Analytical Resources, LLC
Analytical Chemists and Consultants

13 May 2023

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

RE: AOC5 MR Phase 1

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

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

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

Associated Work Order(s)	Associated SDG ID(s)
23A0467	N/A

Susan Dunnihoo

Digitally signed by Susan Dunnihoo
Date: 2023.05.13 09:49:58 -07'00'

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

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

Analytical Resources, LLC

Susan Dunnihoo, Director, Client Services

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

ACCREDITED IN ACCORDANCE WITH nelac
Cert# 100006-012

1 of 1

CHAIN-OF-CUSTODY/TEST REQUEST FORM

№ 3447

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

Ship to: ARL
Attn: Sue Dunihoo
Shipper: courier
Form filled out by: K. McPeek
Shipping Date: 1/23/23
Airbill Number: —
Turnaround requested: std.

Sample Collection Date (m/d/y)	Time	Sample Identification	Volume of Sample / # of Containers	Matrix	Test(s) Requested (check test(s) required) PCBs	SMS SVOCs	SMS metals	TOC / total solids	DIF	Archive		Comments / Instructions [Jar tag number(s)]
1/23/23	0826	LOW23-SS1010	4	sediment	X	X	X	X	NA	X		
	0839	-SS1005	4		X	X	X	X	NA	X		
	0850	-SS1006	4		X	X	X	X	NA	X		
	0903	-SS1003	4		X	X	X	X	NA	X		
	0942	-SS1004	4		X	X	X	X	X	X		
	1111	-SS1204	4		X	X	X	X	NA	X		
	1135	-SS1238	4		X	X	X	X	NA	X		
	1207	-SS1013	4		X	X	X	X	NA	X		
	1226	-SS1014	4		X	X	X	X	NA	X		
		Total Number of Containers	36									

Purchase Order / Statement of Work # APJ-110222-AOCS-ARL

1) Released by:	1) Rec'd by:	2) Released by:	2) Rec'd by:
Print name: Kate McPeek	Phillip	Print name:	
Signature:	Company: AR	Signature:	Company:
Company: Windward	Date/Time: 1/23/23 13:30	Company:	
Date/Time: 1/23/23 1330		Date/Time:	Date/Time:

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

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

To be completed by Laboratory upon sample receipt:

Date of receipt:: 1/23/23	Laboratory W.O. #: 23A0467
Condition upon receipt: good	Time of receipt: 13:30
Cooler temperature: 4.2°C	Received by: phillip Datos

Analytical Resources, LLC
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Anchor QEA/Windward Project Name: LDW AOC5 MR Phase 1

COC No(s): 3447 NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other:_____

Assigned ARI Job No: 23A0467 Tracking No: _____ NA

Preliminary Examination Phase:

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

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 4.2

Time ~~15~~ PIB 1/23 13:50

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 10097109

Cooler Accepted by: PIB Date: 1/23/23 Time: 13:30

Complete custody forms and attach all shipping documents

Log-In Phase:

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

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

Samples Logged by: PIB Date: 1/23/23 Time: 14:23 Labels checked by: _____

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

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

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle, WA 98101	Project Manager: Ali Judkins	05/13/2023 09:05

ANALYTICAL REPORT FOR SAMPLES

Laboratory ID	Sample ID	Matrix	Date Sampled	Date Received
23A0467-01	LDW23-SS1010	Solid	01/23/23 08:26	01/23/23 13:30
23A0467-02	LDW23-SS1005	Solid	01/23/23 08:39	01/23/23 13:30
23A0467-03	LDW23-SS1006	Solid	01/23/23 08:50	01/23/23 13:30
23A0467-04	LDW23-SS1003	Solid	01/23/23 09:03	01/23/23 13:30
23A0467-05	LDW23-SS1004	Solid	01/23/23 09:42	01/23/23 13:30
23A0467-06	LDW23-SS1204	Solid	01/23/23 11:11	01/23/23 13:30
23A0467-07	LDW23-SS1238	Solid	01/23/23 11:35	01/23/23 13:30
23A0467-08	LDW23-SS1013	Solid	01/23/23 12:07	01/23/23 13:30
23A0467-09	LDW23-SS1014	Solid	01/23/23 12:26	01/23/23 13:30

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	13-May-2023 09:05

Case Narrative

Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Work Order: 23A0467

Sample receipt

Samples as listed on the preceding page were received 23-Jan-2023 13:30 under ARI work order 23A0467. For details regarding sample receipt, please refer to the Cooler Receipt Form. Samples were frozen on receipt to preserve holding times.

Semivolatiles - EPA Method SW8270E

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen.

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

Internal standard area for d4-di-n-octylphthalate was high of limits in SLC0504-ICV2. As the samples in the associated bracket had acceptable internal standard areas, no corrective action was taken.

Surrogate percent recoveries outside of control limits are flagged on the summary sheets.

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

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

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

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

Semivolatiles - EPA Method SW8270E-SIM

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements.

Internal standard areas were within limits.

The surrogate percent recoveries high of control limits for d14-p-terphenyl have been flagged on the summary sheets.

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

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

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

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

Pesticides - EPA Method SW8081B (Hexachlorobenzene)

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	13-May-2023 09:05

Case Narrative

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements. PEMs do not apply to this compound and are not addressed for outliers.

Response for the internal standard 1-bromo-2-nitrobenzene was high of limits for 23A-467-08. Outliers for hexabromobiphenyl do not apply to the target analyte and are not addressed for this analysis.

The surrogate percent recoveries were within control limits.

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

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

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

PCB Aroclors - EPA Method SW8082A

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen.

Aroclor 1260 failed high in continuing calibrations on the ZB5 column. Associated data has been reported from the ZB35 column as primary.

The internal standard areas for hexabromobiphenyl were low of limits on the ZB5 column. Associated data has been reported from the ZB35 column as primary.

The surrogate percent recovery was low of control limits in SLC0051-CCV3 for tetra-chloro-m-xylene (TCMX). As TCMX is used for evaluation of blowdown efficiency and is not required by the method, no corrective action was required.

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

The blank spike (BS/LCS) spike recoveries for both aroclors were very low of limits and the relative percent differences (RPD) were outside control limits. An error in spiking of the LCS is suspected. As the matrix spike/matrix spike duplicate and reference were in control, the outliers are flagged, and no further action was taken.

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

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

The analyst noted identification of aroclors were made using the best possible fit, as there were miscellaneous interfering peaks throughout the runs inflating results and obscuring patterns.

Total Metals - EPA Method 6020B

The sample(s) were digested and analyzed within the recommended holding times for samples stored frozen.

Lead was high of limits for several standards in sequence SLE0204. Affected analytes were not reported. The standard mode was noted noisy in sample LDW23-SS1006 and affected analytes were not reported. SLE0204-HCV1 showed indium noisy but cadmium results were low and no action was taken. SLE0204-IFA showed chromium-53 high.

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	13-May-2023 09:05

Case Narrative

The analyst noted SLE0209-CAL4 with indium slightly noisy. The %R and analytes were noted to be okay and no further action taken. SLE0209-CCVN and SLE0209-CCVP showed chromium low and affected analytes were not reported or note required in this run. SLE0209-IFA showed chromium-53 high.

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

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

The duplicate (DUP) relative percent differences (RPD) were within advisory control limits.

The matrix spike (MS) percent recovery for silver was low of control limits. The MS/MSD relative percent differences (RPD) were within advisory control limits. The post spike for silver had an acceptable recovery.

Total Mercury - EPA Method 7471B

The sample(s) were digested and analyzed within the recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements.

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

The blank spike (BS/LCS) percent recovery was within control limits.

The duplicate (DUP) relative percent difference (RPD) were within advisory control limits.

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

Wet Chemistry (Total Organic Carbon and Total Solids)

The sample(s) were prepared and analyzed within the recommended holding times for samples stored frozen.

Initial and continuing calibrations were within method requirements.

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

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

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

The batch BLA0567 matrix spike (MS) percent recovery was high of advisory control limits and the duplicate (DUP) relative percent difference (RPD) was within advisory control limits, reported under work order 23A0455.

Dioxin/Furans - EPA Method 1613

The sample(s) were extracted and analyzed within the recommended holding times for samples stored frozen. Analysis was performed using an application specific column developed by Restek. The RTX-Dioxin2 column has unique isomer separation for the 2378-TCDF, eliminating the need for confirmation analysis.

Initial and continuing calibrations were within method requirements.

Labeled internal standard areas were high of control limits in the method blank BLB0270-BLK1 for 13C12-1,2,3,6,7,8-HxCDF, 13C12-1,2,3,6,7,8-HxCDD and 13C12-1,2,3,4,6,7,8-HpCDF. As all other extracts were in control, outliers are flagged and no other corrective action was taken.

Anchor QEA, LLC	Project: AOC5 MR Phase 1	
1201 3rd Ave, Suite 2600	Project Number: 210075-01.02	**Reported:**
Seattle WA, 98101	Project Manager: Ali Judkins	13-May-2023 09:05

Case Narrative

The cleanup surrogate percent recoveries were within control limits.

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

The OPR (Ongoing Precision and Recovery) standard percent recoveries were within control limits.

The reference material (SRM) percent recovery for 1,2,3,7,8,9-HxCDF was high of advisory limits and flagged on the summary sheet.

QUALIFIERS AND NOTES

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

Analytical Resources, LLC
Analytical Chemists and Consultants
Tukwila, WA

ICP-MS Metals

Analyzed with Secondary Isotopes

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

These results were reported from a secondary ion:

Labnumber	SampleName	Analyte
23A0467-02	LDW23-SS1005	Copper-65
23A0467-06	LDW23-SS1204	Copper-65

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1010

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	02/23/23 15:49	File ID:	NT1003182310.D
% Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 23:29
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.06 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	472		4.4	20.0
106-44-5	4-Methylphenol	1	214		7.4	20.0
91-20-3	Naphthalene	1	15.7	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	13.5	J	4.5	20.0
208-96-8	Acenaphthylene	1	9.5	J	6.2	20.0
131-11-3	Dimethylphthalate	1	6.6	J	4.4	20.0
83-32-9	Acenaphthene	1	14.3	J	5.2	20.0
132-64-9	Dibenzofuran	1	17.3	J	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	94.9		8.7	20.0
120-12-7	Anthracene	1	50.8		7.2	20.0
206-44-0	Fluoranthene	1	209		6.1	20.0
129-00-0	Pyrene	1	198		5.7	20.0
85-68-7	Butylbenzylphthalate	1	15.8	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	113		6.0	20.0
218-01-9	Chrysene	1	178		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	174		5.5	49.9
	Benzofluoranthenes, Total	1	305		10.0	40.0
50-32-8	Benzo(a)pyrene	1	116		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	64.9		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	23.3		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	76.5		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.11	499	66.6	27 - 120	
Phenol-d5	749.11	522	69.6	29 - 120	
2-Chlorophenol-d4	749.11	547	73.0	31 - 120	
1,2-Dichlorobenzene-d4	499.40	345	69.1	32 - 120	
Nitrobenzene-d5	499.40	379	75.9	30 - 120	
2-Fluorobiphenyl	499.40	384	77.0	35 - 120	

LDW23-SS1010

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

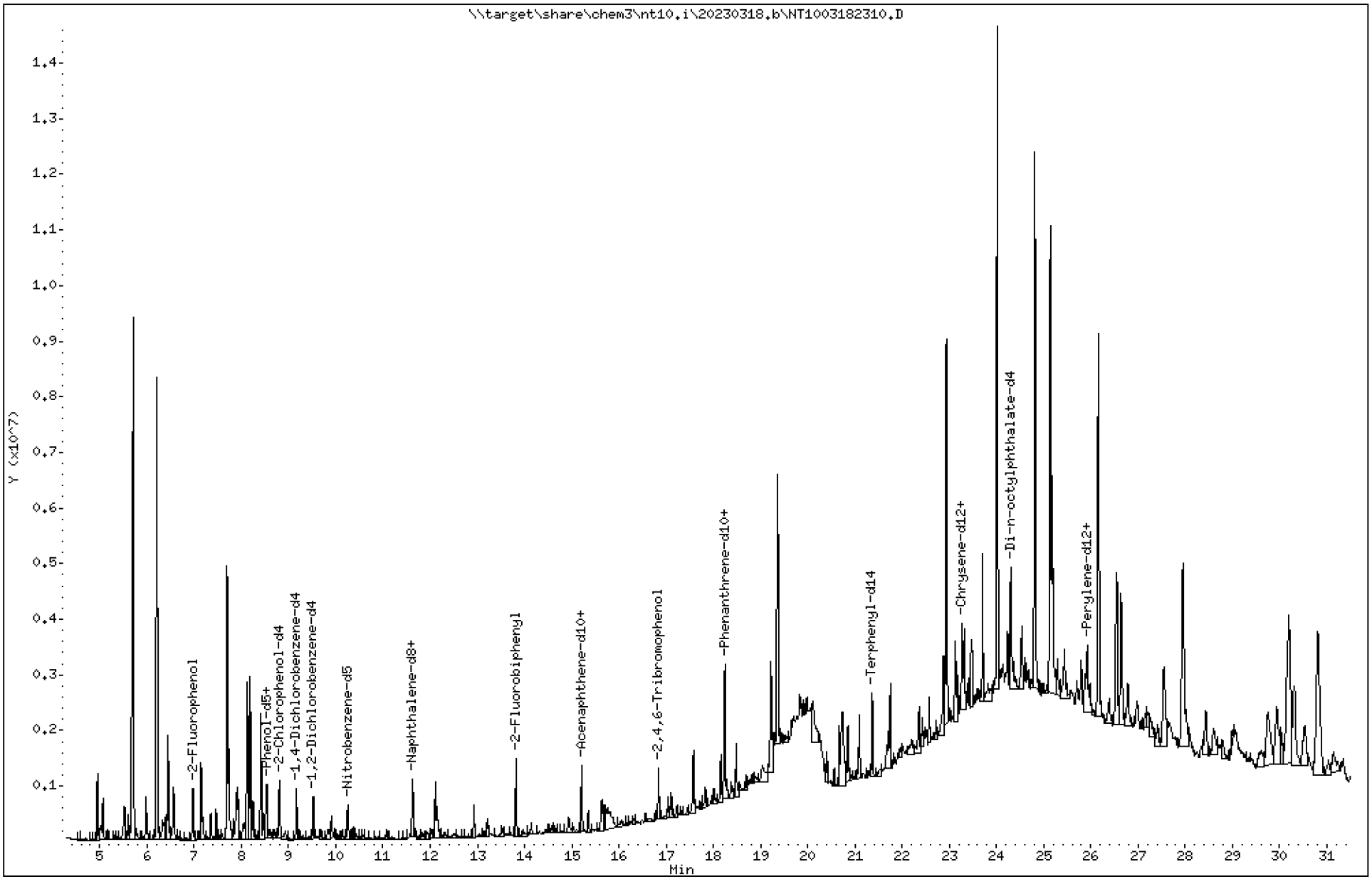
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	02/23/23 15:49	File ID:	NT1003182310.D
% Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 23:29
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.06 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.11	619	82.7	24 - 134	
p-Terphenyl-d14	499.40	369	73.9	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D
Date : 18-MAR-2023 23:29
Client ID:
Sample Info: 23A0467-01

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

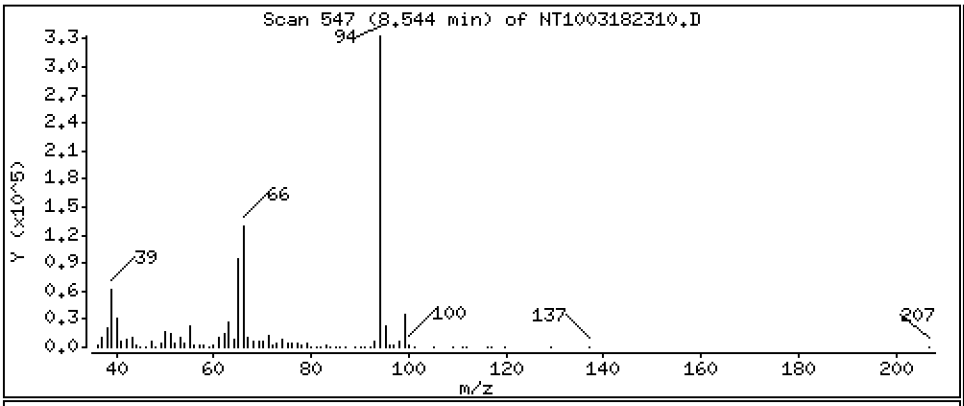
Operator: VTS

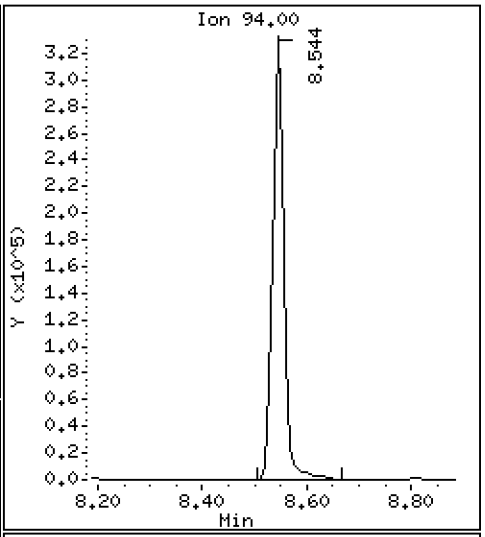
Column phase: ZB-5msi

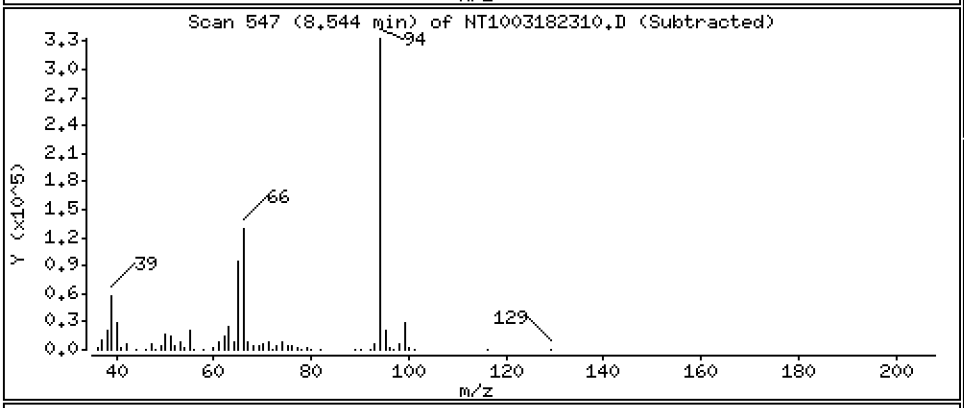
Column diameter: 0.25

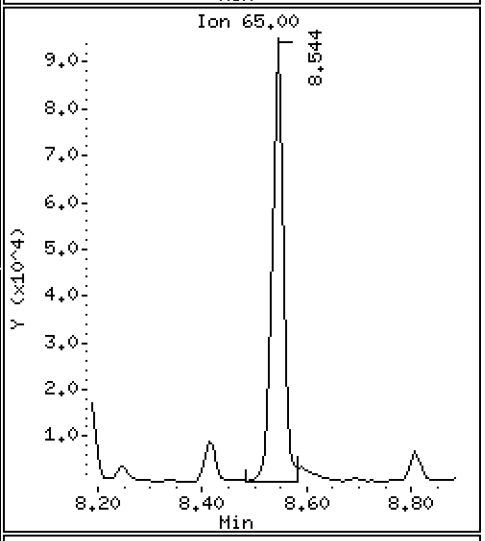
3 Phenol

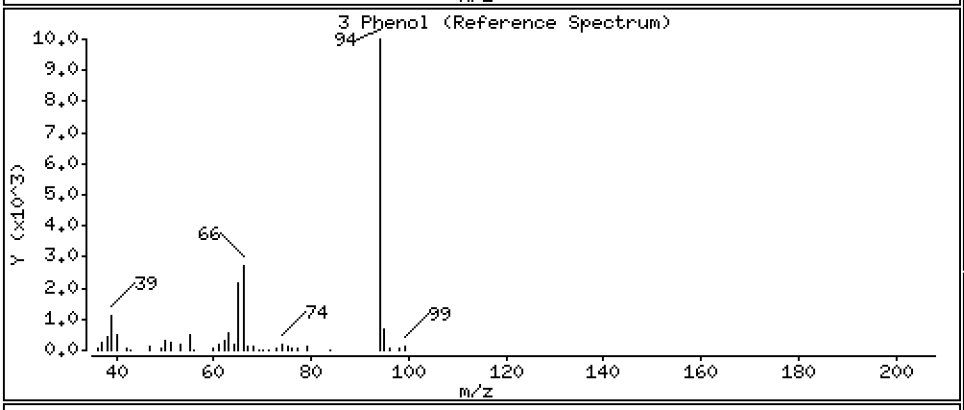
Concentration: 4.727 ug/mL

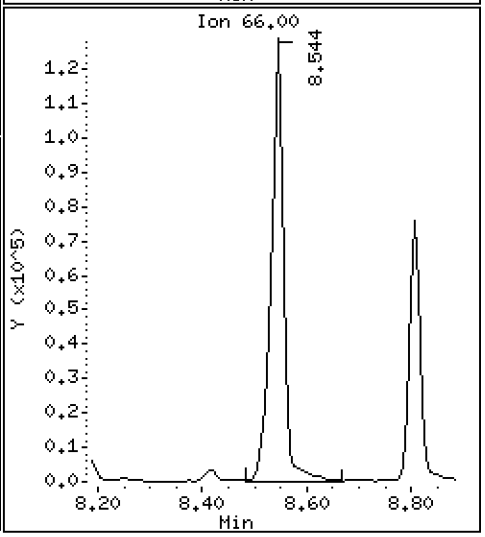


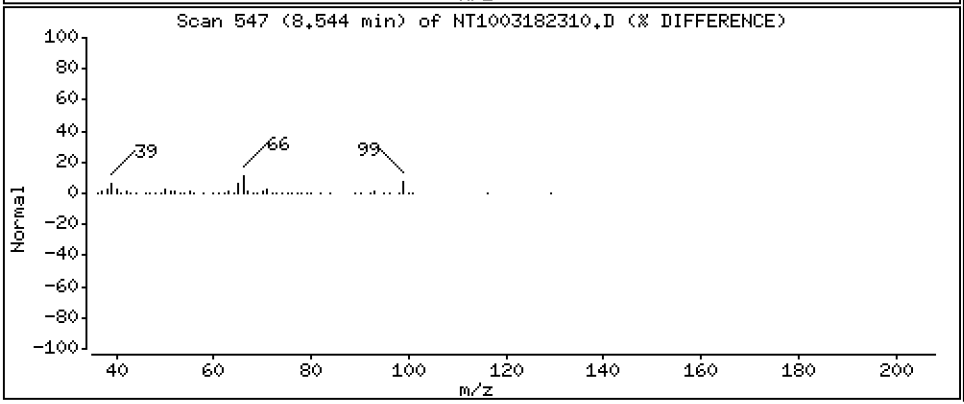












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

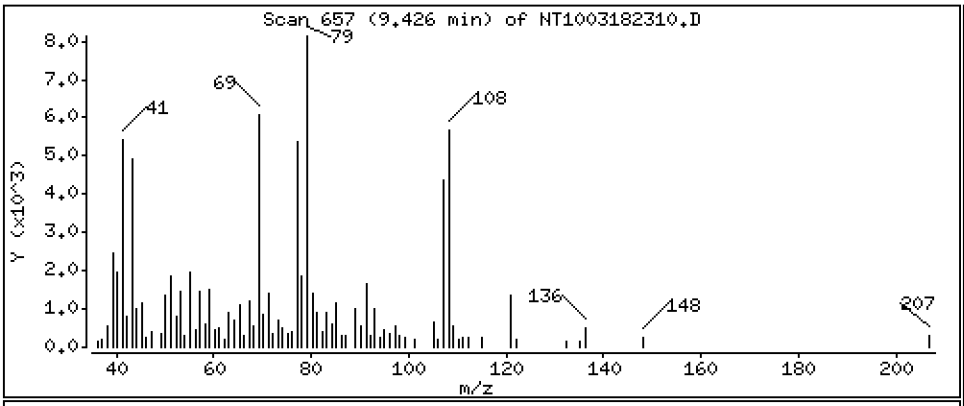
Operator: VTS

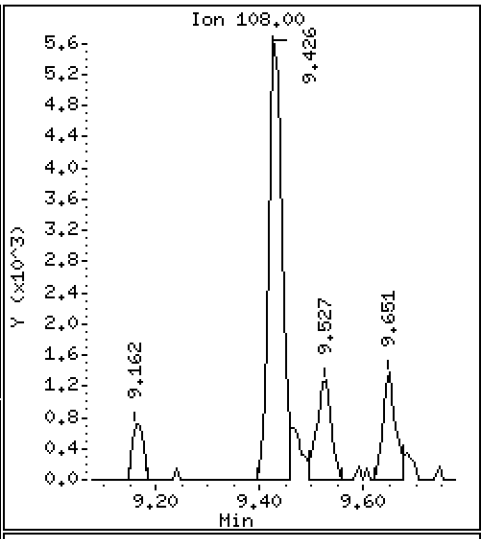
Column phase: ZB-5msi

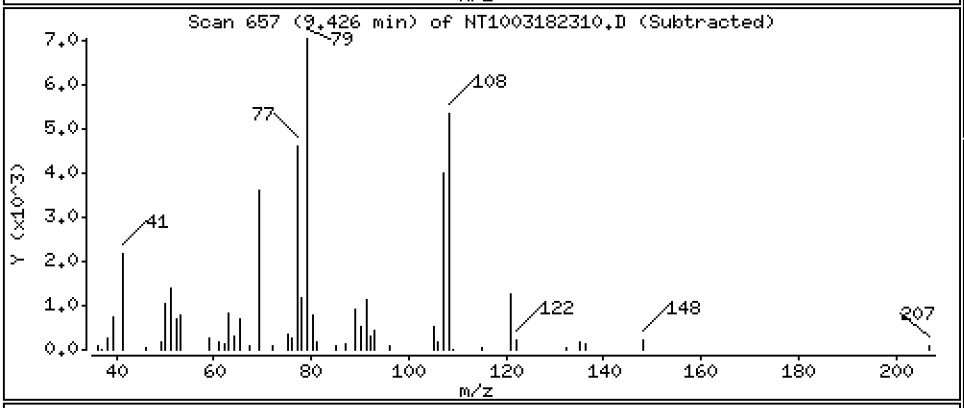
Column diameter: 0.25

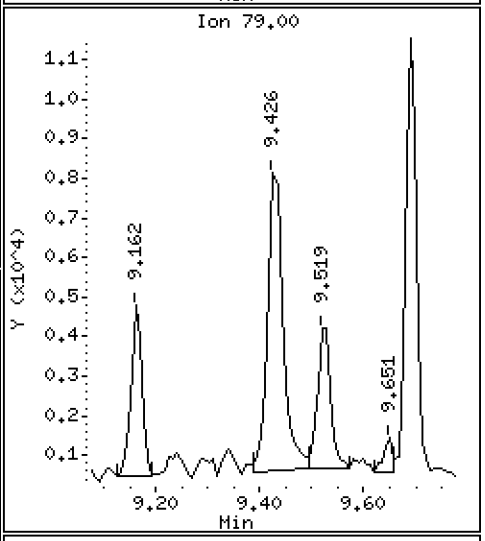
11 Benzyl alcohol

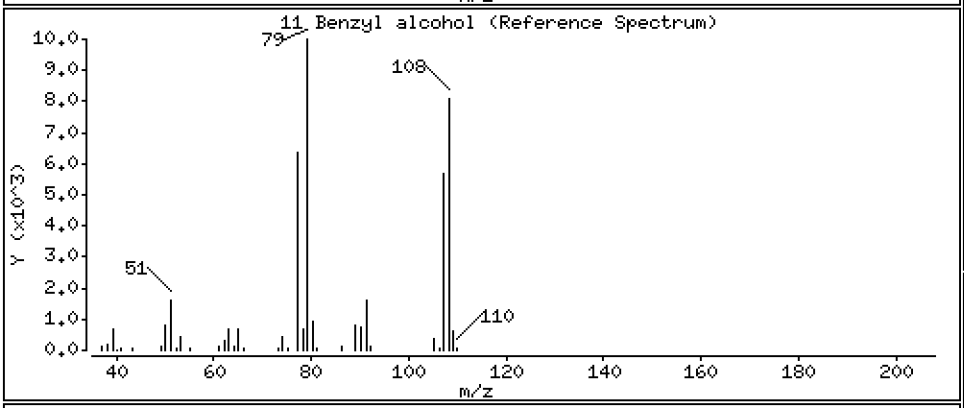
Concentration: 0.1990 ug/mL

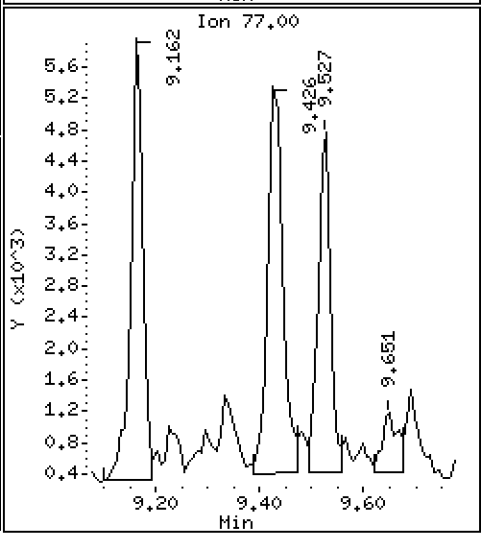


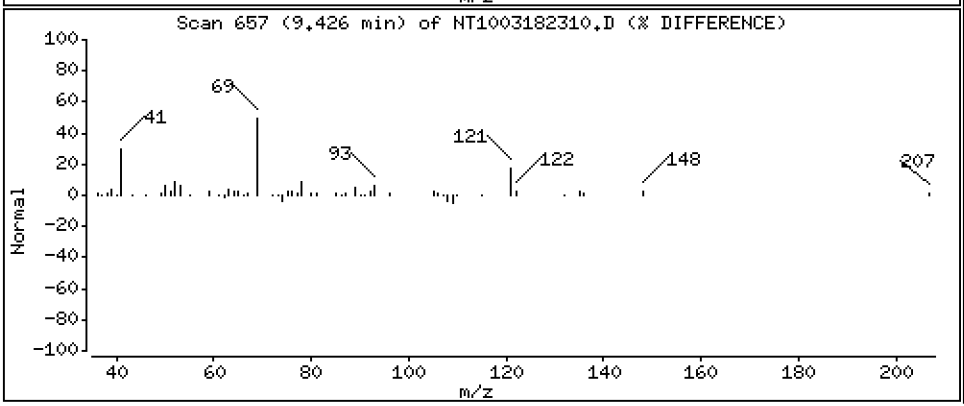












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

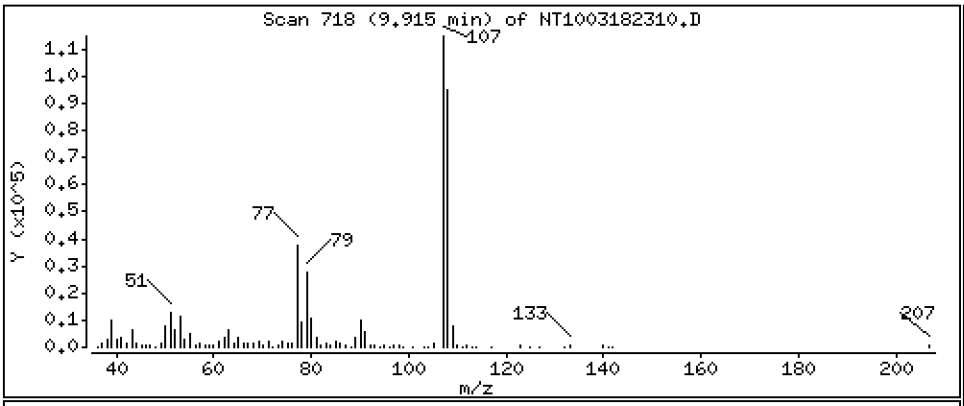
Operator: VTS

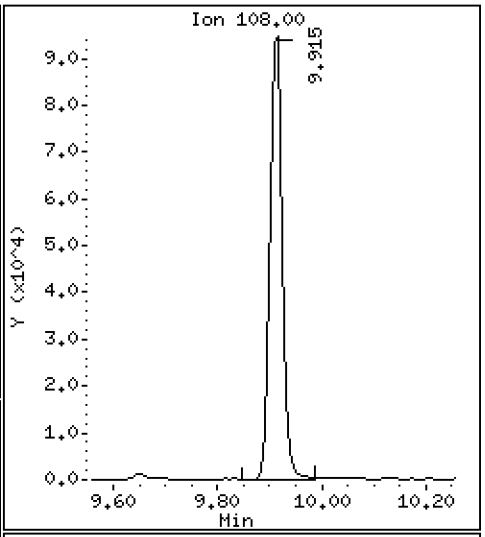
Column phase: ZB-5msi

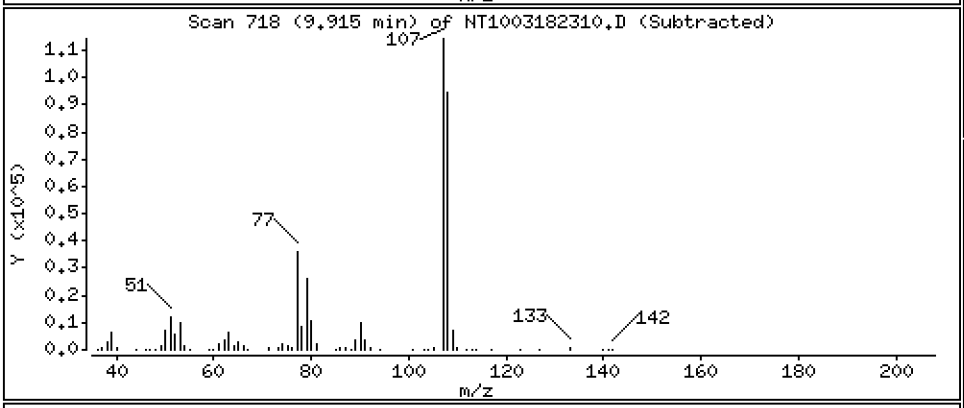
Column diameter: 0.25

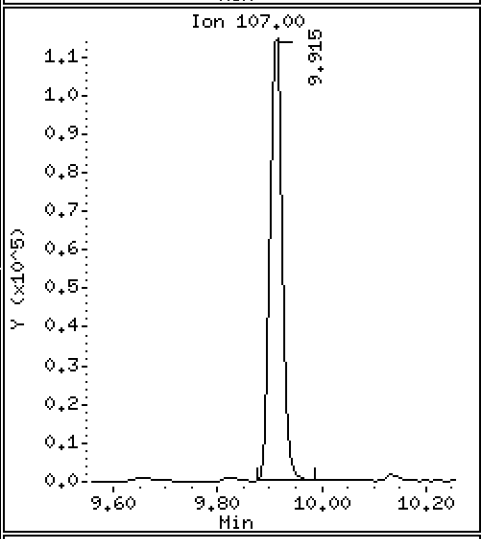
15 4-Methylphenol

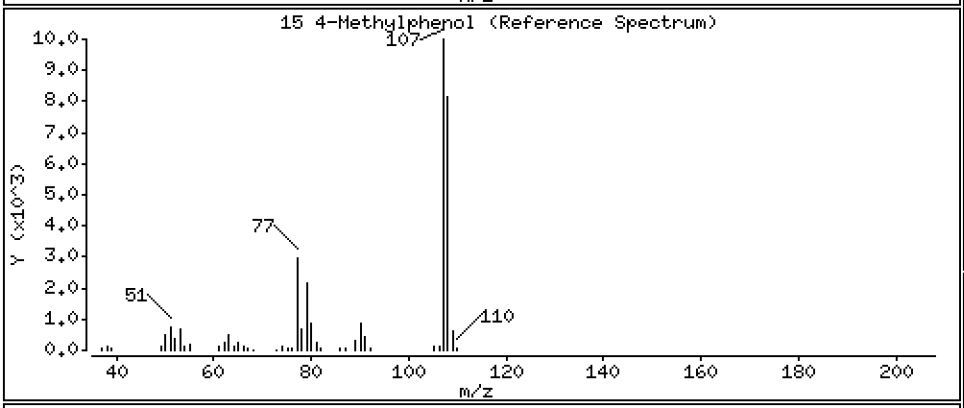
Concentration: 2.139 ug/mL

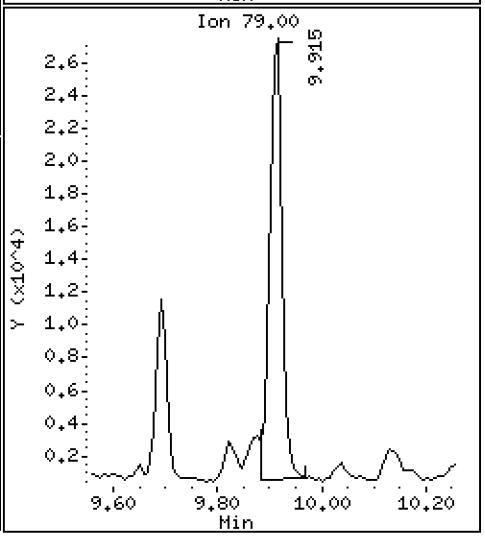


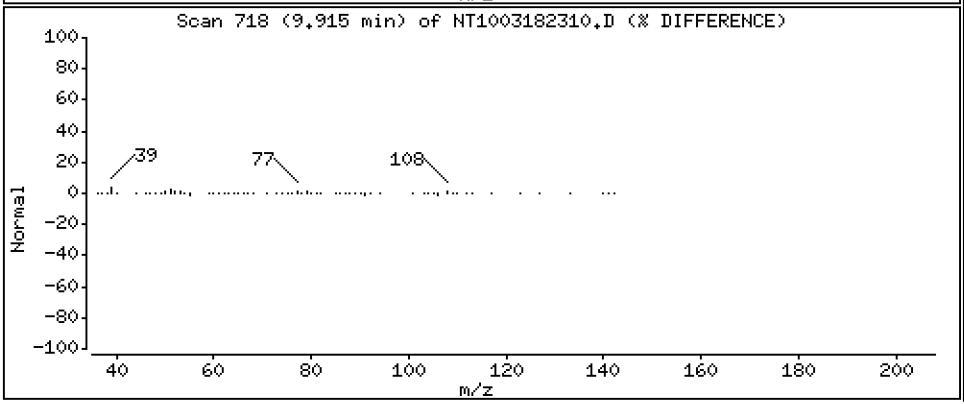












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

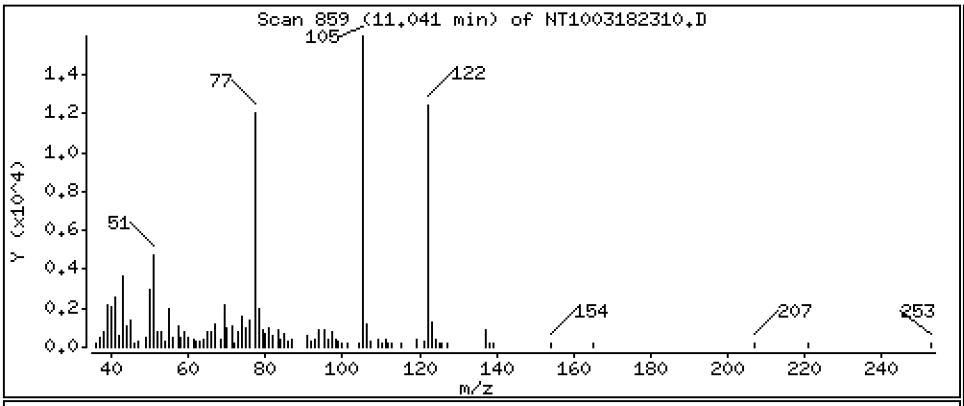
Operator: VTS

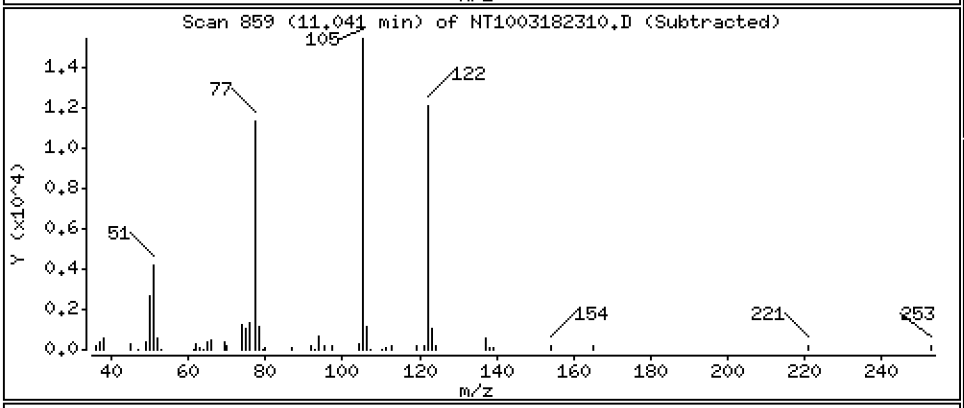
Column phase: ZB-5msi

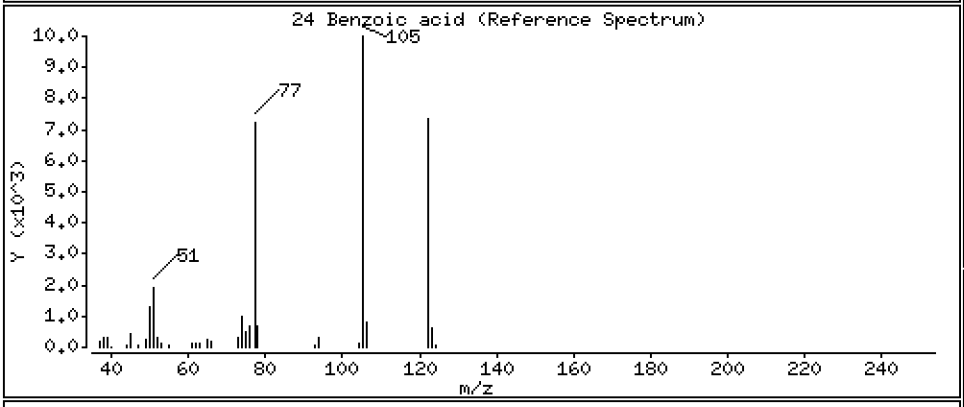
Column diameter: 0.25

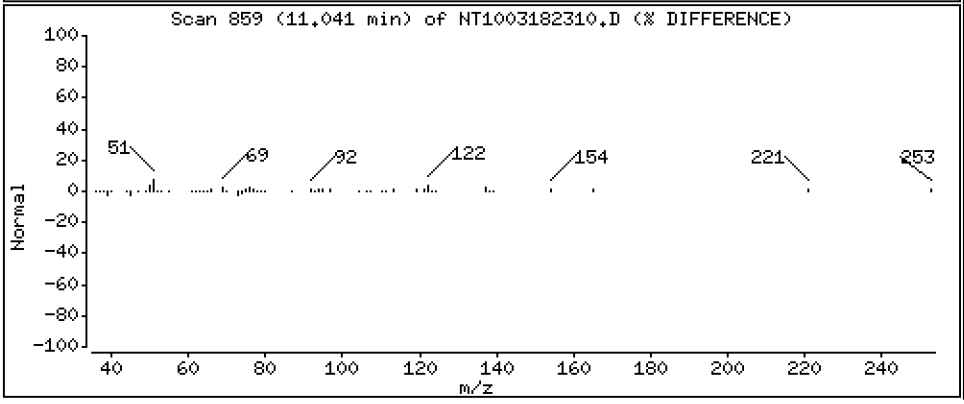
24 Benzoic acid

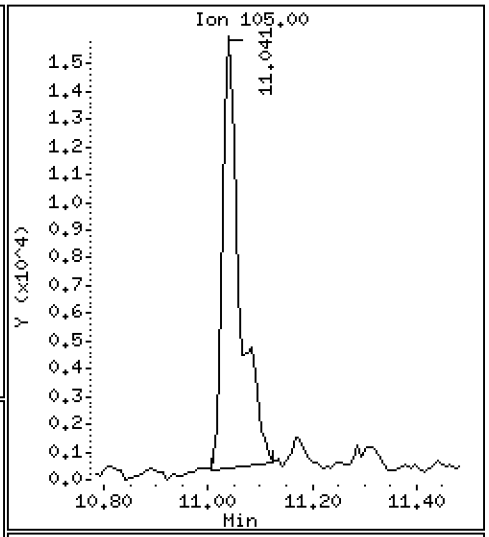
Concentration: 0.8199 ug/mL

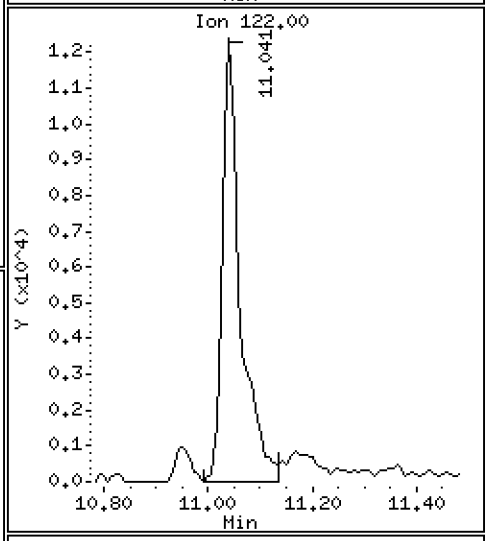


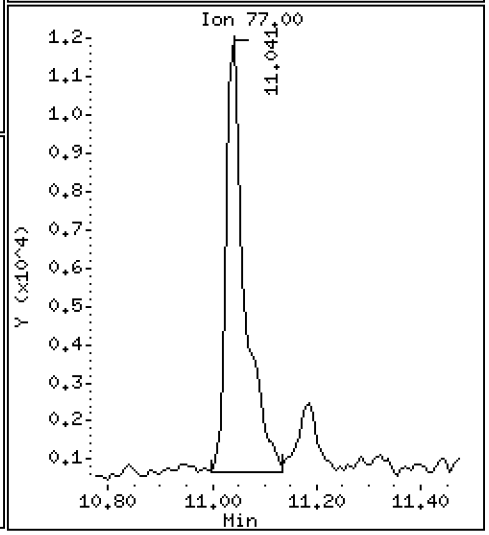












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

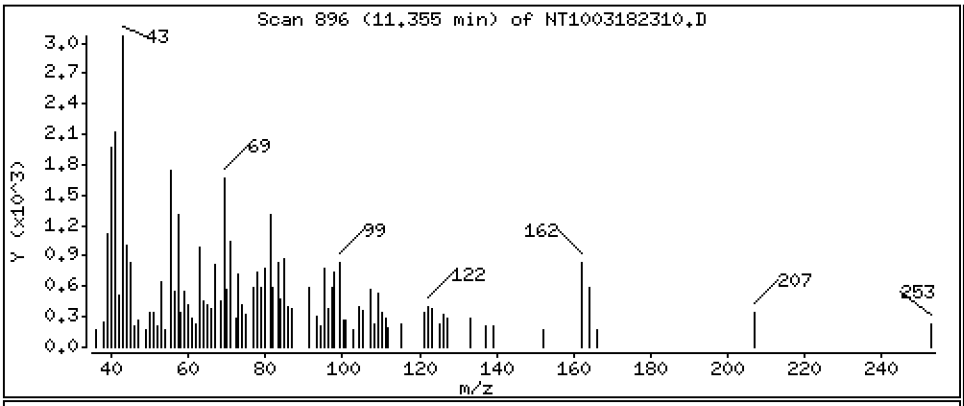
Operator: VTS

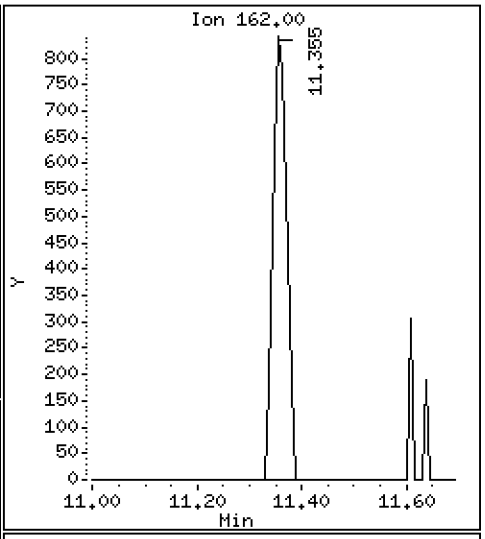
Column phase: ZB-5msi

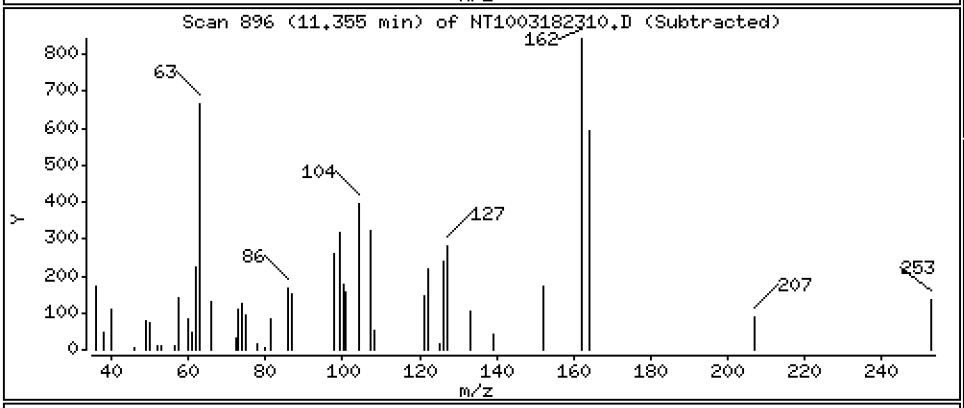
Column diameter: 0.25

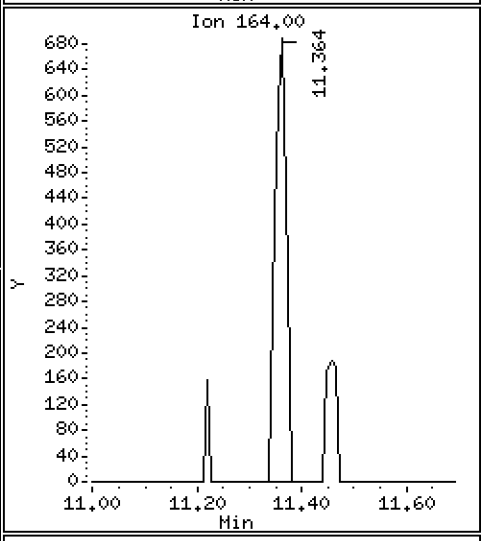
25 2,4-Dichlorophenol

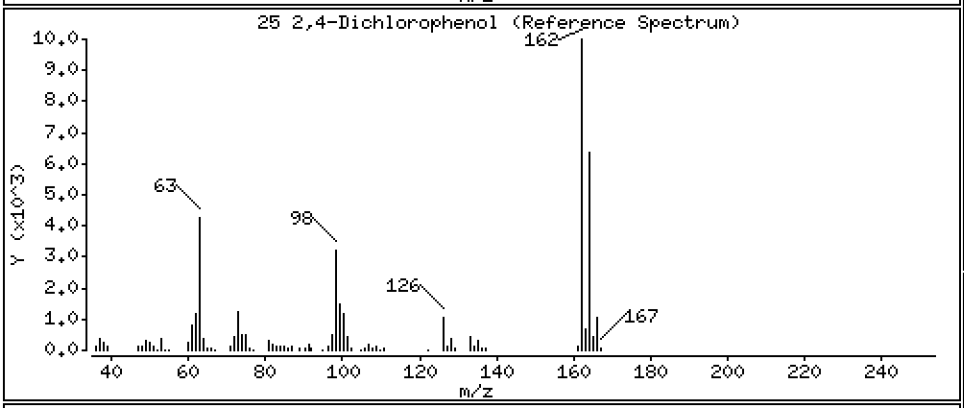
Concentration: 0.02412 ug/mL

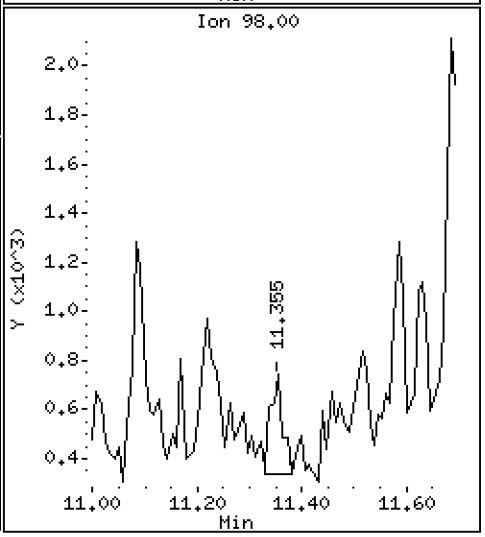


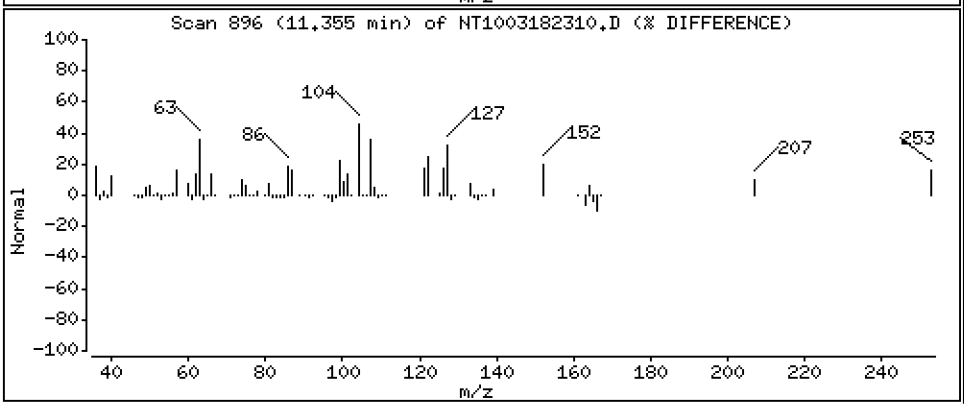












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

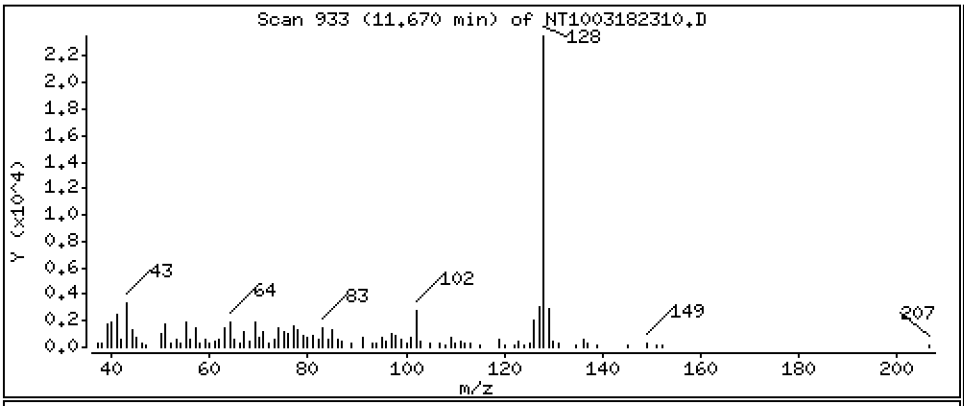
Operator: VTS

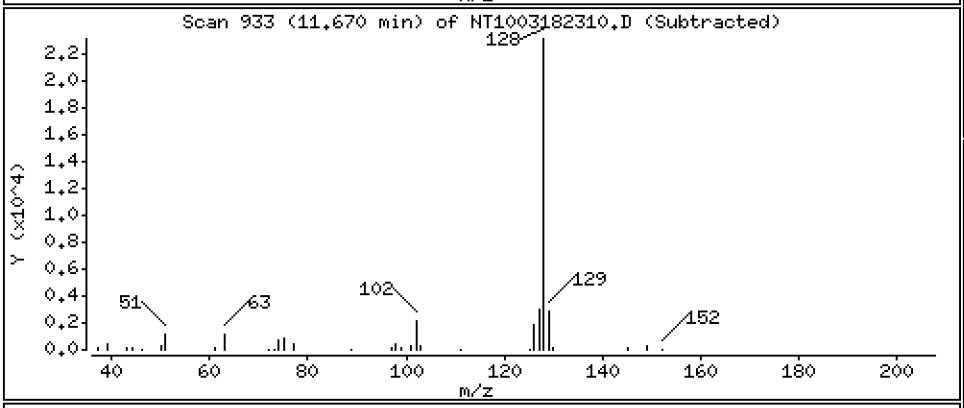
Column phase: ZB-5msi

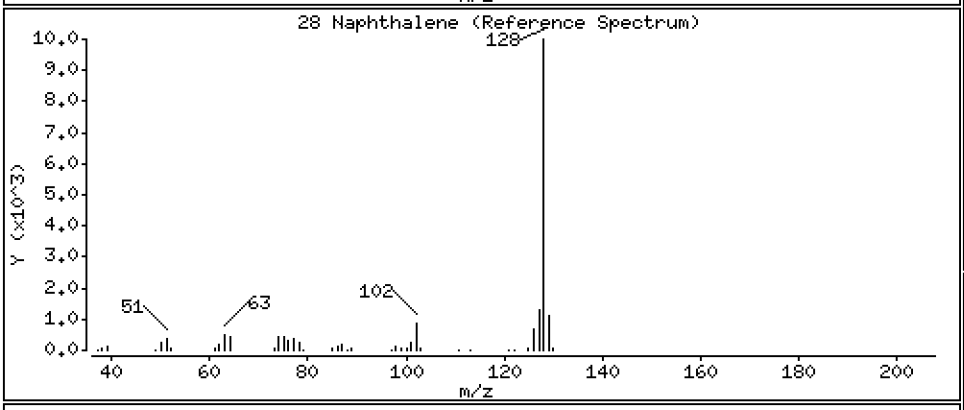
Column diameter: 0.25

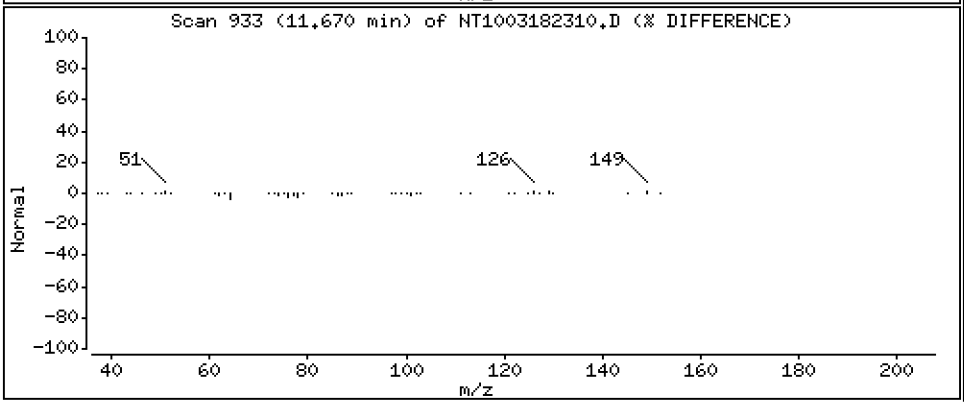
28 Naphthalene

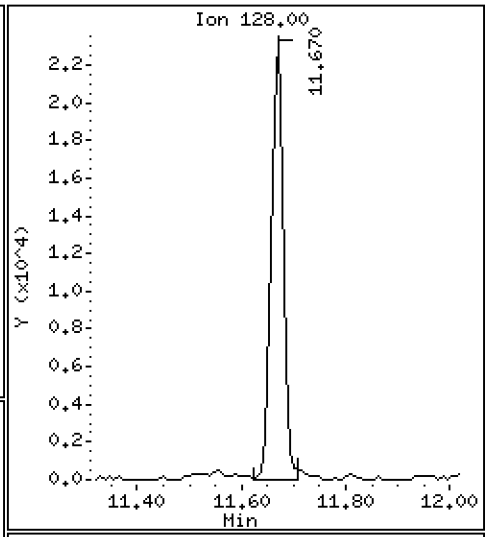
Concentration: 0.1571 ug/mL

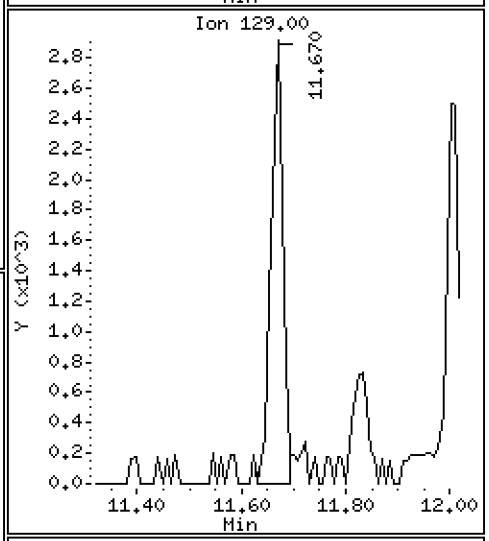


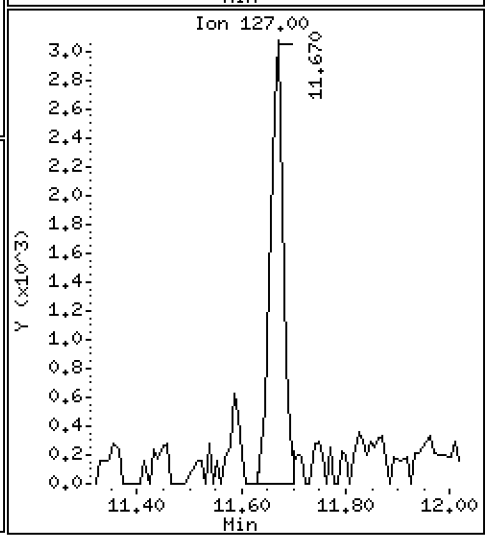












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

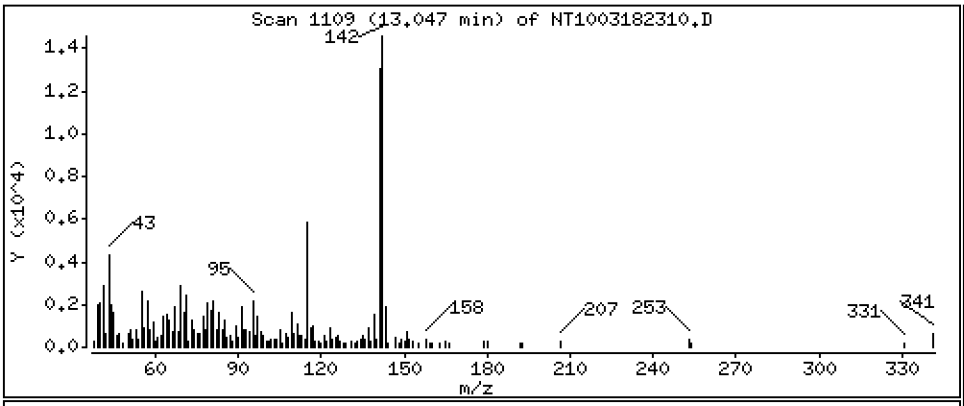
Operator: VTS

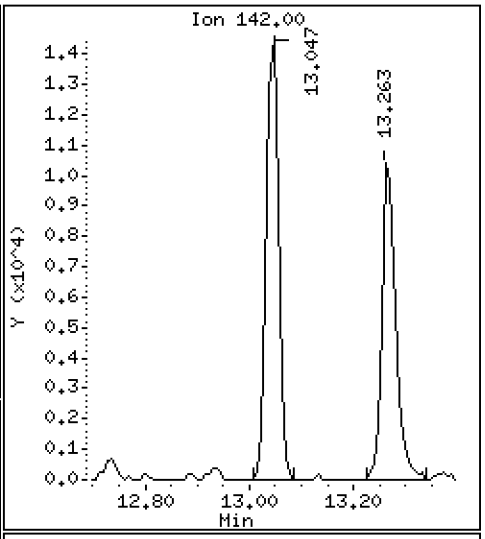
Column phase: ZB-5msi

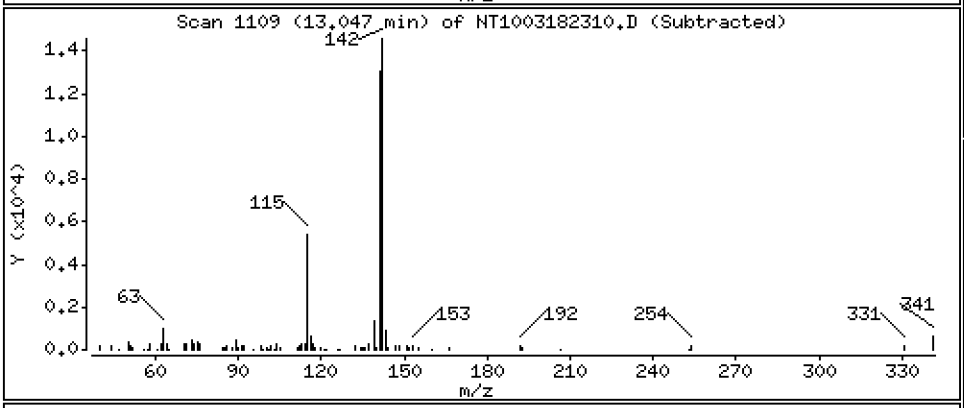
Column diameter: 0.25

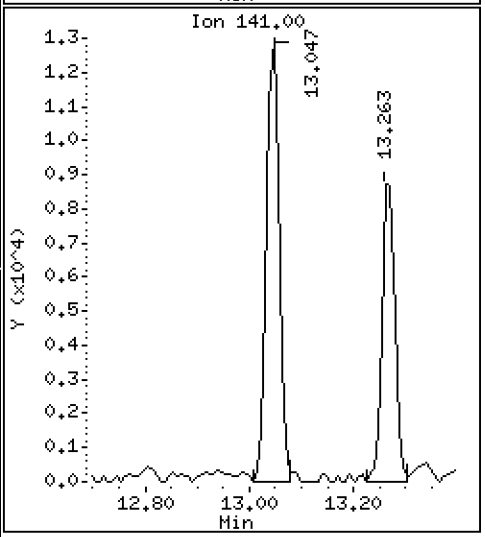
32 2-Methylnaphthalene

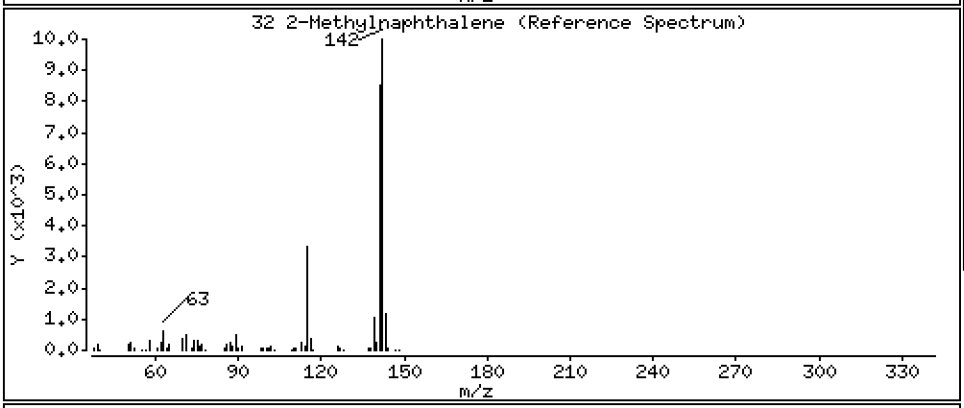
Concentration: 0.1350 ug/mL

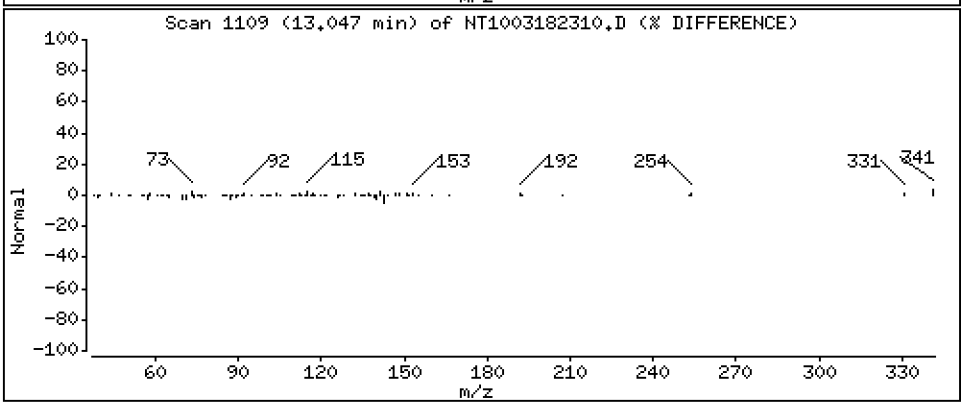












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

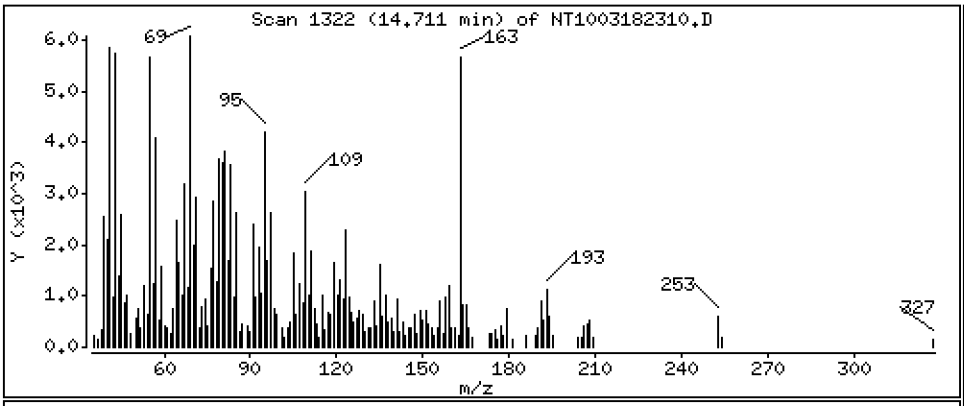
Operator: VTS

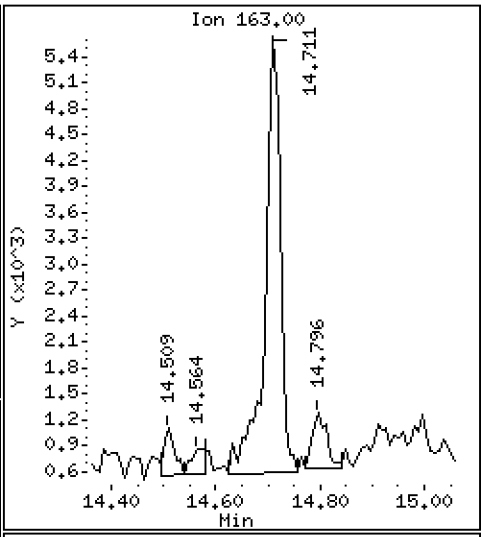
Column phase: ZB-5msi

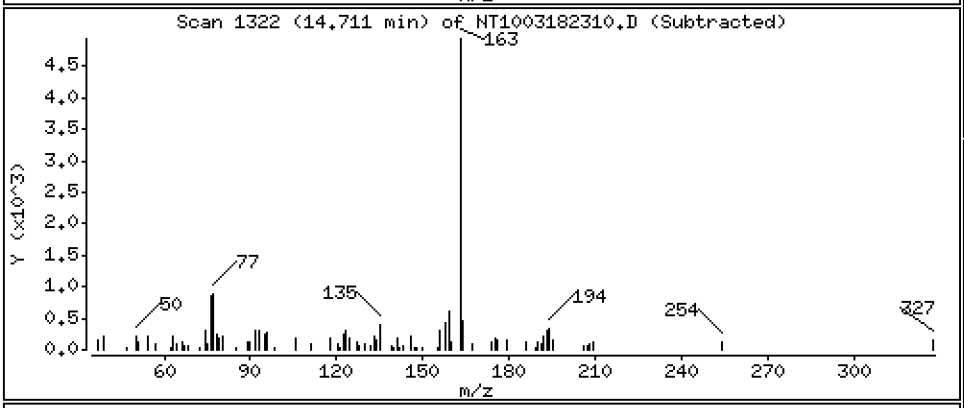
Column diameter: 0.25

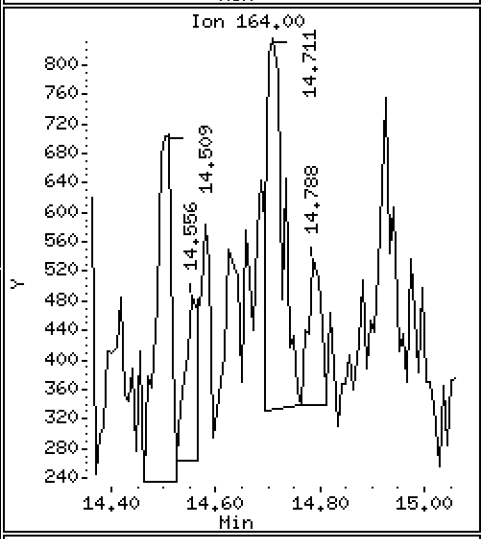
39 Dimethylphthalate

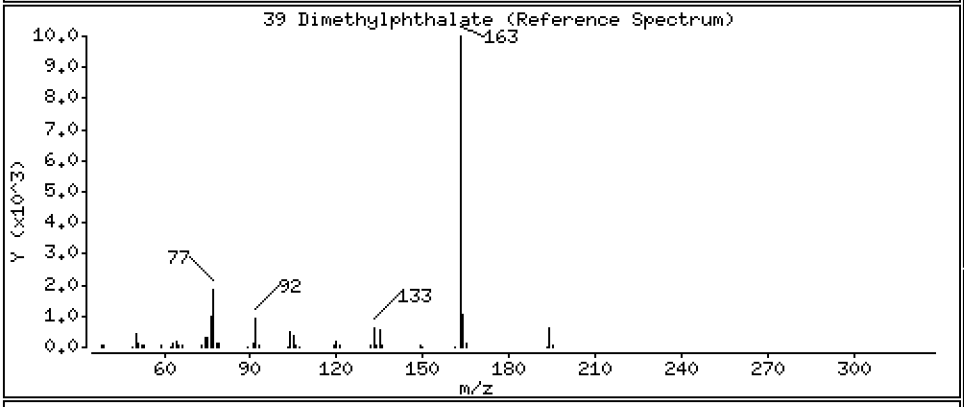
Concentration: 0.06566 ug/mL

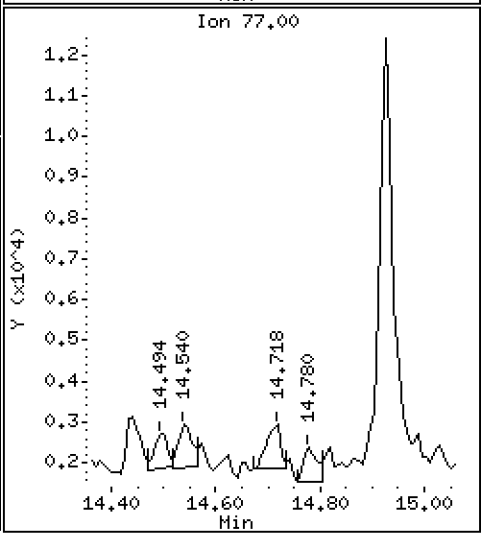


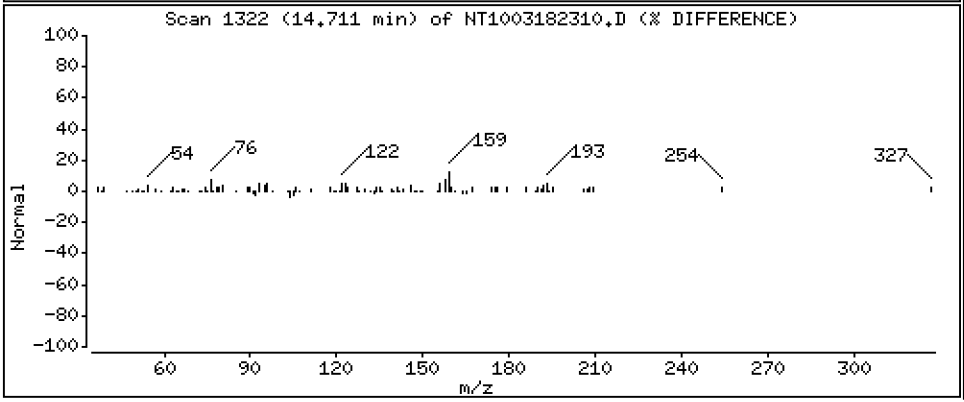












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

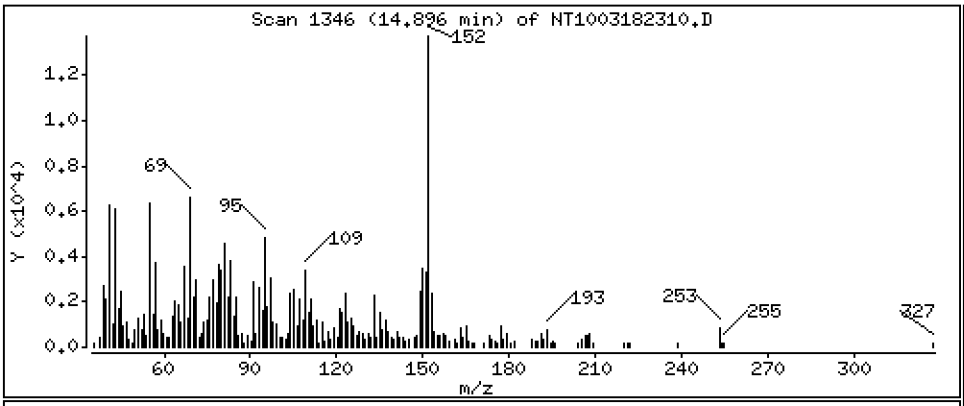
Operator: VTS

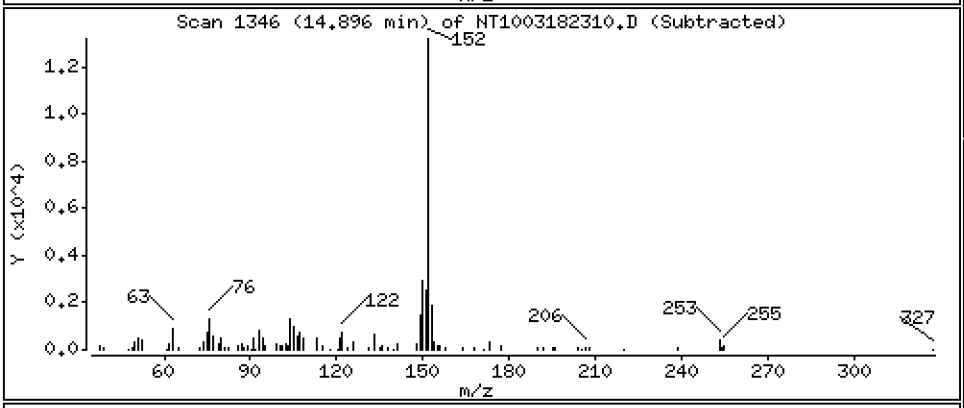
Column phase: ZB-5msi

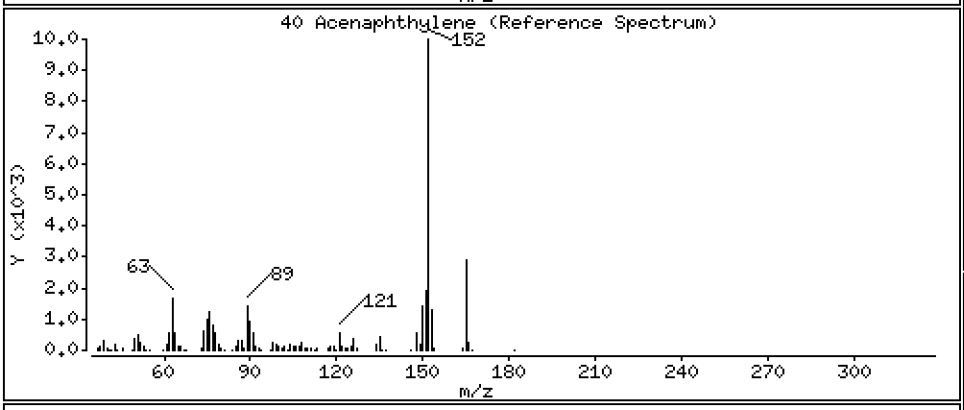
Column diameter: 0.25

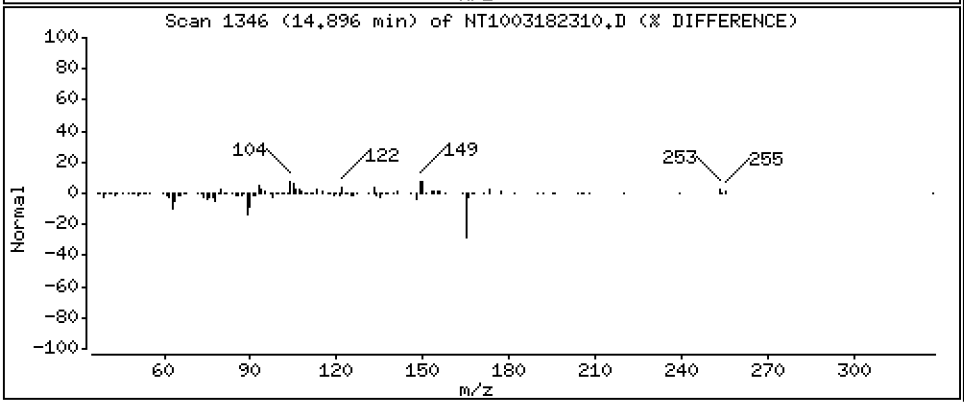
40 Acenaphthylene

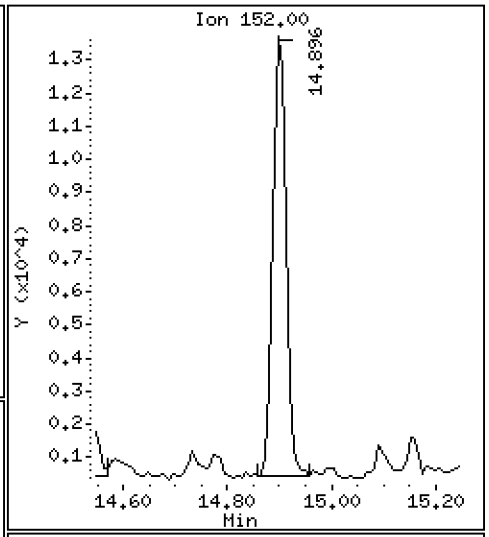
Concentration: 0.09551 ug/mL

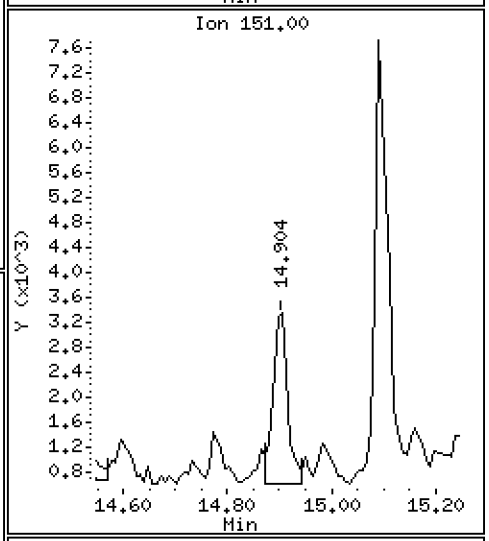


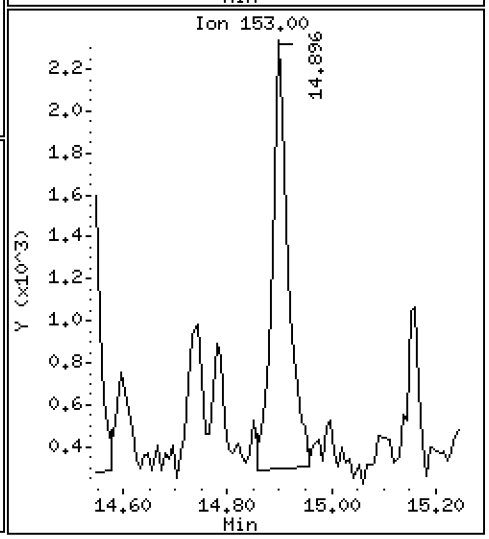












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

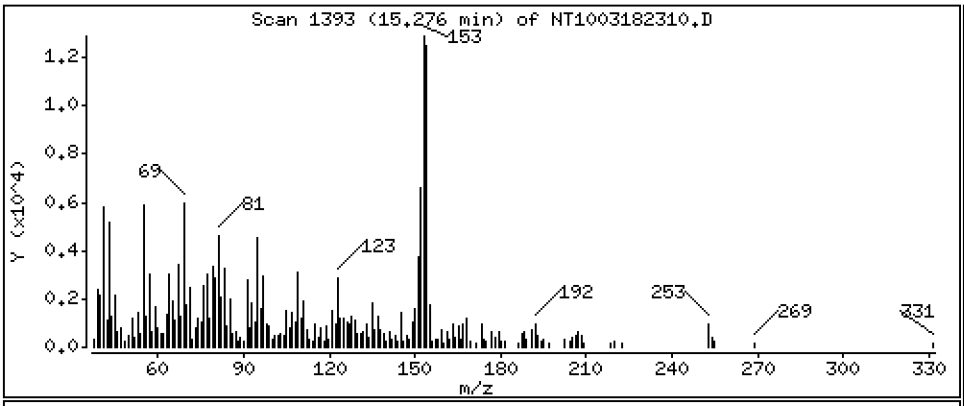
Operator: VTS

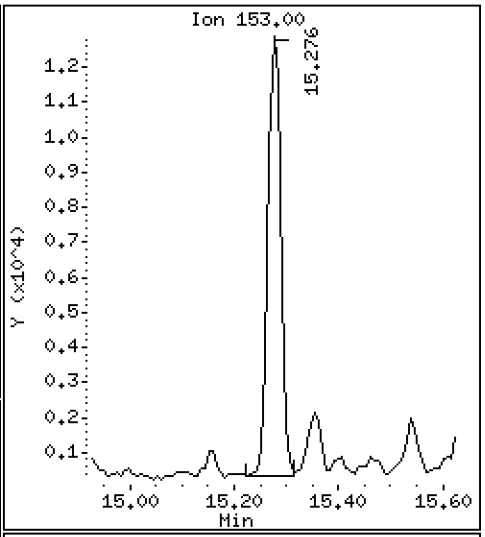
Column phase: ZB-5msi

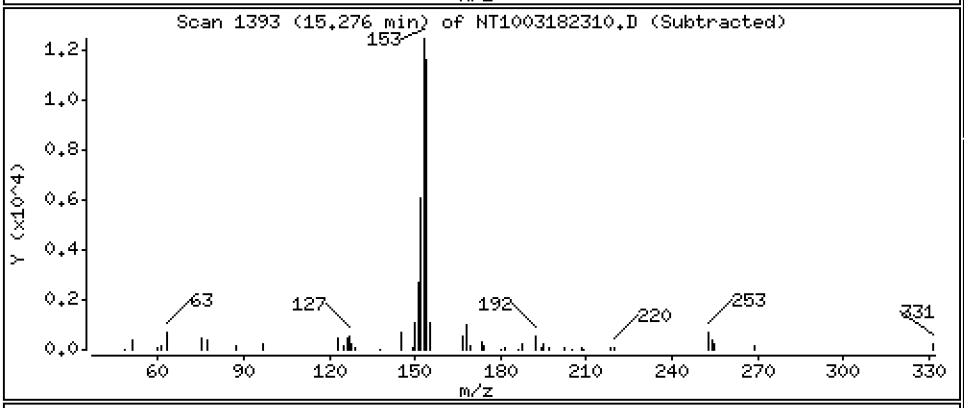
Column diameter: 0.25

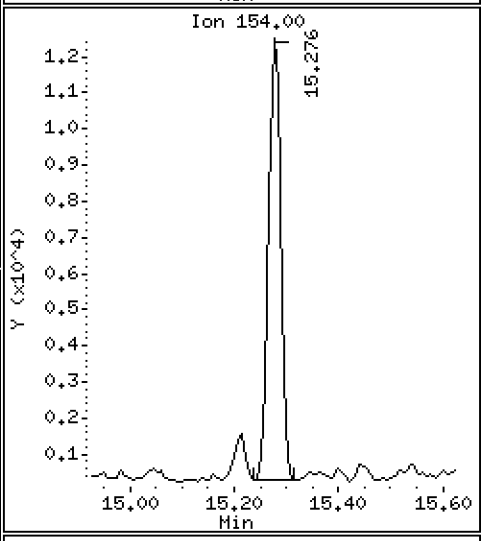
44 Acenaphthene

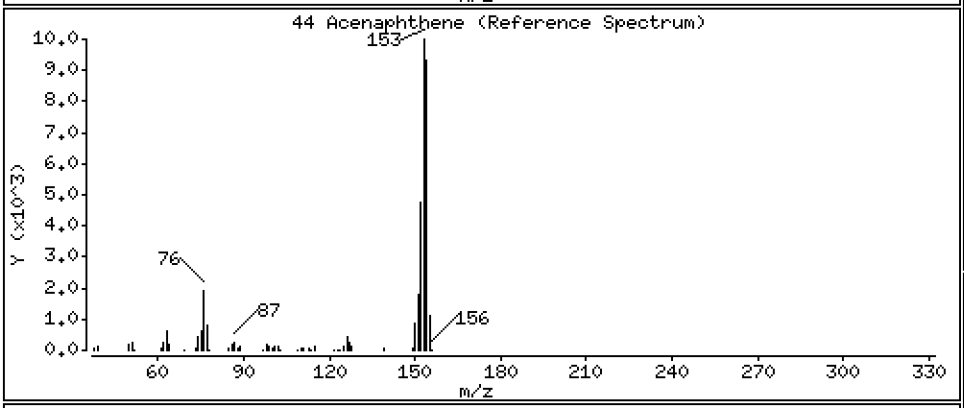
Concentration: 0.1430 ug/mL

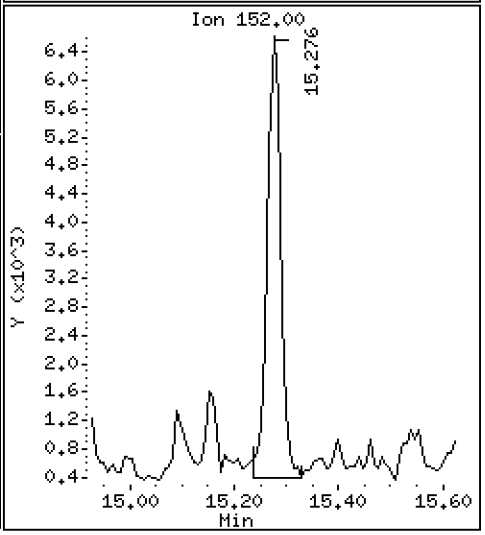


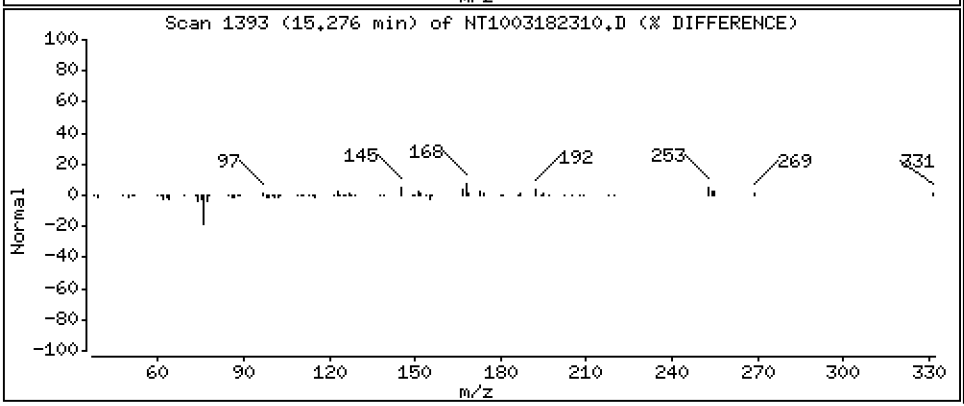












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

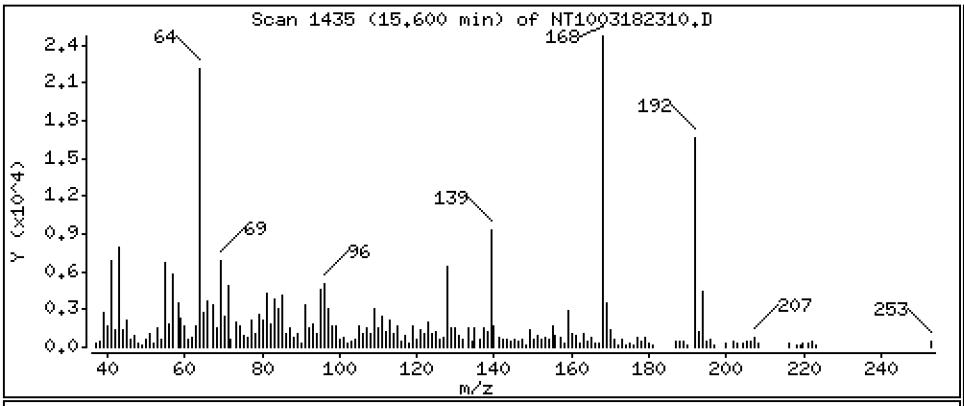
Operator: VTS

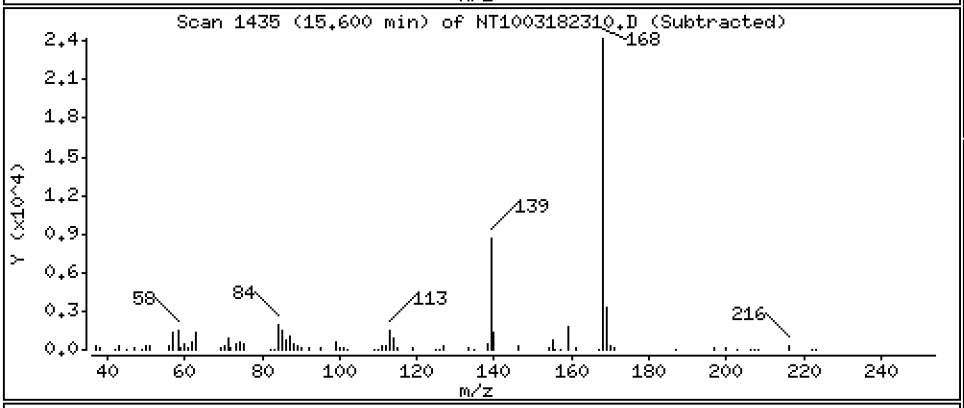
Column phase: ZB-5msi

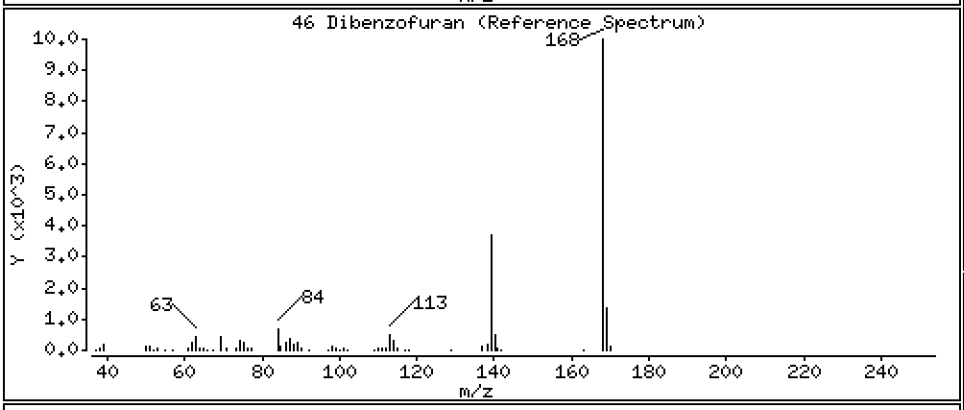
Column diameter: 0.25

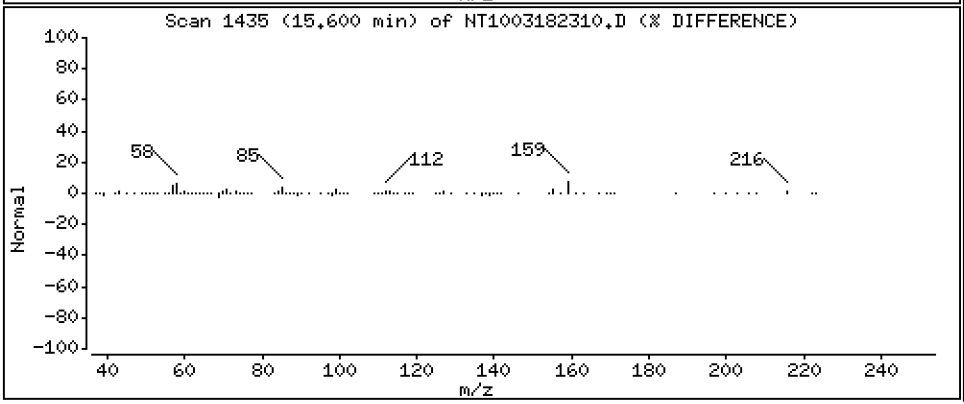
46 Dibenzofuran

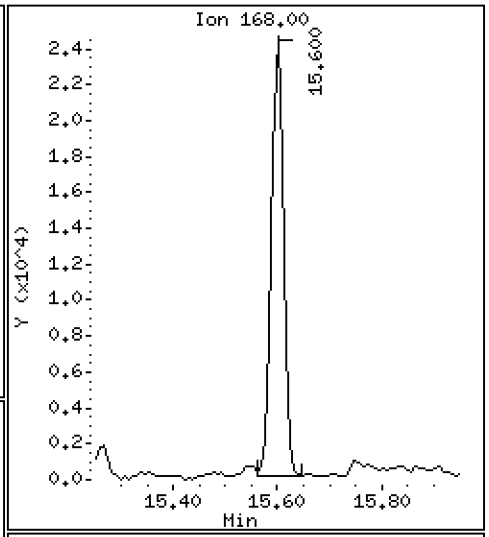
Concentration: 0.1731 ug/mL

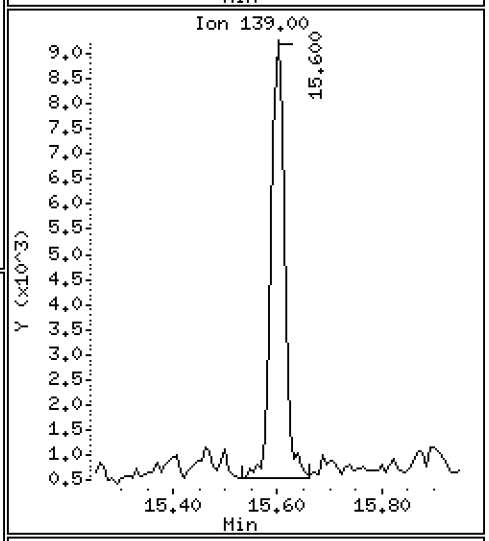


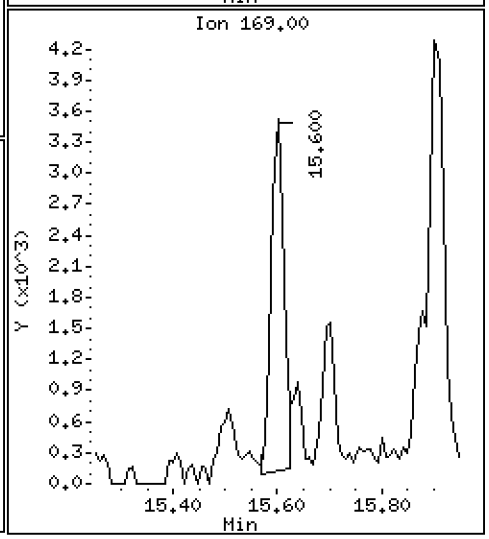












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

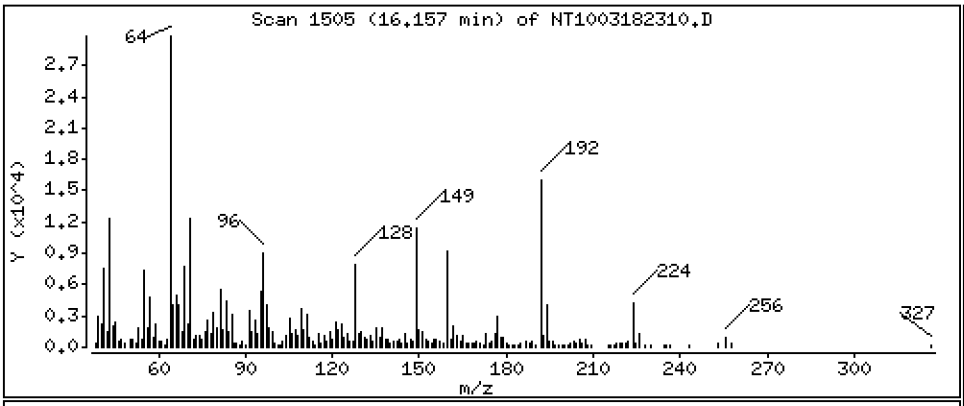
Operator: VTS

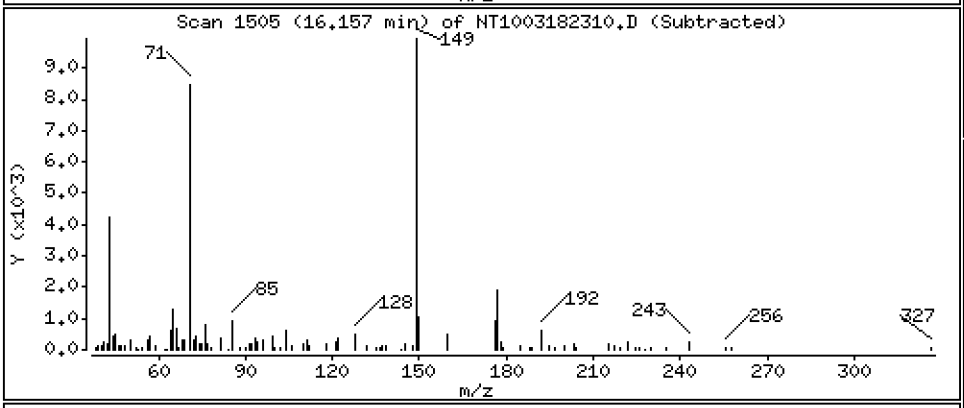
Column phase: ZB-5msi

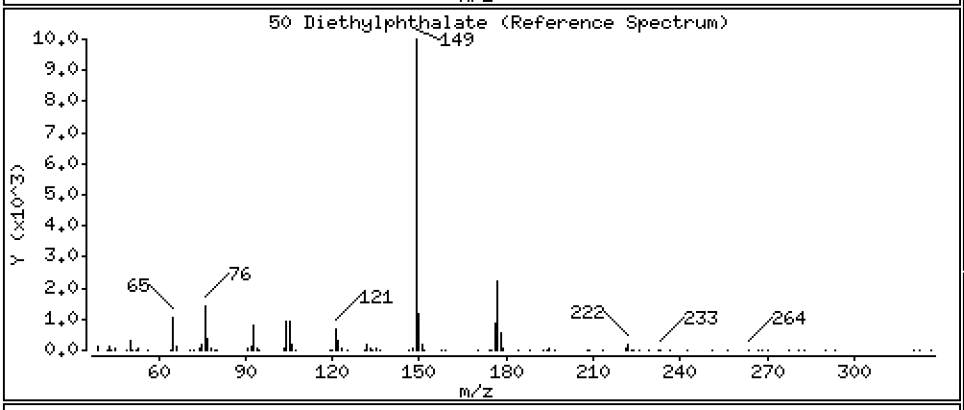
Column diameter: 0.25

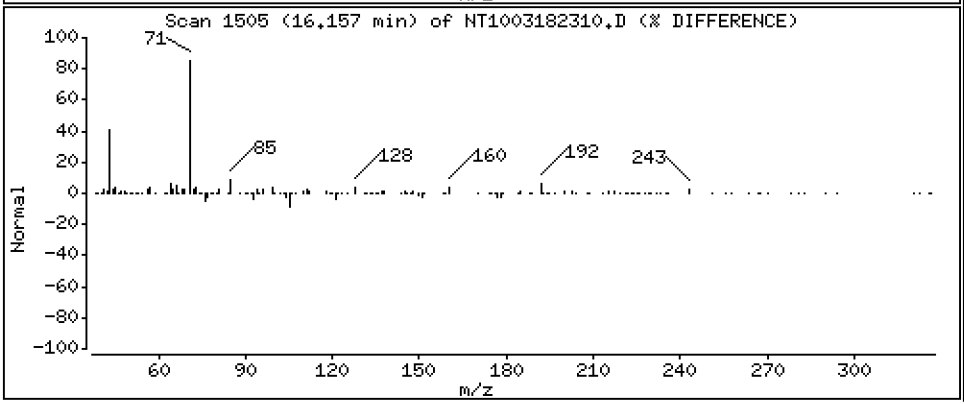
50 Diethylphthalate

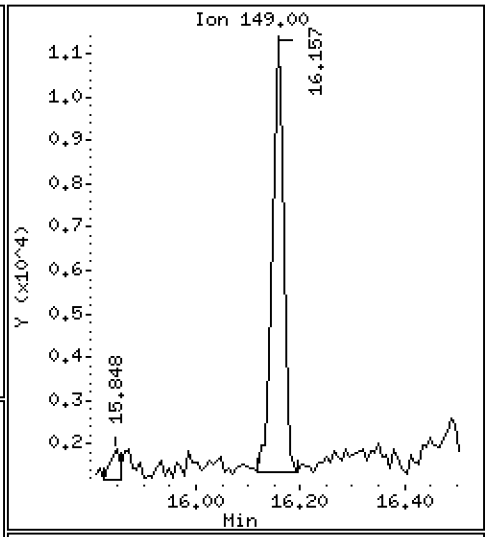
Concentration: 0.09479 ug/mL

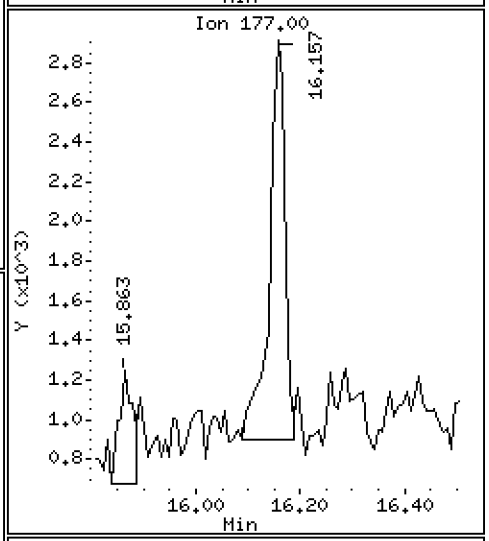


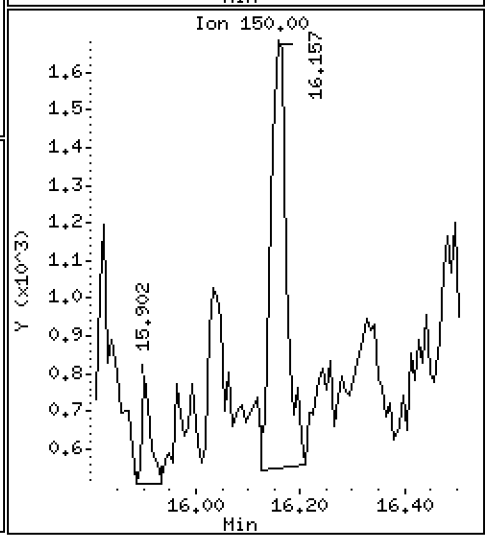












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

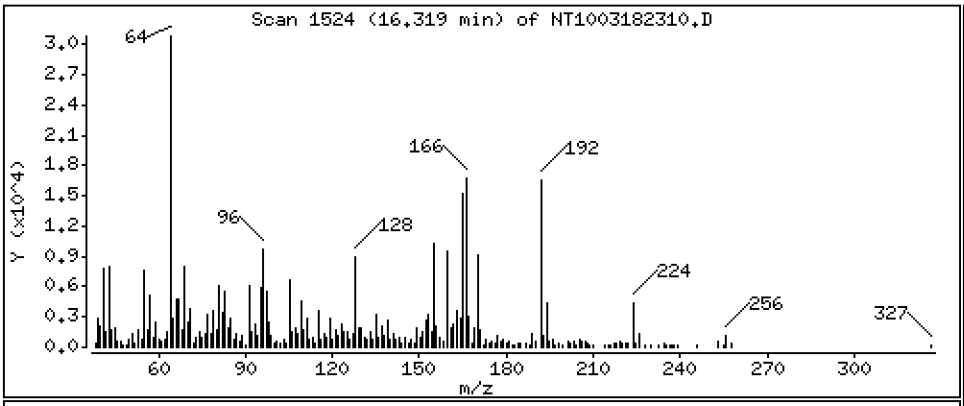
Operator: VTS

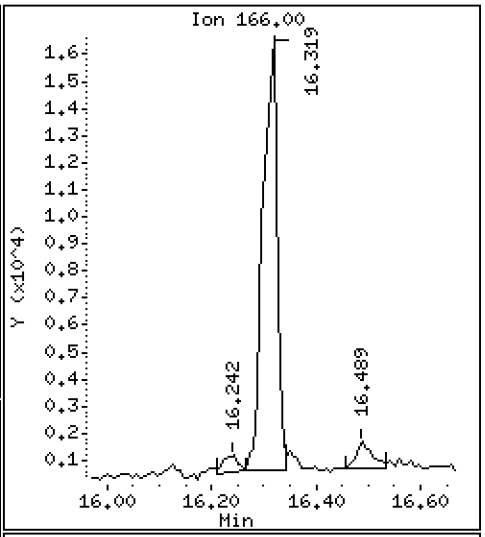
Column phase: ZB-5msi

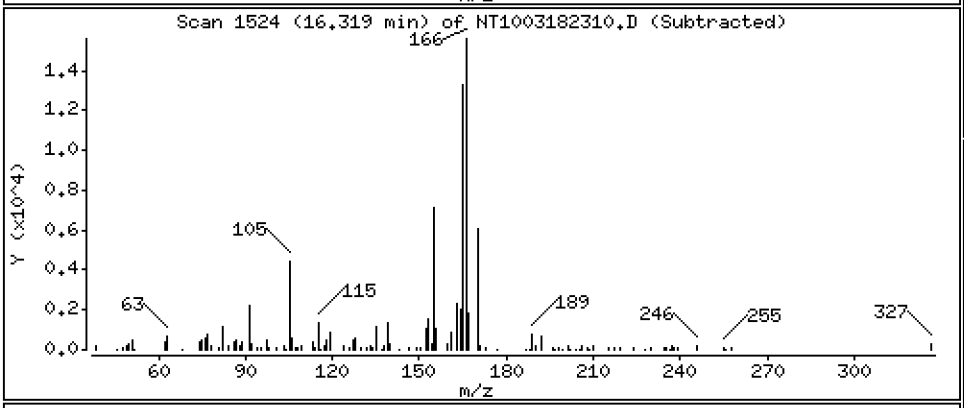
Column diameter: 0.25

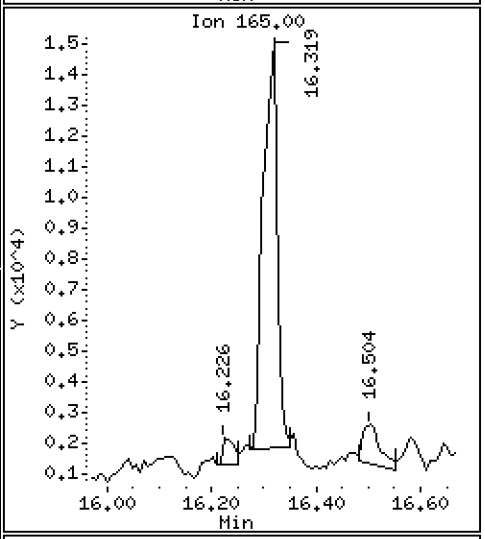
49 Fluorene

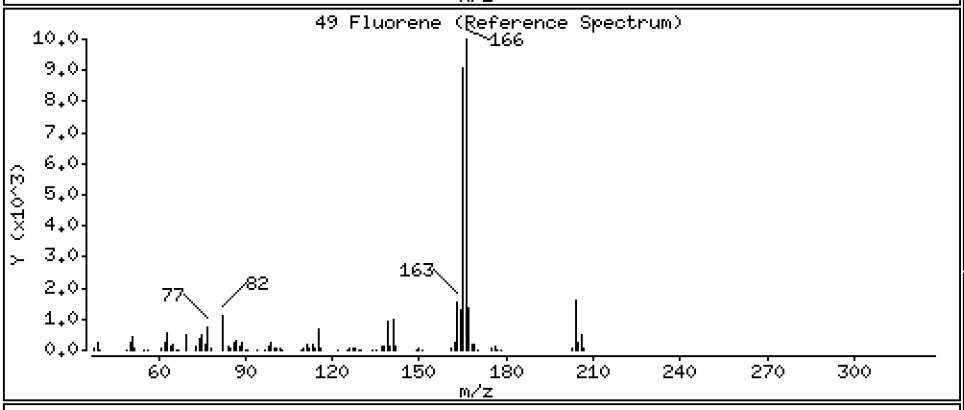
Concentration: 0.1299 ug/mL

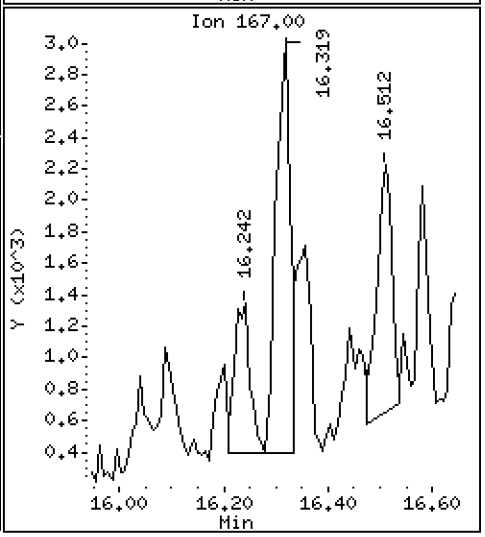


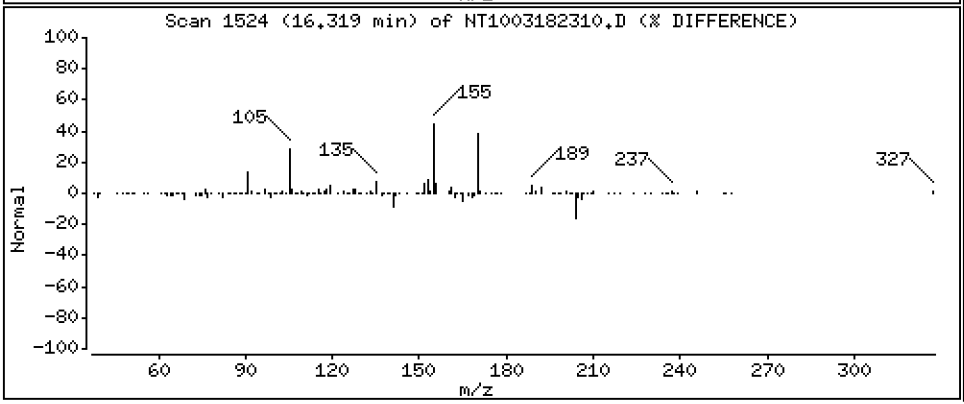












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

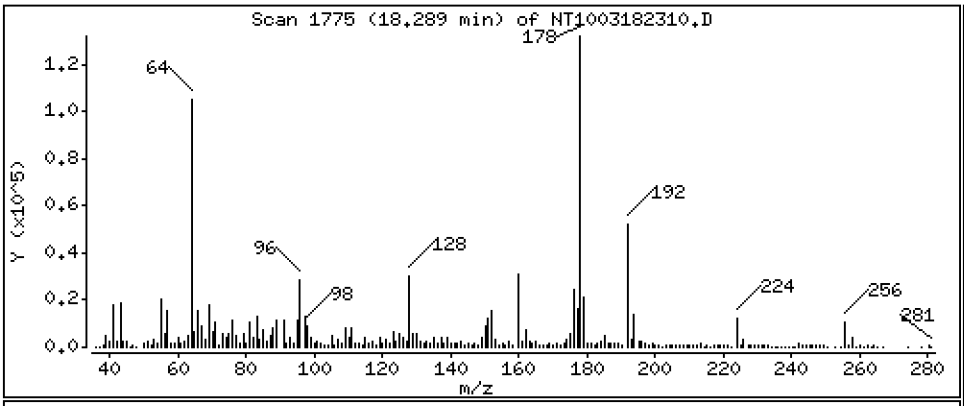
Operator: VTS

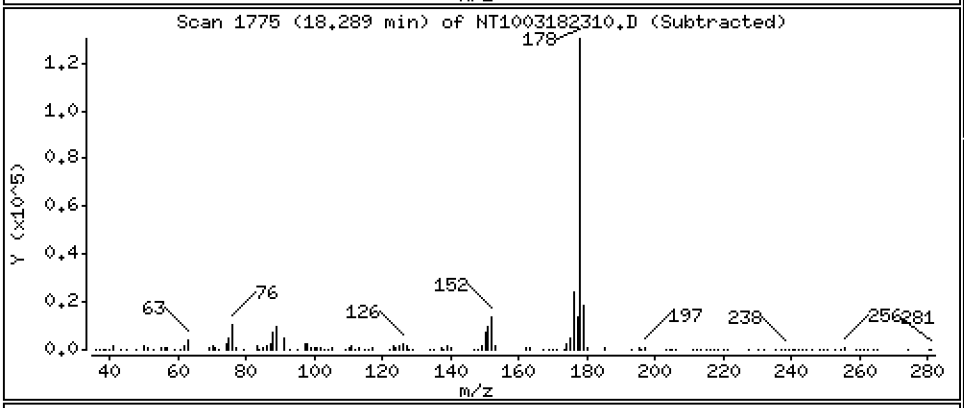
Column phase: ZB-5msi

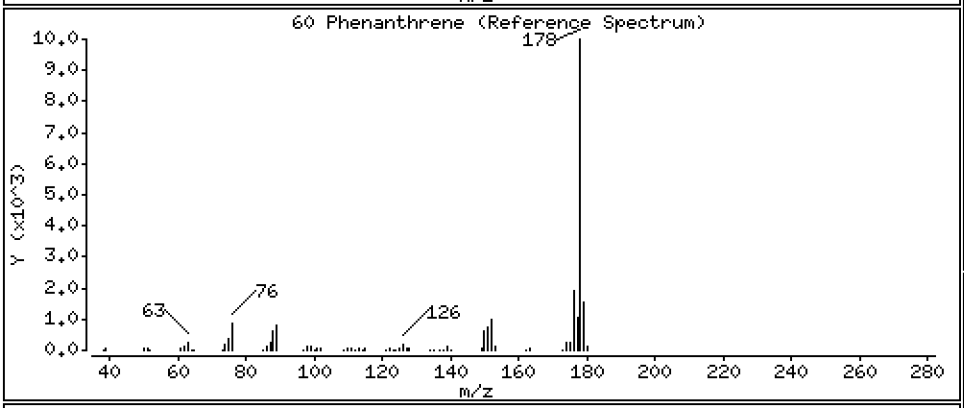
Column diameter: 0.25

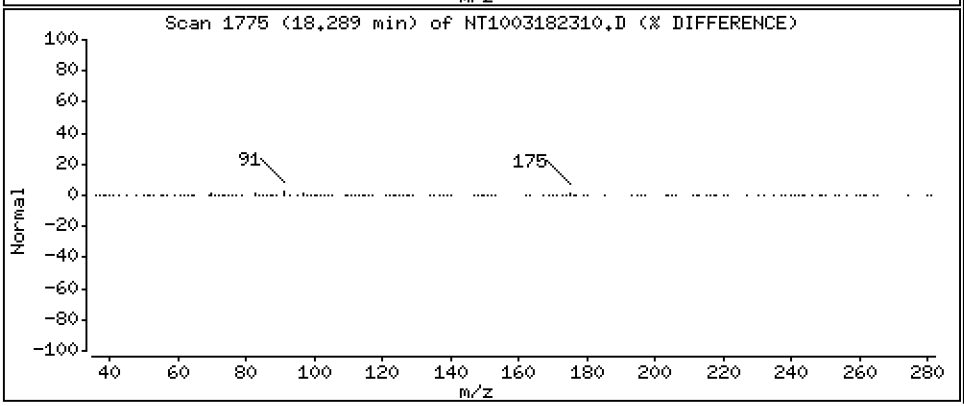
60 Phenanthrene

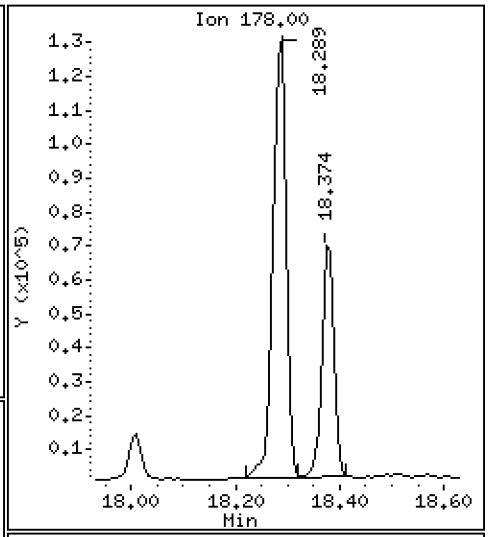
Concentration: 0.9505 ug/mL

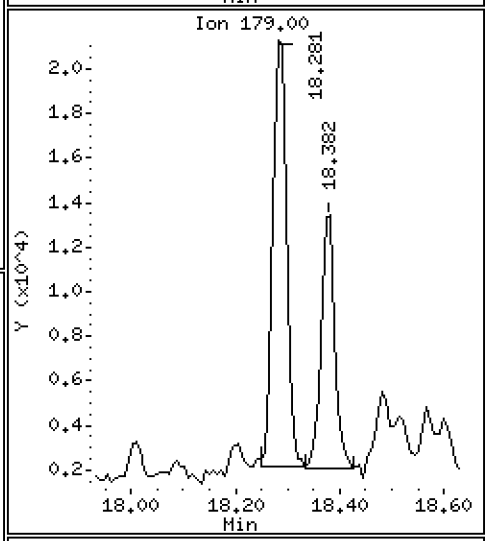


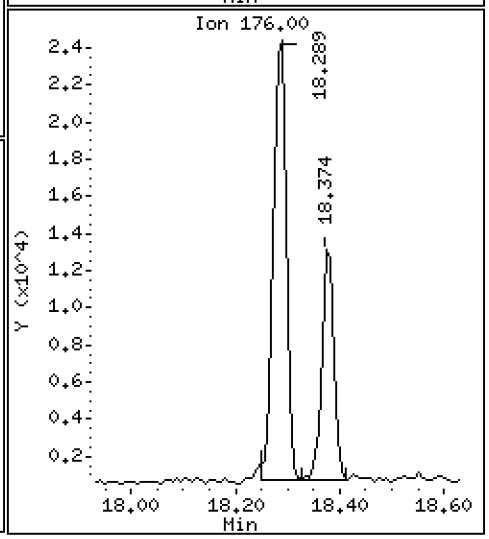












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

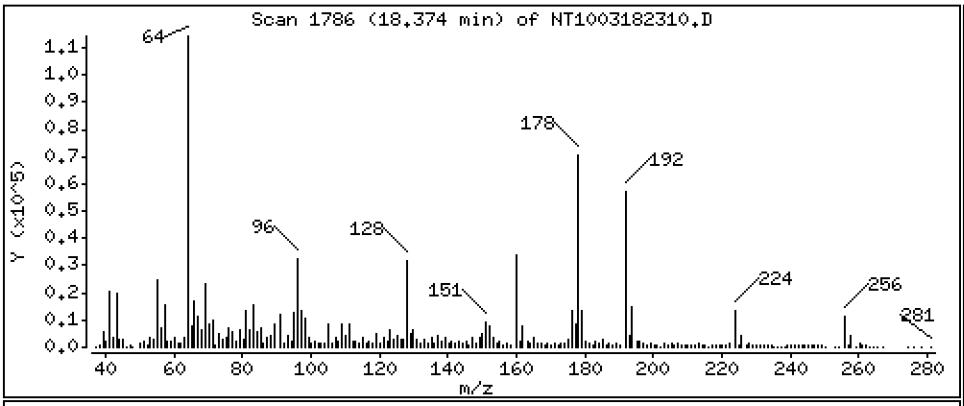
Operator: VTS

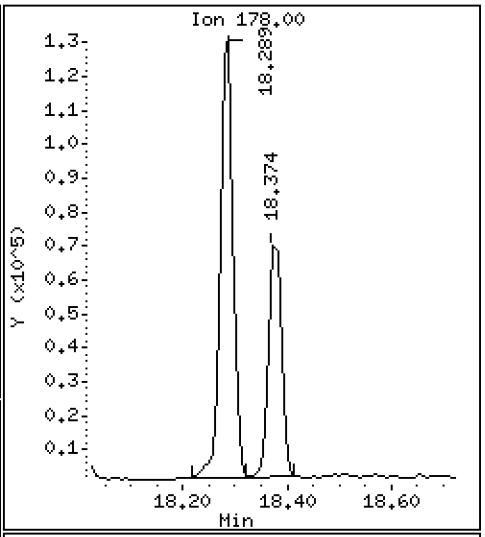
Column phase: ZB-5msi

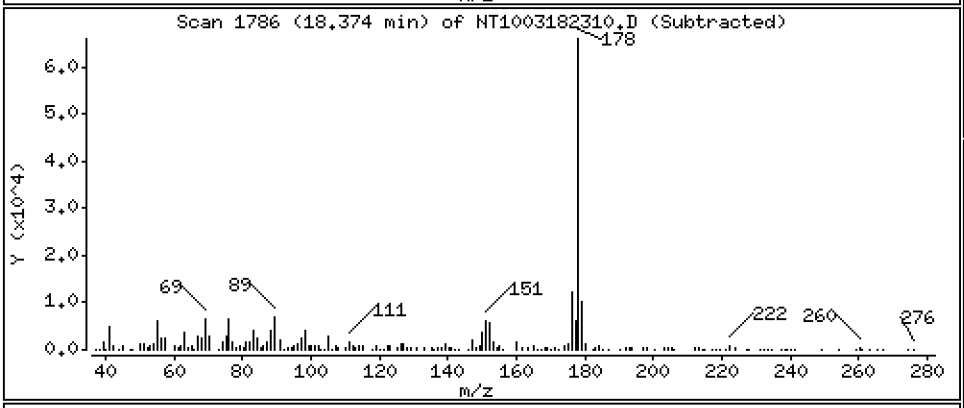
Column diameter: 0.25

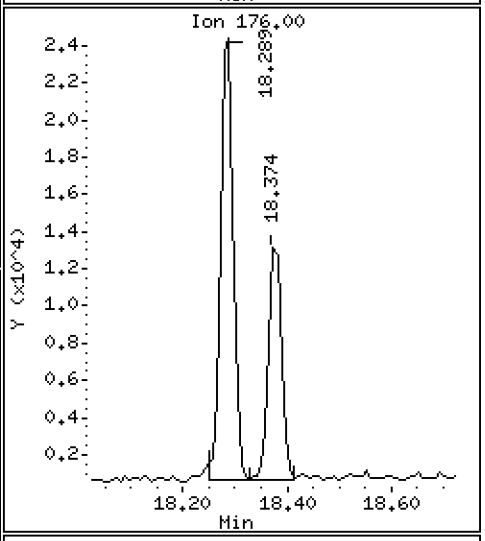
61 Anthracene

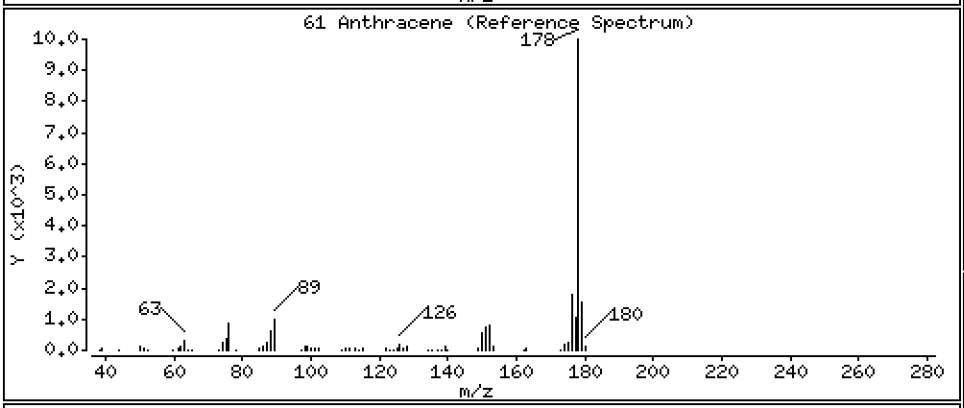
Concentration: 0.5084 ug/mL

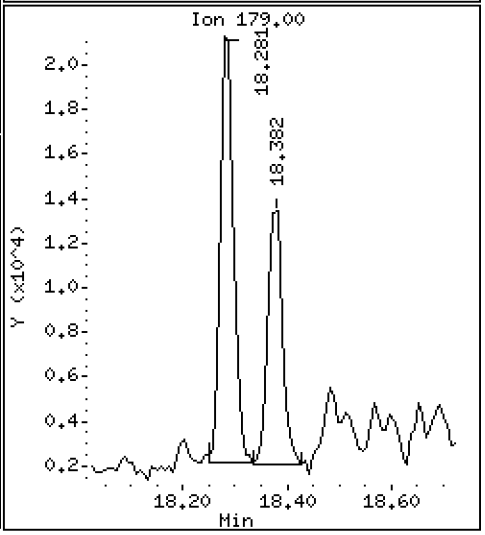


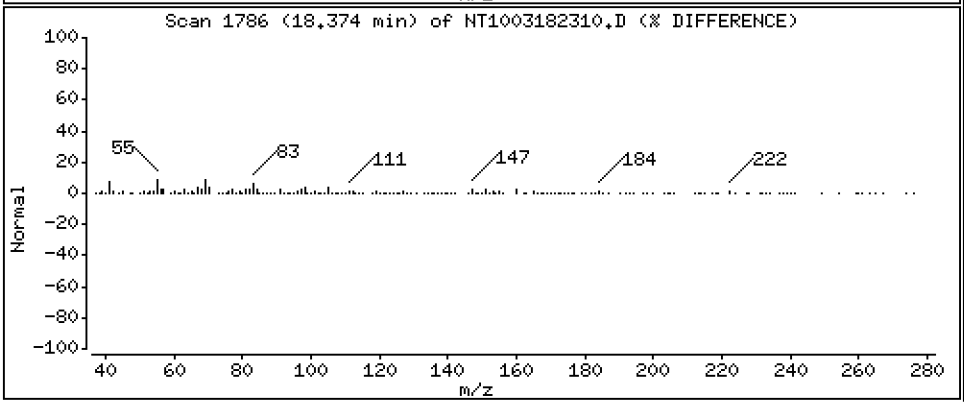












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

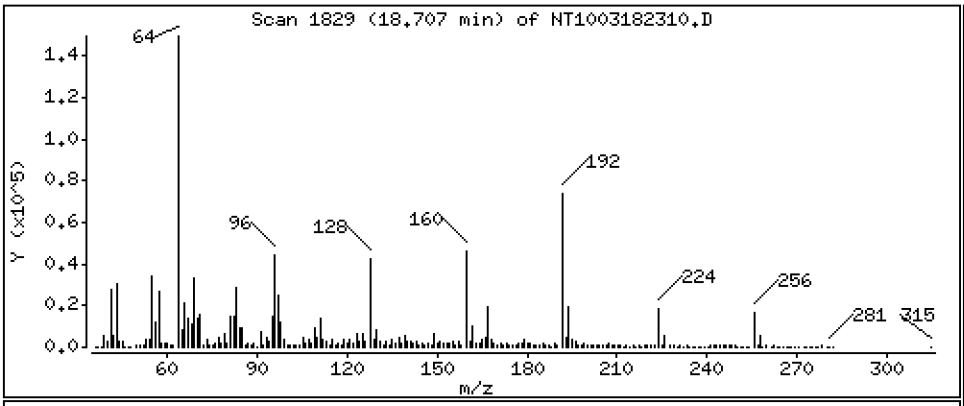
Operator: VTS

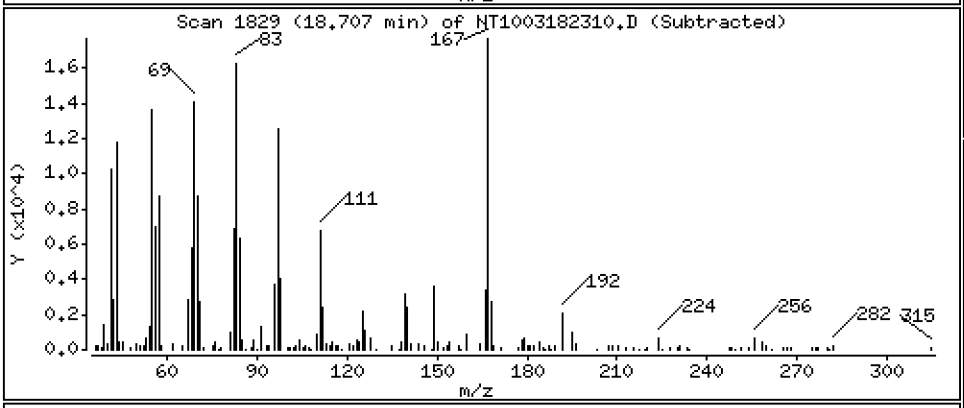
Column phase: ZB-5msi

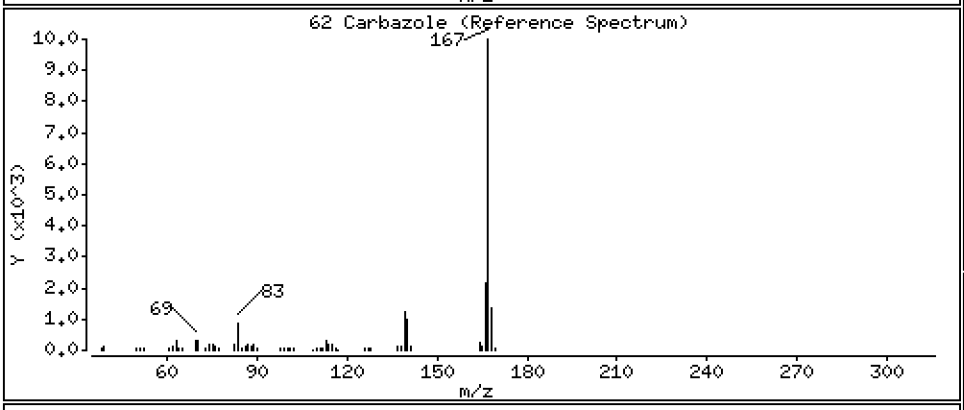
Column diameter: 0.25

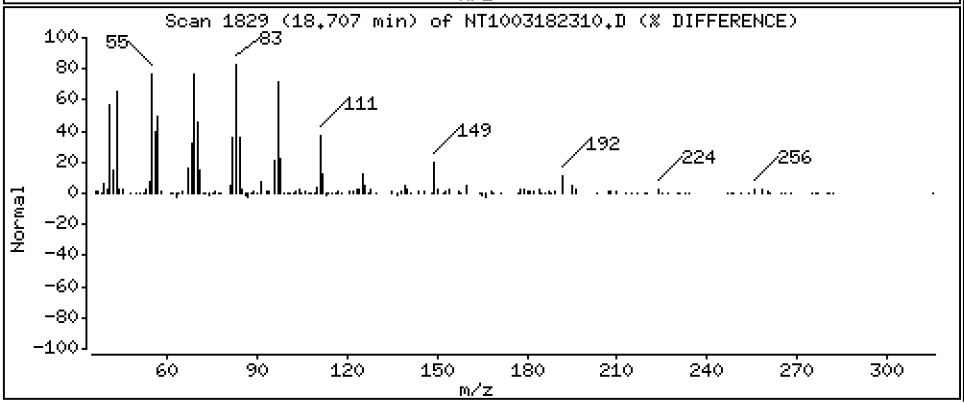
62 Carbazole

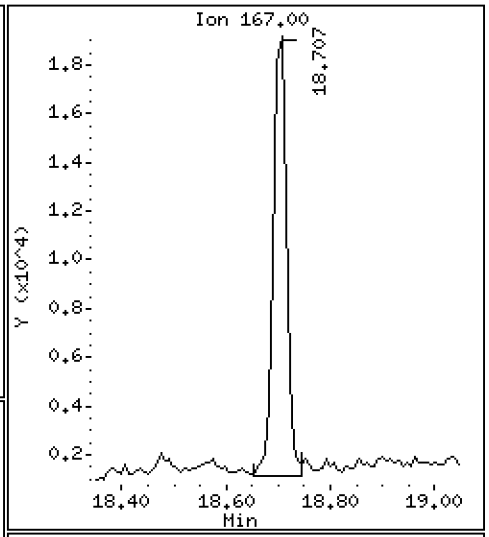
Concentration: 0.1534 ug/mL

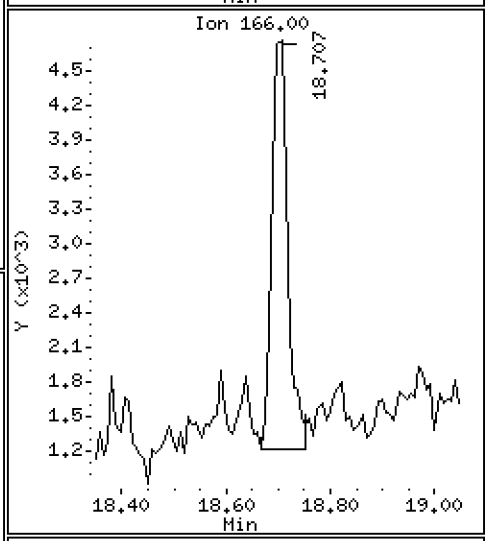


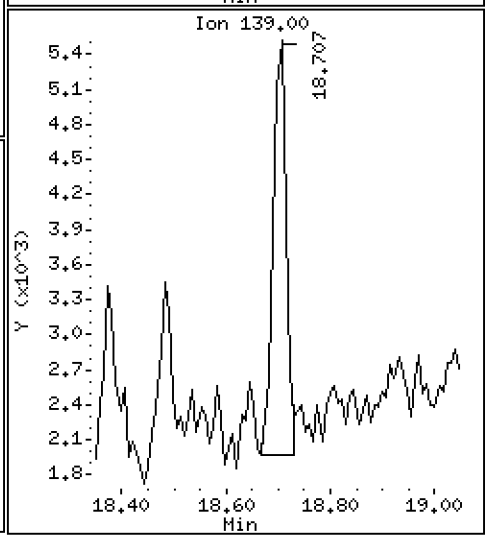












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

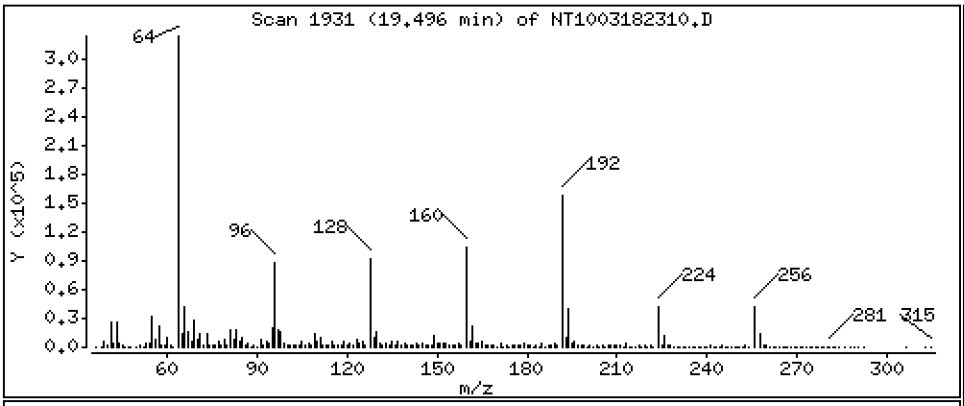
Operator: VTS

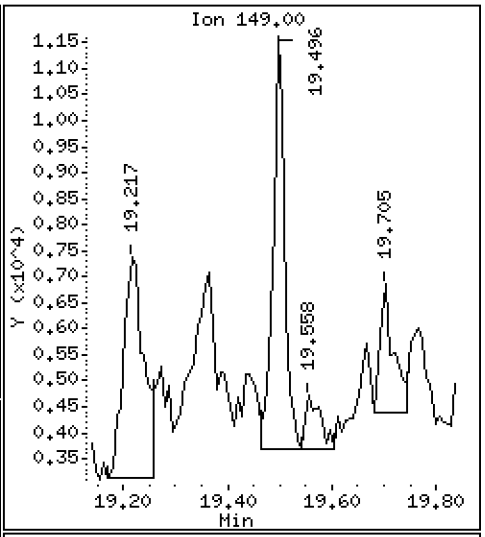
Column phase: ZB-5msi

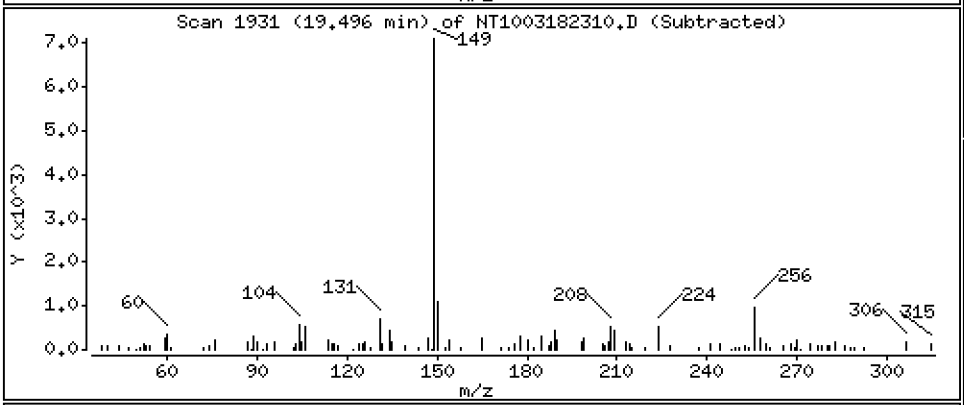
Column diameter: 0.25

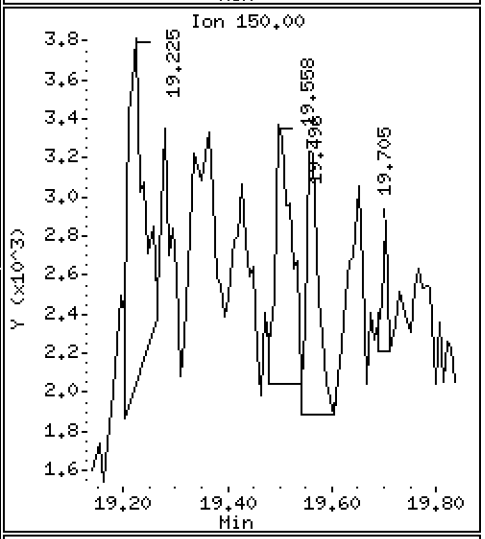
63 Di-n-butylphthalate

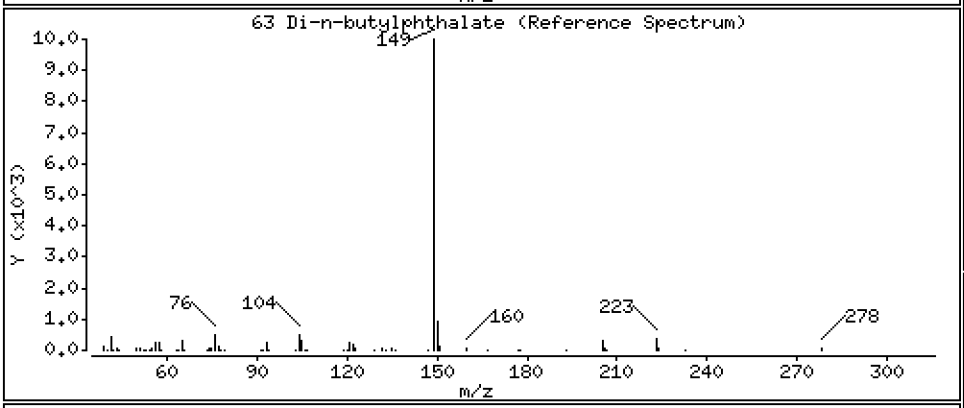
Concentration: 0.04560 ug/mL

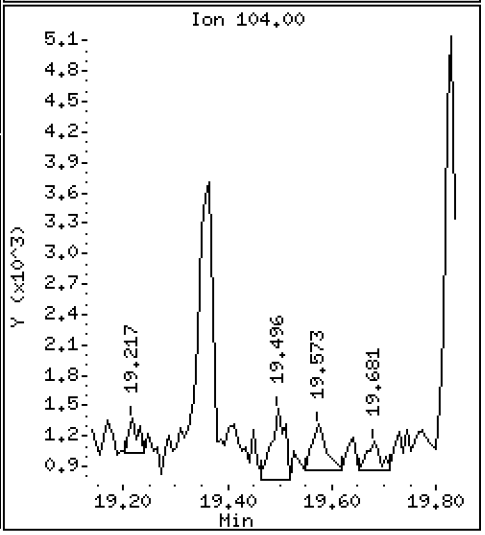


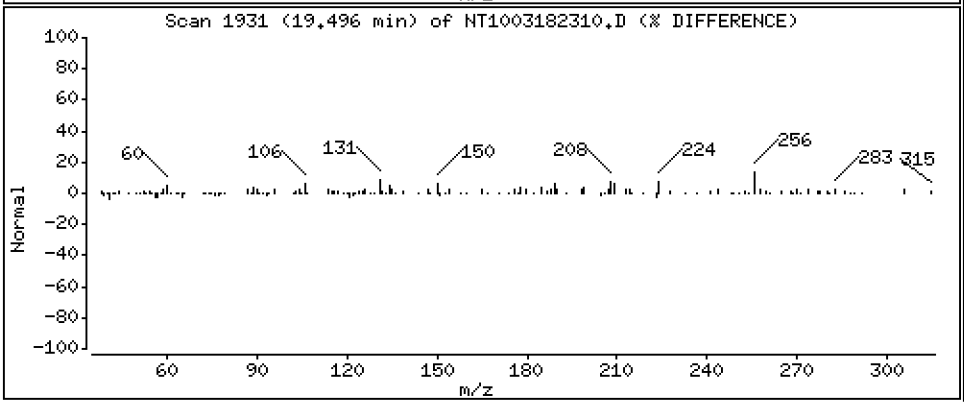












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

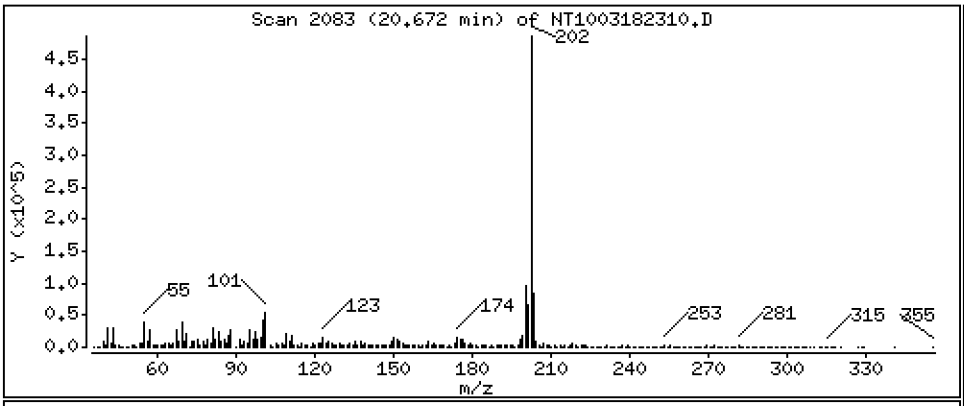
Operator: VTS

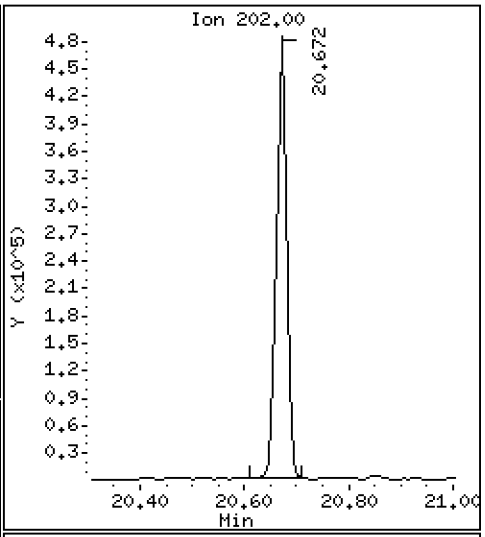
Column phase: ZB-5msi

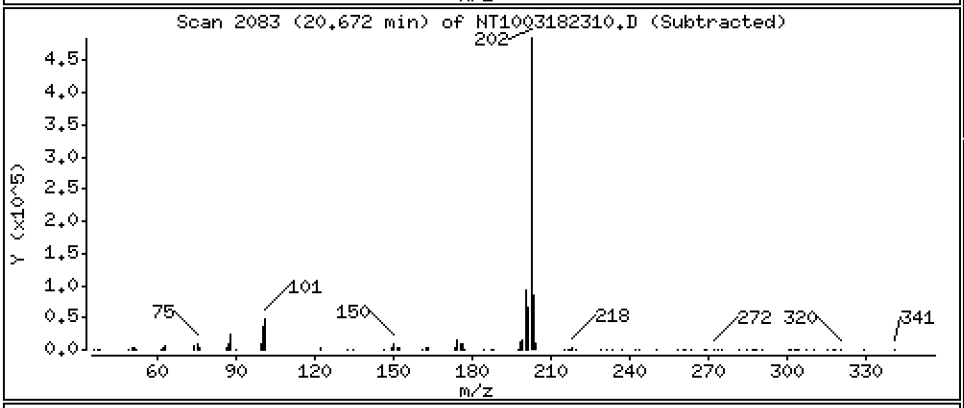
Column diameter: 0.25

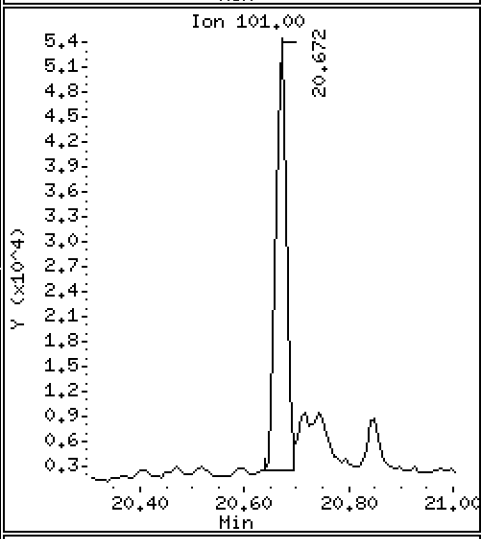
64 Fluoranthene

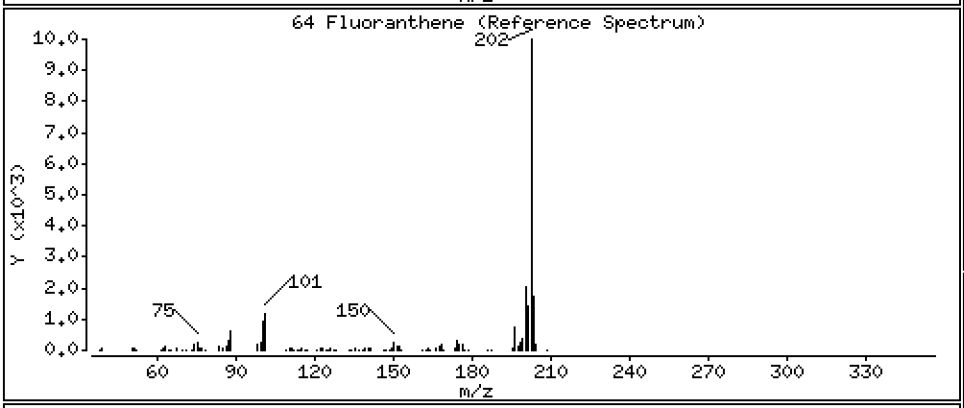
Concentration: 2.091 ug/mL

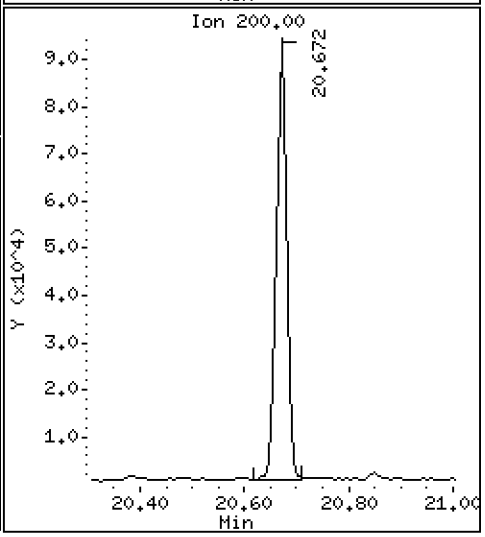


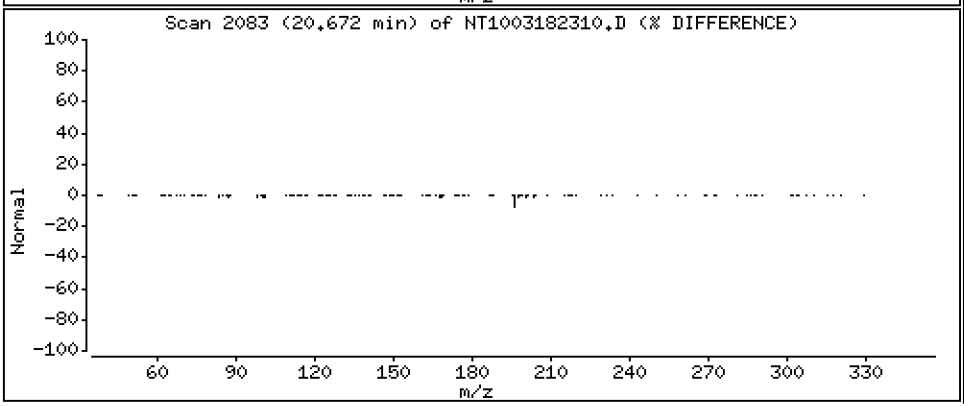












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

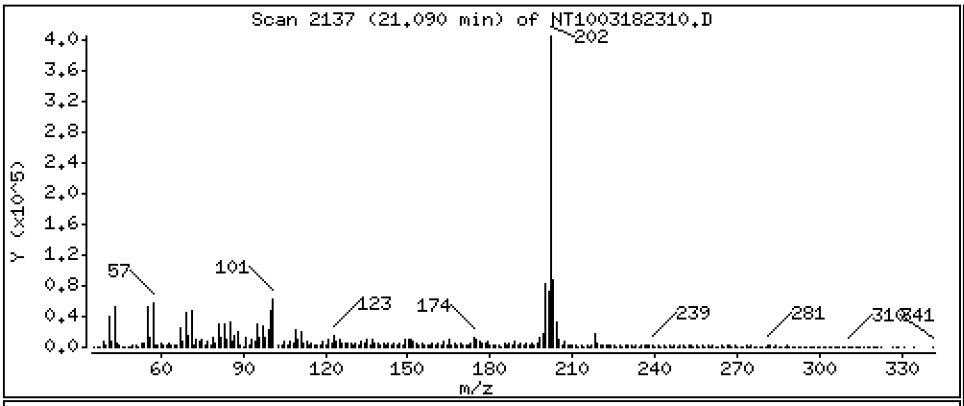
Operator: VTS

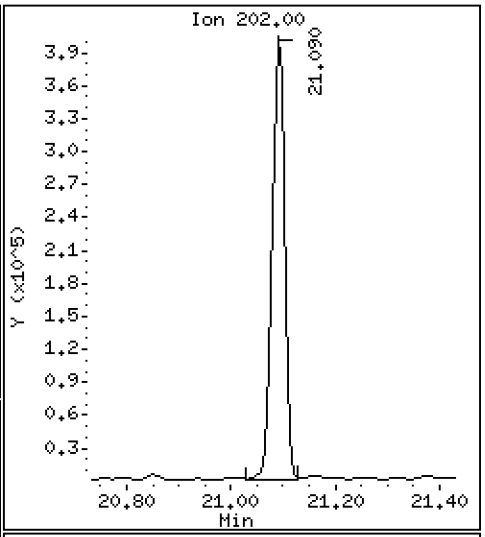
Column phase: ZB-5msi

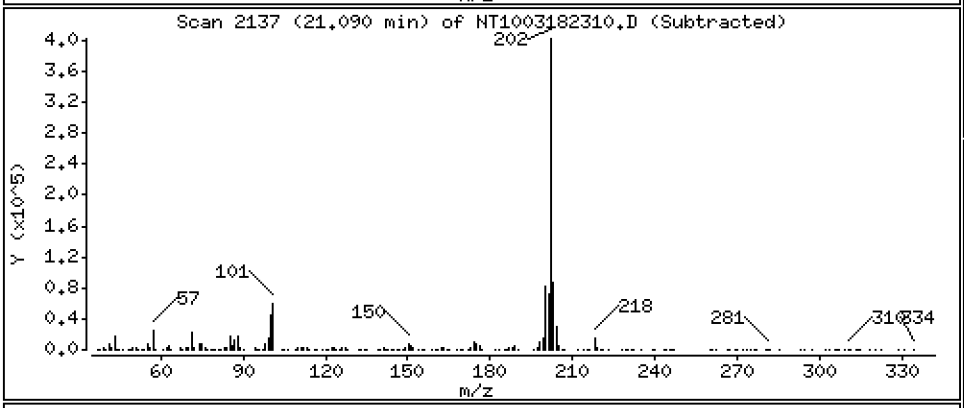
Column diameter: 0.25

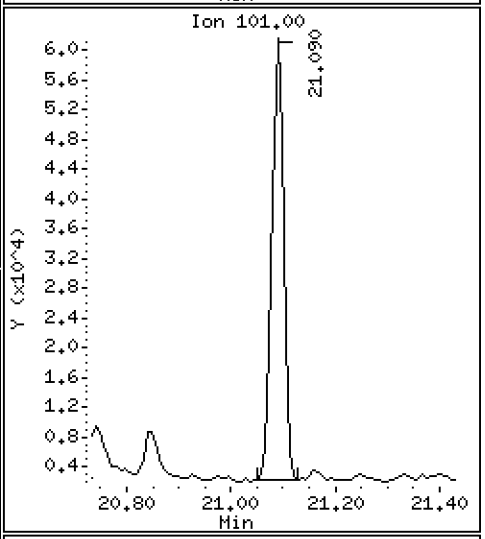
65 Pyrene

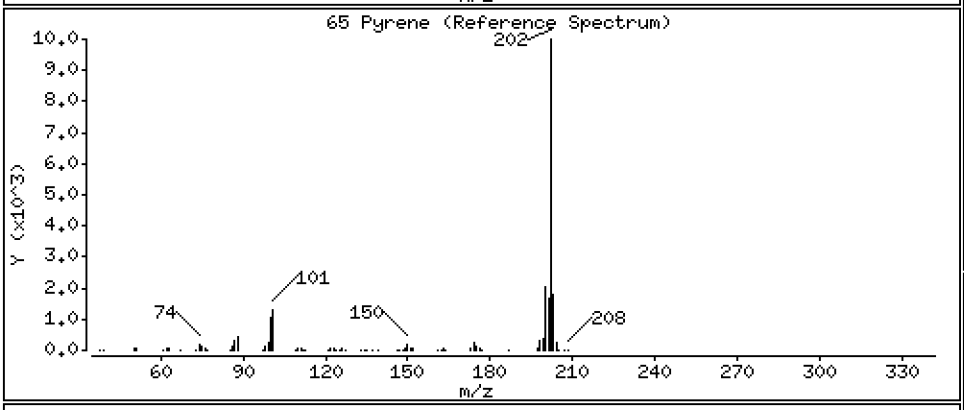
Concentration: 1.987 ug/mL

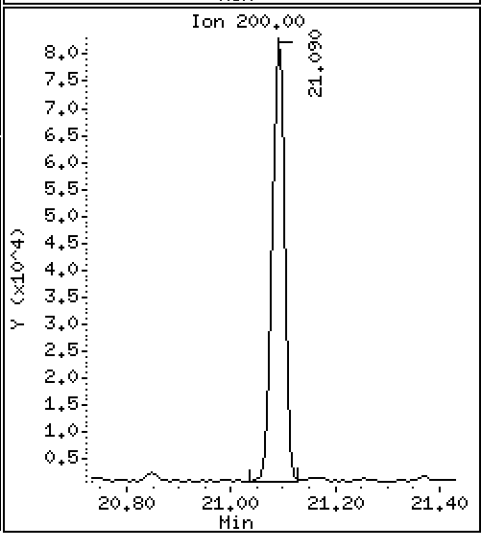


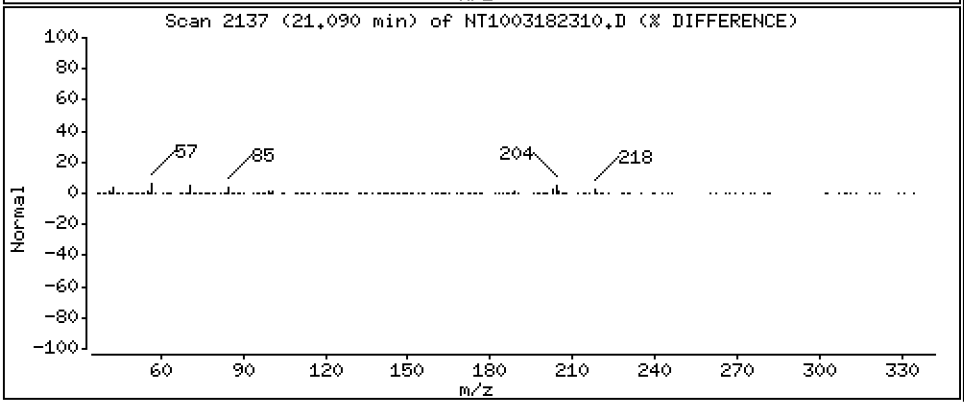












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

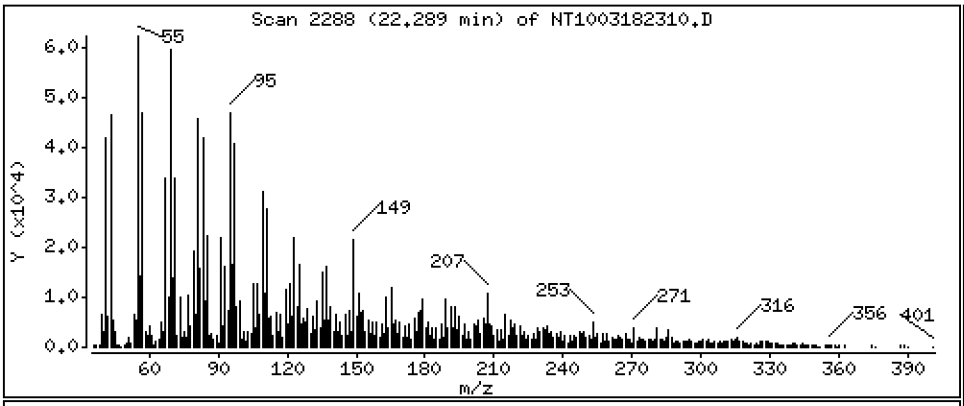
Operator: VTS

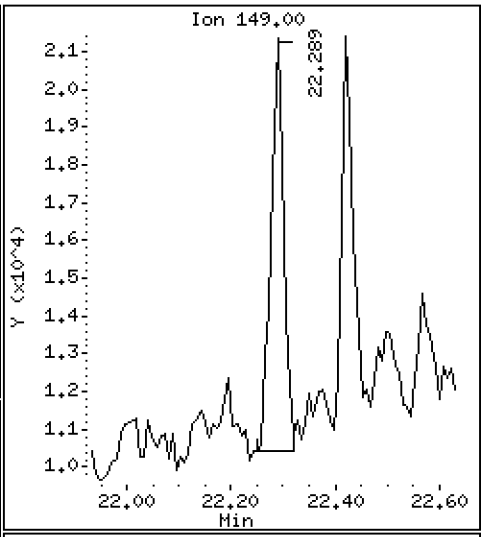
Column phase: ZB-5msi

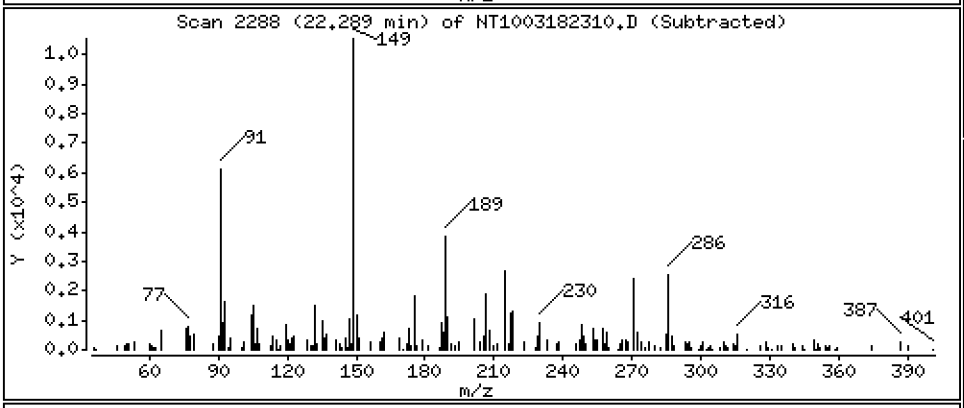
Column diameter: 0.25

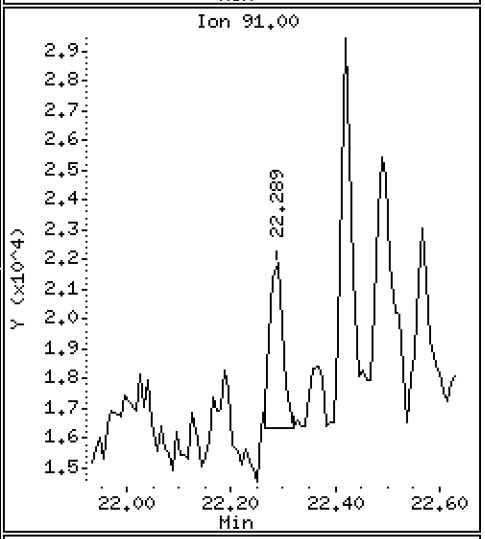
67 Butylbenzylphthalate

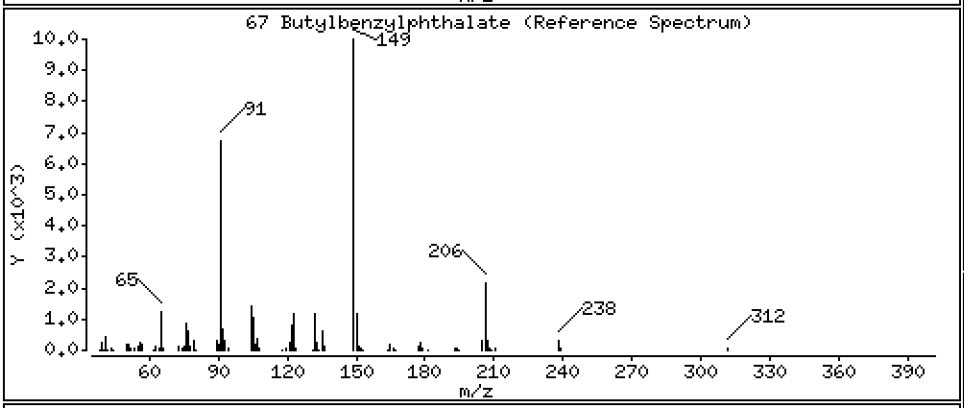
Concentration: 0.1581 ug/mL

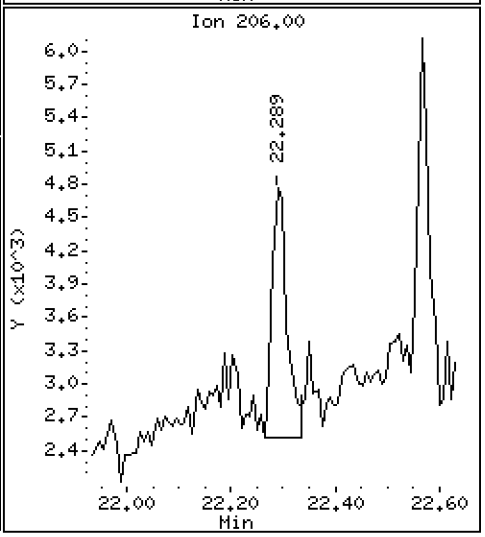


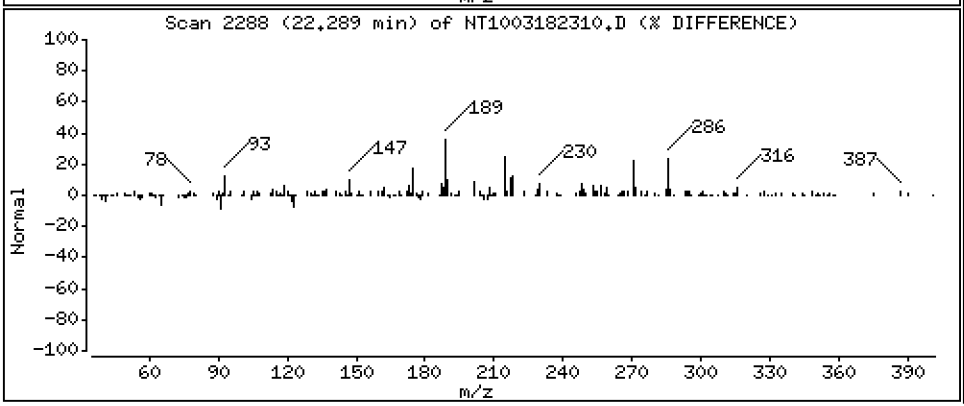












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

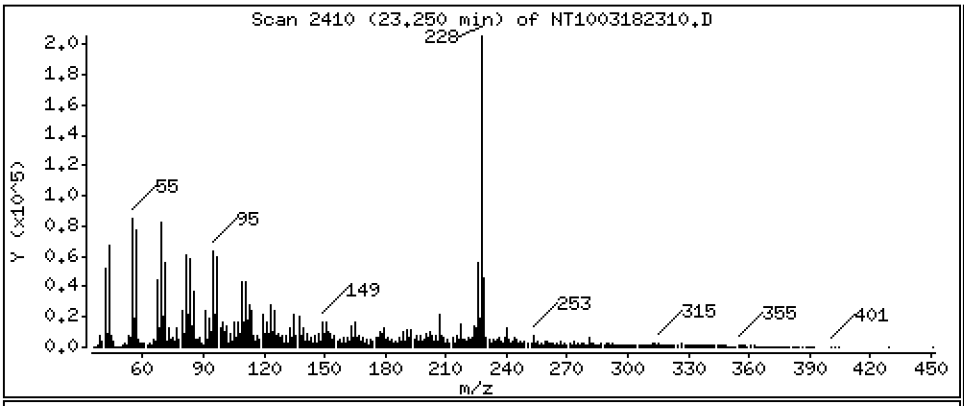
Operator: VTS

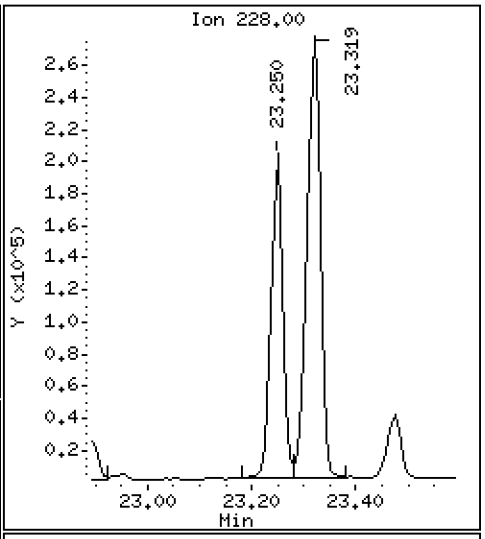
Column phase: ZB-5msi

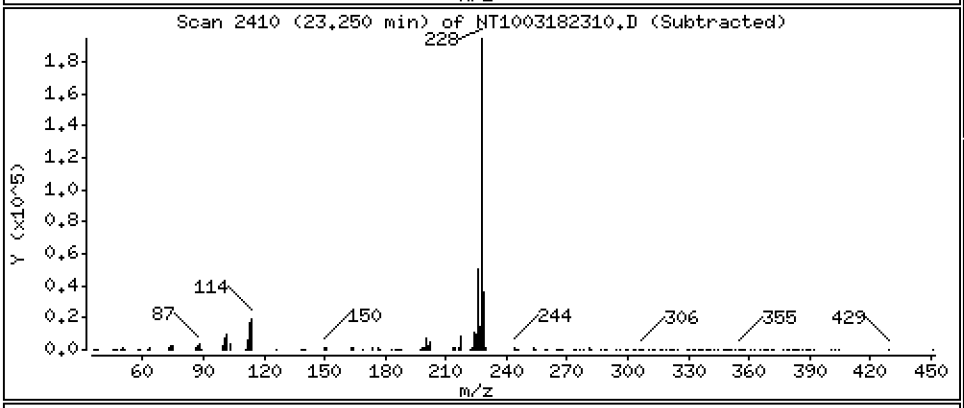
Column diameter: 0.25

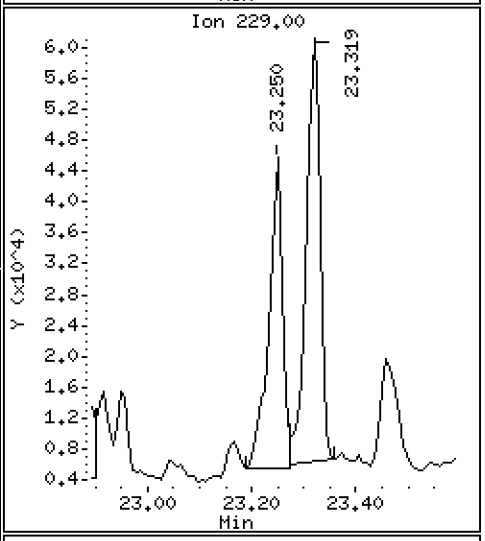
68 Benzo(a)anthracene

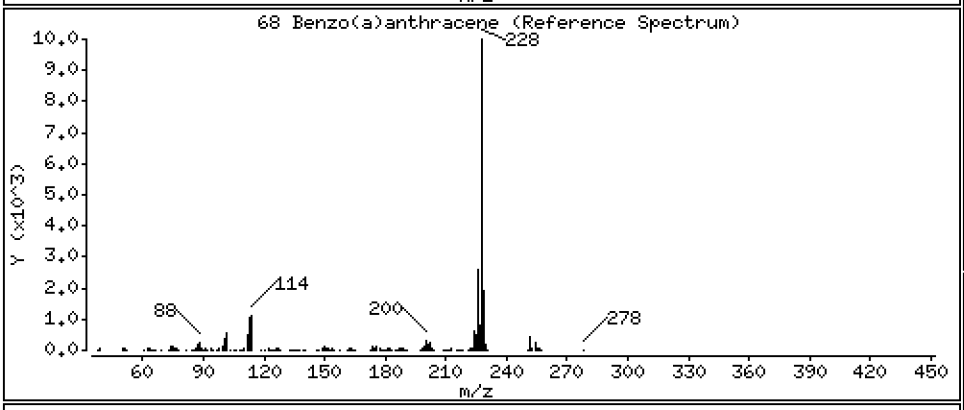
Concentration: 1.135 ug/mL

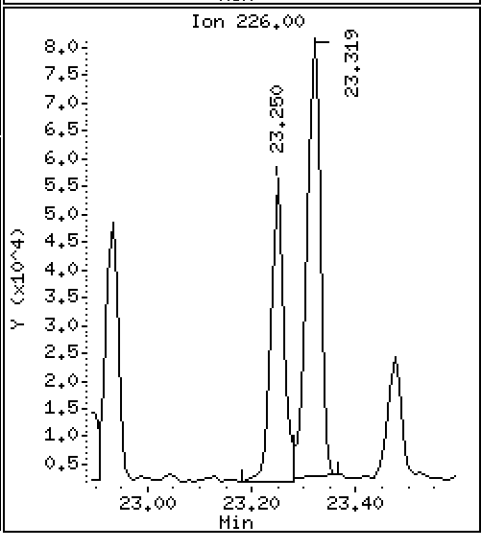


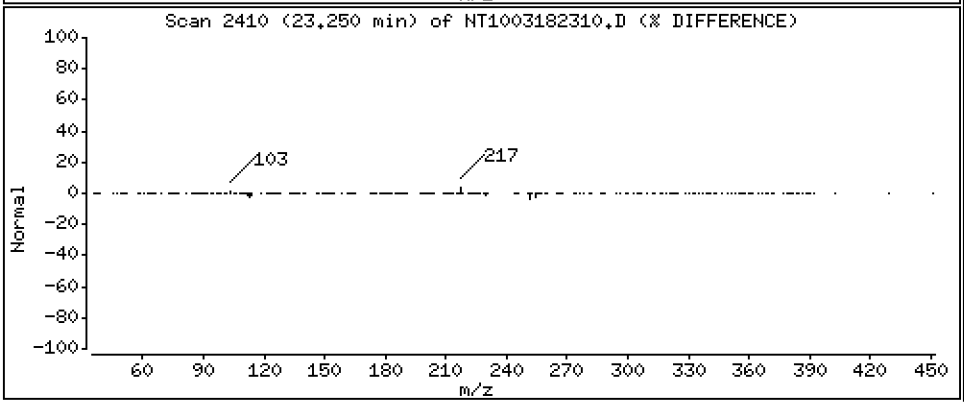












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

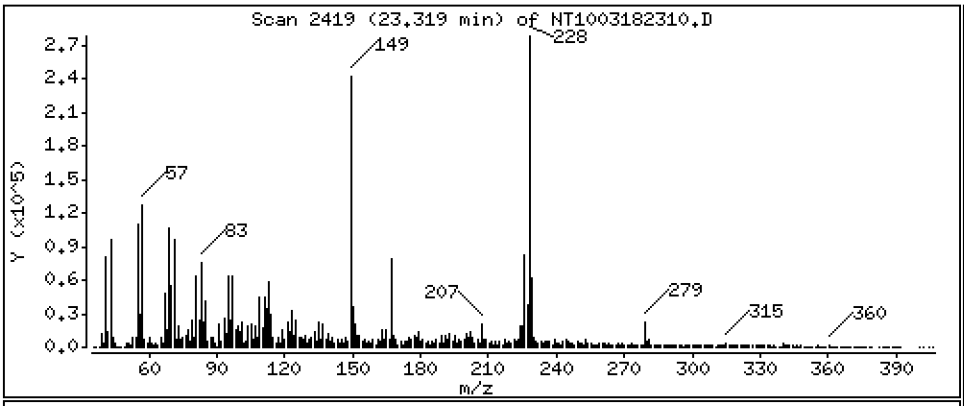
Operator: VTS

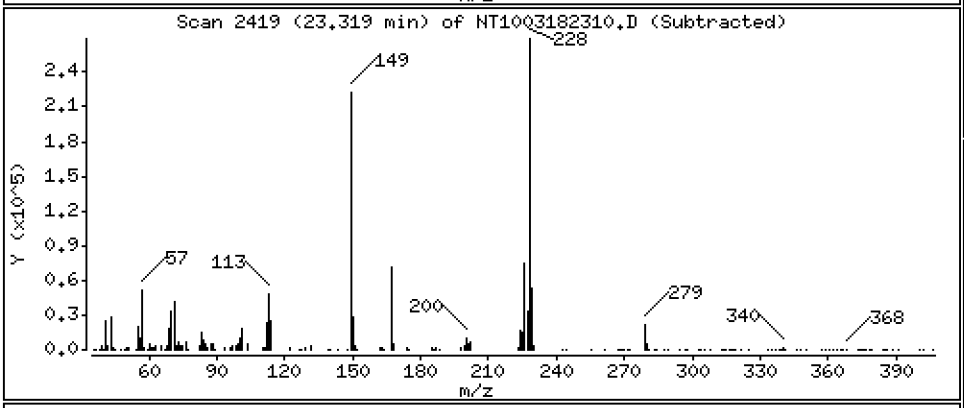
Column phase: ZB-5msi

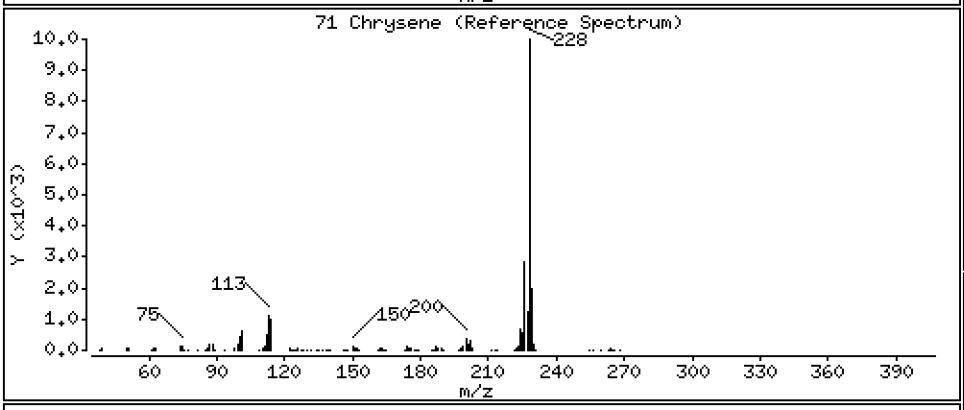
Column diameter: 0.25

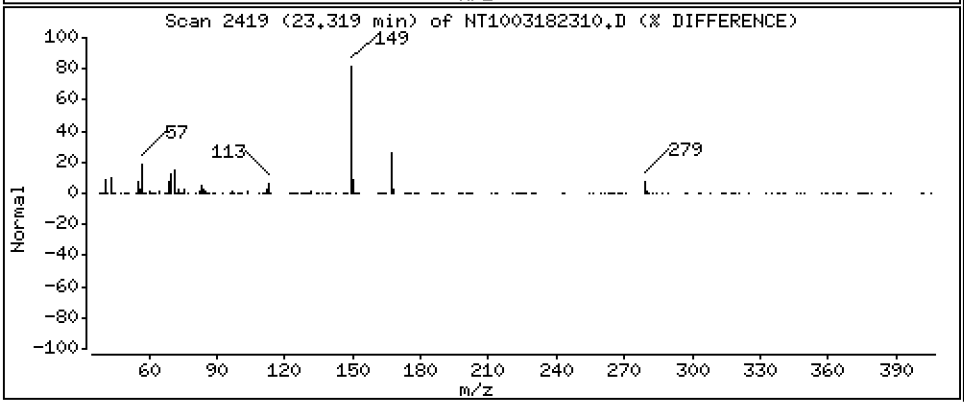
71 Chrysene

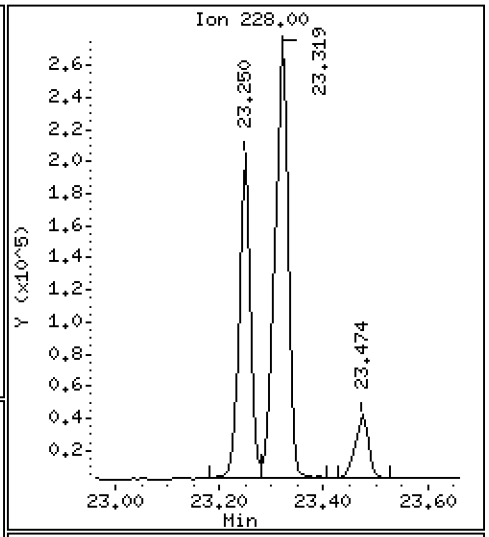
Concentration: 1.787 ug/mL

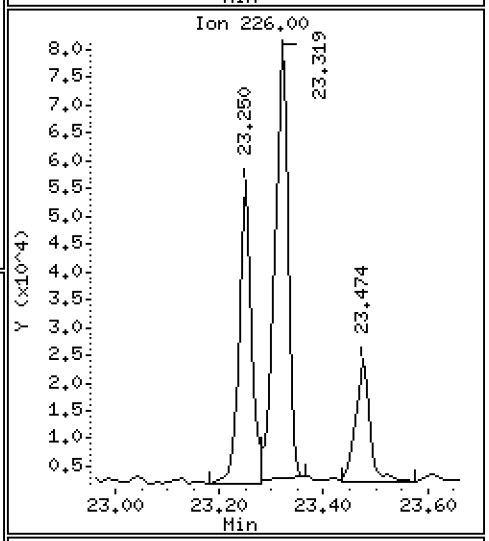


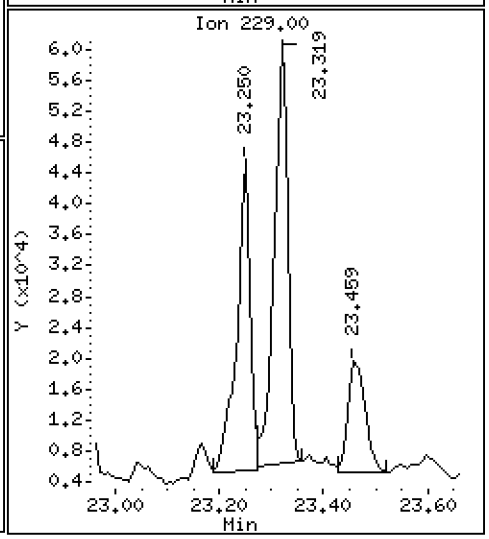












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

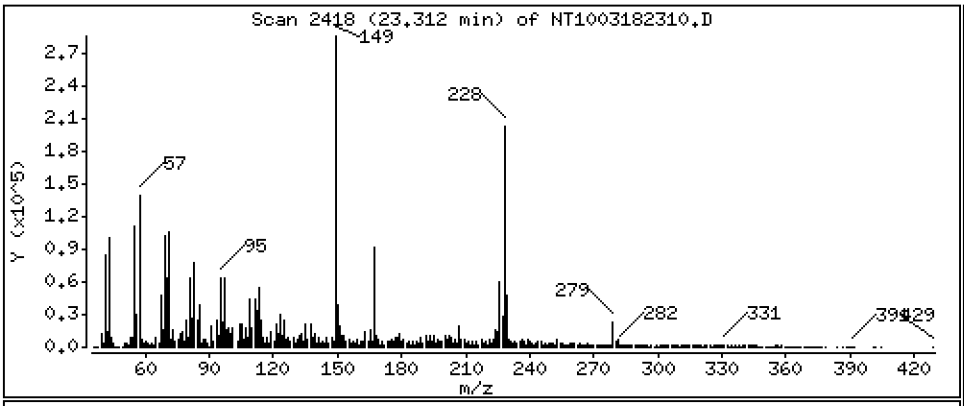
Operator: VTS

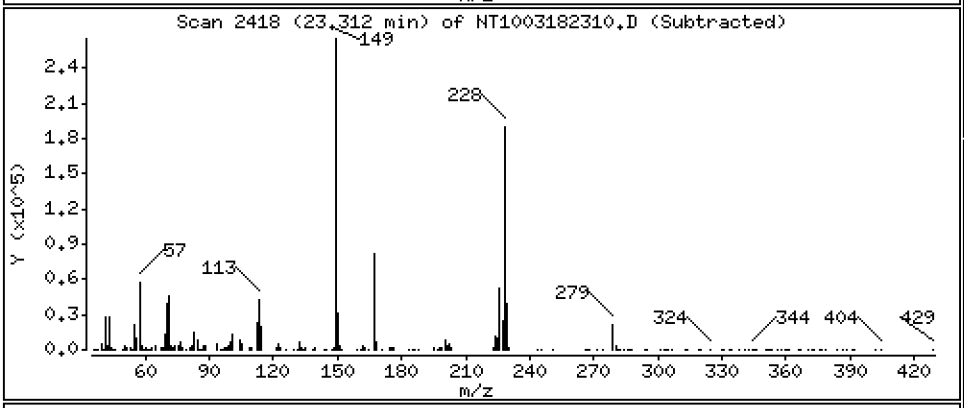
Column phase: ZB-5msi

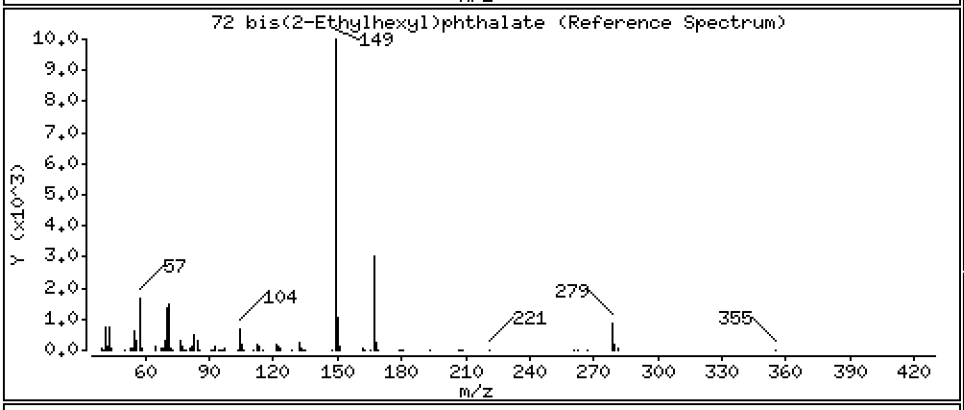
Column diameter: 0.25

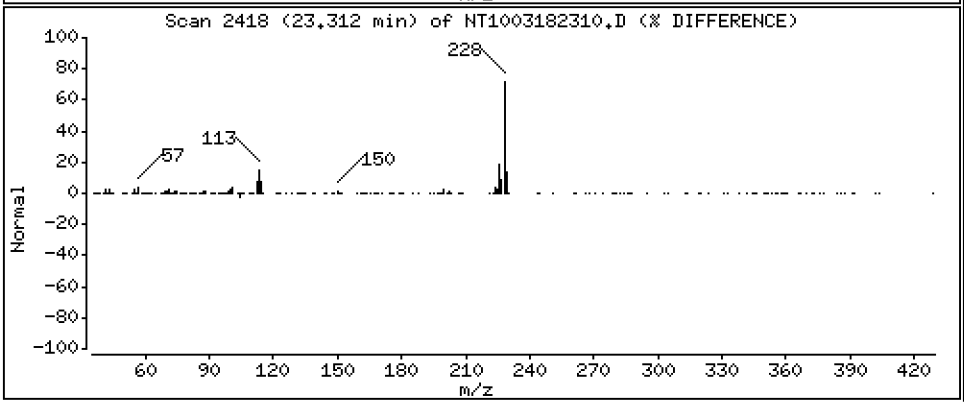
72 bis(2-Ethylhexyl)phthalate

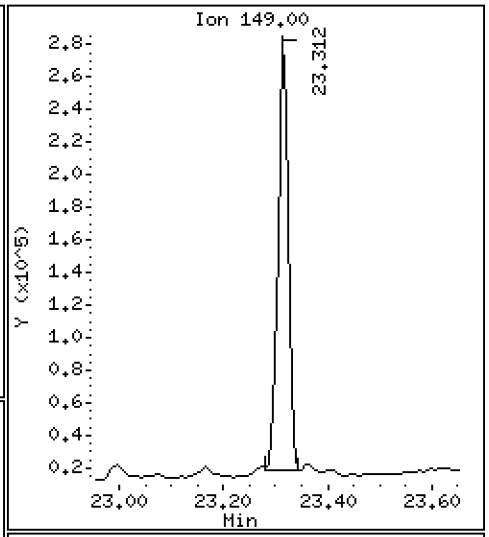
Concentration: 1.745 ug/mL

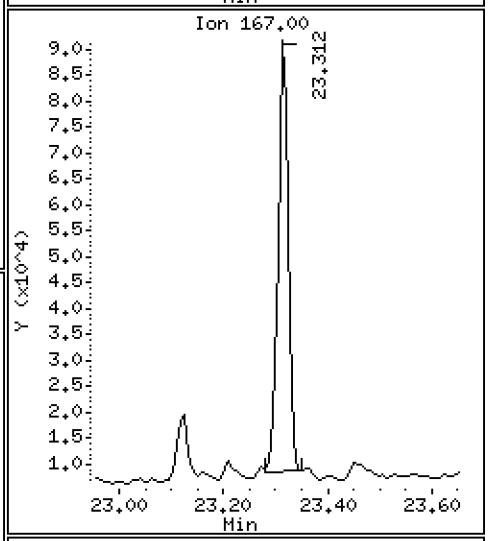


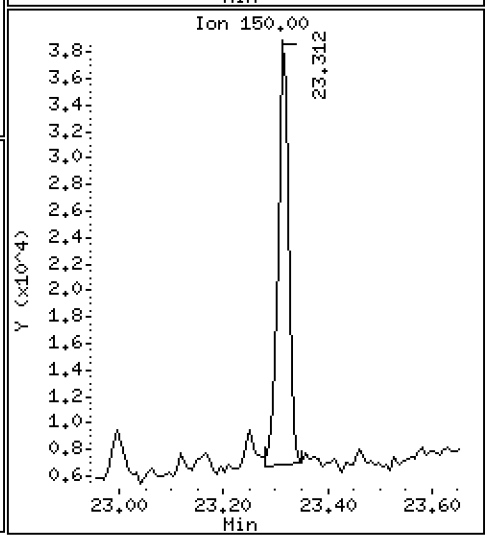












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

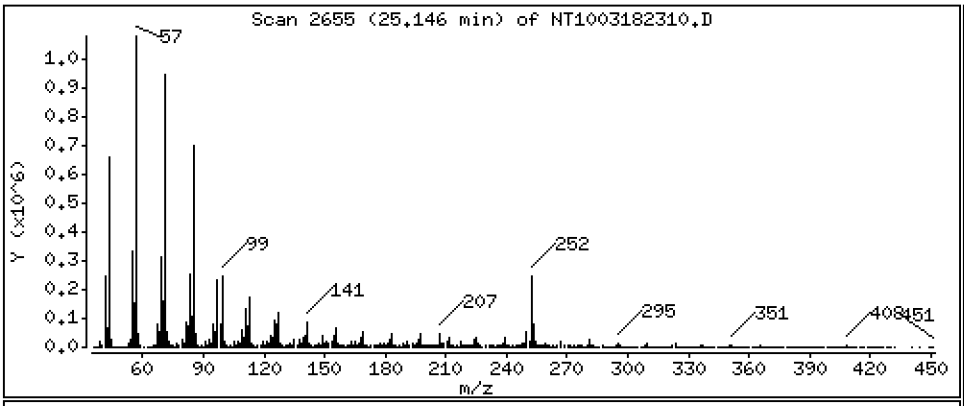
Operator: VTS

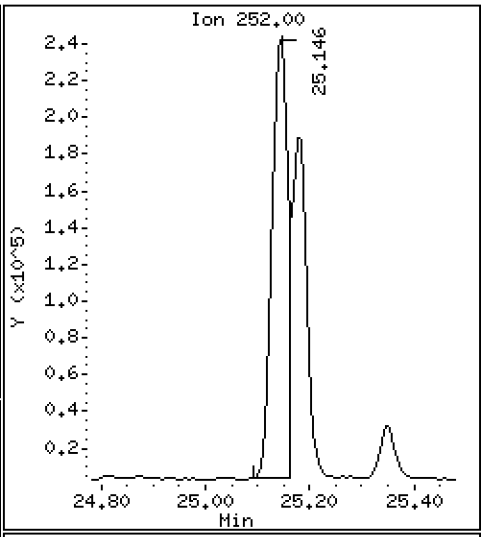
Column phase: ZB-5msi

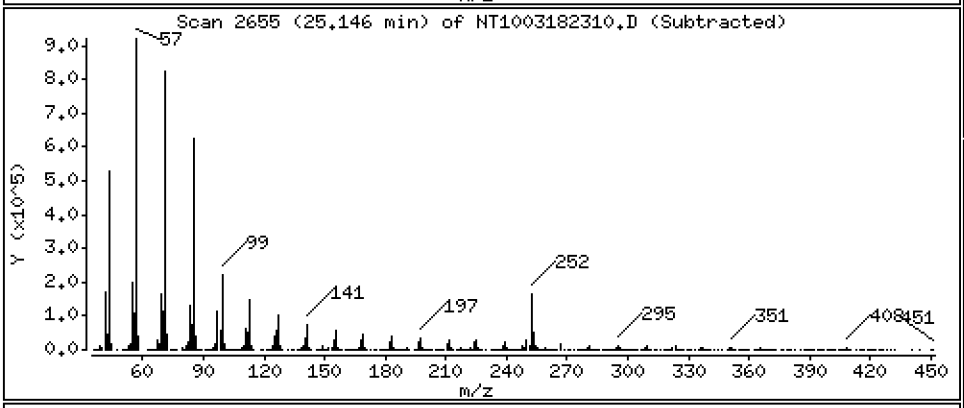
Column diameter: 0.25

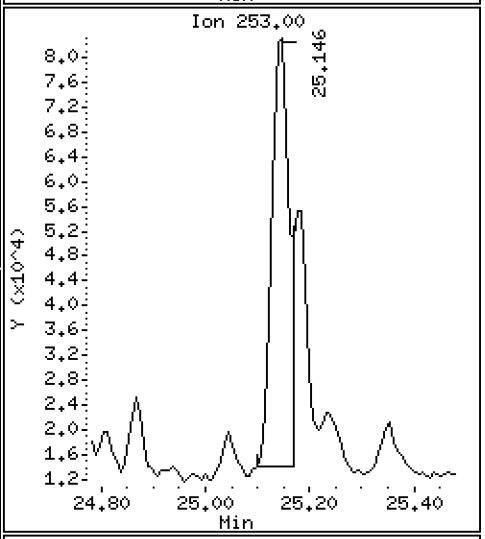
74 Benzo(b)fluoranthene

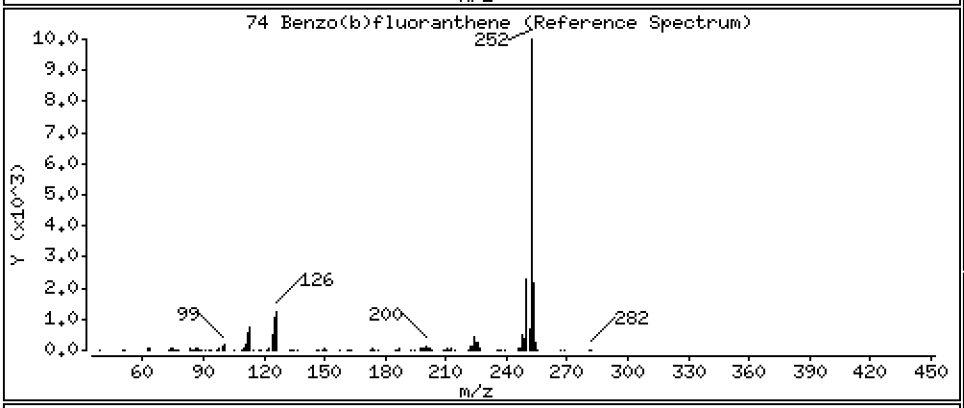
Concentration: 1.727 ug/mL

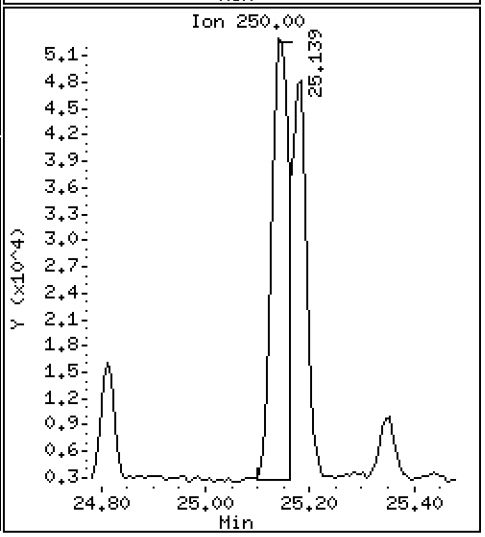


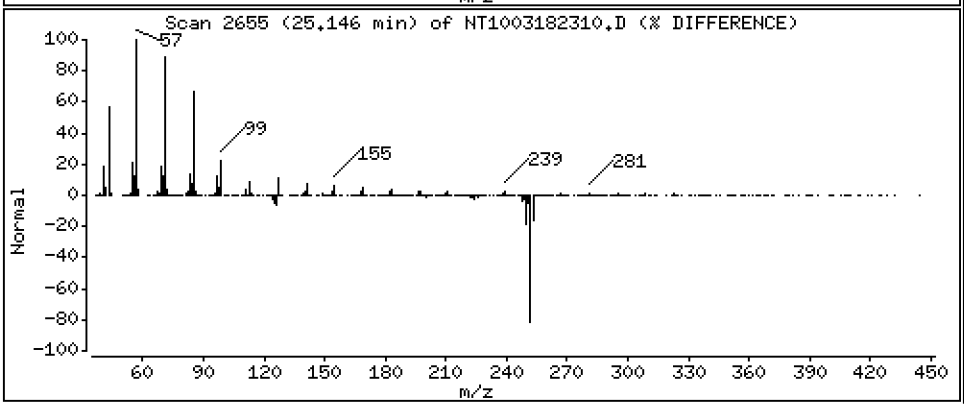












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

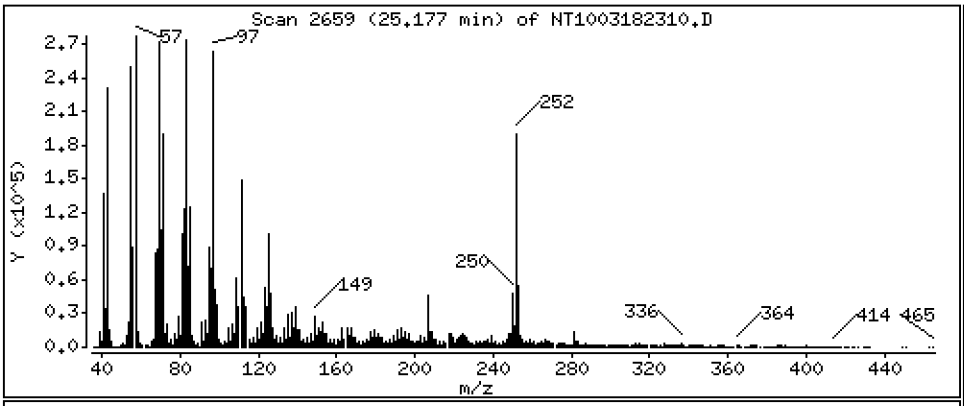
Operator: VTS

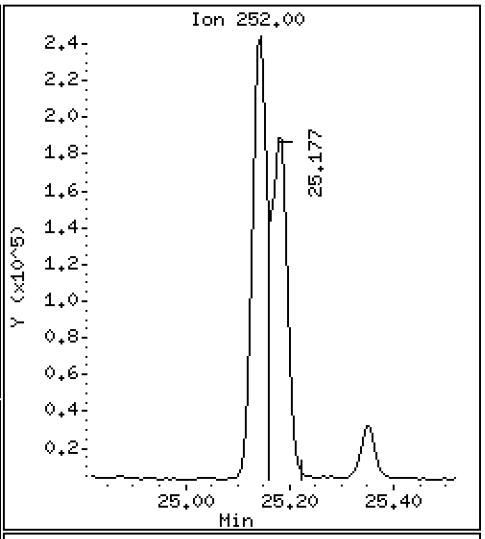
Column phase: ZB-5msi

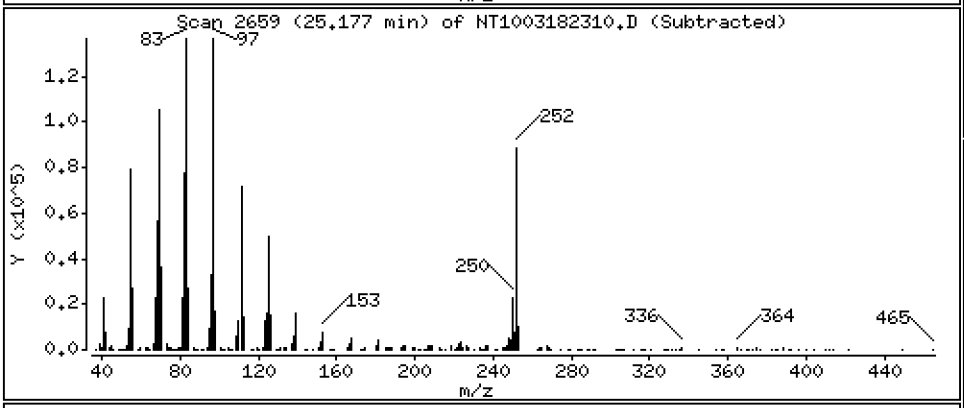
Column diameter: 0.25

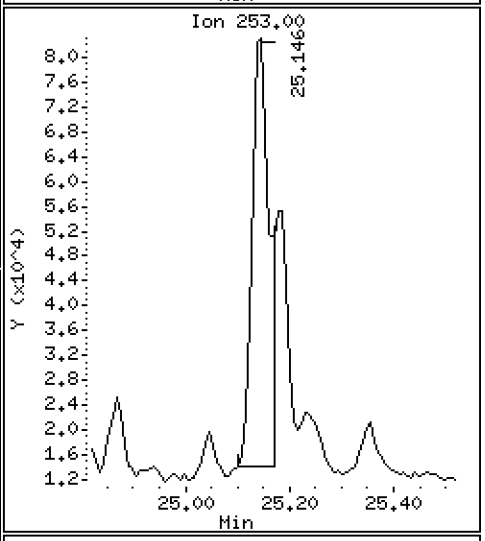
75 Benzo(k)fluoranthene

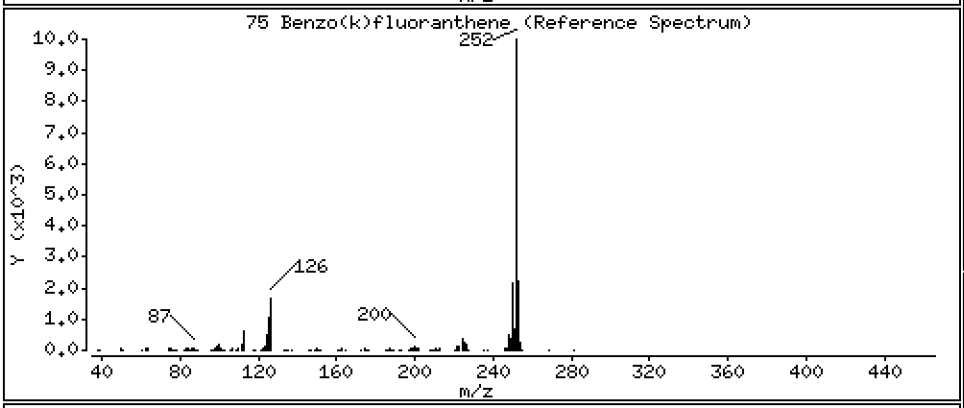
Concentration: 1.443 ug/mL

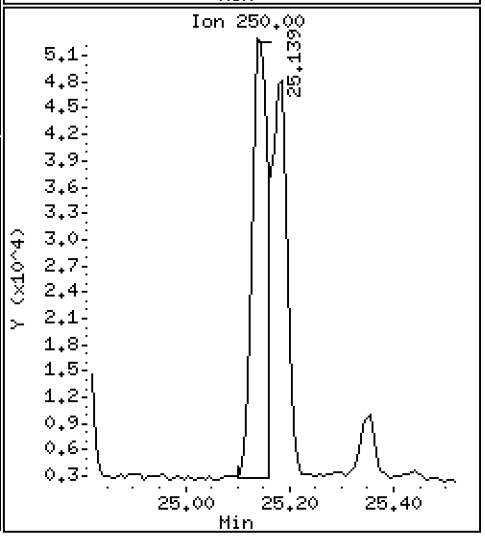


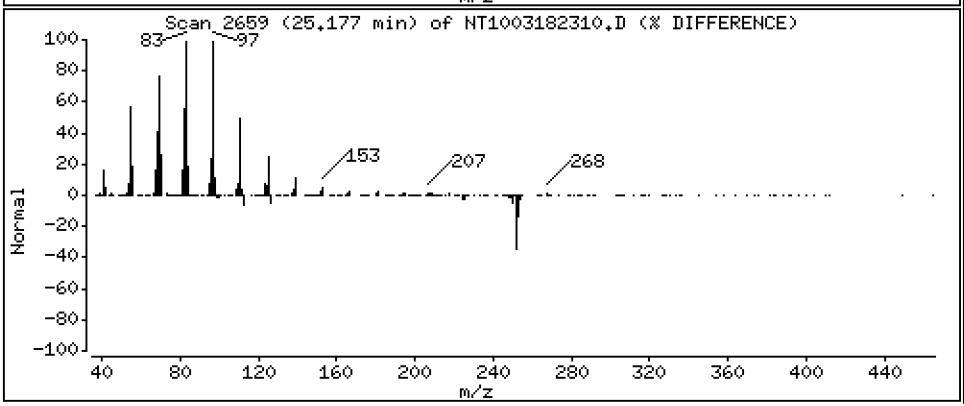












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

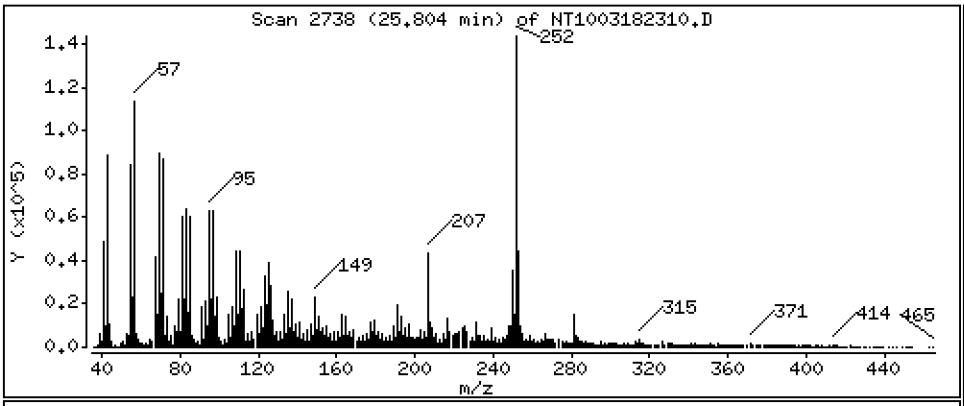
Operator: VTS

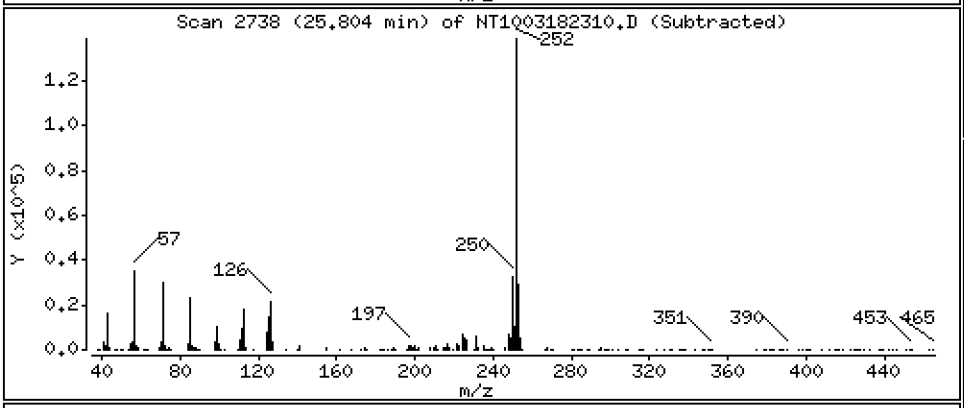
Column phase: ZB-5msi

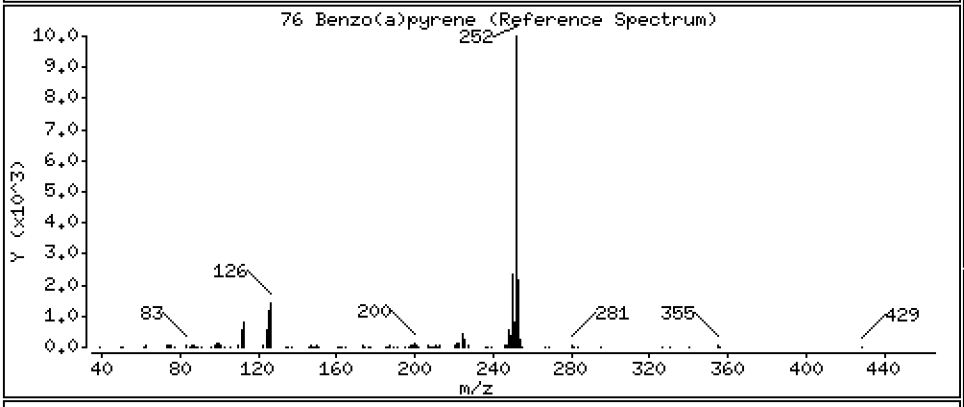
Column diameter: 0.25

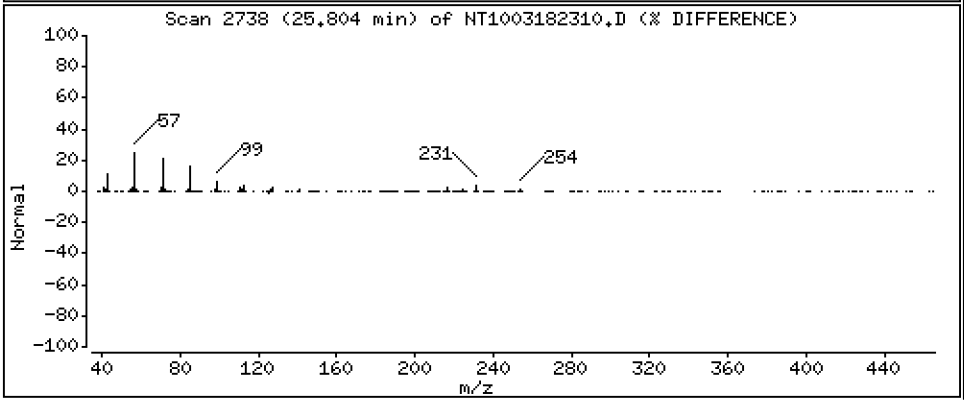
76 Benzo(a)pyrene

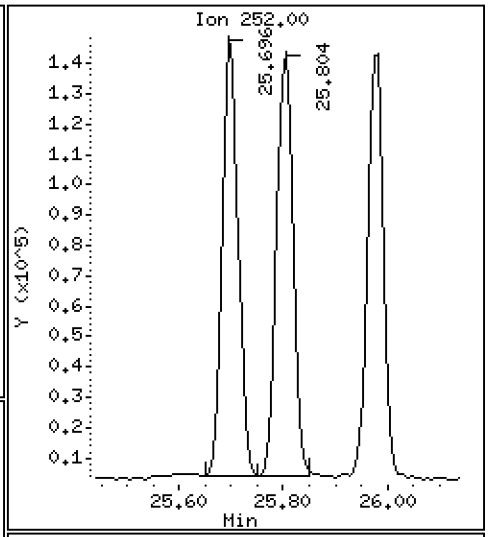
Concentration: 1.164 ug/mL

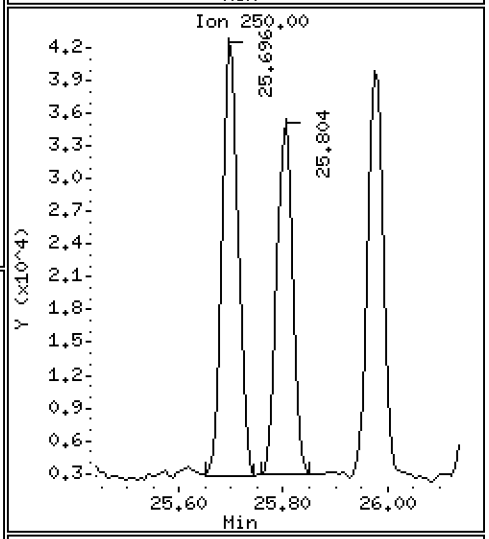


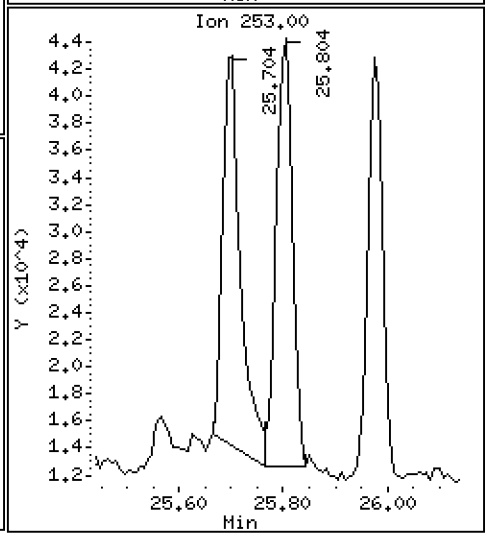












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

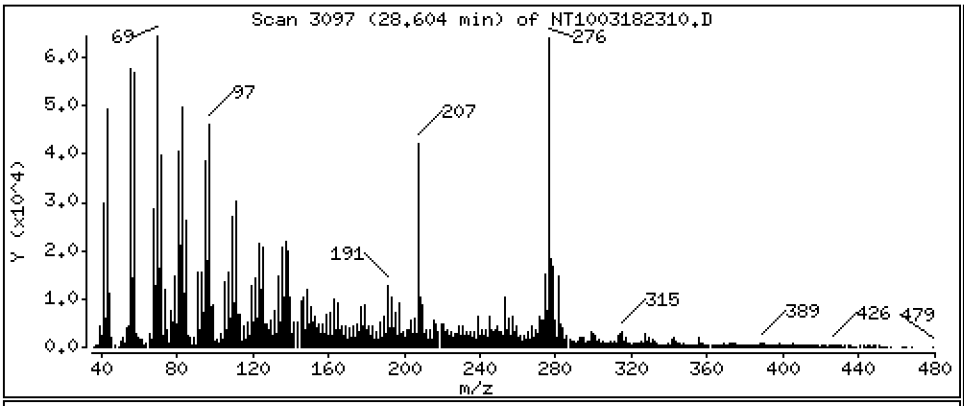
Operator: VTS

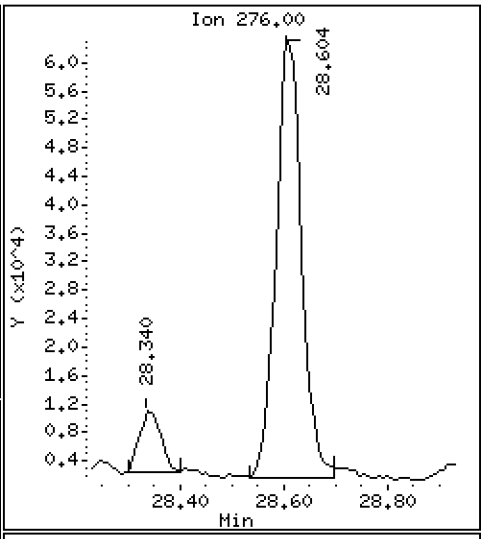
Column phase: ZB-5msi

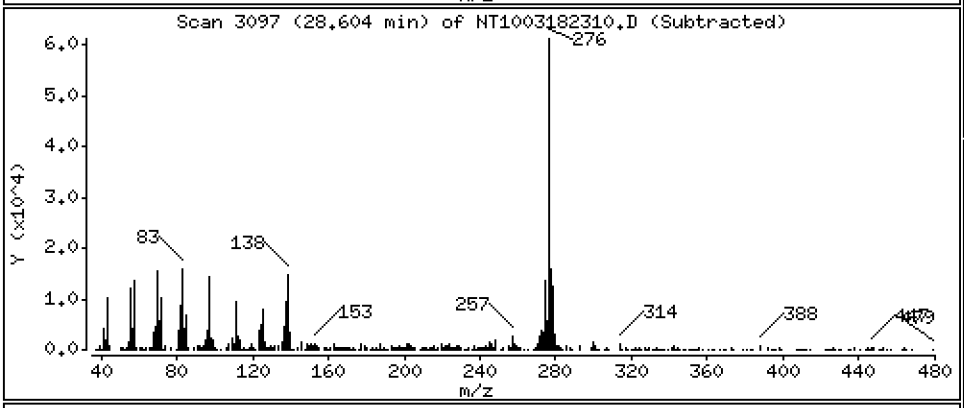
Column diameter: 0.25

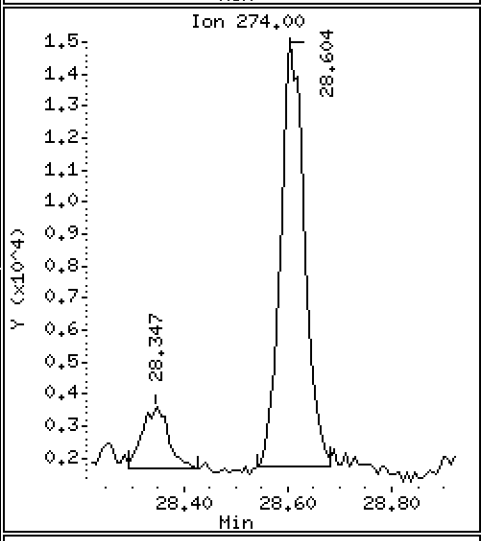
78 Indeno(1,2,3-cd)pyrene

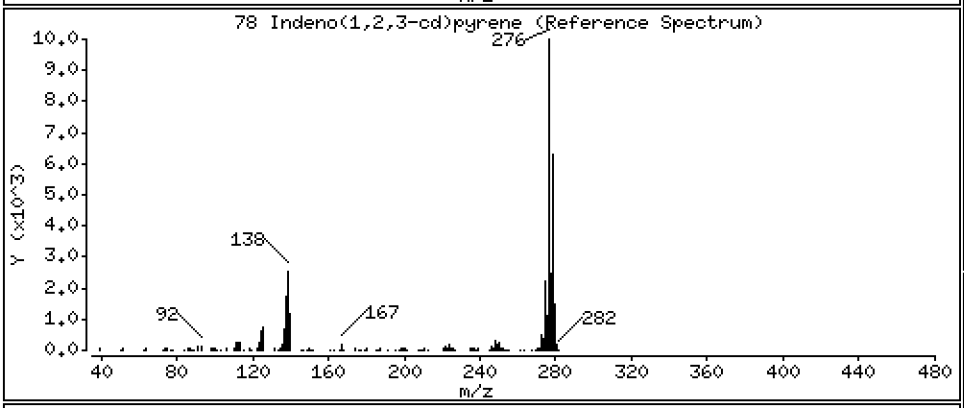
Concentration: 0.6500 ug/mL

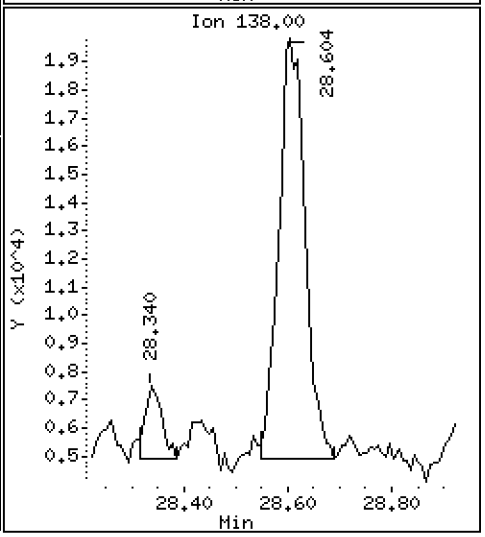


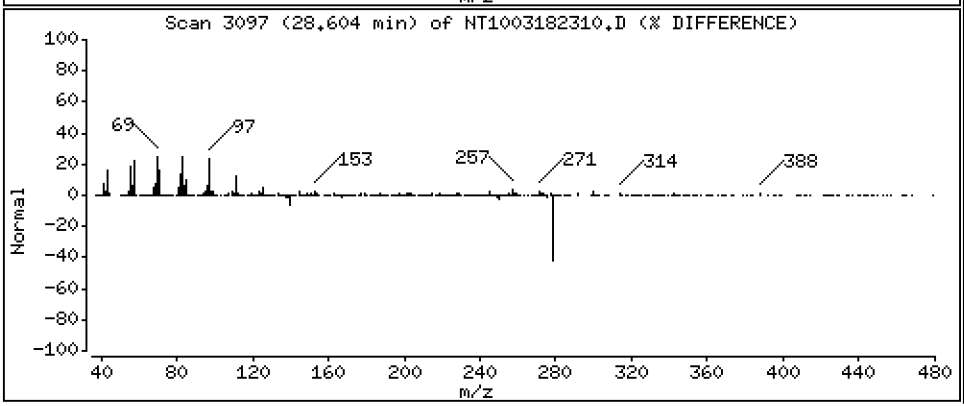












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

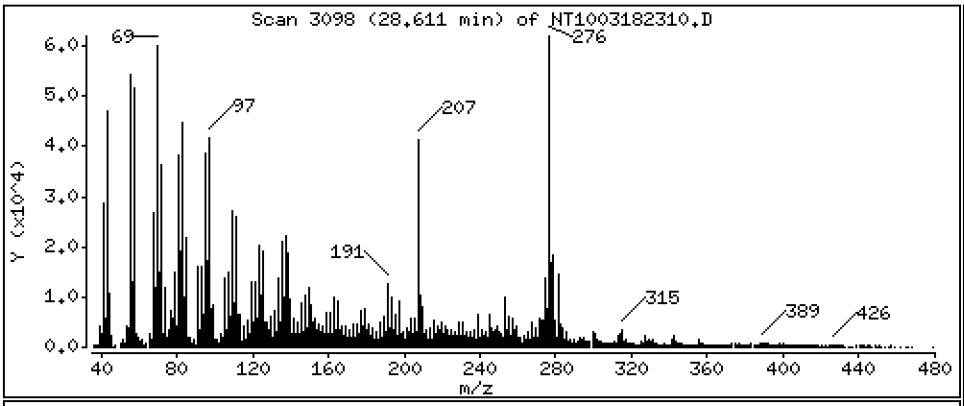
Operator: VTS

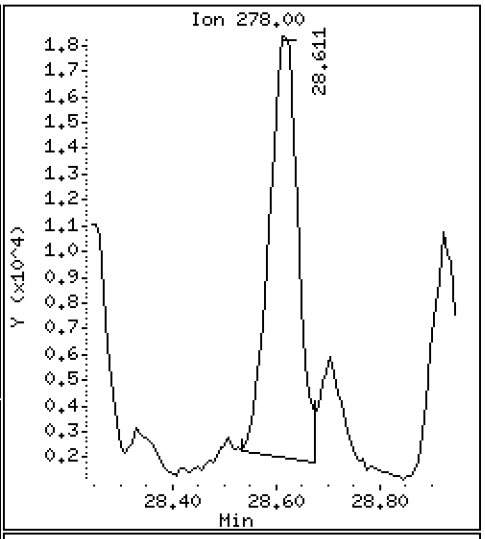
Column phase: ZB-5msi

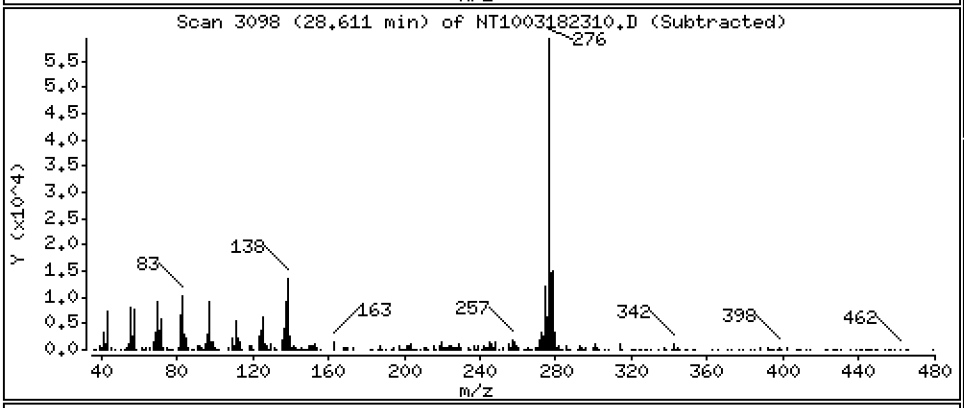
Column diameter: 0.25

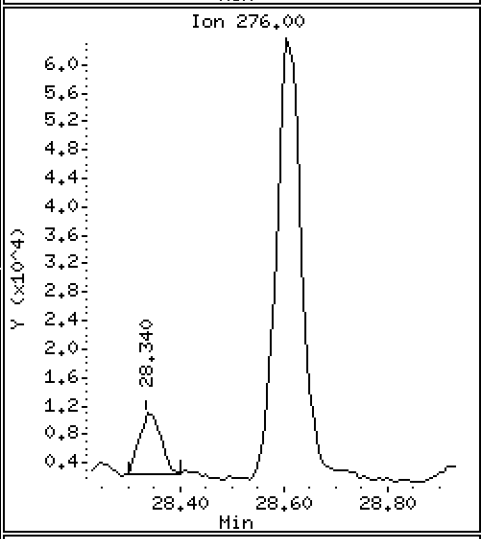
79 Dibenzo(a,h)anthracene

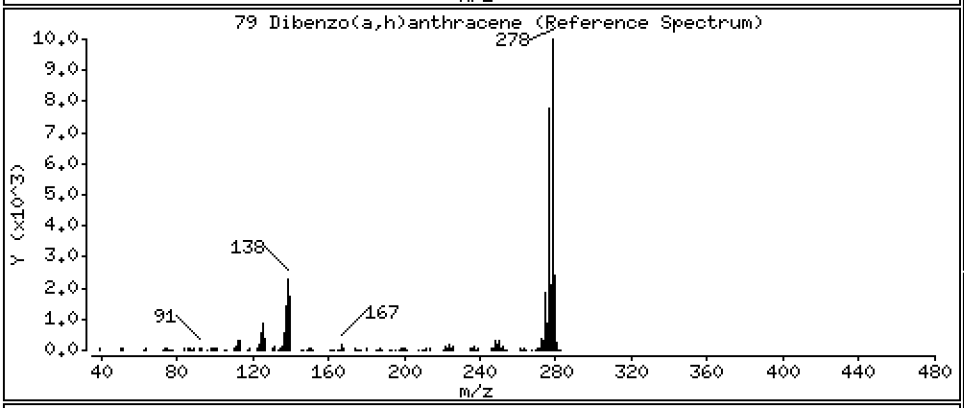
Concentration: 0.2333 ug/mL

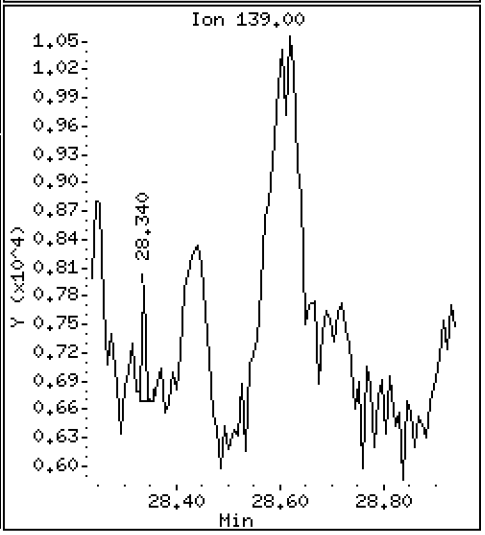


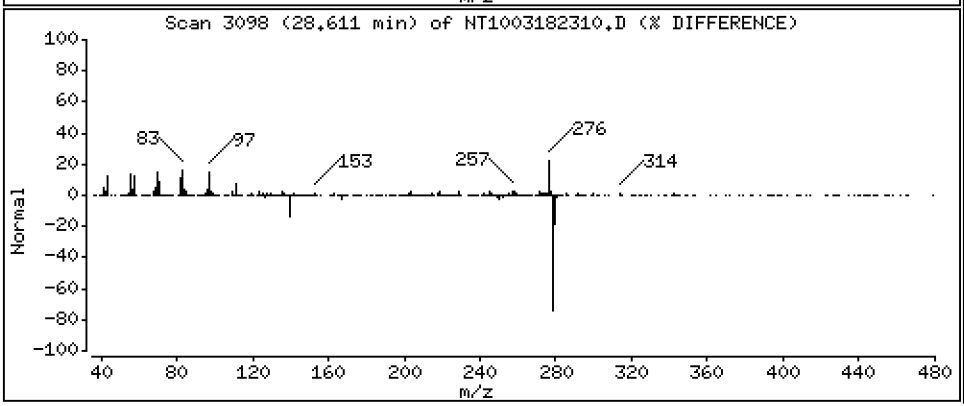












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

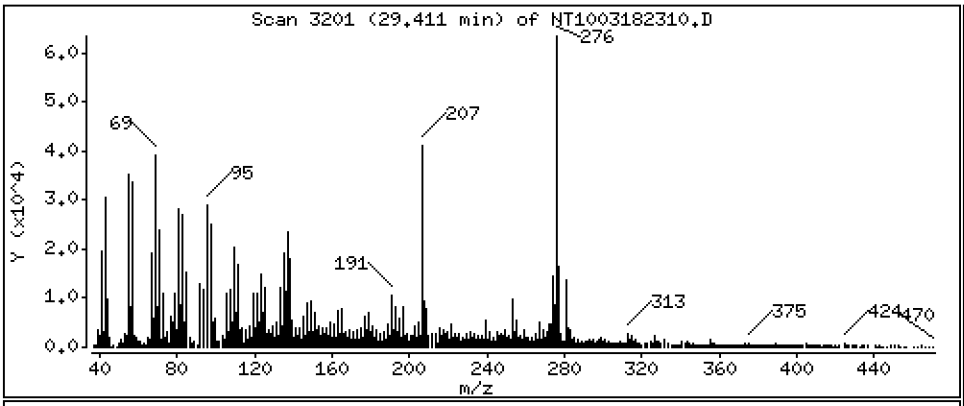
Operator: VTS

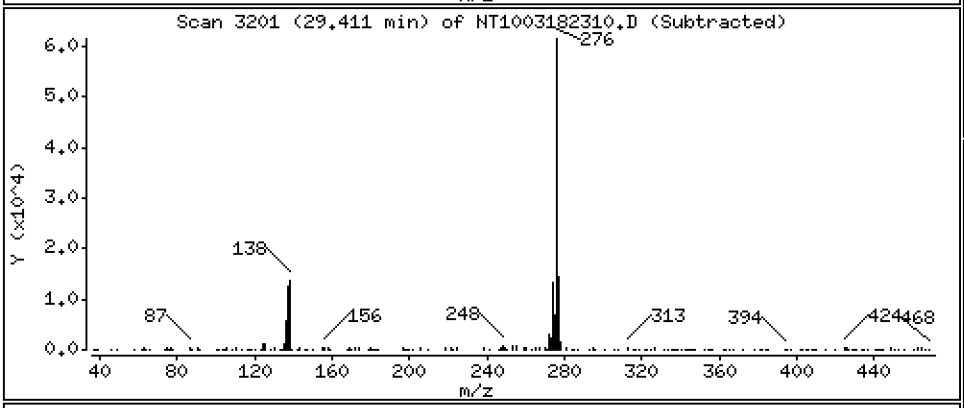
Column phase: ZB-5msi

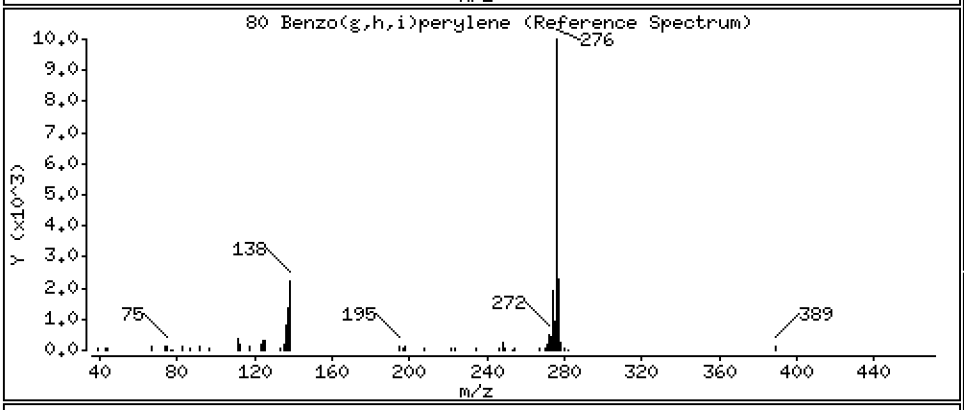
Column diameter: 0.25

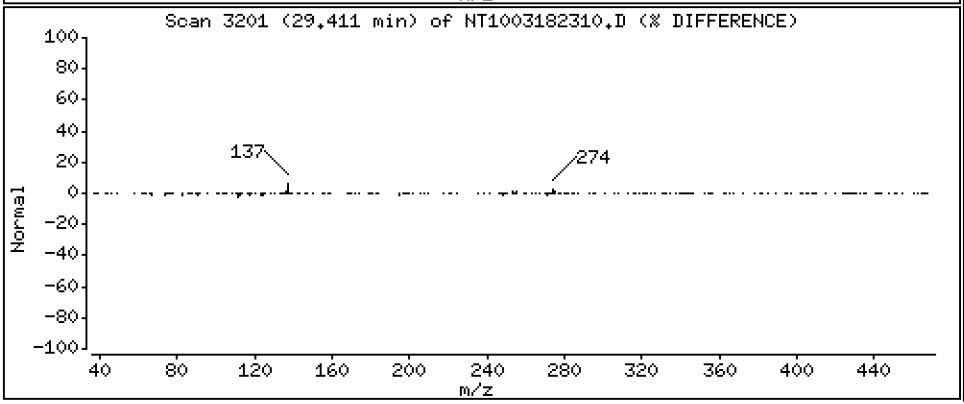
80 Benzo(g,h,i)perylene

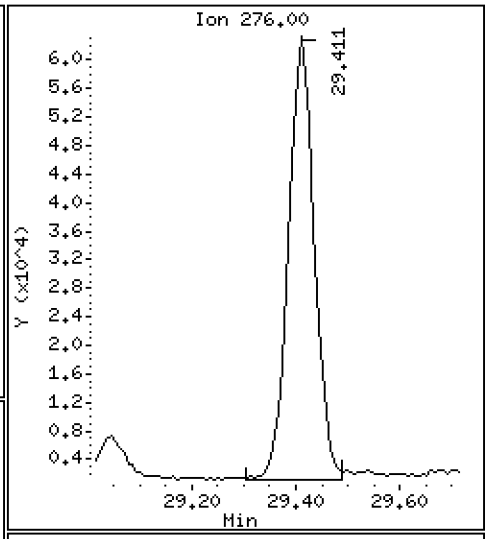
Concentration: 0.7657 ug/mL

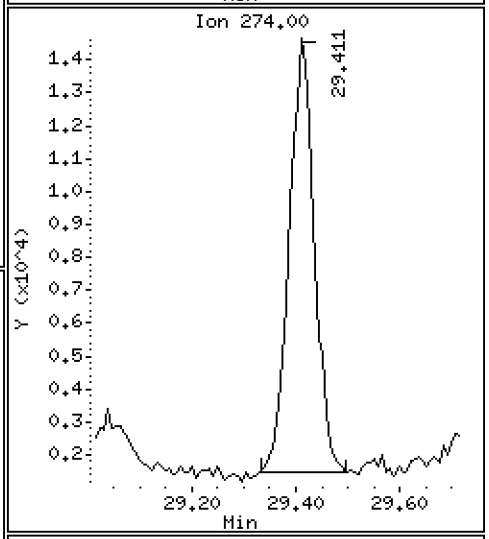


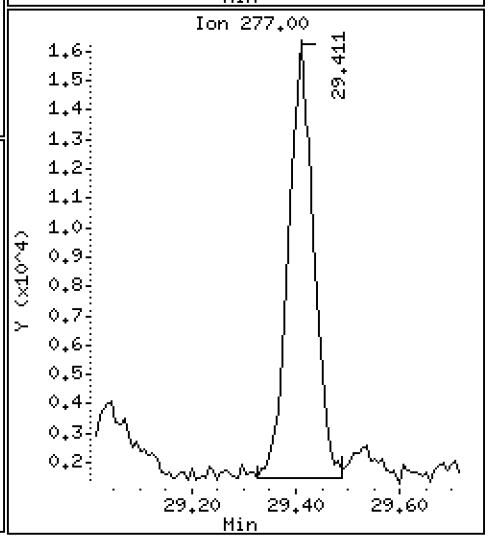












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

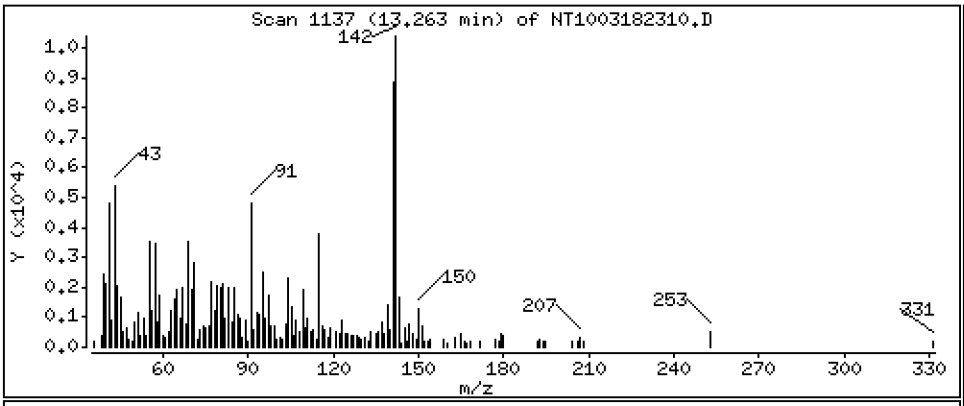
Operator: VTS

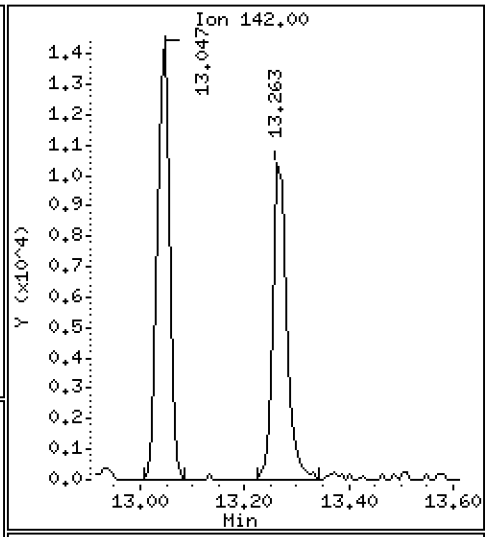
Column phase: ZB-5msi

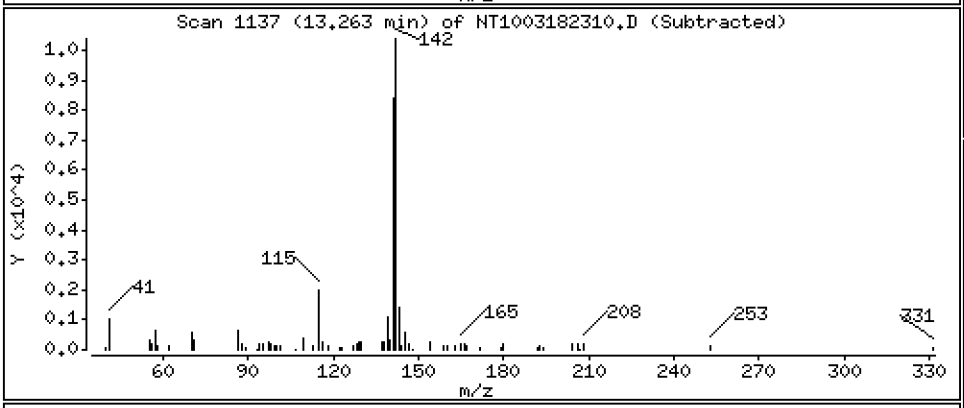
Column diameter: 0.25

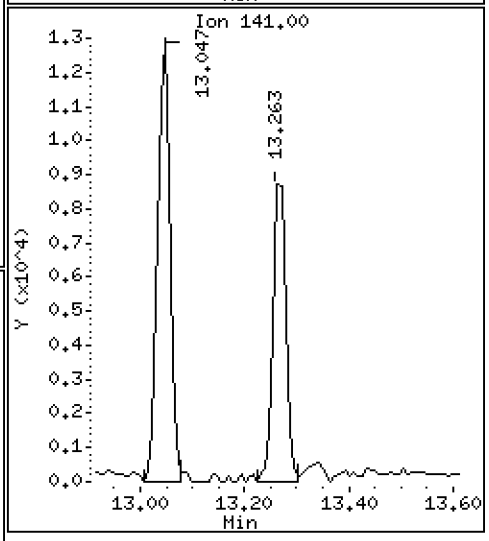
105 1-methylnaphthalene

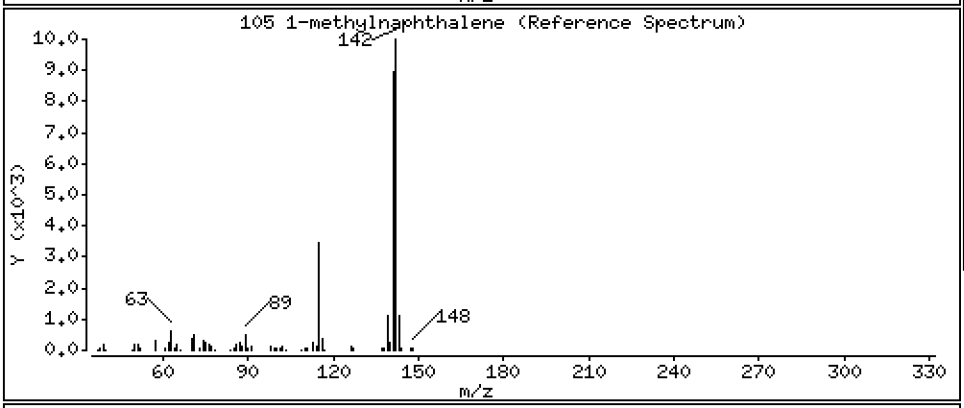
Concentration: 0.1192 ug/mL

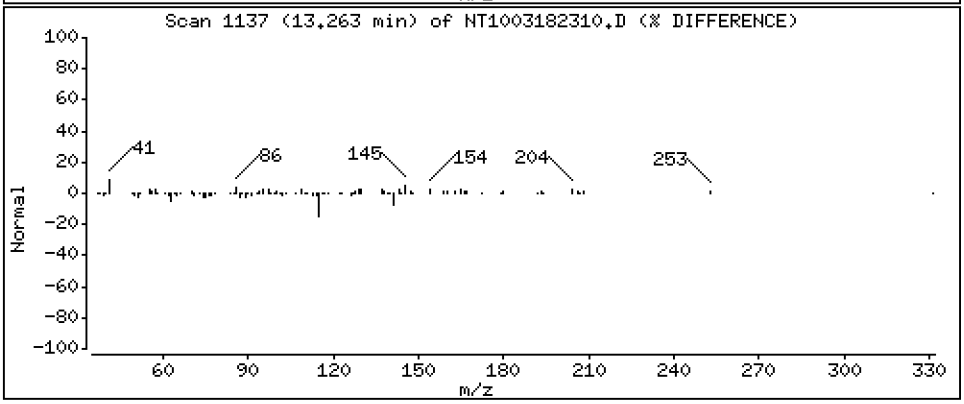












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

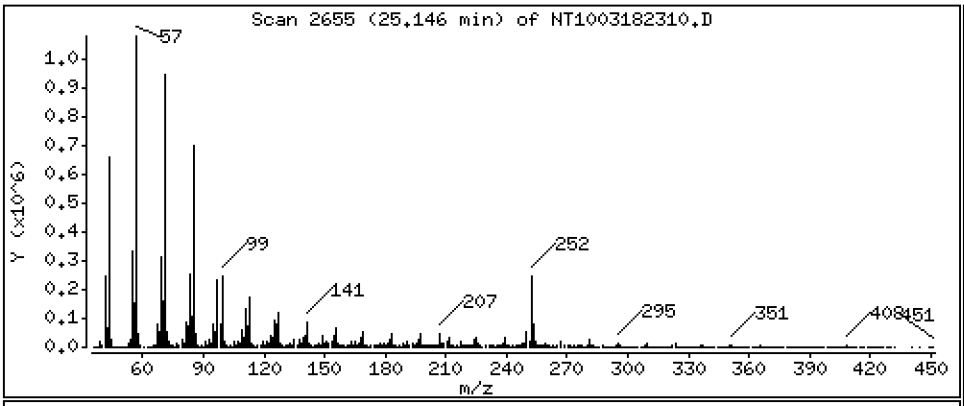
Operator: VTS

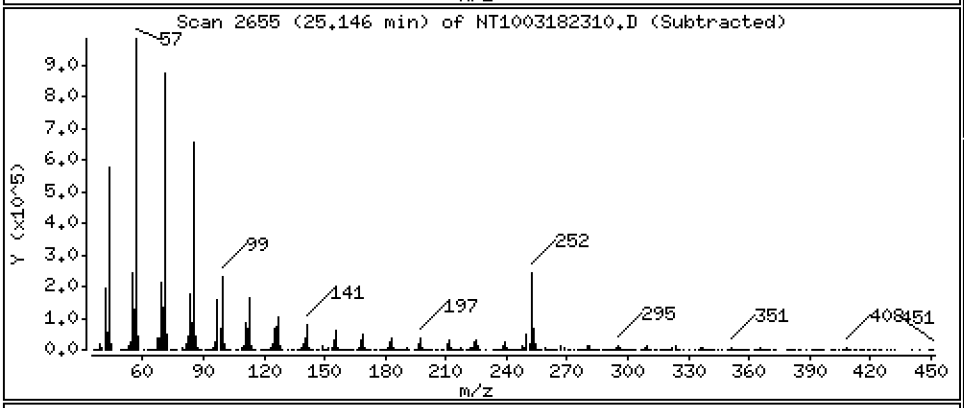
Column phase: ZB-5msi

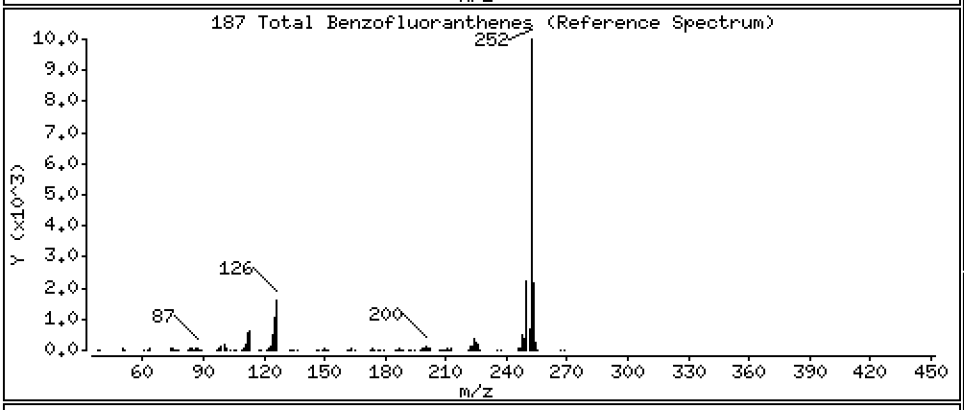
Column diameter: 0.25

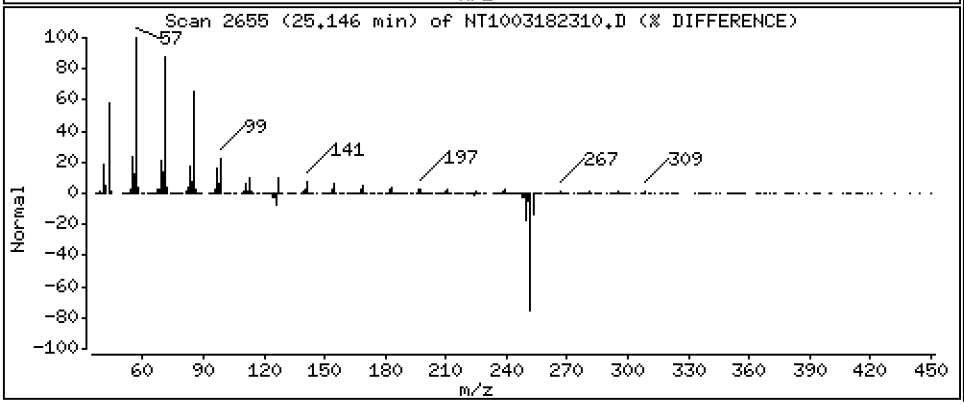
187 Total Benzofluoranthenes

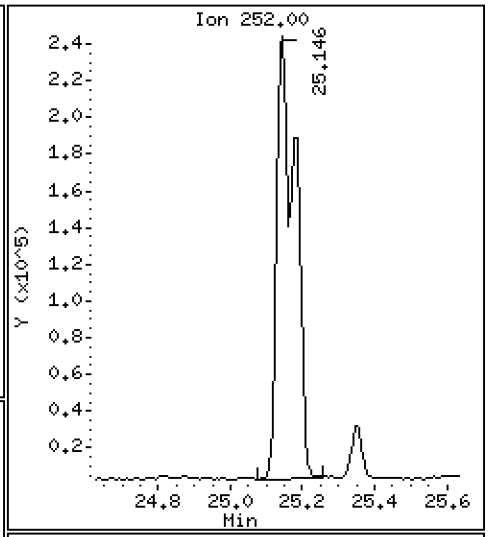
Concentration: 3.058 ug/mL

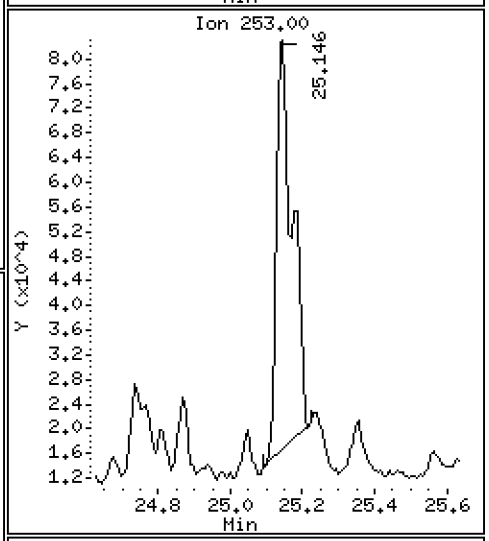


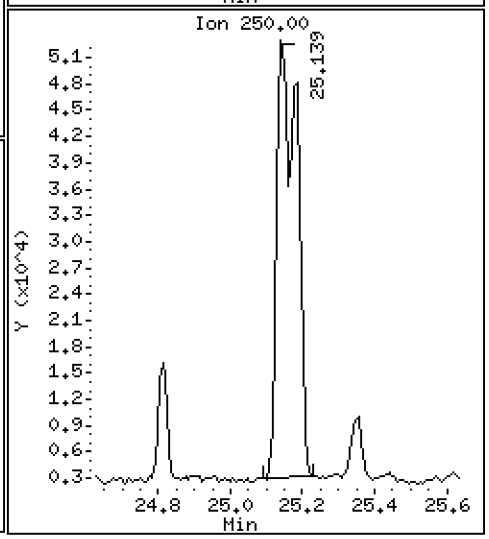












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182310.D
Lab Smp Id: 23A0467-01
Inj Date : 18-MAR-2023 23:29
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-01
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	372005	4.99707	4.997
$	2 Phenol-d5	99	8.520	8.520	(0.930)	510127	5.22348	5.223
	3 Phenol	94	8.543	8.536	(0.932)	479710	4.72693	4.727
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	456700	5.47635	5.476
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	246170	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.040)	206964	3.45571	3.456
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.426	9.426	(1.029)	9481	0.19904	0.1990
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.082)	166697	2.13856	2.139
$	18 Nitrobenzene-d5	82	10.249	10.249	(0.881)	336179	3.79495	3.795
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.041	11.134	(0.949)	36409	0.81988	0.8199(MH)
	25 2,4-Dichlorophenol	162	11.355	11.346	(0.976)	1541	0.02412	0.02412
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.631	11.623	(1.000)	877643	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	36517	0.15706	0.1571
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.046	13.046	(1.122)	22643	0.13495	0.1350
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.820	13.820	(0.908)	714881	3.84850	3.849
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.710	14.710	(0.967)	10016	0.06566	0.06566
	40	Acenaphthylene	152	14.896	14.896	(0.979)	22386	0.09551	0.09551
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.213	15.213	(1.000)	469587	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.275	15.275	(1.004)	20708	0.14302	0.1430
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.600	15.600	(1.025)	36949	0.17305	0.1731
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.156	16.156	(1.062)	14187	0.09479	0.09479
	49	Fluorene	166	16.319	16.319	(1.073)	21824	0.12992	0.1299
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.843	16.843	(1.107)	135905	6.20138	6.201
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.234	18.234	(1.000)	855170	4.00000	
	60	Phenanthrene	178	18.288	18.281	(1.003)	221650	0.95053	0.9505
	61	Anthracene	178	18.373	18.373	(1.008)	113729	0.50843	0.5084
	62	Carbazole	167	18.706	18.698	(1.026)	30749	0.15341	0.1534
	63	Di-n-butylphthalate	149	19.495	19.488	(1.069)	12291	0.04560	0.04560
	64	Fluoranthene	202	20.671	20.656	(0.888)	644279	2.09068	2.091
	65	Pyrene	202	21.089	21.081	(0.906)	628176	1.98712	1.987
$	66	Terphenyl-d14	244	21.368	21.360	(0.918)	876847	3.69349	3.693
	67	Butylbenzylphthalate	149	22.289	22.281	(0.957)	17546	0.15808	0.1581
	68	Benzo(a)anthracene	228	23.249	23.241	(0.999)	307305	1.13521	1.135
*	69	Chrysene-d12	240	23.280	23.272	(1.000)	766933	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.319	23.311	(1.002)	472504	1.78659	1.787
	72	bis(2-Ethylhexyl)phthalate	149	23.311	23.303	(0.959)	360938	1.74495	1.745
*	134	Di-n-octylphthalate-d4	153	24.302	24.294	(1.000)	1412839	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.146	25.130	(0.970)	499098	1.72695	1.727
	75	Benzo(k)fluoranthene	252	25.177	25.169	(0.971)	423604	1.44347	1.443(M)
	76	Benzo(a)pyrene	252	25.804	25.789	(0.996)	300806	1.16417	1.164
*	77	Perylene-d12	264	25.920	25.897	(1.000)	891578	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.603	28.580	(1.104)	213685	0.65003	0.6500
	79	Dibenzo(a,h)anthracene	278	28.611	28.595	(1.104)	63685	0.23335	0.2333(M)
	80	Benzo(g,h,i)perylene	276	29.411	29.364	(1.135)	217830	0.76569	0.7657
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.263	13.263	(1.140)	18326	0.11921	0.1192
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.146	25.130	(0.970)	853251	3.05779	3.058(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182310.D
Lab Smp Id: 23A0467-01
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	246170	32.06
27 Naphthalene-d8	688740	344370	1377480	877643	27.43
42 Acenaphthene-d10	373663	186832	747326	469587	25.67
59 Phenanthrene-d10	652323	326162	1304646	855170	31.10
69 Chrysene-d12	537141	268571	1074282	766933	42.78
134 Di-n-octylphthala	947608	473804	1895216	1412839	49.10
77 Perylene-d12	602550	301275	1205100	891578	47.97

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	-0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	-0.00
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.03
134 Di-n-octylphthala	24.29	23.79	24.79	24.30	0.03
77 Perylene-d12	25.90	25.40	26.40	25.92	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182310.D

Lab ID: 23A0467-01
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 23:29

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0086	Benzoic acid

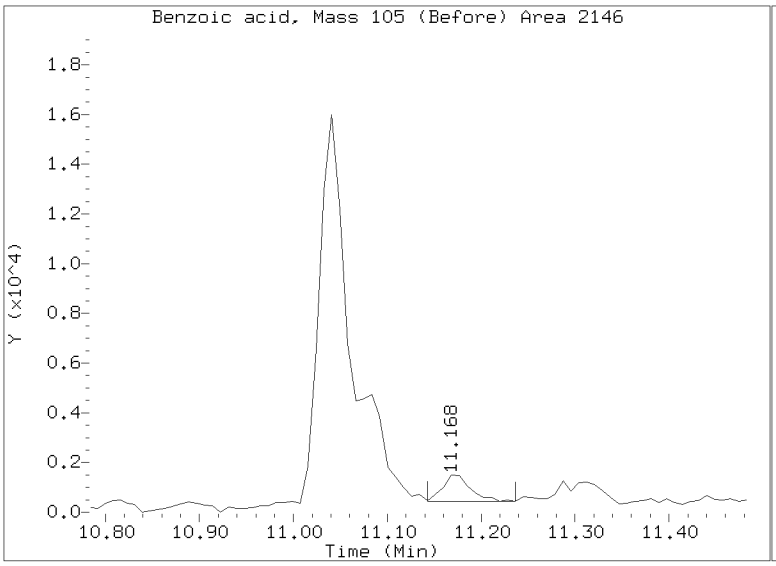
RRT check based on Ccal File: NT1003182302.D

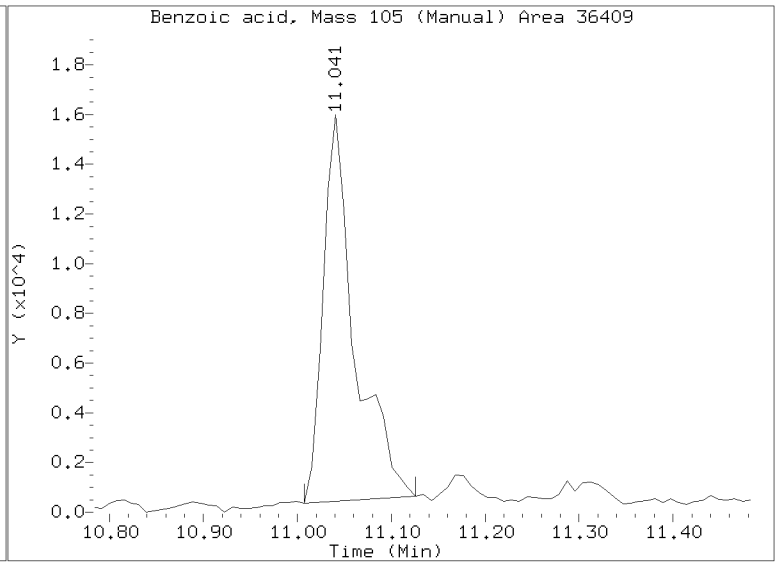
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

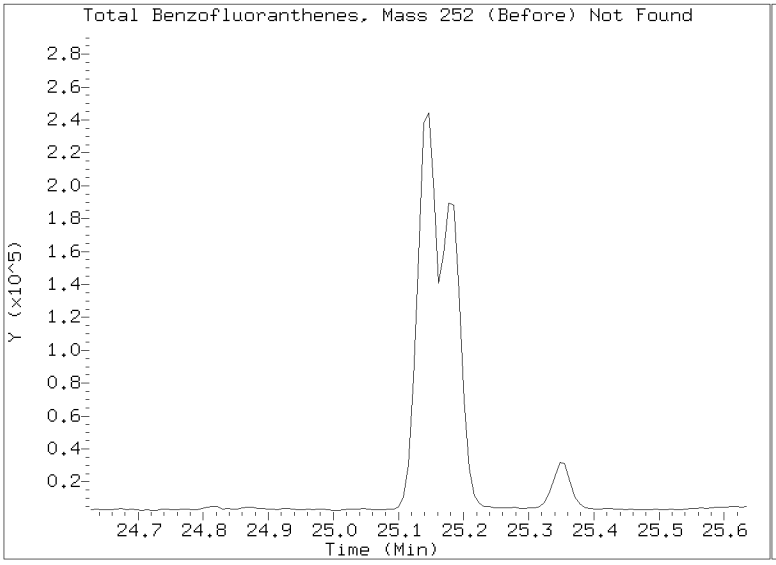
* Only compounds listed in the work order have been verified by the analyst *

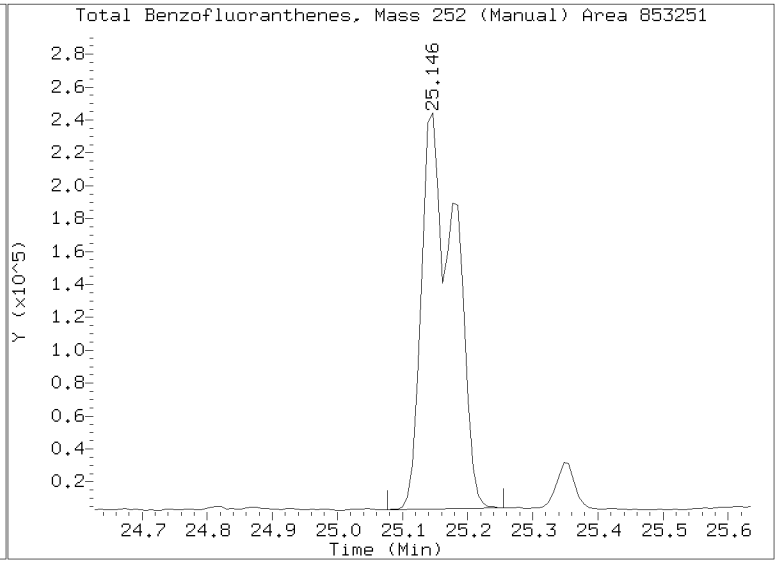
Quant Ion Manual Peak Adjustment Report

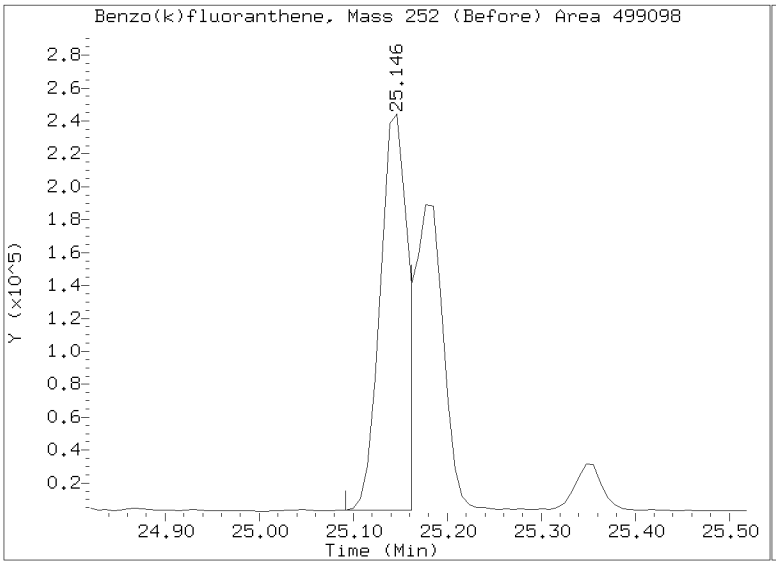
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182310.D
Injection Date: 18-MAR-2023 23:29
Lab ID:23A0467-01 Client ID:
Report Date: 04/04/2023 08:57

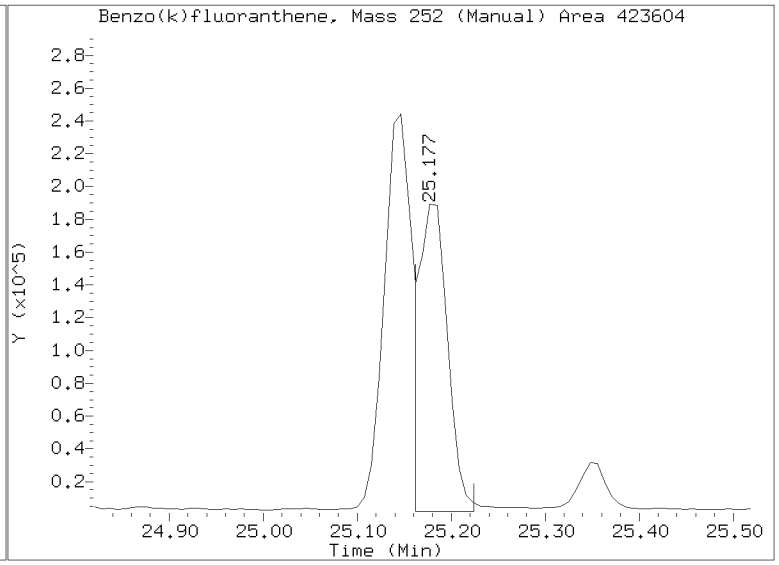












Quant Ion Manual Peak Adjustment Report

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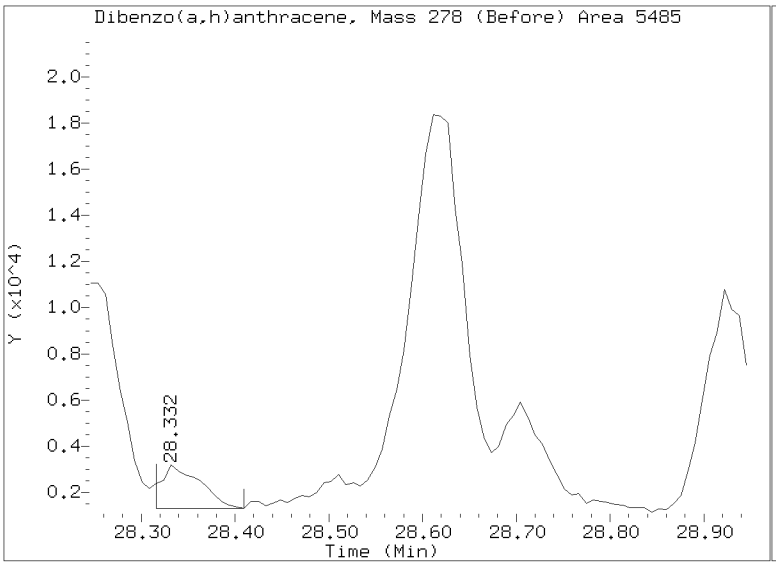
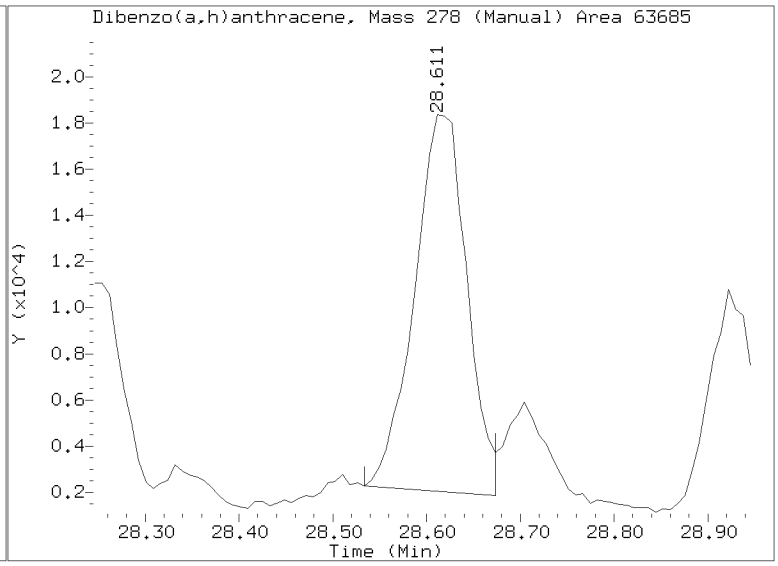
Injection Date: 18-MAR-2023 23:29
Lab ID:23A0467-01 Client ID:
Report Date: 04/04/2023 08:57





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1005

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	02/23/23 15:49	File ID:	NT1003182311.D
% Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:07
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.35 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	450		4.4	20.0
106-44-5	4-Methylphenol	1	187		7.4	20.0
91-20-3	Naphthalene	1	17.8	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	16.1	J	4.5	20.0
208-96-8	Acenaphthylene	1	12.2	J	6.2	20.0
131-11-3	Dimethylphthalate	1	7.6	J	4.4	20.0
83-32-9	Acenaphthene	1	14.4	J	5.2	20.0
132-64-9	Dibenzofuran	1	16.5	J	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	97.8		8.7	20.0
120-12-7	Anthracene	1	54.1		7.2	20.0
206-44-0	Fluoranthene	1	248		6.1	20.0
129-00-0	Pyrene	1	246		5.7	20.0
85-68-7	Butylbenzylphthalate	1	27.9		9.4	20.0
56-55-3	Benzo(a)anthracene	1	136		6.0	20.0
218-01-9	Chrysene	1	196		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	285		5.5	49.9
	Benzofluoranthenes, Total	1	360		10.0	39.9
50-32-8	Benzo(a)pyrene	1	141		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	75.2		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	23.0		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	87.9		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.02	591	78.9	27 - 120	
Phenol-d5	749.02	601	80.3	29 - 120	
2-Chlorophenol-d4	749.02	625	83.5	31 - 120	
1,2-Dichlorobenzene-d4	499.34	389	77.8	32 - 120	
Nitrobenzene-d5	499.34	422	84.4	30 - 120	
2-Fluorobiphenyl	499.34	429	86.0	35 - 120	

LDW23-SS1005

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

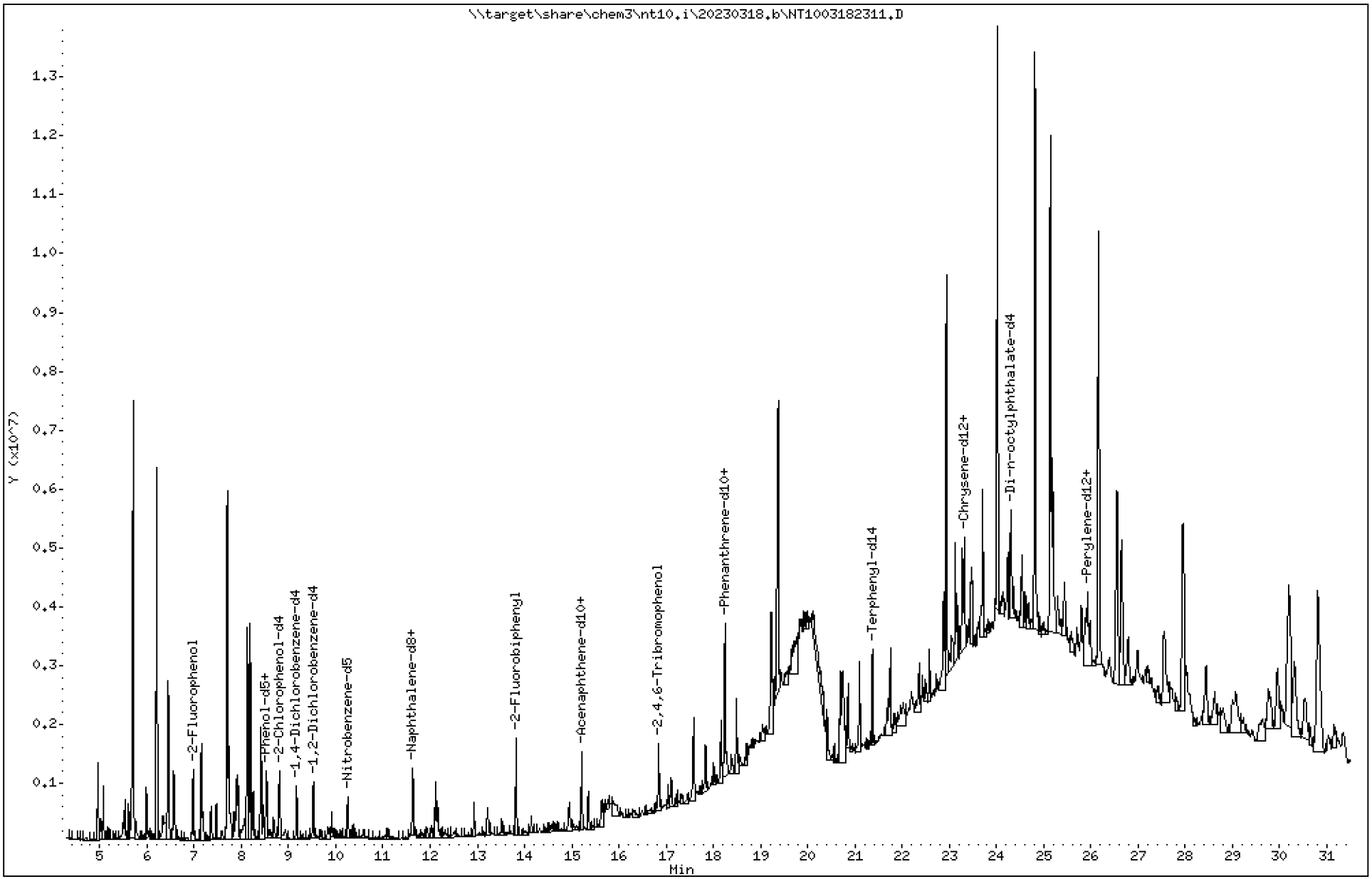
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	02/23/23 15:49	File ID:	NT1003182311.D
% Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:07
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.35 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.02	732	97.7	24 - 134	
p-Terphenyl-d14	499.34	431	86.3	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D
Date : 19-MAR-2023 00:07
Client ID:
Sample Info: 23A0467-02

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

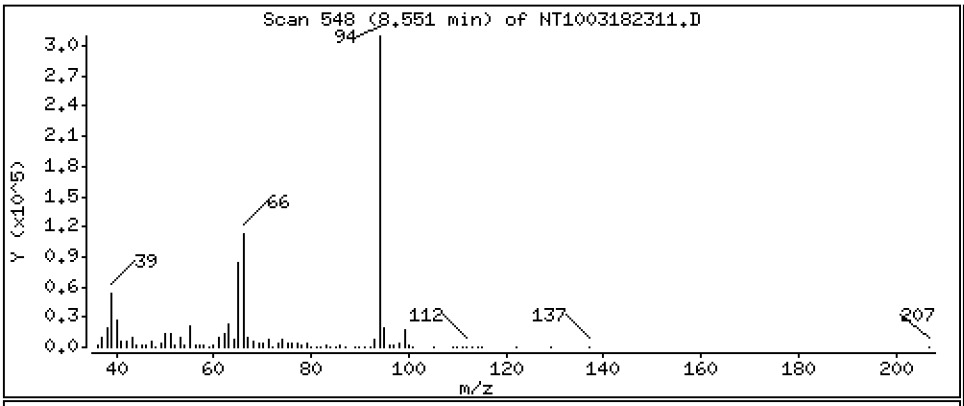
Operator: VTS

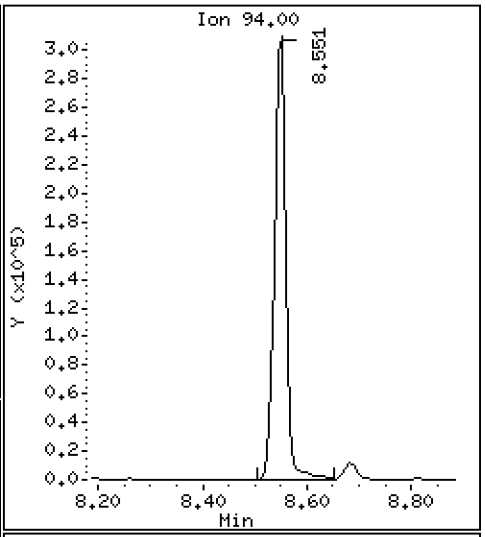
Column phase: ZB-5msi

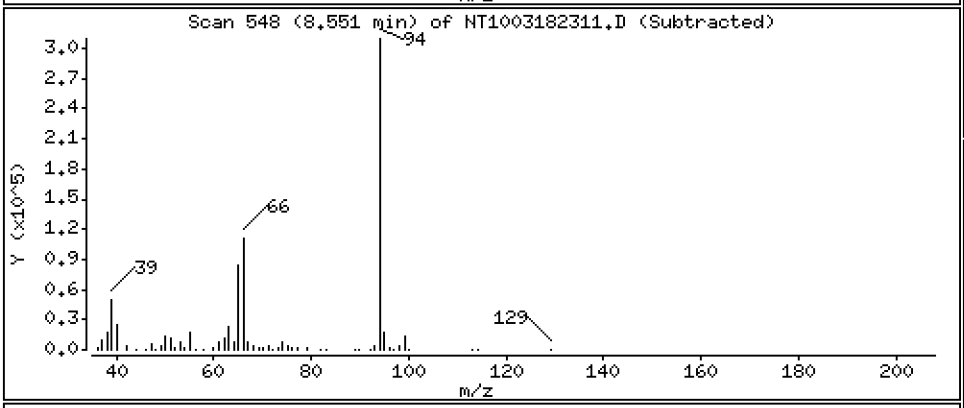
Column diameter: 0.25

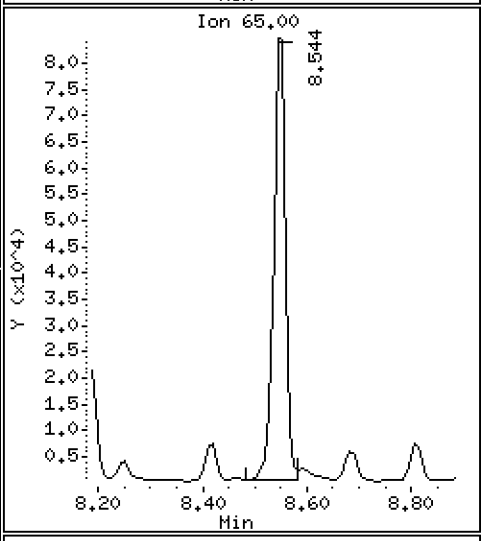
3 Phenol

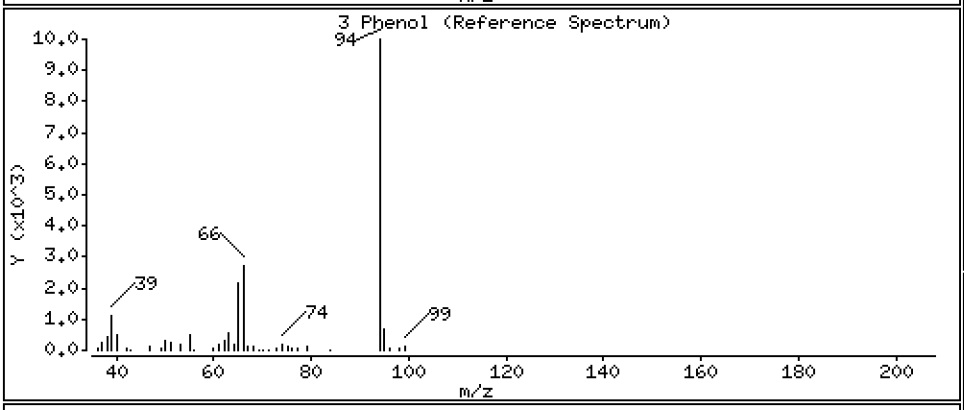
Concentration: 4.503 ug/mL

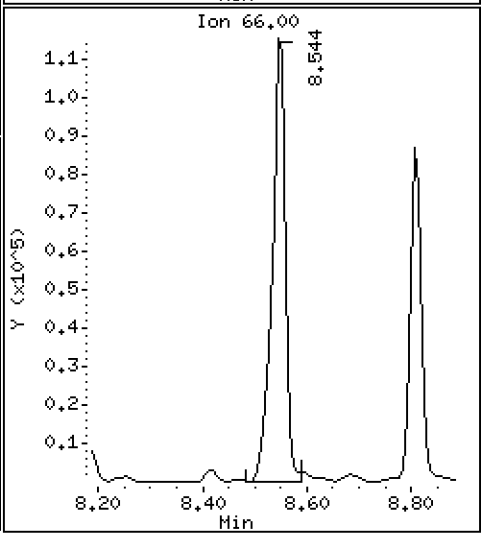


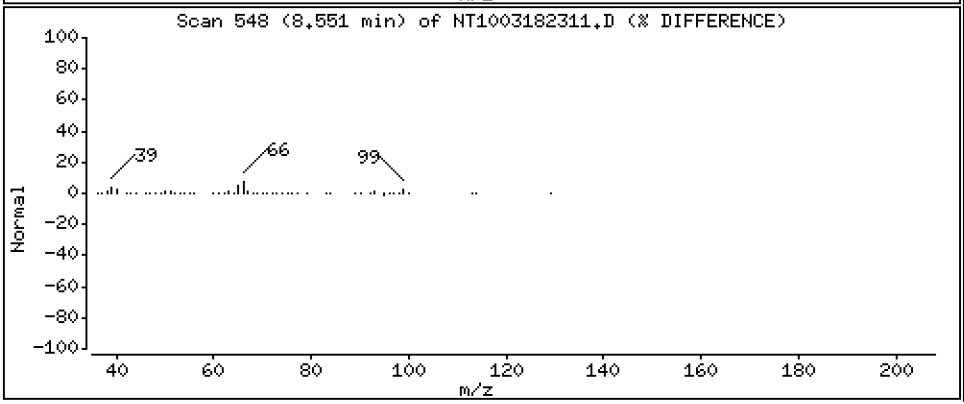












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

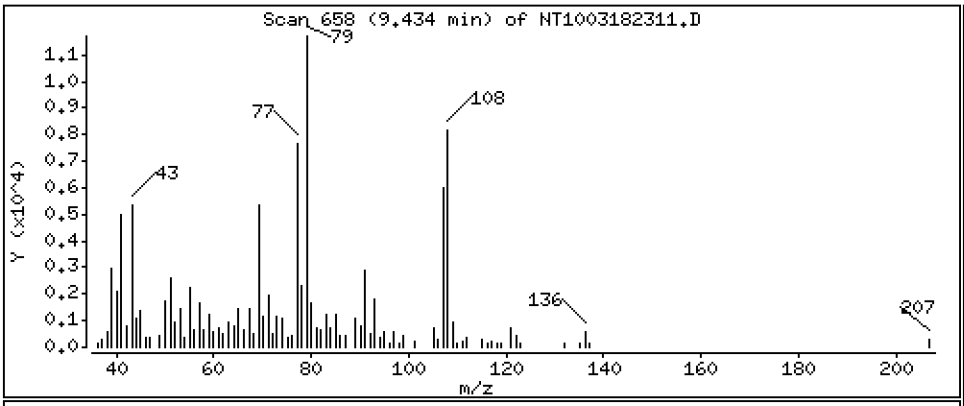
Operator: VTS

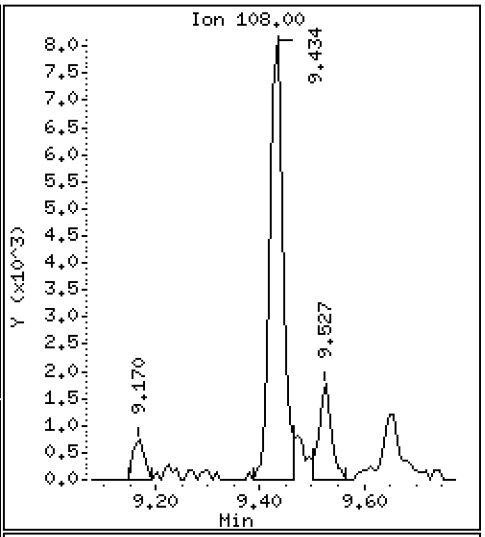
Column phase: ZB-5msi

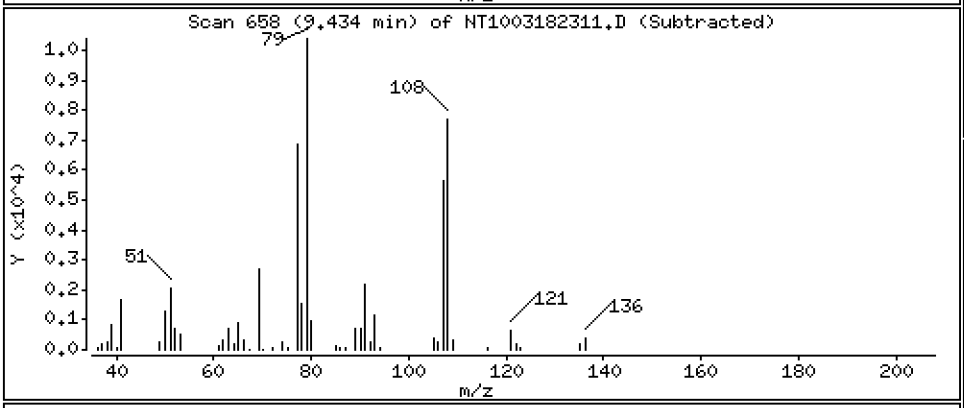
Column diameter: 0.25

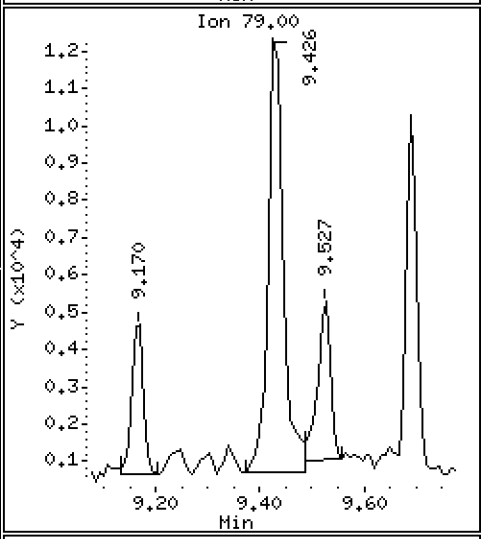
11 Benzyl alcohol

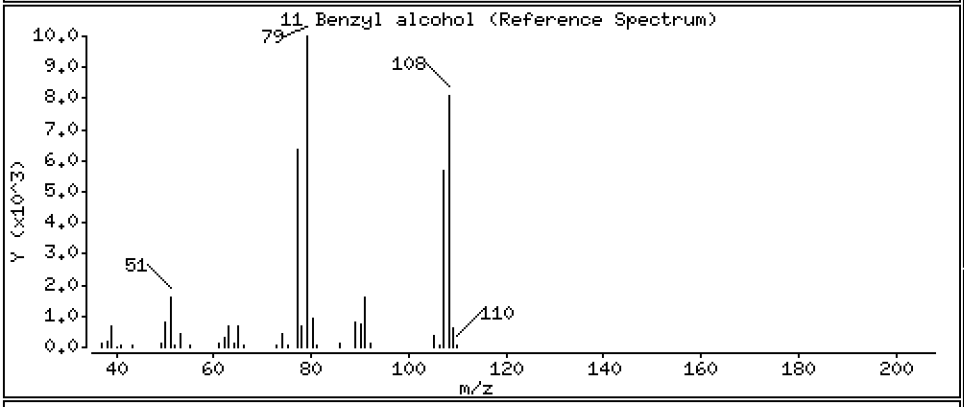
Concentration: 0.2796 ug/mL

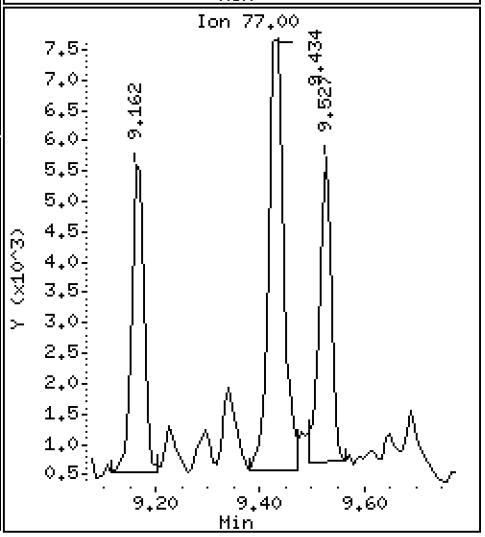


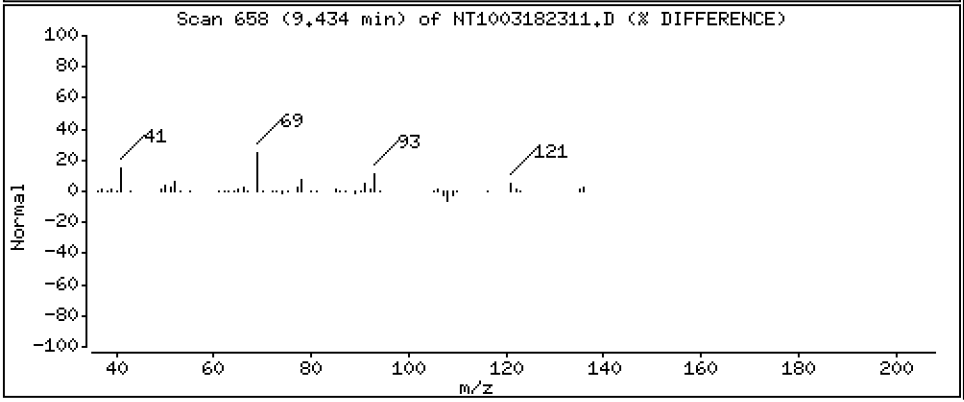












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

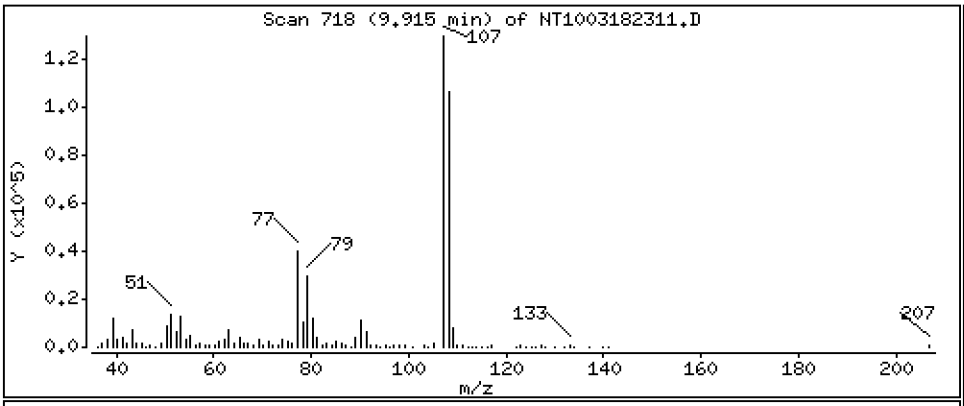
Operator: VTS

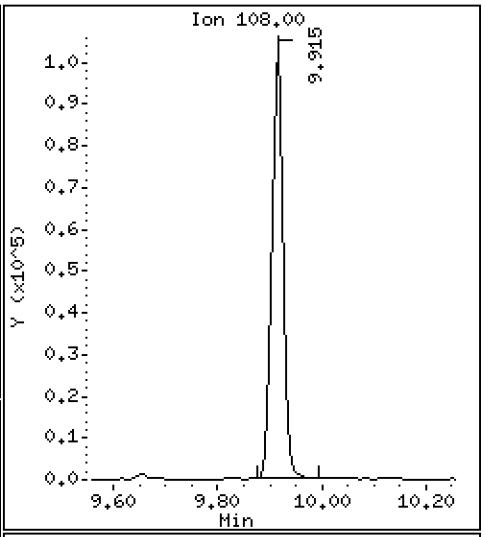
Column phase: ZB-5msi

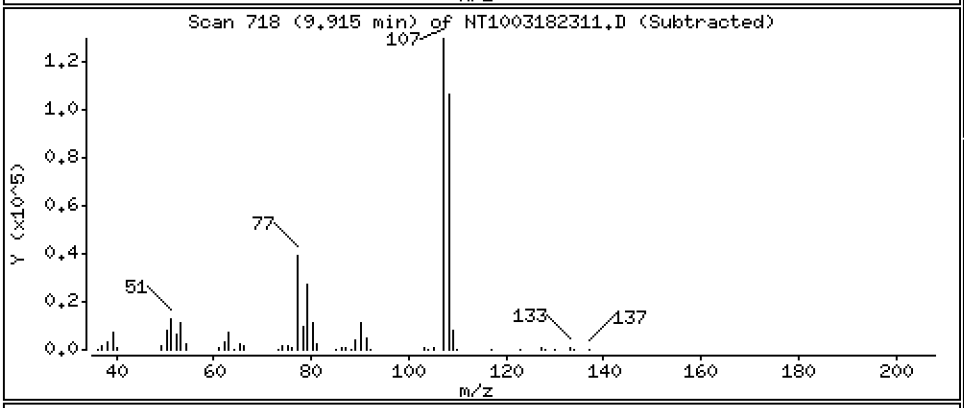
Column diameter: 0.25

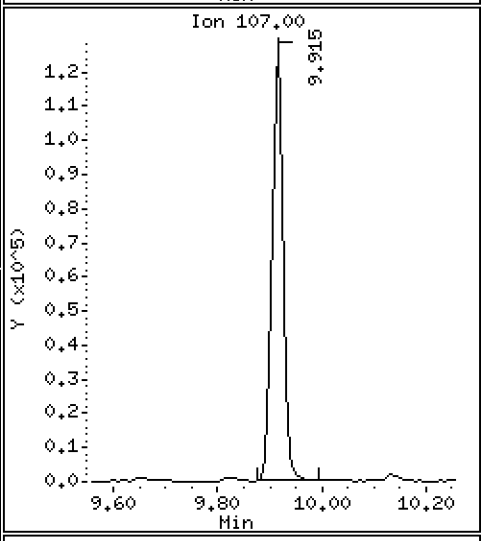
15 4-Methylphenol

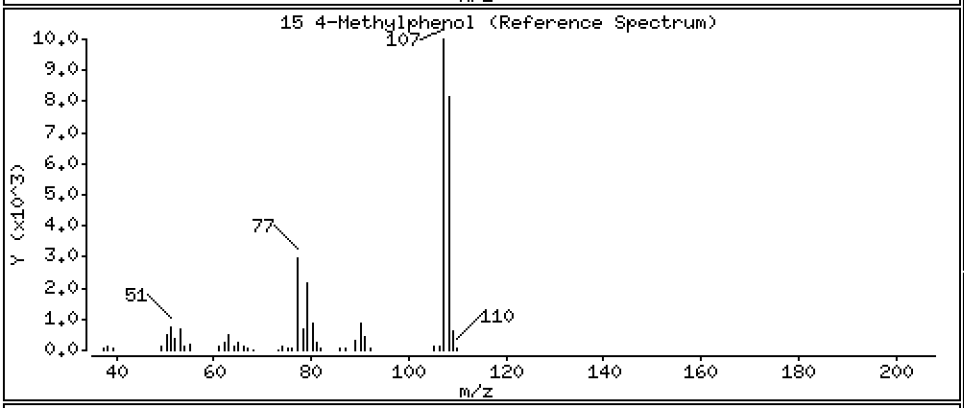
Concentration: 1.872 ug/mL

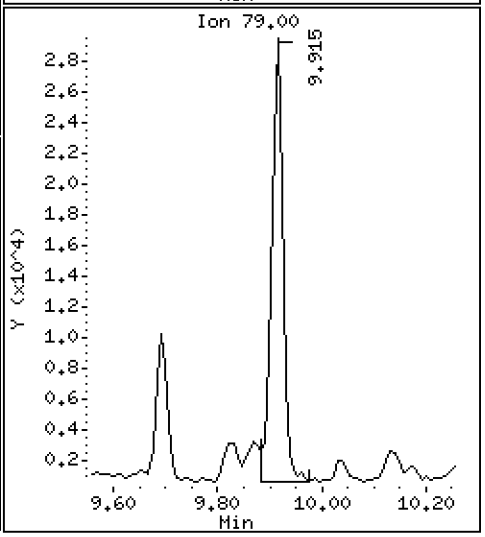


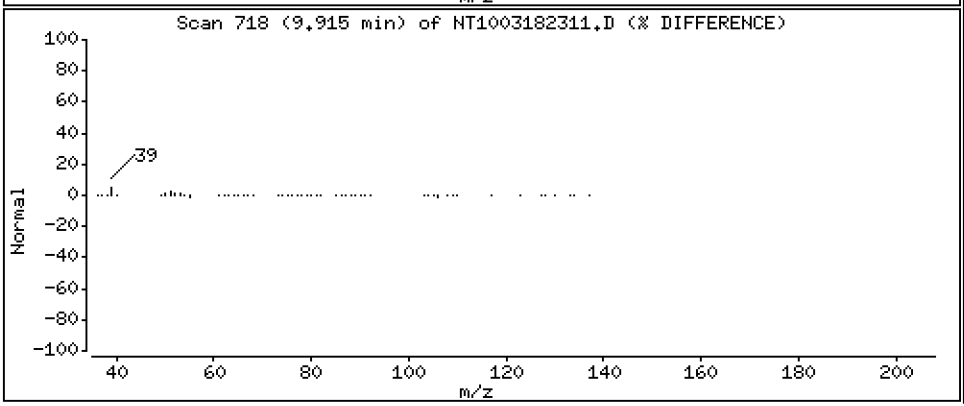












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

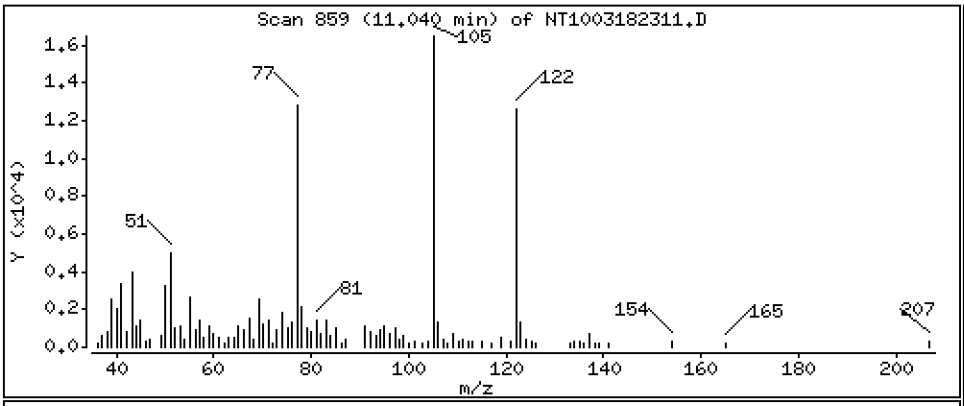
Operator: VTS

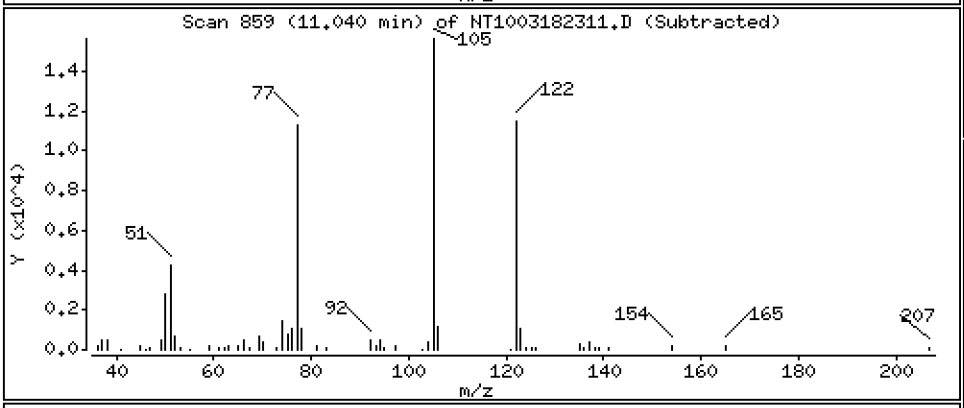
Column phase: ZB-5msi

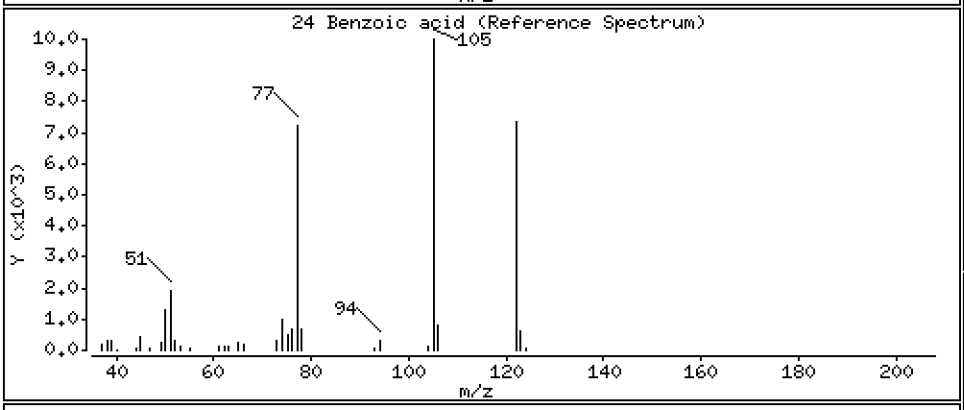
Column diameter: 0.25

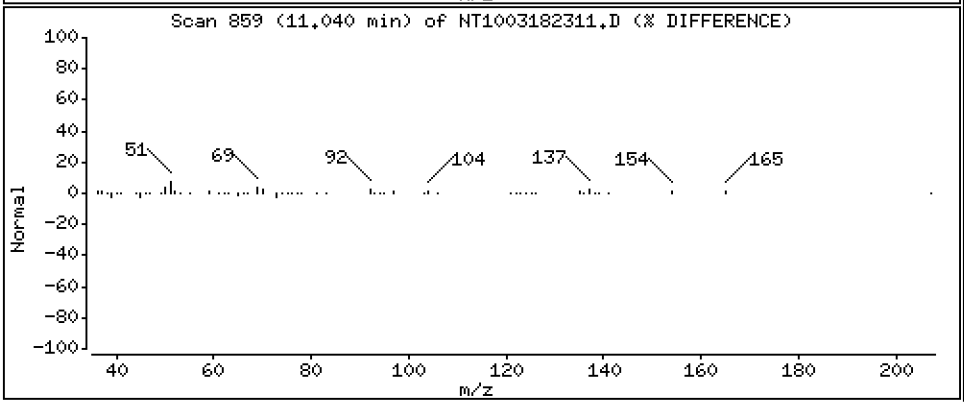
24 Benzoic acid

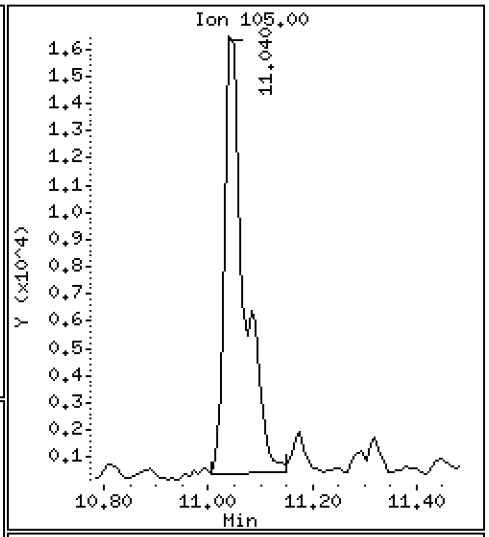
Concentration: 0.9383 ug/mL

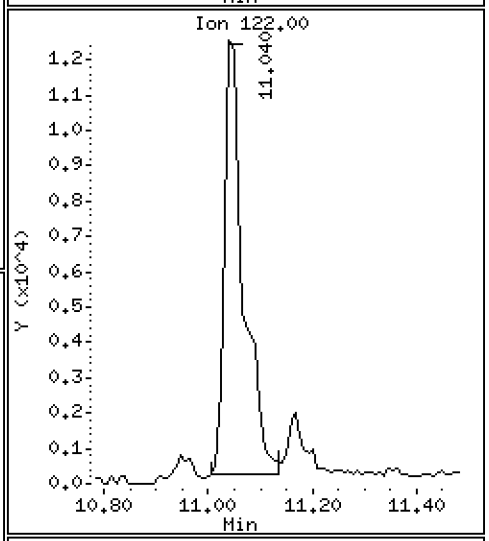


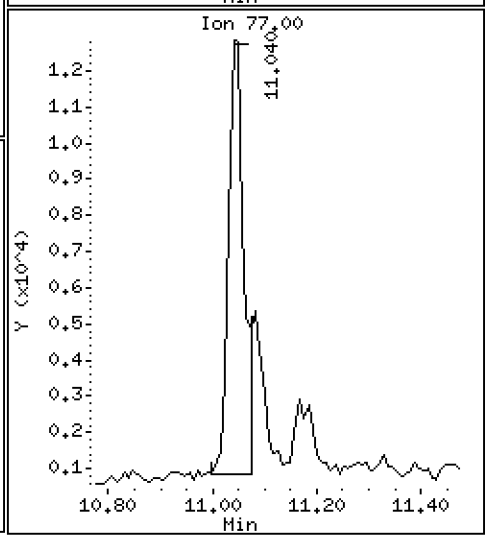












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

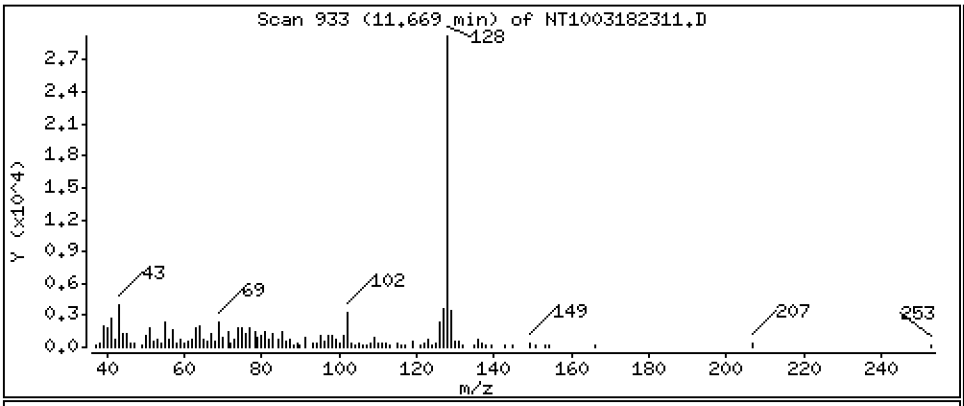
Operator: VTS

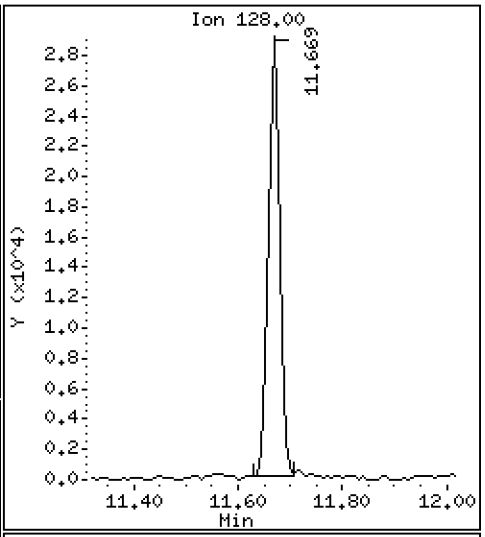
Column phase: ZB-5msi

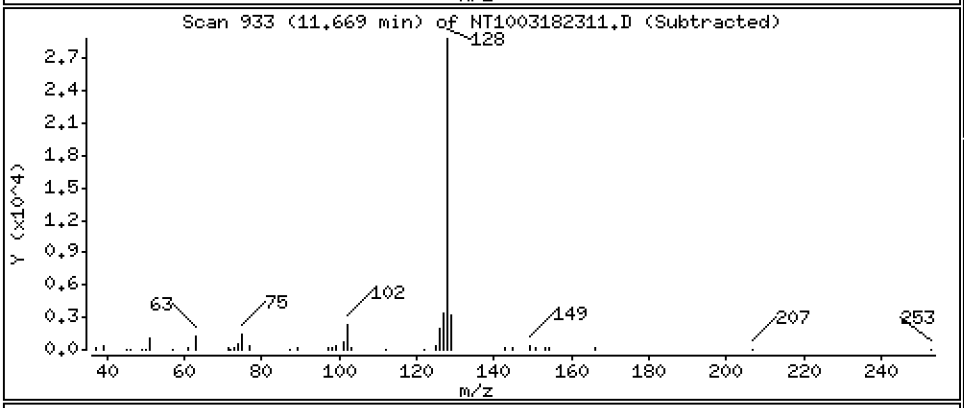
Column diameter: 0.25

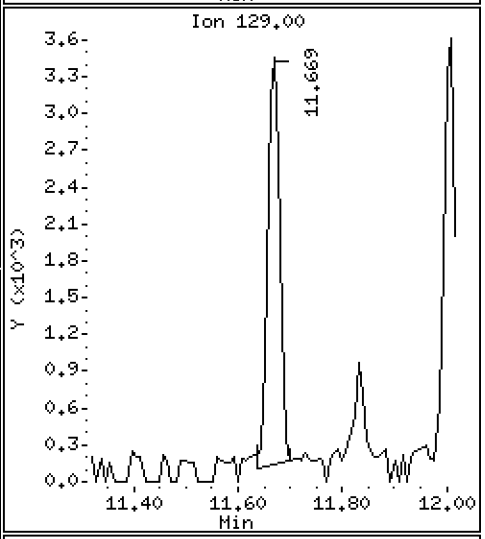
28 Naphthalene

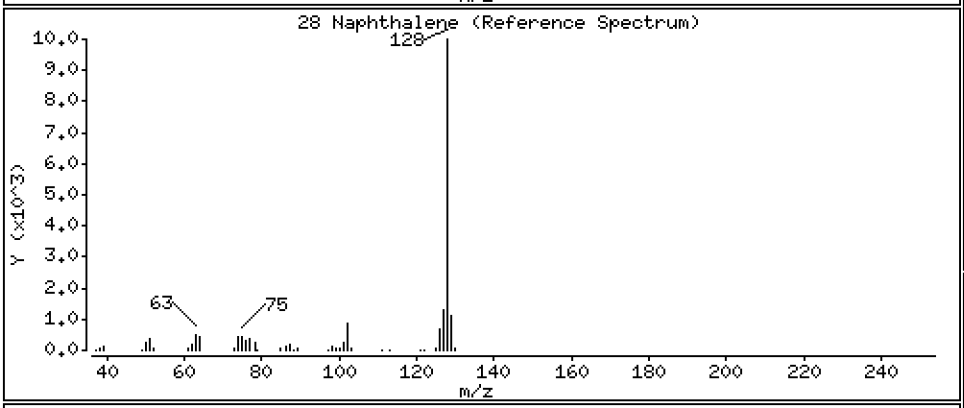
Concentration: 0.1780 ug/mL

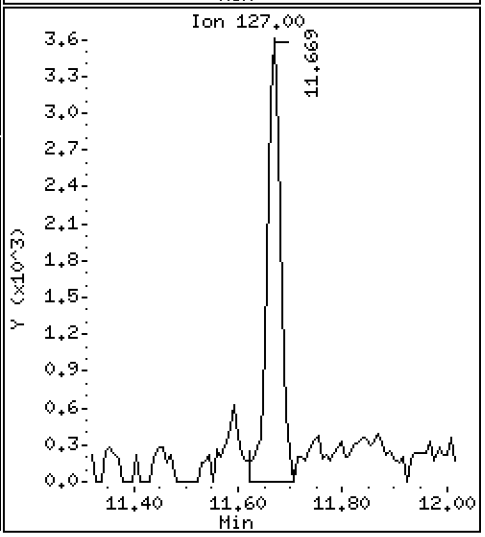


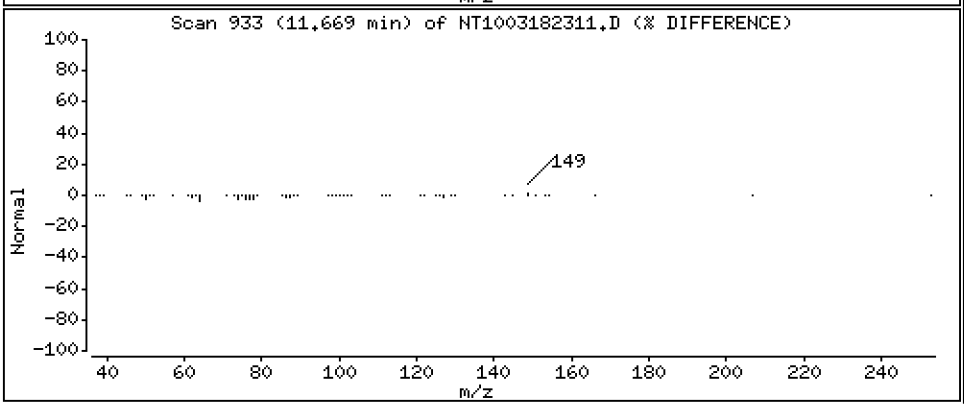












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

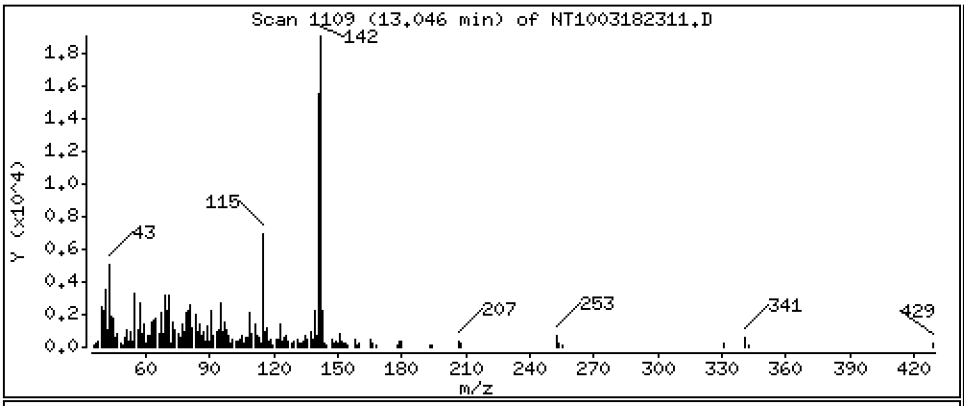
Operator: VTS

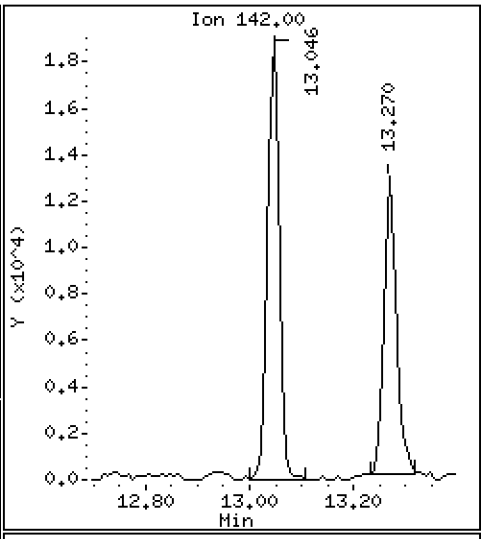
Column phase: ZB-5msi

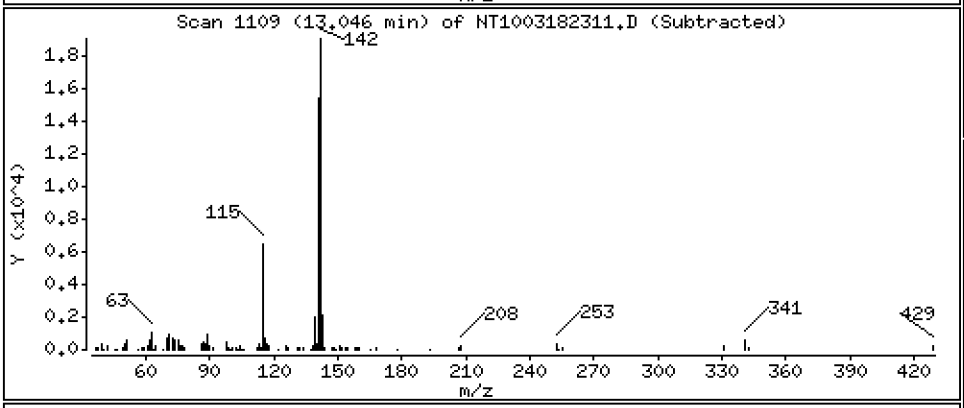
Column diameter: 0.25

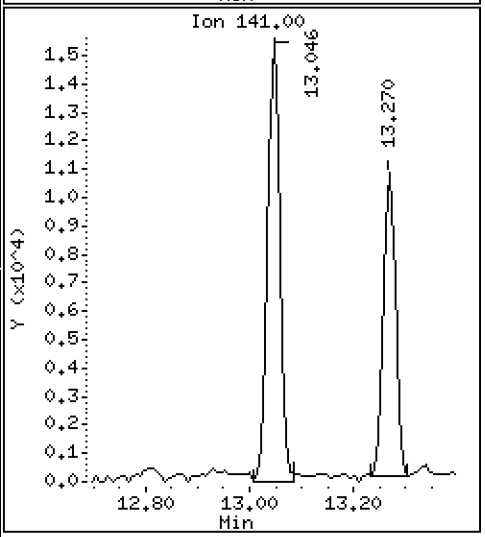
32 2-Methylnaphthalene

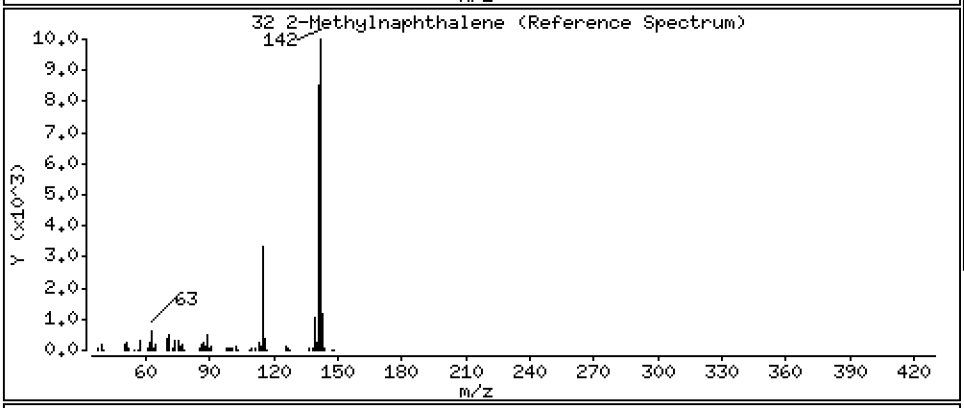
Concentration: 0.1613 ug/mL

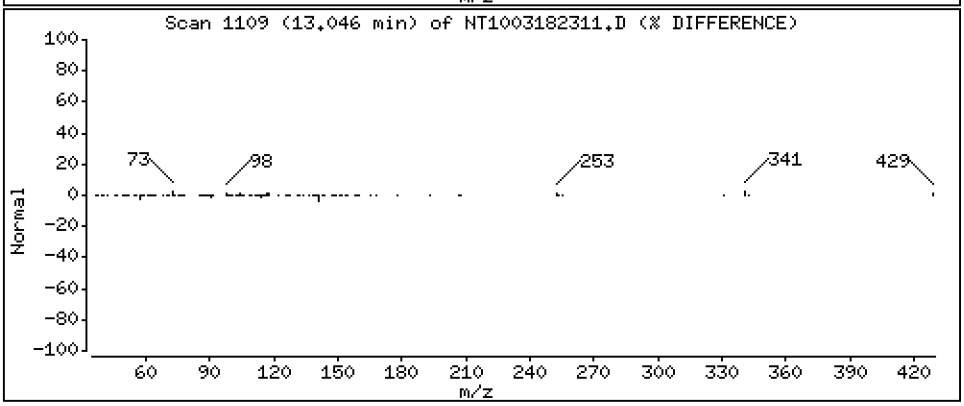












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

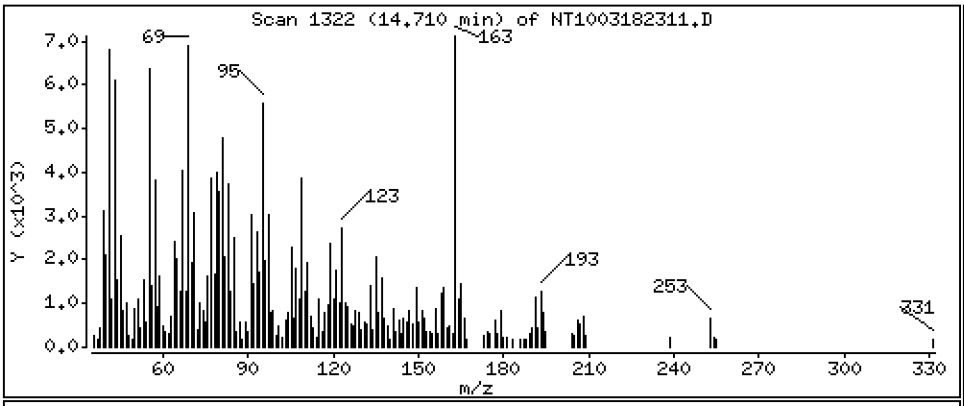
Operator: VTS

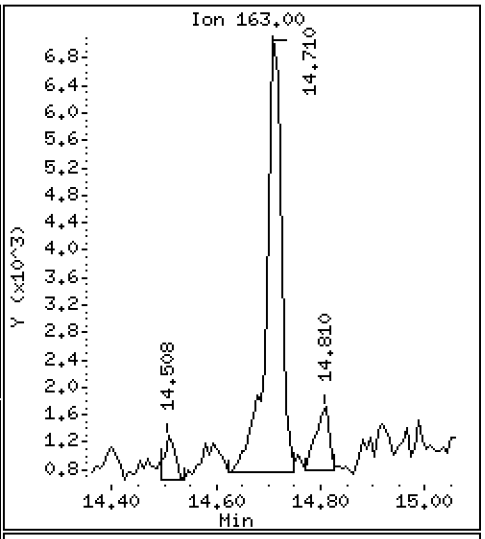
Column phase: ZB-5msi

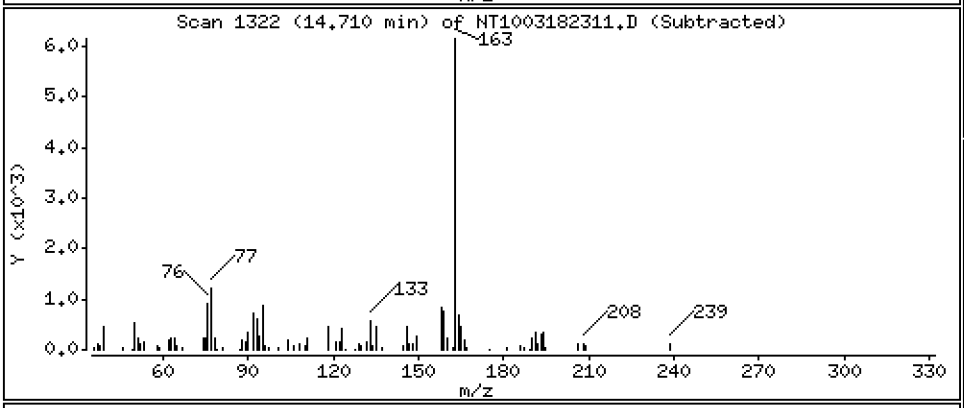
Column diameter: 0.25

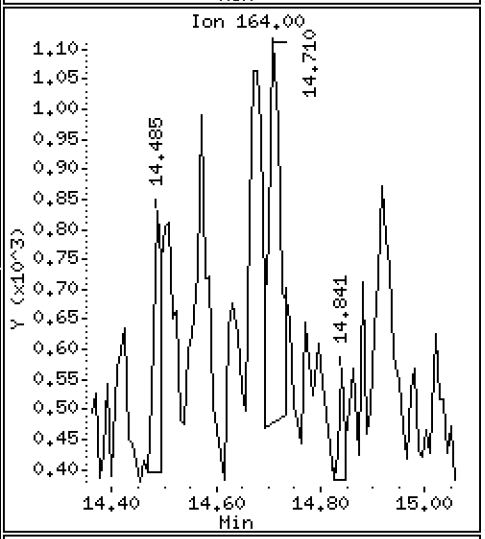
39 Dimethylphthalate

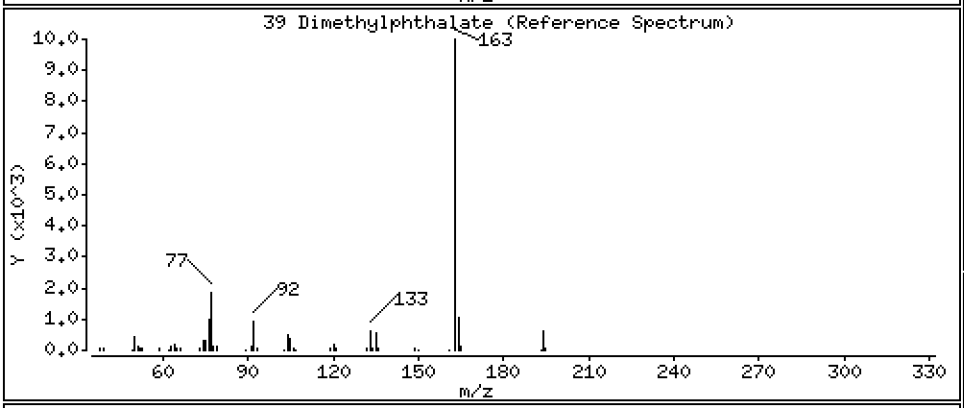
Concentration: 0.07632 ug/mL

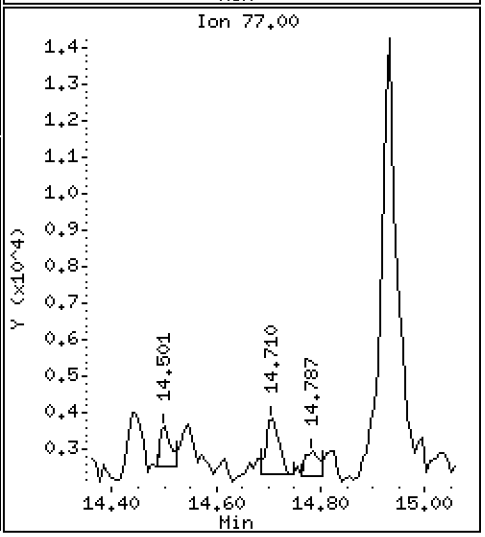


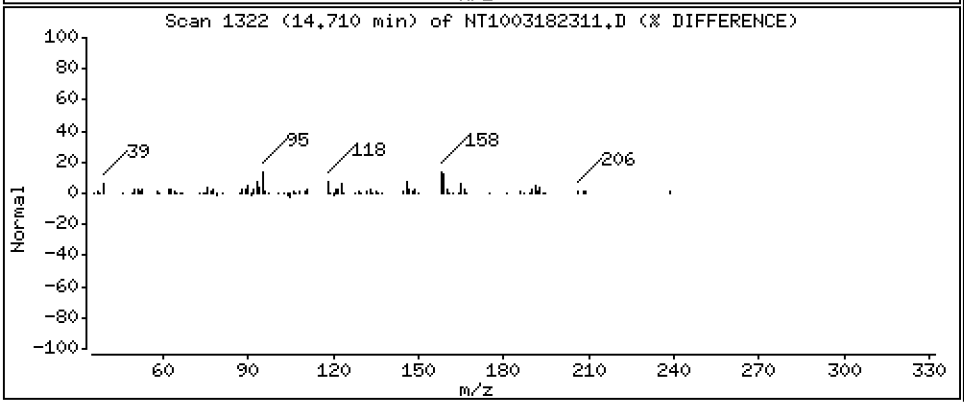












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

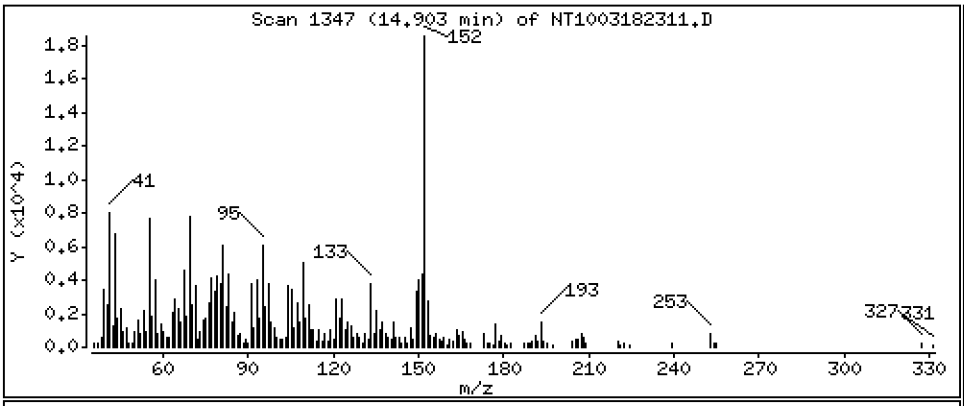
Operator: VTS

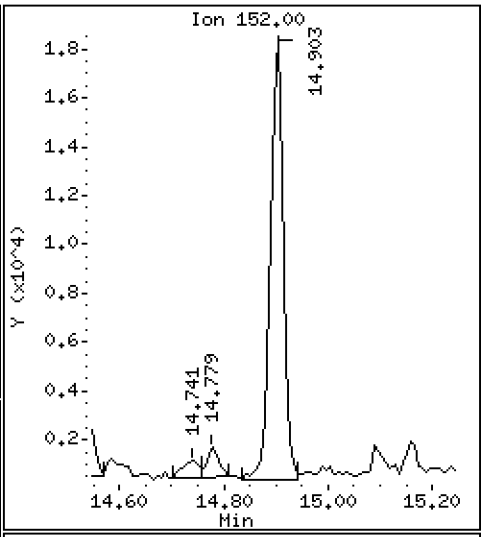
Column phase: ZB-5msi

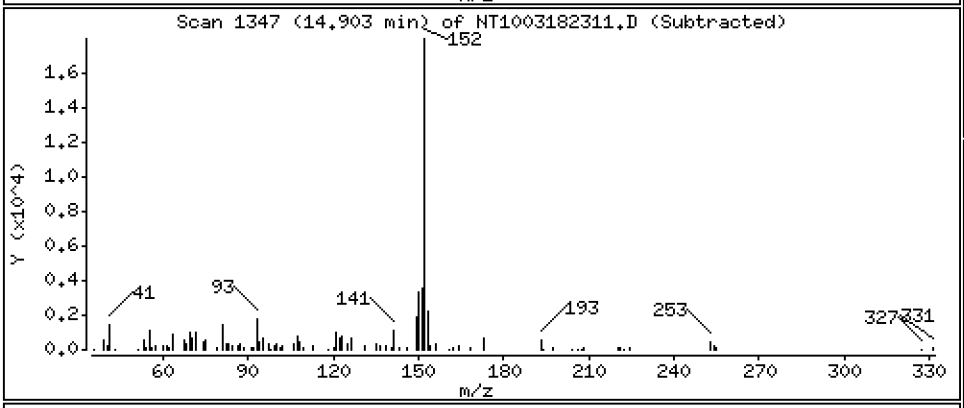
Column diameter: 0.25

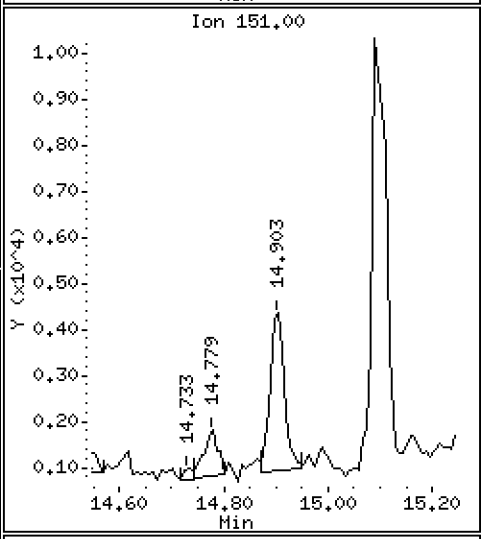
40 Acenaphthylene

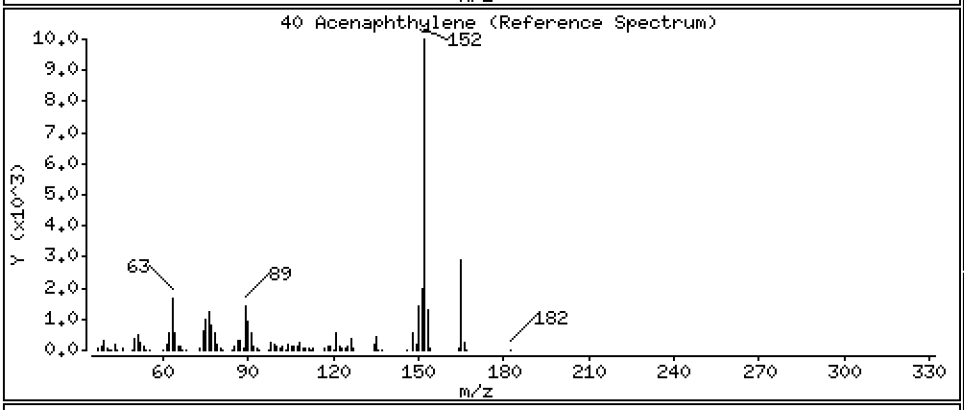
Concentration: 0.1225 ug/mL

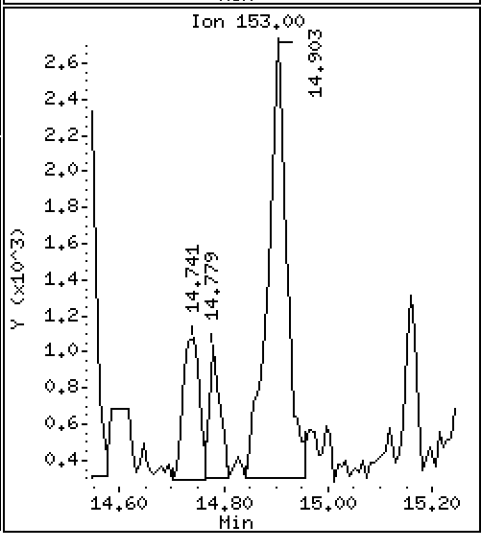


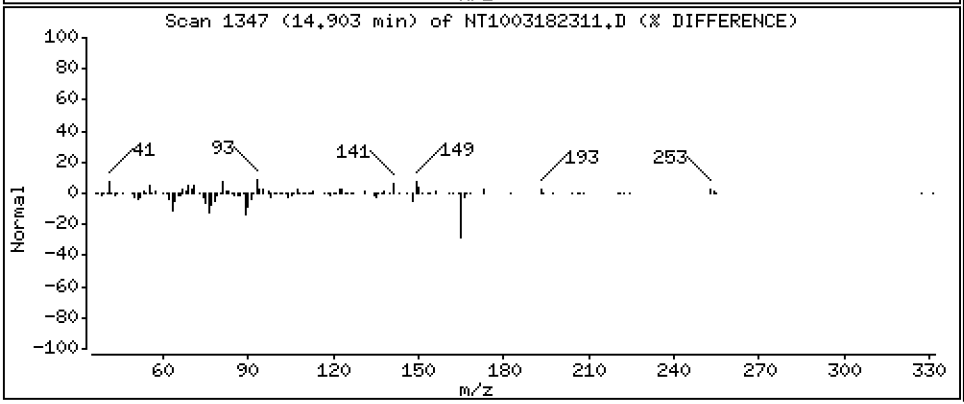












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

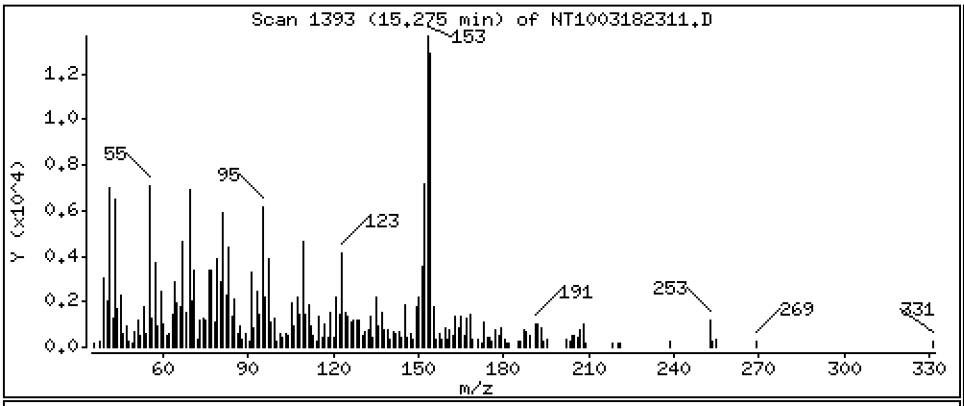
Operator: VTS

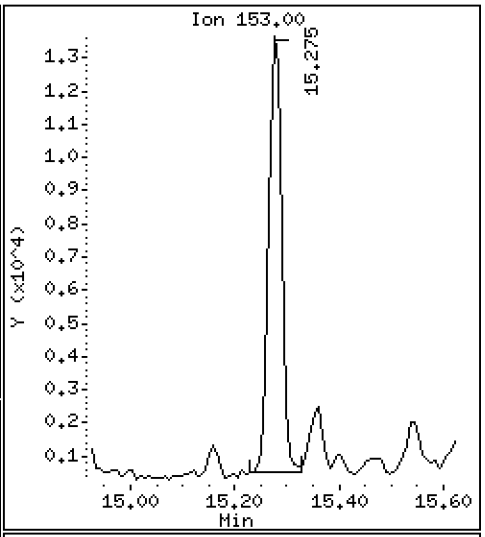
Column phase: ZB-5msi

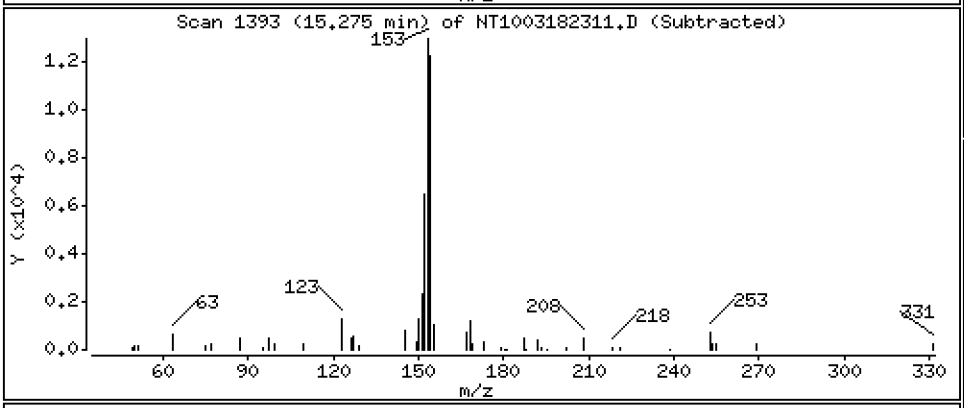
Column diameter: 0.25

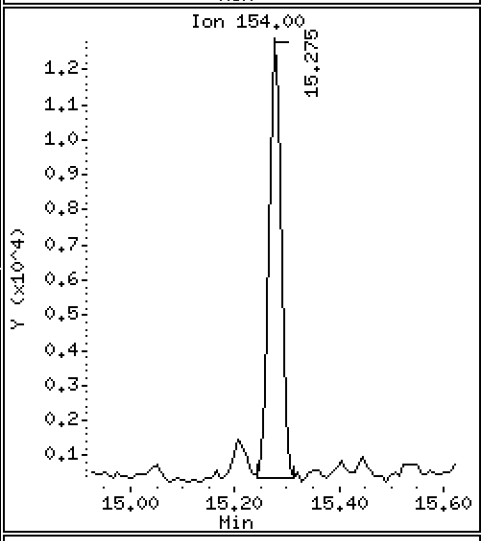
44 Acenaphthene

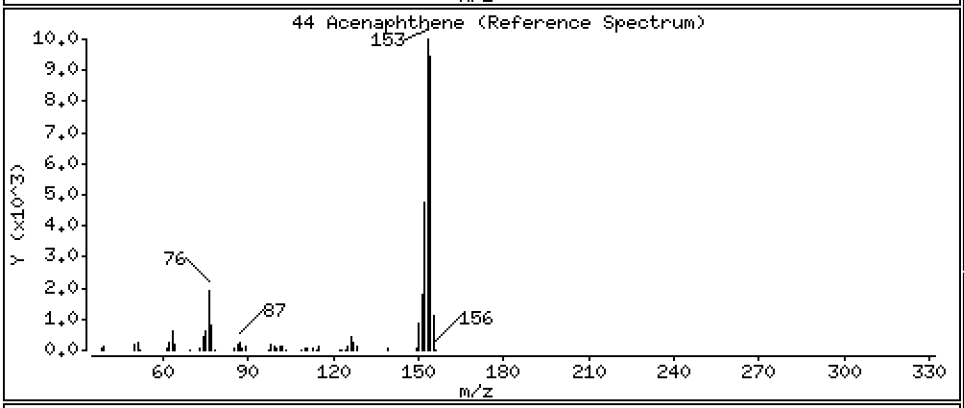
Concentration: 0.1441 ug/mL

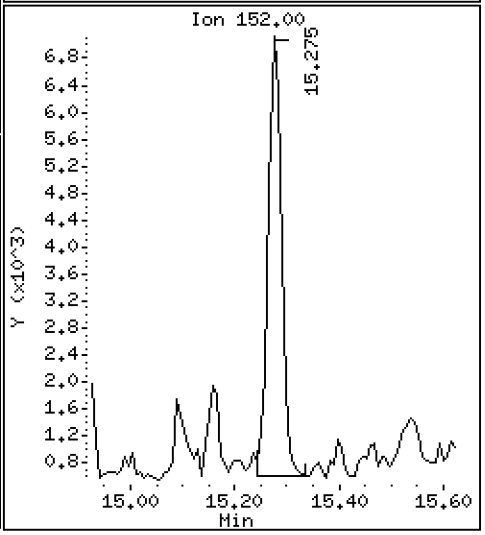


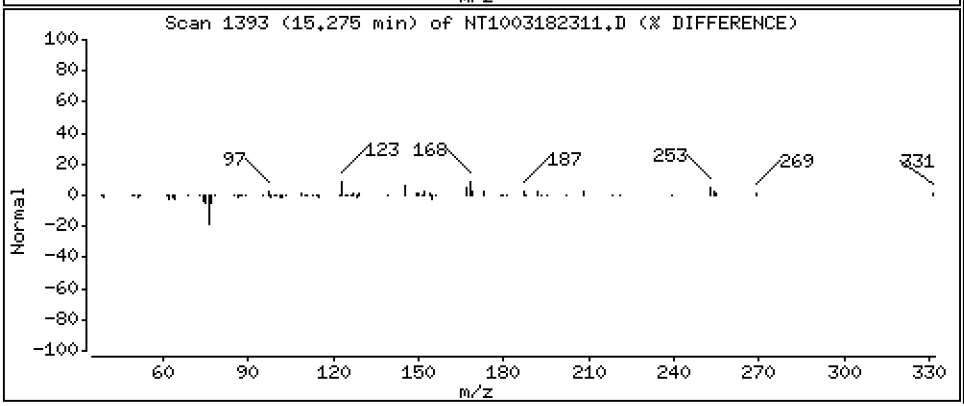












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

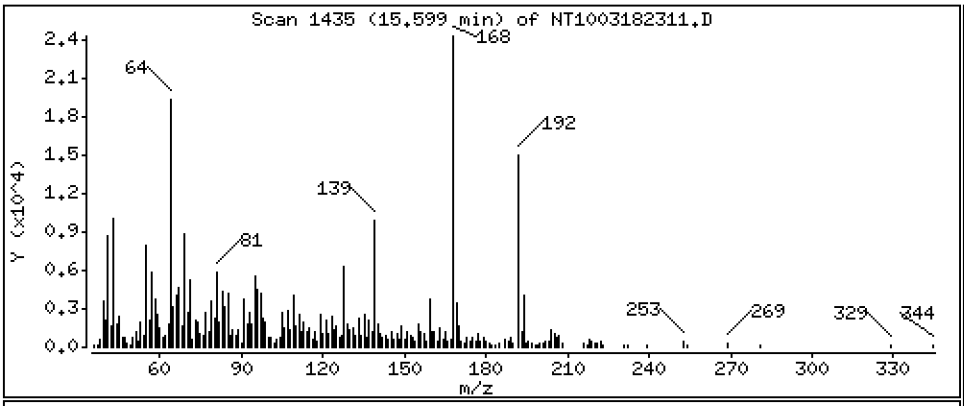
Operator: VTS

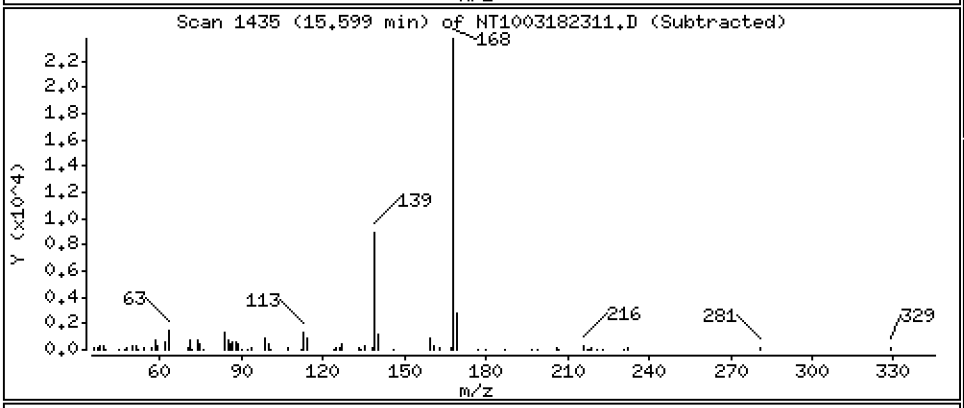
Column phase: ZB-5msi

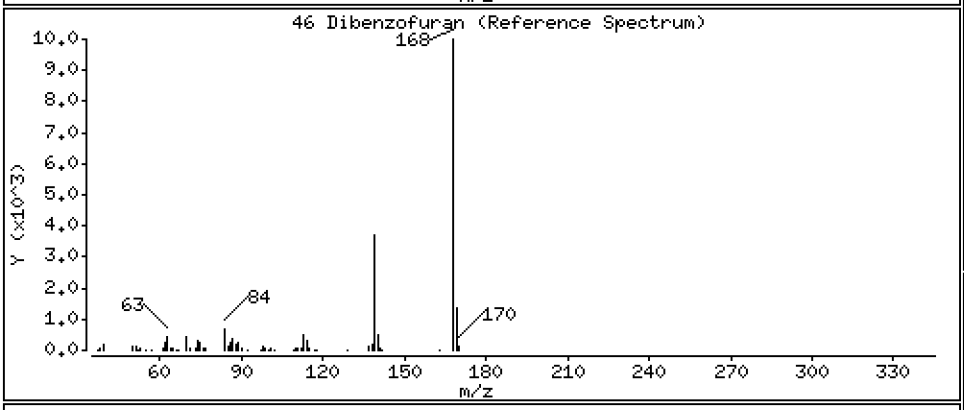
Column diameter: 0.25

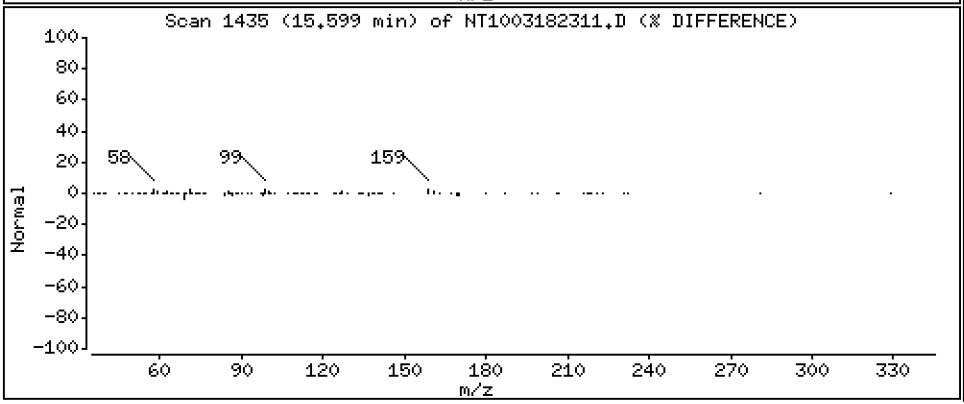
46 Dibenzofuran

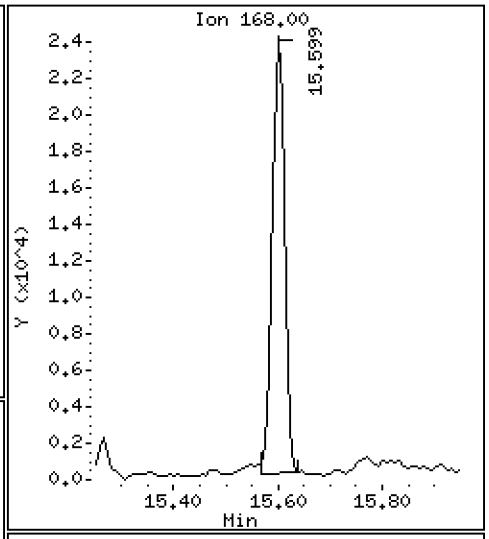
Concentration: 0.1656 ug/mL

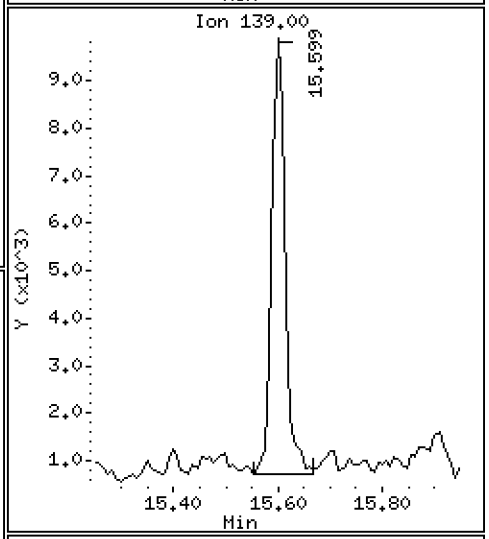


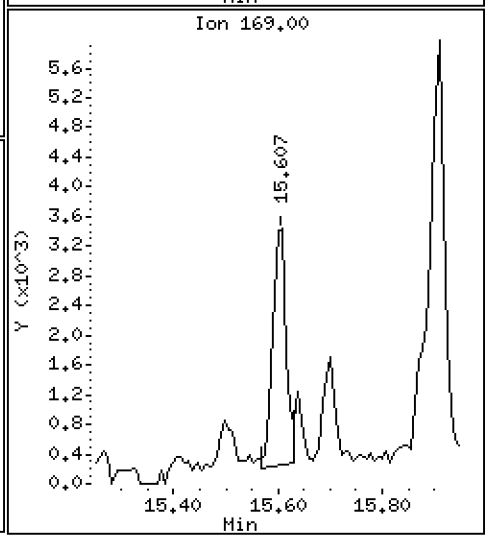












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

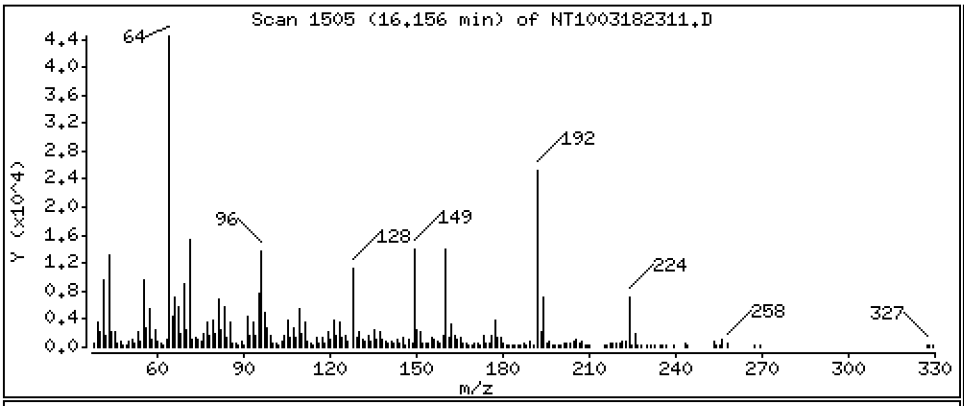
Operator: VTS

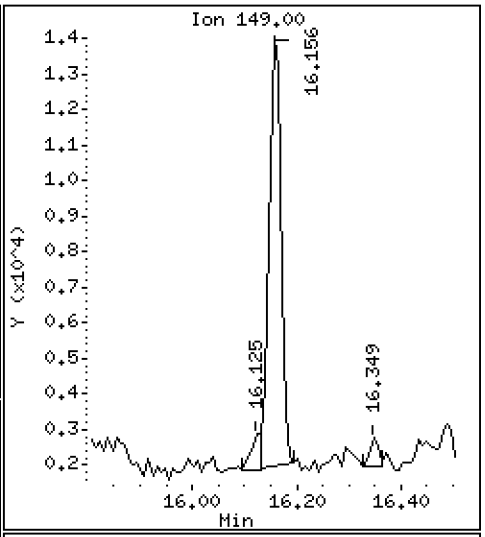
Column phase: ZB-5msi

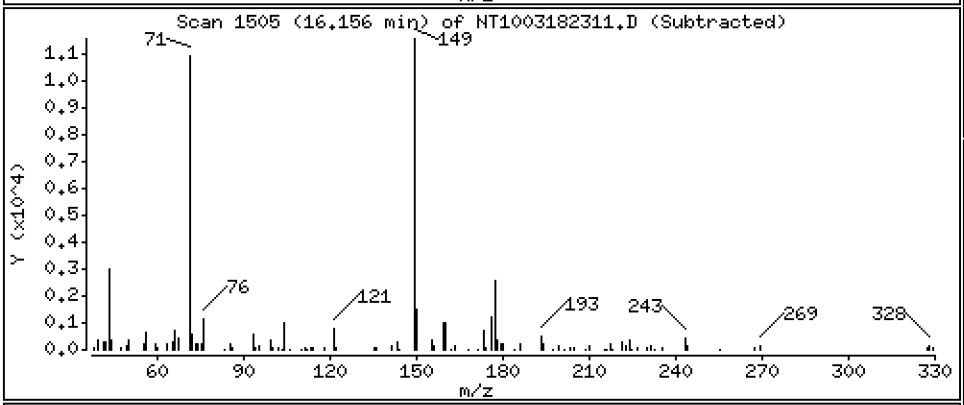
Column diameter: 0.25

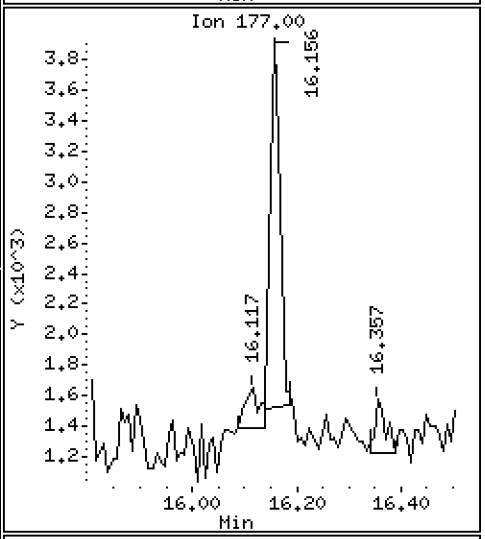
50 Diethylphthalate

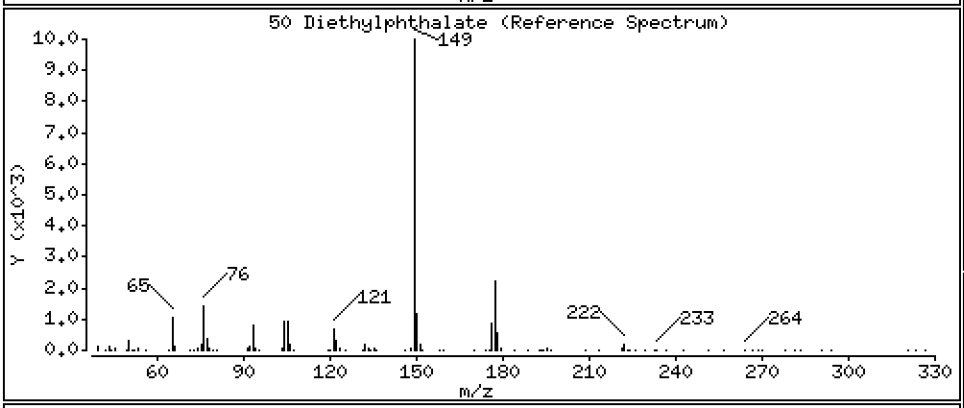
Concentration: 0.1171 ug/mL

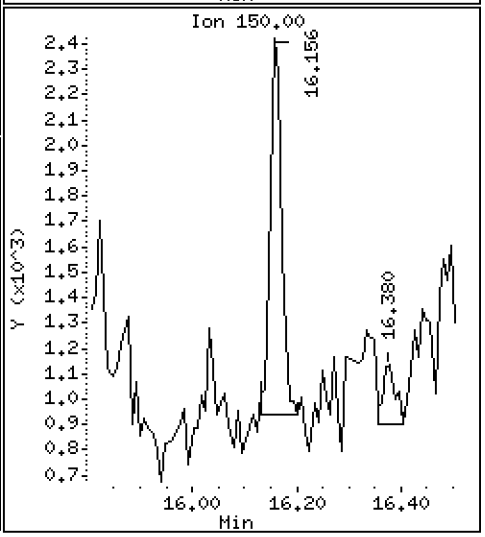


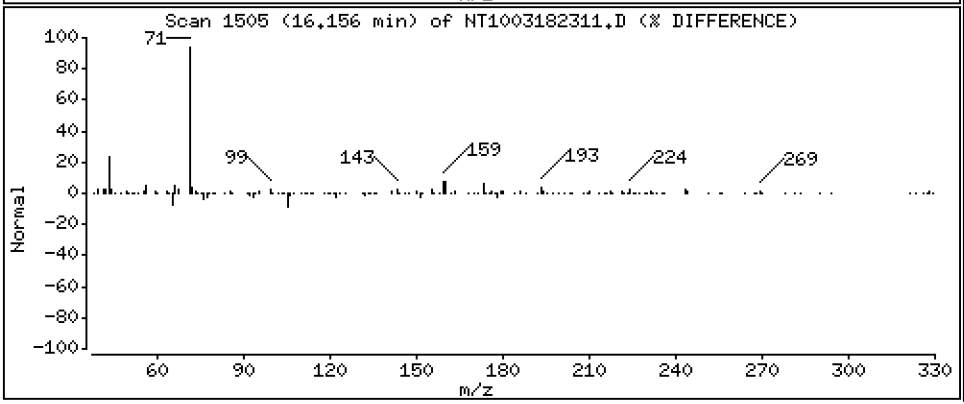












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

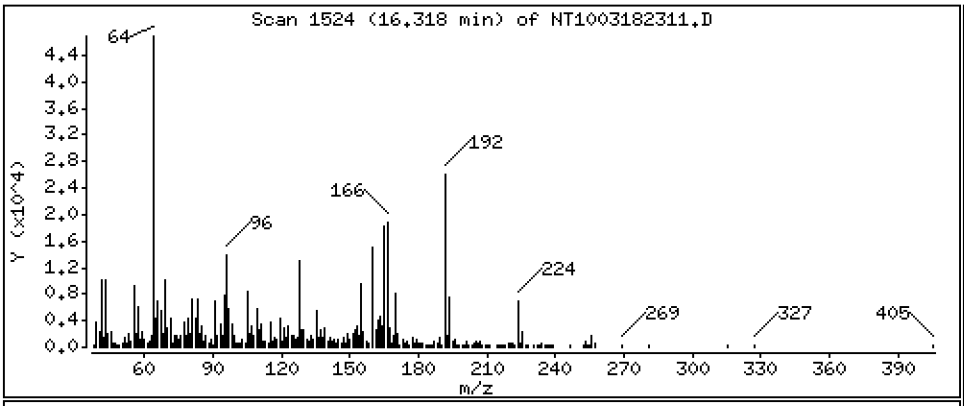
Operator: VTS

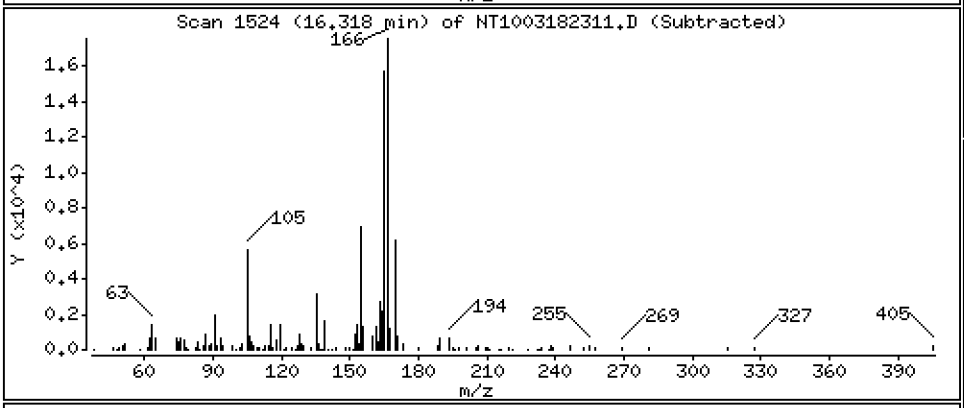
Column phase: ZB-5msi

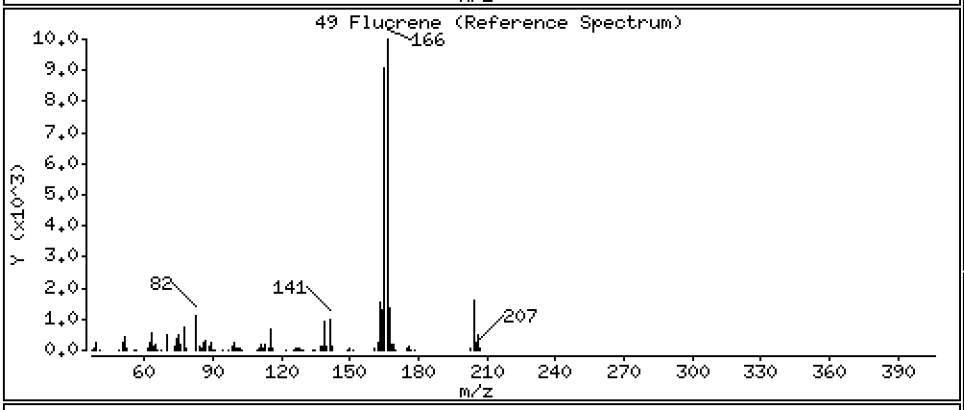
Column diameter: 0.25

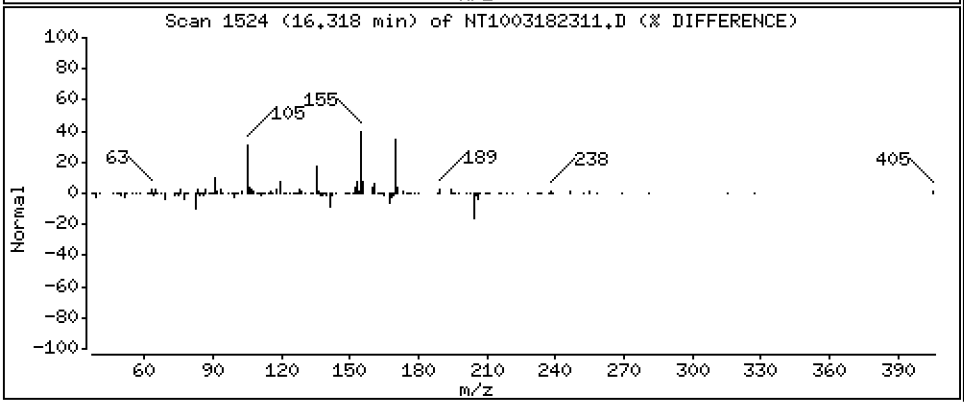
49 Fluorene

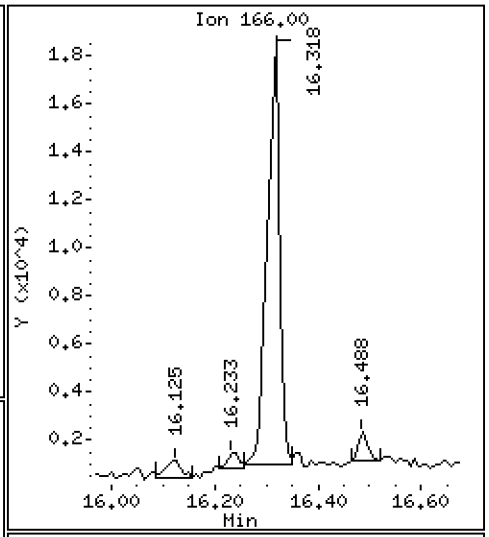
Concentration: 0.1155 ug/mL

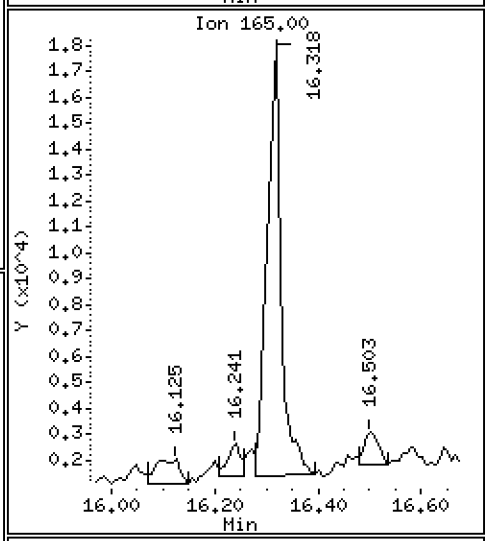


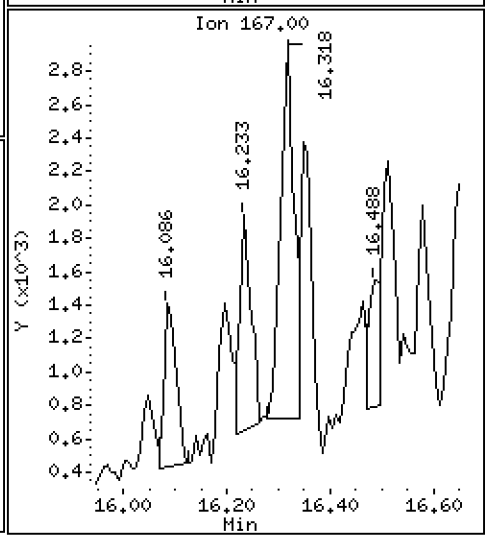












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

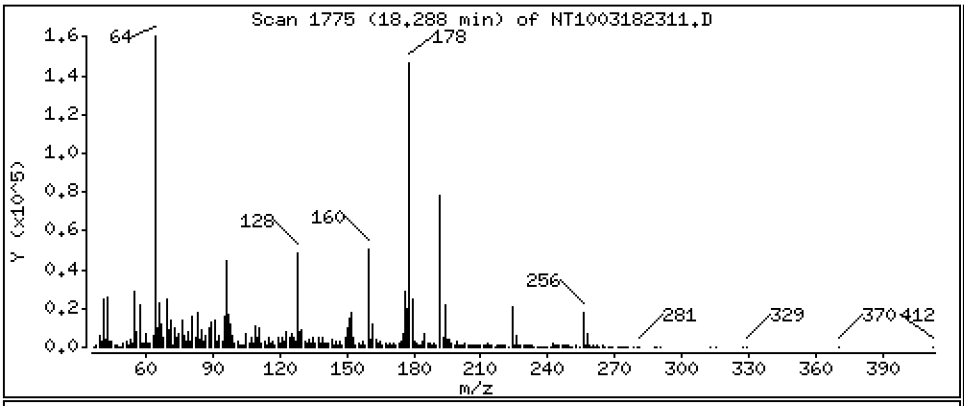
Operator: VTS

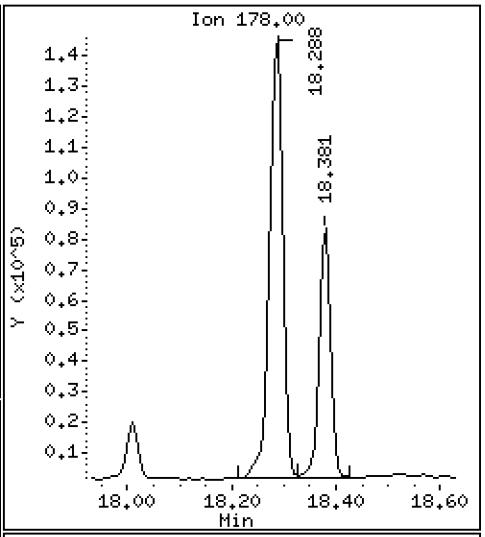
Column phase: ZB-5msi

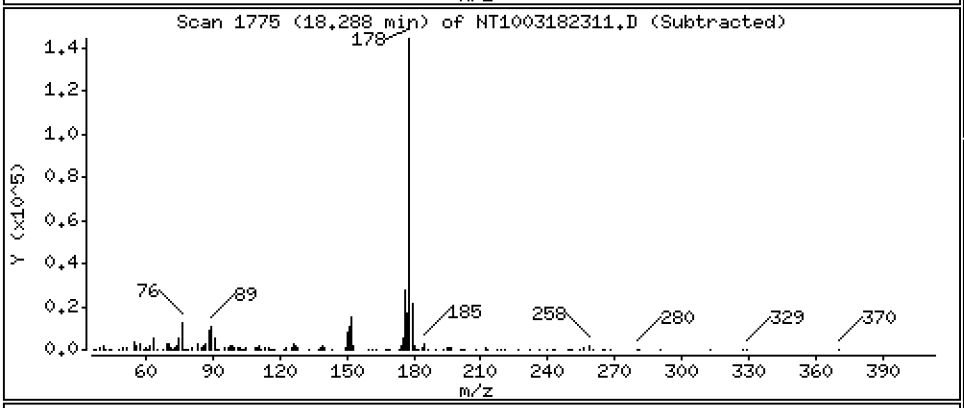
Column diameter: 0.25

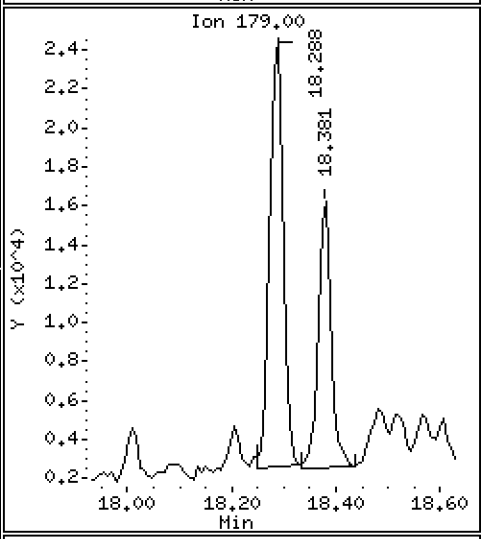
60 Phenanthrene

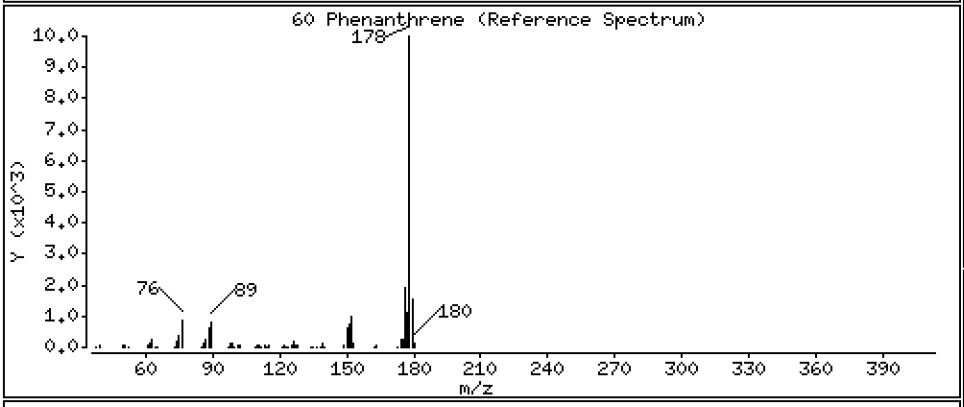
Concentration: 0.9796 ug/mL

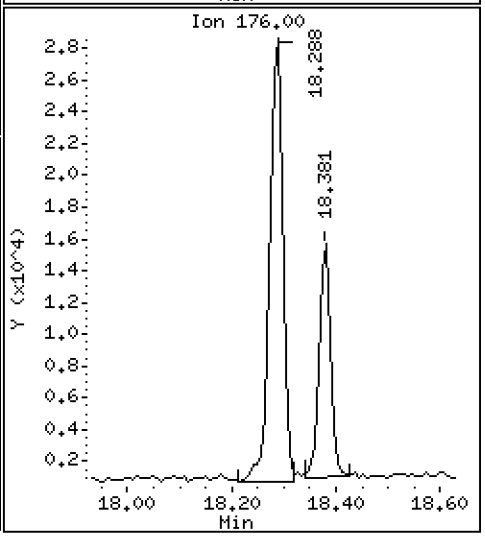


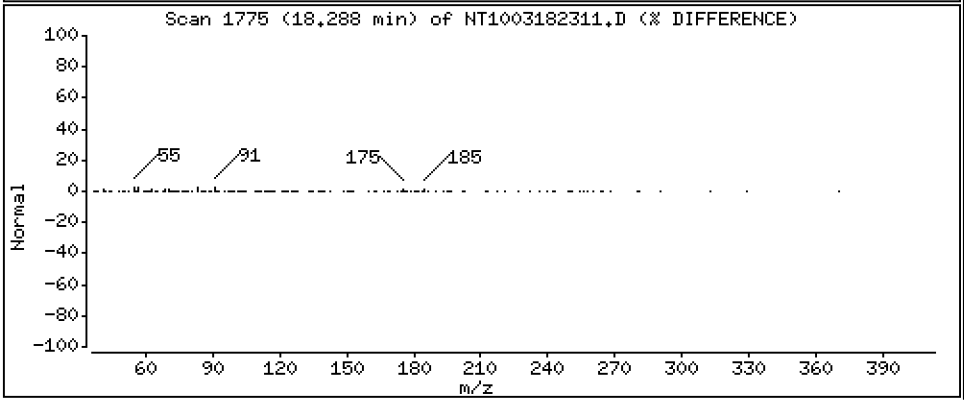












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

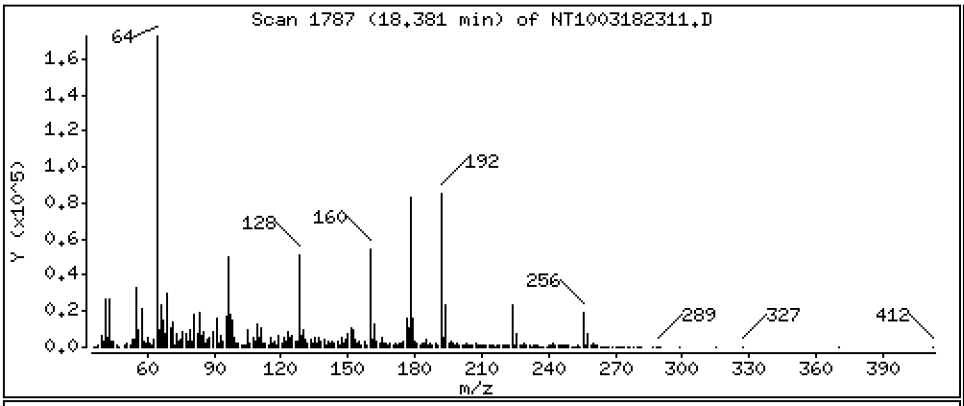
Operator: VTS

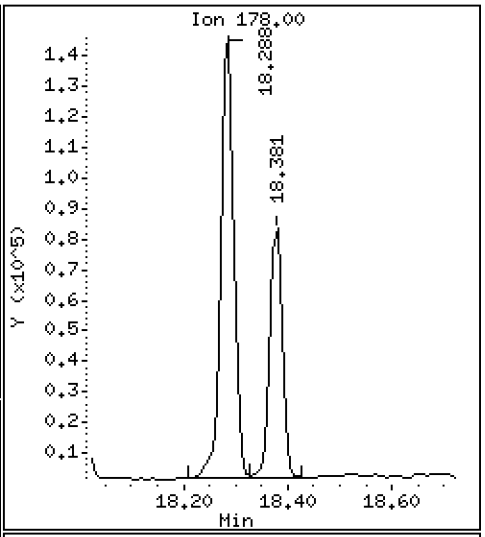
Column phase: ZB-5msi

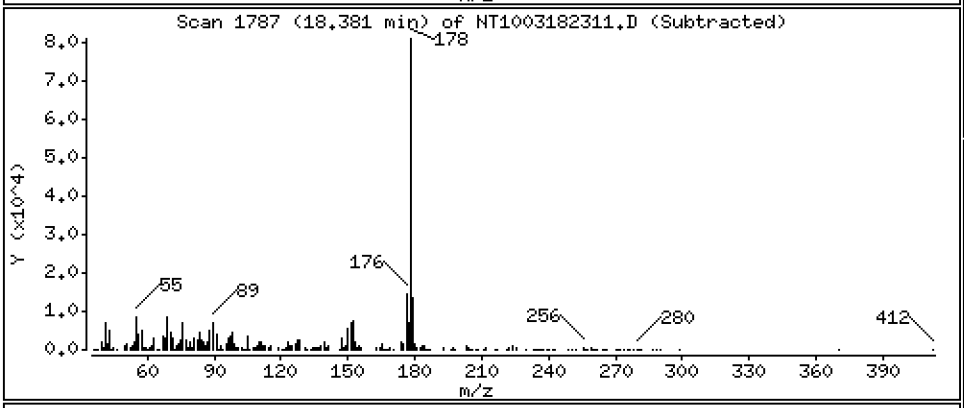
Column diameter: 0.25

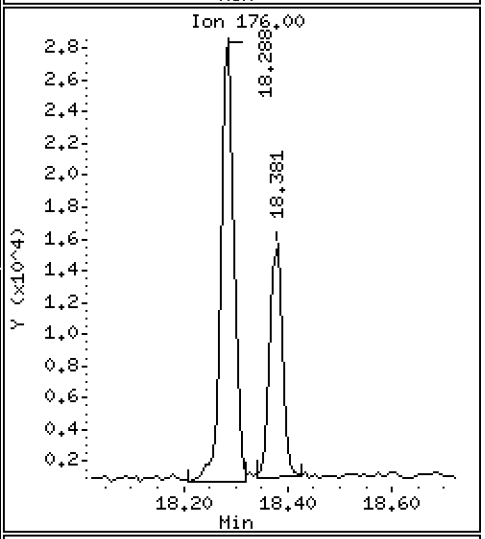
61 Anthracene

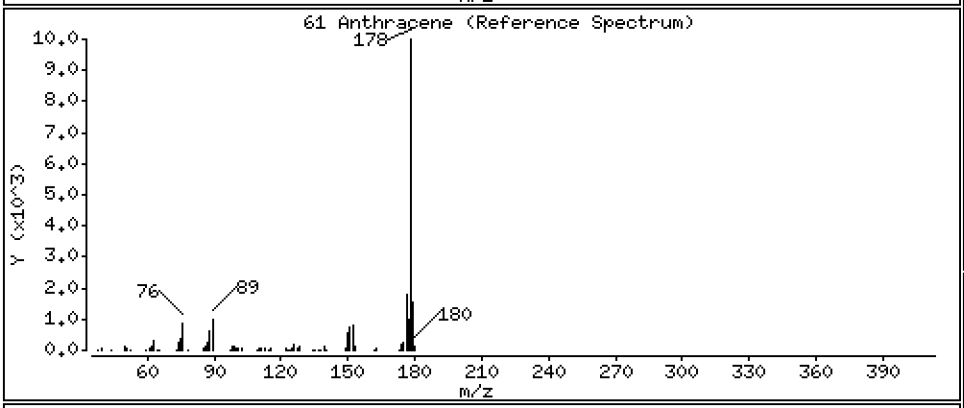
Concentration: 0.5421 ug/mL

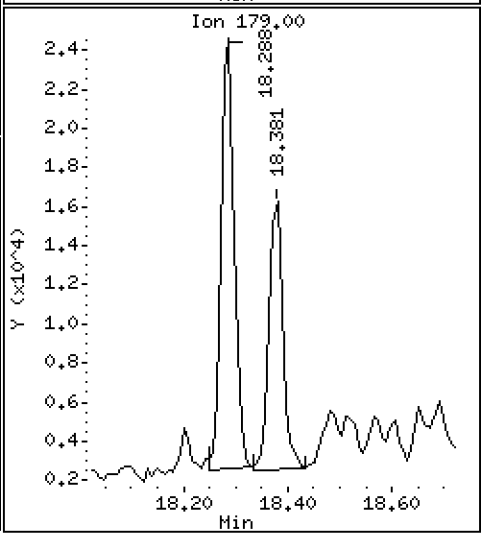


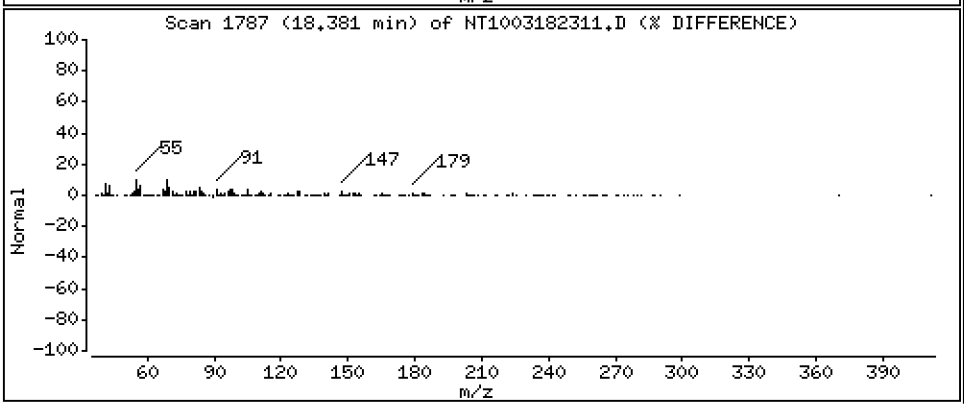












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

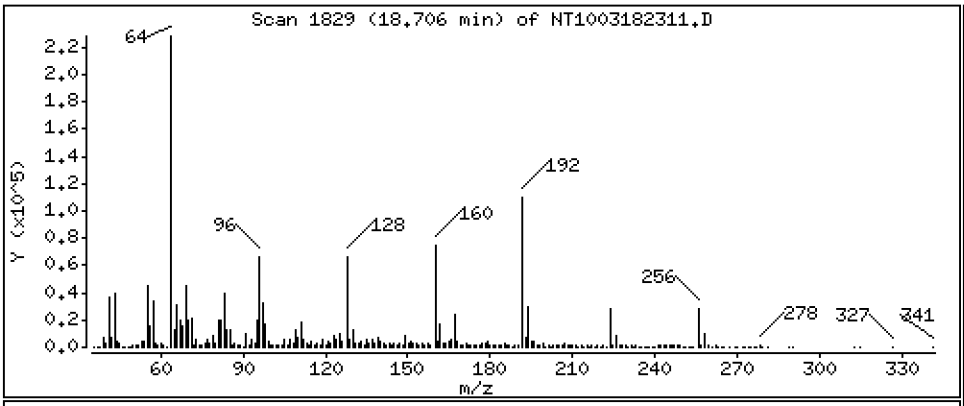
Operator: VTS

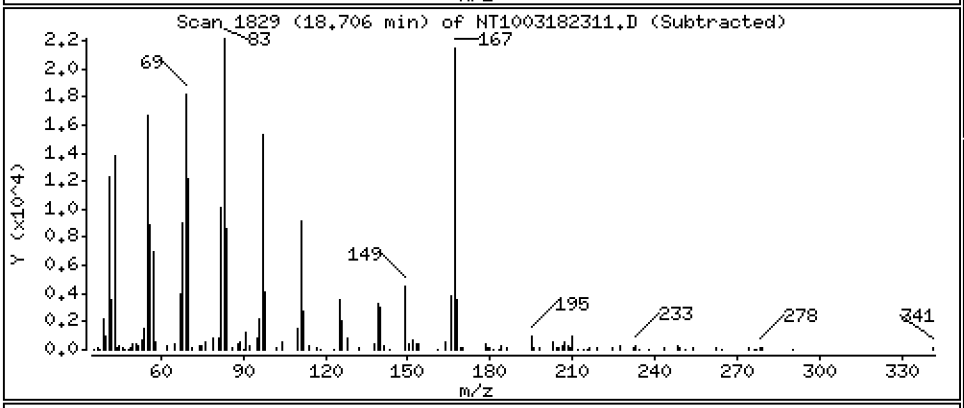
Column phase: ZB-5msi

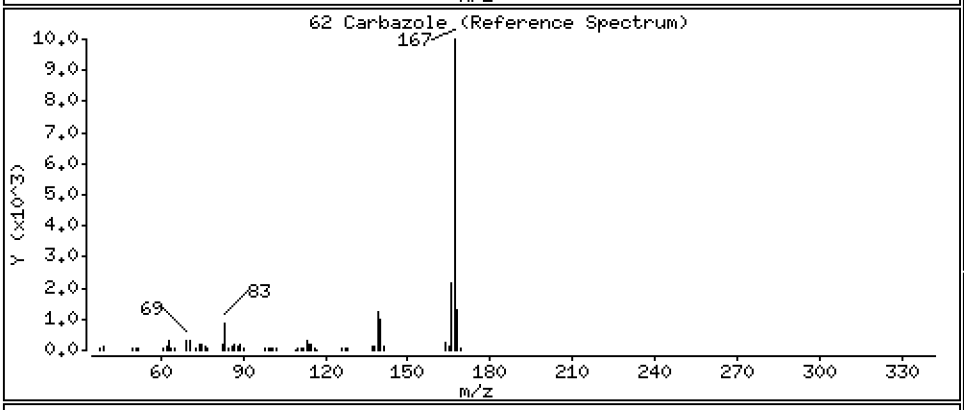
Column diameter: 0.25

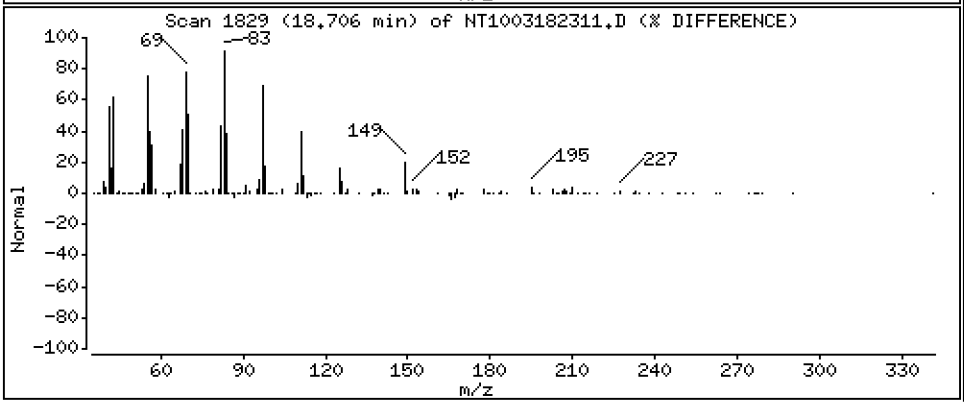
62 Carbazole

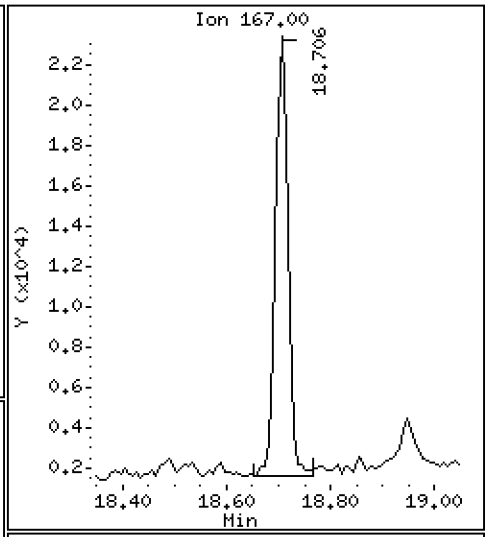
Concentration: 0.1598 ug/mL

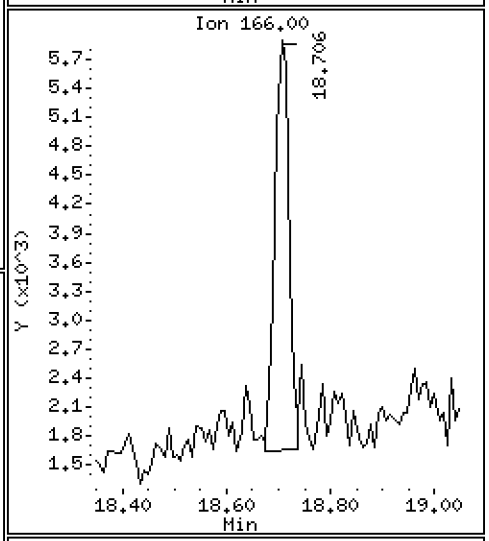


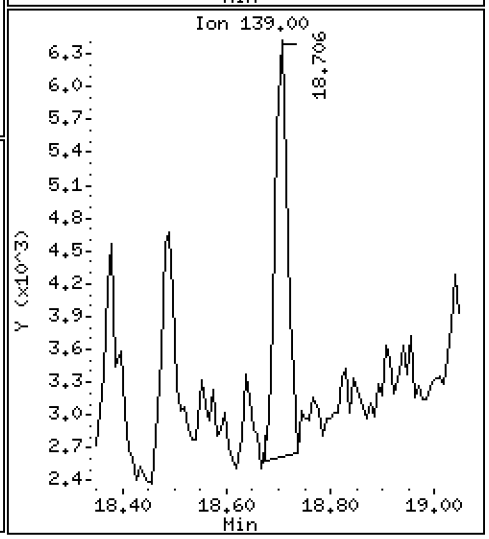












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

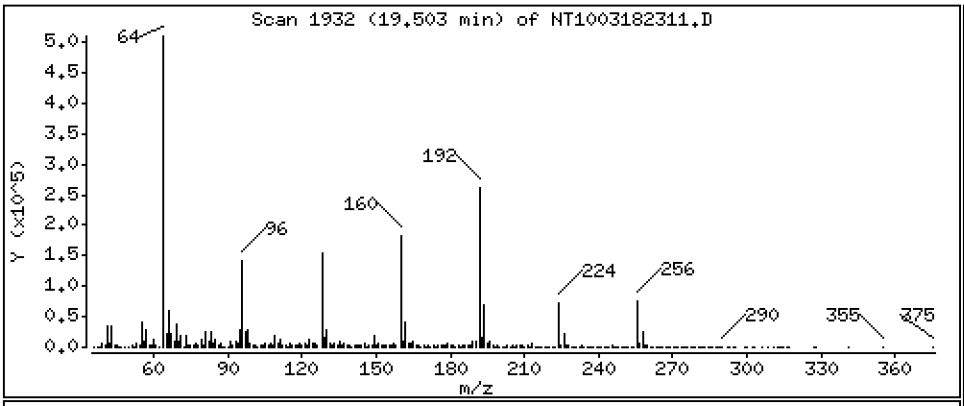
Operator: VTS

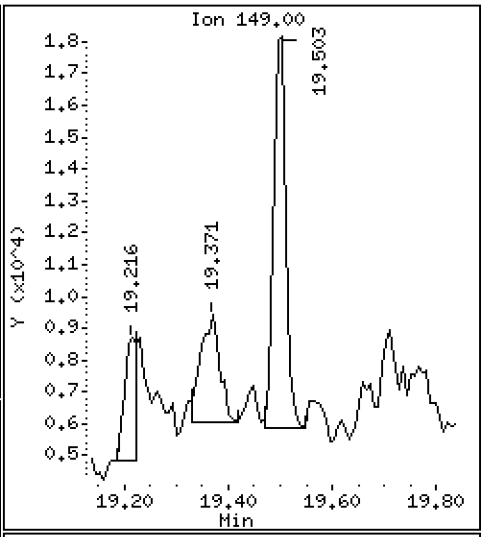
Column phase: ZB-5msi

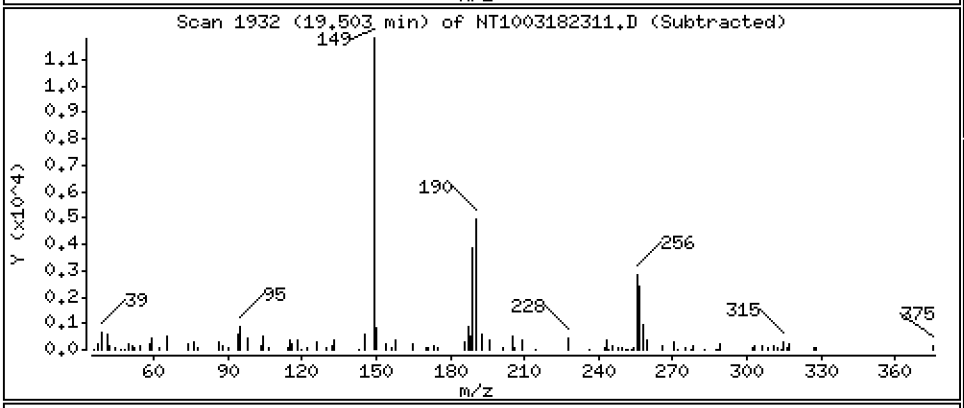
Column diameter: 0.25

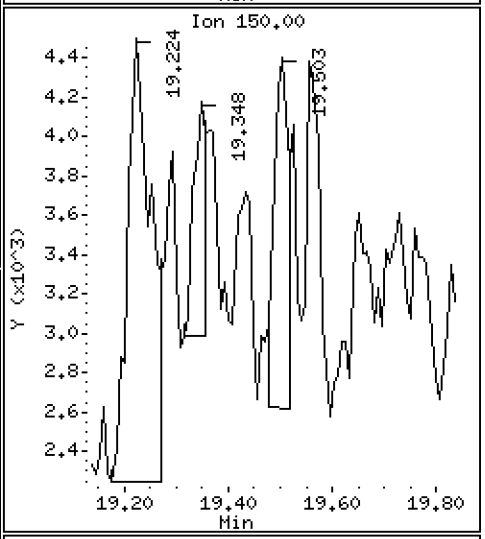
63 Di-n-butylphthalate

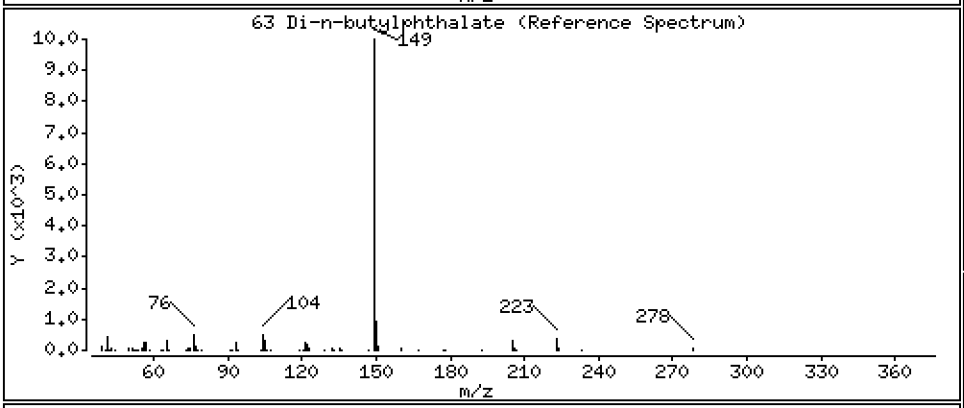
Concentration: 0.06528 ug/mL

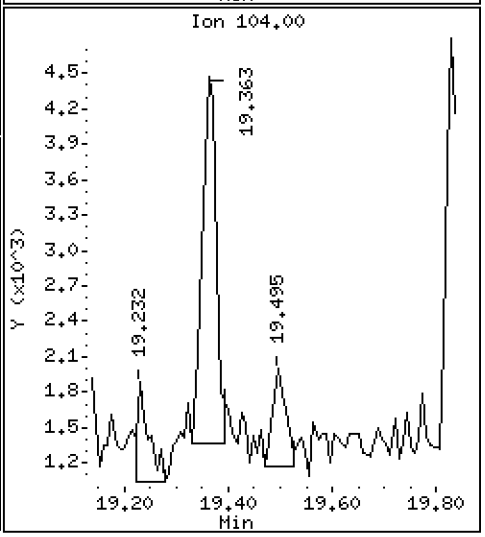


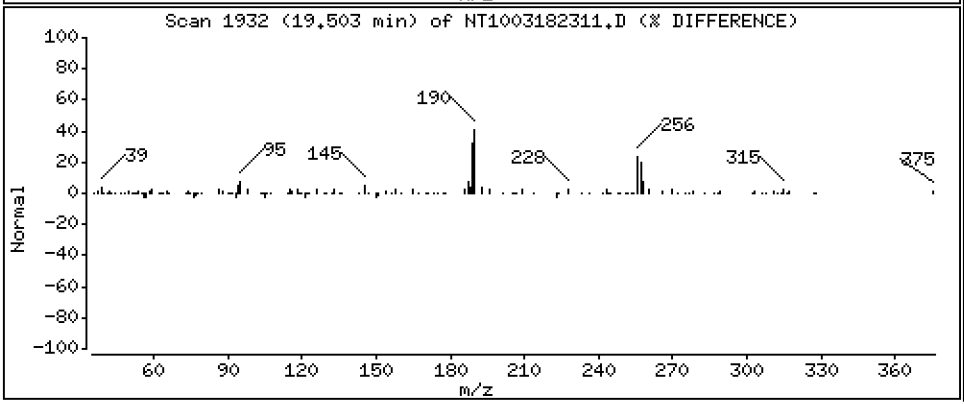












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

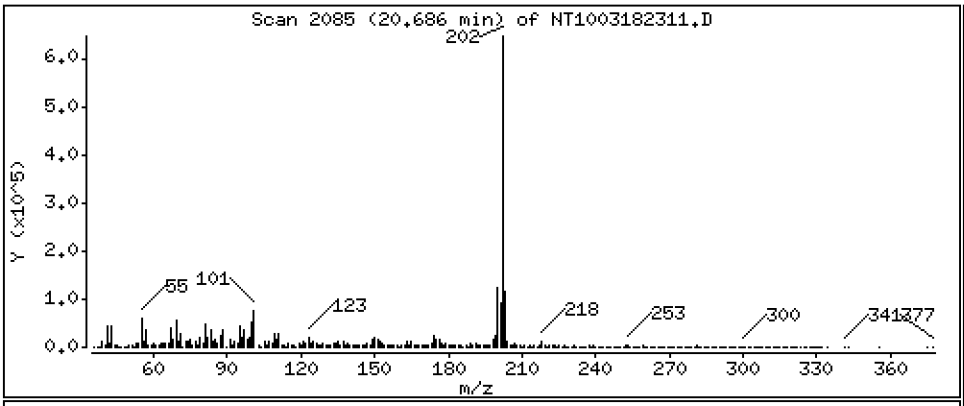
Operator: VTS

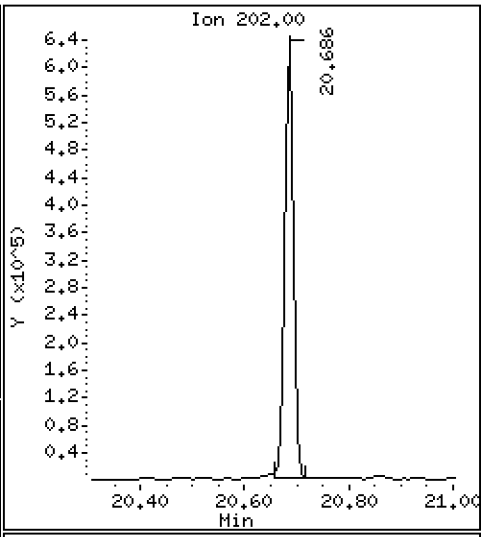
Column phase: ZB-5msi

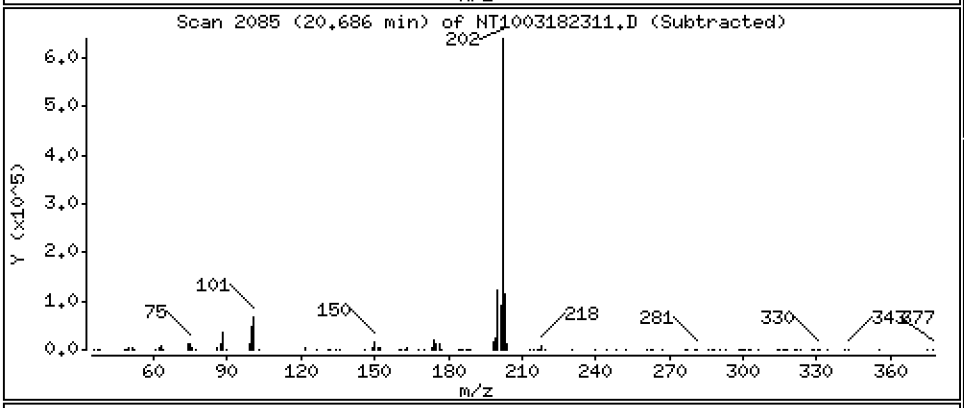
Column diameter: 0.25

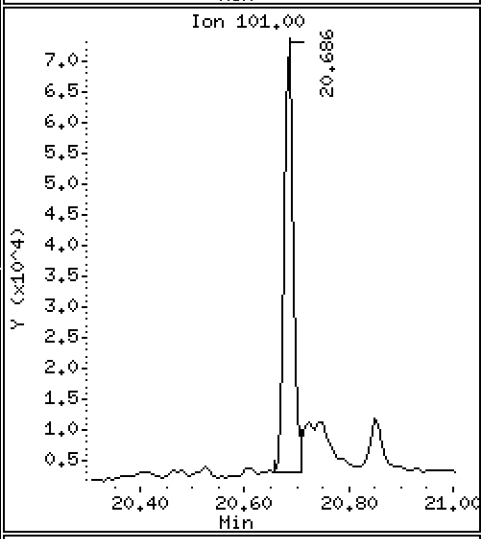
64 Fluoranthene

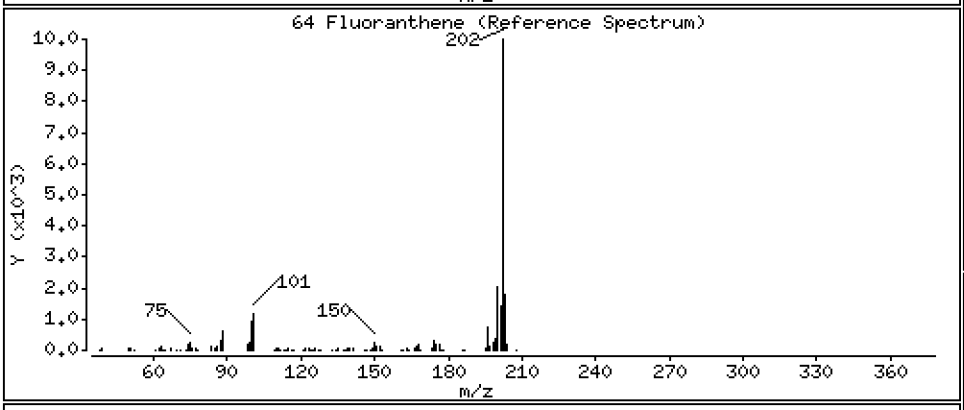
Concentration: 2.481 ug/mL

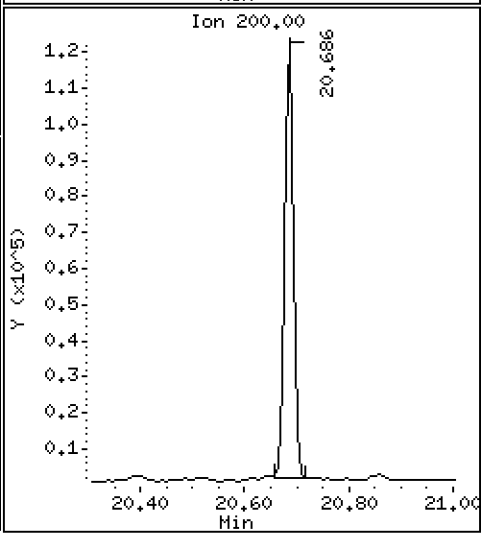


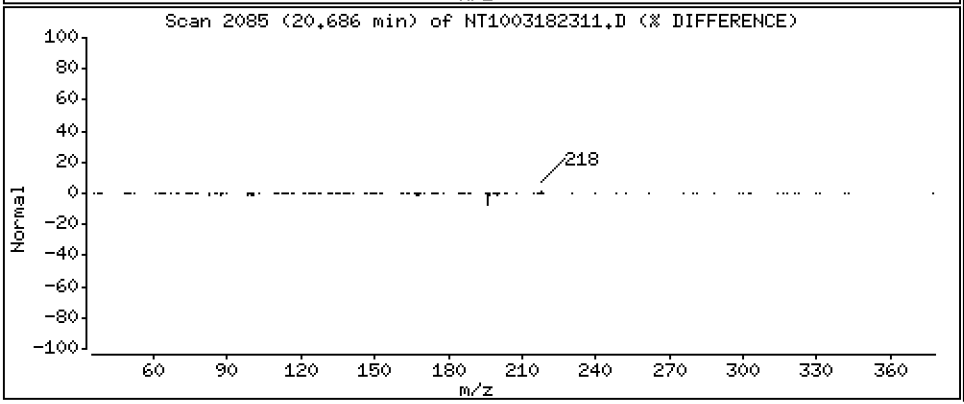












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

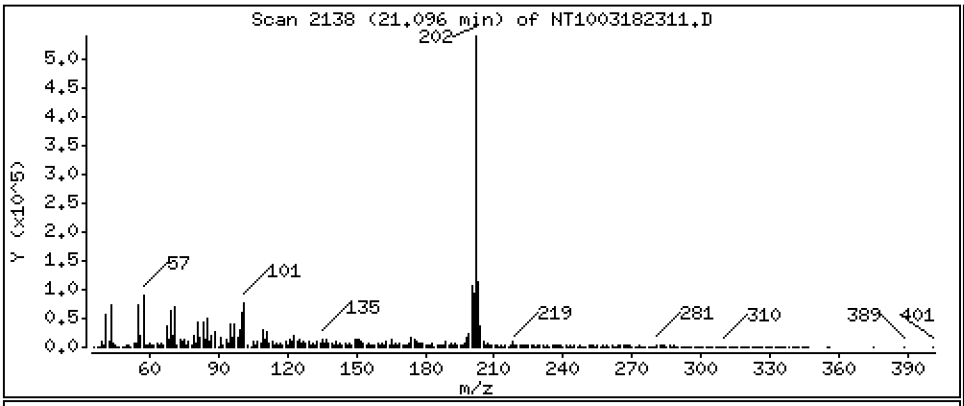
Operator: VTS

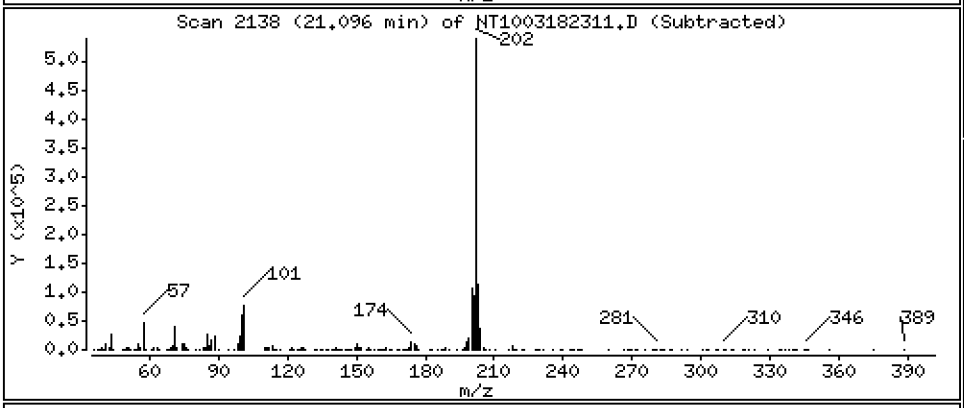
Column phase: ZB-5msi

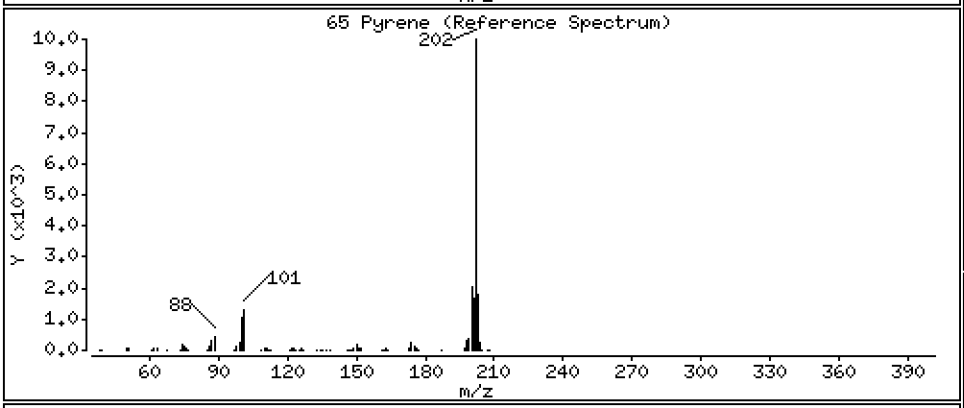
Column diameter: 0.25

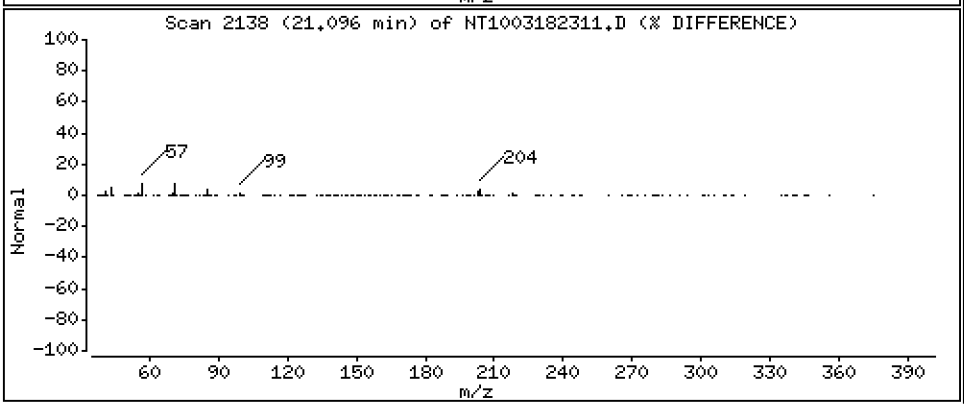
65 Pyrene

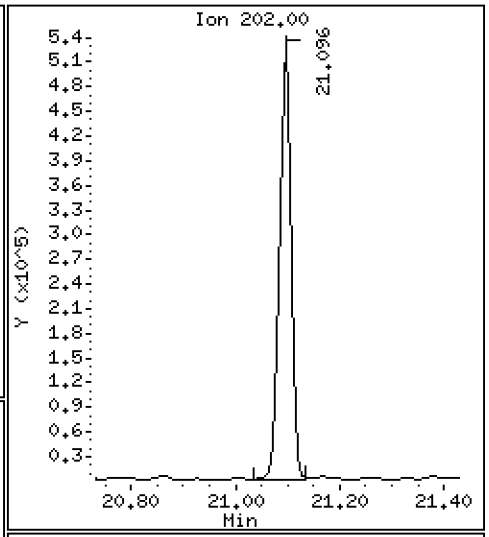
Concentration: 2.468 ug/mL

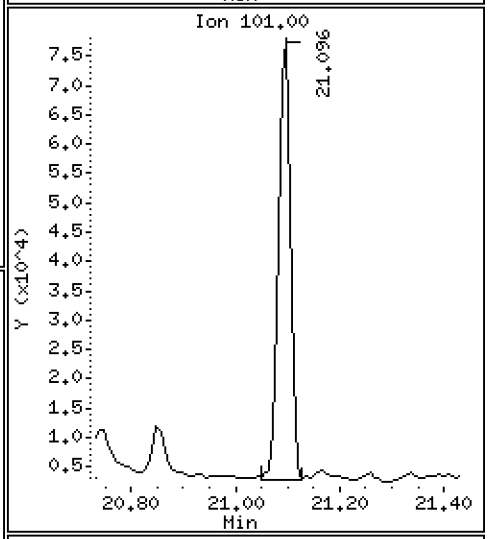


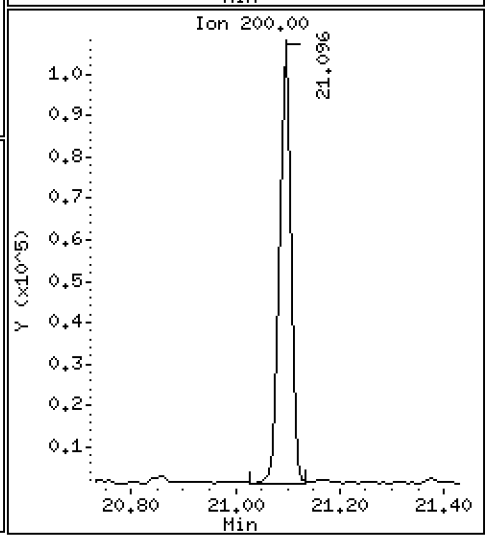












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

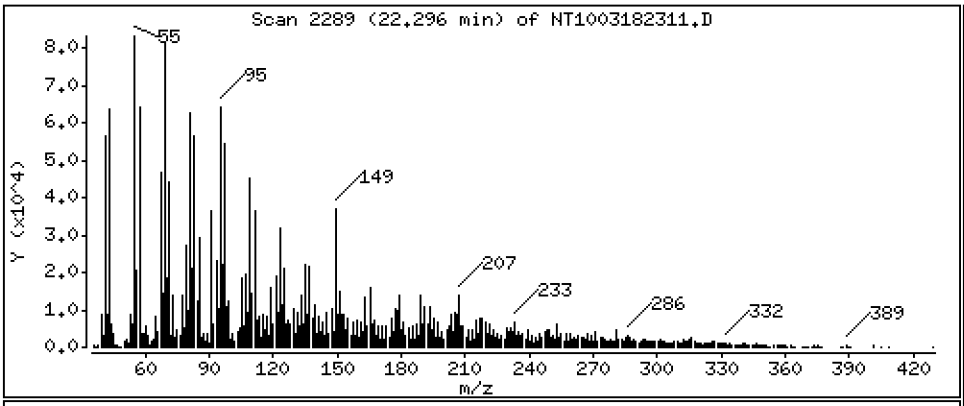
Operator: VTS

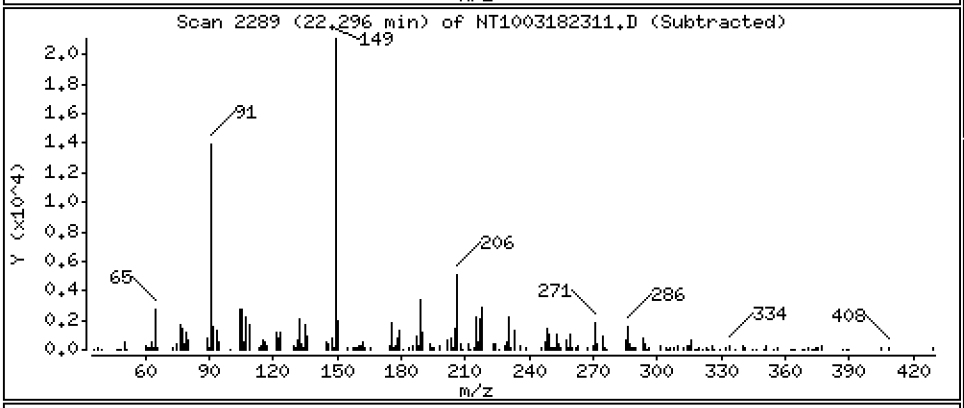
Column phase: ZB-5msi

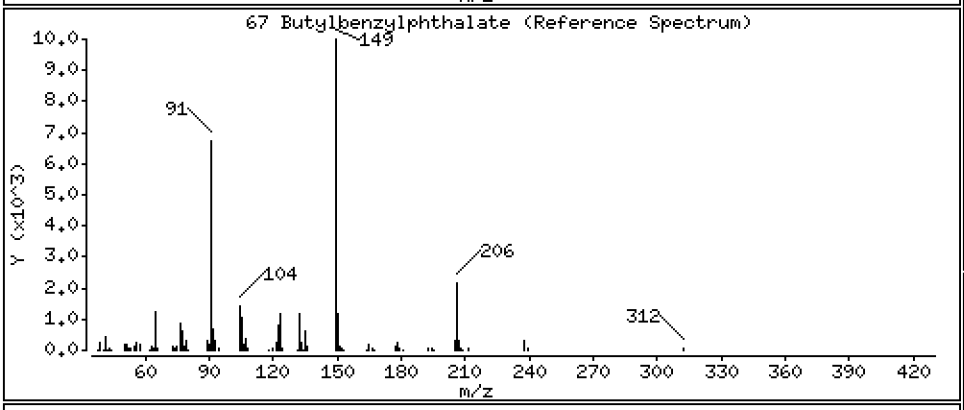
Column diameter: 0.25

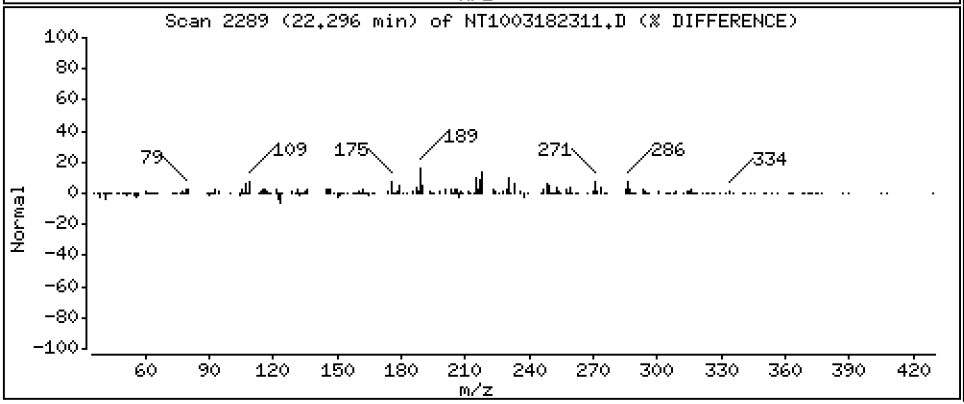
67 Butylbenzylphthalate

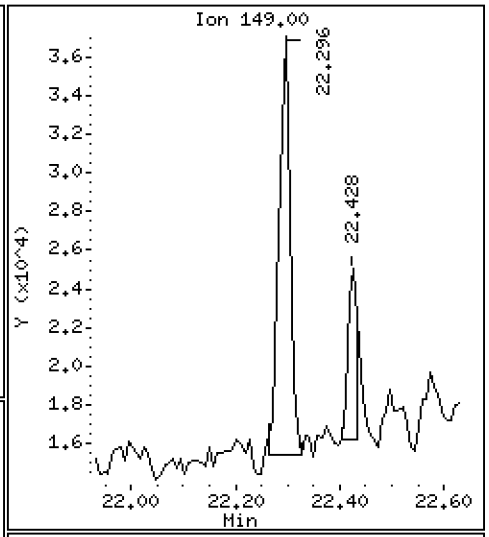
Concentration: 0.2791 ug/mL

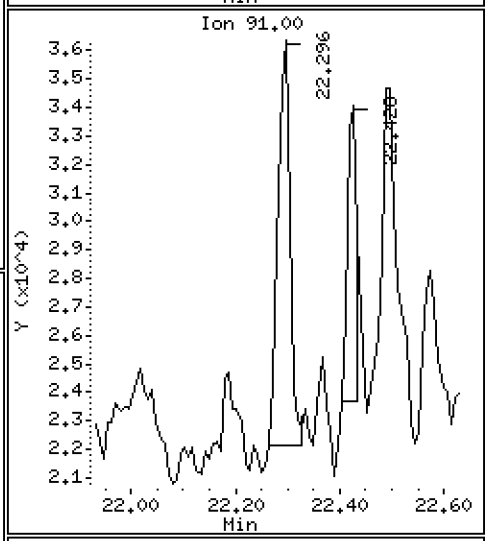


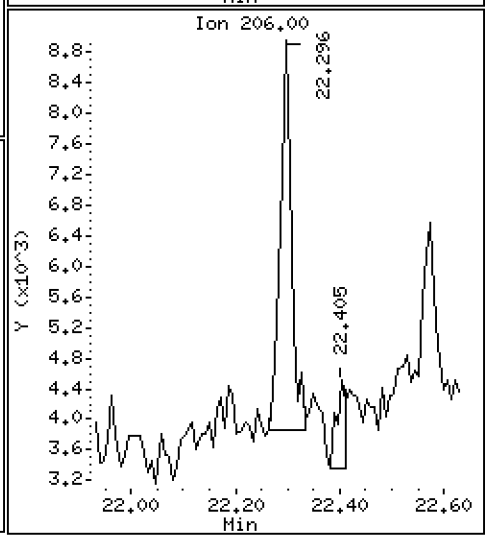












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

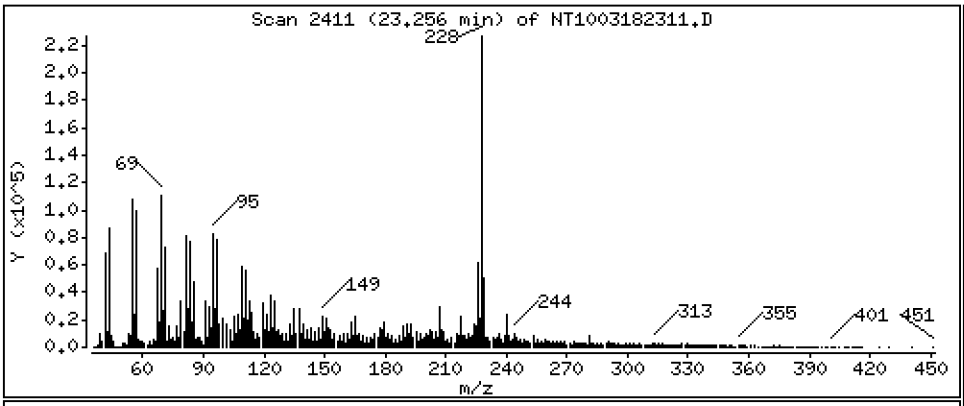
Operator: VTS

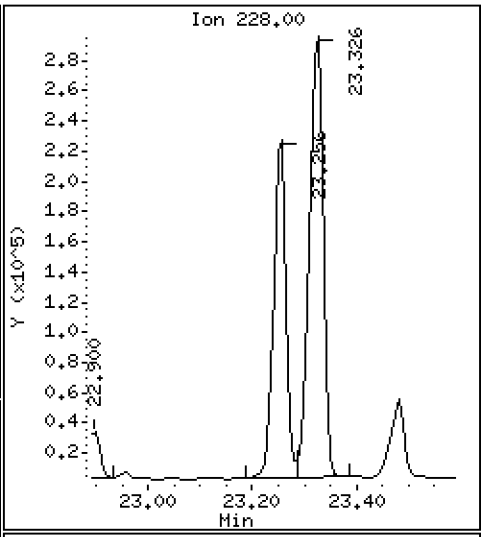
Column phase: ZB-5msi

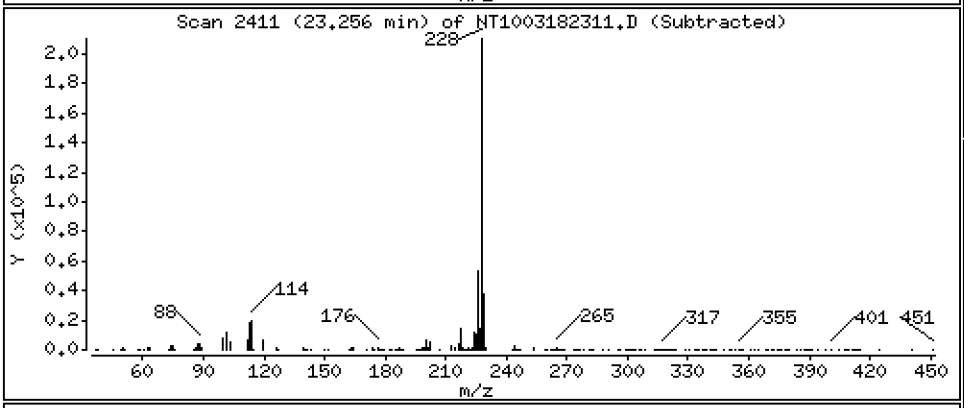
Column diameter: 0.25

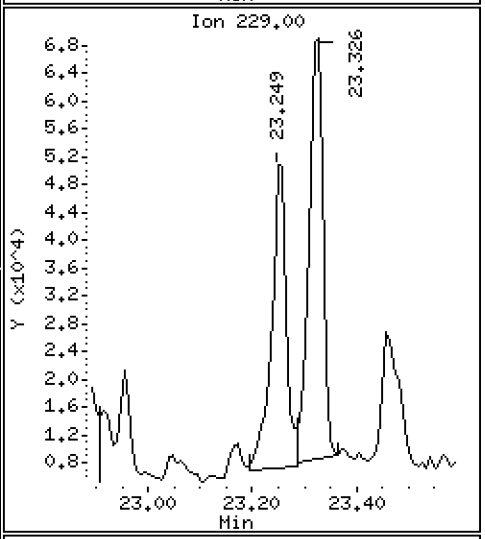
68 Benzo(a)anthracene

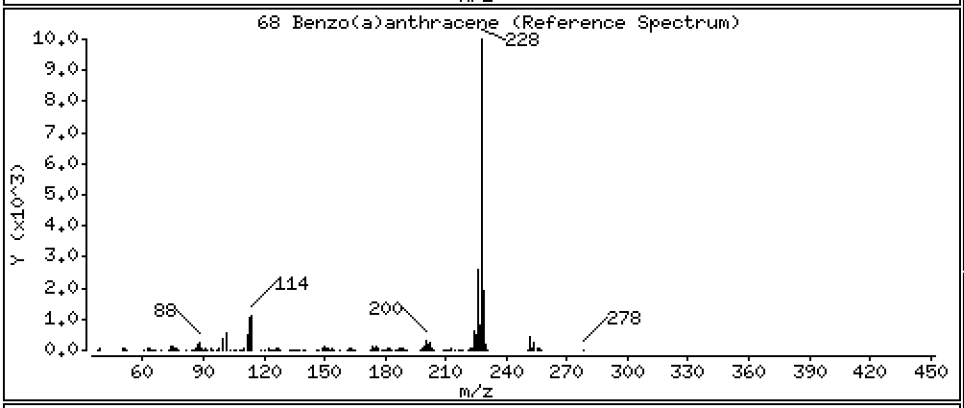
Concentration: 1.358 ug/mL

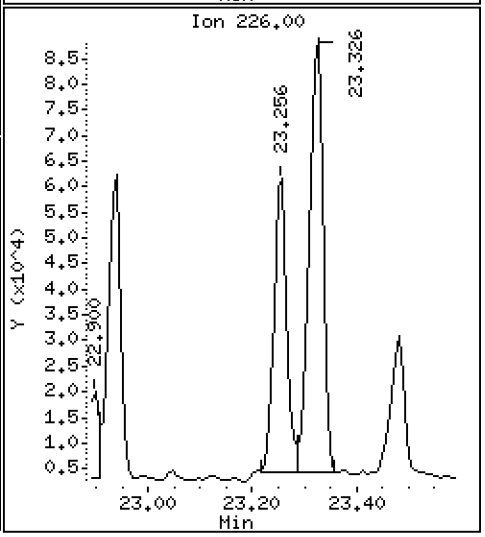


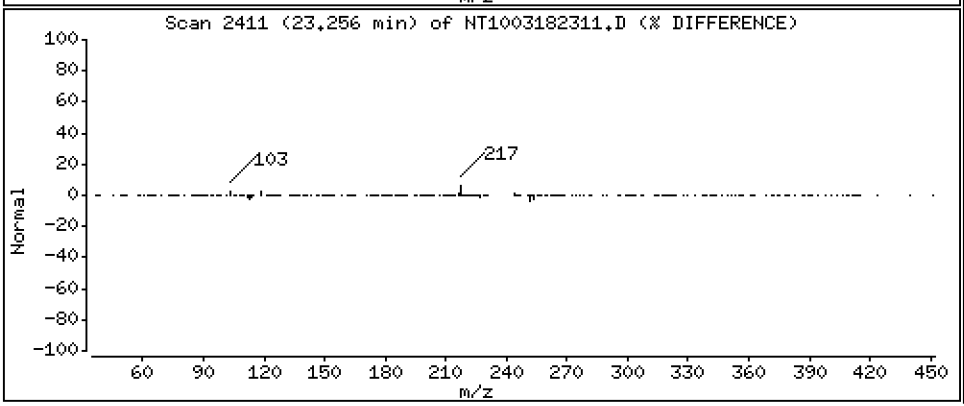












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

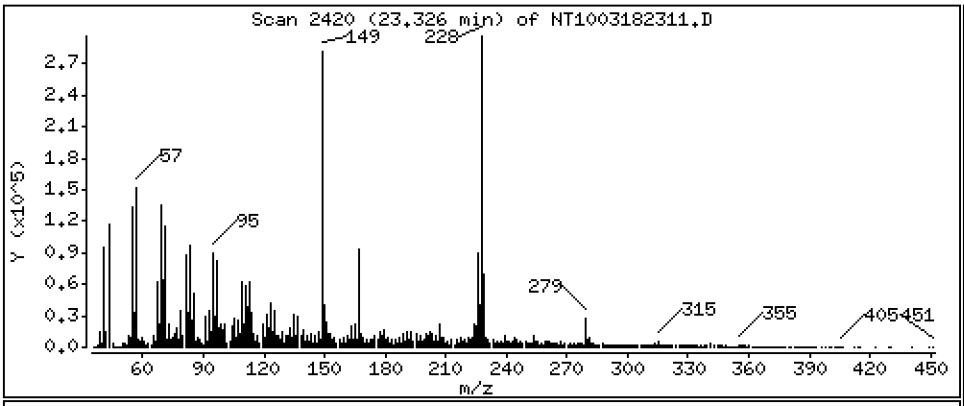
Operator: VTS

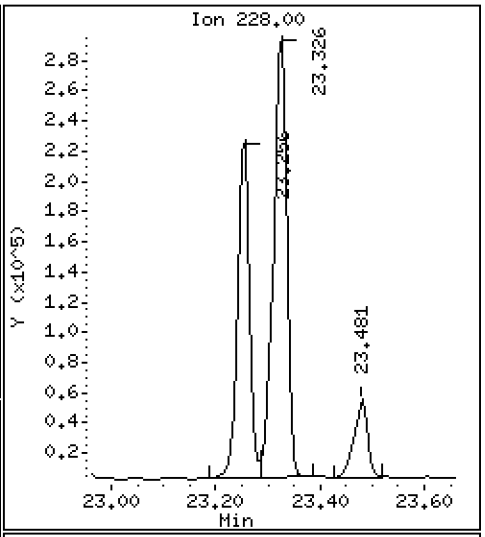
Column phase: ZB-5msi

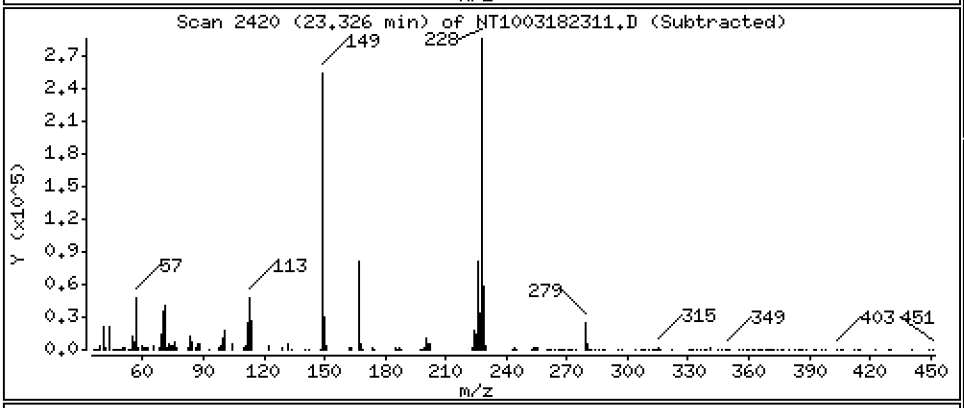
Column diameter: 0.25

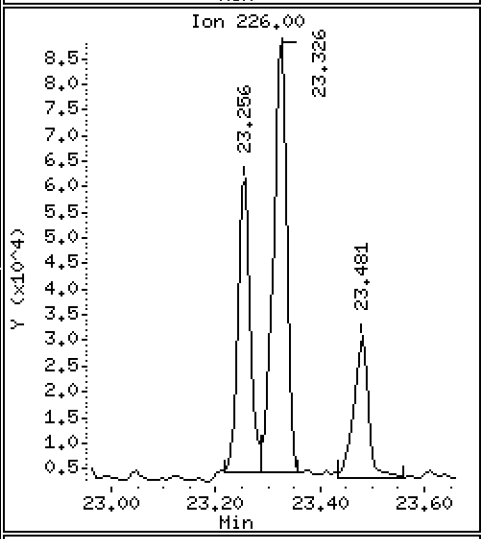
71 Chrysene

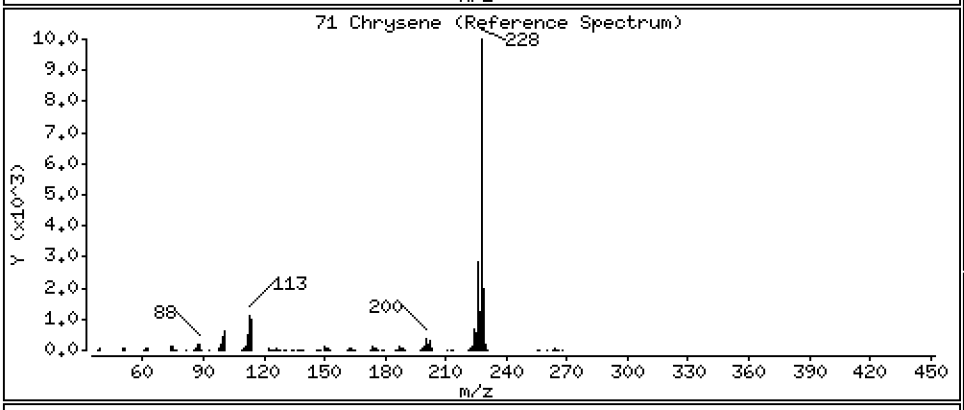
Concentration: 1.959 ug/mL

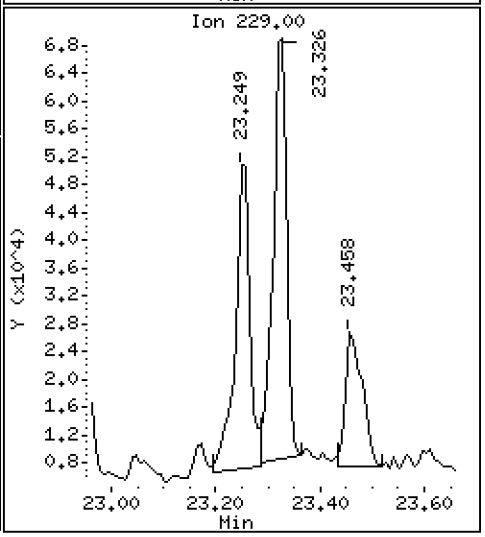


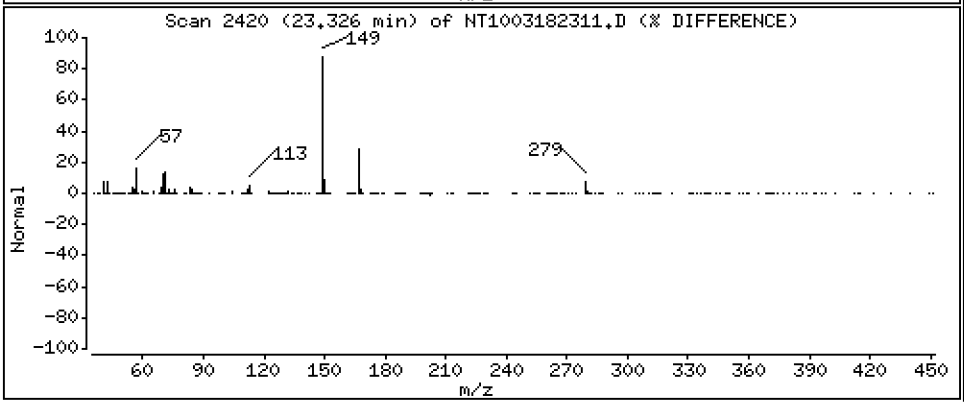












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

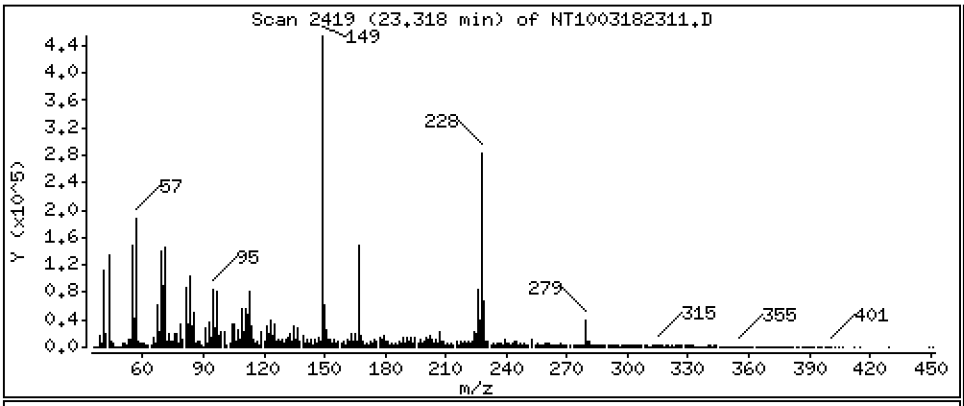
Operator: VTS

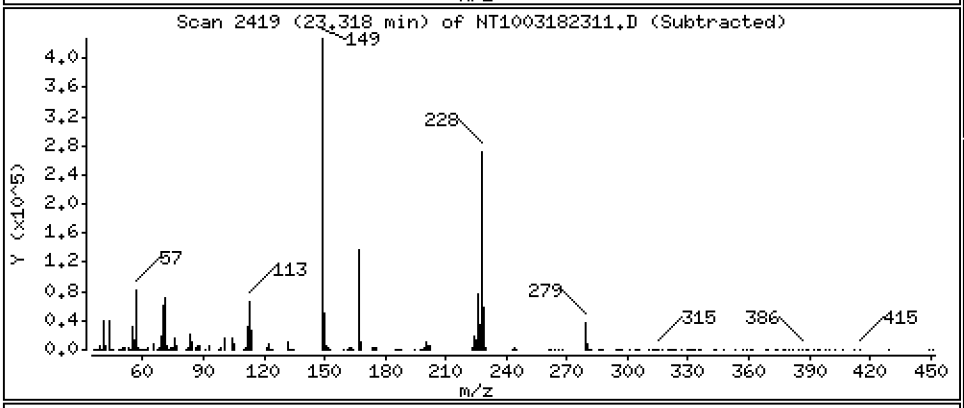
Column phase: ZB-5msi

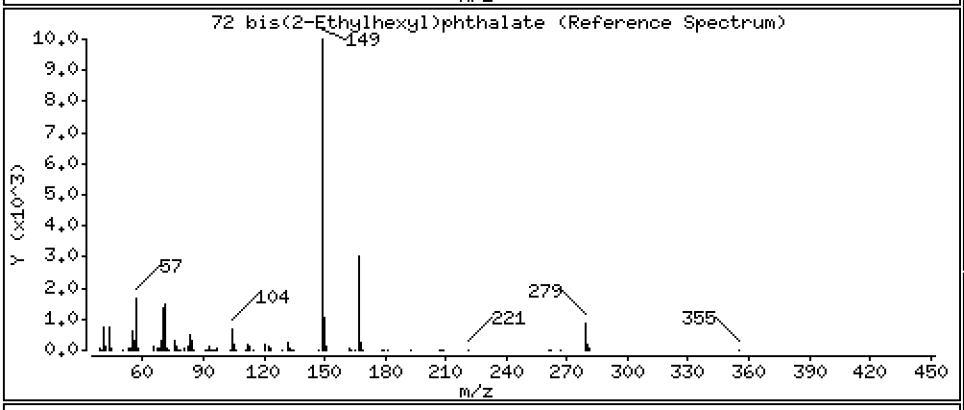
Column diameter: 0.25

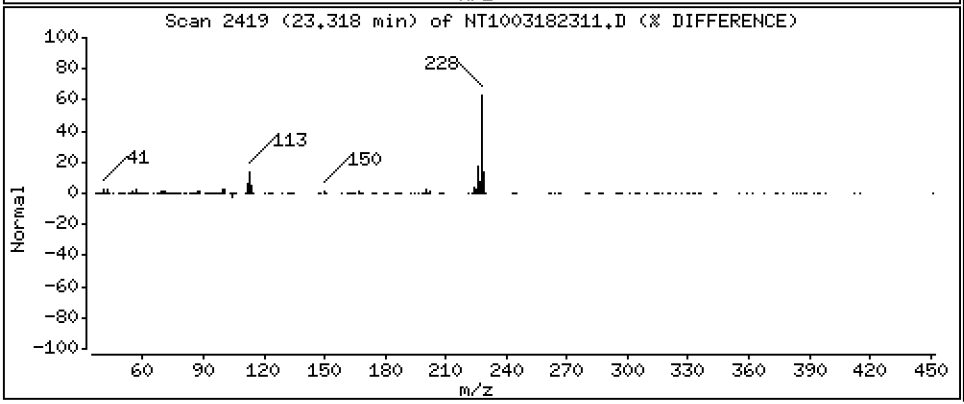
72 bis(2-Ethylhexyl)phthalate

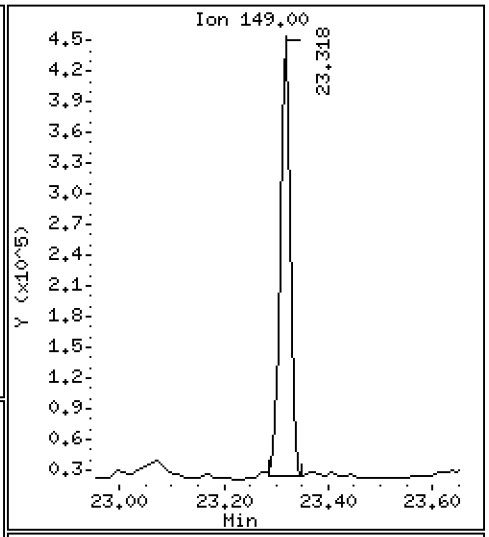
Concentration: 2.856 ug/mL

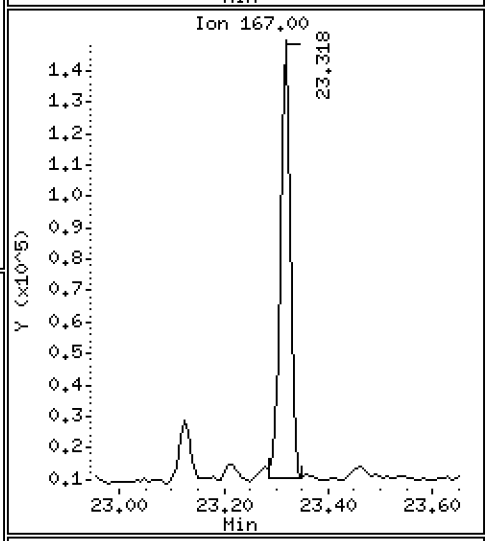


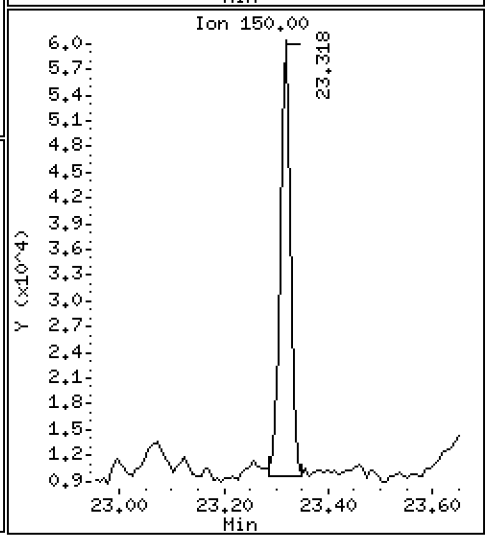












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

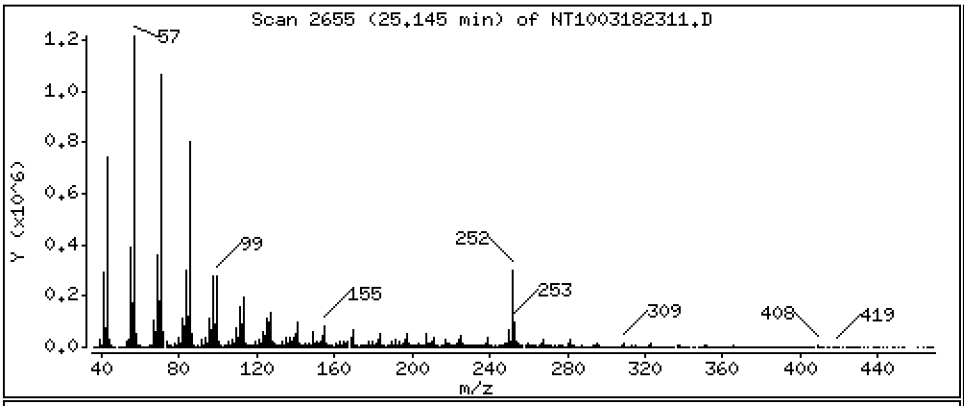
Operator: VTS

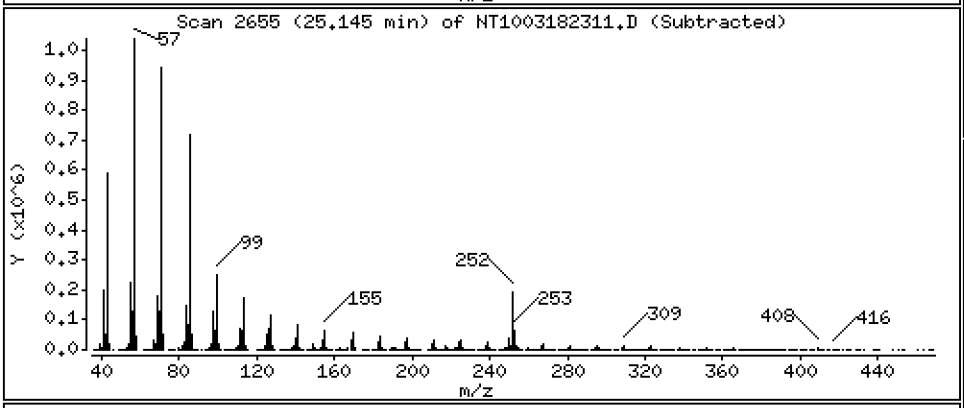
Column phase: ZB-5msi

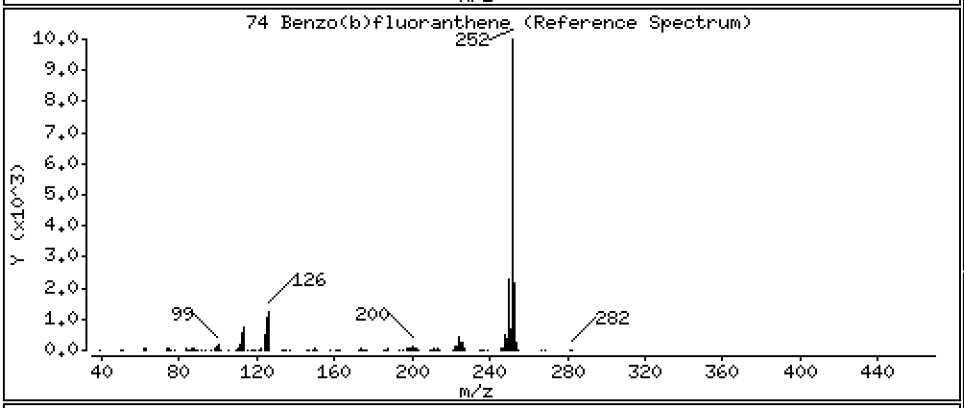
Column diameter: 0.25

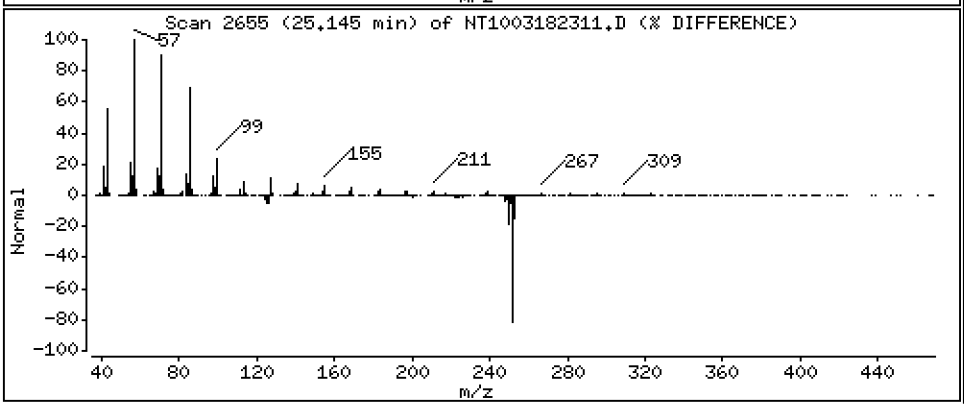
74 Benzo(b)fluoranthene

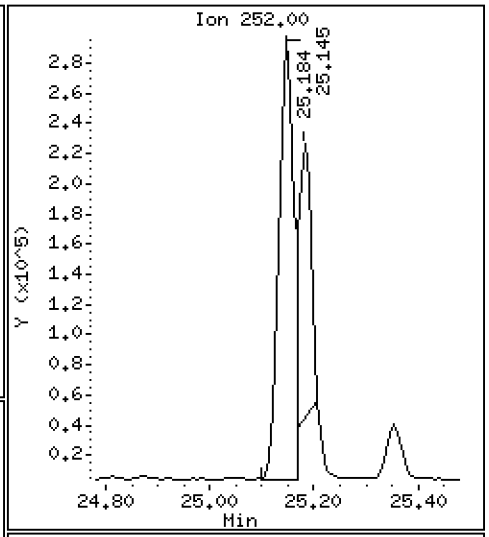
Concentration: 2.138 ug/mL

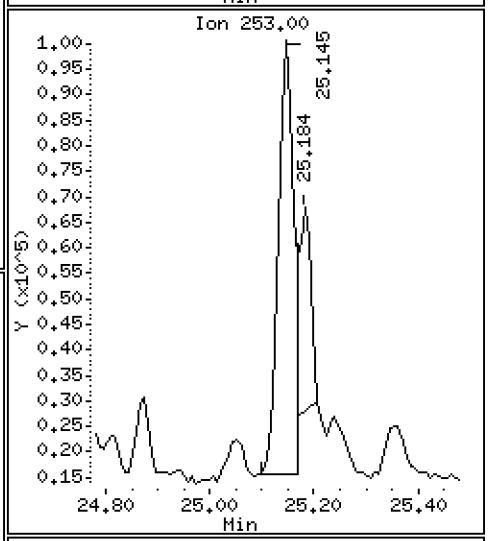


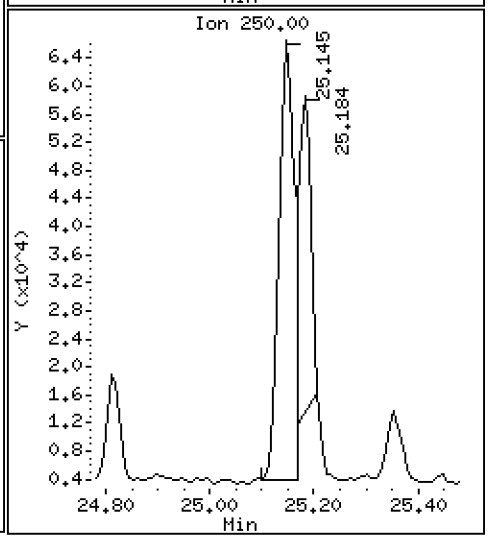












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

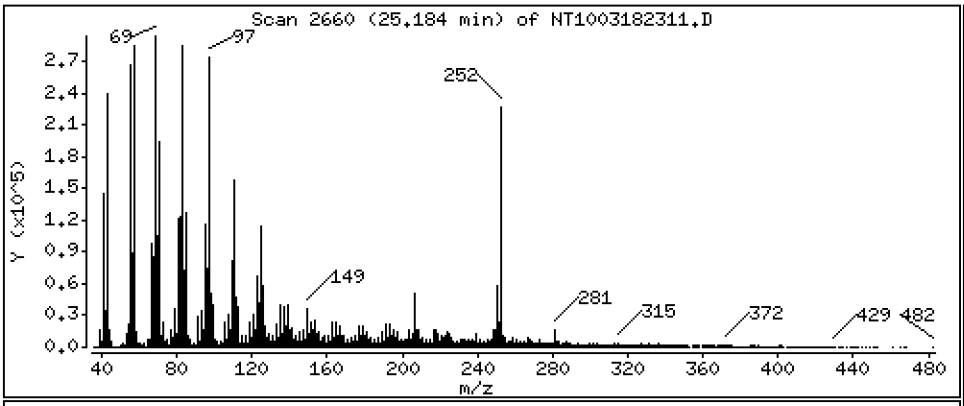
Operator: VTS

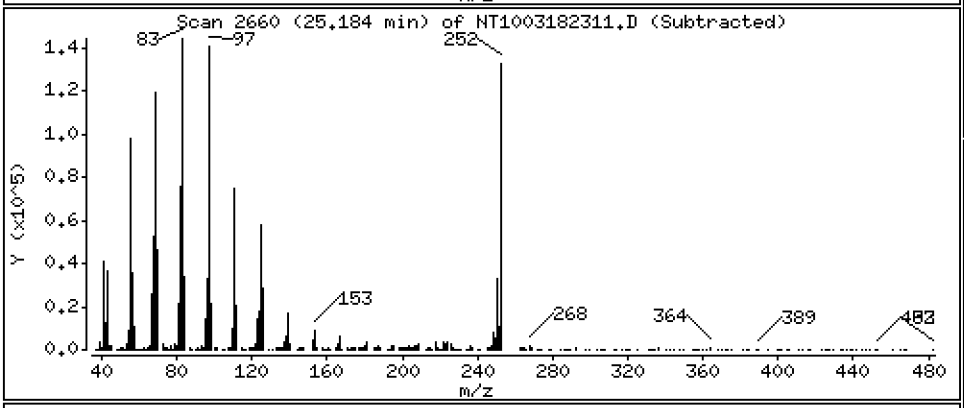
Column phase: ZB-5msi

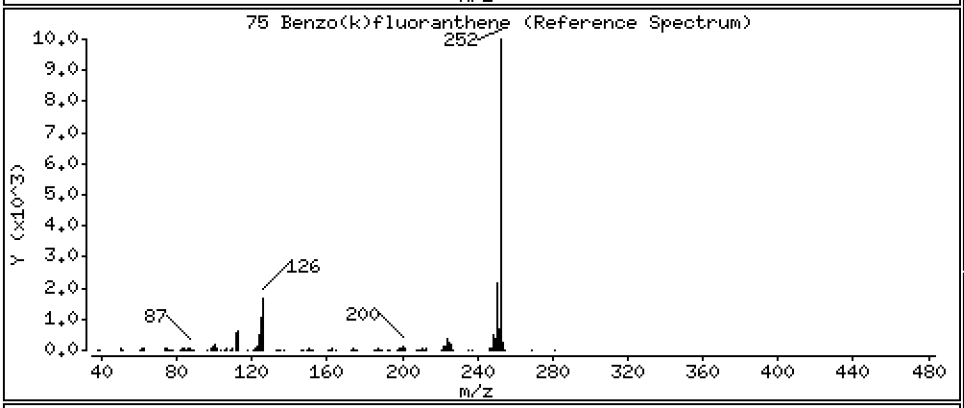
Column diameter: 0.25

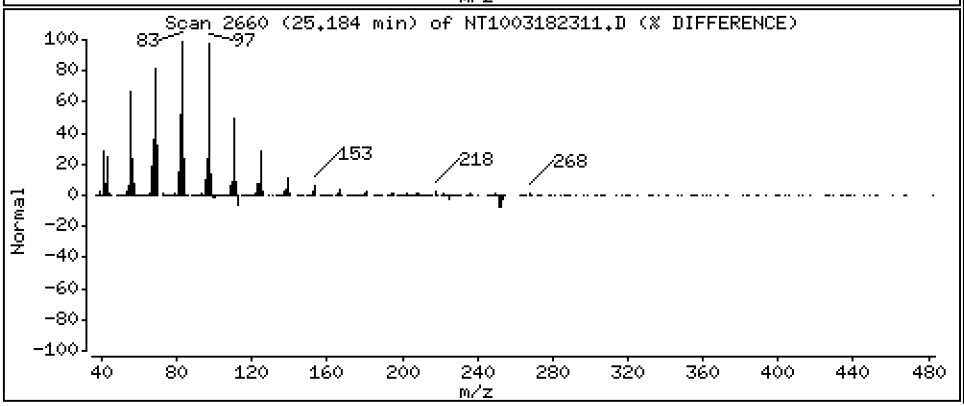
75 Benzo(k)fluoranthene

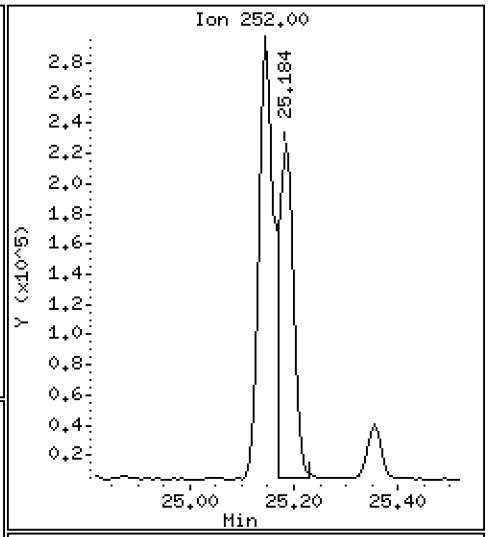
Concentration: 1.579 ug/mL

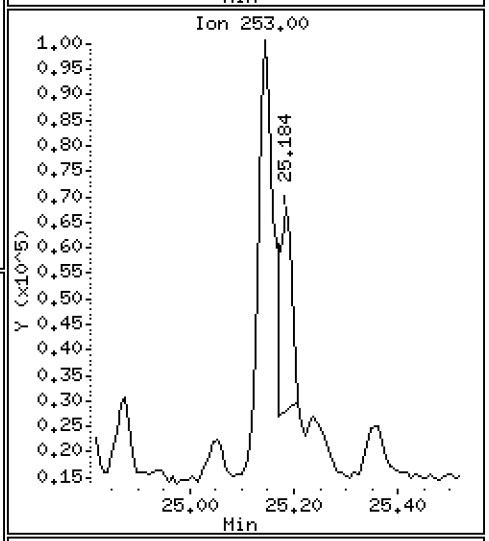


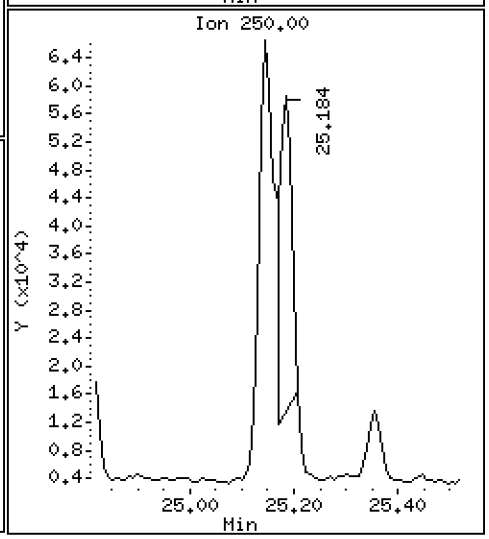












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

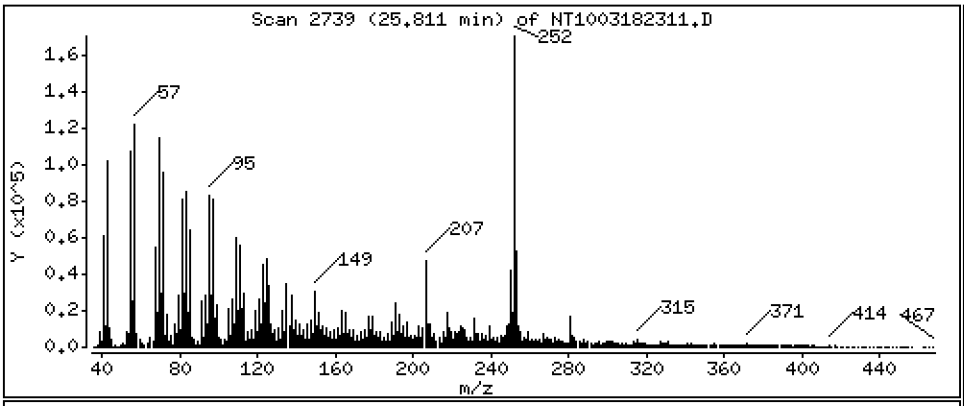
Operator: VTS

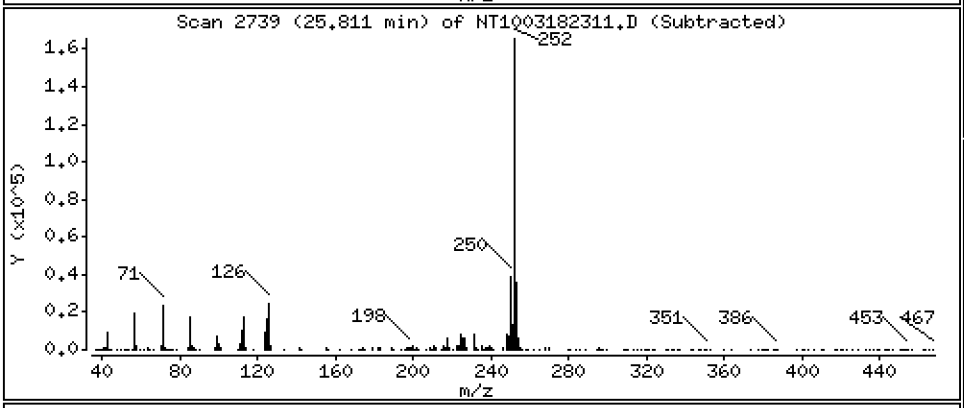
Column phase: ZB-5msi

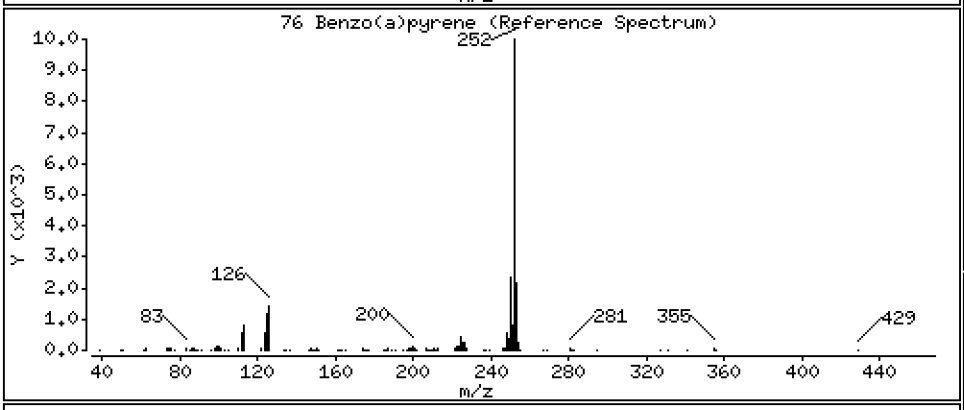
Column diameter: 0.25

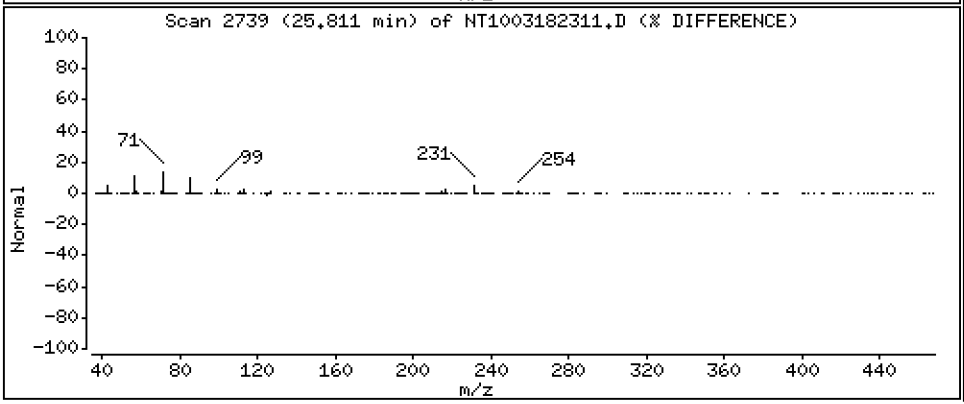
76 Benzo(a)pyrene

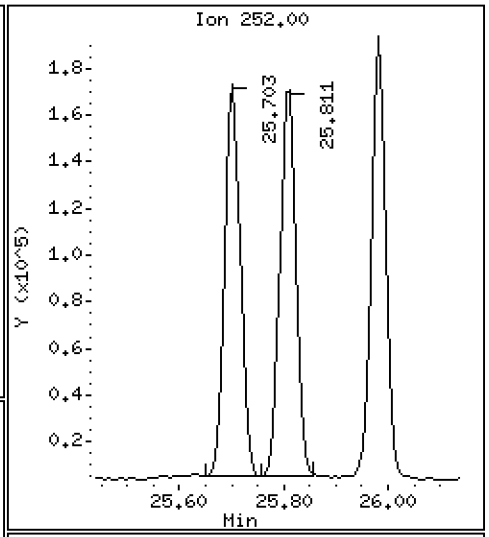
Concentration: 1.407 ug/mL

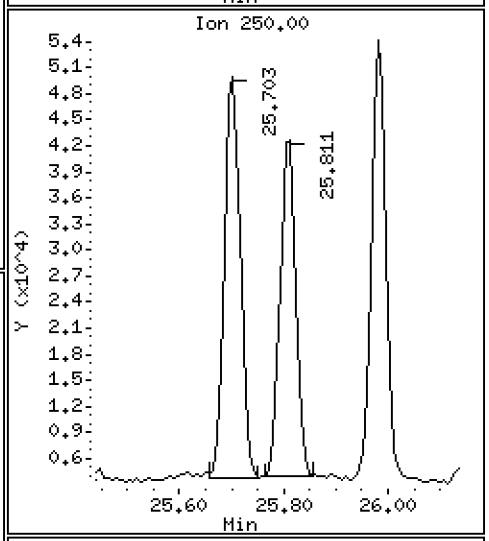


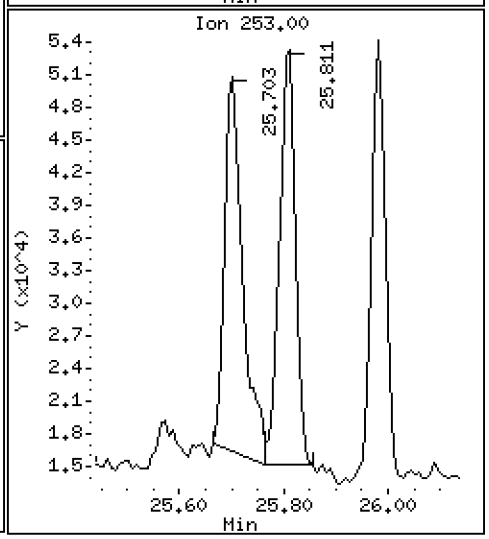












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

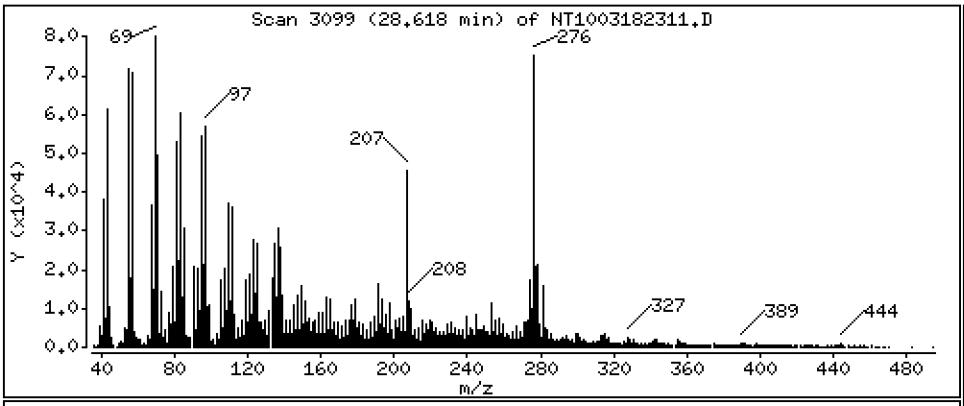
Operator: VTS

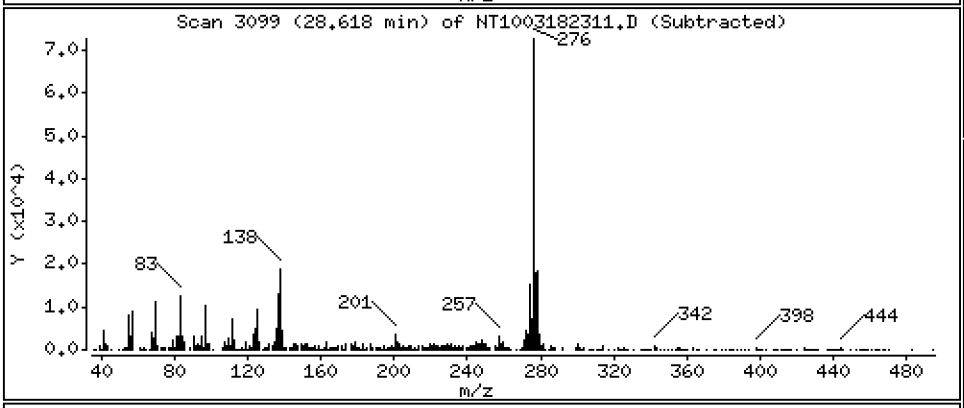
Column phase: ZB-5msi

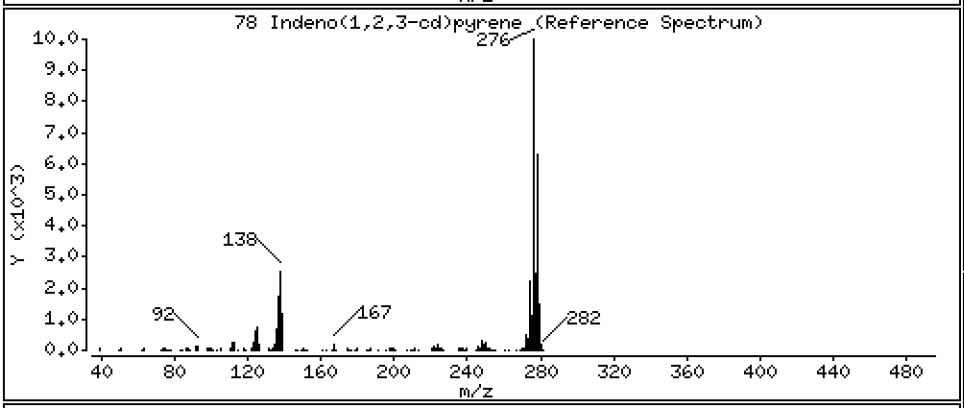
Column diameter: 0.25

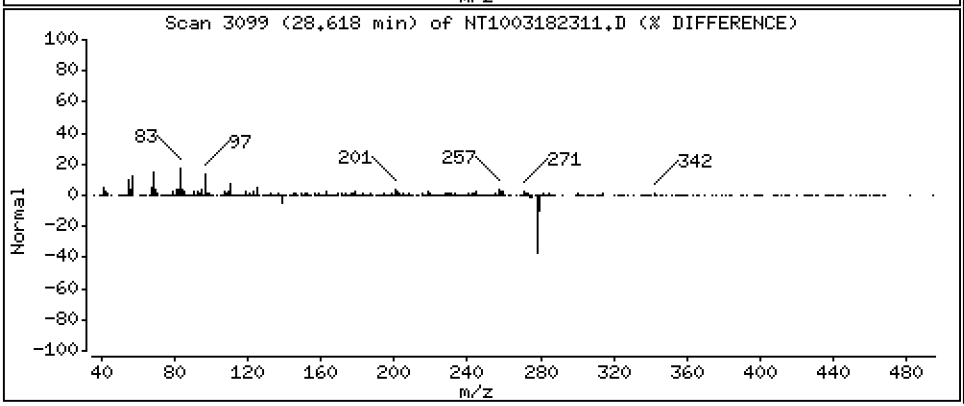
78 Indeno(1,2,3-cd)pyrene

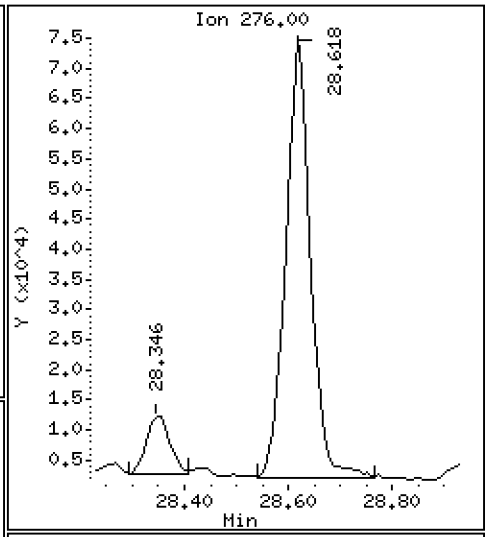
Concentration: 0.7527 ug/mL

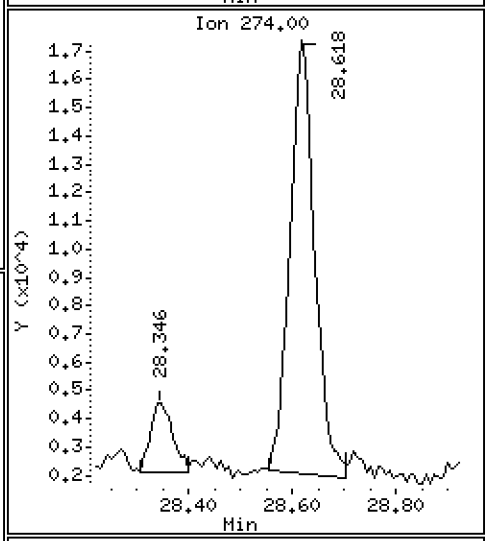


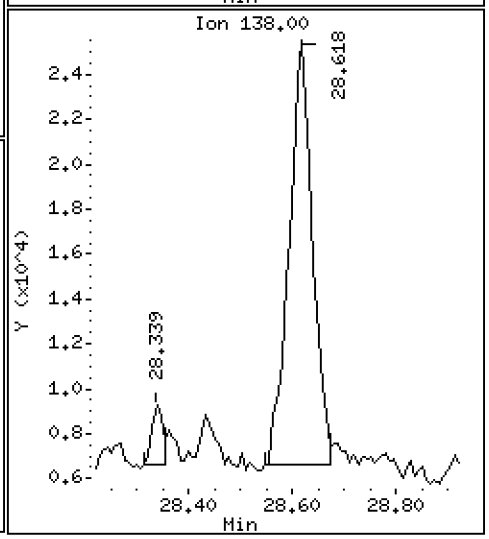












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

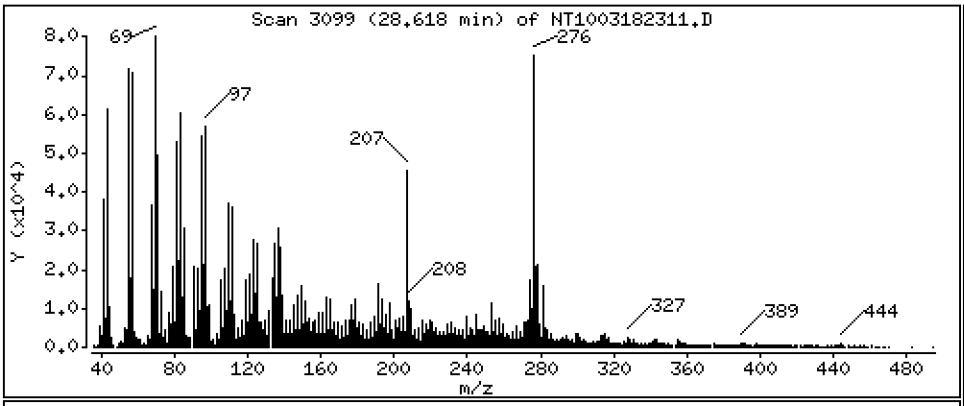
Operator: VTS

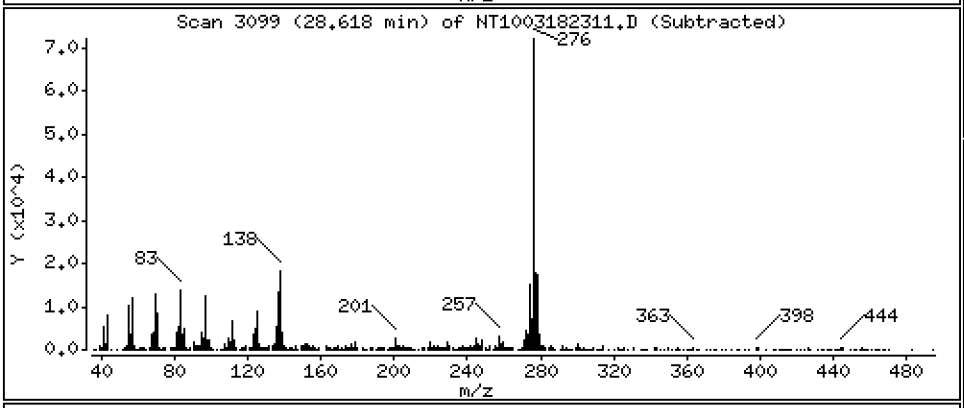
Column phase: ZB-5msi

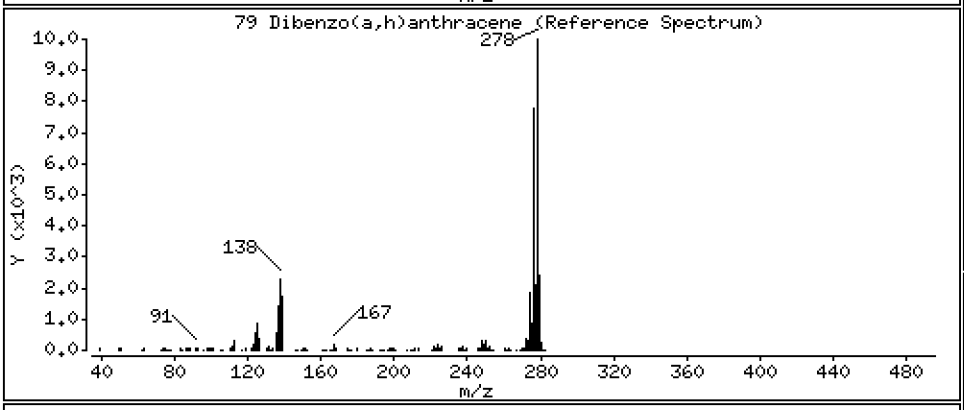
Column diameter: 0.25

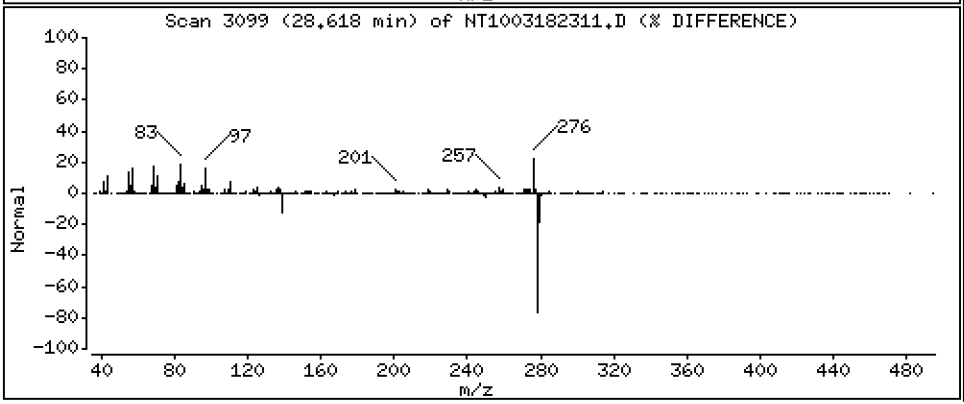
79 Dibenzo(a,h)anthracene

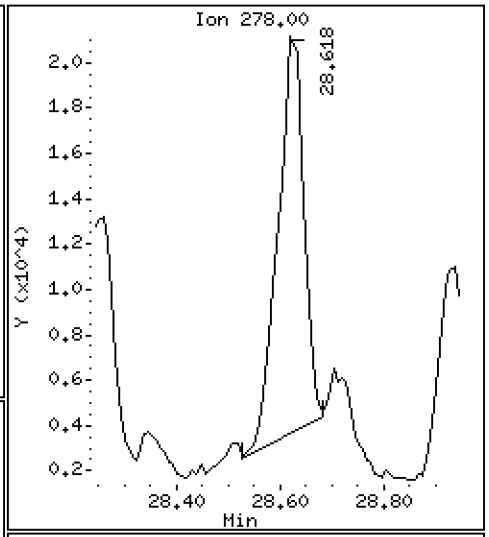
Concentration: 0.2299 ug/mL

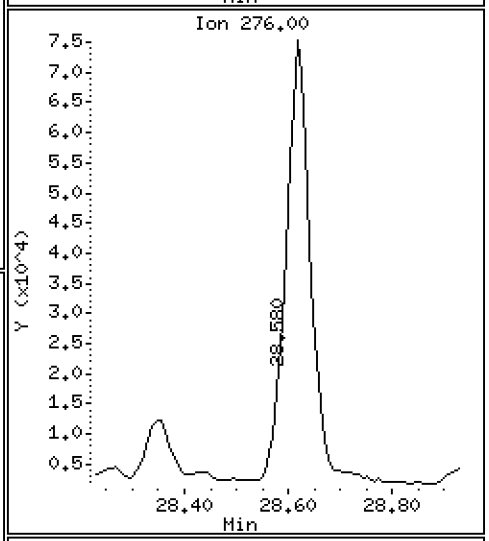


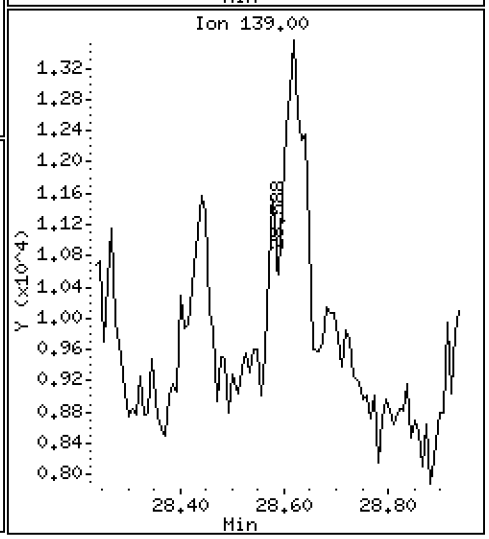












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

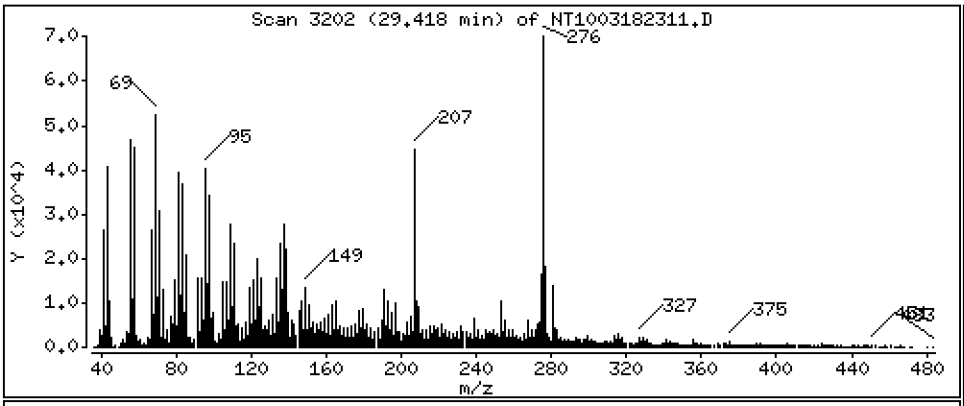
Operator: VTS

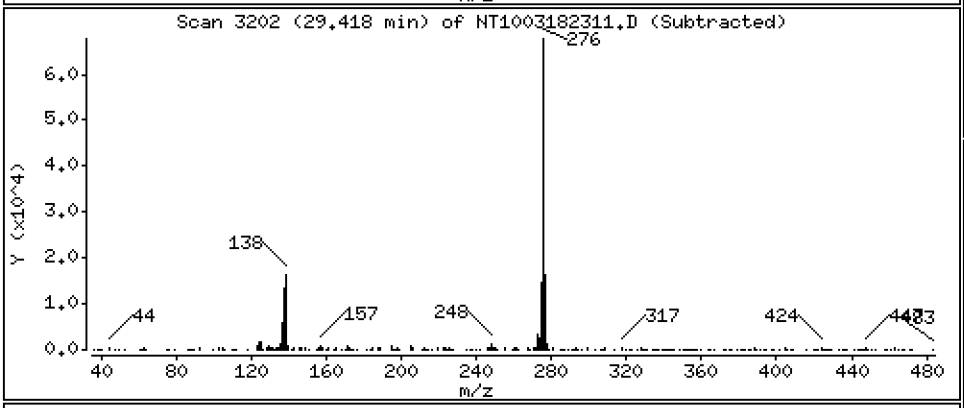
Column phase: ZB-5msi

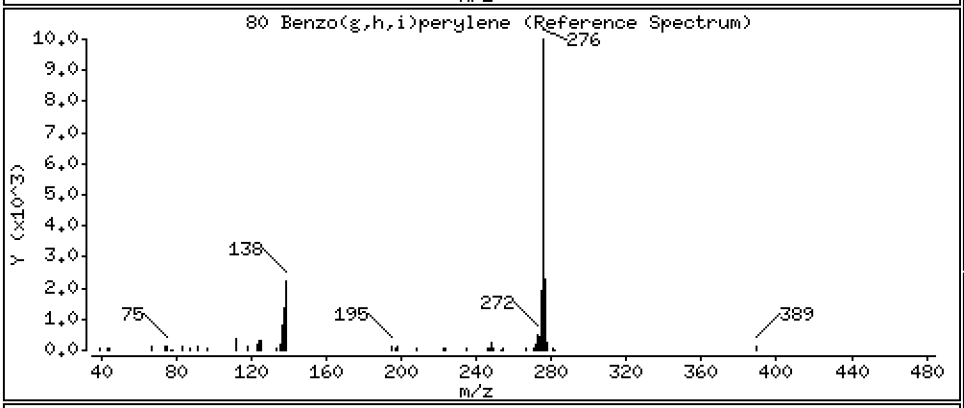
Column diameter: 0.25

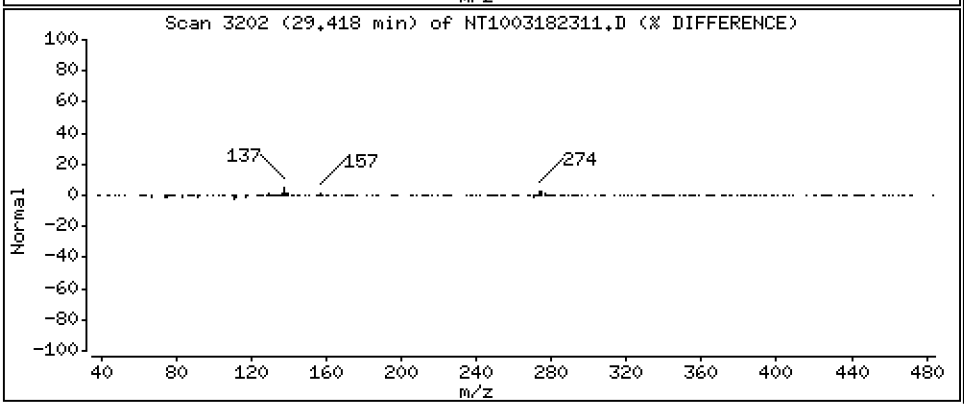
80 Benzo(g,h,i)perylene

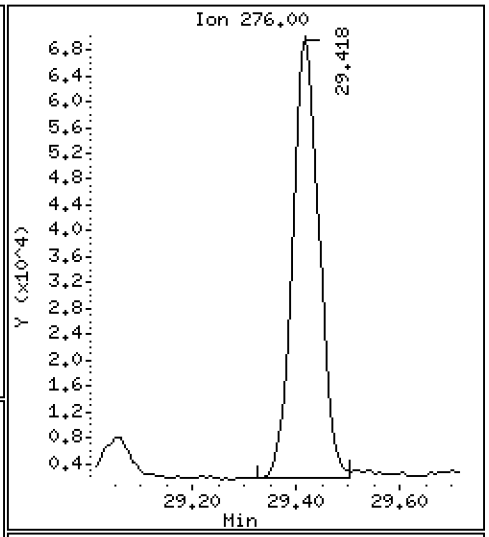
Concentration: 0.8799 ug/mL

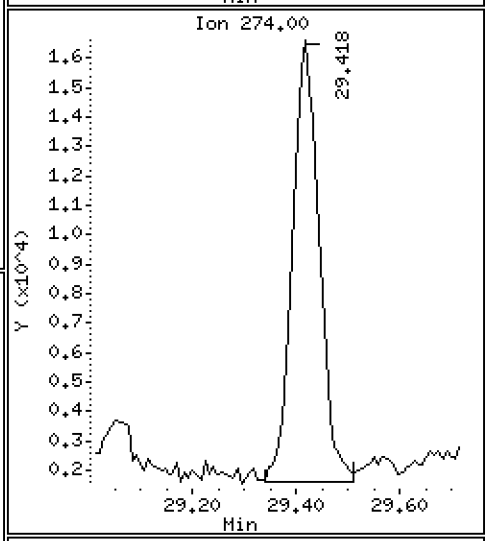


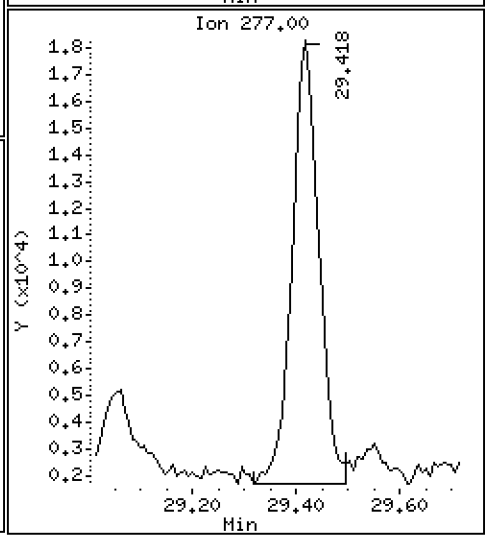












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

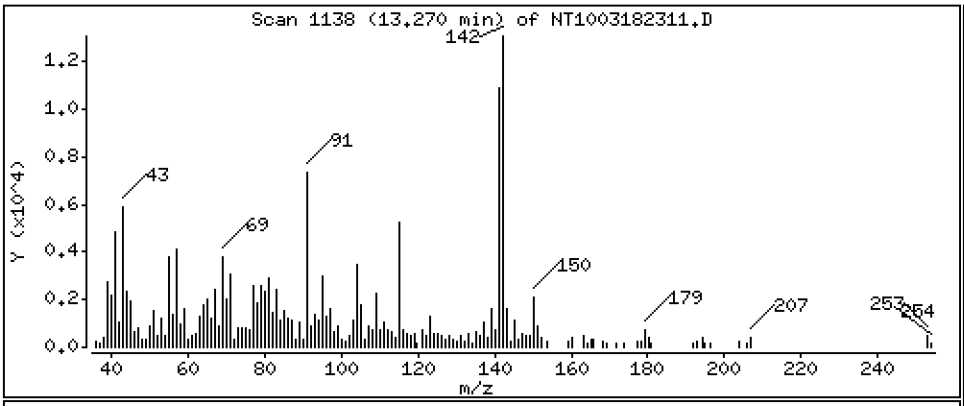
Operator: VTS

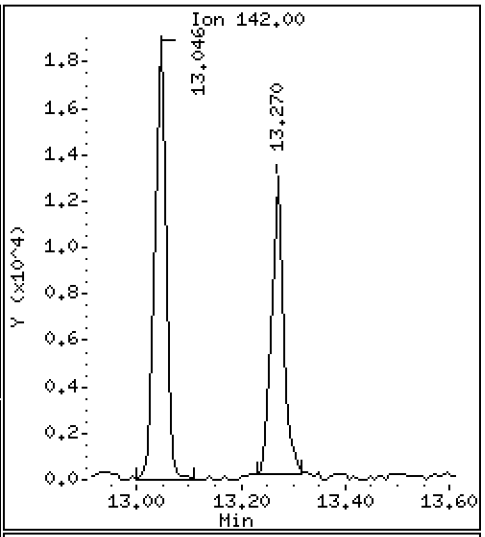
Column phase: ZB-5msi

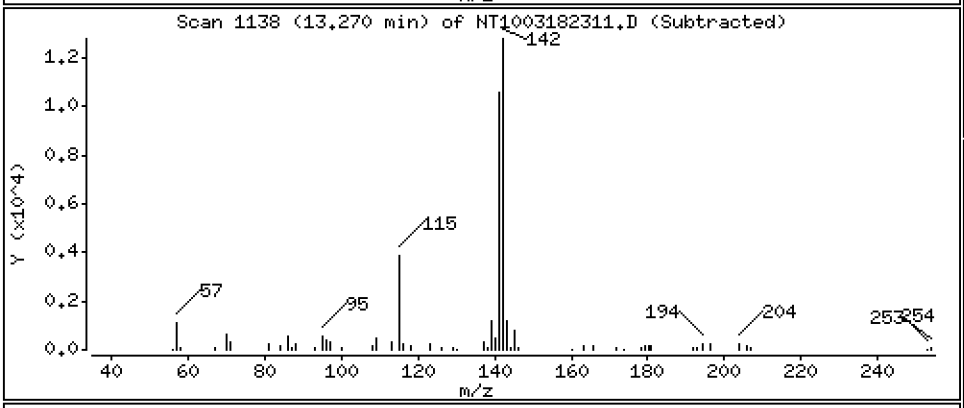
Column diameter: 0.25

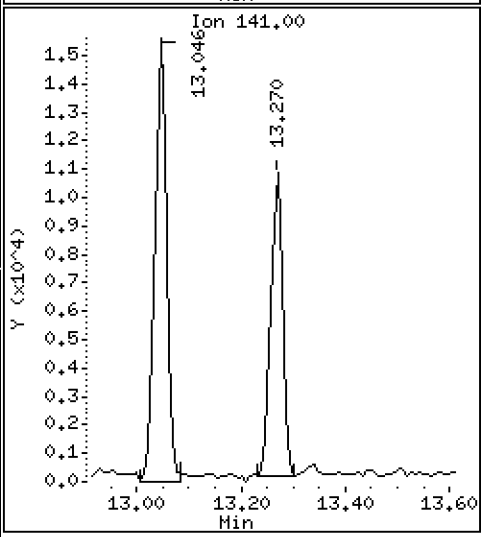
105 1-methylnaphthalene

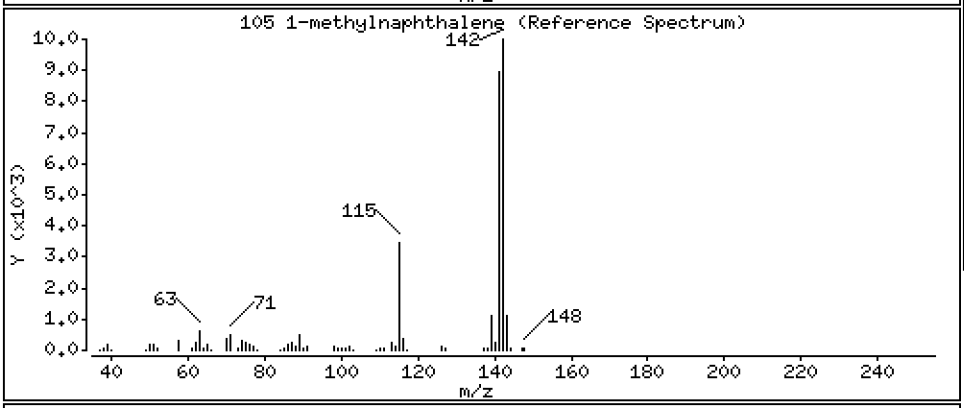
Concentration: 0.1241 ug/mL

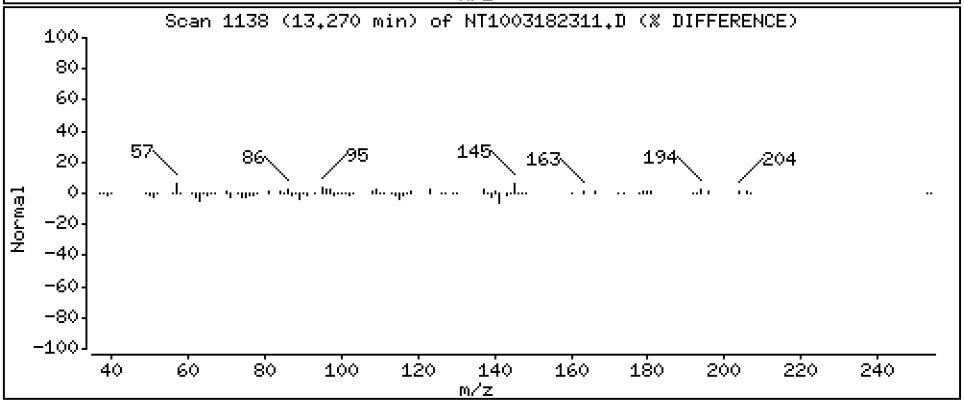












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

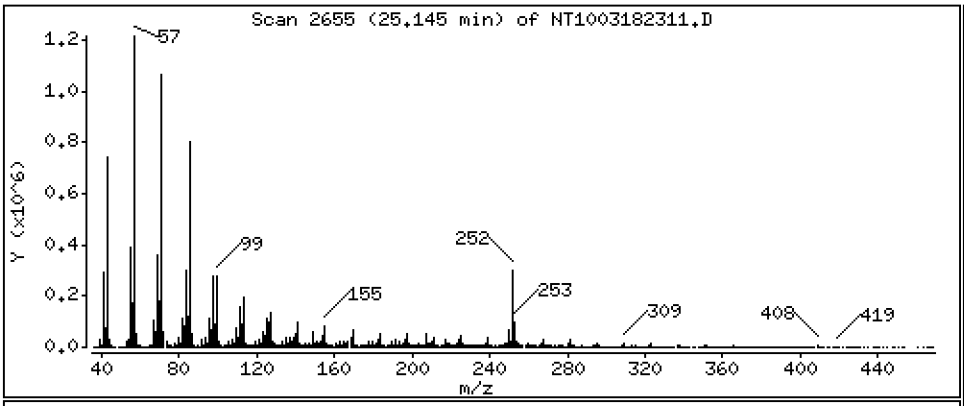
Operator: VTS

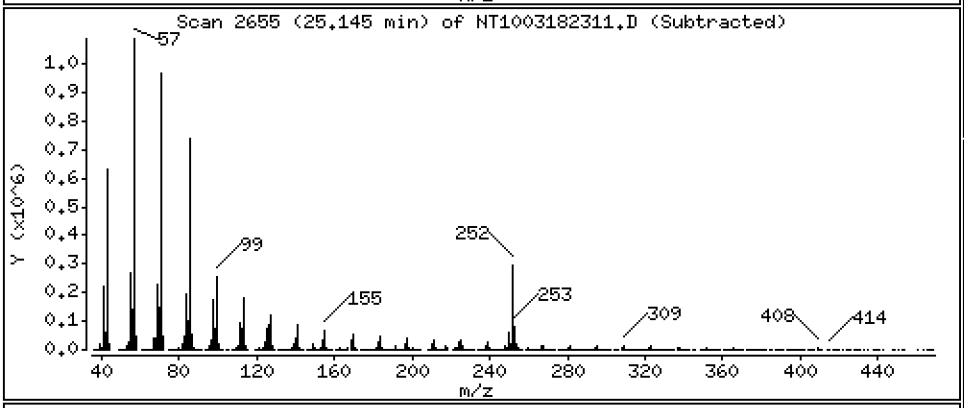
Column phase: ZB-5msi

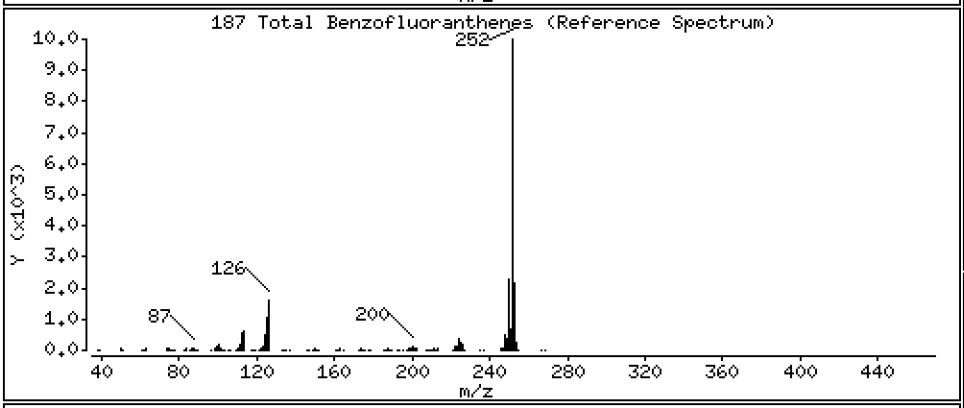
Column diameter: 0.25

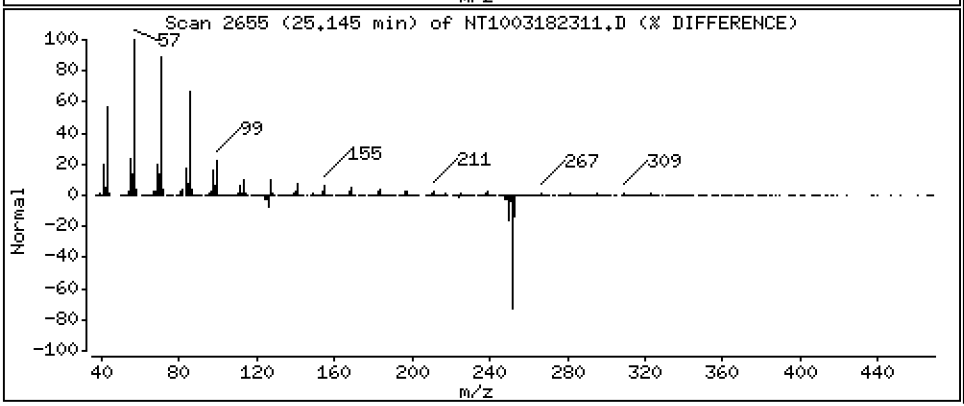
187 Total Benzofluoranthenes

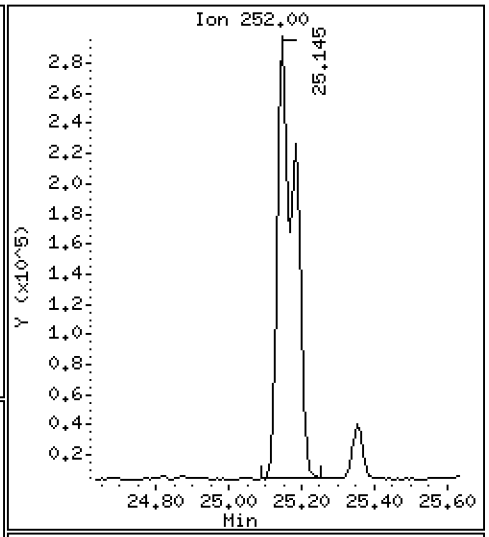
Concentration: 3.604 ug/mL

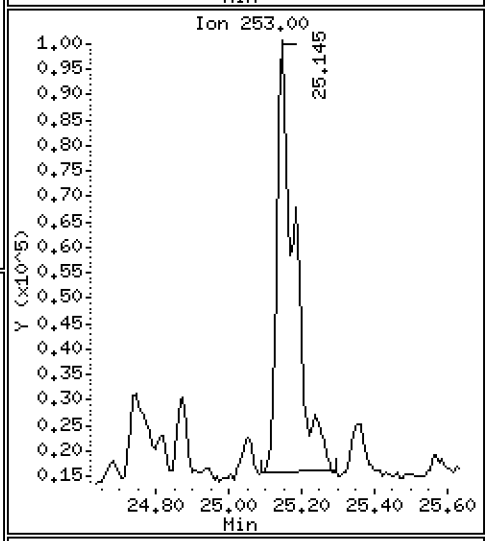


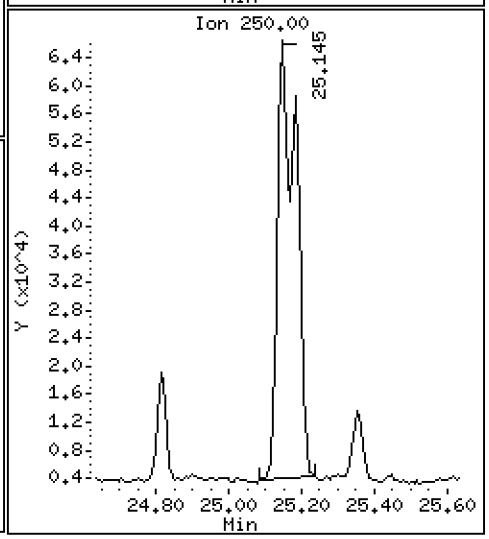












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182311.D
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Inj Date : 19-MAR-2023 00:07
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-02
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	453753	5.91415	5.914
$	2 Phenol-d5	99	8.528	8.520	(0.930)	605904	6.01993	6.020
	3 Phenol	94	8.551	8.536	(0.933)	470934	4.50264	4.503
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.960)	538170	6.26160	6.262
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	253705	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.526	9.519	(1.039)	240229	3.89201	3.892
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.433	9.426	(1.029)	13728	0.27964	0.2796
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.081)	150421	1.87244	1.872
$	18 Nitrobenzene-d5	82	10.248	10.249	(0.881)	386933	4.22193	4.222
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.040	11.134	(0.949)	43118	0.93827	0.9383(MH)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	907983	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	42827	0.17805	0.1780
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	28002	0.16131	0.1613
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.819	13.820	(0.908)	837831	4.30026	4.300
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	14.709	14.710	(0.967)	12211	0.07632	0.07632
	40 Acenaphthylene	152	14.903	14.896	(0.980)	30125	0.12255	0.1225
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.212	15.213	(1.000)	492533	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.274	15.275	(1.004)	21877	0.14405	0.1441
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.599	15.600	(1.025)	37087	0.16560	0.1656
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	16.155	16.156	(1.062)	18378	0.11707	0.1171
	49 Fluorene	166	16.318	16.319	(1.073)	20350	0.11550	0.1155
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.842	16.843	(1.107)	168117	7.32488	7.325
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.241	18.234	(1.000)	924575	4.00000	
	60 Phenanthrene	178	18.287	18.281	(1.003)	246981	0.97965	0.9796
	61 Anthracene	178	18.380	18.373	(1.008)	131113	0.54215	0.5421
	62 Carbazole	167	18.705	18.698	(1.025)	34641	0.15985	0.1598
	63 Di-n-butylphthalate	149	19.502	19.488	(1.069)	19023	0.06528	0.06528
	64 Fluoranthene	202	20.686	20.656	(0.889)	773861	2.48050	2.481
	65 Pyrene	202	21.096	21.081	(0.906)	789892	2.46815	2.468
$	66 Terphenyl-d14	244	21.374	21.360	(0.918)	1036853	4.31413	4.314
	67 Butylbenzylphthalate	149	22.296	22.281	(0.958)	31390	0.27915	0.2791
	68 Benzo(a)anthracene	228	23.256	23.241	(0.999)	372231	1.35825	1.358
*	69 Chrysene-d12	240	23.279	23.272	(1.000)	776417	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	23.326	23.311	(1.002)	524499	1.95896	1.959
	72 bis(2-Ethylhexyl)phthalate	149	23.318	23.303	(0.960)	585879	2.85645	2.856
*	134 Di-n-octylphthalate-d4	153	24.301	24.294	(1.000)	1399920	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	25.145	25.130	(0.970)	603009	2.13828	2.138
	75 Benzo(k)fluoranthene	252	25.184	25.169	(0.971)	452201	1.57916	1.579(MH)
	76 Benzo(a)pyrene	252	25.811	25.789	(0.996)	354849	1.40740	1.407
*	77 Perylene-d12	264	25.927	25.897	(1.000)	869986	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.618	28.580	(1.104)	241435	0.75267	0.7527
	79 Dibenzo(a,h)anthracene	278	28.618	28.595	(1.104)	61237	0.22995	0.2299(M)
	80 Benzo(g,h,i)perylene	276	29.418	29.364	(1.135)	244263	0.87991	0.8799
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	13.270	13.263	(1.141)	19740	0.12412	0.1241
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.145	25.130	(0.970)	981355	3.60416	3.604(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182311.D
Lab Smp Id: 23A0467-02
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	253705	36.10
27 Naphthalene-d8	688740	344370	1377480	907983	31.83
42 Acenaphthene-d10	373663	186832	747326	492533	31.81
59 Phenanthrene-d10	652323	326162	1304646	924575	41.74
69 Chrysene-d12	537141	268571	1074282	776417	44.55
134 Di-n-octylphthala	947608	473804	1895216	1399920	47.73
77 Perylene-d12	602550	301275	1205100	869986	44.38

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.03
134 Di-n-octylphthala	24.29	23.79	24.79	24.30	0.03
77 Perylene-d12	25.90	25.40	26.40	25.93	0.12

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

REVIEW SUMMARY FOR FILE - NT1003182311.D

Lab ID: 23A0467-02
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 00:07

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0087	Benzoic acid

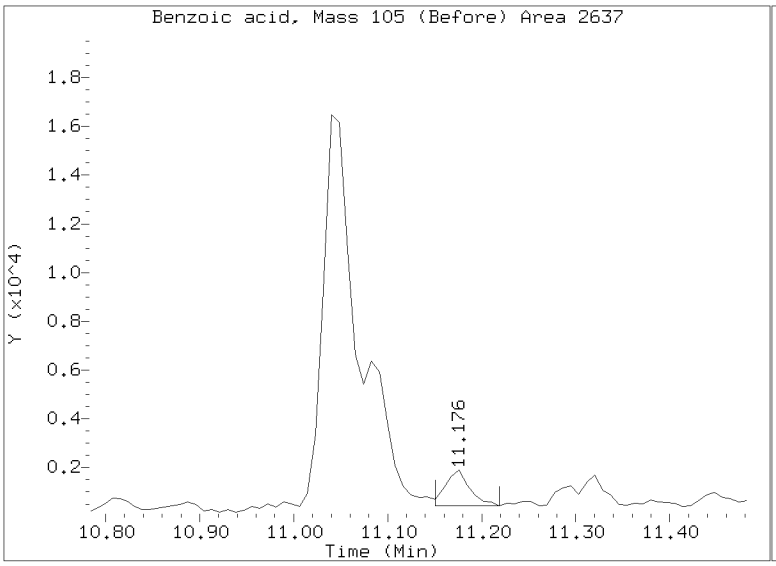
RRT check based on Ccal File: NT1003182302.D

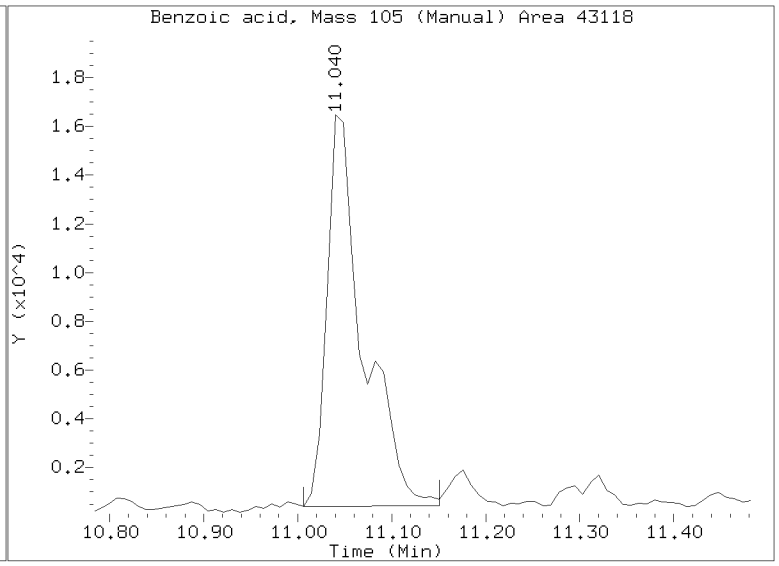
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

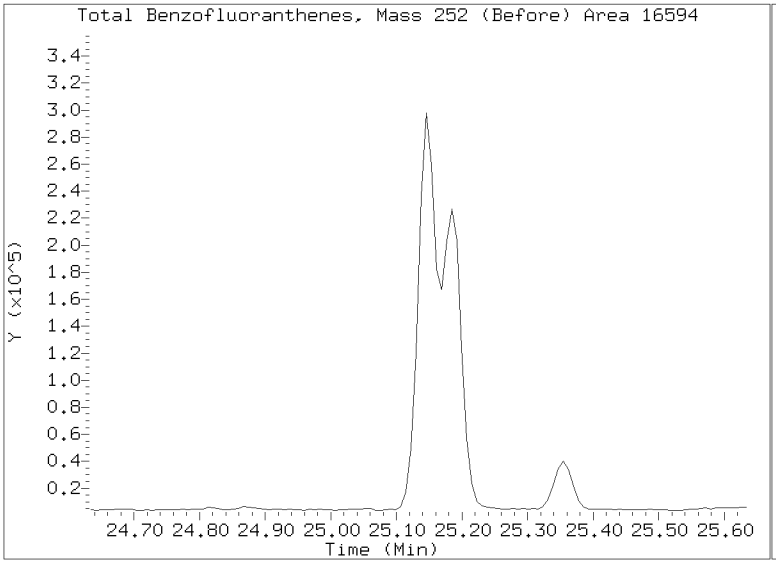
* Only compounds listed in the work order have been verified by the analyst *

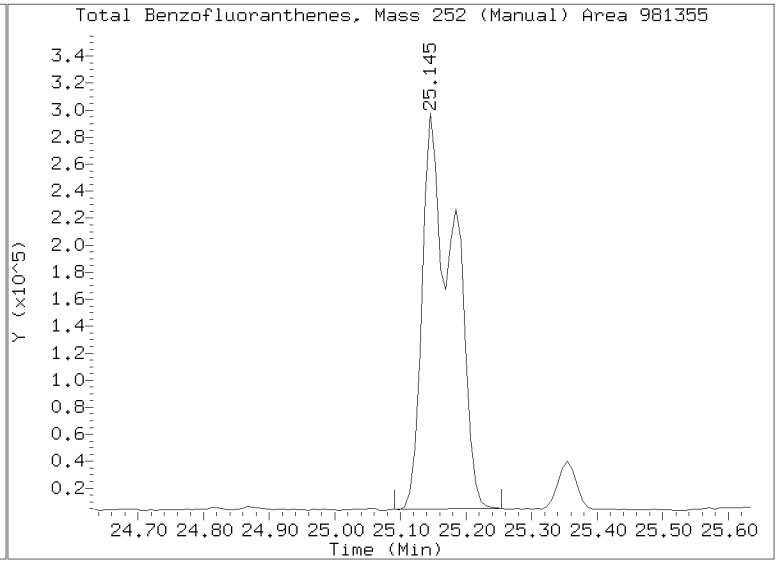
Quant Ion Manual Peak Adjustment Report

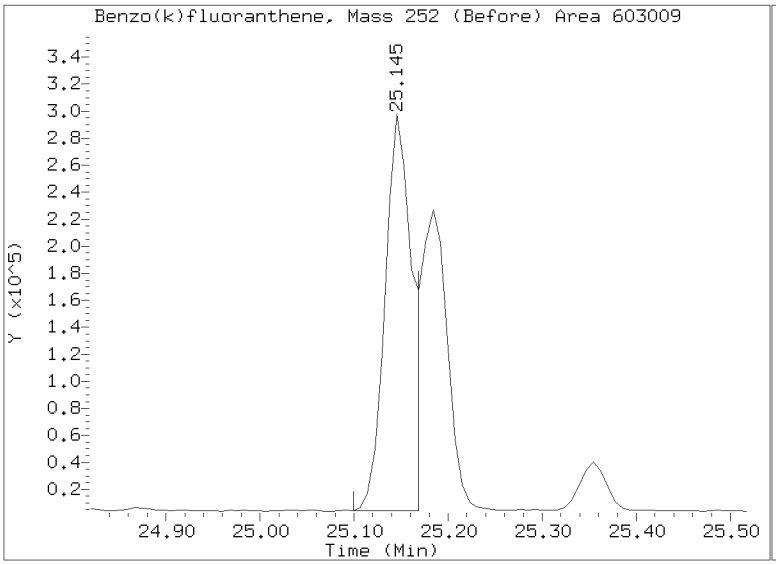
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182311.D
Injection Date: 19-MAR-2023 00:07
Lab ID:23A0467-02 Client ID:
Report Date: 04/04/2023 08:57

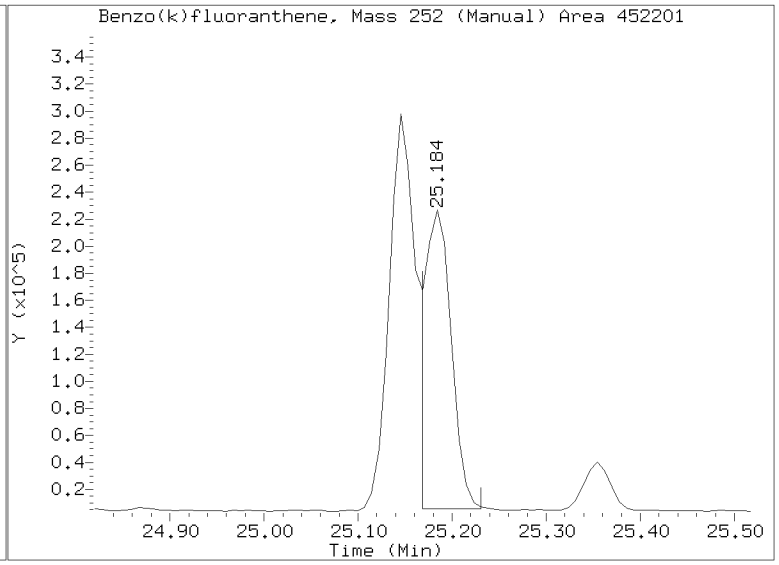












Quant Ion Manual Peak Adjustment Report

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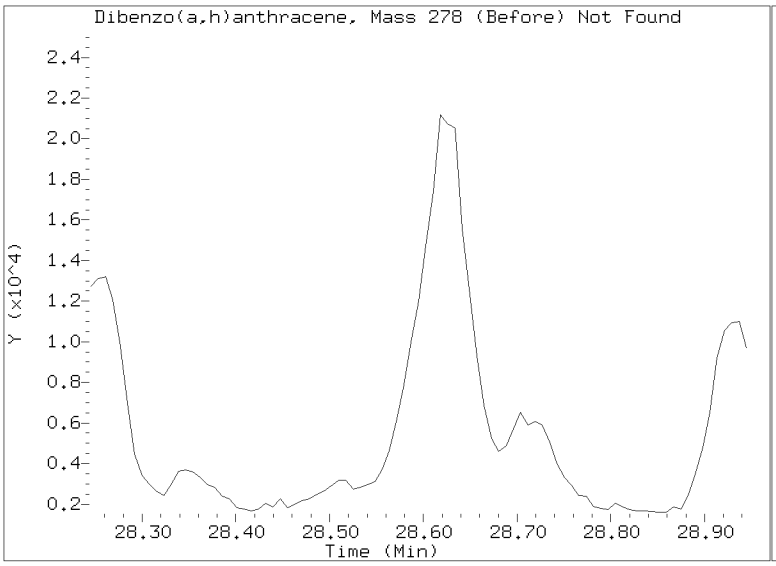
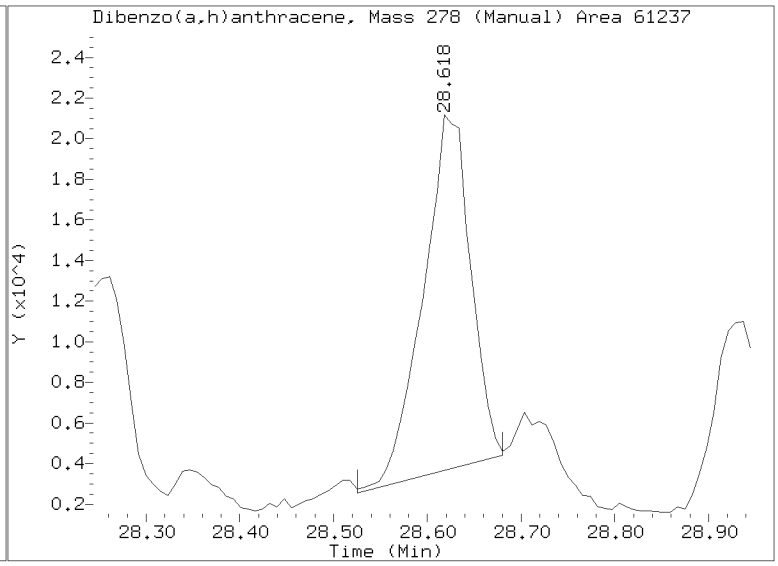
Lab ID:23A0467-02 Client ID:
Report Date: 04/04/2023 08:57





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1006

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	02/23/23 15:49	File ID:	NT1003182312.D
% Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:46
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.89 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	528		4.4	20.0
106-44-5	4-Methylphenol	1	247		7.4	20.0
91-20-3	Naphthalene	1	22.9		4.2	20.0
91-57-6	2-Methylnaphthalene	1	16.2	J	4.5	20.0
208-96-8	Acenaphthylene	1	12.9	J	6.2	20.0
131-11-3	Dimethylphthalate	1	5.7	J	4.4	20.0
83-32-9	Acenaphthene	1	16.6	J	5.2	20.0
132-64-9	Dibenzofuran	1	18.9	J	14.1	20.0
86-73-7	Fluorene	1	14.6	J	14.5	20.0
85-01-8	Phenanthrene	1	98.9		8.7	20.0
120-12-7	Anthracene	1	55.3		7.2	20.0
206-44-0	Fluoranthene	1	277		6.1	20.0
129-00-0	Pyrene	1	267		5.7	20.0
85-68-7	Butylbenzylphthalate	1	18.2	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	140		5.9	20.0
218-01-9	Chrysene	1	197		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	183		5.4	49.9
	Benzofluoranthenes, Total	1	389		10.0	39.9
50-32-8	Benzo(a)pyrene	1	150		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	76.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	23.0		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	87.9		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.59	565	75.5	27 - 120	
Phenol-d5	748.59	578	77.2	29 - 120	
2-Chlorophenol-d4	748.59	616	82.2	31 - 120	
1,2-Dichlorobenzene-d4	499.06	376	75.3	32 - 120	
Nitrobenzene-d5	499.06	397	79.6	30 - 120	
2-Fluorobiphenyl	499.06	412	82.6	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1006

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

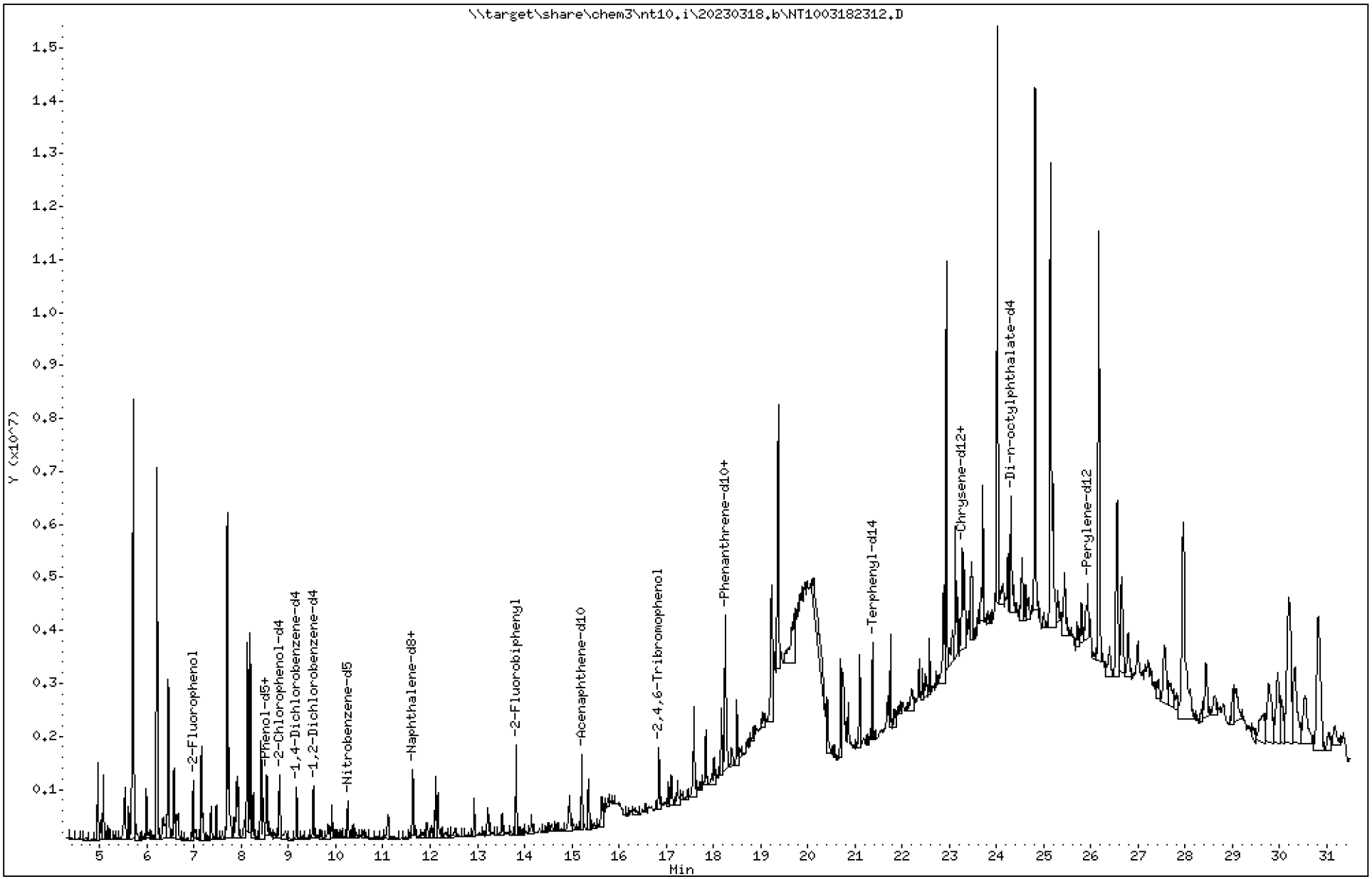
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	02/23/23 15:49	File ID:	NT1003182312.D
% Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:46
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.89 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.59	687	91.8	24 - 134	
p-Terphenyl-d14	499.06	408	81.8	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D
Date : 19-MAR-2023 00:46
Client ID:
Sample Info: 23A0467-03

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

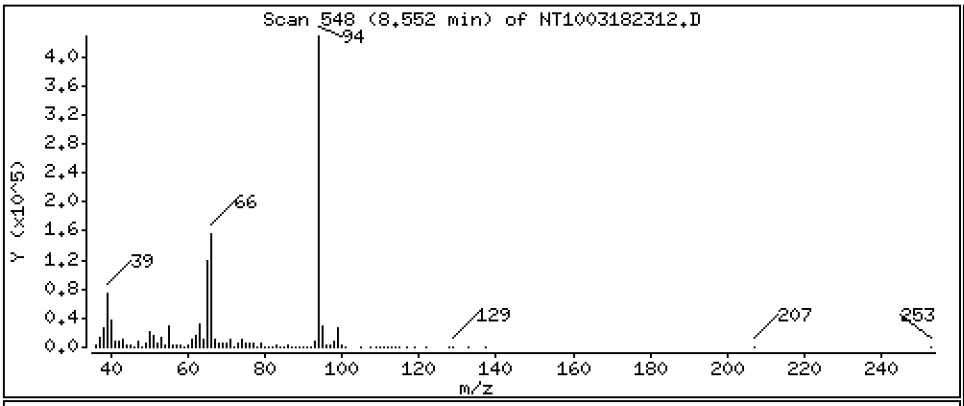
Operator: VTS

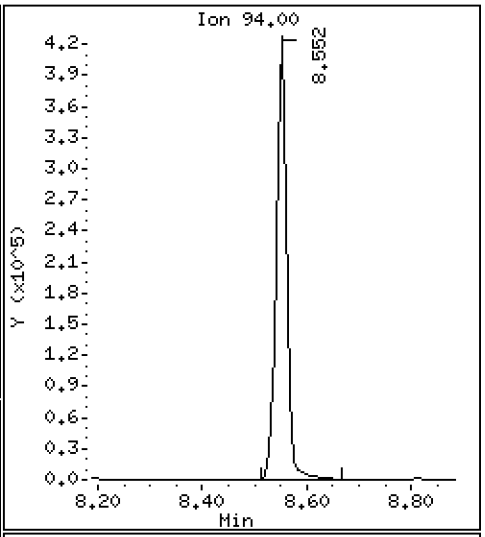
Column phase: ZB-5msi

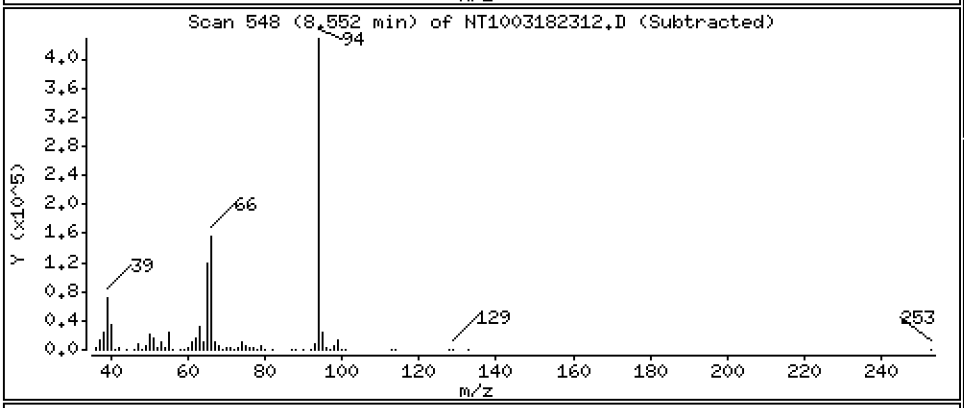
Column diameter: 0.25

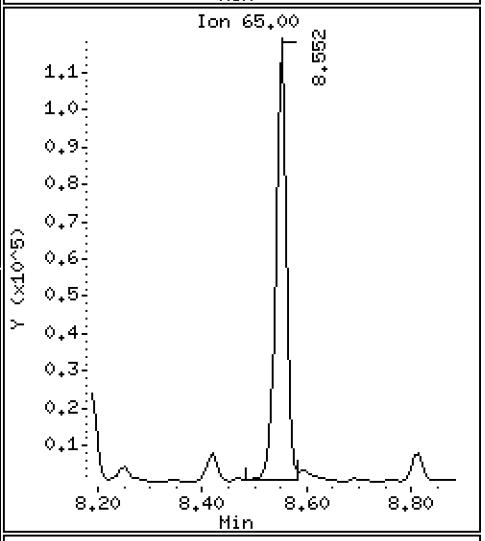
3 Phenol

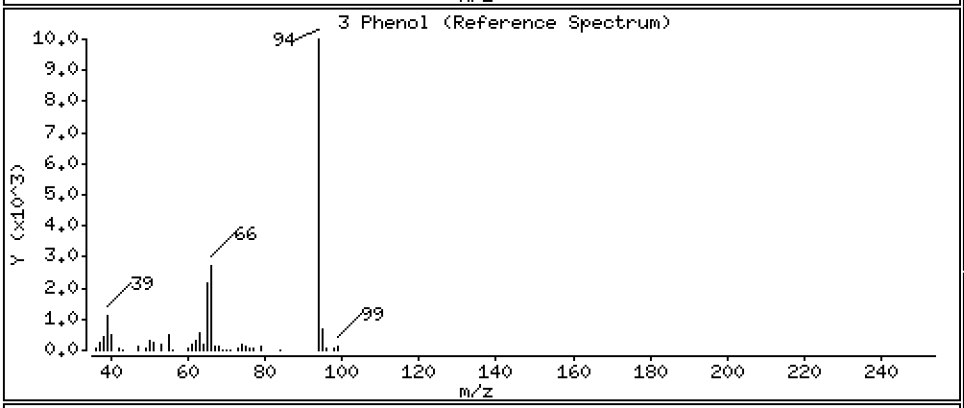
Concentration: 5.290 ug/mL

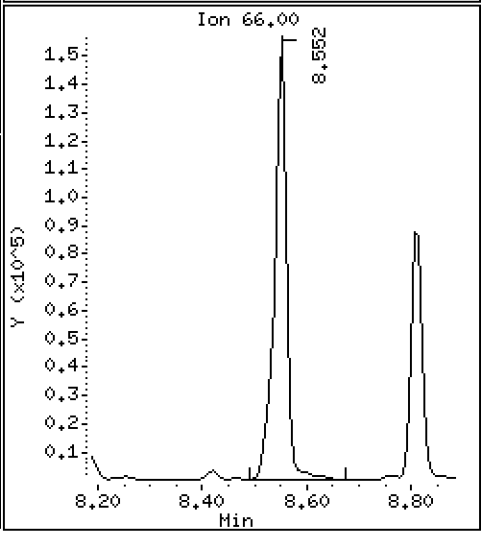


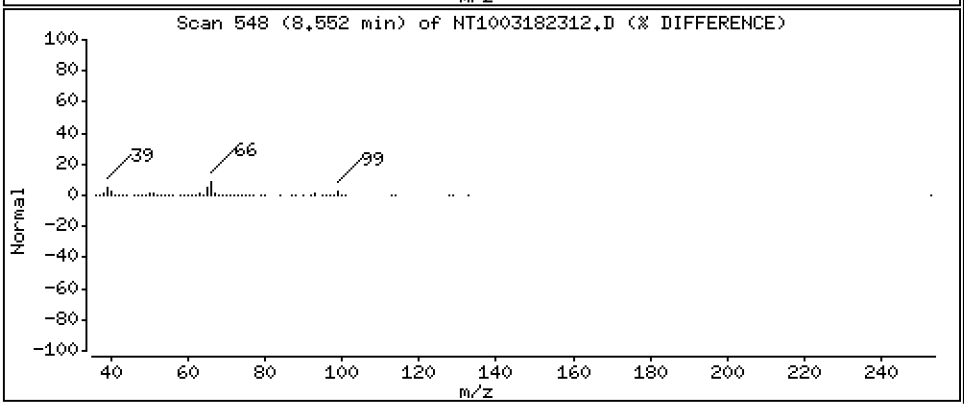












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

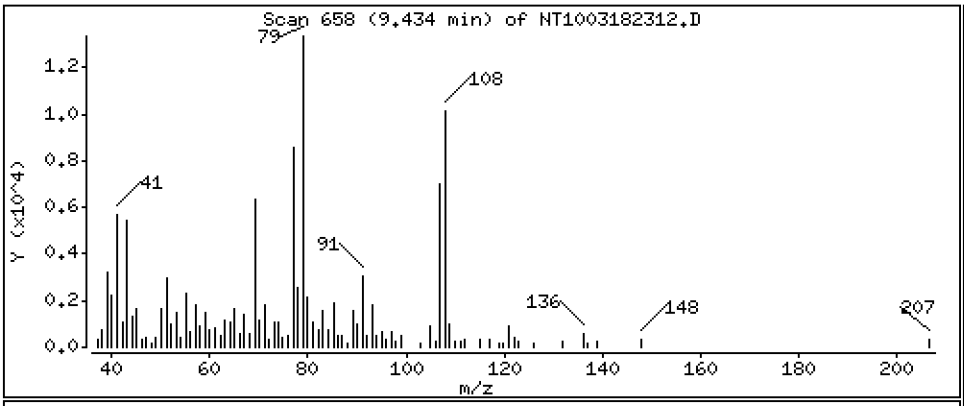
Operator: VTS

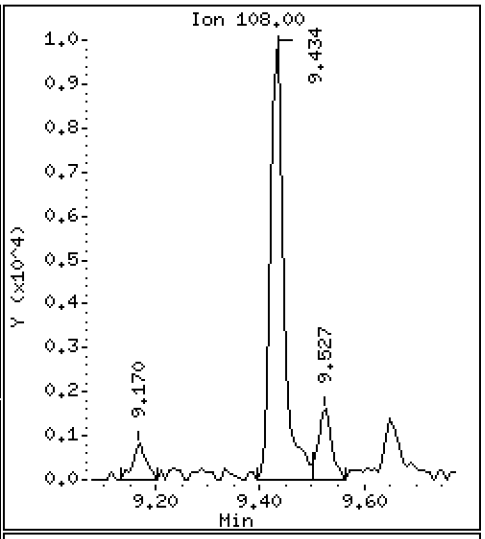
Column phase: ZB-5msi

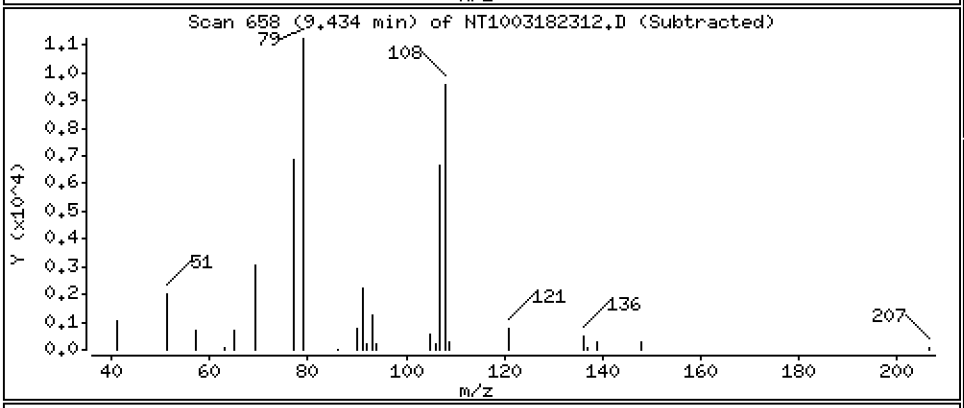
Column diameter: 0.25

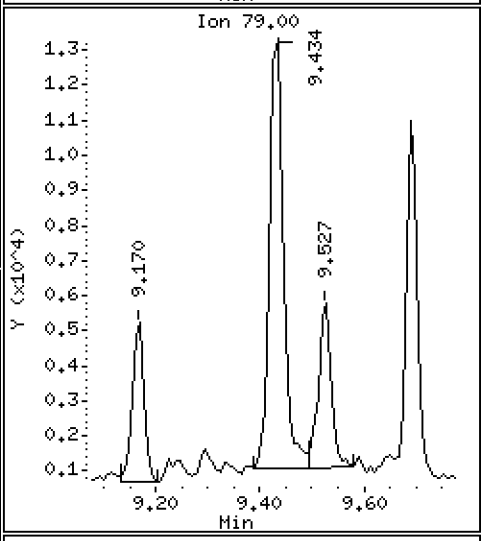
11 Benzyl alcohol

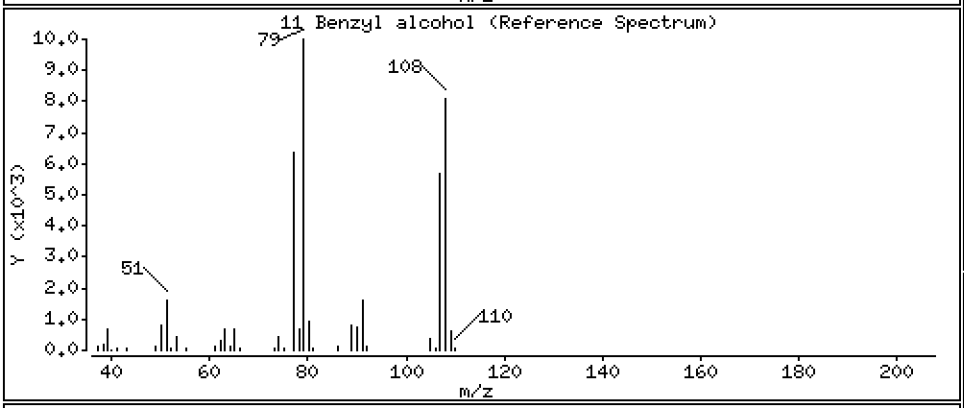
Concentration: 0.3206 ug/mL

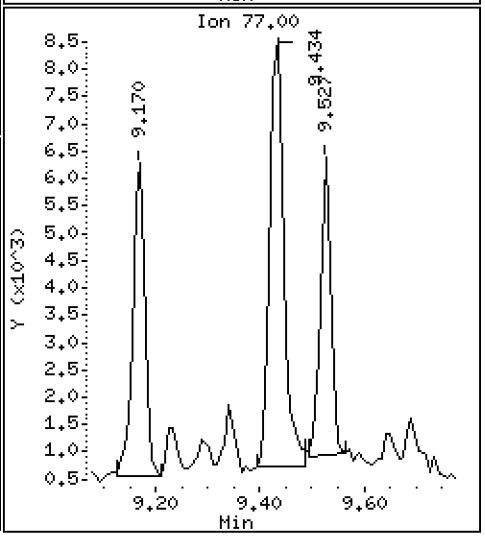


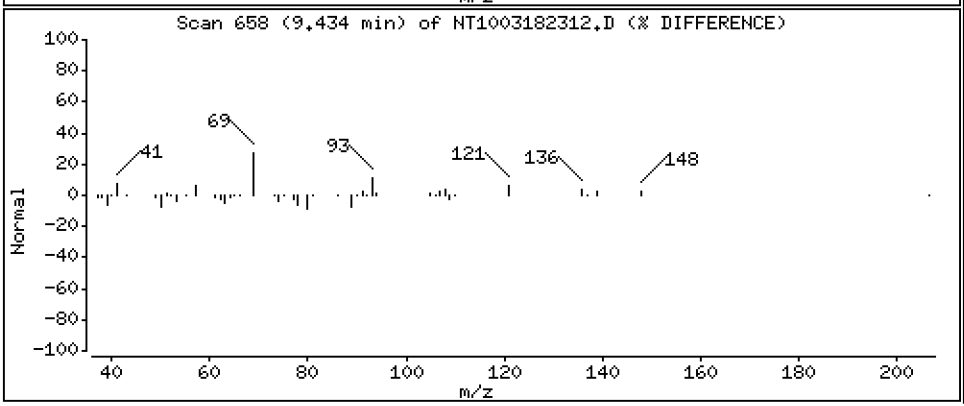












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

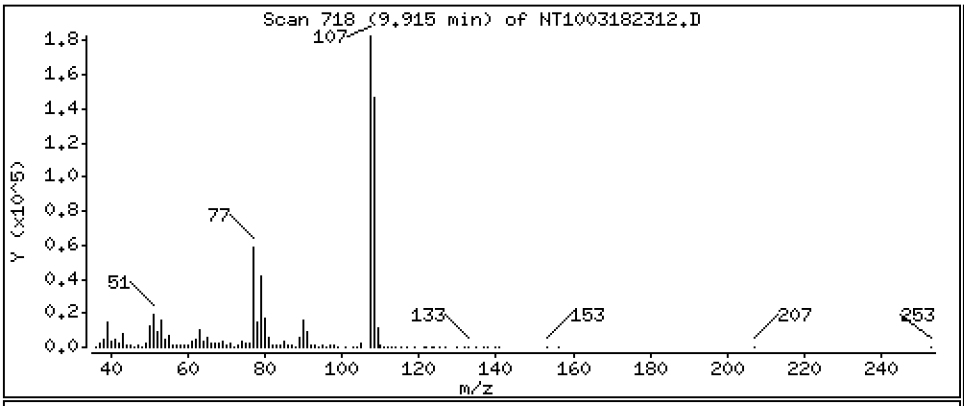
Operator: VTS

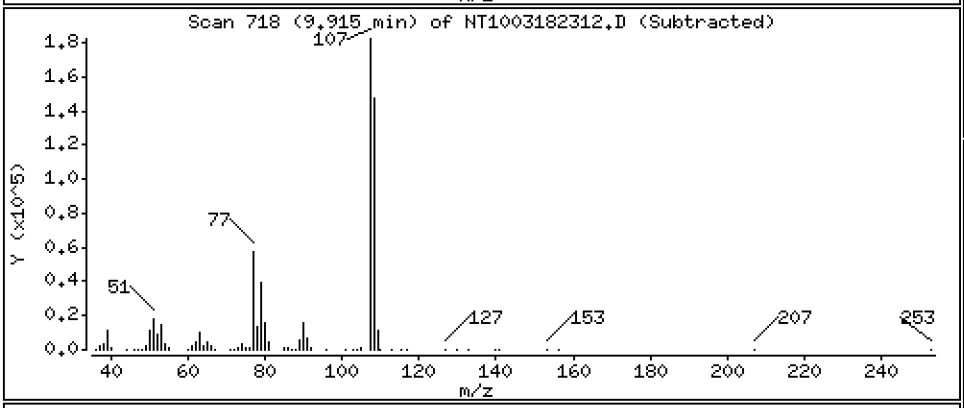
Column phase: ZB-5msi

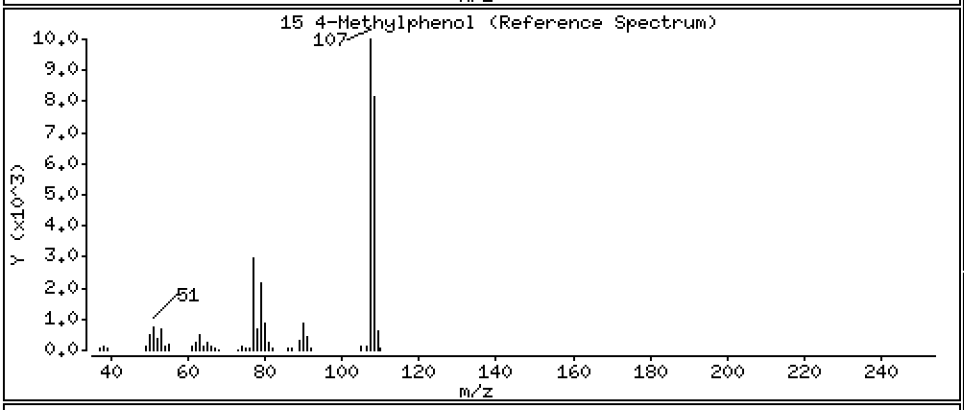
Column diameter: 0.25

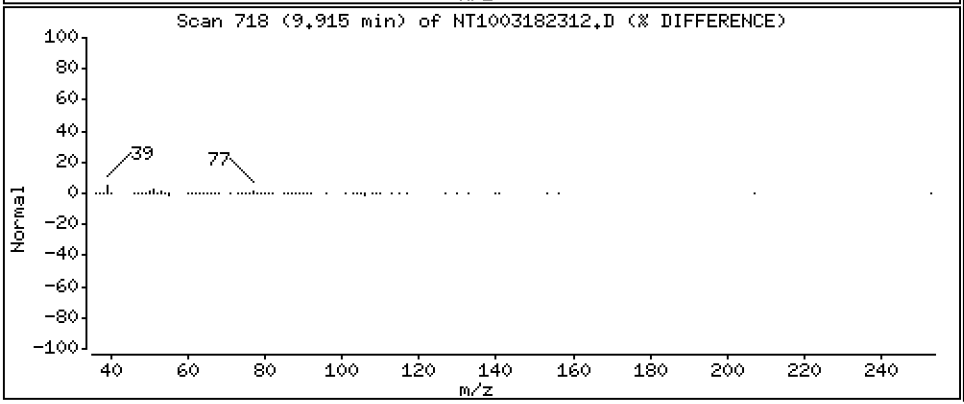
15 4-Methylphenol

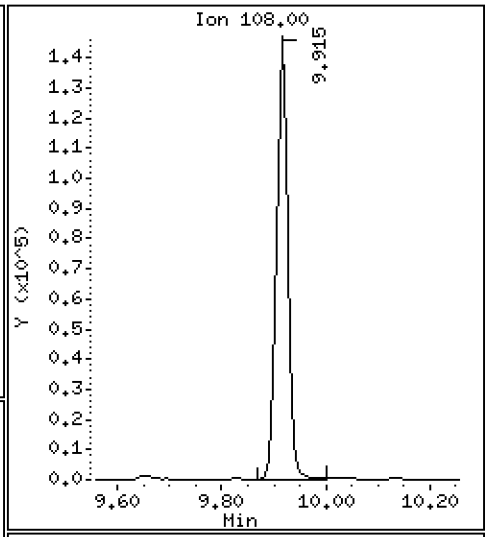
Concentration: 2.475 ug/mL

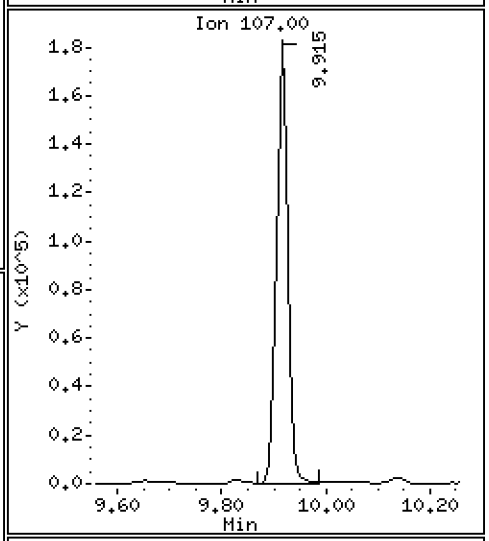


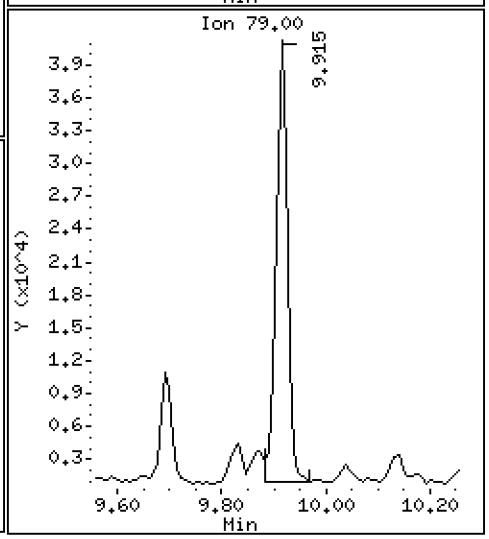












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

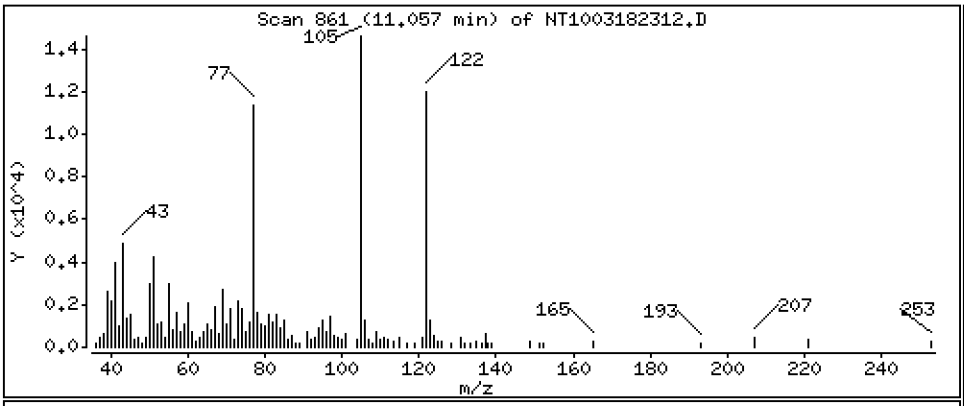
Operator: VTS

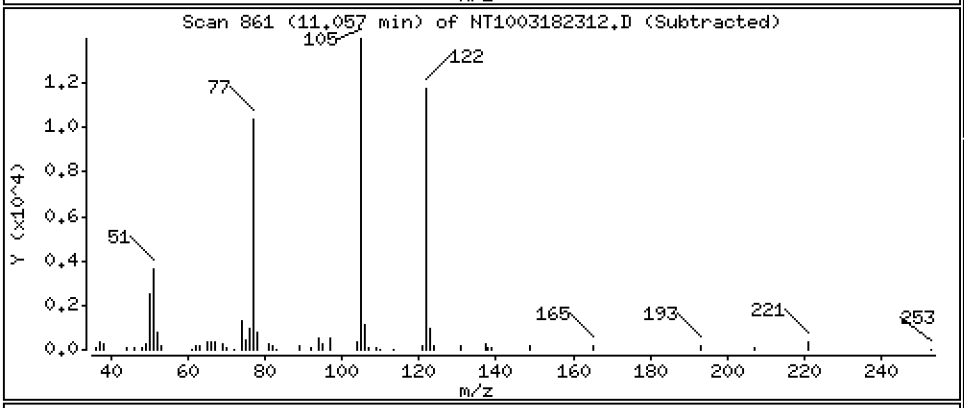
Column phase: ZB-5msi

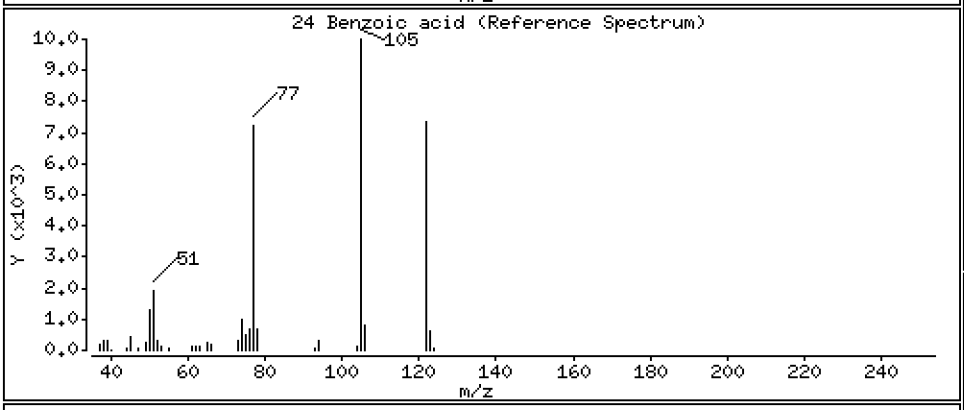
Column diameter: 0.25

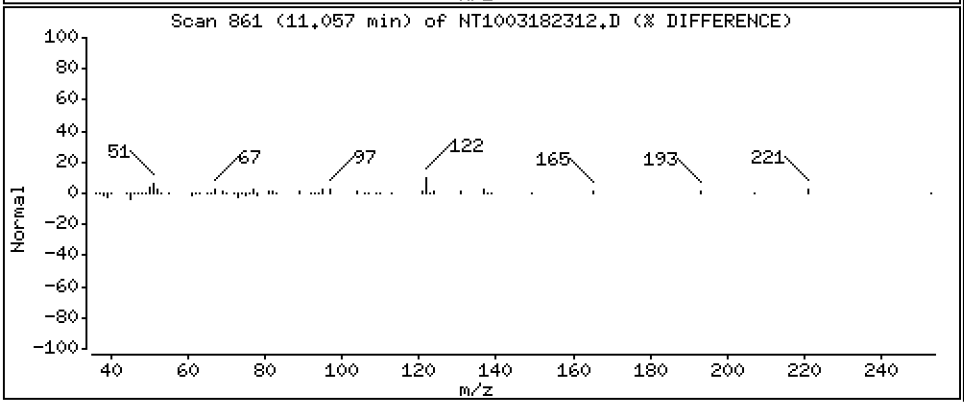
24 Benzoic acid

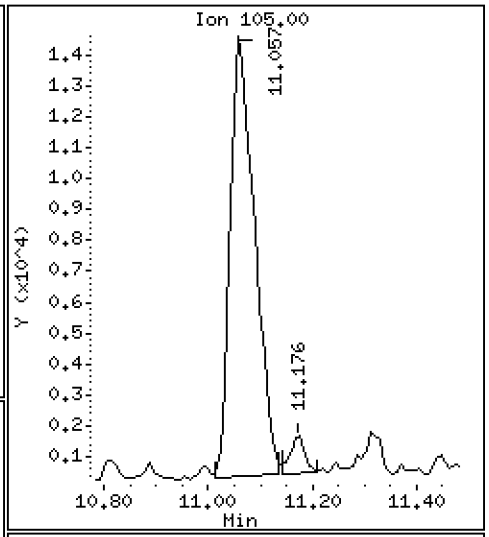
Concentration: 0.9212 ug/mL

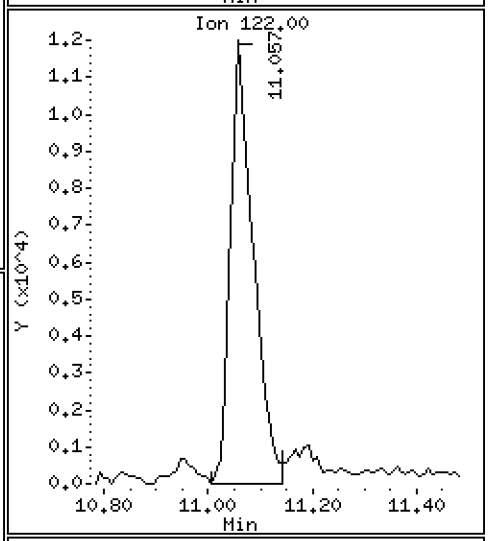


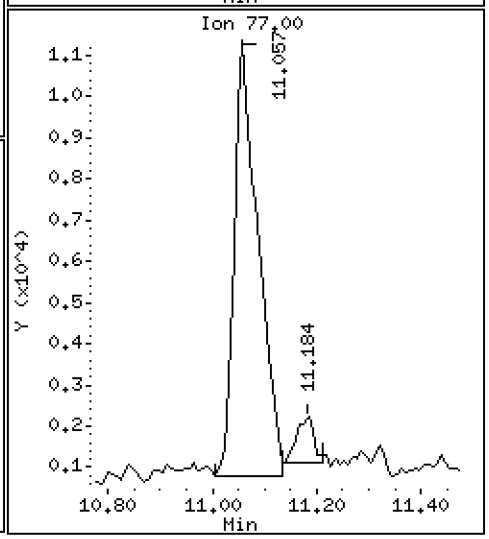












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

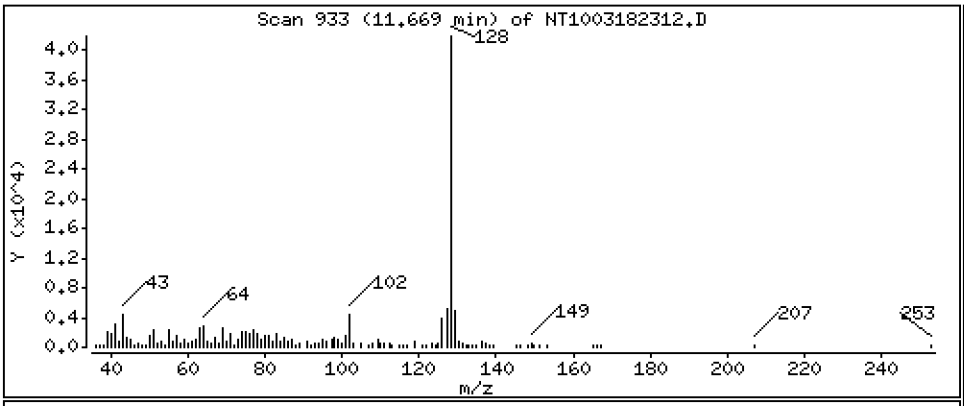
Operator: VTS

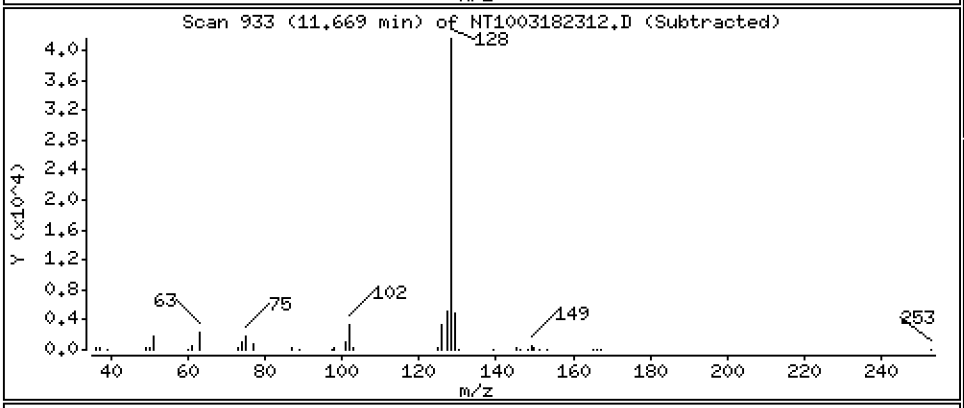
Column phase: ZB-5msi

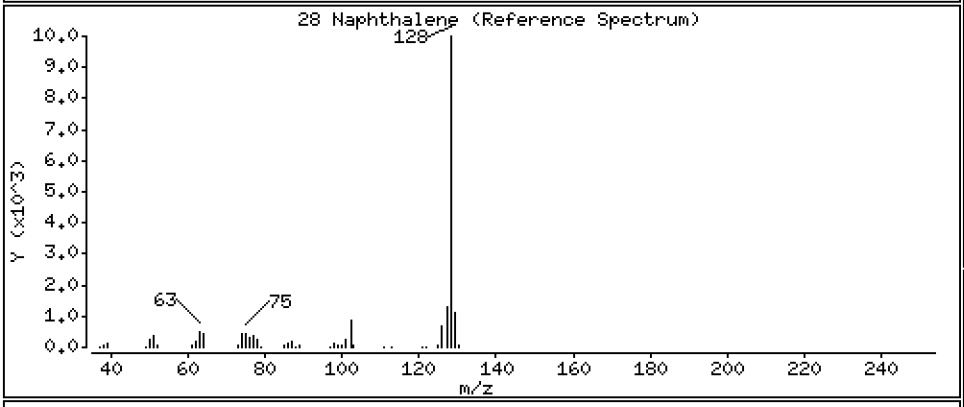
Column diameter: 0.25

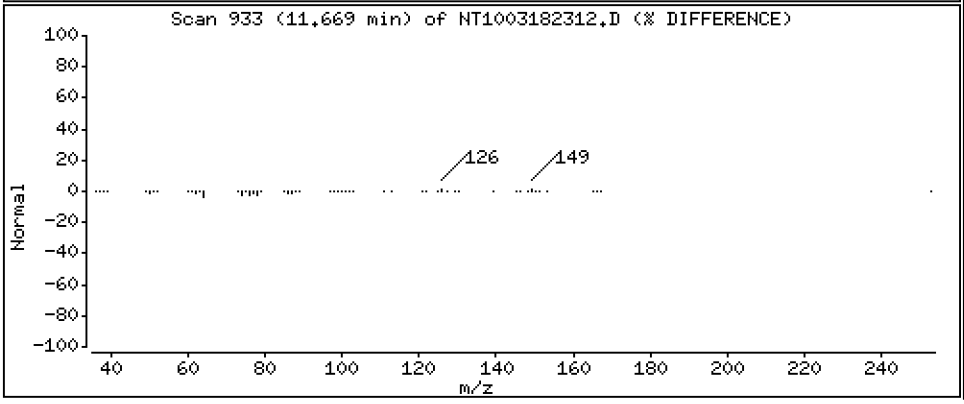
28 Naphthalene

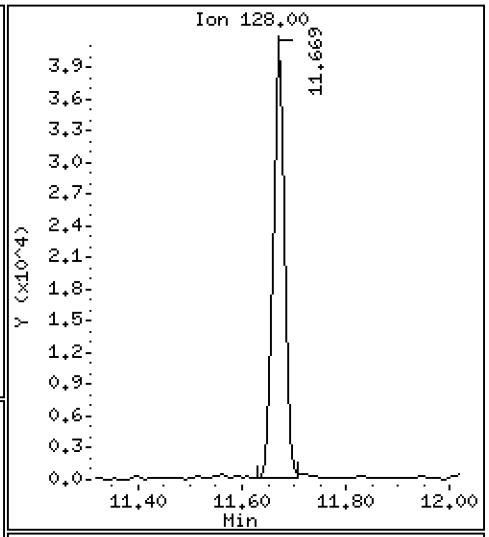
Concentration: 0.2295 ug/mL

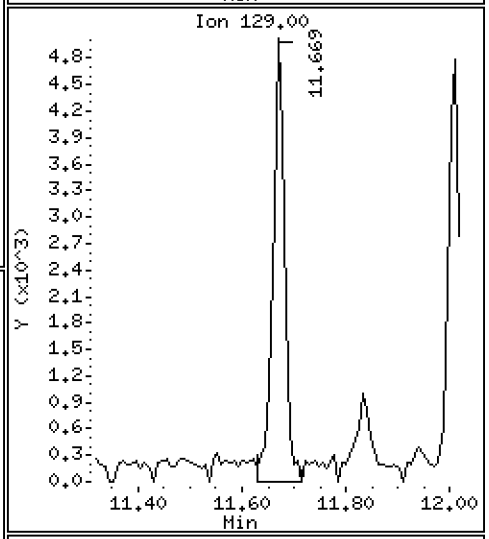


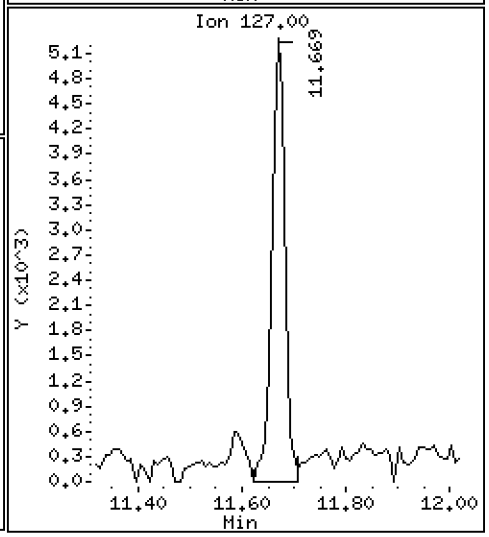












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

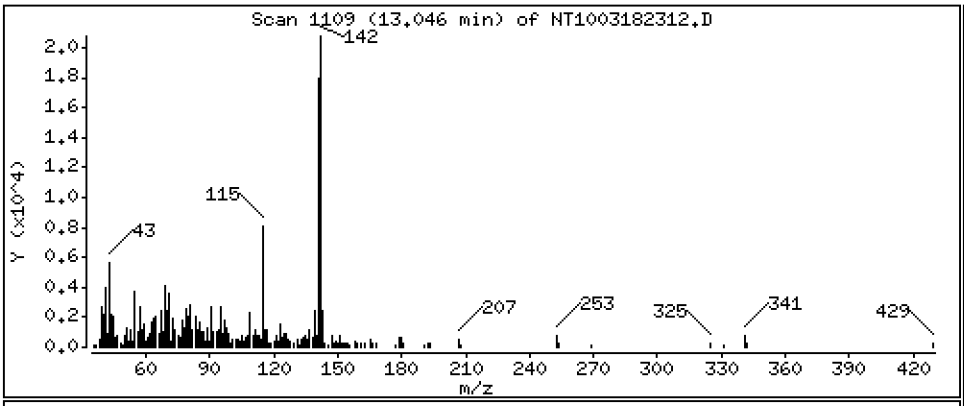
Operator: VTS

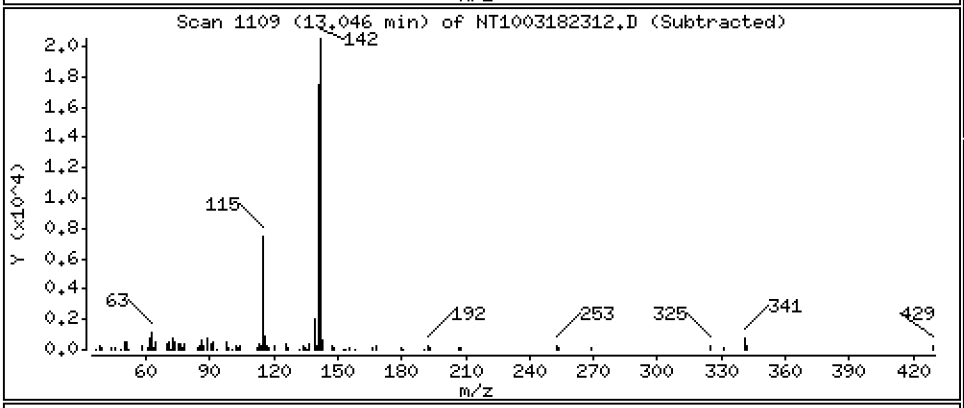
Column phase: ZB-5msi

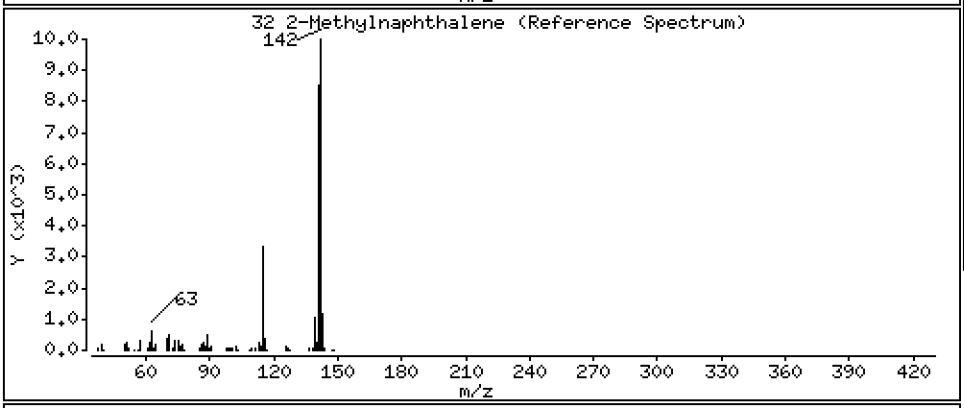
Column diameter: 0.25

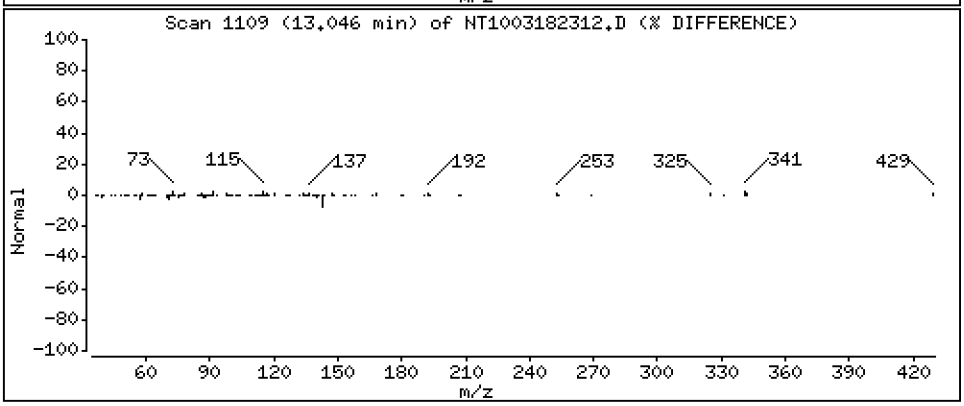
32 2-Methylnaphthalene

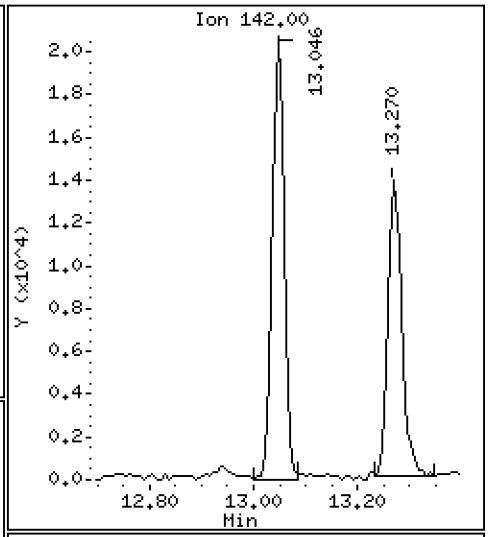
Concentration: 0.1624 ug/mL

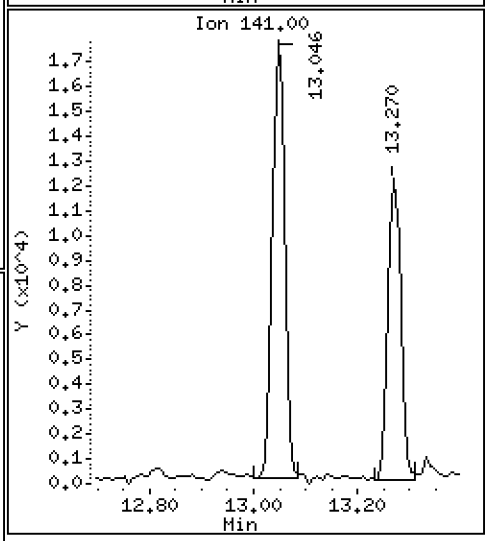












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

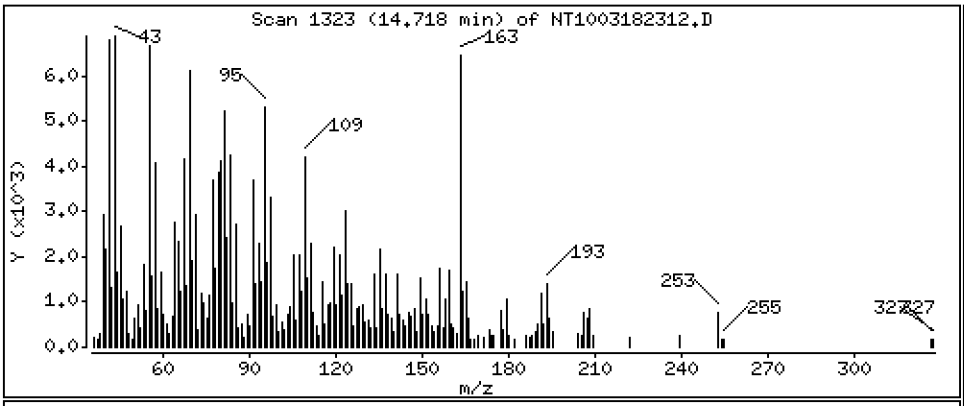
Operator: VTS

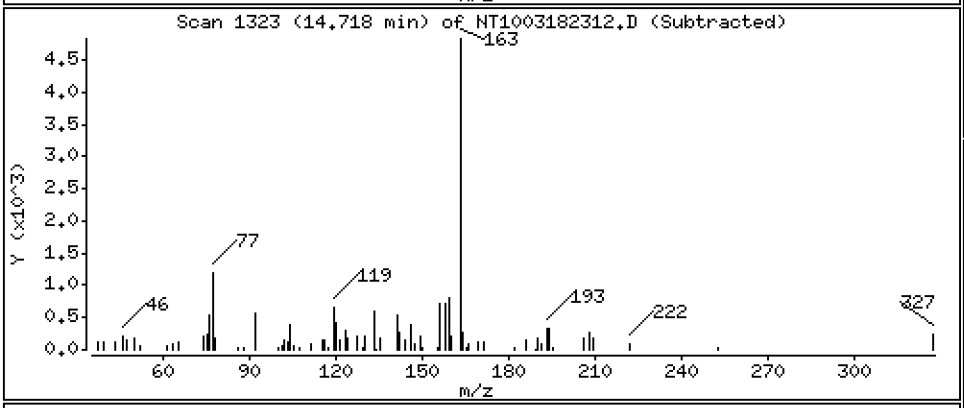
Column phase: ZB-5msi

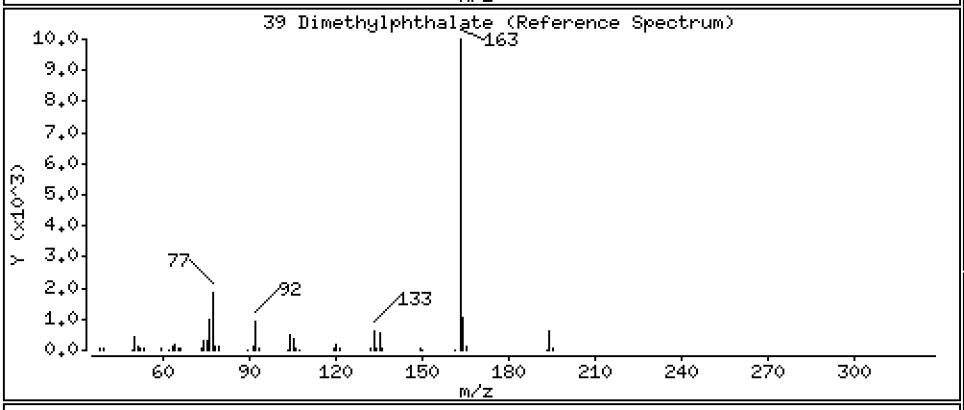
Column diameter: 0.25

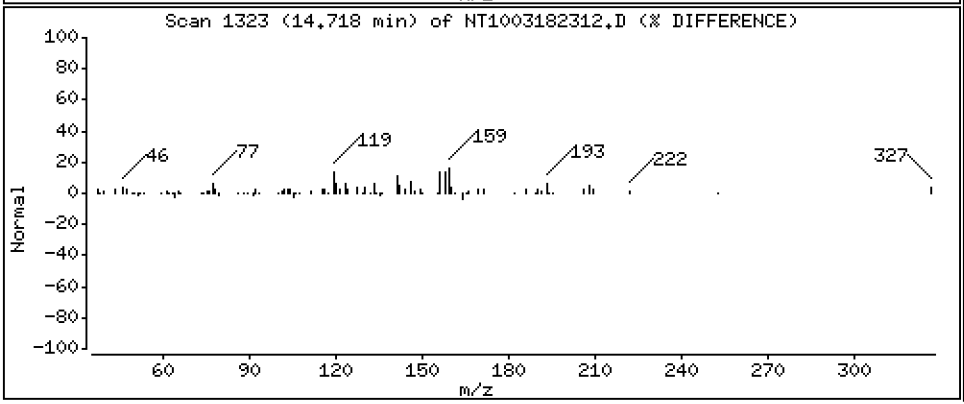
39 Dimethylphthalate

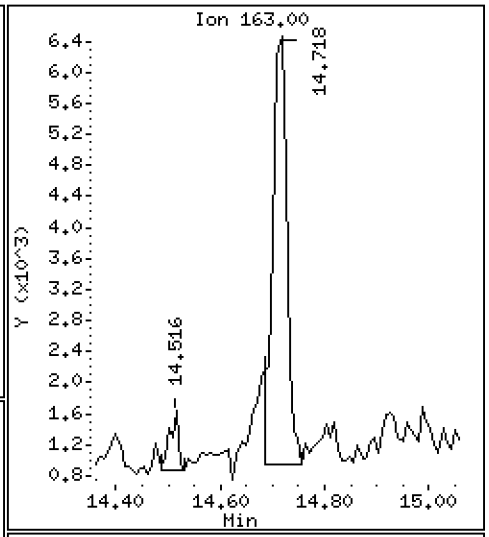
Concentration: 0.05750 ug/mL

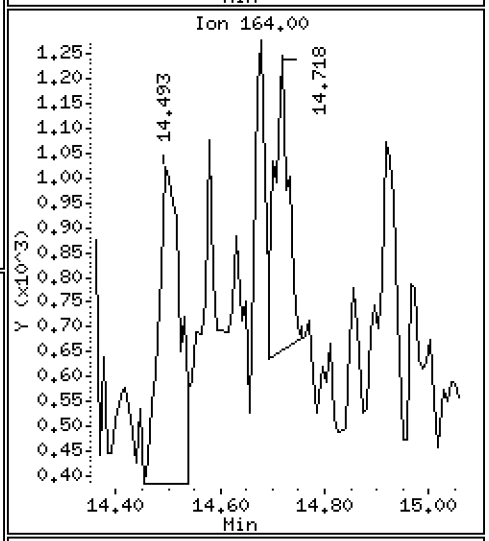


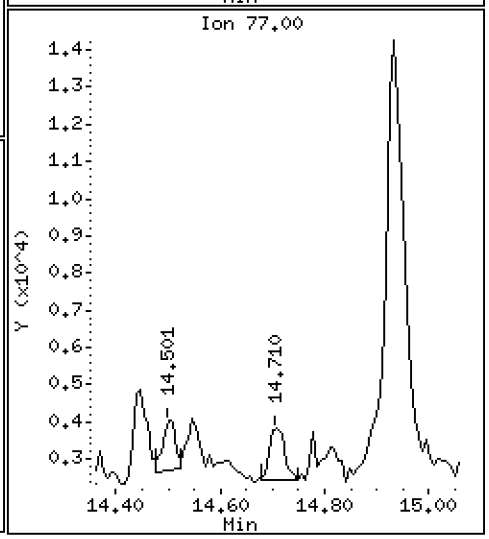












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

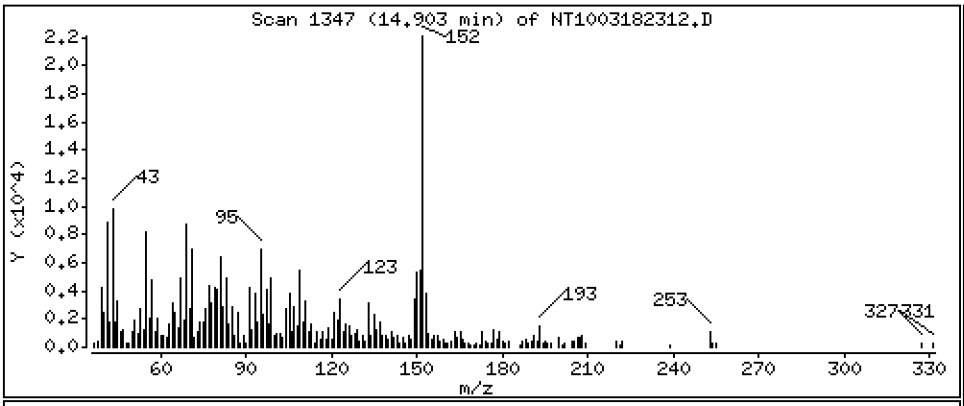
Operator: VTS

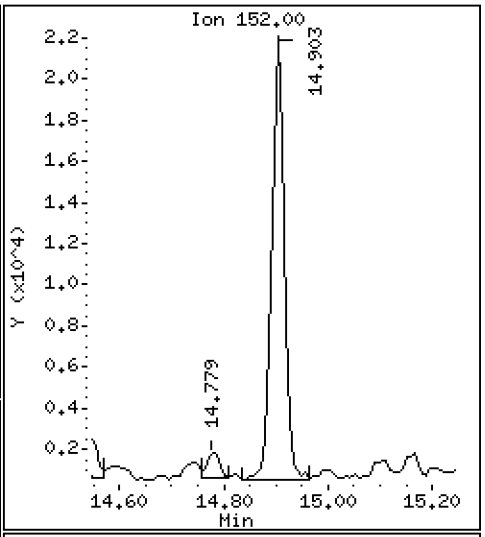
Column phase: ZB-5msi

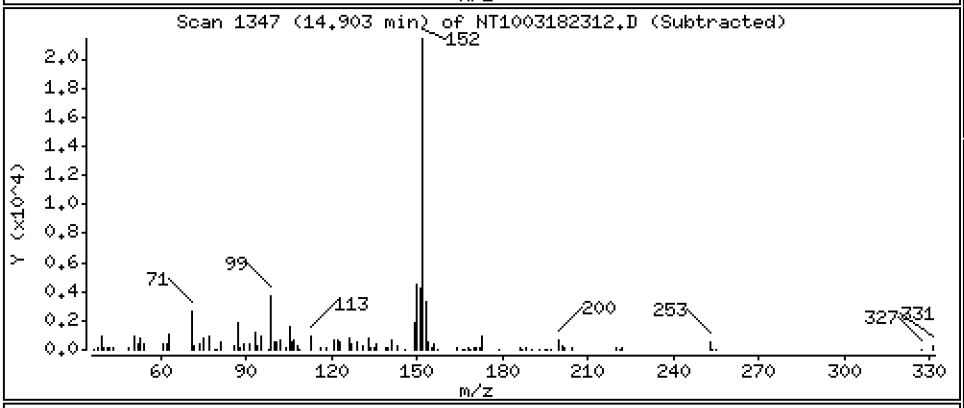
Column diameter: 0.25

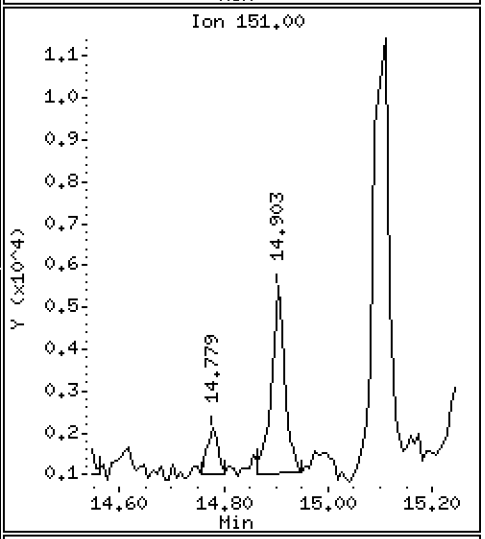
40 Acenaphthylene

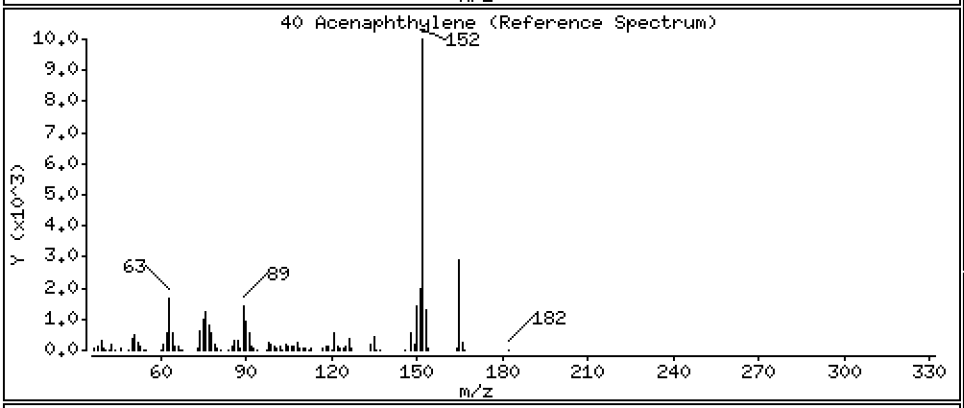
Concentration: 0.1295 ug/mL

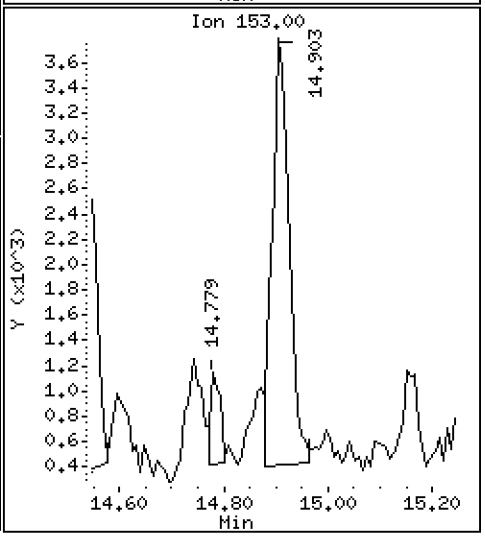


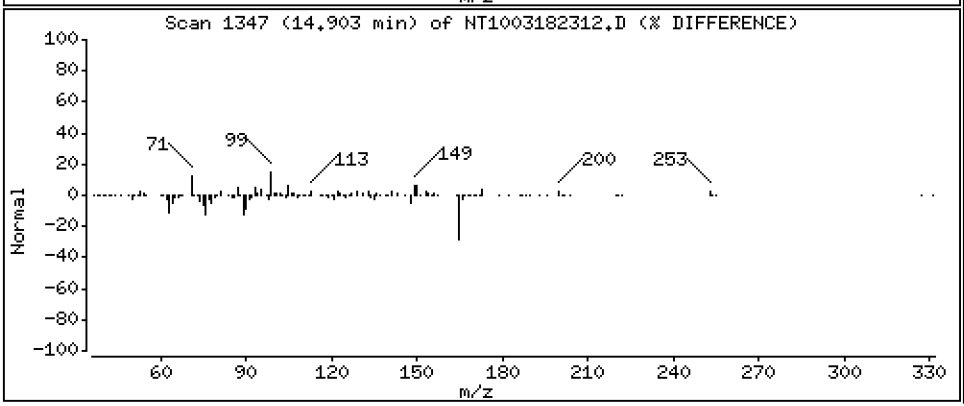












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

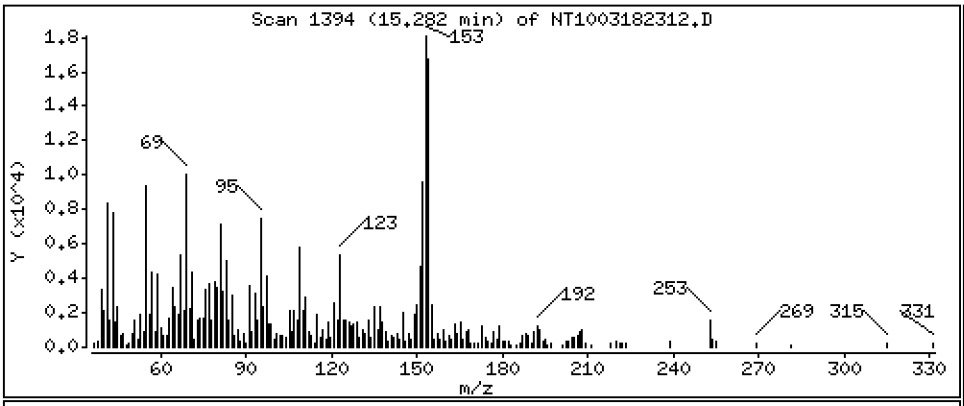
Operator: VTS

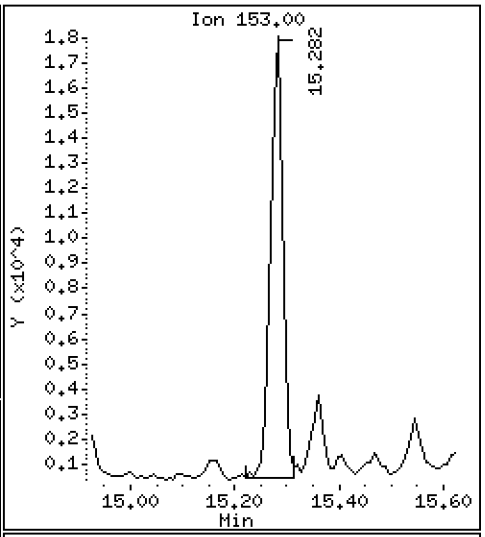
Column phase: ZB-5msi

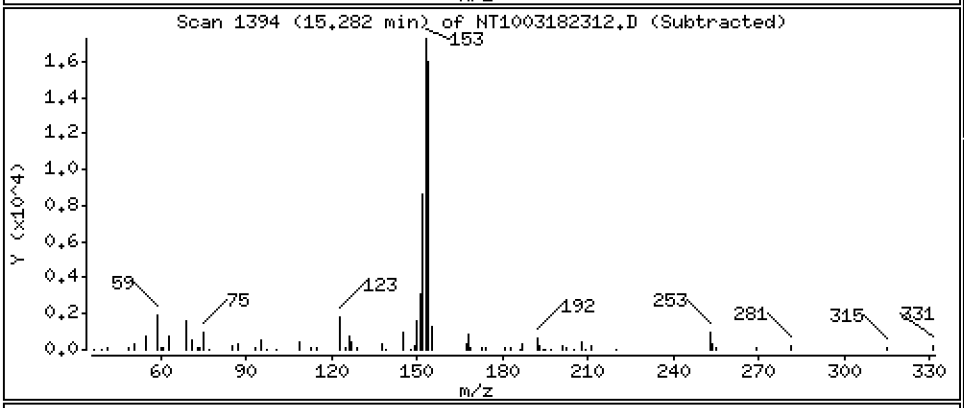
Column diameter: 0.25

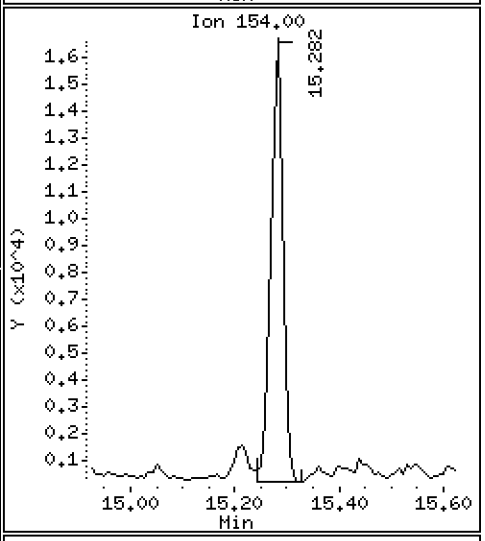
44 Acenaphthene

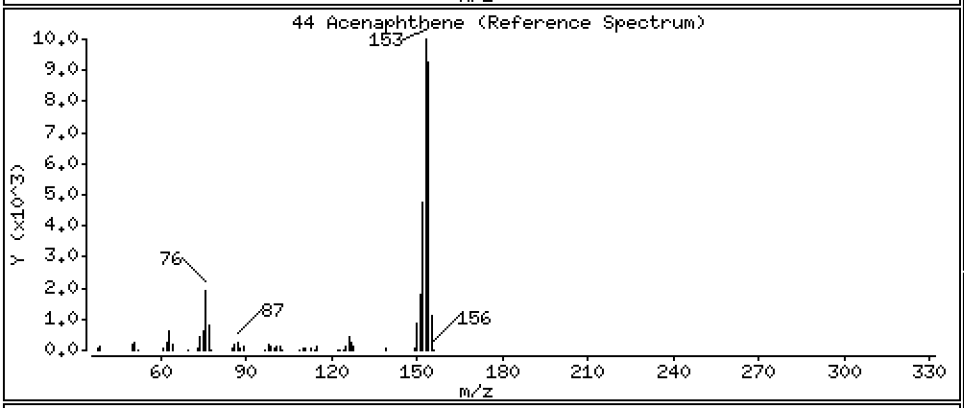
Concentration: 0.1668 ug/mL

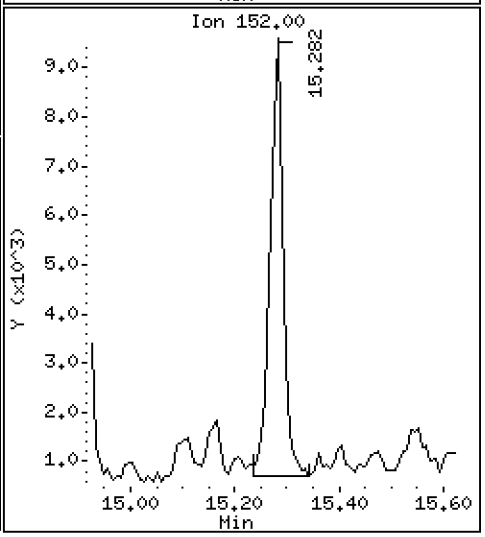


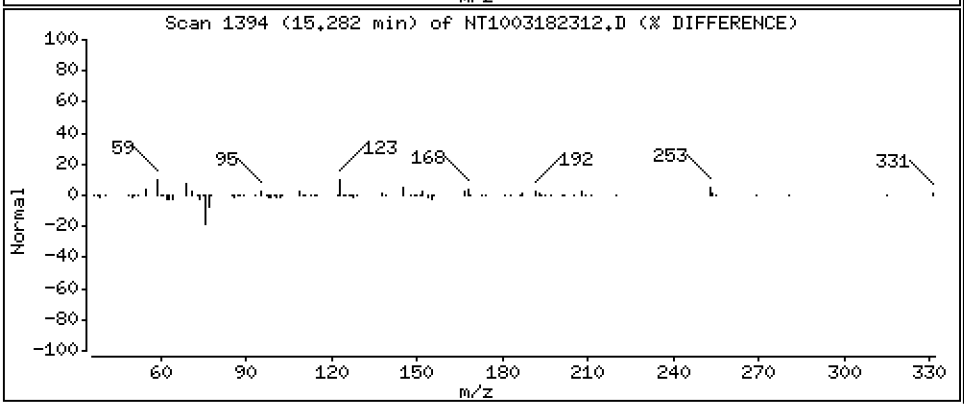












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

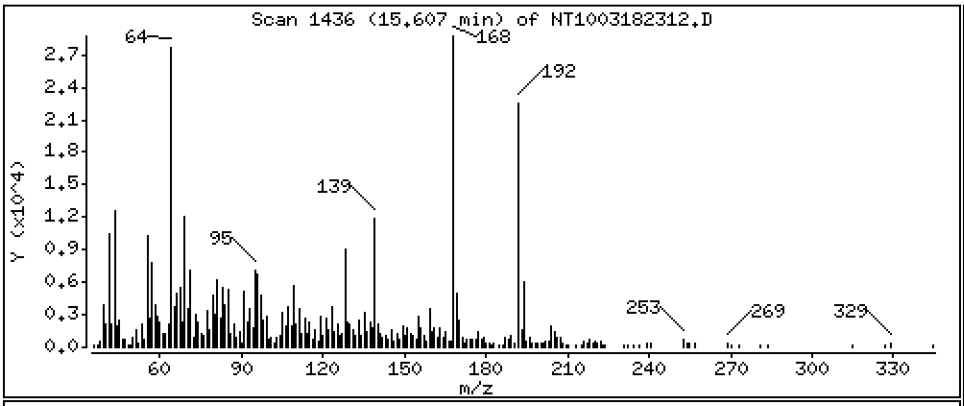
Operator: VTS

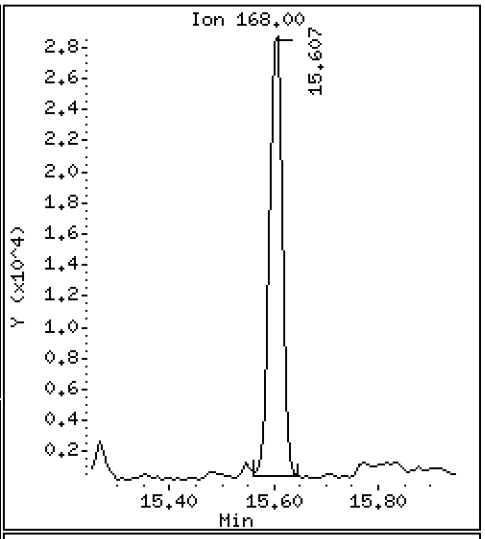
Column phase: ZB-5msi

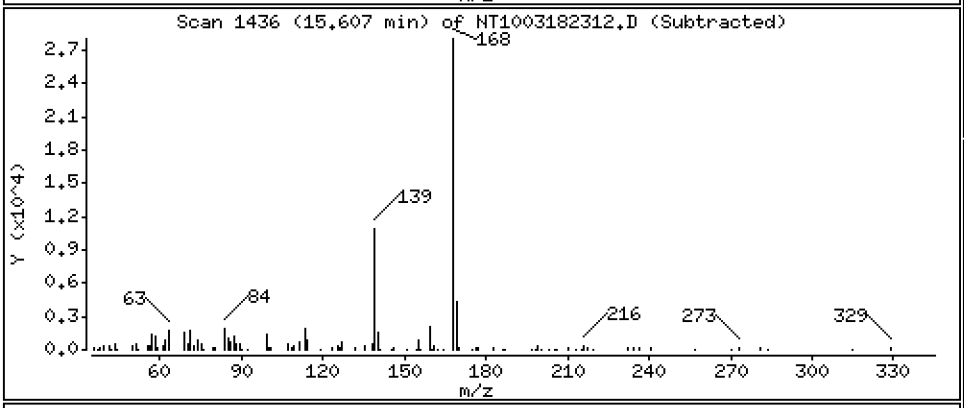
Column diameter: 0.25

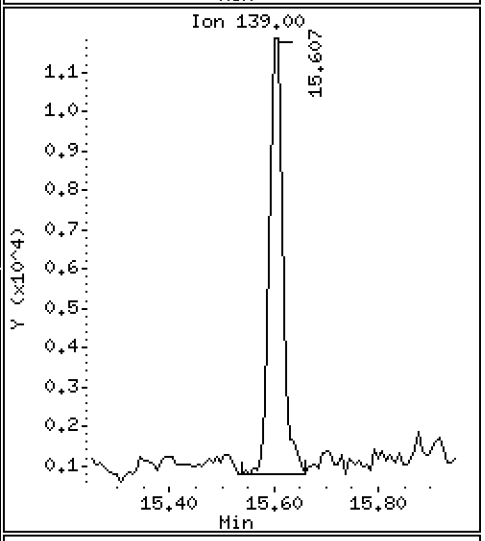
46 Dibenzofuran

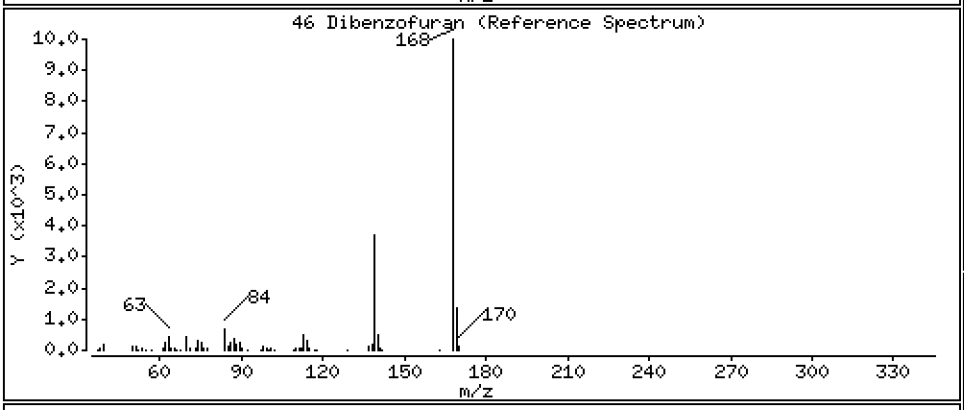
Concentration: 0.1895 ug/mL

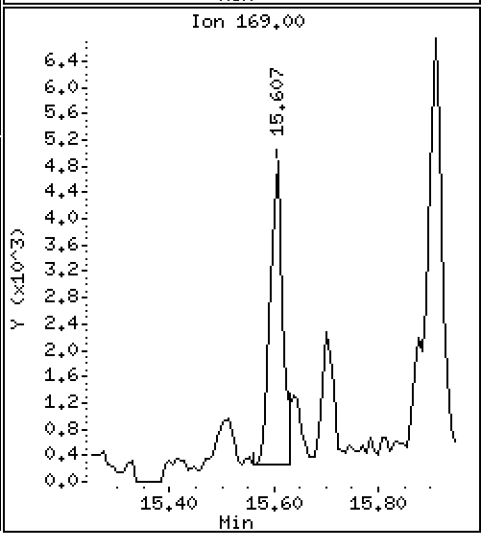


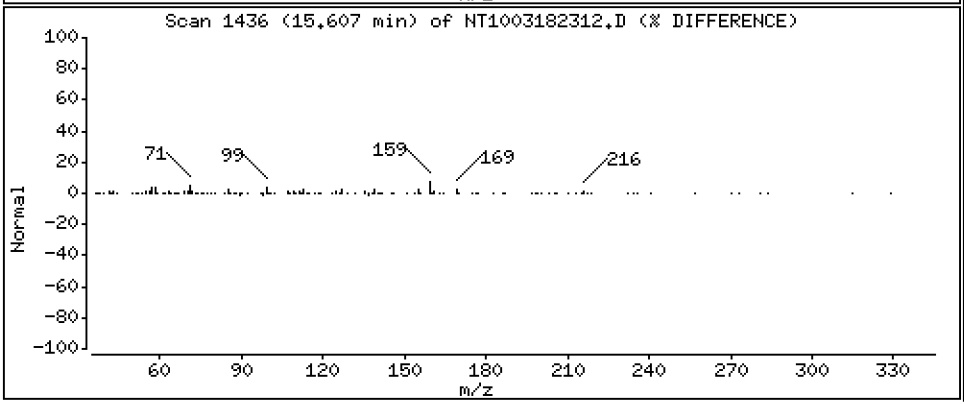












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

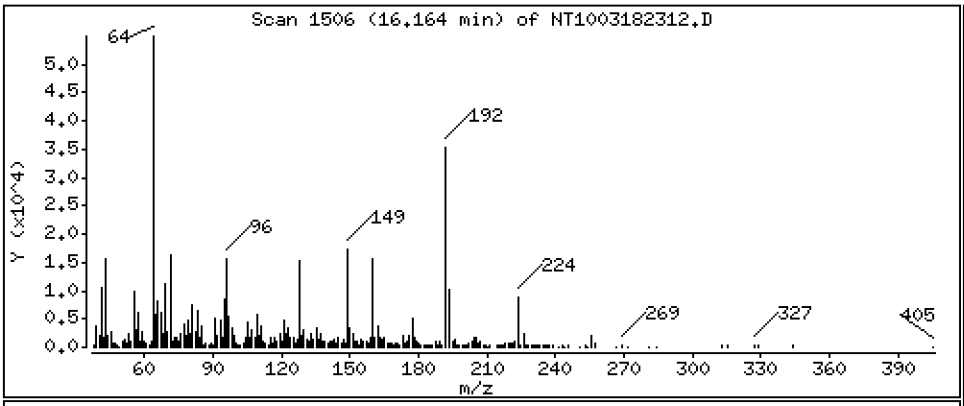
Operator: VTS

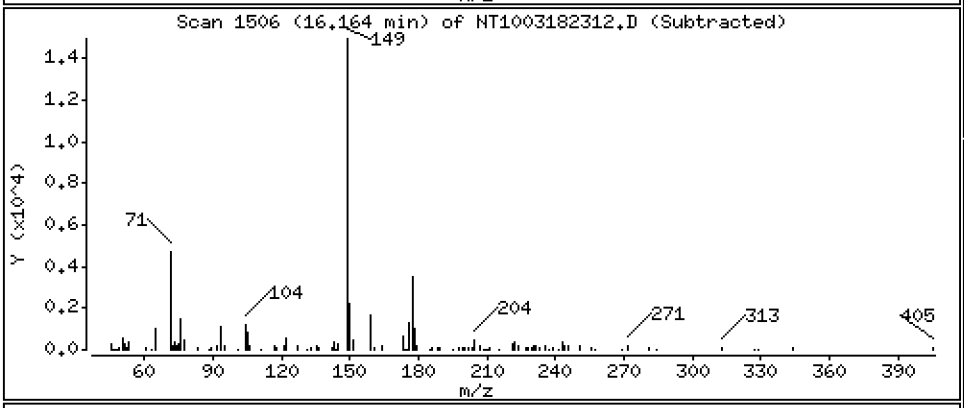
Column phase: ZB-5msi

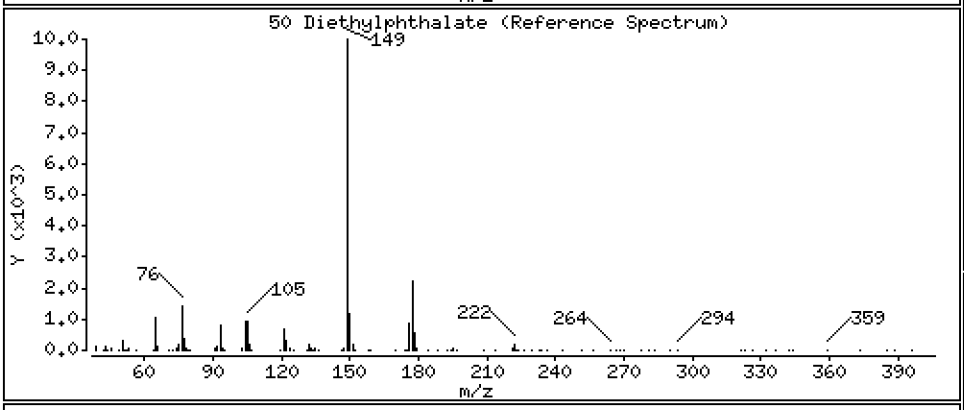
Column diameter: 0.25

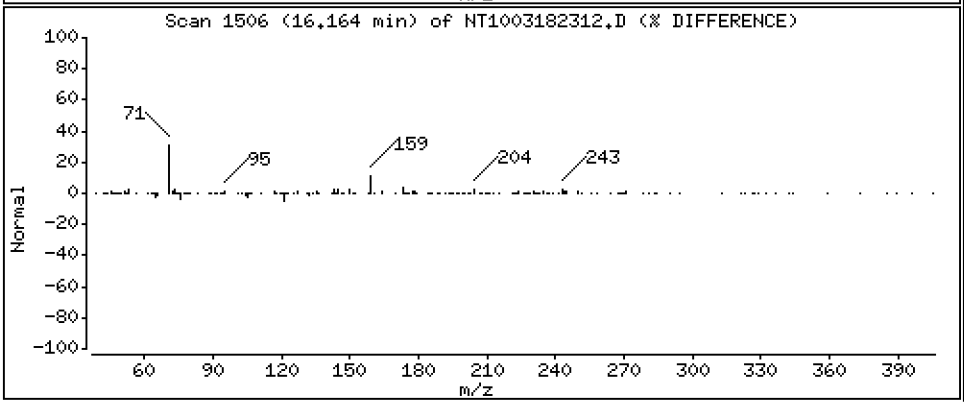
50 Diethylphthalate

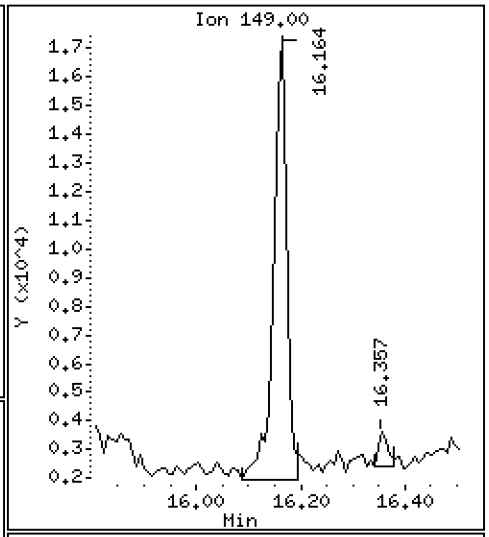
Concentration: 0.1754 ug/mL

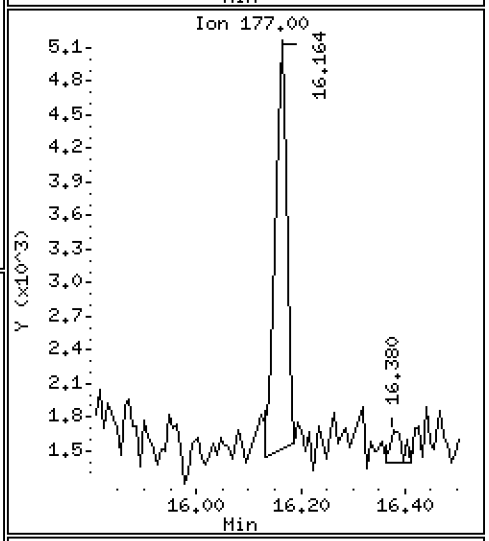


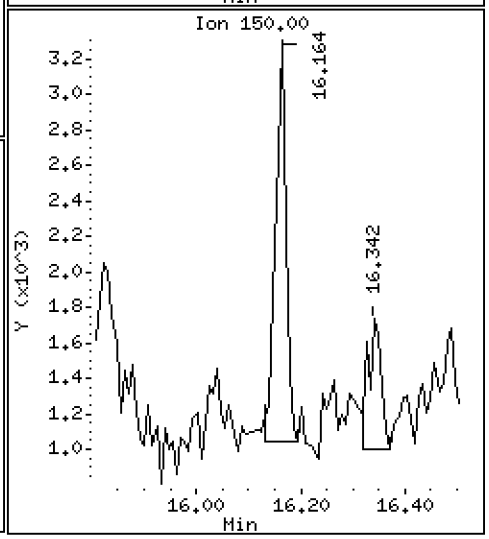












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

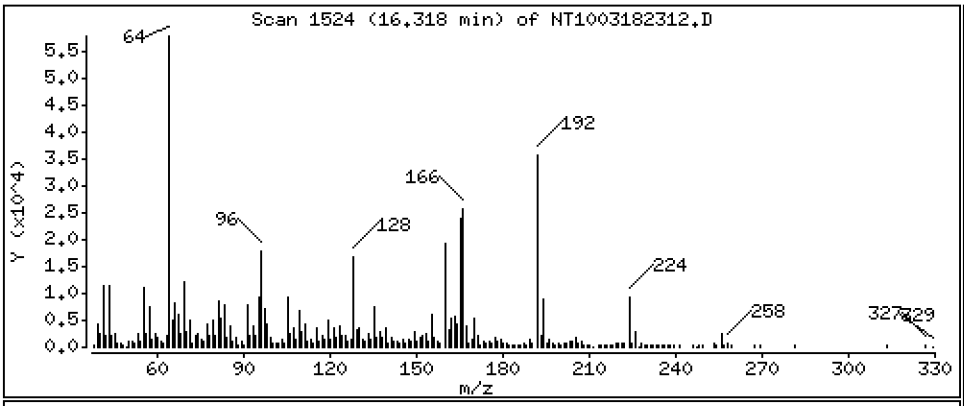
Operator: VTS

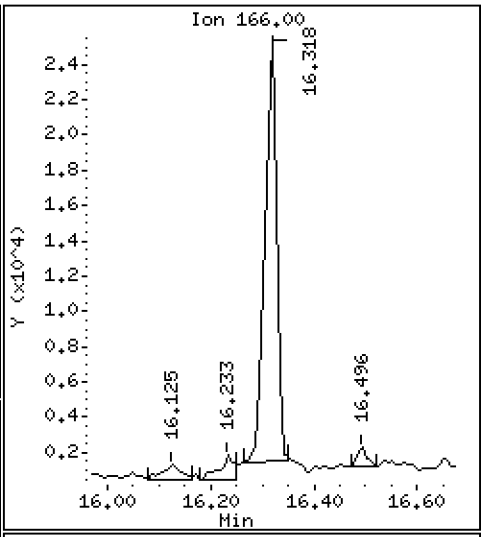
Column phase: ZB-5msi

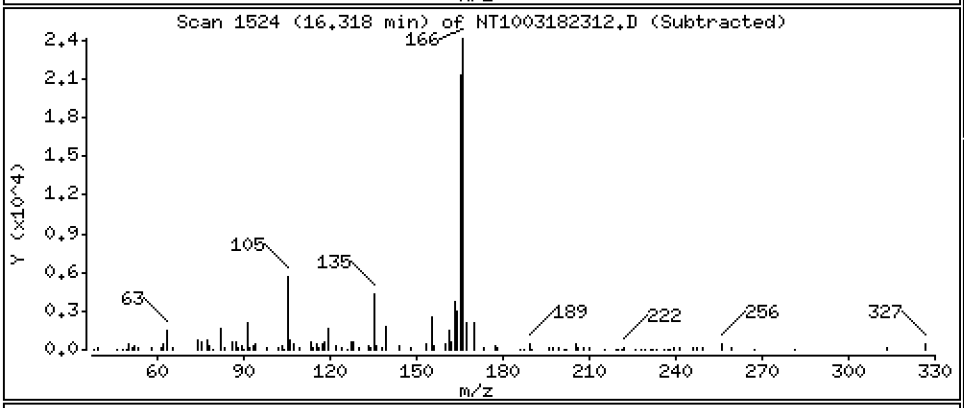
Column diameter: 0.25

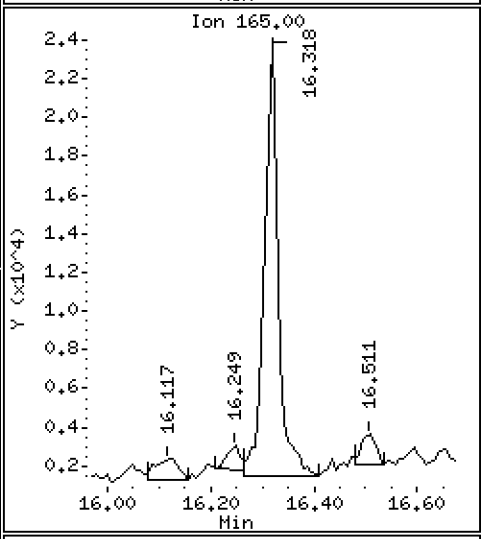
49 Fluorene

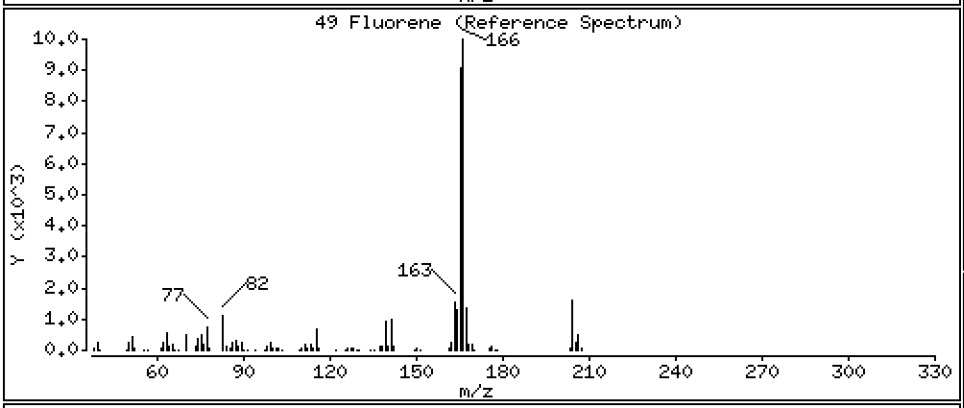
Concentration: 0.1461 ug/mL

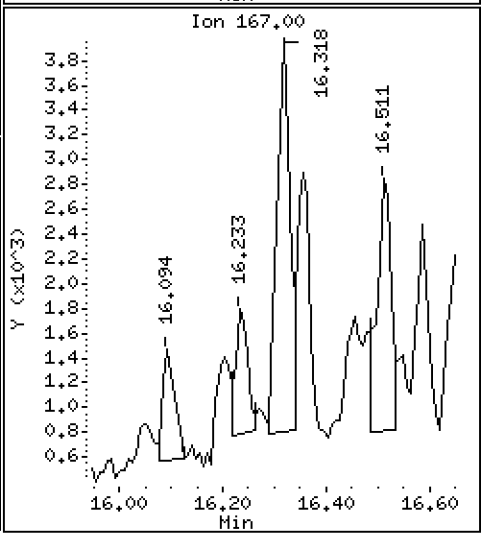


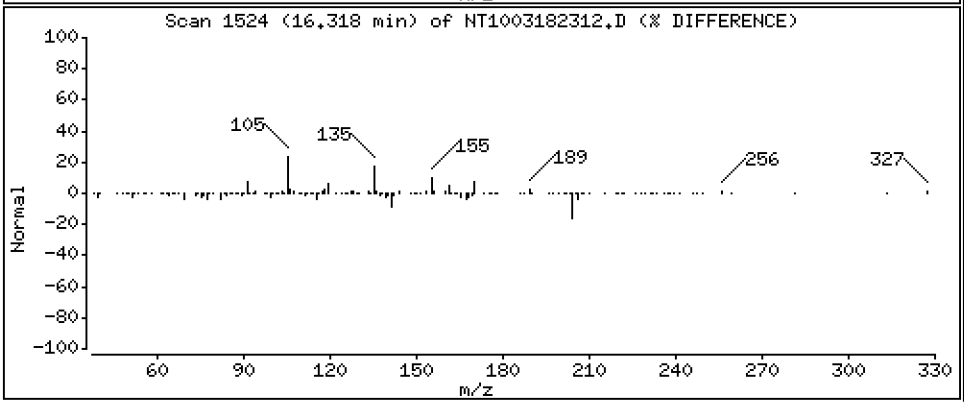












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

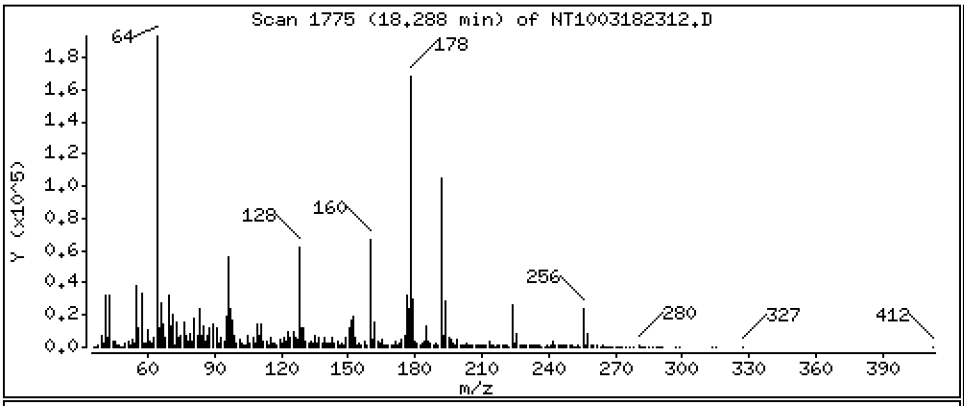
Operator: VTS

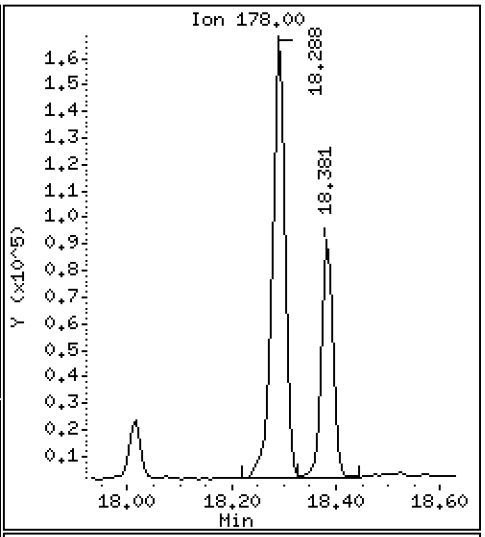
Column phase: ZB-5msi

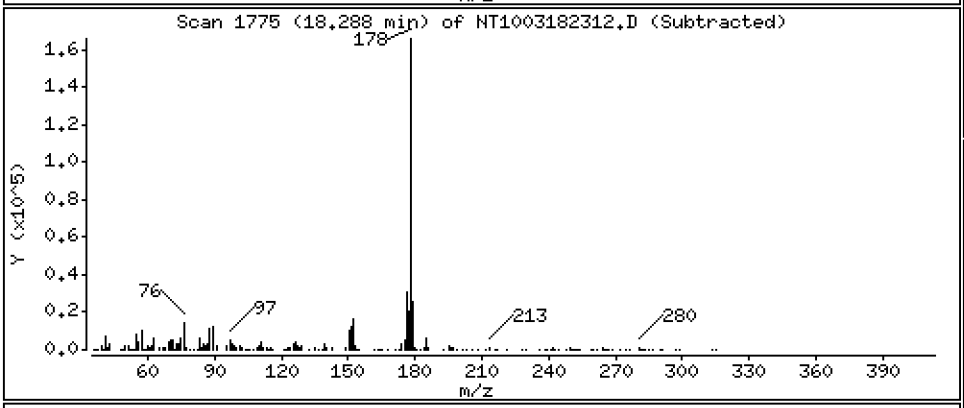
Column diameter: 0.25

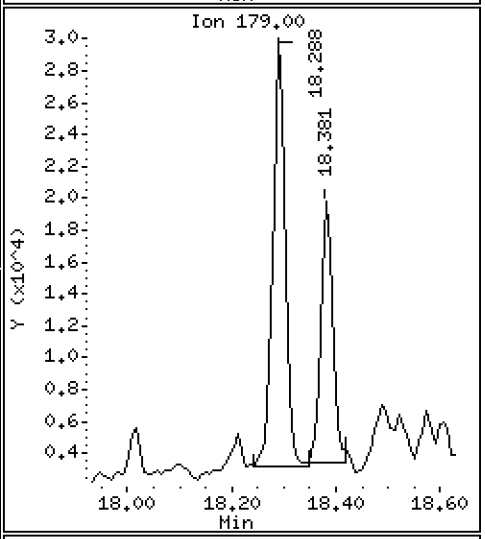
60 Phenanthrene

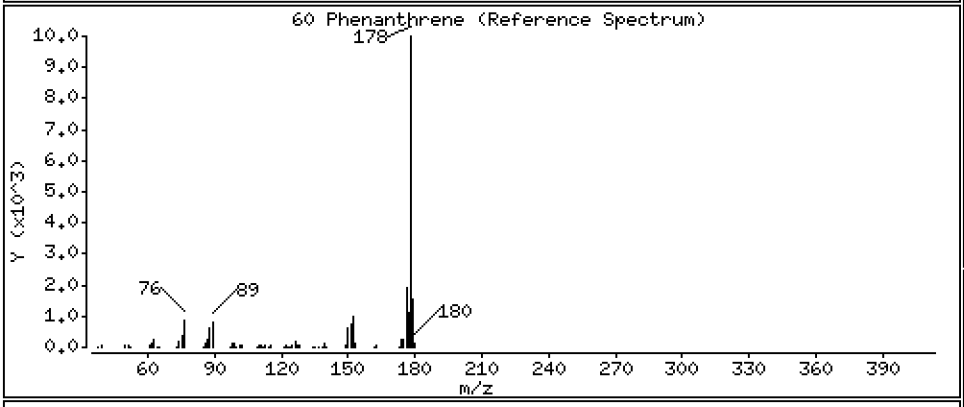
Concentration: 0.9911 ug/mL

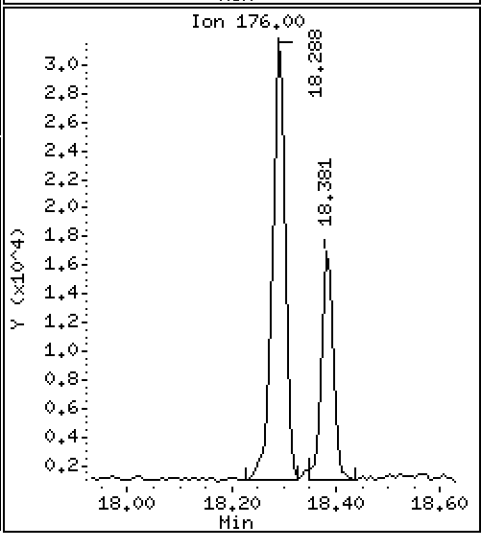


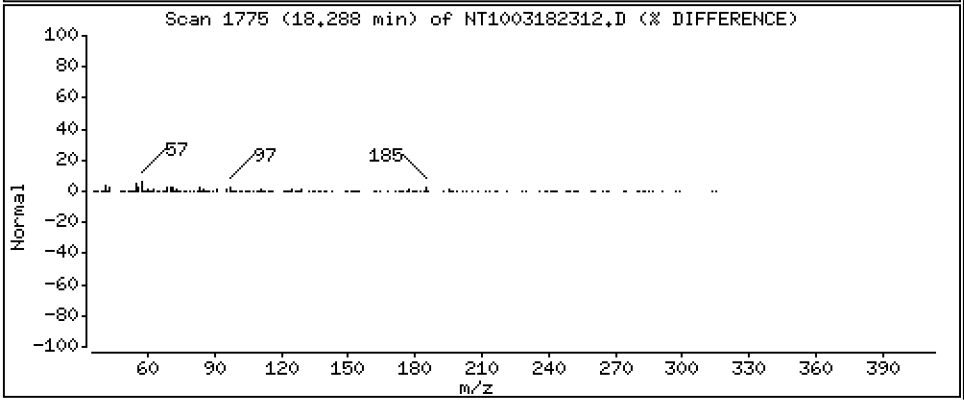












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

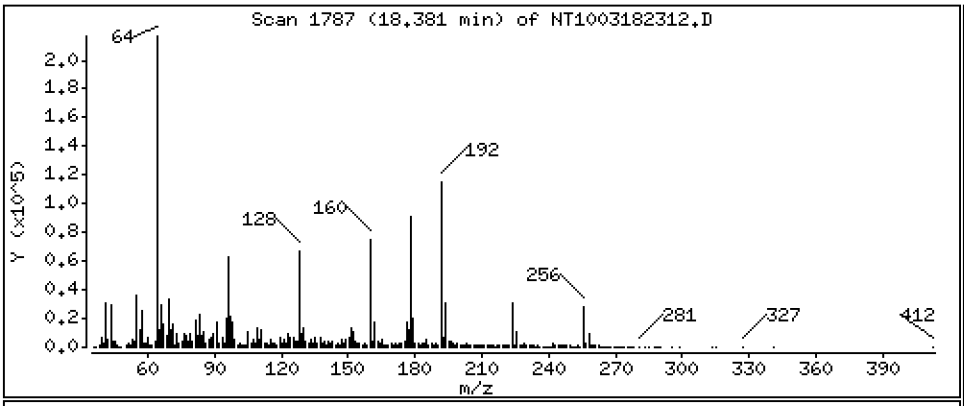
Operator: VTS

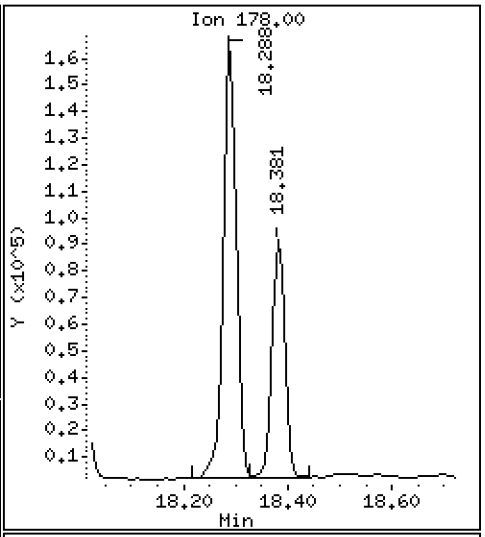
Column phase: ZB-5msi

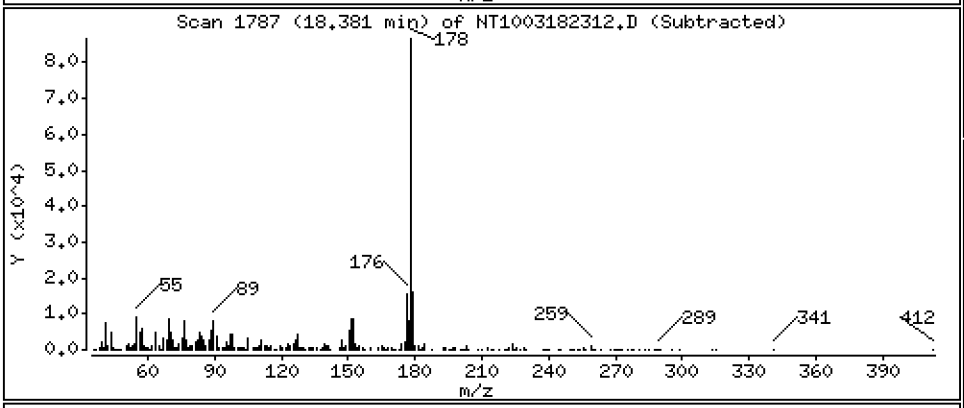
Column diameter: 0.25

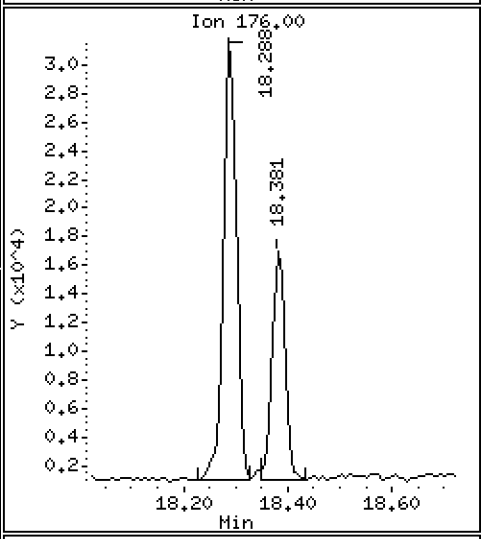
61 Anthracene

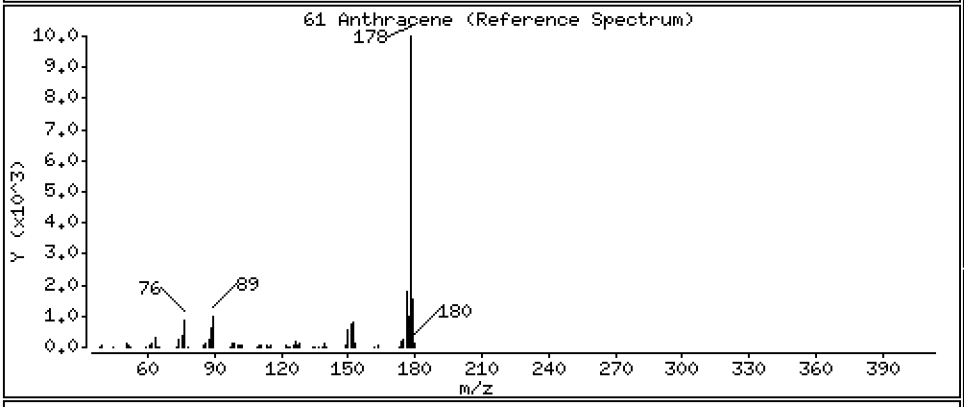
Concentration: 0.5545 ug/mL

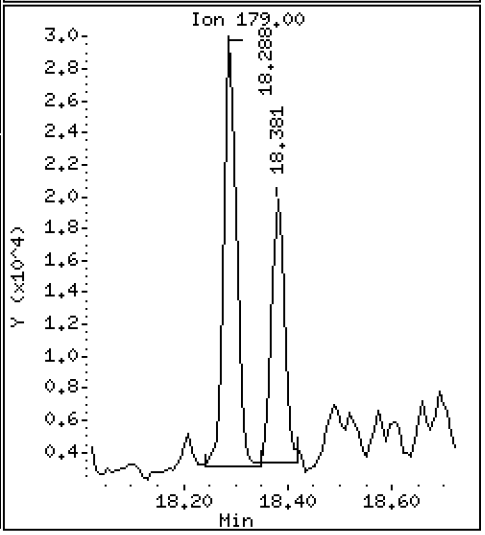


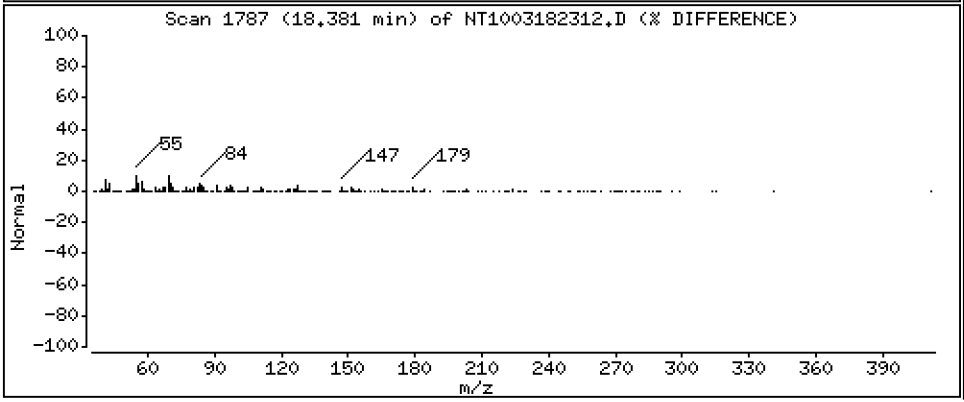












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

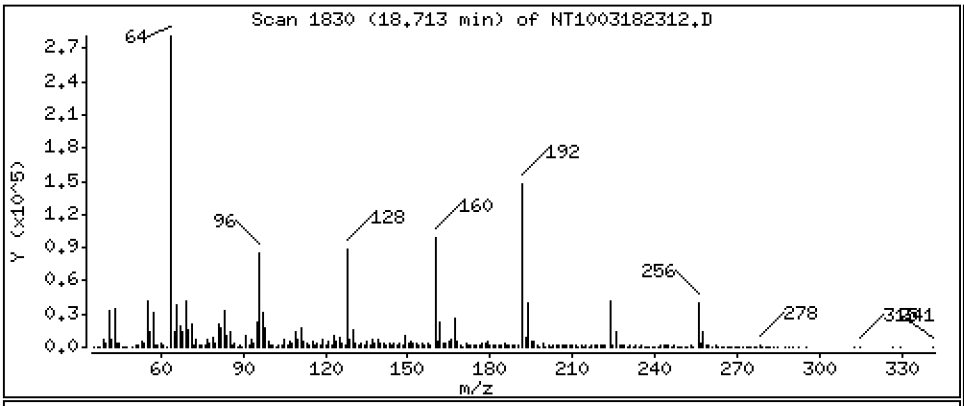
Operator: VTS

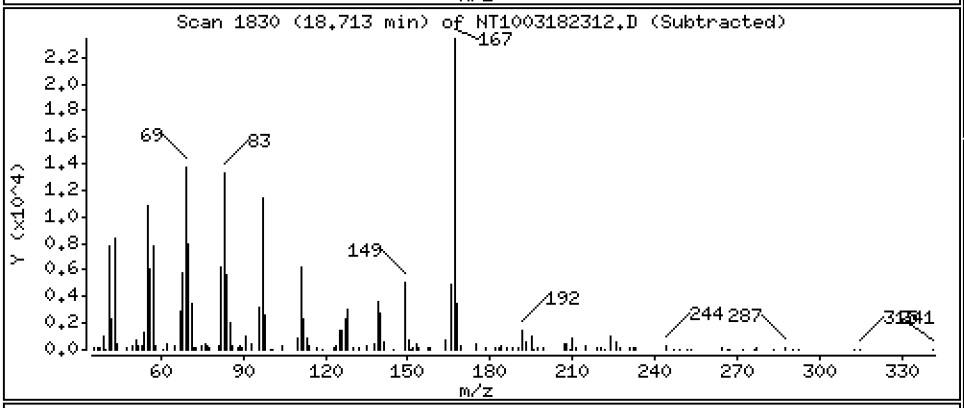
Column phase: ZB-5msi

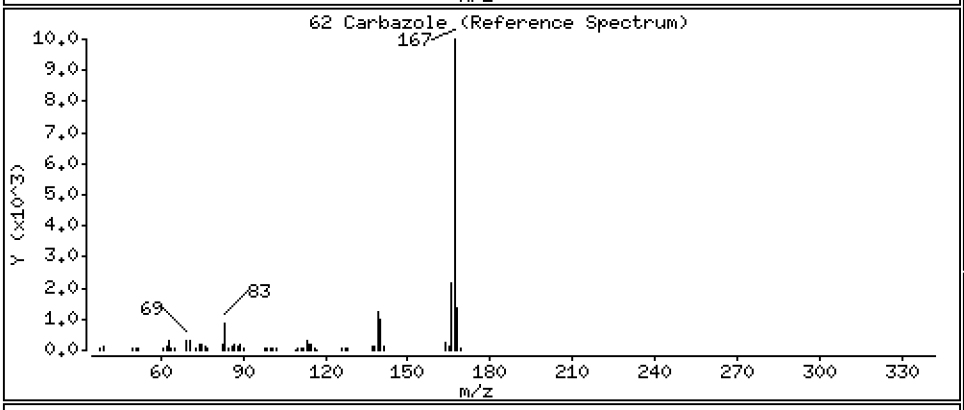
Column diameter: 0.25

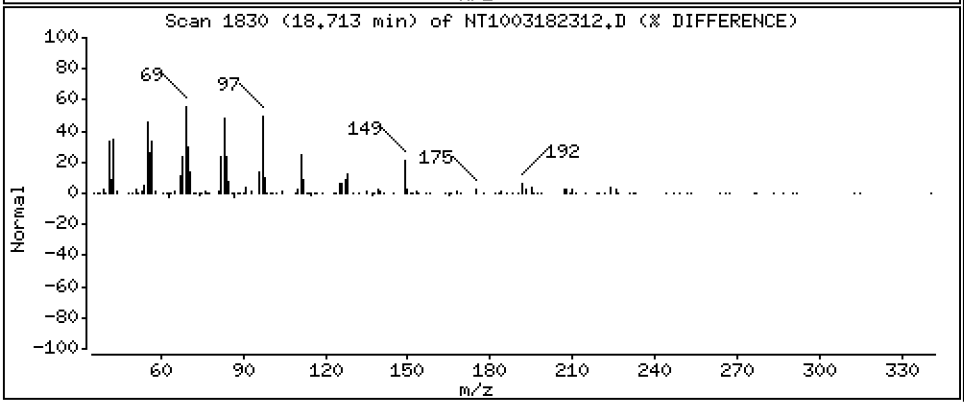
62 Carbazole

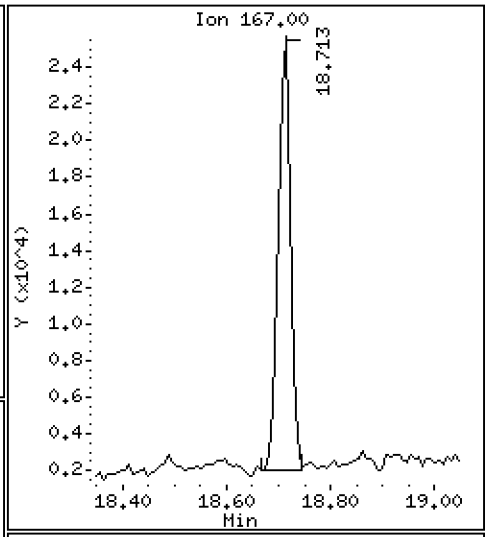
Concentration: 0.1558 ug/mL

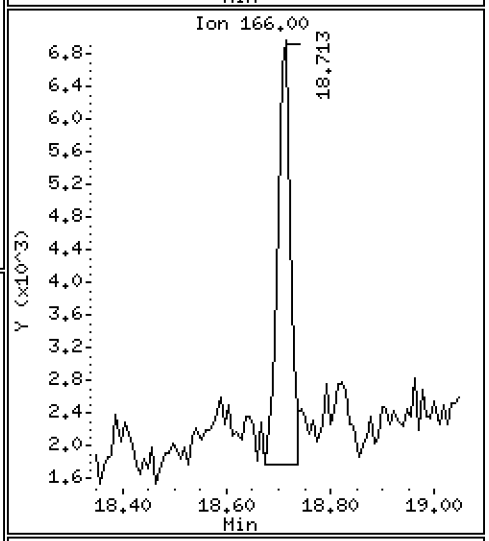


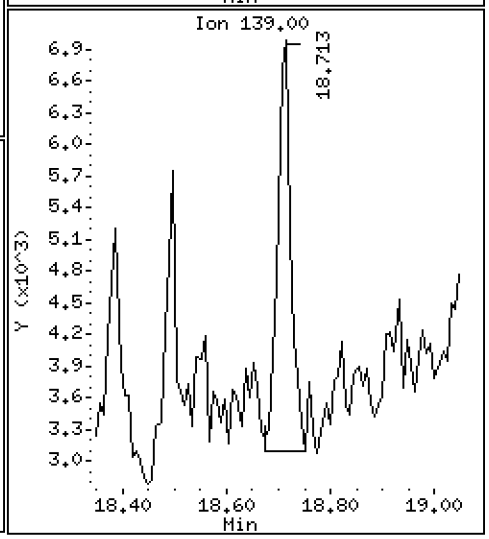












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

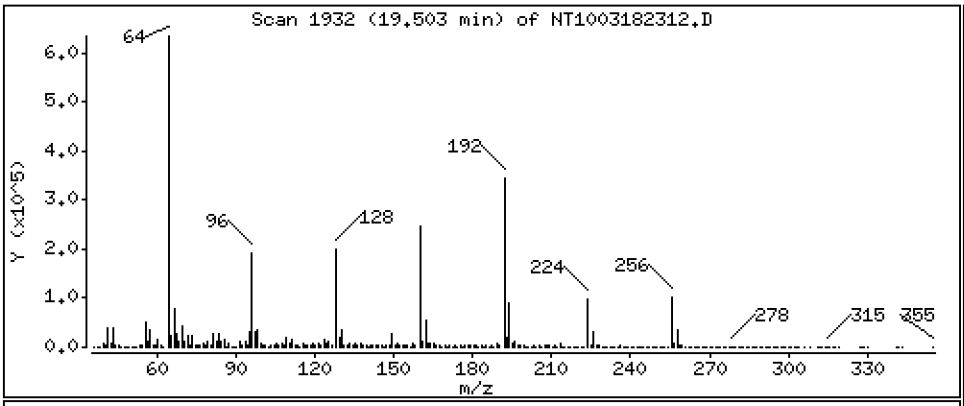
Operator: VTS

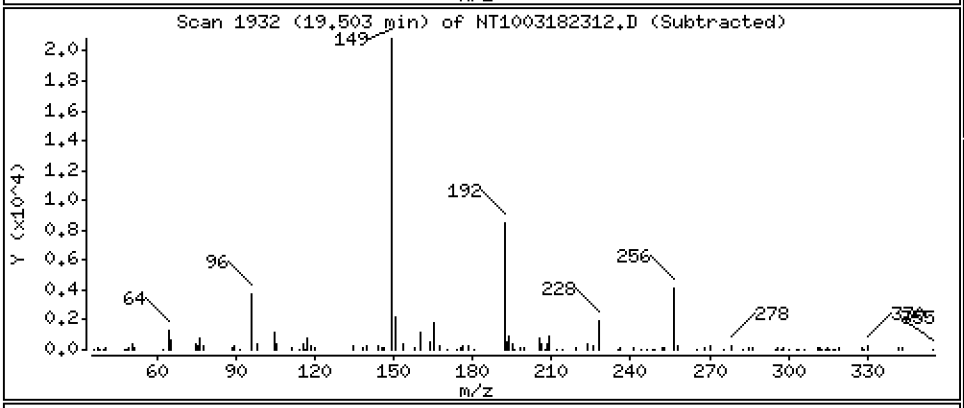
Column phase: ZB-5msi

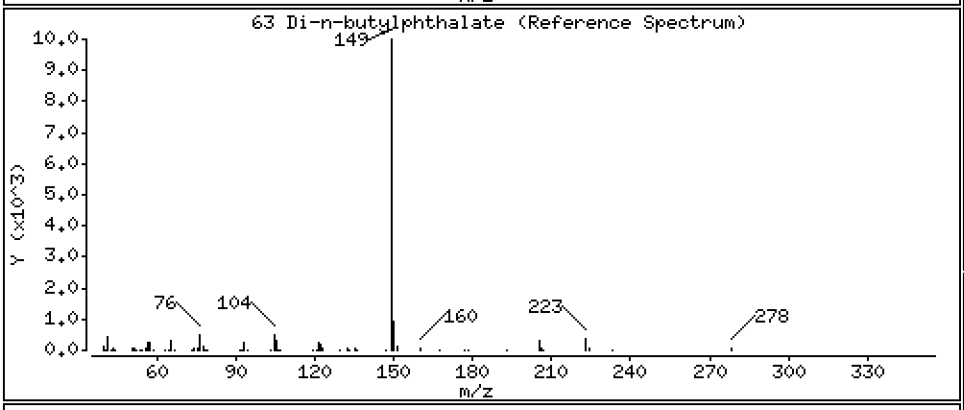
Column diameter: 0.25

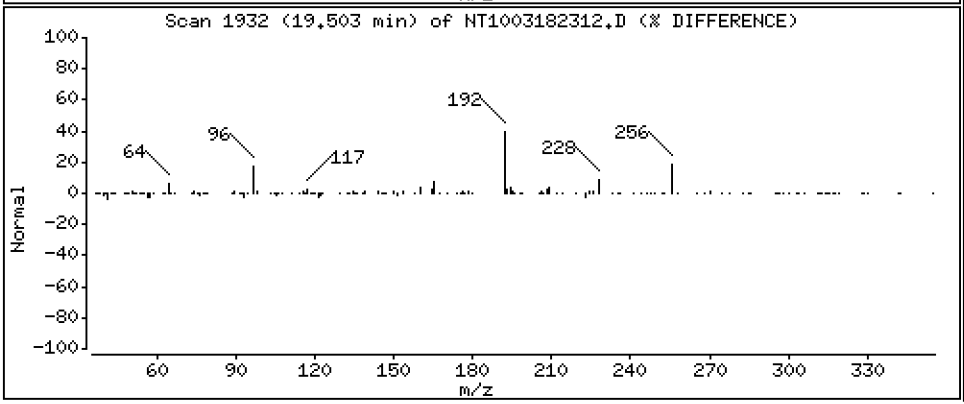
63 Di-n-butylphthalate

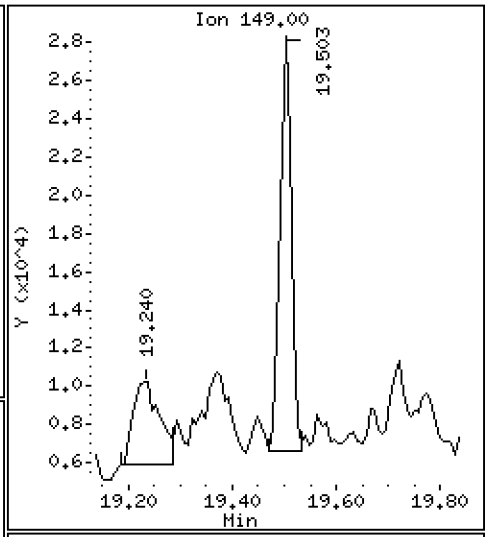
Concentration: 0.09958 ug/mL

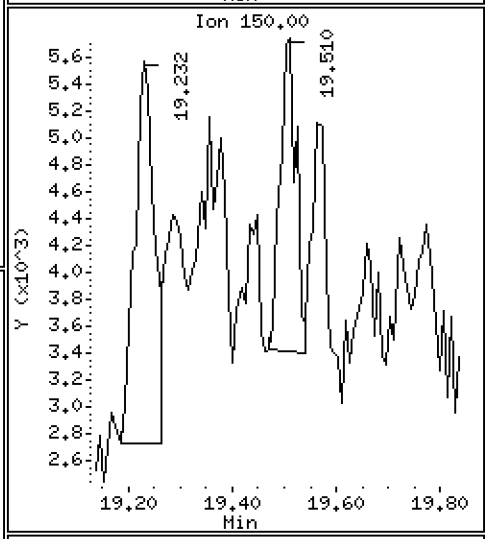


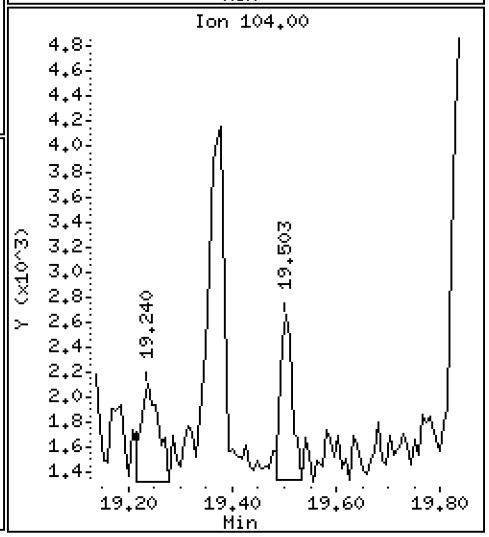












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

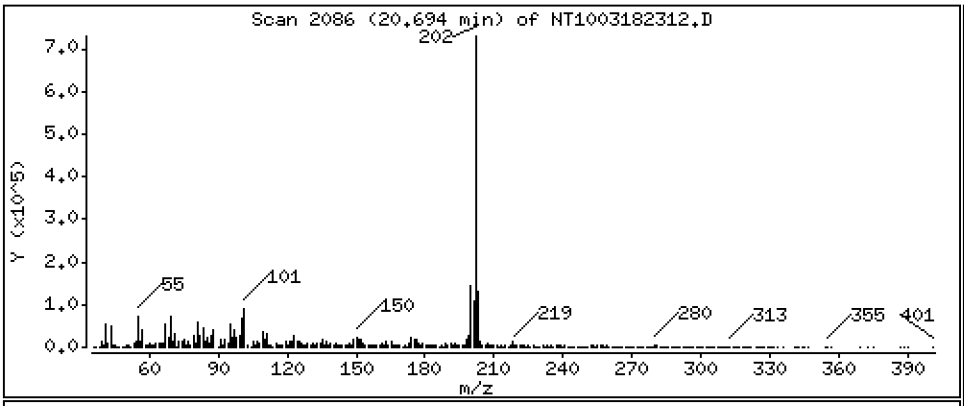
Operator: VTS

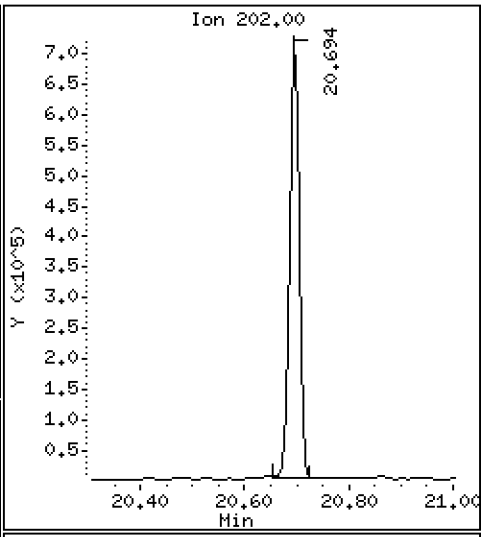
Column phase: ZB-5msi

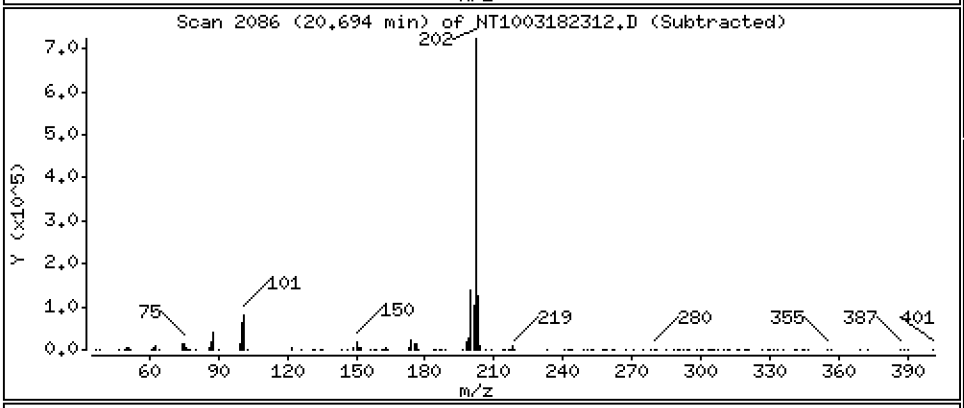
Column diameter: 0.25

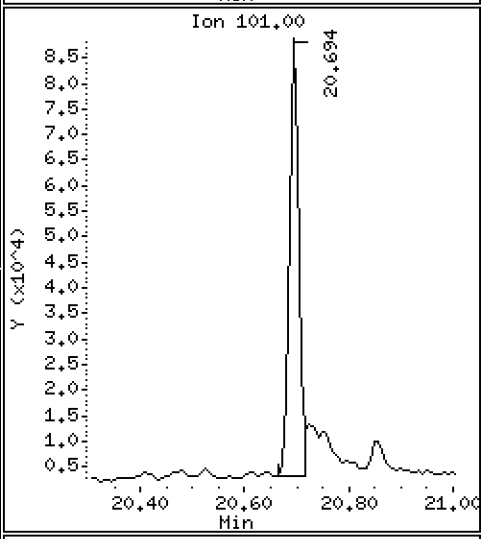
64 Fluoranthene

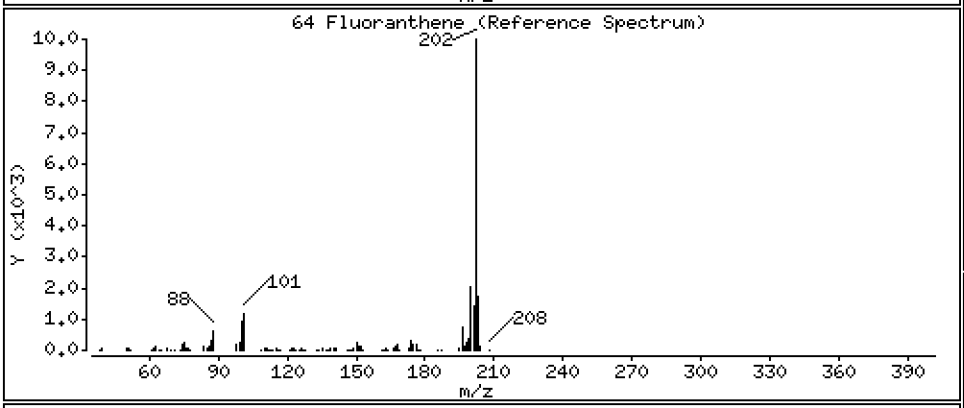
Concentration: 2.774 ug/mL

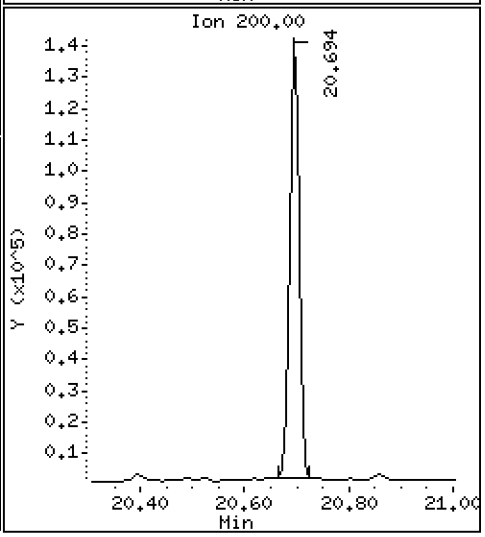


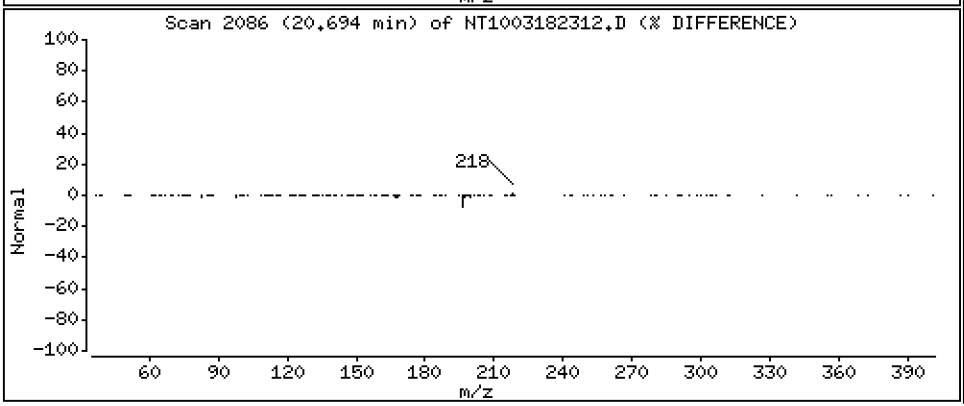












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

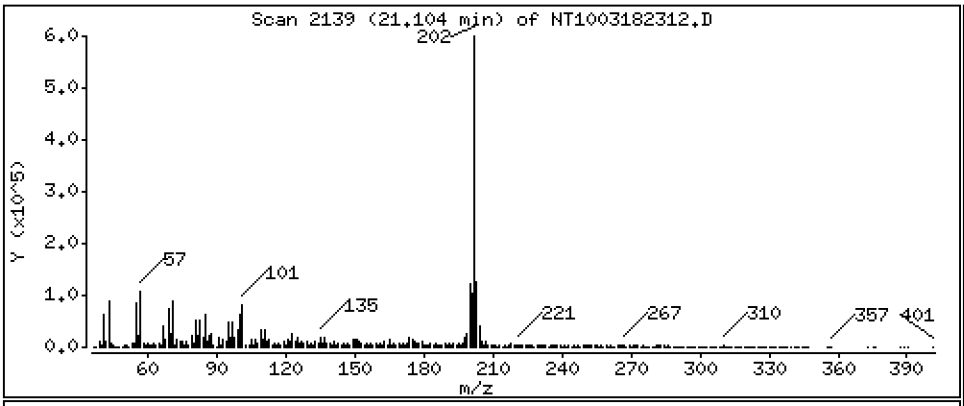
Operator: VTS

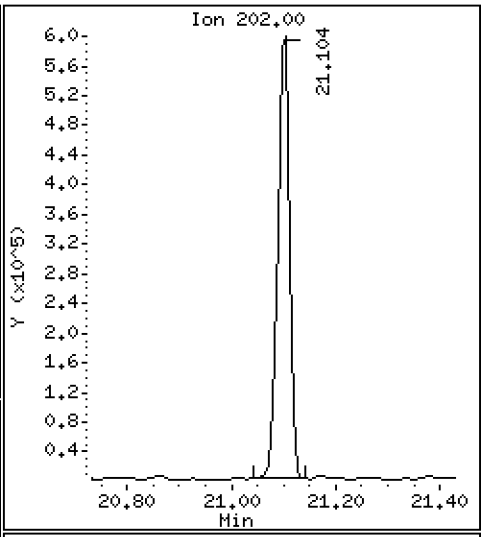
Column phase: ZB-5msi

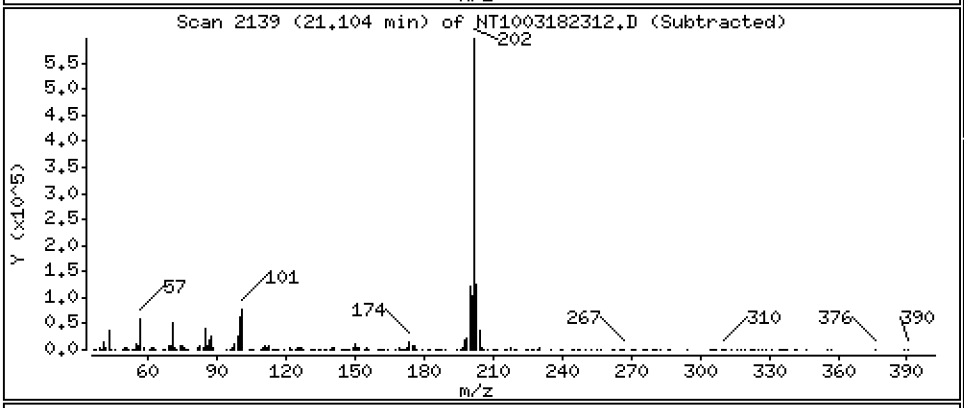
Column diameter: 0.25

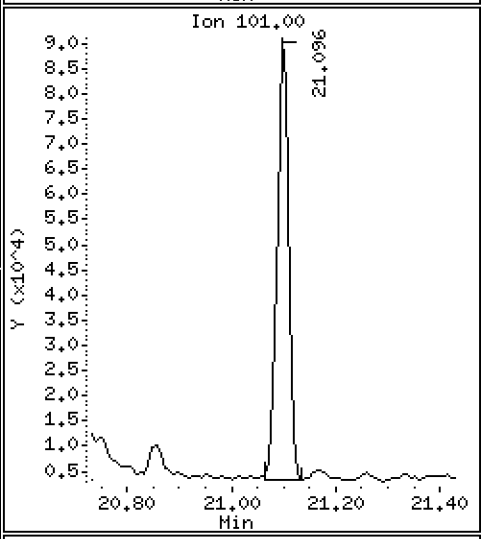
65 Pyrene

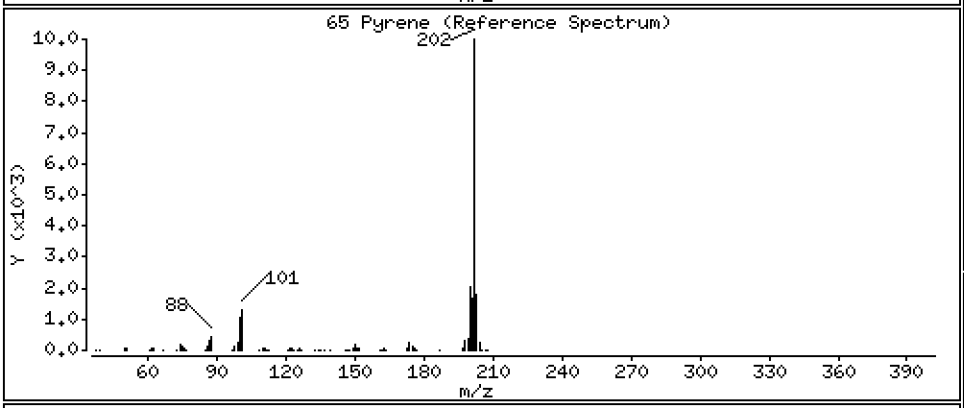
Concentration: 2.674 ug/mL

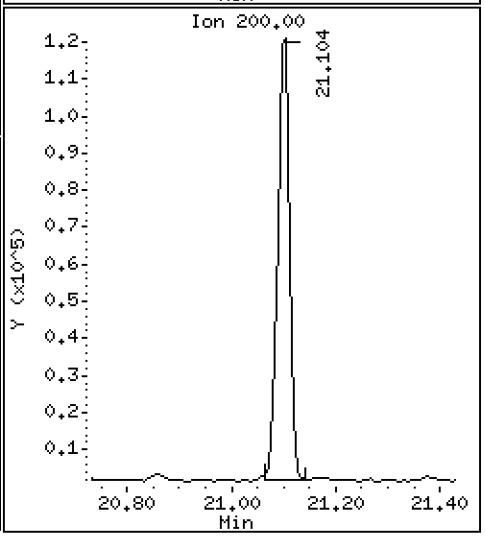


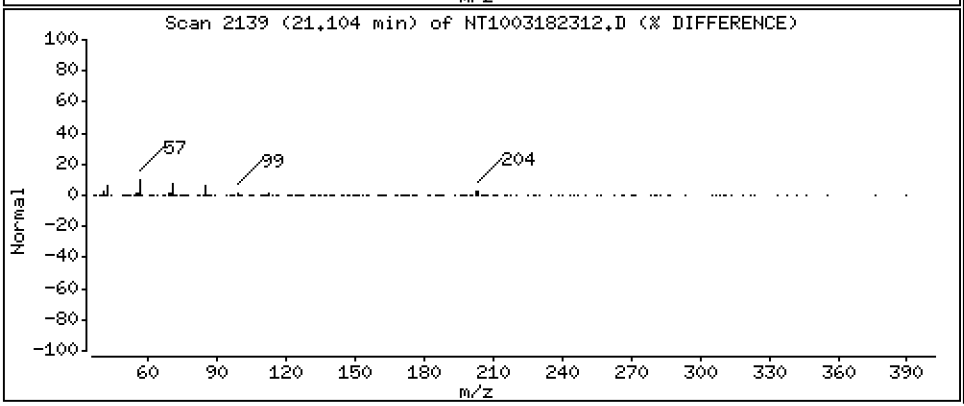












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

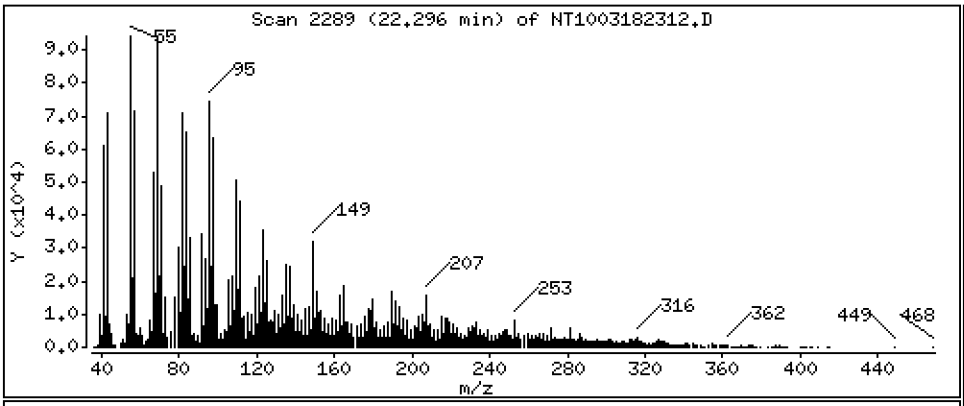
Operator: VTS

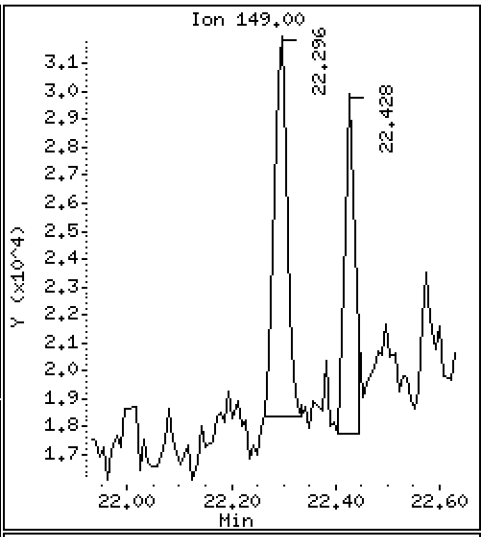
Column phase: ZB-5msi

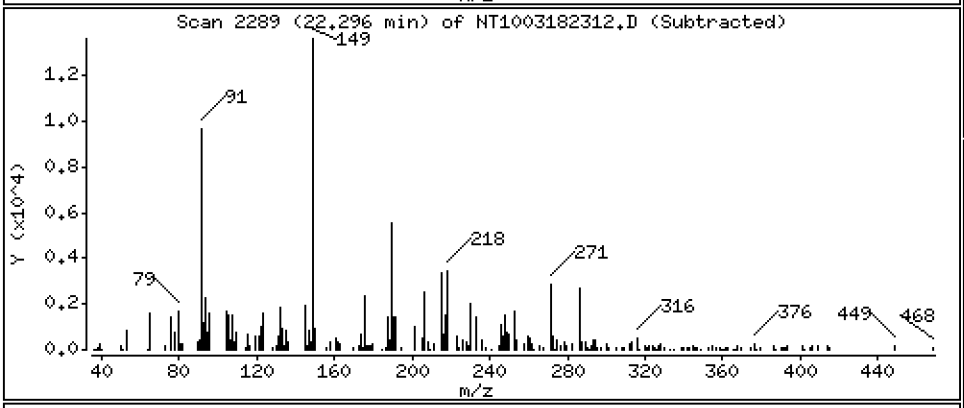
Column diameter: 0.25

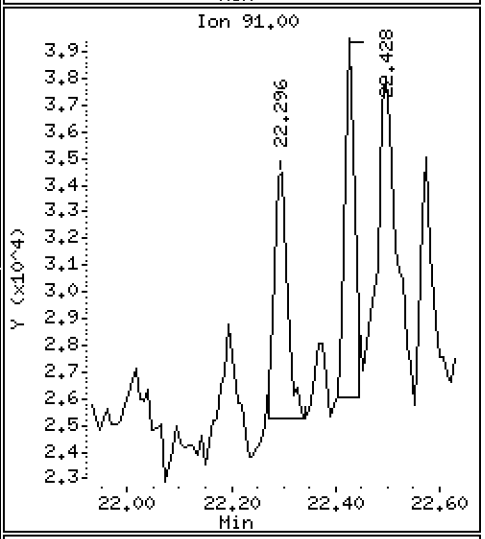
67 Butylbenzylphthalate

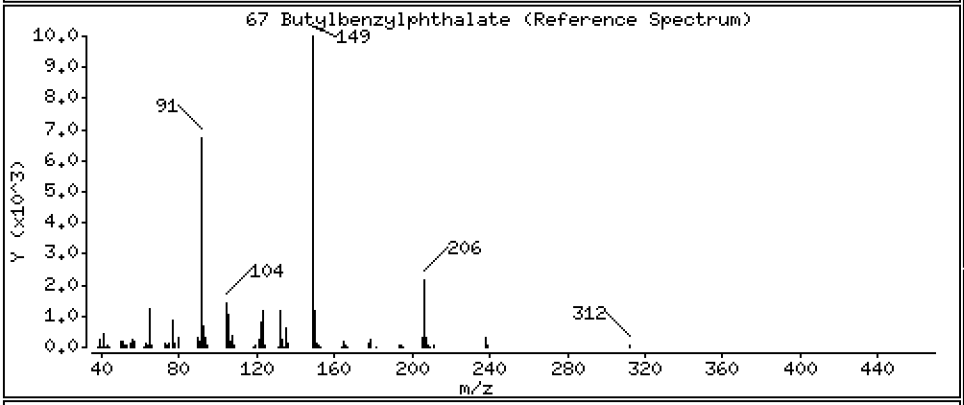
Concentration: 0.1821 ug/mL

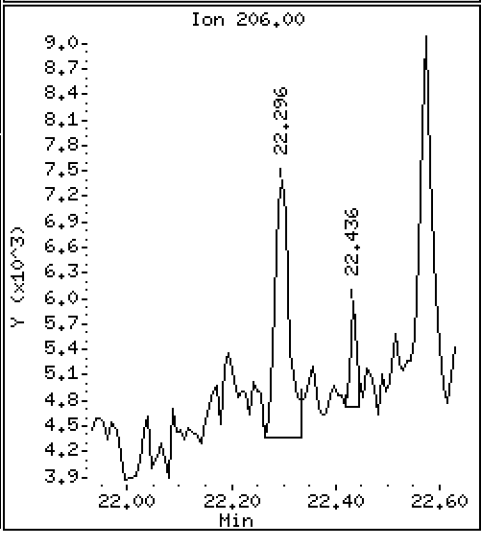


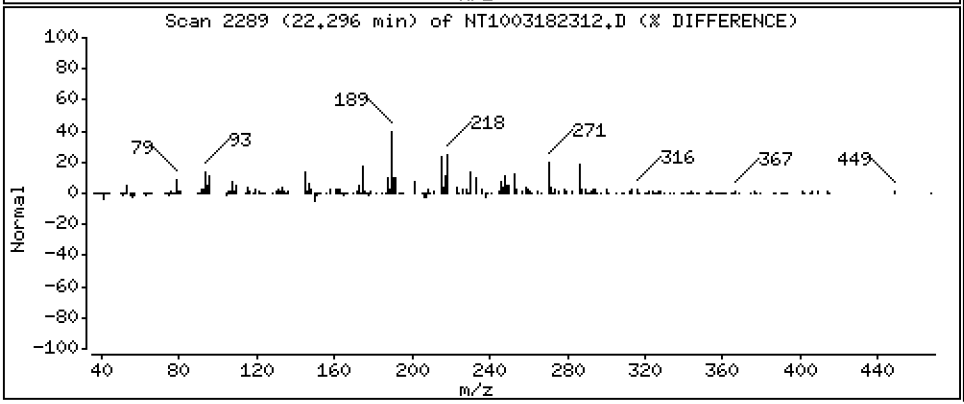












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

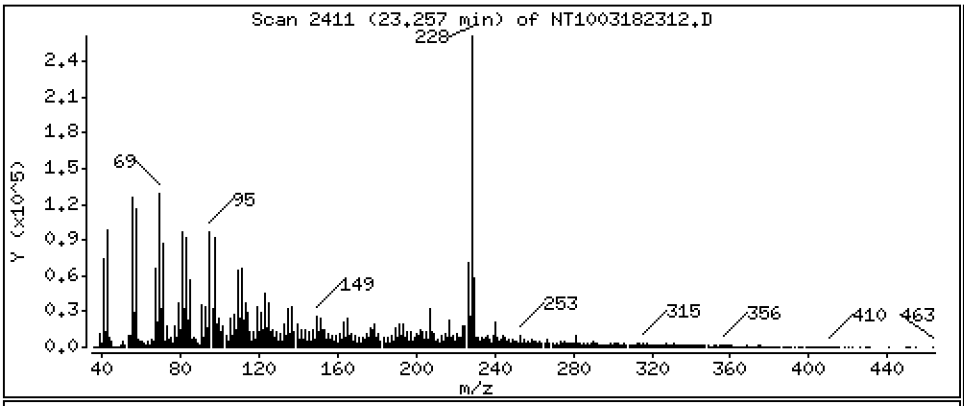
Operator: VTS

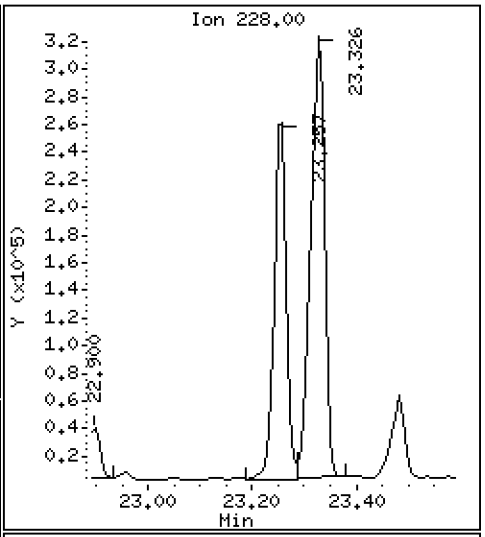
Column phase: ZB-5msi

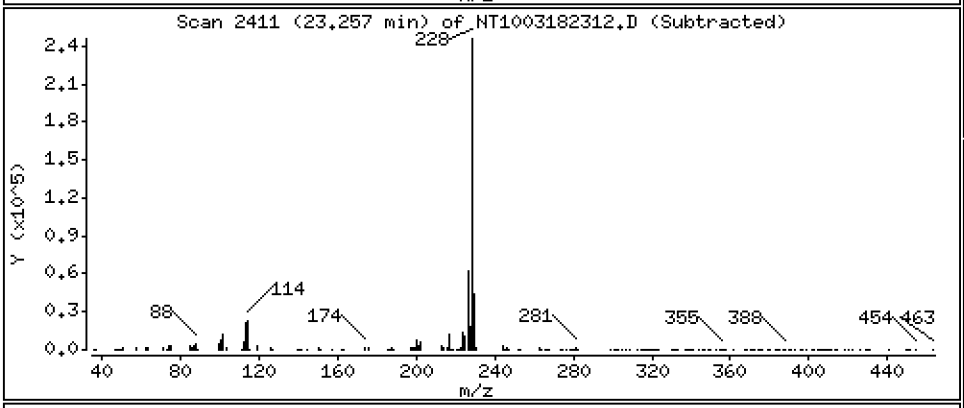
Column diameter: 0.25

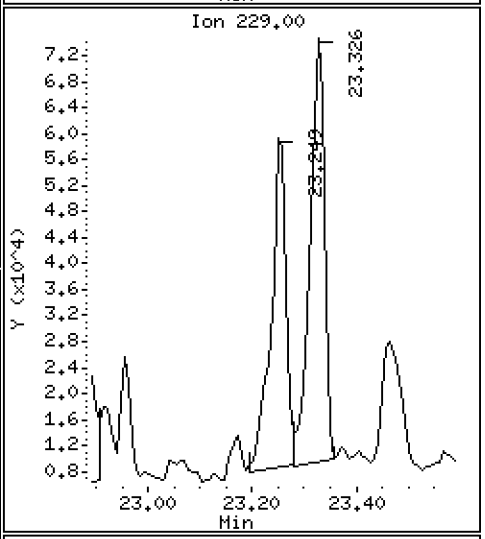
68 Benzo(a)anthracene

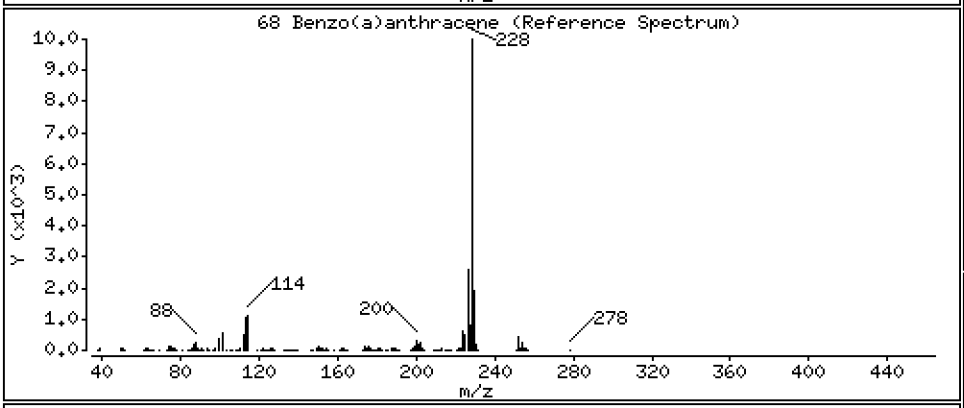
Concentration: 1.399 ug/mL

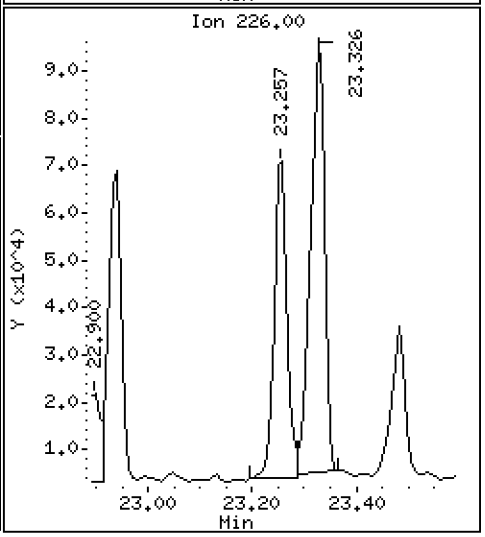


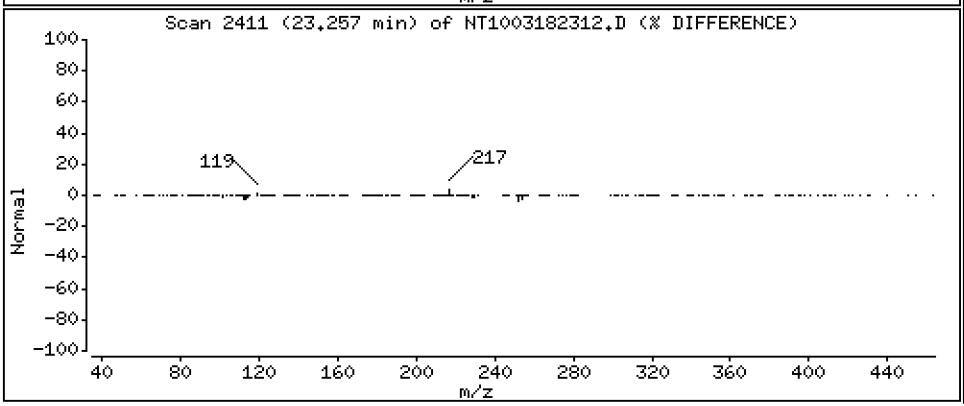












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

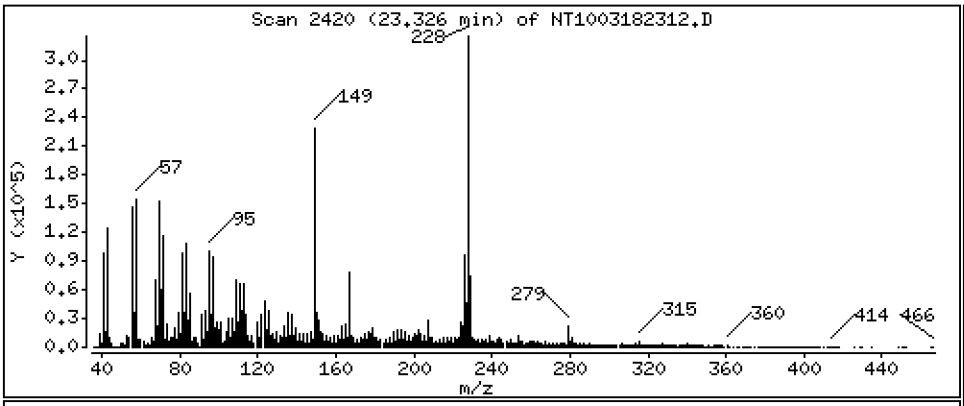
Operator: VTS

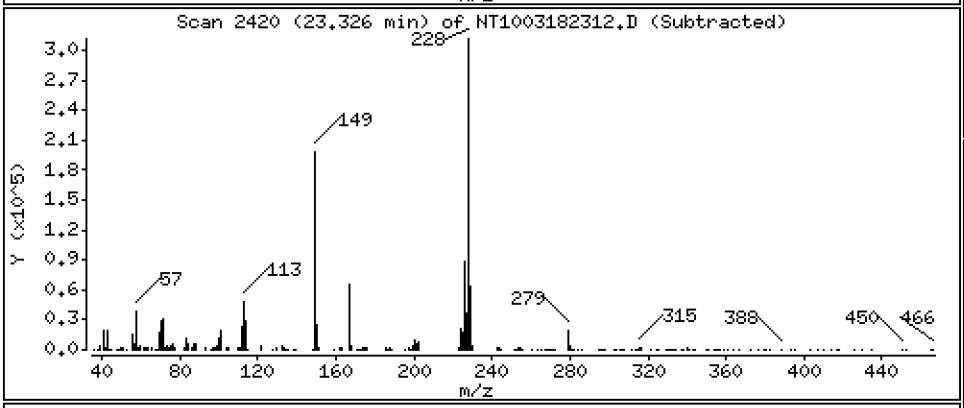
Column phase: ZB-5msi

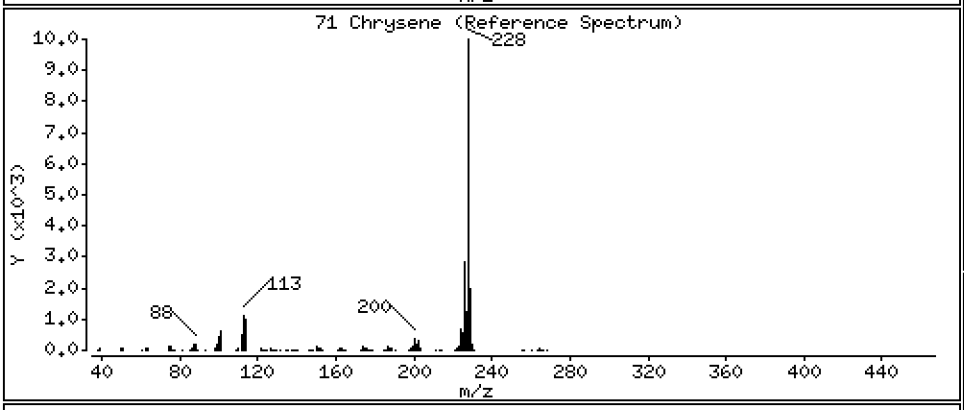
Column diameter: 0.25

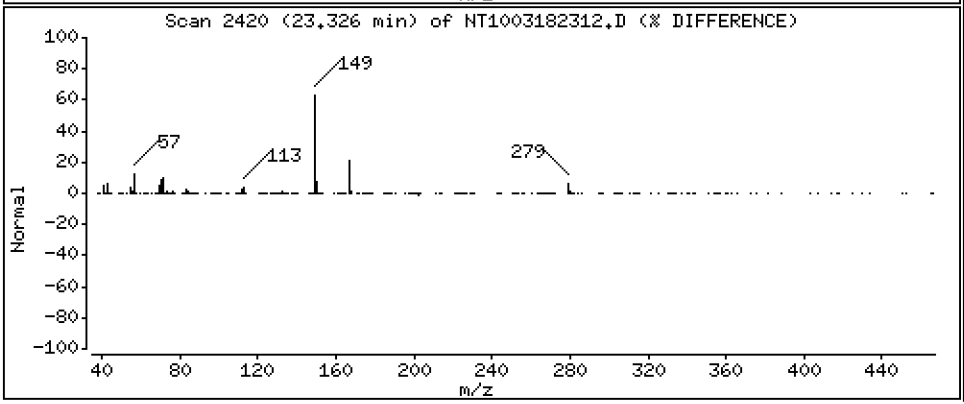
71 Chrysene

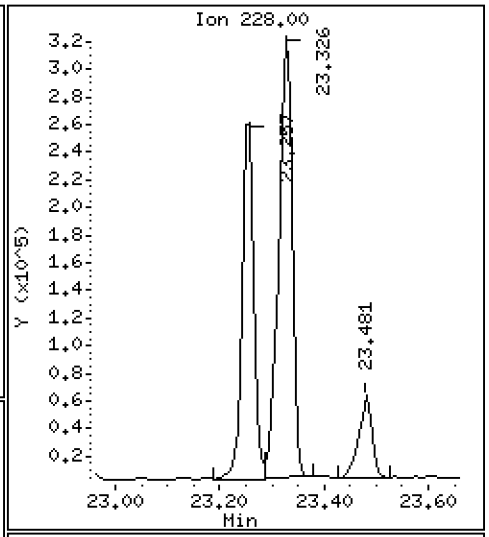
Concentration: 1.975 ug/mL

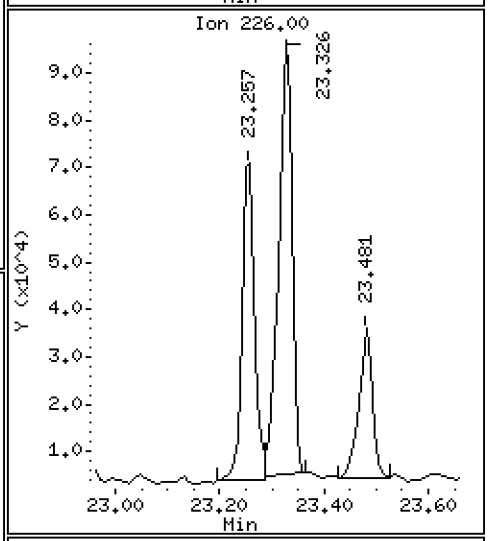


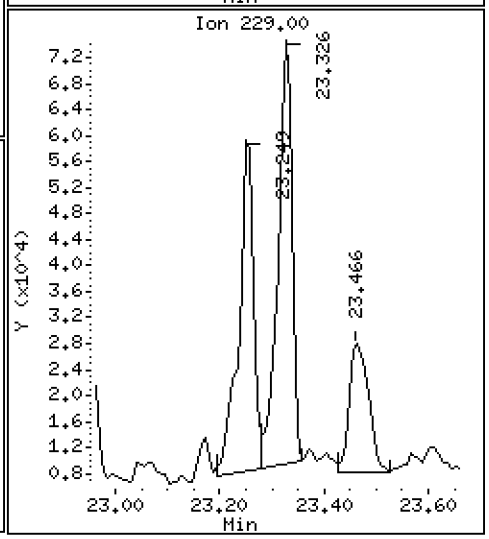












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

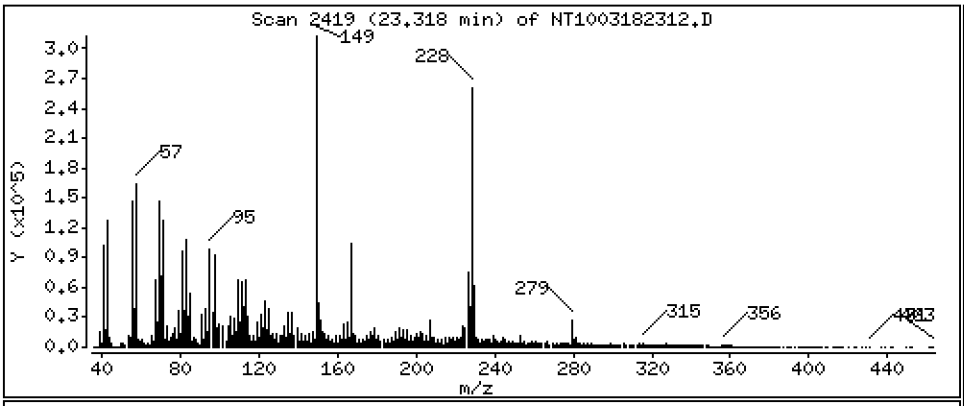
Operator: VTS

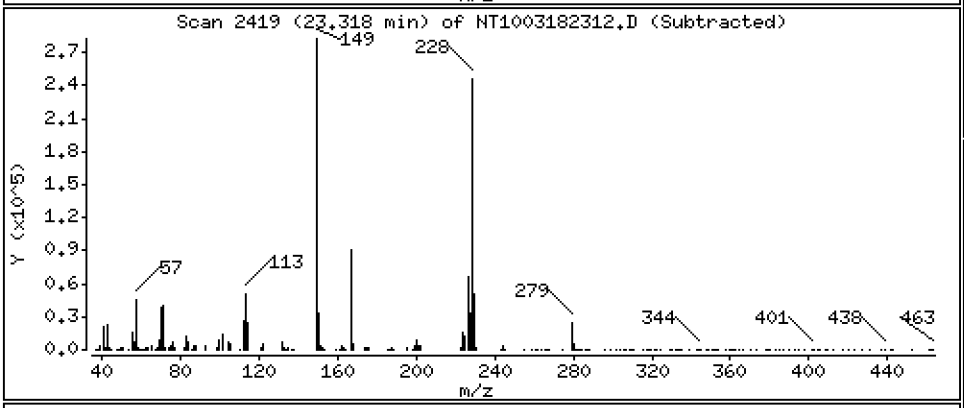
Column phase: ZB-5msi

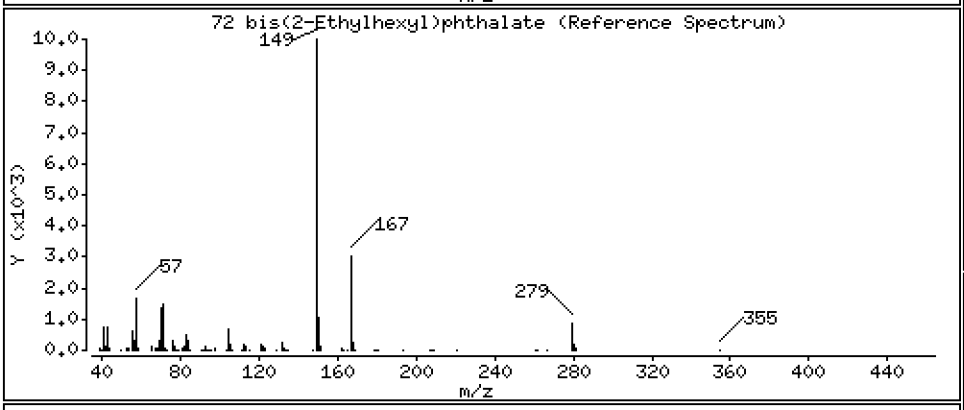
Column diameter: 0.25

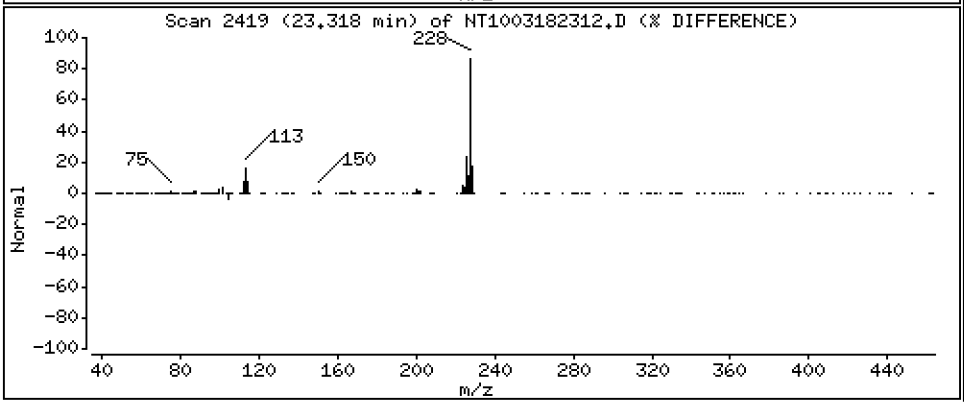
72 bis(2-Ethylhexyl)phthalate

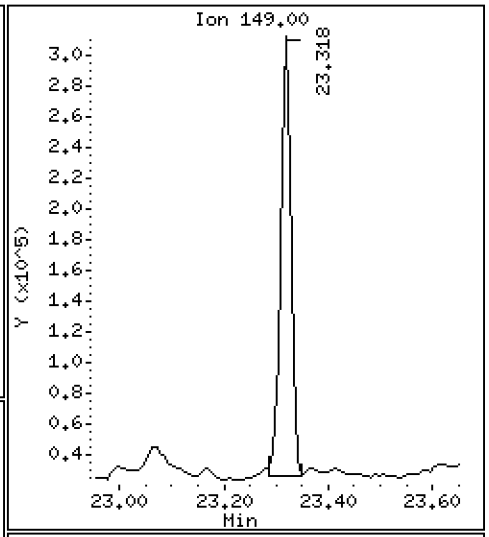
Concentration: 1.835 ug/mL

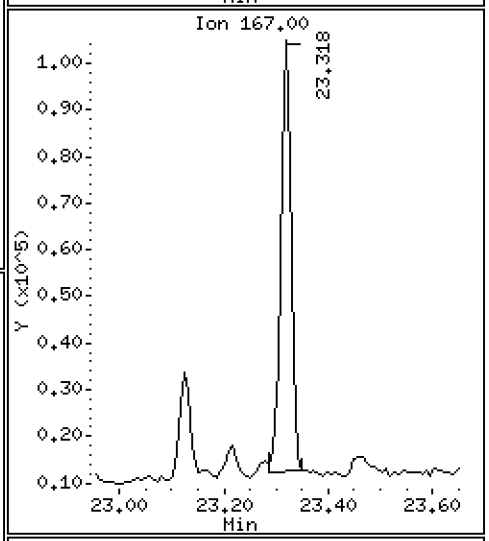


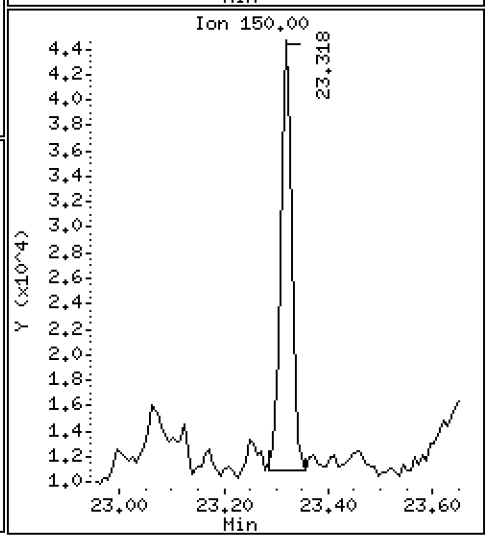












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

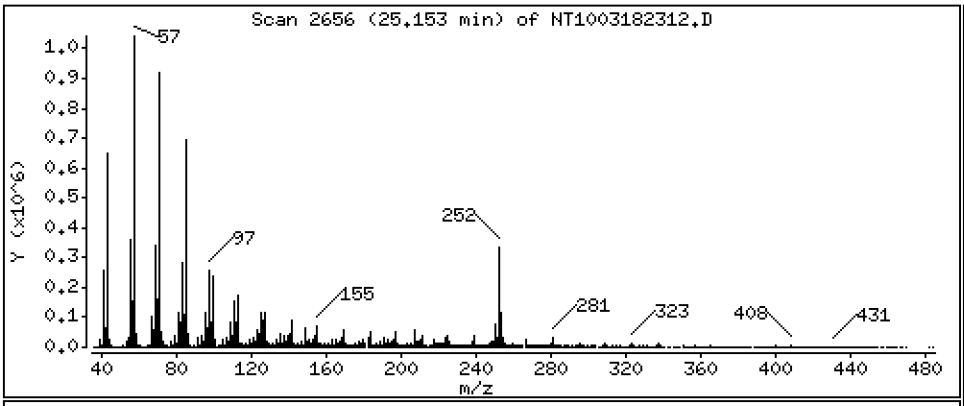
Operator: VTS

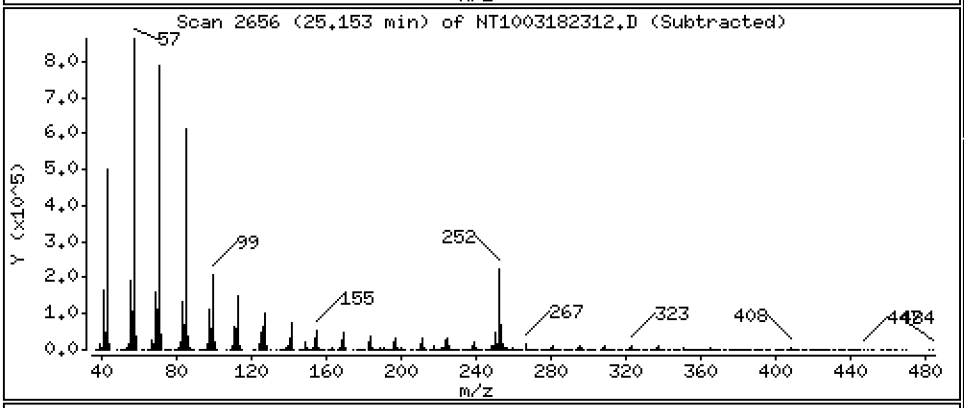
Column phase: ZB-5msi

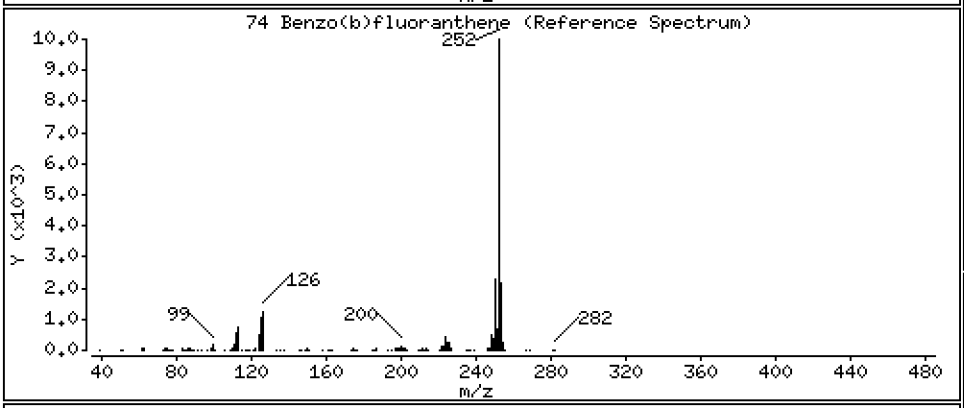
Column diameter: 0.25

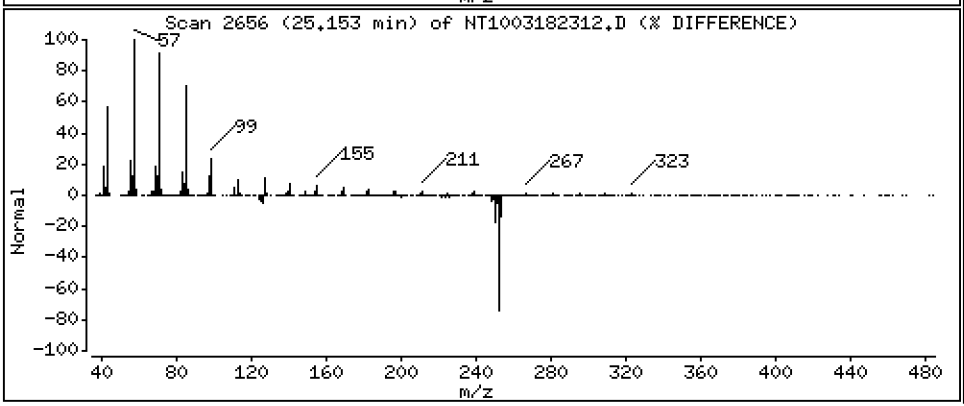
74 Benzo(b)fluoranthene

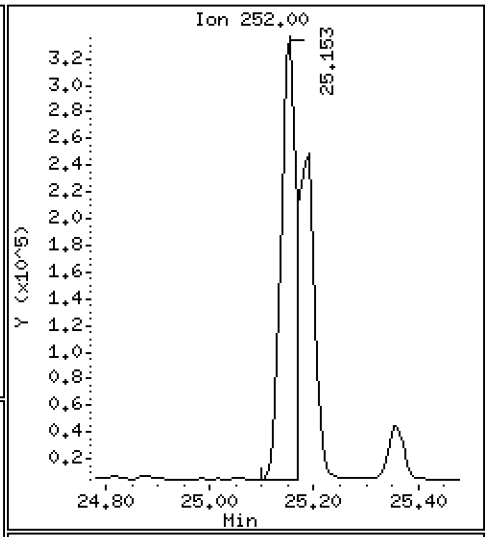
Concentration: 2.241 ug/mL

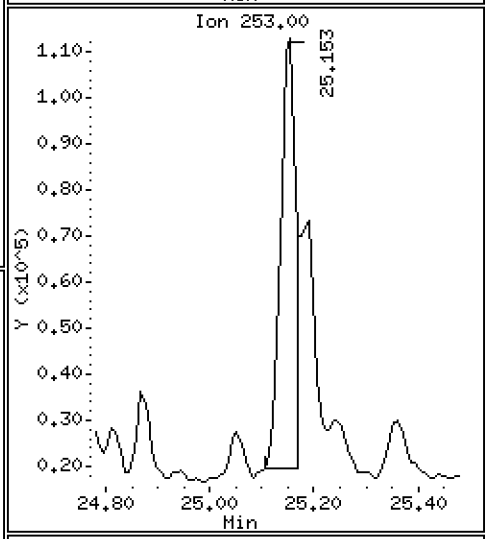


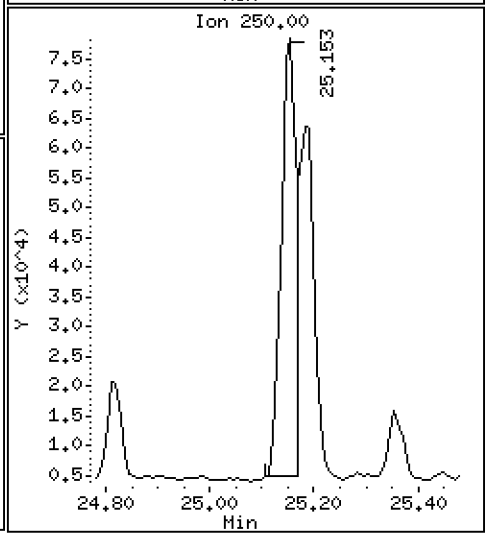












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

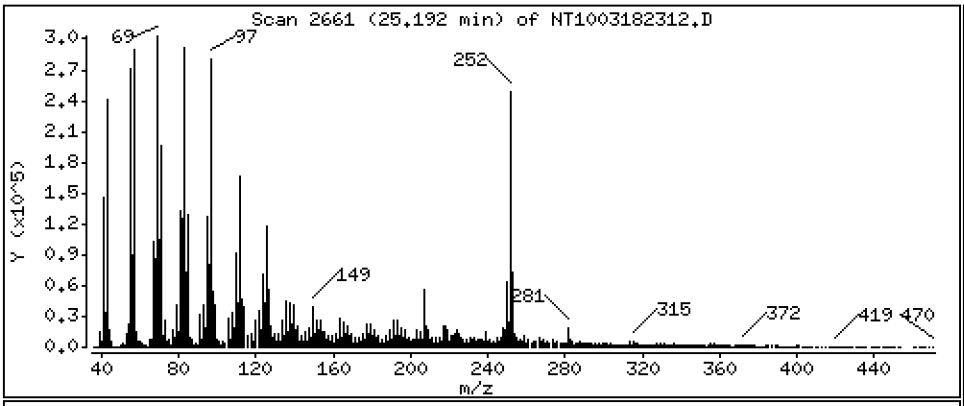
Operator: VTS

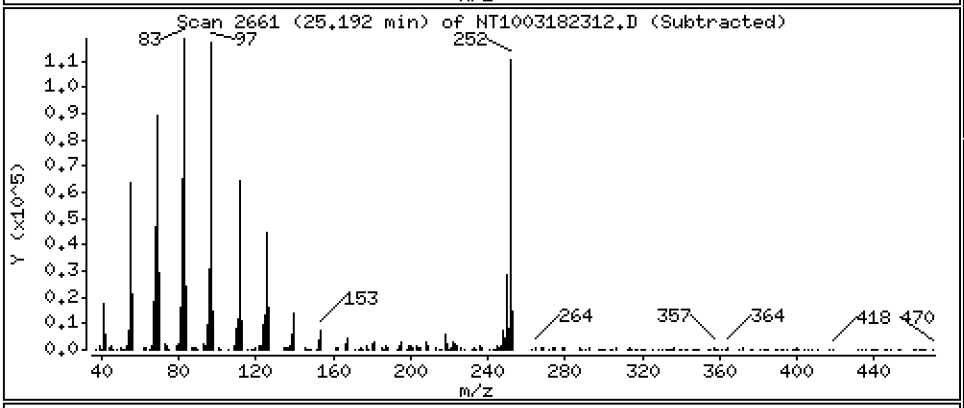
Column phase: ZB-5msi

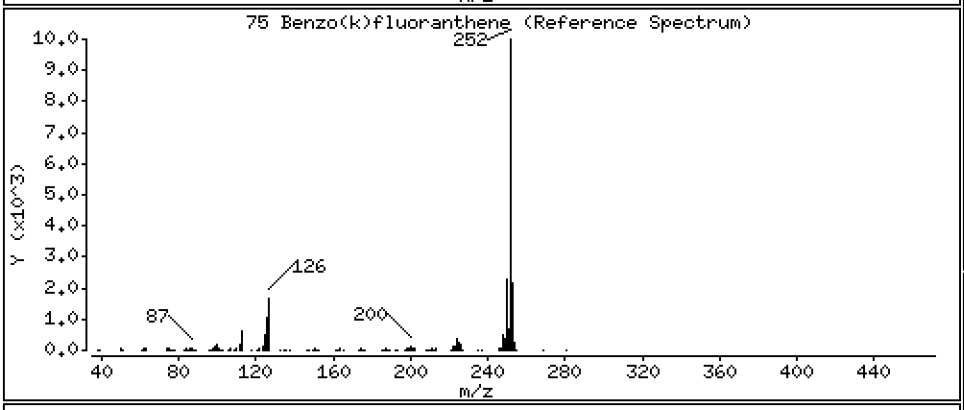
Column diameter: 0.25

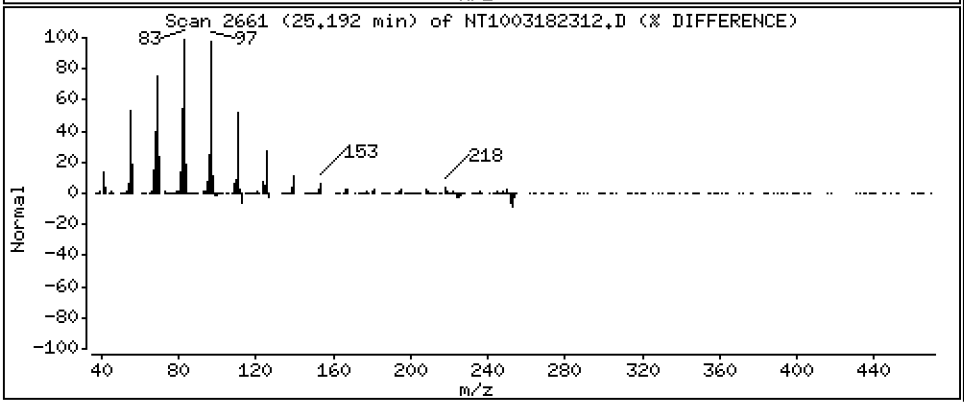
75 Benzo(k)fluoranthene

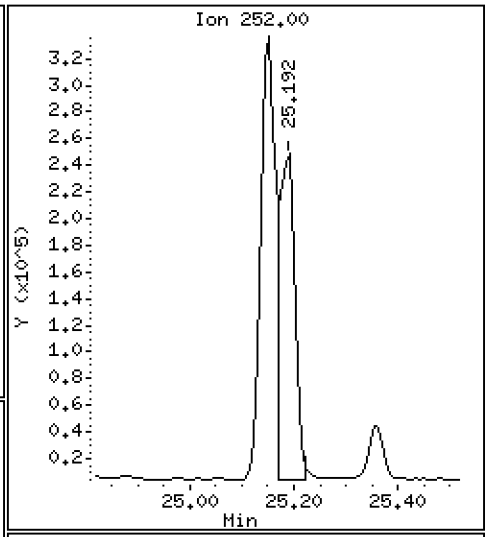
Concentration: 1.822 ug/mL

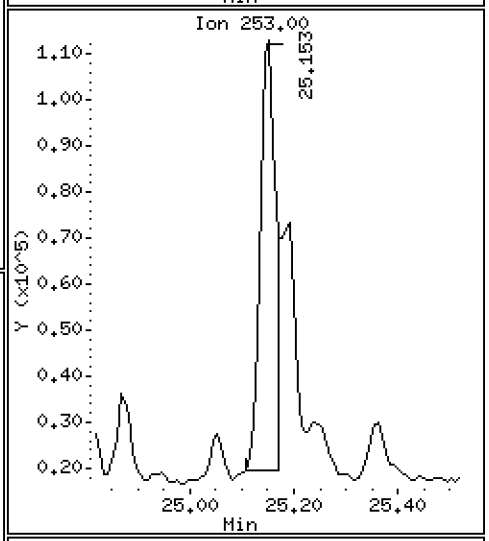


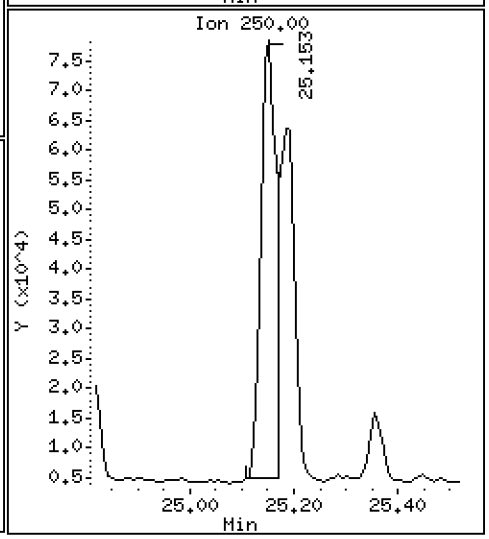












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

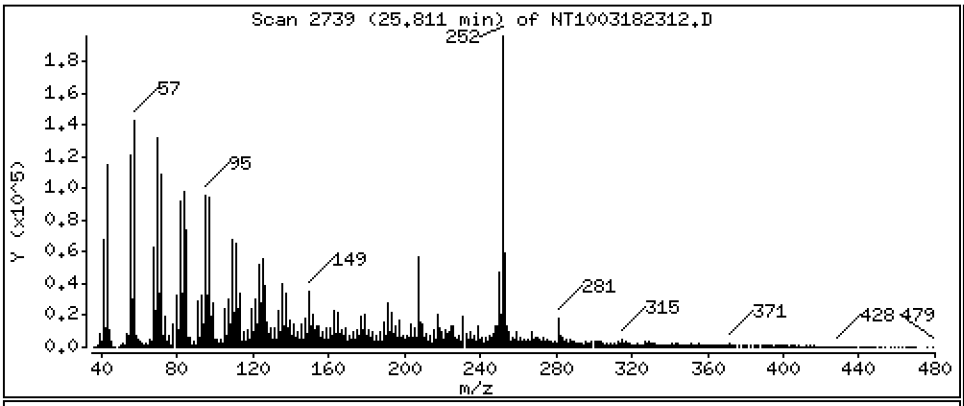
Operator: VTS

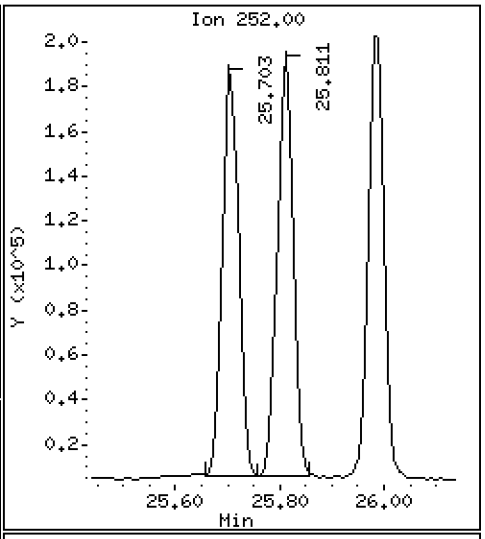
Column phase: ZB-5msi

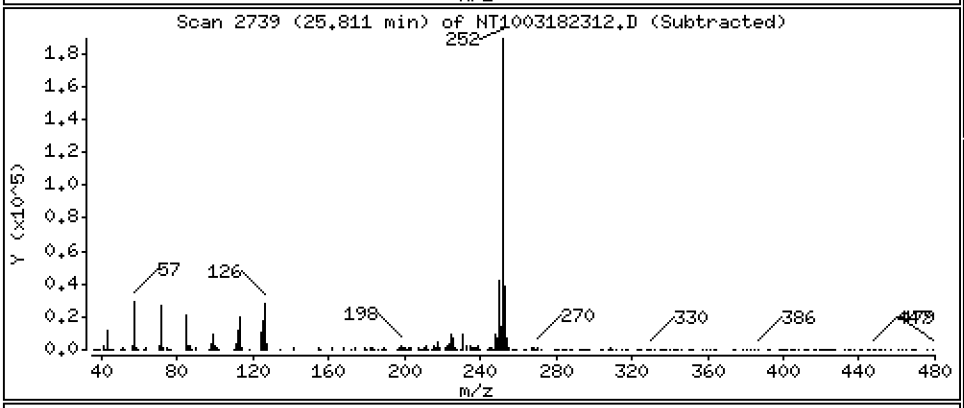
Column diameter: 0.25

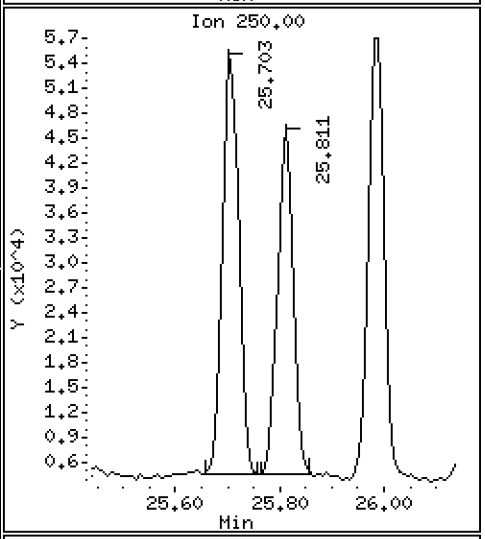
76 Benzo(a)pyrene

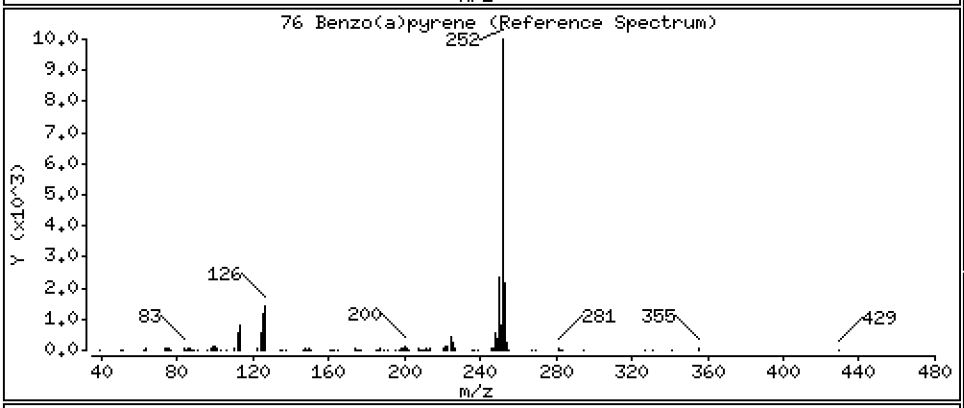
Concentration: 1.507 ug/mL

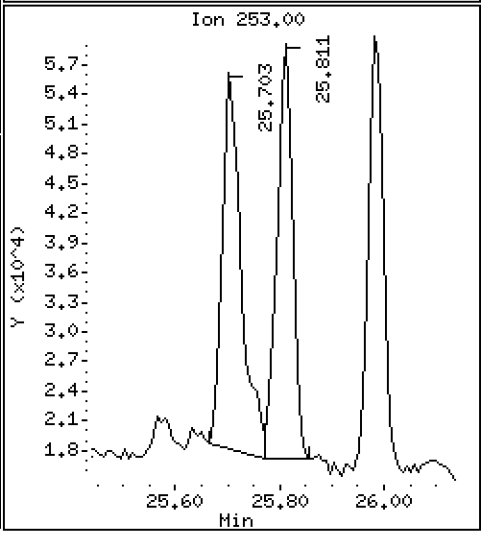


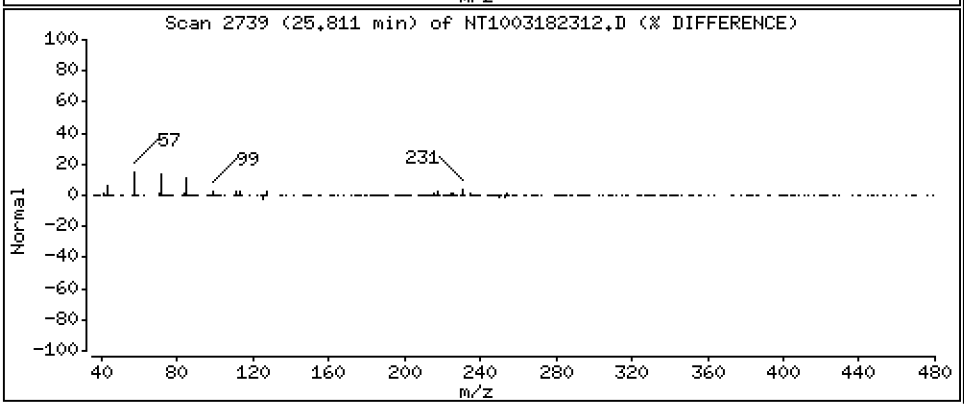












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

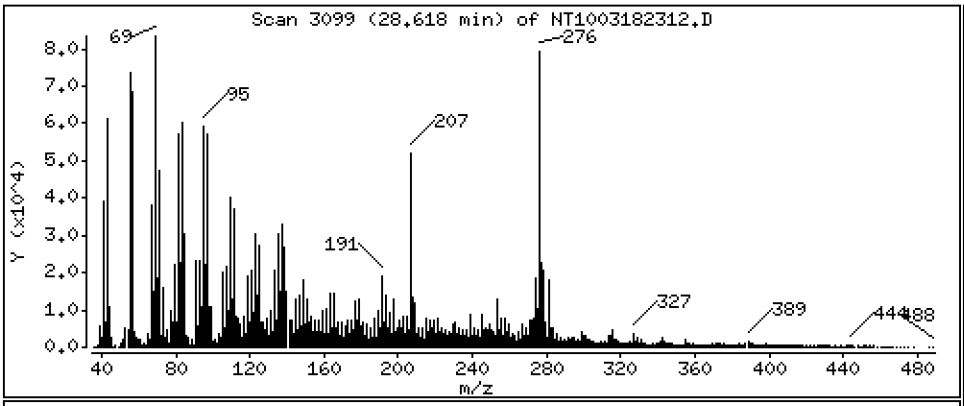
Operator: VTS

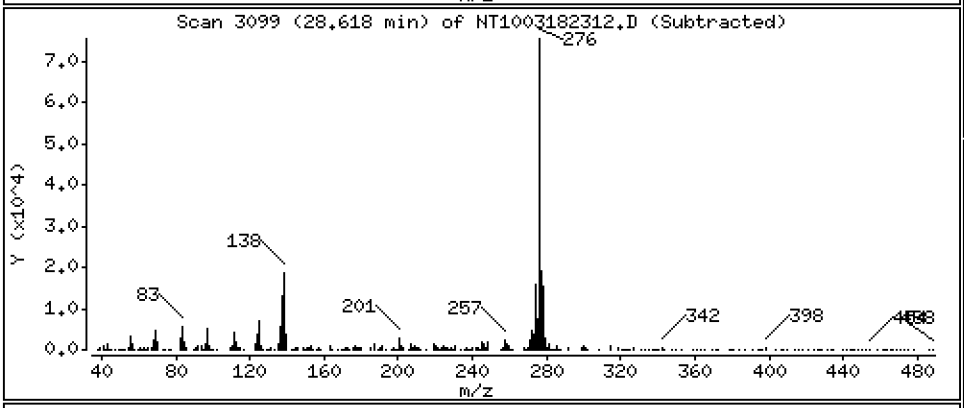
Column phase: ZB-5msi

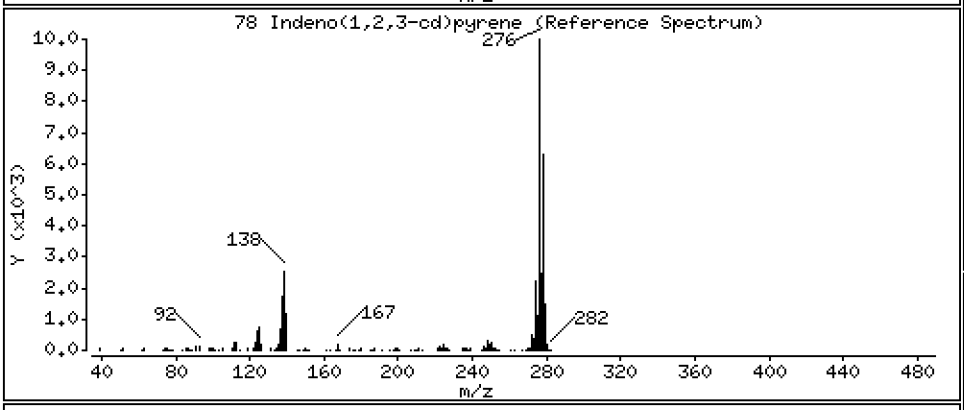
Column diameter: 0.25

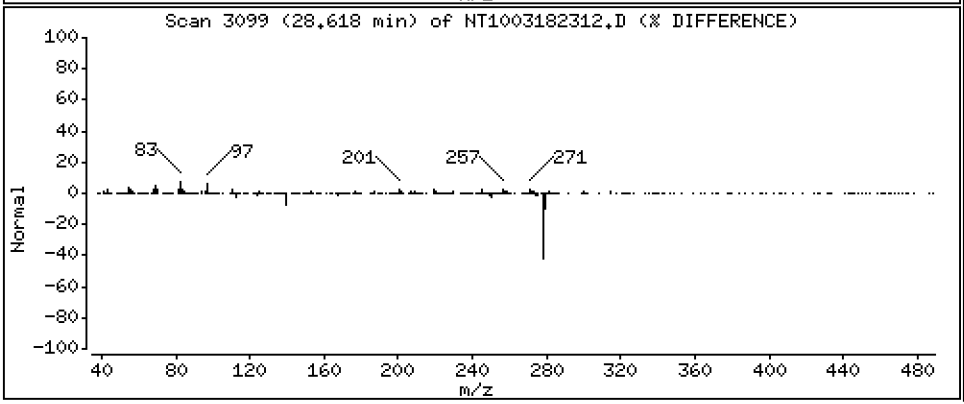
78 Indeno(1,2,3-cd)pyrene

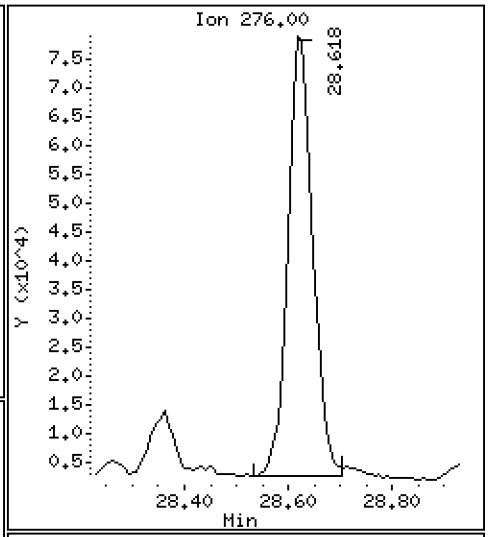
Concentration: 0.7621 ug/mL

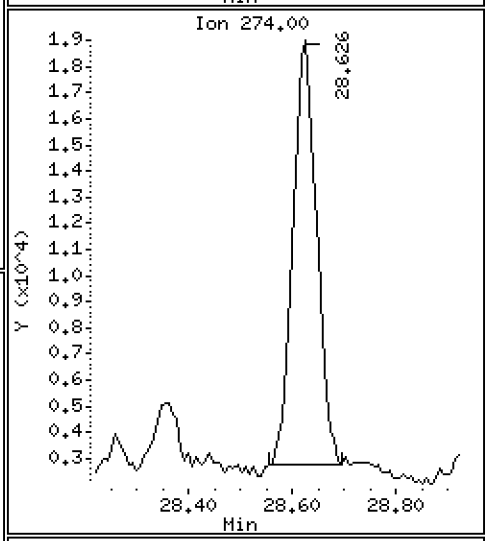


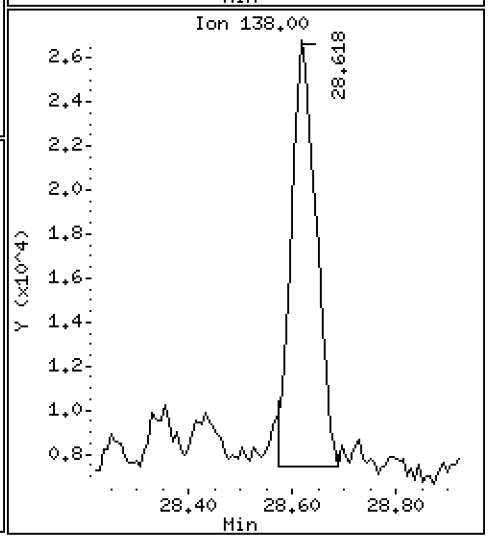












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

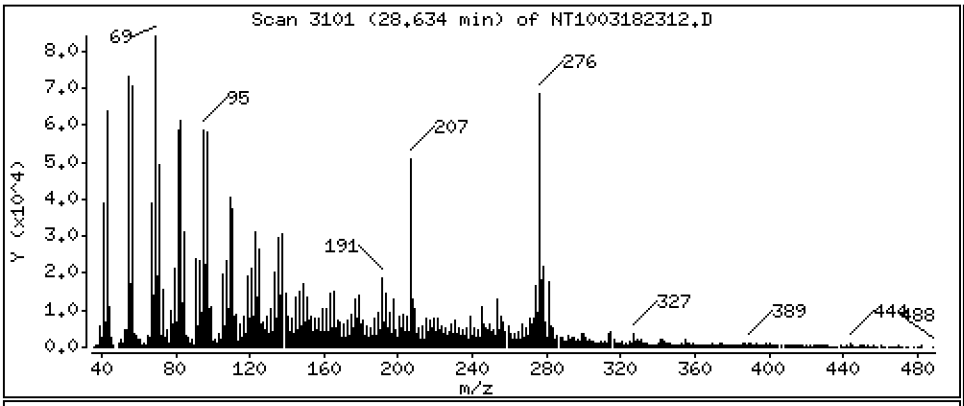
Operator: VTS

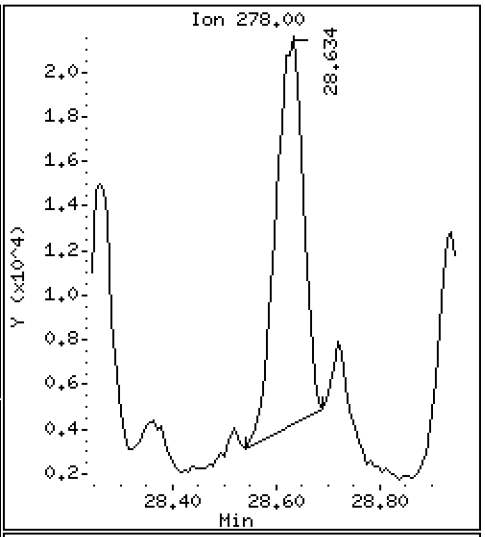
Column phase: ZB-5msi

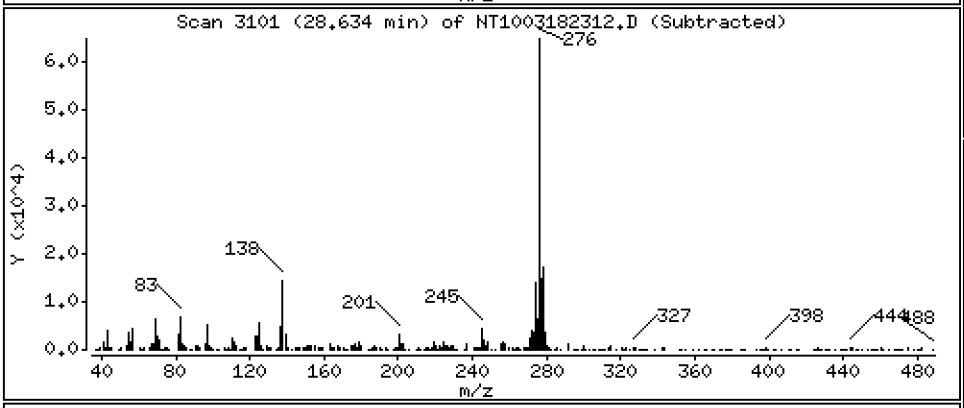
Column diameter: 0.25

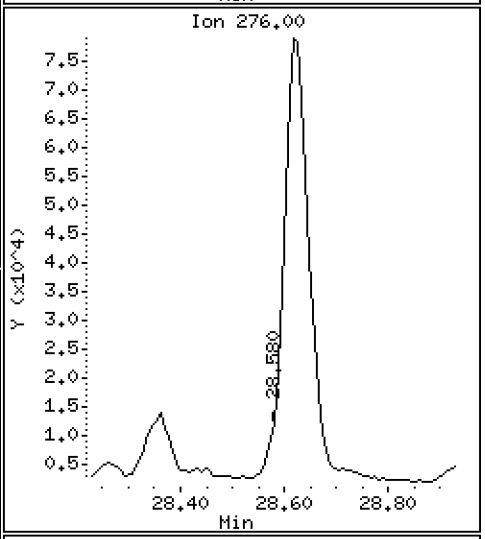
79 Dibenzo(a,h)anthracene

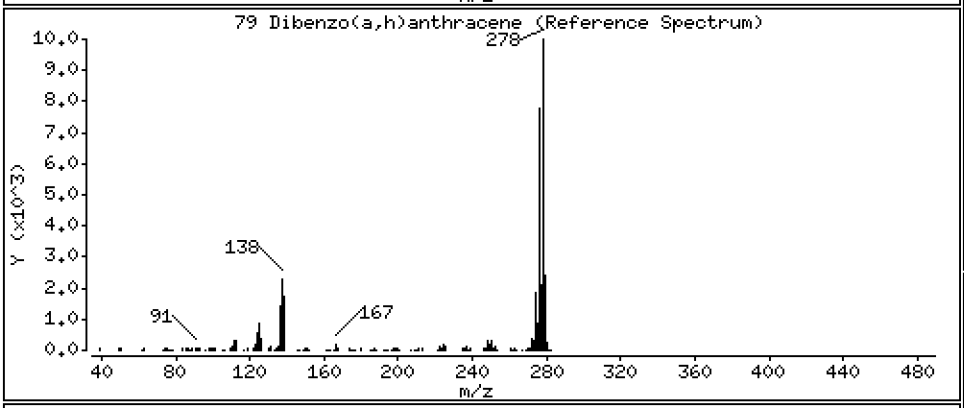
Concentration: 0.2303 ug/mL

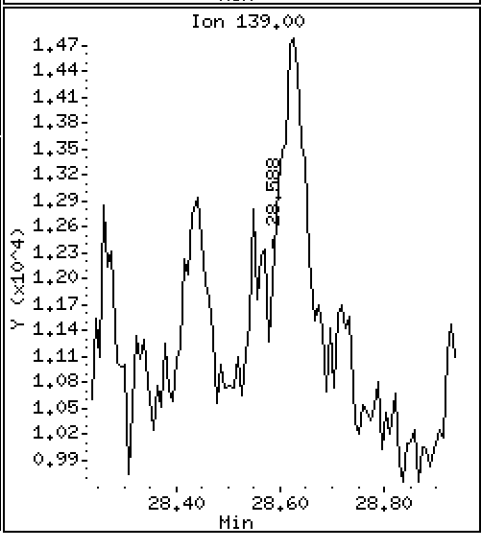


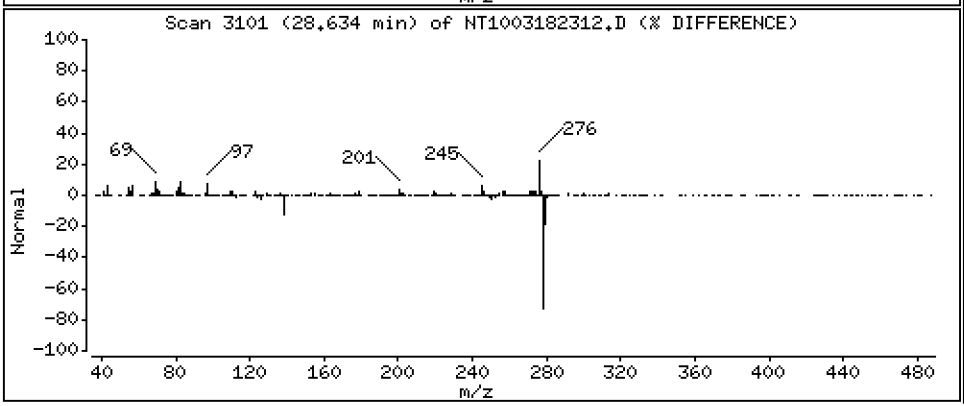












Date : 19-MAR-2023 00:46

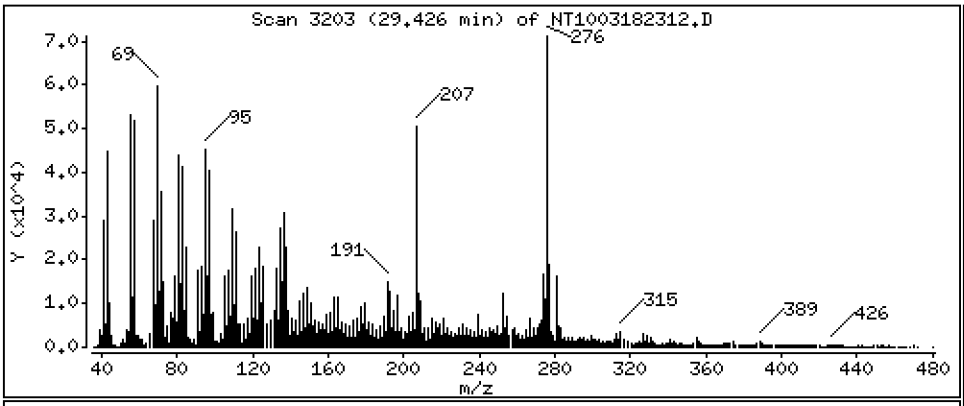
Client ID: Instrument: nt10.i

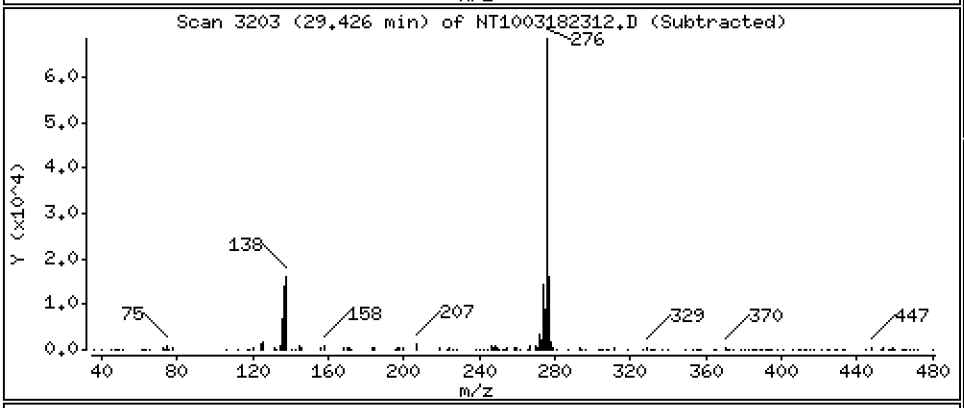
Sample Info: 23A0467-03

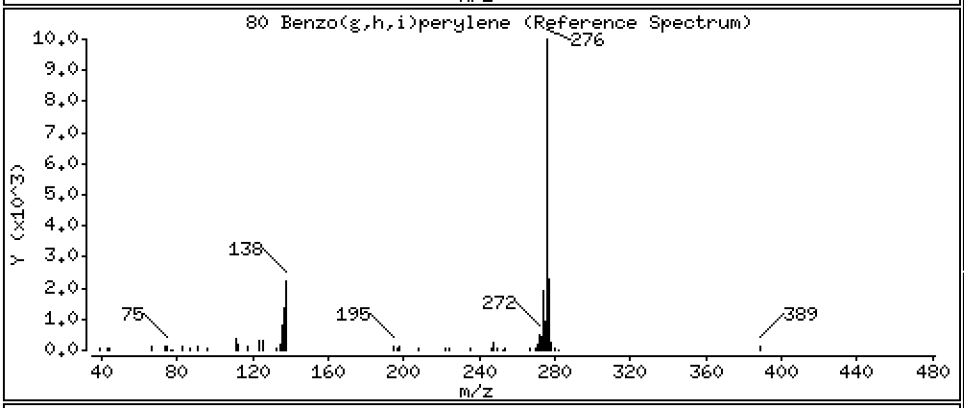
Operator: VTS

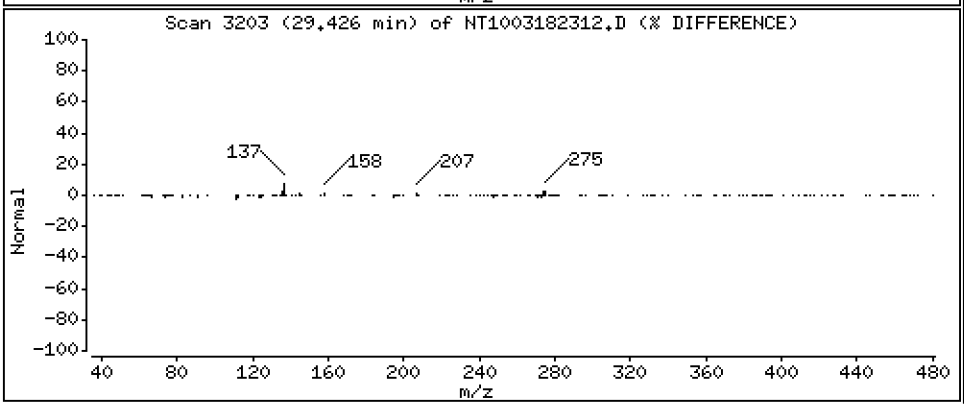
Column phase: ZB-5msi Column diameter: 0.25

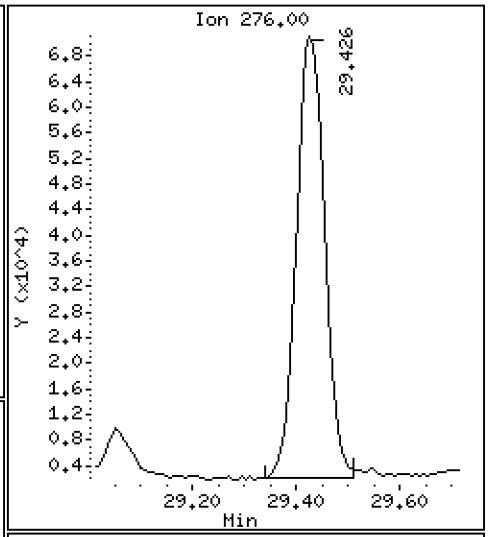
80 Benzo(g,h,i)perylene Concentration: 0.8808 ug/mL

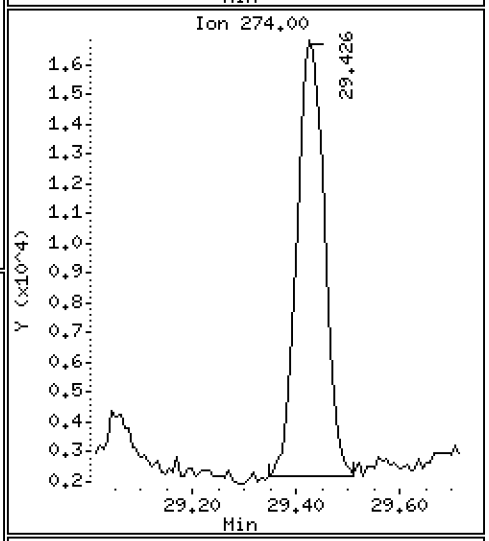


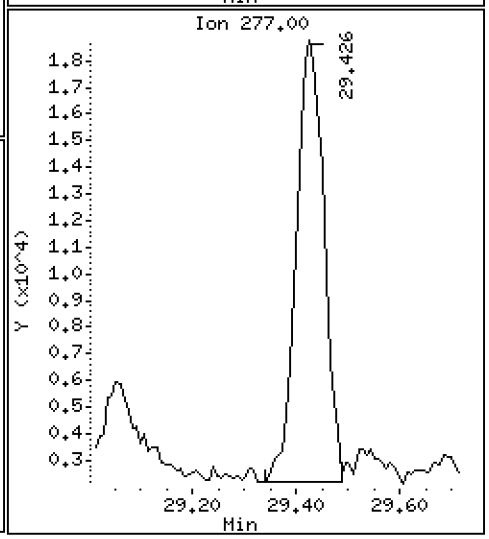












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

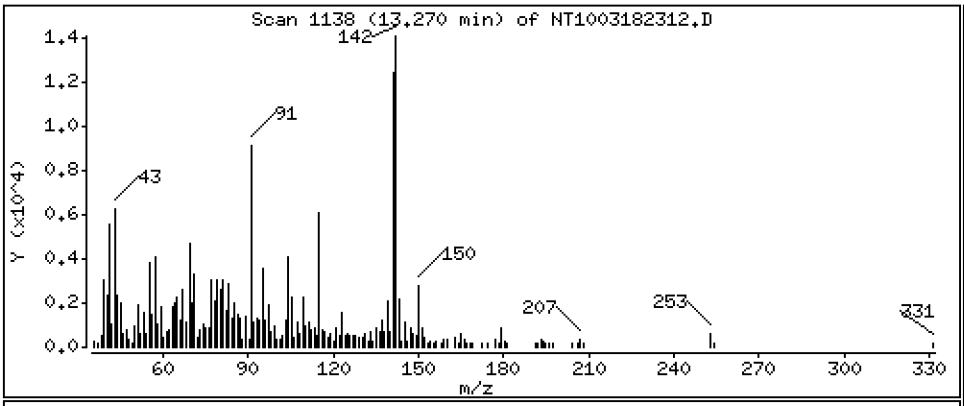
Operator: VTS

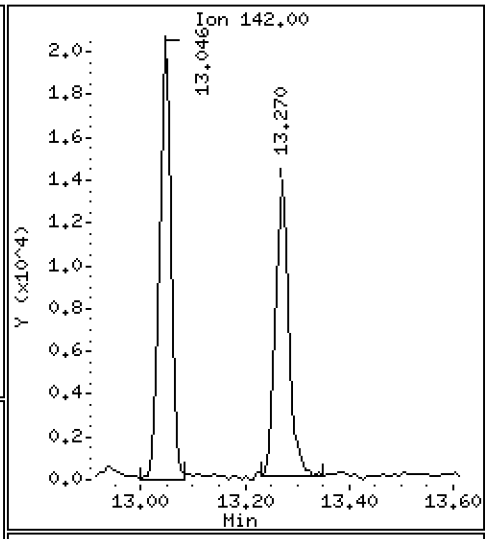
Column phase: ZB-5msi

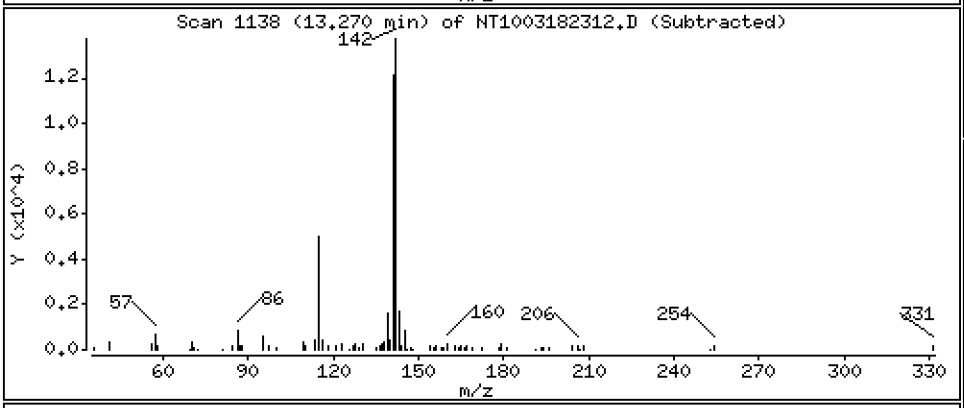
Column diameter: 0.25

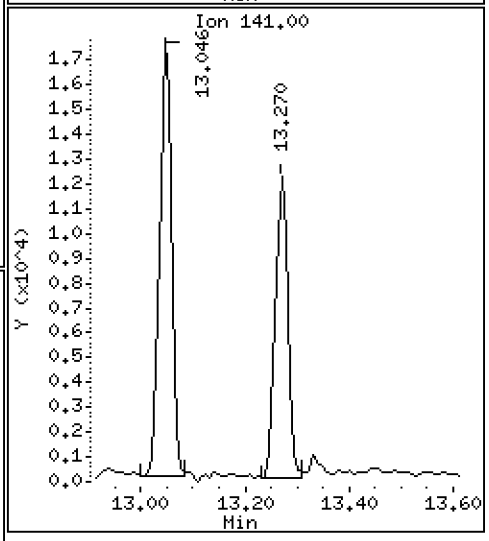
105 1-methylnaphthalene

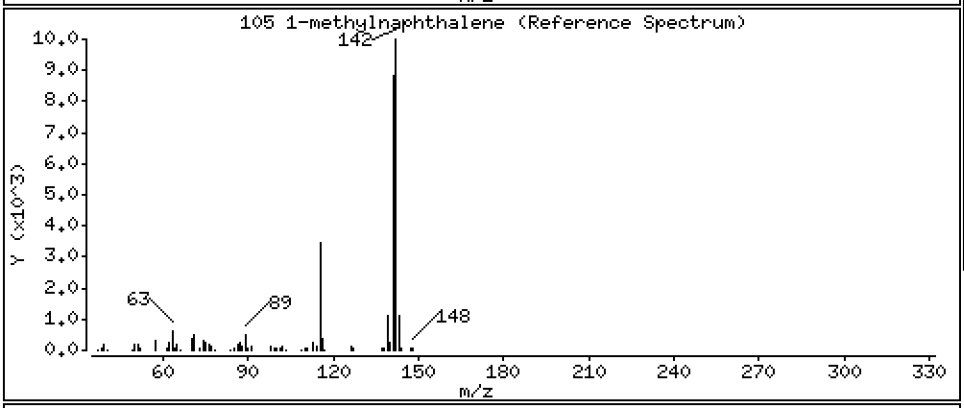
Concentration: 0.1381 ug/mL

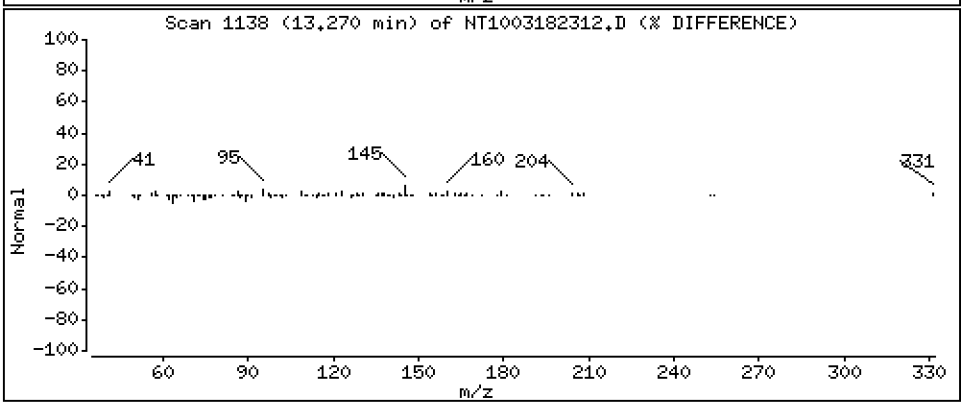












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

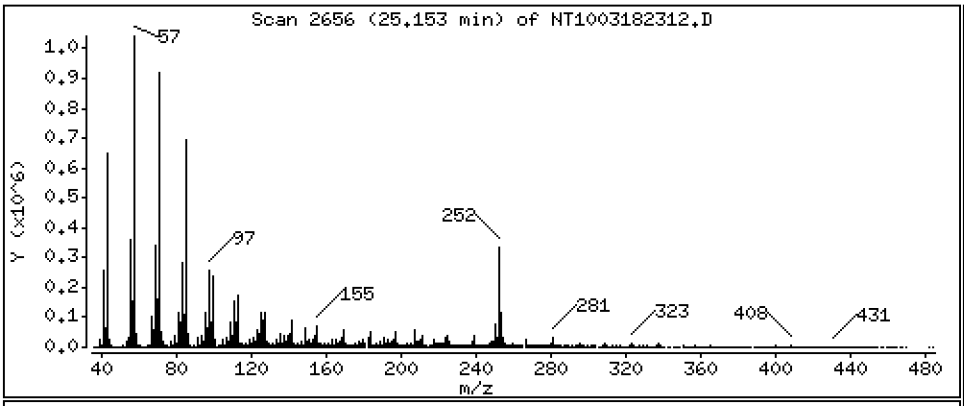
Operator: VTS

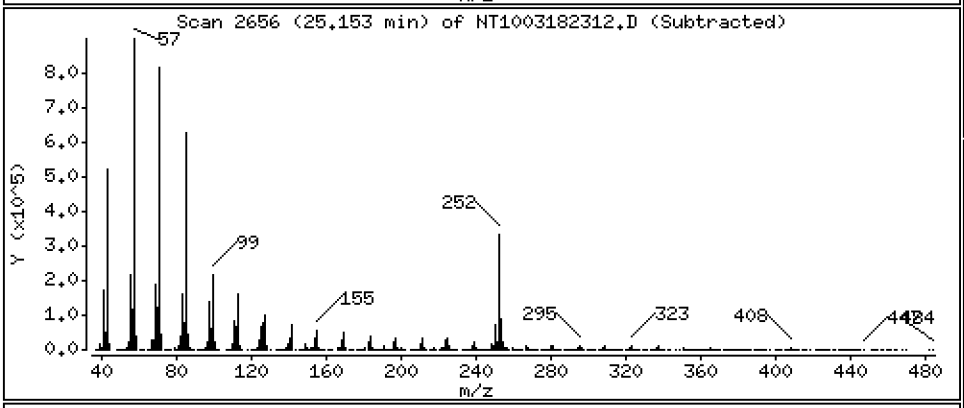
Column phase: ZB-5msi

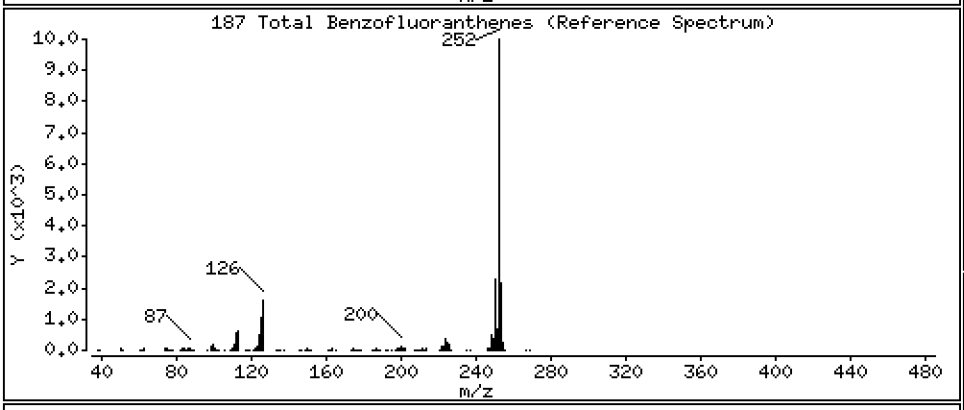
Column diameter: 0.25

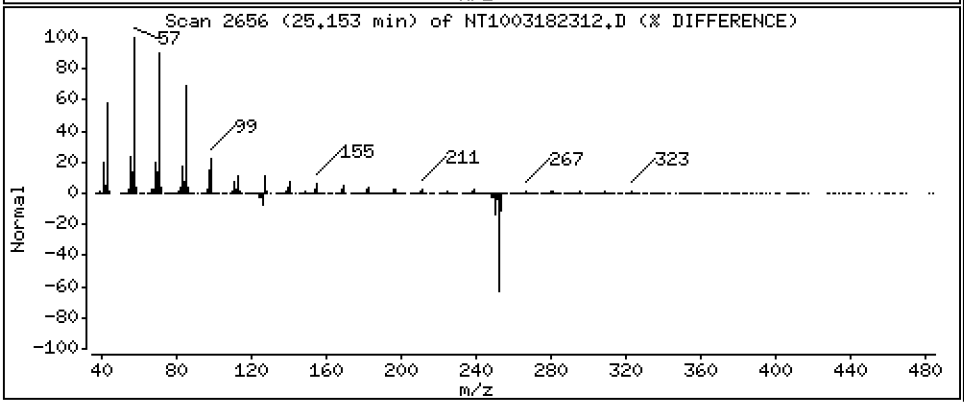
187 Total Benzofluoranthenes

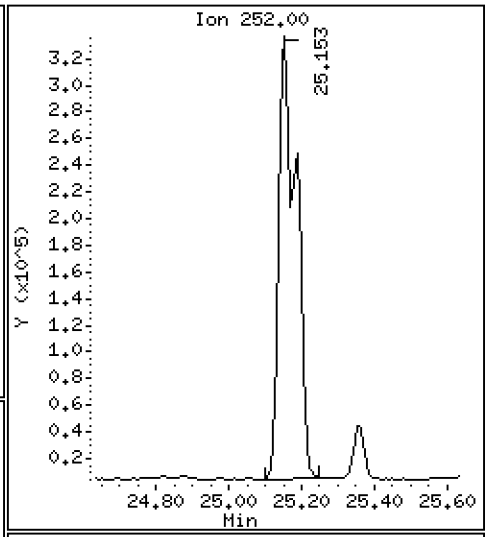
Concentration: 3.900 ug/mL

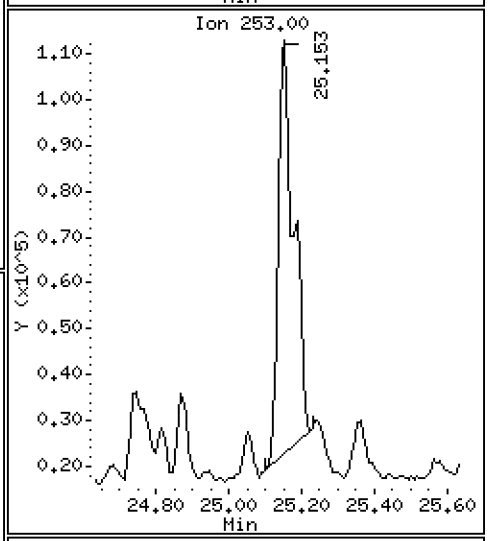


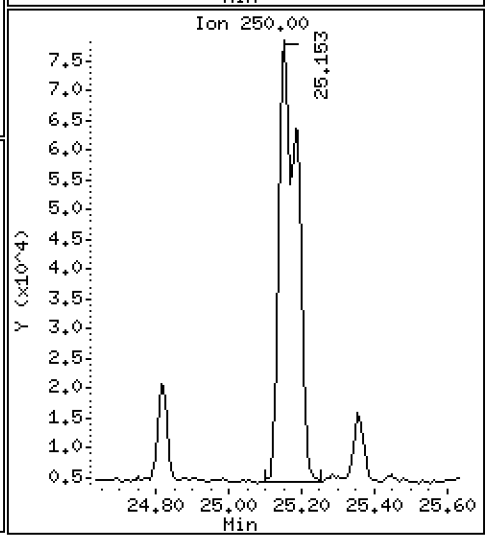












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182312.D
Lab Smp Id: 23A0467-03
Inj Date : 19-MAR-2023 00:46
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-03
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	469964	5.66072	5.661
$	2 Phenol-d5	99	8.528	8.520	(0.930)	630755	5.79139	5.791
	3 Phenol	94	8.551	8.536	(0.933)	598705	5.28998	5.290
$	5 2-Chlorophenol-d4	132	8.814	8.806	(0.961)	573668	6.16824	6.168
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	274533	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.039)	251369	3.76353	3.764
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.433	9.426	(1.029)	17031	0.32060	0.3206
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.081)	215175	2.47529	2.475
$	18 Nitrobenzene-d5	82	10.248	10.249	(0.881)	402729	3.98216	3.982
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.057	11.134	(0.951)	46713	0.92120	0.9212(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	1001952	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	60907	0.22946	0.2295
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	31109	0.16241	0.1624
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.819	13.820	(0.908)	894644	4.12820	4.128
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.717	14.710	(0.967)	10234	0.05750	0.05750
	40	Acenaphthylene	152	14.903	14.896	(0.980)	35414	0.12952	0.1295
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.212	15.213	(1.000)	547853	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.282	15.275	(1.005)	28173	0.16678	0.1668
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.607	15.600	(1.026)	47210	0.18952	0.1895
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.163	16.156	(1.063)	30625	0.17538	0.1754
	49	Fluorene	166	16.318	16.319	(1.073)	28629	0.14608	0.1461
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.850	16.843	(1.108)	175838	6.88360	6.884
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.241	18.234	(1.000)	1025087	4.00000	
	60	Phenanthrene	178	18.287	18.281	(1.003)	277021	0.99106	0.9911
	61	Anthracene	178	18.380	18.373	(1.008)	148666	0.55445	0.5545
	62	Carbazole	167	18.713	18.698	(1.026)	37445	0.15585	0.1558
	63	Di-n-butylphthalate	149	19.502	19.488	(1.069)	32171	0.09958	0.09958
	64	Fluoranthene	202	20.694	20.656	(0.889)	955870	2.77368	2.774
	65	Pyrene	202	21.104	21.081	(0.906)	945395	2.67423	2.674
$	66	Terphenyl-d14	244	21.374	21.360	(0.918)	1086077	4.09089	4.091
	67	Butylbenzylphthalate	149	22.296	22.281	(0.957)	22610	0.18213	0.1821
	68	Benzo(a)anthracene	228	23.256	23.241	(0.999)	423405	1.39864	1.399
*	69	Chrysene-d12	240	23.287	23.272	(1.000)	857658	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.326	23.311	(1.002)	584203	1.97527	1.975
	72	bis(2-Ethylhexyl)phthalate	149	23.318	23.303	(0.959)	405092	1.83507	1.835
*	134	Di-n-octylphthalate-d4	153	24.309	24.294	(1.000)	1507709	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.153	25.130	(0.970)	668573	2.24053	2.241
	75	Benzo(k)fluoranthene	252	25.191	25.169	(0.972)	552122	1.82218	1.822(M)
	76	Benzo(a)pyrene	252	25.811	25.789	(0.996)	402172	1.50747	1.507
*	77	Perylene-d12	264	25.927	25.897	(1.000)	920559	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.618	28.580	(1.104)	258656	0.76206	0.7621
	79	Dibenzo(a,h)anthracene	278	28.633	28.595	(1.104)	64901	0.23032	0.2303(M)
	80	Benzo(g,h,i)perylene	276	29.426	29.364	(1.135)	258733	0.88083	0.8808
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.270	13.263	(1.141)	24239	0.13811	0.1381
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.153	25.130	(0.970)	1123592	3.89984	3.900(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182312.D
Lab Smp Id: 23A0467-03
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	274533	47.28
27 Naphthalene-d8	688740	344370	1377480	1001952	45.48
42 Acenaphthene-d10	373663	186832	747326	547853	46.62
59 Phenanthrene-d10	652323	326162	1304646	1025087	57.14
69 Chrysene-d12	537141	268571	1074282	857658	59.67
134 Di-n-octylphthala	947608	473804	1895216	1507709	59.11
77 Perylene-d12	602550	301275	1205100	920559	52.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.06
134 Di-n-octylphthala	24.29	23.79	24.79	24.31	0.06
77 Perylene-d12	25.90	25.40	26.40	25.93	0.12

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

REVIEW SUMMARY FOR FILE - NT1003182312.D

Lab ID: 23A0467-03
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 00:46

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.958	-0.0072	Benzoic acid

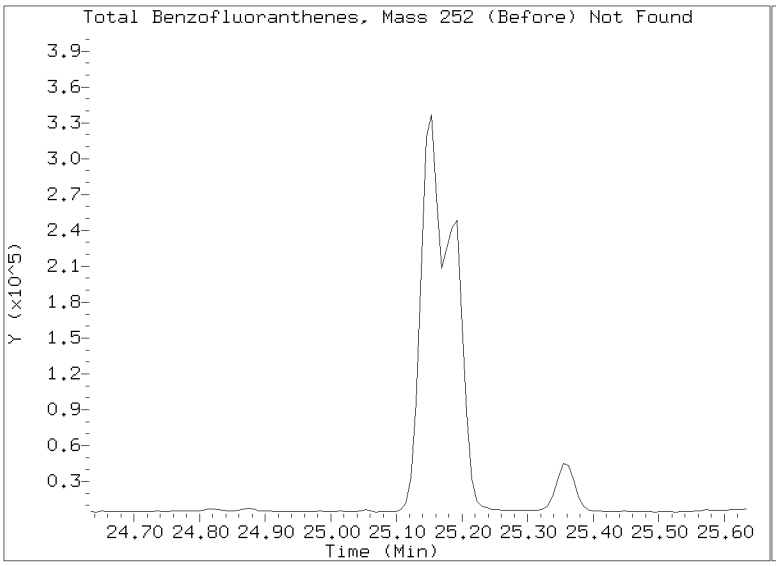
RRT check based on Ccal File: NT1003182302.D

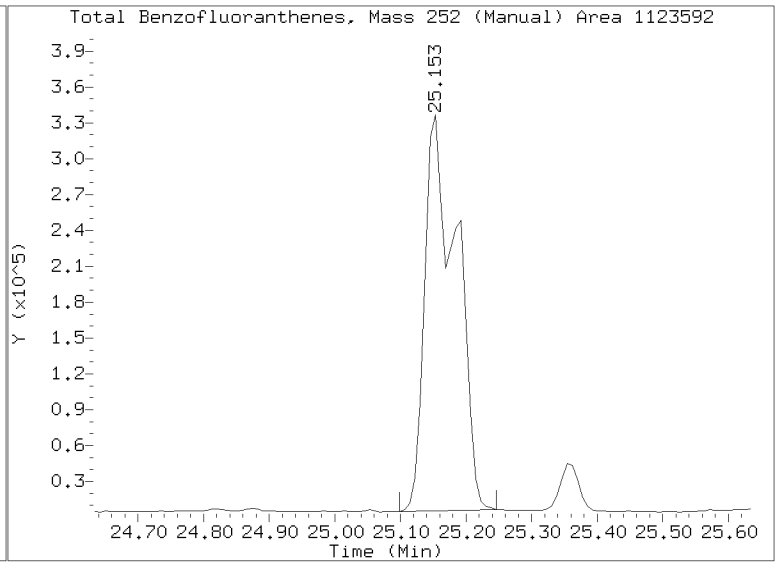
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

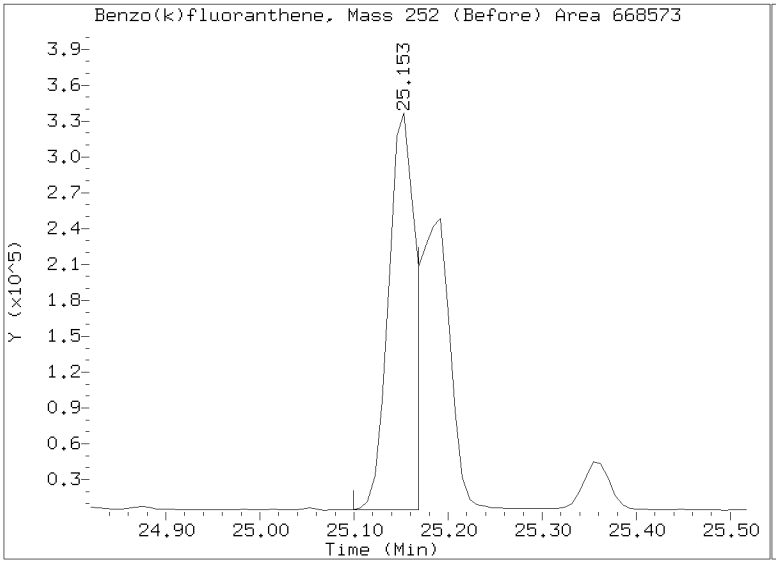
* Only compounds listed in the work order have been verified by the analyst *

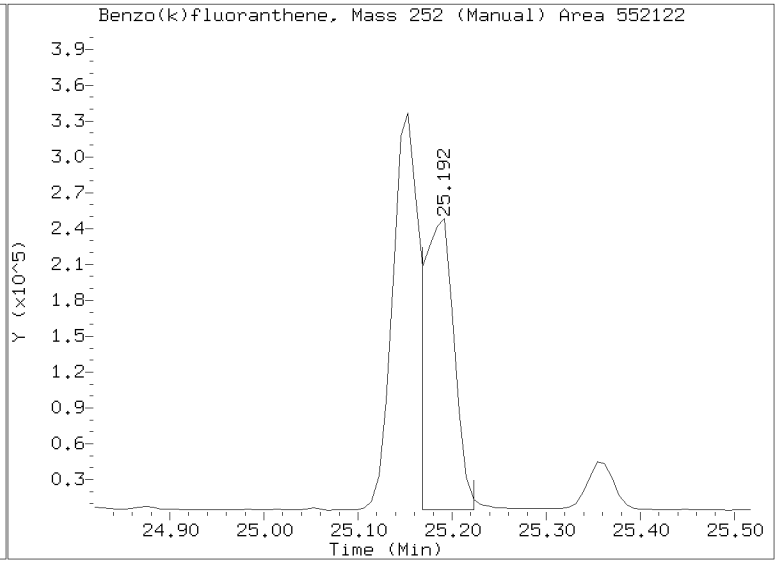
Quant Ion Manual Peak Adjustment Report

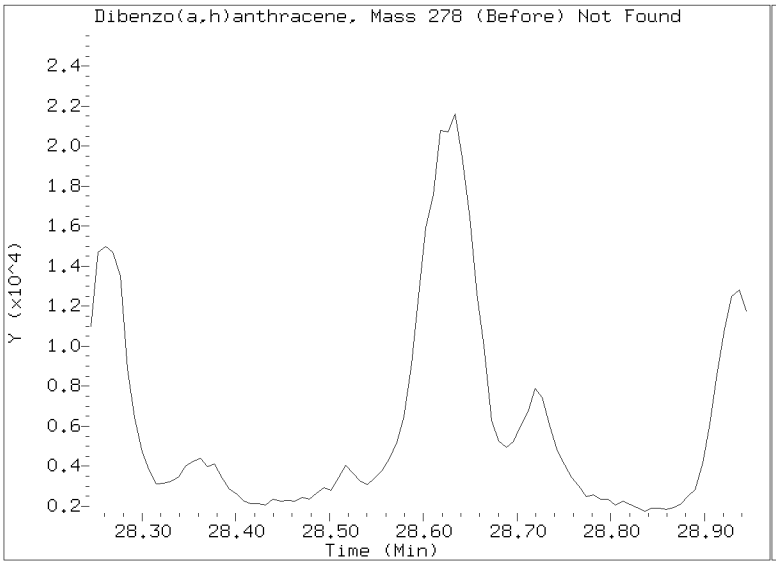
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182312.D
Injection Date: 19-MAR-2023 00:46
Lab ID:23A0467-03 Client ID:
Report Date: 04/04/2023 08:57

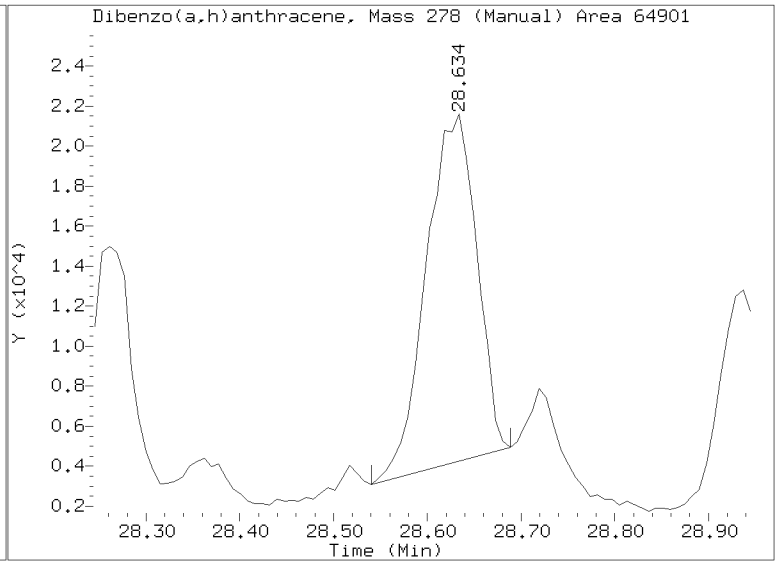












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1003

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	02/23/23 15:49	File ID:	NT1003182313.D
% Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 01:24
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.22 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	856		4.4	20.0
106-44-5	4-Methylphenol	1	263		7.4	20.0
91-20-3	Naphthalene	1	21.6		4.2	20.0
91-57-6	2-Methylnaphthalene	1	18.0	J	4.5	20.0
208-96-8	Acenaphthylene	1	16.0	J	6.2	20.0
131-11-3	Dimethylphthalate	1	9.1	J	4.4	20.0
83-32-9	Acenaphthene	1	18.2	J	5.2	20.0
132-64-9	Dibenzofuran	1	22.5		14.1	20.0
86-73-7	Fluorene	1	23.3	Q	14.6	20.0
85-01-8	Phenanthrene	1	138		8.7	20.0
120-12-7	Anthracene	1	101		7.2	20.0
206-44-0	Fluoranthene	1	319		6.1	20.0
129-00-0	Pyrene	1	304		5.7	20.0
85-68-7	Butylbenzylphthalate	1	23.9		9.4	20.0
56-55-3	Benzo(a)anthracene	1	200		6.0	20.0
218-01-9	Chrysene	1	300		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	276		5.5	50.0
	Benzofluoranthenes, Total	1	478		10.0	40.0
50-32-8	Benzo(a)pyrene	1	188		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	89.6		14.7	20.0
53-70-3	Dibenzo(a,h)anthracene	1	31.0		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	102		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	750.09	549	73.2	27 - 120	
Phenol-d5	750.09	551	73.4	29 - 120	
2-Chlorophenol-d4	750.09	589	78.5	31 - 120	
1,2-Dichlorobenzene-d4	500.06	365	73.1	32 - 120	
Nitrobenzene-d5	500.06	384	76.8	30 - 120	
2-Fluorobiphenyl	500.06	397	79.3	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1003

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

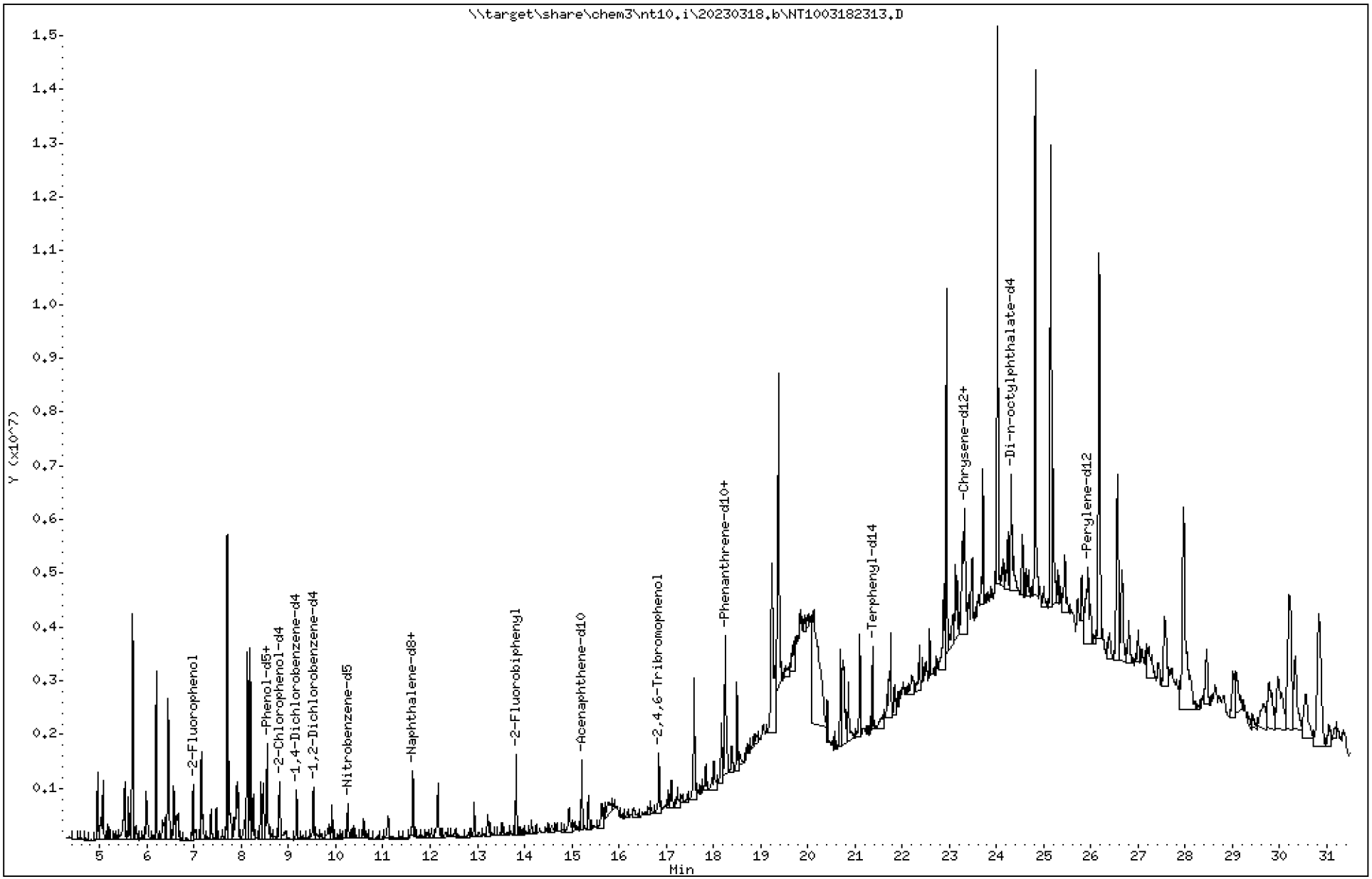
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	02/23/23 15:49	File ID:	NT1003182313.D
% Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 01:24
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.22 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	750.09	653	87.1	24 - 134	
p-Terphenyl-d14	500.06	434	86.8	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D
Date : 19-MAR-2023 01:24
Client ID:
Sample Info: 23A0467-04

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

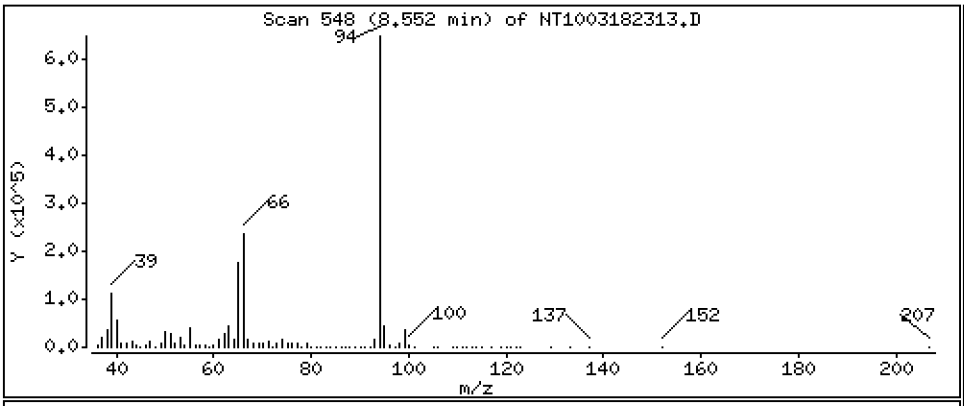
Operator: VTS

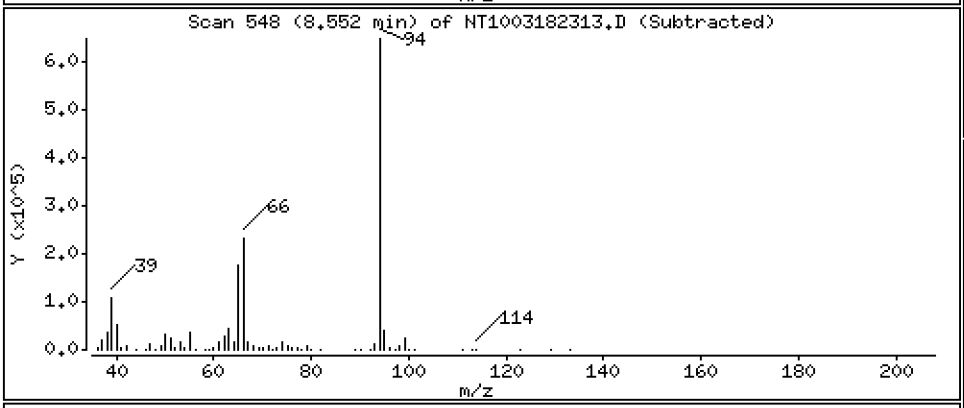
Column phase: ZB-5msi

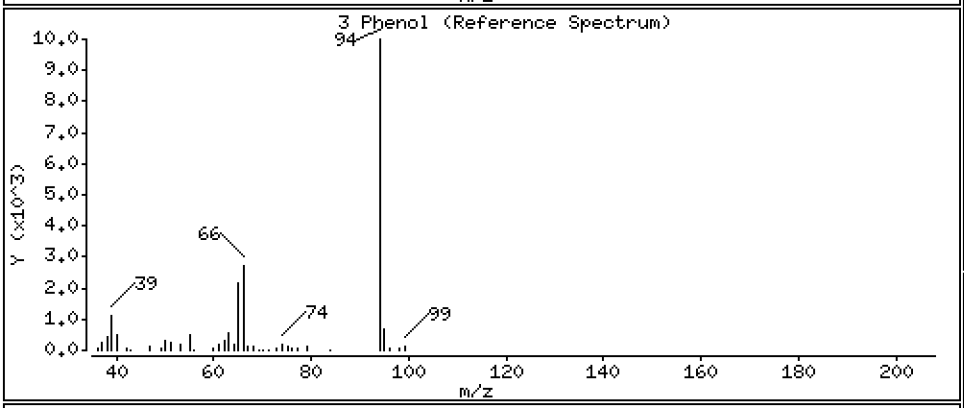
Column diameter: 0.25

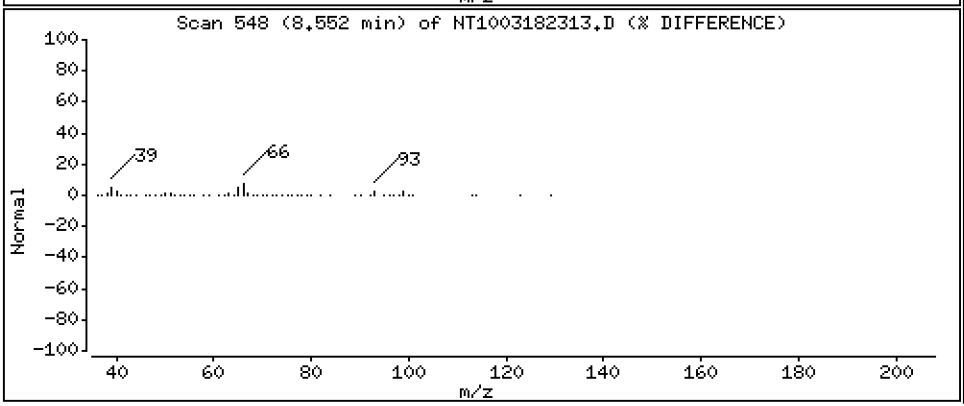
3 Phenol

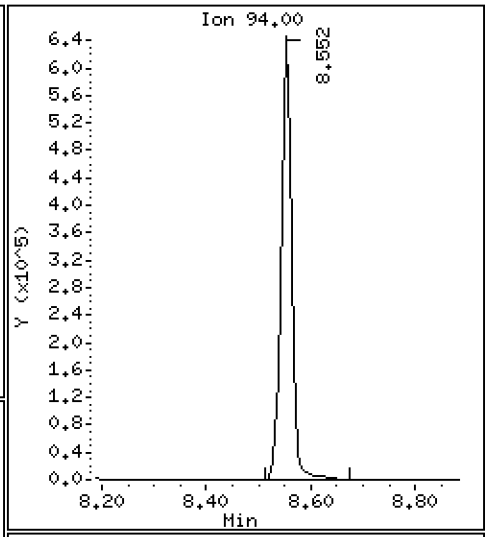
Concentration: 8.554 ug/mL

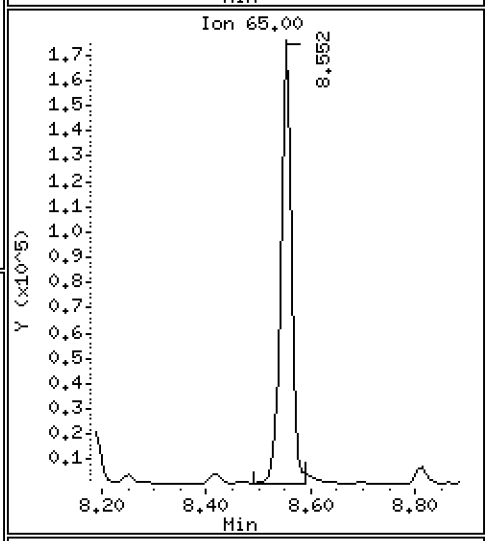


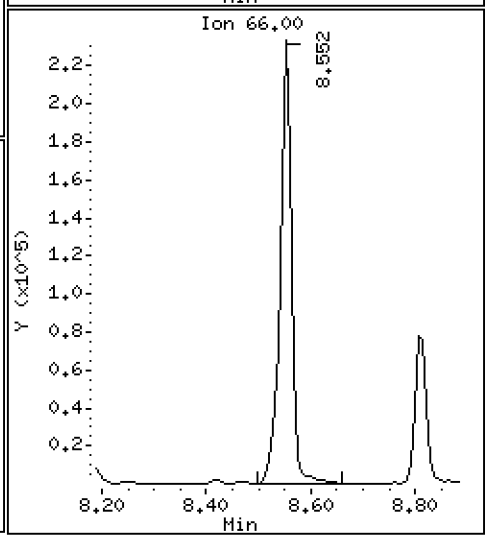












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

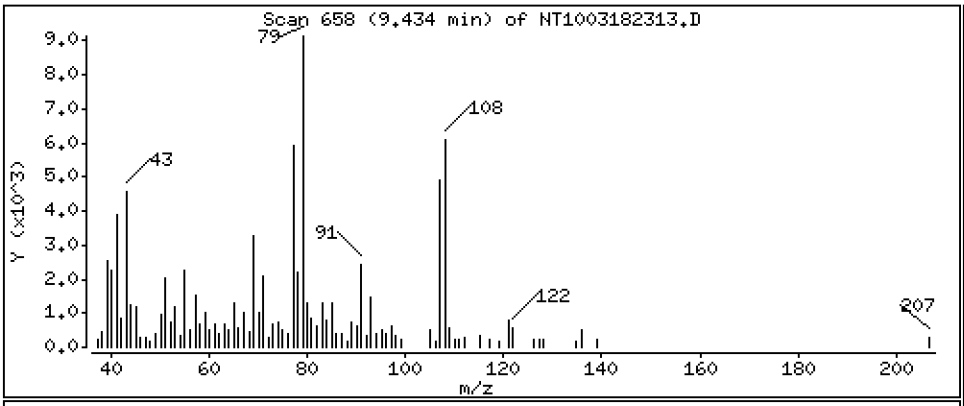
Operator: VTS

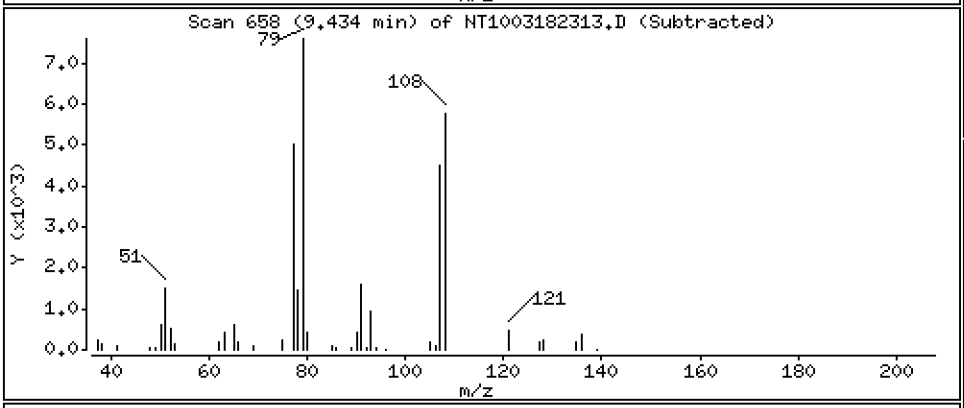
Column phase: ZB-5msi

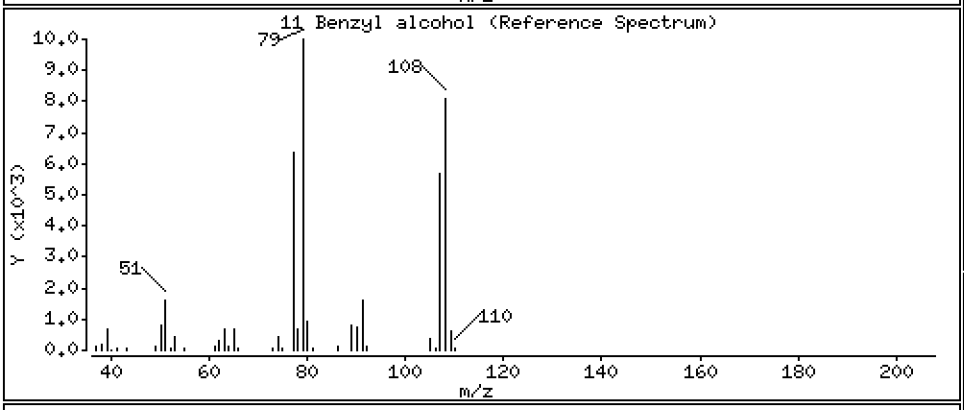
Column diameter: 0.25

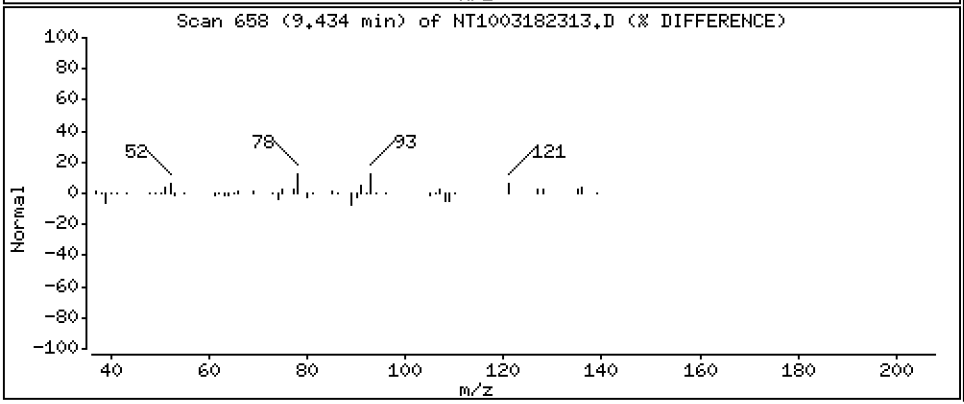
11 Benzyl alcohol

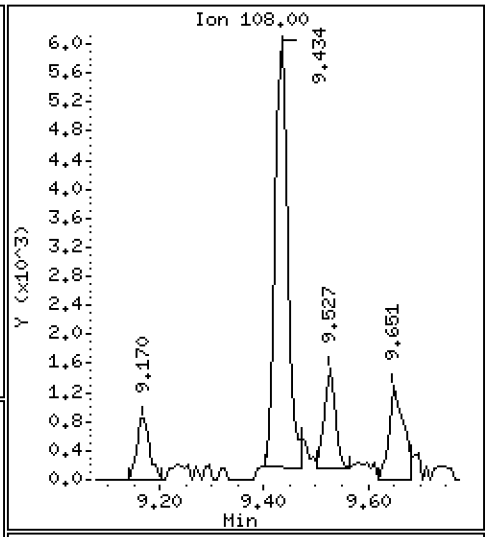
Concentration: 0.1869 ug/mL

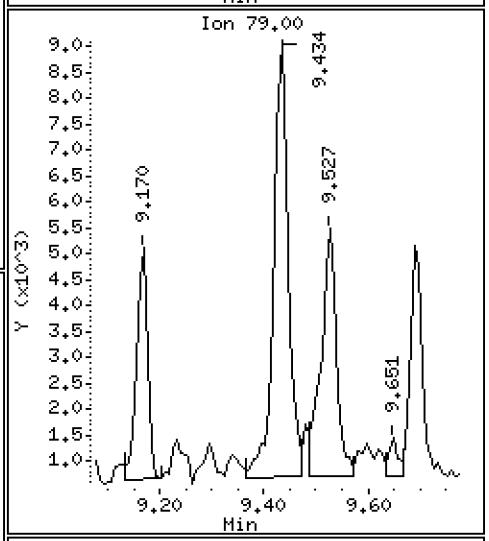


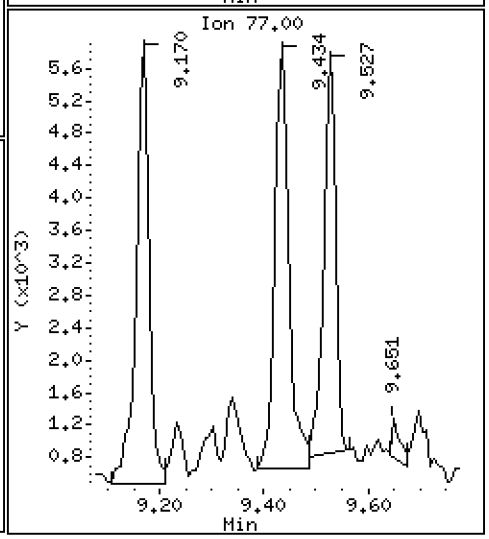












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

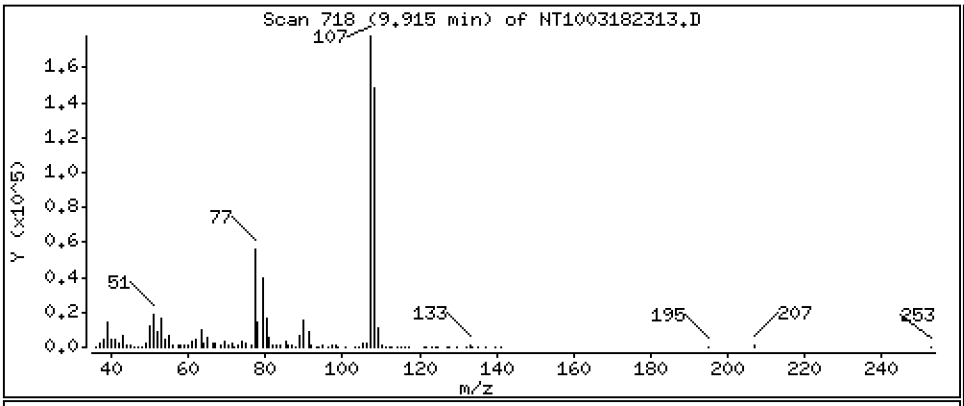
Operator: VTS

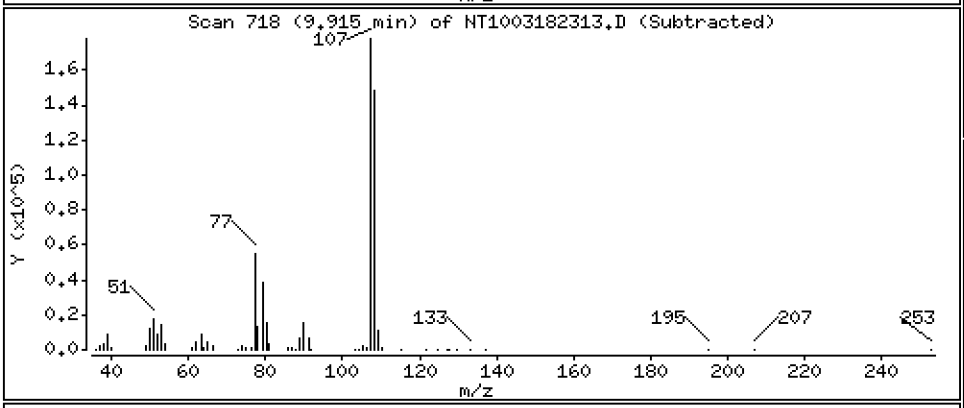
Column phase: ZB-5msi

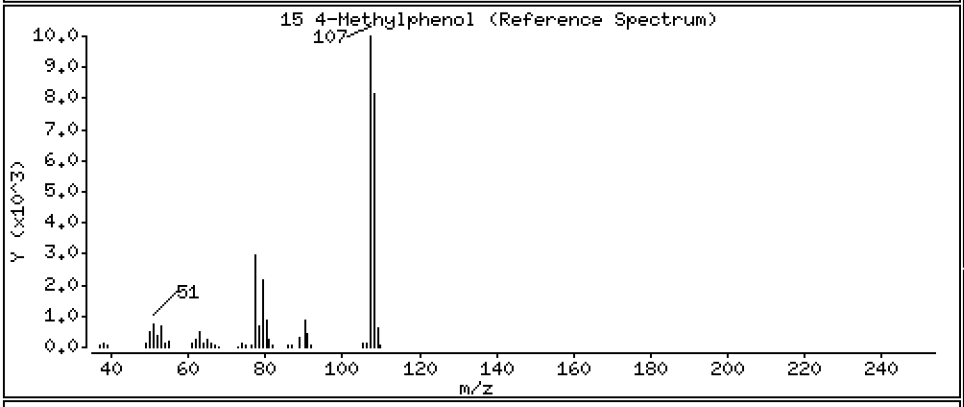
Column diameter: 0.25

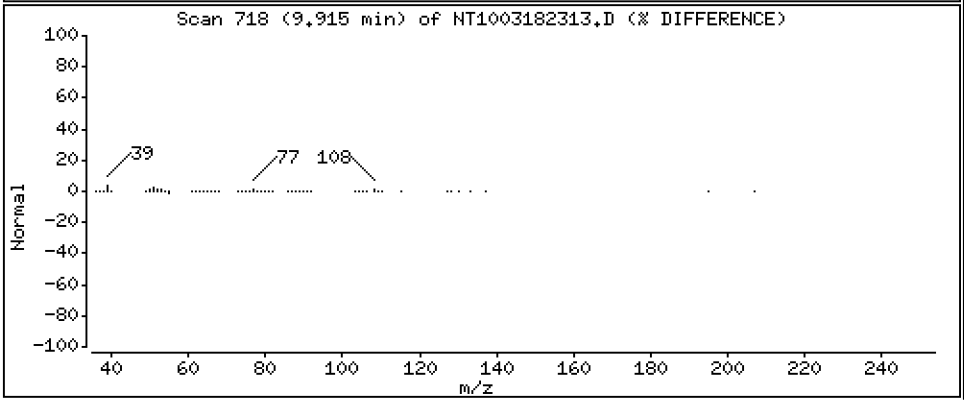
15 4-Methylphenol

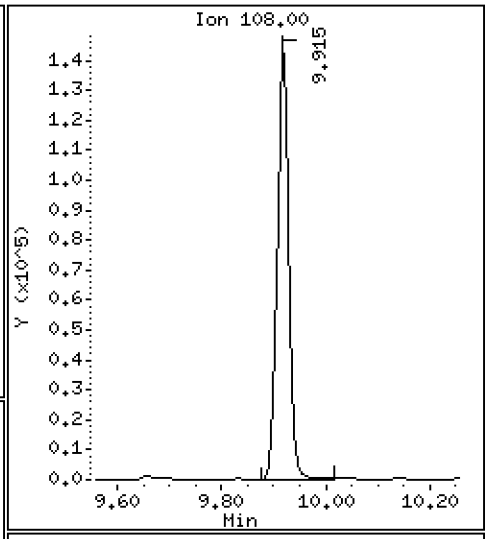
Concentration: 2.634 ug/mL

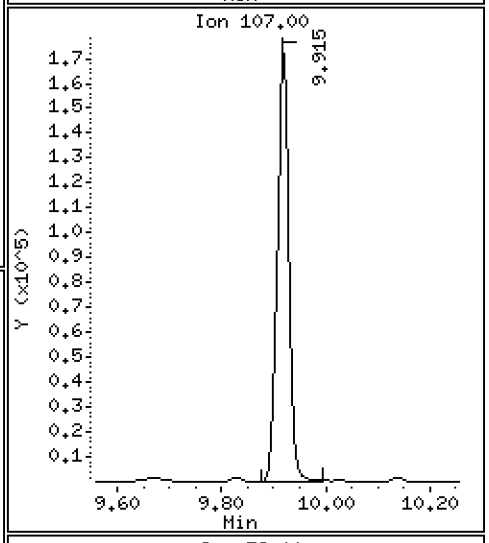


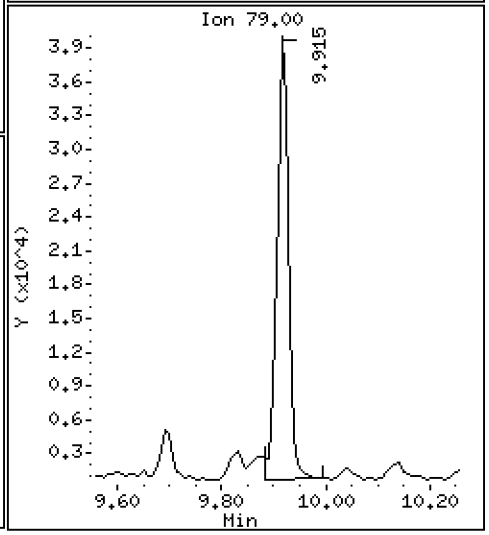












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

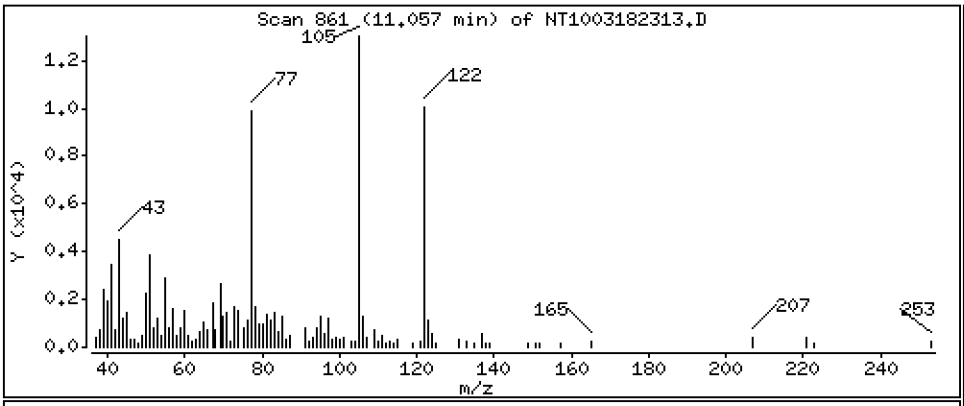
Operator: VTS

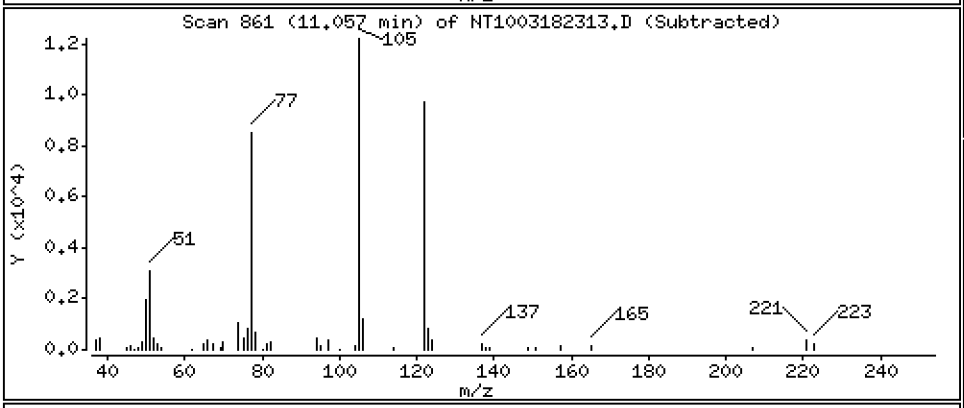
Column phase: ZB-5msi

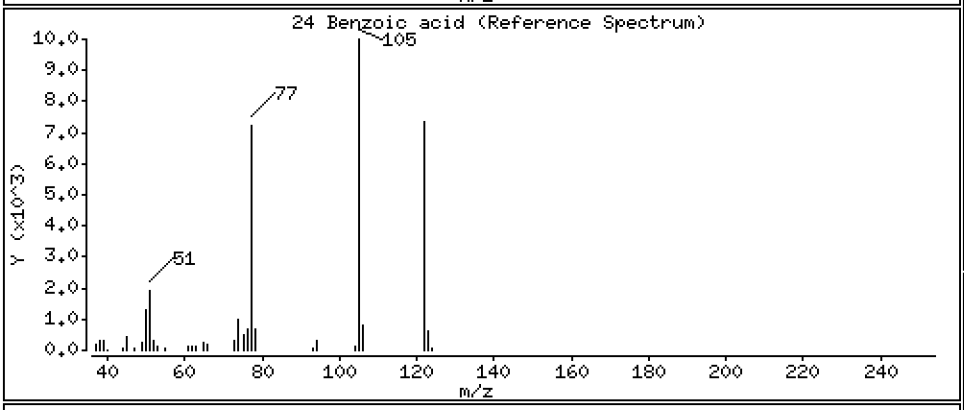
Column diameter: 0.25

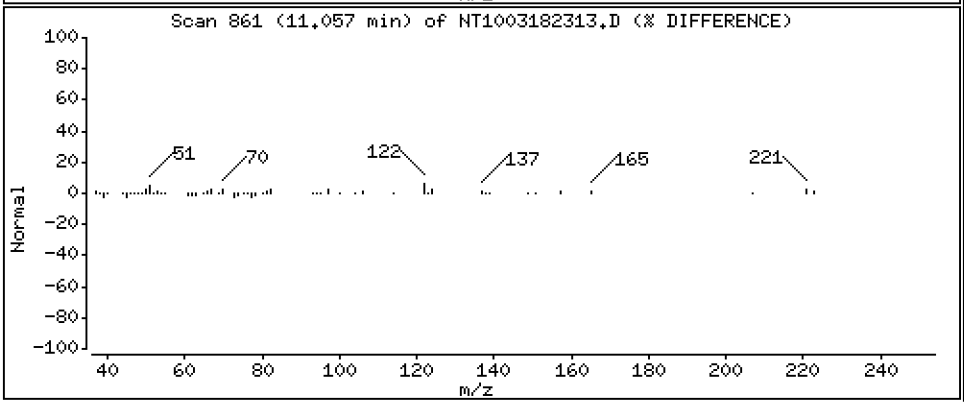
24 Benzoic acid

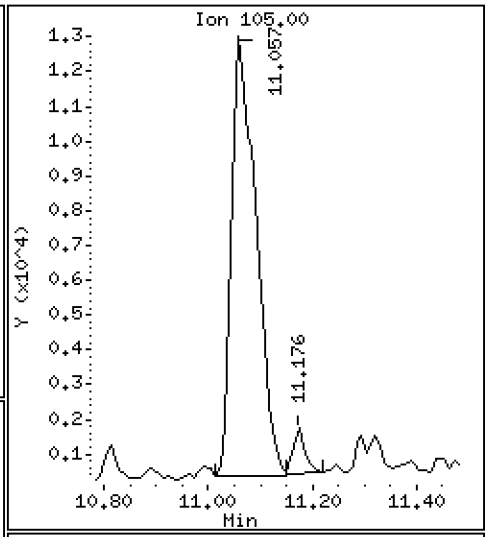
Concentration: 0.8618 ug/mL

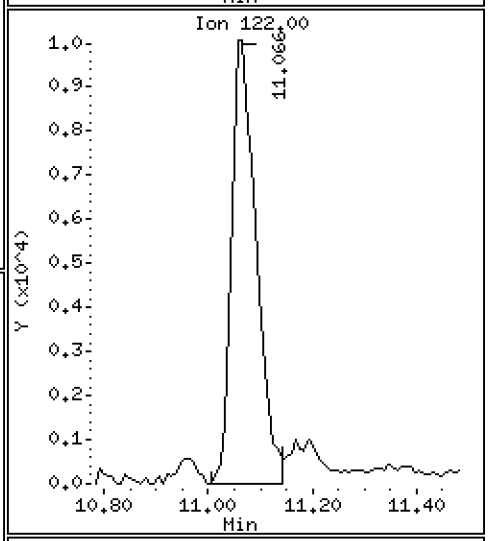


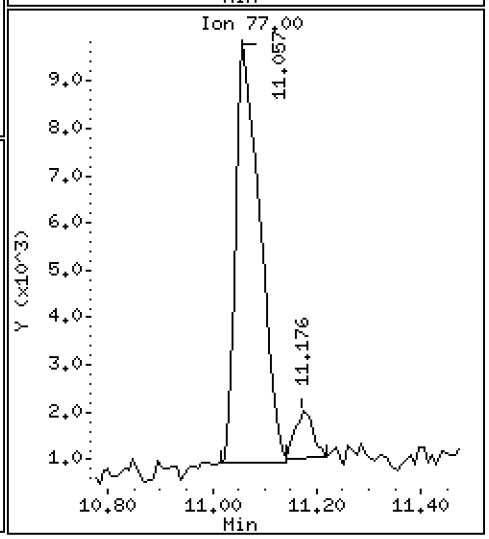












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

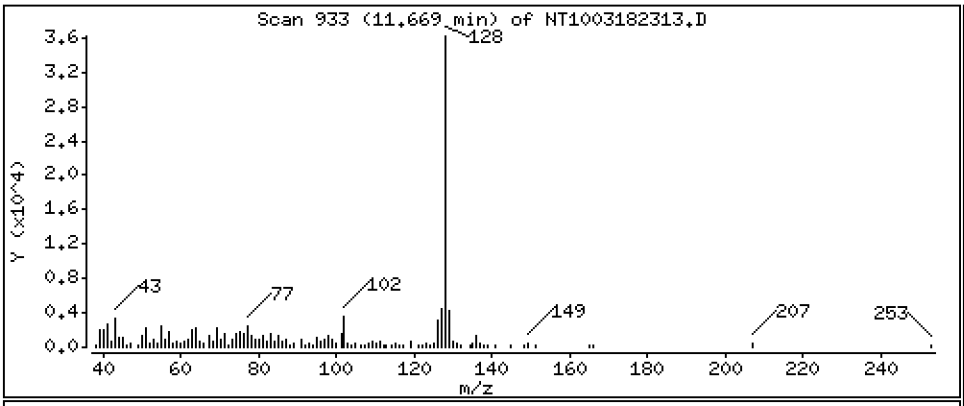
Operator: VTS

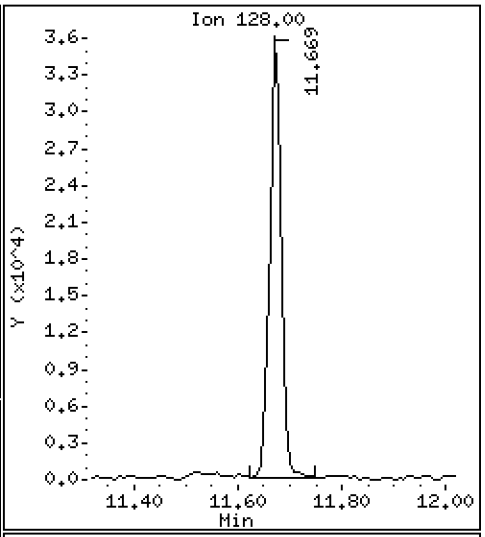
Column phase: ZB-5msi

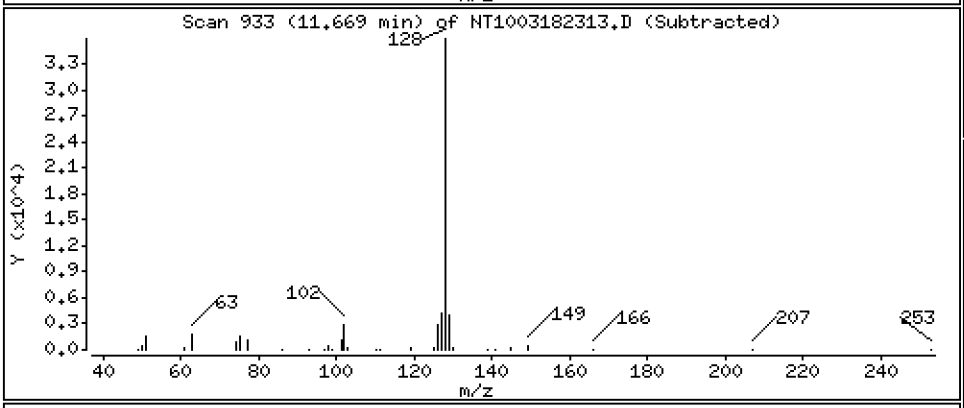
Column diameter: 0.25

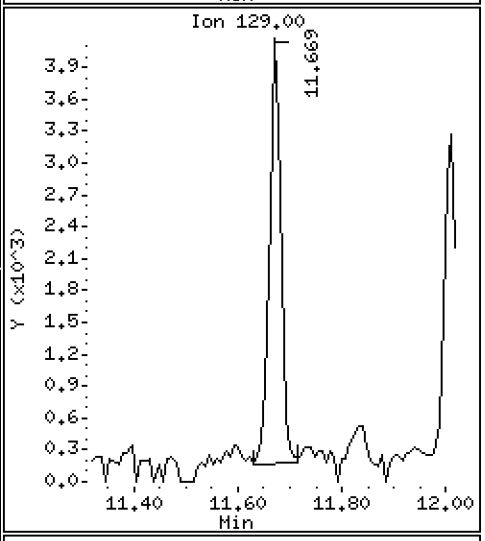
28 Naphthalene

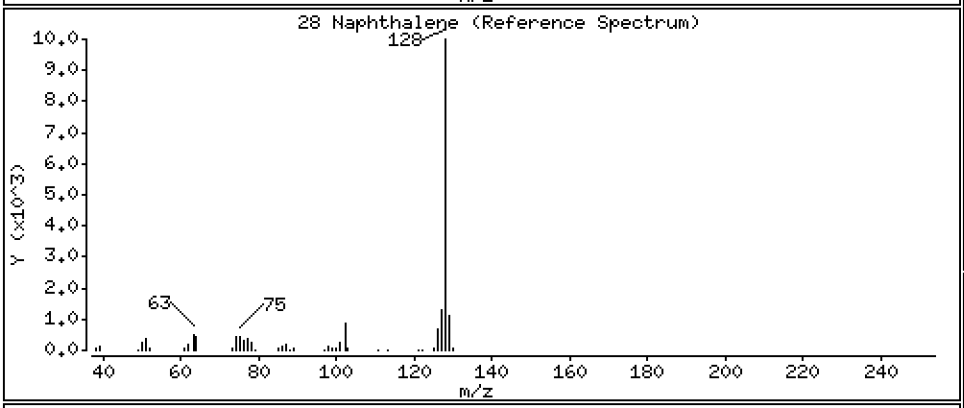
Concentration: 0.2161 ug/mL

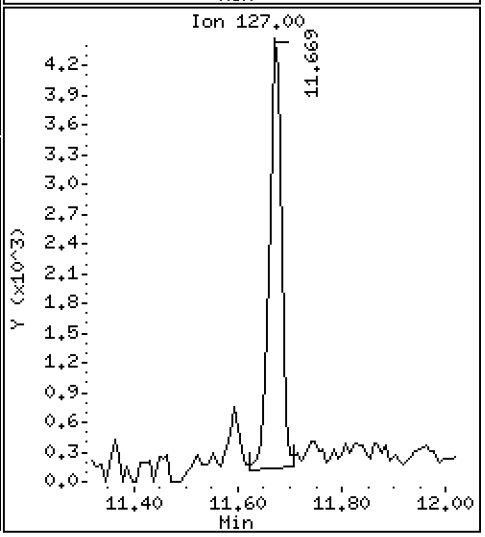


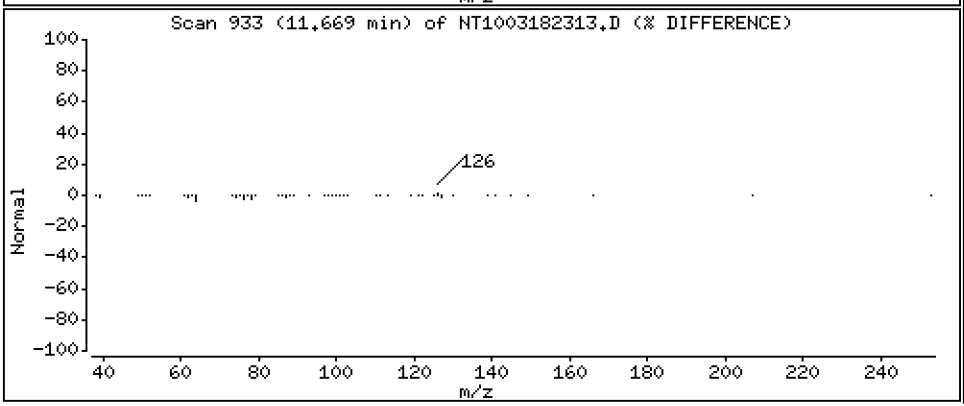












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

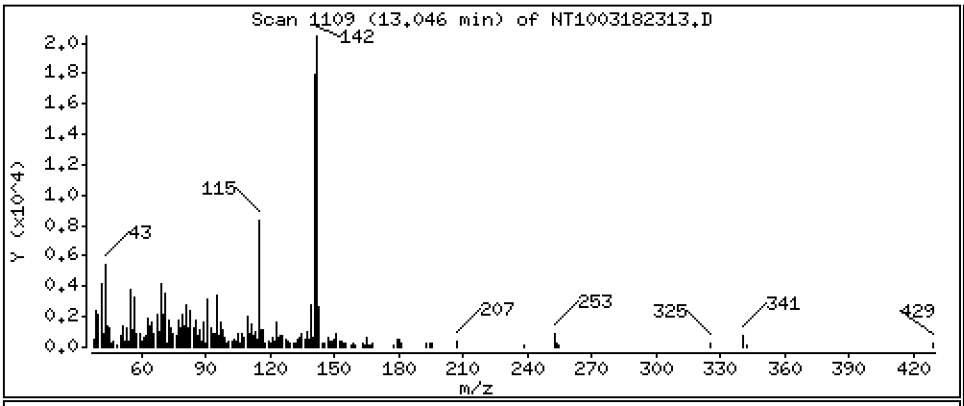
Operator: VTS

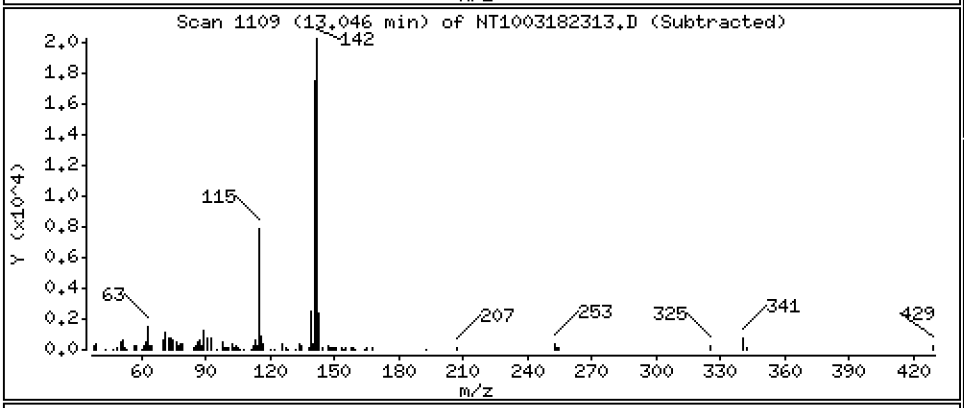
Column phase: ZB-5msi

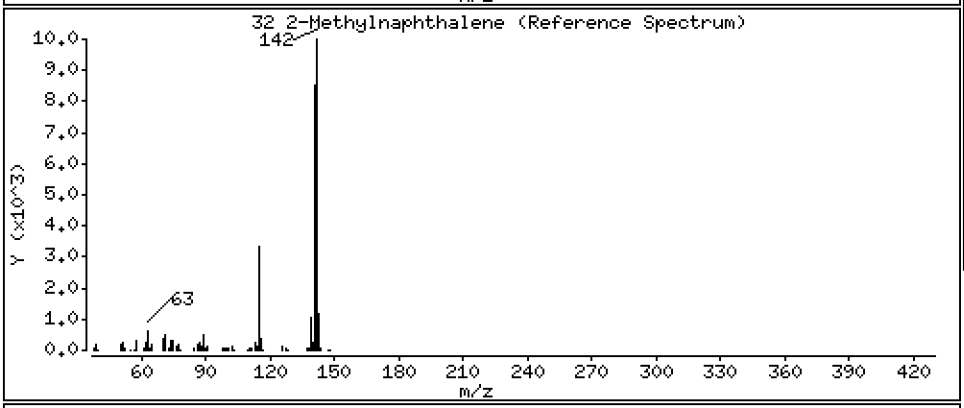
Column diameter: 0.25

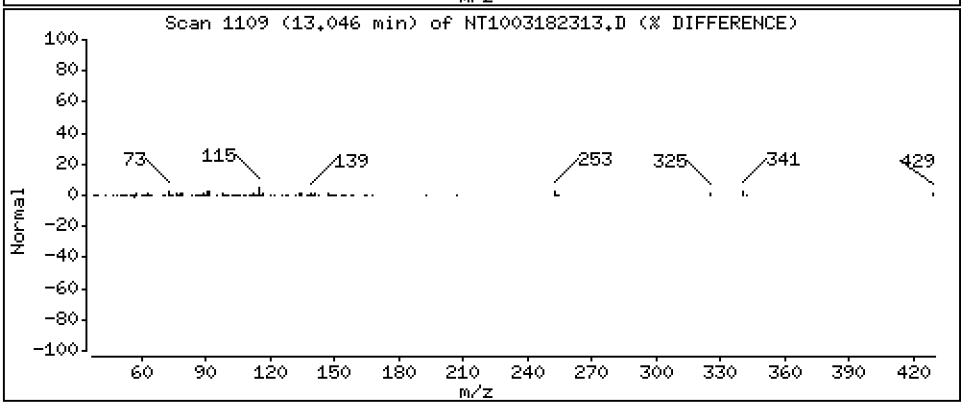
32 2-Methylnaphthalene

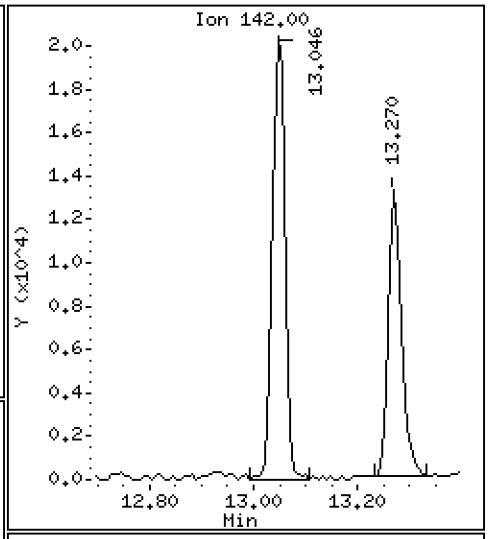
Concentration: 0.1801 ug/mL

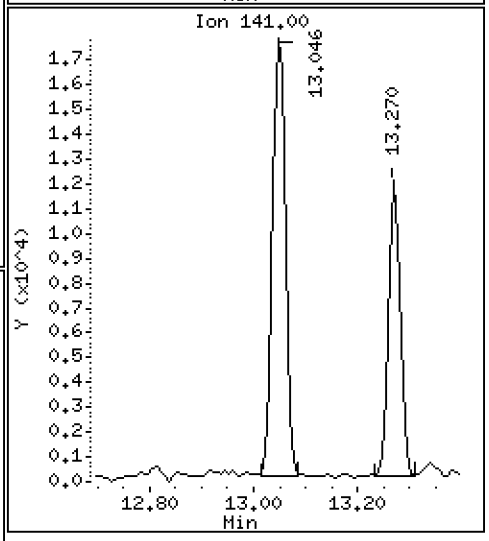












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

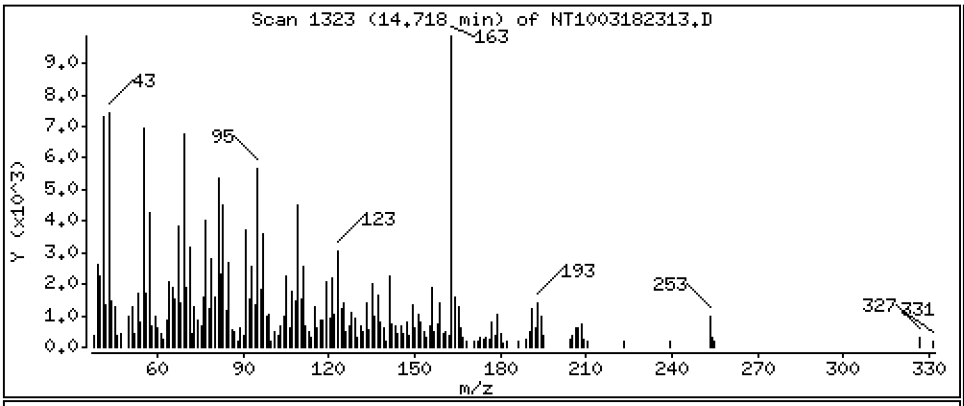
Operator: VTS

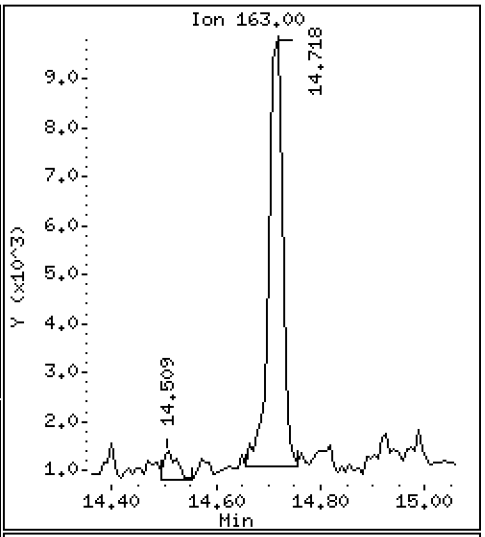
Column phase: ZB-5msi

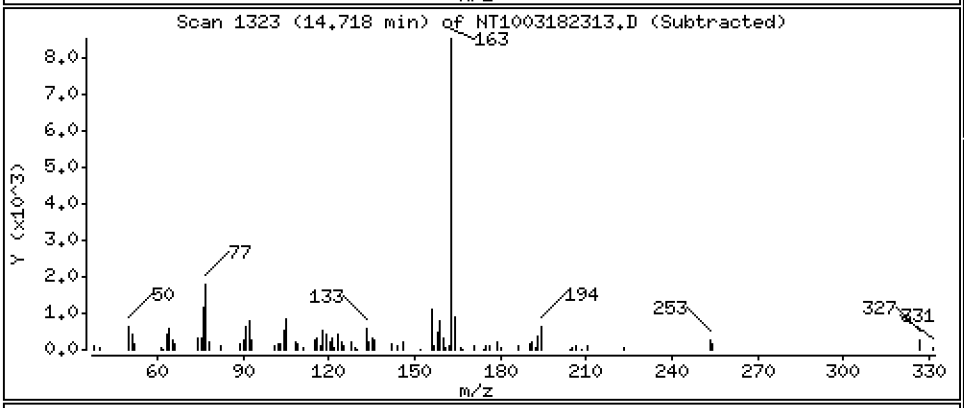
Column diameter: 0.25

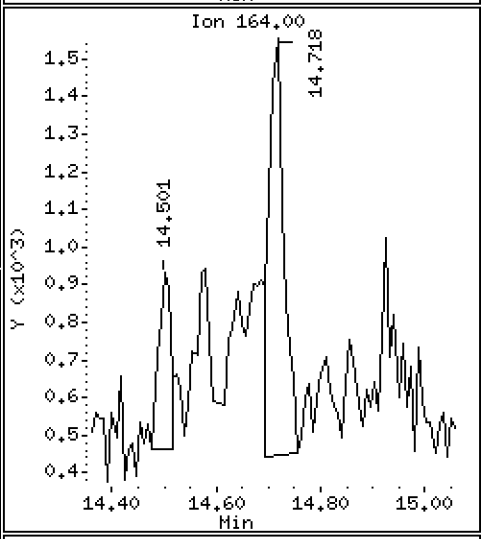
39 Dimethylphthalate

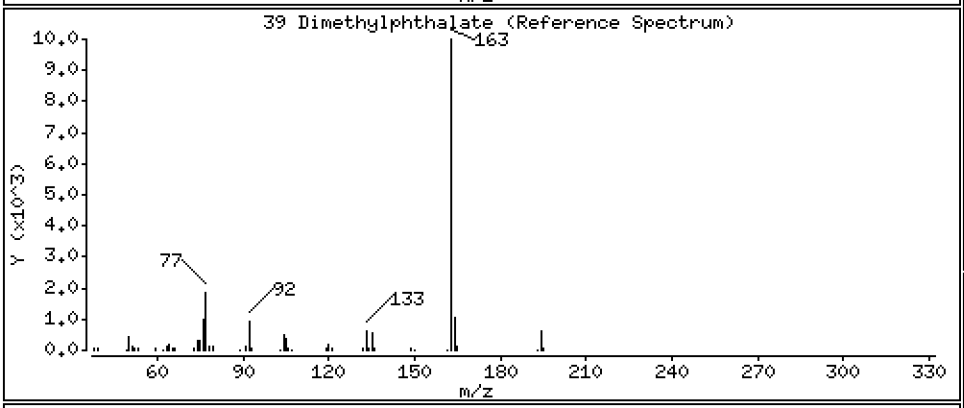
Concentration: 0.09091 ug/mL

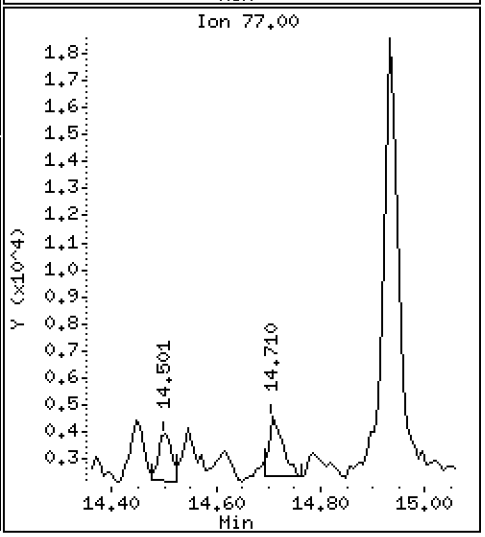


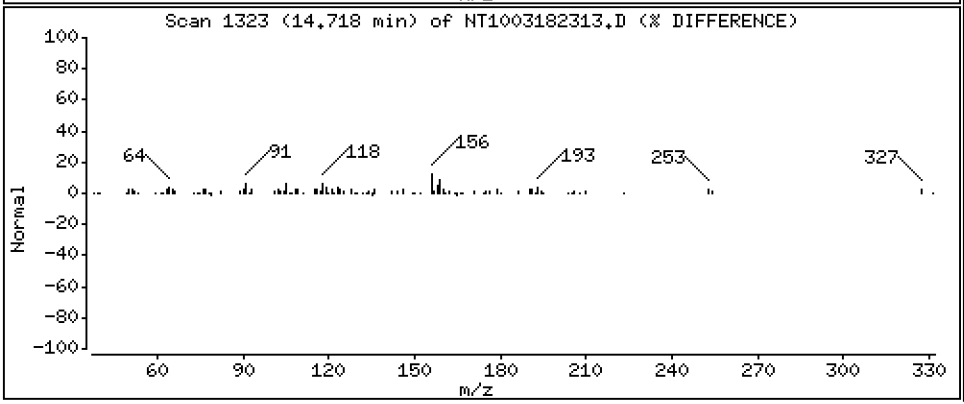












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

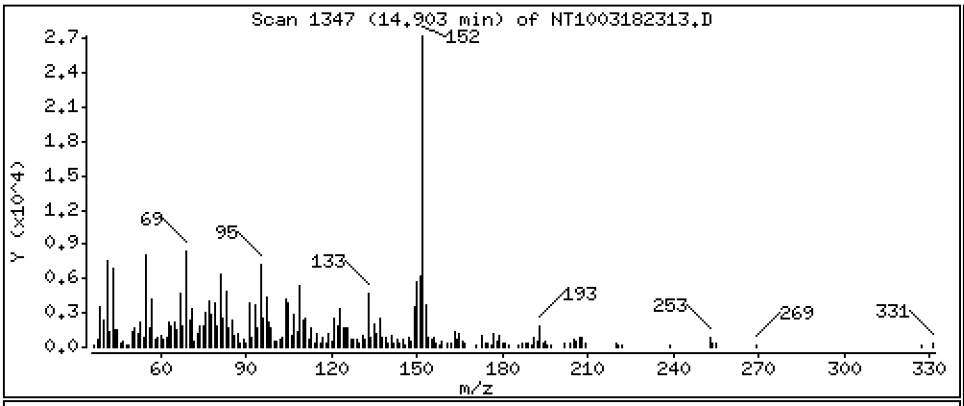
Operator: VTS

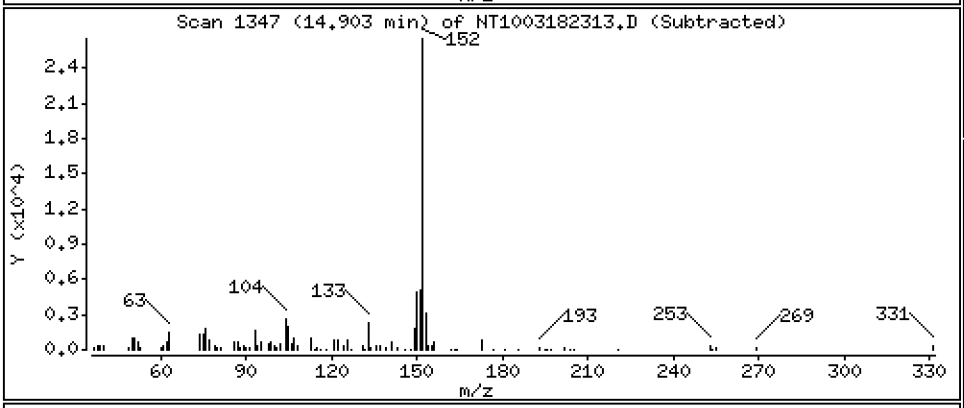
Column phase: ZB-5msi

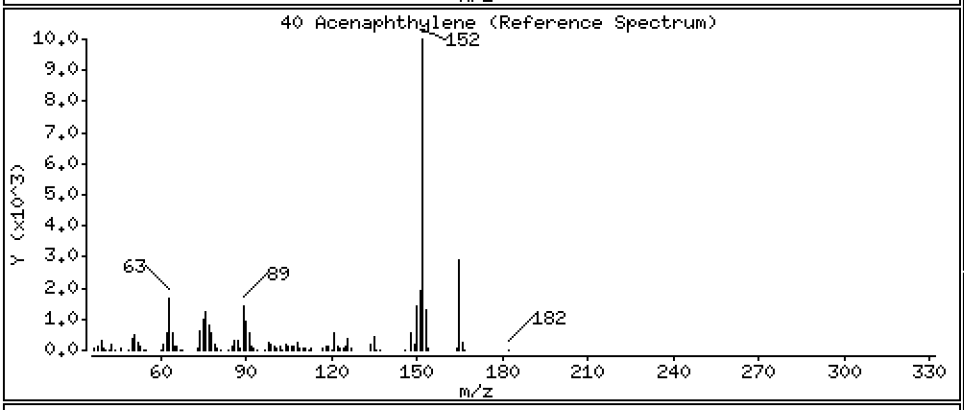
Column diameter: 0.25

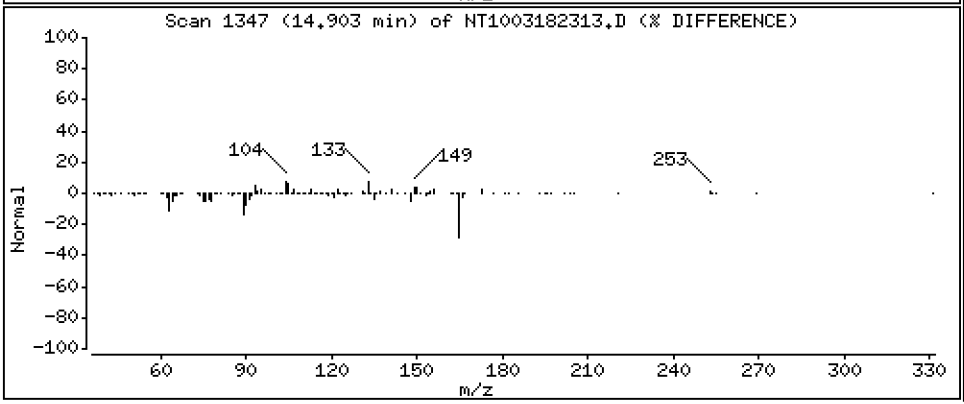
40 Acenaphthylene

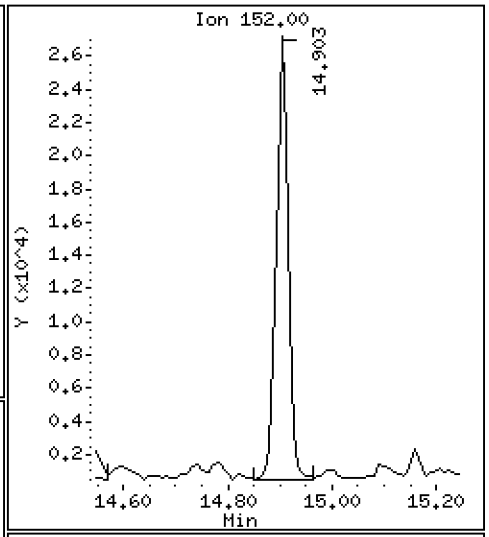
Concentration: 0.1599 ug/mL

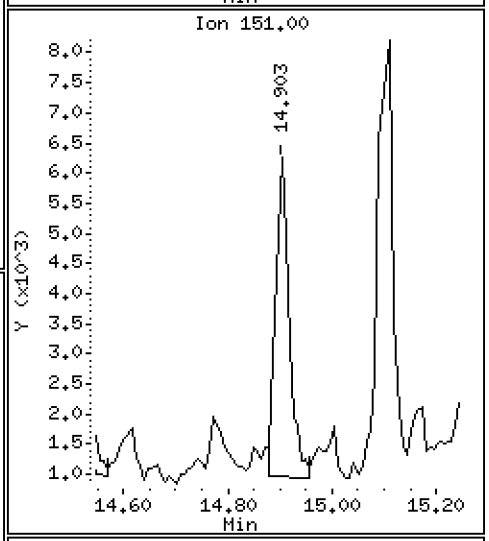


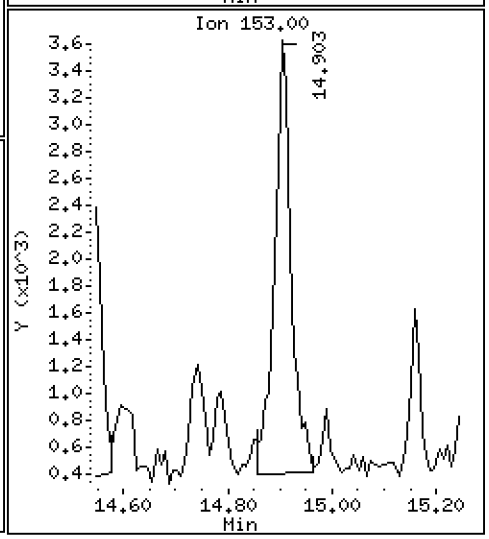












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

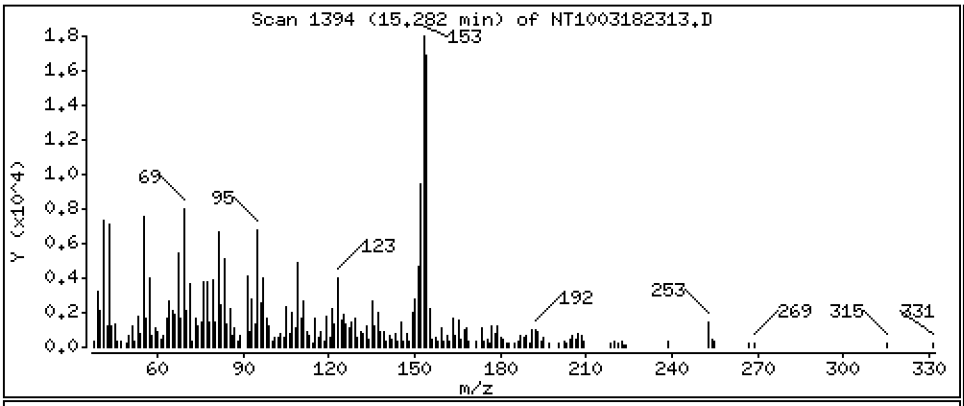
Operator: VTS

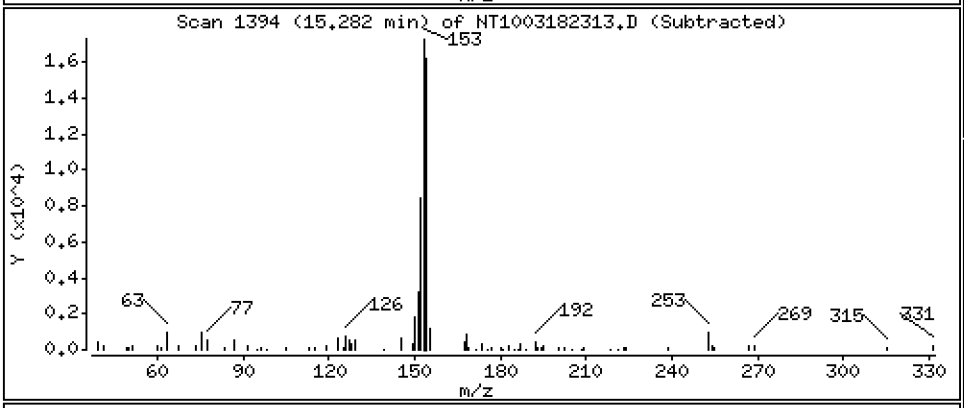
Column phase: ZB-5msi

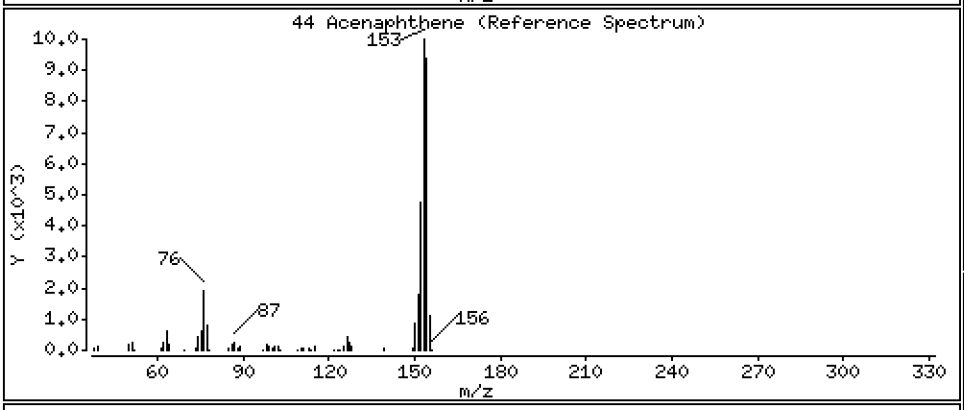
Column diameter: 0.25

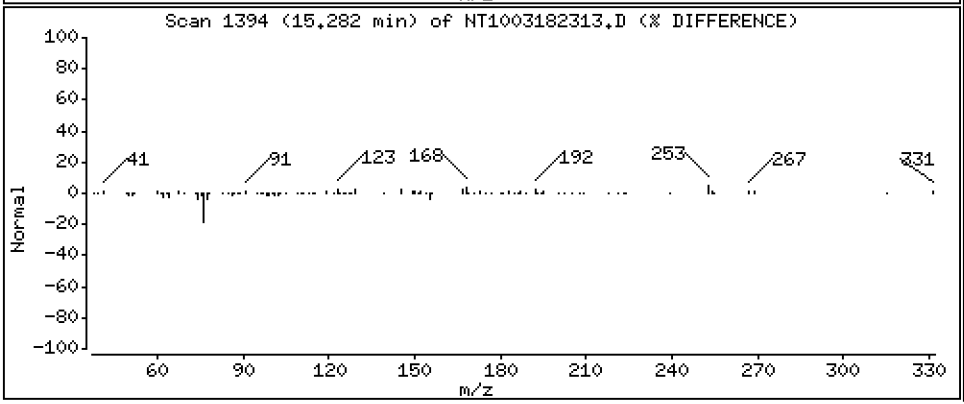
44 Acenaphthene

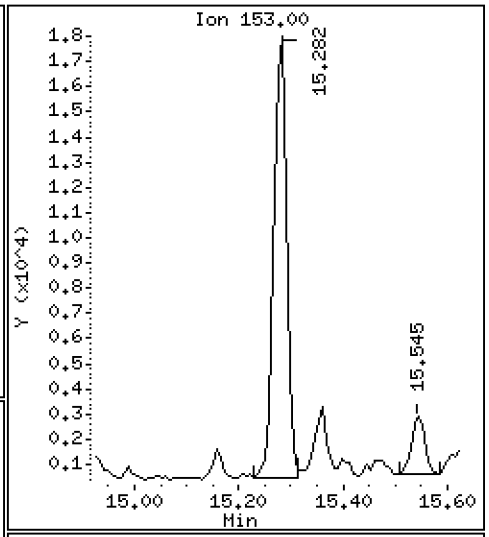
Concentration: 0.1820 ug/mL

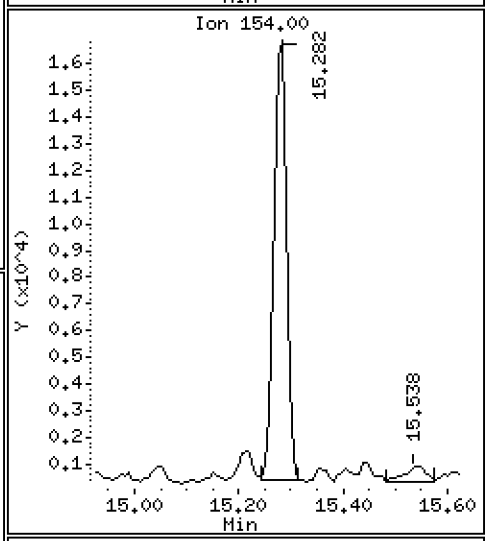


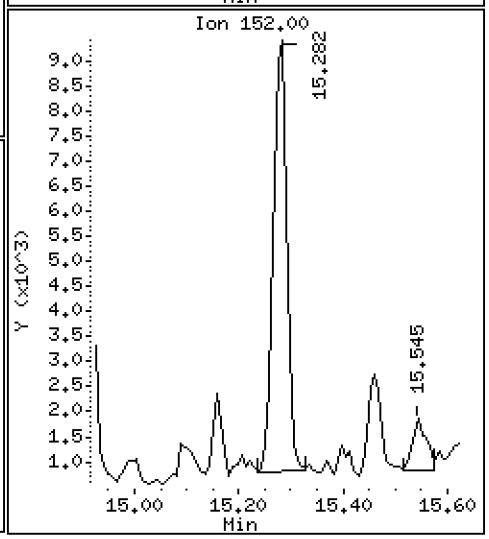












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

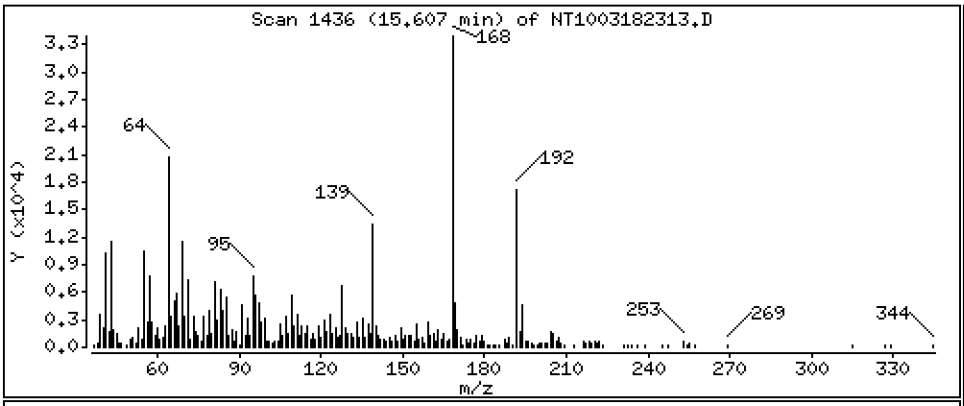
Operator: VTS

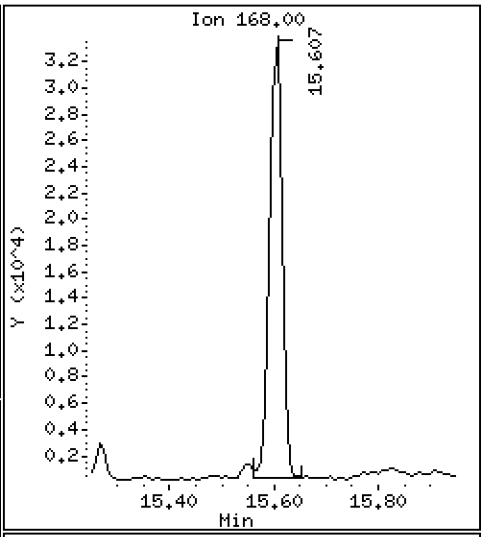
Column phase: ZB-5msi

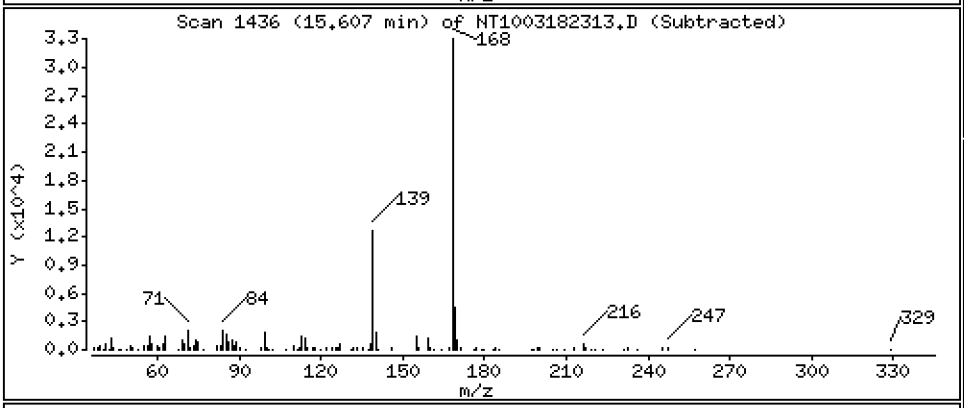
Column diameter: 0.25

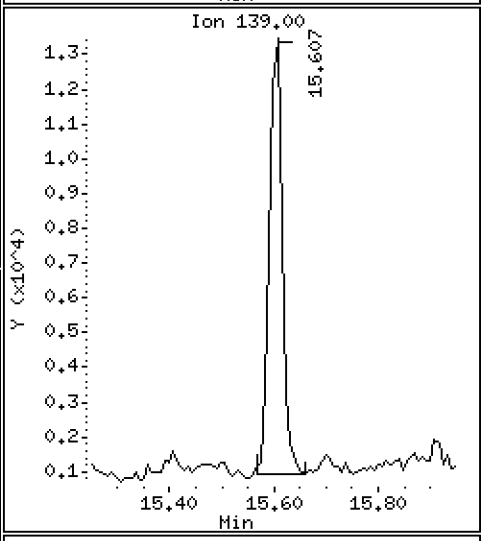
46 Dibenzofuran

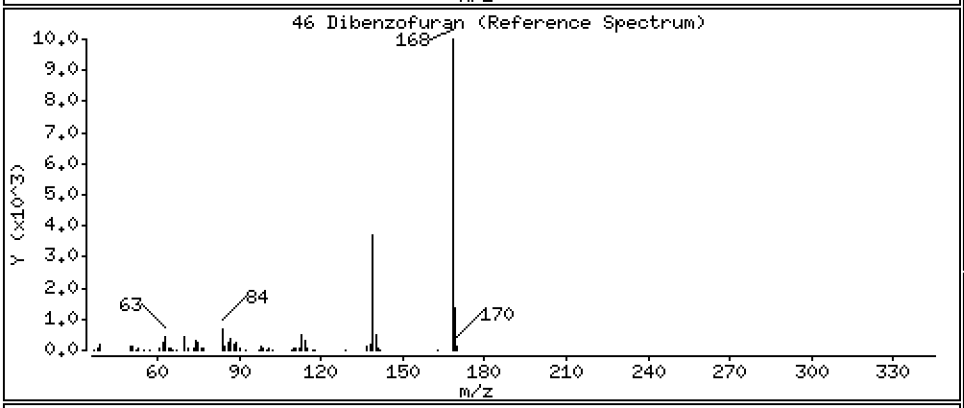
Concentration: 0.2249 ug/mL

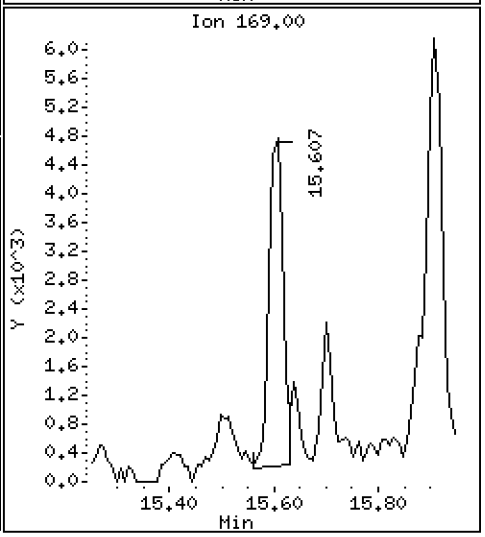


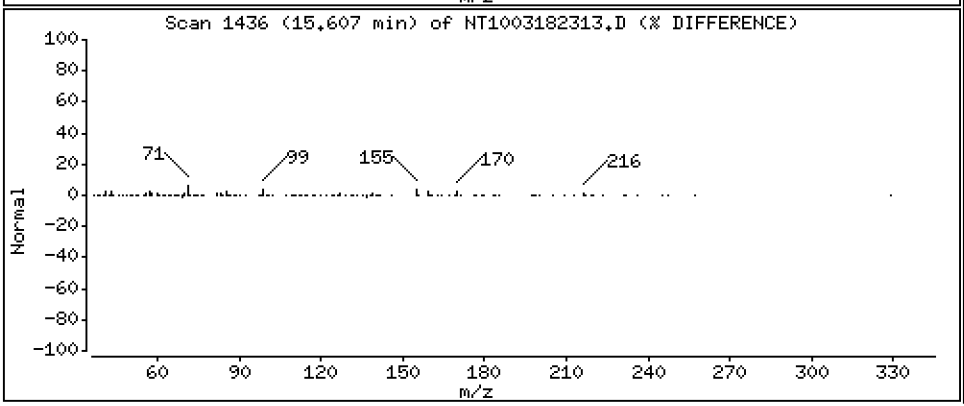












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

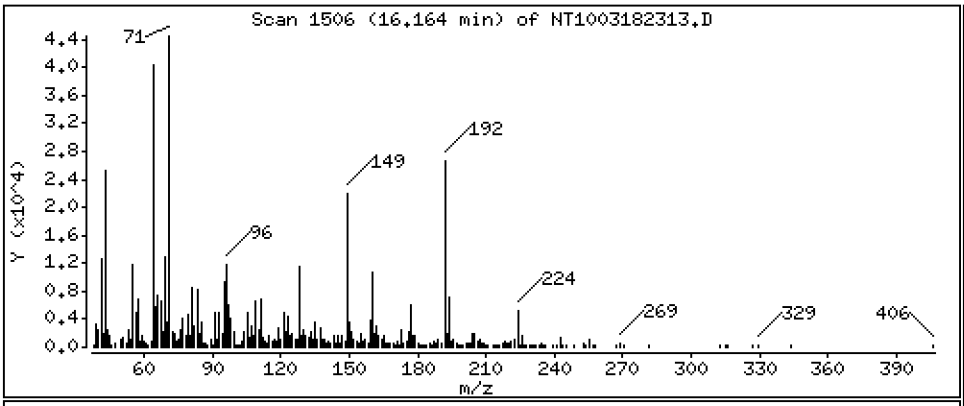
Operator: VTS

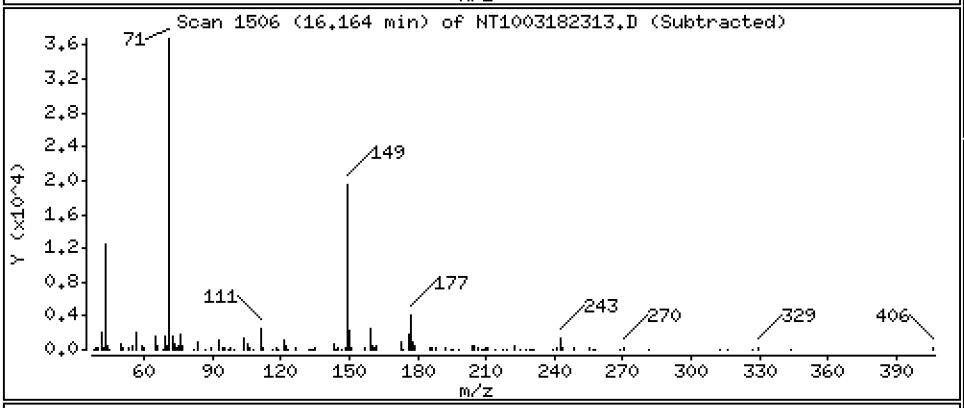
Column phase: ZB-5msi

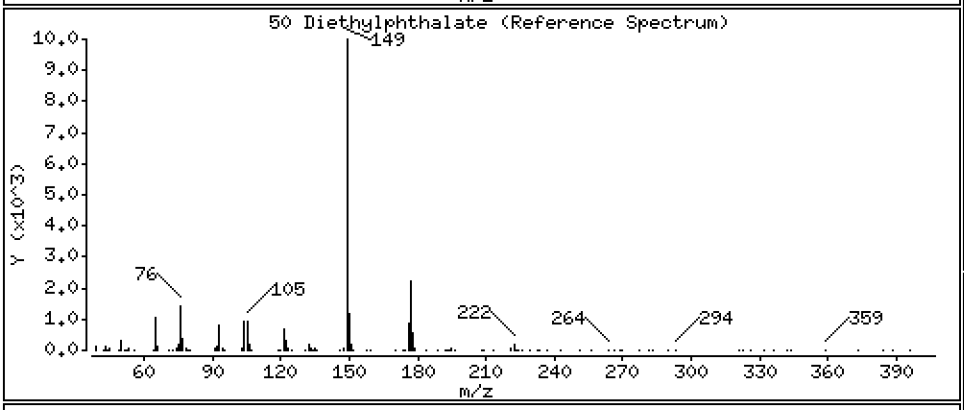
Column diameter: 0.25

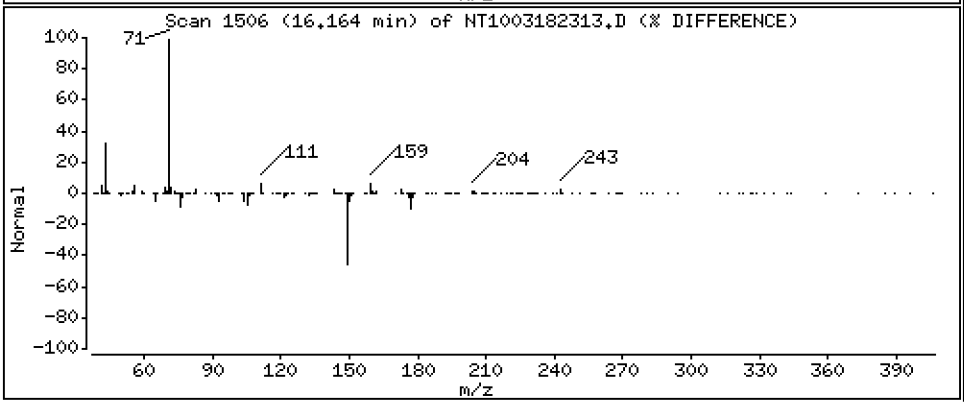
50 Diethylphthalate

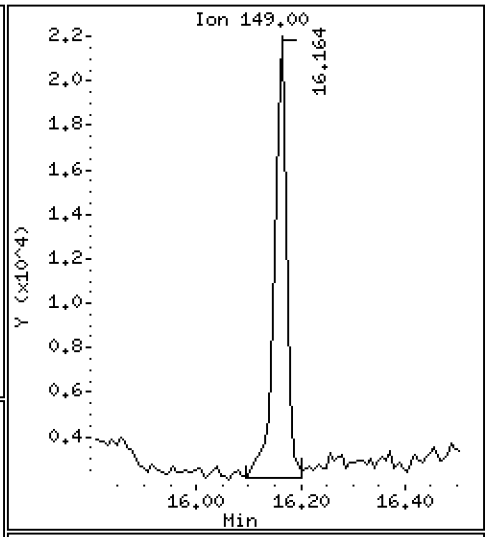
Concentration: 0.2195 ug/mL

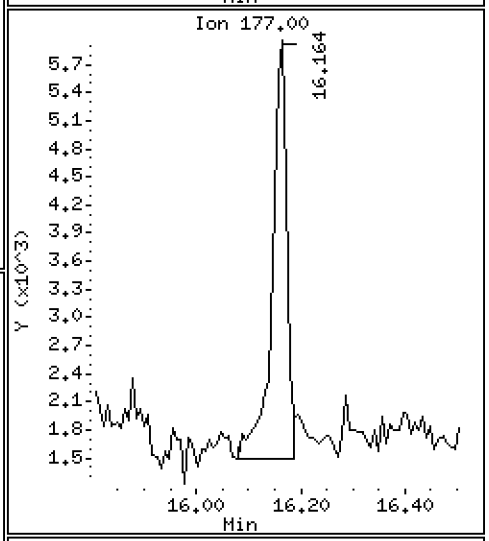


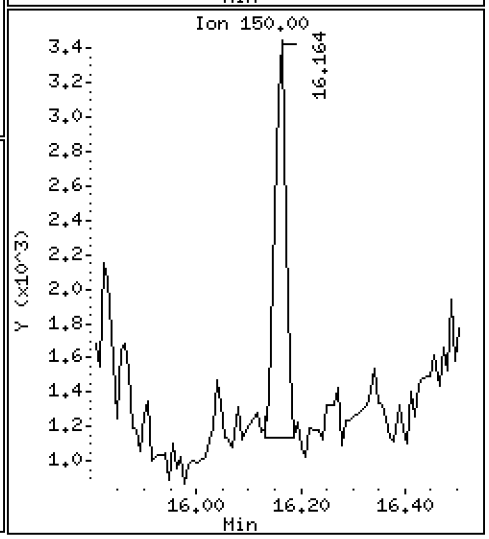












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

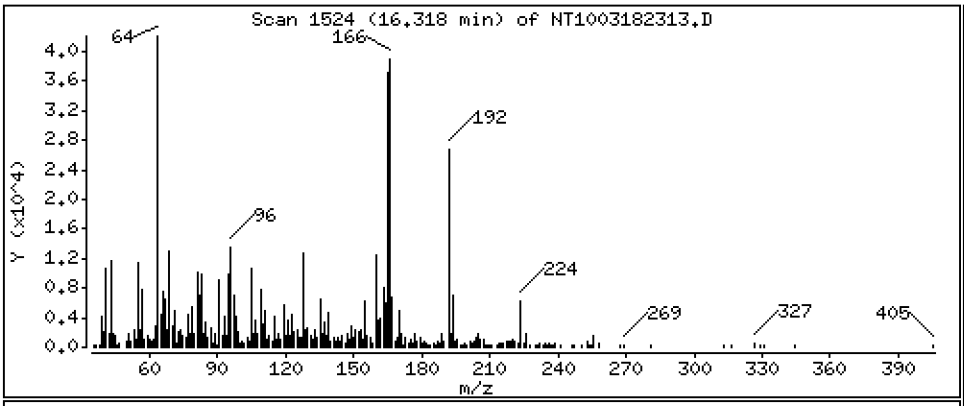
Operator: VTS

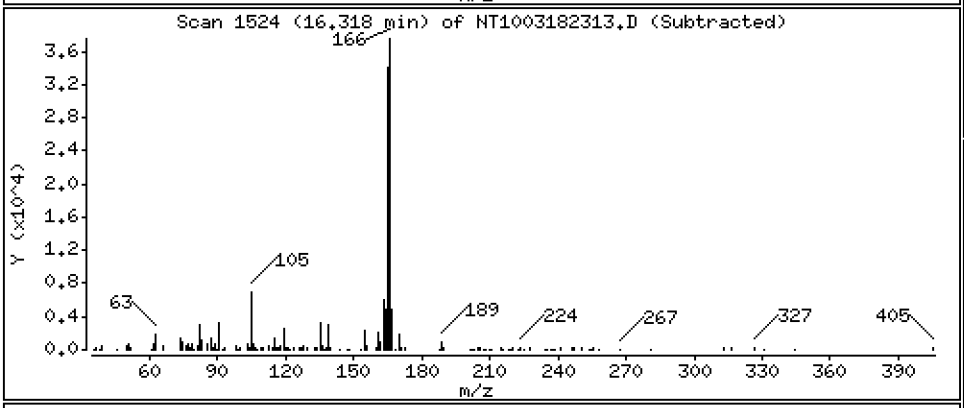
Column phase: ZB-5msi

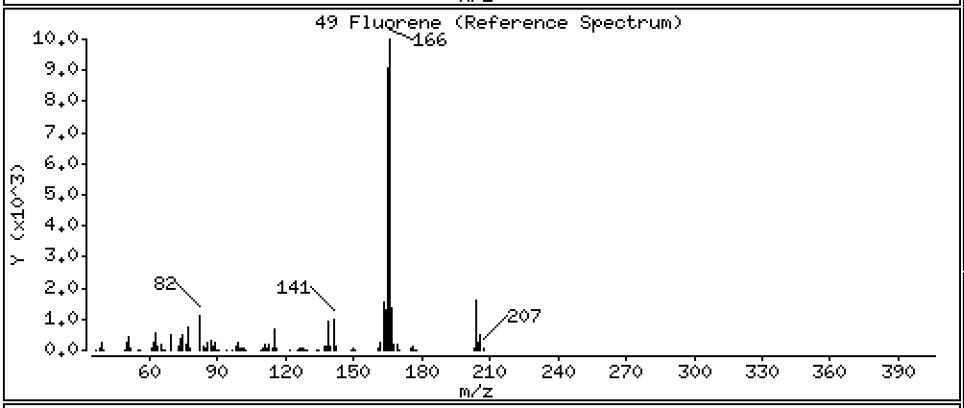
Column diameter: 0.25

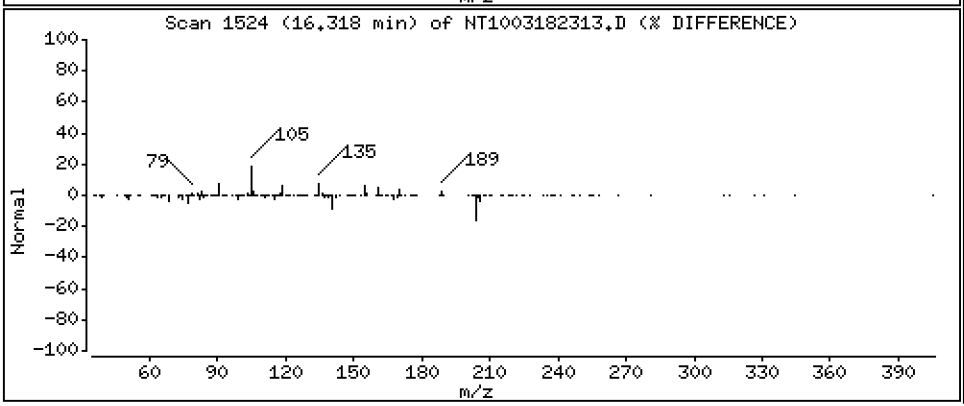
49 Fluorene

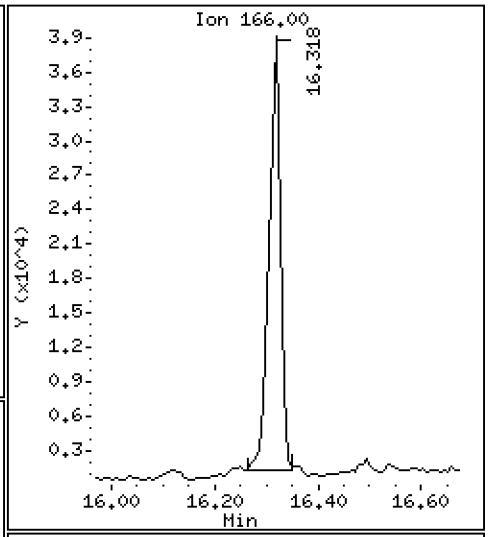
Concentration: 0.2328 ug/mL

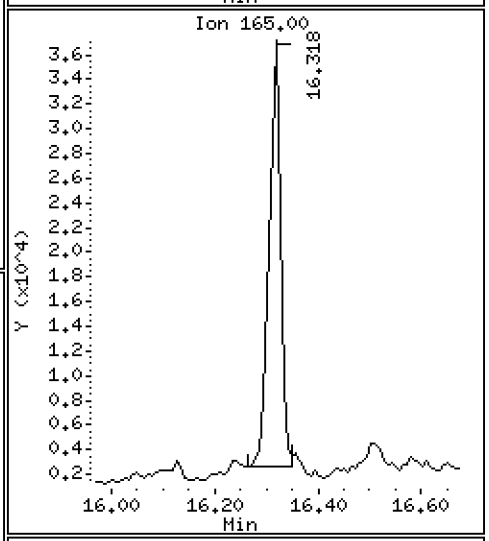


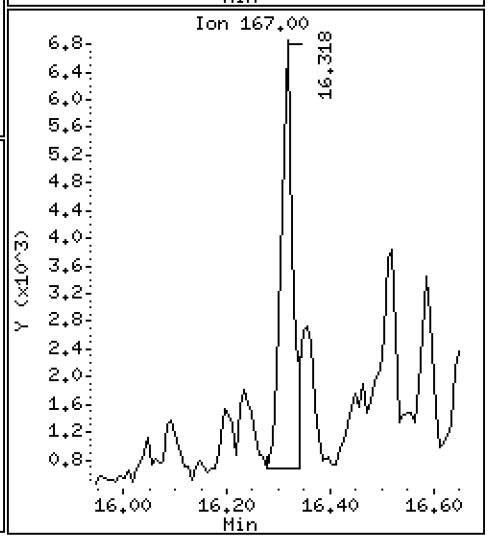












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

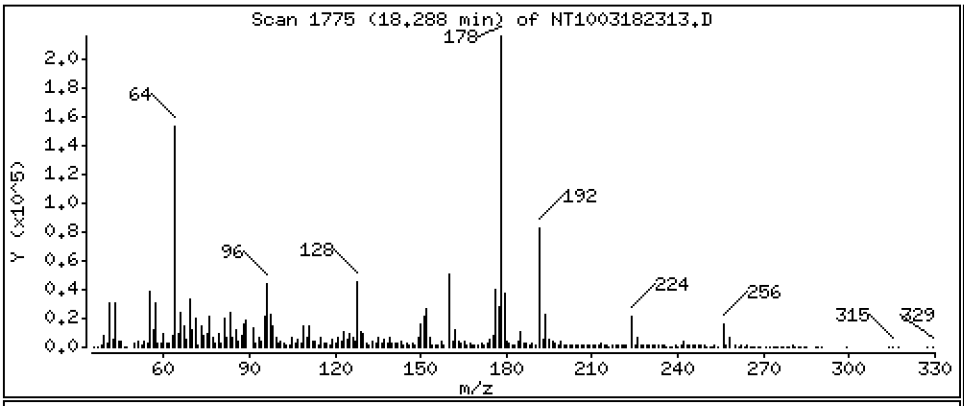
Operator: VTS

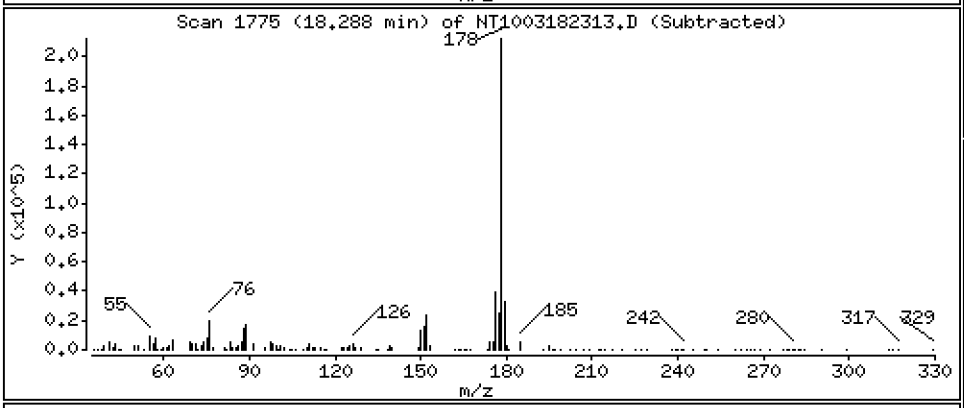
Column phase: ZB-5msi

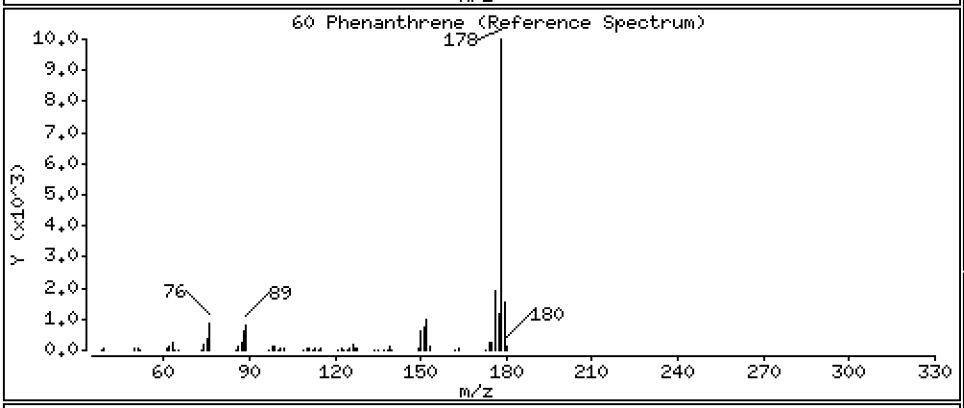
Column diameter: 0.25

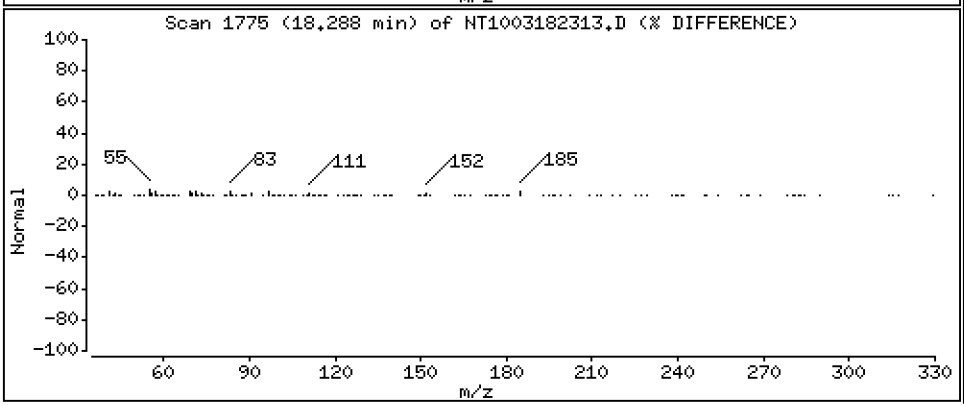
60 Phenanthrene

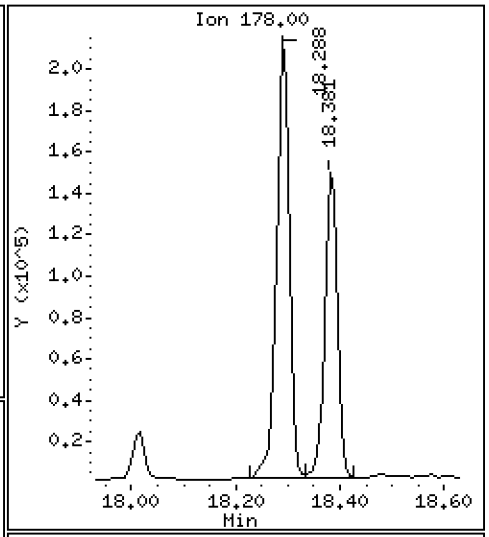
Concentration: 1.380 ug/mL

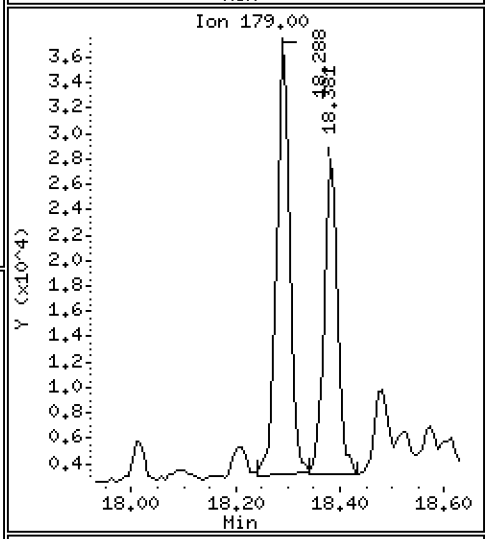


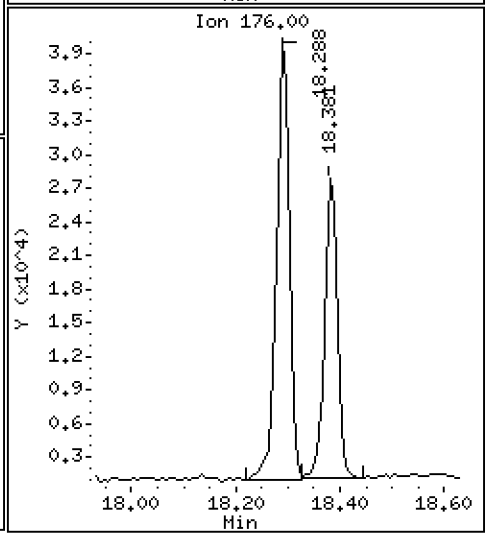












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

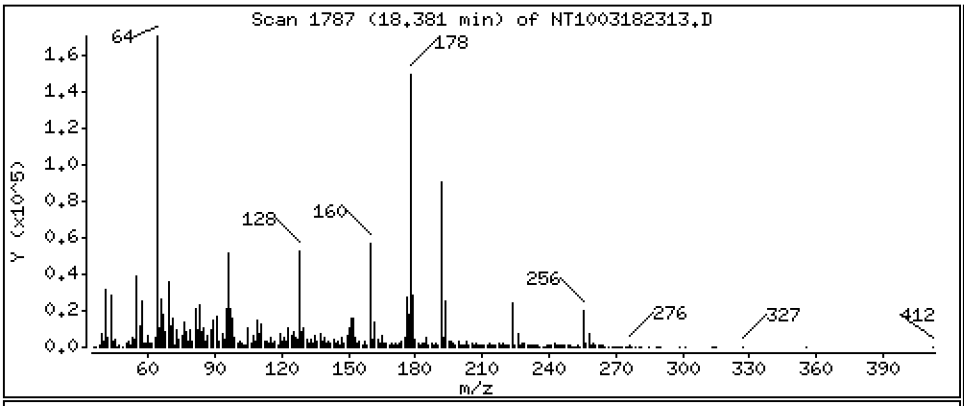
Operator: VTS

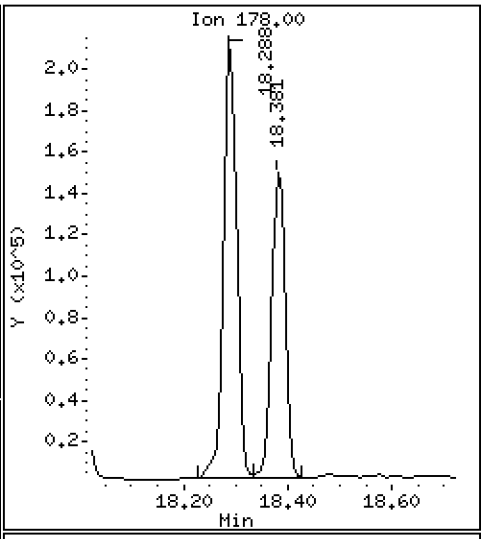
Column phase: ZB-5msi

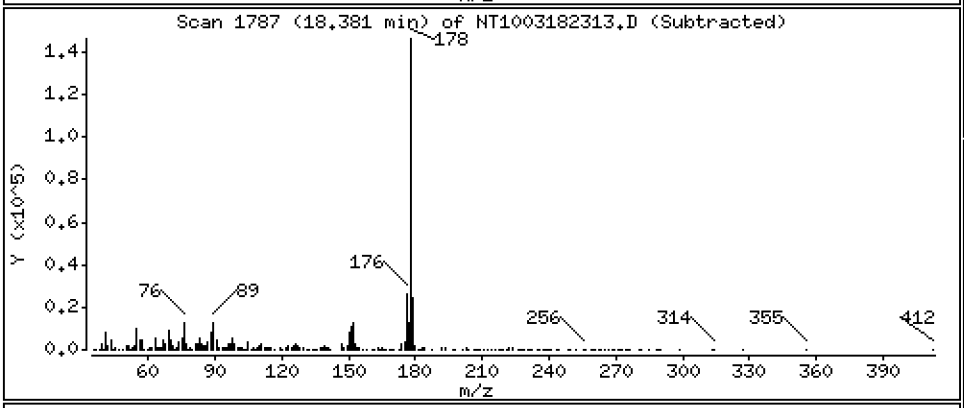
Column diameter: 0.25

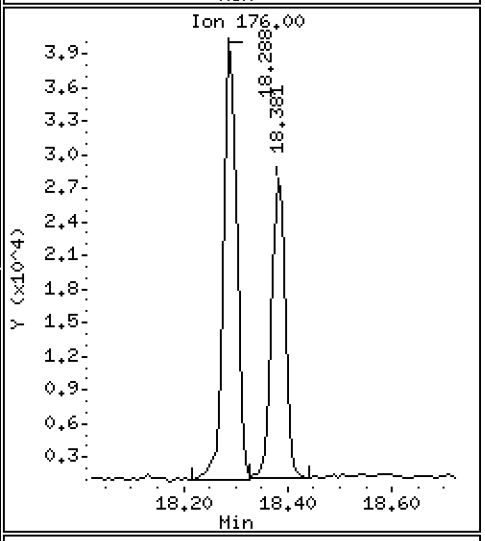
61 Anthracene

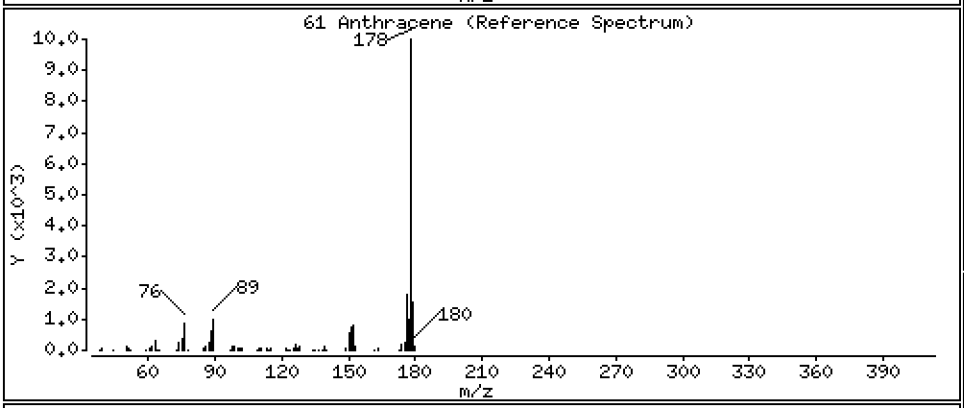
Concentration: 1.013 ug/mL

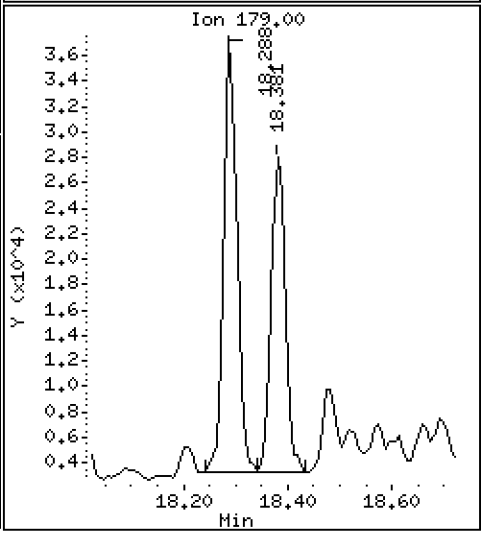


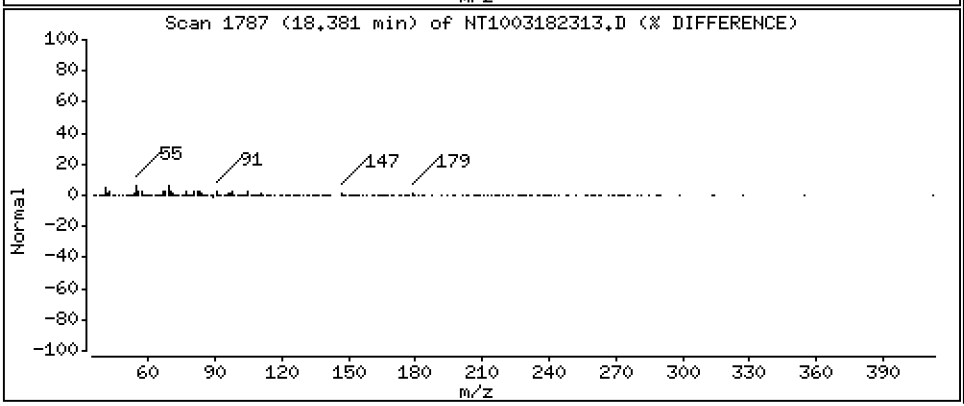












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

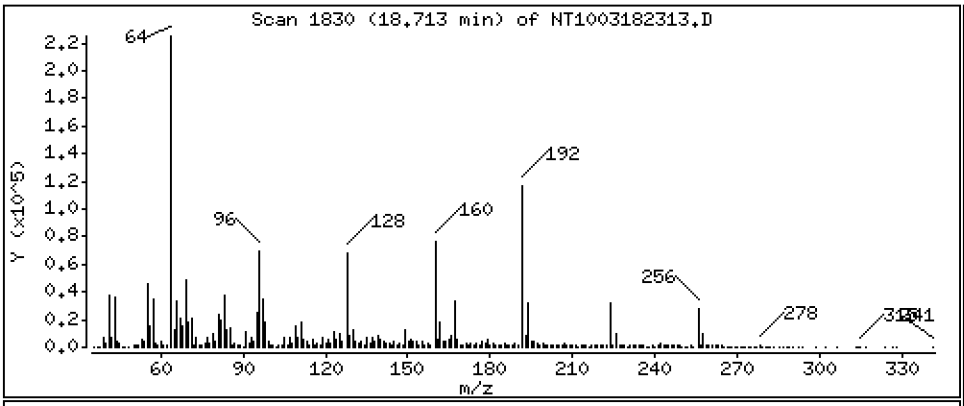
Operator: VTS

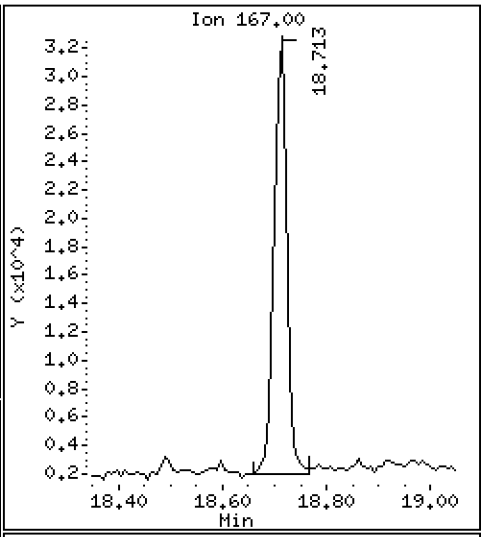
Column phase: ZB-5msi

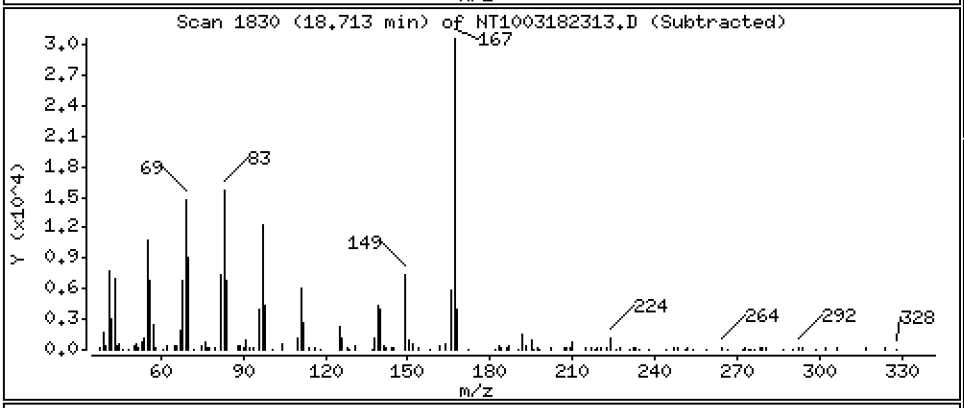
Column diameter: 0.25

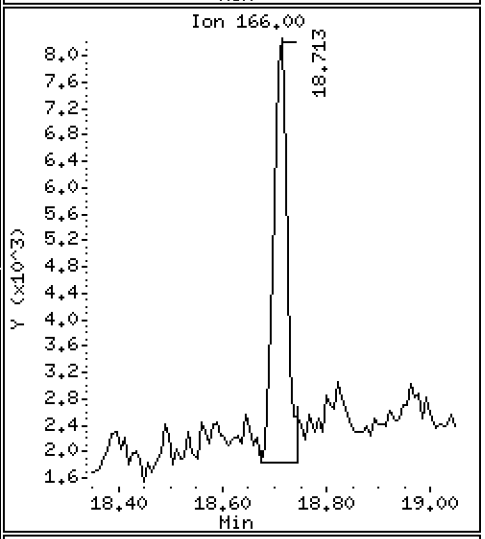
62 Carbazole

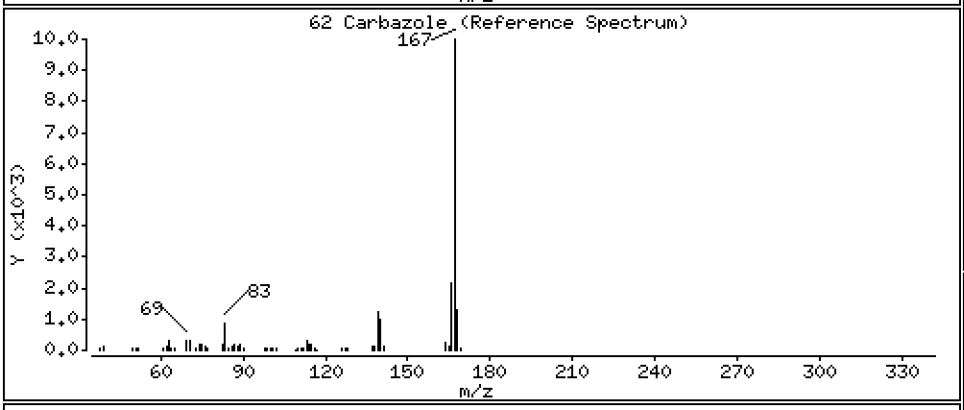
Concentration: 0.2275 ug/mL

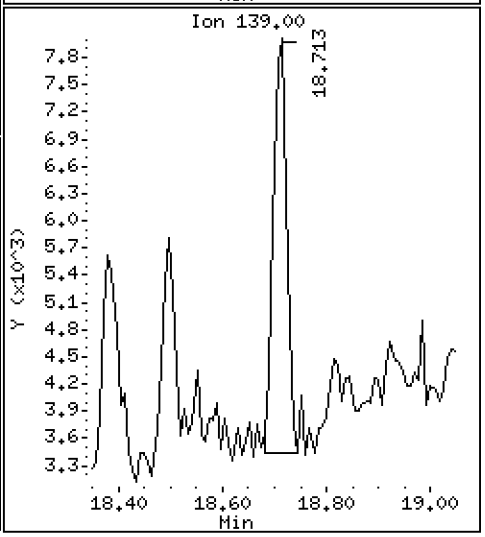


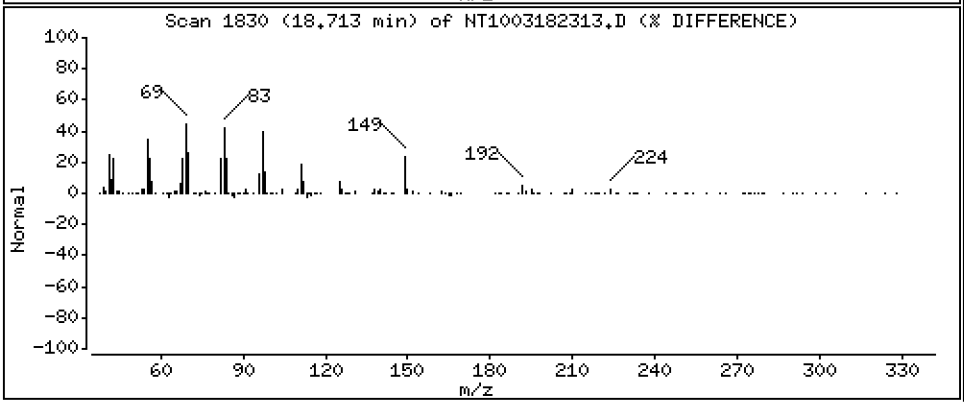












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

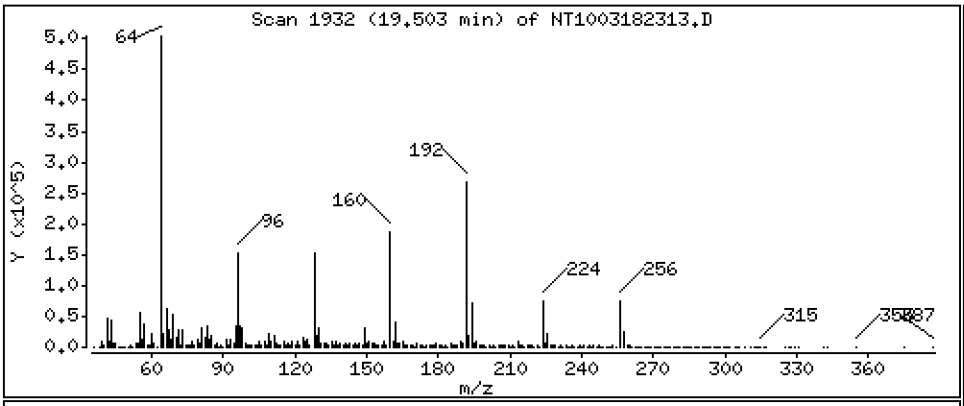
Operator: VTS

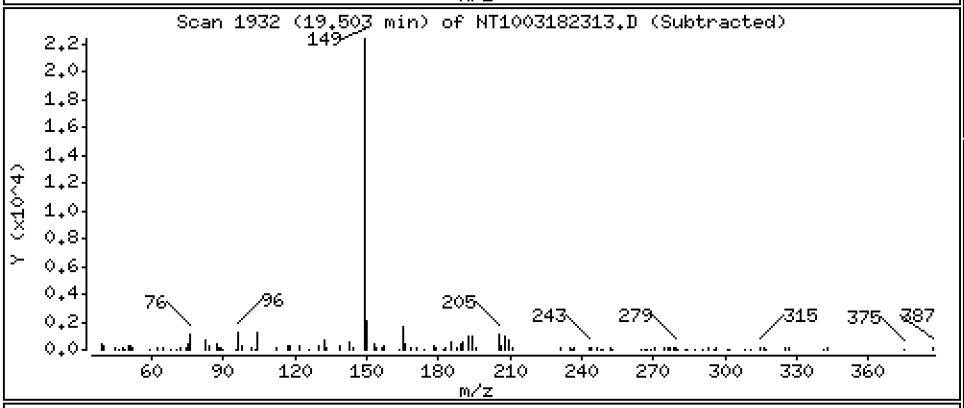
Column phase: ZB-5msi

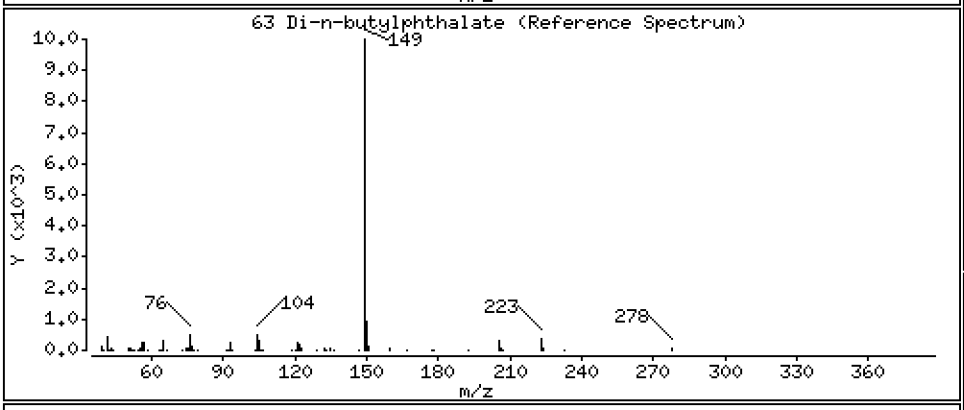
Column diameter: 0.25

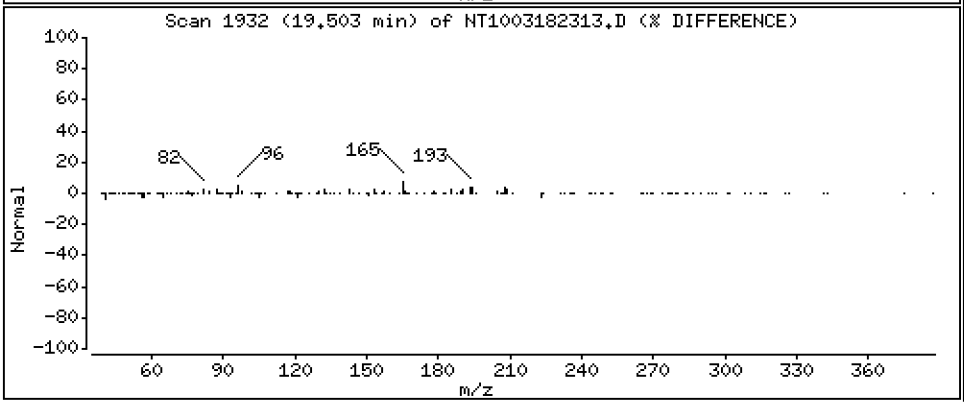
63 Di-n-butylphthalate

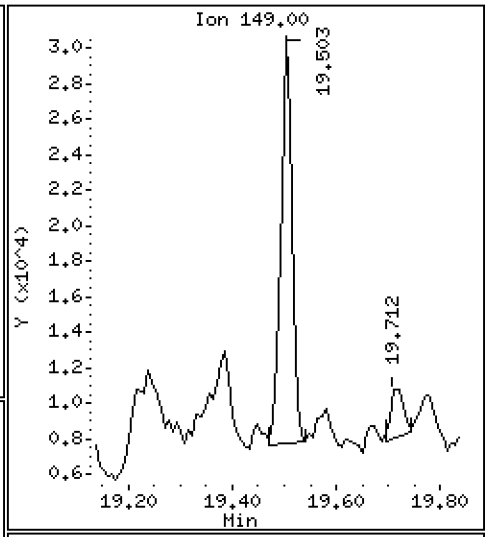
Concentration: 0.1111 ug/mL

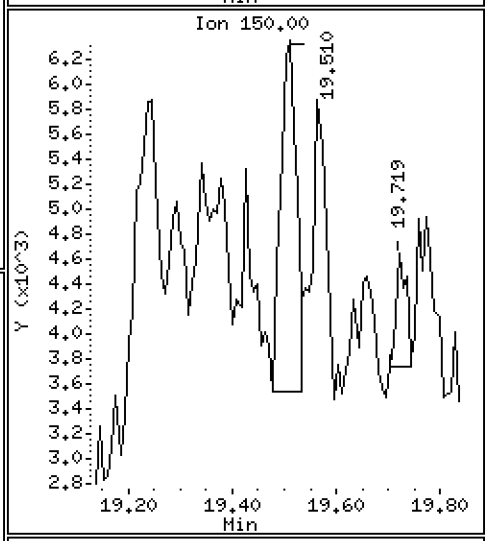


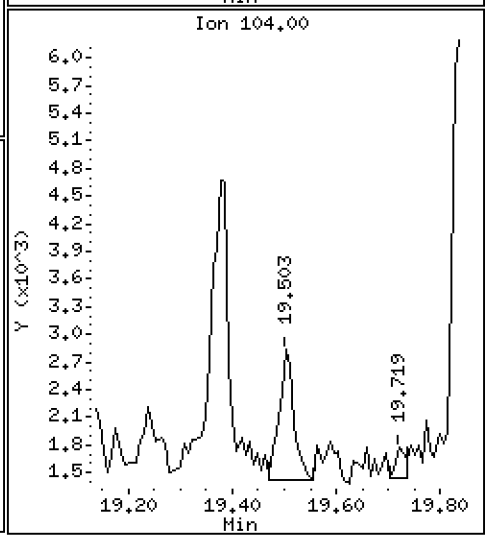












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

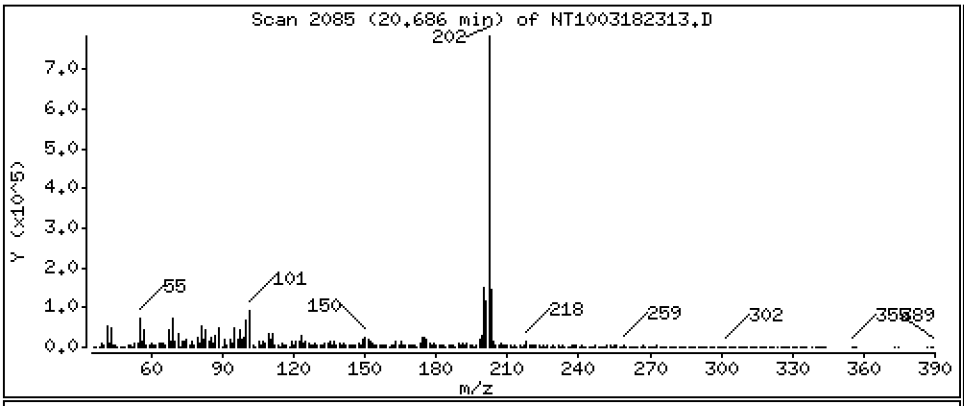
Operator: VTS

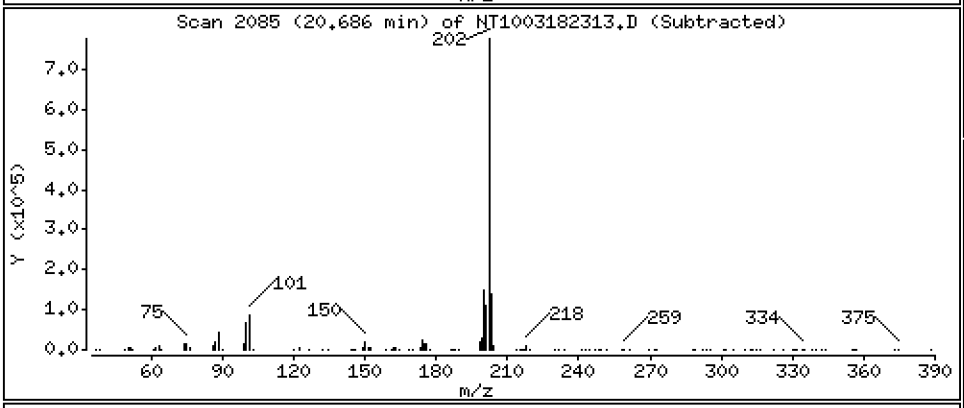
Column phase: ZB-5msi

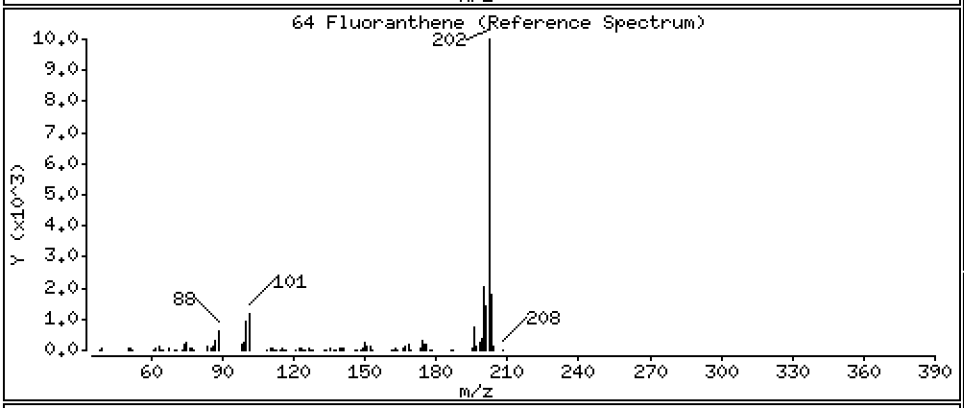
Column diameter: 0.25

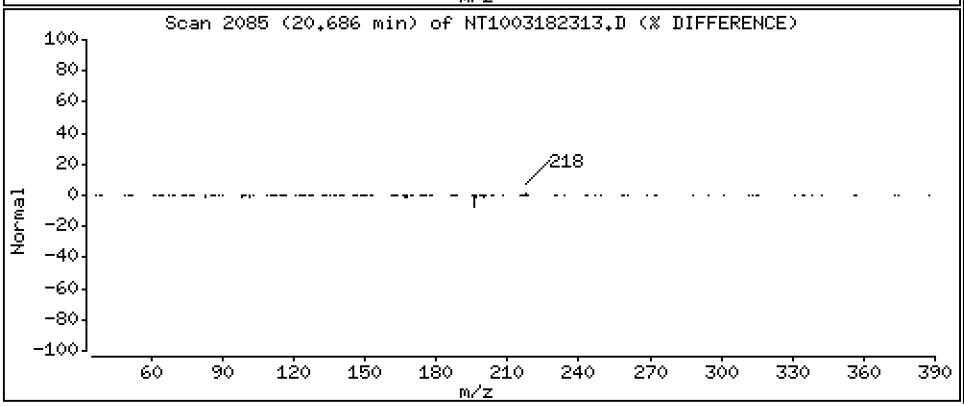
64 Fluoranthene

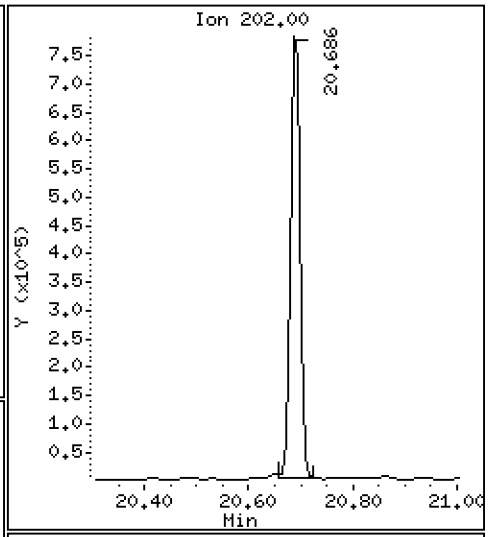
Concentration: 3.185 ug/mL

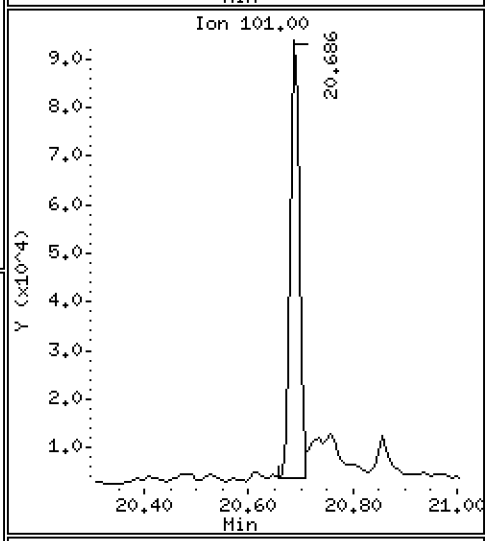


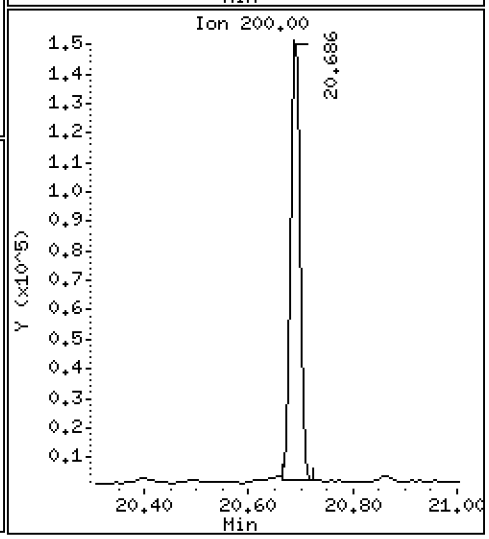












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

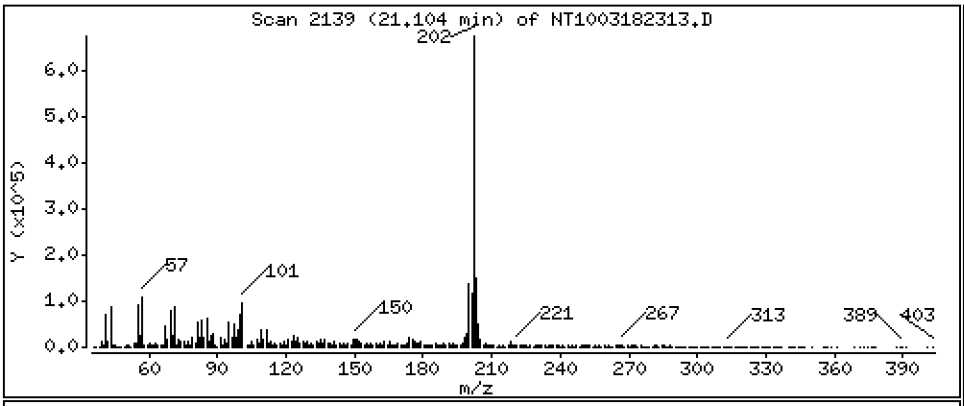
Operator: VTS

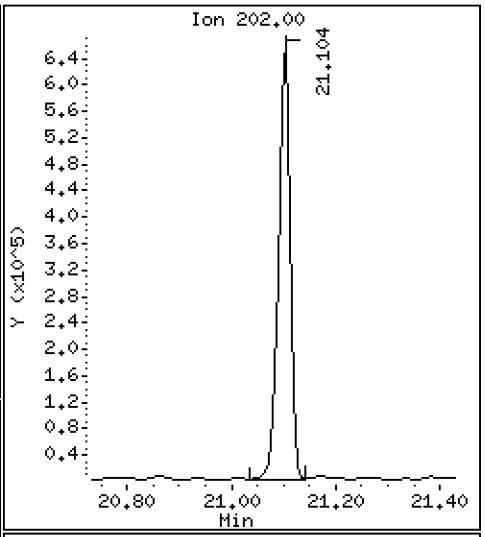
Column phase: ZB-5msi

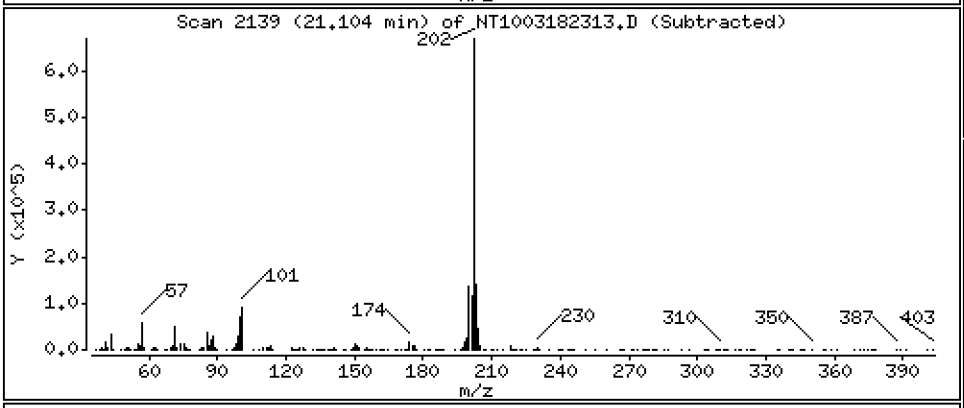
Column diameter: 0.25

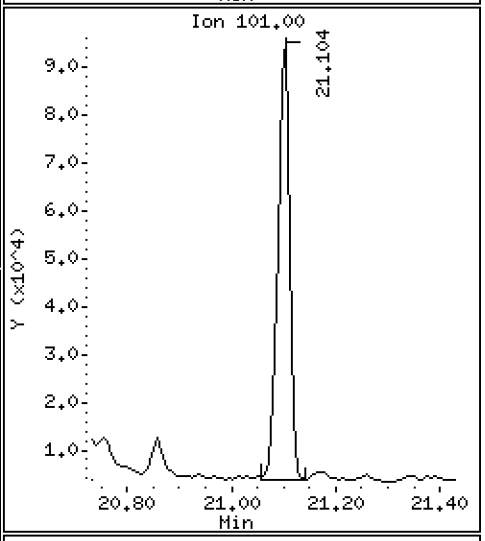
65 Pyrene

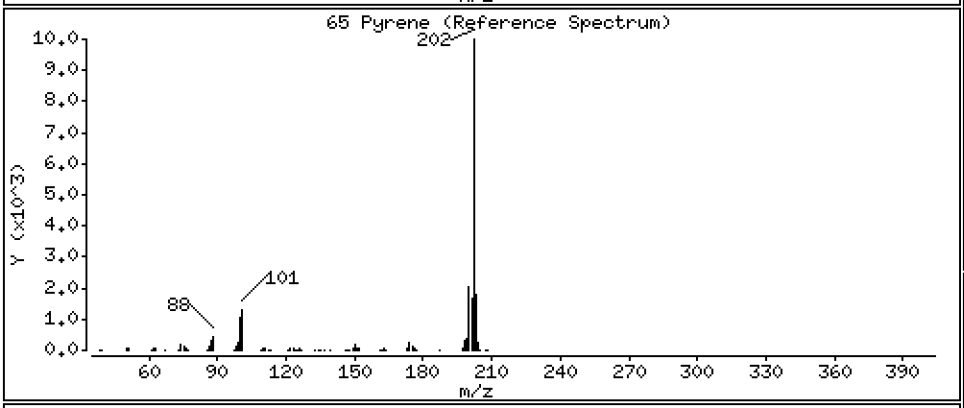
Concentration: 3.041 ug/mL

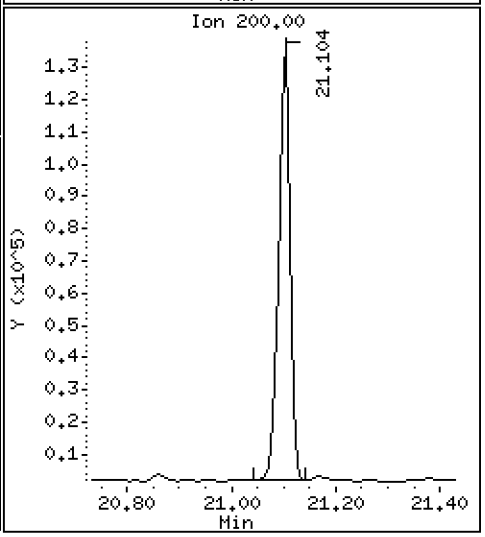


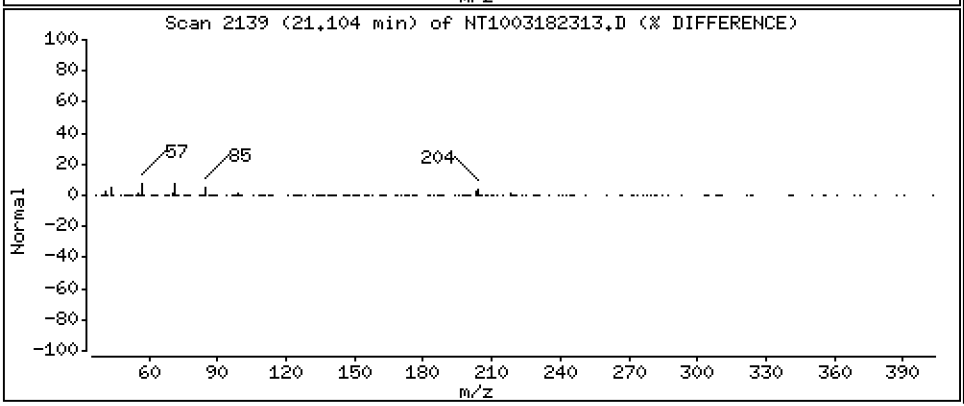












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

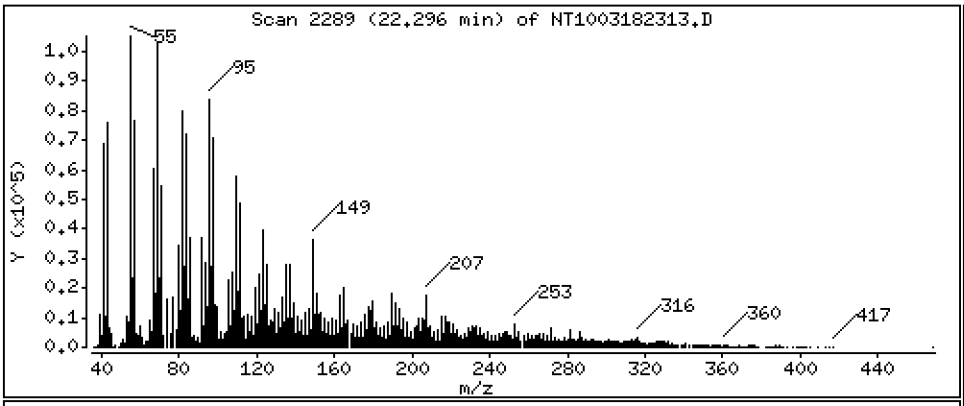
Operator: VTS

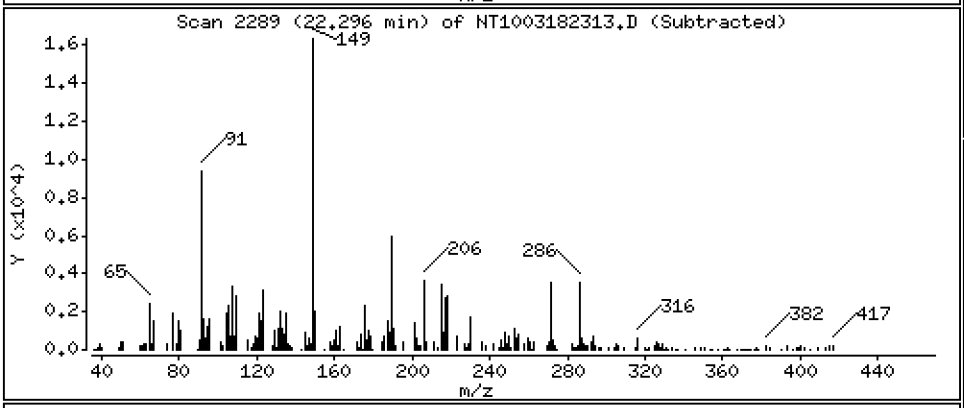
Column phase: ZB-5msi

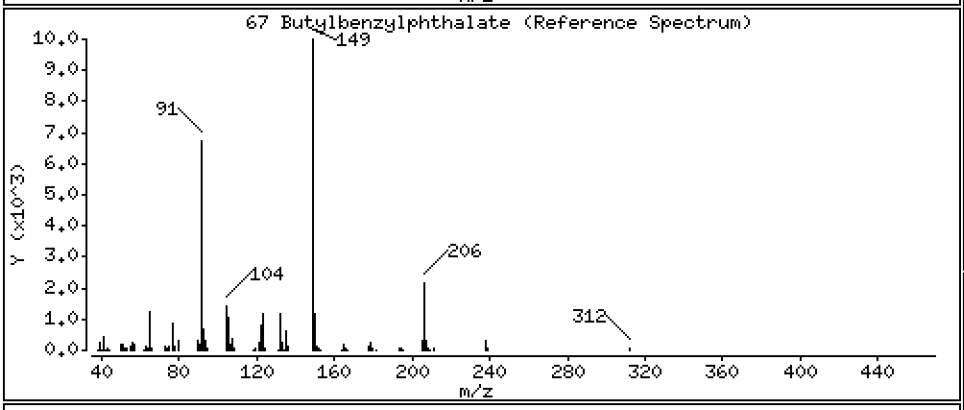
Column diameter: 0.25

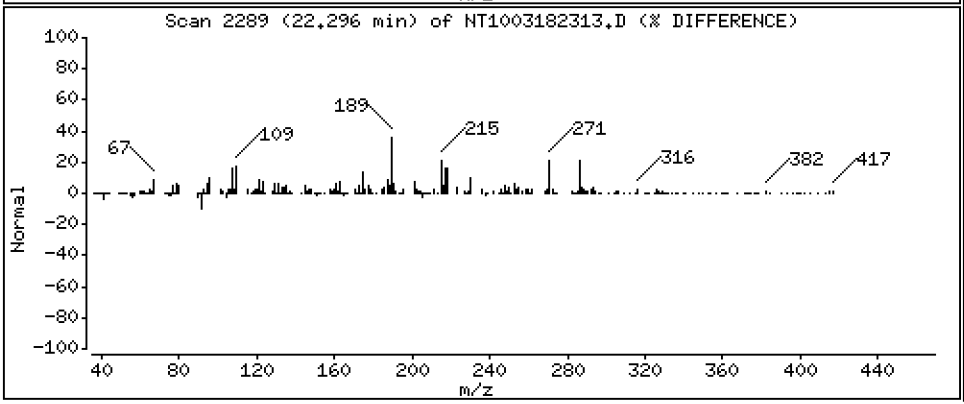
67 Butylbenzylphthalate

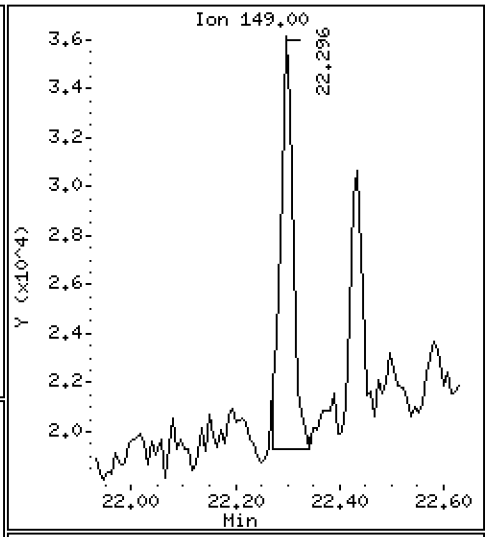
Concentration: 0.2389 ug/mL

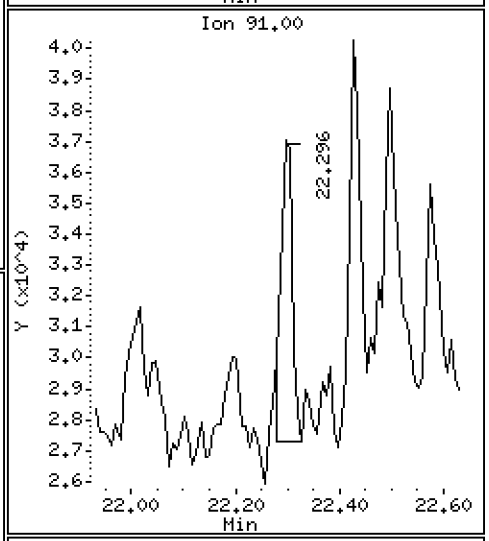


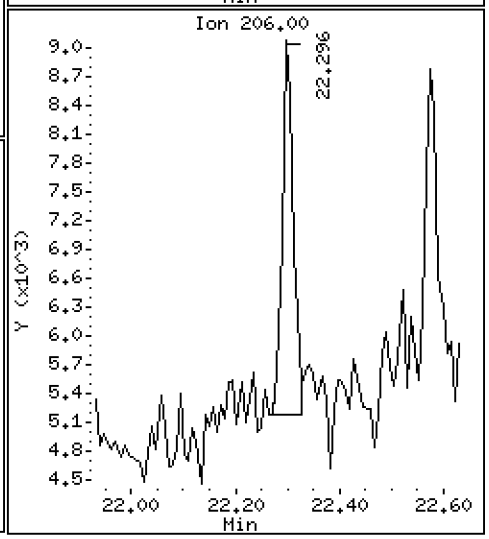












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

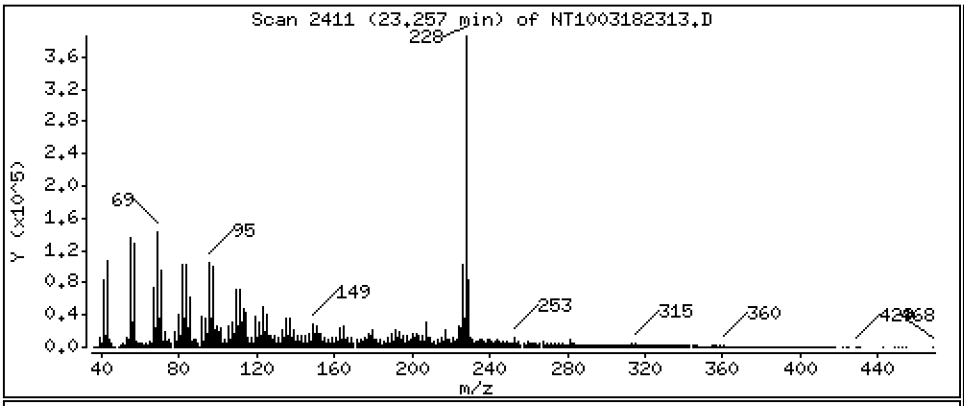
Operator: VTS

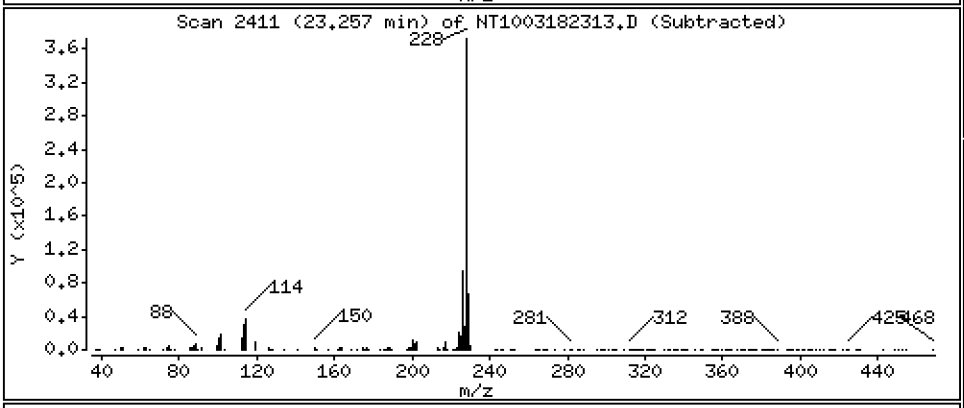
Column phase: ZB-5msi

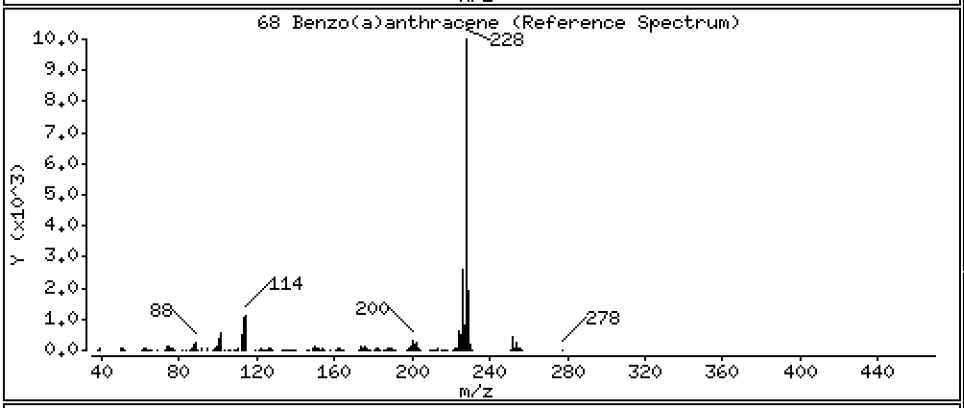
Column diameter: 0.25

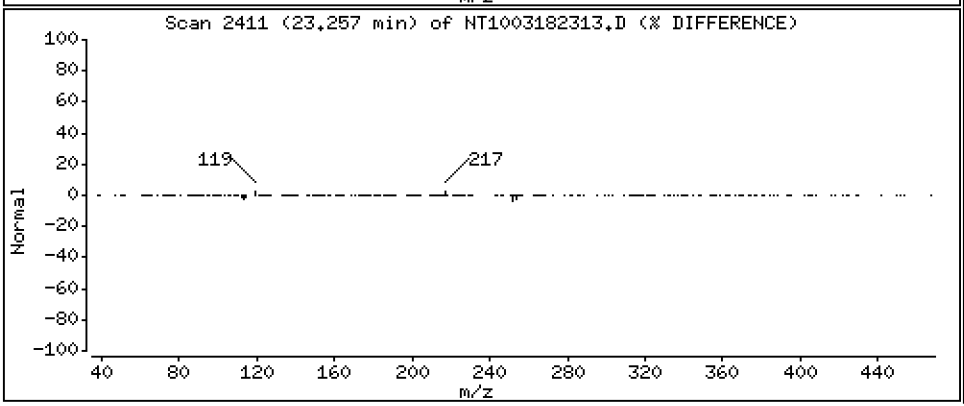
68 Benzo(a)anthracene

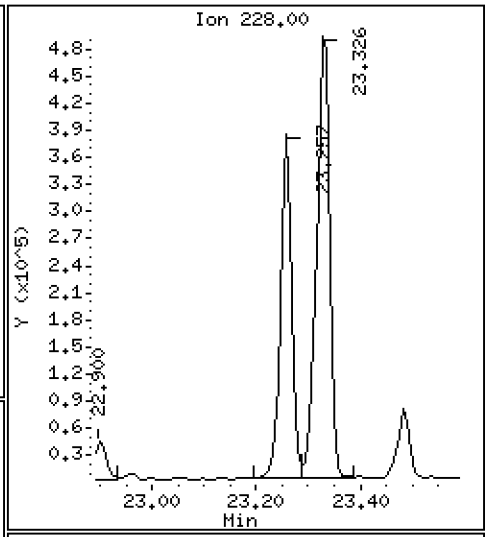
Concentration: 1.998 ug/mL

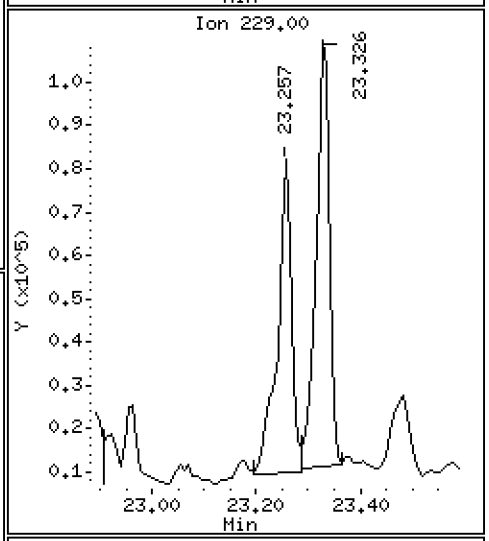


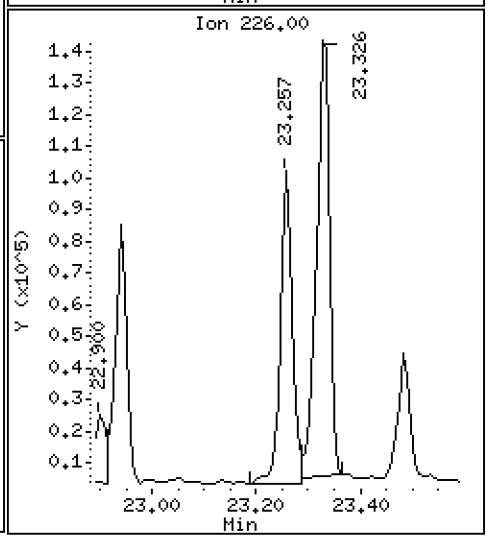












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

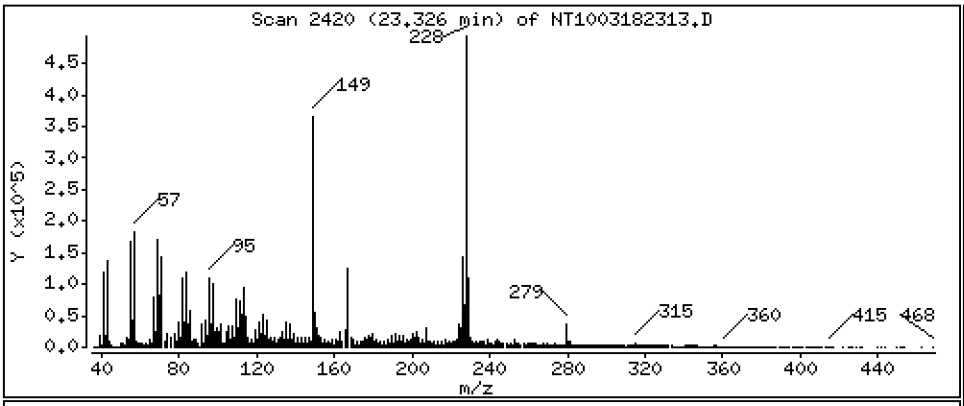
Operator: VTS

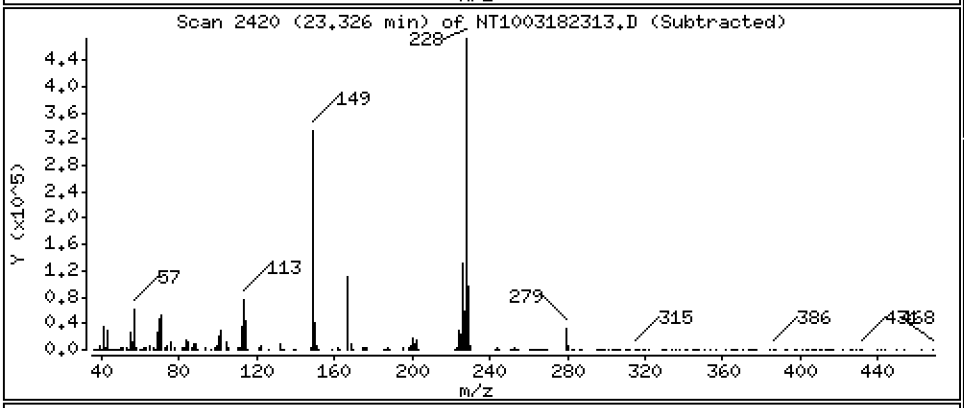
Column phase: ZB-5msi

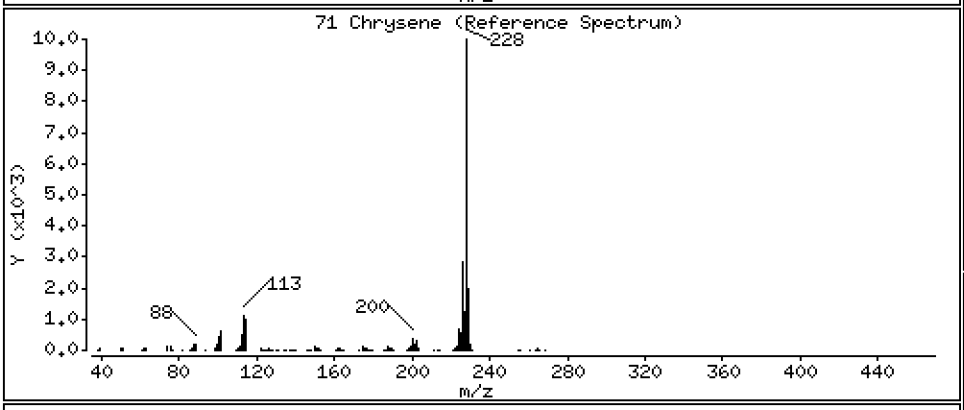
Column diameter: 0.25

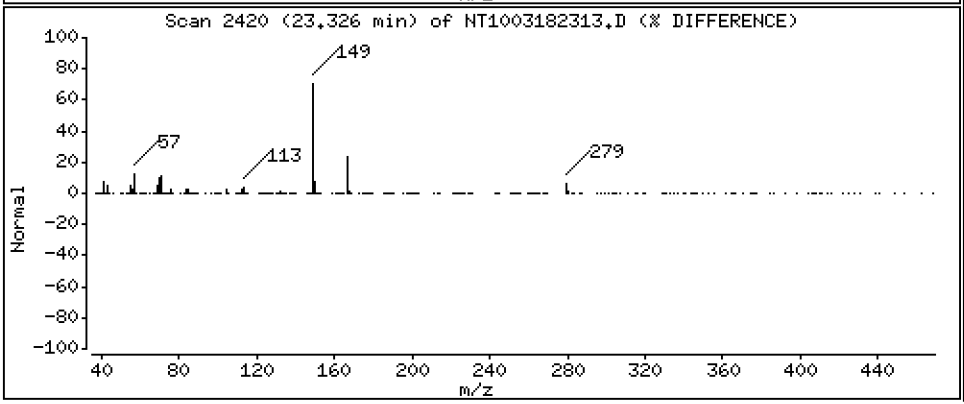
71 Chrysene

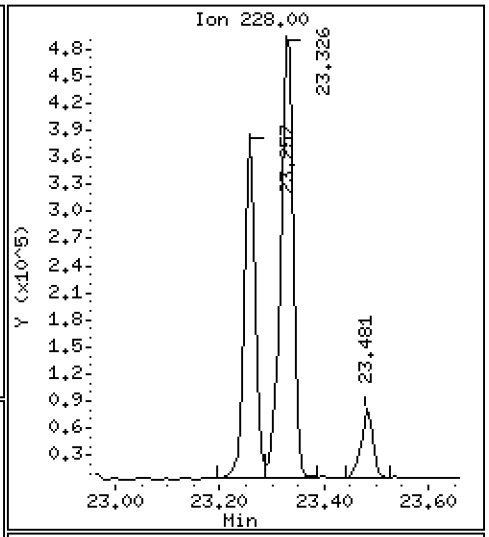
Concentration: 3.000 ug/mL

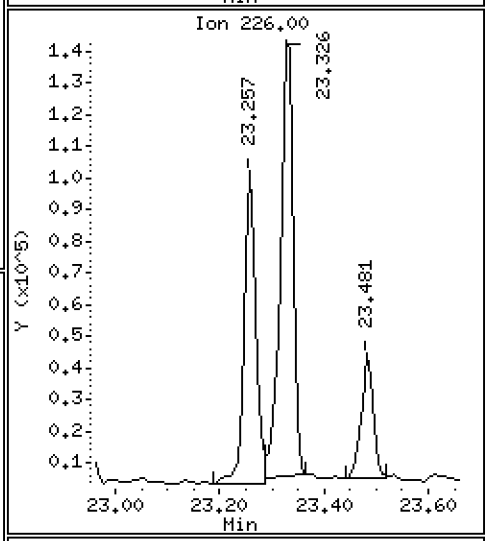


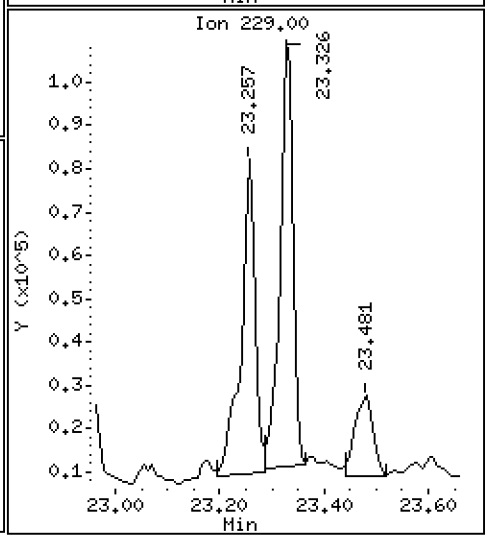












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

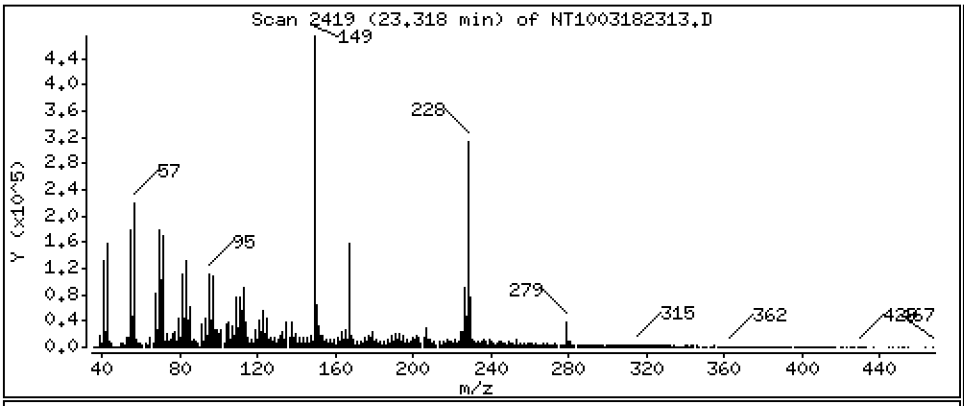
Operator: VTS

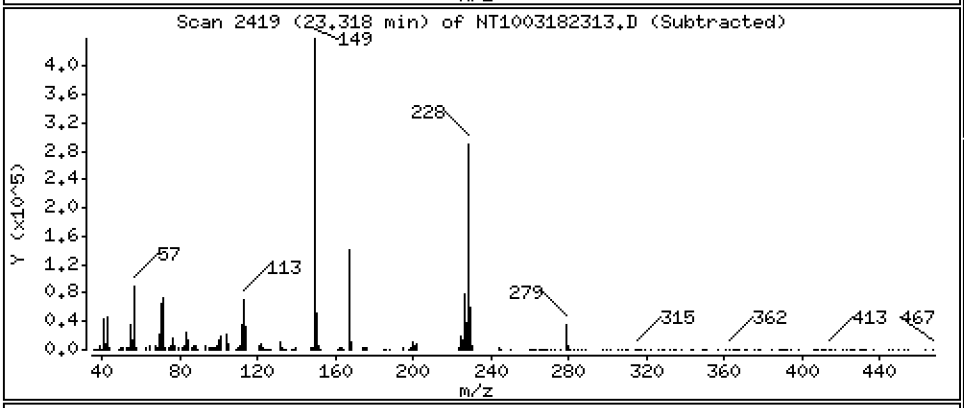
Column phase: ZB-5msi

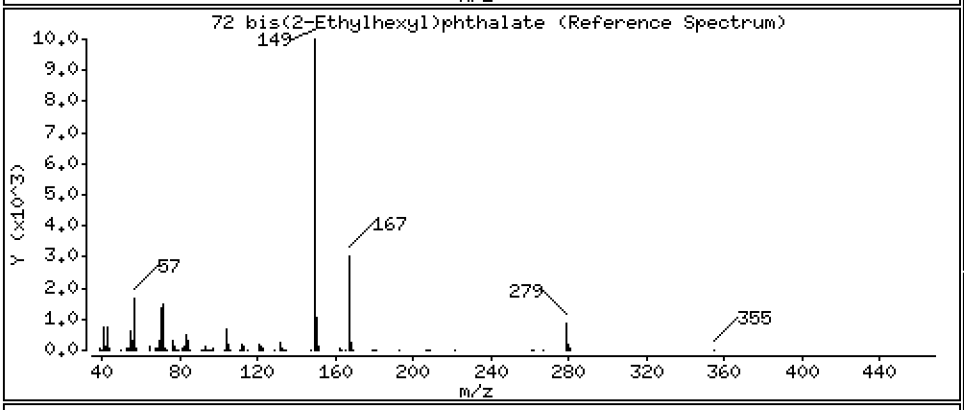
Column diameter: 0.25

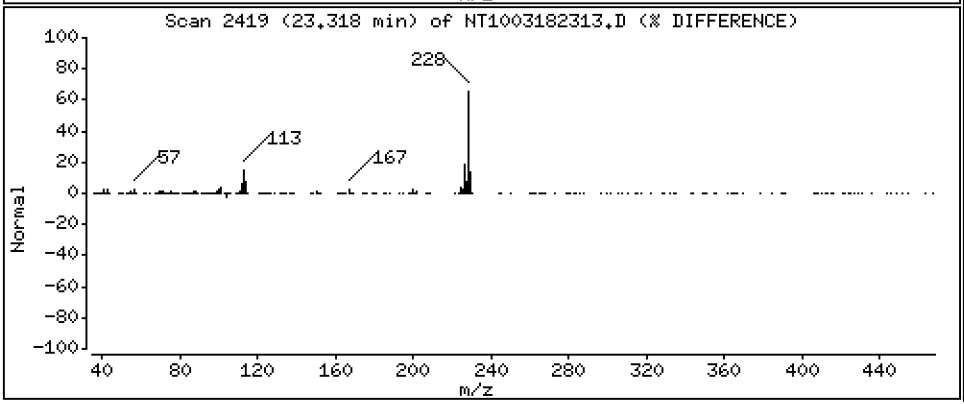
72 bis(2-Ethylhexyl)phthalate

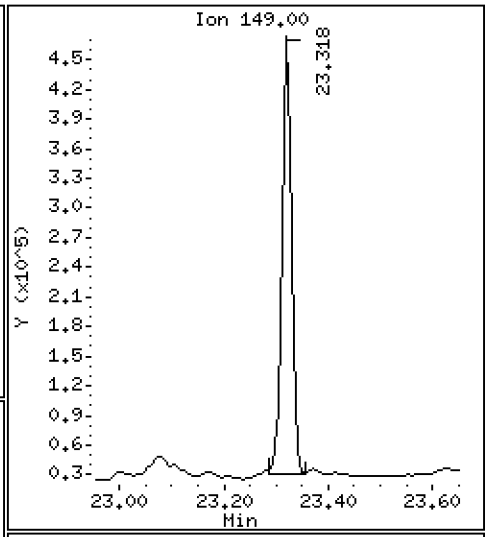
Concentration: 2.755 ug/mL

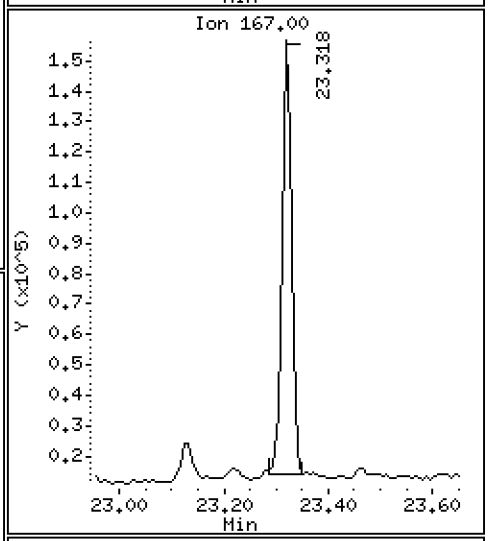


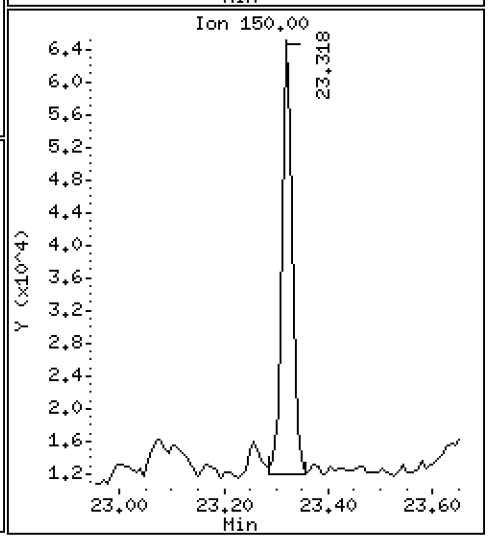












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

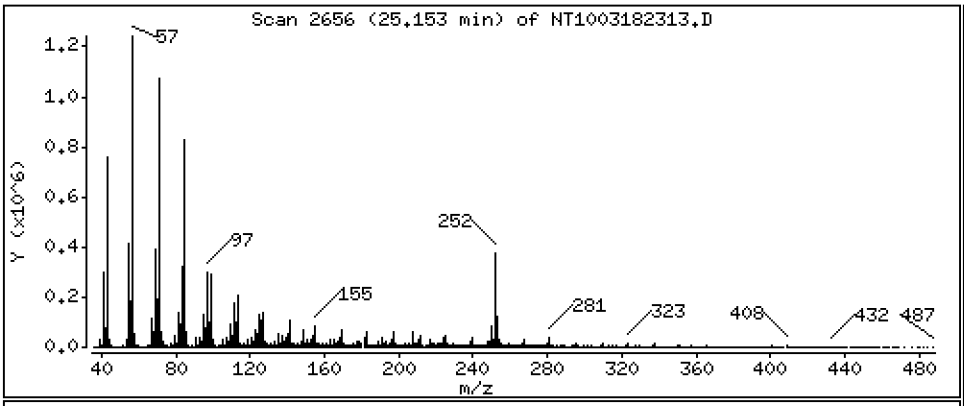
Operator: VTS

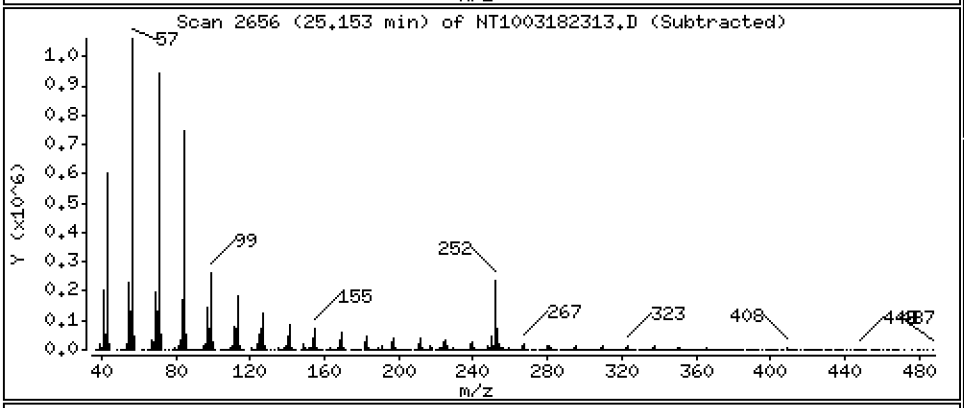
Column phase: ZB-5msi

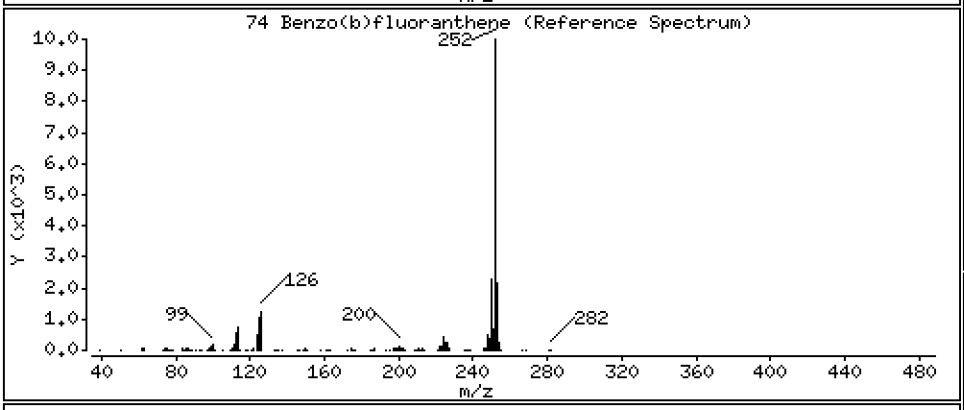
Column diameter: 0.25

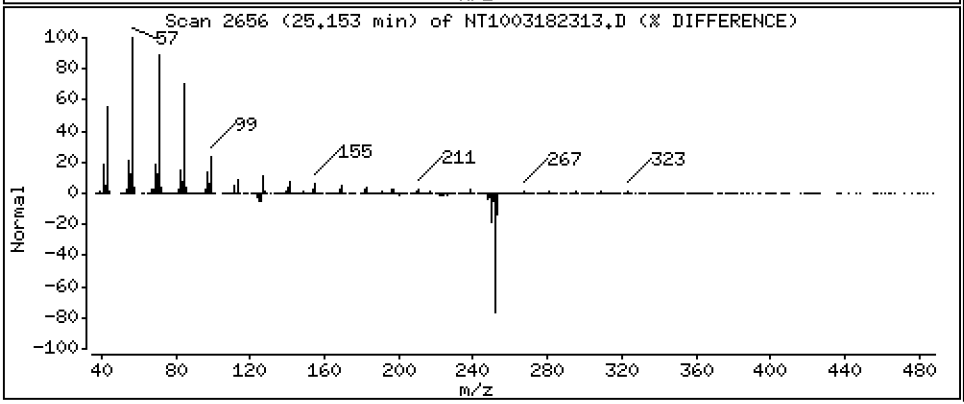
74 Benzo(b)fluoranthene

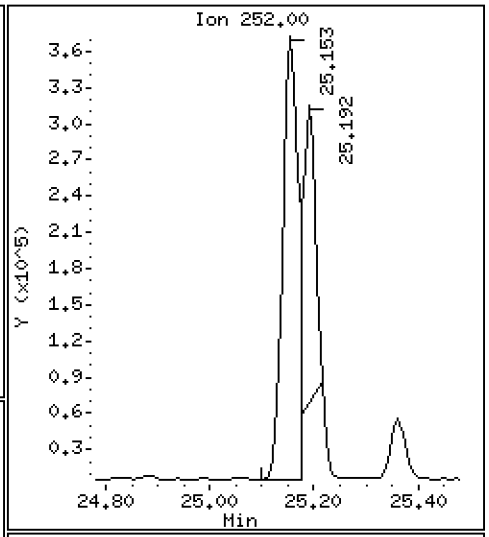
Concentration: 2.796 ug/mL

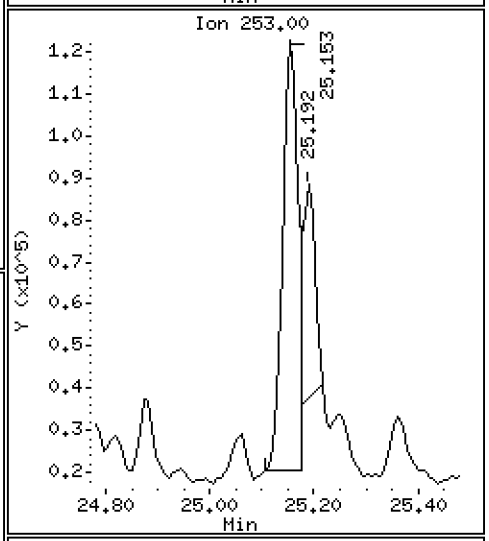


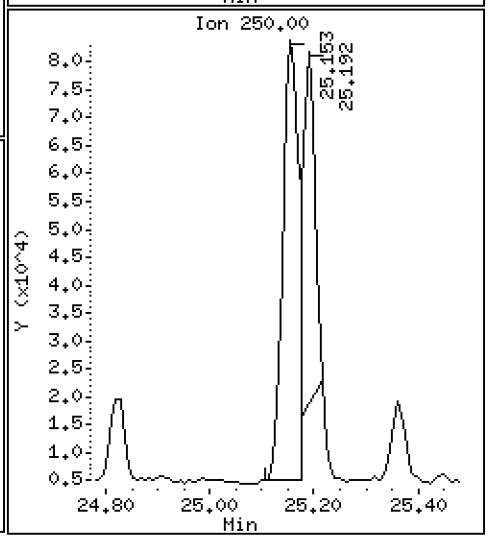












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

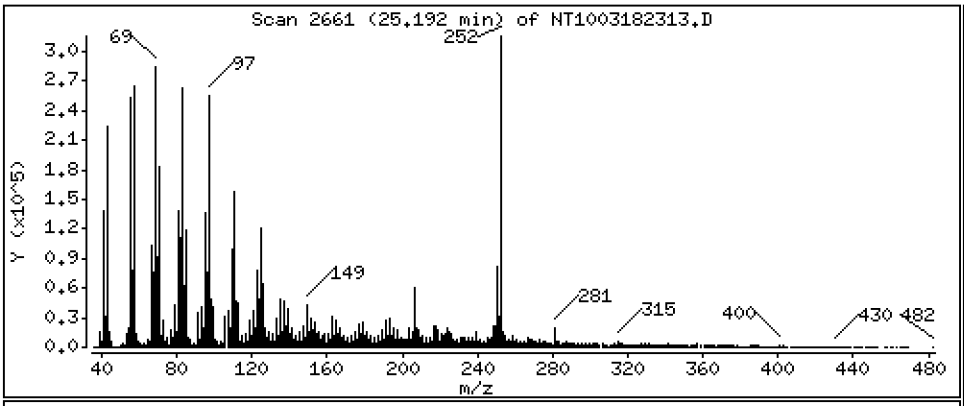
Operator: VTS

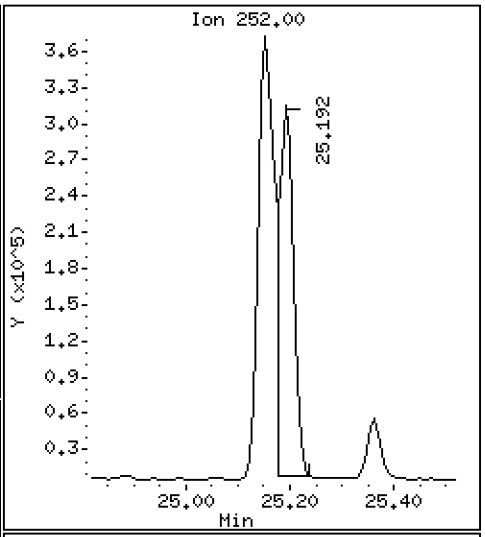
Column phase: ZB-5msi

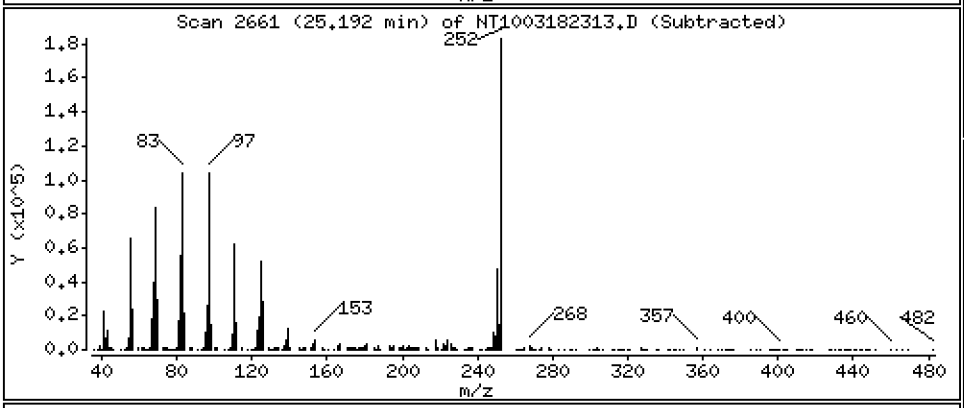
Column diameter: 0.25

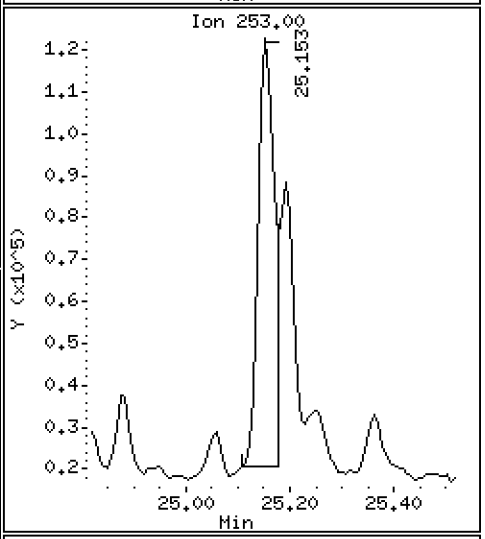
75 Benzo(k)fluoranthene

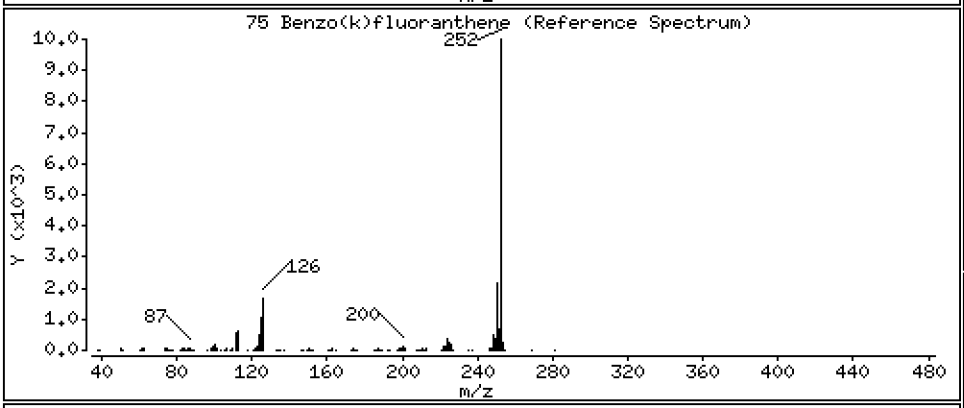
Concentration: 2.108 ug/mL

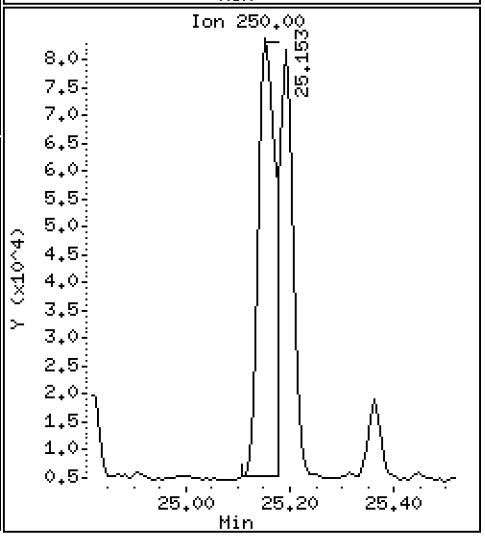


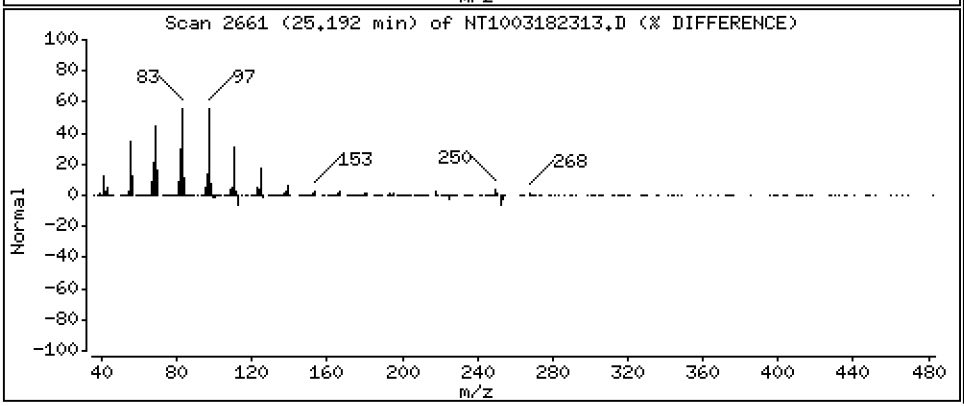












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

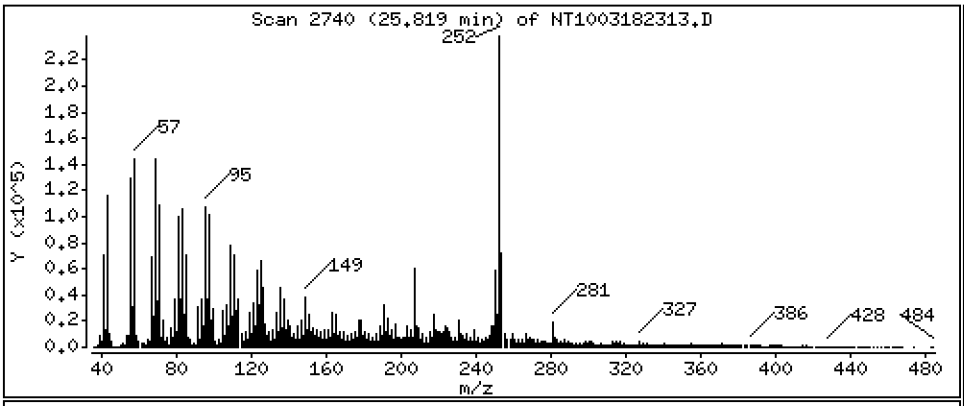
Operator: VTS

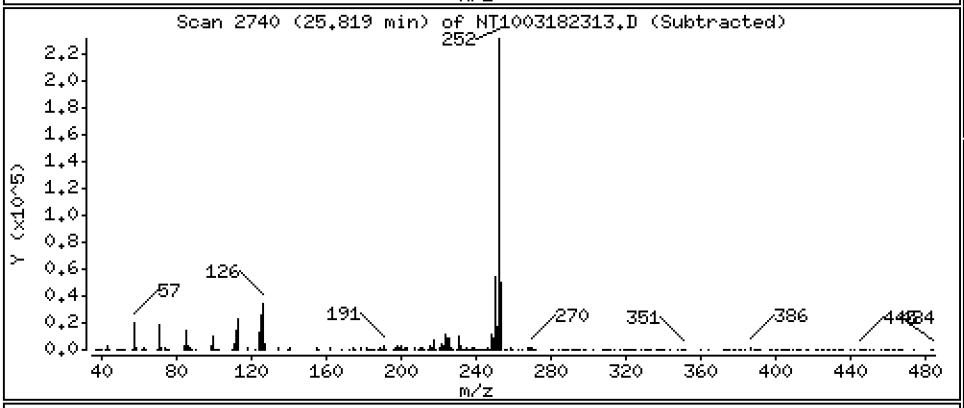
Column phase: ZB-5msi

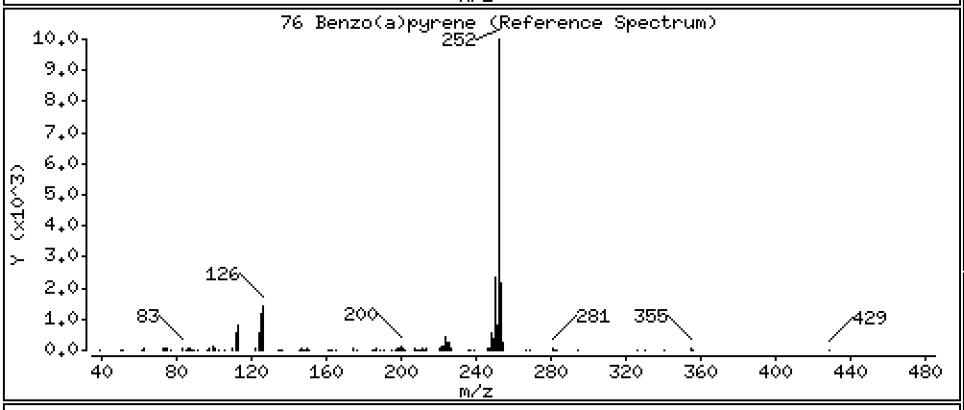
Column diameter: 0.25

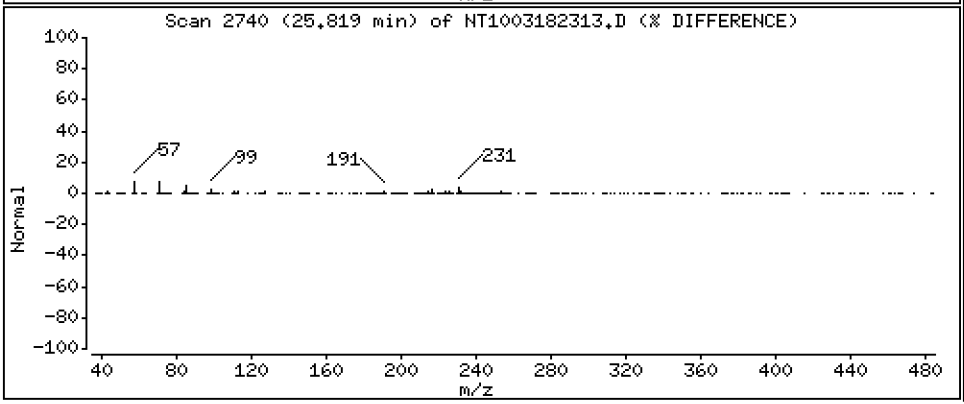
76 Benzo(a)pyrene

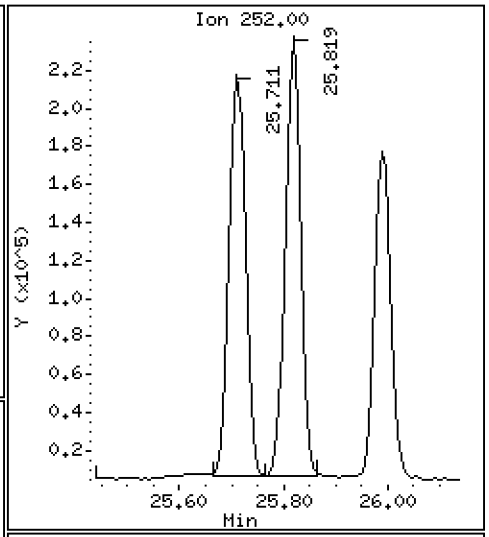
Concentration: 1.883 ug/mL

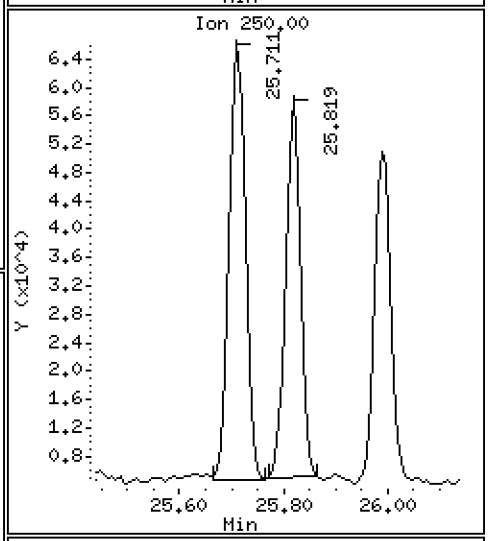


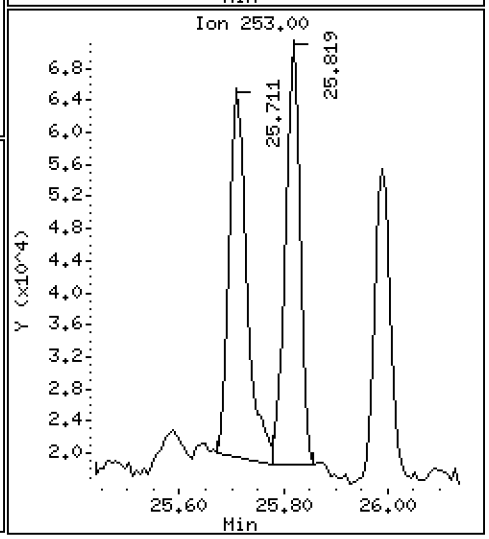












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

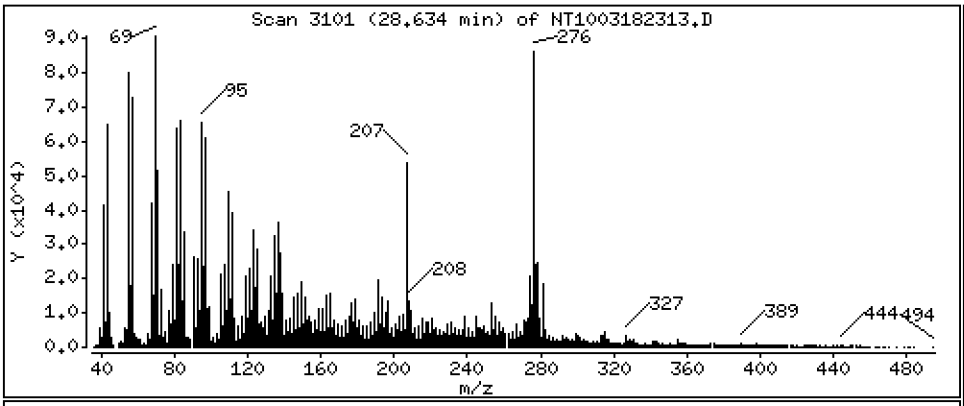
Operator: VTS

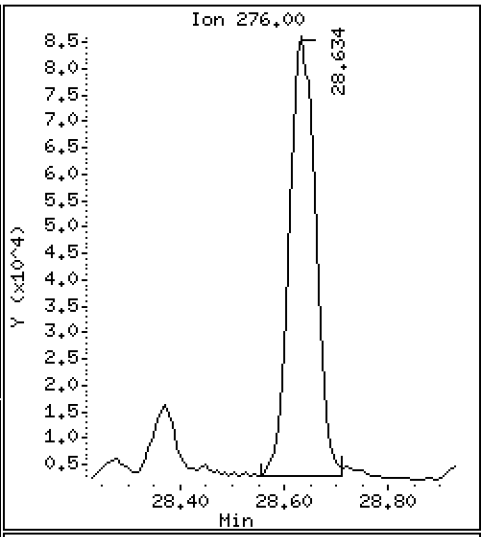
Column phase: ZB-5msi

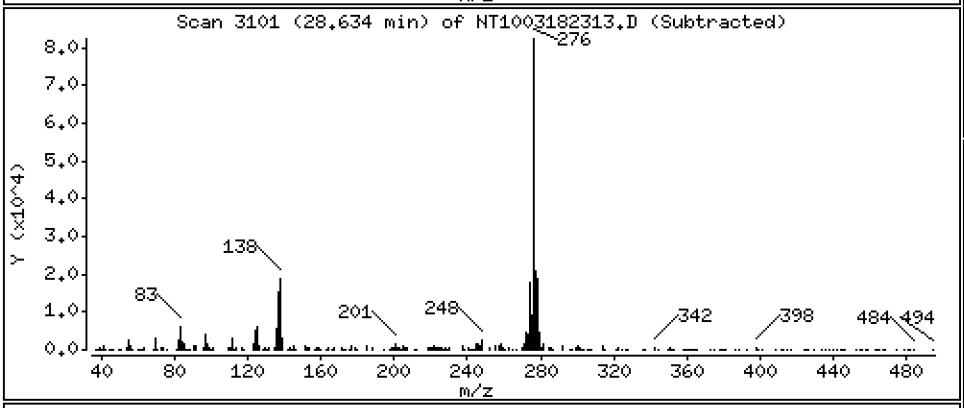
Column diameter: 0.25

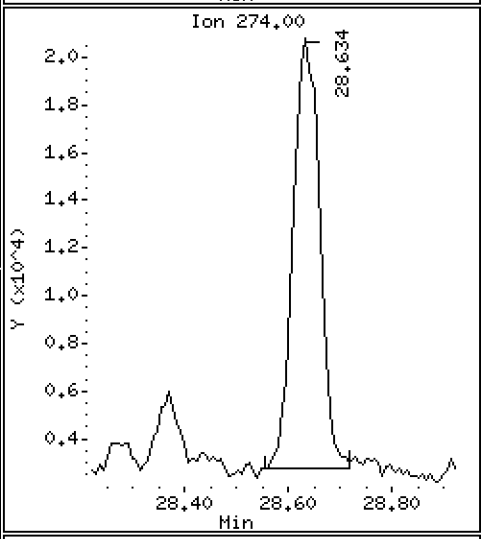
78 Indeno(1,2,3-cd)pyrene

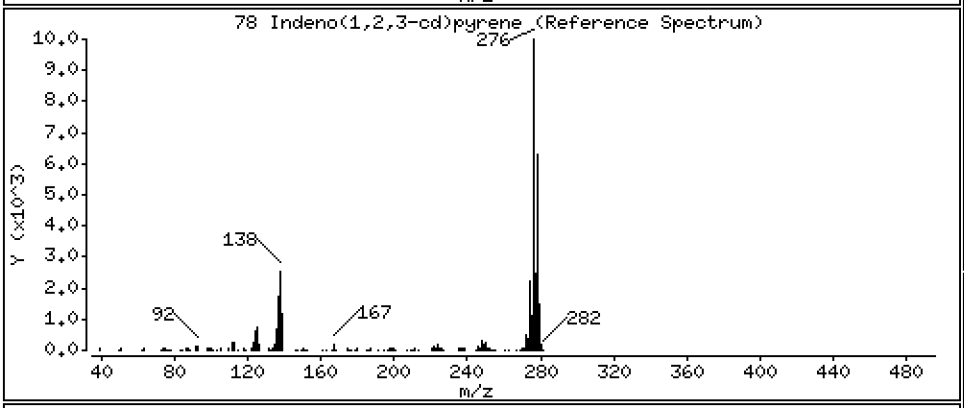
Concentration: 0.8963 ug/mL

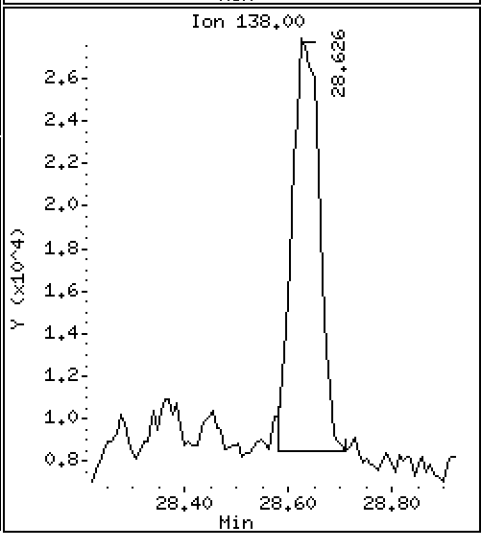


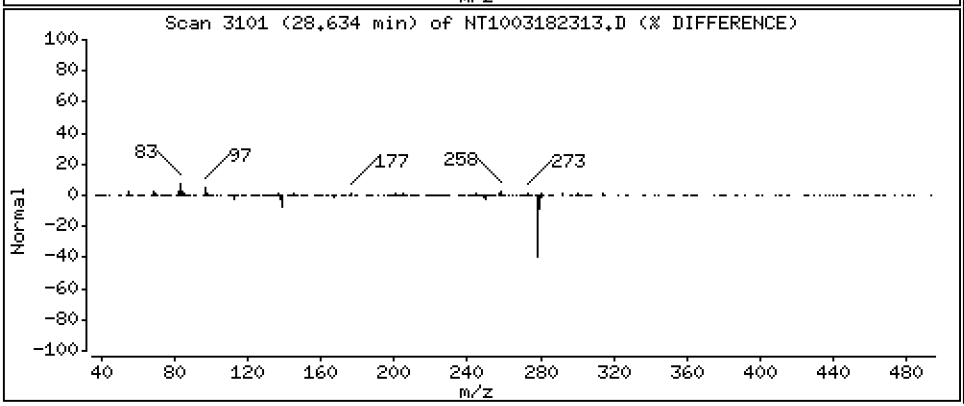












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

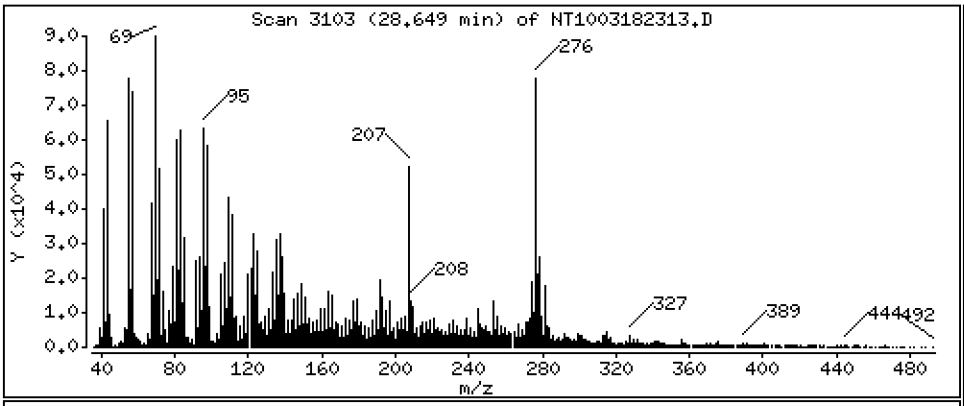
Operator: VTS

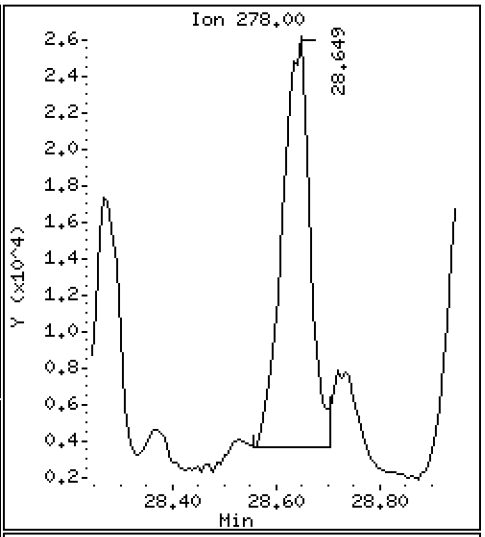
Column phase: ZB-5msi

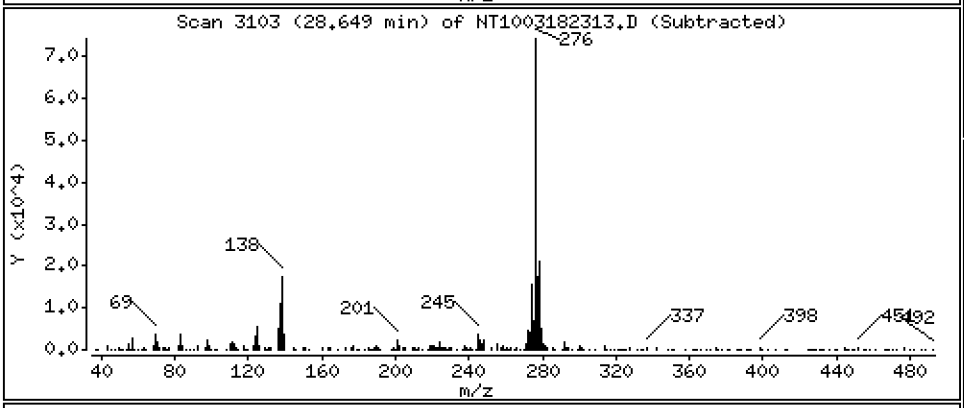
Column diameter: 0.25

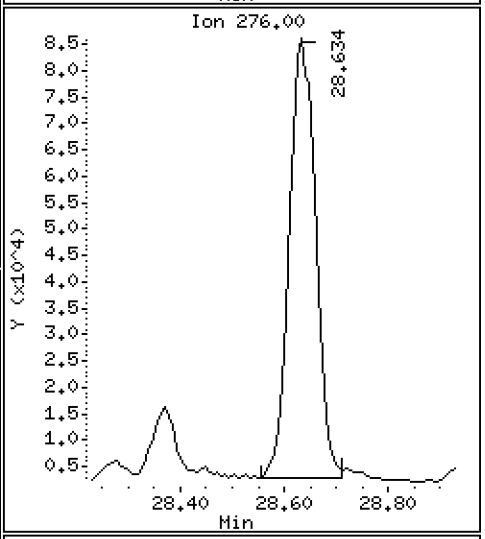
79 Dibenzo(a,h)anthracene

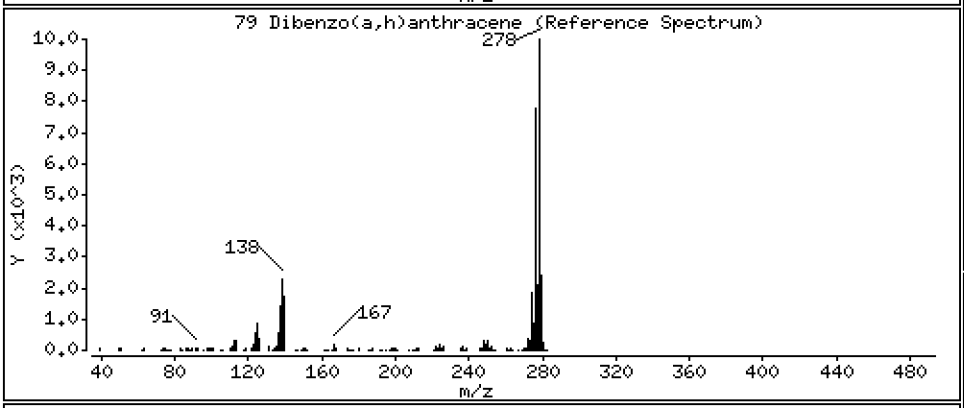
Concentration: 0.3098 ug/mL

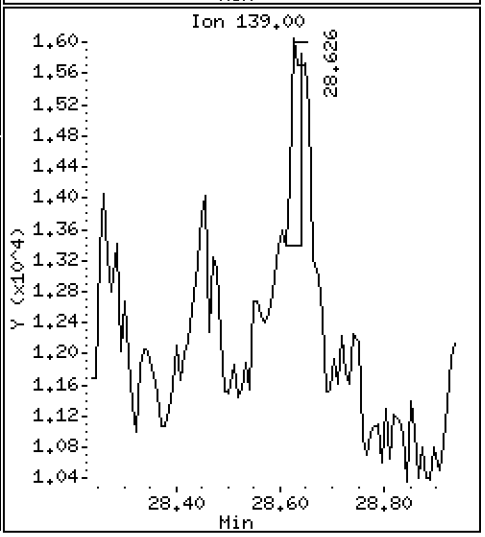


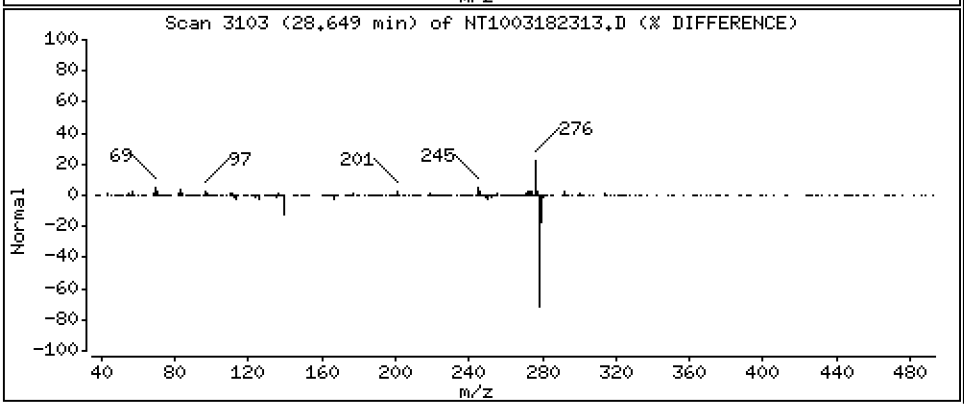












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

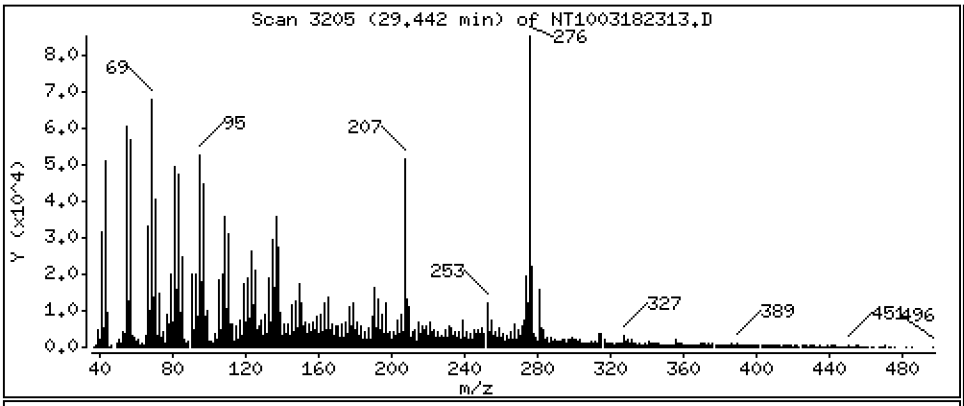
Operator: VTS

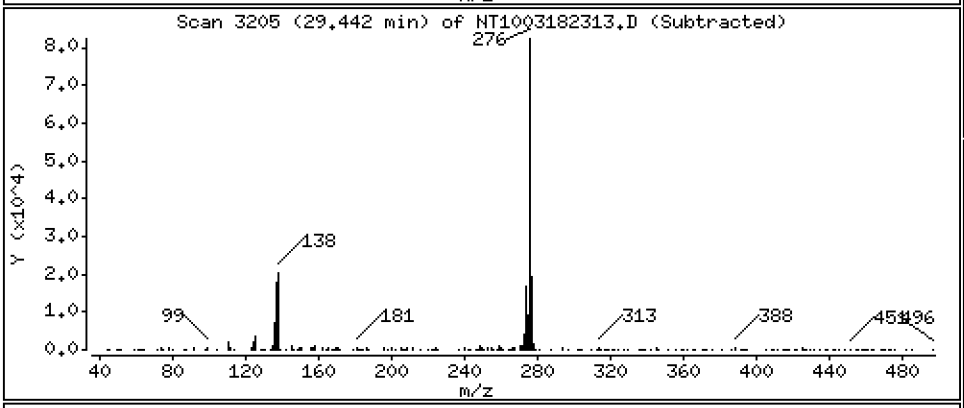
Column phase: ZB-5msi

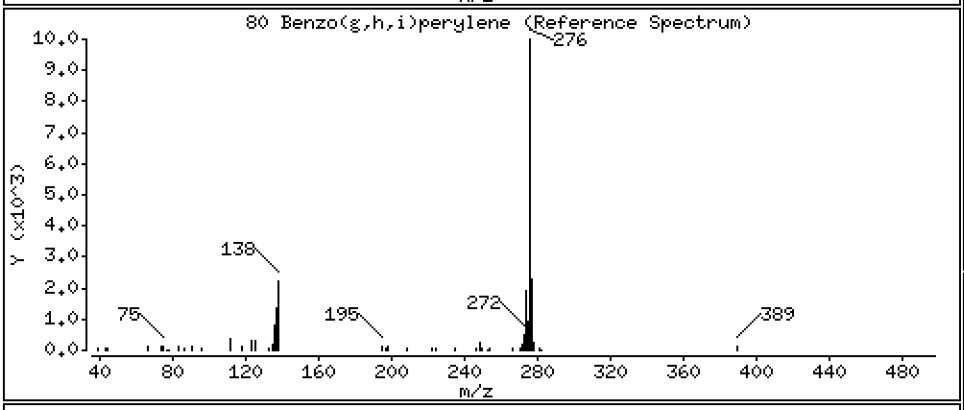
Column diameter: 0.25

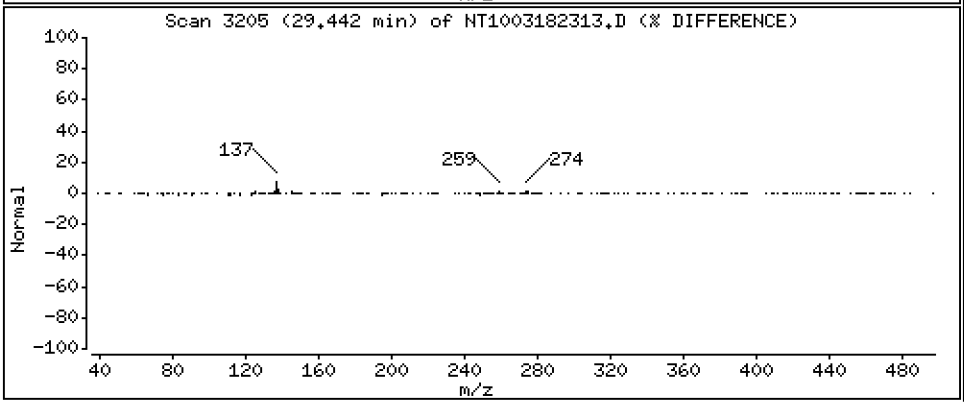
80 Benzo(g,h,i)perylene

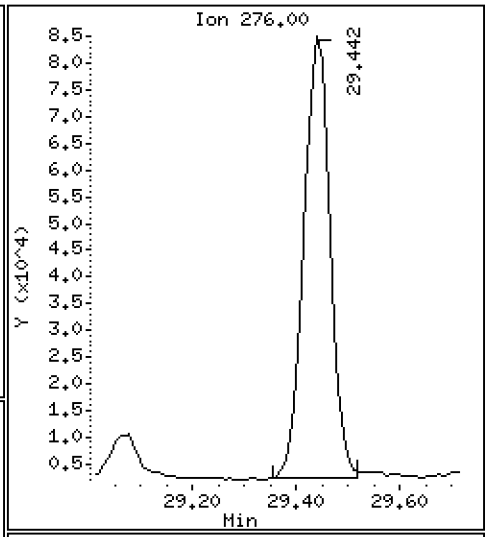
Concentration: 1.015 ug/mL

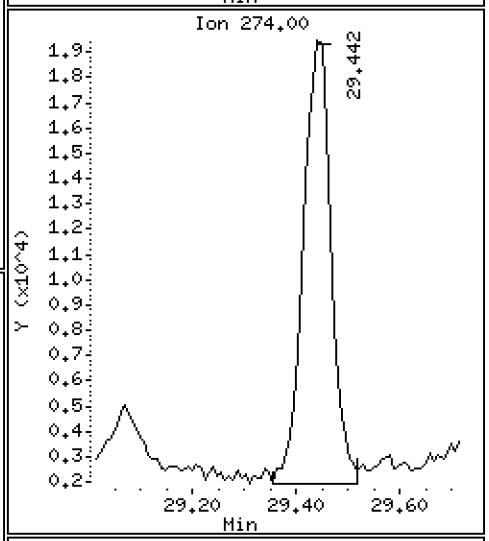


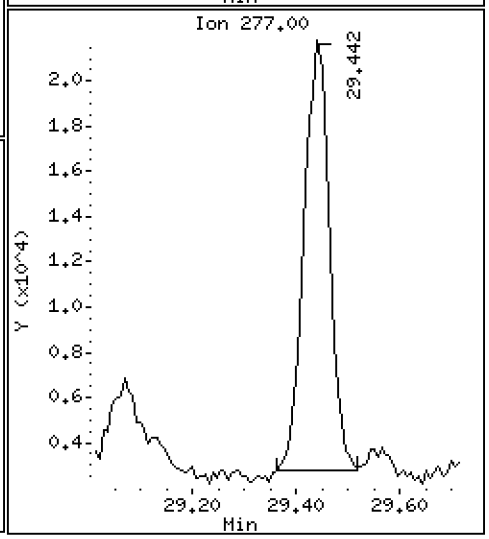












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

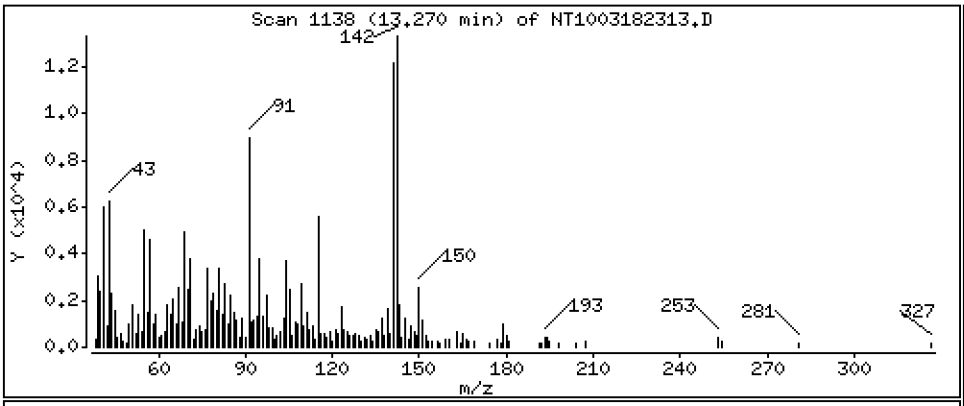
Operator: VTS

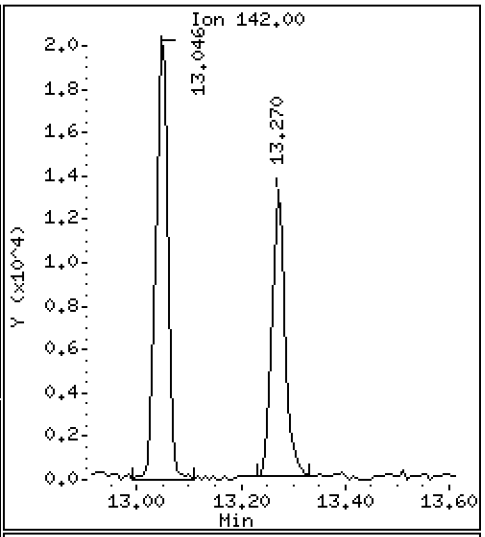
Column phase: ZB-5msi

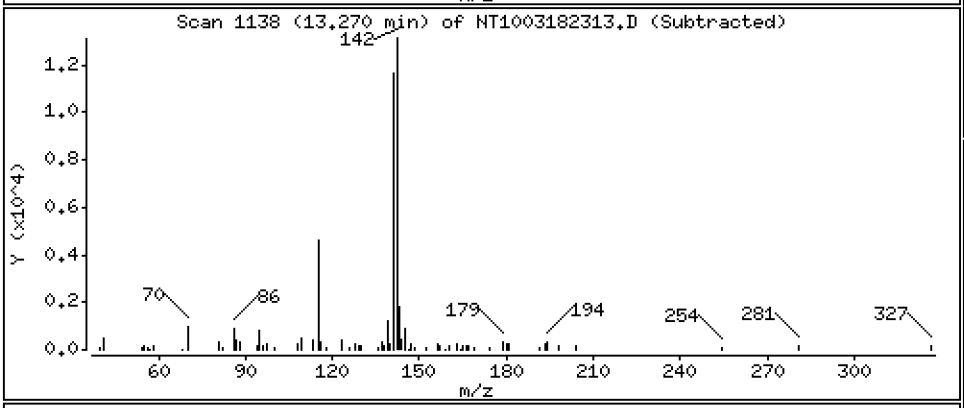
Column diameter: 0.25

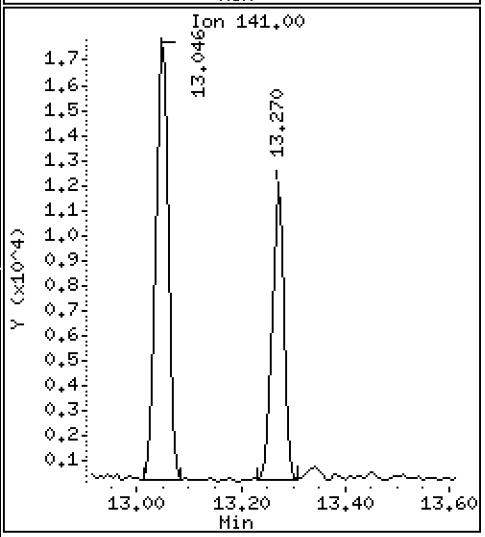
105 1-methylnaphthalene

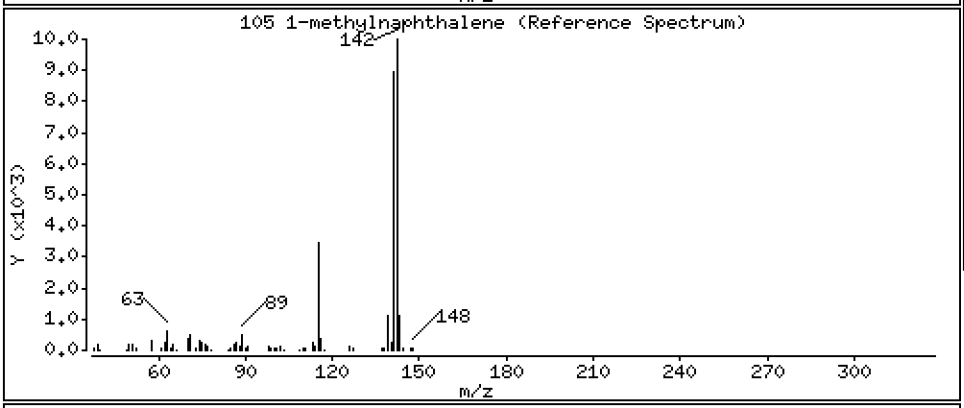
Concentration: 0.1350 ug/mL

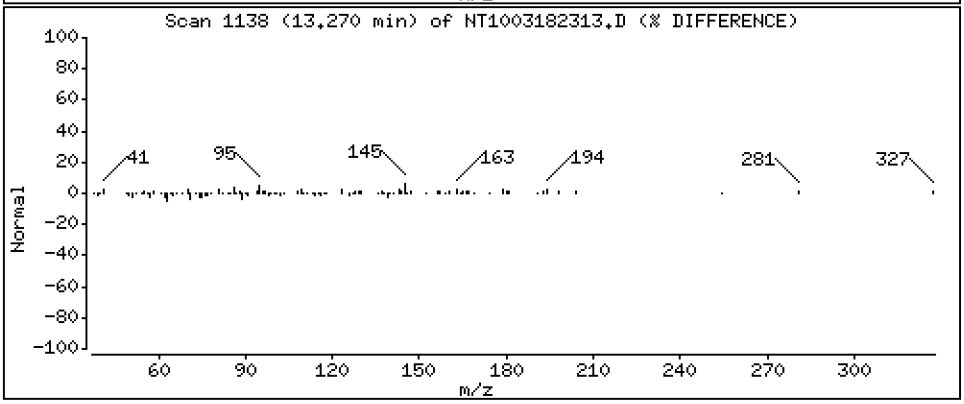












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

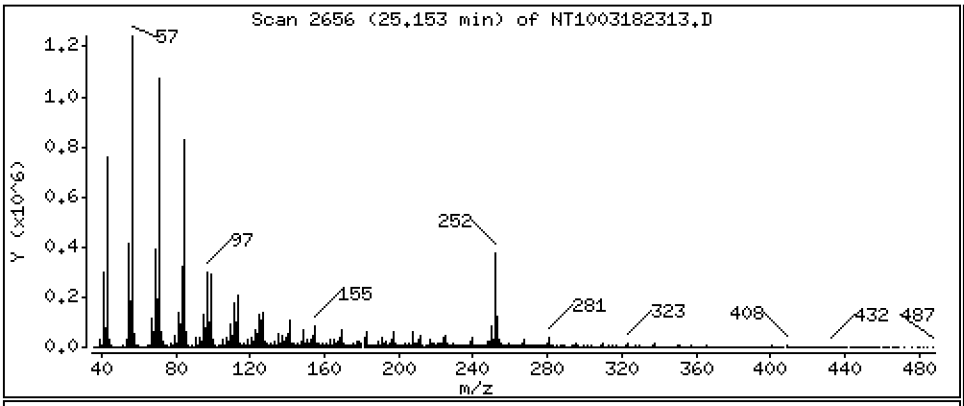
Operator: VTS

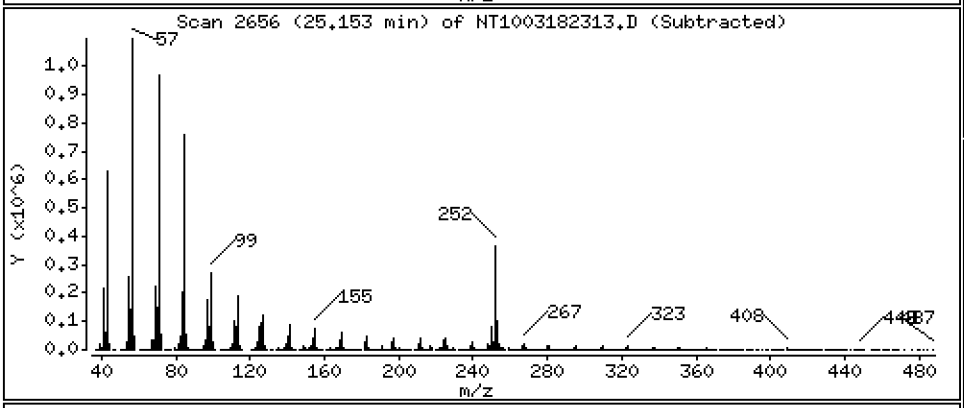
Column phase: ZB-5msi

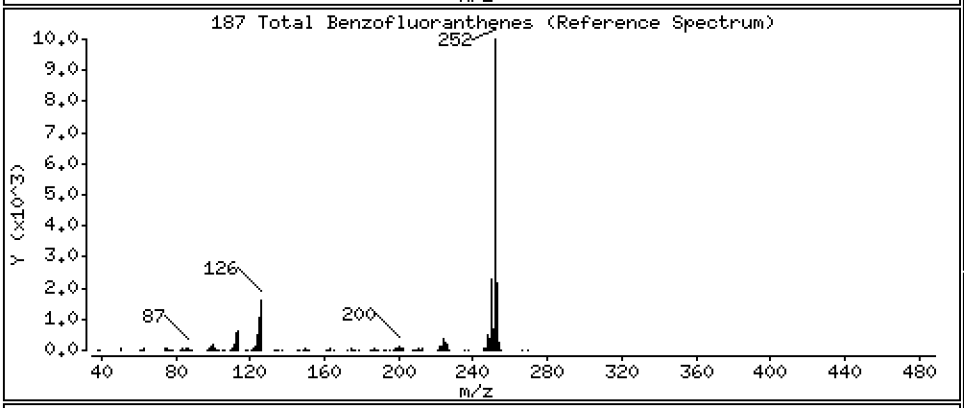
Column diameter: 0.25

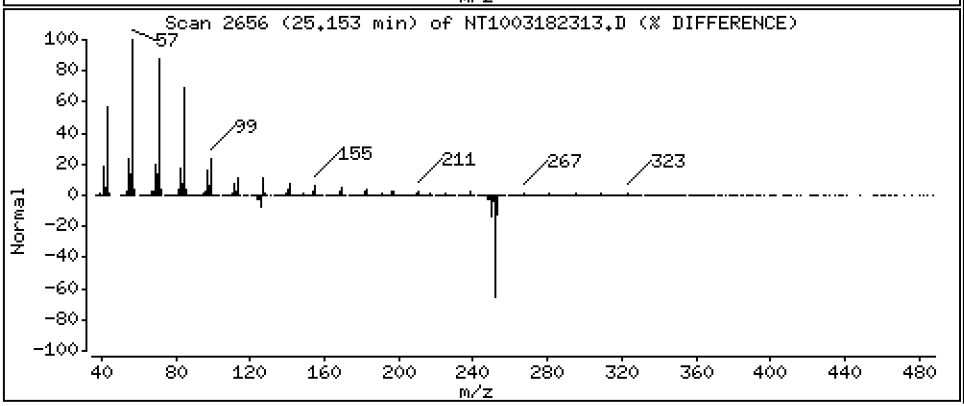
187 Total Benzofluoranthenes

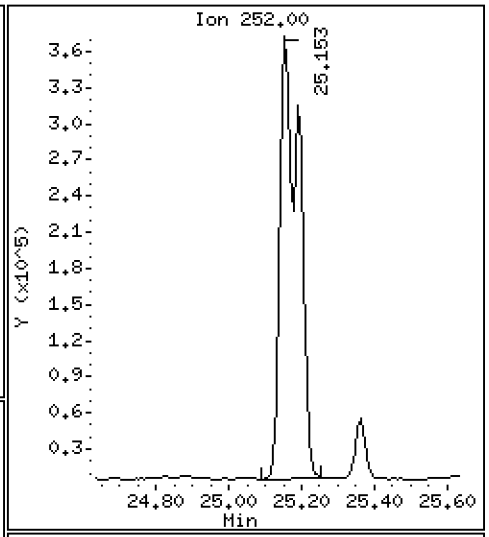
Concentration: 4.782 ug/mL

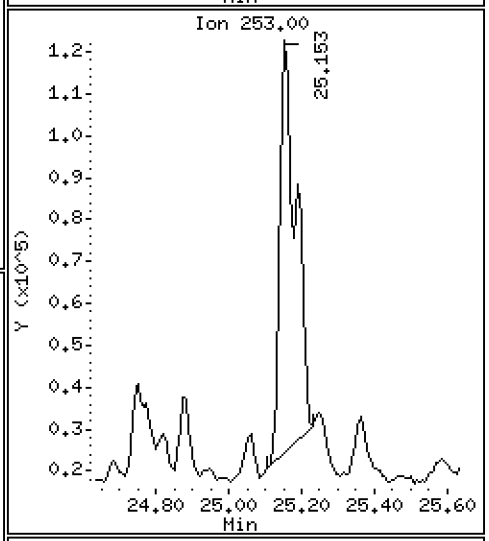


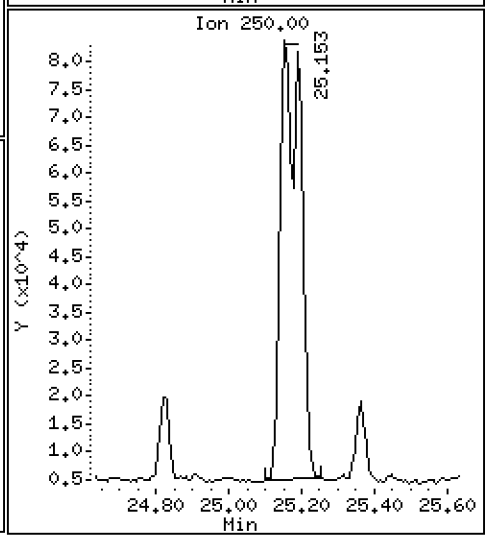












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182313.D
Lab Smp Id: 23A0467-04
Inj Date : 19-MAR-2023 01:24
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-04
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	434176	5.48830	5.488
$	2 Phenol-d5	99	8.528	8.520	(0.930)	571625	5.50806	5.508
	3 Phenol	94	8.551	8.536	(0.933)	922528	8.55433	8.554
$	5 2-Chlorophenol-d4	132	8.814	8.806	(0.961)	521641	5.88623	5.886
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	261595	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.039)	232556	3.65406	3.654
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.433	9.426	(1.029)	9459	0.18687	0.1869
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.081)	218149	2.63361	2.634
$	18 Nitrobenzene-d5	82	10.256	10.249	(0.882)	369874	3.84107	3.841
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.057	11.134	(0.951)	41603	0.86177	0.8618(H)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	954014	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	54610	0.21608	0.2161
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	32842	0.18007	0.1801
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.819	13.820	(0.908)	814637	3.96620	3.966
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.717	14.710	(0.967)	15334	0.09091	0.09091
	40	Acenaphthylene	152	14.903	14.896	(0.979)	41444	0.15992	0.1599
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.220	15.213	(1.000)	519234	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.282	15.275	(1.004)	29136	0.18199	0.1820
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.607	15.600	(1.025)	53090	0.22487	0.2249
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.163	16.156	(1.062)	36327	0.21950	0.2195
	49	Fluorene	166	16.318	16.319	(1.072)	43236	0.23278	0.2328
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.850	16.843	(1.107)	158237	6.53292	6.533
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.241	18.234	(1.000)	959028	4.00000	
	60	Phenanthrene	178	18.287	18.281	(1.003)	360755	1.37953	1.380
	61	Anthracene	178	18.380	18.373	(1.008)	254112	1.01300	1.013
	62	Carbazole	167	18.713	18.698	(1.026)	51143	0.22752	0.2275
	63	Di-n-butylphthalate	149	19.502	19.488	(1.069)	33571	0.11107	0.1111
	64	Fluoranthene	202	20.686	20.656	(0.888)	1046766	3.18518	3.185
	65	Pyrene	202	21.104	21.081	(0.906)	1025198	3.04103	3.041
$	66	Terphenyl-d14	244	21.382	21.360	(0.918)	1099294	4.34208	4.342
	67	Butylbenzylphthalate	149	22.296	22.281	(0.957)	28288	0.23887	0.2389
	68	Benzo(a)anthracene	228	23.256	23.241	(0.999)	576709	1.99771	1.998
*	69	Chrysene-d12	240	23.287	23.272	(1.000)	817875	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.326	23.311	(1.002)	846021	2.99965	3.000
	72	bis(2-Ethylhexyl)phthalate	149	23.318	23.303	(0.959)	580635	2.75494	2.755
*	134	Di-n-octylphthalate-d4	153	24.309	24.294	(1.000)	1438608	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.153	25.130	(0.970)	808970	2.79618	2.796
	75	Benzo(k)fluoranthene	252	25.191	25.169	(0.971)	619223	2.10783	2.108(M)
	76	Benzo(a)pyrene	252	25.819	25.789	(0.996)	487104	1.88317	1.883
*	77	Perylene-d12	264	25.935	25.897	(1.000)	892524	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.633	28.580	(1.104)	294947	0.89628	0.8963
	79	Dibenzo(a,h)anthracene	278	28.649	28.595	(1.105)	84637	0.30979	0.3098
	80	Benzo(g,h,i)perylene	276	29.441	29.364	(1.135)	289147	1.01529	1.015
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.270	13.263	(1.141)	22559	0.13500	0.1350
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.153	25.130	(0.970)	1335916	4.78243	4.782(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182313.D
Lab Smp Id: 23A0467-04
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	261595	40.33
27 Naphthalene-d8	688740	344370	1377480	954014	38.52
42 Acenaphthene-d10	373663	186832	747326	519234	38.96
59 Phenanthrene-d10	652323	326162	1304646	959028	47.02
69 Chrysene-d12	537141	268571	1074282	817875	52.26
134 Di-n-octylphthala	947608	473804	1895216	1438608	51.81
77 Perylene-d12	602550	301275	1205100	892524	48.12

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.04
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.06
134 Di-n-octylphthala	24.29	23.79	24.79	24.31	0.06
77 Perylene-d12	25.90	25.40	26.40	25.94	0.15

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

REVIEW SUMMARY FOR FILE - NT1003182313.D

Lab ID: 23A0467-04
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 01:24

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.958	-0.0072	Benzoic acid

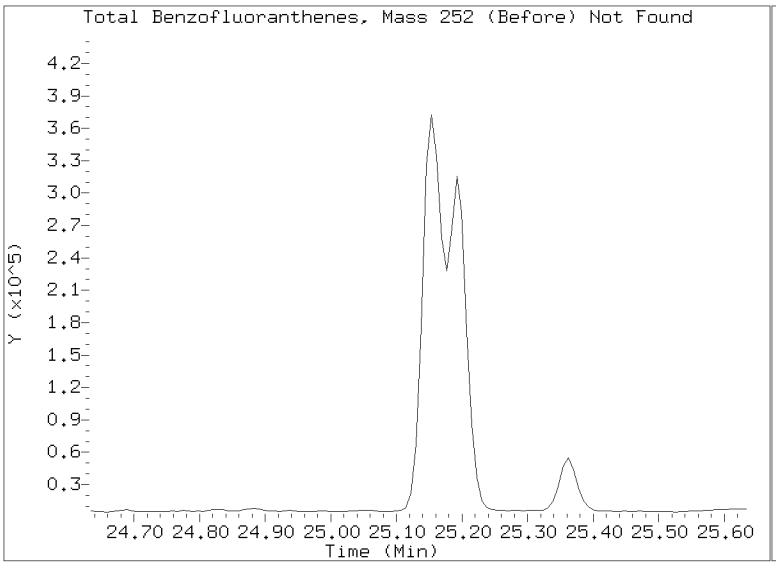
RRT check based on Ccal File: NT1003182302.D

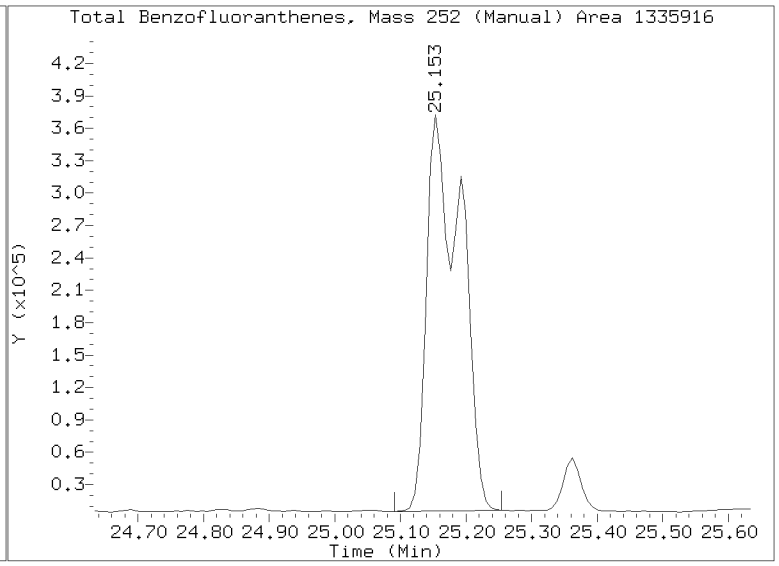
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

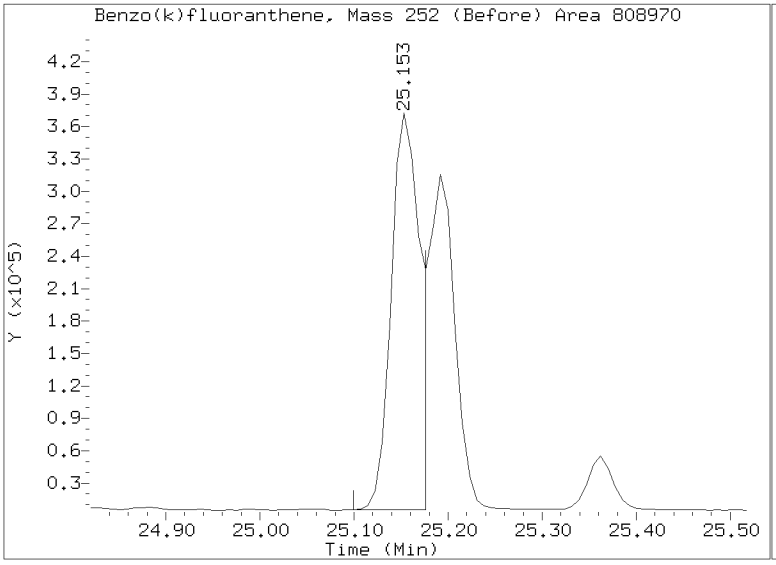
* Only compounds listed in the work order have been verified by the analyst *

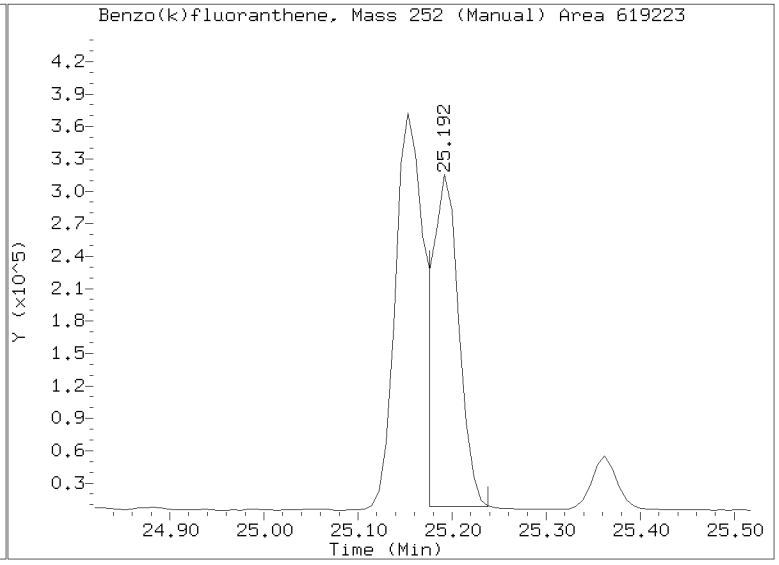
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182313.D
Injection Date: 19-MAR-2023 01:24
Lab ID:23A0467-04 Client ID:
Report Date: 04/04/2023 08:57









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1004

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	02/23/23 15:49	File ID:	NT1003182314.D
% Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:02
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	18.17 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	262		4.4	20.0
106-44-5	4-Methylphenol	1	194		7.4	20.0
91-20-3	Naphthalene	1	13.8	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	11.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	14.1	J	6.2	20.0
131-11-3	Dimethylphthalate	1	6.2	J	4.4	20.0
83-32-9	Acenaphthene	1	11.1	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	124		8.7	20.0
120-12-7	Anthracene	1	53.9		7.2	20.0
206-44-0	Fluoranthene	1	451		6.1	20.0
129-00-0	Pyrene	1	375		5.7	20.0
85-68-7	Butylbenzylphthalate	1	13.7	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	136		5.9	20.0
218-01-9	Chrysene	1	218		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	199		5.5	49.9
	Benzofluoranthenes, Total	1	369		10.0	39.9
50-32-8	Benzo(a)pyrene	1	134		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	67.7		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.2		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	78.7		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.72	589	78.7	27 - 120	
Phenol-d5	748.72	606	81.0	29 - 120	
2-Chlorophenol-d4	748.72	639	85.3	31 - 120	
1,2-Dichlorobenzene-d4	499.15	403	80.7	32 - 120	
Nitrobenzene-d5	499.15	424	84.9	30 - 120	
2-Fluorobiphenyl	499.15	434	86.9	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1004

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

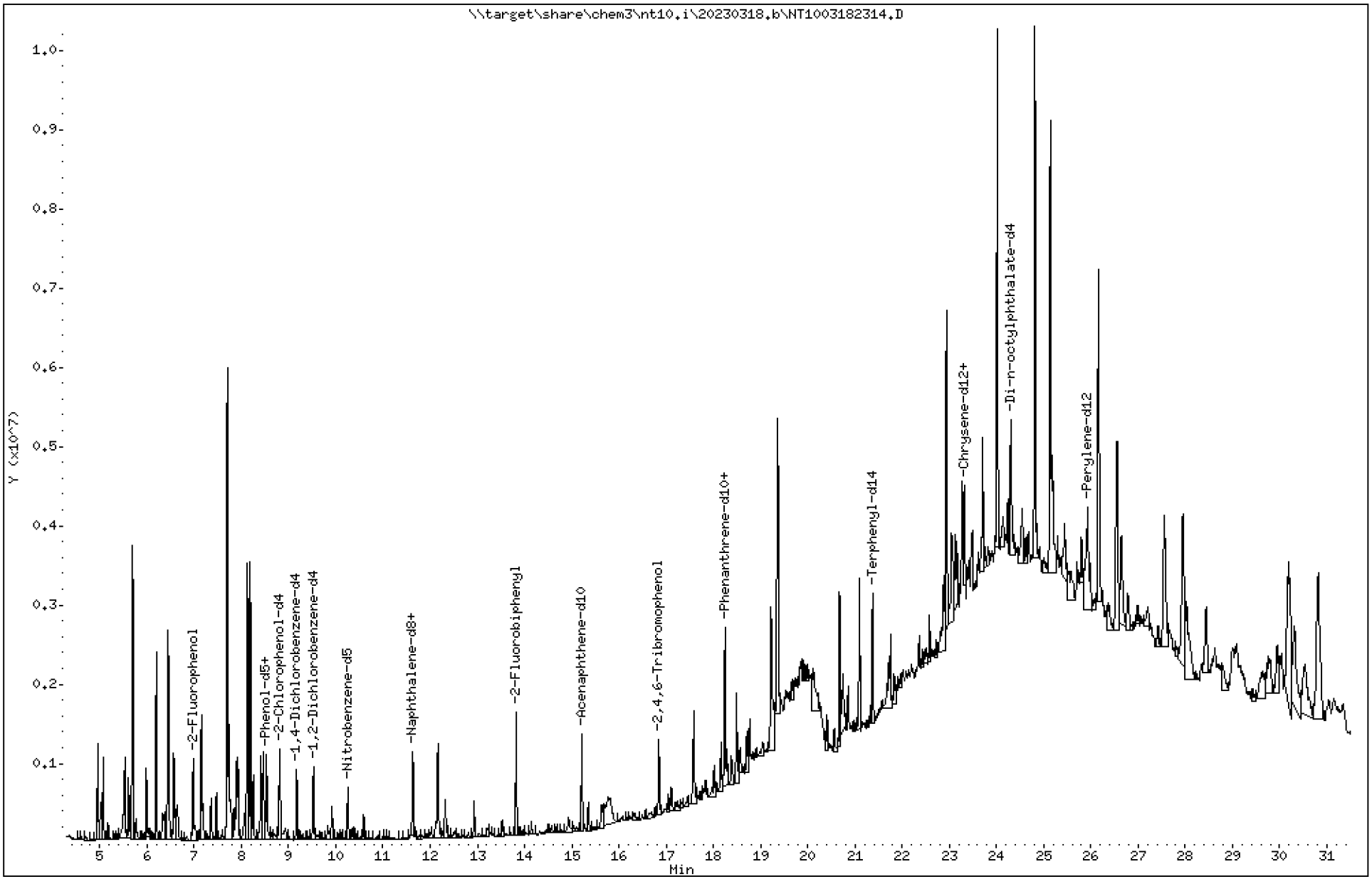
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	02/23/23 15:49	File ID:	NT1003182314.D
% Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:02
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	18.17 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.72	643	85.9	24 - 134	
p-Terphenyl-d14	499.15	415	83.2	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D
Date : 19-MAR-2023 02:02
Client ID:
Sample Info: 23A0467-05

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

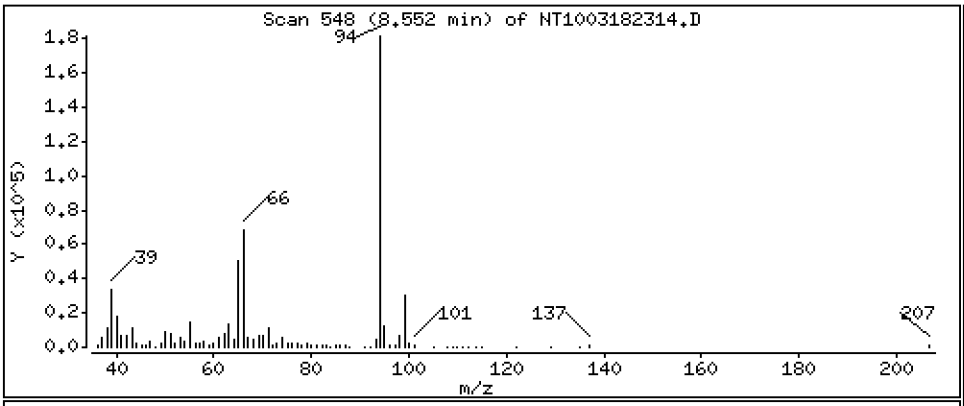
Operator: VTS

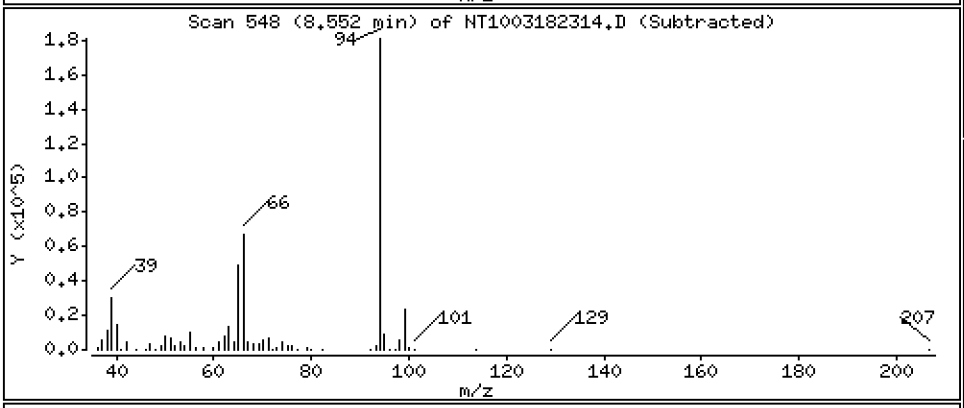
Column phase: ZB-5msi

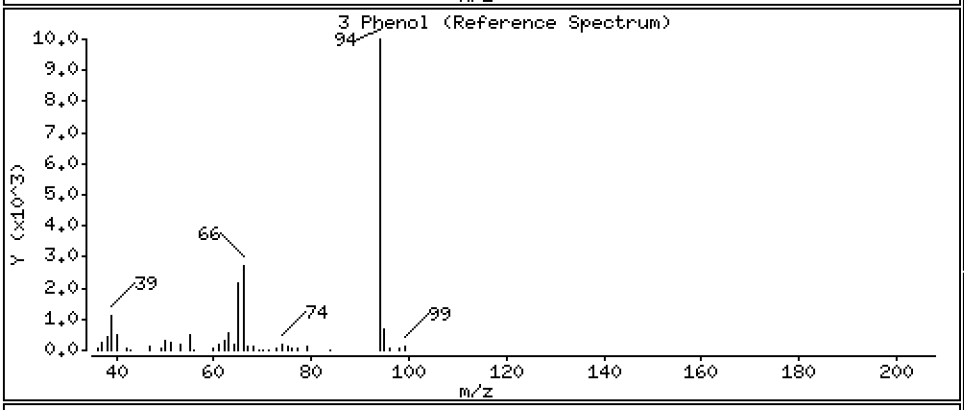
Column diameter: 0.25

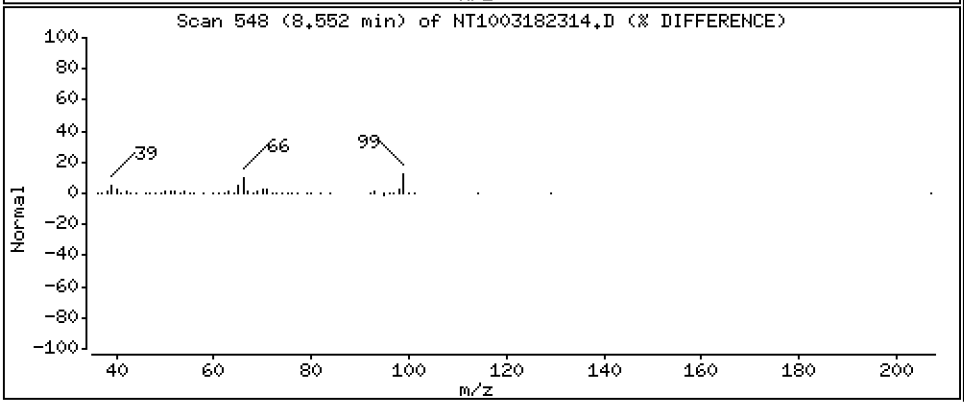
3 Phenol

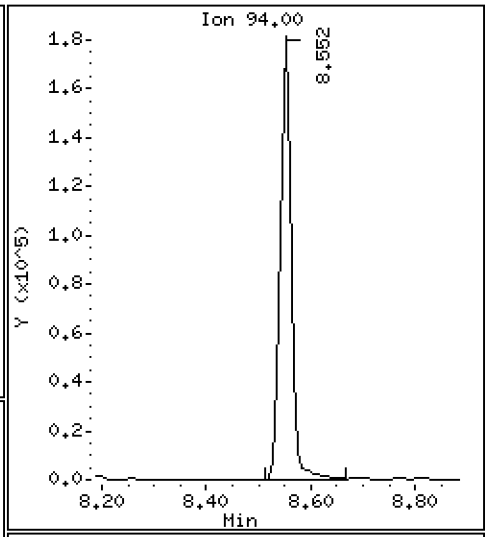
Concentration: 2.628 ug/mL

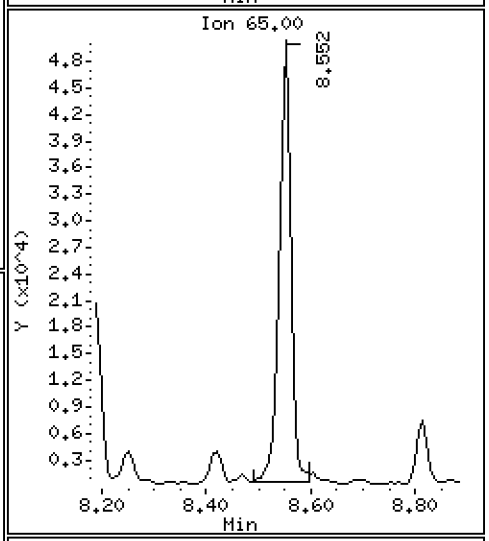


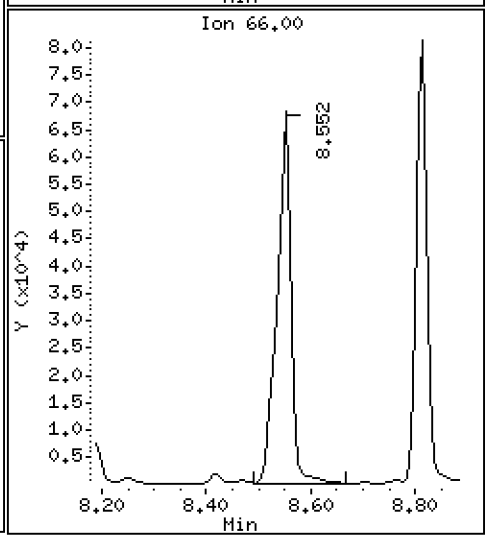












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

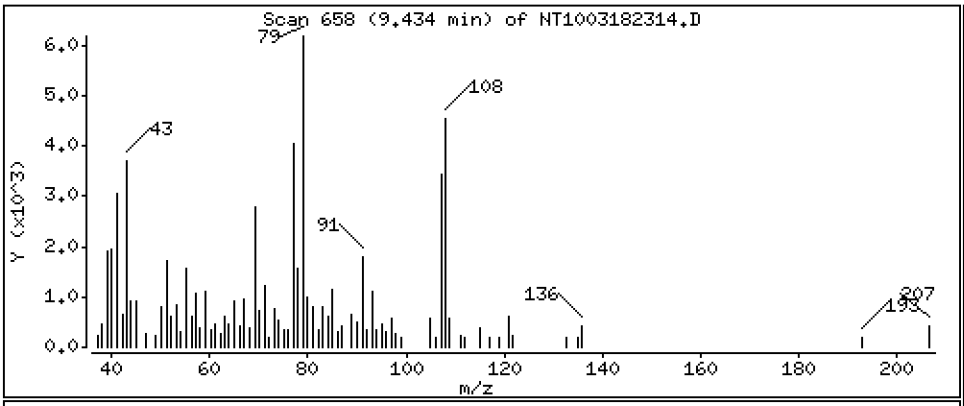
Operator: VTS

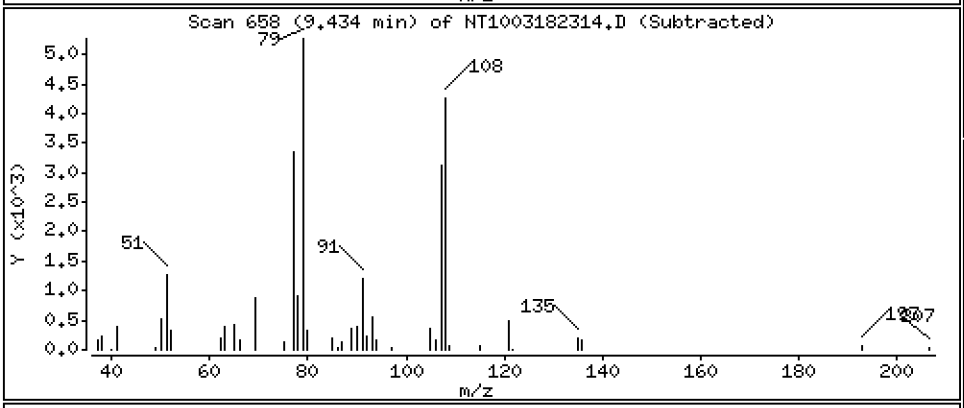
Column phase: ZB-5msi

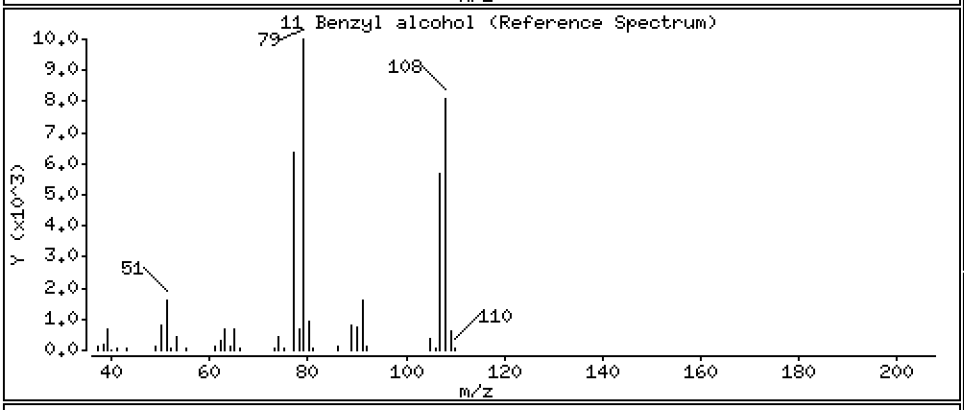
Column diameter: 0.25

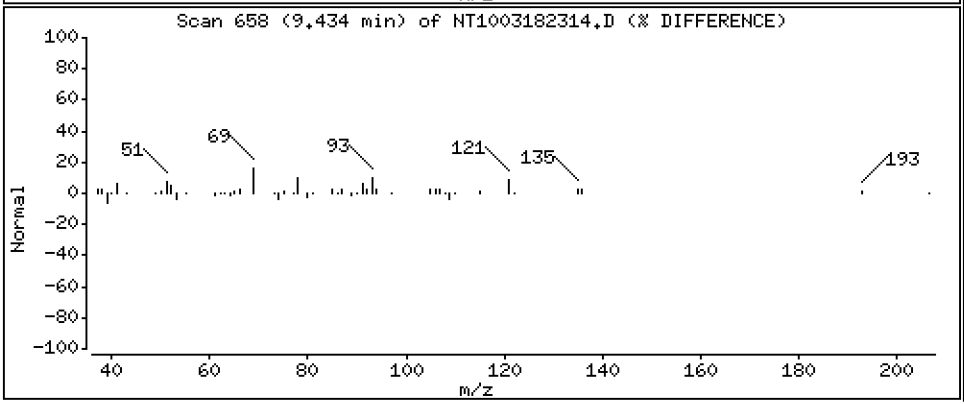
11 Benzyl alcohol

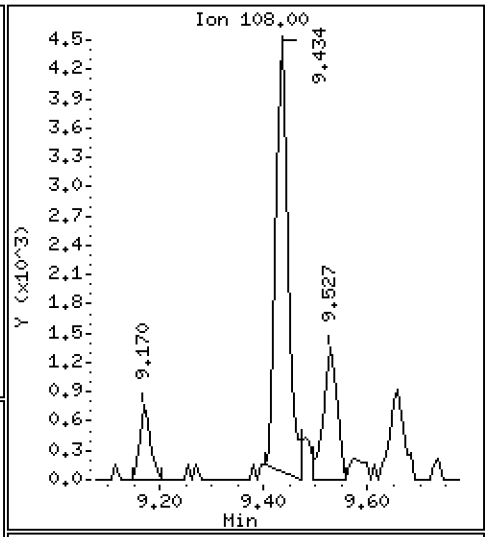
Concentration: 0.1513 ug/mL

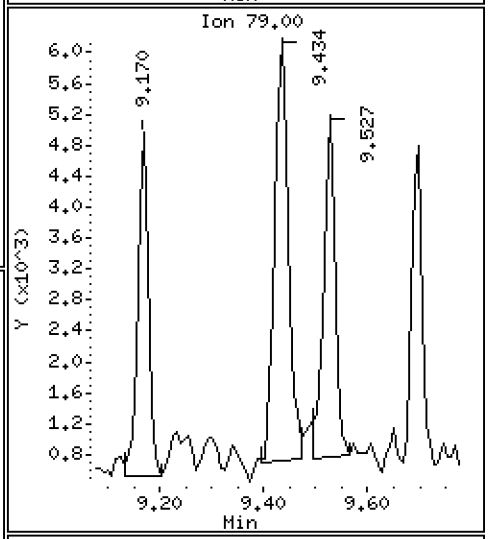


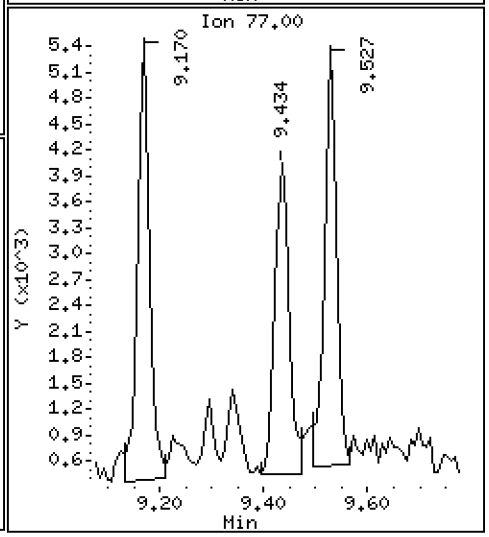












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

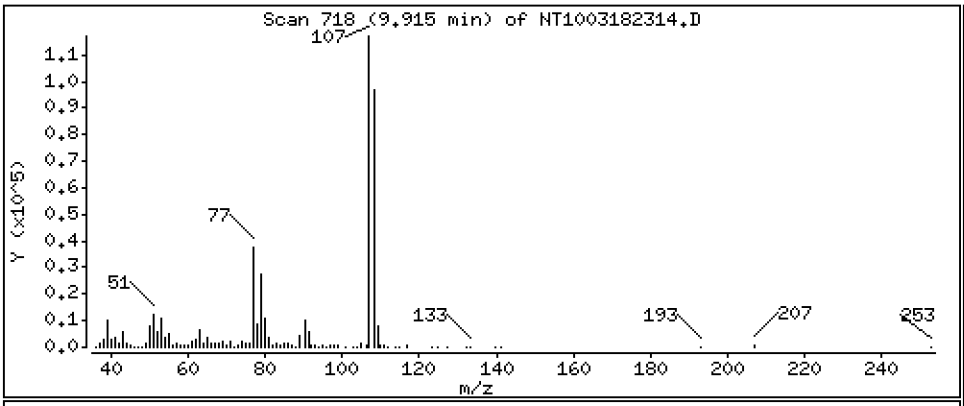
Operator: VTS

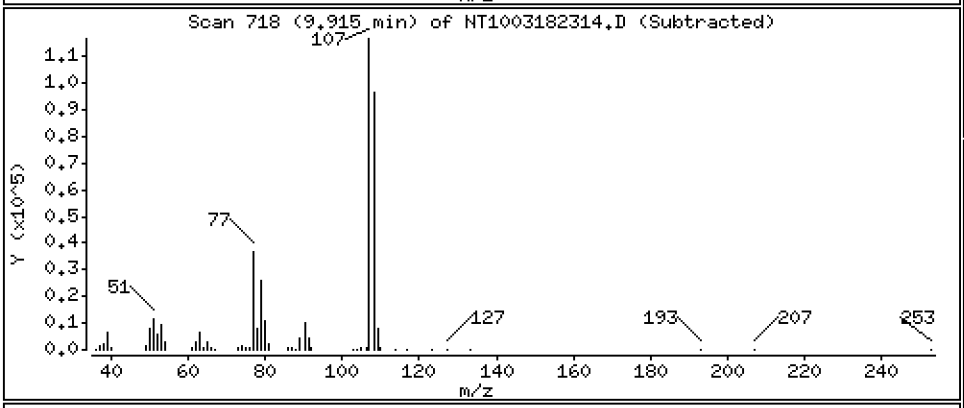
Column phase: ZB-5msi

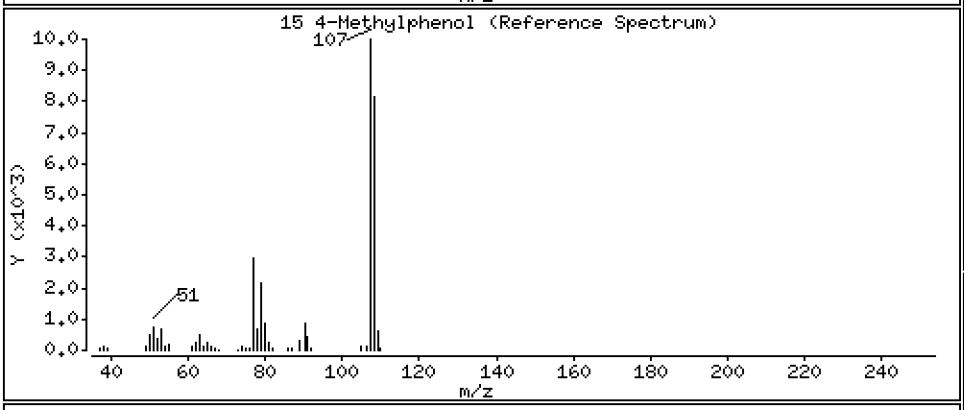
Column diameter: 0.25

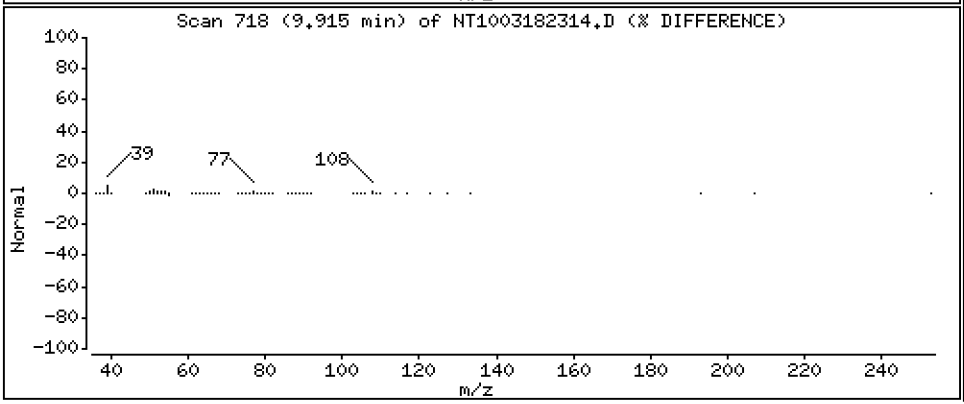
15 4-Methylphenol

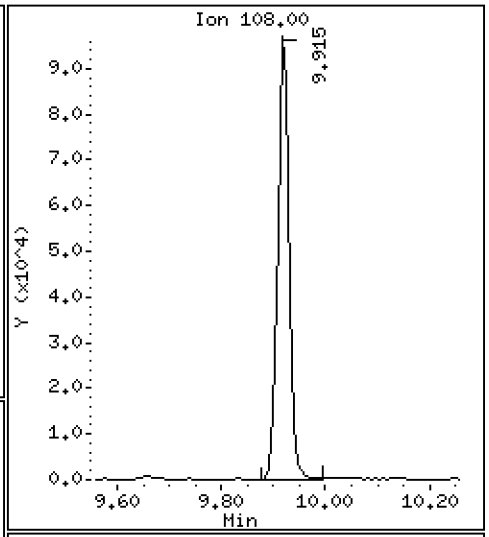
Concentration: 1.940 ug/mL

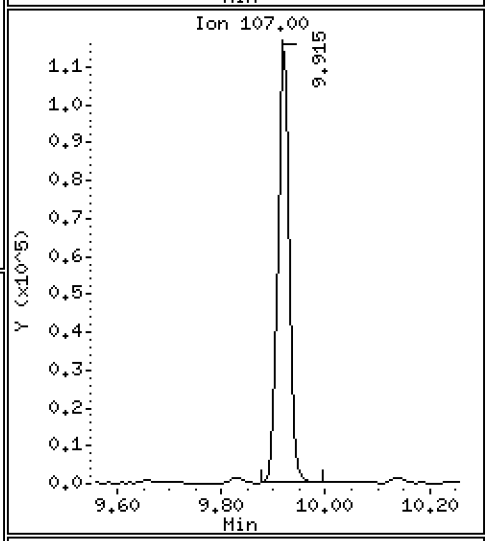


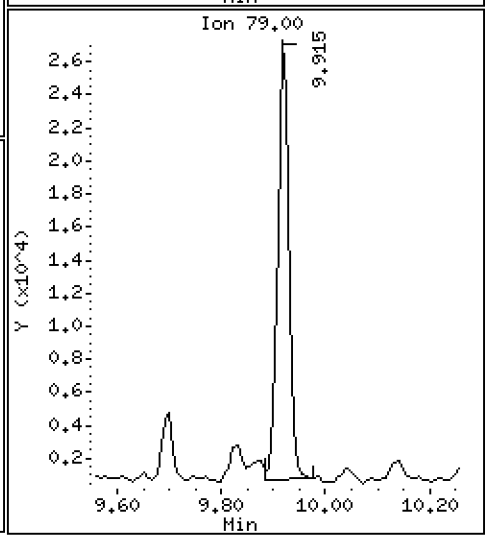












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

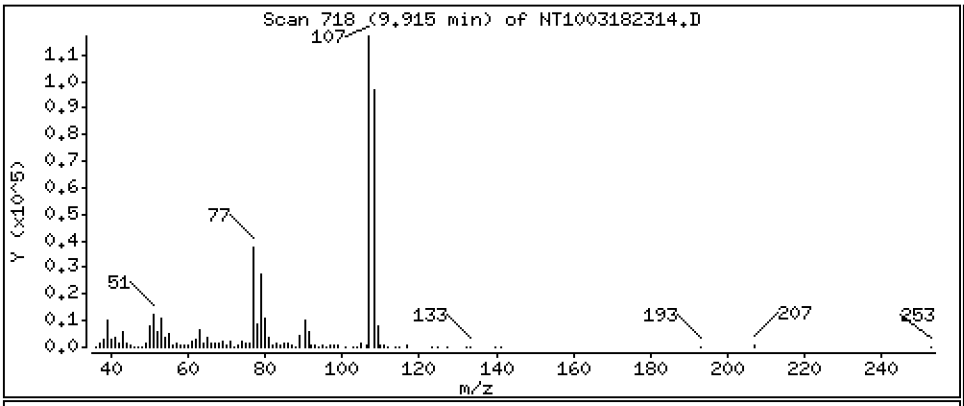
Operator: VTS

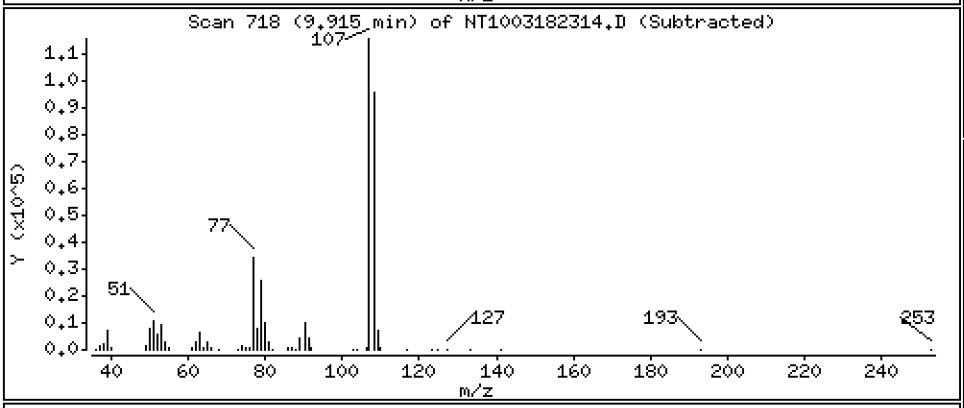
Column phase: ZB-5msi

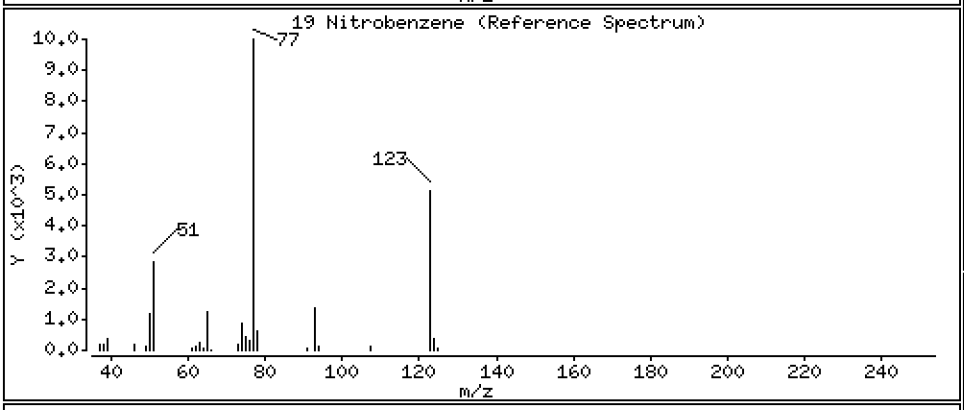
Column diameter: 0.25

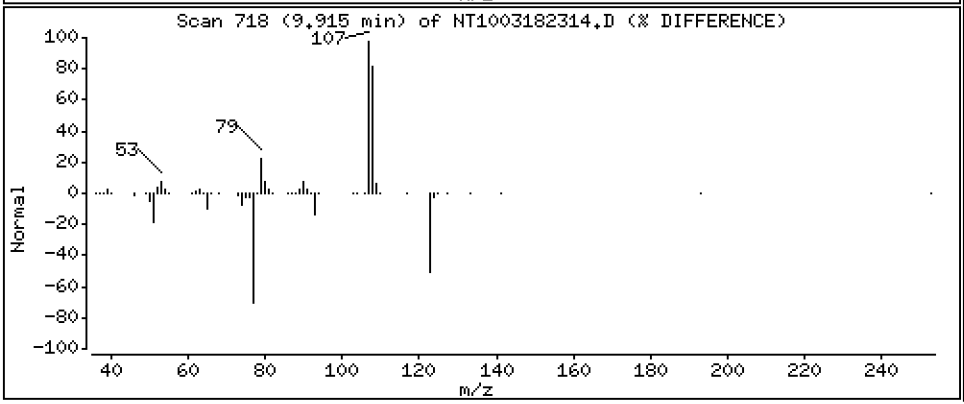
19 Nitrobenzene

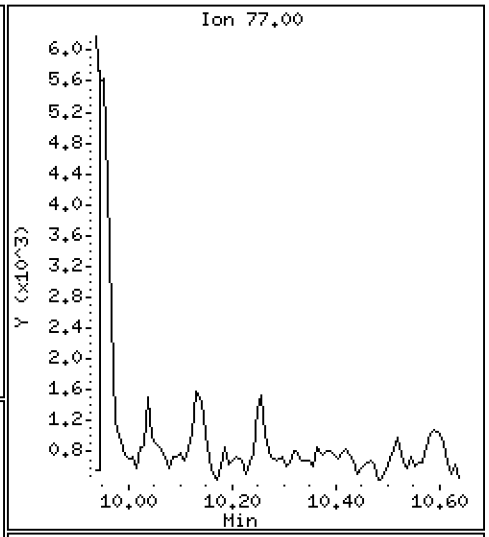
Concentration: 0.6672 ug/mL

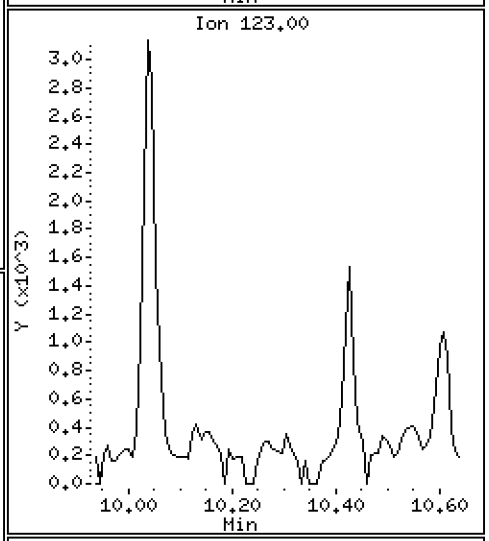


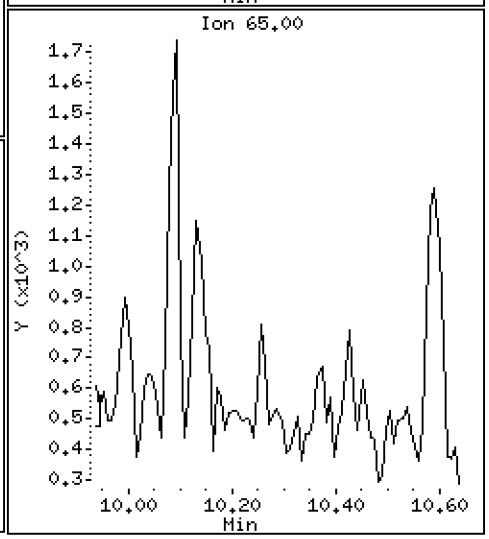












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

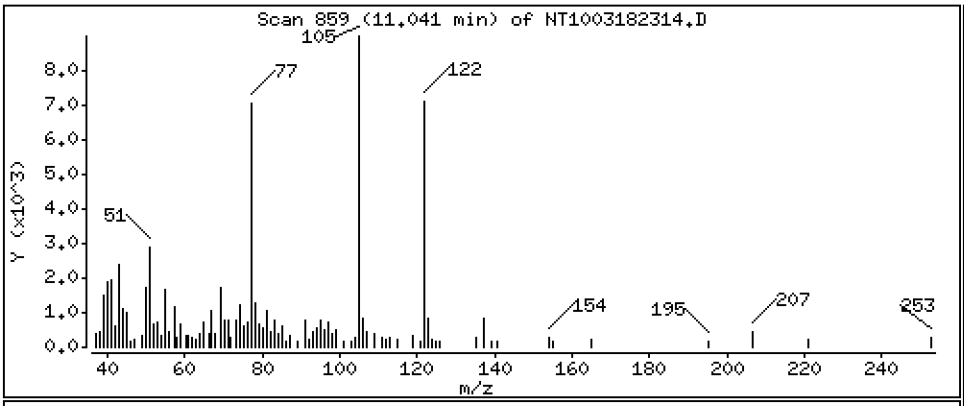
Operator: VTS

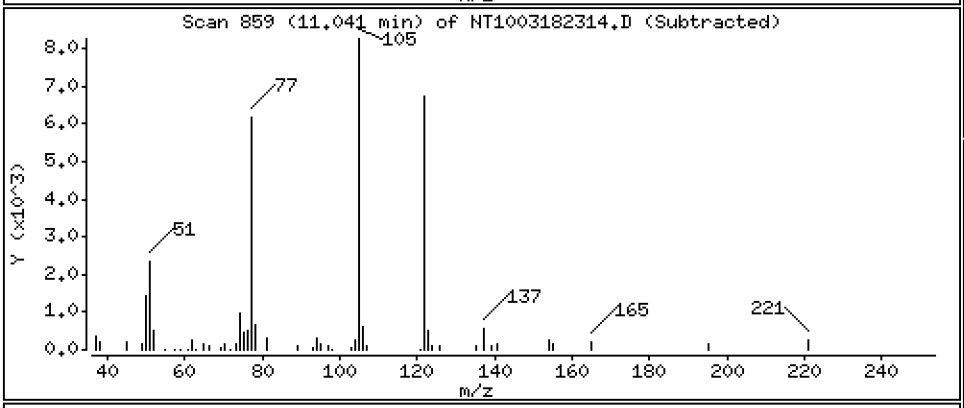
Column phase: ZB-5msi

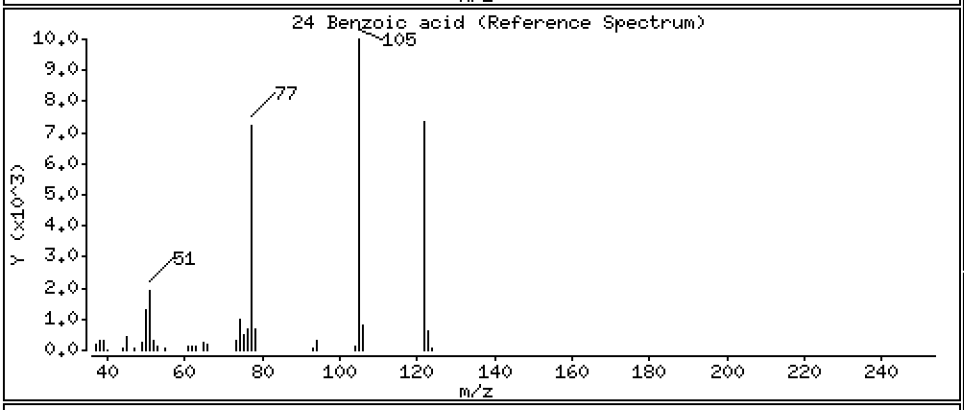
Column diameter: 0.25

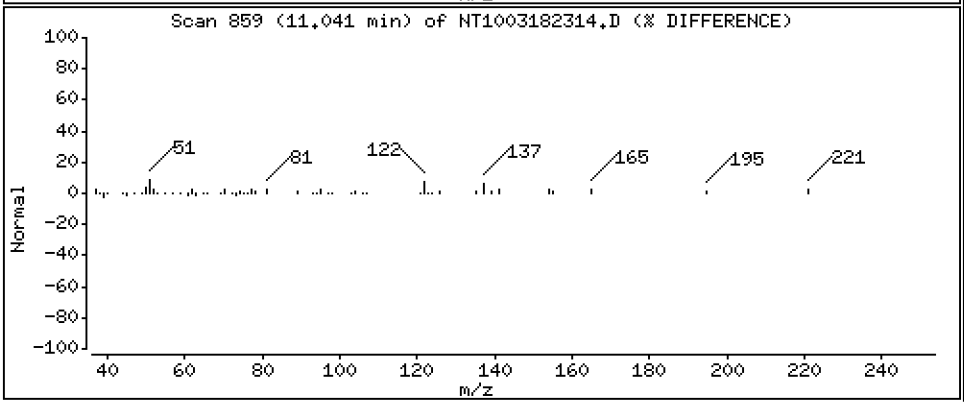
24 Benzoic acid

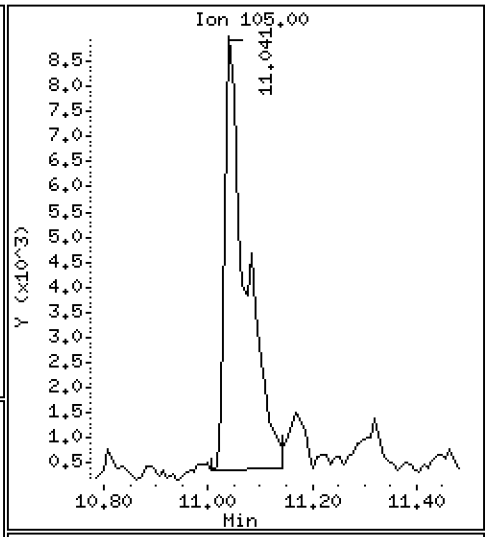
Concentration: 0.5701 ug/mL

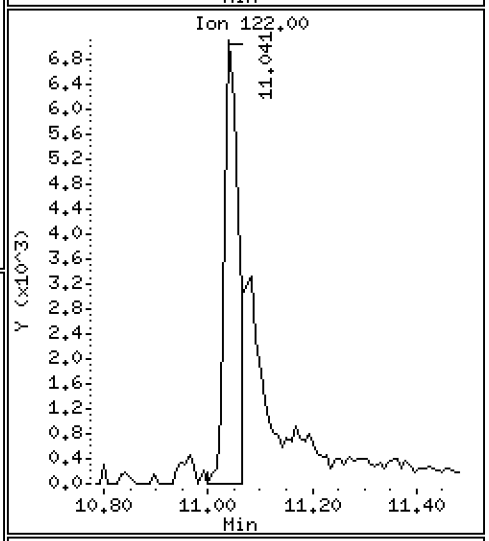


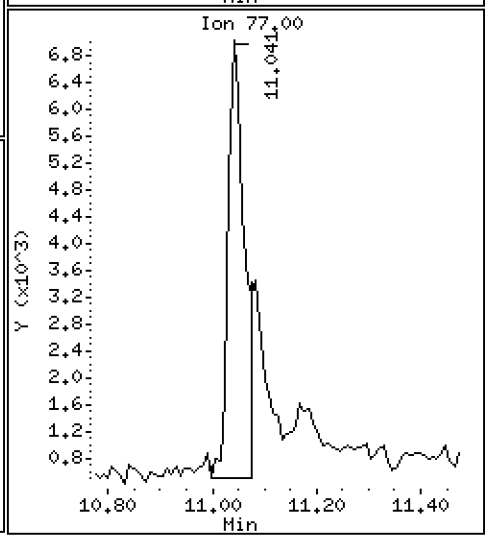












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

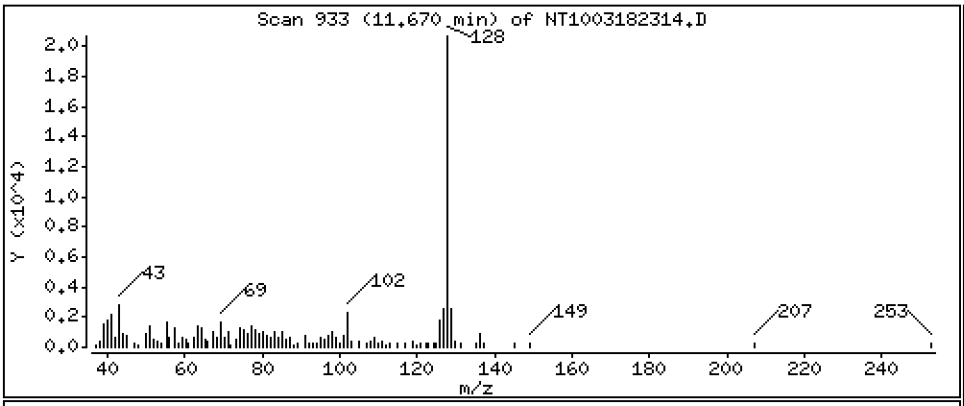
Operator: VTS

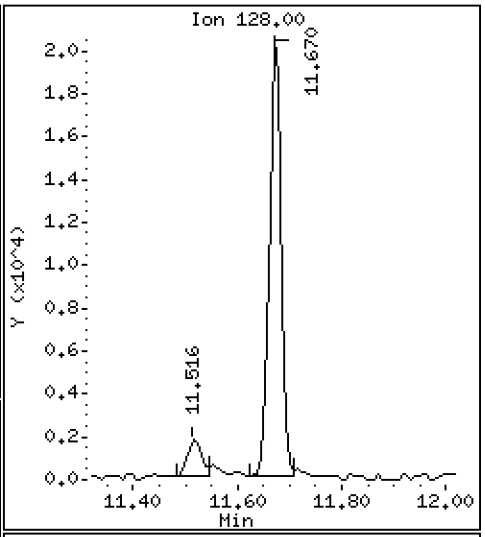
Column phase: ZB-5msi

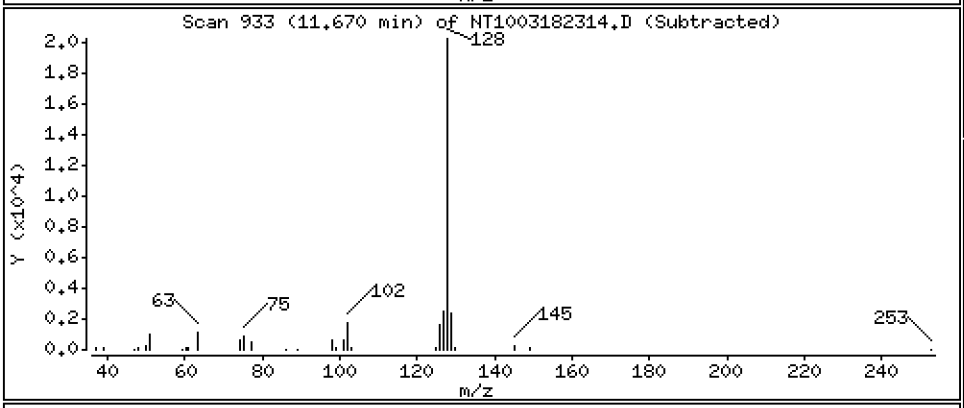
Column diameter: 0.25

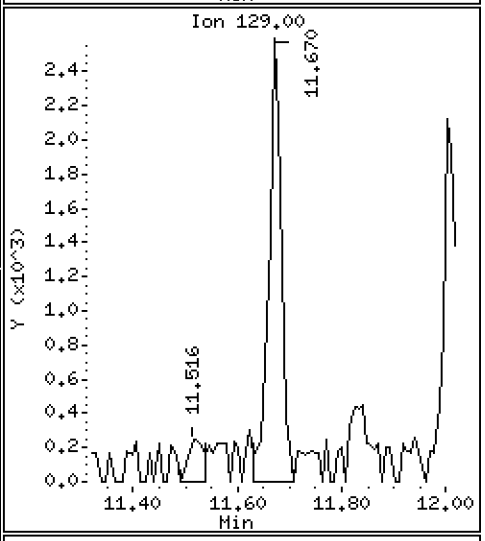
28 Naphthalene

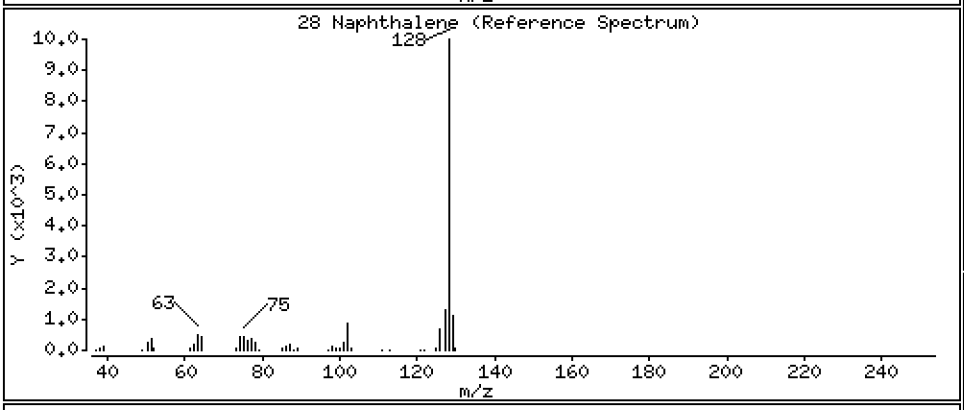
Concentration: 0.1380 ug/mL

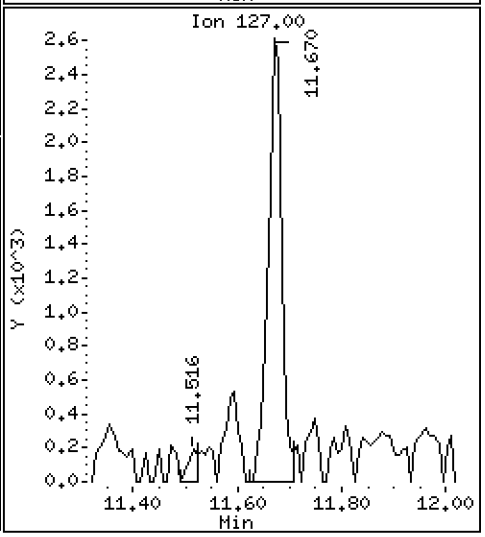


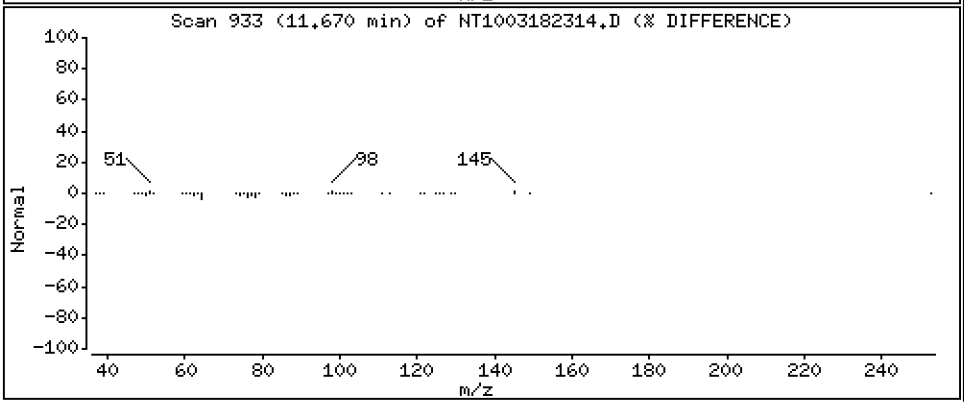












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

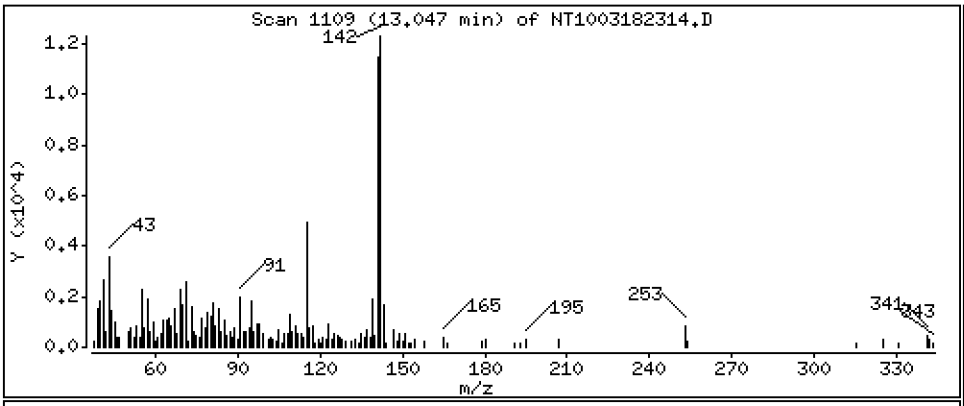
Operator: VTS

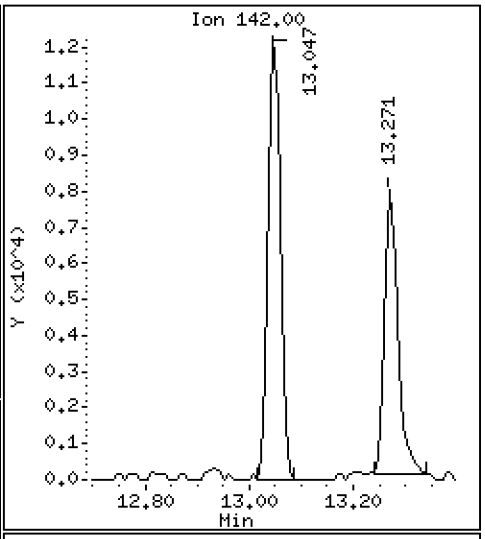
Column phase: ZB-5msi

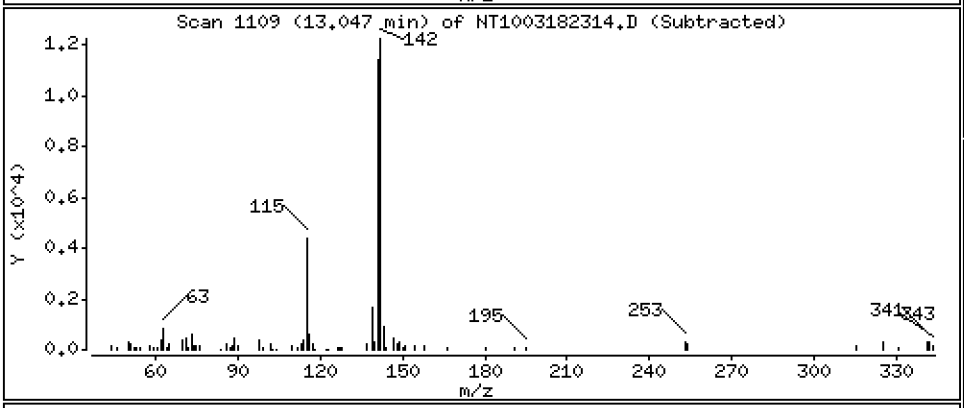
Column diameter: 0.25

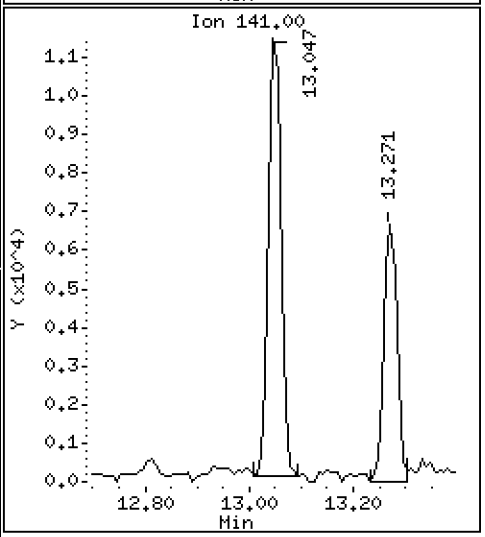
32 2-Methylnaphthalene

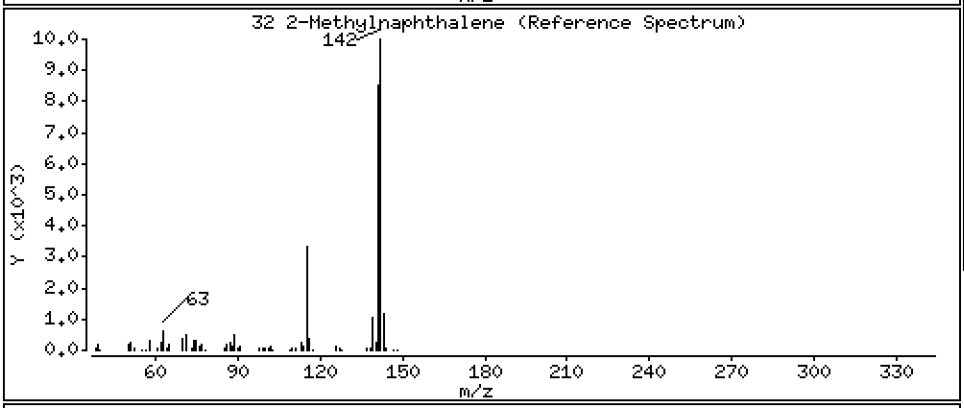
Concentration: 0.1160 ug/mL

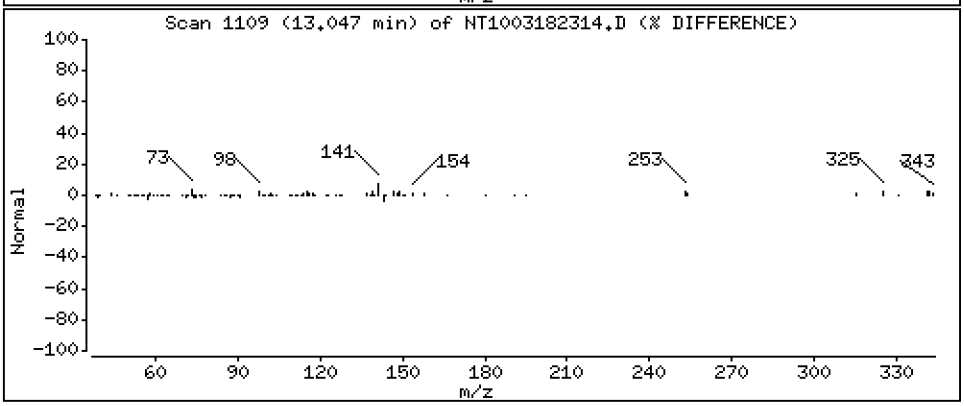












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

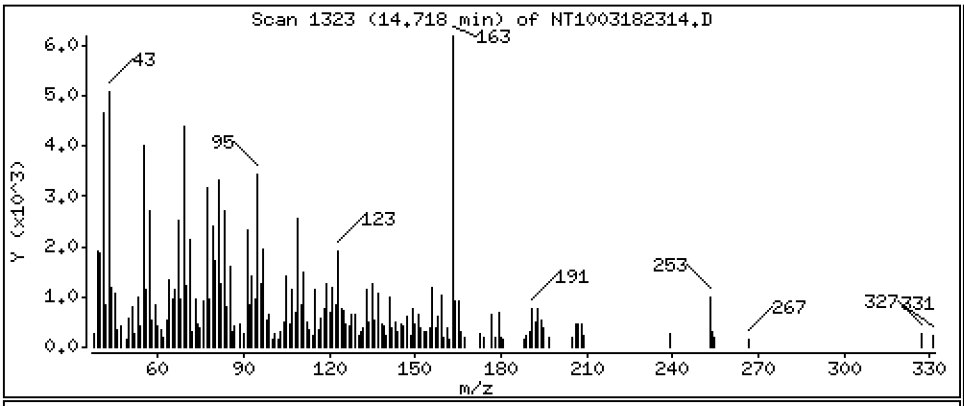
Operator: VTS

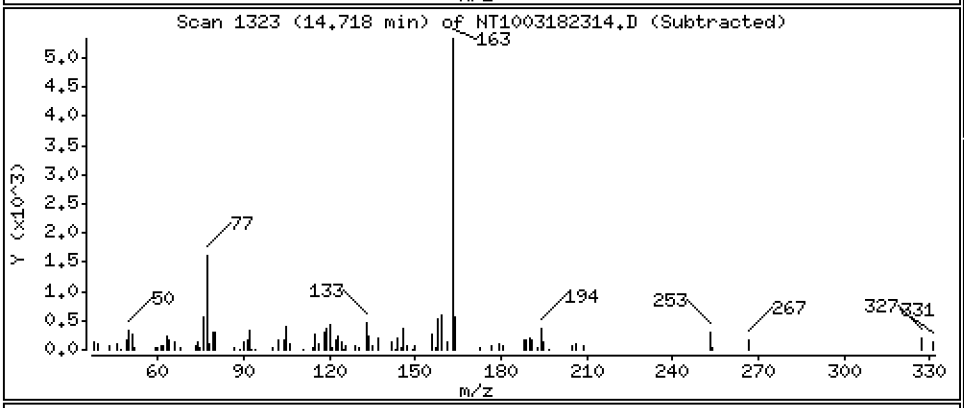
Column phase: ZB-5msi

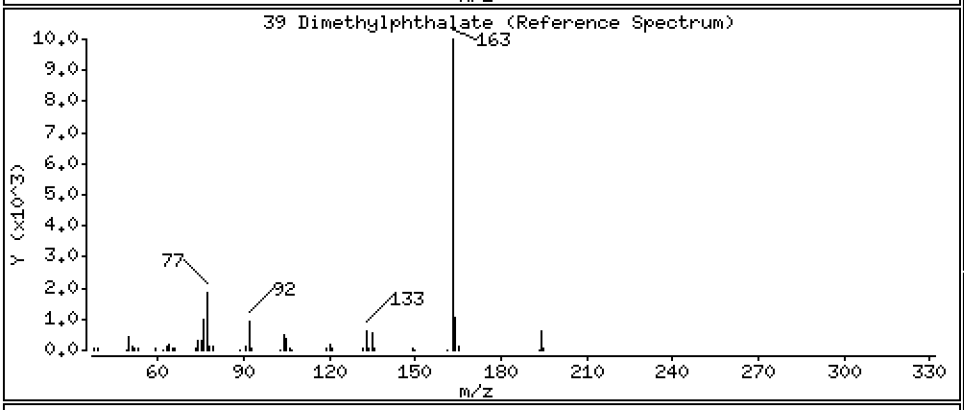
Column diameter: 0.25

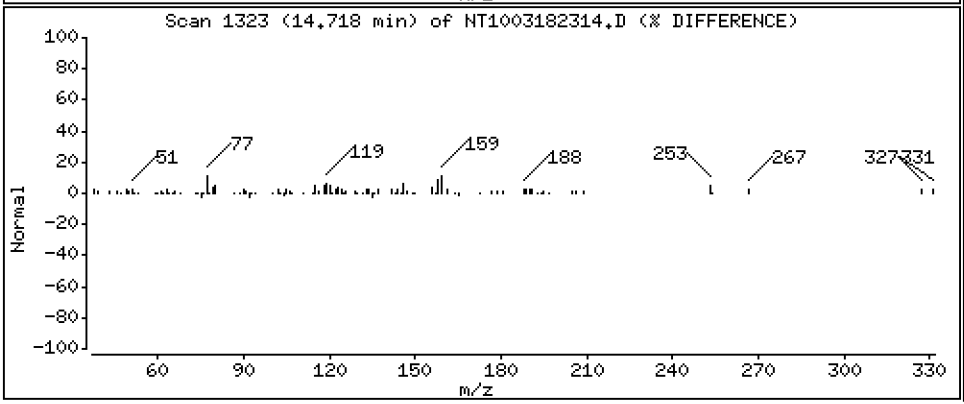
39 Dimethylphthalate

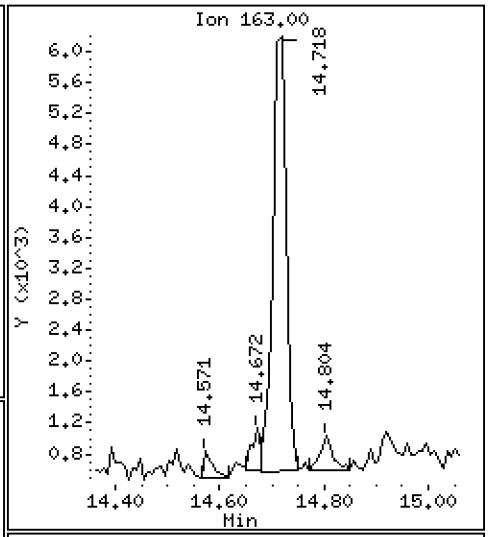
Concentration: 0.06242 ug/mL

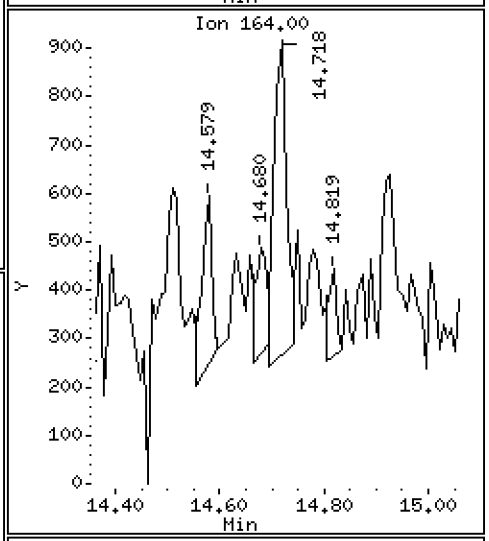


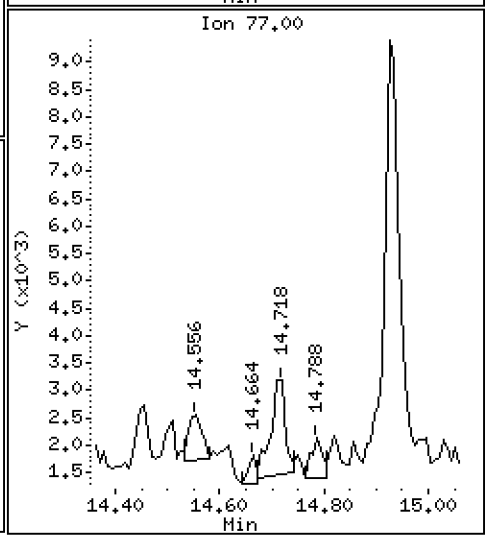












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

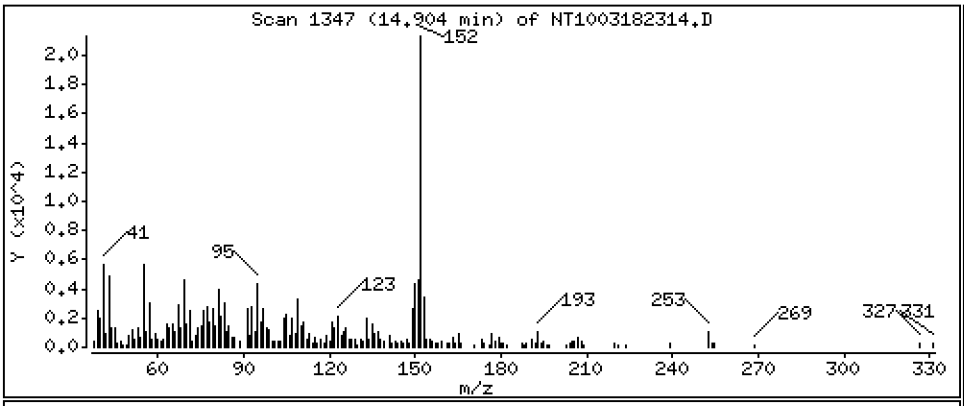
Operator: VTS

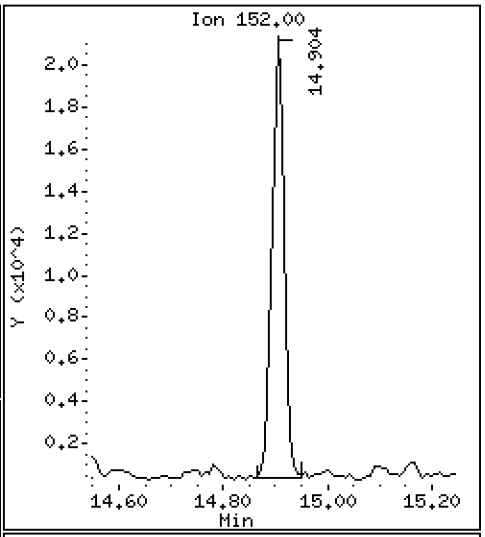
Column phase: ZB-5msi

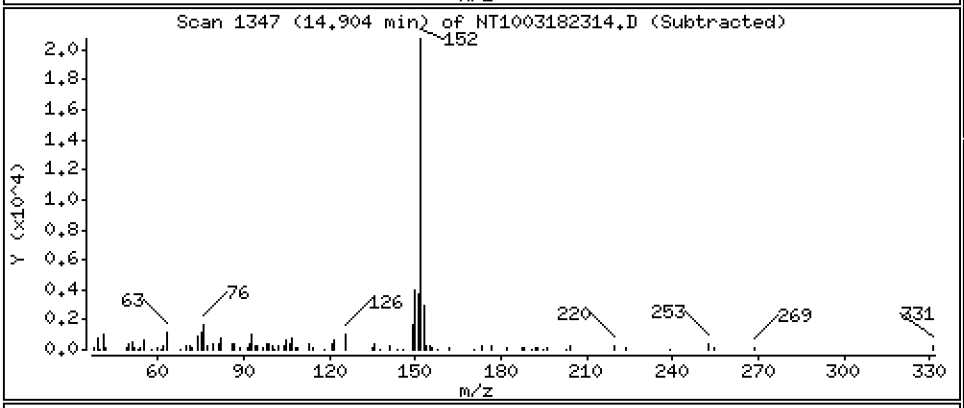
Column diameter: 0.25

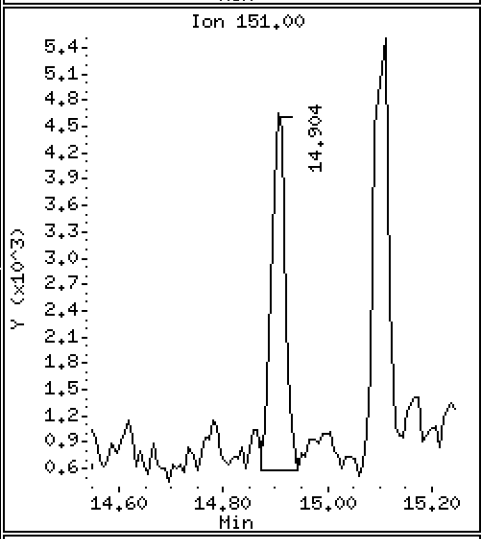
40 Acenaphthylene

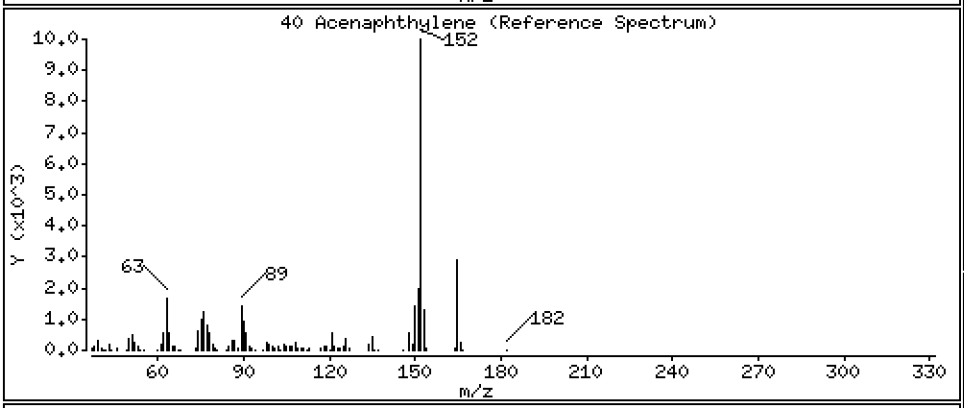
Concentration: 0.1416 ug/mL

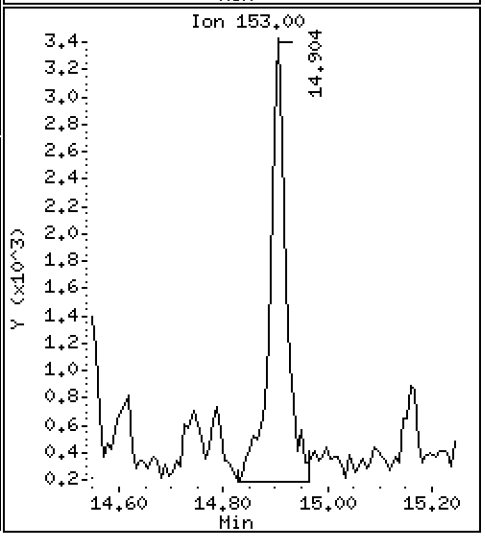


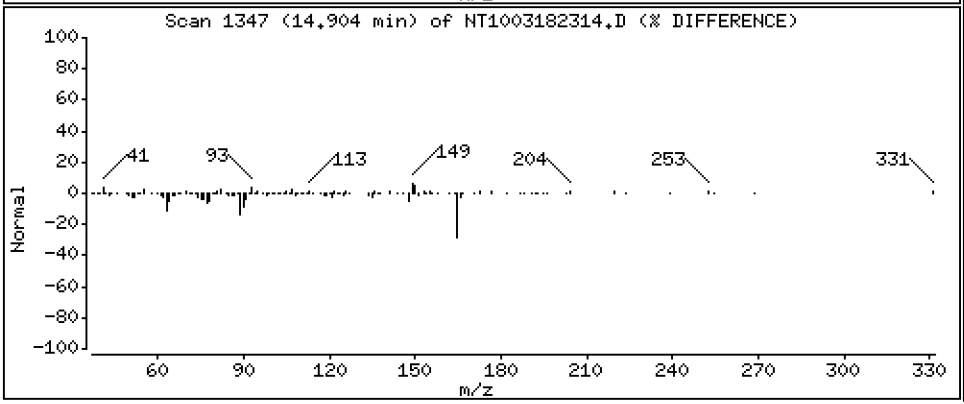












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

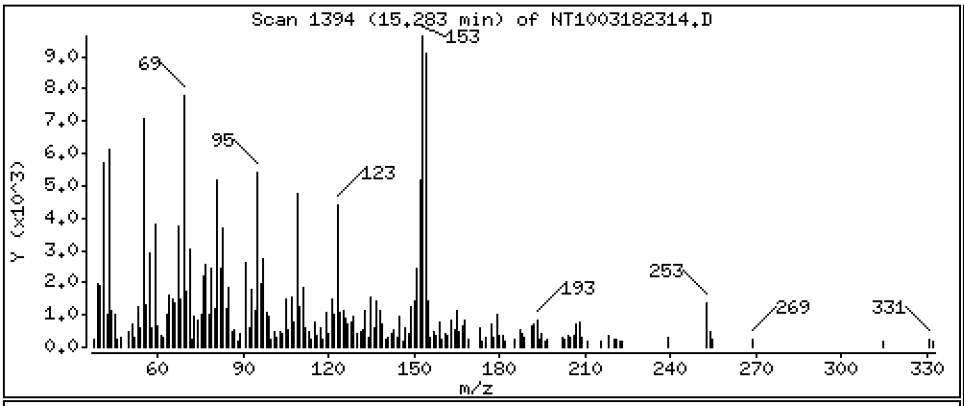
Operator: VTS

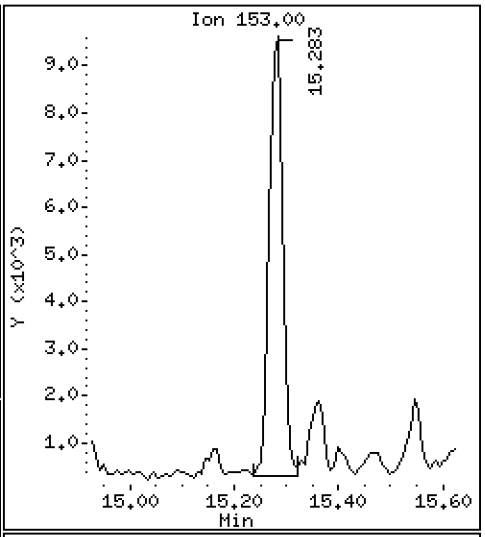
Column phase: ZB-5msi

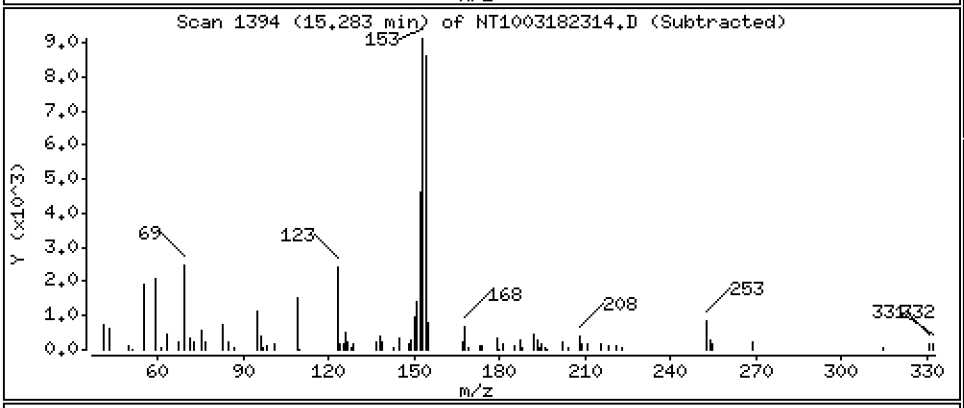
Column diameter: 0.25

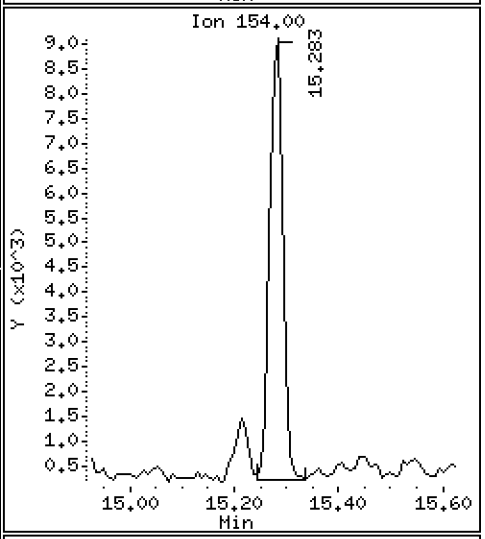
44 Acenaphthene

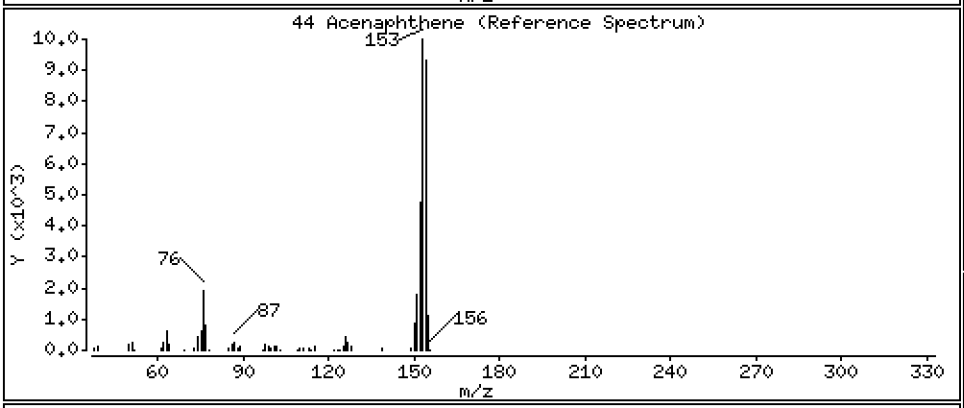
Concentration: 0.1116 ug/mL

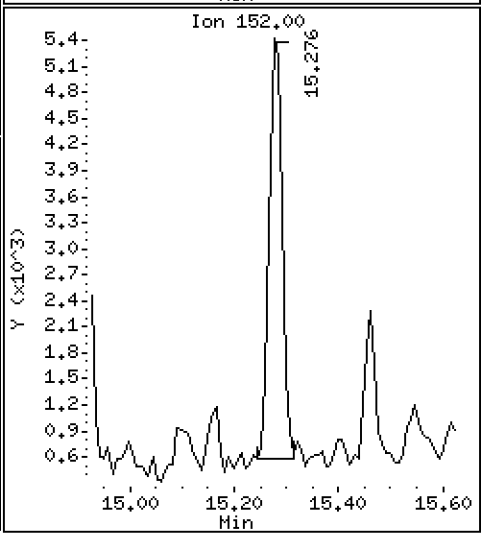


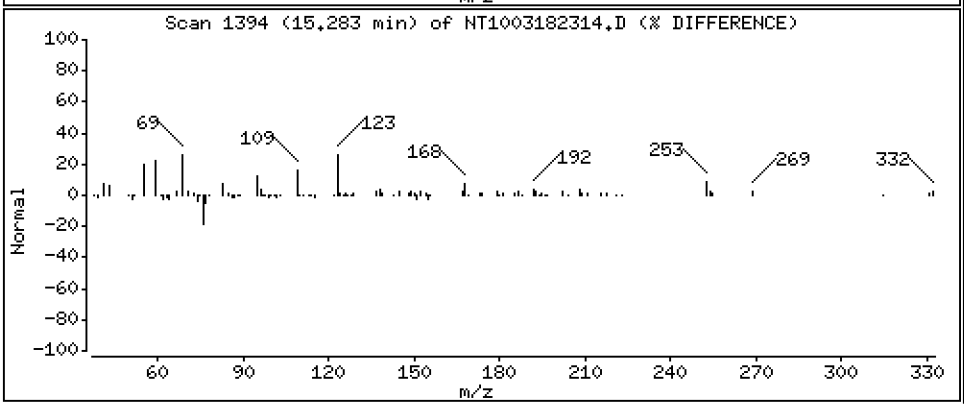












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

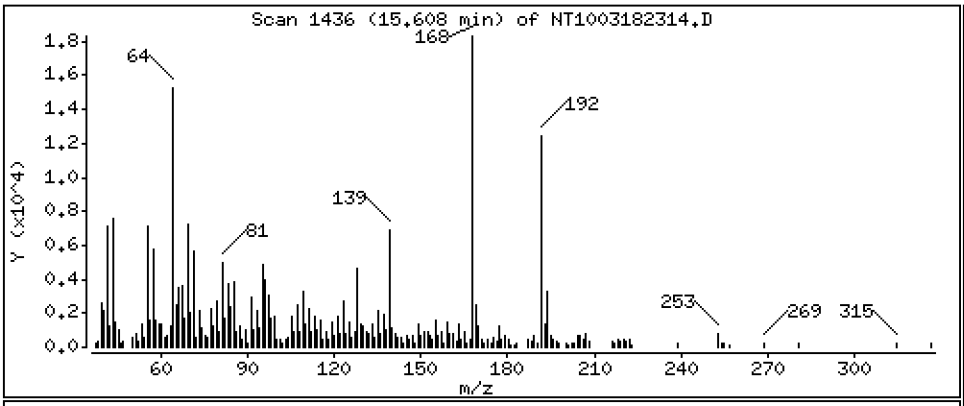
Operator: VTS

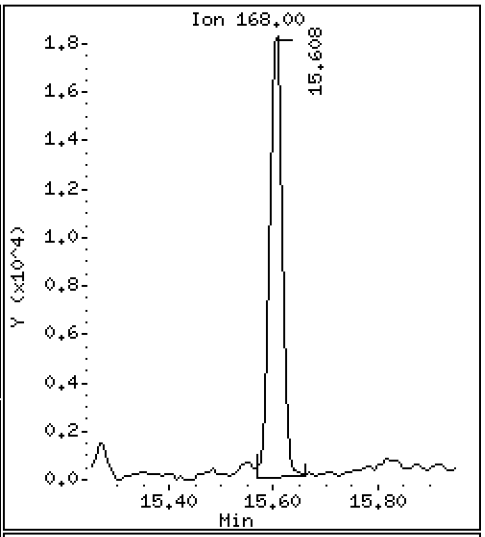
Column phase: ZB-5msi

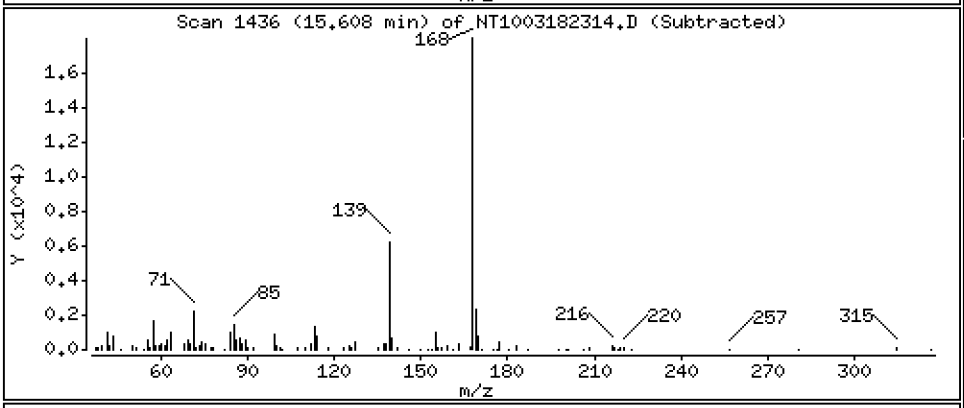
Column diameter: 0.25

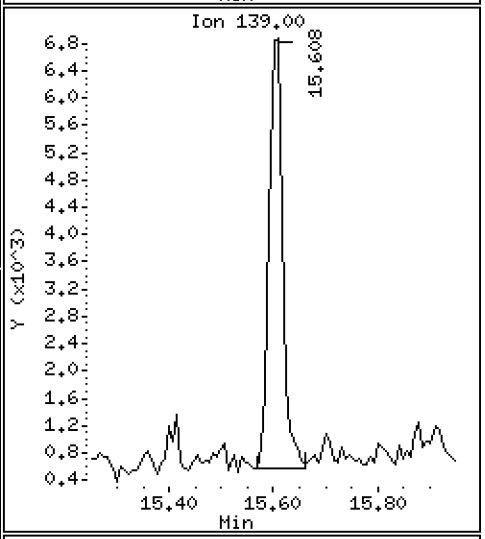
46 Dibenzofuran

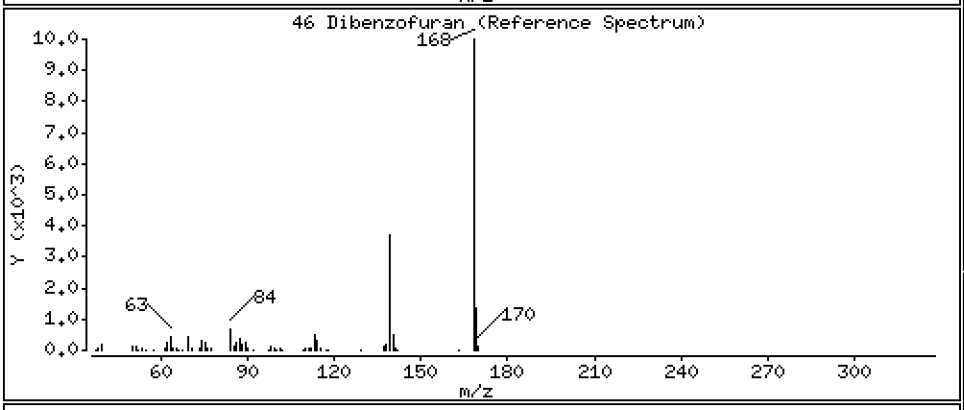
Concentration: 0.1375 ug/mL

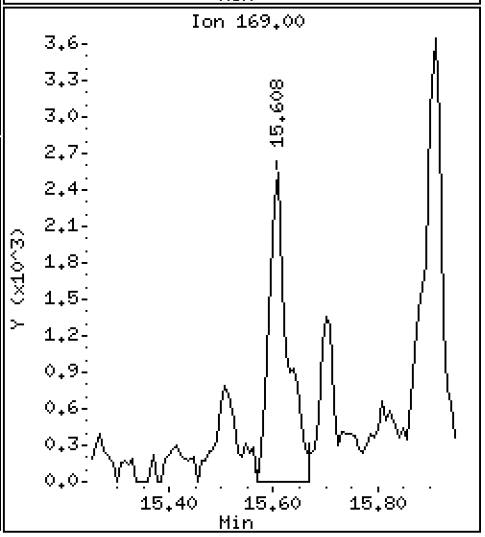


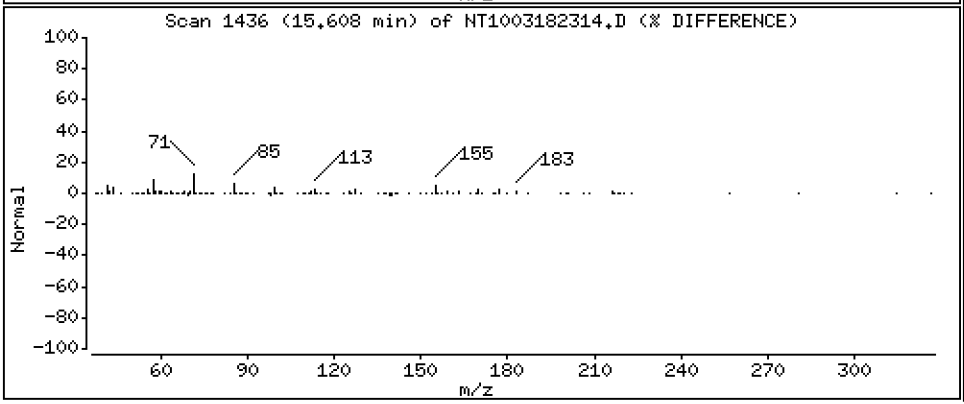












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

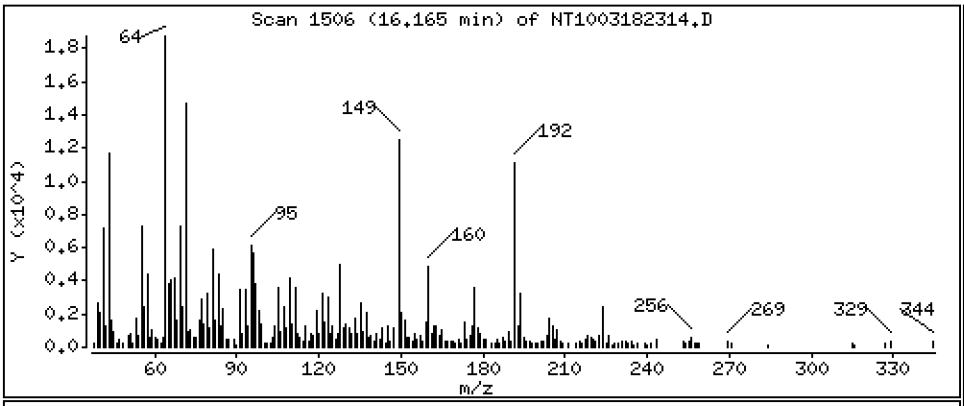
Operator: VTS

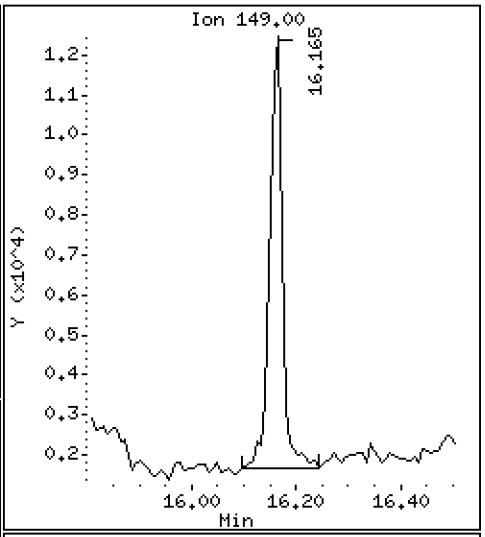
Column phase: ZB-5msi

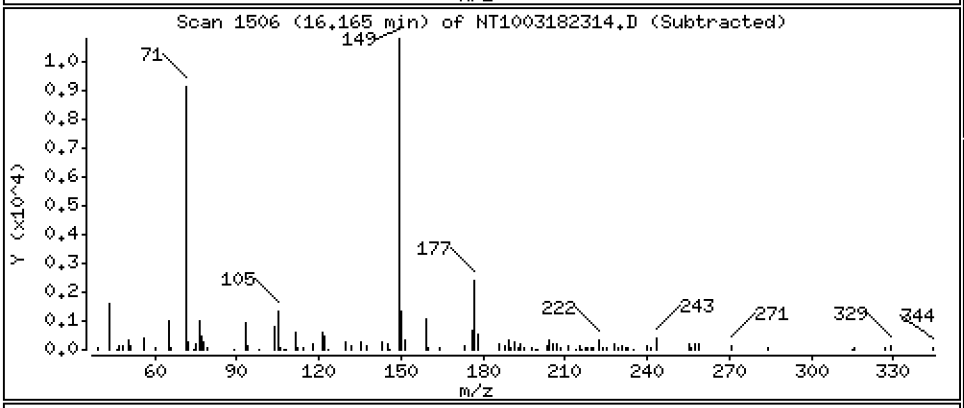
Column diameter: 0.25

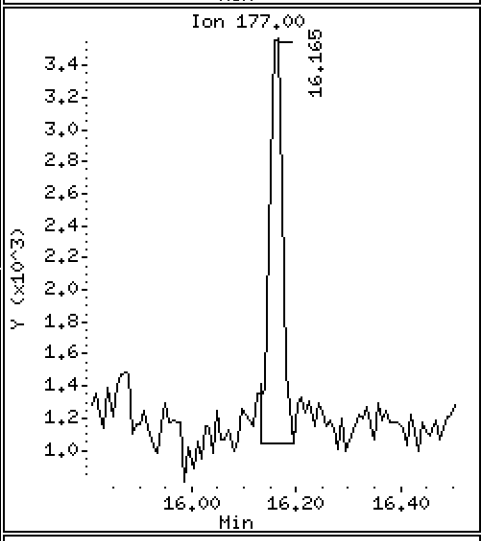
50 Diethylphthalate

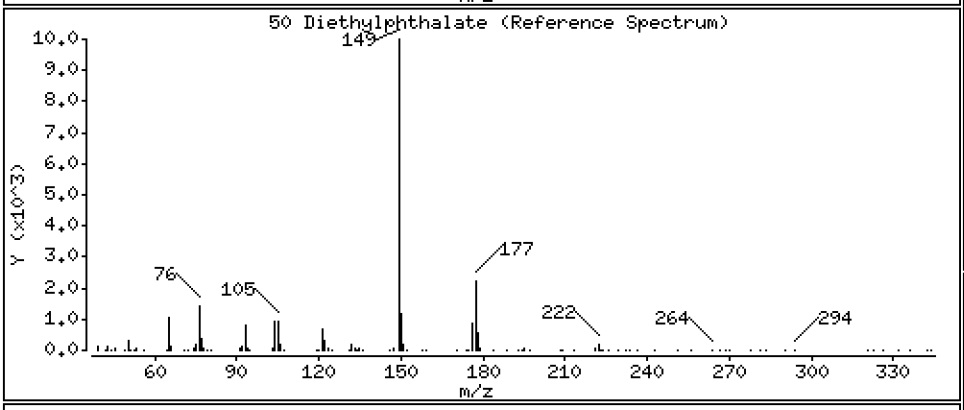
Concentration: 0.1331 ug/mL

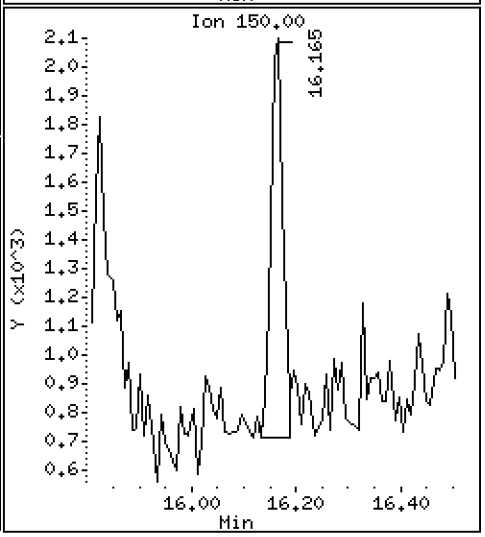


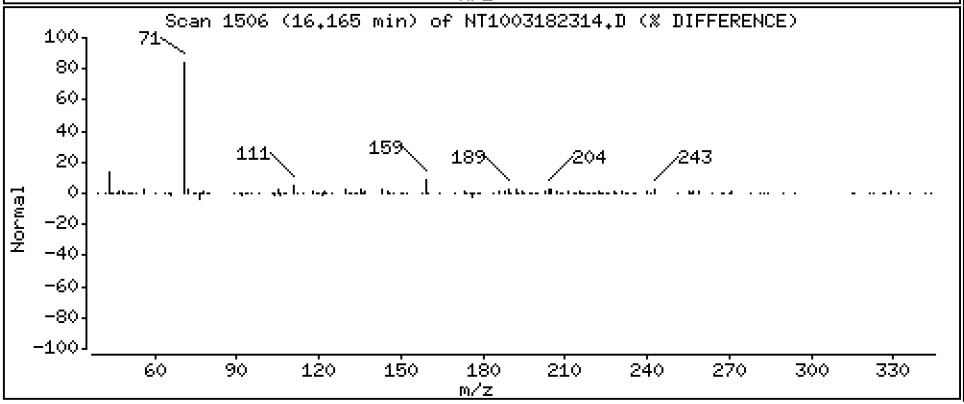












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

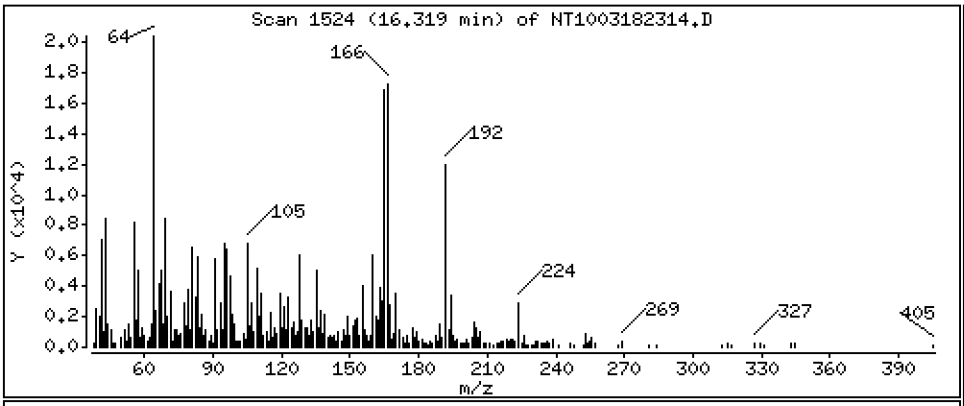
Operator: VTS

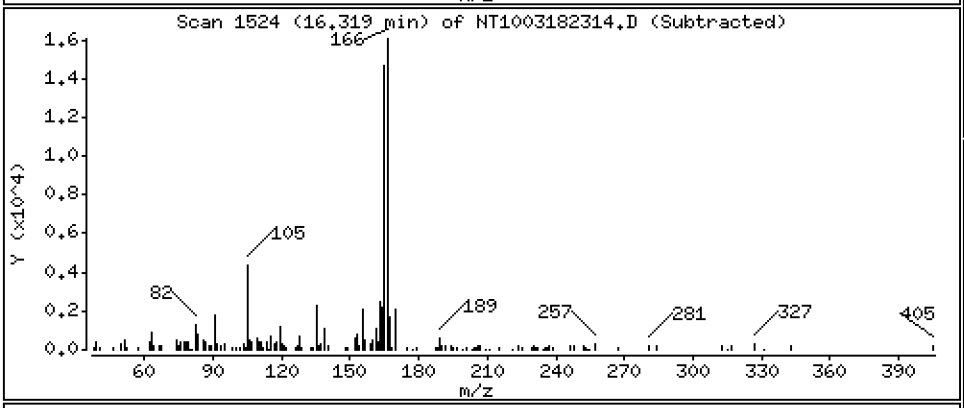
Column phase: ZB-5msi

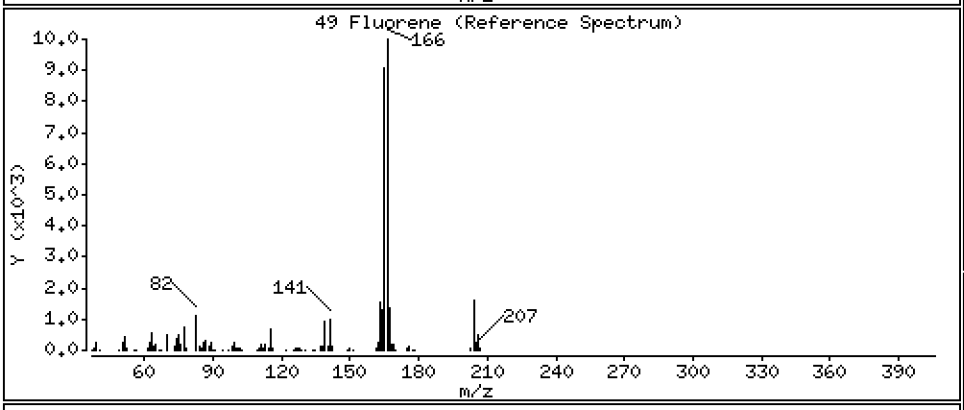
Column diameter: 0.25

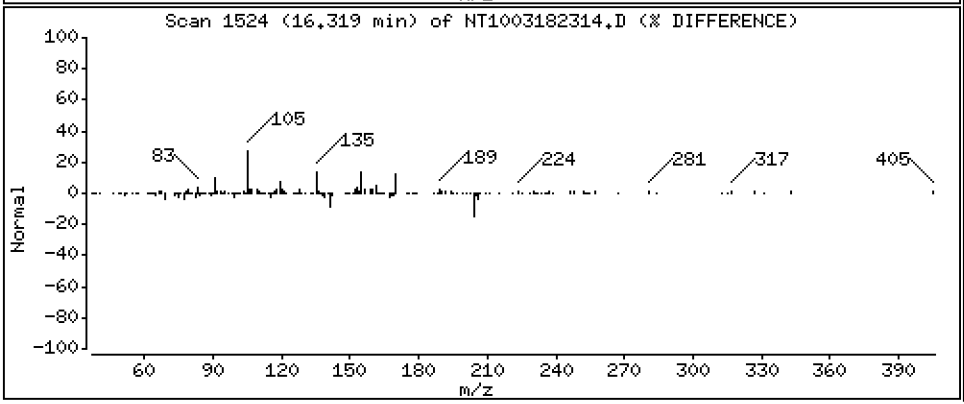
49 Fluorene

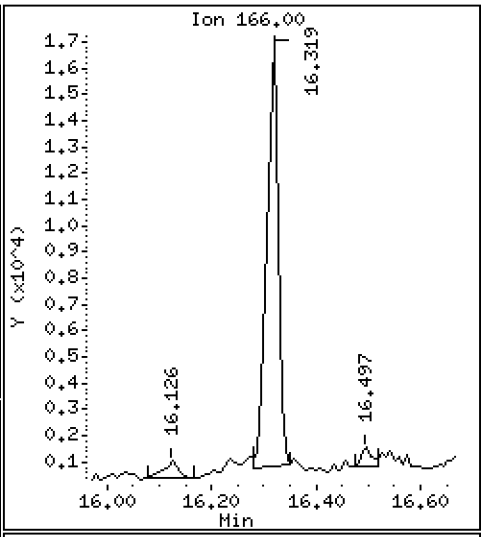
Concentration: 0.1142 ug/mL

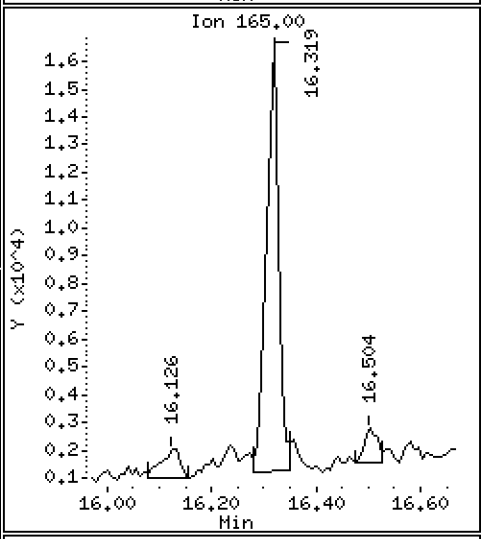


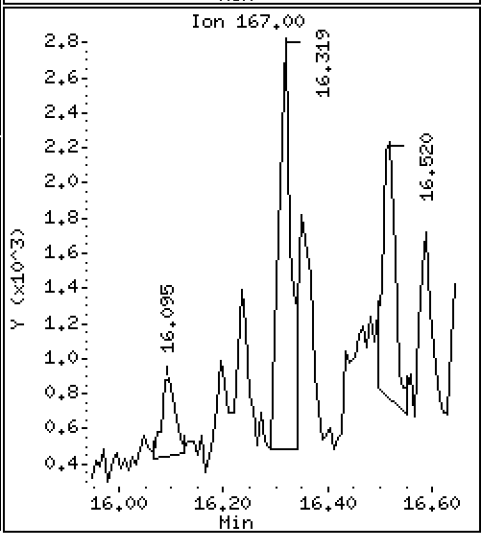












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

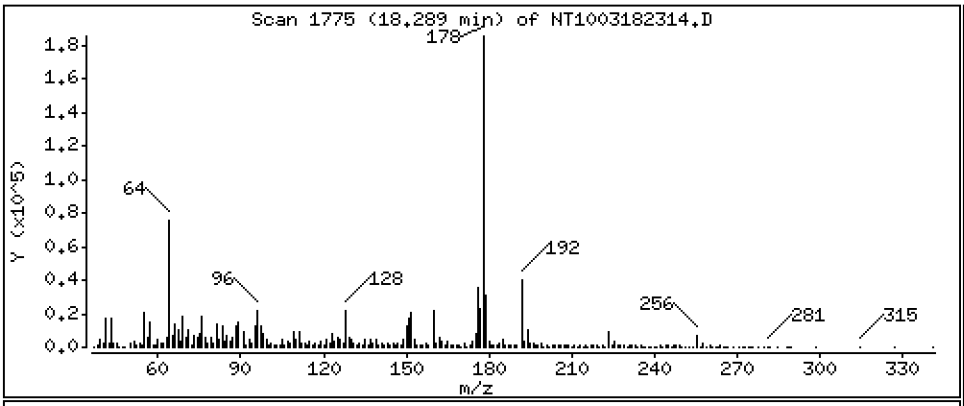
Operator: VTS

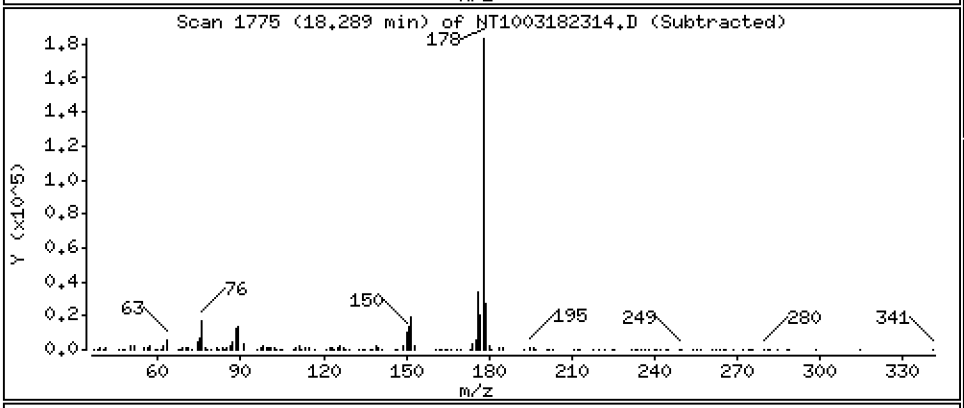
Column phase: ZB-5msi

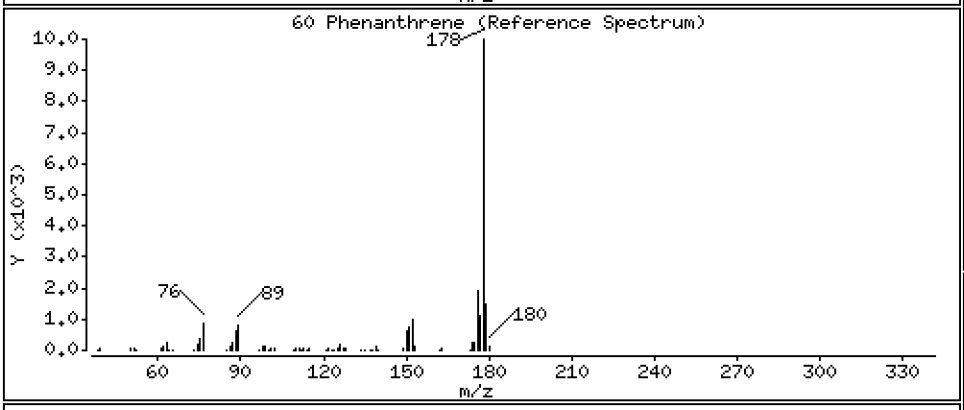
Column diameter: 0.25

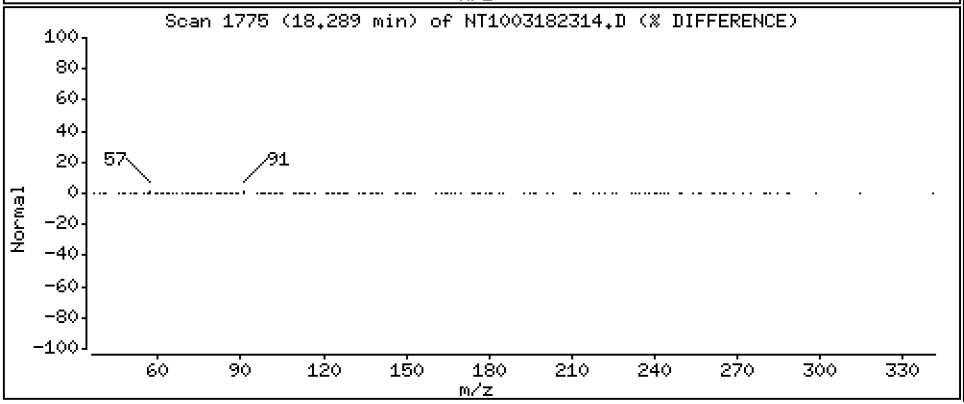
60 Phenanthrene

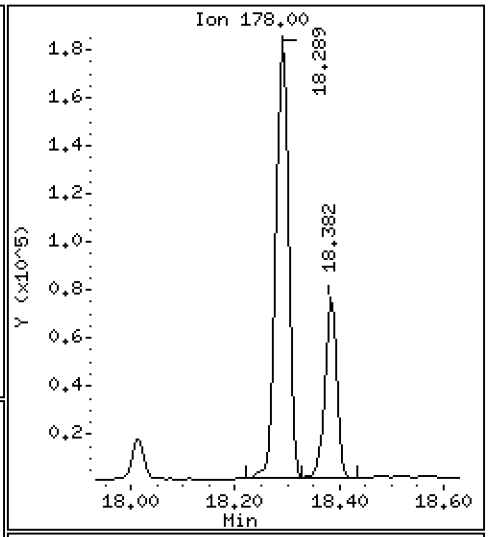
Concentration: 1.243 ug/mL

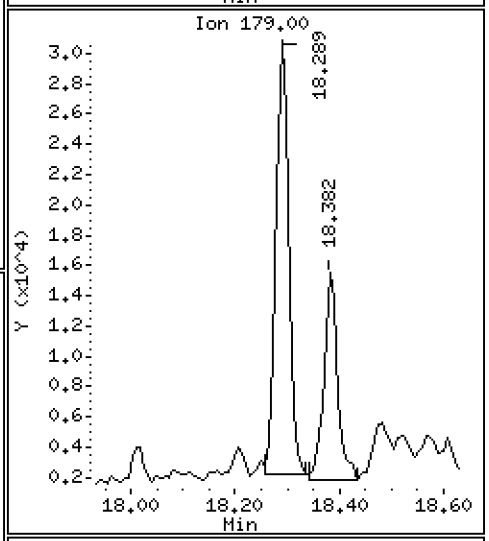


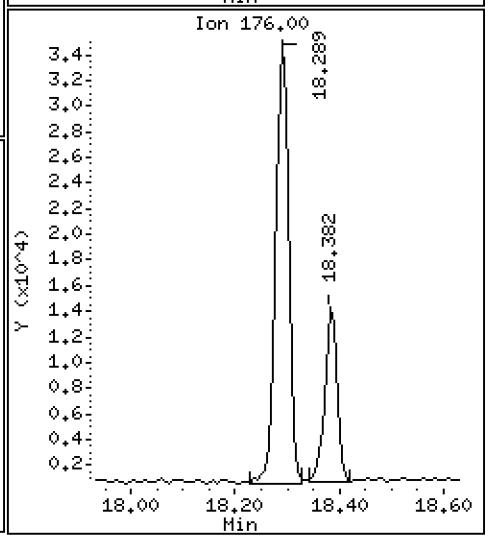












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

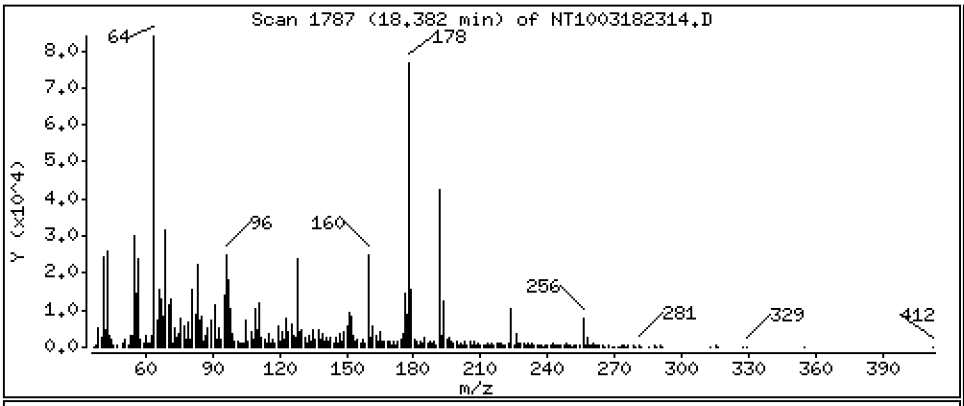
Operator: VTS

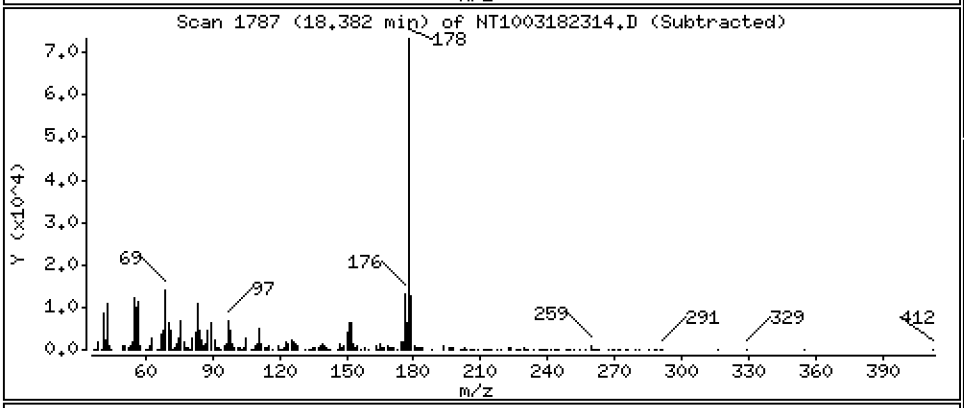
Column phase: ZB-5msi

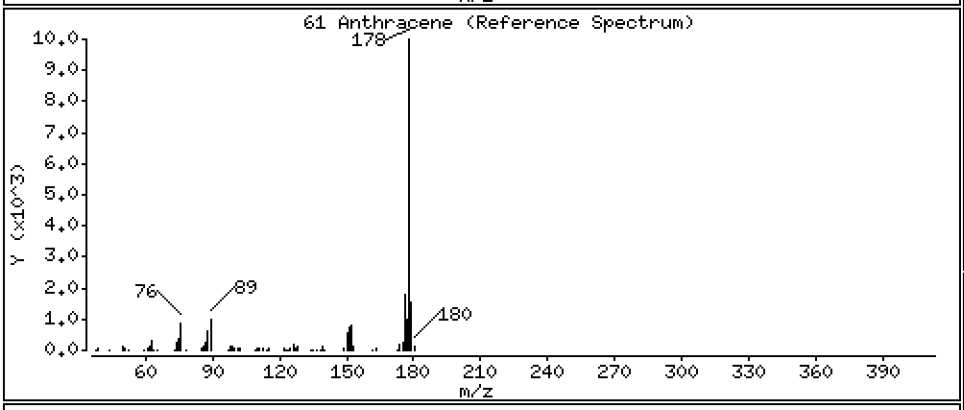
Column diameter: 0.25

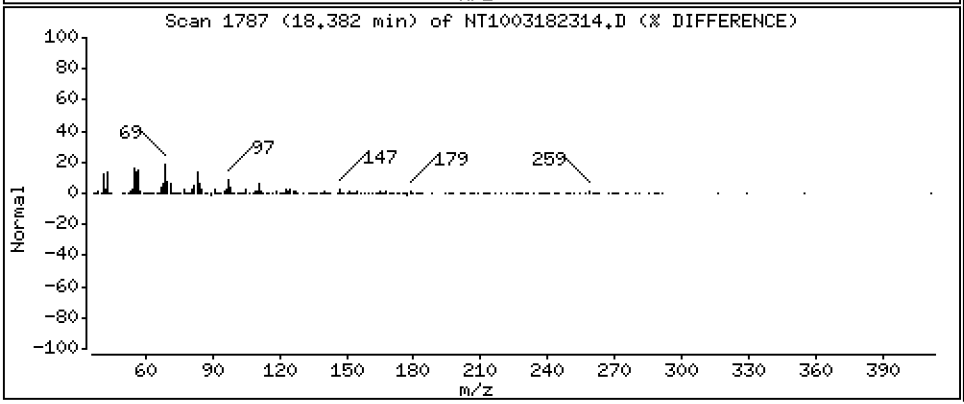
61 Anthracene

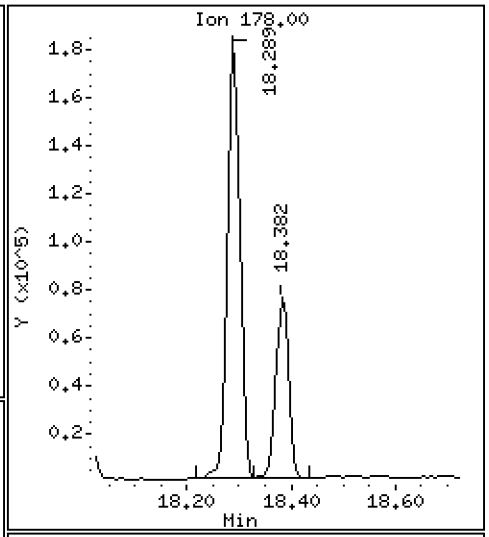
Concentration: 0.5402 ug/mL

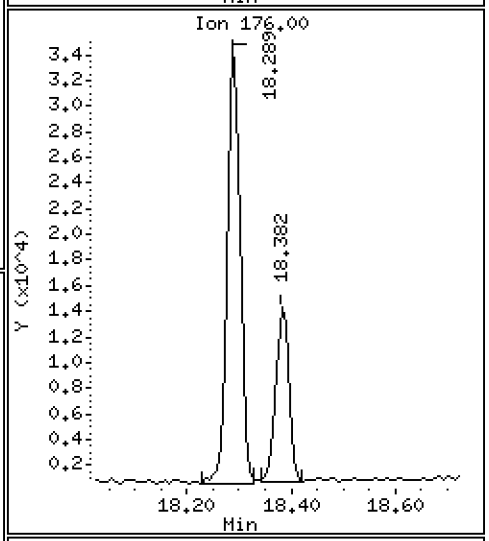


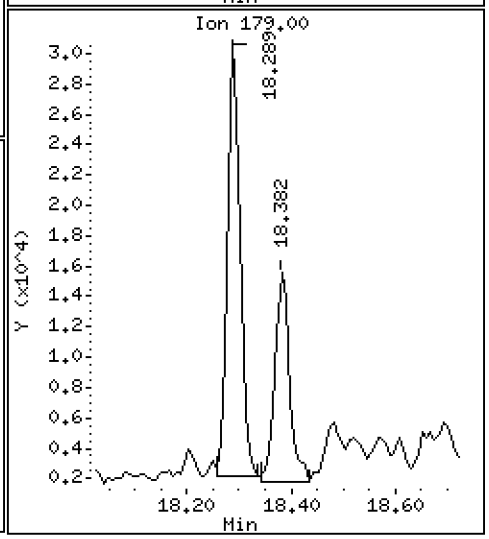












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

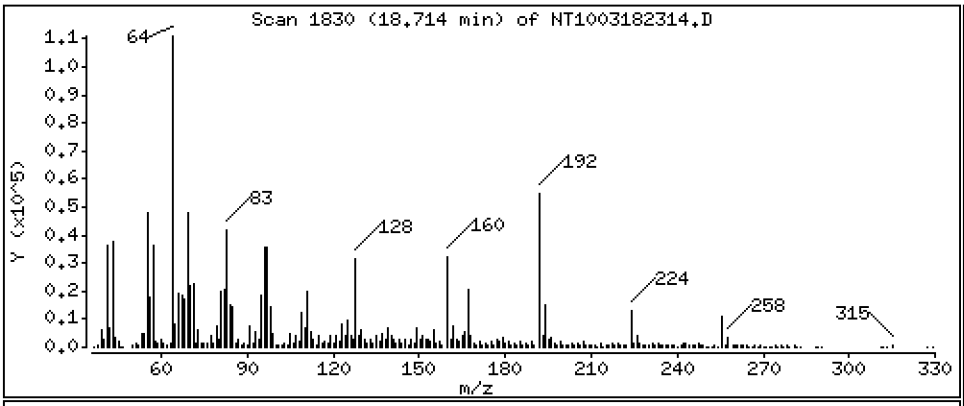
Operator: VTS

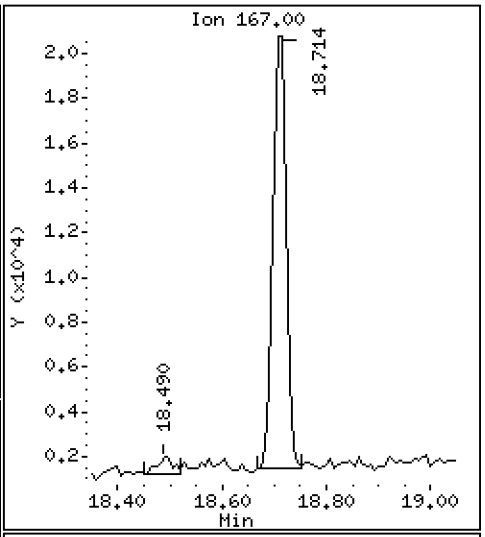
Column phase: ZB-5msi

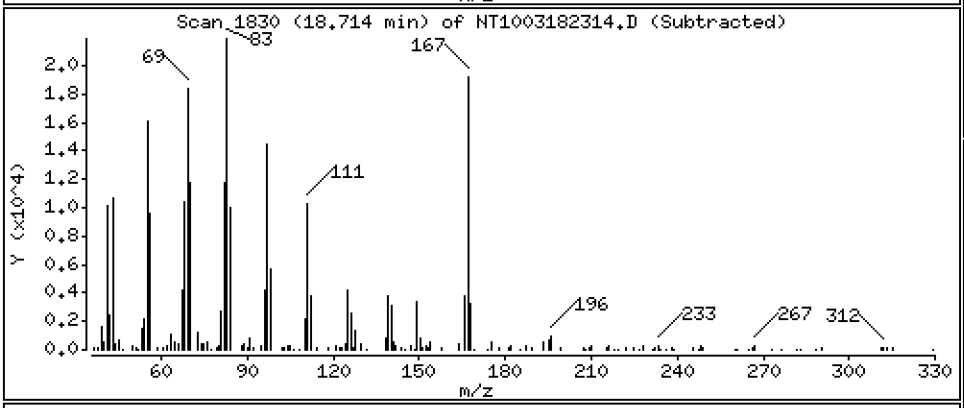
Column diameter: 0.25

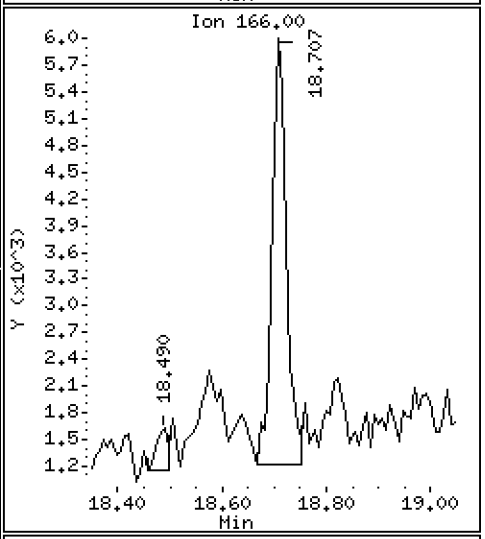
62 Carbazole

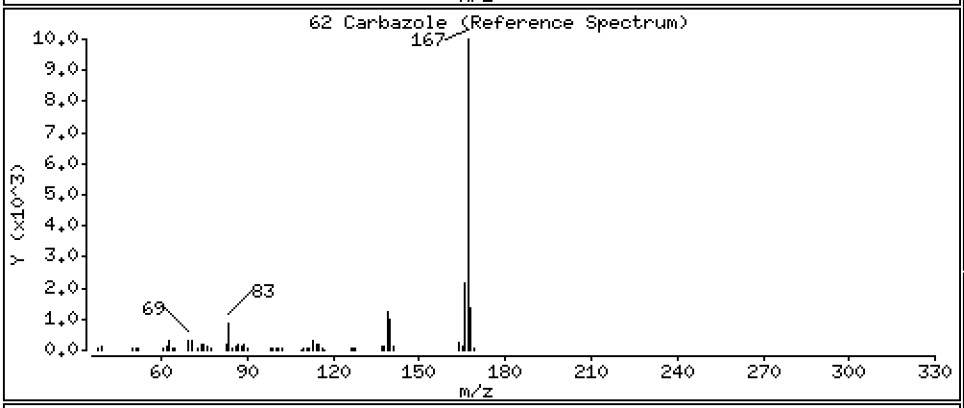
Concentration: 0.1615 ug/mL

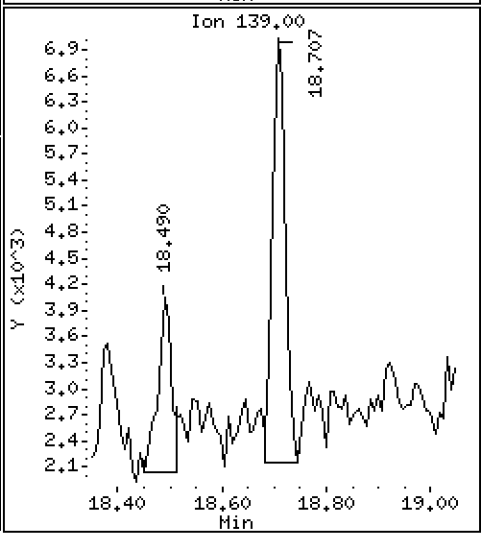


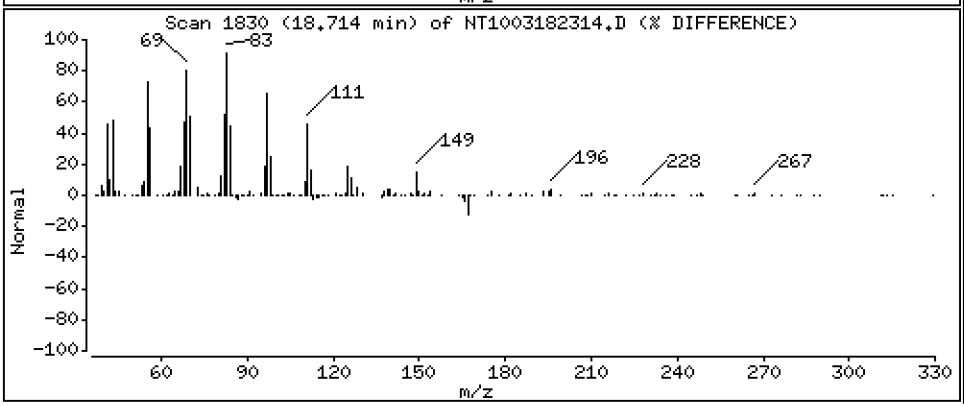












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

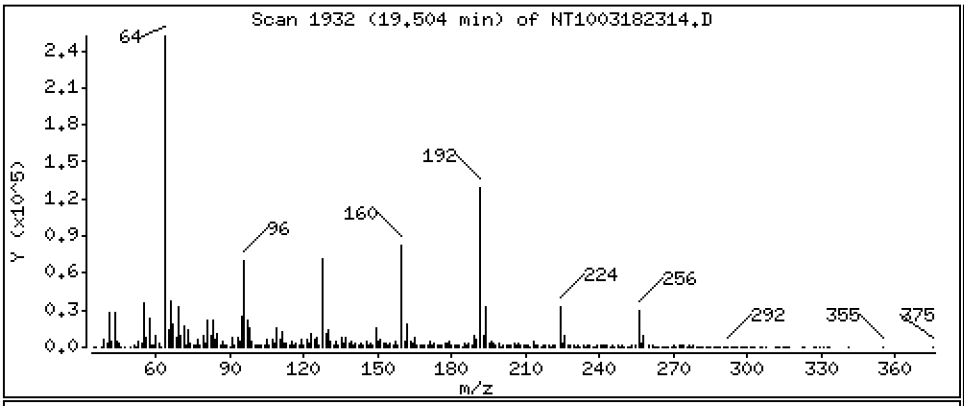
Operator: VTS

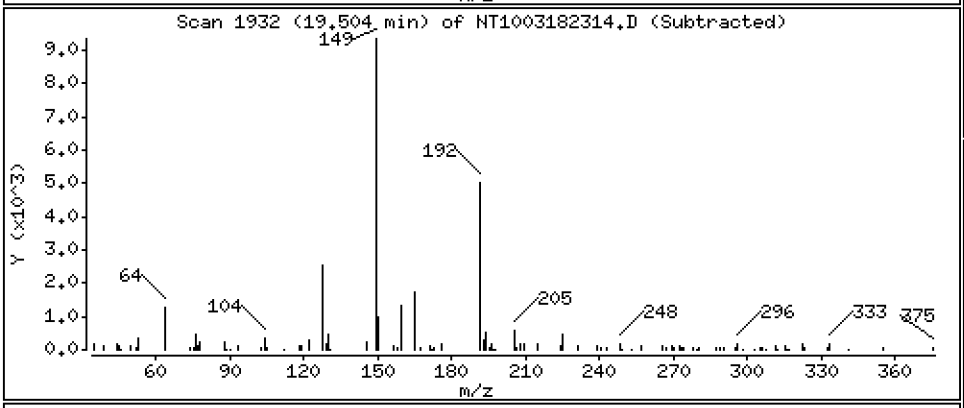
Column phase: ZB-5msi

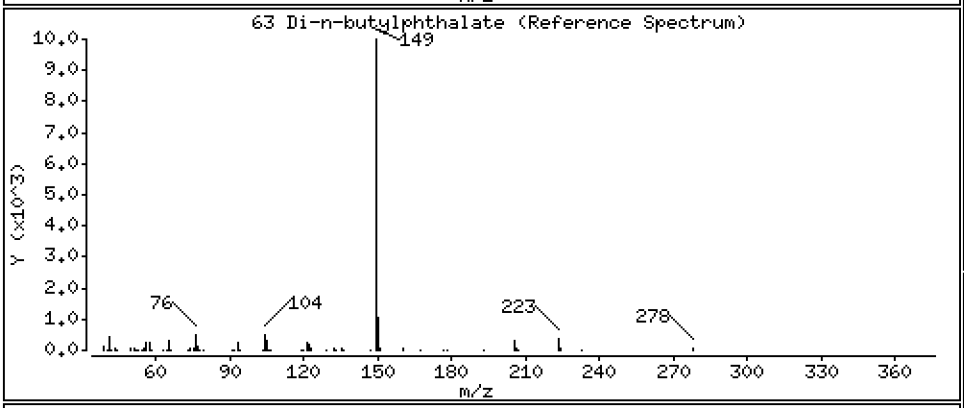
Column diameter: 0.25

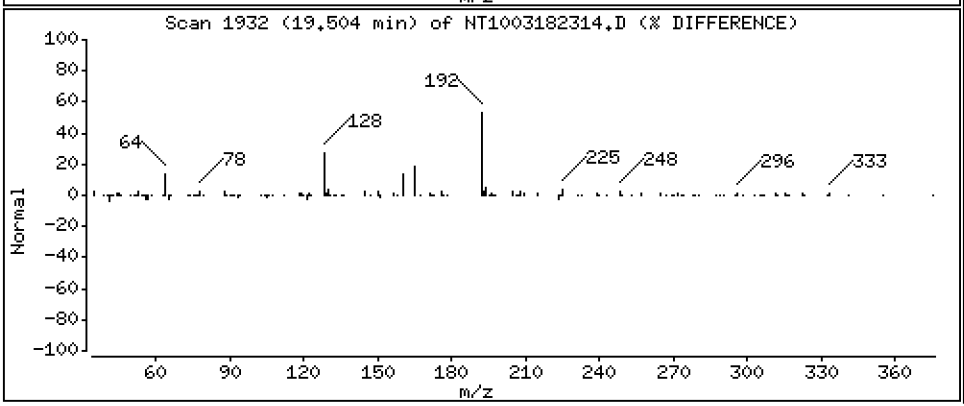
63 Di-n-butylphthalate

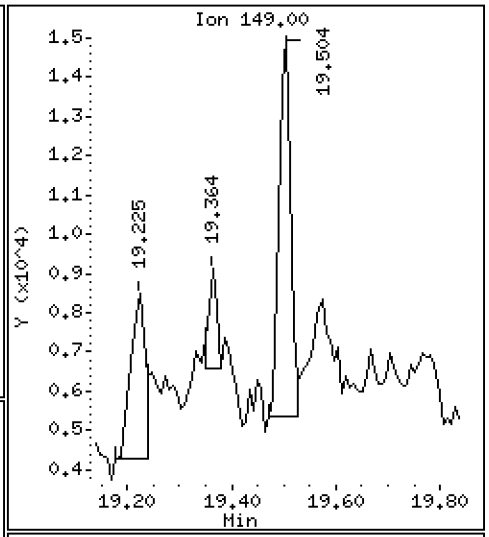
Concentration: 0.05300 ug/mL

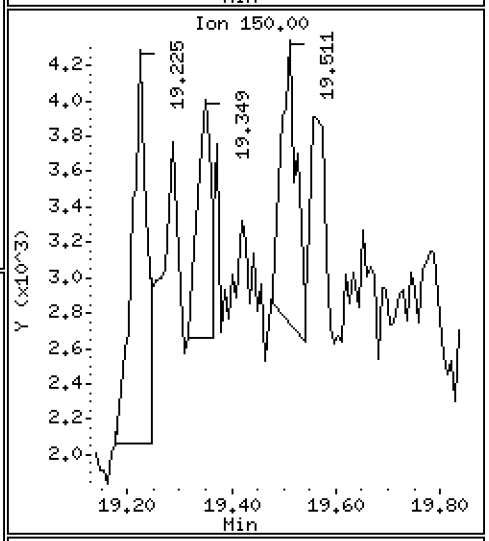


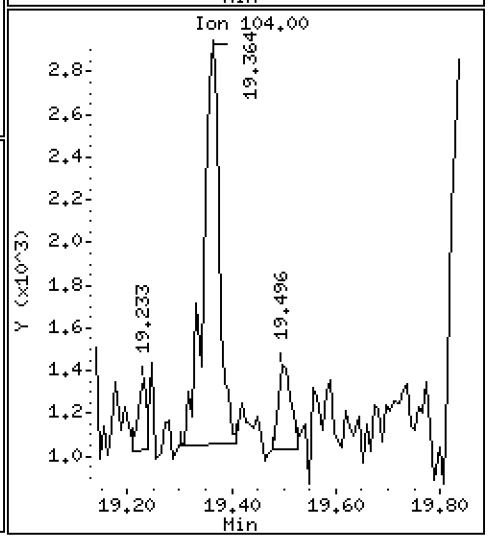












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

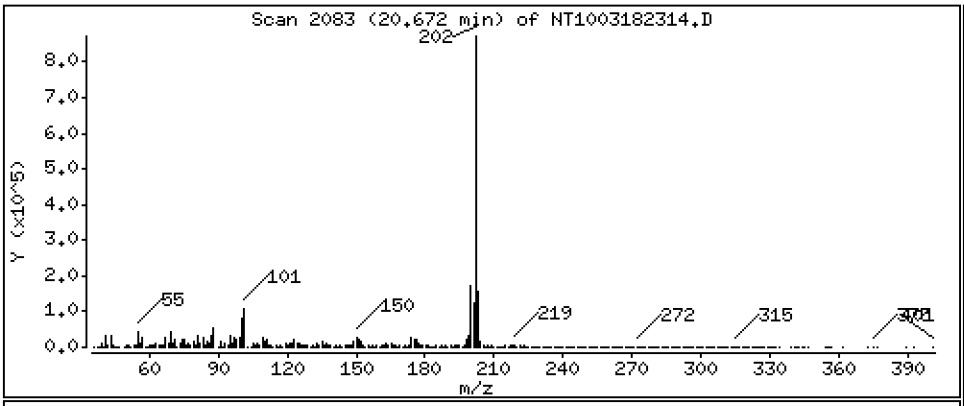
Operator: VTS

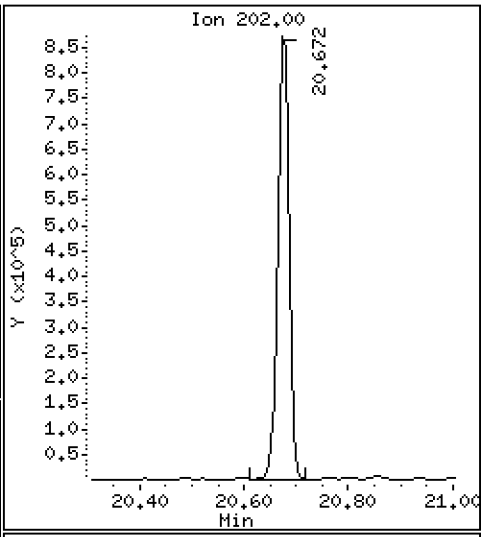
Column phase: ZB-5msi

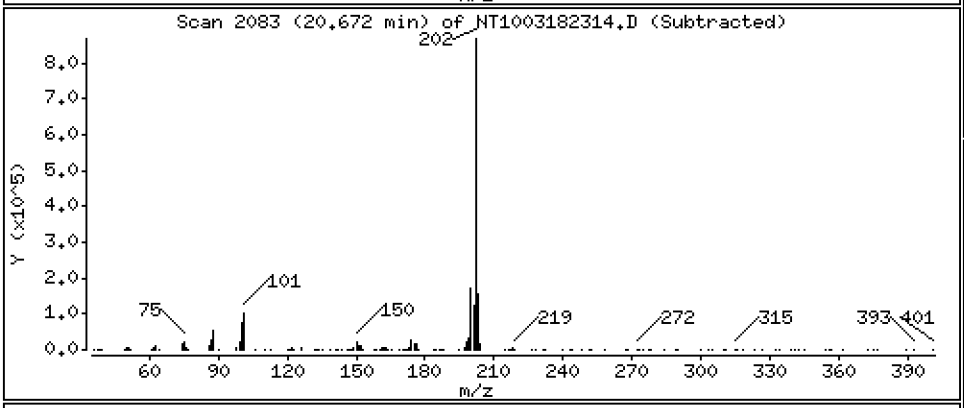
Column diameter: 0.25

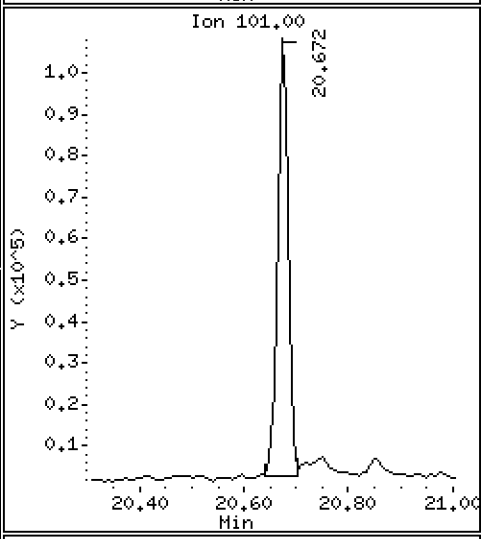
64 Fluoranthene

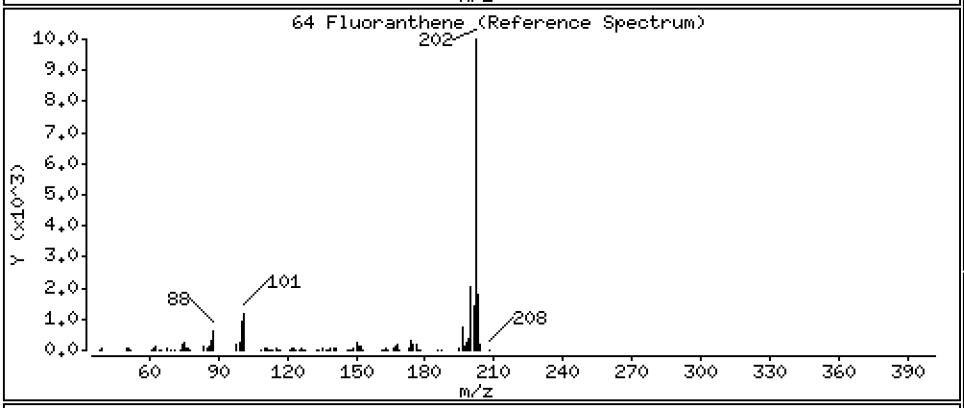
Concentration: 4.514 ug/mL

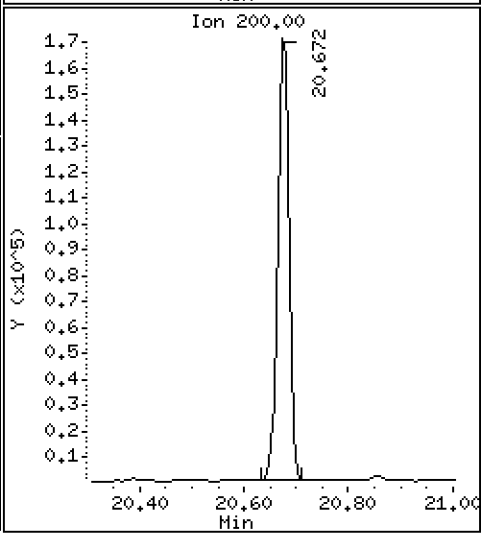


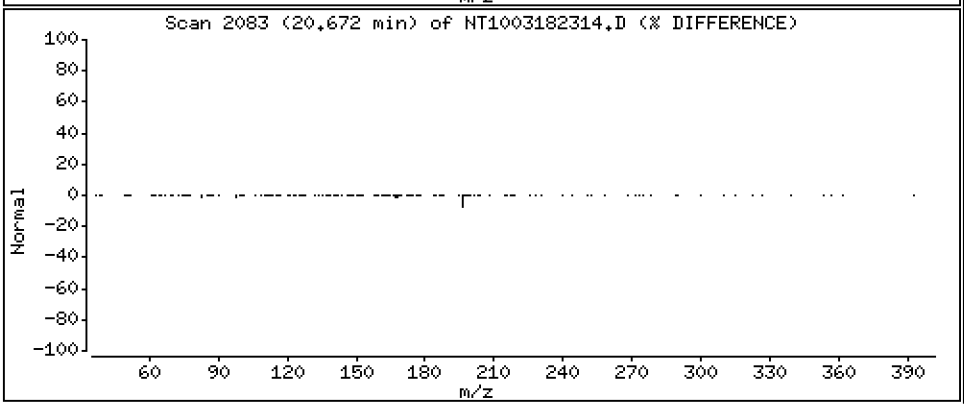












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

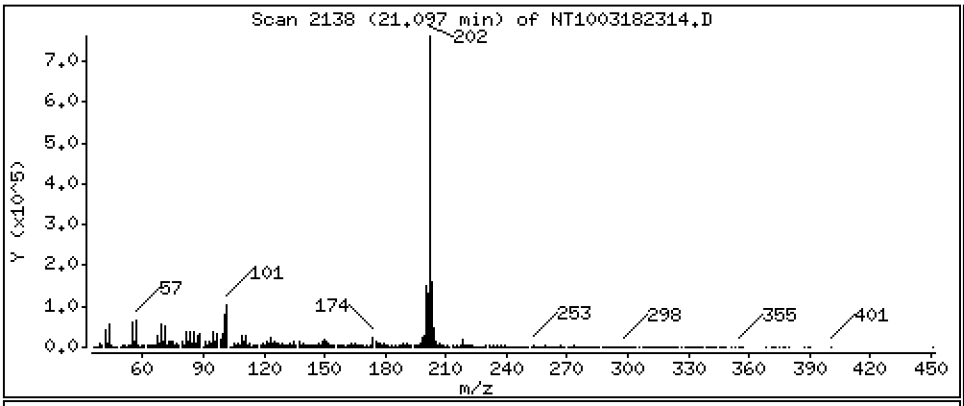
Operator: VTS

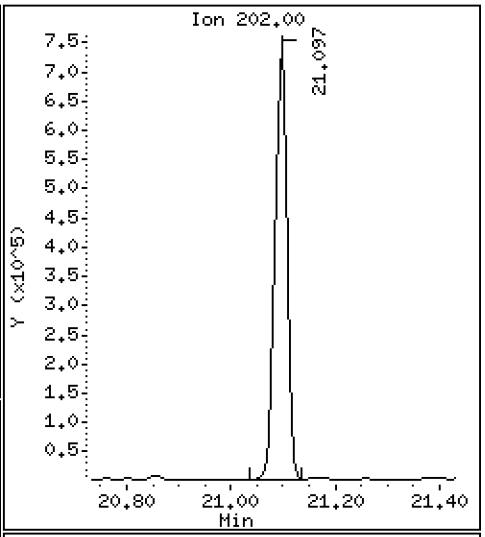
Column phase: ZB-5msi

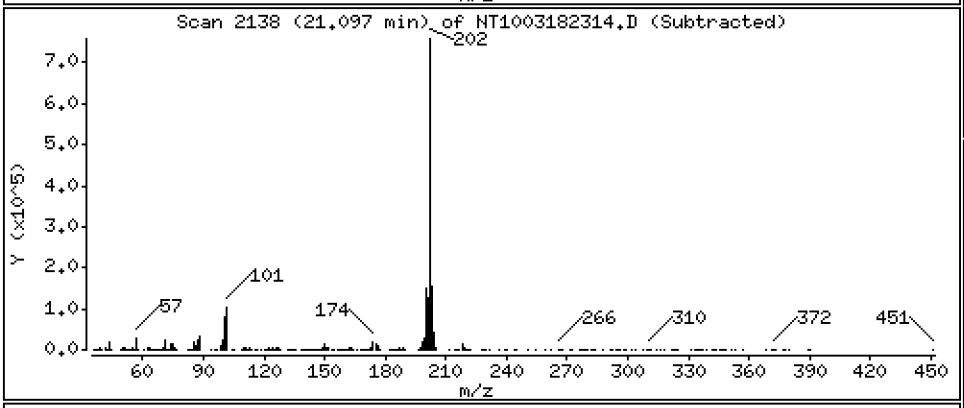
Column diameter: 0.25

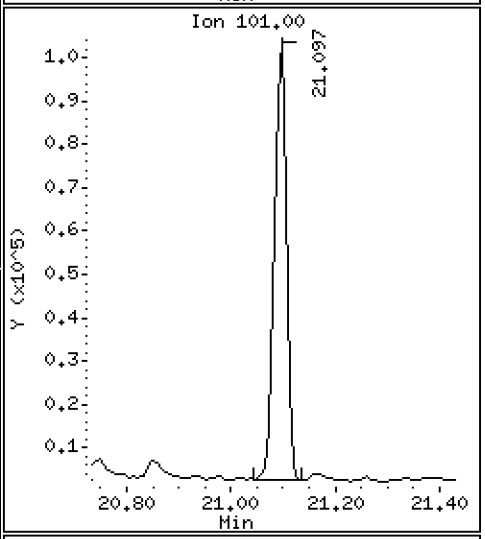
65 Pyrene

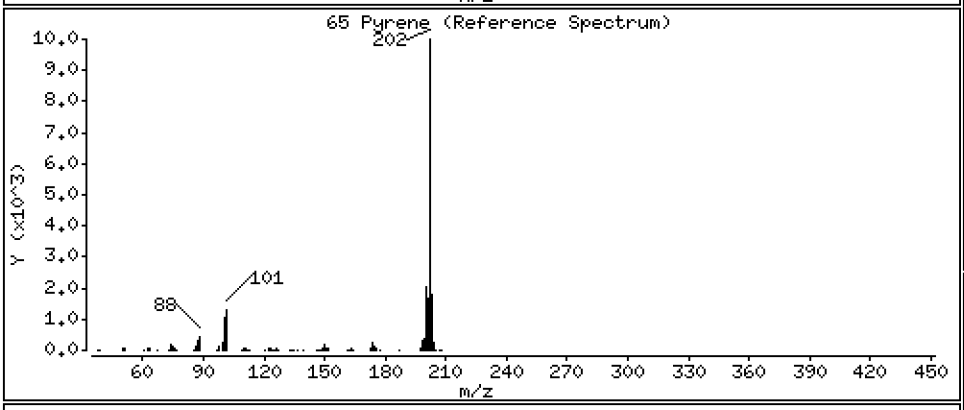
Concentration: 3.756 ug/mL

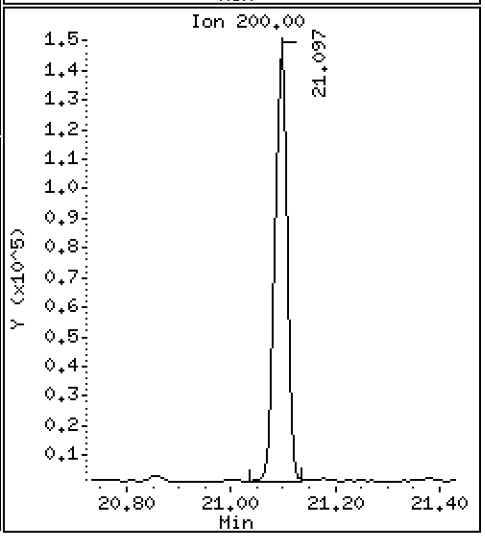


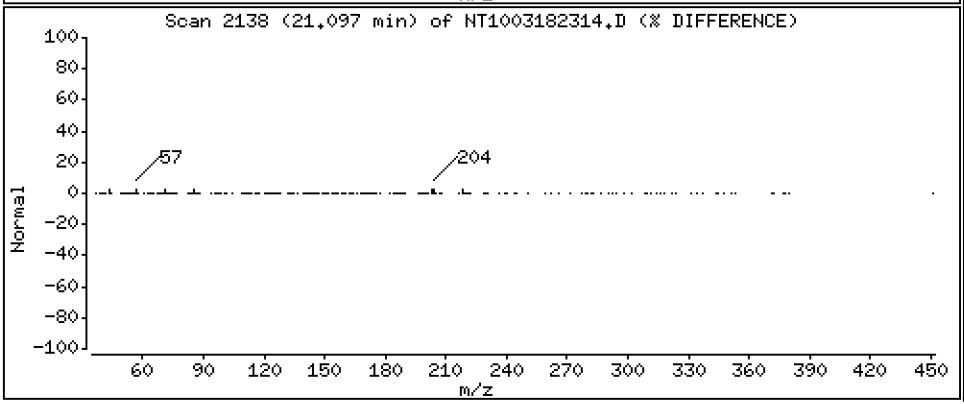












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

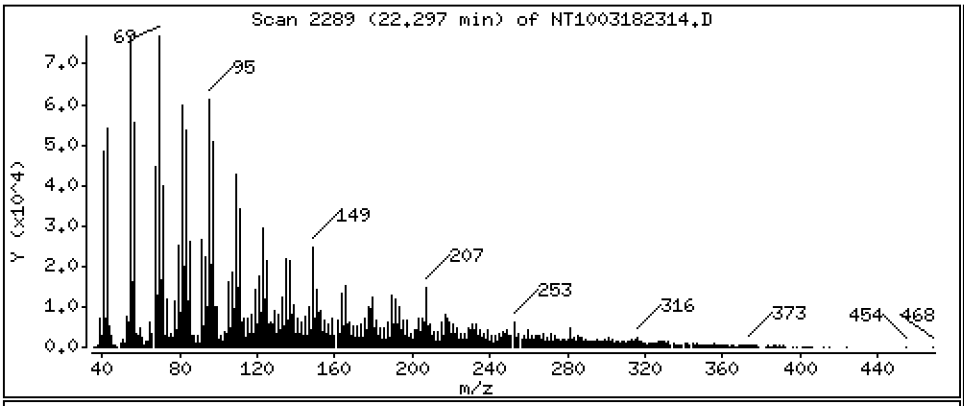
Operator: VTS

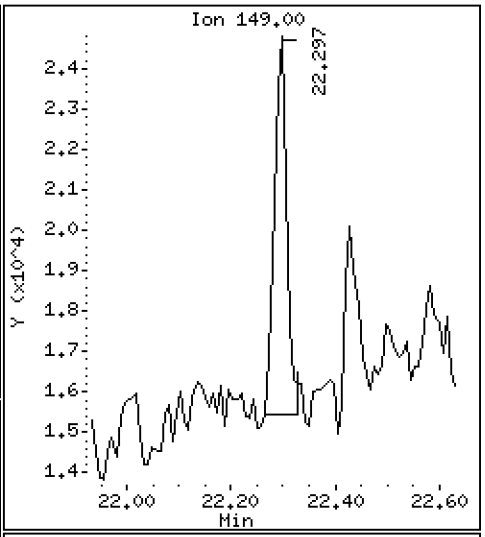
Column phase: ZB-5msi

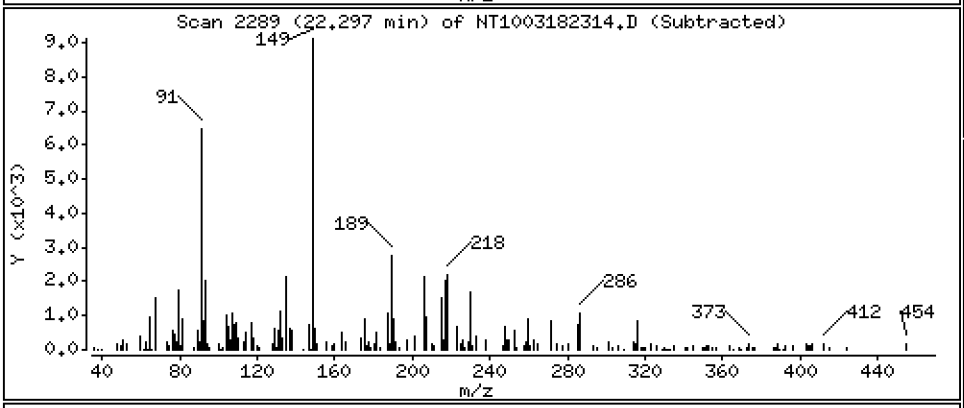
Column diameter: 0.25

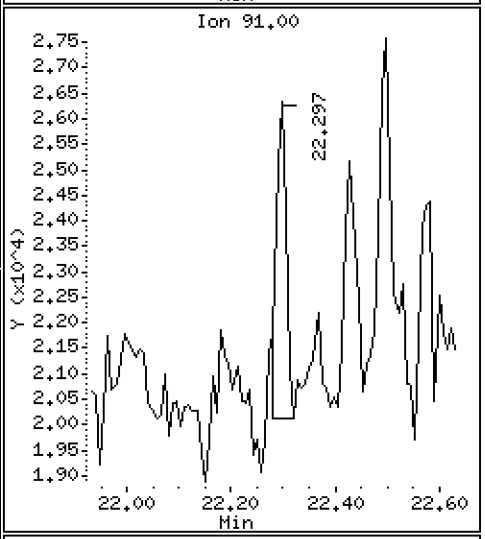
67 Butylbenzylphthalate

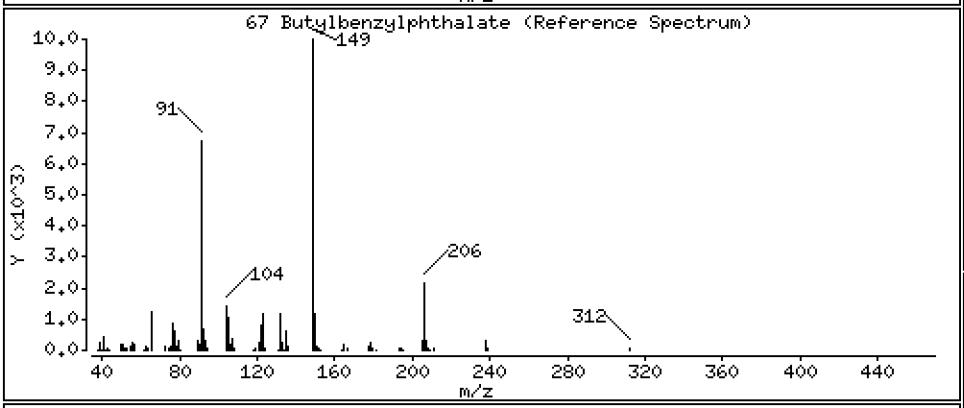
Concentration: 0.1372 ug/mL

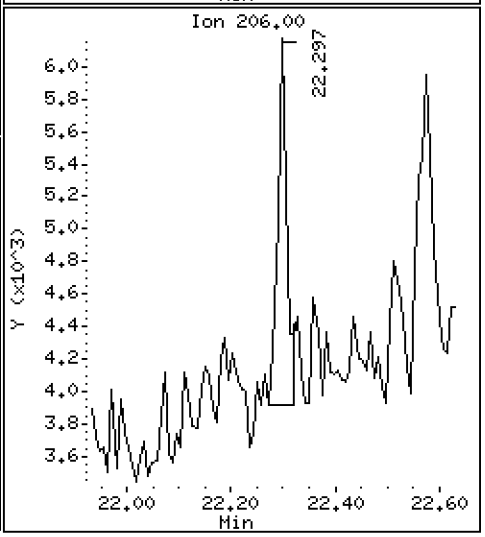


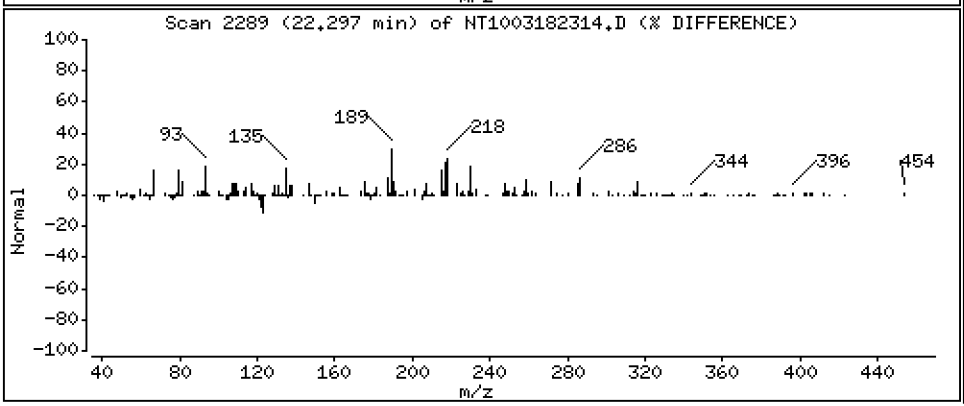












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

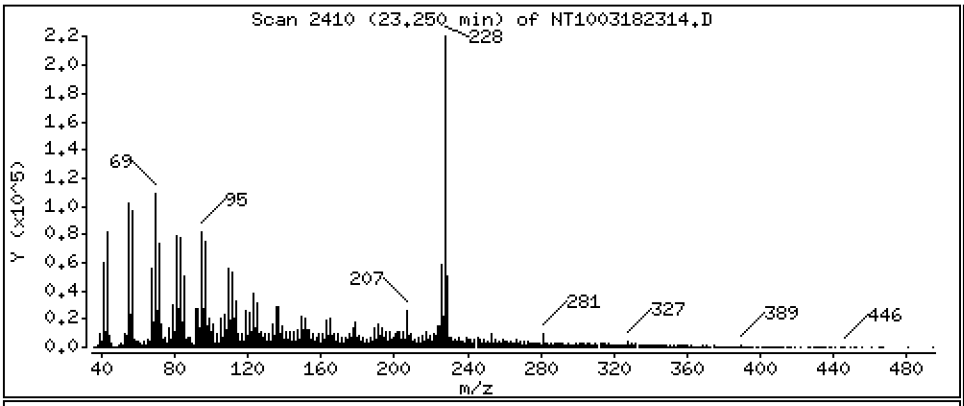
Operator: VTS

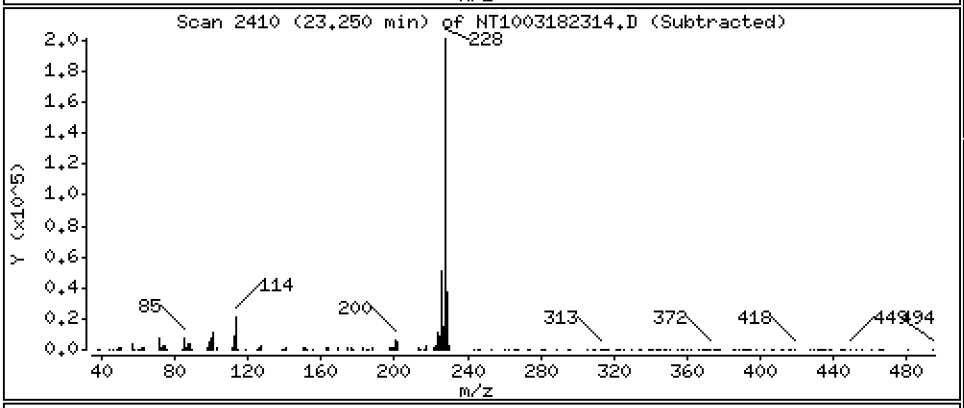
Column phase: ZB-5msi

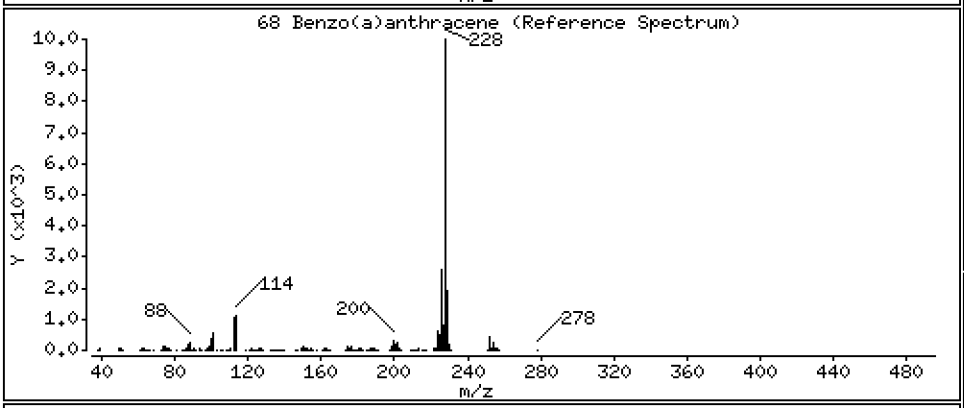
Column diameter: 0.25

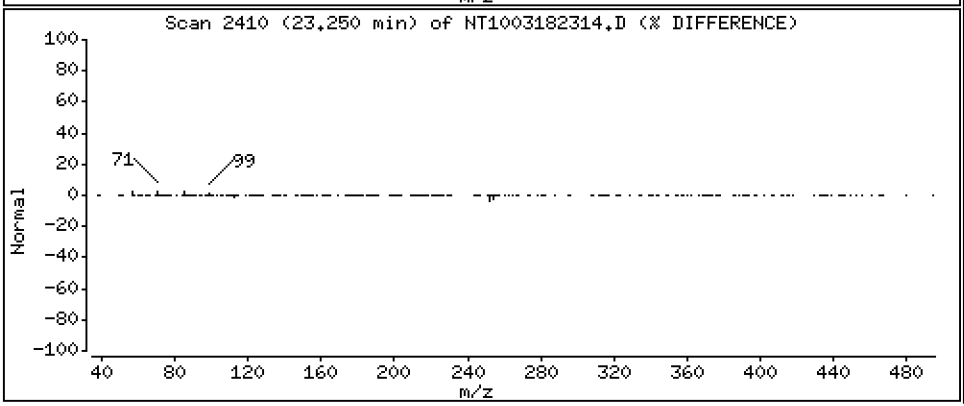
68 Benzo(a)anthracene

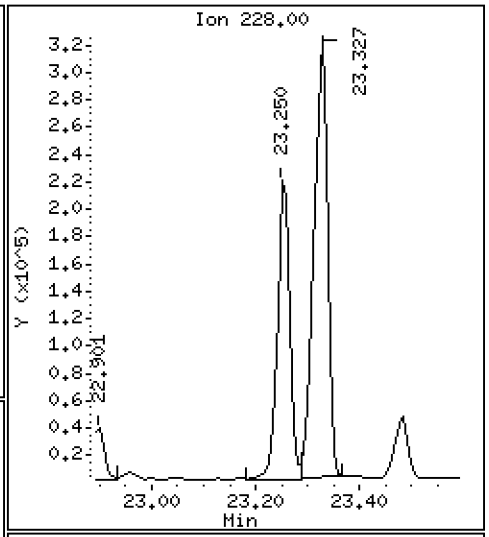
Concentration: 1.362 ug/mL

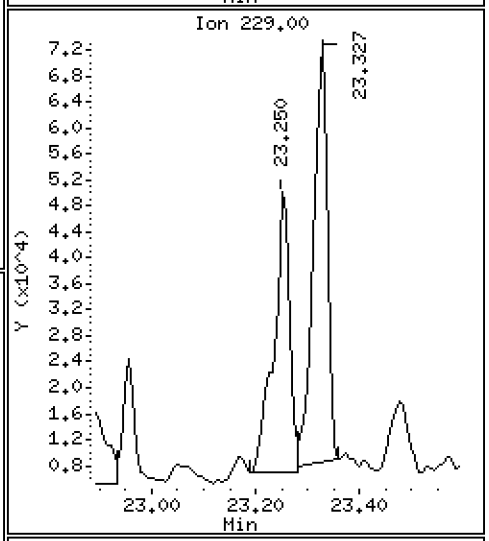


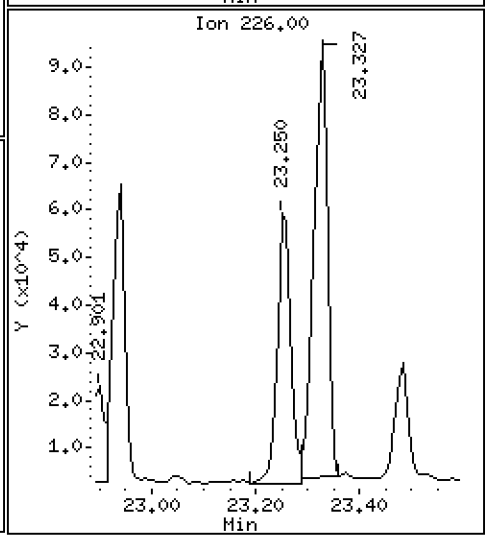












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

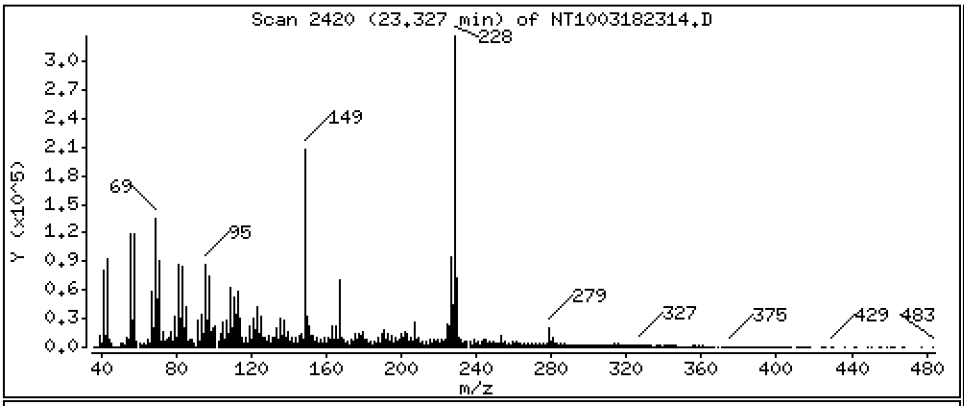
Operator: VTS

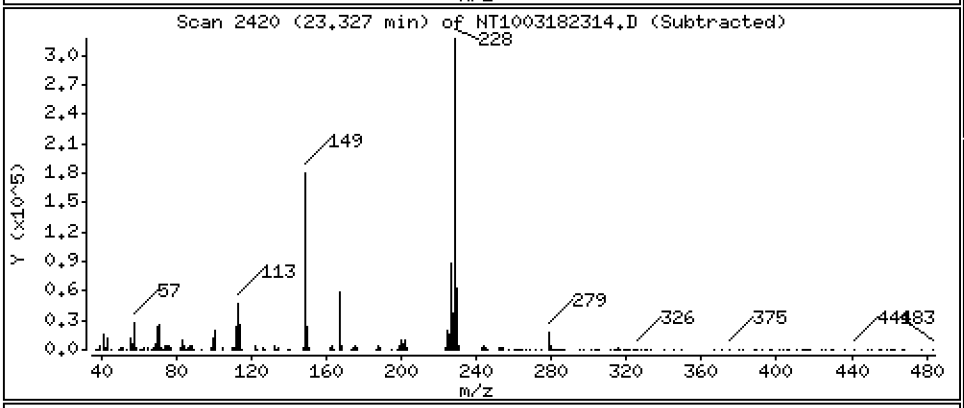
Column phase: ZB-5msi

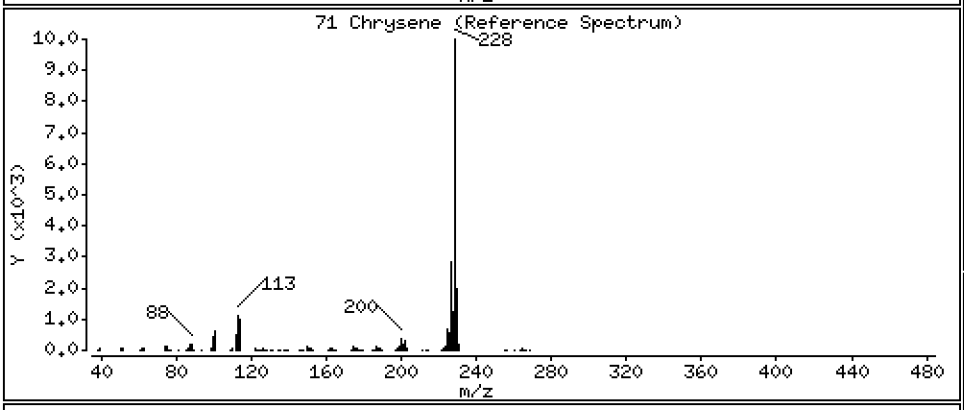
Column diameter: 0.25

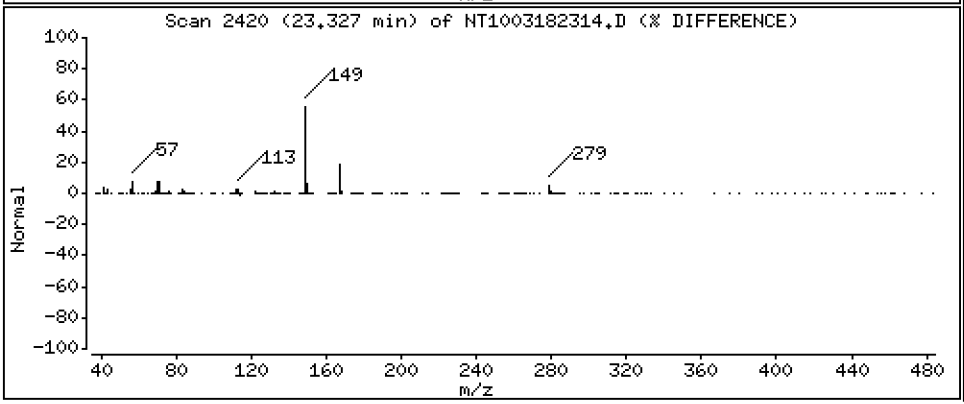
71 Chrysene

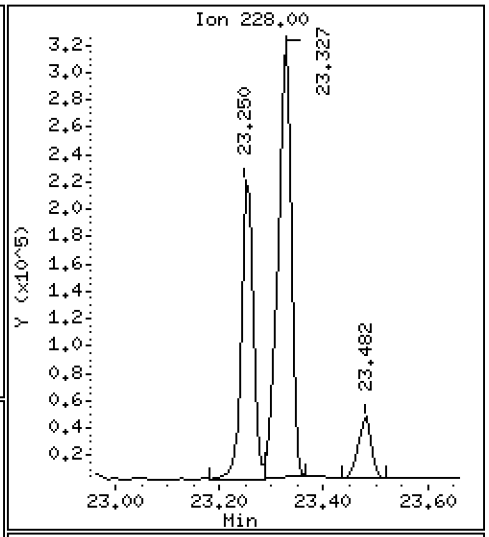
Concentration: 2.187 ug/mL

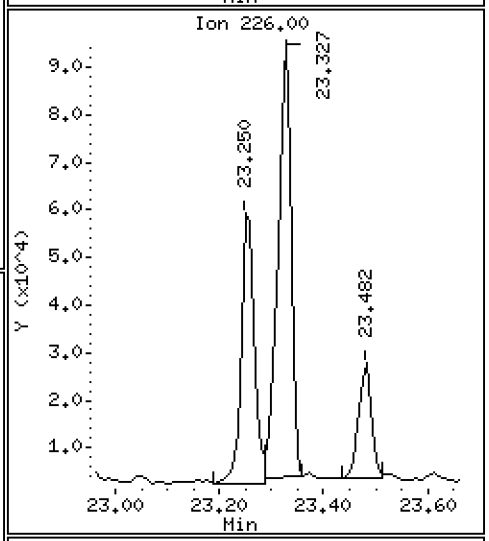


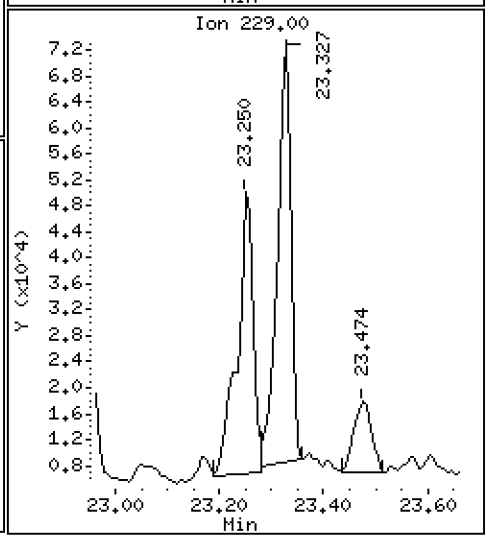












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

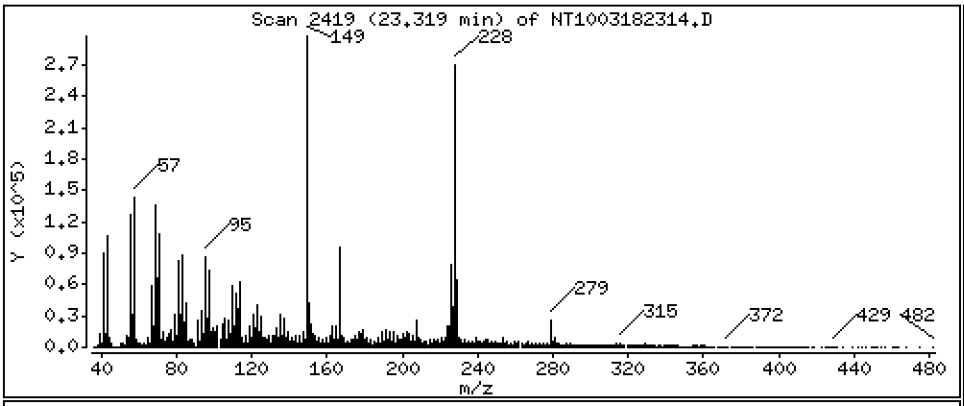
Operator: VTS

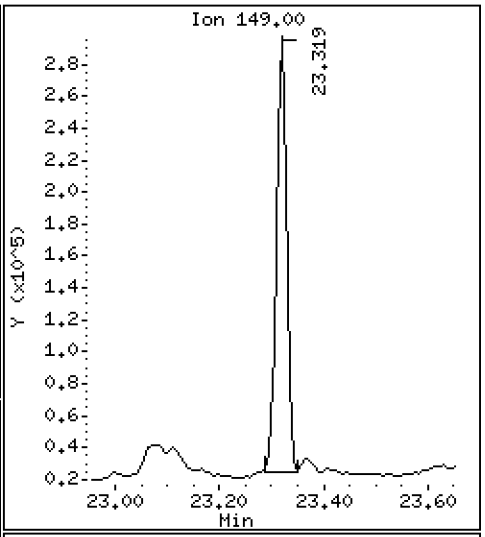
Column phase: ZB-5msi

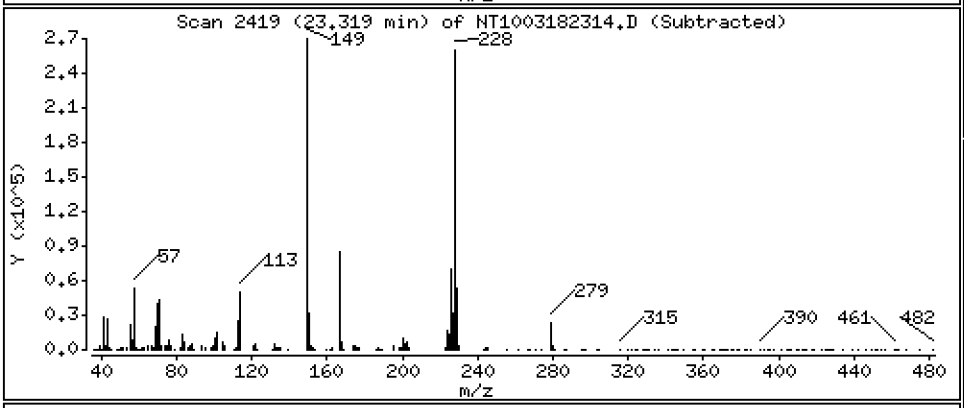
Column diameter: 0.25

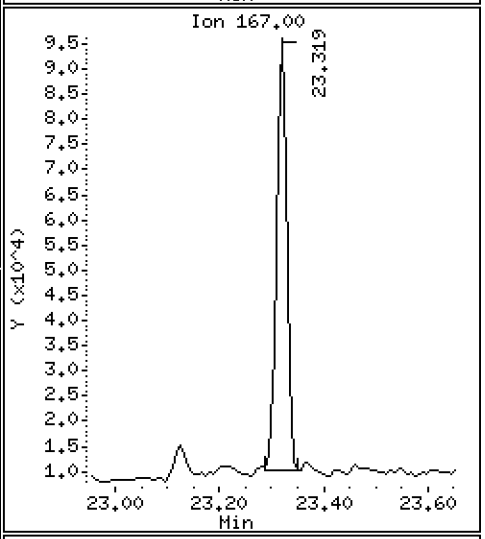
72 bis(2-Ethylhexyl)phthalate

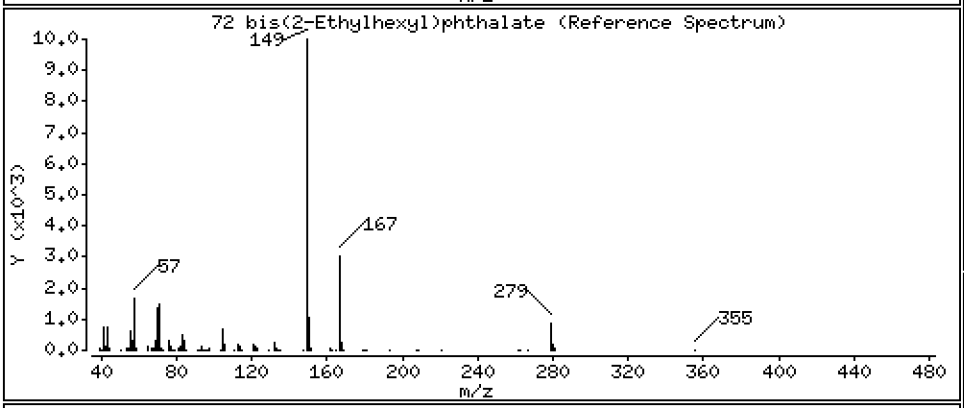
Concentration: 1.993 ug/mL

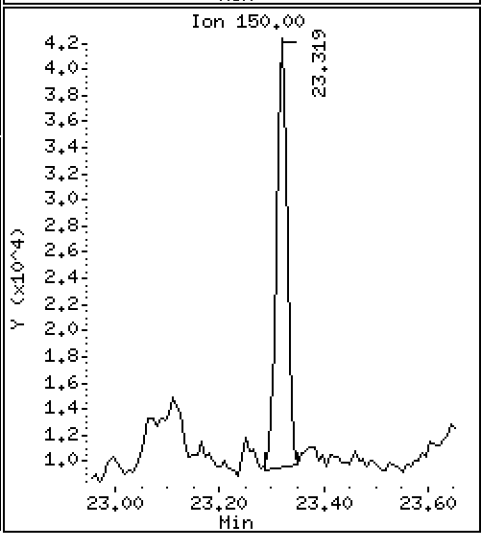


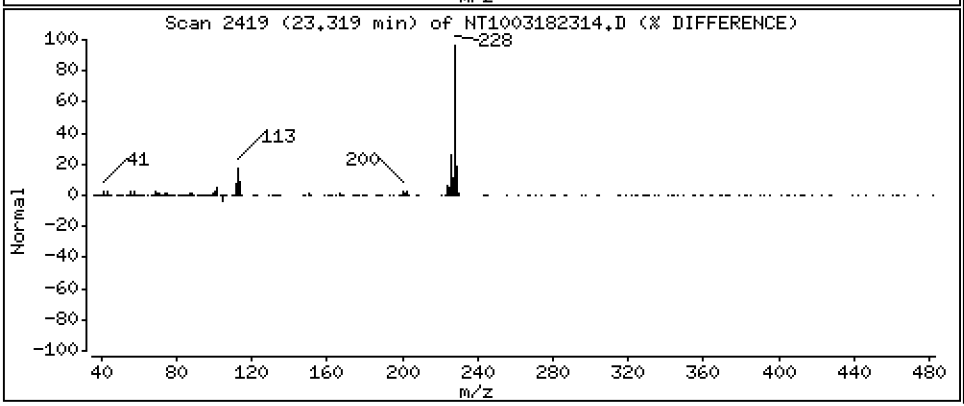












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

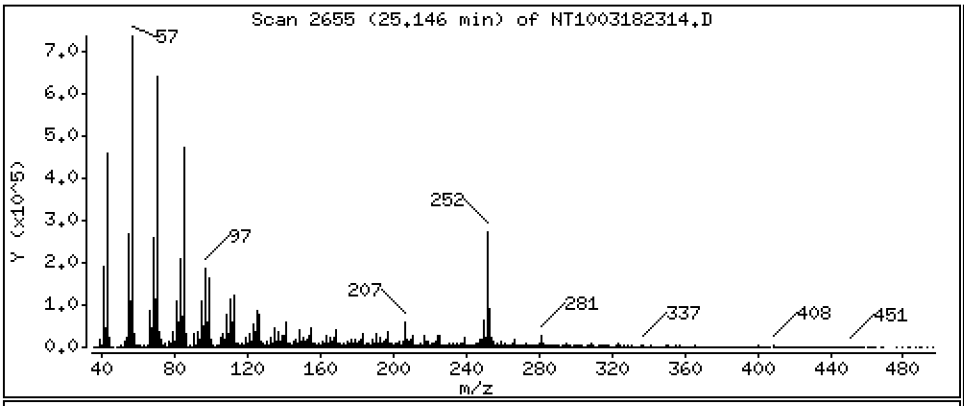
Operator: VTS

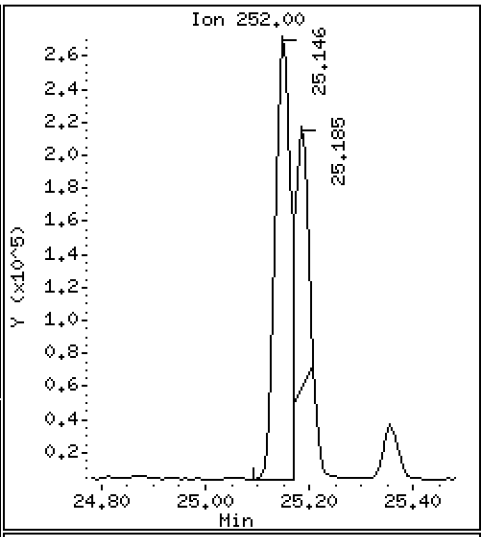
Column phase: ZB-5msi

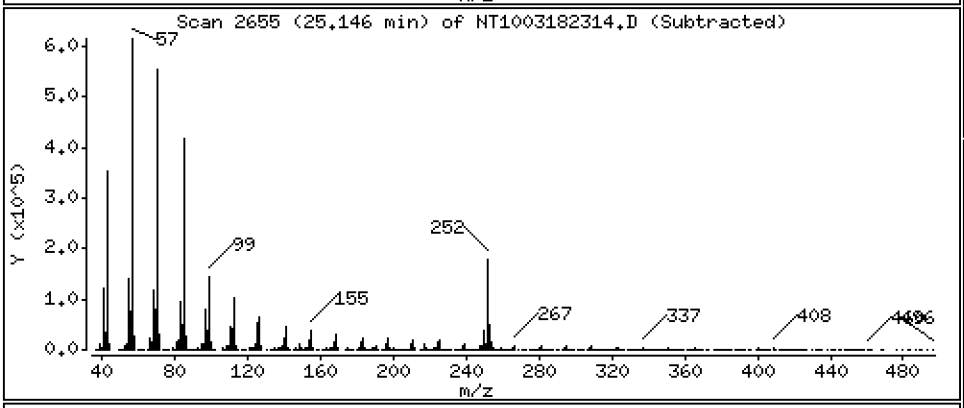
Column diameter: 0.25

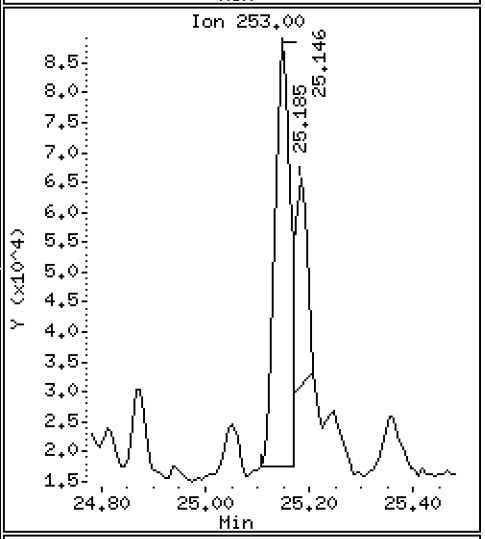
74 Benzo(b)fluoranthene

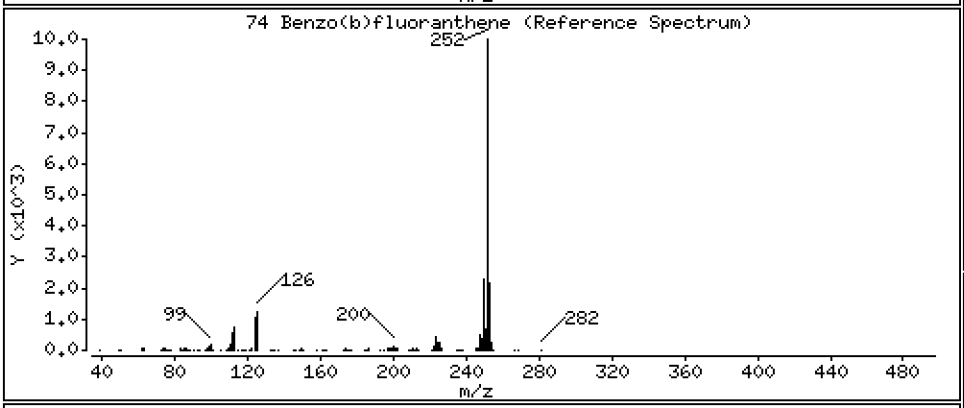
Concentration: 2.118 ug/mL

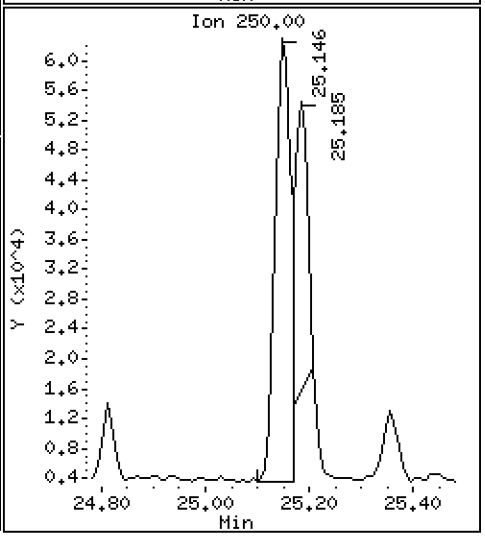


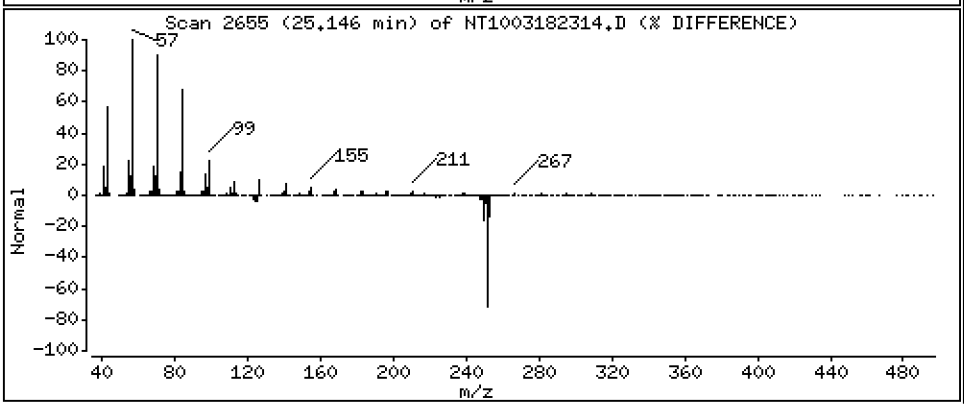












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

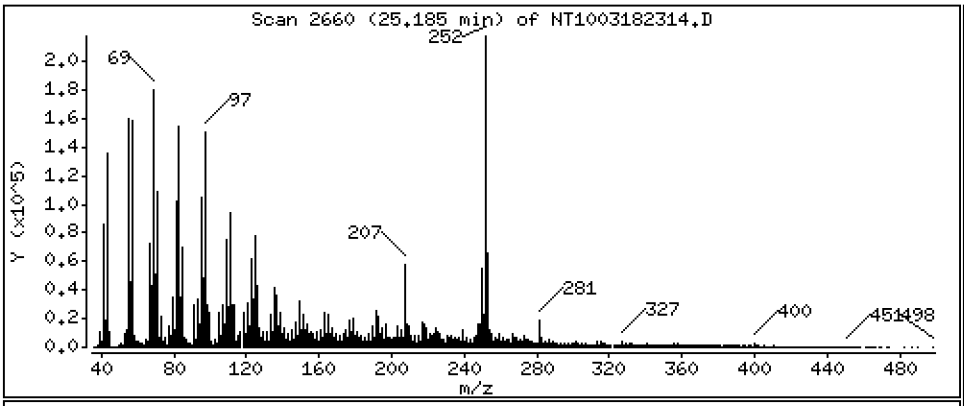
Operator: VTS

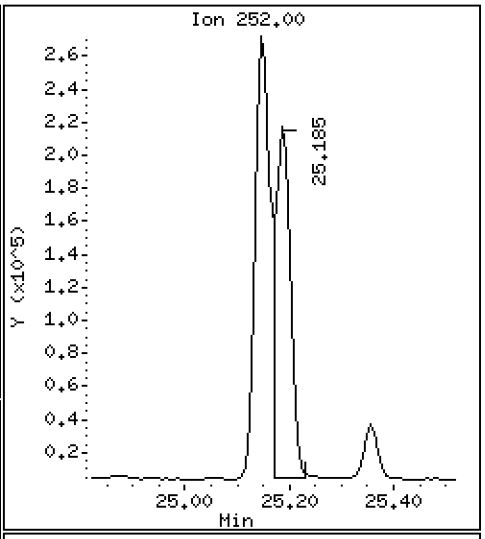
Column phase: ZB-5msi

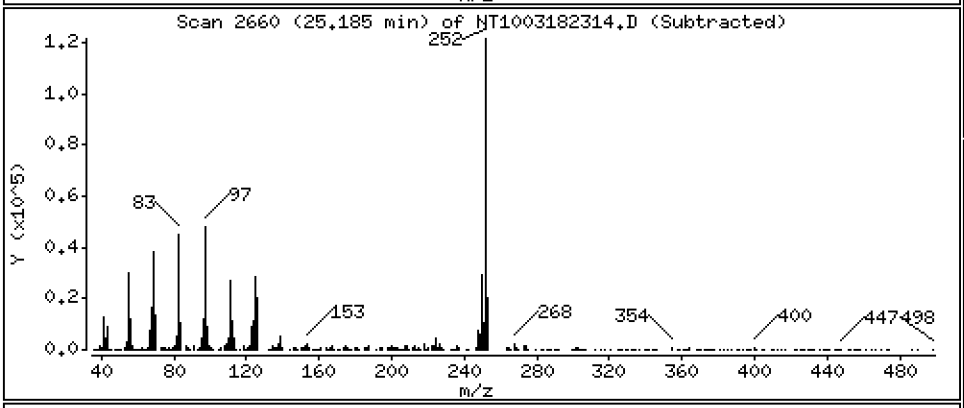
Column diameter: 0.25

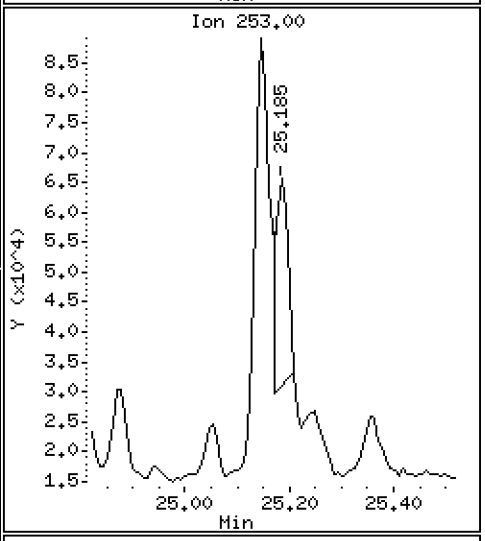
75 Benzo(k)fluoranthene

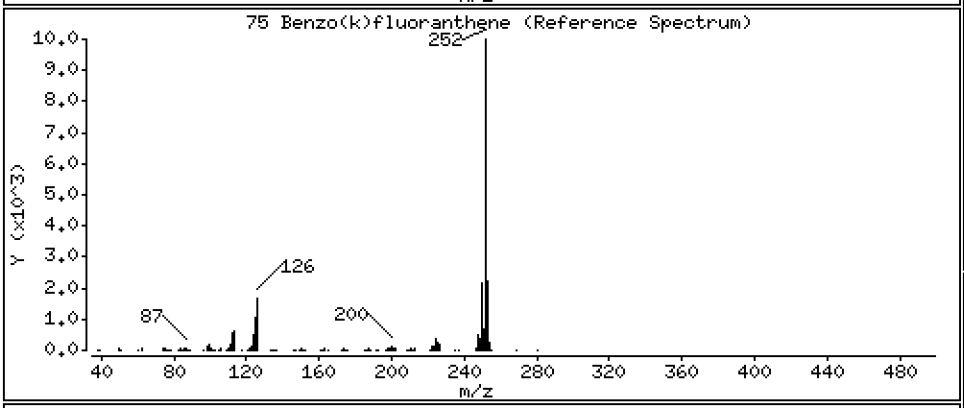
Concentration: 1.675 ug/mL

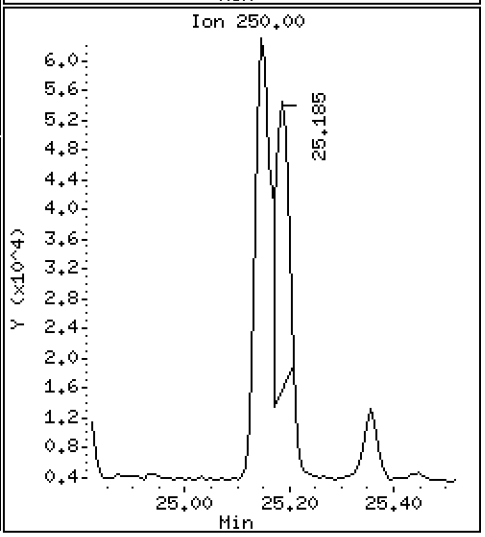


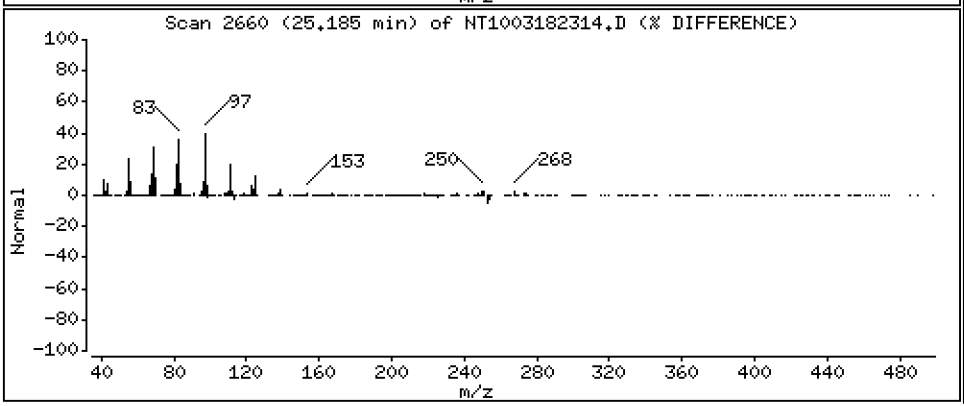












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

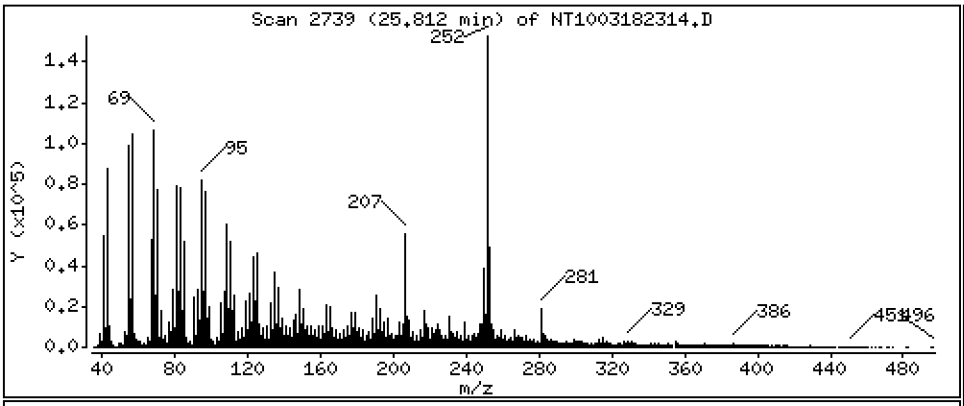
Operator: VTS

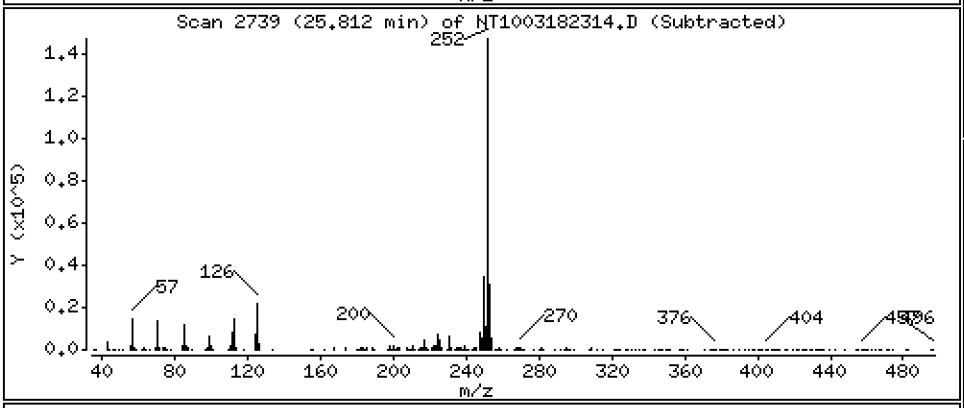
Column phase: ZB-5msi

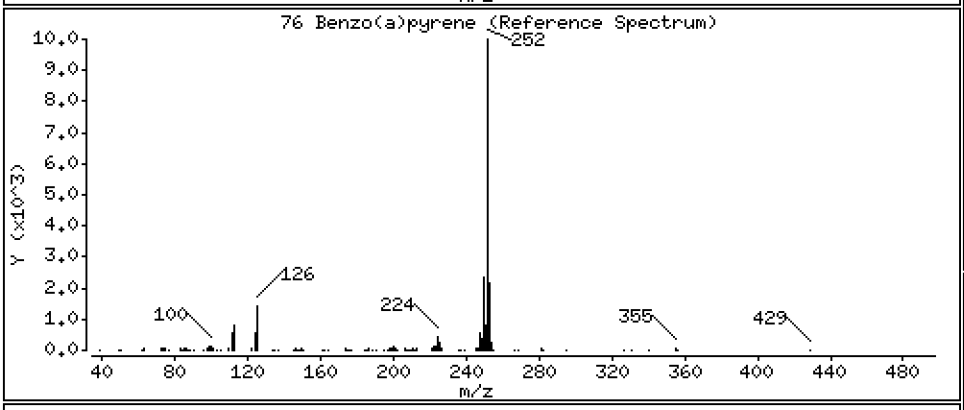
Column diameter: 0.25

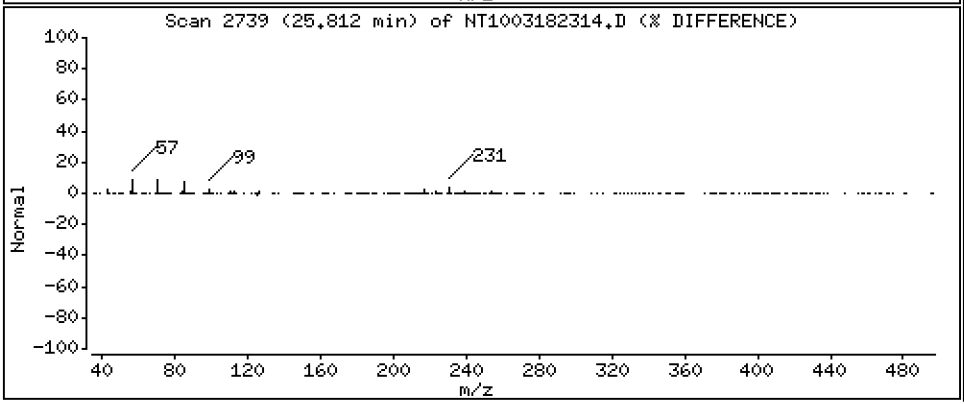
76 Benzo(a)pyrene

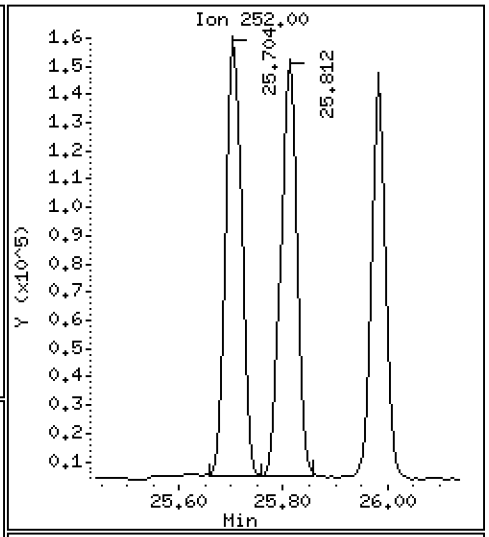
Concentration: 1.339 ug/mL

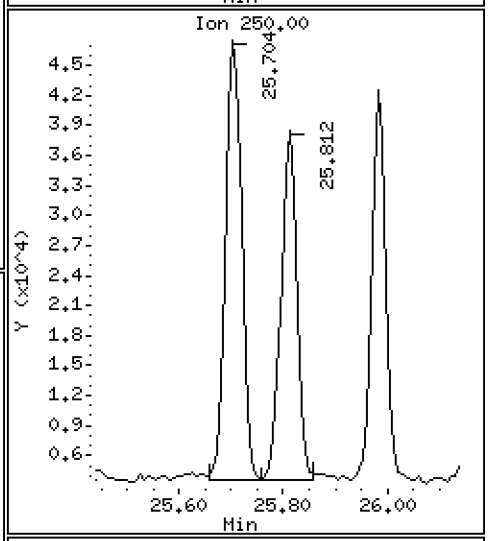


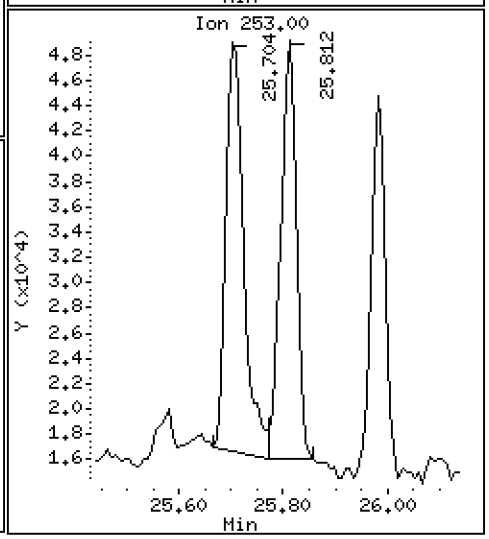












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

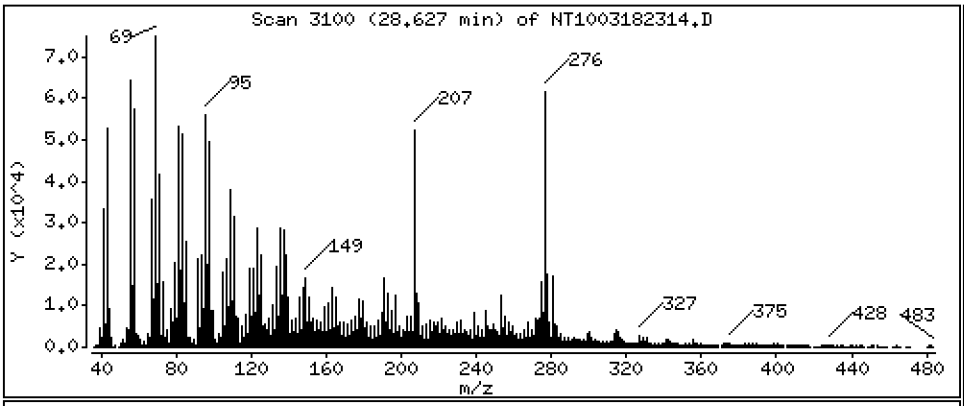
Operator: VTS

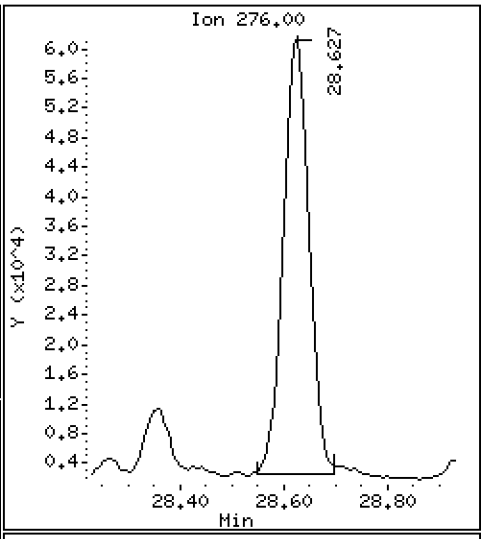
Column phase: ZB-5msi

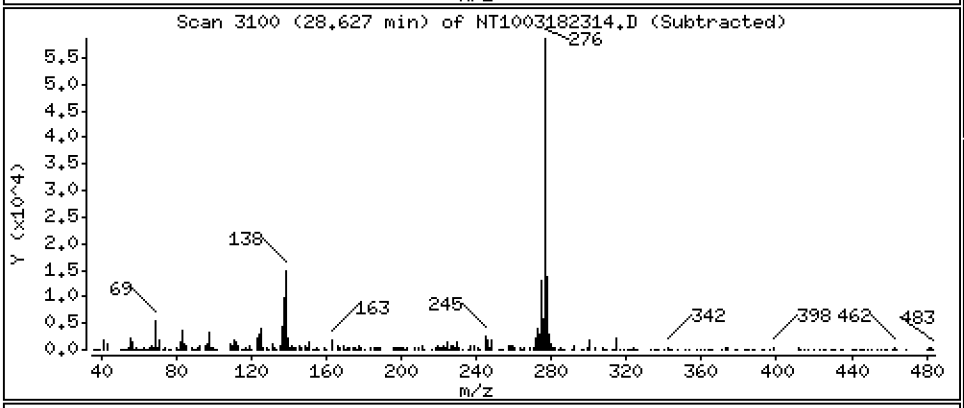
Column diameter: 0.25

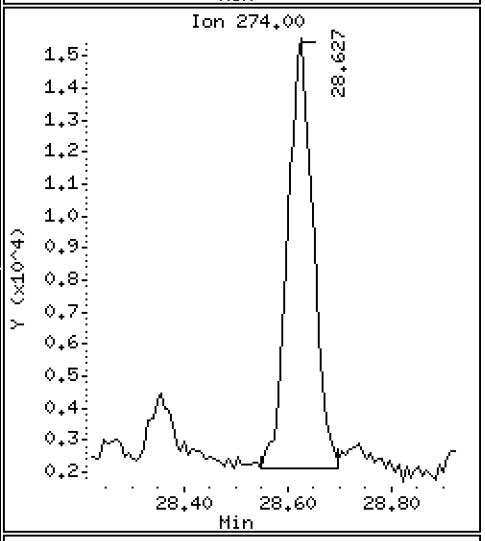
78 Indeno(1,2,3-cd)pyrene

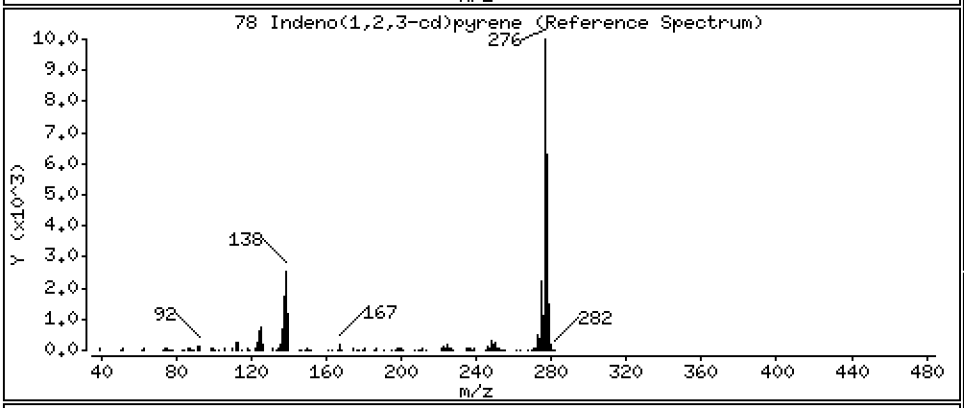
Concentration: 0.6780 ug/mL

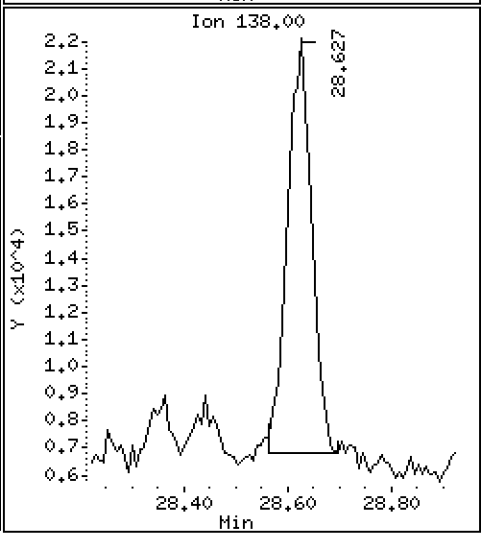


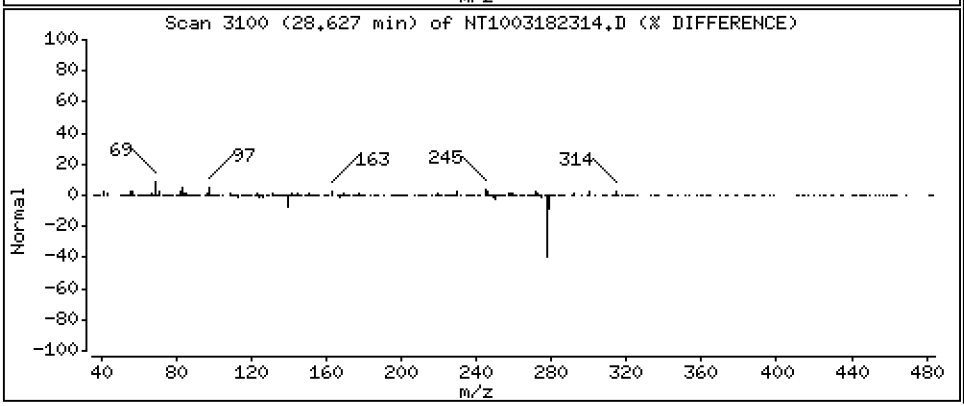












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

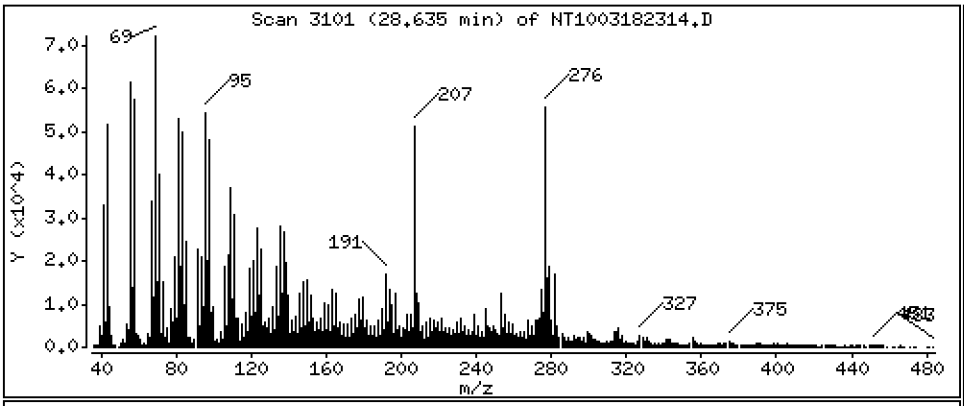
Operator: VTS

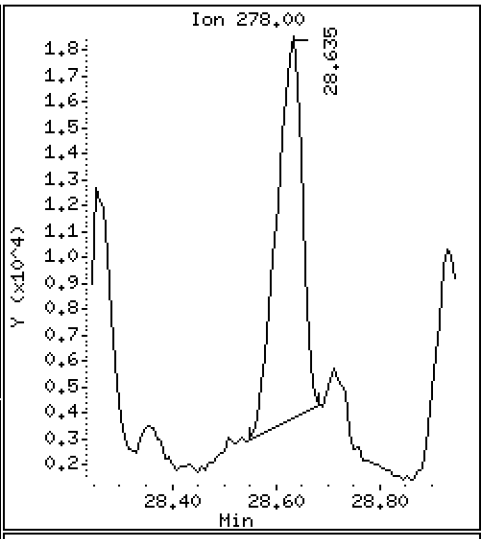
Column phase: ZB-5msi

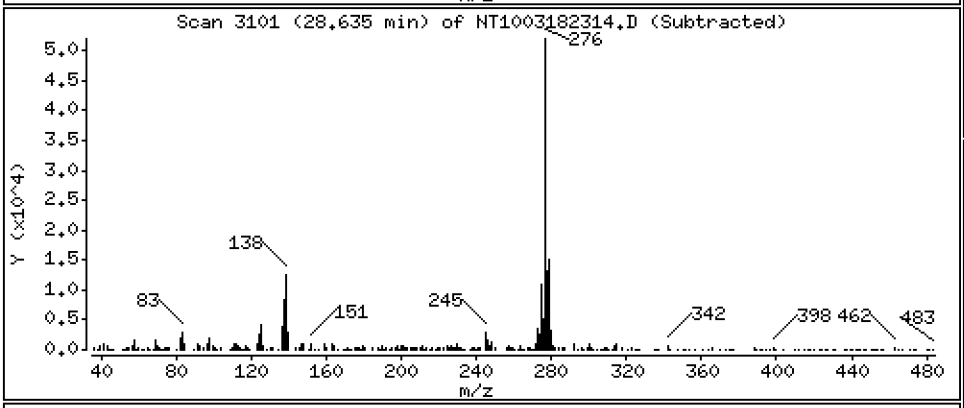
Column diameter: 0.25

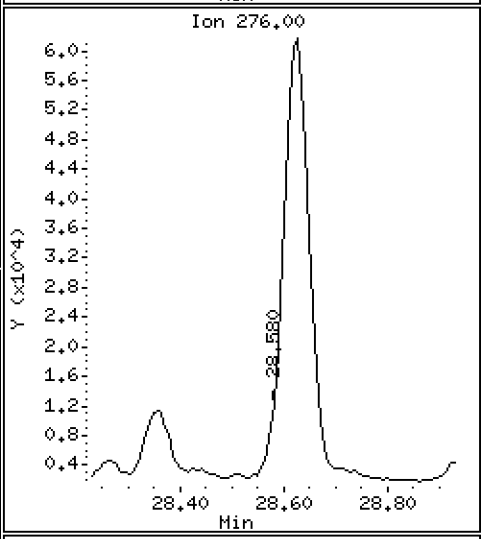
79 Dibenzo(a,h)anthracene

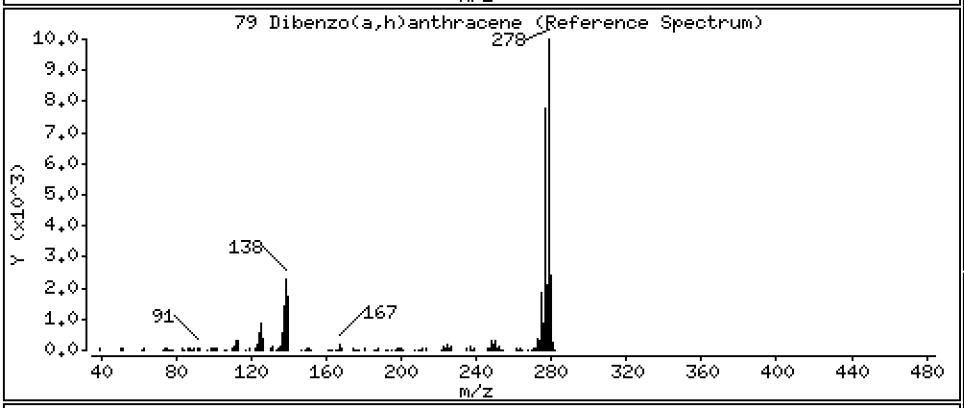
Concentration: 0.2020 ug/mL

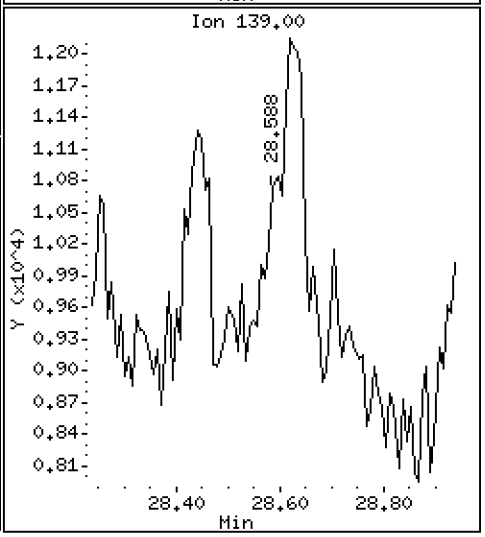


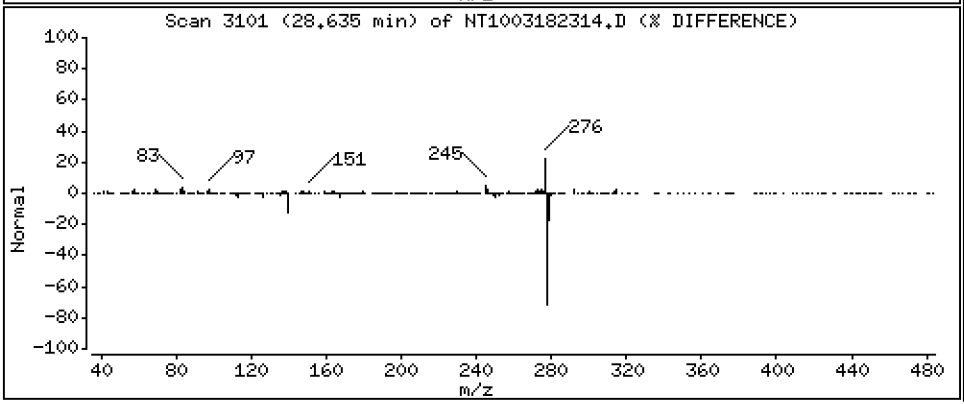












Date : 19-MAR-2023 02:02

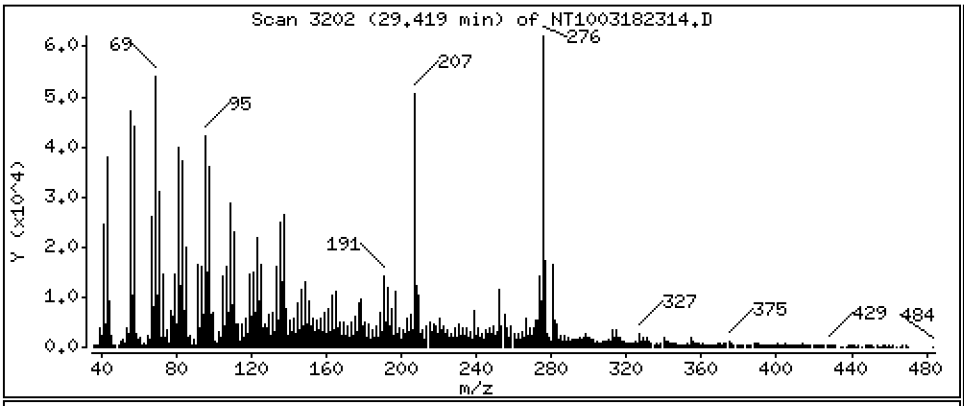
Client ID: Instrument: nt10.i

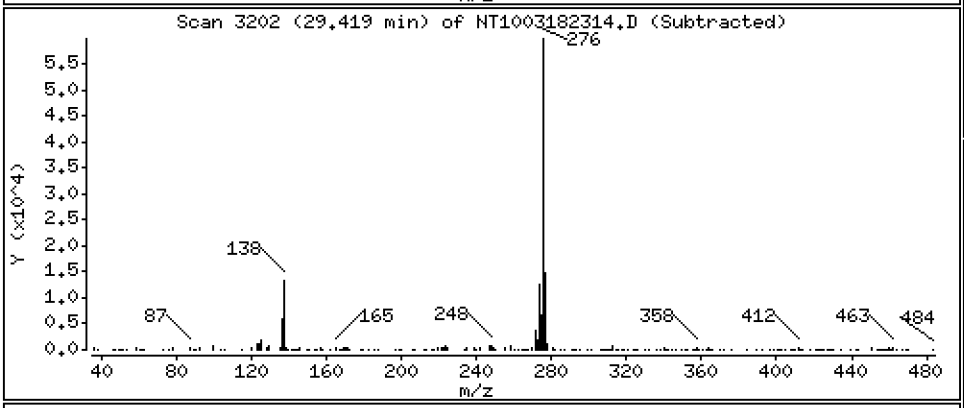
Sample Info: 23A0467-05

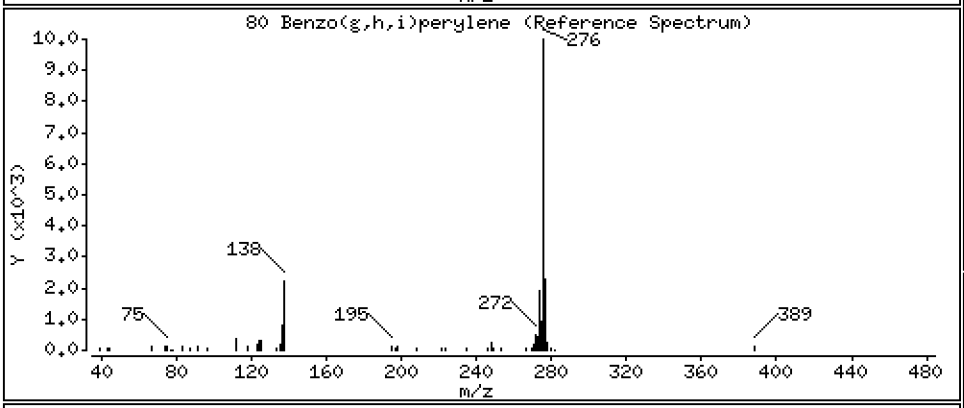
Operator: VTS

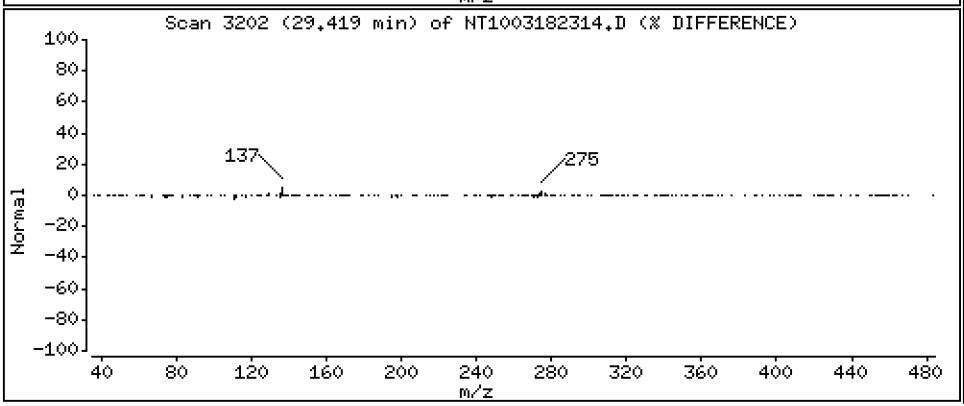
Column phase: ZB-5msi Column diameter: 0.25

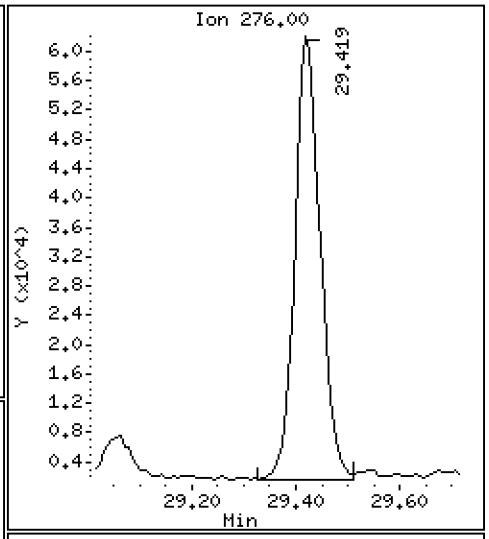
80 Benzo(g,h,i)perylene Concentration: 0.7886 ug/mL

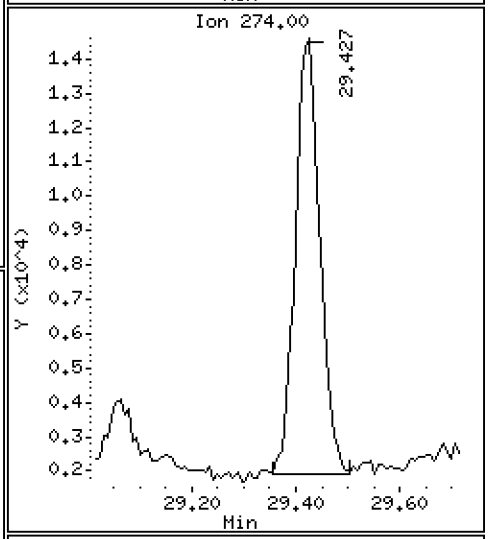


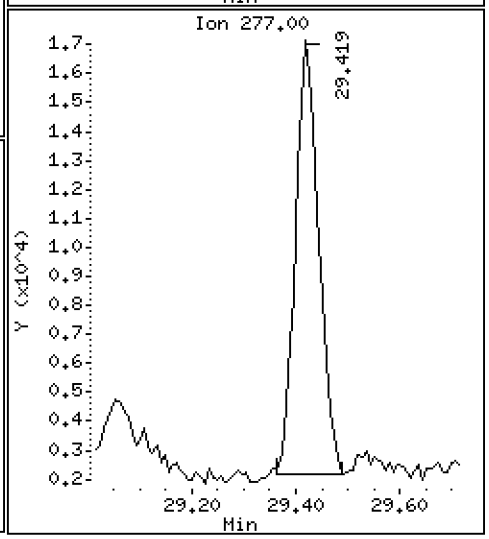












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

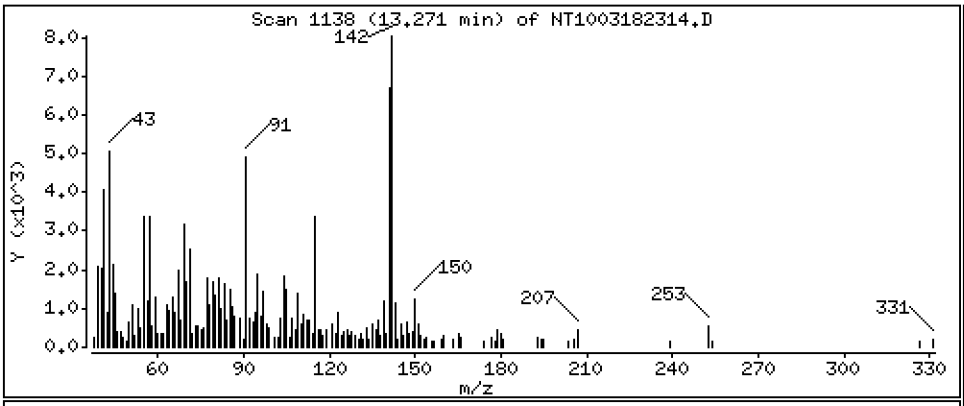
Operator: VTS

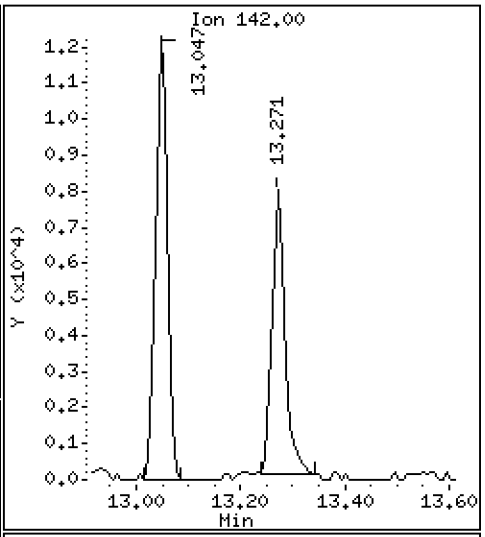
Column phase: ZB-5msi

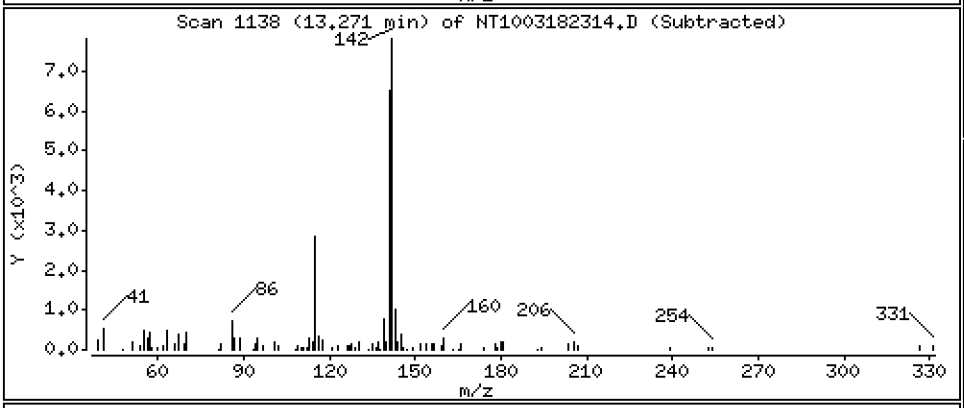
Column diameter: 0.25

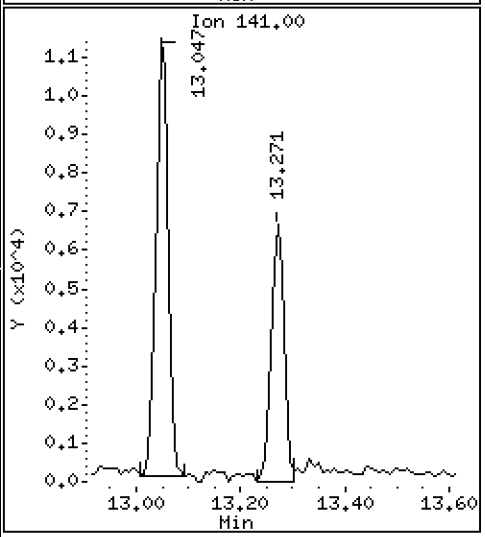
105 1-methylnaphthalene

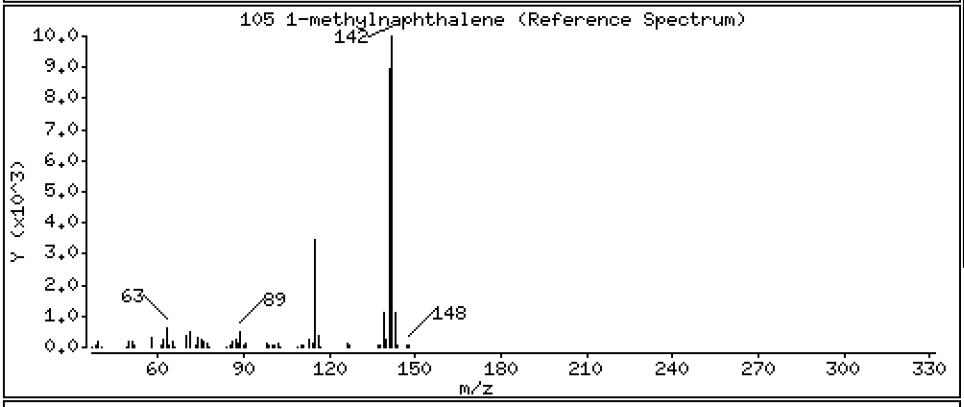
Concentration: 0.08886 ug/mL

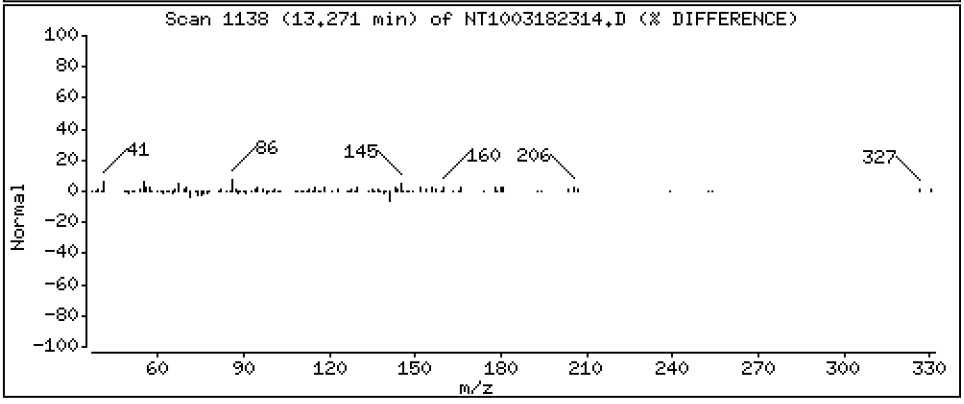












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

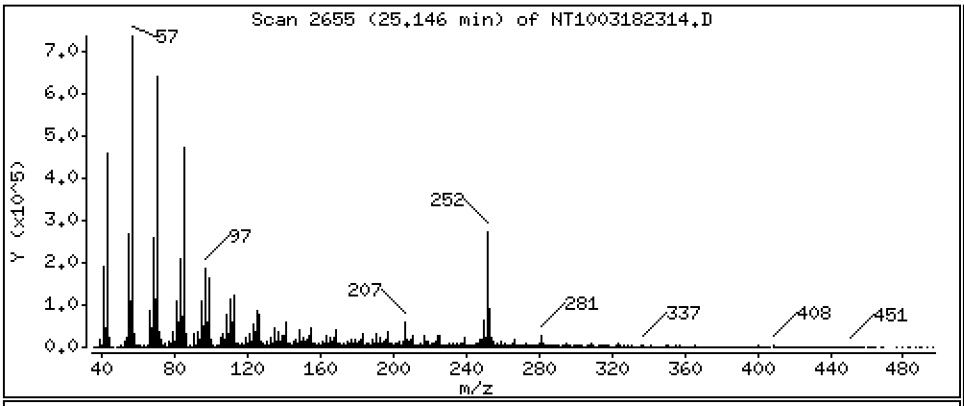
Operator: VTS

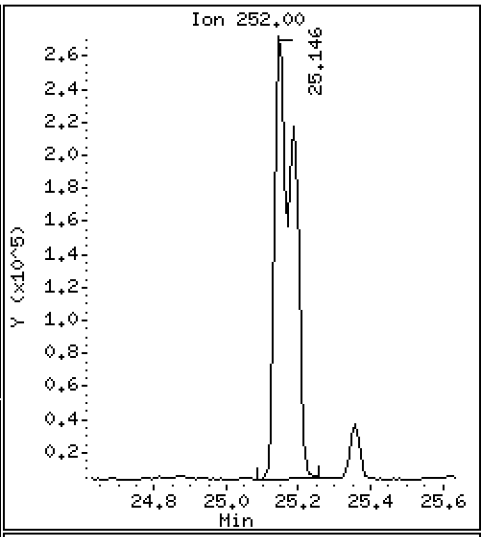
Column phase: ZB-5msi

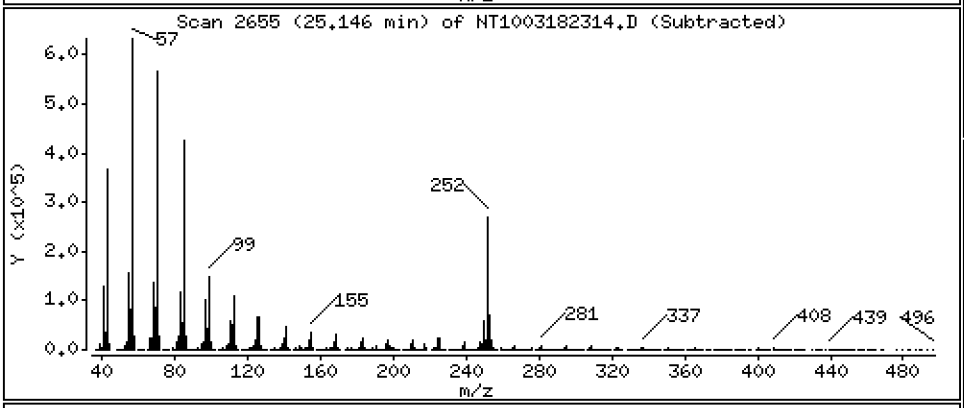
Column diameter: 0.25

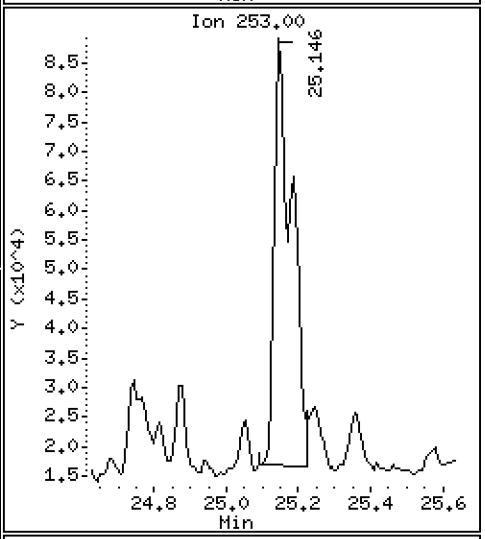
187 Total Benzofluoranthenes

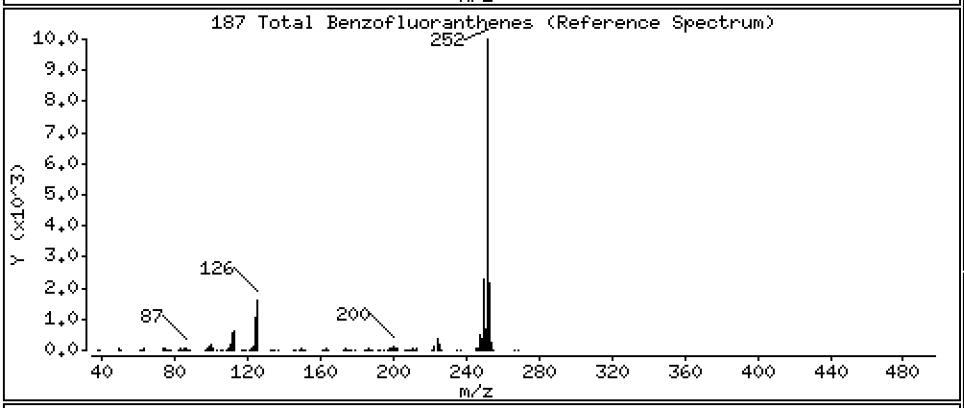
Concentration: 3.693 ug/mL

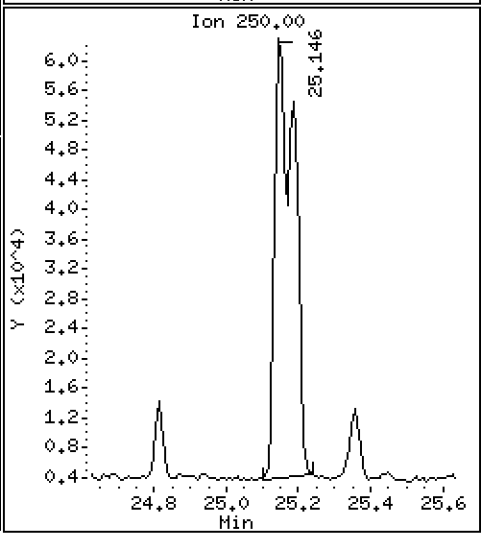


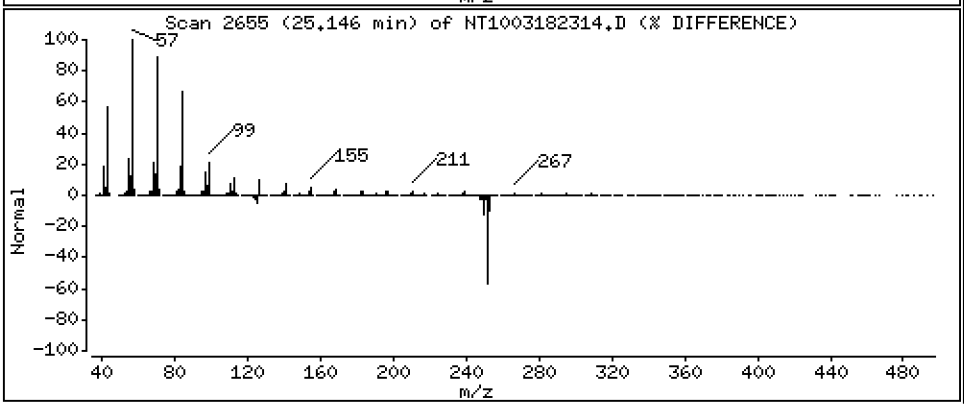












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182314.D
Lab Smp Id: 23A0467-05
Inj Date : 19-MAR-2023 02:02
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-05
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	423408	5.90236	5.902
$	2 Phenol-d5	99	8.528	8.520	(0.930)	571558	6.07355	6.074
	3 Phenol	94	8.551	8.536	(0.933)	256978	2.62783	2.628
$	5 2-Chlorophenol-d4	132	8.814	8.806	(0.961)	514141	6.39797	6.398
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	237211	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.039)	232817	4.03420	4.034
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	9.434	9.426	(1.029)	6943	0.15126	0.1513(H)
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.081)	145711	1.93993	1.940
$	18 Nitrobenzene-d5	82	10.256	10.249	(0.882)	368019	4.24702	4.247
	19 Nitrobenzene	77	9.915	10.287	(0.852)	56738	0.66720	0.6672
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.041	11.134	(0.949)	24752	0.57013	0.5701(MH)
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.631	11.623	(1.000)	858498	4.00000	
	28 Naphthalene	128	11.670	11.669	(1.003)	31375	0.13796	0.1380
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	142	13.046	13.046	(1.122)	19041	0.11601	0.1160
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	13.820	13.820	(0.908)	809945	4.34652	4.347
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	14.718	14.710	(0.967)	9553	0.06242	0.06242
	40 Acenaphthylene	152	14.904	14.896	(0.980)	33293	0.14160	0.1416
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	15.213	15.213	(1.000)	471073	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.283	15.275	(1.005)	16216	0.11164	0.1116
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.608	15.600	(1.026)	29441	0.13745	0.1375
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	16.164	16.156	(1.062)	19991	0.13314	0.1331
	49 Fluorene	166	16.319	16.319	(1.073)	19252	0.11425	0.1142
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	16.851	16.843	(1.108)	141651	6.44529	6.445
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.242	18.234	(1.000)	870067	4.00000	
	60 Phenanthrene	178	18.288	18.281	(1.003)	294905	1.24302	1.243
	61 Anthracene	178	18.381	18.373	(1.008)	122942	0.54021	0.5402
	62 Carbazole	167	18.714	18.698	(1.026)	32942	0.16153	0.1615
	63 Di-n-butylphthalate	149	19.503	19.488	(1.069)	14535	0.05300	0.05300
	64 Fluoranthene	202	20.671	20.656	(0.888)	1364315	4.51447	4.514
	65 Pyrene	202	21.097	21.081	(0.906)	1164521	3.75636	3.756
$	66 Terphenyl-d14	244	21.375	21.360	(0.918)	968343	4.15931	4.159
	67 Butylbenzylphthalate	149	22.297	22.281	(0.958)	14937	0.13725	0.1372
	68 Benzo(a)anthracene	228	23.249	23.241	(0.999)	361635	1.36224	1.362
*	69 Chrysene-d12	240	23.280	23.272	(1.000)	752106	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	23.327	23.311	(1.002)	567184	2.18686	2.187
	72 bis(2-Ethylhexyl)phthalate	149	23.319	23.303	(0.960)	382157	1.99346	1.993
*	134 Di-n-octylphthalate-d4	153	24.302	24.294	(1.000)	1309201	4.00000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	25.146	25.130	(0.970)	565780	2.11754	2.118
	75 Benzo(k)fluoranthene	252	25.185	25.169	(0.971)	454451	1.67504	1.675(MH)
	76 Benzo(a)pyrene	252	25.812	25.789	(0.996)	319851	1.33895	1.339
*	77 Perylene-d12	264	25.928	25.897	(1.000)	824270	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.627	28.580	(1.104)	206046	0.67797	0.6780
	79 Dibenzo(a,h)anthracene	278	28.634	28.595	(1.104)	50978	0.20204	0.2020(M)
	80 Benzo(g,h,i)perylene	276	29.419	29.364	(1.135)	207414	0.78861	0.7886
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	142	13.271	13.263	(1.141)	13362	0.08886	0.08886
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.146	25.130	(0.970)	952685	3.69292	3.693(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182314.D
Lab Smp Id: 23A0467-05
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	237211	27.25
27 Naphthalene-d8	688740	344370	1377480	858498	24.65
42 Acenaphthene-d10	373663	186832	747326	471073	26.07
59 Phenanthrene-d10	652323	326162	1304646	870067	33.38
69 Chrysene-d12	537141	268571	1074282	752106	40.02
134 Di-n-octylphthala	947608	473804	1895216	1309201	38.16
77 Perylene-d12	602550	301275	1205100	824270	36.80

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.03
134 Di-n-octylphthala	24.29	23.79	24.79	24.30	0.03
77 Perylene-d12	25.90	25.40	26.40	25.93	0.12

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

REVIEW SUMMARY FOR FILE - NT1003182314.D

Lab ID: 23A0467-05
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 02:02

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.852	0.885	-0.0326	Nitrobenzene
0.949	0.958	-0.0086	Benzoic acid

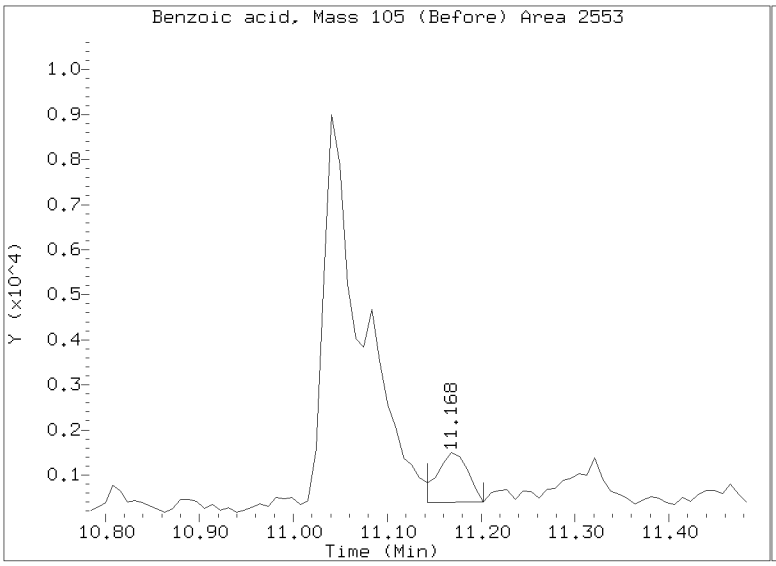
RRT check based on Ccal File: NT1003182302.D

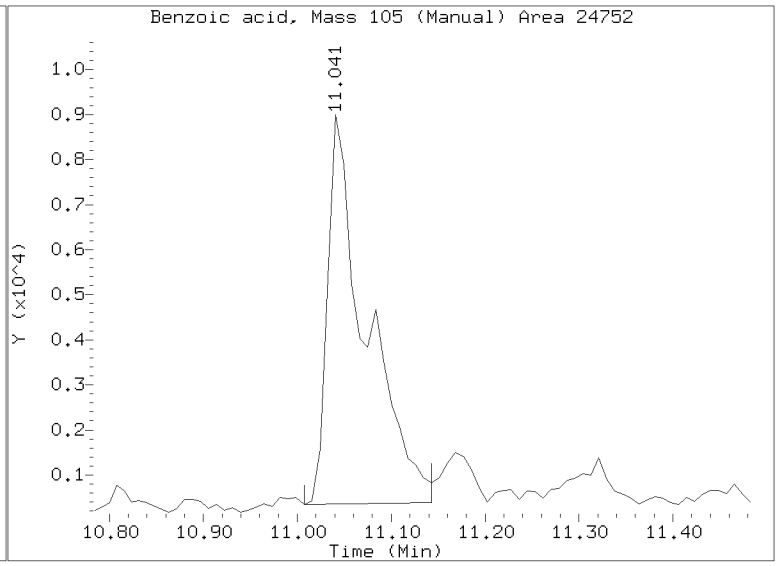
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

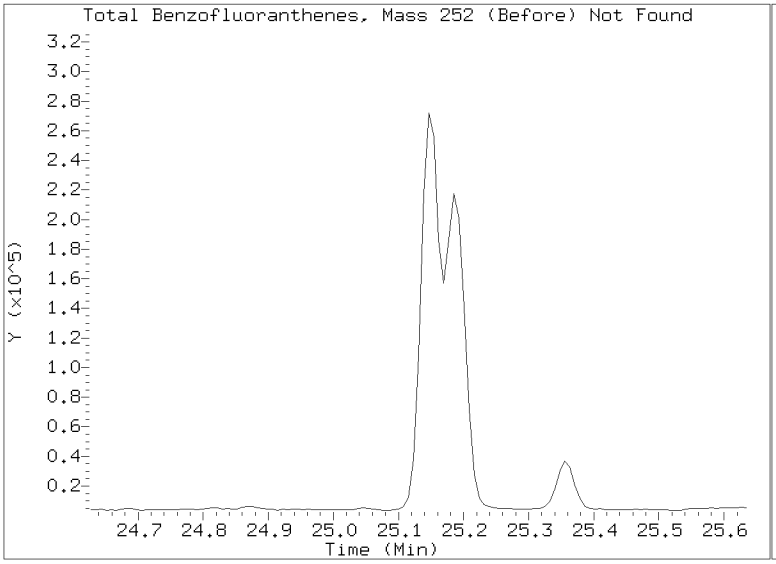
* Only compounds listed in the work order have been verified by the analyst *

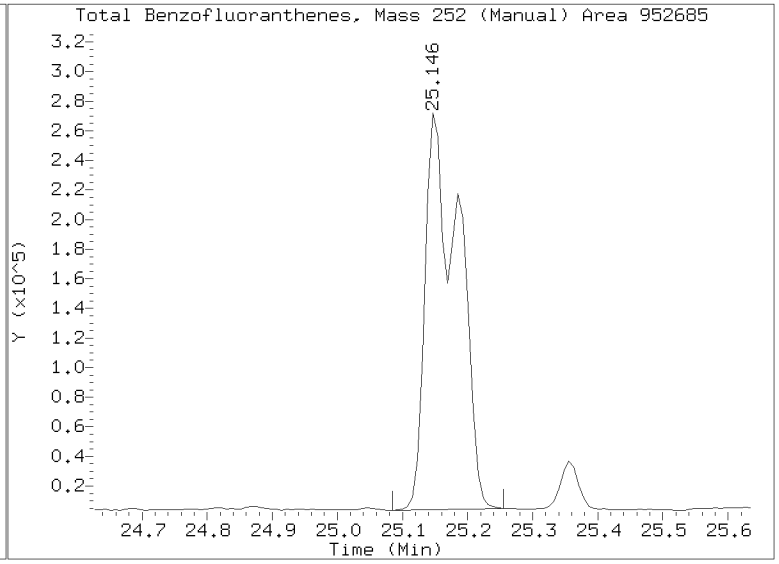
Quant Ion Manual Peak Adjustment Report

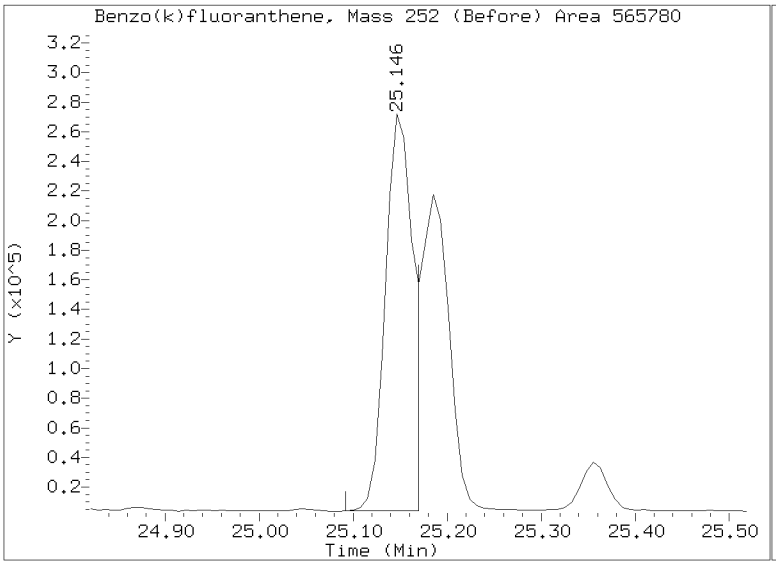
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182314.D
Injection Date: 19-MAR-2023 02:02
Lab ID:23A0467-05 Client ID:
Report Date: 04/04/2023 08:58

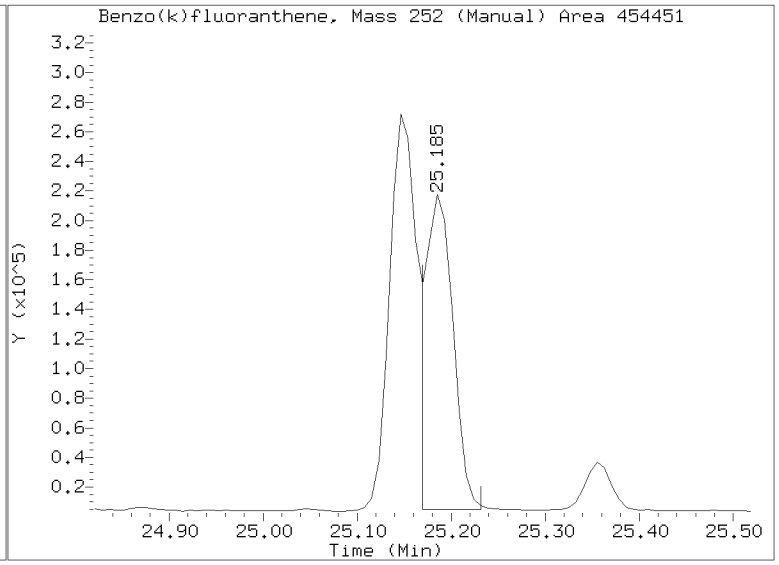












Quant Ion Manual Peak Adjustment Report

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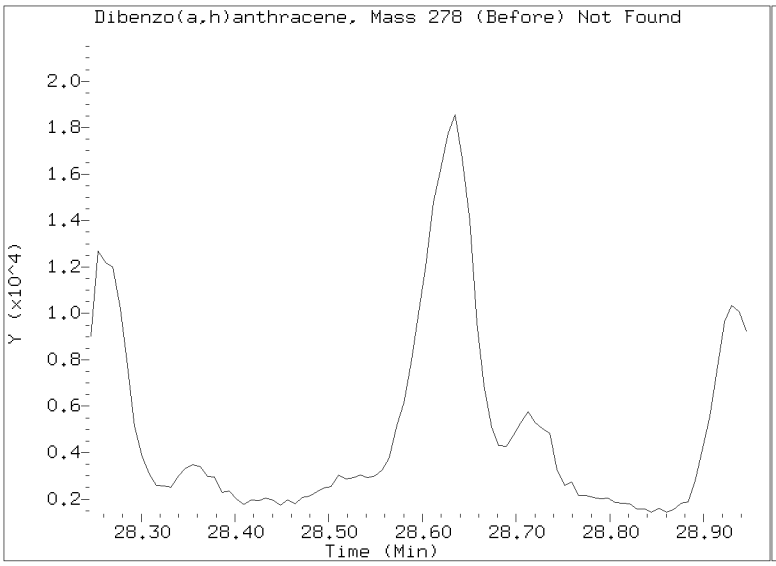
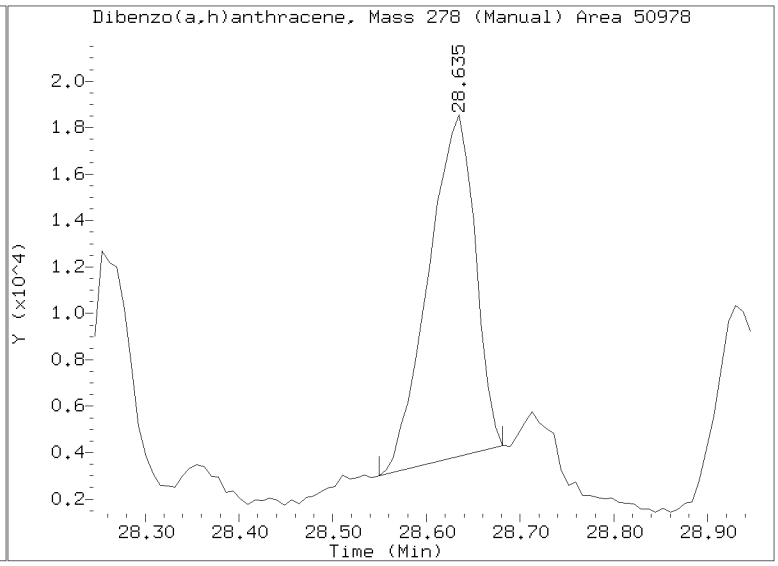
Injection Date: 19-MAR-2023 02:02
Lab ID:23A0467-05 Client ID:
Report Date: 04/04/2023 08:58





Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1204

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	02/23/23 15:49	File ID:	NT1003182315.D
% Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:41
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.2 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	1620		4.4	20.0
106-44-5	4-Methylphenol	1	720		7.4	20.0
91-20-3	Naphthalene	1	13.8	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	13.3	J	4.5	20.0
208-96-8	Acenaphthylene	1	11.2	J	6.2	20.0
131-11-3	Dimethylphthalate	1	9.0	J	4.4	20.0
83-32-9	Acenaphthene	1	20.0		5.2	20.0
132-64-9	Dibenzofuran	1	19.5	J	14.1	20.0
86-73-7	Fluorene	1	17.9	J	14.5	20.0
85-01-8	Phenanthrene	1	105		8.7	20.0
120-12-7	Anthracene	1	44.9		7.2	20.0
206-44-0	Fluoranthene	1	238		6.1	20.0
129-00-0	Pyrene	1	228		5.7	20.0
85-68-7	Butylbenzylphthalate	1	26.0		9.4	20.0
56-55-3	Benzo(a)anthracene	1	105		6.0	20.0
218-01-9	Chrysene	1	157		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	161		5.5	49.9
	Benzofluoranthenes, Total	1	296		10.0	39.9
50-32-8	Benzo(a)pyrene	1	104		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	51.1		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	18.8	J	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	59.5		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.89	559	74.6	27 - 120	
Phenol-d5	748.89	572	76.4	29 - 120	
2-Chlorophenol-d4	748.89	615	82.1	31 - 120	
1,2-Dichlorobenzene-d4	499.26	362	72.5	32 - 120	
Nitrobenzene-d5	499.26	393	78.8	30 - 120	
2-Fluorobiphenyl	499.26	417	83.5	35 - 120	

LDW23-SS1204

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

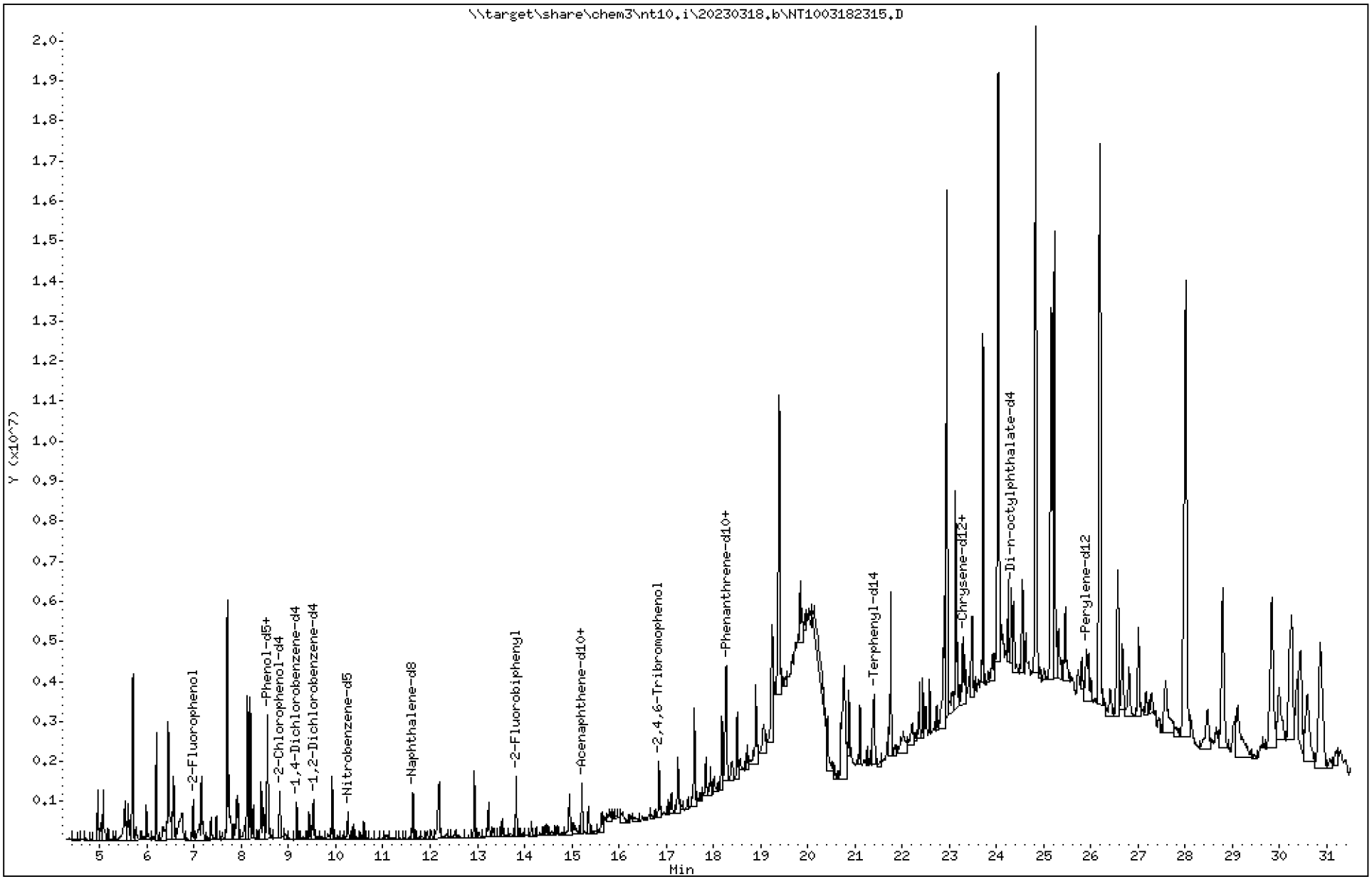
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	02/23/23 15:49	File ID:	NT1003182315.D
% Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:41
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	21.2 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.89	725	96.8	24 - 134	
p-Terphenyl-d14	499.26	506	101	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D
Date : 19-MAR-2023 02:41
Client ID:
Sample Info: 23A0467-06

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

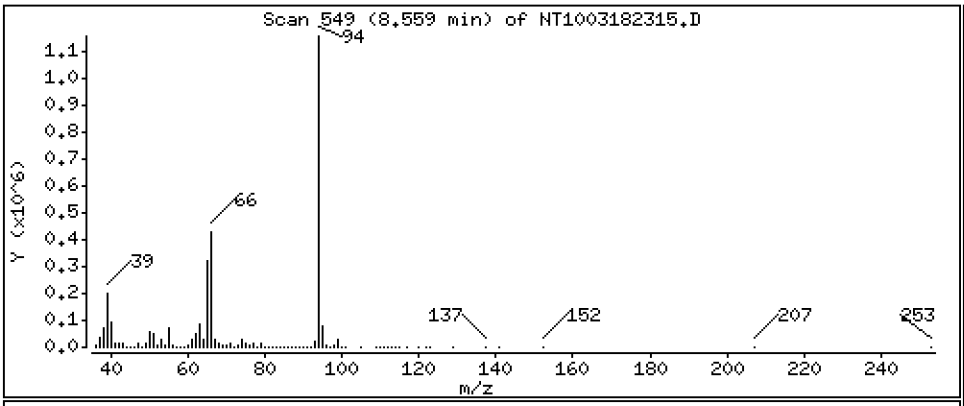
Operator: VTS

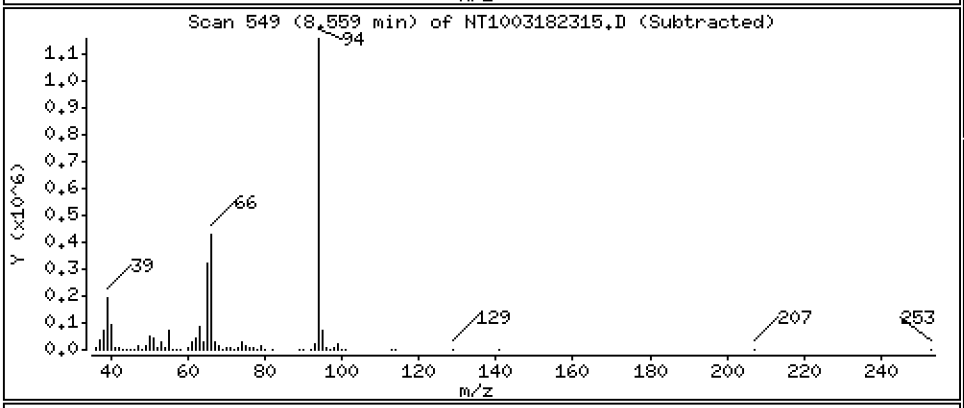
Column phase: ZB-5msi

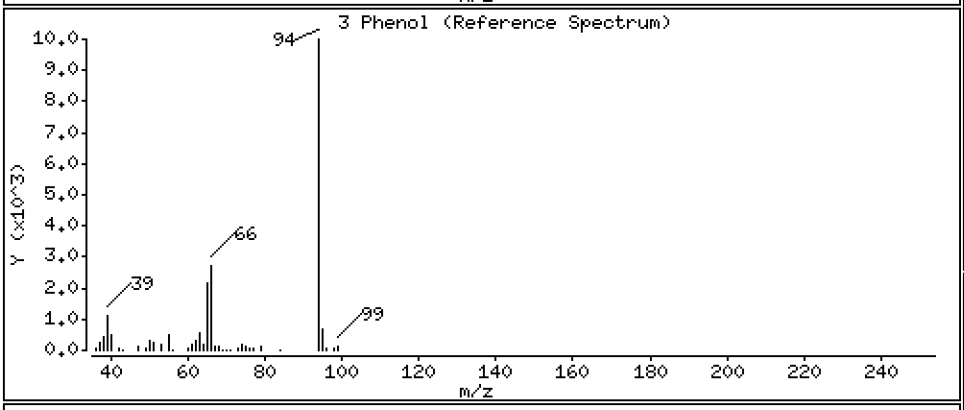
Column diameter: 0.25

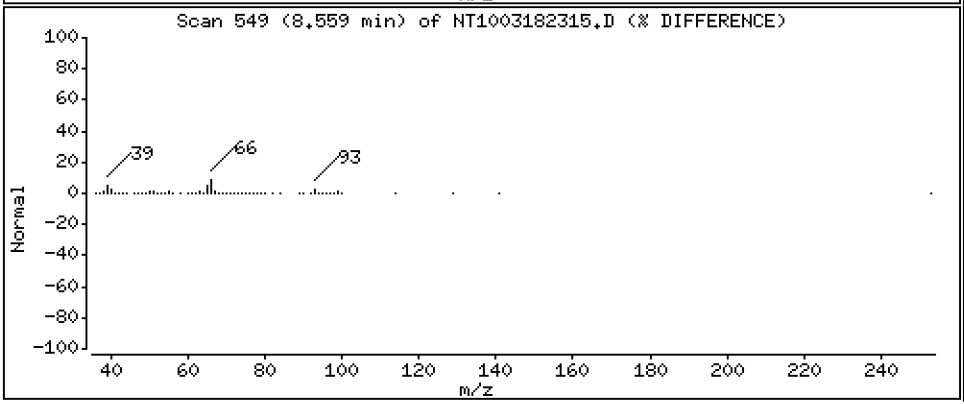
3 Phenol

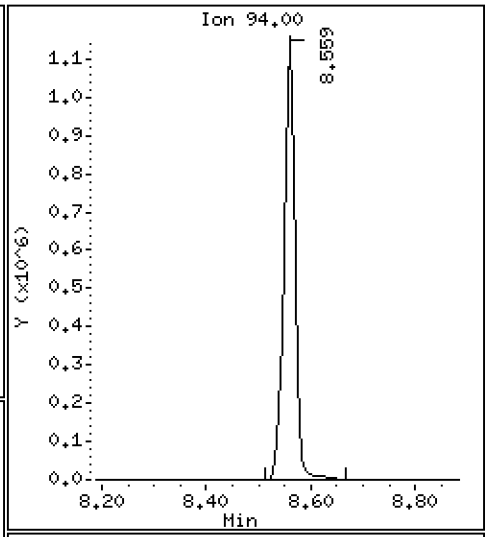
Concentration: 16.24 ug/mL

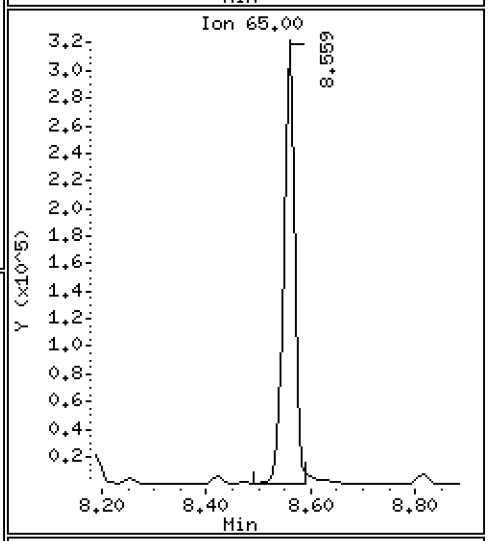


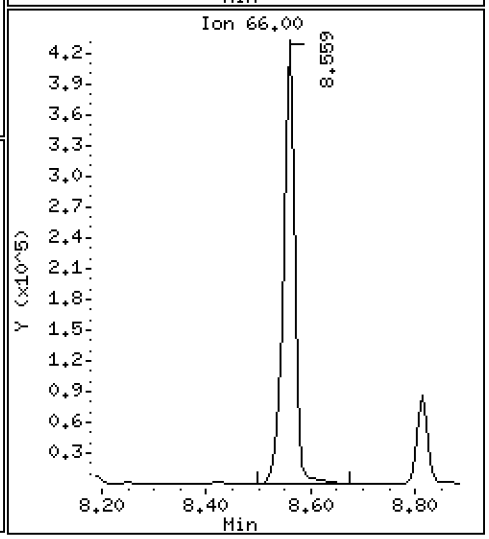












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

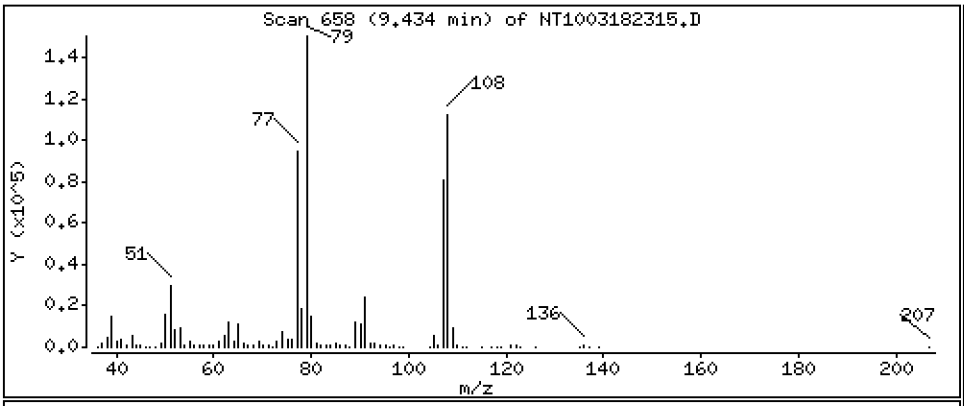
Operator: VTS

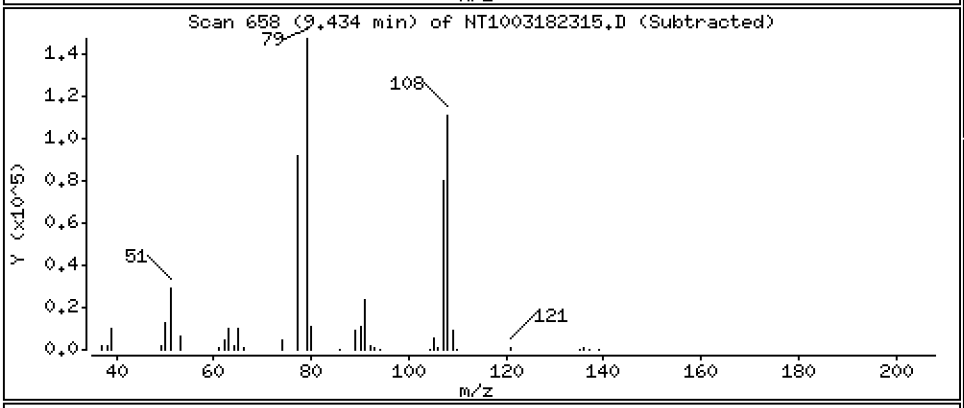
Column phase: ZB-5msi

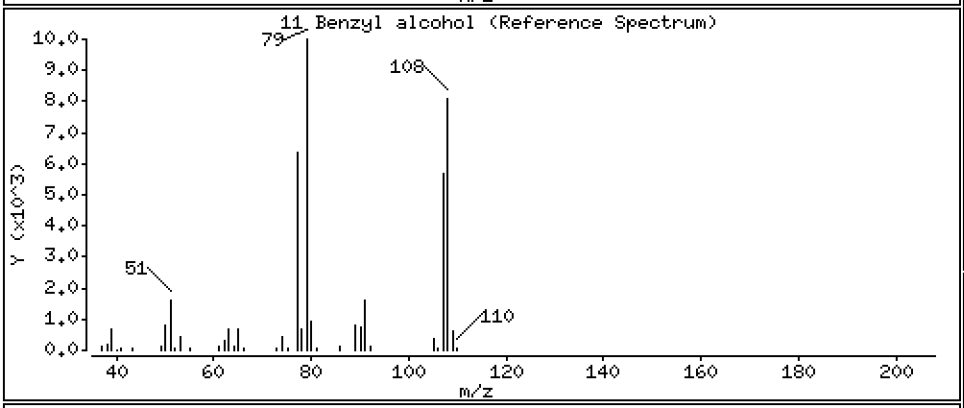
Column diameter: 0.25

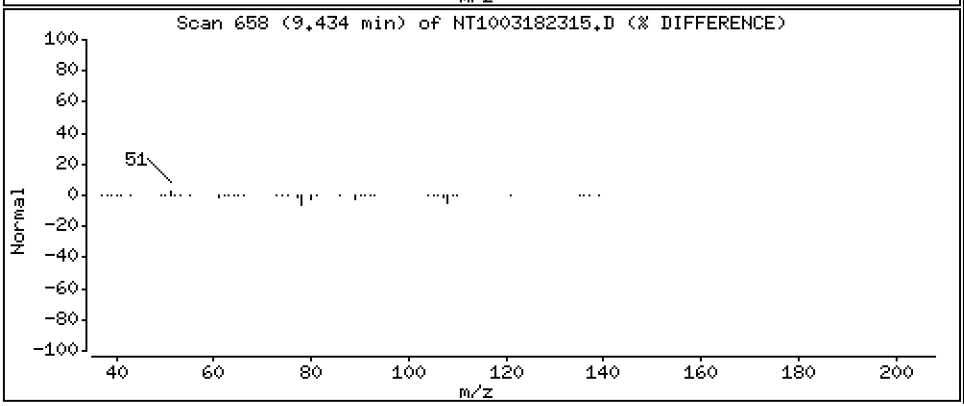
11 Benzyl alcohol

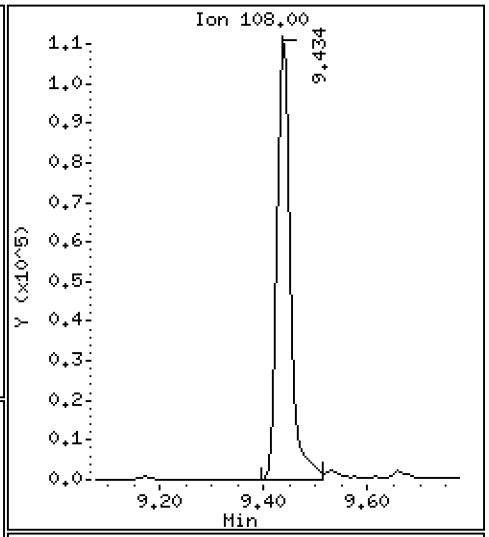
Concentration: 3.854 ug/mL

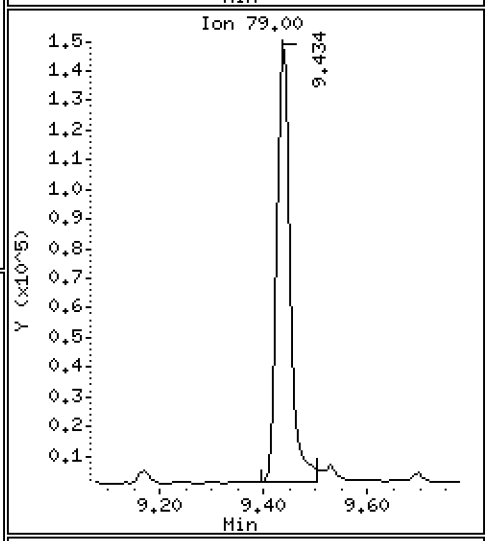


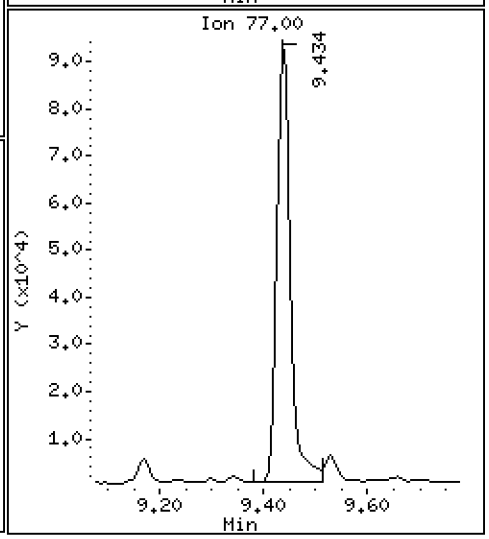












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

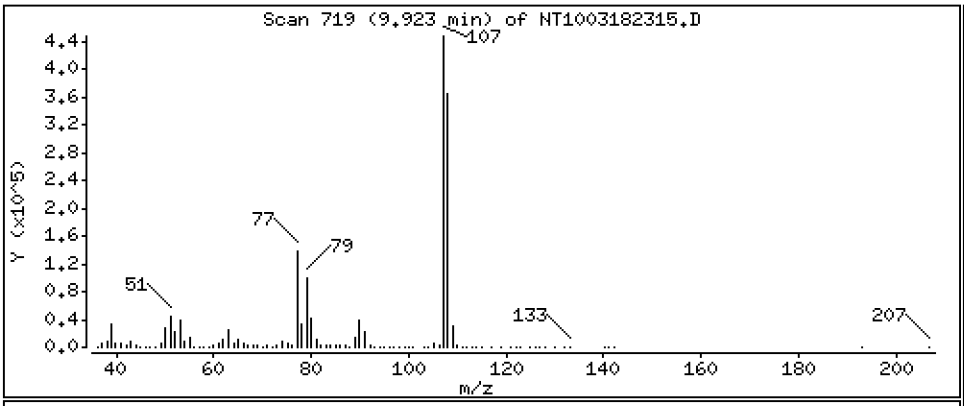
Operator: VTS

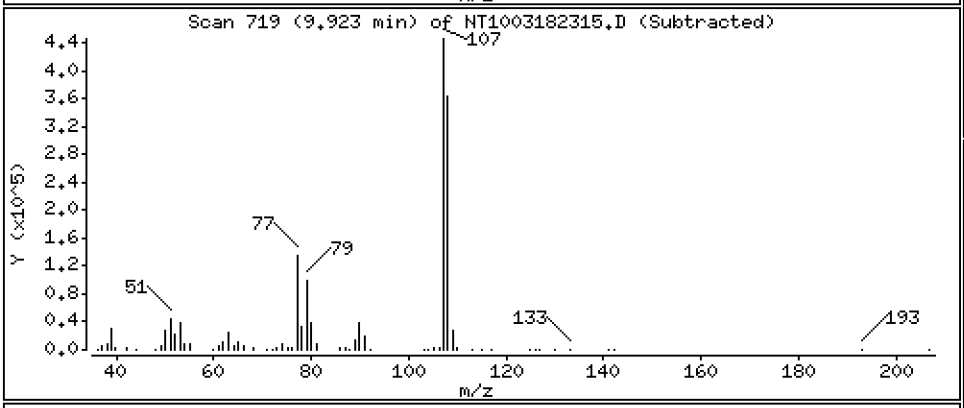
Column phase: ZB-5msi

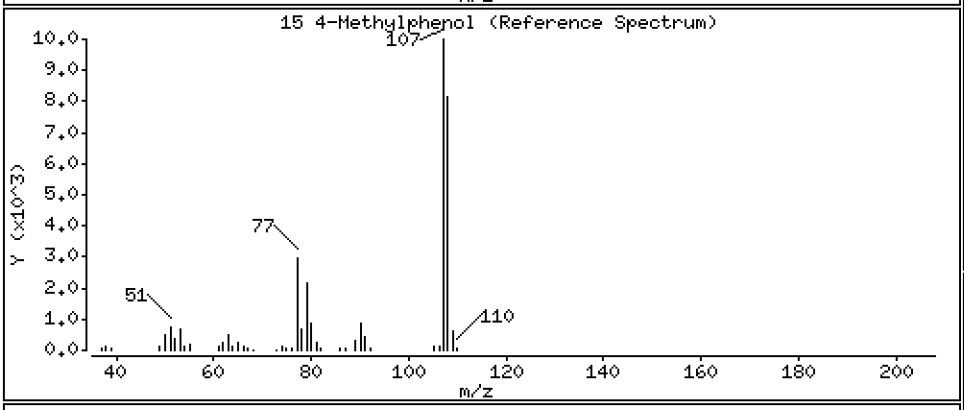
Column diameter: 0.25

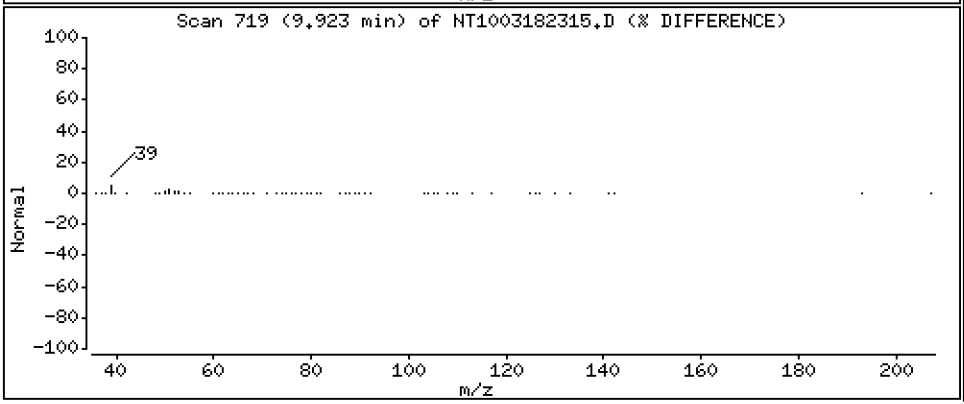
15 4-Methylphenol

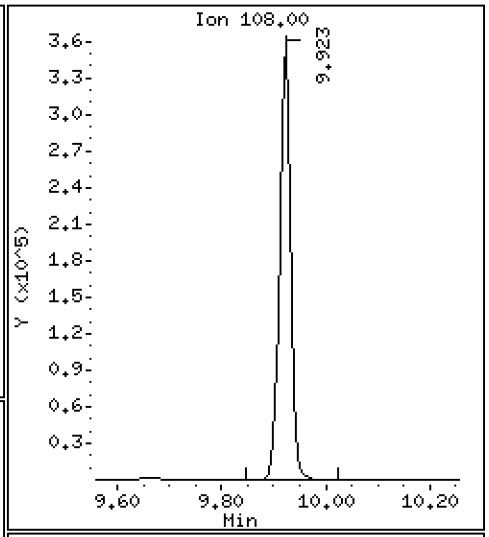
Concentration: 7.211 ug/mL

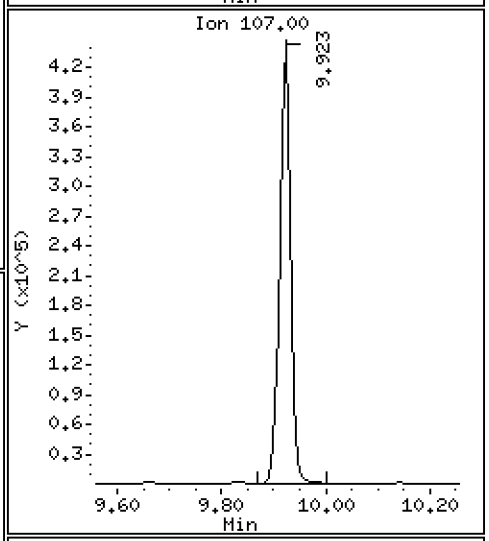


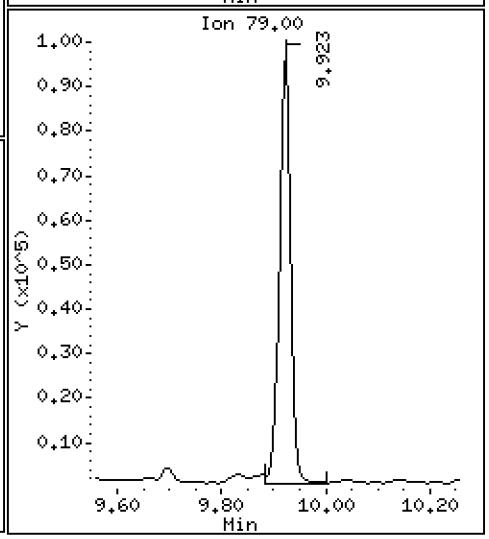












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

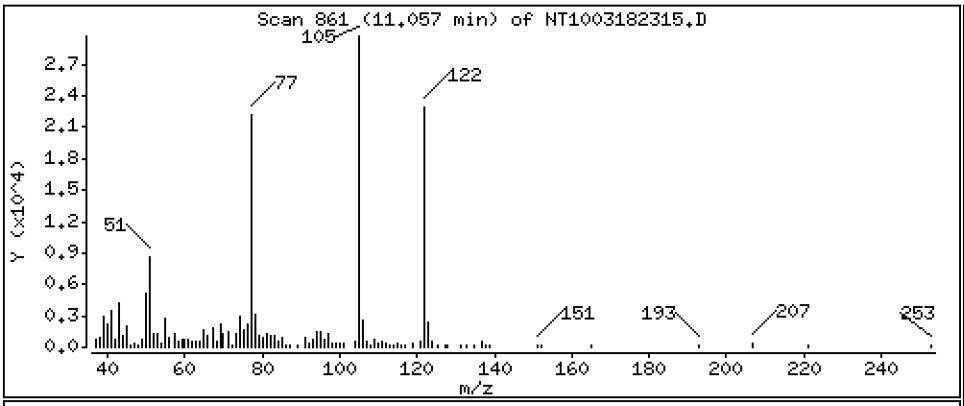
Operator: VTS

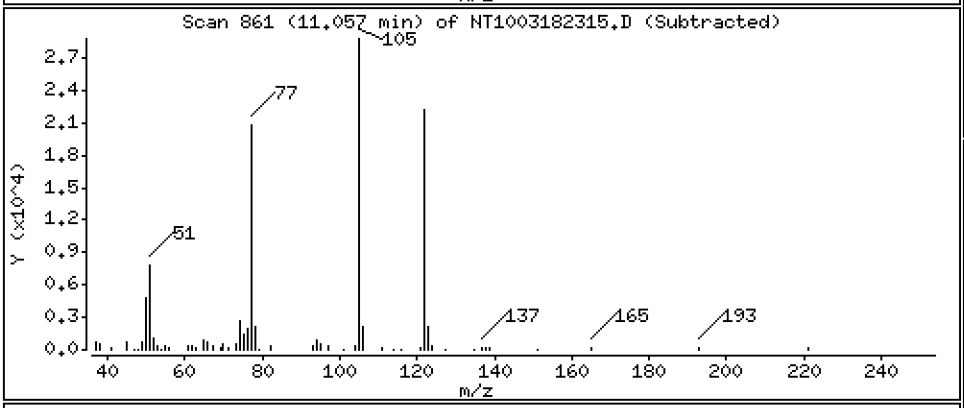
Column phase: ZB-5msi

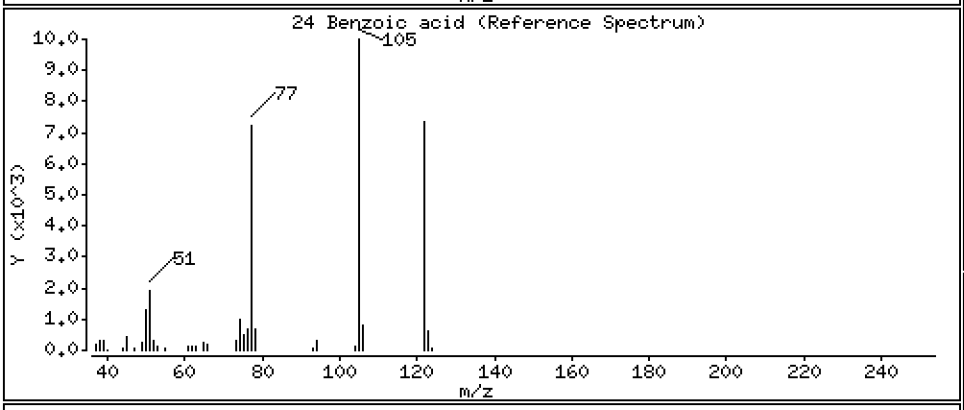
Column diameter: 0.25

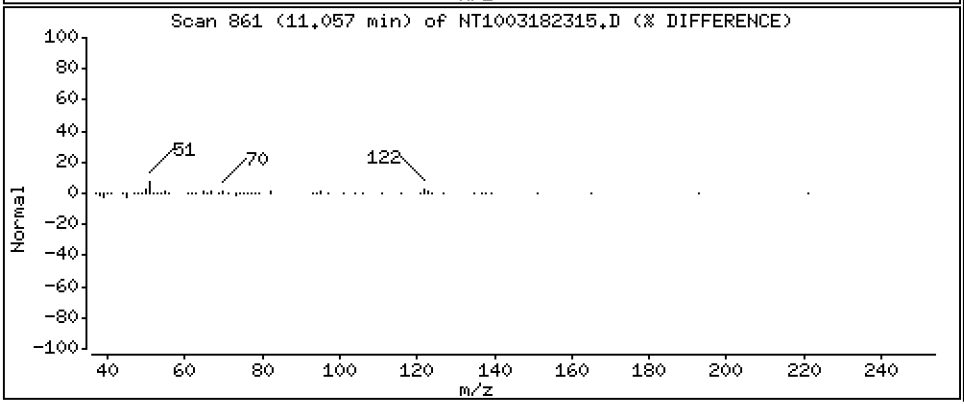
24 Benzoic acid

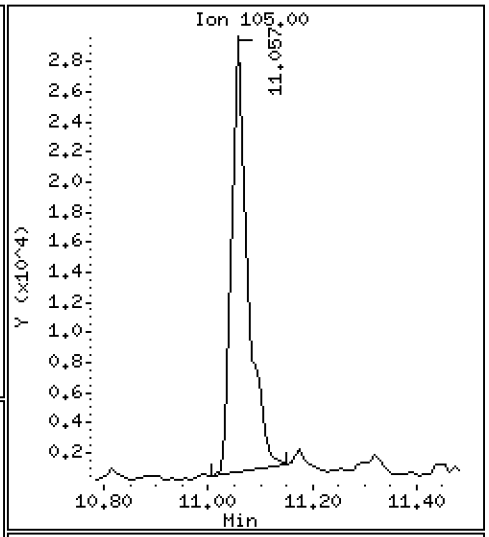
Concentration: 1.321 ug/mL

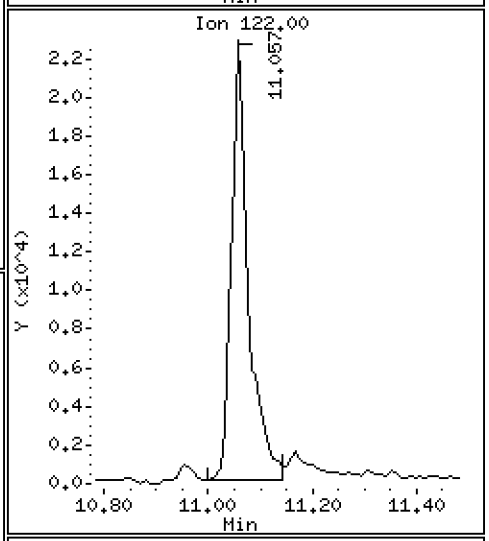


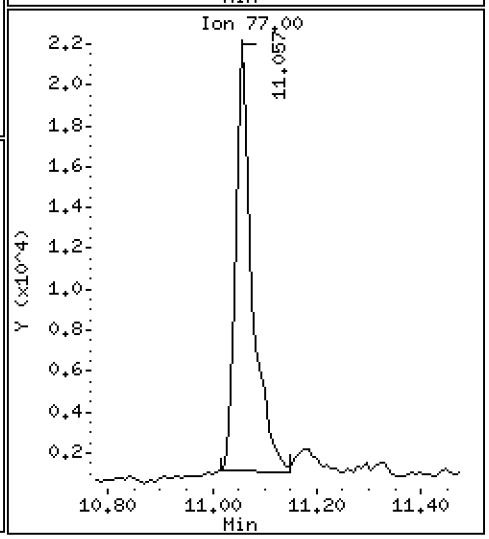












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

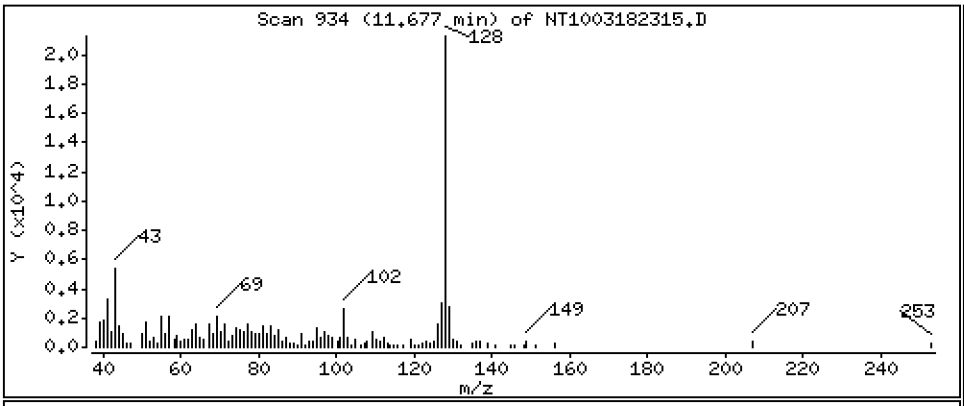
Operator: VTS

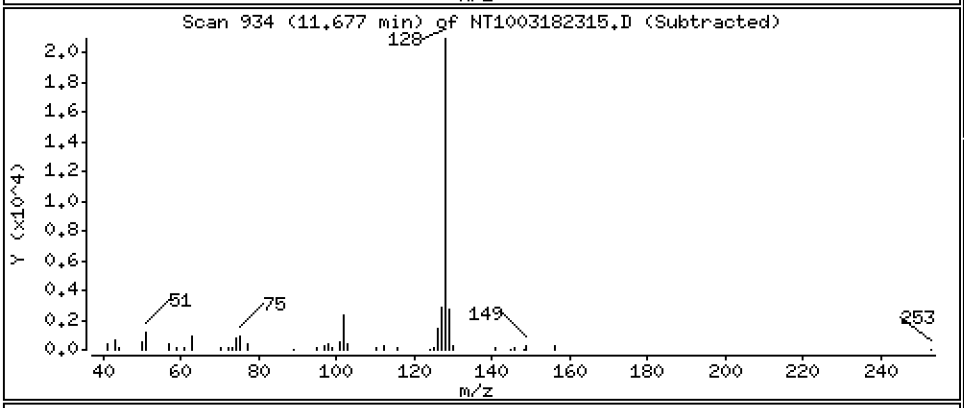
Column phase: ZB-5msi

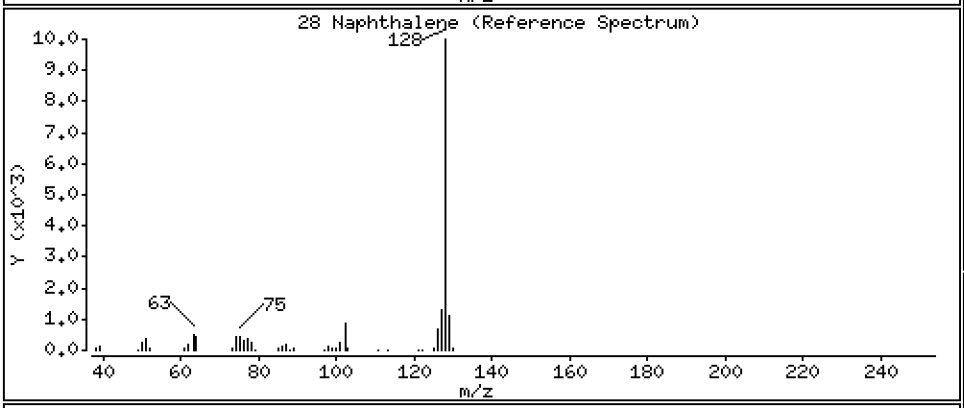
Column diameter: 0.25

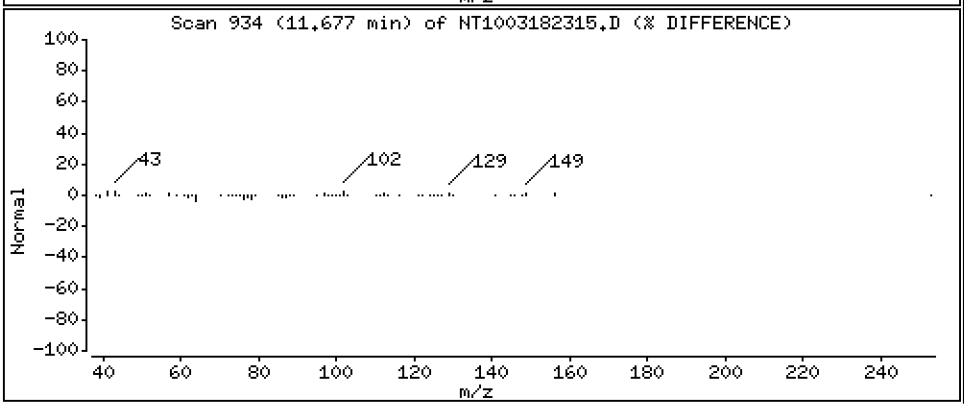
28 Naphthalene

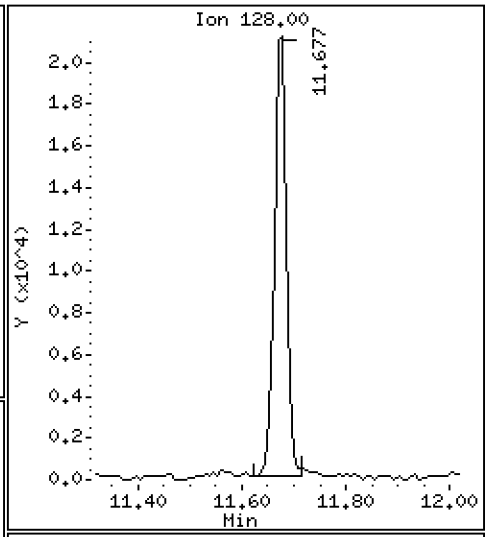
Concentration: 0.1386 ug/mL

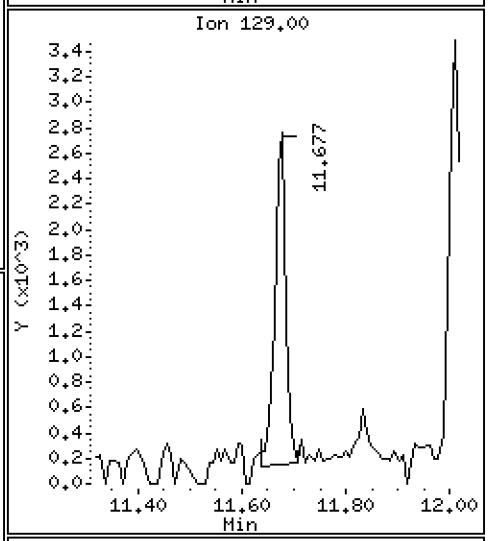


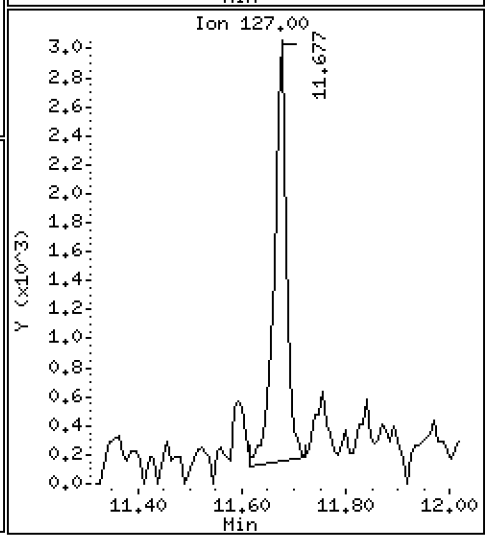












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

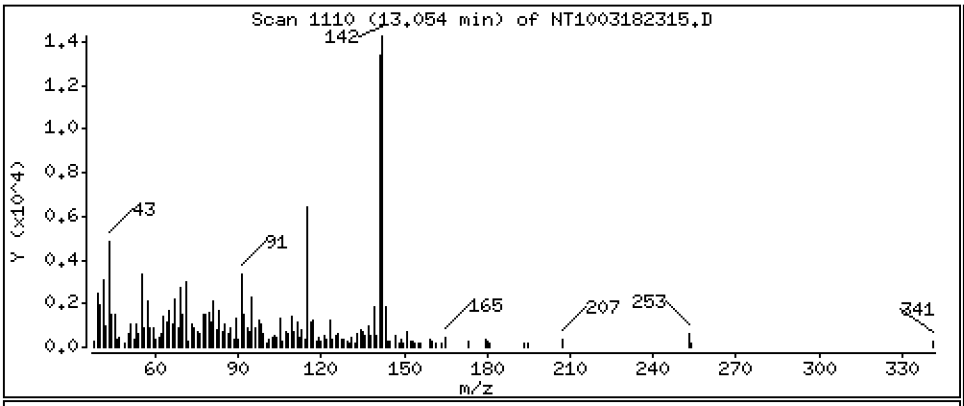
Operator: VTS

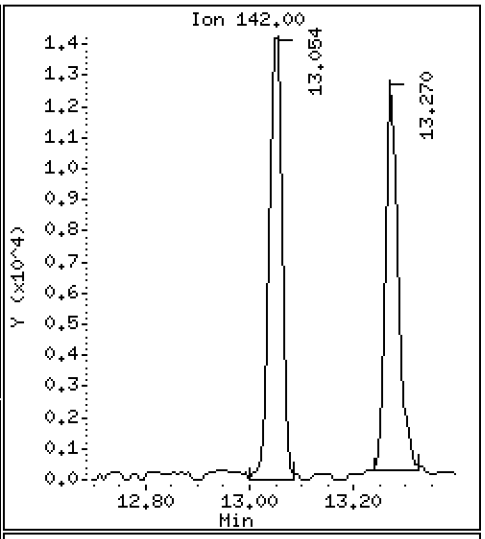
Column phase: ZB-5msi

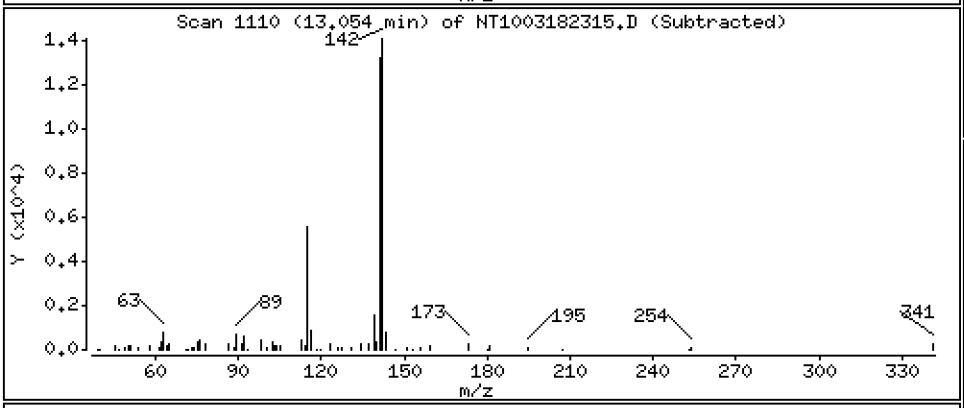
Column diameter: 0.25

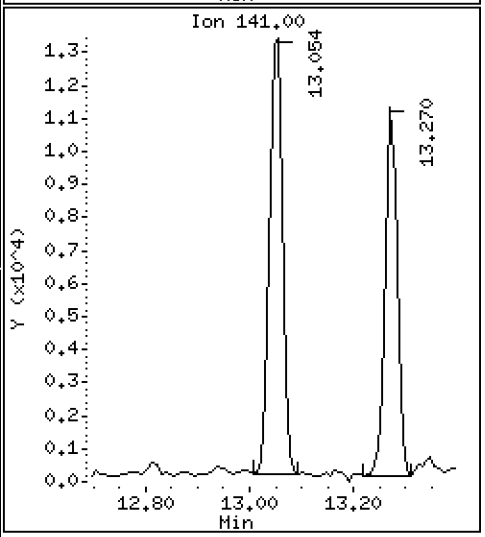
32 2-Methylnaphthalene

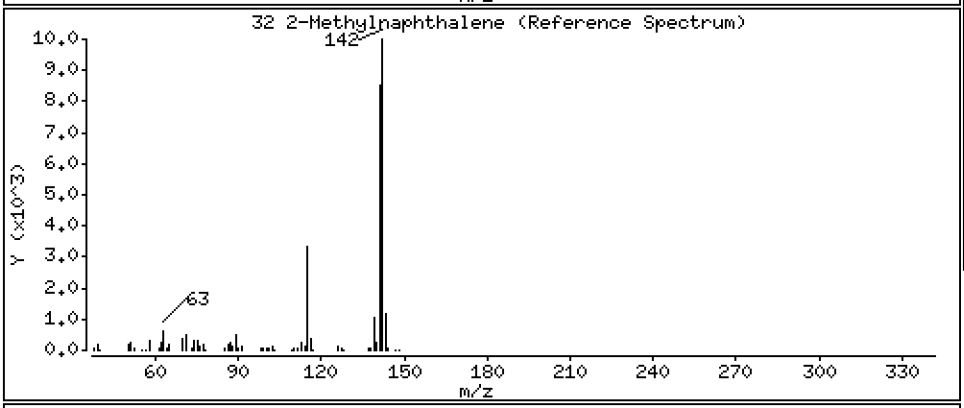
Concentration: 0.1334 ug/mL

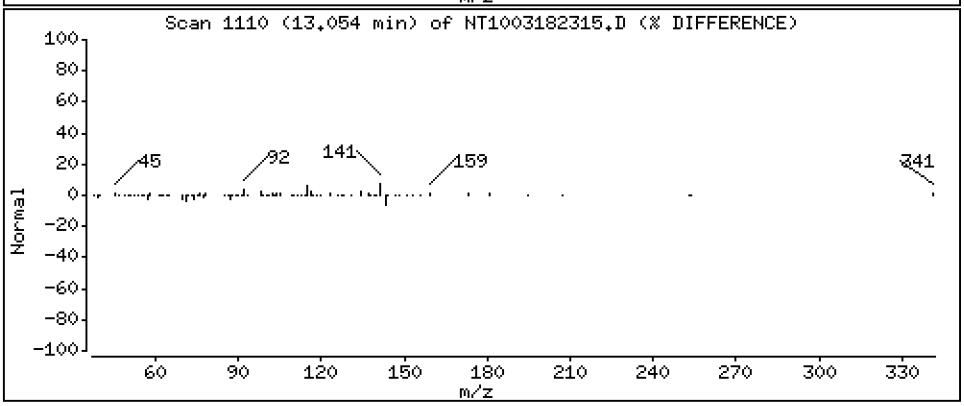












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

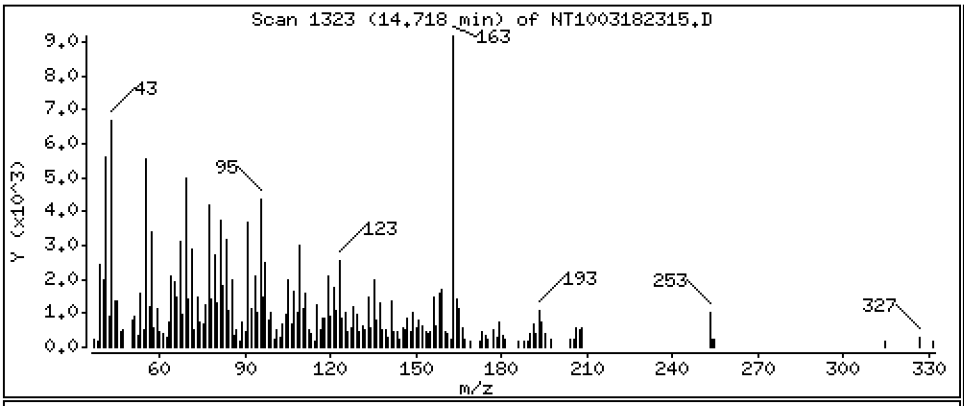
Operator: VTS

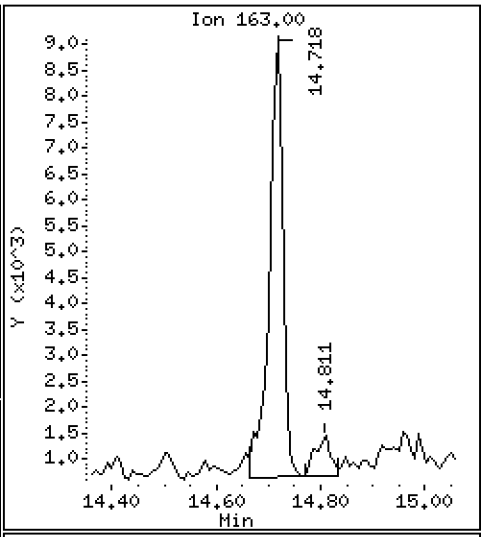
Column phase: ZB-5msi

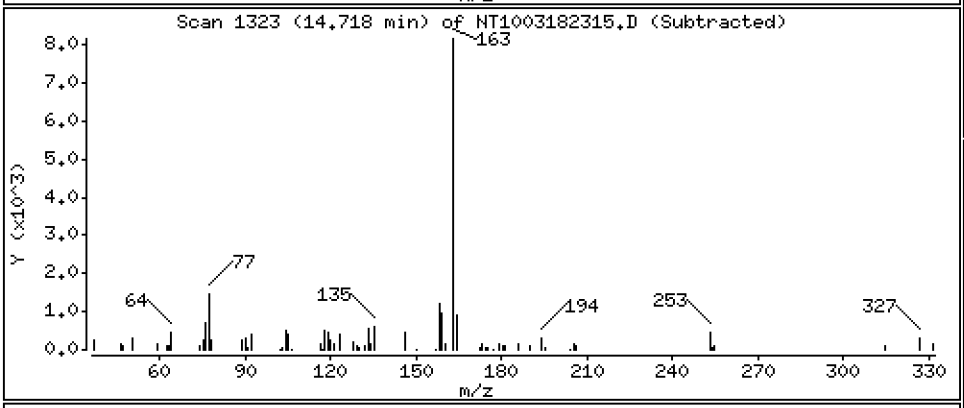
Column diameter: 0.25

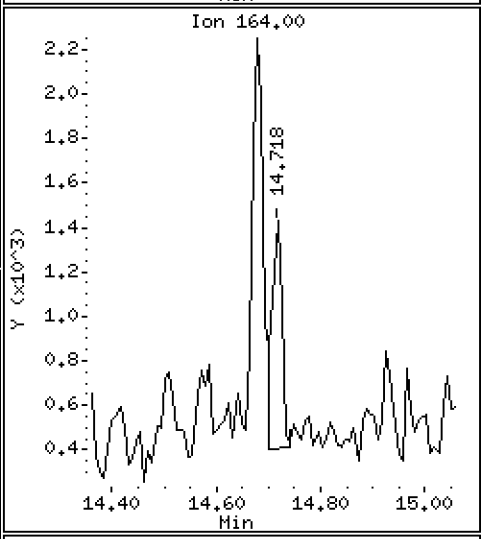
39 Dimethylphthalate

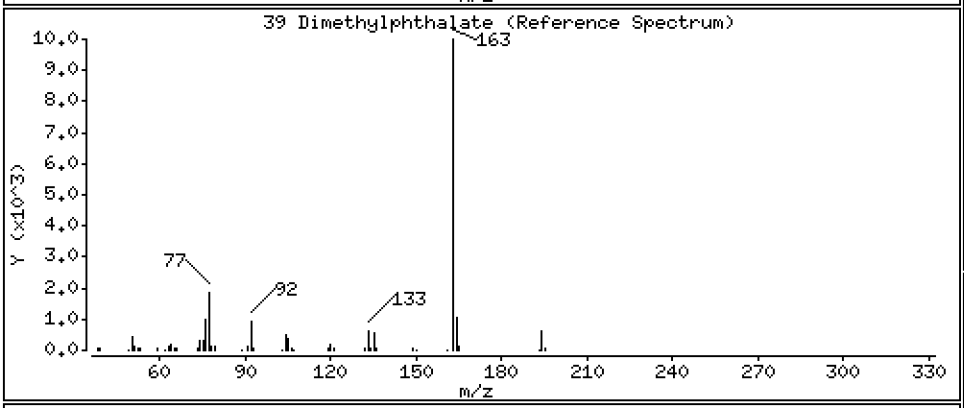
Concentration: 0.09042 ug/mL

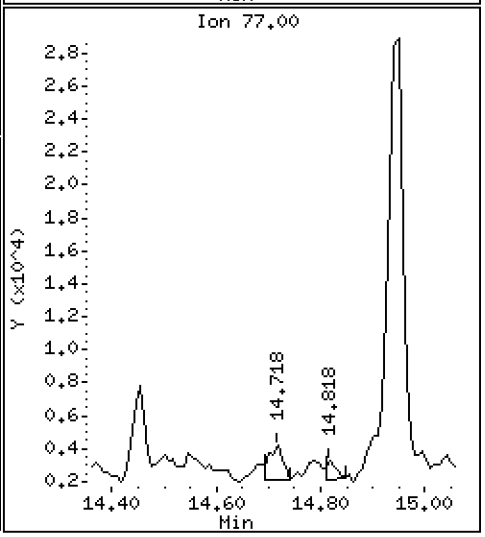


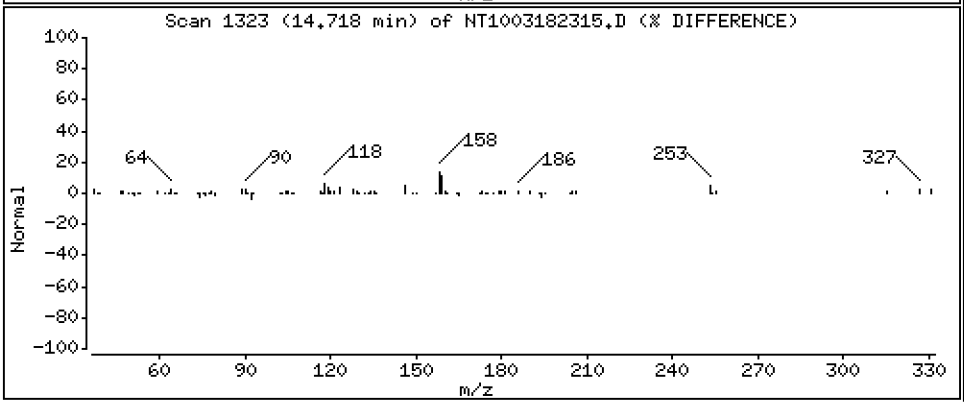












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

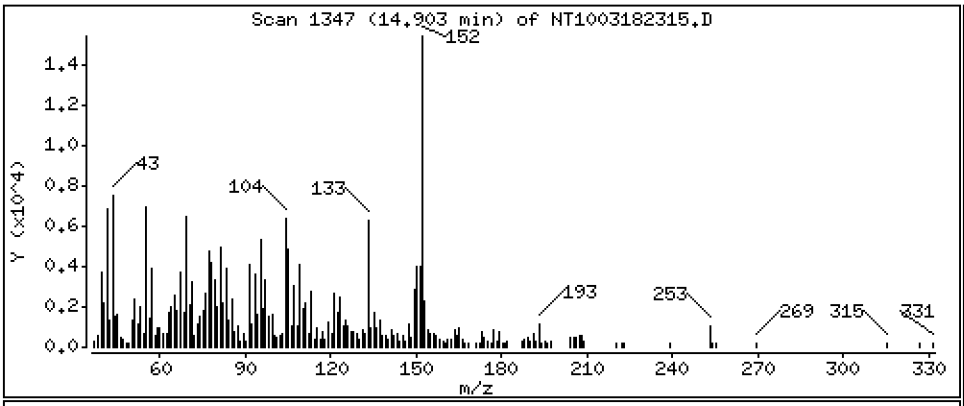
Operator: VTS

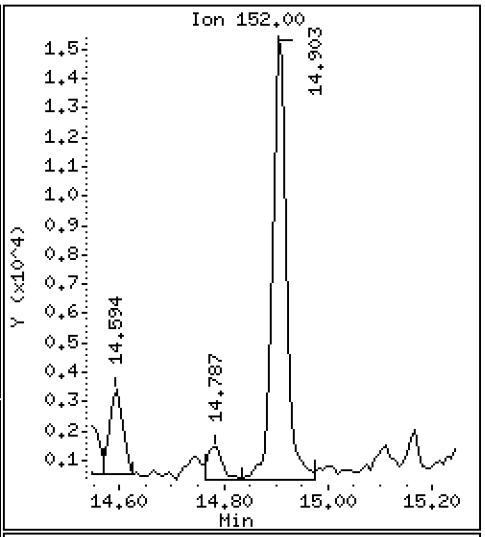
Column phase: ZB-5msi

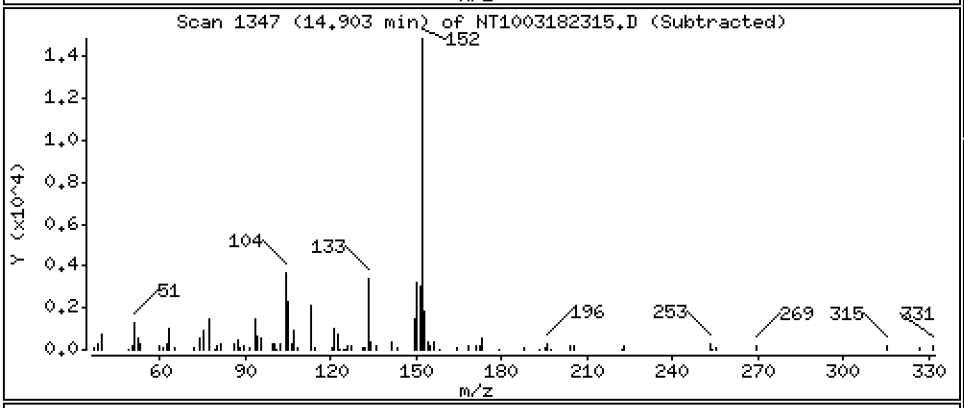
Column diameter: 0.25

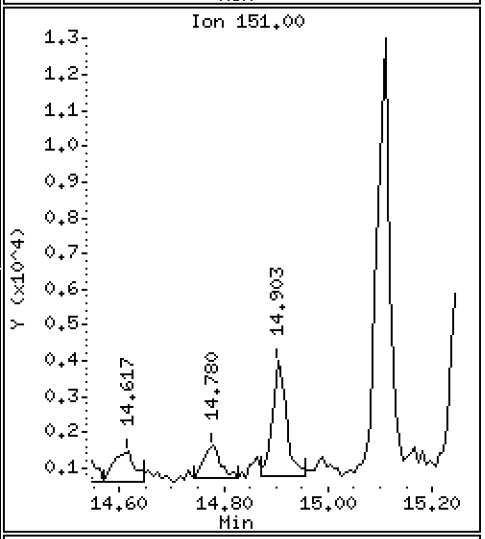
40 Acenaphthylene

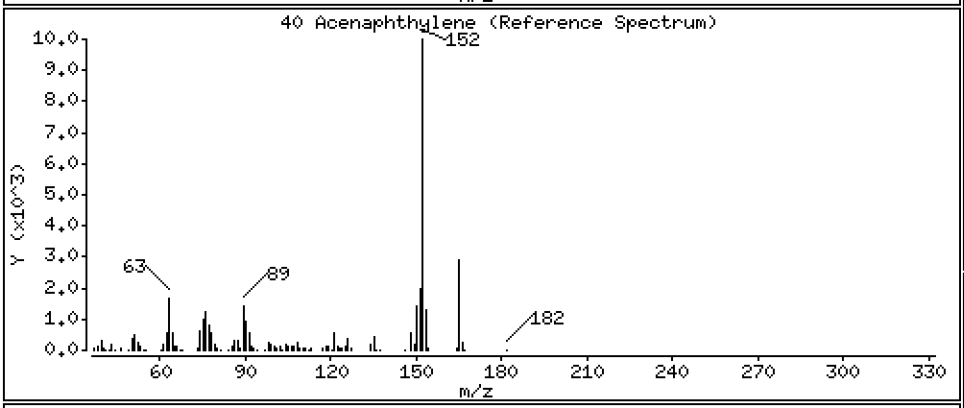
Concentration: 0.1125 ug/mL

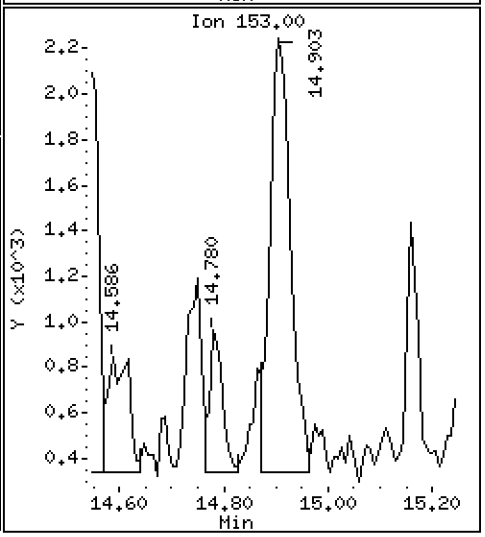


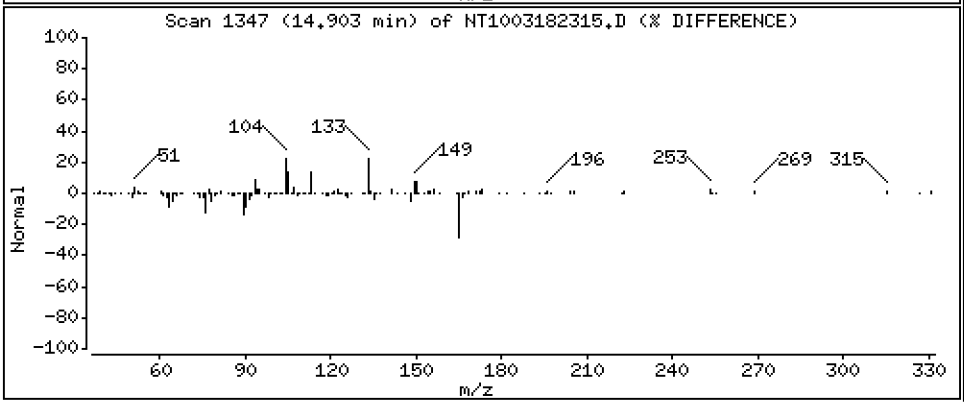












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

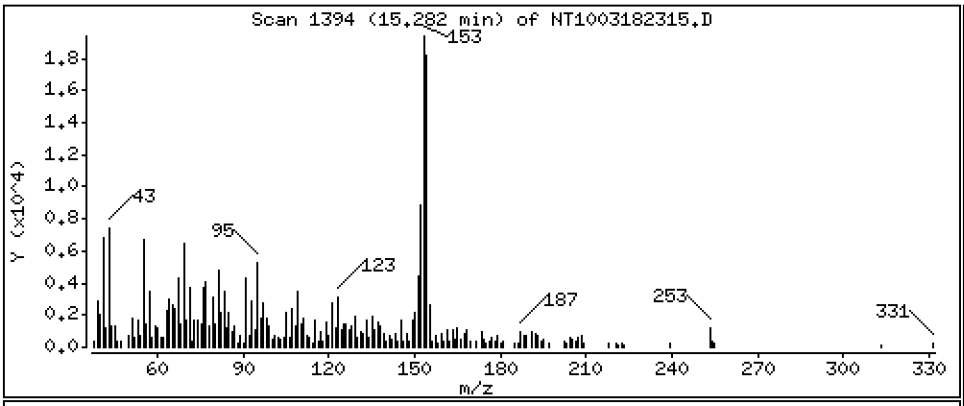
Operator: VTS

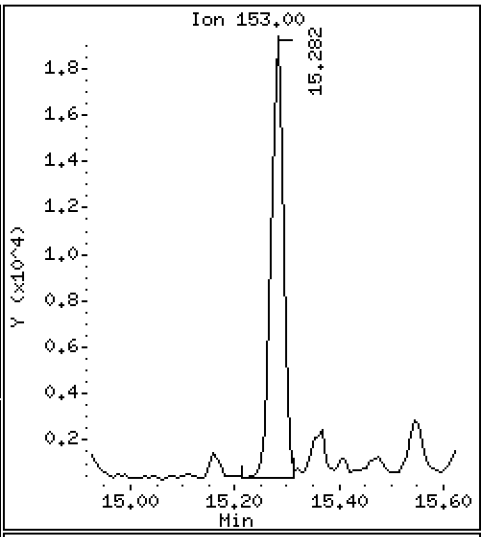
Column phase: ZB-5msi

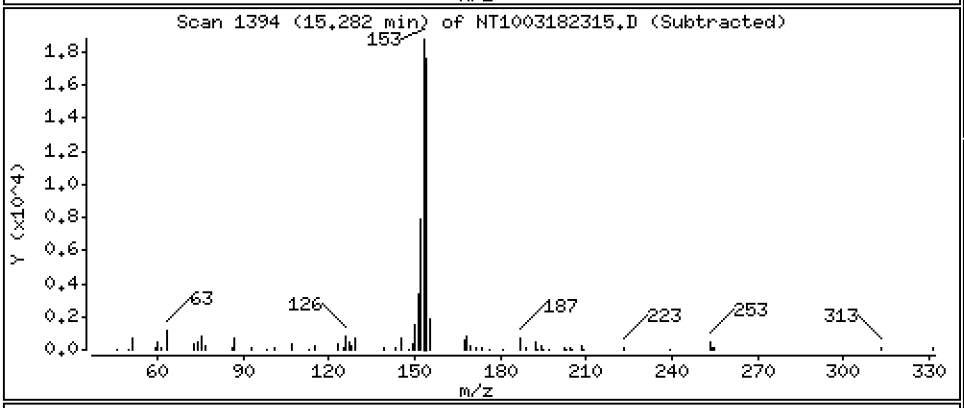
Column diameter: 0.25

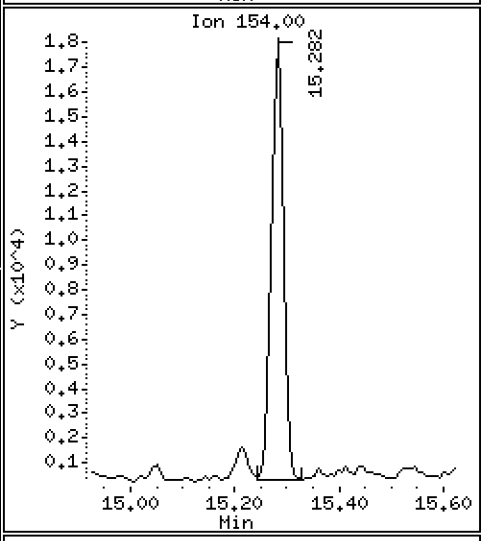
44 Acenaphthene

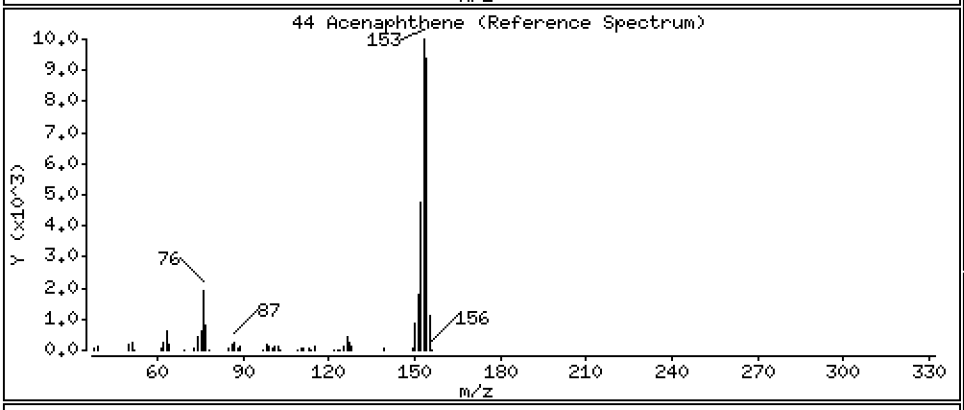
Concentration: 0.2001 ug/mL

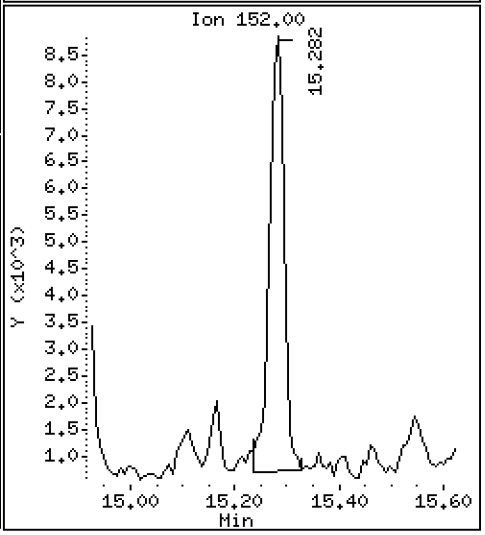


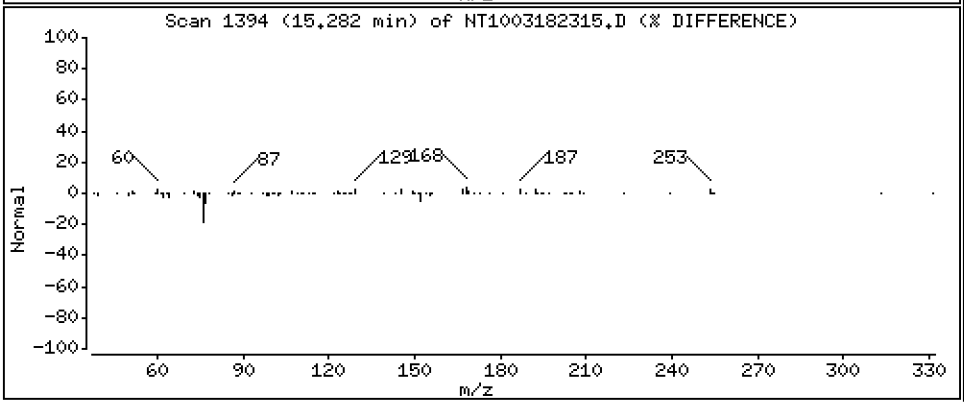












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

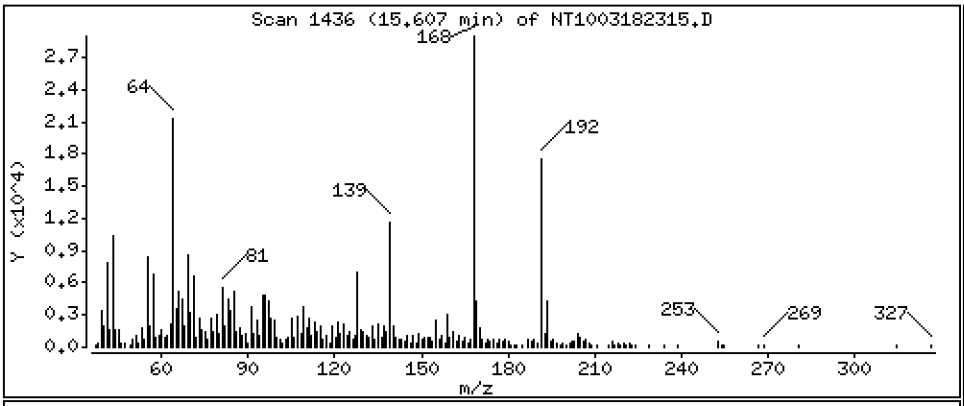
Operator: VTS

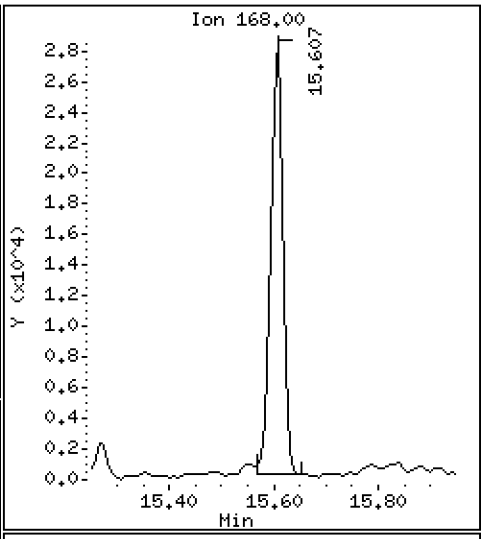
Column phase: ZB-5msi

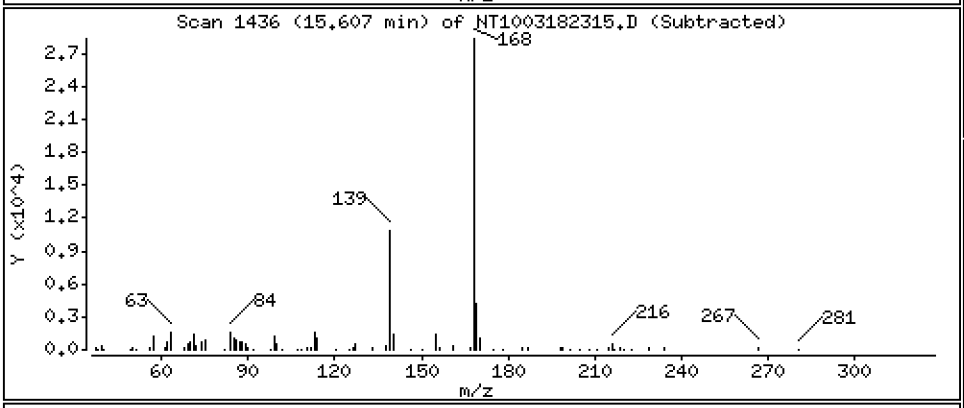
Column diameter: 0.25

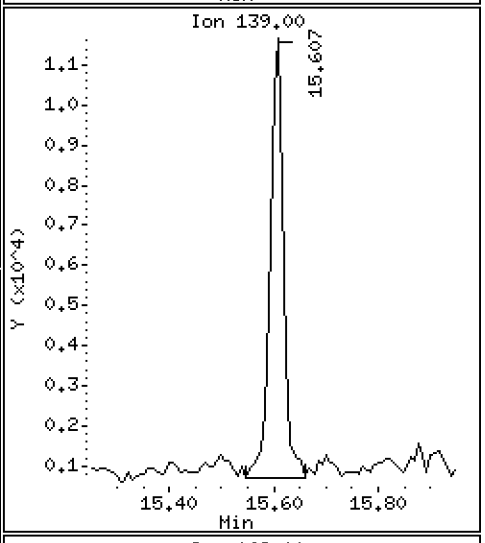
46 Dibenzofuran

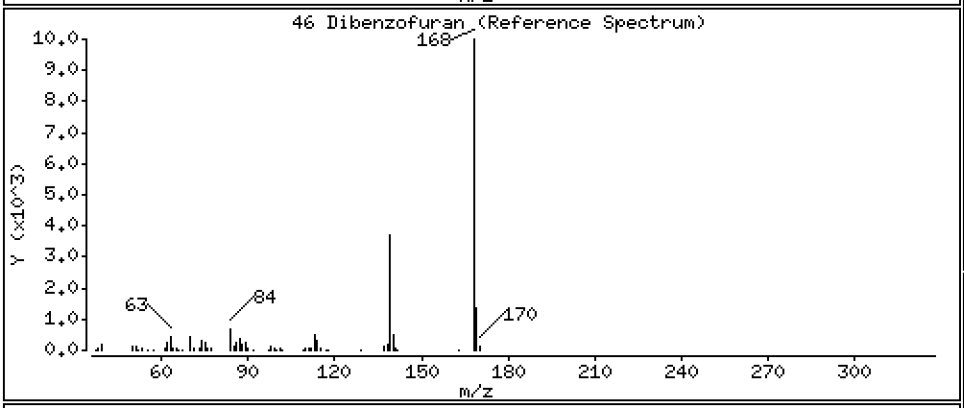
Concentration: 0.1955 ug/mL

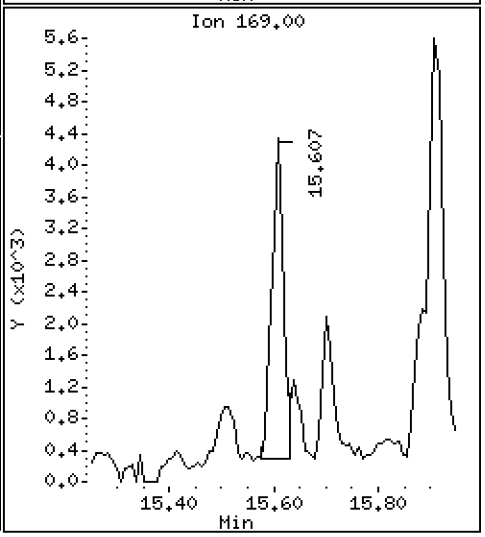


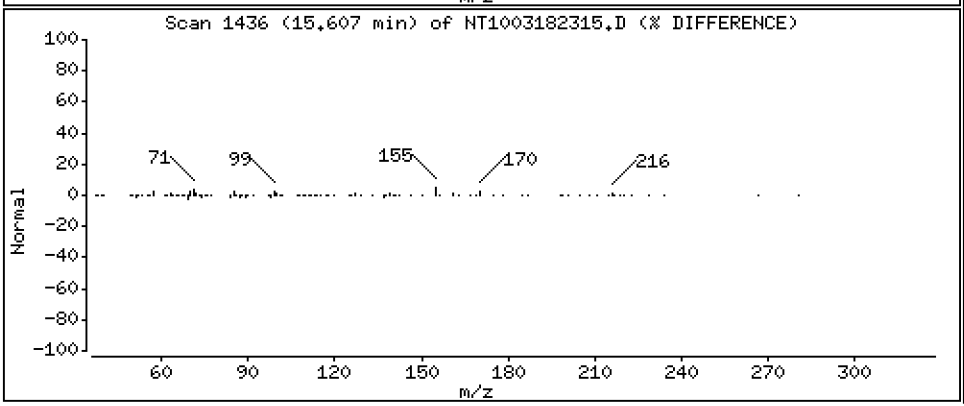












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

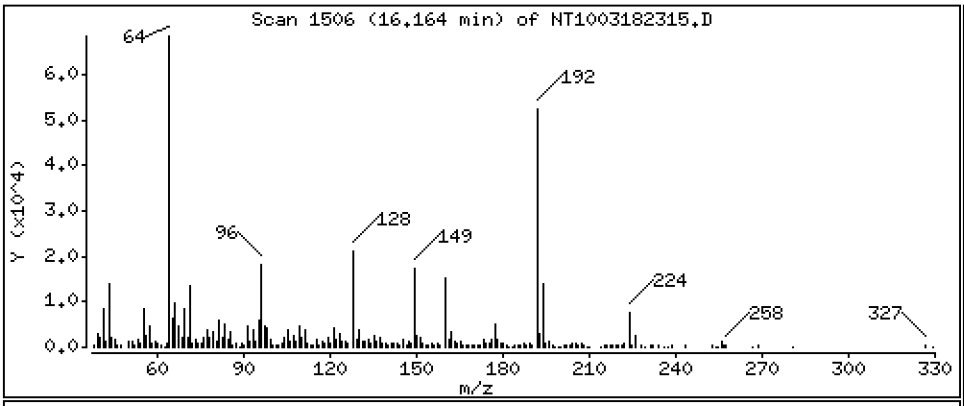
Operator: VTS

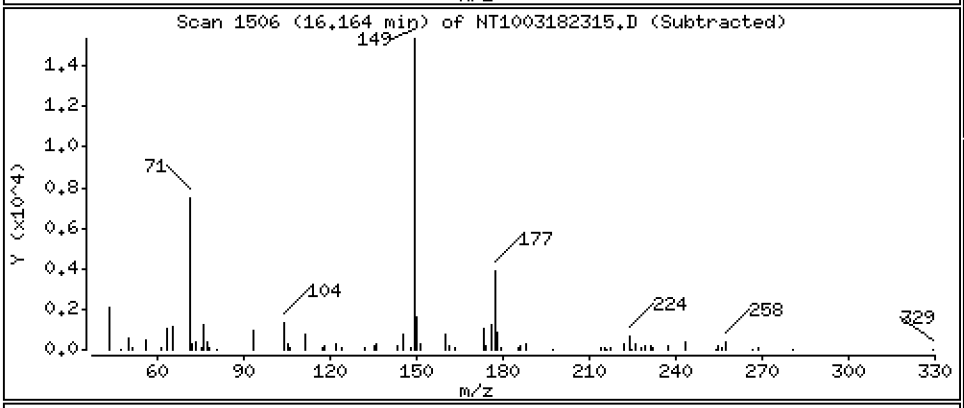
Column phase: ZB-5msi

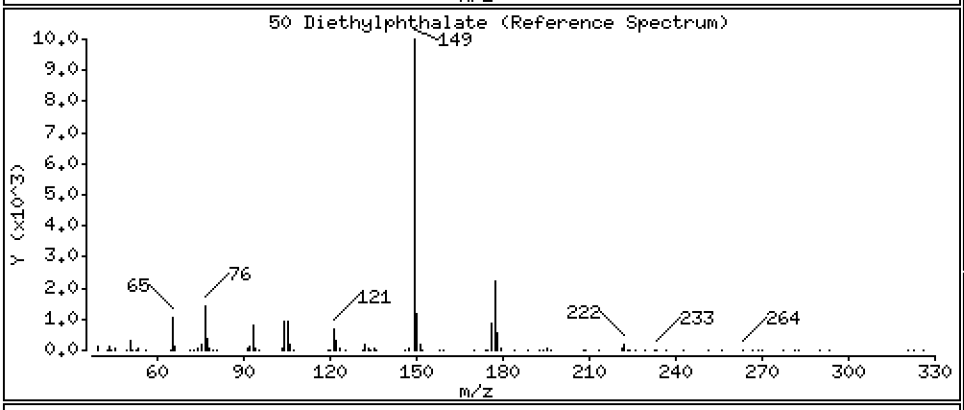
Column diameter: 0.25

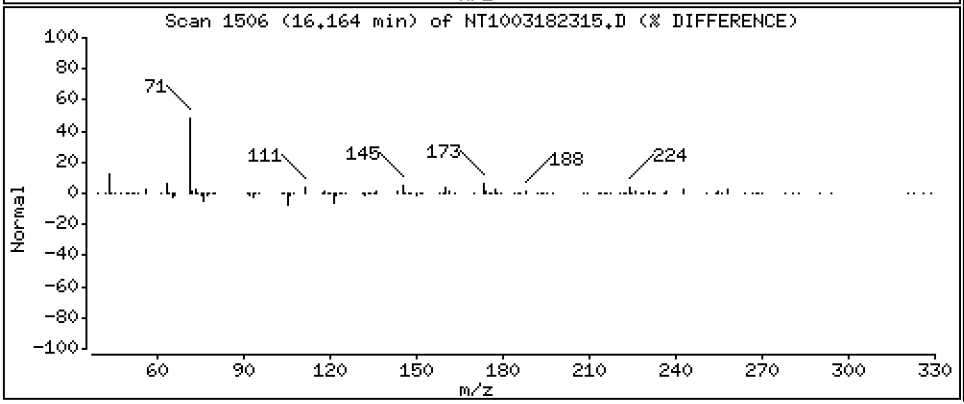
50 Diethylphthalate

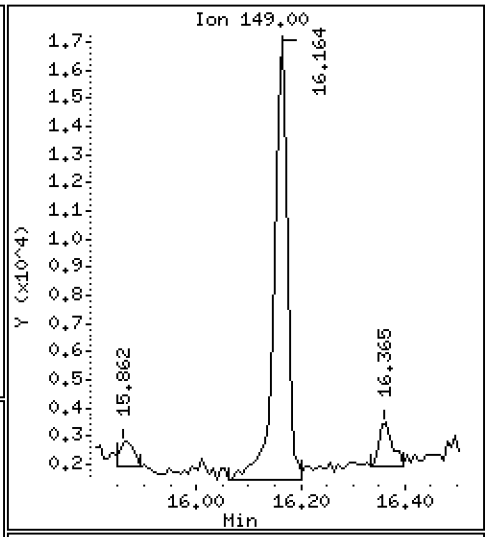
Concentration: 0.1888 ug/mL

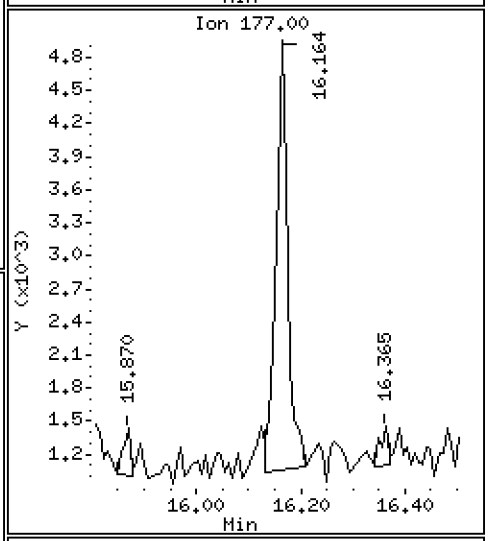


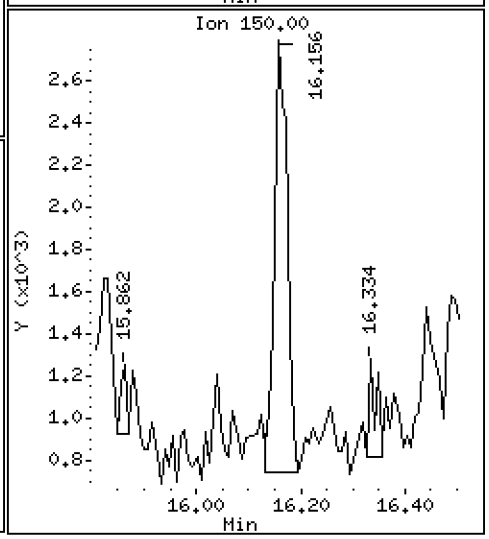












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

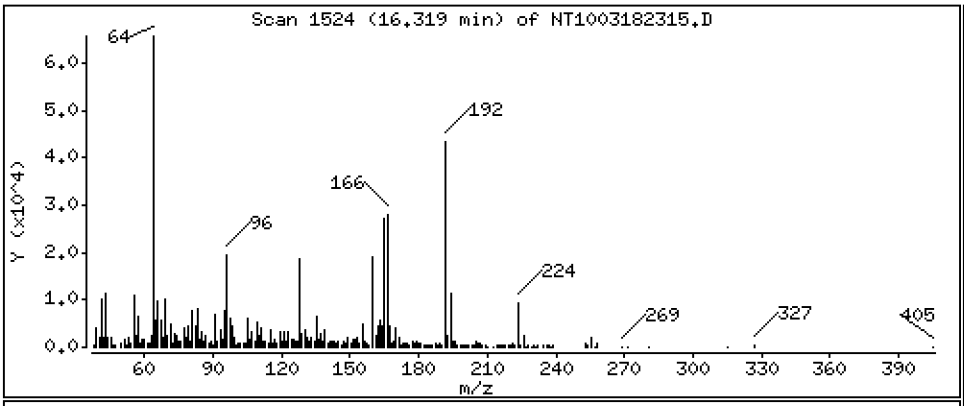
Operator: VTS

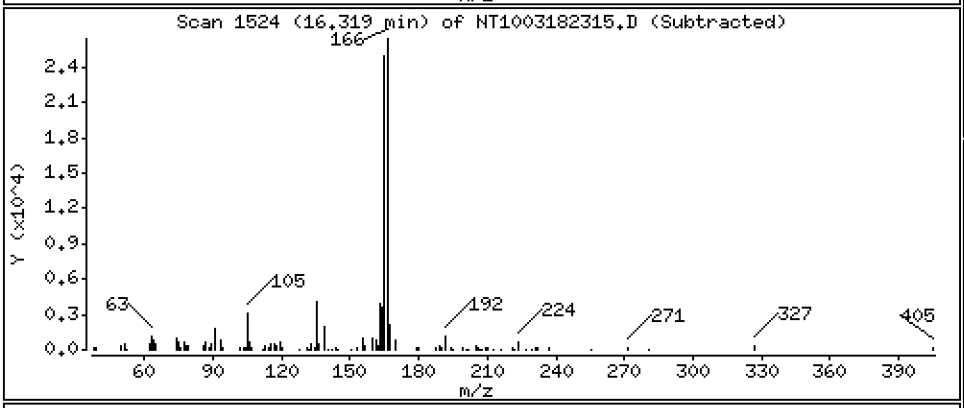
Column phase: ZB-5msi

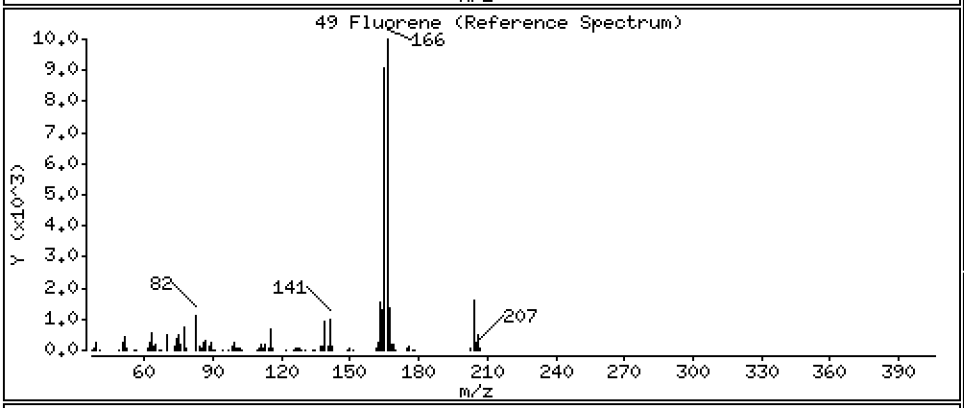
Column diameter: 0.25

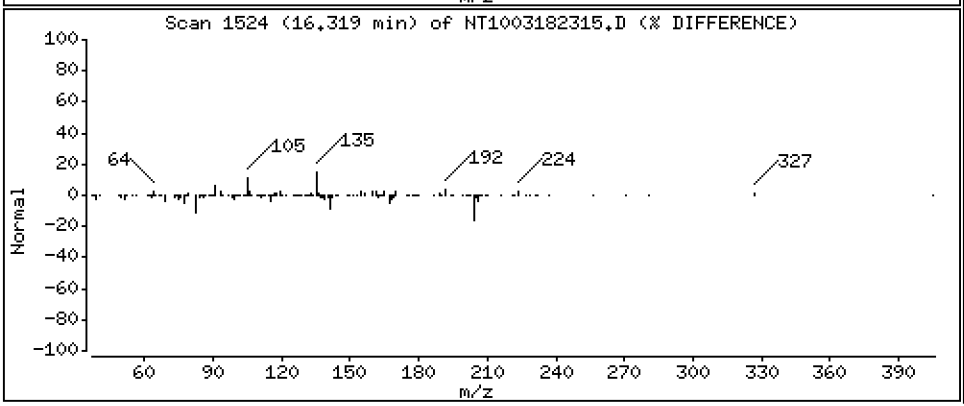
49 Fluorene

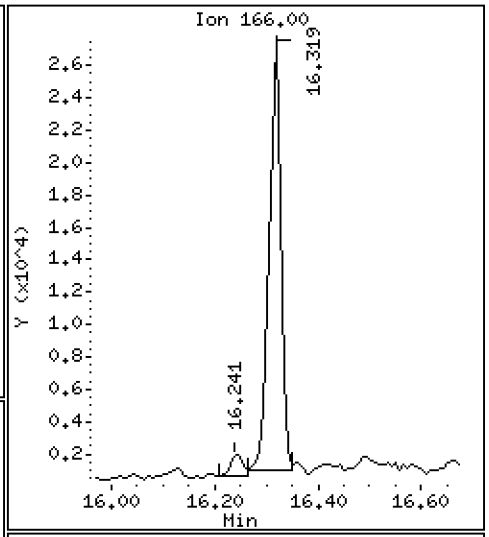
Concentration: 0.1789 ug/mL

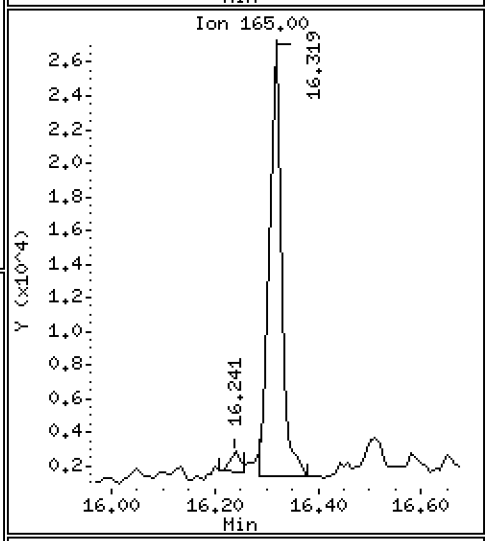


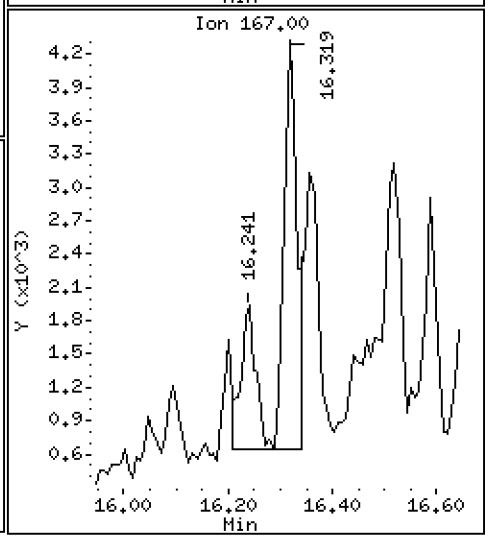












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

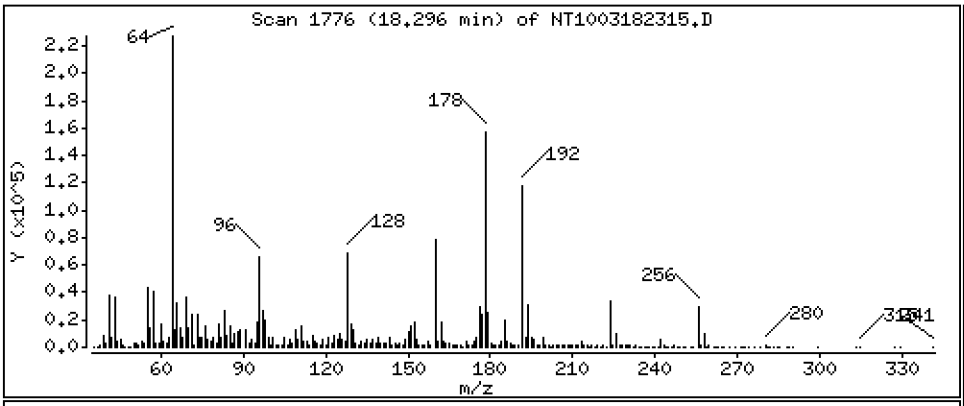
Operator: VTS

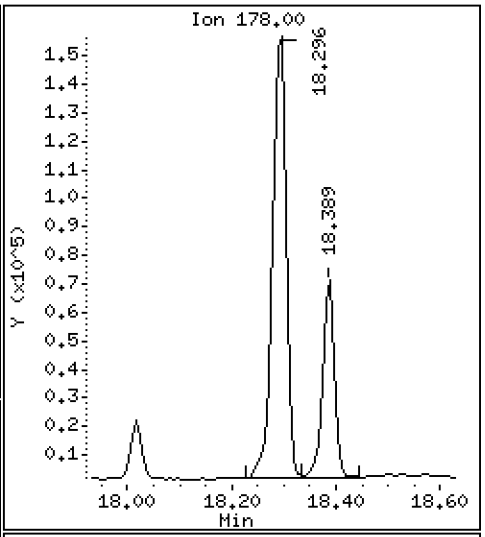
Column phase: ZB-5msi

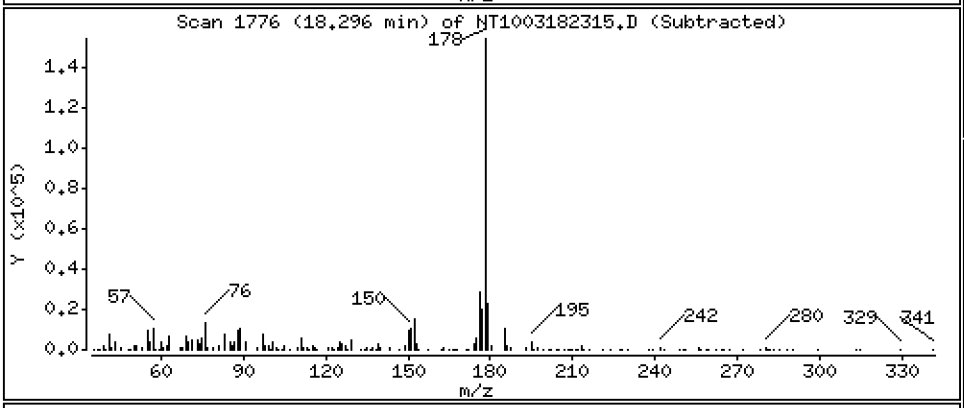
Column diameter: 0.25

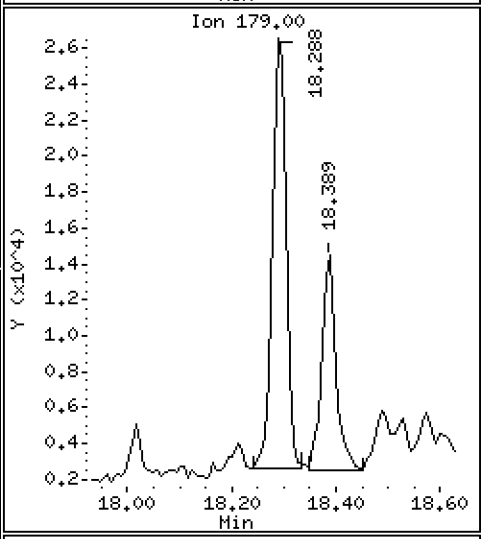
60 Phenanthrene

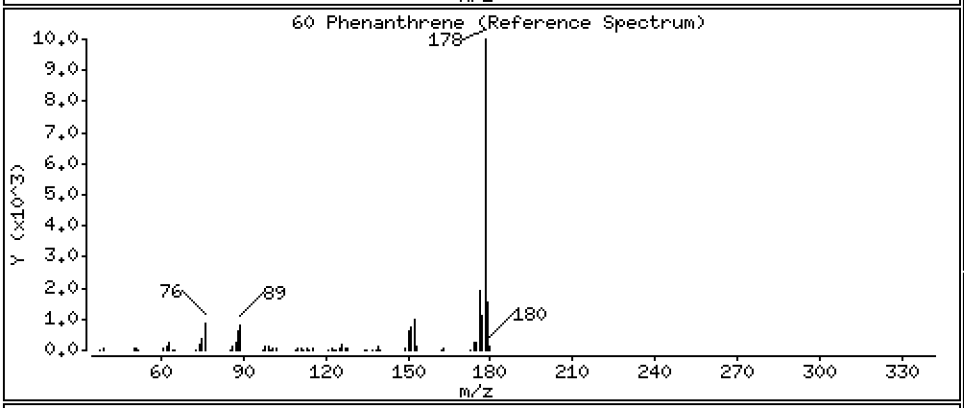
Concentration: 1.055 ug/mL

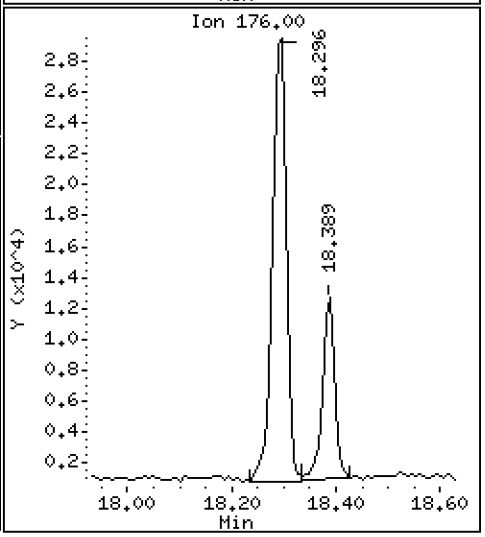


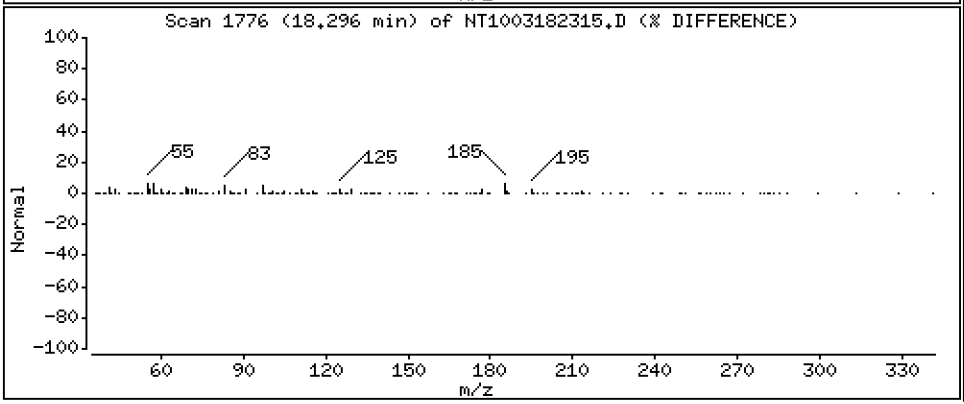












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

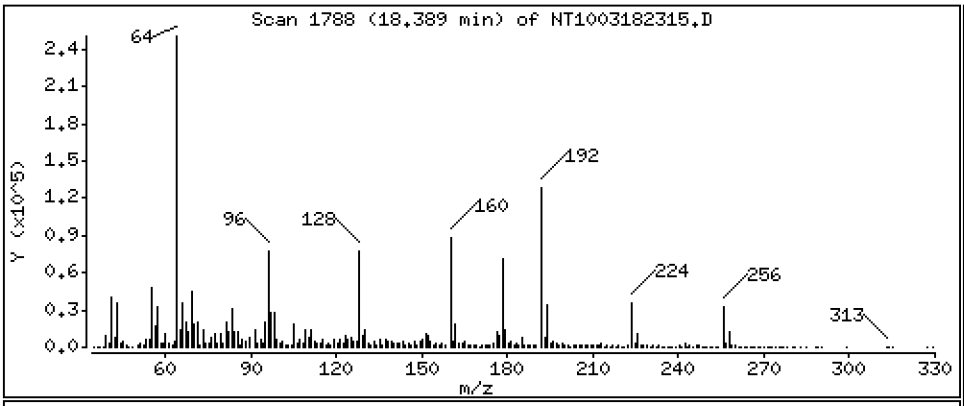
Operator: VTS

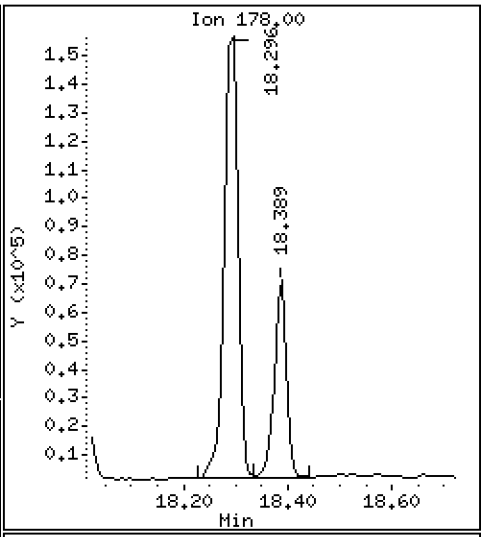
Column phase: ZB-5msi

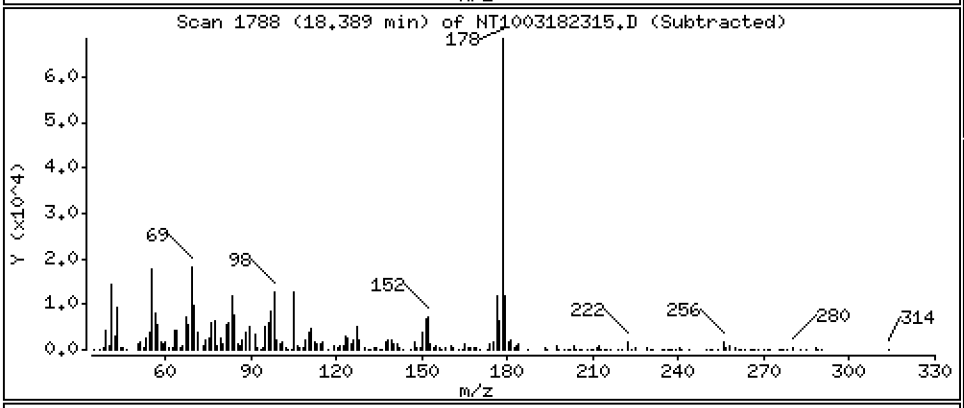
Column diameter: 0.25

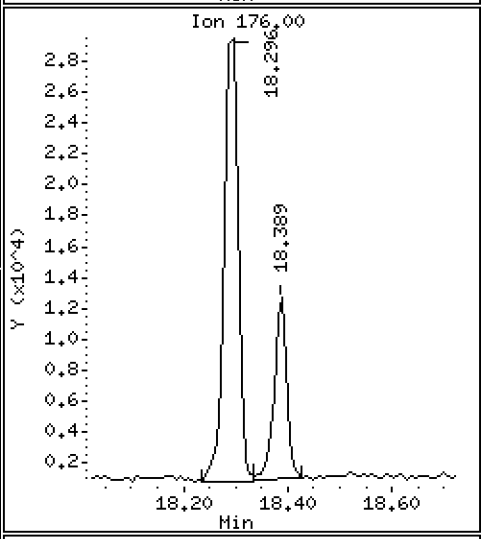
61 Anthracene

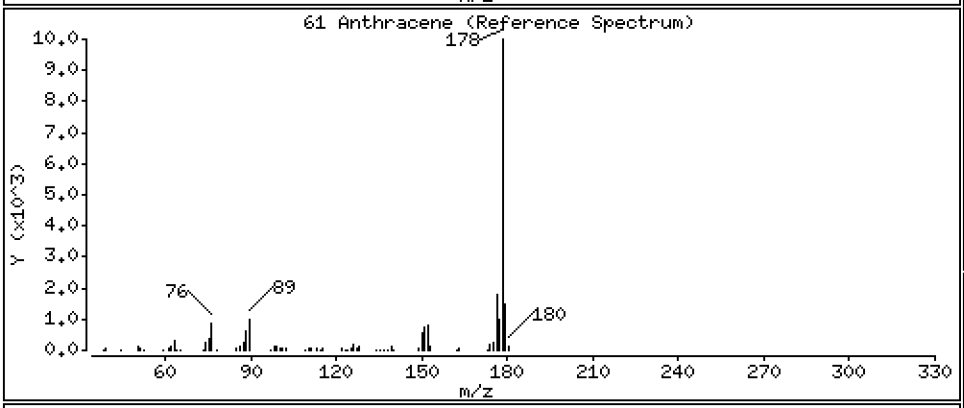
Concentration: 0.4495 ug/mL

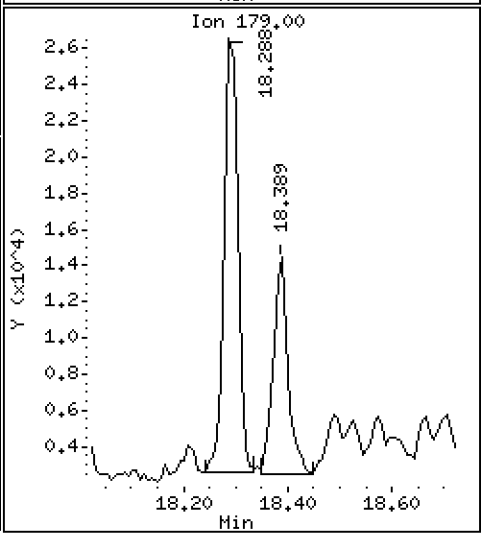


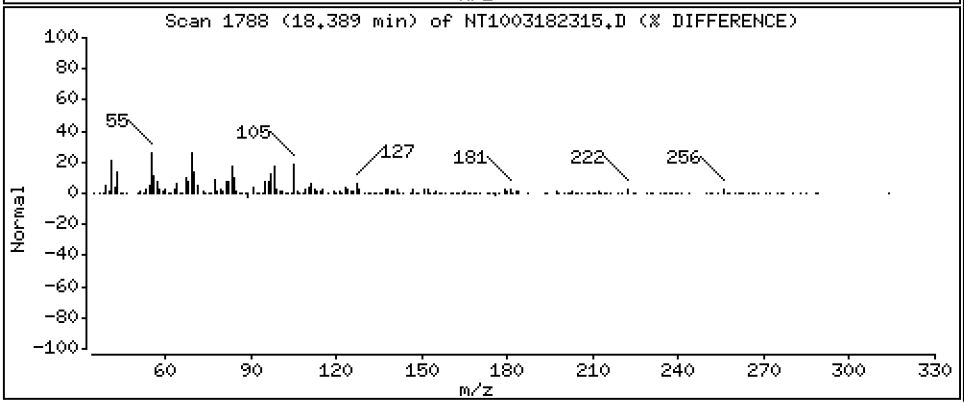












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

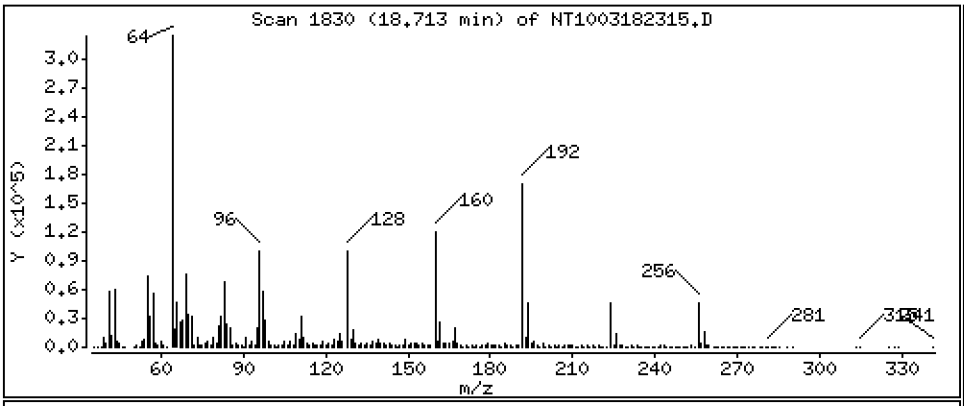
Operator: VTS

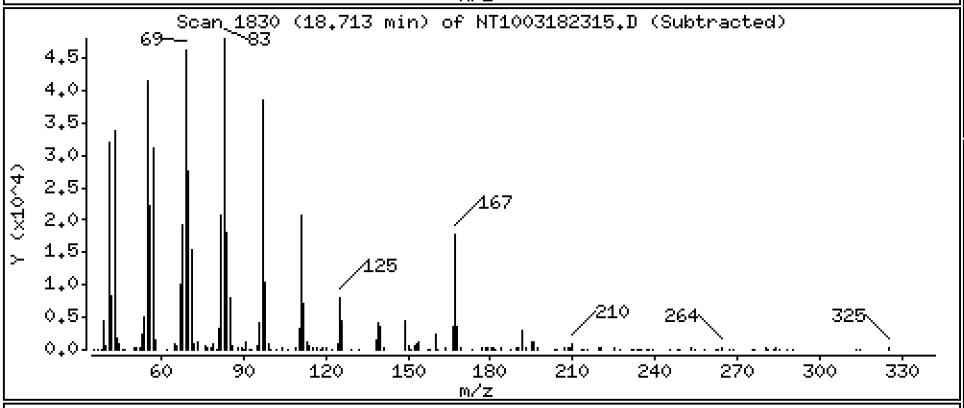
Column phase: ZB-5msi

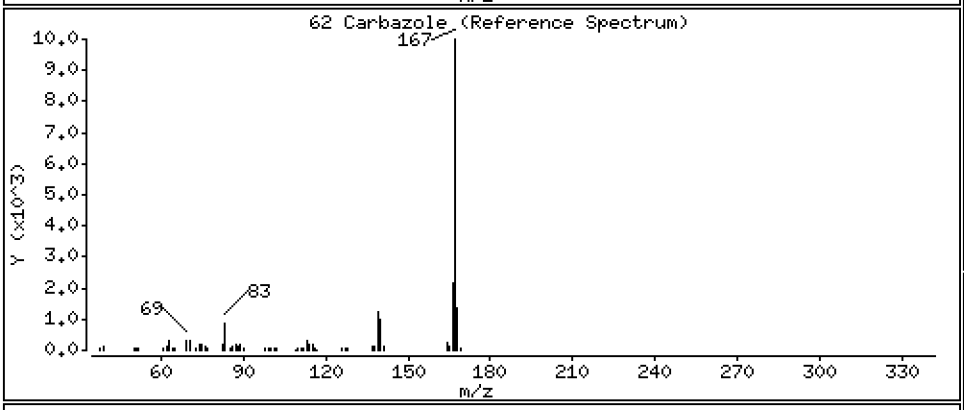
Column diameter: 0.25

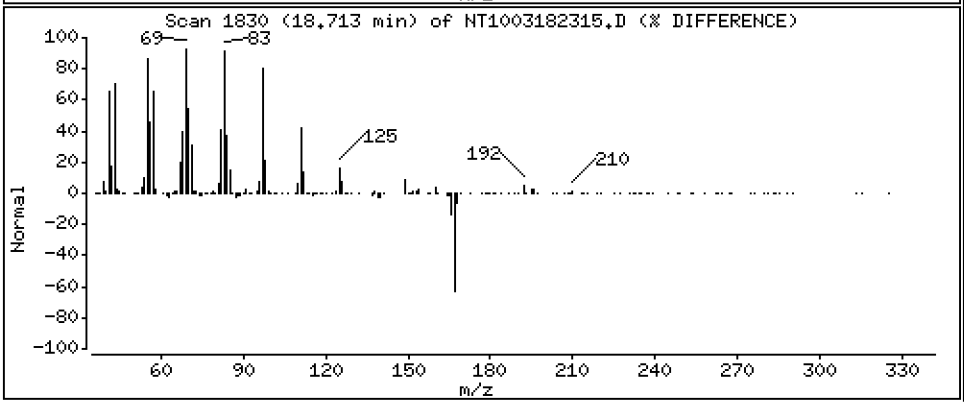
62 Carbazole

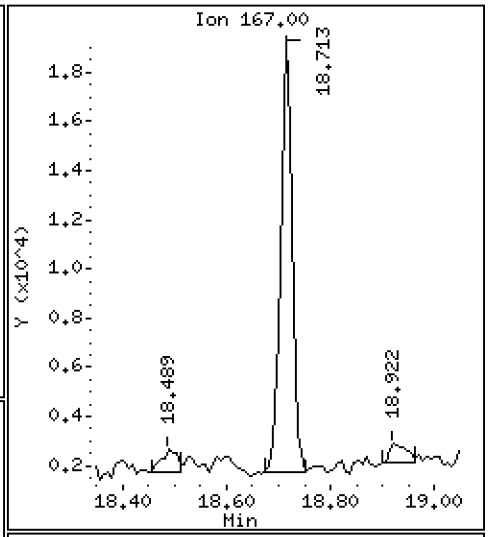
Concentration: 0.1241 ug/mL

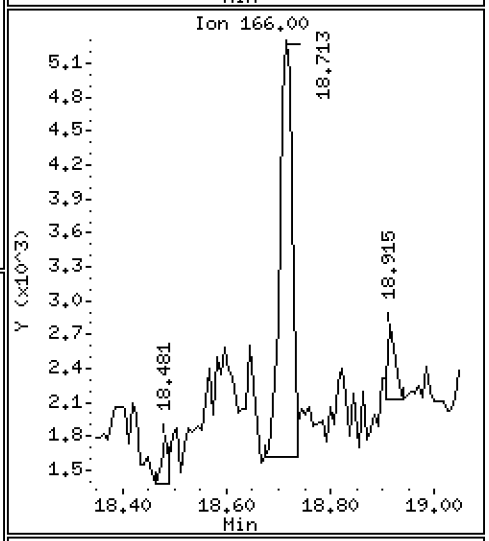


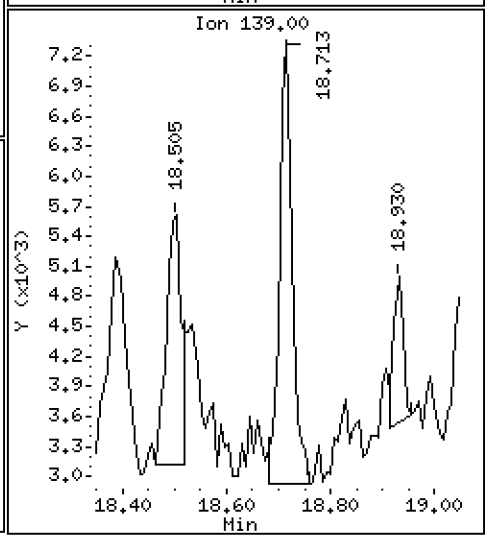












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

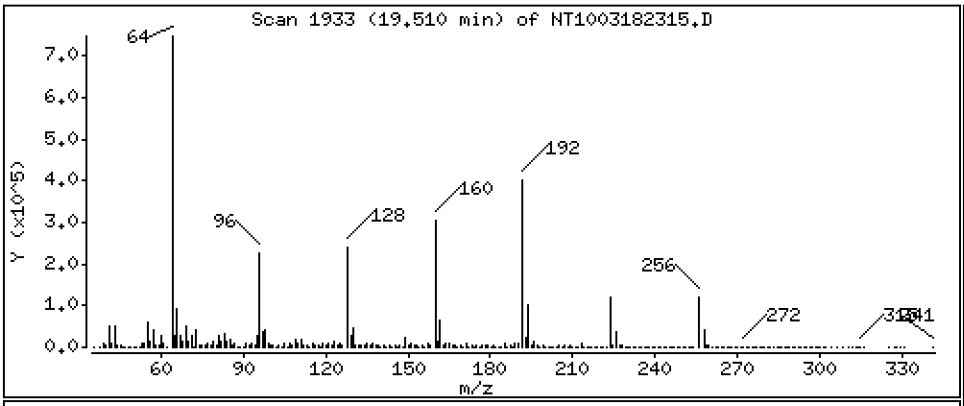
Operator: VTS

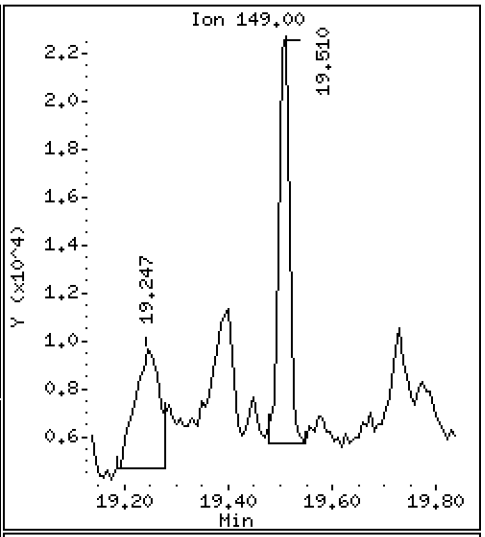
Column phase: ZB-5msi

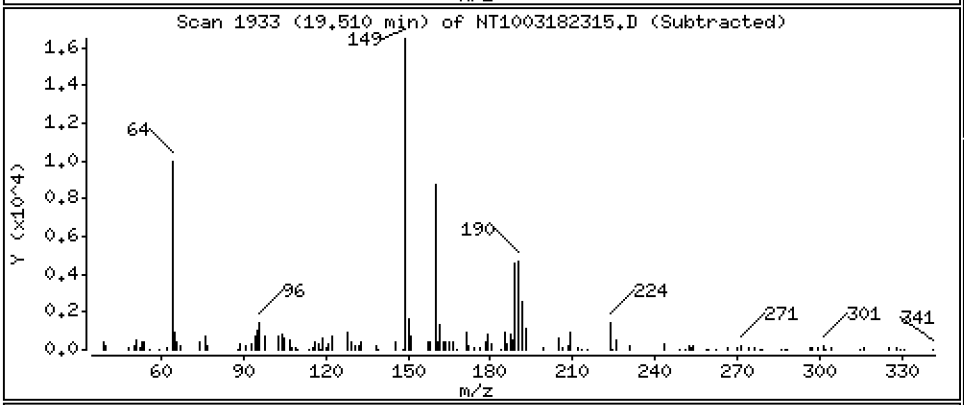
Column diameter: 0.25

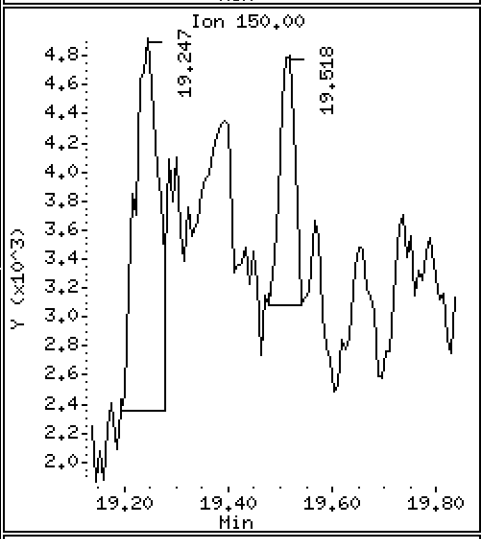
63 Di-n-butylphthalate

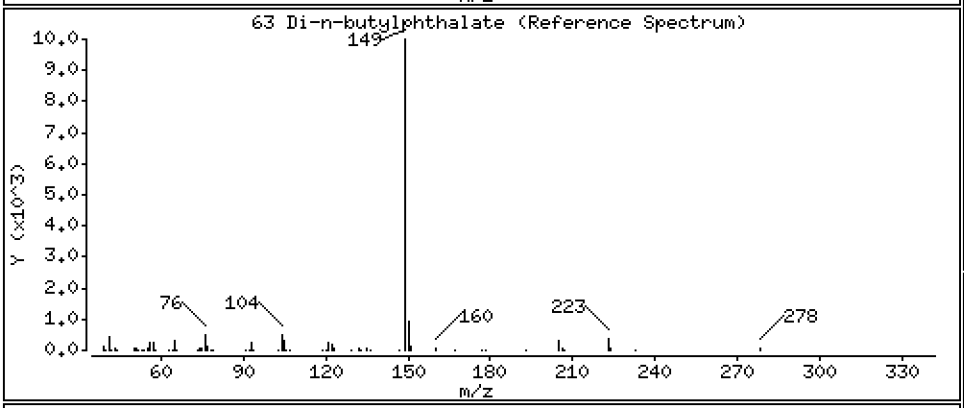
Concentration: 0.08628 ug/mL

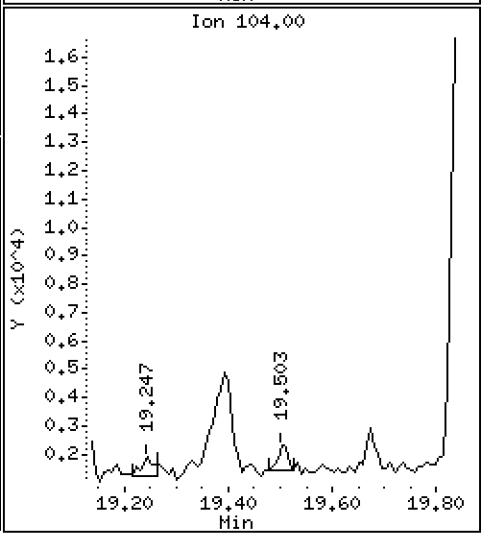


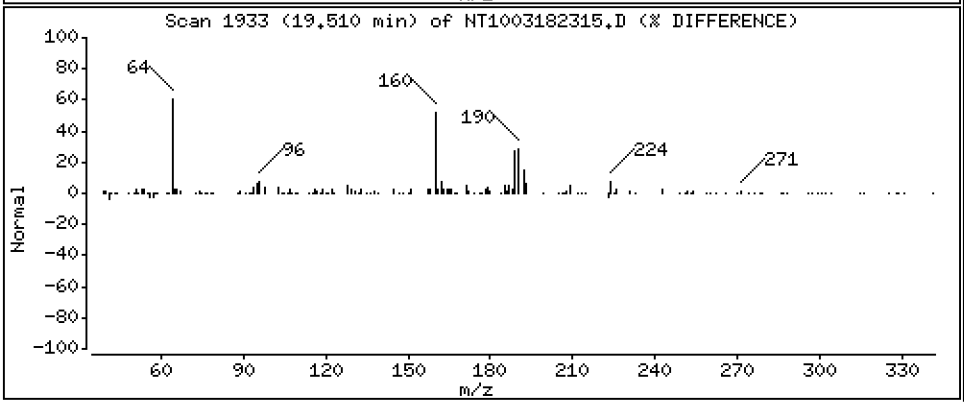












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

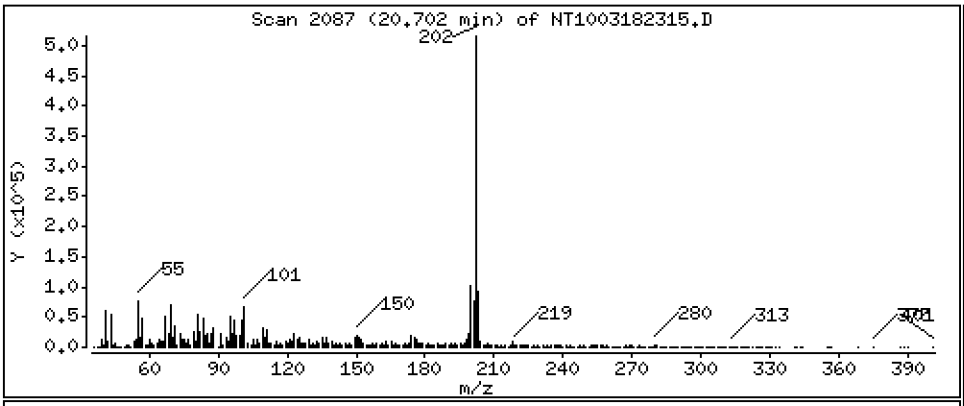
Operator: VTS

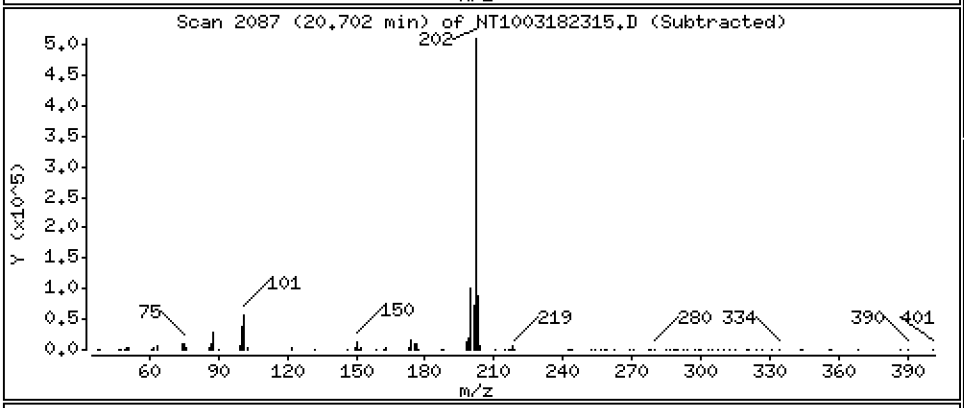
Column phase: ZB-5msi

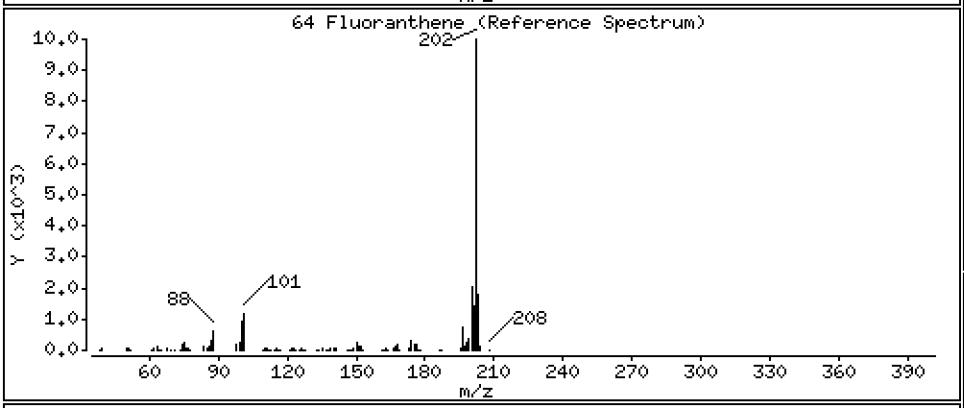
Column diameter: 0.25

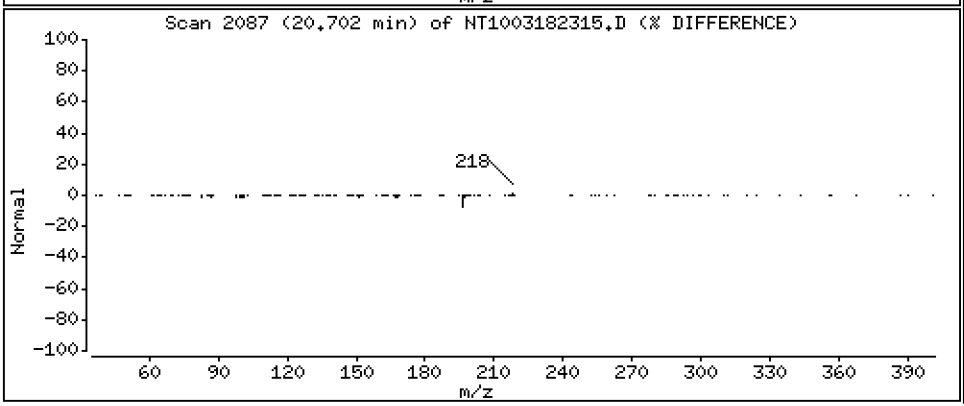
64 Fluoranthene

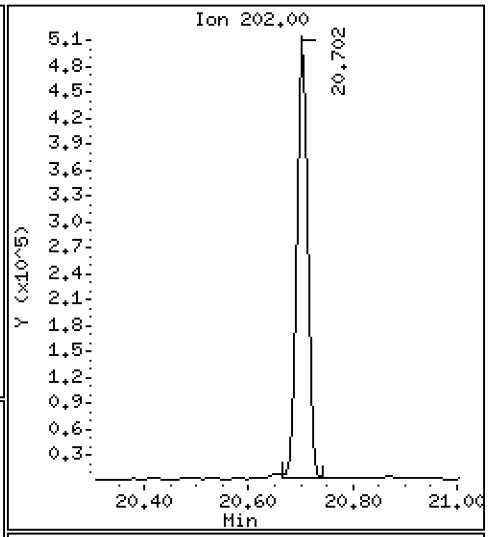
Concentration: 2.388 ug/mL

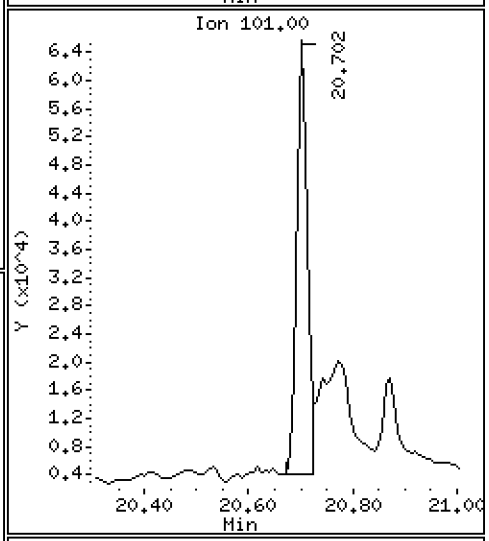


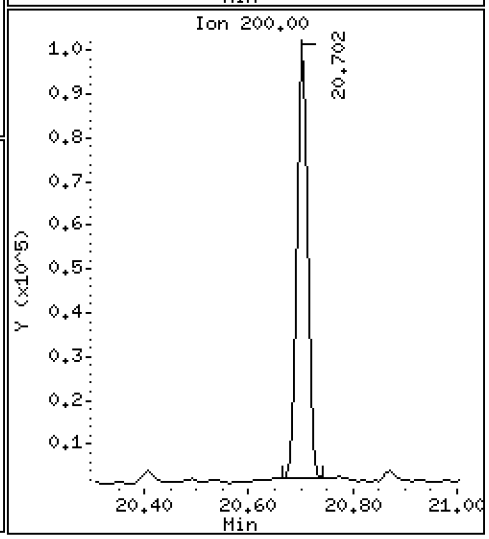












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

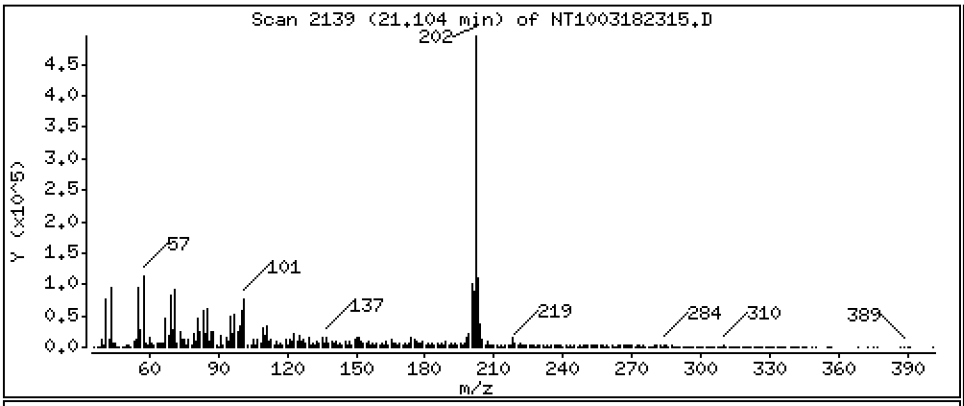
Operator: VTS

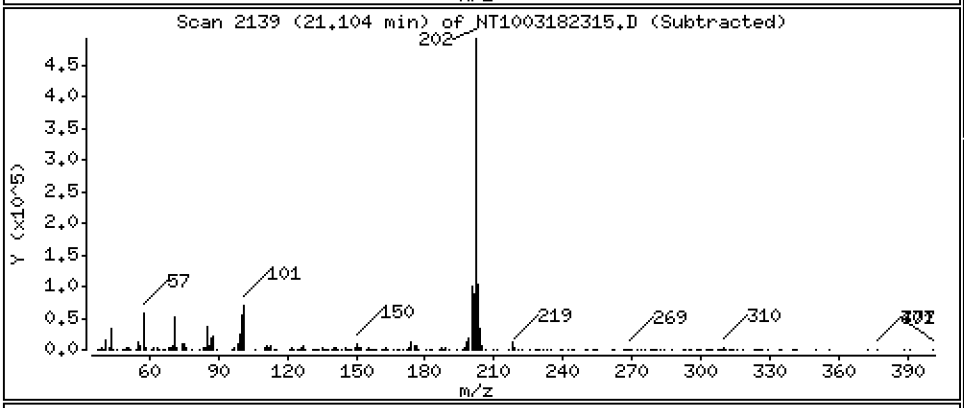
Column phase: ZB-5msi

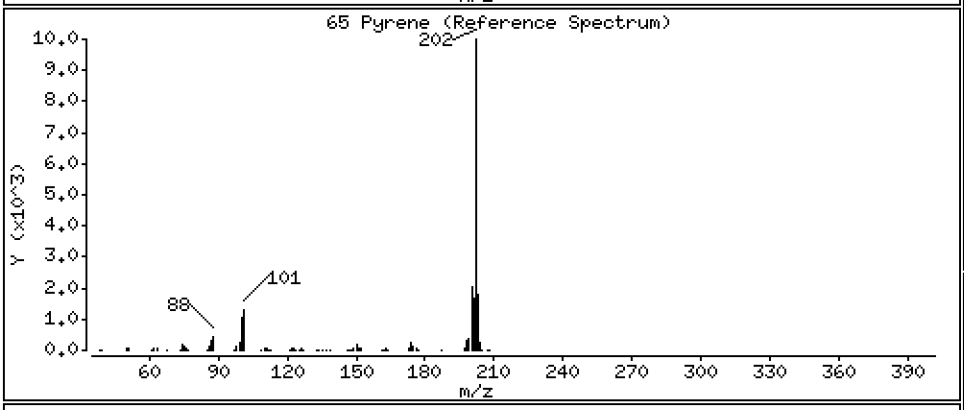
Column diameter: 0.25

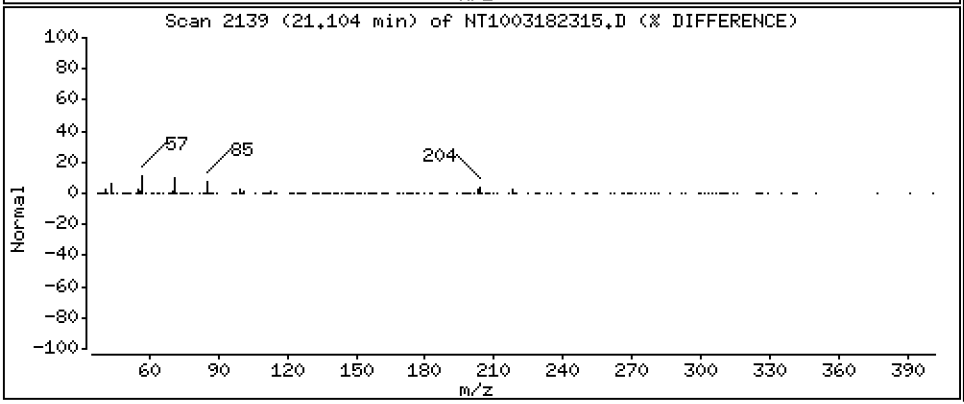
65 Pyrene

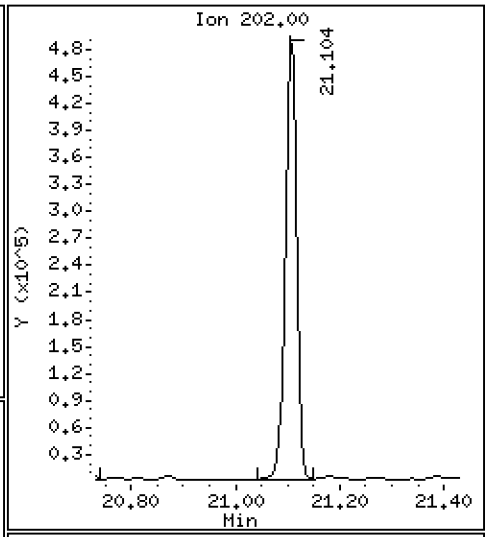
Concentration: 2.279 ug/mL

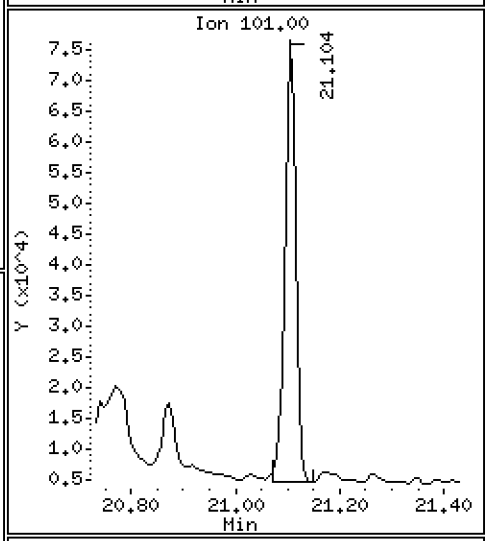


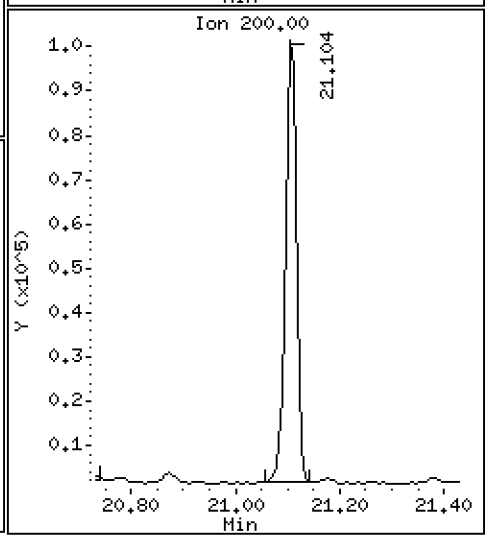












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

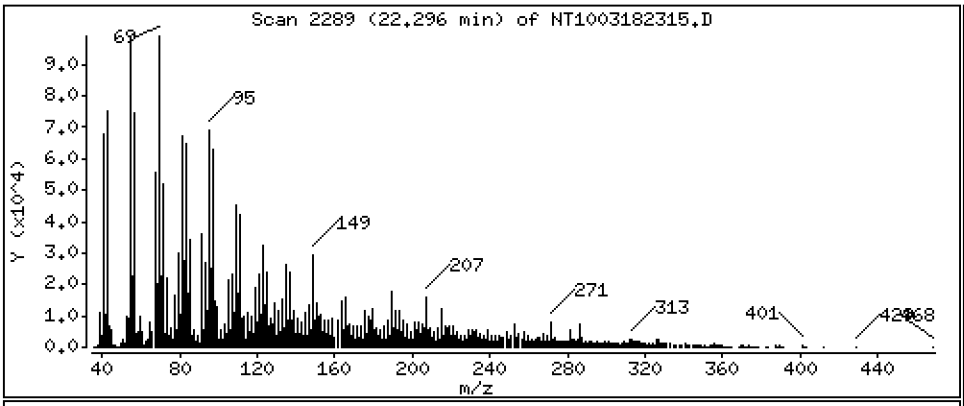
Operator: VTS

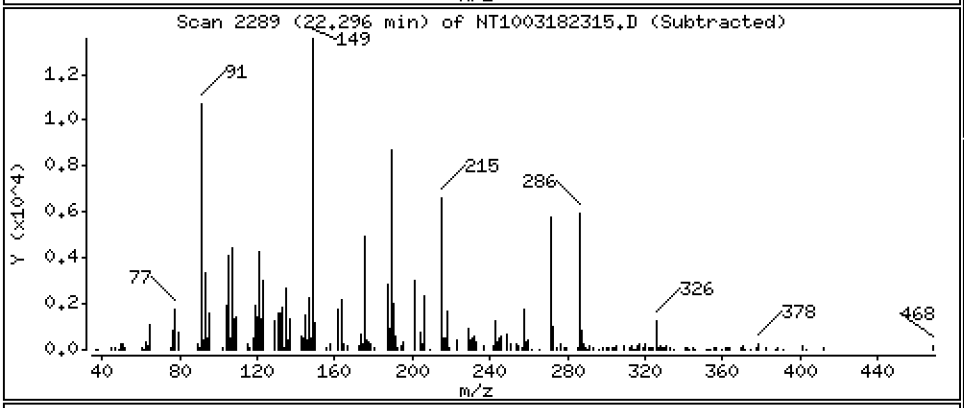
Column phase: ZB-5msi

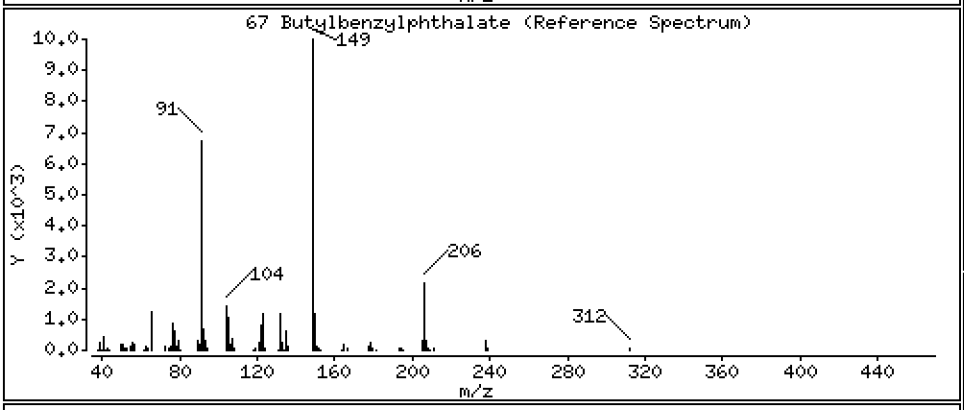
Column diameter: 0.25

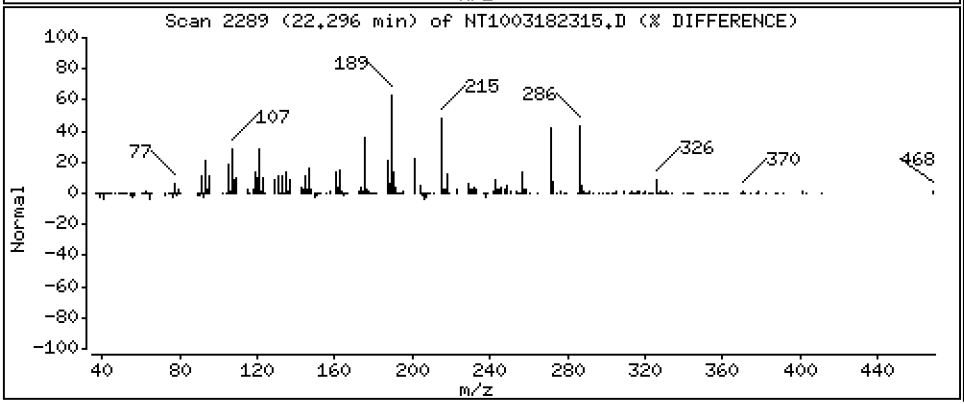
67 Butylbenzylphthalate

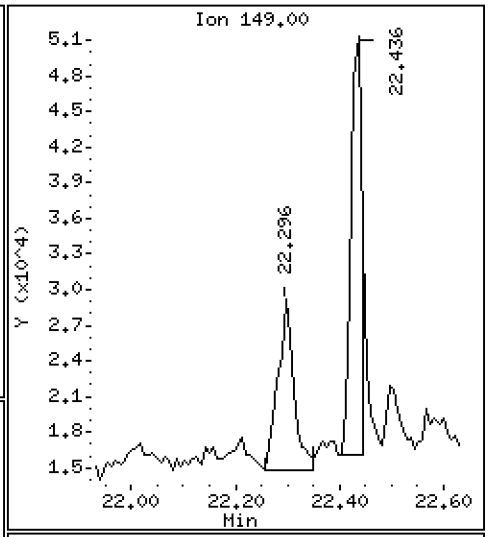
Concentration: 0.2608 ug/mL

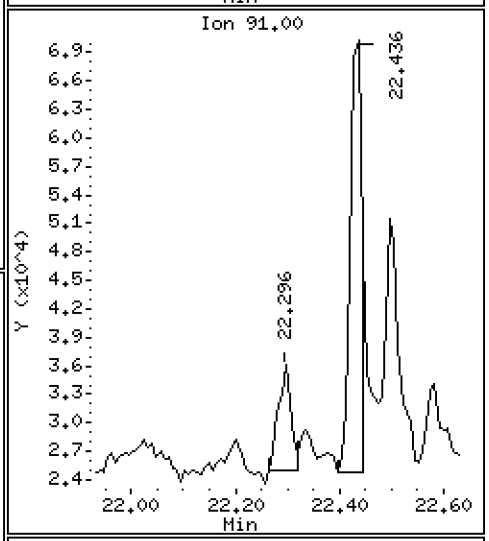


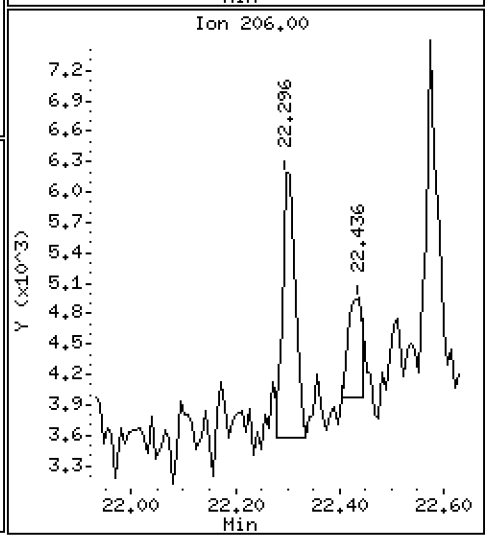












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

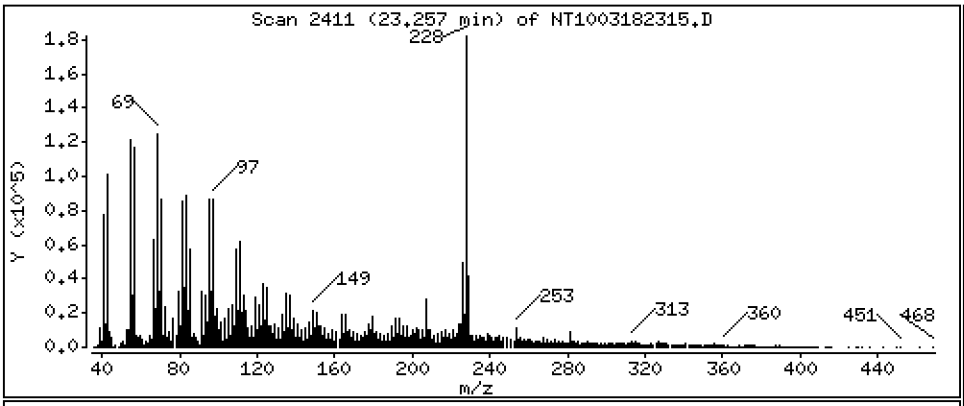
Operator: VTS

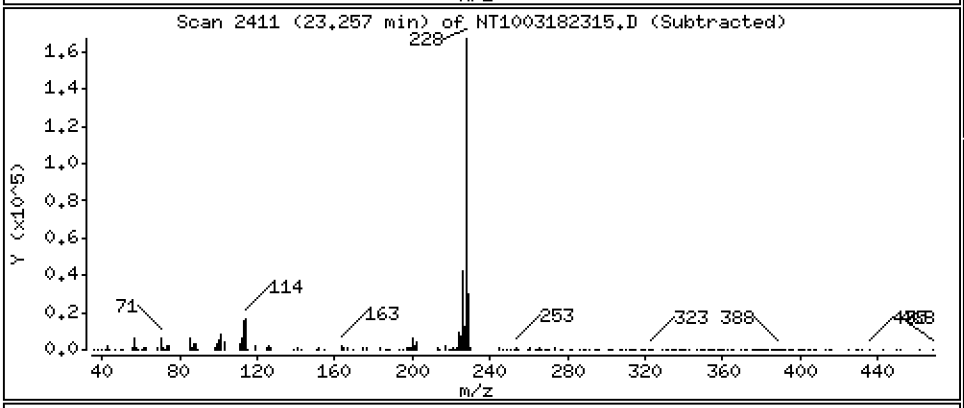
Column phase: ZB-5msi

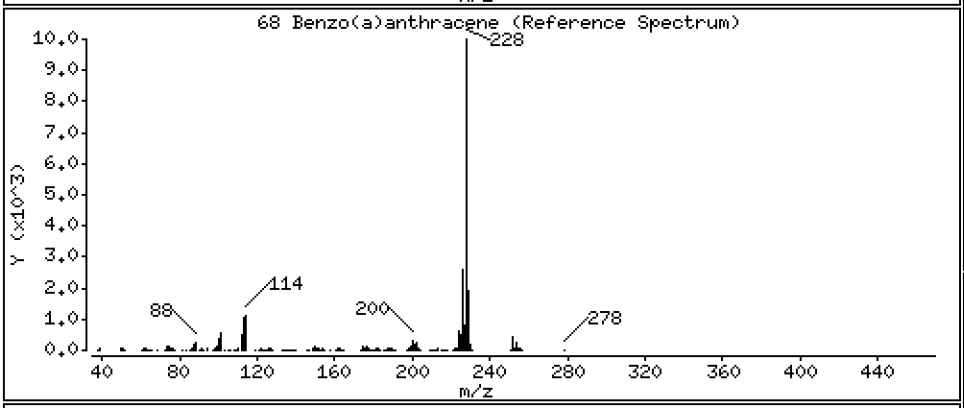
Column diameter: 0.25

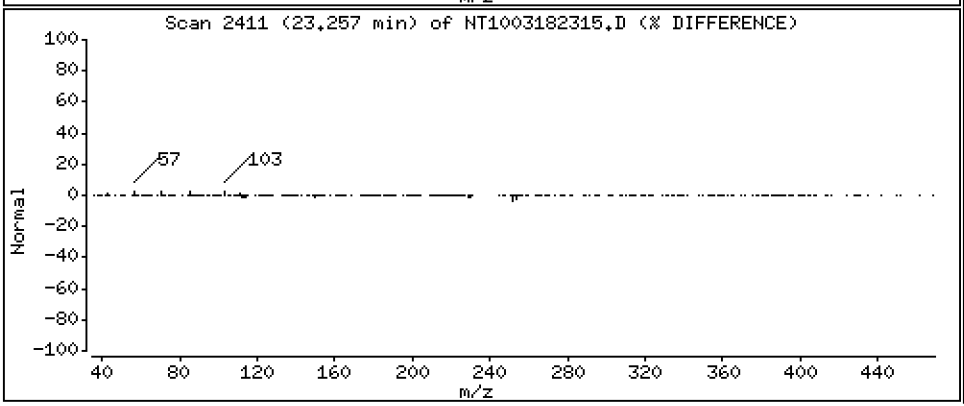
68 Benzo(a)anthracene

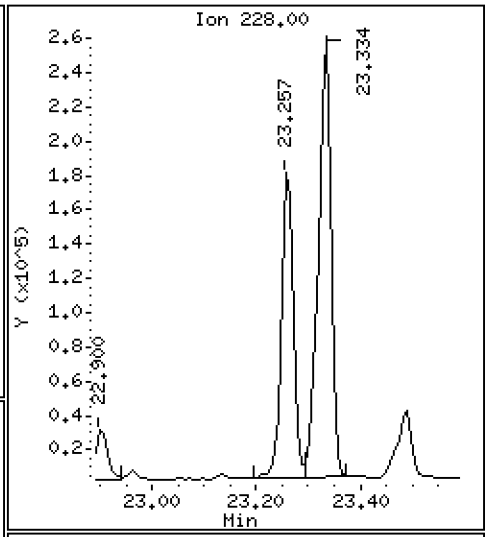
Concentration: 1.049 ug/mL

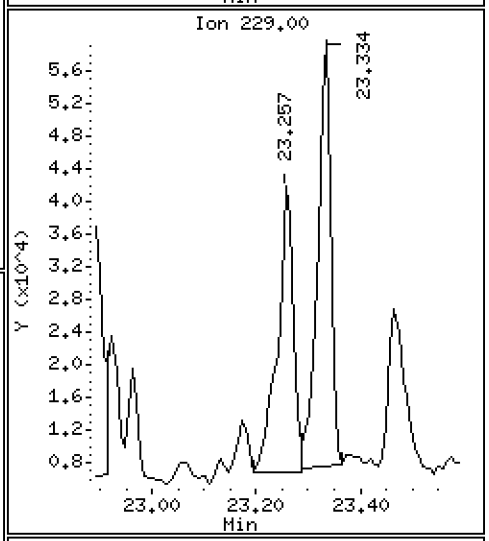


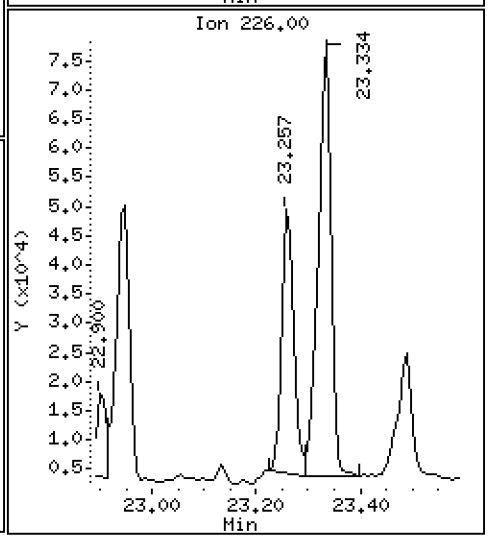












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

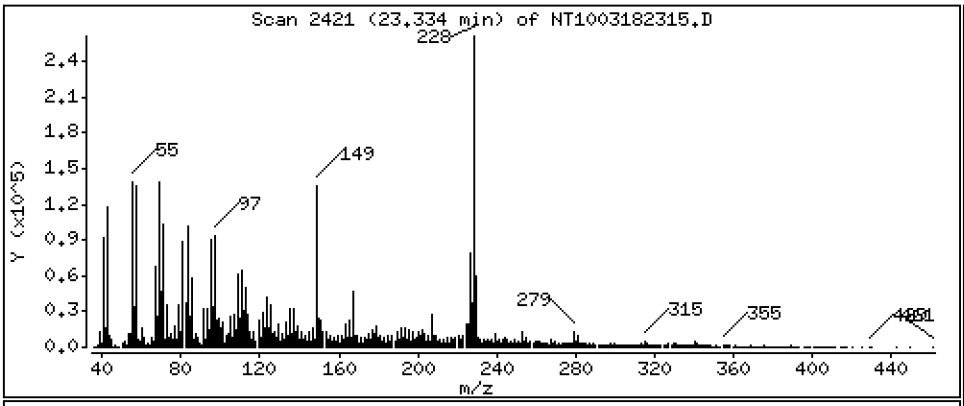
Operator: VTS

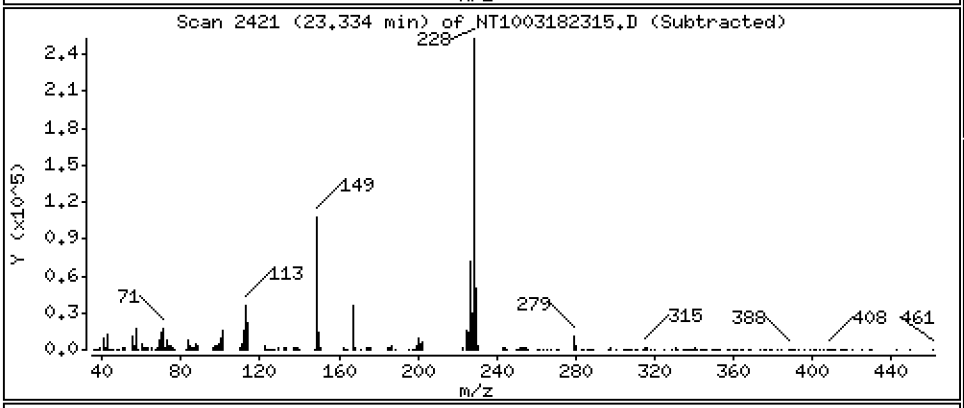
Column phase: ZB-5msi

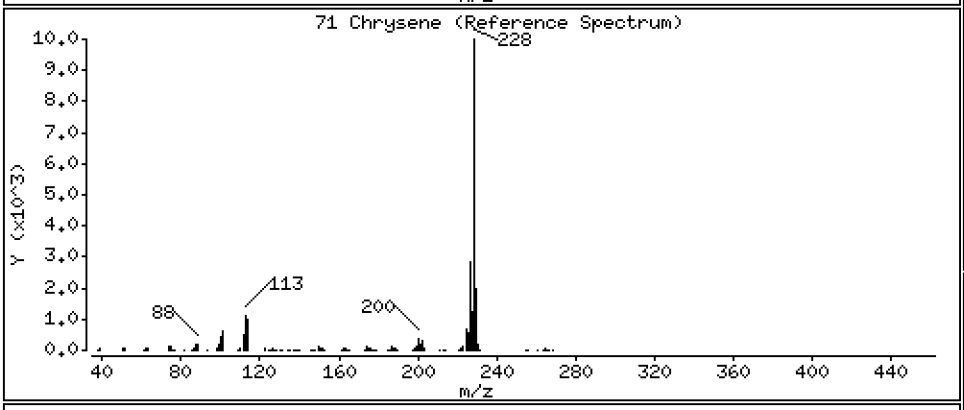
Column diameter: 0.25

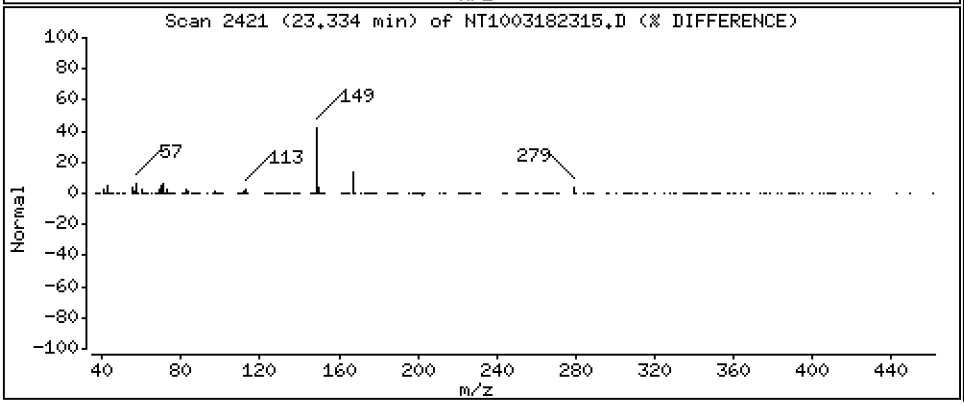
71 Chrysene

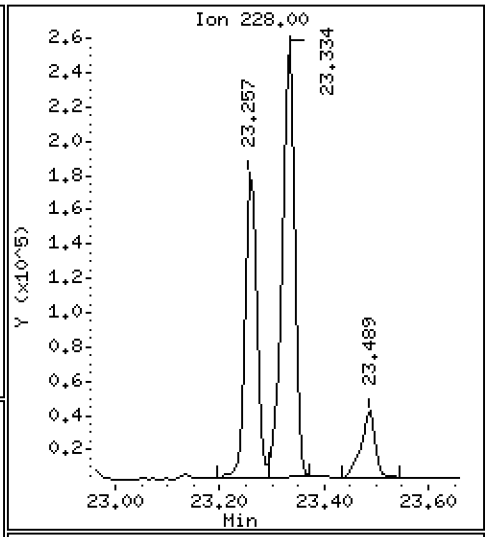
Concentration: 1.568 ug/mL

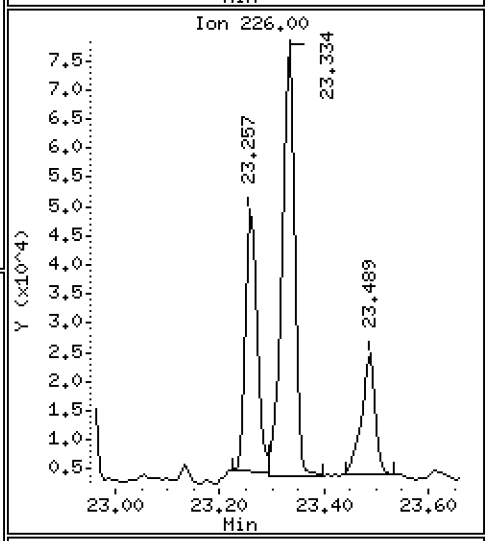


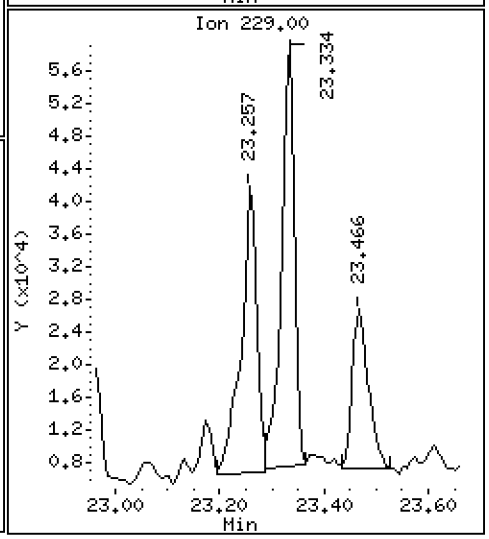












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

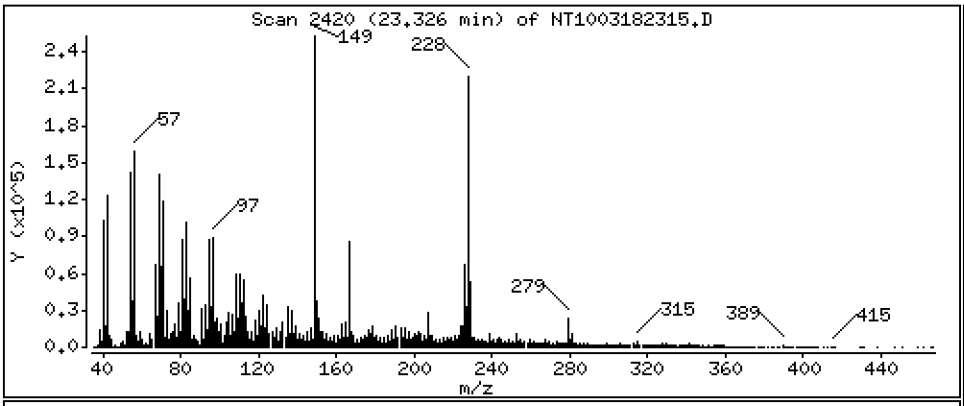
Operator: VTS

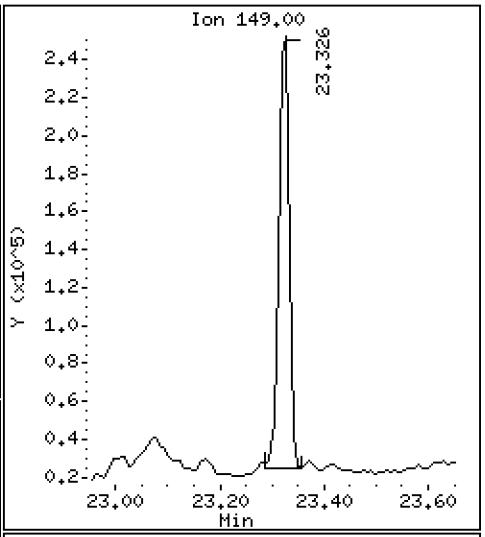
Column phase: ZB-5msi

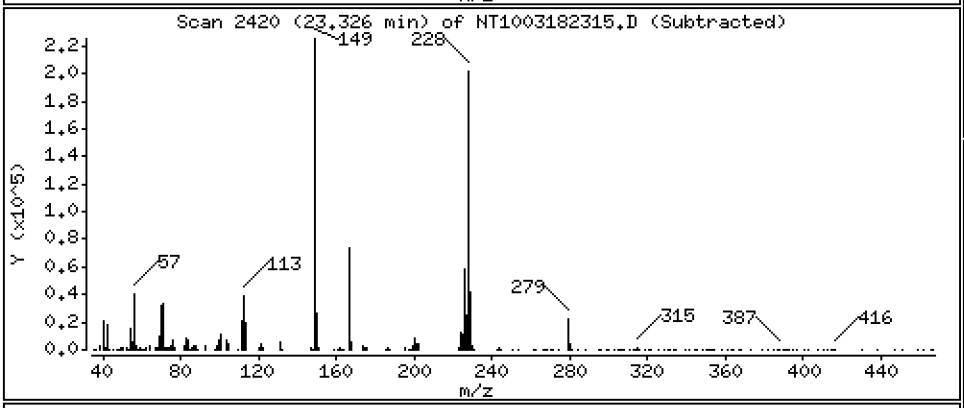
Column diameter: 0.25

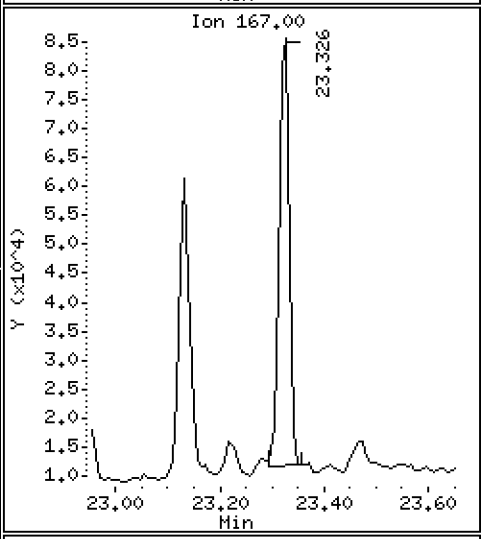
72 bis(2-Ethylhexyl)phthalate

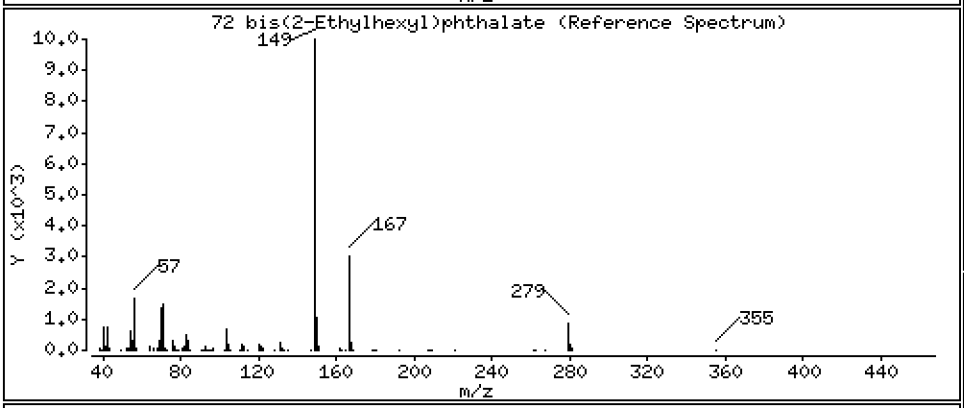
Concentration: 1.615 ug/mL

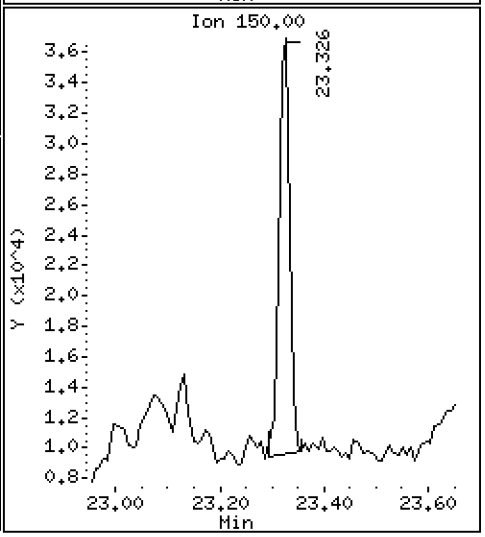


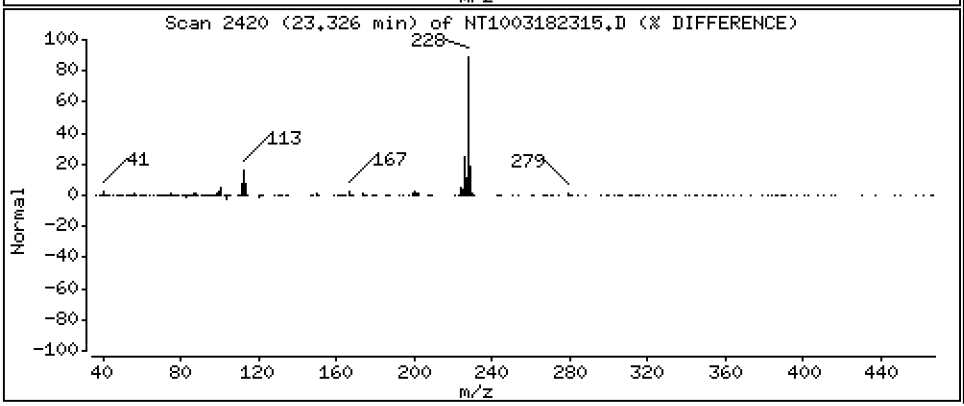












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

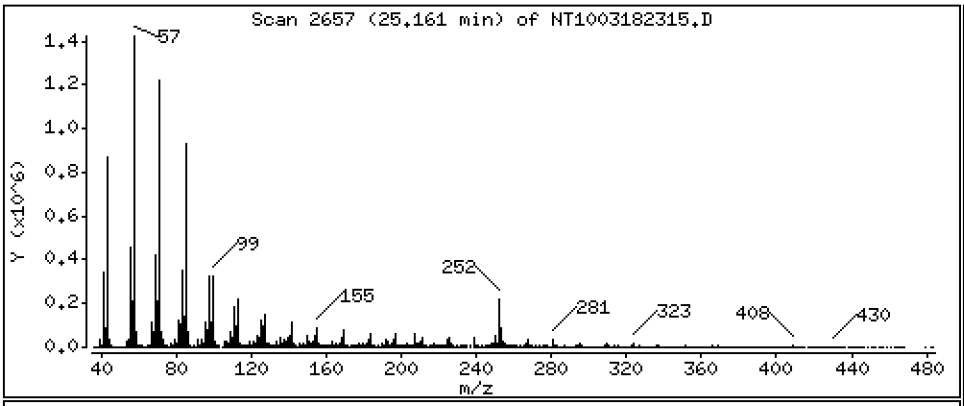
Operator: VTS

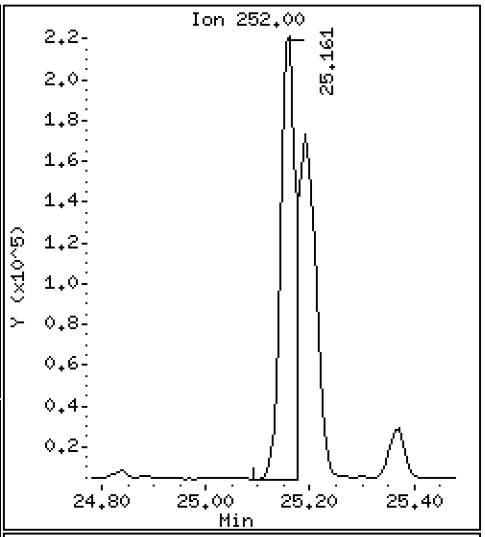
Column phase: ZB-5msi

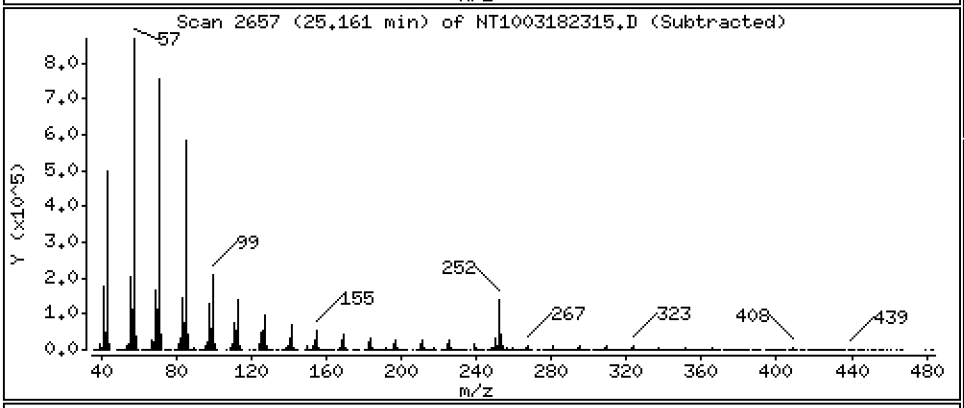
Column diameter: 0.25

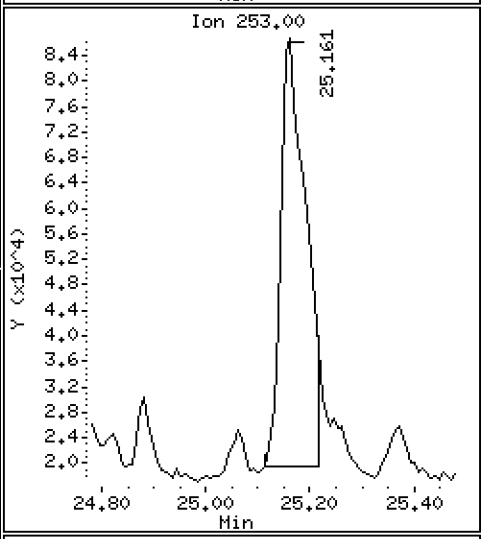
74 Benzo(b)fluoranthene

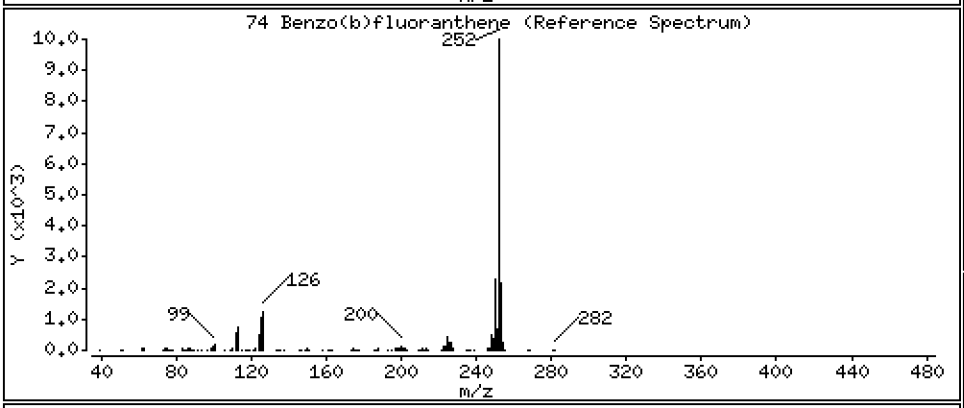
Concentration: 1.668 ug/mL

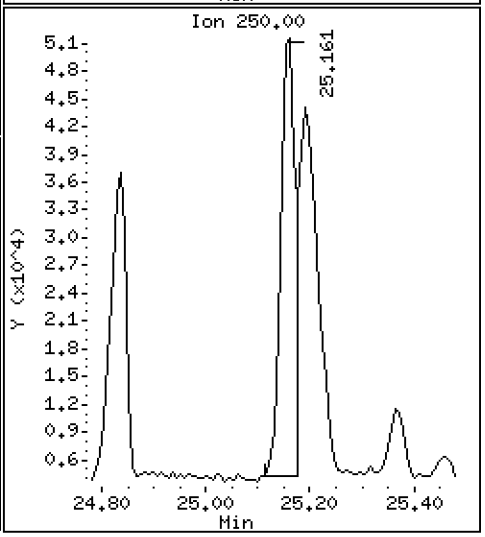


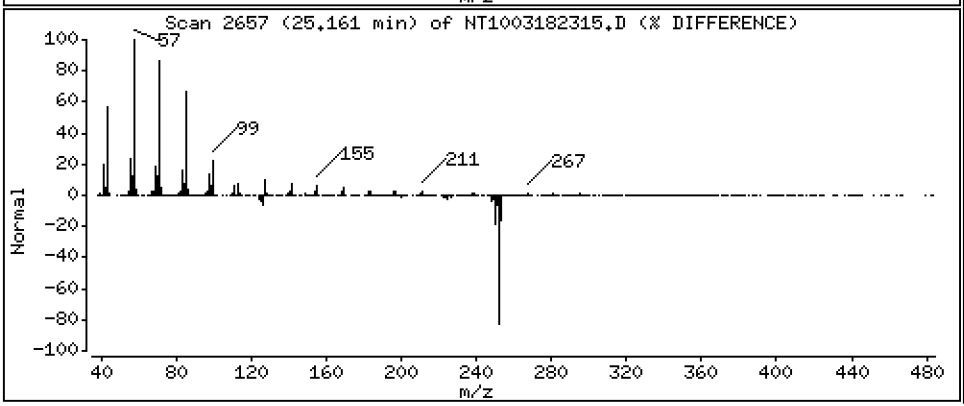












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

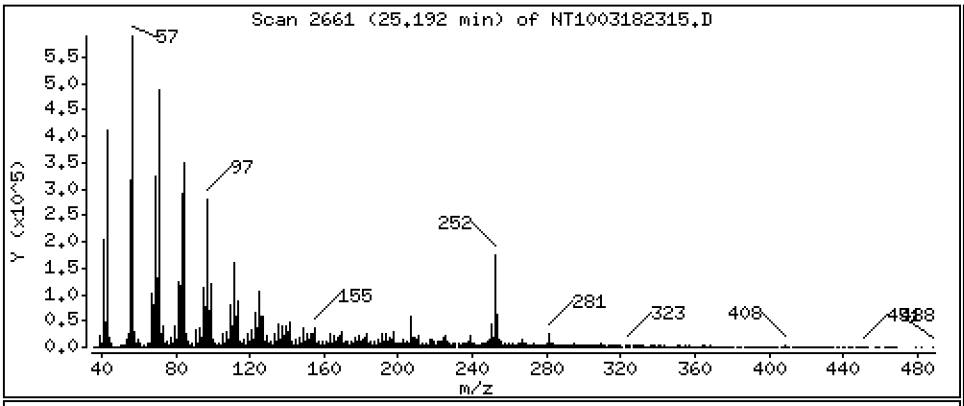
Operator: VTS

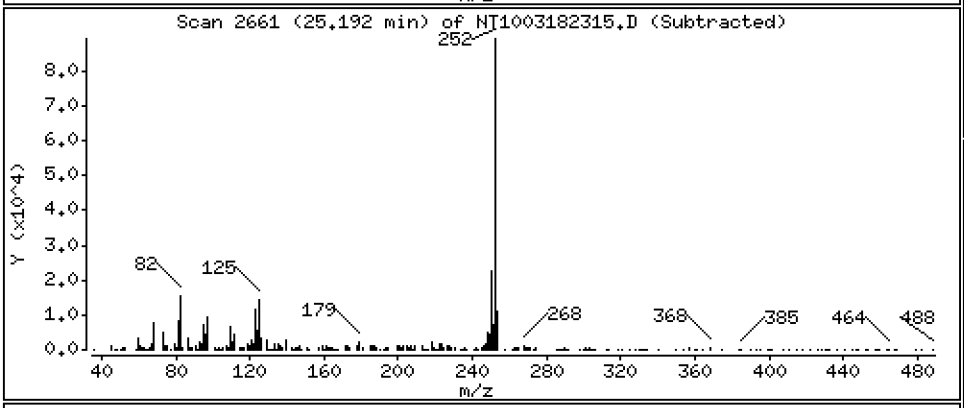
Column phase: ZB-5msi

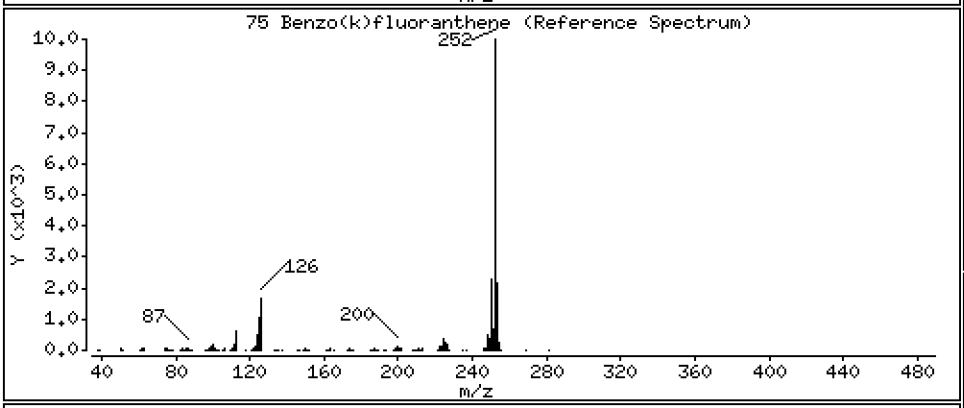
Column diameter: 0.25

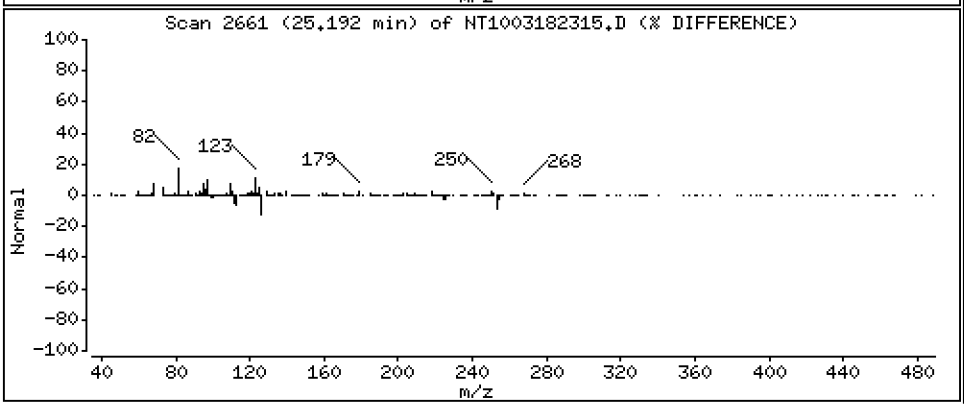
75 Benzo(k)fluoranthene

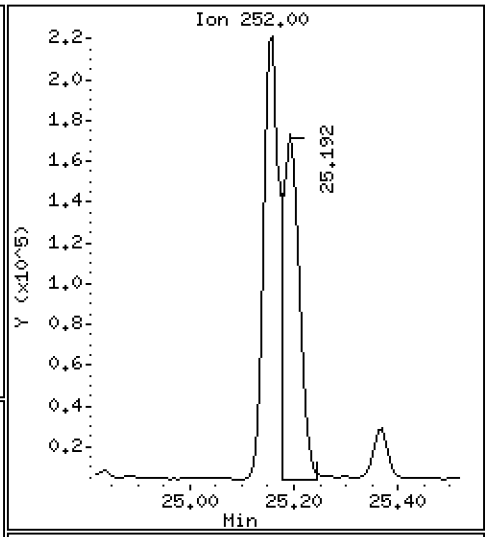
Concentration: 1.431 ug/mL

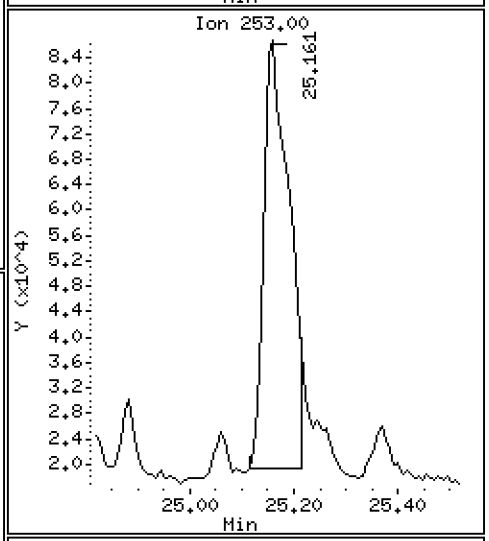


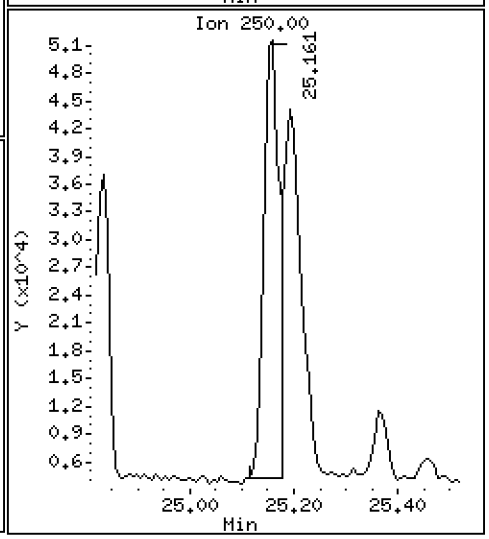












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

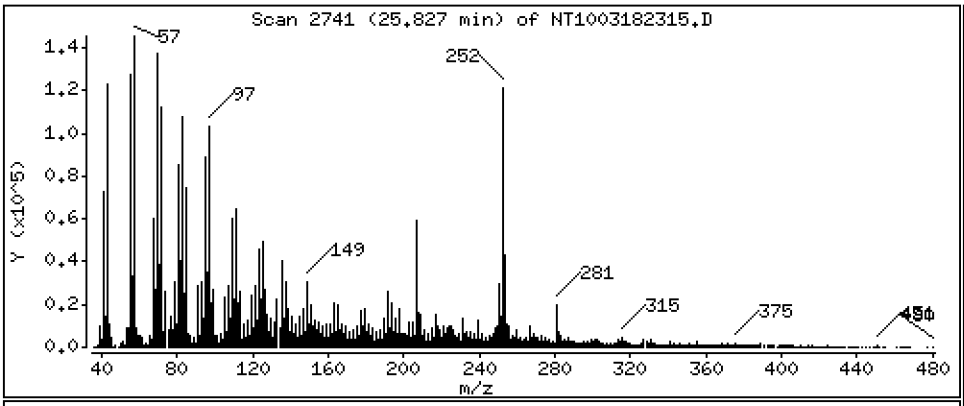
Operator: VTS

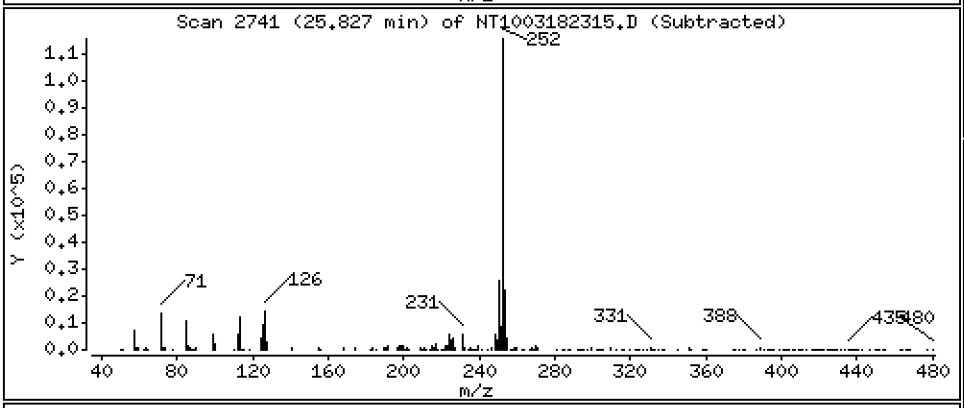
Column phase: ZB-5msi

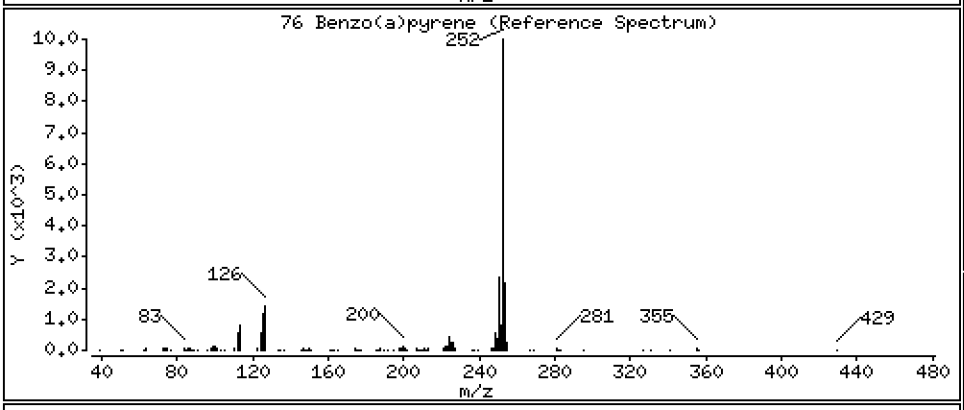
Column diameter: 0.25

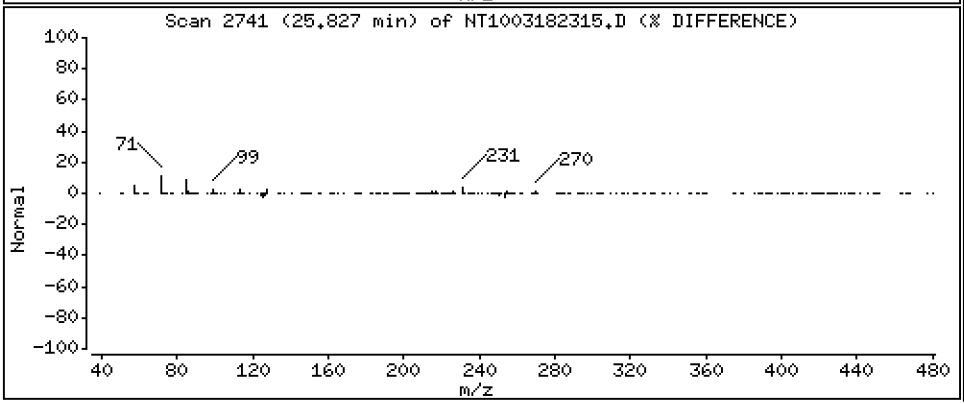
76 Benzo(a)pyrene

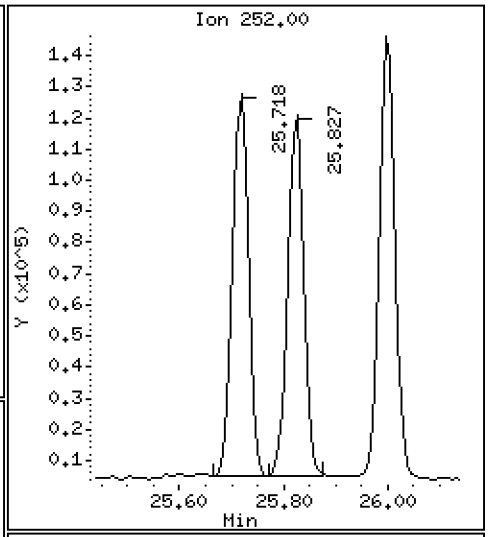
Concentration: 1.039 ug/mL

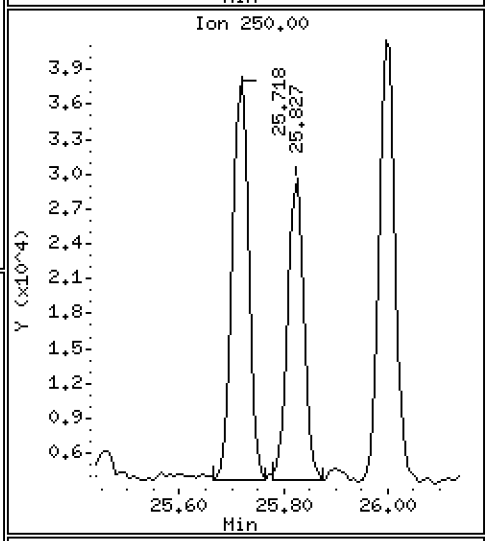


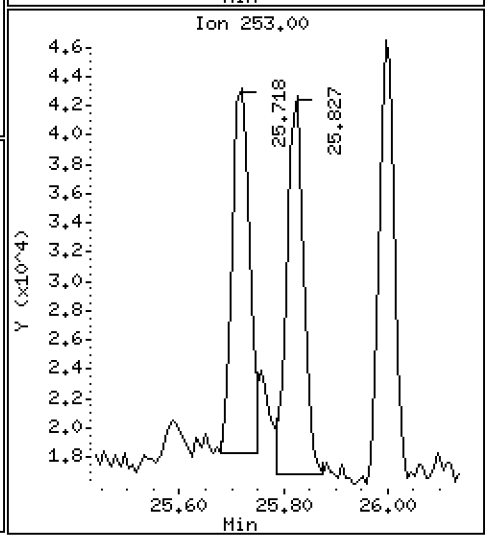












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

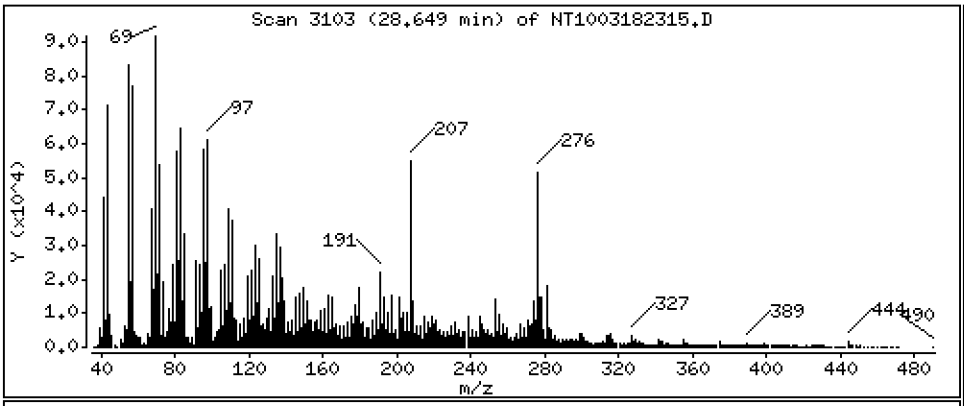
Operator: VTS

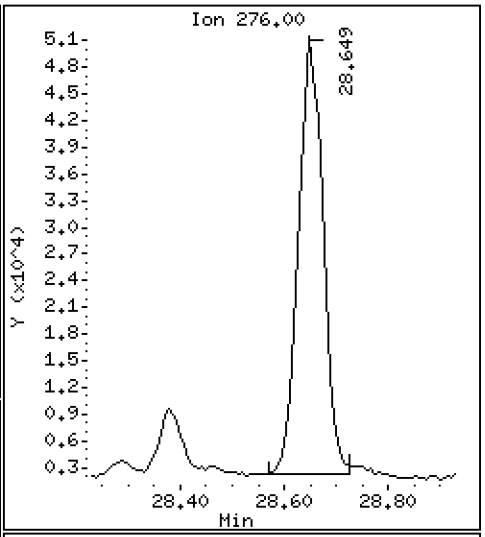
Column phase: ZB-5msi

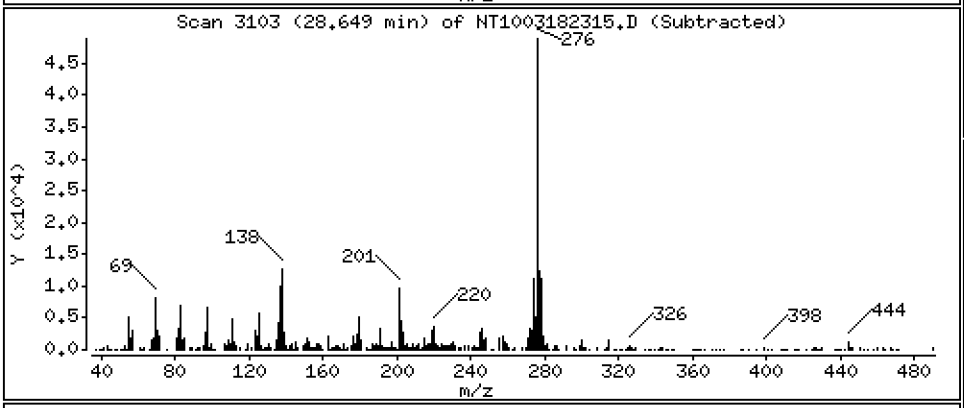
Column diameter: 0.25

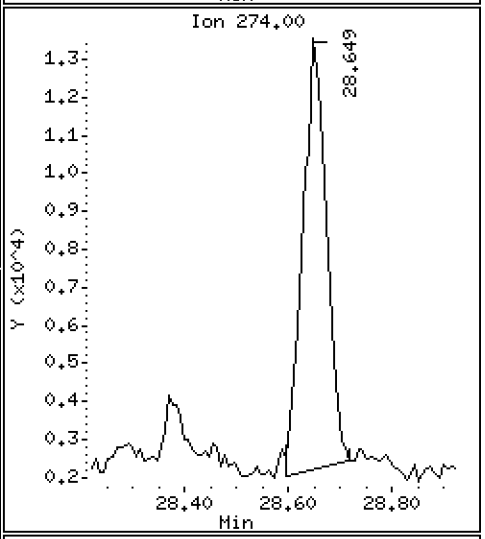
78 Indeno(1,2,3-cd)pyrene

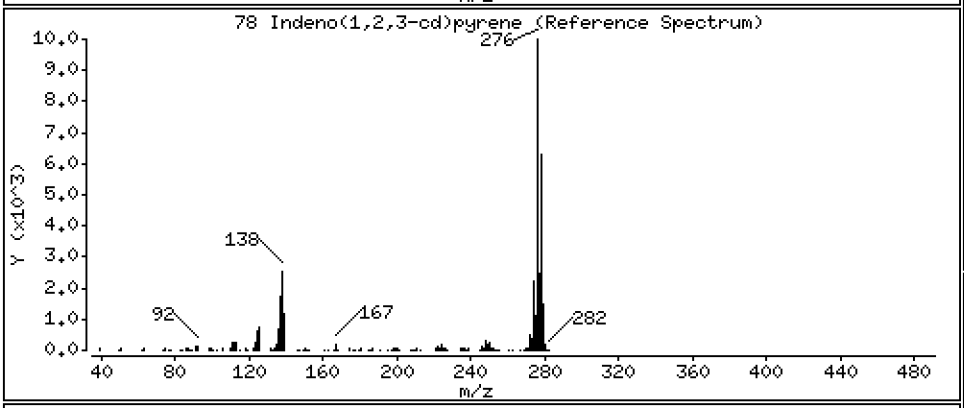
Concentration: 0.5117 ug/mL

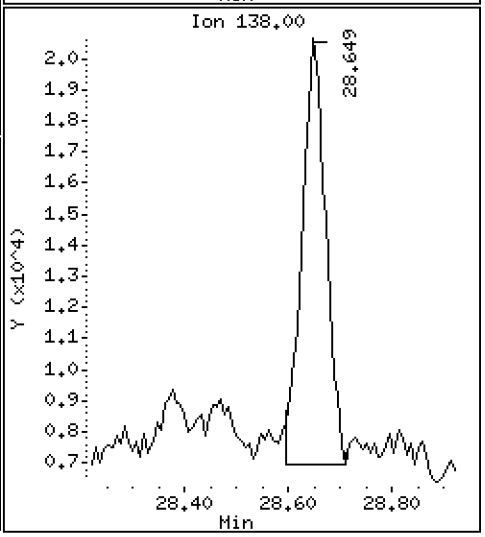


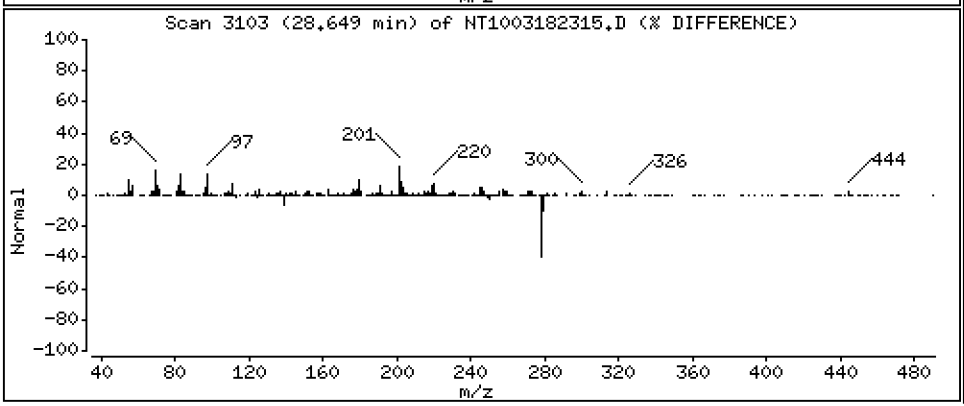












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

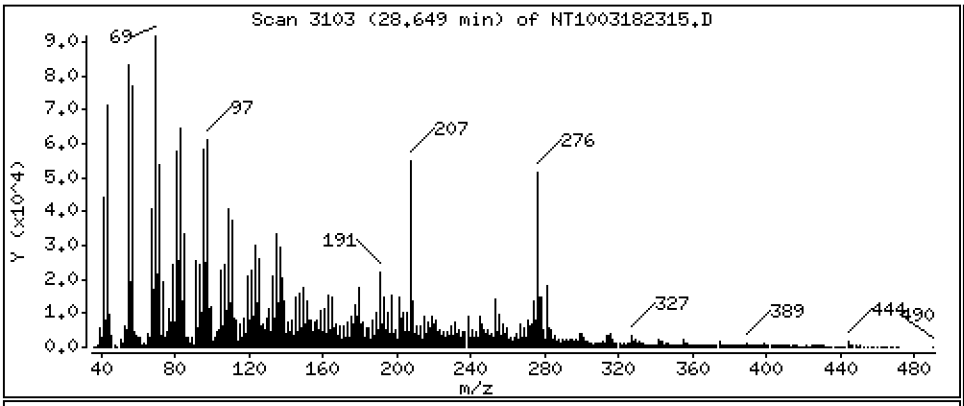
Operator: VTS

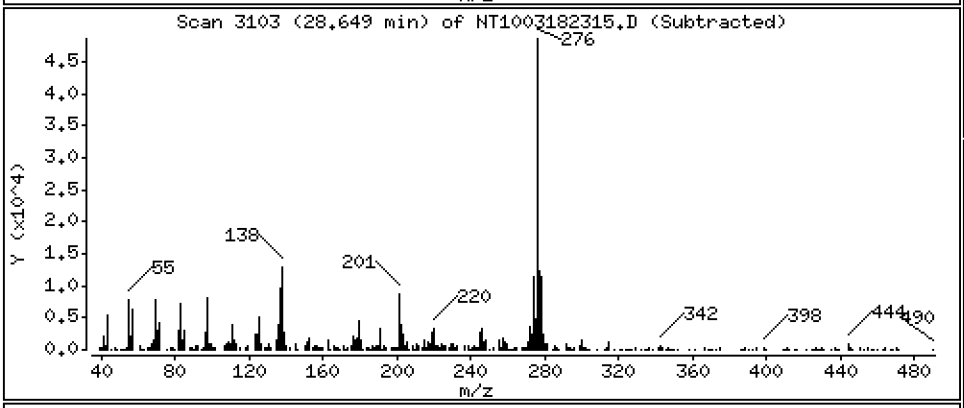
Column phase: ZB-5msi

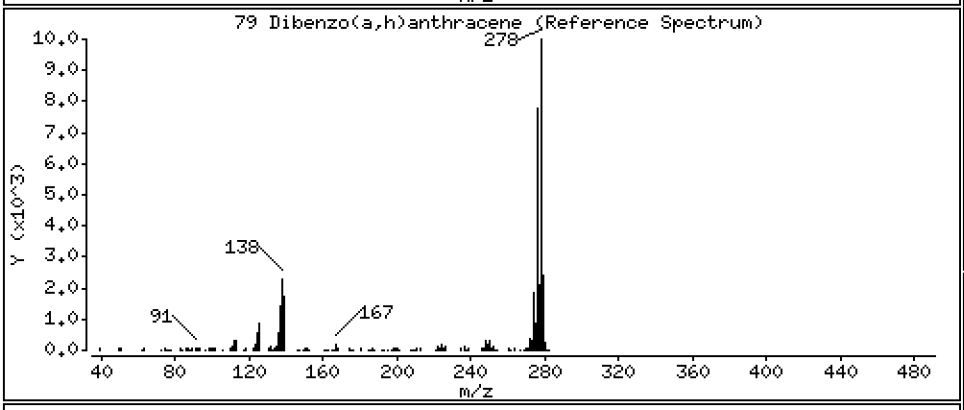
Column diameter: 0.25

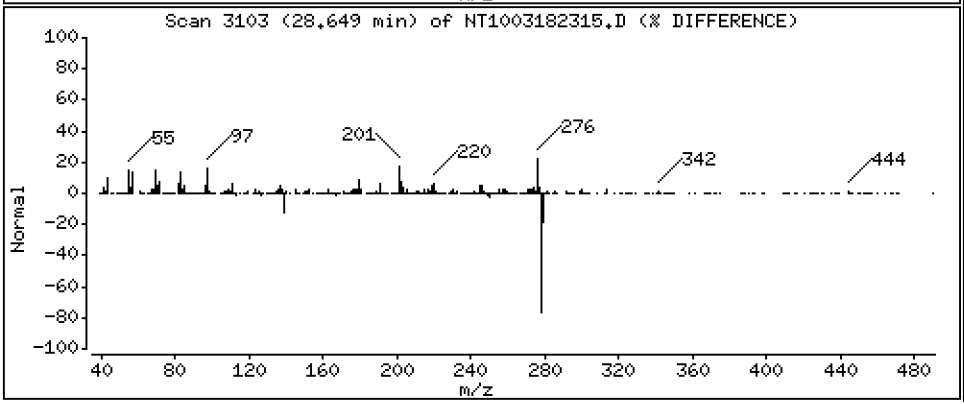
79 Dibenzo(a,h)anthracene

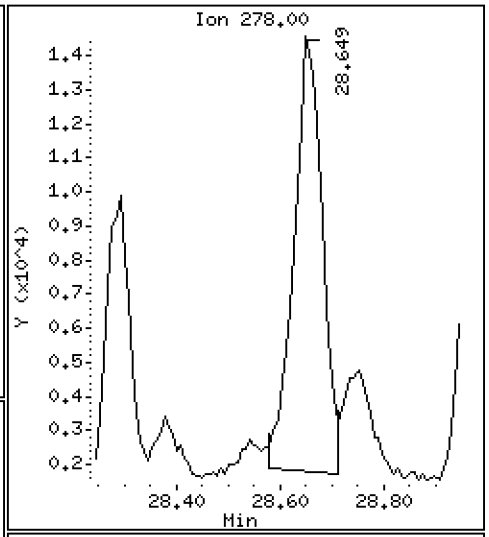
Concentration: 0.1880 ug/mL

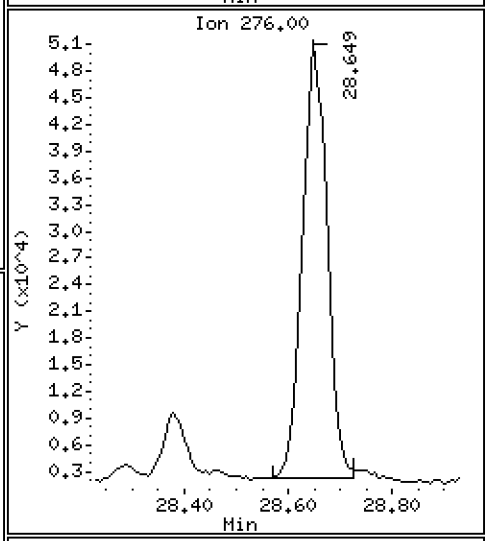


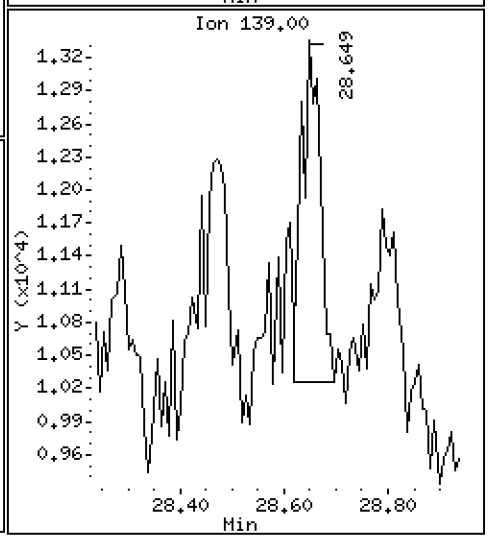












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

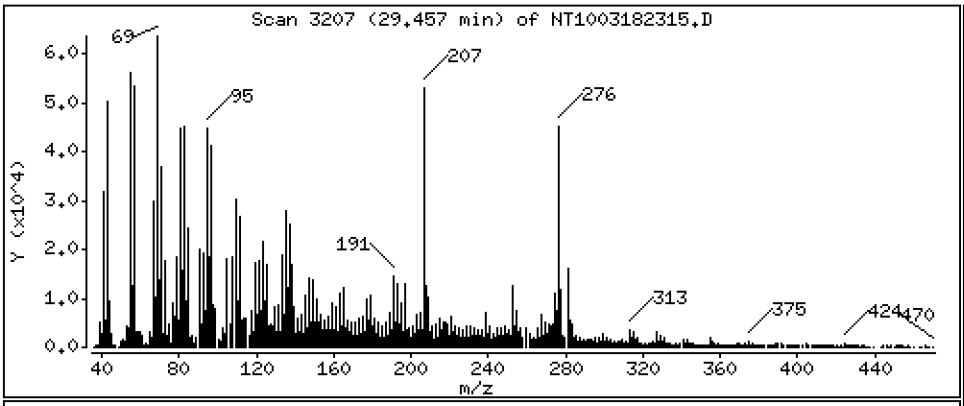
Operator: VTS

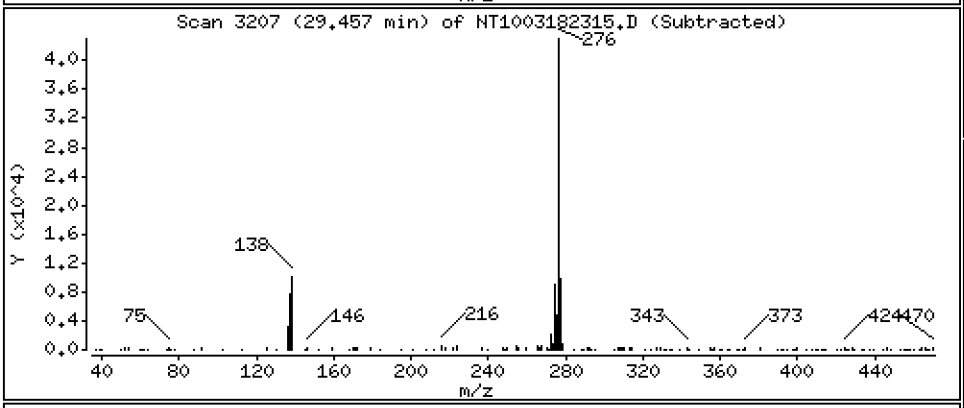
Column phase: ZB-5msi

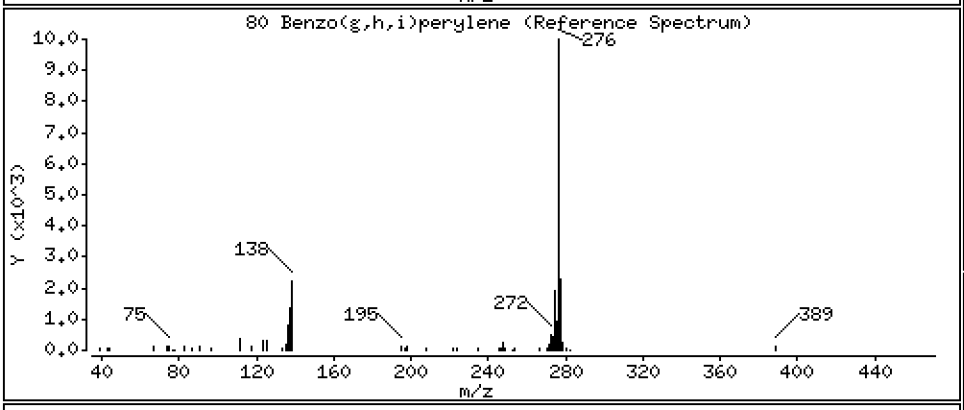
Column diameter: 0.25

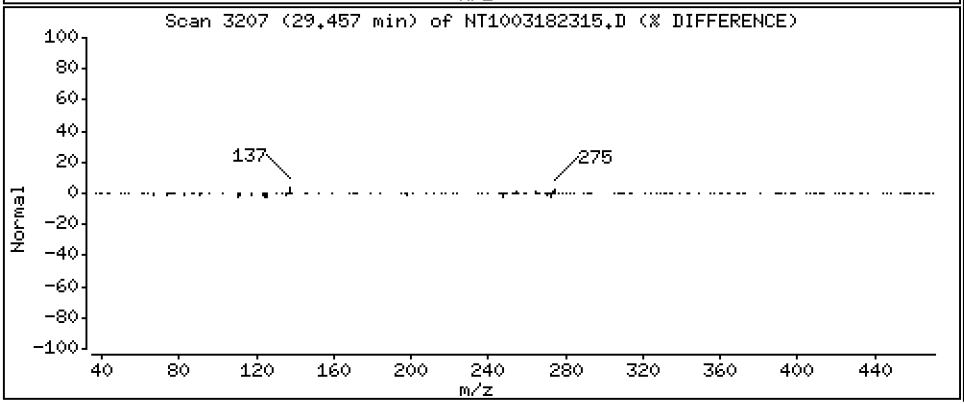
80 Benzo(g,h,i)perylene

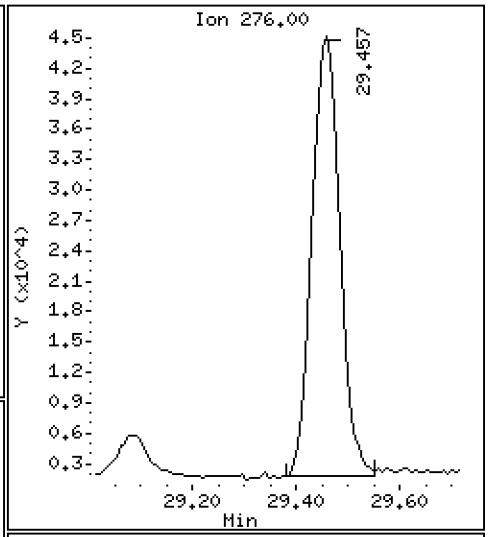
Concentration: 0.5957 ug/mL

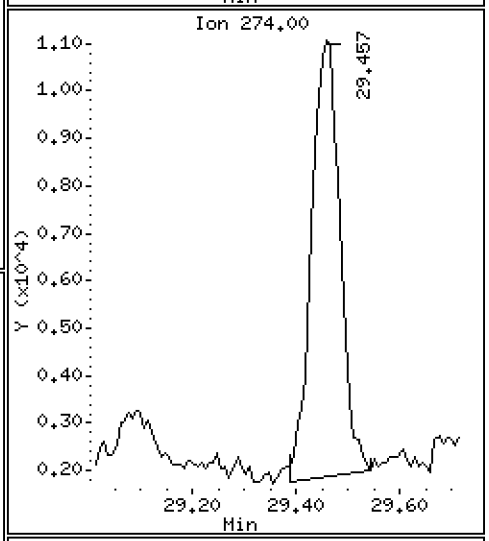


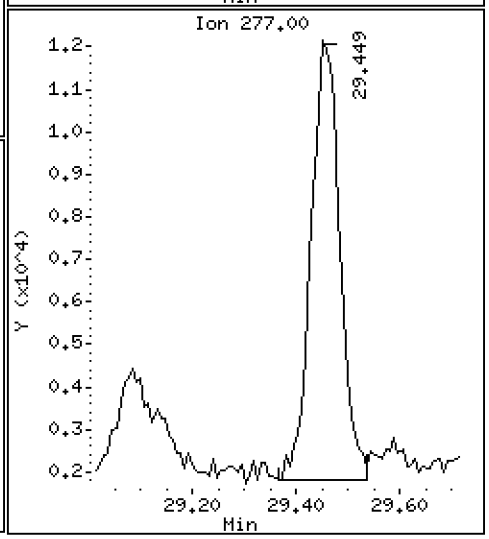












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

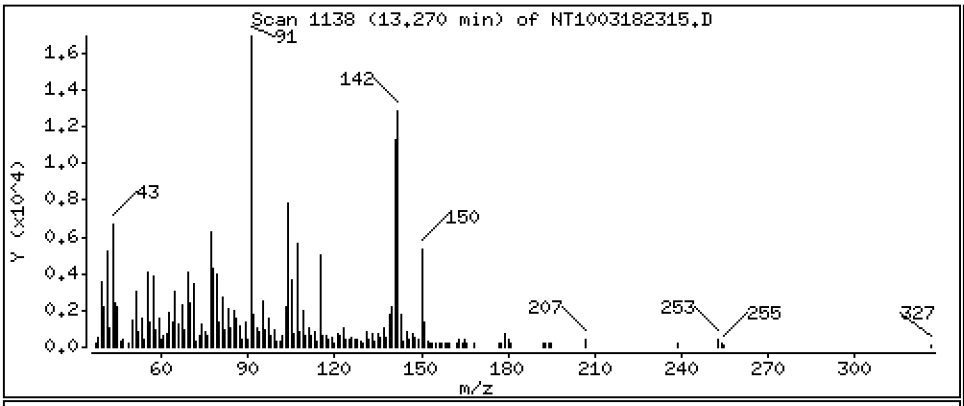
Operator: VTS

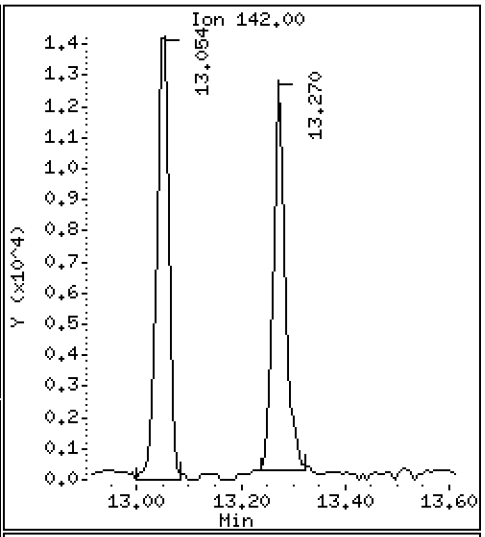
Column phase: ZB-5msi

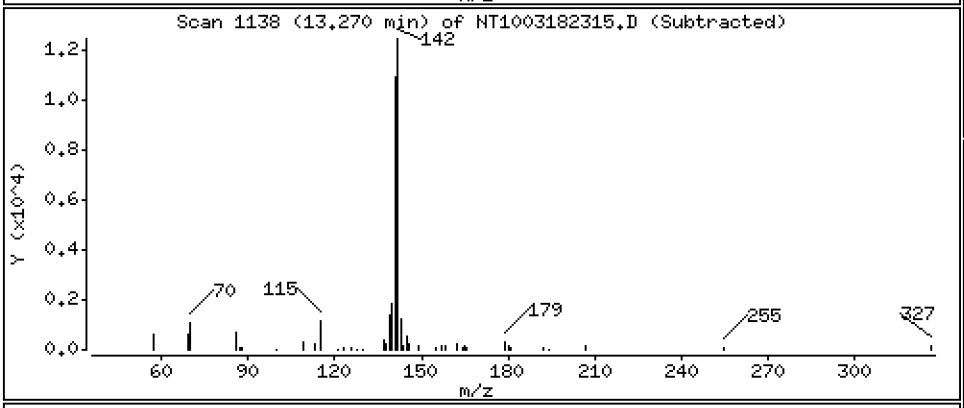
Column diameter: 0.25

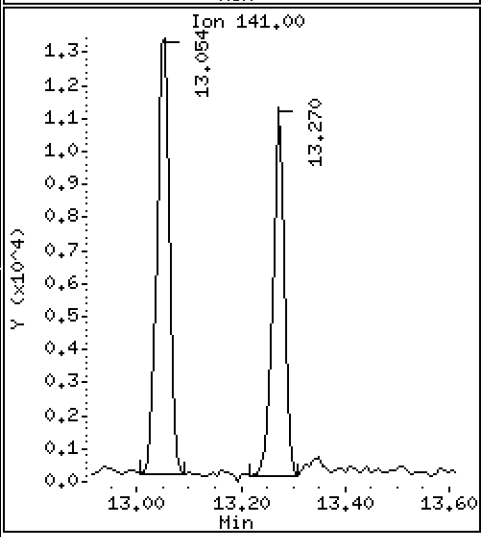
105 1-methylnaphthalene

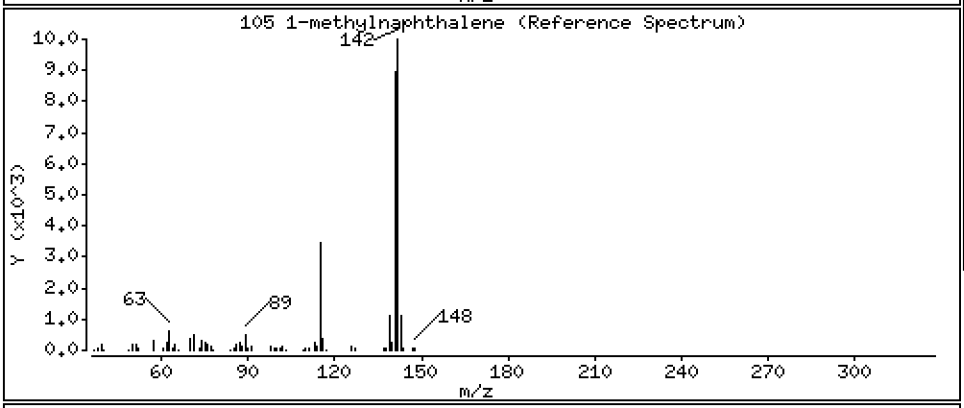
Concentration: 0.1217 ug/mL

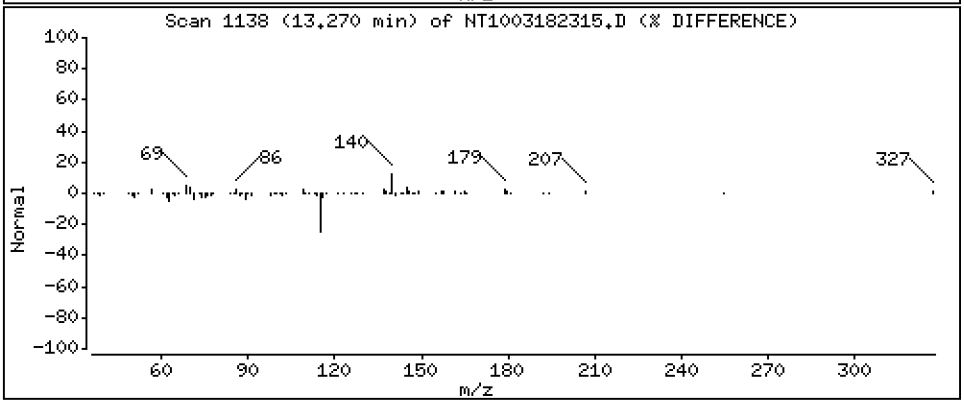












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

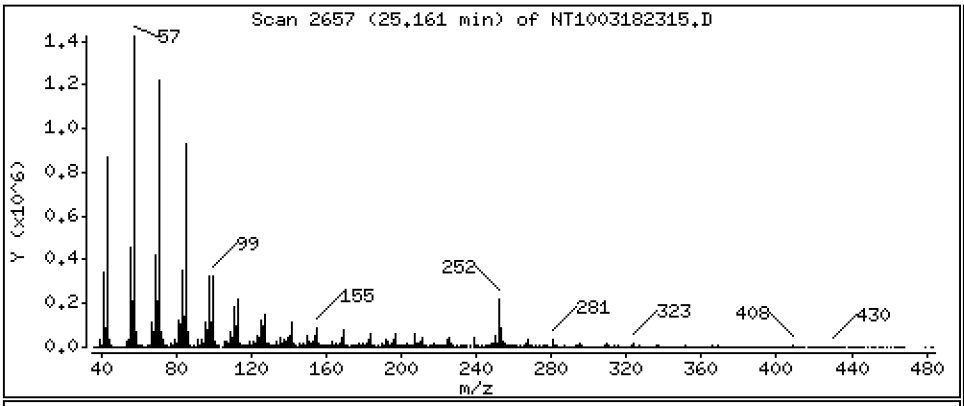
Operator: VTS

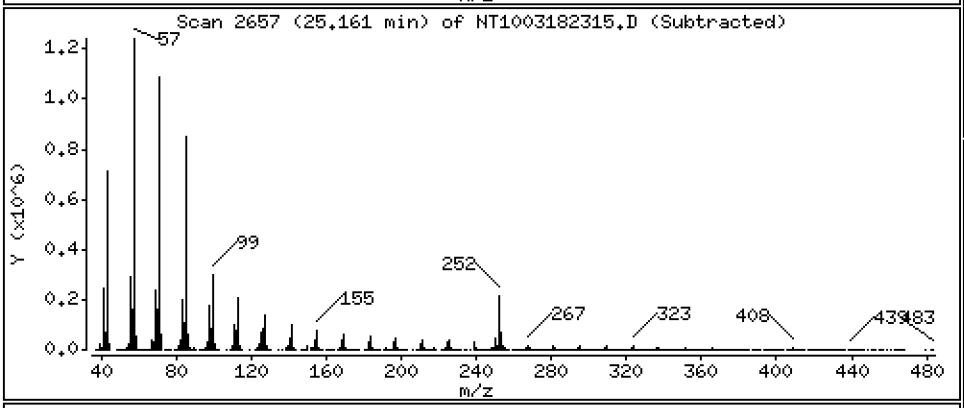
Column phase: ZB-5msi

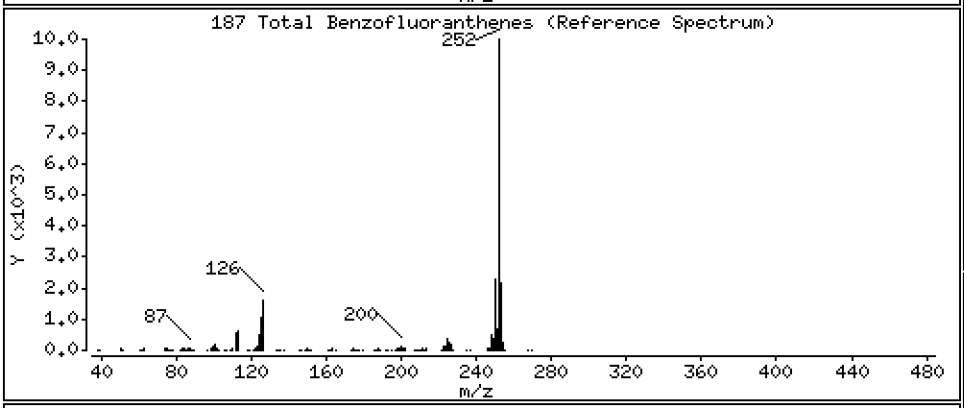
Column diameter: 0.25

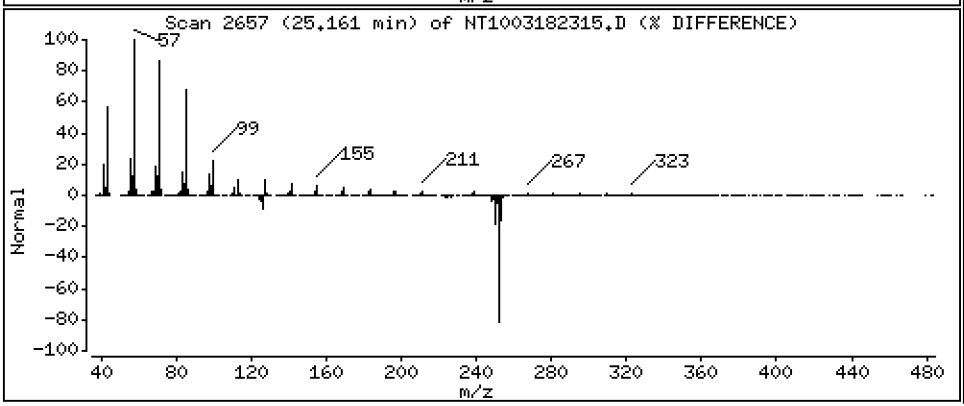
187 Total Benzofluoranthenes

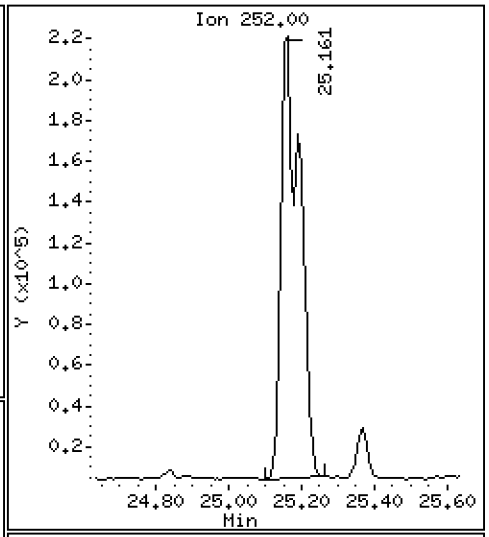
Concentration: 2.962 ug/mL

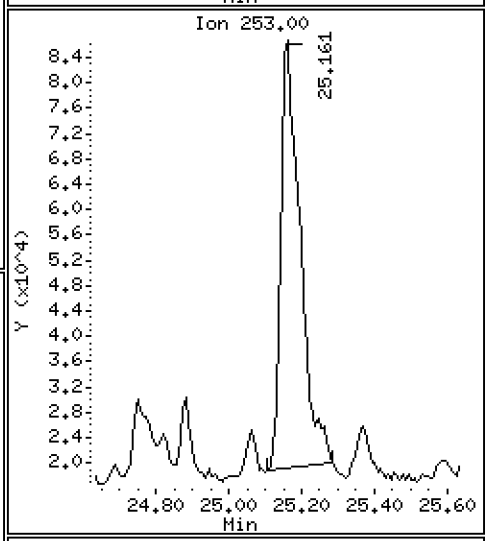


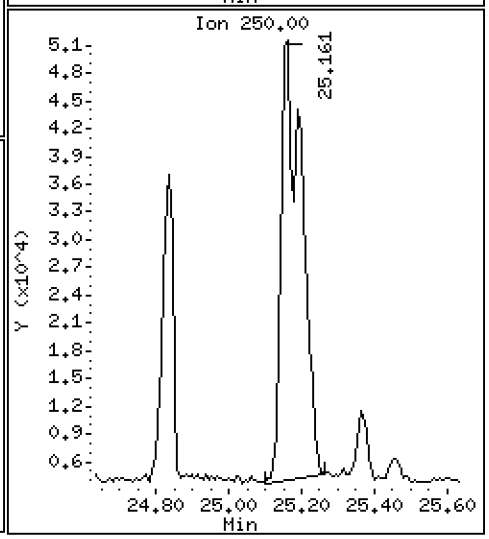












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182315.D
Lab Smp Id: 23A0467-06
Inj Date : 19-MAR-2023 02:41
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-06
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	6.975	6.952	(0.761)	434695	5.59537	5.595
$ 2	Phenol-d5	99	8.536	8.520	(0.931)	583782	5.72810	5.728
3	Phenol	94	8.559	8.536	(0.933)	1719407	16.2352	16.24
$ 5	2-Chlorophenol-d4	132	8.814	8.806	(0.961)	535851	6.15718	6.157
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	256896	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.039)	226517	3.62427	3.624
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	9.433	9.426	(1.029)	191576	3.85393	3.854
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	9.923	9.907	(1.082)	586606	7.21137	7.211
$ 18	Nitrobenzene-d5	82	10.256	10.249	(0.882)	370406	3.94033	3.940
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	11.057	11.134	(0.951)	62299	1.32055	1.321(M)
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.630	11.623	(1.000)	931319	4.00000	
28	Naphthalene	128	11.676	11.669	(1.004)	34196	0.13860	0.1386
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	13.053	13.046	(1.122)	23752	0.13340	0.1334
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.827	13.820	(0.908)	824815	4.17576	4.176
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.717	14.710	(0.967)	14667	0.09042	0.09042
	40	Acenaphthylene	152	14.903	14.896	(0.979)	28025	0.11245	0.1125
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.220	15.213	(1.000)	499339	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.282	15.275	(1.004)	30810	0.20011	0.2001
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.607	15.600	(1.025)	44379	0.19546	0.1955
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.163	16.156	(1.062)	30044	0.18877	0.1888
	49	Fluorene	166	16.318	16.319	(1.072)	31954	0.17889	0.1789
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.850	16.843	(1.107)	169003	7.26251	7.263
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.249	18.234	(1.000)	947429	4.00000	
	60	Phenanthrene	178	18.295	18.281	(1.003)	272561	1.05503	1.055
	61	Anthracene	178	18.388	18.373	(1.008)	111391	0.44949	0.4495
	62	Carbazole	167	18.713	18.698	(1.025)	27551	0.12407	0.1241
	63	Di-n-butylphthalate	149	19.510	19.488	(1.069)	25765	0.08628	0.08628
	64	Fluoranthene	202	20.701	20.656	(0.889)	773923	2.38829	2.388
	65	Pyrene	202	21.104	21.081	(0.906)	757743	2.27949	2.279
$	66	Terphenyl-d14	244	21.382	21.360	(0.918)	1264671	5.06601	5.066
	67	Butylbenzylphthalate	149	22.296	22.281	(0.957)	30454	0.26076	0.2608
	68	Benzo(a)anthracene	228	23.256	23.241	(0.999)	298580	1.04892	1.049
*	69	Chrysene-d12	240	23.287	23.272	(1.000)	806460	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.334	23.311	(1.002)	436146	1.56829	1.568
	72	bis(2-Ethylhexyl)phthalate	149	23.326	23.303	(0.959)	331202	1.61492	1.615
*	134	Di-n-octylphthalate-d4	153	24.317	24.294	(1.000)	1400947	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.161	25.130	(0.970)	459059	1.66796	1.668
	75	Benzo(k)fluoranthene	252	25.192	25.169	(0.971)	400053	1.43149	1.431(M)
	76	Benzo(a)pyrene	252	25.826	25.789	(0.996)	255699	1.03916	1.039
*	77	Perylene-d12	264	25.943	25.897	(1.000)	849056	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.649	28.580	(1.104)	160194	0.51172	0.5117
	79	Dibenzo(a,h)anthracene	278	28.649	28.595	(1.104)	48872	0.18804	0.1880
	80	Benzo(g,h,i)perylene	276	29.457	29.364	(1.135)	161393	0.59572	0.5957
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.270	13.263	(1.141)	19861	0.12175	0.1217
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.161	25.130	(0.970)	787012	2.96166	2.962(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182315.D
Lab Smp Id: 23A0467-06
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	256896	37.81
27 Naphthalene-d8	688740	344370	1377480	931319	35.22
42 Acenaphthene-d10	373663	186832	747326	499339	33.63
59 Phenanthrene-d10	652323	326162	1304646	947429	45.24
69 Chrysene-d12	537141	268571	1074282	806460	50.14
134 Di-n-octylphthala	947608	473804	1895216	1400947	47.84
77 Perylene-d12	602550	301275	1205100	849056	40.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.08
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.06
134 Di-n-octylphthala	24.29	23.79	24.79	24.32	0.09
77 Perylene-d12	25.90	25.40	26.40	25.94	0.18

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

REVIEW SUMMARY FOR FILE - NT1003182315.D

Lab ID: 23A0467-06
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 02:41

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.951	0.958	-0.0072	Benzoic acid

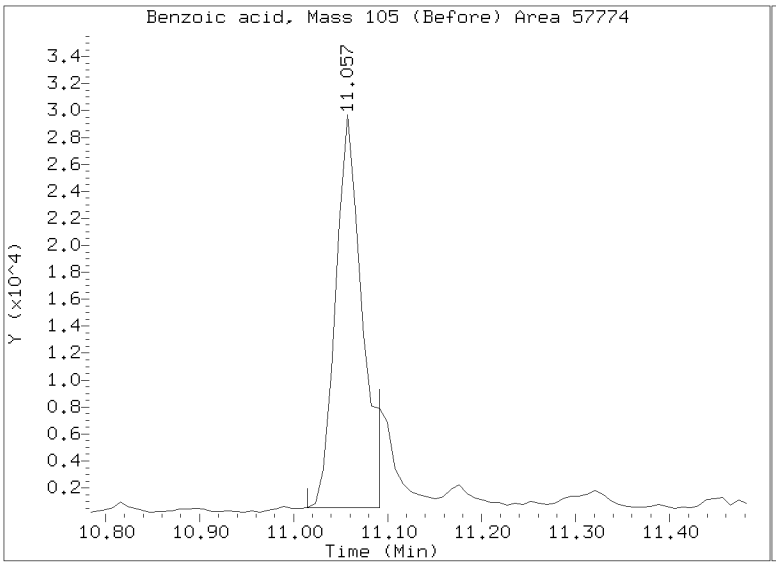
RRT check based on Ccal File: NT1003182302.D

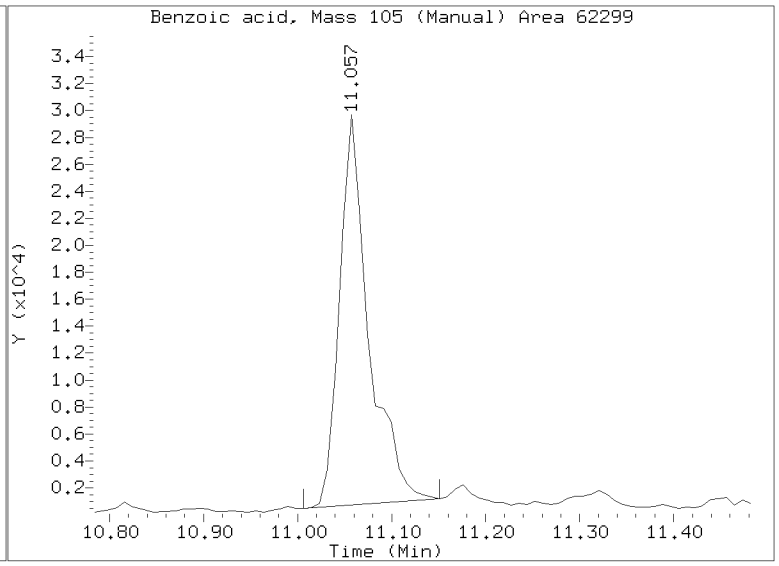
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

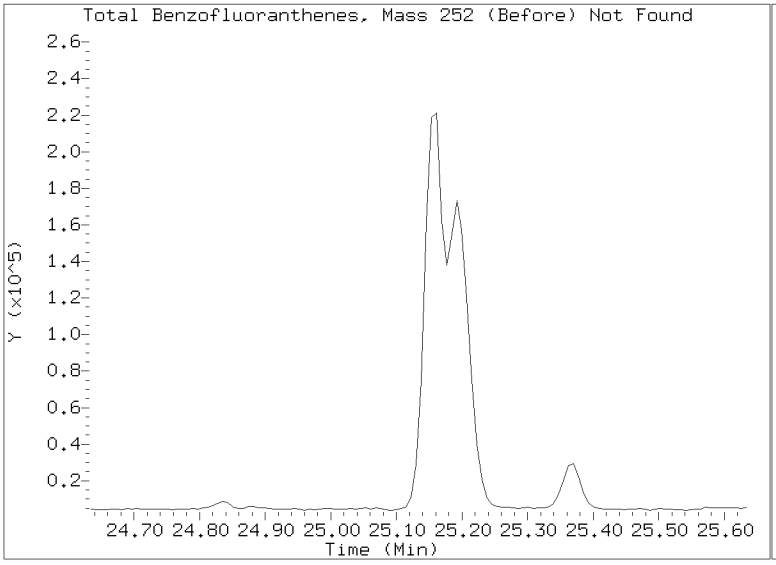
* Only compounds listed in the work order have been verified by the analyst *

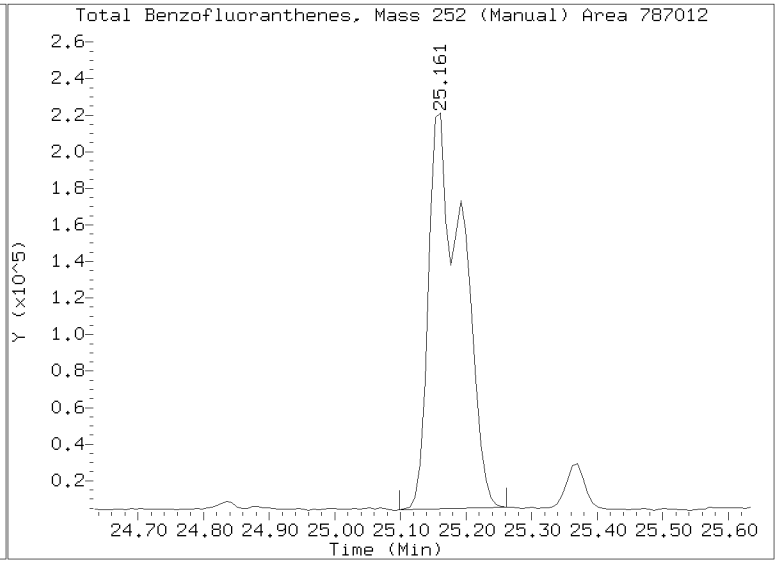
Quant Ion Manual Peak Adjustment Report

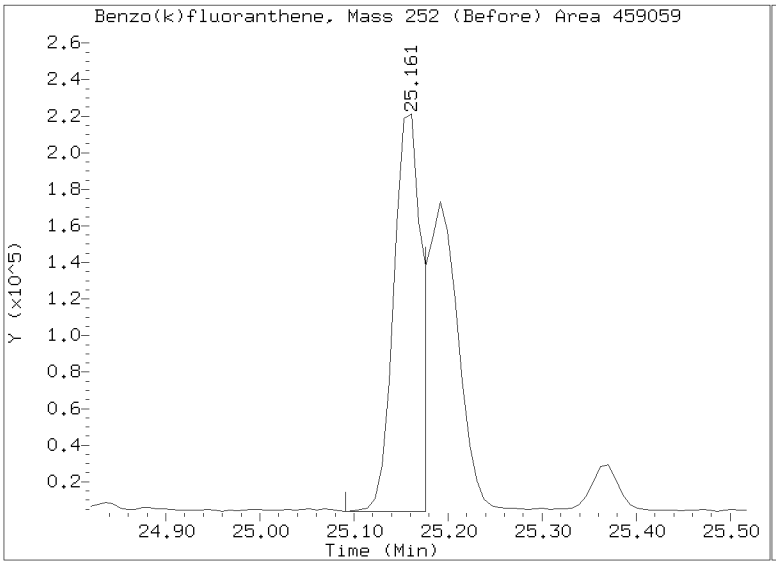
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182315.D
Injection Date: 19-MAR-2023 02:41
Lab ID:23A0467-06 Client ID:
Report Date: 04/04/2023 08:58

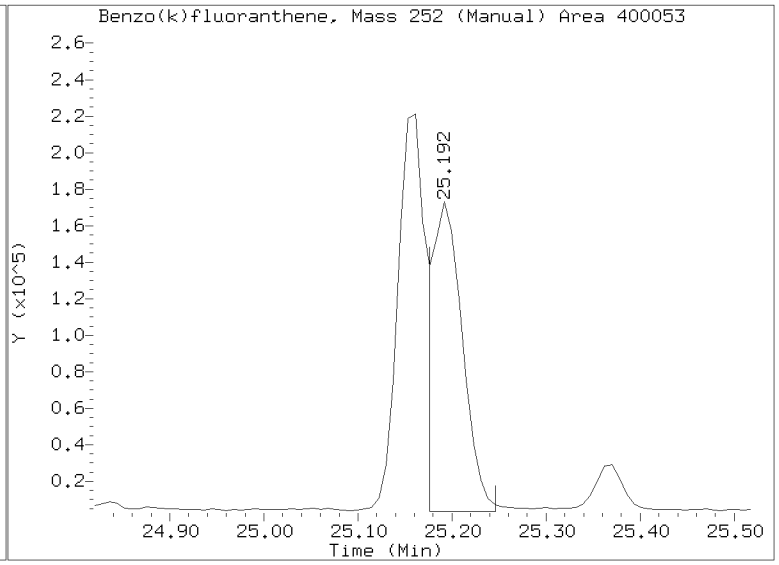












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1238

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	02/23/23 15:49	File ID:	NT1003182320.D
% Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 05:51
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	18.15 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	609		4.4	20.0
106-44-5	4-Methylphenol	1	666		7.4	20.0
91-20-3	Naphthalene	1	9.2	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	8.1	J	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	8.1	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.5	20.0
85-01-8	Phenanthrene	1	57.4		8.7	20.0
120-12-7	Anthracene	1	29.2		7.2	20.0
206-44-0	Fluoranthene	1	193		6.1	20.0
129-00-0	Pyrene	1	222		5.7	20.0
85-68-7	Butylbenzylphthalate	1	19.9	J	9.4	20.0
56-55-3	Benzo(a)anthracene	1	116		5.9	20.0
218-01-9	Chrysene	1	135		6.0	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	118		5.4	49.9
	Benzofluoranthenes, Total	1	244		10.0	39.9
50-32-8	Benzo(a)pyrene	1	110		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	50.7		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	19.9	J	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	59.4		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.59	547	73.1	27 - 120	
Phenol-d5	748.59	569	76.0	29 - 120	
2-Chlorophenol-d4	748.59	596	79.6	31 - 120	
1,2-Dichlorobenzene-d4	499.06	370	74.1	32 - 120	
Nitrobenzene-d5	499.06	392	78.6	30 - 120	
2-Fluorobiphenyl	499.06	419	83.9	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1238

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

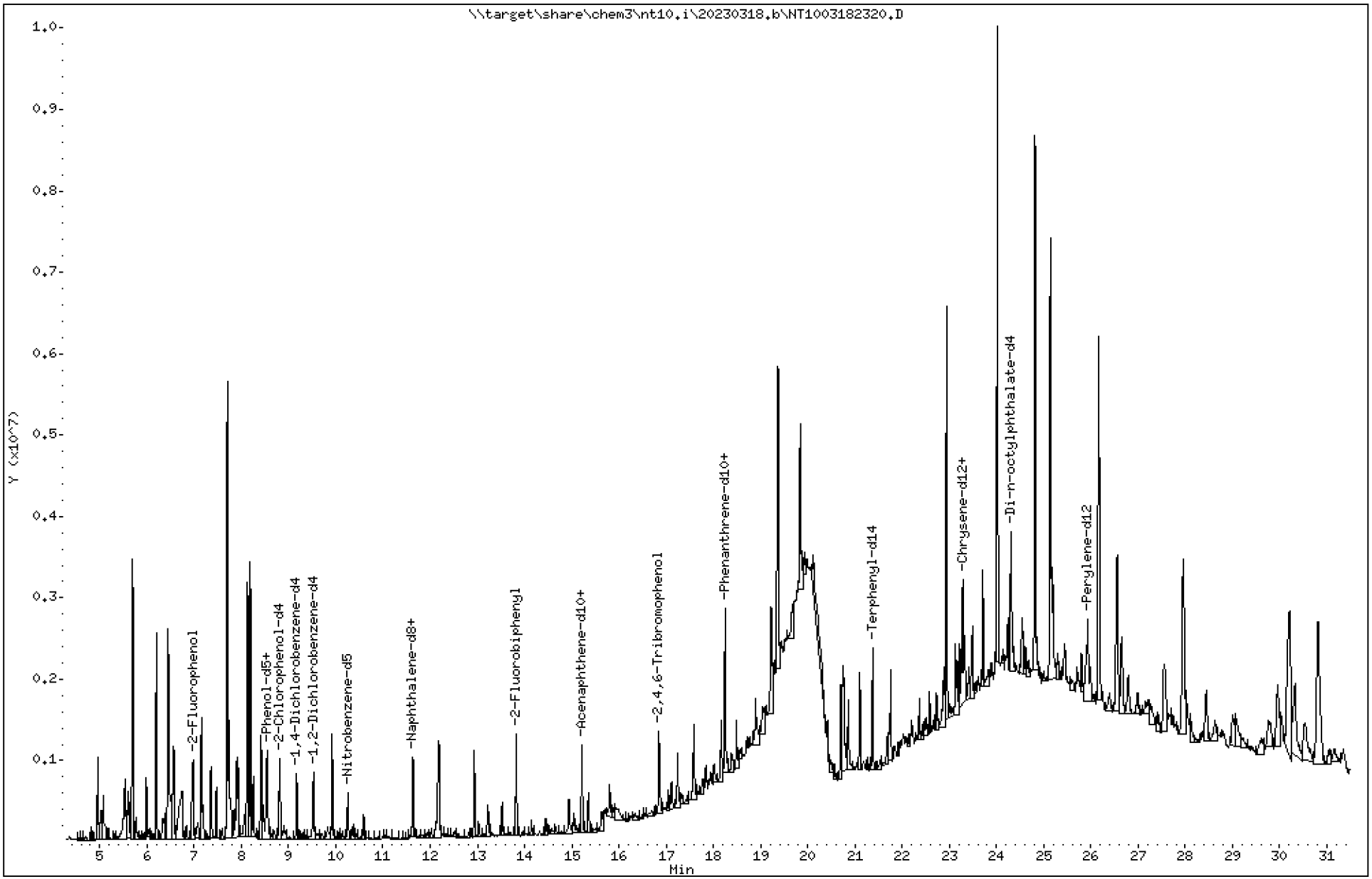
Semivolatiles (20ug/kg - 0.2ug/L SepF)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	02/23/23 15:49	File ID:	NT1003182320.D
% Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 05:51
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	18.15 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	748.59	738	98.6	24 - 134	
p-Terphenyl-d14	499.06	467	93.5	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D
Date : 19-MAR-2023 05:51
Client ID:
Sample Info: 23A0467-07

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

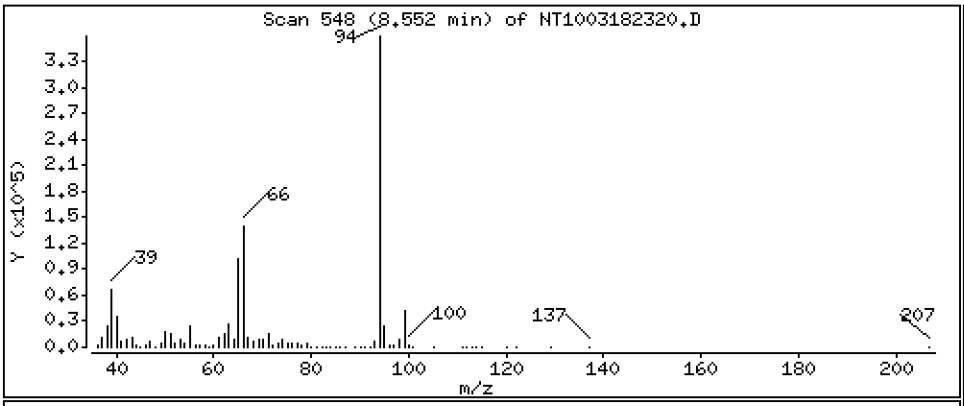
Operator: VTS

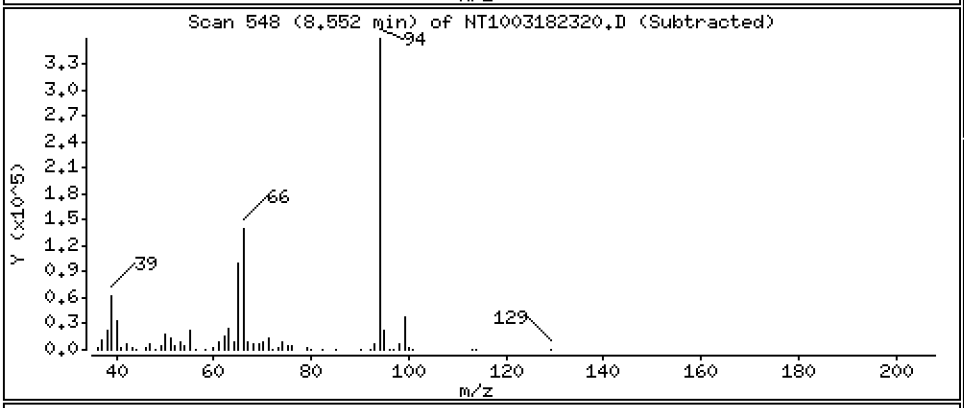
Column phase: ZB-5msi

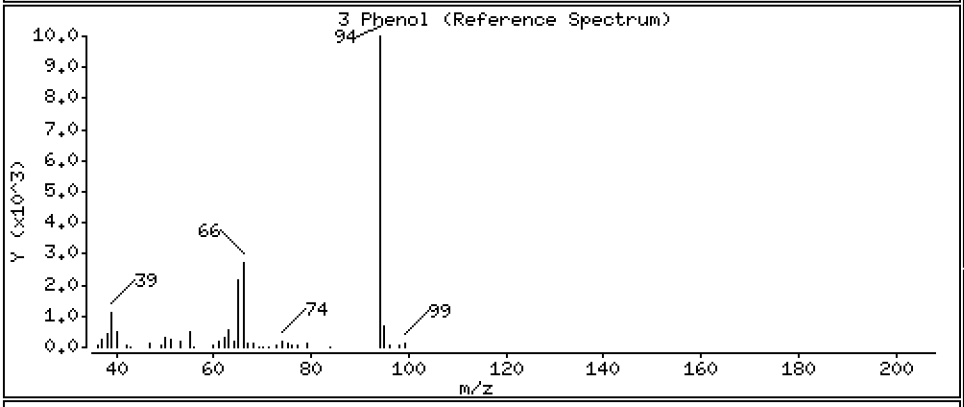
Column diameter: 0.25

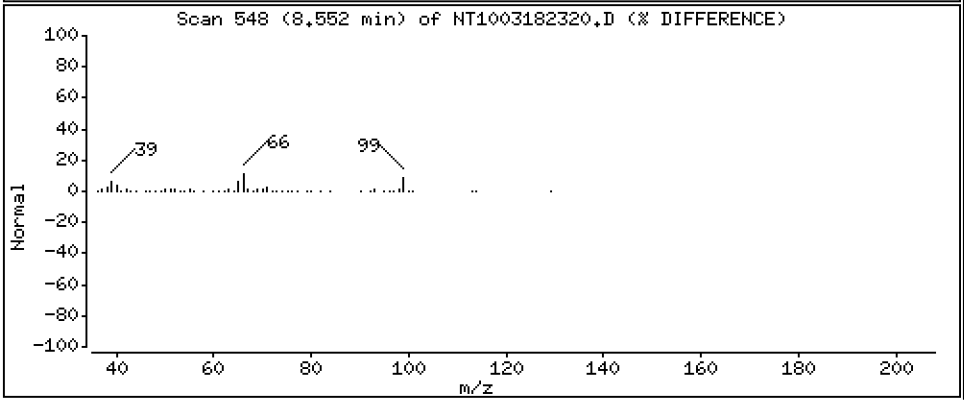
3 Phenol

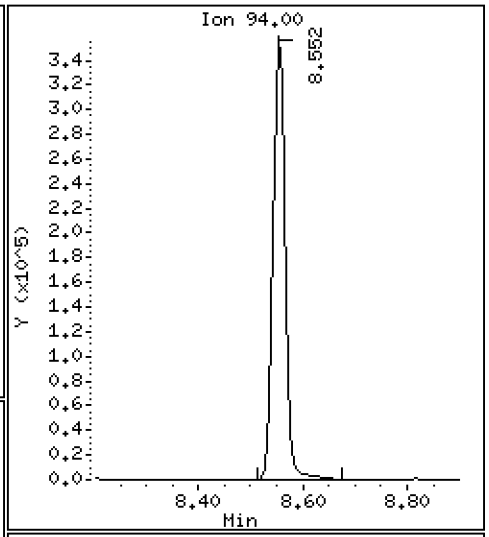
Concentration: 6.100 ug/mL

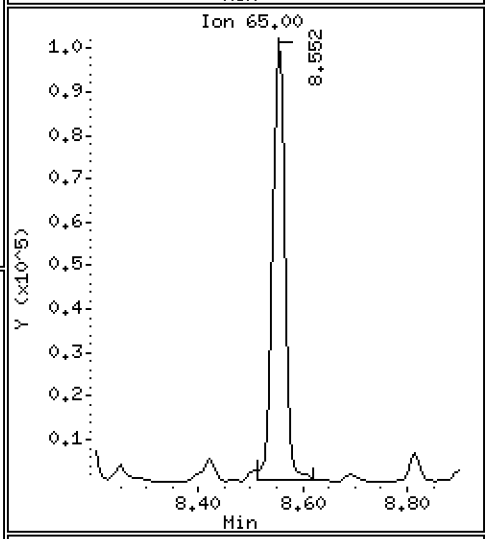


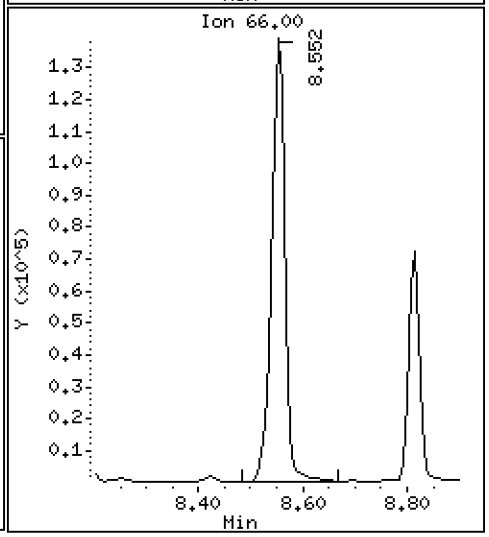












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

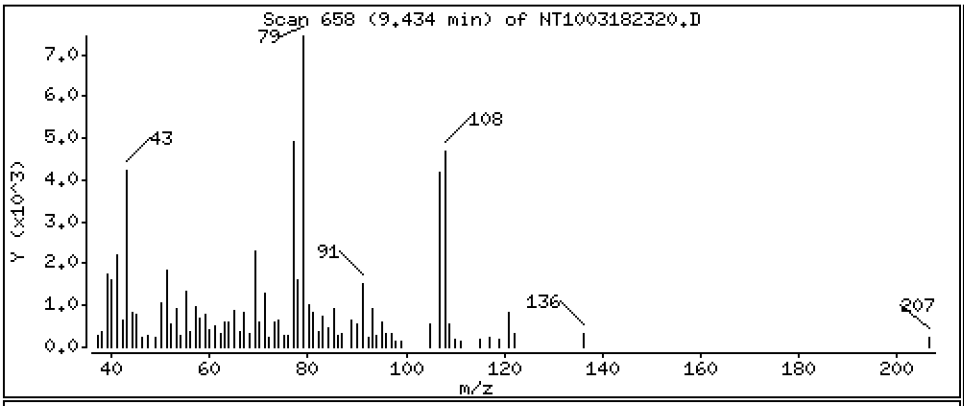
Operator: VTS

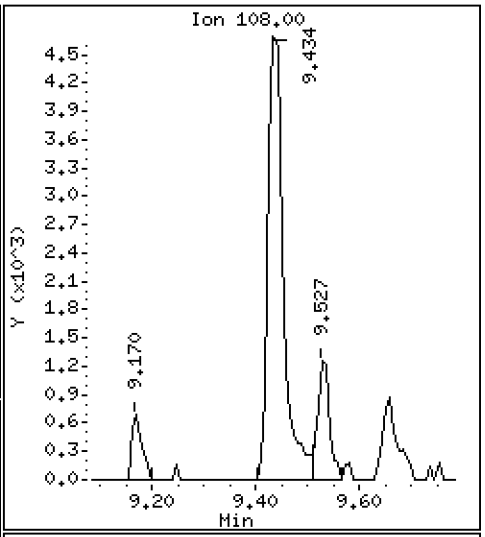
Column phase: ZB-5msi

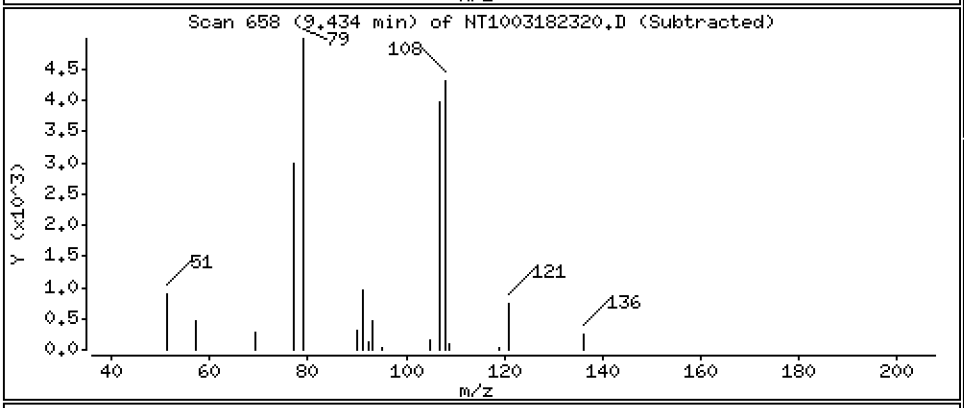
Column diameter: 0.25

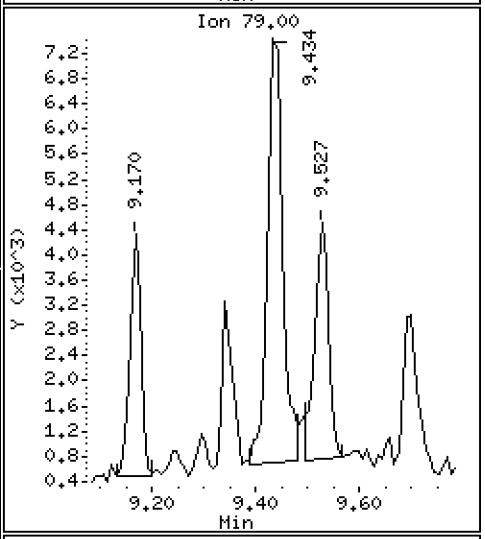
11 Benzyl alcohol

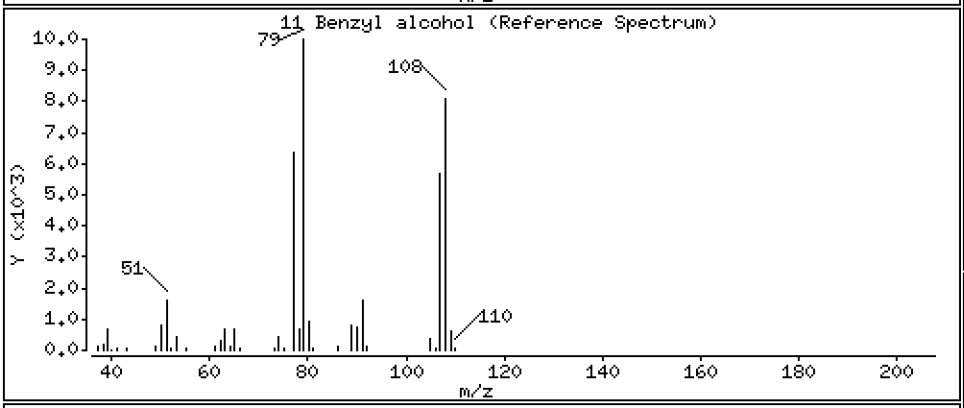
Concentration: 0.2250 ug/mL

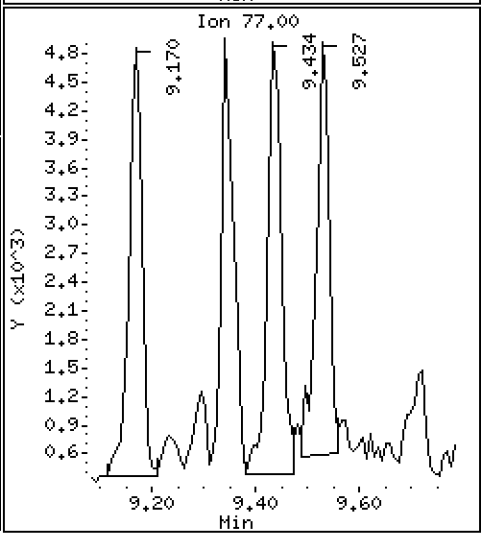


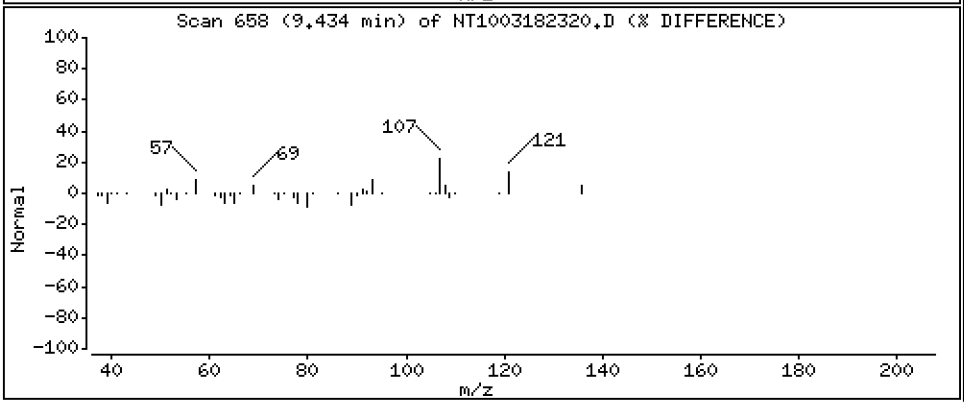












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

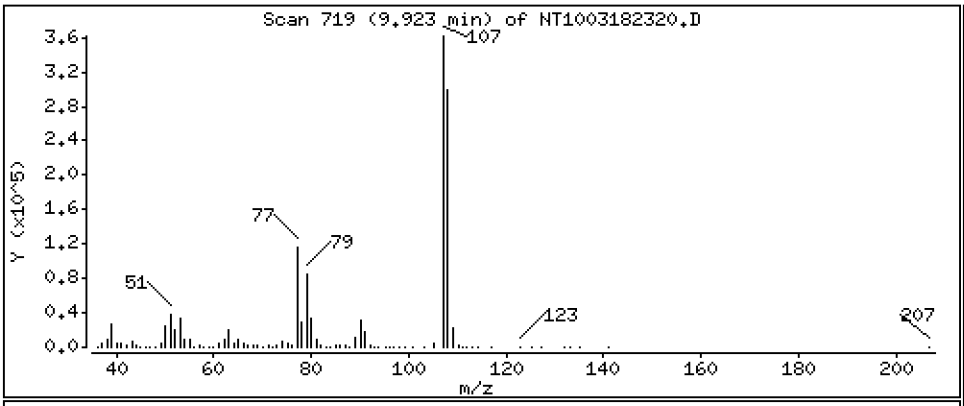
Operator: VTS

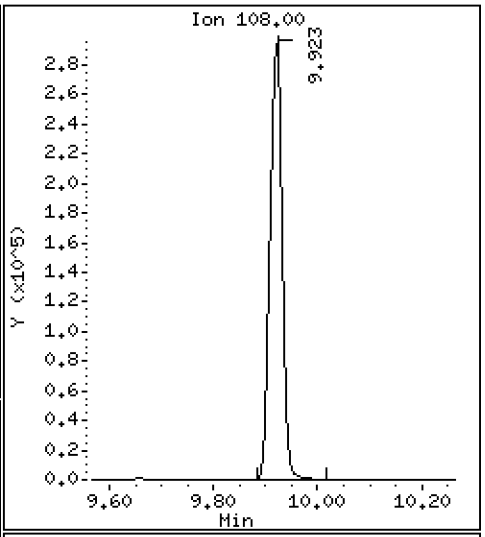
Column phase: ZB-5msi

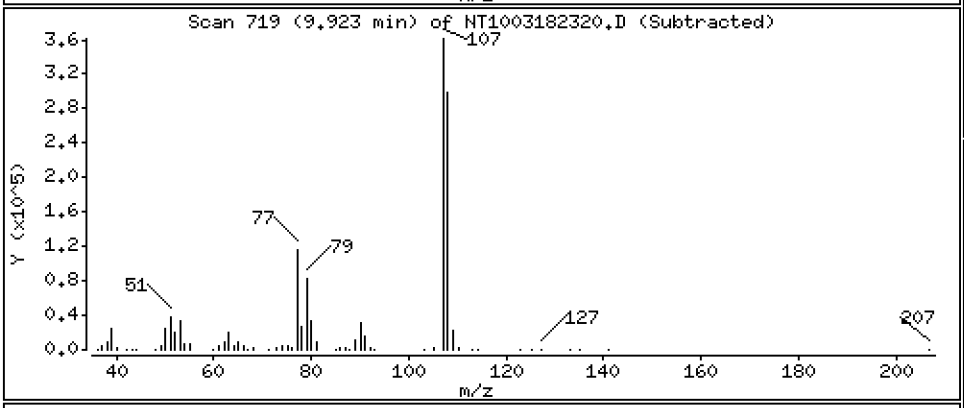
Column diameter: 0.25

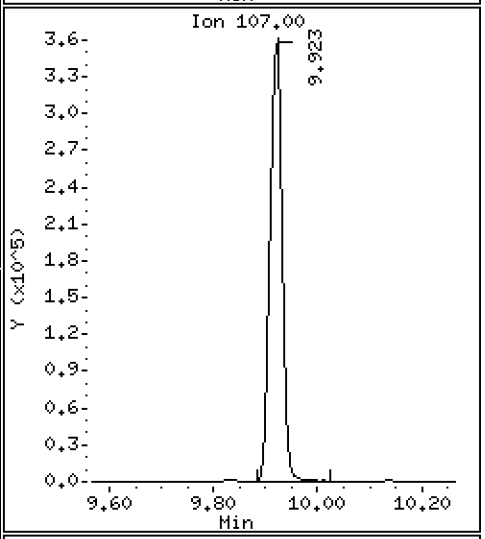
15 4-Methylphenol

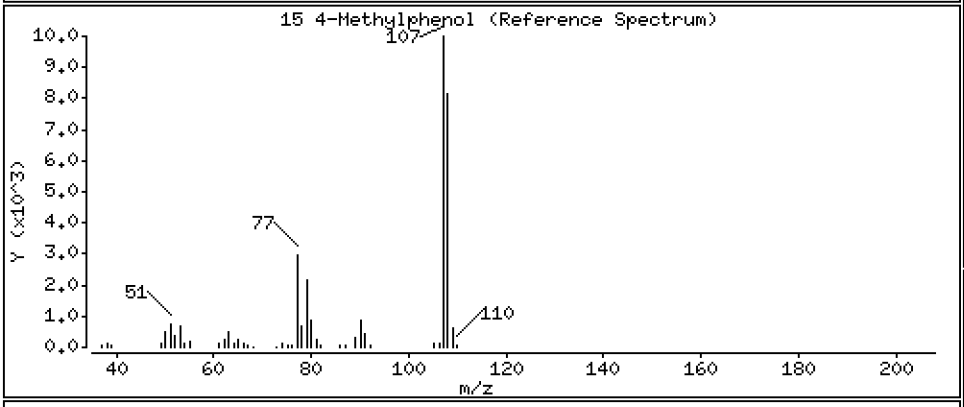
Concentration: 6.677 ug/mL

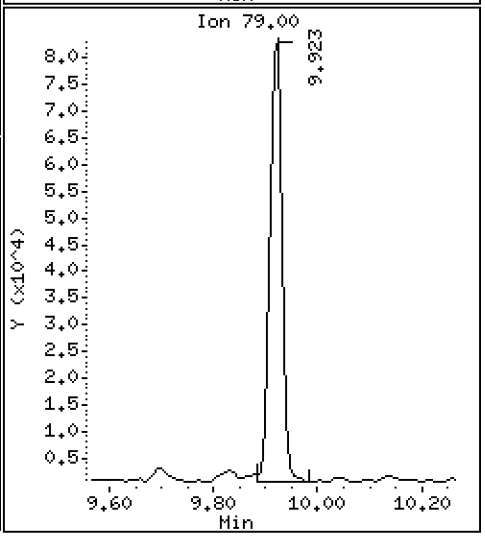


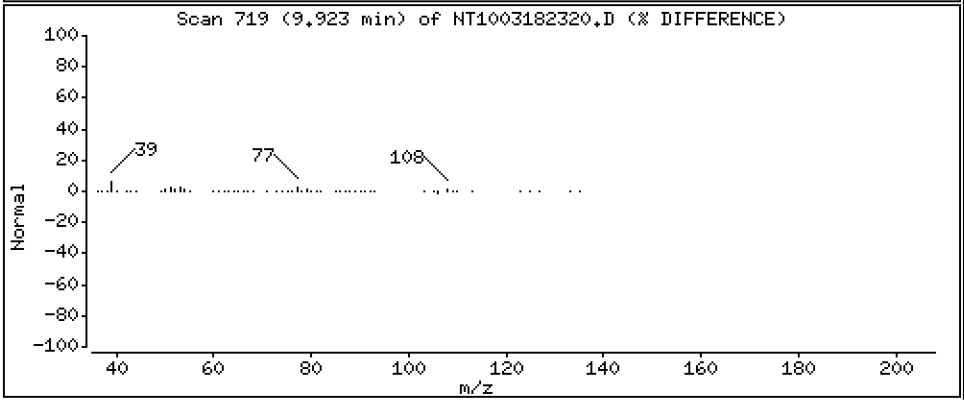












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

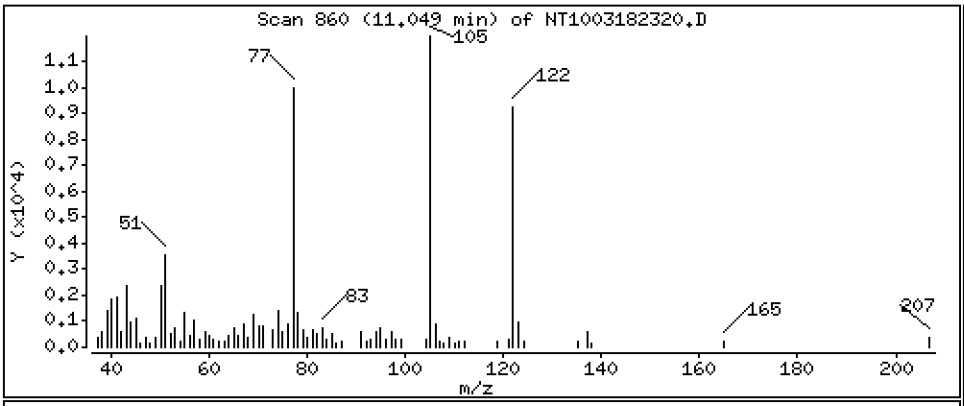
Operator: VTS

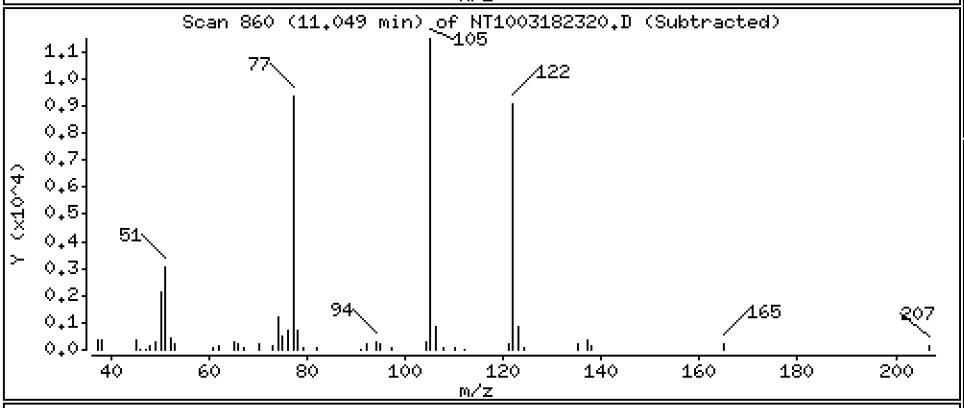
Column phase: ZB-5msi

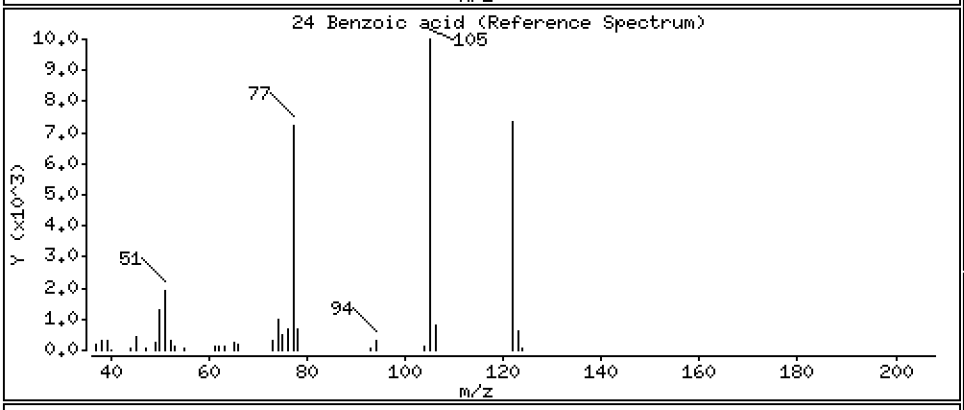
Column diameter: 0.25

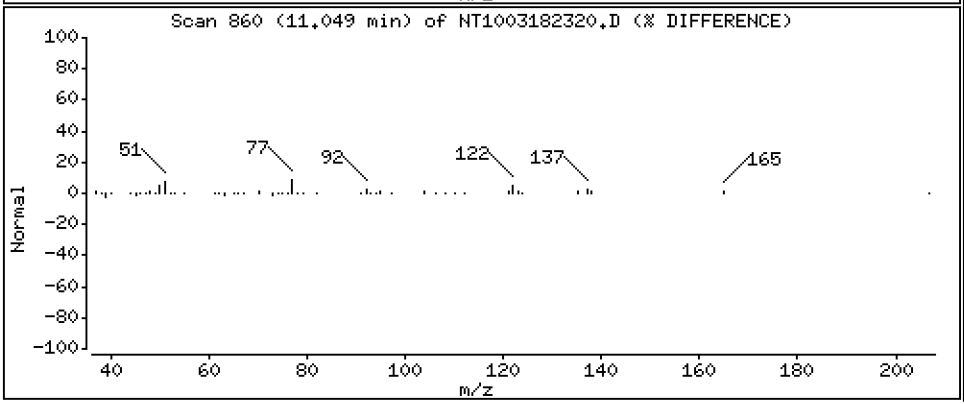
24 Benzoic acid

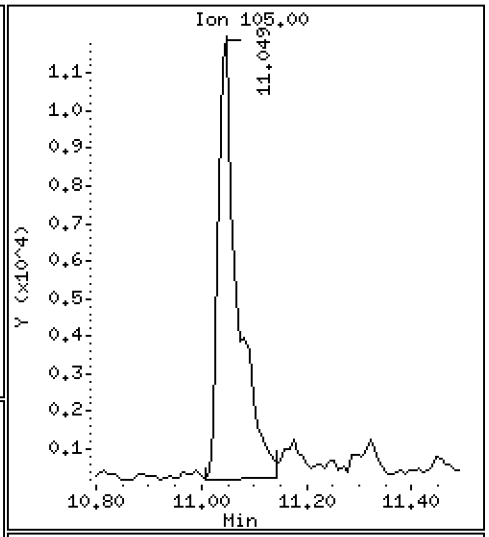
Concentration: 0.7630 ug/mL

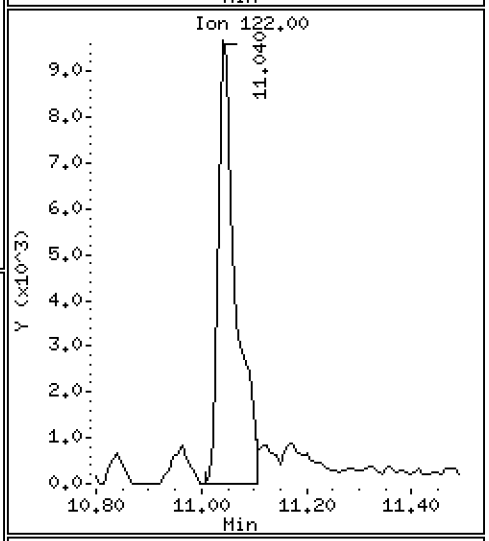


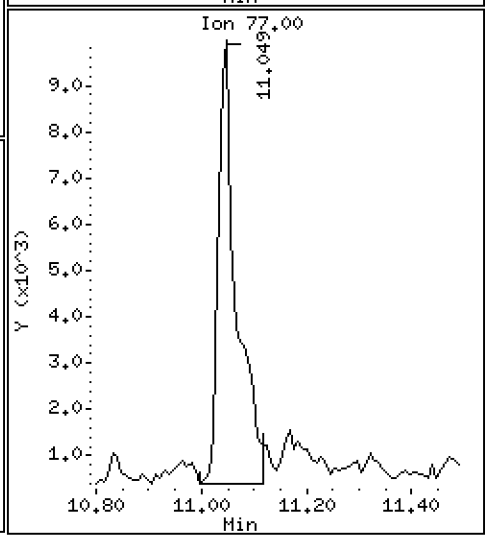












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

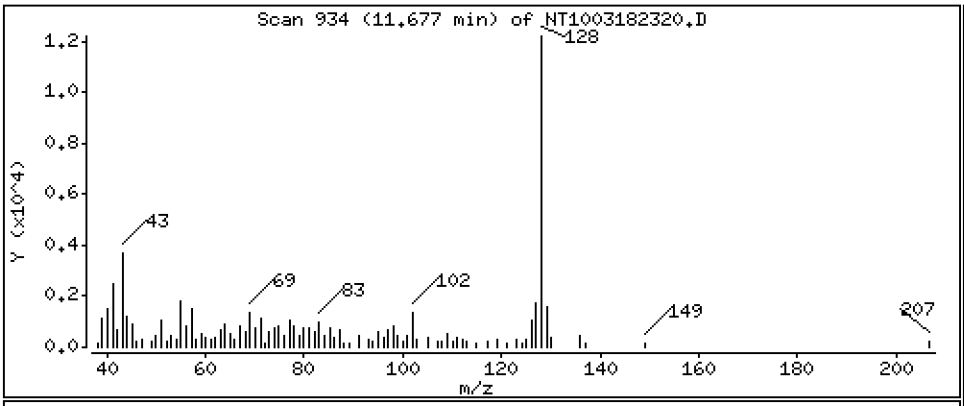
Operator: VTS

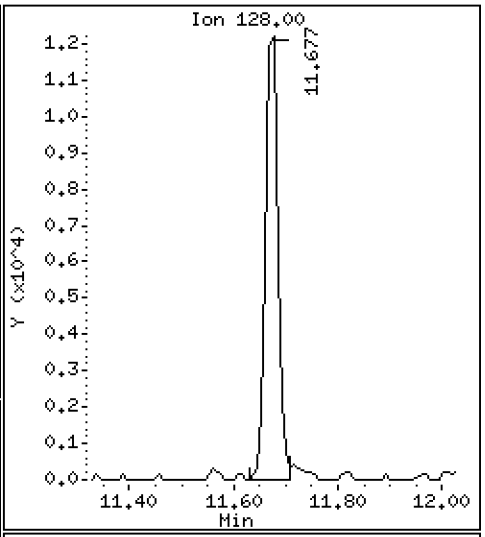
Column phase: ZB-5msi

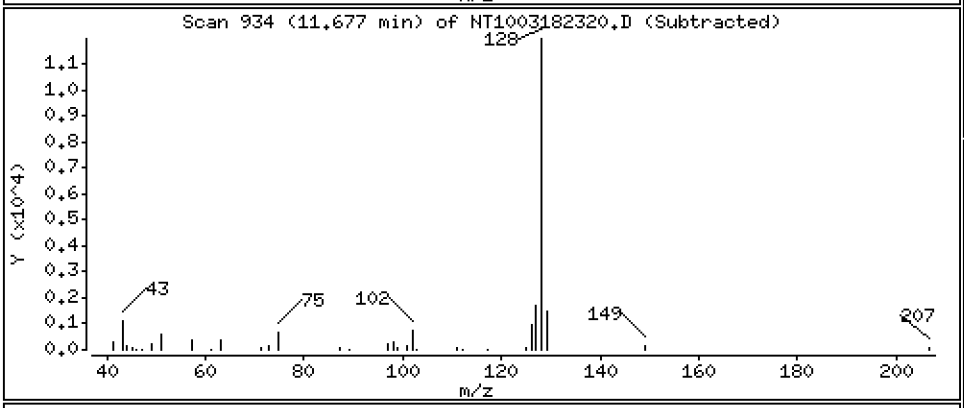
Column diameter: 0.25

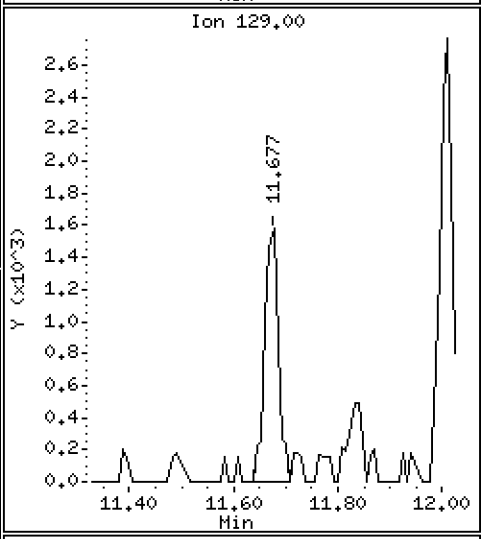
28 Naphthalene

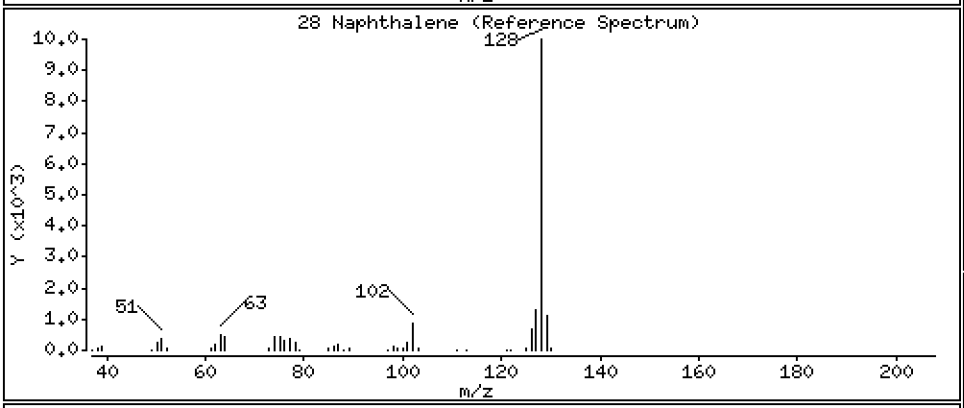
Concentration: 0.09249 ug/mL

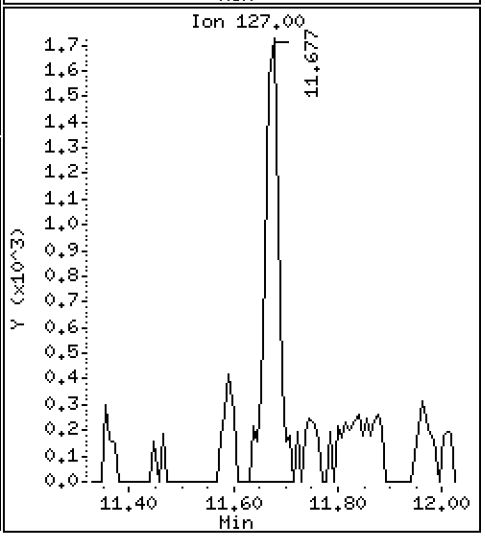


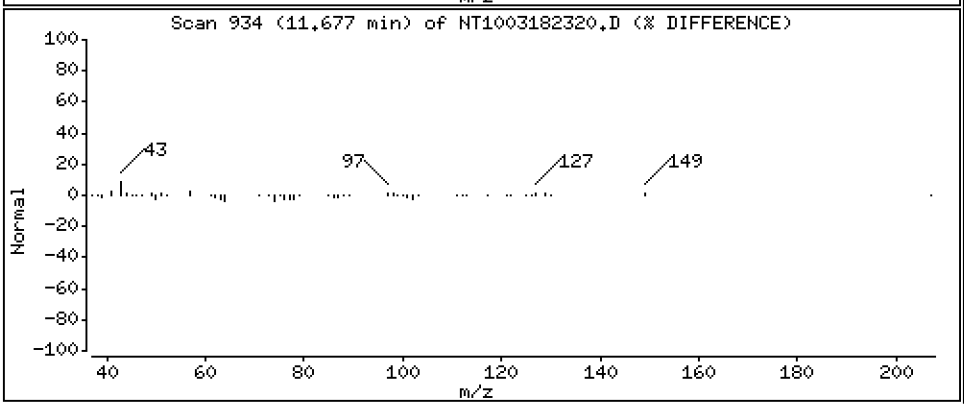












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

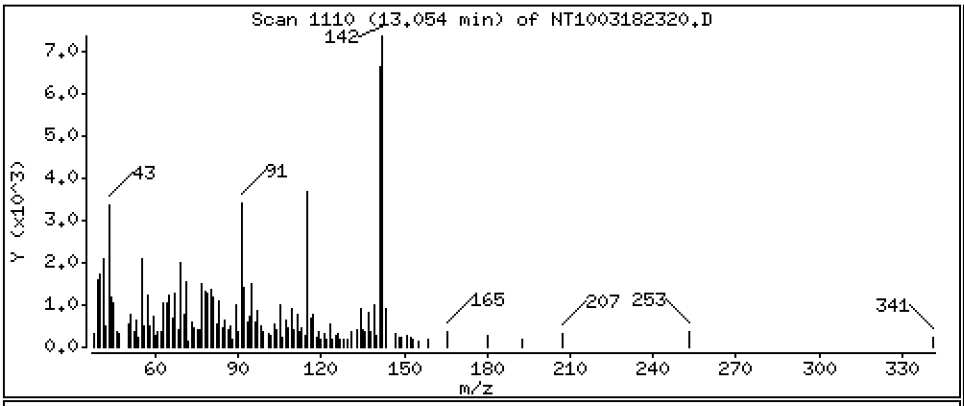
Operator: VTS

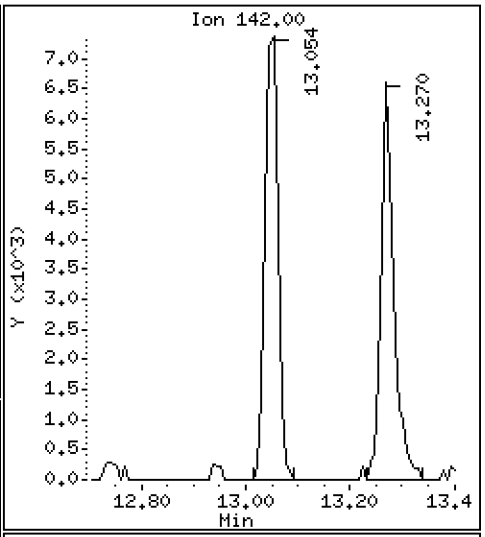
Column phase: ZB-5msi

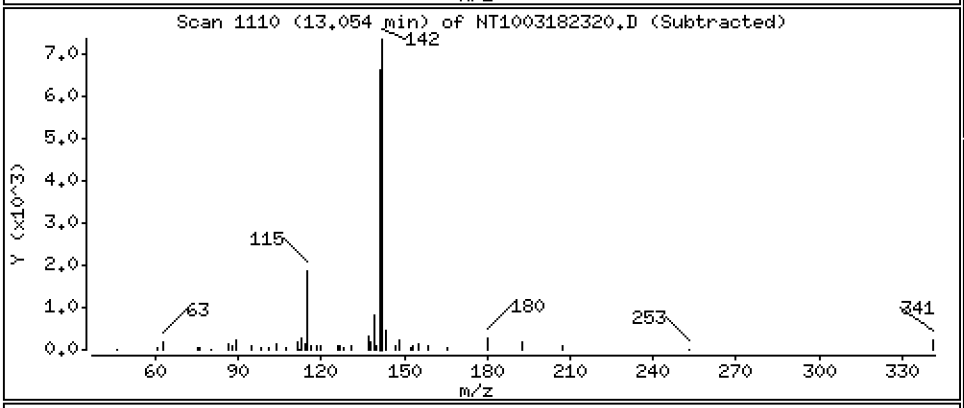
Column diameter: 0.25

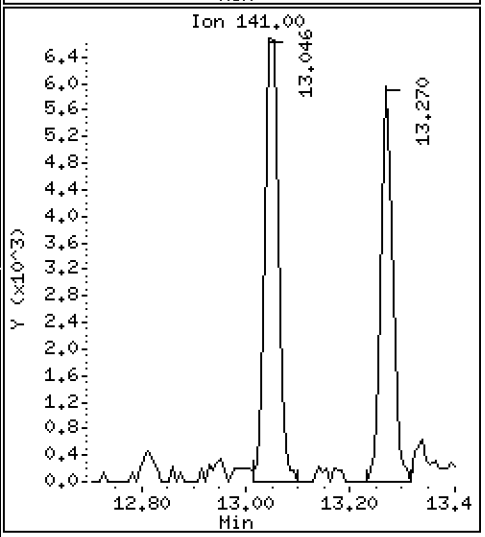
32 2-Methylnaphthalene

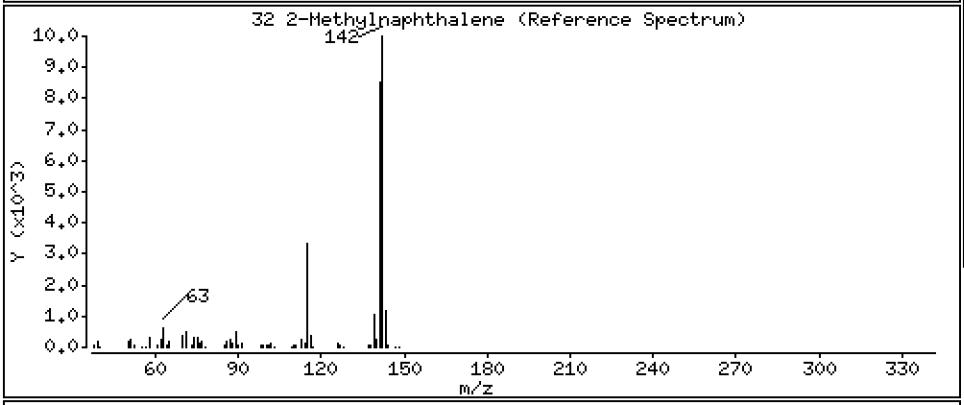
Concentration: 0.08146 ug/mL

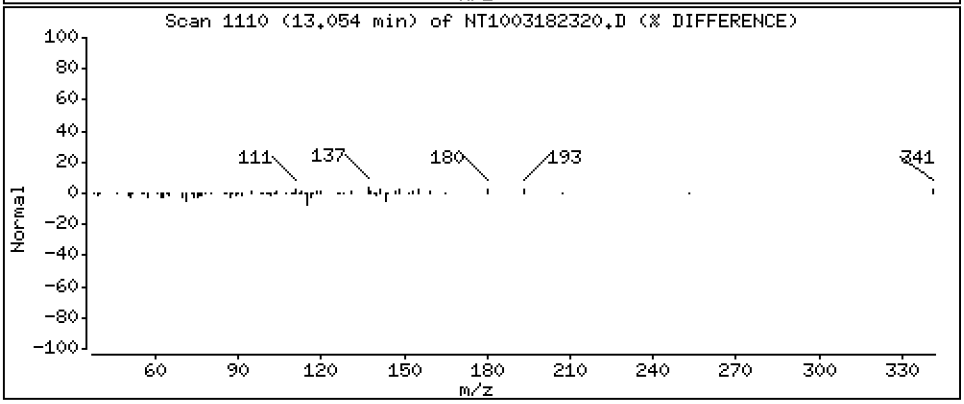












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

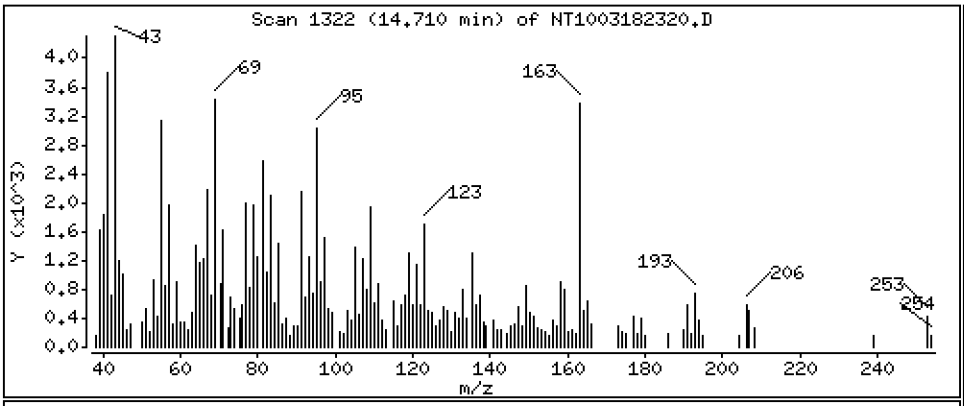
Operator: VTS

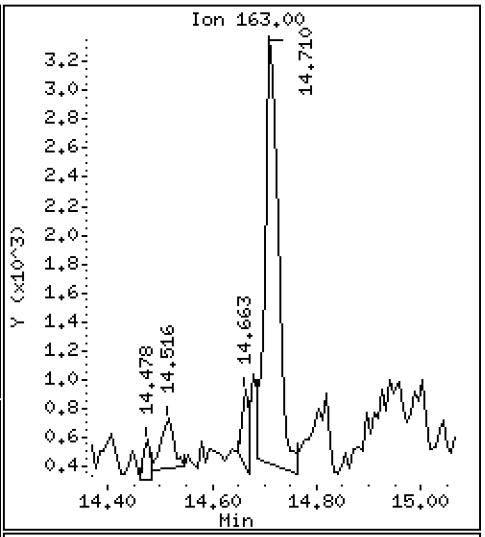
Column phase: ZB-5msi

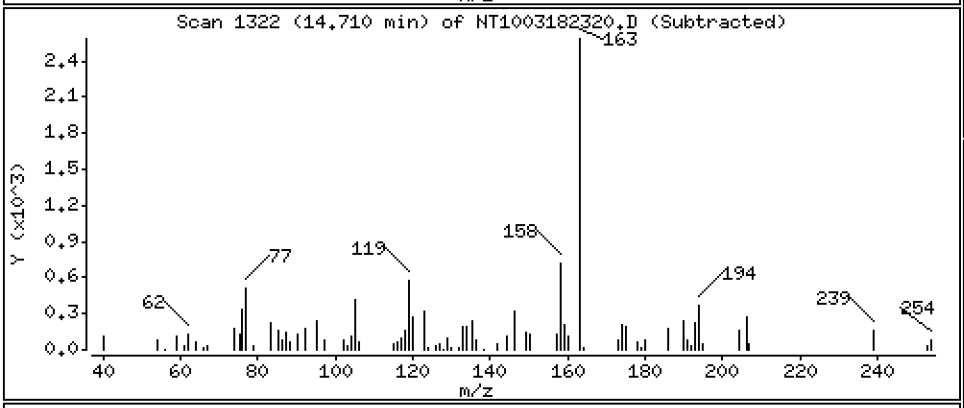
Column diameter: 0.25

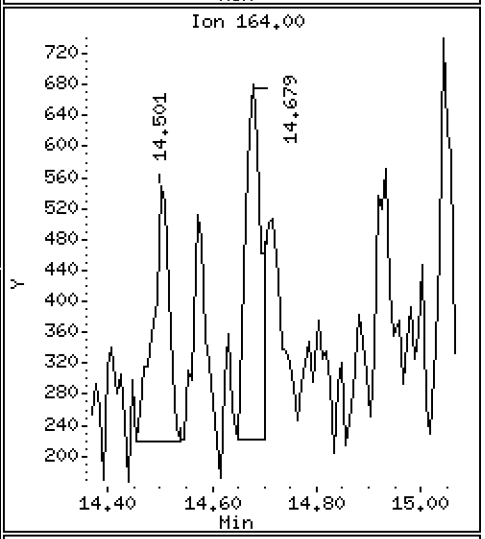
39 Dimethylphthalate

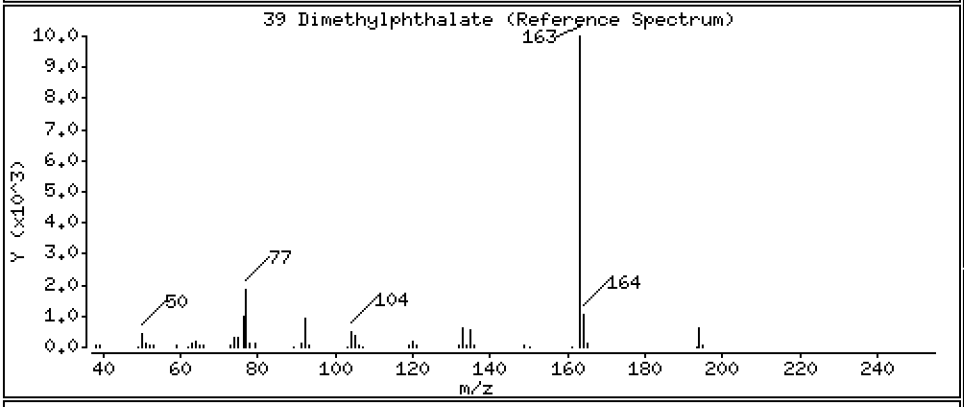
Concentration: 0.03783 ug/mL

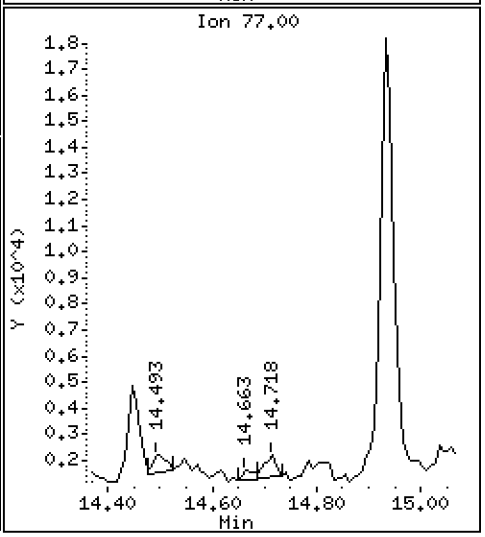


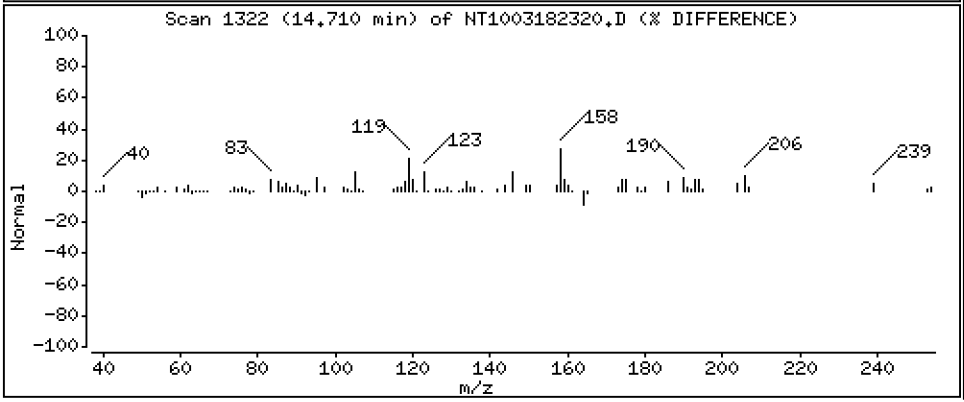












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

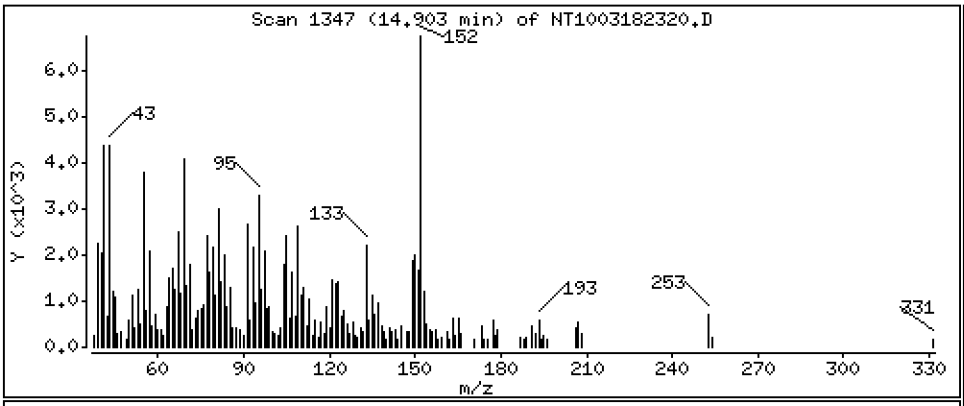
Operator: VTS

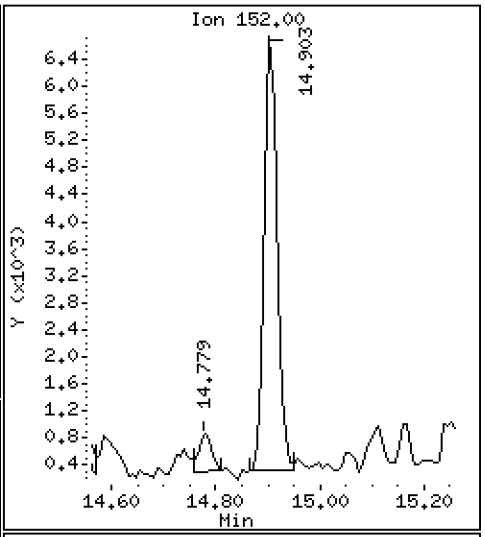
Column phase: ZB-5msi

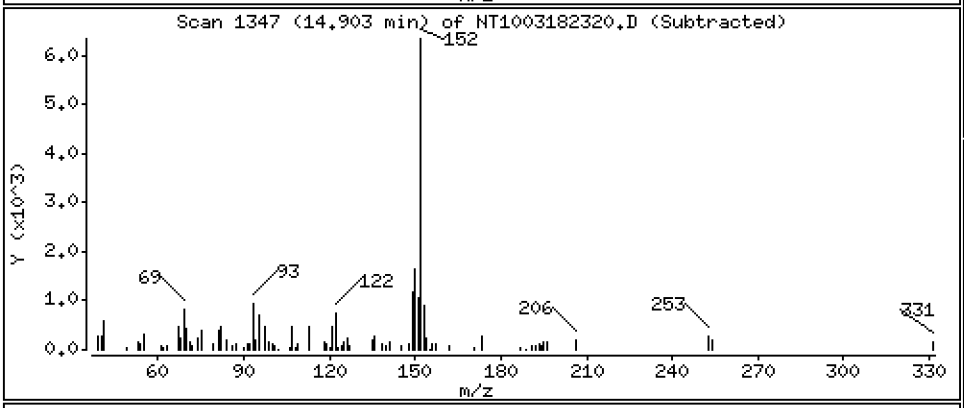
Column diameter: 0.25

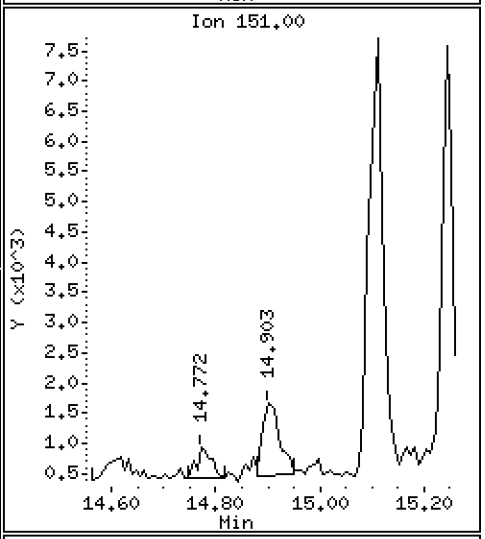
40 Acenaphthylene

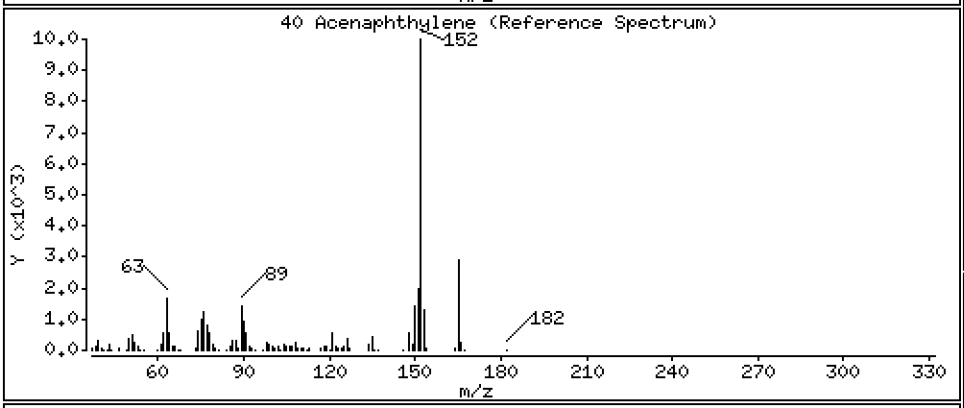
Concentration: 0.04967 ug/mL

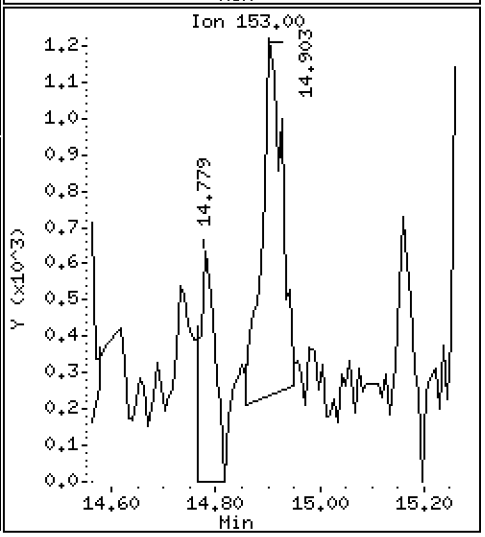


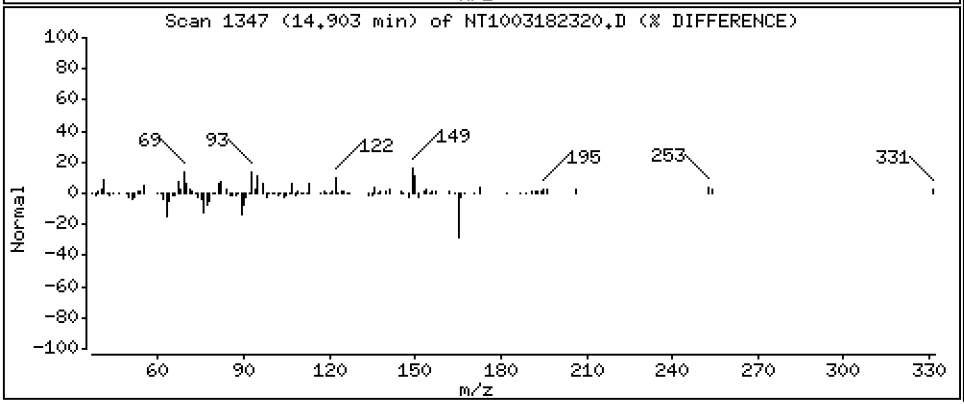












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

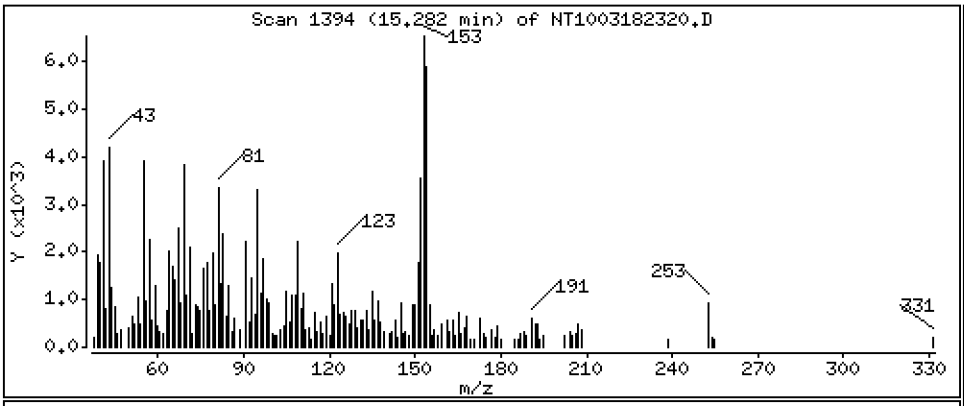
Operator: VTS

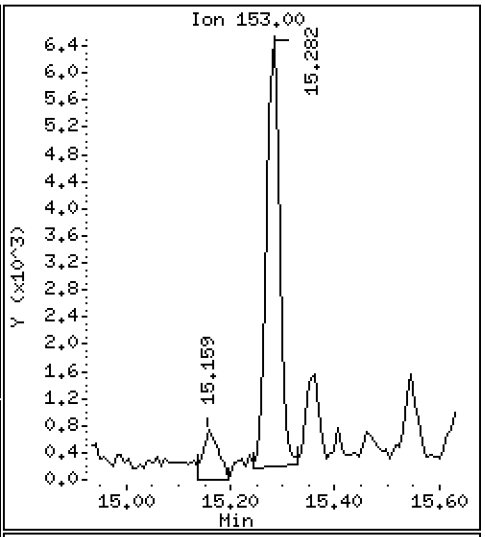
Column phase: ZB-5msi

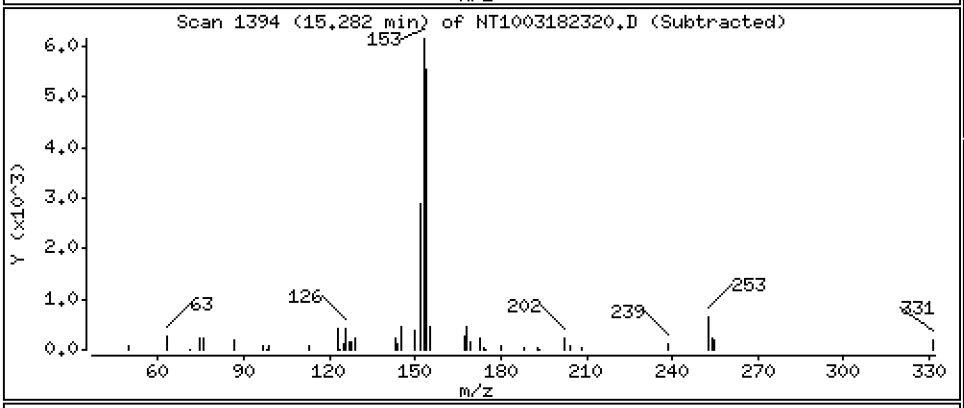
Column diameter: 0.25

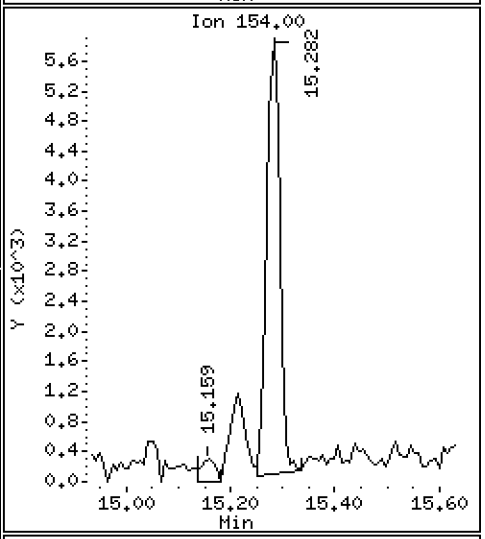
44 Acenaphthene

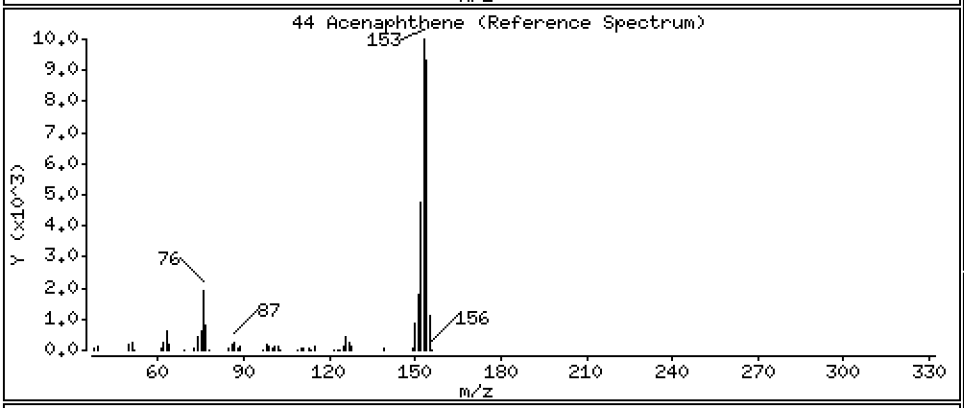
Concentration: 0.08073 ug/mL

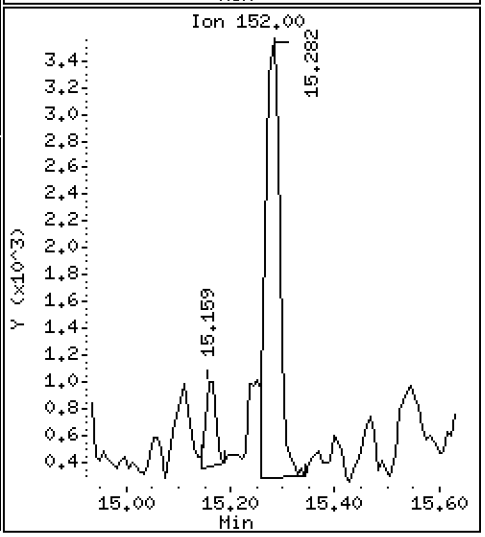


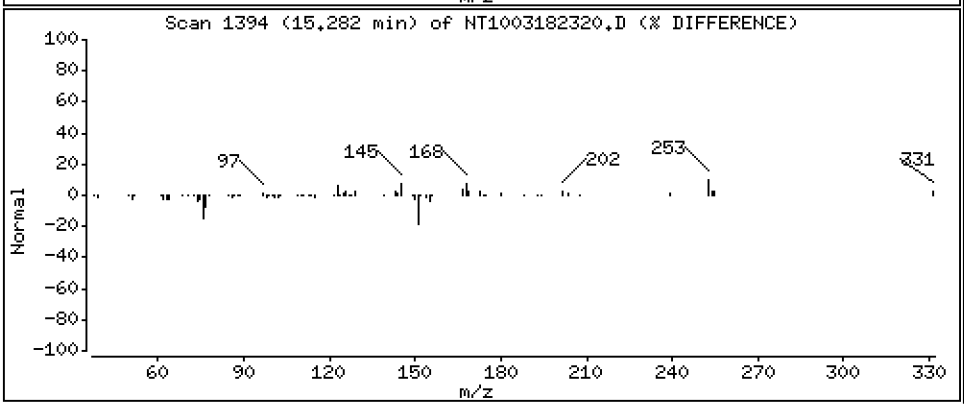












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

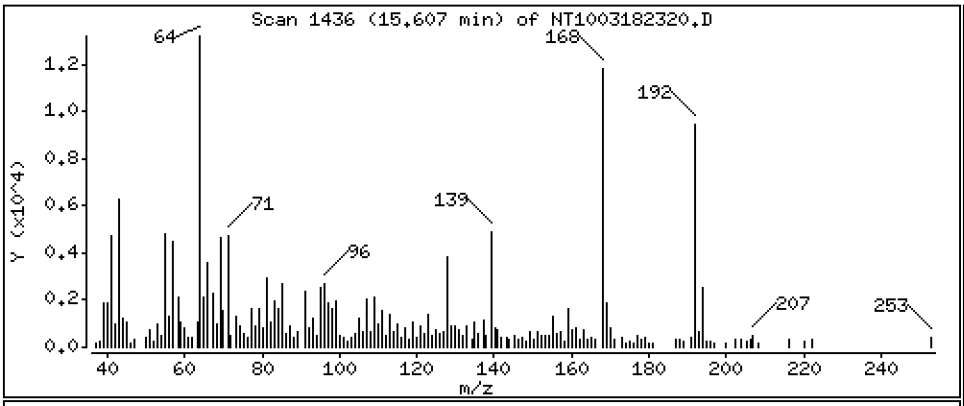
Operator: VTS

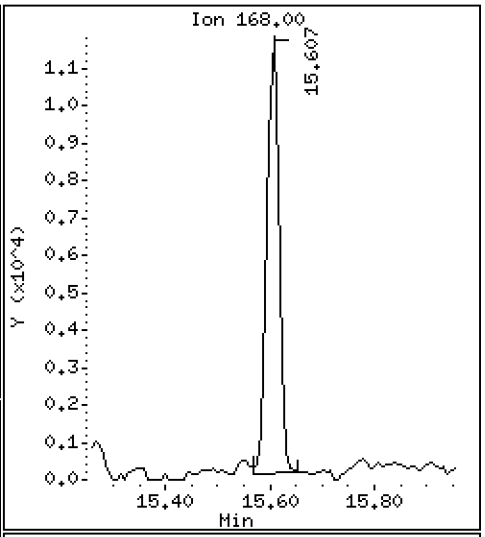
Column phase: ZB-5msi

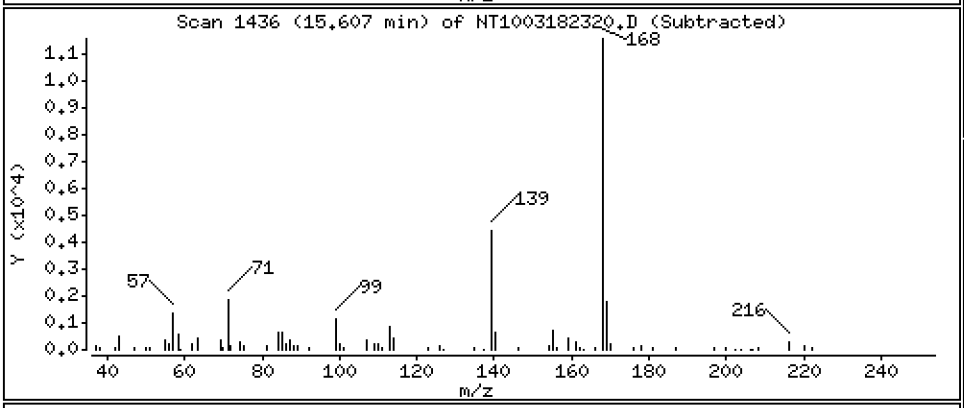
Column diameter: 0.25

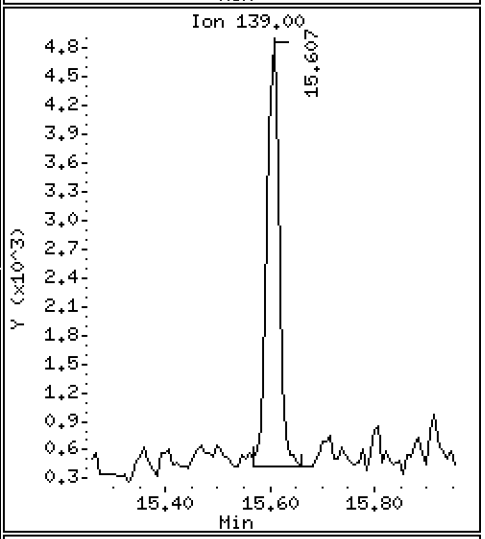
46 Dibenzofuran

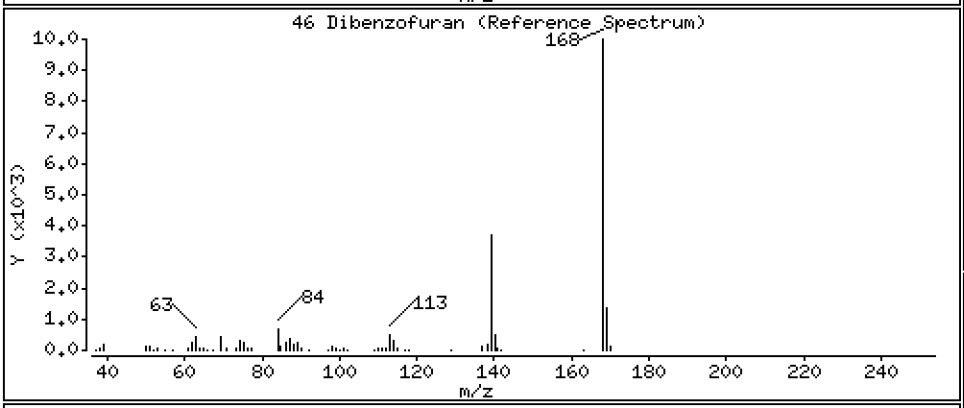
Concentration: 0.09316 ug/mL

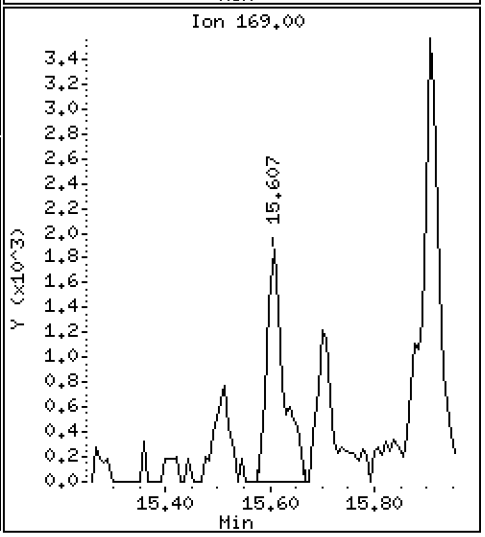


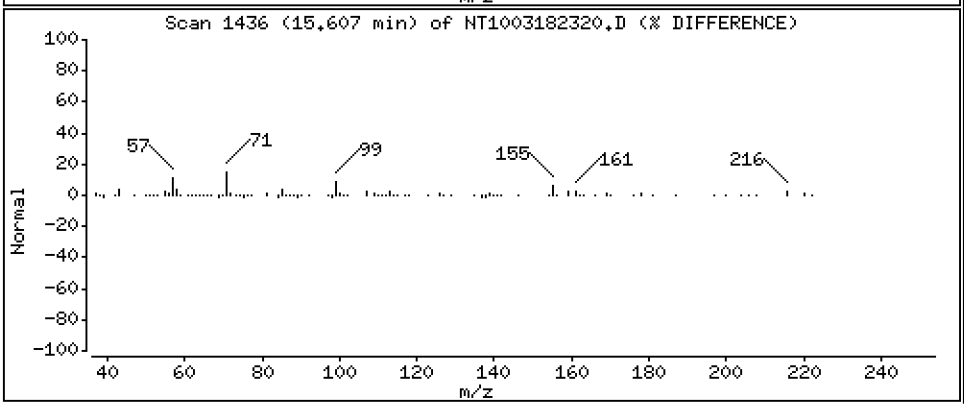












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

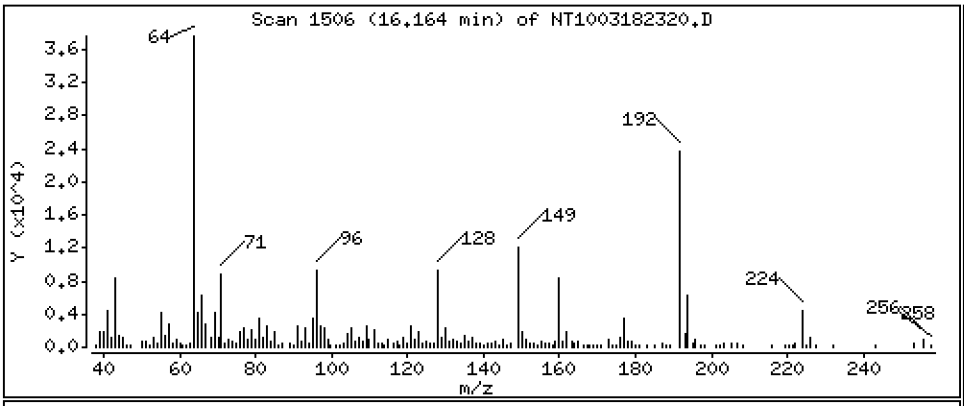
Operator: VTS

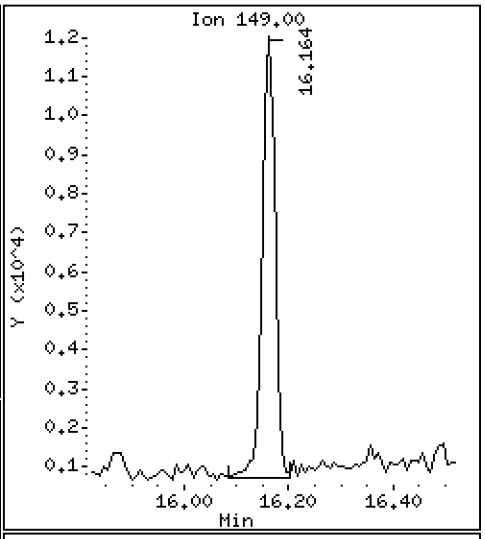
Column phase: ZB-5msi

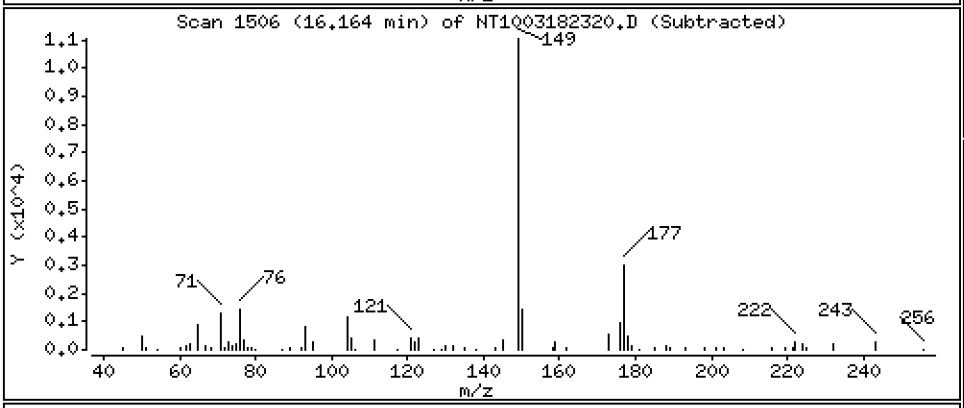
Column diameter: 0.25

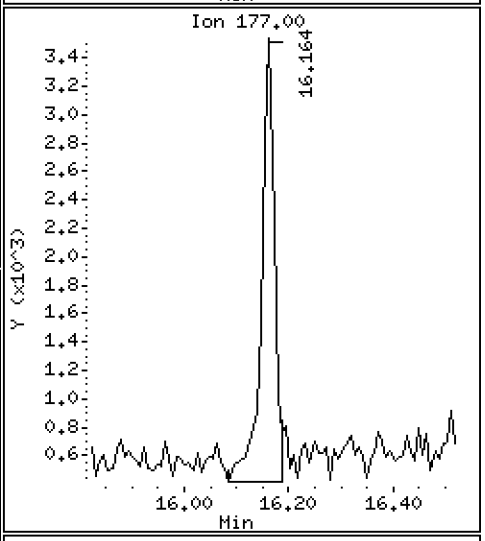
50 Diethylphthalate

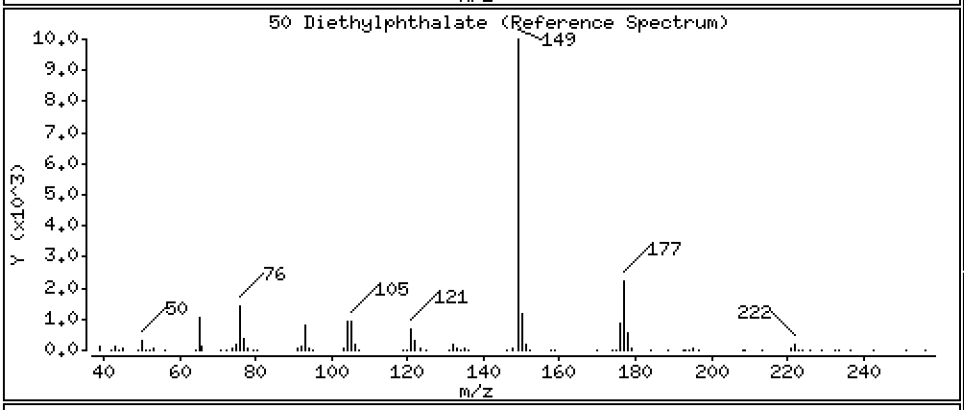
Concentration: 0.1579 ug/mL

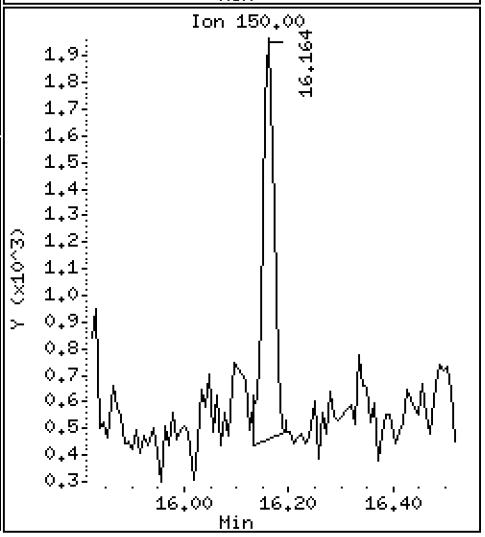


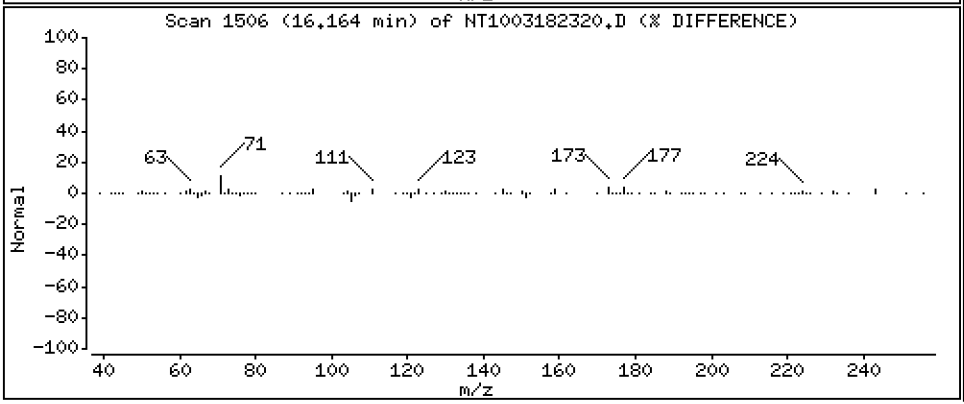












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

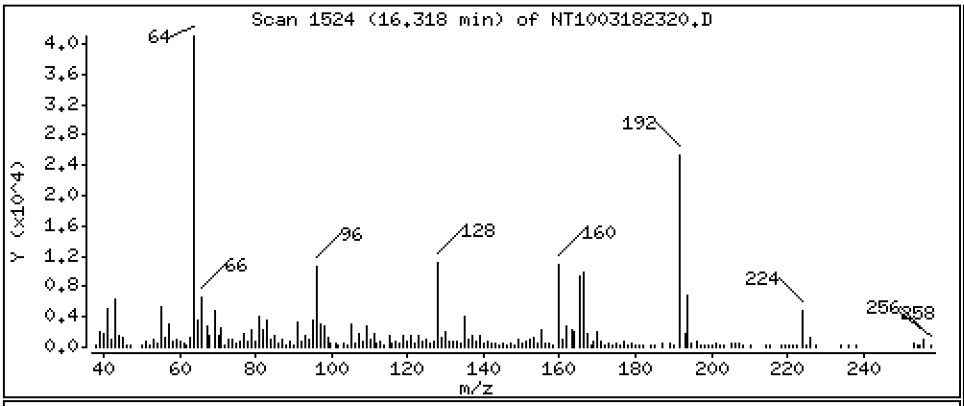
Operator: VTS

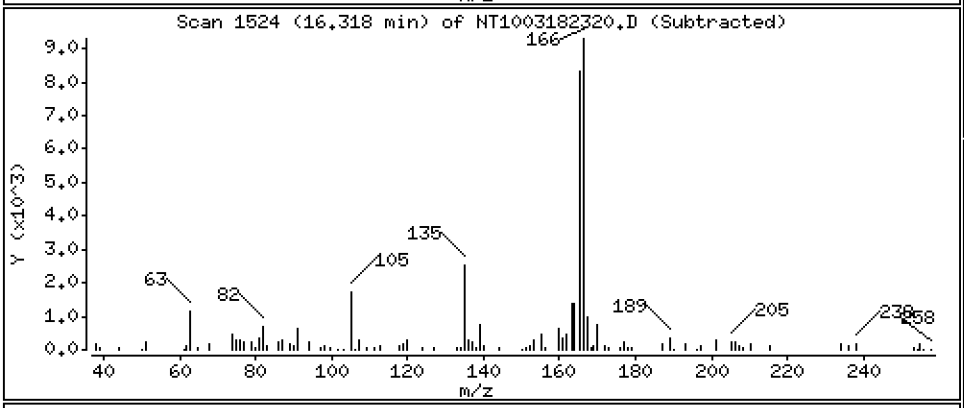
Column phase: ZB-5msi

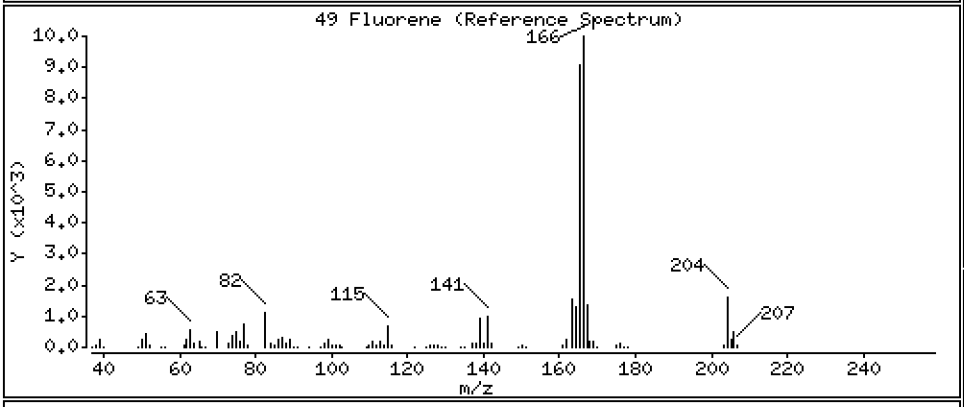
Column diameter: 0.25

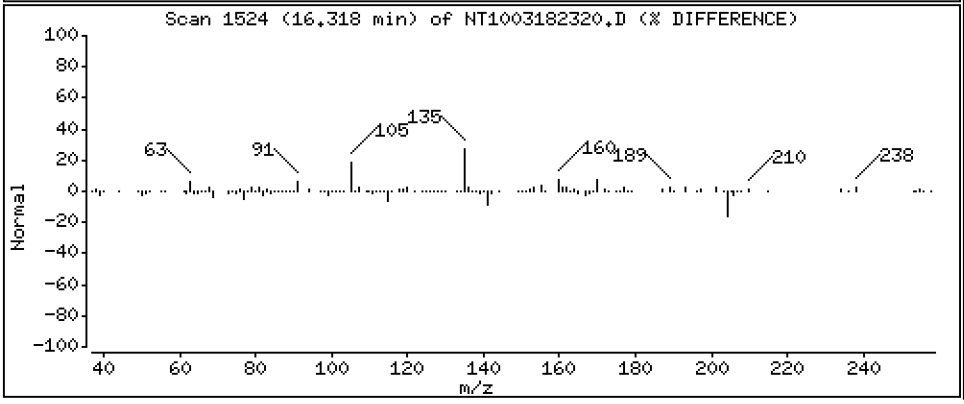
49 Fluorene

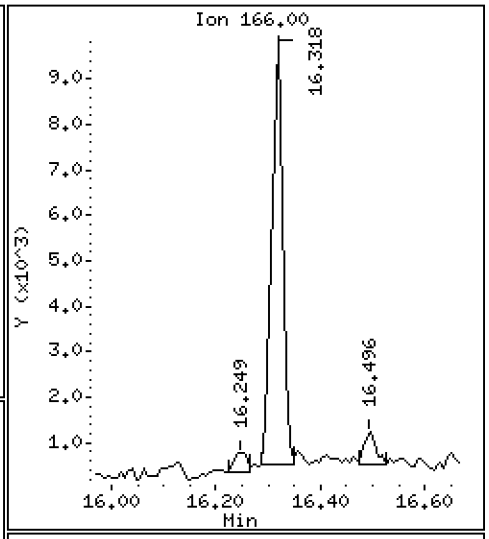
Concentration: 0.07604 ug/mL

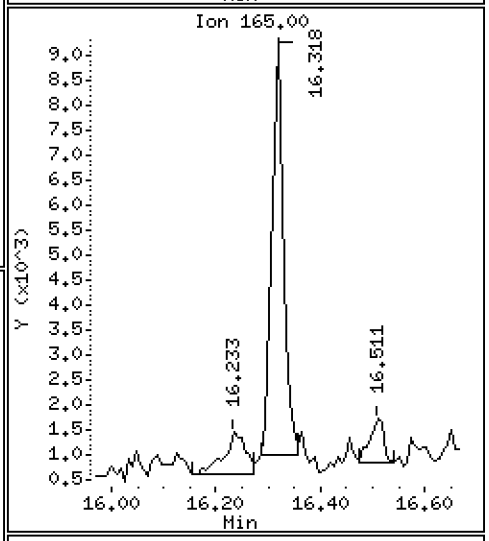


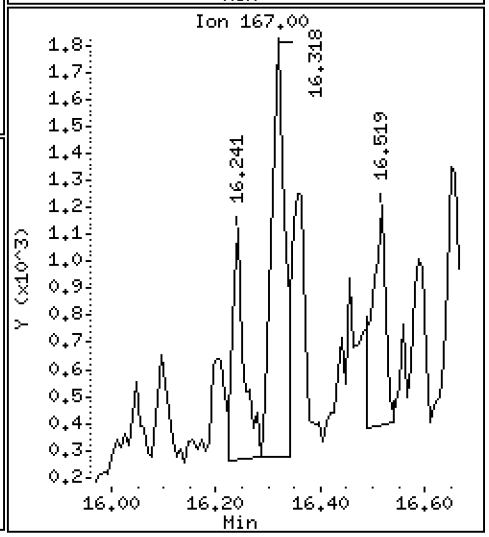












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

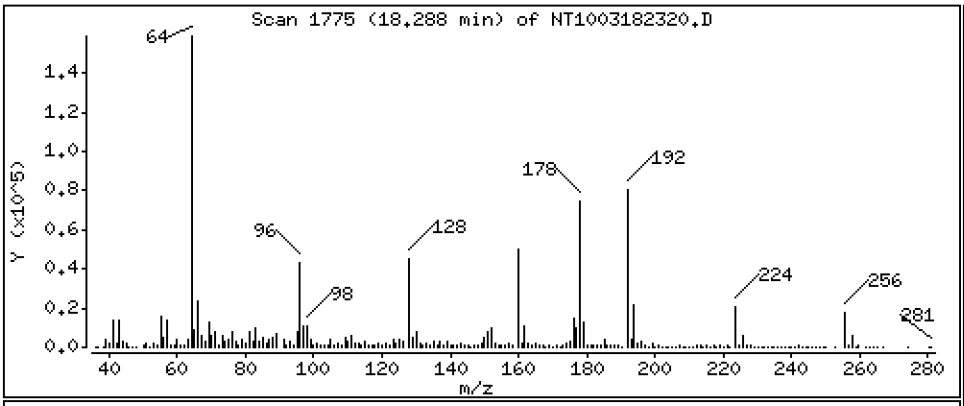
Operator: VTS

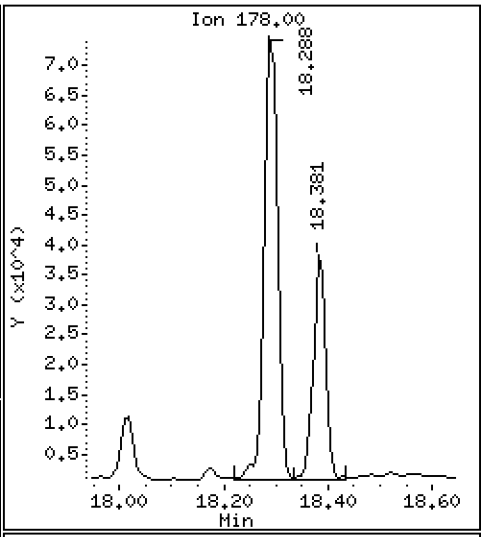
Column phase: ZB-5msi

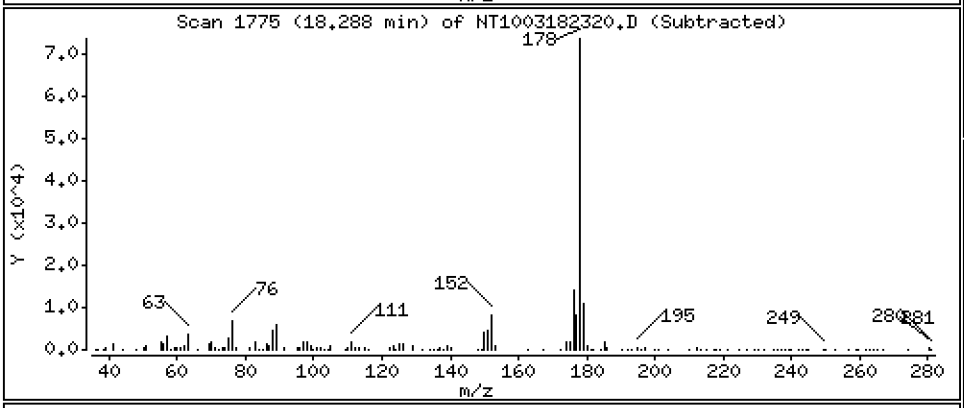
Column diameter: 0.25

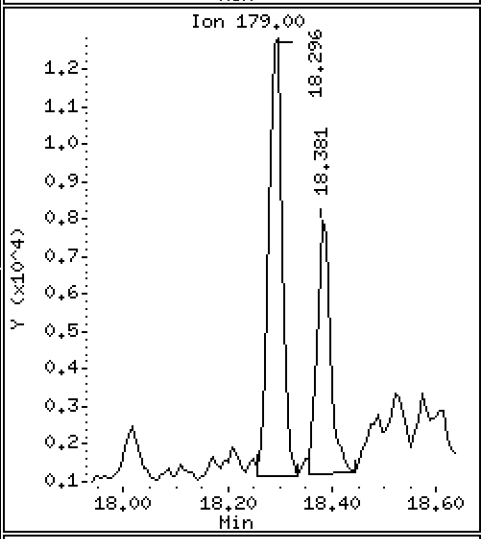
60 Phenanthrene

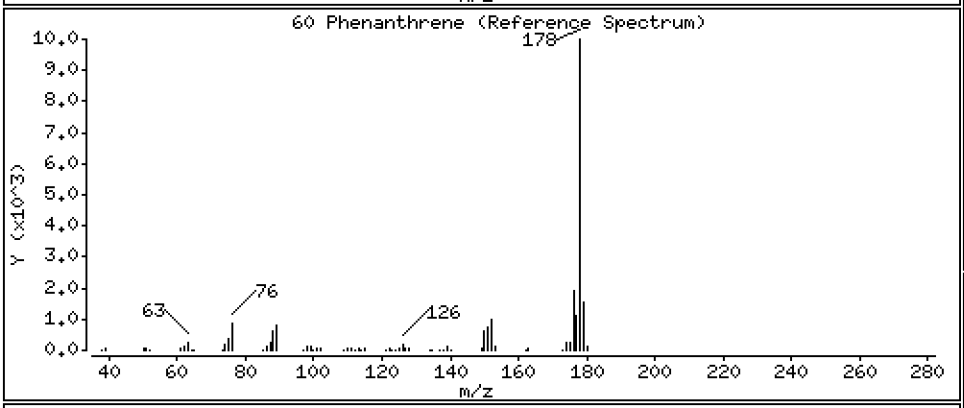
Concentration: 0.5749 ug/mL

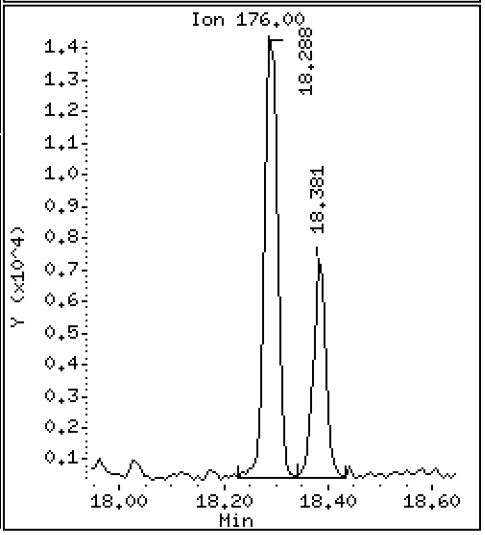


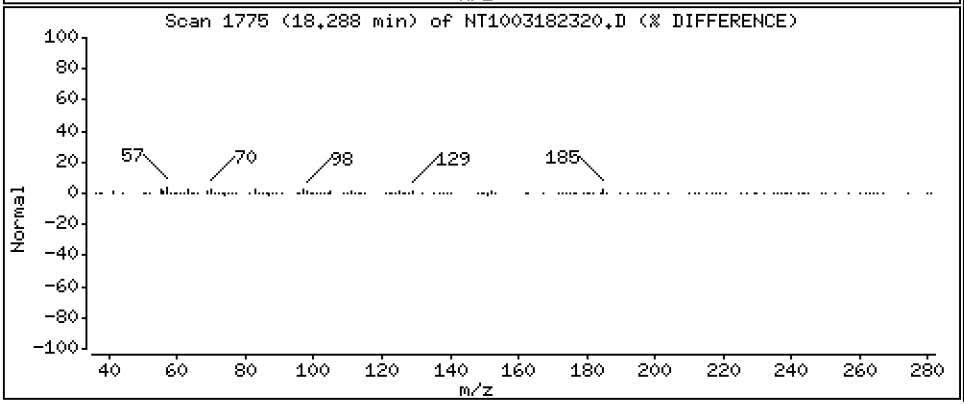












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

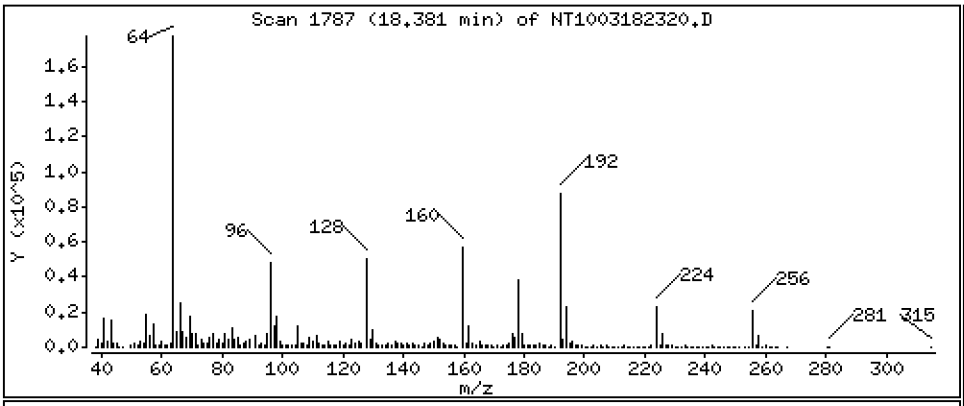
Operator: VTS

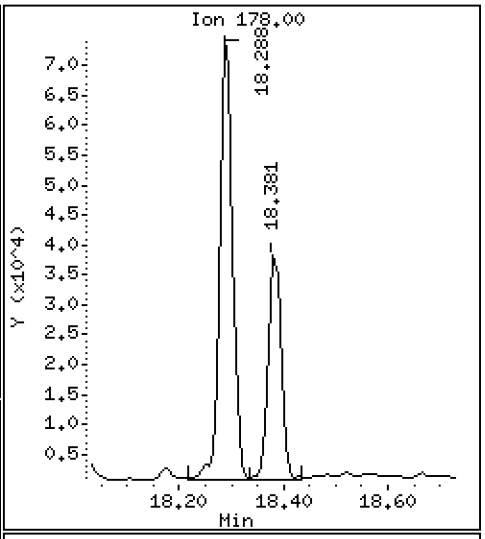
Column phase: ZB-5msi

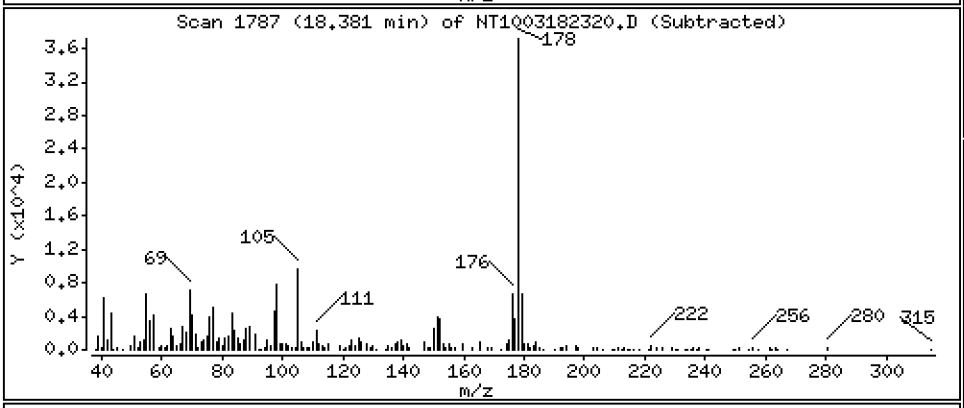
Column diameter: 0.25

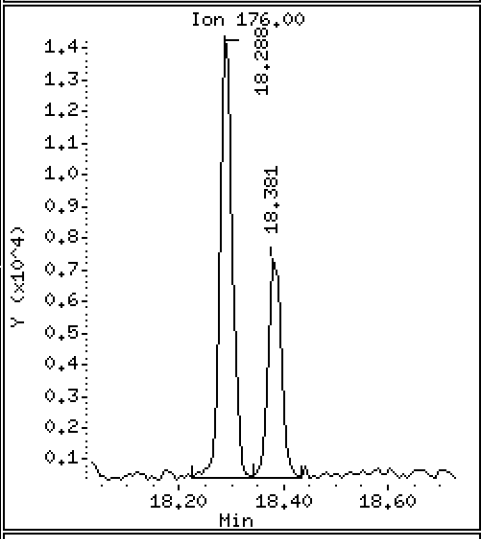
61 Anthracene

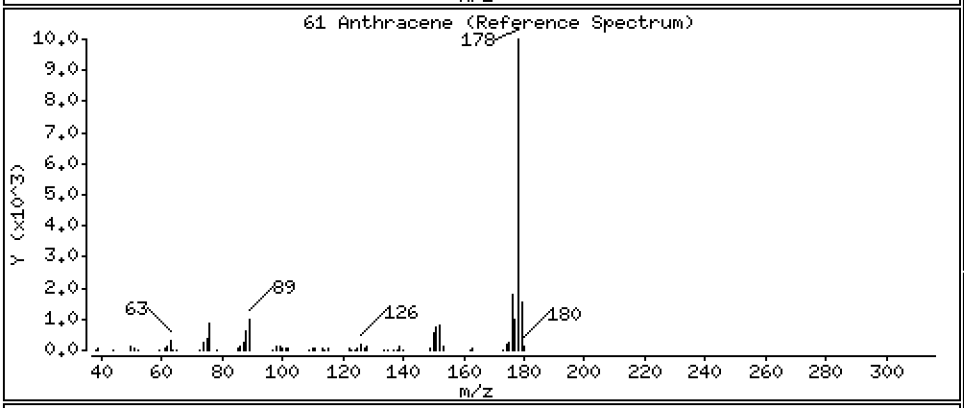
Concentration: 0.2923 ug/mL

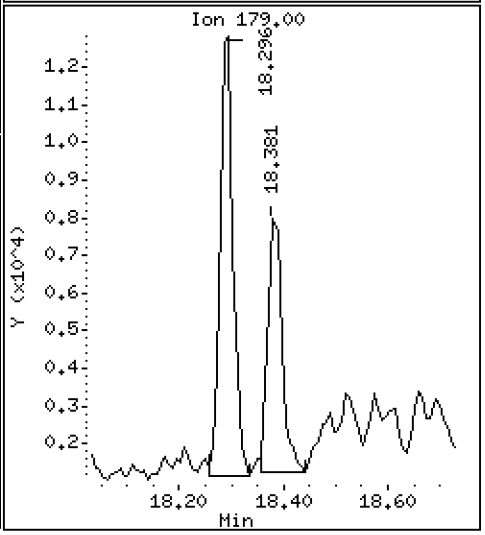


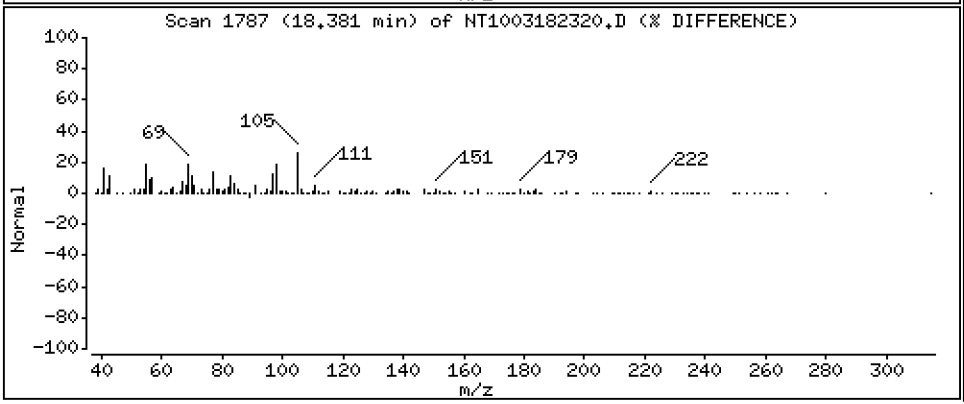












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

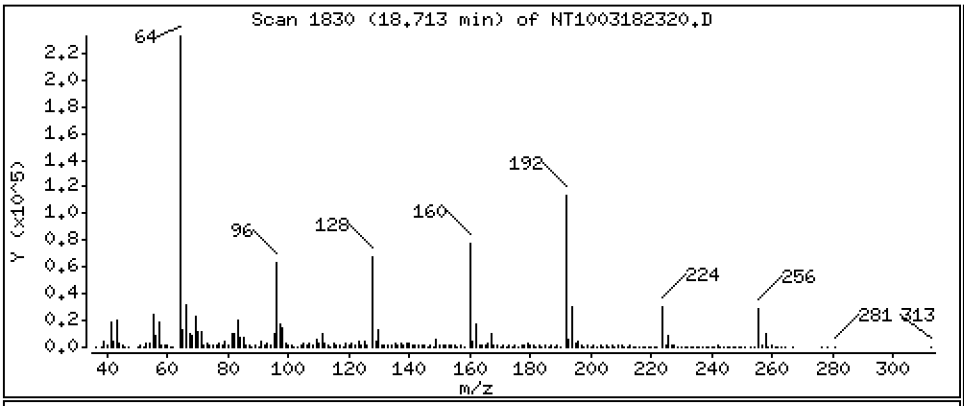
Operator: VTS

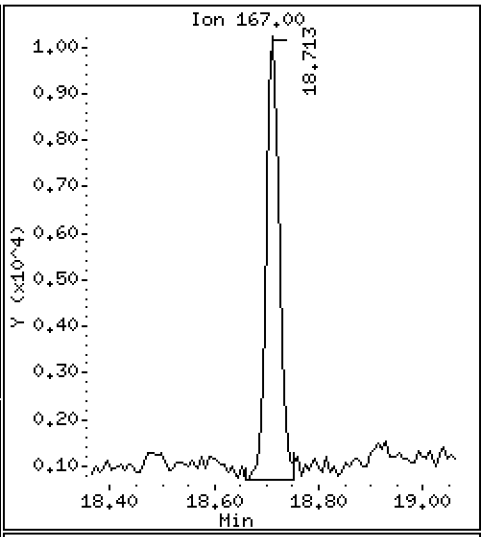
Column phase: ZB-5msi

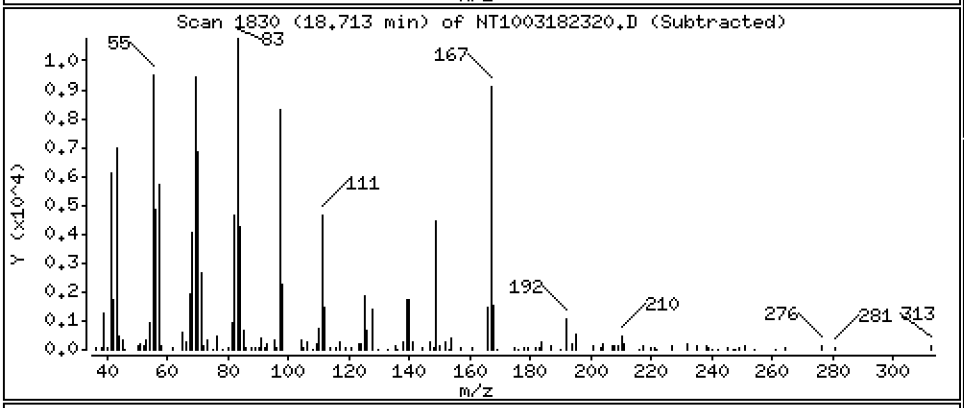
Column diameter: 0.25

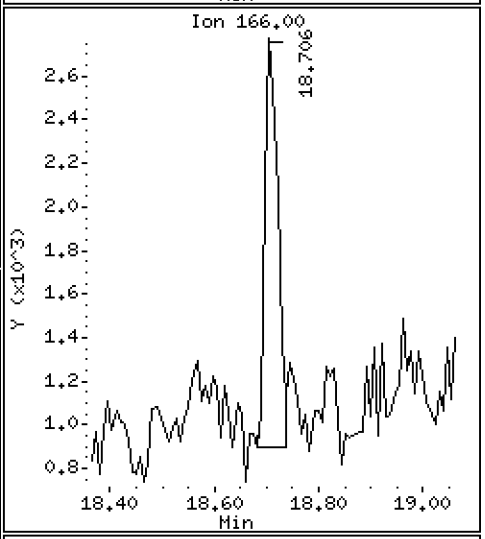
62 Carbazole

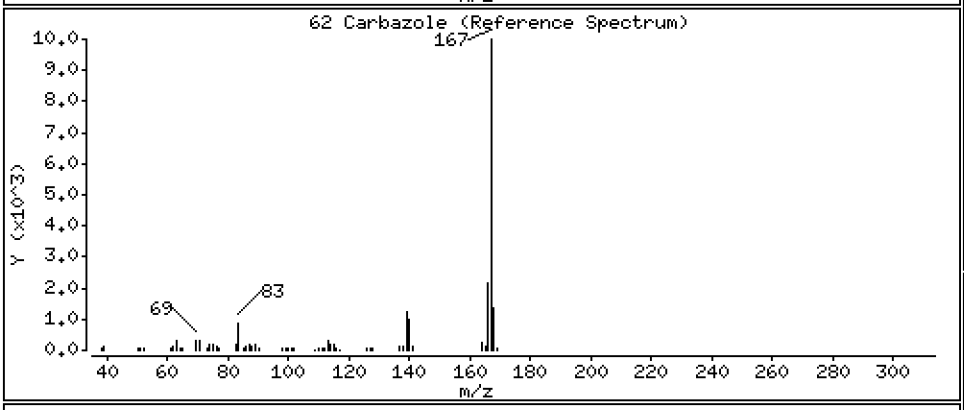
Concentration: 0.08397 ug/mL

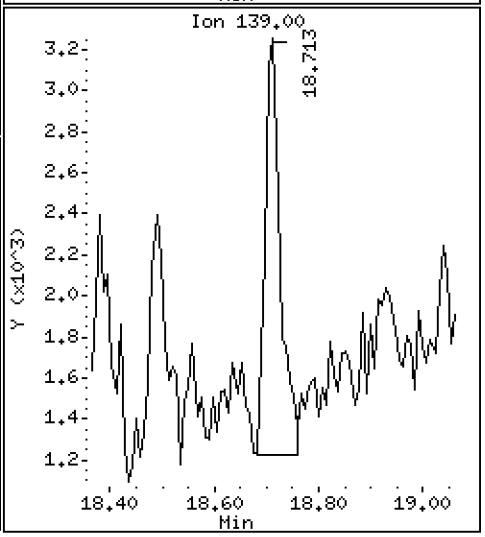


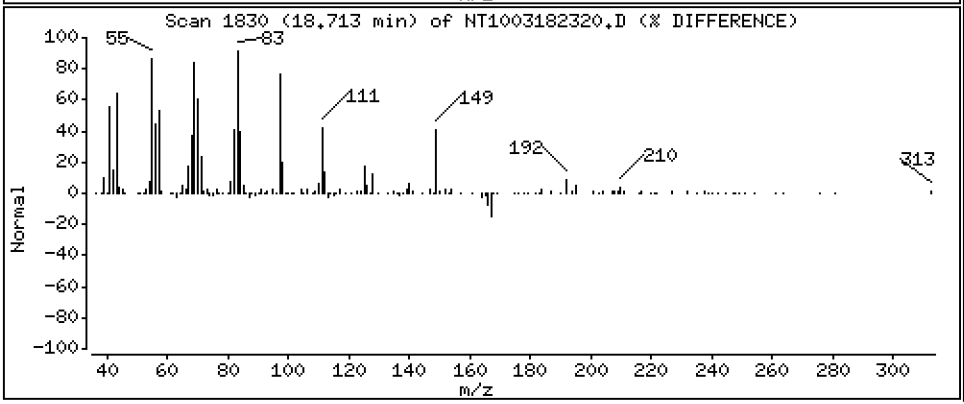












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

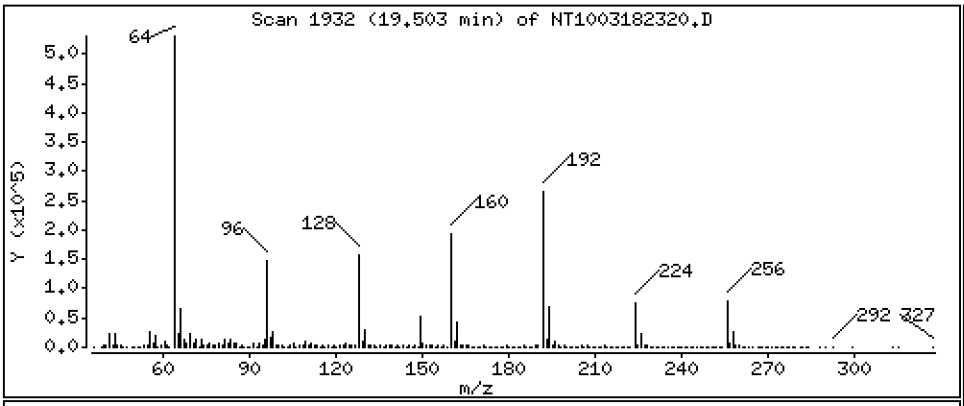
Operator: VTS

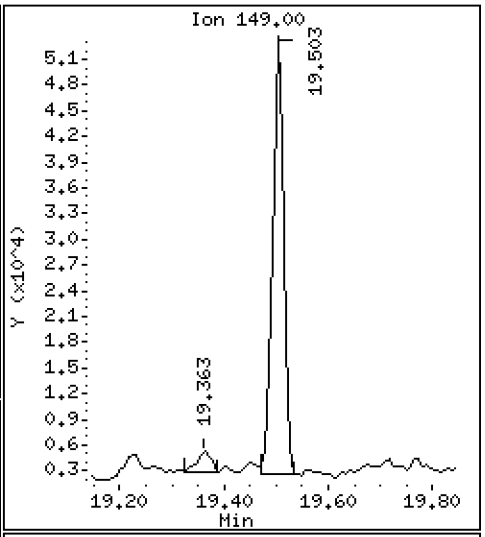
Column phase: ZB-5msi

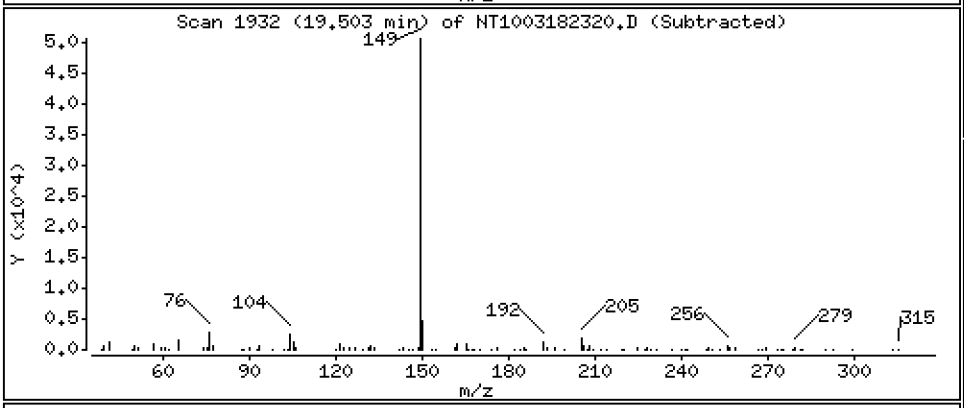
Column diameter: 0.25

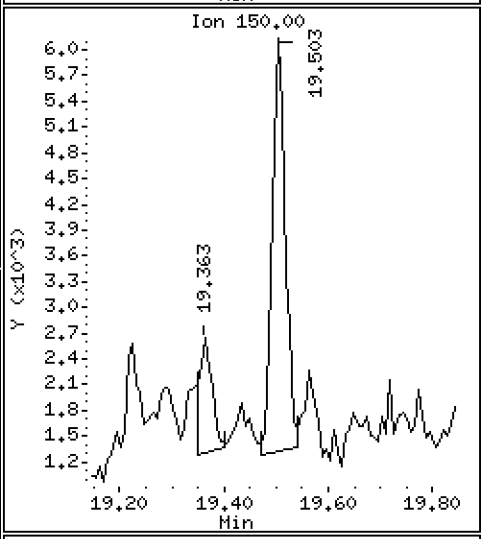
63 Di-n-butylphthalate

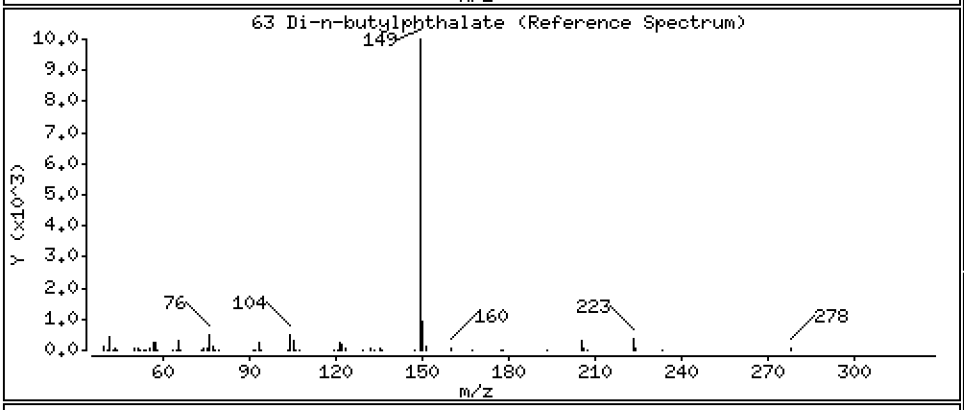
Concentration: 0.2904 ug/mL

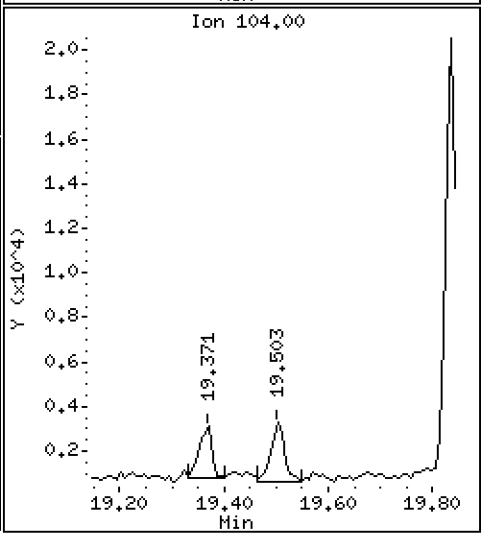


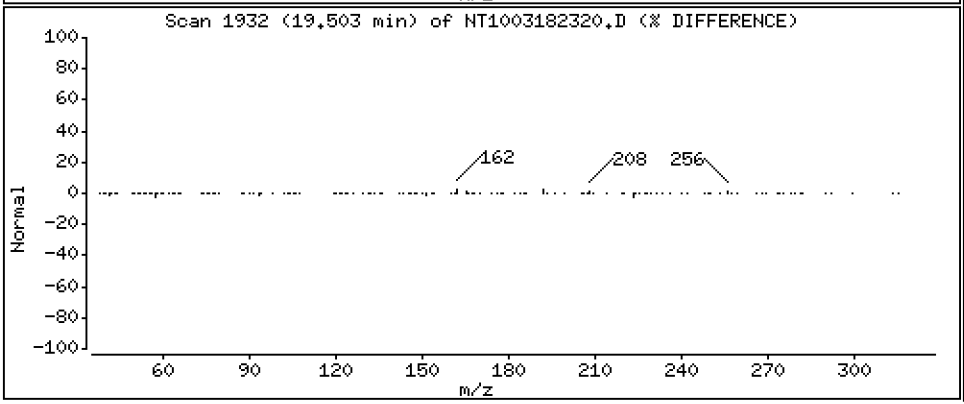












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

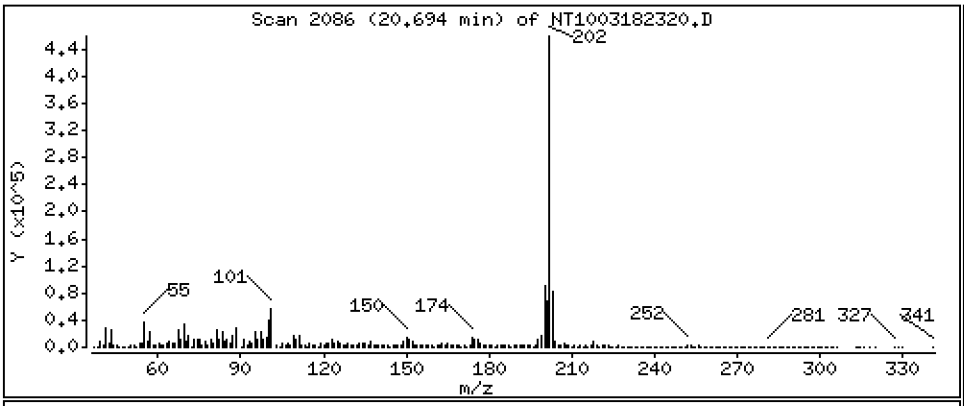
Operator: VTS

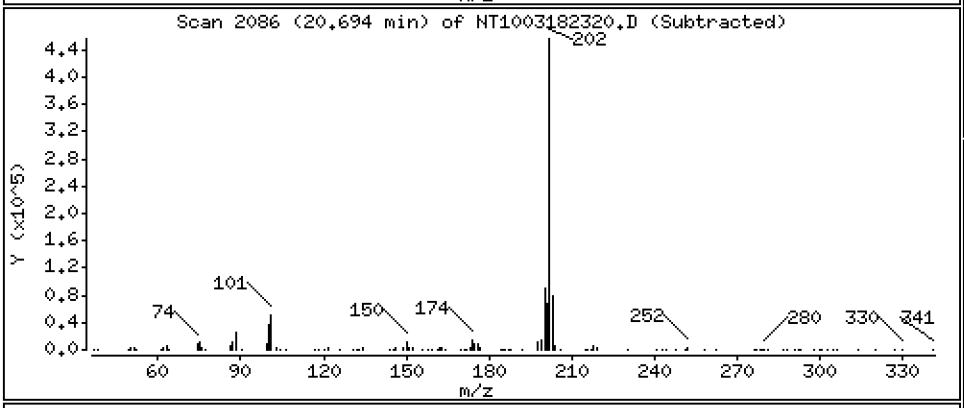
Column phase: ZB-5msi

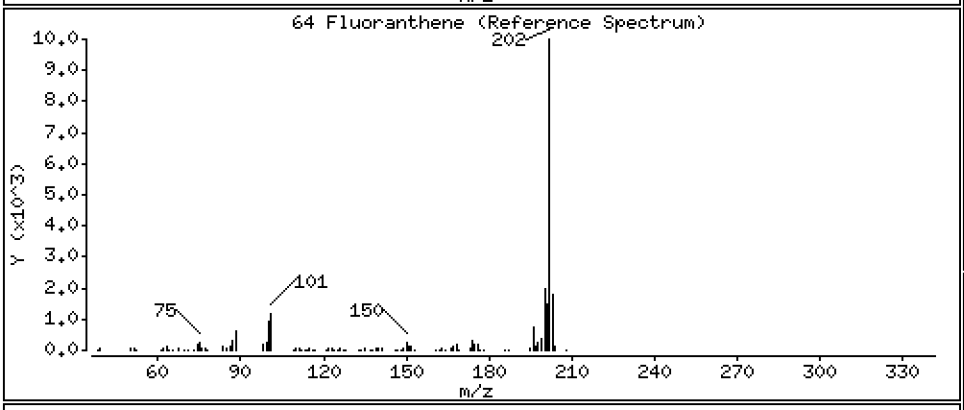
Column diameter: 0.25

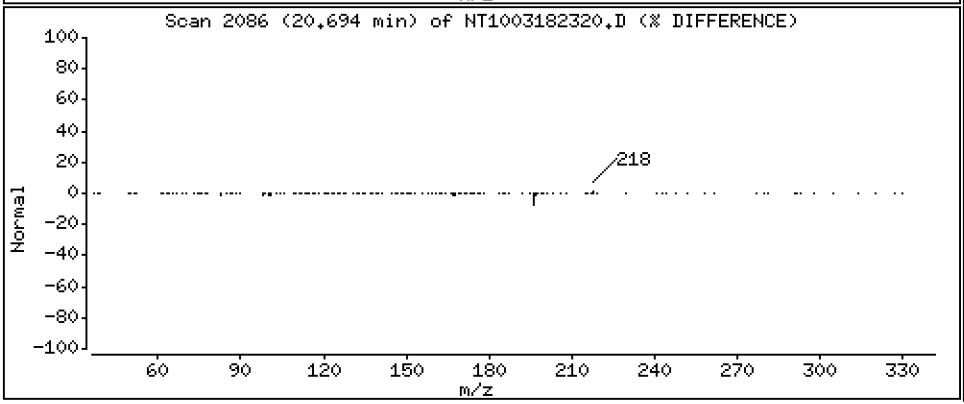
64 Fluoranthene

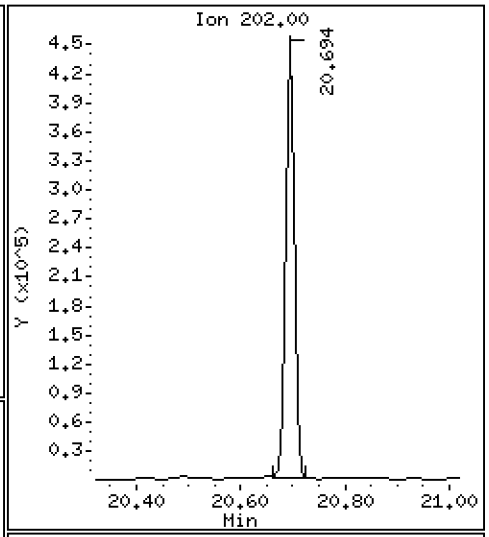
Concentration: 1.933 ug/mL

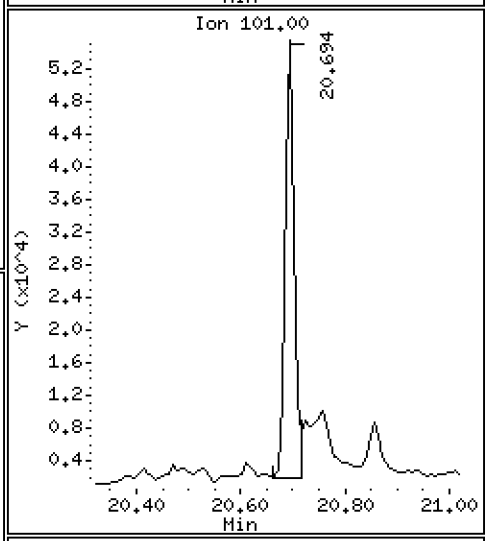


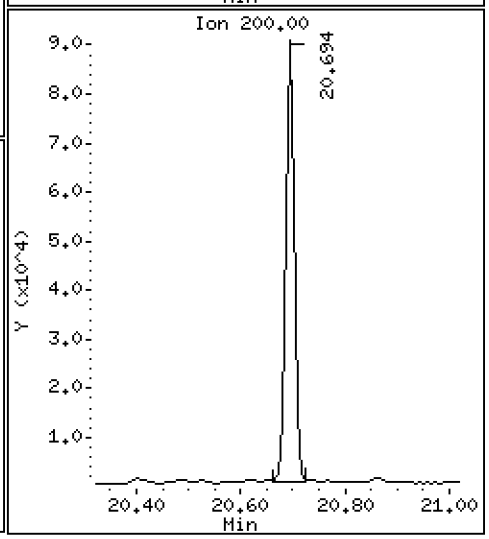












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

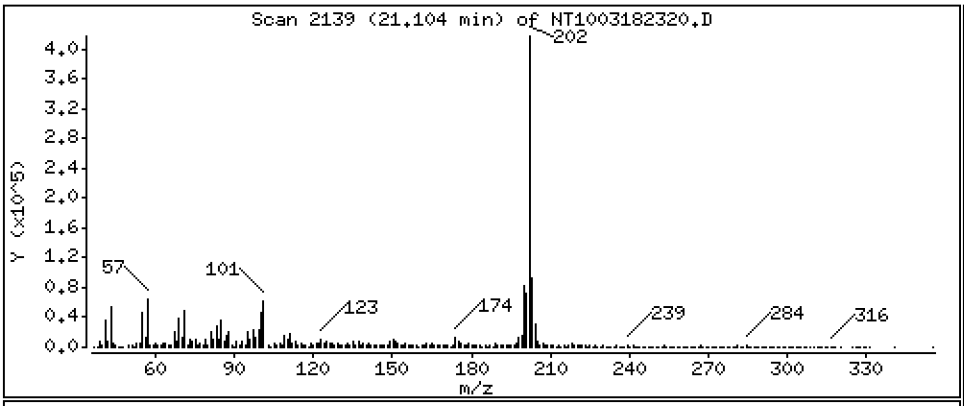
Operator: VTS

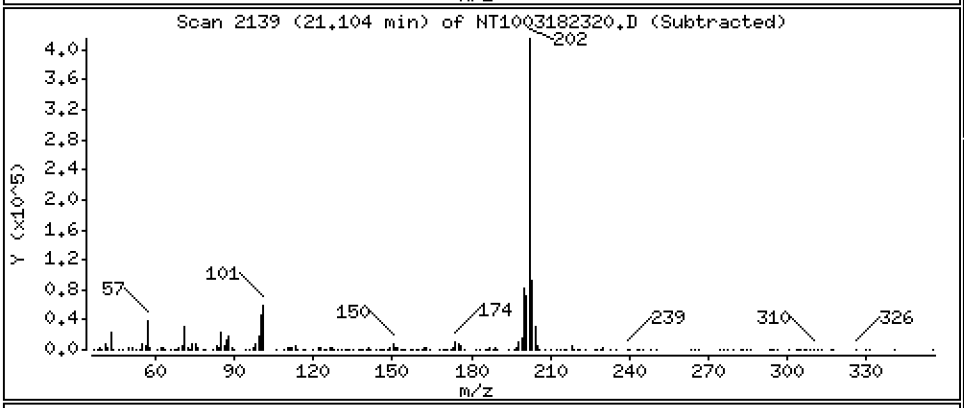
Column phase: ZB-5msi

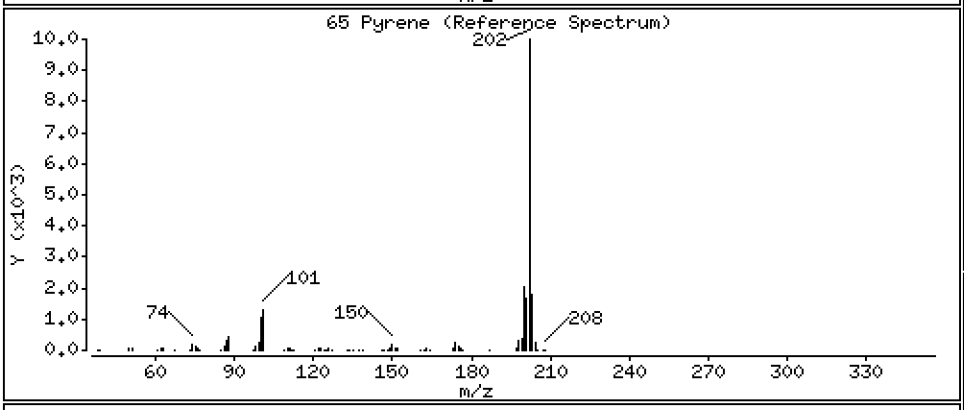
Column diameter: 0.25

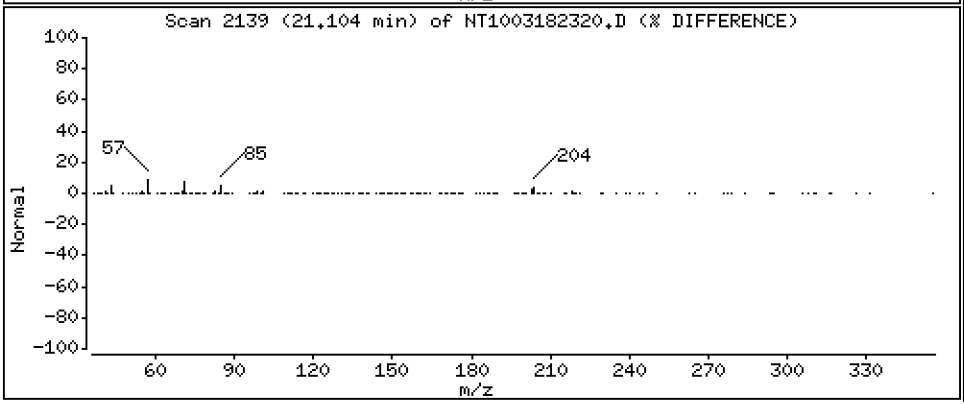
65 Pyrene

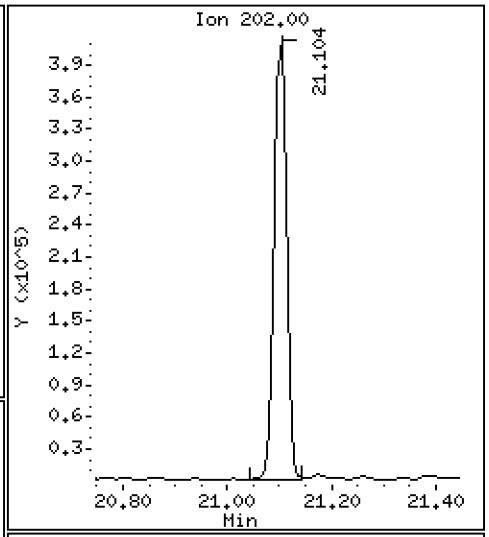
Concentration: 2.219 ug/mL

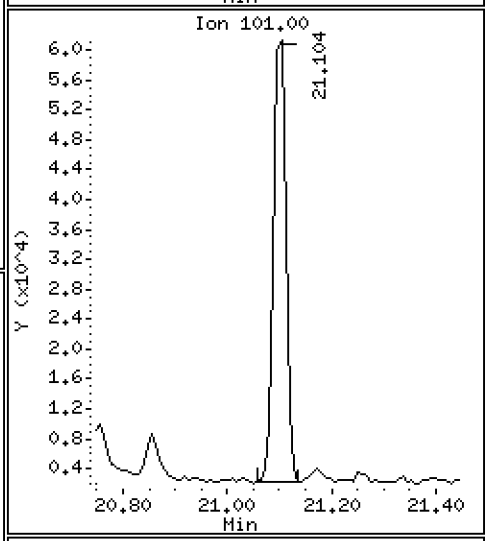


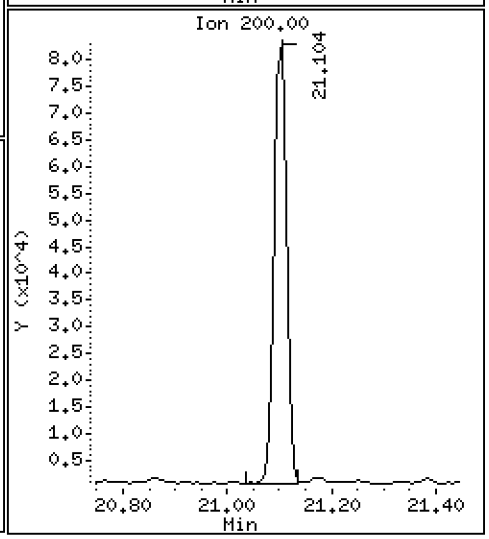












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

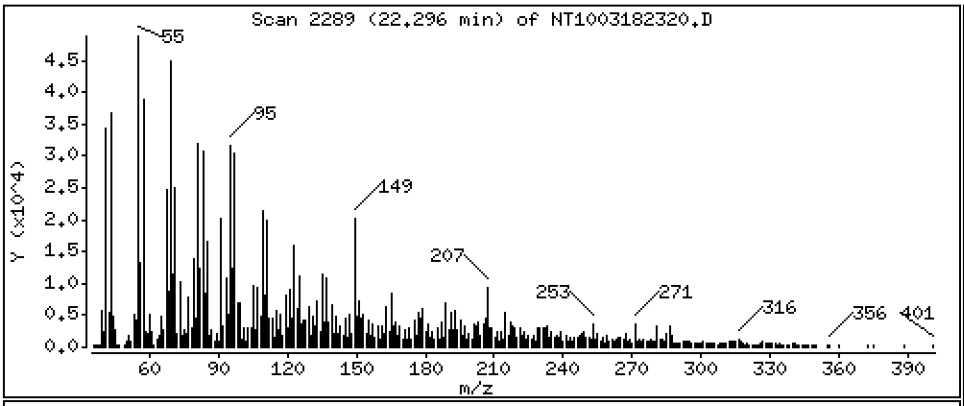
Operator: VTS

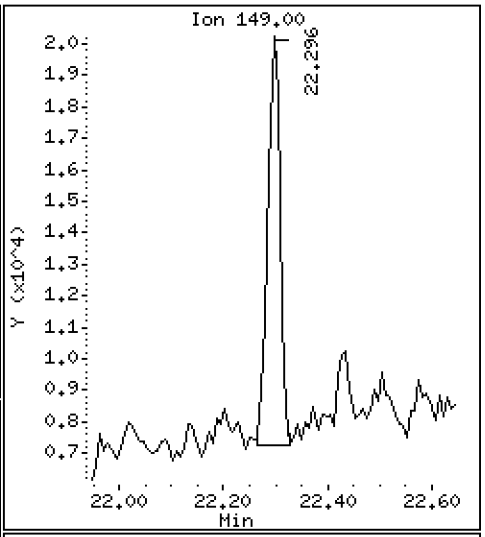
Column phase: ZB-5msi

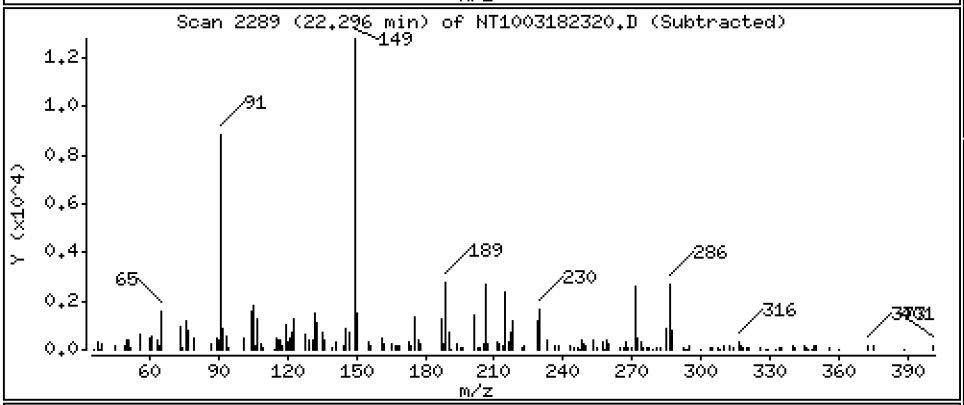
Column diameter: 0.25

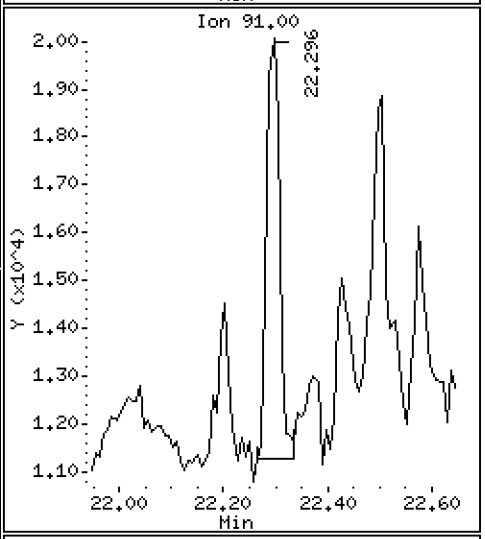
67 Butylbenzylphthalate

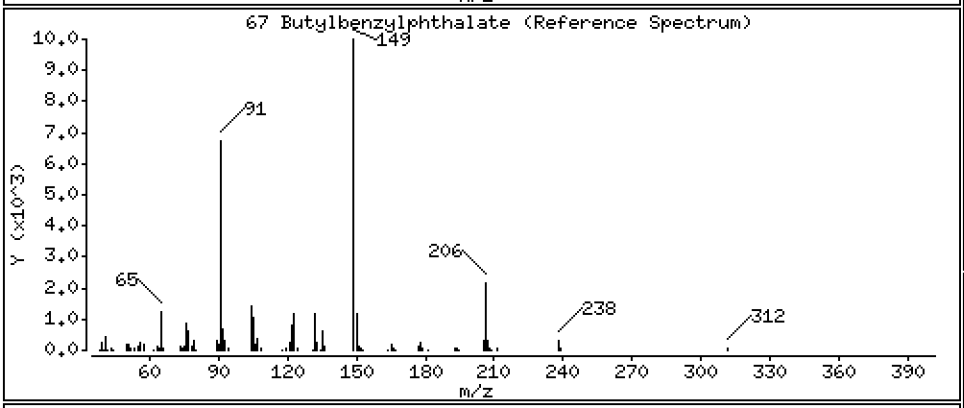
Concentration: 0.1993 ug/mL

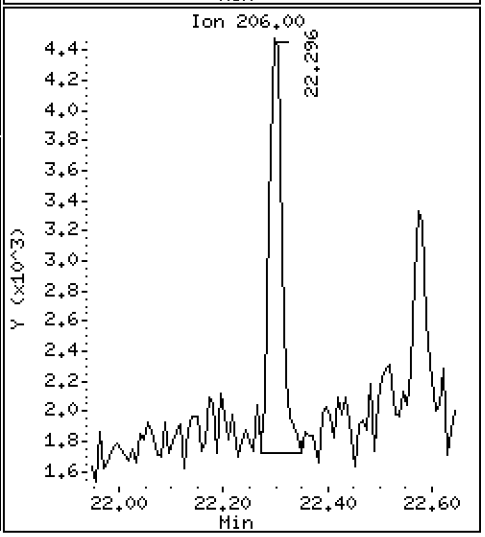


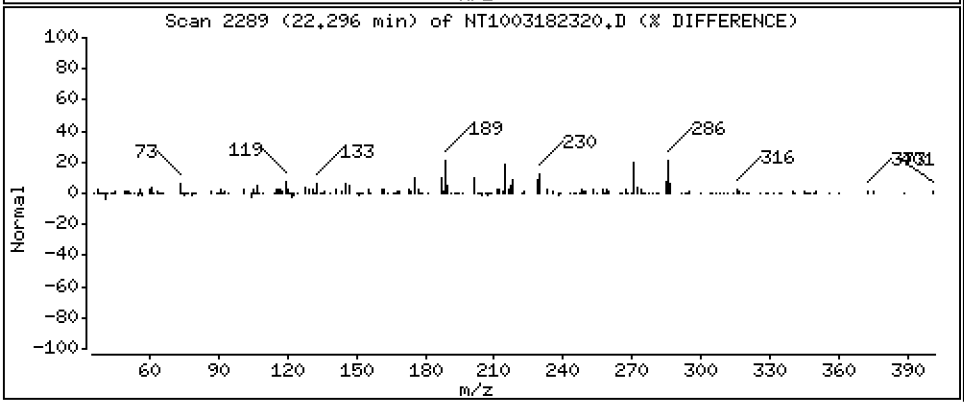












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

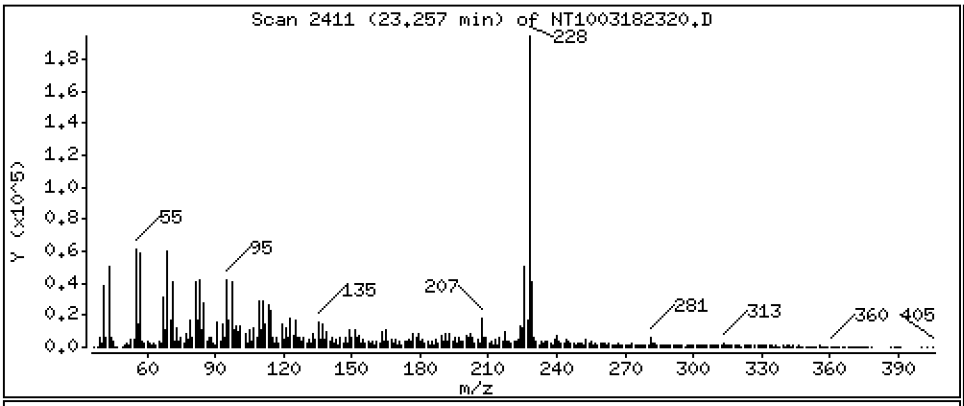
Operator: VTS

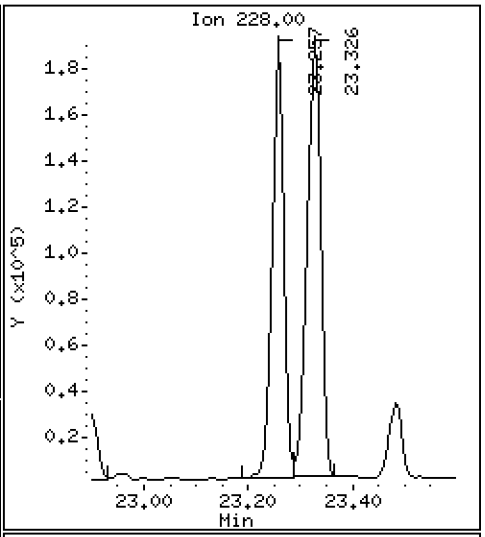
Column phase: ZB-5msi

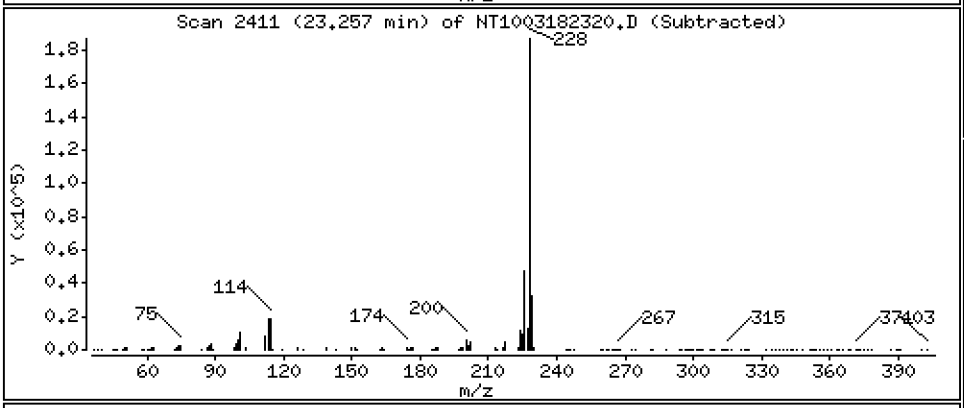
Column diameter: 0.25

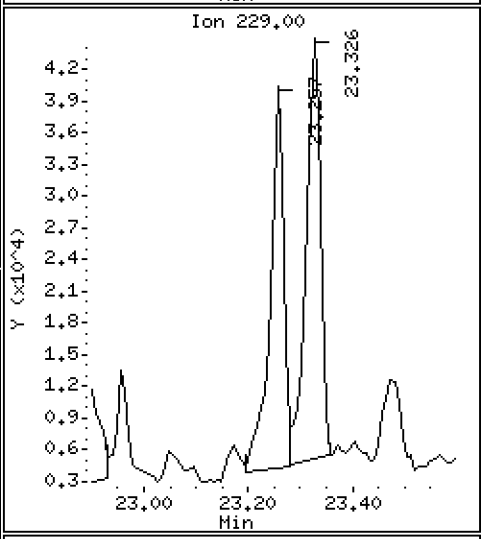
68 Benzo(a)anthracene

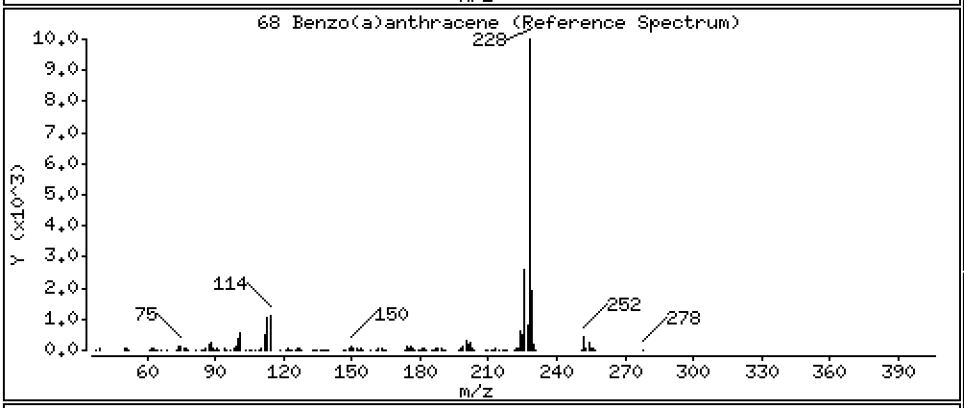
Concentration: 1.159 ug/mL

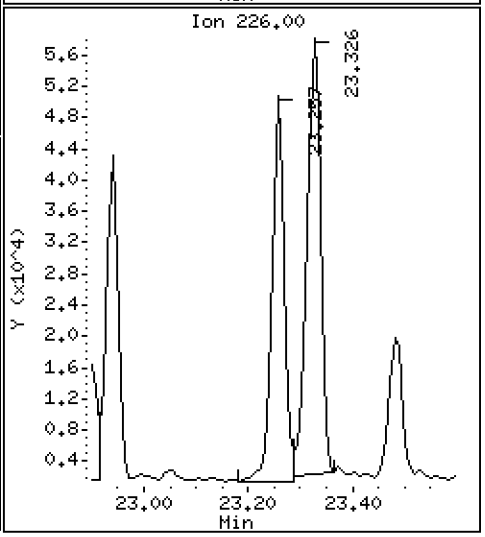


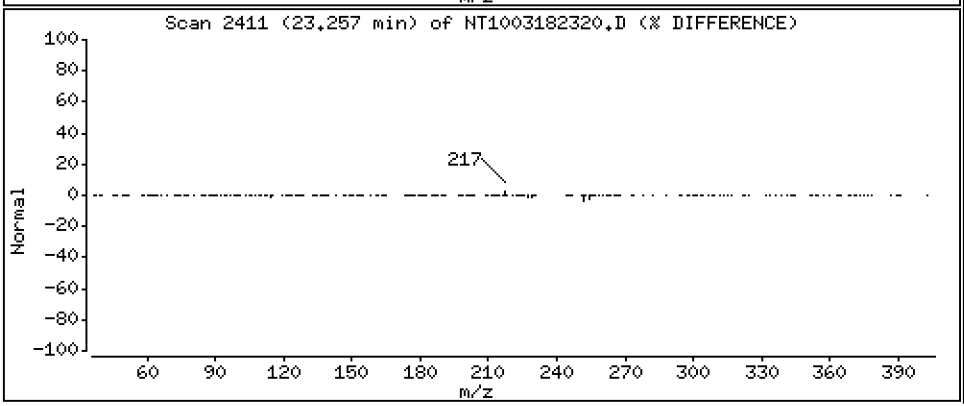












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

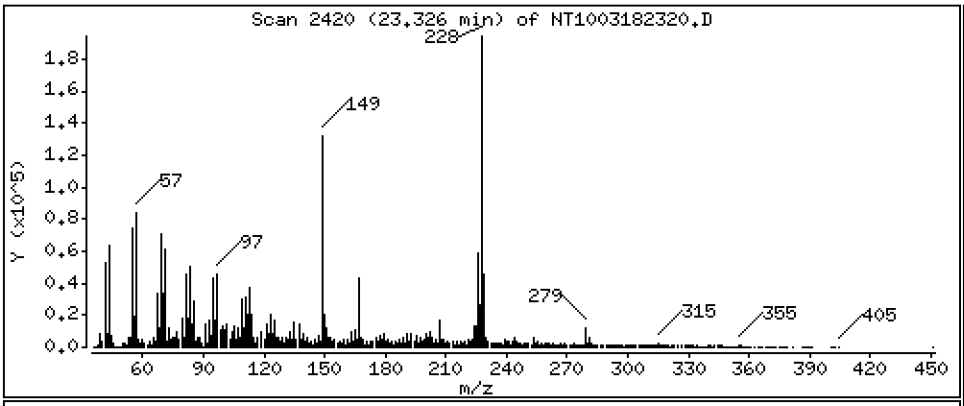
Operator: VTS

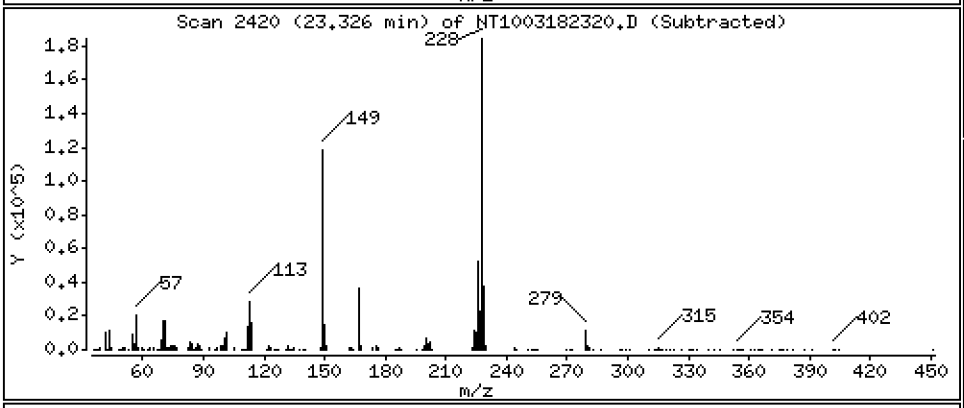
Column phase: ZB-5msi

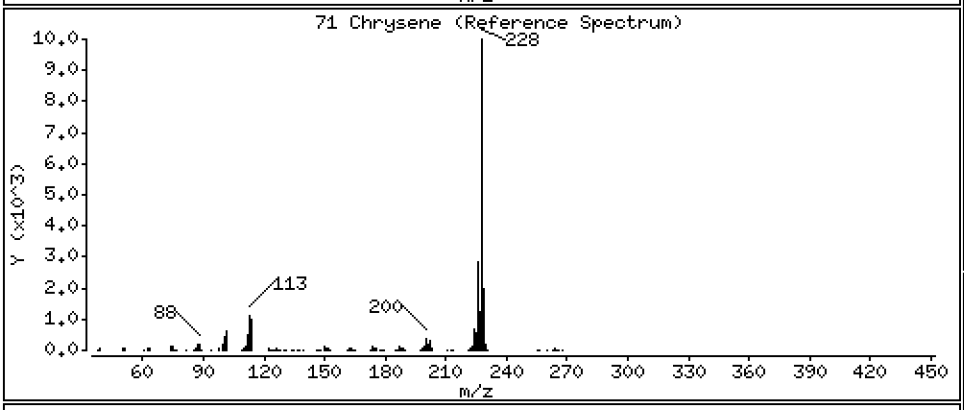
Column diameter: 0.25

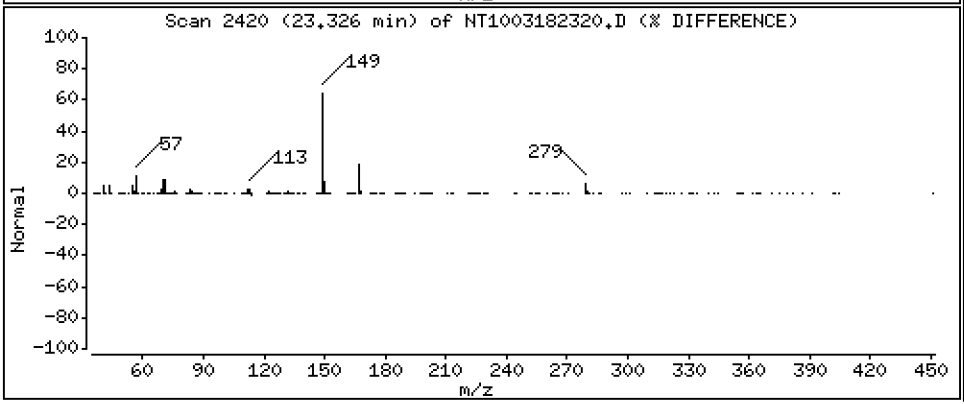
71 Chrysene

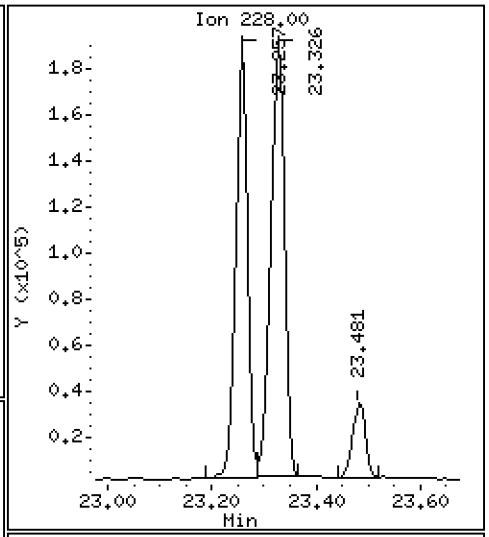
Concentration: 1.354 ug/mL

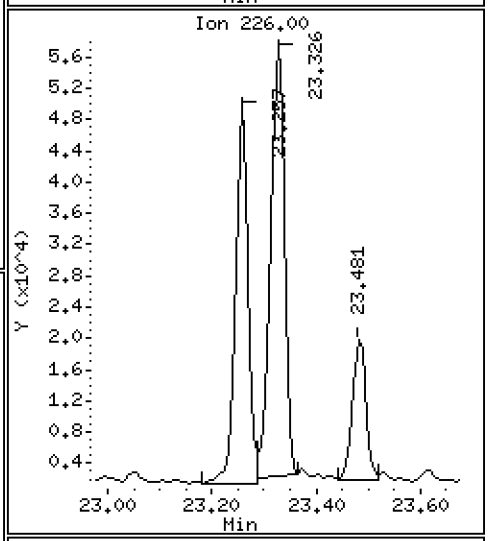


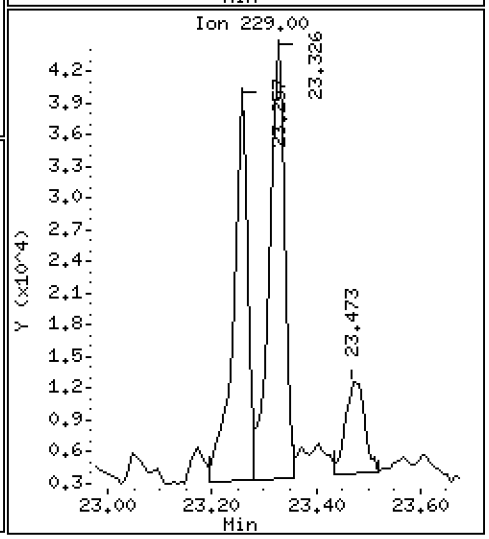












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

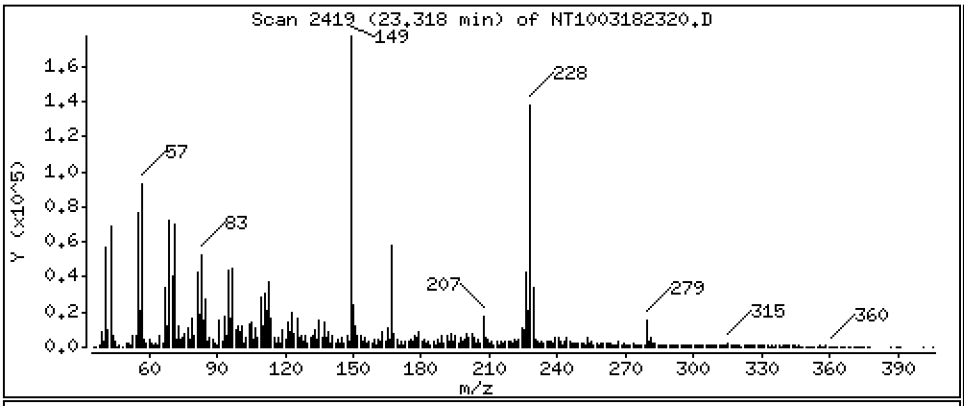
Operator: VTS

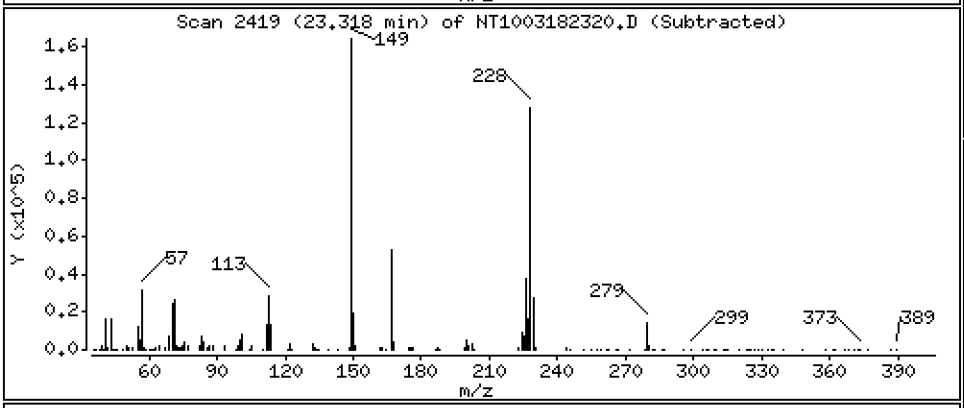
Column phase: ZB-5msi

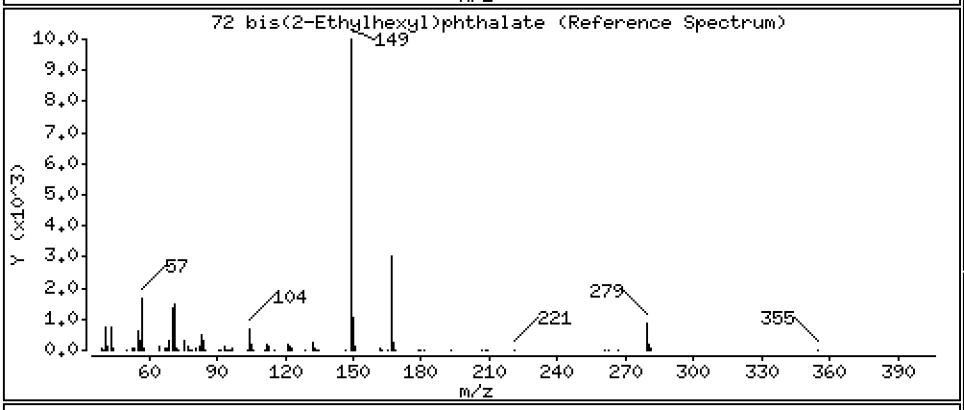
Column diameter: 0.25

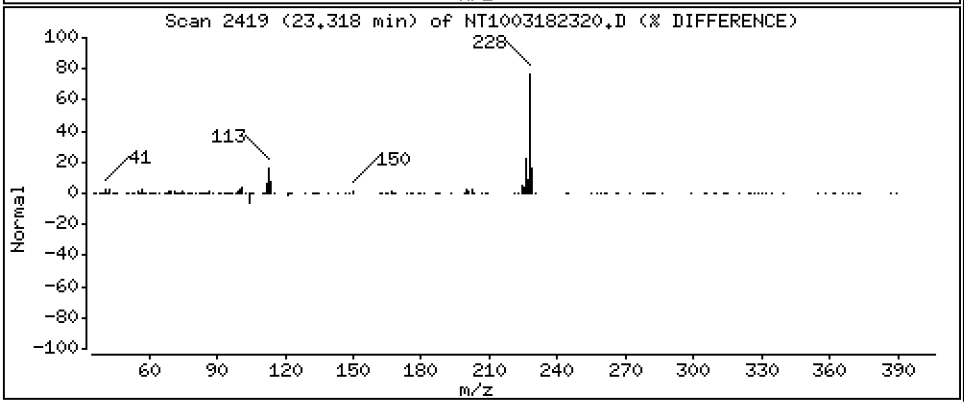
72 bis(2-Ethylhexyl)phthalate

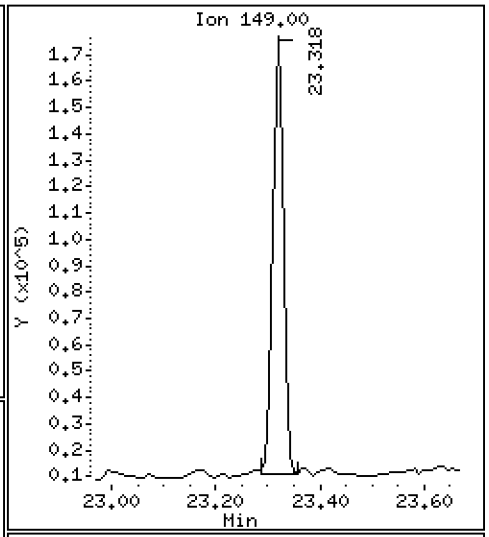
Concentration: 1.186 ug/mL

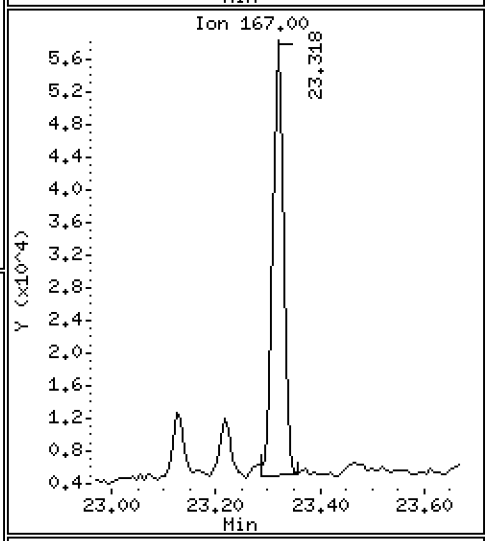


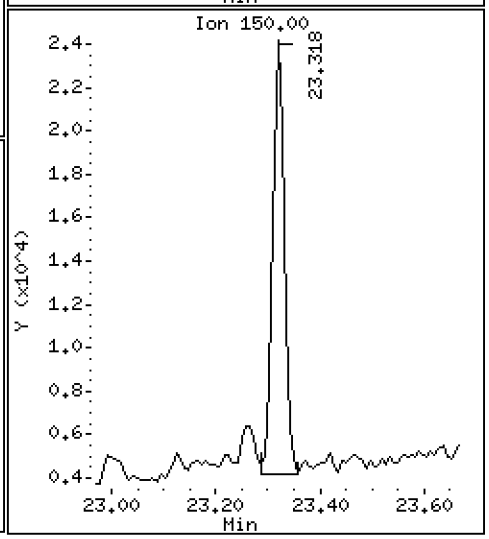












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

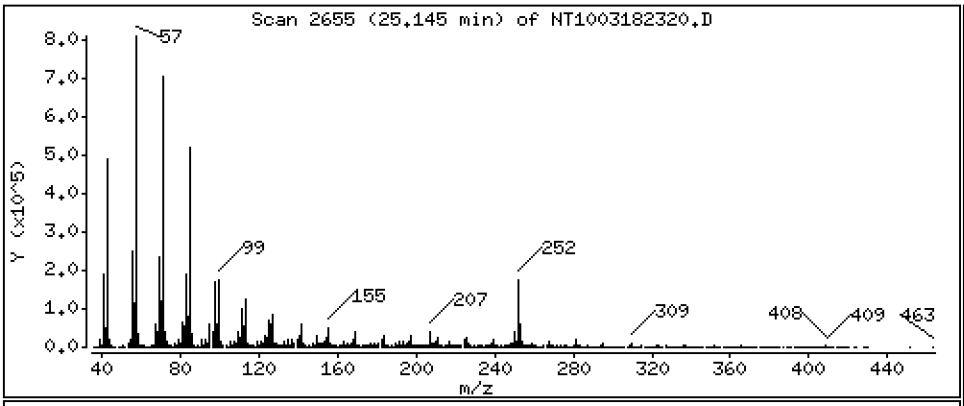
Operator: VTS

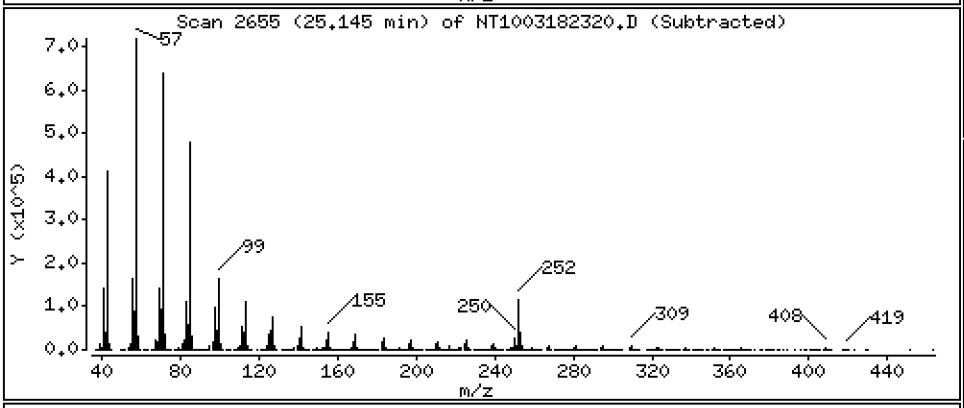
Column phase: ZB-5msi

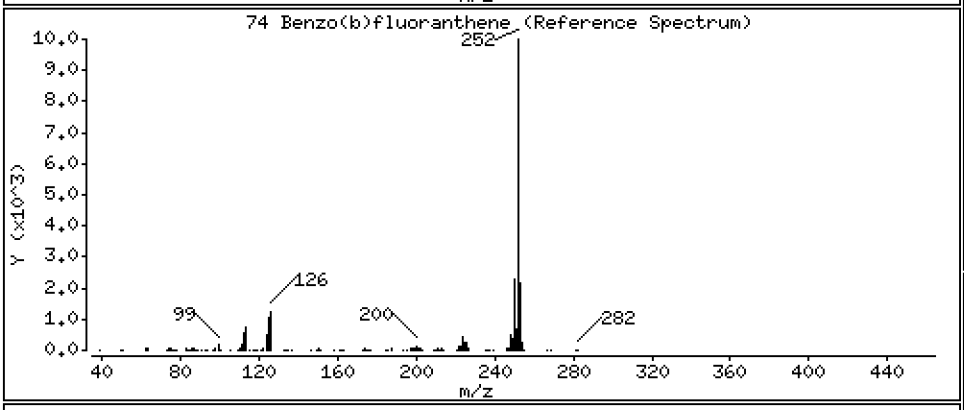
Column diameter: 0.25

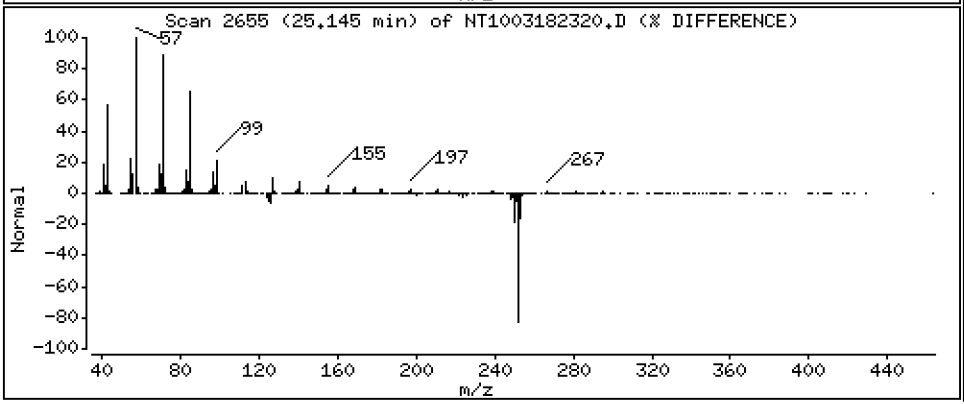
74 Benzo(b)fluoranthene

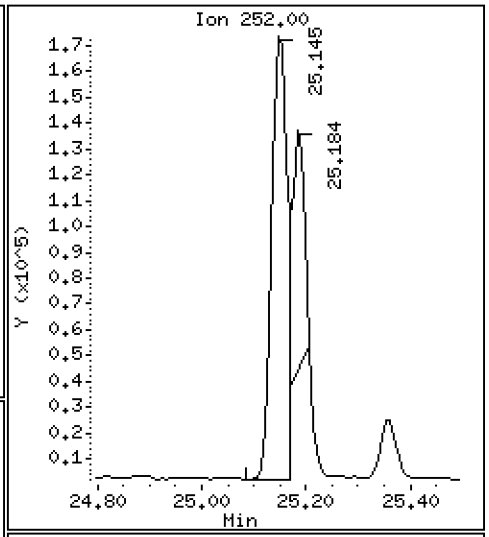
Concentration: 1.387 ug/mL

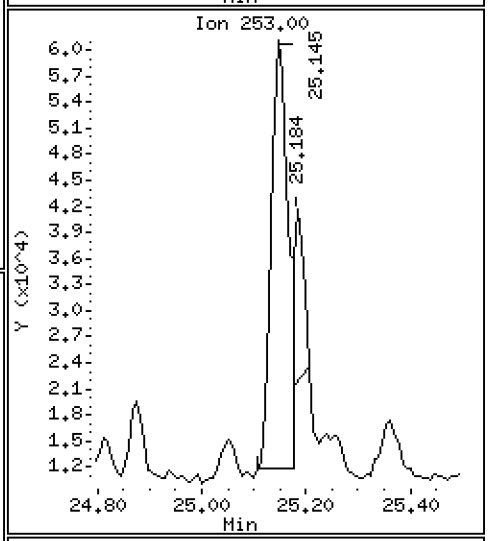


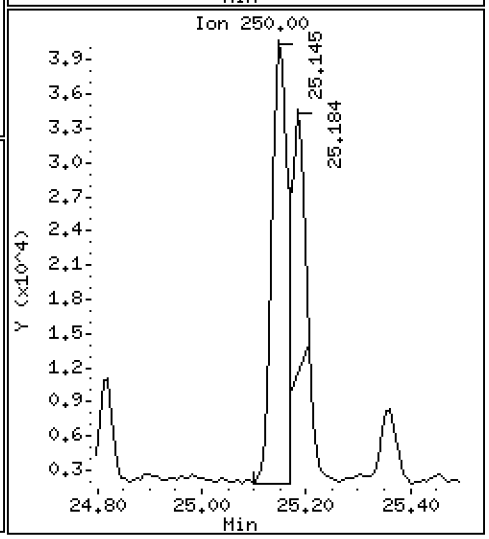












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

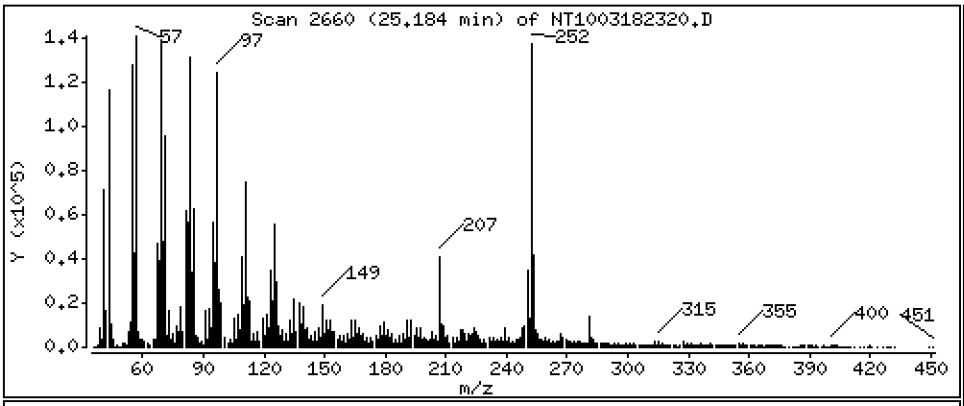
Operator: VTS

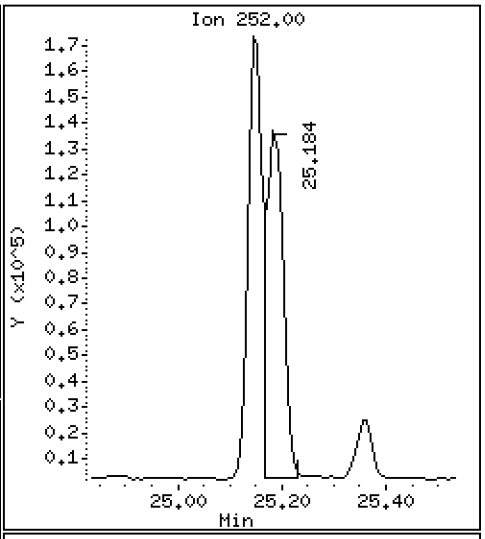
Column phase: ZB-5msi

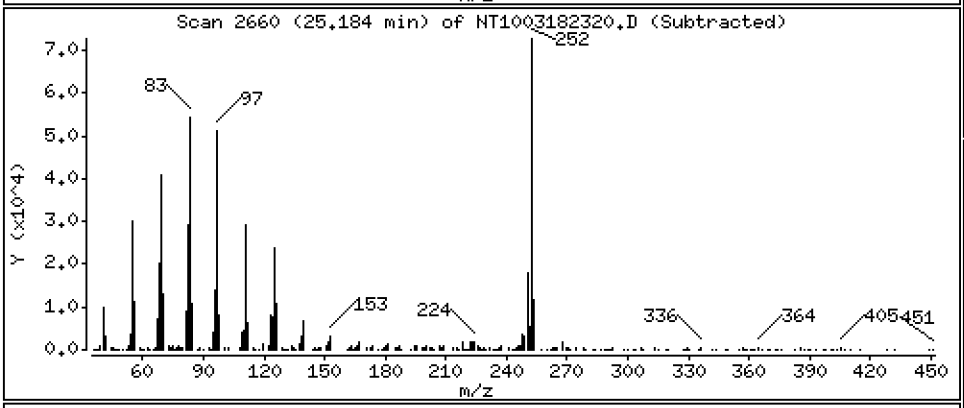
Column diameter: 0.25

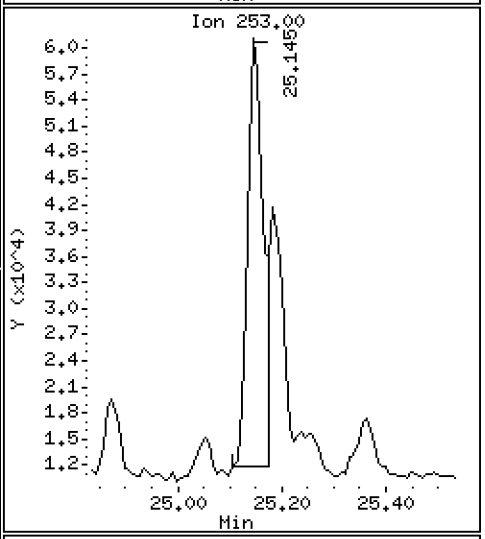
75 Benzo(k)fluoranthene

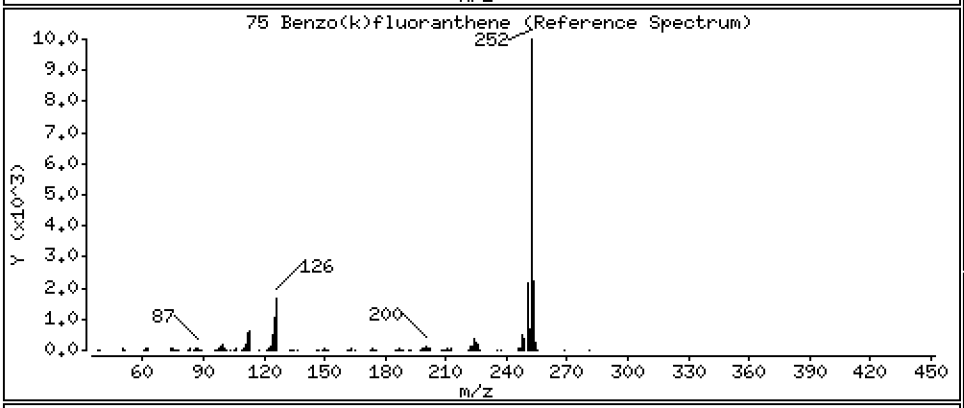
Concentration: 1.153 ug/mL

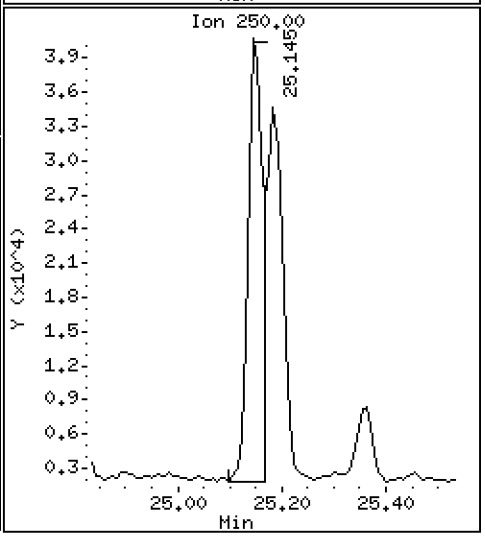


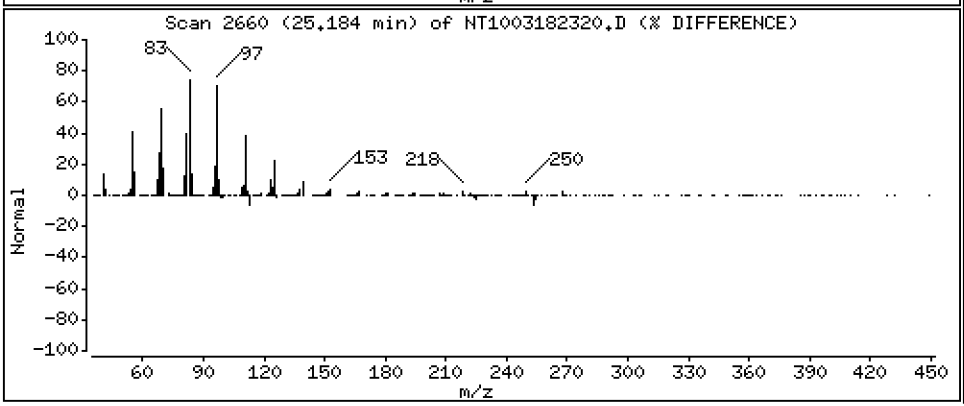












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

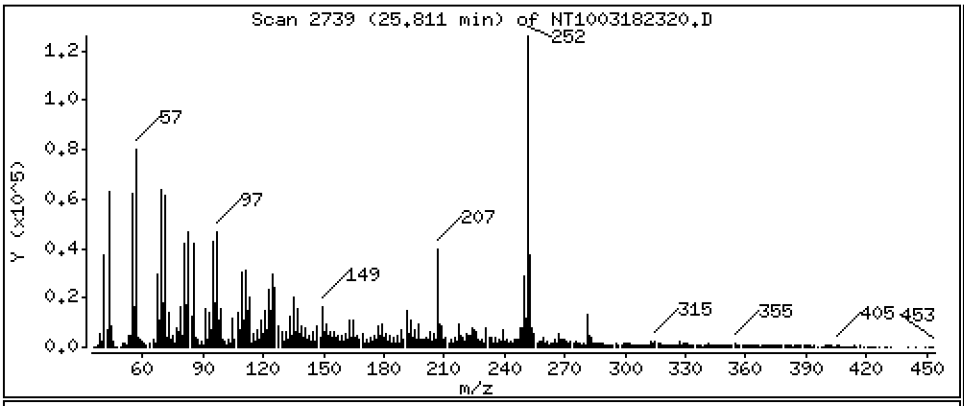
Operator: VTS

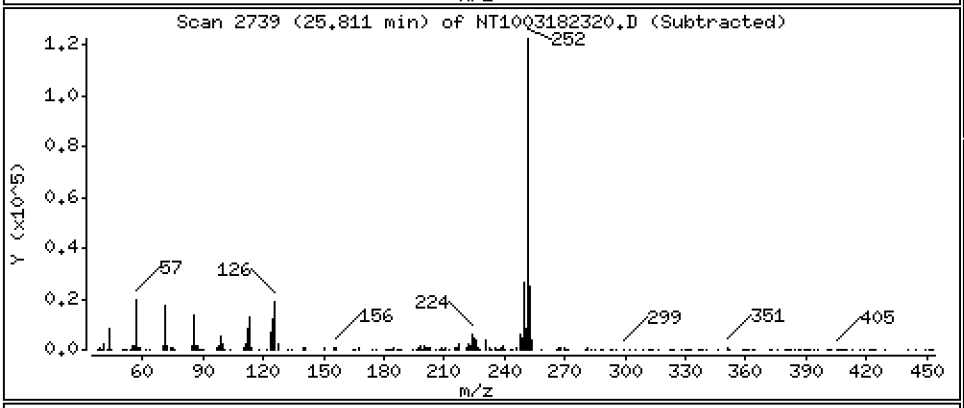
Column phase: ZB-5msi

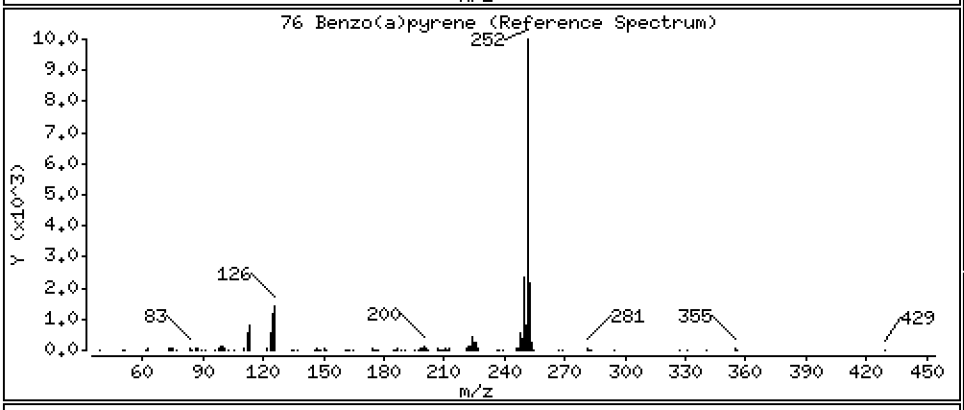
Column diameter: 0.25

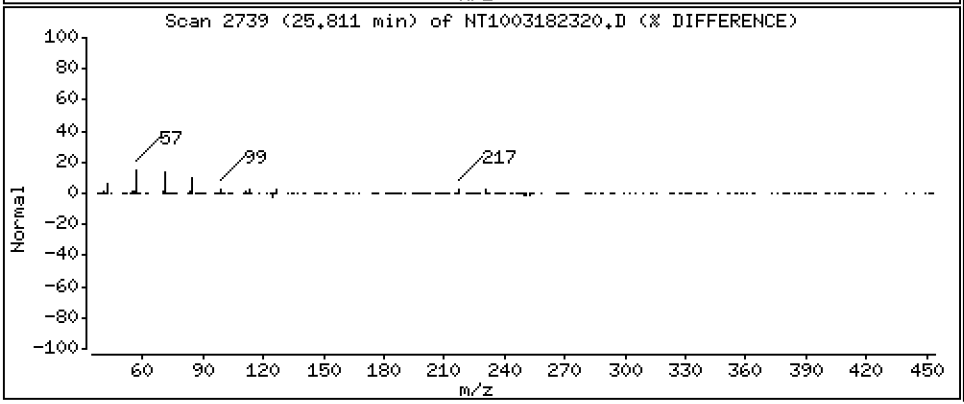
76 Benzo(a)pyrene

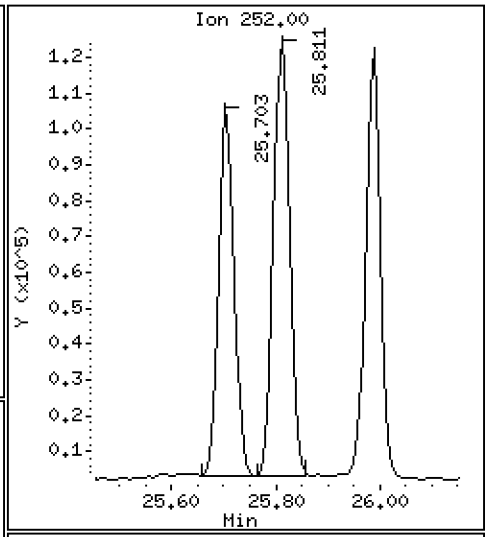
Concentration: 1.105 ug/mL

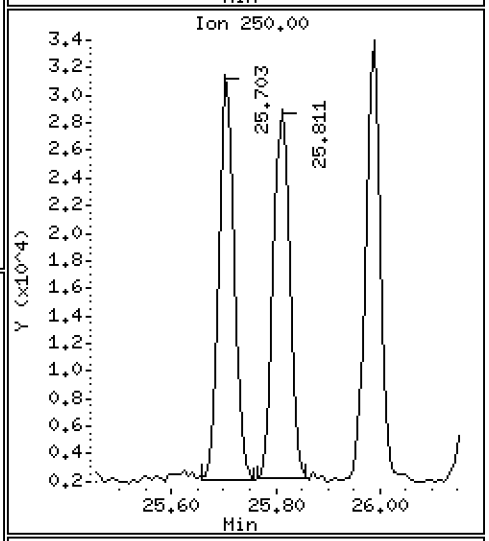


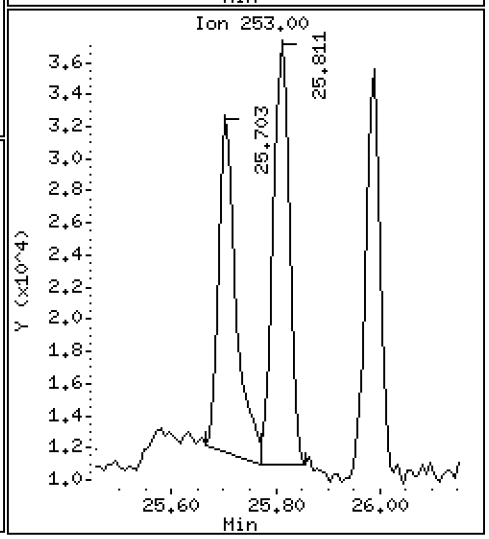












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

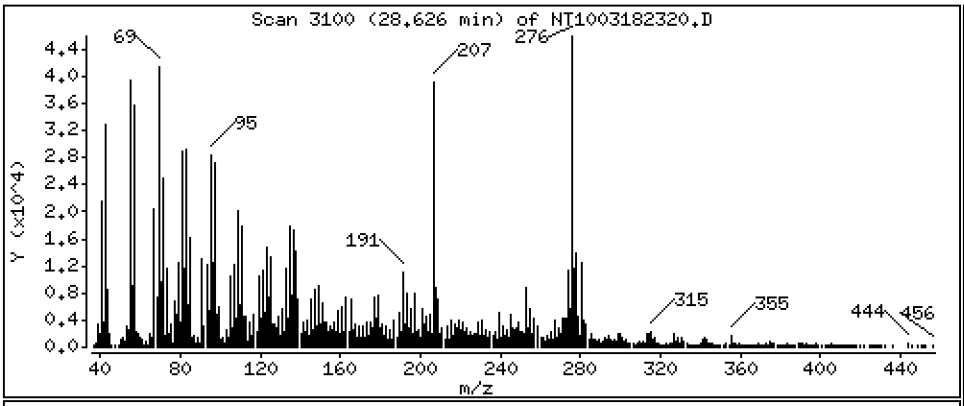
Operator: VTS

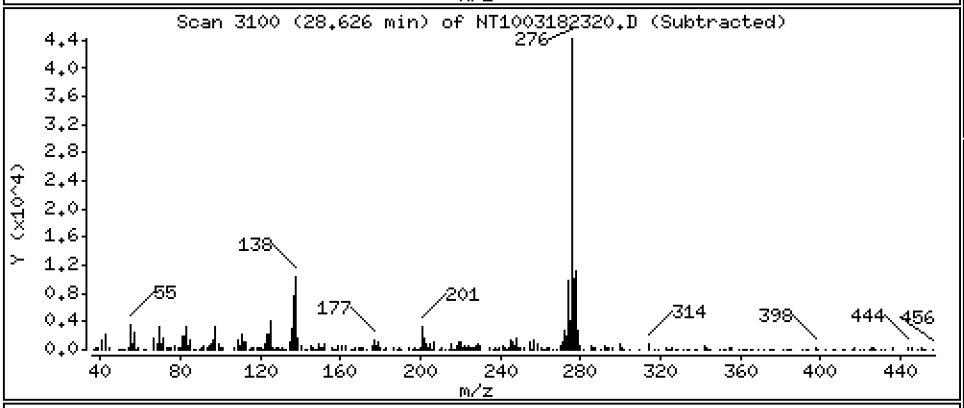
Column phase: ZB-5msi

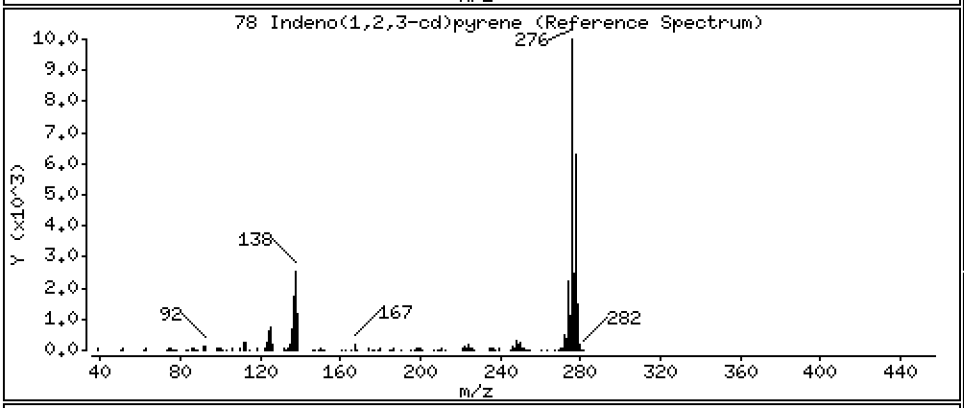
Column diameter: 0.25

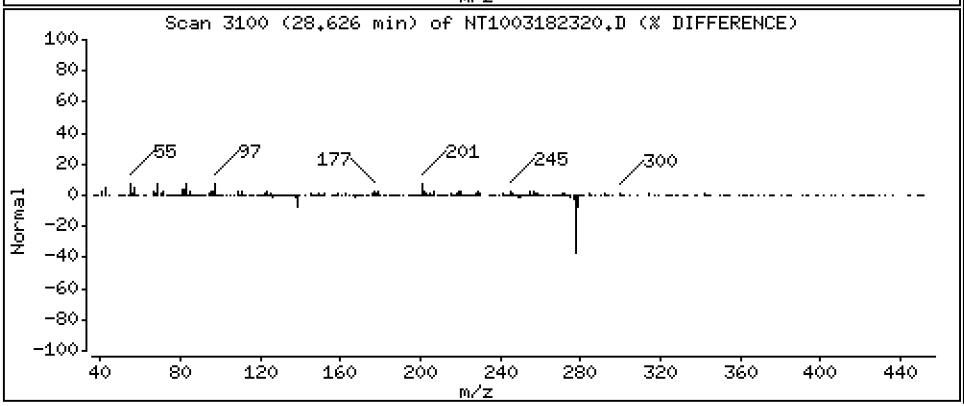
78 Indeno(1,2,3-cd)pyrene

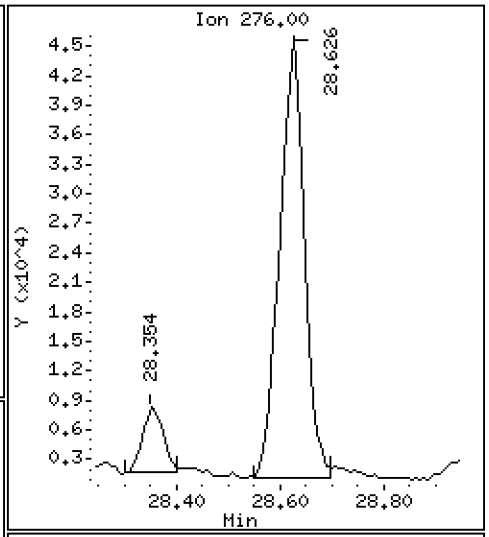
Concentration: 0.5084 ug/mL

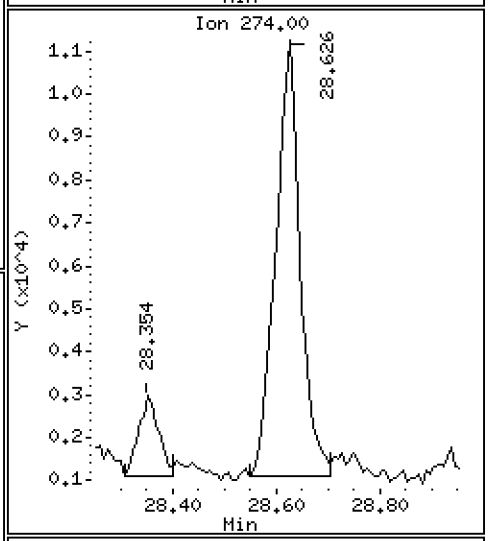


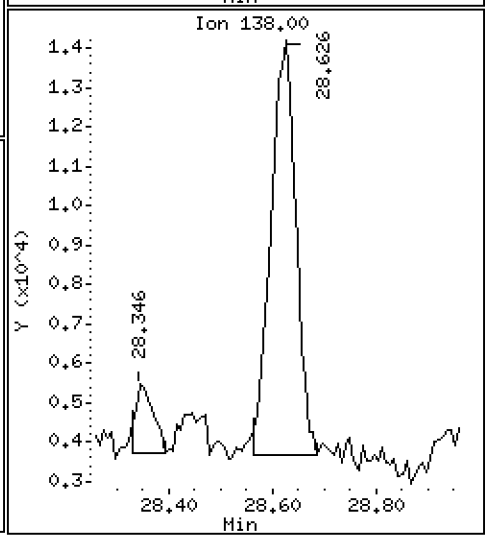












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

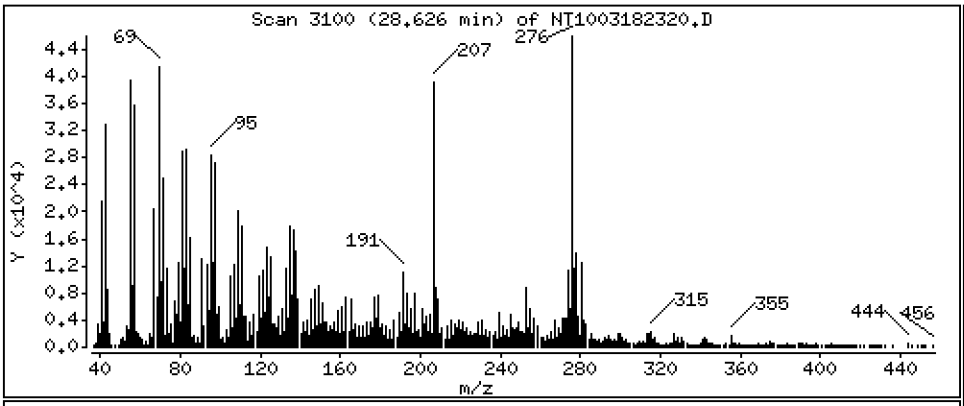
Operator: VTS

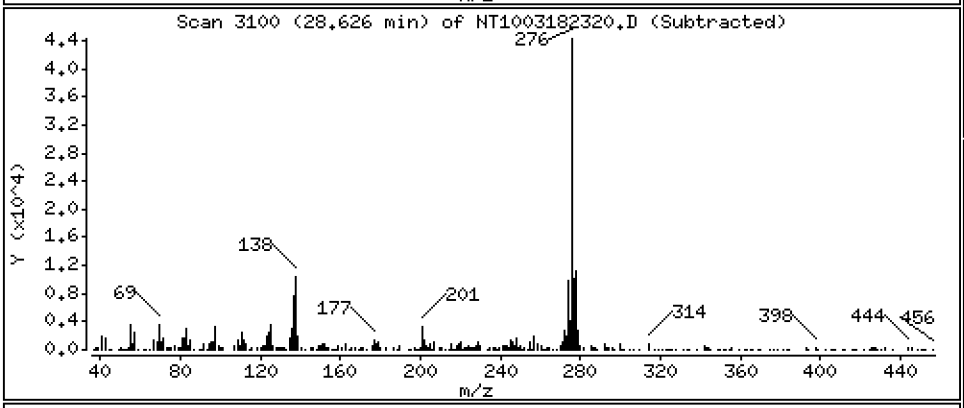
Column phase: ZB-5msi

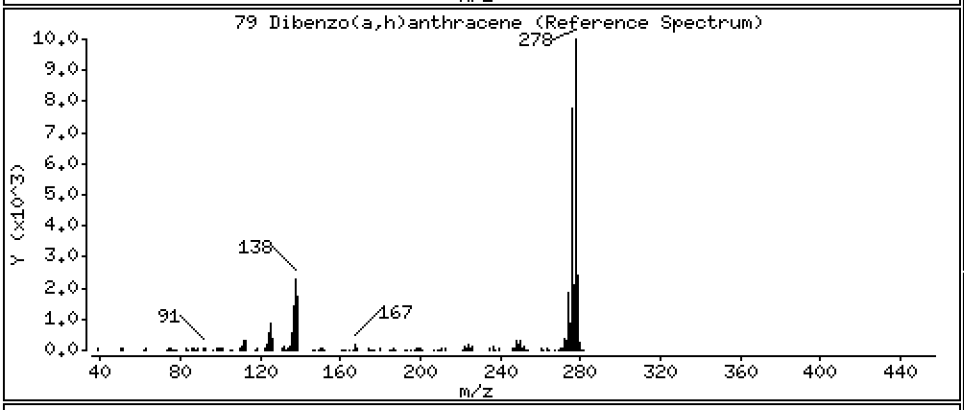
Column diameter: 0.25

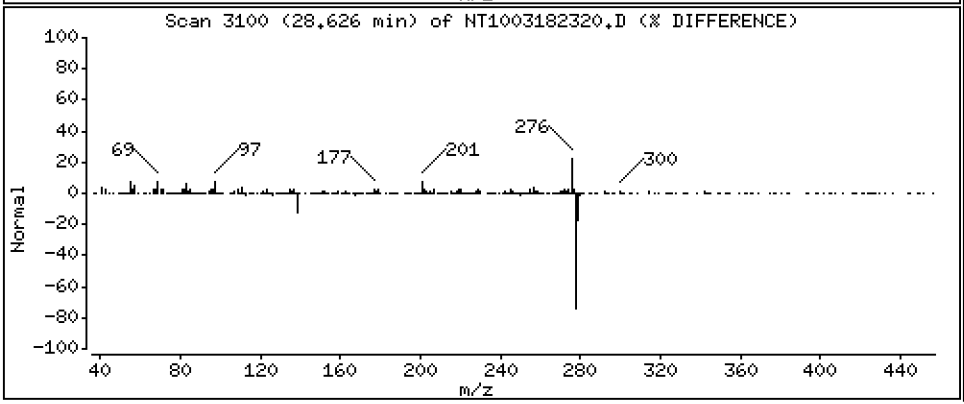
79 Dibenzo(a,h)anthracene

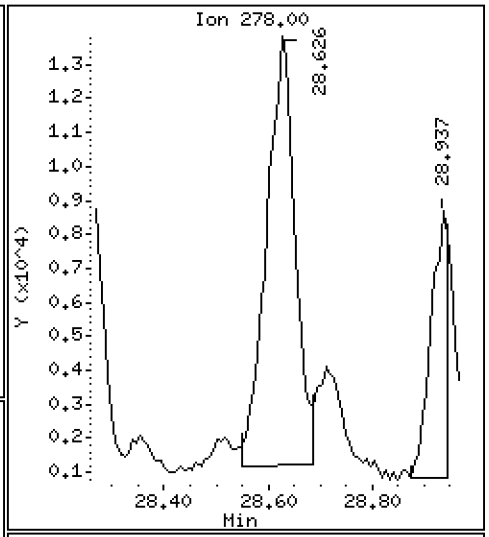
Concentration: 0.1993 ug/mL

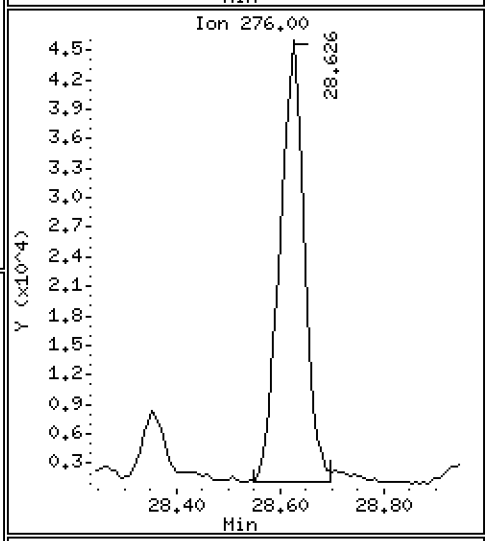


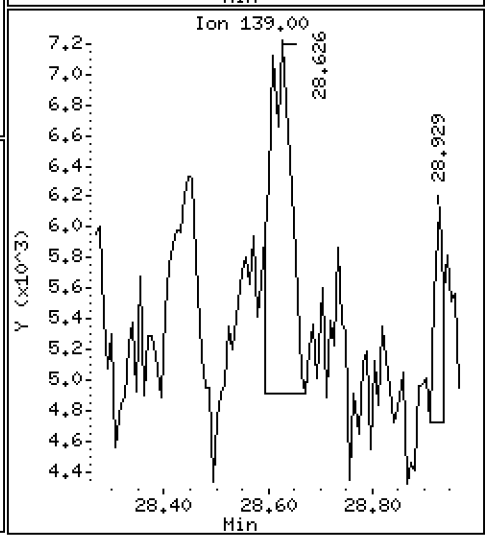












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

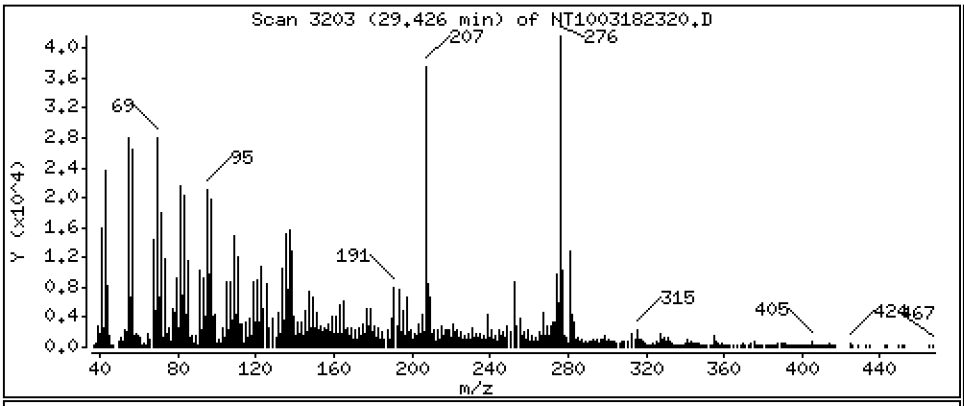
Operator: VTS

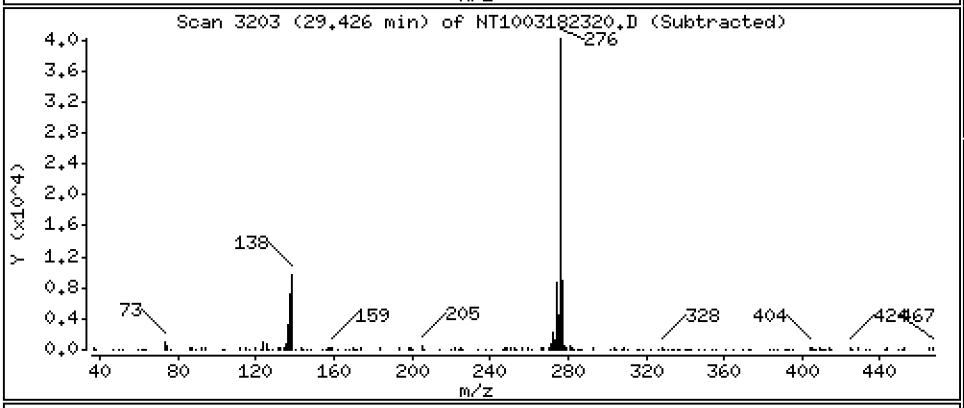
Column phase: ZB-5msi

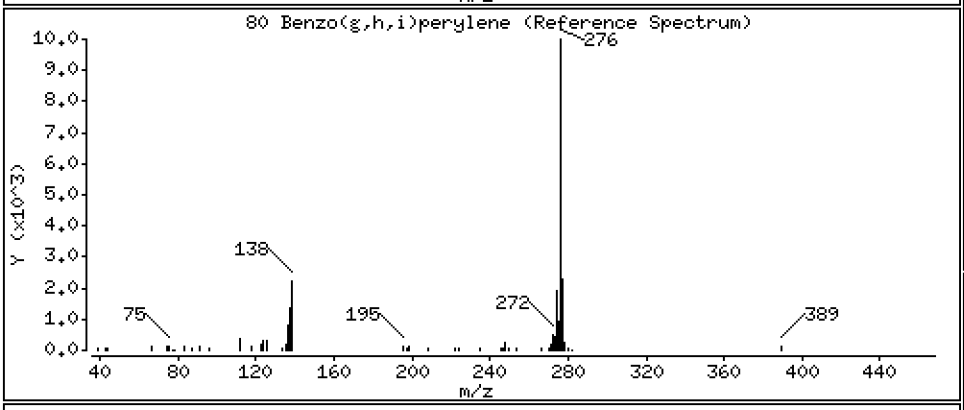
Column diameter: 0.25

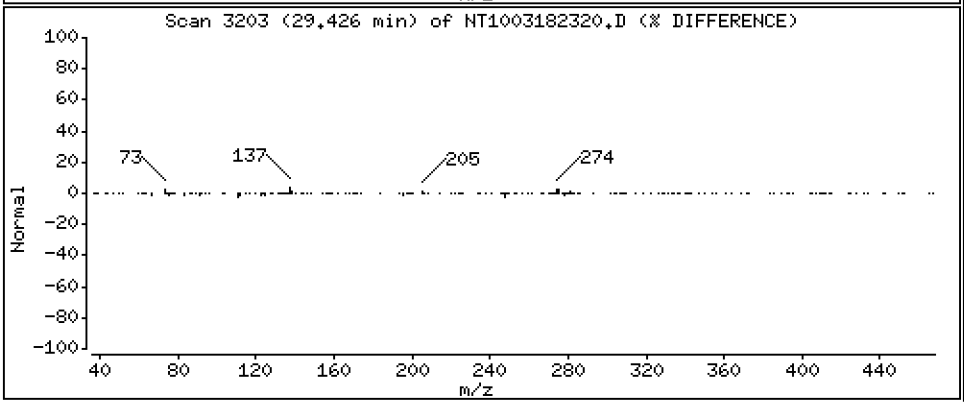
80 Benzo(g,h,i)perylene

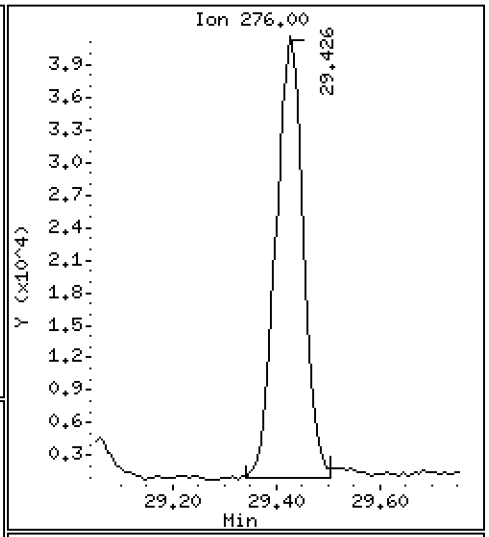
Concentration: 0.5955 ug/mL

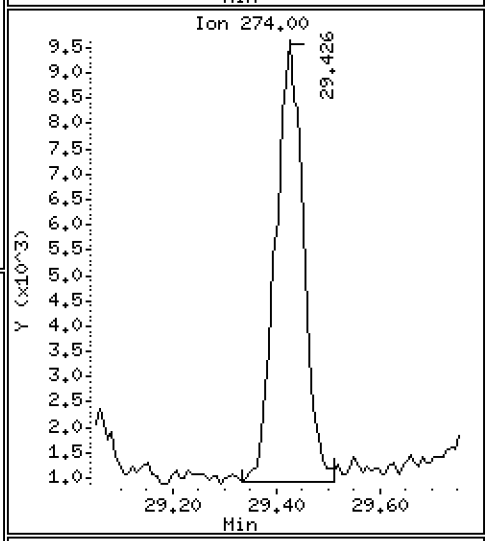


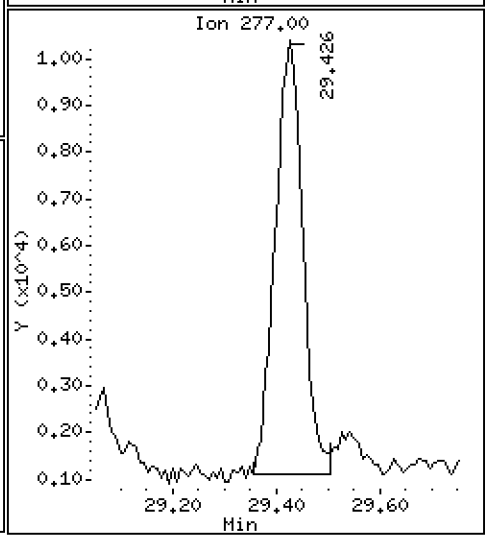












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

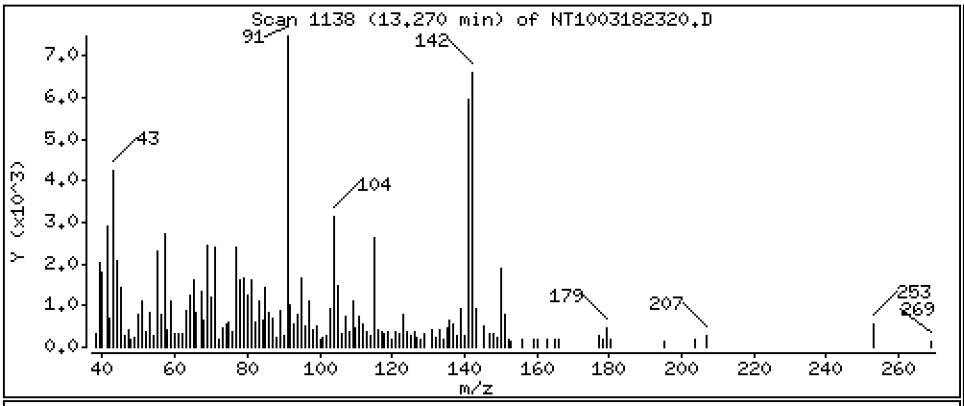
Operator: VTS

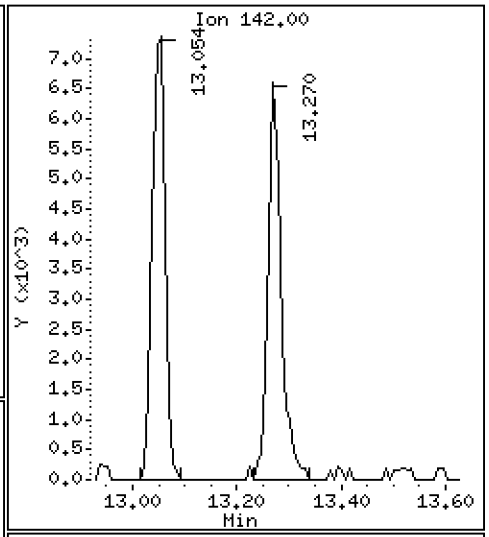
Column phase: ZB-5msi

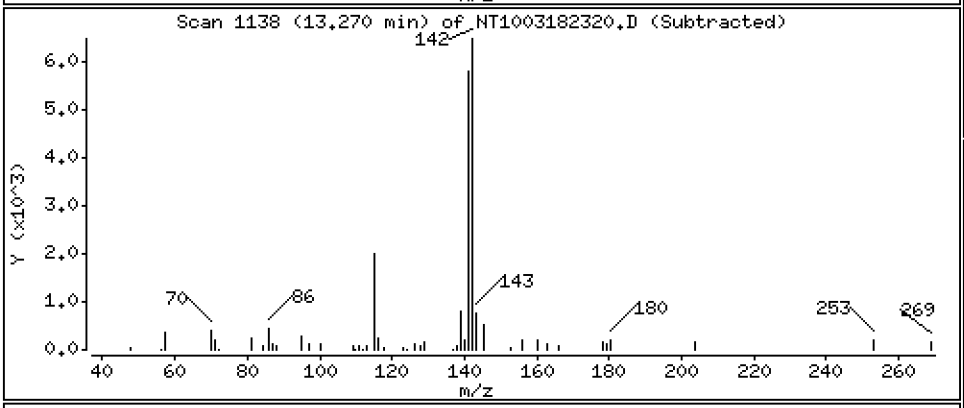
Column diameter: 0.25

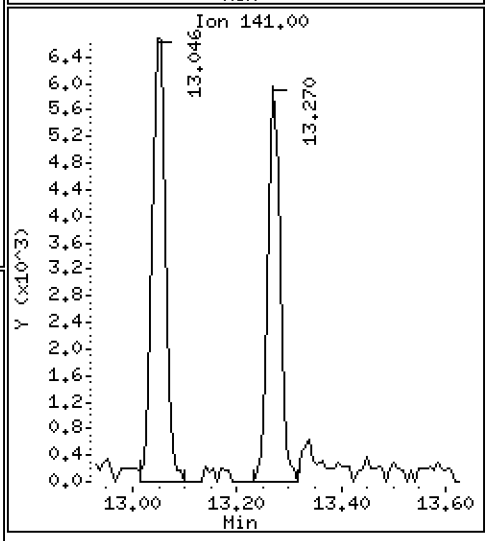
105 1-methylnaphthalene

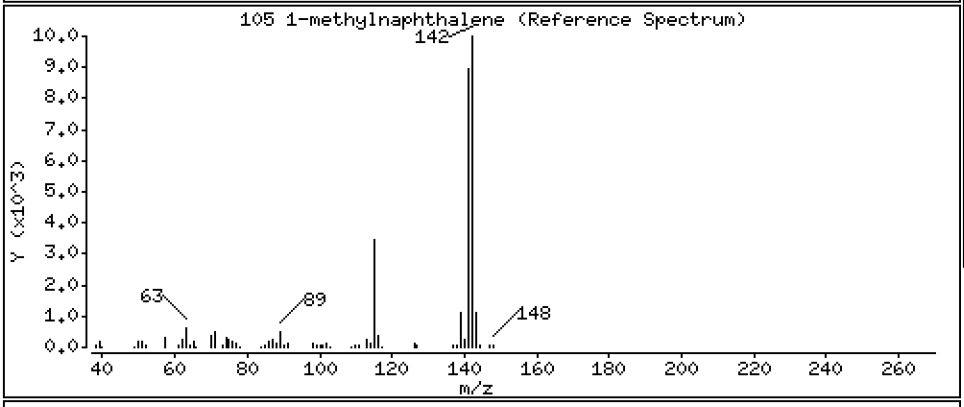
Concentration: 0.07983 ug/mL

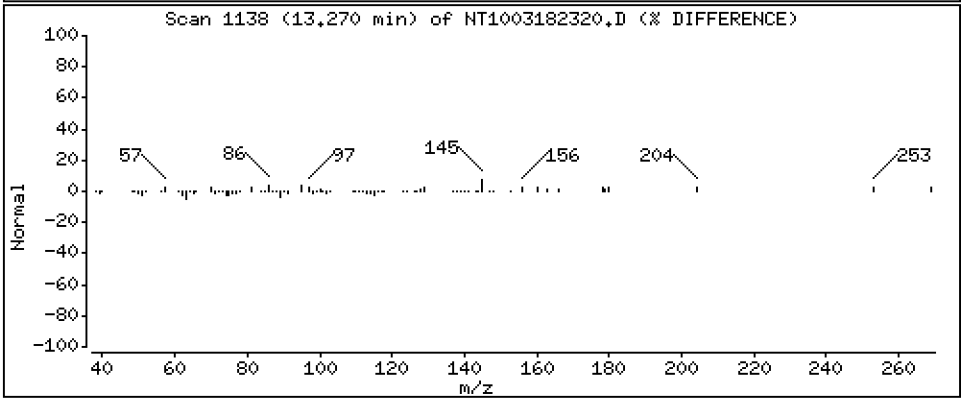












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

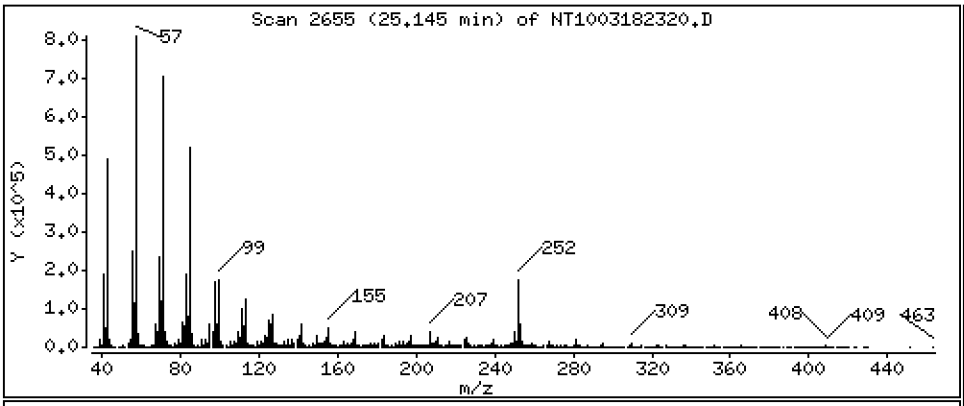
Operator: VTS

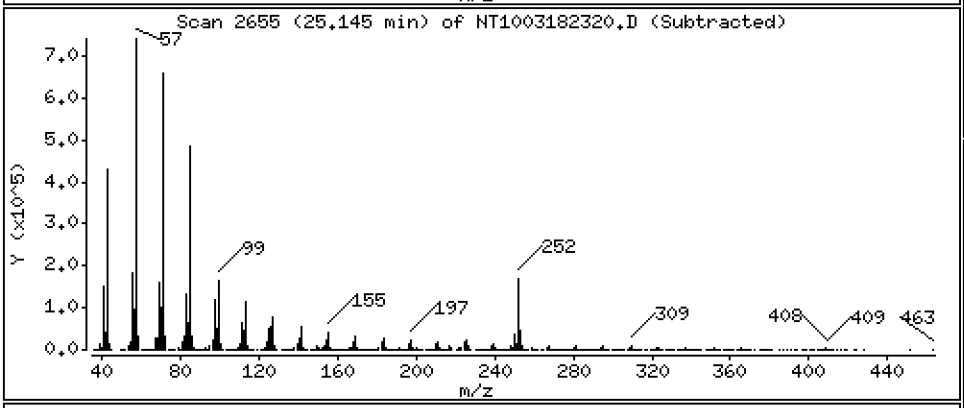
Column phase: ZB-5msi

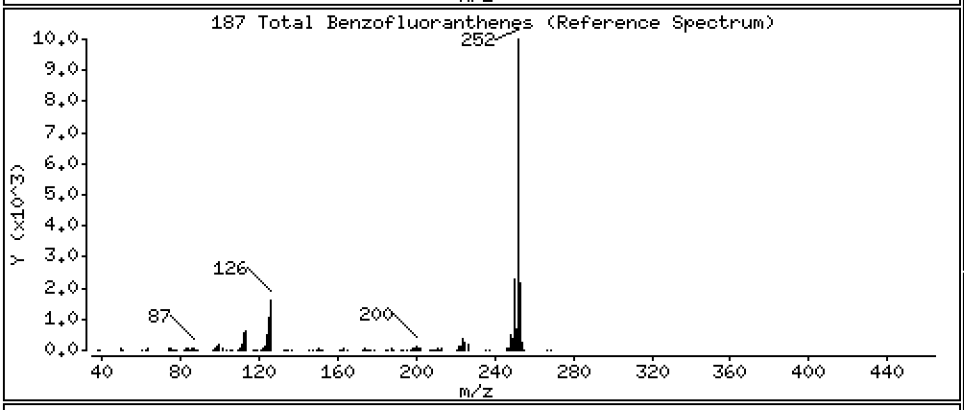
Column diameter: 0.25

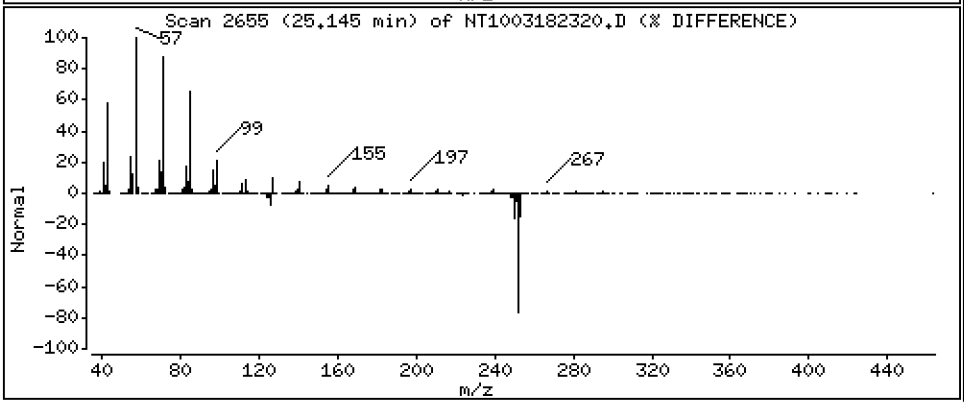
187 Total Benzofluoranthenes

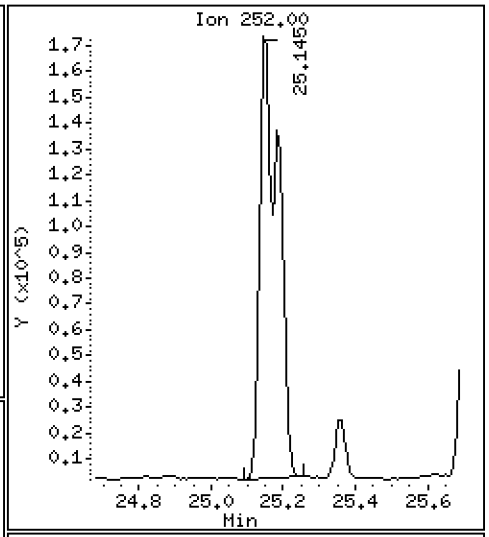
Concentration: 2.446 ug/mL

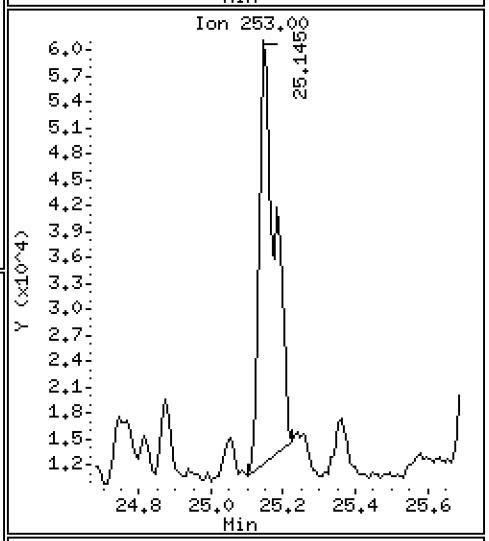


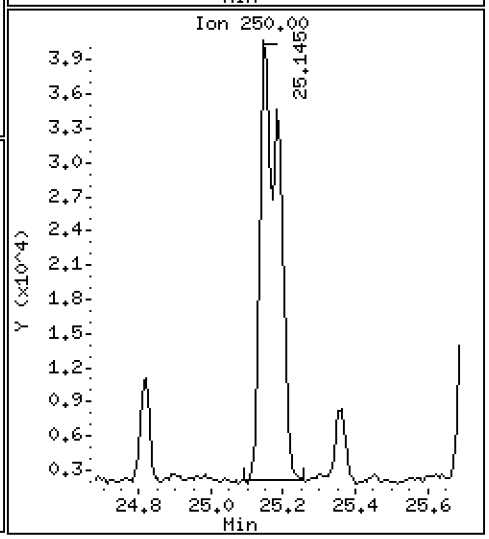












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182320.D
Lab Smp Id: 23A0467-07
Inj Date : 19-MAR-2023 05:51
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-07
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)	
$	1	2-Fluorophenol	112	6.975	6.967	(0.761)	358286	5.48227	5.482	
$	2	Phenol-d5	99	8.528	8.528	(0.930)	488984	5.70349	5.703	
	3	Phenol	94	8.551	8.551	(0.933)	543423	6.09962	6.100	
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	436993	5.96896	5.969	
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6	2-Chlorophenol	128	Compound Not Detected.						
	7	1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	216108	4.00000		
	9	1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	194905	3.70706	3.707	
	12	1,2-Dichlorobenzene	146	Compound Not Detected.						
	11	Benzyl alcohol	108	9.433	9.433	(1.029)	9409	0.22501	0.2250	
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.						
	13	2-Methylphenol	108	Compound Not Detected.						
	17	Hexachloroethane	117	Compound Not Detected.						
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15	4-Methylphenol	108	9.922	9.915	(1.082)	456909	6.67709	6.677	
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.882)	312180	3.93128	3.931	
	19	Nitrobenzene	77	Compound Not Detected.						
	20	Isophorone	82	Compound Not Detected.						
	21	2-Nitrophenol	139	Compound Not Detected.						
	22	2,4-Dimethylphenol	107	Compound Not Detected.						
	23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24	Benzoic acid	105	11.048	11.150	(0.950)	30368	0.76297	0.7630(MH)	
	25	2,4-Dichlorophenol	162	Compound Not Detected.						
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27	Naphthalene-d8	136	11.630	11.638	(1.000)	786727	4.00000		
	28	Naphthalene	128	11.676	11.676	(1.004)	19276	0.09249	0.09249	
	29	4-Chloroaniline	127	Compound Not Detected.						
	30	Hexachlorobutadiene	225	Compound Not Detected.						
	31	4-Chloro-3-methylphenol	107	Compound Not Detected.						
	32	2-Methylnaphthalene	142	13.053	13.053	(1.122)	12252	0.08146	0.08146	
	33	Hexachlorocyclopentadiene	237	Compound Not Detected.						

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.827	13.827	(0.908)	699497	4.19743	4.197
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.709	14.717	(0.966)	5178	0.03783	0.03783
	40	Acenaphthylene	152	14.903	14.910	(0.979)	10443	0.04967	0.04967
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.220	15.220	(1.000)	421285	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.282	15.282	(1.004)	10486	0.08073	0.08073
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.607	15.606	(1.025)	17846	0.09316	0.09316
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.163	16.171	(1.062)	21200	0.15788	0.1579
	49	Fluorene	166	16.318	16.318	(1.072)	11460	0.07604	0.07604
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	145216	7.39784	7.398
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.241	18.241	(1.000)	803711	4.00000	
	60	Phenanthrene	178	18.287	18.295	(1.003)	125993	0.57490	0.5749
	61	Anthracene	178	18.380	18.380	(1.008)	61457	0.29234	0.2923
	62	Carbazole	167	18.713	18.713	(1.026)	15819	0.08397	0.08397
	63	Di-n-butylphthalate	149	19.502	19.494	(1.069)	73535	0.29036	0.2904
	64	Fluoranthene	202	20.694	20.670	(0.889)	548496	1.93315	1.933
	65	Pyrene	202	21.104	21.096	(0.906)	645959	2.21935	2.219
$	66	Terphenyl-d14	244	21.382	21.374	(0.918)	1021627	4.67395	4.674
	67	Butylbenzylphthalate	149	22.296	22.296	(0.957)	20375	0.19933	0.1993
	68	Benzo(a)anthracene	228	23.256	23.248	(0.999)	288867	1.15900	1.159
*	69	Chrysene-d12	240	23.287	23.279	(1.000)	706121	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.326	23.326	(1.002)	329716	1.35406	1.354
	72	bis(2-Ethylhexyl)phthalate	149	23.318	23.318	(0.959)	217553	1.18631	1.186
*	134	Di-n-octylphthalate-d4	153	24.309	24.301	(1.000)	1253054	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.145	25.145	(0.970)	358407	1.38729	1.387
	75	Benzo(k)fluoranthene	252	25.184	25.184	(0.971)	302411	1.15277	1.153(M)
	76	Benzo(a)pyrene	252	25.811	25.803	(0.996)	255137	1.10459	1.105
*	77	Perylene-d12	264	25.927	25.919	(1.000)	797005	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.626	28.594	(1.104)	149396	0.50839	0.5084
	79	Dibenzo(a,h)anthracene	278	28.626	28.618	(1.104)	48621	0.19929	0.1993
	80	Benzo(g,h,i)perylene	276	29.426	29.402	(1.135)	151449	0.59552	0.5955
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.270	13.277	(1.141)	11001	0.07983	0.07983
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.145	25.184	(0.970)	610075	2.44575	2.446(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182320.D
Lab Smp Id: 23A0467-07
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	216108	3.14
27 Naphthalene-d8	795859	397930	1591718	786727	-1.15
42 Acenaphthene-d10	432510	216255	865020	421285	-2.60
59 Phenanthrene-d10	808891	404446	1617782	803711	-0.64
69 Chrysene-d12	657926	328963	1315852	706121	7.33
134 Di-n-octylphthala	1187734	593867	2375468	1253054	5.50
77 Perylene-d12	770107	385054	1540214	797005	3.49

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.63	-0.07
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.03
134 Di-n-octylphthala	24.30	23.80	24.80	24.31	0.03
77 Perylene-d12	25.92	25.42	26.42	25.93	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182320.D

Lab ID: 23A0467-07
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 05:51

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.958	-0.0081	Benzoic acid

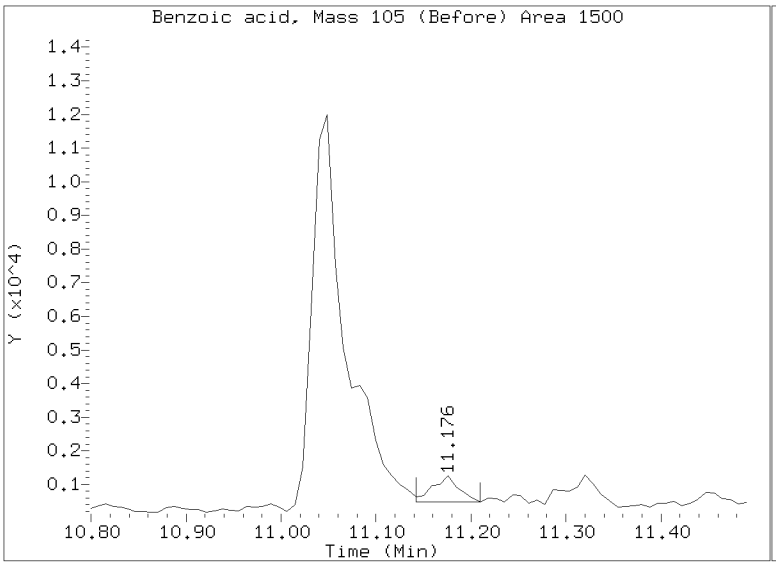
RRT check based on Ccal File: NT1003182316.D

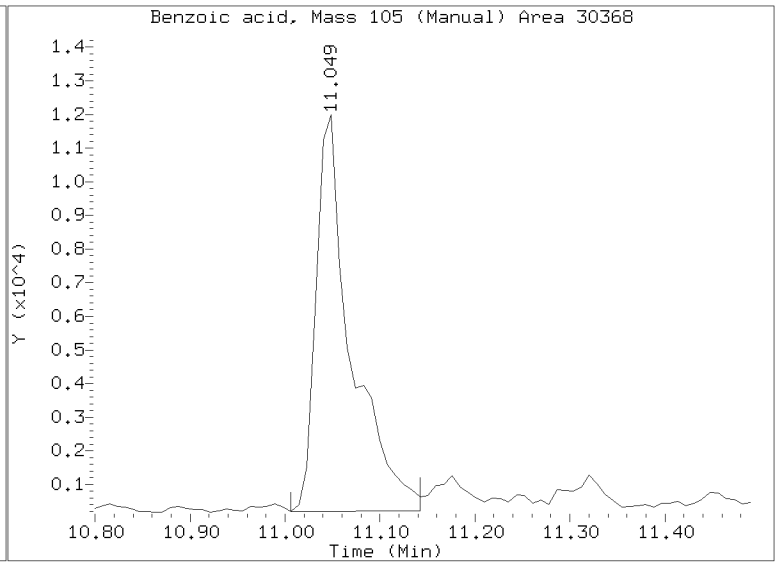
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

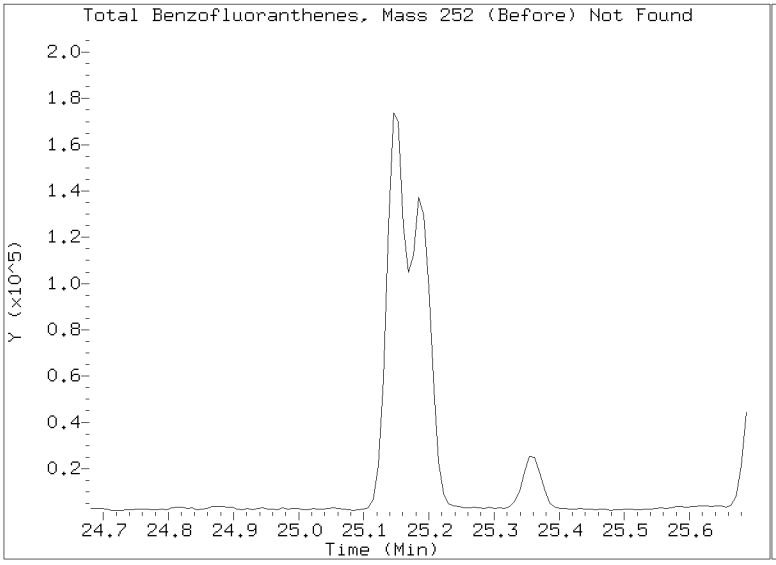
* Only compounds listed in the work order have been verified by the analyst *

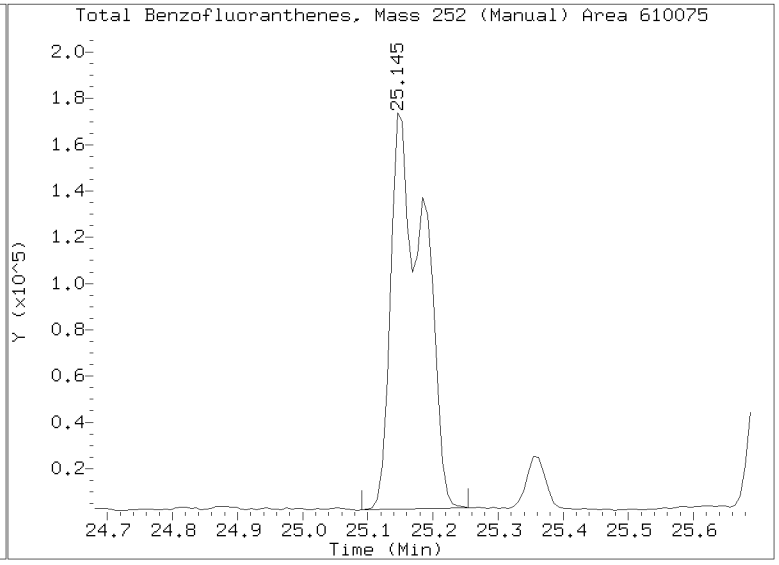
Quant Ion Manual Peak Adjustment Report

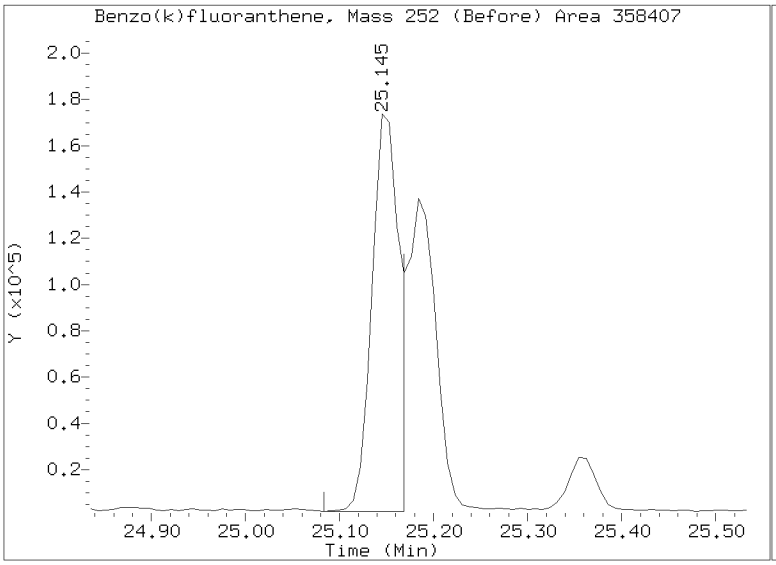
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182320.D
Injection Date: 19-MAR-2023 05:51
Lab ID:23A0467-07 Client ID:
Report Date: 04/04/2023 10:37

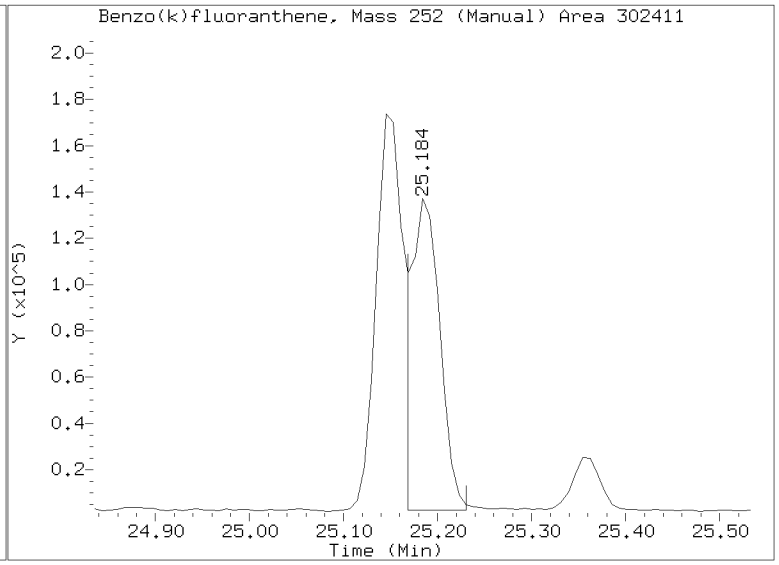












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1013

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	02/23/23 15:49	File ID:	NT1003182323.D
% Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 07:46
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.67 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	296		4.4	20.0
106-44-5	4-Methylphenol	1	121		7.4	20.0
91-20-3	Naphthalene	1	17.7	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	14.6	J	4.5	20.0
208-96-8	Acenaphthylene	1	15.3	J	6.2	20.0
131-11-3	Dimethylphthalate	1	8.6	J	4.4	20.0
83-32-9	Acenaphthene	1	11.5	J	5.2	20.0
132-64-9	Dibenzofuran	1	14.6	J	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	83.5		8.7	20.0
120-12-7	Anthracene	1	70.7		7.2	20.0
206-44-0	Fluoranthene	1	204		6.1	20.0
129-00-0	Pyrene	1	230		5.7	20.0
85-68-7	Butylbenzylphthalate	1	22.0		9.4	20.0
56-55-3	Benzo(a)anthracene	1	138		6.0	20.0
218-01-9	Chrysene	1	209		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	191		5.5	50.0
	Benzofluoranthenes, Total	1	418		10.0	40.0
50-32-8	Benzo(a)pyrene	1	173		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	85.3		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	31.8		17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	92.3		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.99	567	75.5	27 - 120	
Phenol-d5	749.99	573	76.4	29 - 120	
2-Chlorophenol-d4	749.99	608	81.1	31 - 120	
1,2-Dichlorobenzene-d4	499.99	377	75.4	32 - 120	
Nitrobenzene-d5	499.99	400	80.0	30 - 120	
2-Fluorobiphenyl	499.99	400	80.0	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1013

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

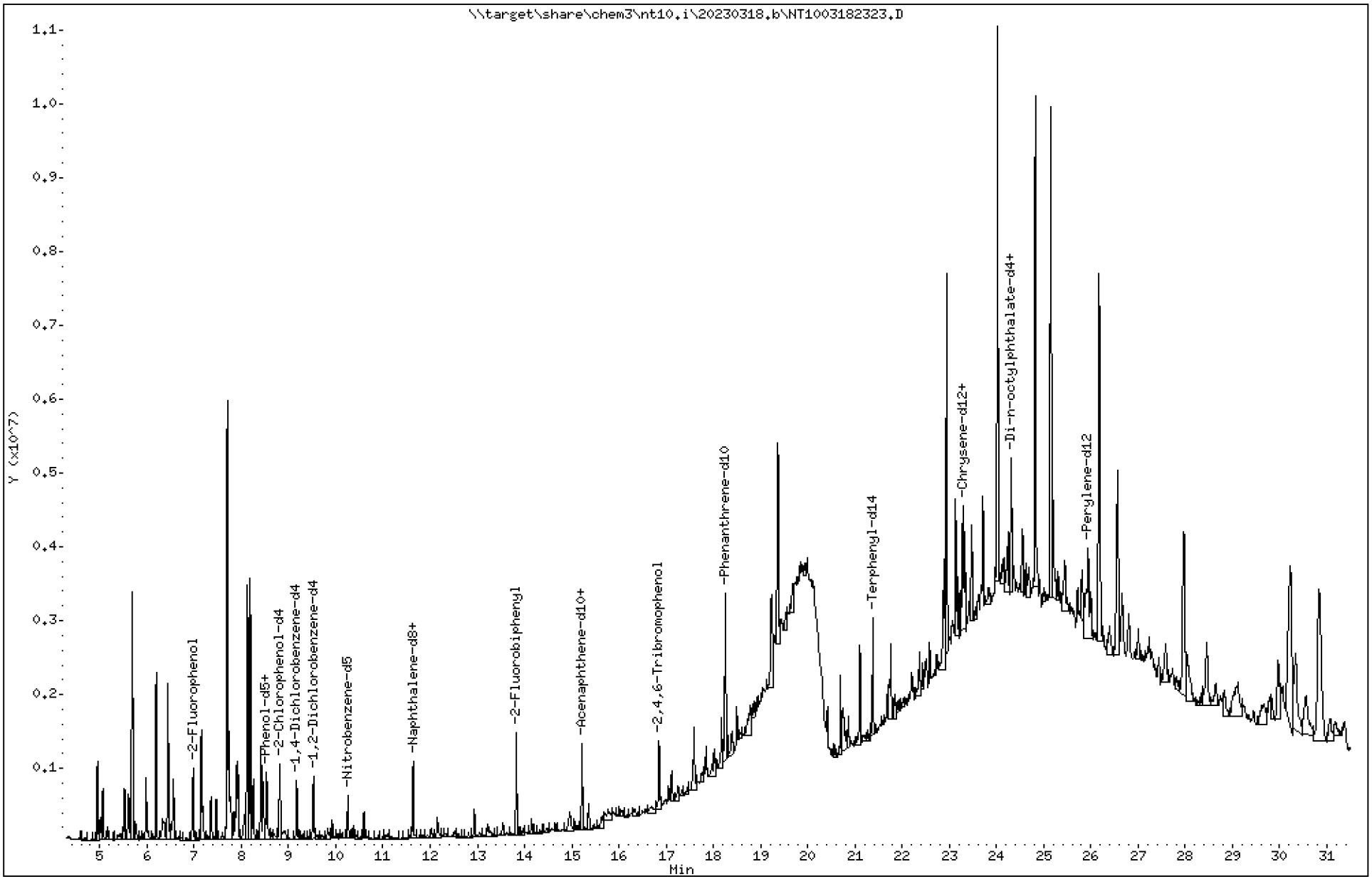
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	02/23/23 15:49	File ID:	NT1003182323.D
% Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 07:46
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	20.67 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.99	674	89.8	24 - 134	
p-Terphenyl-d14	499.99	391	78.3	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D
Date : 19-MAR-2023 07:46
Client ID:
Sample Info: 23A0467-08

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

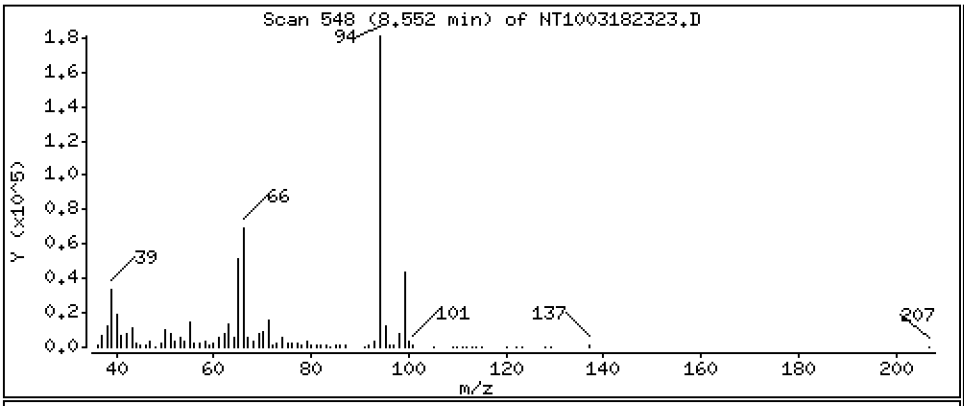
Operator: VTS

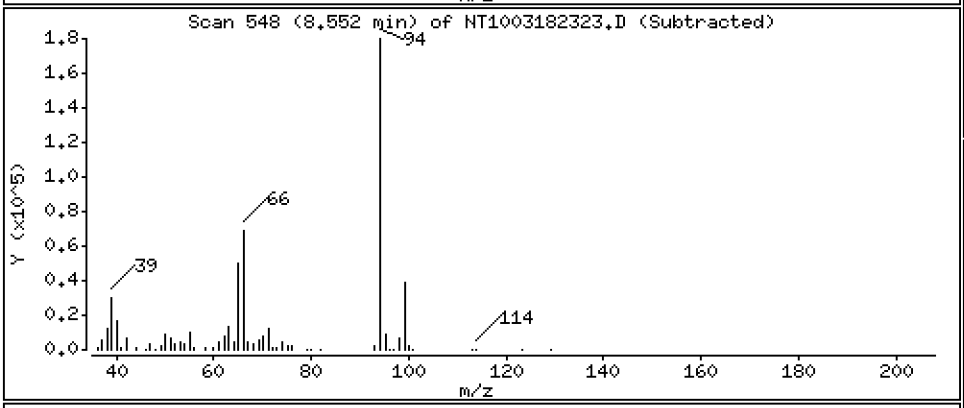
Column phase: ZB-5msi

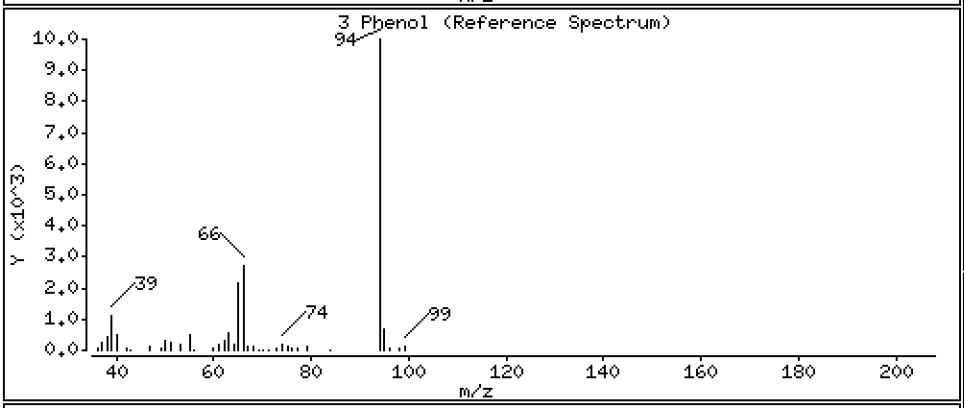
Column diameter: 0.25

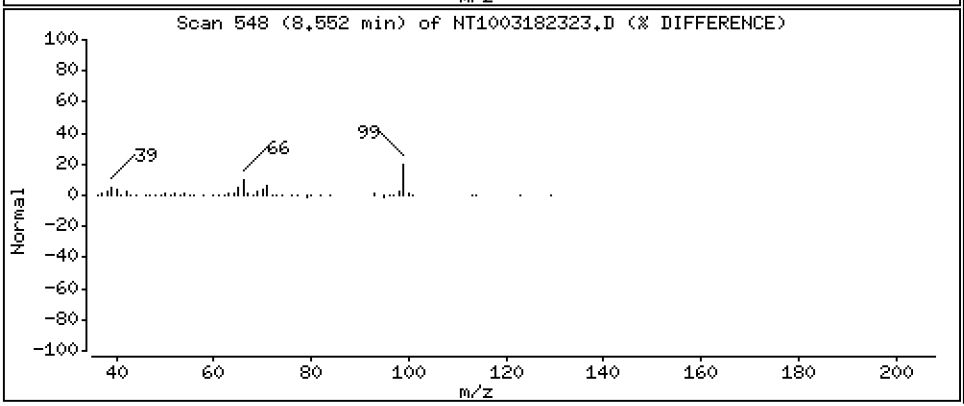
3 Phenol

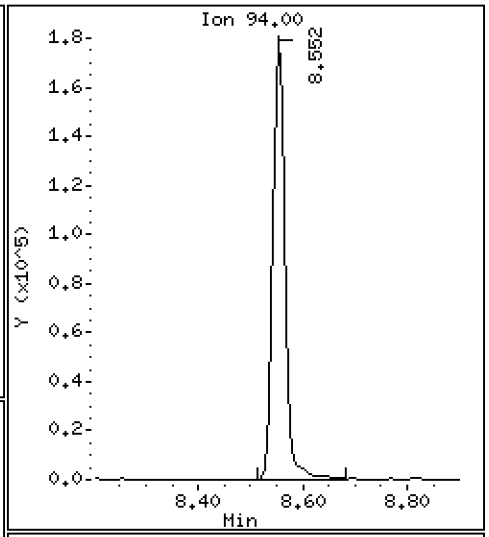
Concentration: 2.964 ug/mL

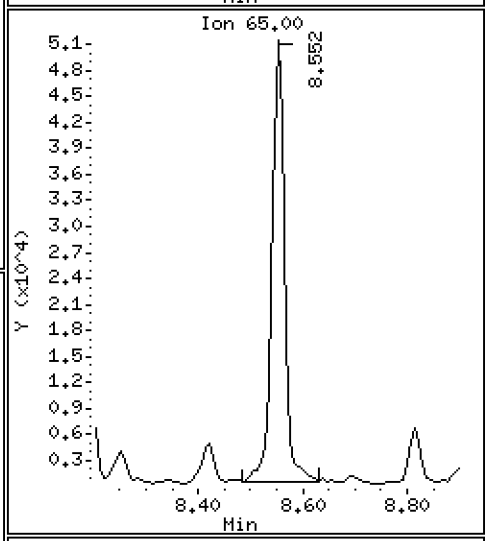


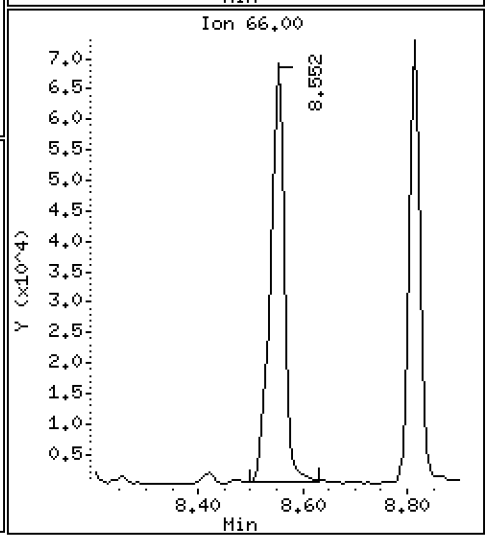












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

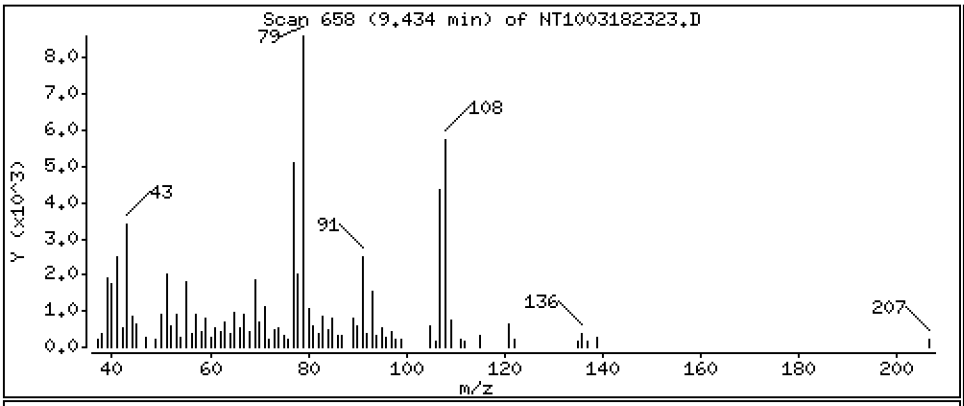
Operator: VTS

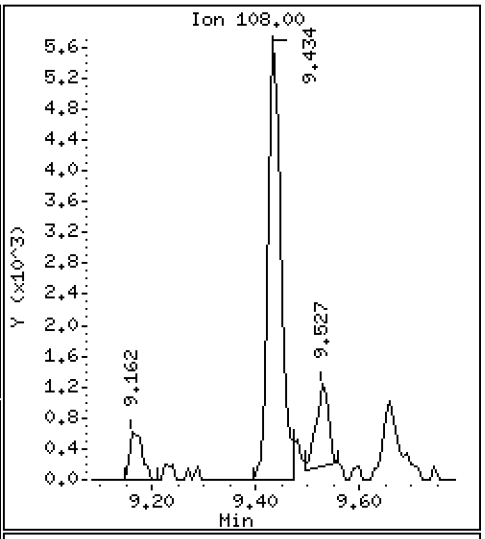
Column phase: ZB-5msi

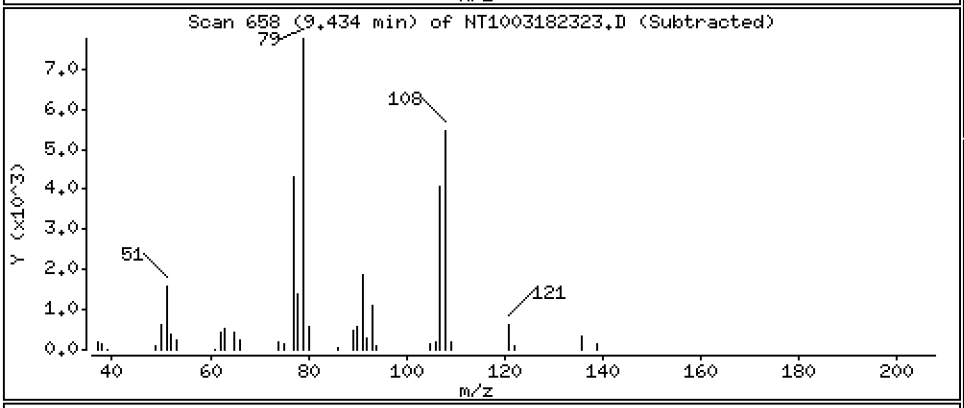
Column diameter: 0.25

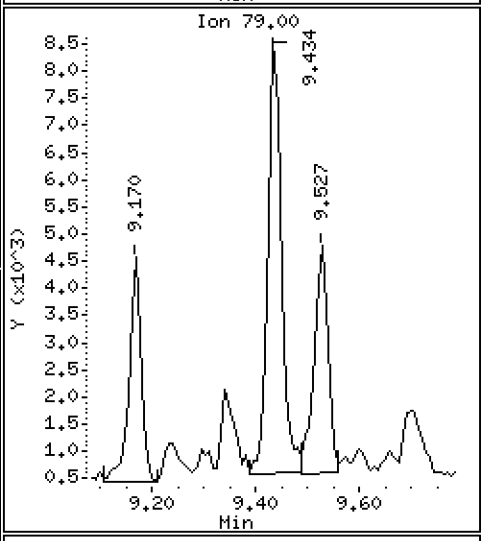
11 Benzyl alcohol

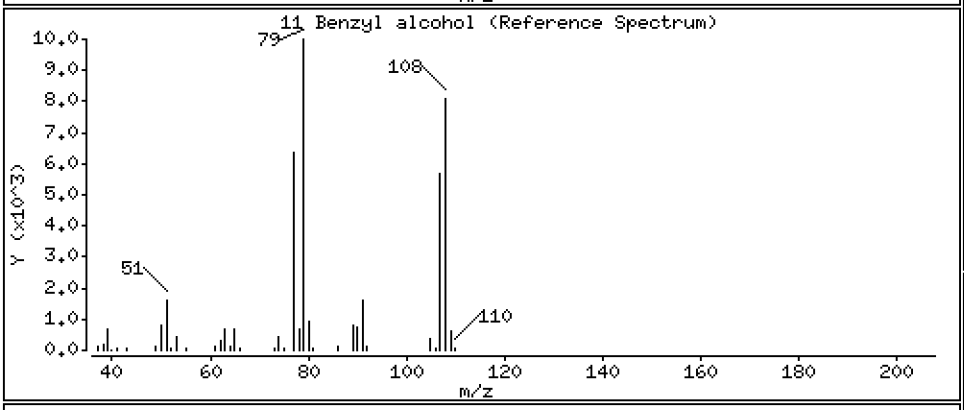
Concentration: 0.2156 ug/mL

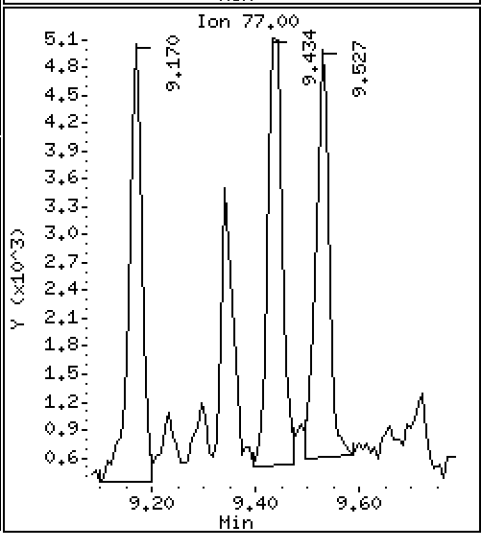


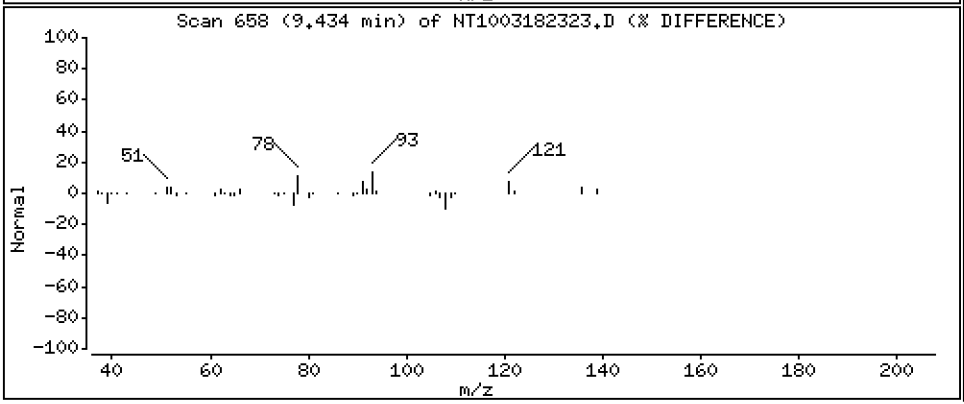












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

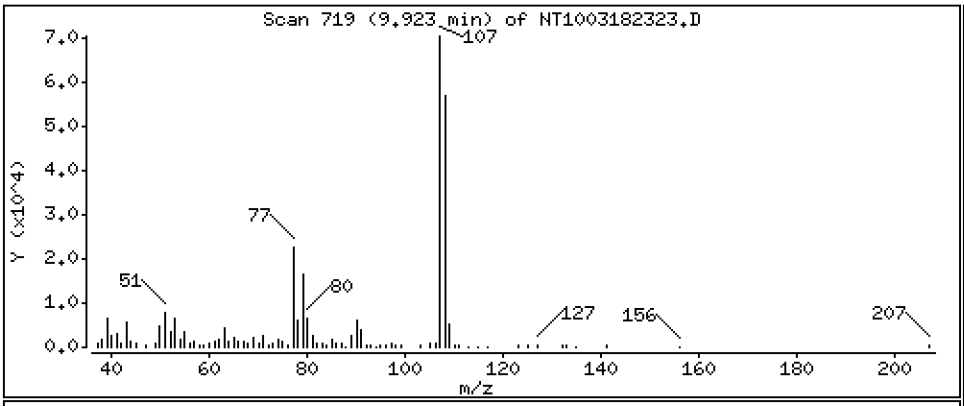
Operator: VTS

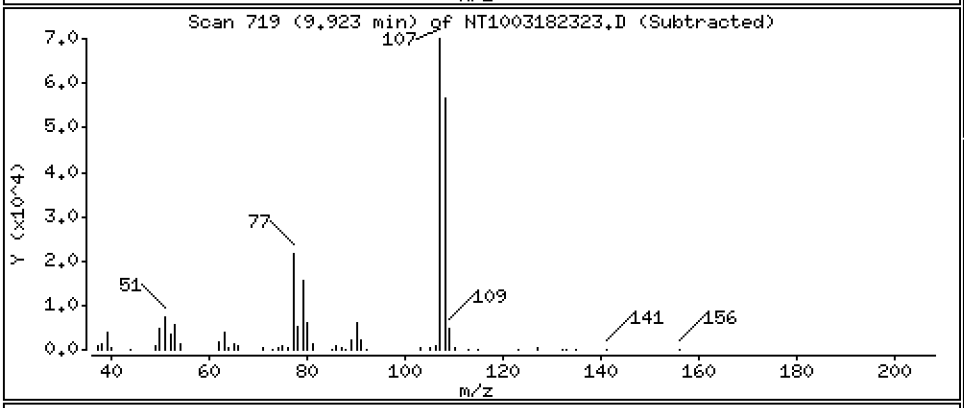
Column phase: ZB-5msi

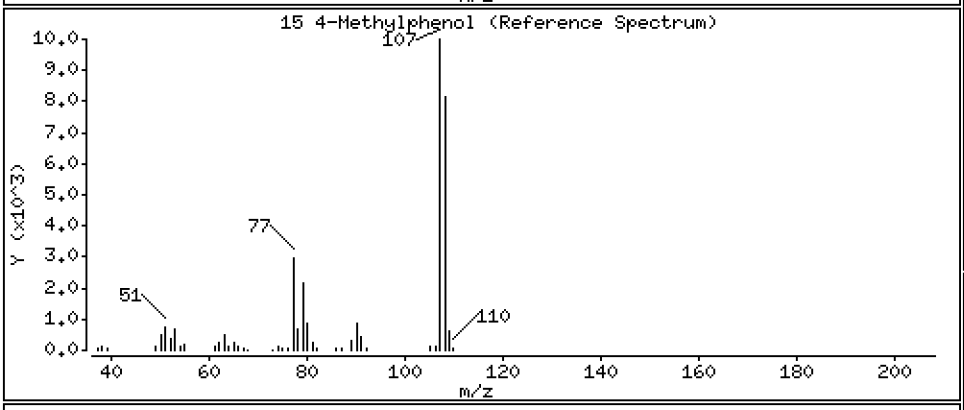
Column diameter: 0.25

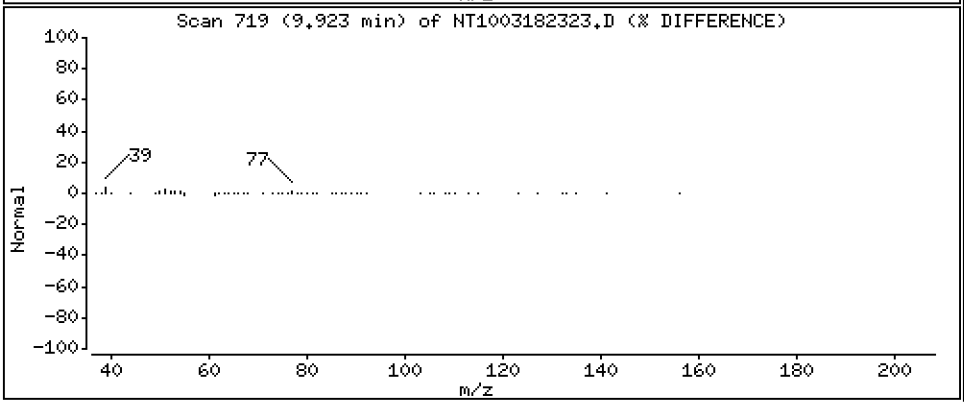
15 4-Methylphenol

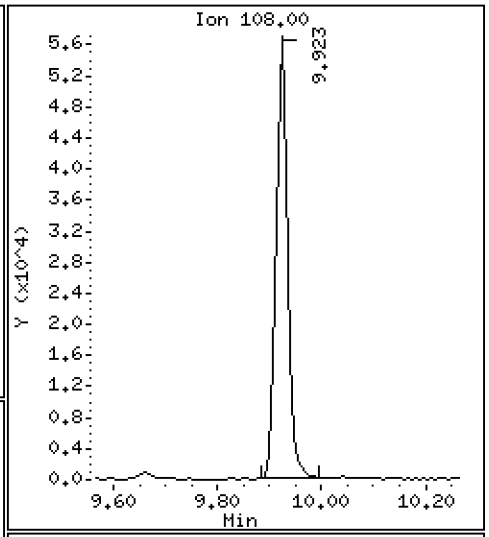
Concentration: 1.211 ug/mL

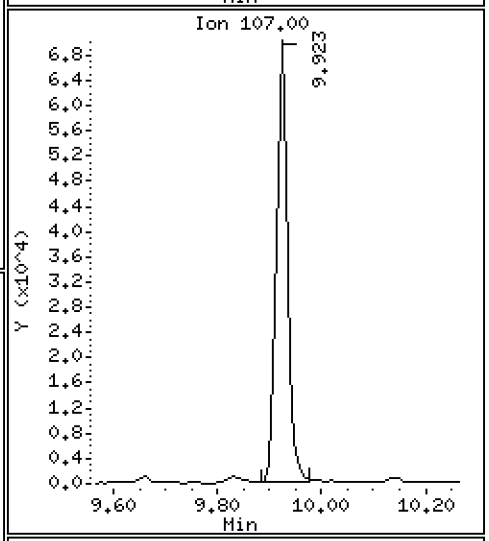


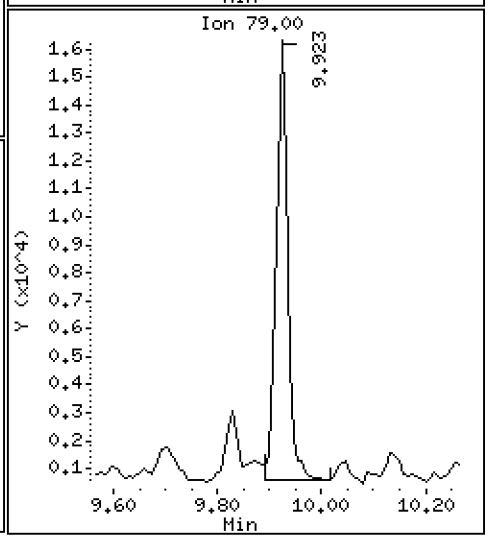












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

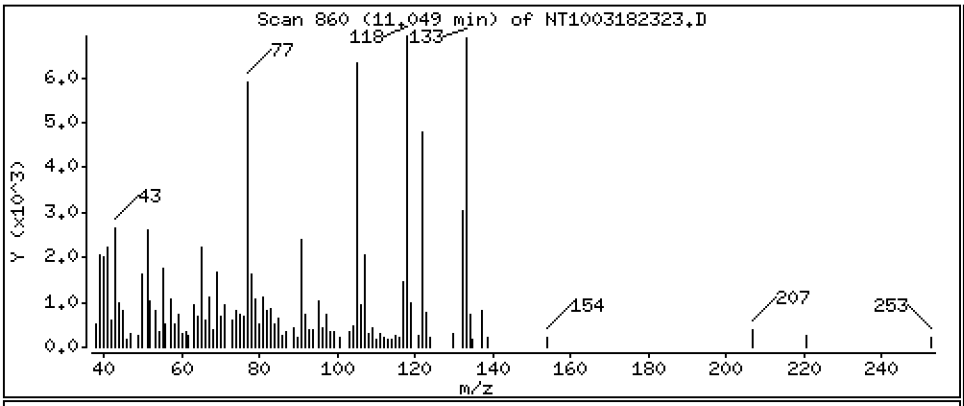
Operator: VTS

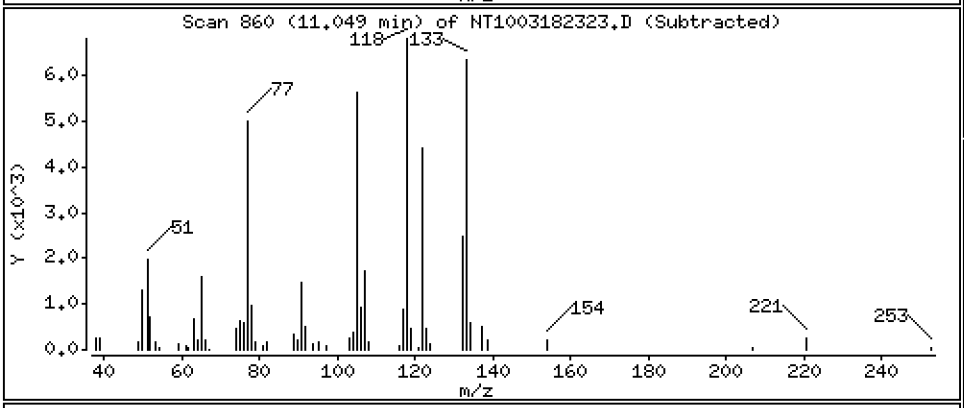
Column phase: ZB-5msi

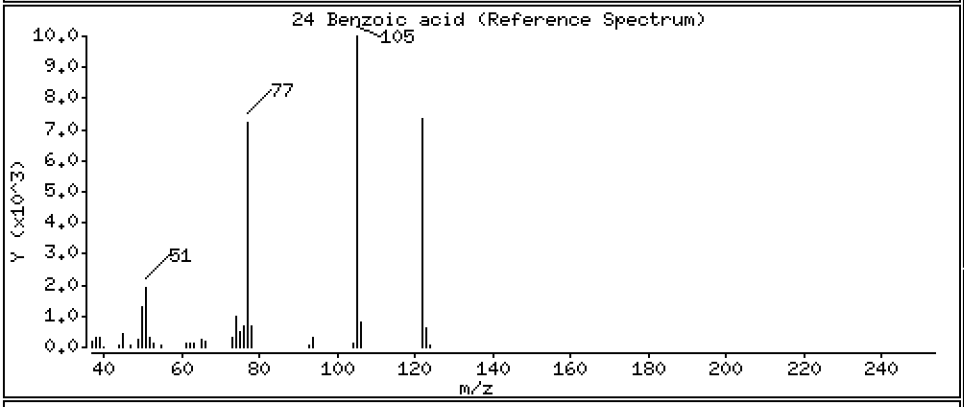
Column diameter: 0.25

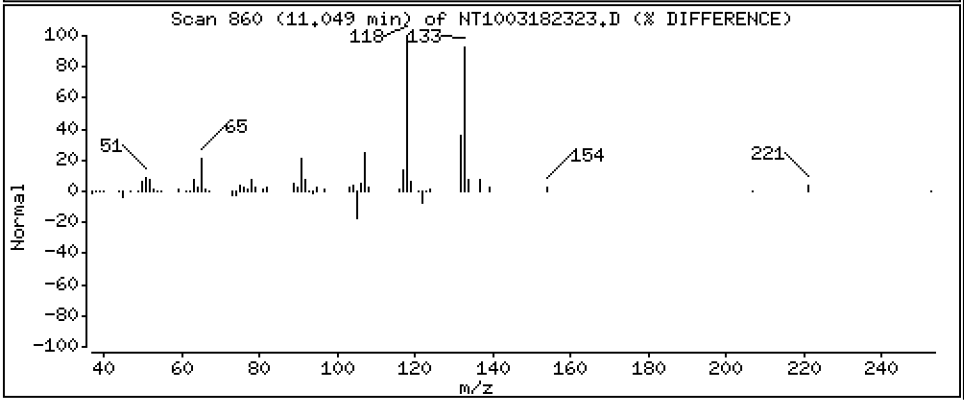
24 Benzoic acid

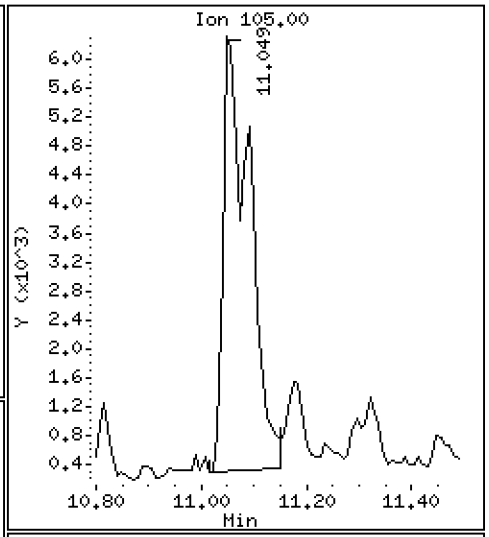
Concentration: 0.5108 ug/mL

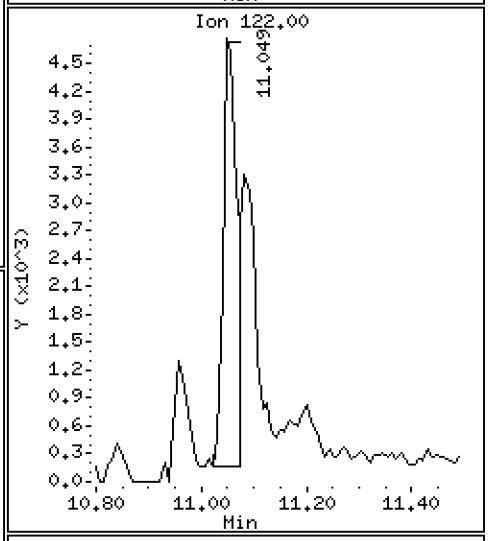


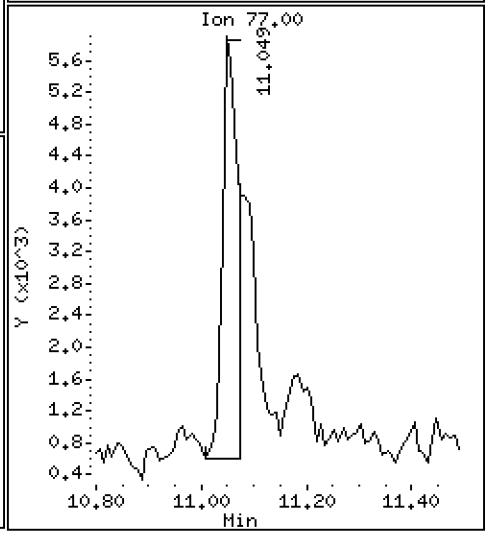












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

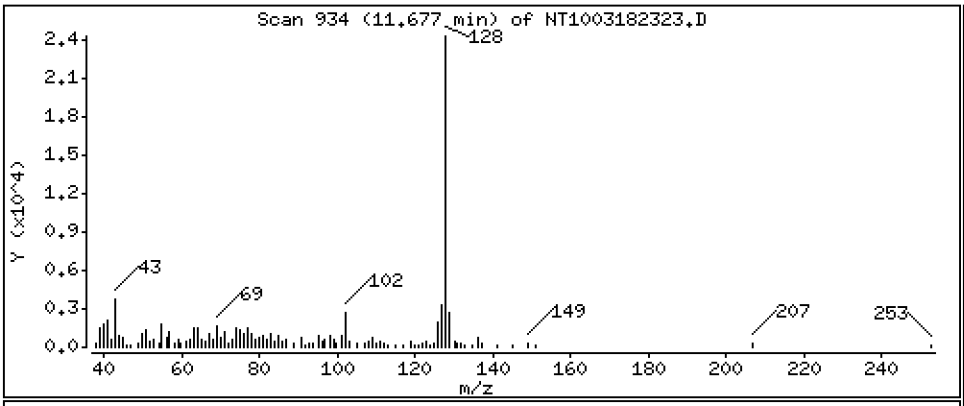
Operator: VTS

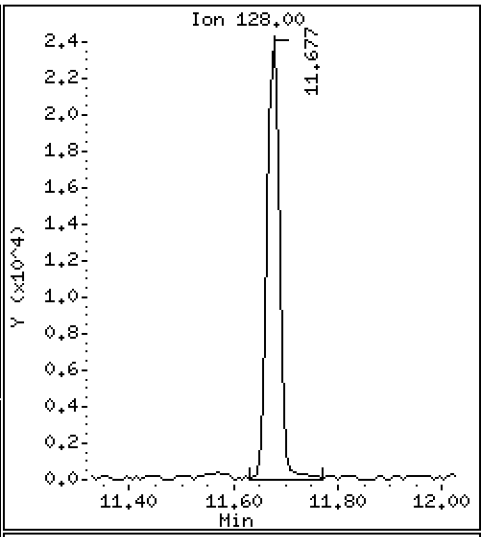
Column phase: ZB-5msi

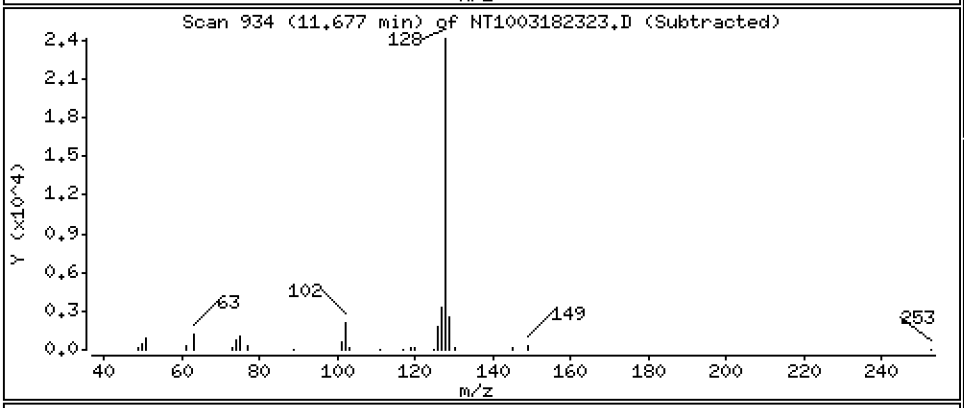
Column diameter: 0.25

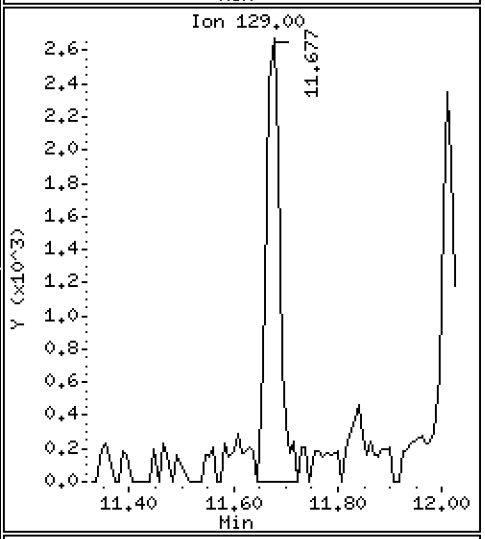
28 Naphthalene

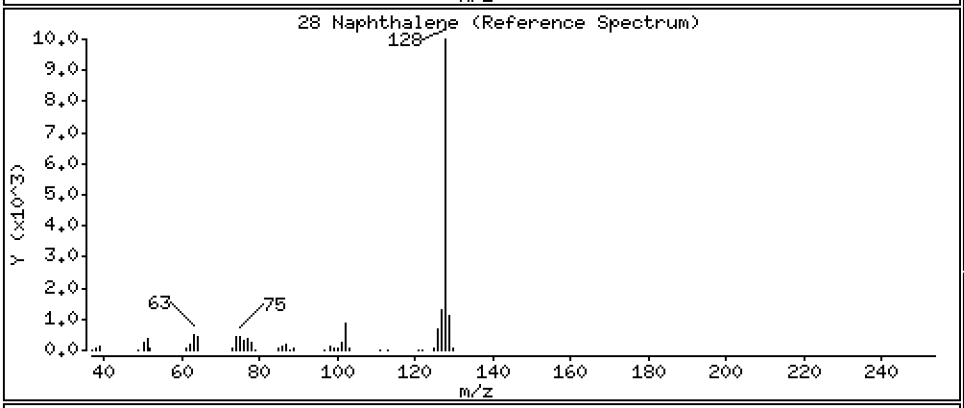
Concentration: 0.1773 ug/mL

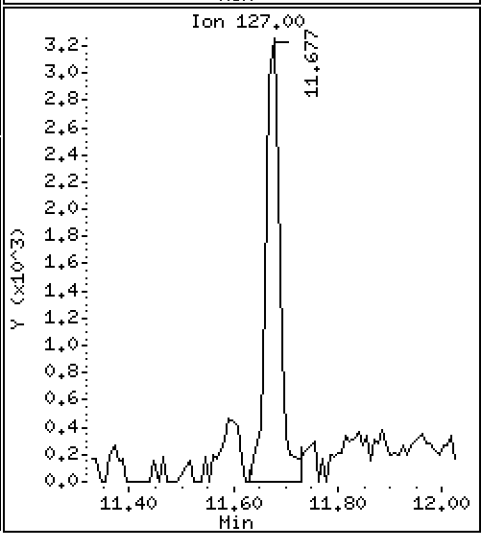


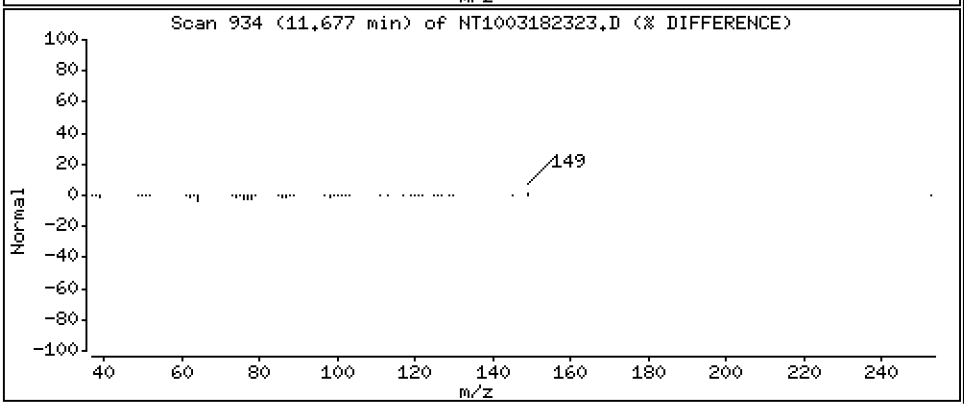












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

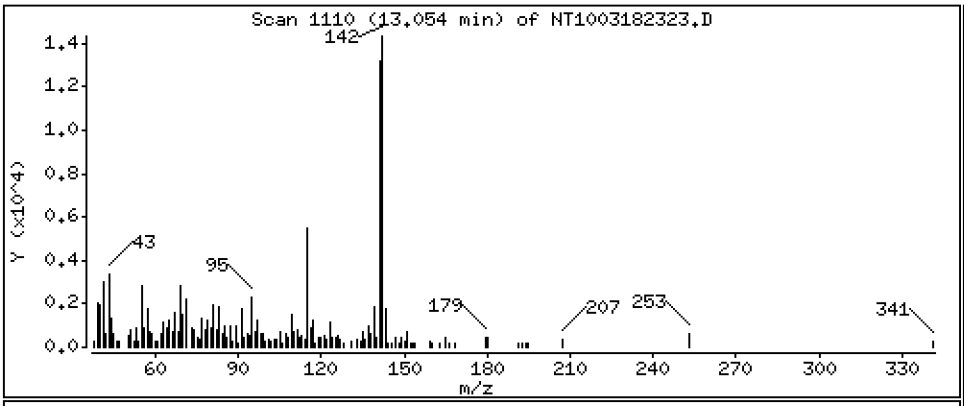
Operator: VTS

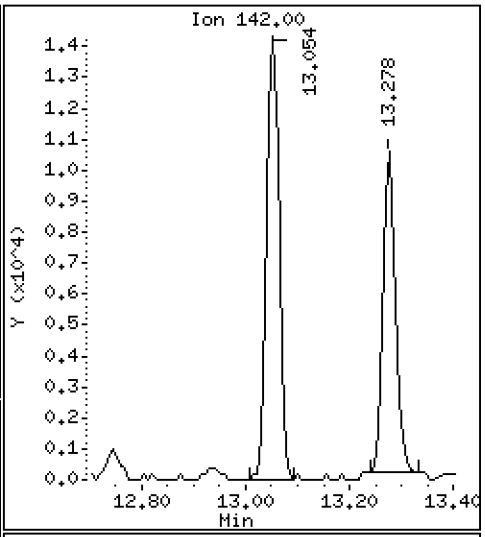
Column phase: ZB-5msi

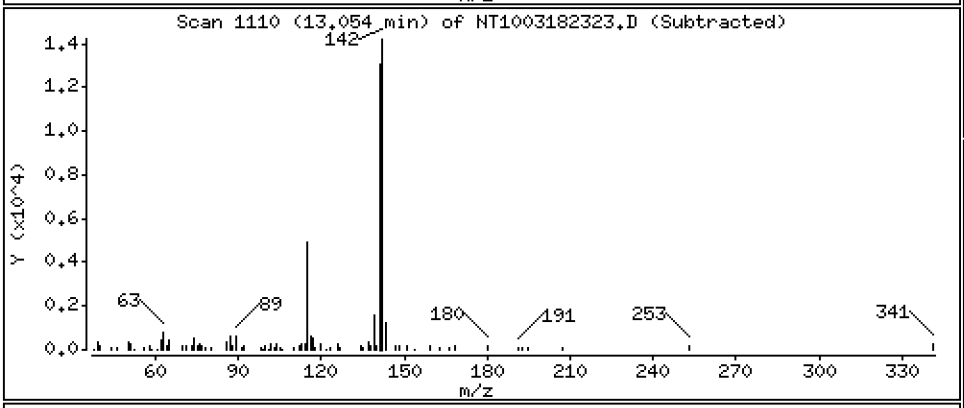
Column diameter: 0.25

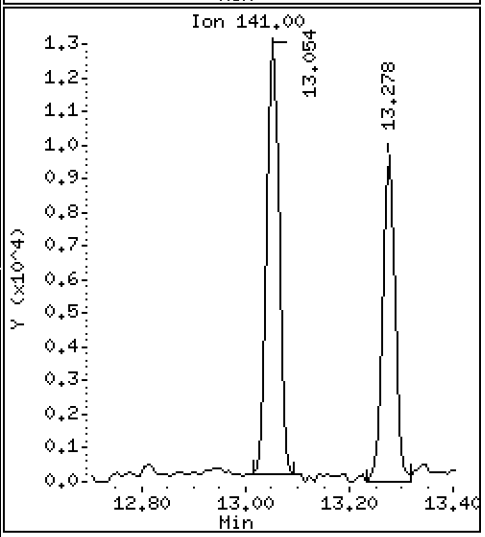
32 2-Methylnaphthalene

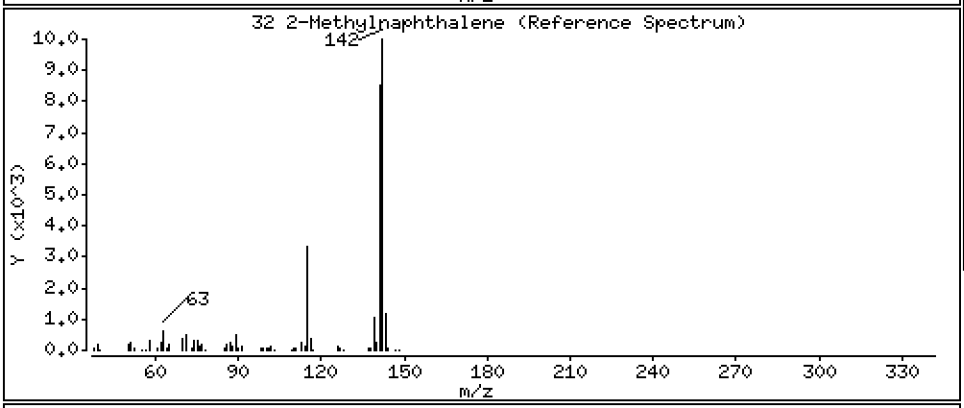
Concentration: 0.1465 ug/mL

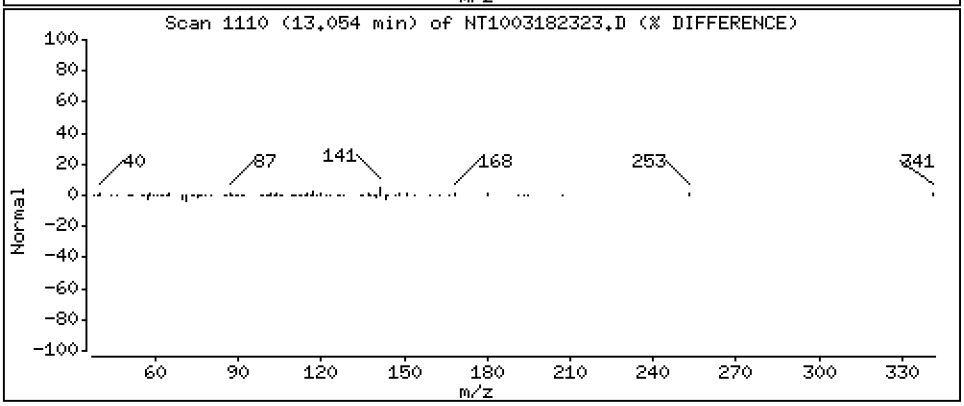












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

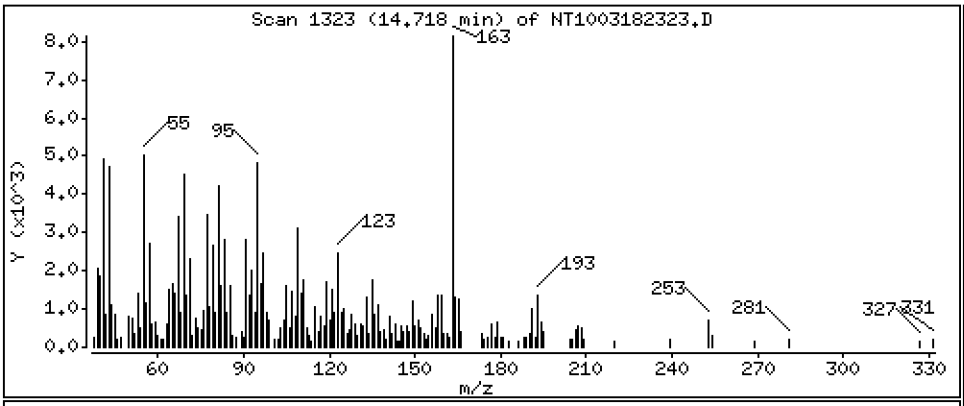
Operator: VTS

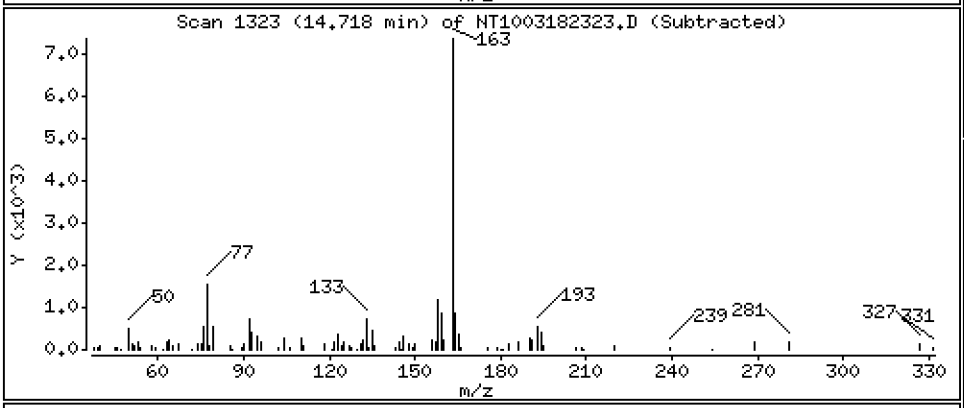
Column phase: ZB-5msi

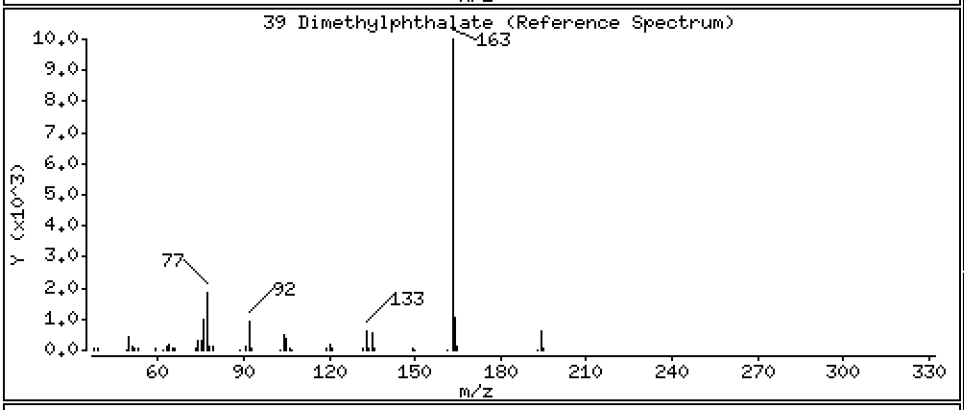
Column diameter: 0.25

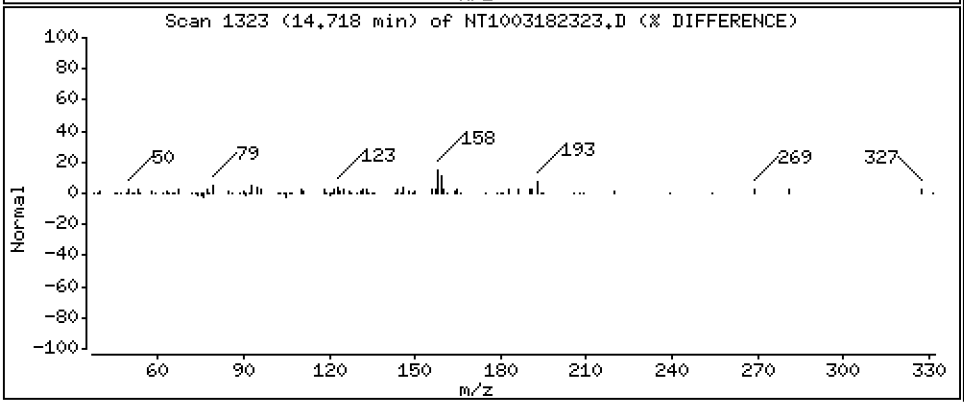
39 Dimethylphthalate

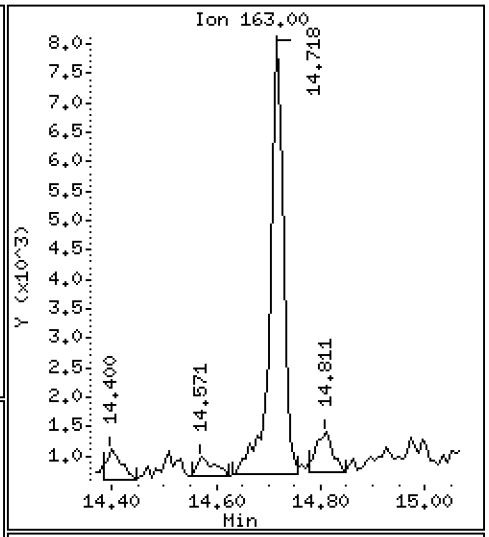
Concentration: 0.08558 ug/mL

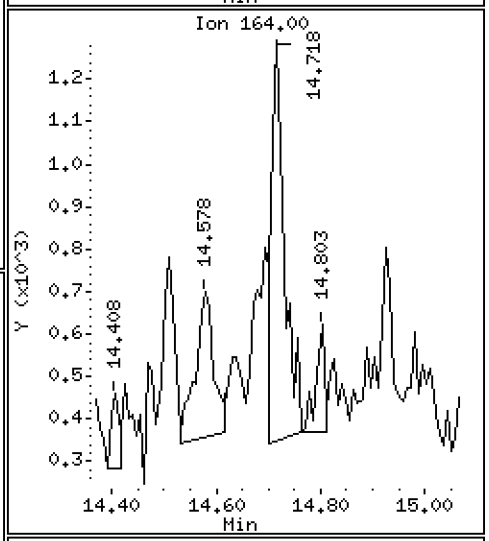


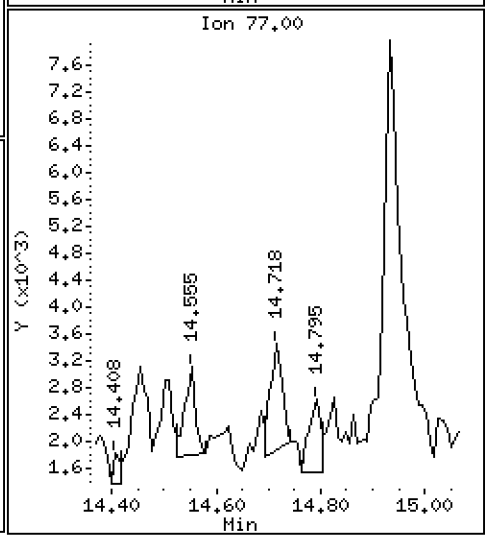












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

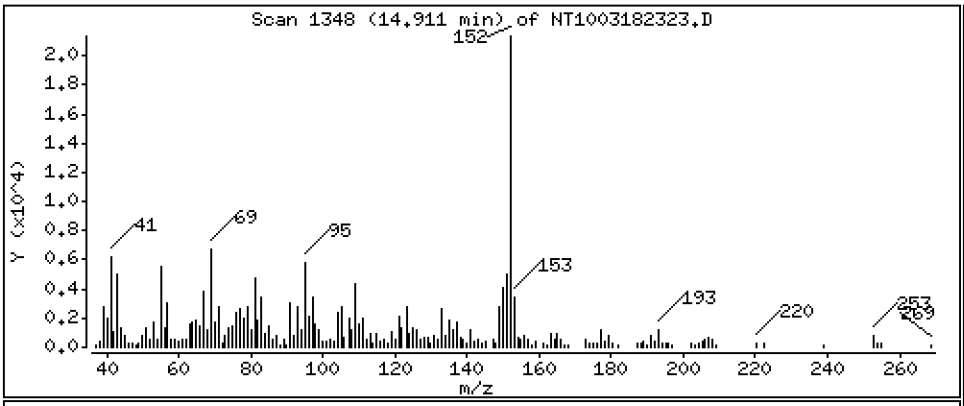
Operator: VTS

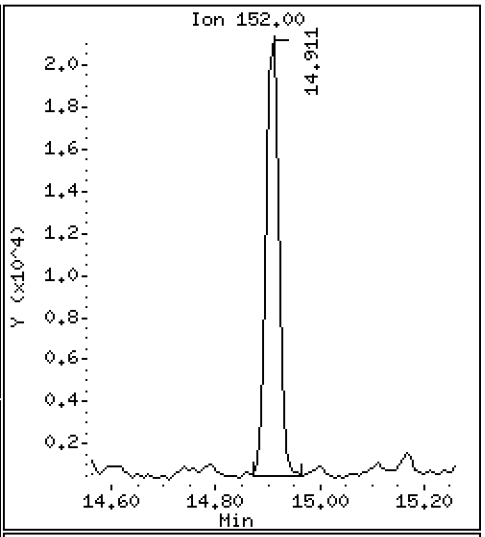
Column phase: ZB-5msi

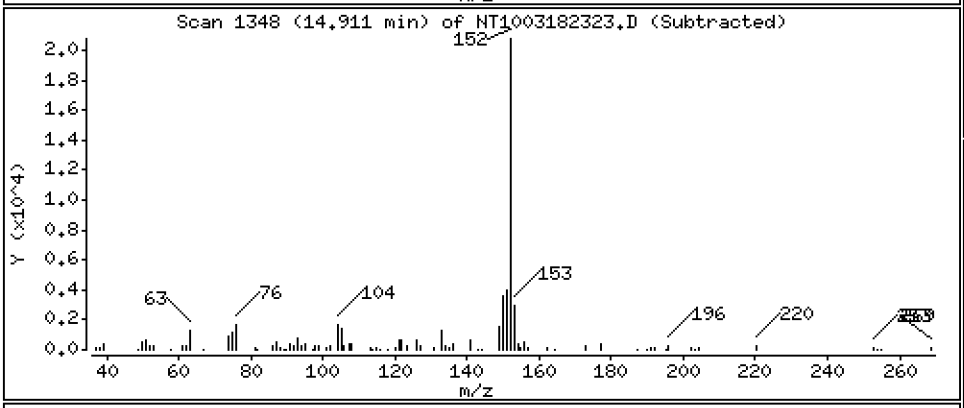
Column diameter: 0.25

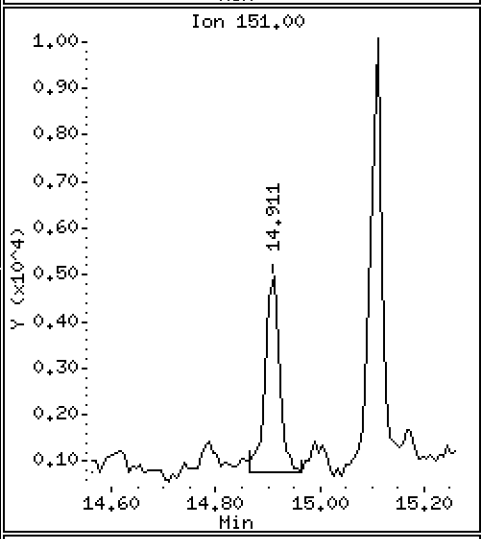
40 Acenaphthylene

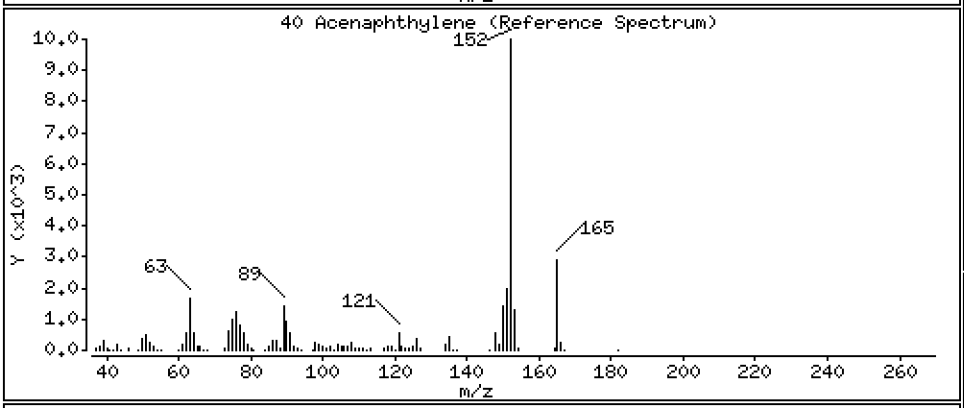
Concentration: 0.1526 ug/mL

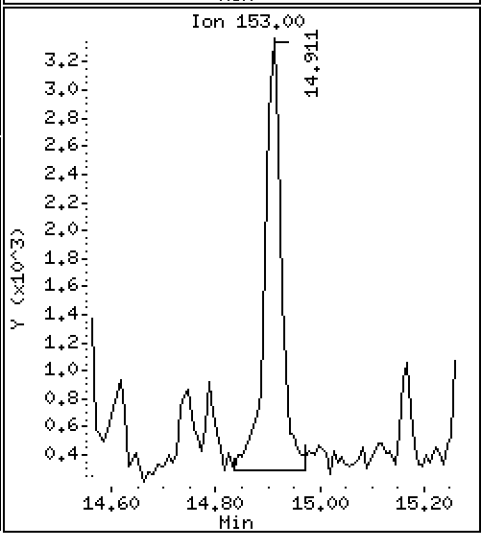


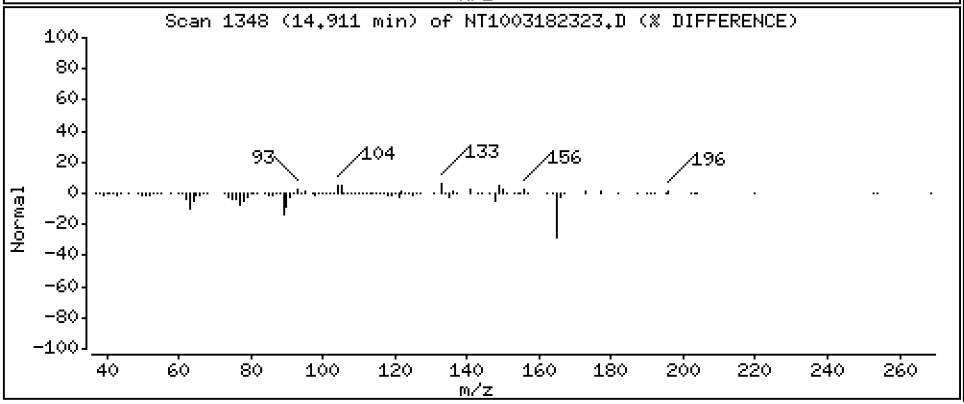












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

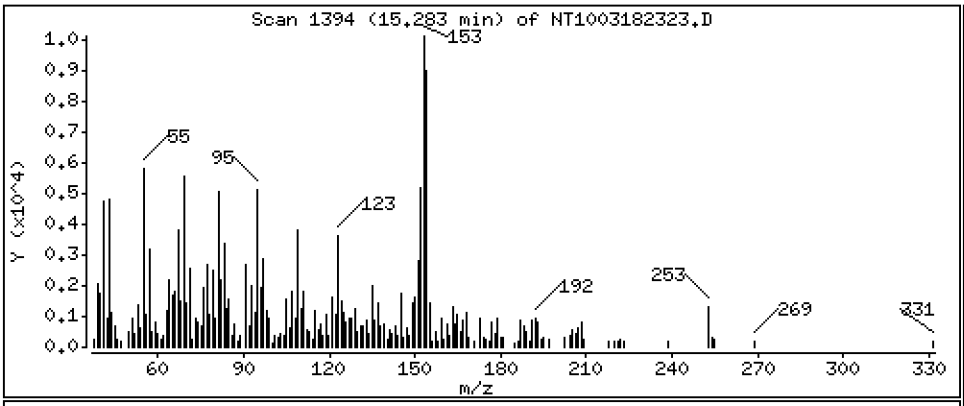
Operator: VTS

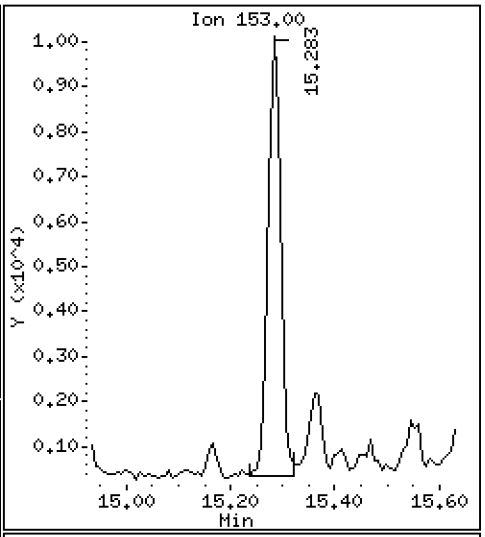
Column phase: ZB-5msi

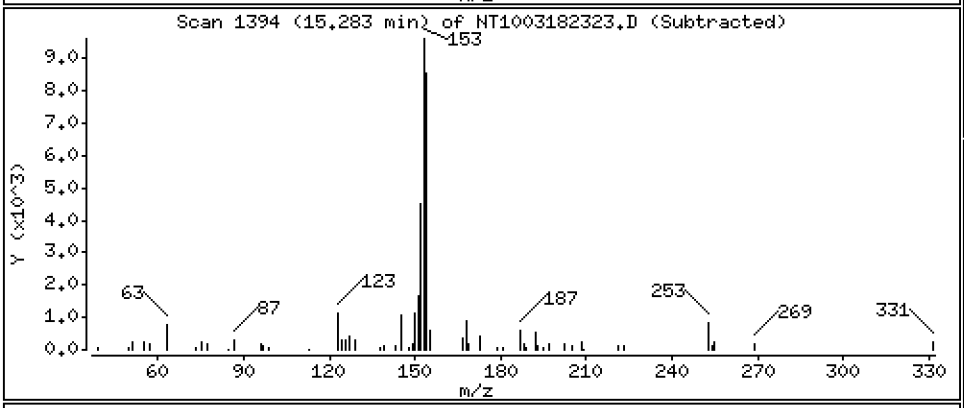
Column diameter: 0.25

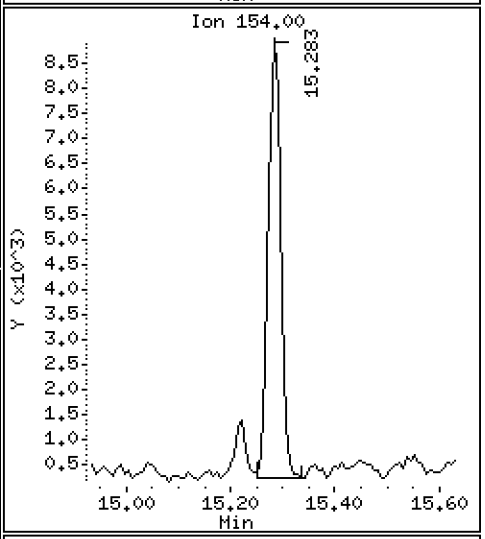
44 Acenaphthene

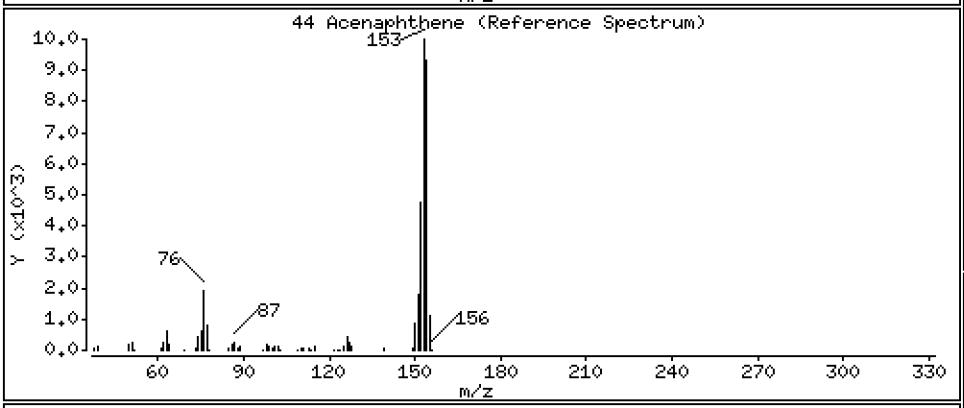
Concentration: 0.1148 ug/mL

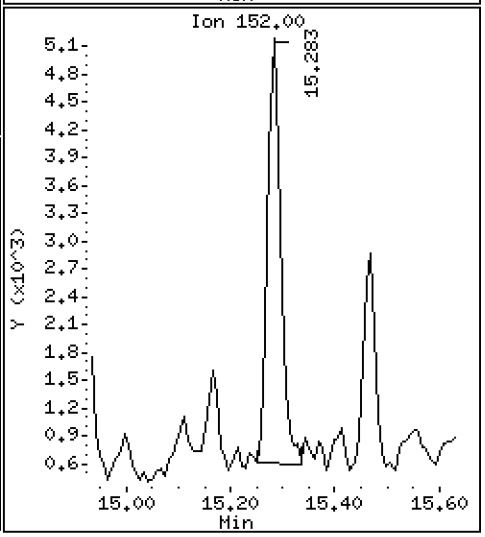


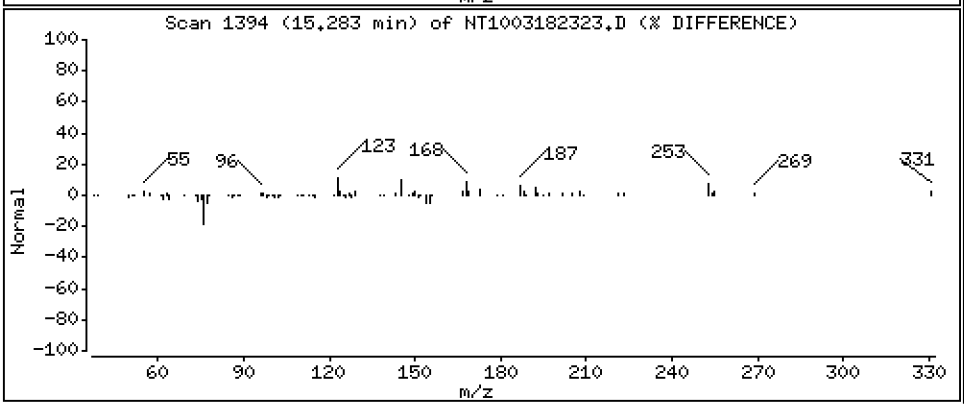












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

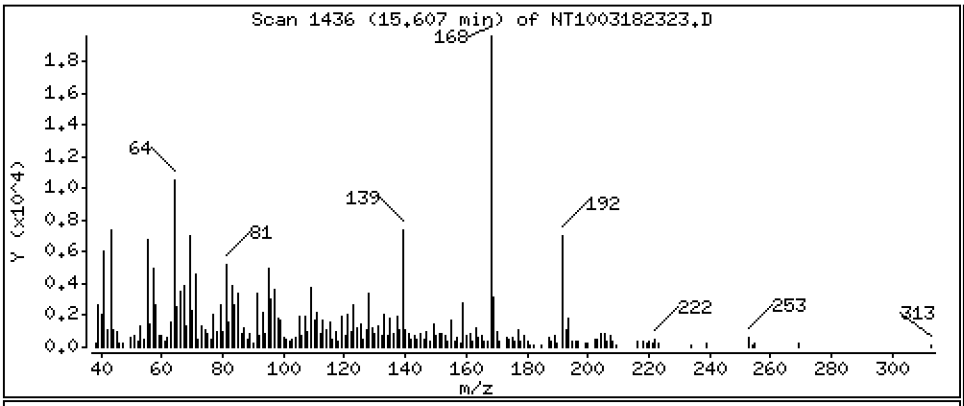
Operator: VTS

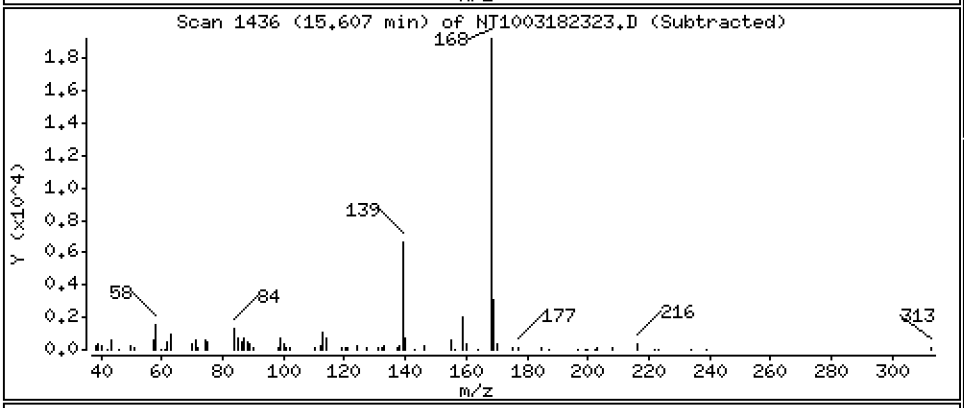
Column phase: ZB-5msi

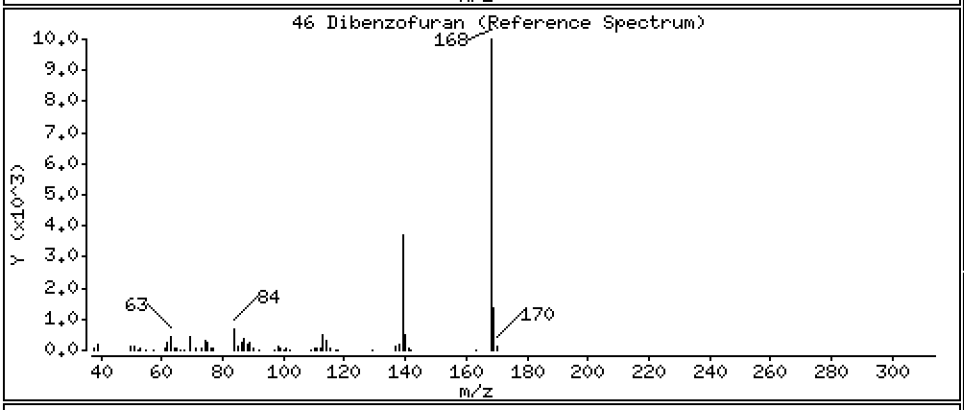
Column diameter: 0.25

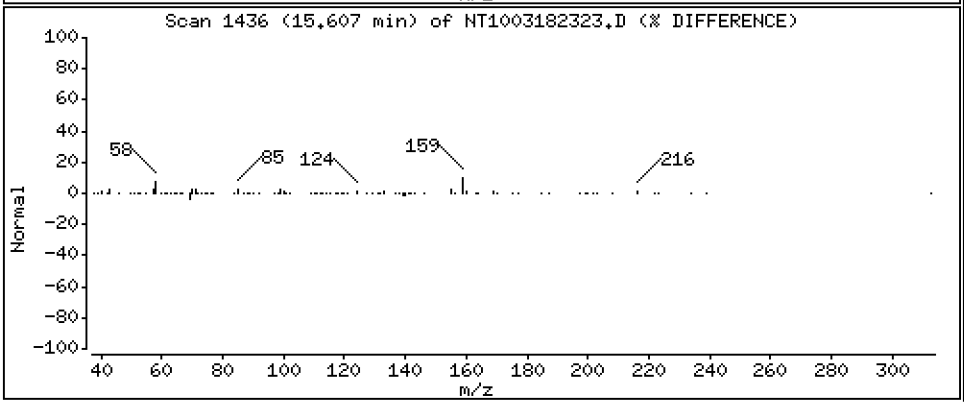
46 Dibenzofuran

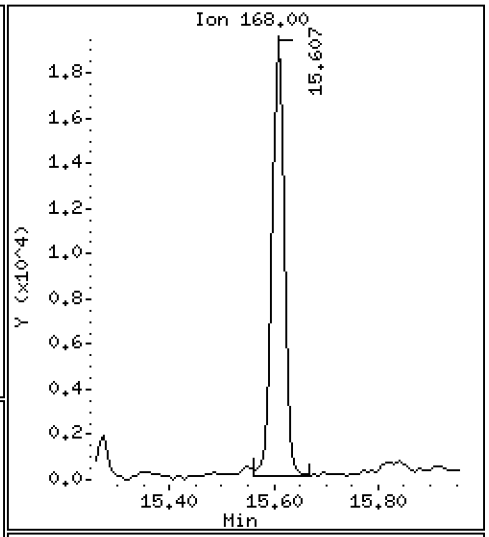
Concentration: 0.1464 ug/mL

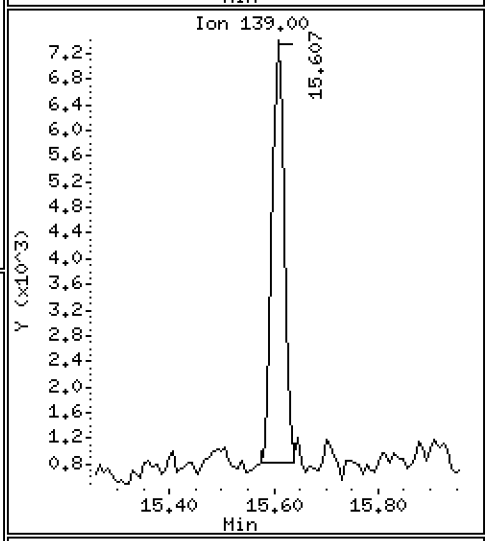


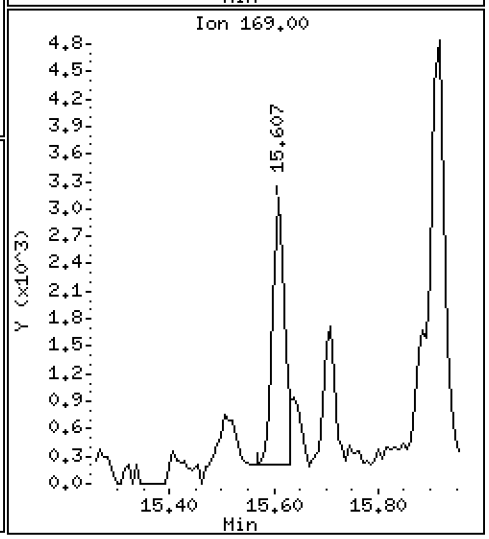












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

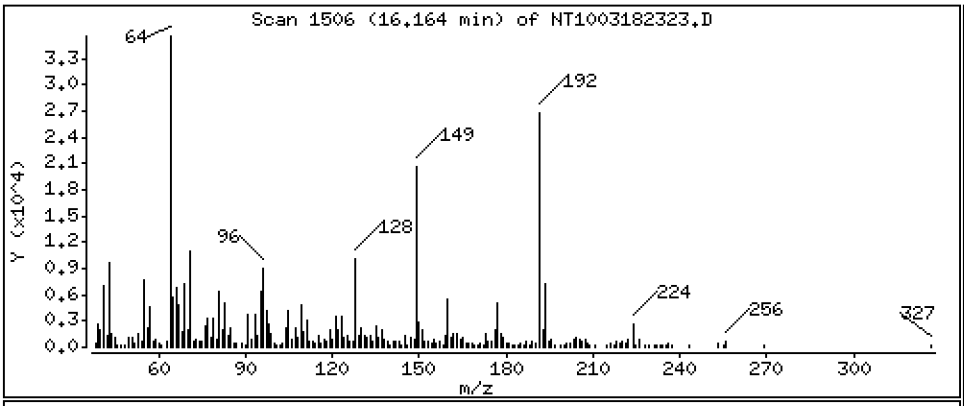
Operator: VTS

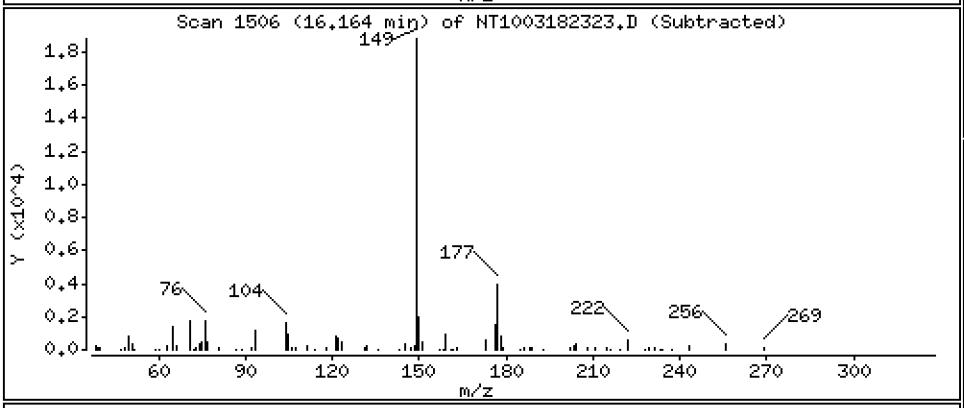
Column phase: ZB-5msi

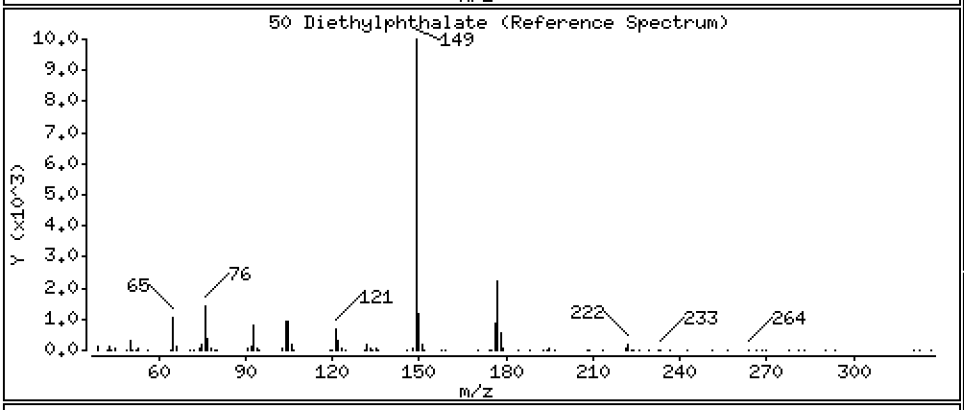
Column diameter: 0.25

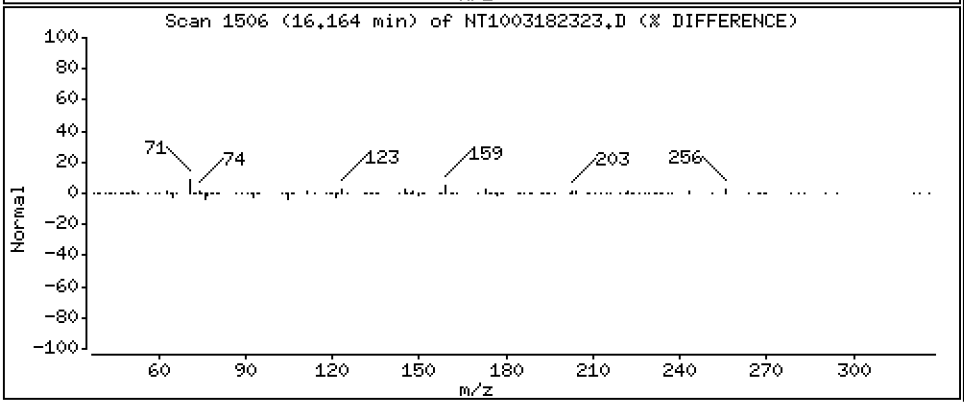
50 Diethylphthalate

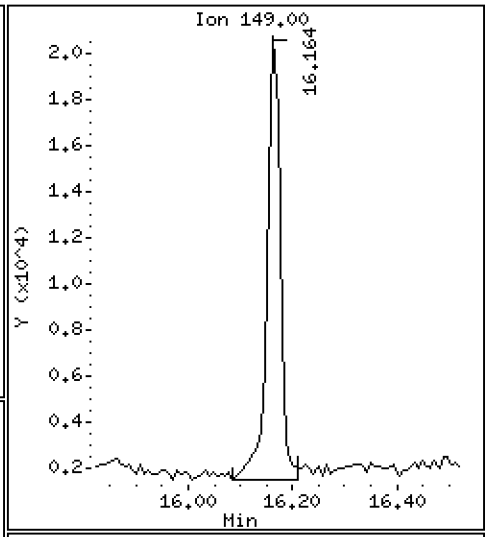
Concentration: 0.2555 ug/mL

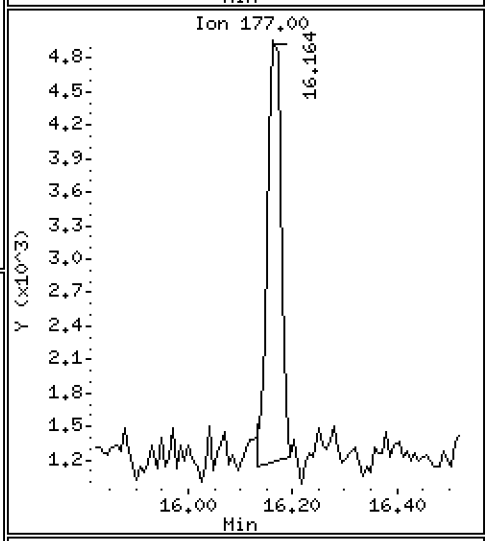


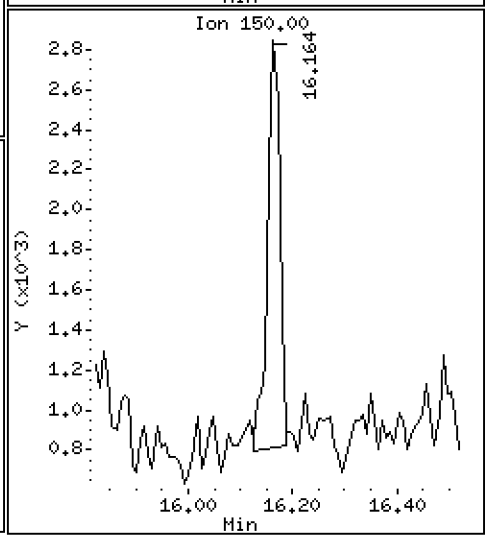












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

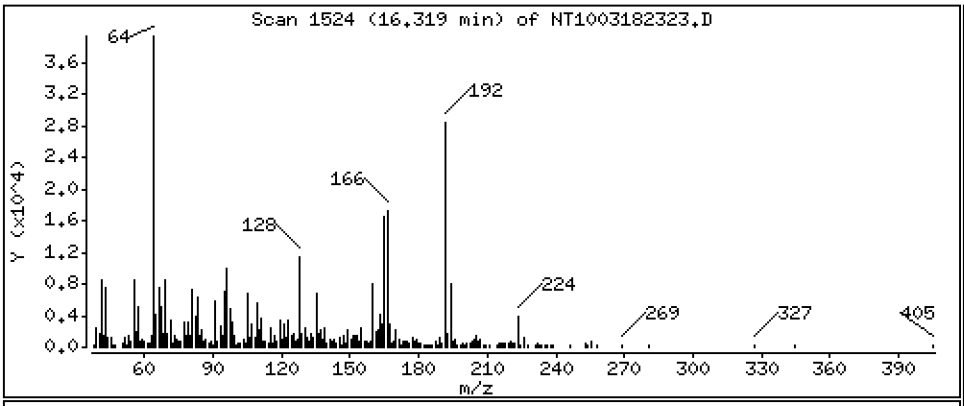
Operator: VTS

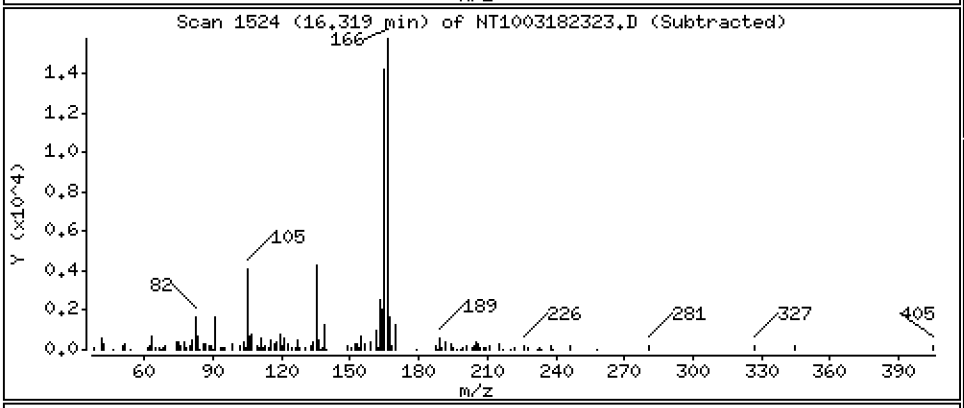
Column phase: ZB-5msi

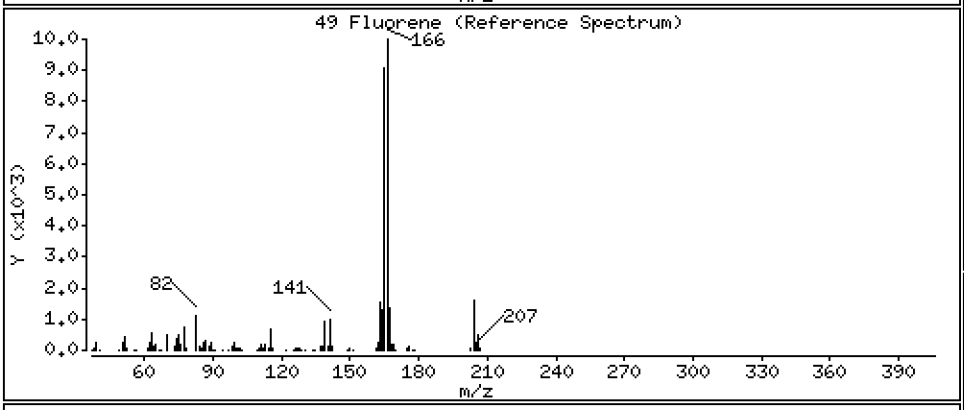
Column diameter: 0.25

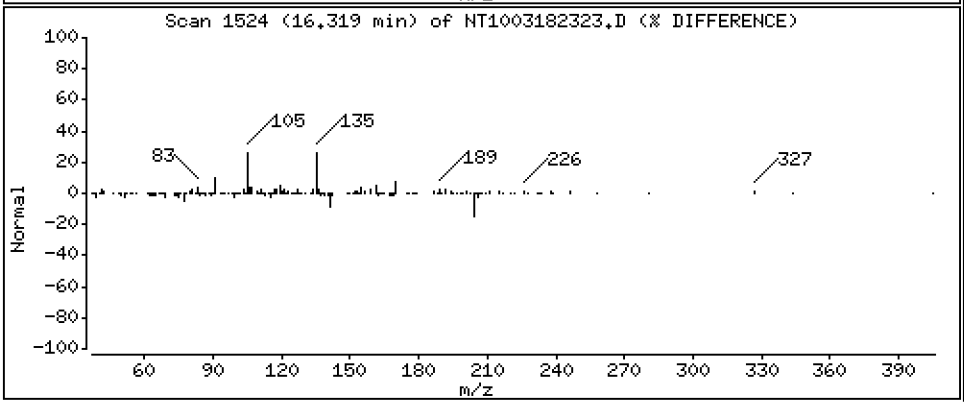
49 Fluorene

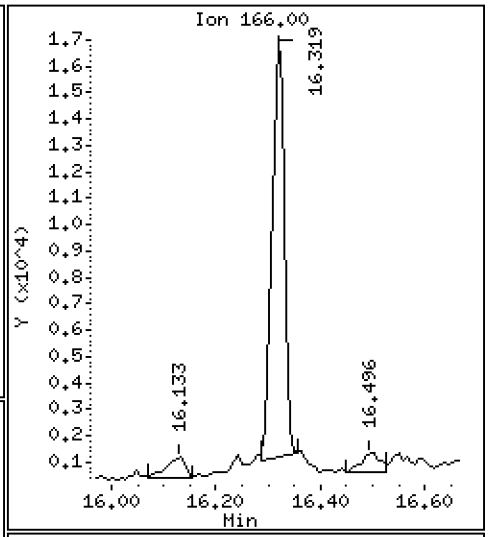
Concentration: 0.1410 ug/mL

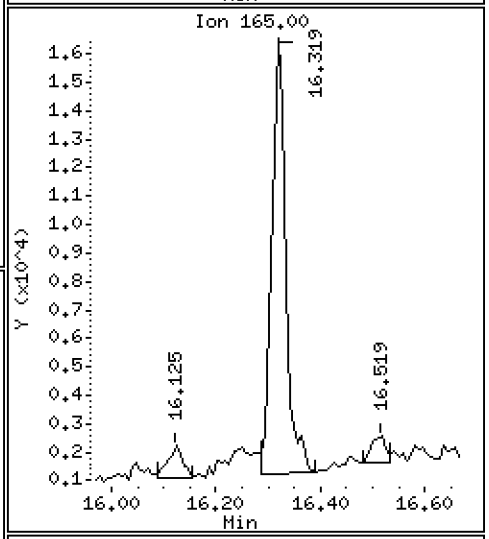


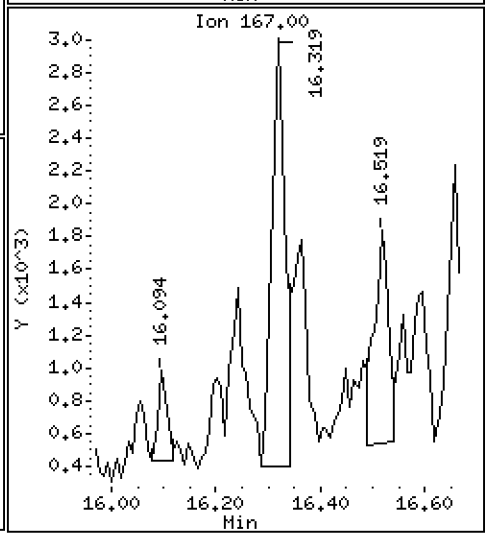












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

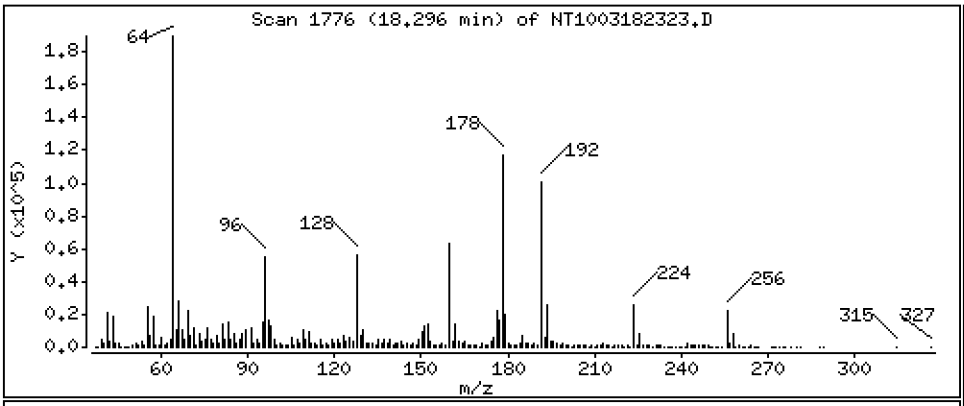
Operator: VTS

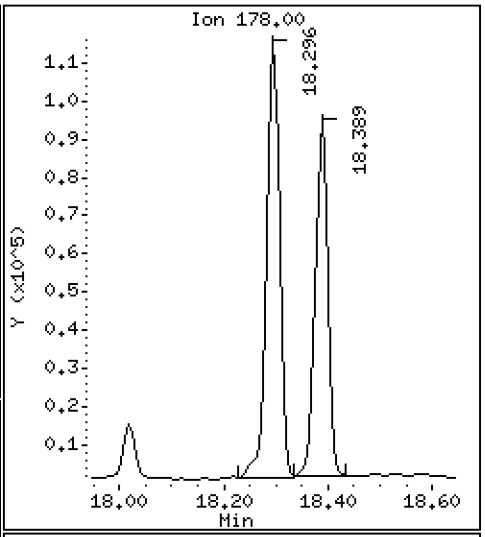
Column phase: ZB-5msi

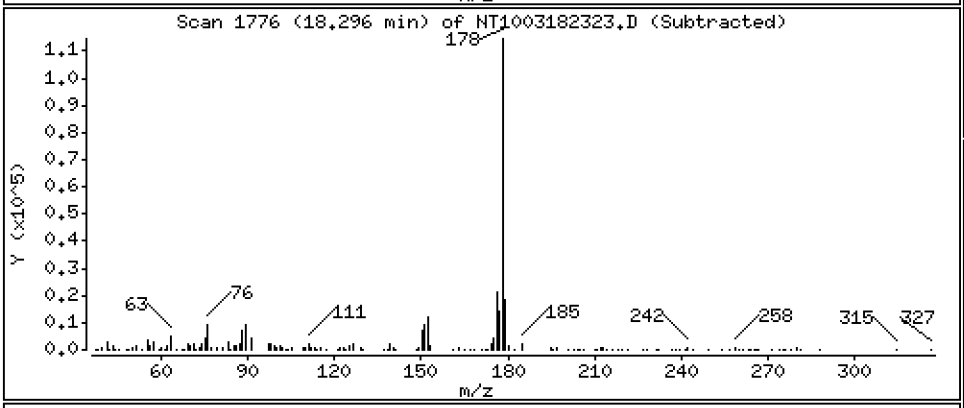
Column diameter: 0.25

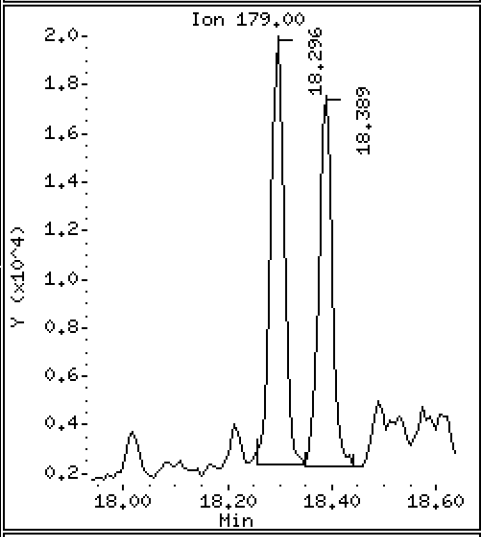
60 Phenanthrene

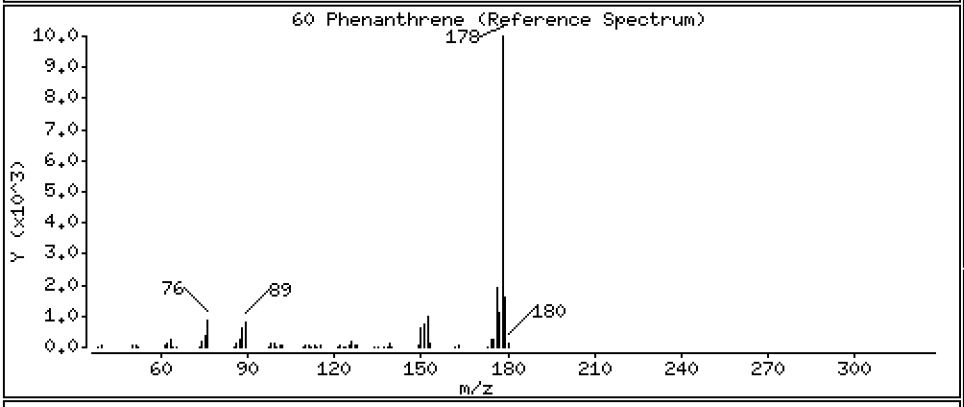
Concentration: 0.8347 ug/mL

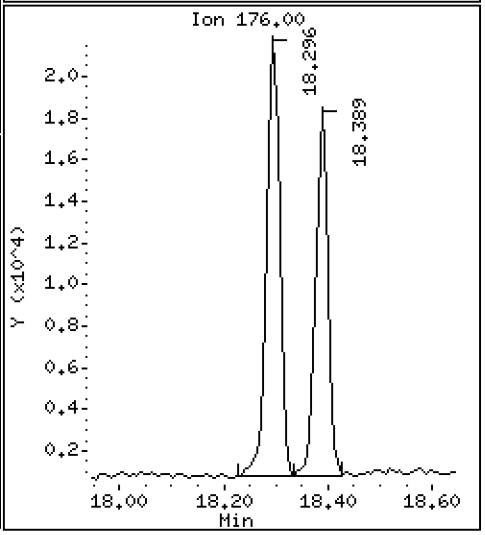


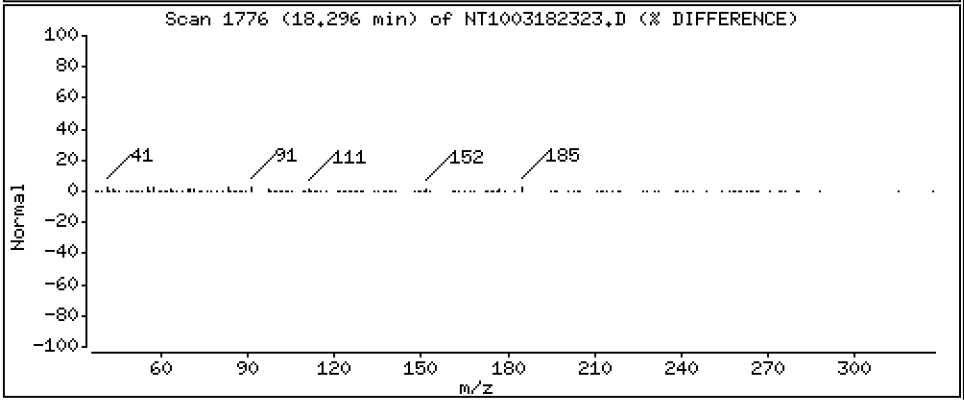












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

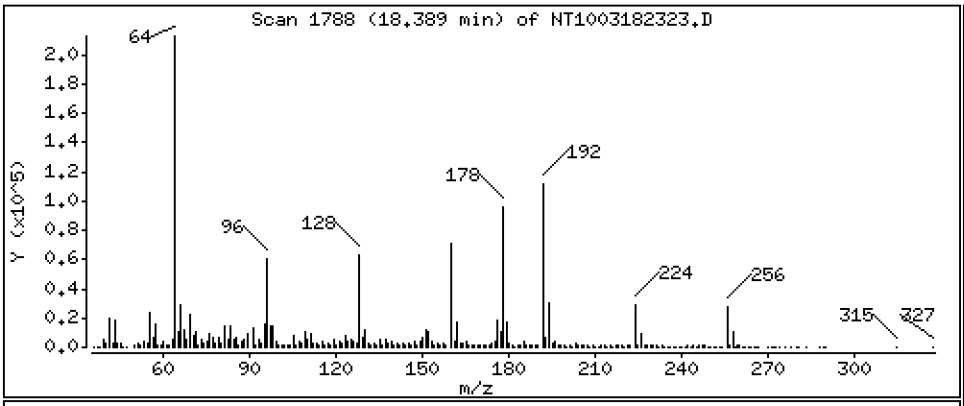
Operator: VTS

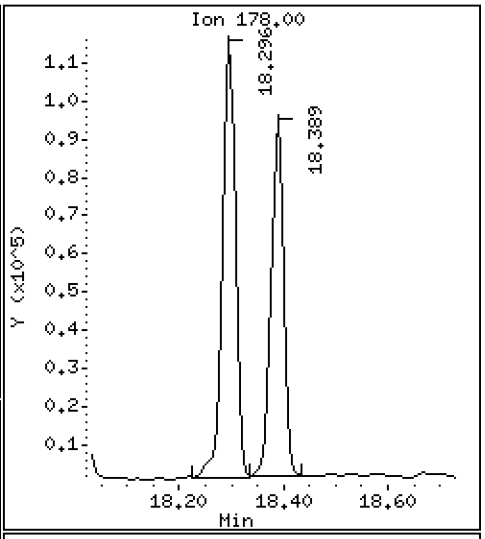
Column phase: ZB-5msi

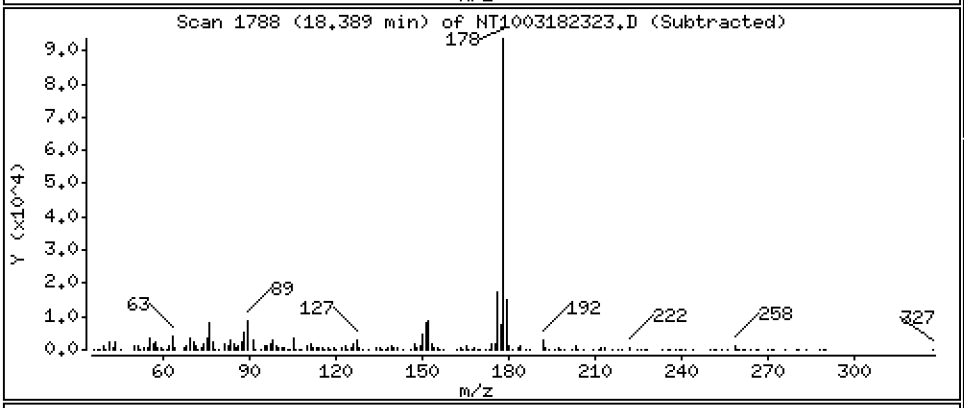
Column diameter: 0.25

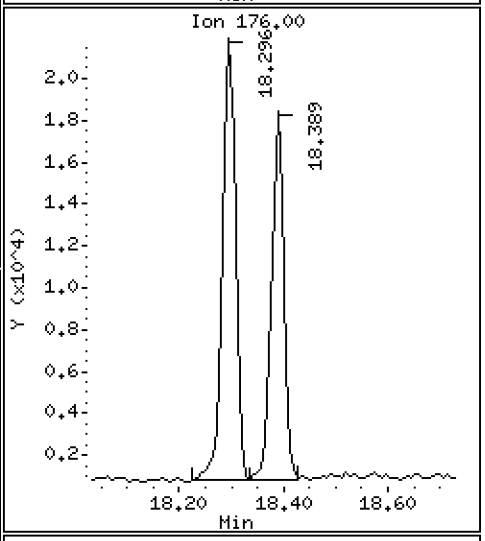
61 Anthracene

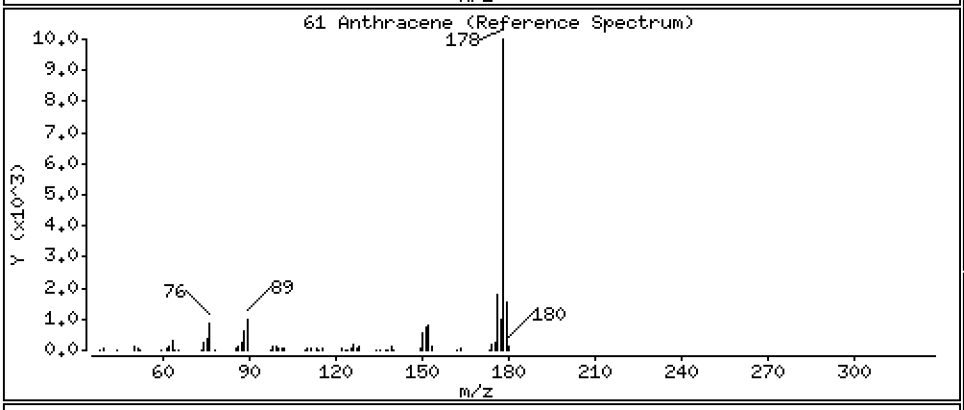
Concentration: 0.7073 ug/mL

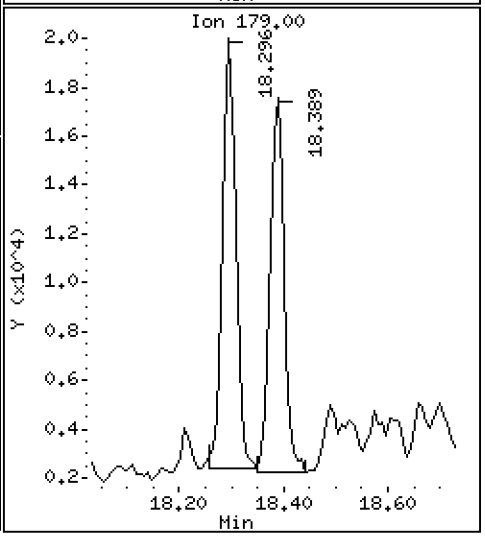


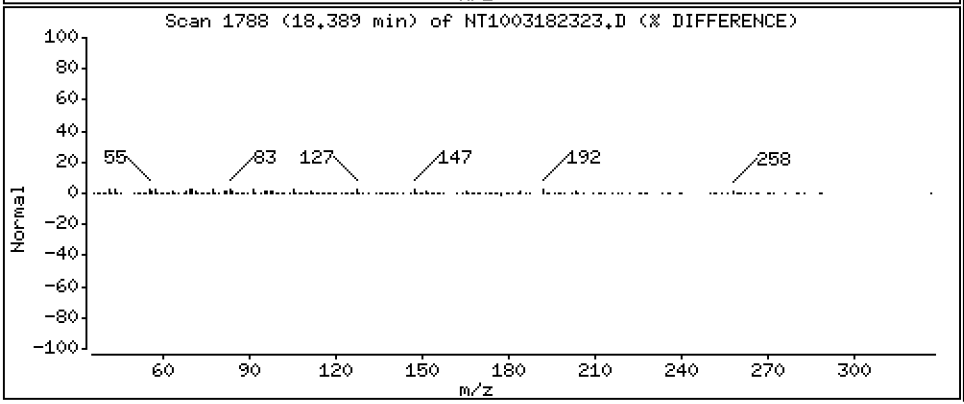












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

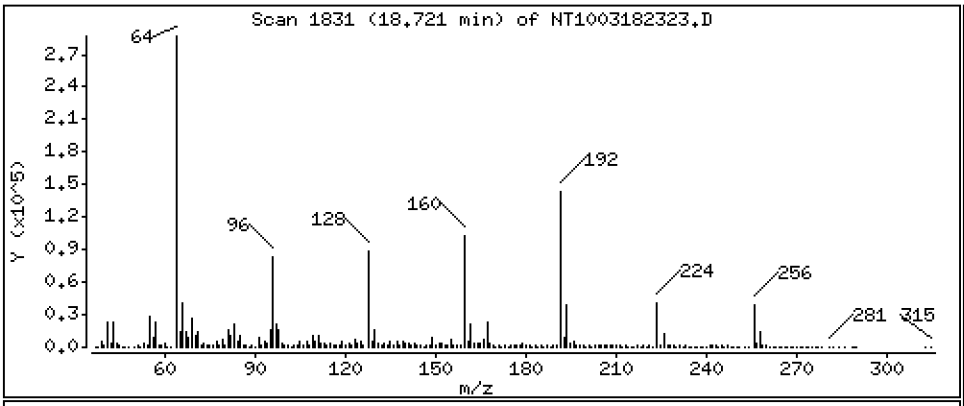
Operator: VTS

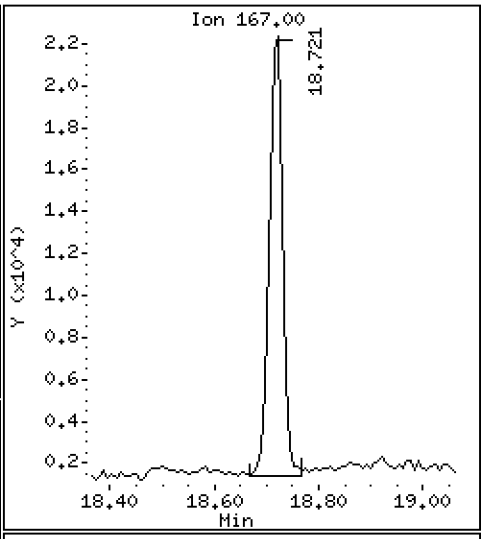
Column phase: ZB-5msi

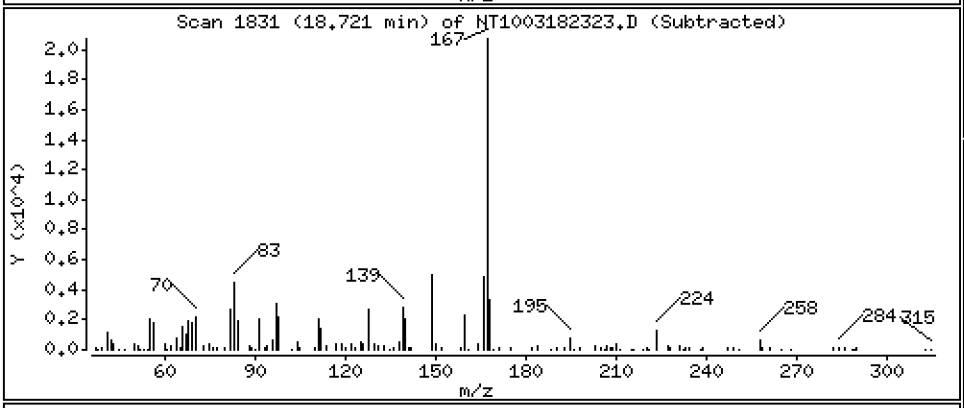
Column diameter: 0.25

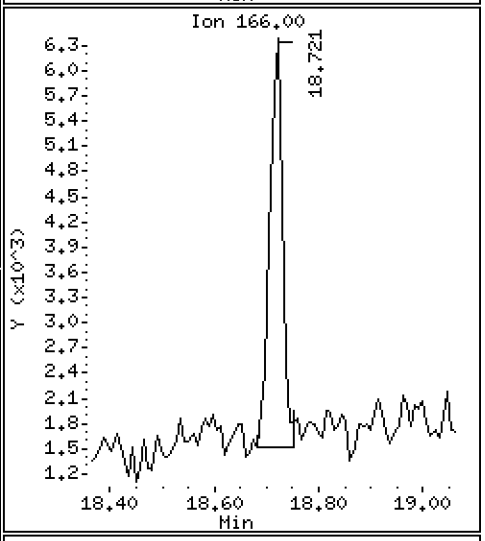
62 Carbazole

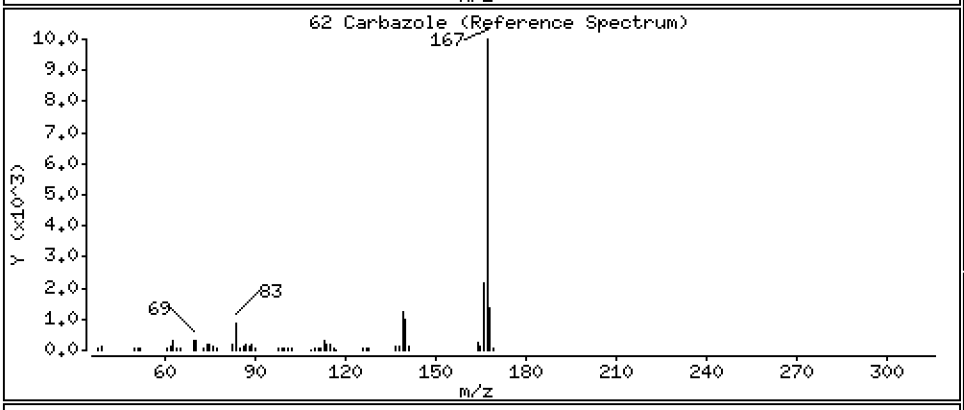
Concentration: 0.1866 ug/mL

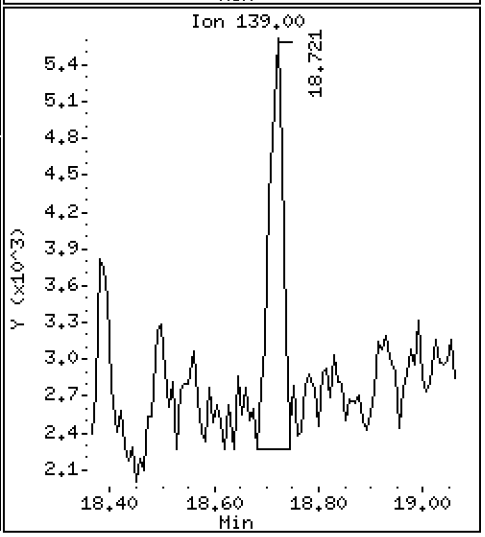


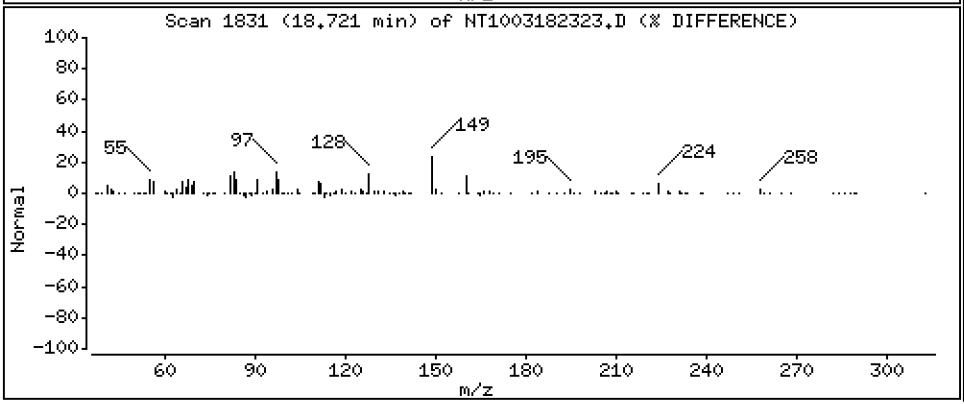












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

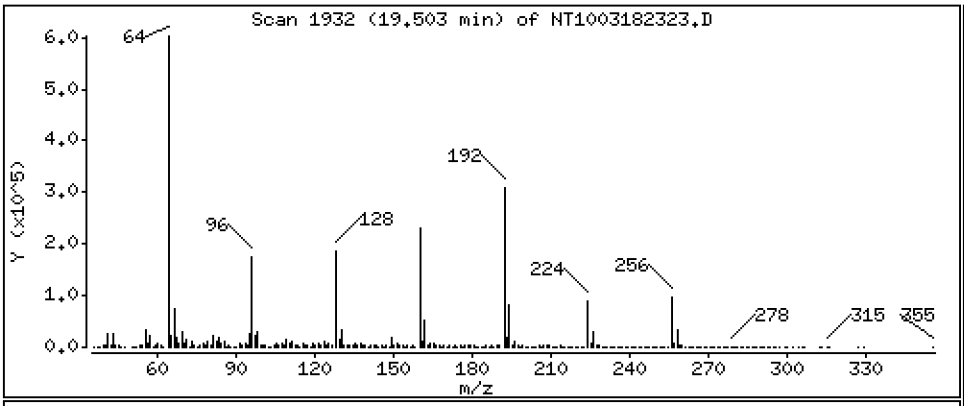
Operator: VTS

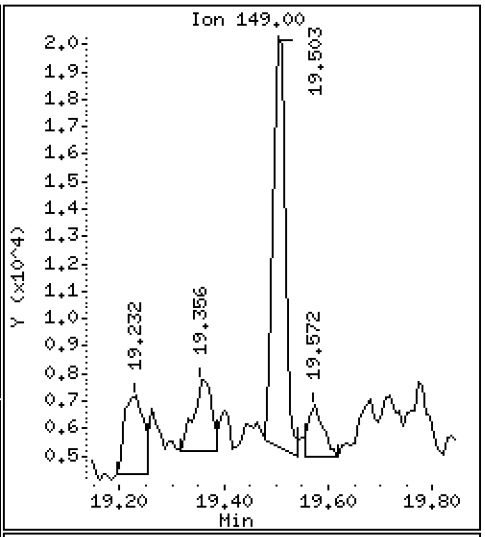
Column phase: ZB-5msi

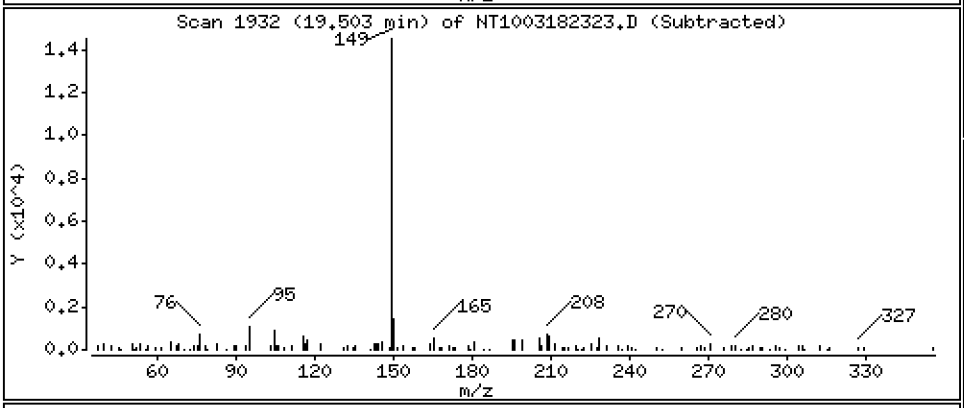
Column diameter: 0.25

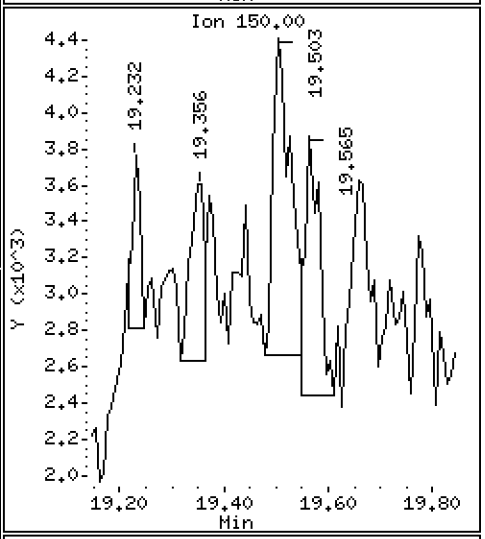
63 Di-n-butylphthalate

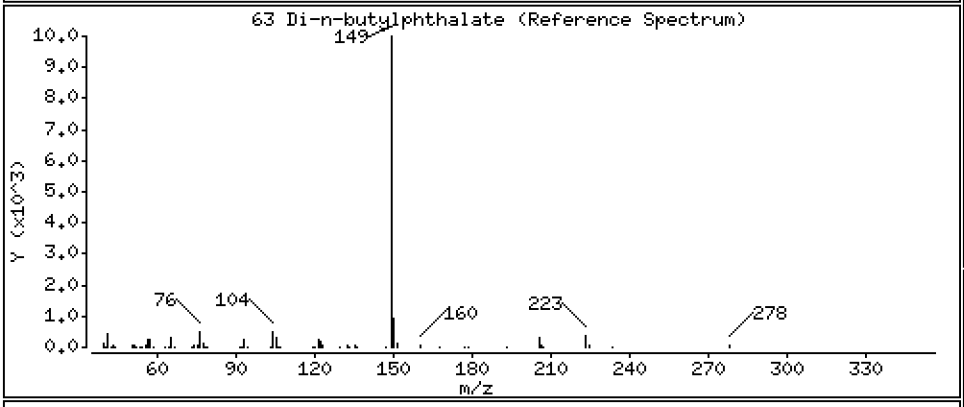
Concentration: 0.08970 ug/mL

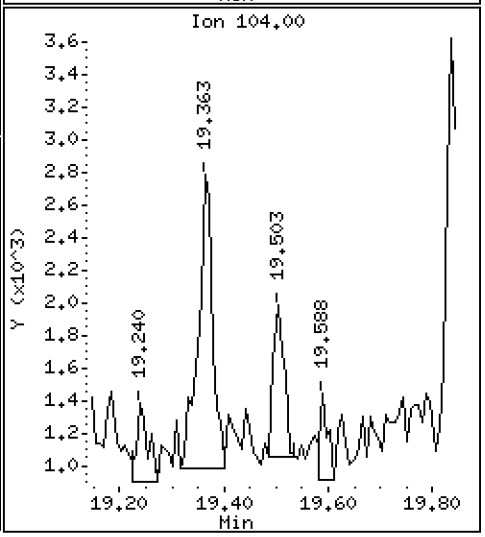


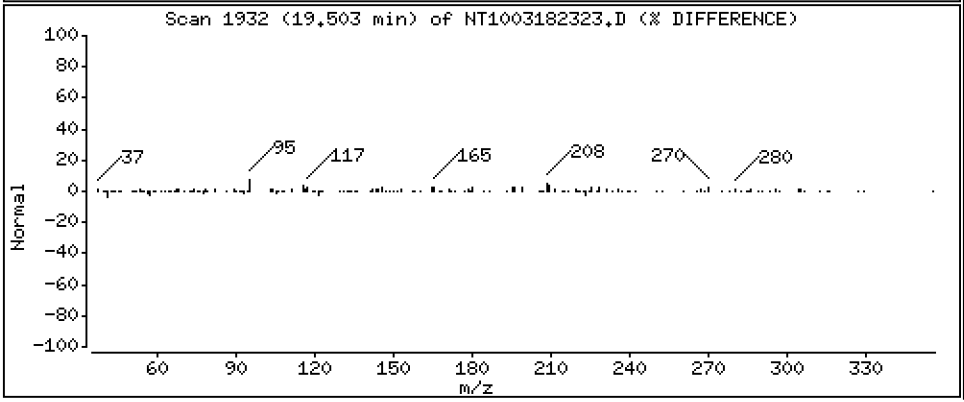












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

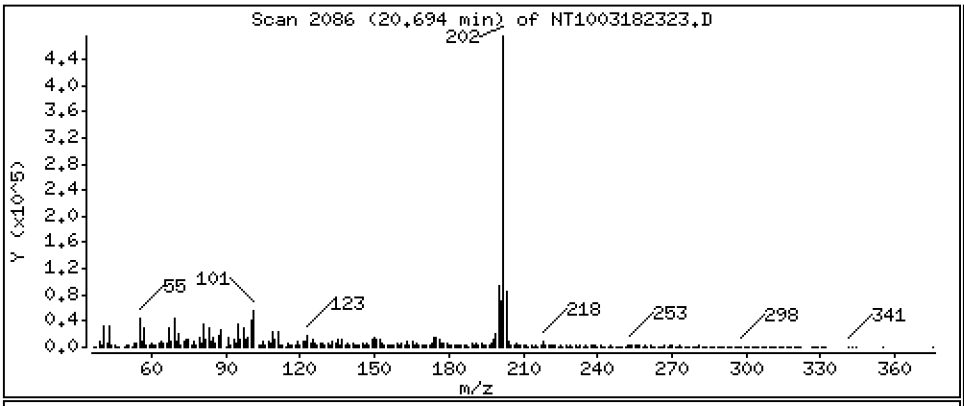
Operator: VTS

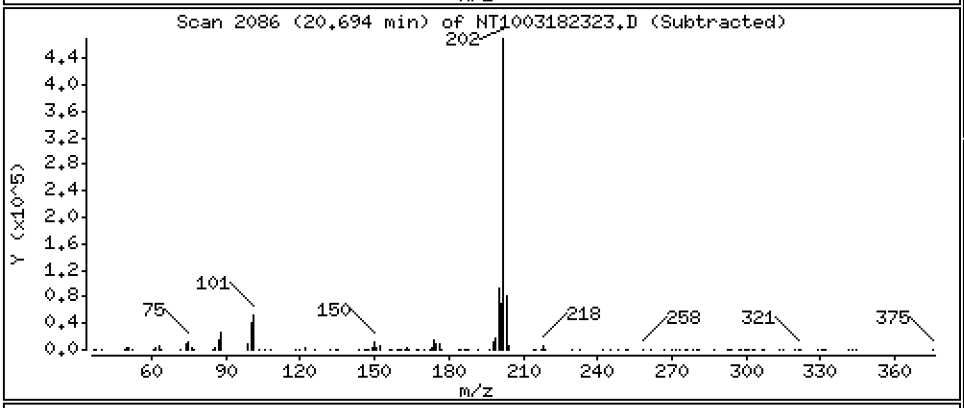
Column phase: ZB-5msi

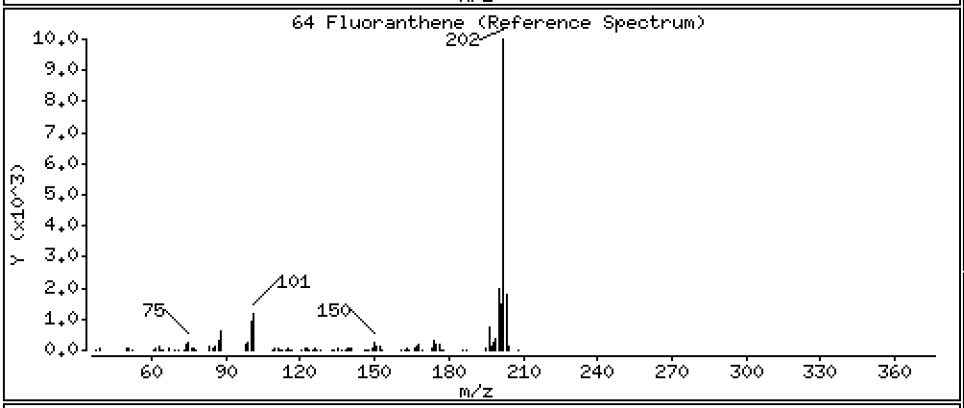
Column diameter: 0.25

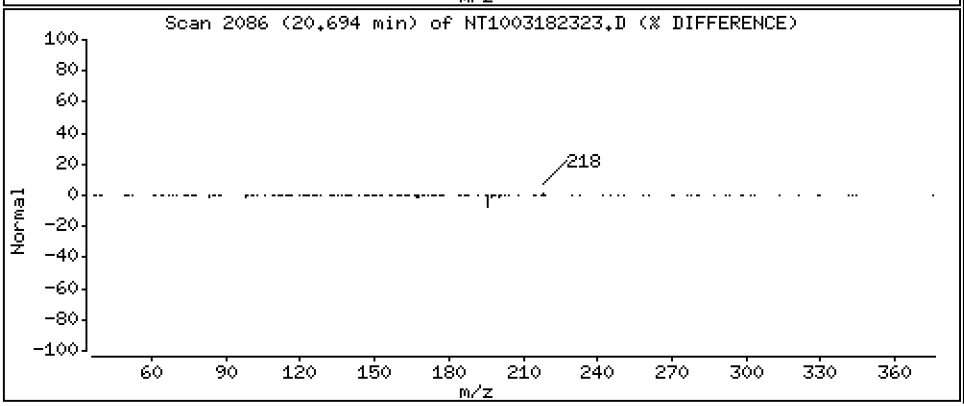
64 Fluoranthene

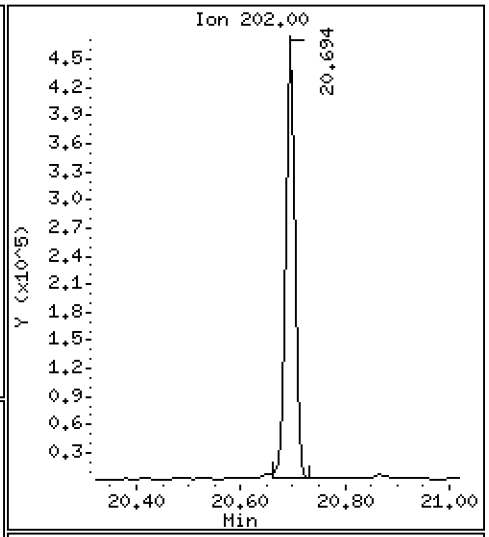
Concentration: 2.043 ug/mL

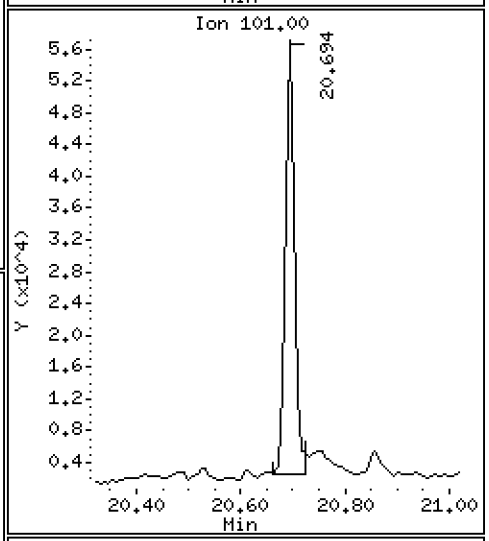


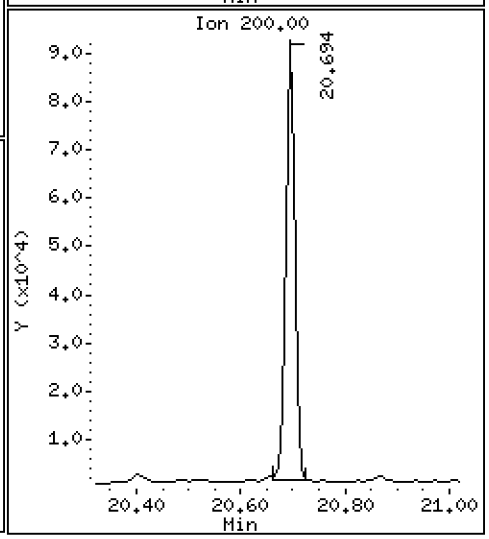












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

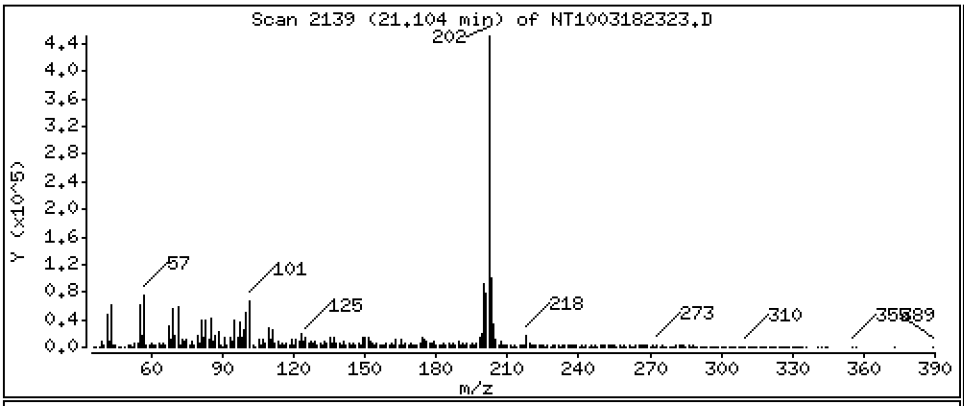
Operator: VTS

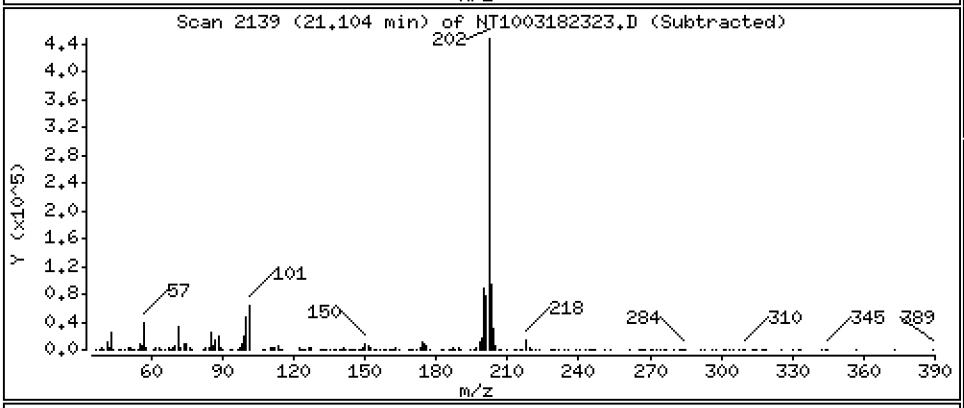
Column phase: ZB-5msi

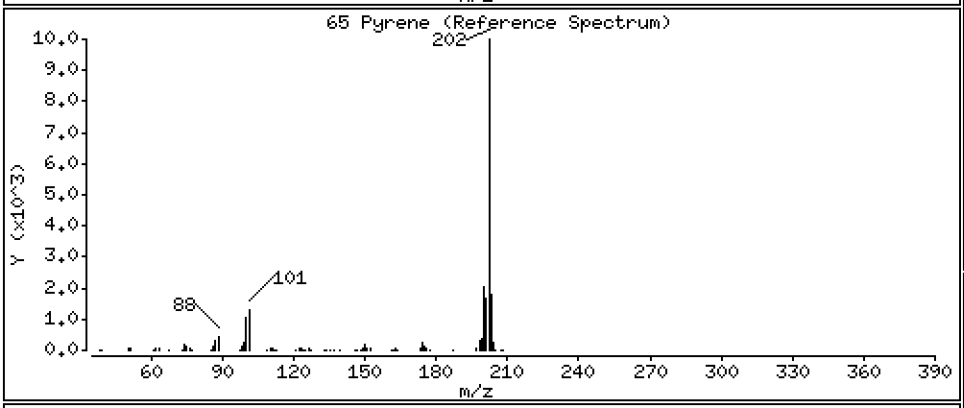
Column diameter: 0.25

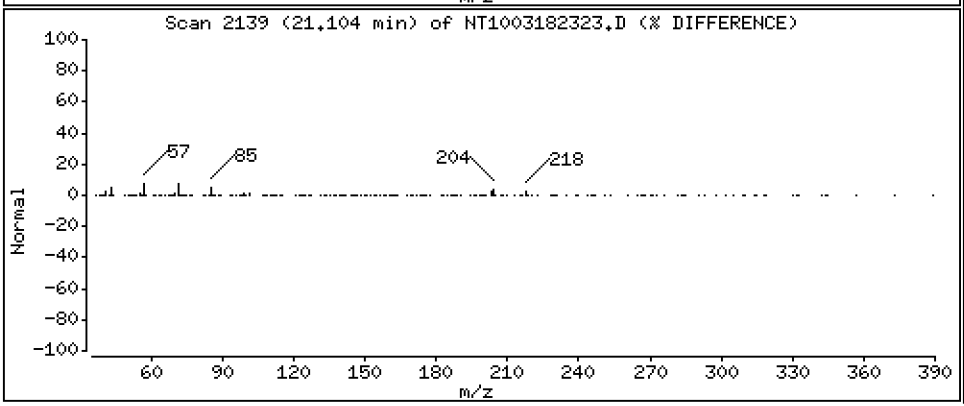
65 Pyrene

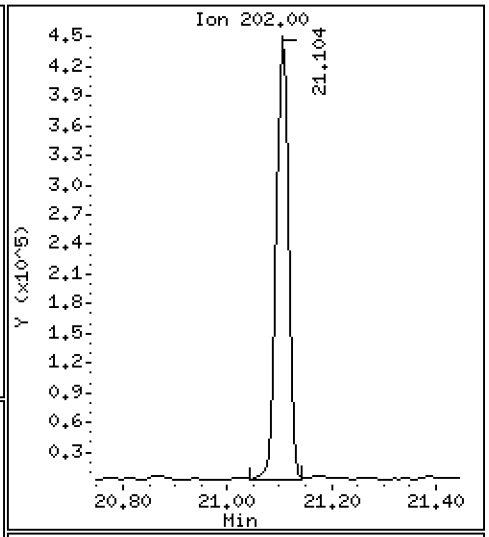
Concentration: 2.302 ug/mL

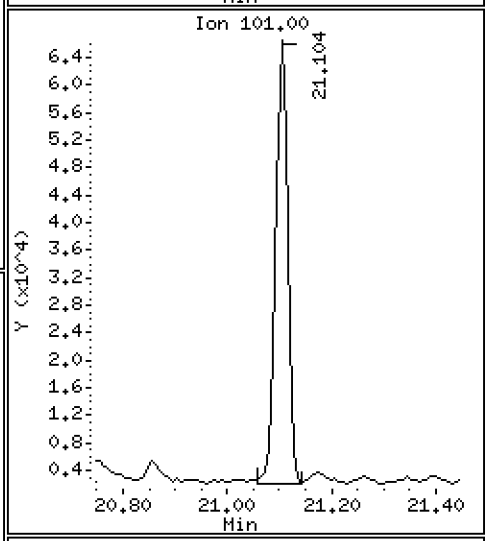


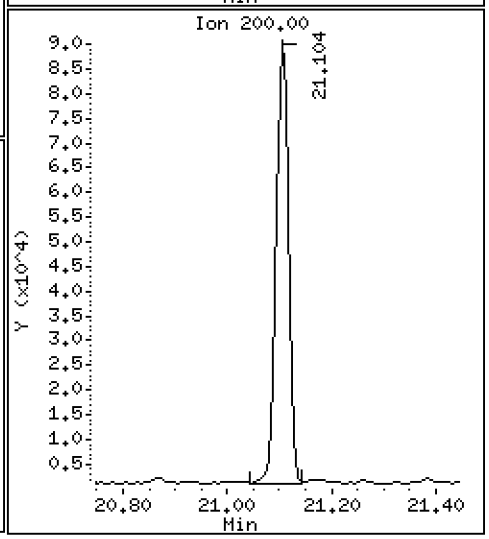












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

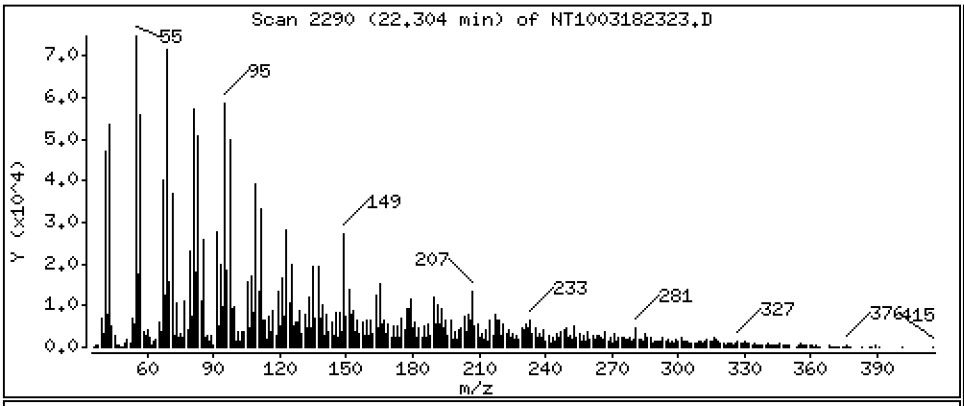
Operator: VTS

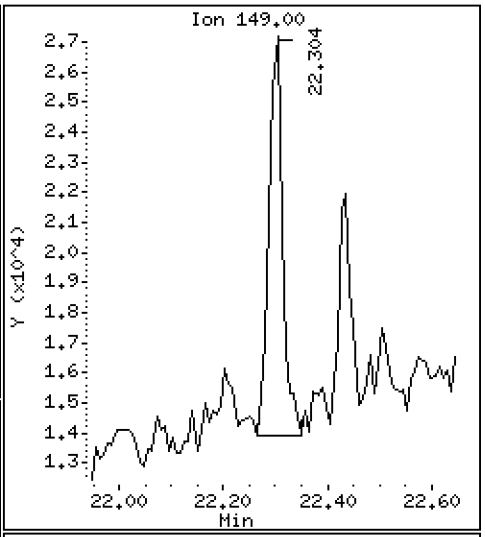
Column phase: ZB-5msi

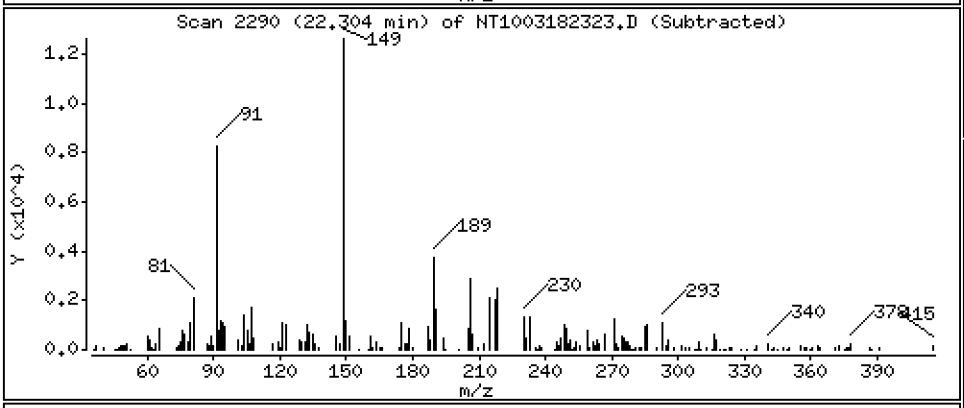
Column diameter: 0.25

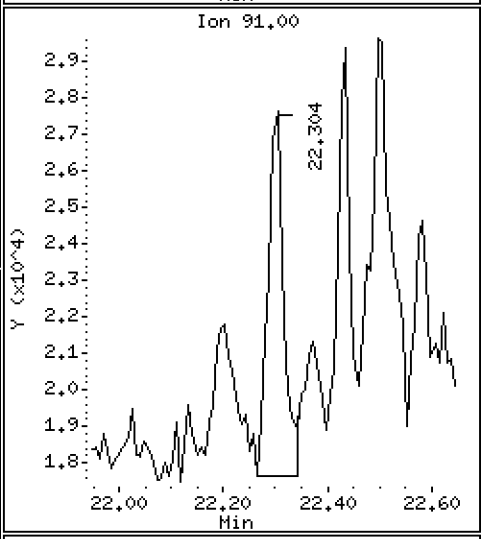
67 Butylbenzylphthalate

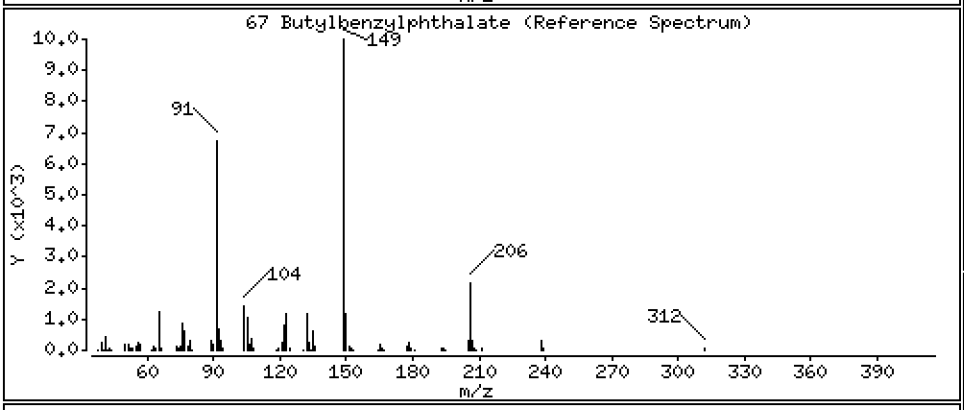
Concentration: 0.2202 ug/mL

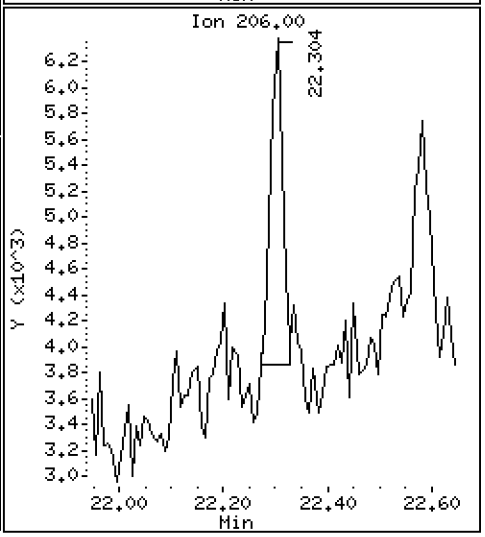


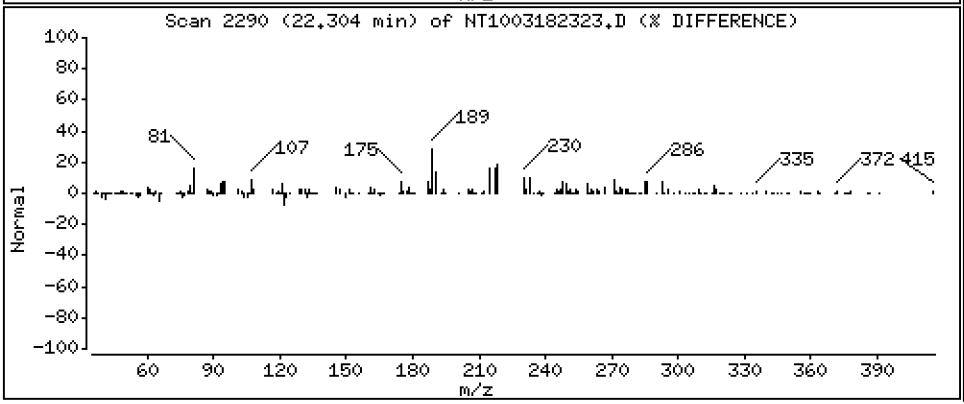












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

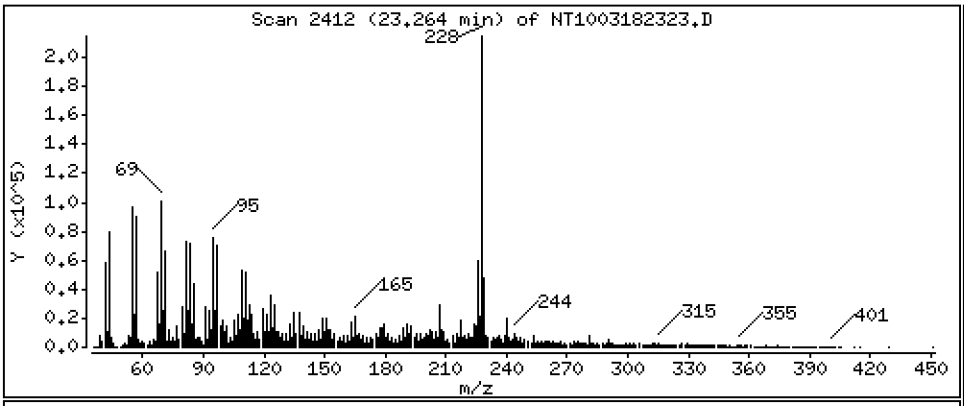
Operator: VTS

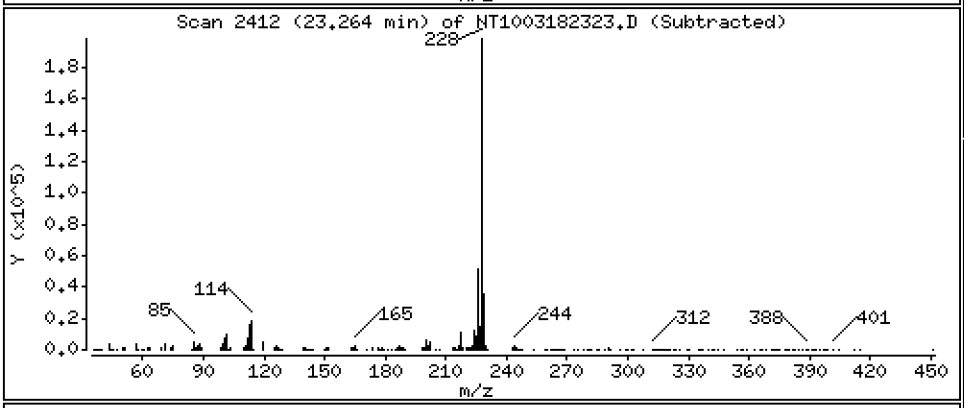
Column phase: ZB-5msi

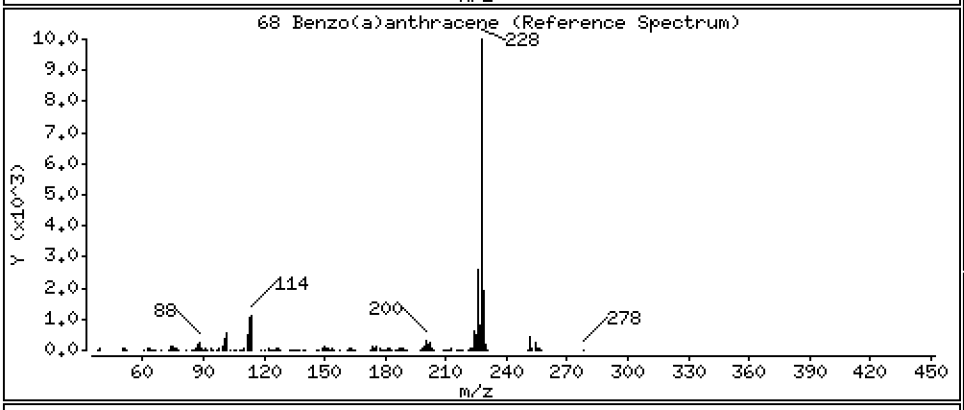
Column diameter: 0.25

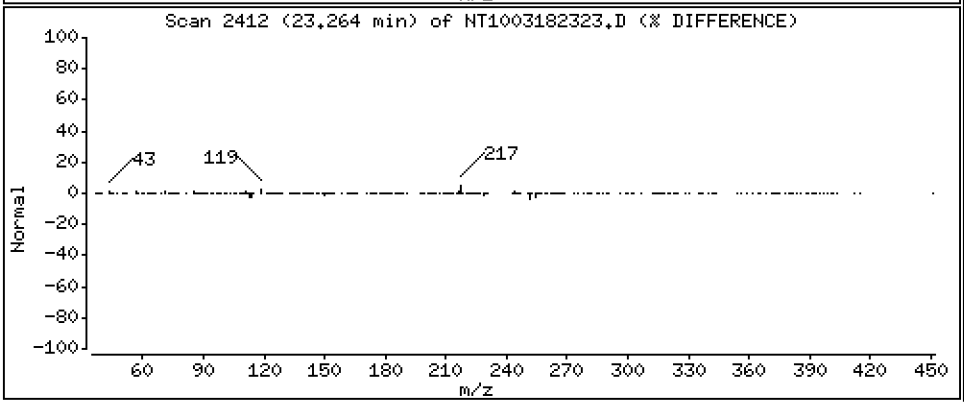
68 Benzo(a)anthracene

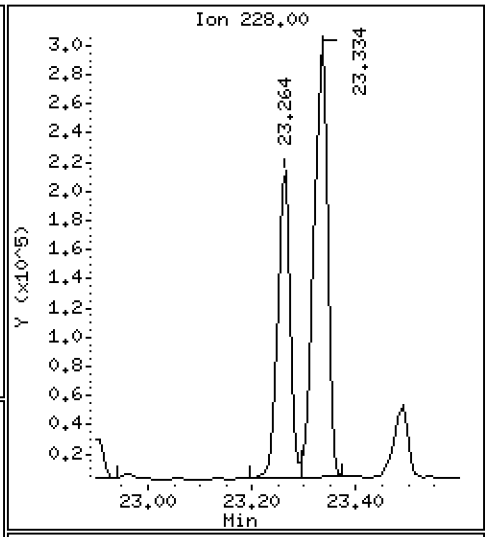
Concentration: 1.384 ug/mL

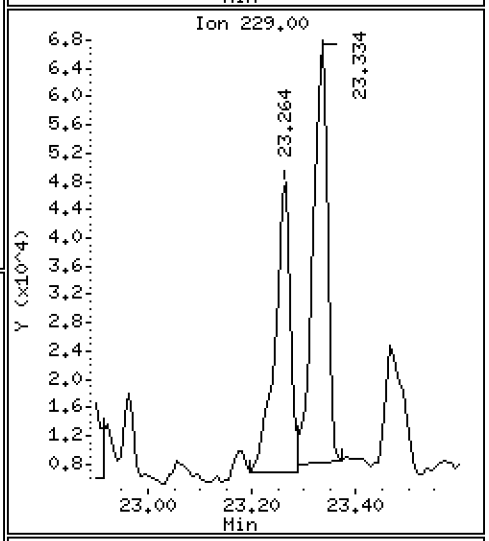


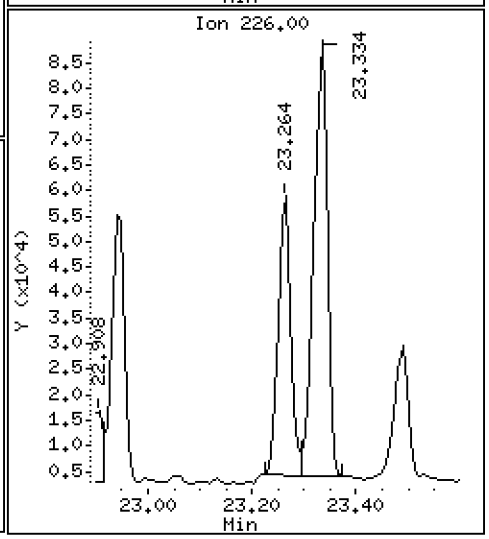












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

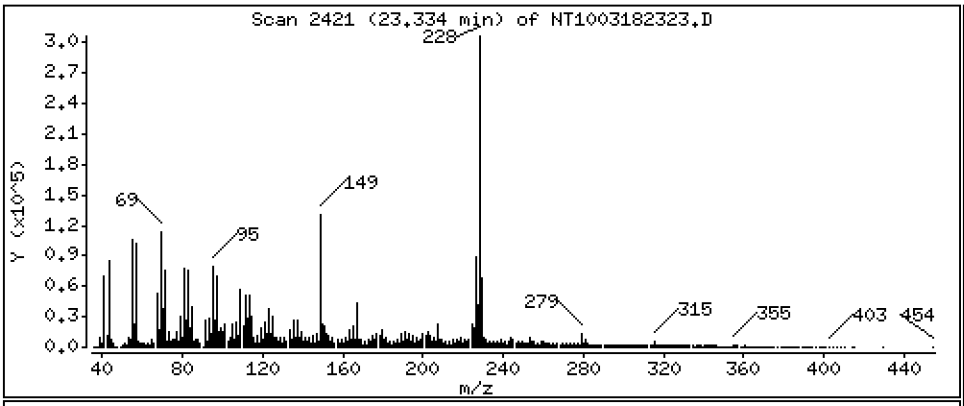
Operator: VTS

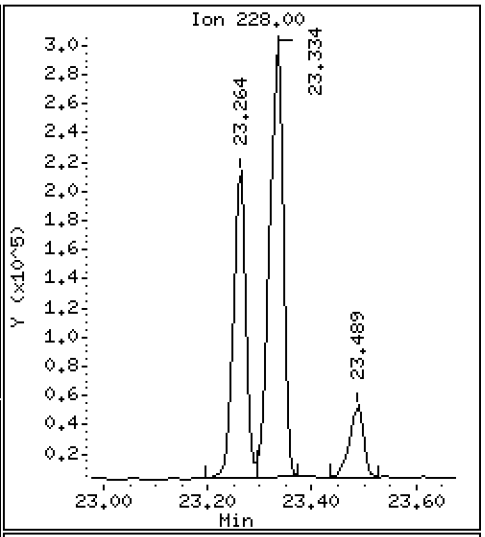
Column phase: ZB-5msi

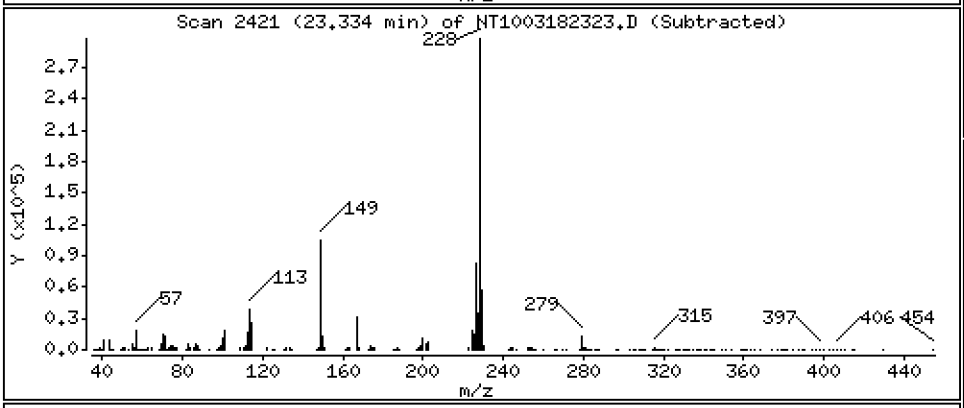
Column diameter: 0.25

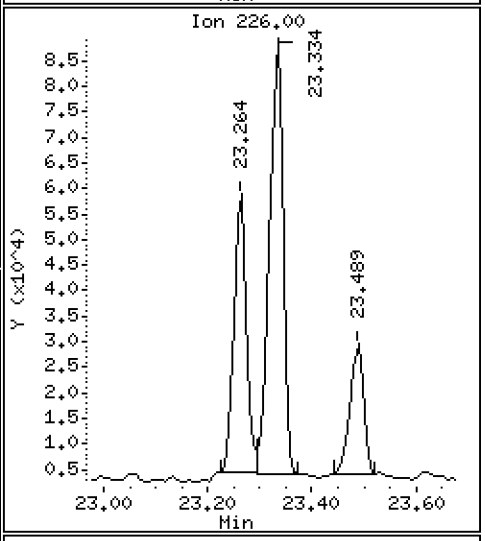
71 Chrysene

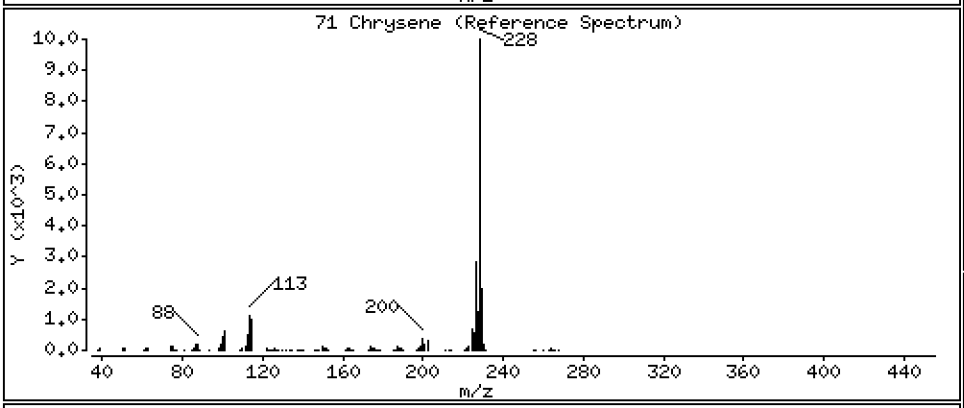
Concentration: 2.092 ug/mL

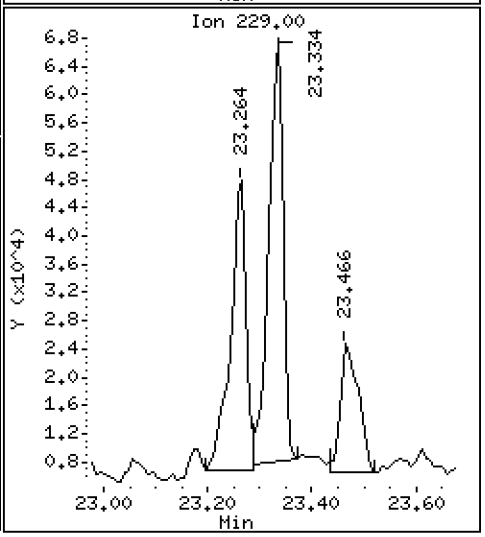


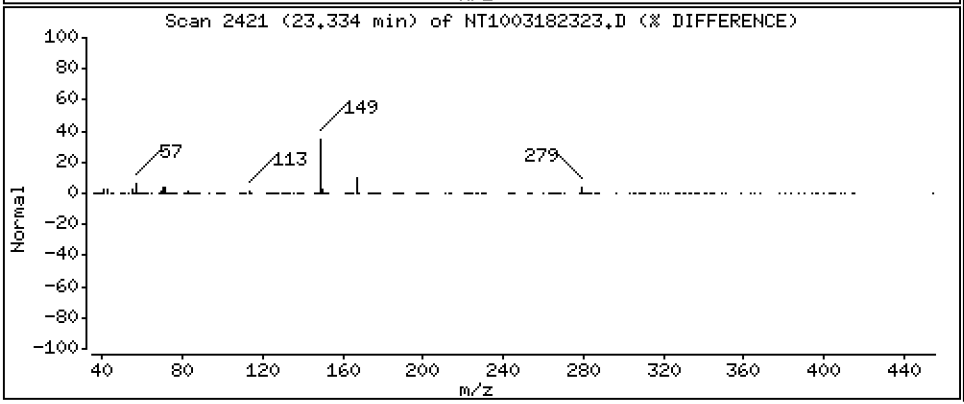












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

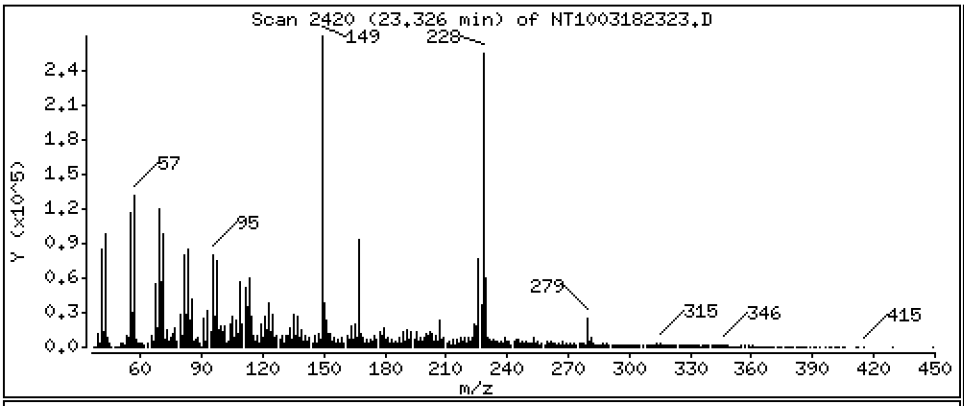
Operator: VTS

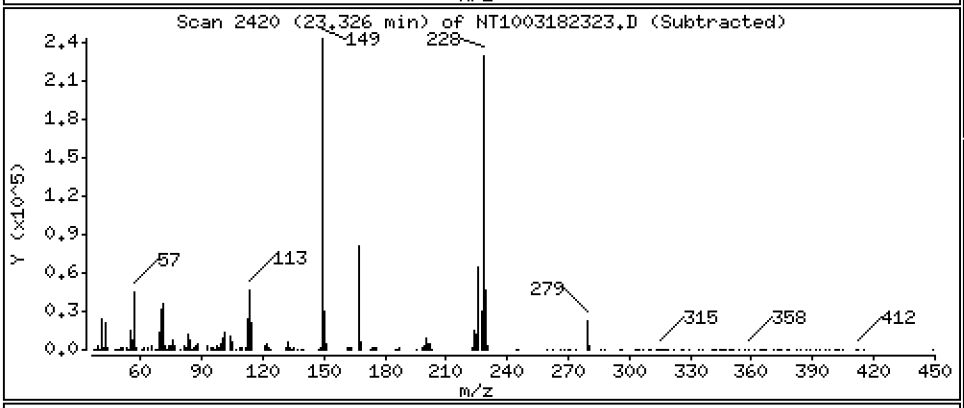
Column phase: ZB-5msi

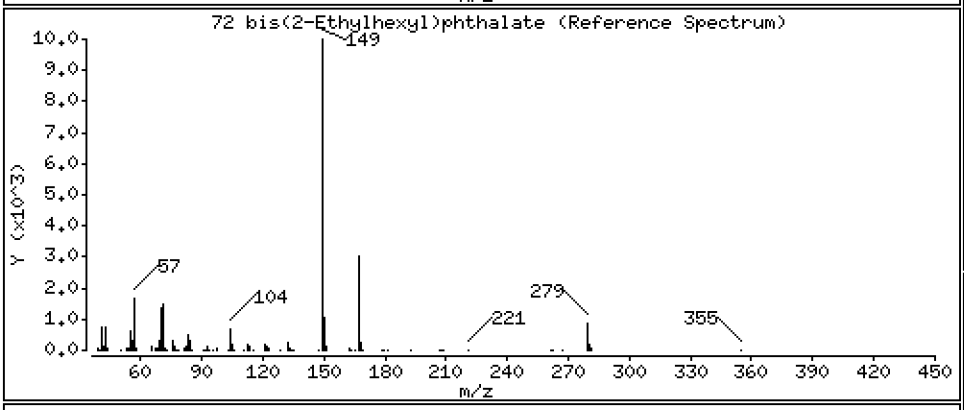
Column diameter: 0.25

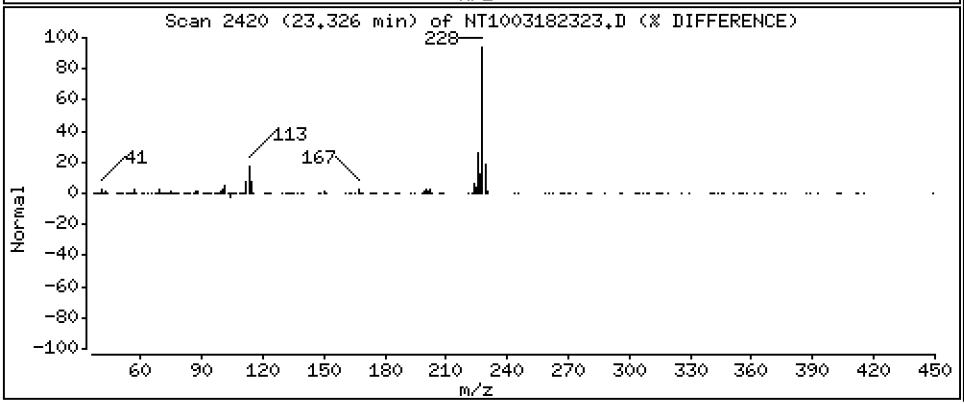
72 bis(2-Ethylhexyl)phthalate

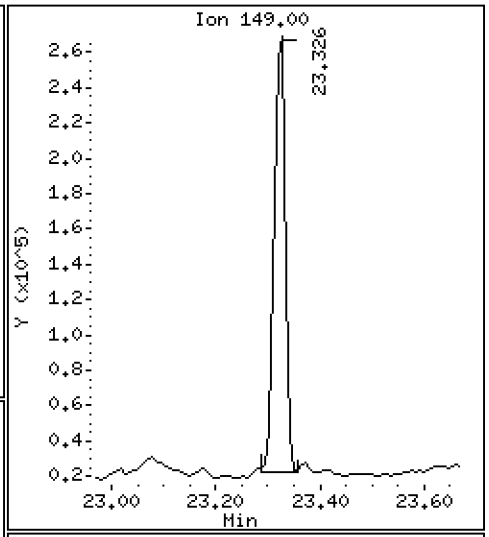
Concentration: 1.913 ug/mL

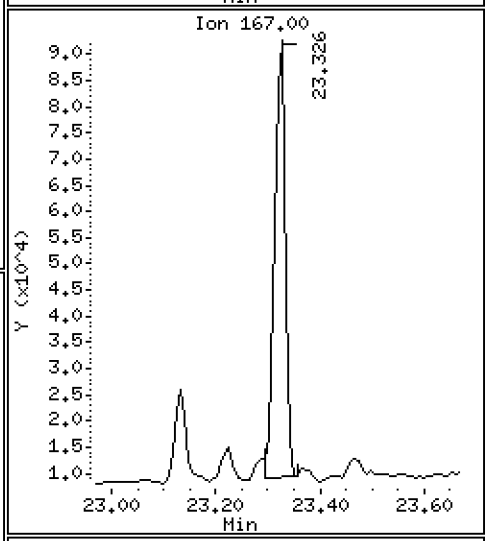


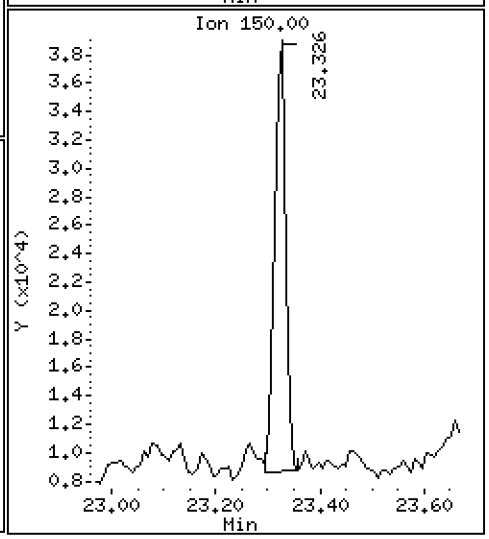












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182323.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

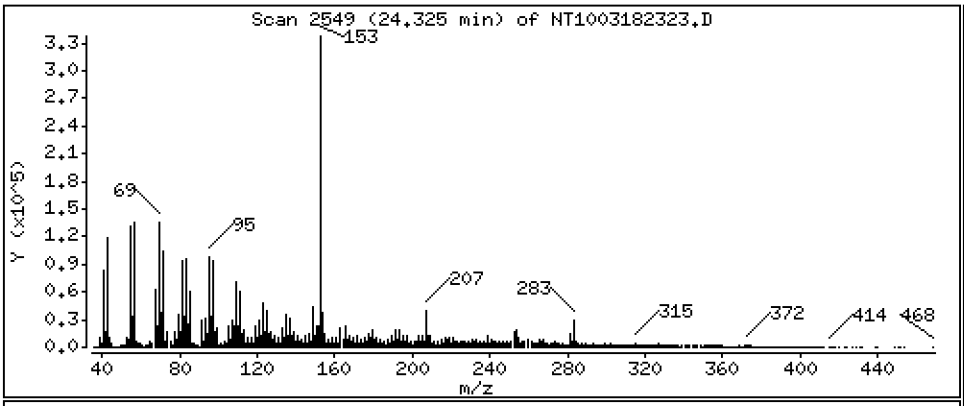
Operator: VTS

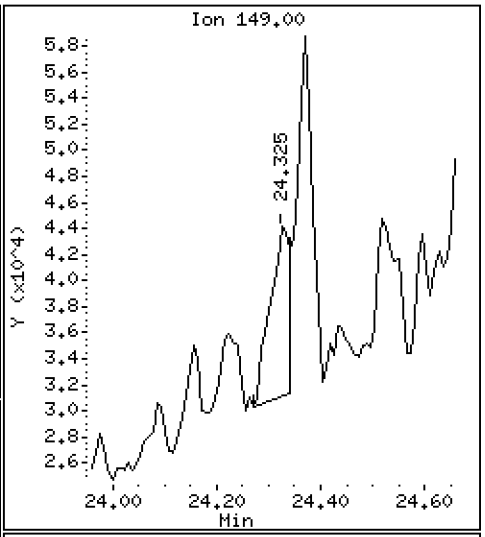
Column phase: ZB-5msi

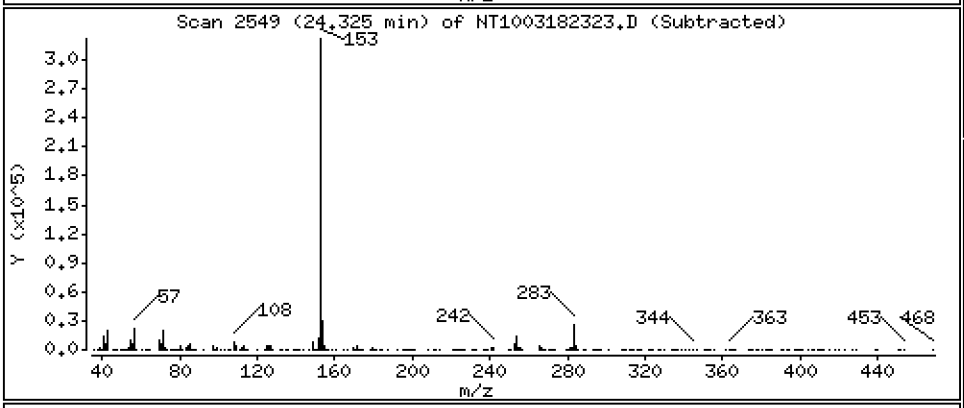
Column diameter: 0.25

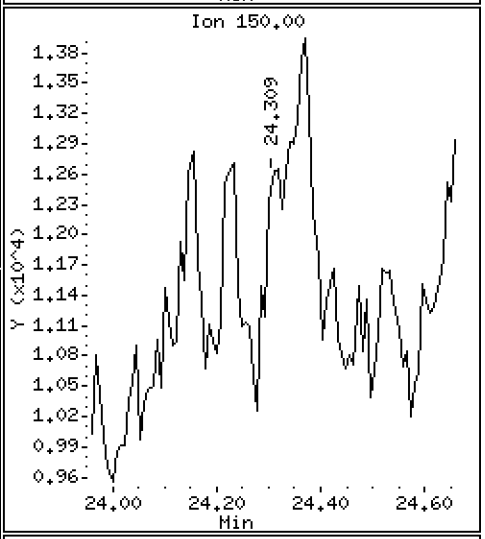
73 Di-n-octylphthalate

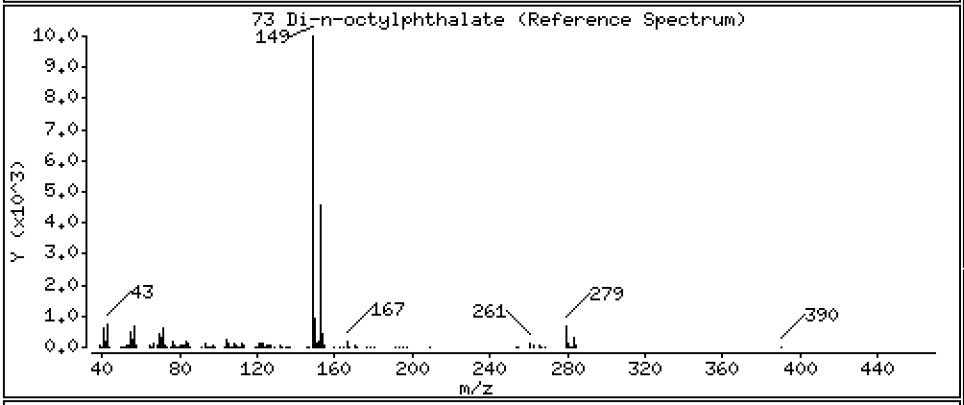
Concentration: 0.1035 ug/mL

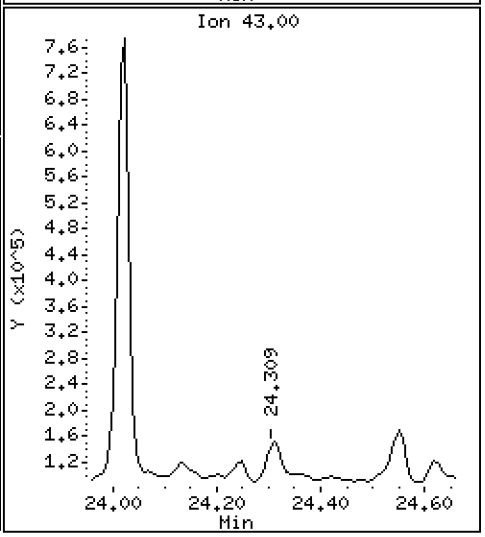


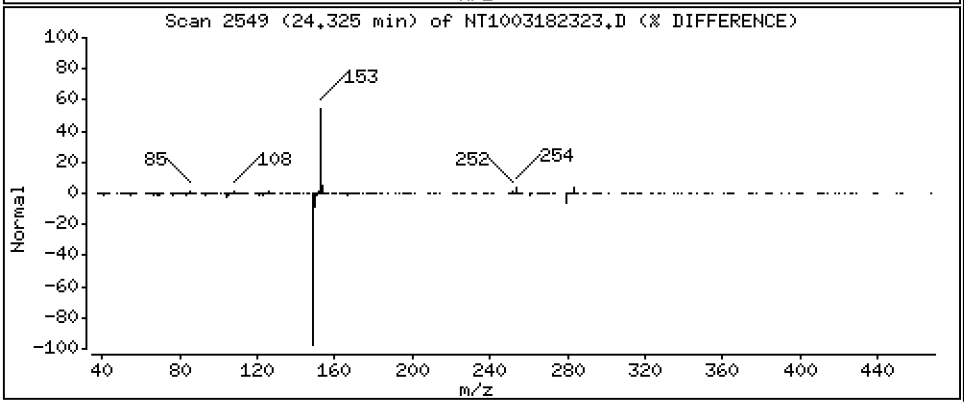












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

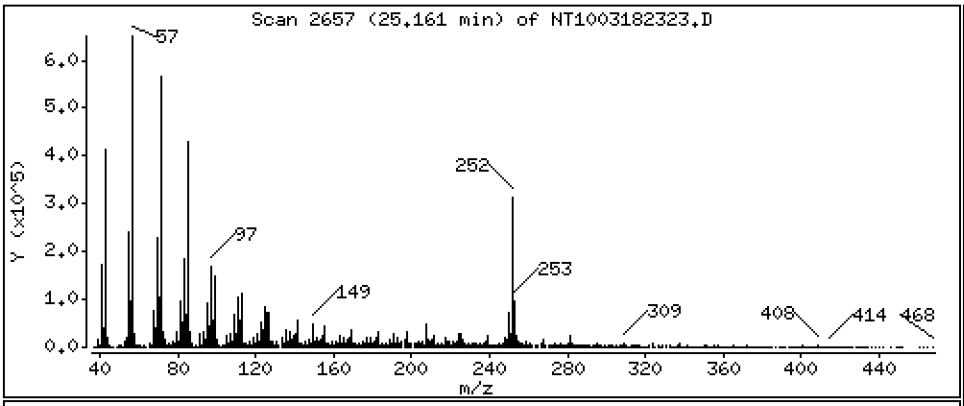
Operator: VTS

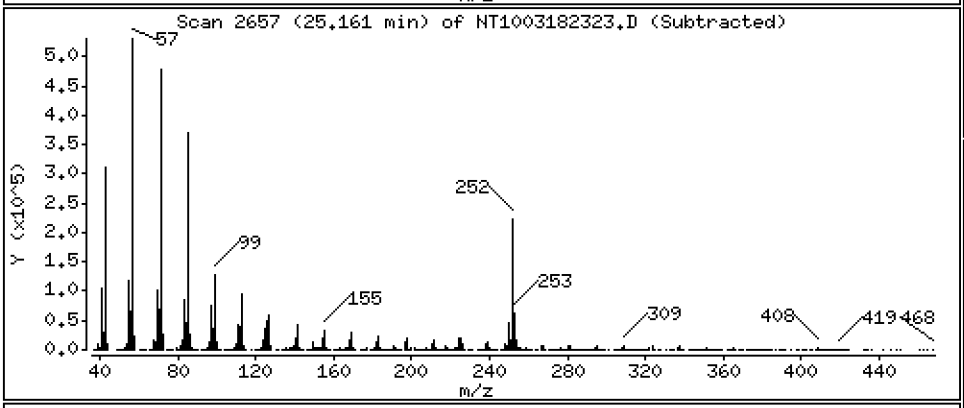
Column phase: ZB-5msi

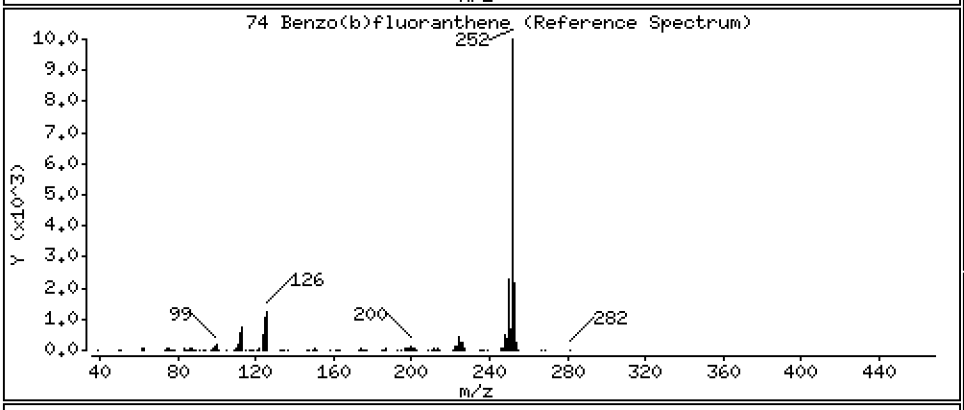
Column diameter: 0.25

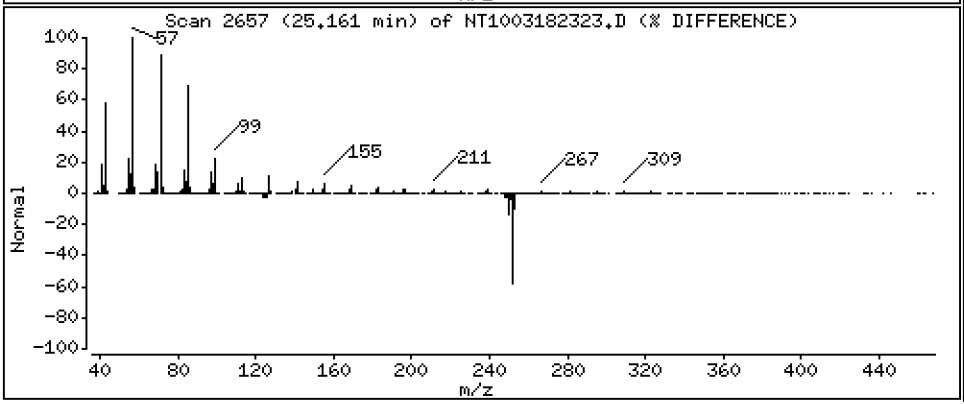
74 Benzo(b)fluoranthene

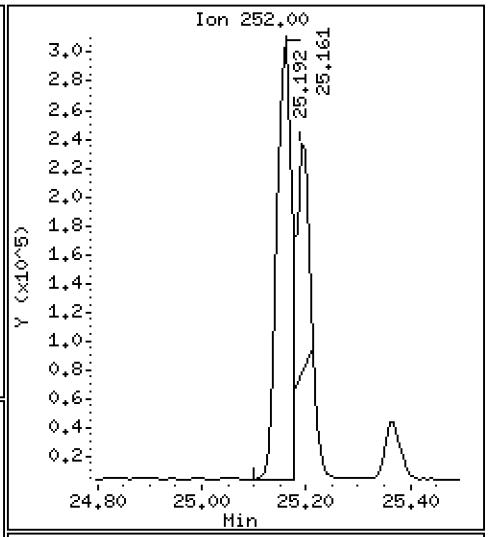
Concentration: 2.330 ug/mL

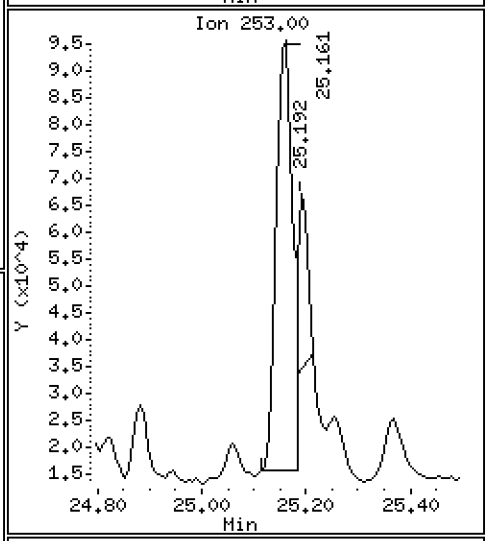


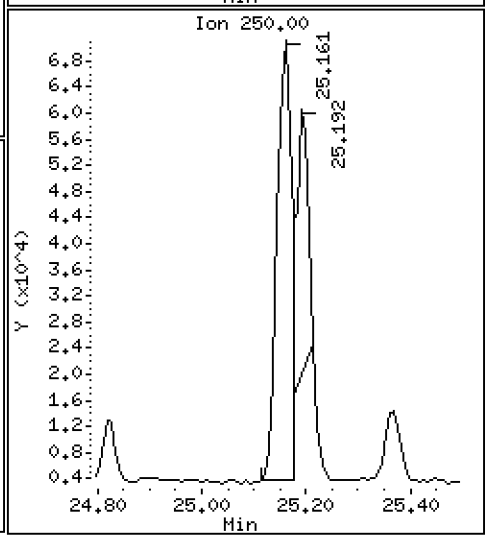












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

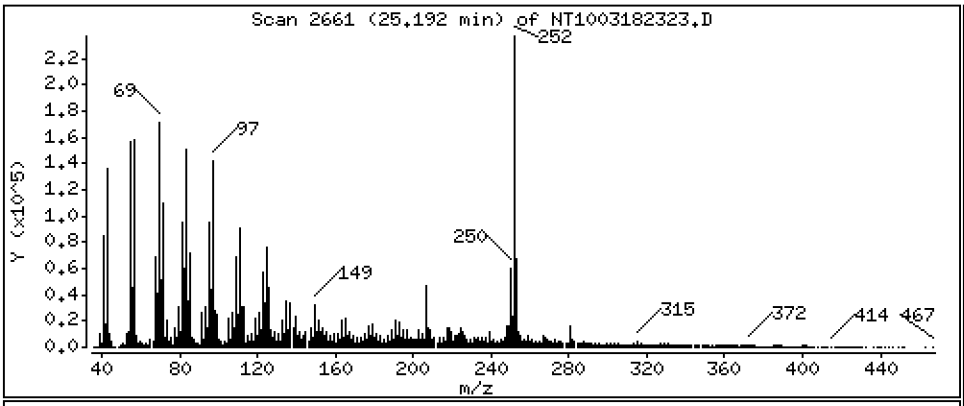
Operator: VTS

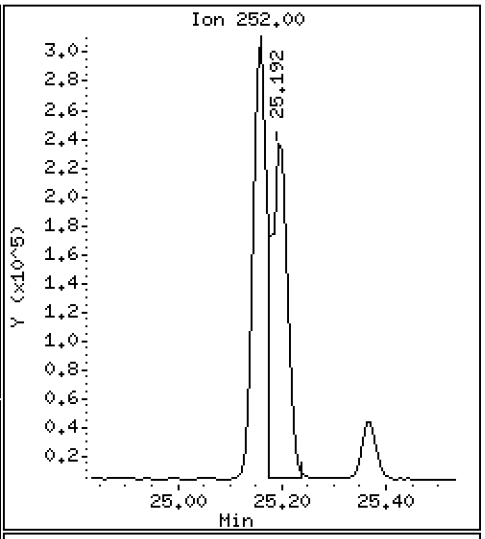
Column phase: ZB-5msi

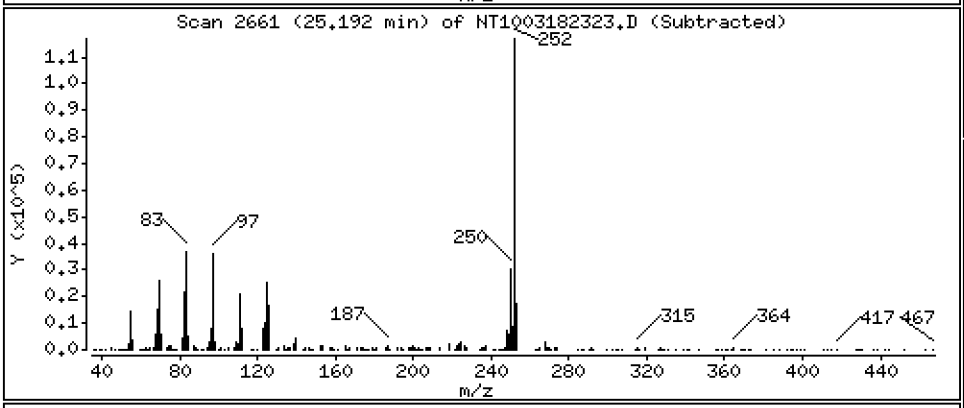
Column diameter: 0.25

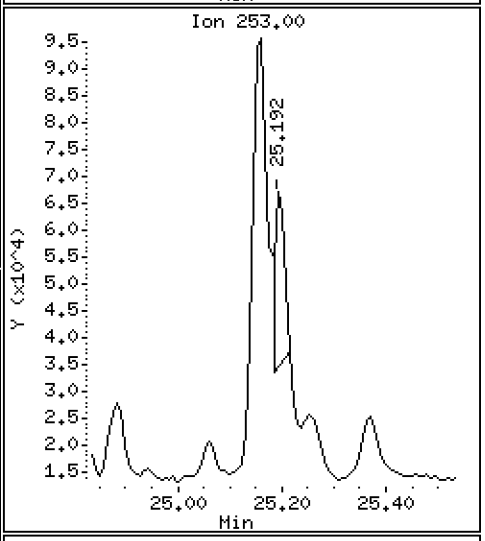
75 Benzo(k)fluoranthene

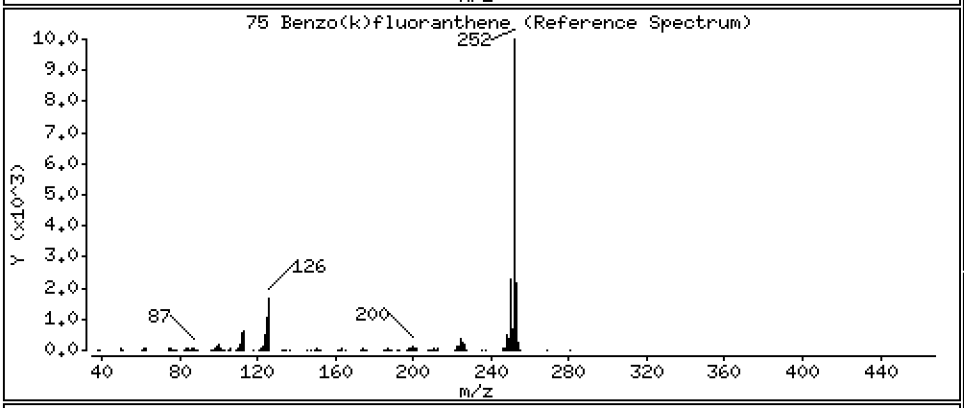
Concentration: 1.989 ug/mL

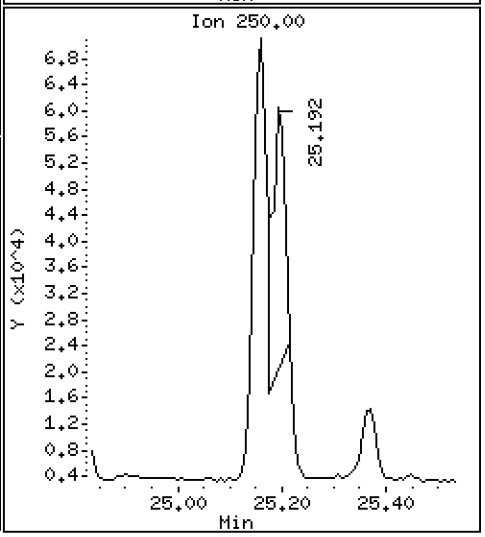


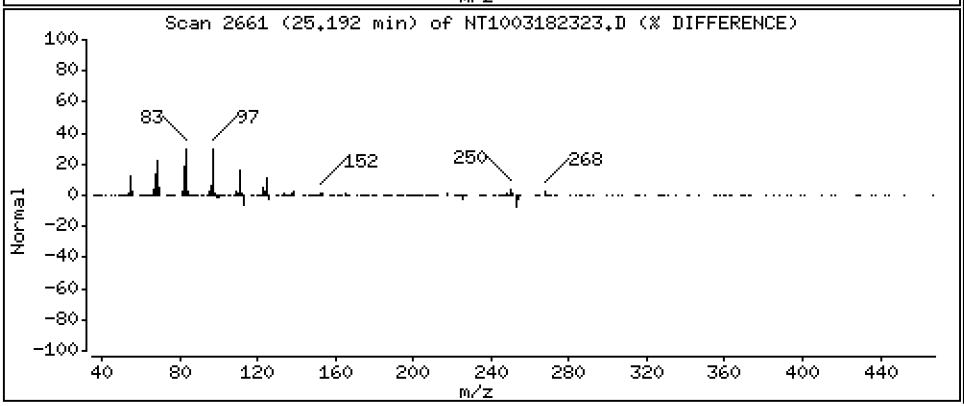












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

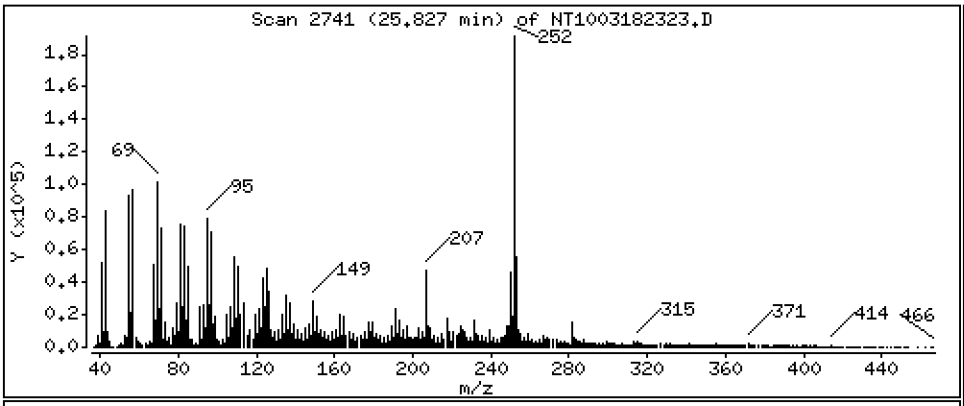
Operator: VTS

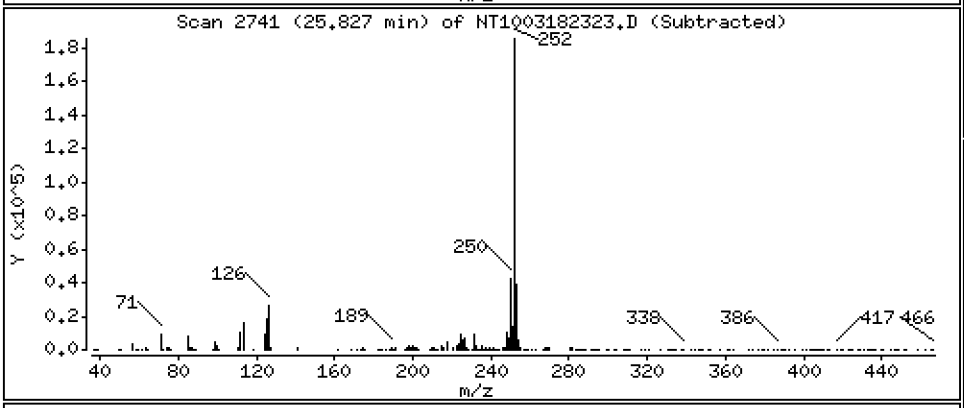
Column phase: ZB-5msi

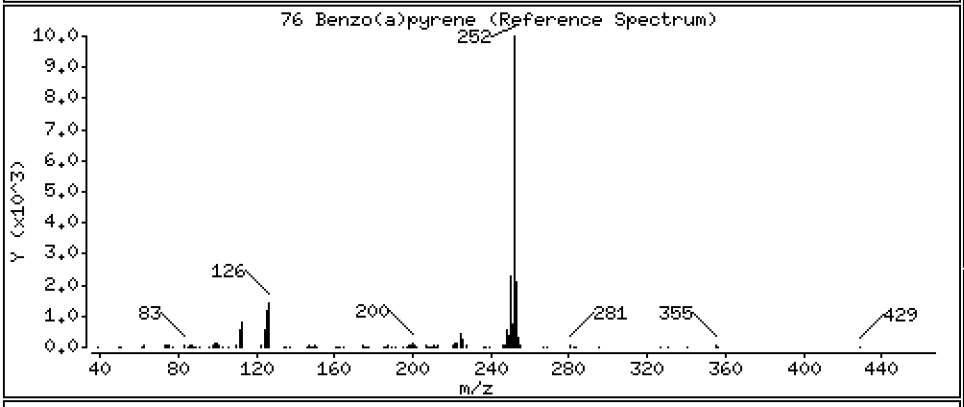
Column diameter: 0.25

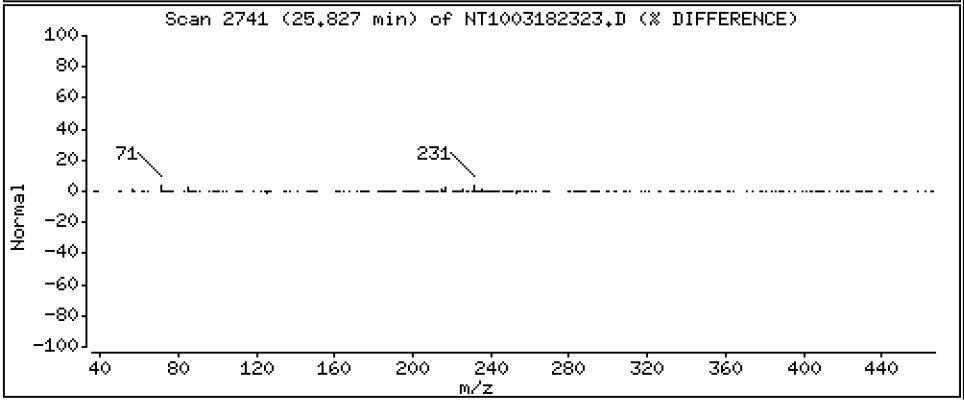
76 Benzo(a)pyrene

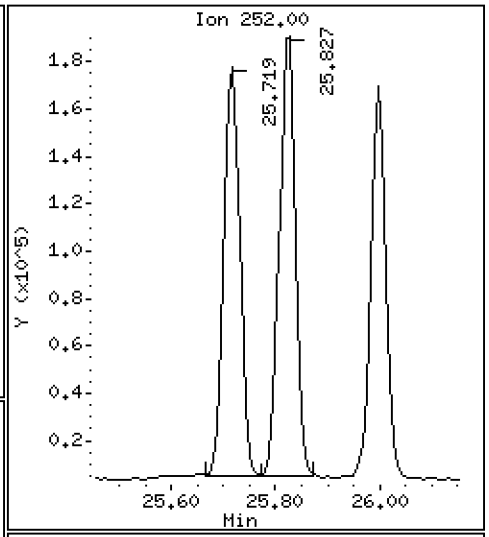
Concentration: 1.732 ug/mL

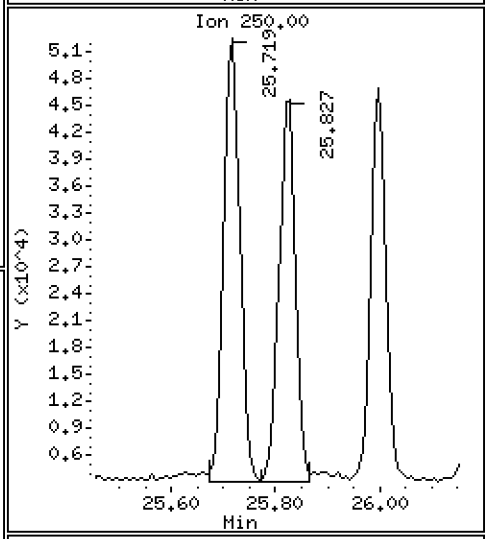


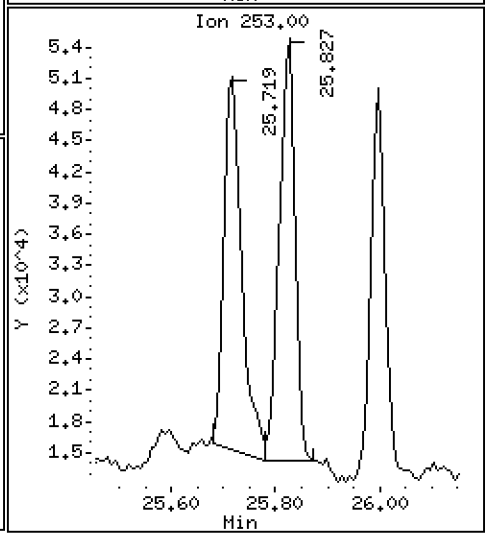












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

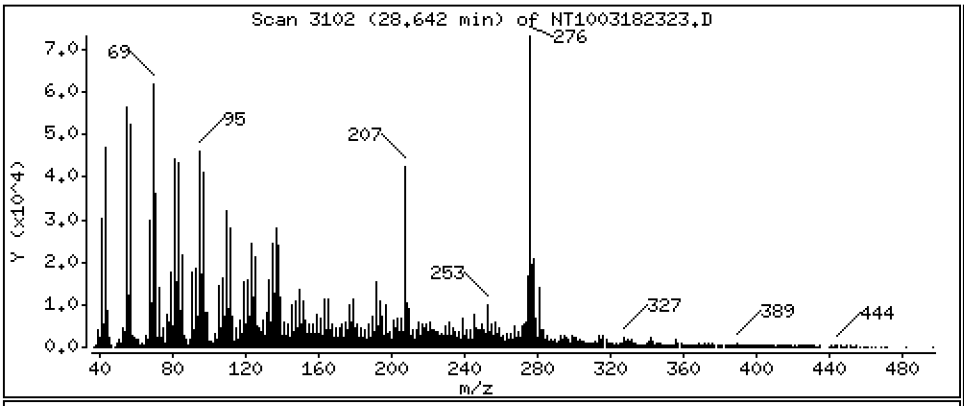
Operator: VTS

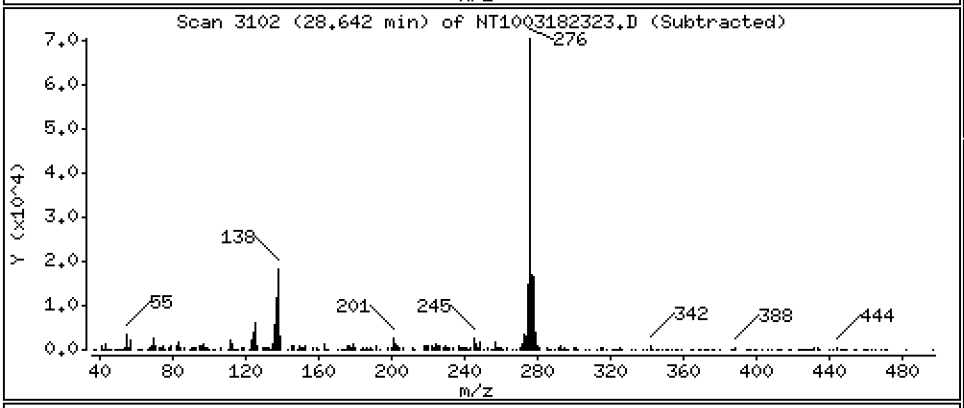
Column phase: ZB-5msi

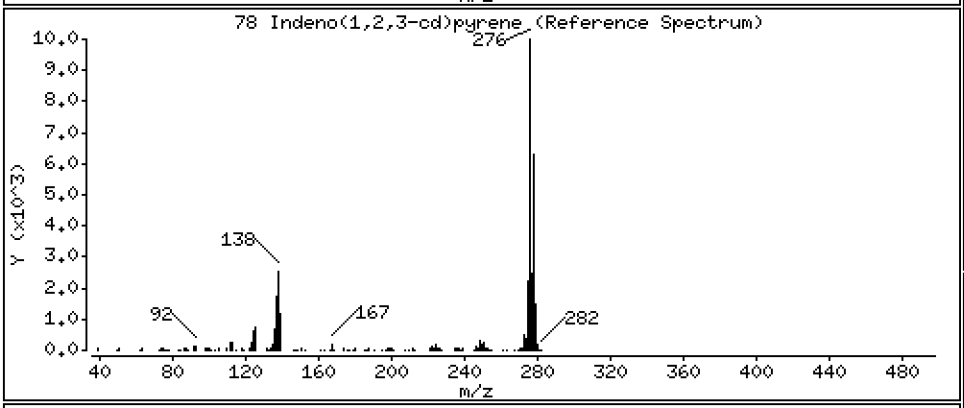
Column diameter: 0.25

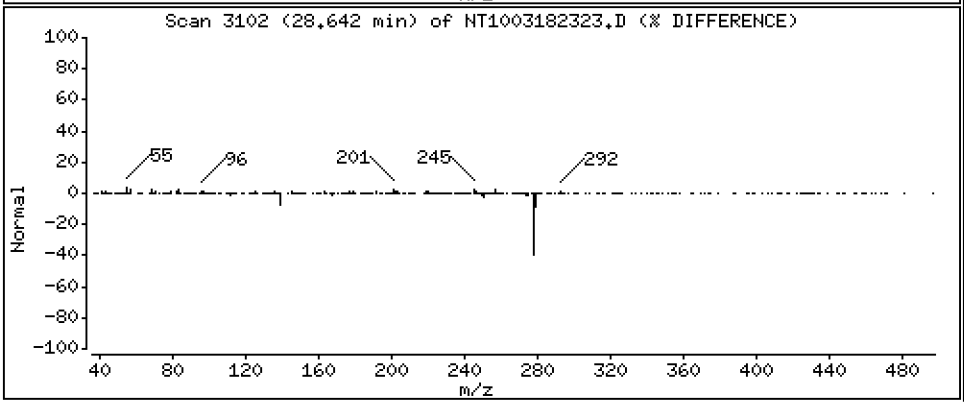
78 Indeno(1,2,3-cd)pyrene

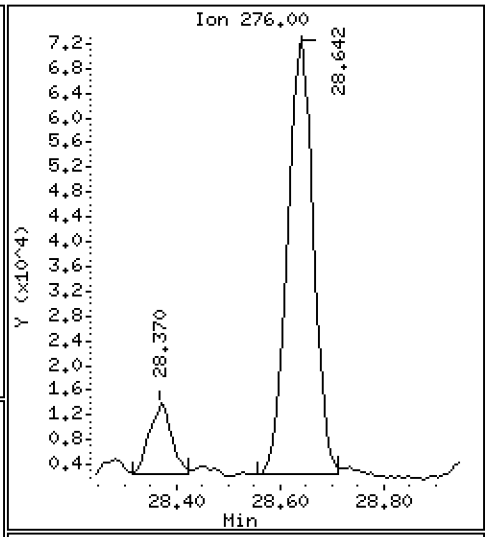
Concentration: 0.8533 ug/mL

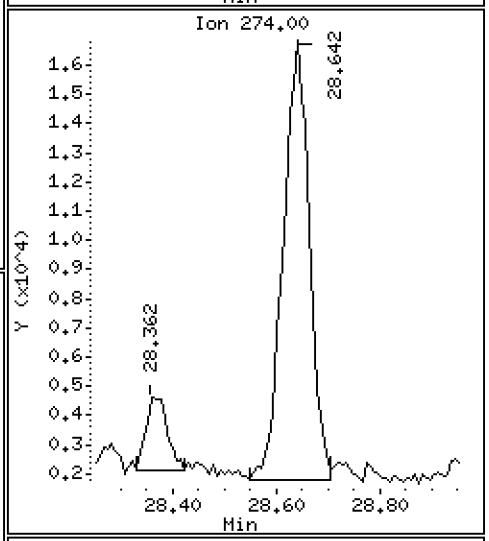


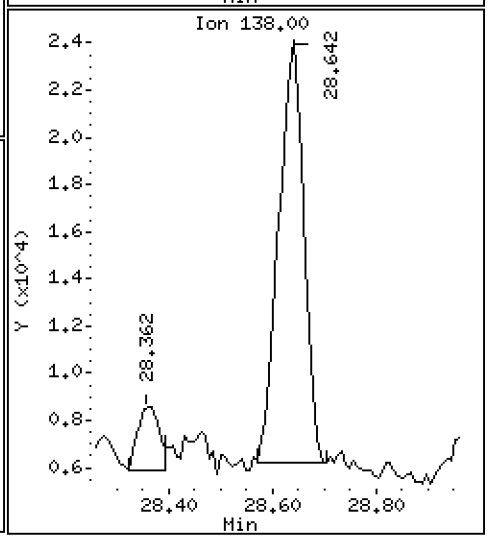












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

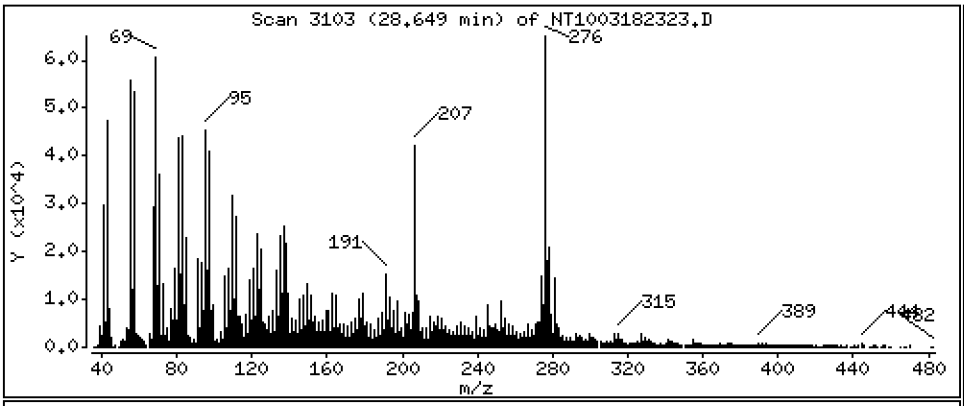
Operator: VTS

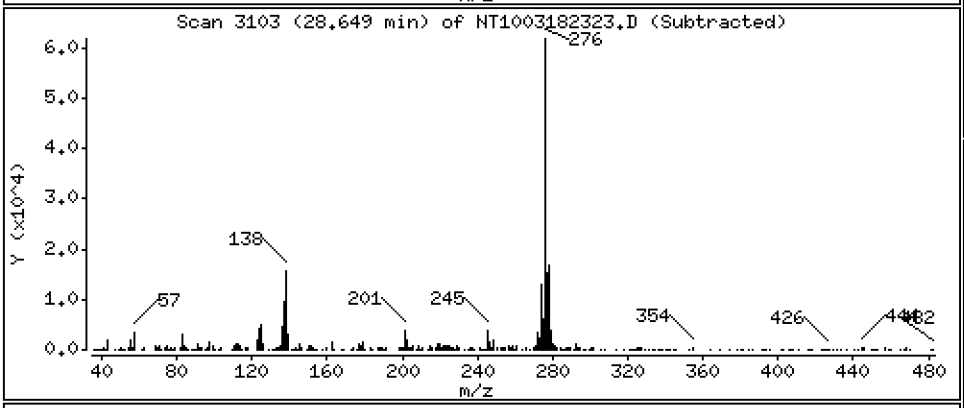
Column phase: ZB-5msi

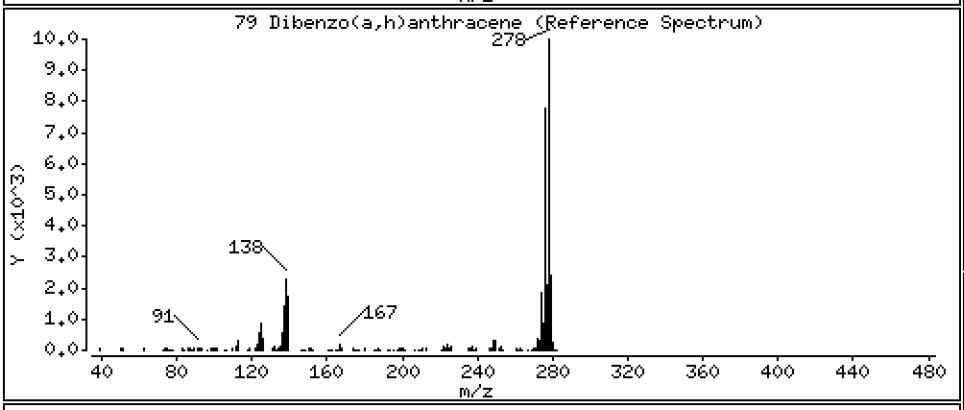
Column diameter: 0.25

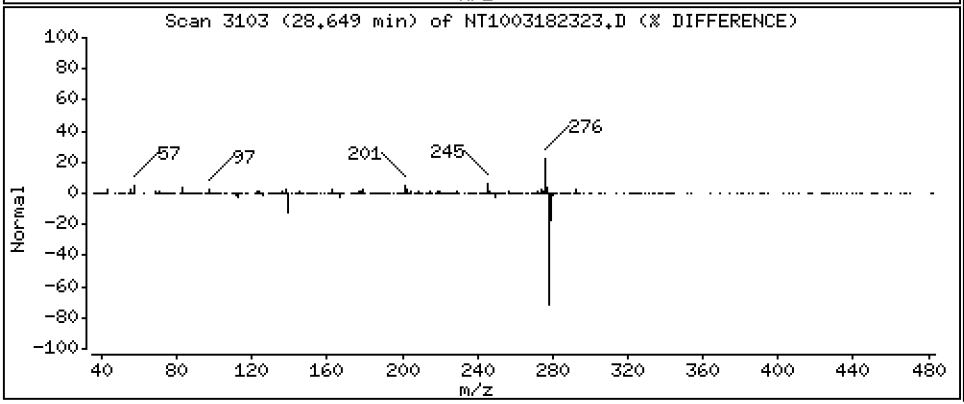
79 Dibenzo(a,h)anthracene

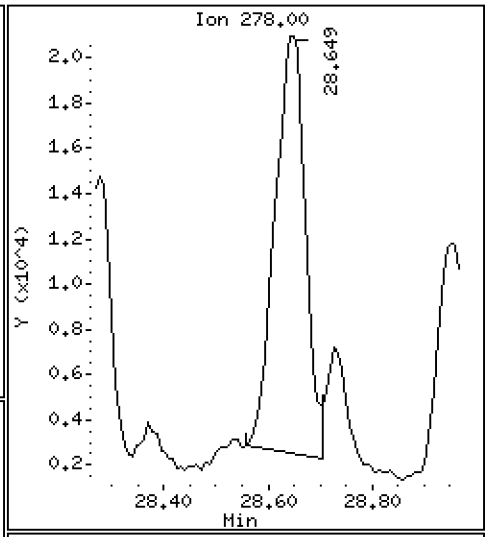
Concentration: 0.3177 ug/mL

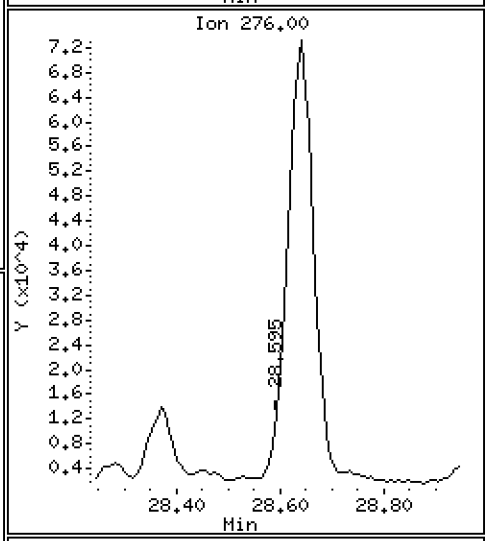


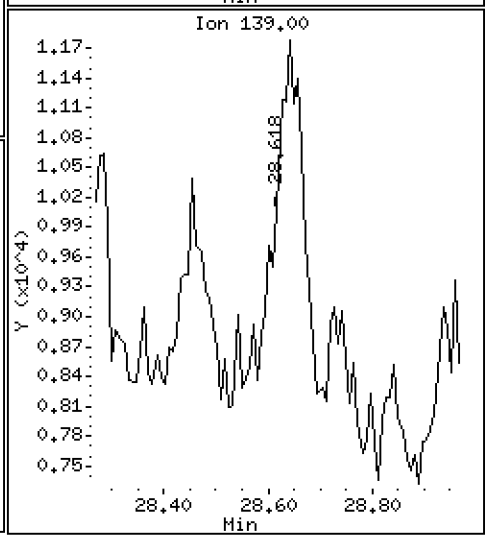












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

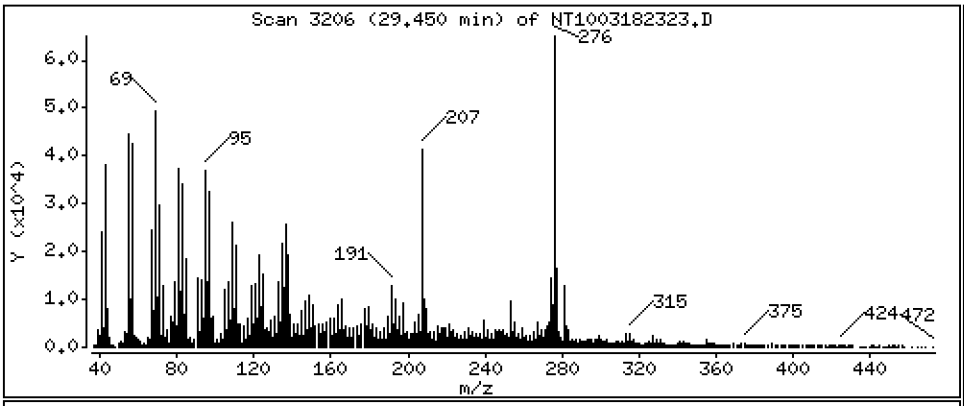
Operator: VTS

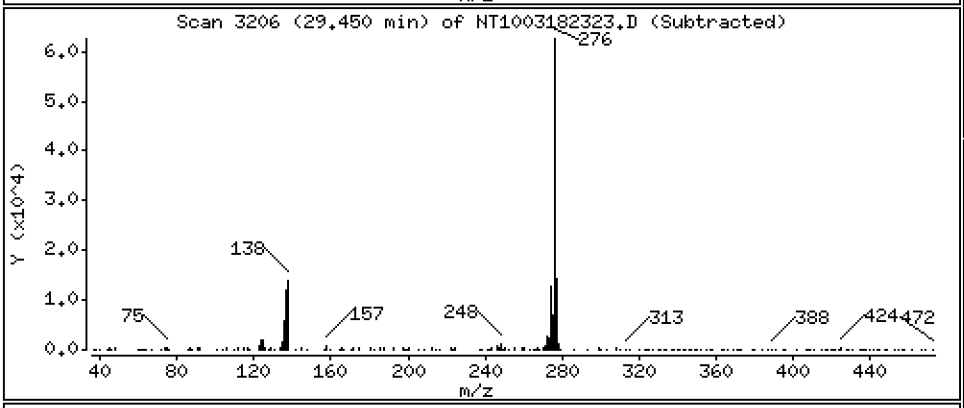
Column phase: ZB-5msi

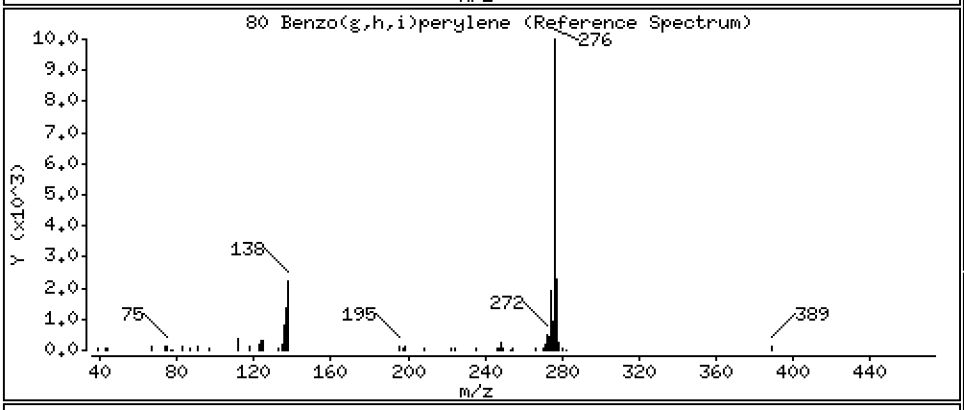
Column diameter: 0.25

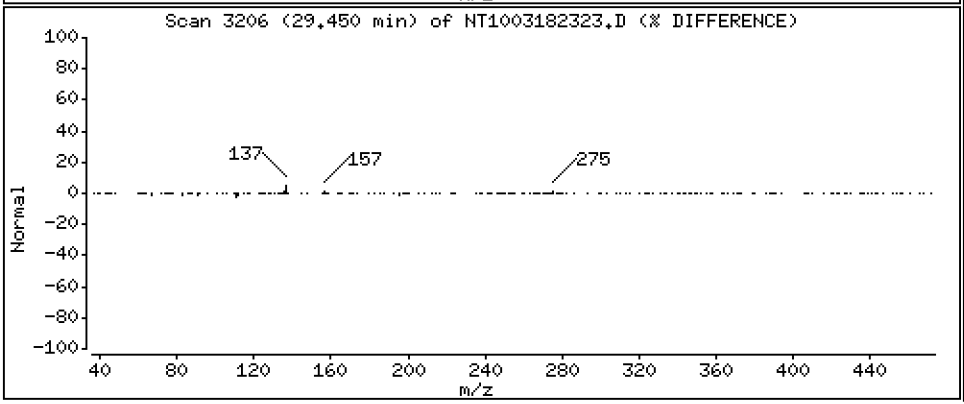
80 Benzo(g,h,i)perylene

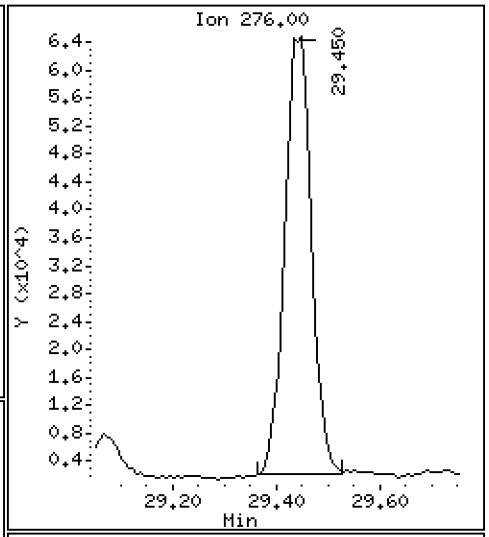
Concentration: 0.9232 ug/mL

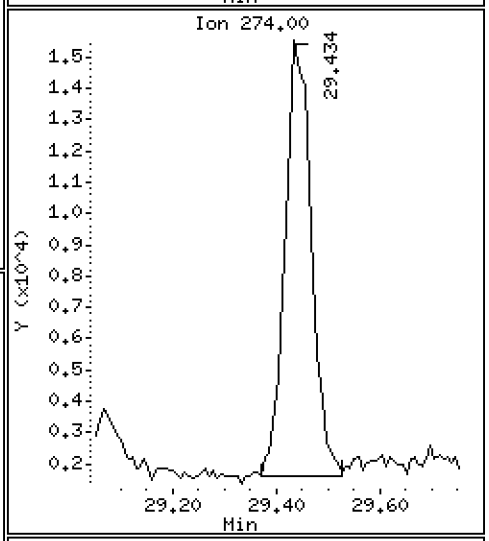


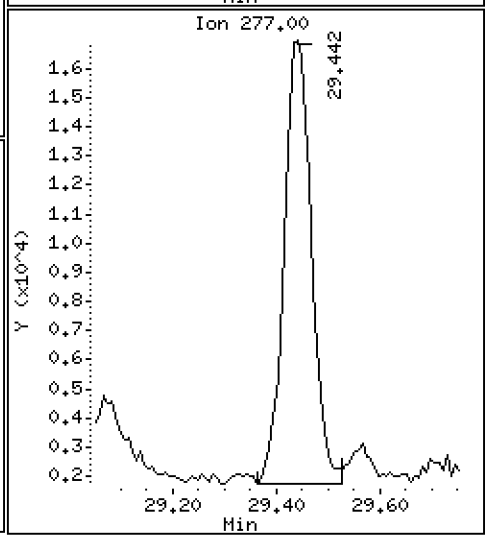












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

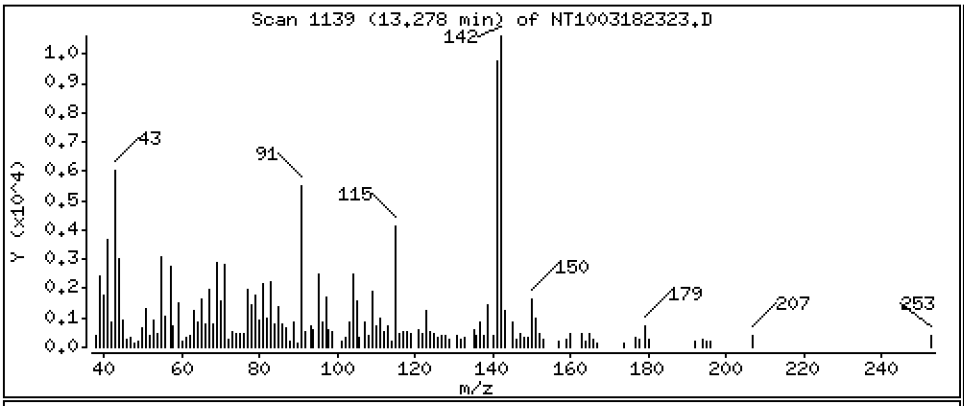
Operator: VTS

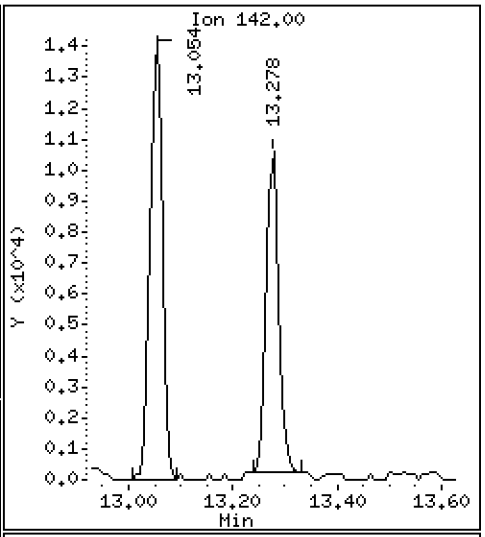
Column phase: ZB-5msi

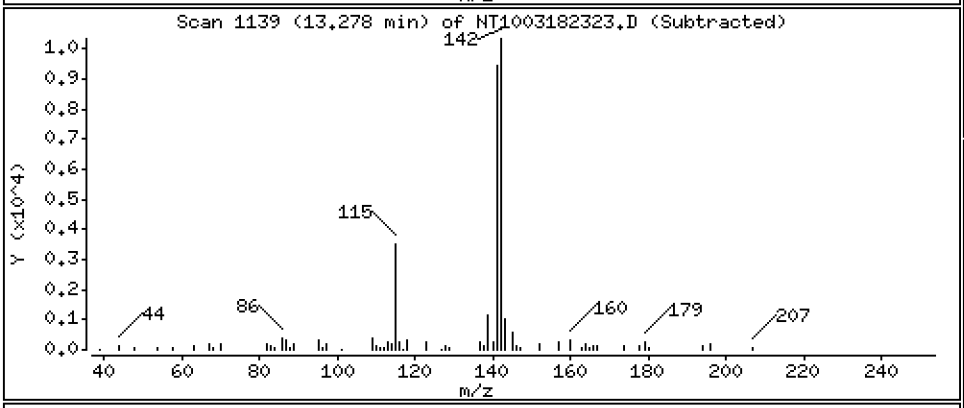
Column diameter: 0.25

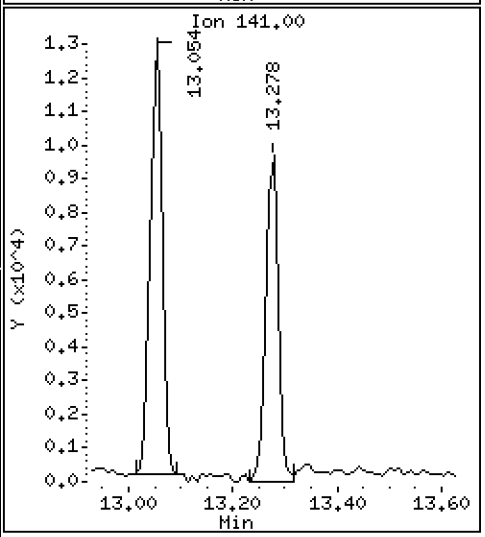
105 1-methylnaphthalene

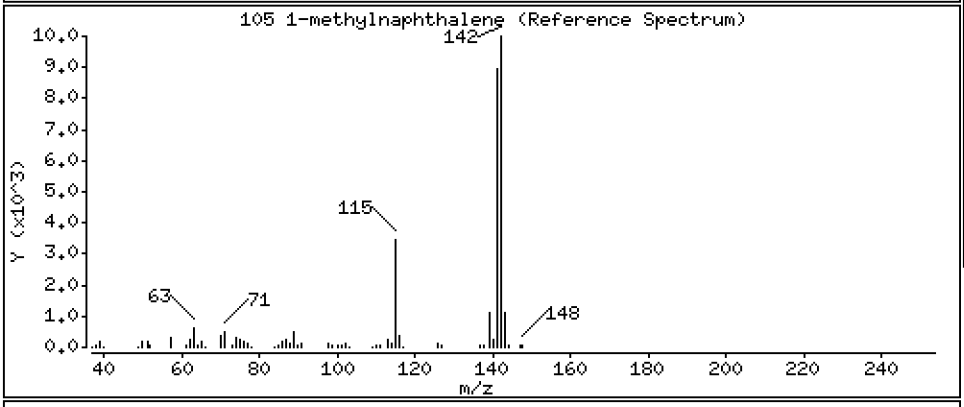
Concentration: 0.1141 ug/mL

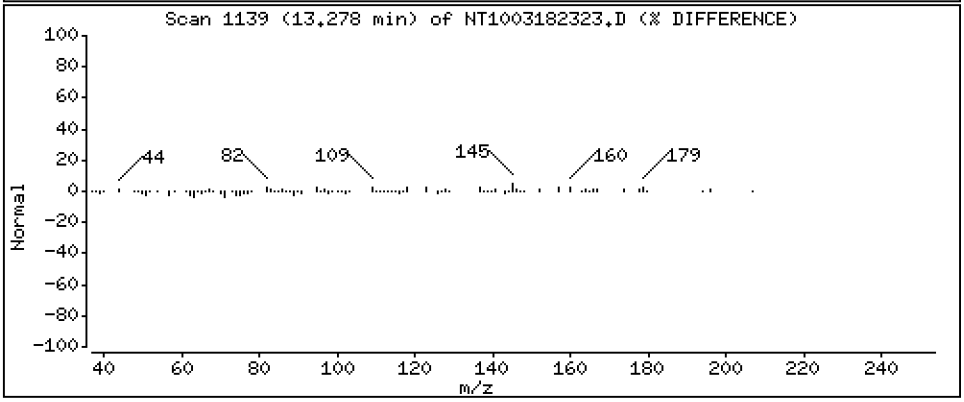












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

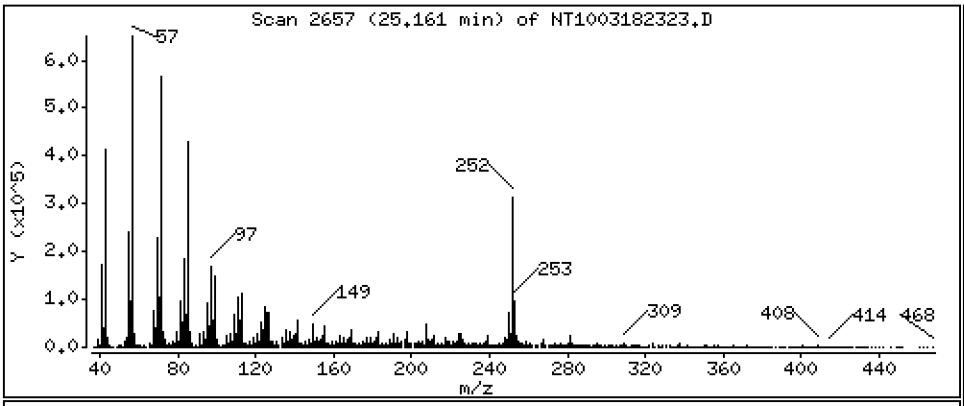
Operator: VTS

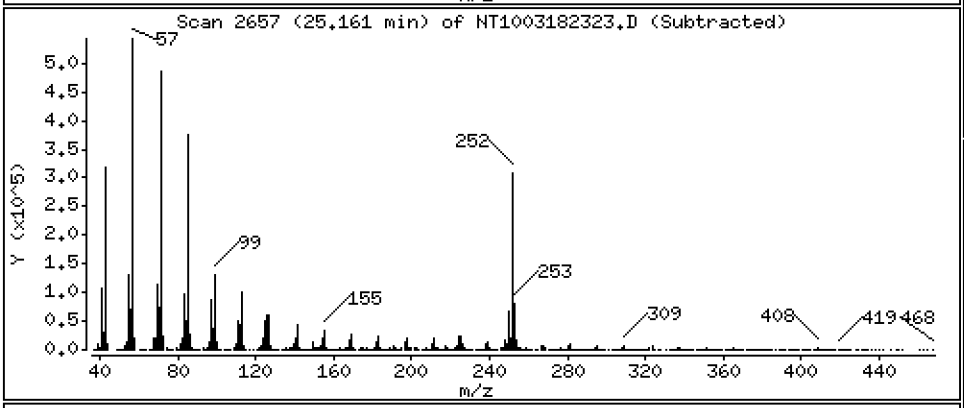
Column phase: ZB-5msi

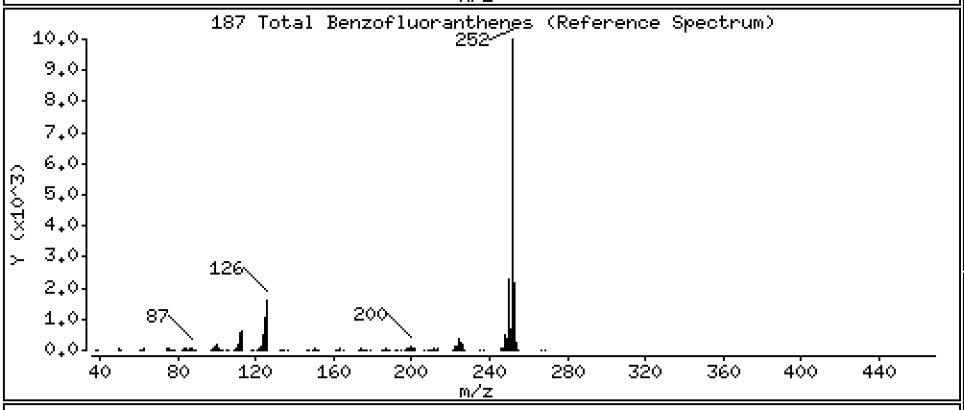
Column diameter: 0.25

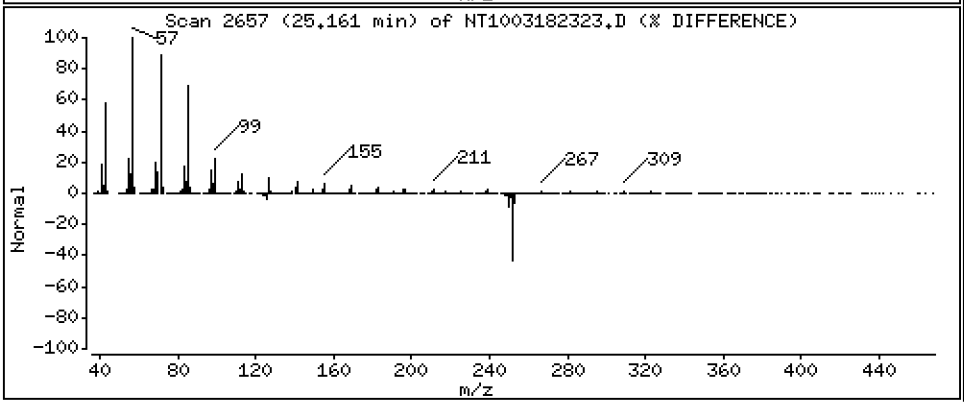
187 Total Benzofluoranthenes

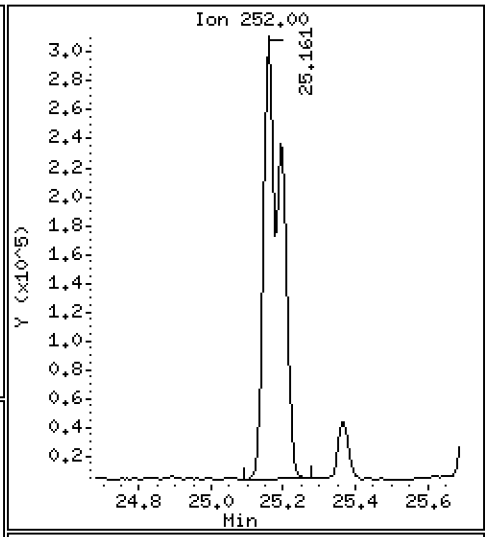
Concentration: 4.181 ug/mL

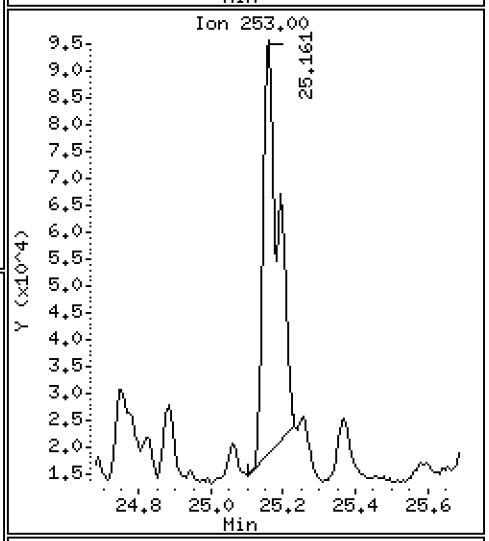


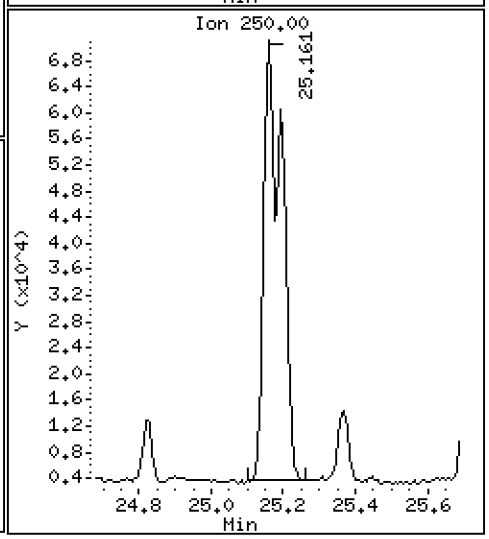












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Lab Smp Id: 23A0467-08
Inj Date : 19-MAR-2023 07:46
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-08
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)	
$	1	2-Fluorophenol	112	6.975	6.967	(0.761)	381538	5.66515	5.665	
$	2	Phenol-d5	99	8.528	8.528	(0.930)	506250	5.72999	5.730	
	3	Phenol	94	8.551	8.551	(0.933)	272139	2.96414	2.964	
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	458907	6.08263	6.083	
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.						
	6	2-Chlorophenol	128	Compound Not Detected.						
	7	1,3-Dichlorobenzene	146	Compound Not Detected.						
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	222704	4.00000		
	9	1,4-Dichlorobenzene	146	Compound Not Detected.						
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	204203	3.76888	3.769	
	12	1,2-Dichlorobenzene	146	Compound Not Detected.						
	11	Benzyl alcohol	108	9.433	9.433	(1.029)	9293	0.21565	0.2156	
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.						
	13	2-Methylphenol	108	Compound Not Detected.						
	17	Hexachloroethane	117	Compound Not Detected.						
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.						
	15	4-Methylphenol	108	9.923	9.915	(1.082)	85417	1.21128	1.211	
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.881)	329580	4.00094	4.001	
	19	Nitrobenzene	77	Compound Not Detected.						
	20	Isophorone	82	Compound Not Detected.						
	21	2-Nitrophenol	139	Compound Not Detected.						
	22	2,4-Dimethylphenol	107	Compound Not Detected.						
	23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.						
	24	Benzoic acid	105	11.048	11.150	(0.949)	21078	0.51078	0.5108(MH)	
	25	2,4-Dichlorophenol	162	Compound Not Detected.						
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.						
*	27	Naphthalene-d8	136	11.638	11.638	(1.000)	816117	4.00000		
	28	Naphthalene	128	11.676	11.676	(1.003)	38326	0.17727	0.1773	
	29	4-Chloroaniline	127	Compound Not Detected.						
	30	Hexachlorobutadiene	225	Compound Not Detected.						
	31	4-Chloro-3-methylphenol	107	Compound Not Detected.						
	32	2-Methylnaphthalene	142	13.053	13.053	(1.122)	22857	0.14650	0.1465	
	33	Hexachlorocyclopentadiene	237	Compound Not Detected.						

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.827	13.827	(0.908)	707012	4.00197	4.002
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.717	14.717	(0.967)	12416	0.08558	0.08558
	40	Acenaphthylene	152	14.911	14.910	(0.980)	34004	0.15255	0.1526
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.220	15.220	(1.000)	446608	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.282	15.282	(1.004)	15809	0.11480	0.1148
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.607	15.606	(1.025)	29719	0.14635	0.1464
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.163	16.171	(1.062)	36373	0.25552	0.2555
	49	Fluorene	166	16.318	16.318	(1.072)	22530	0.14102	0.1410
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	140299	6.73611	6.736
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.249	18.241	(1.000)	823538	4.00000	
	60	Phenanthrene	178	18.295	18.295	(1.003)	187449	0.83474	0.8347
	61	Anthracene	178	18.388	18.380	(1.008)	152358	0.70729	0.7073
	62	Carbazole	167	18.721	18.713	(1.026)	36016	0.18658	0.1866
	63	Di-n-butylphthalate	149	19.502	19.494	(1.069)	23282	0.08970	0.08970
	64	Fluoranthene	202	20.694	20.670	(0.889)	599827	2.04278	2.043
	65	Pyrene	202	21.104	21.096	(0.906)	693343	2.30182	2.302
$	66	Terphenyl-d14	244	21.382	21.374	(0.918)	885515	3.91463	3.915
	67	Butylbenzylphthalate	149	22.304	22.296	(0.958)	23292	0.22015	0.2202
	68	Benzo(a)anthracene	228	23.264	23.248	(0.999)	356969	1.38394	1.384
*	69	Chrysene-d12	240	23.287	23.279	(1.000)	730762	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.334	23.326	(1.002)	527107	2.09170	2.092
	72	bis(2-Ethylhexyl)phthalate	149	23.326	23.318	(0.960)	350737	1.91337	1.913
*	134	Di-n-octylphthalate-d4	153	24.309	24.301	(1.000)	1251920	4.00000	
	73	Di-n-octylphthalate	149	24.324	24.309	(1.001)	33899	0.10347	0.1035(M)
	74	Benzo(b)fluoranthene	252	25.161	25.145	(0.970)	592300	2.32958	2.330
	75	Benzo(k)fluoranthene	252	25.192	25.184	(0.971)	513581	1.98930	1.989(MH)
	76	Benzo(a)pyrene	252	25.826	25.803	(0.996)	393625	1.73163	1.732
*	77	Perylene-d12	264	25.943	25.919	(1.000)	784361	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.641	28.594	(1.104)	246765	0.85327	0.8533
	79	Dibenzo(a,h)anthracene	278	28.649	28.618	(1.104)	76283	0.31771	0.3177(M)
	80	Benzo(g,h,i)perylene	276	29.449	29.402	(1.135)	231065	0.92323	0.9232
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.278	13.277	(1.141)	16316	0.11414	0.1141
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.161	25.184	(0.970)	1026356	4.18092	4.181(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182323.D
Lab Smp Id: 23A0467-08
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	222704	6.28
27 Naphthalene-d8	795859	397930	1591718	816117	2.55
42 Acenaphthene-d10	432510	216255	865020	446608	3.26
59 Phenanthrene-d10	808891	404446	1617782	823538	1.81
69 Chrysene-d12	657926	328963	1315852	730762	11.07
134 Di-n-octylphthala	1187734	593867	2375468	1251920	5.40
77 Perylene-d12	770107	385054	1540214	784361	1.85

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.04
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.03
134 Di-n-octylphthala	24.30	23.80	24.80	24.31	0.03
77 Perylene-d12	25.92	25.42	26.42	25.94	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182323.D

Lab ID: 23A0467-08
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 07:46

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0087	Benzoic acid

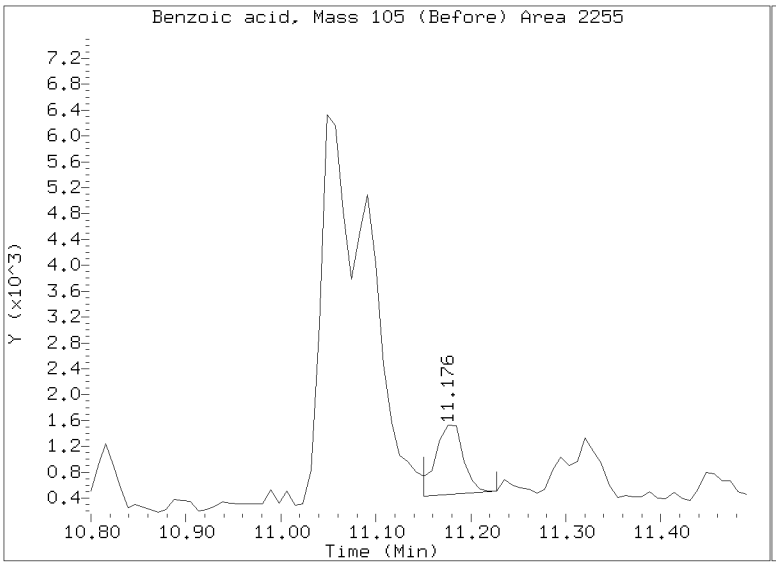
RRT check based on Ccal File: NT1003182316.D

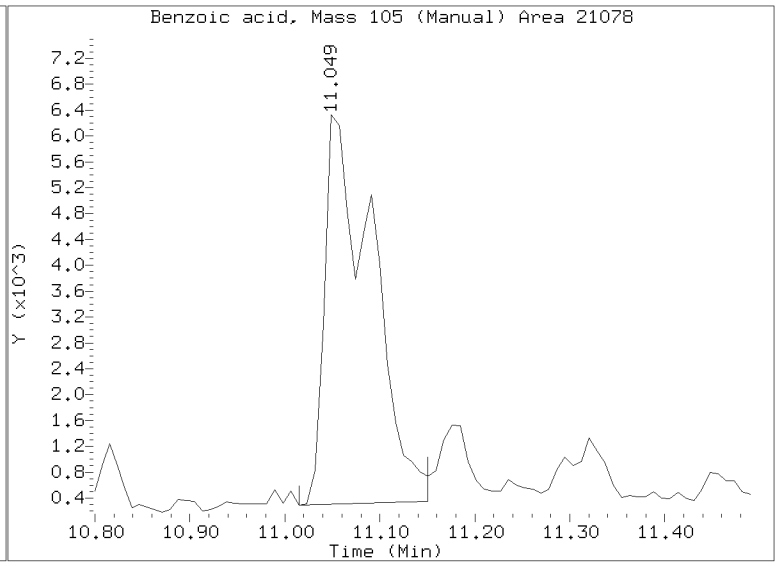
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

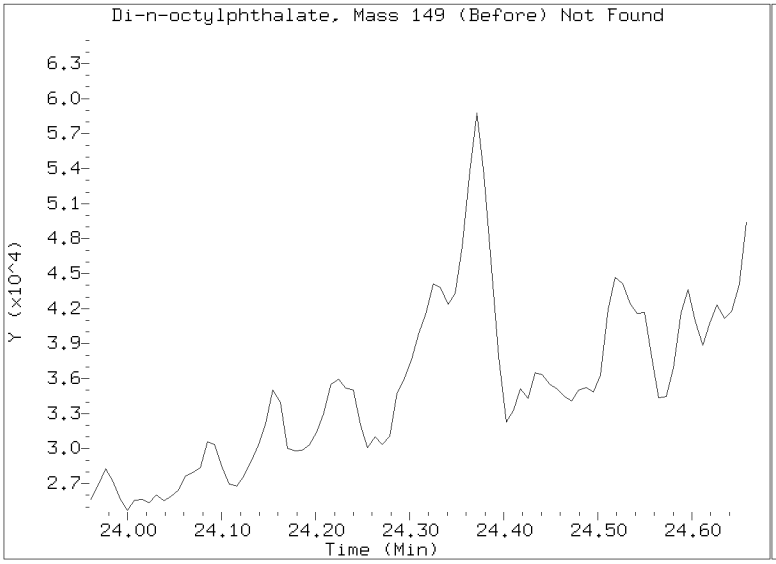
* Only compounds listed in the work order have been verified by the analyst *

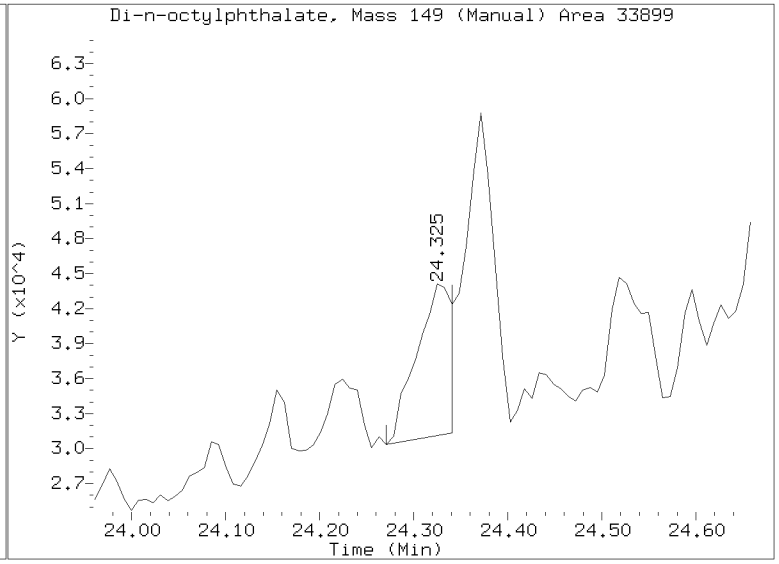
Quant Ion Manual Peak Adjustment Report

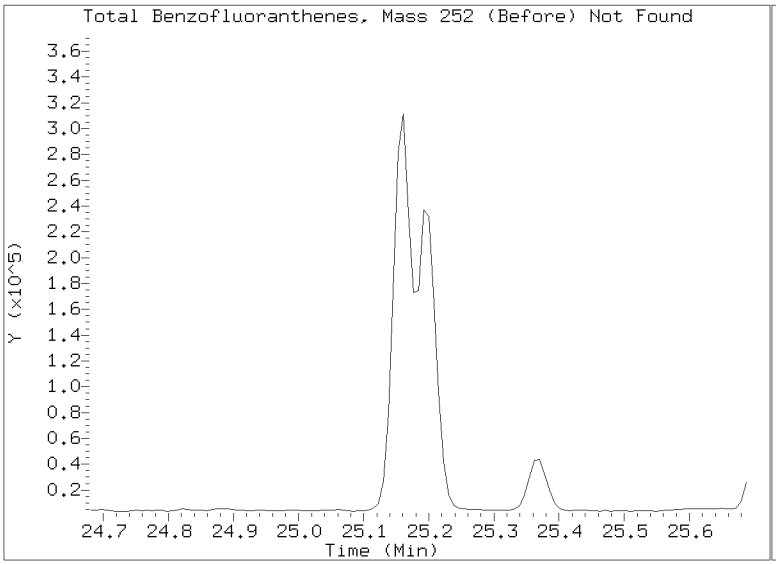
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182323.D
Injection Date: 19-MAR-2023 07:46
Lab ID:23A0467-08 Client ID:
Report Date: 04/04/2023 10:38

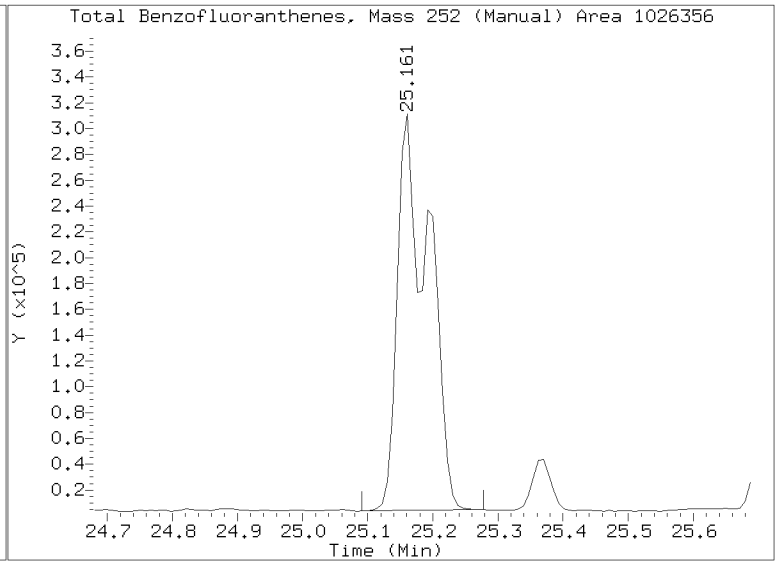






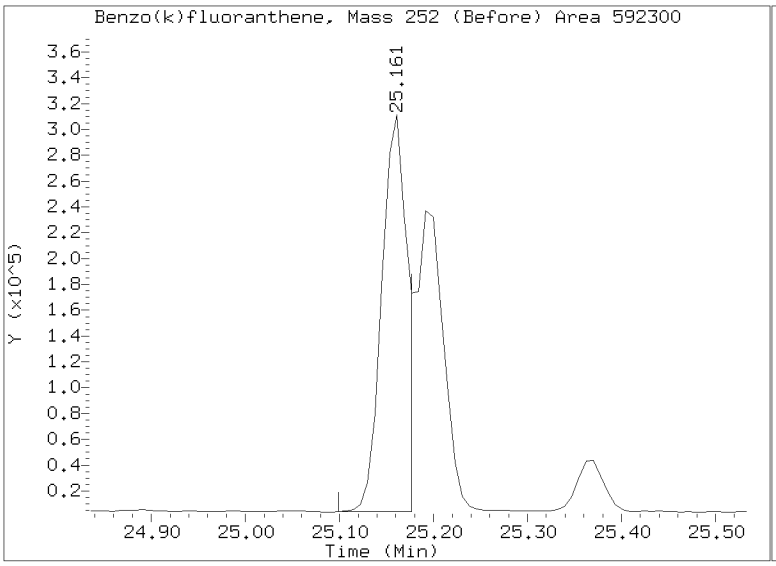


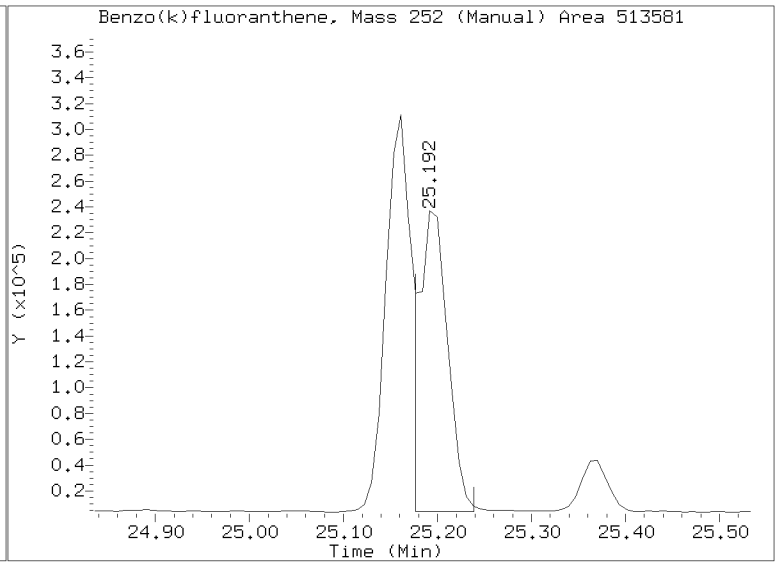


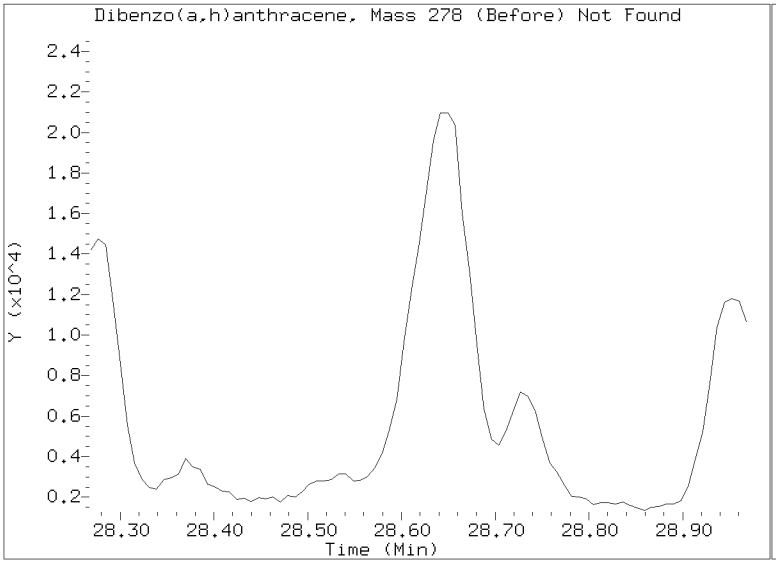


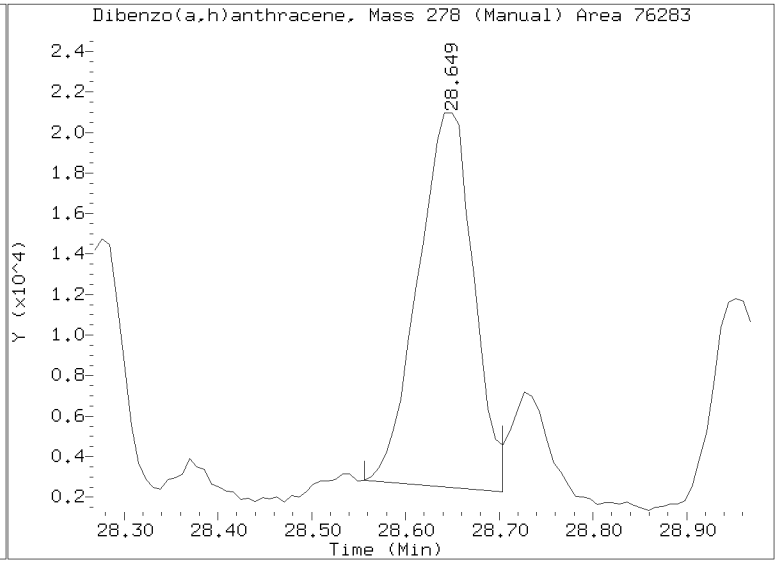
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182323.D
Injection Date: 19-MAR-2023 07:46
Lab ID:23A0467-08 Client ID:
Report Date: 04/04/2023 10:38









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1014

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	02/23/23 15:49	File ID:	NT1003182324.D
% Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 08:24
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	15.68 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
108-95-2	Phenol	1	758		4.4	20.0
106-44-5	4-Methylphenol	1	176		7.4	20.0
91-20-3	Naphthalene	1	8.0	J	4.2	20.0
91-57-6	2-Methylnaphthalene	1	6.8	J	4.5	20.0
208-96-8	Acenaphthylene	1	7.3	J	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9	Acenaphthene	1	7.4	J	5.2	20.0
132-64-9	Dibenzofuran	1	20.0	U	14.1	20.0
86-73-7	Fluorene	1	20.0	U	14.6	20.0
85-01-8	Phenanthrene	1	65.6		8.7	20.0
120-12-7	Anthracene	1	32.8		7.2	20.0
206-44-0	Fluoranthene	1	136		6.1	20.0
129-00-0	Pyrene	1	150		5.7	20.0
85-68-7	Butylbenzylphthalate	1	20.0	U	9.4	20.0
56-55-3	Benzo(a)anthracene	1	83.3		6.0	20.0
218-01-9	Chrysene	1	145		6.1	20.0
117-81-7	bis(2-Ethylhexyl)phthalate	1	124		5.5	50.0
	Benzofluoranthenes, Total	1	228		10.0	40.0
50-32-8	Benzo(a)pyrene	1	91.4		4.2	20.0
193-39-5	Indeno(1,2,3-cd)pyrene	1	46.9		14.6	20.0
53-70-3	Dibenzo(a,h)anthracene	1	20.0	U	17.2	20.0
191-24-2	Benzo(g,h,i)perylene	1	51.0		13.6	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.36	544	72.6	27 - 120	
Phenol-d5	749.36	567	75.7	29 - 120	
2-Chlorophenol-d4	749.36	602	80.3	31 - 120	
1,2-Dichlorobenzene-d4	499.57	381	76.2	32 - 120	
Nitrobenzene-d5	499.57	399	79.9	30 - 120	
2-Fluorobiphenyl	499.57	416	83.3	35 - 120	

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1014

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E

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

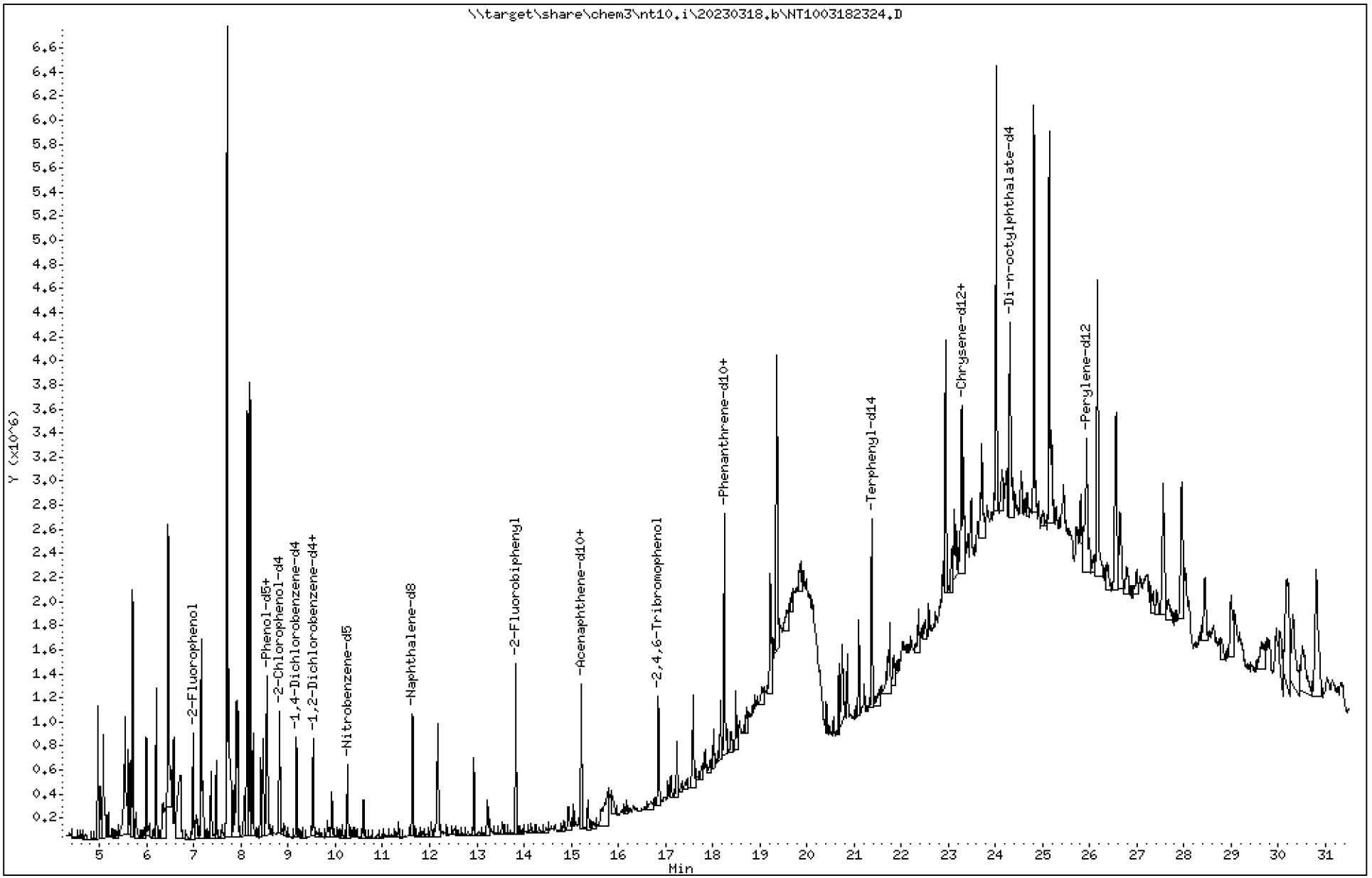
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	02/23/23 15:49	File ID:	NT1003182324.D
% Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 08:24
Batch:	BLB0579	Sequence:	SLC0504	Initial/Final:	15.68 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00046
Cleanups:	GPC				

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2,4,6-Tribromophenol	749.36	642	85.7	24 - 134	
p-Terphenyl-d14	499.57	474	95.0	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D
Date : 19-MAR-2023 08:24
Client ID:
Sample Info: 23A0467-09

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

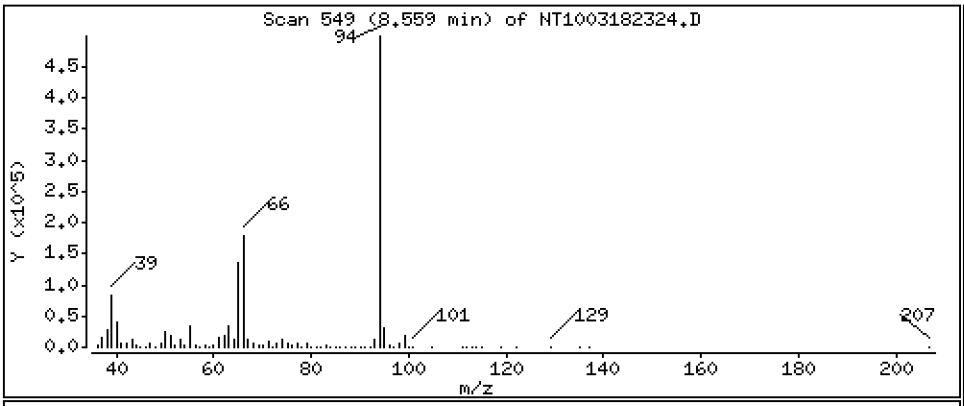
Operator: VTS

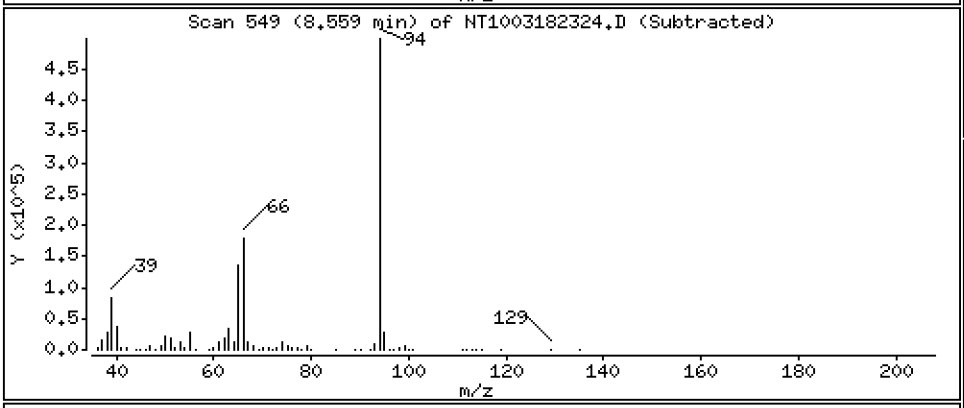
Column phase: ZB-5msi

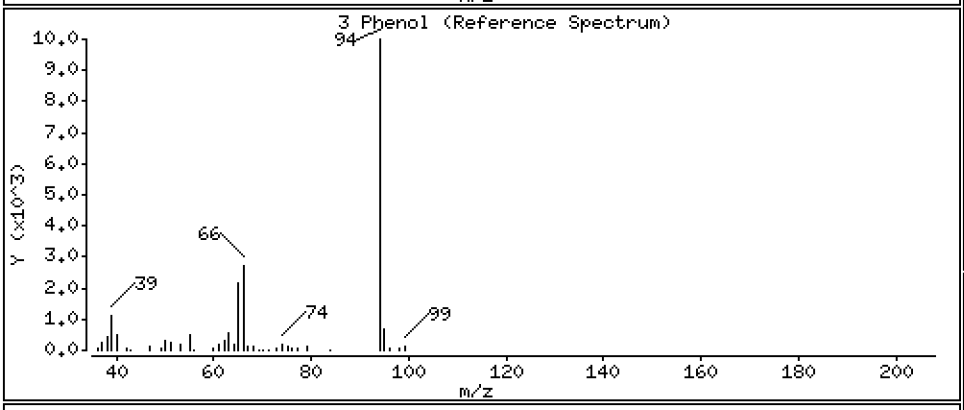
Column diameter: 0.25

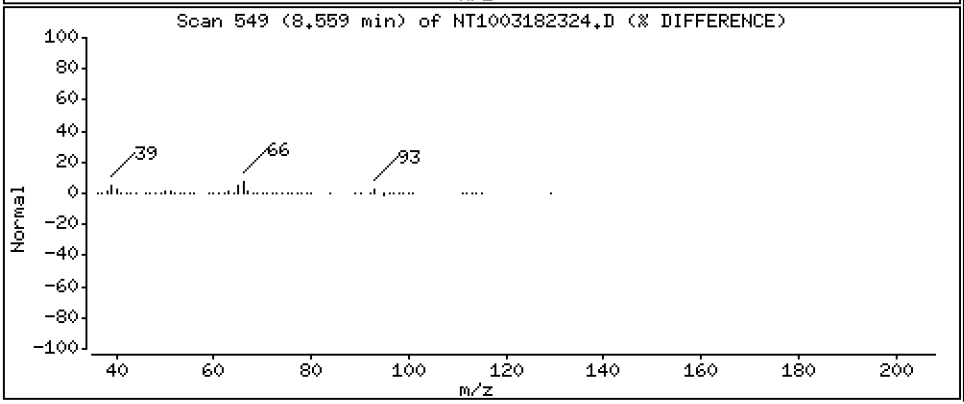
3 Phenol

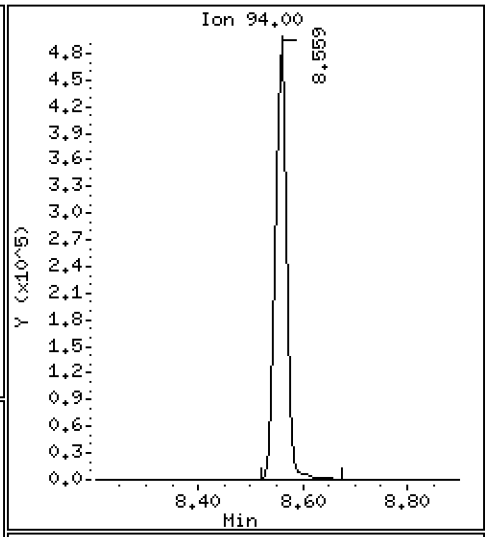
Concentration: 7.591 ug/mL

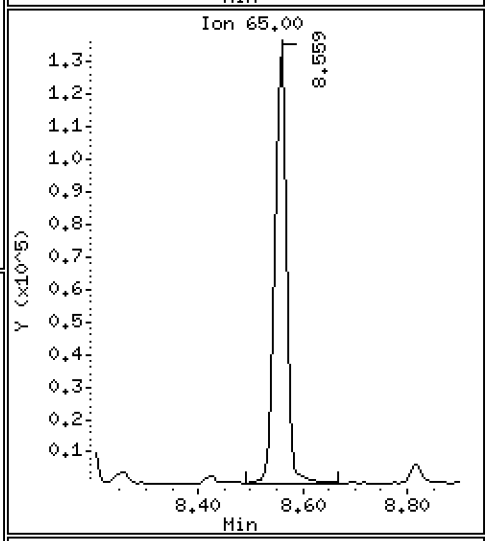


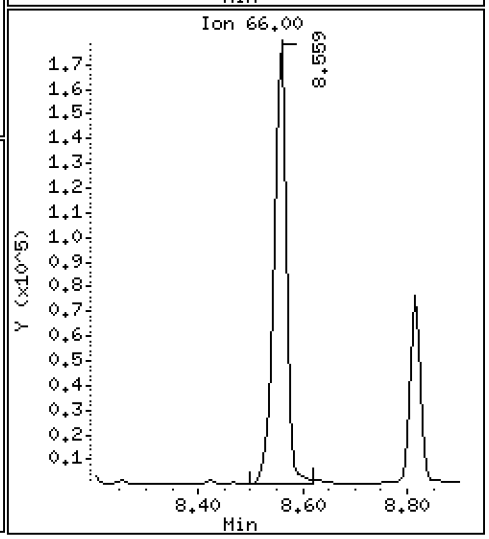












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

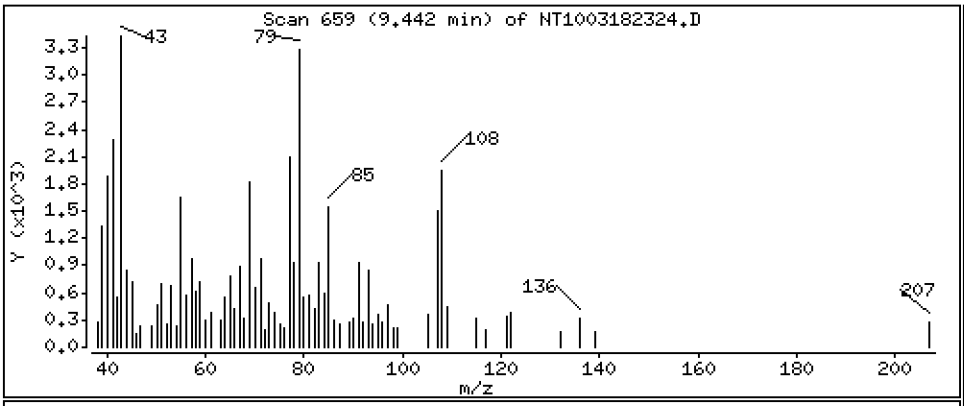
Operator: VTS

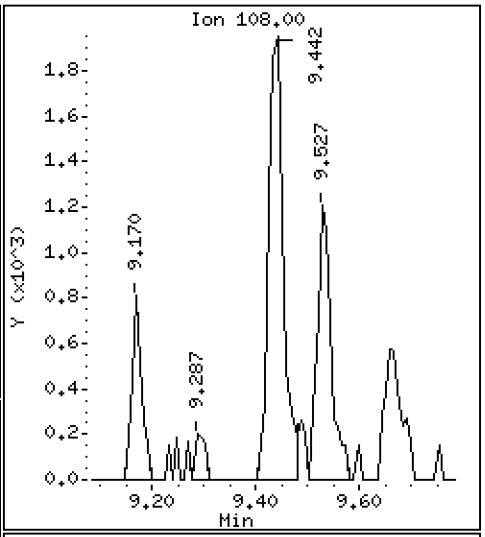
Column phase: ZB-5msi

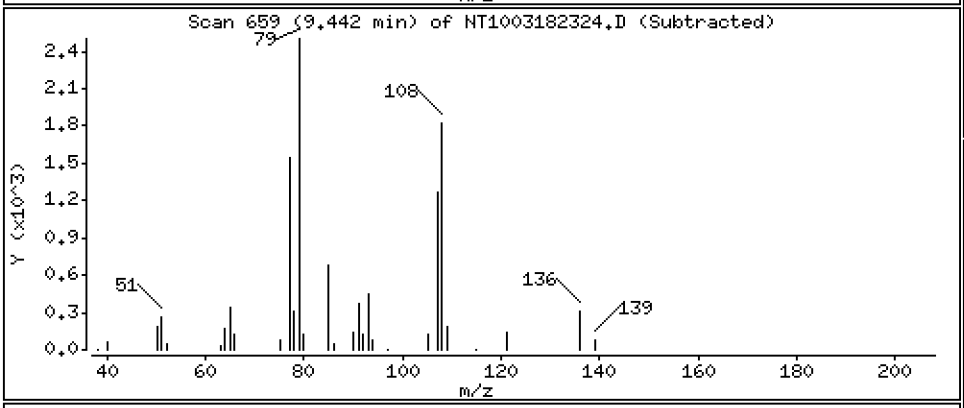
Column diameter: 0.25

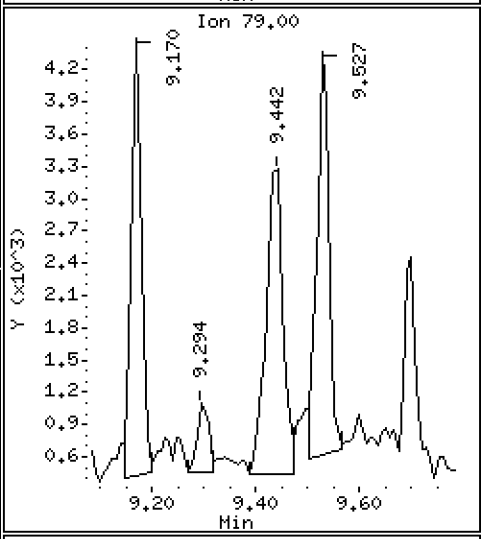
11 Benzyl alcohol

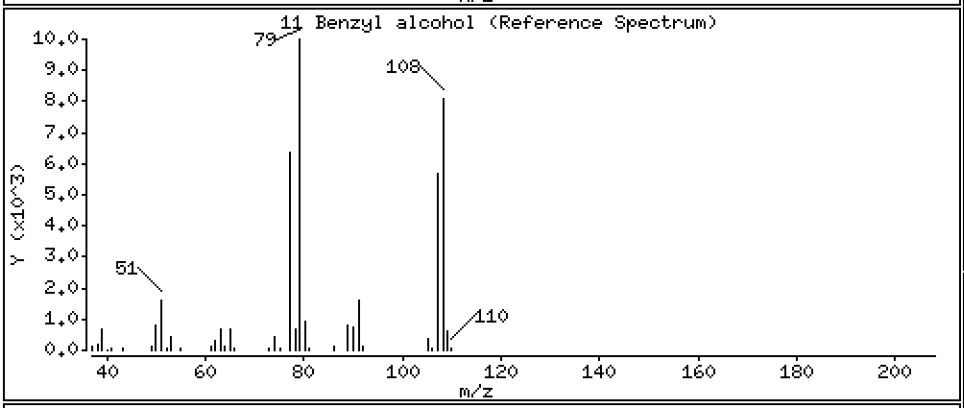
Concentration: 0.08382 ug/mL

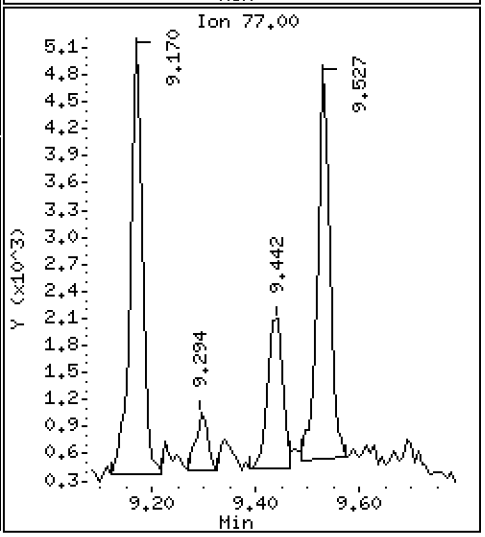


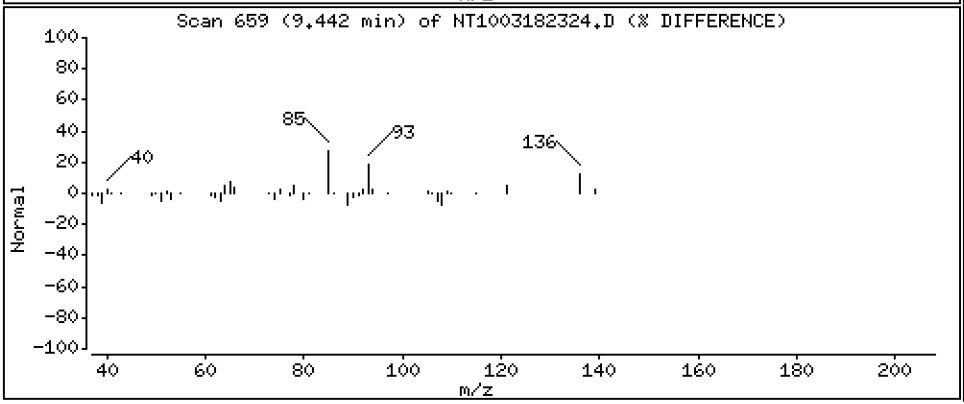












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

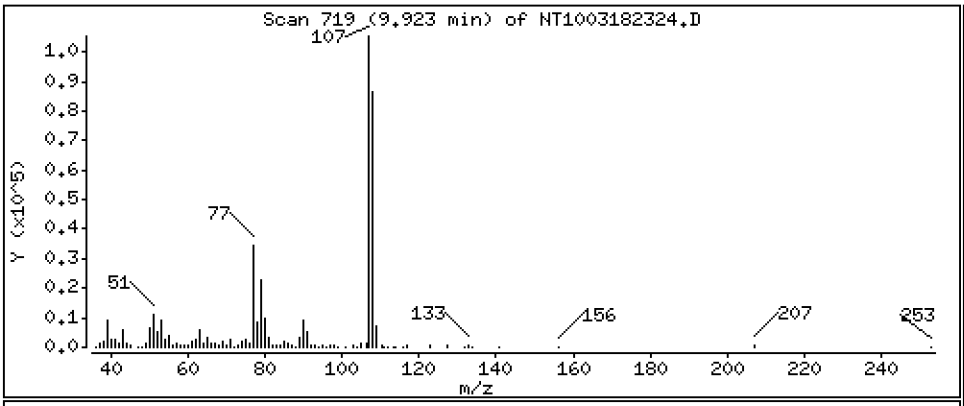
Operator: VTS

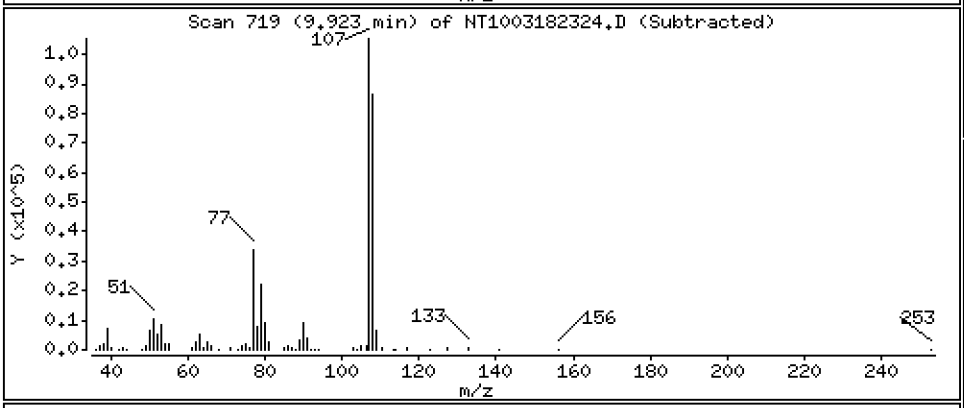
Column phase: ZB-5msi

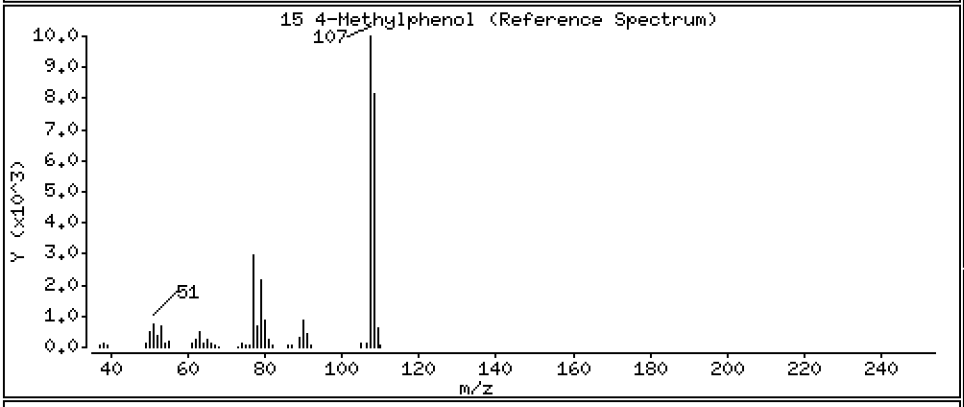
Column diameter: 0.25

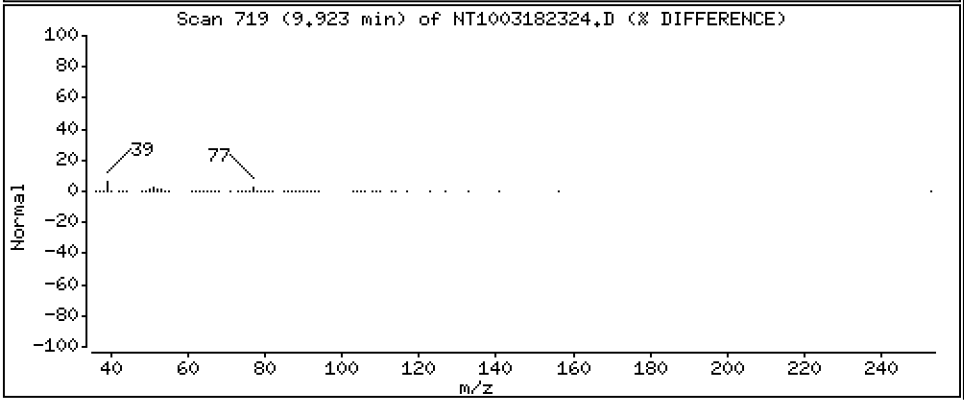
15 4-Methylphenol

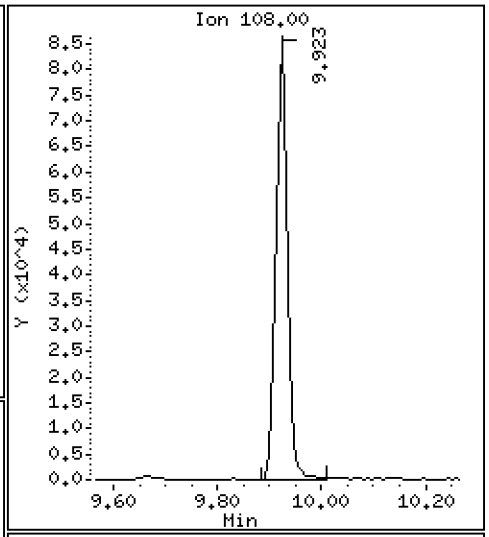
Concentration: 1.765 ug/mL

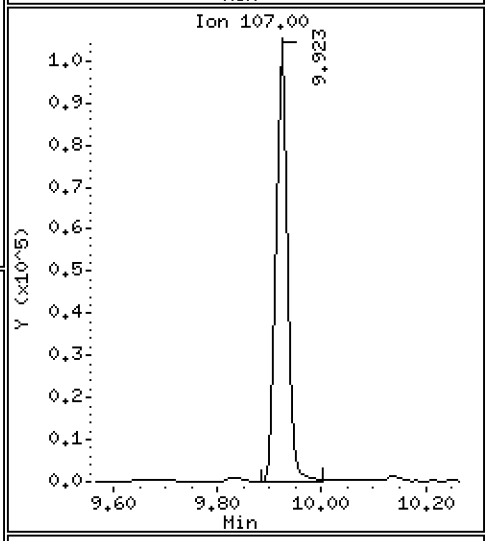


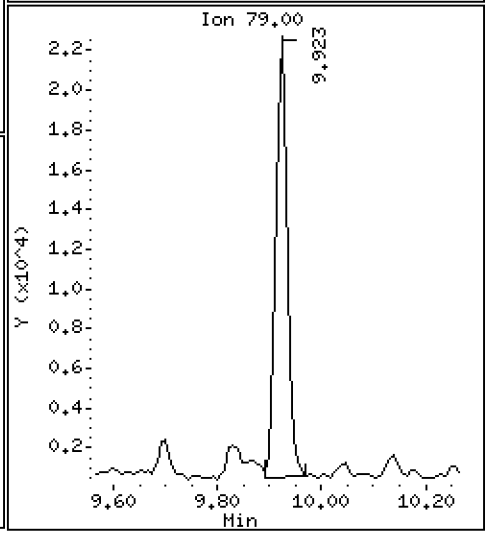












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

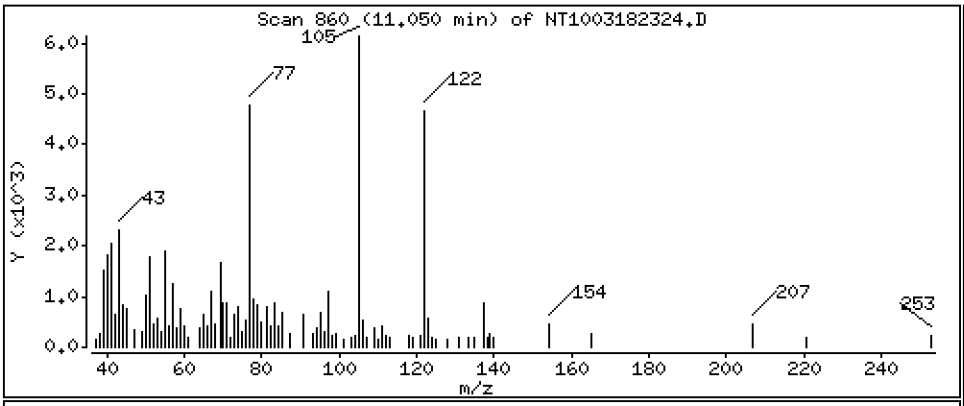
Operator: VTS

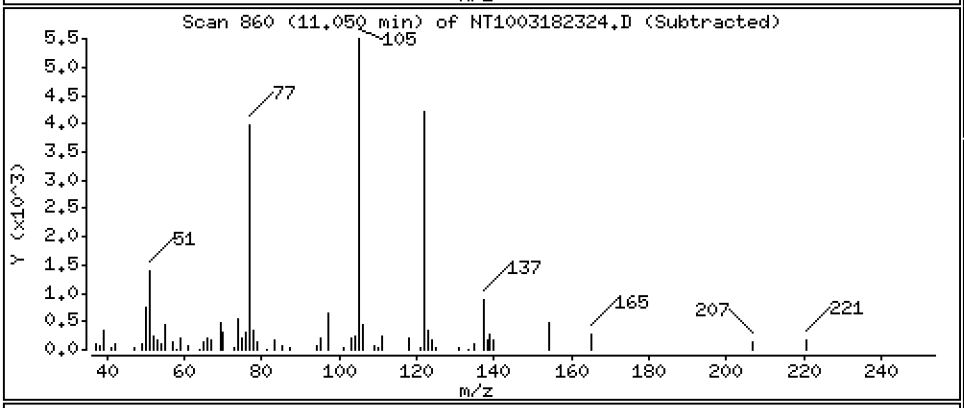
Column phase: ZB-5msi

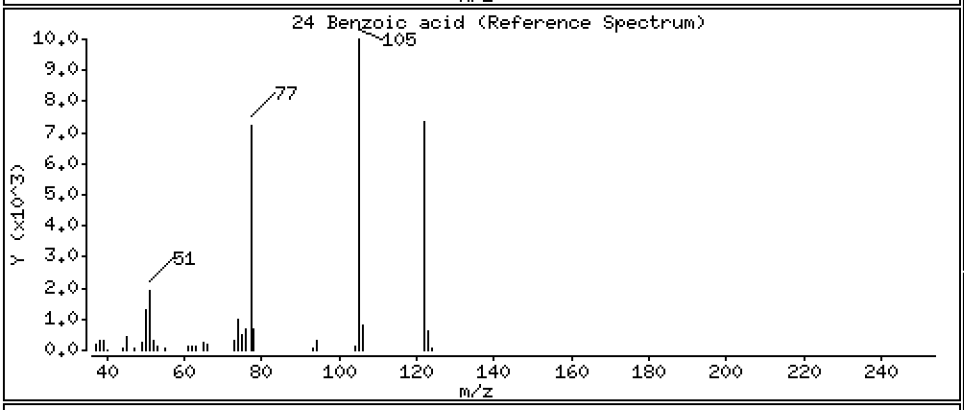
Column diameter: 0.25

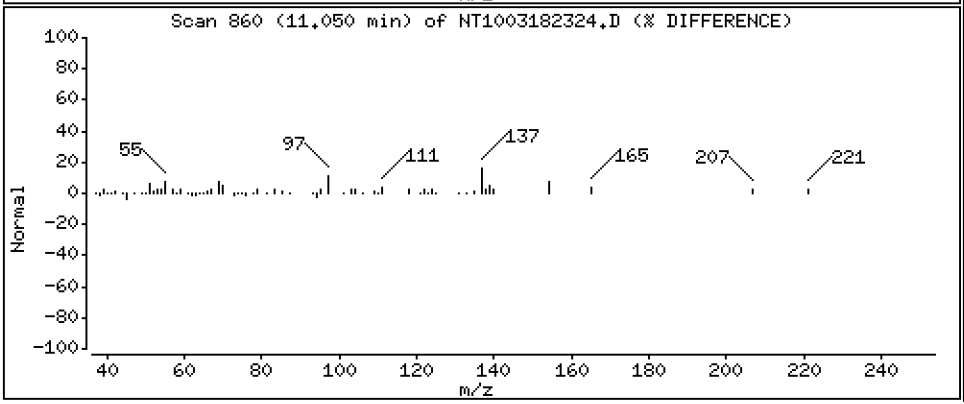
24 Benzoic acid

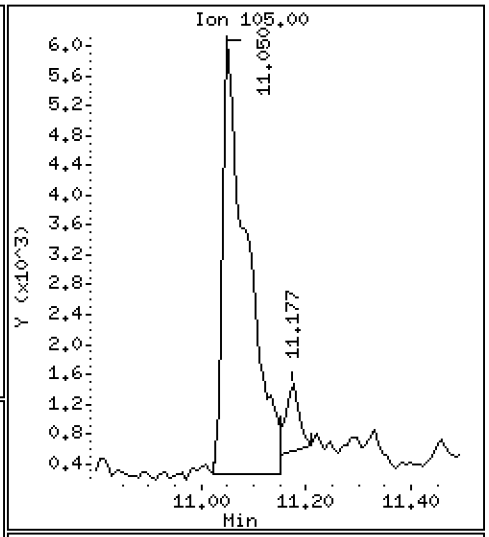
Concentration: 0.4546 ug/mL

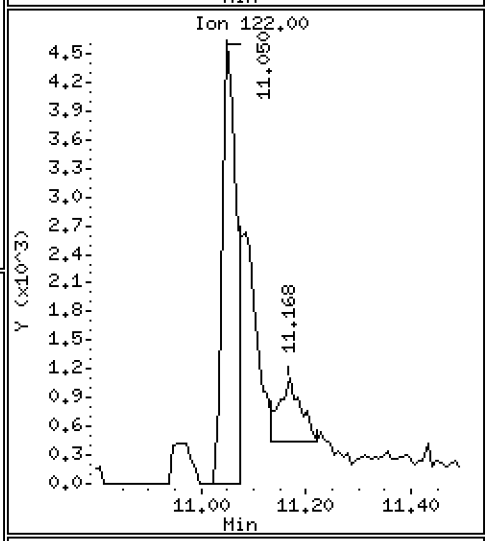


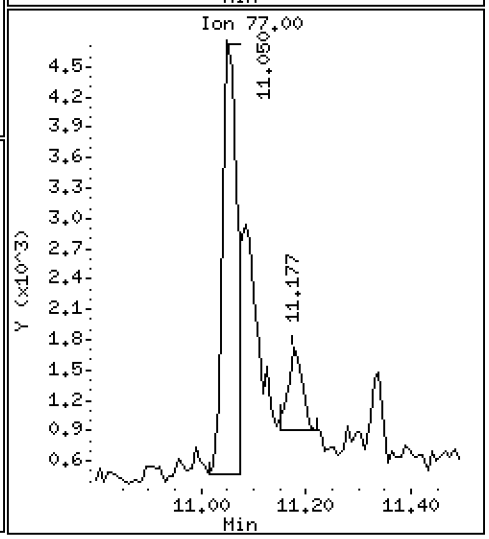












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

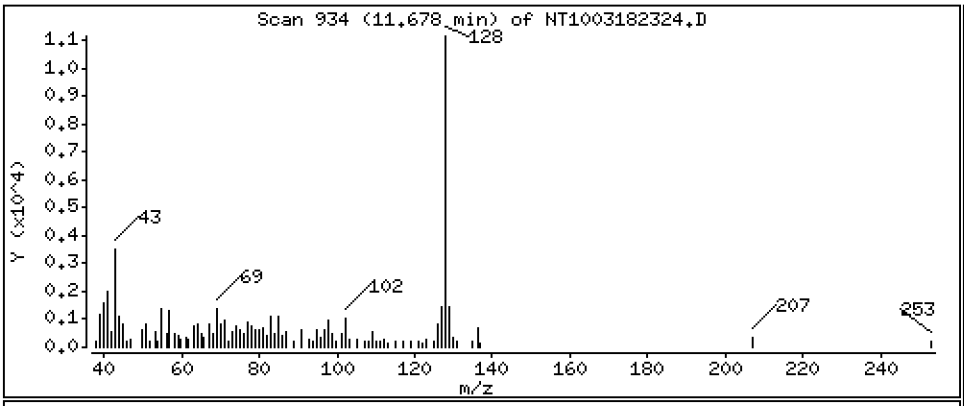
Operator: VTS

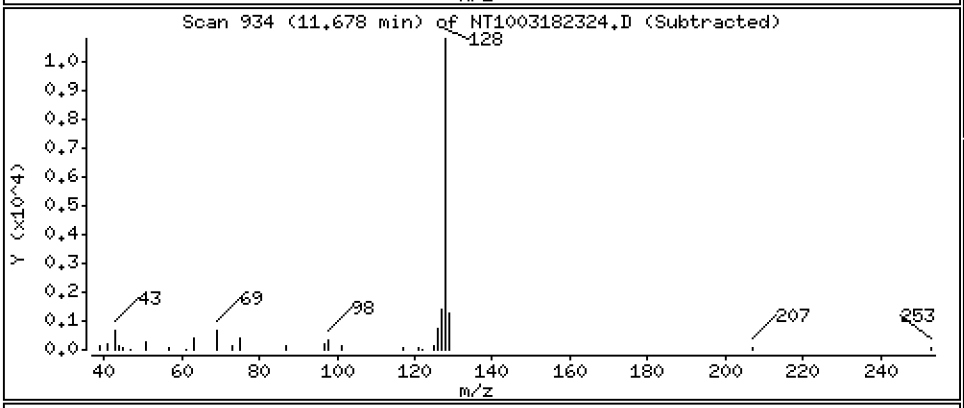
Column phase: ZB-5msi

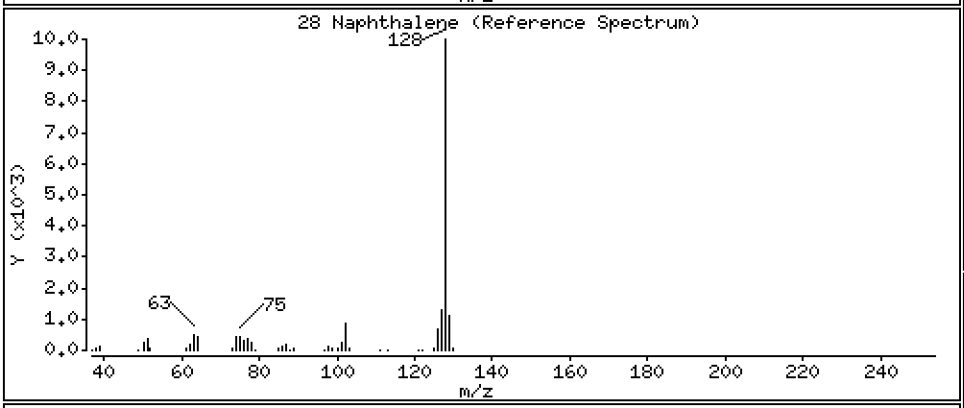
Column diameter: 0.25

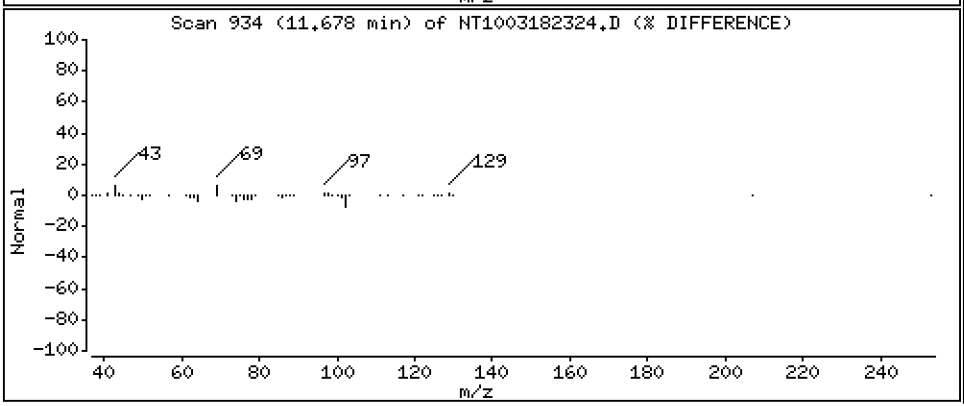
28 Naphthalene

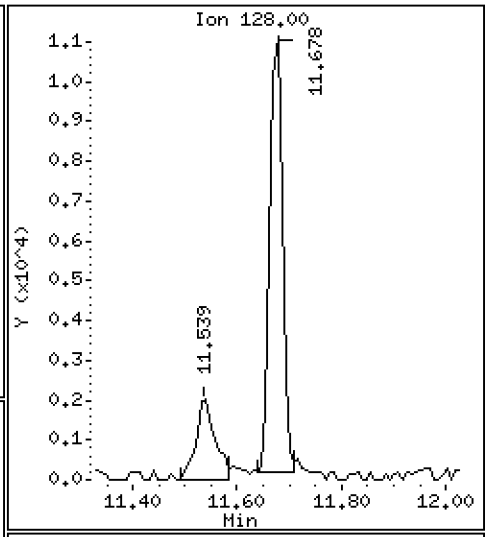
Concentration: 0.07997 ug/mL

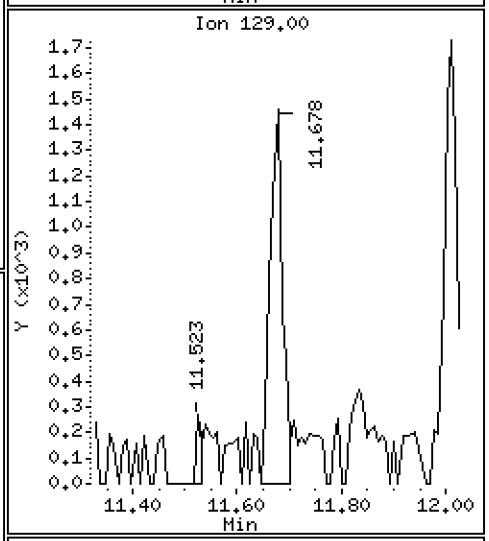


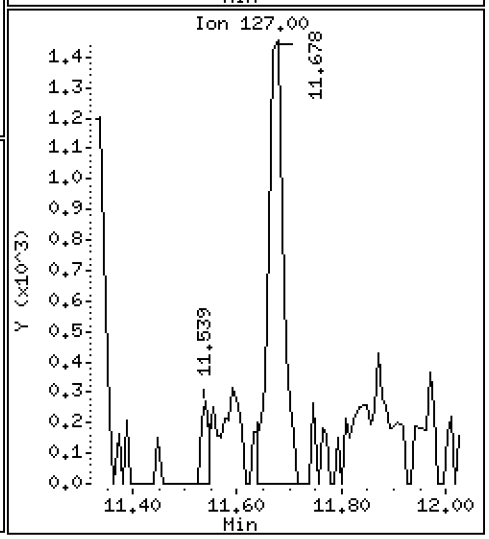












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

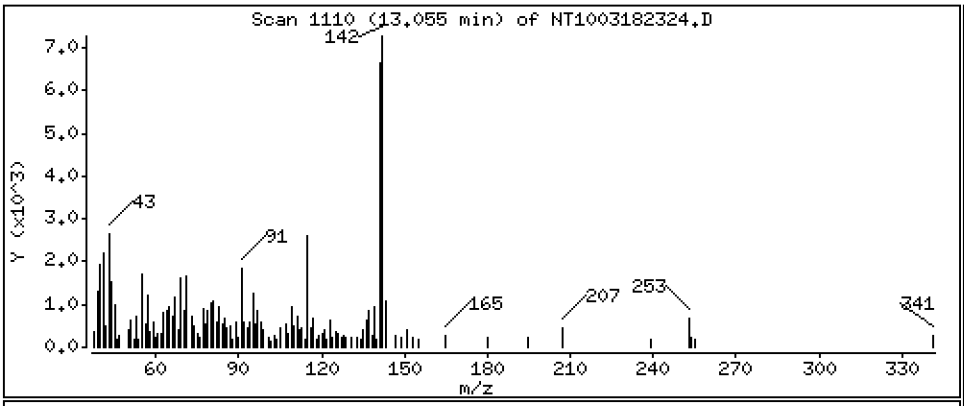
Operator: VTS

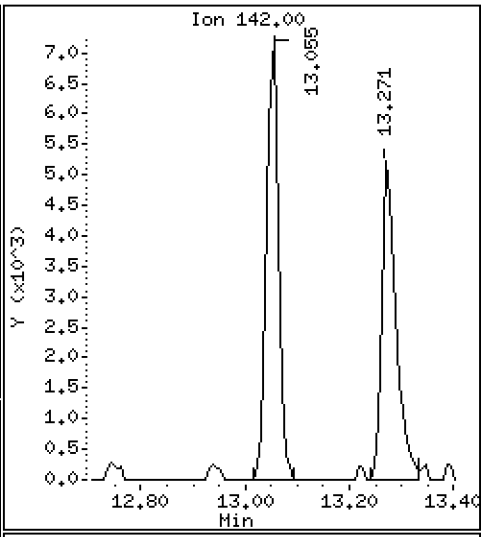
Column phase: ZB-5msi

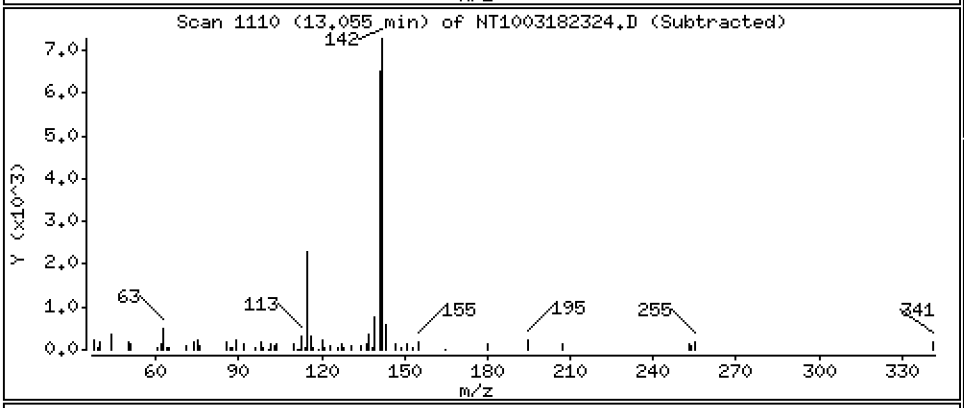
Column diameter: 0.25

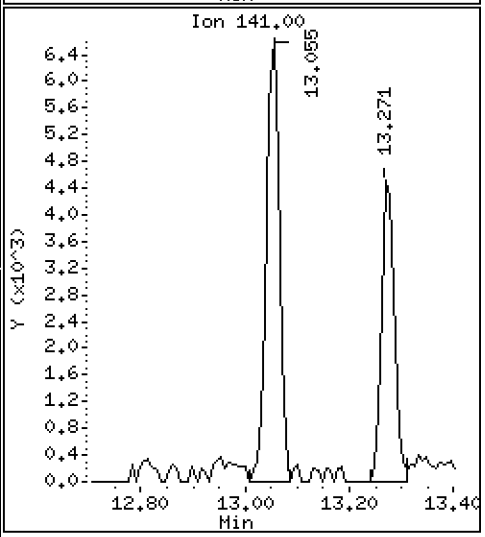
32 2-Methylnaphthalene

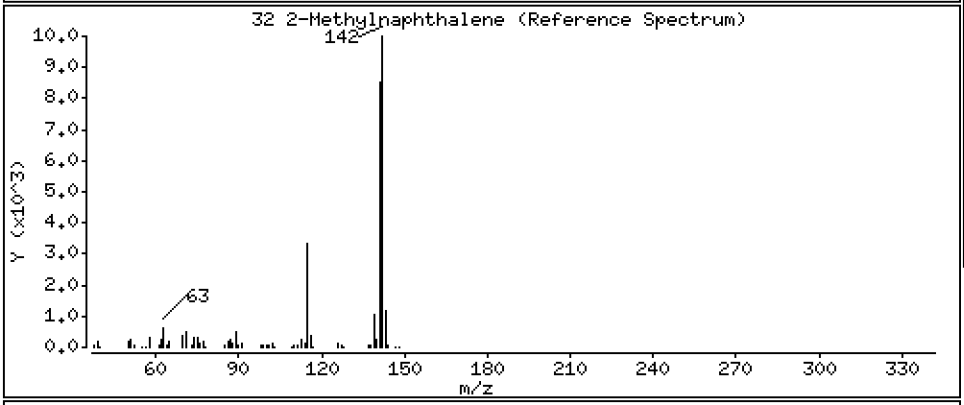
Concentration: 0.06802 ug/mL

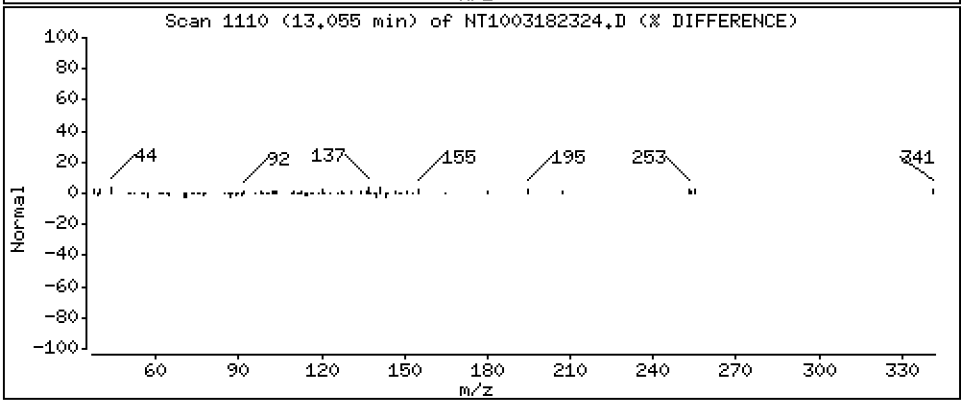












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

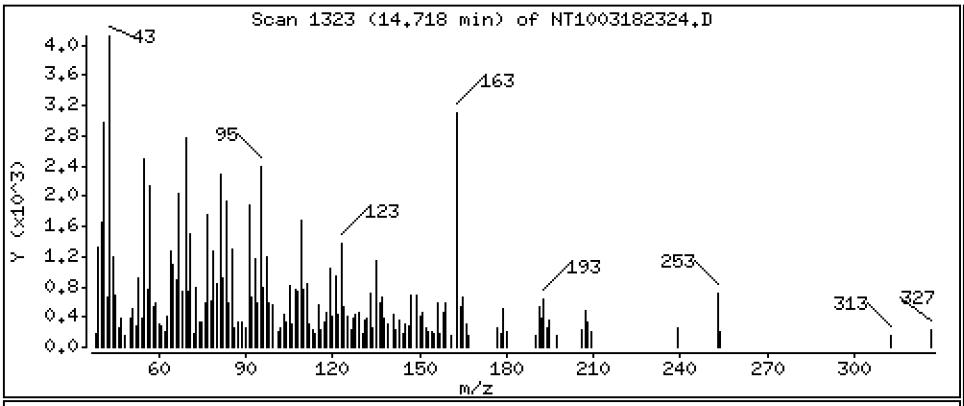
Operator: VTS

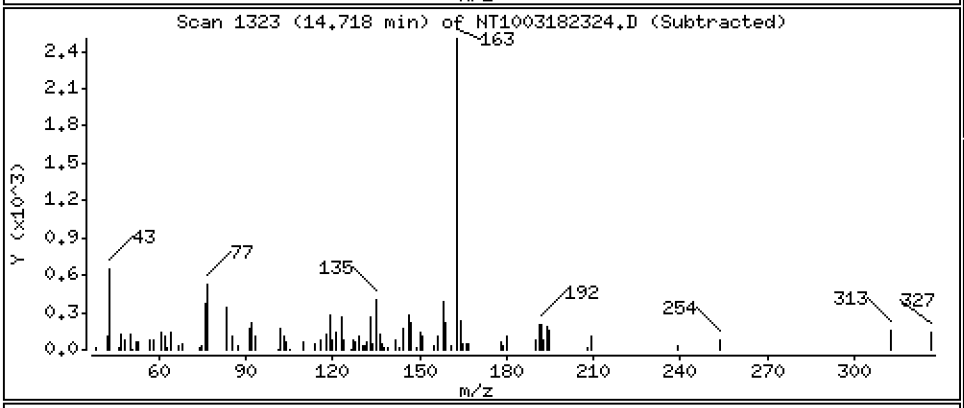
Column phase: ZB-5msi

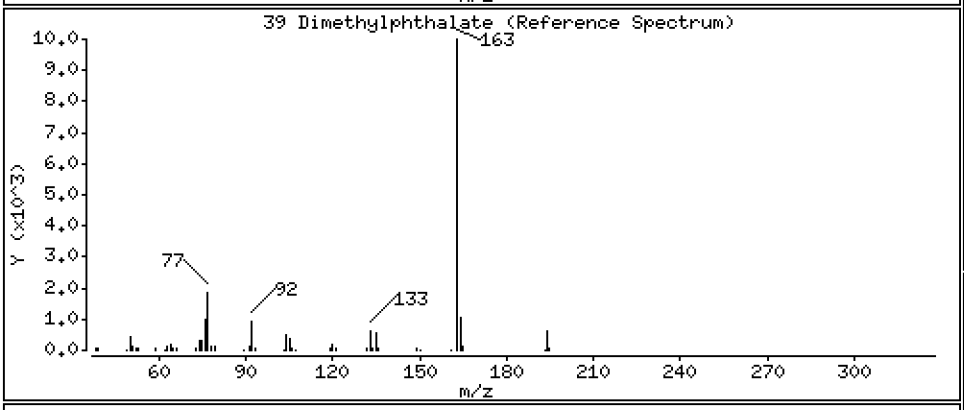
Column diameter: 0.25

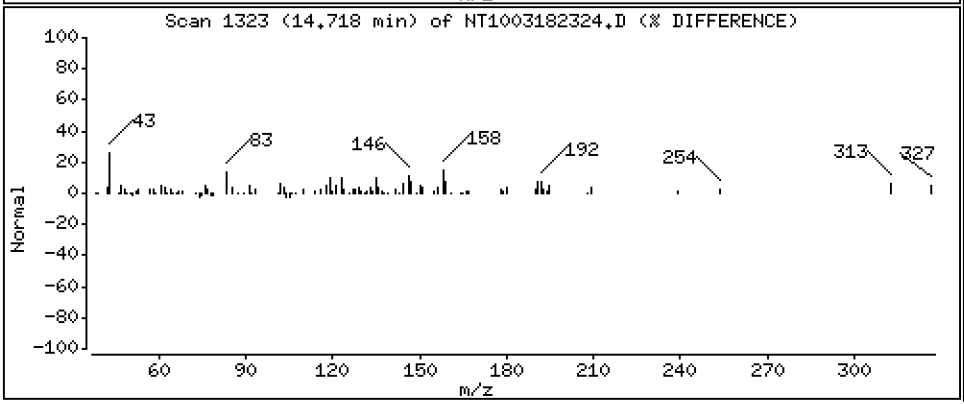
39 Dimethylphthalate

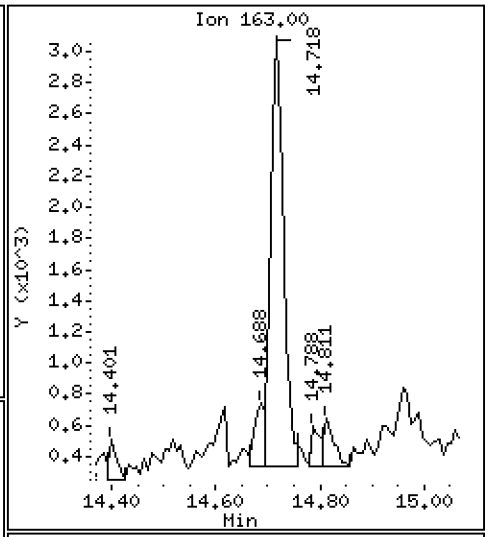
Concentration: 0.03077 ug/mL

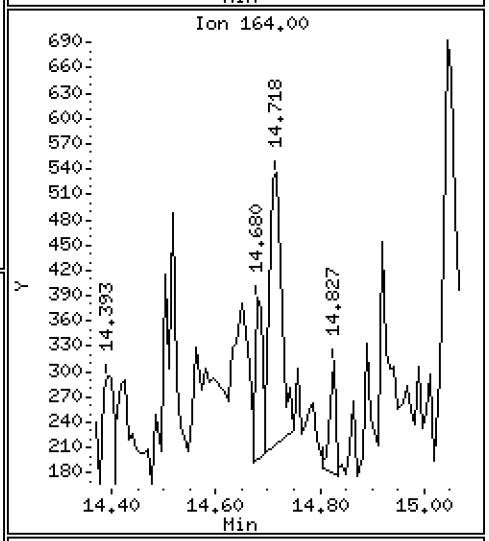


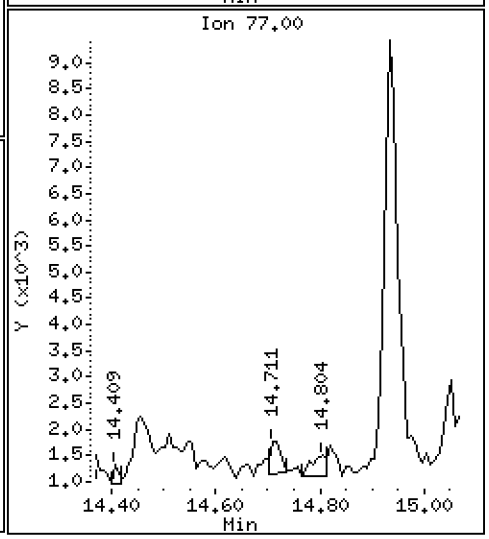












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

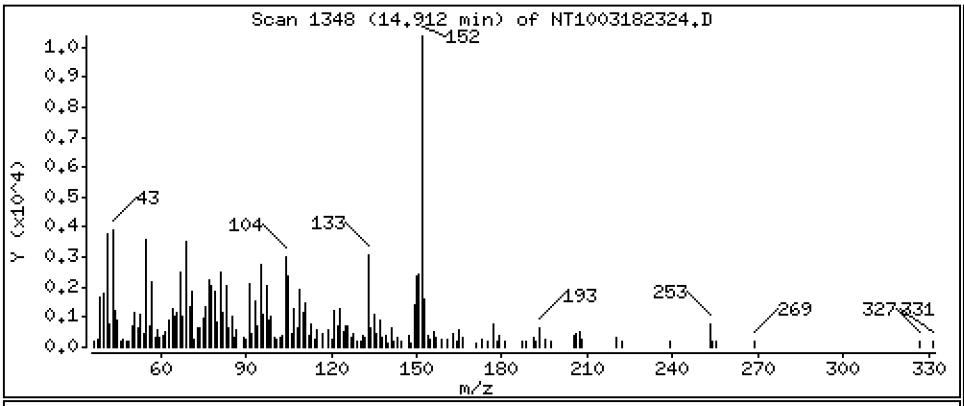
Operator: VTS

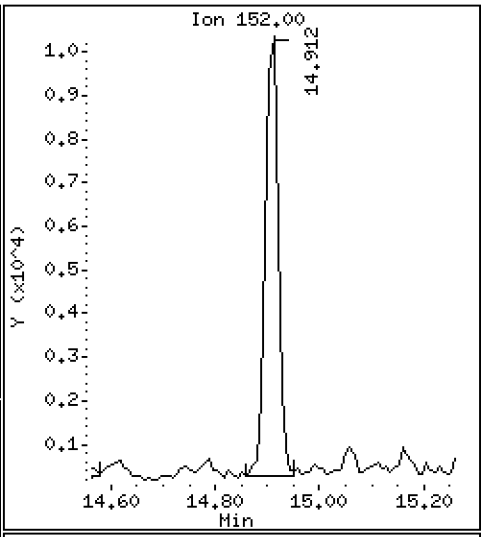
Column phase: ZB-5msi

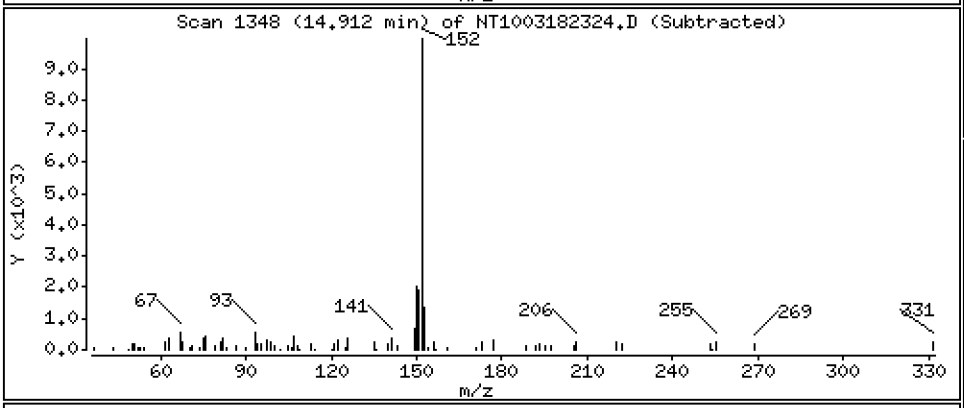
Column diameter: 0.25

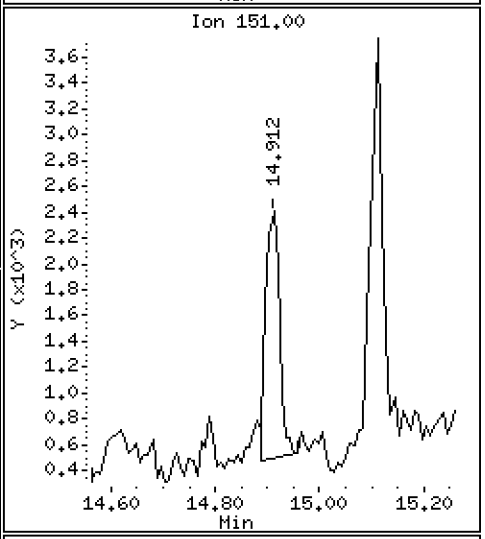
40 Acenaphthylene

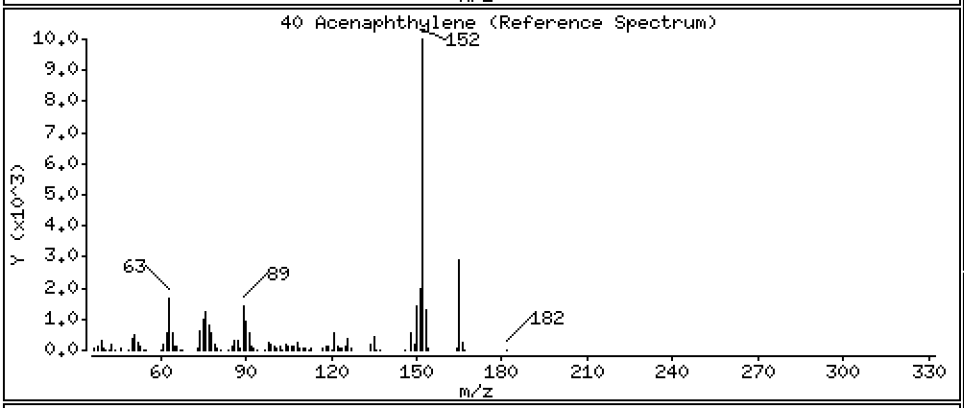
Concentration: 0.07338 ug/mL

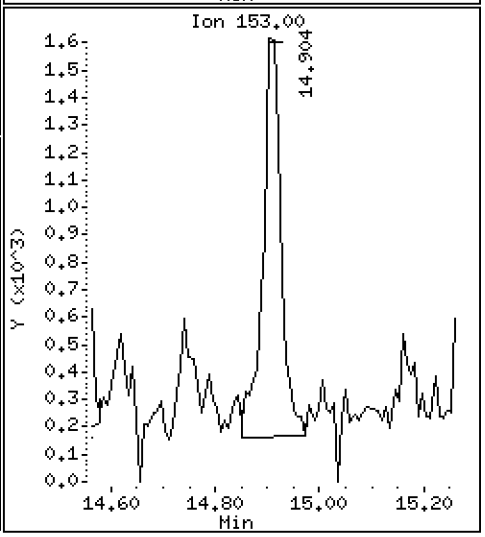


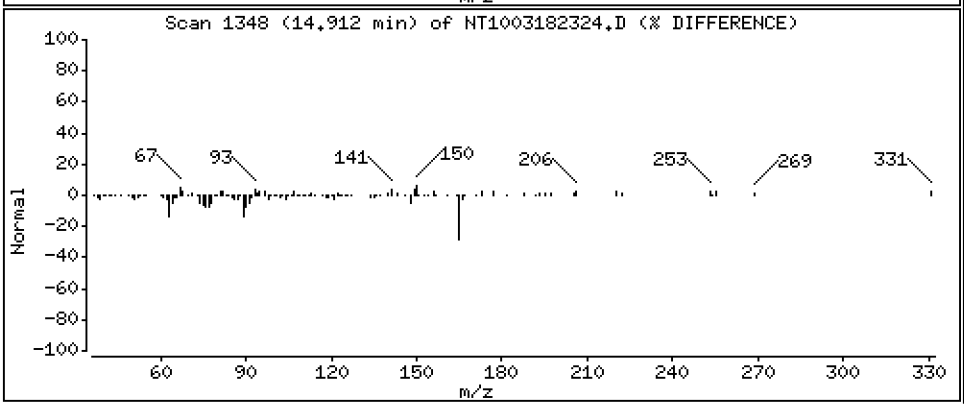












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

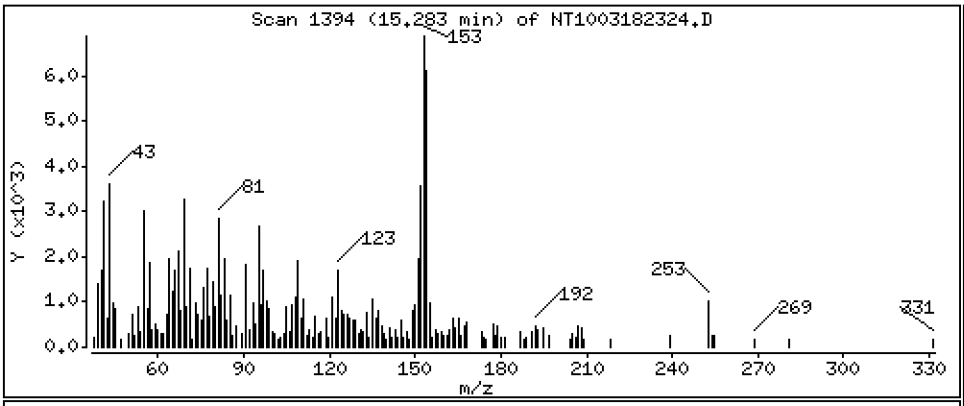
Operator: VTS

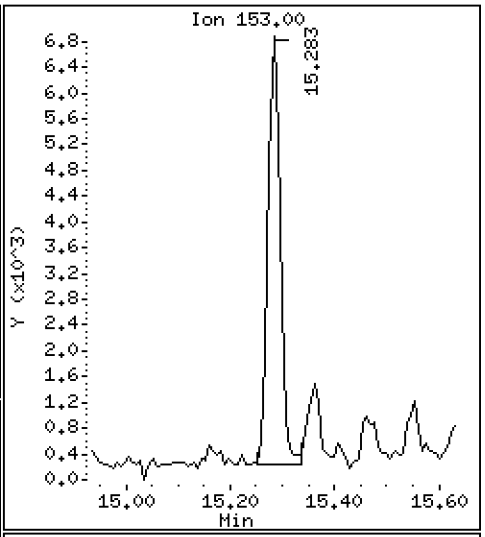
Column phase: ZB-5msi

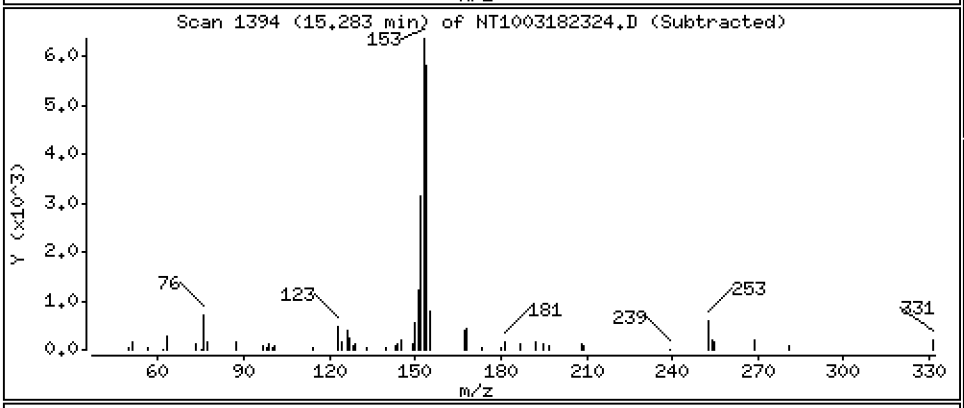
Column diameter: 0.25

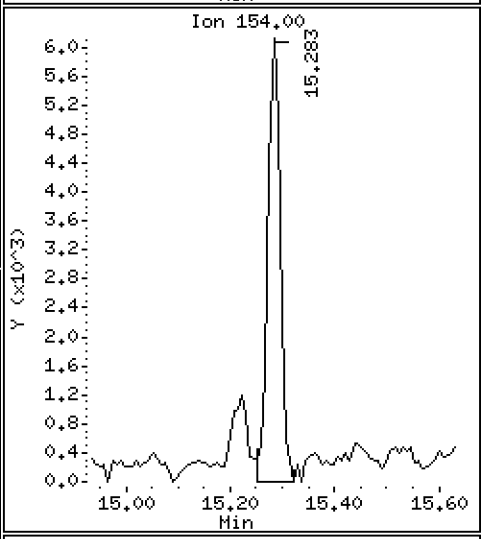
44 Acenaphthene

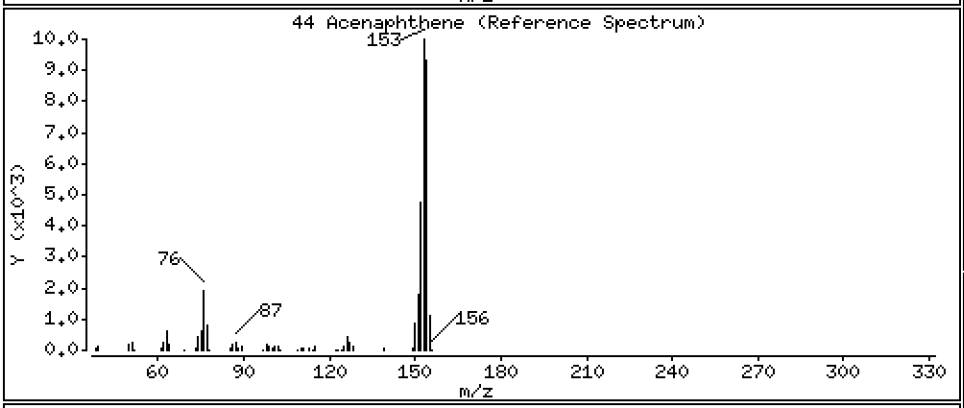
Concentration: 0.07381 ug/mL

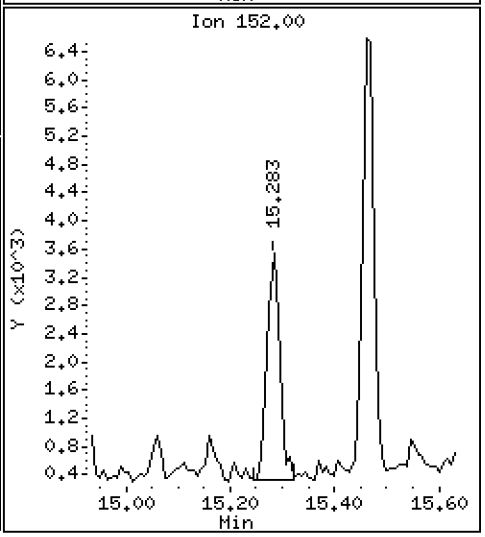


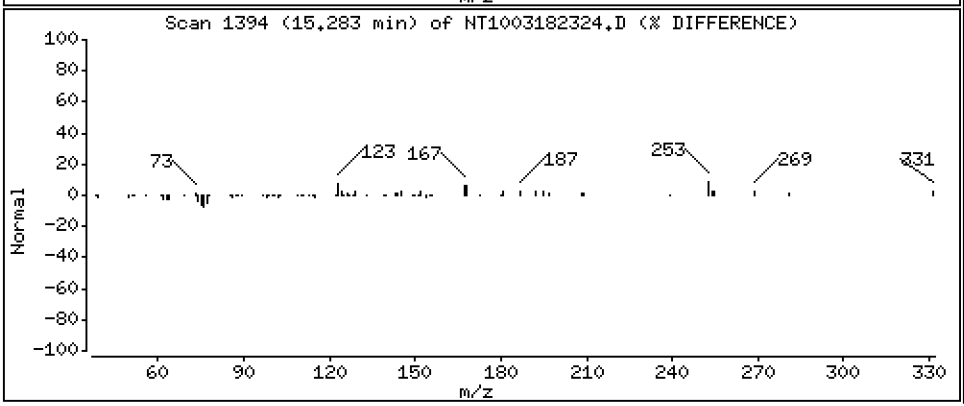












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

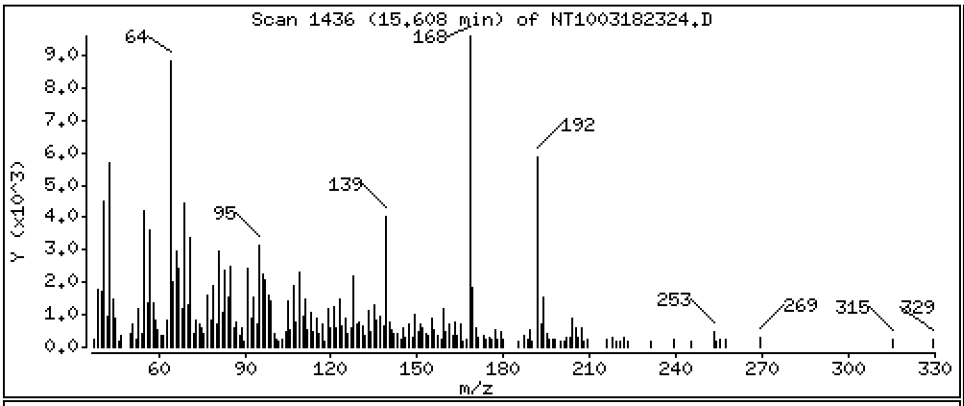
Operator: VTS

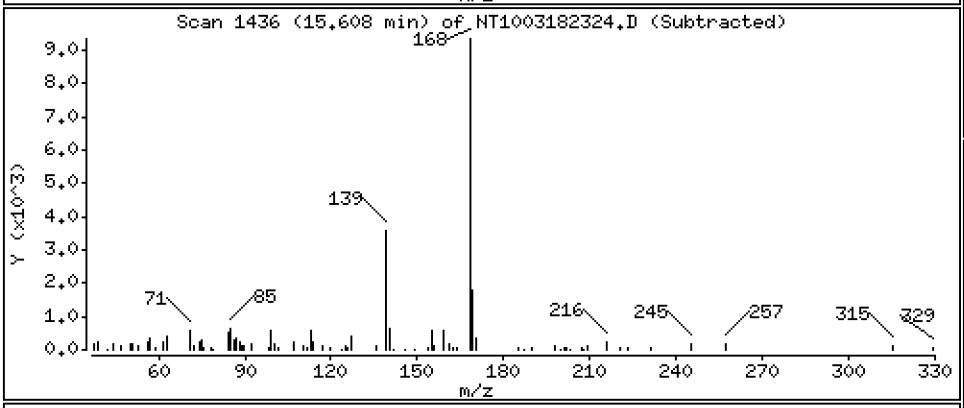
Column phase: ZB-5msi

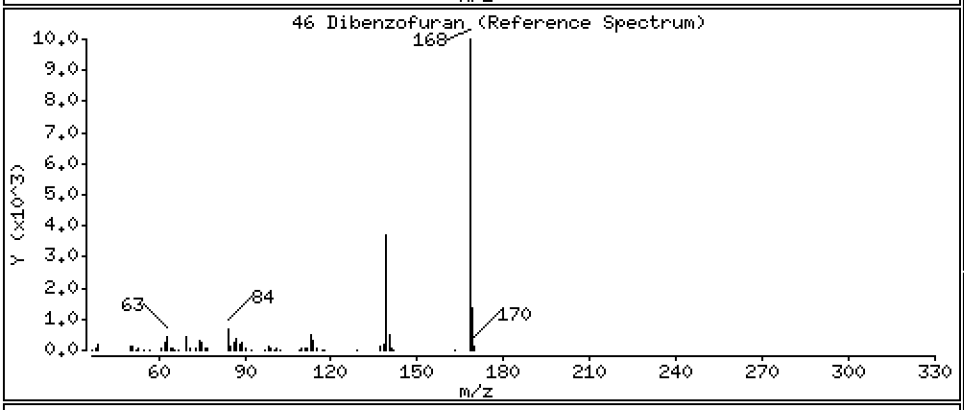
Column diameter: 0.25

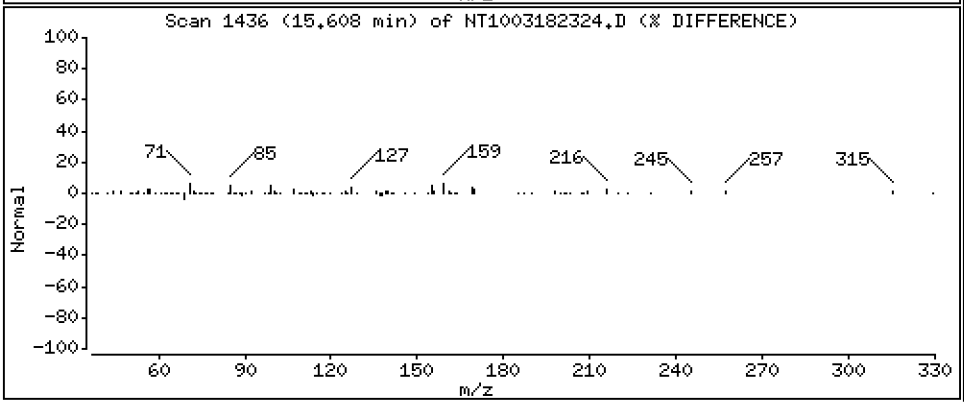
46 Dibenzofuran

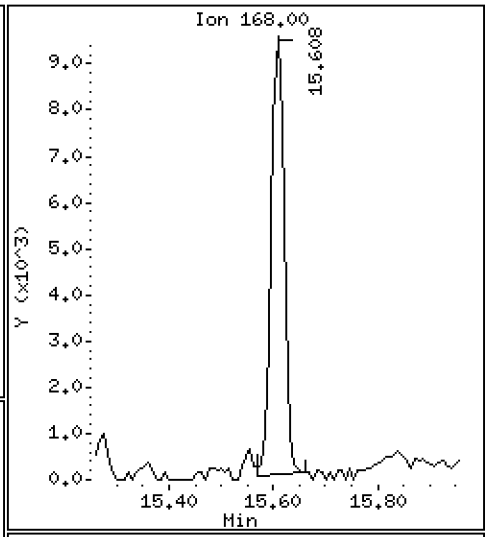
Concentration: 0.07576 ug/mL

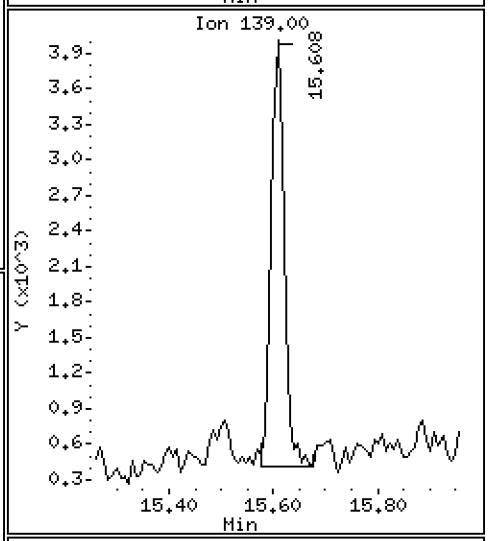


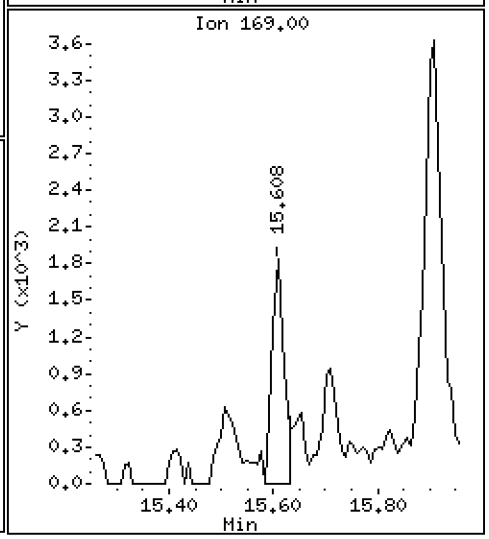












Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

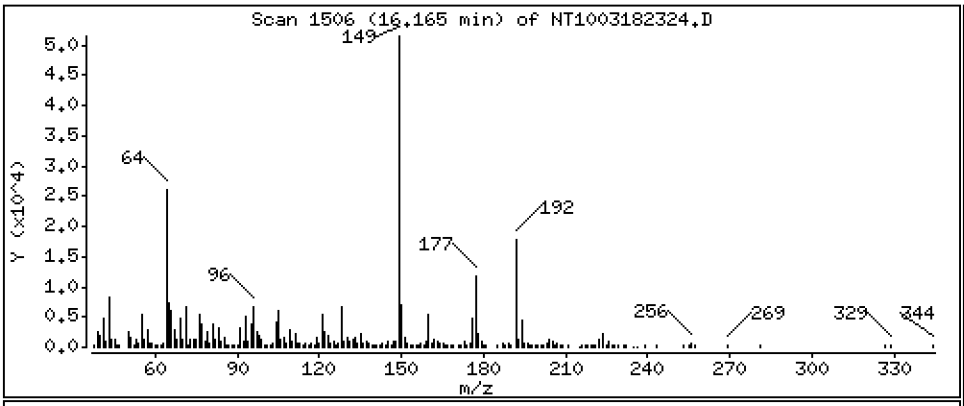
Operator: VTS

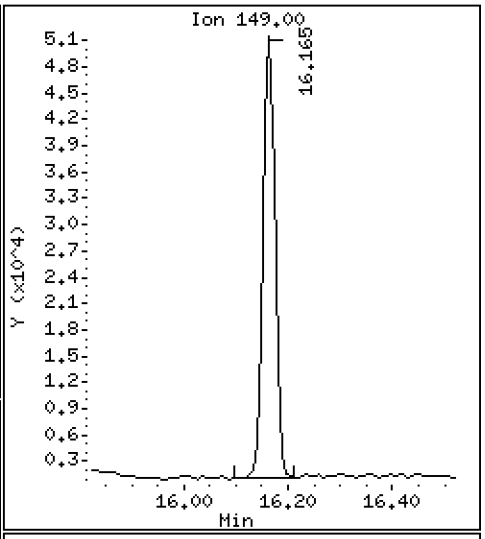
Column phase: ZB-5msi

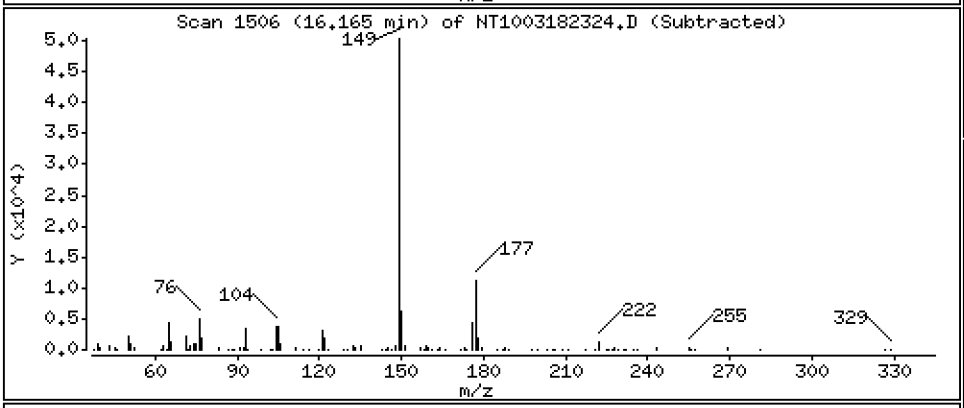
Column diameter: 0.25

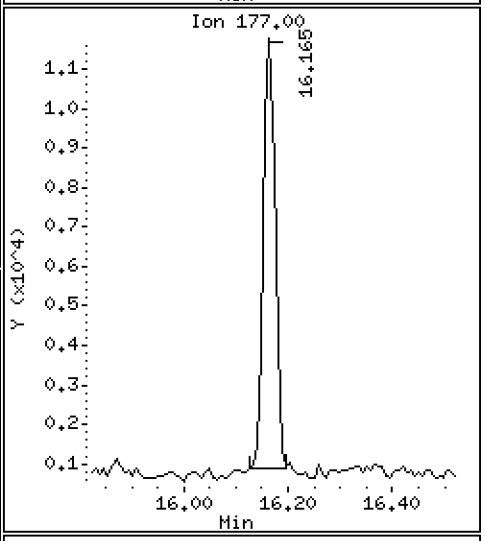
50 Diethylphthalate

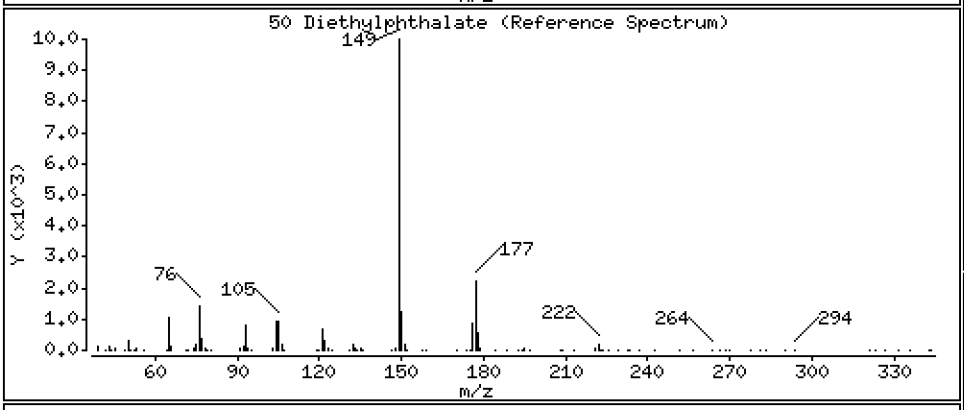
Concentration: 0.6061 ug/mL

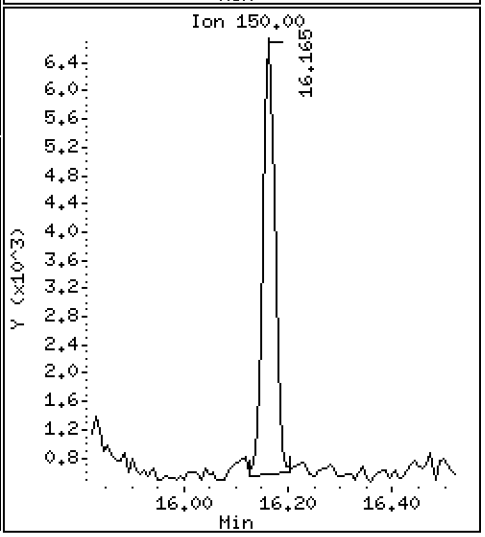


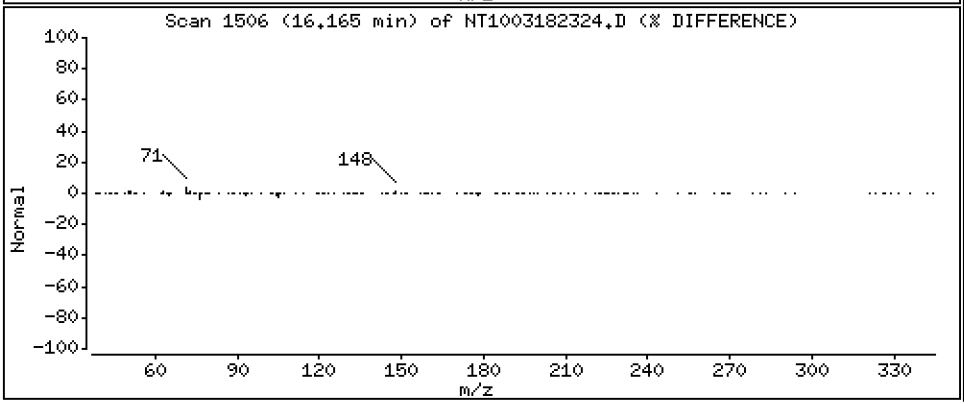












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

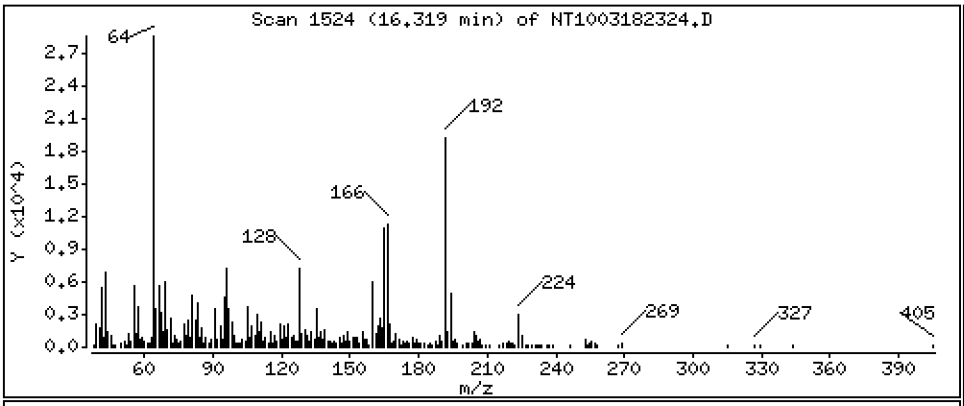
Operator: VTS

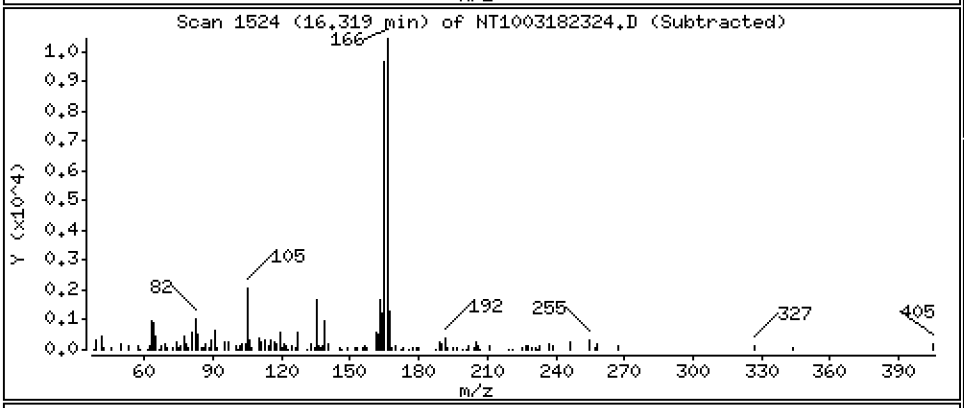
Column phase: ZB-5msi

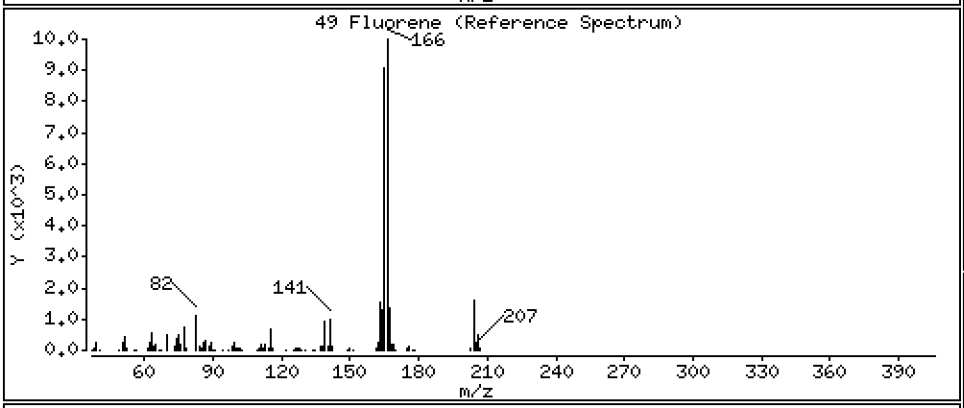
Column diameter: 0.25

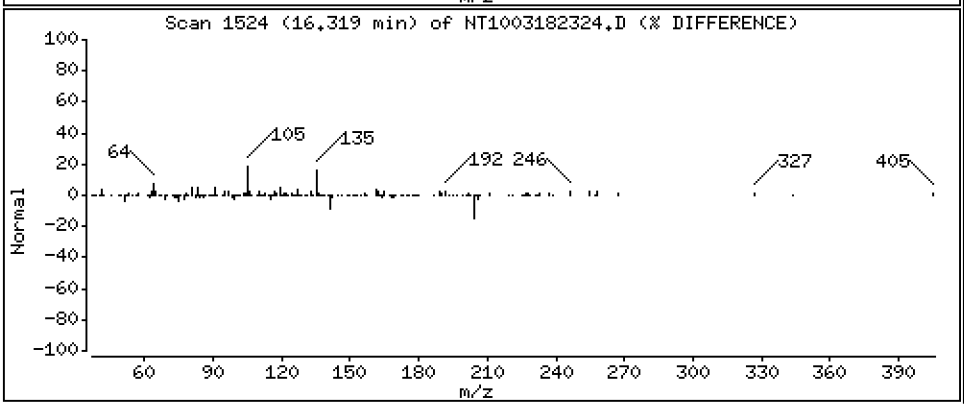
49 Fluorene

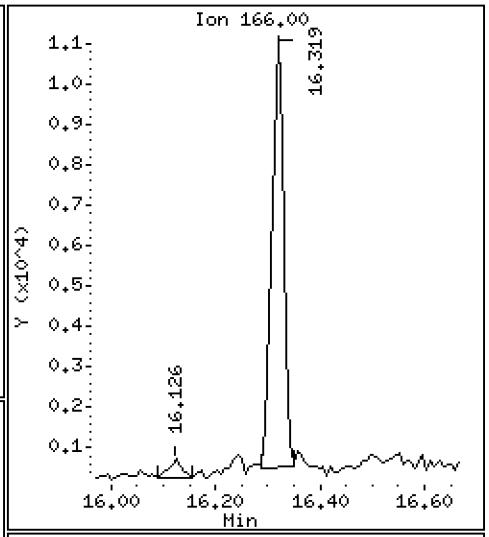
Concentration: 0.08961 ug/mL

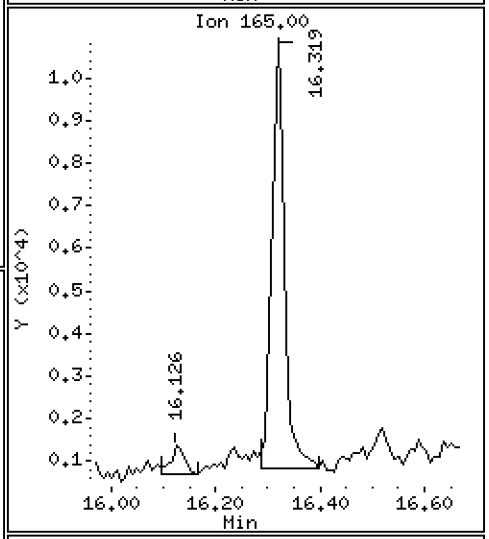


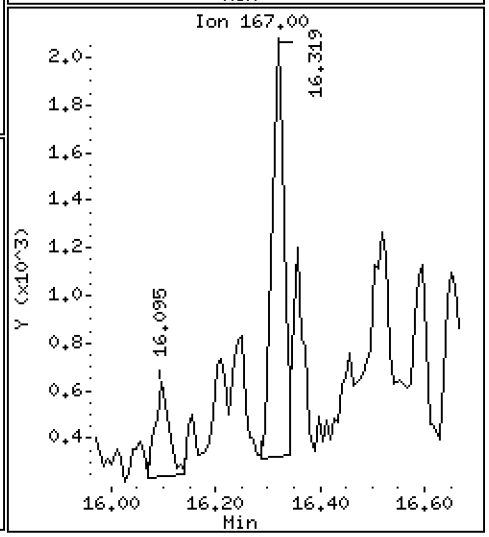












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

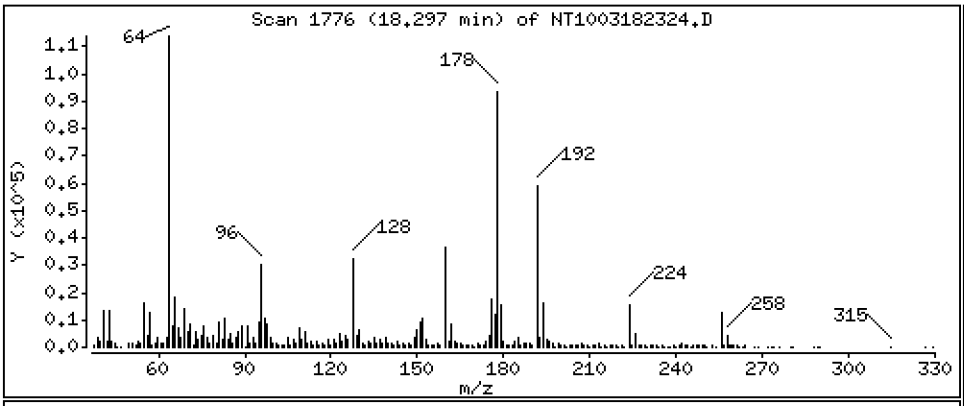
Operator: VTS

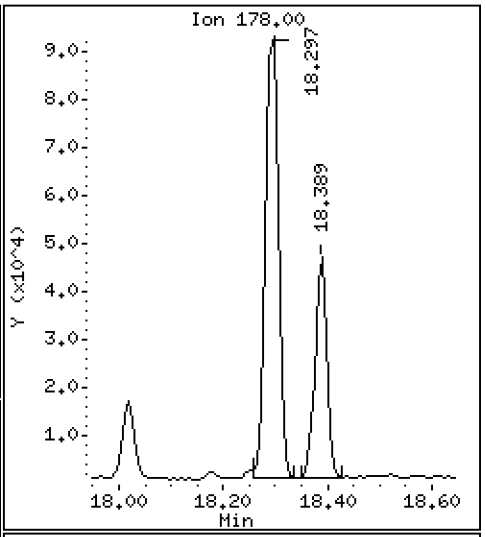
Column phase: ZB-5msi

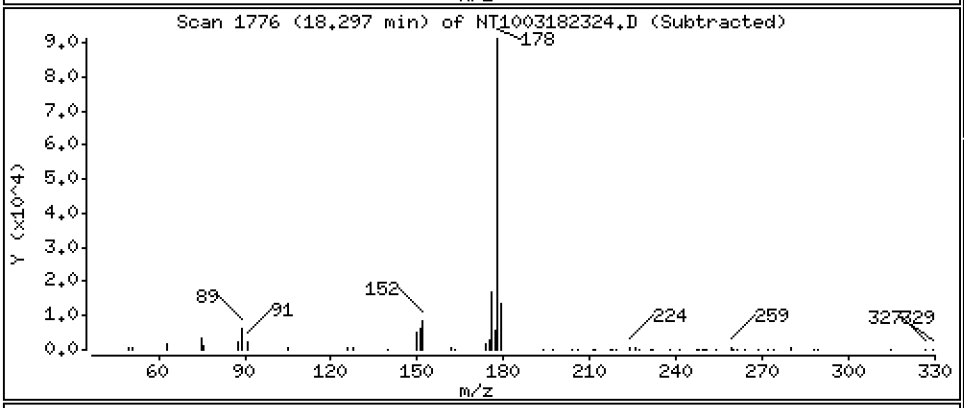
Column diameter: 0.25

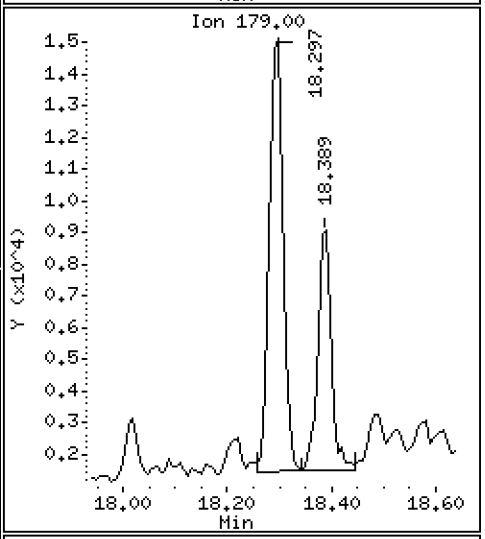
60 Phenanthrene

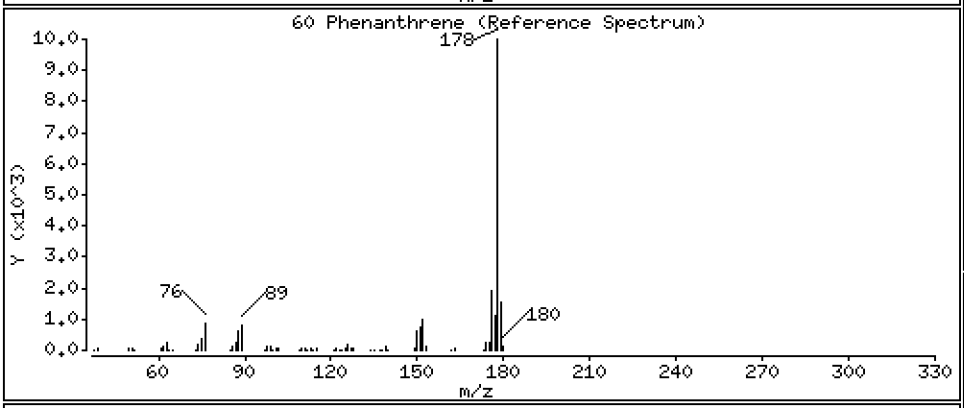
Concentration: 0.6568 ug/mL

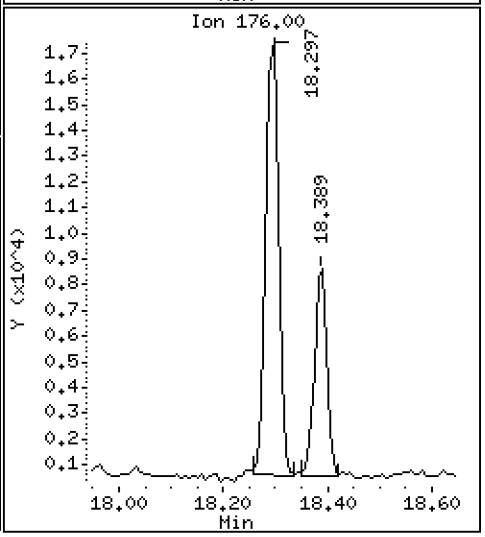


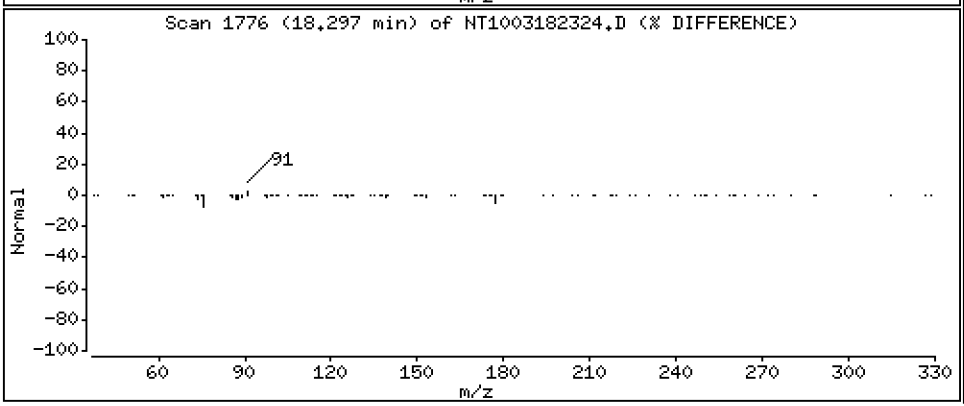












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

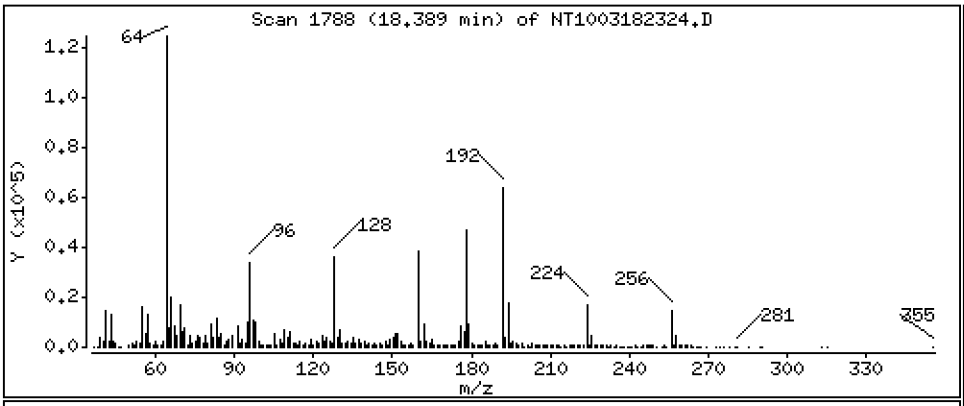
Operator: VTS

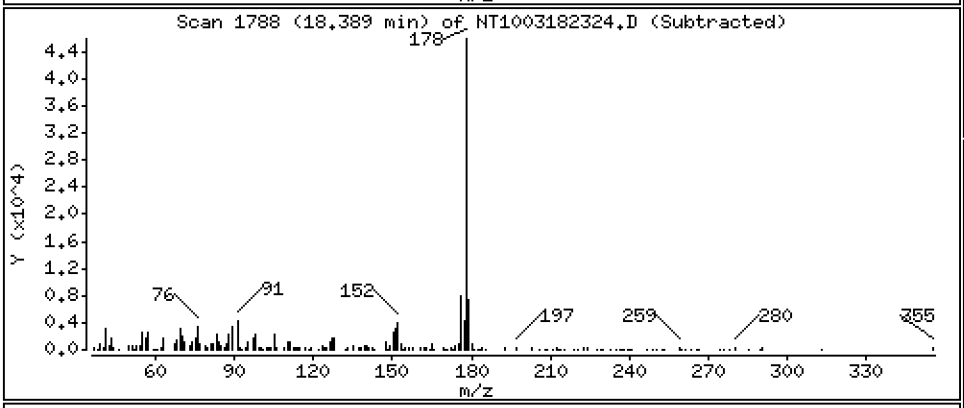
Column phase: ZB-5msi

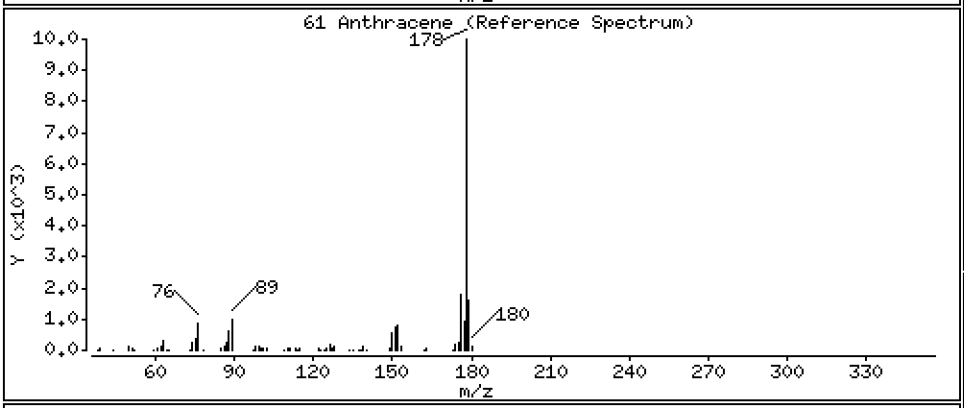
Column diameter: 0.25

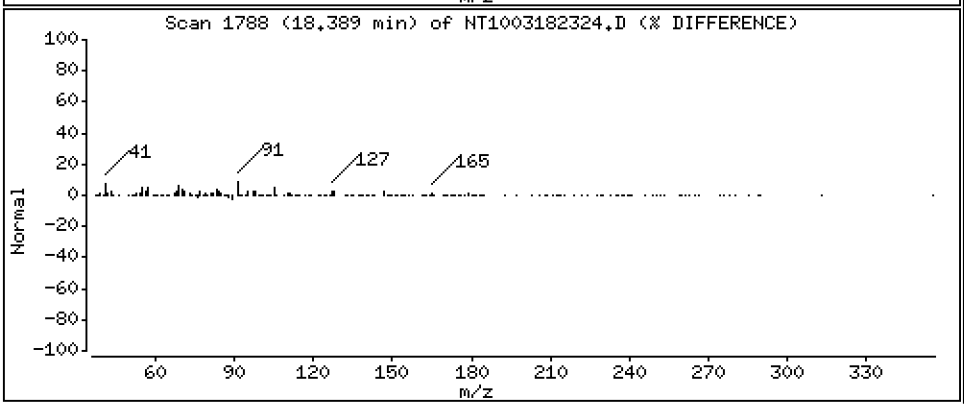
61 Anthracene

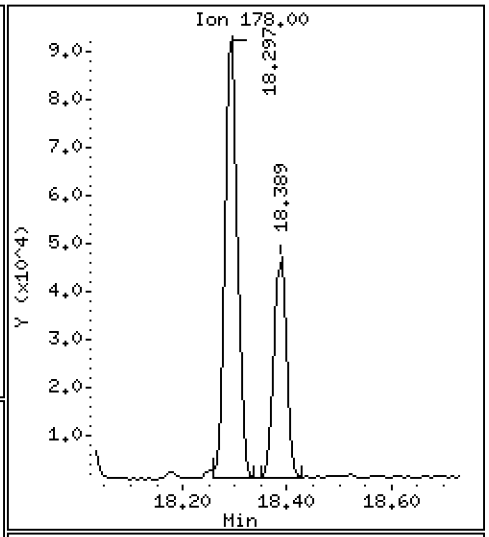
Concentration: 0.3282 ug/mL

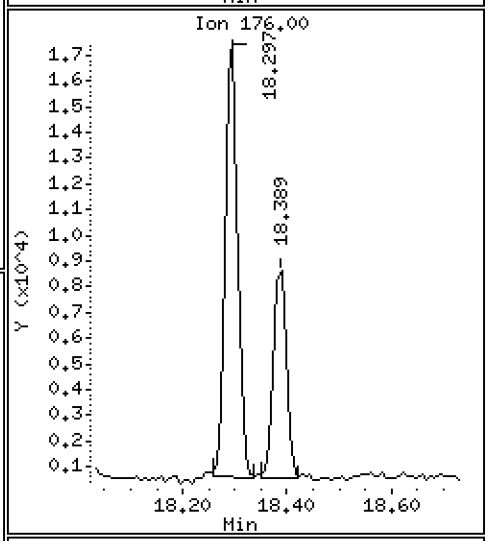


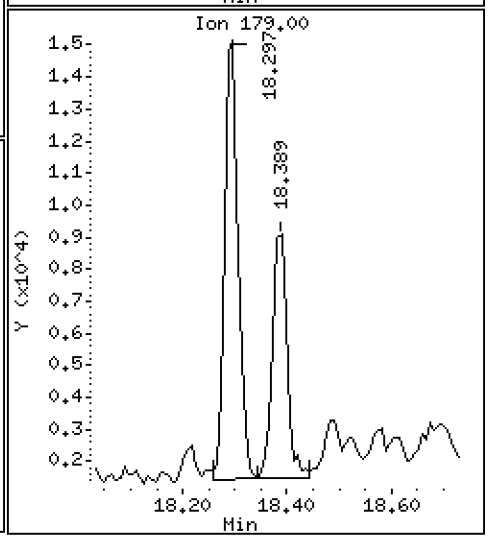












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

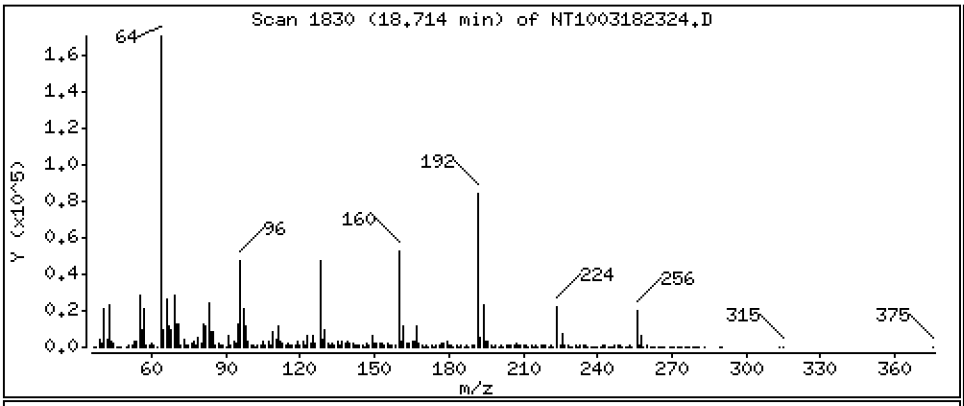
Operator: VTS

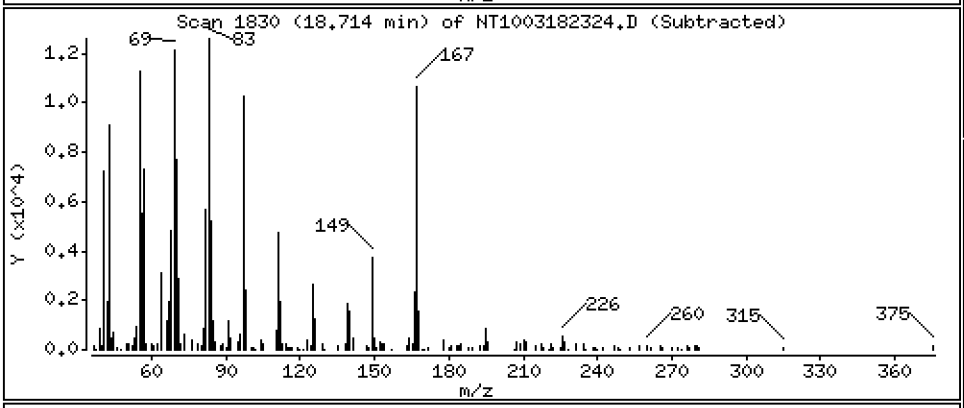
Column phase: ZB-5msi

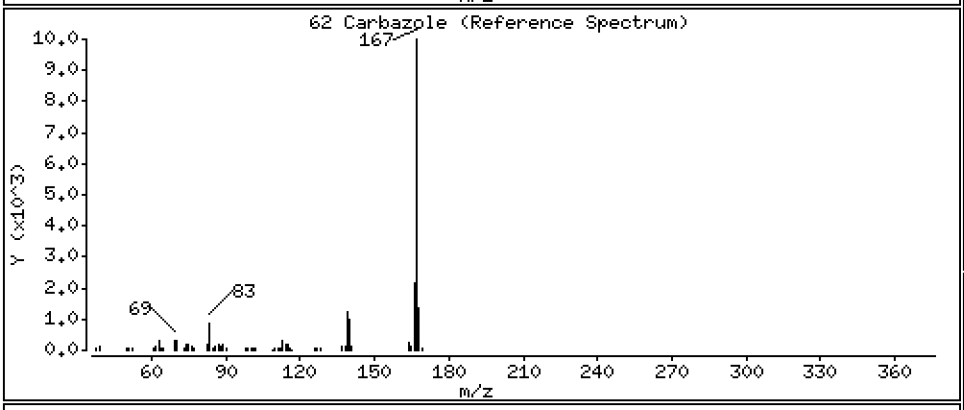
Column diameter: 0.25

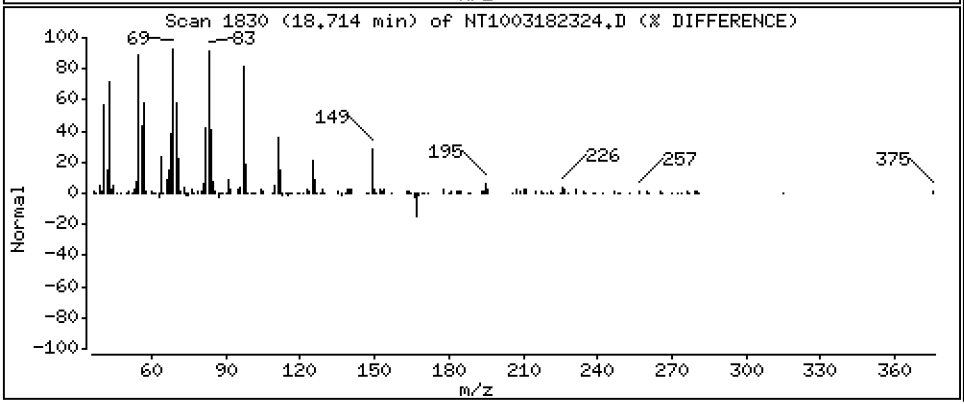
62 Carbazole

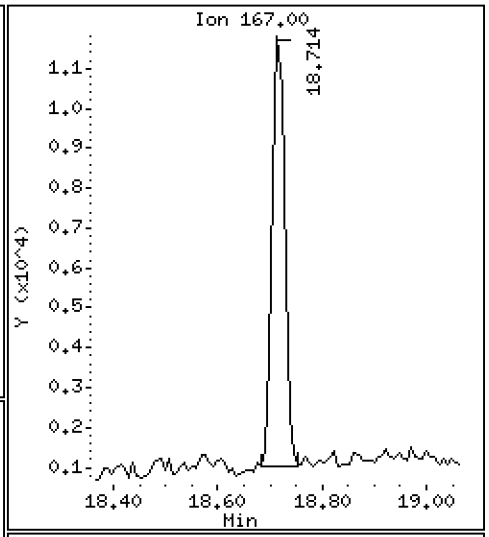
Concentration: 0.08615 ug/mL

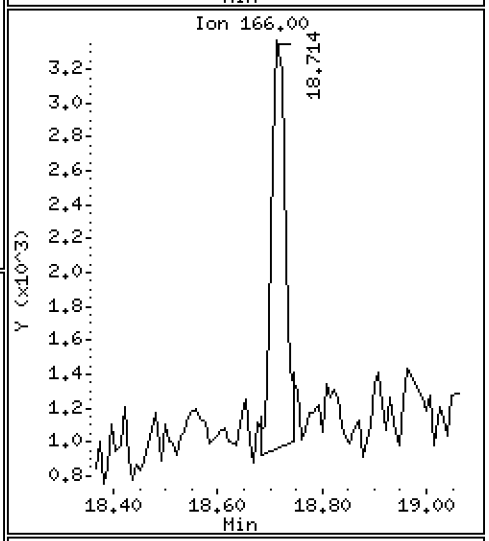


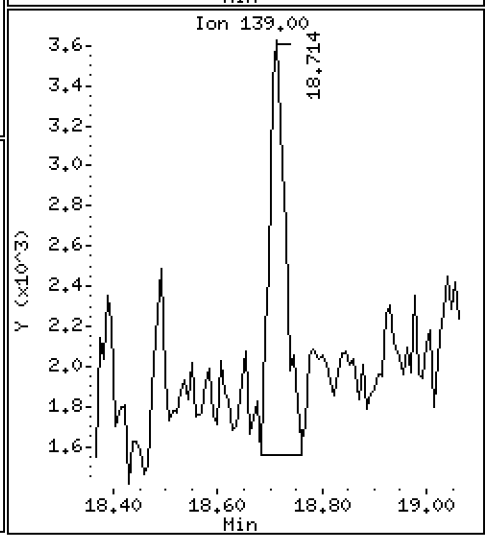












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

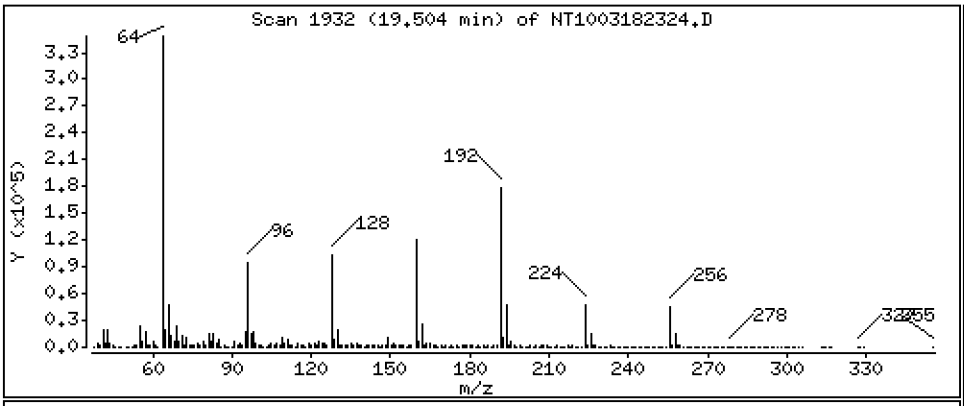
Operator: VTS

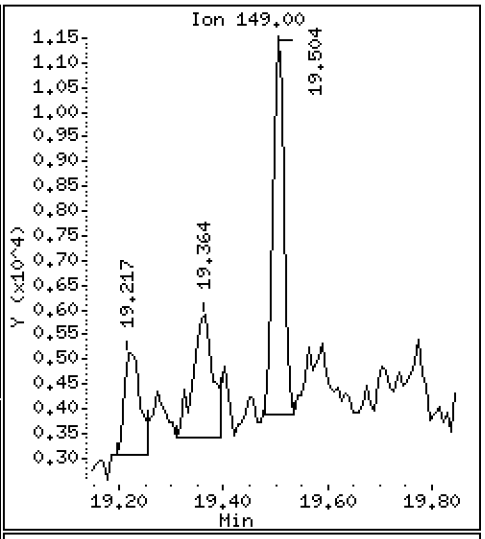
Column phase: ZB-5msi

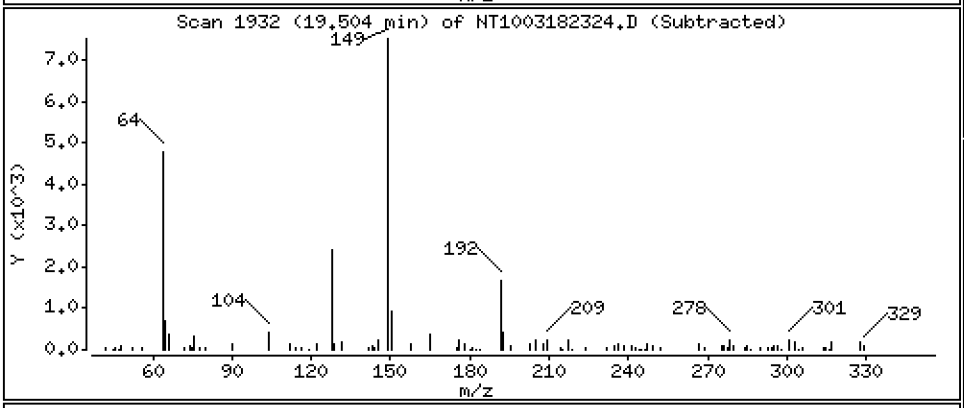
Column diameter: 0.25

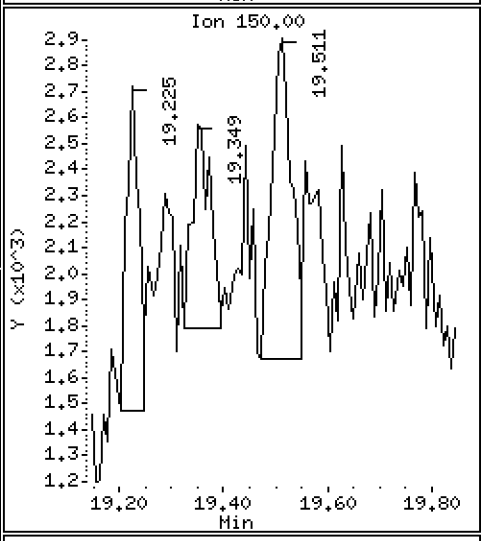
63 Di-n-butylphthalate

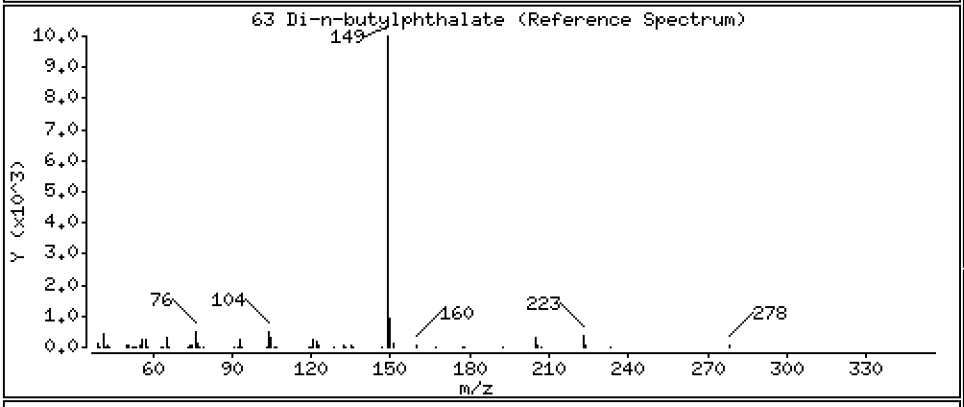
Concentration: 0.04122 ug/mL

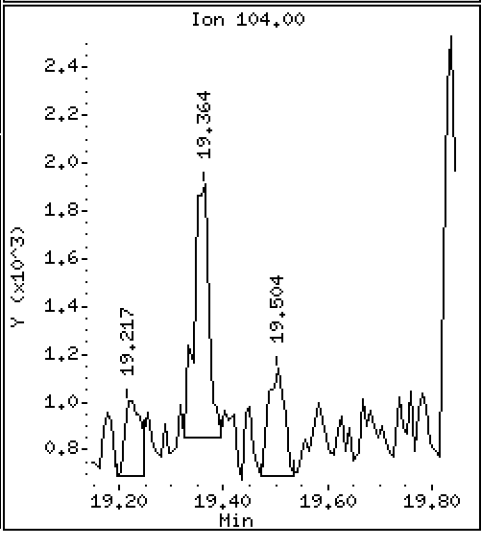


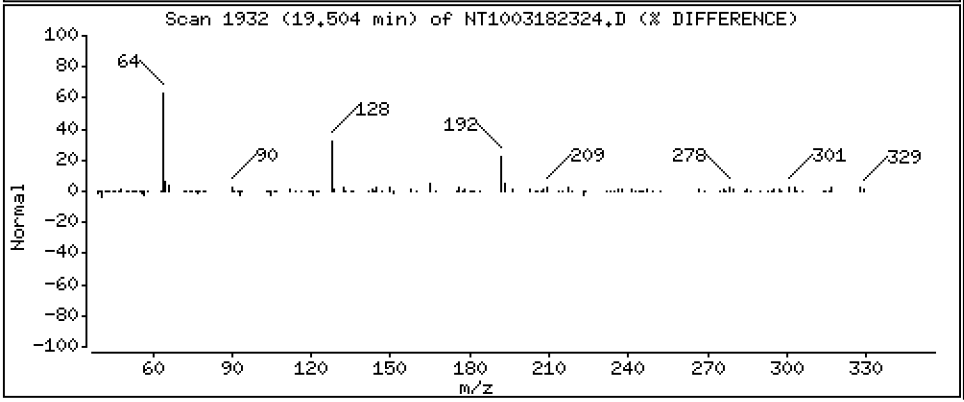












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

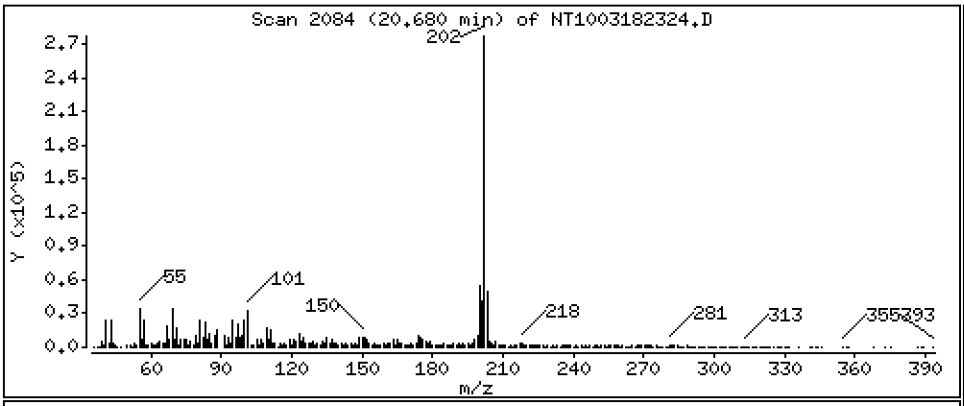
Operator: VTS

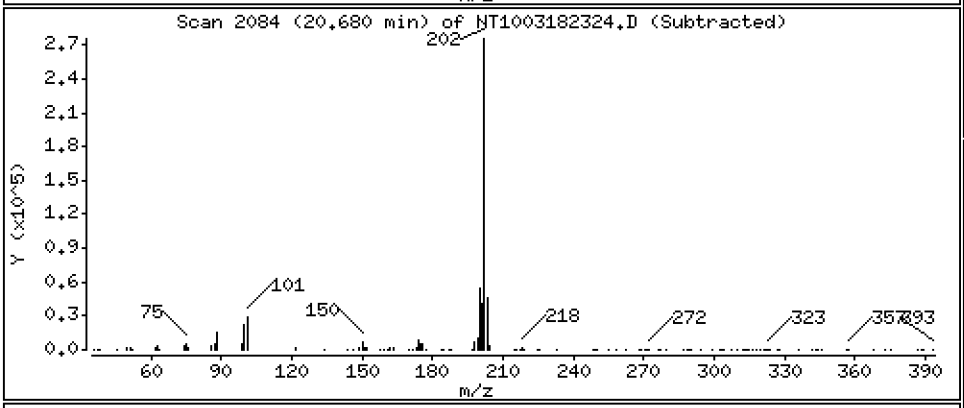
Column phase: ZB-5msi

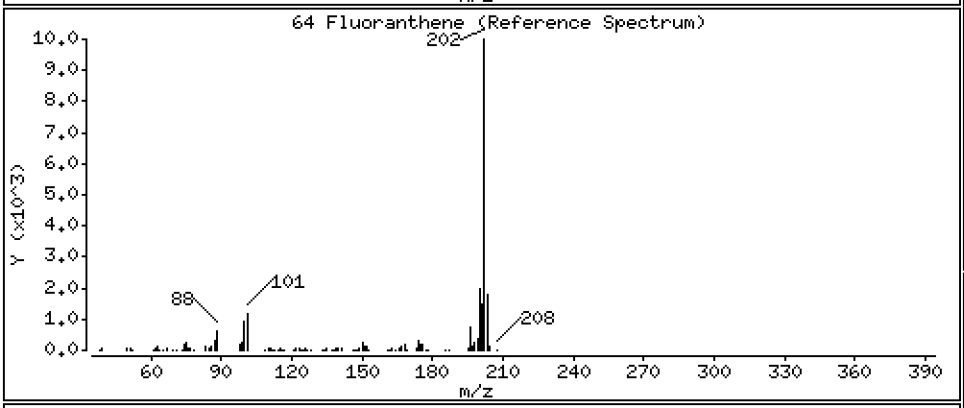
Column diameter: 0.25

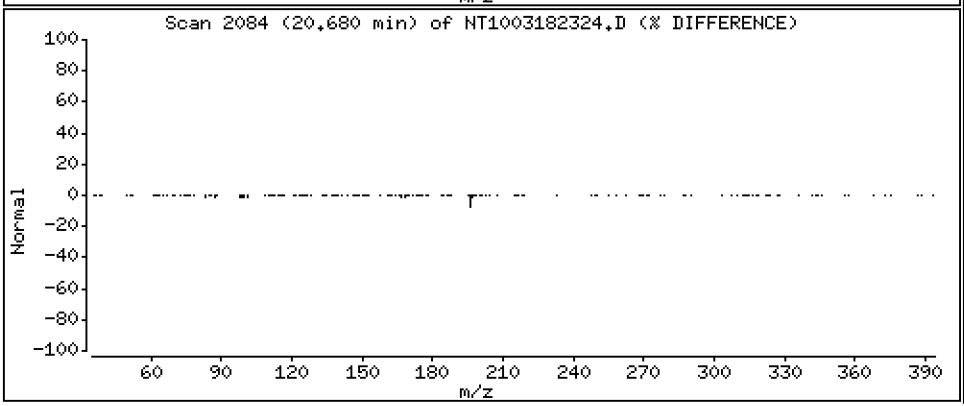
64 Fluoranthene

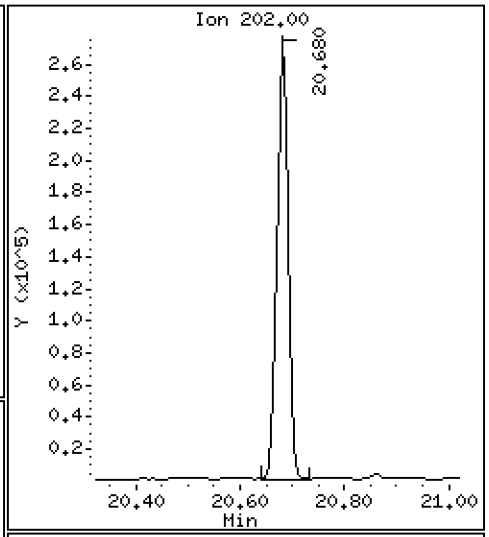
Concentration: 1.361 ug/mL

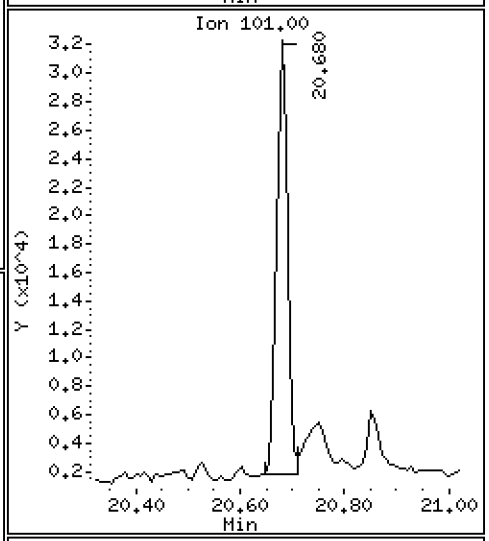


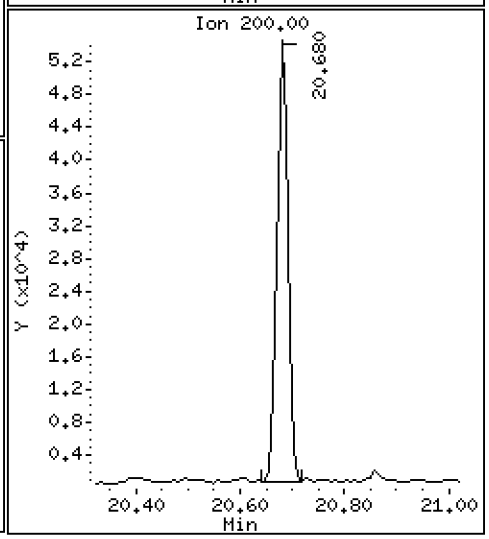












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

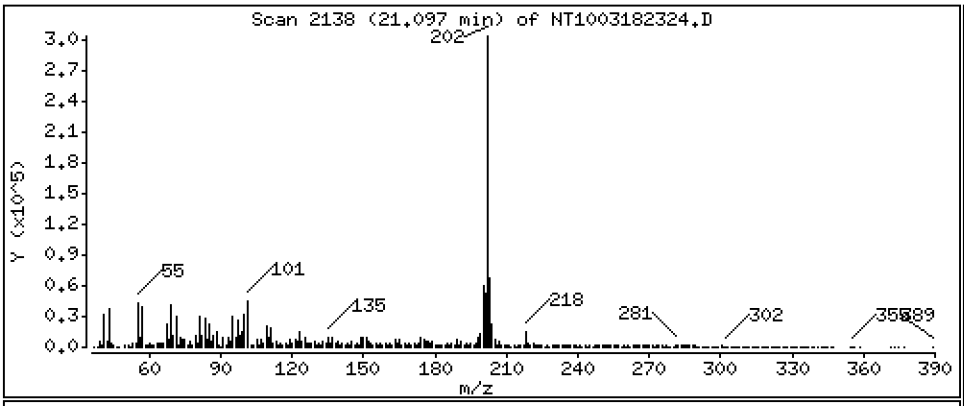
Operator: VTS

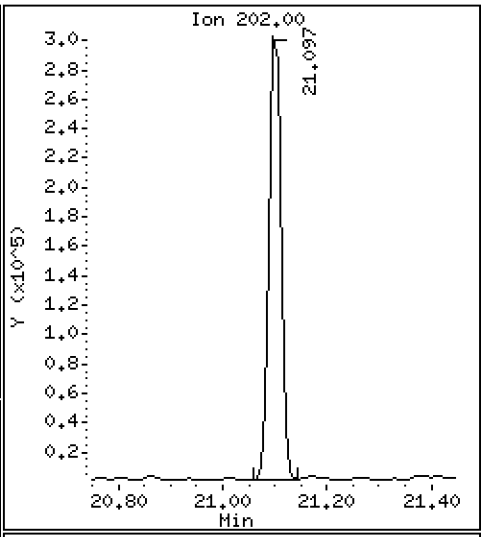
Column phase: ZB-5msi

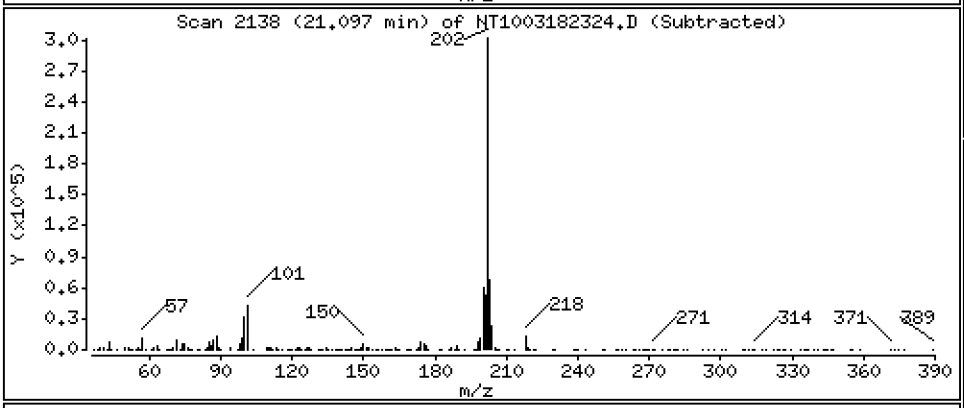
Column diameter: 0.25

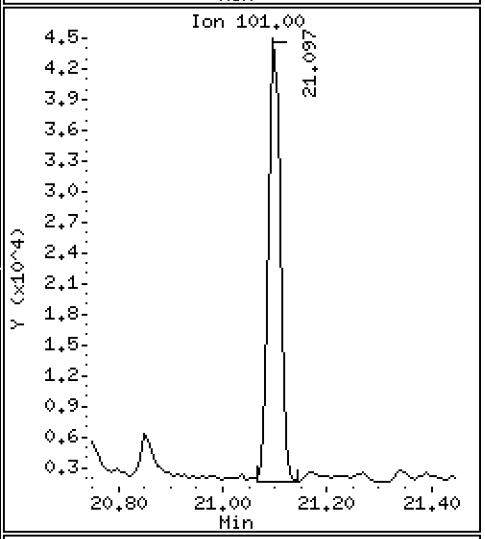
65 Pyrene

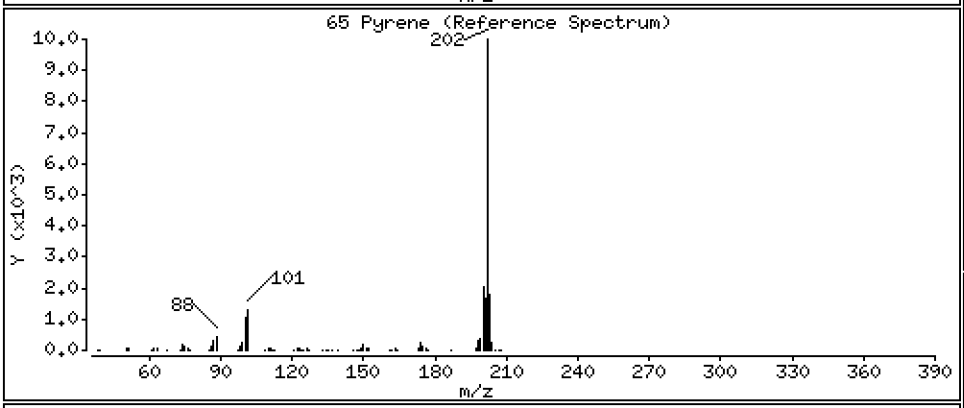
Concentration: 1.499 ug/mL

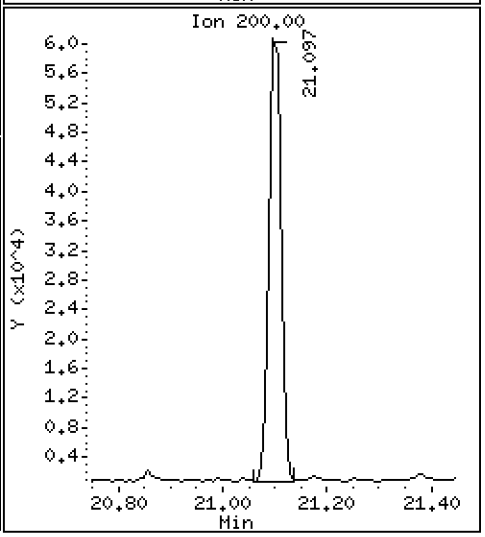


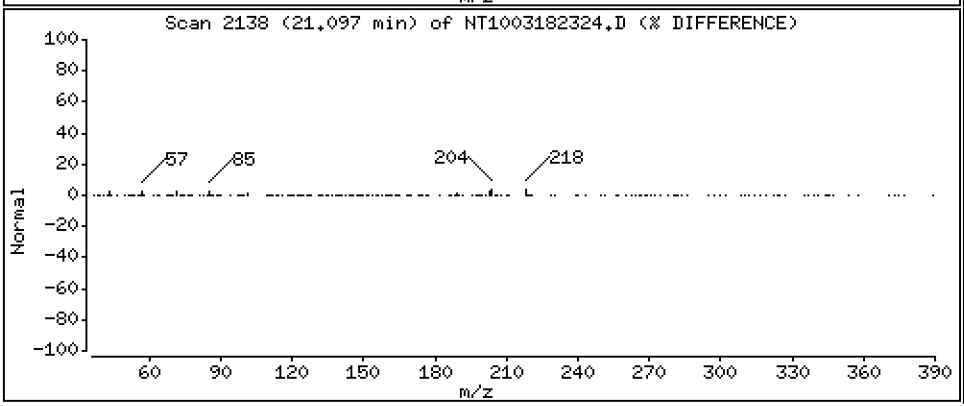












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

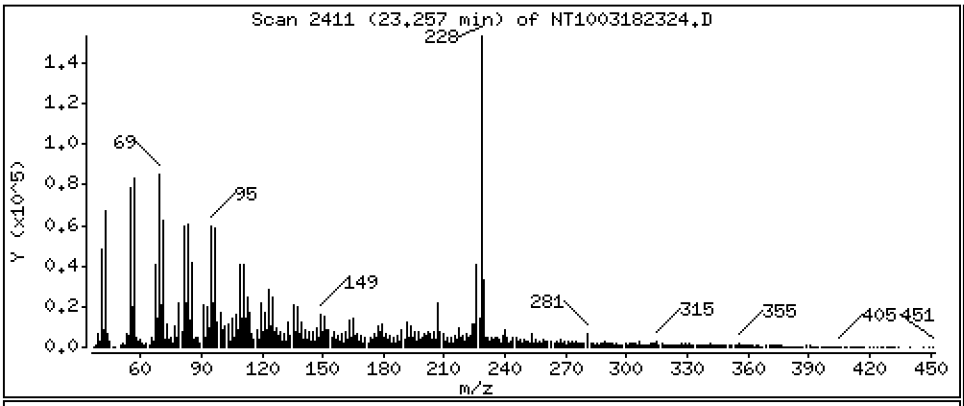
Operator: VTS

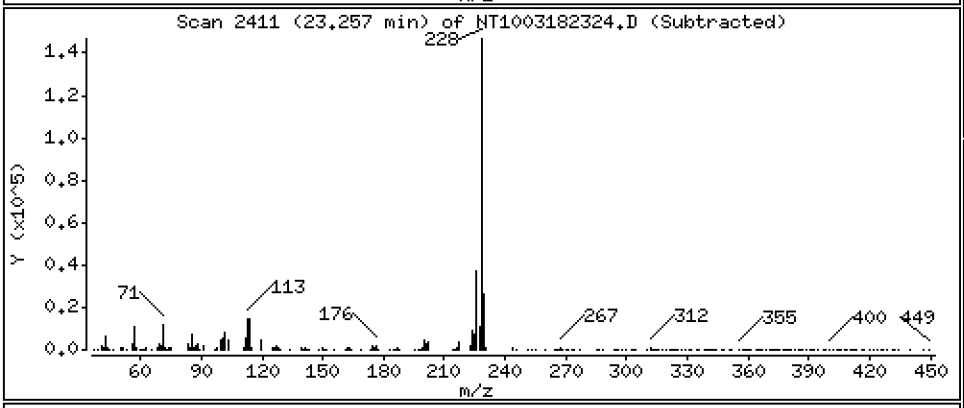
Column phase: ZB-5msi

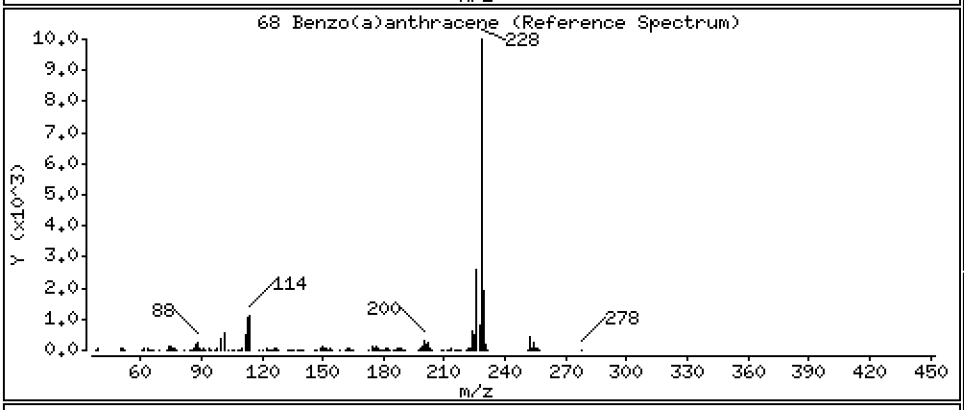
Column diameter: 0.25

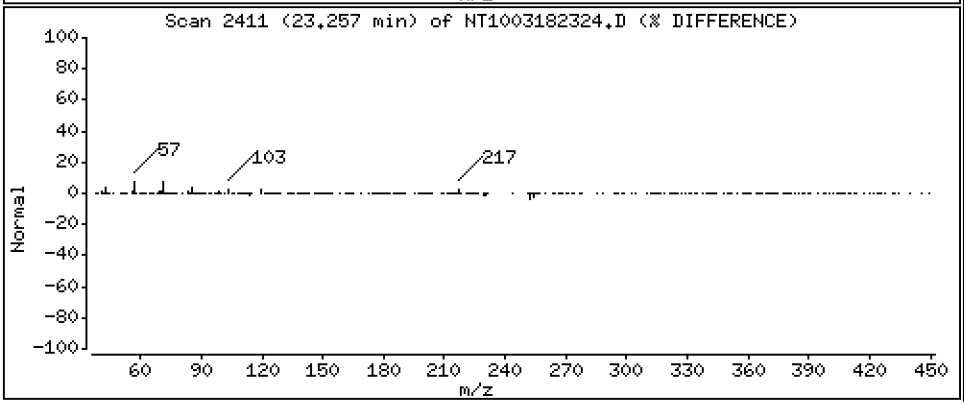
68 Benzo(a)anthracene

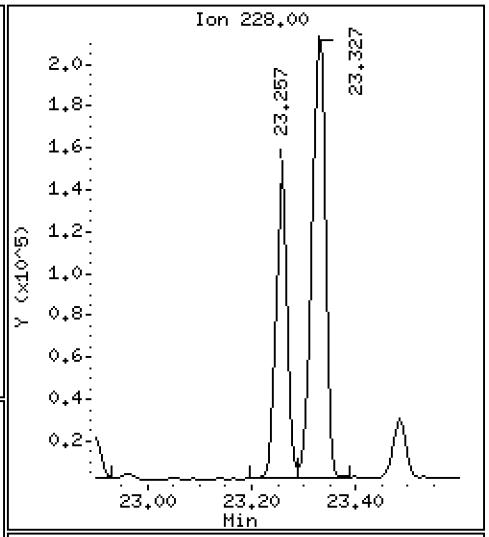
Concentration: 0.8338 ug/mL

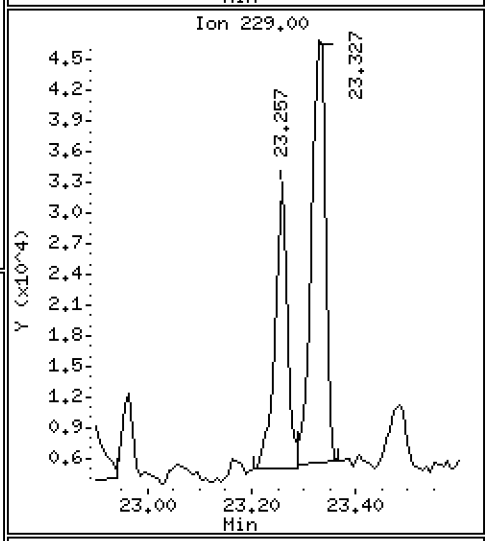


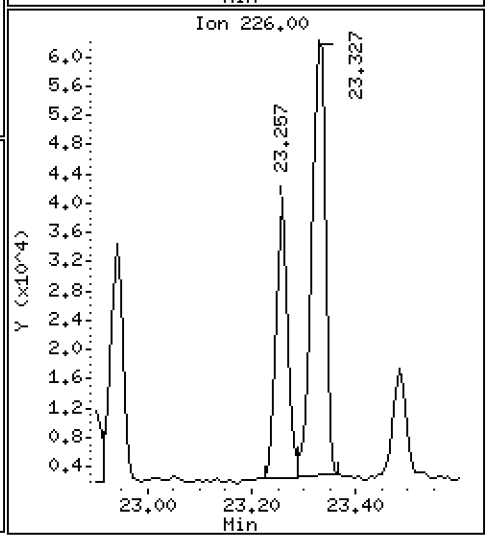












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

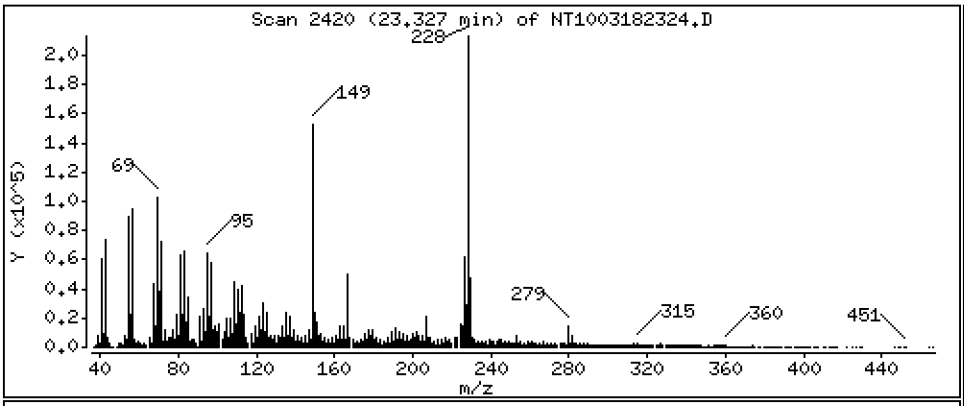
Operator: VTS

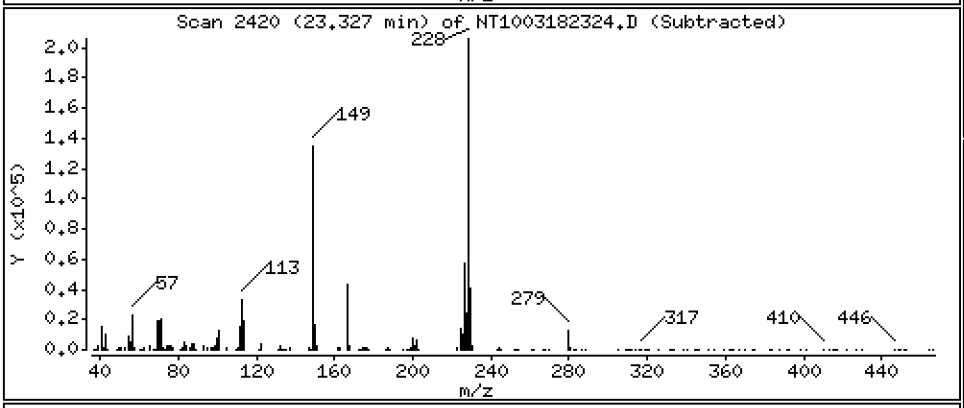
Column phase: ZB-5msi

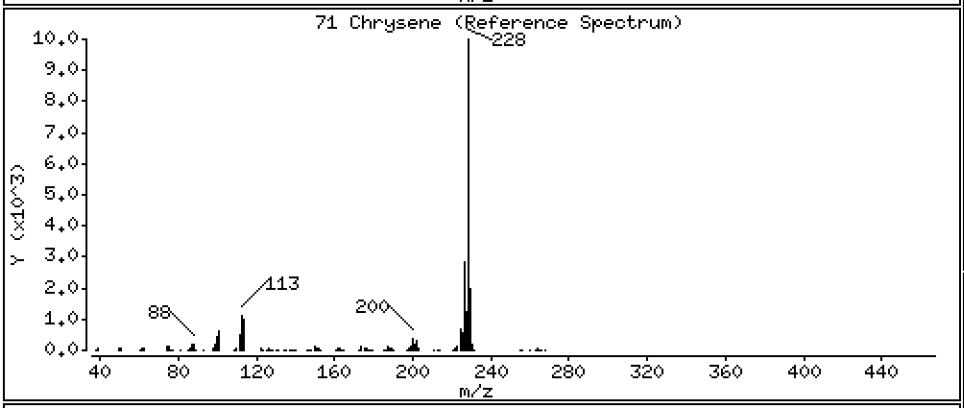
Column diameter: 0.25

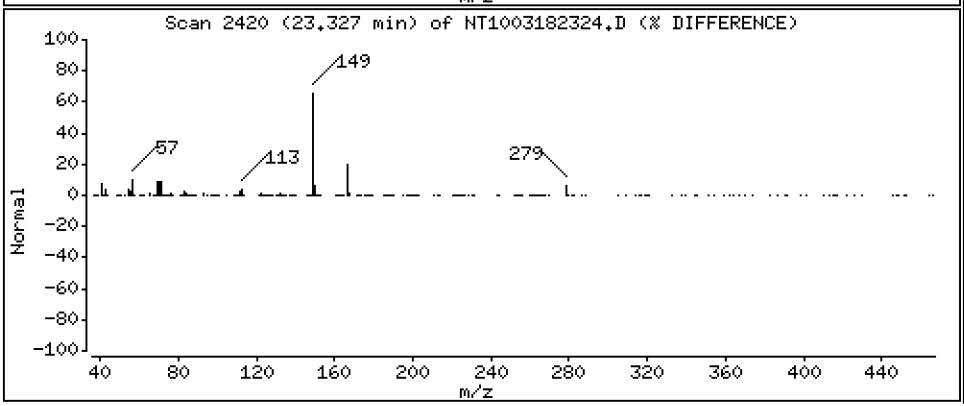
71 Chrysene

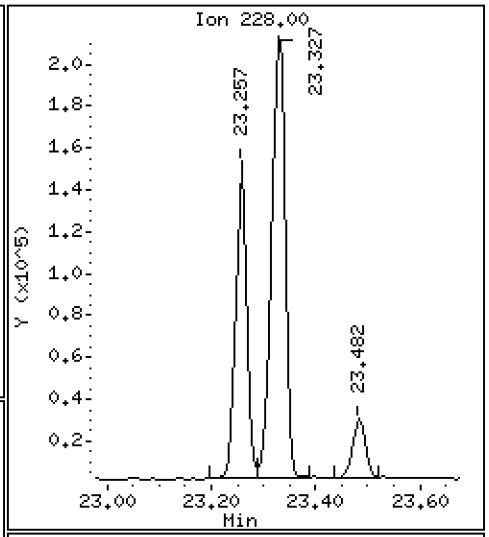
Concentration: 1.447 ug/mL

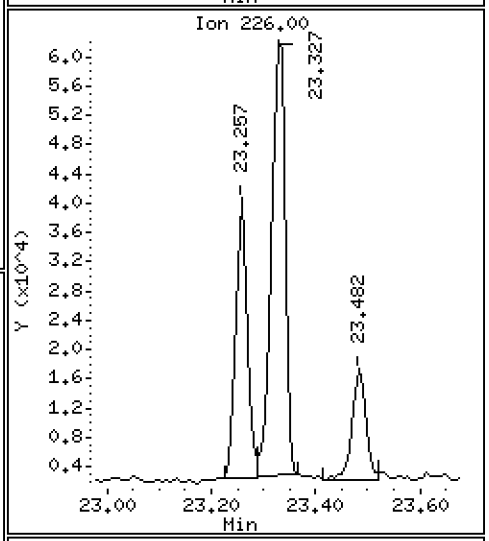


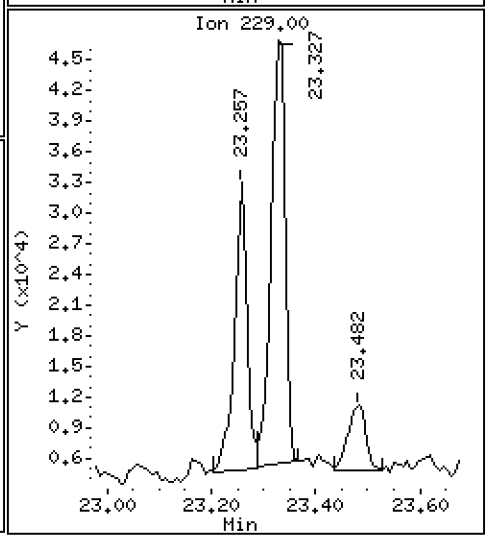












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

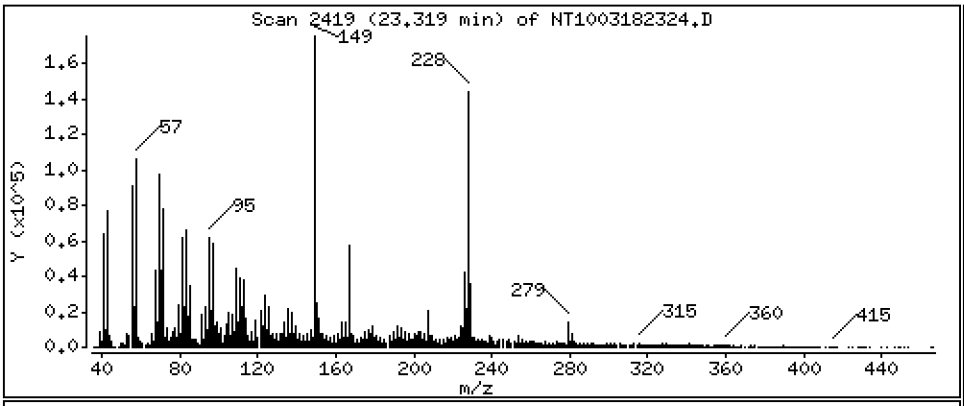
Operator: VTS

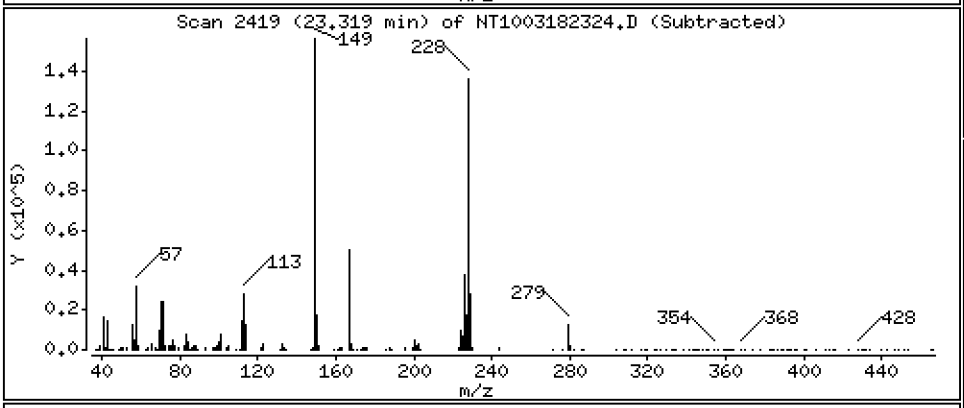
Column phase: ZB-5msi

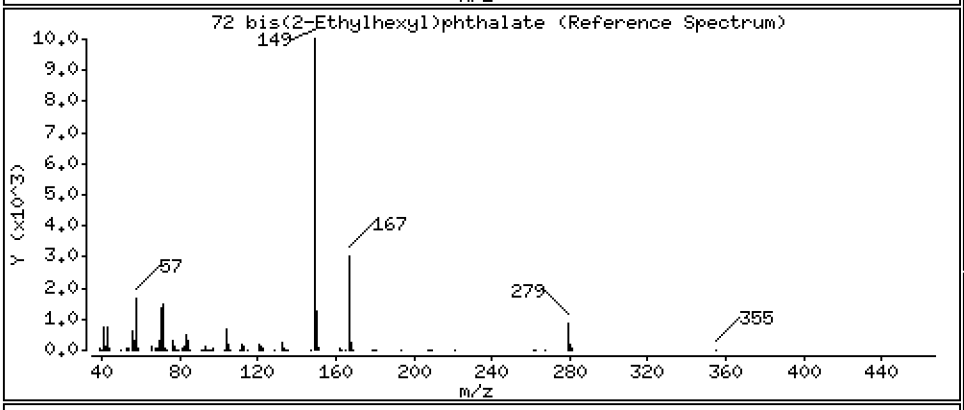
Column diameter: 0.25

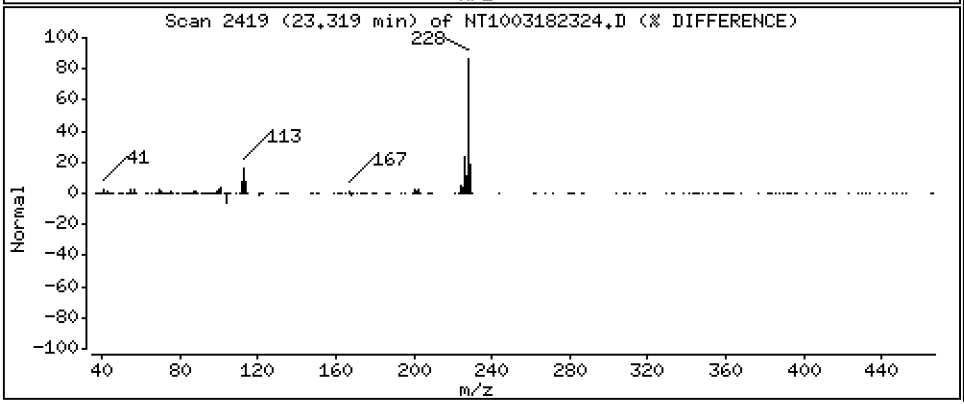
72 bis(2-Ethylhexyl)phthalate

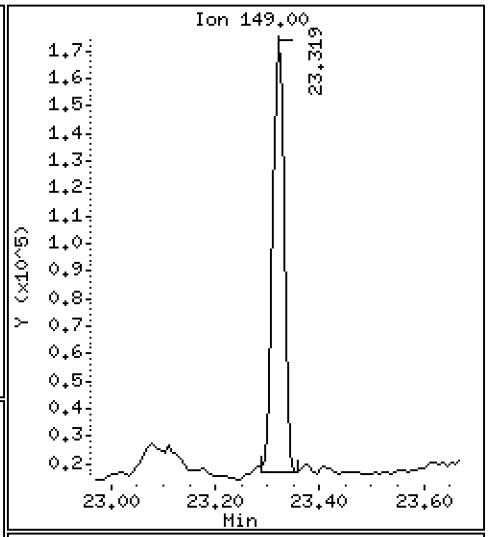
Concentration: 1.246 ug/mL

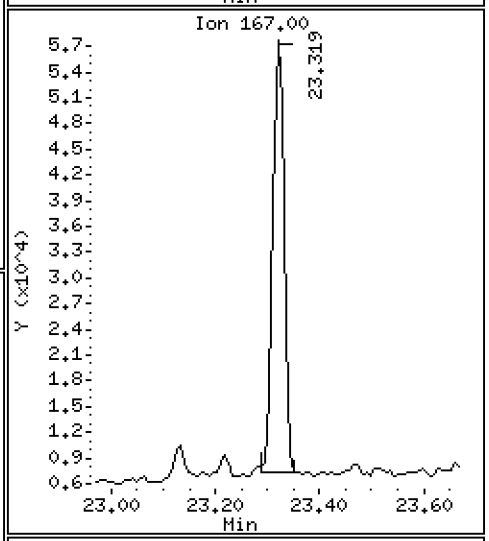


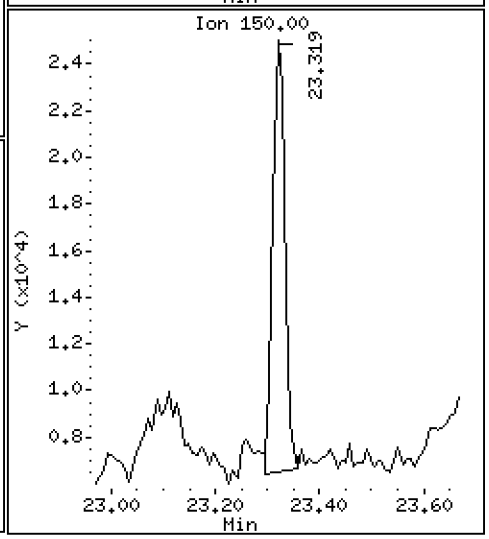












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

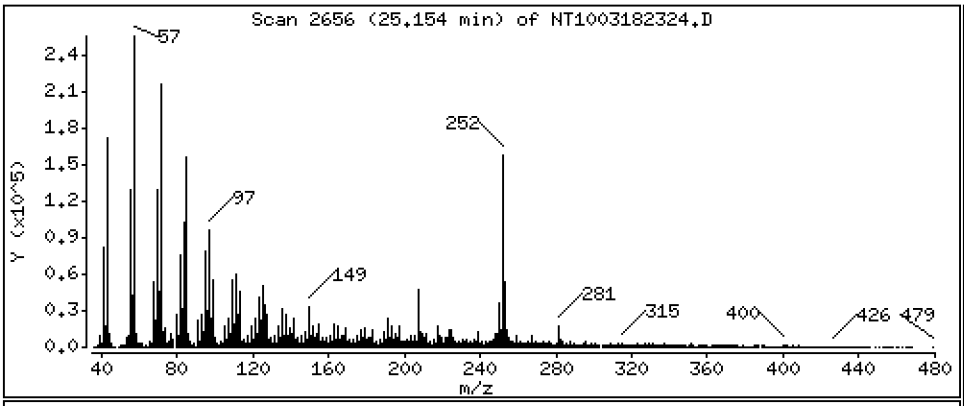
Operator: VTS

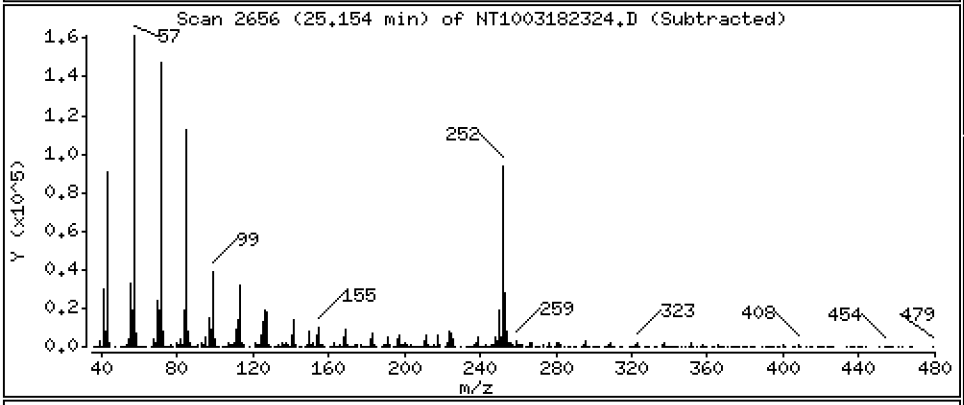
Column phase: ZB-5msi

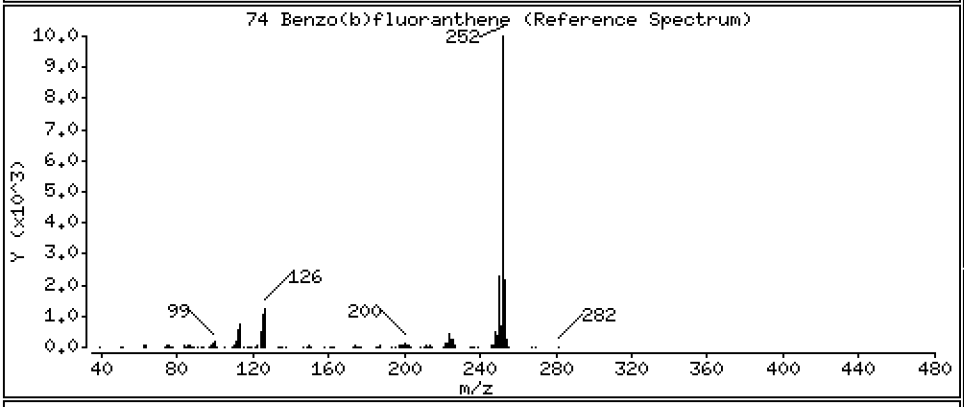
Column diameter: 0.25

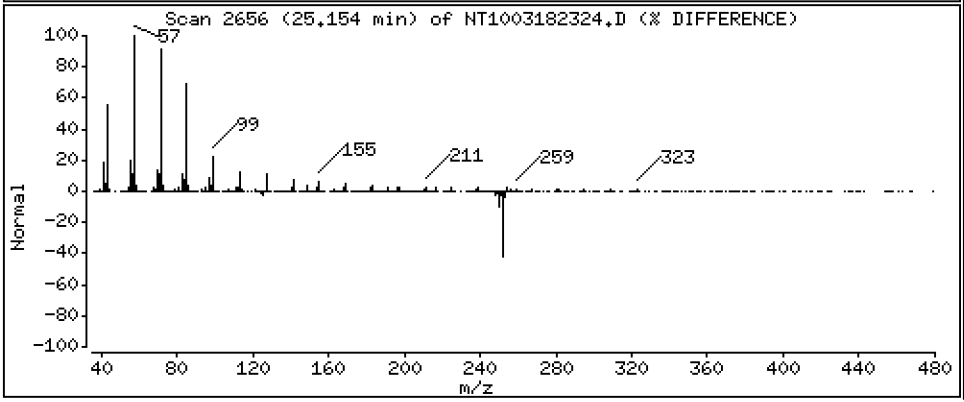
74 Benzo(b)fluoranthene

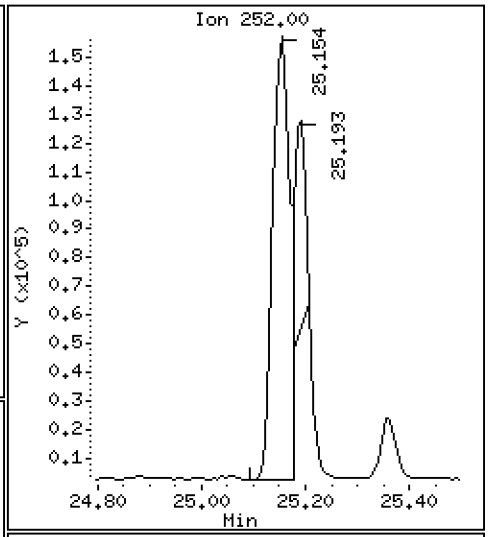
Concentration: 1.407 ug/mL

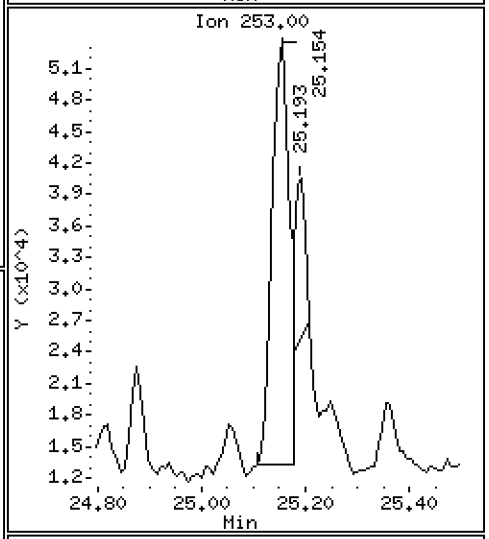


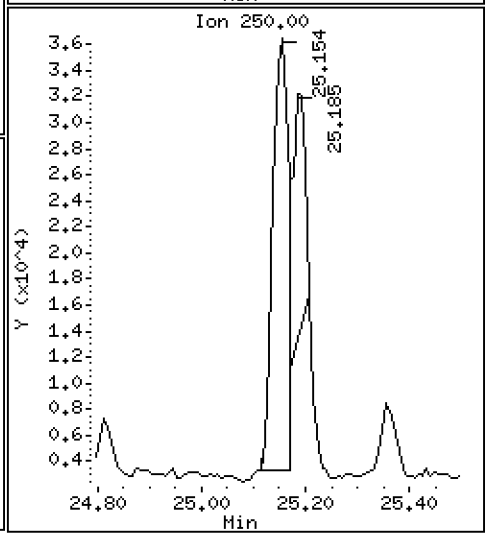












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

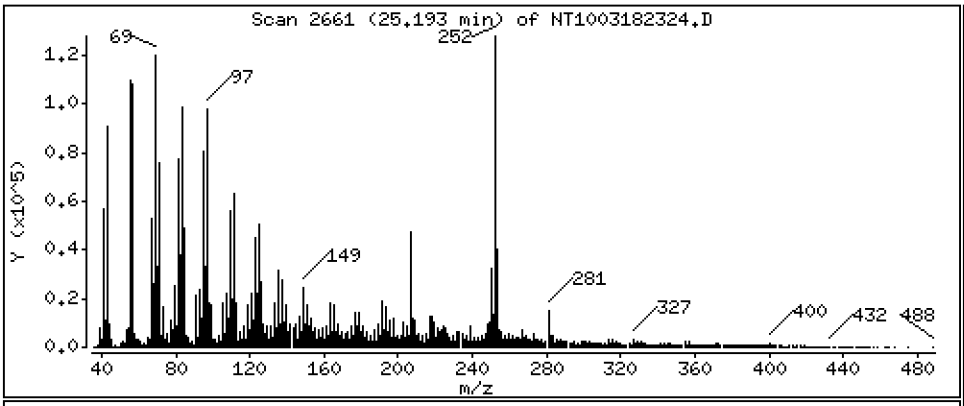
Operator: VTS

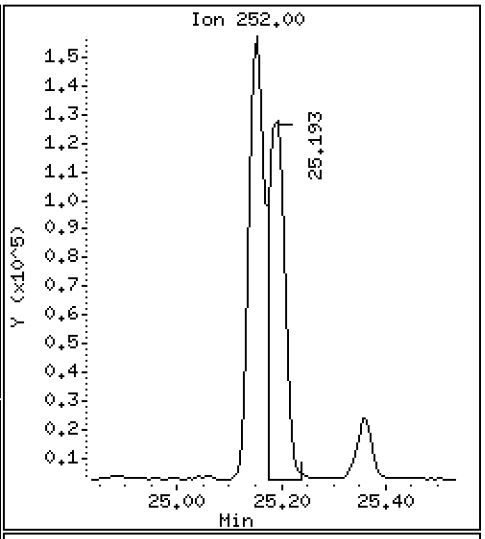
Column phase: ZB-5msi

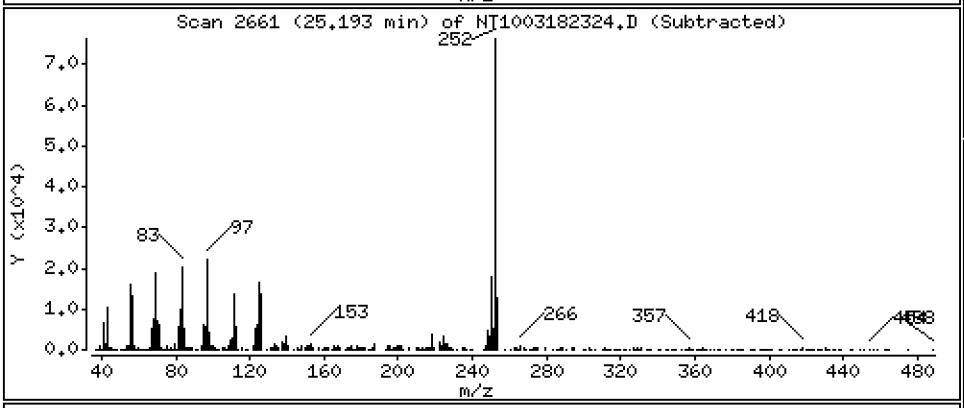
Column diameter: 0.25

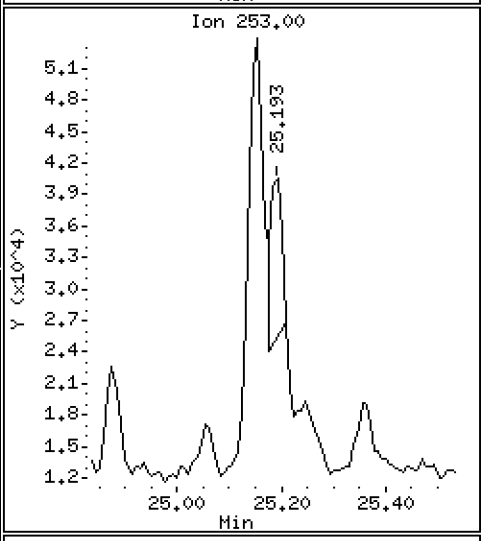
75 Benzo(k)fluoranthene

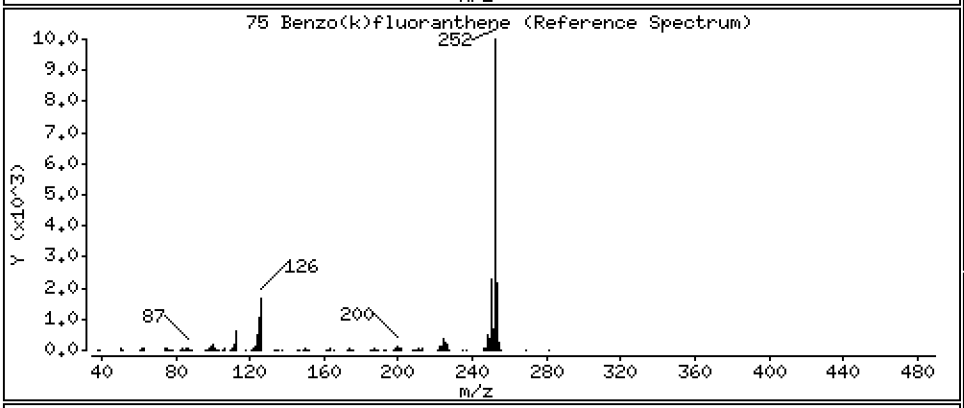
Concentration: 0.9616 ug/mL

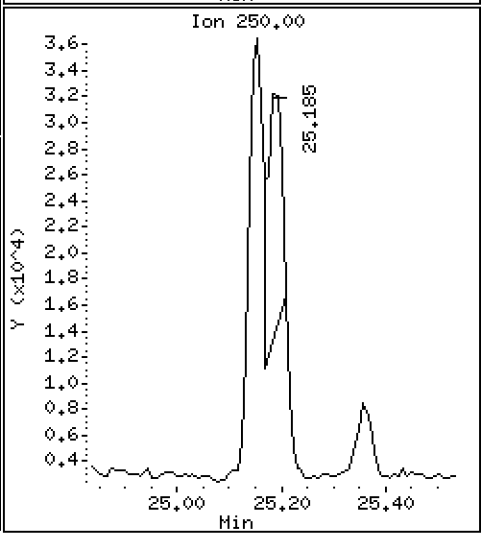


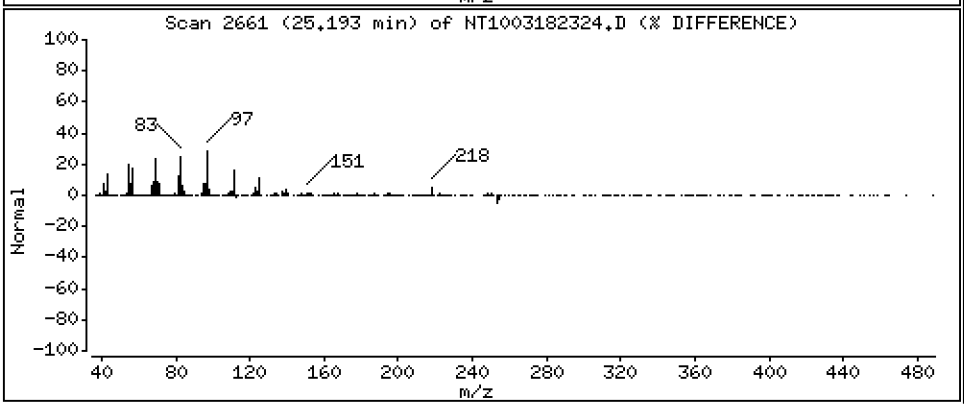












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

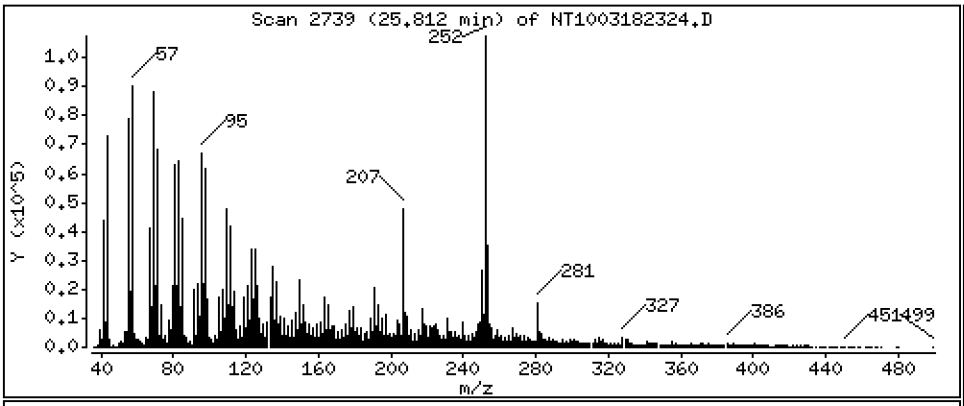
Operator: VTS

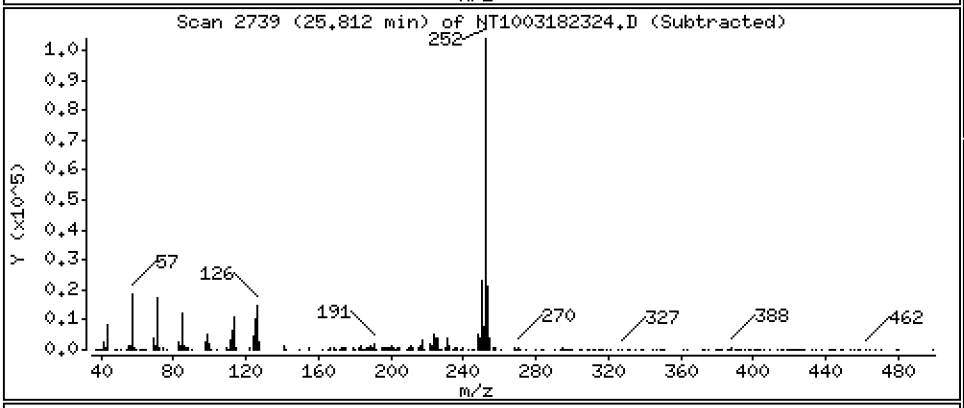
Column phase: ZB-5msi

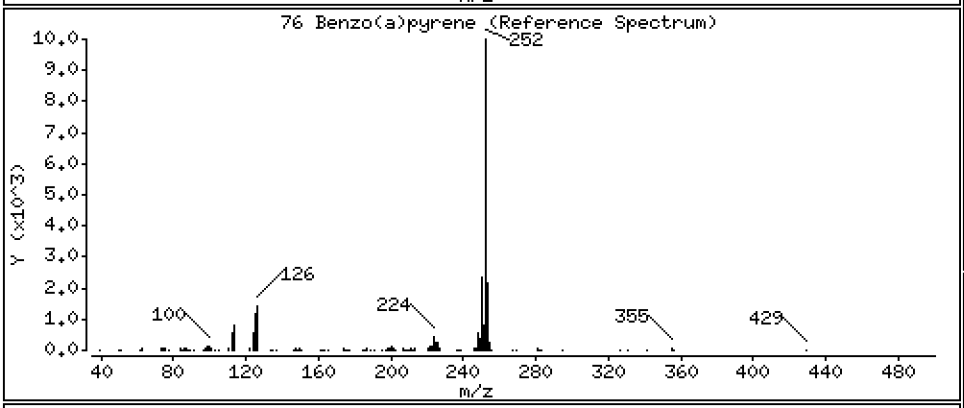
Column diameter: 0.25

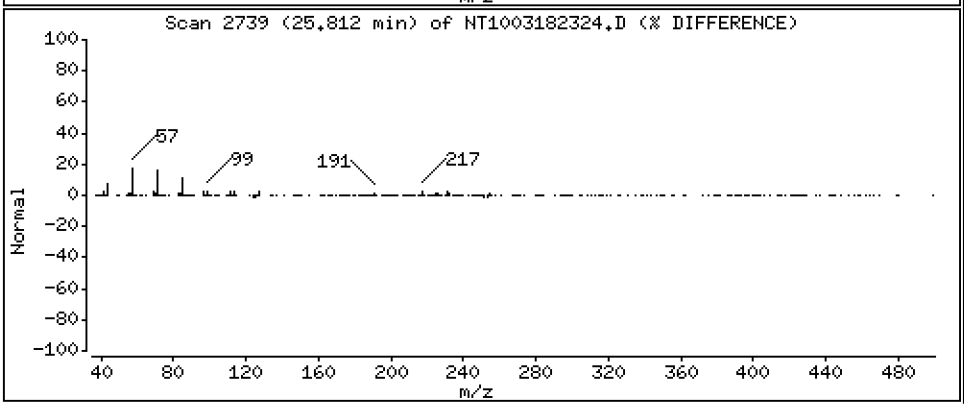
76 Benzo(a)pyrene

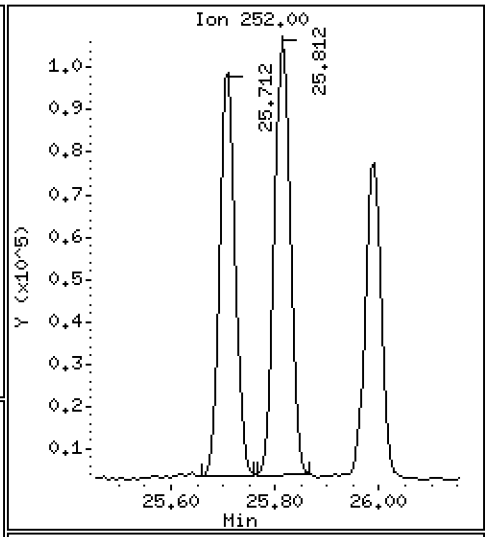
Concentration: 0.9150 ug/mL

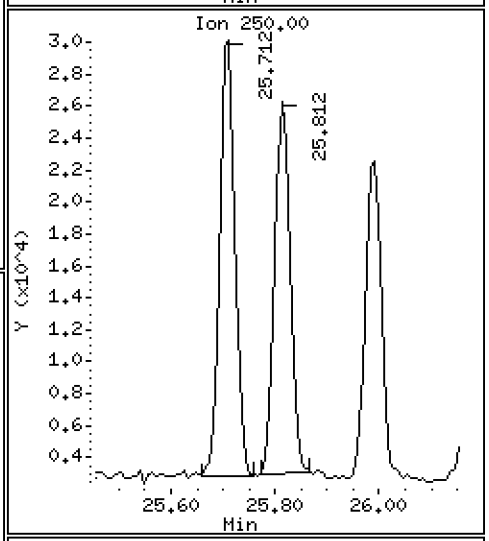


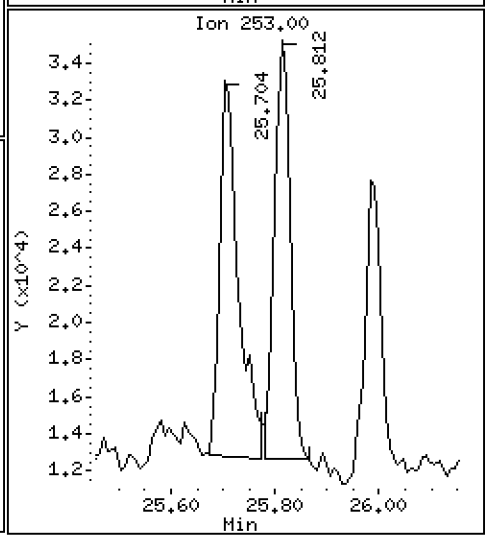












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

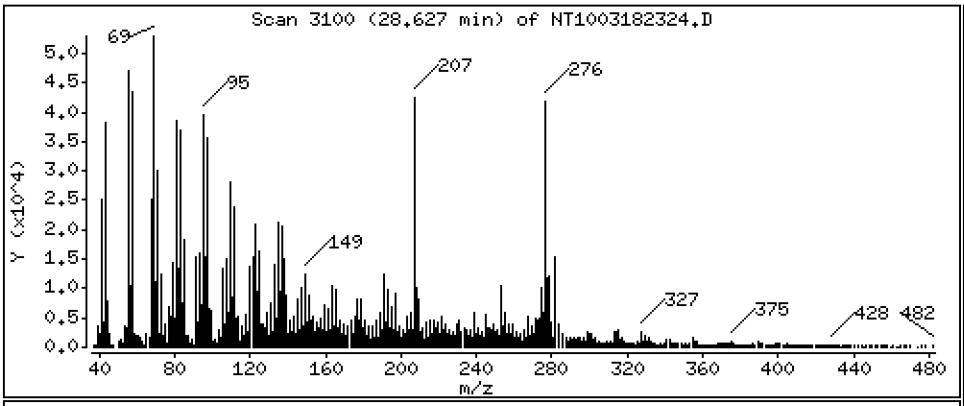
Operator: VTS

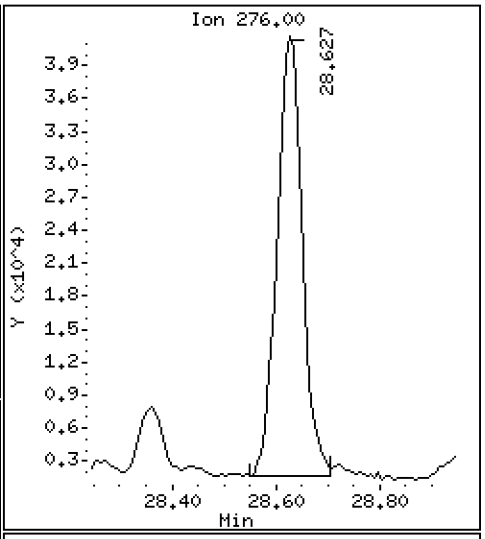
Column phase: ZB-5msi

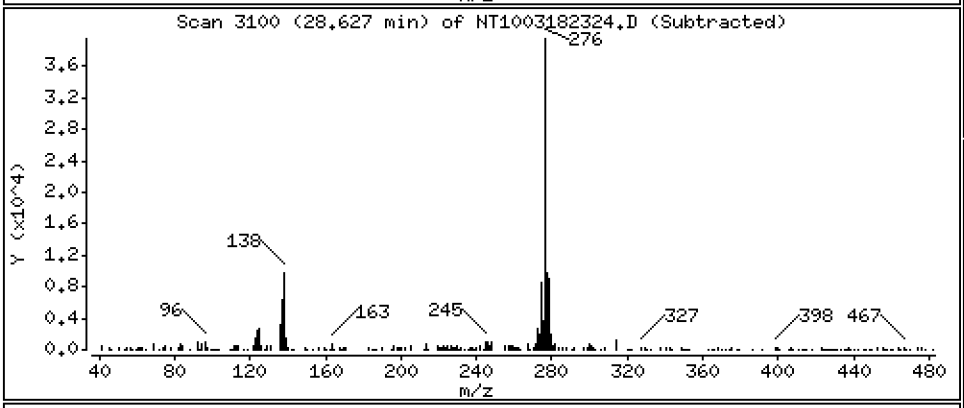
Column diameter: 0.25

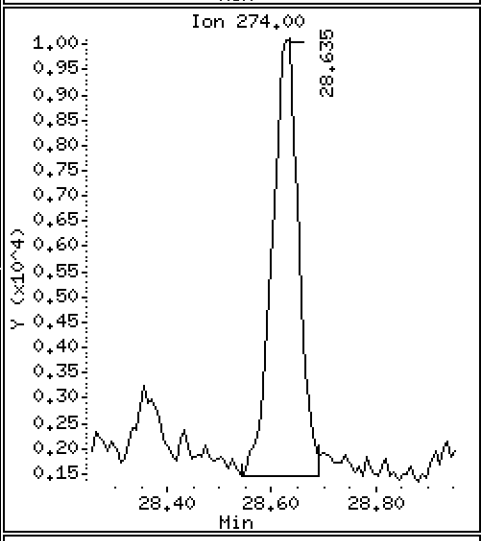
78 Indeno(1,2,3-cd)pyrene

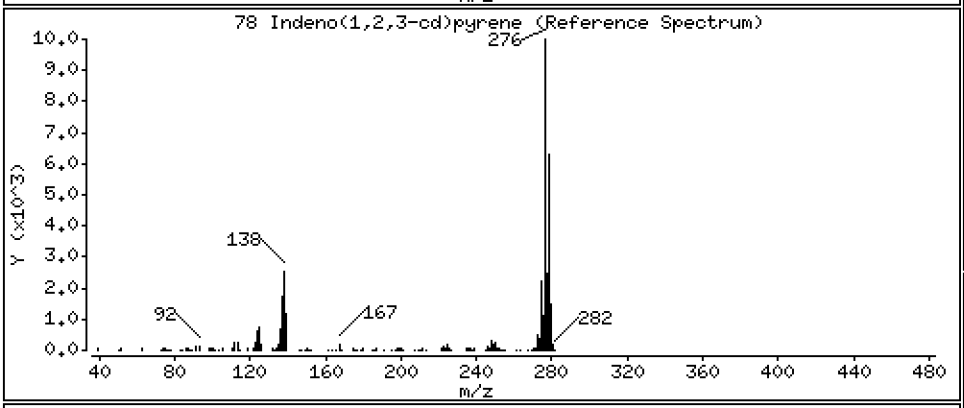
Concentration: 0.4697 ug/mL

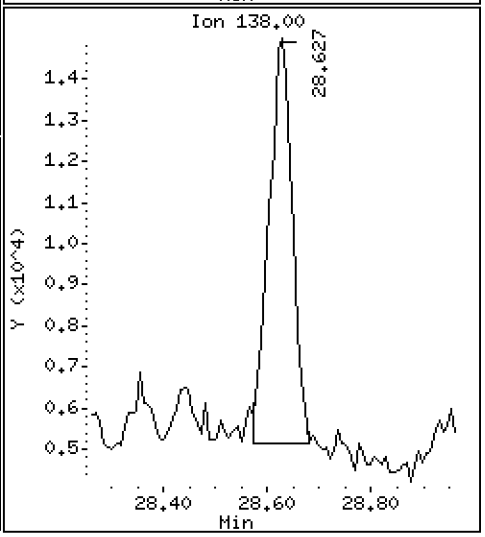


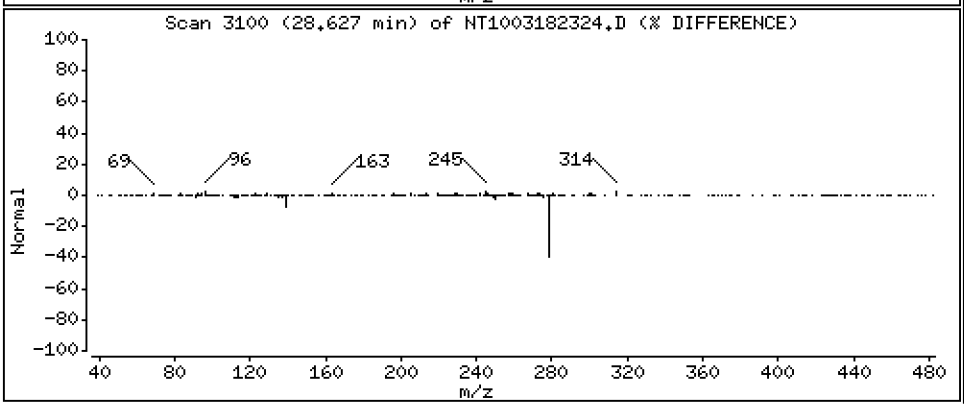












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

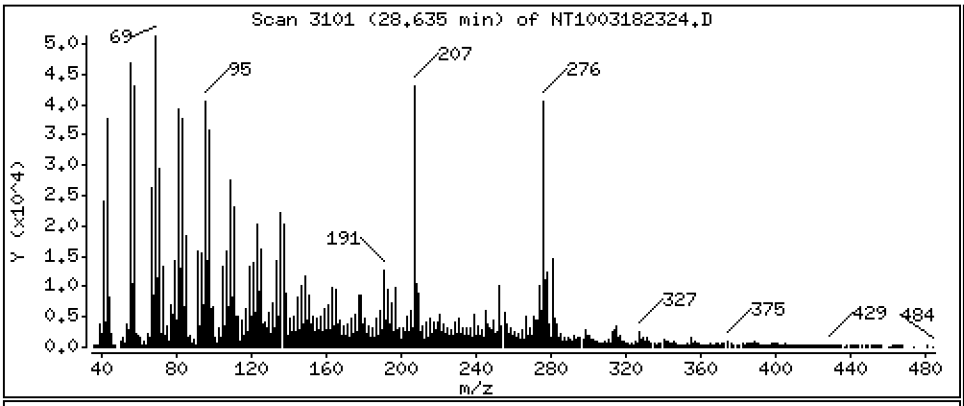
Operator: VTS

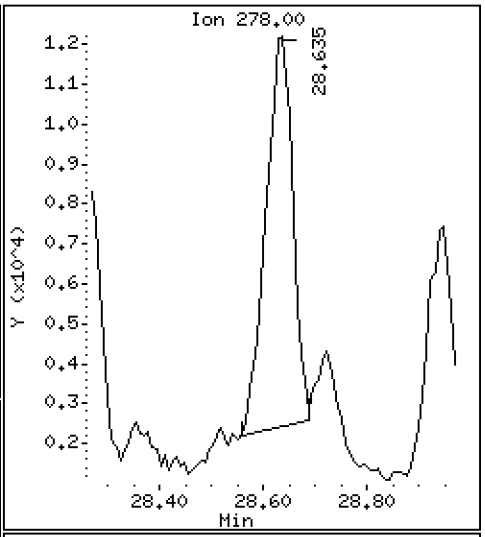
Column phase: ZB-5msi

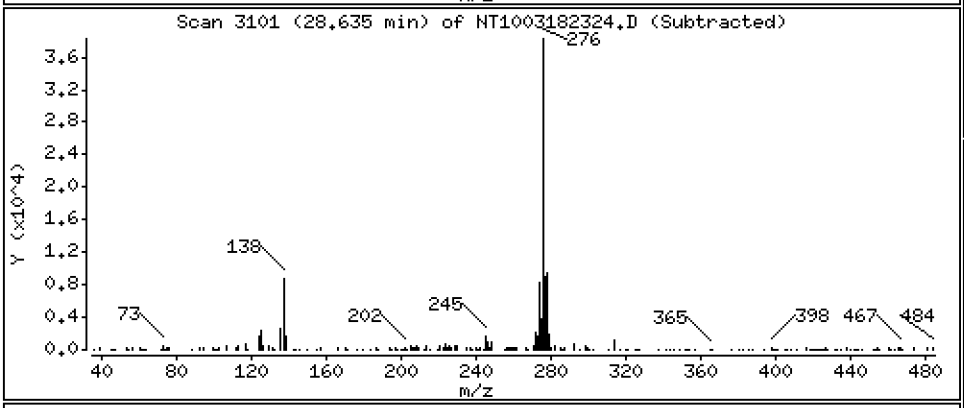
Column diameter: 0.25

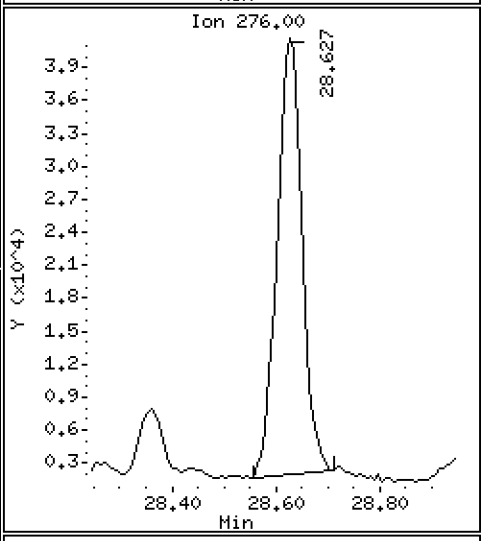
79 Dibenzo(a,h)anthracene

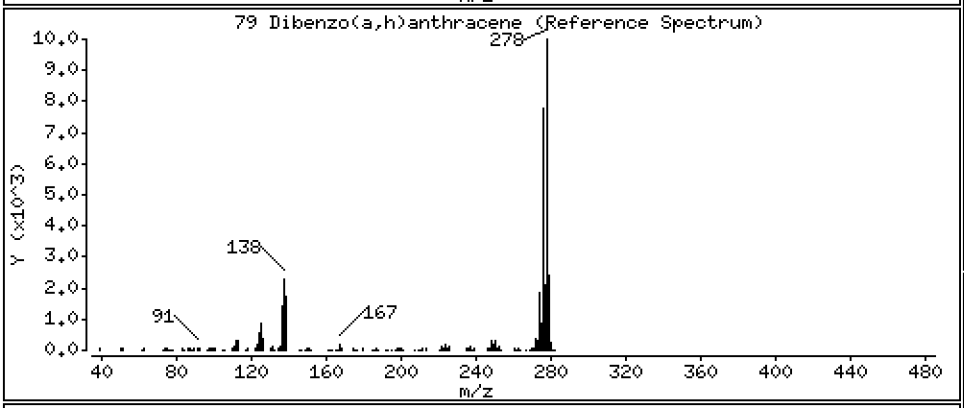
Concentration: 0.1447 ug/mL

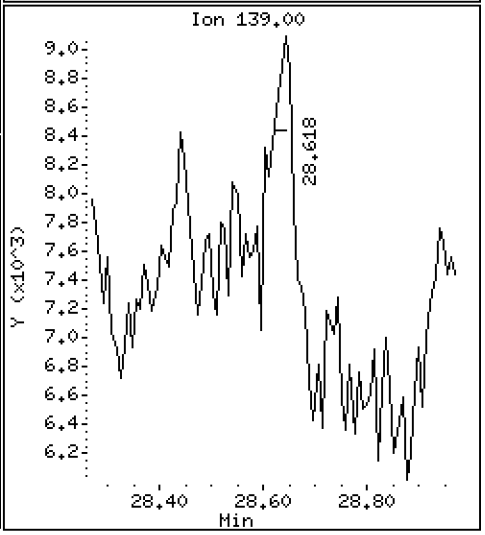


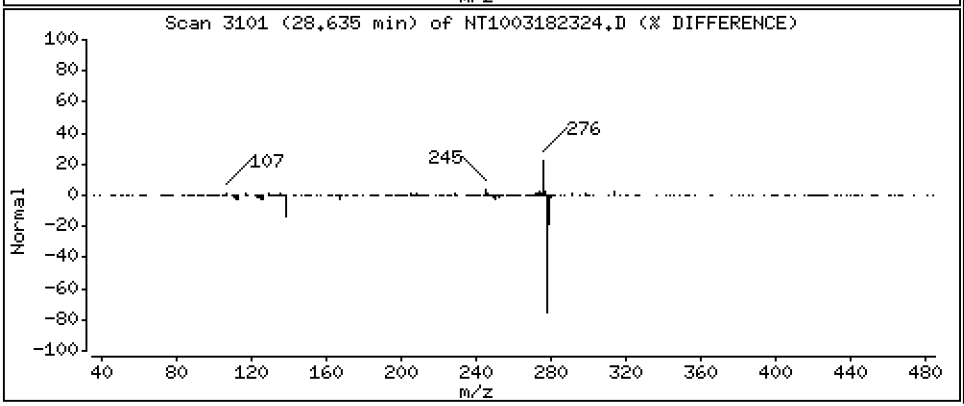












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

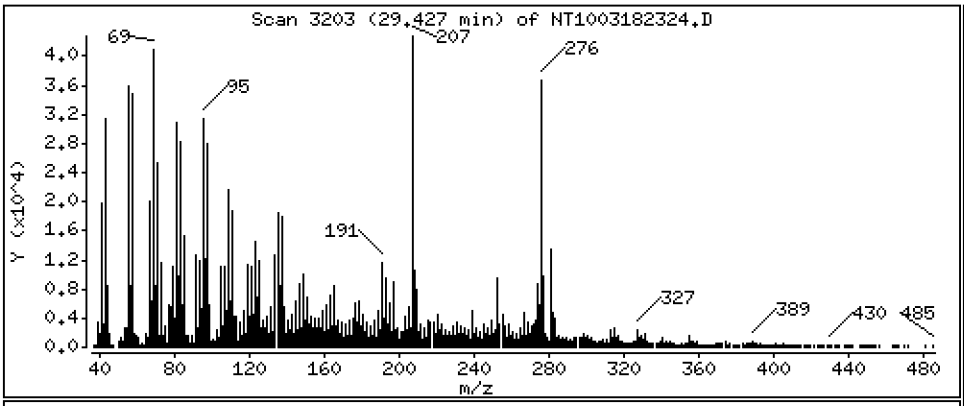
Operator: VTS

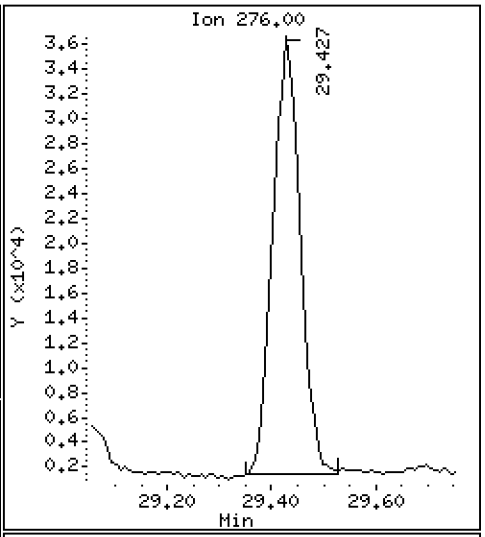
Column phase: ZB-5msi

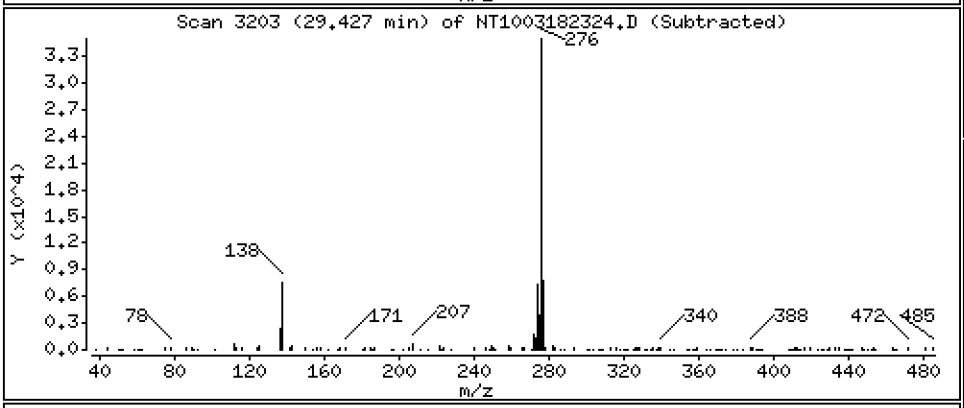
Column diameter: 0.25

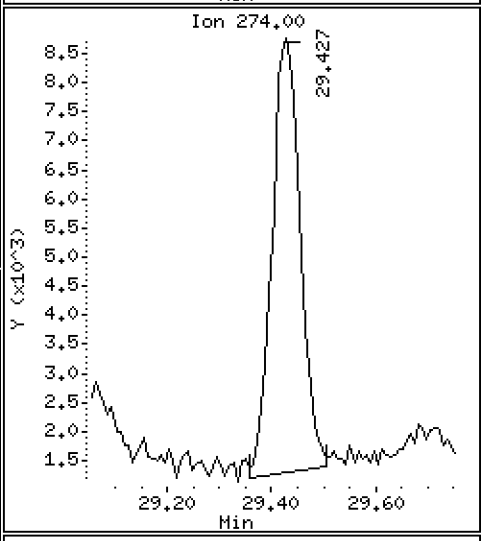
80 Benzo(g,h,i)perylene

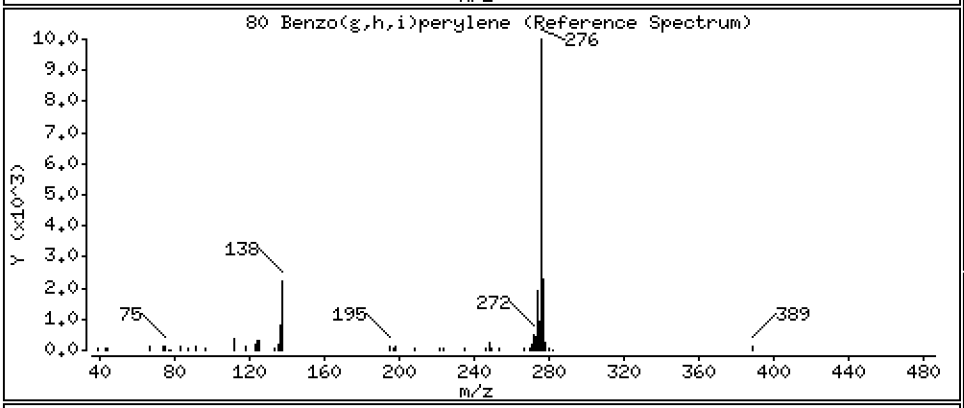
Concentration: 0.5105 ug/mL

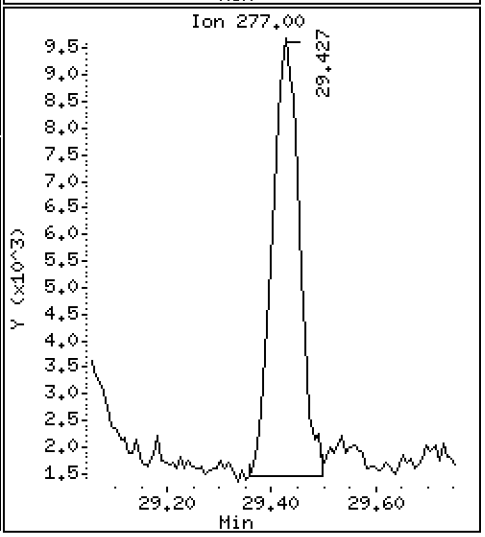


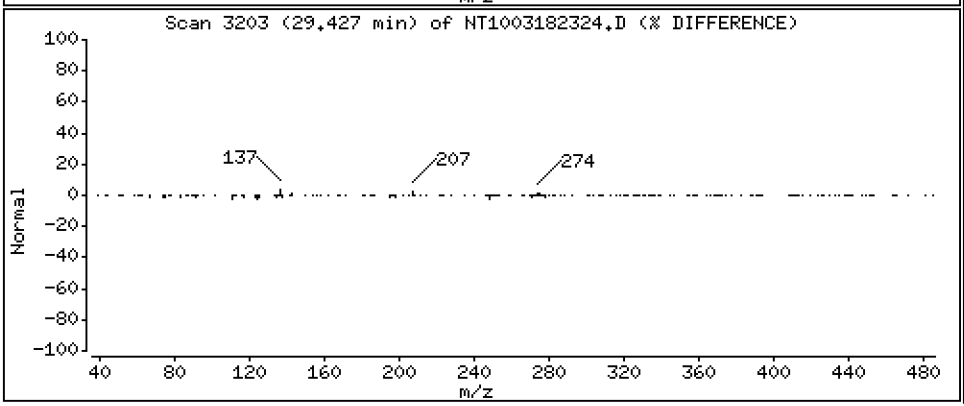












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

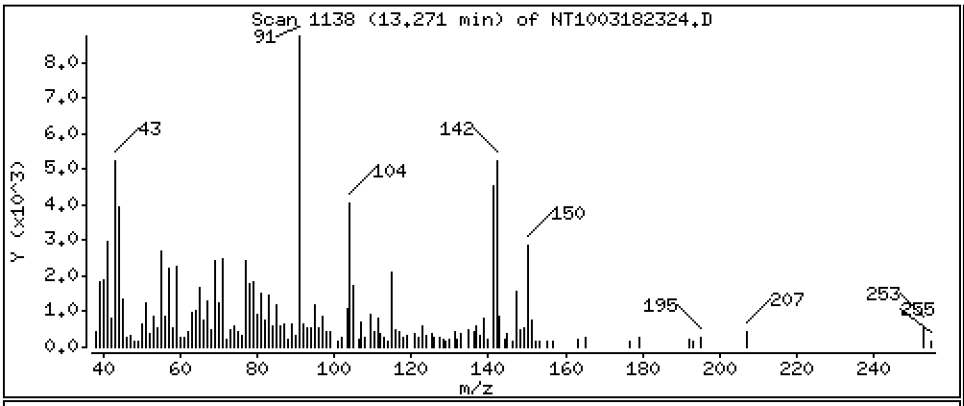
Operator: VTS

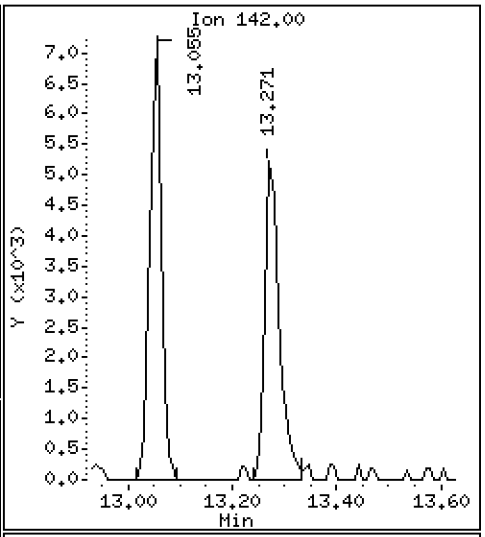
Column phase: ZB-5msi

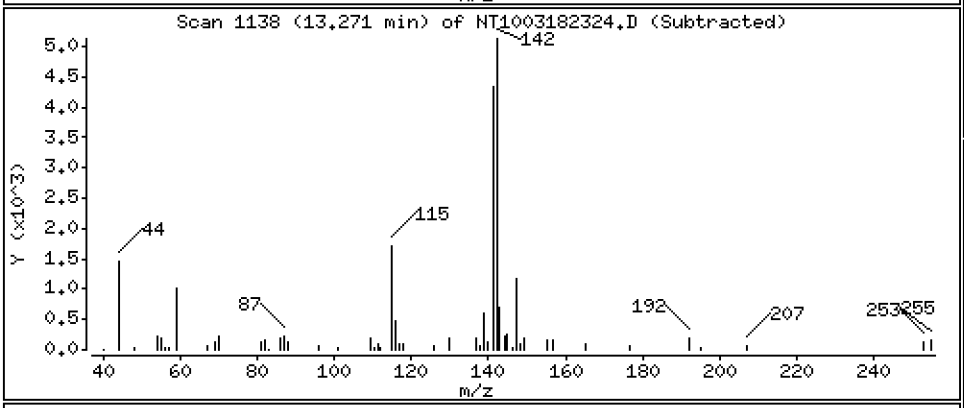
Column diameter: 0.25

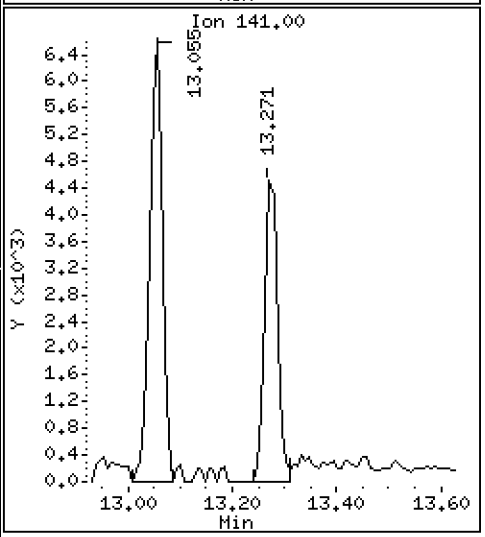
105 1-methylnaphthalene

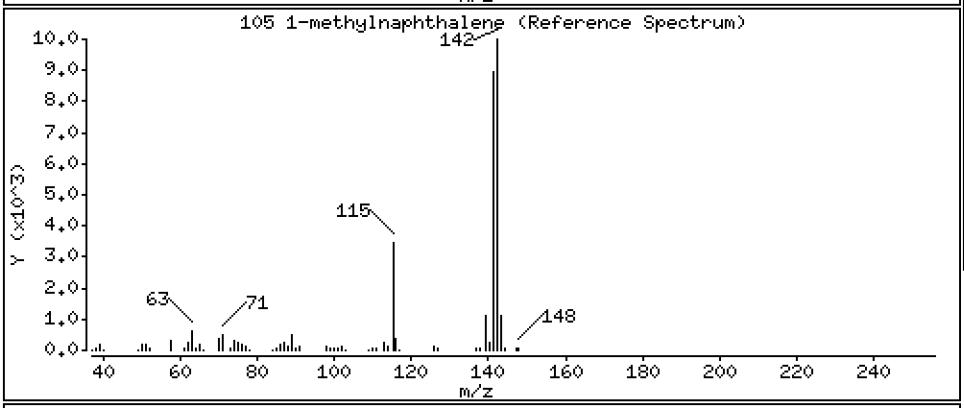
Concentration: 0.06650 ug/mL

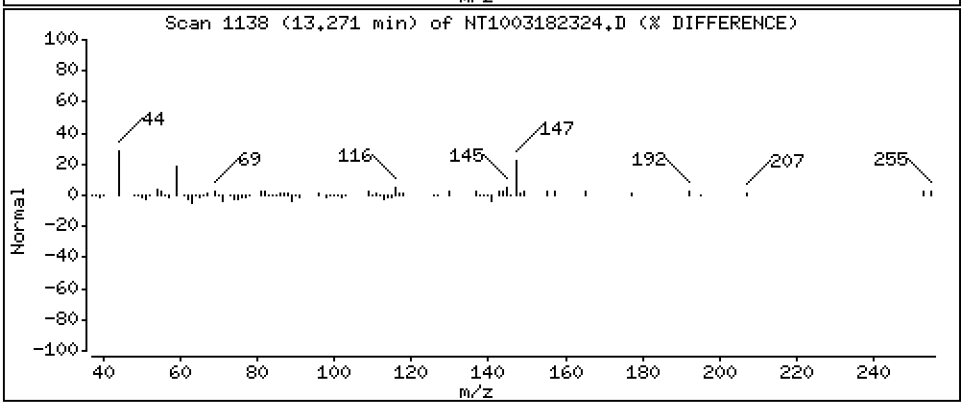












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

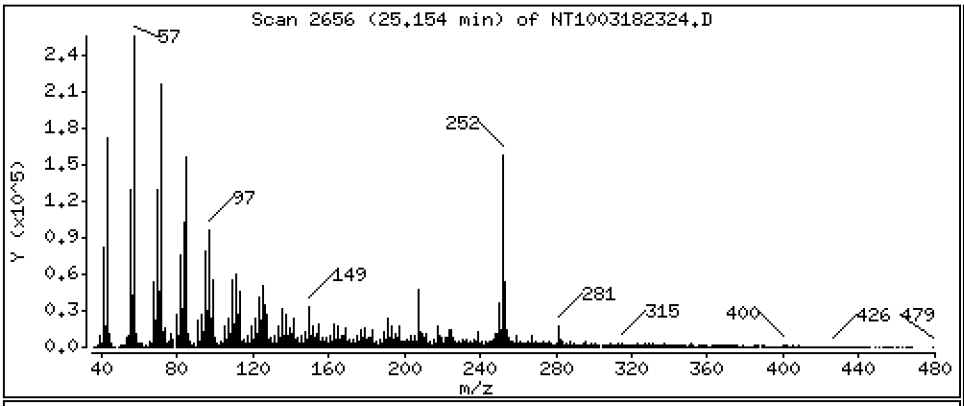
Operator: VTS

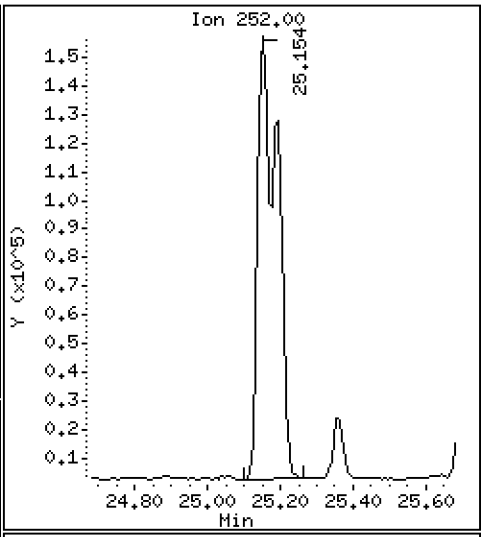
Column phase: ZB-5msi

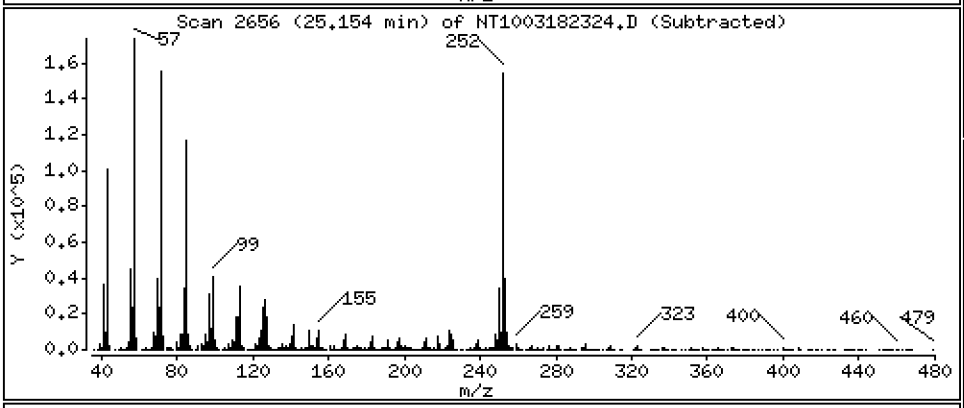
Column diameter: 0.25

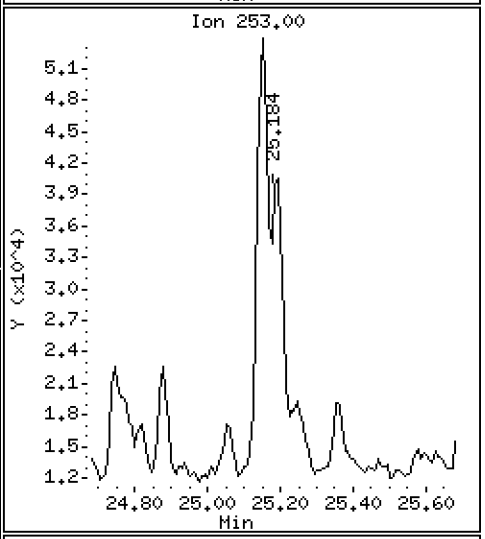
187 Total Benzofluoranthenes

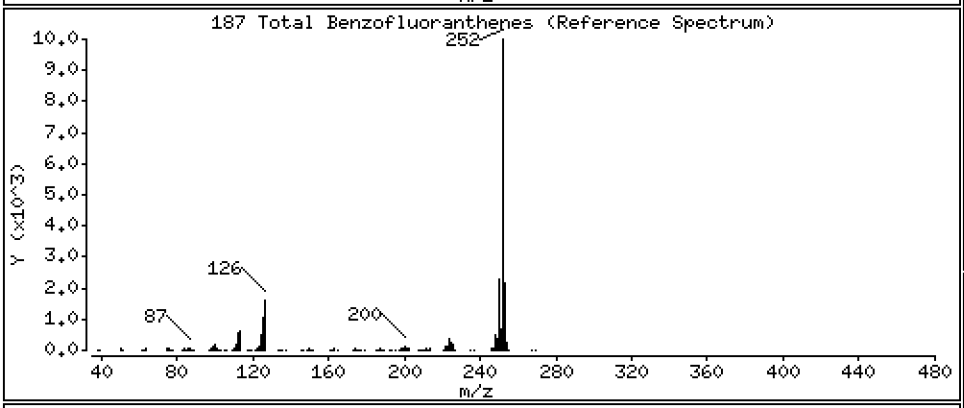
Concentration: 2.277 ug/mL

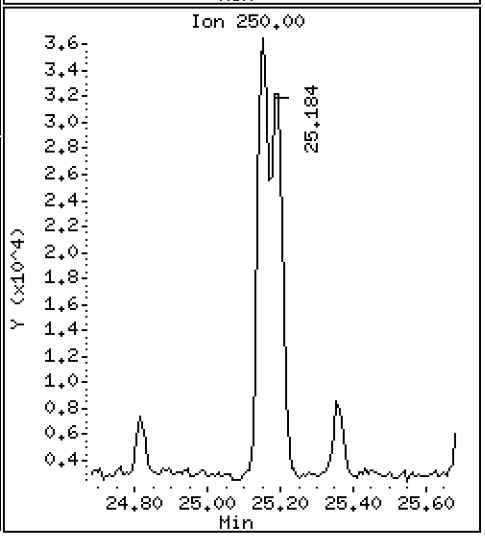


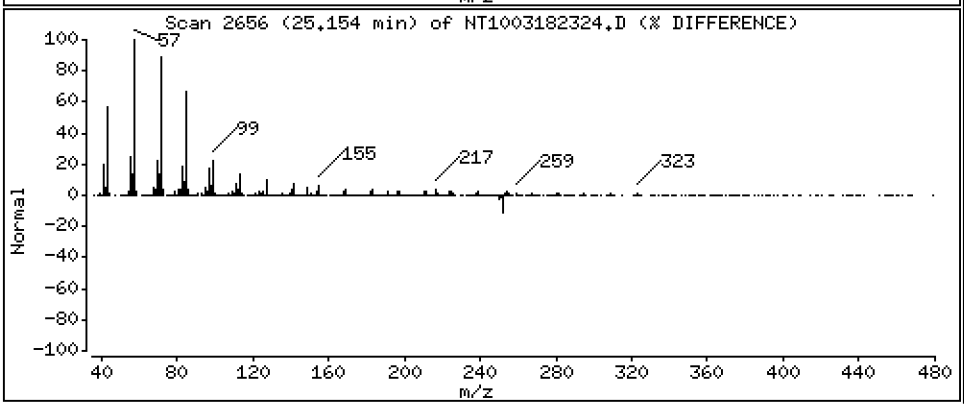












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182324.D
Lab Smp Id: 23A0467-09
Inj Date : 19-MAR-2023 08:24
Operator : VTS Inst ID: nt10.i
Smp Info : 23A0467-09
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.983	6.967	(0.762)	377638	5.44592	5.446
$	2	Phenol-d5	99	8.536	8.528	(0.931)	516254	5.67511	5.675
	3	Phenol	94	8.559	8.551	(0.933)	717595	7.59118	7.591
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	467973	6.02435	6.024
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6	2-Chlorophenol	128	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	229301	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	212547	3.81002	3.810
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	9.441	9.433	(1.030)	3719	0.08382	0.08382
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15	4-Methylphenol	108	9.923	9.915	(1.082)	128152	1.76501	1.765
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.882)	335489	3.99709	3.997
	19	Nitrobenzene	77	Compound Not Detected.					
	20	Isophorone	82	Compound Not Detected.					
	21	2-Nitrophenol	139	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24	Benzoic acid	105	11.049	11.150	(0.950)	19111	0.45458	0.4546(H)
	25	2,4-Dichlorophenol	162	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.631	11.638	(1.000)	831548	4.00000	
	28	Naphthalene	128	11.677	11.676	(1.004)	17617	0.07997	0.07997
	29	4-Chloroaniline	127	Compound Not Detected.					
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32	2-Methylnaphthalene	142	13.054	13.053	(1.122)	10814	0.06802	0.06802
	33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.828	13.827	(0.908)	745076	4.16314	4.163
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.718	14.717	(0.967)	4523	0.03077	0.03077
	40	Acenaphthylene	152	14.912	14.910	(0.980)	16570	0.07338	0.07338
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.221	15.220	(1.000)	452432	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.283	15.282	(1.004)	10297	0.07381	0.07381
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	15.608	15.606	(1.025)	15586	0.07576	0.07576
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.164	16.171	(1.062)	87399	0.60607	0.6061
	49	Fluorene	166	16.319	16.318	(1.072)	14503	0.08961	0.08961
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.851	16.850	(1.107)	135708	6.42916	6.429
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.250	18.241	(1.000)	846672	4.00000	
	60	Phenanthrene	178	18.296	18.295	(1.003)	151644	0.65684	0.6568
	61	Anthracene	178	18.389	18.380	(1.008)	72683	0.32819	0.3282
	62	Carbazole	167	18.714	18.713	(1.025)	17096	0.08615	0.08615
	63	Di-n-butylphthalate	149	19.503	19.494	(1.069)	10999	0.04122	0.04122
	64	Fluoranthene	202	20.679	20.670	(0.888)	399349	1.36062	1.361
	65	Pyrene	202	21.097	21.096	(0.906)	451423	1.49933	1.499
$	66	Terphenyl-d14	244	21.375	21.374	(0.918)	1073524	4.74784	4.748
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	23.257	23.248	(0.999)	214980	0.83382	0.8338
*	69	Chrysene-d12	240	23.288	23.279	(1.000)	730444	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.327	23.326	(1.002)	364446	1.44685	1.447
	72	bis(2-Ethylhexyl)phthalate	149	23.319	23.318	(0.959)	225632	1.24551	1.246
*	134	Di-n-octylphthalate-d4	153	24.310	24.301	(1.000)	1237768	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	25.154	25.145	(0.970)	364491	1.40665	1.407
	75	Benzo(k)fluoranthene	252	25.192	25.184	(0.971)	253020	0.96163	0.9616(MH)
	76	Benzo(a)pyrene	252	25.812	25.803	(0.995)	211984	0.91504	0.9150
*	77	Perylene-d12	264	25.936	25.919	(1.000)	799379	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.627	28.594	(1.104)	138435	0.46969	0.4697
	79	Dibenzo(a,h)anthracene	278	28.634	28.618	(1.104)	35405	0.14469	0.1447(M)
	80	Benzo(g,h,i)perylene	276	29.427	29.402	(1.135)	130213	0.51050	0.5105
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	13.271	13.277	(1.141)	9686	0.06650	0.06650
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.154	25.184	(0.970)	569798	2.27750	2.277(M)
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182324.D
Lab Smp Id: 23A0467-09
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	229301	9.43
27 Naphthalene-d8	795859	397930	1591718	831548	4.48
42 Acenaphthene-d10	432510	216255	865020	452432	4.61
59 Phenanthrene-d10	808891	404446	1617782	846672	4.67
69 Chrysene-d12	657926	328963	1315852	730444	11.02
134 Di-n-octylphthala	1187734	593867	2375468	1237768	4.21
77 Perylene-d12	770107	385054	1540214	799379	3.80

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.63	-0.06
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.01
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.05
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.04
134 Di-n-octylphthala	24.30	23.80	24.80	24.31	0.04
77 Perylene-d12	25.92	25.42	26.42	25.94	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182324.D

Lab ID: 23A0467-09
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 08:24

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.958	-0.0081	Benzoic acid

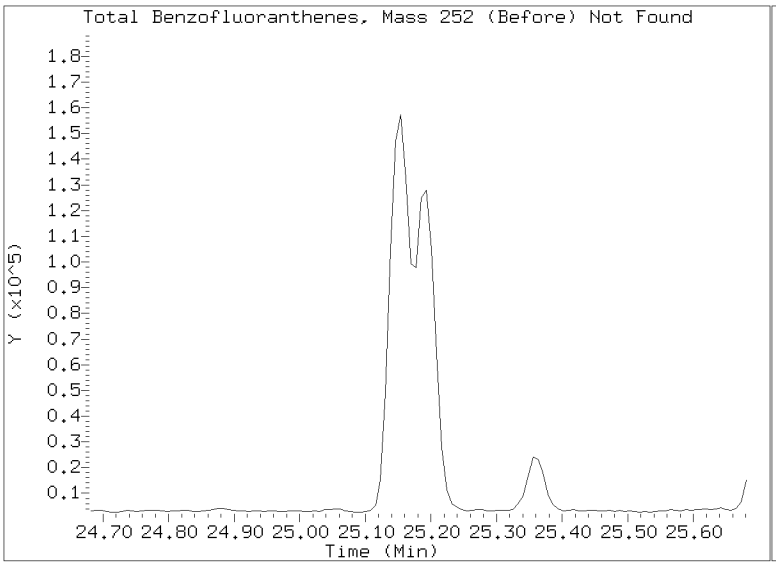
RRT check based on Ccal File: NT1003182316.D

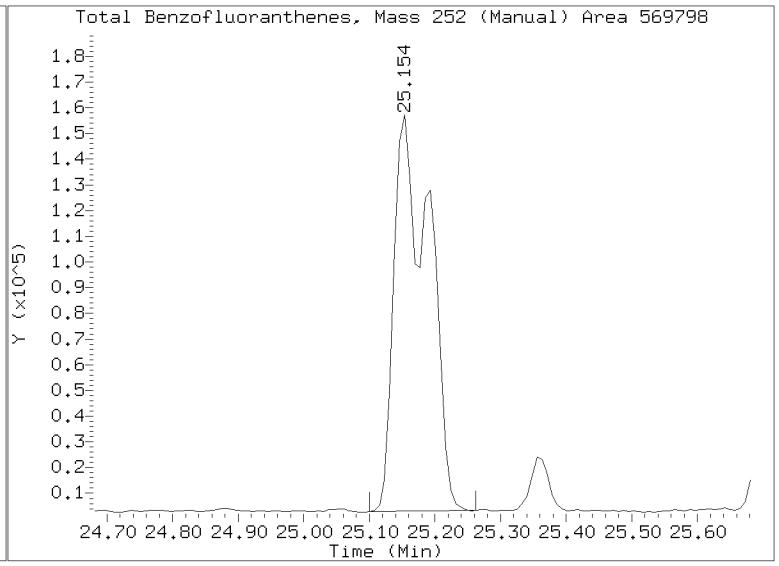
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

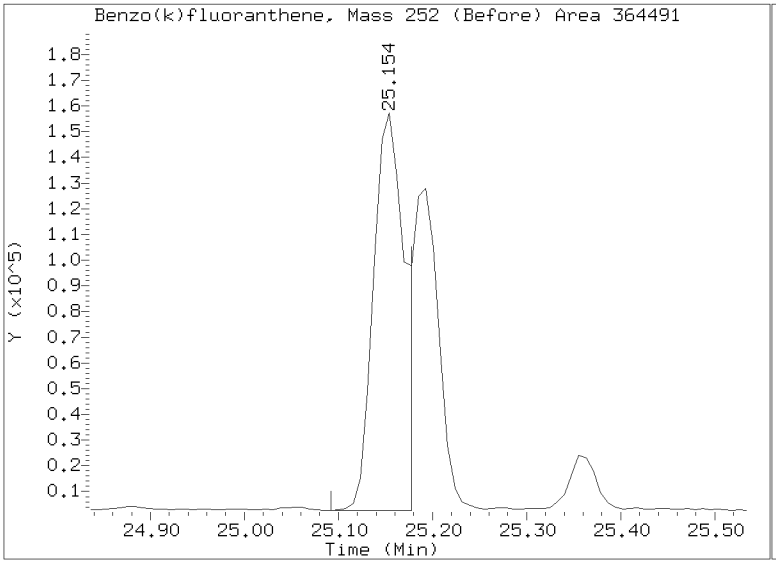
* Only compounds listed in the work order have been verified by the analyst *

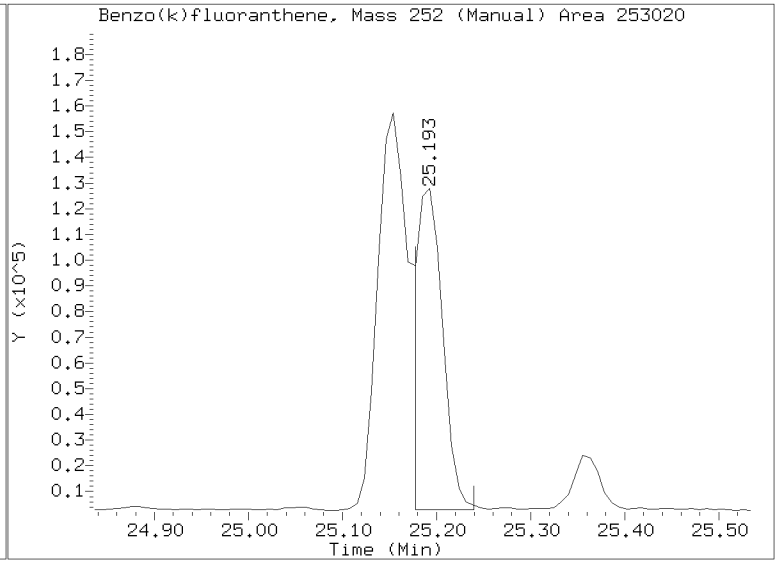
Quant Ion Manual Peak Adjustment Report

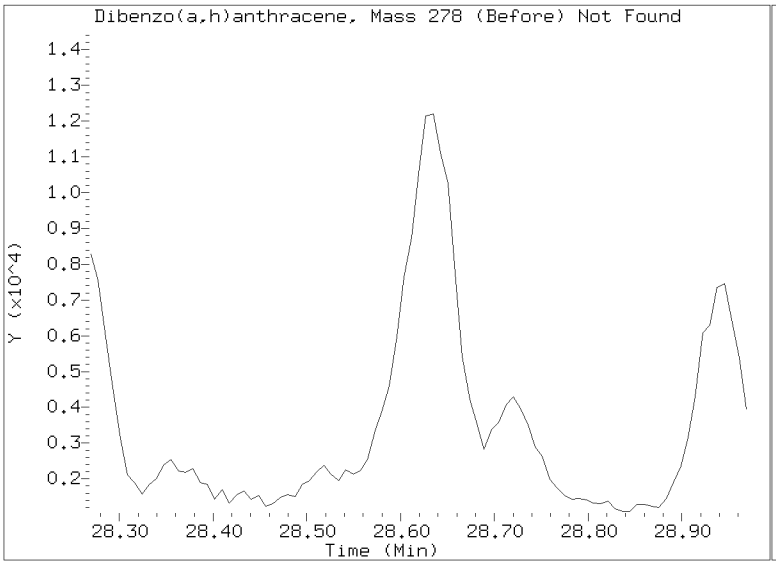
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182324.D
Injection Date: 19-MAR-2023 08:24
Lab ID:23A0467-09 Client ID:
Report Date: 04/04/2023 10:38

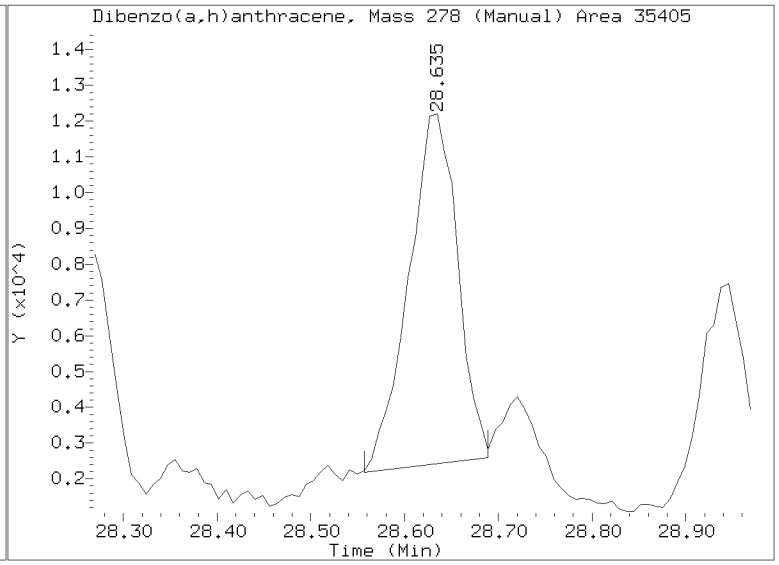












PREPARATION BATCH SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0579 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	NT1003182310.D	02/23/23 15:49	
LDW23-SS1005	23A0467-02	NT1003182311.D	02/23/23 15:49	
LDW23-SS1006	23A0467-03	NT1003182312.D	02/23/23 15:49	
LDW23-SS1003	23A0467-04	NT1003182313.D	02/23/23 15:49	
LDW23-SS1004	23A0467-05	NT1003182314.D	02/23/23 15:49	
LDW23-SS1204	23A0467-06	NT1003182315.D	02/23/23 15:49	
LDW23-SS1238	23A0467-07	NT1003182320.D	02/23/23 15:49	
LDW23-SS1013	23A0467-08	NT1003182323.D	02/23/23 15:49	
LDW23-SS1014	23A0467-09	NT1003182324.D	02/23/23 15:49	
Blank	BLB0579-BLK1	NT1003182306.D	02/23/23 15:49	
LCS	BLB0579-BS1	NT1003182307.D	02/23/23 15:49	
LCS Dup	BLB0579-BSD1	NT1003182308.D	02/23/23 15:49	
LDW23-SS1238	BLB0579-MS1	NT1003182321.D	02/23/23 15:49	
LDW23-SS1238	BLB0579-MSD1	NT1003182322.D	02/23/23 15:49	
Reference	BLB0579-SRM1	NT1003182309.D	02/23/23 15:49	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid Date Prepared: 02/23/23 Balance ID: B146462614 Set Up By: CTO 2/22/23

WO Comments
23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0467-01 A	49.9	(20.04) 20.06	(1:1)	1mL	1 _____	0.5 _____	
23A0467-02 A	46.9	(21.32) 21.35	(1:1)	1mL	1 _____	0.5 _____	
23A0467-03 A	48.0	(20.85) 20.89	(1:1)	1mL	1 _____	0.5 _____	
23A0467-04 A	47.1	(21.22) 21.22	(1:1)	1mL	1 _____	0.5 _____	
23A0467-05 A	55.1	(18.14) 18.17	(1:1)	1mL	1 _____	0.5 _____	
23A0467-06 A	47.2	(21.17) 21.20	(1:1)	1mL	1 _____	0.5 _____	
23A0467-07 A	55.2	(18.12) 18.15	(1:1)	1mL	1 _____	0.5 _____	
23A0467-08 A	48.4	(20.67) 20.67	(1:1)	1mL	1 _____	0.5 _____	
23A0467-09 A	63.8	(15.67) 15.68	(1:1)	1mL	1 _____	0.5 _____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0579-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1 _____	0.5 _____	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1 _____	0.5 _____	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1 _____	0.5 _____	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-MS1	55.2	(18.12) 18.12	(1:1)	1mL	1 _____	0.5 _____	Use 23A0467-07
BLB0579-MSD1	55.2	(18.12) 18.12	(1:1)	1mL	1 _____	0.5 _____	Use 23A0467-07
BLB0579-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1 _____	0.5 _____	Use K003477

+1g DI WATER

02/23/23 — Client ID verified By — Date

TWC — Preparation Reviewed By

3/4/23 — Date

02/23/23 15:49 — Extraction Date and Time

Printed: 2/22/2023 3:52:48PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
02/24/23
GT
Analyst/Date

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 5 6
LO 2-27
Analyst/Date

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

Post GPC KD
80-85°C
1 0 2 4 5 6
LO 3-1
Analyst/Date

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

Water Wash
TWC 3/4/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: GT Date: 02/24/23	
Anhydrous Sodium Sulfate	LΦΦ1285
1:1 Methylene Chloride/Acetone	LΦΦ1416
Methylene Chloride	KΦΦ5158
Pre-Deactivated Glass Wool	LΦΦΦ252
Pre GPC KD Analyst: LO Date: 2/27/23	
Pre-Deactivated Glass Wool	
Anhydrous Sodium Sulfate	
Methylene Chloride	KΦΦ5158
Hexane	HΦ81373
GPC Filter Prep Analyst: LO Date: 2/27/23	
Methylene Chloride	K005158
GPC Filter	L001749
GPC Analyst: GTO Date: 2/28/23	
Methylene Chloride	K005158
GPC Calibration File	CLB0250
Post GPC KD Analyst: LO Date: 3-1-23	
Methylene Chloride	KΦΦ5158
Vialing Analyst: TWC Date: 3/4/23	
Methylene Chloride	K005158

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A L001153 Exp Date: 8/1/2023	50µL	GT	✓
Full List Spike (Freezer) 100µg/mL	7 L001812 (V) Exp Date: LΦ91781 8/4/2023	50µL	GT	✓
Base Spike 200µg/mL	56 L001812 (V) Exp Date: LΦ41778 8/24/2023	50µL	GT	✓
Acid Spike 100/200µg/mL	38 L001812 (V) Exp Date: LΦ41779 8/24/2023	50µL	GT	✓

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch BLB0579

Total Solids Batch: BLB0378 Work Order(s): 23A0467

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-05	CR 2/20/23
☒ Standing Water Decanted (Not shared)= 01-09	CR 2/20/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 06,07,08,09	CR 2/20/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-09	CR 2/20/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 2/20/23
☒ Multiple Jars Y / (N)	CR 2/20/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0039	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike Dup	BLB0579-MSD1	NT1003182322.D	02/28/2023	
LDW23-SS1003	23A0467-04	NT1003182313.D	02/28/2023	
Reference	BLB0579-SRM1	NT1003182309.D	02/28/2023	
LCS Dup	BLB0579-BSD1	NT1003182308.D	02/28/2023	
LDW23-SS1010	23A0467-01	NT1003182310.D	02/28/2023	
Matrix Spike	BLB0579-MS1	NT1003182321.D	02/28/2023	
Blank	BLB0579-BLK1	NT1003182306.D	02/28/2023	
LDW23-SS1238	23A0467-07	NT1003182320.D	02/28/2023	
LDW23-SS1204	23A0467-06	NT1003182315.D	02/28/2023	
LCS	BLB0579-BS1	NT1003182307.D	02/28/2023	
LDW23-SS1013	23A0467-08	NT1003182323.D	02/28/2023	
LDW23-SS1006	23A0467-03	NT1003182312.D	02/28/2023	
LDW23-SS1005	23A0467-02	NT1003182311.D	02/28/2023	
LDW23-SS1004	23A0467-05	NT1003182314.D	02/28/2023	
LDW23-SS1014	23A0467-09	NT1003182324.D	02/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0039

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0150-GPC2** **Printed: 3/4/2023 12:45:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-01	A	LDW23-SS1010	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-02	A	LDW23-SS1005	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-02	A	LDW23-SS1005	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-03	A	LDW23-SS1006	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-03	A	LDW23-SS1006	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-04	A	LDW23-SS1003	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-04	A	LDW23-SS1003	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-05	A	LDW23-SS1004	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-05	A	LDW23-SS1004	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-06	A	LDW23-SS1204	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-06	A	LDW23-SS1204	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-07	A	LDW23-SS1238	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-07	A	LDW23-SS1238	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-08	A	LDW23-SS1013	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-08	A	LDW23-SS1013	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-09	A	LDW23-SS1014	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-09	A	LDW23-SS1014	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
BLB0579-BLK1	-	Blank	-	1	1	-	2/28/2023	CTO	
BLB0579-BLK2	-	Blank	-	1	1	-	2/28/2023	CTO	
BLB0579-BS1	-	LCS	-	1	1	-	2/28/2023	CTO	
BLB0579-BS2	-	LCS	-	1	1	-	2/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0039

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0150-GPC2** **Printed: 3/4/2023 12:45:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLB0579-BSD1	-	LCS Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-BSD2	-	LCS Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-MS1	-	Matrix Spike	-	1	1	-	2/28/2023	CTO	
BLB0579-MS2	-	Matrix Spike	-	1	1	-	2/28/2023	CTO	
BLB0579-MSD1	-	Matrix Spike Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-MSD2	-	Matrix Spike Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-SRM1	-	Reference	-	1	1	-	2/28/2023	CTO	
BLB0579-SRM2	-	Reference	-	1	1	-	2/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8270E

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0579-BLK1	File ID:	NT1003182306.D
Sampled:	N/A	Prepared:	02/23/23 15:49	Analyzed:	03/18/23 20:55
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLB0579	Sequence:	SLC0504	Calibration:	GC00046
Instrument:	NT10	Column:	ZB-5MSi	Cleanups:	GPC

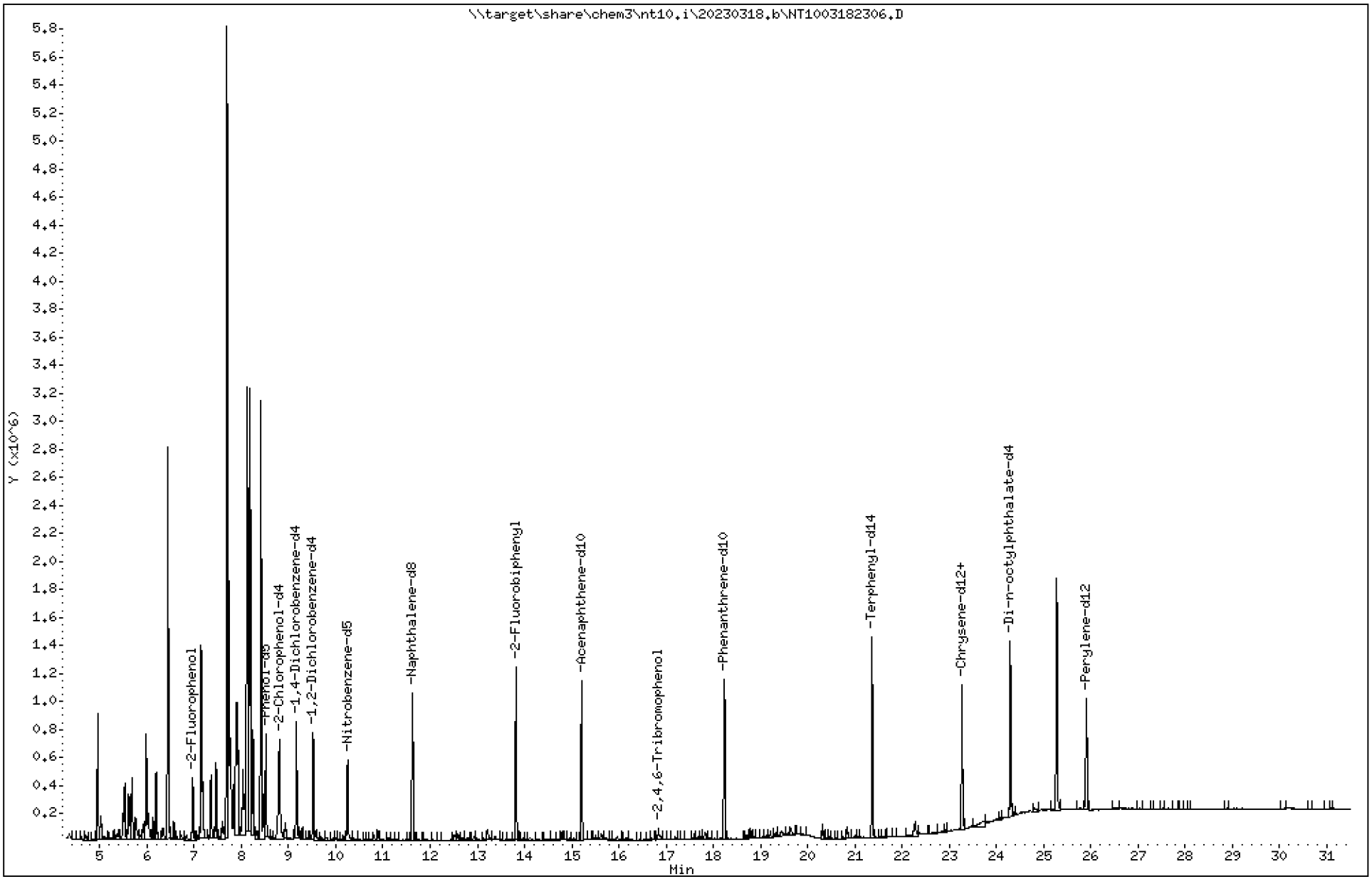
CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
108-95-2	Phenol	1	20.0	U	4.4	20.0
106-44-5	4-Methylphenol	1	20.0	U	7.4	20.0
91-20-3	Naphthalene	1	20.0	U	4.2	20.0
91-57-6	2-Methylnaphthalene	1	20.0	U	4.5	20.0
208-96-8	Acenaphthylene	1	20.0	U	6.2	20.0
131-11-3	Dimethylphthalate	1	20.0	U	4.4	20.0
83-32-9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

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	265	35.3	27 - 120	
Phenol-d5	750.00	435	58.0	29 - 120	
2-Chlorophenol-d4	750.00	343	45.8	31 - 120	
1,2-Dichlorobenzene-d4	500.00	359	71.9	32 - 120	
Nitrobenzene-d5	500.00	385	77.1	30 - 120	
2-Fluorobiphenyl	500.00	379	75.9	35 - 120	
2,4,6-Tribromophenol	750.00	62.7	8.35	24 - 134	*
p-Terphenyl-d14	500.00	422	84.5	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182306.D
Date : 18-MAR-2023 20:55
Client ID:
Sample Info: BLB0579-BLK1

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK1

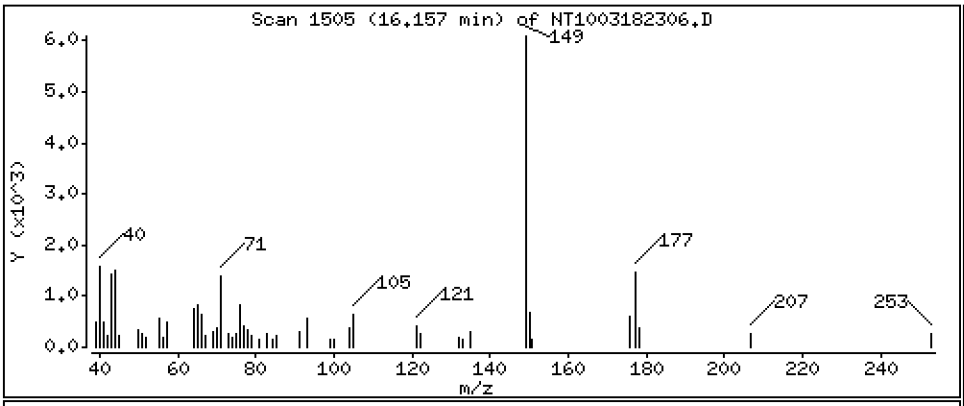
Operator: VTS

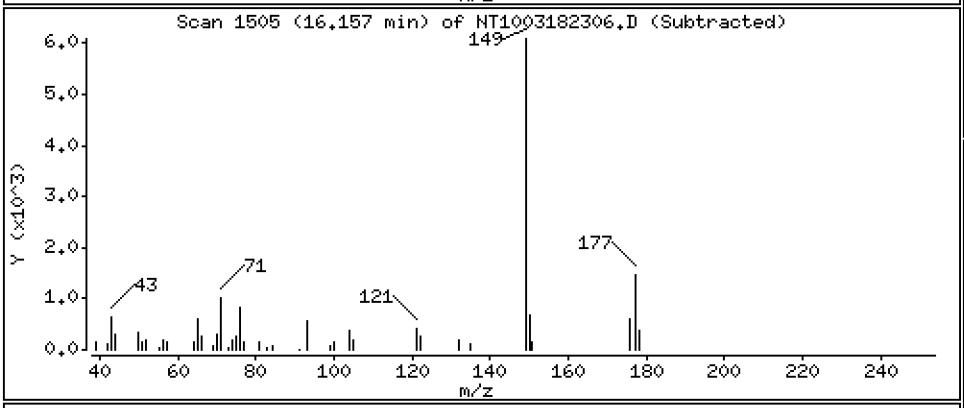
Column phase: ZB-5msi

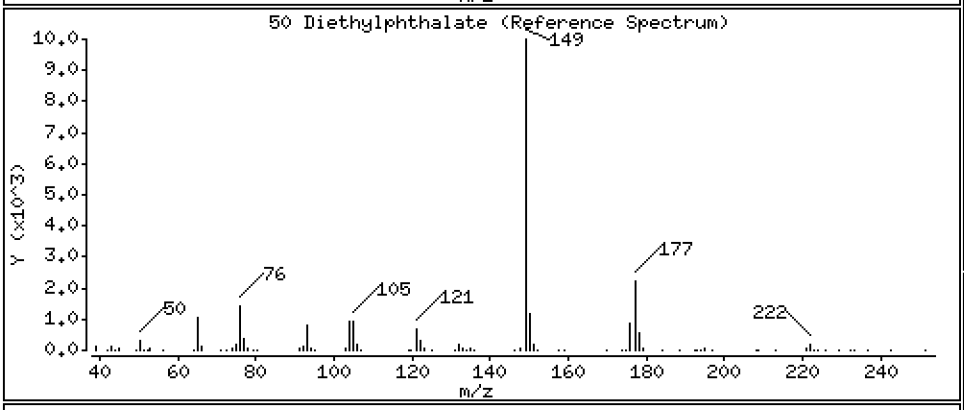
Column diameter: 0.25

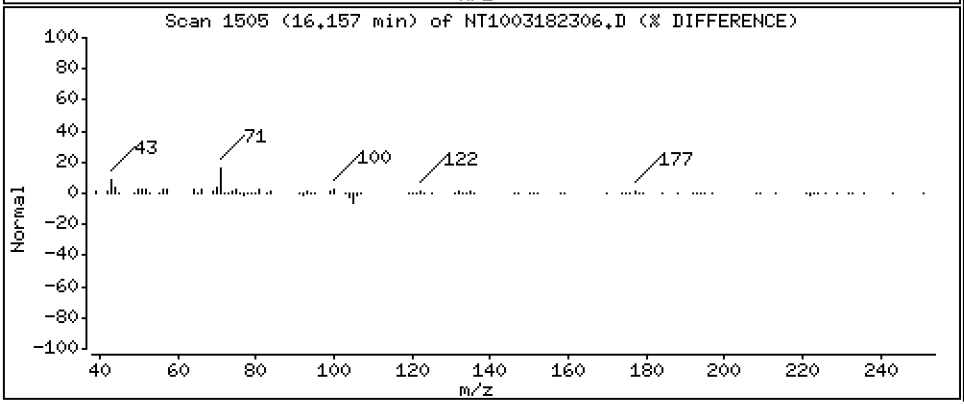
50 Diethylphthalate

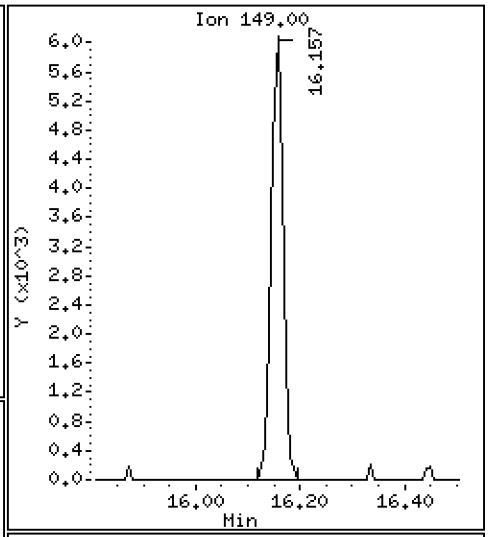
Concentration: 0.06630 ug/mL

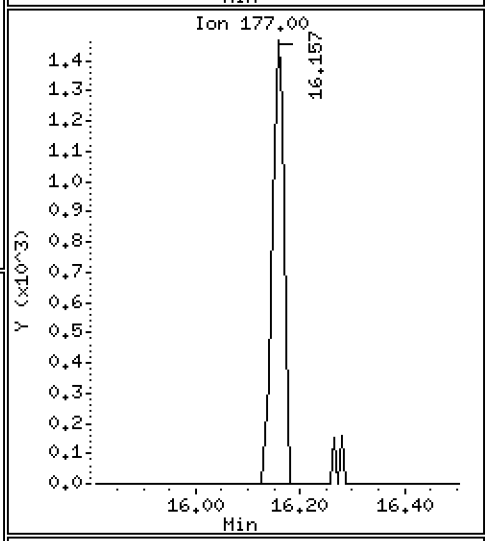


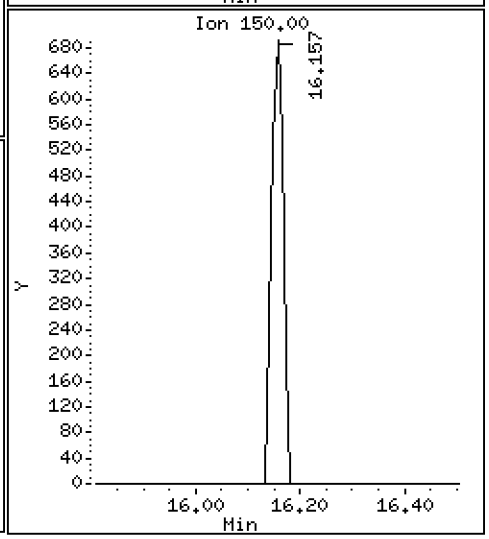












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182306.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK1

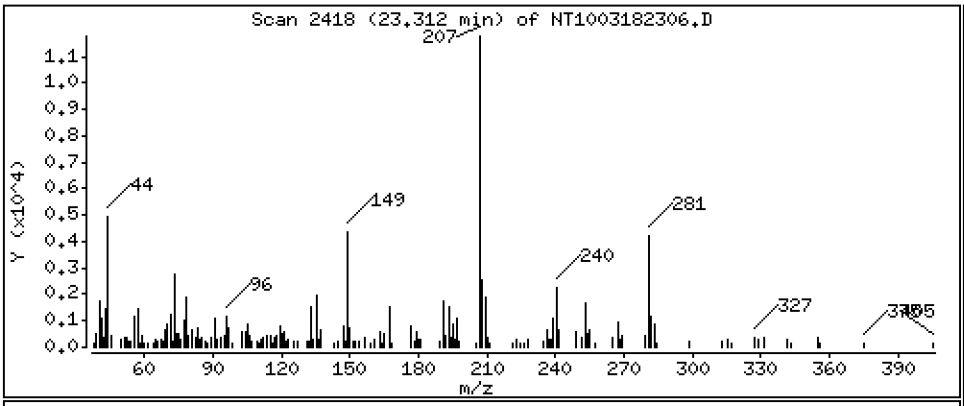
Operator: VTS

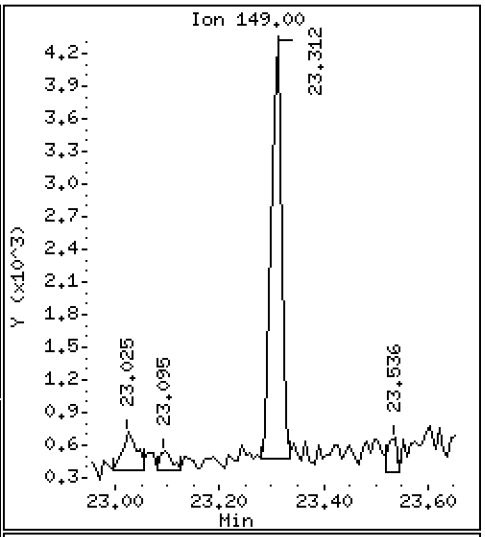
Column phase: ZB-5msi

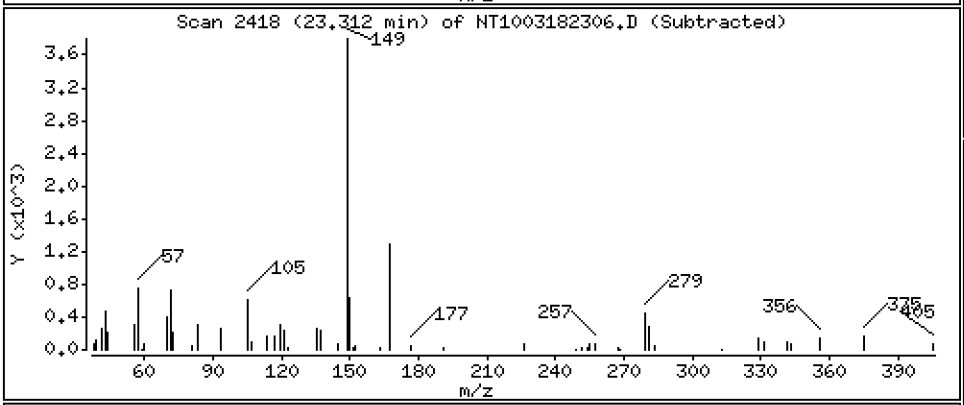
Column diameter: 0.25

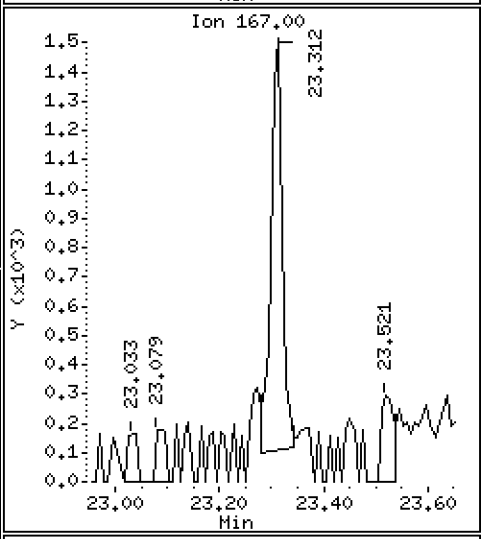
72 bis(2-Ethylhexyl)phthalate

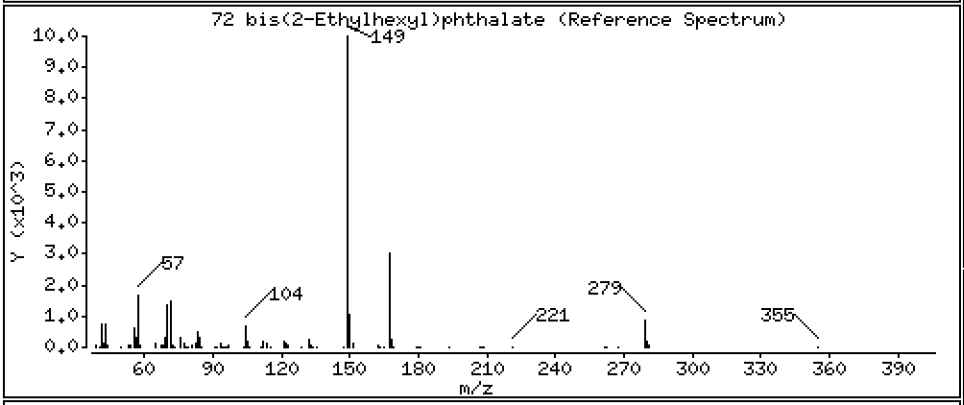
Concentration: 0.03607 ug/mL

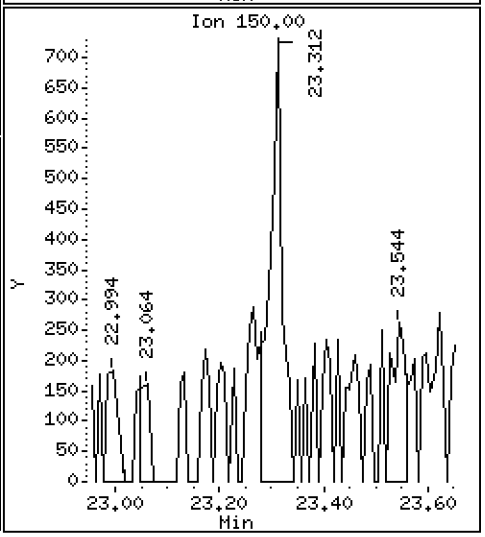


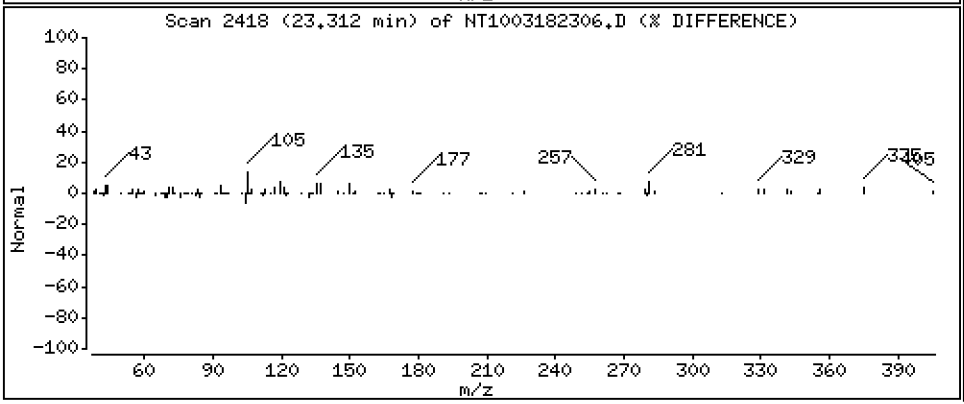












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182306.D
Lab Smp Id: BLB0579-BLK1
Inj Date : 18-MAR-2023 20:55
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-BLK1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.967	6.952	(0.760)	182025	2.64528	2.645
$	2	Phenol-d5	99	8.520	8.520	(0.930)	392789	4.35126	4.351
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	8.806	8.806	(0.961)	264688	3.43374	3.434
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6	2-Chlorophenol	128	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	227542	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	198927	3.59344	3.593
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15	4-Methylphenol	108	Compound Not Detected.					
$	18	Nitrobenzene-d5	82	10.249	10.249	(0.882)	315468	3.85449	3.854
	19	Nitrobenzene	77	Compound Not Detected.					
	20	Isophorone	82	Compound Not Detected.					
	21	2-Nitrophenol	139	Compound Not Detected.					
	22	2,4-Dimethylphenol	107	Compound Not Detected.					
	23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24	Benzoic acid	105	Compound Not Detected.					
	25	2,4-Dichlorophenol	162	Compound Not Detected.					
	26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27	Naphthalene-d8	136	11.623	11.623	(1.000)	810852	4.00000	
	28	Naphthalene	128	Compound Not Detected.					
	29	4-Chloroaniline	127	Compound Not Detected.					
	30	Hexachlorobutadiene	225	Compound Not Detected.					
	31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32	2-Methylnaphthalene	142	Compound Not Detected.					
	33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.820	13.820	(0.908)	646519	3.79315	3.793
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.213	15.213	(1.000)	430879	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	16.156	16.156	(1.062)	9105	0.06630	0.06630
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	16.843	16.843	(1.107)	12696	0.62659	0.6266
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.234	18.234	(1.000)	750996	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.368	21.360	(0.918)	766118	4.22295	4.223
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.272	23.272	(1.000)	586071	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	23.311	23.303	(0.960)	5144	0.03607	0.03607
*	134	Di-n-octylphthalate-d4	153	24.294	24.294	(1.000)	975272	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	25.905	25.897	(1.000)	628586	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182306.D
Lab Smp Id: BLB0579-BLK1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	227542	22.07
27 Naphthalene-d8	688740	344370	1377480	810852	17.73
42 Acenaphthene-d10	373663	186832	747326	430879	15.31
59 Phenanthrene-d10	652323	326162	1304646	750996	15.13
69 Chrysene-d12	537141	268571	1074282	586071	9.11
134 Di-n-octylphthala	947608	473804	1895216	975272	2.92
77 Perylene-d12	602550	301275	1205100	628586	4.32

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.62	0.00
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	0.00
77 Perylene-d12	25.90	25.40	26.40	25.91	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182306.D

Lab ID: BLB0579-BLK1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 20:55

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT1003182302.D

On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

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

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 21:33
Batch:	BLB0579	Laboratory ID:	BLB0579-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Phenol	500	345		69.1	34 - 120
4-Methylphenol	500	363		72.7	29 - 120
Naphthalene	500	384		76.8	43 - 120
2-Methylnaphthalene	500	389		77.8	43 - 120
Acenaphthylene	500	388		77.5	42 - 120
Dimethylphthalate	500	470		94.1	43 - 120
Acenaphthene	500	413		82.5	45 - 120
Dibenzofuran	500	418		83.5	43 - 120
Fluorene	500	249	Q	49.8	45 - 120
Phenanthrene	500	434		86.9	49 - 120
Anthracene	500	387		77.4	45 - 120
Fluoranthene	500	461		92.3	53 - 145
Pyrene	500	454		90.7	52 - 134
Butylbenzylphthalate	500	557		111	45 - 132
Benzo(a)anthracene	500	461		92.3	49 - 120
Chrysene	500	447		89.4	47 - 120
bis(2-Ethylhexyl)phthalate	500	478		95.6	34 - 130
Benzofluoranthenes, Total	1000	983		98.3	30 - 160
Benzo(a)pyrene	500	462		92.5	42 - 120
Indeno(1,2,3-cd)pyrene	500	476		95.1	42 - 163
Dibenzo(a,h)anthracene	500	482		96.5	30 - 133
Benzo(g,h,i)perylene	500	477		95.5	46 - 148

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	396		79.2	13.7	30	34 - 120
4-Methylphenol	500	405		81.0	10.8	30	29 - 120
Naphthalene	500	424		84.8	9.97	30	43 - 120
2-Methylnaphthalene	500	428		85.6	9.51	30	43 - 120
Acenaphthylene	500	421		84.2	8.22	30	42 - 120
Dimethylphthalate	500	491		98.1	4.21	30	43 - 120
Acenaphthene	500	450		89.9	8.61	30	45 - 120

* Indicates values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270E

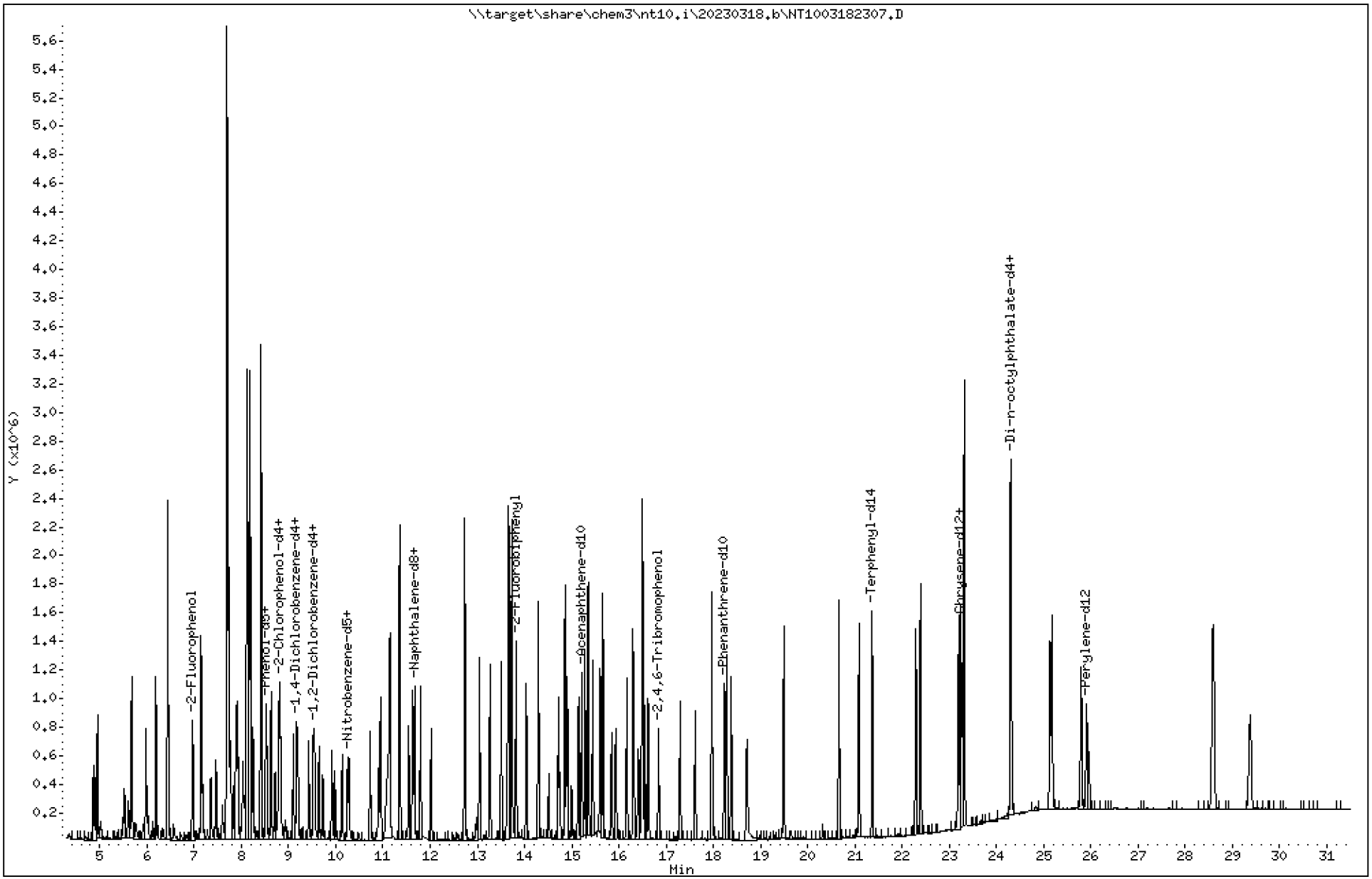
Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 22:12
Batch:	BLB0579	Laboratory ID:	BLB0579-BSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS Dup
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Dibenzofuran	500	446		89.1	6.48	30	43 - 120
Fluorene	500	266	Q	53.2	6.59	30	45 - 120
Phenanthrene	500	451		90.1	3.64	30	49 - 120
Anthracene	500	404		80.9	4.41	30	45 - 120
Fluoranthene	500	469		93.8	1.61	30	53 - 145
Pyrene	500	460		92.0	1.37	30	52 - 134
Butylbenzylphthalate	500	558		112	0.171	30	45 - 132
Benzo(a)anthracene	500	477		95.5	3.40	30	49 - 120
Chrysene	500	463		92.7	3.57	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	471		94.1	1.52	30	34 - 130
Benzofluoranthenes, Total	1000	1020		102	3.48	30	30 - 160
Benzo(a)pyrene	500	481		96.3	4.02	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	464		92.9	2.38	30	42 - 163
Dibenzo(a,h)anthracene	500	473		94.6	1.97	30	30 - 133
Benzo(g,h,i)perylene	500	468		93.6	2.01	30	46 - 148

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D
Date : 18-MAR-2023 21:33
Client ID:
Sample Info: BLB0579-BS1

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

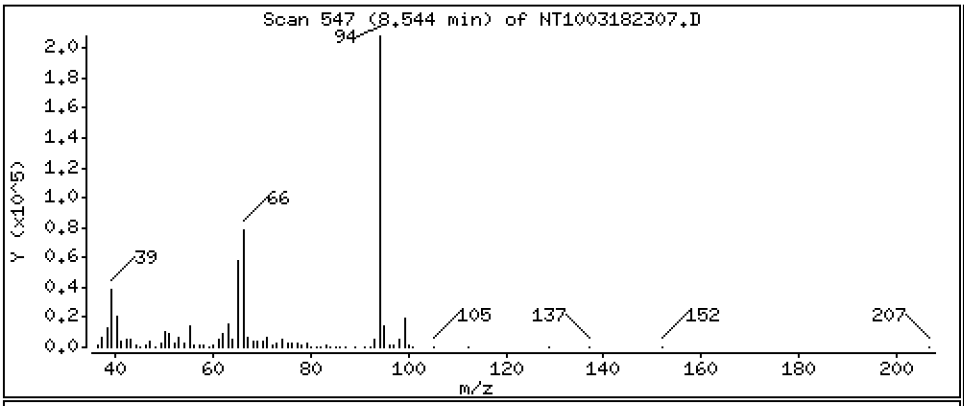
Operator: VTS

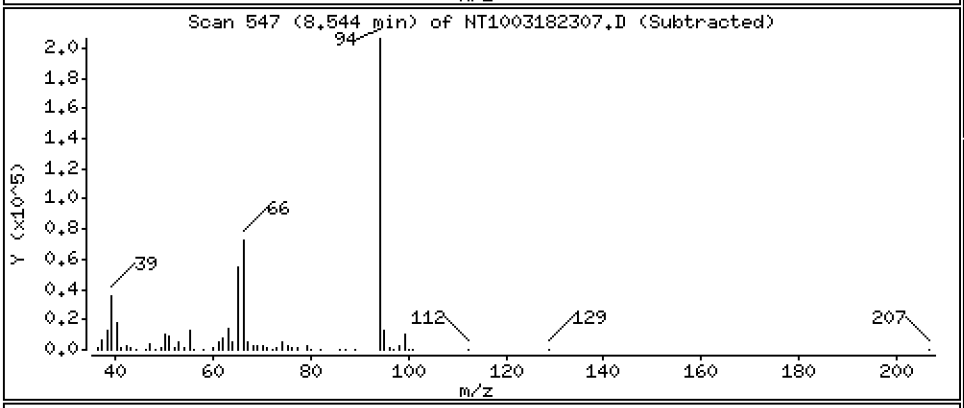
Column phase: ZB-5msi

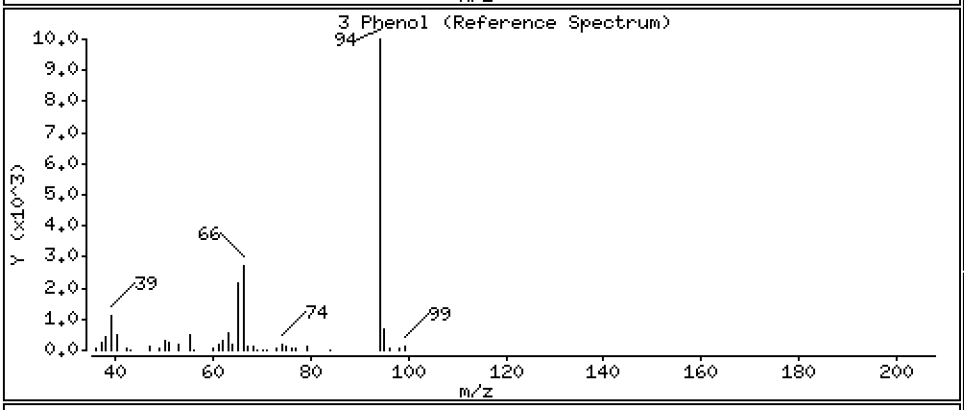
Column diameter: 0.25

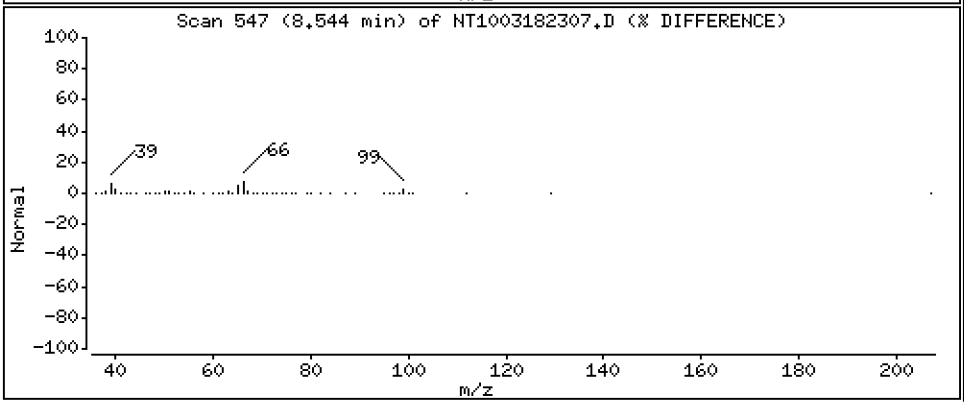
3 Phenol

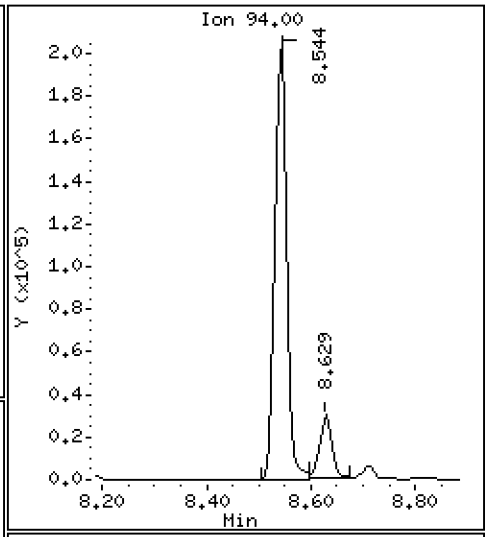
Concentration: 3.453 ug/mL

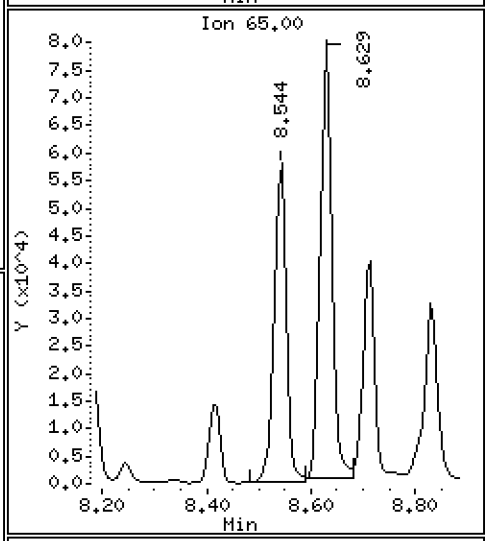


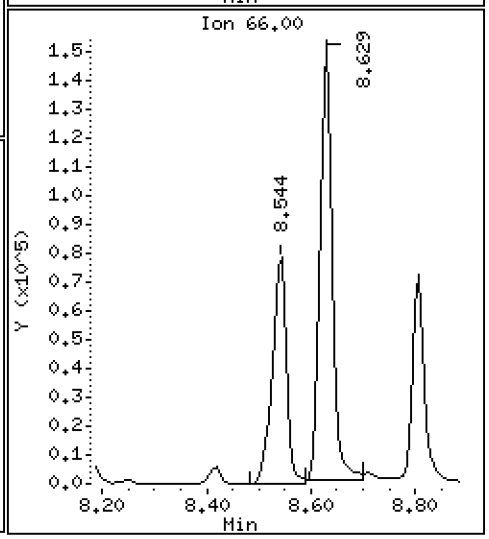












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

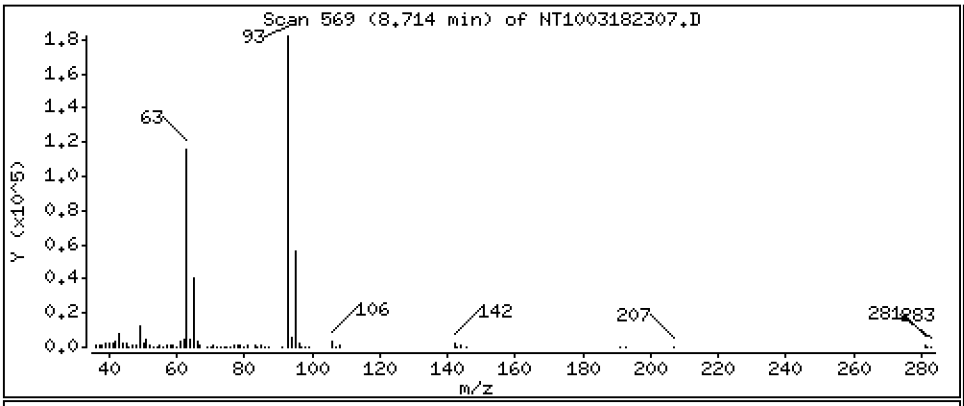
Operator: VTS

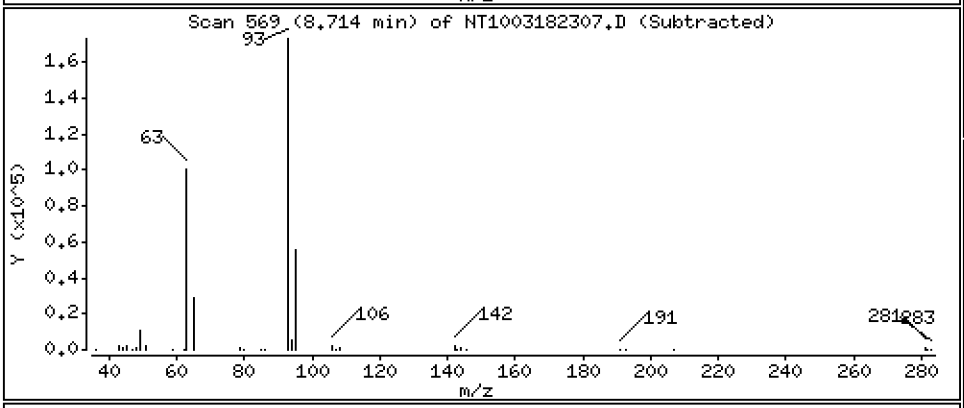
Column phase: ZB-5msi

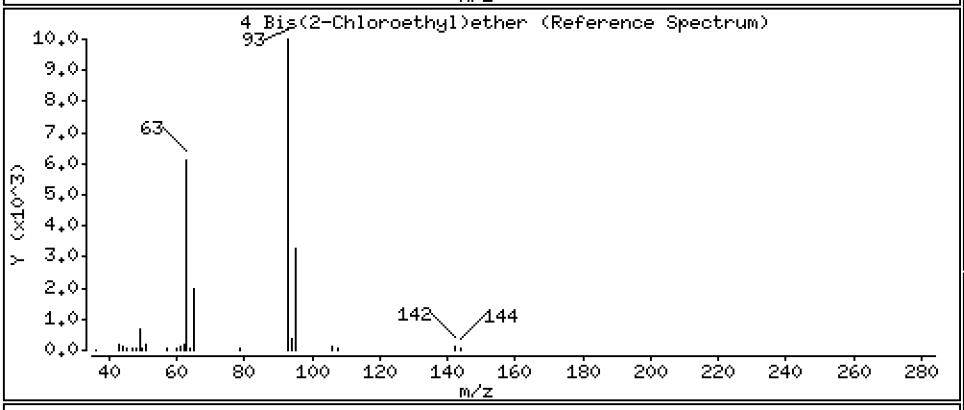
Column diameter: 0.25

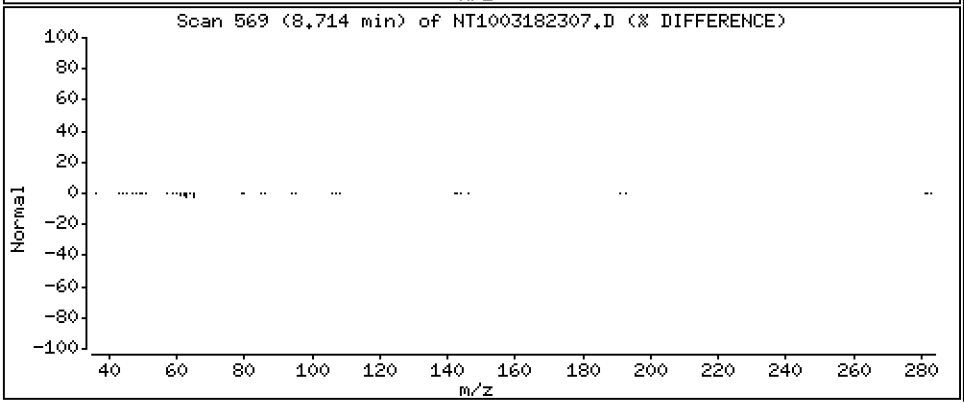
4 Bis(2-Chloroethyl)ether

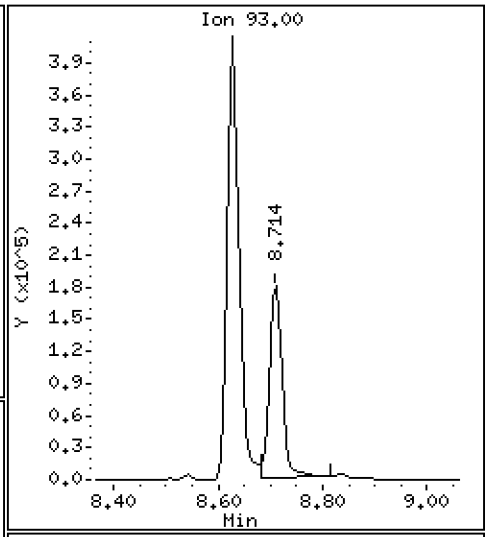
Concentration: 4.396 ug/mL

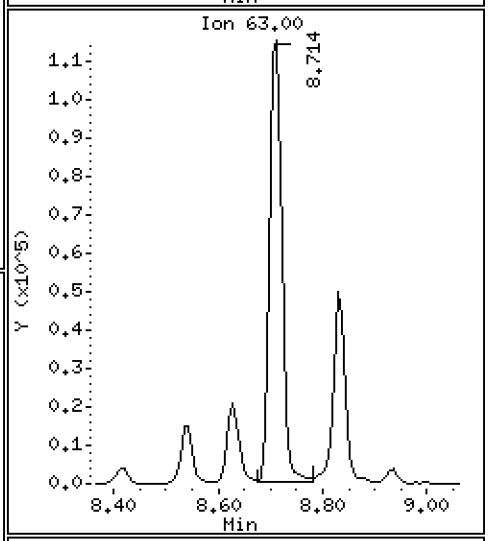


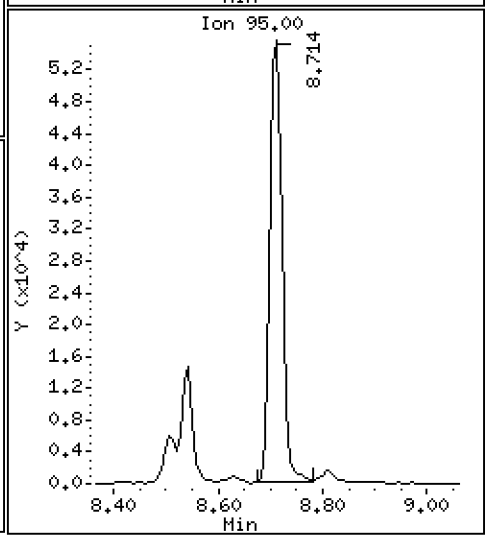












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

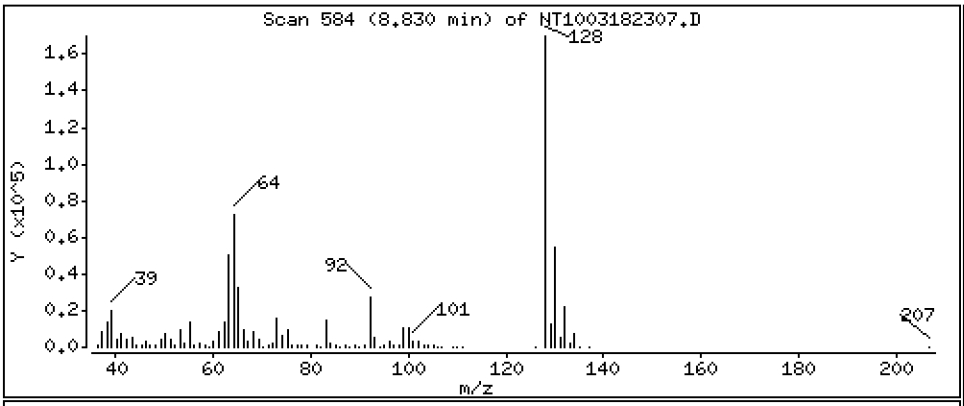
Operator: VTS

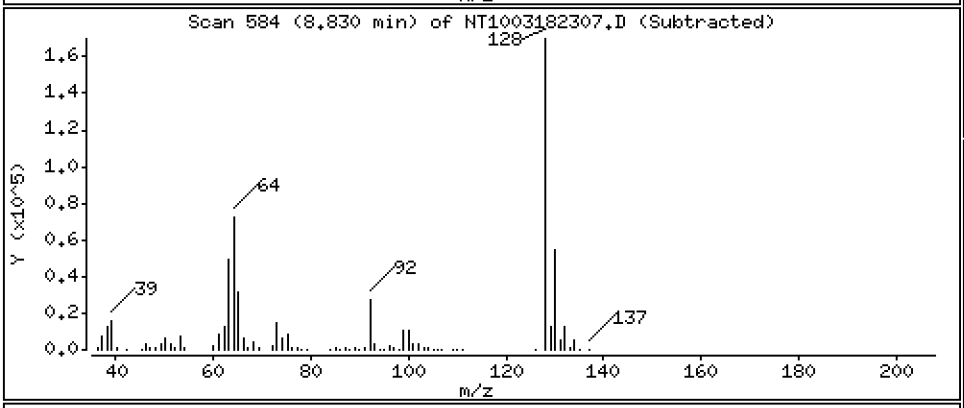
Column phase: ZB-5msi

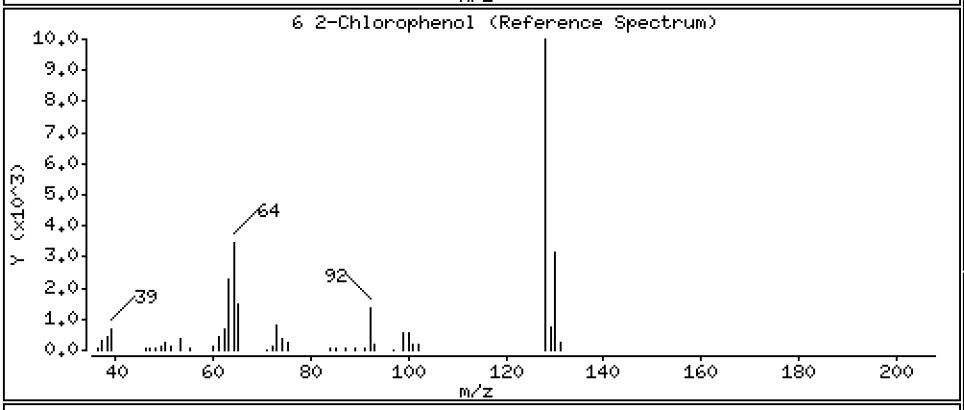
Column diameter: 0.25

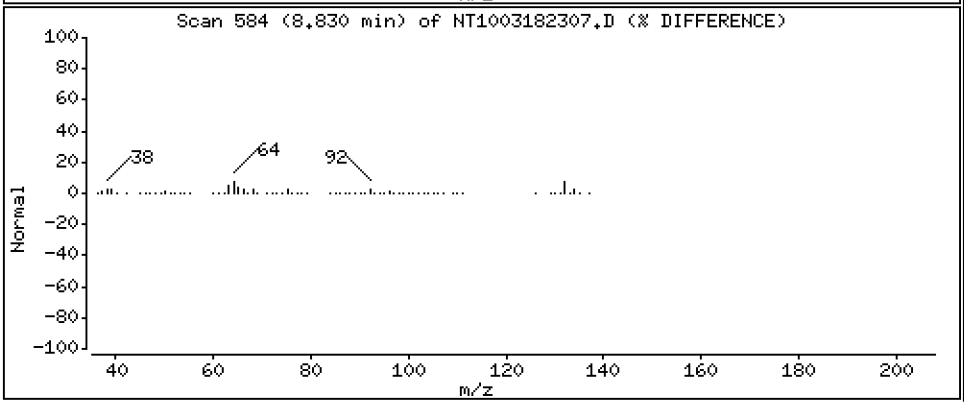
6 2-Chlorophenol

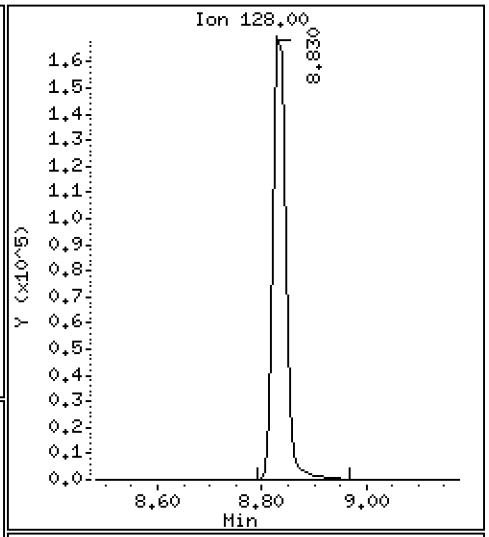
Concentration: 3.589 ug/mL

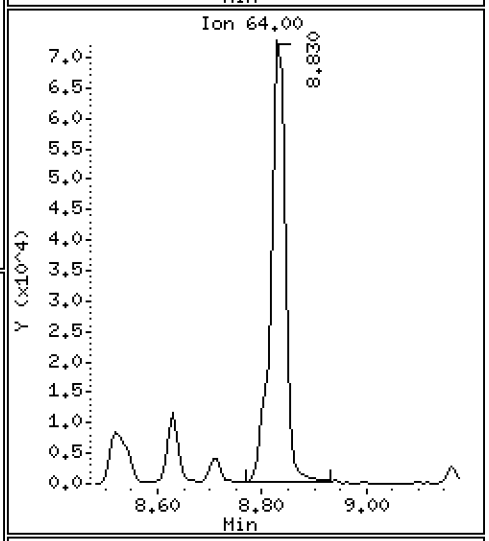


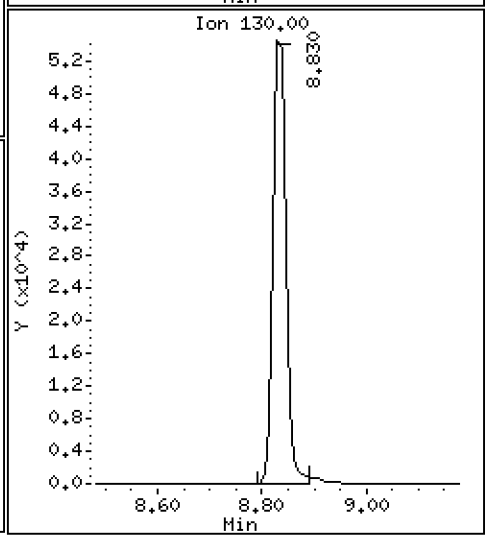












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

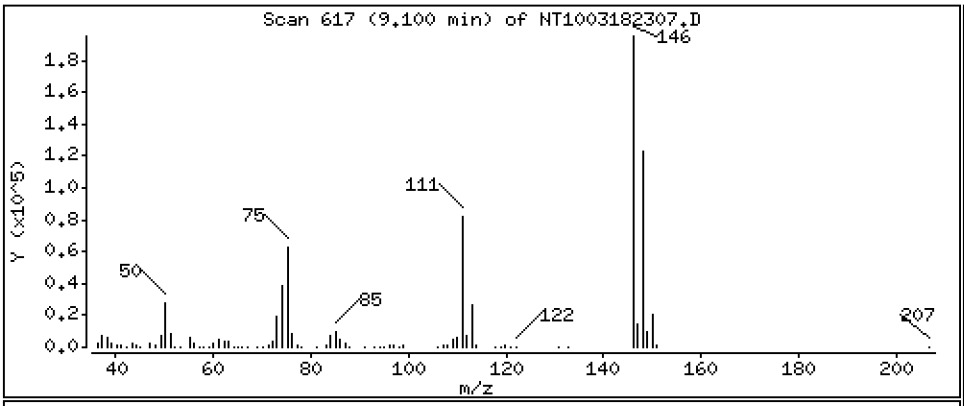
Operator: VTS

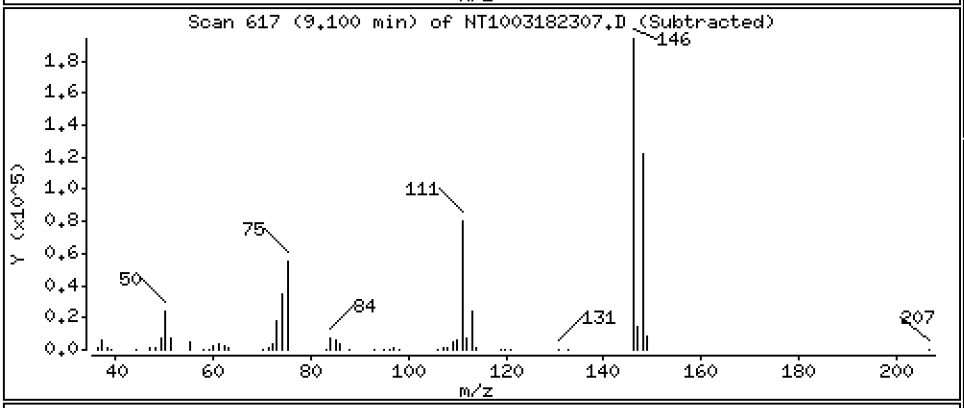
Column phase: ZB-5msi

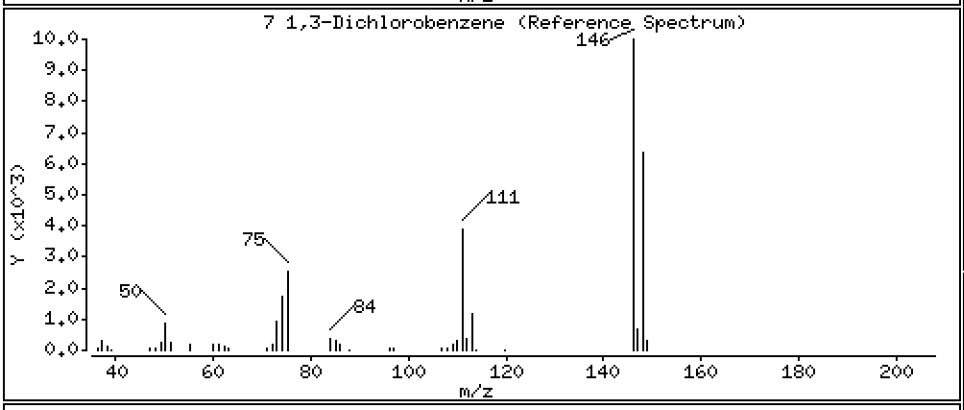
Column diameter: 0.25

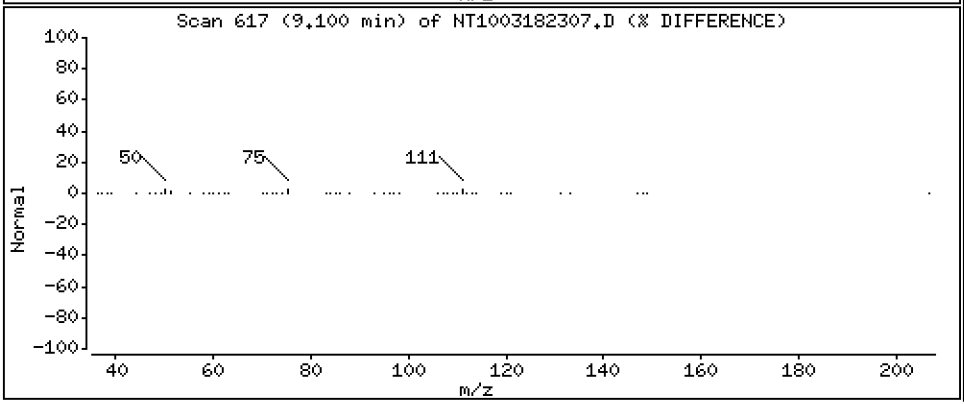
7 1,3-Dichlorobenzene

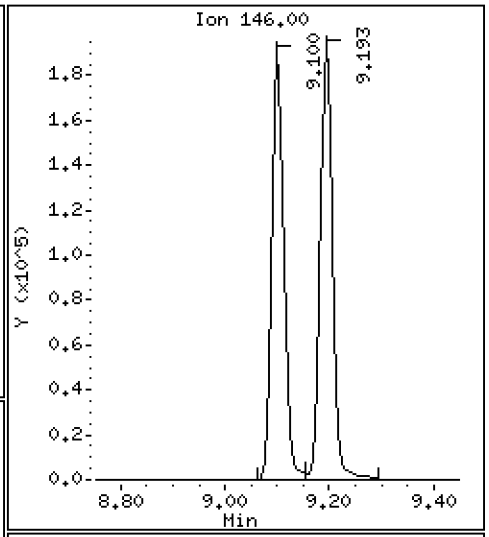
Concentration: 3.680 ug/mL

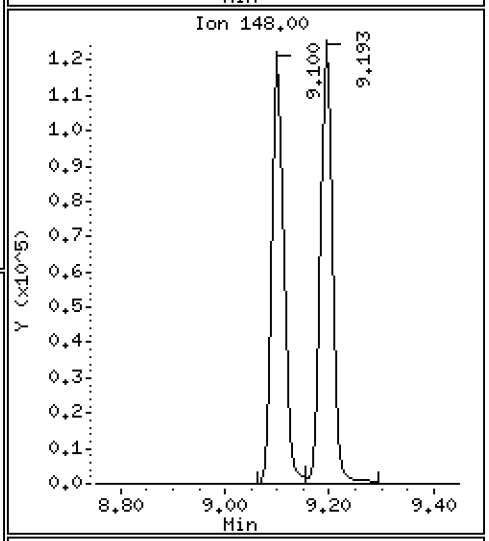


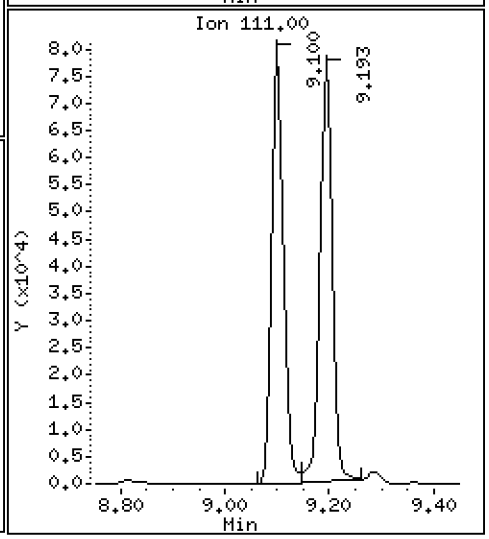












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

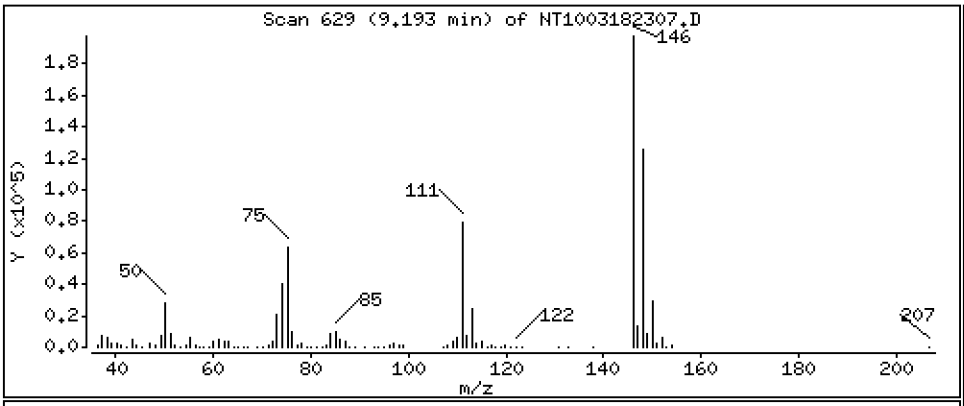
Operator: VTS

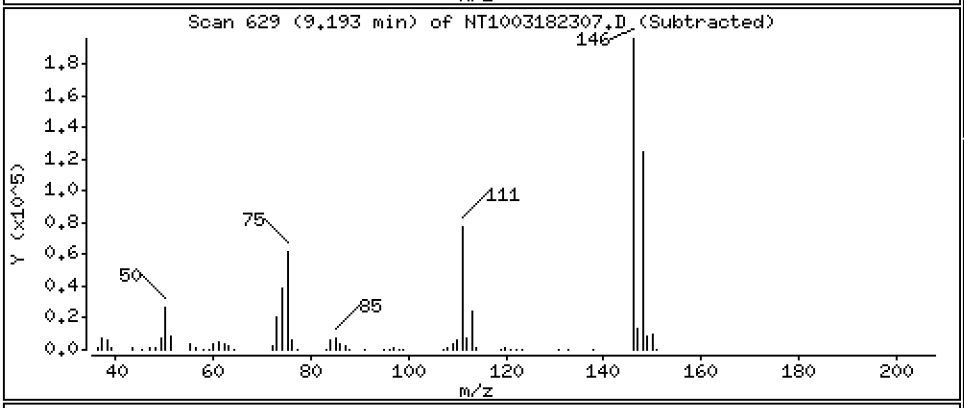
Column phase: ZB-5msi

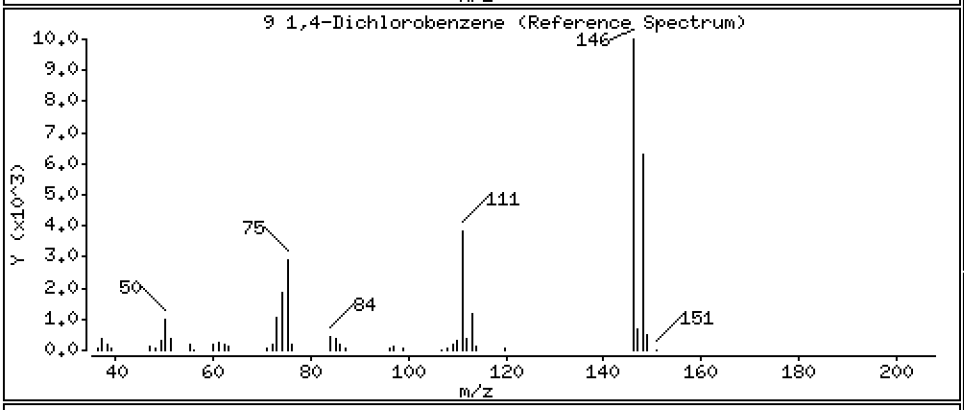
Column diameter: 0.25

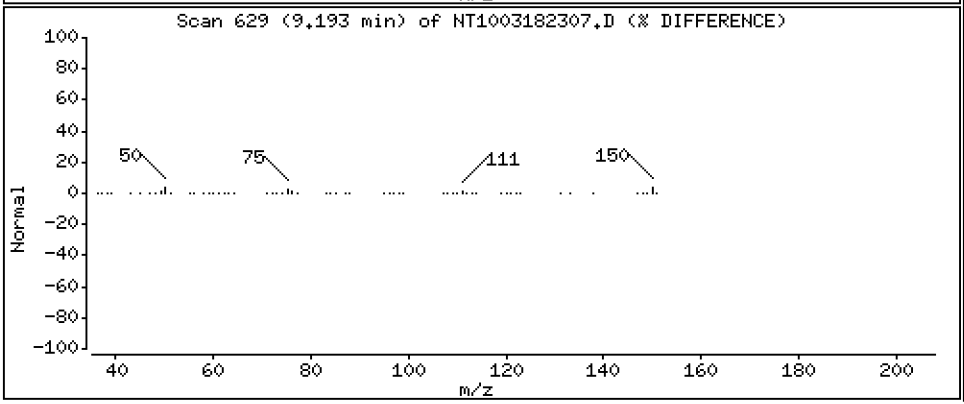
9 1,4-Dichlorobenzene

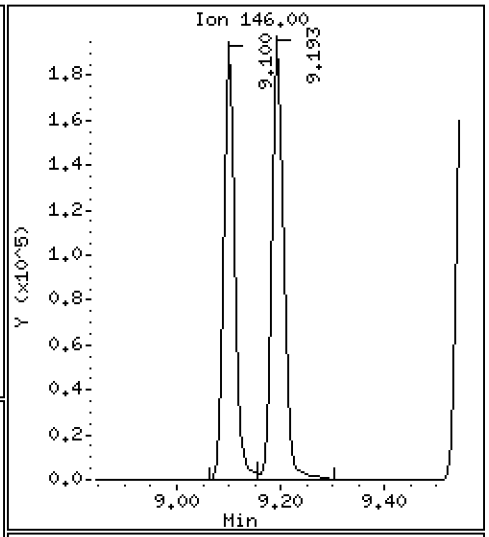
Concentration: 3.849 ug/mL

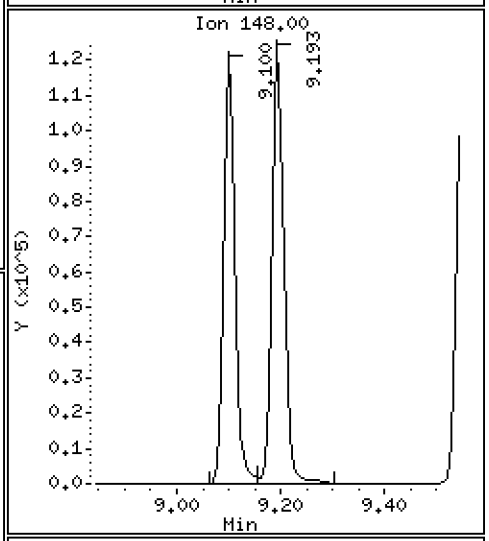


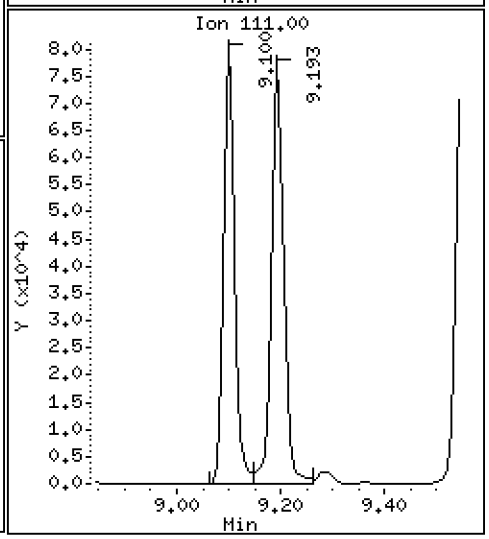












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

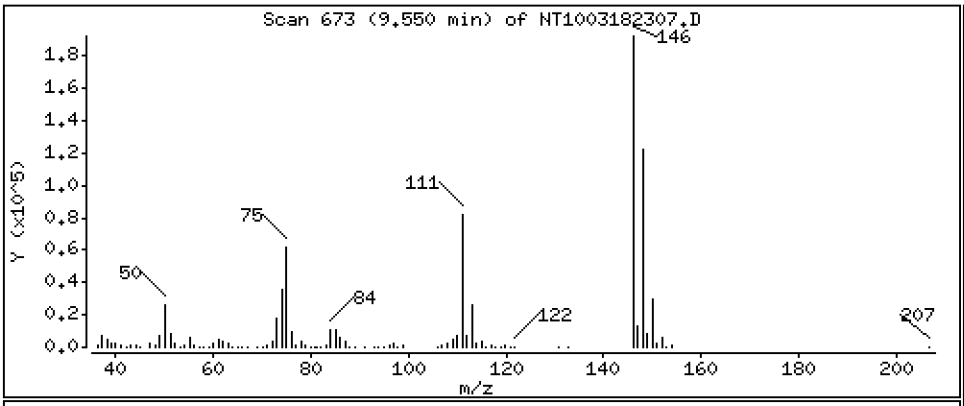
Operator: VTS

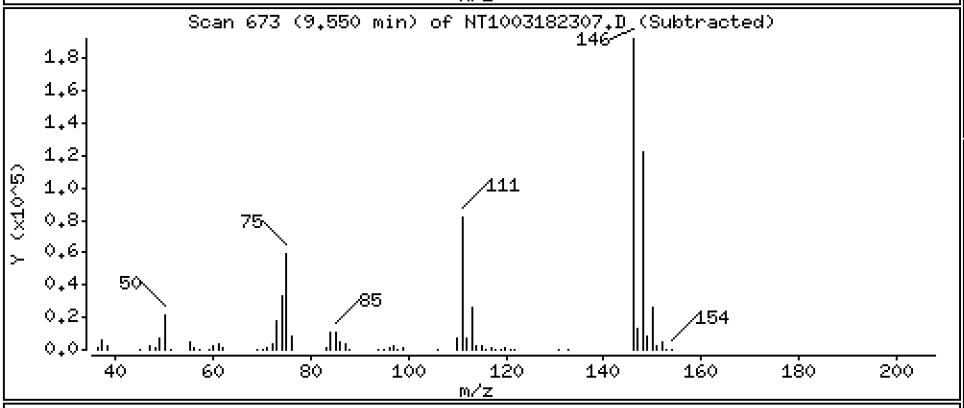
Column phase: ZB-5msi

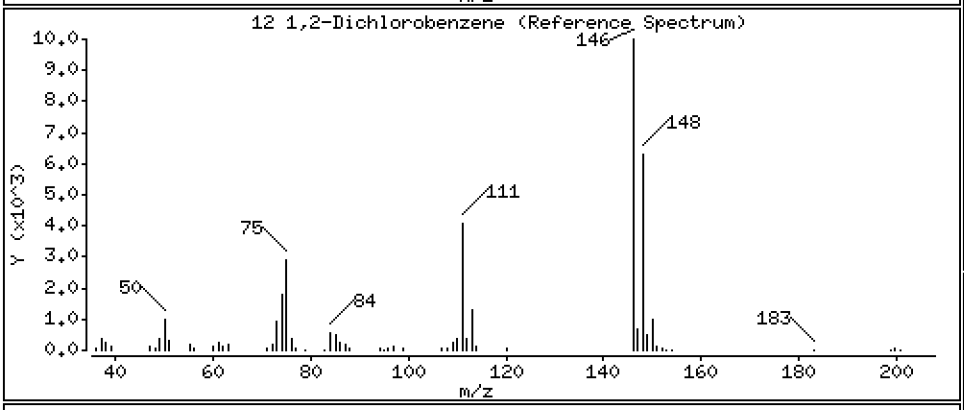
Column diameter: 0.25

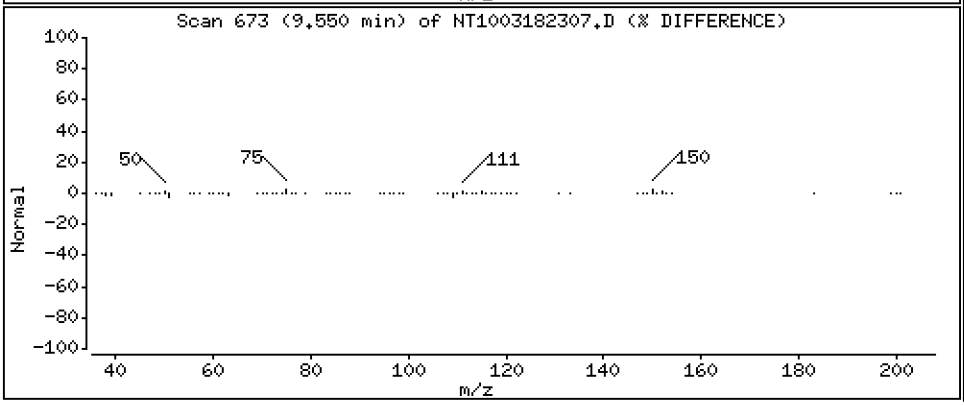
12 1,2-Dichlorobenzene

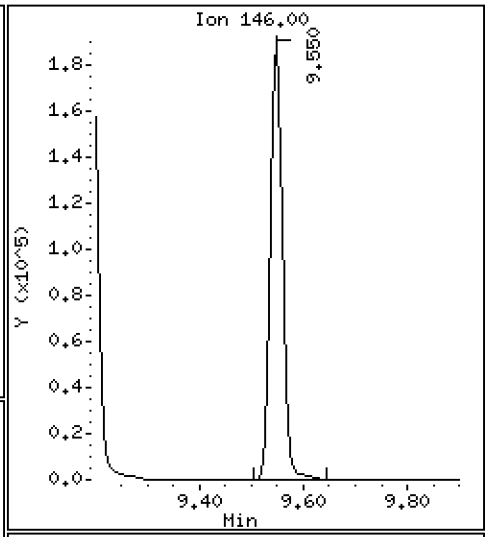
Concentration: 3.788 ug/mL

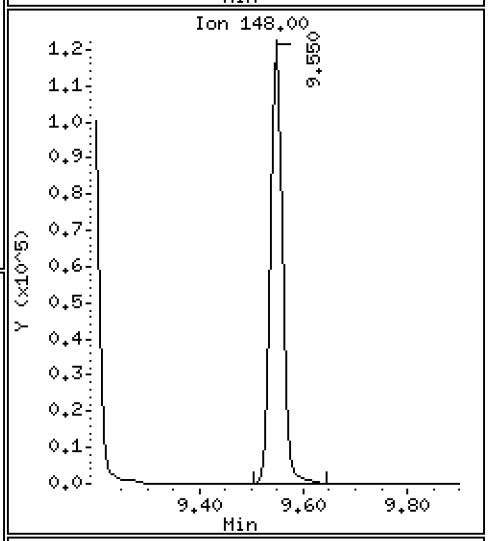


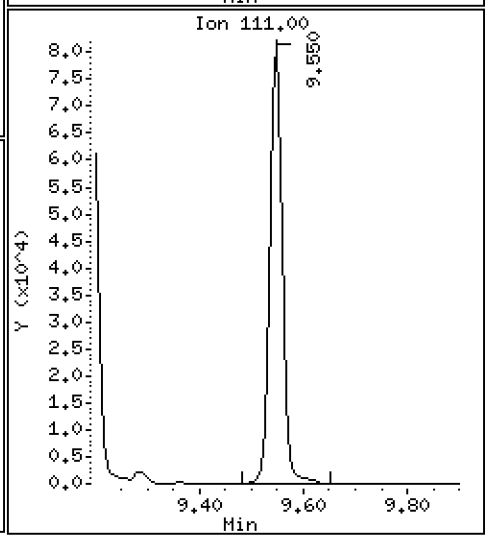












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

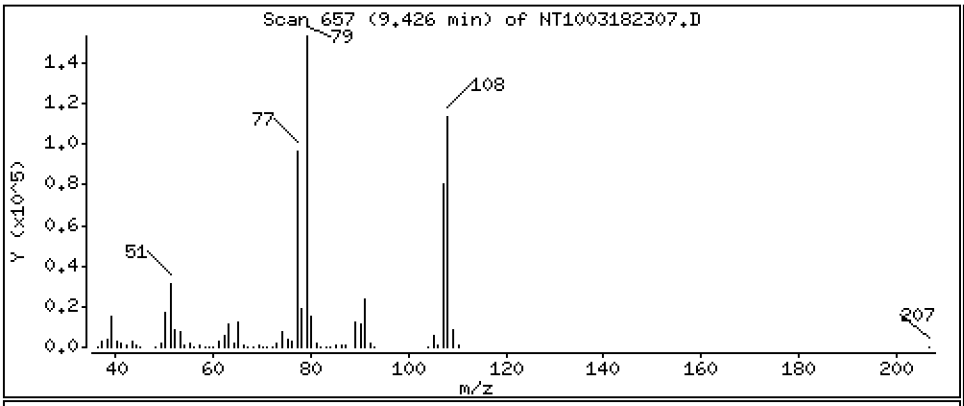
Operator: VTS

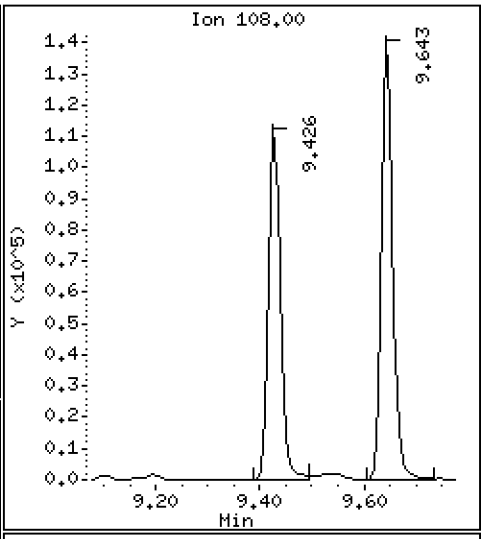
Column phase: ZB-5msi

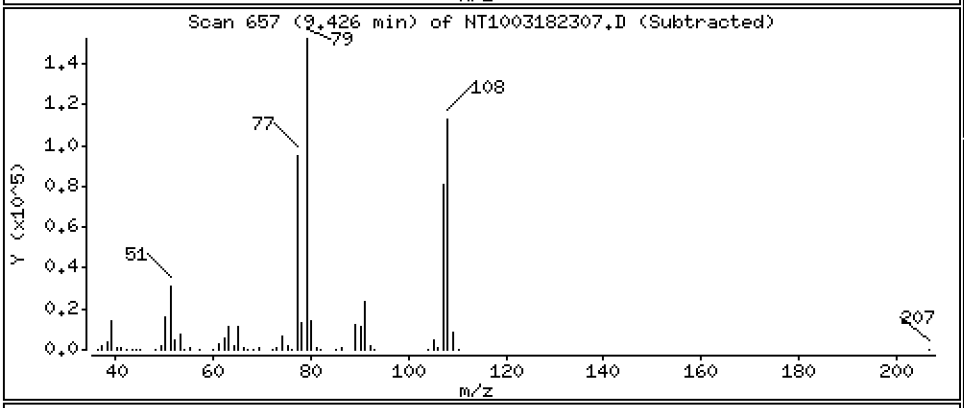
Column diameter: 0.25

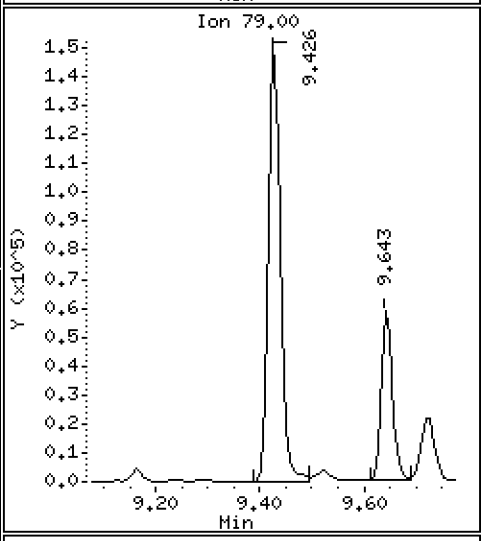
11 Benzyl alcohol

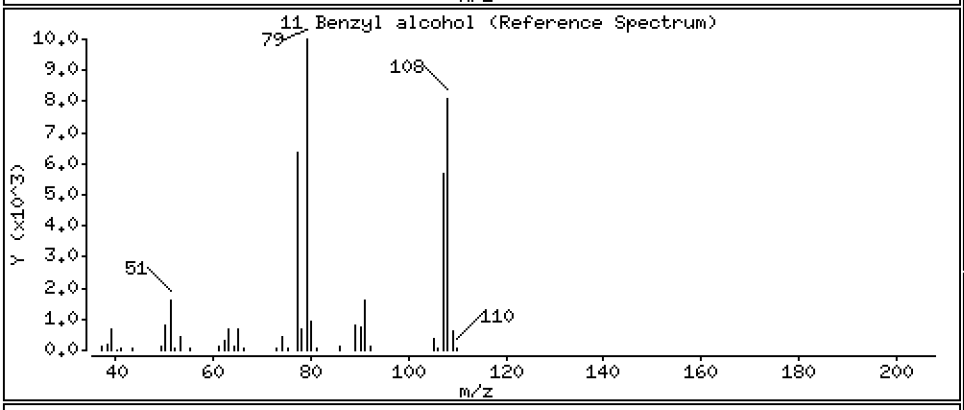
Concentration: 4.005 ug/mL

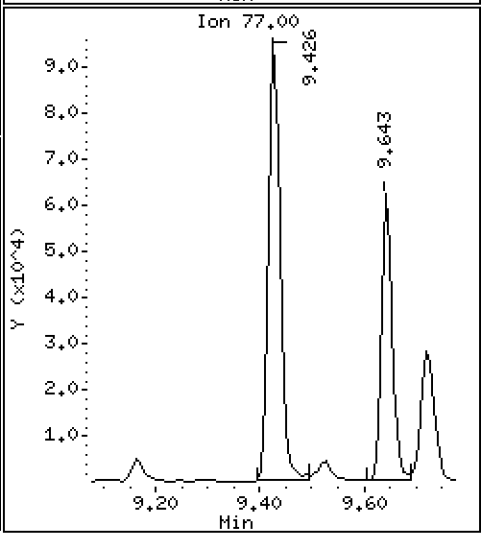


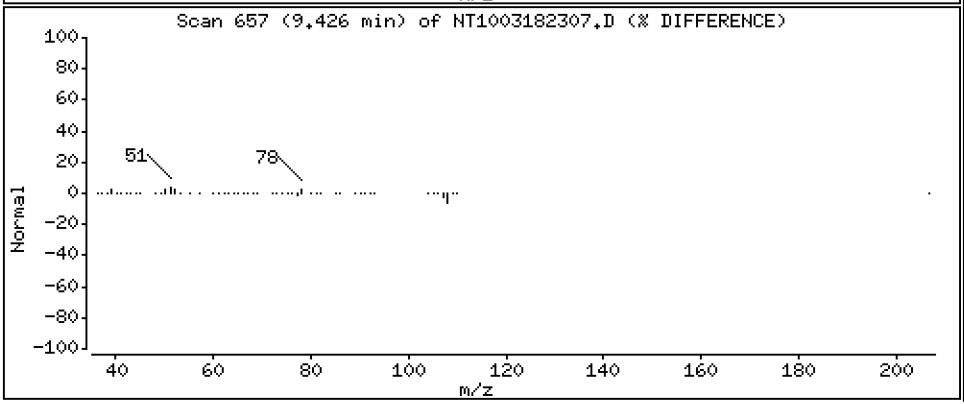












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

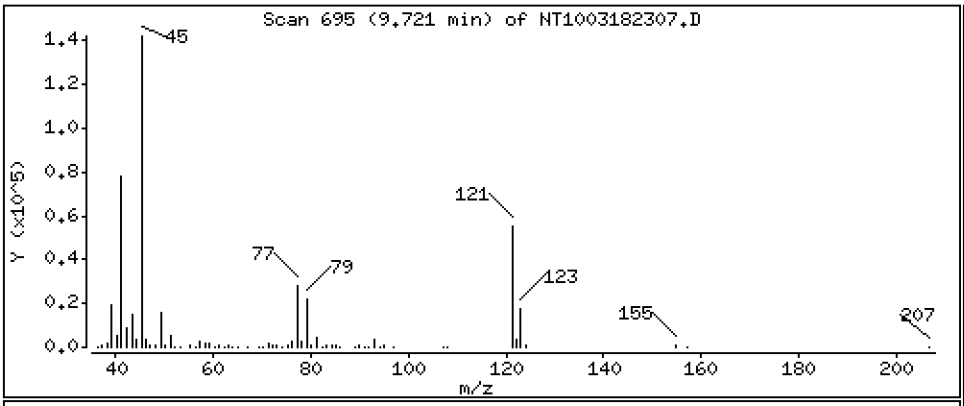
Operator: VTS

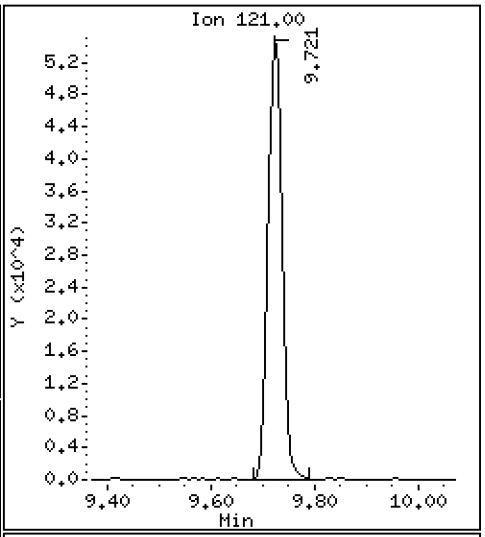
Column phase: ZB-5msi

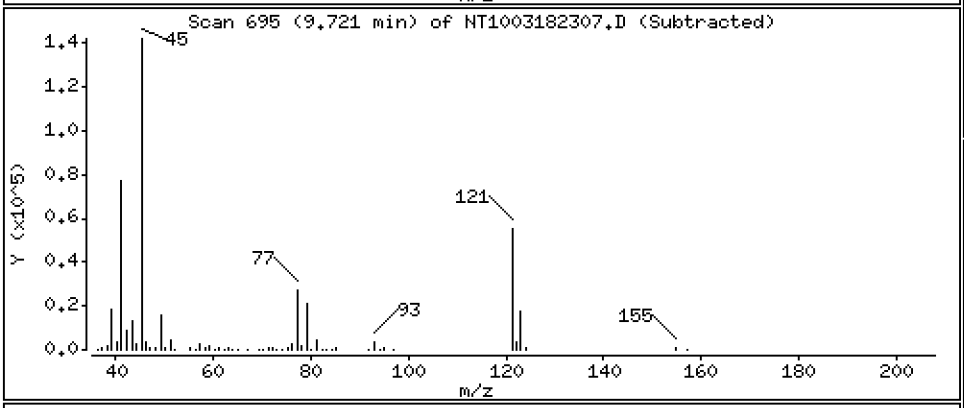
Column diameter: 0.25

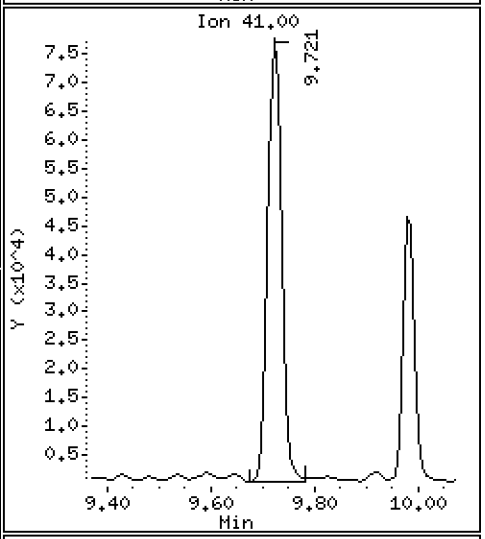
14 2,2'-oxybis(1-Chloropropane)

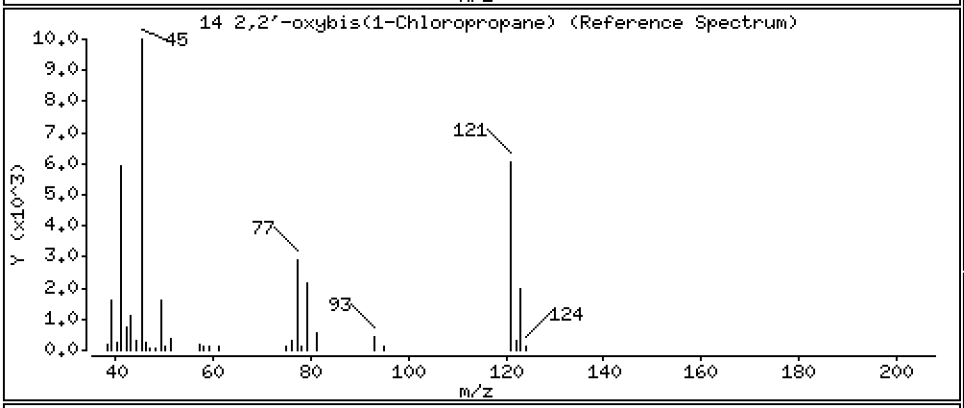
Concentration: 4.384 ug/mL

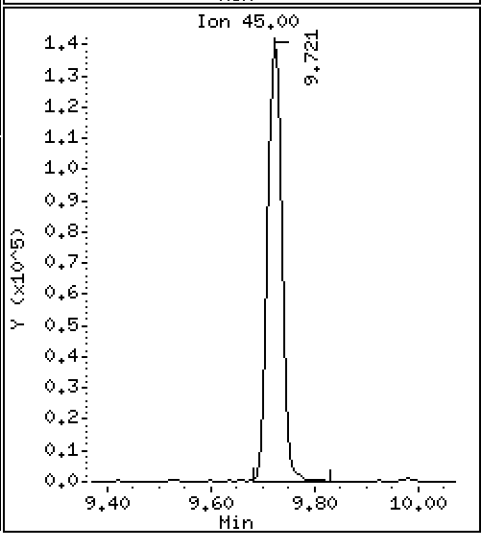


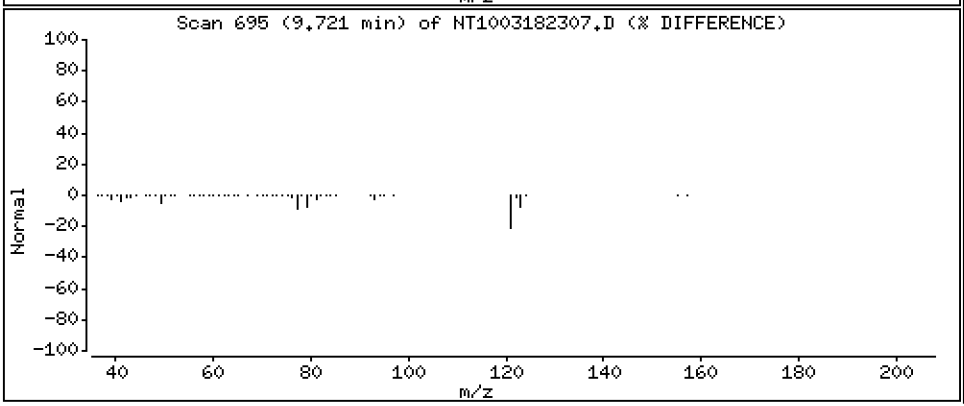












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

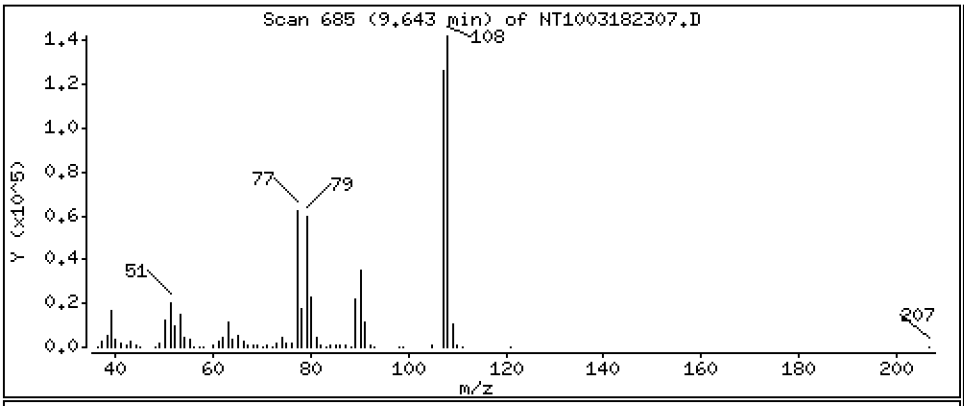
Operator: VTS

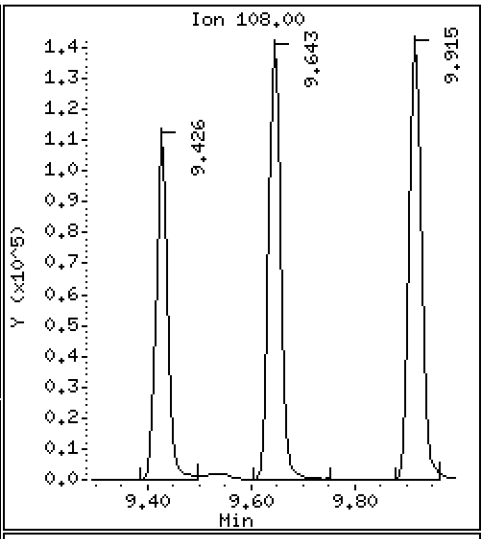
Column phase: ZB-5msi

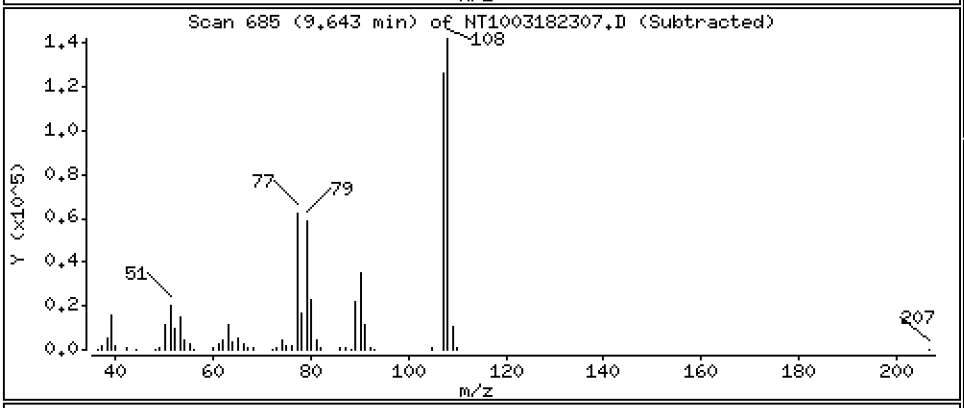
Column diameter: 0.25

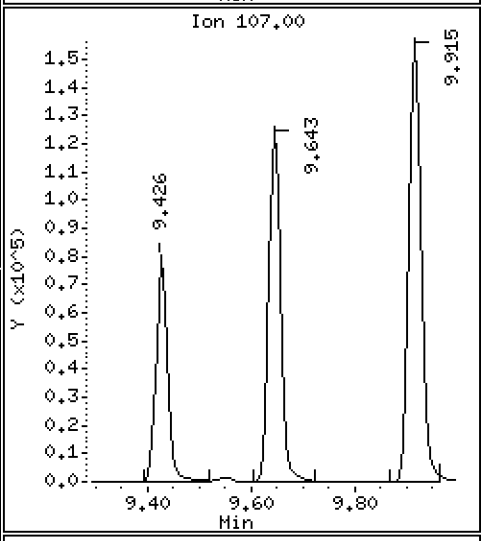
13 2-Methylphenol

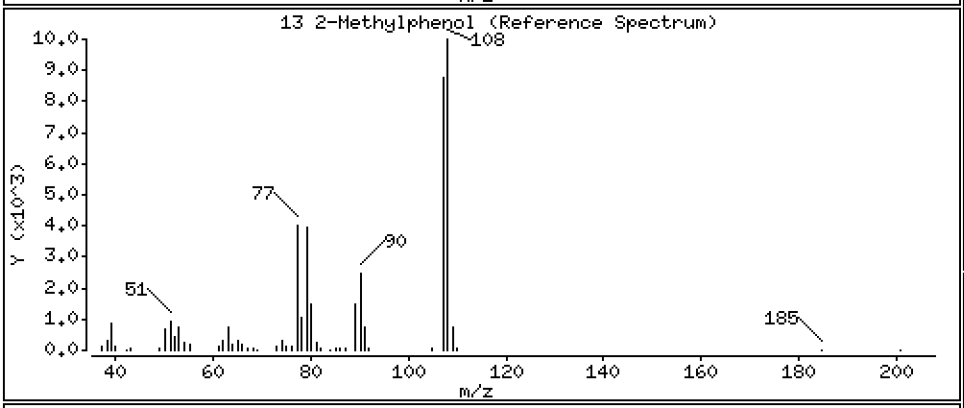
Concentration: 3.256 ug/mL

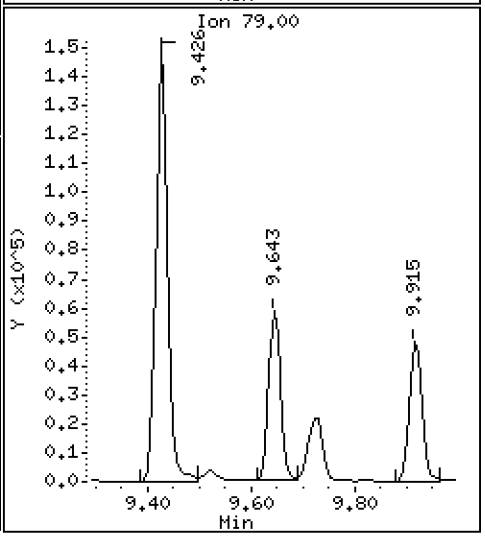


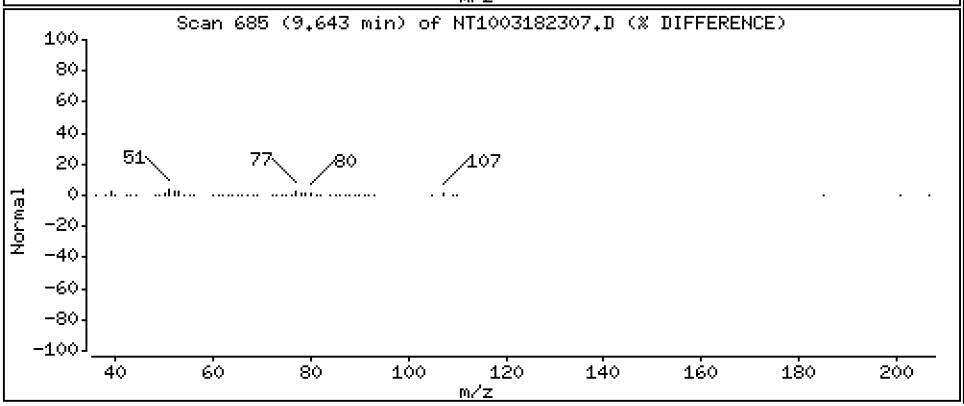












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

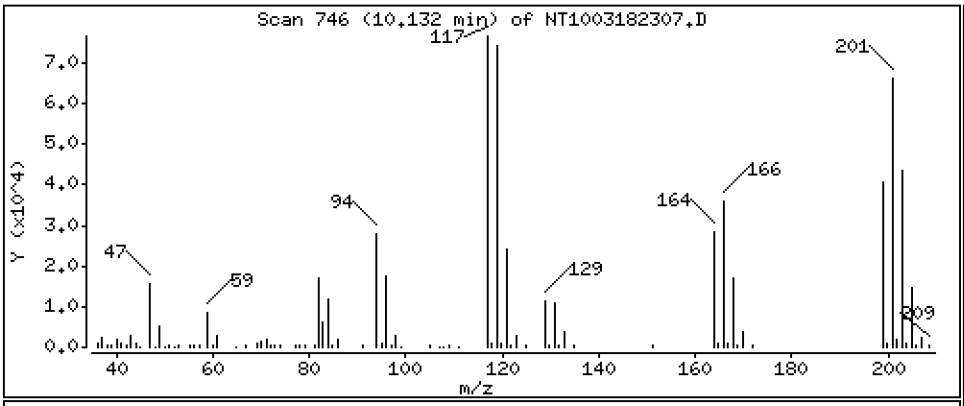
Operator: VTS

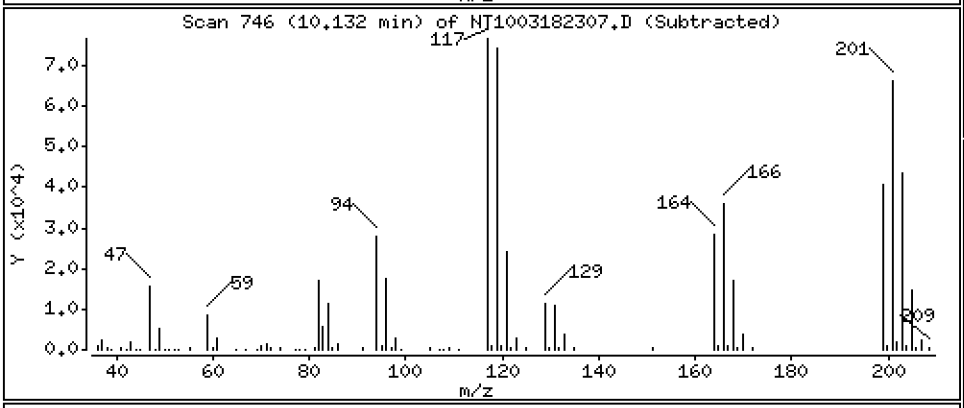
Column phase: ZB-5msi

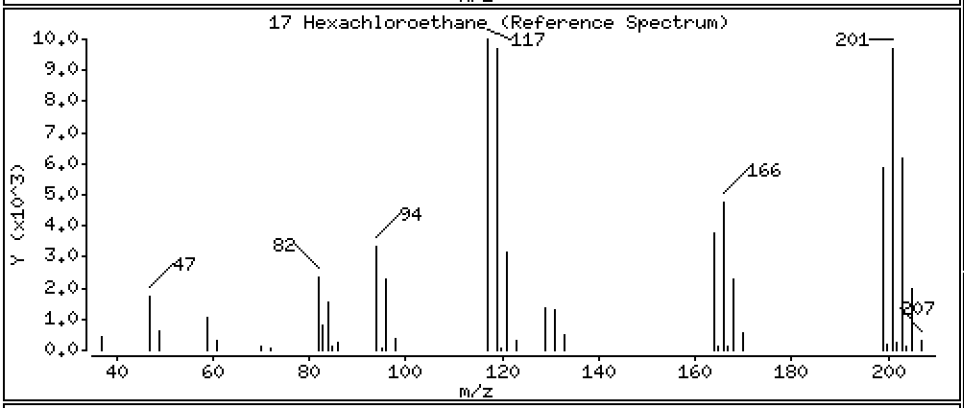
Column diameter: 0.25

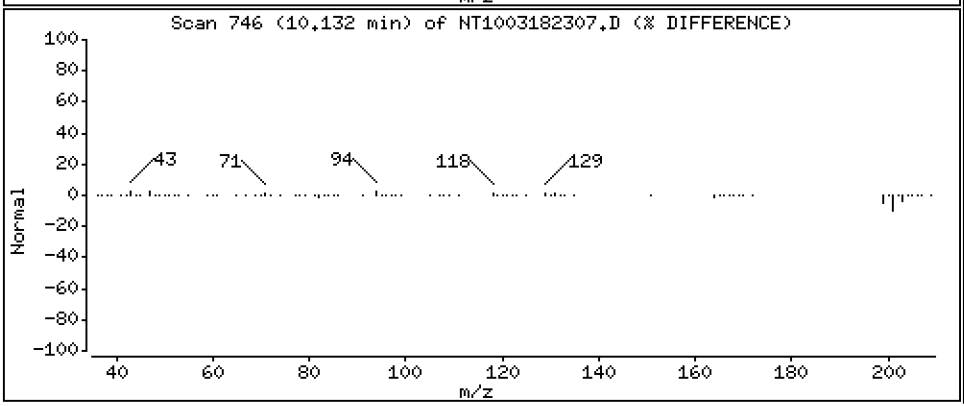
17 Hexachloroethane

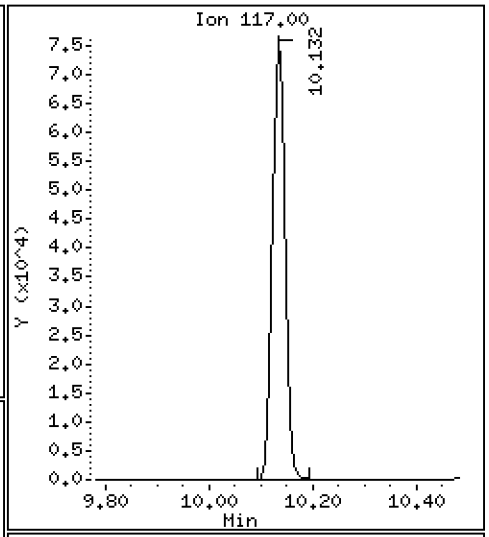
Concentration: 3.763 ug/mL

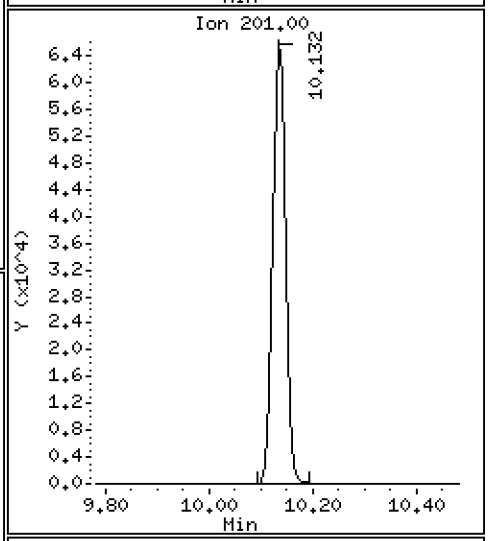


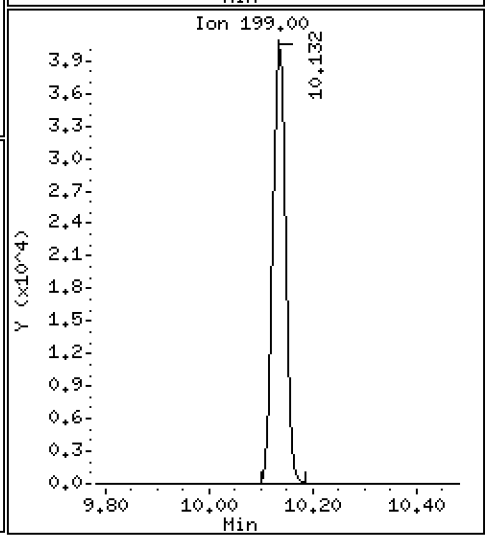












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

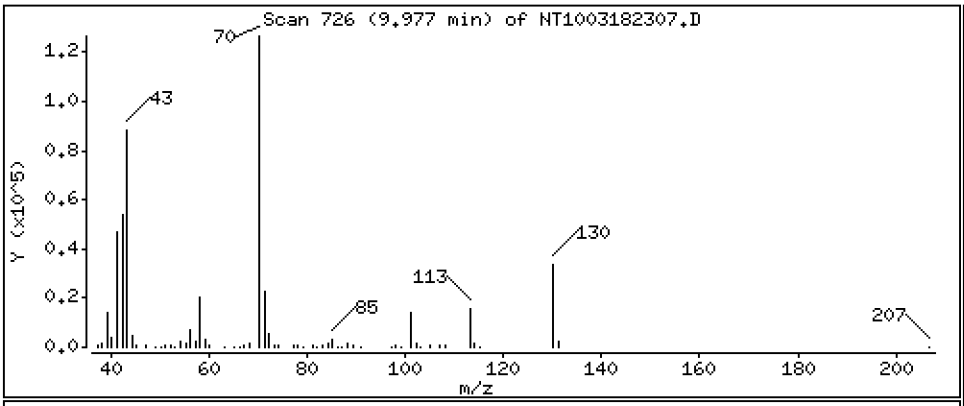
Operator: VTS

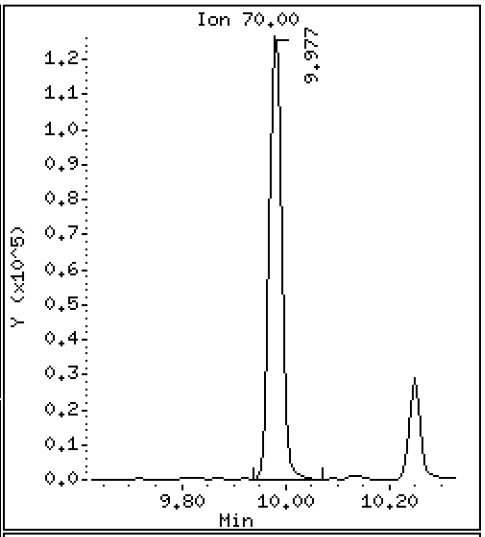
Column phase: ZB-5msi

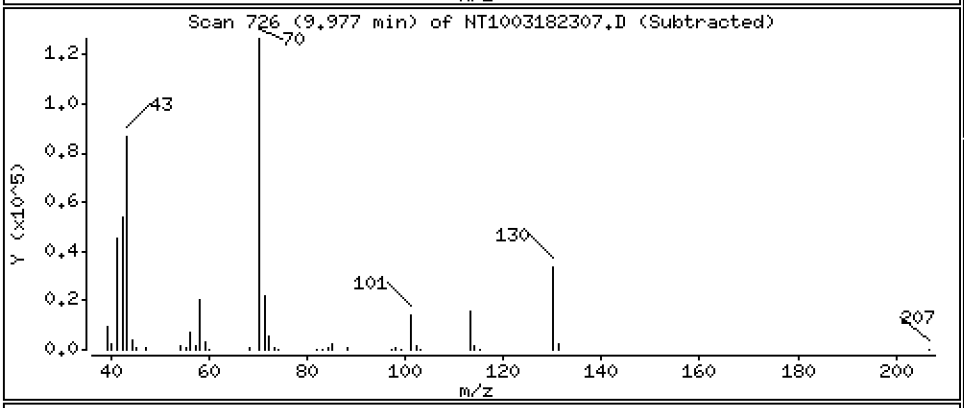
Column diameter: 0.25

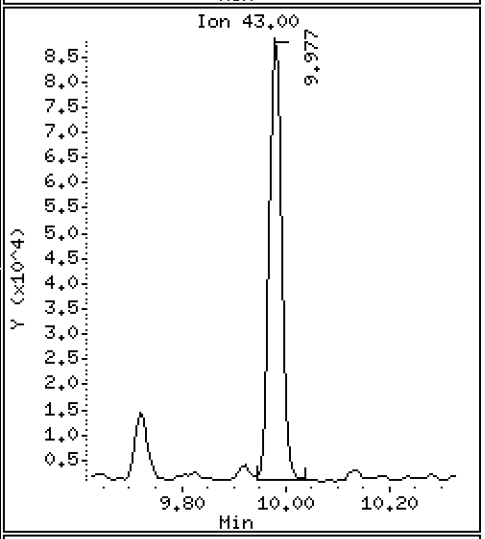
16 N-Nitroso-di-n-propylamine

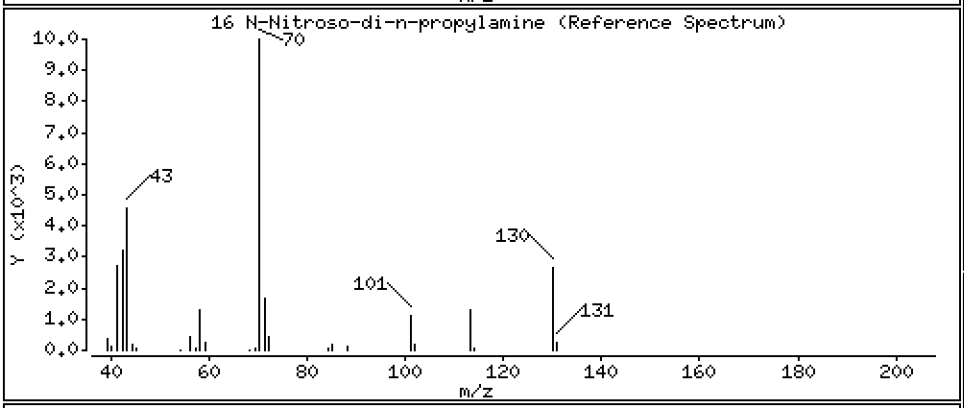
Concentration: 3.876 ug/mL

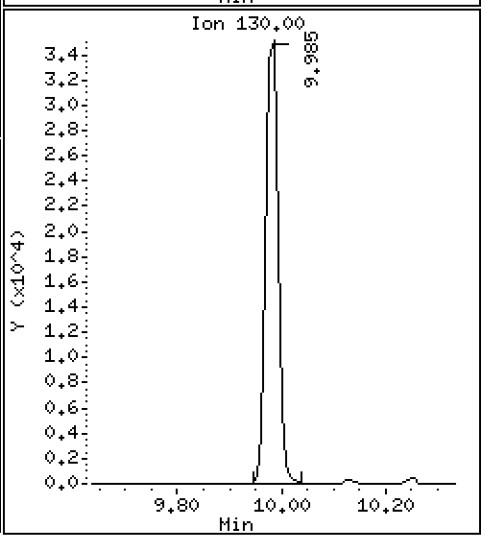


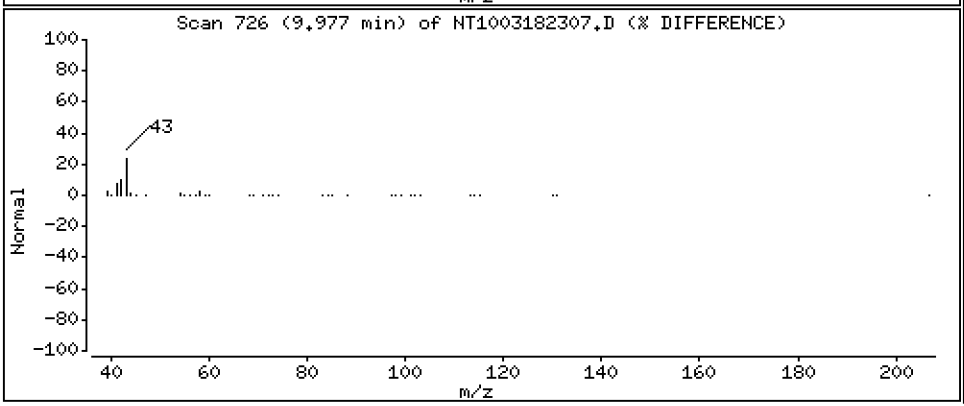












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

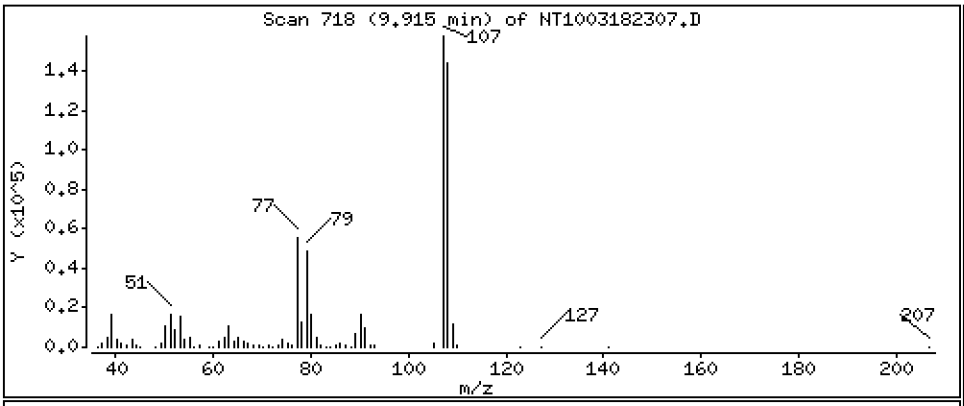
Operator: VTS

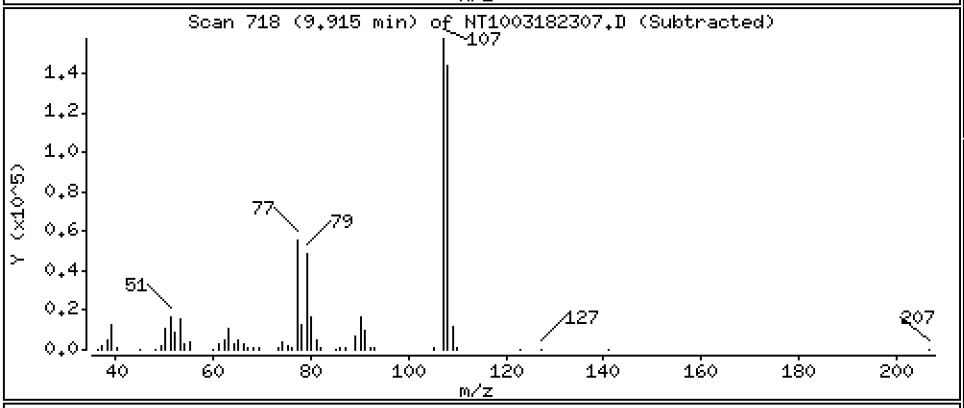
Column phase: ZB-5msi

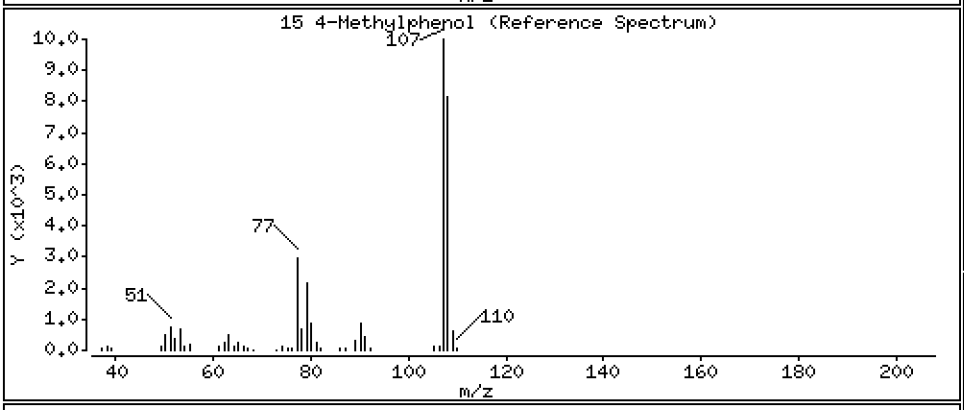
Column diameter: 0.25

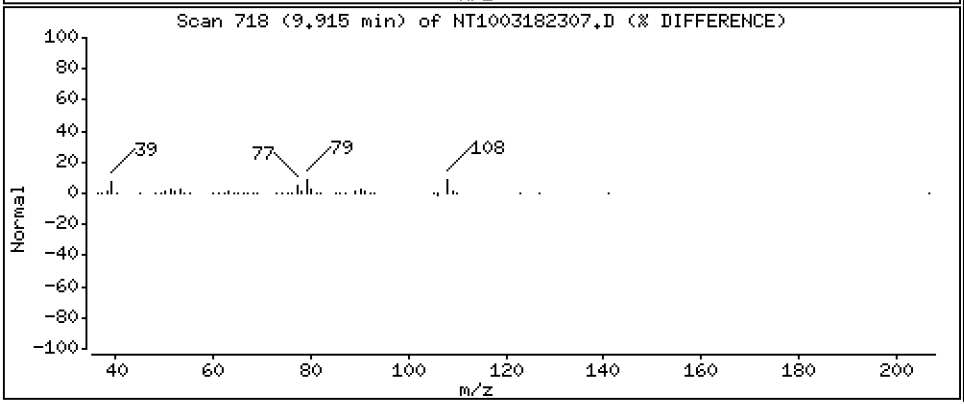
15 4-Methylphenol

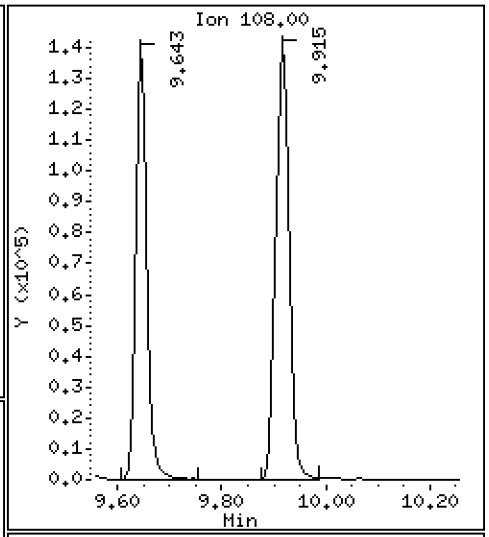
Concentration: 3.634 ug/mL

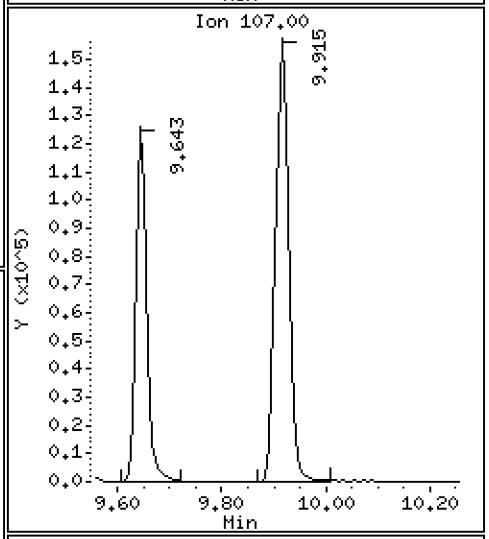


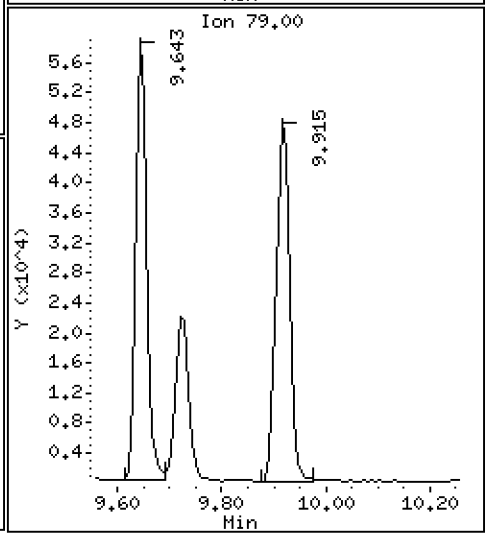












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

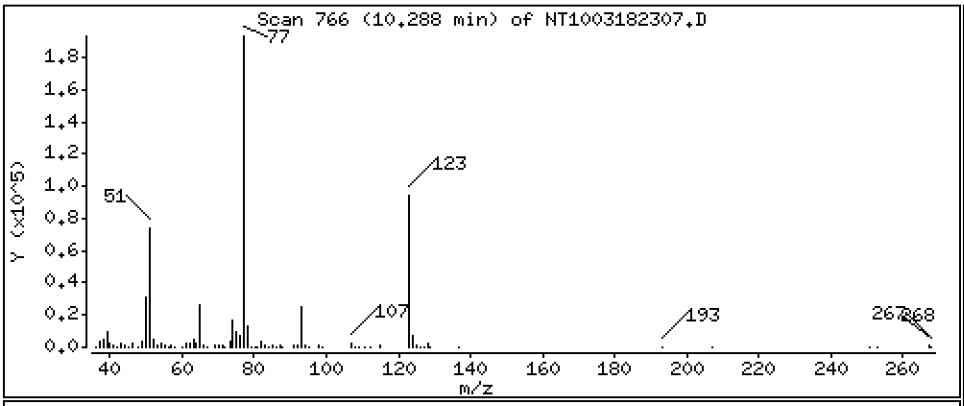
Operator: VTS

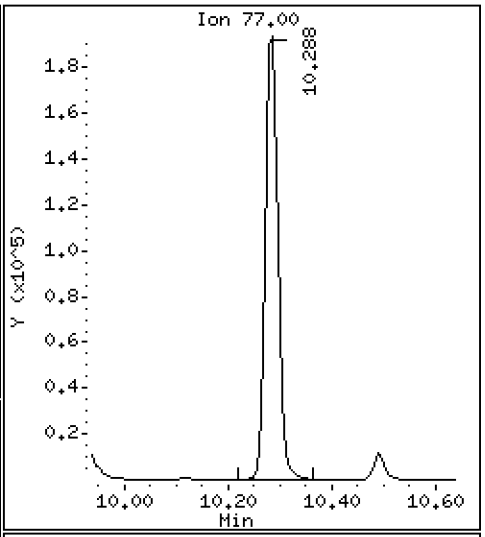
Column phase: ZB-5msi

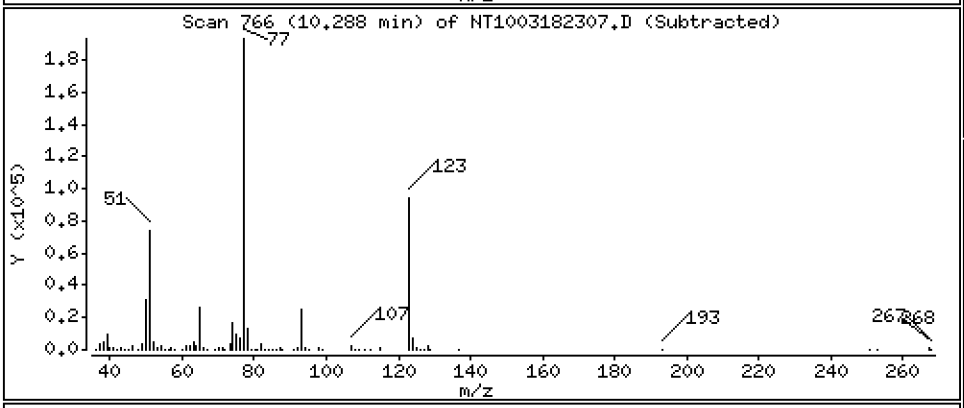
Column diameter: 0.25

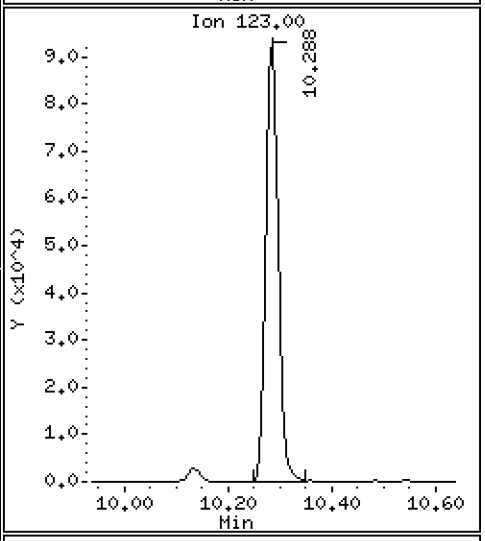
19 Nitrobenzene

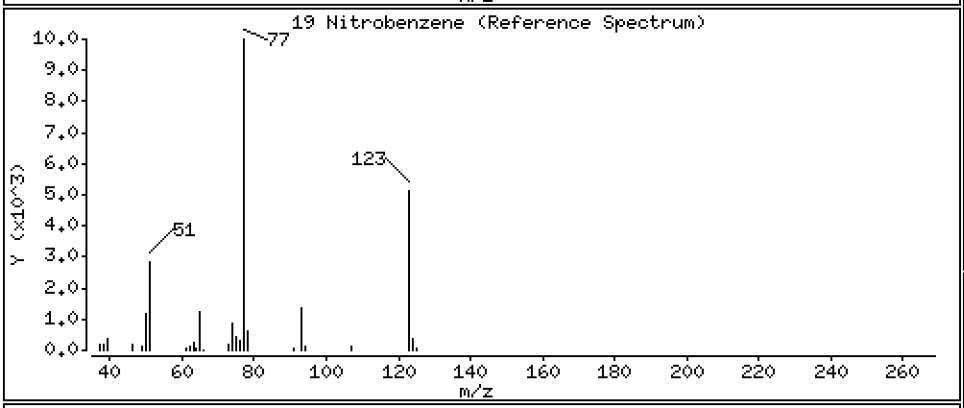
Concentration: 4.023 ug/mL

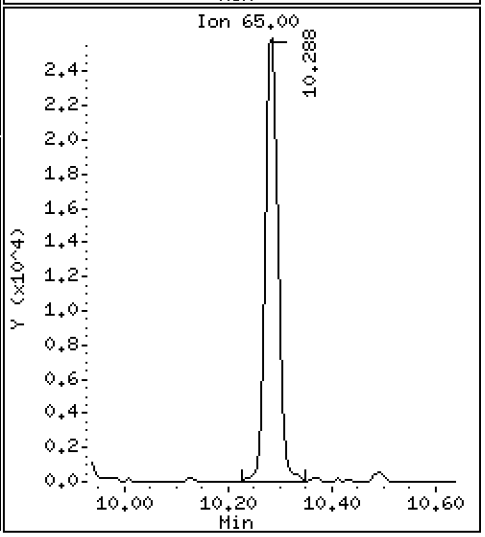


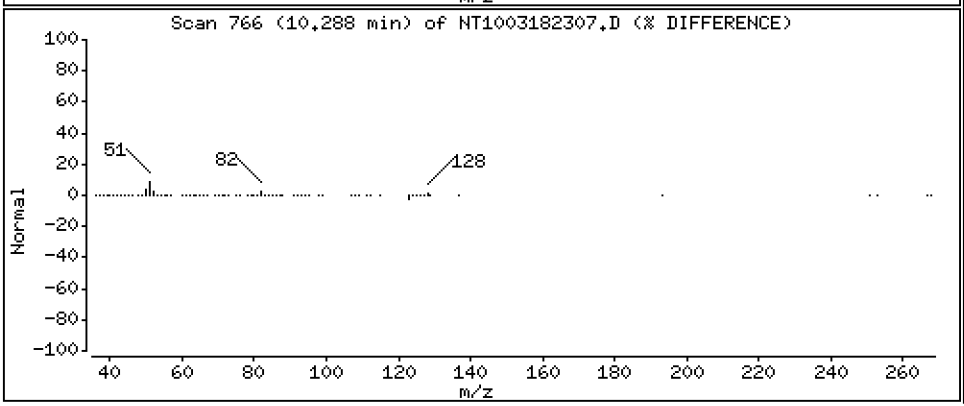












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

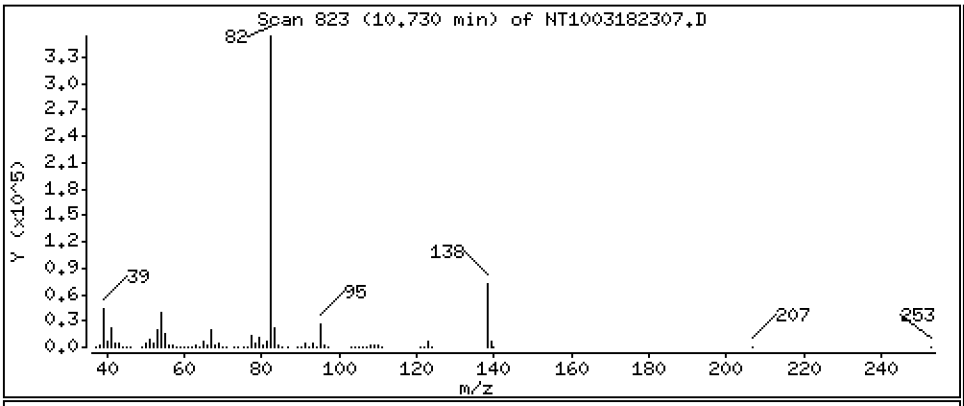
Operator: VTS

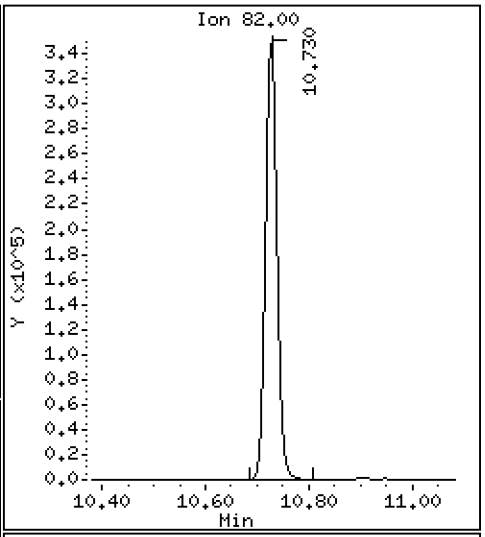
Column phase: ZB-5msi

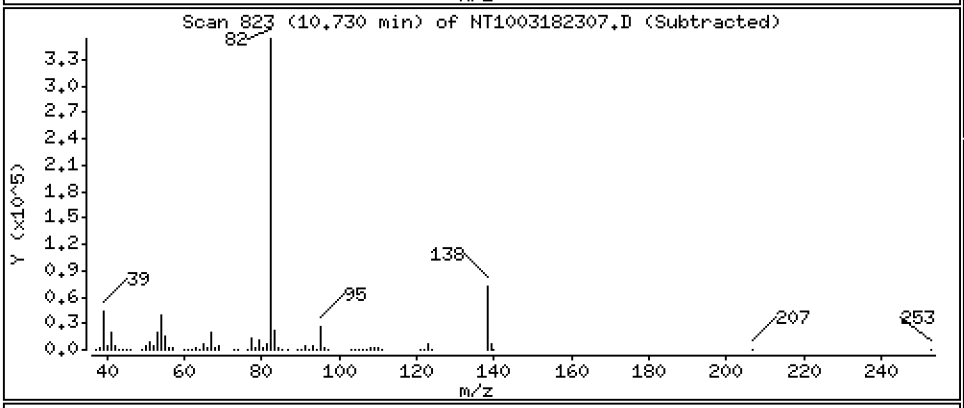
Column diameter: 0.25

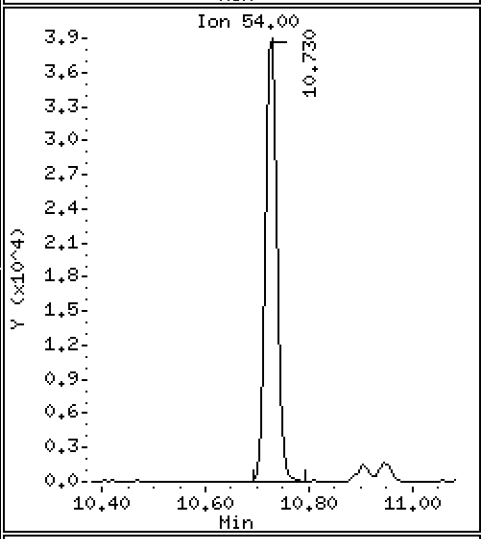
20 Isophorone

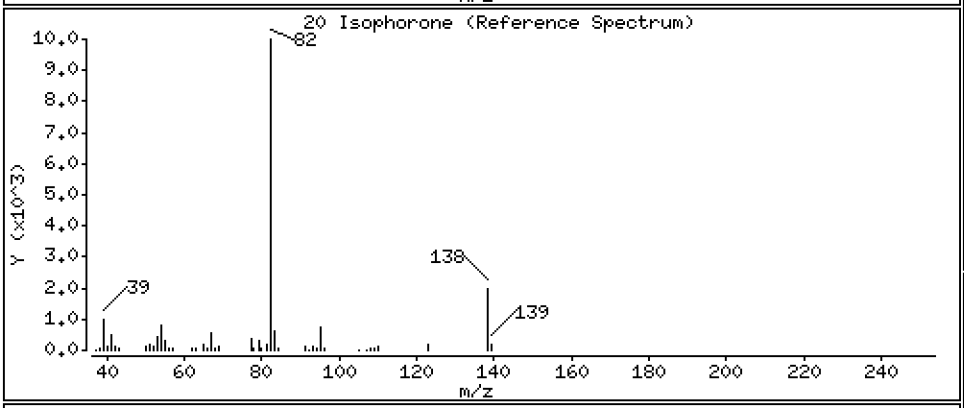
Concentration: 5.687 ug/mL

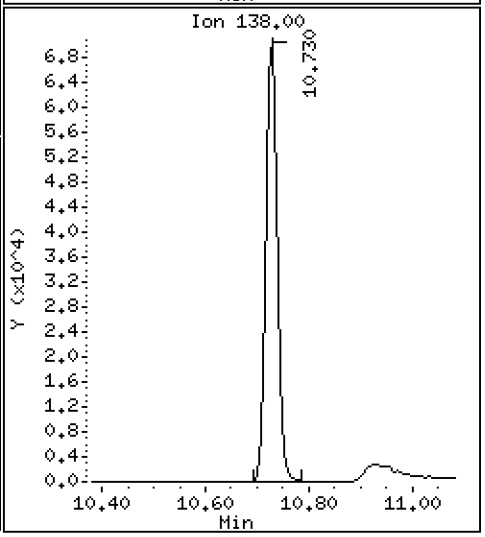


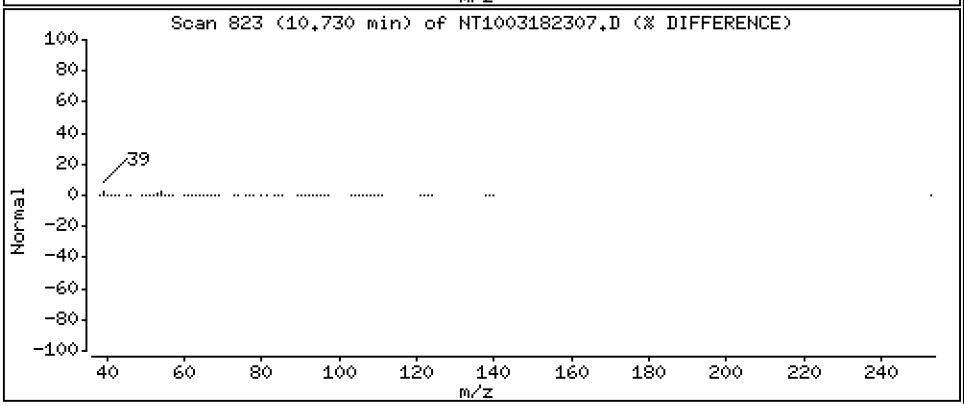












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

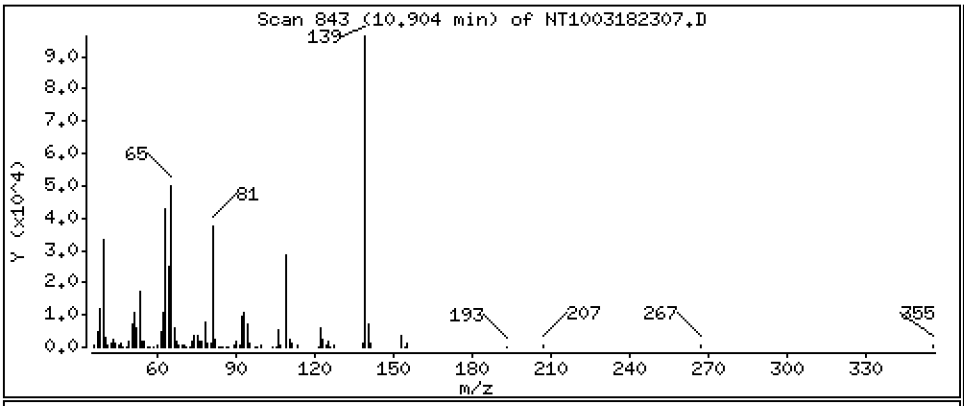
Operator: VTS

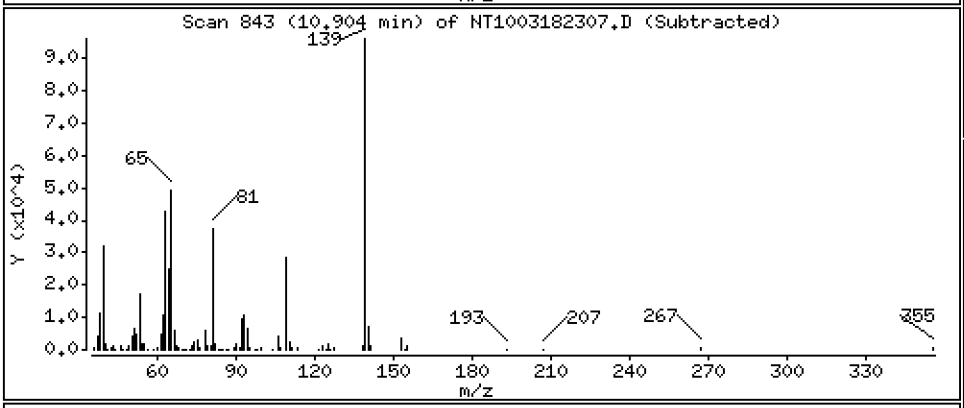
Column phase: ZB-5msi

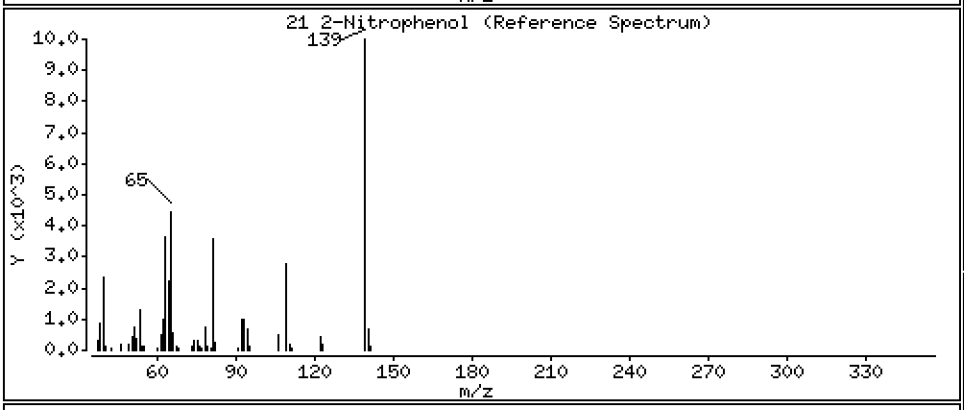
Column diameter: 0.25

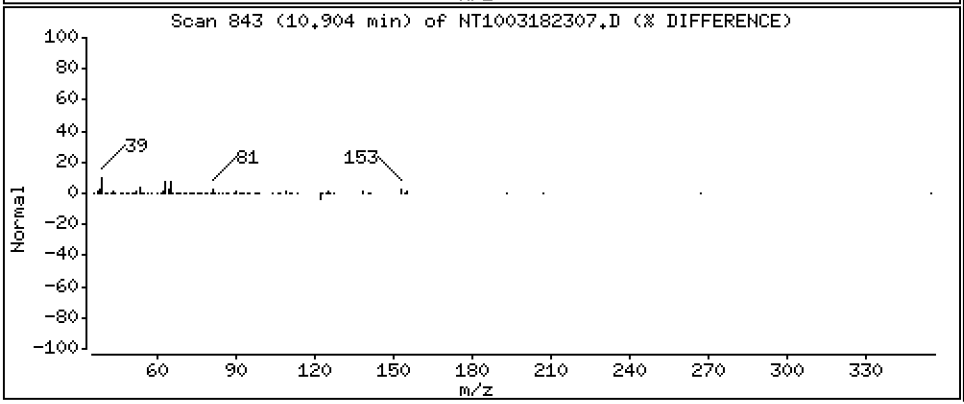
21 2-Nitrophenol

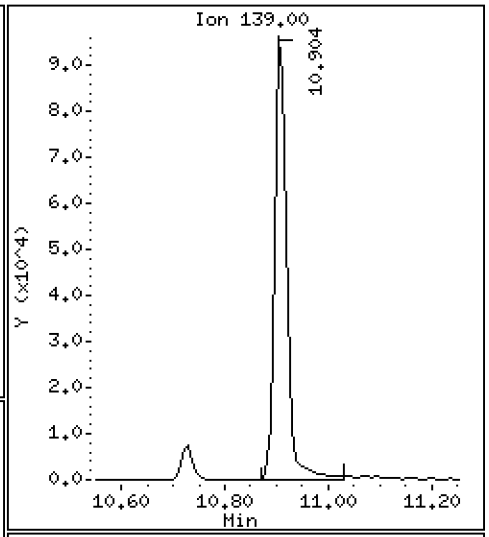
Concentration: 4.174 ug/mL

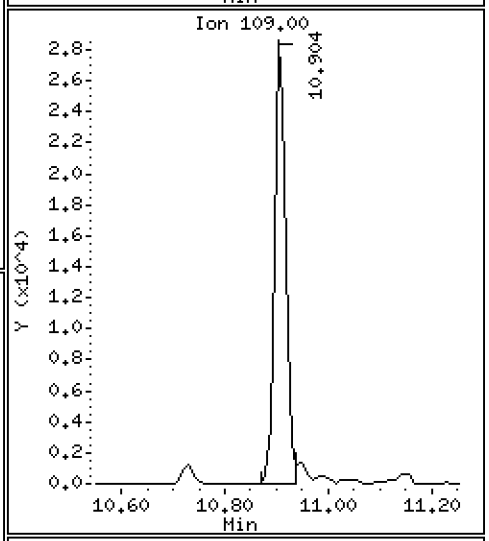


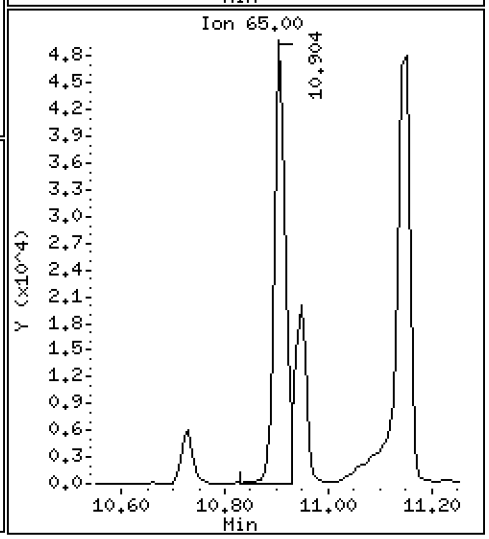












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

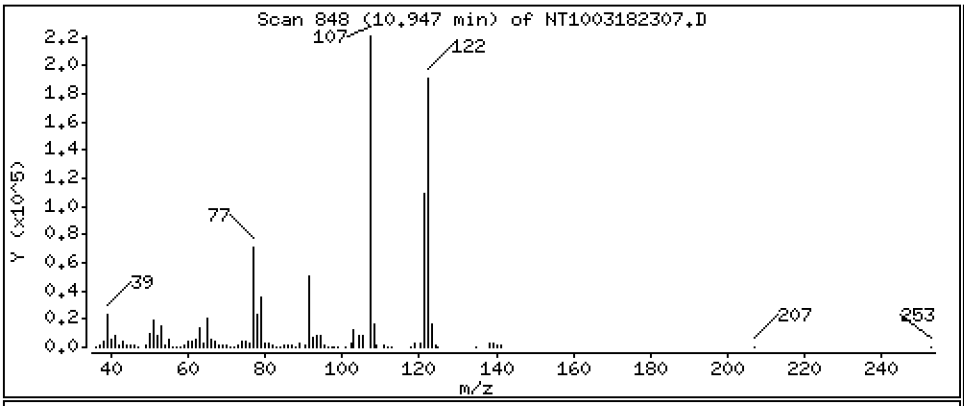
Operator: VTS

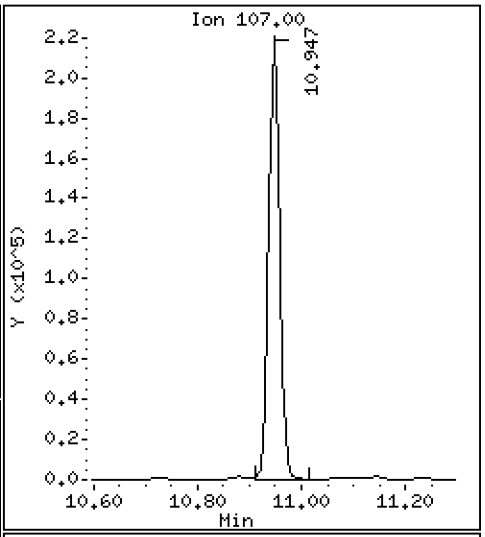
Column phase: ZB-5msi

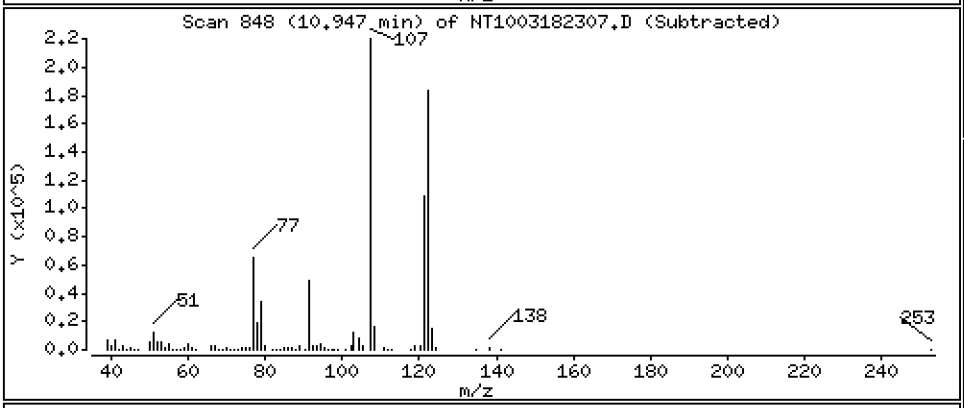
Column diameter: 0.25

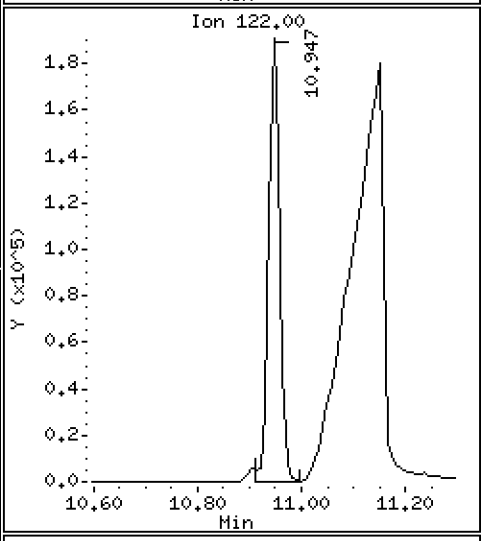
22 2,4-Dimethylphenol

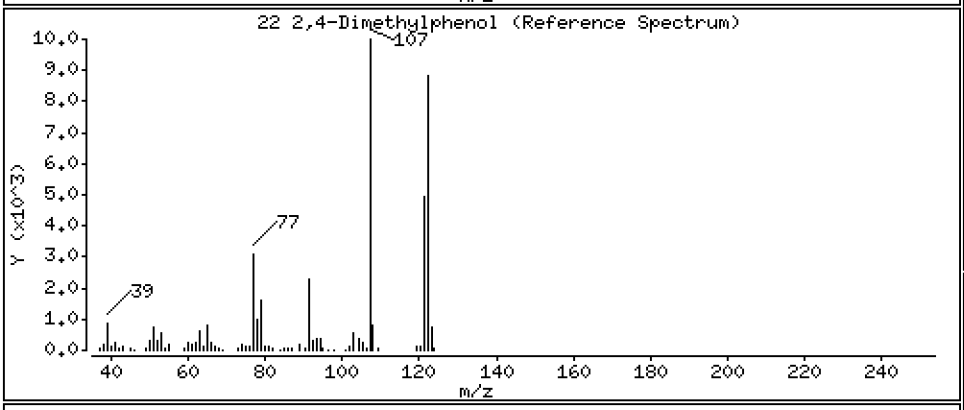
Concentration: 4.448 ug/mL

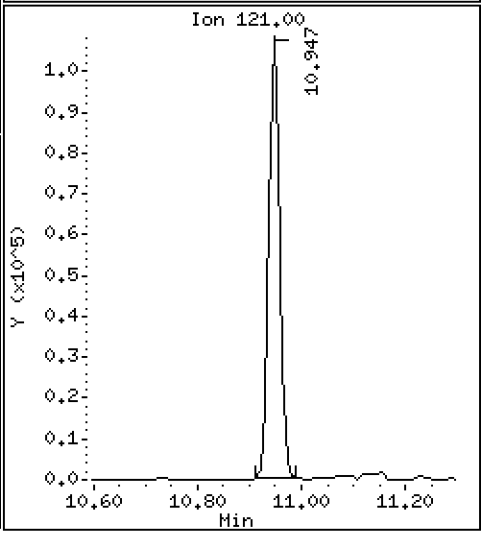


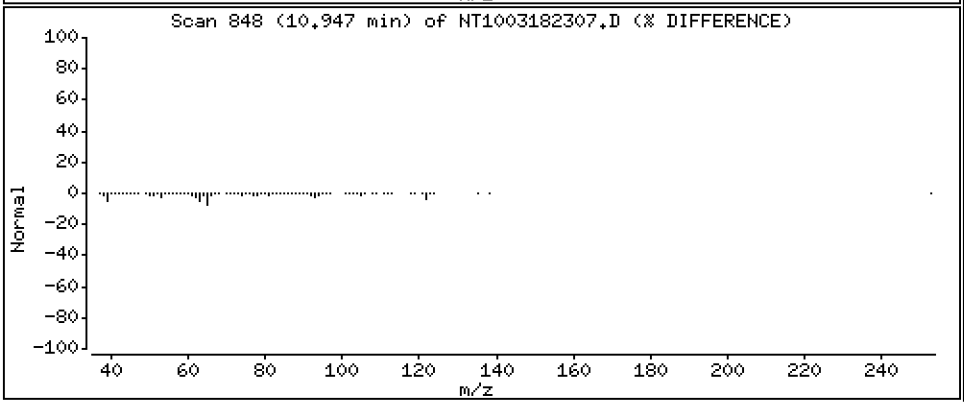












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

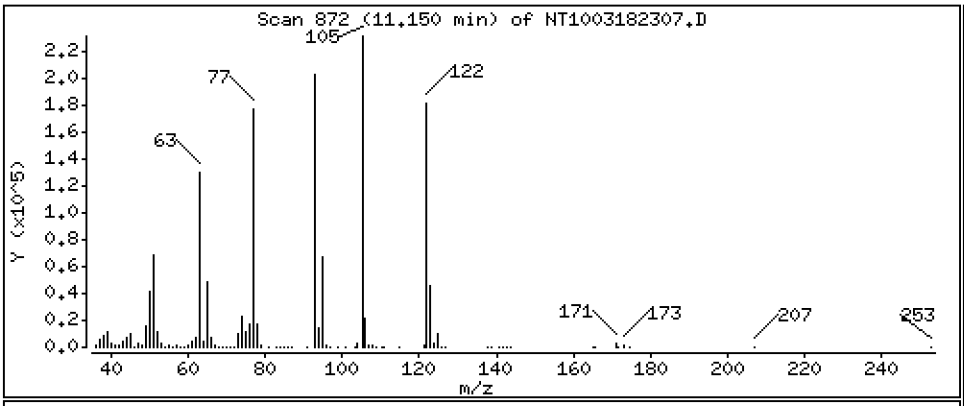
Operator: VTS

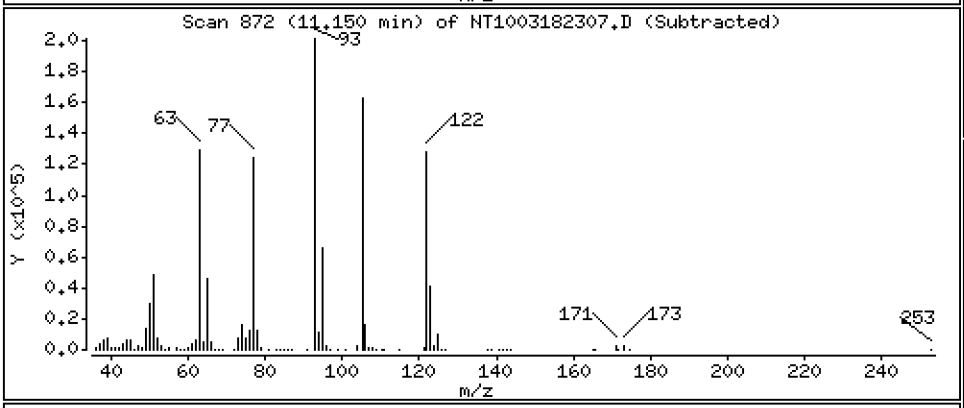
Column phase: ZB-5msi

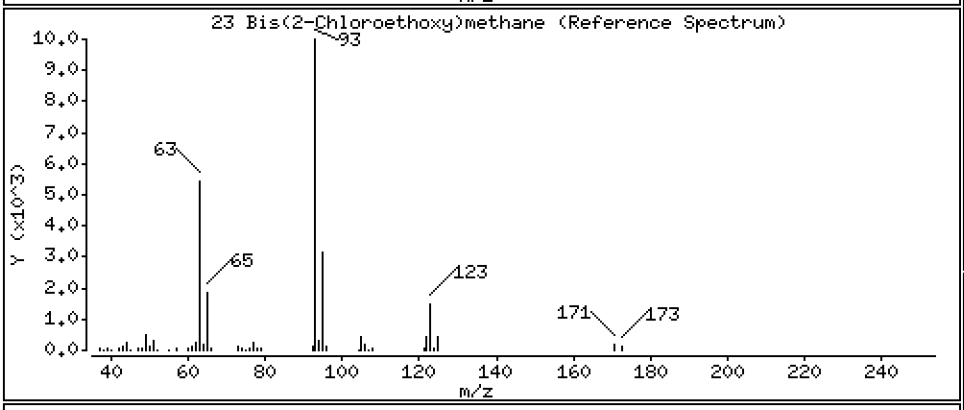
Column diameter: 0.25

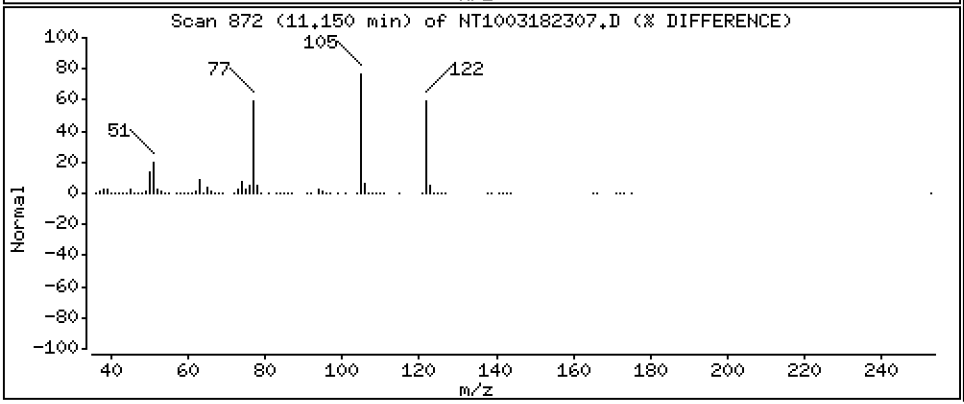
23 Bis(2-Chloroethoxy)methane

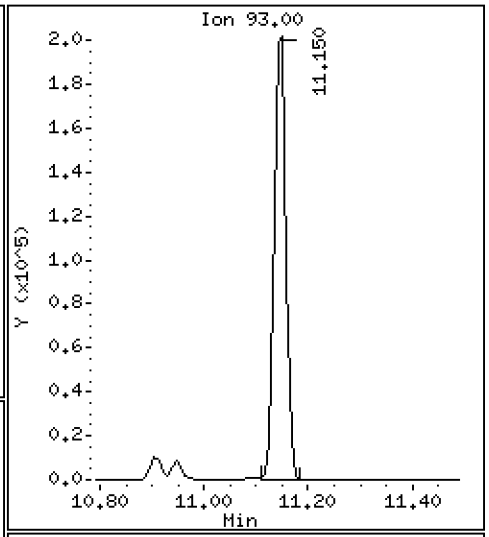
Concentration: 4.687 ug/mL

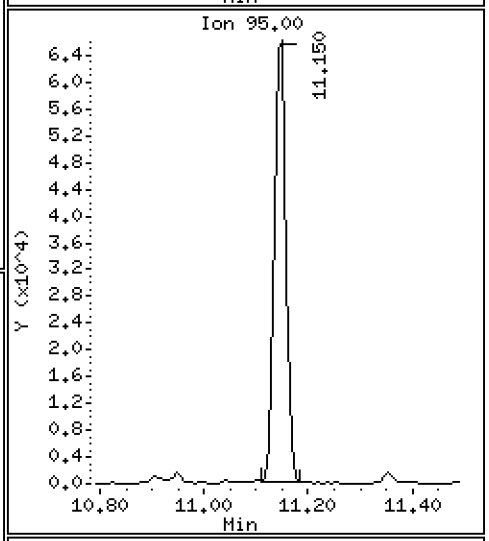


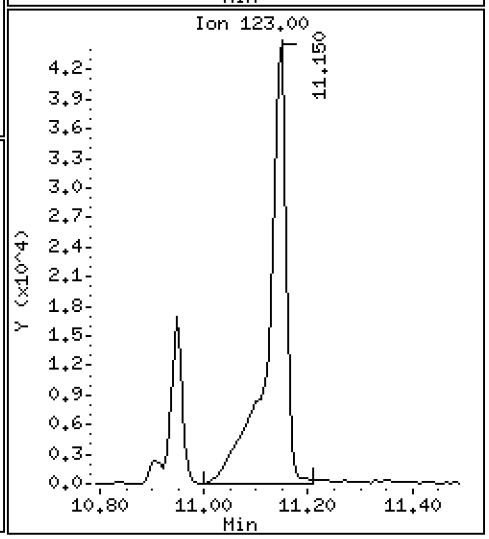












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

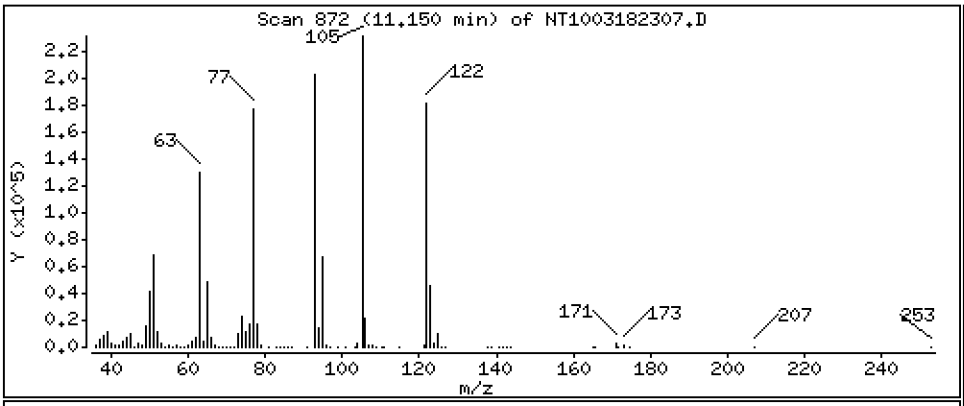
Operator: VTS

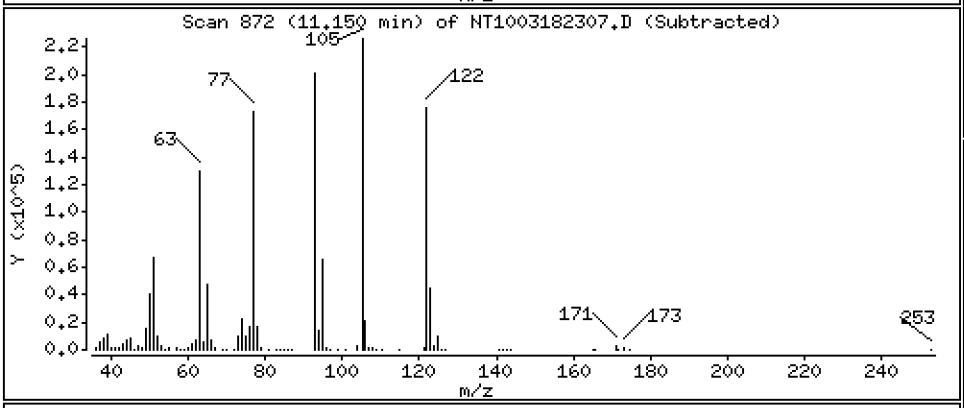
Column phase: ZB-5msi

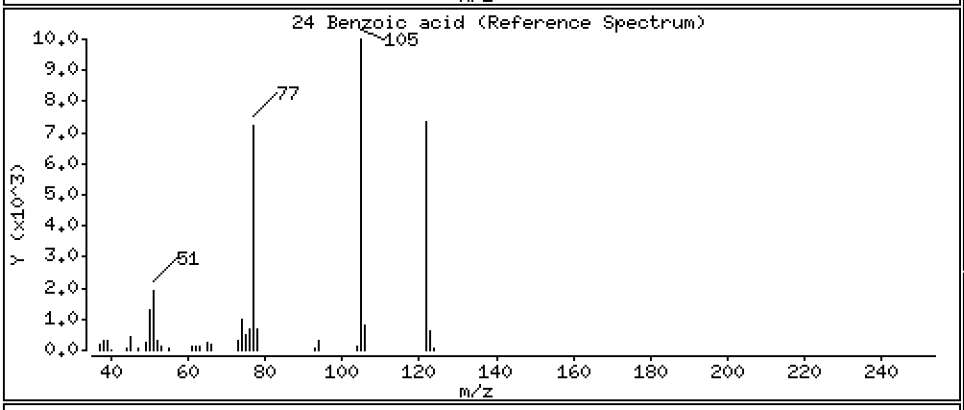
Column diameter: 0.25

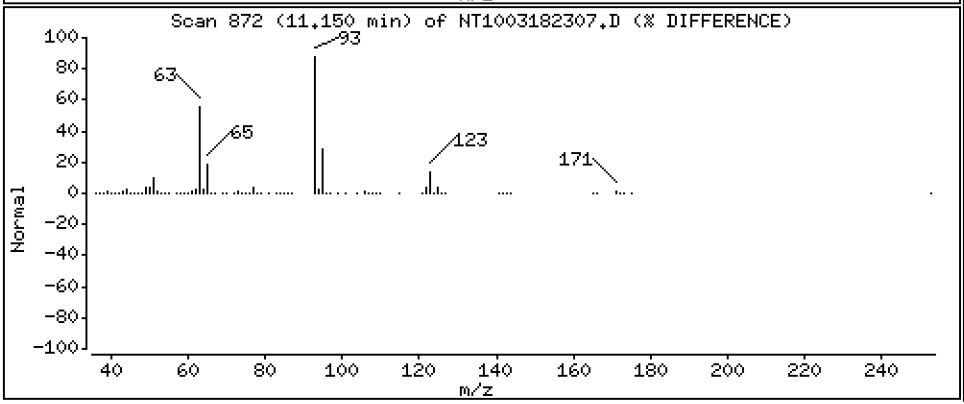
24 Benzoic acid

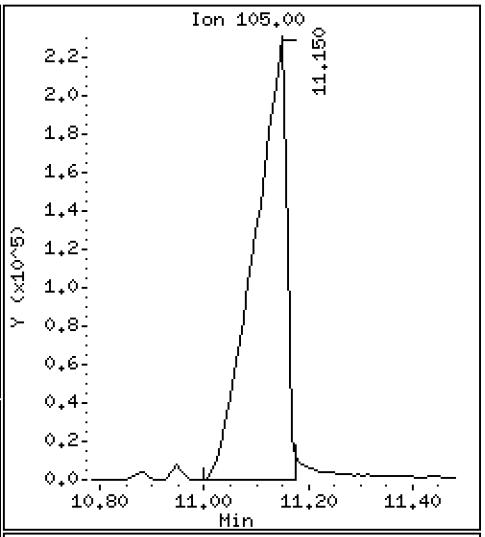
Concentration: 23.52 ug/mL

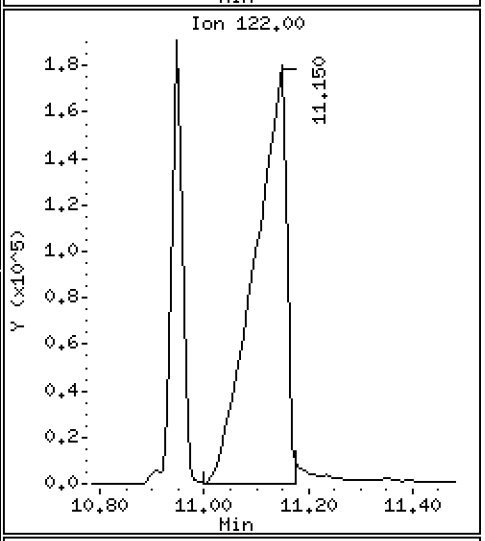


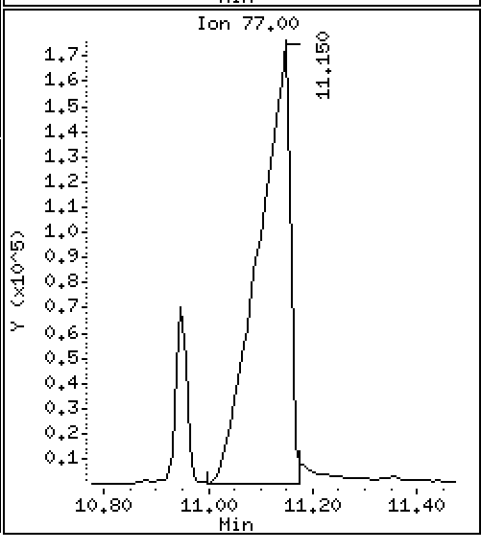












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

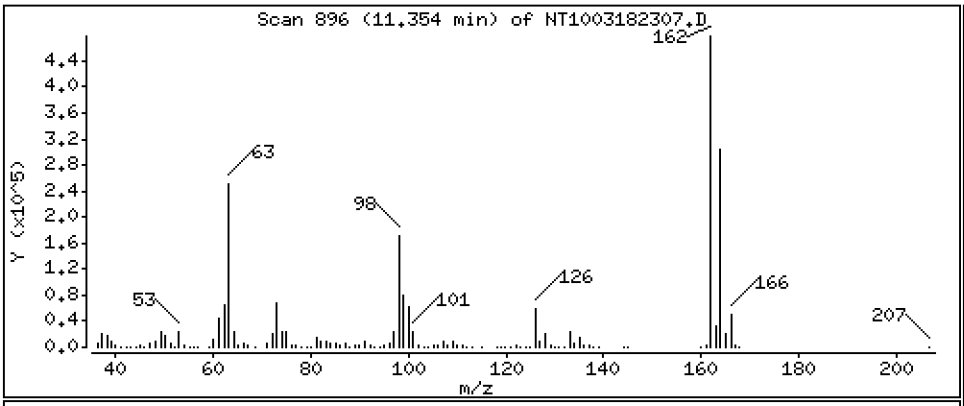
Operator: VTS

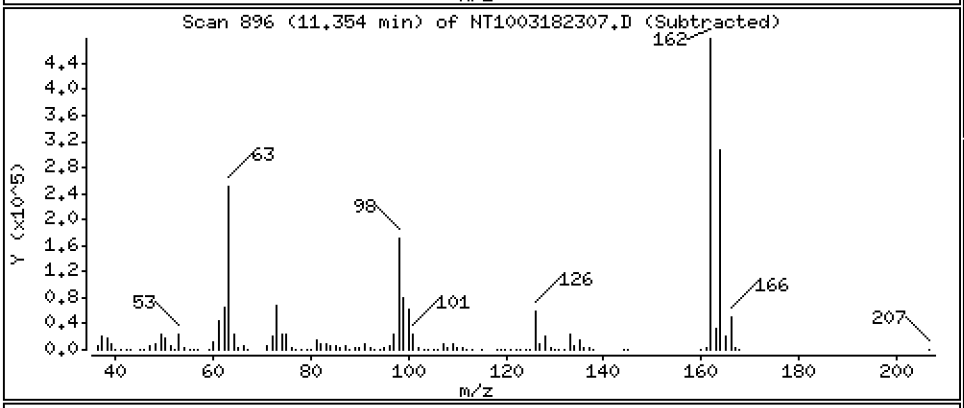
Column phase: ZB-5msi

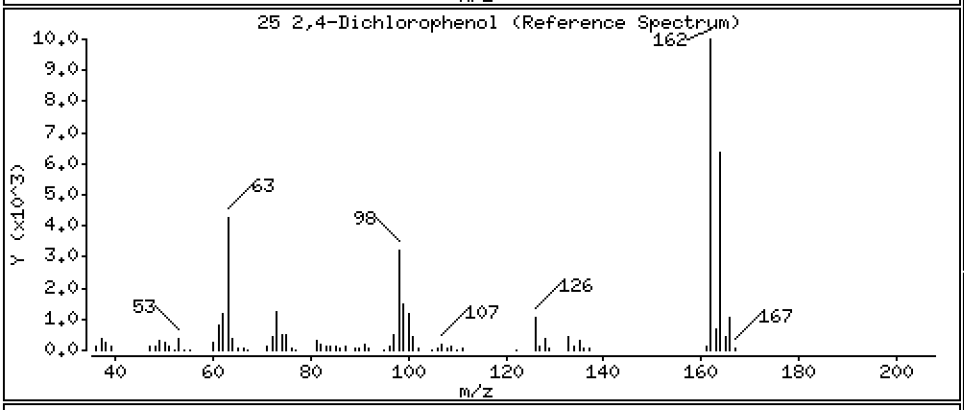
Column diameter: 0.25

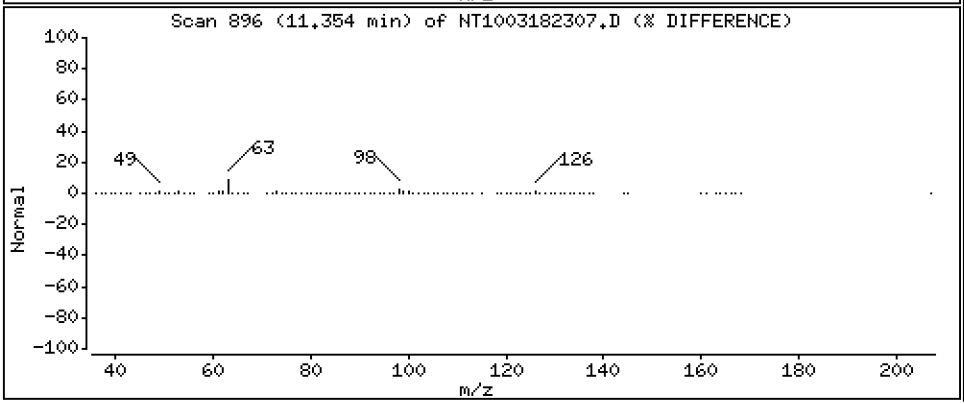
25 2,4-Dichlorophenol

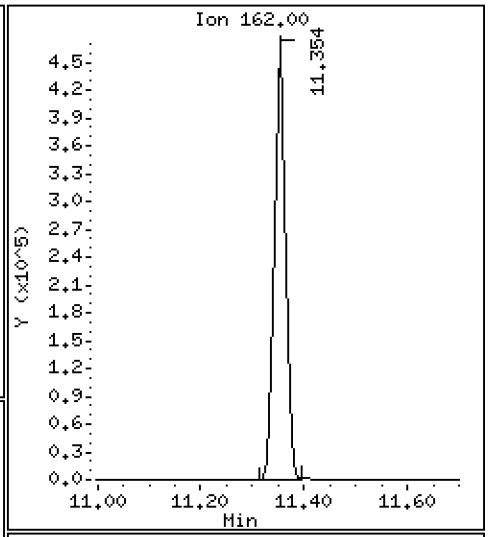
Concentration: 12.17 ug/mL

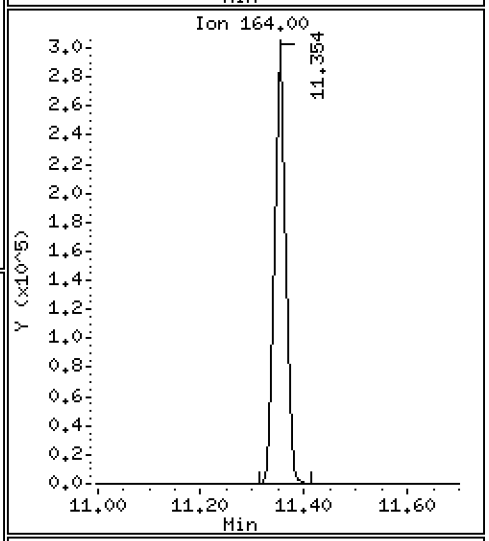


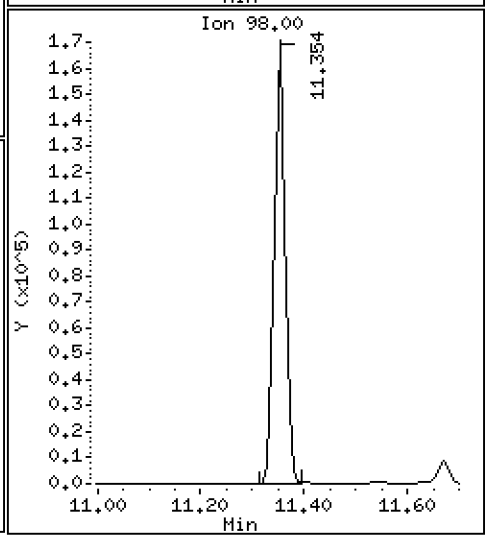












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

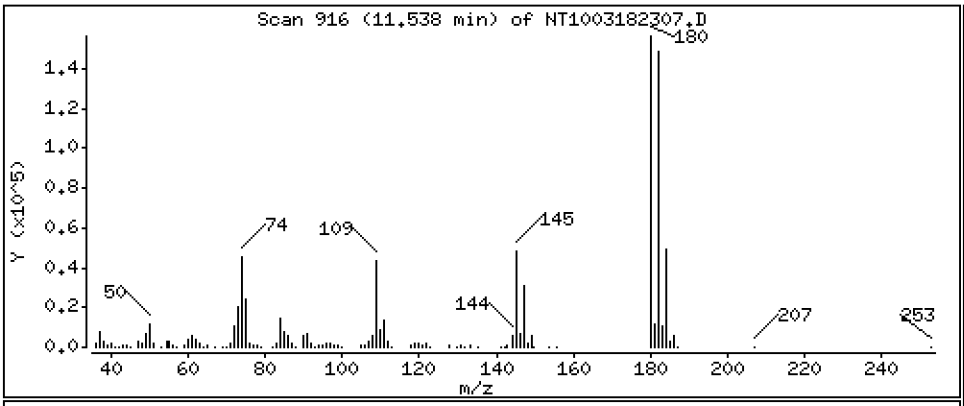
Operator: VTS

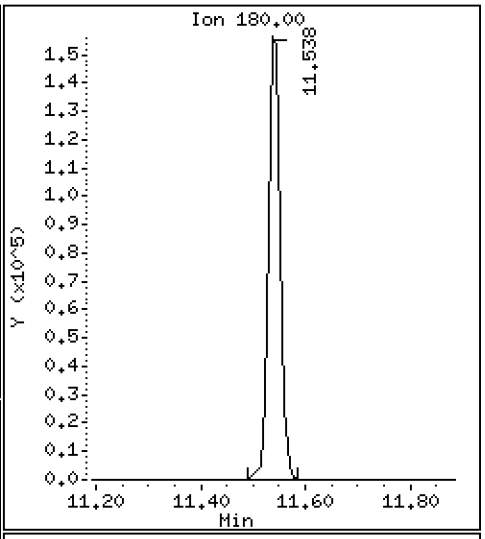
Column phase: ZB-5msi

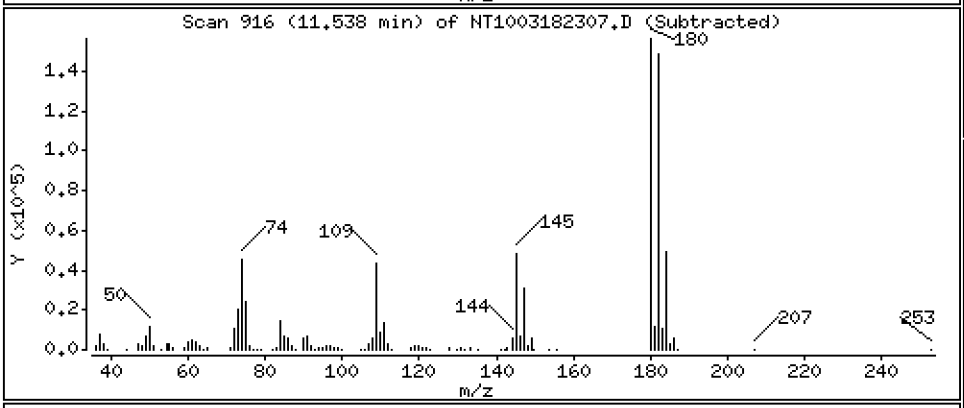
Column diameter: 0.25

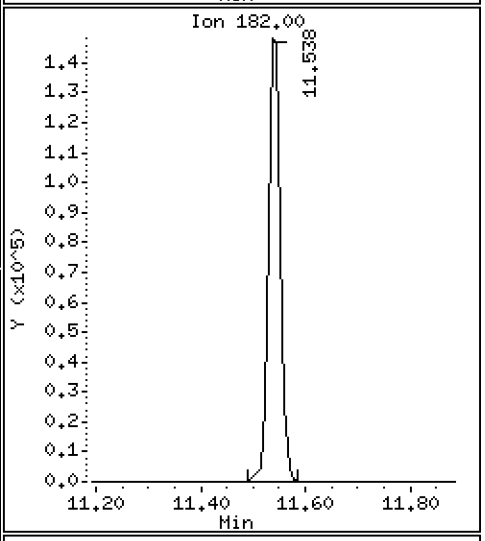
26 1,2,4-Trichlorobenzene

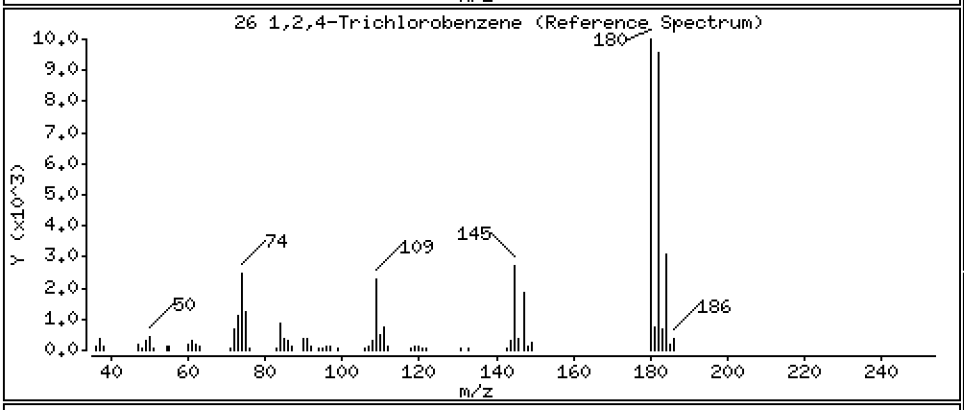
Concentration: 4.589 ug/mL

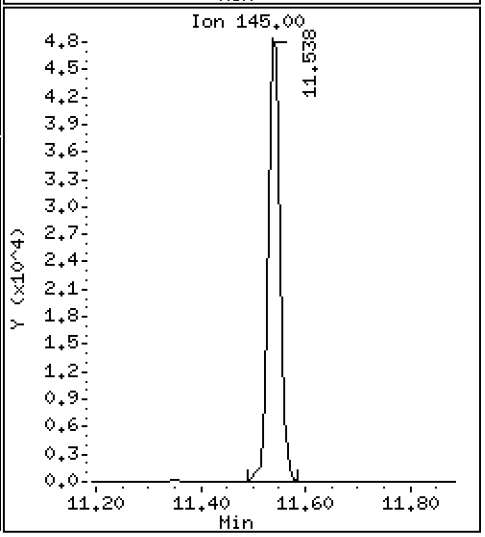


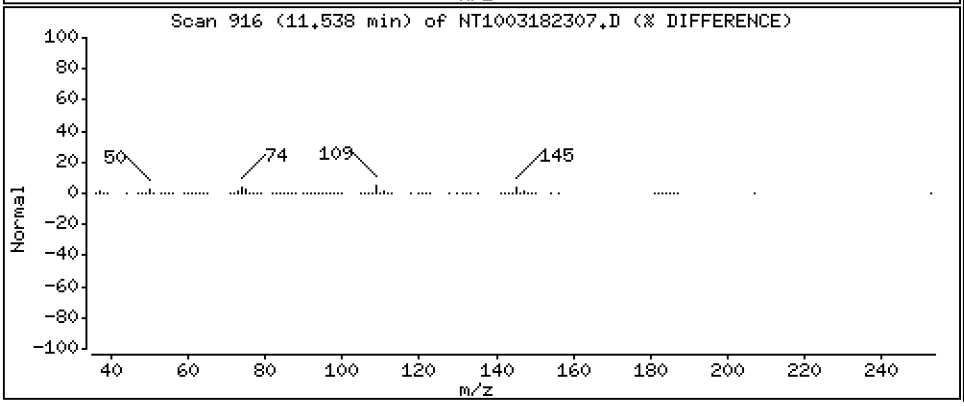












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

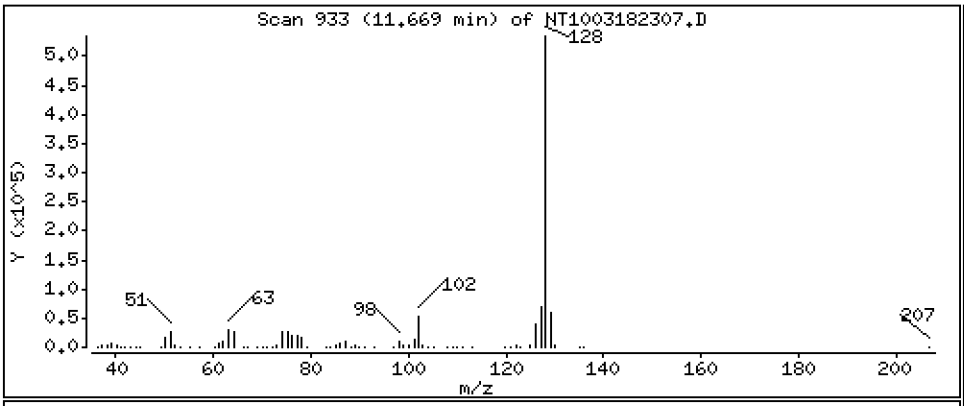
Operator: VTS

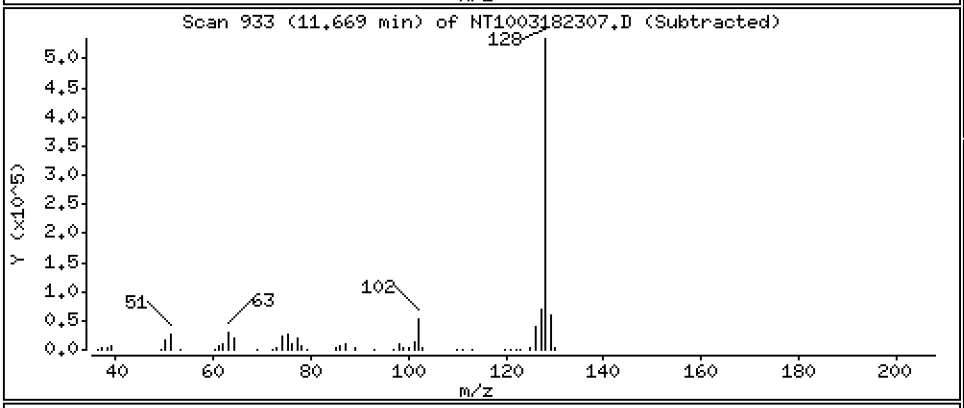
Column phase: ZB-5msi

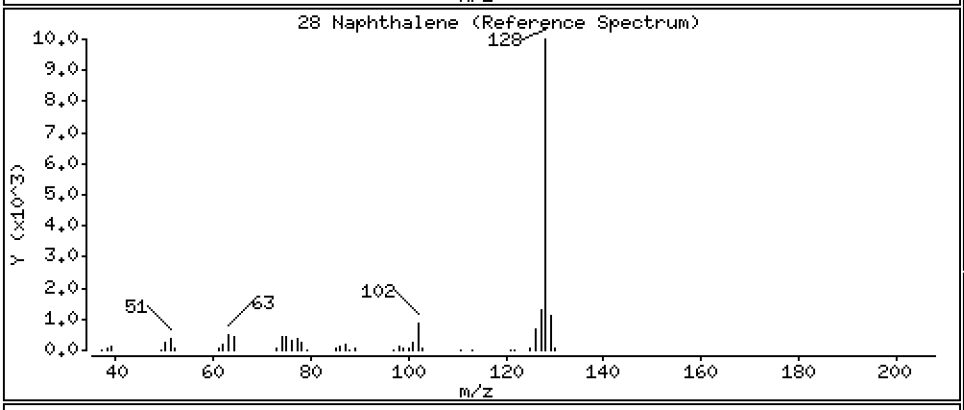
Column diameter: 0.25

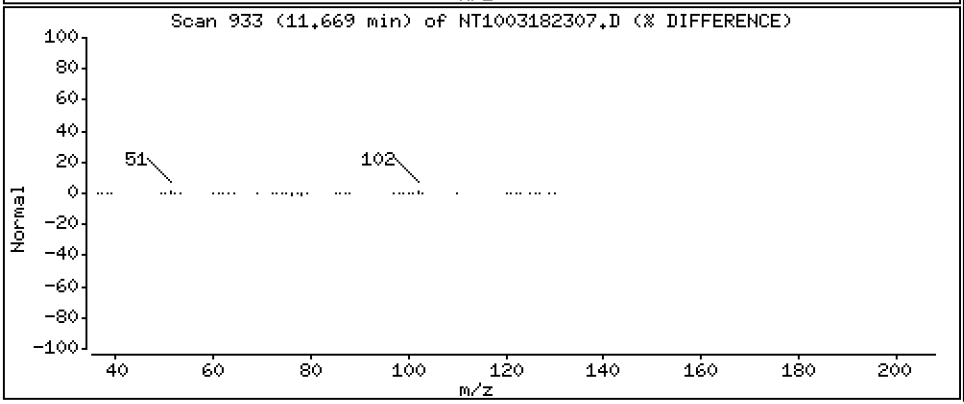
28 Naphthalene

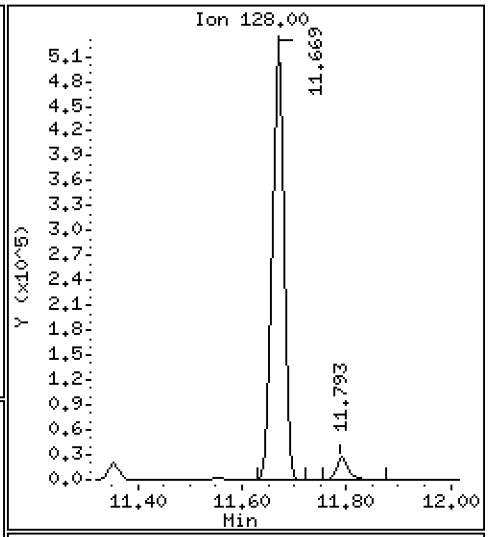
Concentration: 3.839 ug/mL

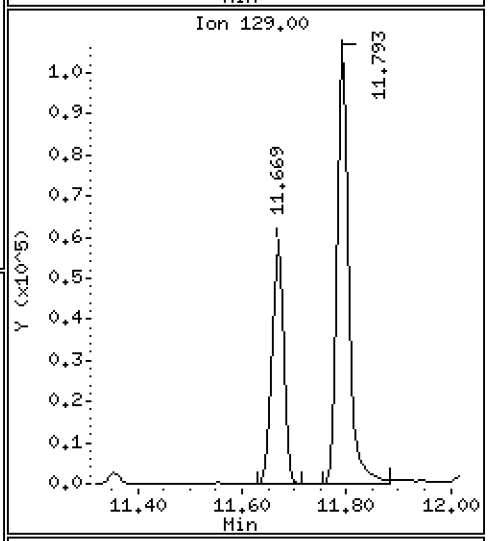


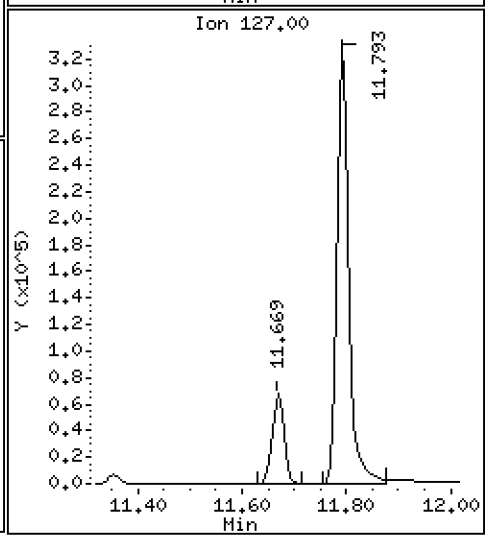












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

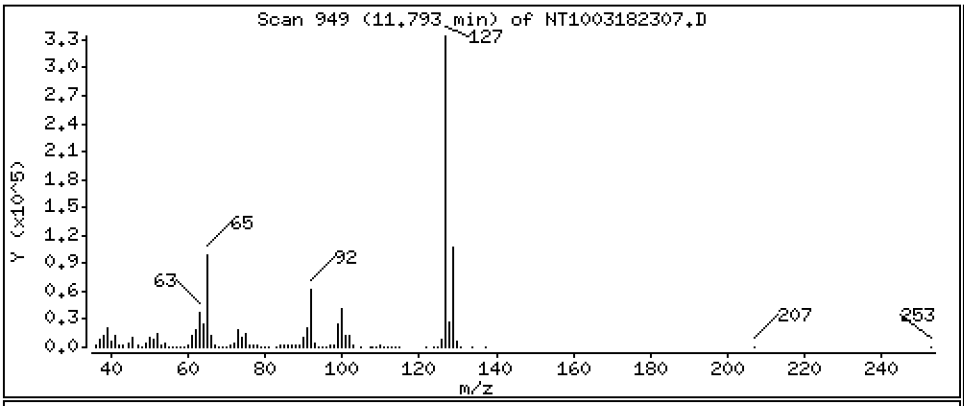
Operator: VTS

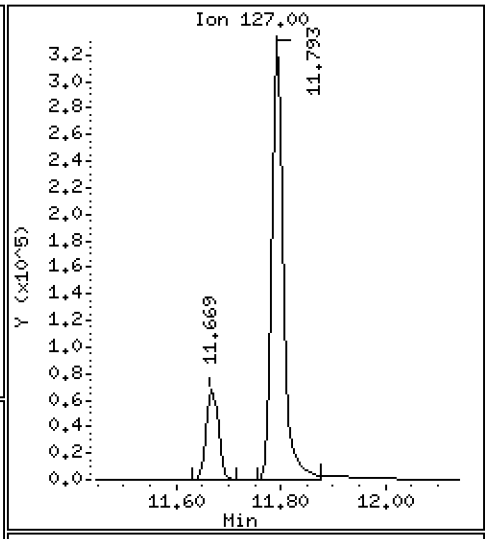
Column phase: ZB-5msi

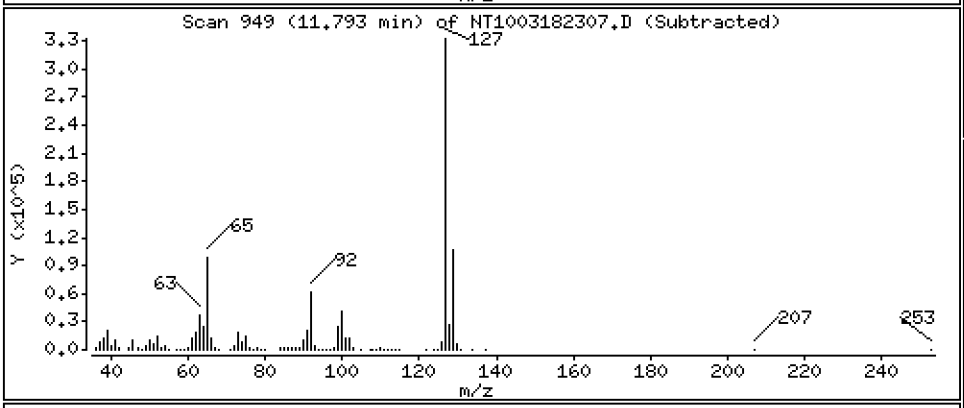
Column diameter: 0.25

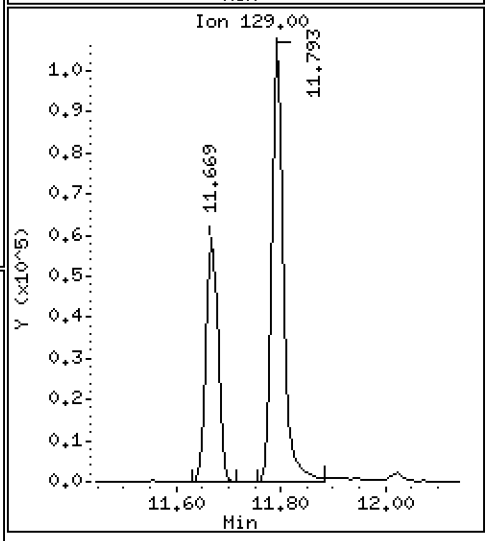
29 4-Chloroaniline

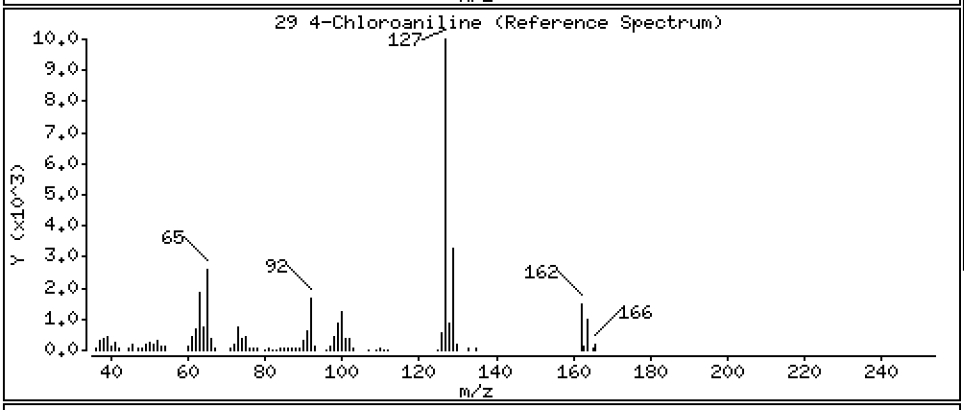
Concentration: 6.547 ug/mL

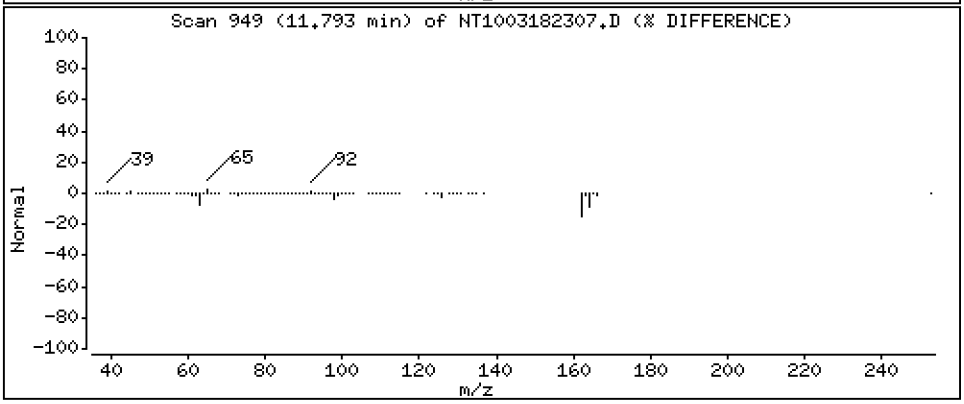












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

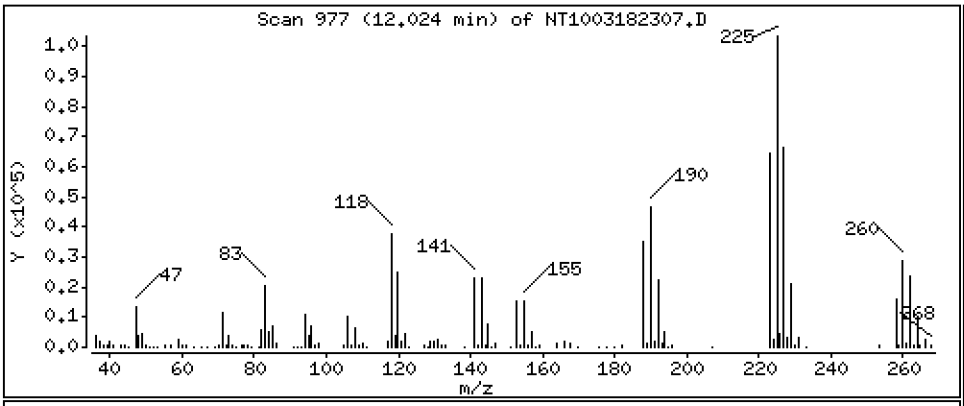
Operator: VTS

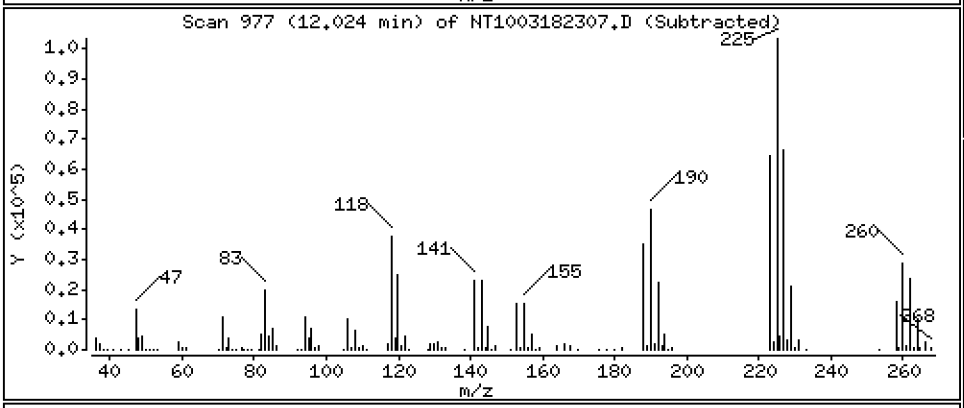
Column phase: ZB-5msi

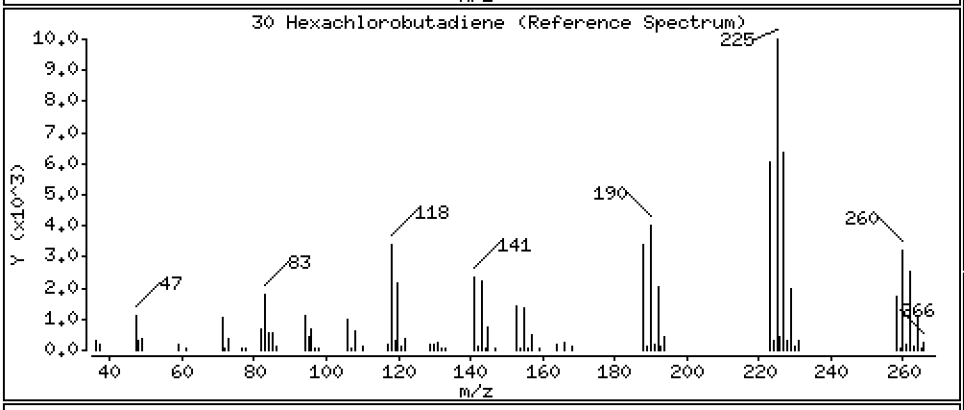
Column diameter: 0.25

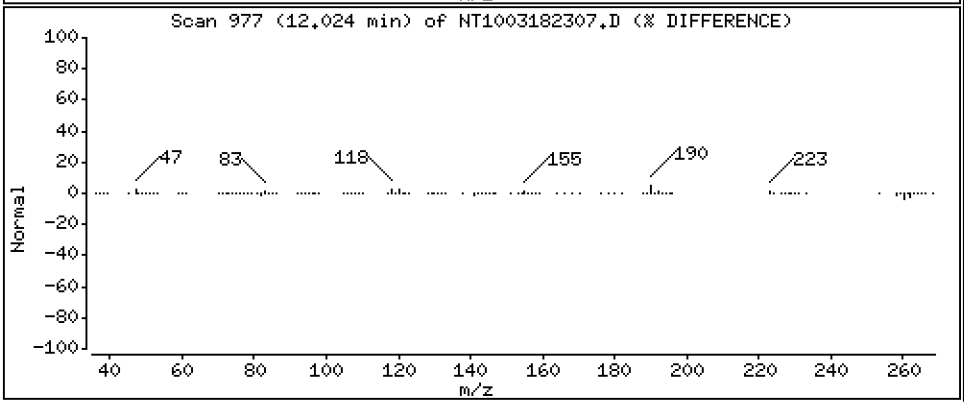
30 Hexachlorobutadiene

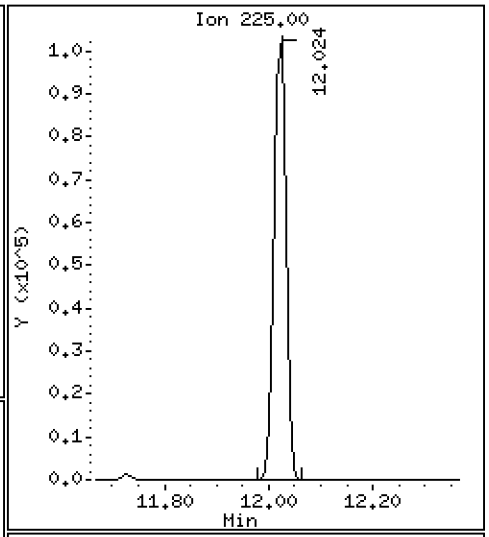
Concentration: 3.954 ug/mL

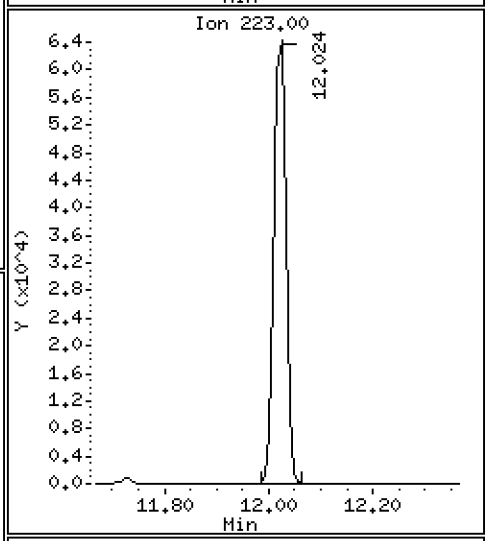


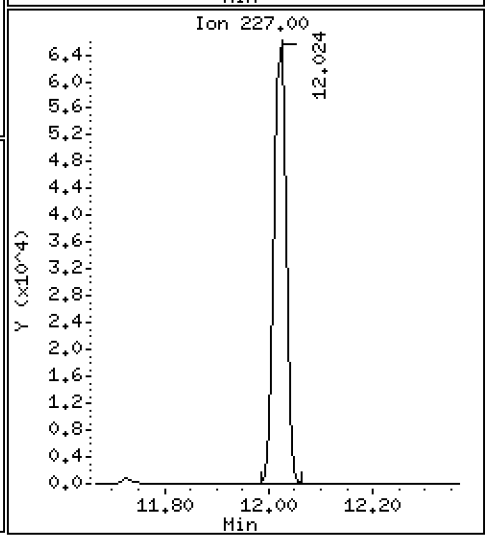












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

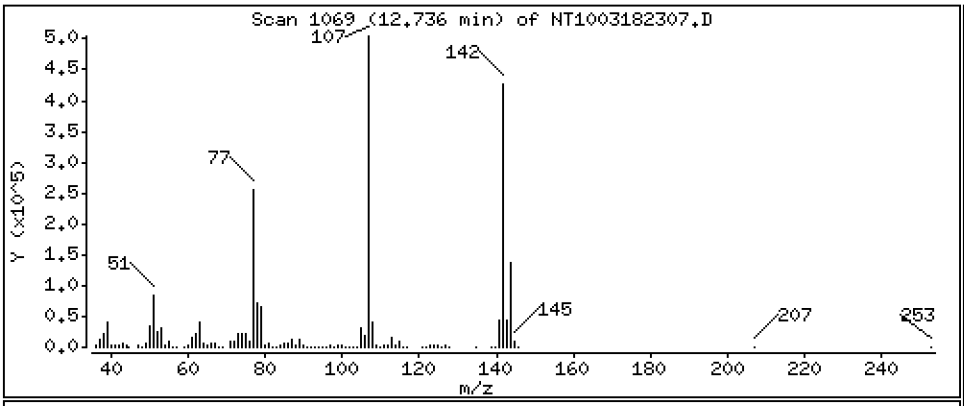
Operator: VTS

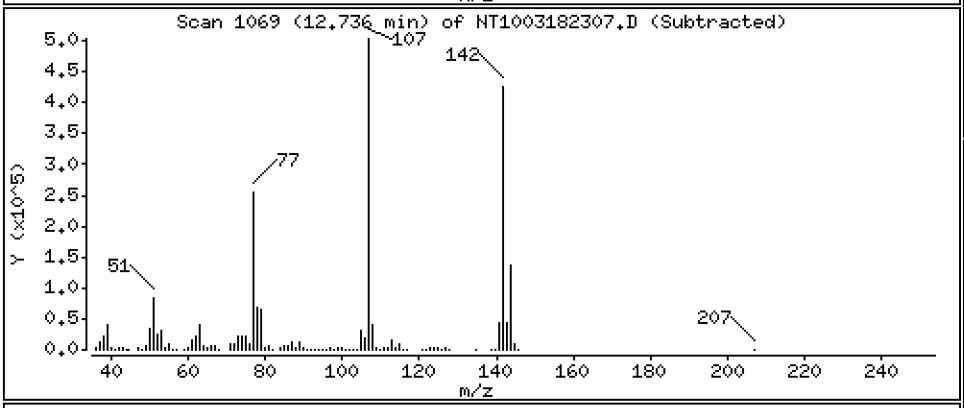
Column phase: ZB-5msi

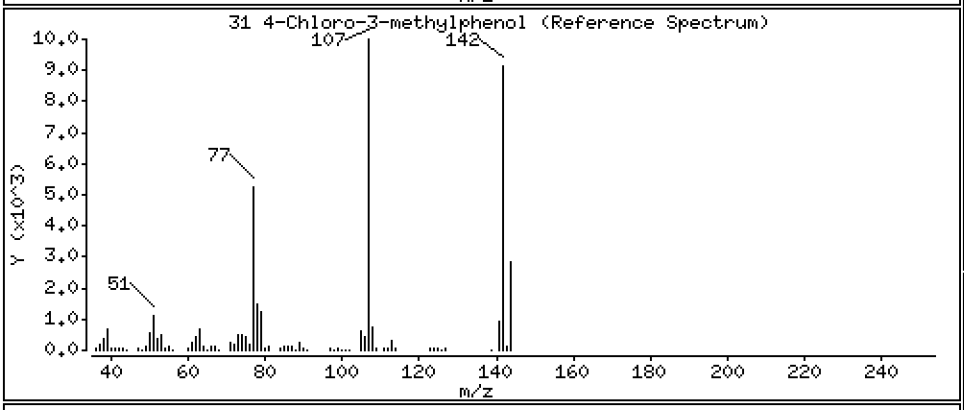
Column diameter: 0.25

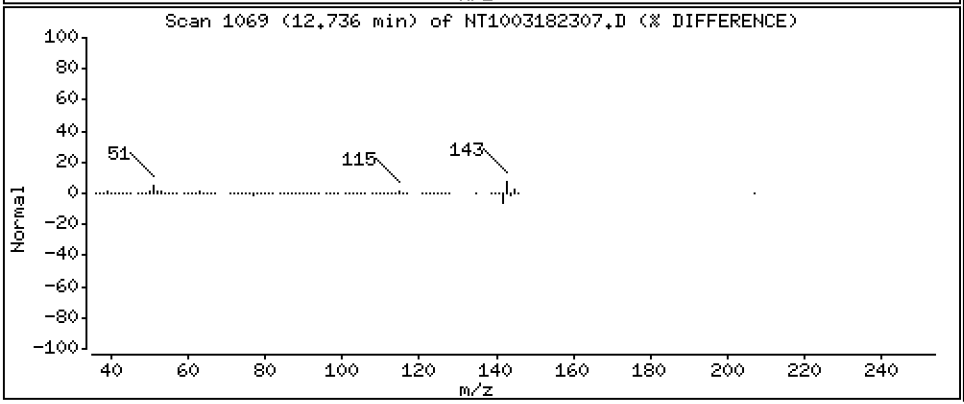
31 4-Chloro-3-methylphenol

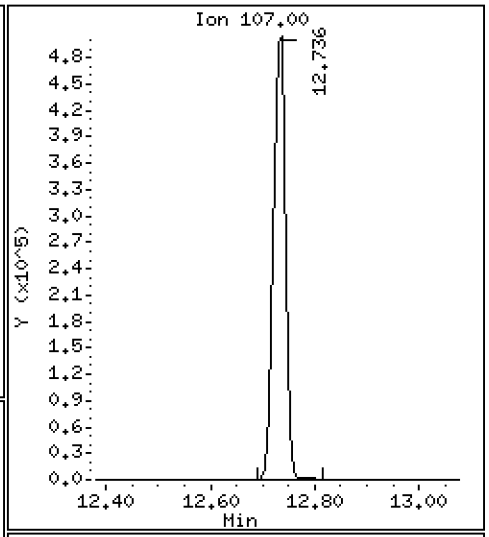
Concentration: 12.47 ug/mL

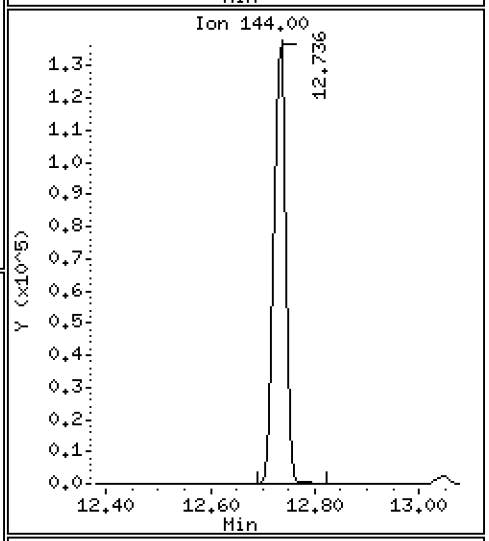


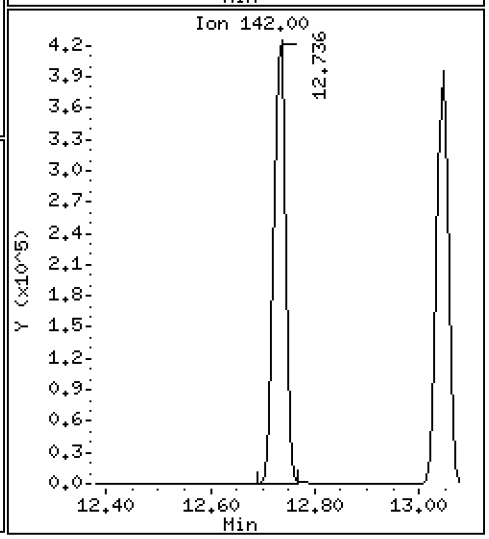












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

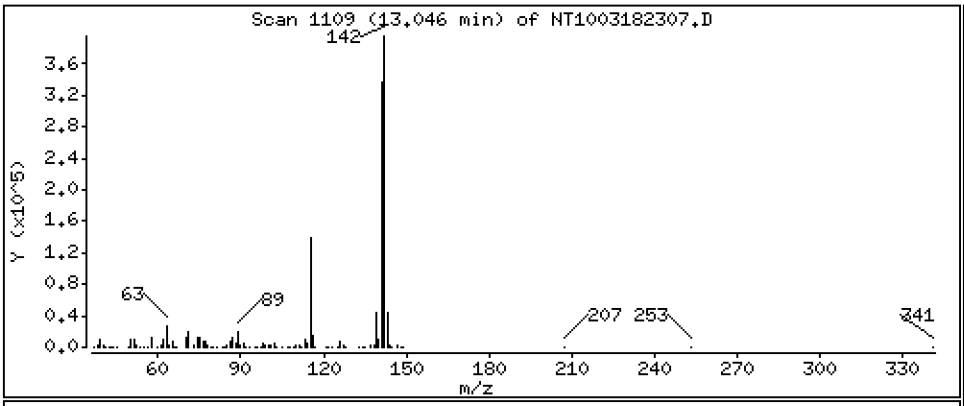
Operator: VTS

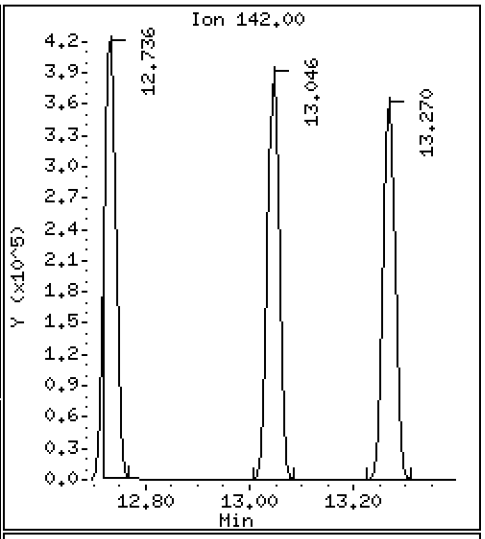
Column phase: ZB-5msi

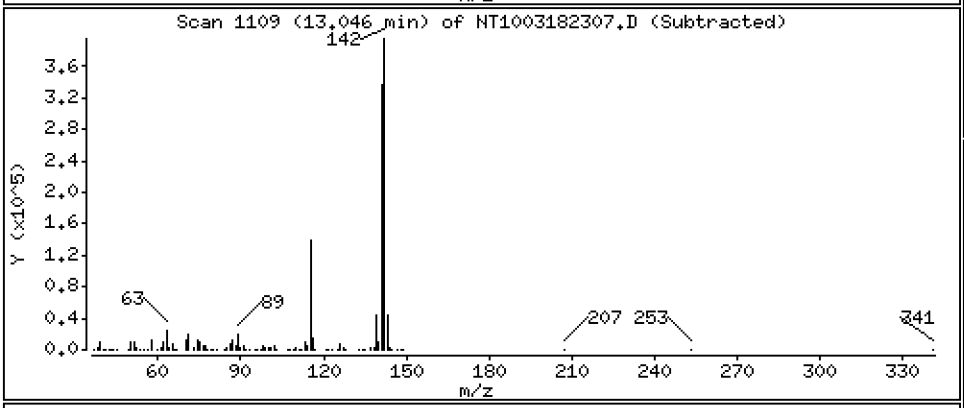
Column diameter: 0.25

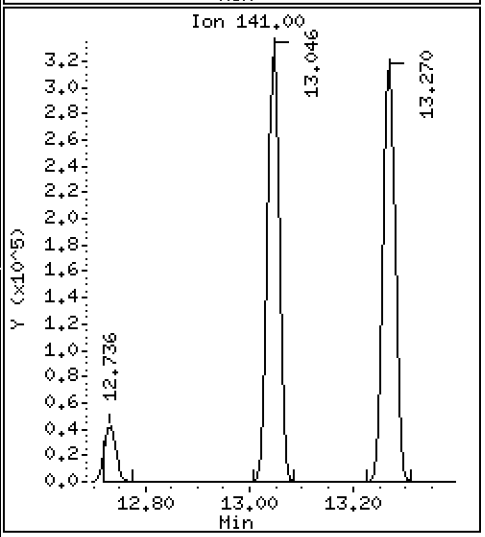
32 2-Methylnaphthalene

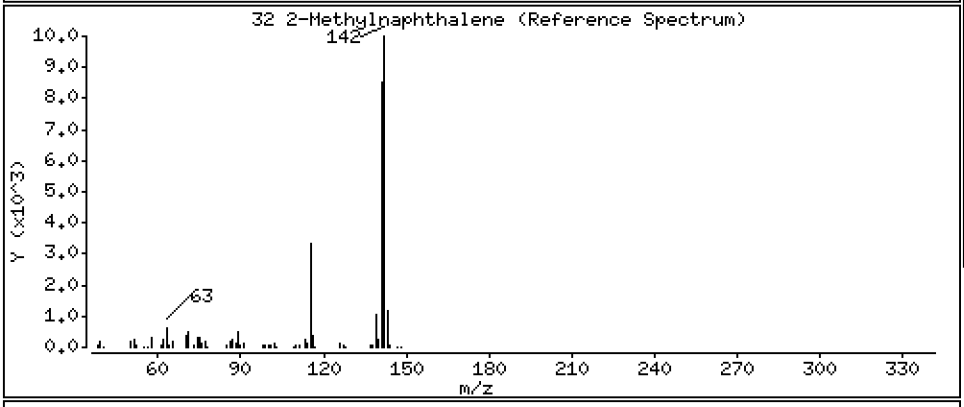
Concentration: 3.890 ug/mL

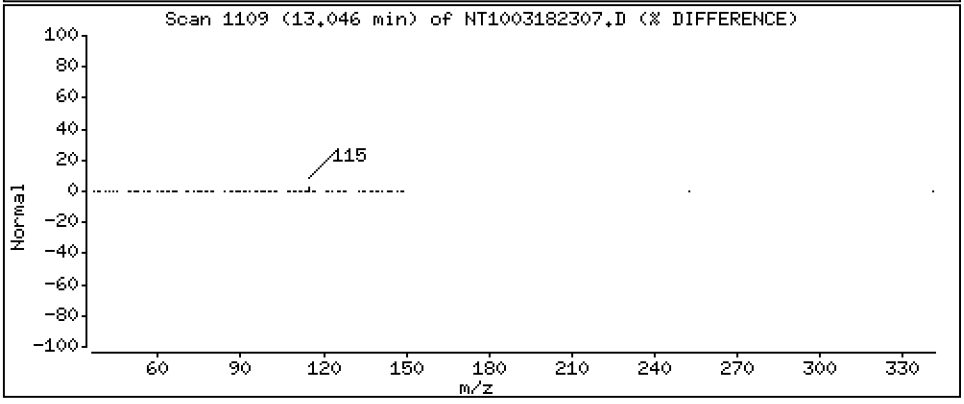












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

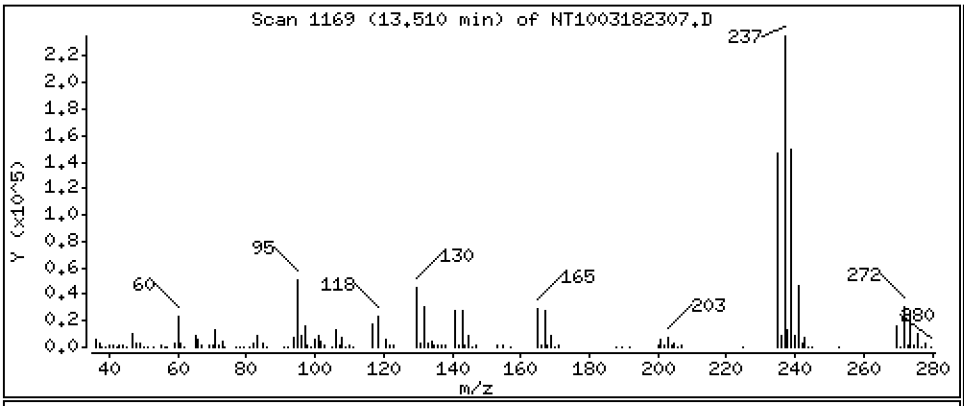
Operator: VTS

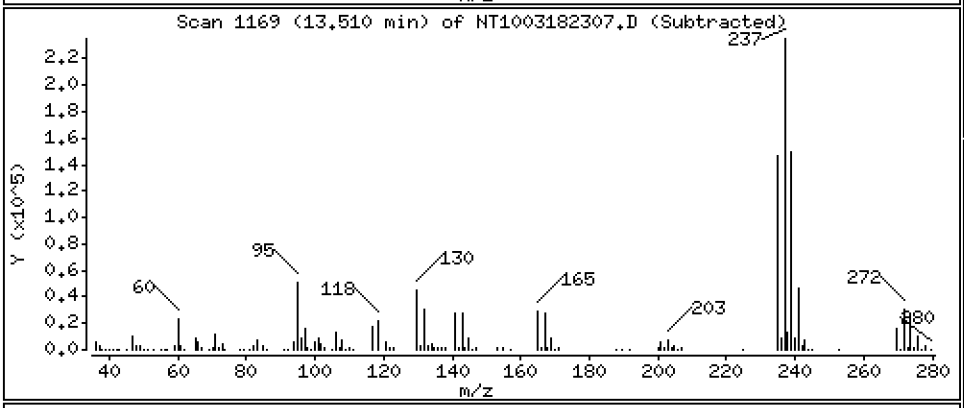
Column phase: ZB-5msi

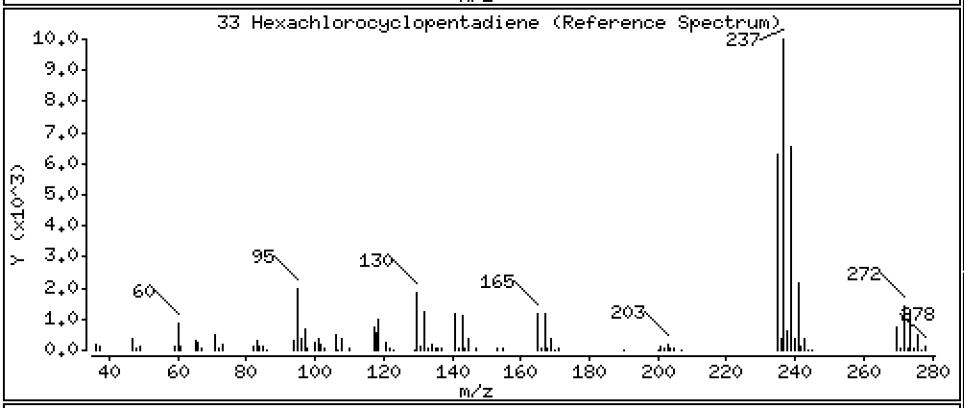
Column diameter: 0.25

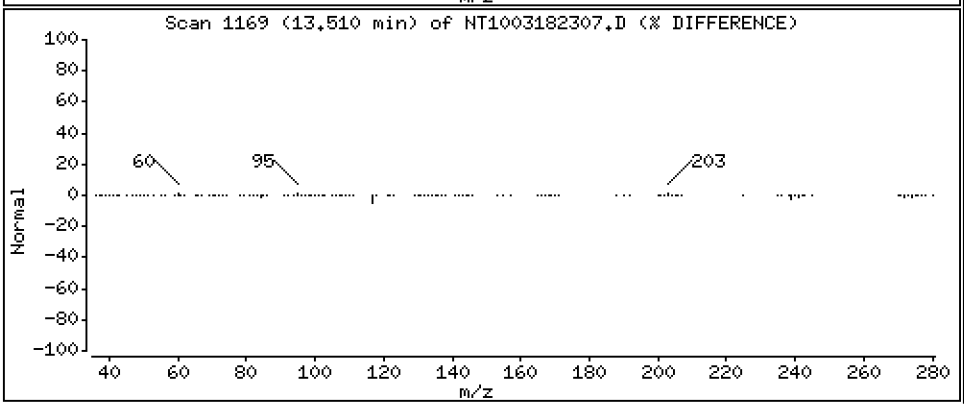
33 Hexachlorocyclopentadiene

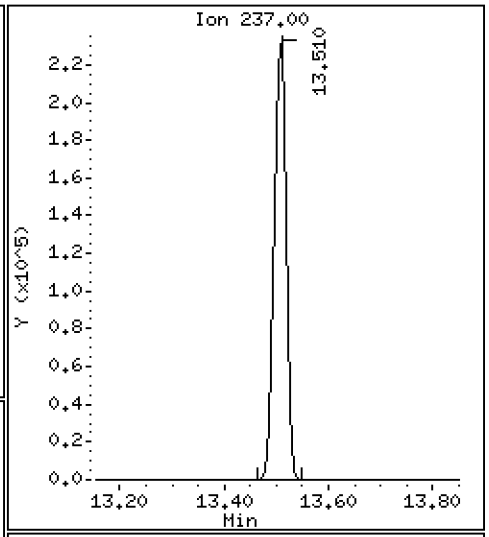
Concentration: 9.110 ug/mL

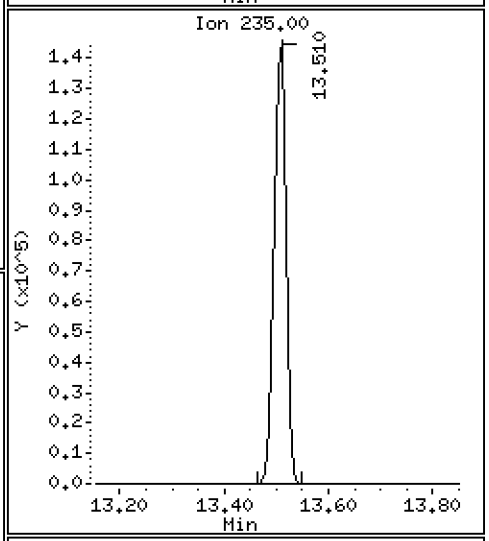


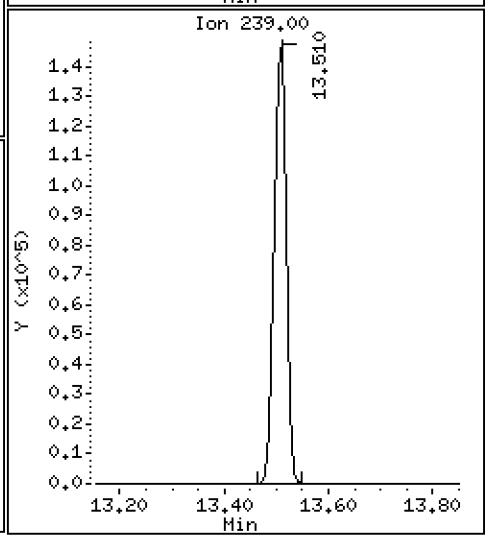












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

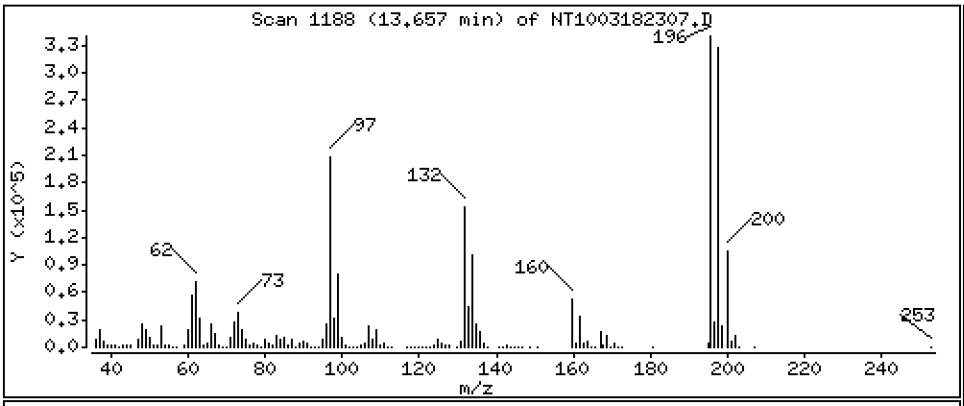
Operator: VTS

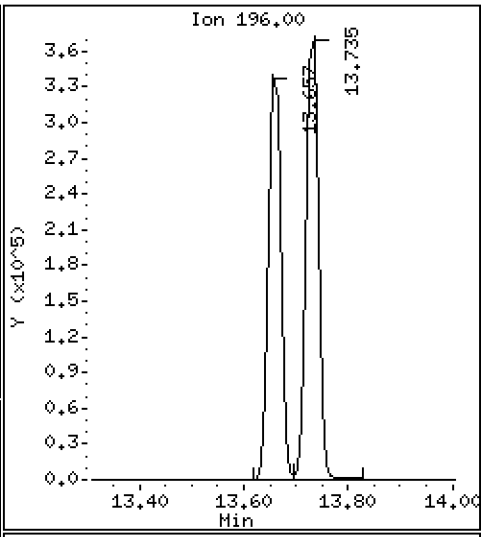
Column phase: ZB-5msi

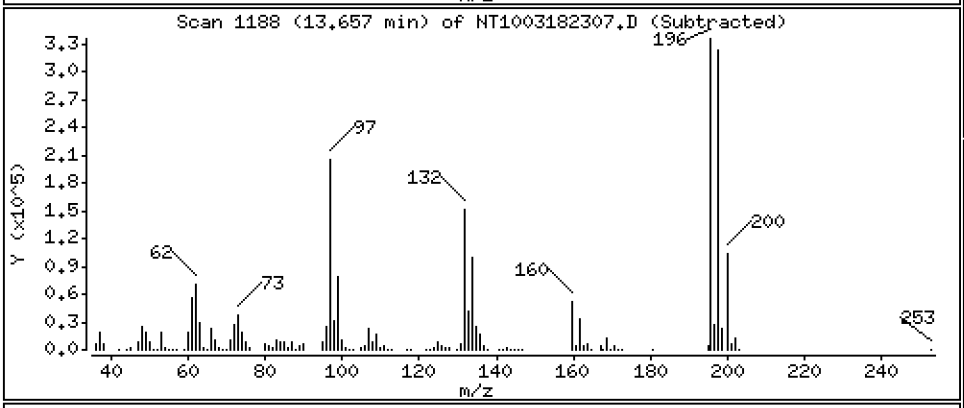
Column diameter: 0.25

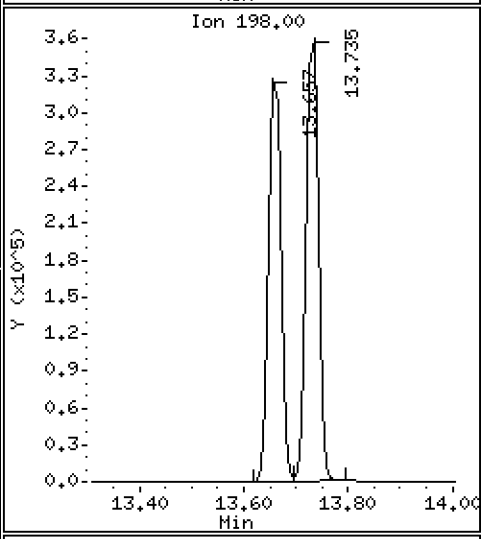
34 2,4,6-Trichlorophenol

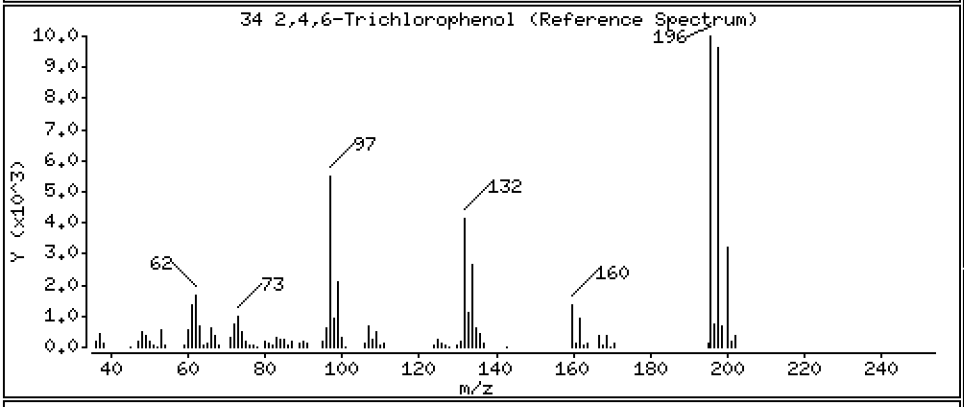
Concentration: 12.70 ug/mL

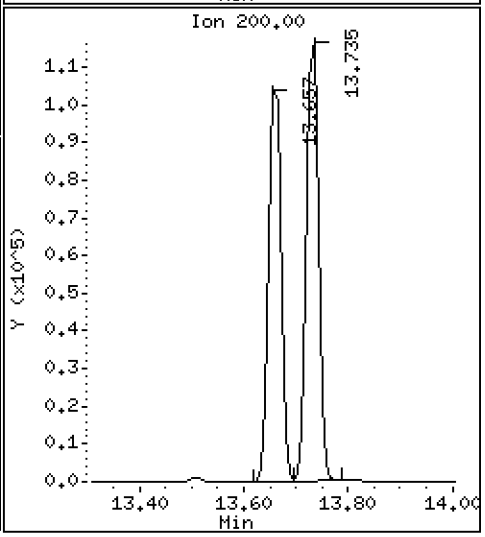


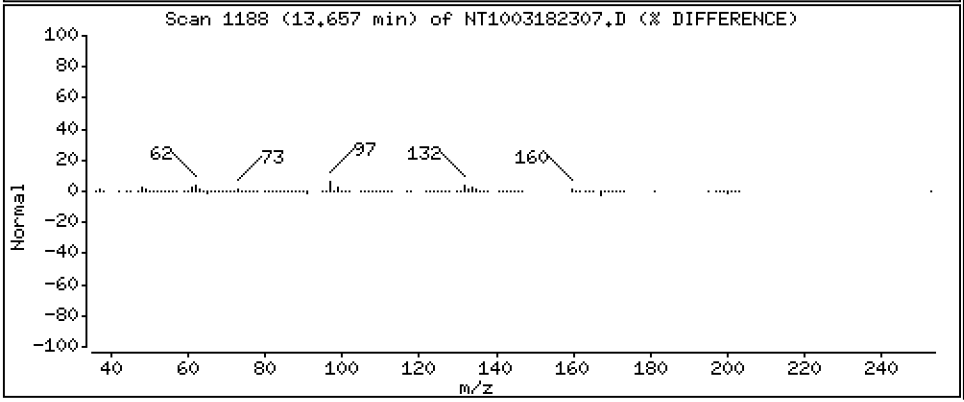












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

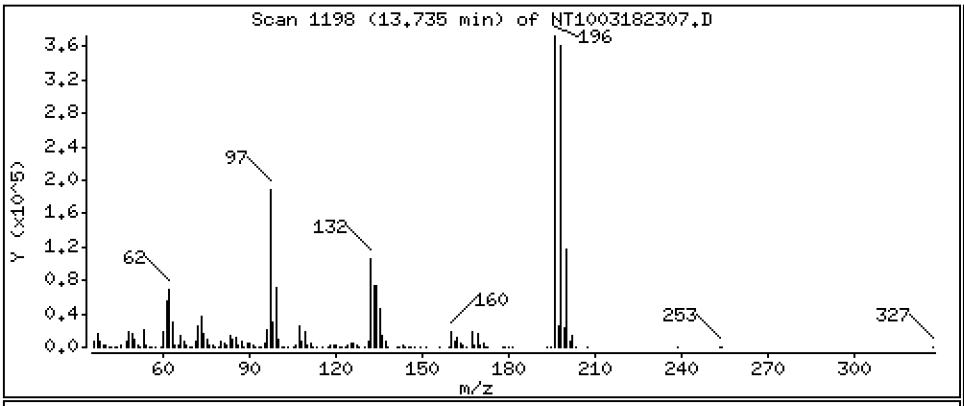
Operator: VTS

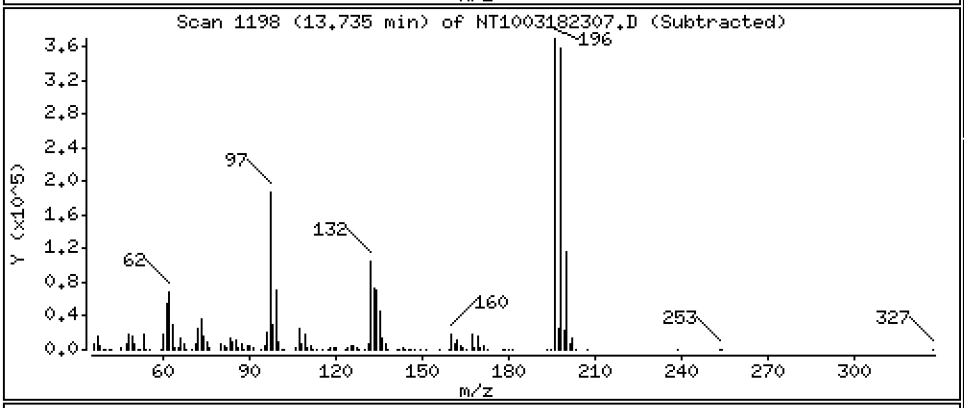
Column phase: ZB-5msi

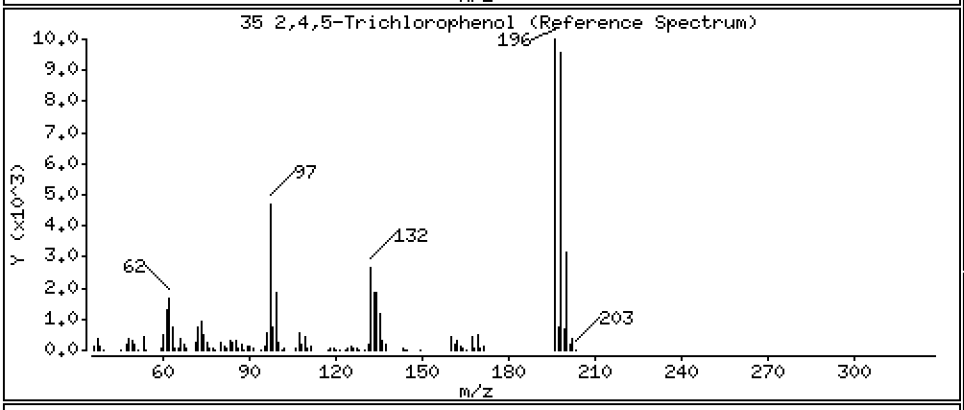
Column diameter: 0.25

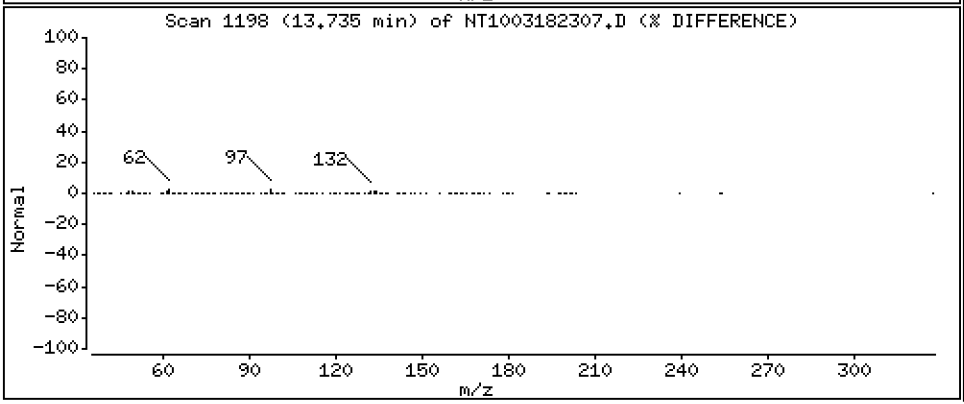
35 2,4,5-Trichlorophenol

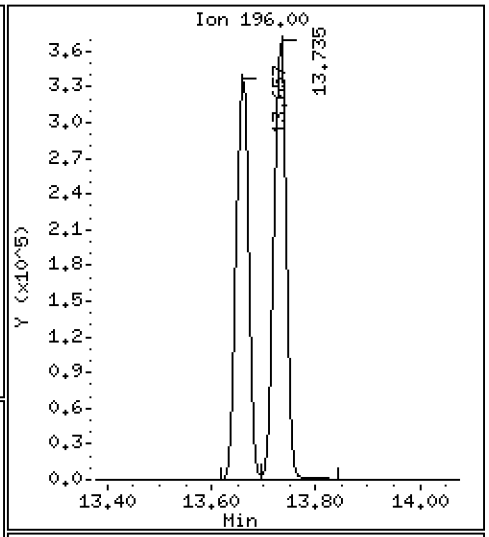
Concentration: 12.45 ug/mL

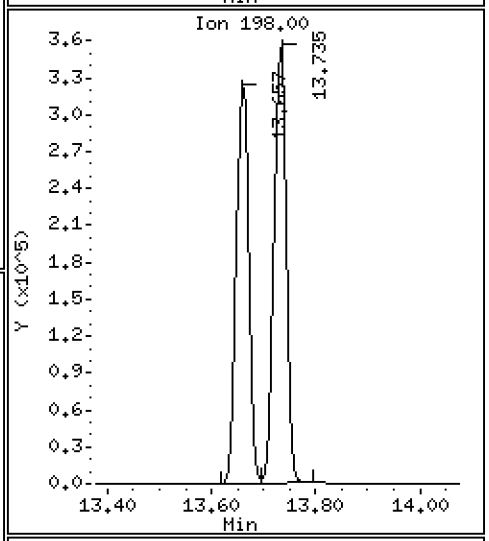


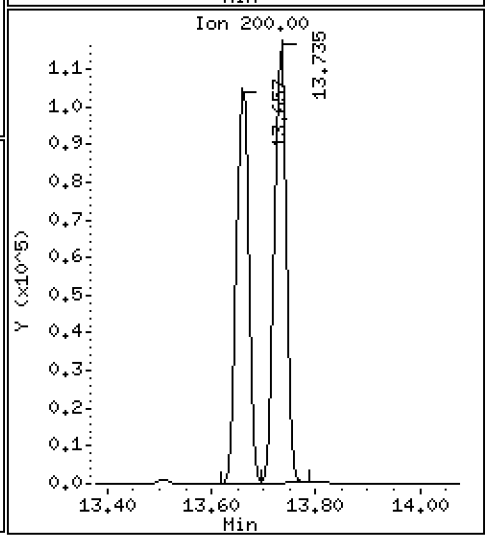












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

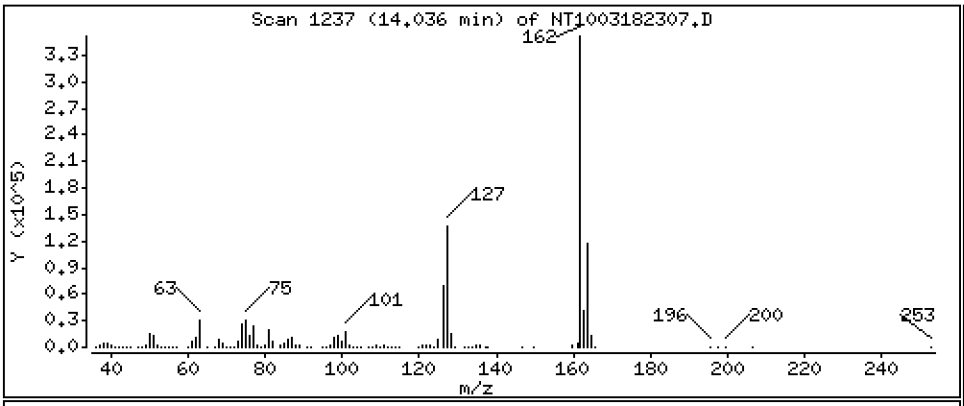
Operator: VTS

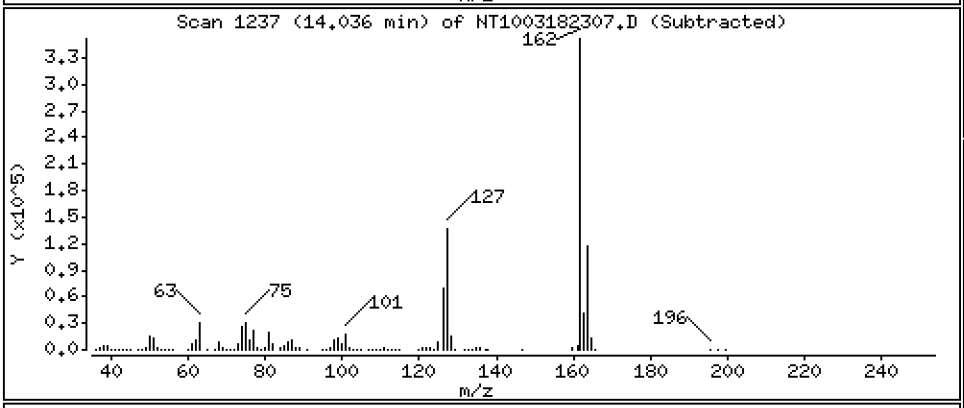
Column phase: ZB-5msi

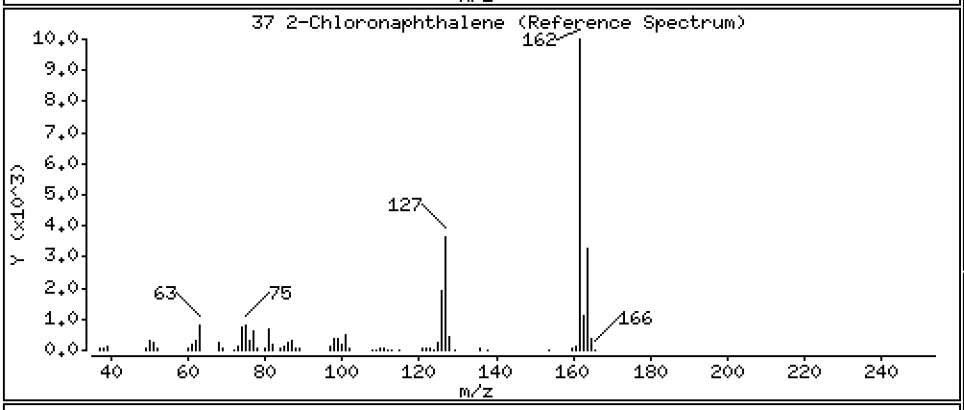
Column diameter: 0.25

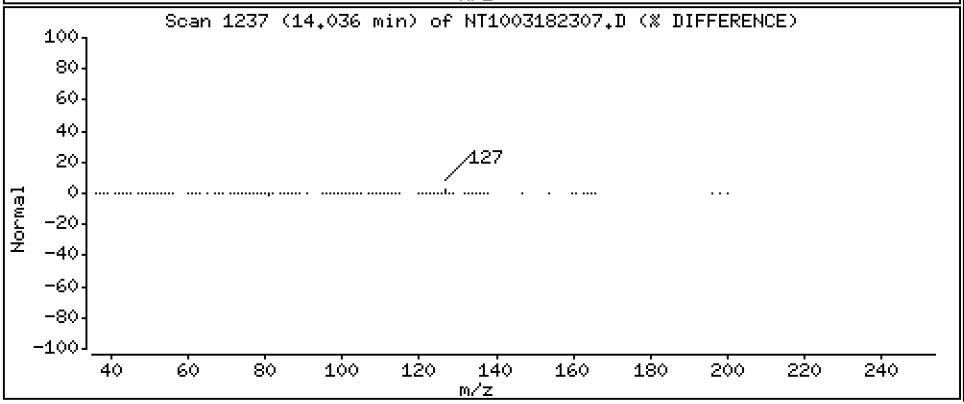
37 2-Chloronaphthalene

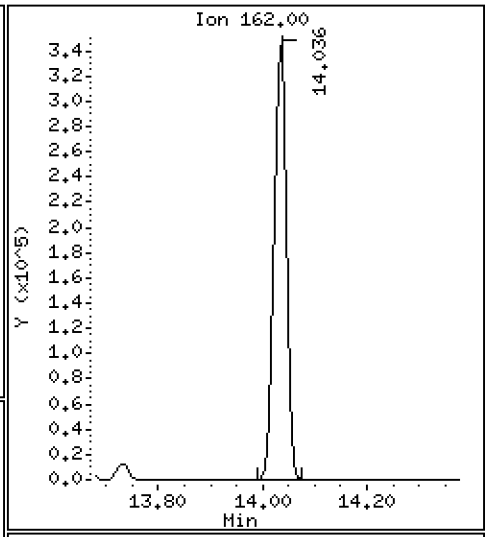
Concentration: 4.026 ug/mL

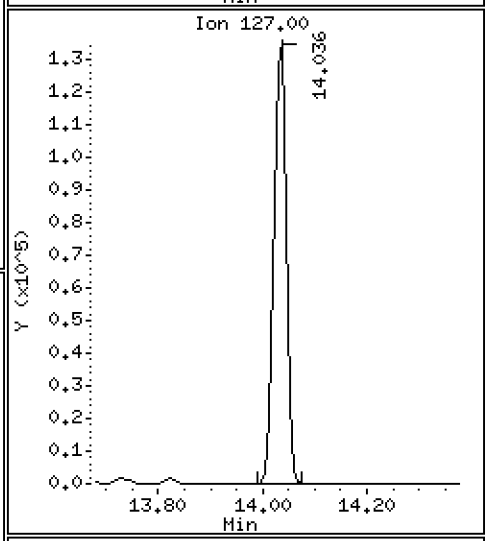


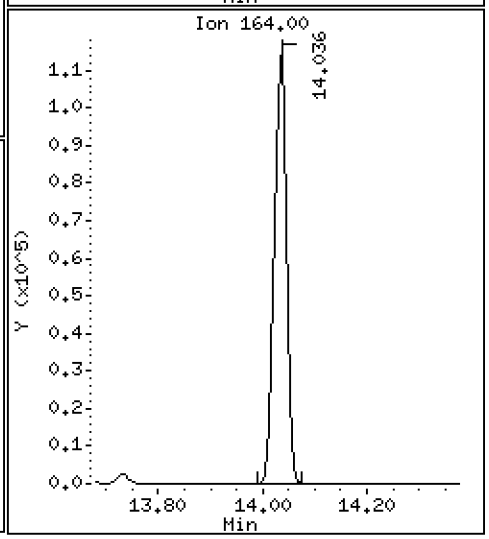












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

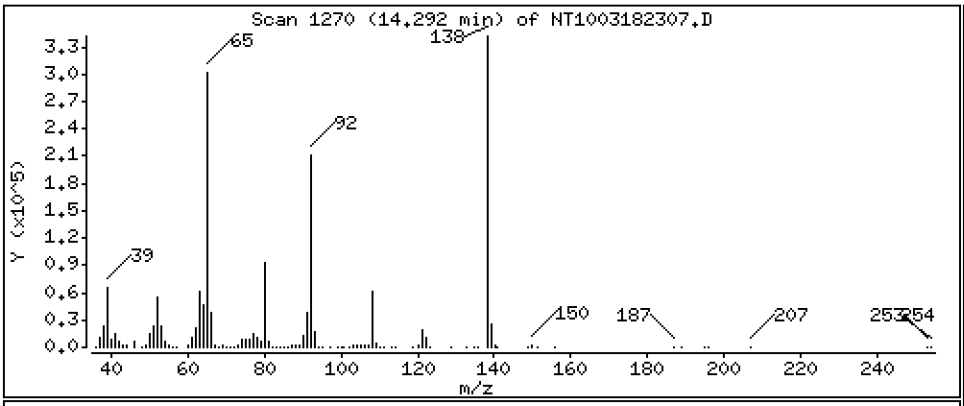
Operator: VTS

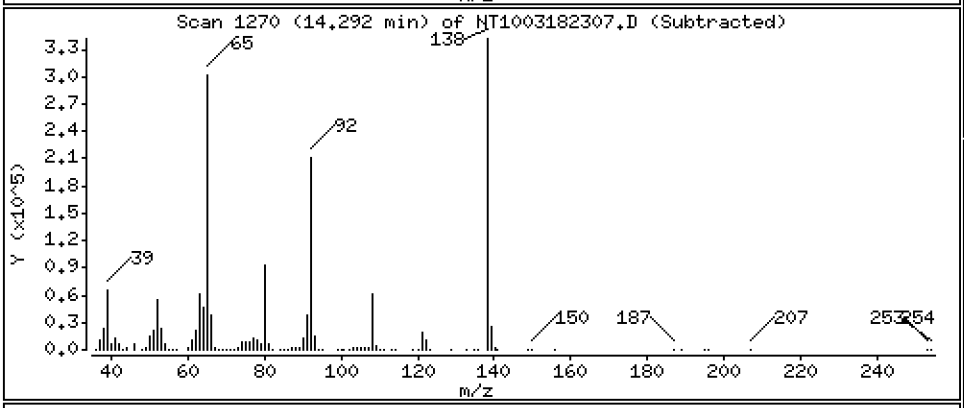
Column phase: ZB-5msi

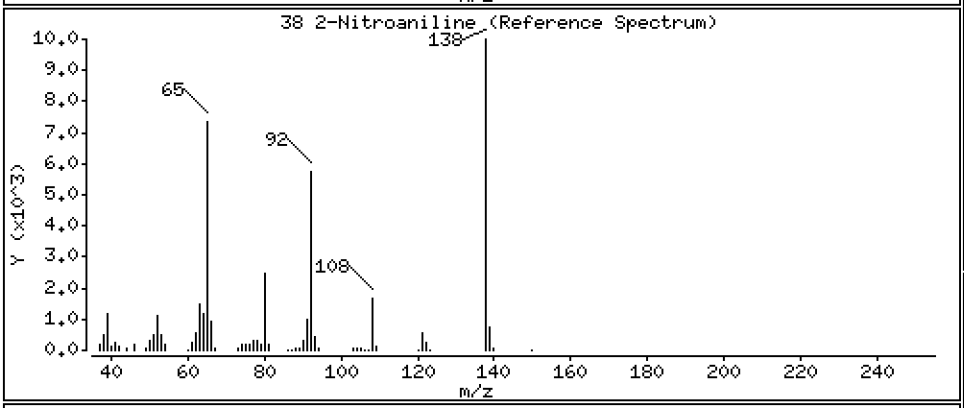
Column diameter: 0.25

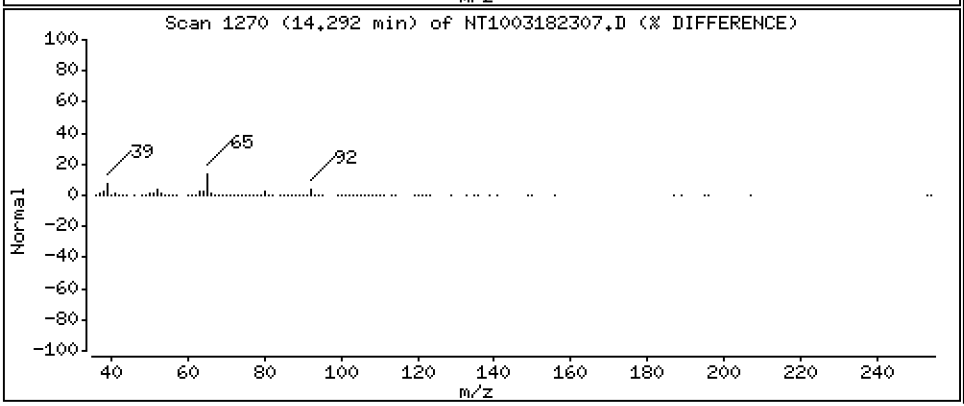
38 2-Nitroaniline

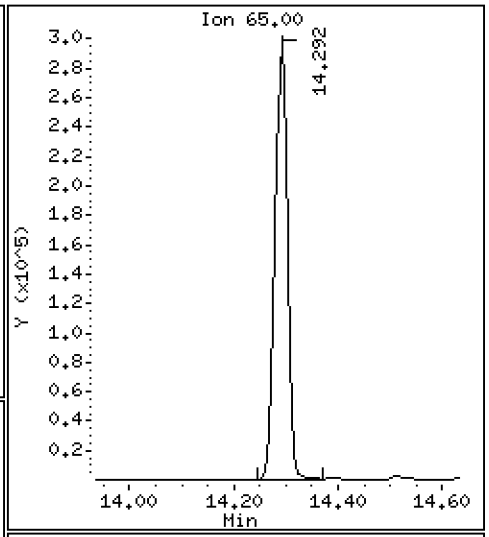
Concentration: 12.15 ug/mL

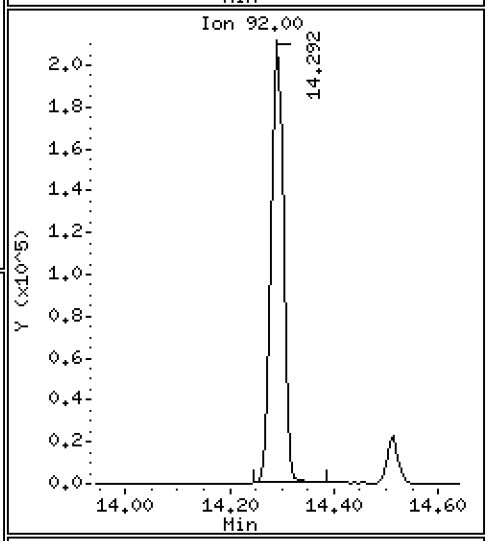


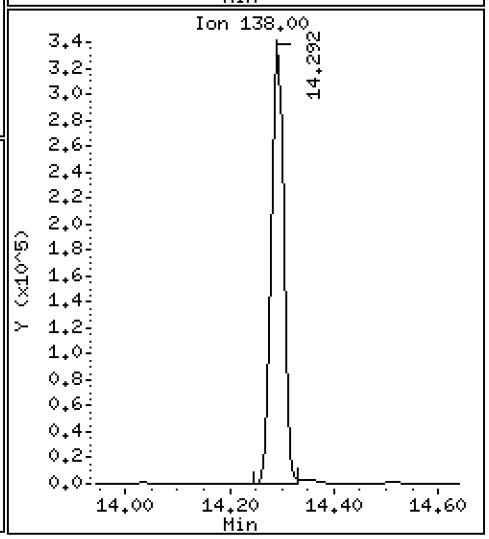












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

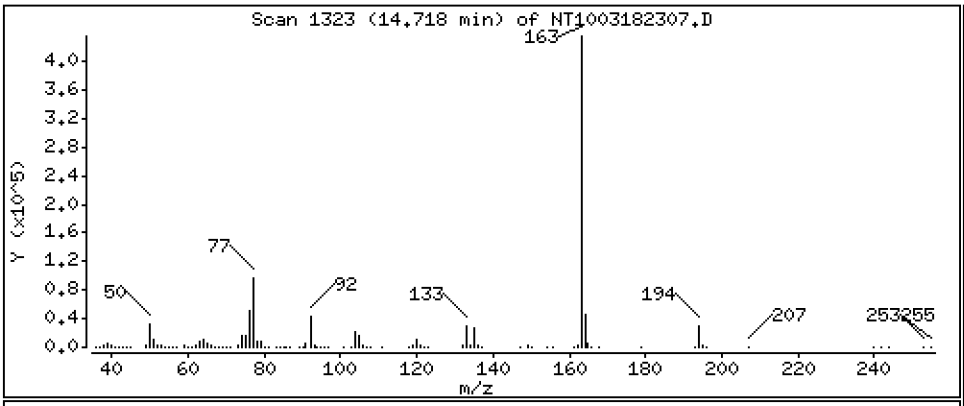
Operator: VTS

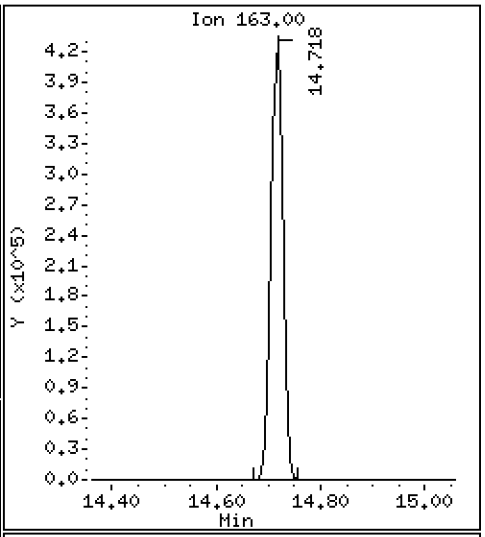
Column phase: ZB-5msi

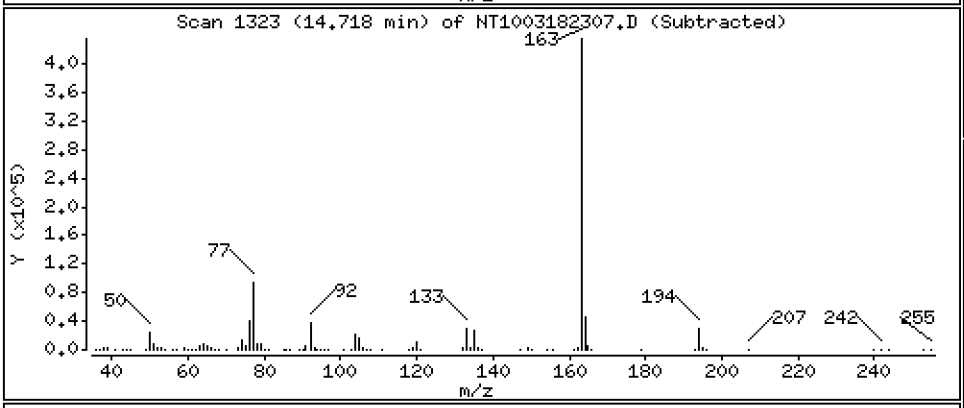
Column diameter: 0.25

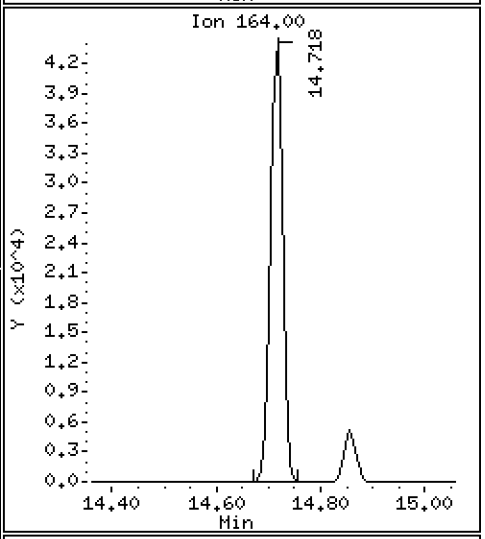
39 Dimethylphthalate

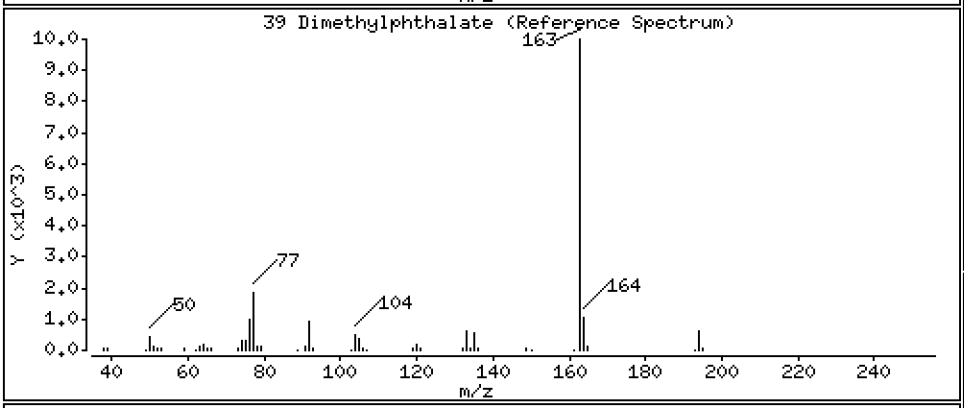
Concentration: 4.705 ug/mL

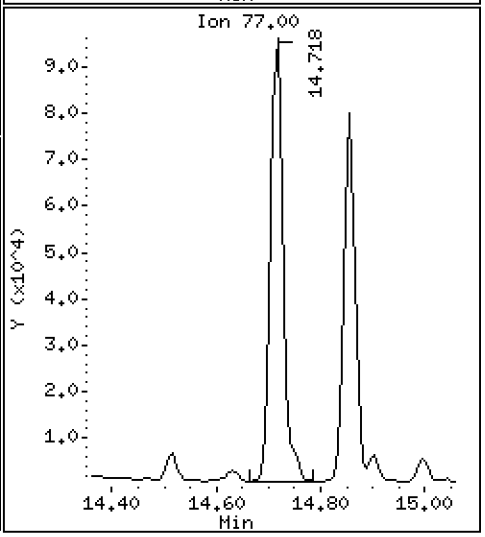


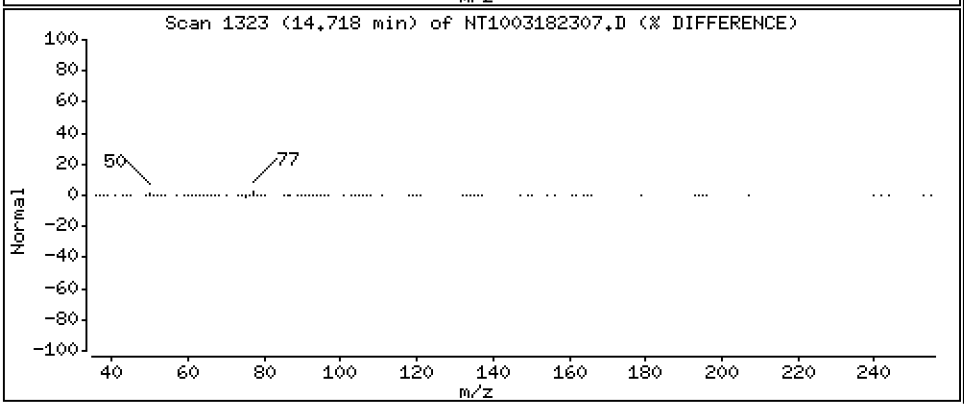












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

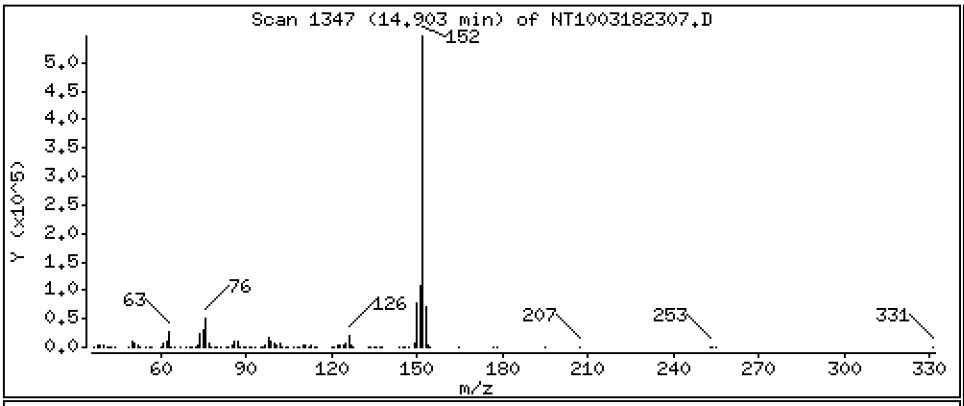
Operator: VTS

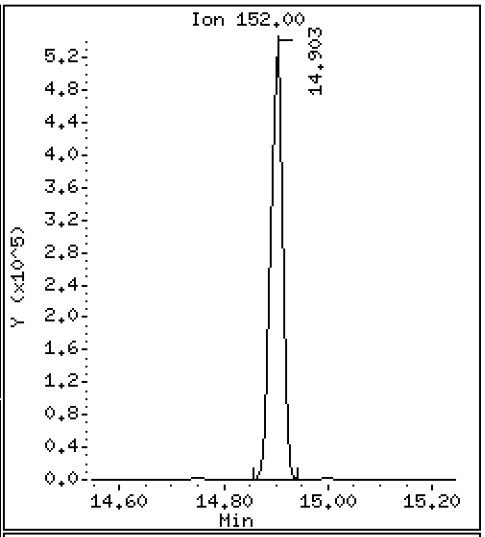
Column phase: ZB-5msi

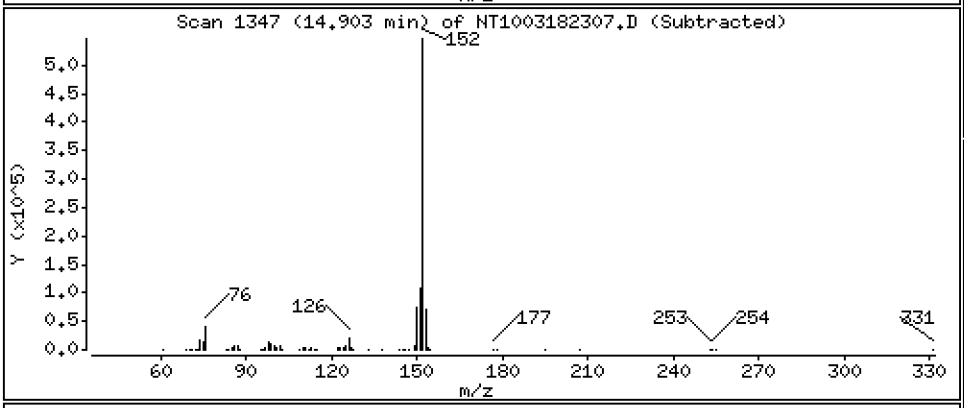
Column diameter: 0.25

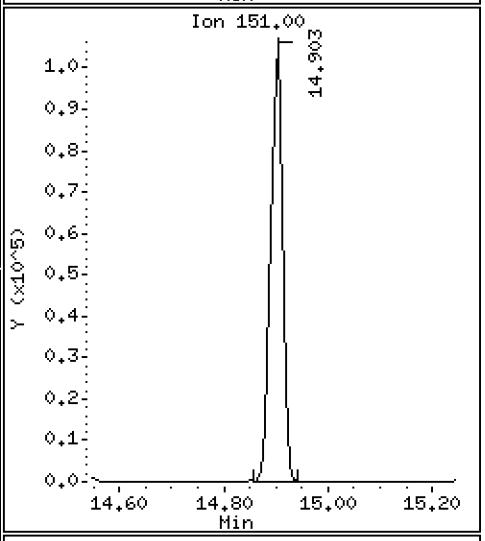
40 Acenaphthylene

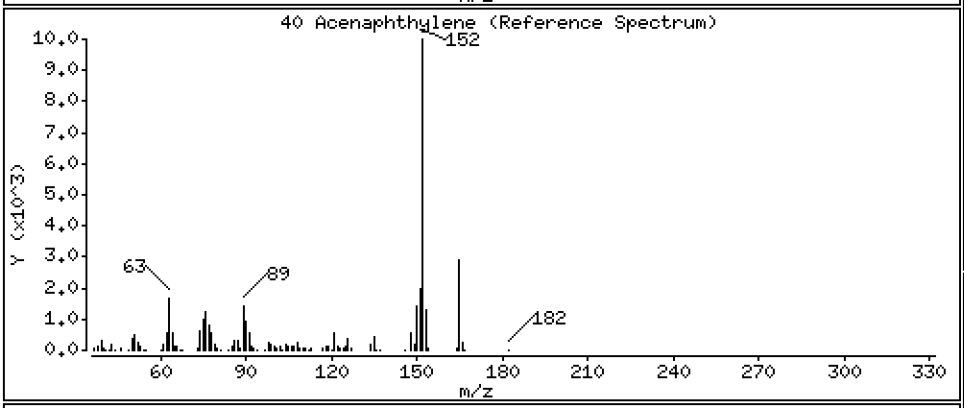
Concentration: 3.876 ug/mL

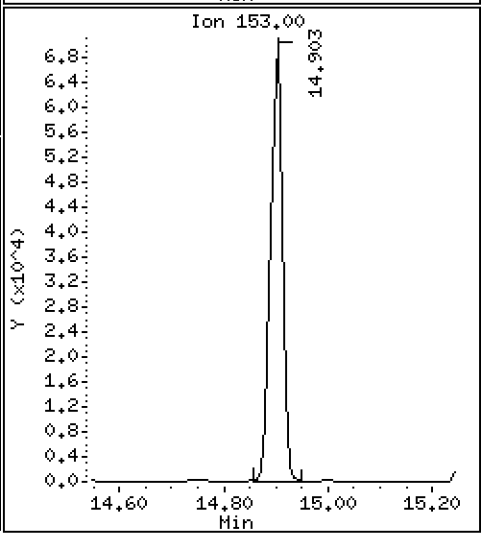


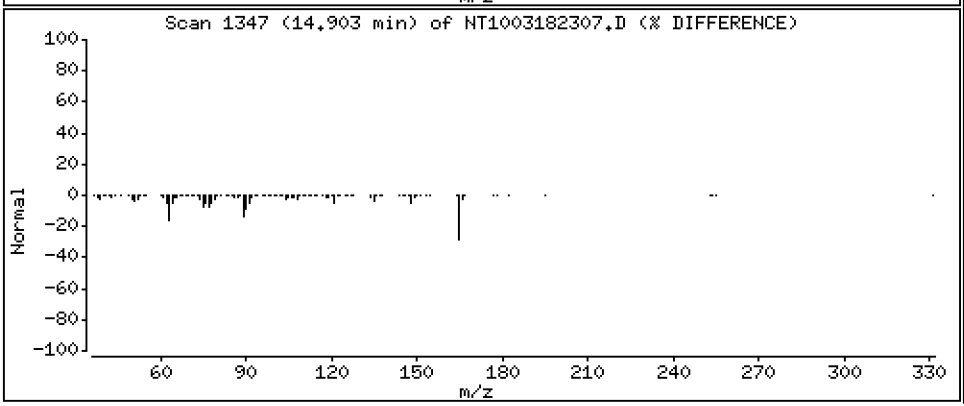












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

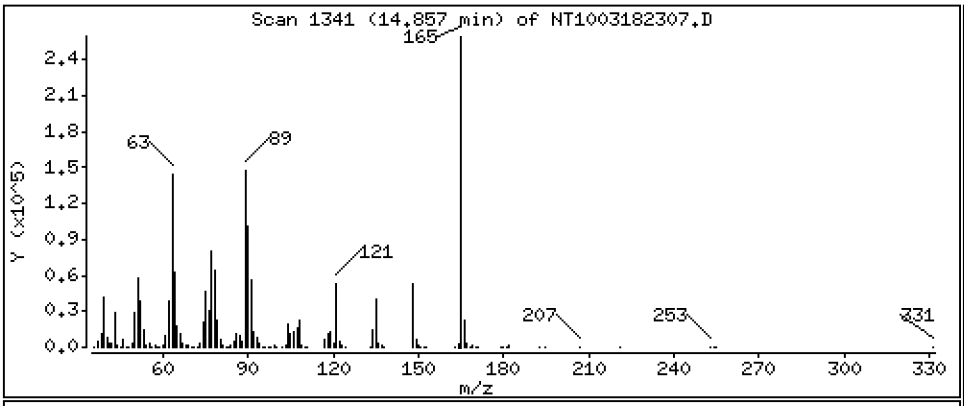
Operator: VTS

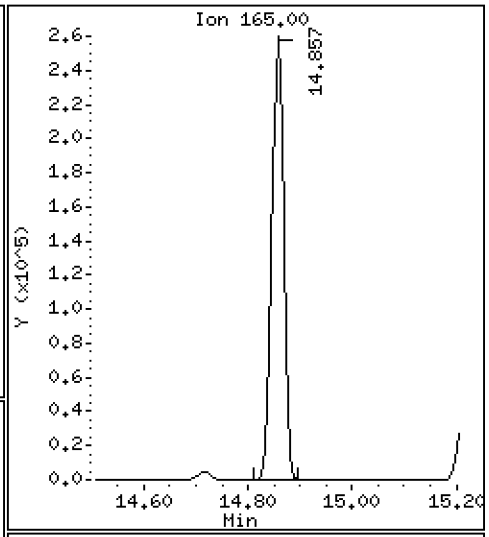
Column phase: ZB-5msi

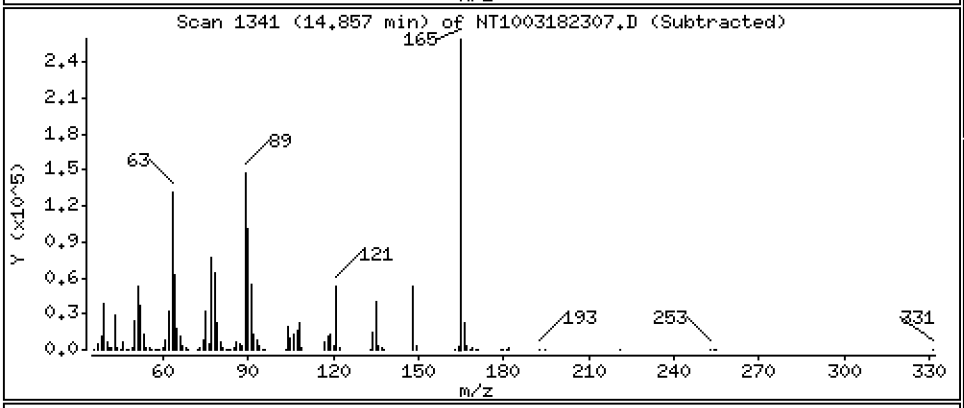
Column diameter: 0.25

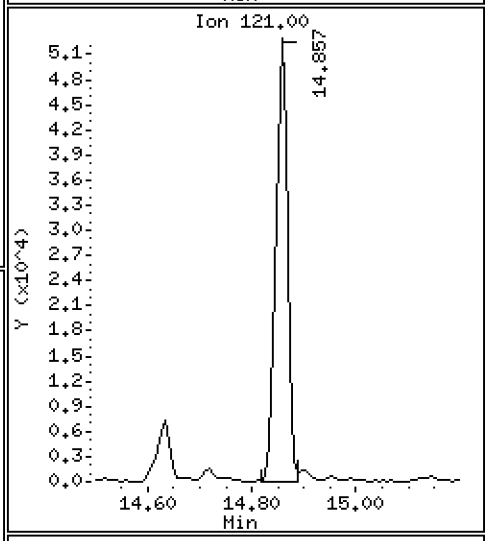
41 2,6-Dinitrotoluene

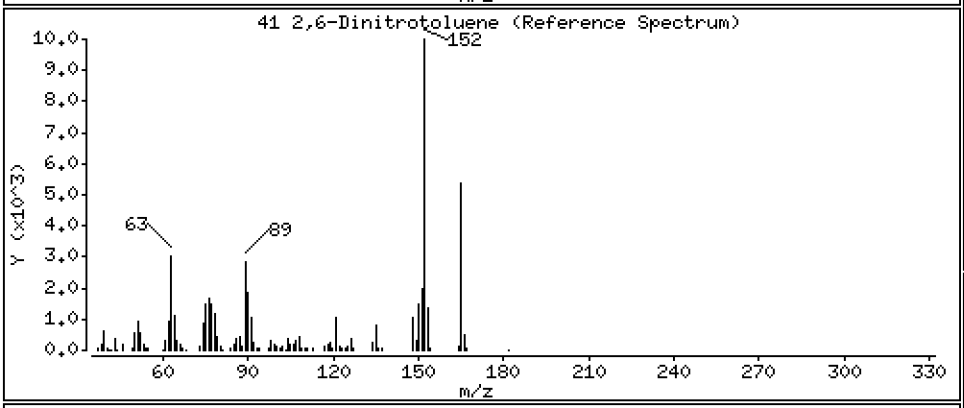
Concentration: 13.00 ug/mL

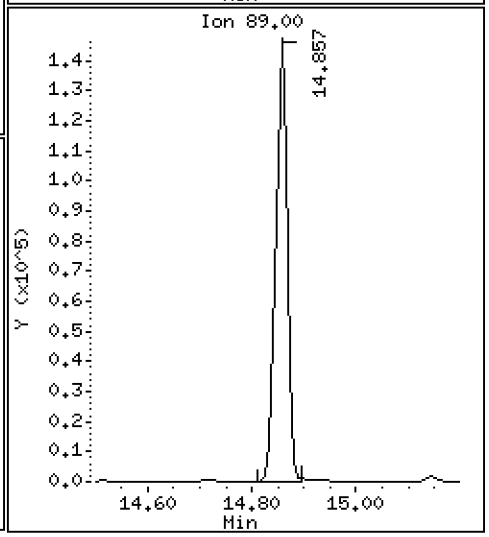


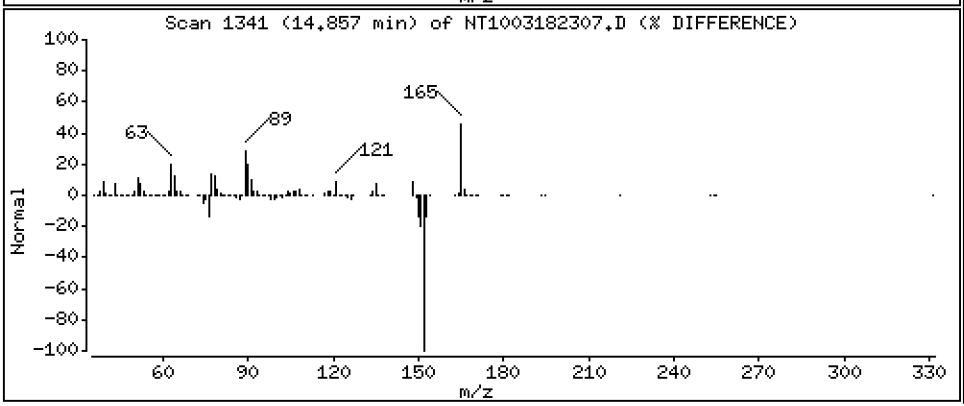












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

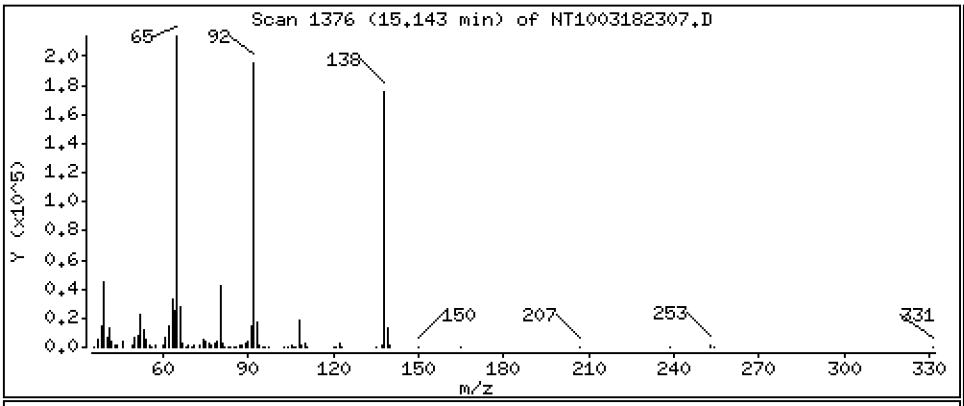
Operator: VTS

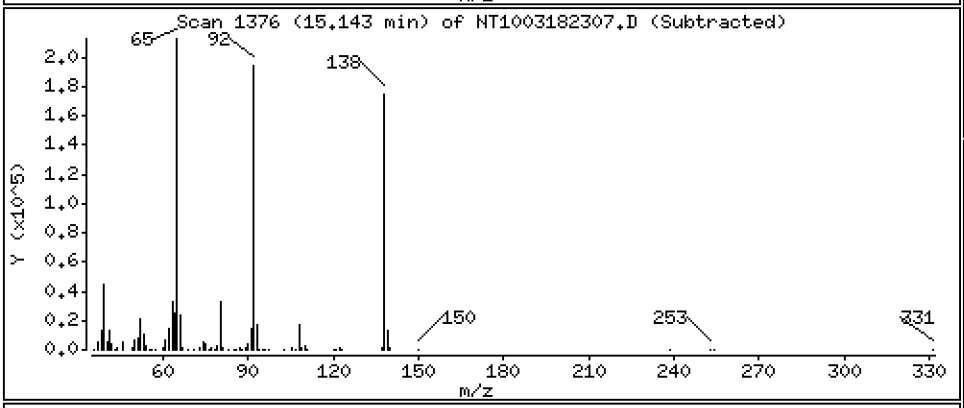
Column phase: ZB-5msi

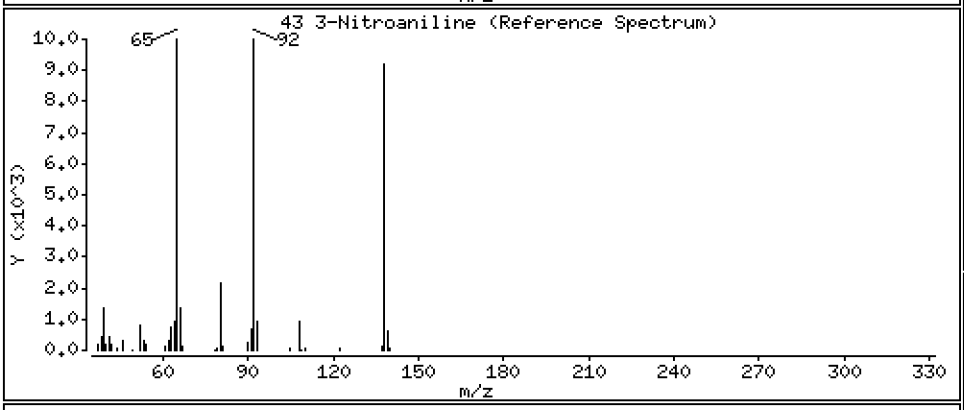
Column diameter: 0.25

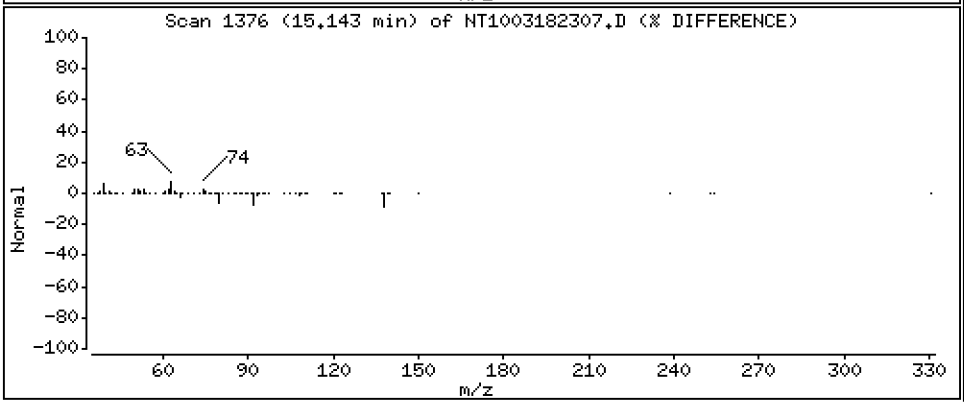
43 3-Nitroaniline

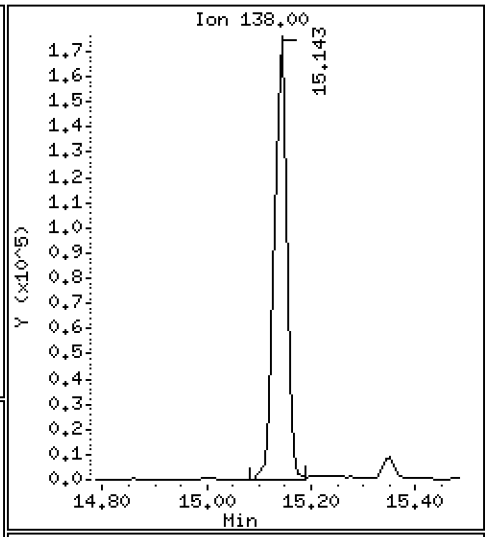
Concentration: 9.630 ug/mL

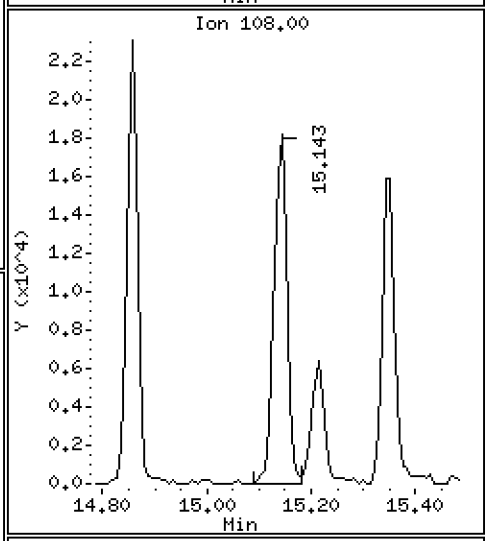


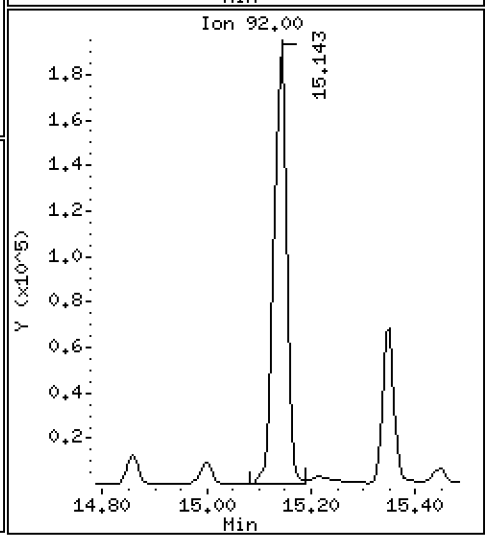












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

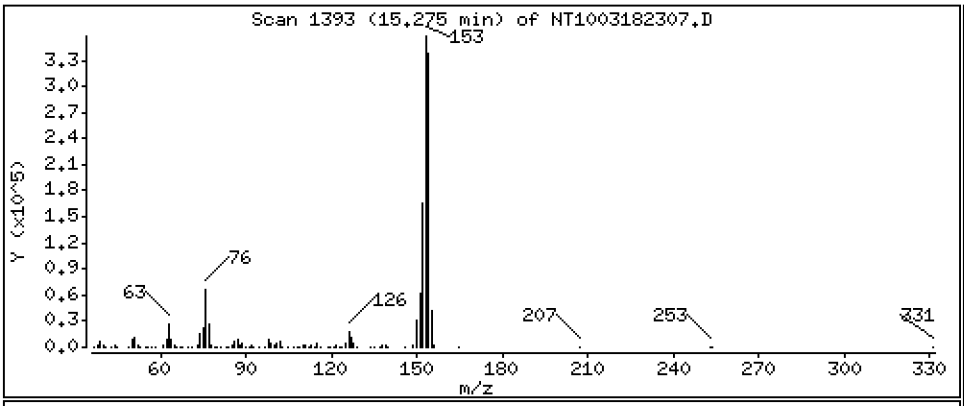
Operator: VTS

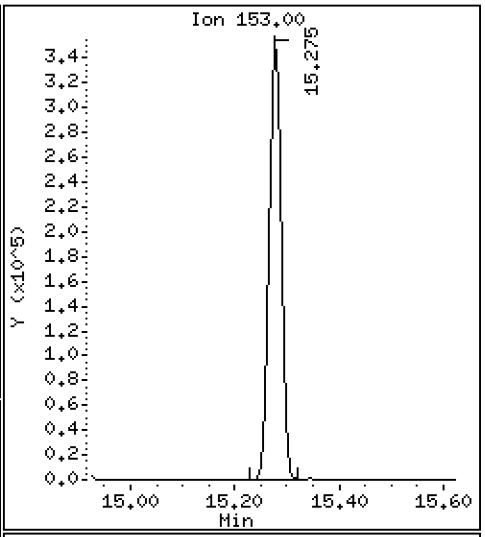
Column phase: ZB-5msi

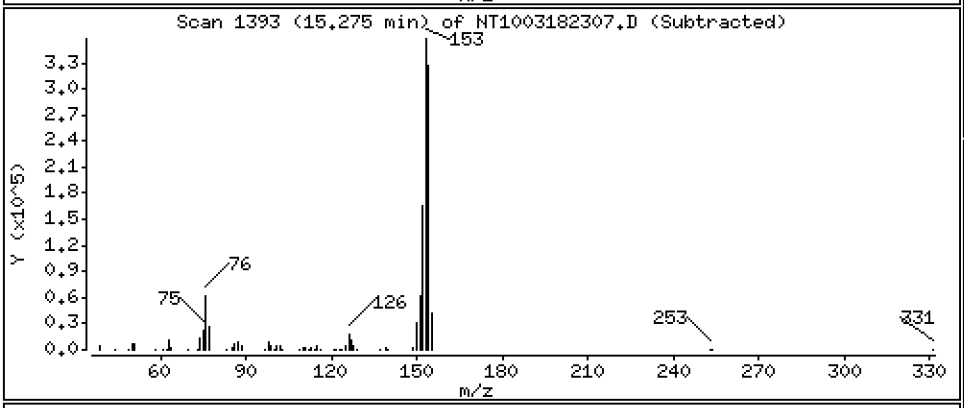
Column diameter: 0.25

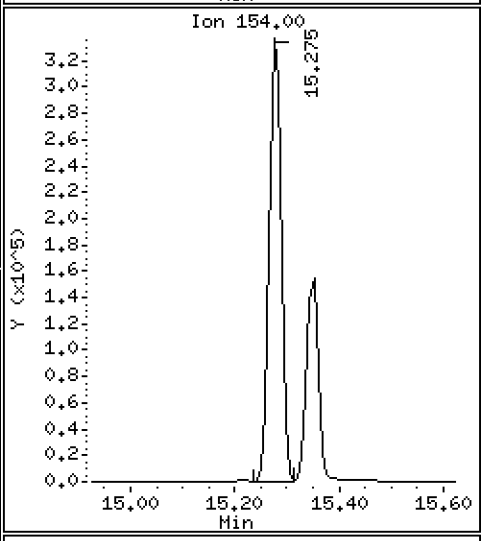
44 Acenaphthene

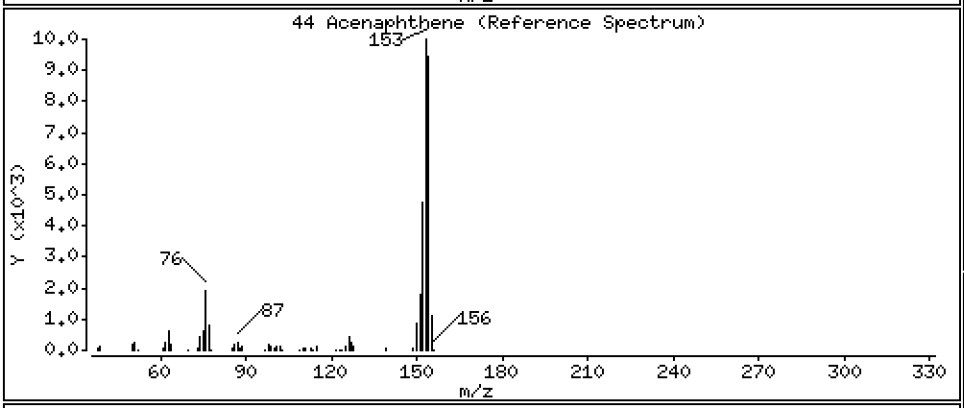
Concentration: 4.126 ug/mL

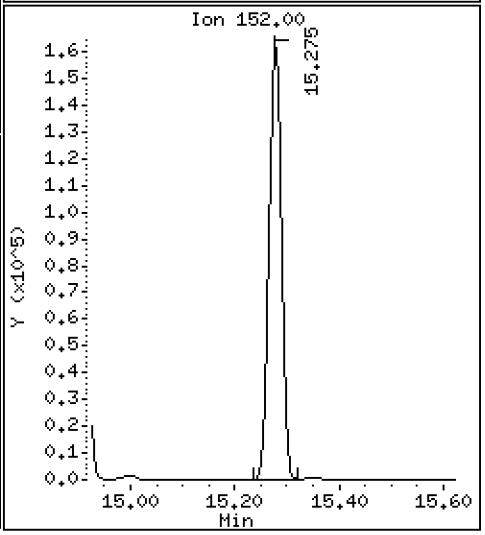


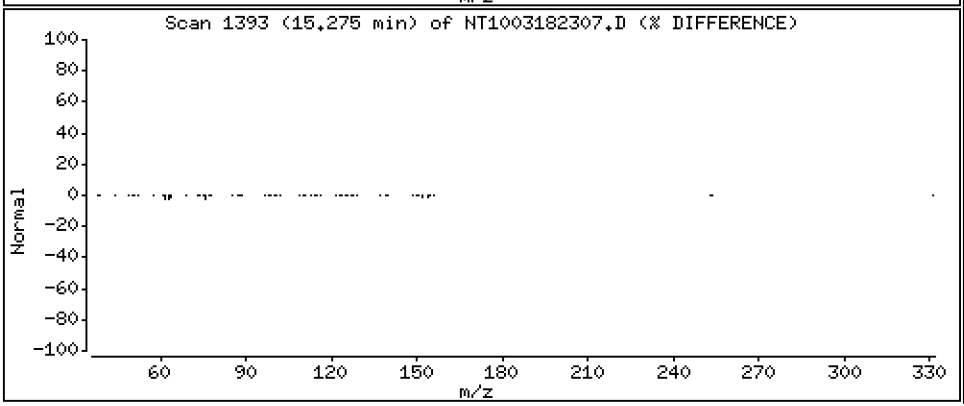












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

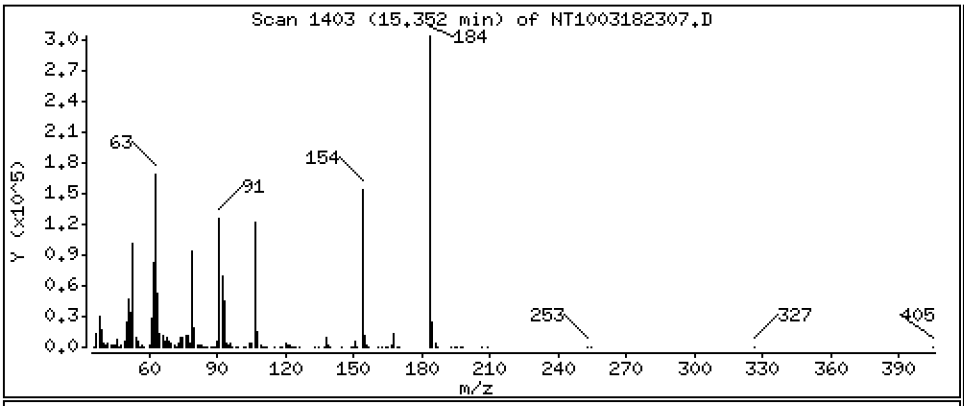
Operator: VTS

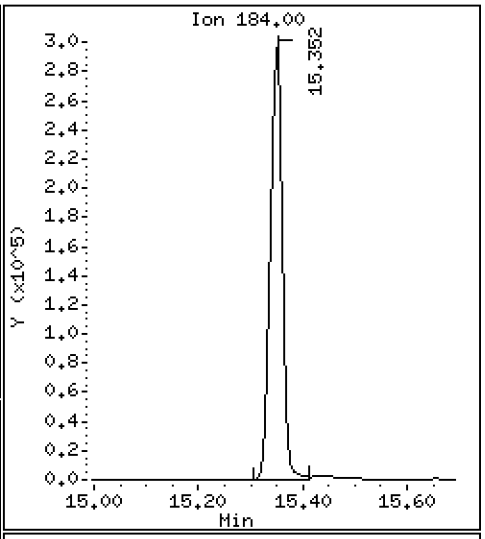
Column phase: ZB-5msi

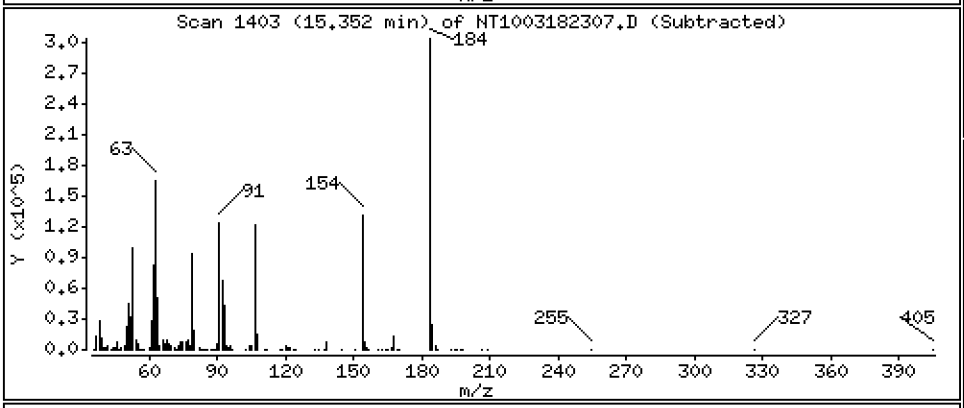
Column diameter: 0.25

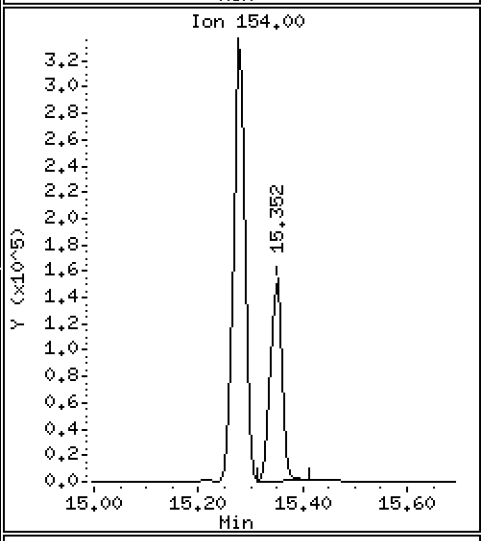
45 2,4-Dinitrophenol

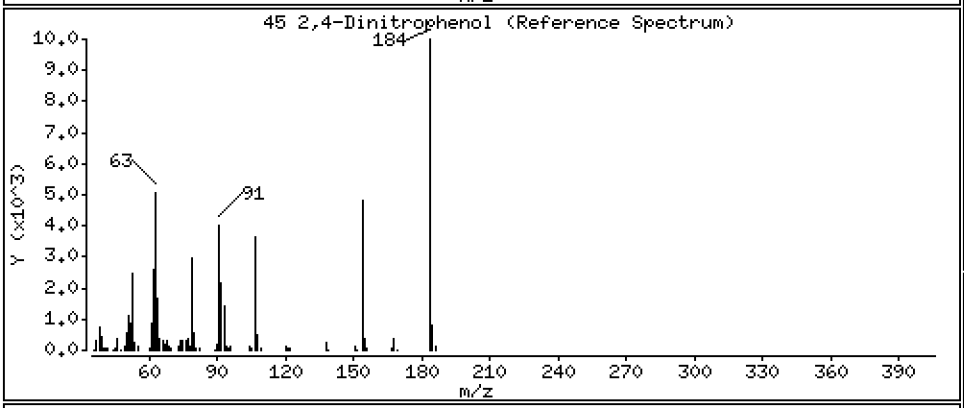
Concentration: 24.28 ug/mL

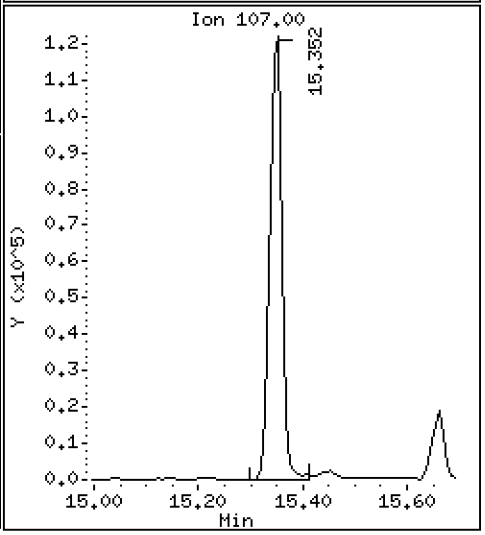


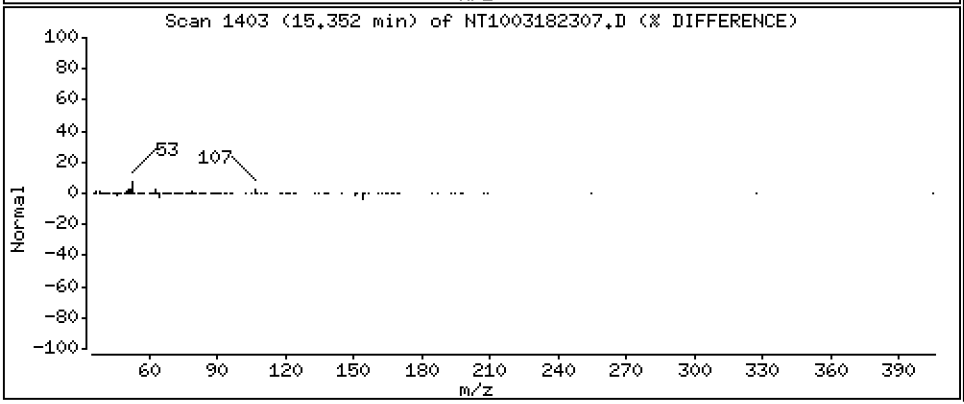












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

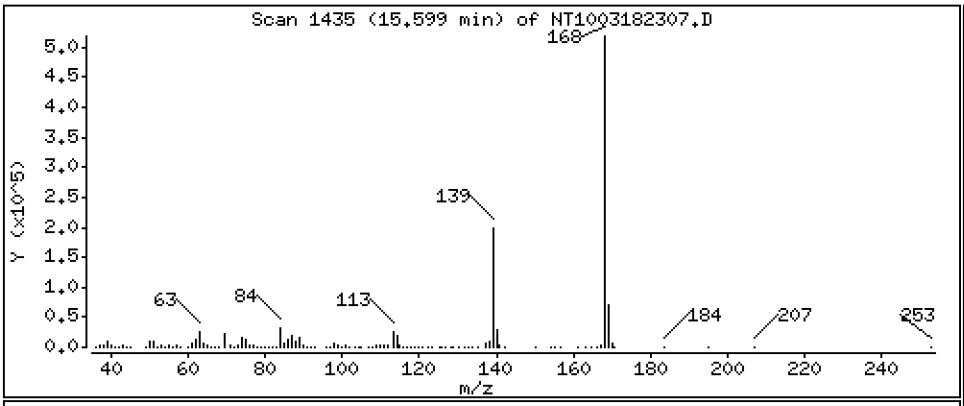
Operator: VTS

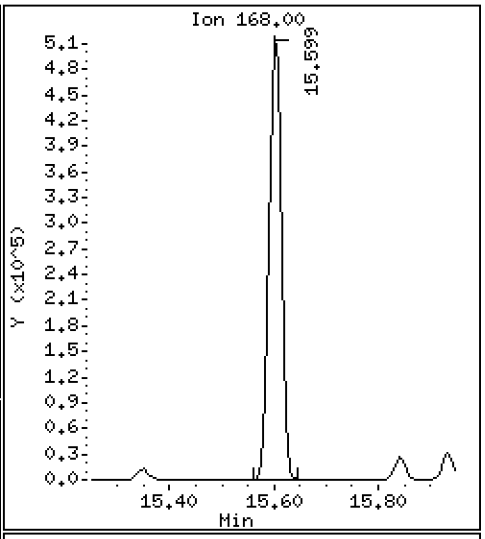
Column phase: ZB-5msi

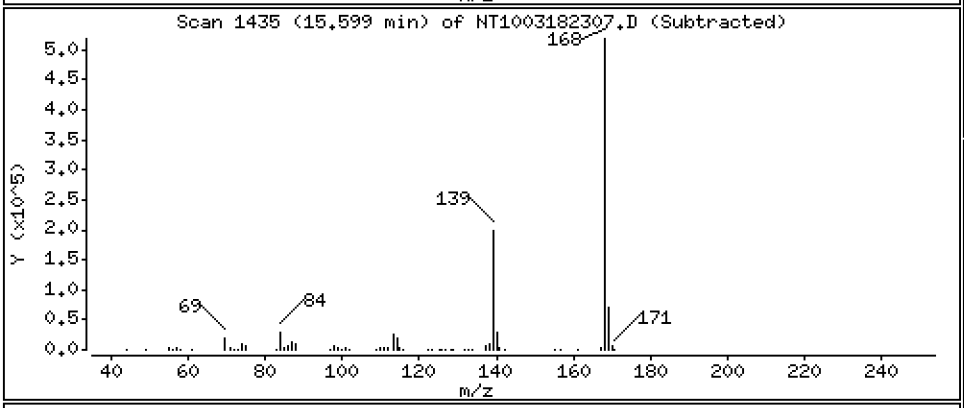
Column diameter: 0.25

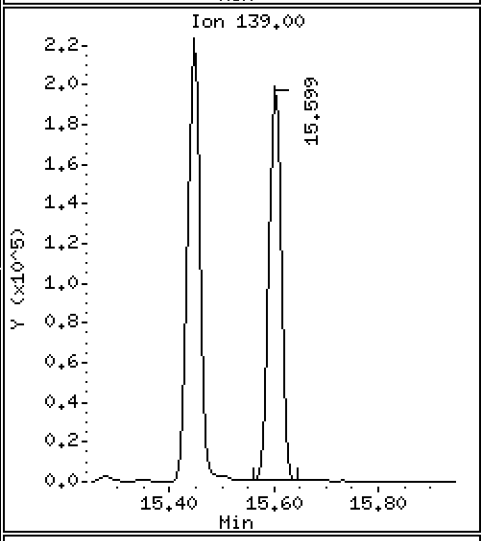
46 Dibenzofuran

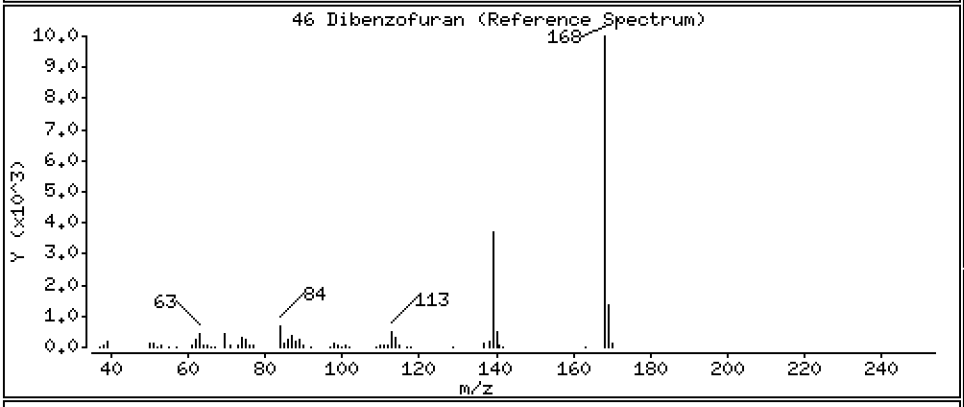
Concentration: 4.177 ug/mL

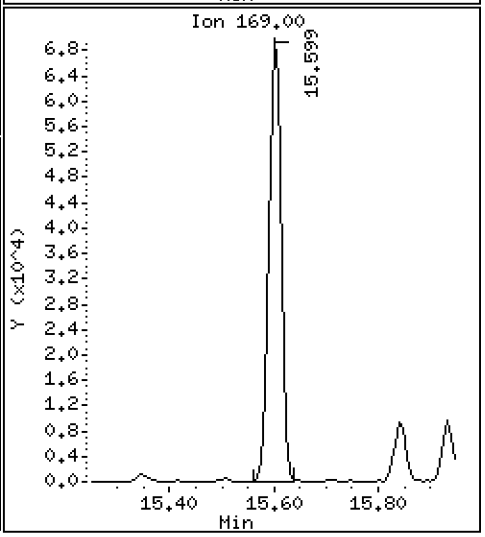


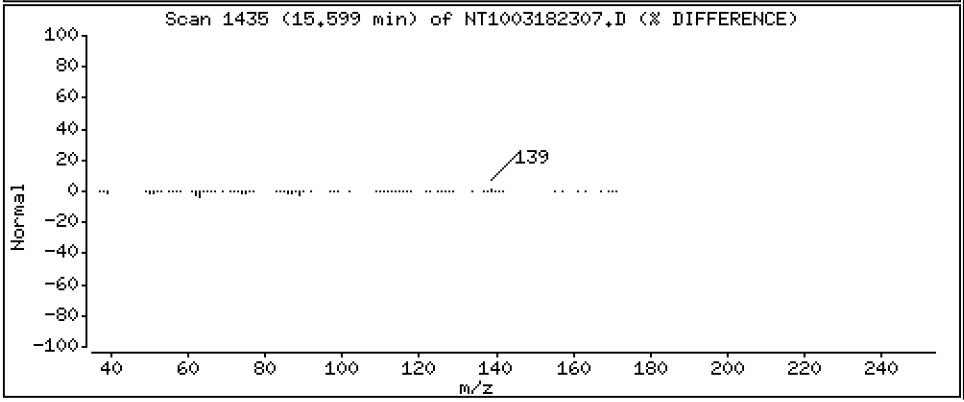












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

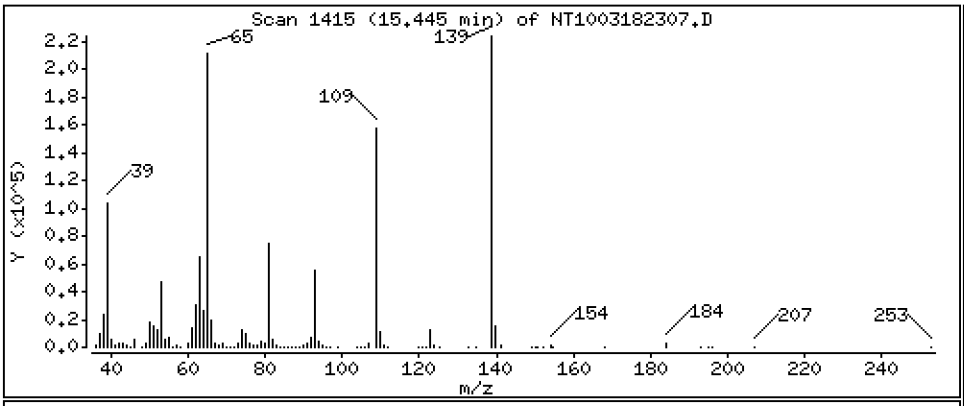
Operator: VTS

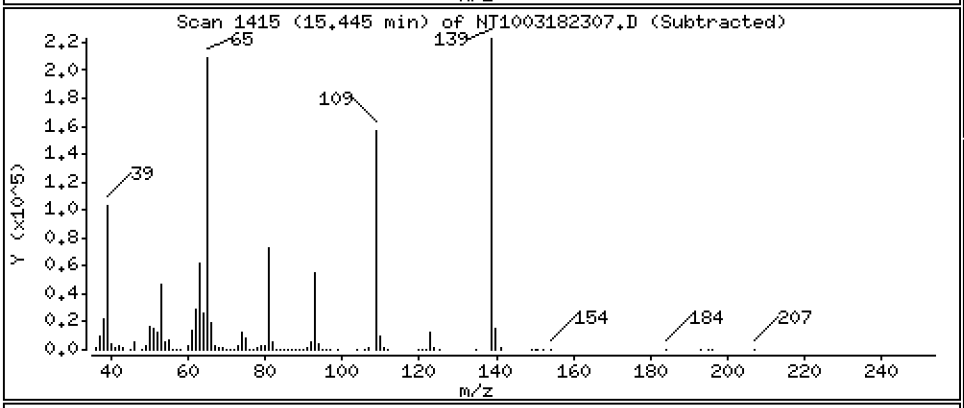
Column phase: ZB-5msi

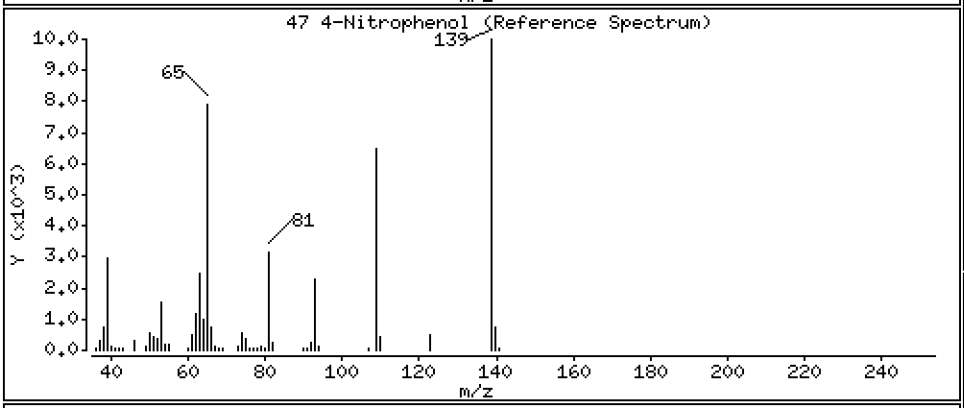
Column diameter: 0.25

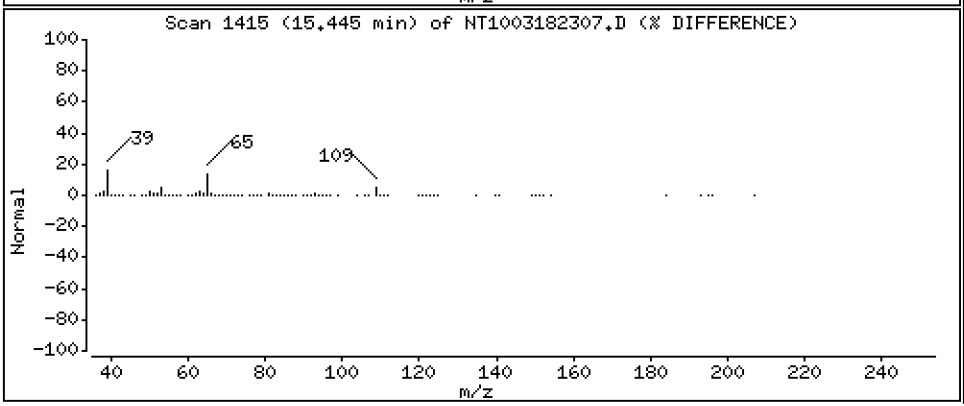
47 4-Nitrophenol

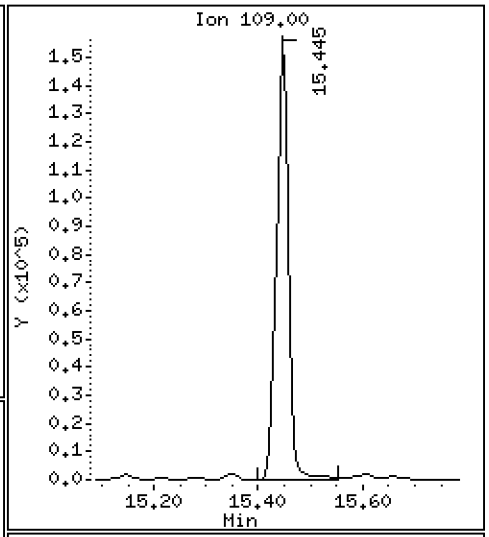
Concentration: 11.69 ug/mL

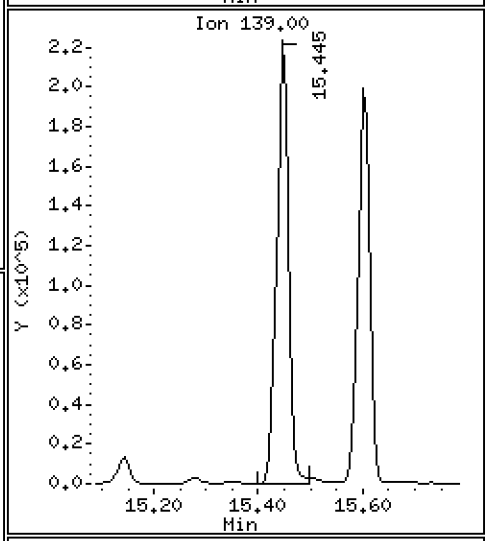


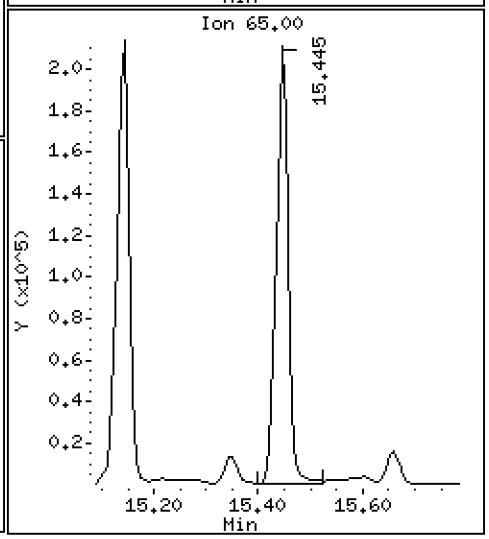












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

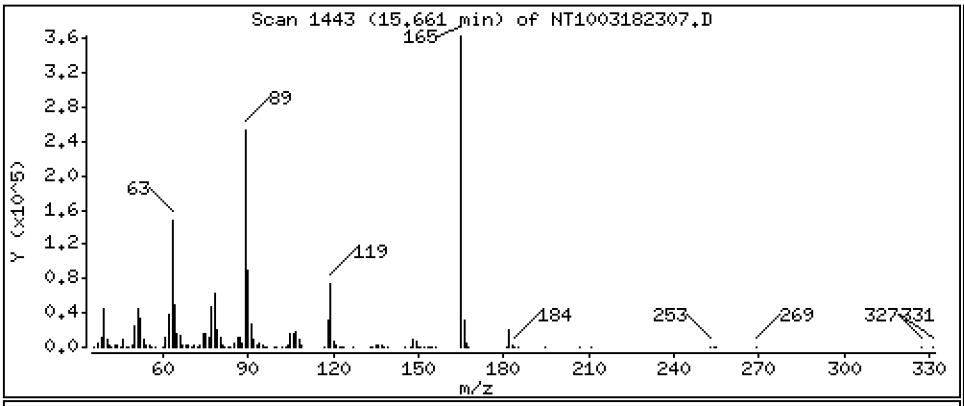
Operator: VTS

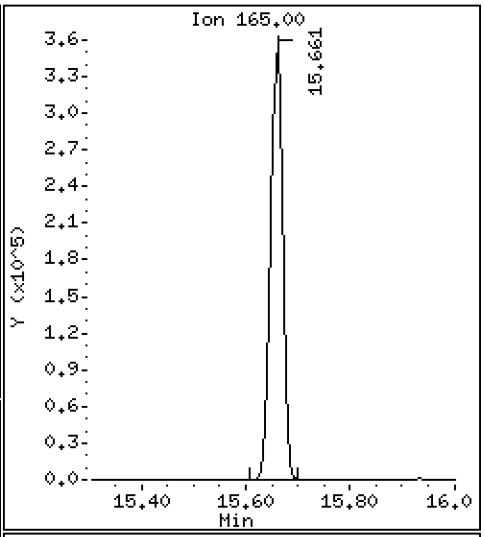
Column phase: ZB-5msi

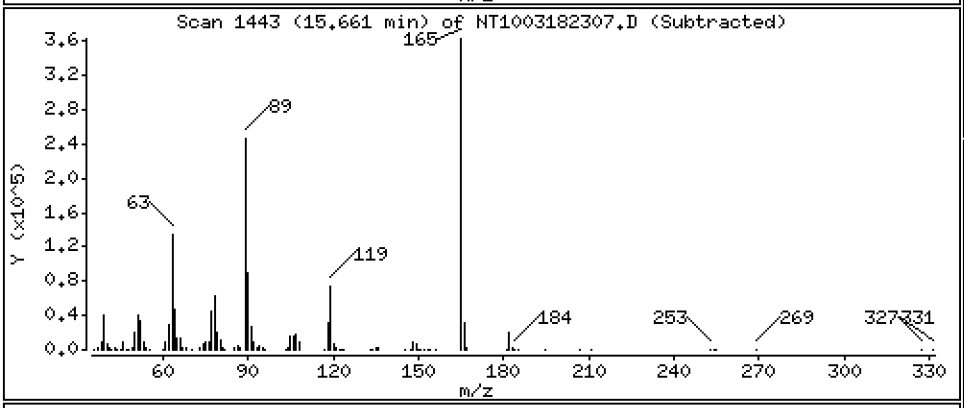
Column diameter: 0.25

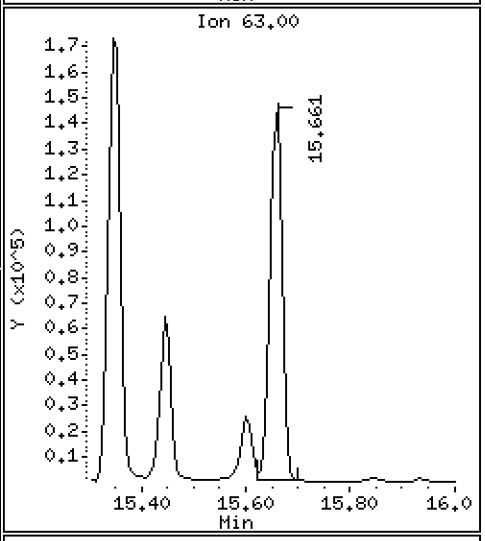
48 2,4-Dinitrotoluene

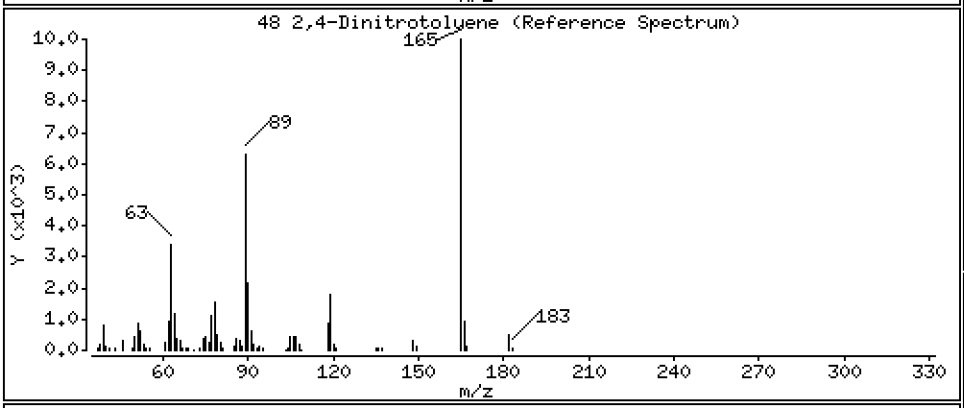
Concentration: 12.22 ug/mL

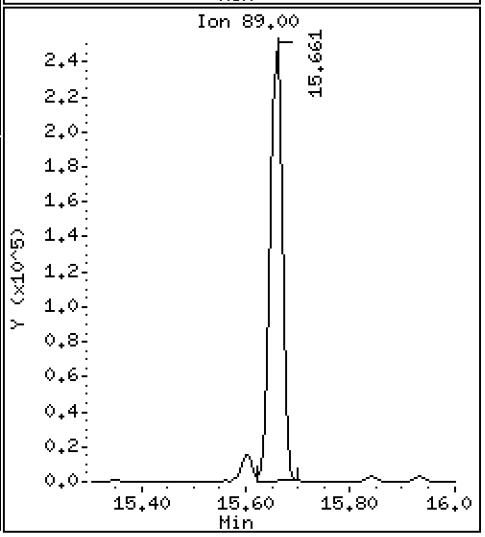


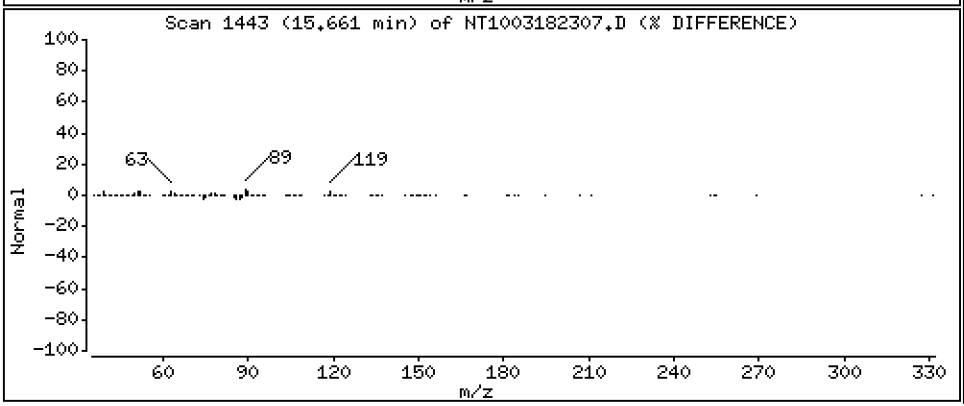












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

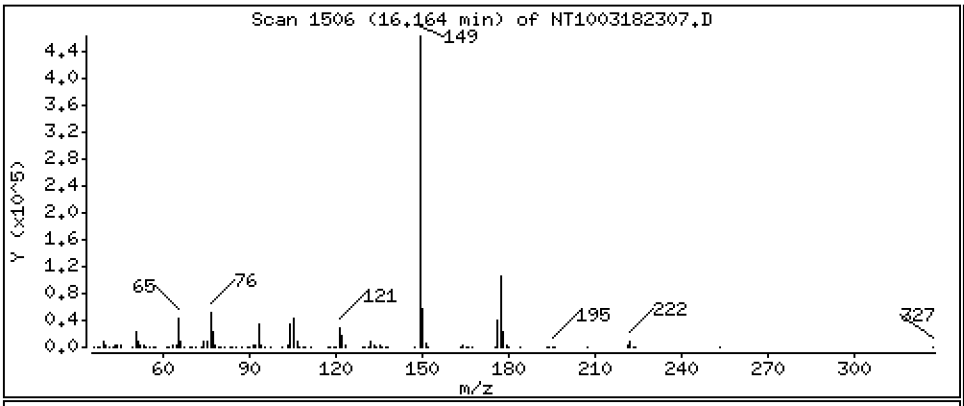
Operator: VTS

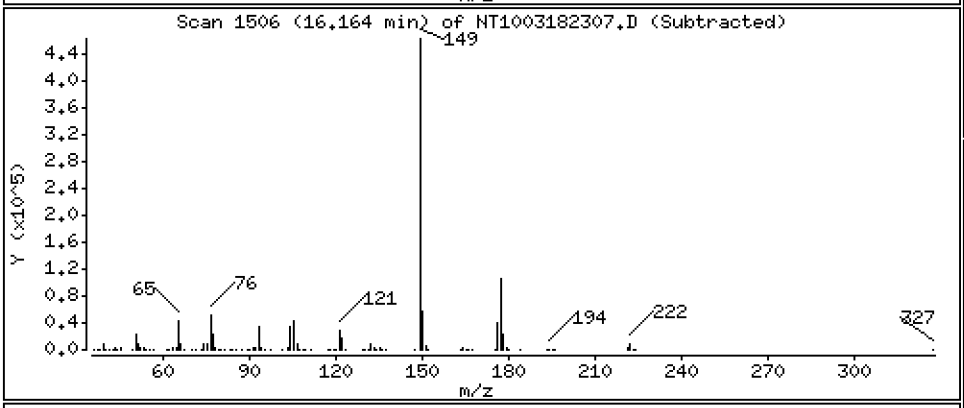
Column phase: ZB-5msi

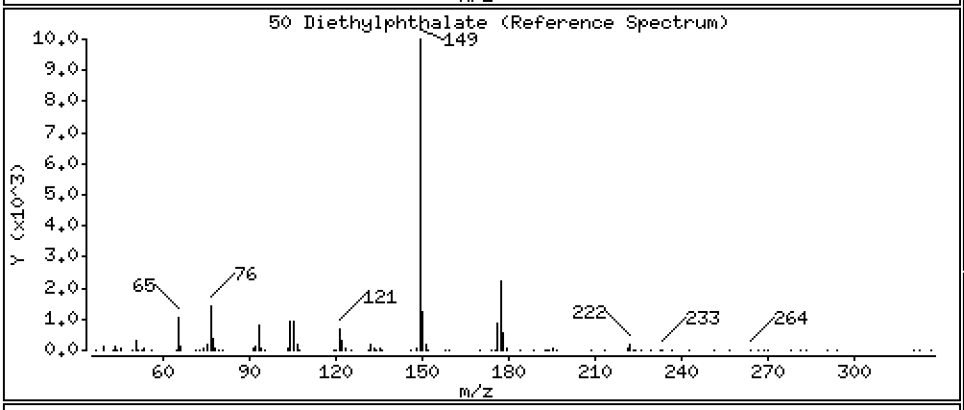
Column diameter: 0.25

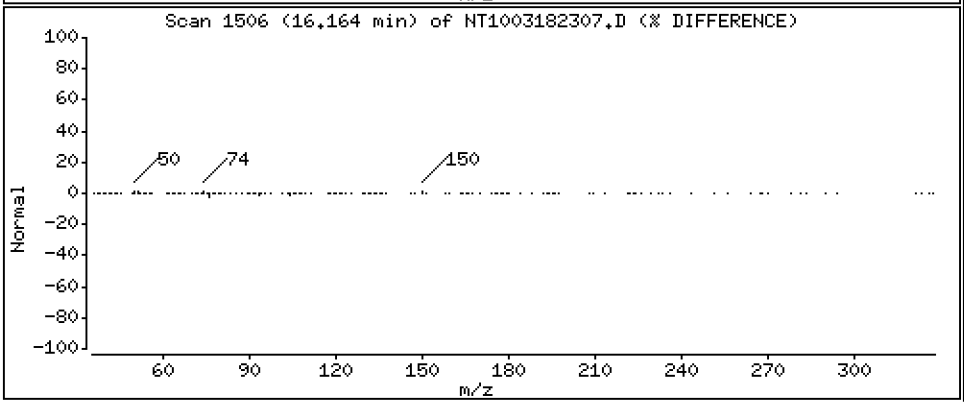
50 Diethylphthalate

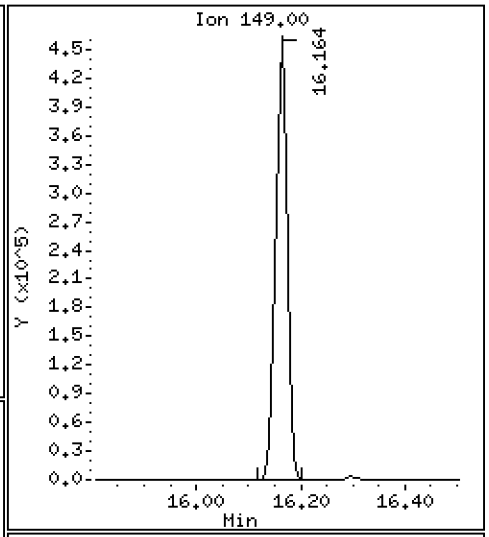
Concentration: 5.109 ug/mL

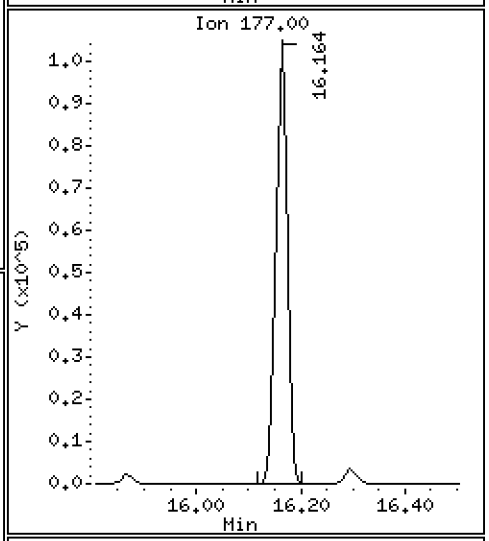


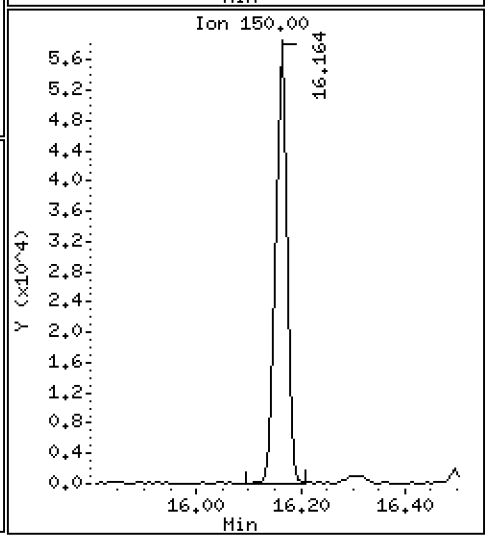












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

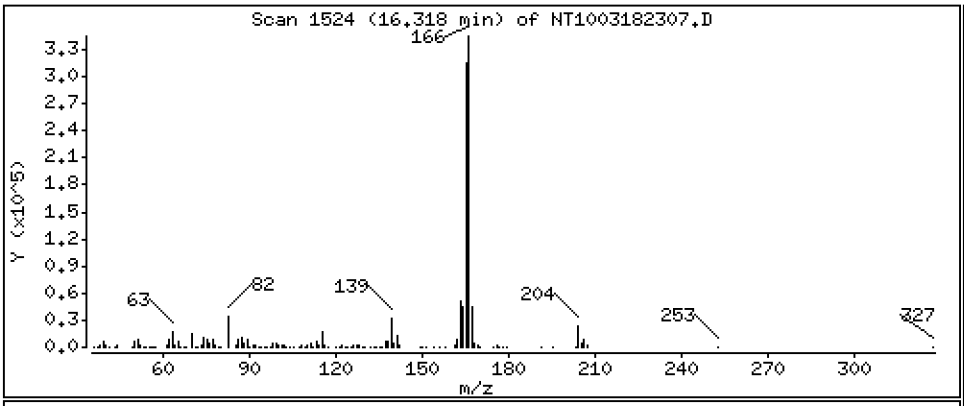
Operator: VTS

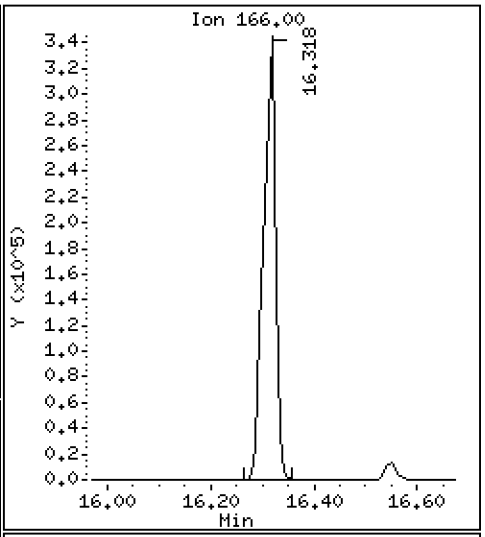
Column phase: ZB-5msi

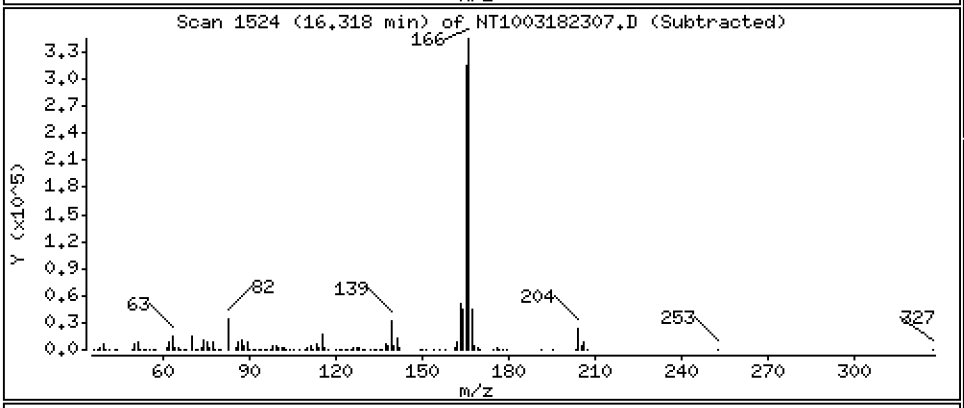
Column diameter: 0.25

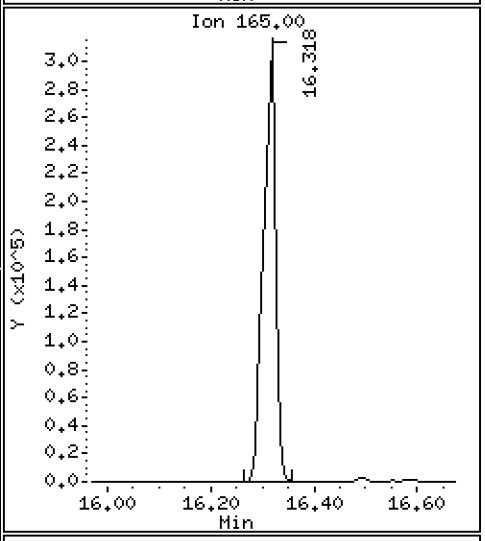
49 Fluorene

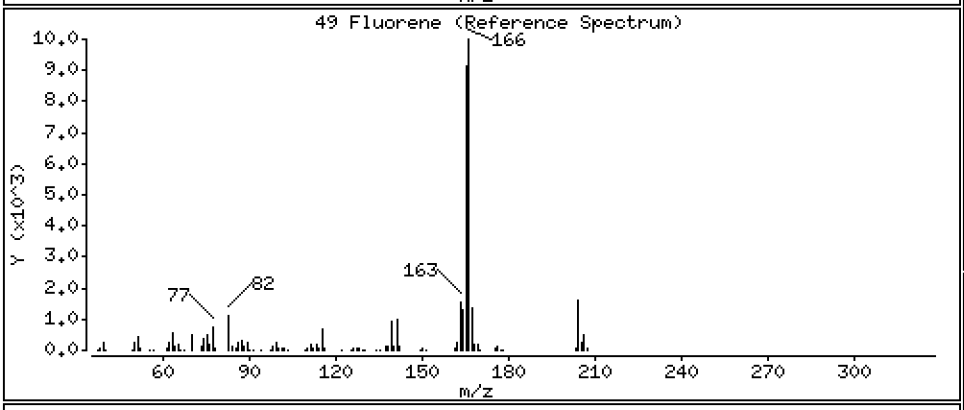
Concentration: 2.489 ug/mL

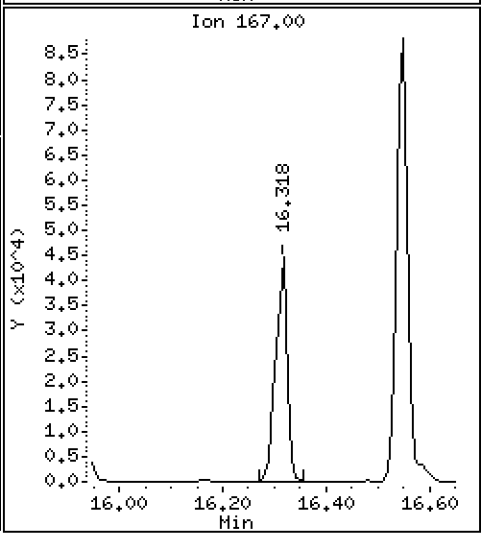


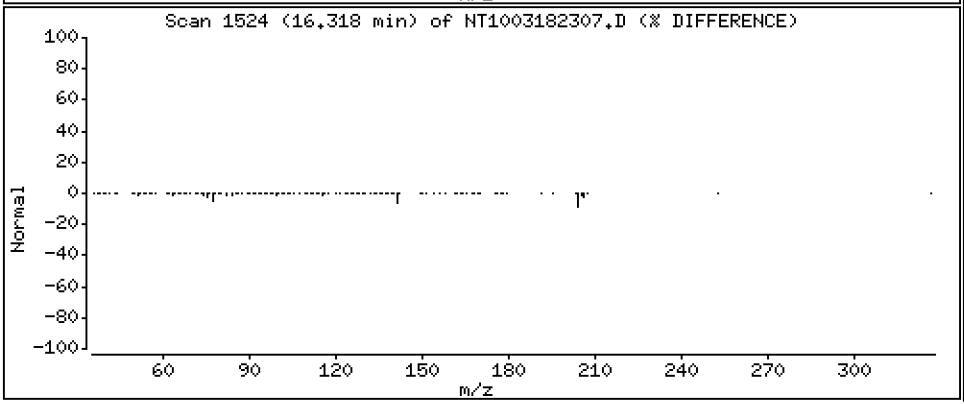












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

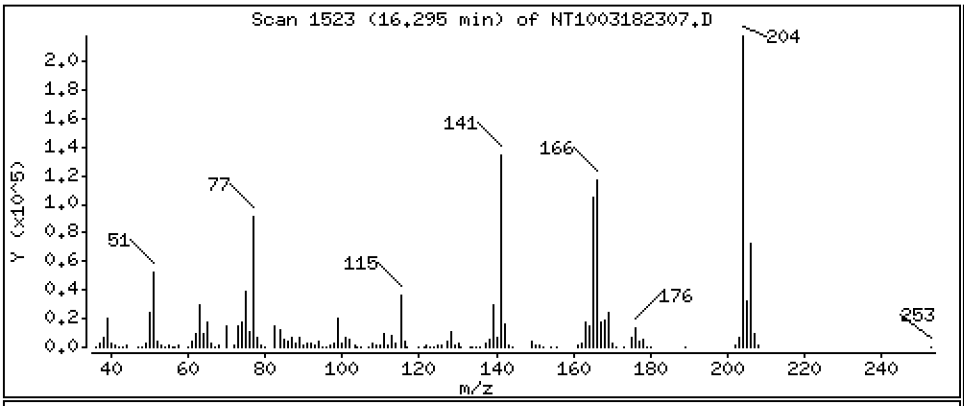
Operator: VTS

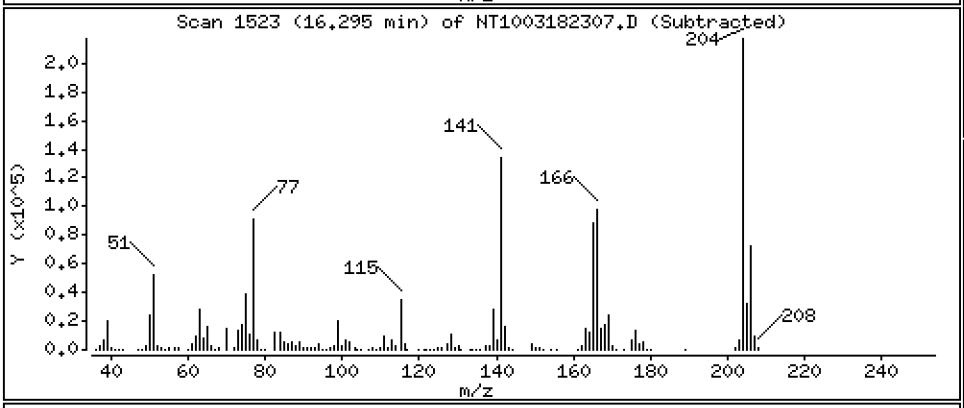
Column phase: ZB-5msi

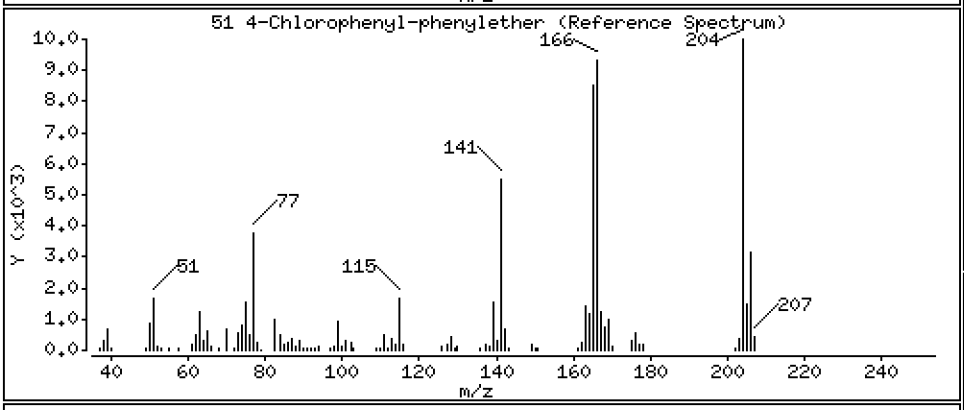
Column diameter: 0.25

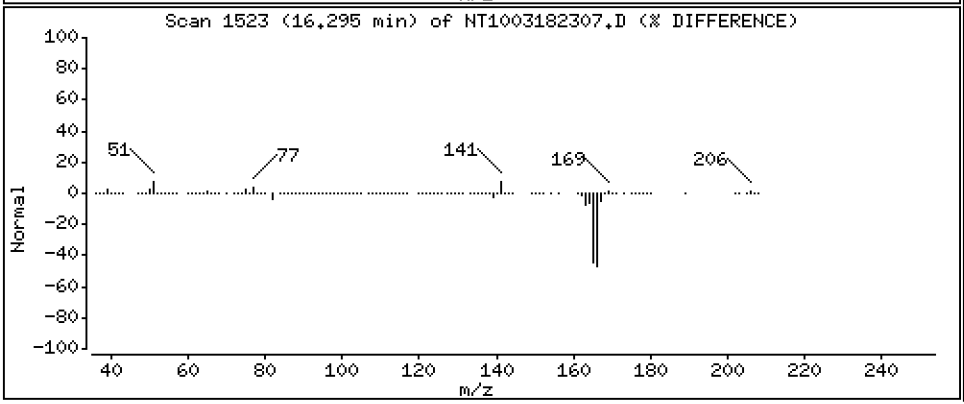
51 4-Chlorophenyl-phenylether

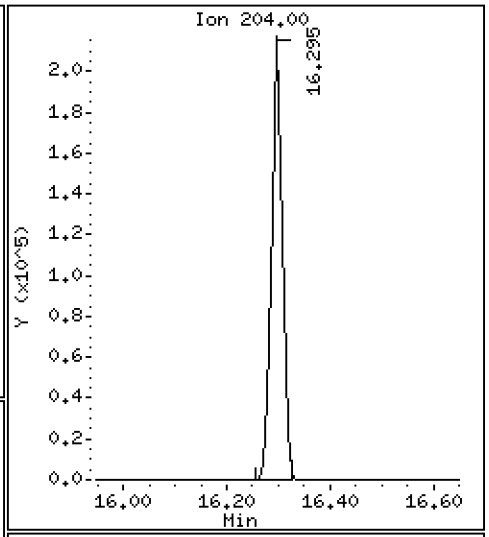
Concentration: 3.463 ug/mL

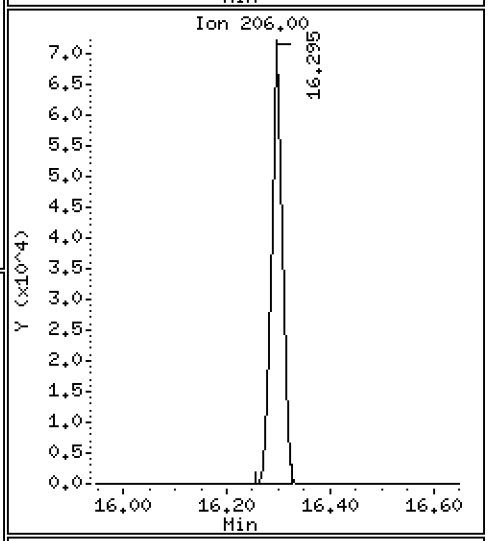


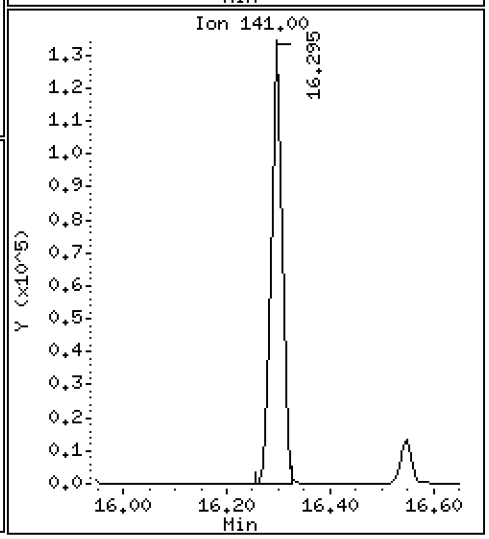












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

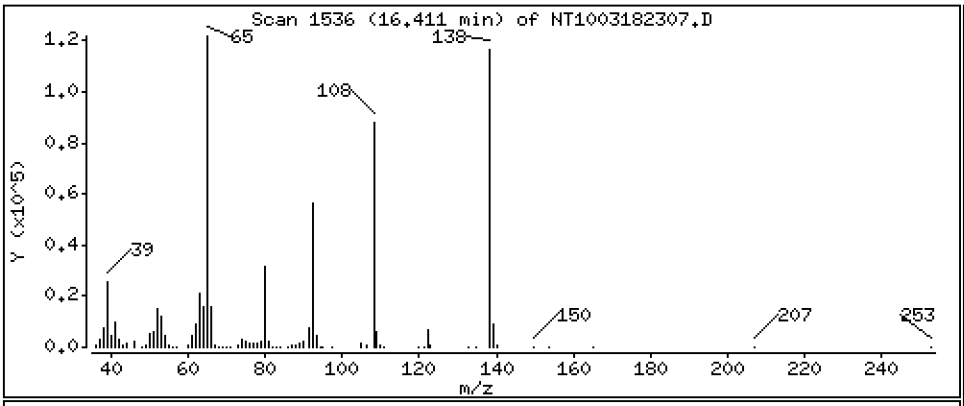
Operator: VTS

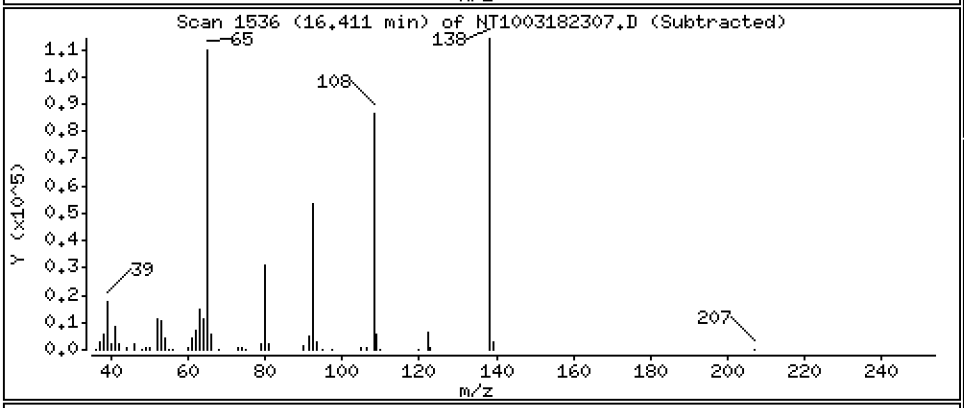
Column phase: ZB-5msi

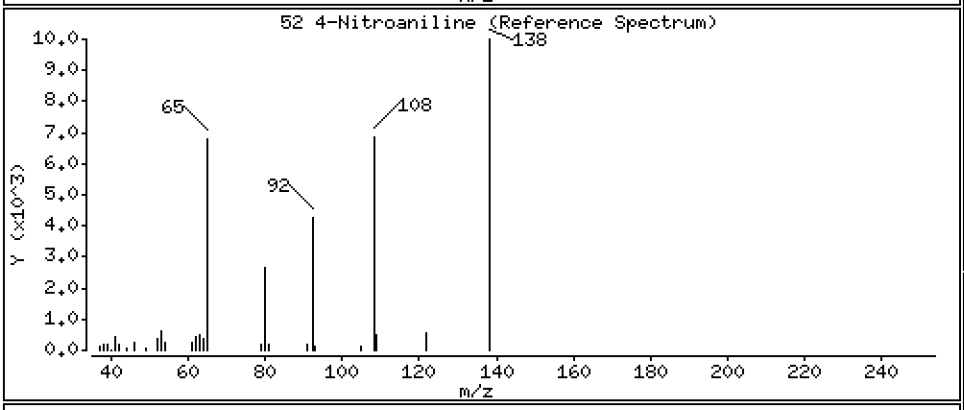
Column diameter: 0.25

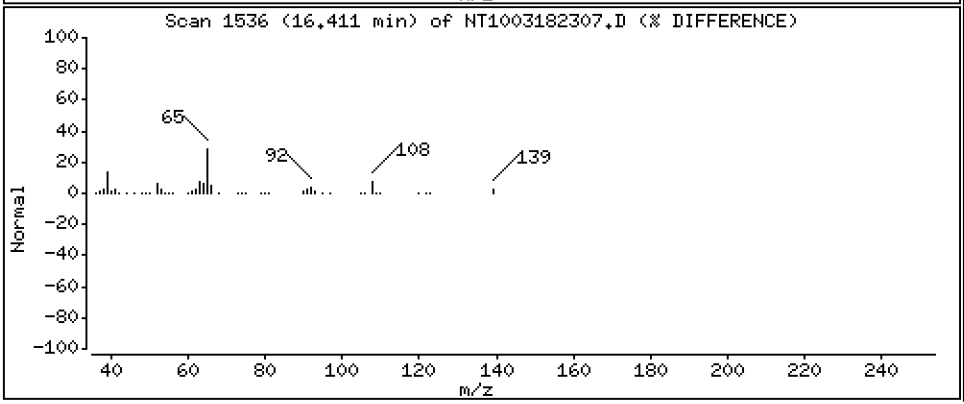
52 4-Nitroaniline

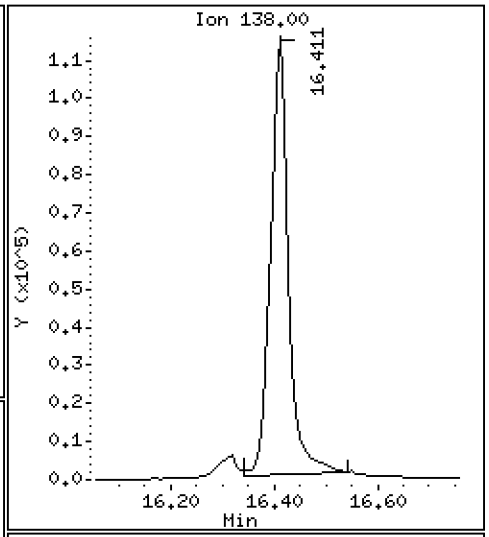
Concentration: 8.919 ug/mL

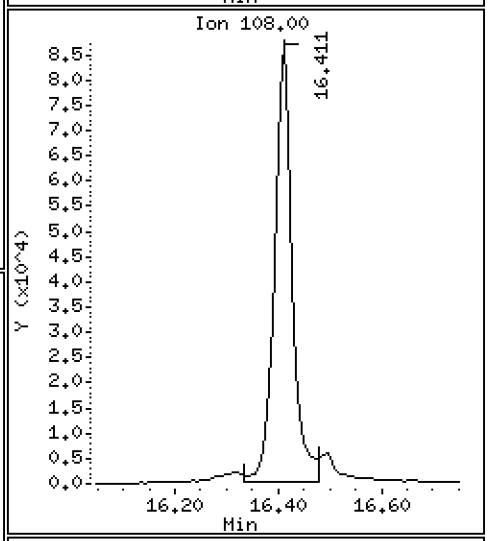


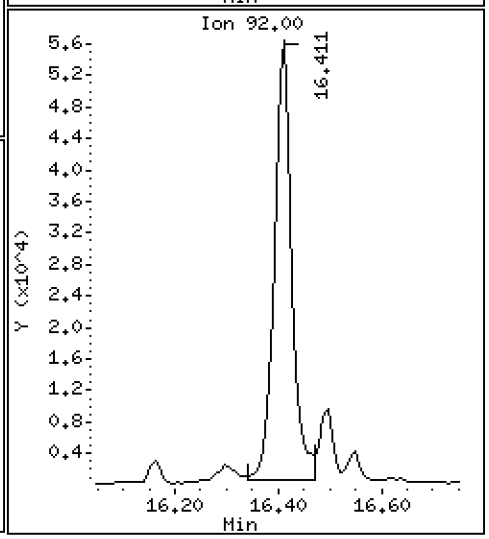












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

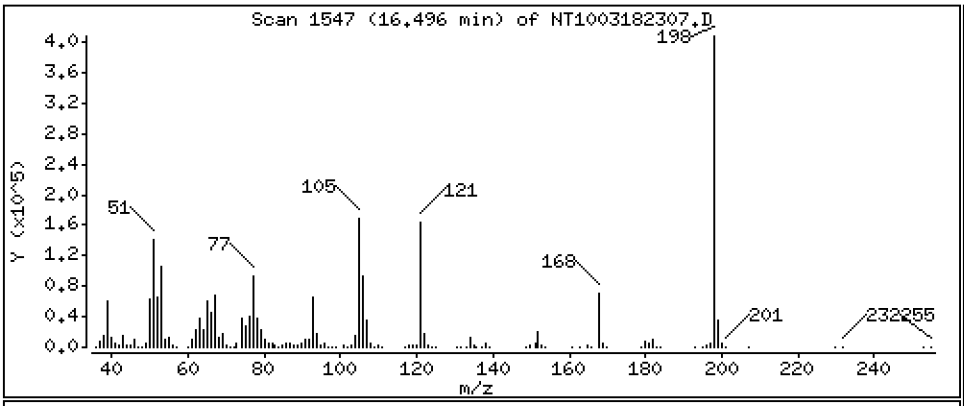
Operator: VTS

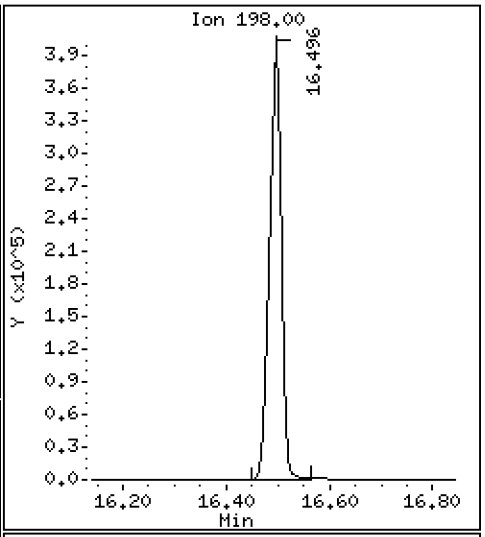
Column phase: ZB-5msi

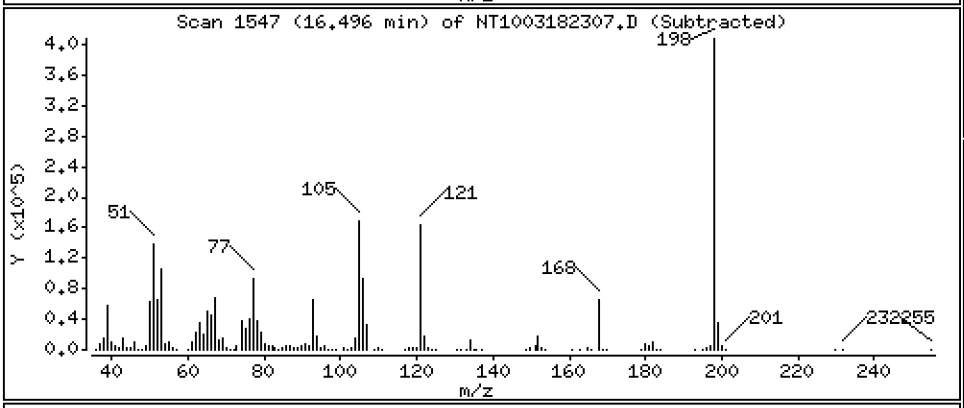
Column diameter: 0.25

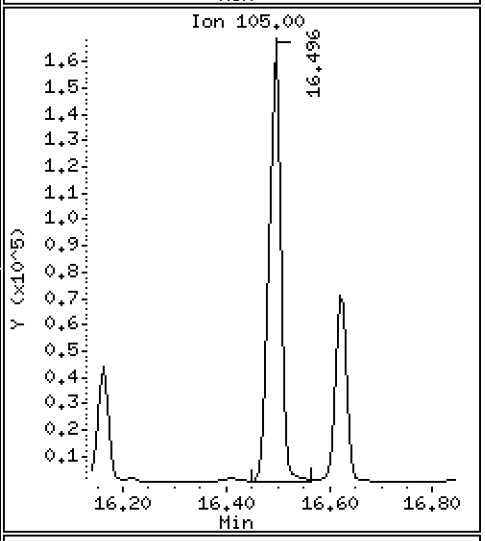
53 4,6-Dinitro-2-methylphenol

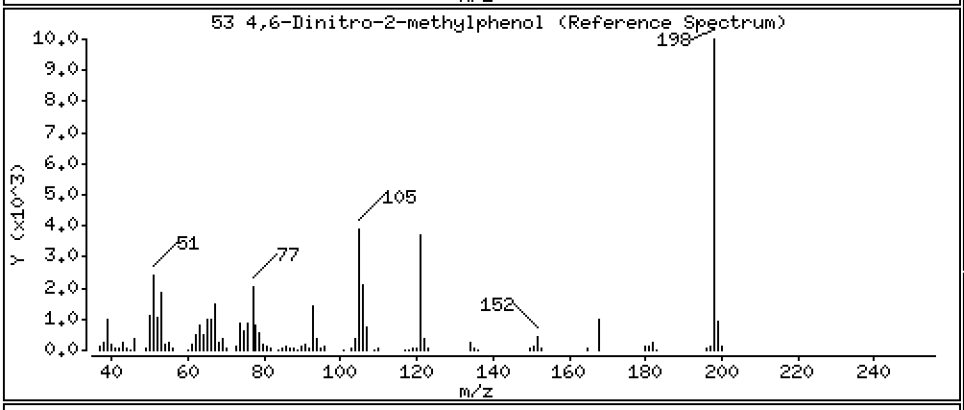
Concentration: 26.43 ug/mL

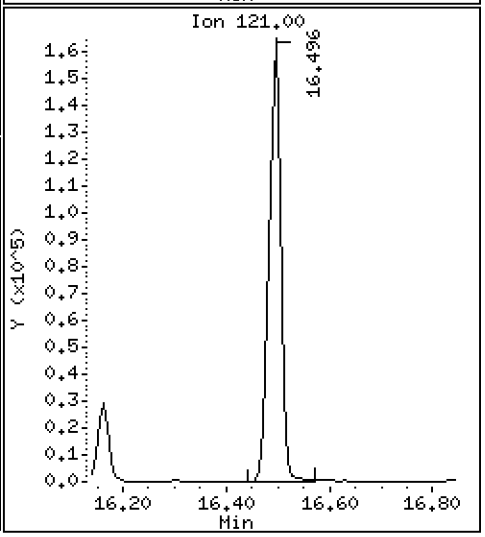


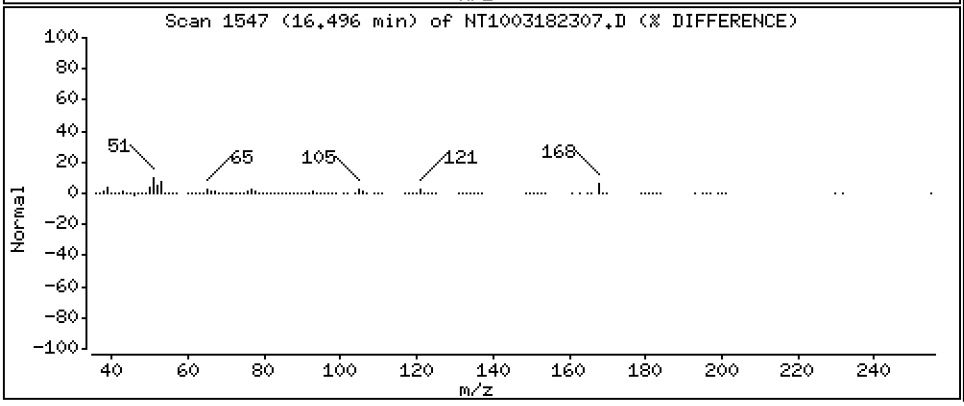












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

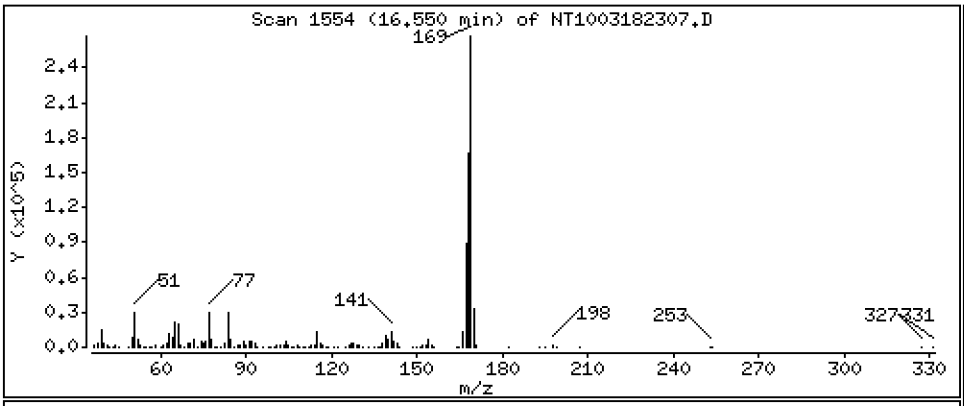
Operator: VTS

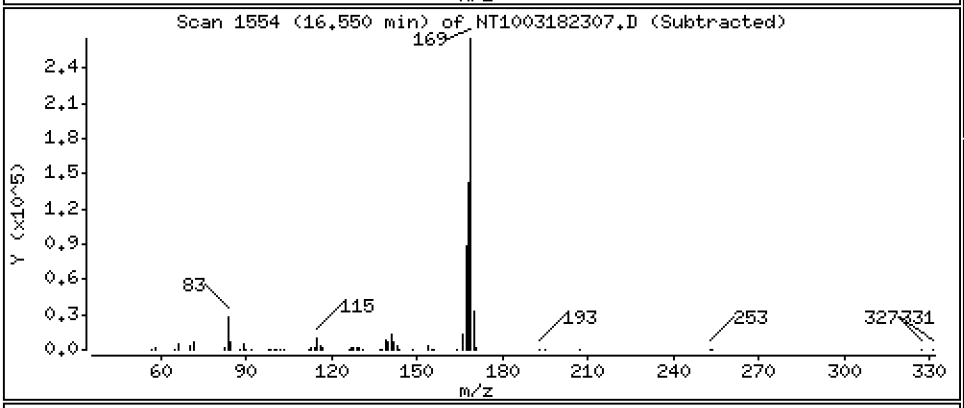
Column phase: ZB-5msi

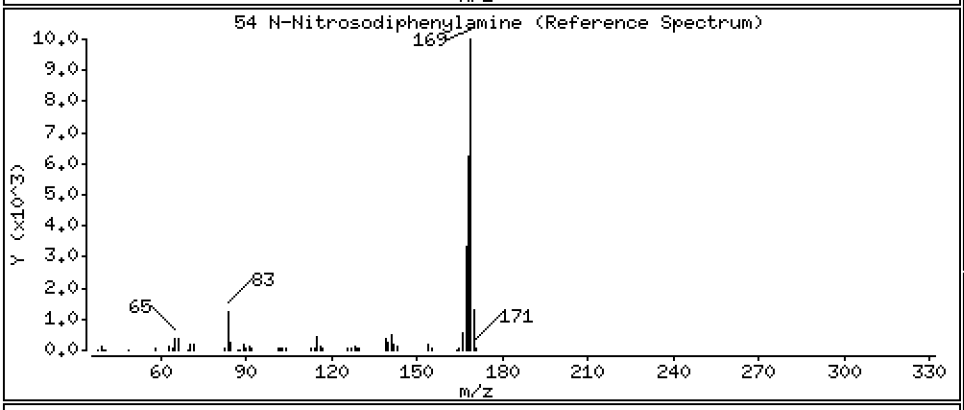
Column diameter: 0.25

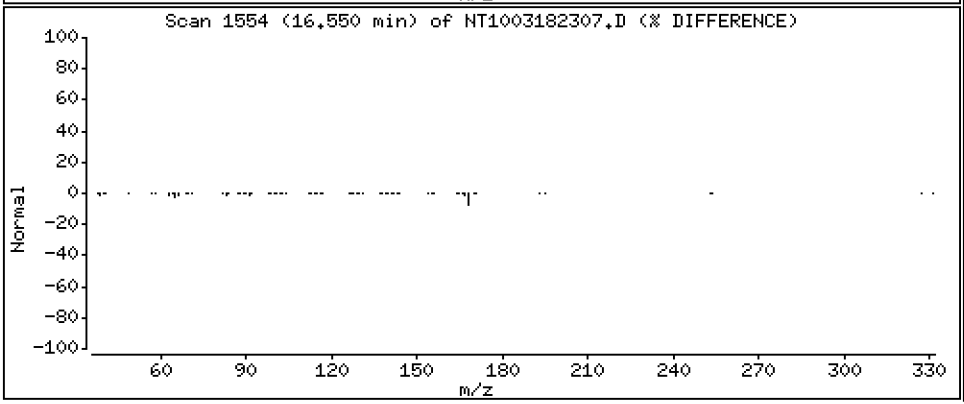
54 N-Nitrosodiphenylamine

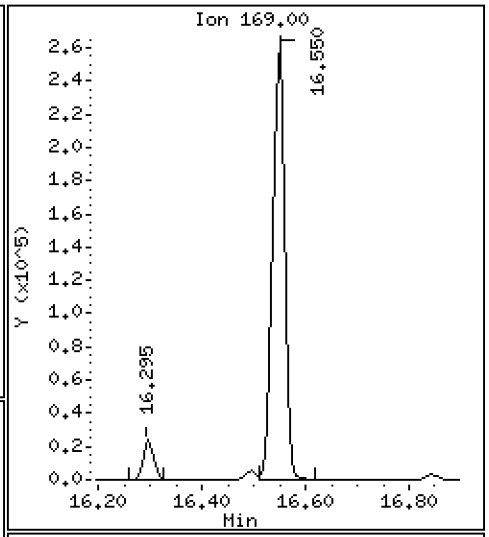
Concentration: 4.054 ug/mL

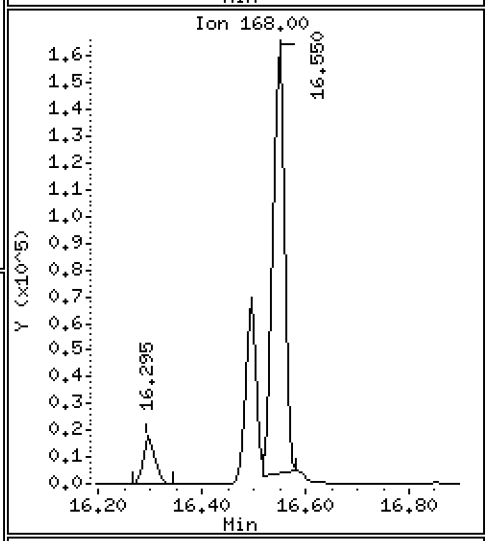


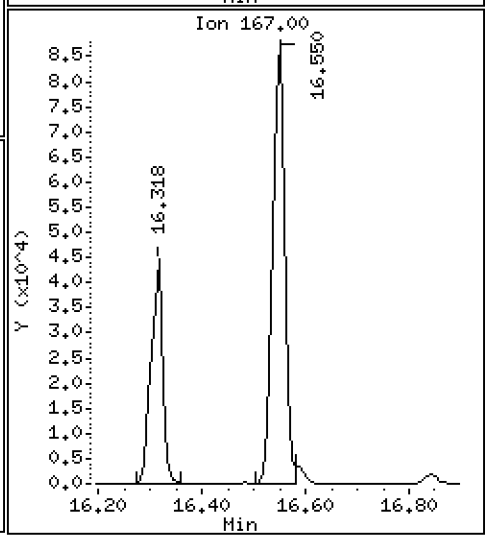












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

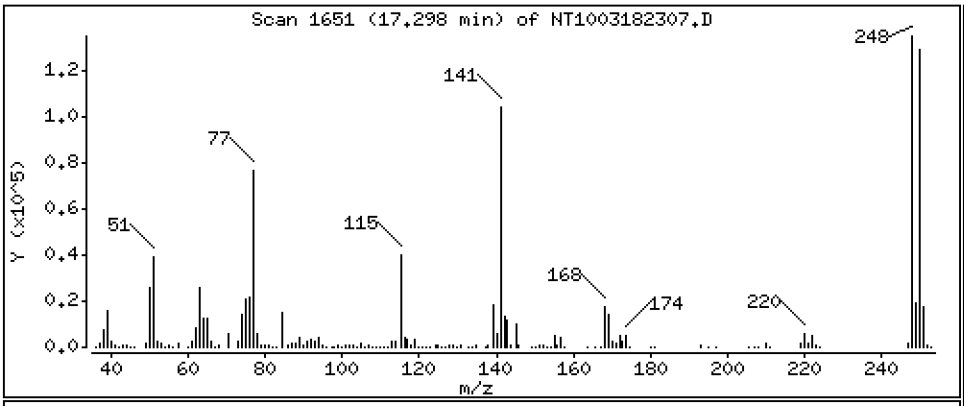
Operator: VTS

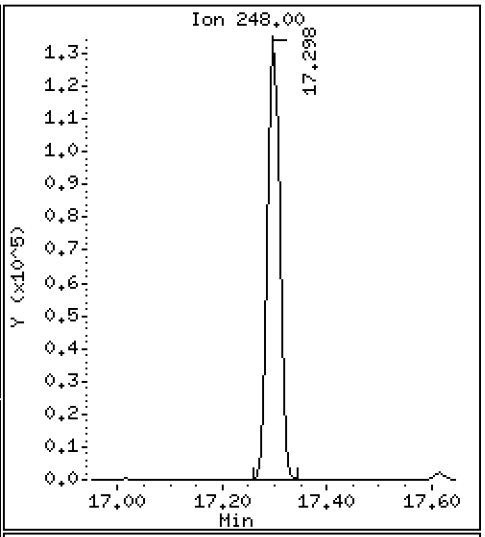
Column phase: ZB-5msi

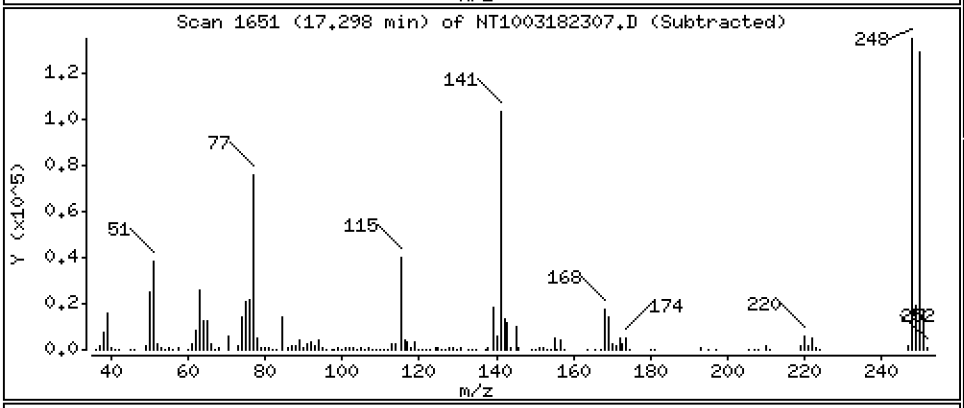
Column diameter: 0.25

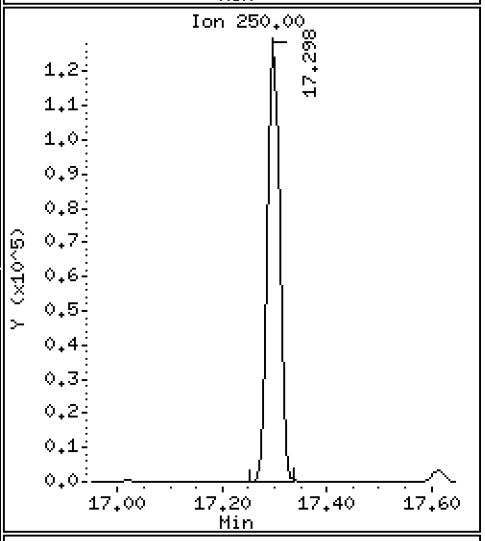
56 4-Bromophenyl-phenylether

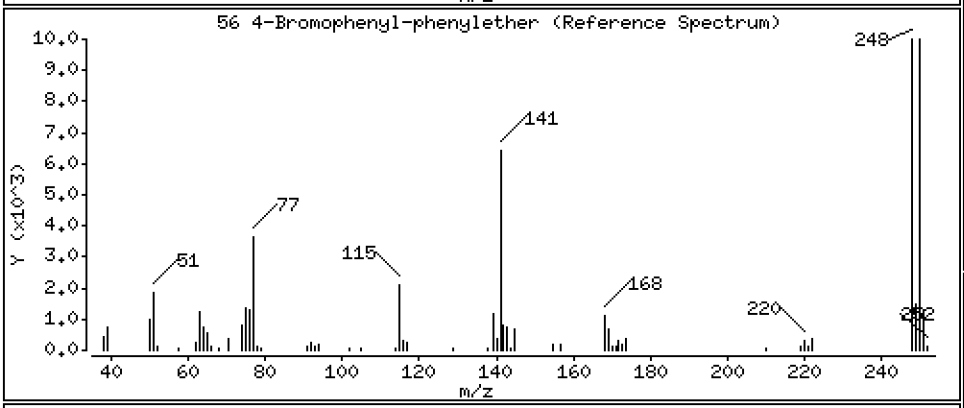
Concentration: 4.943 ug/mL

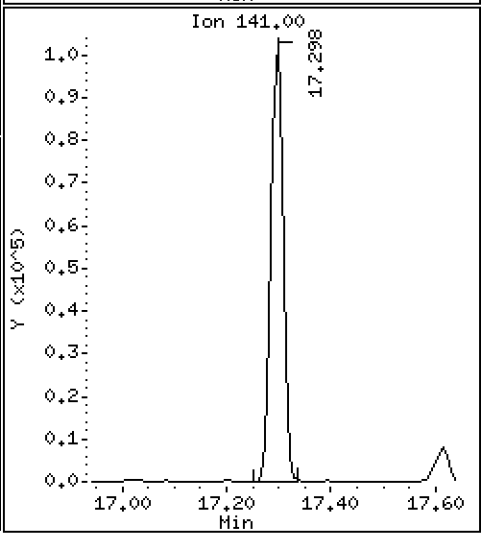


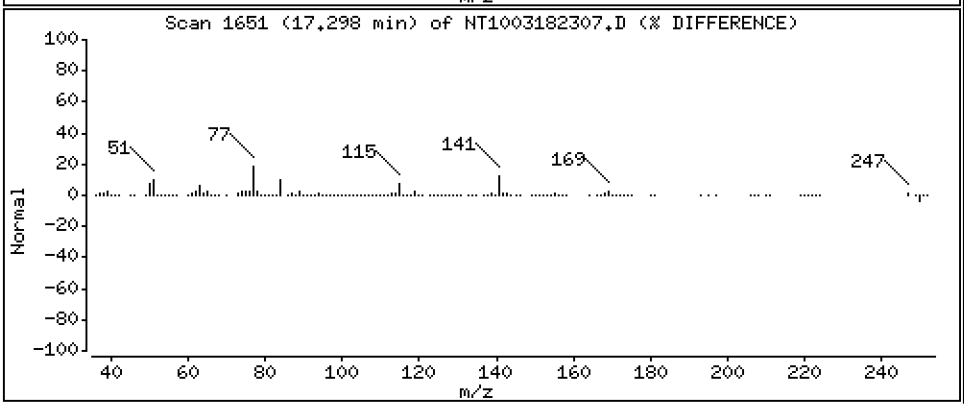












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

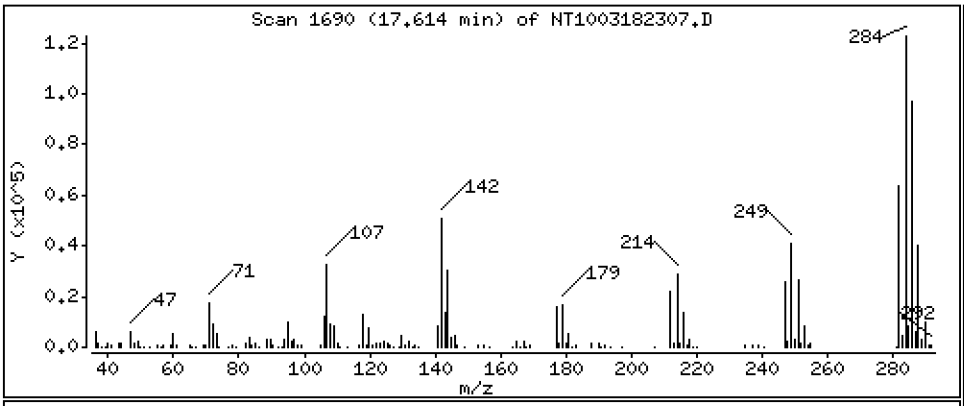
Operator: VTS

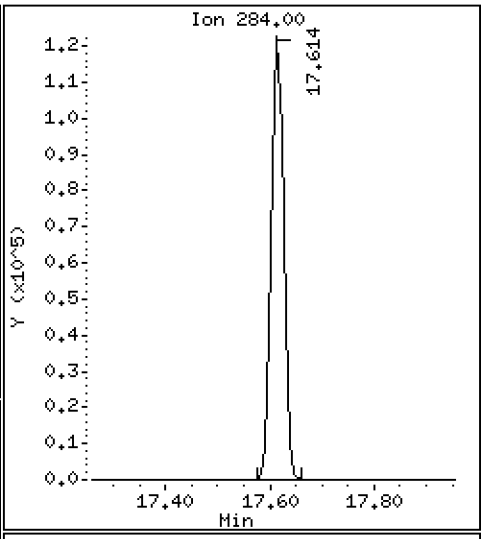
Column phase: ZB-5msi

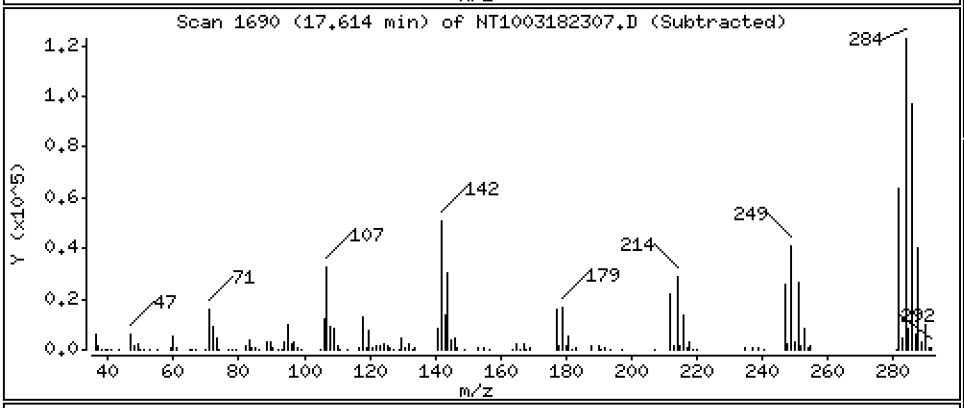
Column diameter: 0.25

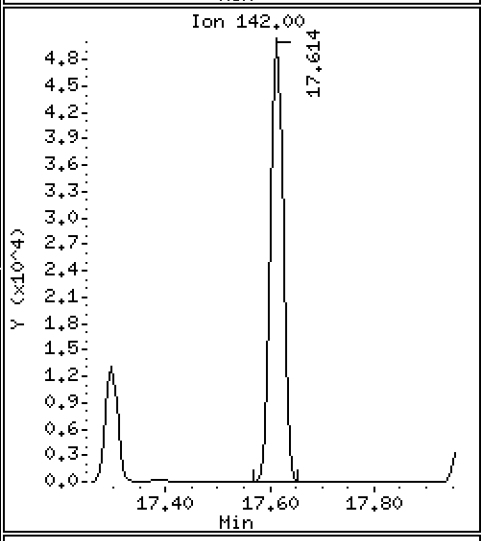
57 Hexachlorobenzene

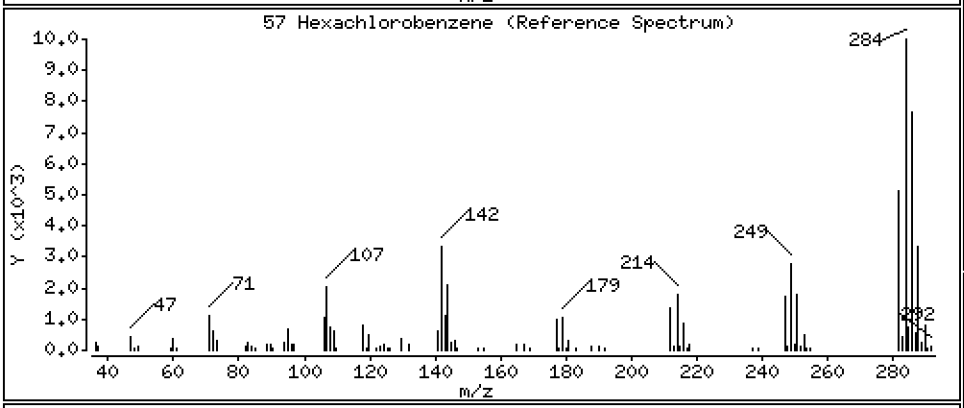
Concentration: 4.372 ug/mL

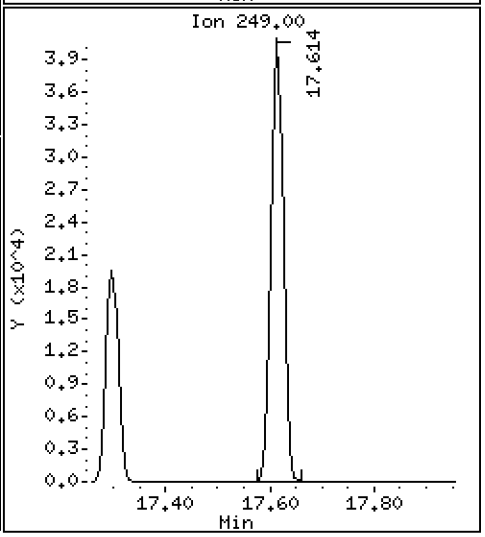


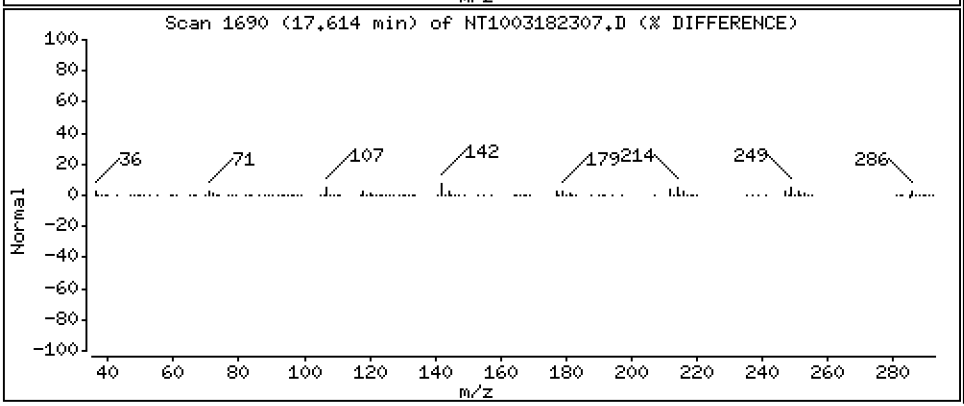












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

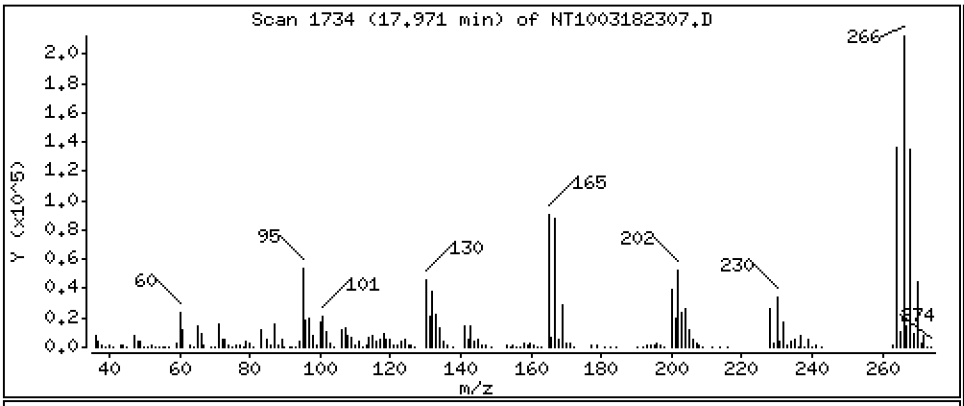
Operator: VTS

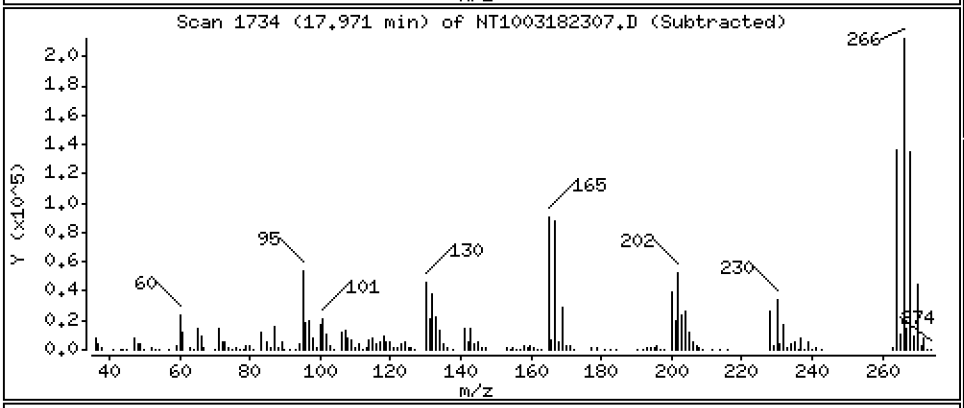
Column phase: ZB-5msi

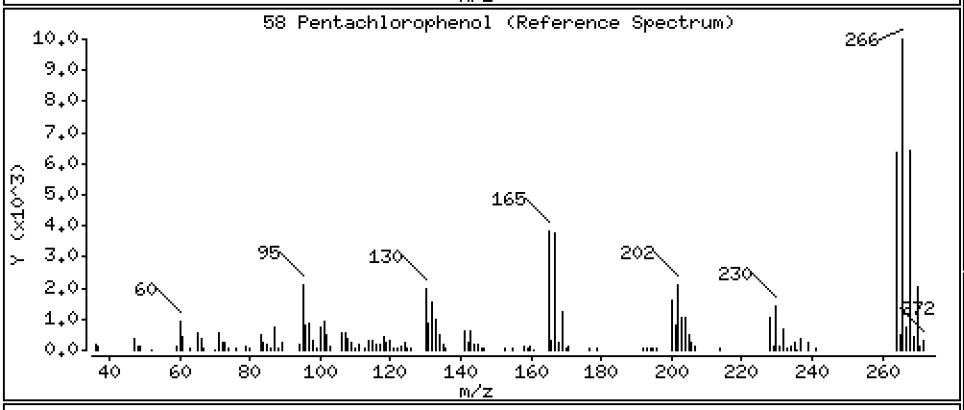
Column diameter: 0.25

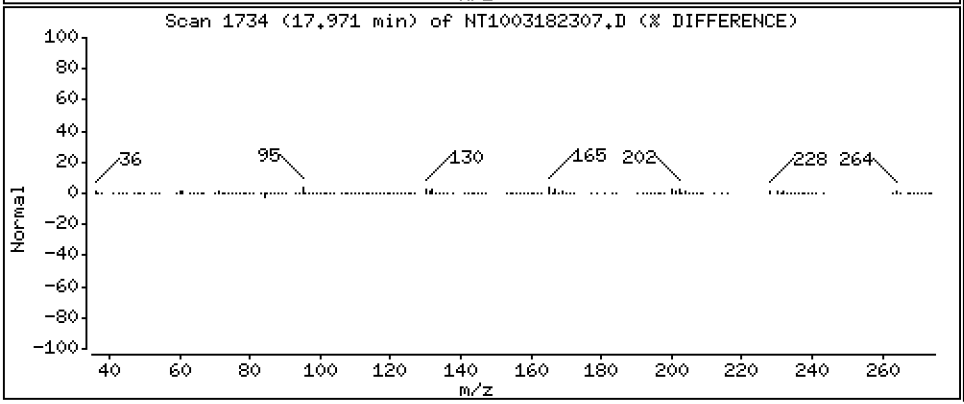
58 Pentachlorophenol

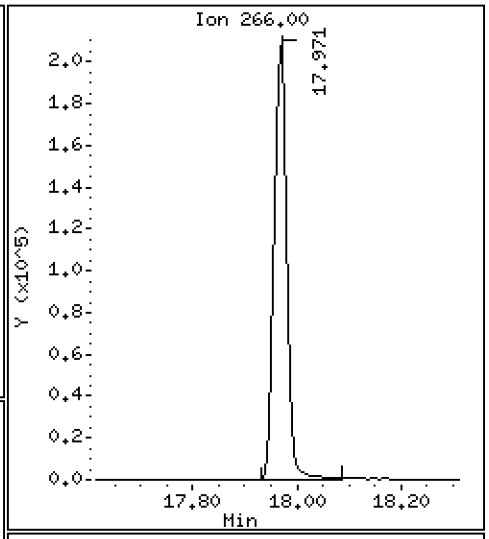
Concentration: 12.67 ug/mL

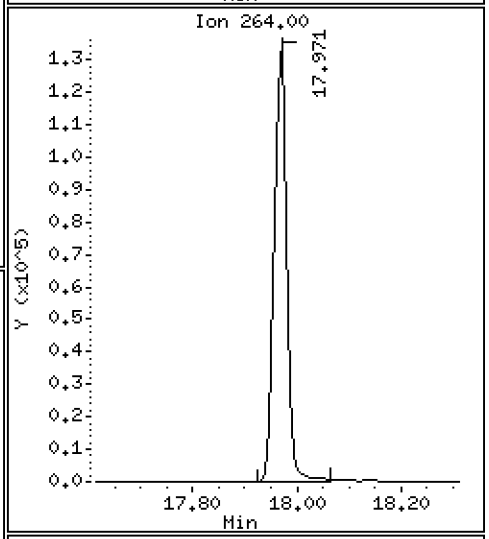


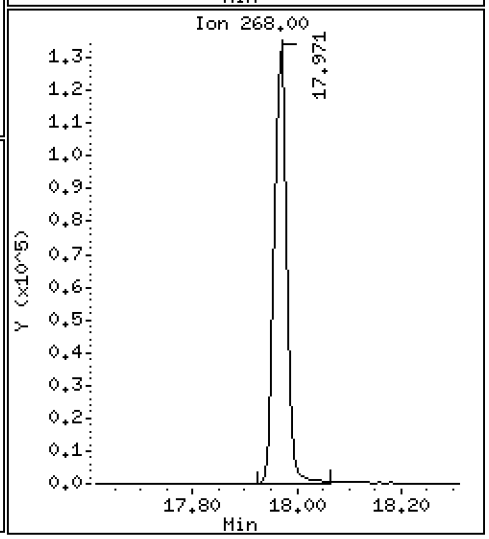












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

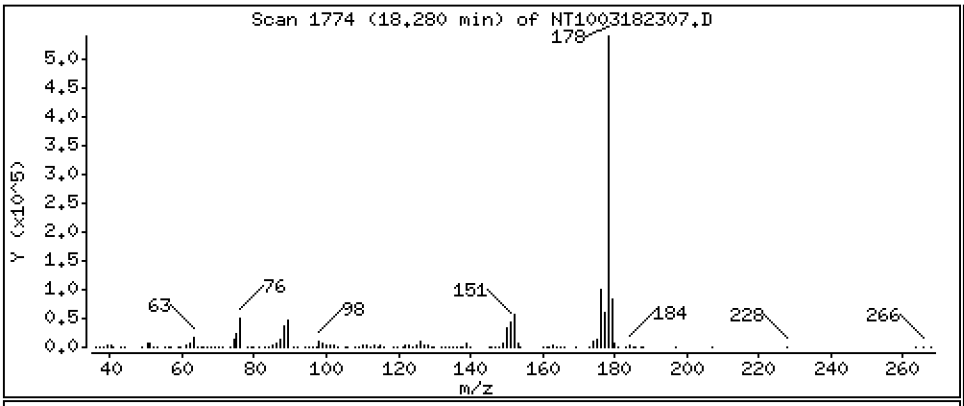
Operator: VTS

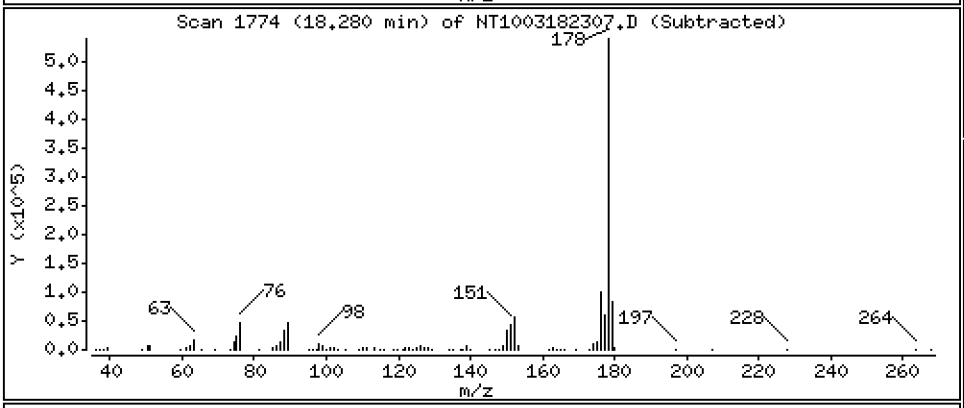
Column phase: ZB-5msi

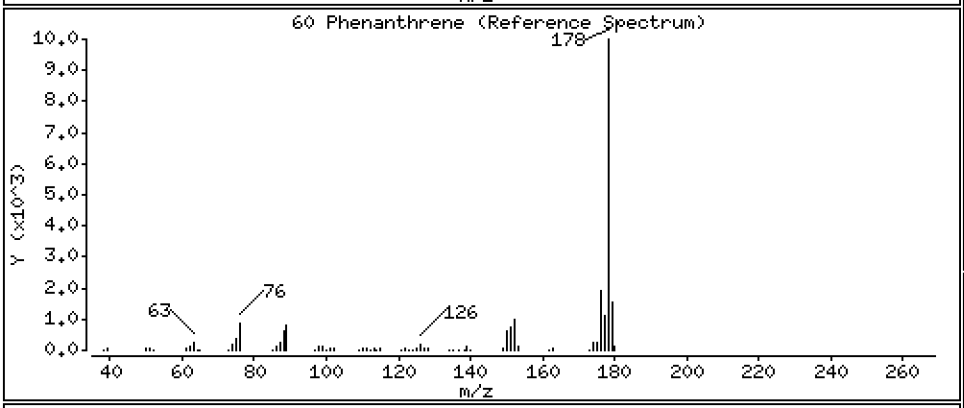
Column diameter: 0.25

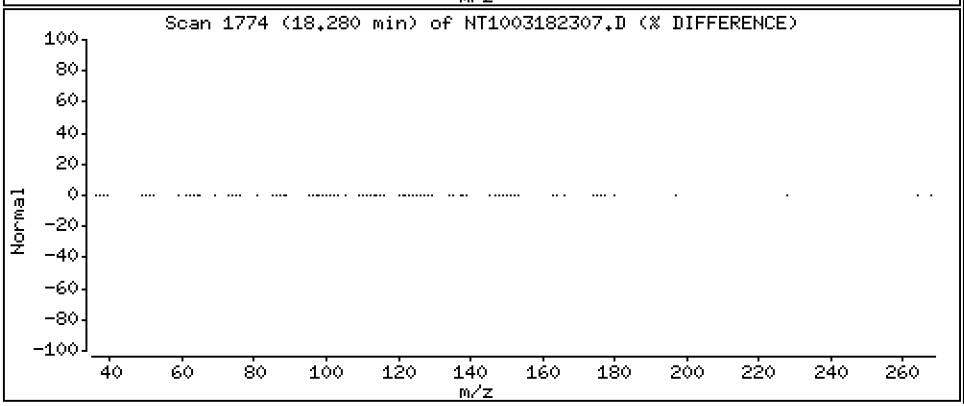
60 Phenanthrene

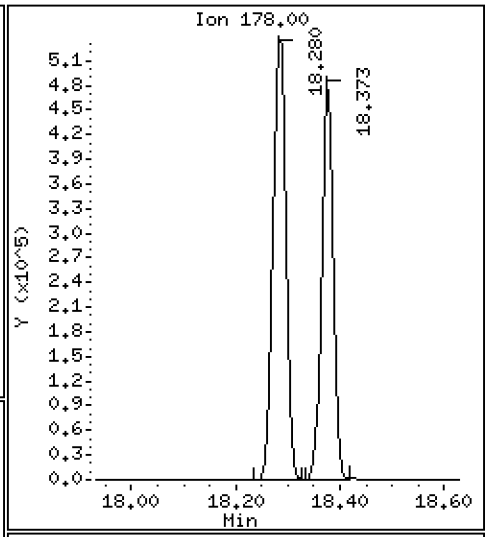
Concentration: 4.344 ug/mL

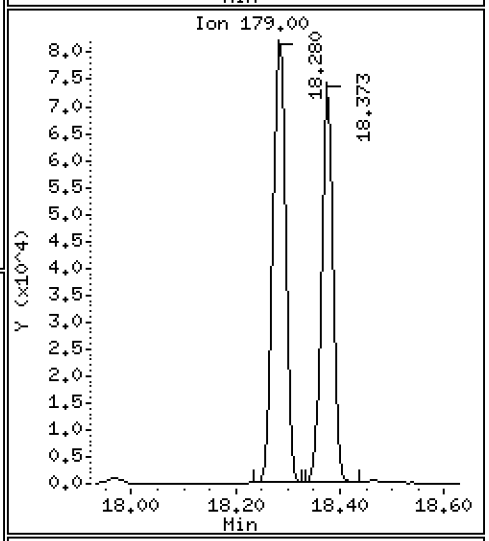


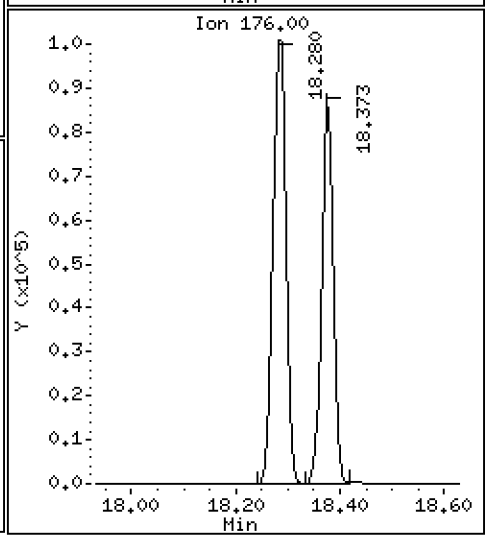












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

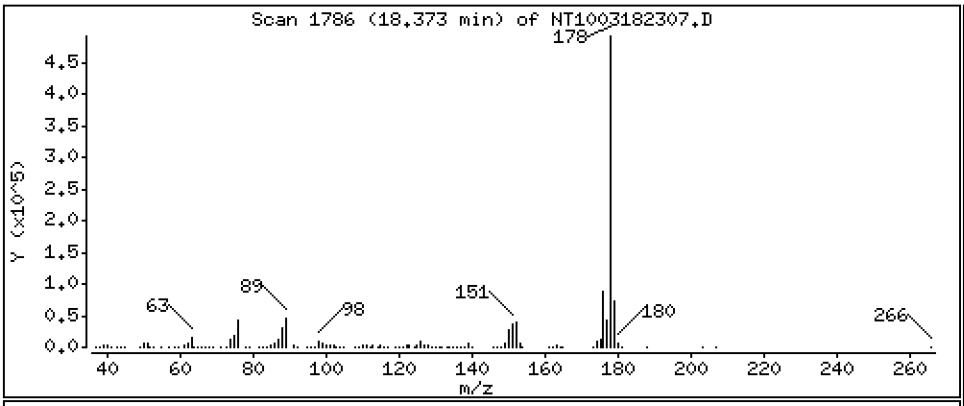
Operator: VTS

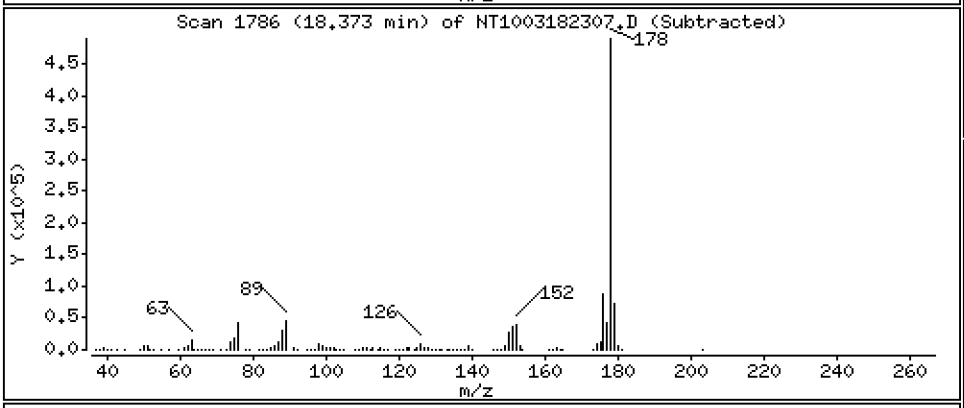
Column phase: ZB-5msi

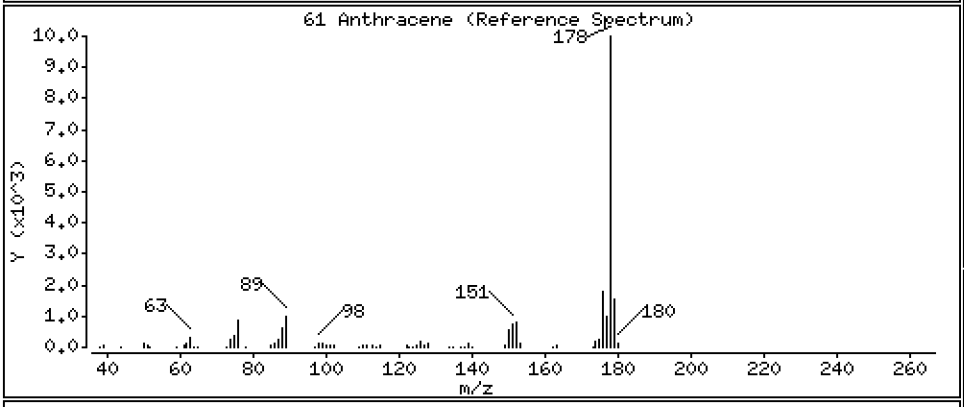
Column diameter: 0.25

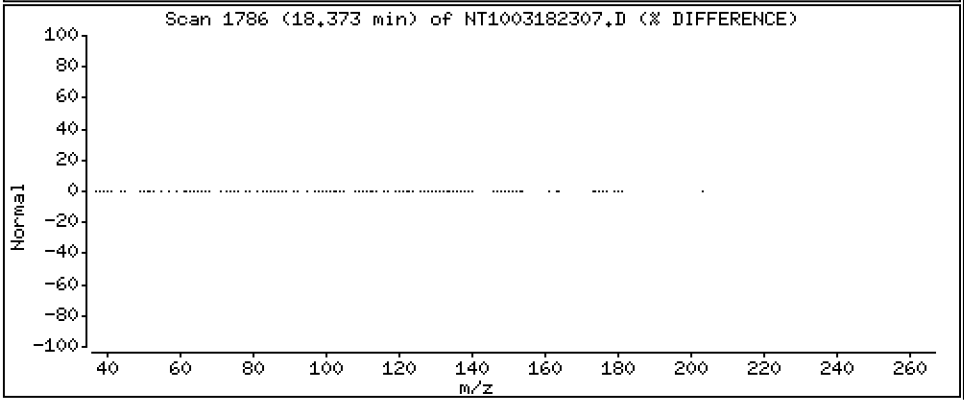
61 Anthracene

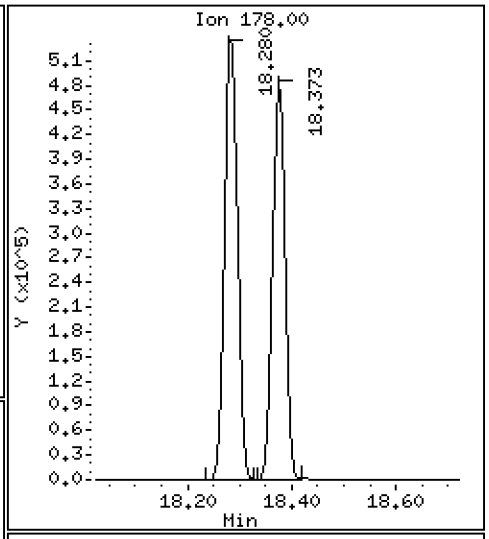
Concentration: 3.869 ug/mL

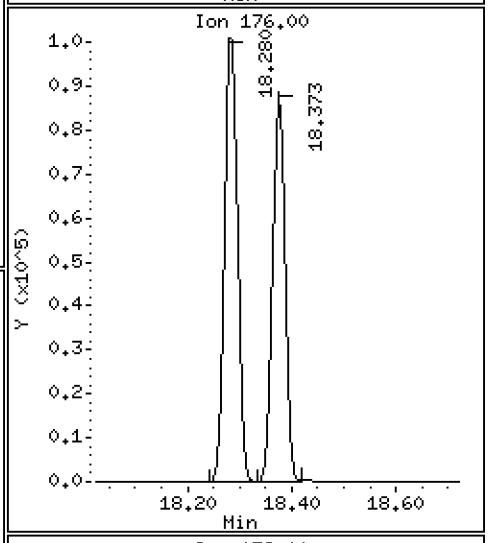


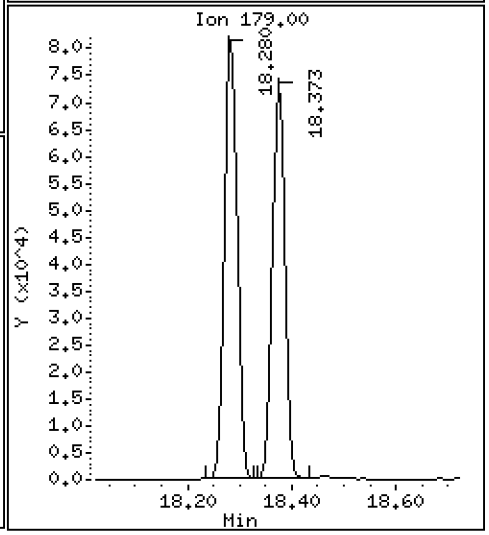












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

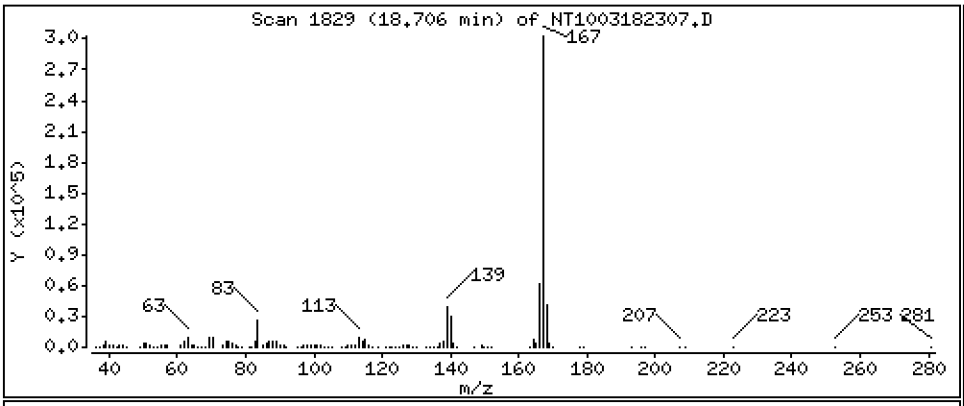
Operator: VTS

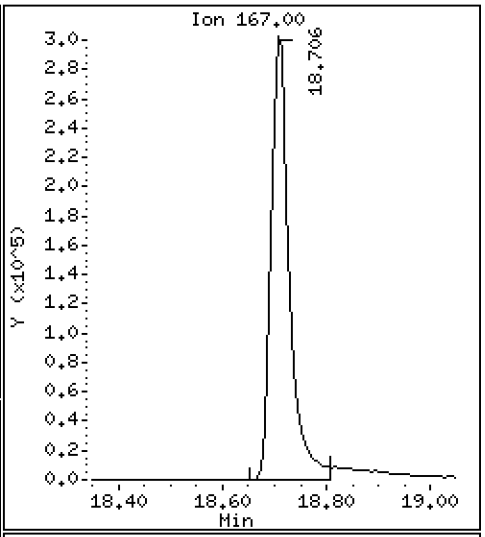
Column phase: ZB-5msi

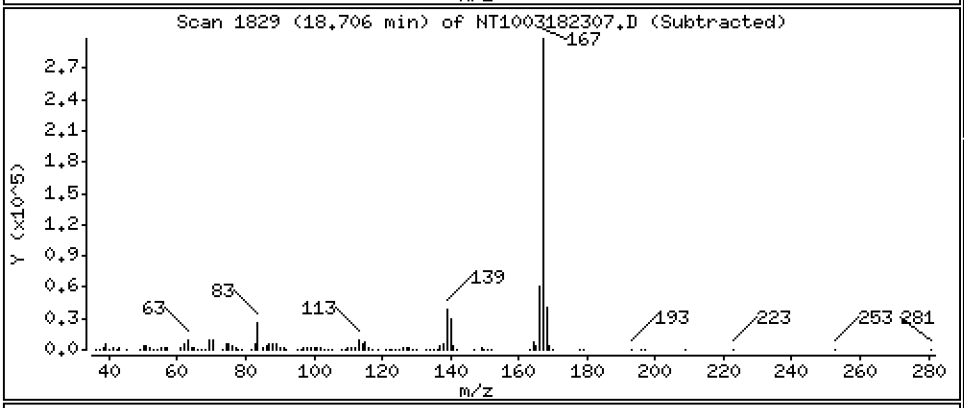
Column diameter: 0.25

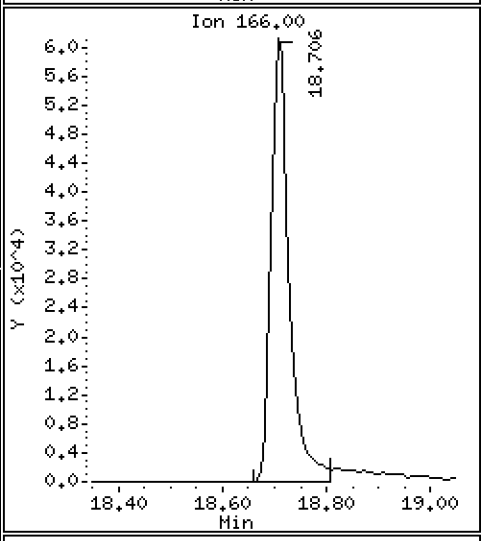
62 Carbazole

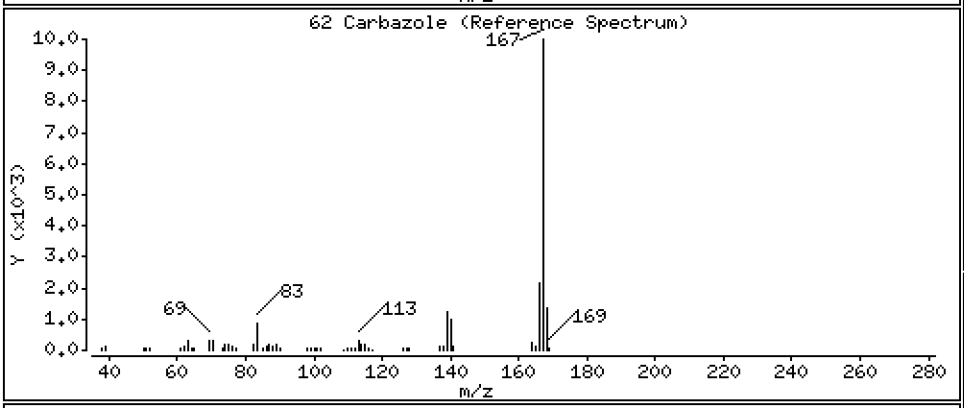
Concentration: 4.164 ug/mL

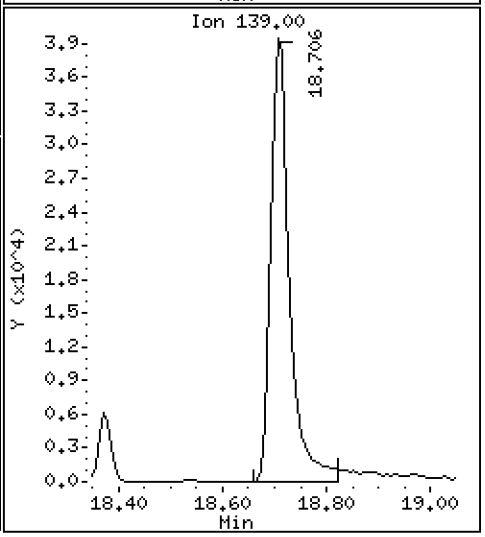


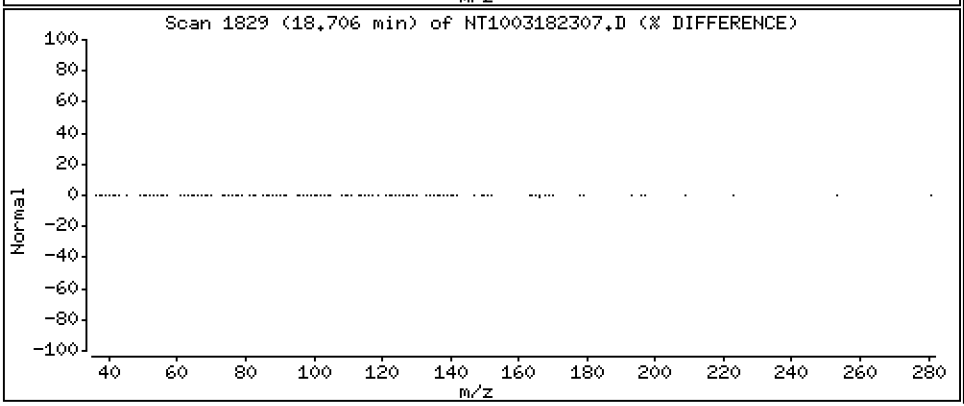












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

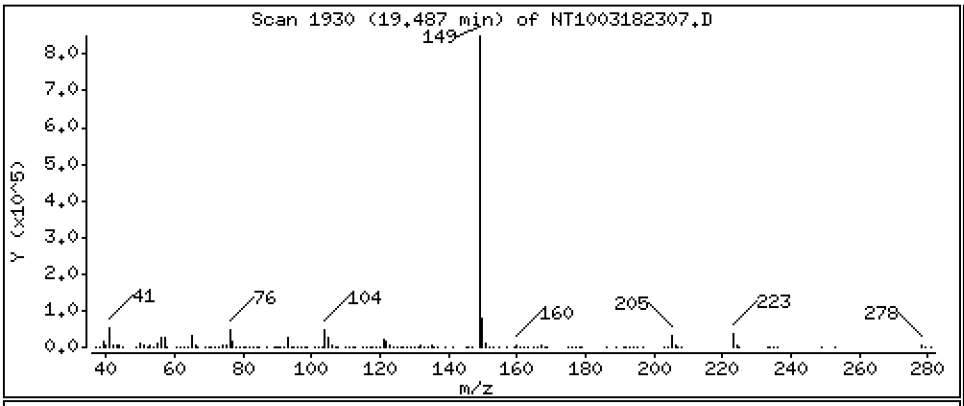
Operator: VTS

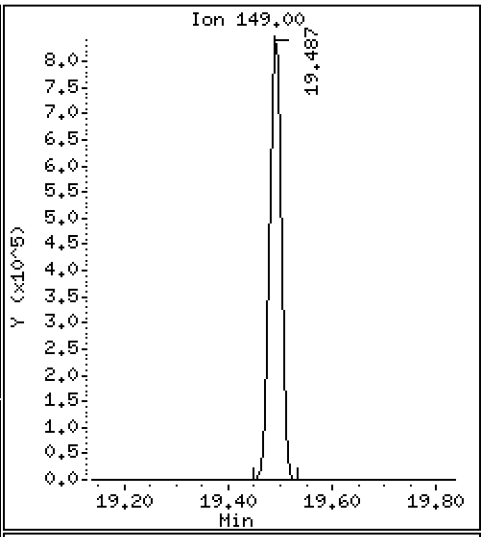
Column phase: ZB-5msi

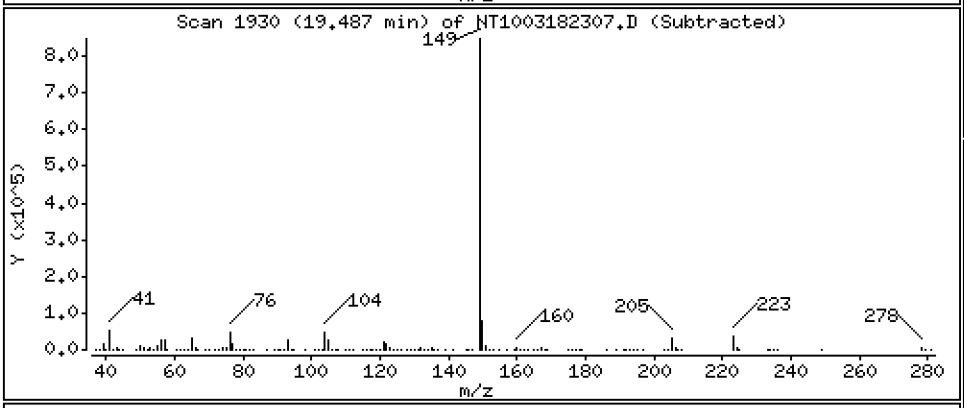
Column diameter: 0.25

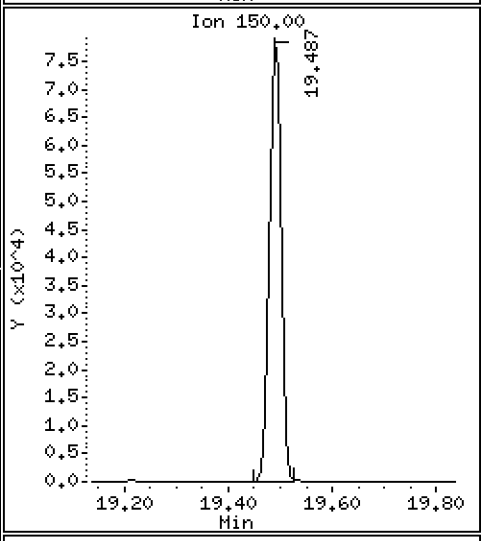
63 Di-n-butylphthalate

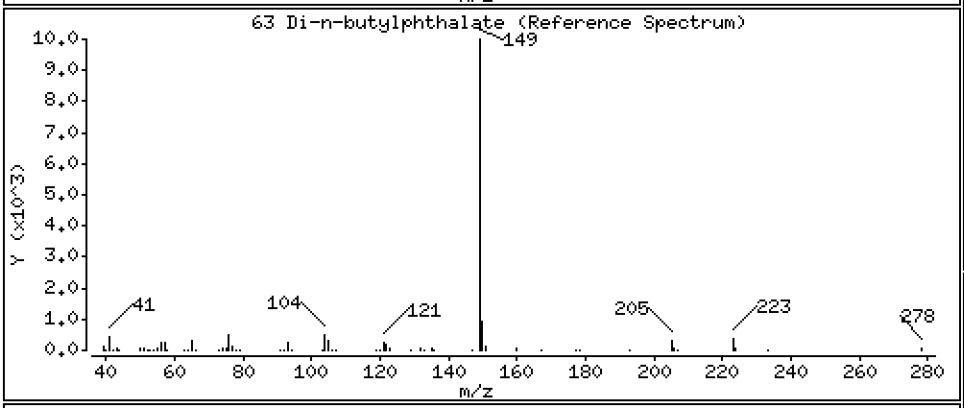
Concentration: 5.369 ug/mL

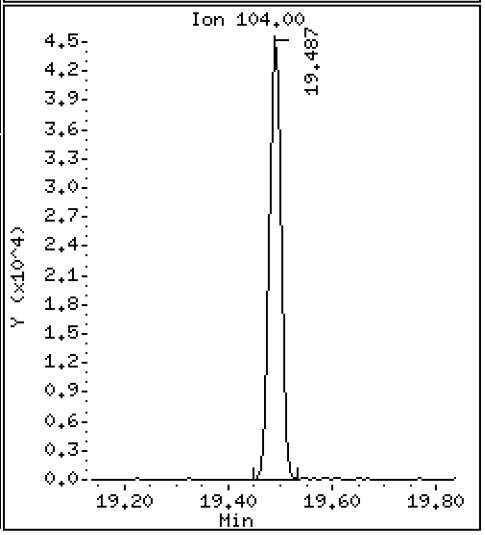


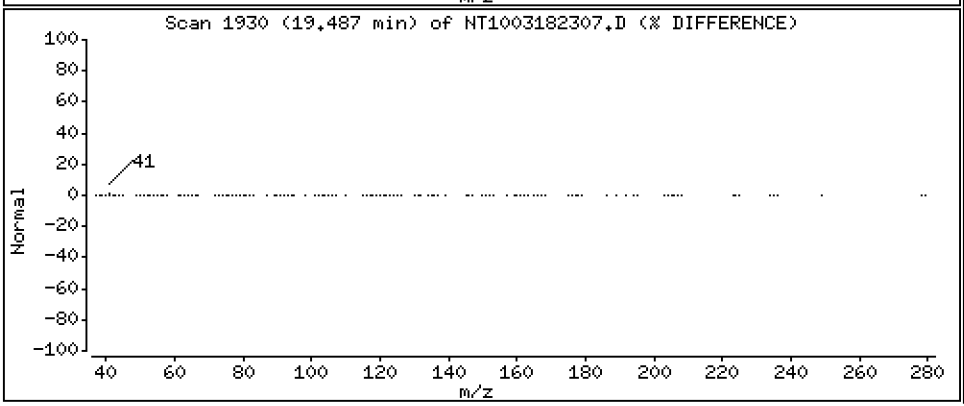












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

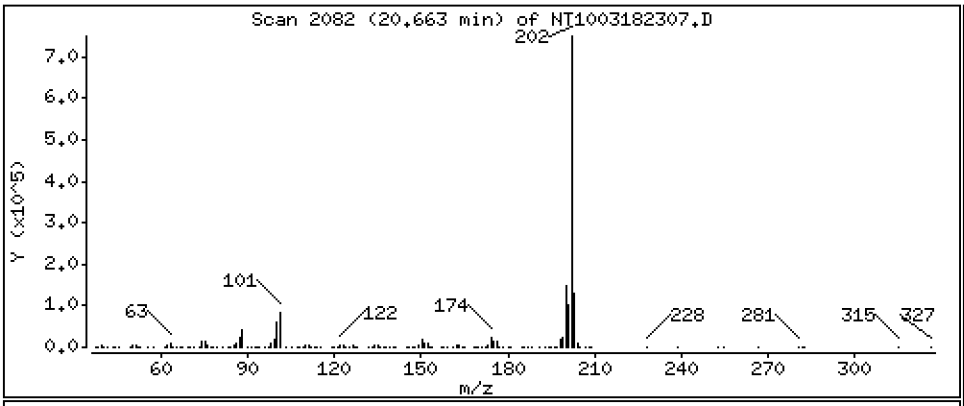
Operator: VTS

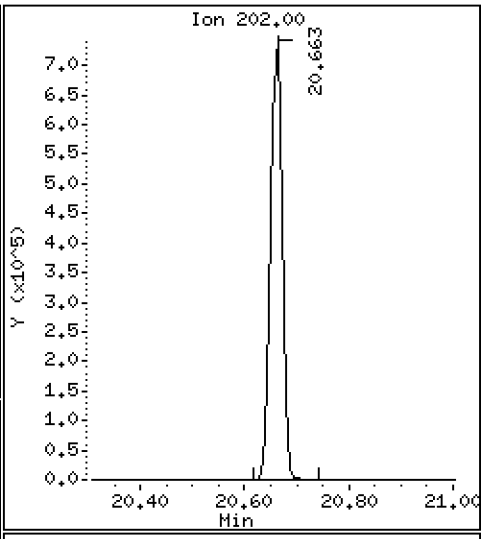
Column phase: ZB-5msi

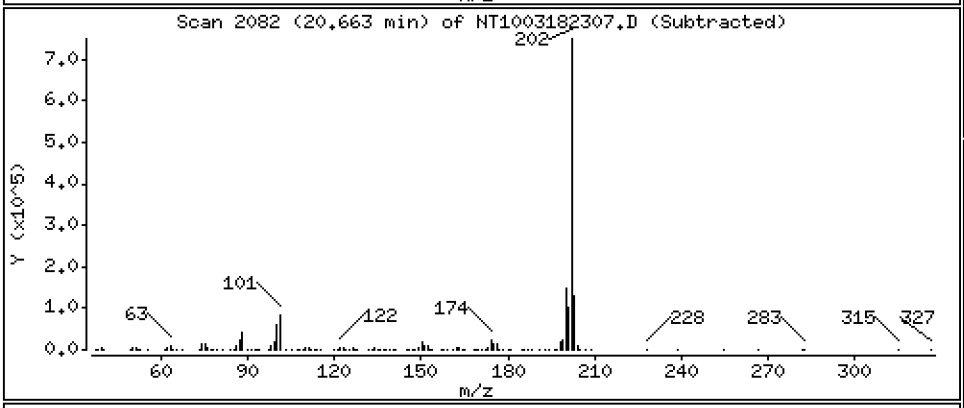
Column diameter: 0.25

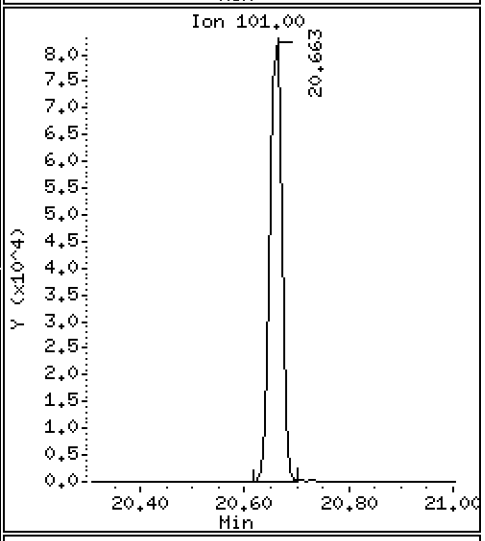
64 Fluoranthene

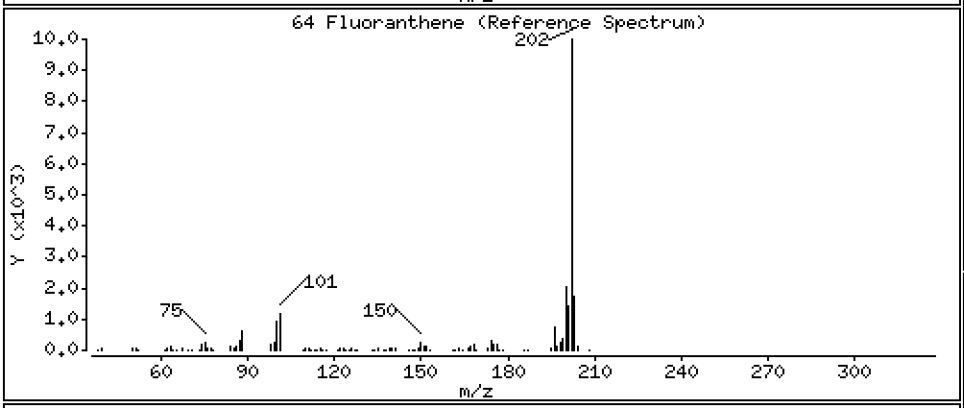
Concentration: 4.614 ug/mL

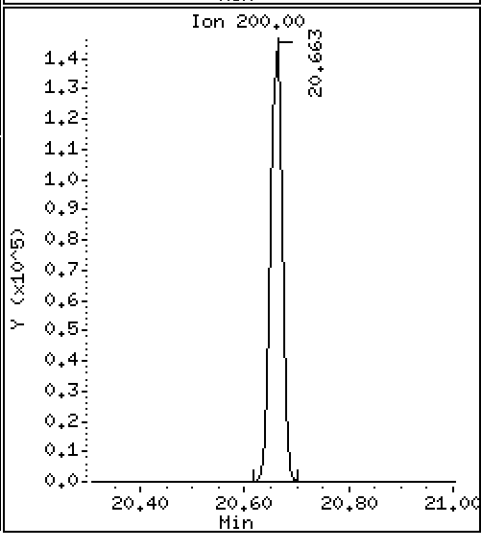


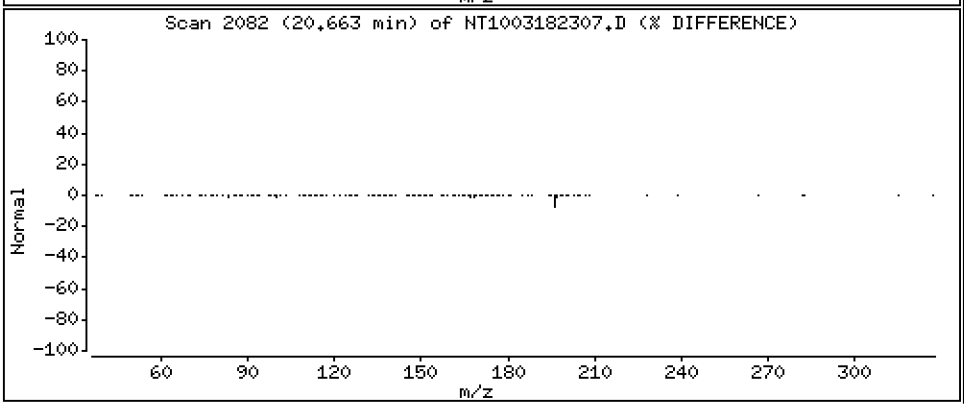












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

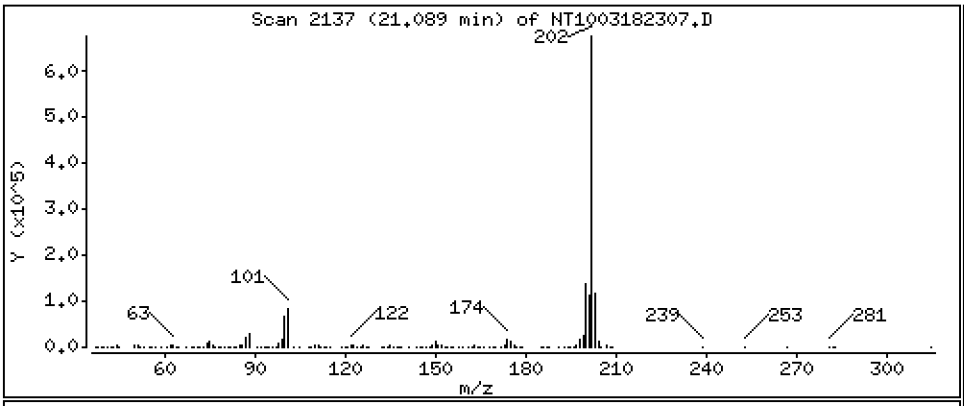
Operator: VTS

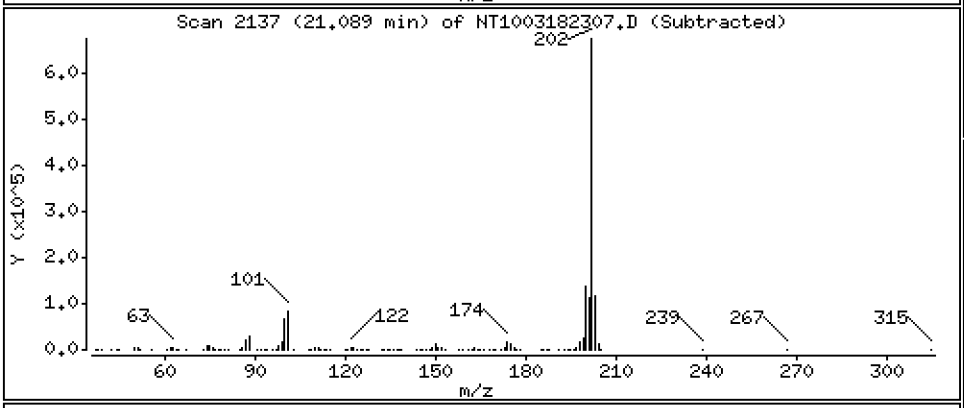
Column phase: ZB-5msi

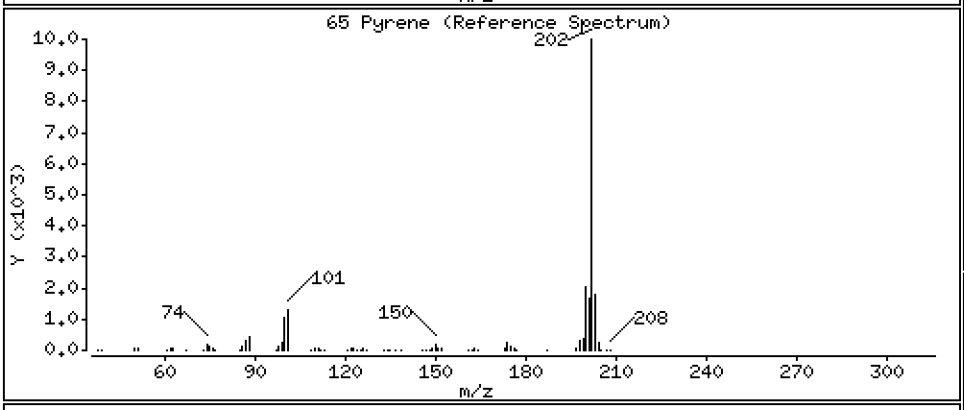
Column diameter: 0.25

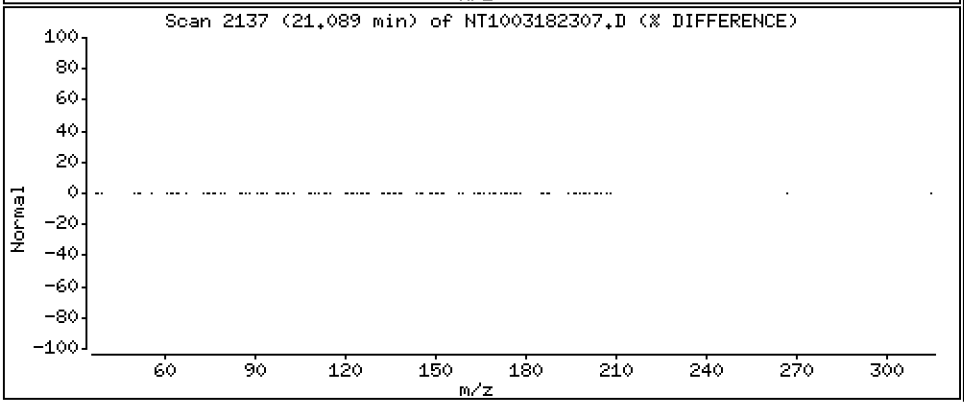
65 Pyrene

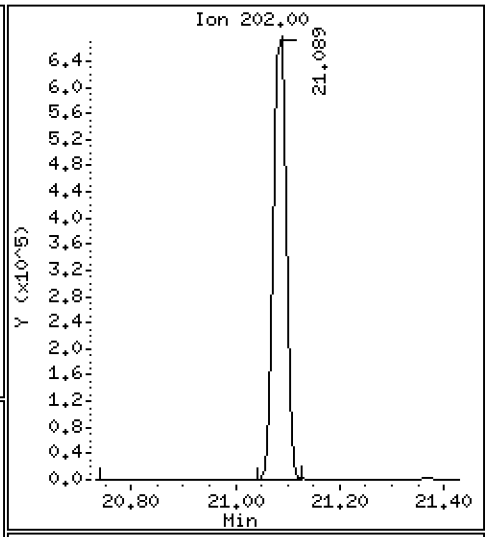
Concentration: 4.536 ug/mL

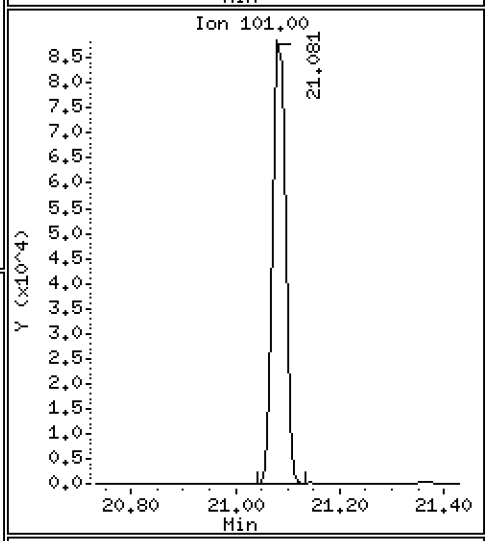


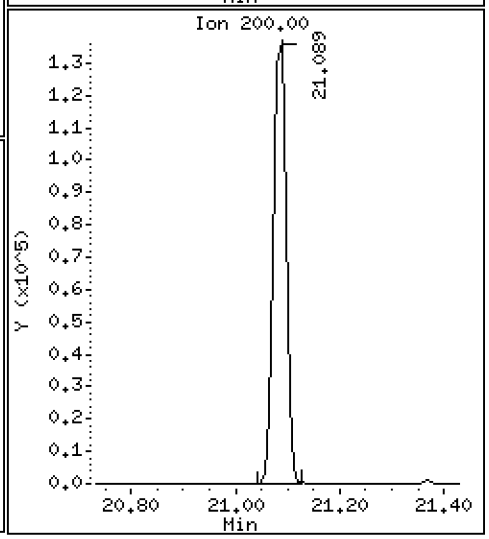












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

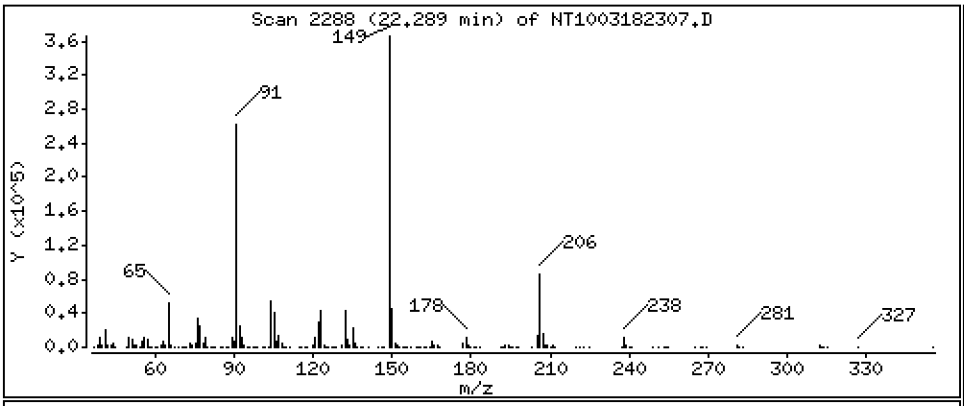
Operator: VTS

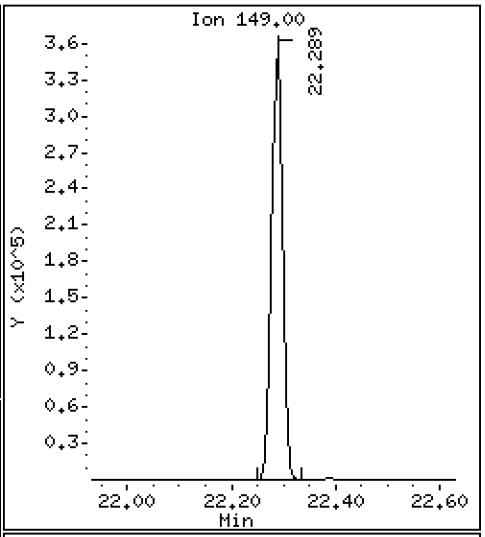
Column phase: ZB-5msi

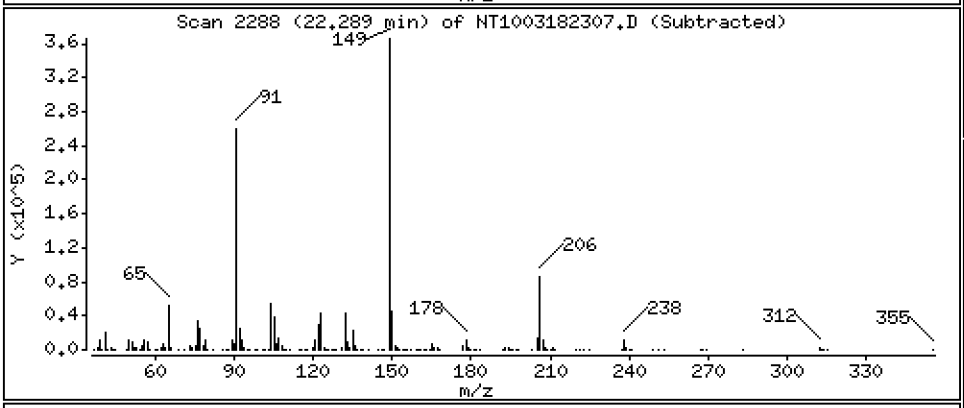
Column diameter: 0.25

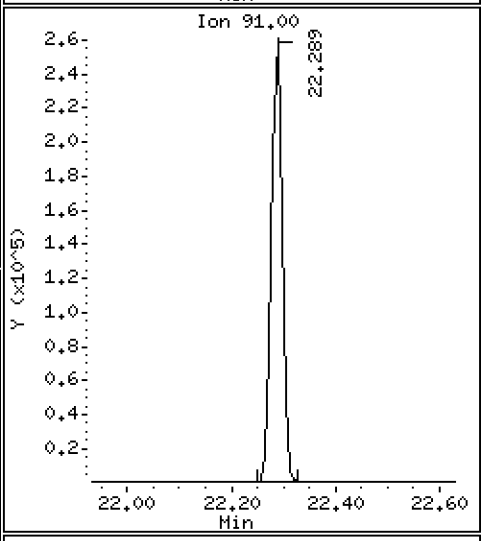
67 Butylbenzylphthalate

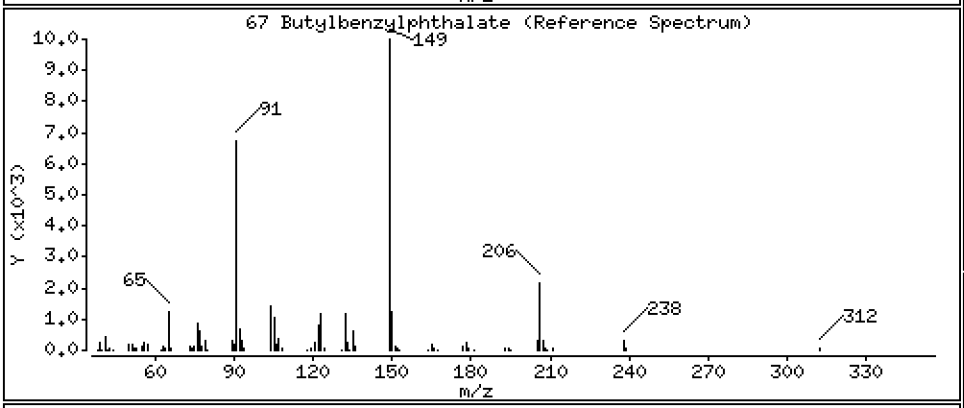
Concentration: 5.570 ug/mL

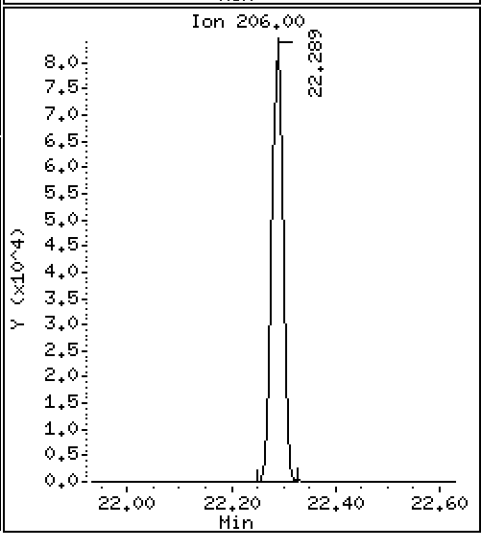


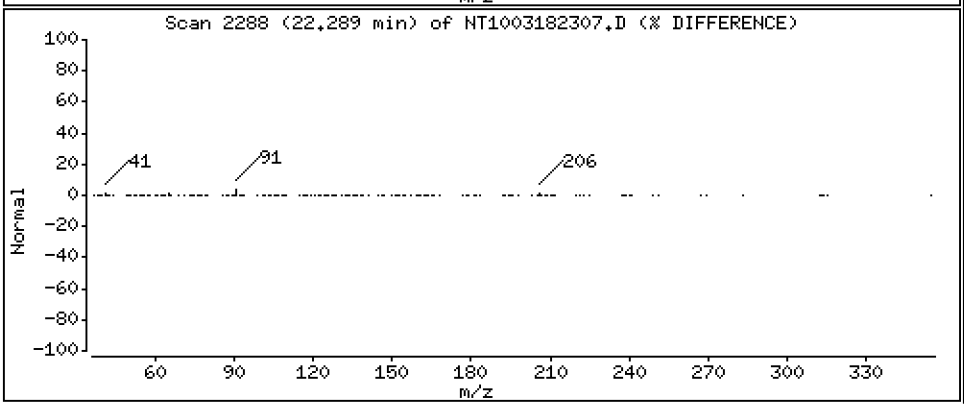












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

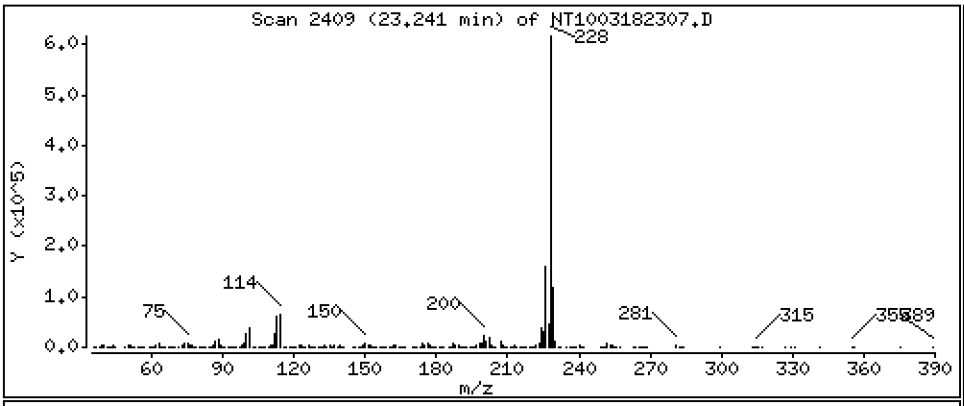
Operator: VTS

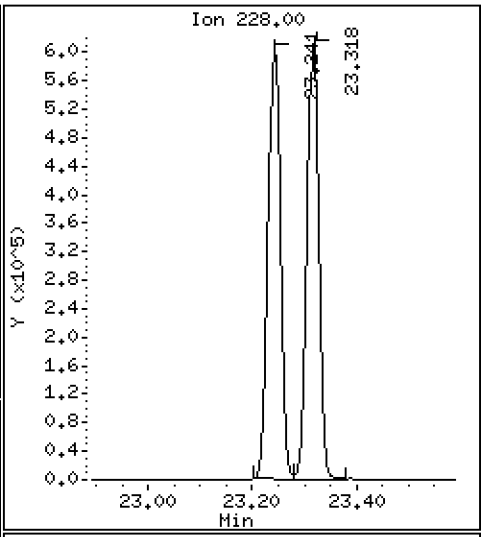
Column phase: ZB-5msi

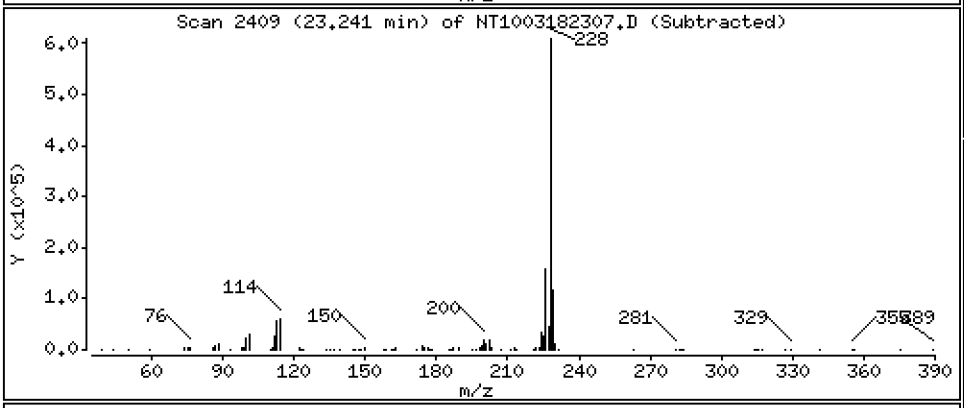
Column diameter: 0.25

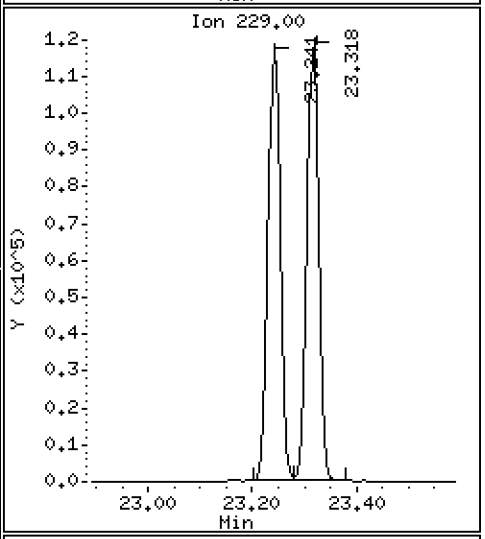
68 Benzo(a)anthracene

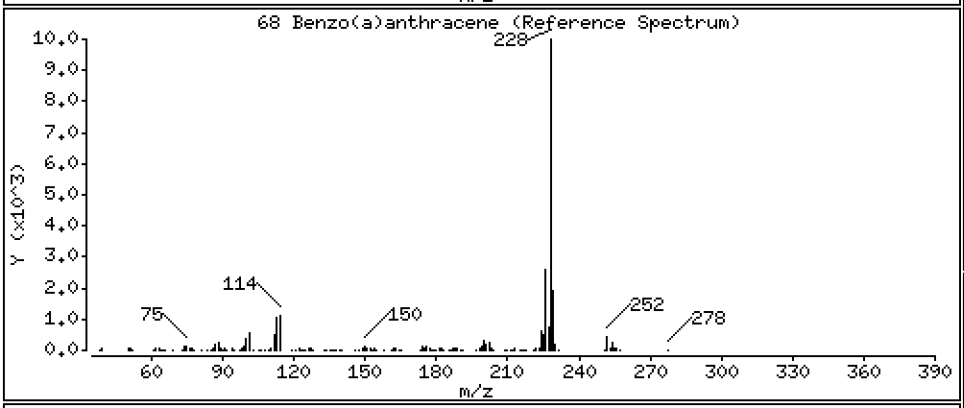
Concentration: 4.614 ug/mL

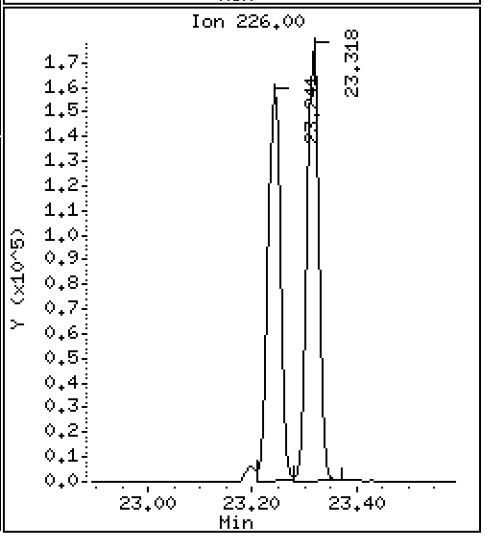


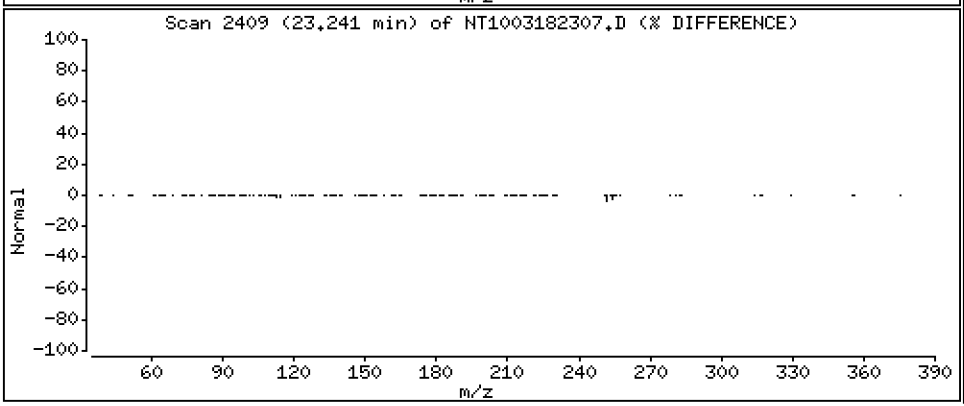












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

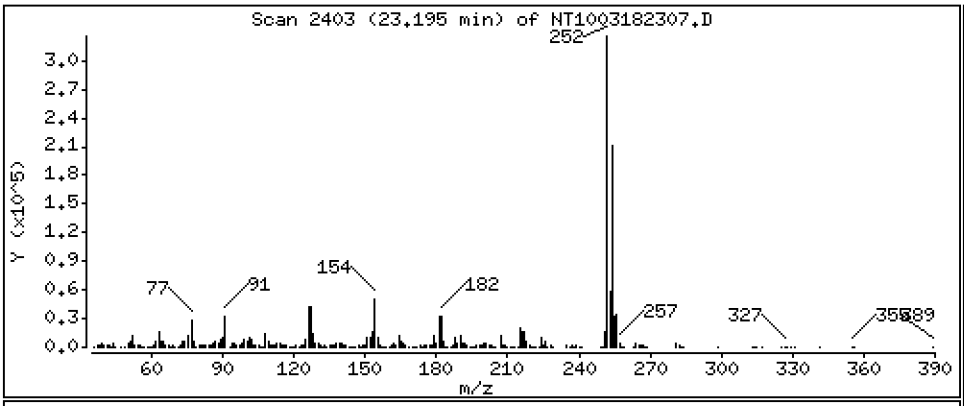
Operator: VTS

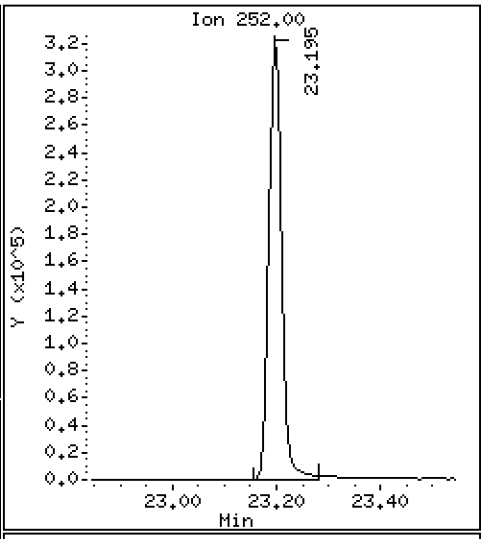
Column phase: ZB-5msi

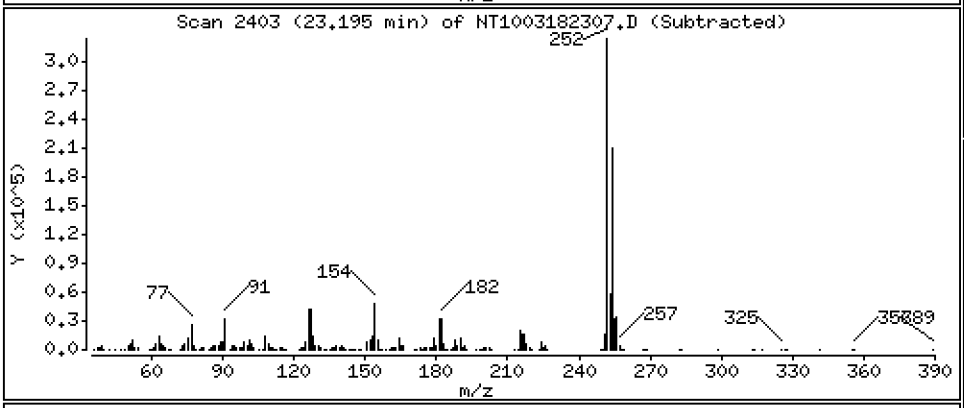
Column diameter: 0.25

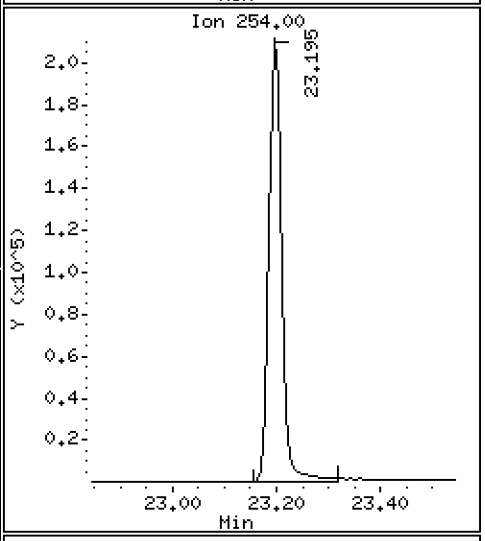
70 3,3'-Dichlorobenzidine

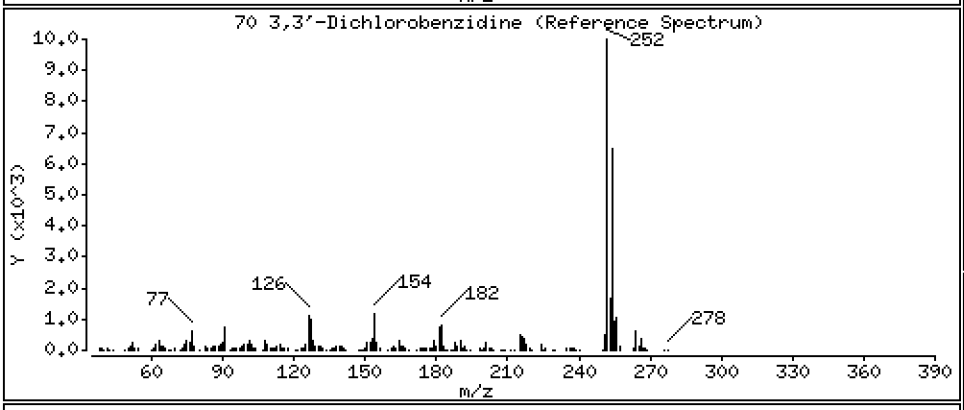
Concentration: 7.841 ug/mL

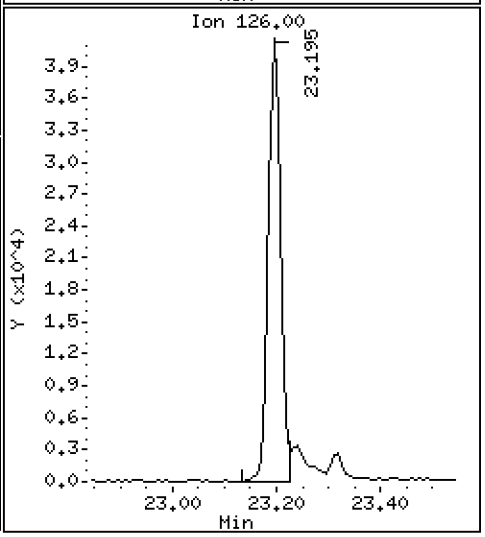


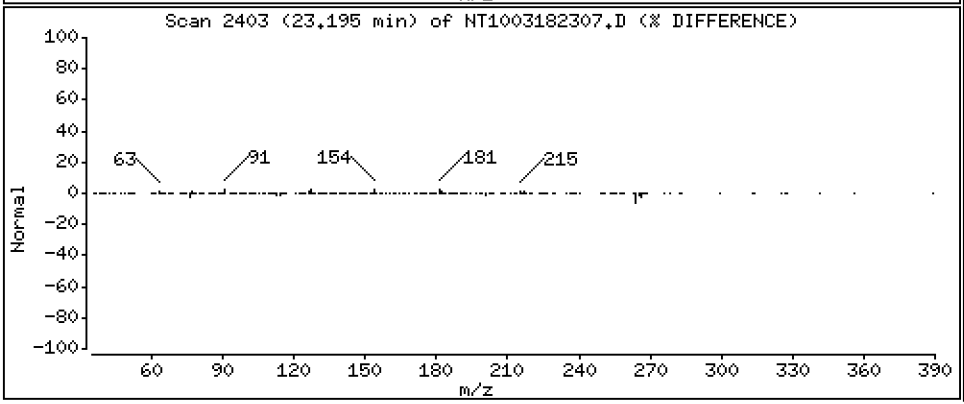












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

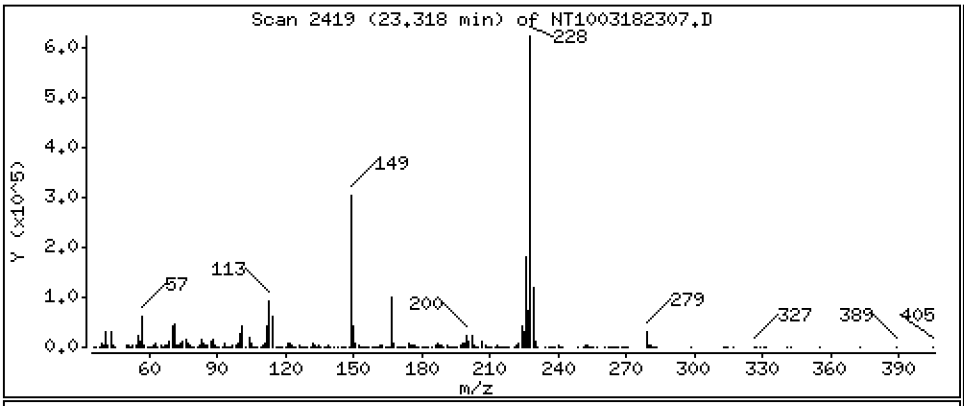
Operator: VTS

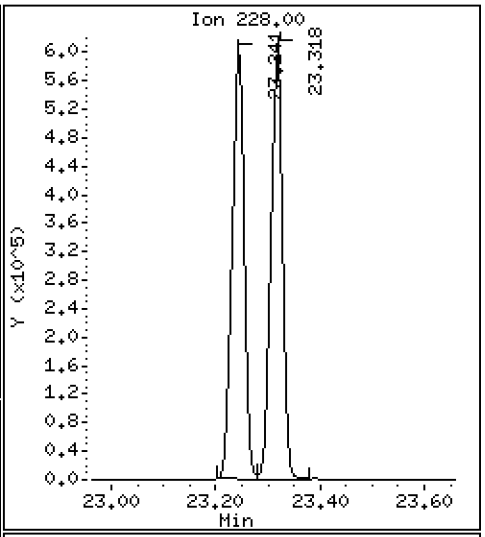
Column phase: ZB-5msi

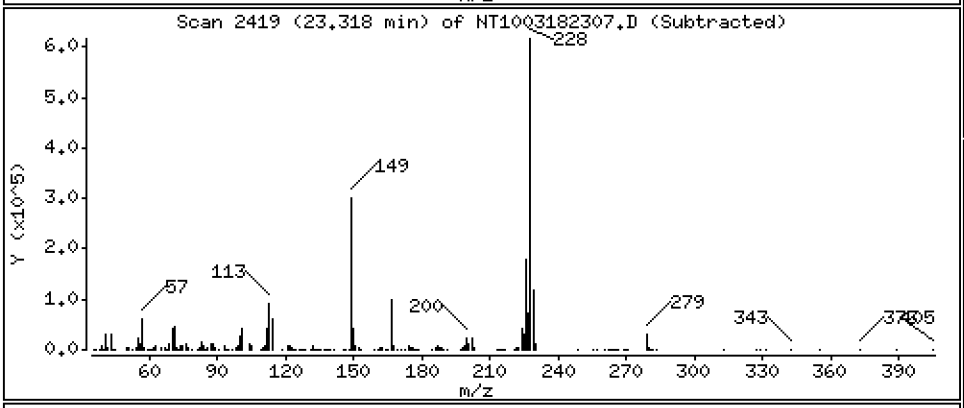
Column diameter: 0.25

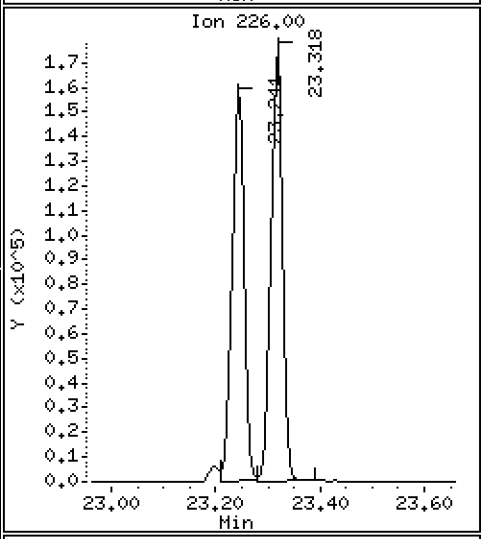
71 Chrysene

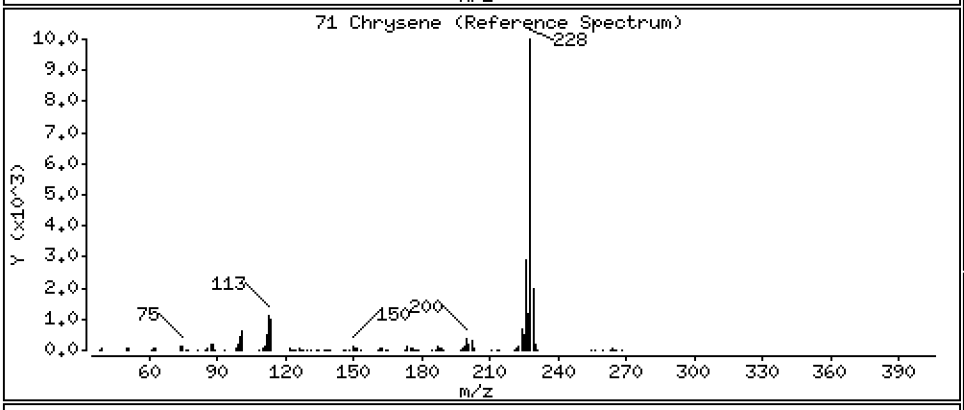
Concentration: 4.471 ug/mL

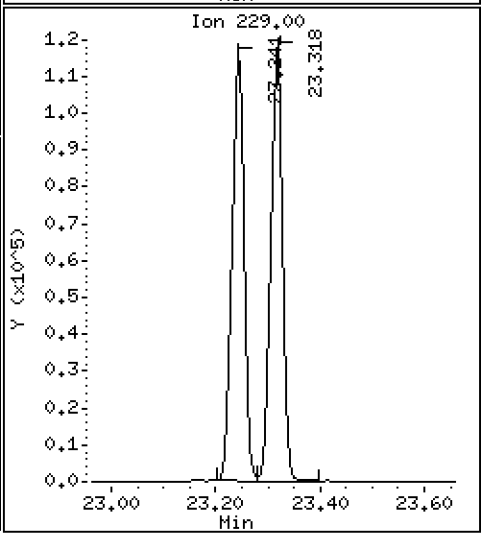


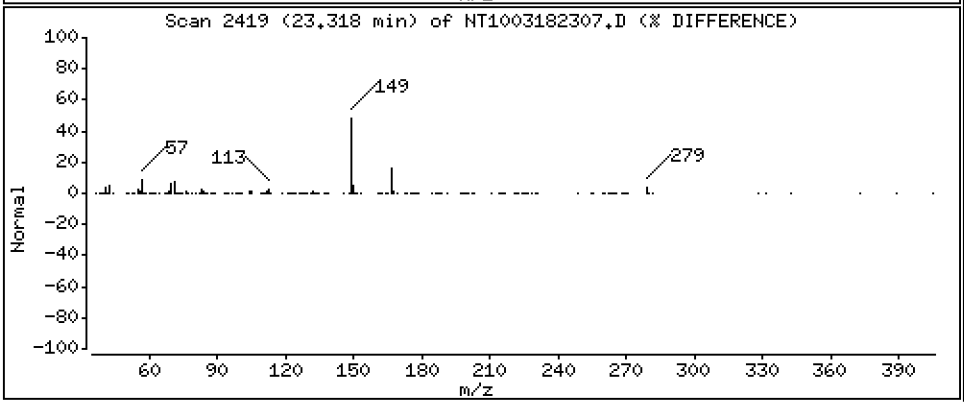












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

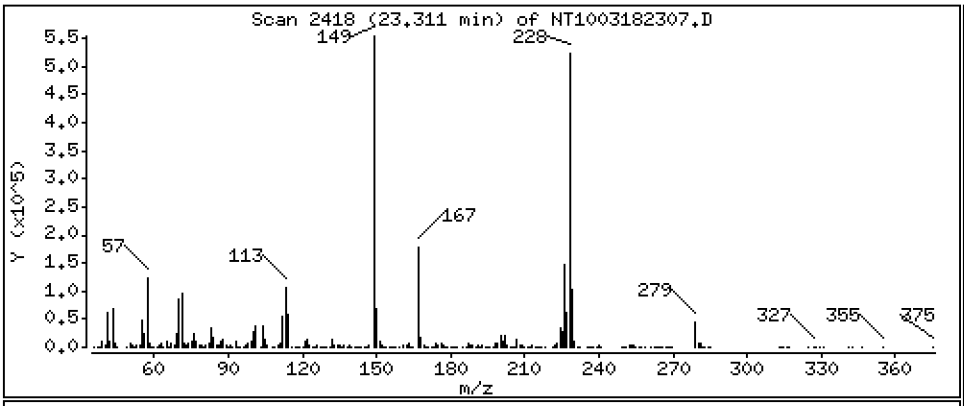
Operator: VTS

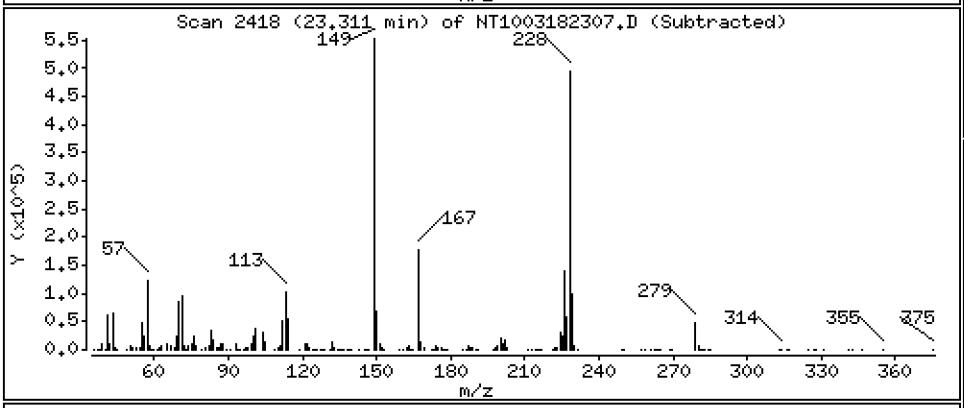
Column phase: ZB-5msi

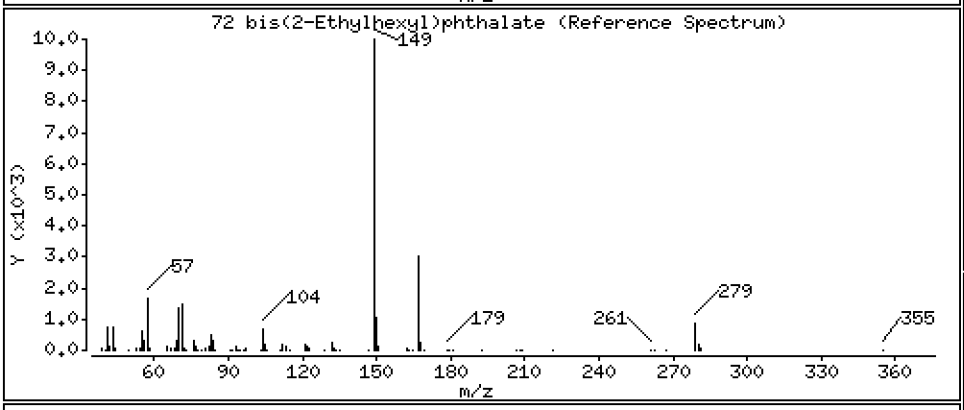
Column diameter: 0.25

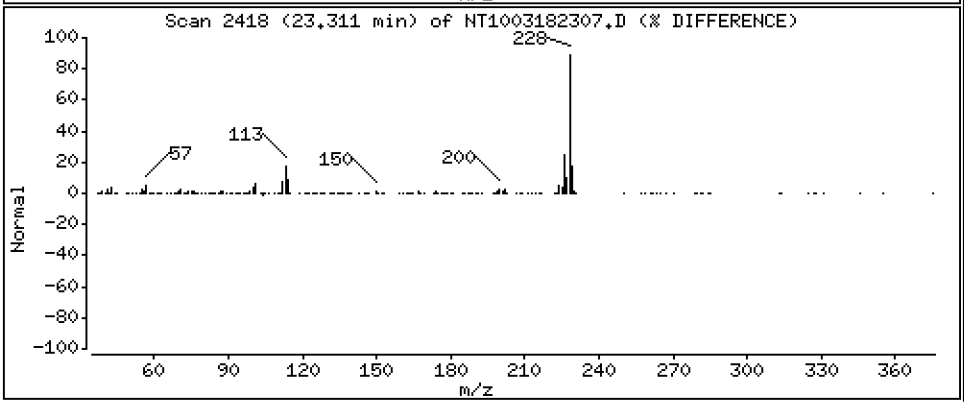
72 bis(2-Ethylhexyl)phthalate

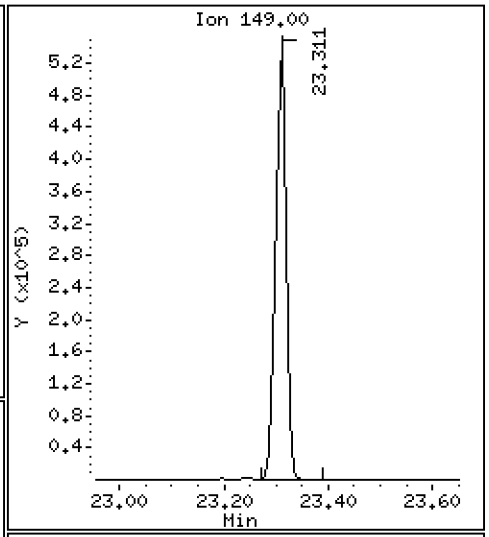
Concentration: 4.779 ug/mL

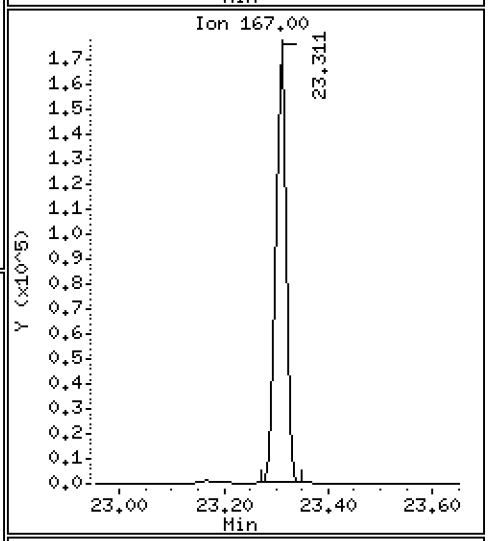


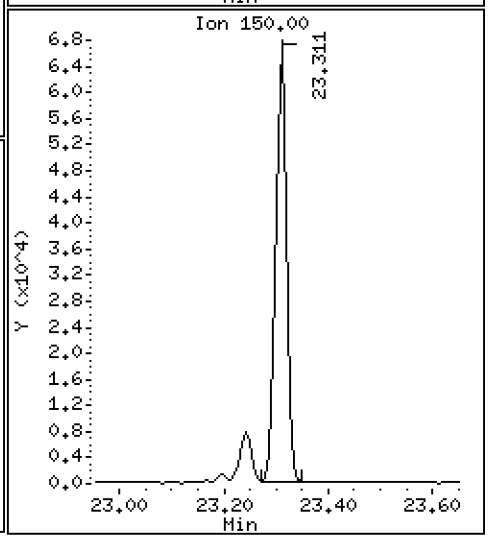












Date : 18-MAR-2023 21:33

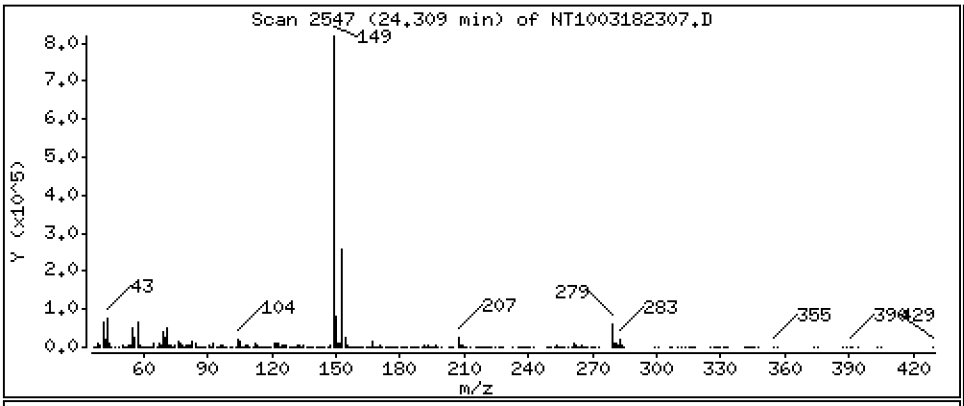
Client ID: Instrument: nt10.i

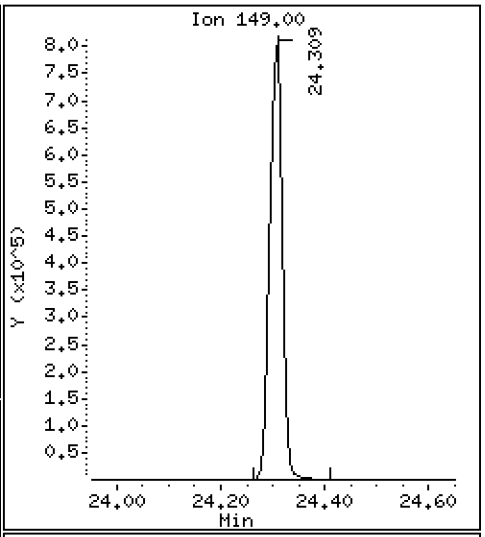
Sample Info: BLB0579-BS1

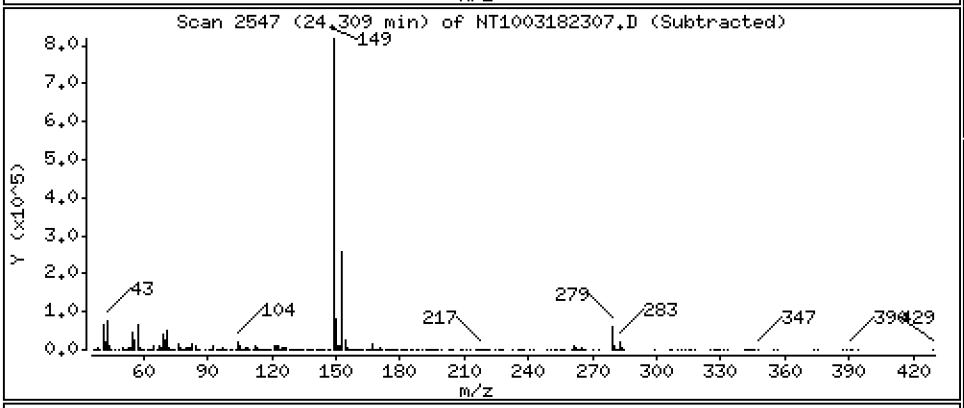
Operator: VTS

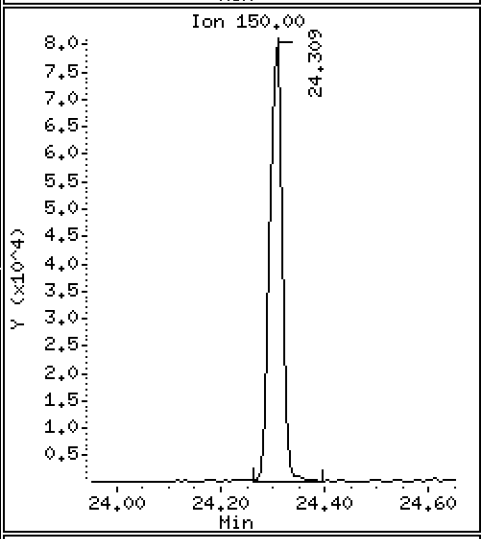
Column phase: ZB-5msi Column diameter: 0.25

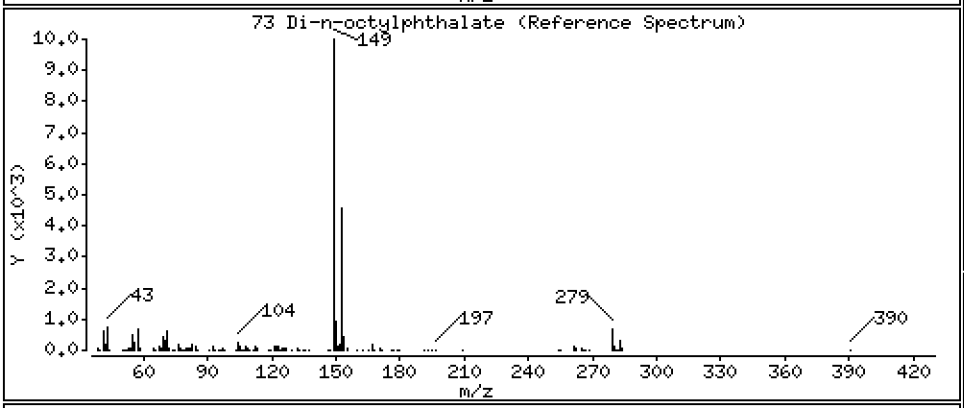
73 Di-n-octylphthalate Concentration: 4.762 ug/mL

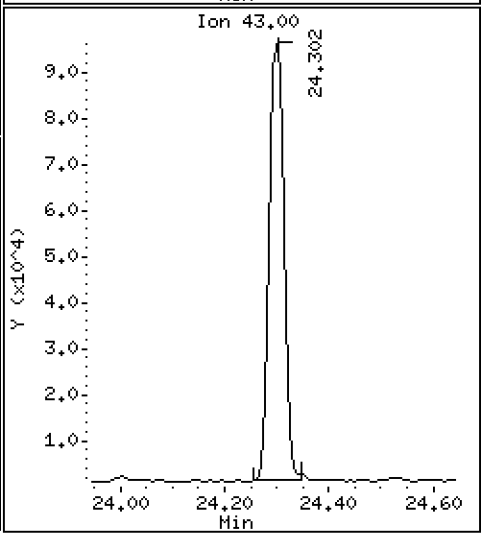


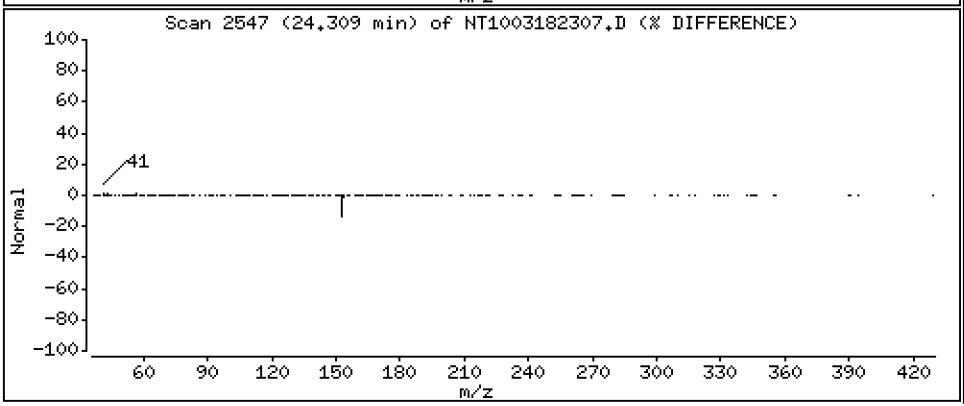












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

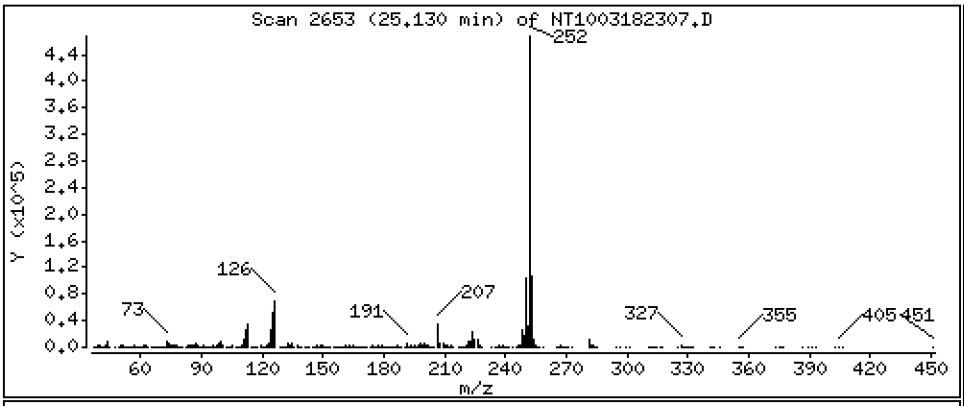
Operator: VTS

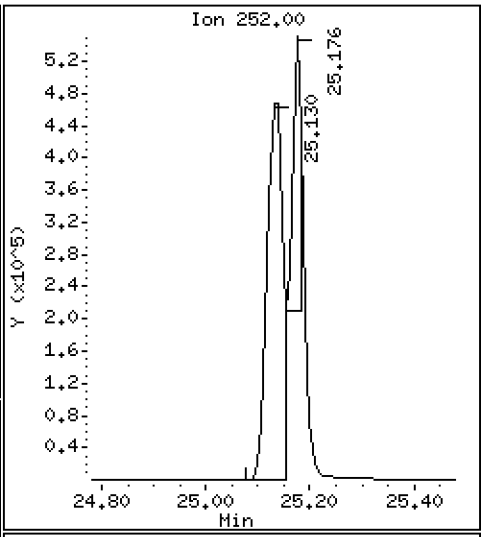
Column phase: ZB-5msi

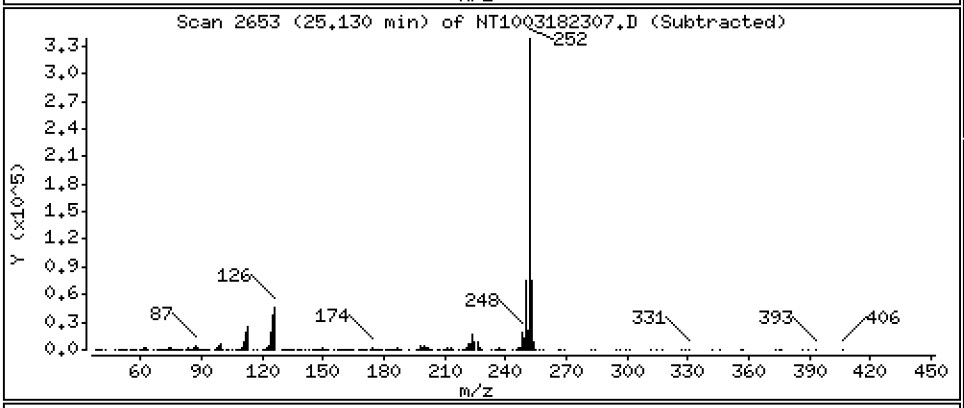
Column diameter: 0.25

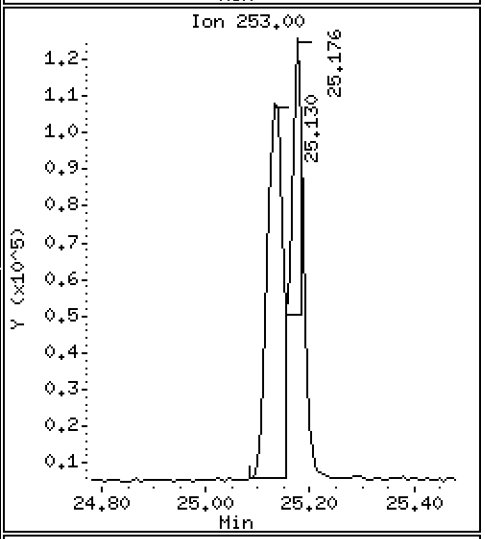
74 Benzo(b)fluoranthene

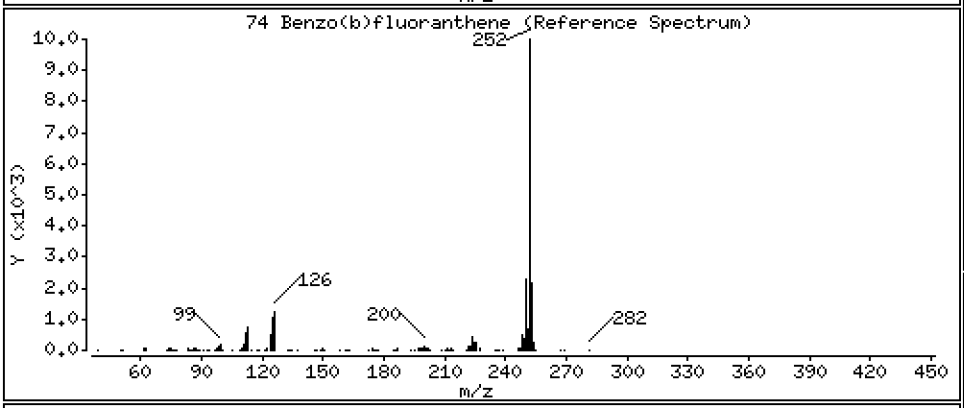
Concentration: 4.896 ug/mL

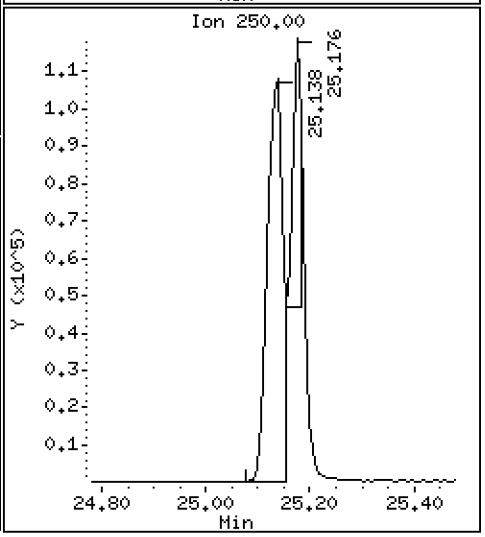


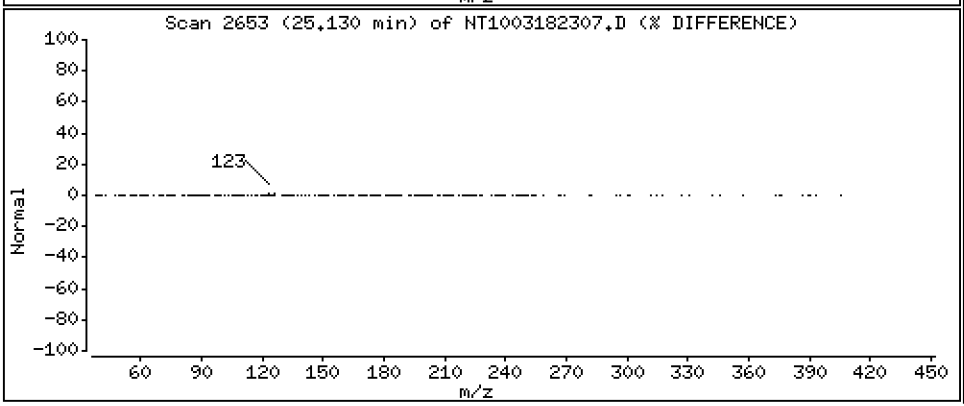












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

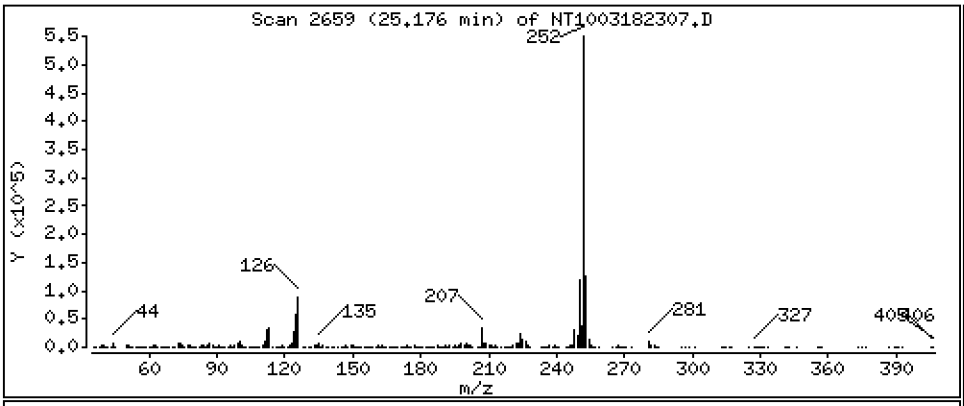
Operator: VTS

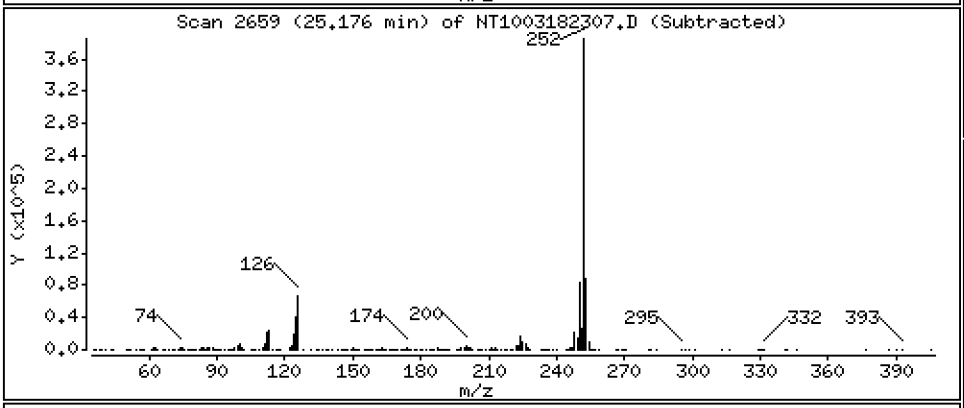
Column phase: ZB-5msi

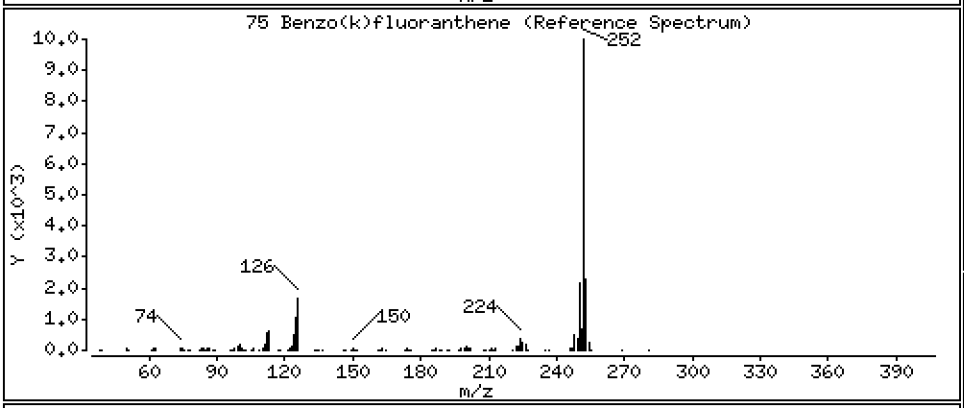
Column diameter: 0.25

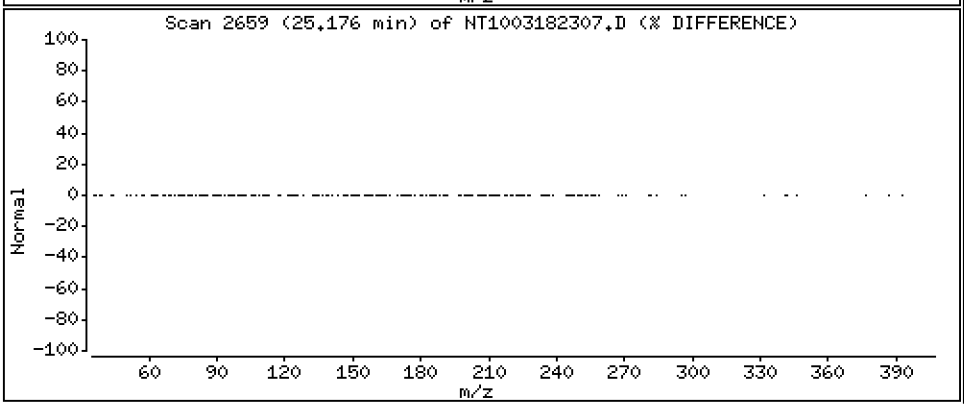
75 Benzo(k)fluoranthene

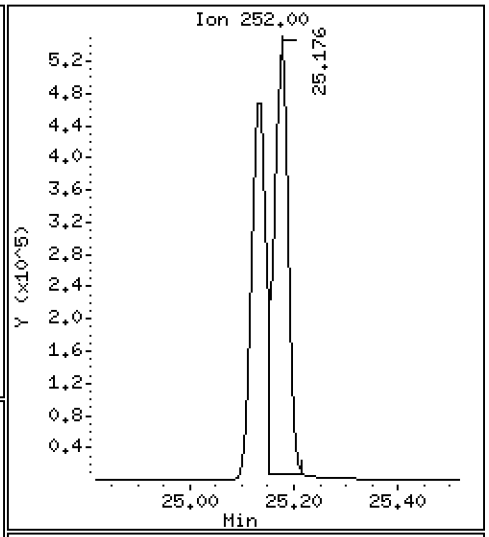
Concentration: 4.875 ug/mL

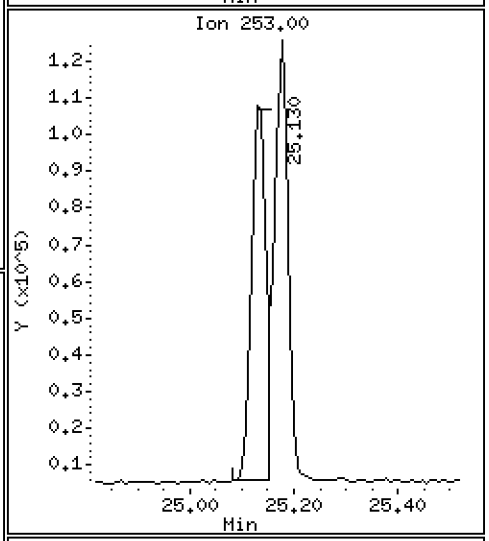


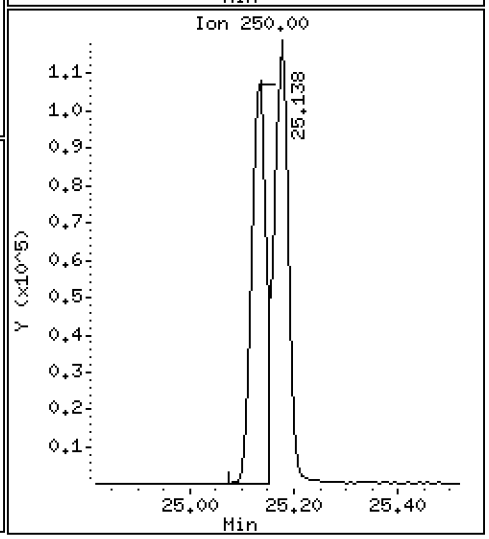












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

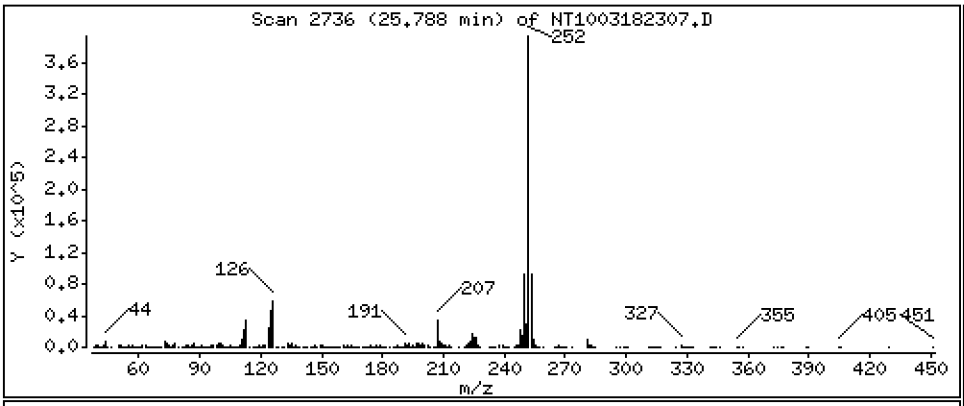
Operator: VTS

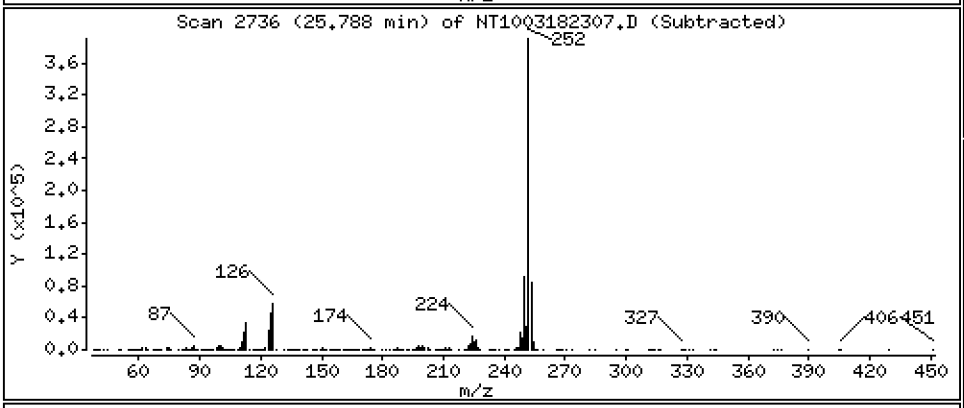
Column phase: ZB-5msi

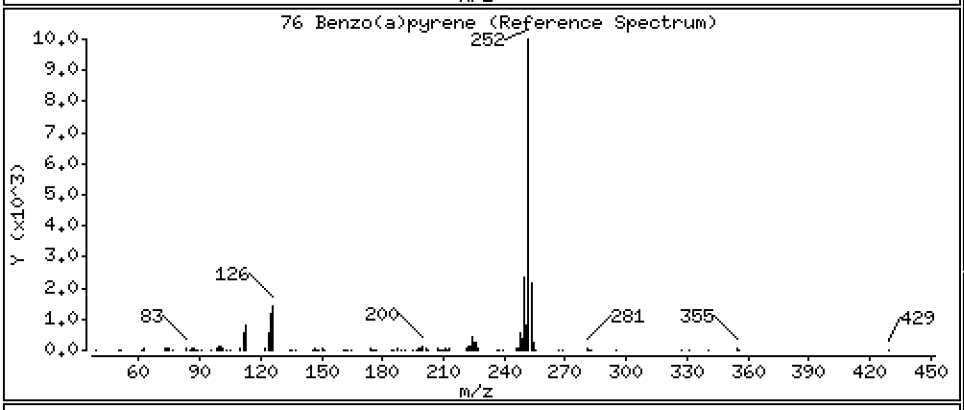
Column diameter: 0.25

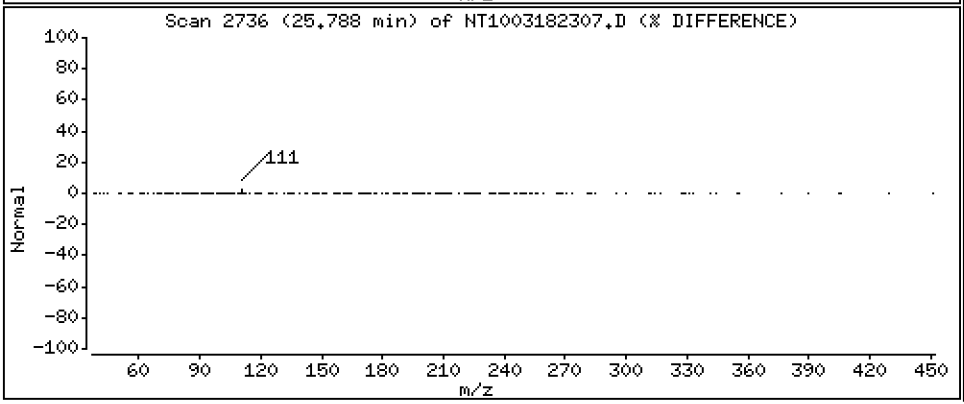
76 Benzo(a)pyrene

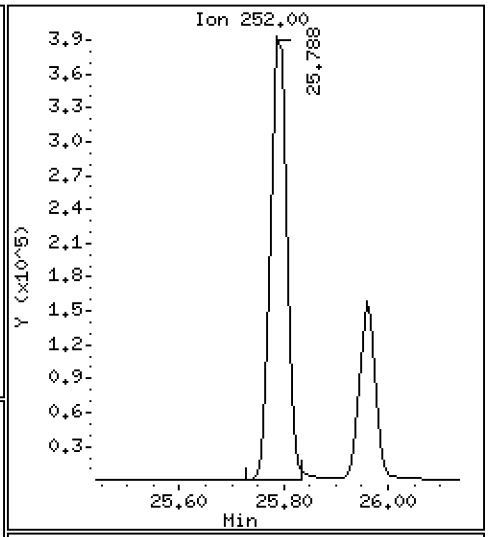
Concentration: 4.624 ug/mL

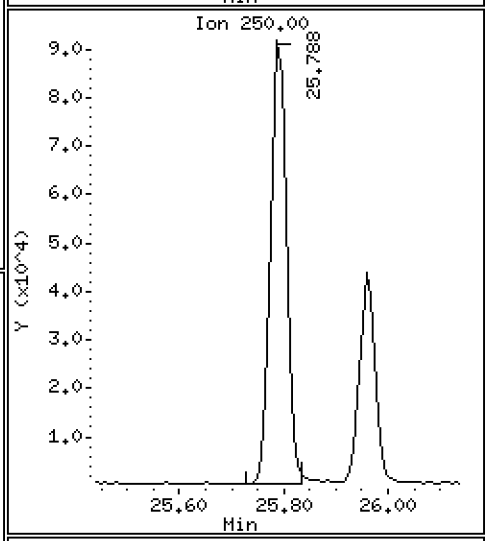


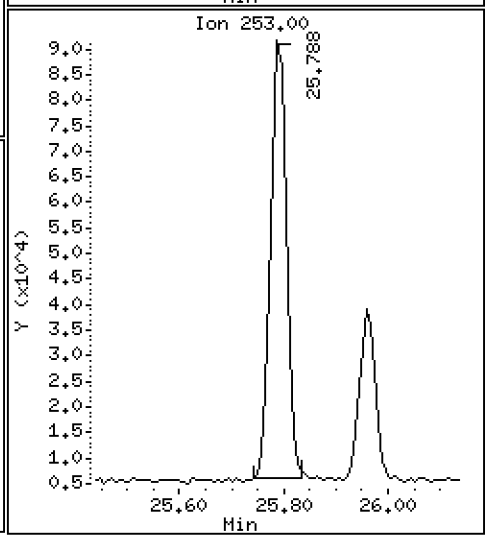












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

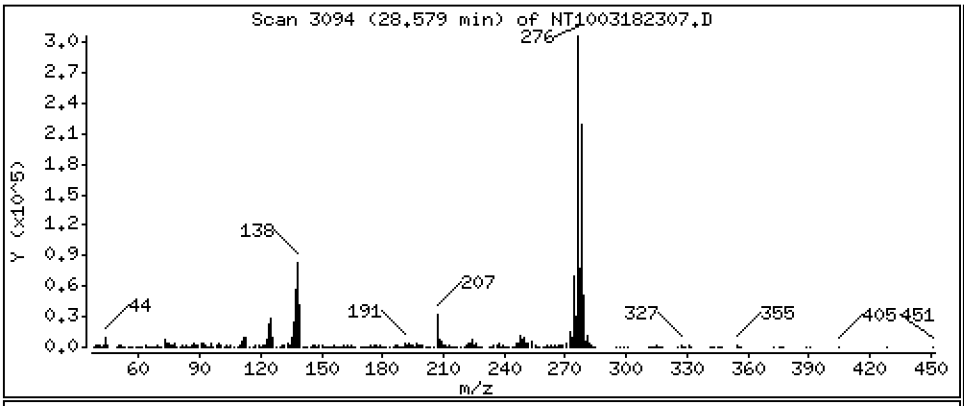
Operator: VTS

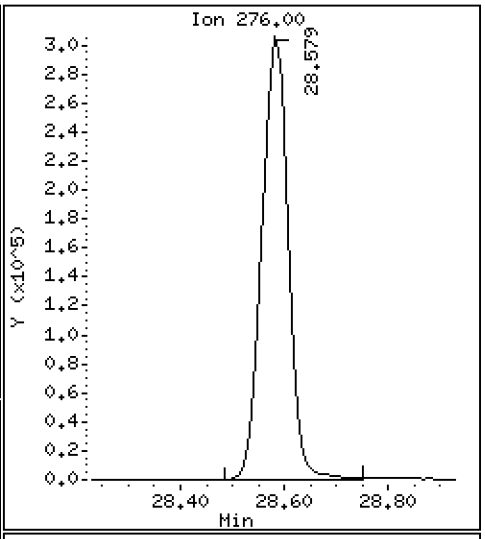
Column phase: ZB-5msi

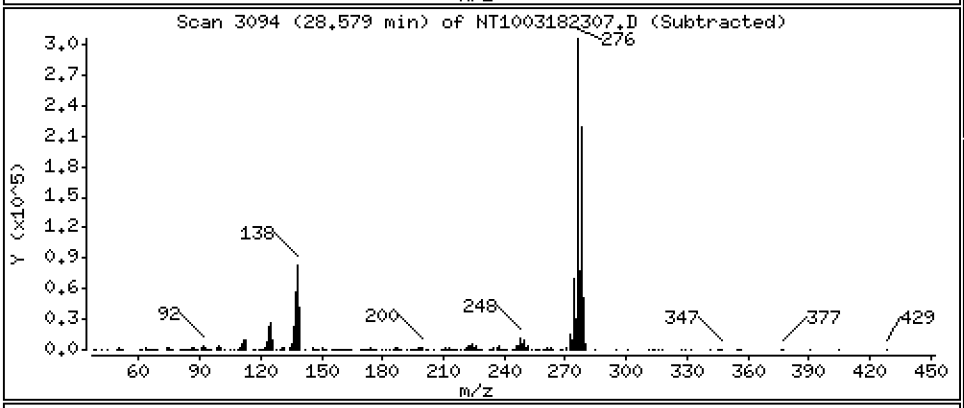
Column diameter: 0.25

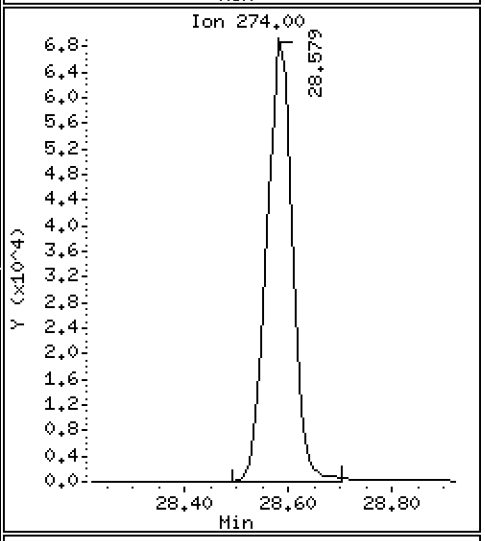
78 Indeno(1,2,3-cd)pyrene

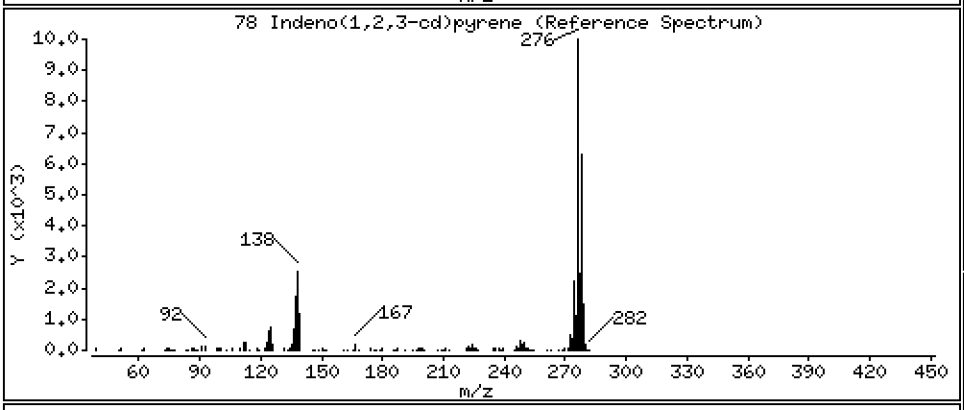
Concentration: 4.755 ug/mL

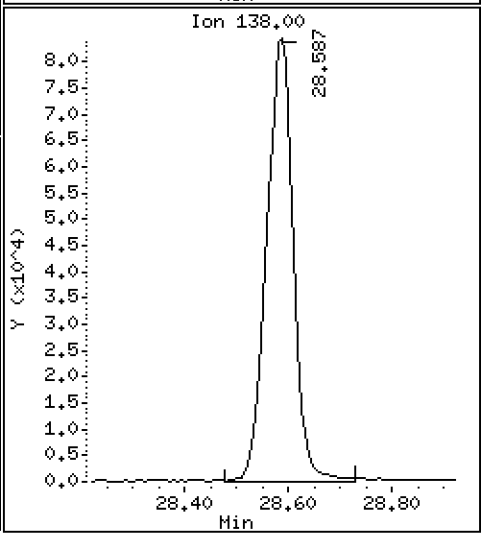


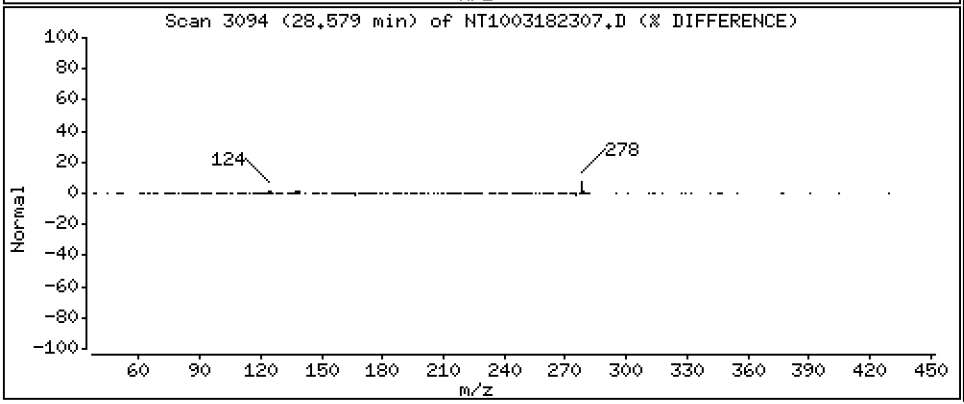












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

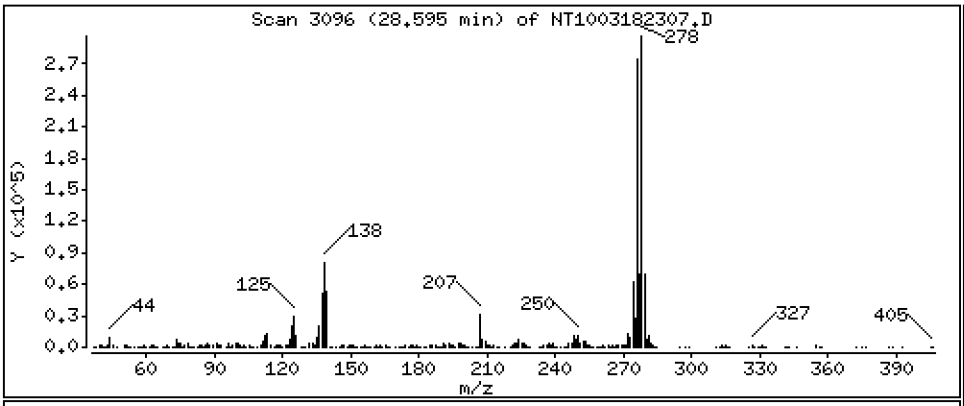
Operator: VTS

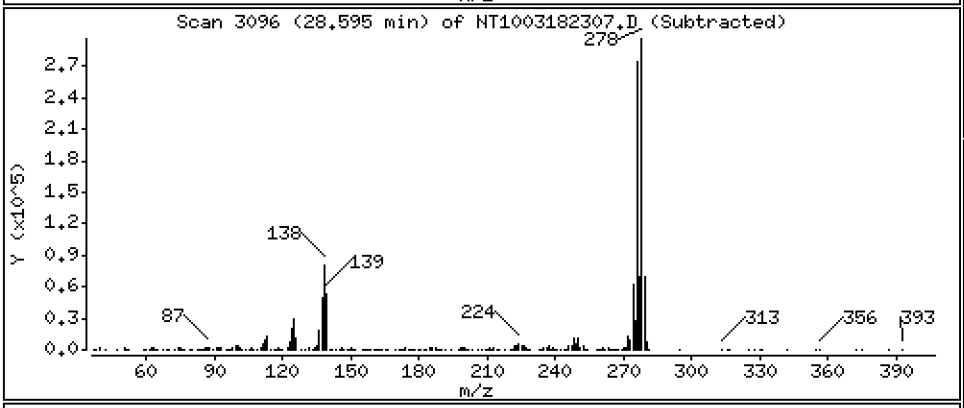
Column phase: ZB-5msi

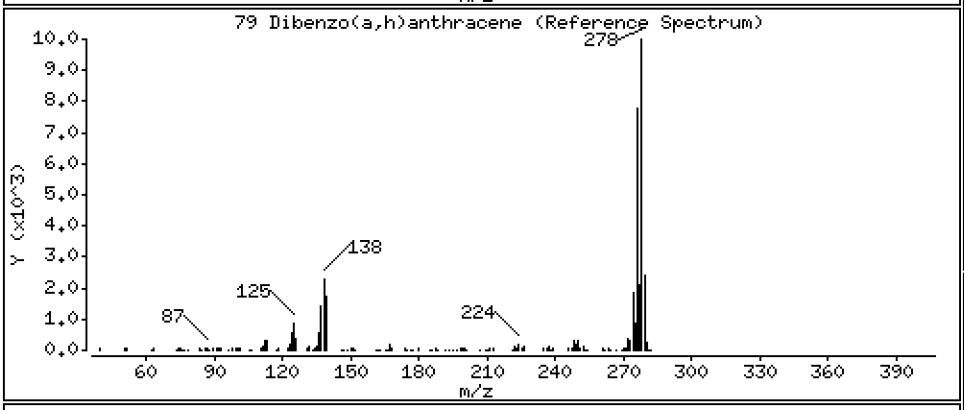
Column diameter: 0.25

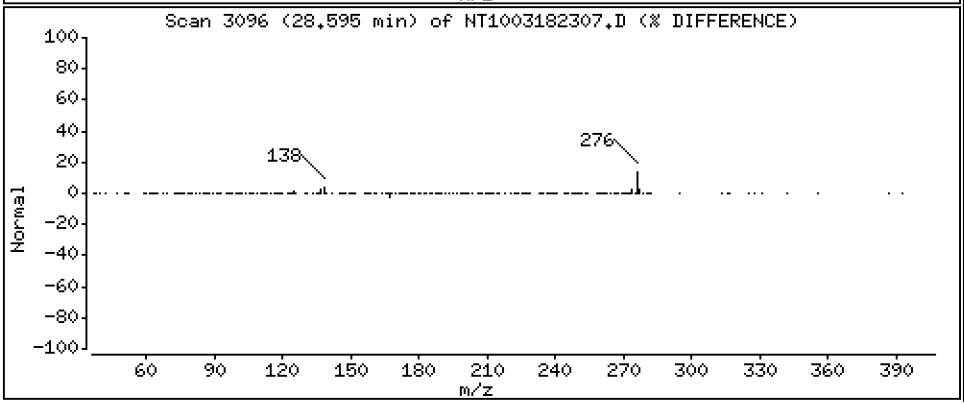
79 Dibenzo(a,h)anthracene

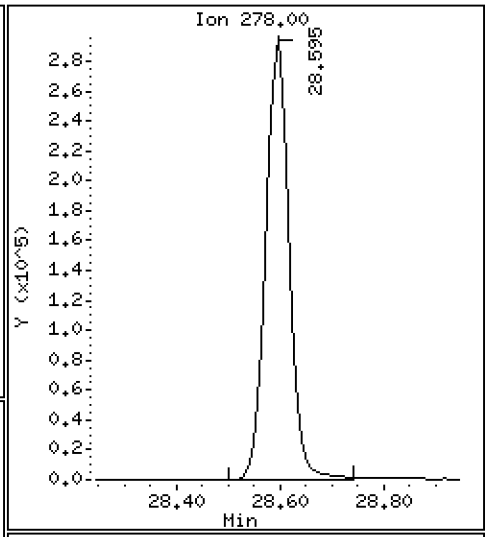
Concentration: 4.823 ug/mL

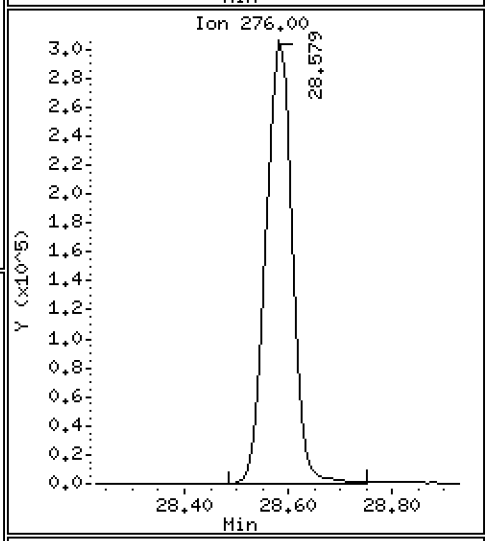


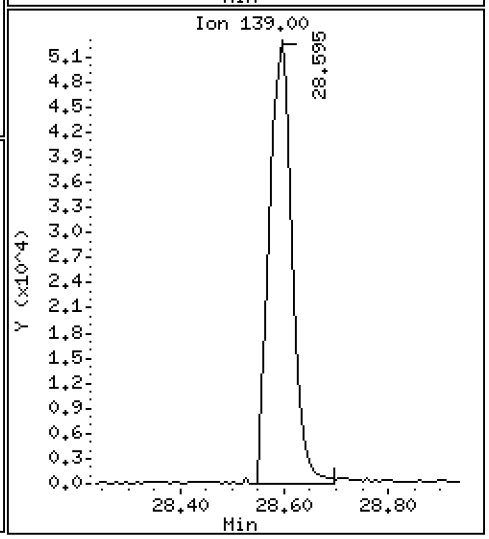












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

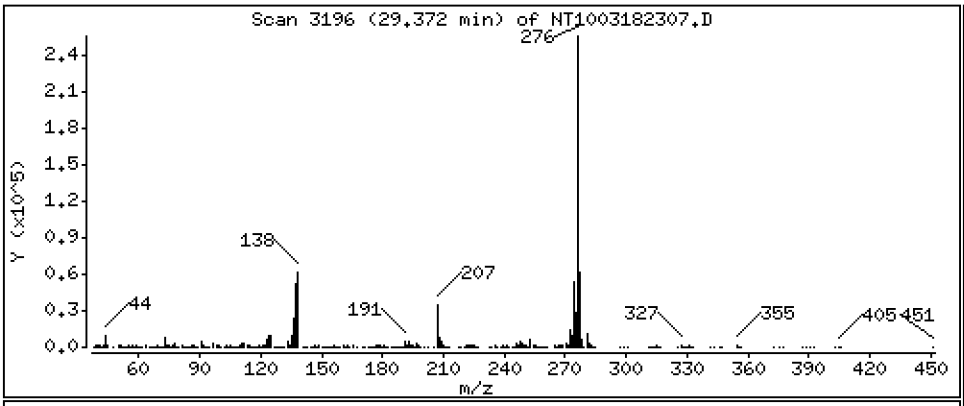
Operator: VTS

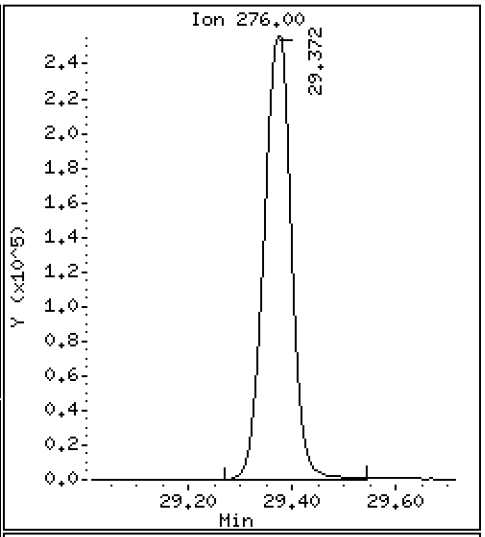
Column phase: ZB-5msi

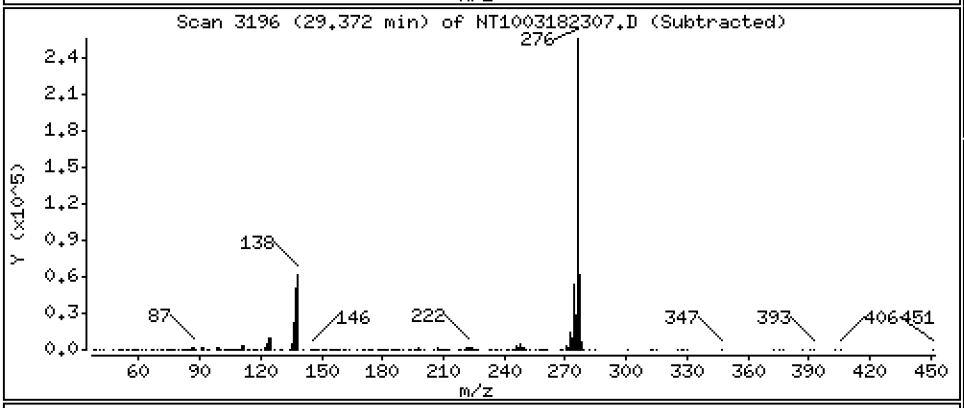
Column diameter: 0.25

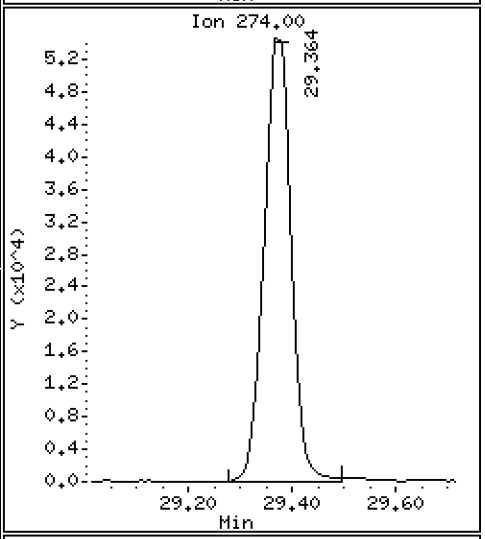
80 Benzo(g,h,i)perylene

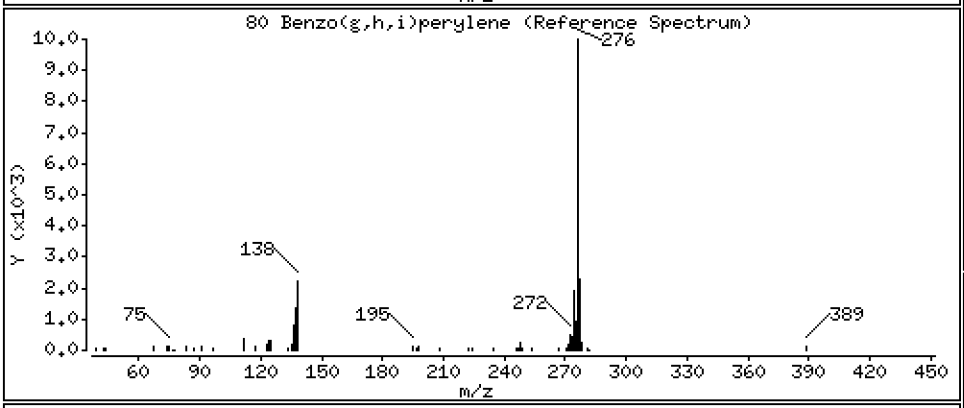
Concentration: 4.774 ug/mL

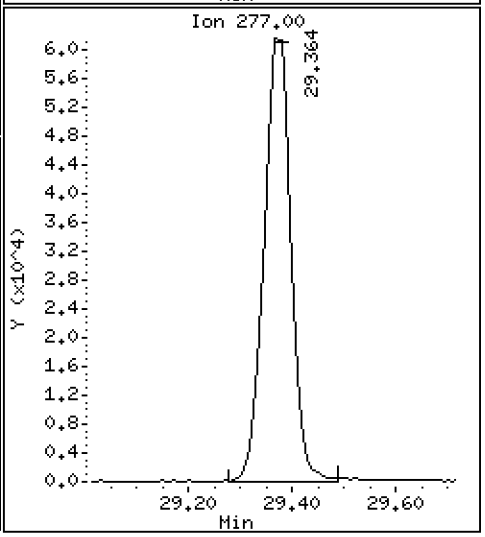


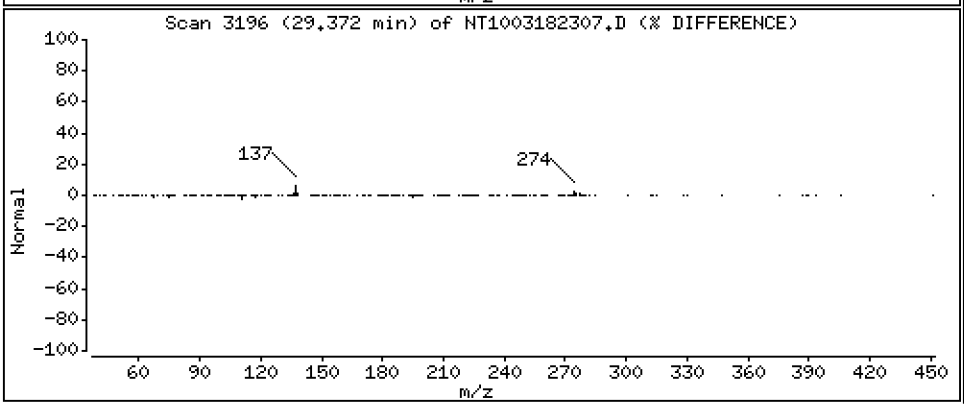












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

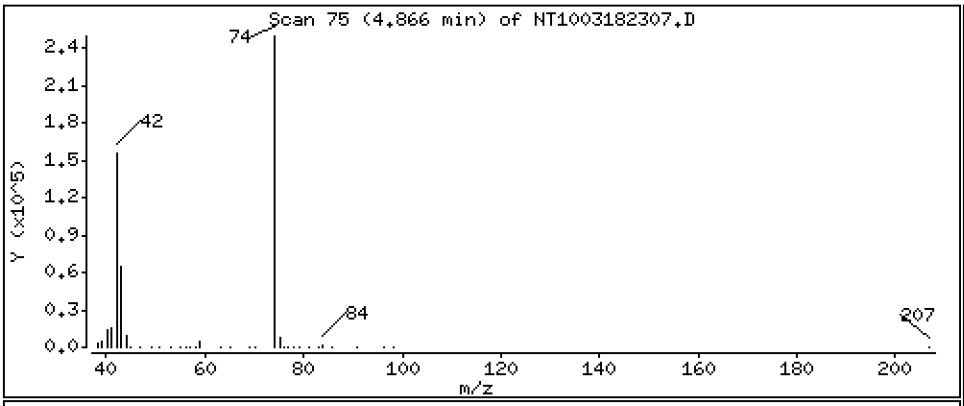
Operator: VTS

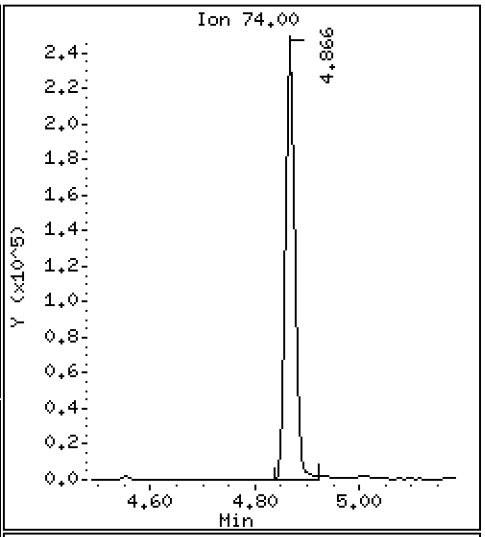
Column phase: ZB-5msi

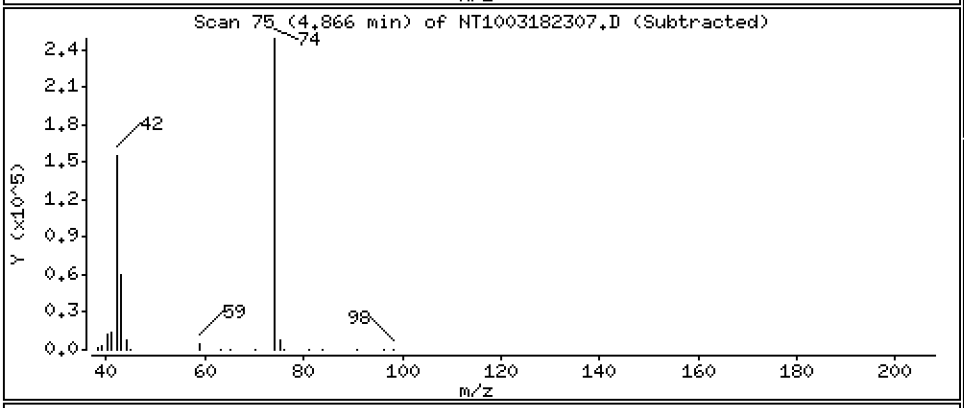
Column diameter: 0.25

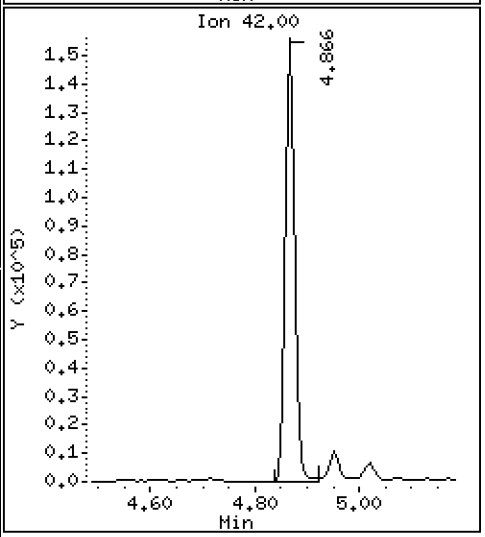
90 N-Nitrosodimethylamine

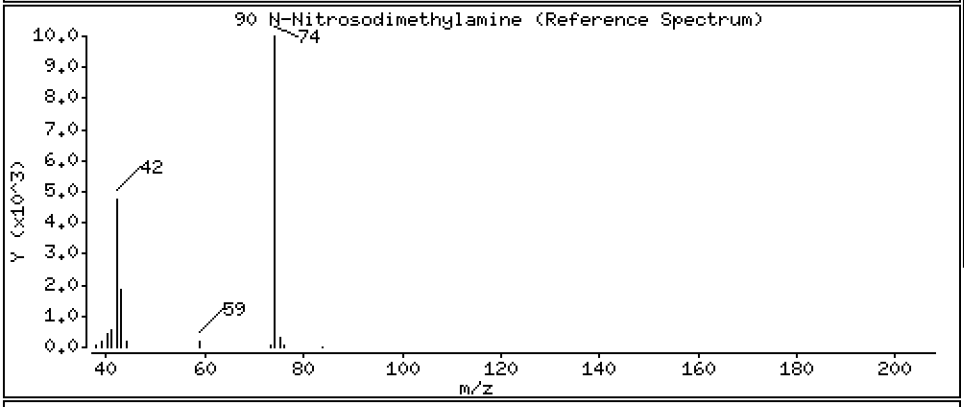
Concentration: 7.695 ug/mL

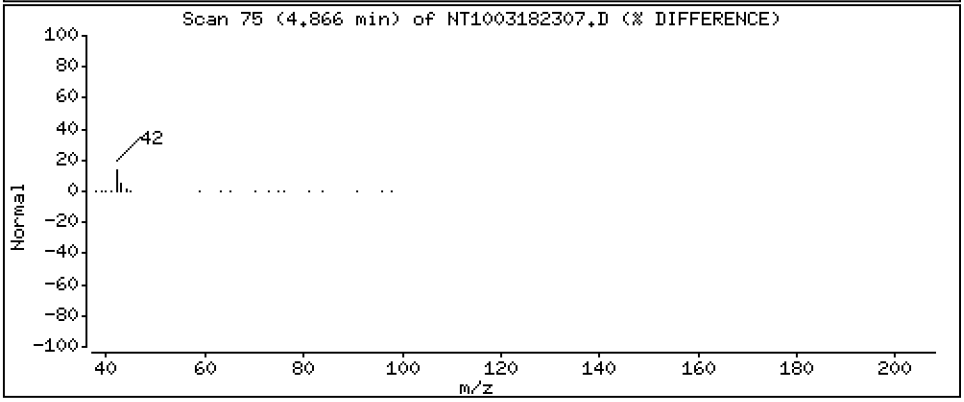












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

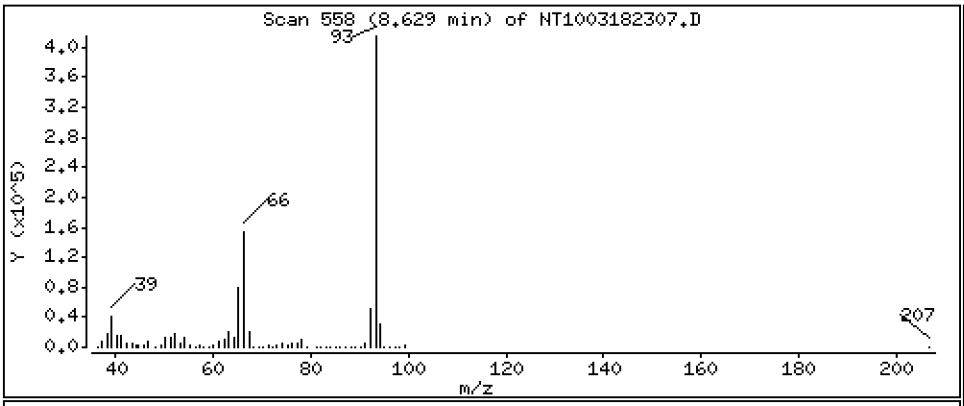
Operator: VTS

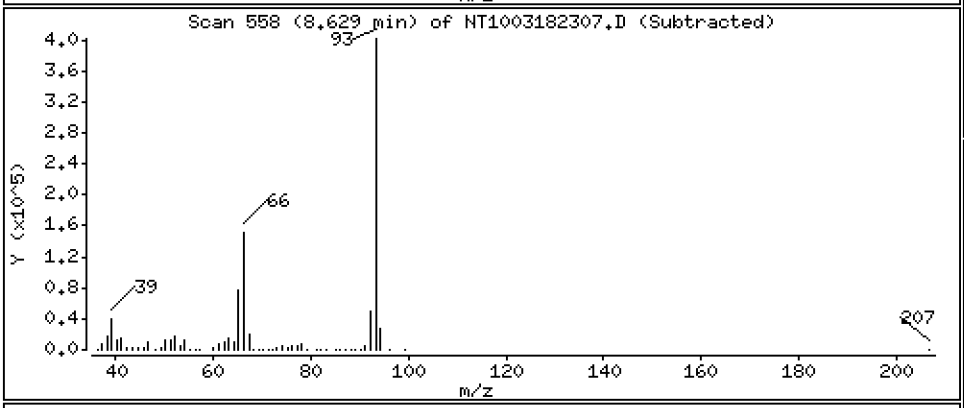
Column phase: ZB-5msi

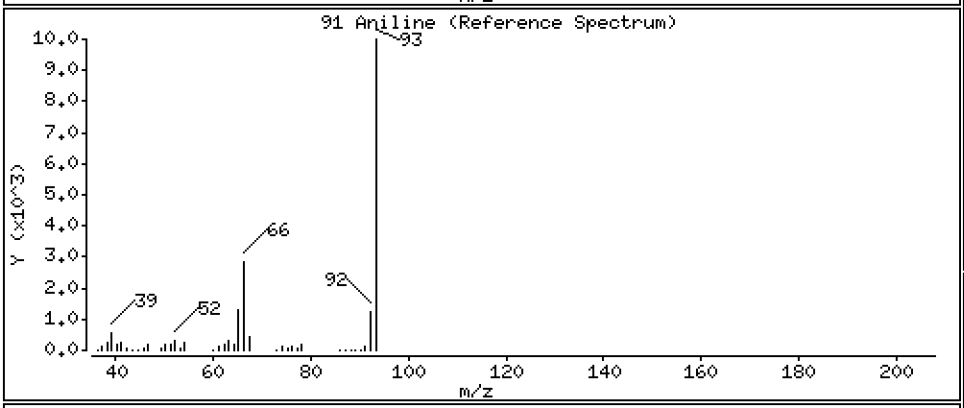
Column diameter: 0.25

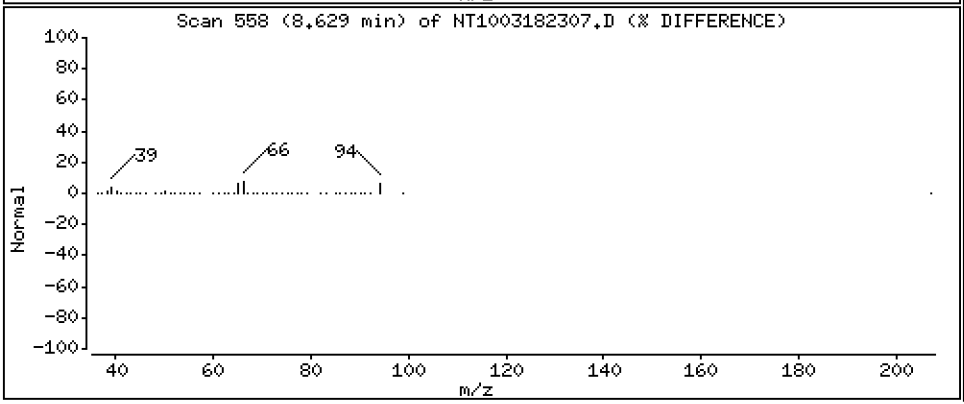
91 Aniline

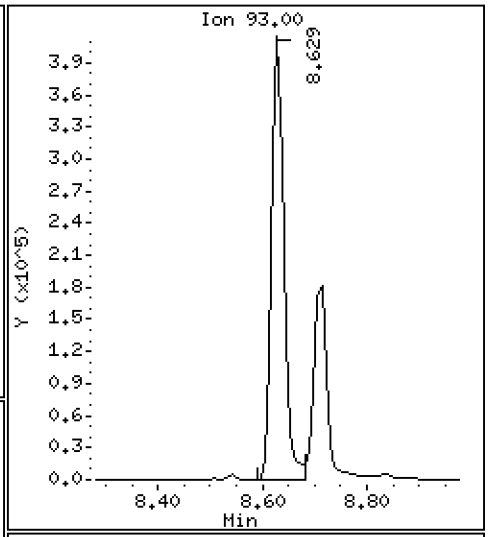
Concentration: 7.023 ug/mL

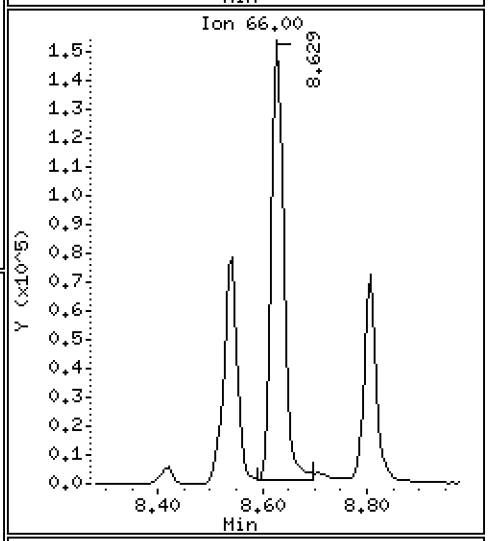


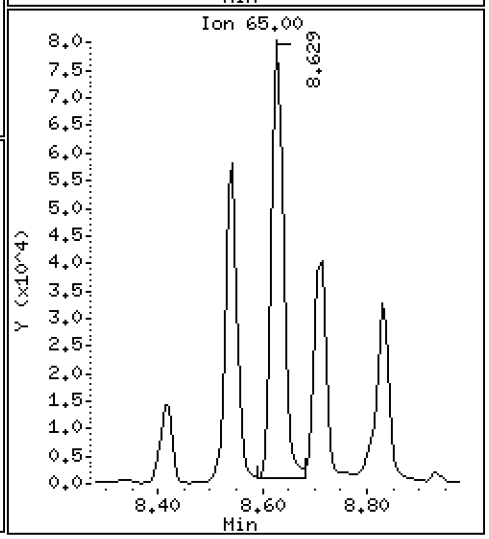












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182307.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

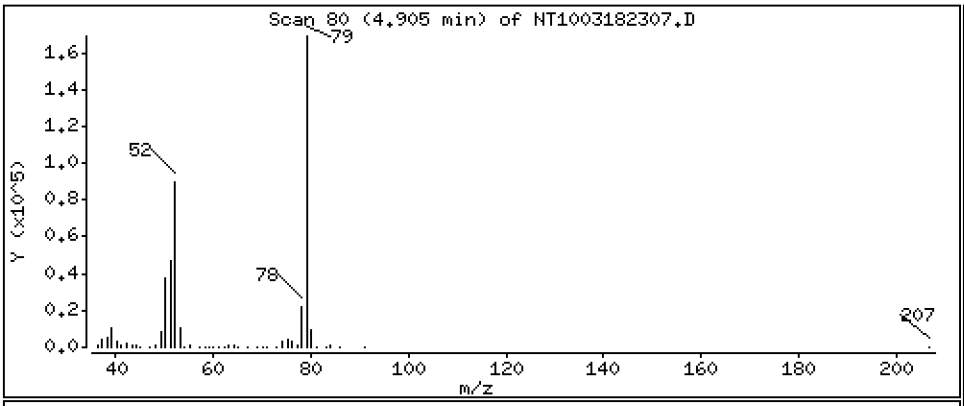
Operator: VTS

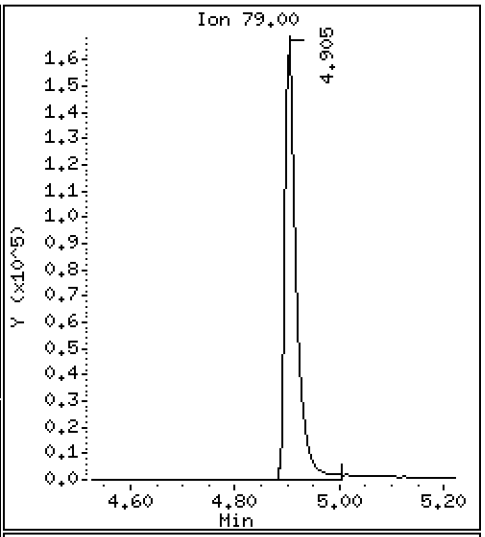
Column phase: ZB-5msi

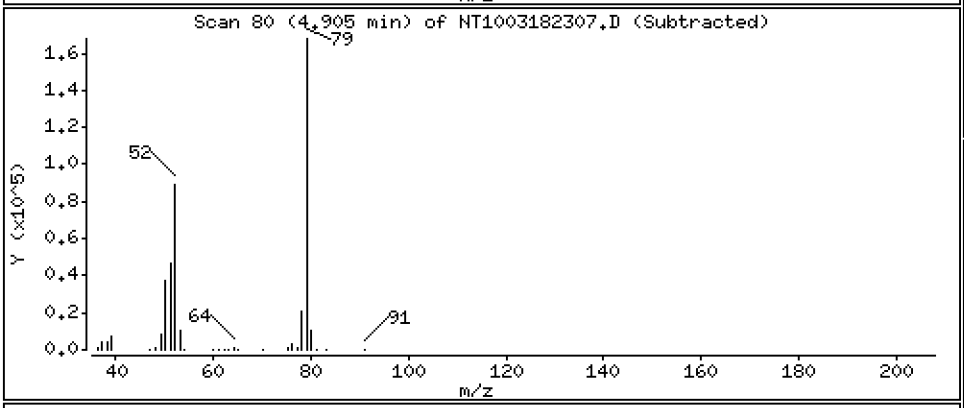
Column diameter: 0.25

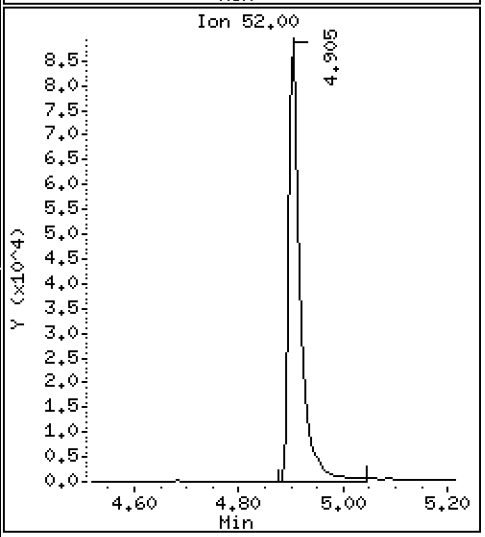
103 Pyridine

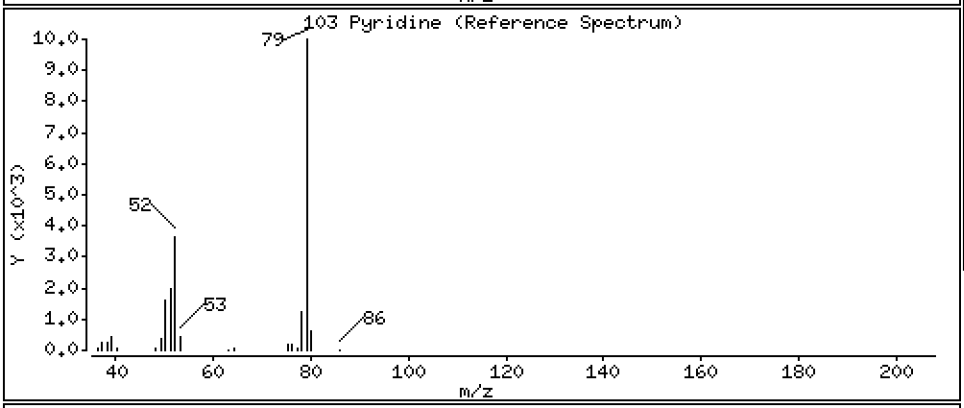
Concentration: 4.162 ug/mL

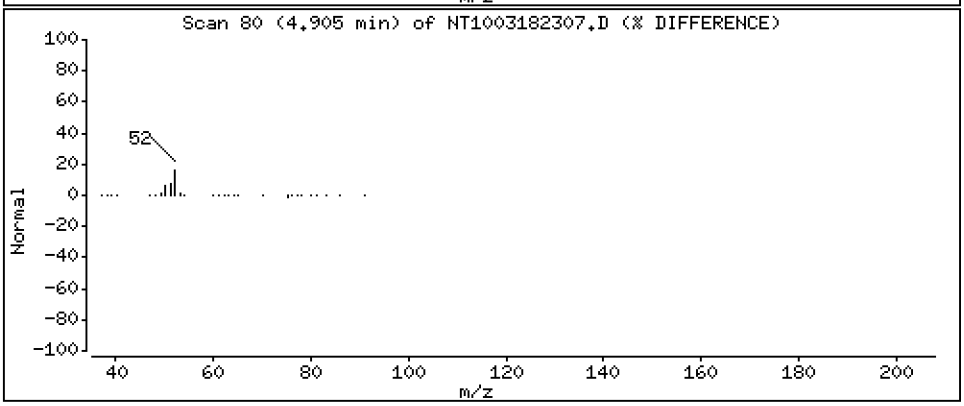












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

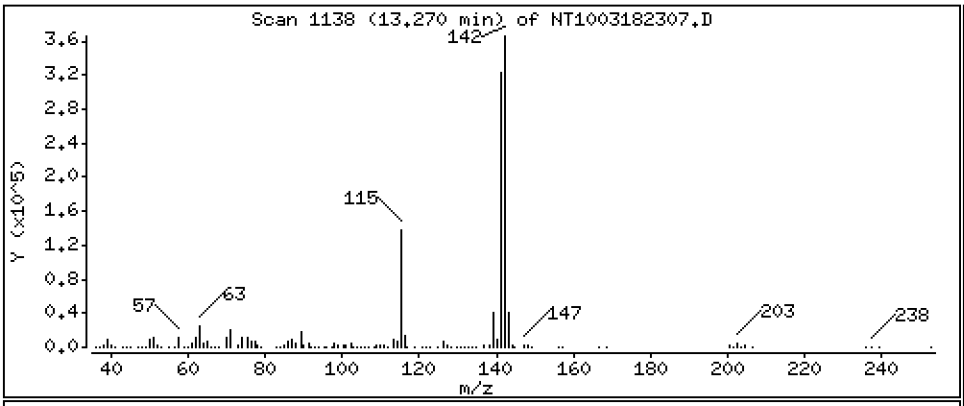
Operator: VTS

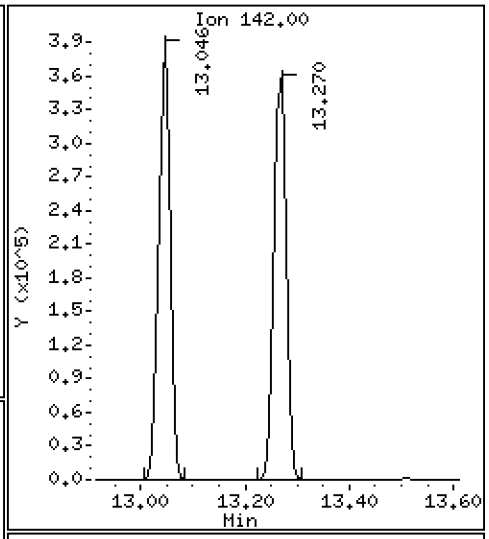
Column phase: ZB-5msi

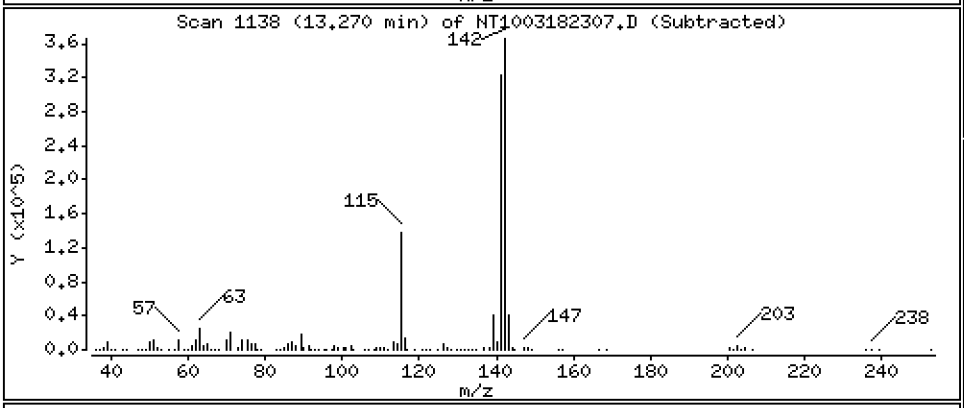
Column diameter: 0.25

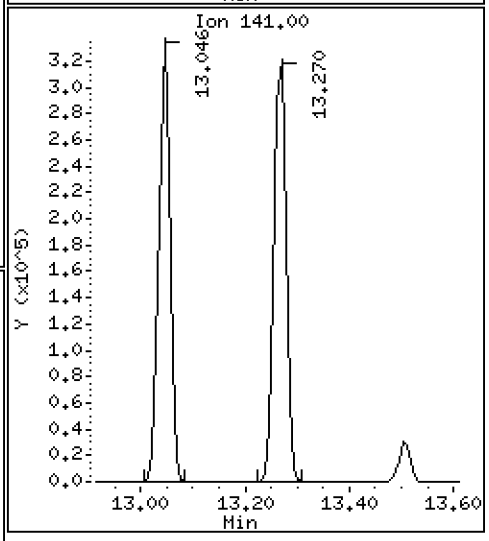
105 1-methylnaphthalene

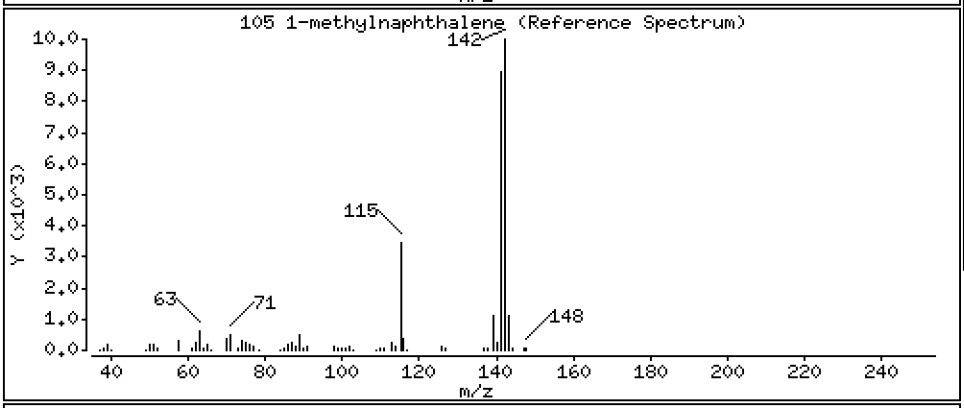
Concentration: 4.070 ug/mL

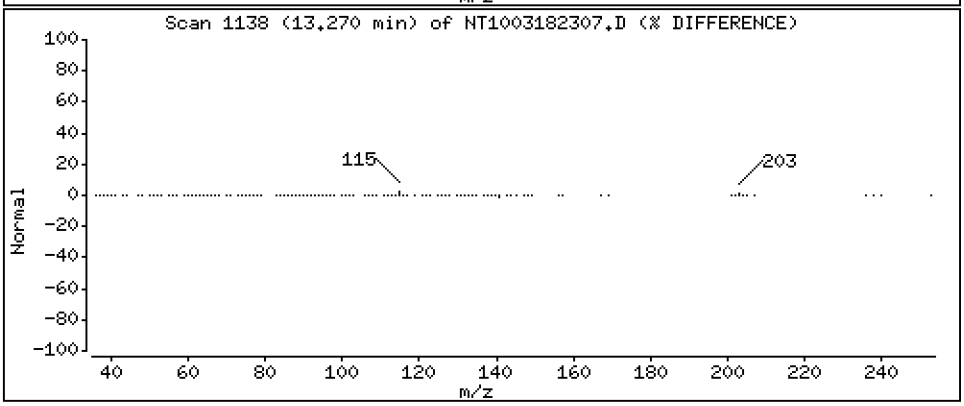












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

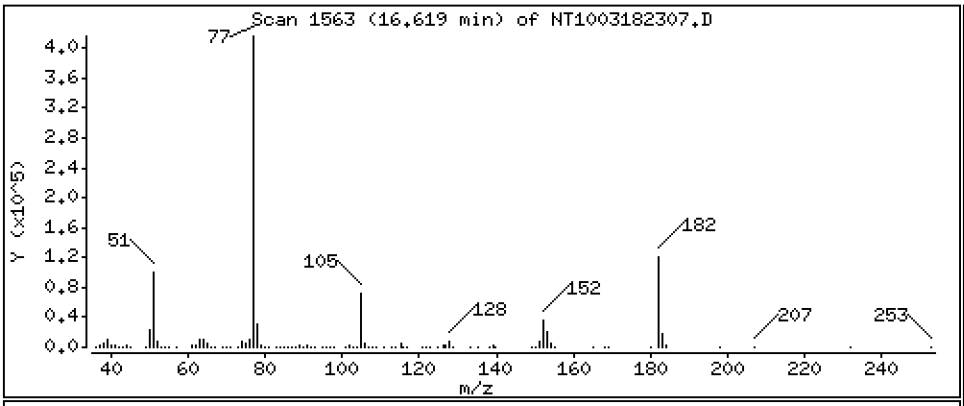
Operator: VTS

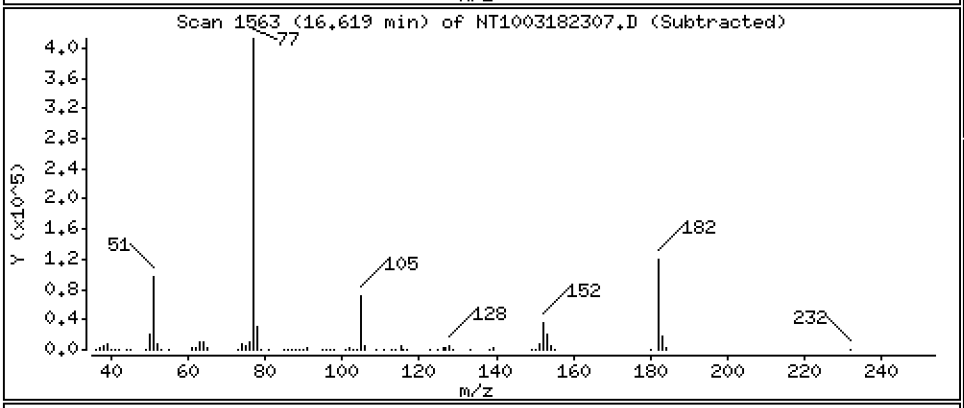
Column phase: ZB-5msi

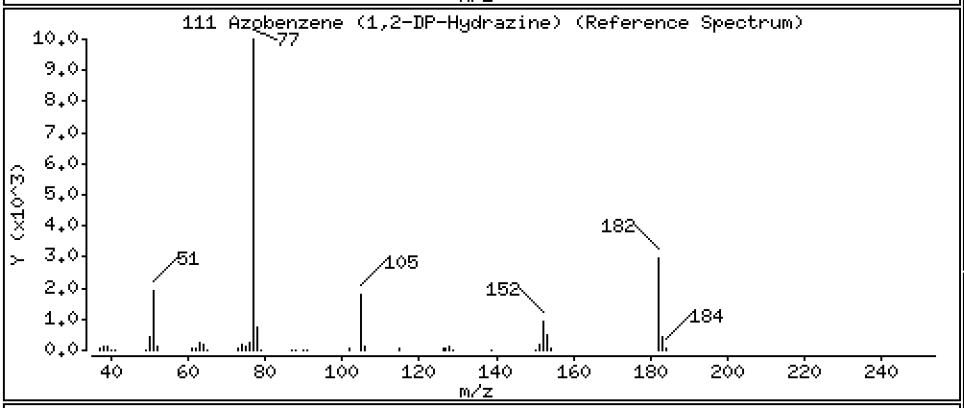
Column diameter: 0.25

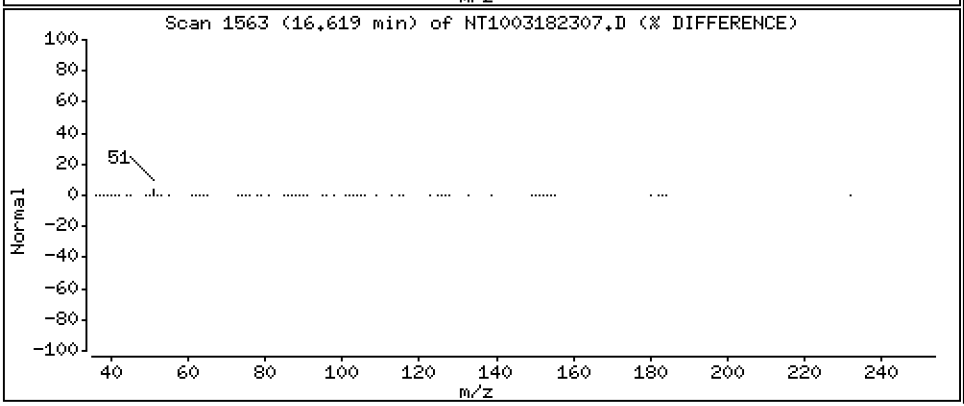
111 Azobenzene (1,2-DP-Hydrazine)

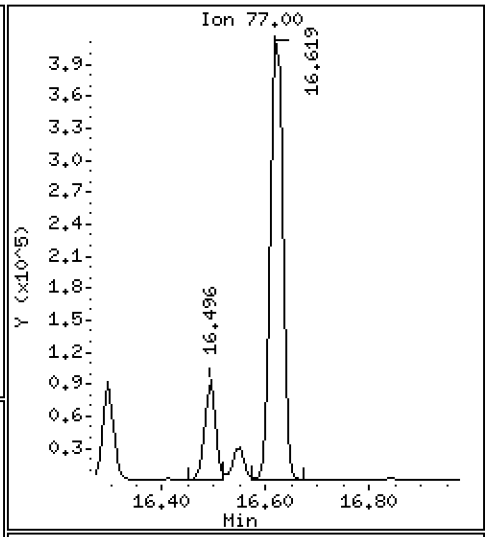
Concentration: 4.267 ug/mL

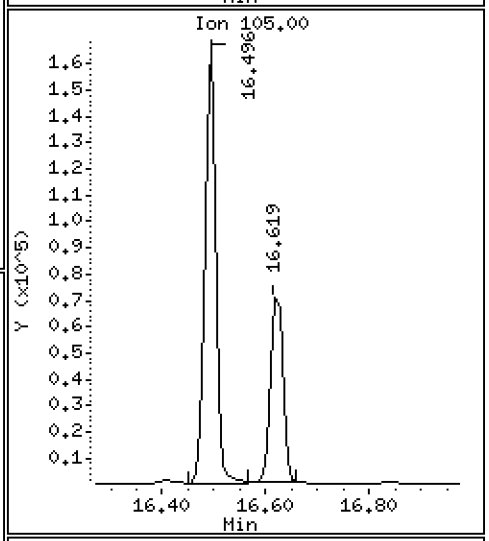


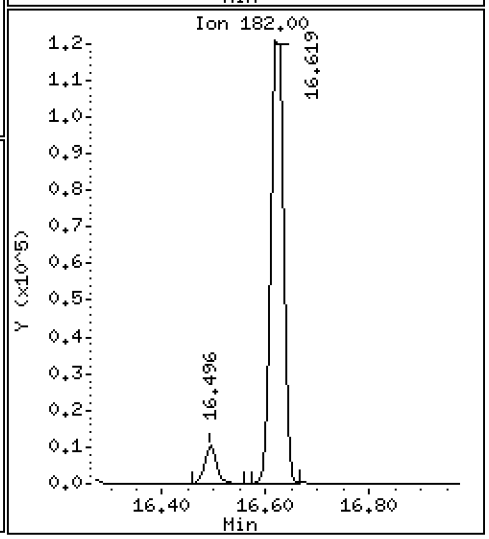












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

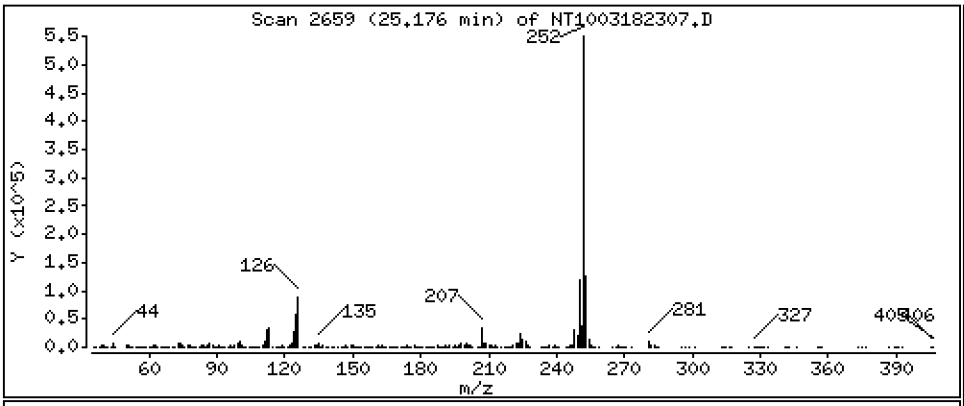
Operator: VTS

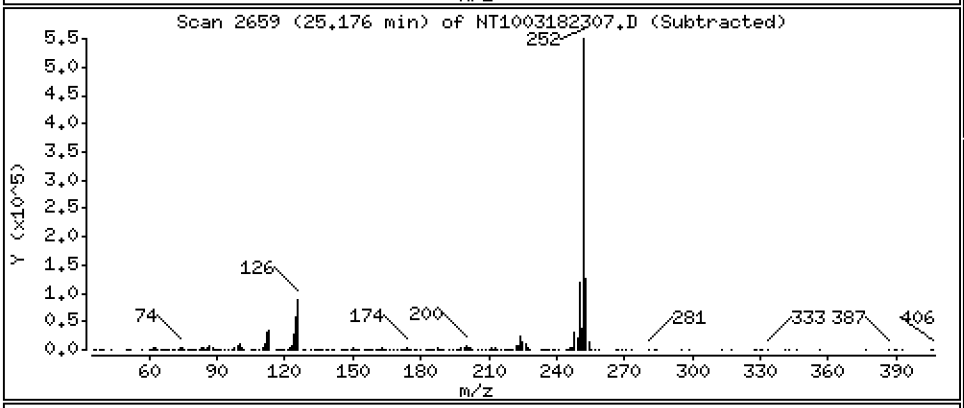
Column phase: ZB-5msi

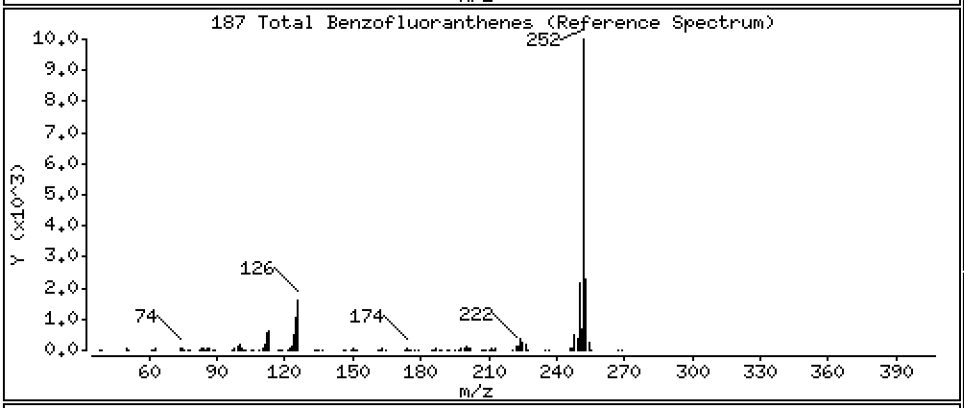
Column diameter: 0.25

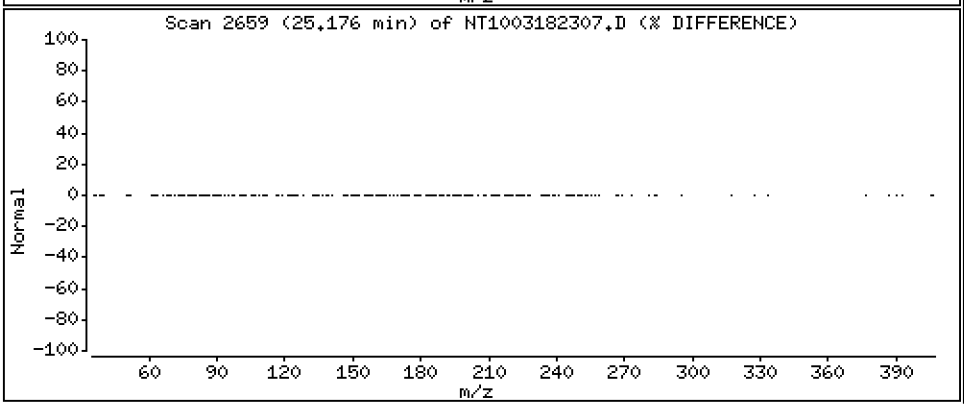
187 Total Benzofluoranthenes

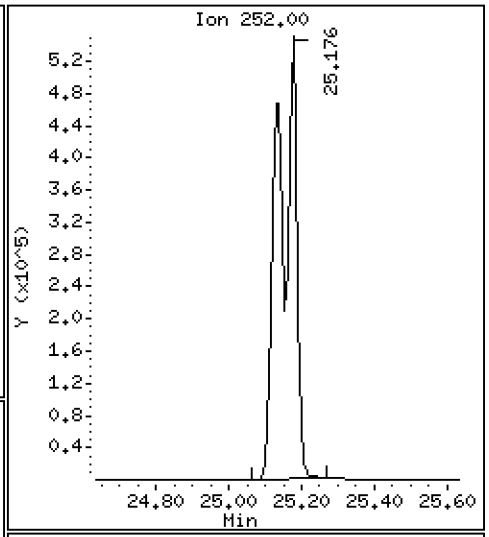
Concentration: 9.832 ug/mL

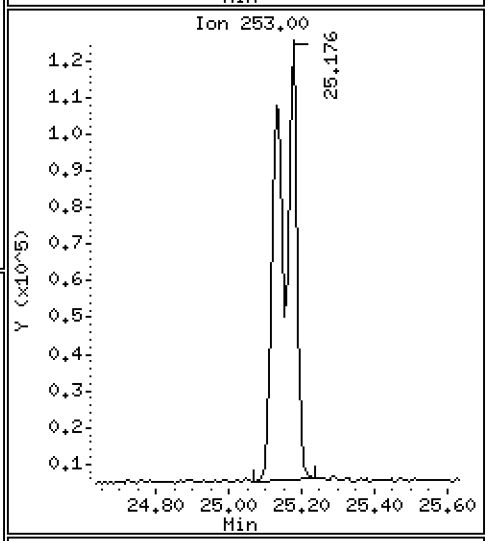


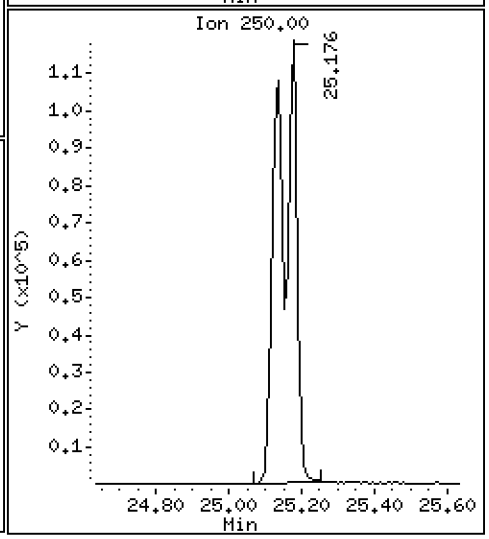












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS1

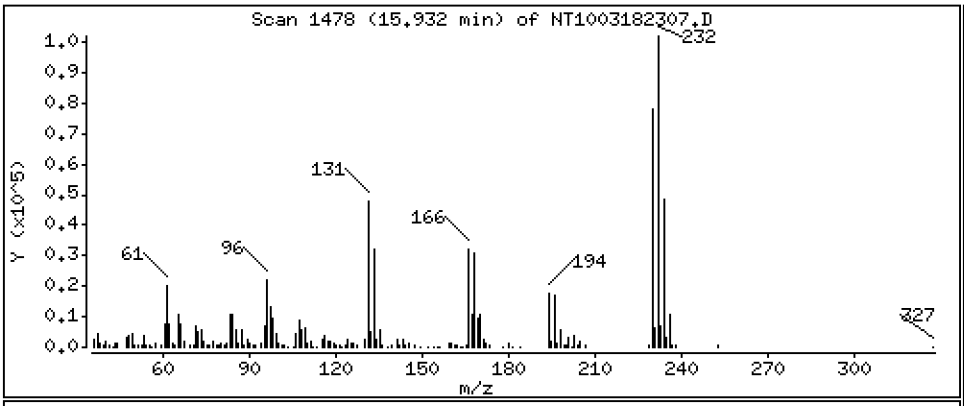
Operator: VTS

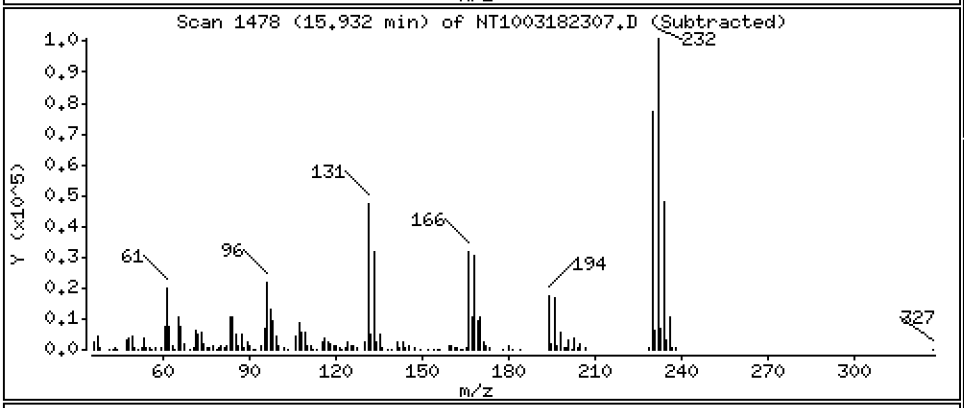
Column phase: ZB-5msi

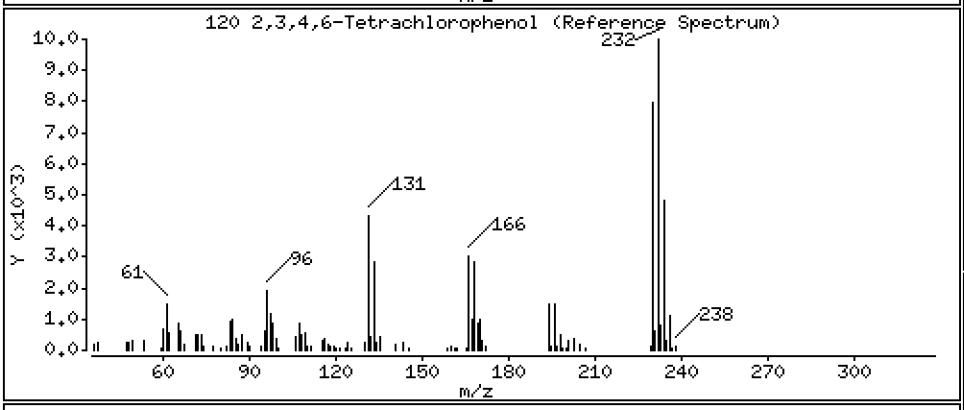
Column diameter: 0.25

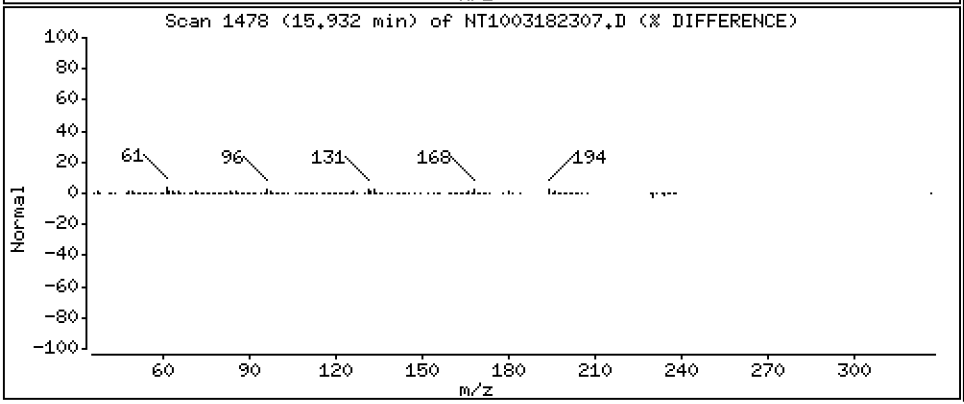
120 2,3,4,6-Tetrachlorophenol

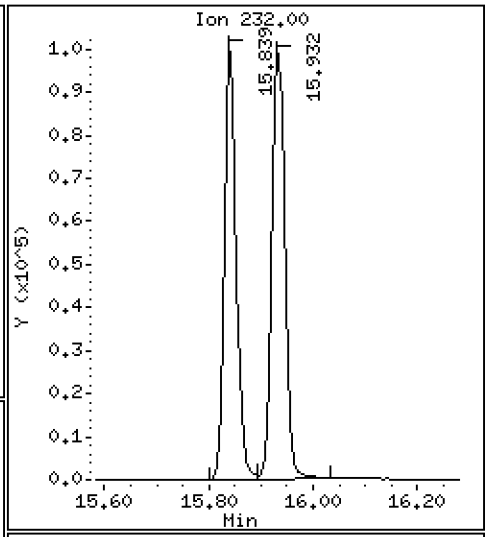
Concentration: 3.707 ug/mL

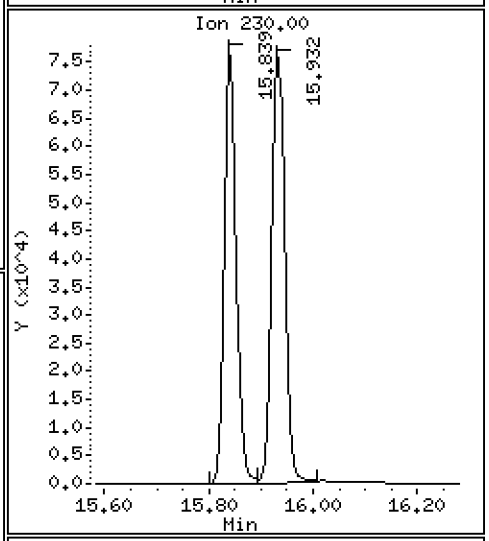


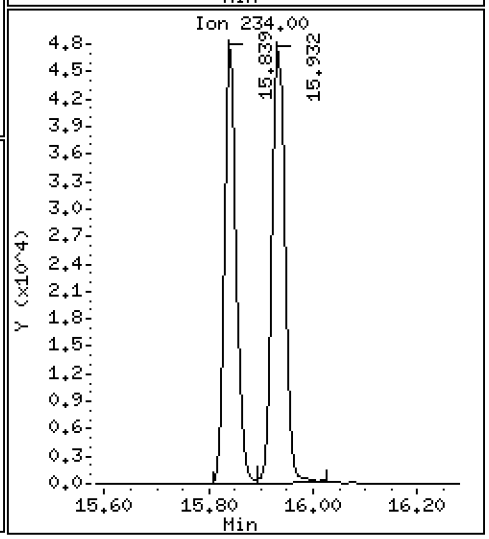












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

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Inj Date : 18-MAR-2023 21:33
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-BS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.952	(0.760)	355437	5.39138	5.391
$	2 Phenol-d5	99	8.520	8.520	(0.930)	488971	5.65374	5.654
	3 Phenol	94	8.543	8.536	(0.932)	310360	3.45332	3.453
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	433284	5.86683	5.867
	4 Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.951)	293034	4.39617	4.396
	6 2-Chlorophenol	128	8.829	8.829	(0.964)	276090	3.58937	3.589
	7 1,3-Dichlorobenzene	146	9.100	9.100	(0.993)	299285	3.68039	3.680
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	218004	4.00000	
	9 1,4-Dichlorobenzene	146	9.193	9.193	(1.003)	302349	3.84885	3.849
$	10 1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	193602	3.65025	3.650
	12 1,2-Dichlorobenzene	146	9.550	9.550	(1.042)	292855	3.78805	3.788
	11 Benzyl alcohol	108	9.426	9.426	(1.029)	168948	4.00506	4.005
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.721	(1.061)	99544	4.38445	4.384
	13 2-Methylphenol	108	9.643	9.643	(1.053)	213346	3.25647	3.256
	17 Hexachloroethane	117	10.132	10.132	(1.106)	121295	3.76338	3.763
	16 N-Nitroso-di-n-propylamine	70	9.977	9.977	(1.089)	200526	3.87633	3.876
	15 4-Methylphenol	108	9.915	9.907	(1.082)	250887	3.63448	3.634
$	18 Nitrobenzene-d5	82	10.248	10.249	(0.881)	317839	4.00352	4.004
	19 Nitrobenzene	77	10.287	10.287	(0.885)	313464	4.02338	4.023
	20 Isophorone	82	10.730	10.730	(0.923)	566821	5.68706	5.687
	21 2-Nitrophenol	139	10.904	10.905	(0.938)	158841	4.17432	4.174
	22 2,4-Dimethylphenol	107	10.946	10.947	(0.941)	318313	4.44812	4.448
	23 Bis(2-Chloroethoxy)methane	93	11.150	11.142	(0.959)	312070	4.68740	4.687
	24 Benzoic acid	105	11.150	11.134	(0.959)	989082	23.5196	23.52
	25 2,4-Dichlorophenol	162	11.354	11.346	(0.976)	696990	12.1711	12.17
	26 1,2,4-Trichlorobenzene	180	11.537	11.538	(0.992)	308474	4.58892	4.589
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	786535	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	799868	3.83879	3.839
	29 4-Chloroaniline	127	11.792	11.793	(1.014)	532207	6.54727	6.547
	30 Hexachlorobutadiene	225	12.024	12.017	(1.034)	155754	3.95436	3.954
	31 4-Chloro-3-methylphenol	107	12.736	12.729	(1.095)	772873	12.4670	12.47
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	584860	3.88952	3.890
	33 Hexachlorocyclopentadiene	237	13.510	13.503	(0.888)	359517	9.11012	9.110

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.657	13.658	(0.898)	535196	12.6990	12.70
35	2,4,5-Trichlorophenol	196	13.734	13.727	(0.903)	582998	12.4497	12.45
$ 36	2-Fluorobiphenyl	172	13.819	13.820	(0.908)	677405	4.01604	4.016
37	2-Chloronaphthalene	162	14.036	14.029	(0.923)	549864	4.02602	4.026
38	2-Nitroaniline	65	14.291	14.285	(0.939)	466133	12.1500	12.15
39	Dimethylphthalate	163	14.717	14.710	(0.967)	651727	4.70488	4.705
40	Acenaphthylene	152	14.903	14.896	(0.980)	824890	3.87599	3.876
41	2,6-Dinitrotoluene	165	14.856	14.857	(0.977)	388943	12.9977	13.00
* 42	Acenaphthene-d10	164	15.212	15.213	(1.000)	426407	4.00000	
43	3-Nitroaniline	138	15.143	15.136	(0.995)	325250	9.62987	9.630
44	Acenaphthene	153	15.274	15.275	(1.004)	542451	4.12583	4.126
45	2,4-Dinitrophenol	184	15.351	15.345	(1.009)	461018	24.2794	24.28
46	Dibenzofuran	168	15.599	15.600	(1.025)	809851	4.17702	4.177
47	4-Nitrophenol	109	15.444	15.437	(1.015)	246526	11.6900	11.69
48	2,4-Dinitrotoluene	165	15.661	15.654	(1.029)	542146	12.2175	12.22
50	Diethylphthalate	149	16.163	16.156	(1.063)	694317	5.10862	5.109
49	Fluorene	166	16.318	16.319	(1.073)	379604	2.48867	2.489
51	4-Chlorophenyl-phenylether	204	16.295	16.296	(1.071)	251163	3.46269	3.463
52	4-Nitroaniline	138	16.410	16.404	(1.079)	271483	8.91926	8.919
53	4,6-Dinitro-2-methylphenol	198	16.495	16.489	(0.905)	616225	26.4289	26.43
54	N-Nitrosodiphenylamine	169	16.549	16.542	(0.908)	406165	4.05351	4.054
$ 55	2,4,6-Tribromophenol	330	16.842	16.843	(1.107)	129683	6.51949	6.519
56	4-Bromophenyl-phenylether	248	17.297	17.298	(0.949)	207207	4.94312	4.943
57	Hexachlorobenzene	284	17.614	17.607	(0.966)	192140	4.37189	4.372
58	Pentachlorophenol	266	17.970	17.963	(0.986)	337569	12.6673	12.67
* 59	Phenanthrene-d10	188	18.233	18.234	(1.000)	749465	4.00000	
60	Phenanthrene	178	18.280	18.281	(1.003)	887844	4.34445	4.344
61	Anthracene	178	18.372	18.373	(1.008)	758539	3.86937	3.869
62	Carbazole	167	18.705	18.698	(1.026)	731435	4.16376	4.164
63	Di-n-butylphthalate	149	19.487	19.488	(1.069)	1260913	5.36902	5.369
64	Fluoranthene	202	20.663	20.656	(0.888)	1085657	4.61376	4.614
65	Pyrene	202	21.088	21.081	(0.906)	1094933	4.53605	4.536
$ 66	Terphenyl-d14	244	21.367	21.360	(0.918)	820346	4.52542	4.525
67	Butylbenzylphthalate	149	22.288	22.281	(0.958)	489174	5.57041	5.570
68	Benzo(a)anthracene	228	23.241	23.241	(0.999)	953746	4.61410	4.614
* 69	Chrysene-d12	240	23.271	23.272	(1.000)	585611	4.00000	
70	3,3'-Dichlorobenzidine	252	23.194	23.195	(0.997)	519155	7.84108	7.841
71	Chrysene	228	23.318	23.311	(1.002)	902965	4.47135	4.471
72	bis(2-Ethylhexyl)phthalate	149	23.310	23.303	(0.960)	732814	4.77904	4.779
* 134	Di-n-octylphthalate-d4	153	24.293	24.294	(1.000)	1045243	4.00000	
73	Di-n-octylphthalate	149	24.309	24.302	(1.001)	1302483	4.76170	4.762
74	Benzo(b)fluoranthene	252	25.129	25.130	(0.970)	974050	4.89585	4.896
75	Benzo(k)fluoranthene	252	25.176	25.169	(0.972)	984759	4.87451	4.875(M)
76	Benzo(a)pyrene	252	25.788	25.789	(0.996)	822553	4.62429	4.624
* 77	Perylene-d12	264	25.904	25.897	(1.000)	613771	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.579	28.580	(1.103)	1076131	4.75530	4.755
79	Dibenzo(a,h)anthracene	278	28.594	28.595	(1.104)	906062	4.82254	4.823
80	Benzo(g,h,i)perylene	276	29.371	29.364	(1.134)	934995	4.77415	4.774
90	N-Nitrosodimethylamine	74	4.866	4.835	(0.531)	323654	7.69506	7.695
91	Aniline	93	8.628	8.628	(0.942)	646699	7.02260	7.023
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.905	4.874	(0.535)	268846	4.16199	4.162
105	1-methylnaphthalene	142	13.270	13.263	(1.141)	560697	4.06983	4.070
111	Azobenzene (1,2-DP-Hydrazine)	77	16.619	16.620	(1.092)	647768	4.26666	4.267

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.176	25.130	(0.972)	1888668	9.83193	9.832(M)
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.932	(1.047)	162892	3.70724	3.707

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182307.D
Lab Smp Id: BLB0579-BS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	218004	16.95
27 Naphthalene-d8	688740	344370	1377480	786535	14.20
42 Acenaphthene-d10	373663	186832	747326	426407	14.12
59 Phenanthrene-d10	652323	326162	1304646	749465	14.89
69 Chrysene-d12	537141	268571	1074282	585611	9.02
134 Di-n-octylphthala	947608	473804	1895216	1045243	10.30
77 Perylene-d12	602550	301275	1205100	613771	1.86

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	-0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	-0.01
69 Chrysene-d12	23.27	22.77	23.77	23.27	-0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	-0.00
77 Perylene-d12	25.90	25.40	26.40	25.90	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182307.D

Lab ID: BLB0579-BS1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 21:33

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

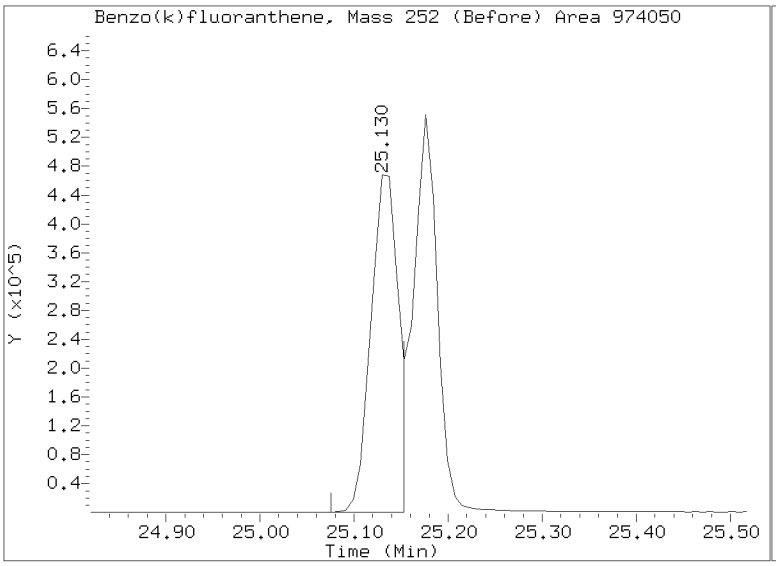
RRT check based on Ccal File: NT1003182302.D

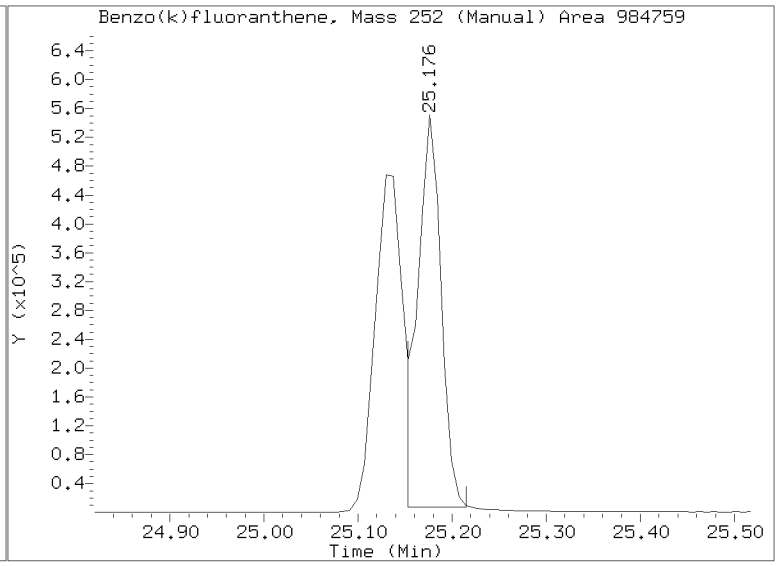
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

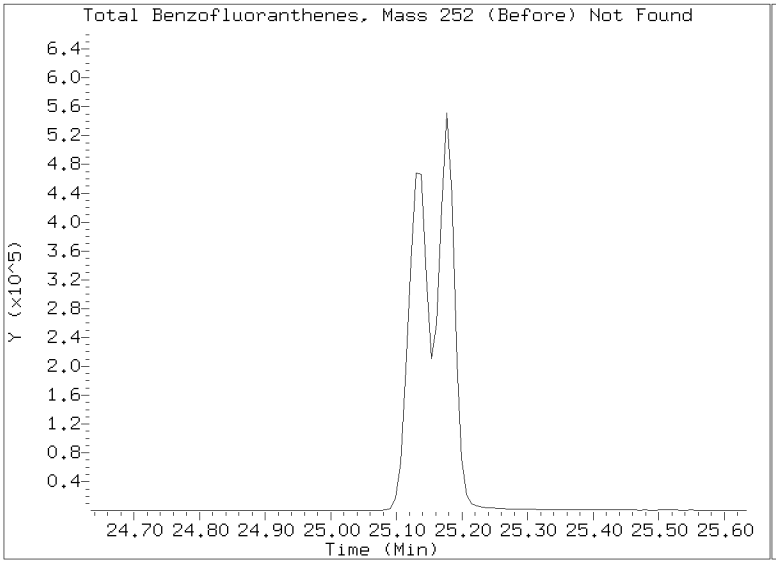
* Only compounds listed in the work order have been verified by the analyst *

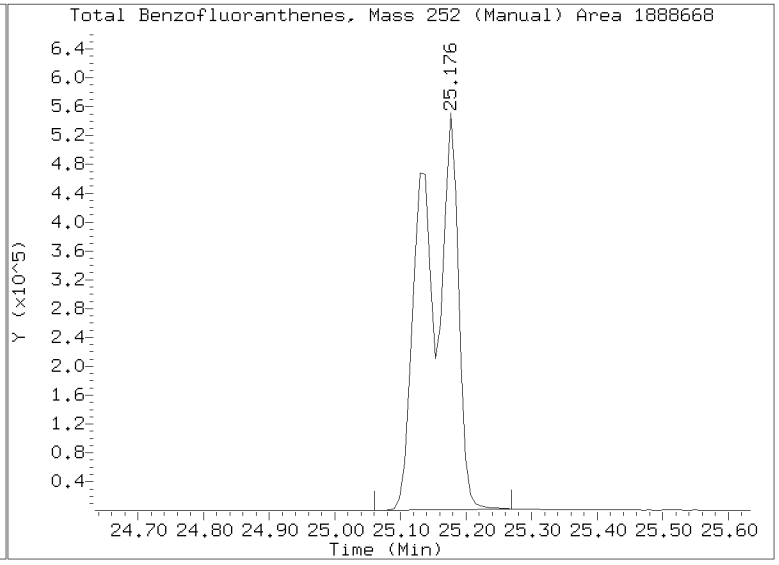
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182307.D
Injection Date: 18-MAR-2023 21:33
Lab ID:BLB0579-BS1 Client ID:
Report Date: 04/04/2023 08:56









Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

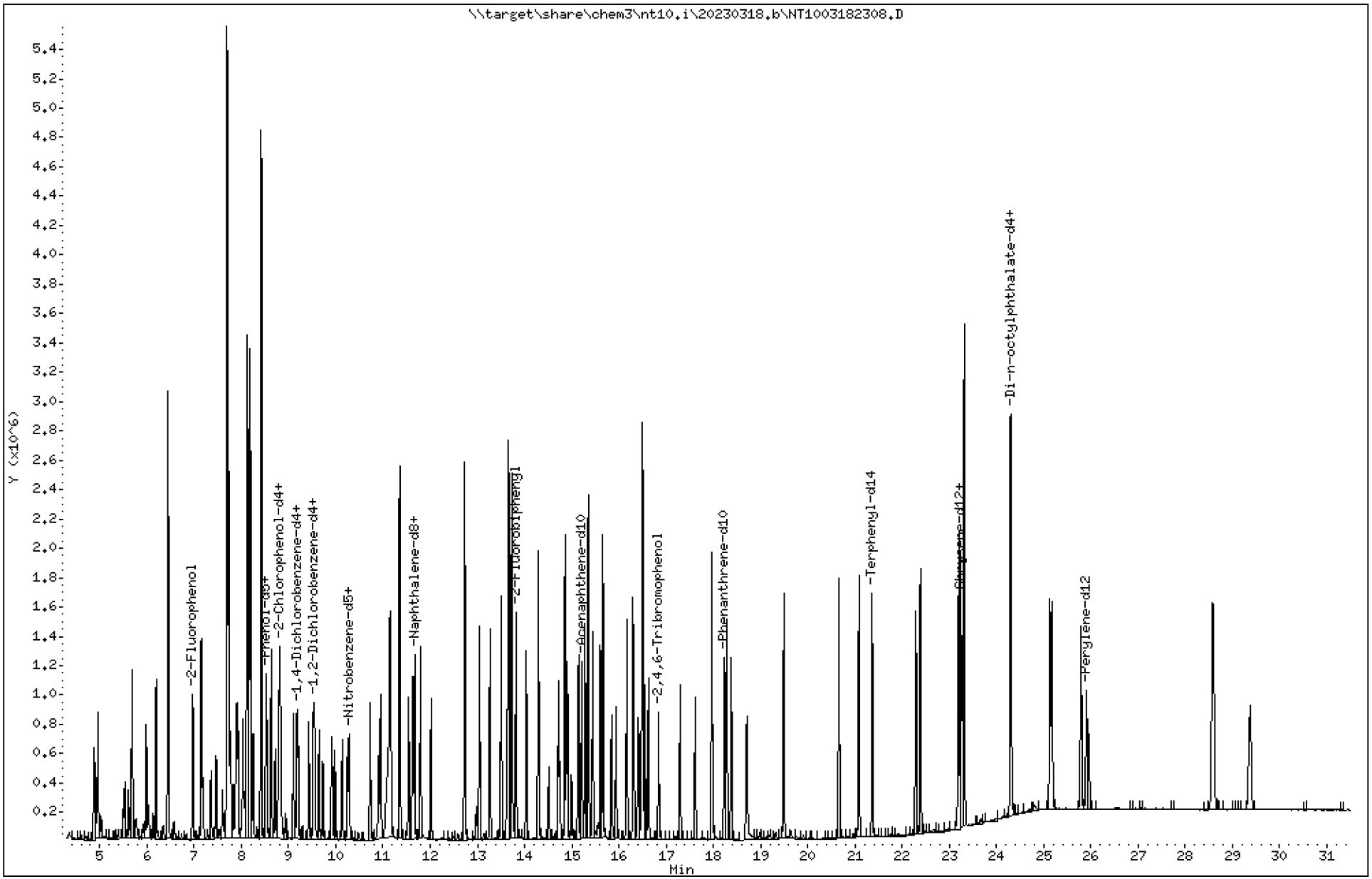
Instrument: nt10.i

Sample Info: BLB0579-BSD1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

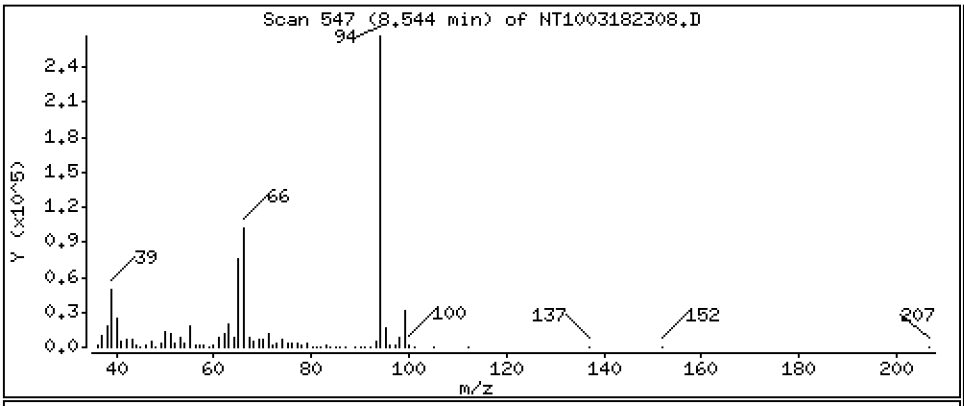
Operator: VTS

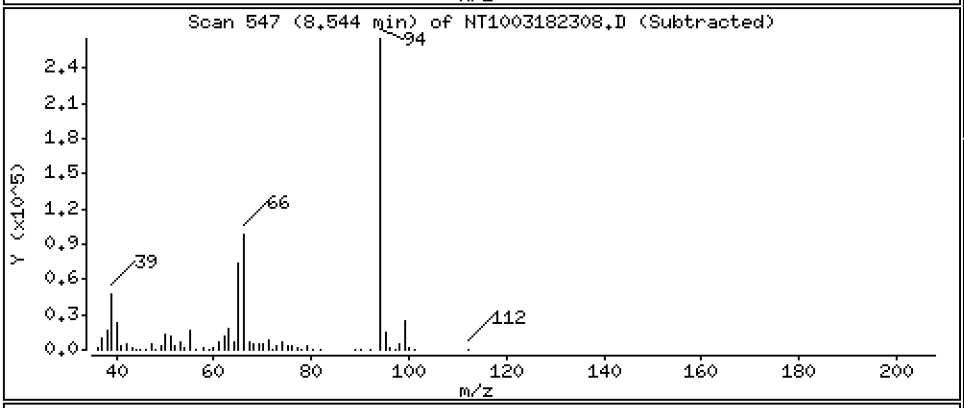
Column phase: ZB-5msi

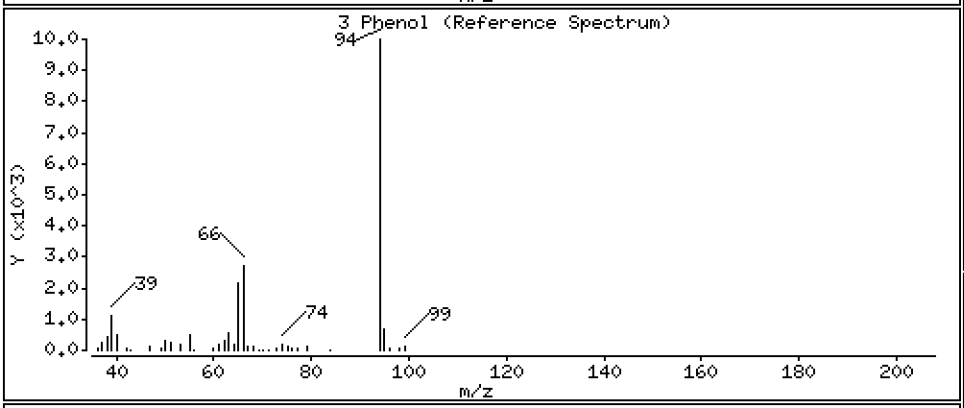
Column diameter: 0.25

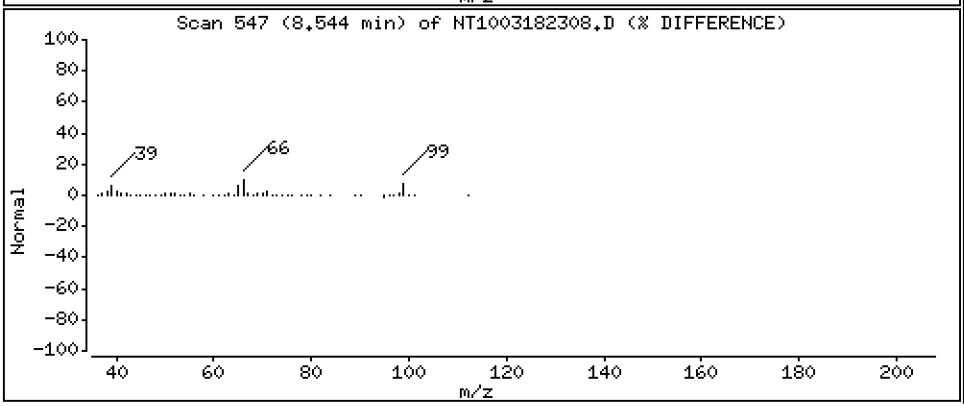
3 Phenol

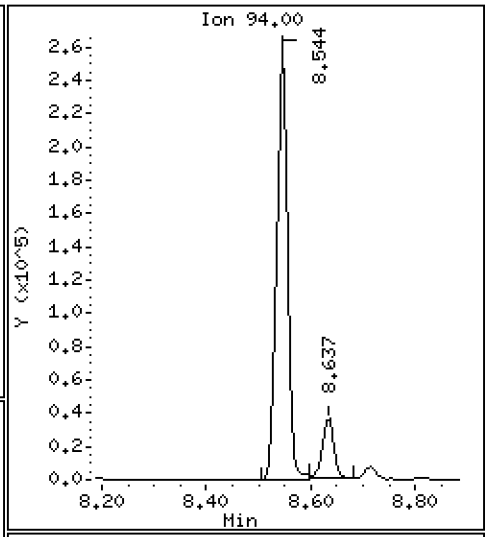
Concentration: 3.962 ug/mL

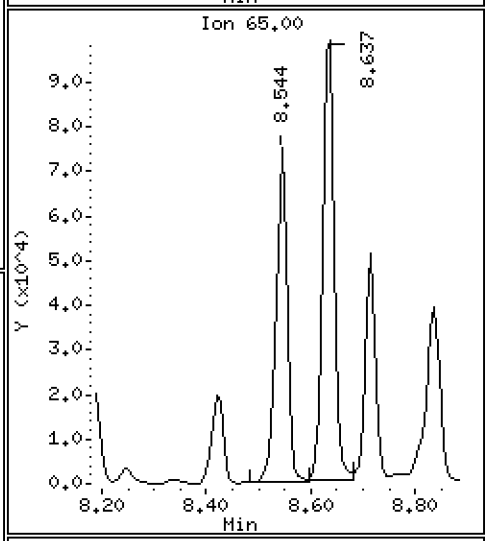


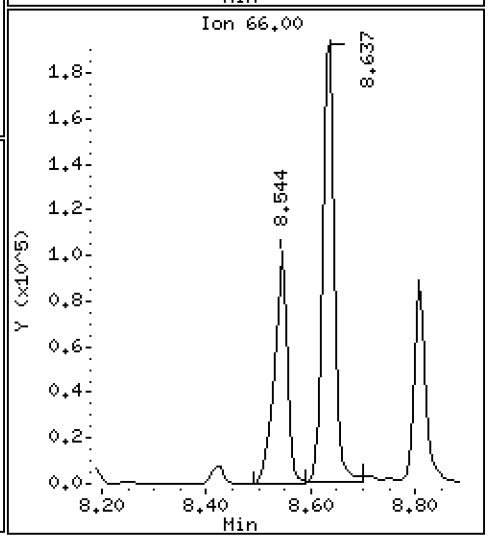












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

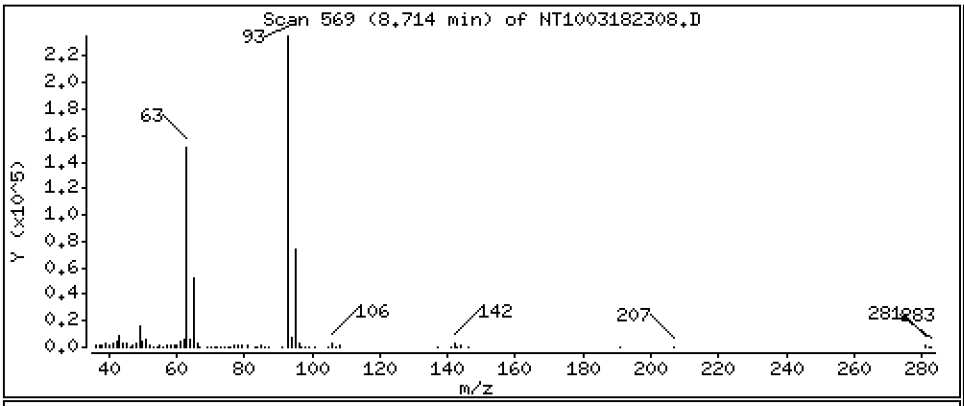
Operator: VTS

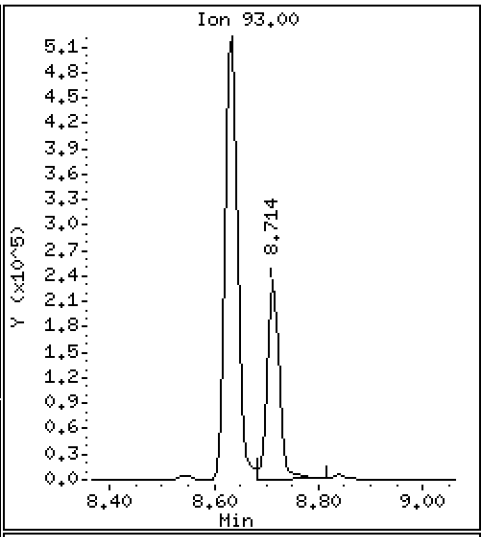
Column phase: ZB-5msi

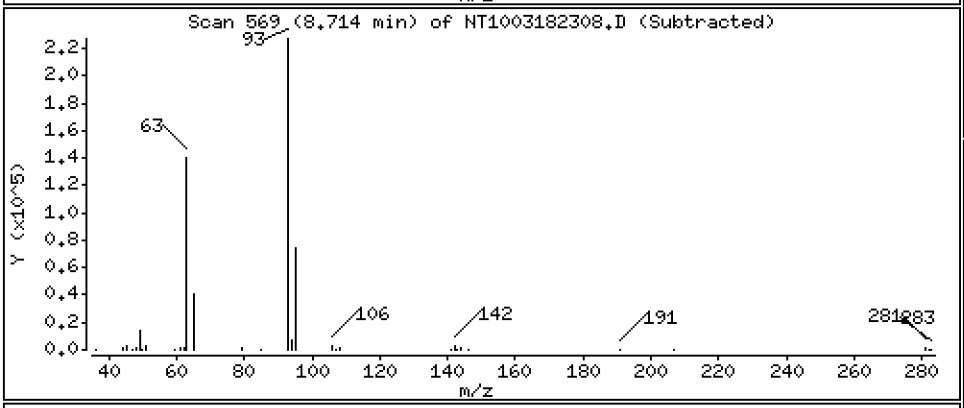
Column diameter: 0.25

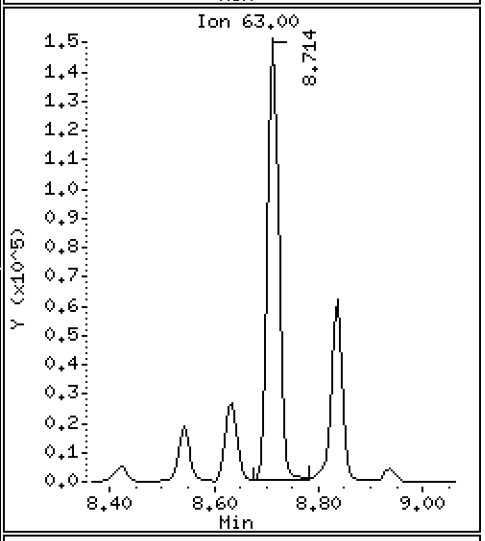
4 Bis(2-Chloroethyl)ether

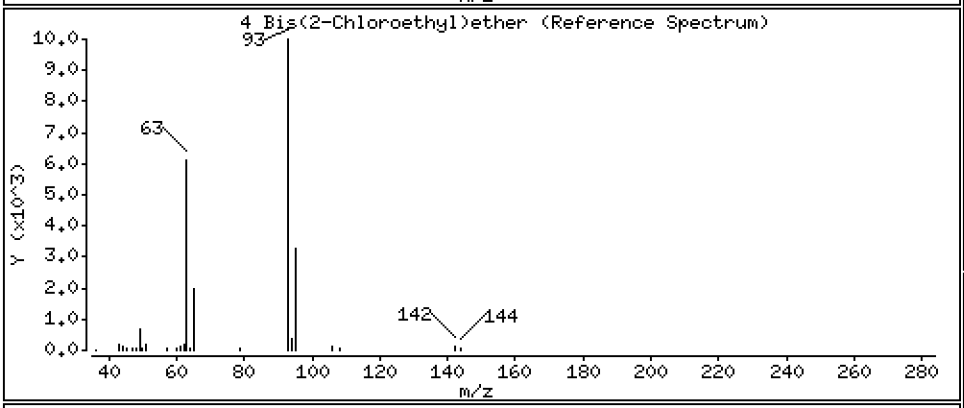
Concentration: 5.009 ug/mL

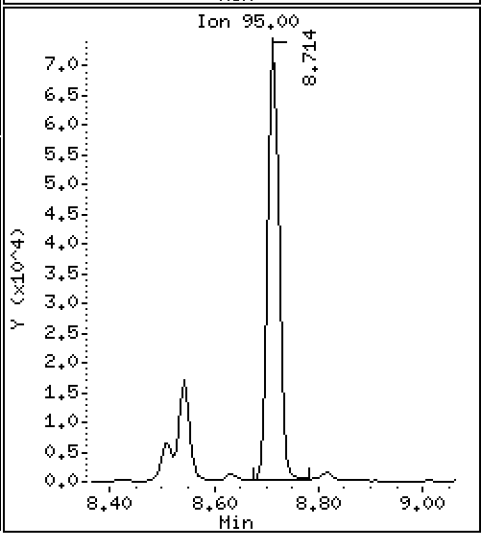


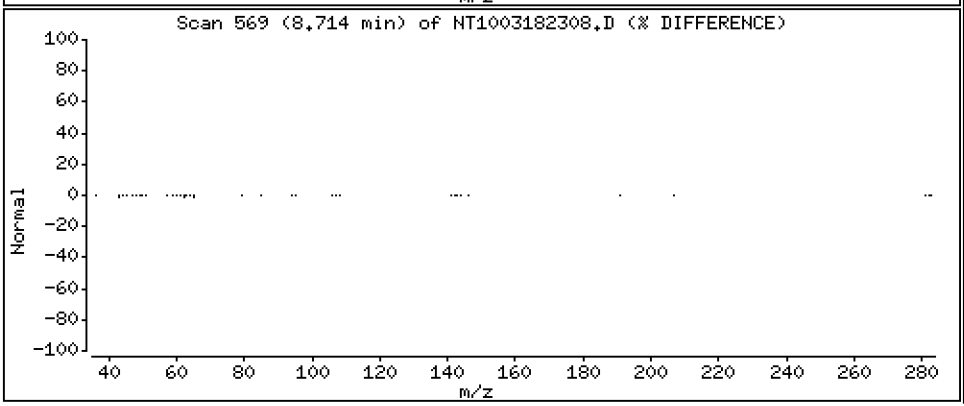












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

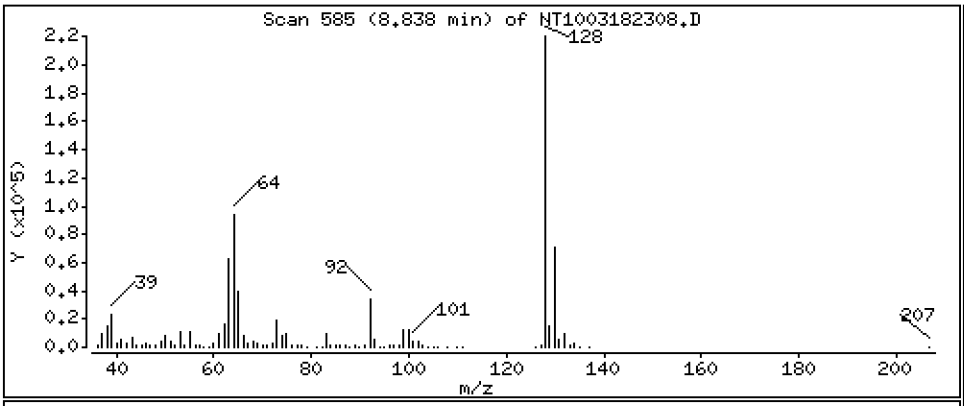
Operator: VTS

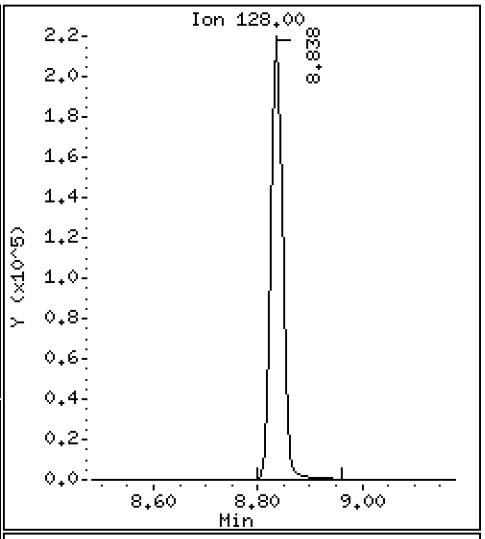
Column phase: ZB-5msi

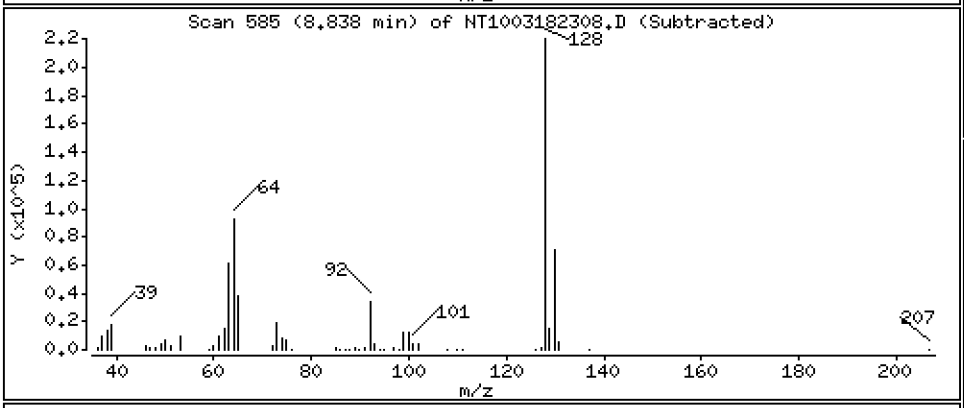
Column diameter: 0.25

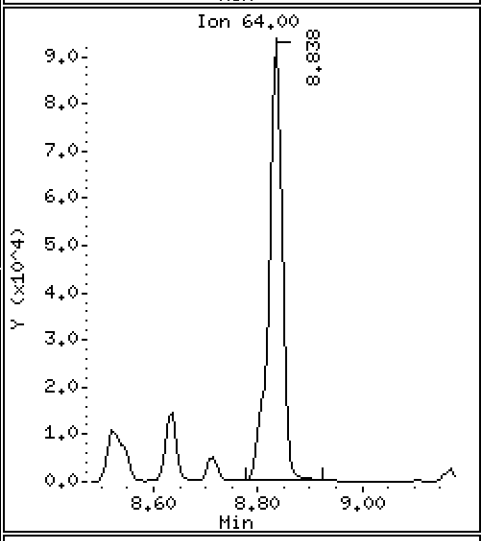
6 2-Chlorophenol

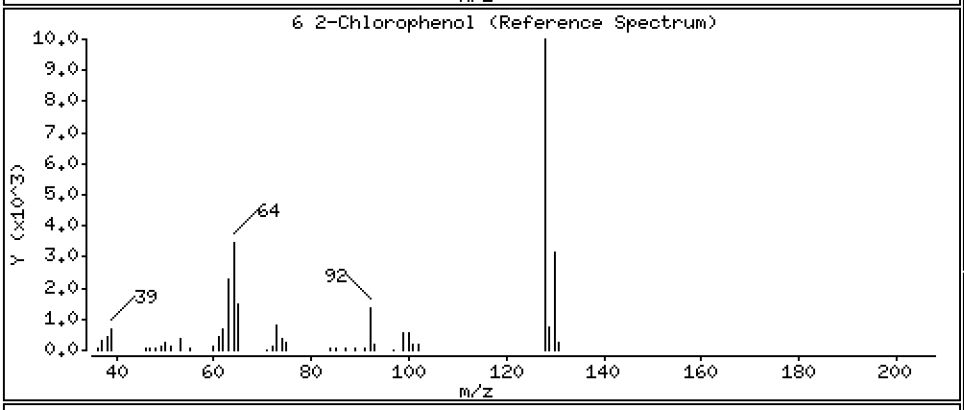
Concentration: 4.086 ug/mL

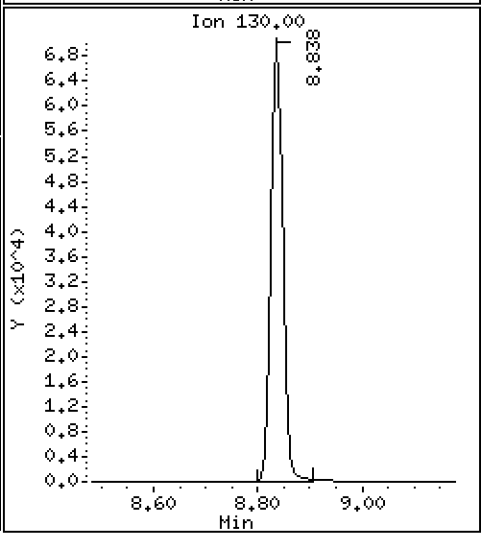


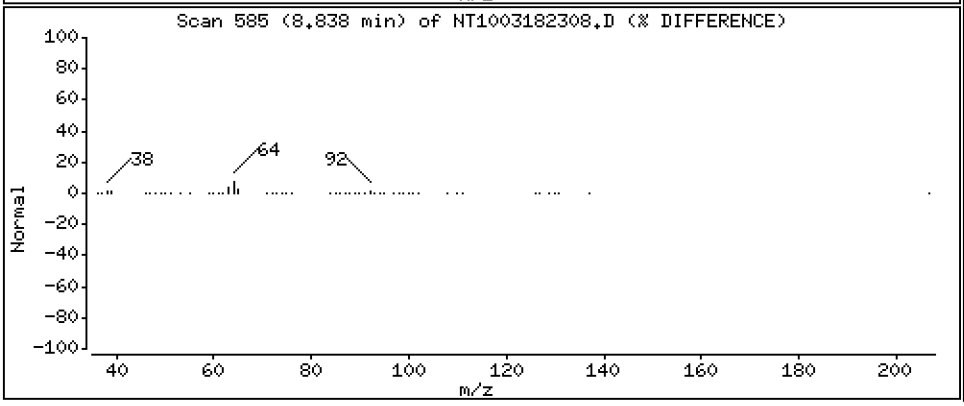












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

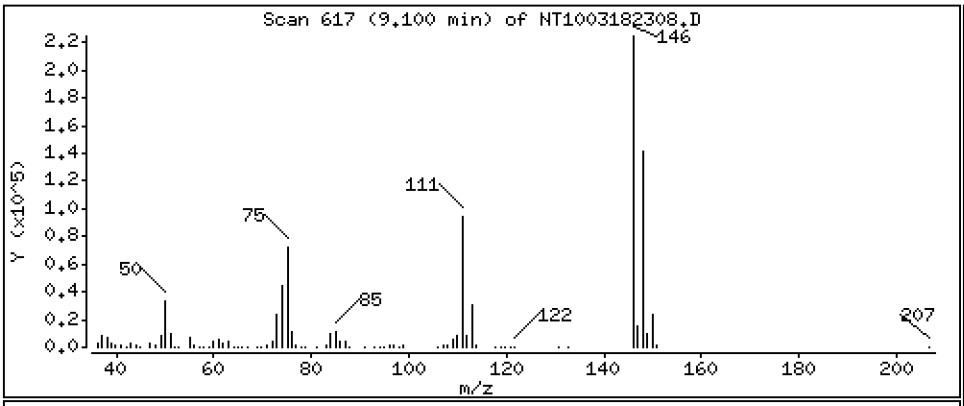
Operator: VTS

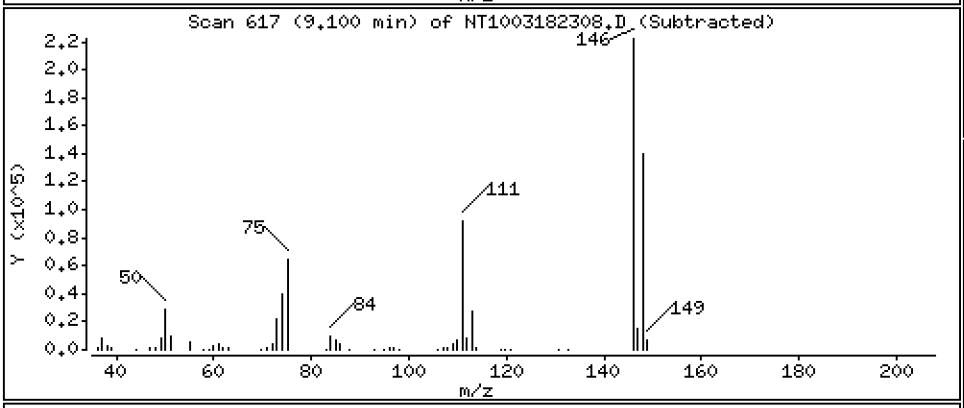
Column phase: ZB-5msi

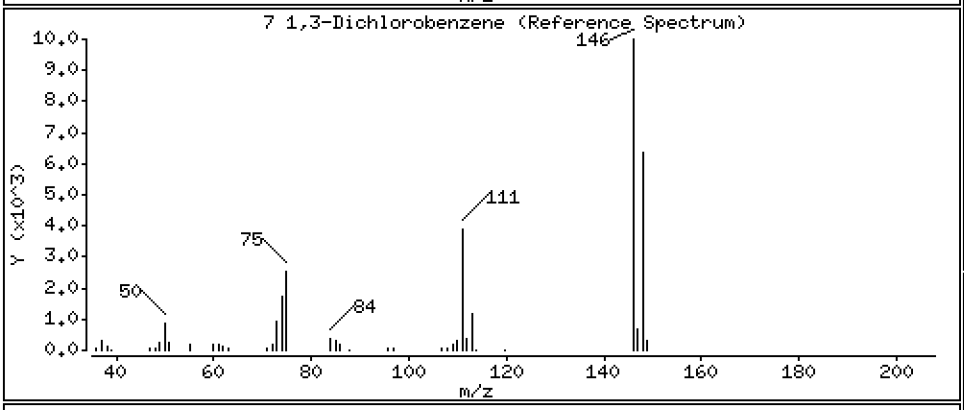
Column diameter: 0.25

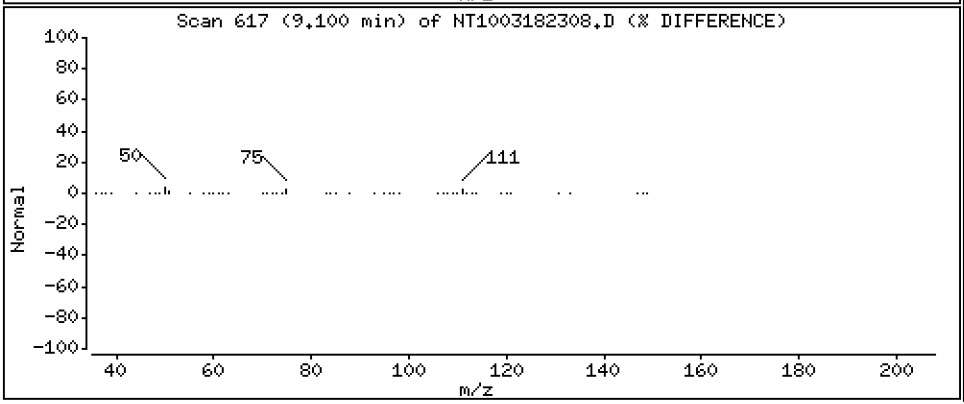
7 1,3-Dichlorobenzene

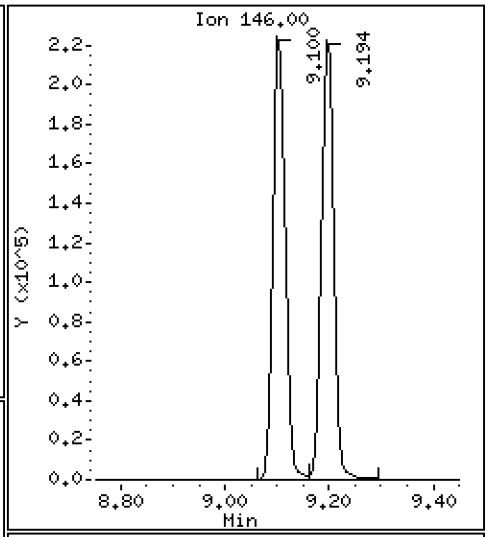
Concentration: 4.185 ug/mL

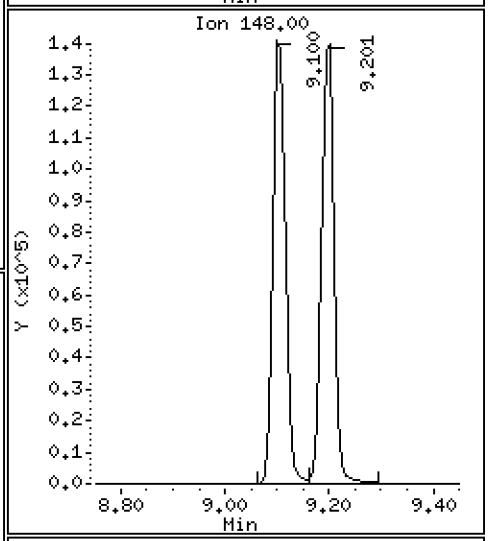


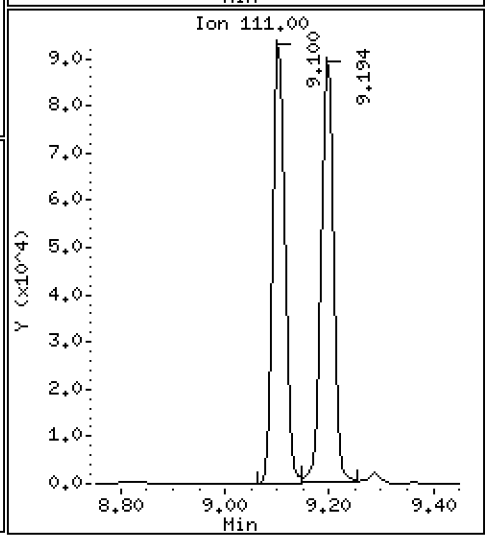












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

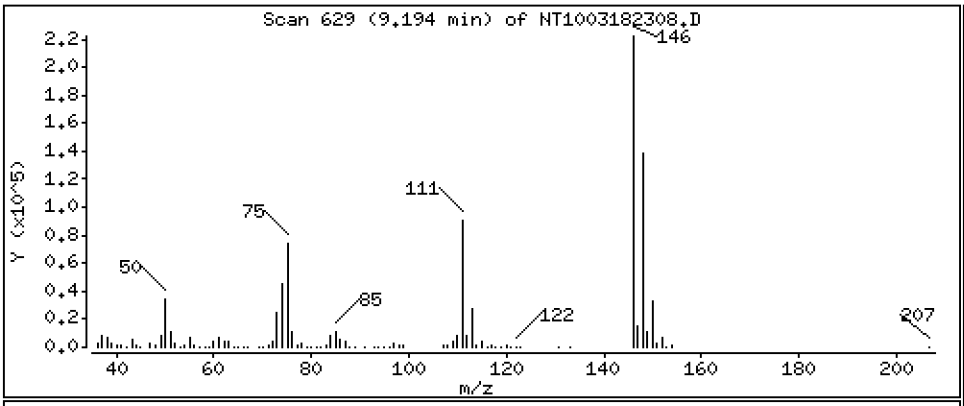
Operator: VTS

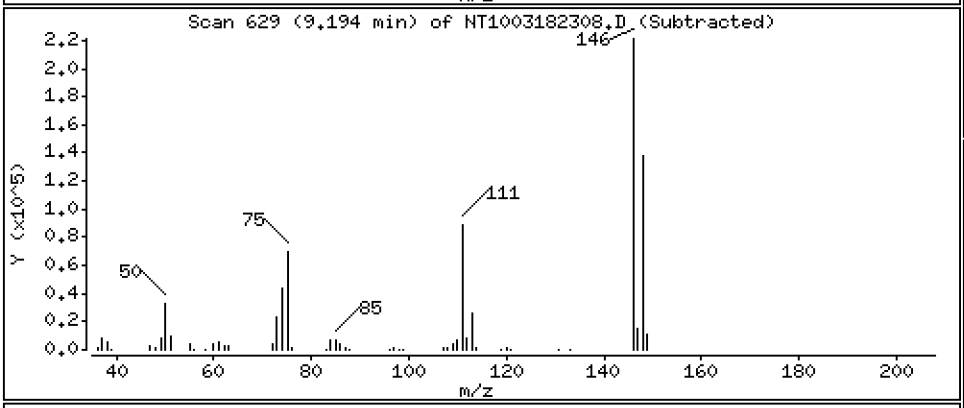
Column phase: ZB-5msi

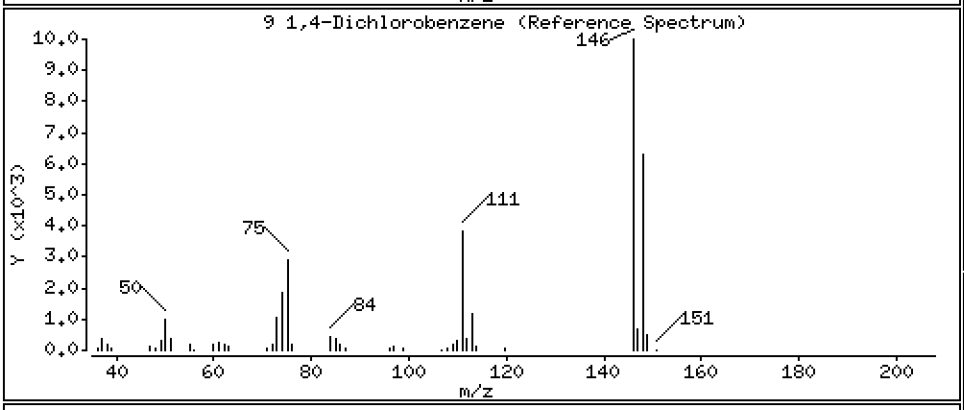
Column diameter: 0.25

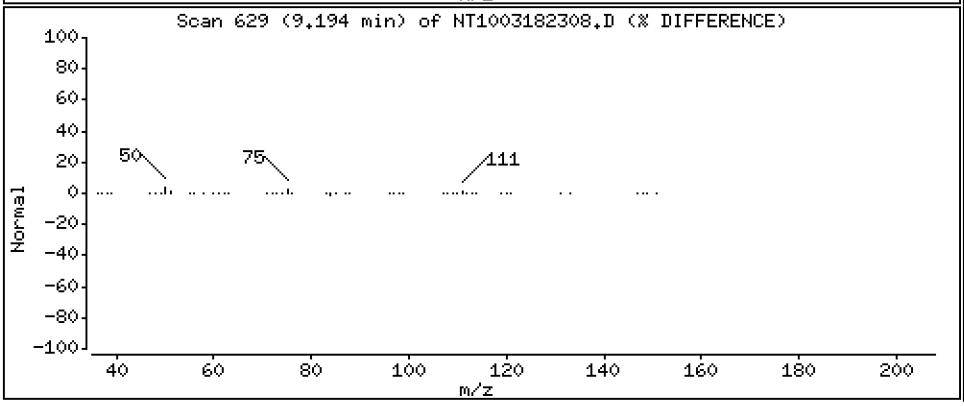
9 1,4-Dichlorobenzene

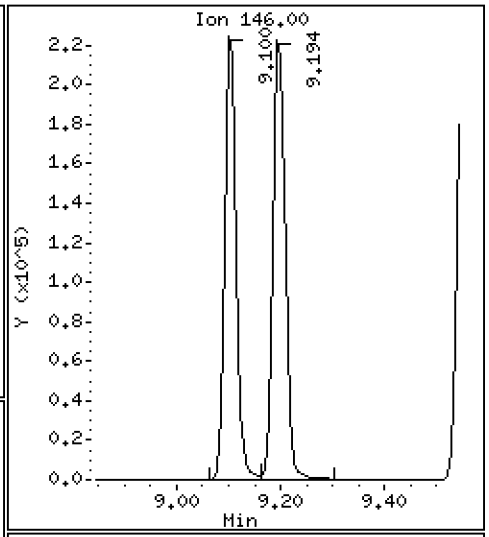
Concentration: 4.323 ug/mL

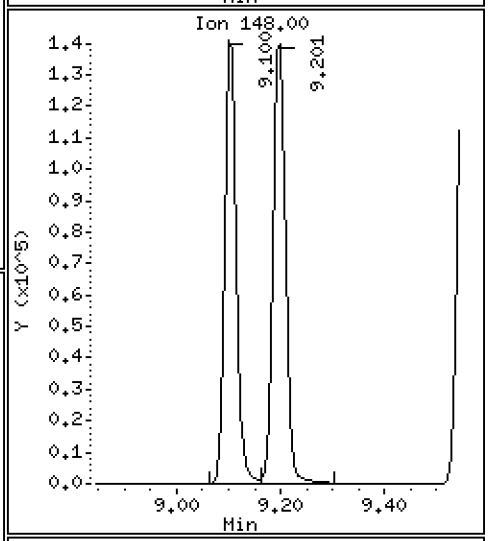


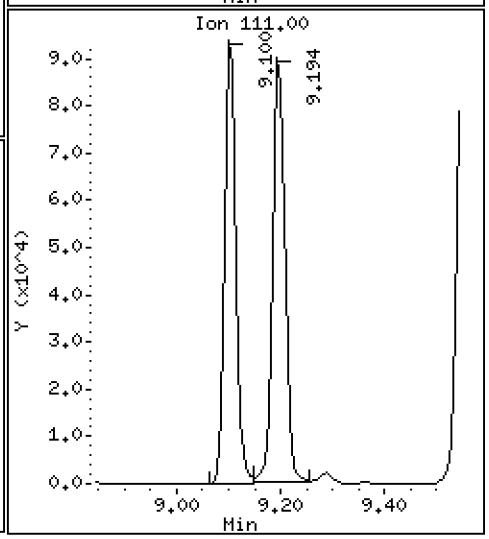












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

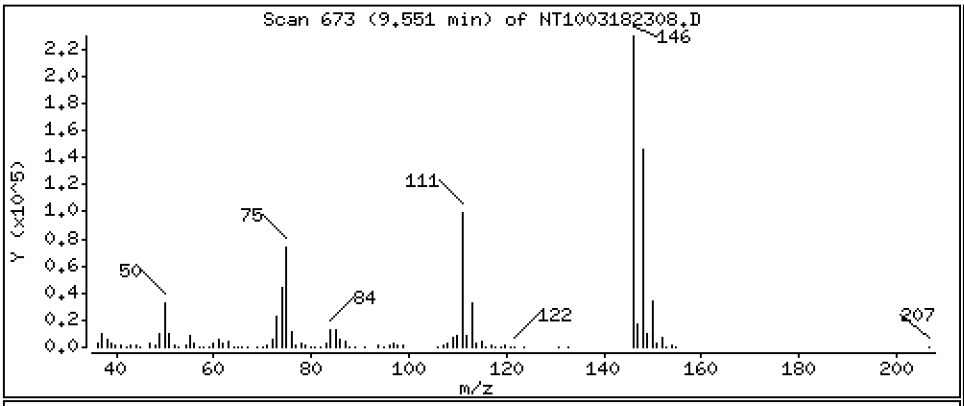
Operator: VTS

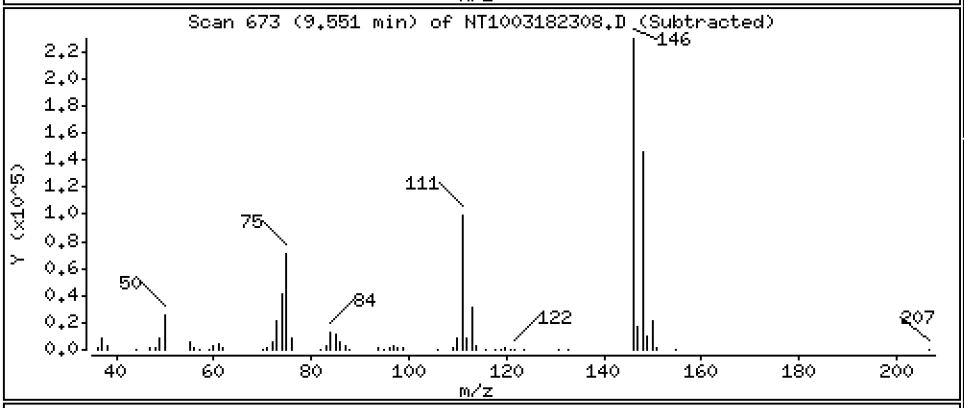
Column phase: ZB-5msi

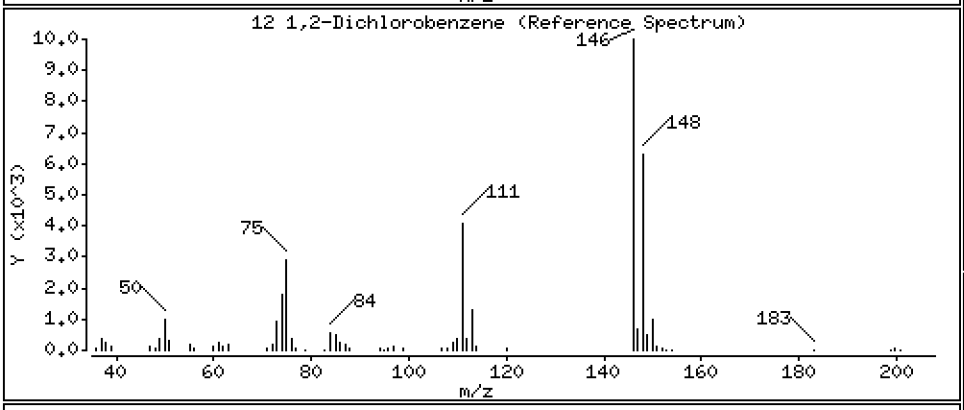
Column diameter: 0.25

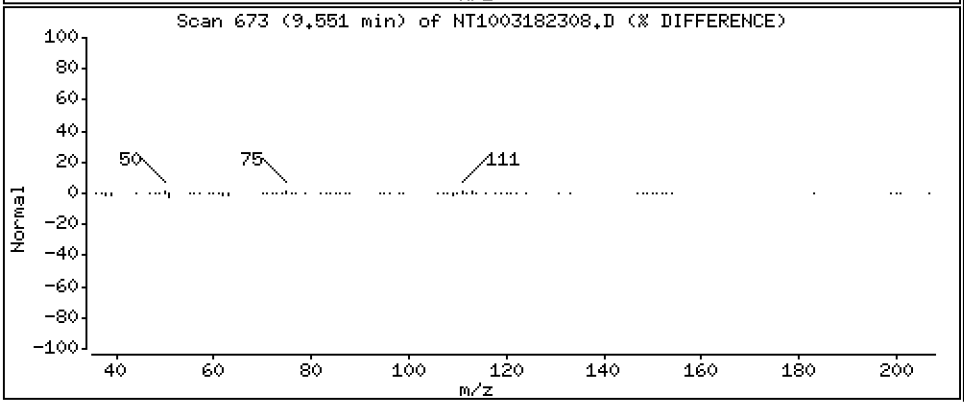
12 1,2-Dichlorobenzene

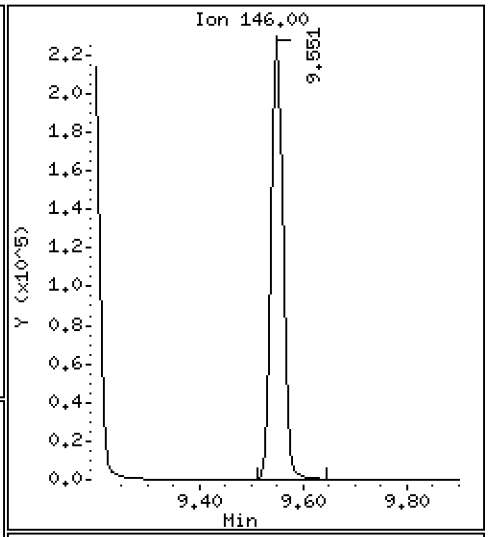
Concentration: 4.289 ug/mL

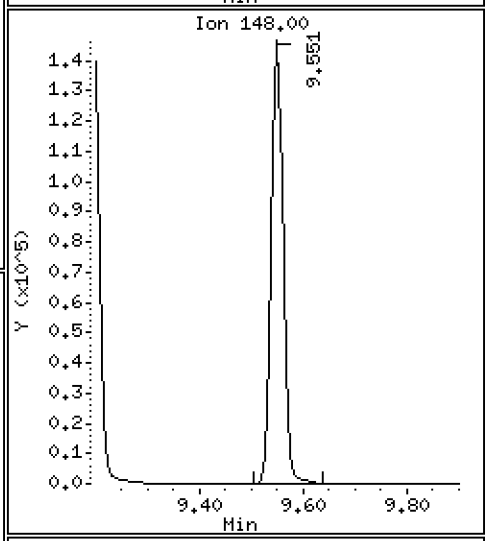


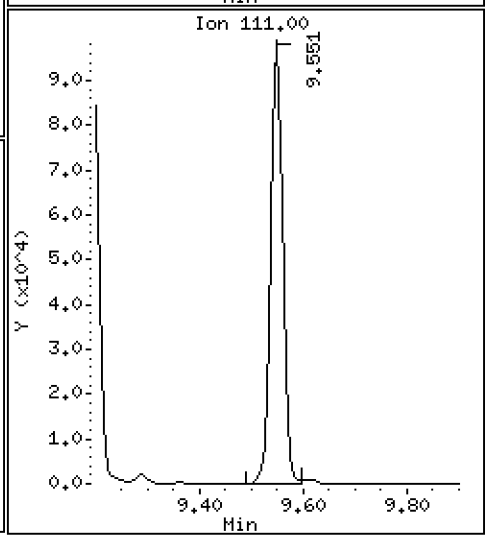












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

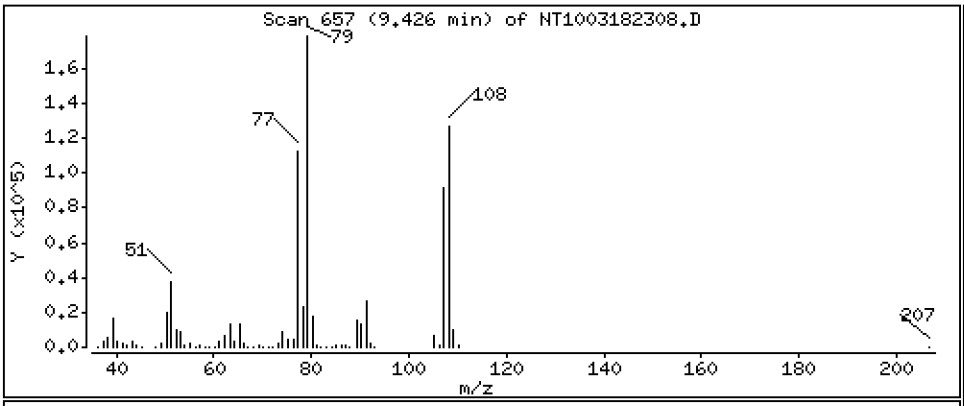
Operator: VTS

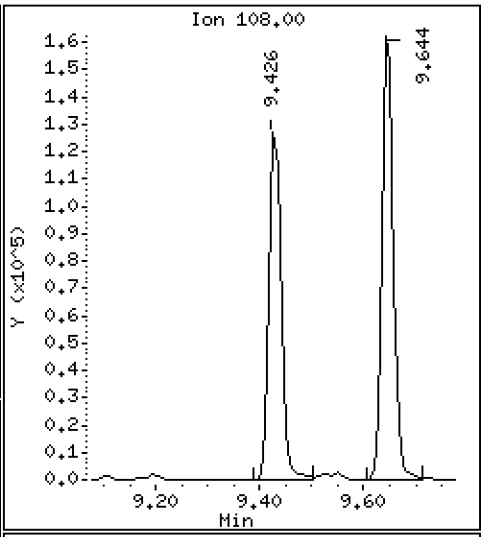
Column phase: ZB-5msi

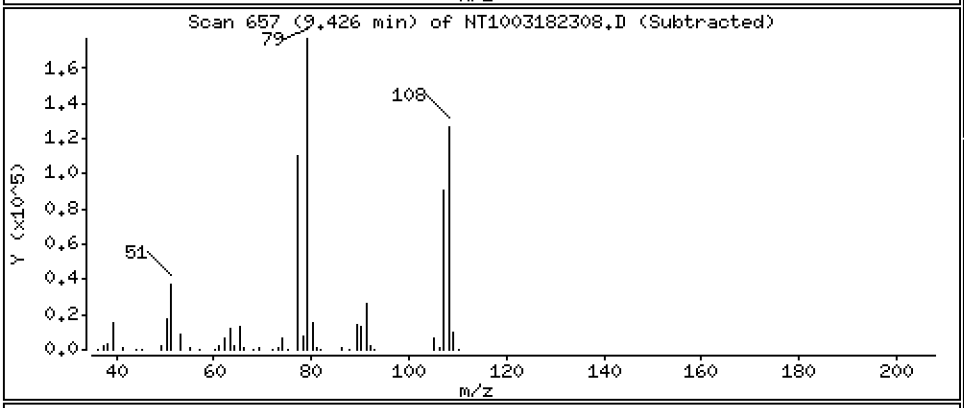
Column diameter: 0.25

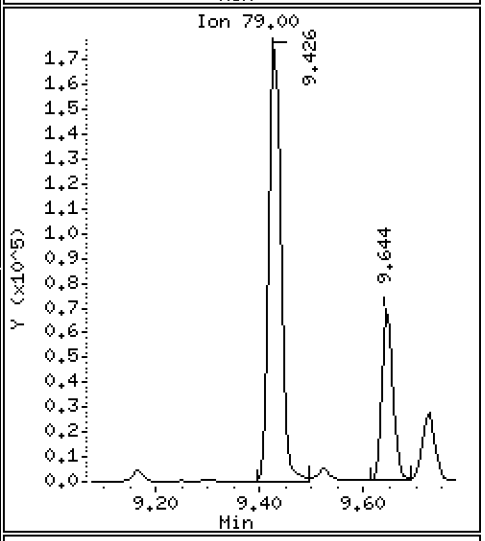
11 Benzyl alcohol

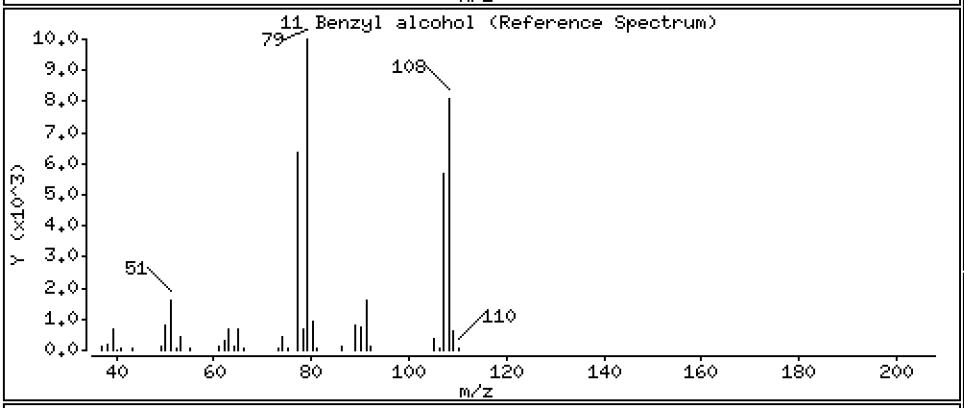
Concentration: 4.530 ug/mL

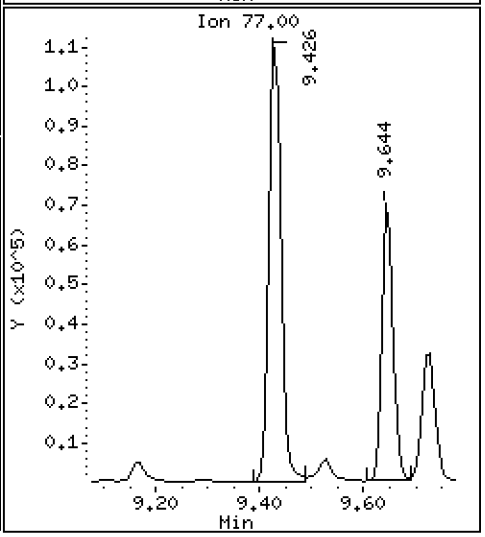


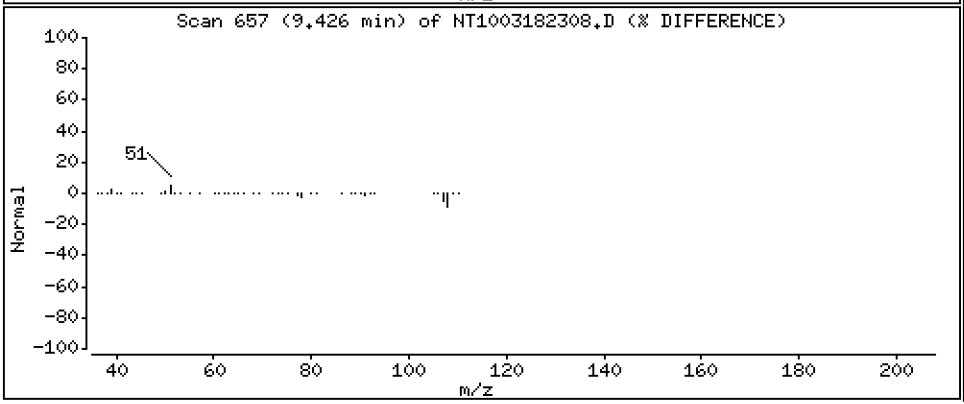












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

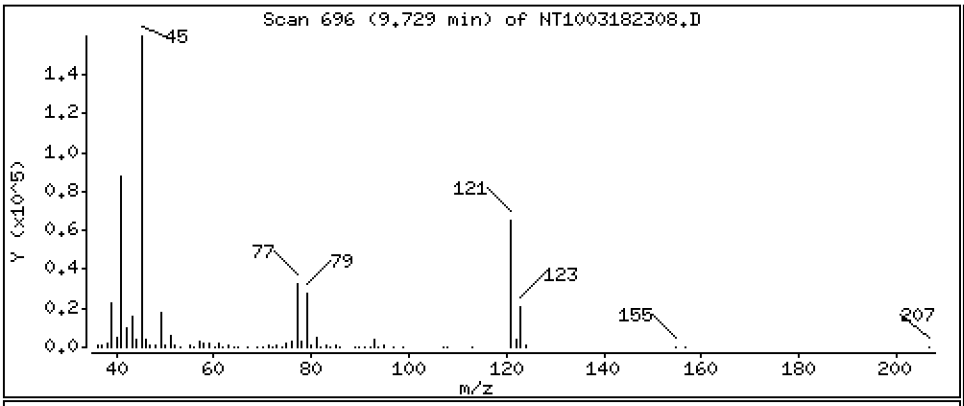
Operator: VTS

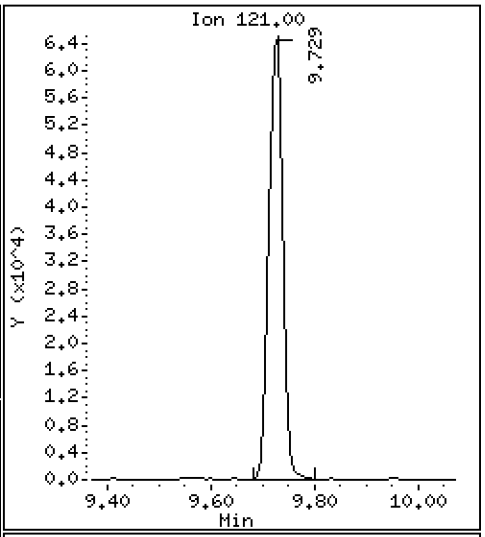
Column phase: ZB-5msi

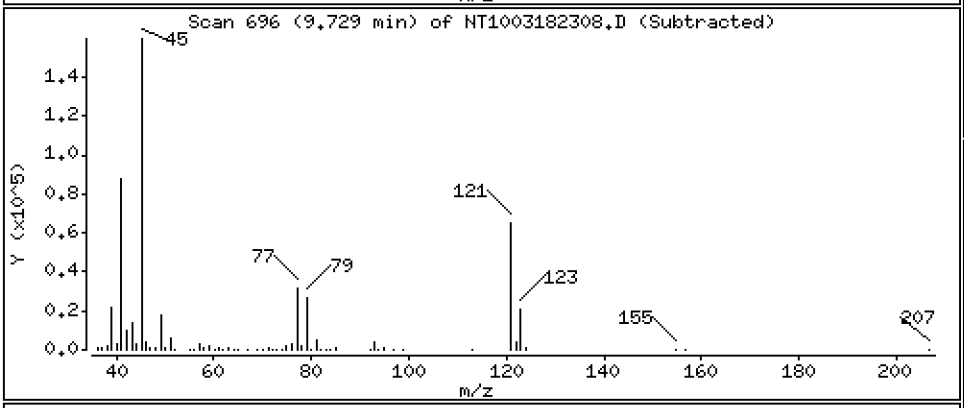
Column diameter: 0.25

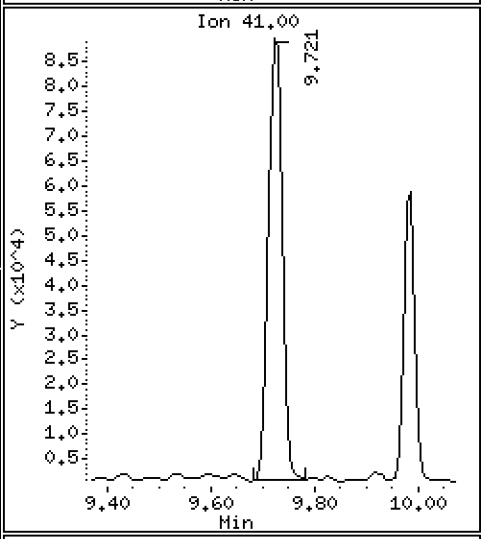
14 2,2'-oxybis(1-Chloropropane)

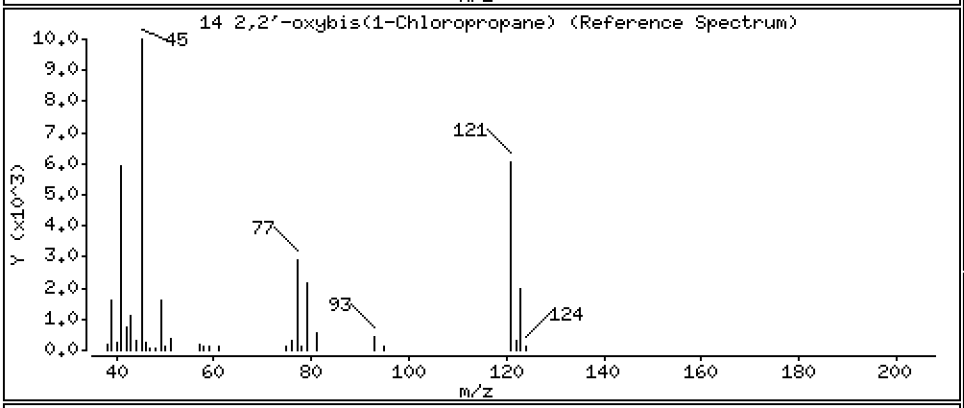
Concentration: 4.978 ug/mL

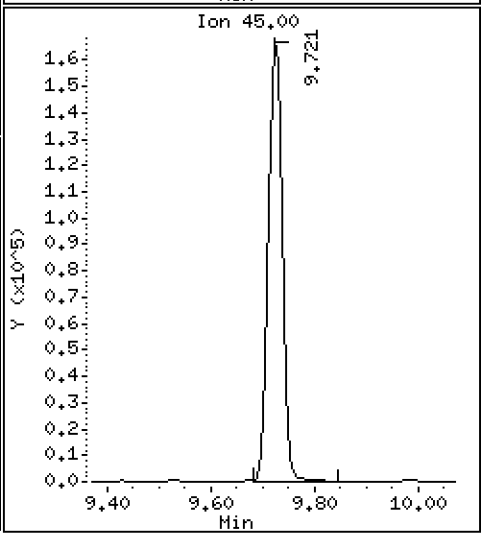


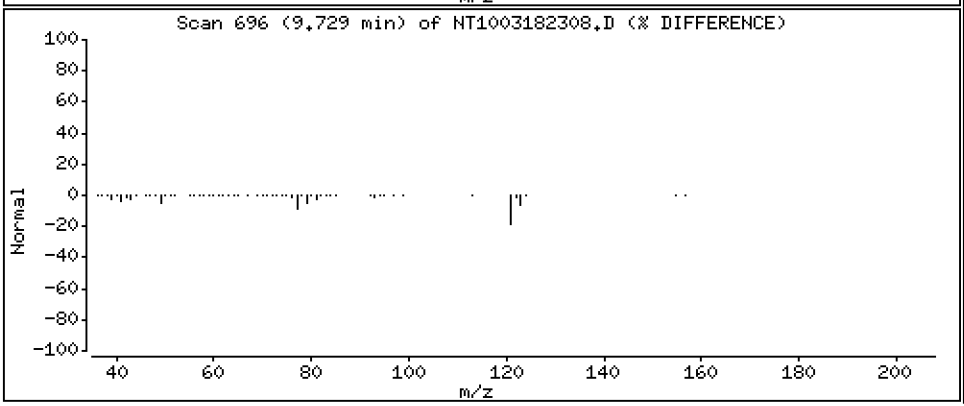












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

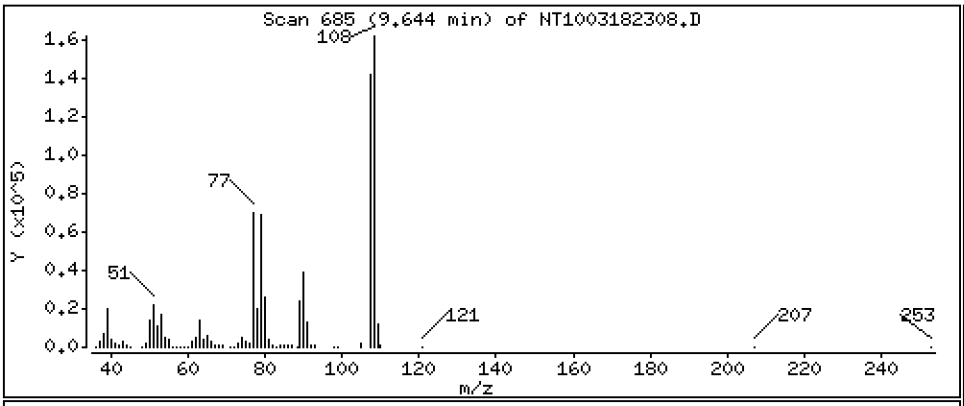
Operator: VTS

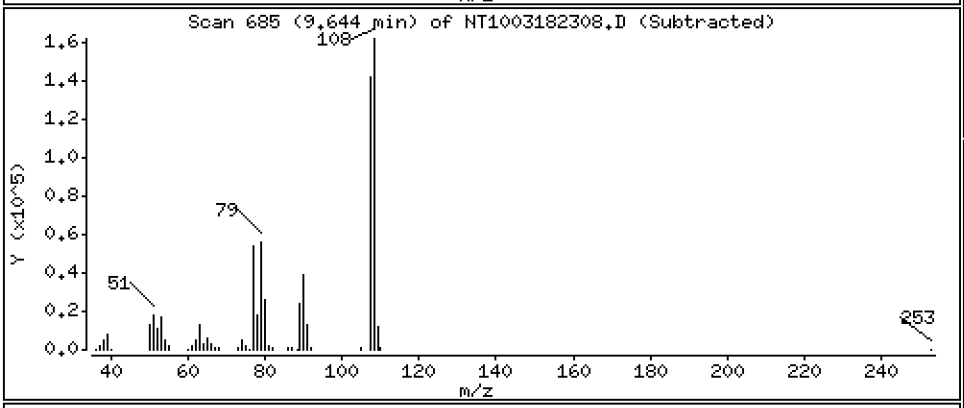
Column phase: ZB-5msi

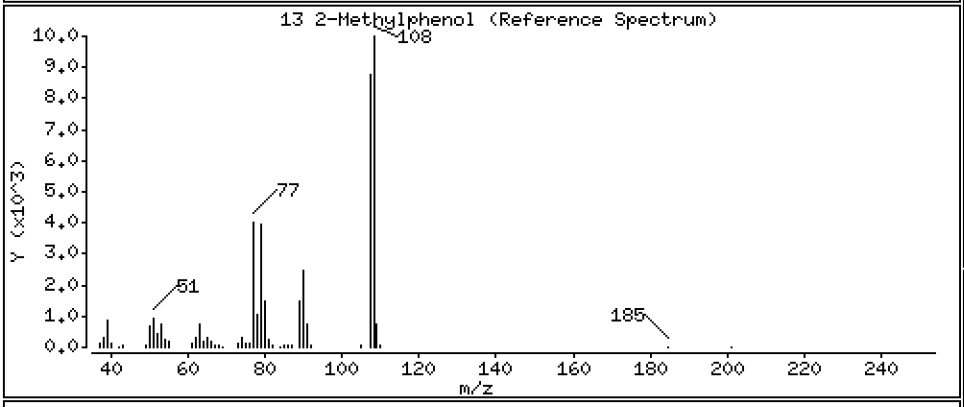
Column diameter: 0.25

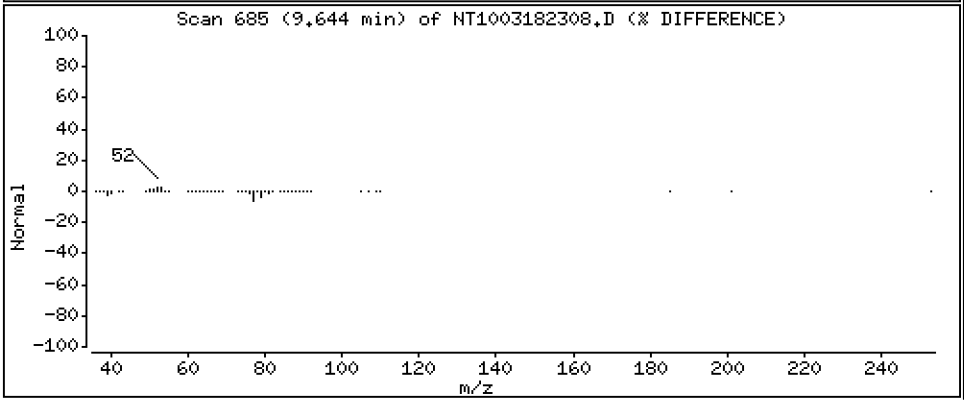
13 2-Methylphenol

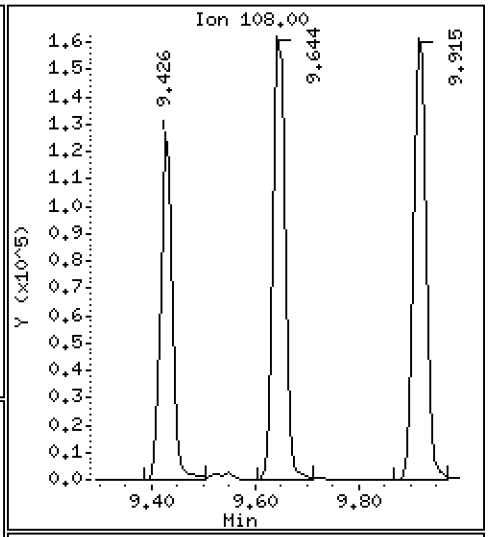
Concentration: 3.612 ug/mL

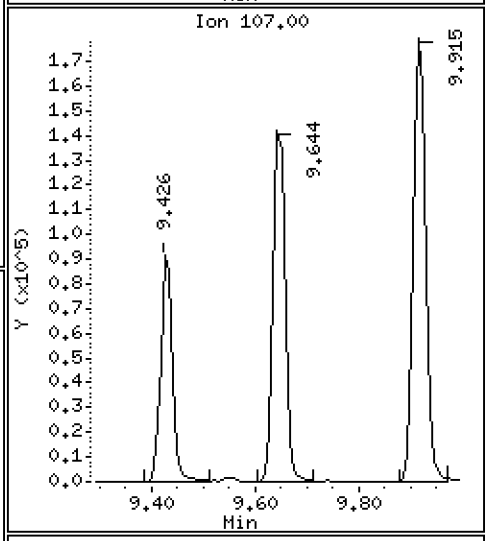


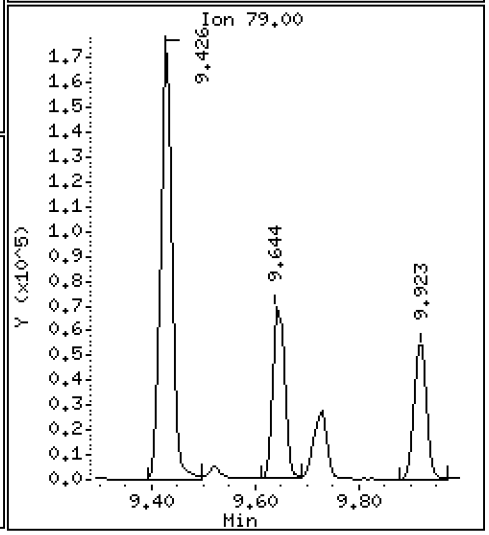












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

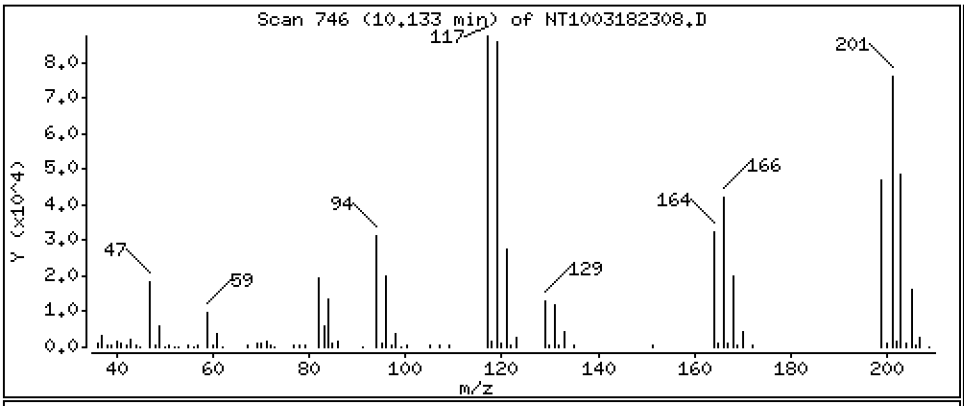
Operator: VTS

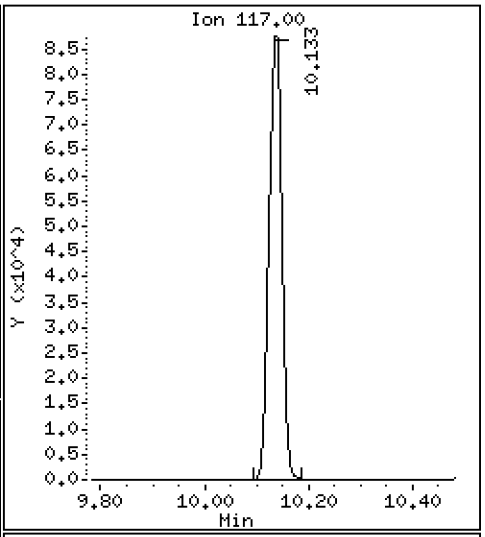
Column phase: ZB-5msi

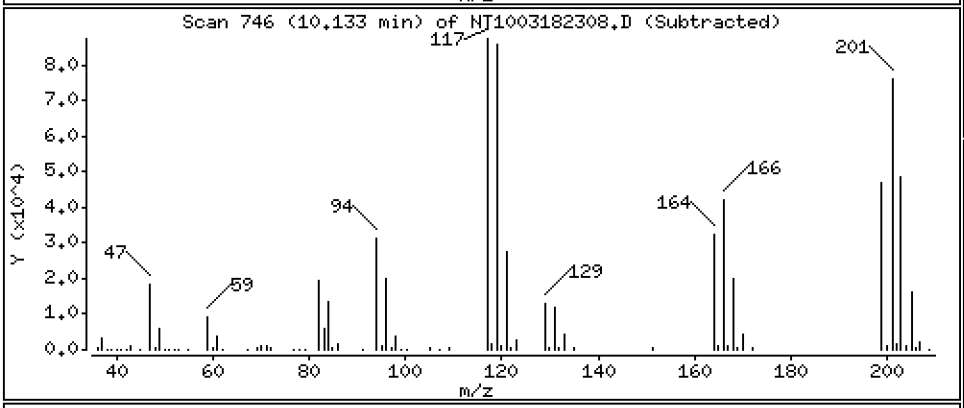
Column diameter: 0.25

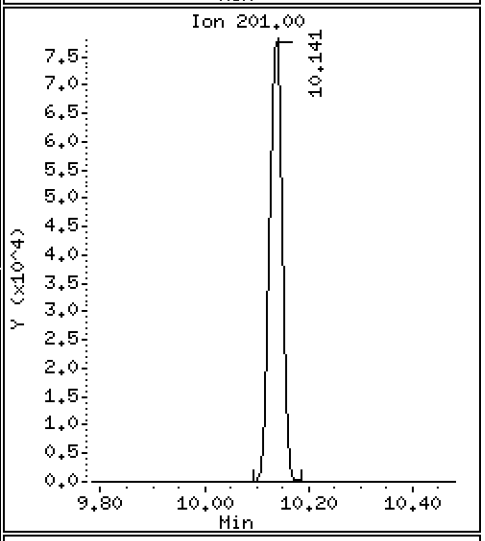
17 Hexachloroethane

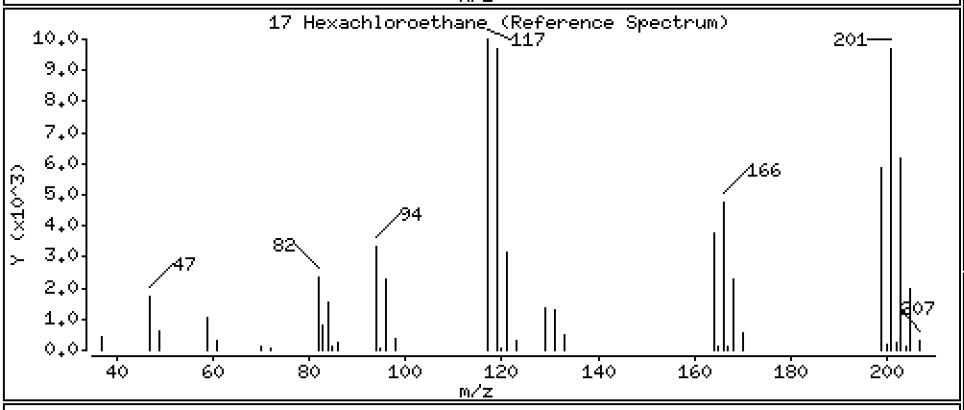
Concentration: 4.310 ug/mL

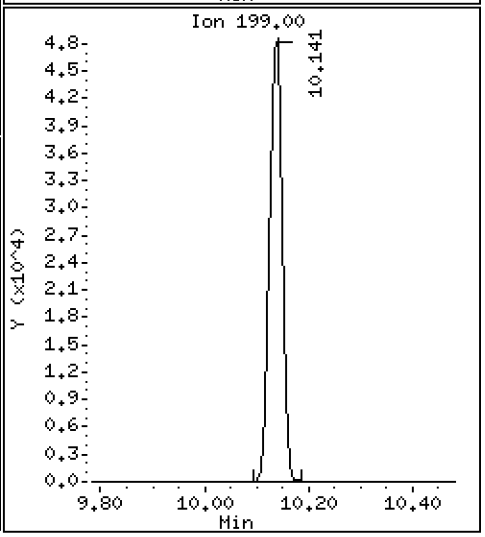


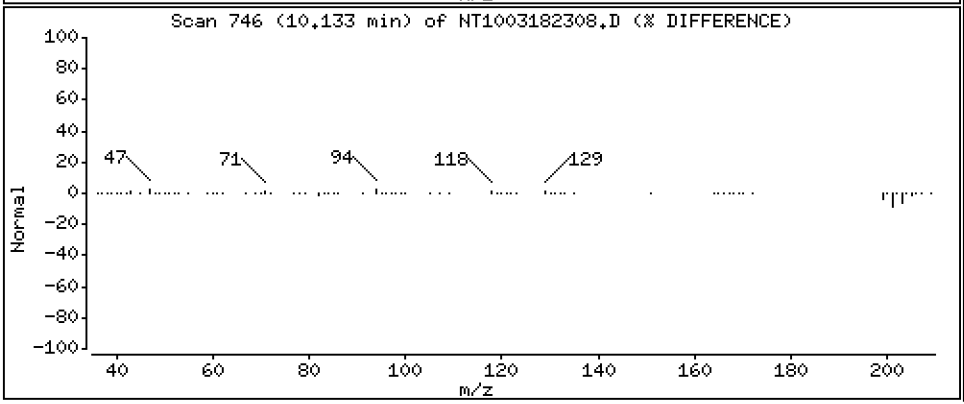












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

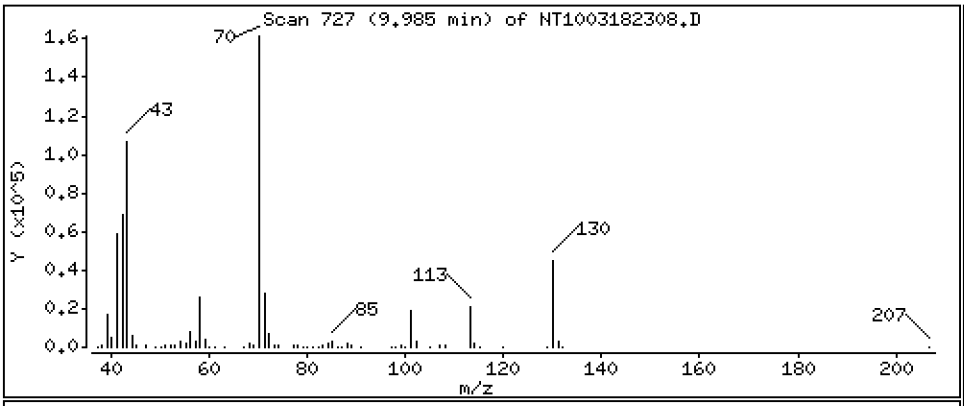
Operator: VTS

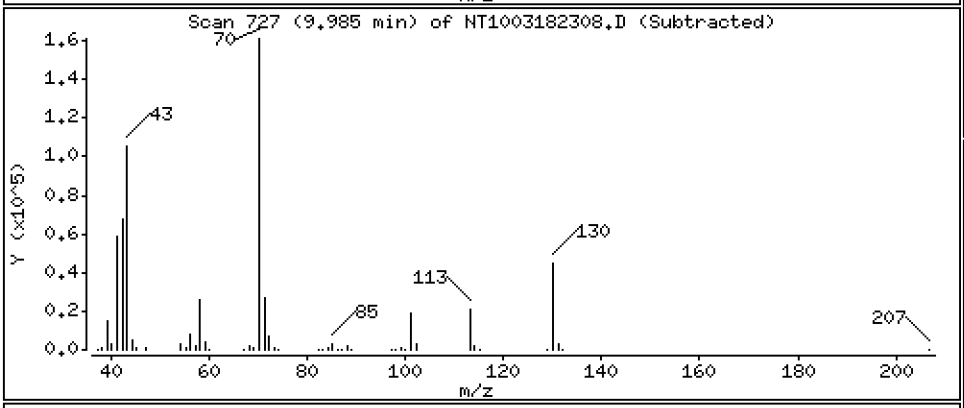
Column phase: ZB-5msi

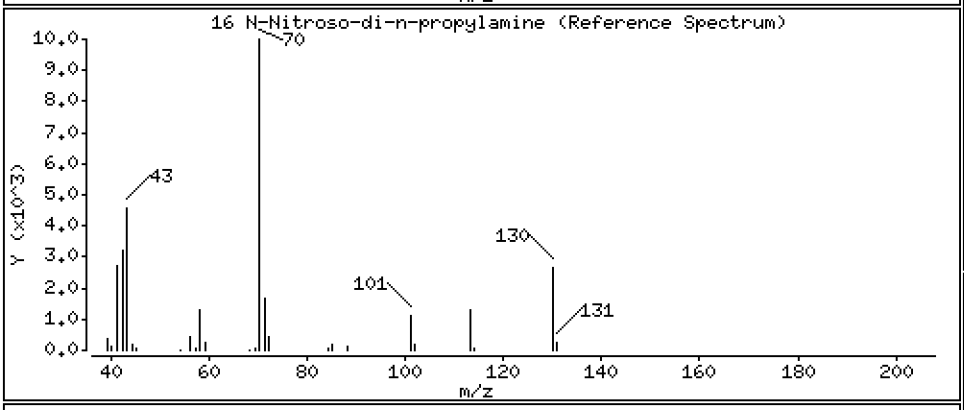
Column diameter: 0.25

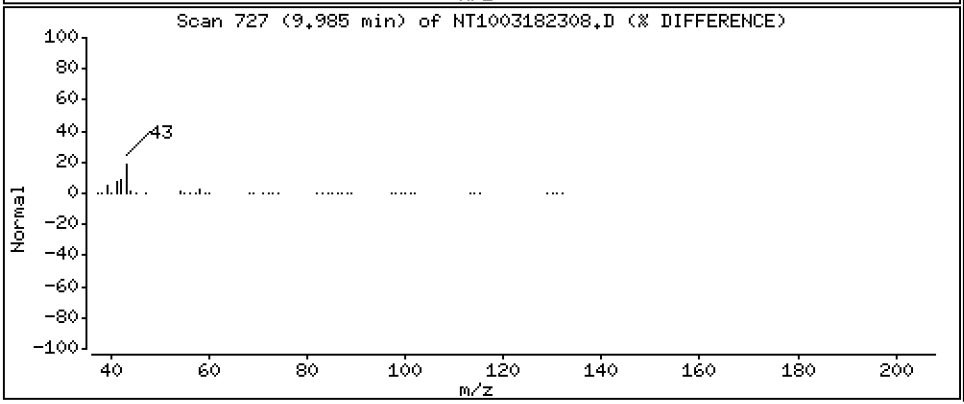
16 N-Nitroso-di-n-propylamine

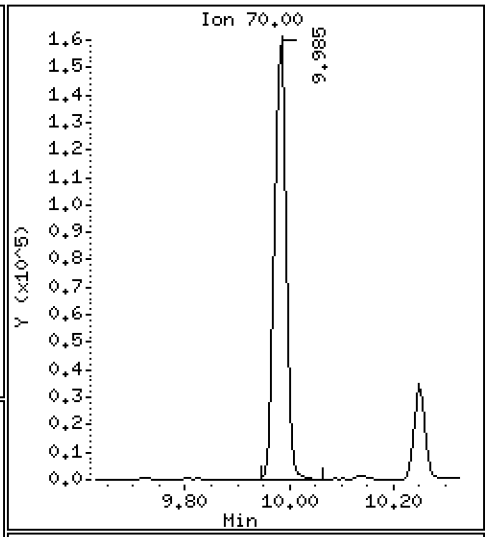
Concentration: 4.474 ug/mL

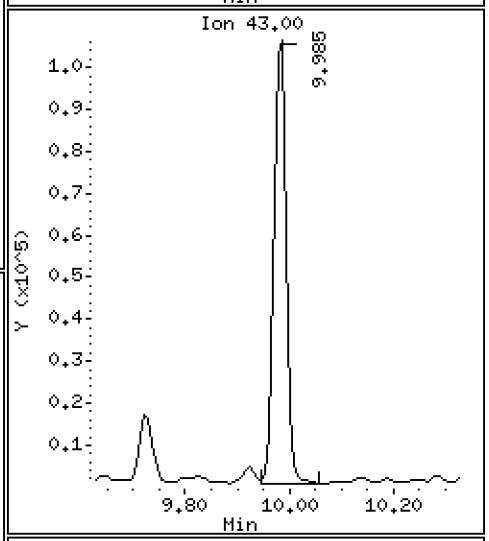


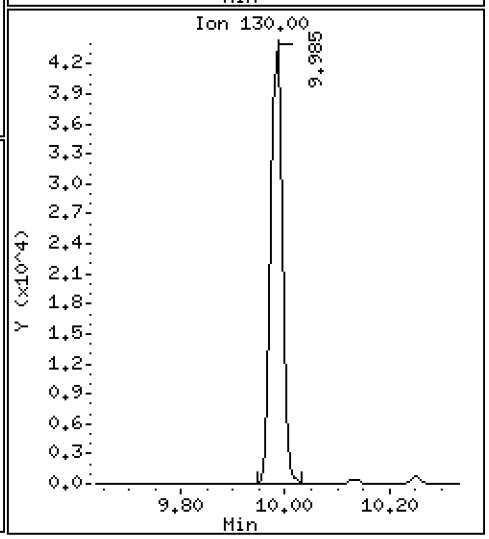












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

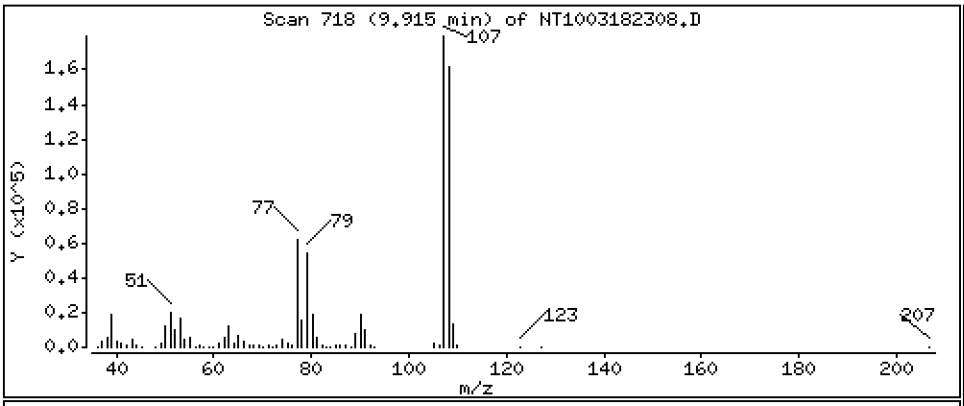
Operator: VTS

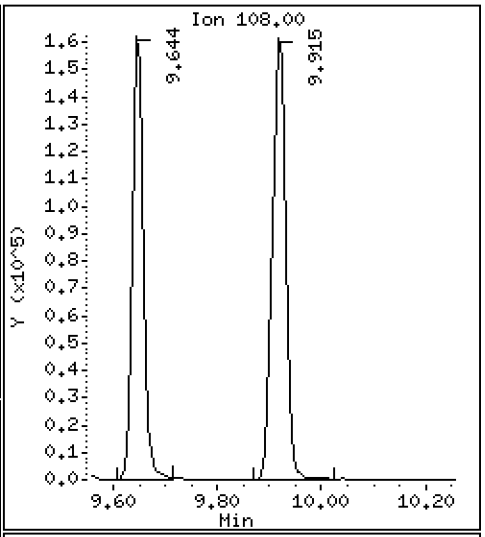
Column phase: ZB-5msi

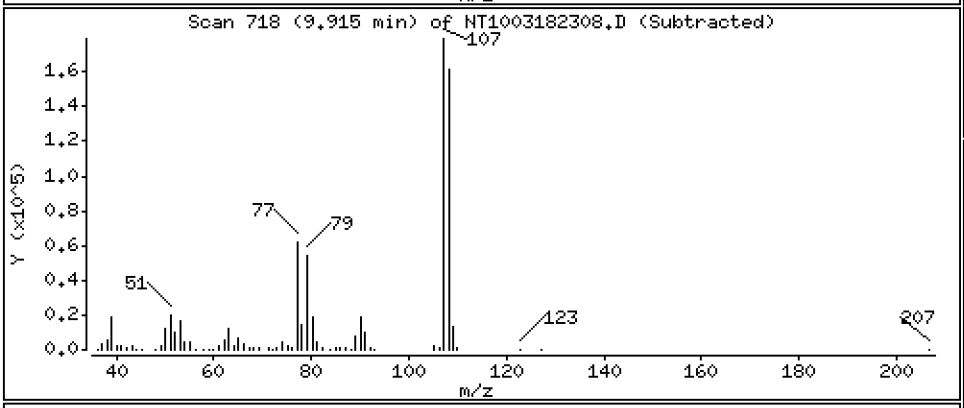
Column diameter: 0.25

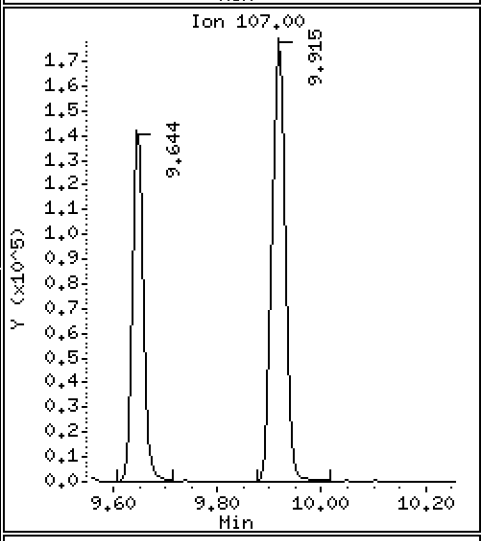
15 4-Methylphenol

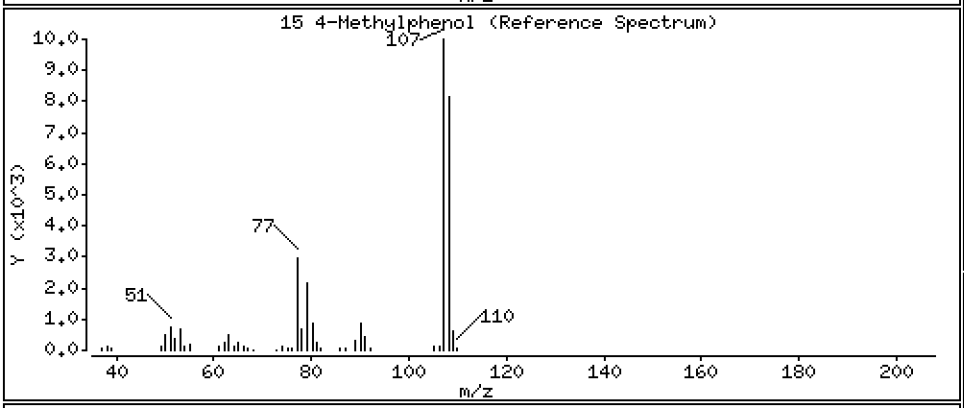
Concentration: 4.048 ug/mL

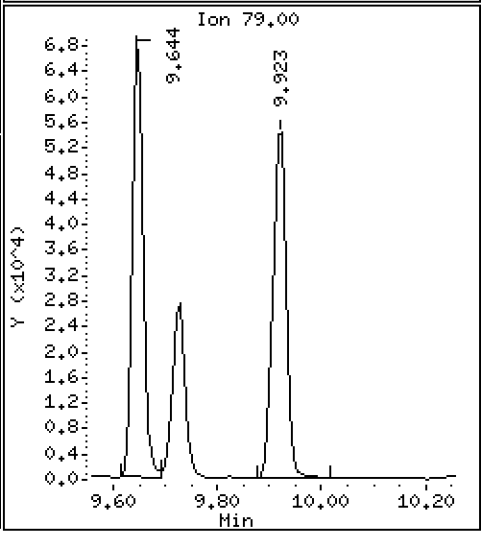


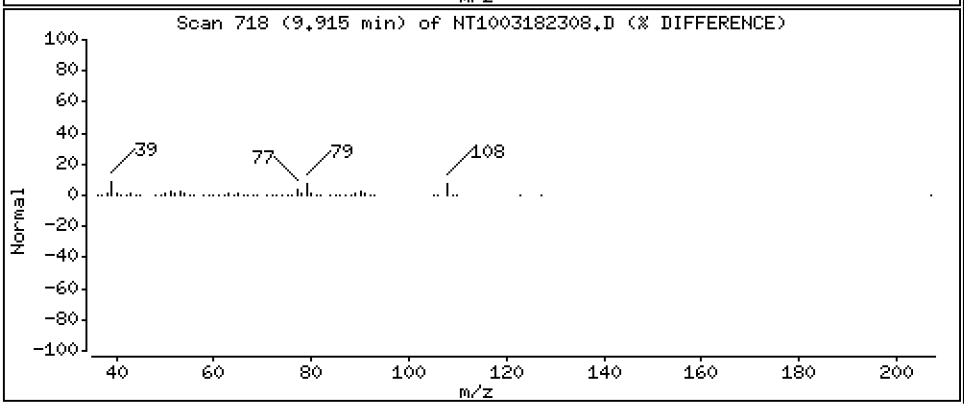












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

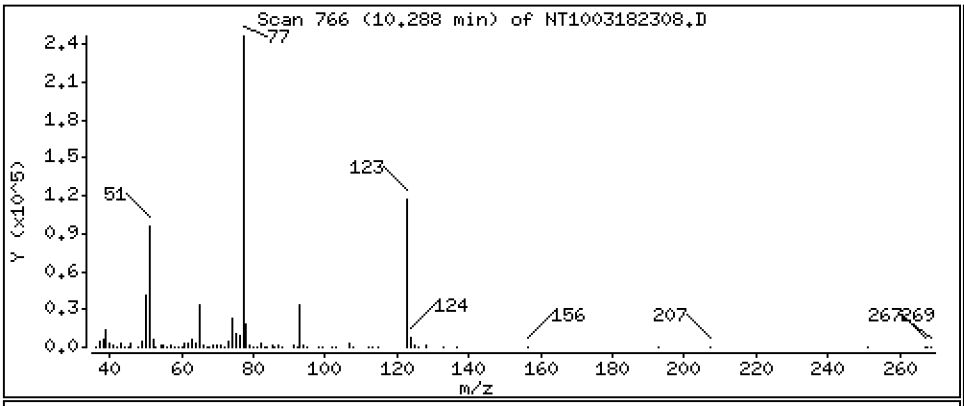
Operator: VTS

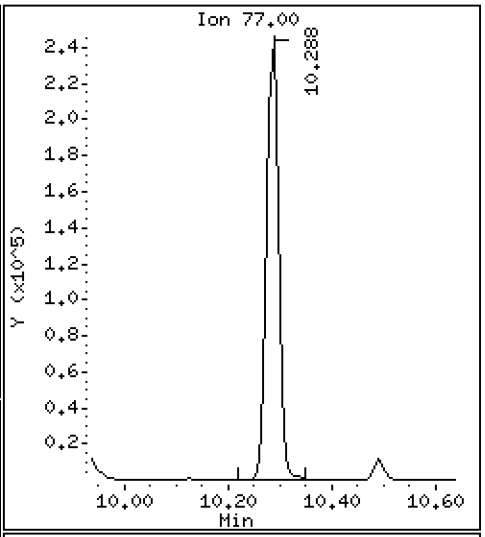
Column phase: ZB-5msi

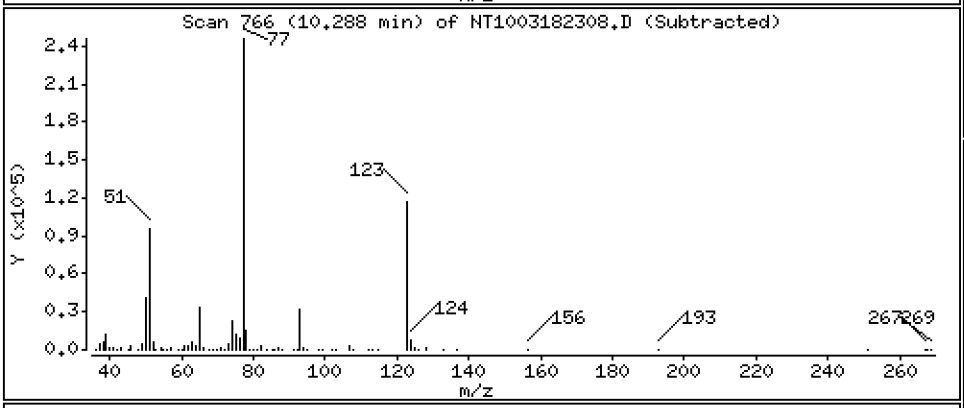
Column diameter: 0.25

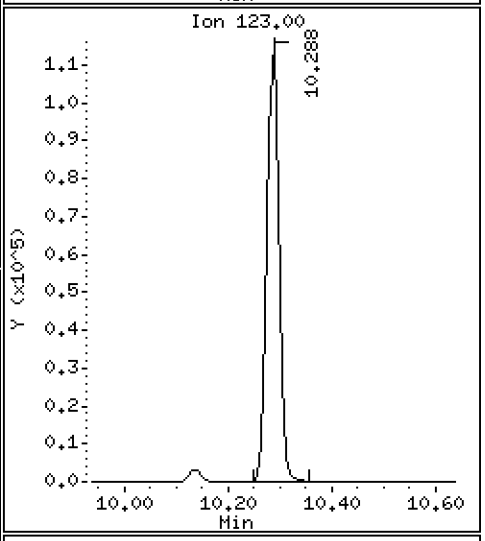
19 Nitrobenzene

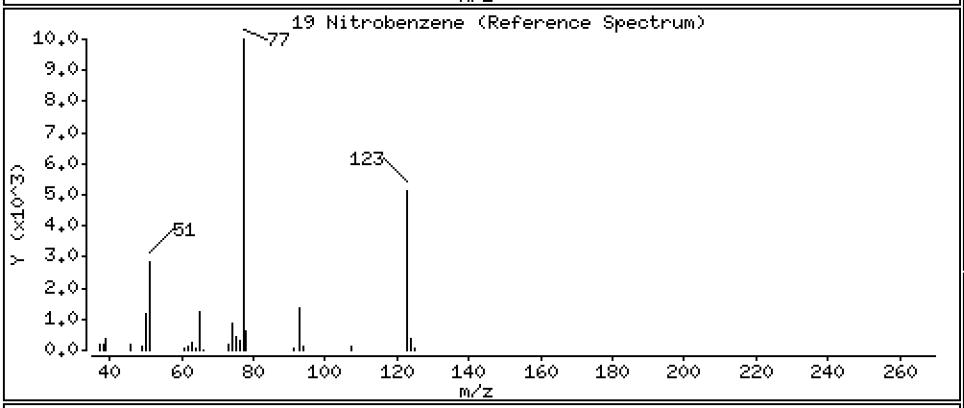
Concentration: 4.482 ug/mL

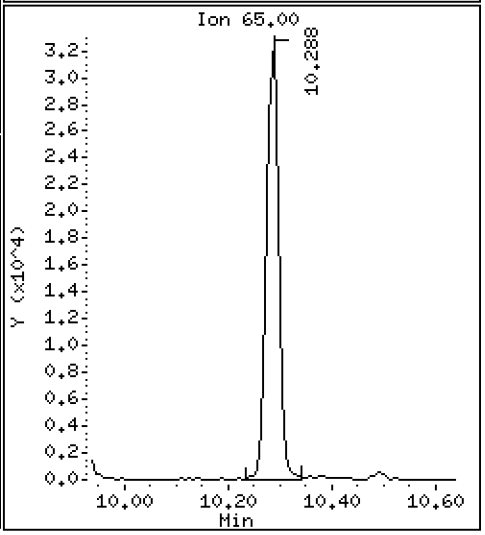


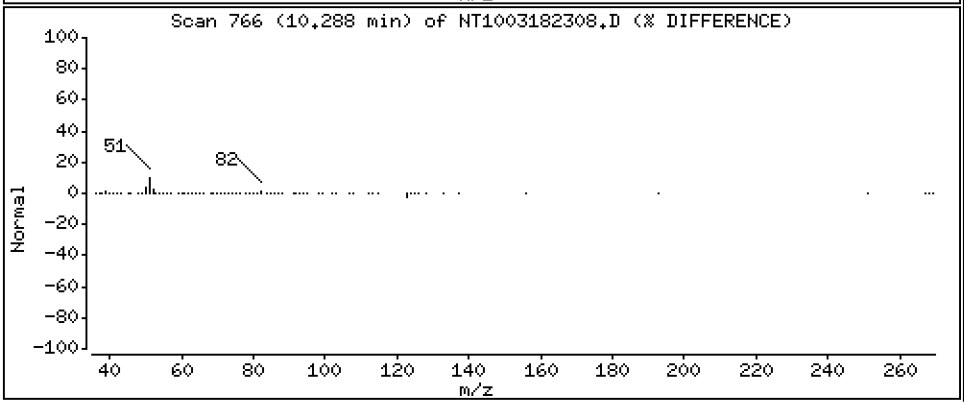












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

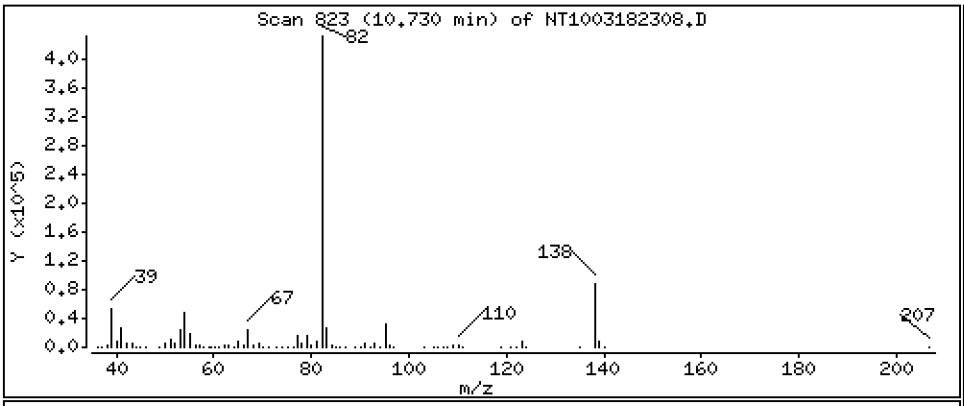
Operator: VTS

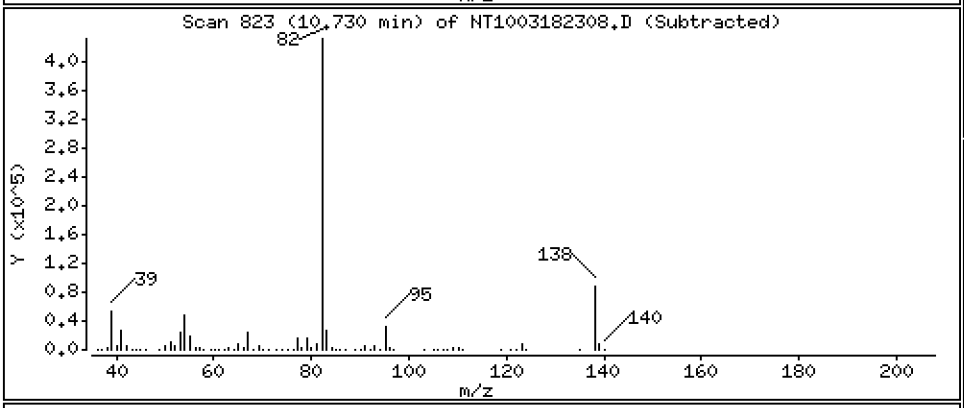
Column phase: ZB-5msi

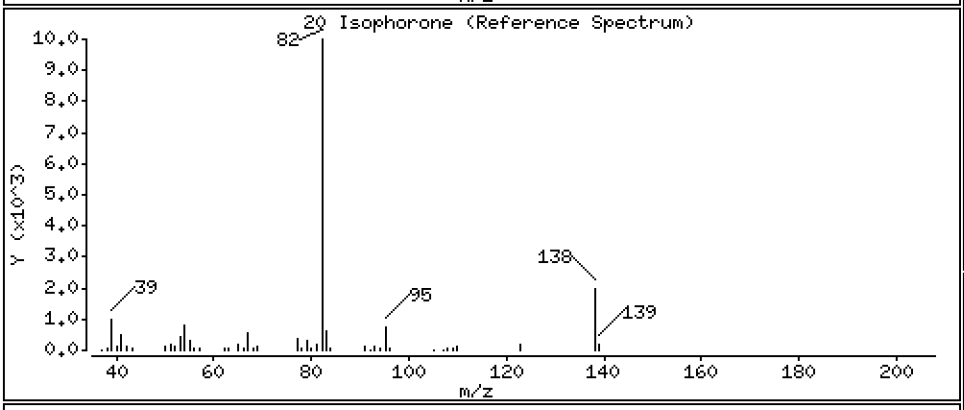
Column diameter: 0.25

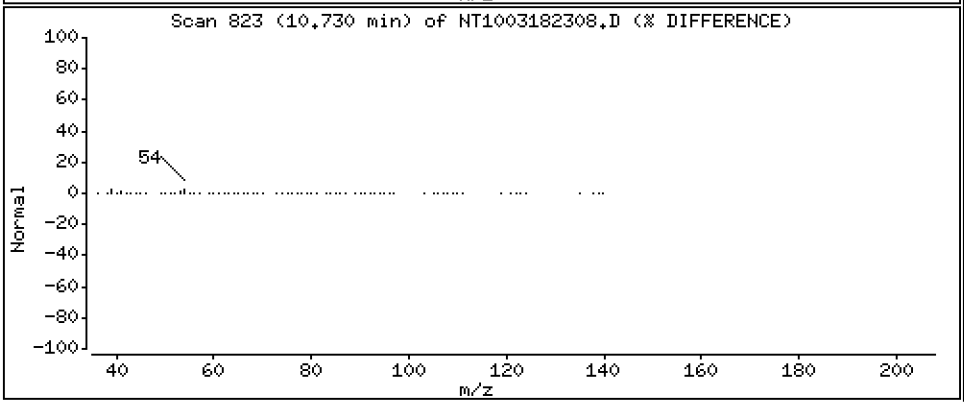
20 Isophorone

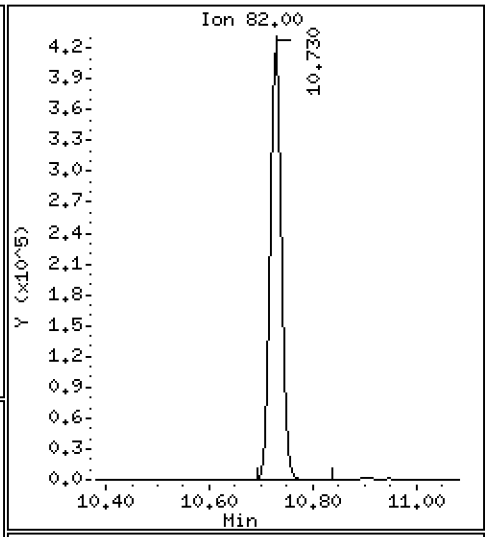
Concentration: 6.299 ug/mL

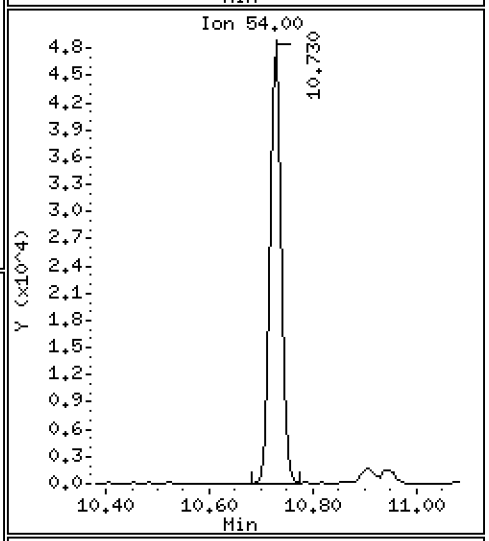


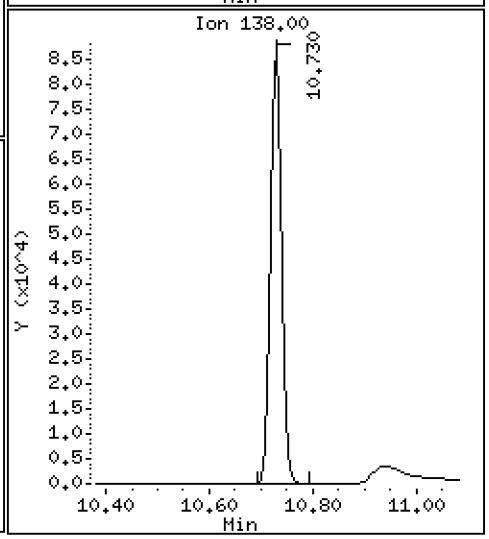












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

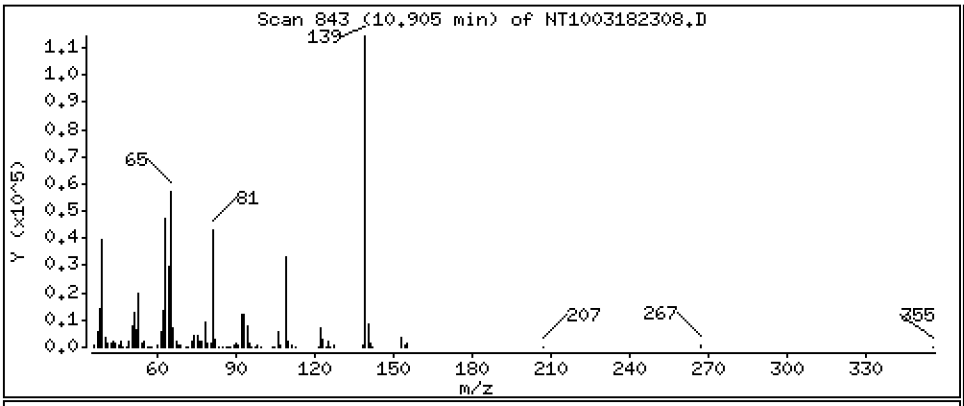
Operator: VTS

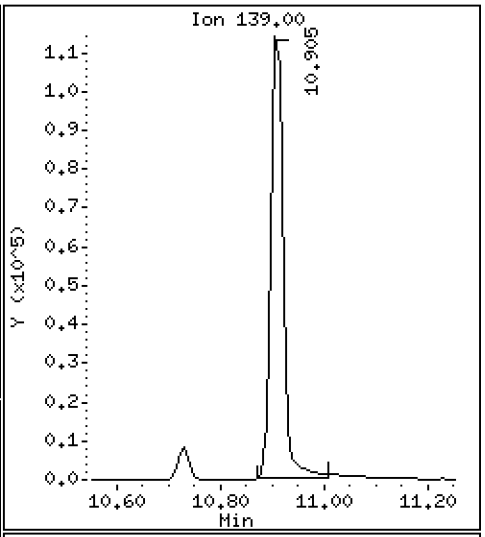
Column phase: ZB-5msi

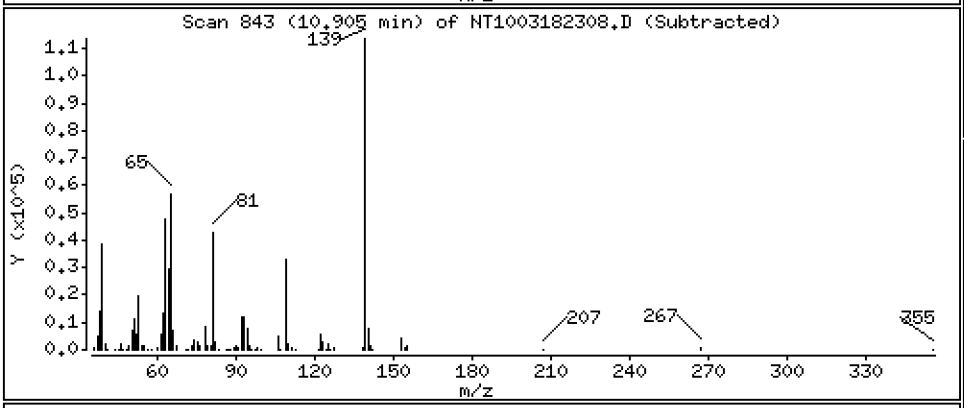
Column diameter: 0.25

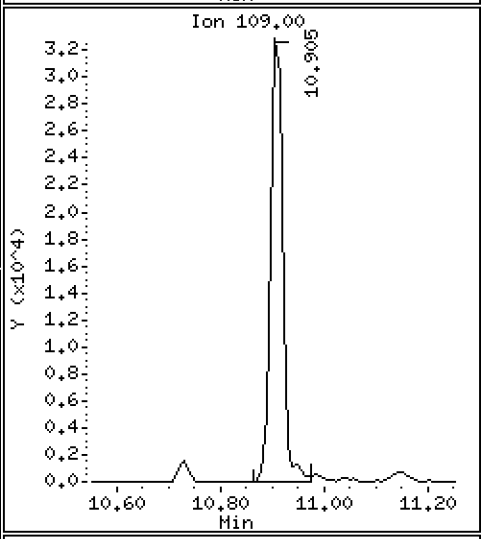
21 2-Nitrophenol

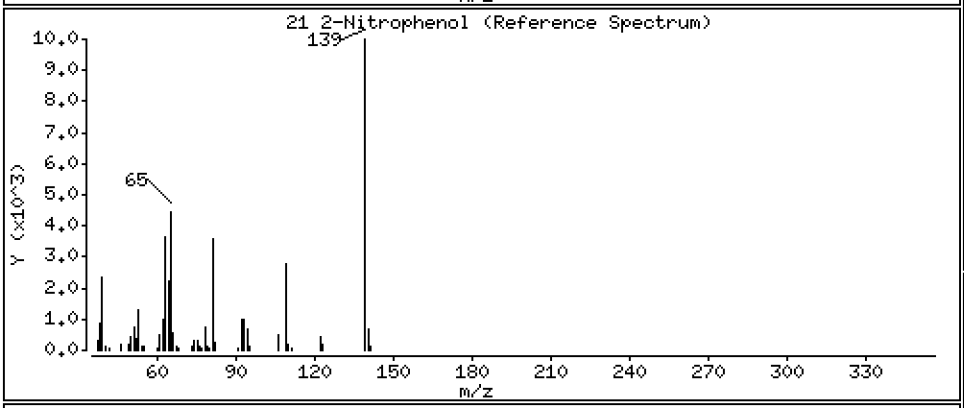
Concentration: 4.751 ug/mL

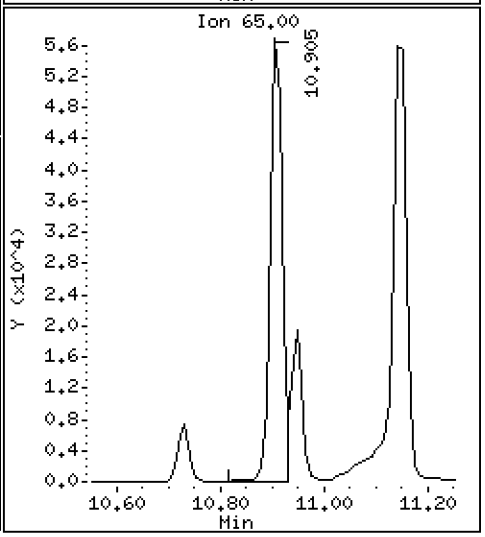


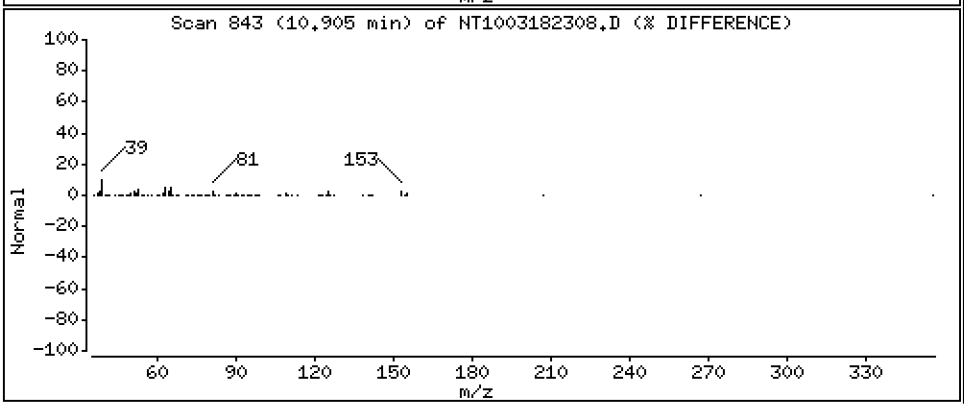












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

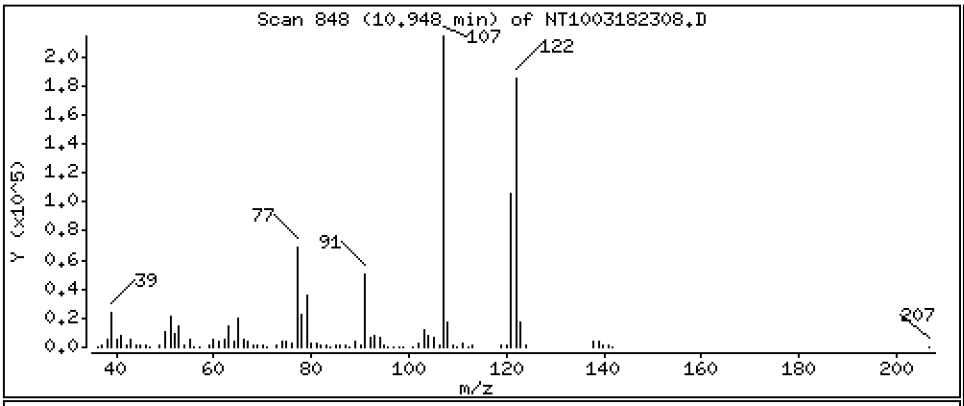
Operator: VTS

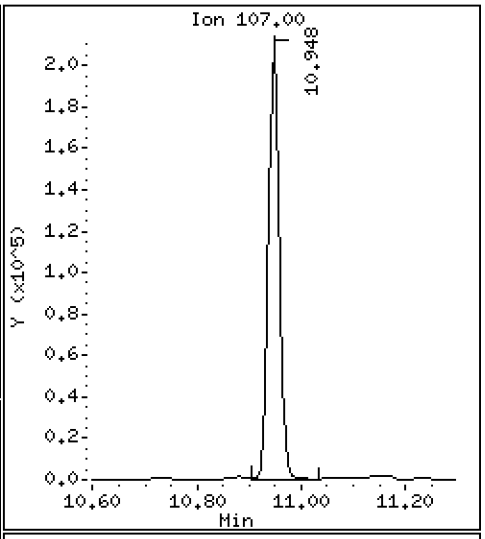
Column phase: ZB-5msi

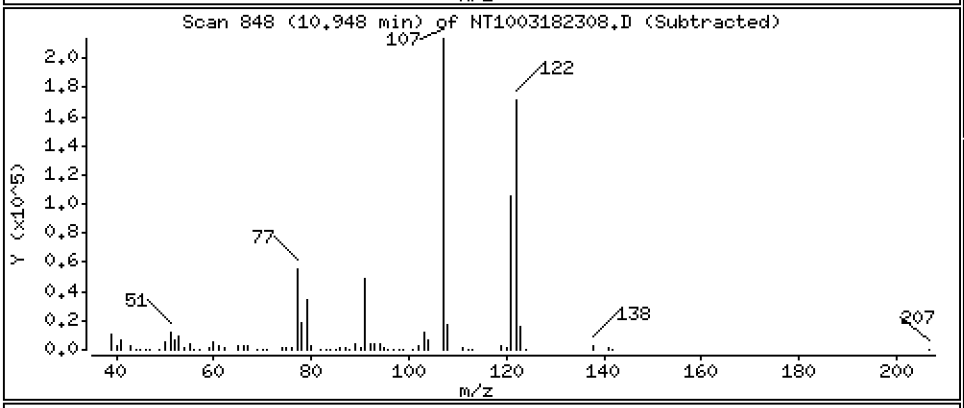
Column diameter: 0.25

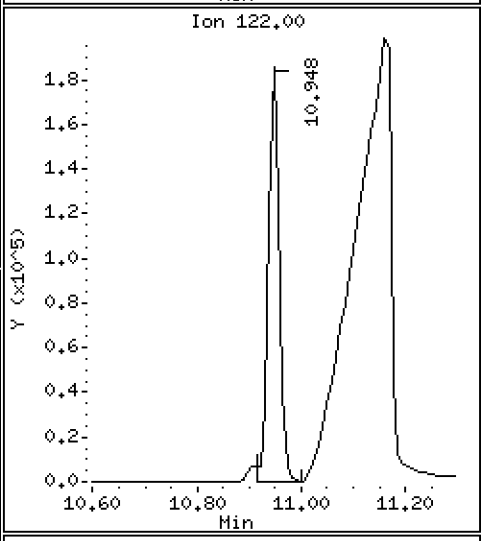
22 2,4-Dimethylphenol

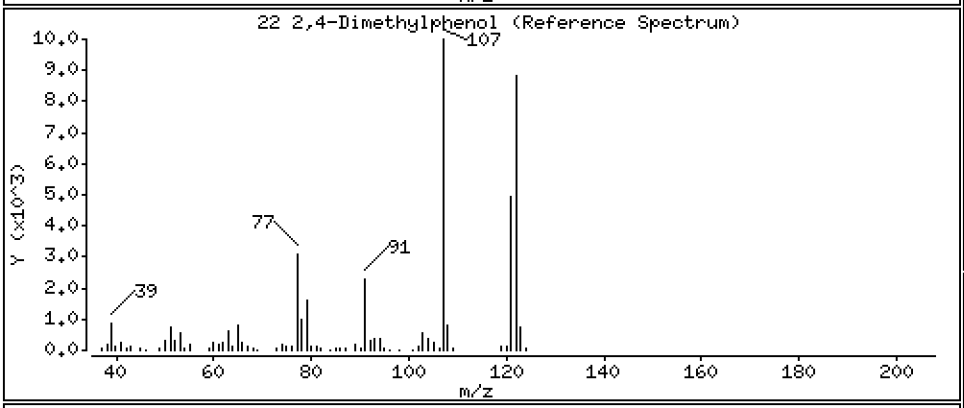
Concentration: 3.952 ug/mL

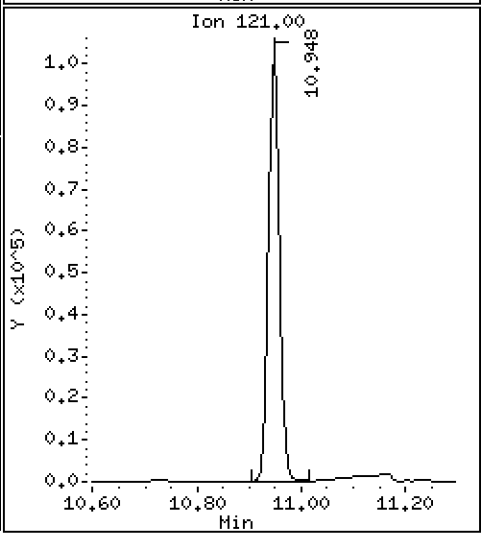


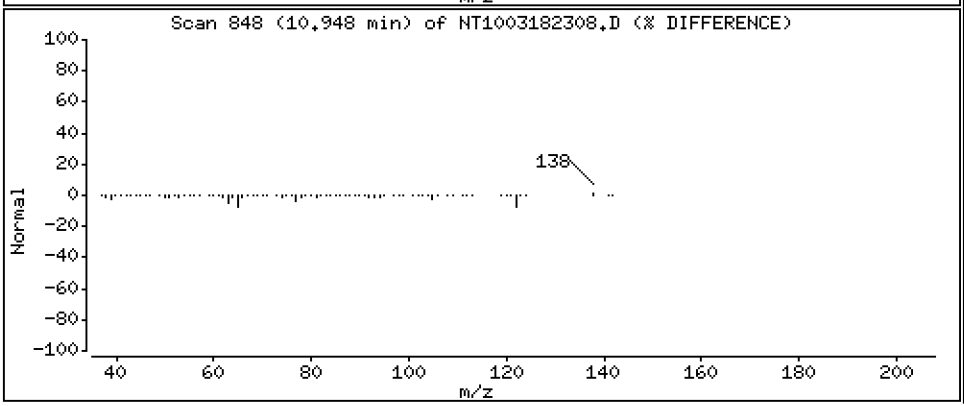












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

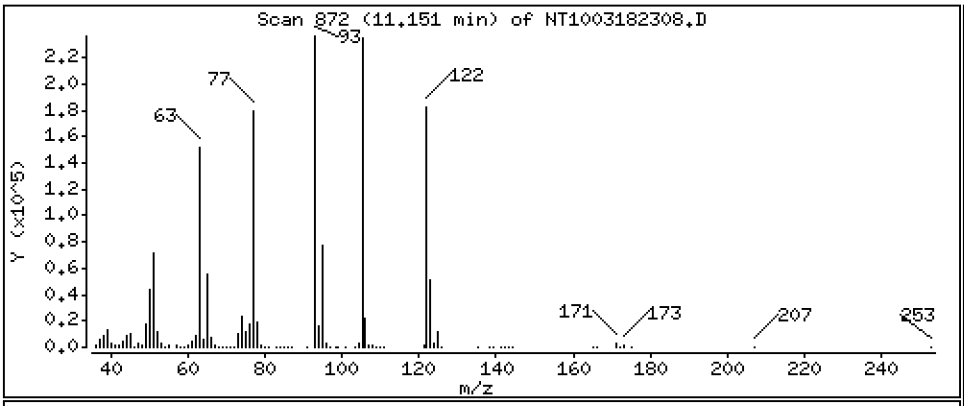
Operator: VTS

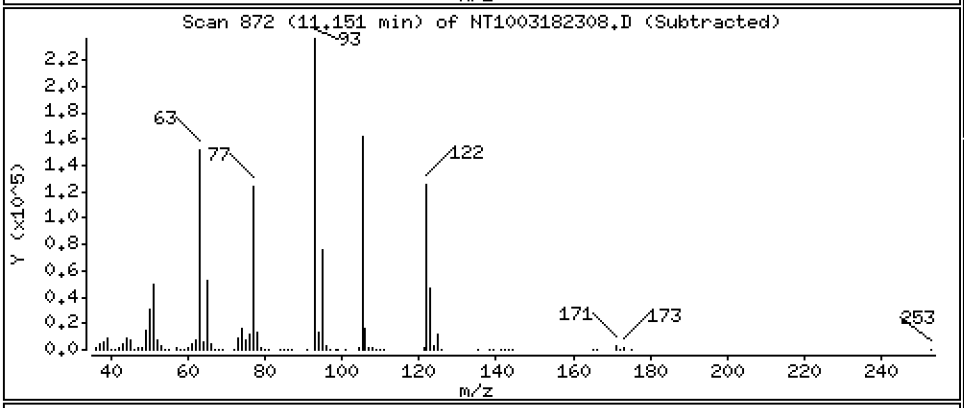
Column phase: ZB-5msi

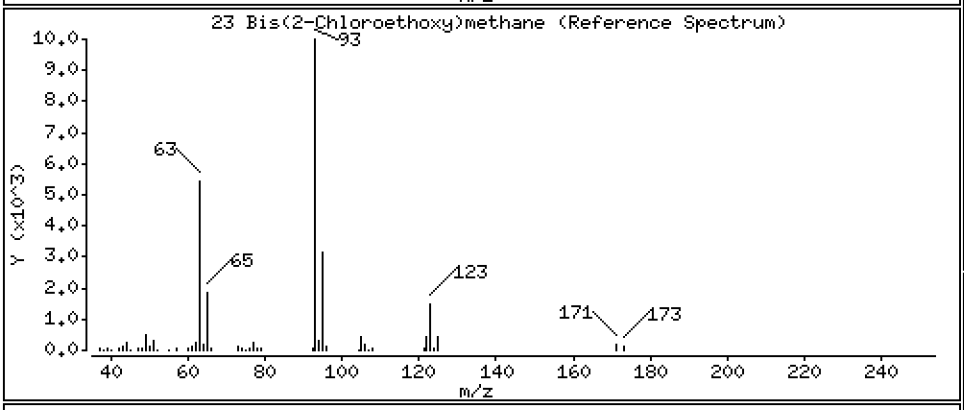
Column diameter: 0.25

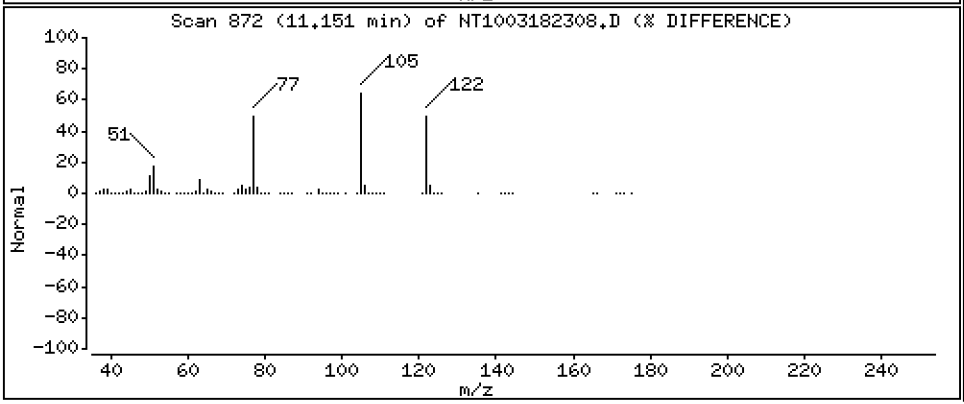
23 Bis(2-Chloroethoxy)methane

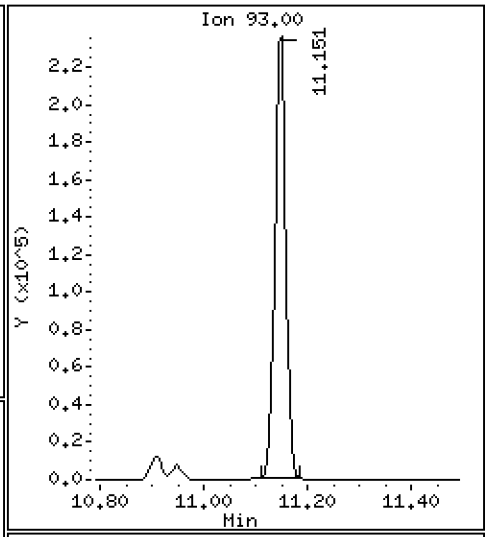
Concentration: 5.133 ug/mL

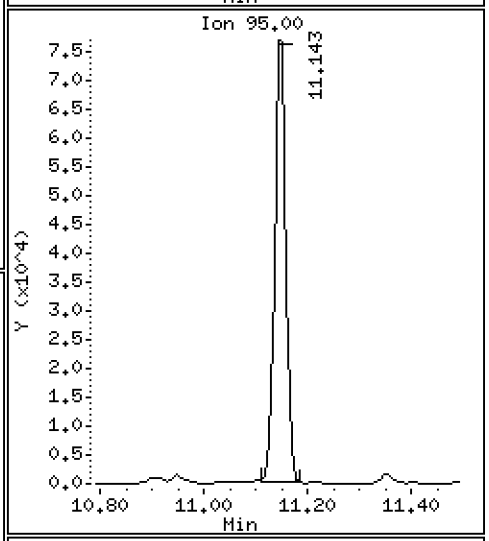


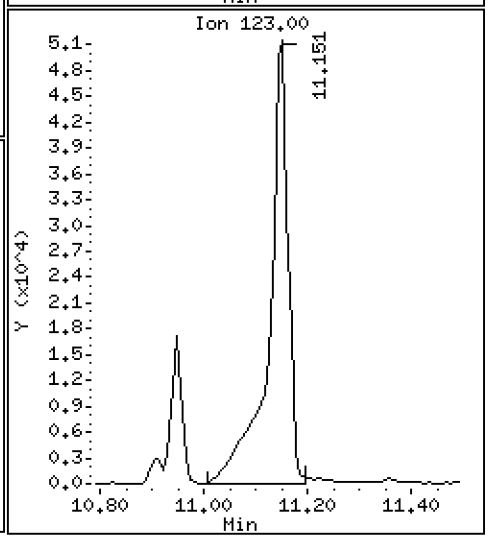












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

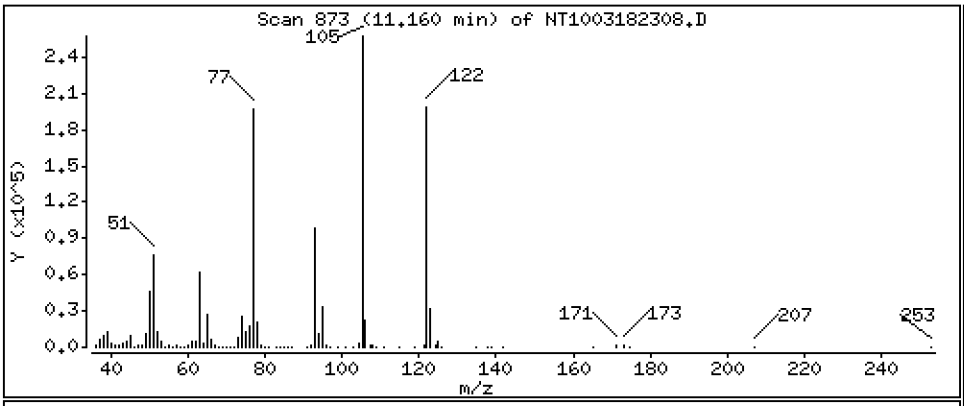
Operator: VTS

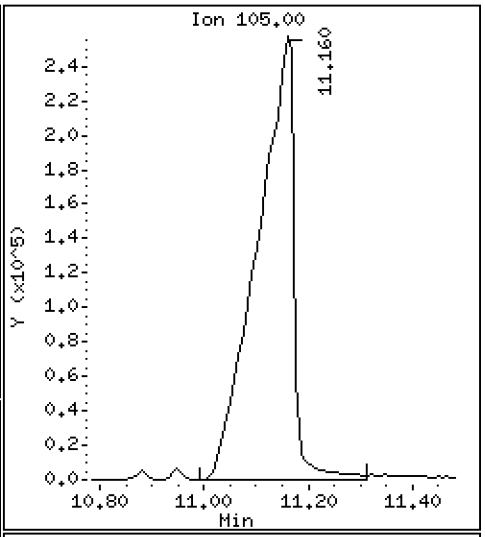
Column phase: ZB-5msi

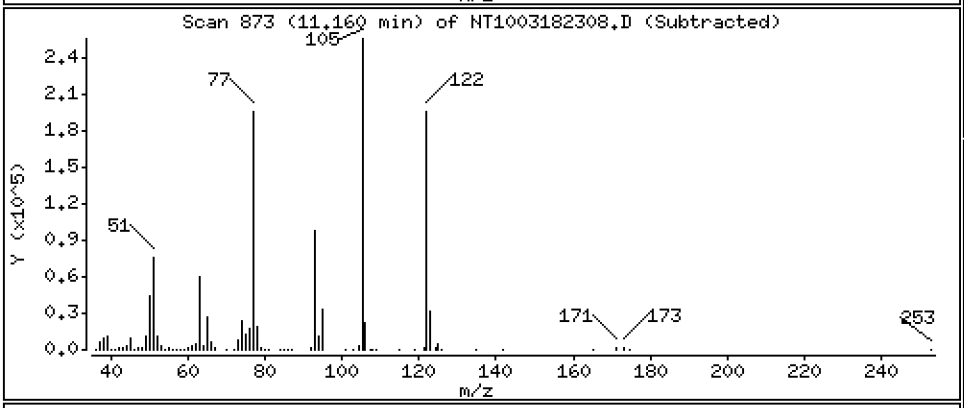
Column diameter: 0.25

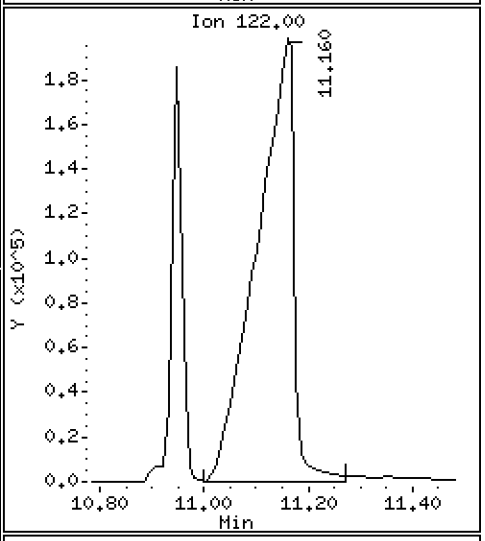
24 Benzoic acid

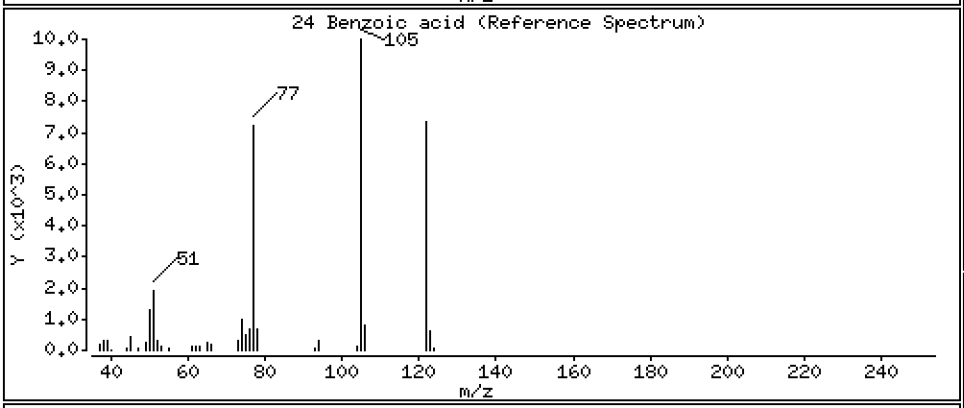
Concentration: 28.08 ug/mL

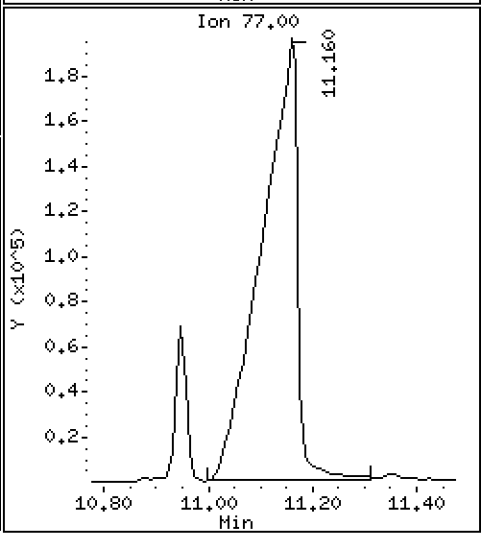


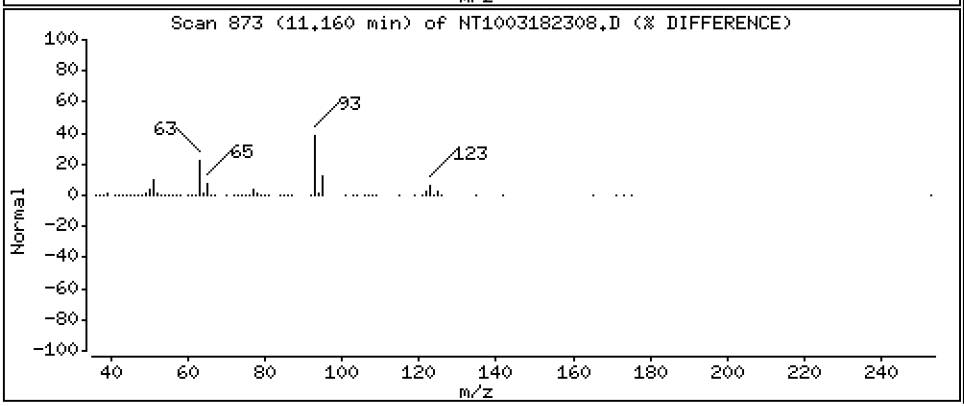












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

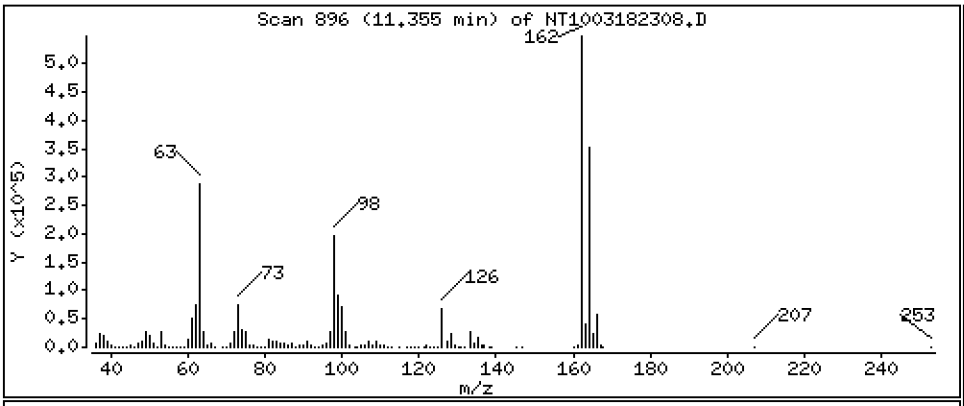
Operator: VTS

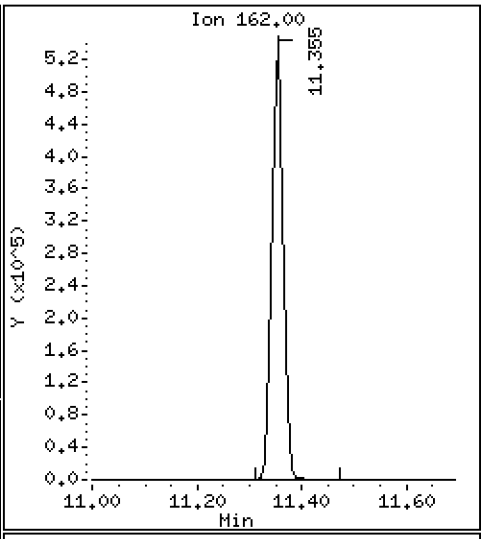
Column phase: ZB-5msi

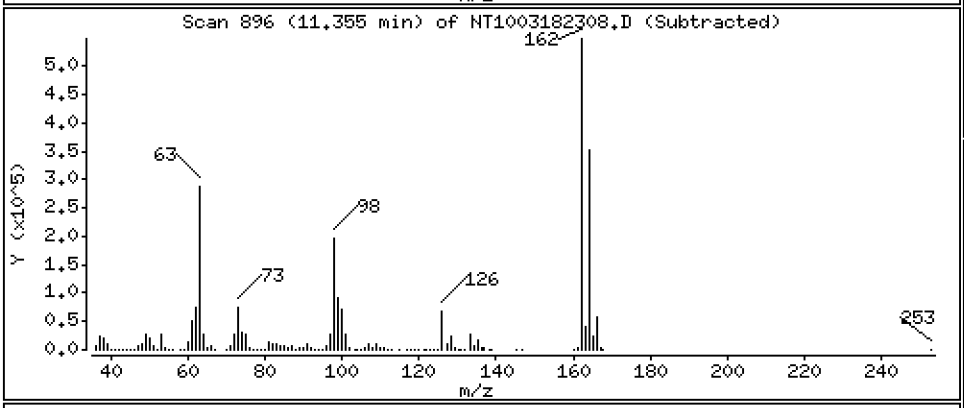
Column diameter: 0.25

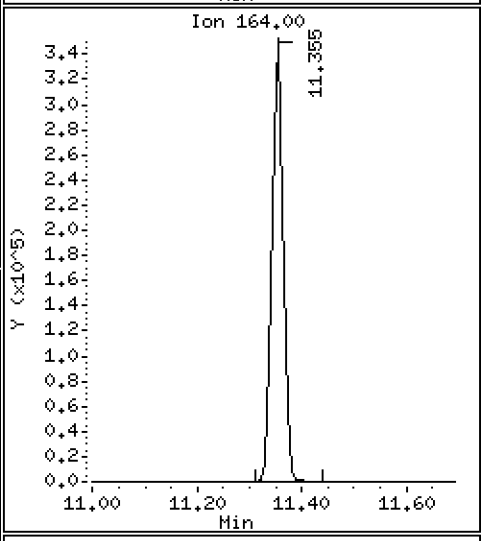
25 2,4-Dichlorophenol

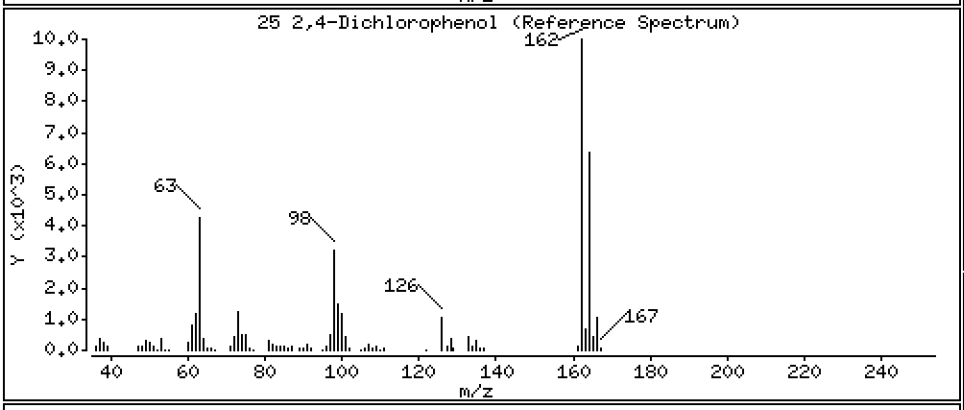
Concentration: 13.42 ug/mL

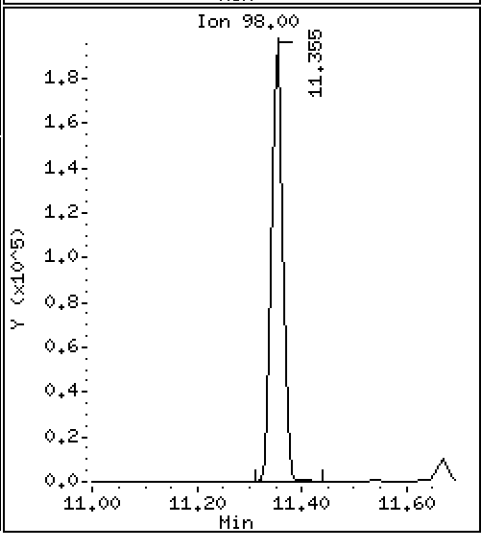


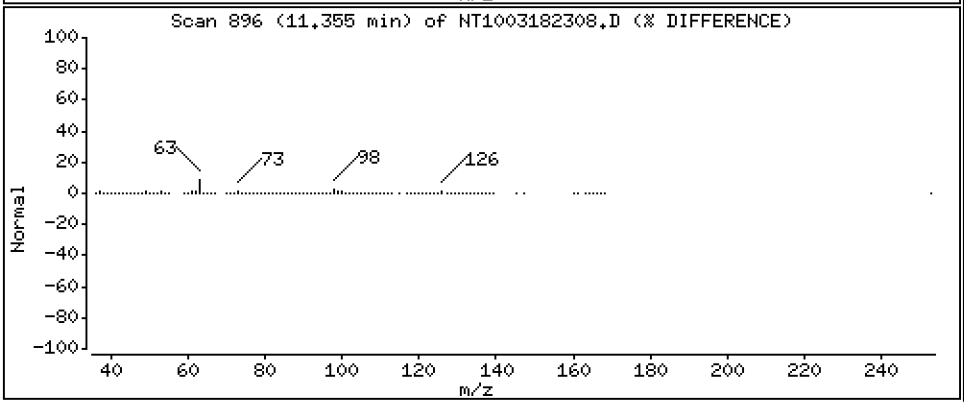












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

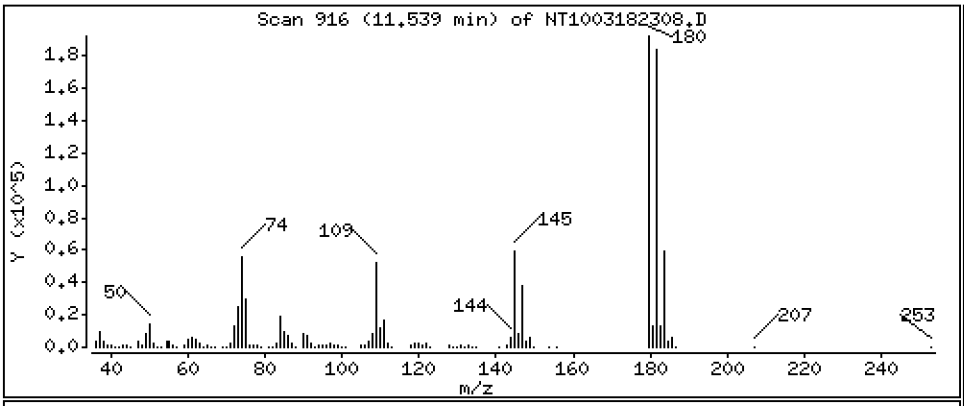
Operator: VTS

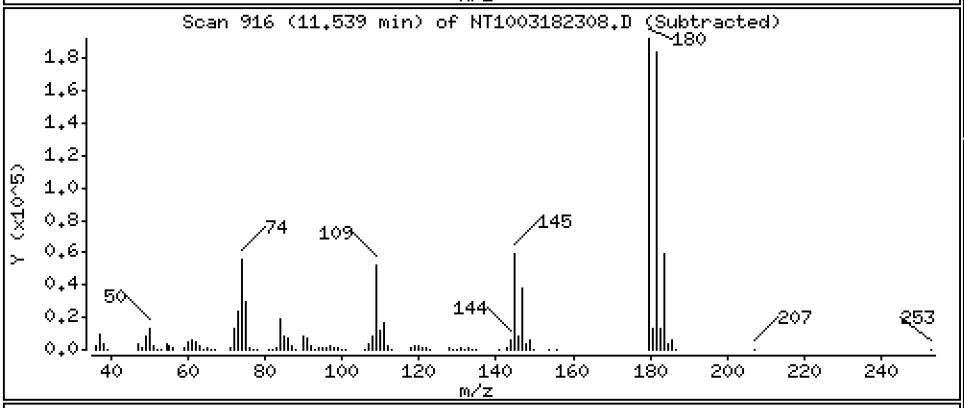
Column phase: ZB-5msi

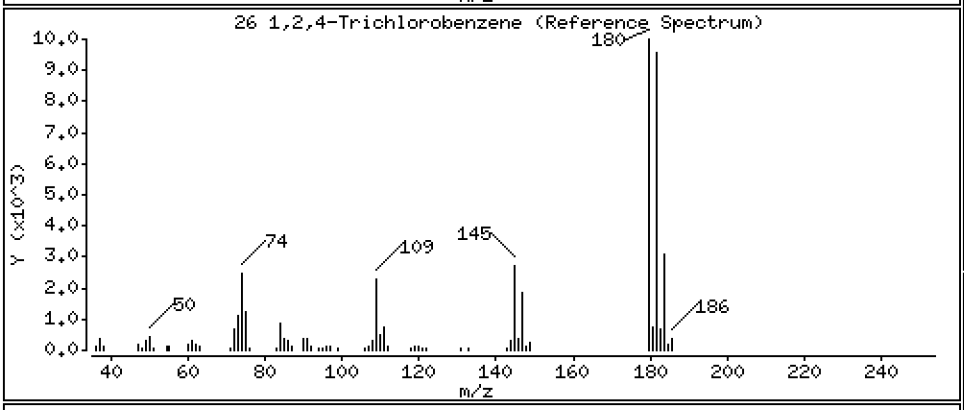
Column diameter: 0.25

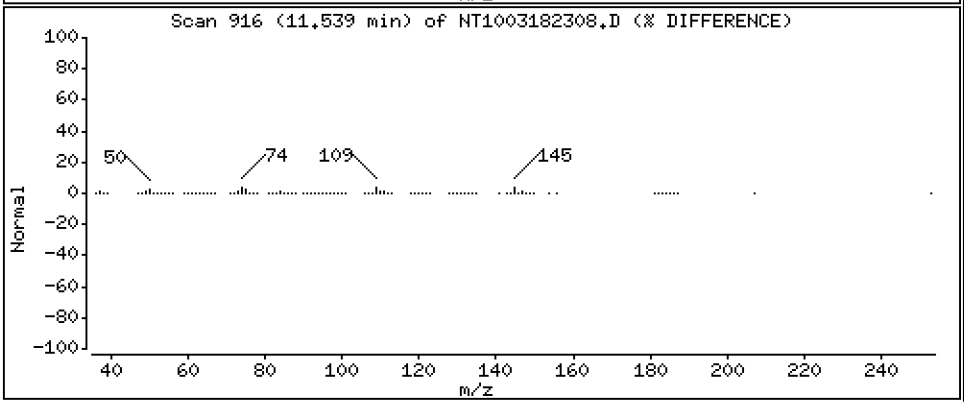
26 1,2,4-Trichlorobenzene

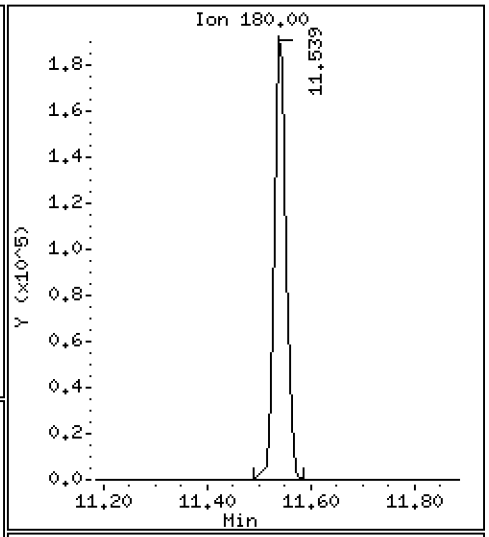
Concentration: 5.122 ug/mL

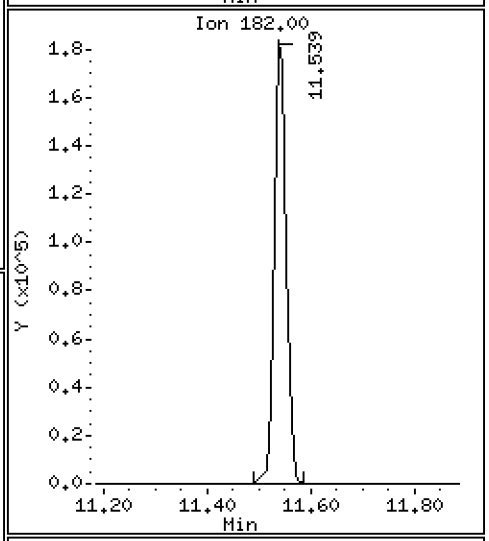


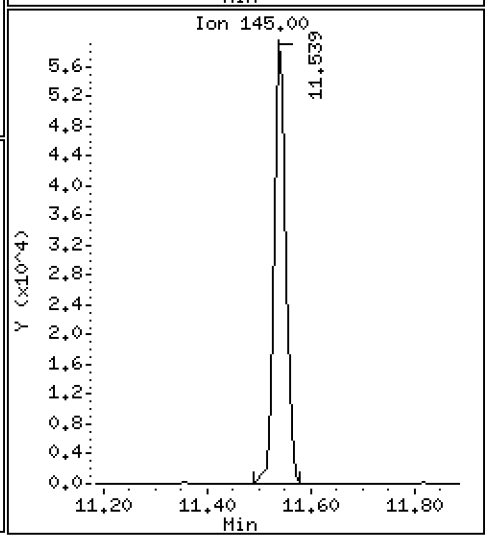












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

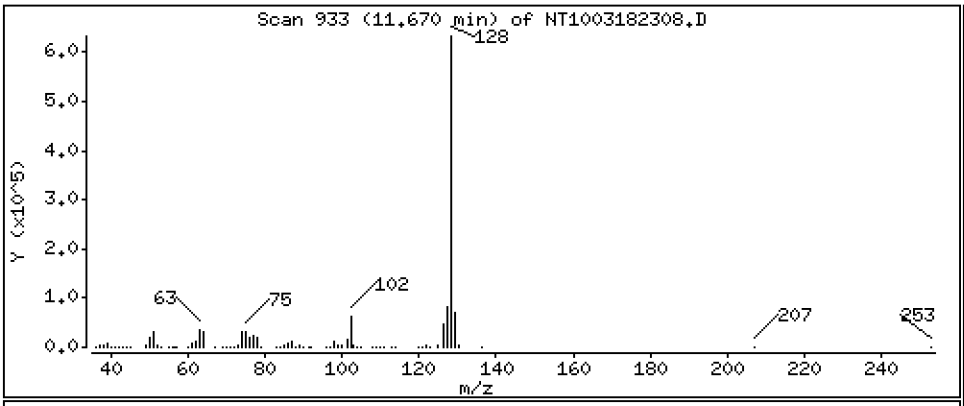
Operator: VTS

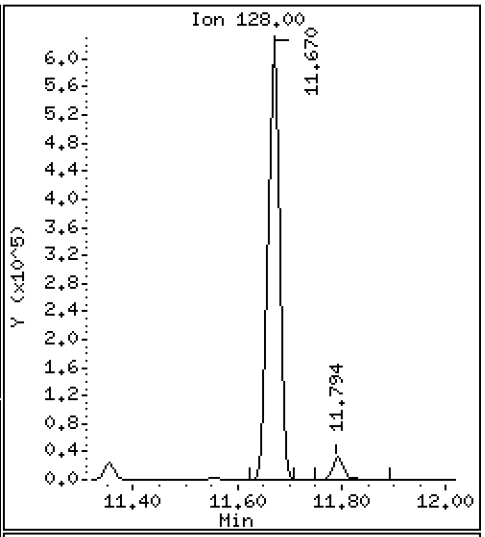
Column phase: ZB-5msi

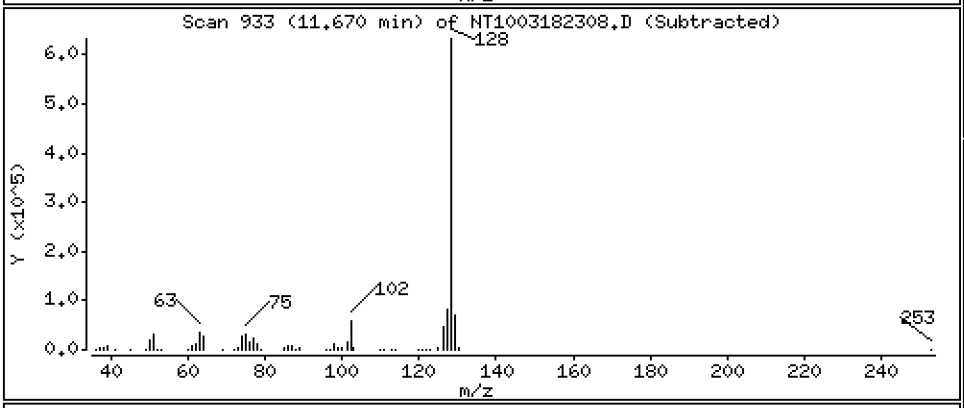
Column diameter: 0.25

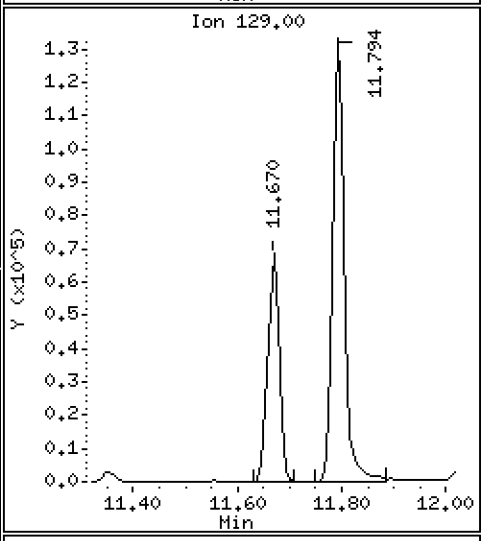
28 Naphthalene

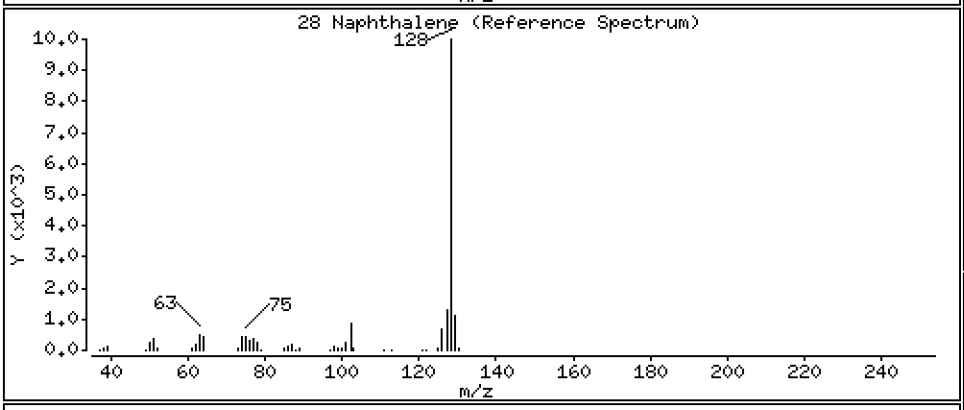
Concentration: 4.242 ug/mL

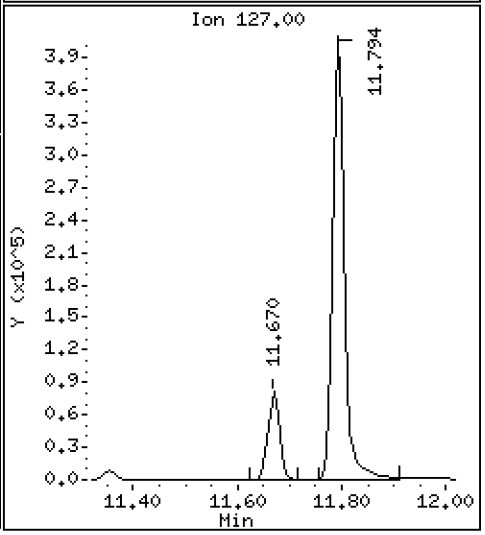


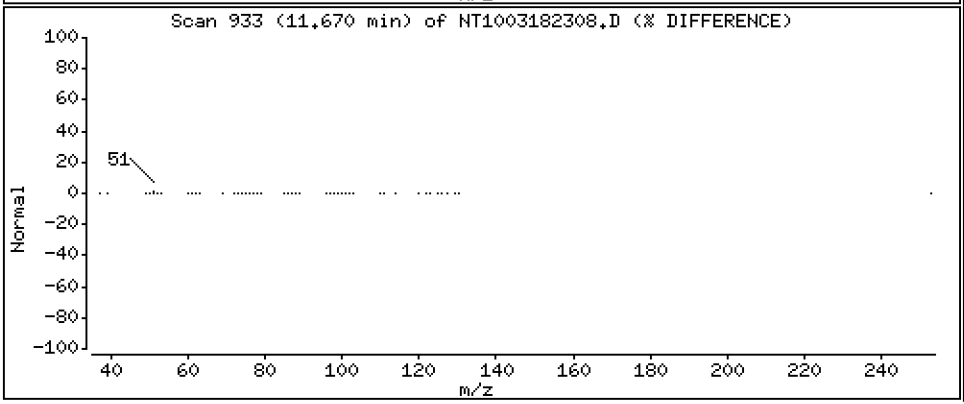












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

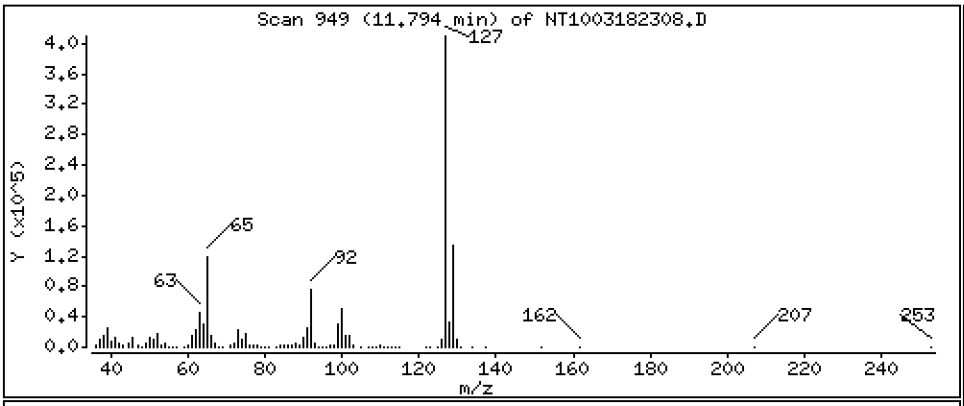
Operator: VTS

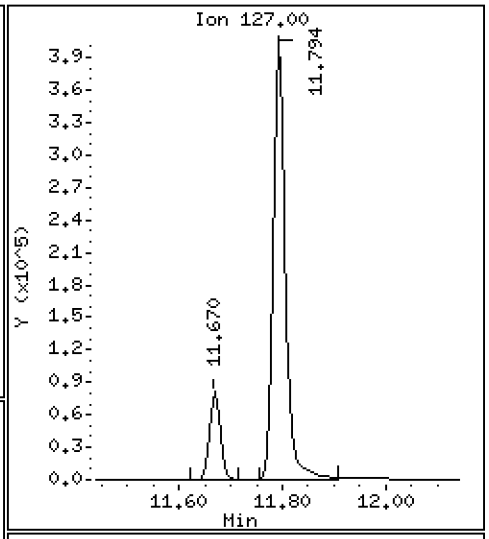
Column phase: ZB-5msi

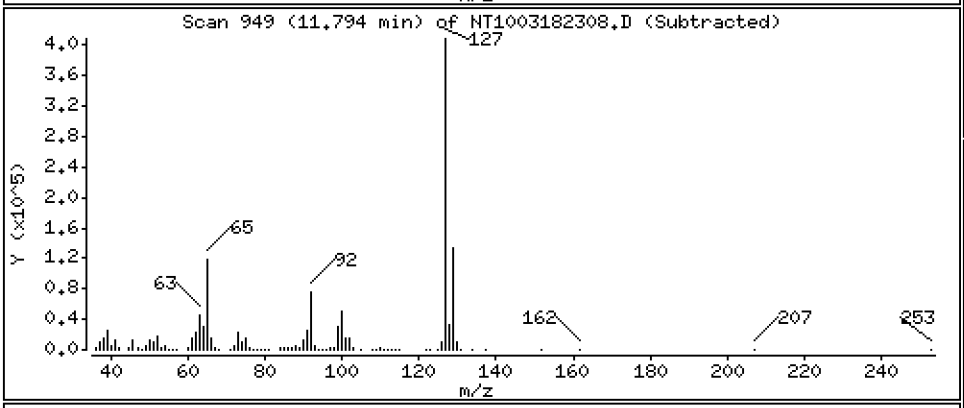
Column diameter: 0.25

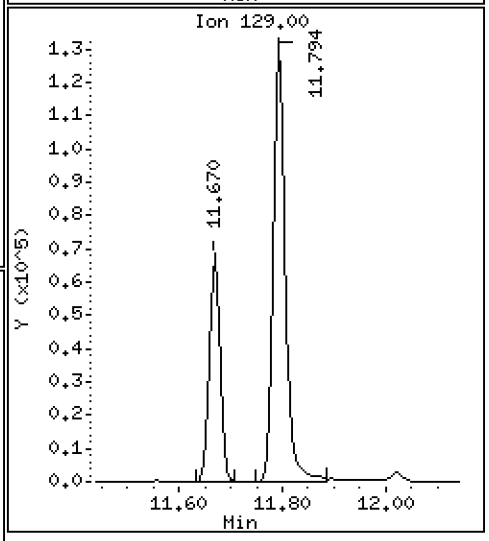
29 4-Chloroaniline

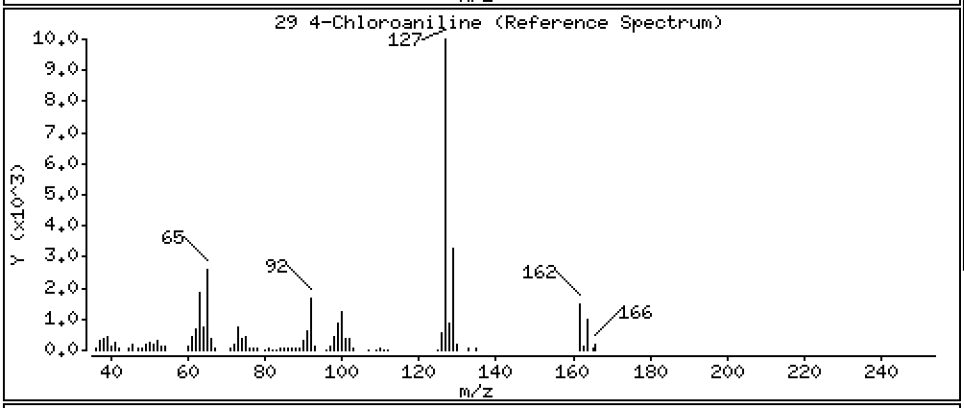
Concentration: 7.640 ug/mL

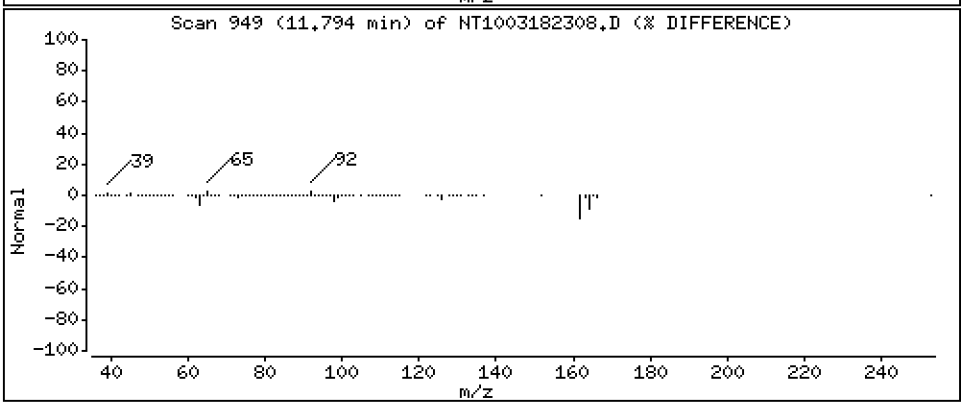












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

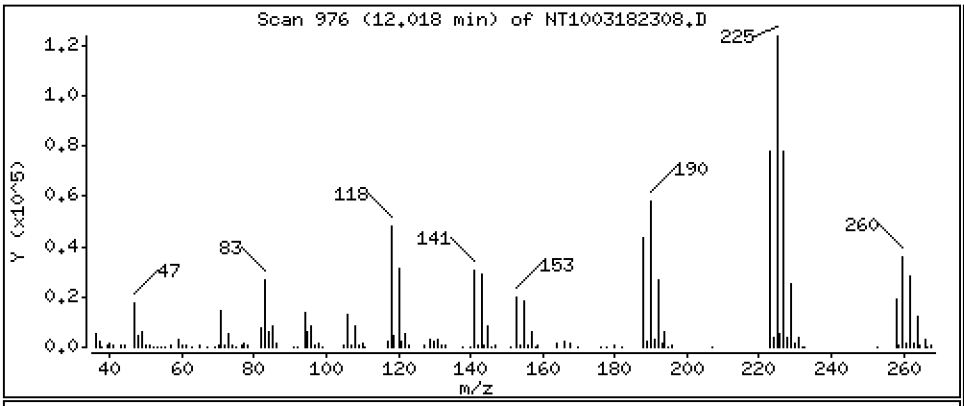
Operator: VTS

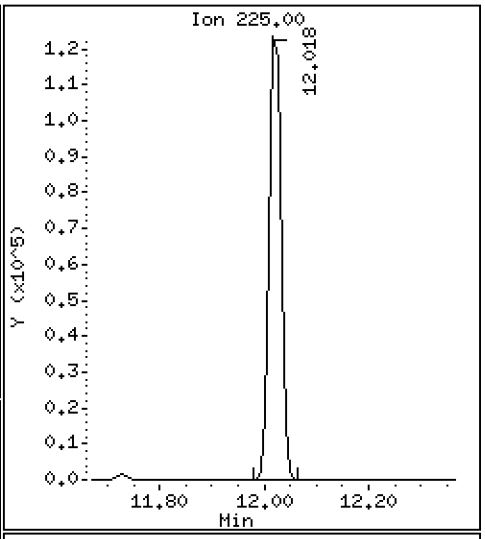
Column phase: ZB-5msi

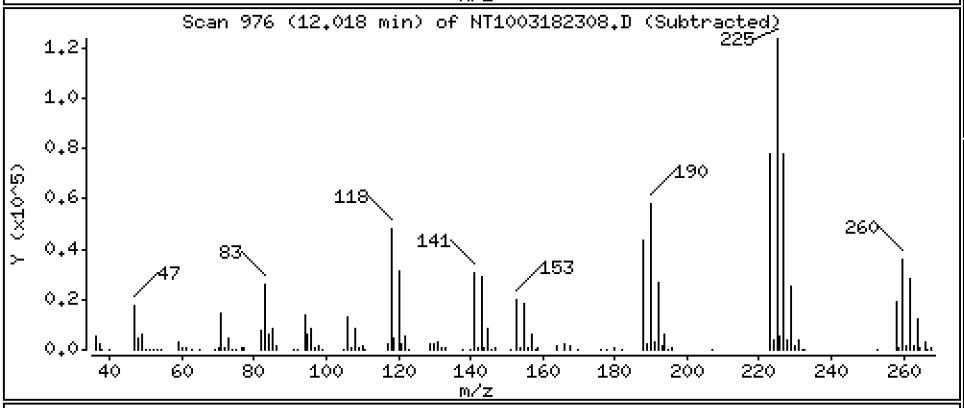
Column diameter: 0.25

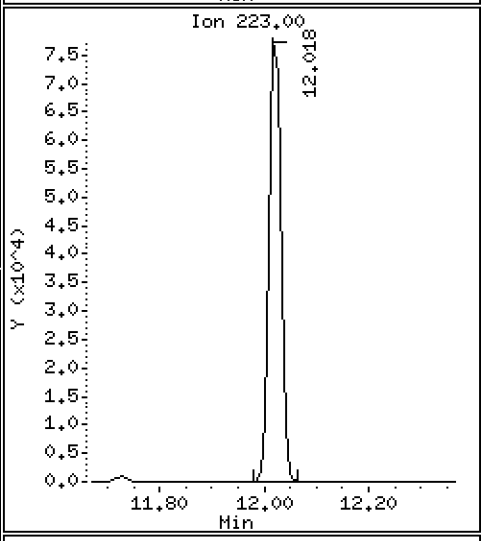
30 Hexachlorobutadiene

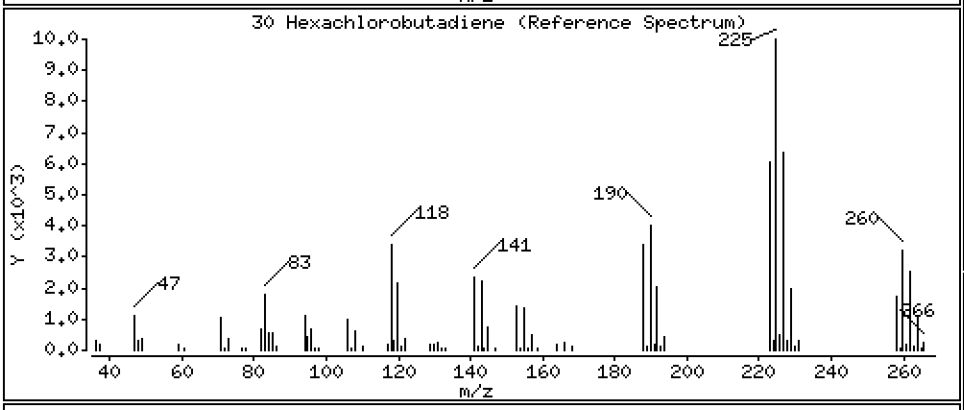
Concentration: 4.456 ug/mL

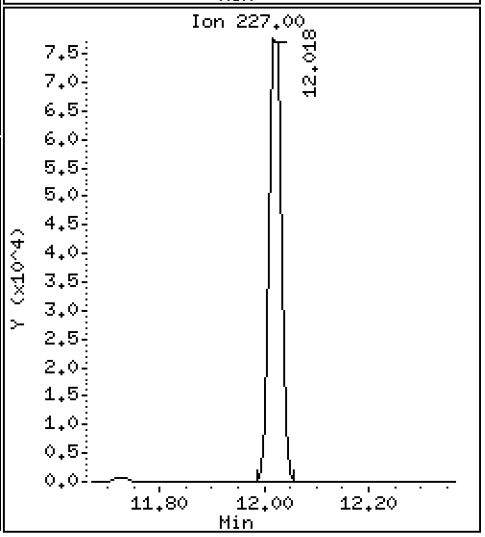


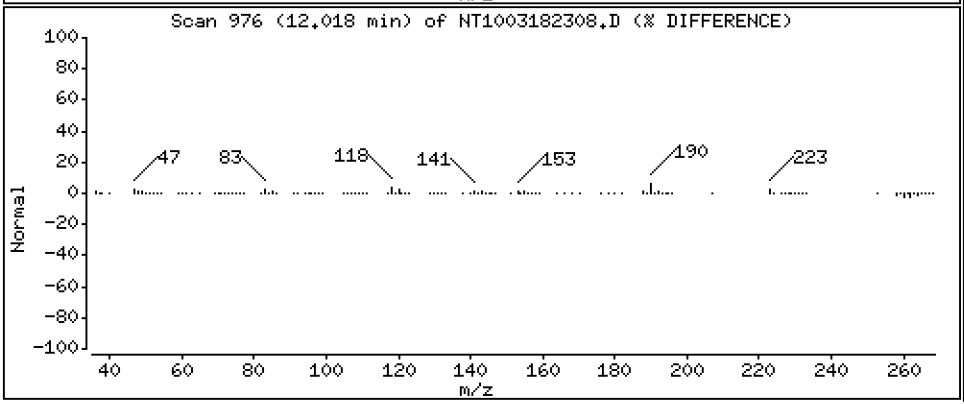












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

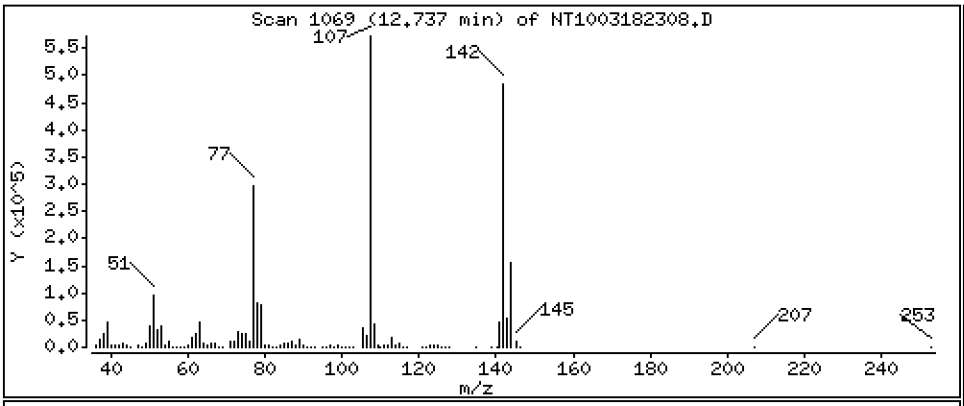
Operator: VTS

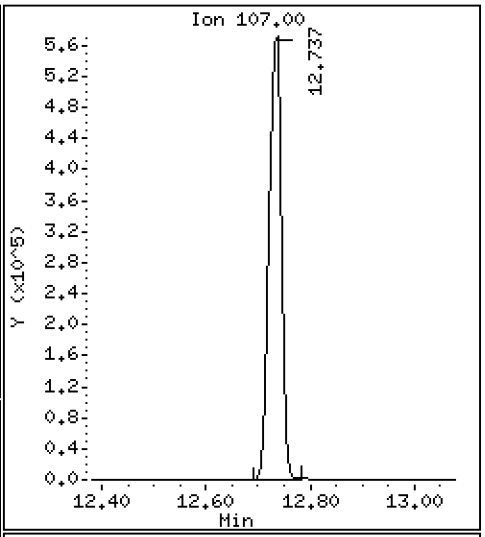
Column phase: ZB-5msi

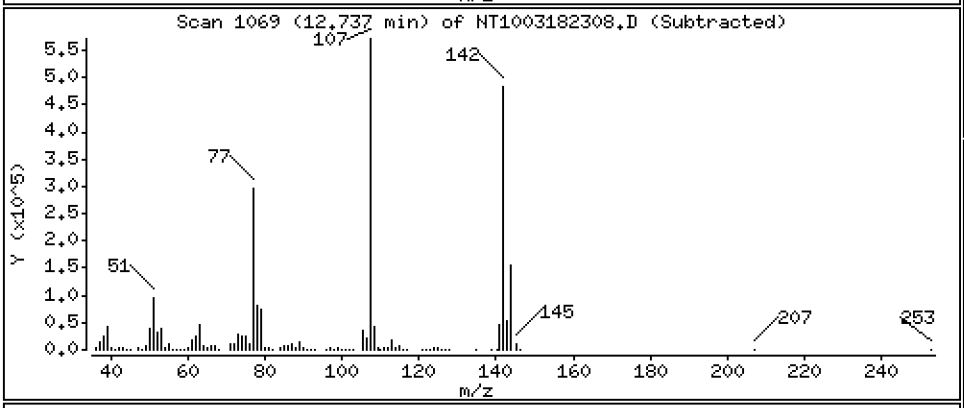
Column diameter: 0.25

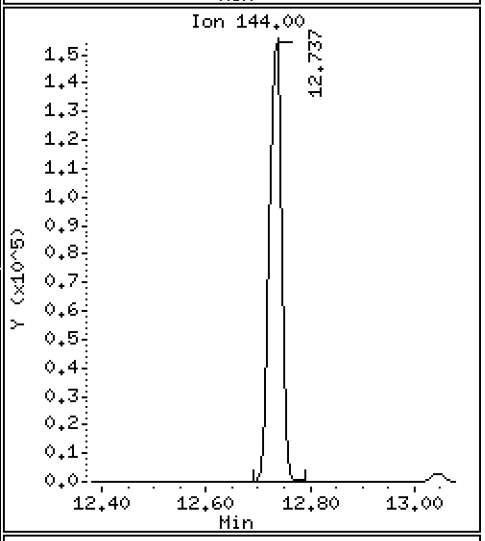
31 4-Chloro-3-methylphenol

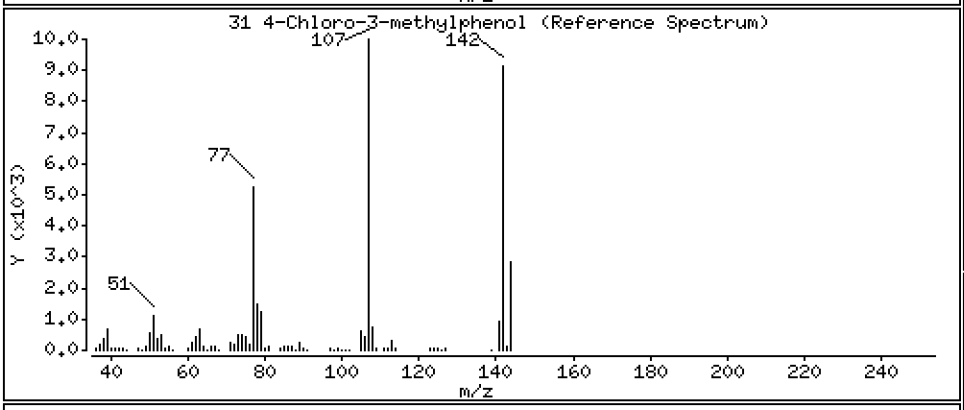
Concentration: 13.53 ug/mL

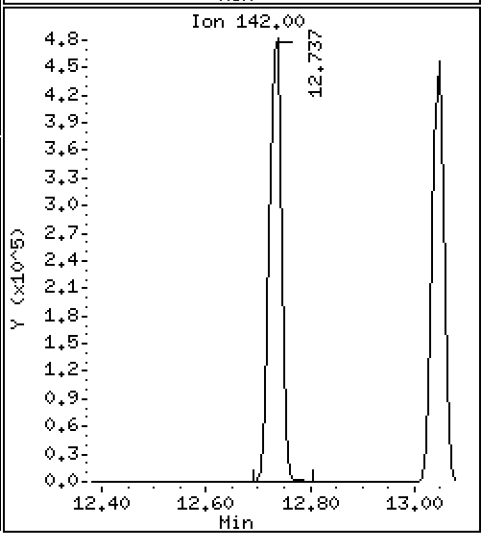


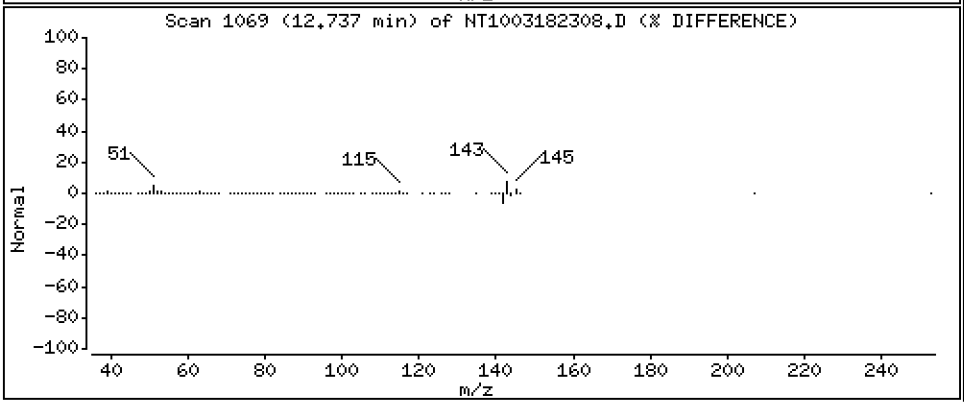












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

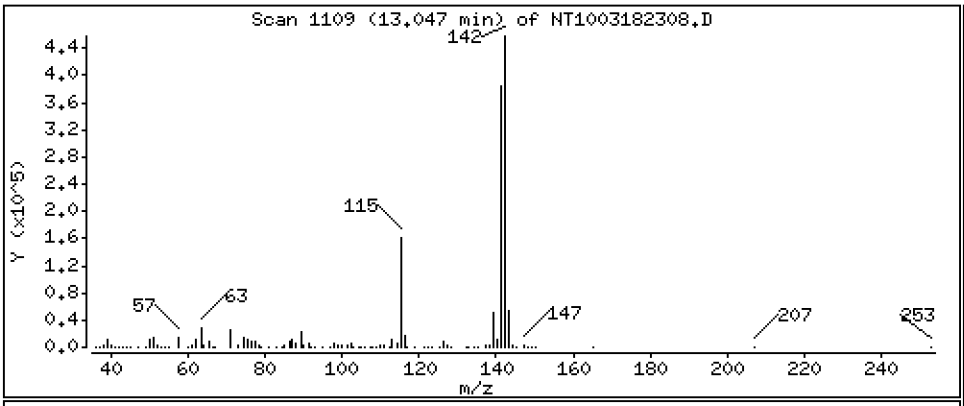
Operator: VTS

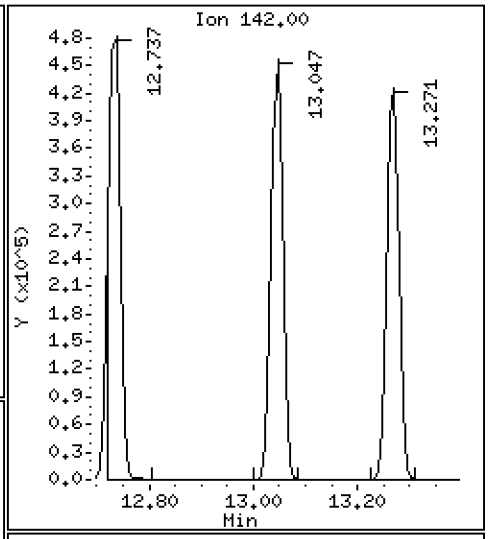
Column phase: ZB-5msi

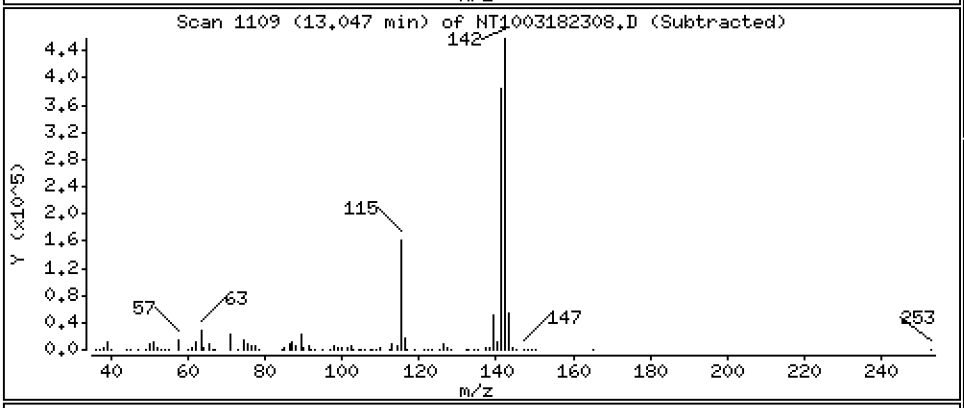
Column diameter: 0.25

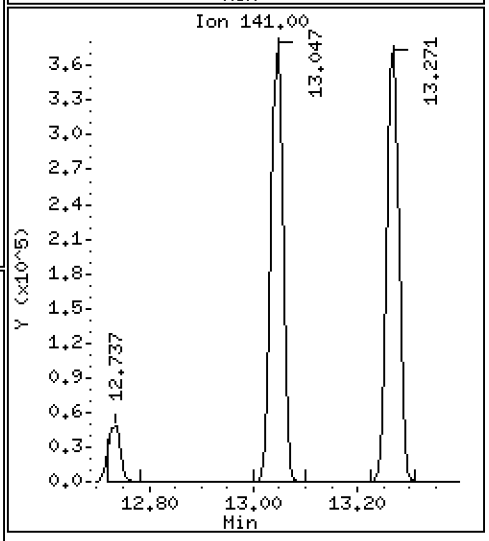
32 2-Methylnaphthalene

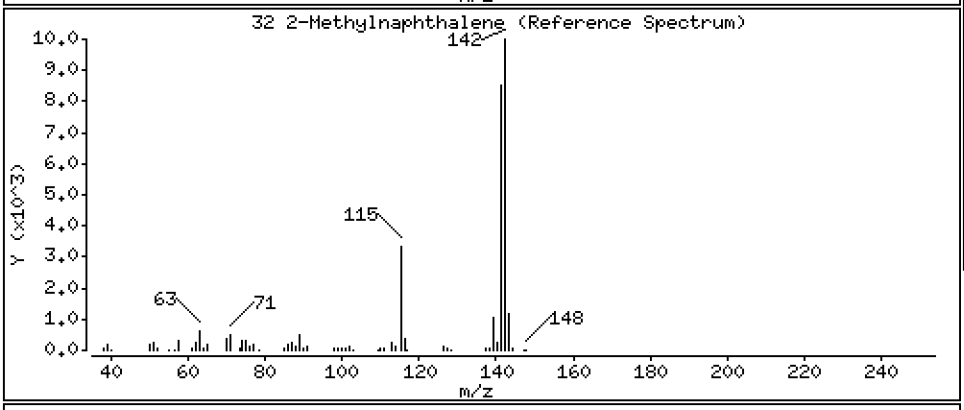
Concentration: 4.278 ug/mL

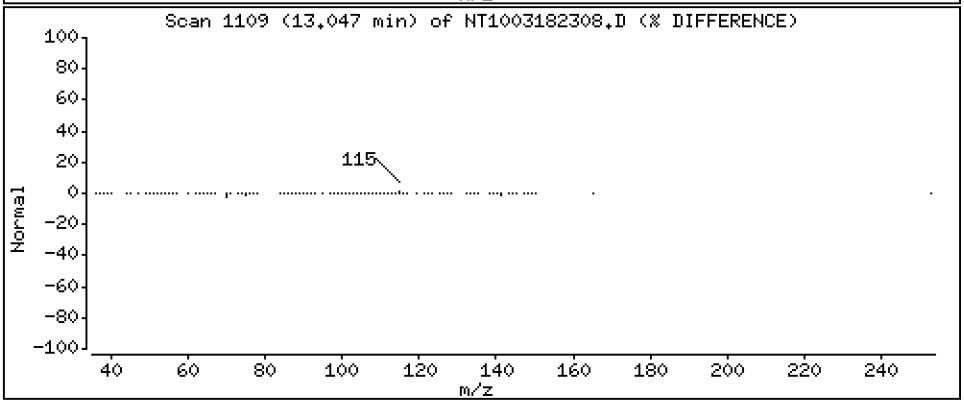












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

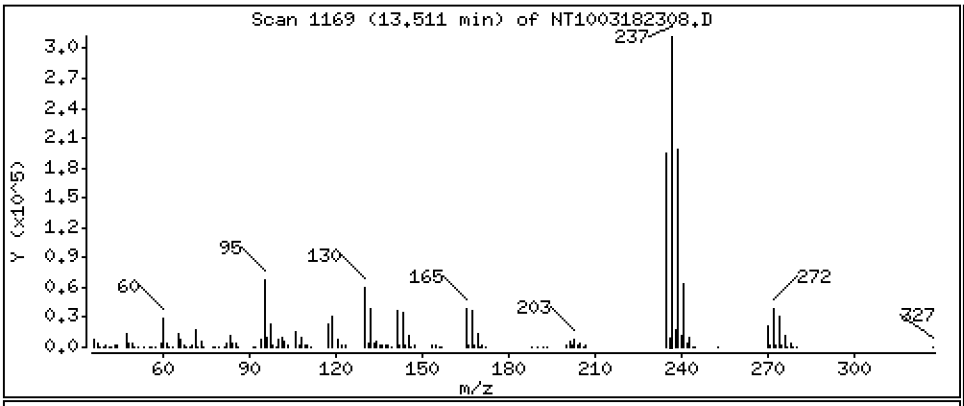
Operator: VTS

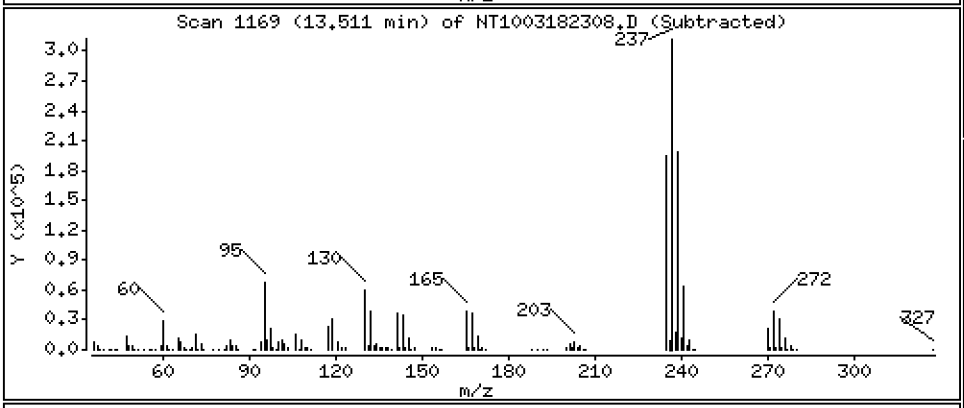
Column phase: ZB-5msi

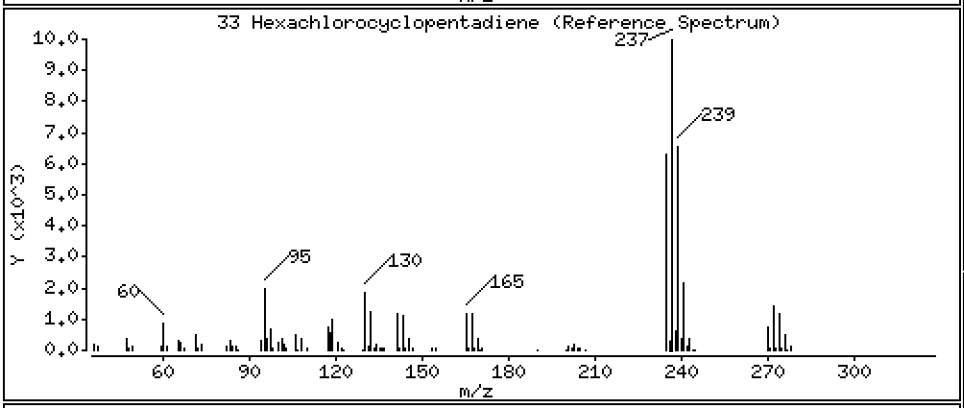
Column diameter: 0.25

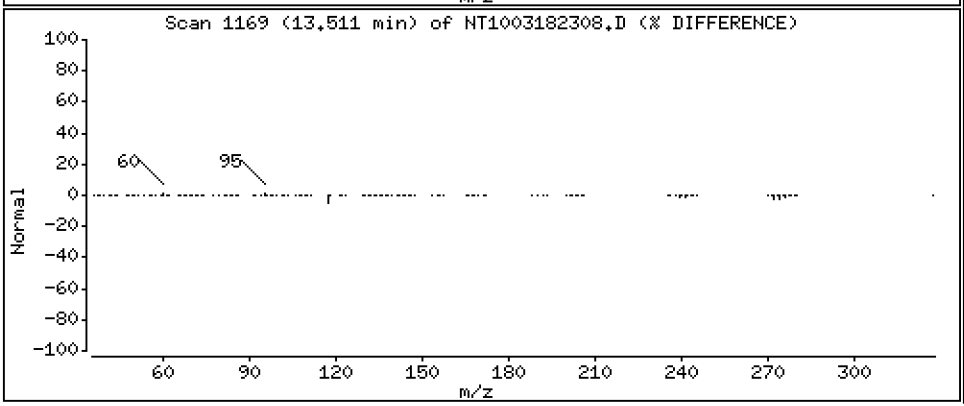
33 Hexachlorocyclopentadiene

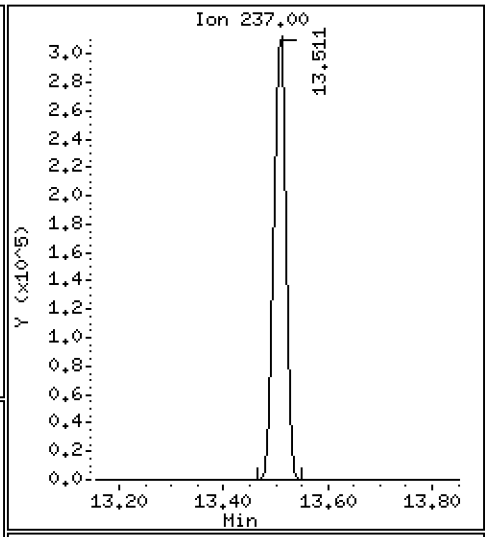
Concentration: 11.62 ug/mL

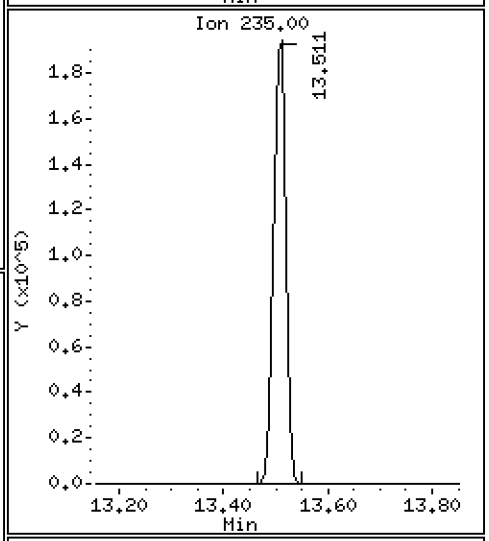


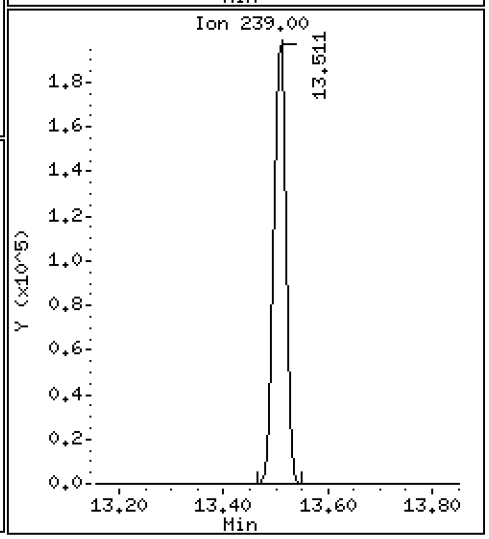












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

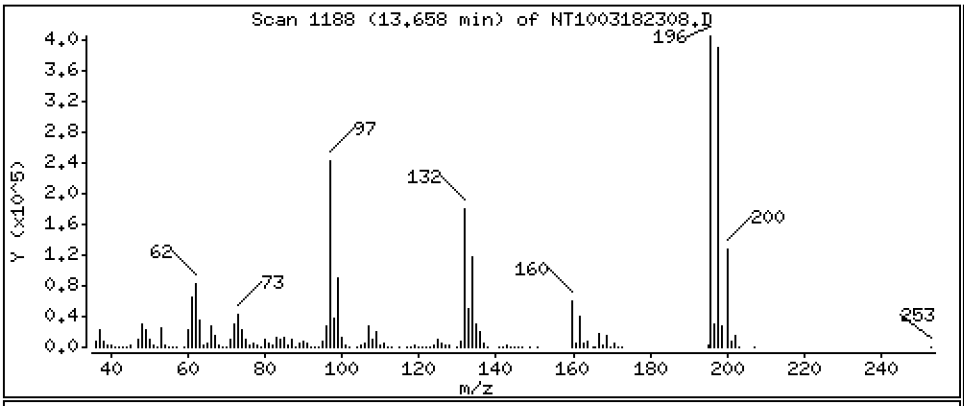
Operator: VTS

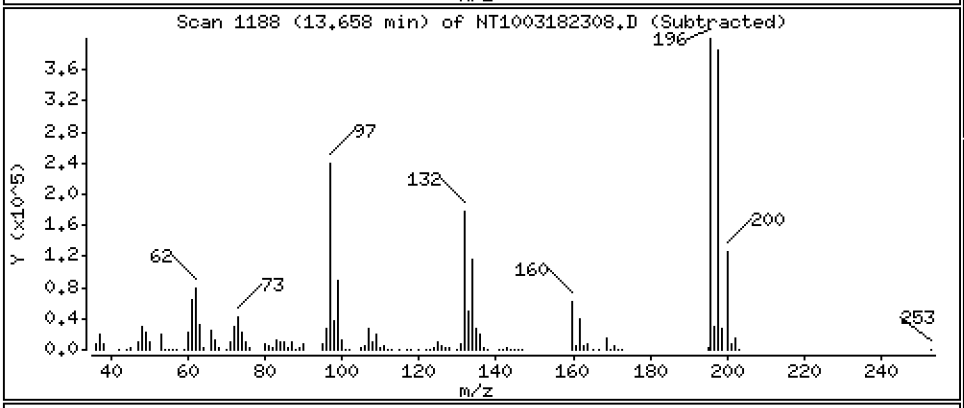
Column phase: ZB-5msi

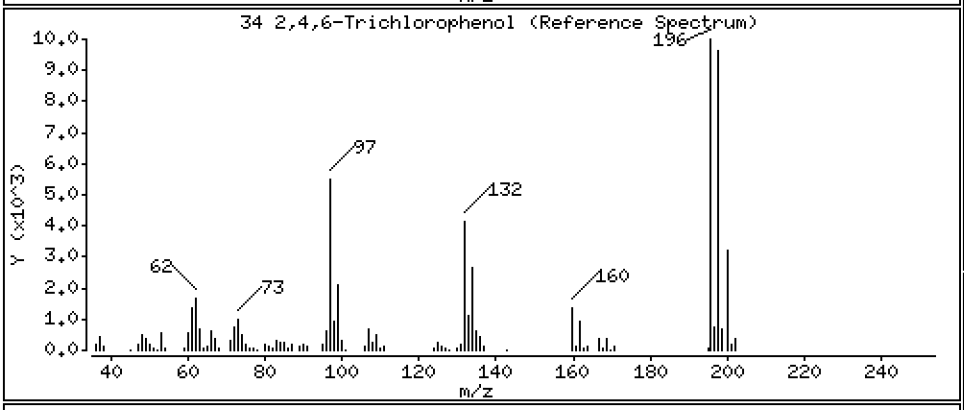
Column diameter: 0.25

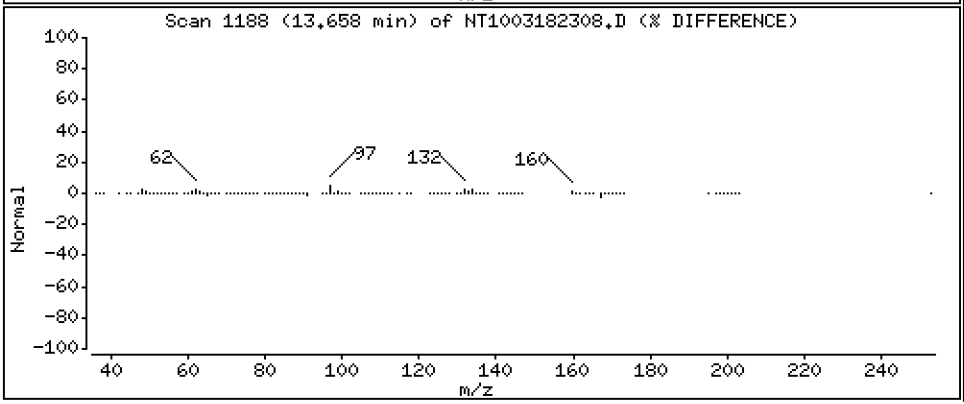
34 2,4,6-Trichlorophenol

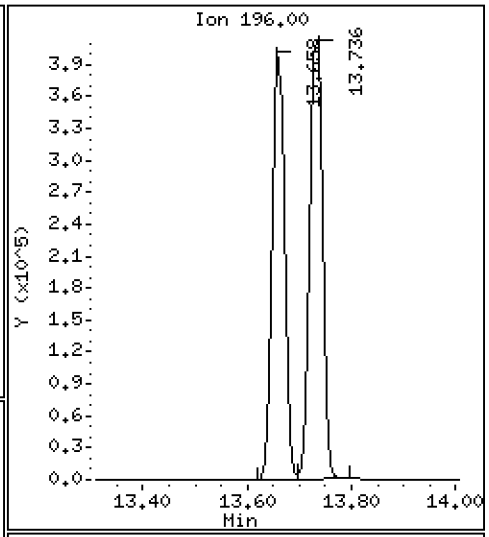
Concentration: 13.95 ug/mL

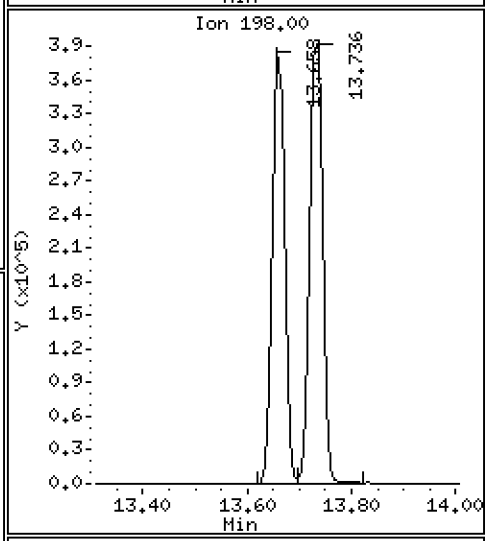


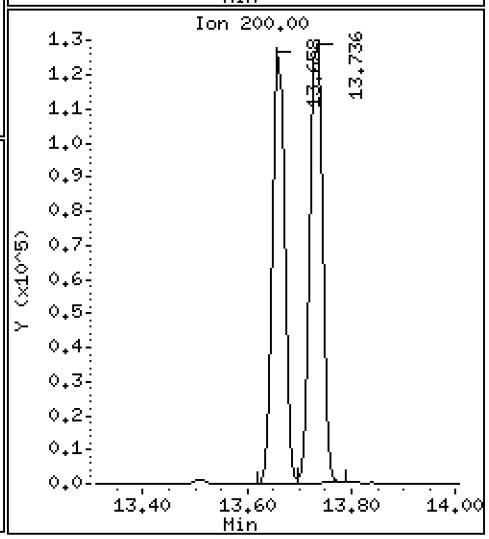












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

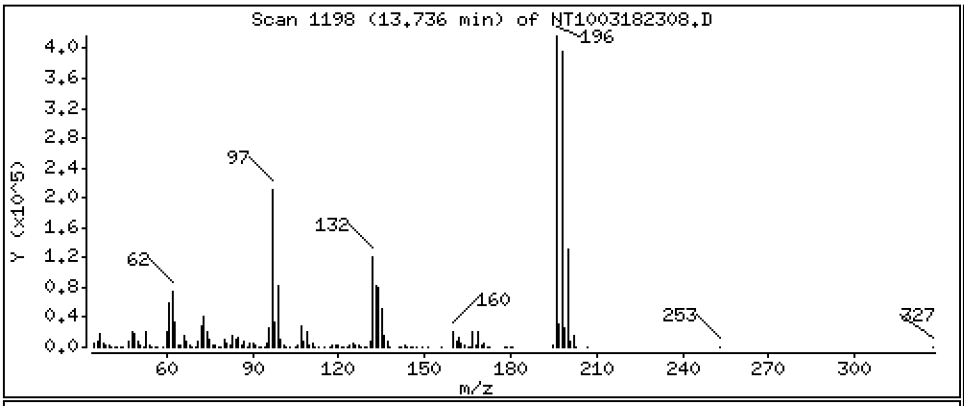
Operator: VTS

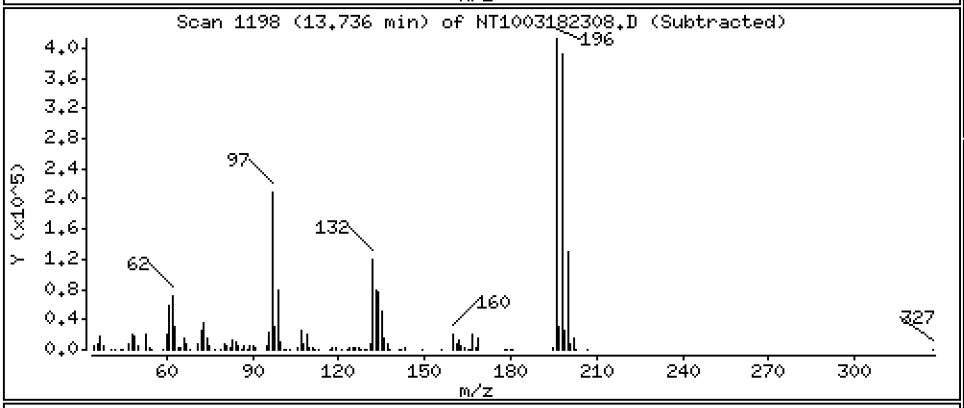
Column phase: ZB-5msi

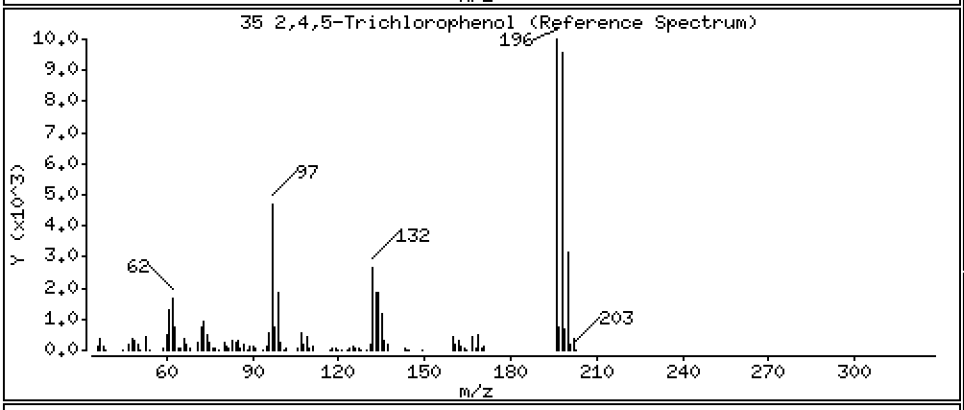
Column diameter: 0.25

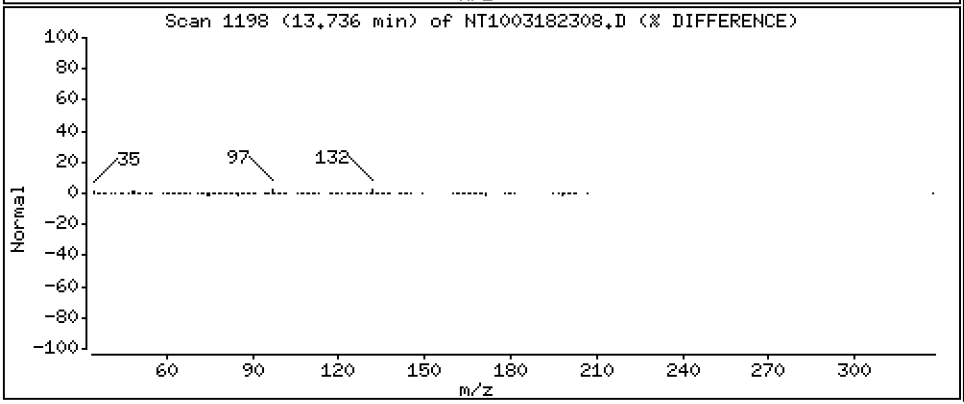
35 2,4,5-Trichlorophenol

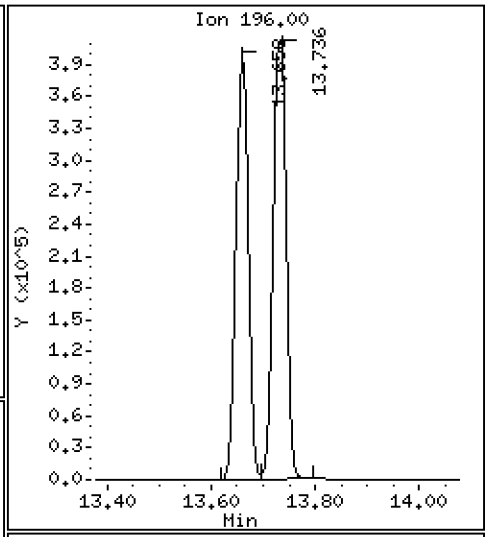
Concentration: 13.55 ug/mL

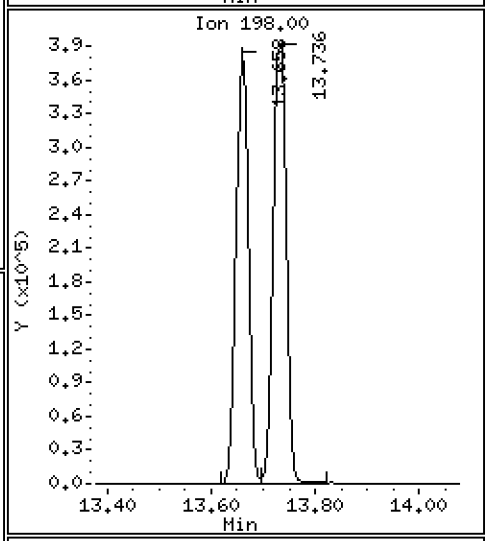


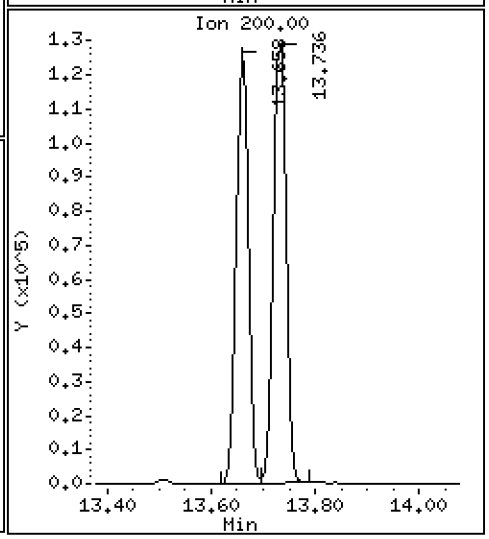












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

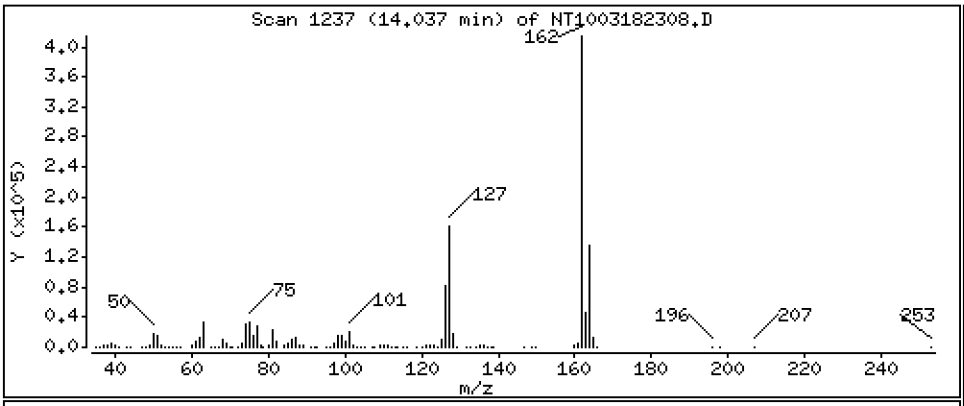
Operator: VTS

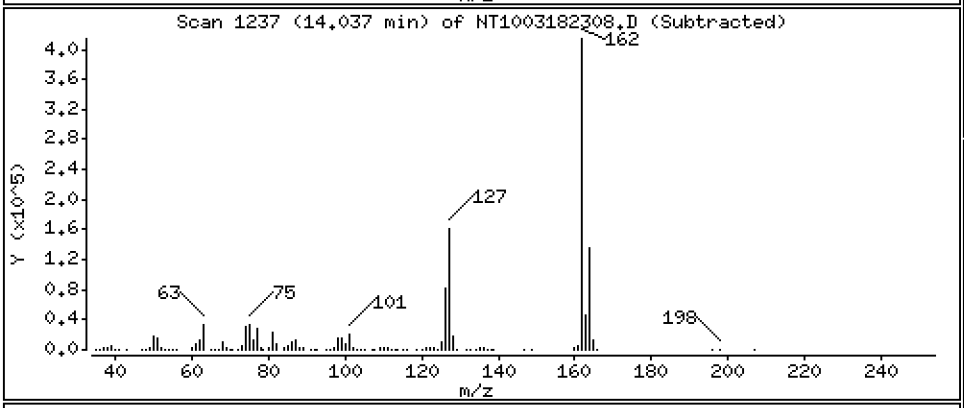
Column phase: ZB-5msi

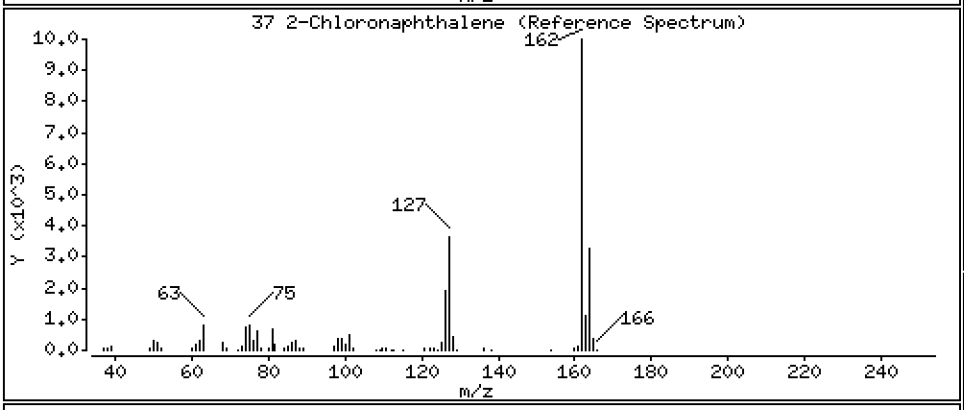
Column diameter: 0.25

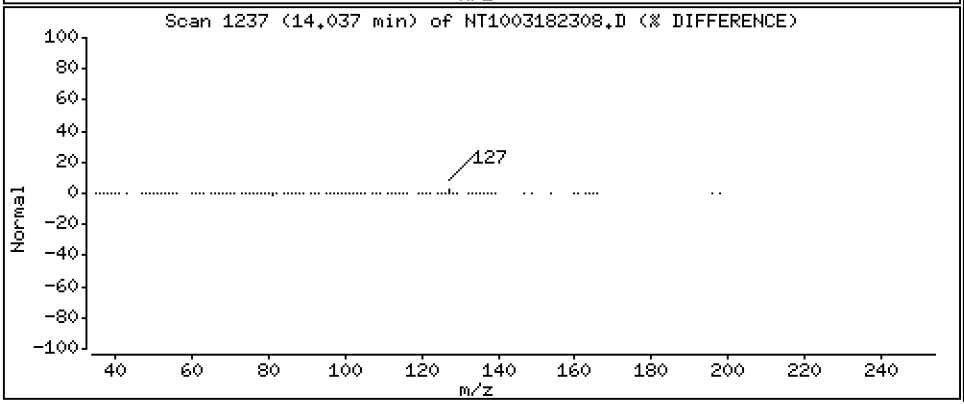
37 2-Chloronaphthalene

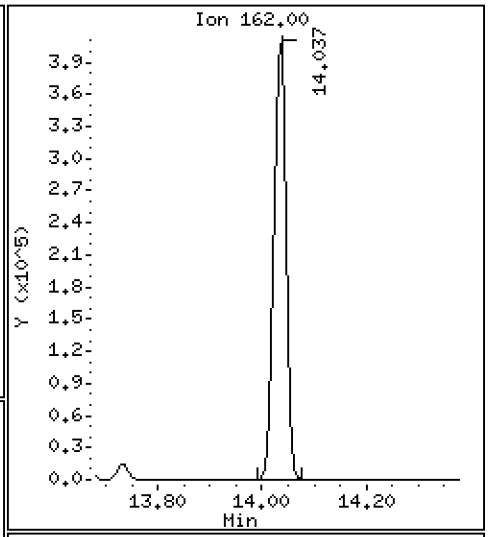
Concentration: 4.433 ug/mL

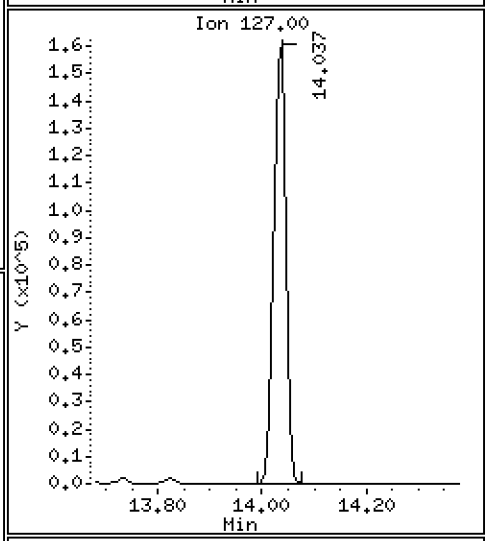


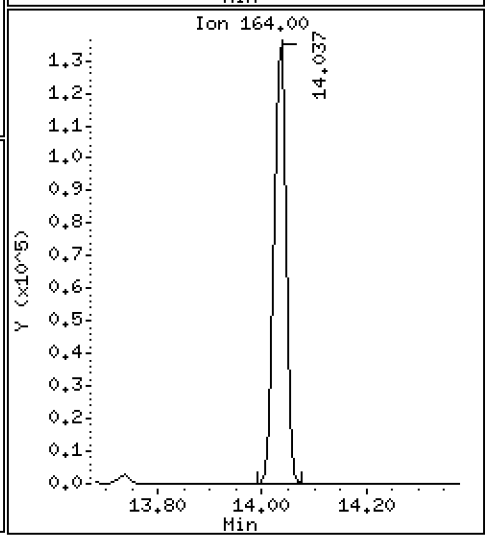












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

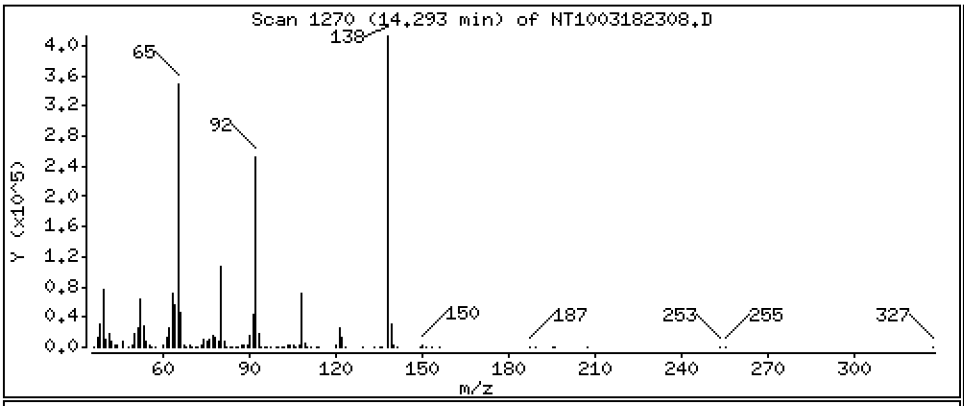
Operator: VTS

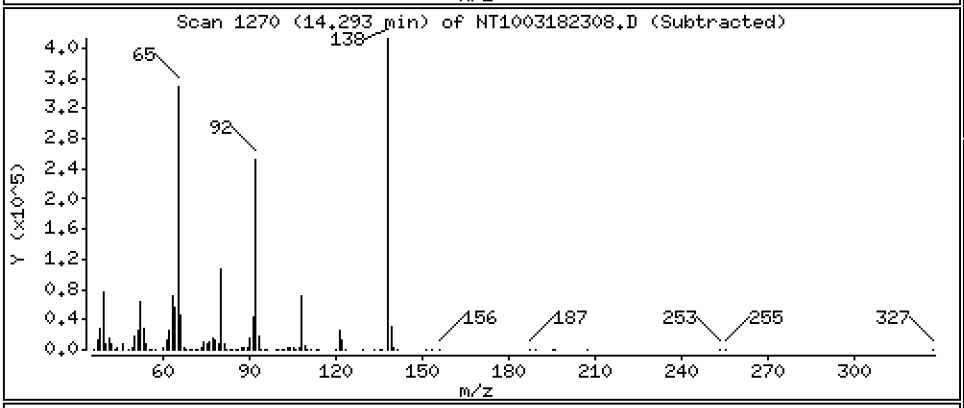
Column phase: ZB-5msi

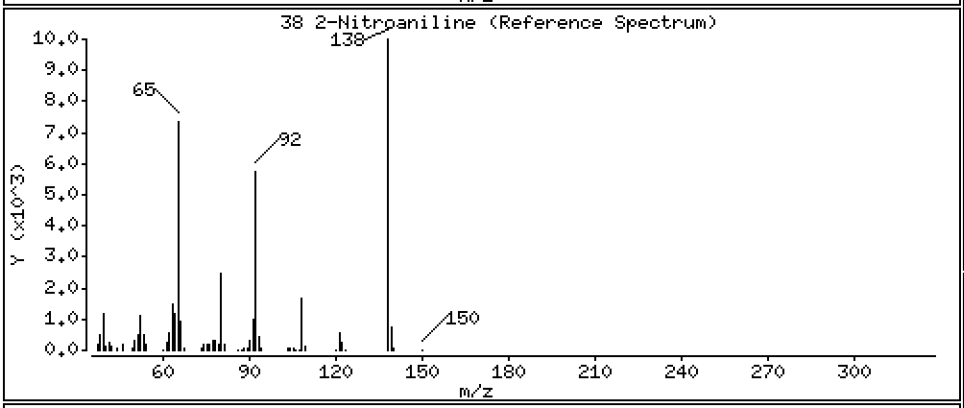
Column diameter: 0.25

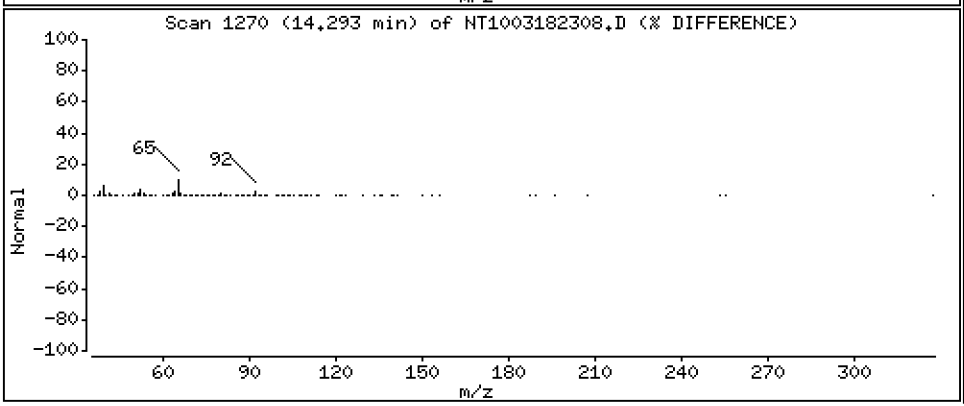
38 2-Nitroaniline

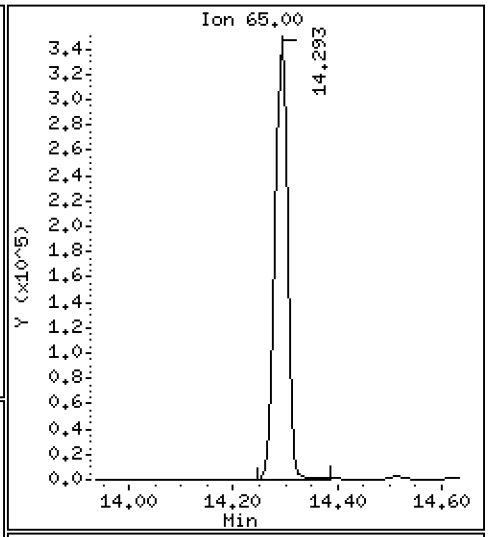
Concentration: 13.62 ug/mL

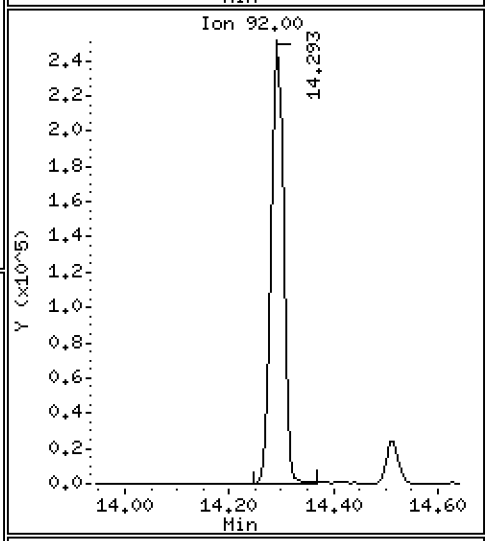


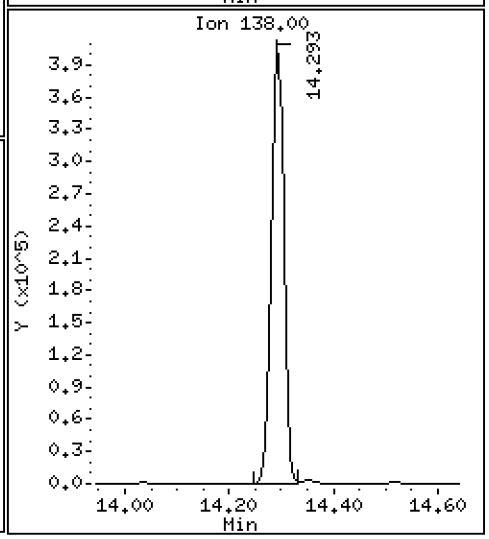












Date : 18-MAR-2023 22:12

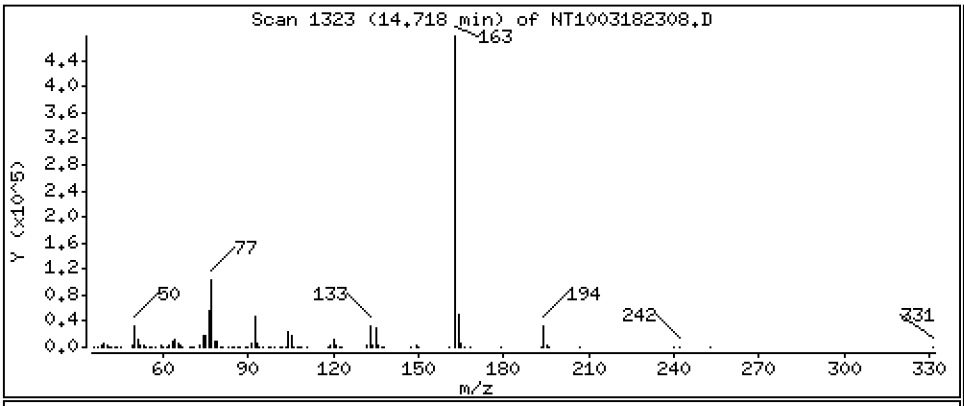
Client ID: Instrument: nt10.i

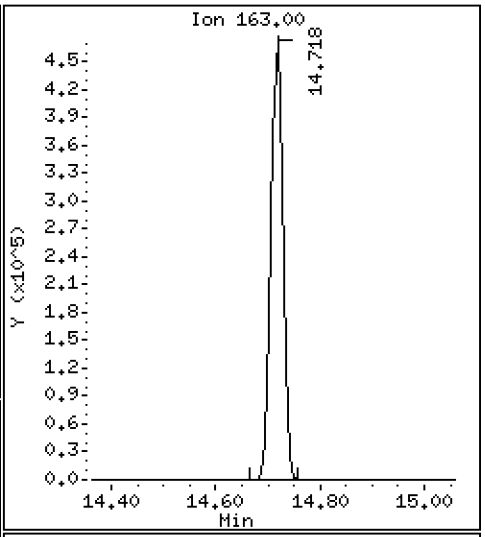
Sample Info: BLB0579-BSD1

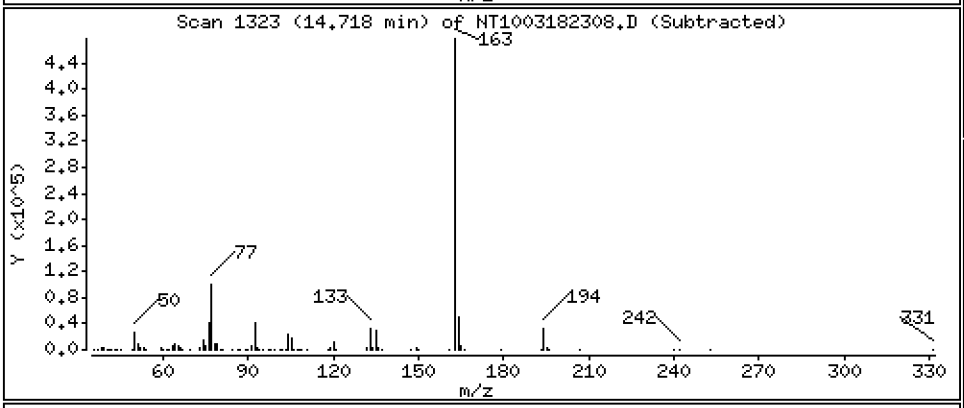
Operator: VTS

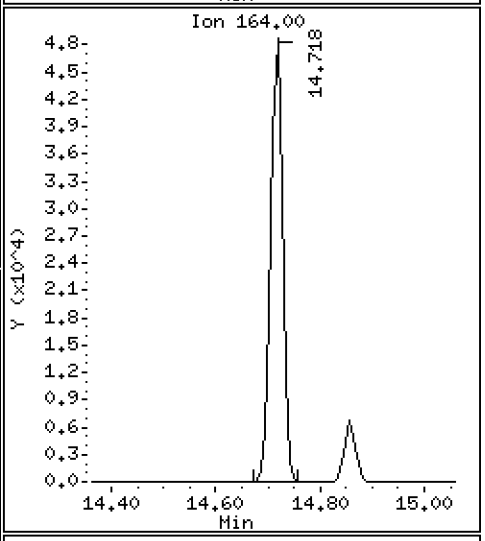
Column phase: ZB-5msi Column diameter: 0.25

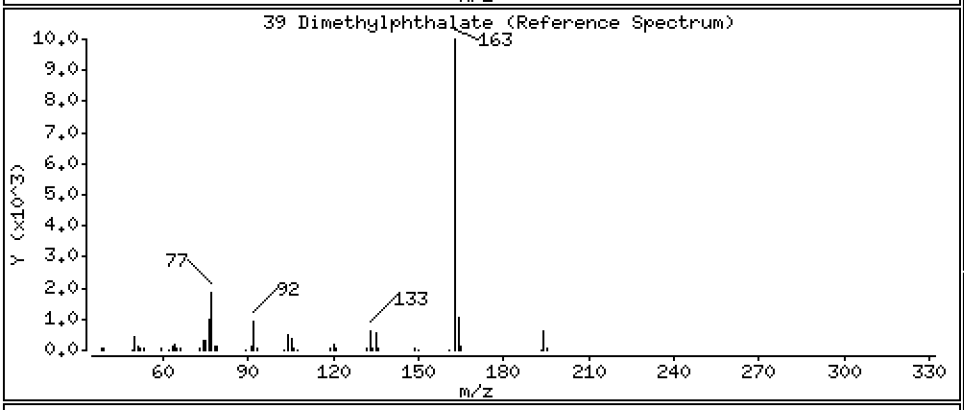
39 Dimethylphthalate Concentration: 4.907 ug/mL

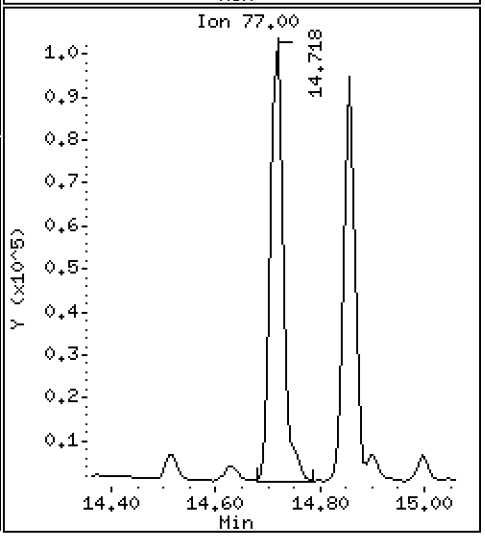


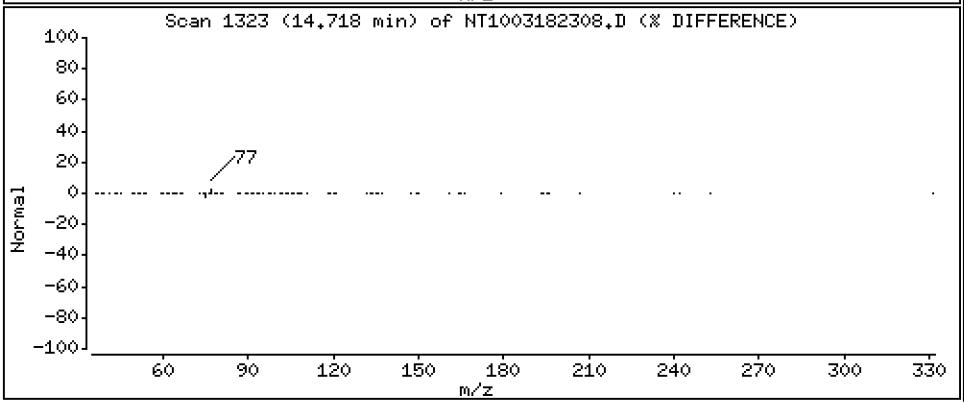












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

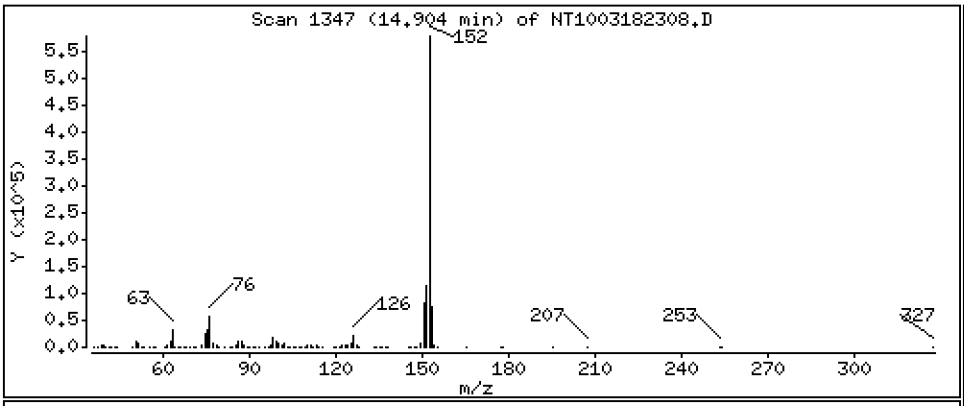
Operator: VTS

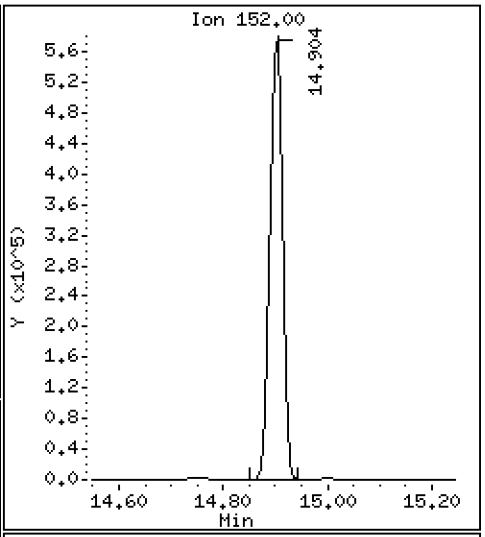
Column phase: ZB-5msi

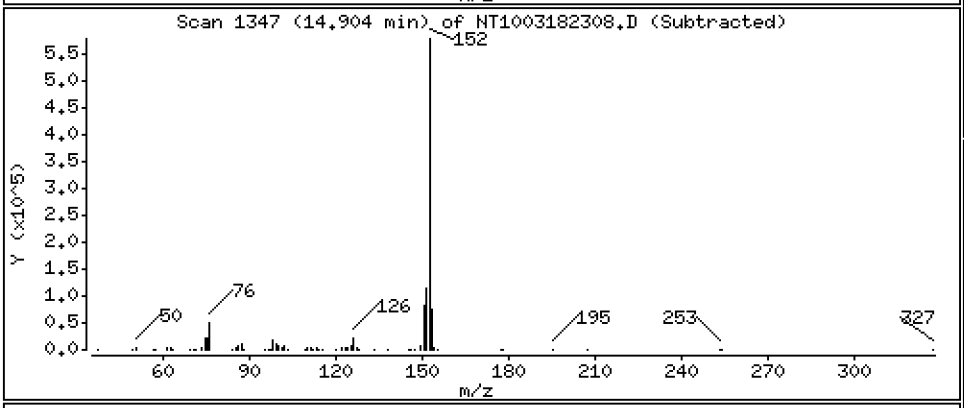
Column diameter: 0.25

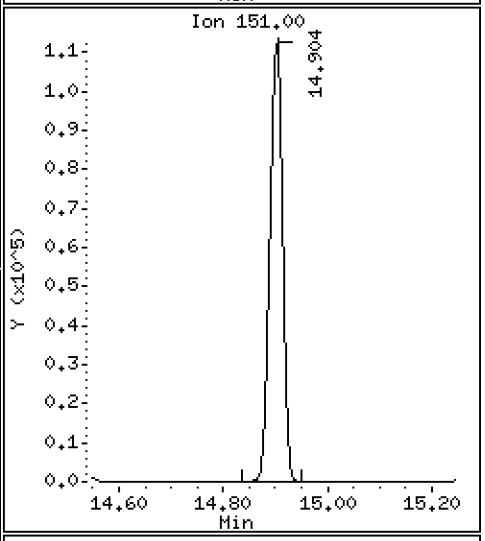
40 Acenaphthylene

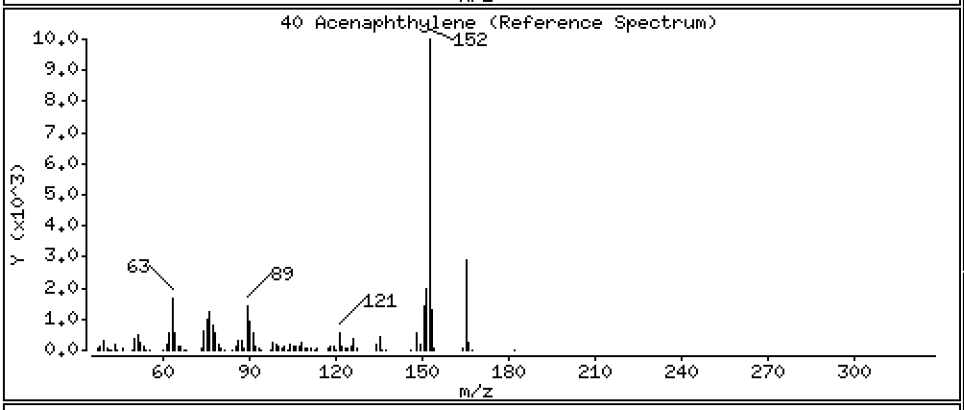
Concentration: 4.208 ug/mL

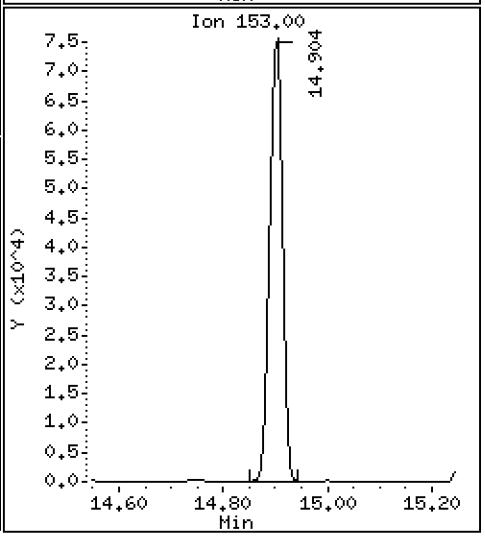


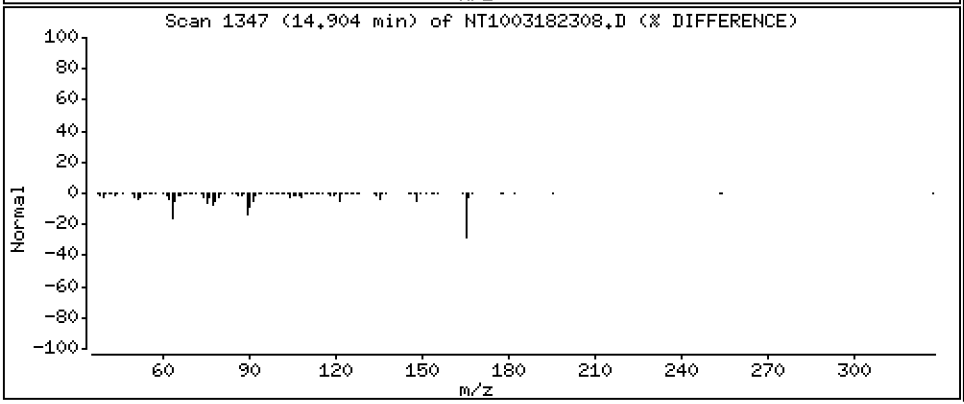












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

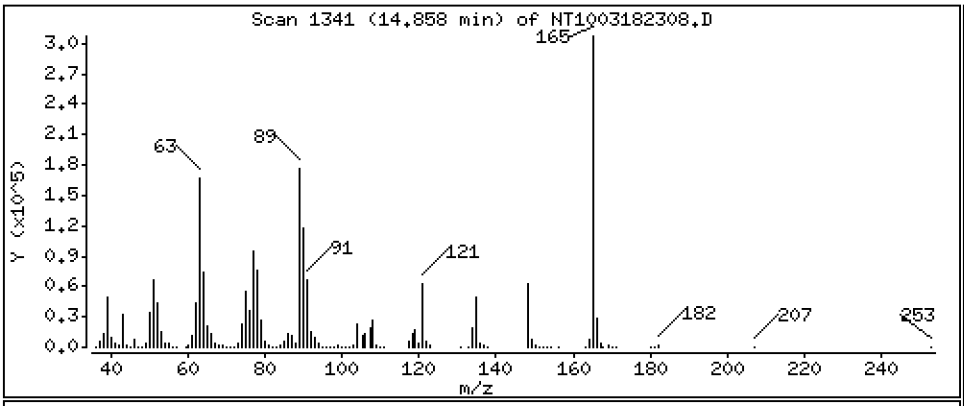
Operator: VTS

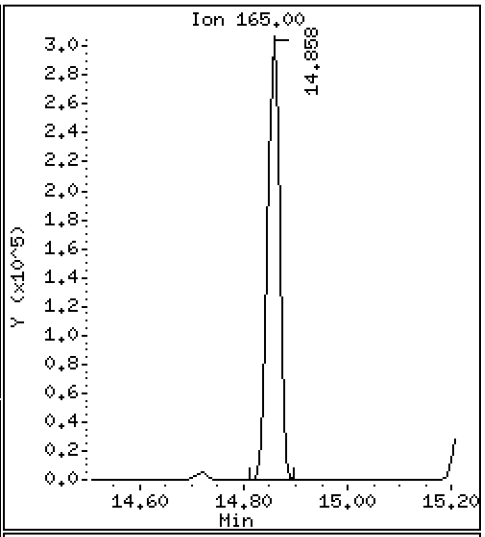
Column phase: ZB-5msi

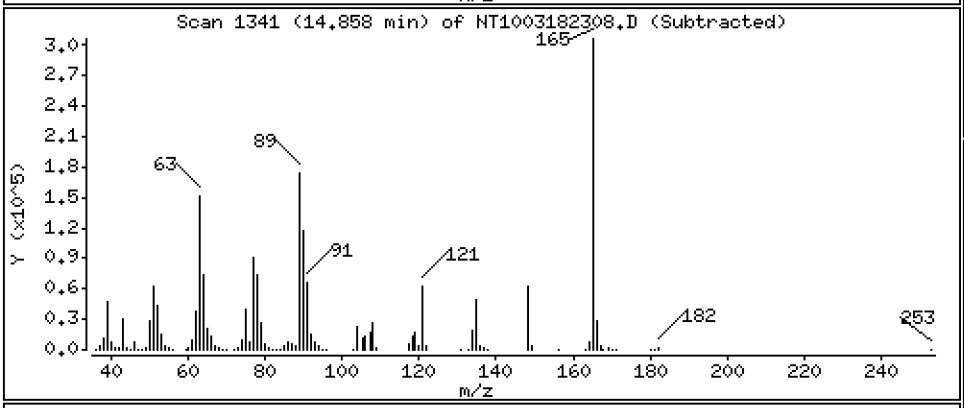
Column diameter: 0.25

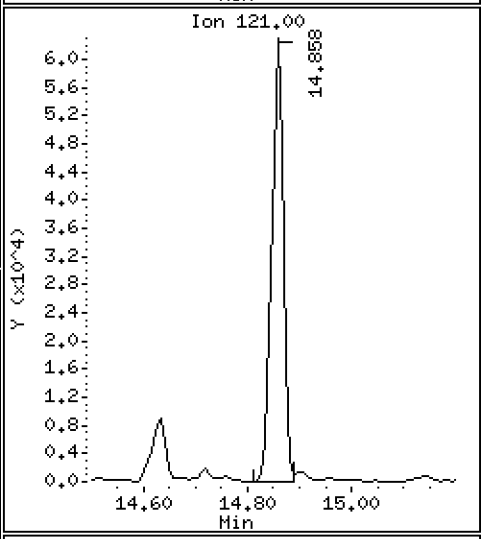
41 2,6-Dinitrotoluene

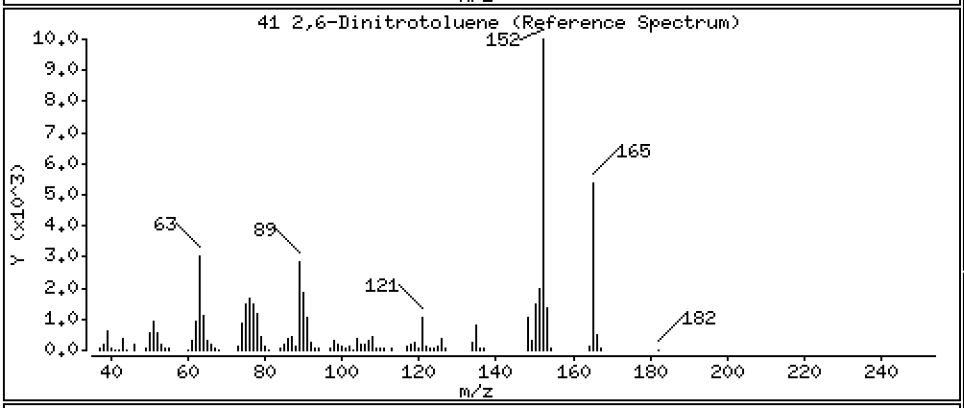
Concentration: 14.72 ug/mL

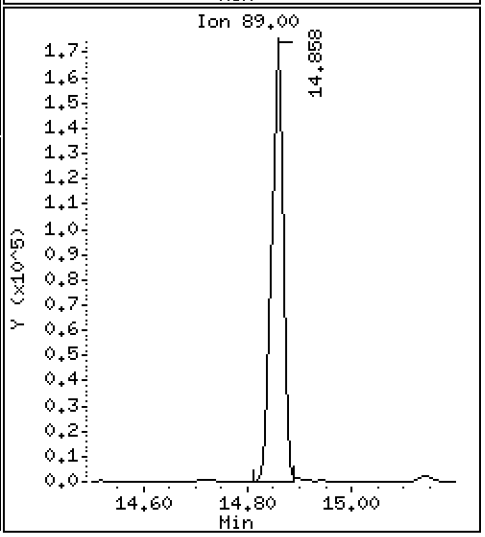


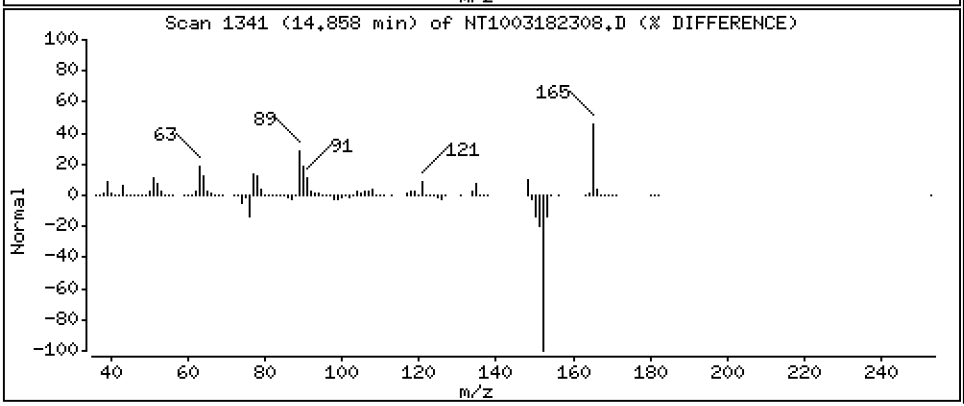












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

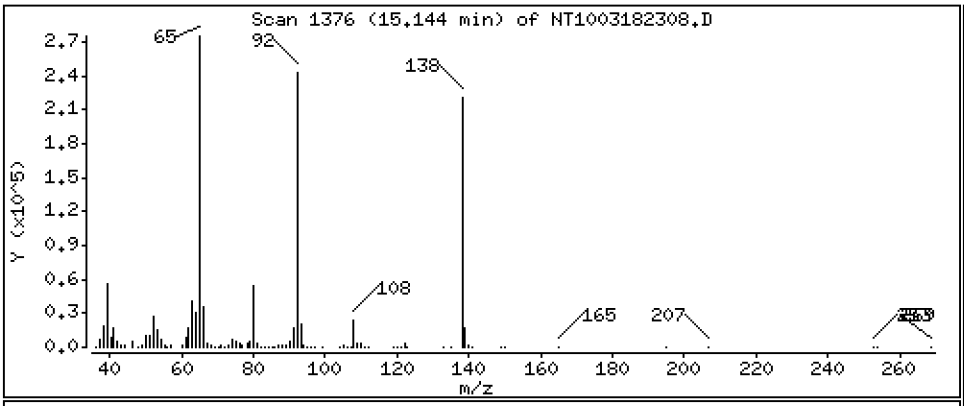
Operator: VTS

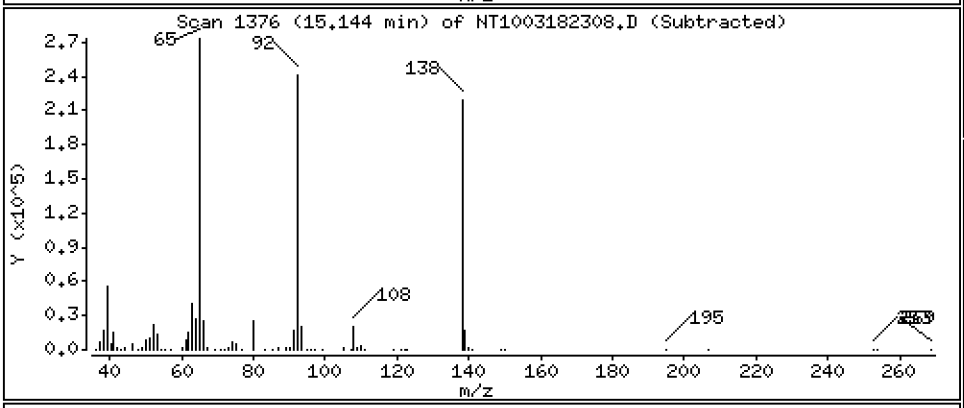
Column phase: ZB-5msi

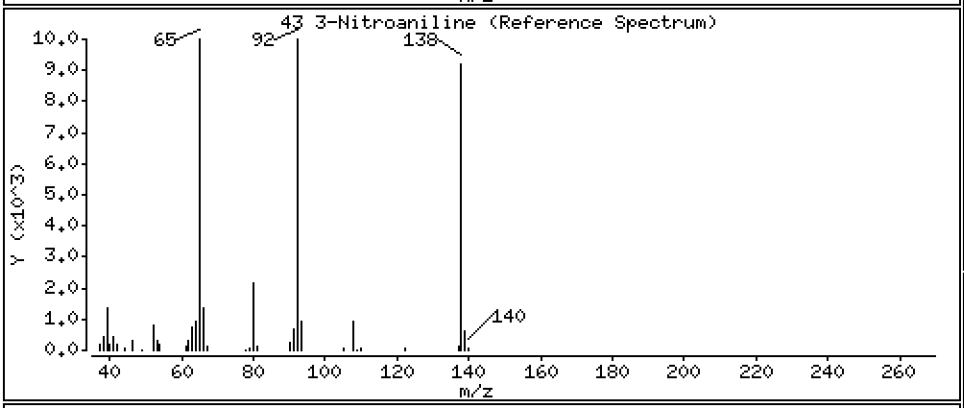
Column diameter: 0.25

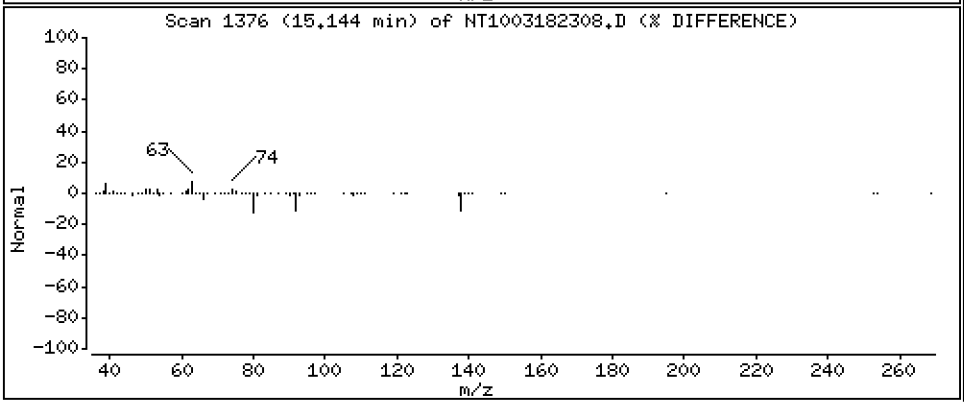
43 3-Nitroaniline

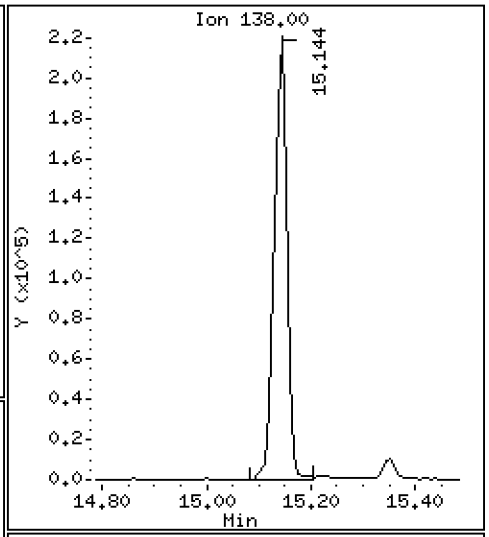
Concentration: 11.40 ug/mL

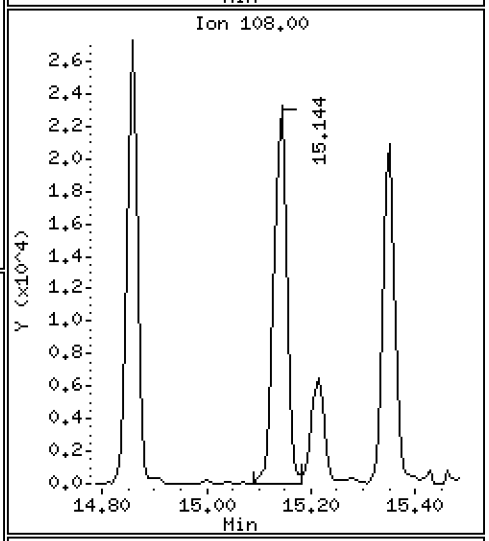


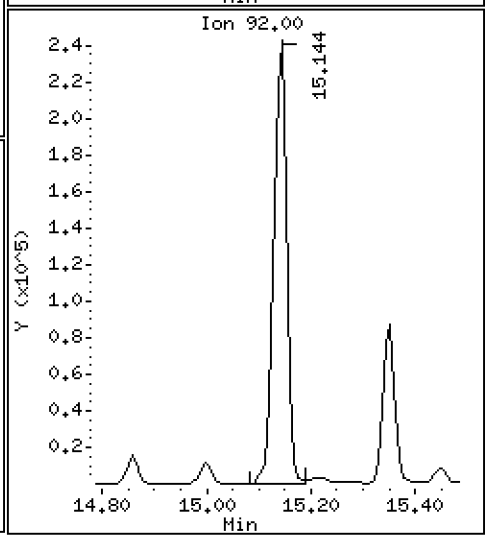












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

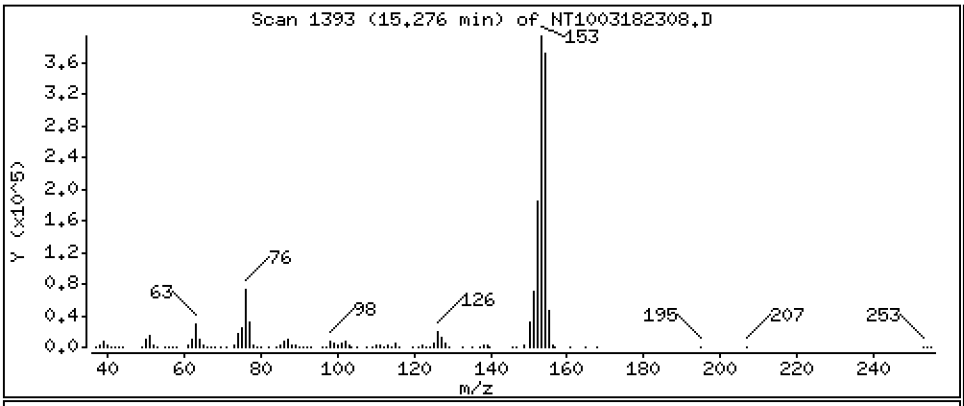
Operator: VTS

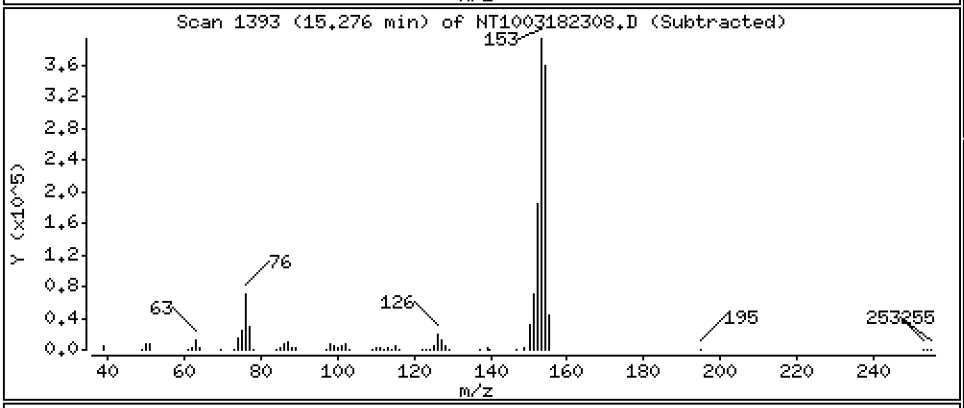
Column phase: ZB-5msi

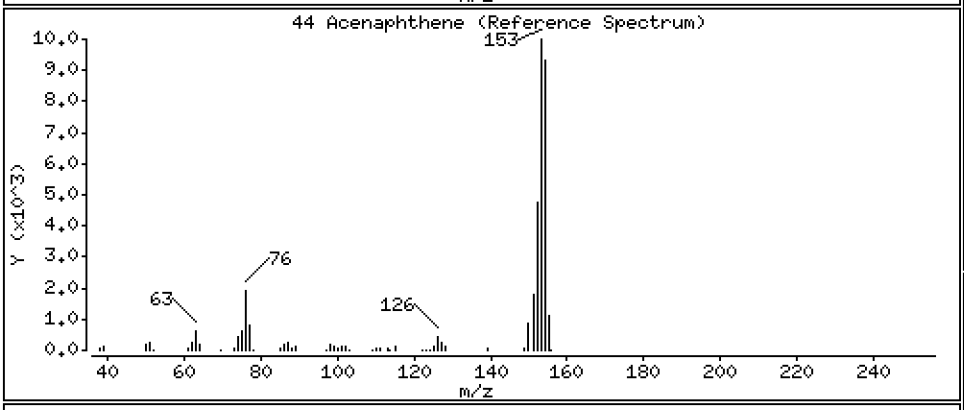
Column diameter: 0.25

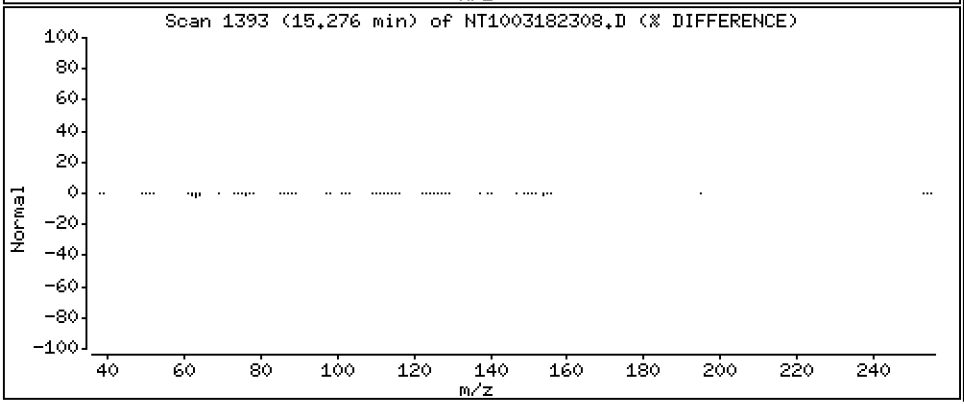
44 Acenaphthene

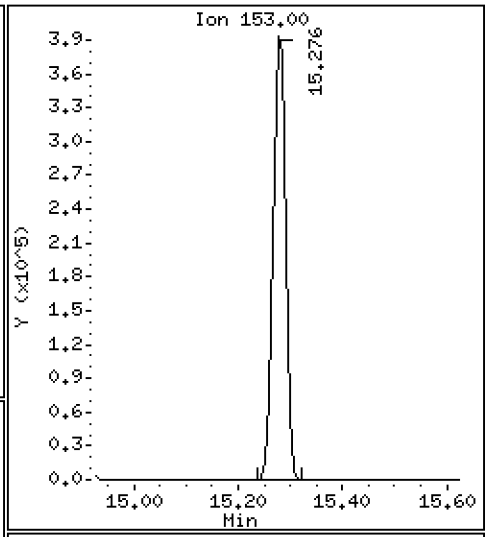
Concentration: 4.497 ug/mL

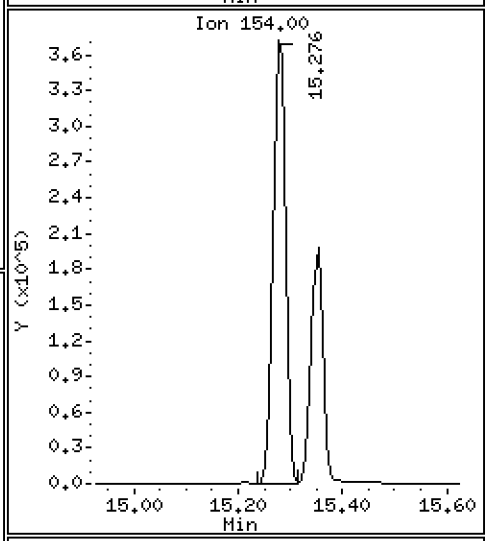


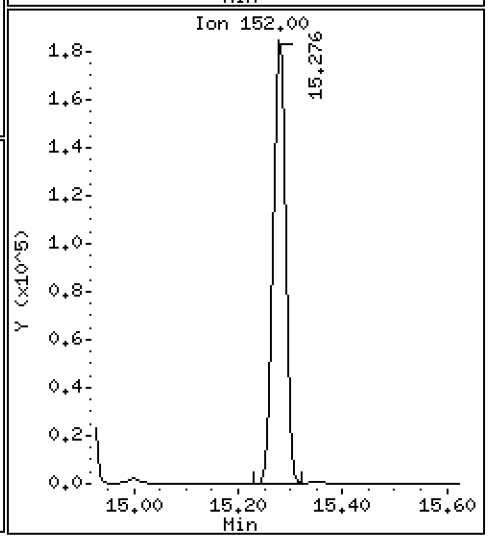












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

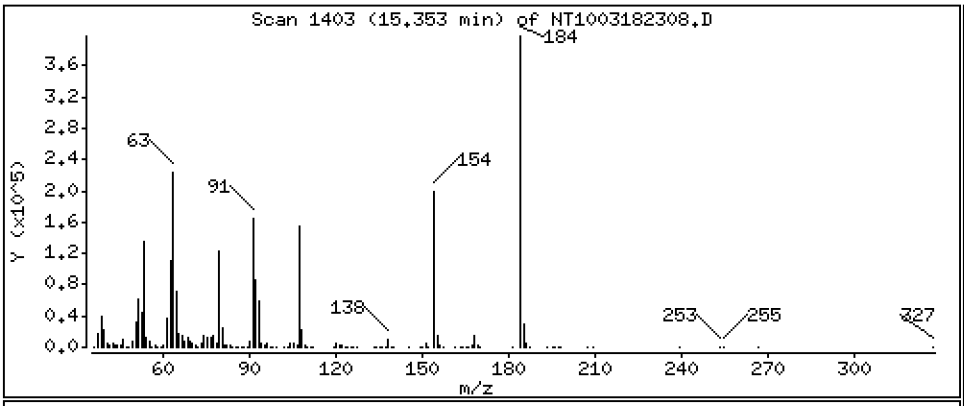
Operator: VTS

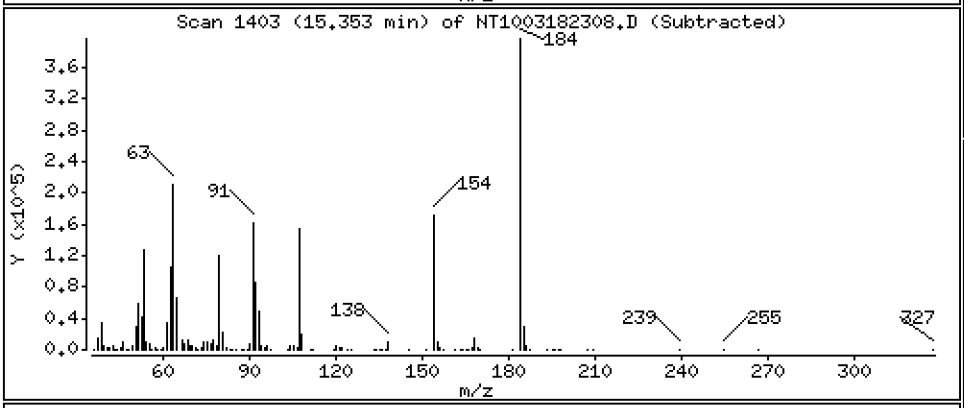
Column phase: ZB-5msi

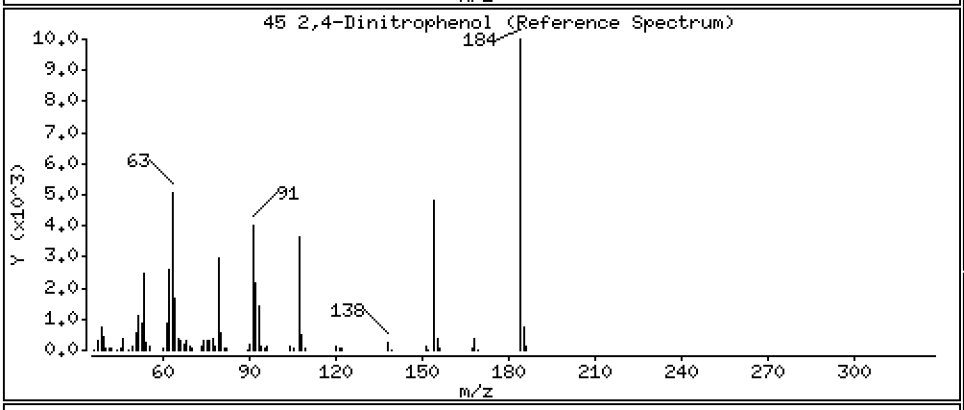
Column diameter: 0.25

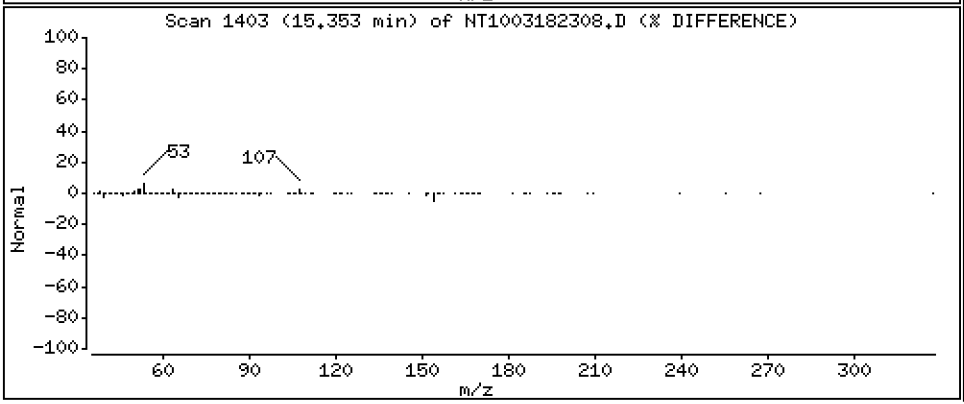
45 2,4-Dinitrophenol

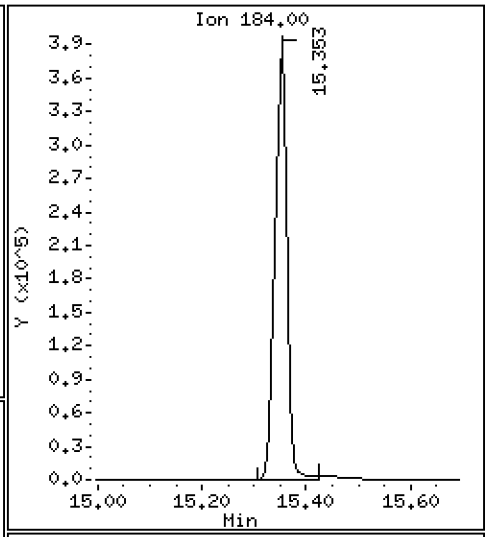
Concentration: 29.63 ug/mL

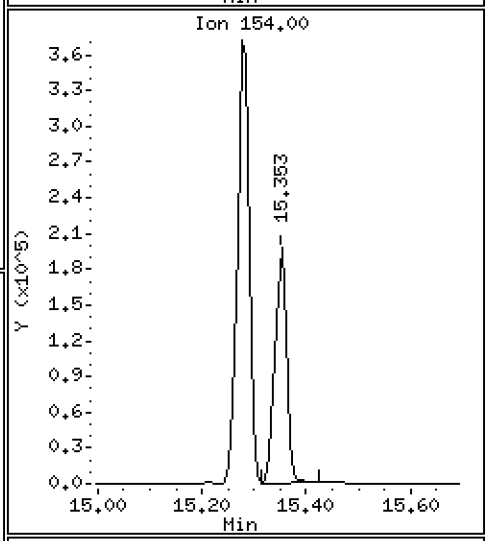


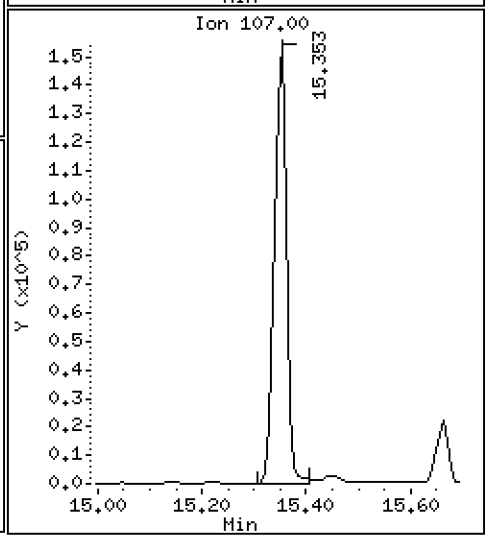












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

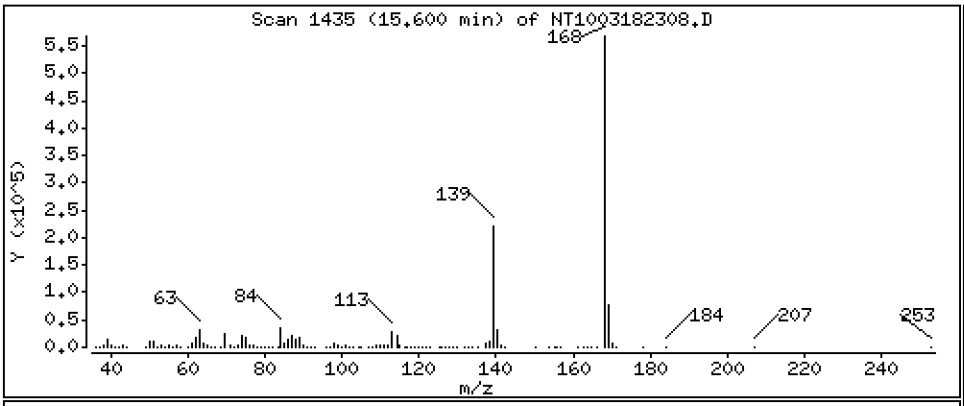
Operator: VTS

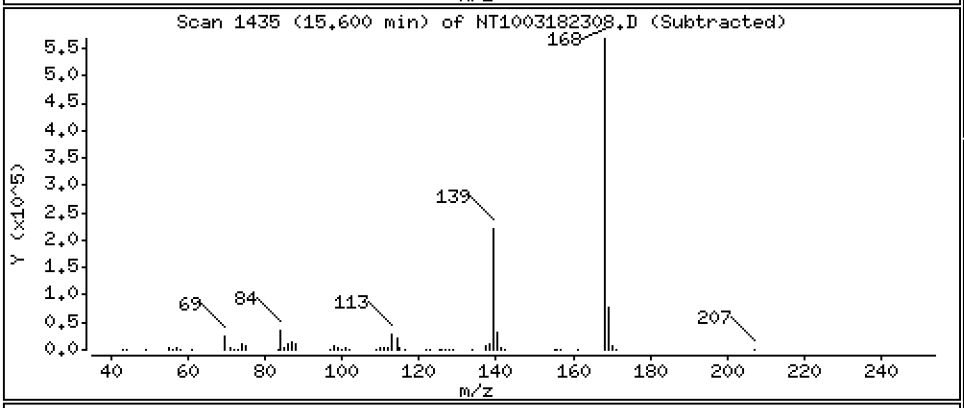
Column phase: ZB-5msi

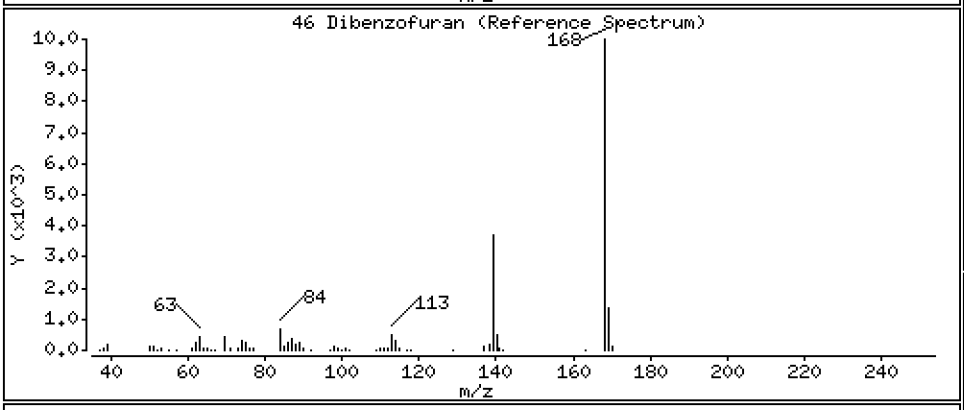
Column diameter: 0.25

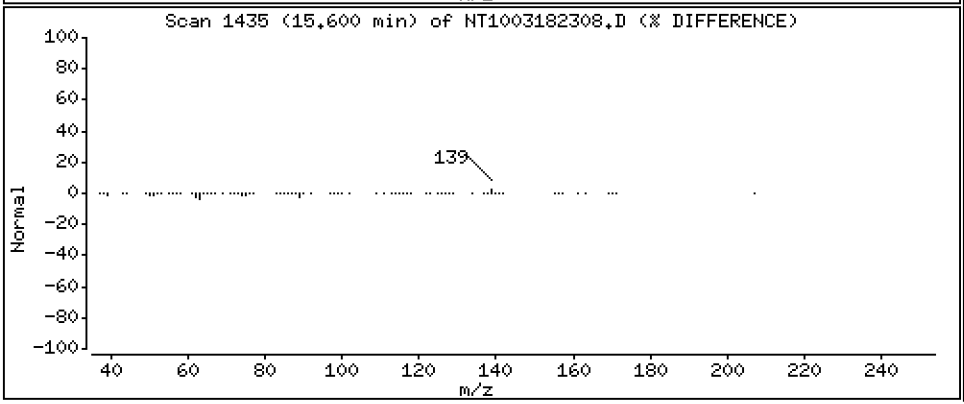
46 Dibenzofuran

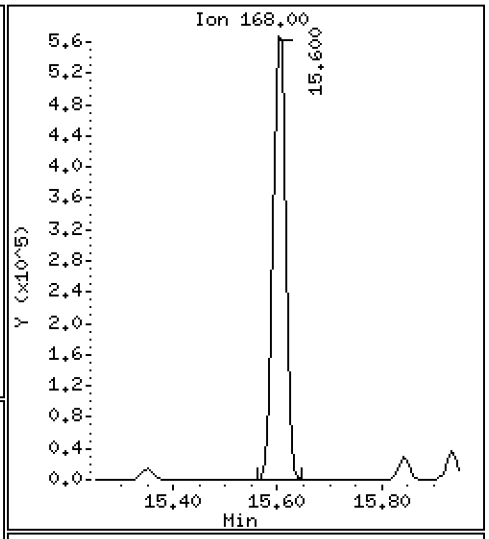
Concentration: 4.457 ug/mL

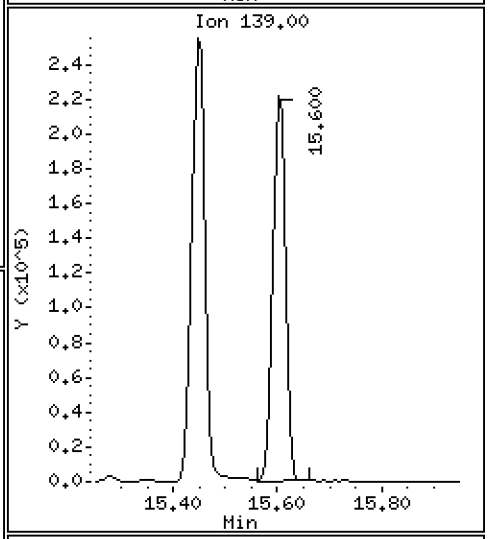


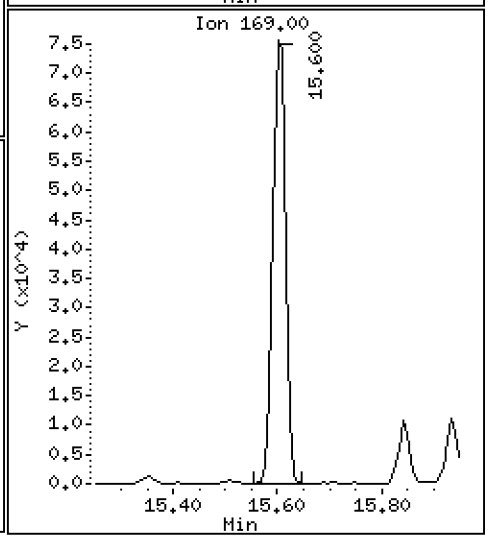












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

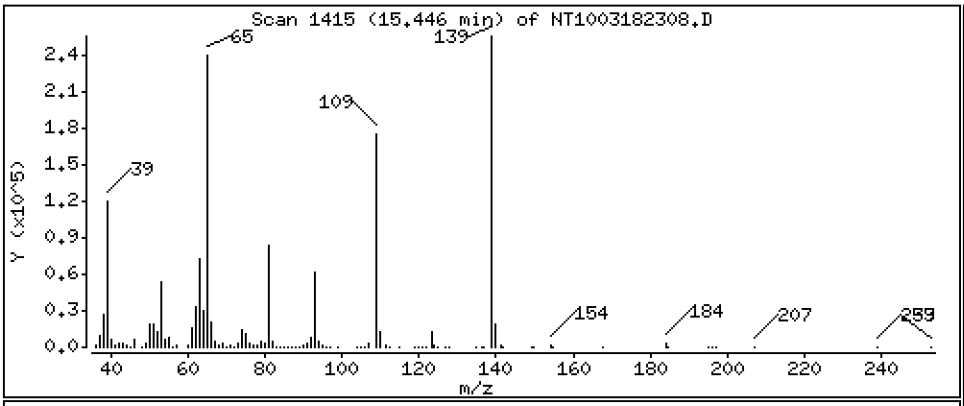
Operator: VTS

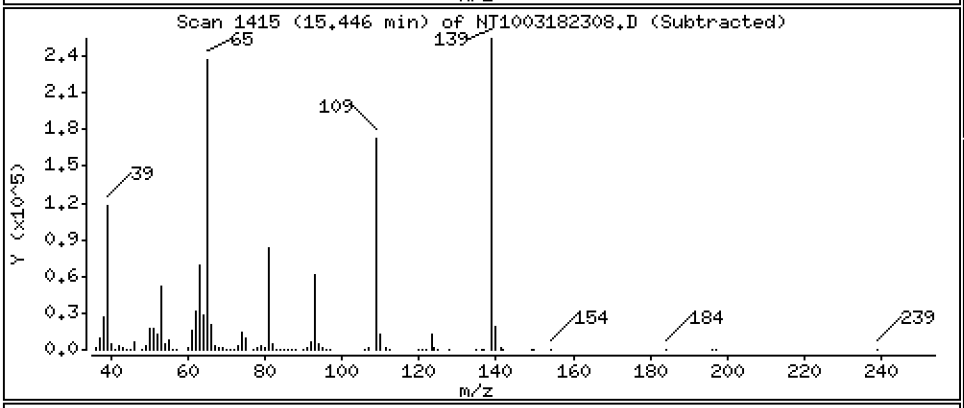
Column phase: ZB-5msi

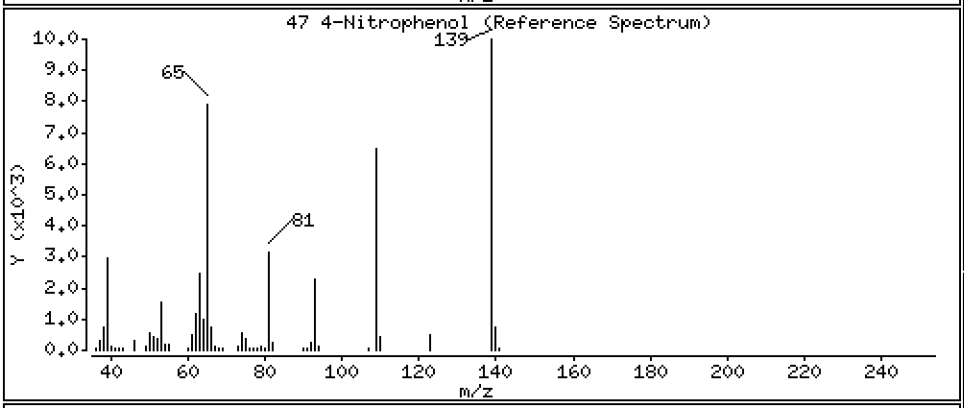
Column diameter: 0.25

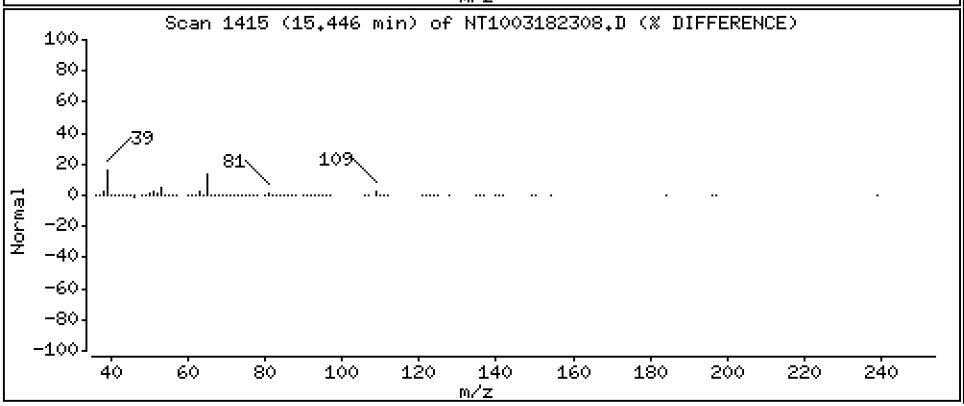
47 4-Nitrophenol

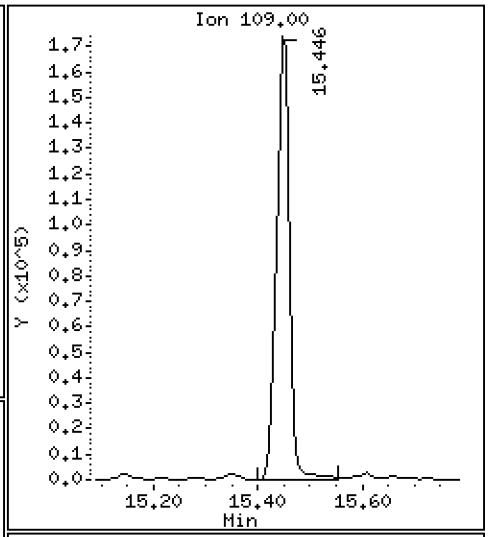
Concentration: 13.46 ug/mL

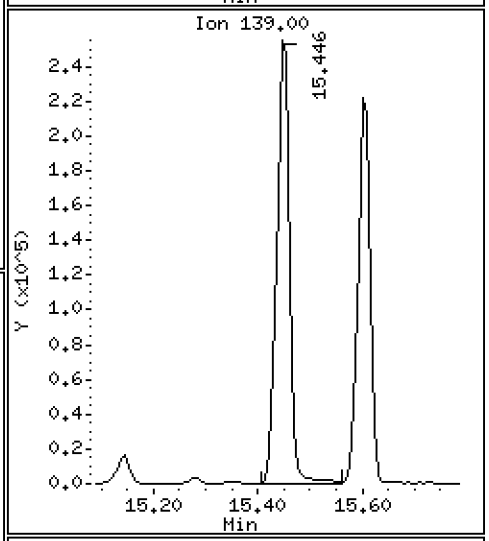


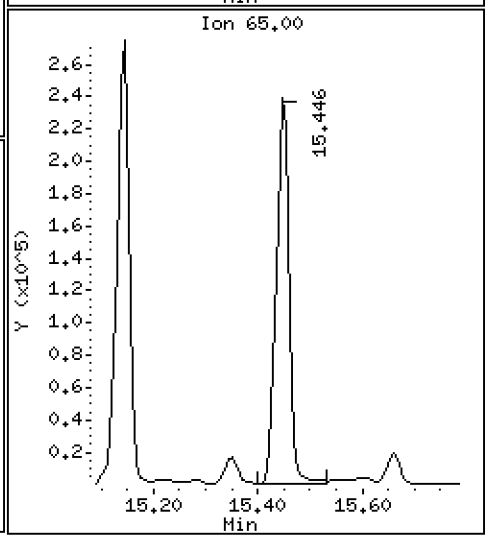












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

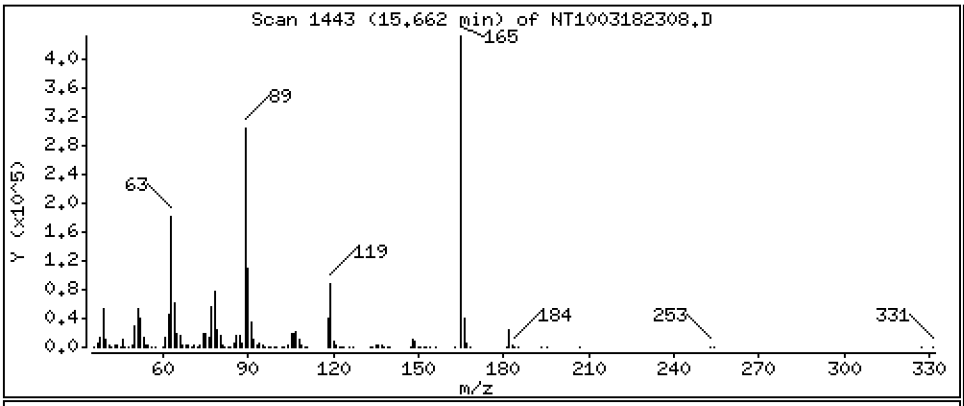
Operator: VTS

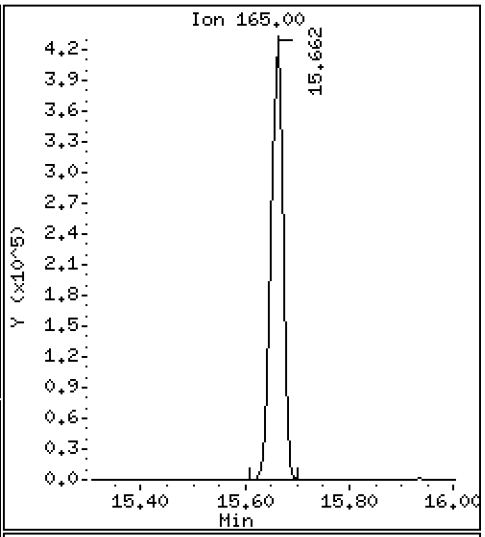
Column phase: ZB-5msi

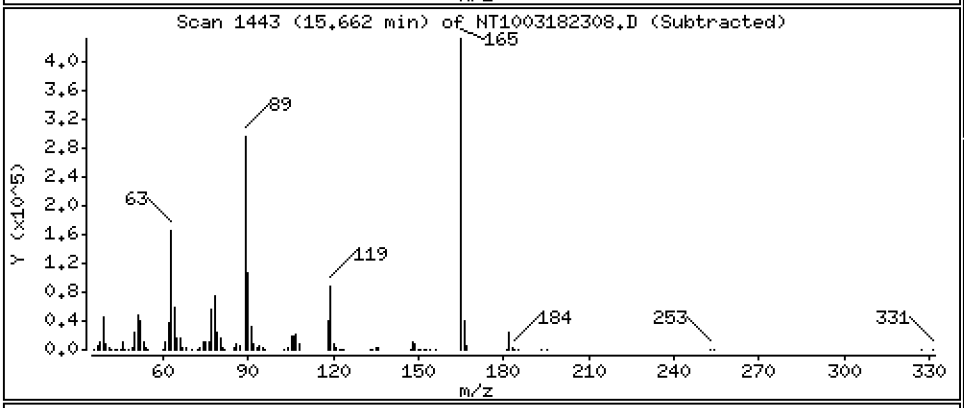
Column diameter: 0.25

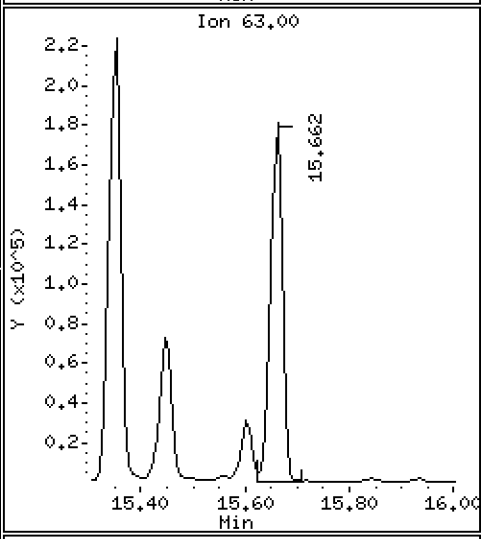
48 2,4-Dinitrotoluene

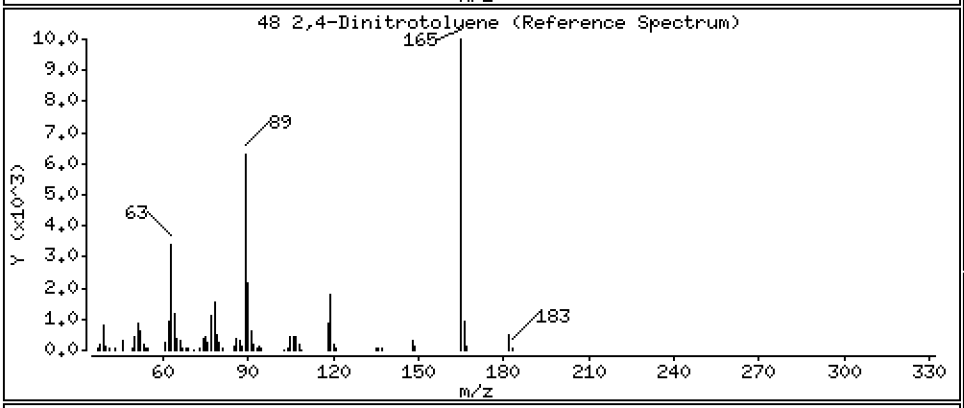
Concentration: 13.79 ug/mL

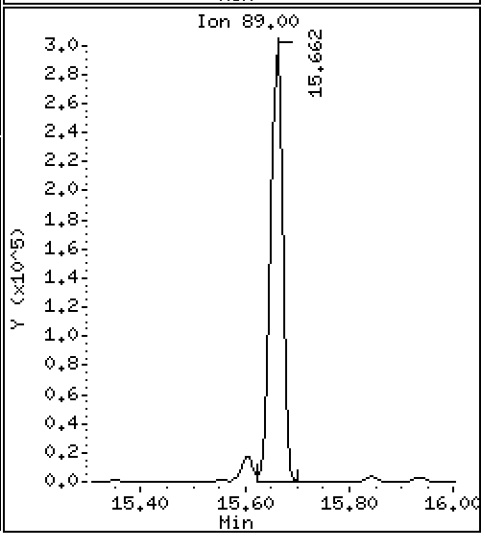


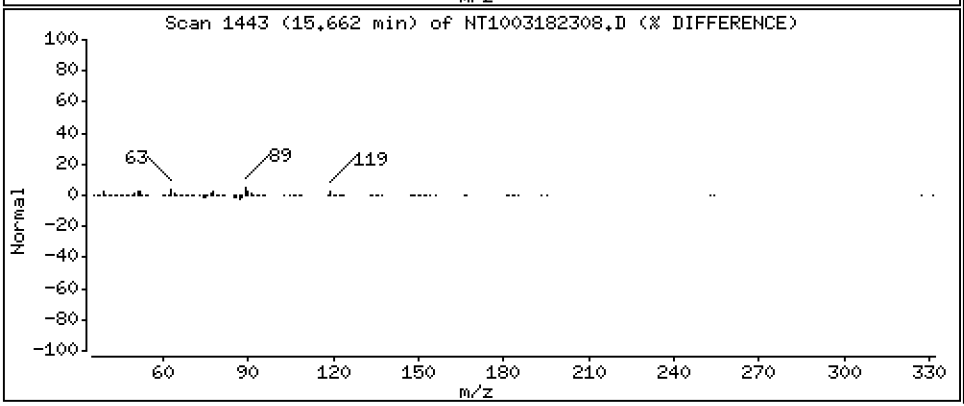












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

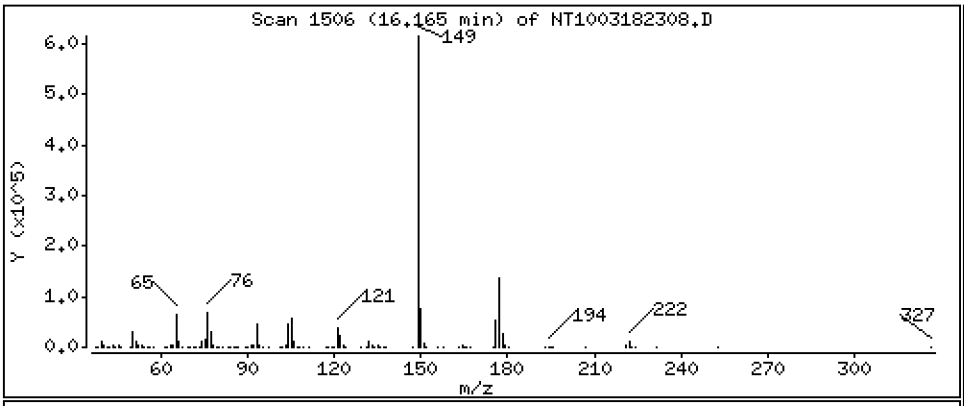
Operator: VTS

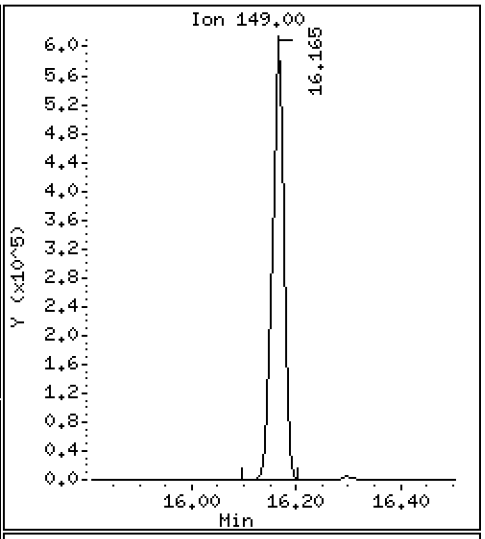
Column phase: ZB-5msi

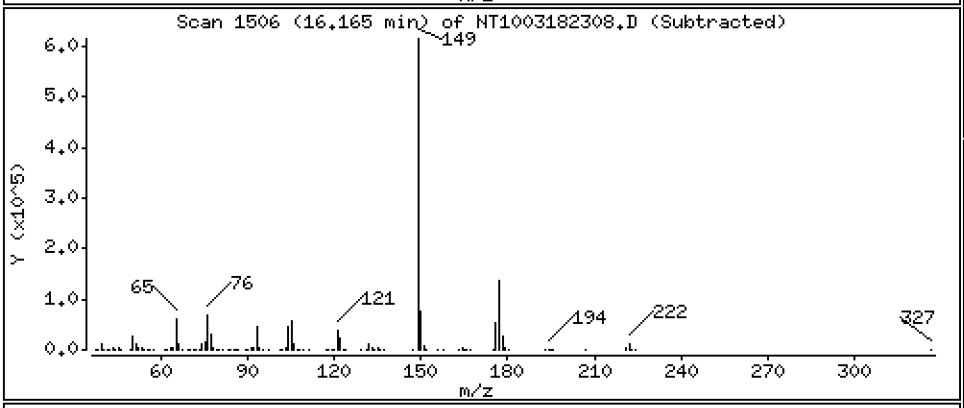
Column diameter: 0.25

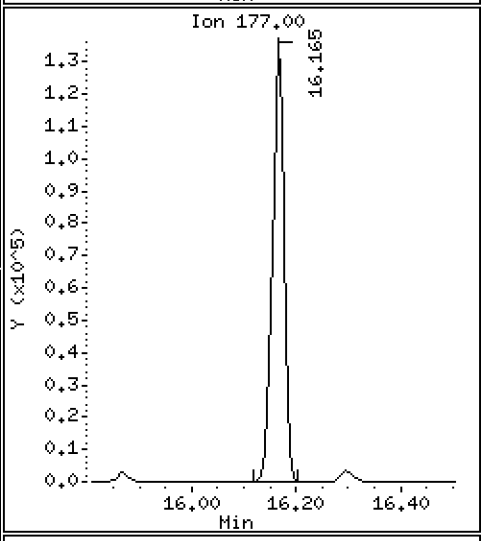
50 Diethylphthalate

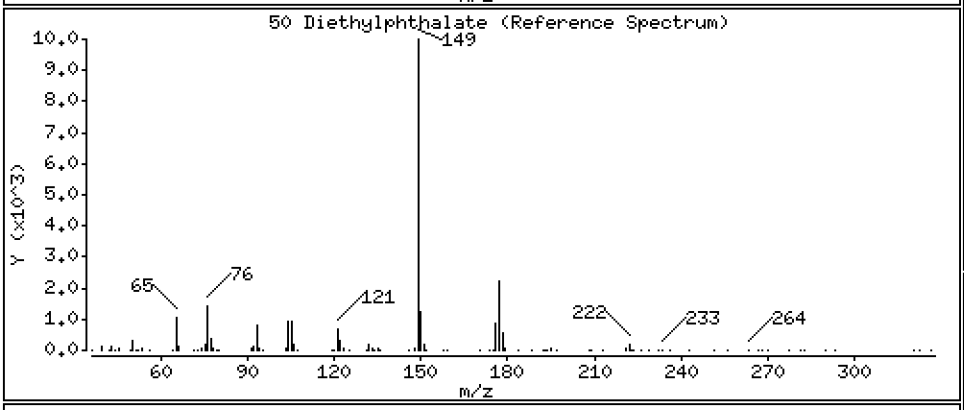
Concentration: 7.441 ug/mL

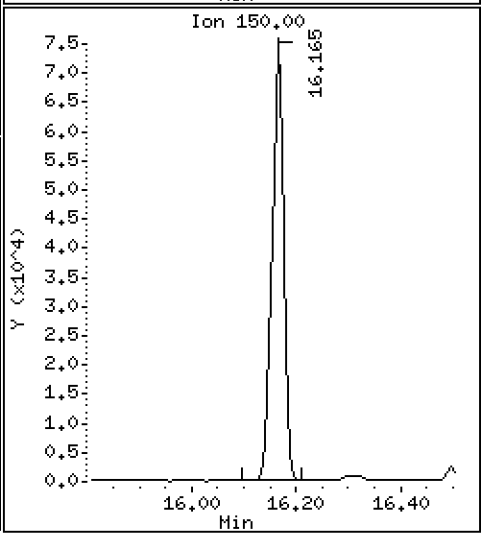


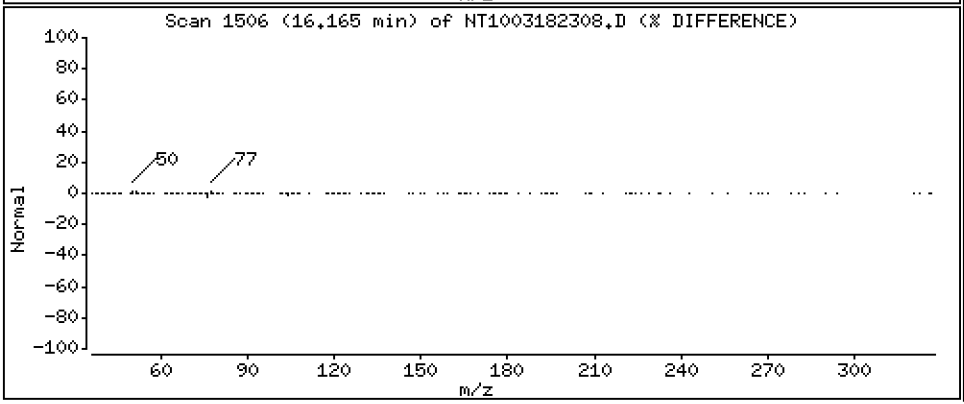












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

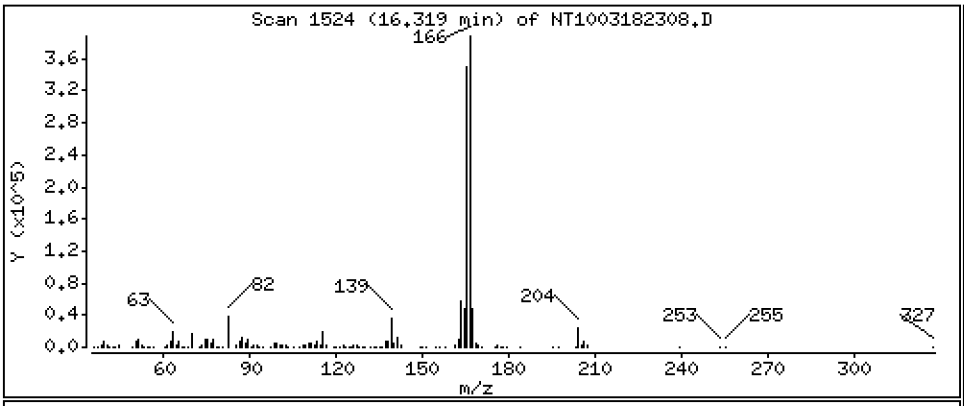
Operator: VTS

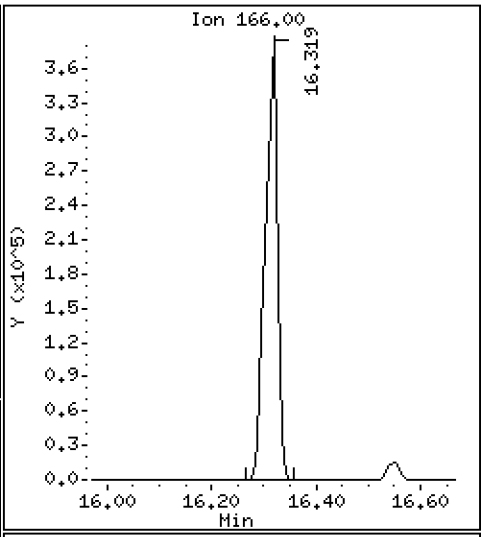
Column phase: ZB-5msi

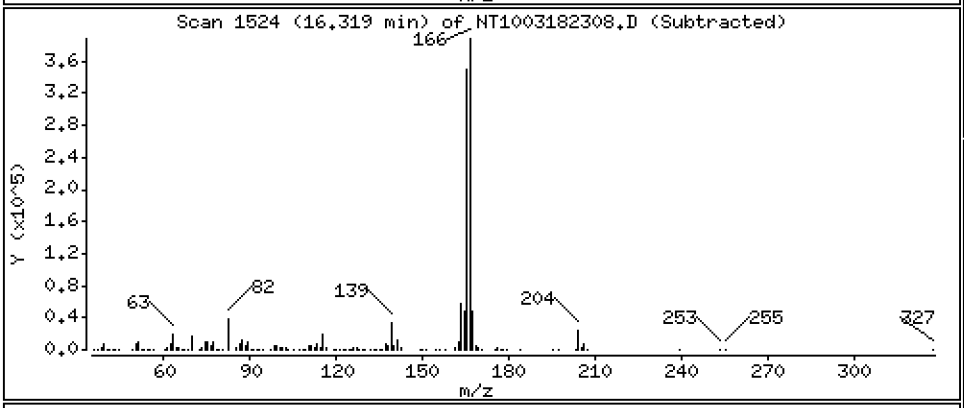
Column diameter: 0.25

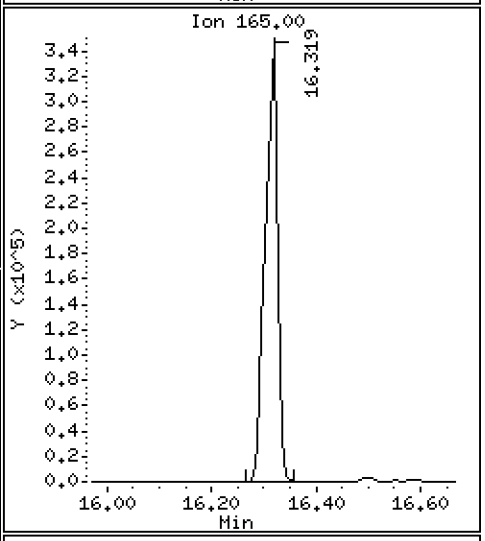
49 Fluorene

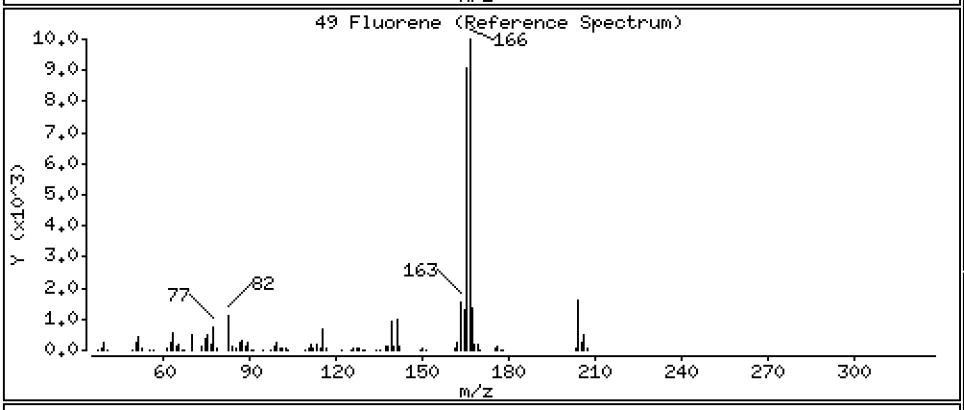
Concentration: 2.658 ug/mL

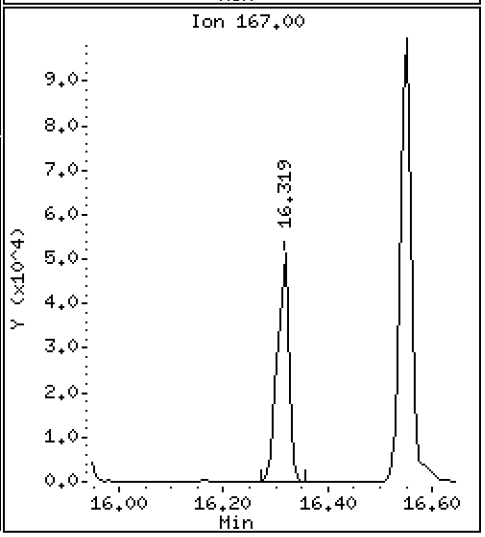


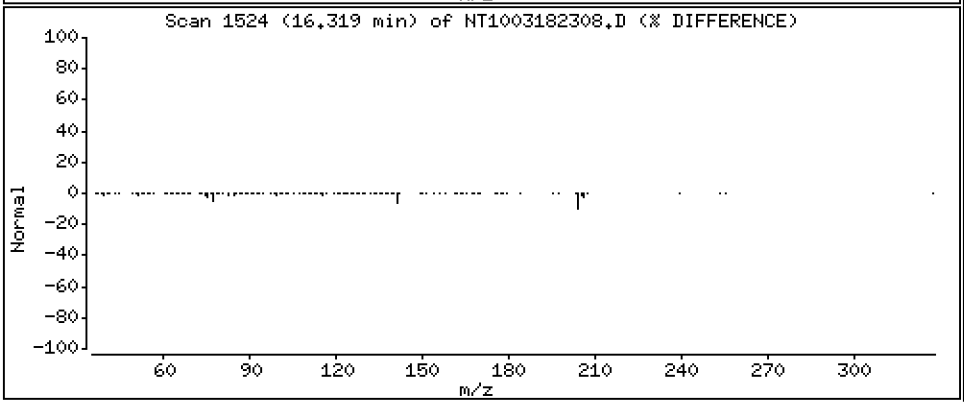












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

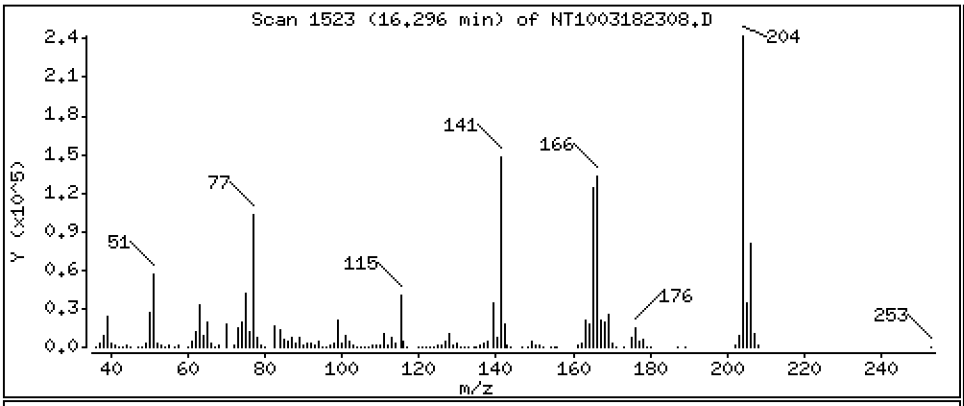
Operator: VTS

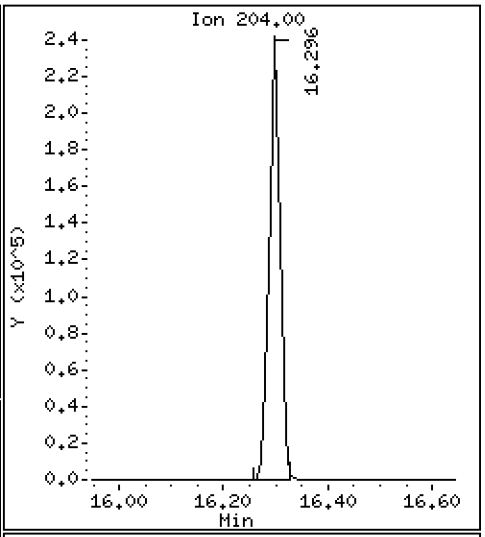
Column phase: ZB-5msi

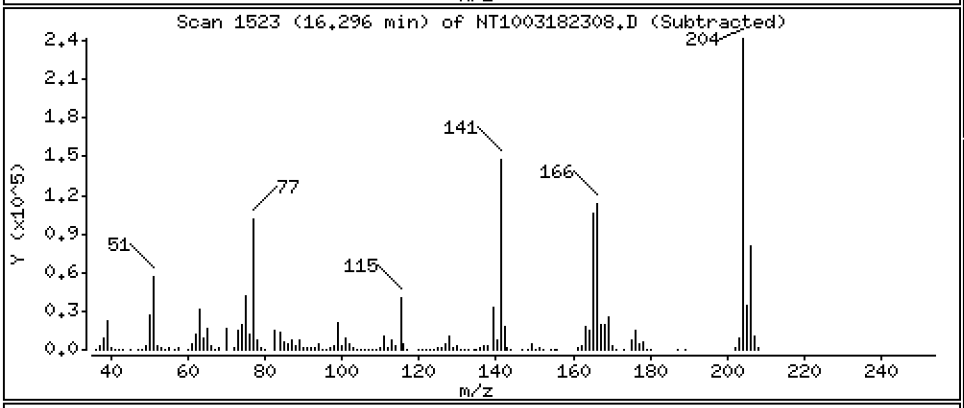
Column diameter: 0.25

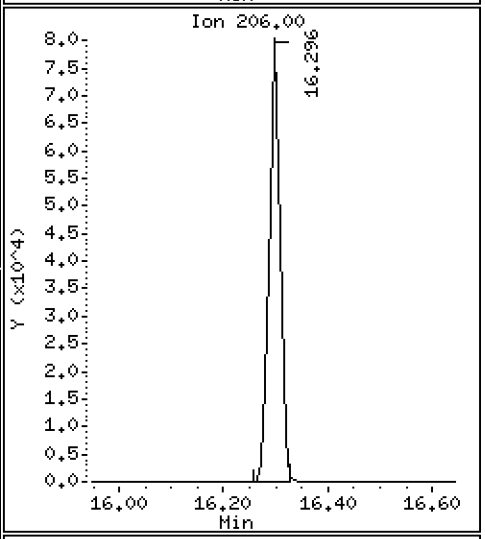
51 4-Chlorophenyl-phenylether

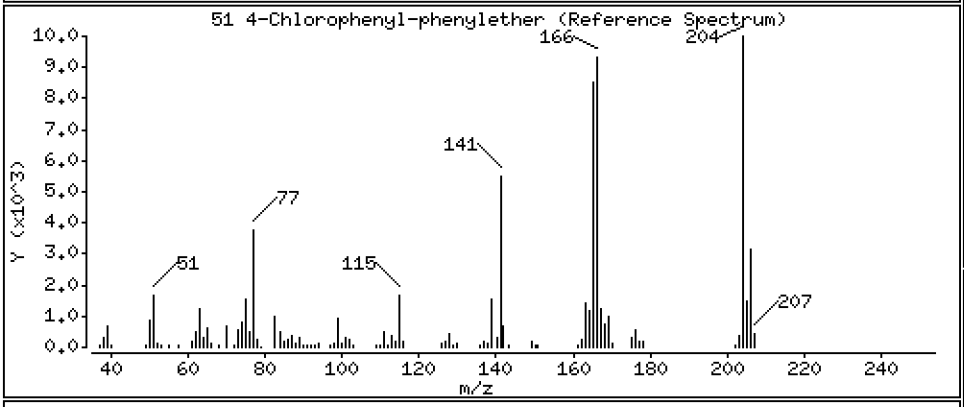
Concentration: 3.757 ug/mL

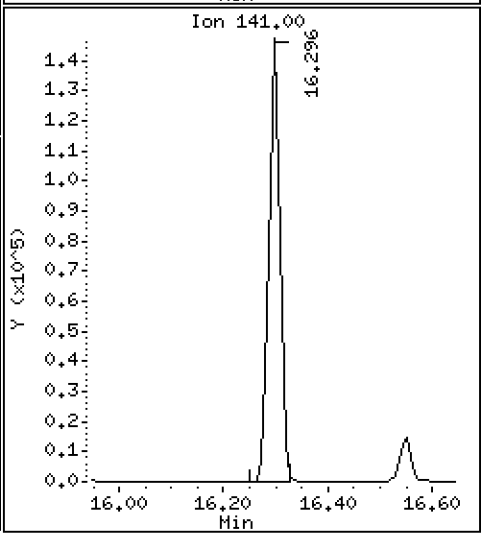


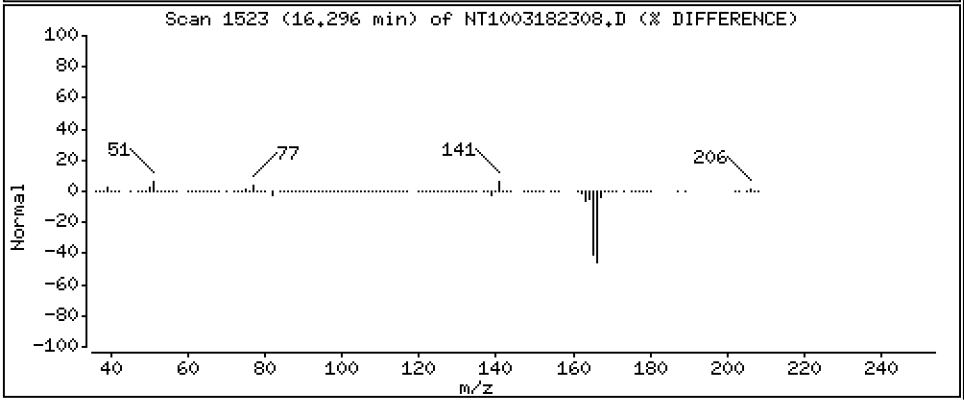












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

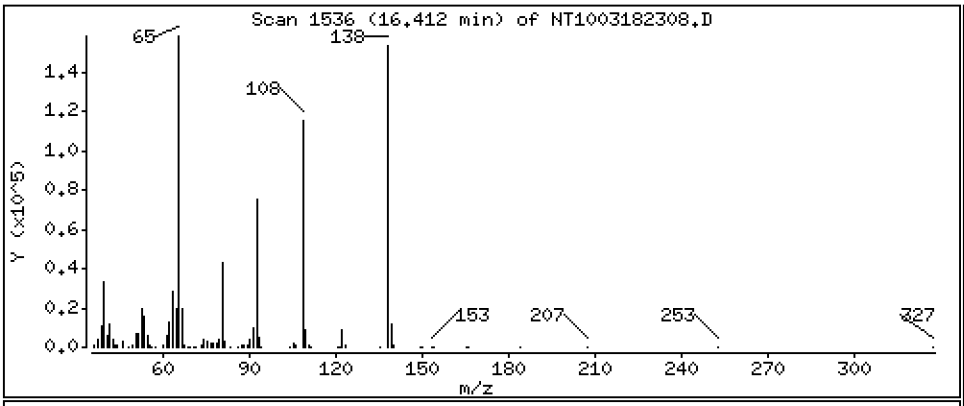
Operator: VTS

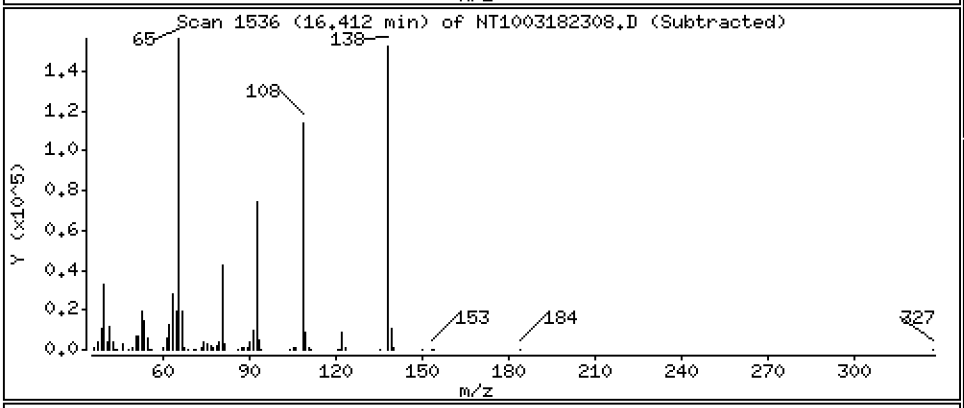
Column phase: ZB-5msi

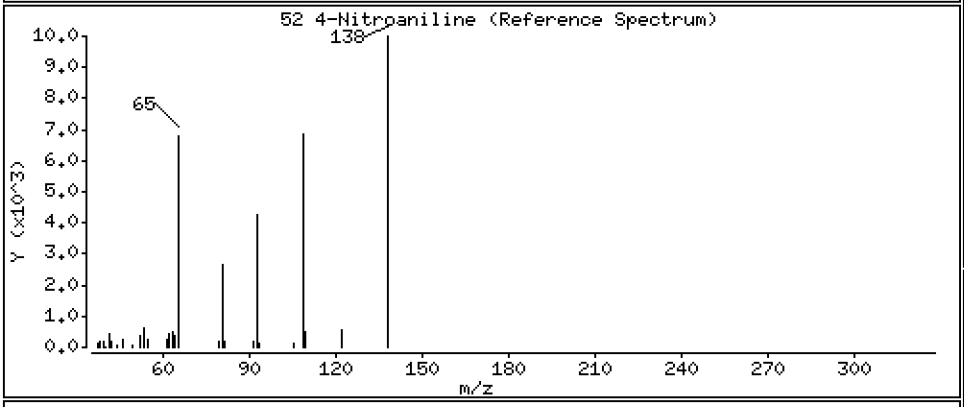
Column diameter: 0.25

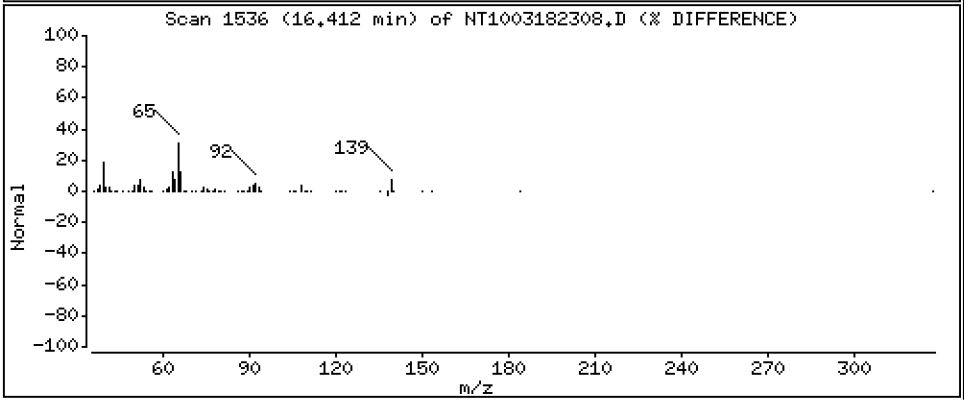
52 4-Nitroaniline

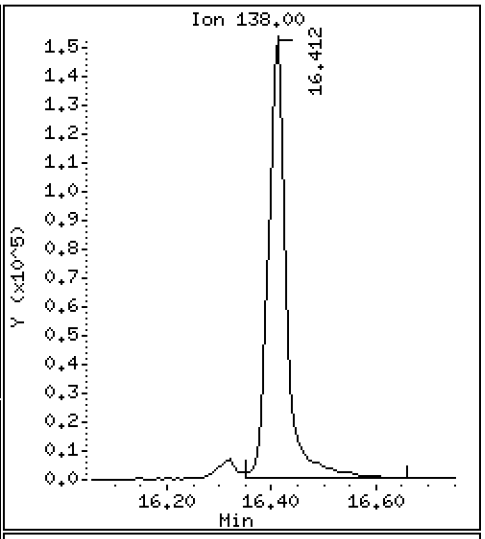
Concentration: 11.49 ug/mL

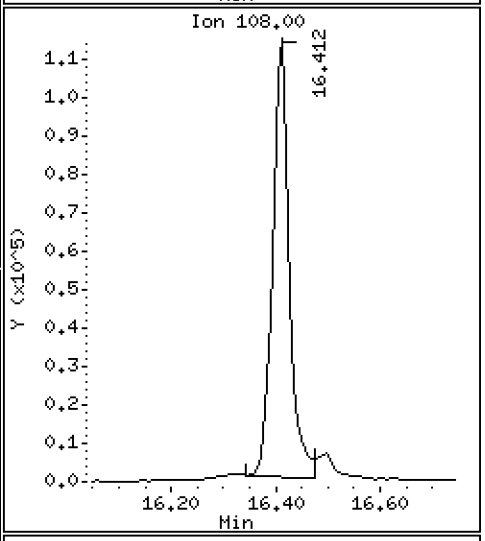


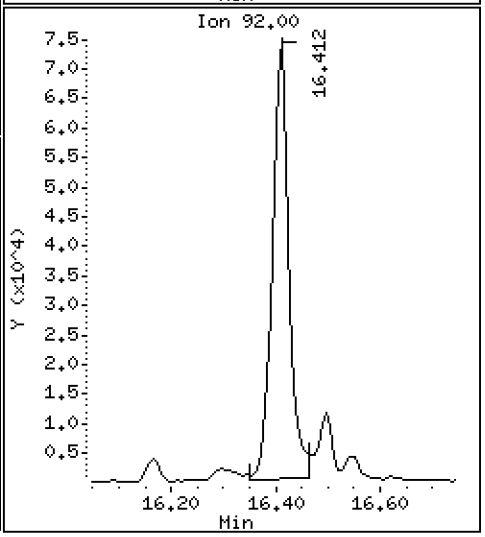












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

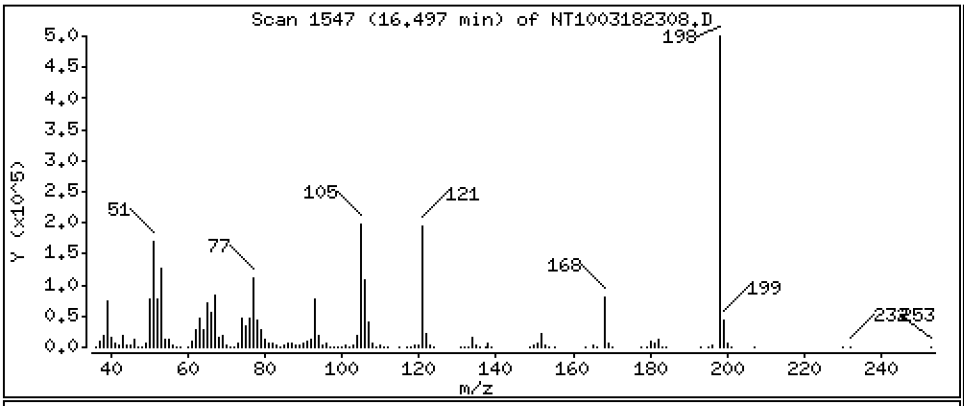
Operator: VTS

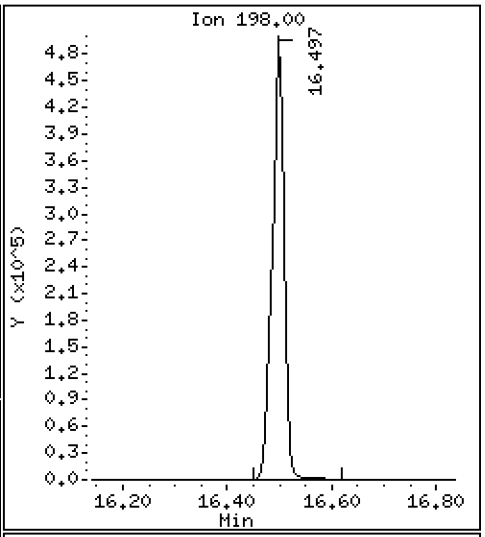
Column phase: ZB-5msi

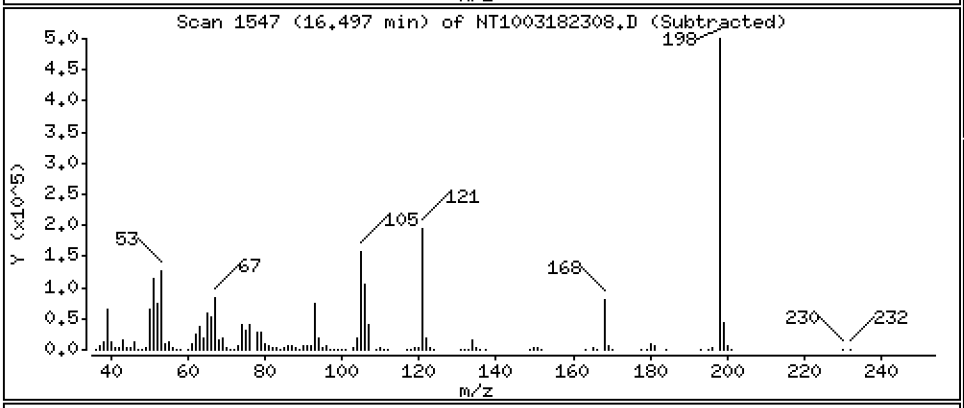
Column diameter: 0.25

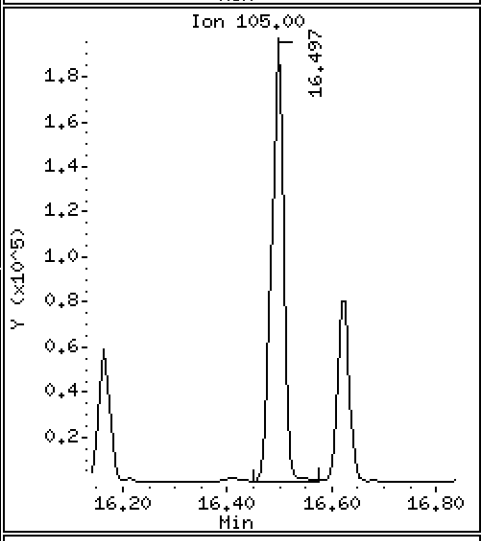
53 4,6-Dinitro-2-methylphenol

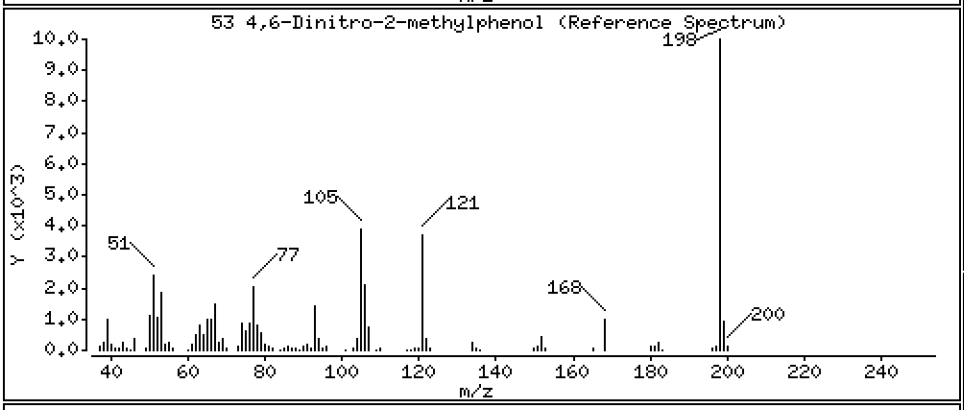
Concentration: 30.08 ug/mL

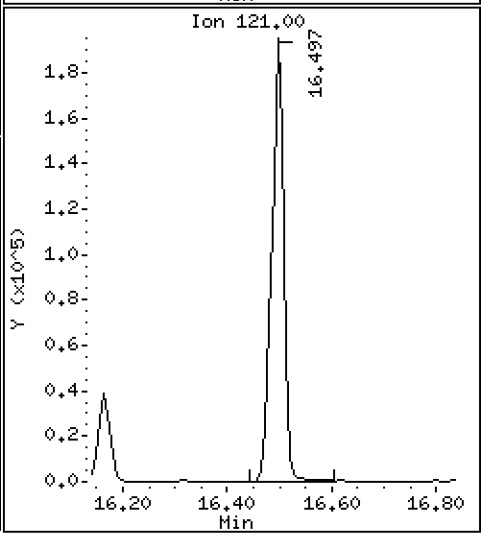


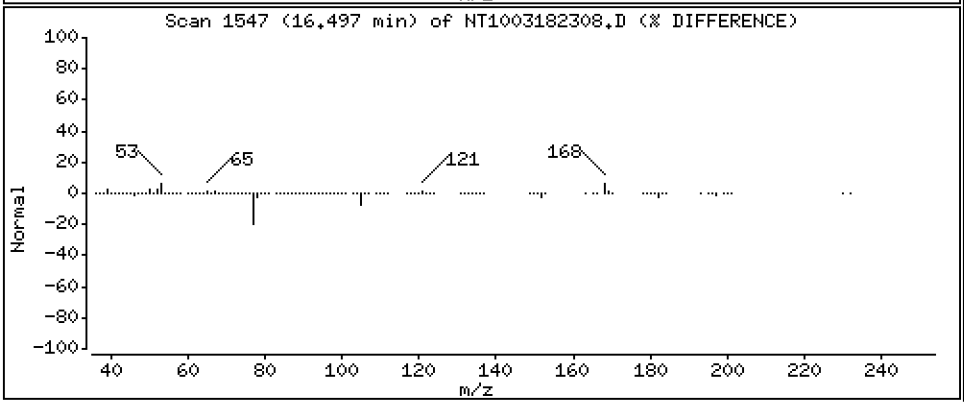












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

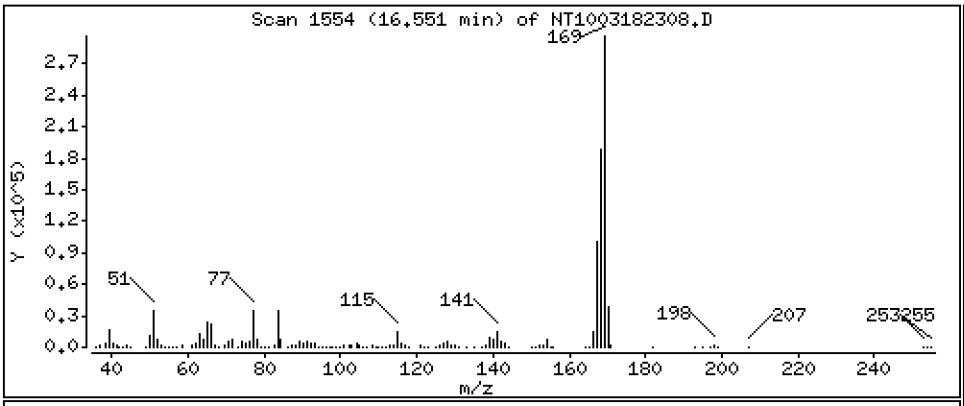
Operator: VTS

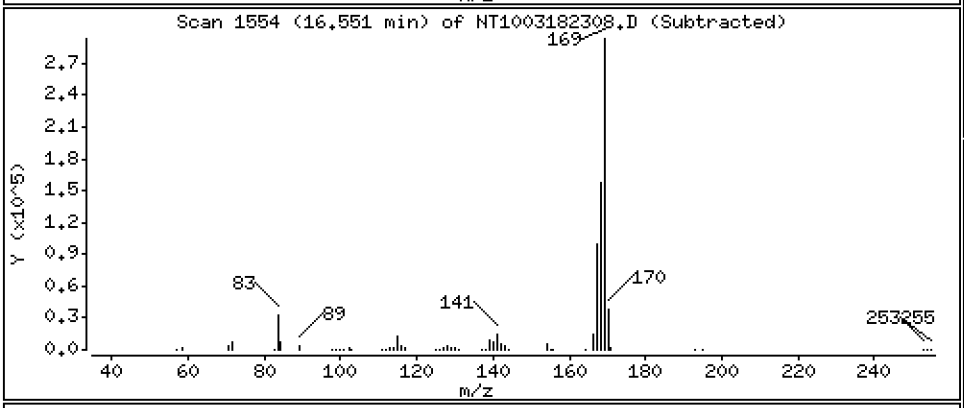
Column phase: ZB-5msi

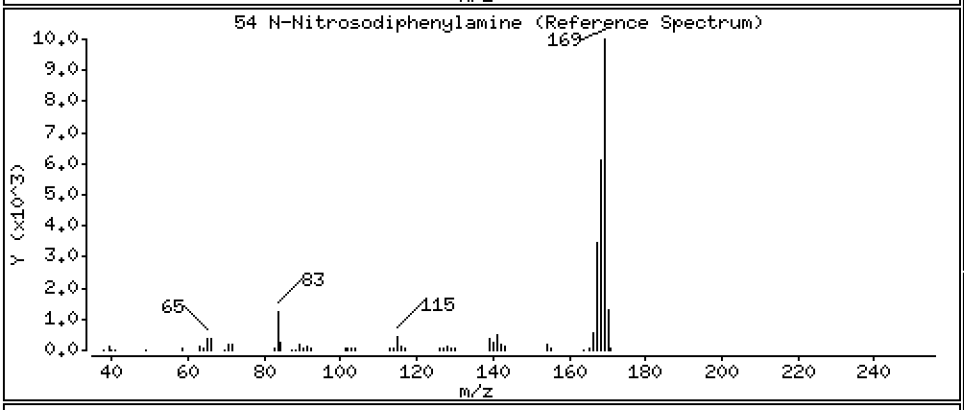
Column diameter: 0.25

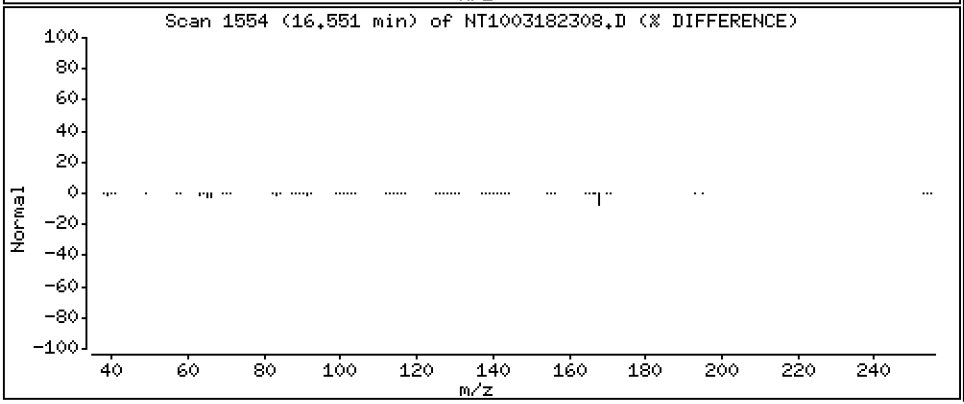
54 N-Nitrosodiphenylamine

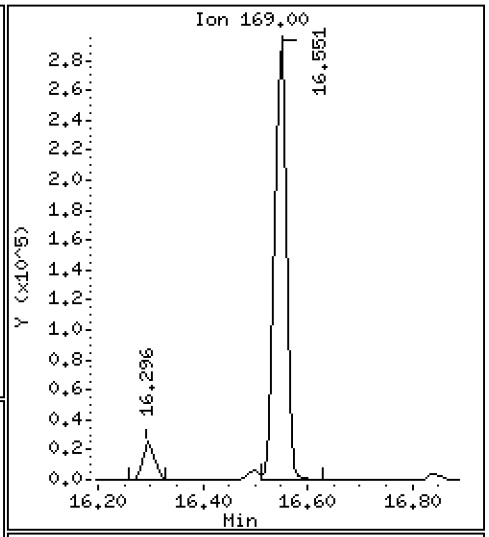
Concentration: 4.090 ug/mL

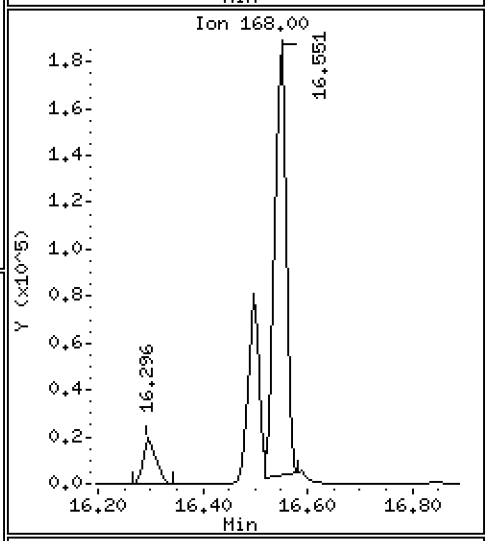


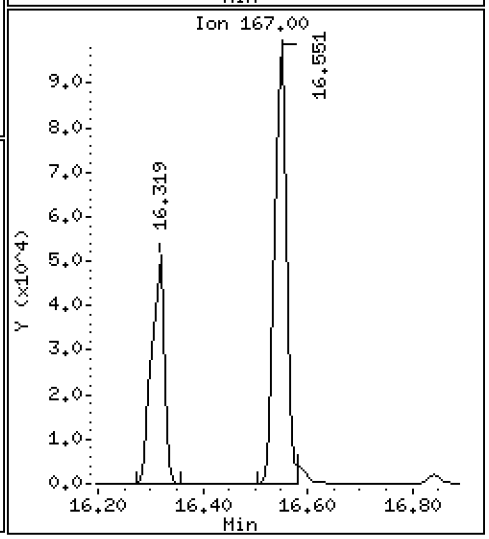












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

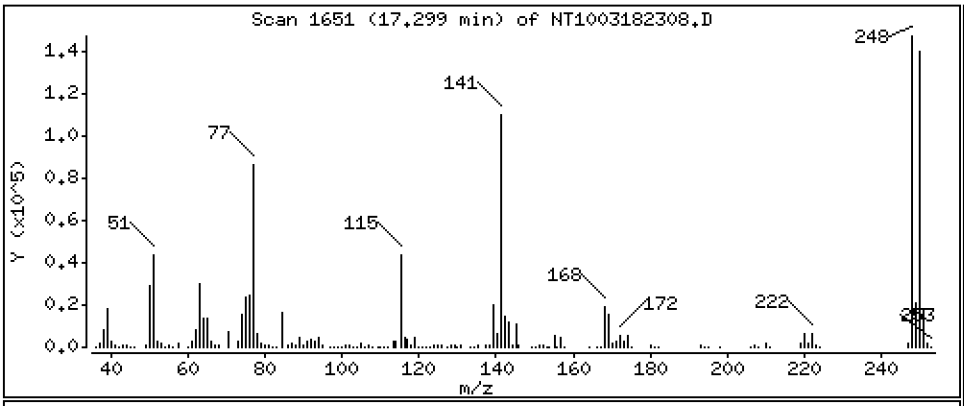
Operator: VTS

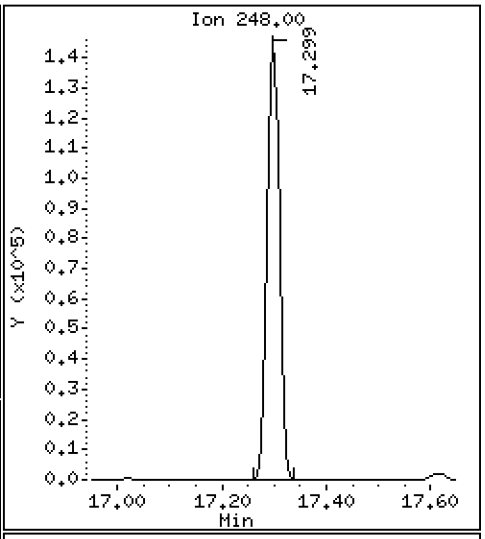
Column phase: ZB-5msi

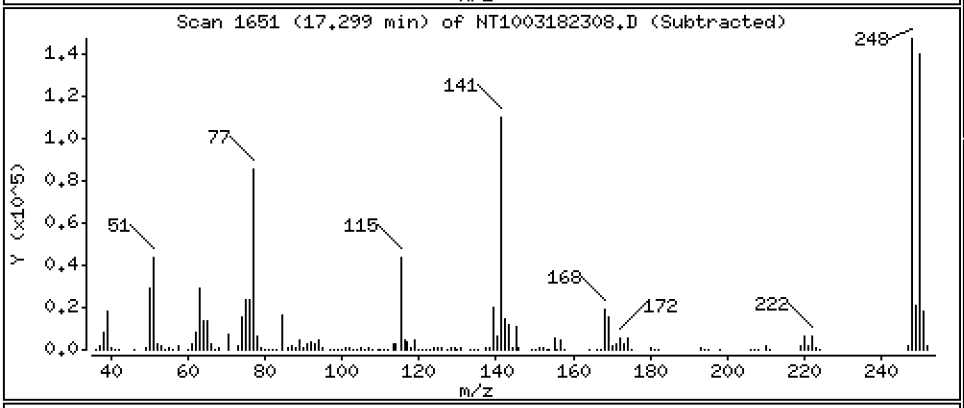
Column diameter: 0.25

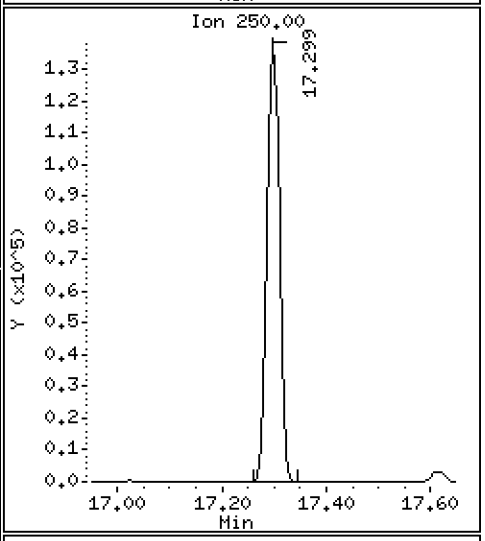
56 4-Bromophenyl-phenylether

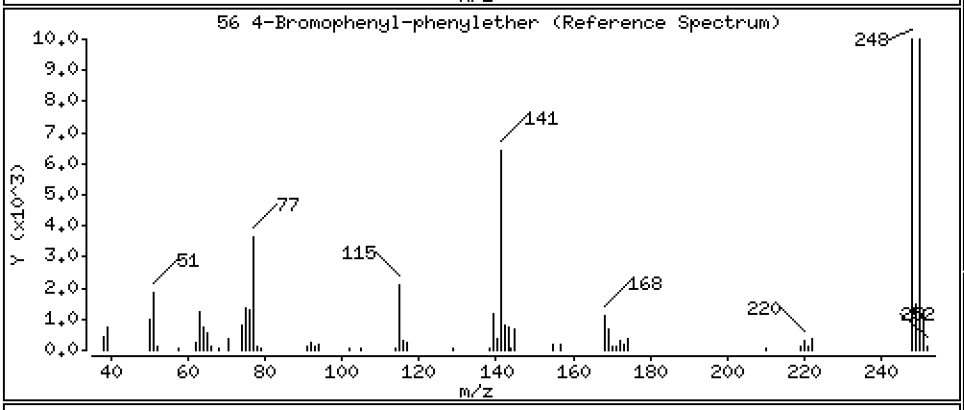
Concentration: 4.929 ug/mL

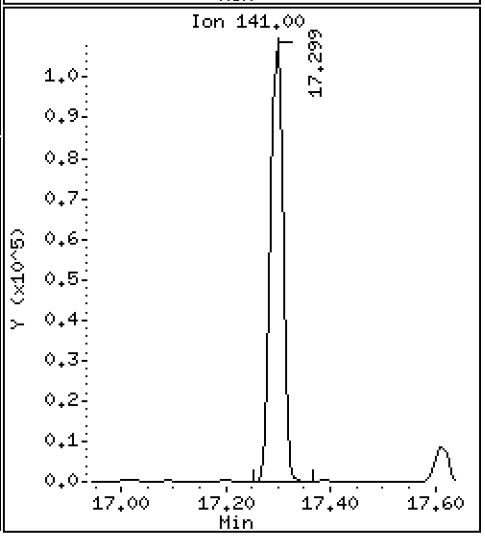


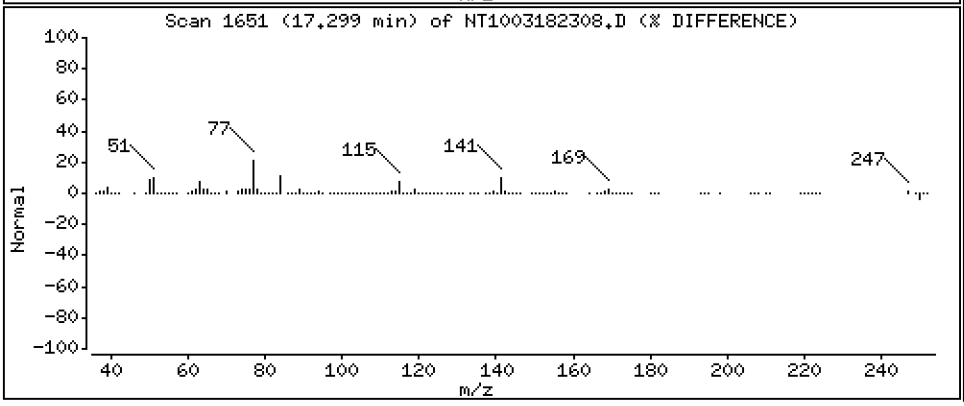












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

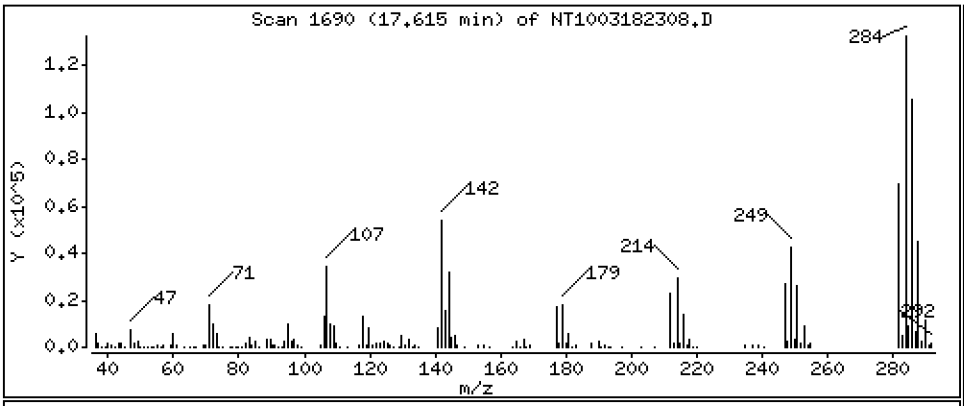
Operator: VTS

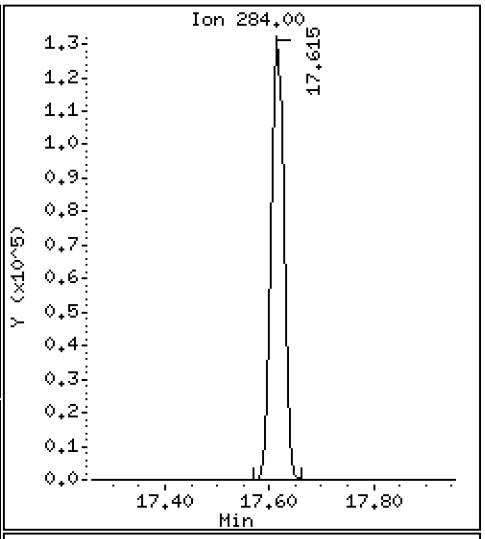
Column phase: ZB-5msi

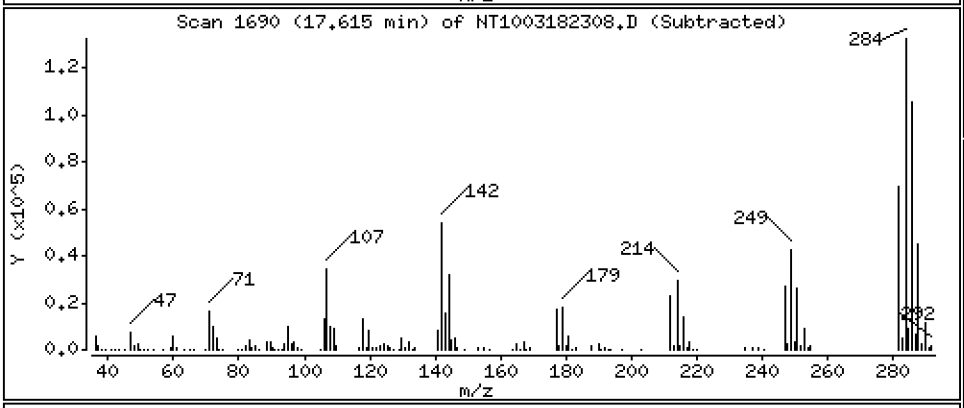
Column diameter: 0.25

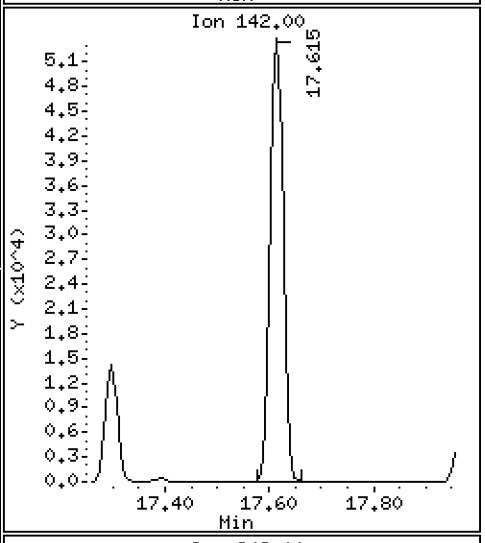
57 Hexachlorobenzene

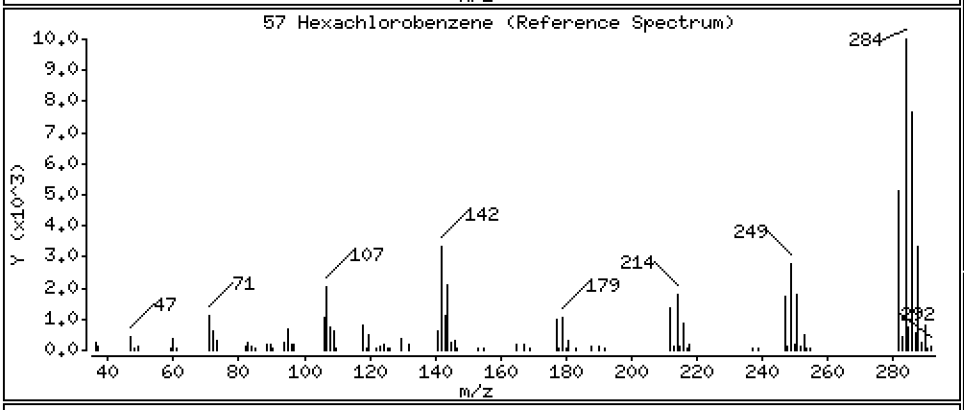
Concentration: 4.417 ug/mL

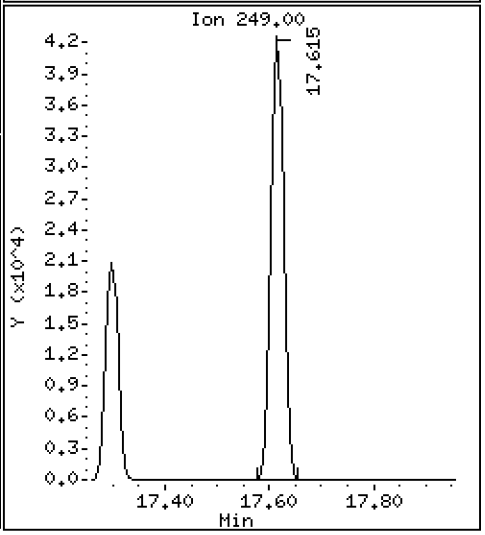


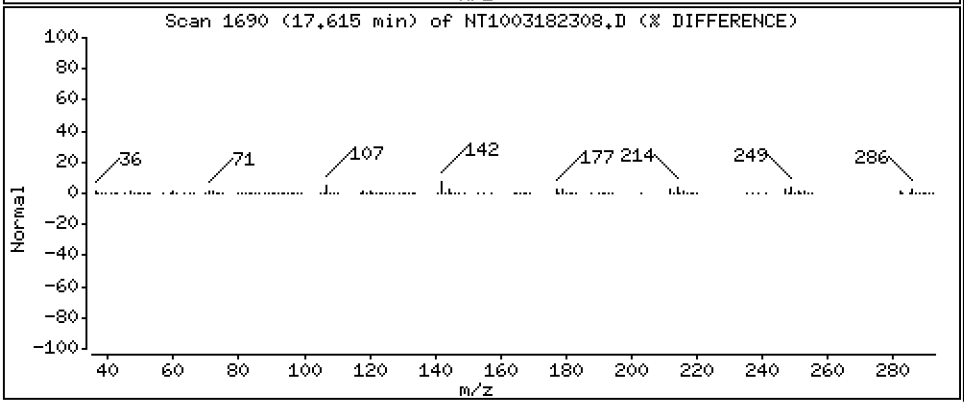












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

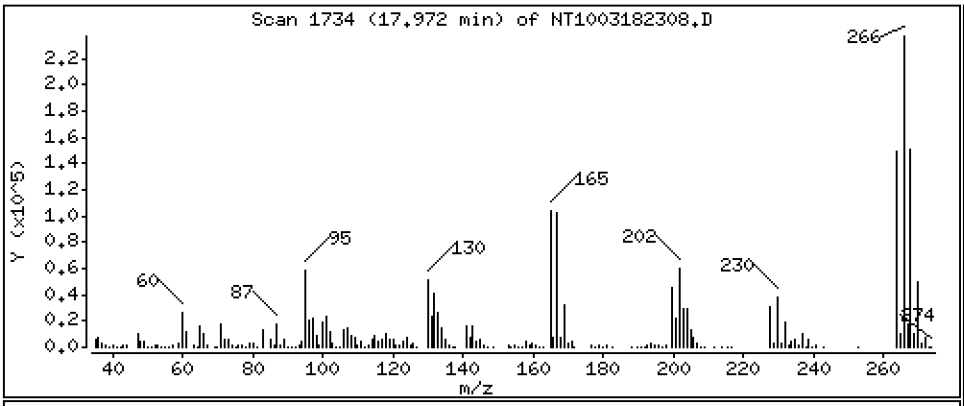
Operator: VTS

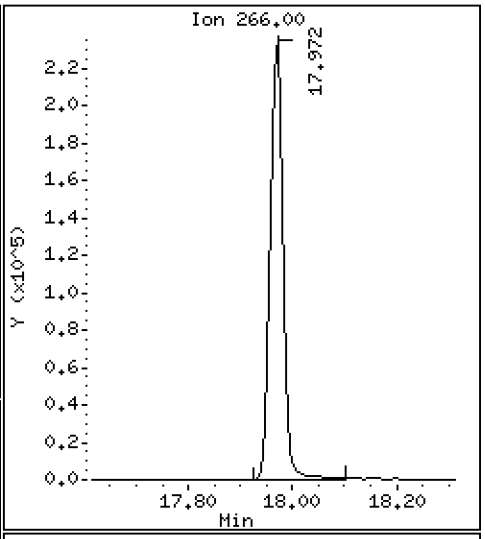
Column phase: ZB-5msi

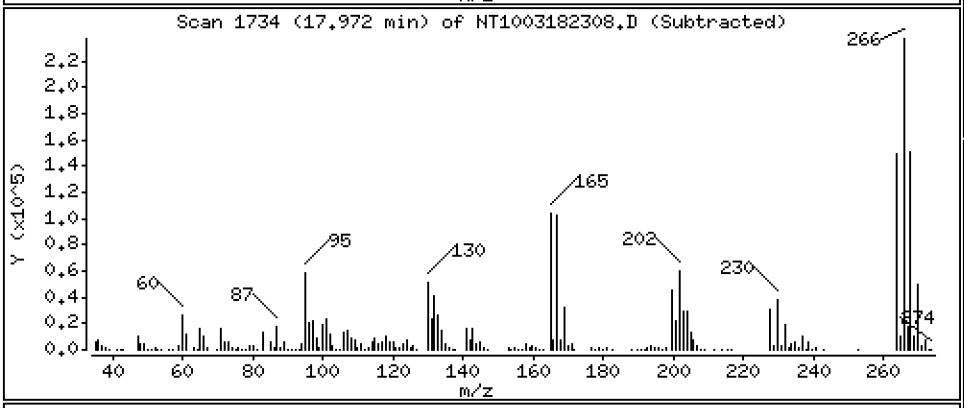
Column diameter: 0.25

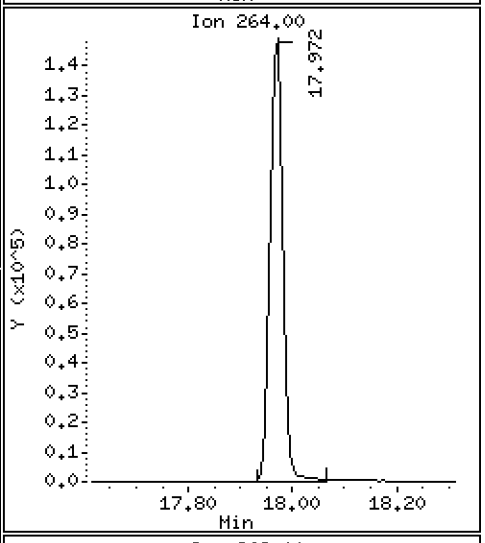
58 Pentachlorophenol

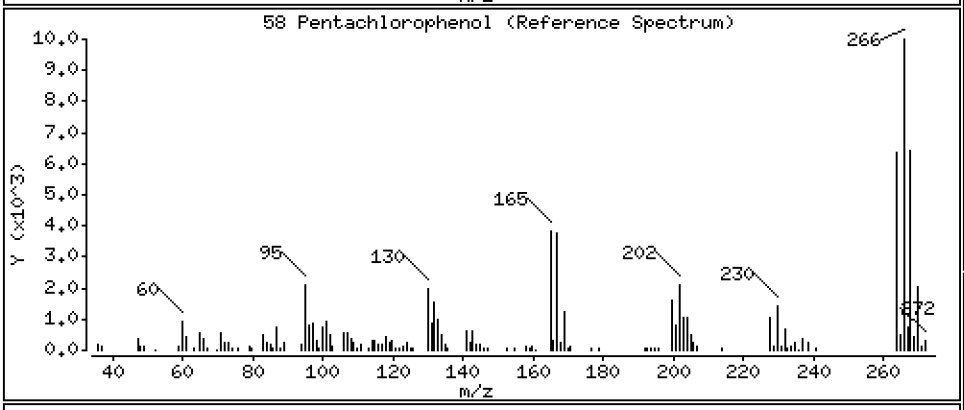
Concentration: 13.38 ug/mL

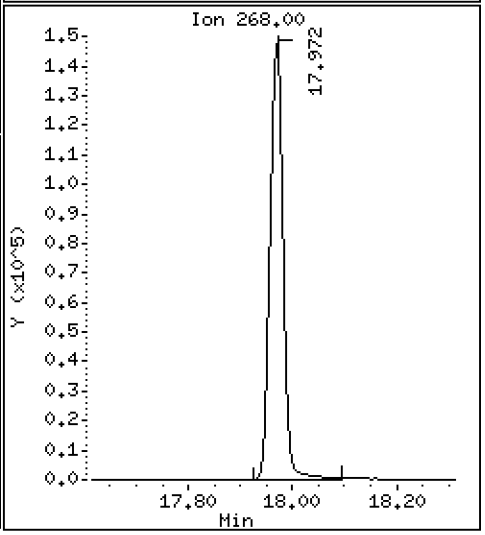


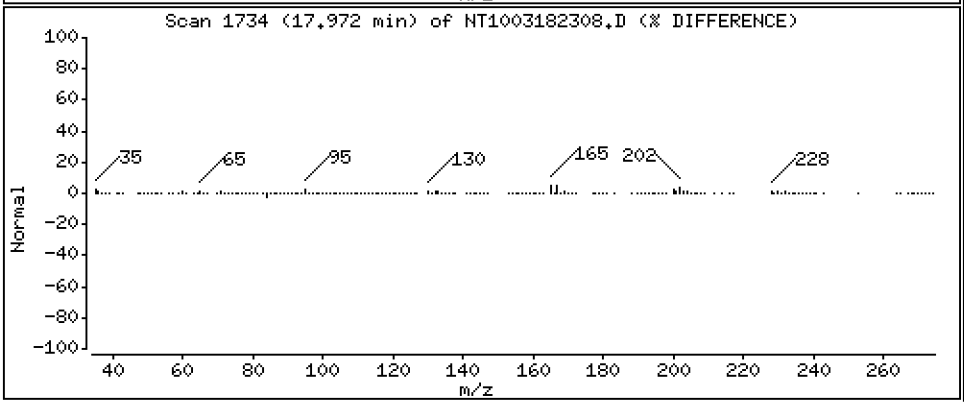












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

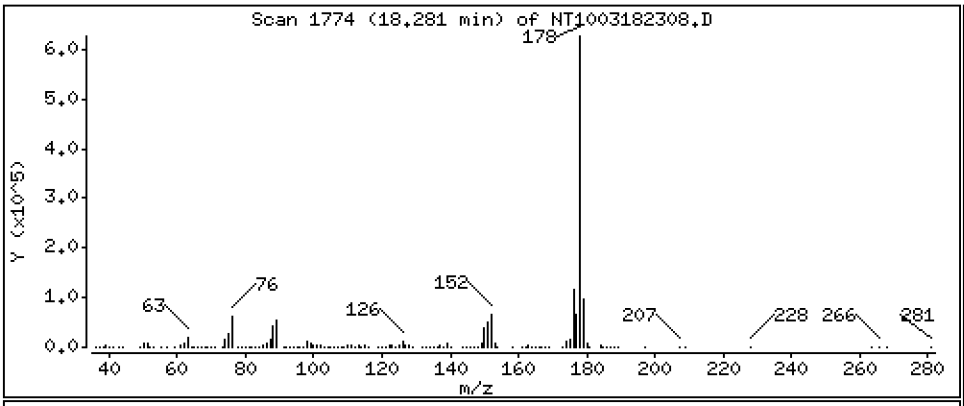
Operator: VTS

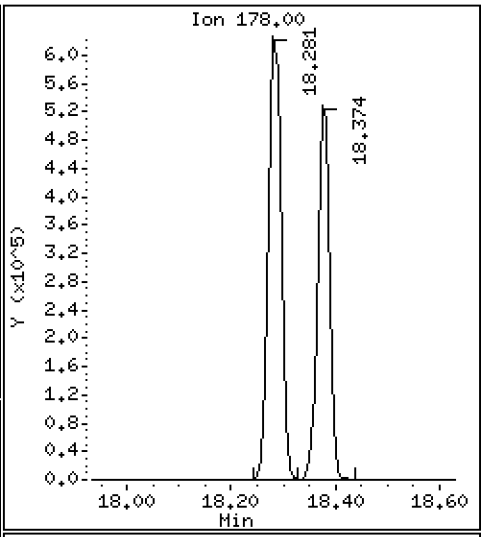
Column phase: ZB-5msi

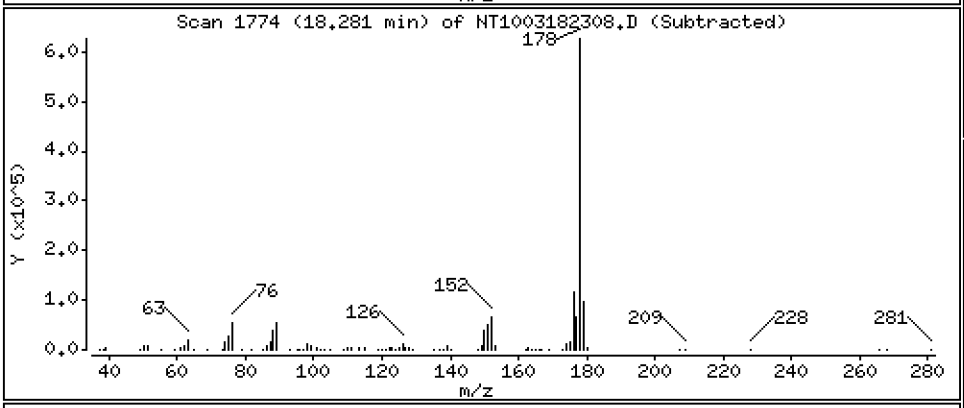
Column diameter: 0.25

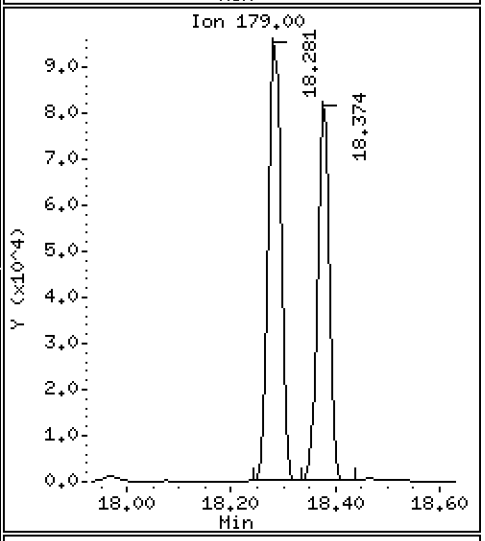
60 Phenanthrene

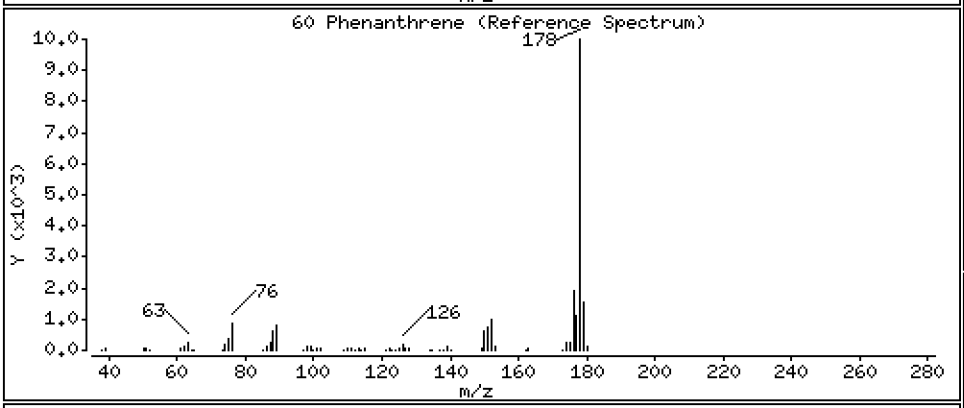
Concentration: 4.505 ug/mL

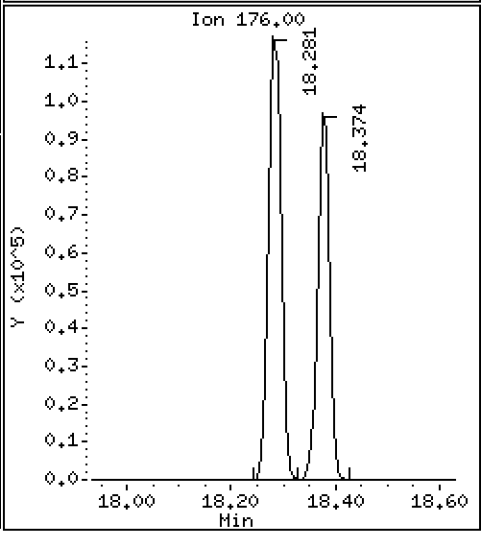


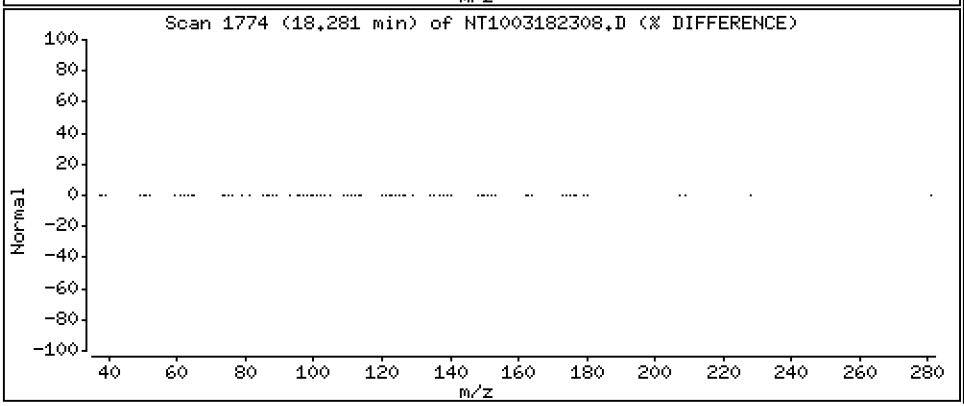












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

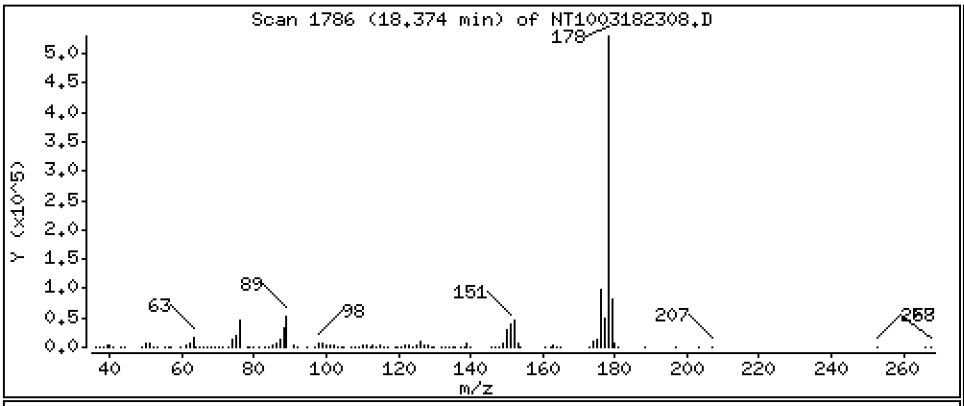
Operator: VTS

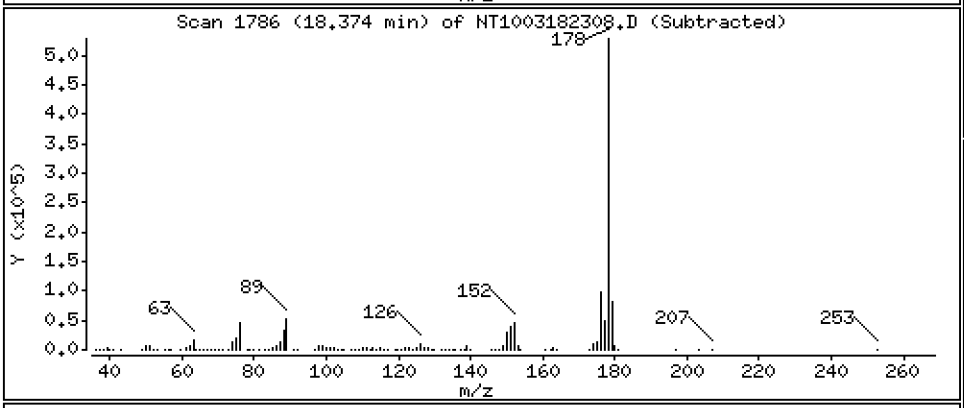
Column phase: ZB-5msi

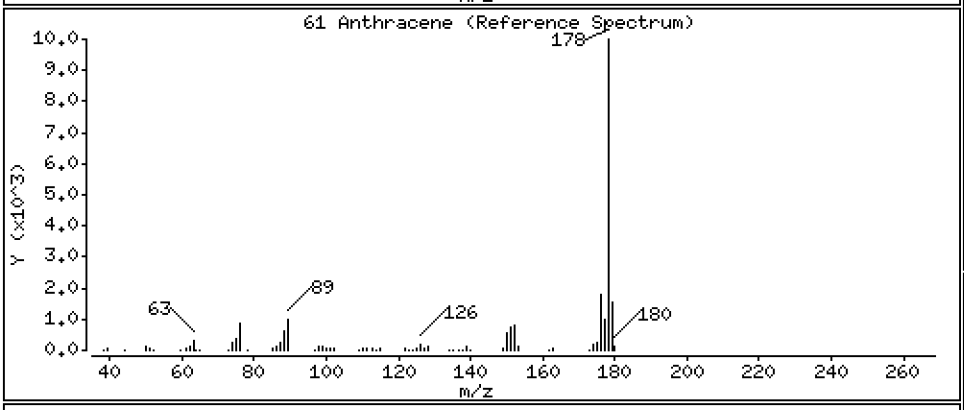
Column diameter: 0.25

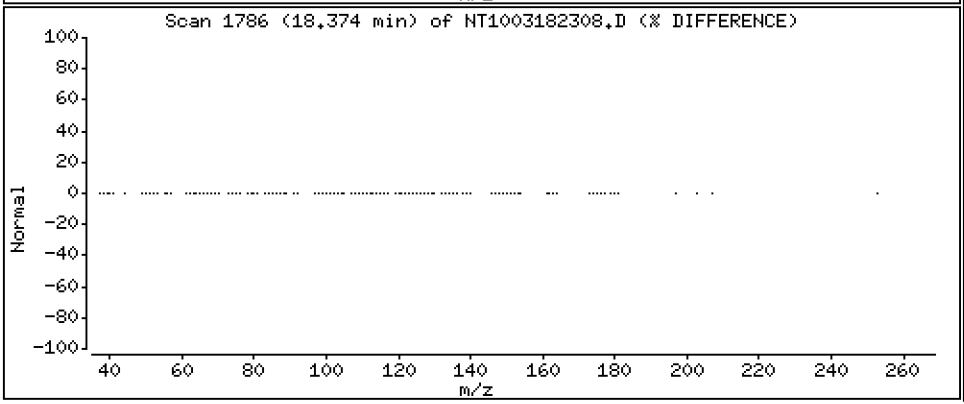
61 Anthracene

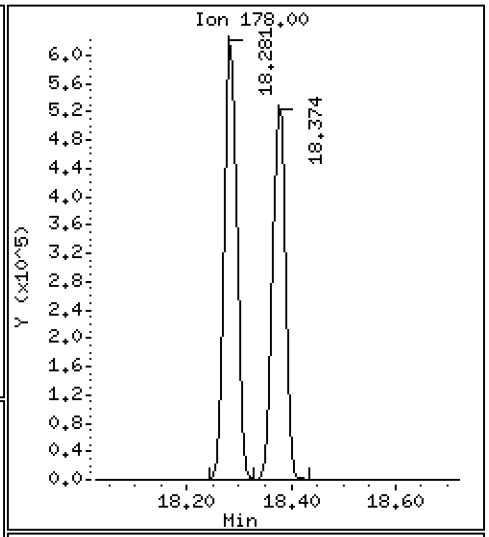
Concentration: 4.044 ug/mL

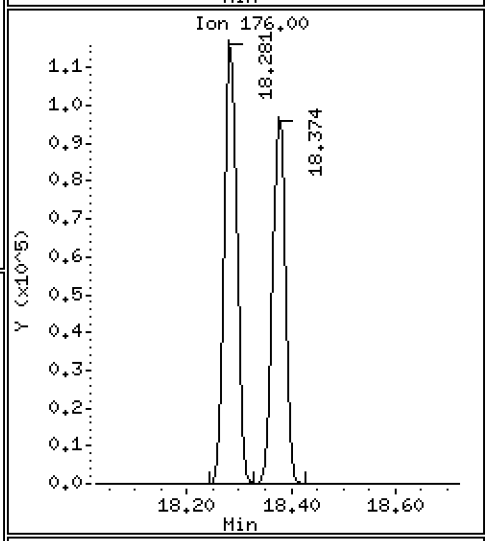


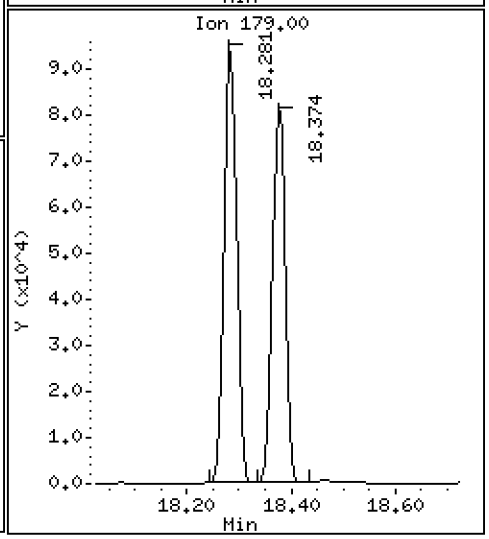












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

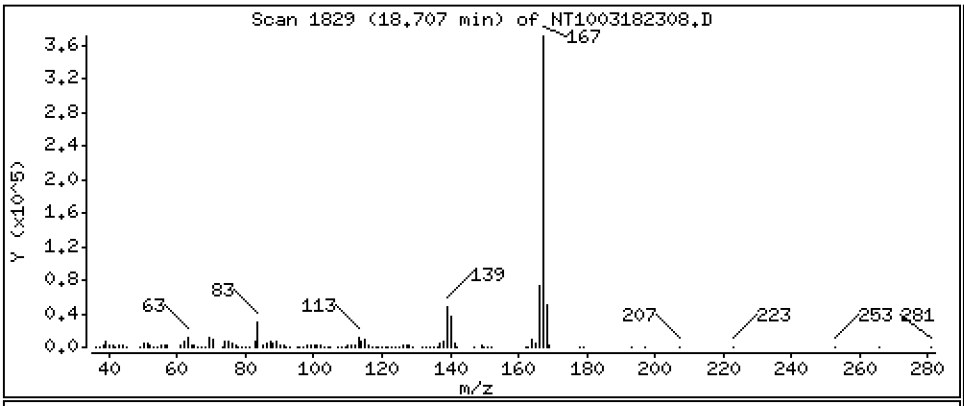
Operator: VTS

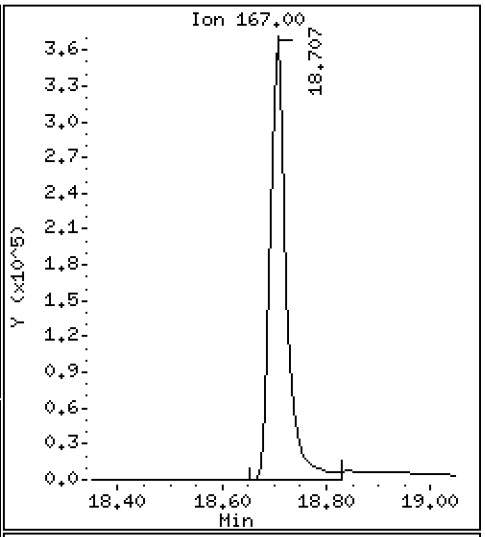
Column phase: ZB-5msi

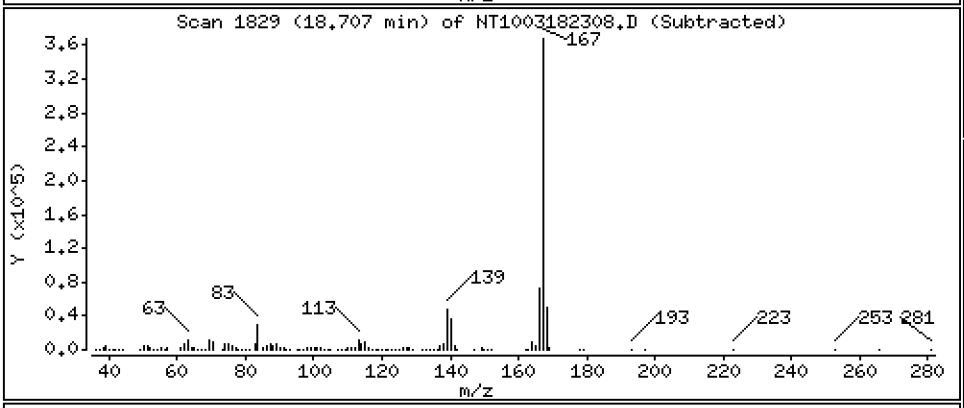
Column diameter: 0.25

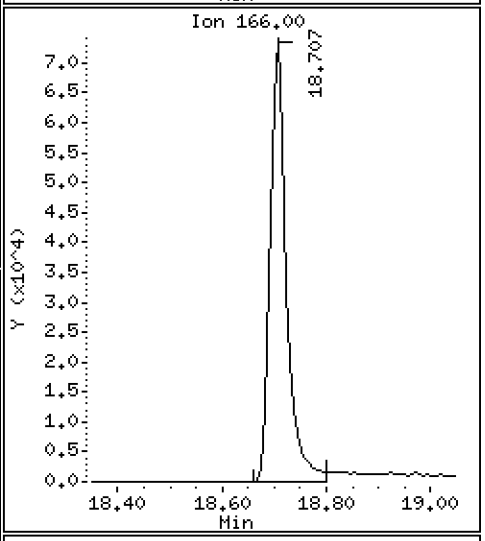
62 Carbazole

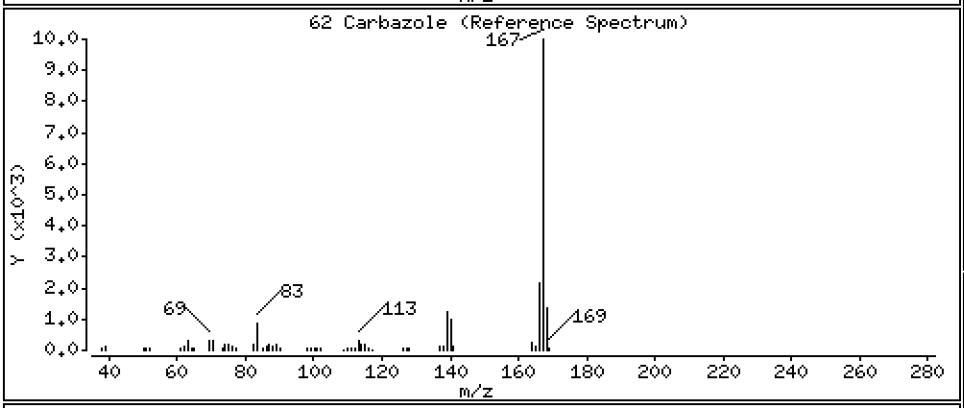
Concentration: 4.087 ug/mL

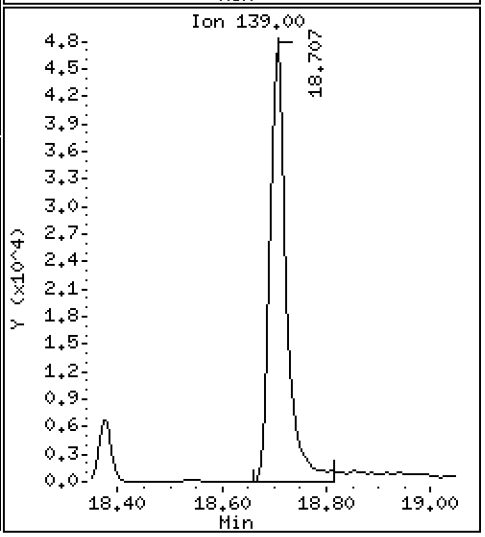


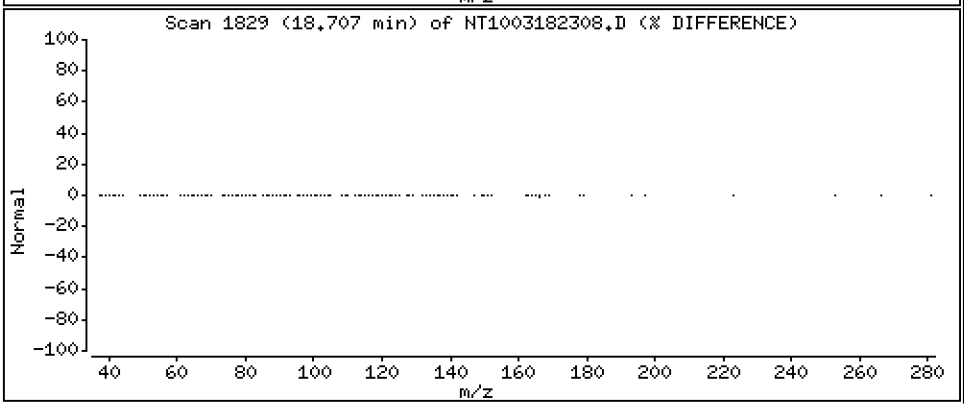












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

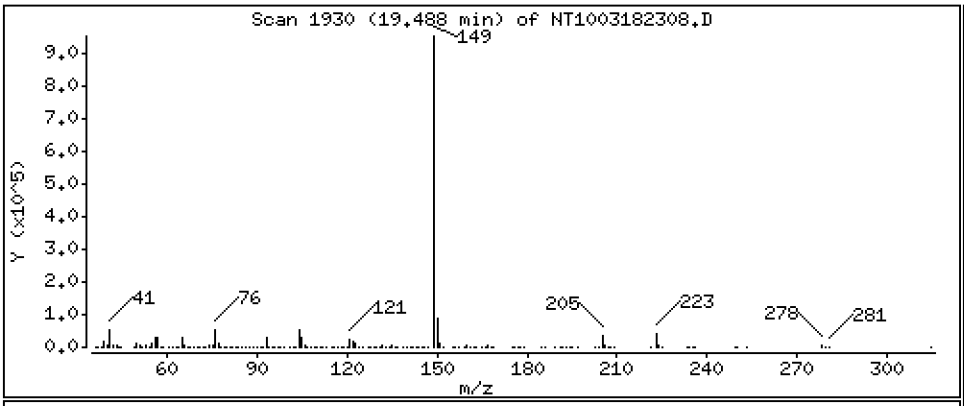
Operator: VTS

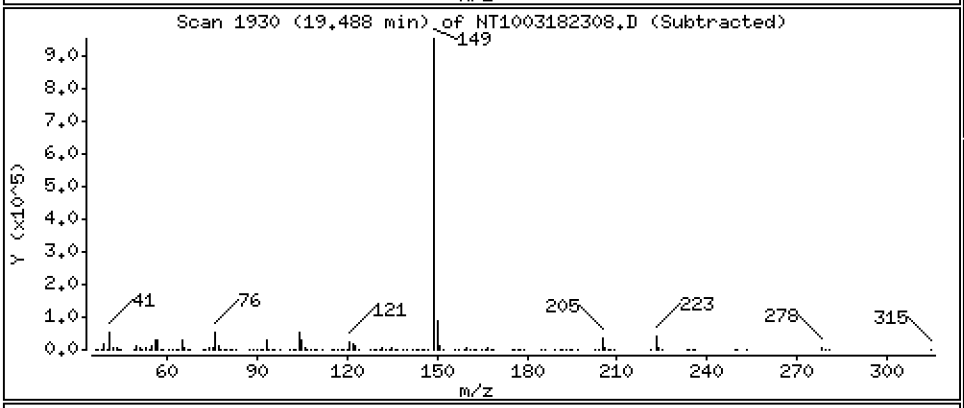
Column phase: ZB-5msi

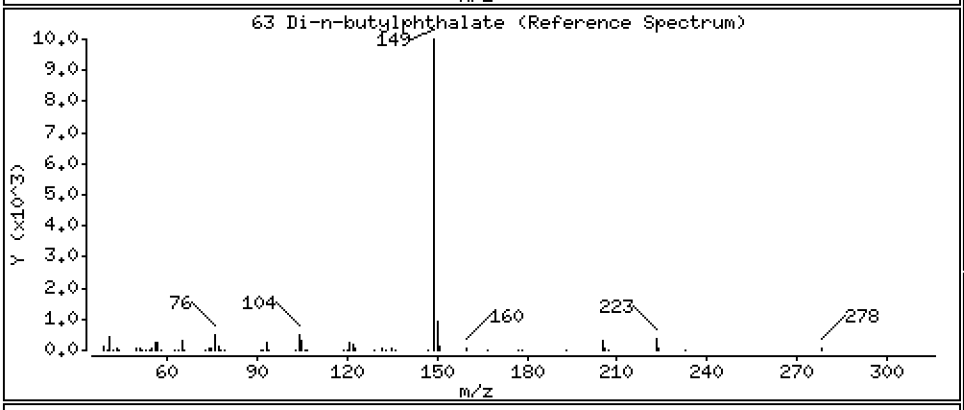
Column diameter: 0.25

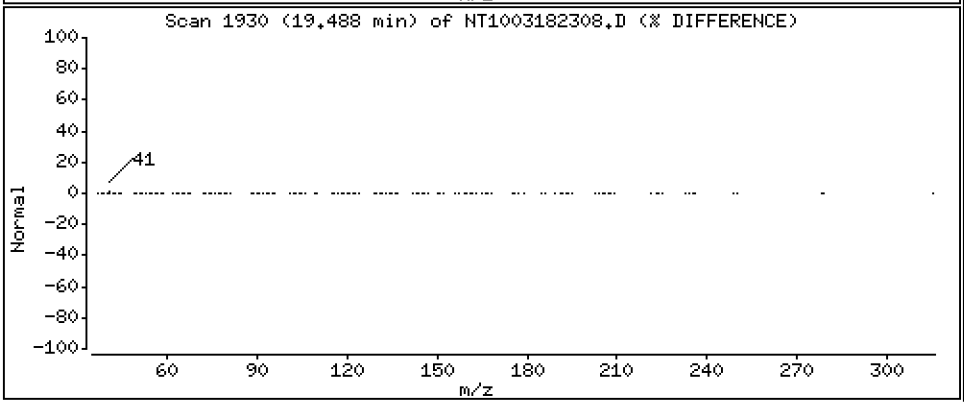
63 Di-n-butylphthalate

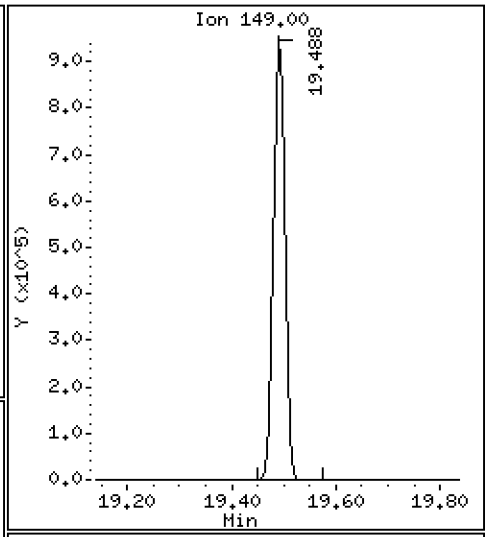
Concentration: 5.324 ug/mL

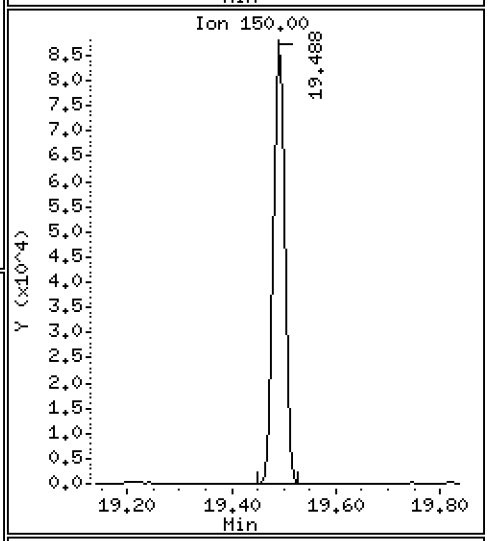


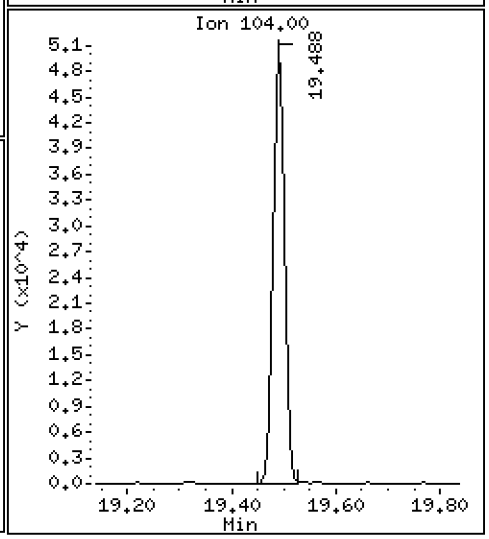












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

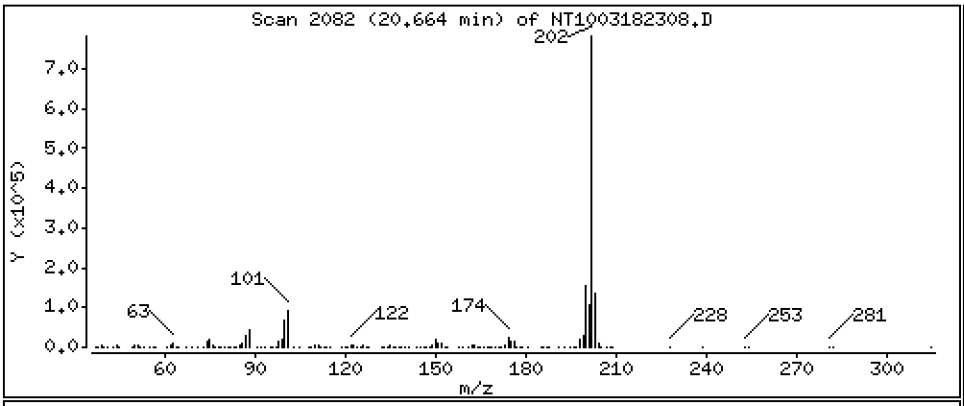
Operator: VTS

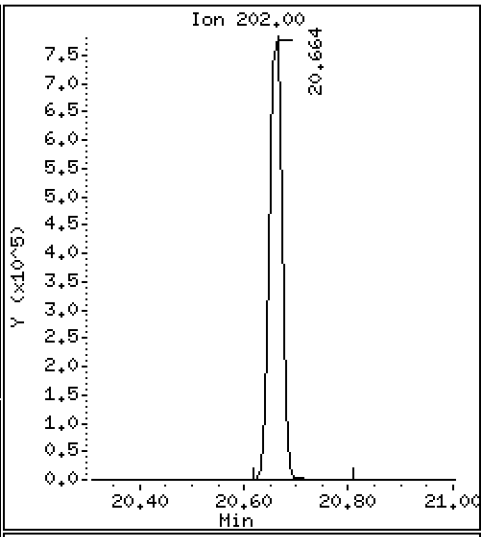
Column phase: ZB-5msi

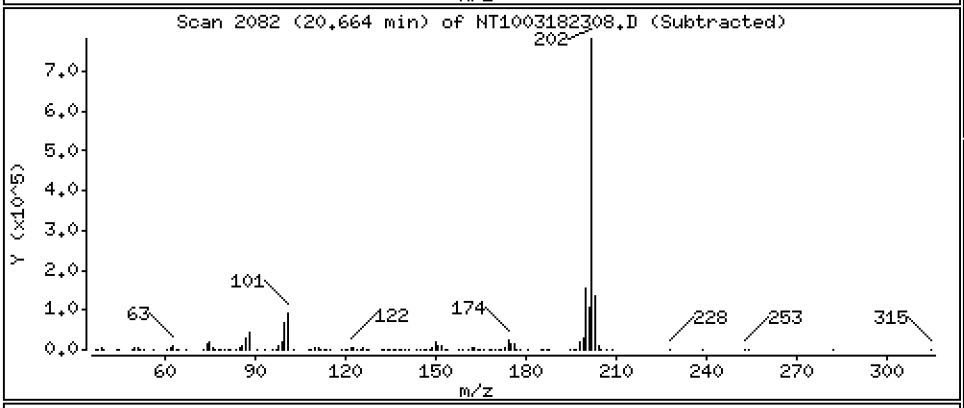
Column diameter: 0.25

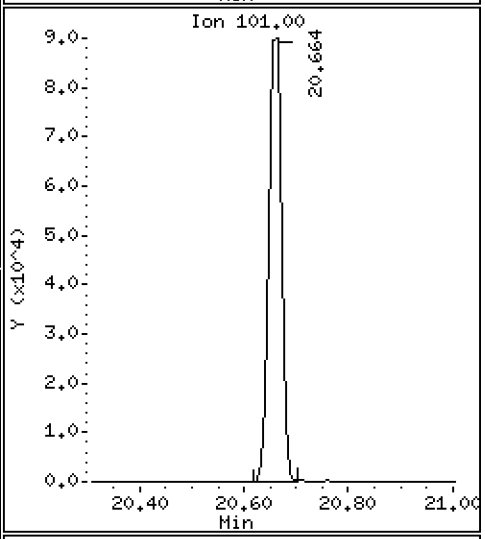
64 Fluoranthene

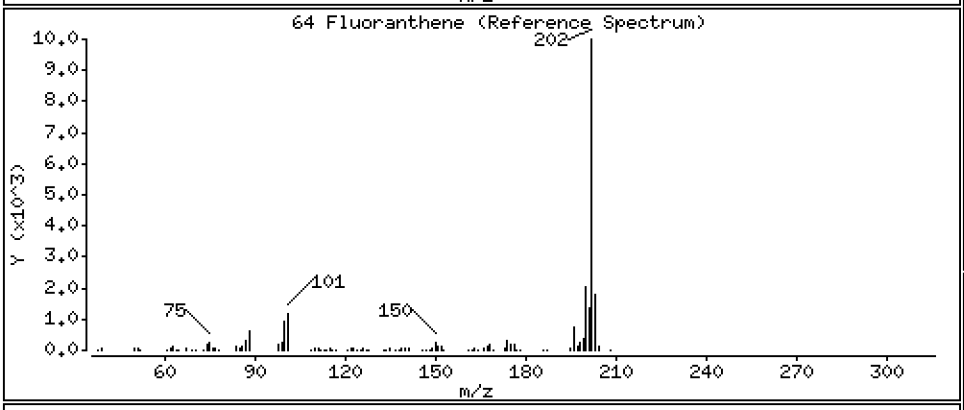
Concentration: 4.689 ug/mL

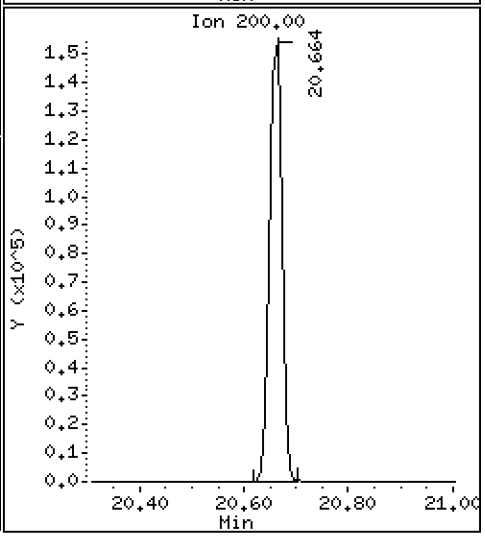


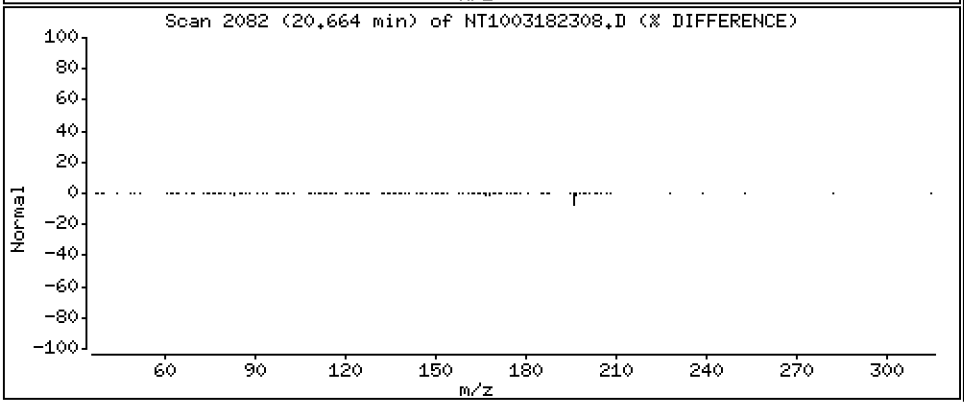












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

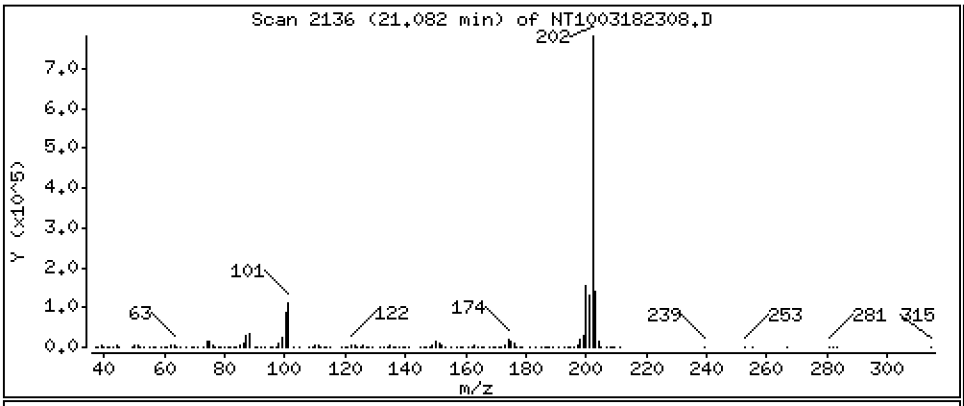
Operator: VTS

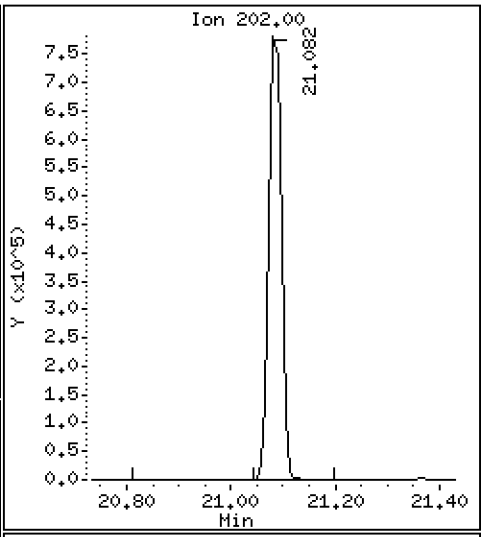
Column phase: ZB-5msi

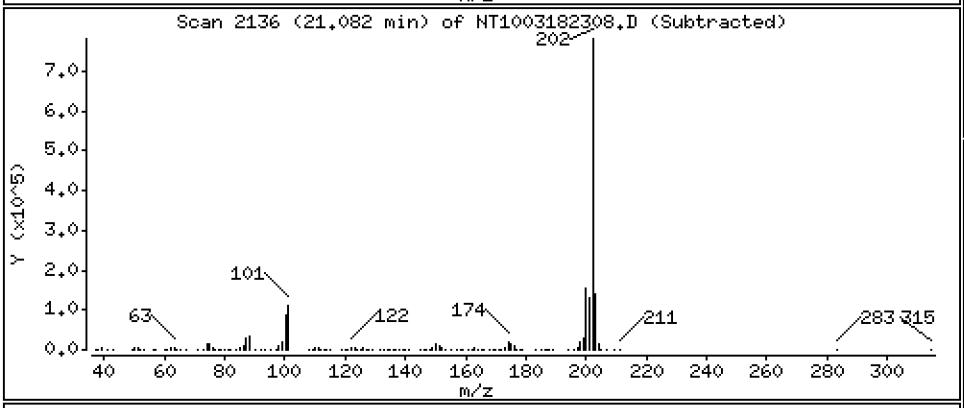
Column diameter: 0.25

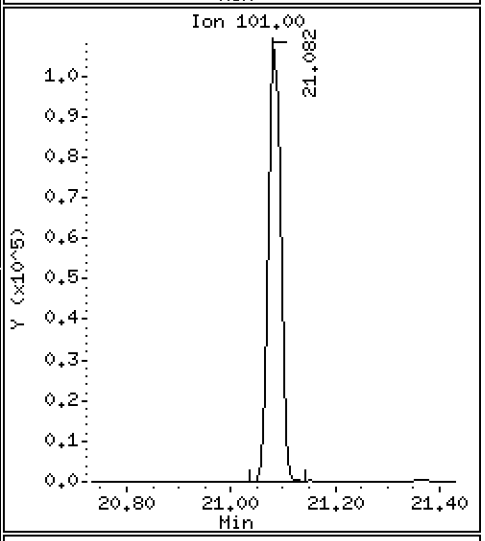
65 Pyrene

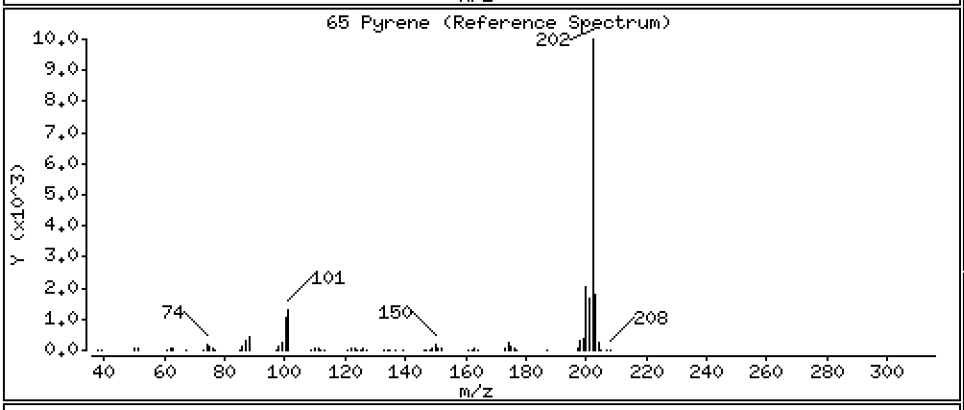
Concentration: 4.599 ug/mL

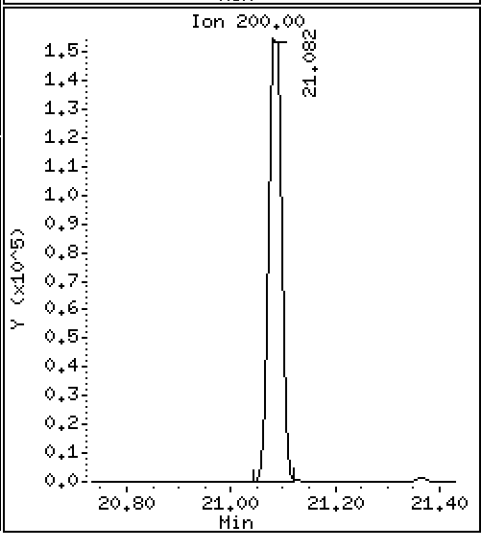


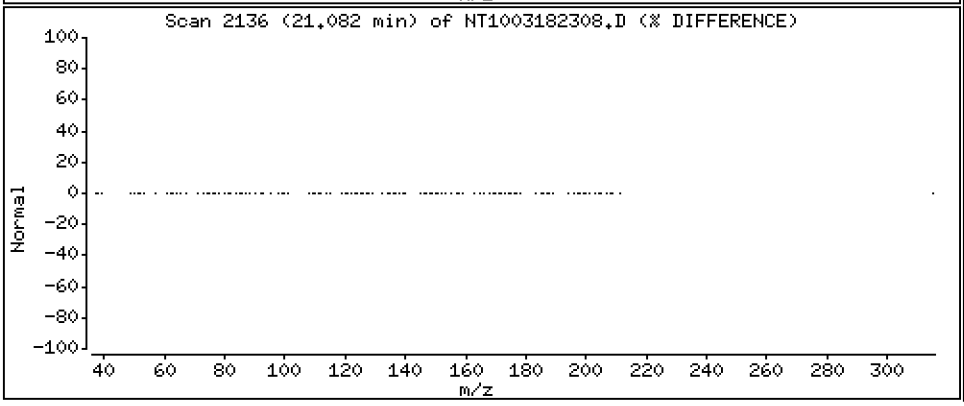












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

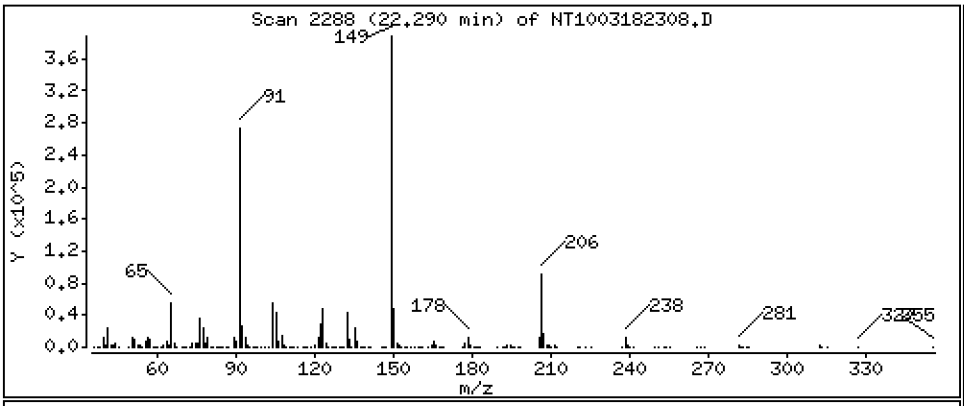
Operator: VTS

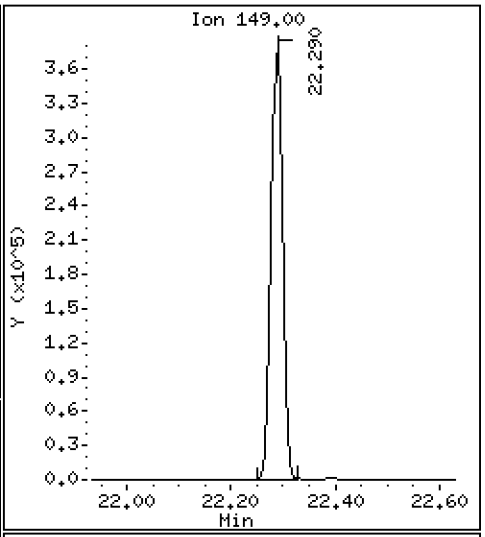
Column phase: ZB-5msi

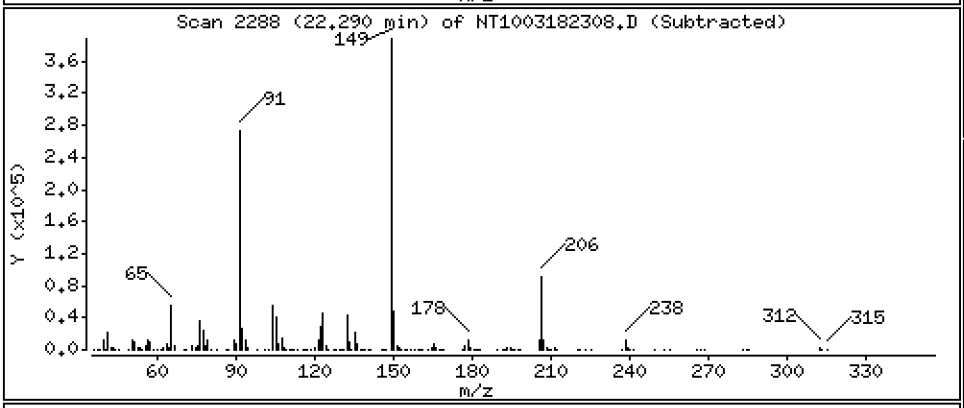
Column diameter: 0.25

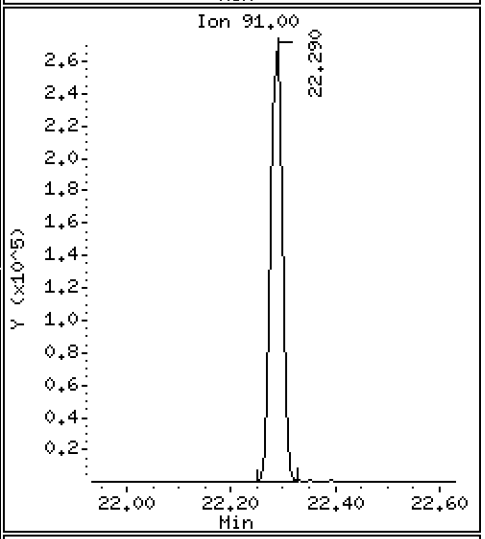
67 Butylbenzylphthalate

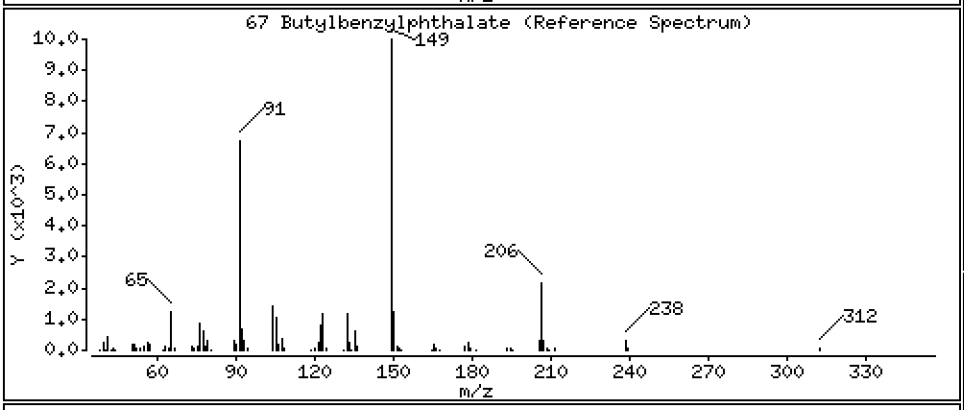
Concentration: 5.580 ug/mL

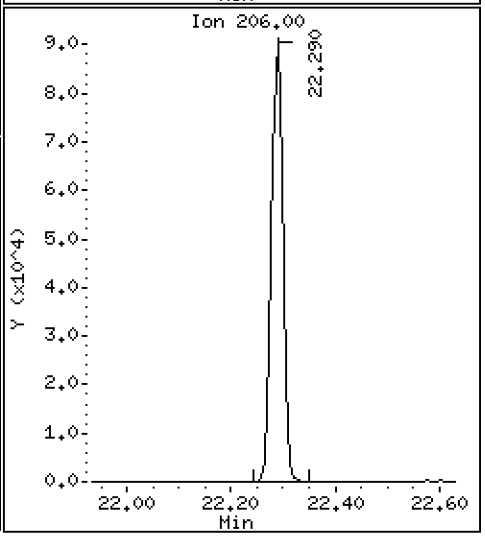


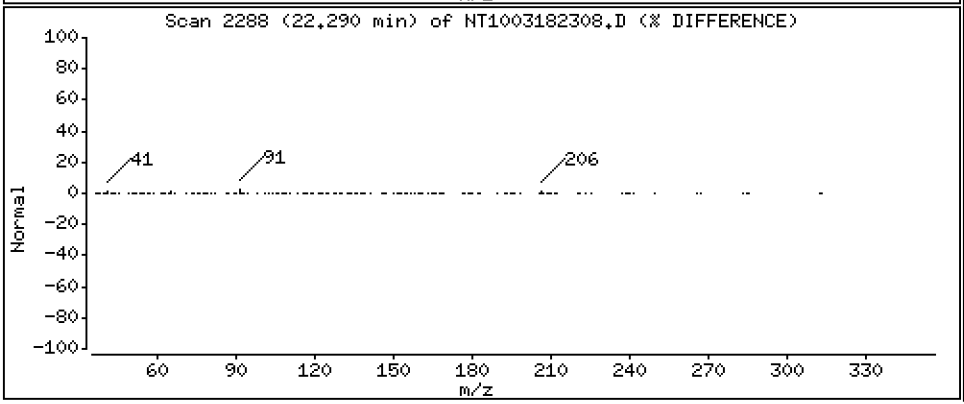












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

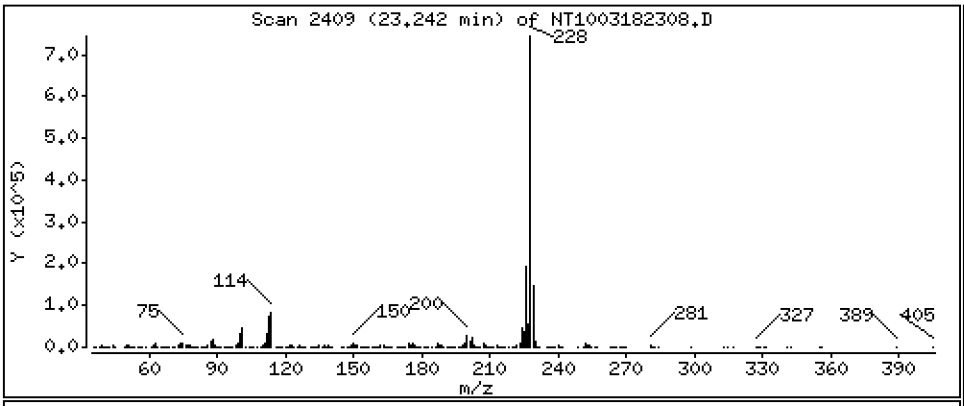
Operator: VTS

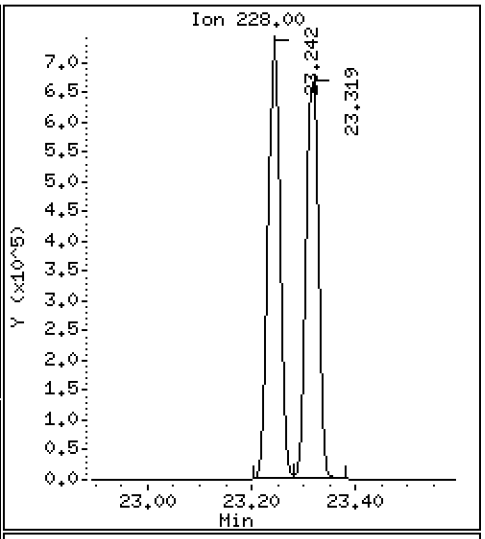
Column phase: ZB-5msi

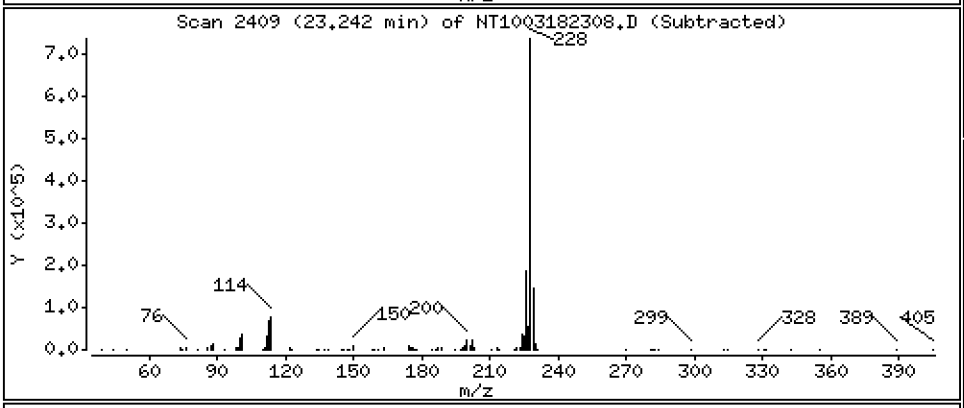
Column diameter: 0.25

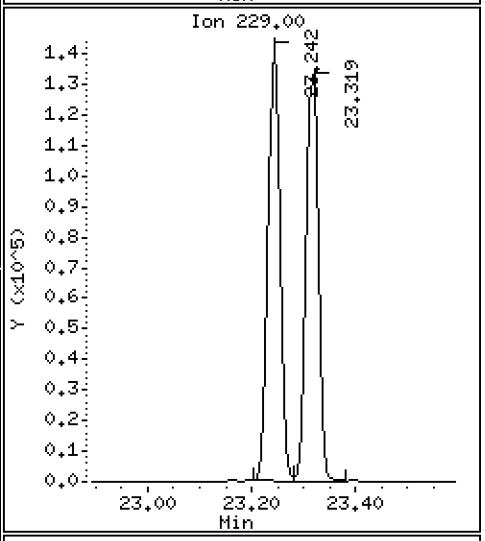
68 Benzo(a)anthracene

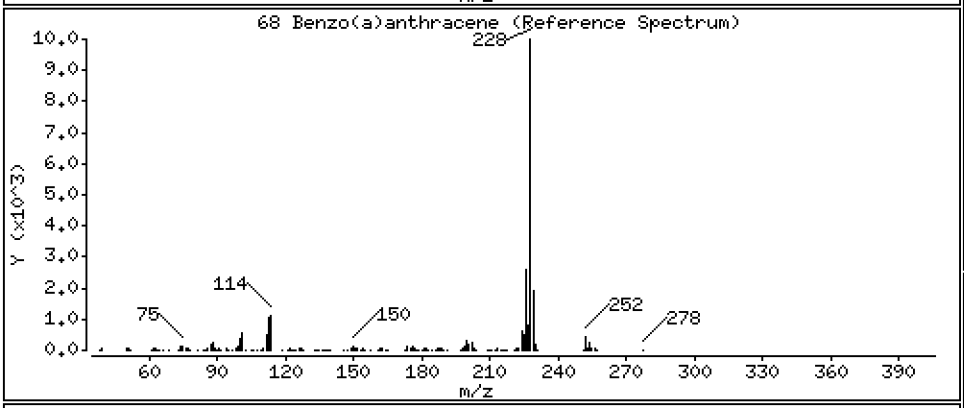
Concentration: 4.774 ug/mL

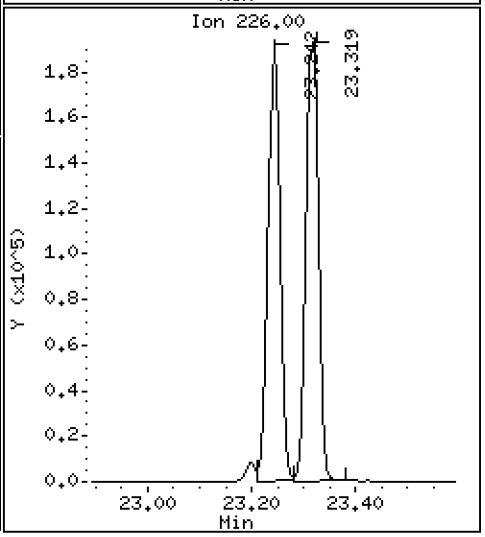


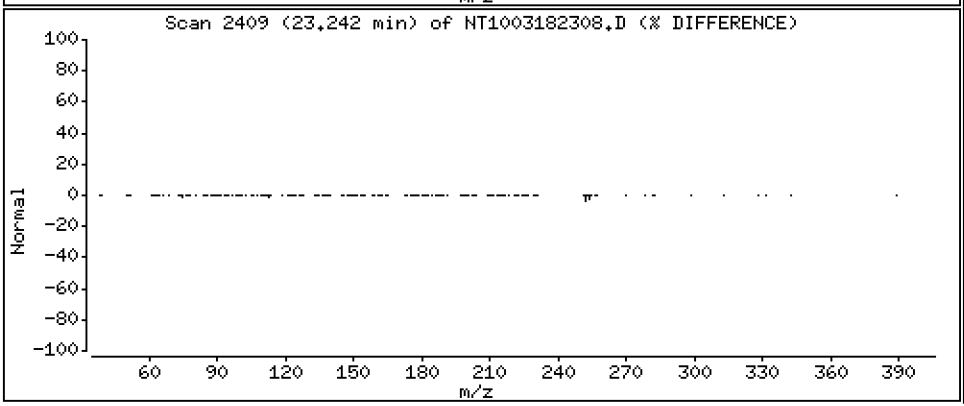












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

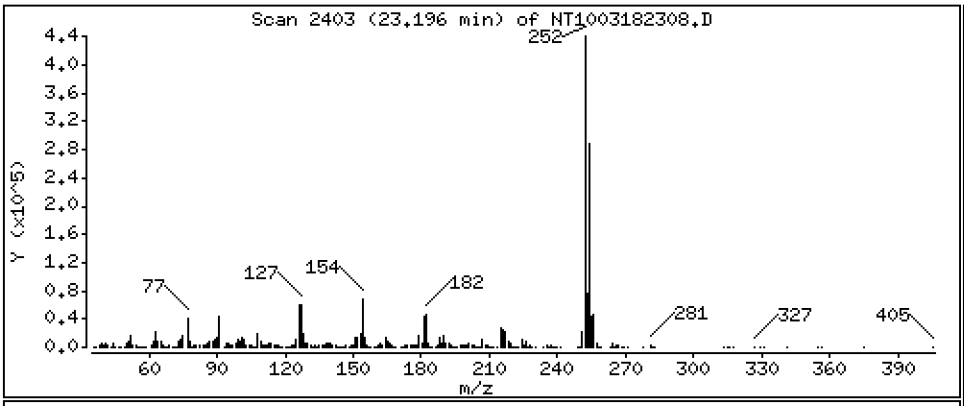
Operator: VTS

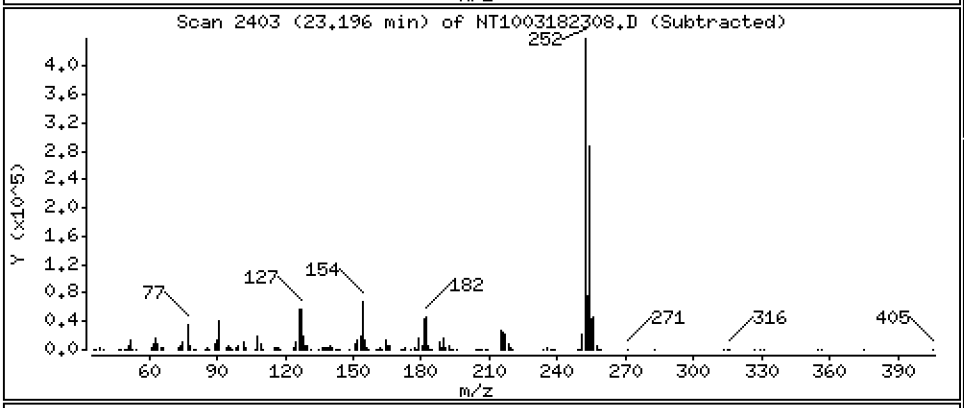
Column phase: ZB-5msi

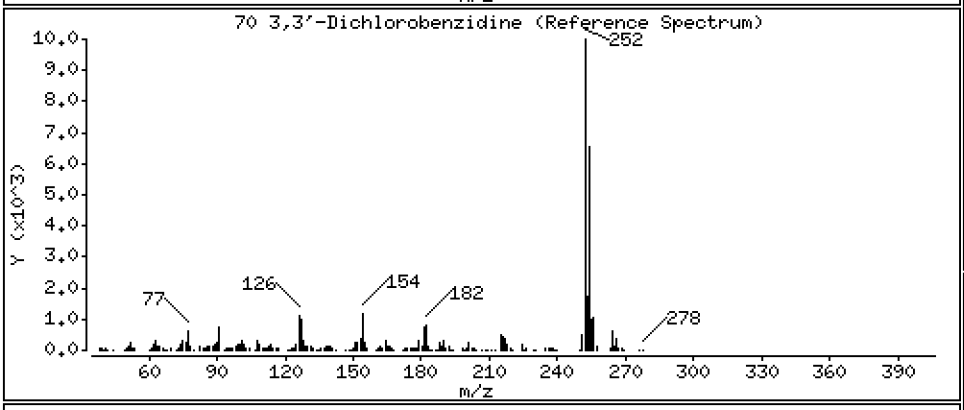
Column diameter: 0.25

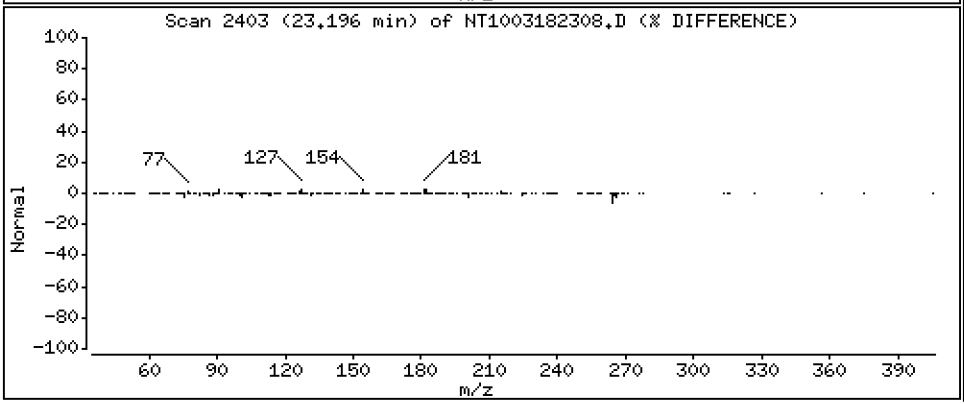
70 3,3'-Dichlorobenzidine

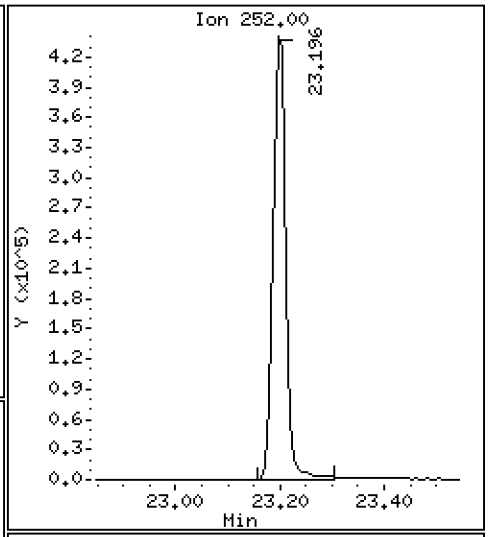
Concentration: 9.409 ug/mL

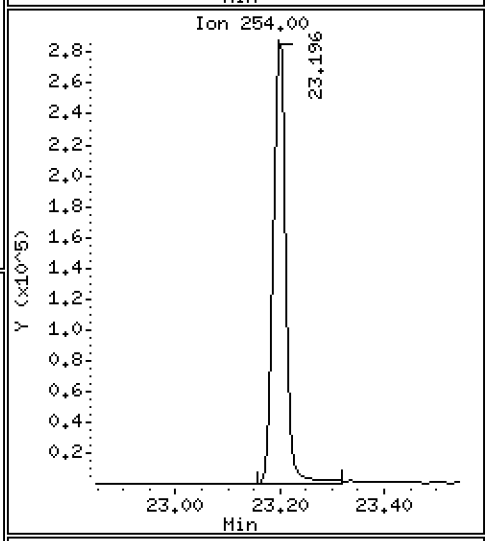


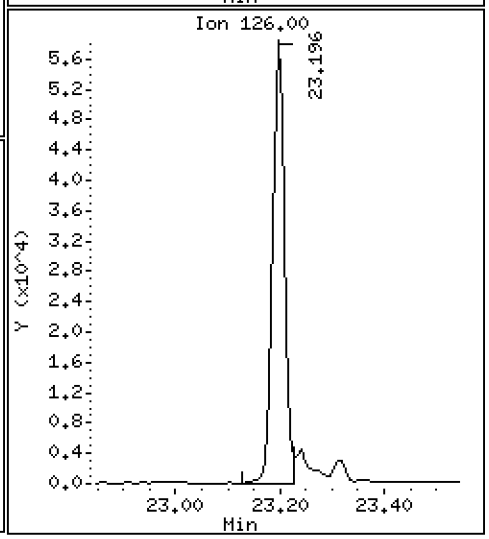












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

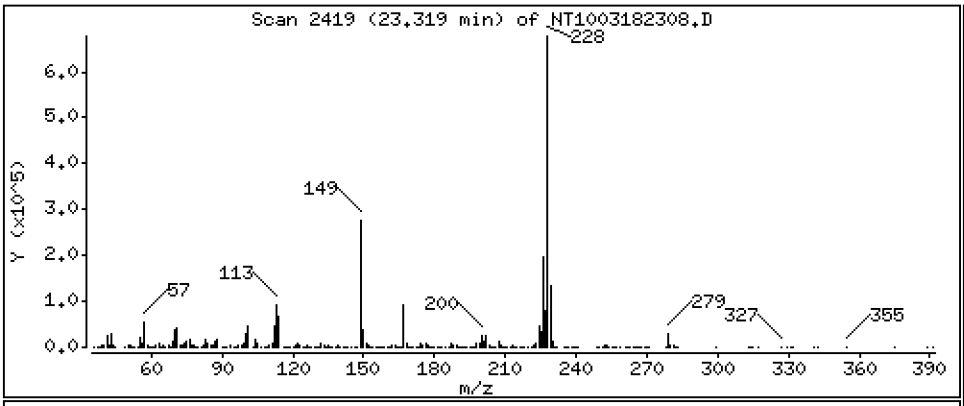
Operator: VTS

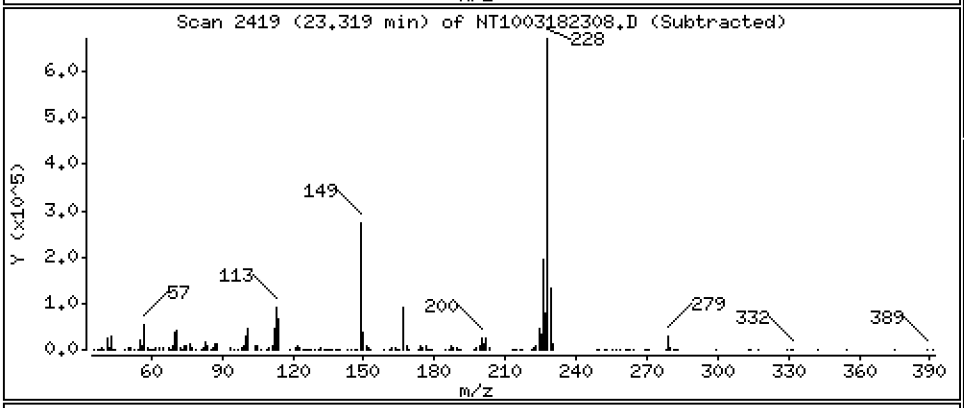
Column phase: ZB-5msi

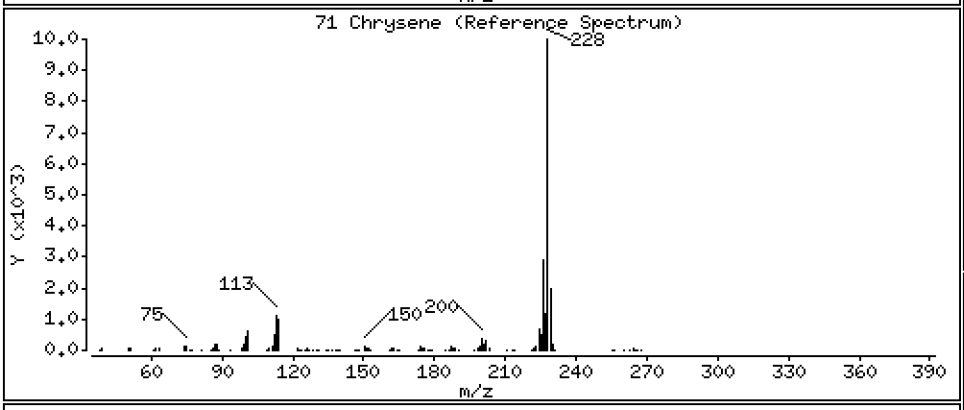
Column diameter: 0.25

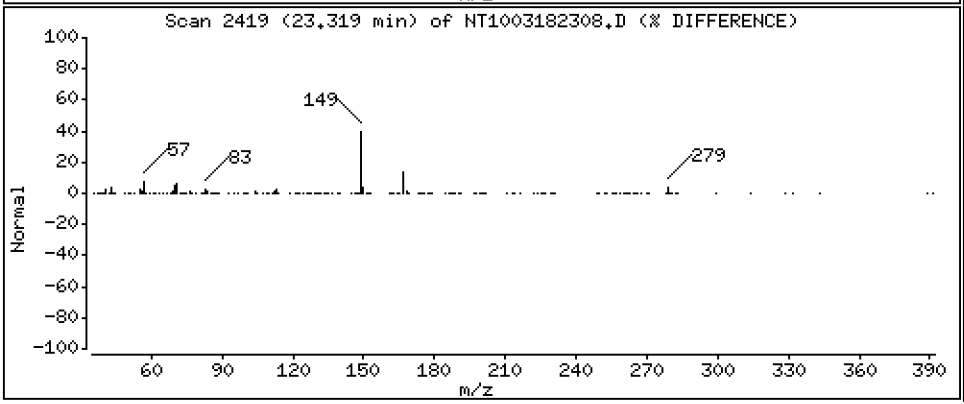
71 Chrysene

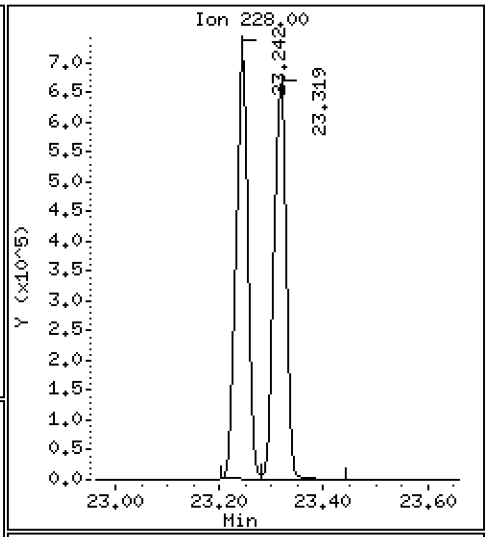
Concentration: 4.634 ug/mL

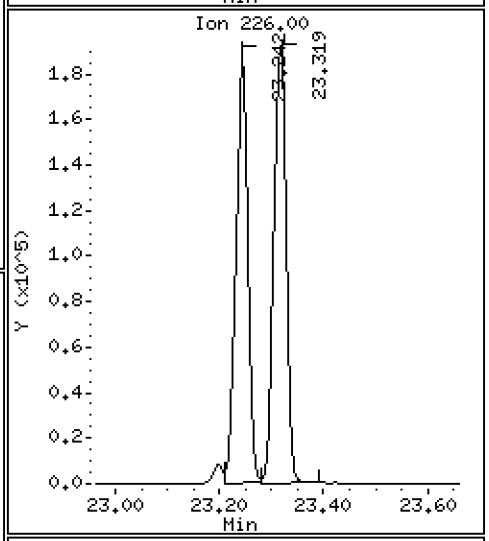


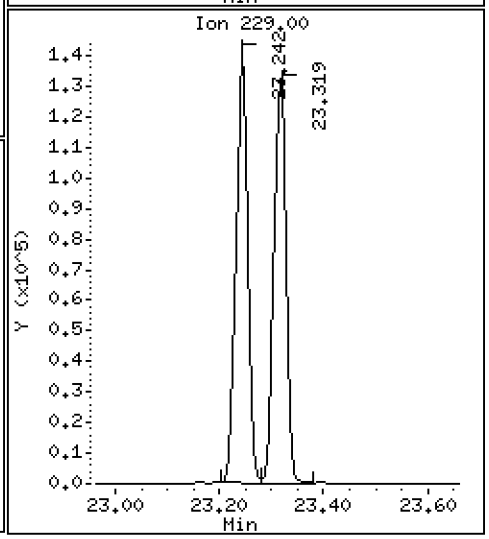












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

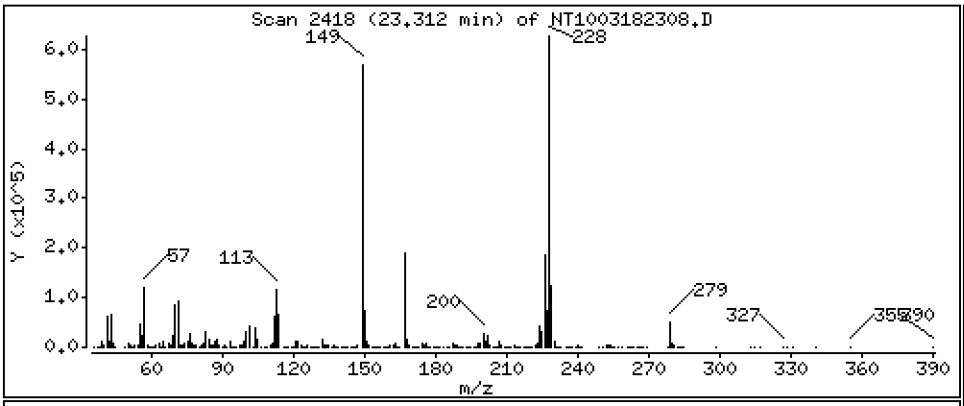
Operator: VTS

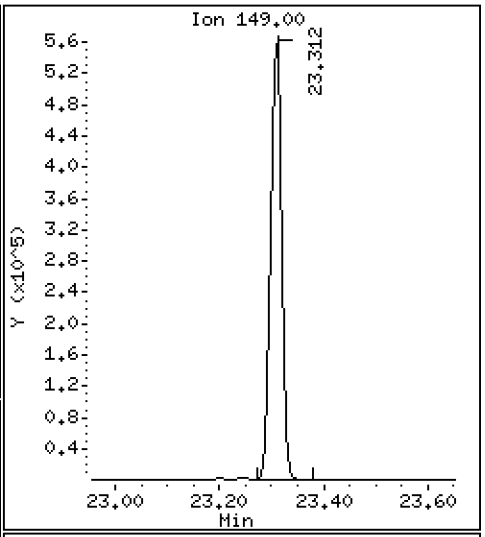
Column phase: ZB-5msi

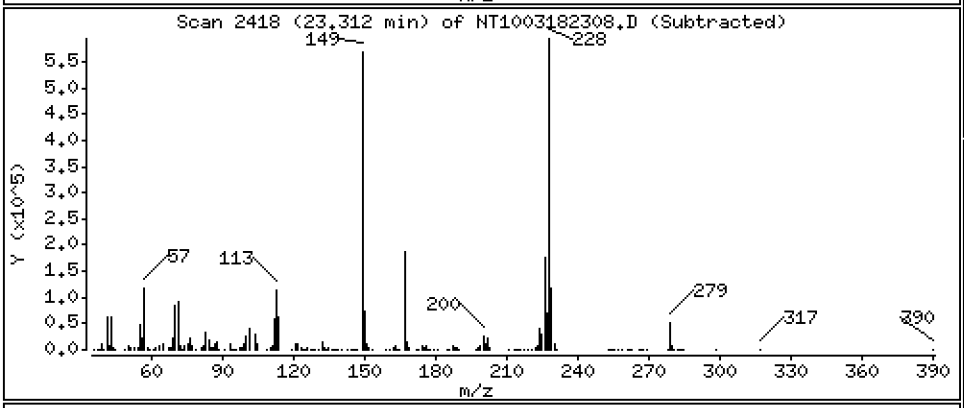
Column diameter: 0.25

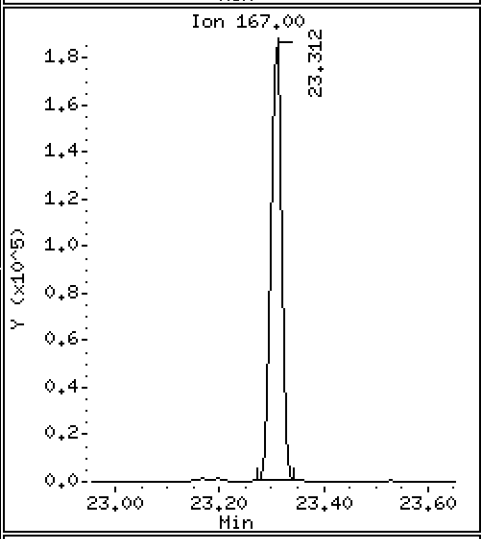
72 bis(2-Ethylhexyl)phthalate

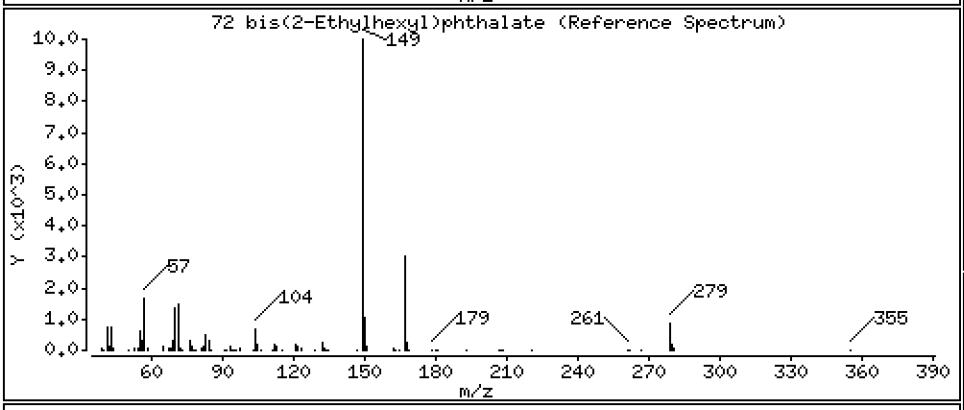
Concentration: 4.707 ug/mL

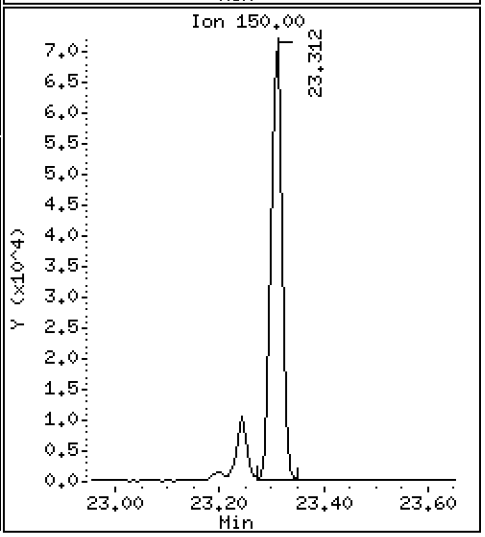


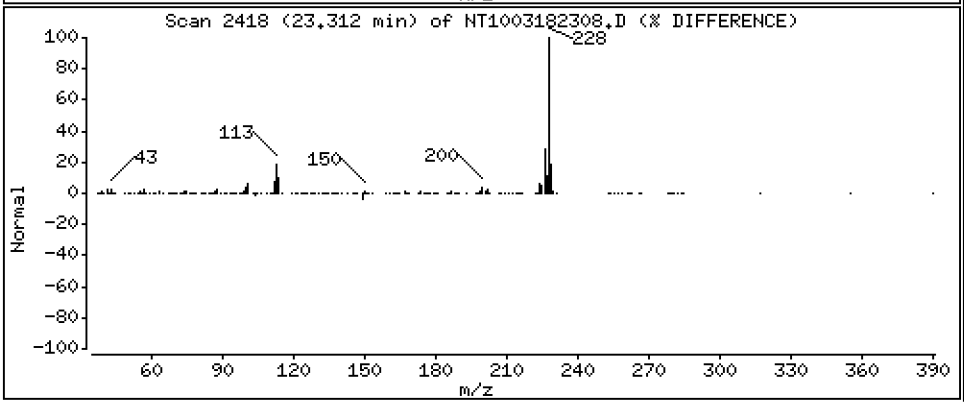












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

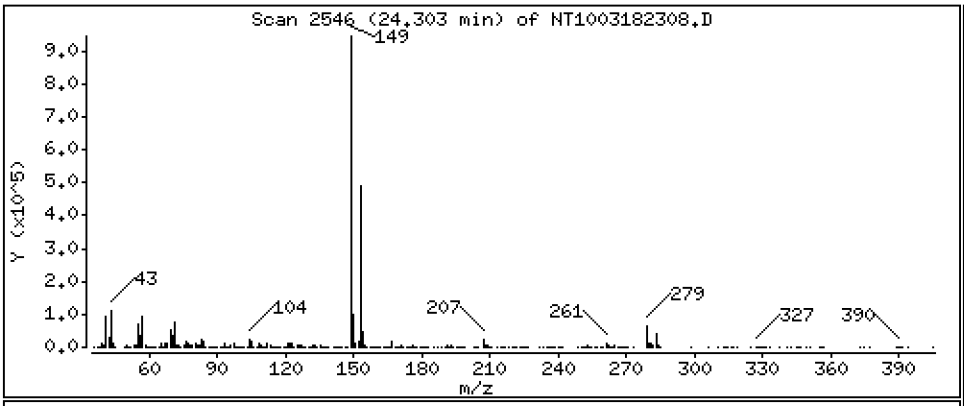
Operator: VTS

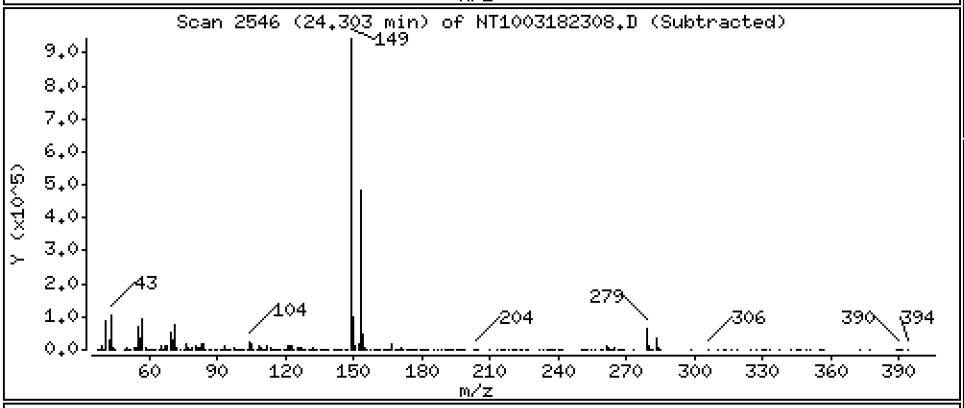
Column phase: ZB-5msi

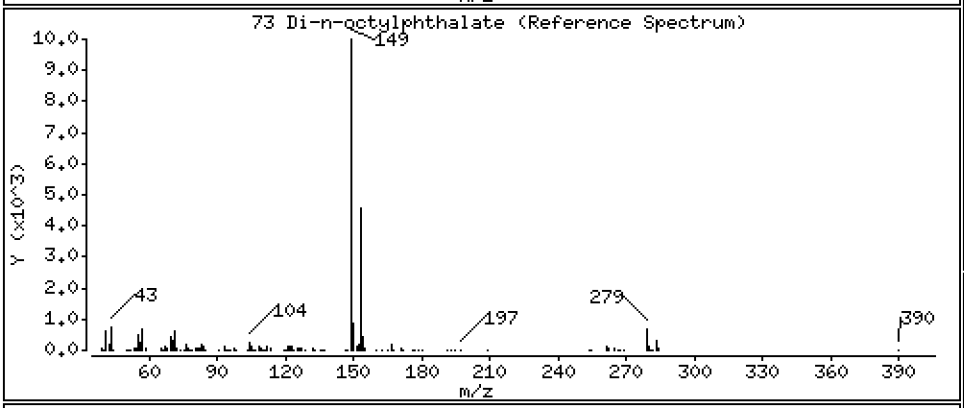
Column diameter: 0.25

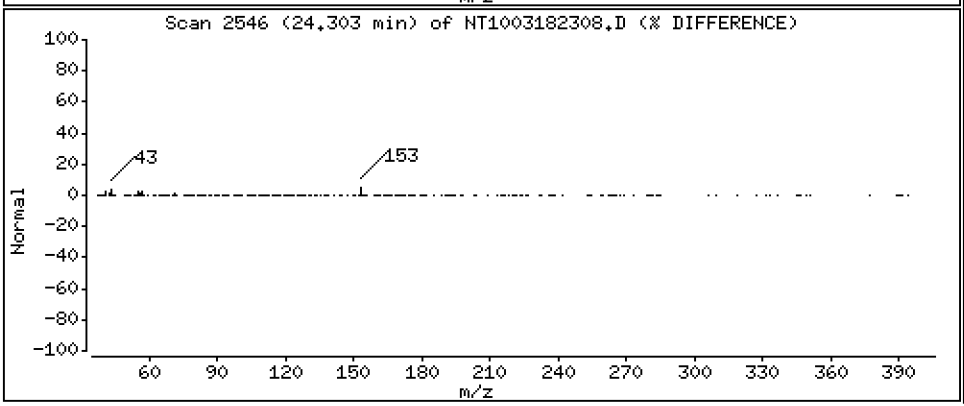
73 Di-n-octylphthalate

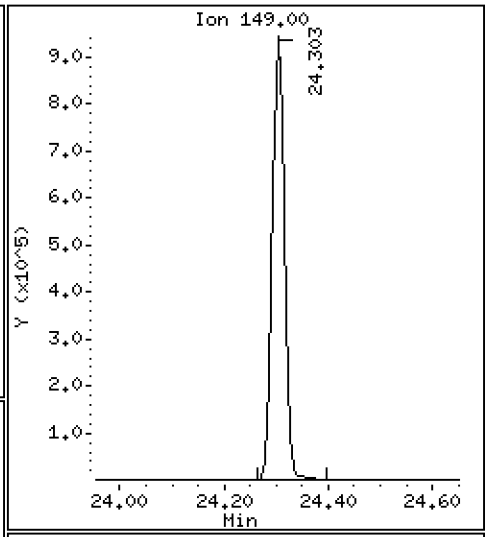
Concentration: 4.809 ug/mL

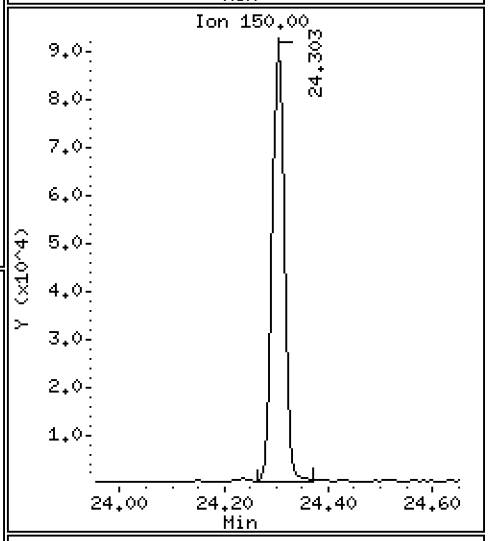


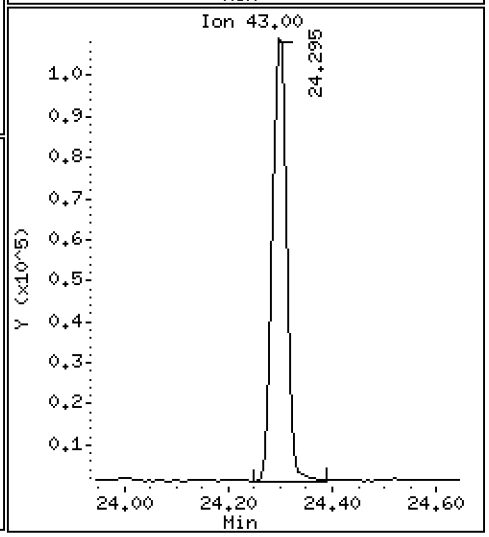












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

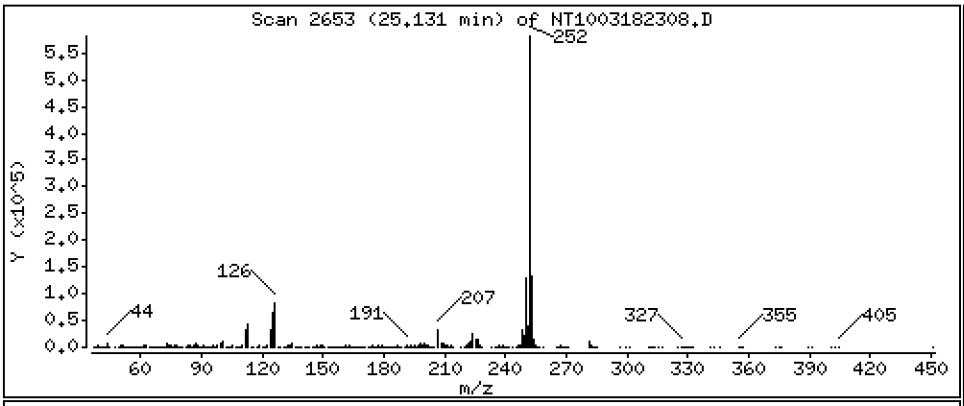
Operator: VTS

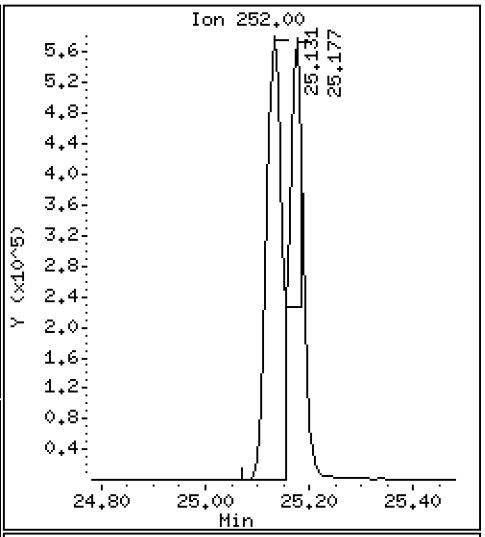
Column phase: ZB-5msi

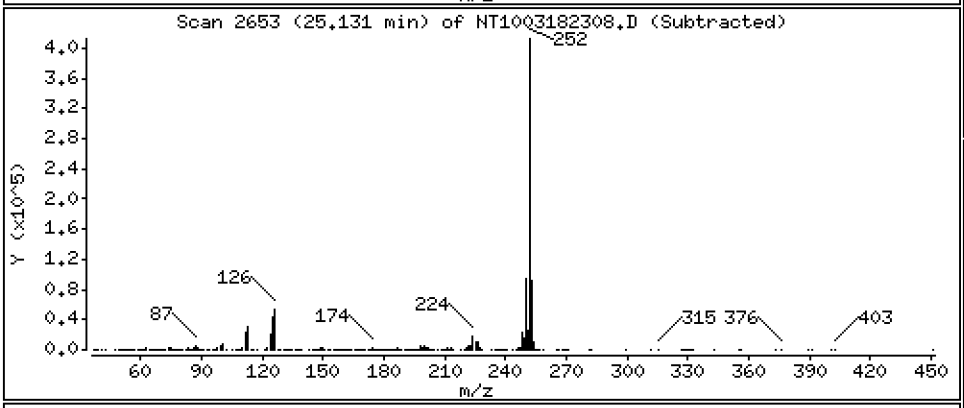
Column diameter: 0.25

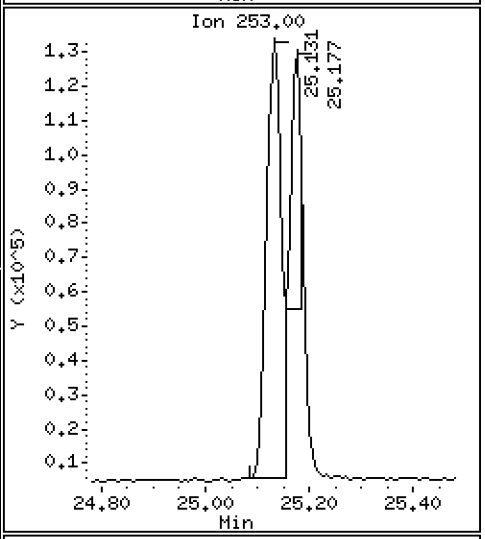
74 Benzo(b)fluoranthene

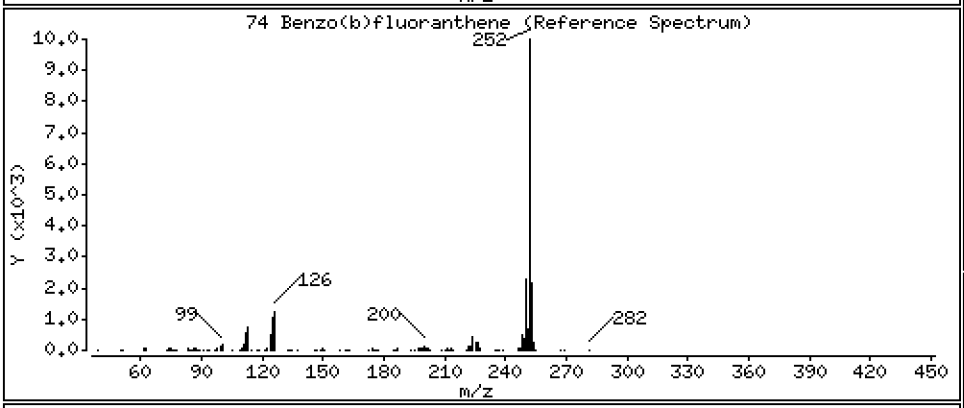
Concentration: 5.257 ug/mL

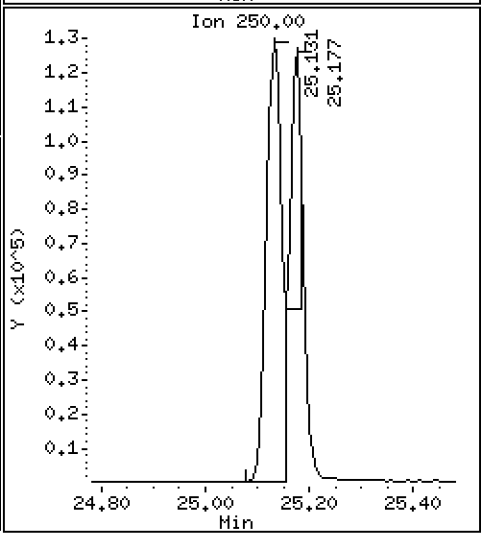


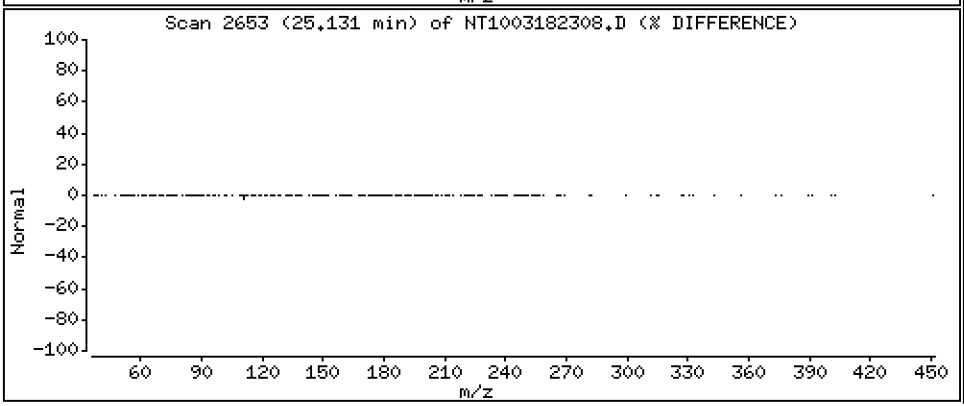












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

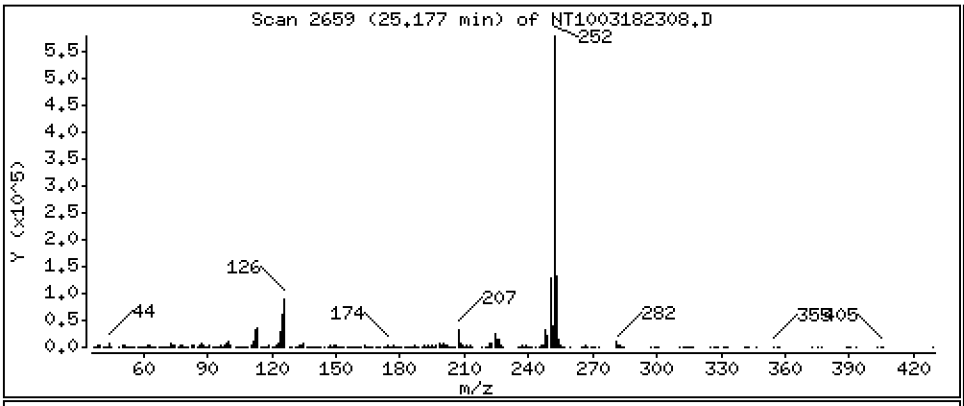
Operator: VTS

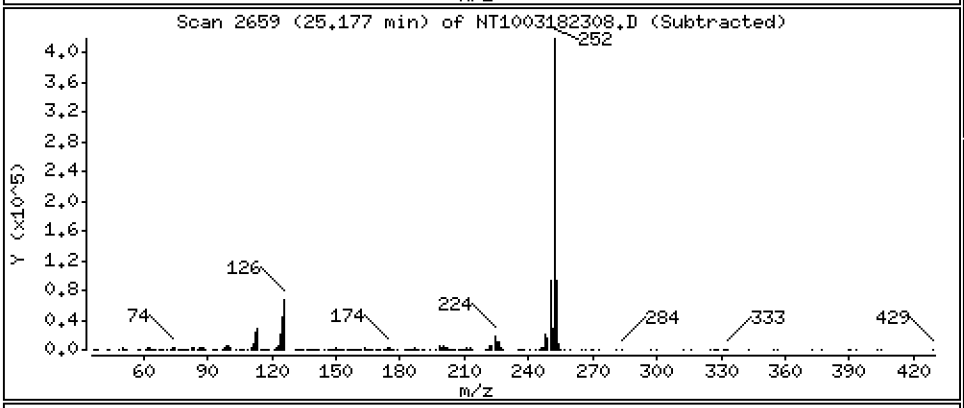
Column phase: ZB-5msi

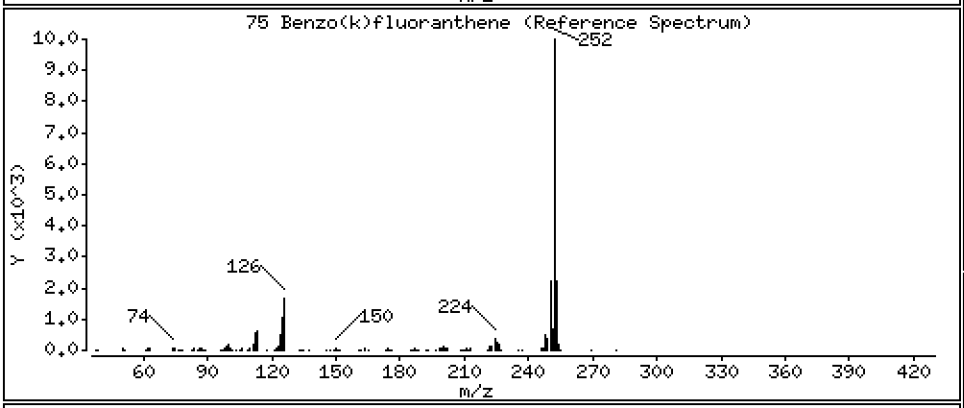
Column diameter: 0.25

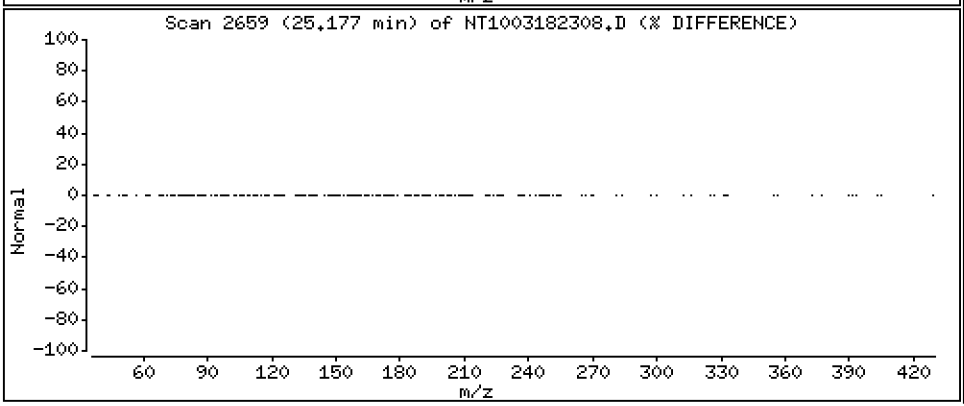
75 Benzo(k)fluoranthene

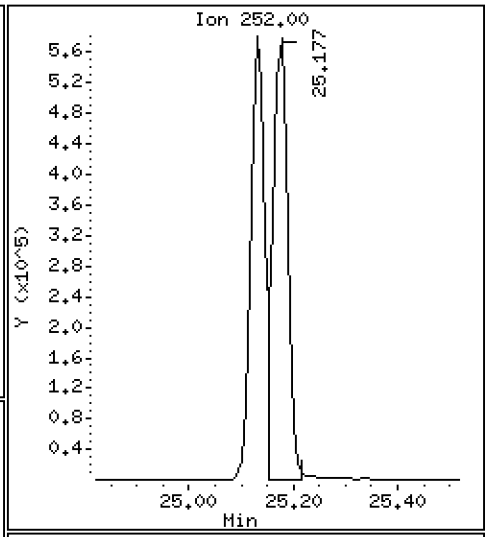
Concentration: 5.026 ug/mL

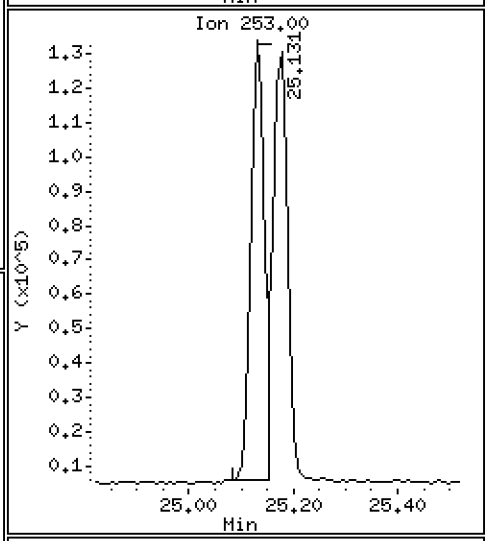


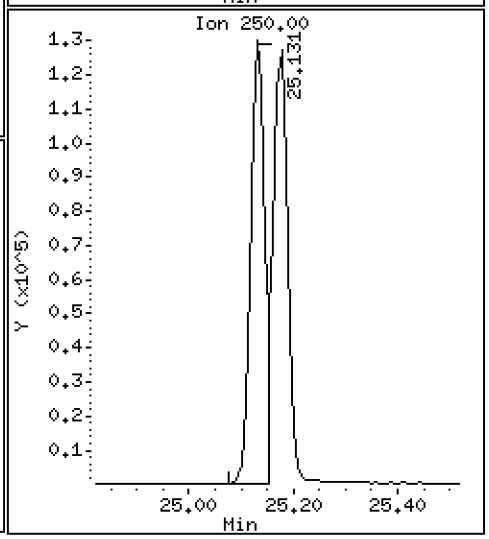












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

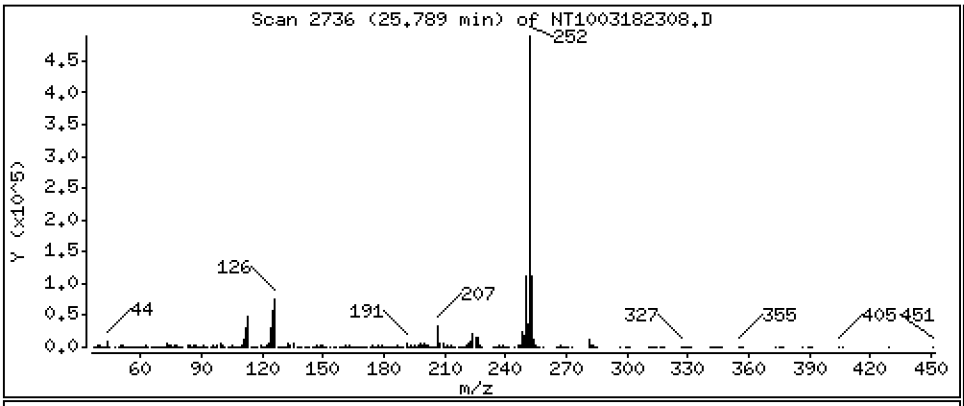
Operator: VTS

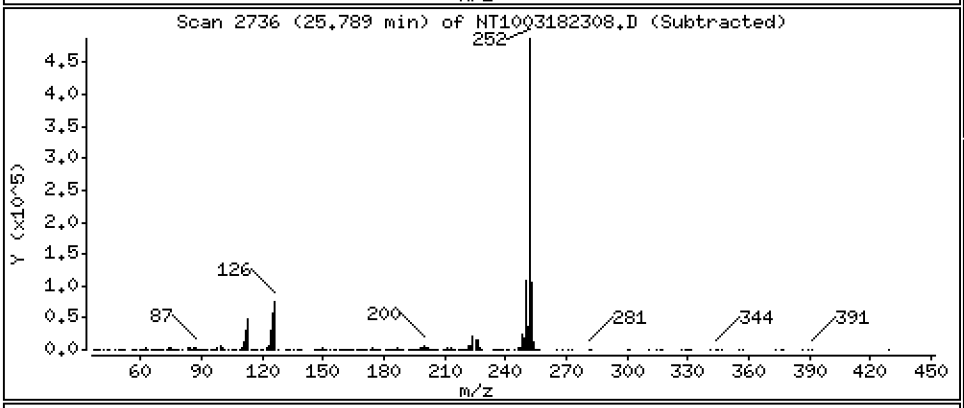
Column phase: ZB-5msi

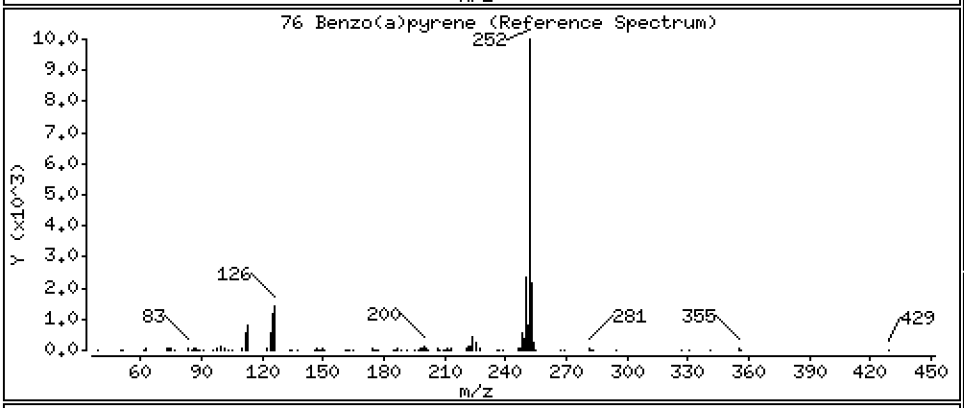
Column diameter: 0.25

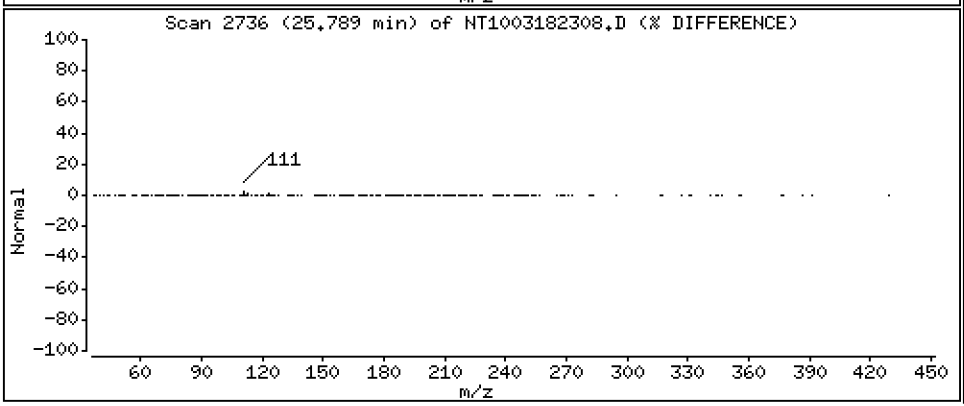
76 Benzo(a)pyrene

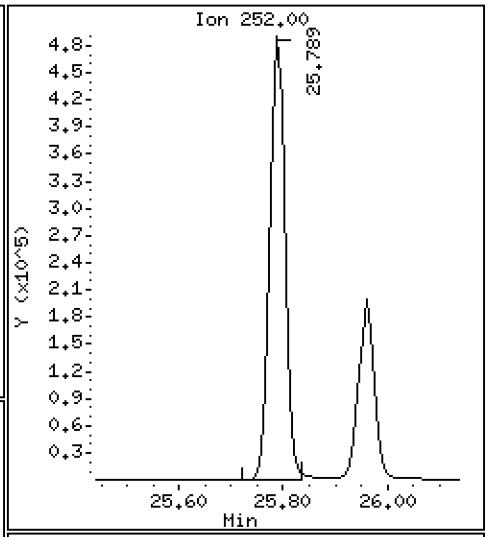
Concentration: 4.814 ug/mL

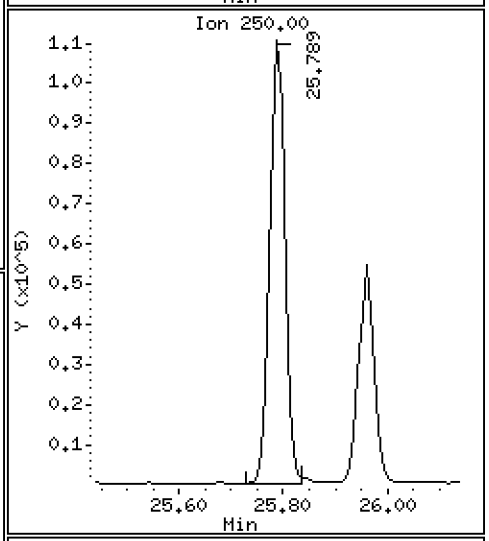


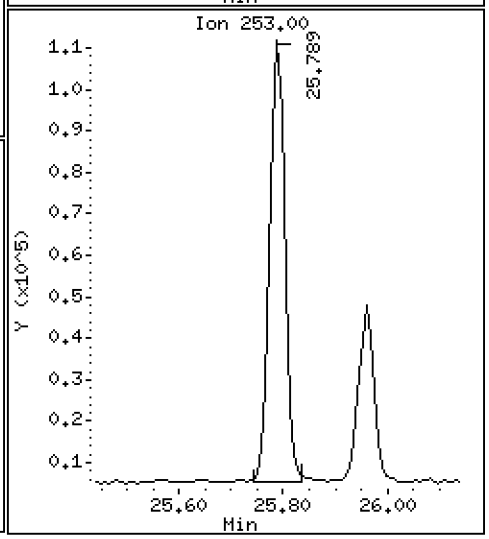












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

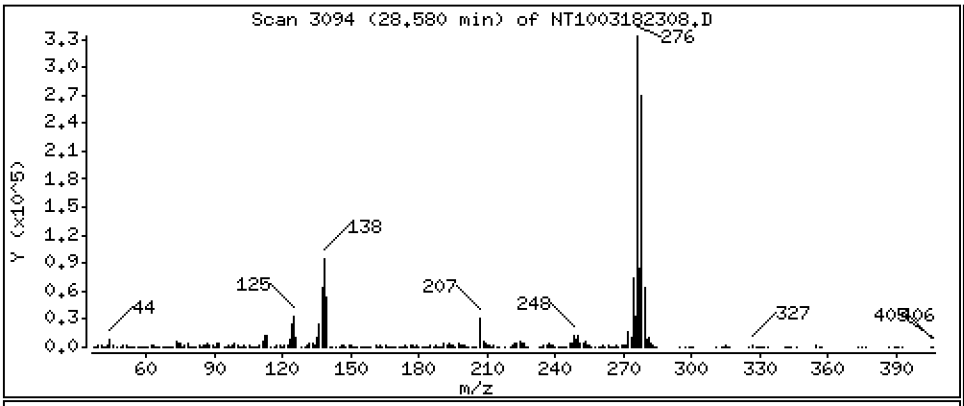
Operator: VTS

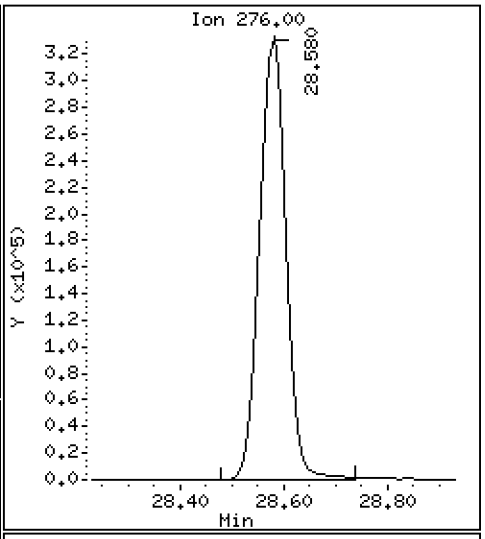
Column phase: ZB-5msi

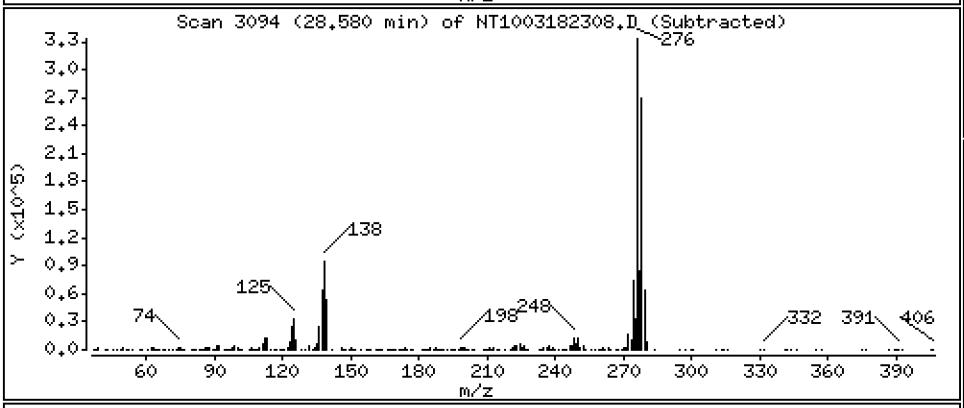
Column diameter: 0.25

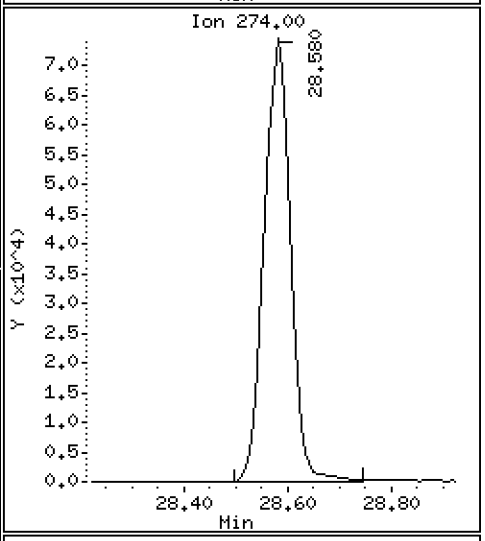
78 Indeno(1,2,3-cd)pyrene

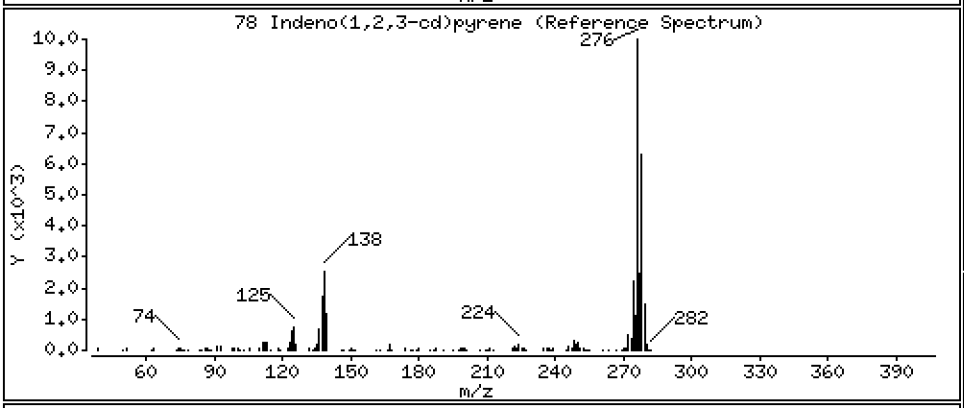
Concentration: 4.643 ug/mL

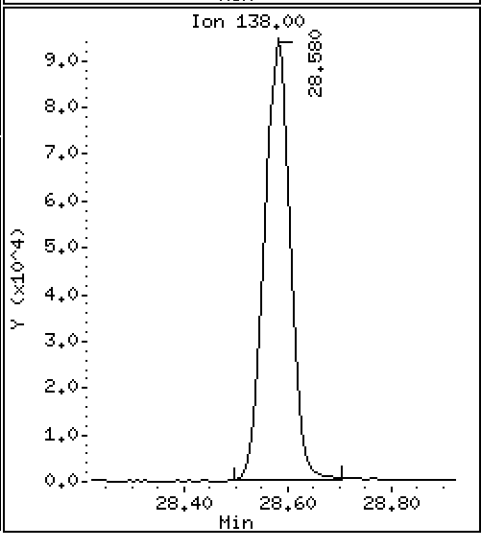


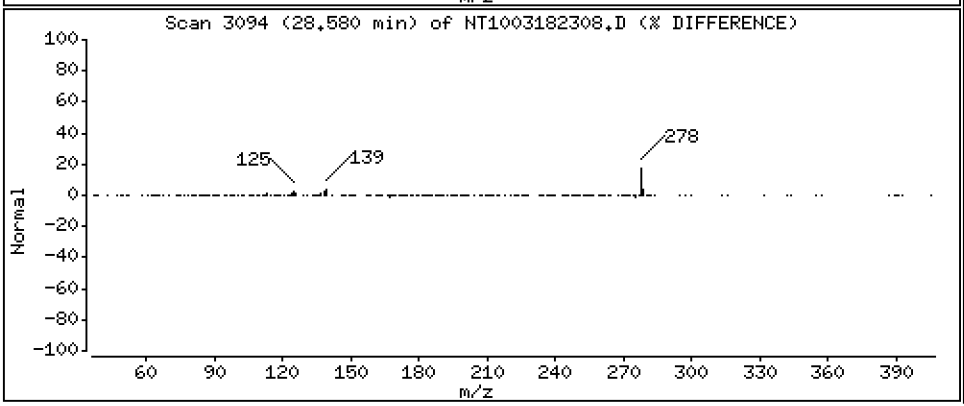












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

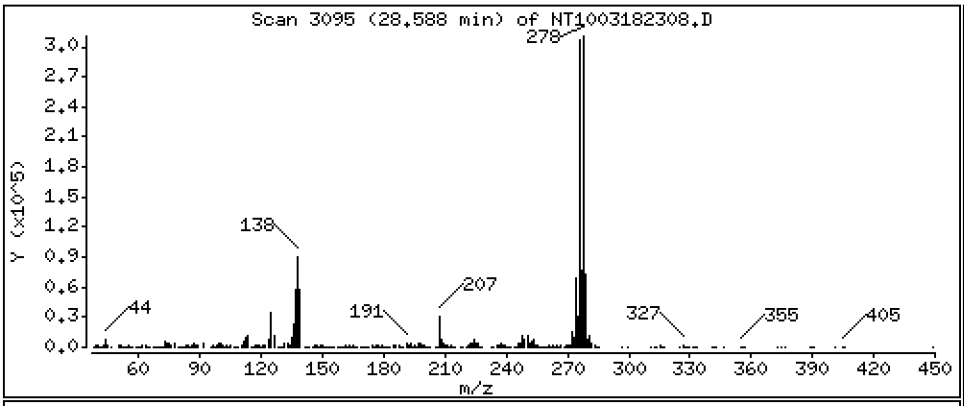
Operator: VTS

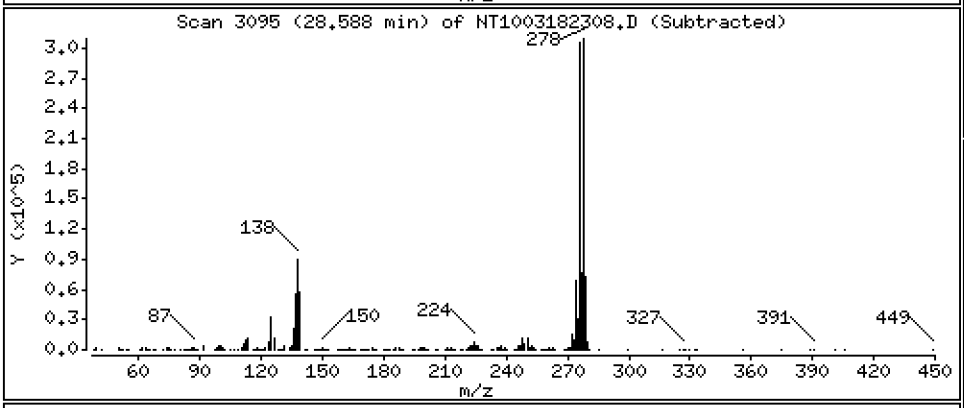
Column phase: ZB-5msi

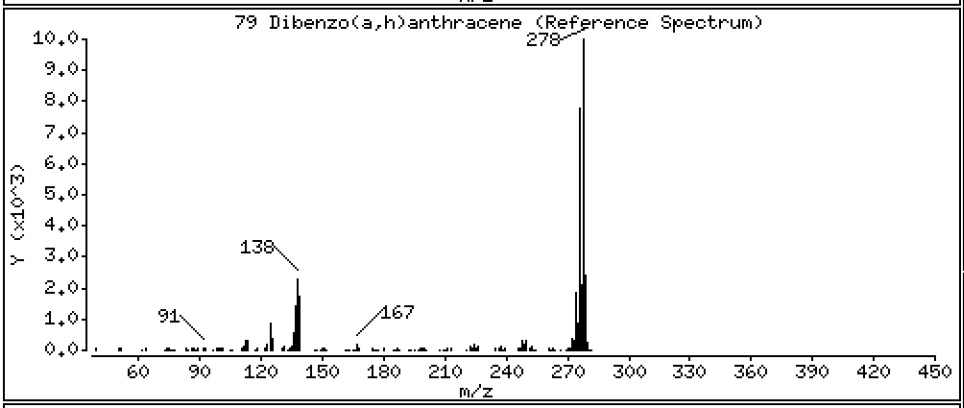
Column diameter: 0.25

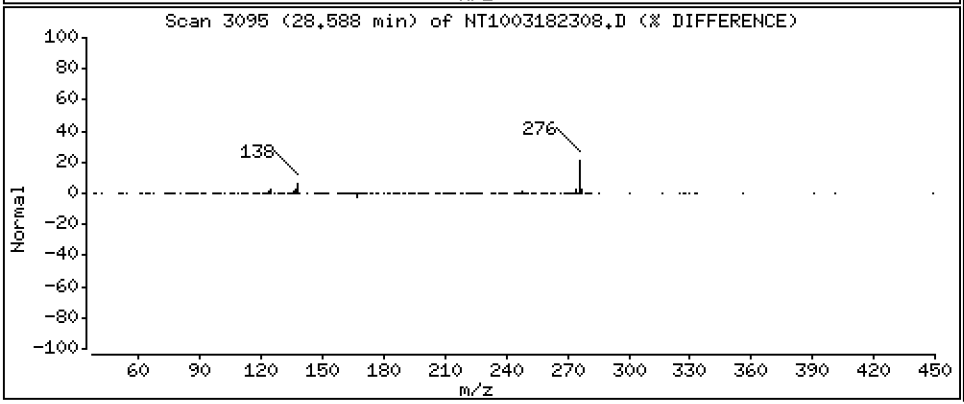
79 Dibenzo(a,h)anthracene

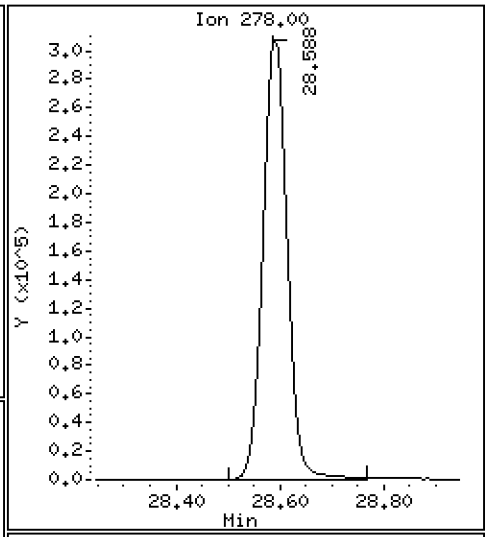
Concentration: 4.728 ug/mL

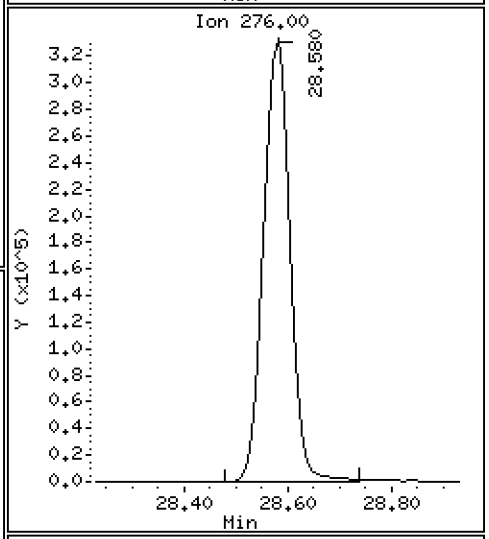


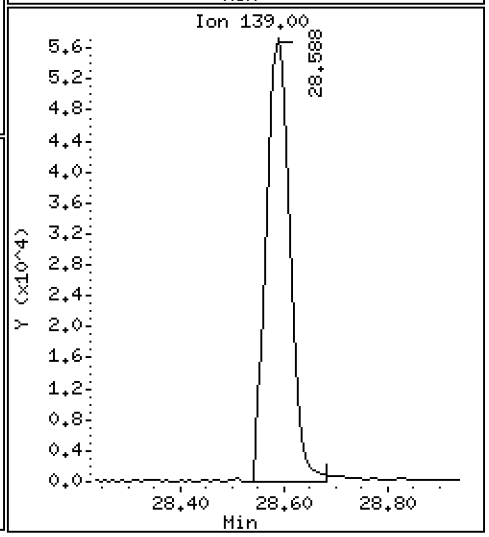












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

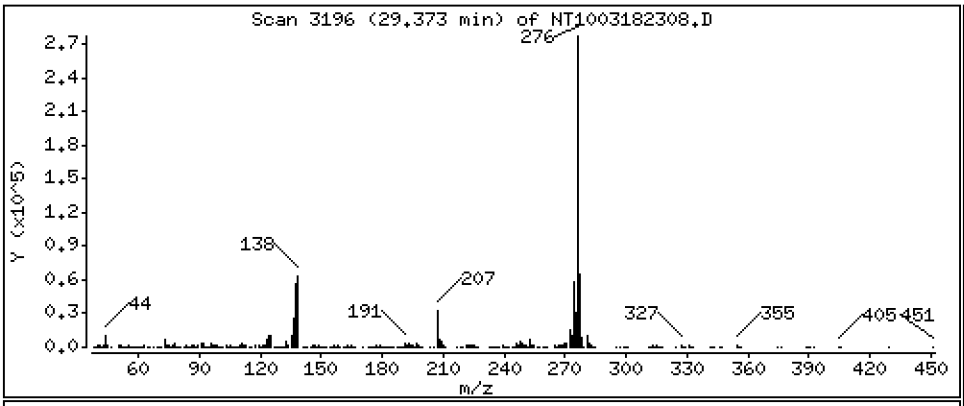
Operator: VTS

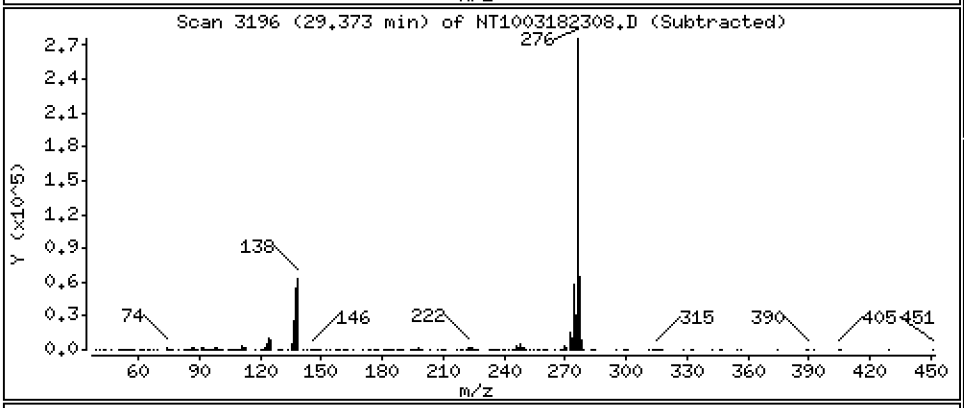
Column phase: ZB-5msi

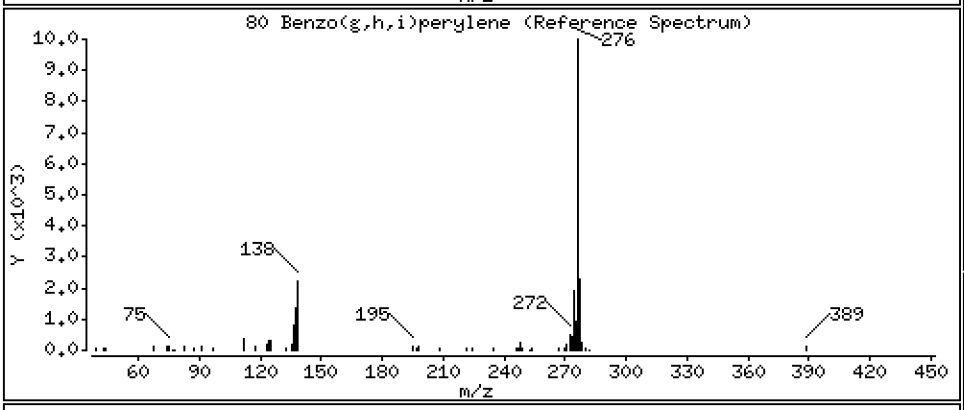
Column diameter: 0.25

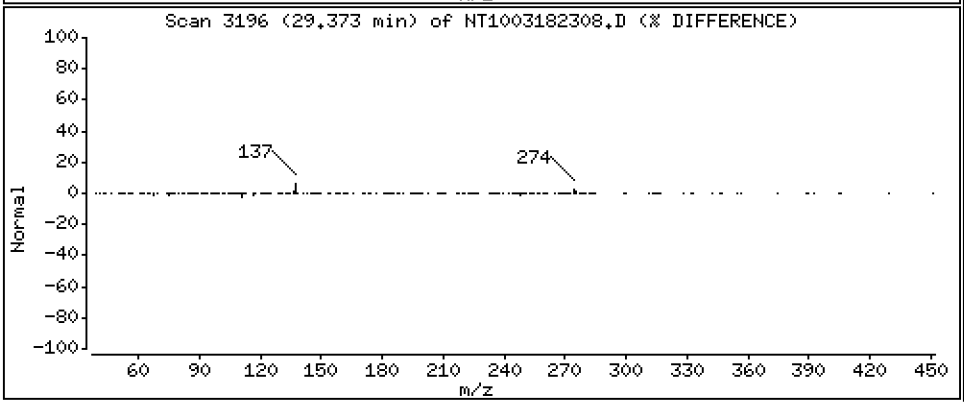
80 Benzo(g,h,i)perylene

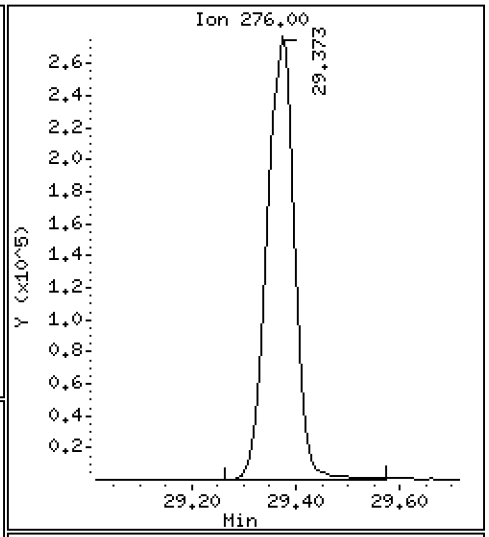
Concentration: 4.679 ug/mL

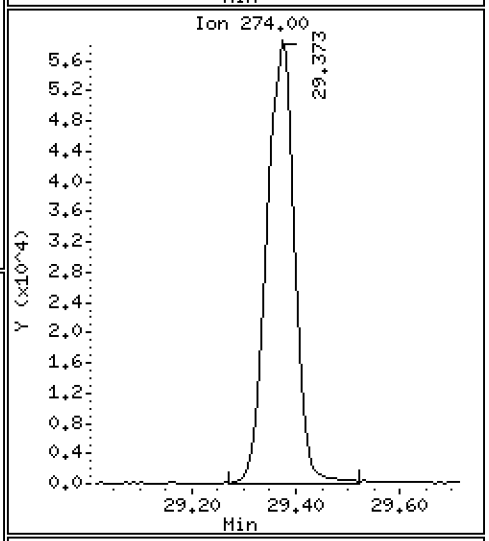


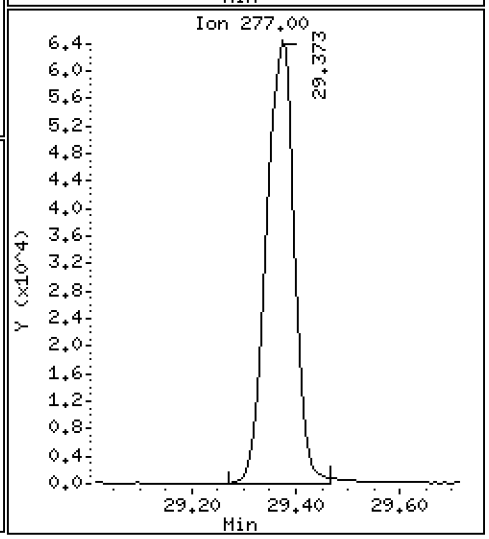












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

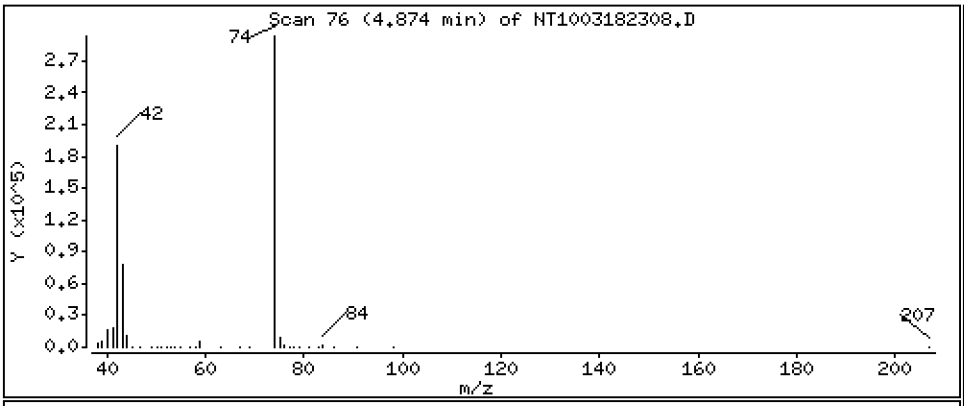
Operator: VTS

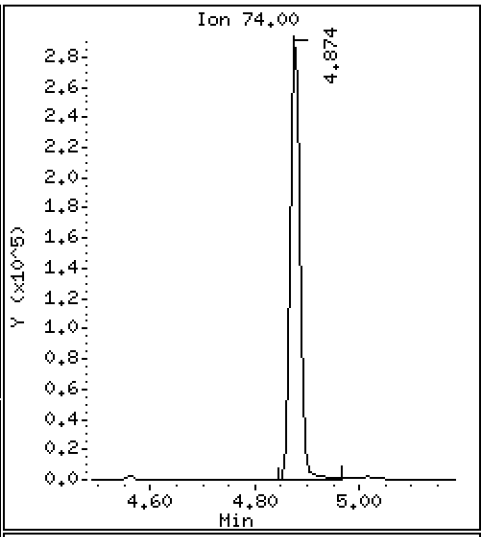
Column phase: ZB-5msi

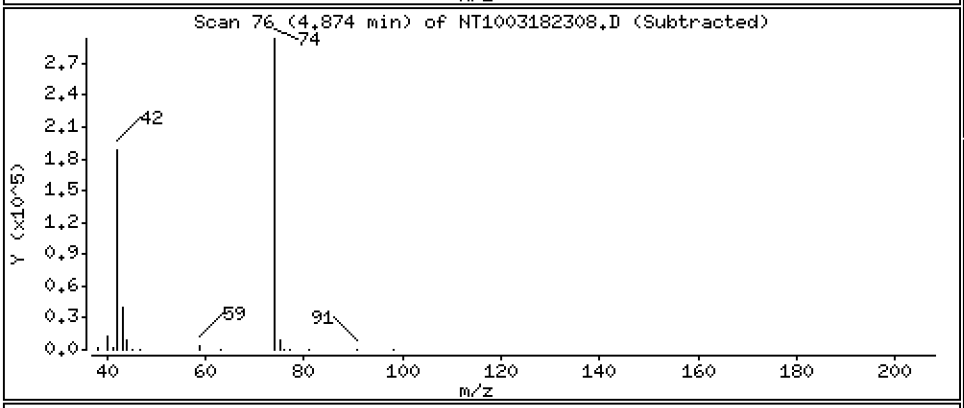
Column diameter: 0.25

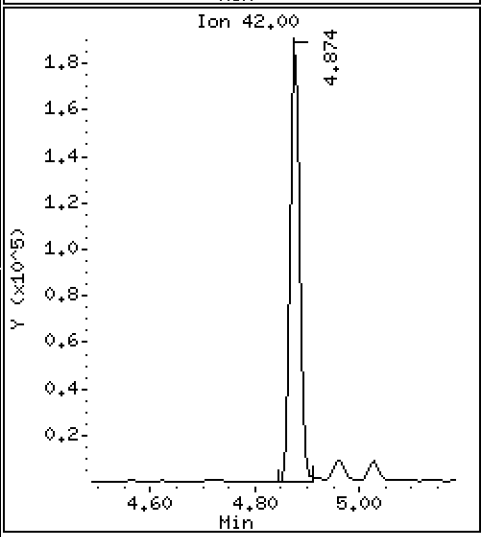
90 N-Nitrosodimethylamine

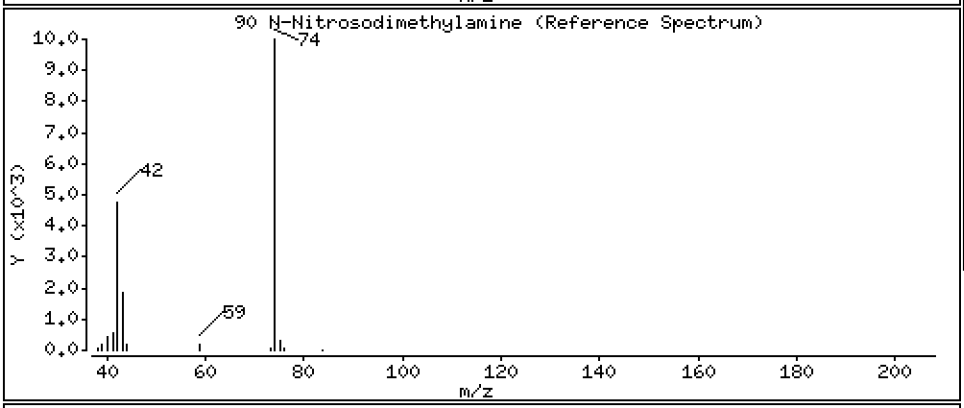
Concentration: 9.238 ug/mL

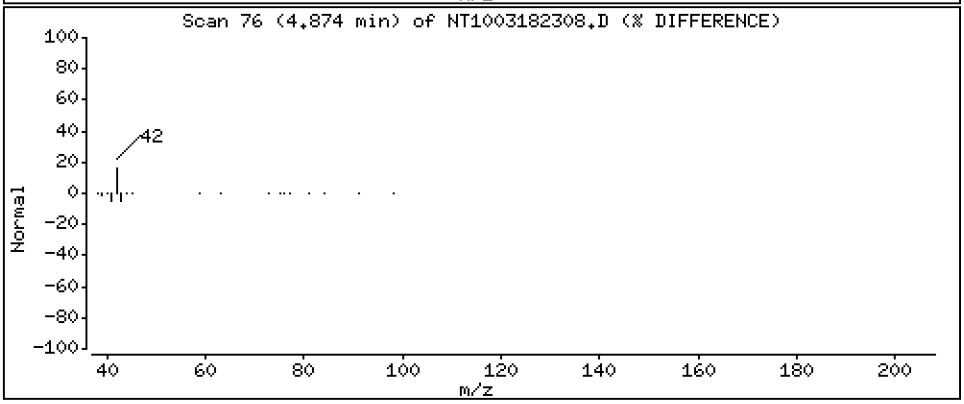












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

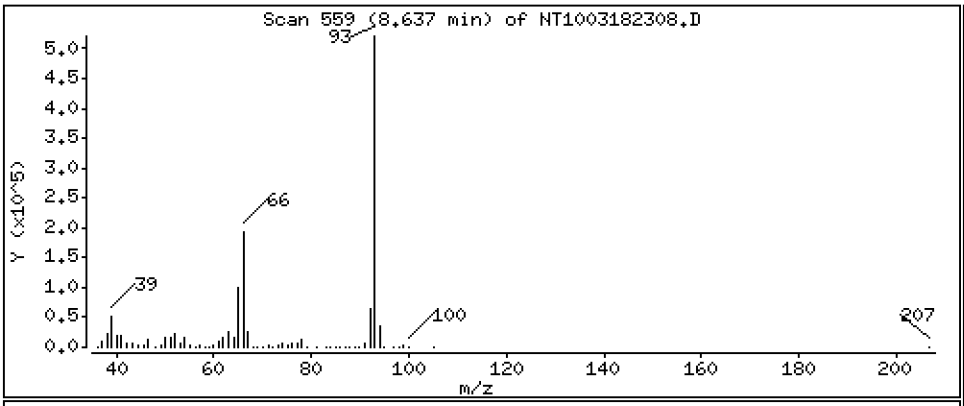
Operator: VTS

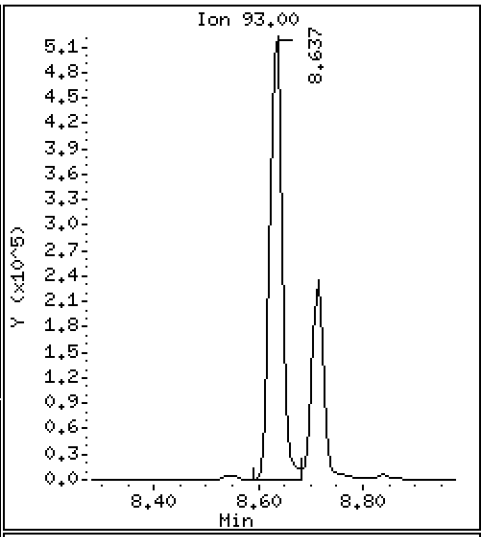
Column phase: ZB-5msi

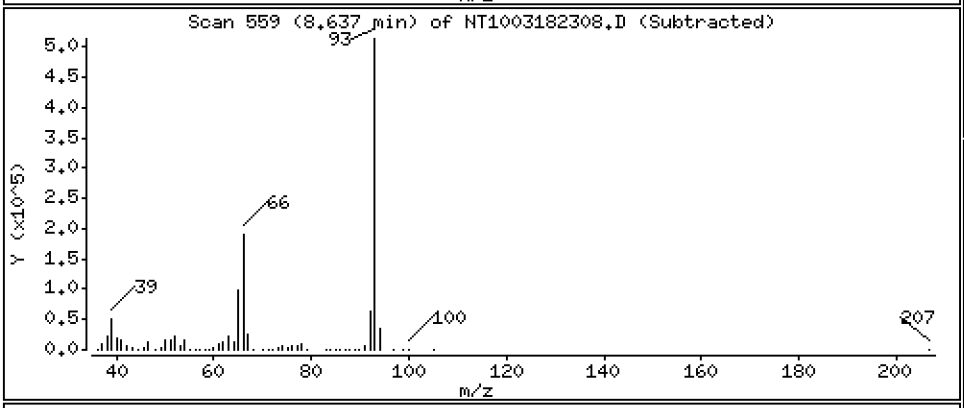
Column diameter: 0.25

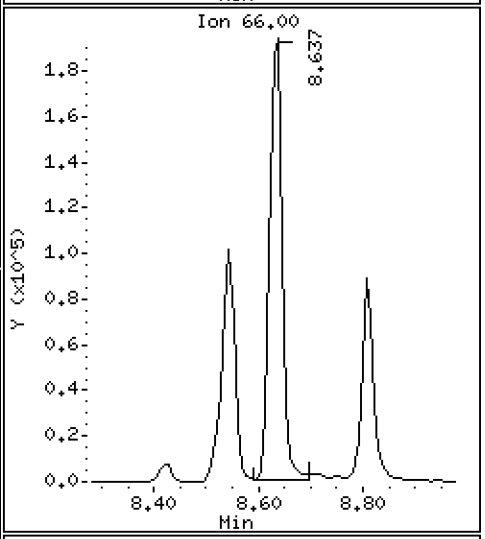
91 Aniline

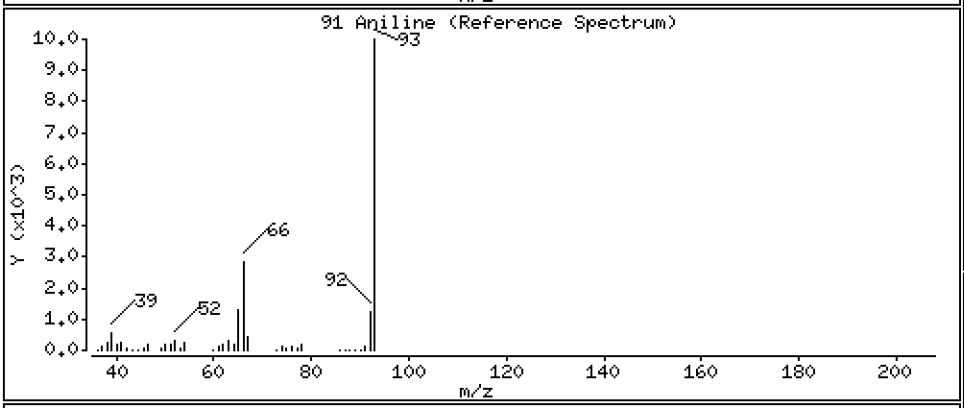
Concentration: 8.731 ug/mL

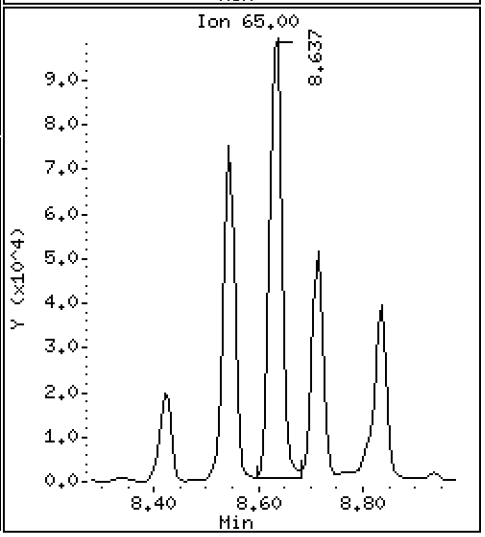


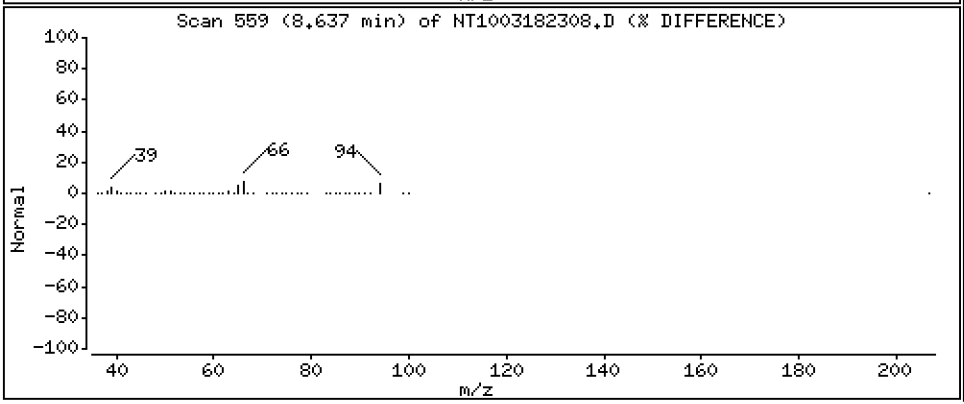












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

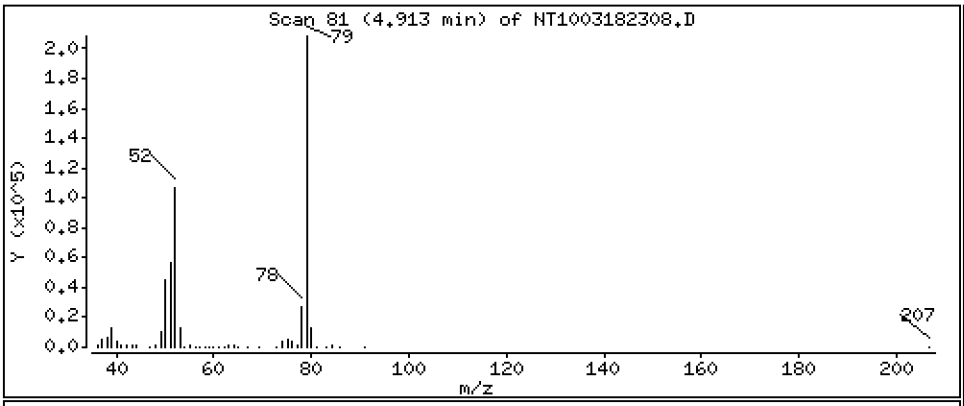
Operator: VTS

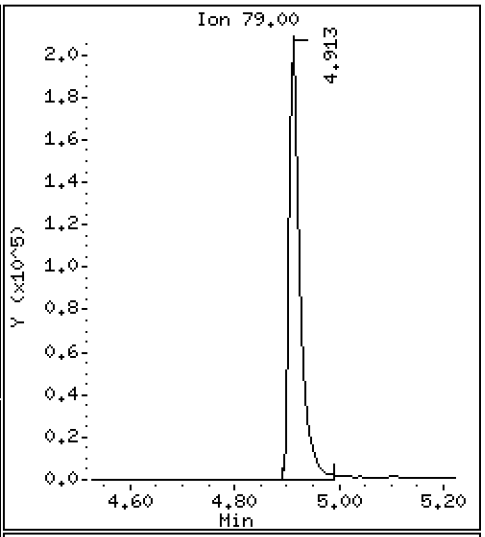
Column phase: ZB-5msi

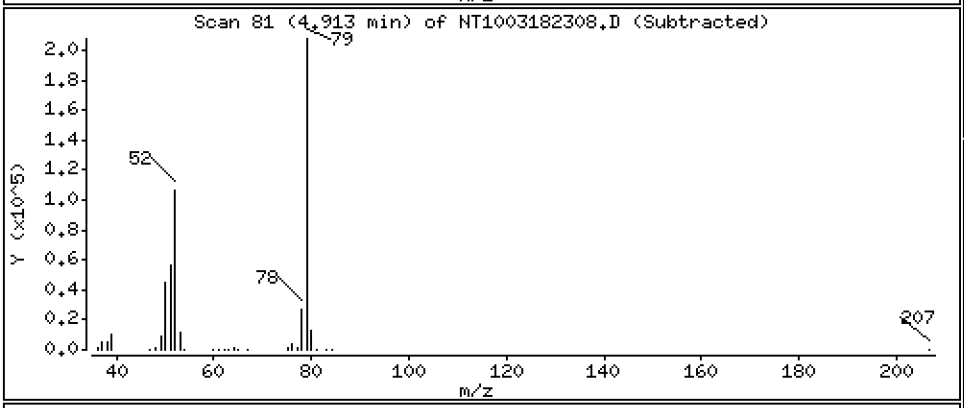
Column diameter: 0.25

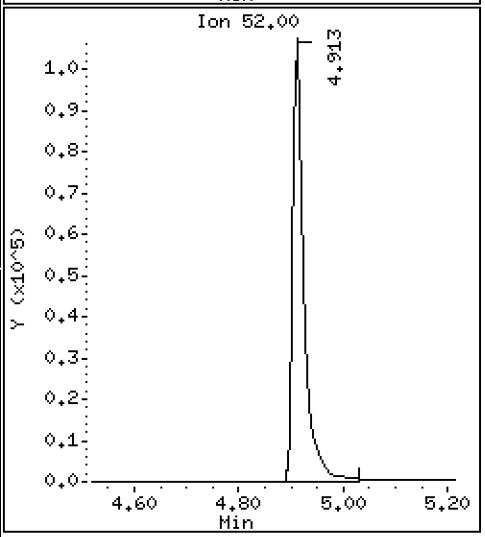
103 Pyridine

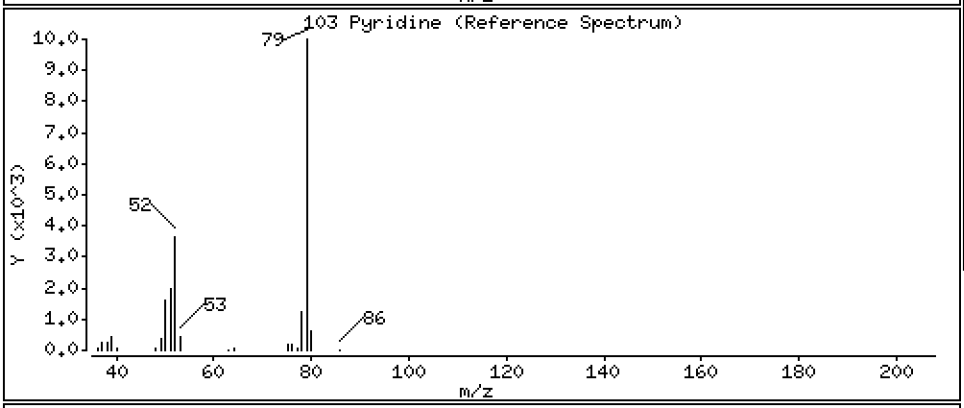
Concentration: 4.707 ug/mL

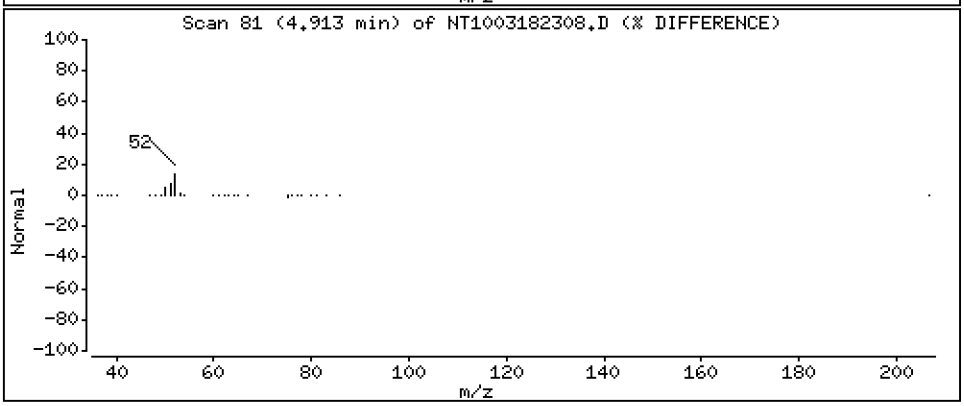












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

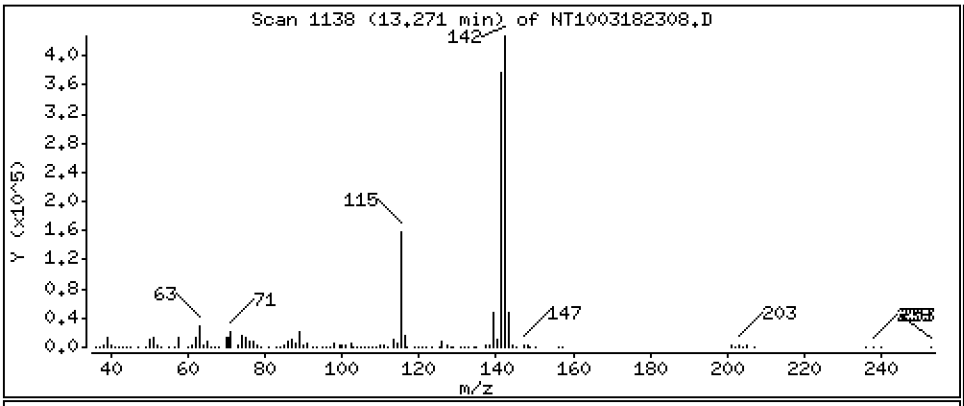
Operator: VTS

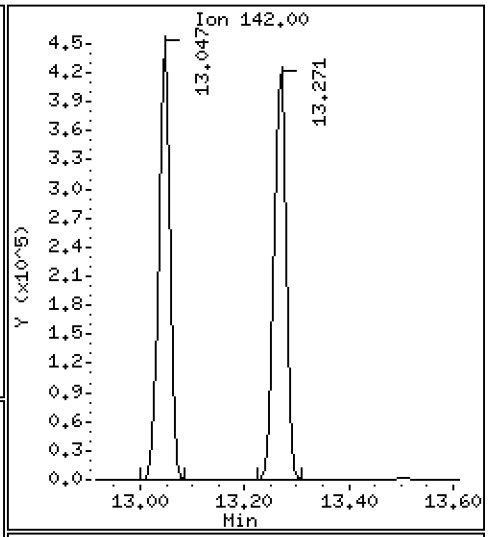
Column phase: ZB-5msi

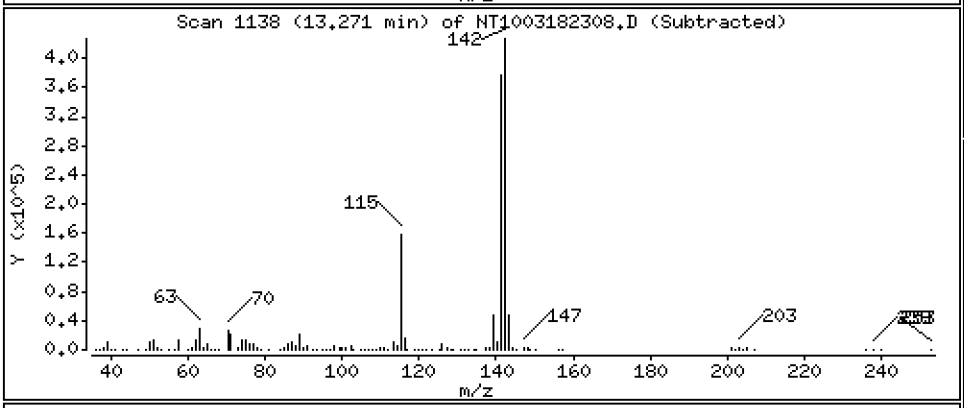
Column diameter: 0.25

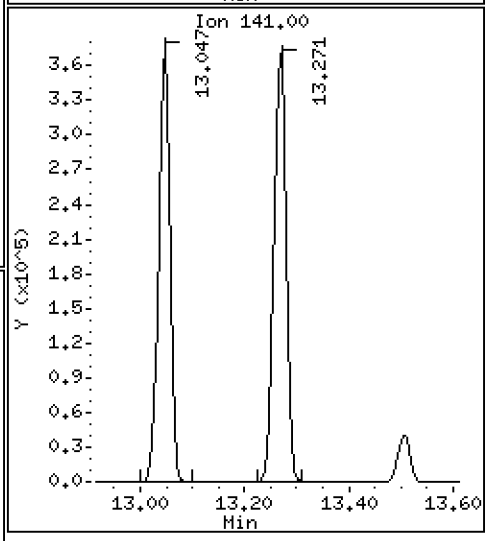
105 1-methylnaphthalene

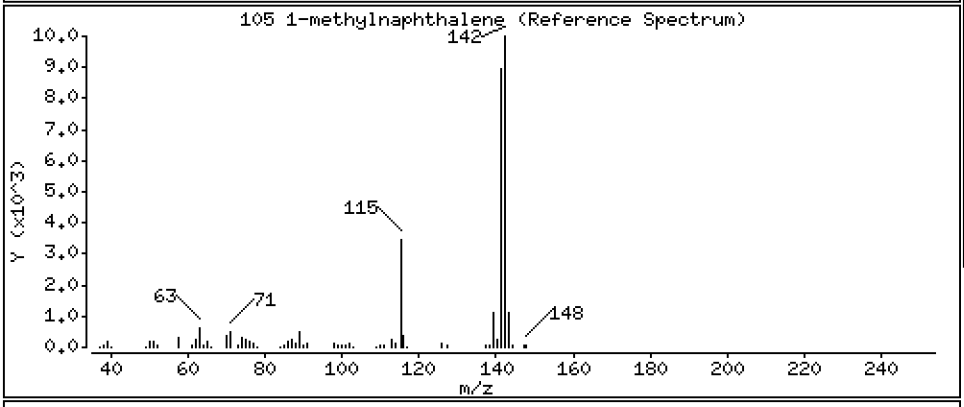
Concentration: 4.481 ug/mL

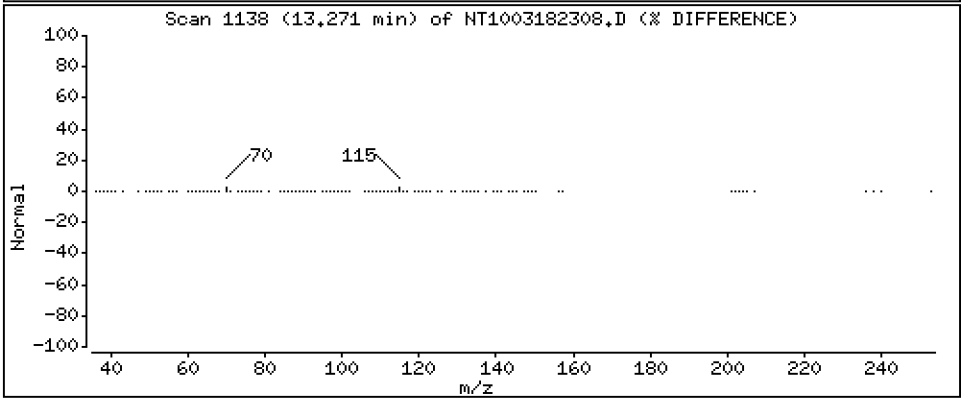












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

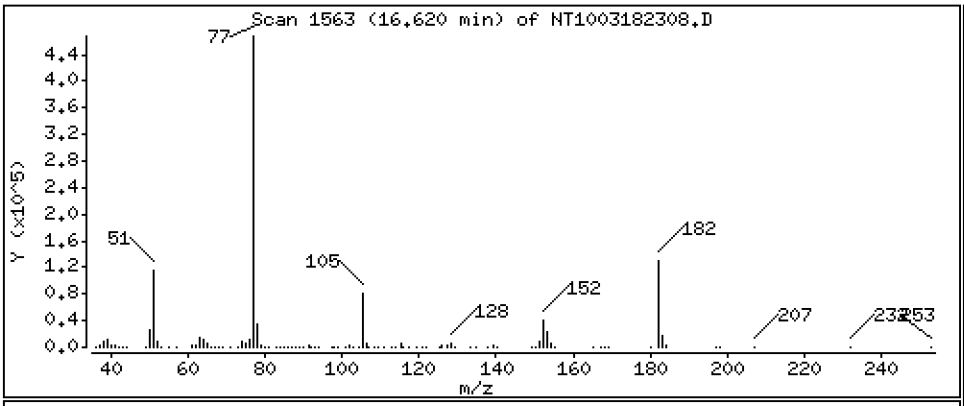
Operator: VTS

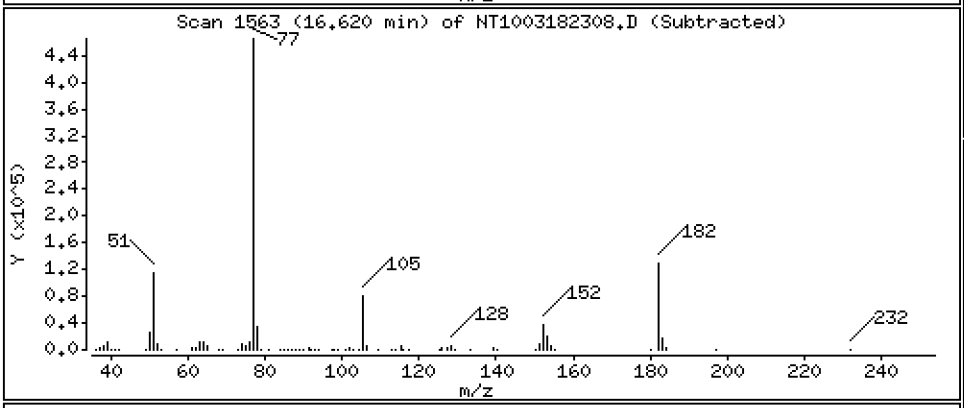
Column phase: ZB-5msi

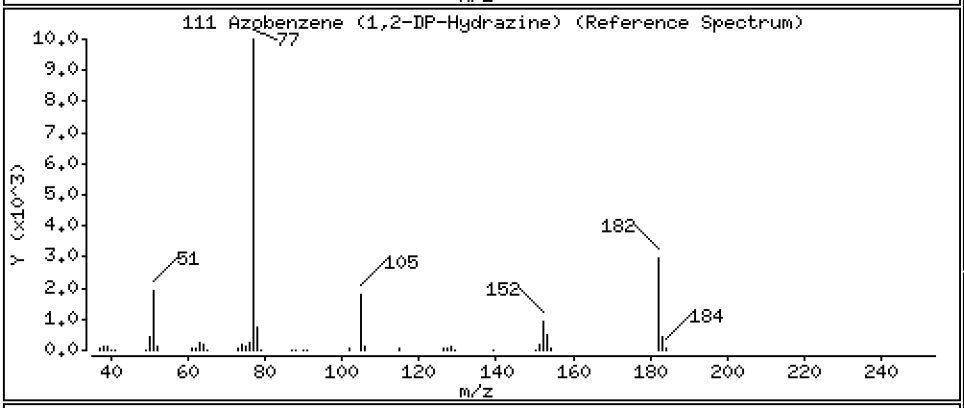
Column diameter: 0.25

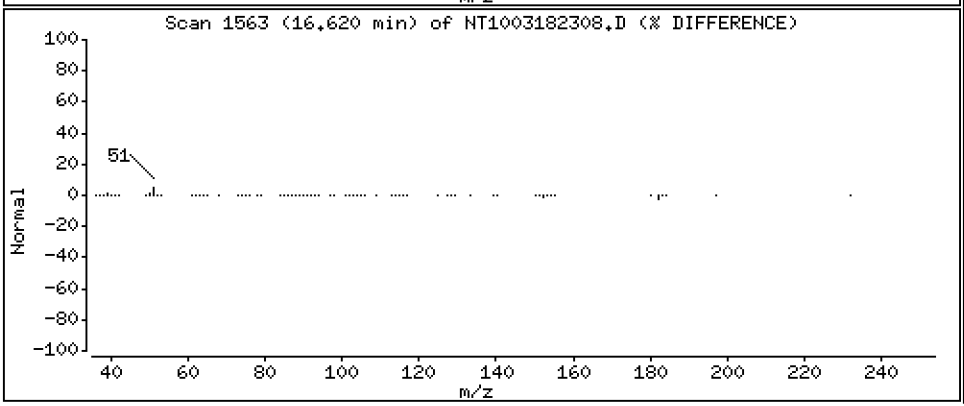
111 Azobenzene (1,2-DP-Hydrazine)

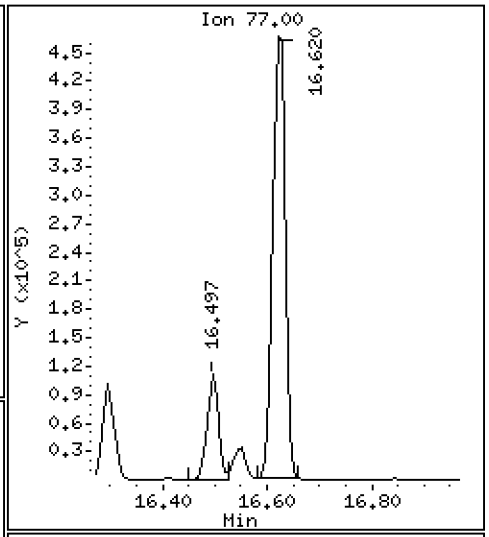
Concentration: 4.597 ug/mL

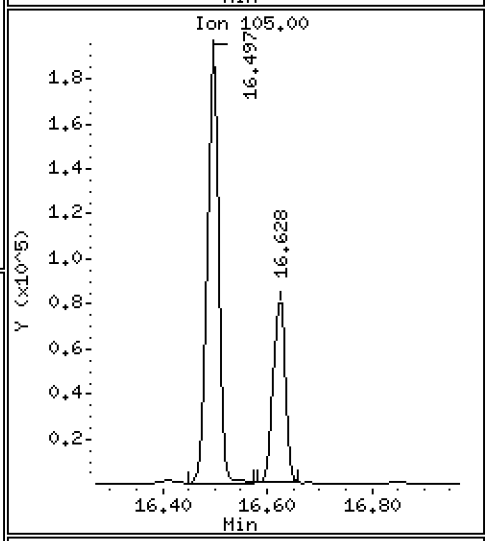


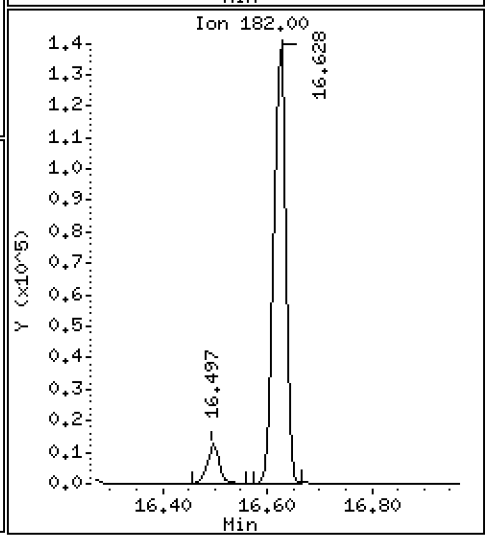












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

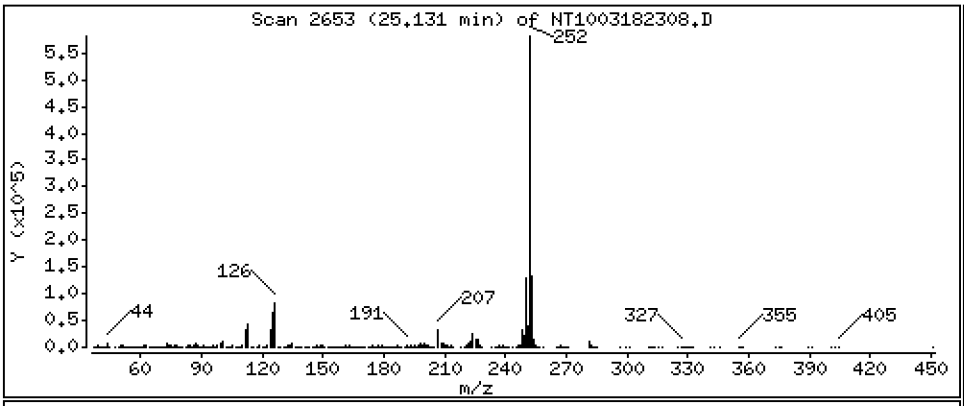
Operator: VTS

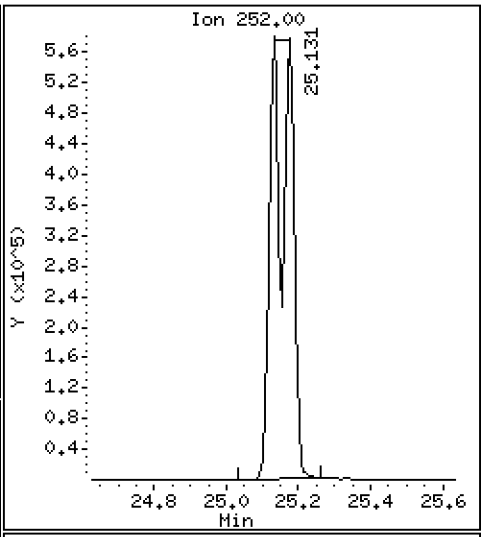
Column phase: ZB-5msi

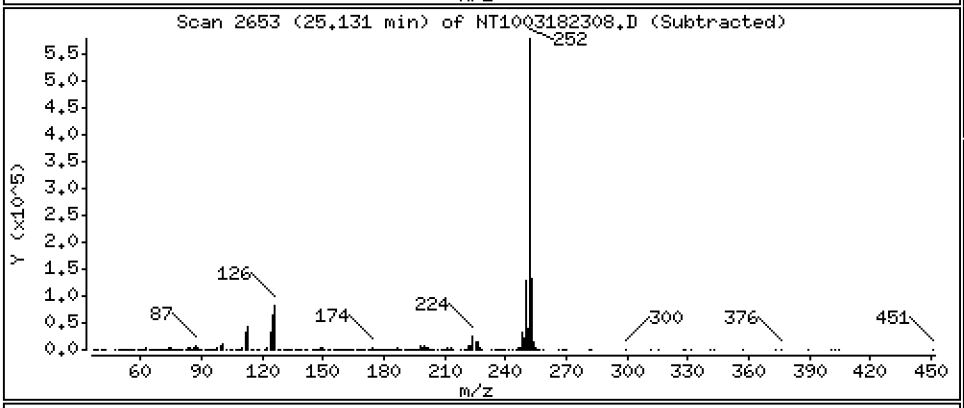
Column diameter: 0.25

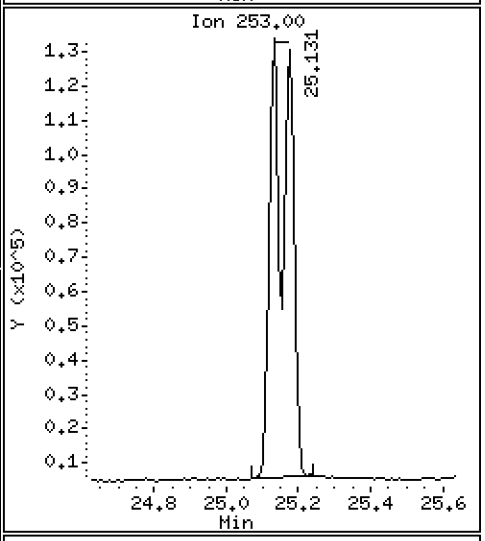
187 Total Benzofluoranthenes

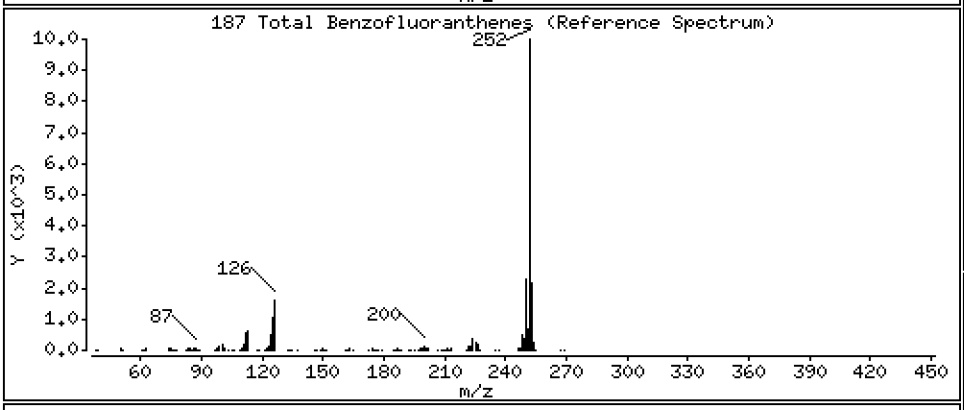
Concentration: 10.18 ug/mL

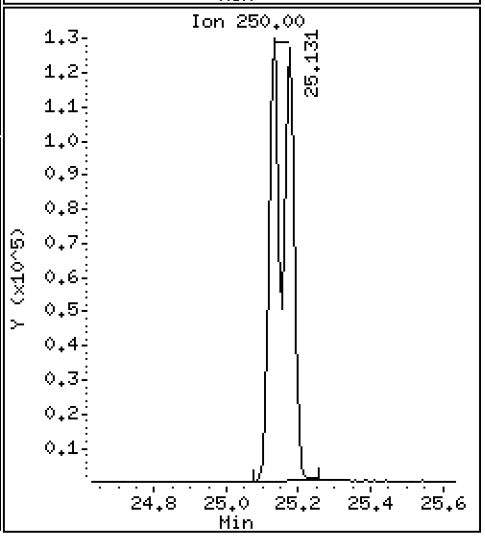


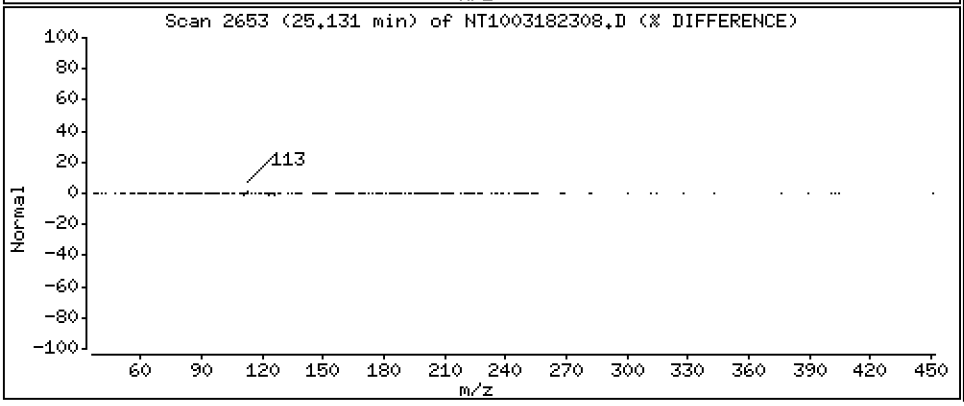












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Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD1

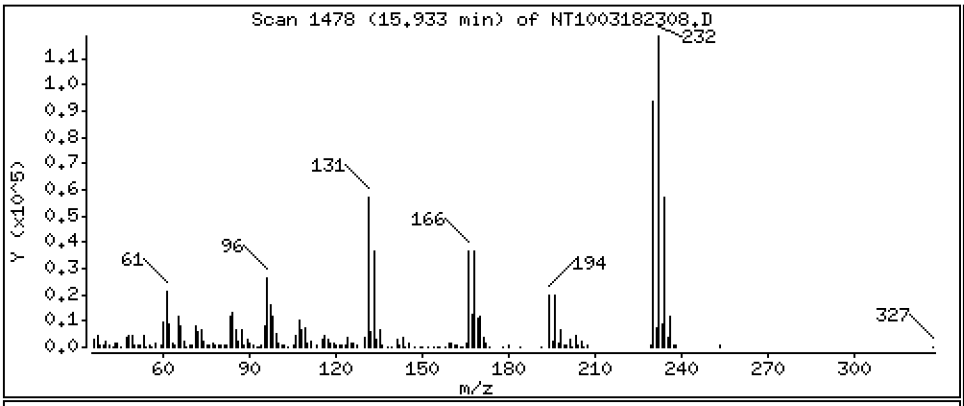
Operator: VTS

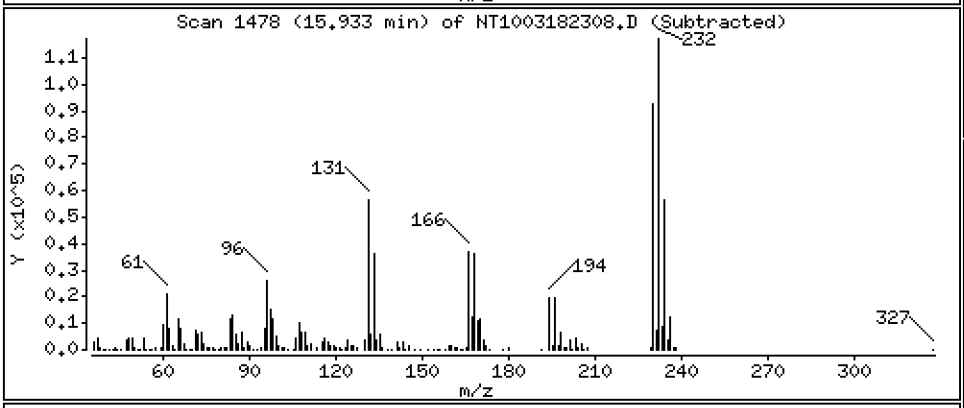
Column phase: ZB-5msi

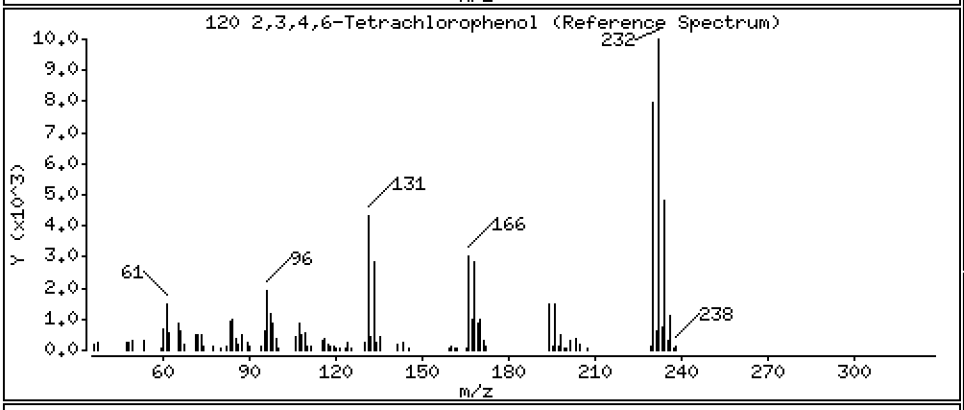
Column diameter: 0.25

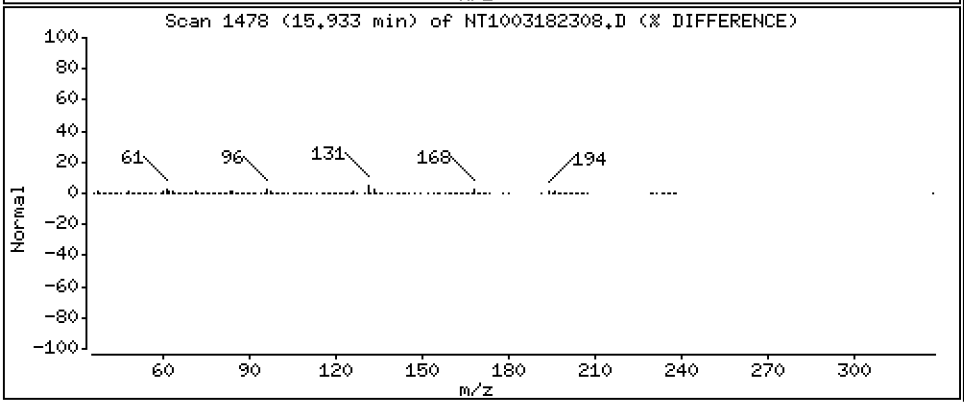
120 2,3,4,6-Tetrachlorophenol

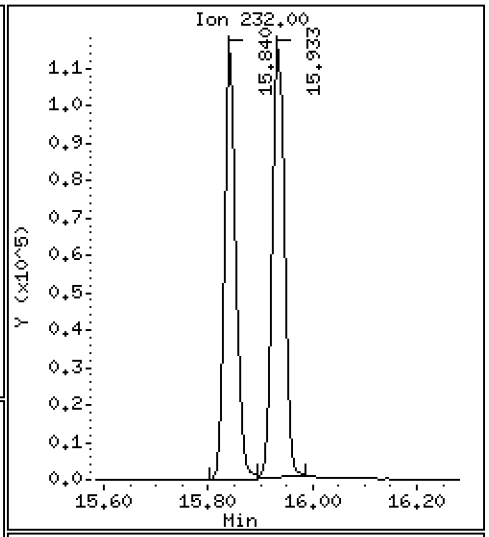
Concentration: 3.813 ug/mL

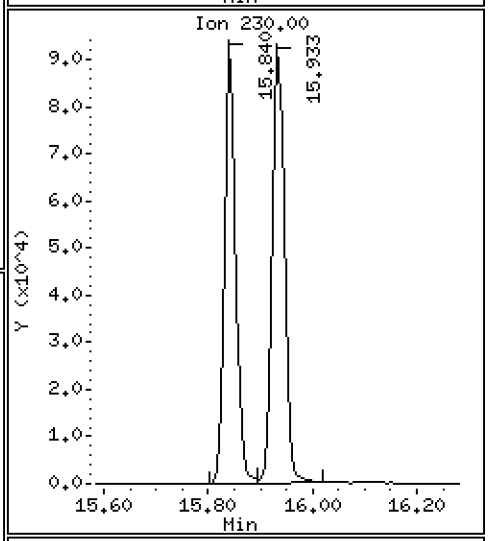


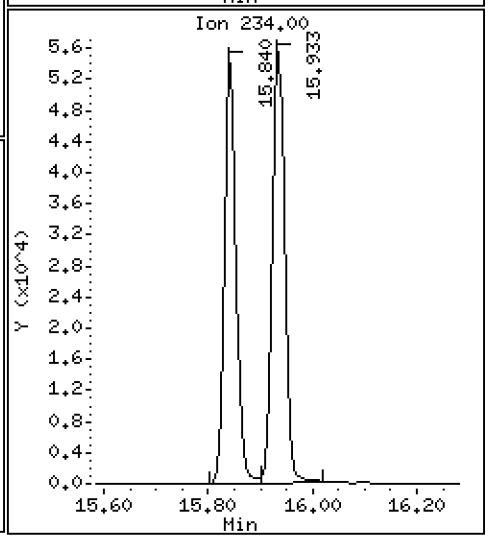












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182308.D
Lab Smp Id: BLB0579-BSD1
Inj Date : 18-MAR-2023 22:12
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-BSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
$	1	2-Fluorophenol	112	6.967	6.952	(0.760)	414043	6.06549	6.065
$	2	Phenol-d5	99	8.520	8.520	(0.929)	566252	6.32332	6.323
	3	Phenol	94	8.544	8.536	(0.932)	368684	3.96195	3.962
$	5	2-Chlorophenol-d4	132	8.806	8.806	(0.960)	509277	6.65990	6.660
	4	Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	345719	5.00913	5.009
	6	2-Chlorophenol	128	8.837	8.829	(0.964)	325406	4.08579	4.086
	7	1,3-Dichlorobenzene	146	9.100	9.100	(0.992)	352345	4.18465	4.185
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.162	(1.000)	225726	4.00000	
	9	1,4-Dichlorobenzene	146	9.193	9.193	(1.003)	351642	4.32321	4.323
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.519	(1.039)	228597	4.16262	4.163
	12	1,2-Dichlorobenzene	146	9.550	9.550	(1.041)	343347	4.28923	4.289
	11	Benzyl alcohol	108	9.426	9.426	(1.028)	197852	4.52980	4.530
	14	2,2'-oxybis(1-Chloropropane)	121	9.729	9.721	(1.061)	117013	4.97757	4.978
	13	2-Methylphenol	108	9.643	9.643	(1.052)	245018	3.61196	3.612
	17	Hexachloroethane	117	10.132	10.132	(1.105)	143822	4.30966	4.310
	16	N-Nitroso-di-n-propylamine	70	9.985	9.977	(1.089)	239619	4.47356	4.474
	15	4-Methylphenol	108	9.915	9.907	(1.081)	289346	4.04822	4.048
$	18	Nitrobenzene-d5	82	10.249	10.249	(0.881)	374651	4.43792	4.438
	19	Nitrobenzene	77	10.287	10.287	(0.884)	371320	4.48197	4.482
	20	Isophorone	82	10.730	10.730	(0.923)	667636	6.29940	6.299
	21	2-Nitrophenol	139	10.905	10.905	(0.938)	192382	4.75145	4.751
	22	2,4-Dimethylphenol	107	10.947	10.947	(0.941)	300721	3.95187	3.952
	23	Bis(2-Chloroethoxy)methane	93	11.151	11.142	(0.959)	363420	5.13342	5.133
	24	Benzoic acid	105	11.159	11.134	(0.959)	1271135	28.0779	28.08
	25	2,4-Dichlorophenol	162	11.355	11.346	(0.976)	817474	13.4244	13.42
	26	1,2,4-Trichlorobenzene	180	11.538	11.538	(0.992)	366152	5.12237	5.122
*	27	Naphthalene-d8	136	11.631	11.623	(1.000)	836374	4.00000	
	28	Naphthalene	128	11.669	11.669	(1.003)	939790	4.24155	4.242
	29	4-Chloroaniline	127	11.793	11.793	(1.014)	660386	7.64003	7.640
	30	Hexachlorobutadiene	225	12.017	12.017	(1.033)	186653	4.45645	4.456
	31	4-Chloro-3-methylphenol	107	12.737	12.729	(1.095)	891793	13.5280	13.53
	32	2-Methylnaphthalene	142	13.046	13.046	(1.122)	684002	4.27778	4.278
	33	Hexachlorocyclopentadiene	237	13.511	13.503	(0.888)	483812	11.6186	11.62

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.658	13.658	(0.898)	620538	13.9540	13.95
	35 2,4,5-Trichlorophenol	196	13.735	13.727	(0.903)	669451	13.5482	13.55
$	36 2-Fluorobiphenyl	172	13.820	13.820	(0.908)	767259	4.31086	4.311
	37 2-Chloronaphthalene	162	14.037	14.029	(0.923)	638889	4.43321	4.433
	38 2-Nitroaniline	65	14.292	14.285	(0.939)	551532	13.6242	13.62
	39 Dimethylphthalate	163	14.718	14.710	(0.967)	717242	4.90705	4.907
	40 Acenaphthylene	152	14.904	14.896	(0.980)	945005	4.20817	4.208
	41 2,6-Dinitrotoluene	165	14.857	14.857	(0.977)	464901	14.7236	14.72
*	42 Acenaphthene-d10	164	15.213	15.213	(1.000)	449937	4.00000	
	43 3-Nitroaniline	138	15.144	15.136	(0.995)	406283	11.4000	11.40
	44 Acenaphthene	153	15.275	15.275	(1.004)	623894	4.49712	4.497
	45 2,4-Dinitrophenol	184	15.352	15.345	(1.009)	600875	29.6264	29.63
	46 Dibenzofuran	168	15.600	15.600	(1.025)	911733	4.45658	4.457
	47 4-Nitrophenol	109	15.445	15.437	(1.015)	299150	13.4585	13.46
	48 2,4-Dinitrotoluene	165	15.662	15.654	(1.029)	644065	13.7901	13.79
	50 Diethylphthalate	149	16.164	16.156	(1.062)	1067145	7.44118	7.441
	49 Fluorene	166	16.319	16.319	(1.073)	427843	2.65823	2.658
	51 4-Chlorophenyl-phenylether	204	16.296	16.296	(1.071)	287575	3.75735	3.757
	52 4-Nitroaniline	138	16.411	16.404	(1.079)	368926	11.4868	11.49
	53 4,6-Dinitro-2-methylphenol	198	16.496	16.489	(0.905)	771732	30.0836	30.08
	54 N-Nitrosodiphenylamine	169	16.550	16.542	(0.908)	449019	4.09037	4.090
$	55 2,4,6-Tribromophenol	330	16.843	16.843	(1.107)	142983	6.81490	6.815
	56 4-Bromophenyl-phenylether	248	17.298	17.298	(0.949)	226339	4.92863	4.929
	57 Hexachlorobenzene	284	17.615	17.607	(0.966)	212658	4.41675	4.417
	58 Pentachlorophenol	266	17.971	17.963	(0.986)	391280	13.3827	13.38
*	59 Phenanthrene-d10	188	18.234	18.234	(1.000)	821072	4.00000	
	60 Phenanthrene	178	18.281	18.281	(1.003)	1008718	4.50545	4.505
	61 Anthracene	178	18.373	18.373	(1.008)	868472	4.04379	4.044
	62 Carbazole	167	18.706	18.698	(1.026)	786511	4.08681	4.087
	63 Di-n-butylphthalate	149	19.488	19.488	(1.069)	1369952	5.32432	5.324
	64 Fluoranthene	202	20.664	20.656	(0.888)	1240945	4.68872	4.689
	65 Pyrene	202	21.081	21.081	(0.906)	1248571	4.59879	4.599
$	66 Terphenyl-d14	244	21.368	21.360	(0.918)	924842	4.53596	4.536
	67 Butylbenzylphthalate	149	22.289	22.281	(0.958)	551184	5.57997	5.580
	68 Benzo(a)anthracene	228	23.241	23.241	(0.999)	1109885	4.77389	4.774
*	69 Chrysene-d12	240	23.272	23.272	(1.000)	658672	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.195	23.195	(0.997)	700719	9.40942	9.409
	71 Chrysene	228	23.319	23.311	(1.002)	1052569	4.63402	4.634
	72 bis(2-Ethylhexyl)phthalate	149	23.311	23.303	(0.960)	786794	4.70693	4.707
*	134 Di-n-octylphthalate-d4	153	24.294	24.294	(1.000)	1139486	4.00000	
	73 Di-n-octylphthalate	149	24.302	24.302	(1.000)	1434117	4.80932	4.809
	74 Benzo(b)fluoranthene	252	25.130	25.130	(0.970)	1158207	5.25733	5.257
	75 Benzo(k)fluoranthene	252	25.177	25.169	(0.972)	1124359	5.02619	5.026(M)
	76 Benzo(a)pyrene	252	25.789	25.789	(0.996)	948190	4.81404	4.814
*	77 Perylene-d12	264	25.905	25.897	(1.000)	679632	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.580	28.580	(1.103)	1163549	4.64333	4.643
	79 Dibenzo(a,h)anthracene	278	28.588	28.595	(1.104)	983700	4.72839	4.728
	80 Benzo(g,h,i)perylene	276	29.372	29.364	(1.134)	1014705	4.67907	4.679
	90 N-Nitrosodimethylamine	74	4.874	4.835	(0.532)	402301	9.23772	9.238
	91 Aniline	93	8.636	8.628	(0.942)	832477	8.73073	8.731
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	4.912	4.874	(0.536)	314833	4.70718	4.707
	105 1-methylnaphthalene	142	13.271	13.263	(1.141)	656493	4.48121	4.481
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.620	16.620	(1.092)	736494	4.59738	4.597

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.130	25.130	(0.970)	2165330	10.1798	10.18(M)
120 2,3,4,6-Tetrachlorophenol	232	15.932	15.932	(1.047)	176932	3.81343	3.813

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182308.D
Lab Smp Id: BLB0579-BSD1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	225726	21.09
27 Naphthalene-d8	688740	344370	1377480	836374	21.44
42 Acenaphthene-d10	373663	186832	747326	449937	20.41
59 Phenanthrene-d10	652323	326162	1304646	821072	25.87
69 Chrysene-d12	537141	268571	1074282	658672	22.63
134 Di-n-octylphthala	947608	473804	1895216	1139486	20.25
77 Perylene-d12	602550	301275	1205100	679632	12.79

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.17	0.08
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	0.00
77 Perylene-d12	25.90	25.40	26.40	25.91	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182308.D

Lab ID: BLB0579-BSD1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 22:12

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

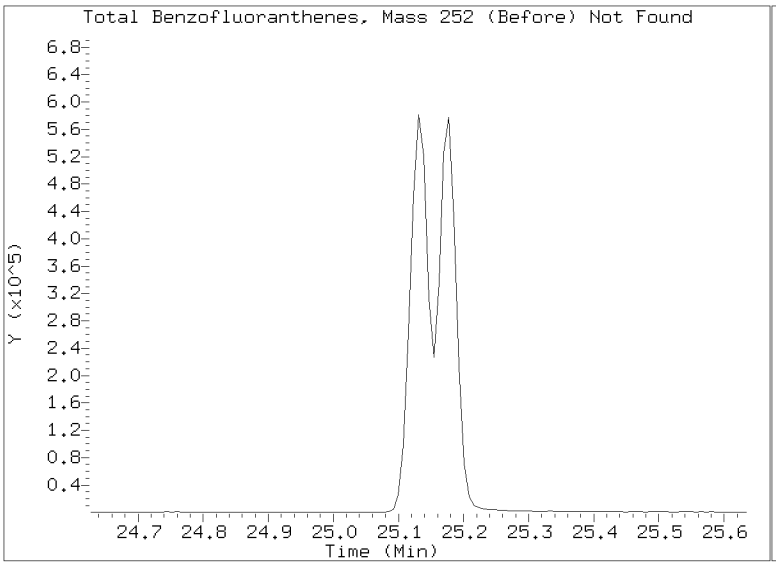
RRT check based on Ccal File: NT1003182302.D

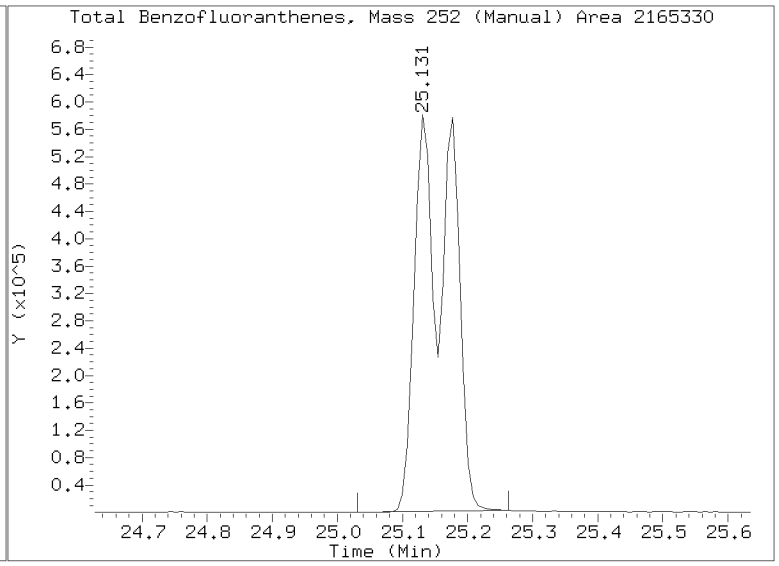
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

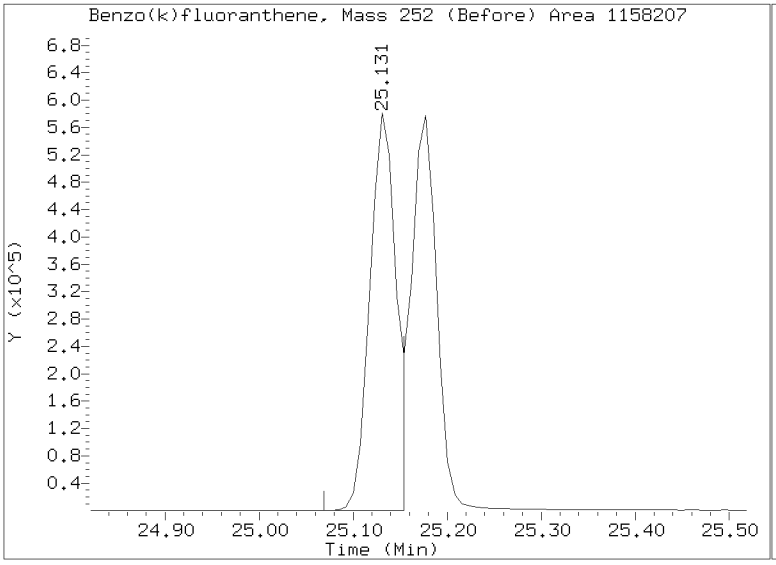
* Only compounds listed in the work order have been verified by the analyst *

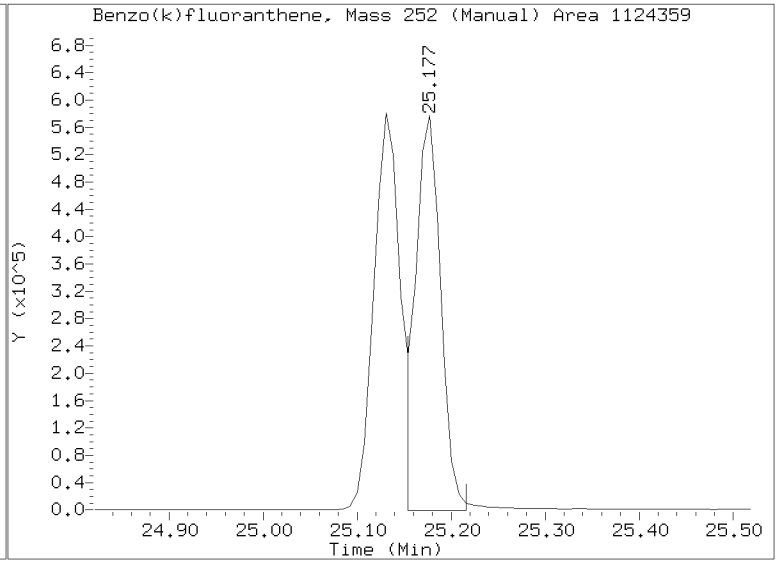
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182308.D
Injection Date: 18-MAR-2023 22:12
Lab ID:BLB0579-BSD1 Client ID:
Report Date: 04/04/2023 08:57









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1238

MS / MS DUPLICATE RECOVERY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/19/23 06:29
Batch:	BLB0579	Laboratory ID:	BLB0579-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	18.12 g / 1 mL	Source Sample:	LDW23-SS1238

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Phenol	500	609		929		64.0	34 - 120
4-Methylphenol	500	666		1090		85.6	29 - 120
Naphthalene	500	9.2	J	379		74.0	43 - 120
2-Methylnaphthalene	500	8.1	J	390		76.4	43 - 120
Acenaphthylene	500	ND	U	401		80.2	42 - 120
Dimethylphthalate	500	ND	U	452		90.3	43 - 120
Acenaphthene	500	8.1	J	422		82.9	45 - 120
Dibenzofuran	500	ND	U	418		83.6	43 - 120
Fluorene	500	ND	U	397		79.5	45 - 120
Phenanthrene	500	57.4		495		87.5	49 - 120
Anthracene	500	29.2		410		76.3	45 - 120
Fluoranthene	500	193		578		77.1	53 - 145
Pyrene	500	222		589		73.6	52 - 134
Butylbenzylphthalate	500	19.9	J	507		97.5	45 - 132
Benzo(a)anthracene	500	116		545		85.9	49 - 120
Chrysene	500	135		552		83.4	47 - 120
bis(2-Ethylhexyl)phthalate	500	118		521		80.6	34 - 130
Benzofluoranthenes, Total	1000	244		1180		93.3	30 - 160
Benzo(a)pyrene	500	110		561		90.1	42 - 120
Indeno(1,2,3-cd)pyrene	500	50.7		434		76.6	42 - 163
Dibenzo(a,h)anthracene	500	19.9	J	413		78.6	30 - 133
Benzo(g,h,i)perylene	500	59.4		421		72.4	46 - 148

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/19/23 07:08
Batch:	BLB0579	Laboratory ID:	BLB0579-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	18.12 g / 1 mL	Source Sample:	LDW23-SS1238

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	500	897		57.7	3.42	30	34 - 120
4-Methylphenol	500	1010		69.1	7.84	30	29 - 120
Naphthalene	500	384		74.9	1.22	30	43 - 120
2-Methylnaphthalene	500	391		76.5	0.178	30	43 - 120
Acenaphthylene	500	402		80.4	0.331	30	42 - 120
Dimethylphthalate	500	451		90.3	0.0429	30	43 - 120
Acenaphthene	500	420		82.4	0.607	30	45 - 120
Dibenzofuran	500	419		83.9	0.382	30	43 - 120
Fluorene	500	379		75.7	4.85	30	45 - 120
Phenanthrene	500	509		90.4	2.94	30	49 - 120
Anthracene	500	417		77.6	1.62	30	45 - 120
Fluoranthene	500	621		85.7	7.13	30	53 - 145
Pyrene	500	634		82.6	7.36	30	52 - 134
Butylbenzylphthalate	500	502		96.5	1.00	30	45 - 132
Benzo(a)anthracene	500	580		93.0	6.26	30	49 - 120
Chrysene	500	601		93.2	8.47	30	47 - 120
bis(2-Ethylhexyl)phthalate	500	530		82.4	1.68	30	34 - 130
Benzofluoranthenes, Total	1000	1170		92.8	0.399	30	30 - 160
Benzo(a)pyrene	500	545		87.1	2.73	30	42 - 120
Indeno(1,2,3-cd)pyrene	500	423		74.5	2.51	30	42 - 163
Dibenzo(a,h)anthracene	500	405		77.1	1.78	30	30 - 133
Benzo(g,h,i)perylene	500	401		68.4	4.88	30	46 - 148

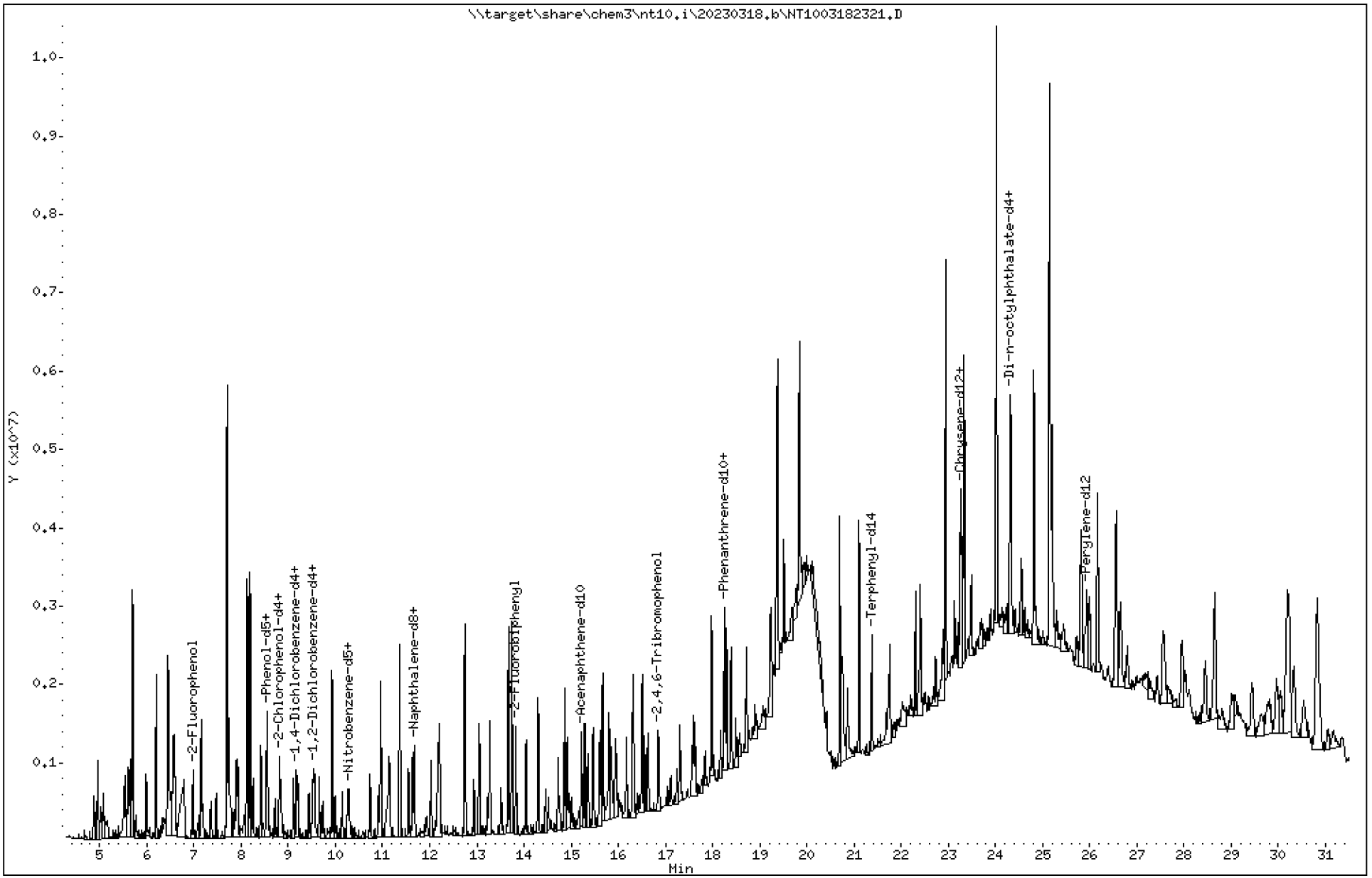
* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D
Date : 19-MAR-2023 06:29
Client ID:
Sample Info: BLB0579-MS1

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS
Column diameter: 0.25



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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

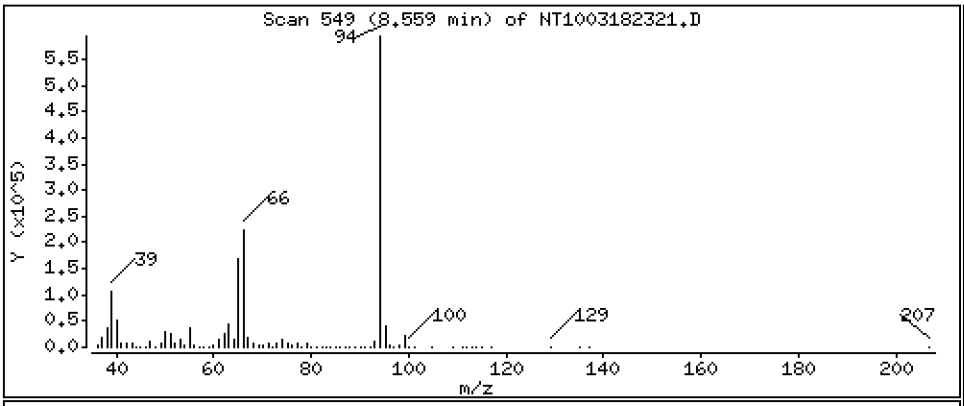
Operator: VTS

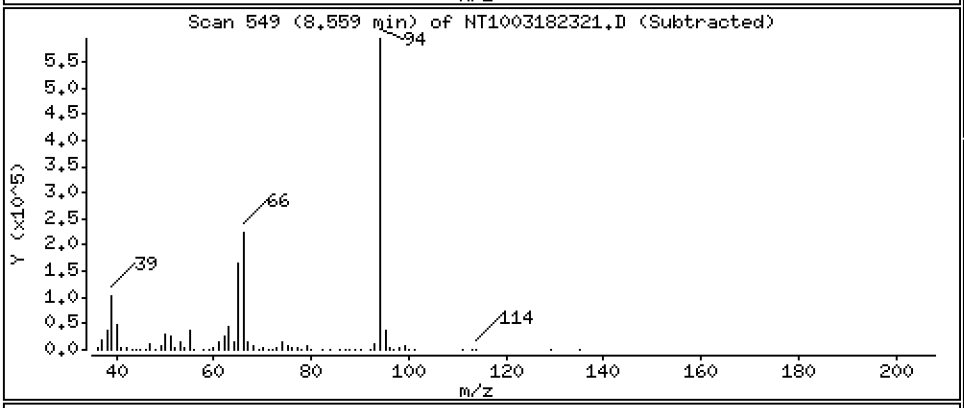
Column phase: ZB-5msi

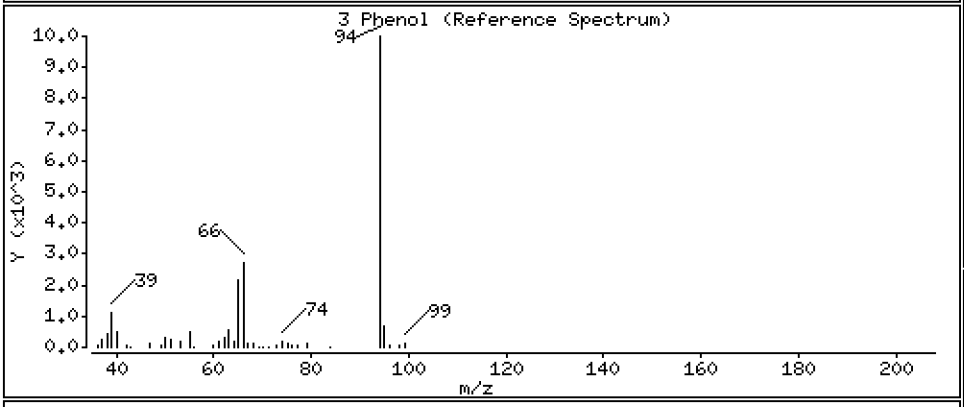
Column diameter: 0.25

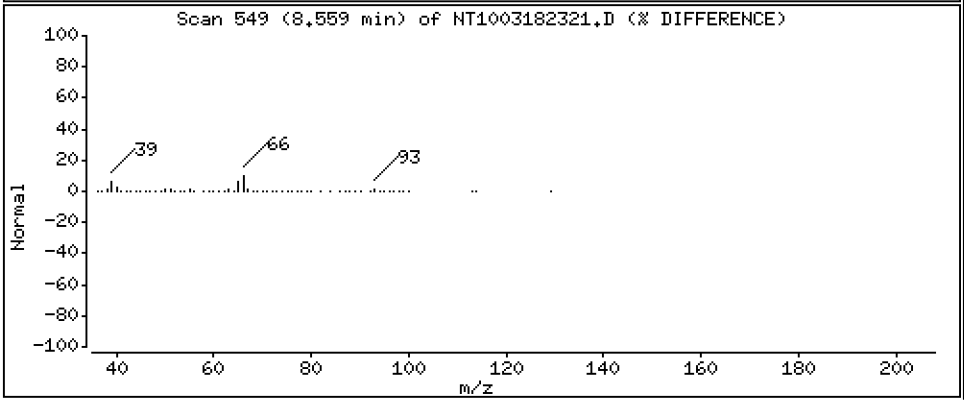
3 Phenol

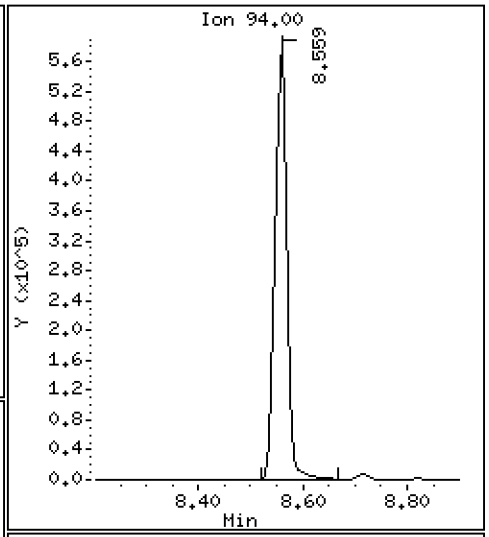
Concentration: 9.289 ug/mL

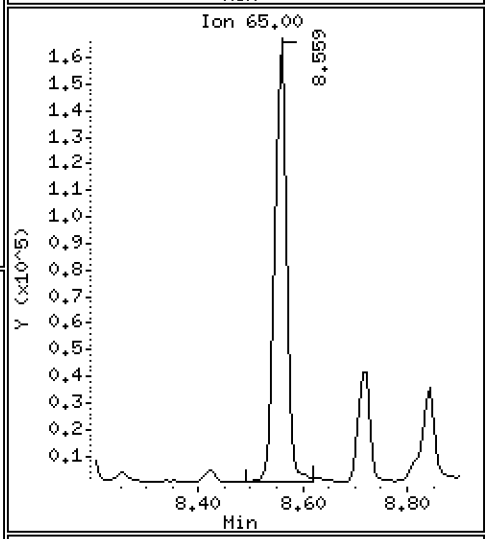


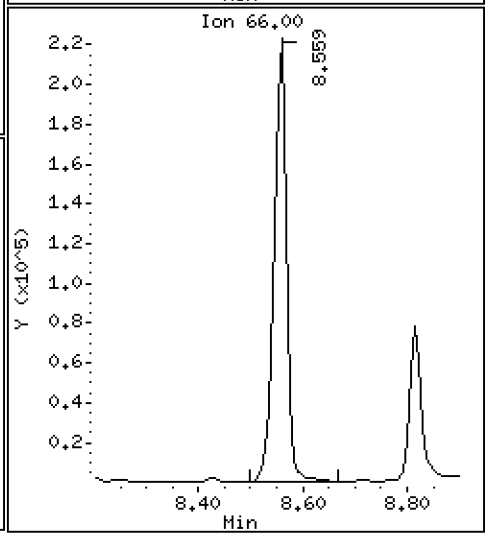












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

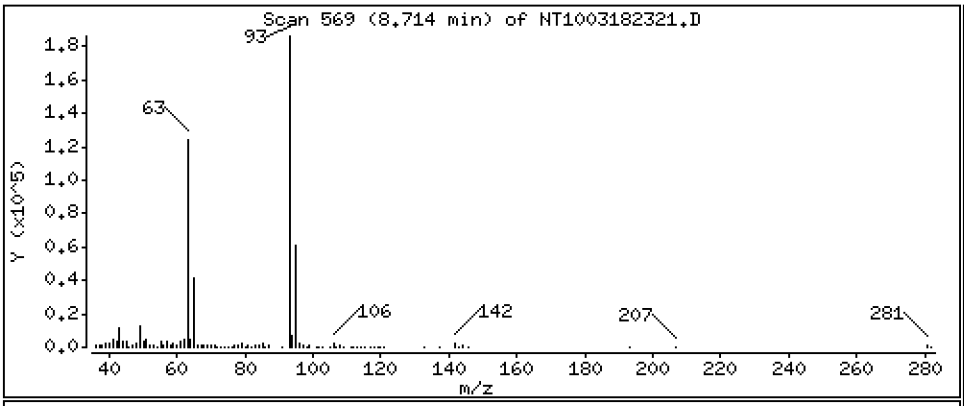
Operator: VTS

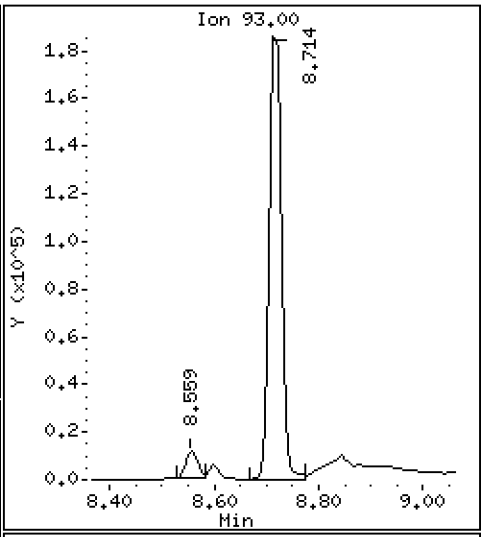
Column phase: ZB-5msi

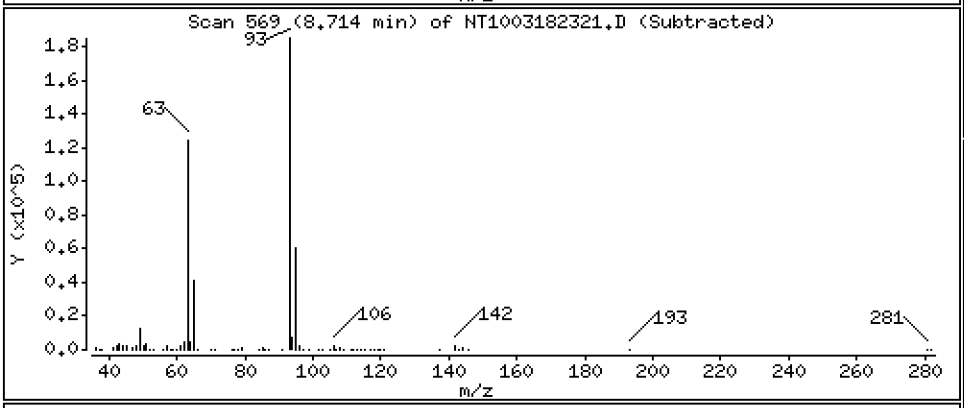
Column diameter: 0.25

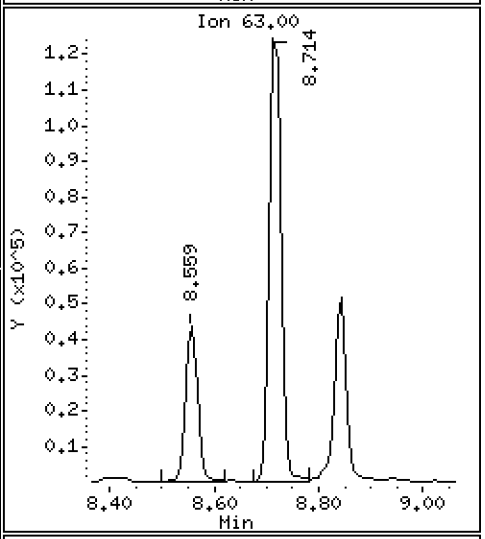
4 Bis(2-Chloroethyl)ether

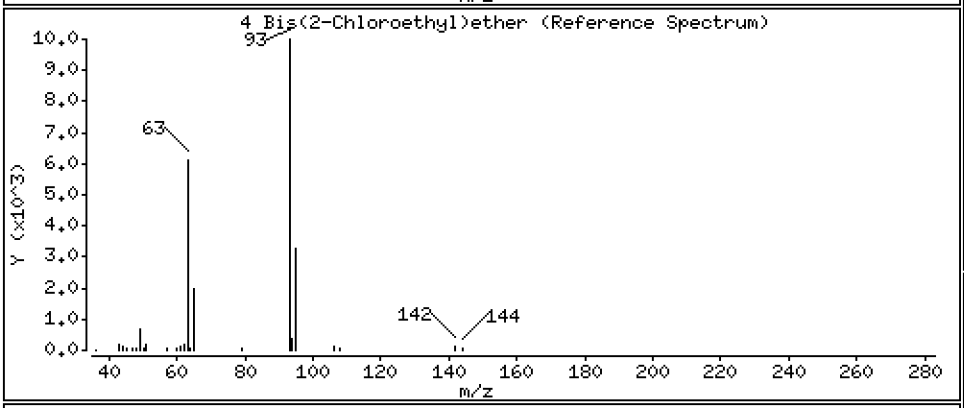
Concentration: 3.995 ug/mL

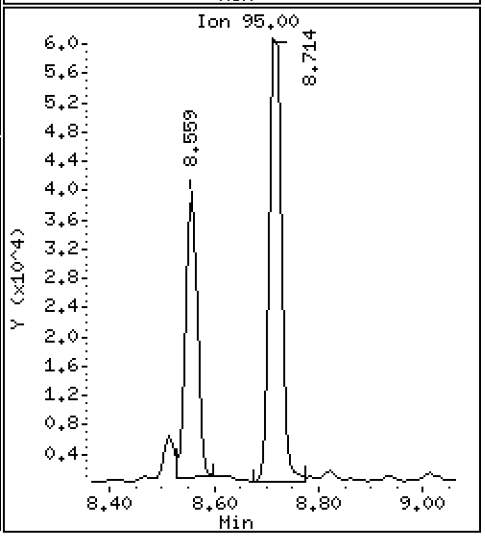


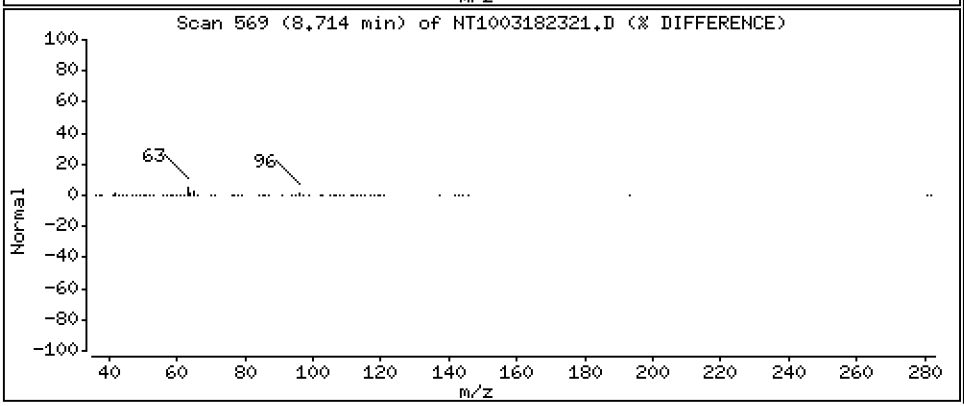












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

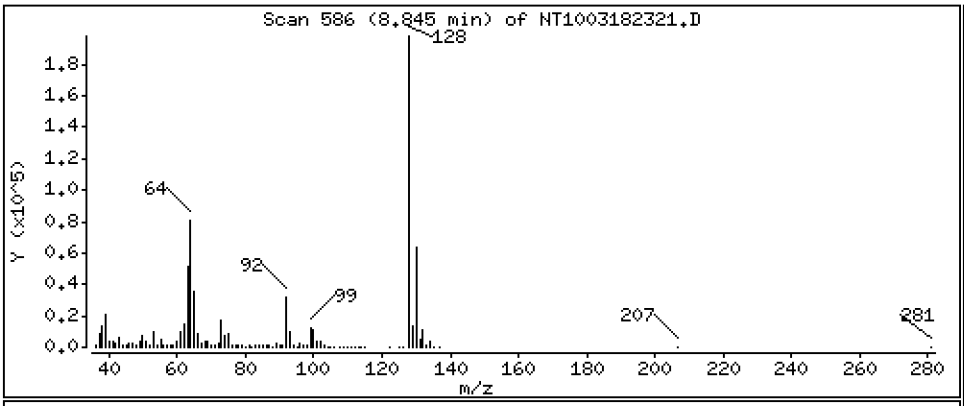
Operator: VTS

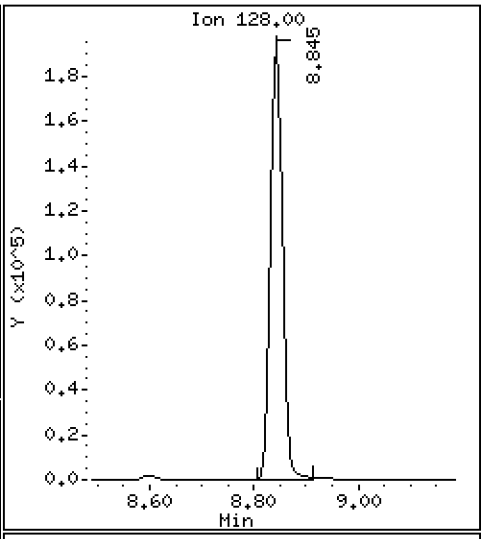
Column phase: ZB-5msi

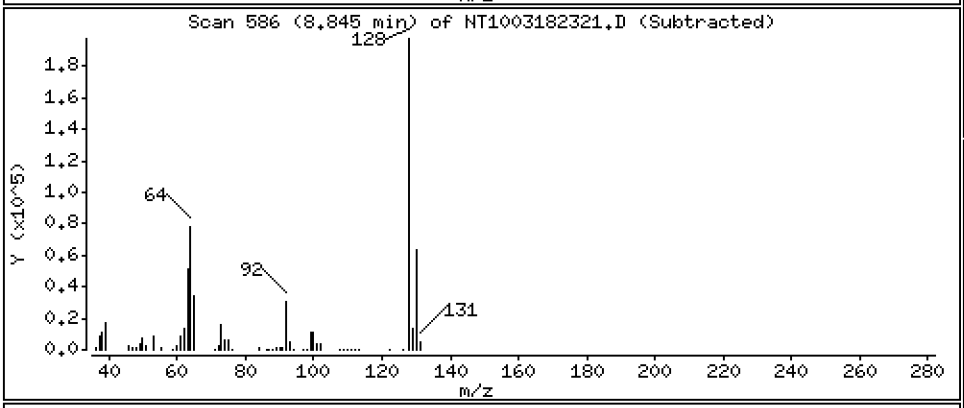
Column diameter: 0.25

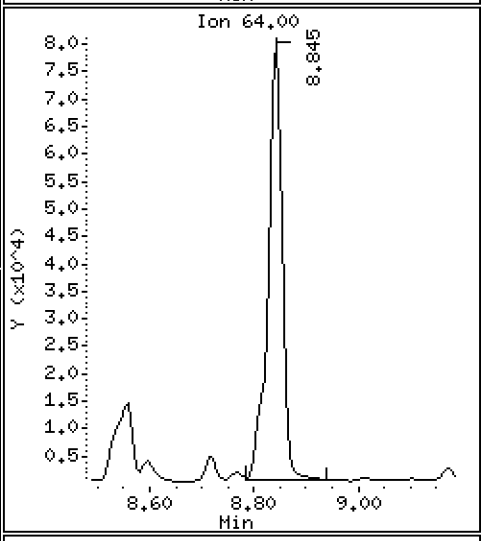
6 2-Chlorophenol

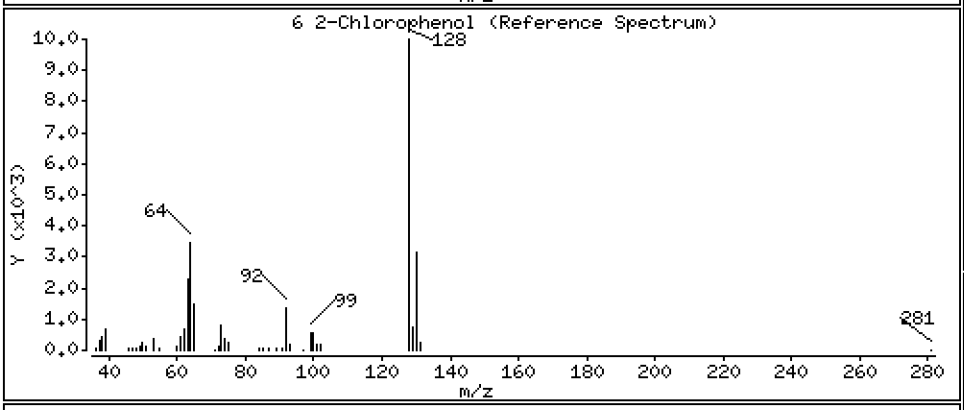
Concentration: 3.622 ug/mL

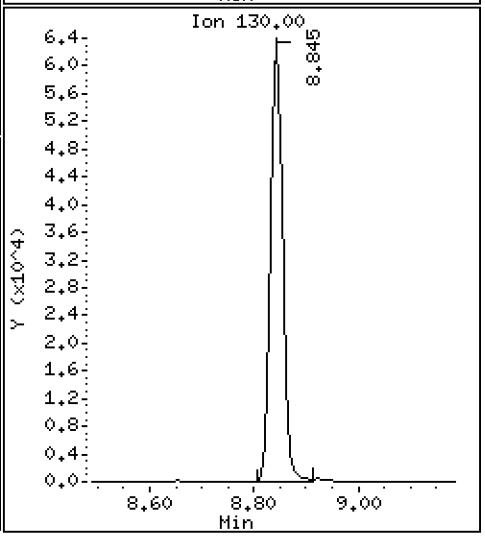


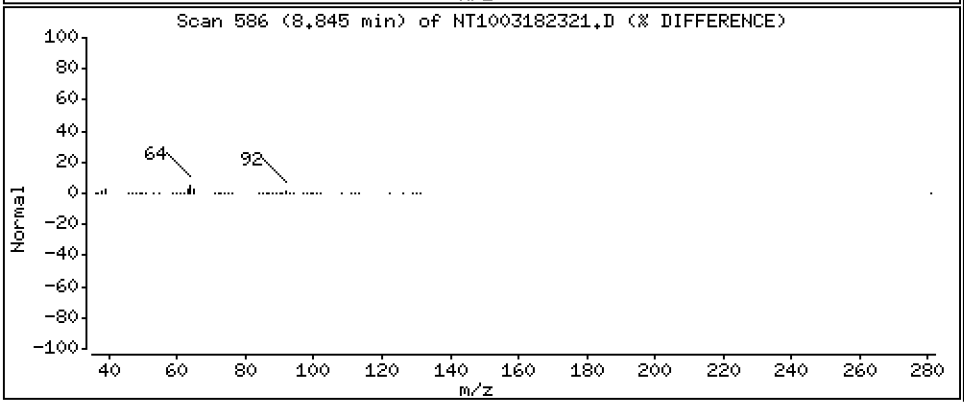












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

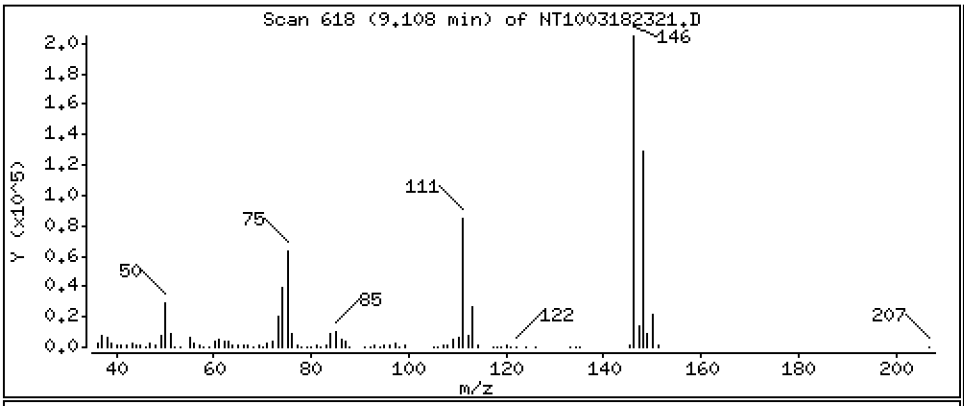
Operator: VTS

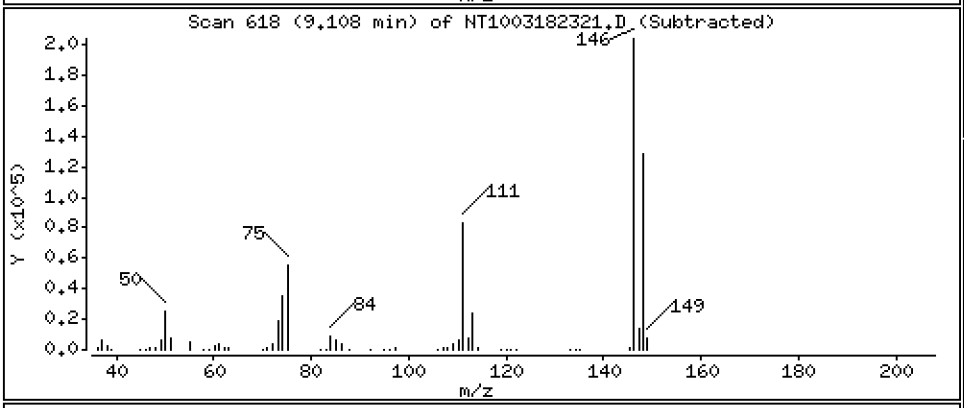
Column phase: ZB-5msi

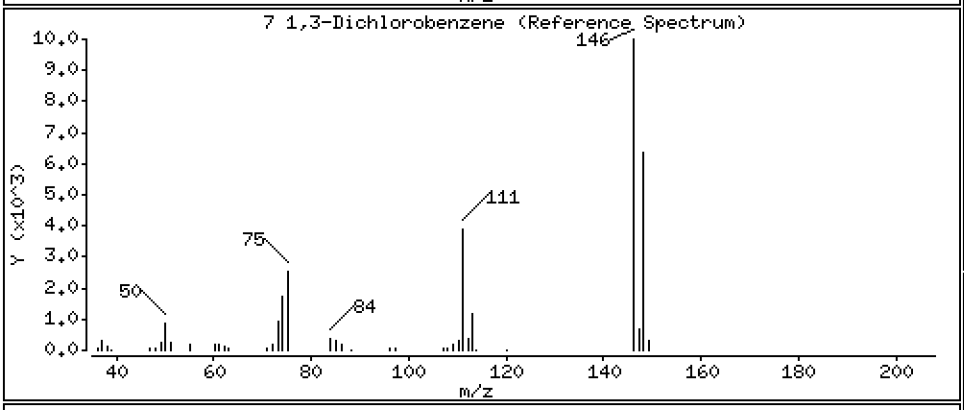
Column diameter: 0.25

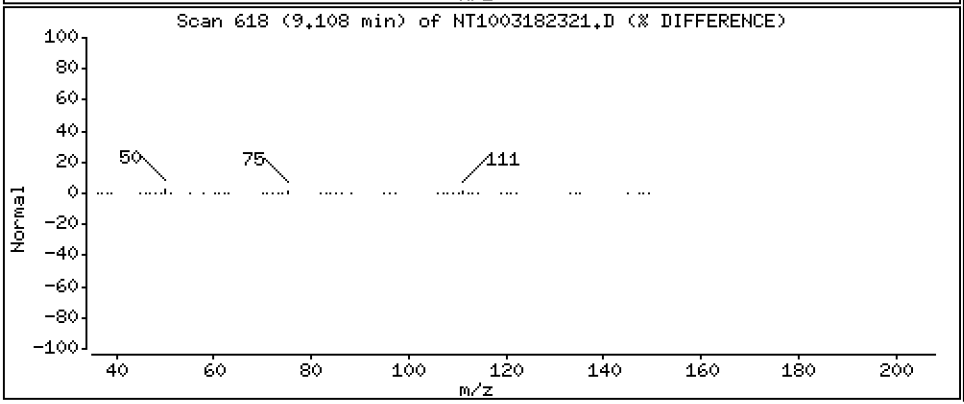
7 1,3-Dichlorobenzene

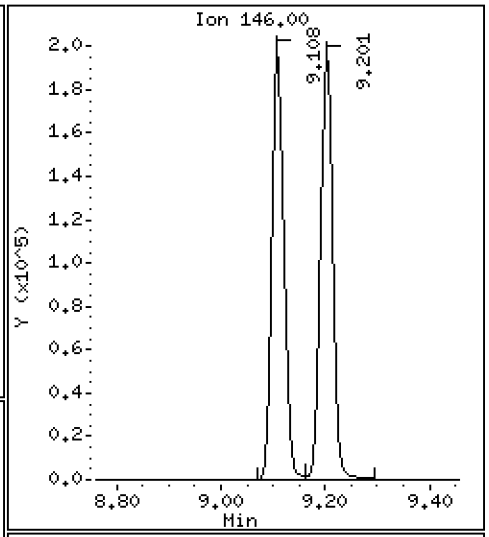
Concentration: 3.599 ug/mL

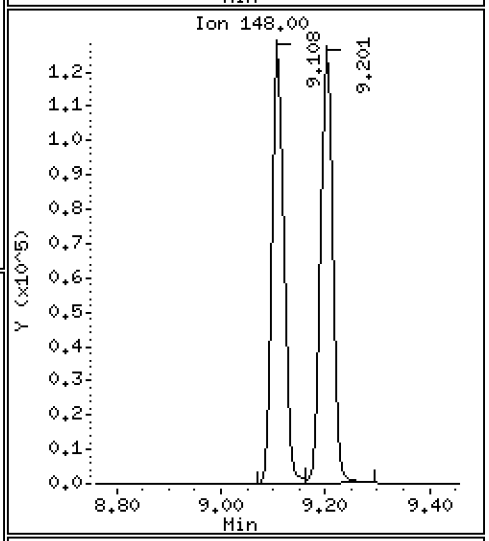


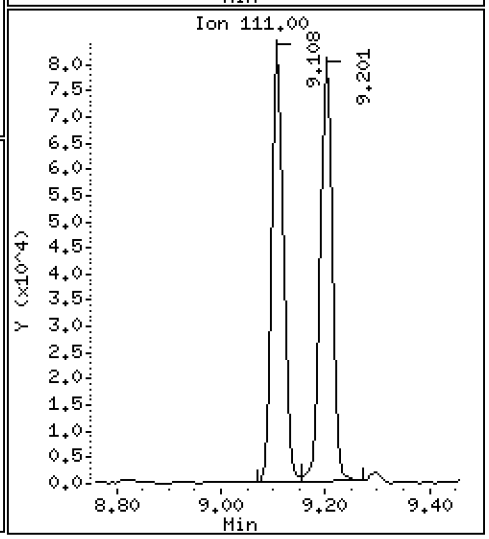












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

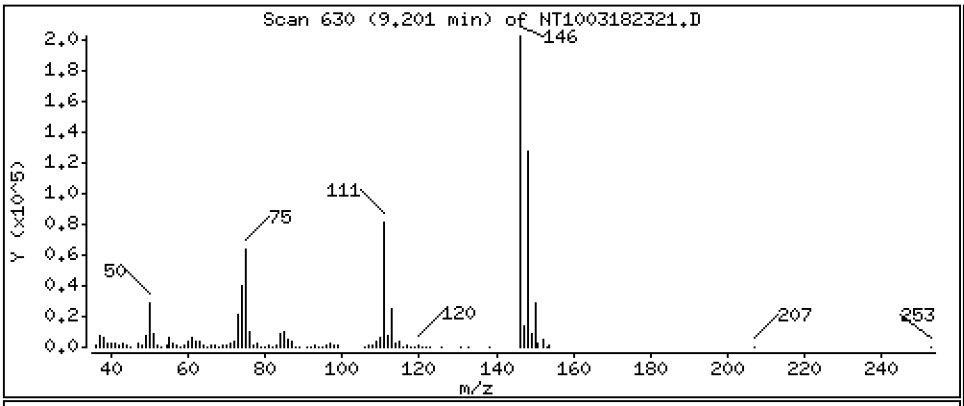
Operator: VTS

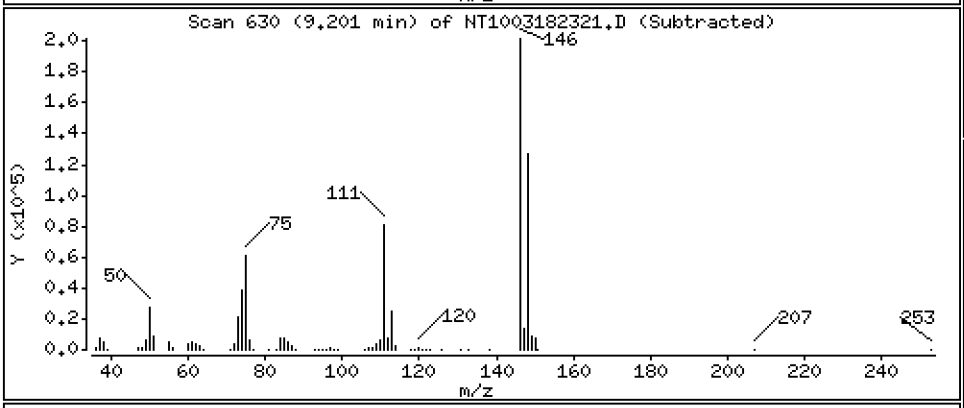
Column phase: ZB-5msi

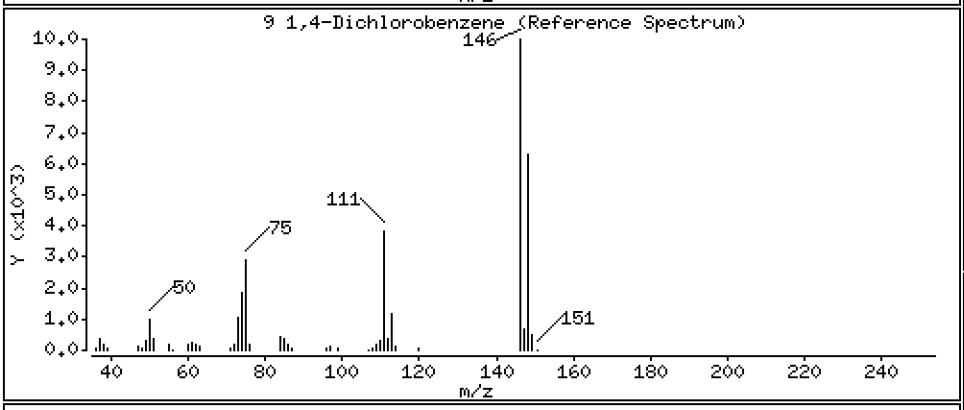
Column diameter: 0.25

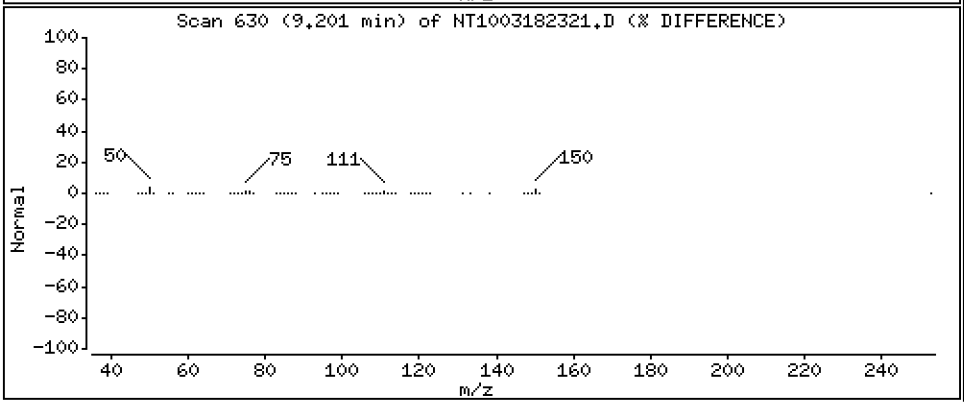
9 1,4-Dichlorobenzene

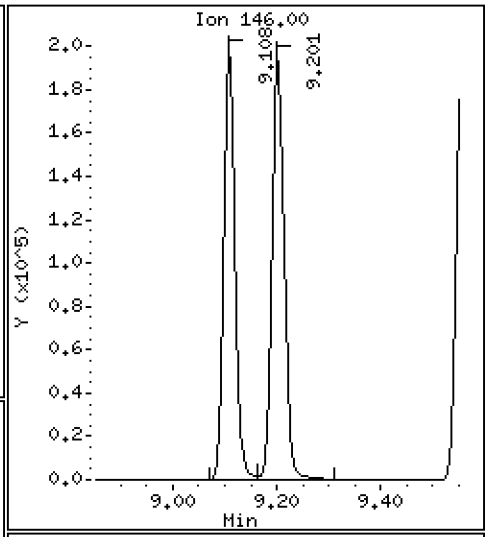
Concentration: 3.701 ug/mL

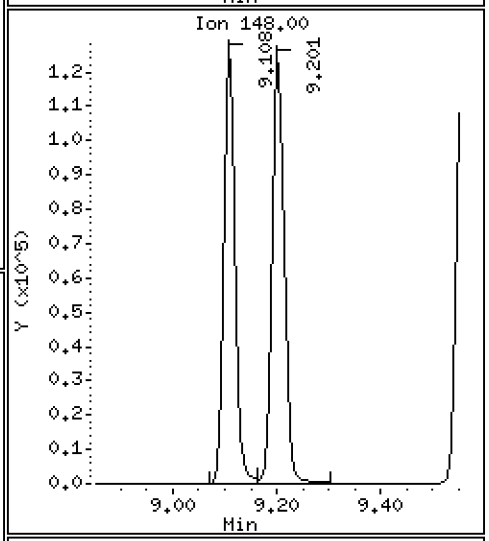


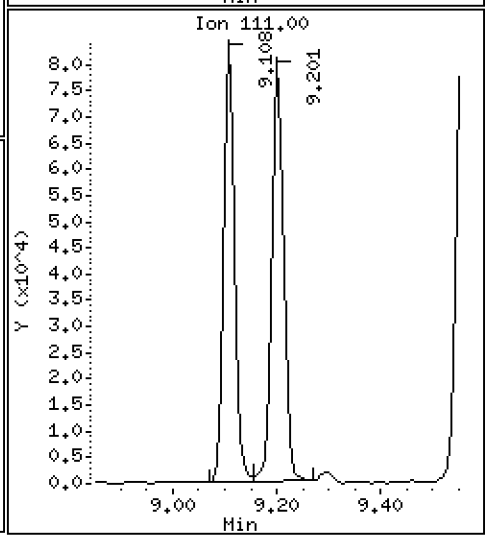












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

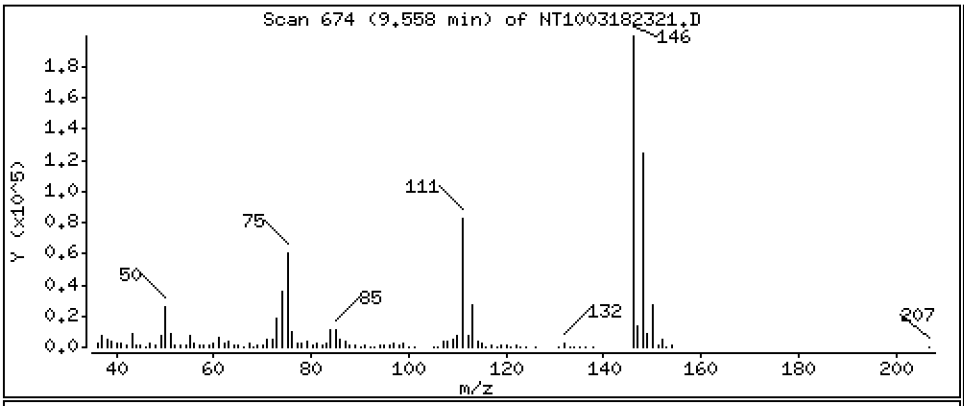
Operator: VTS

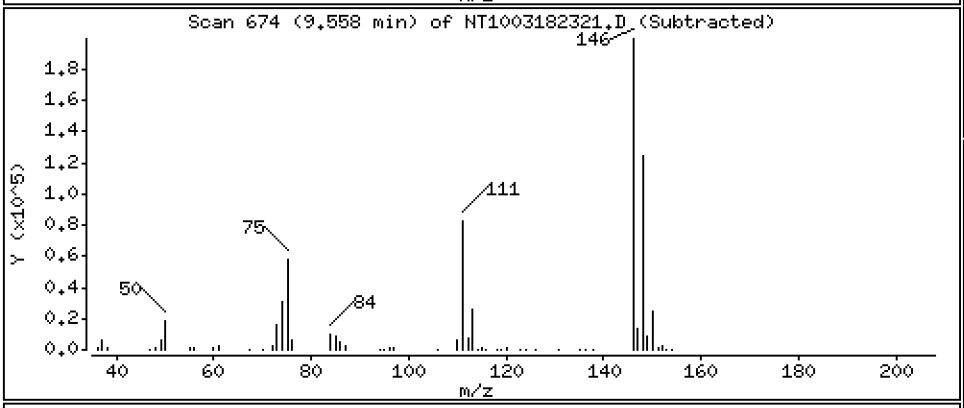
Column phase: ZB-5msi

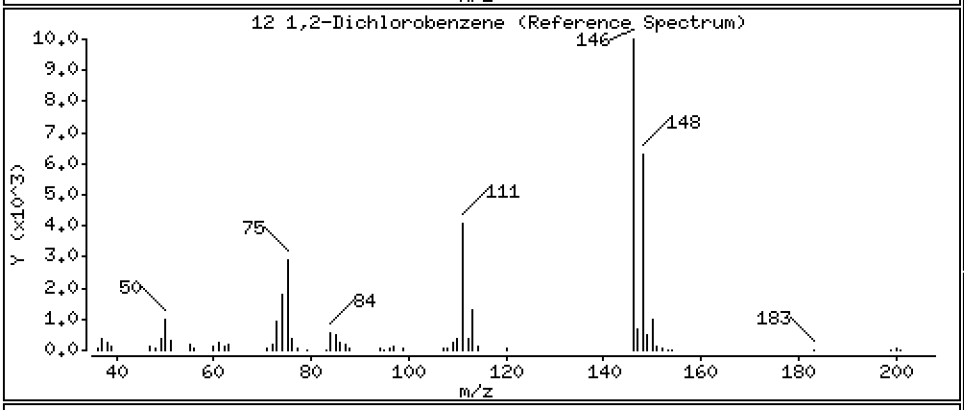
Column diameter: 0.25

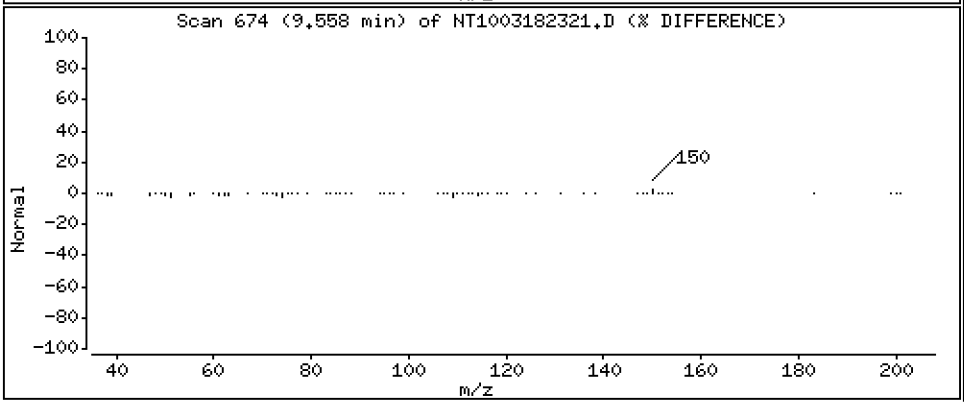
12 1,2-Dichlorobenzene

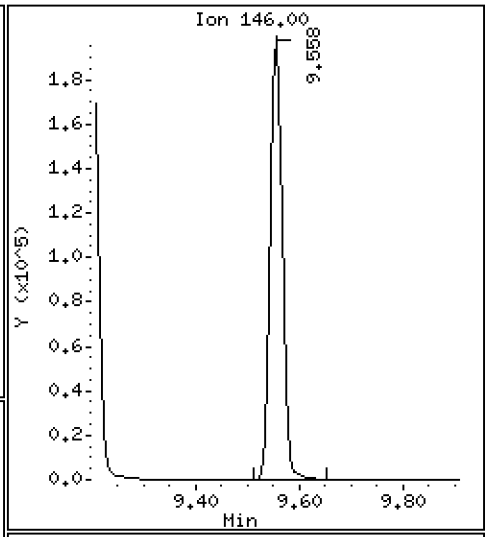
Concentration: 3.749 ug/mL

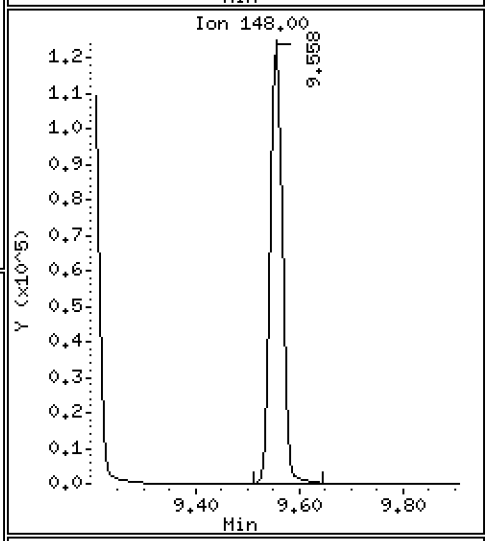


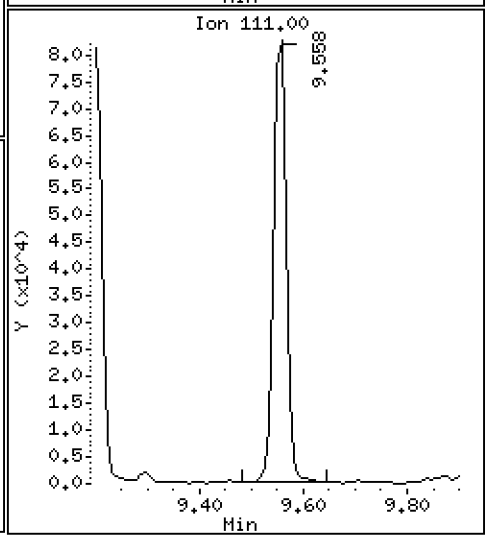












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

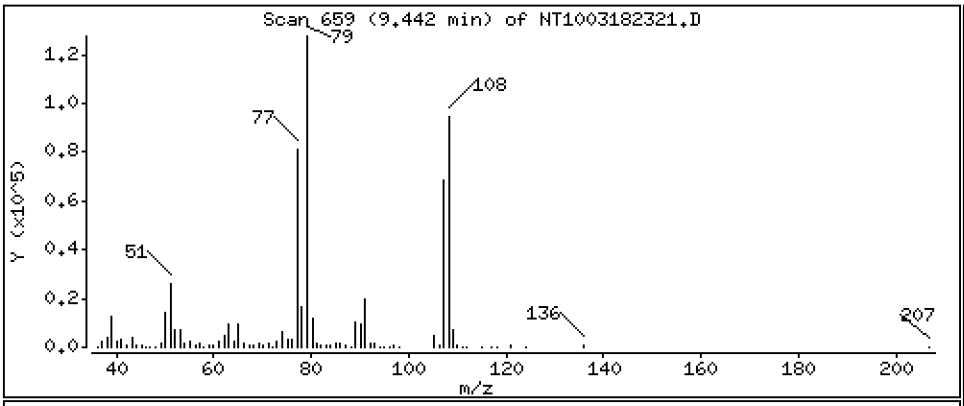
Operator: VTS

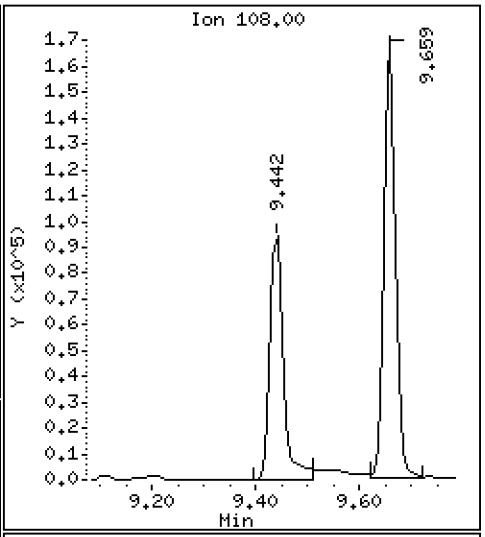
Column phase: ZB-5msi

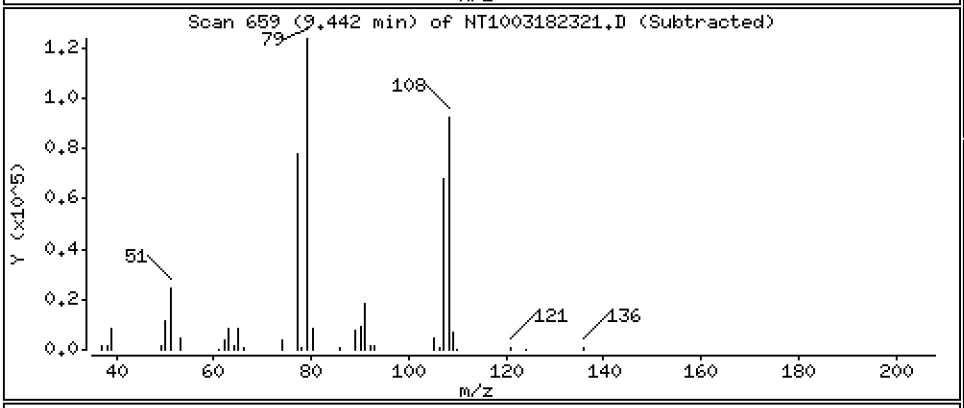
Column diameter: 0.25

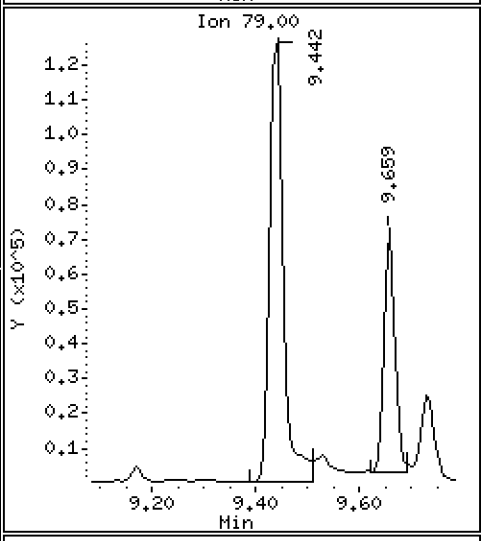
11 Benzyl alcohol

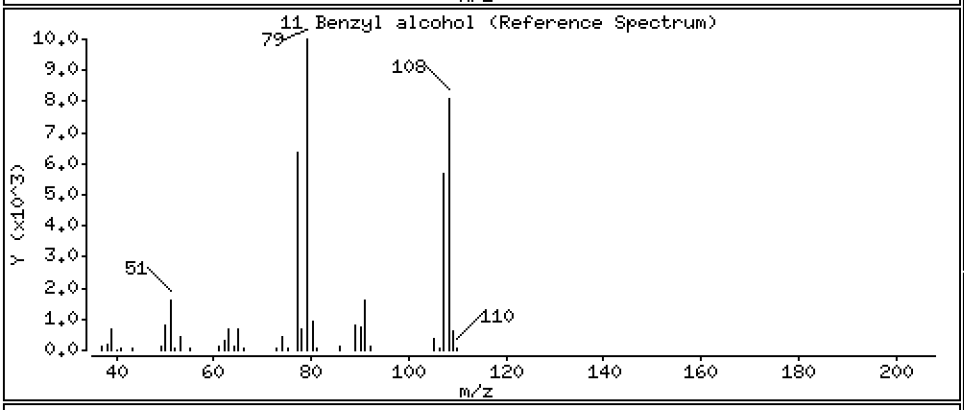
Concentration: 3.671 ug/mL

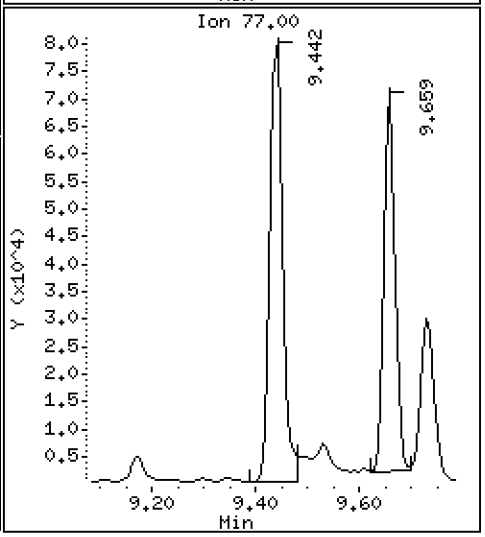


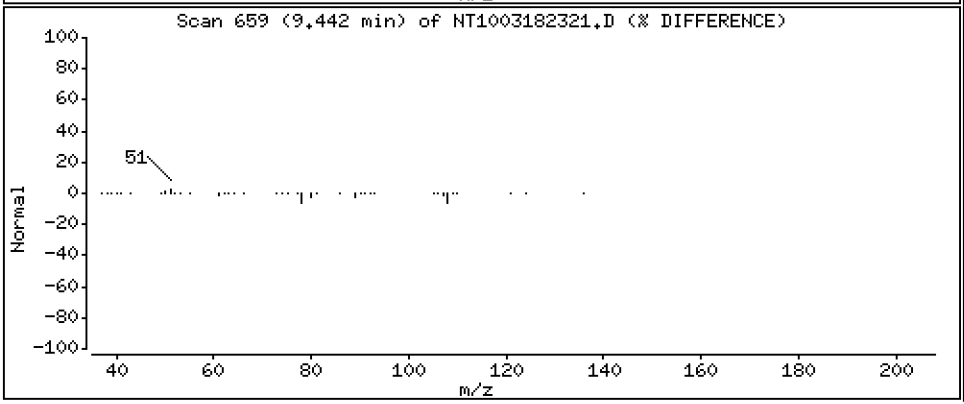












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

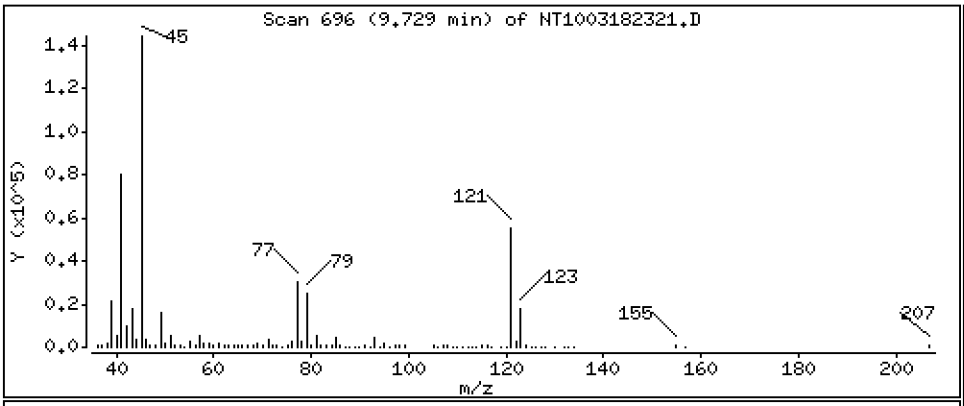
Operator: VTS

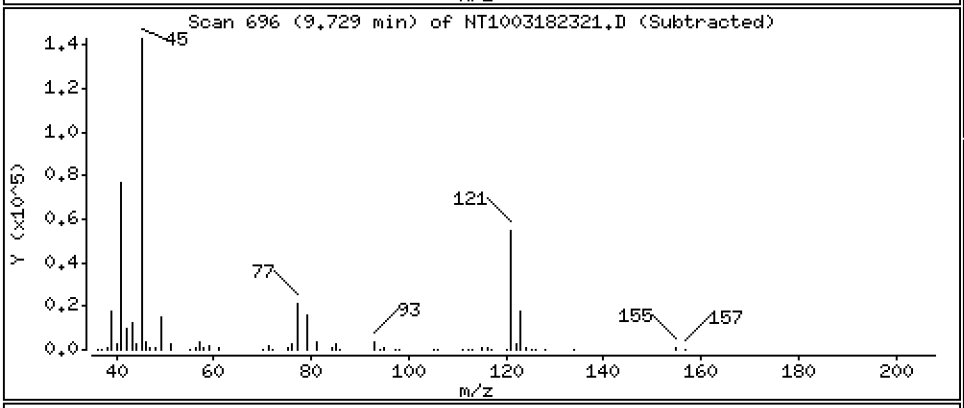
Column phase: ZB-5msi

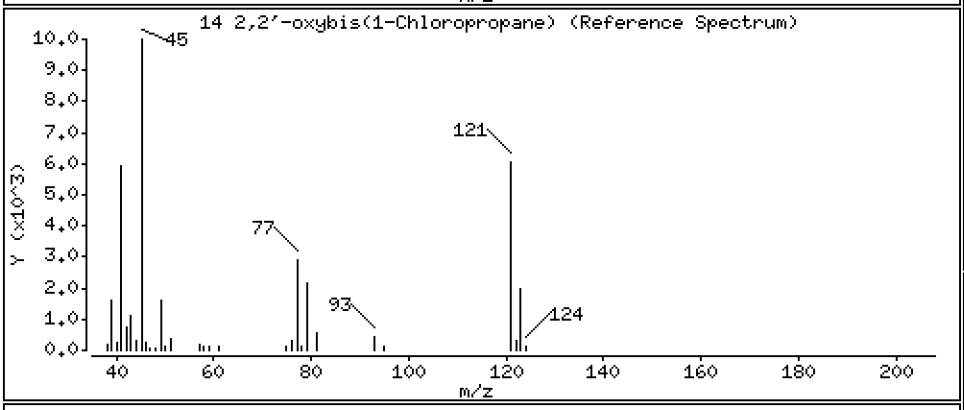
Column diameter: 0.25

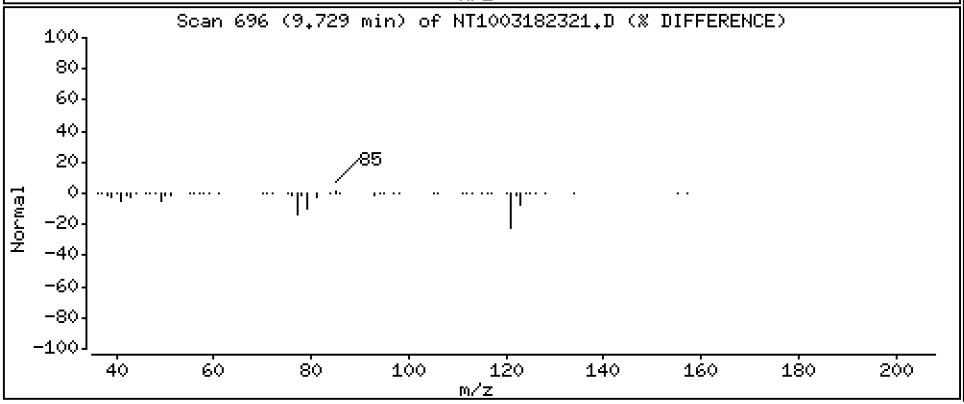
14 2,2'-oxybis(1-Chloropropane)

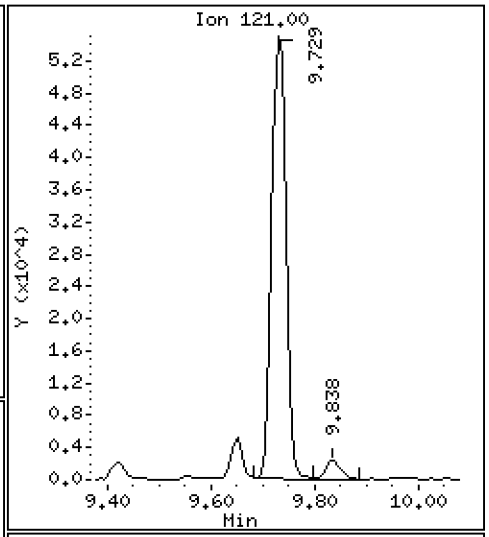
Concentration: 4.242 ug/mL

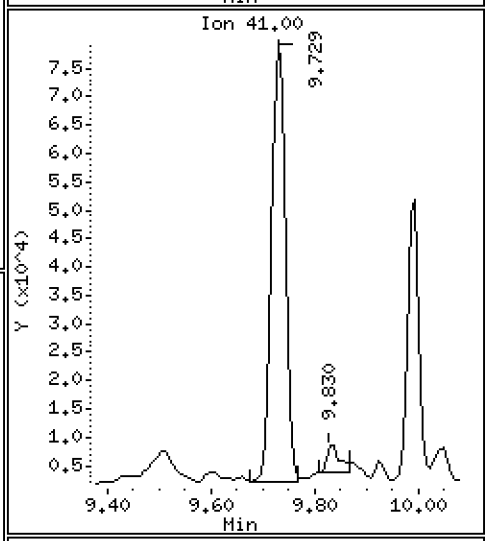


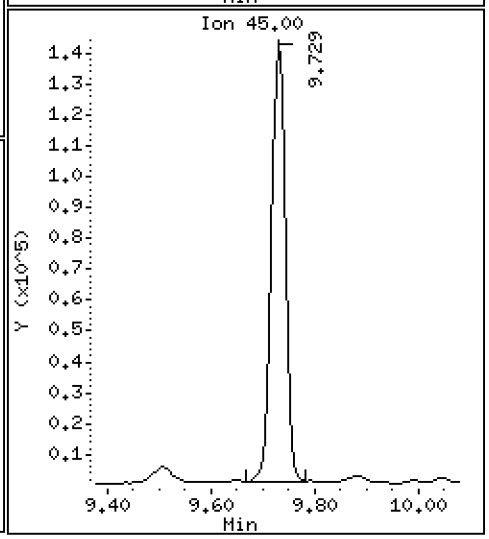












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

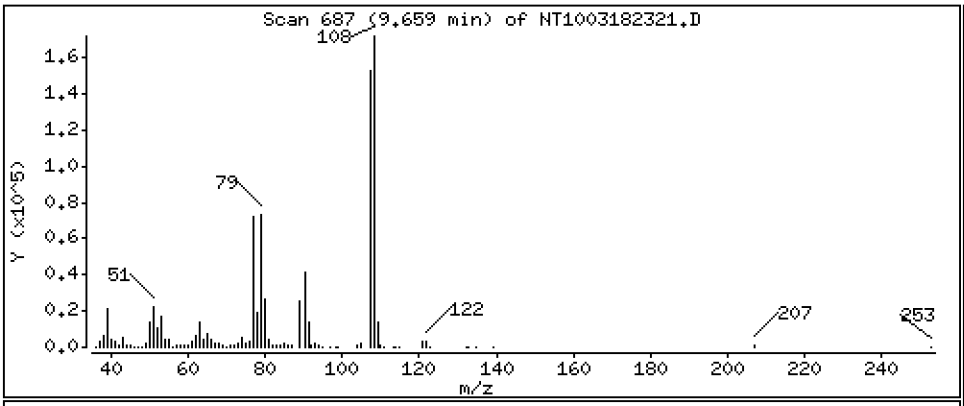
Operator: VTS

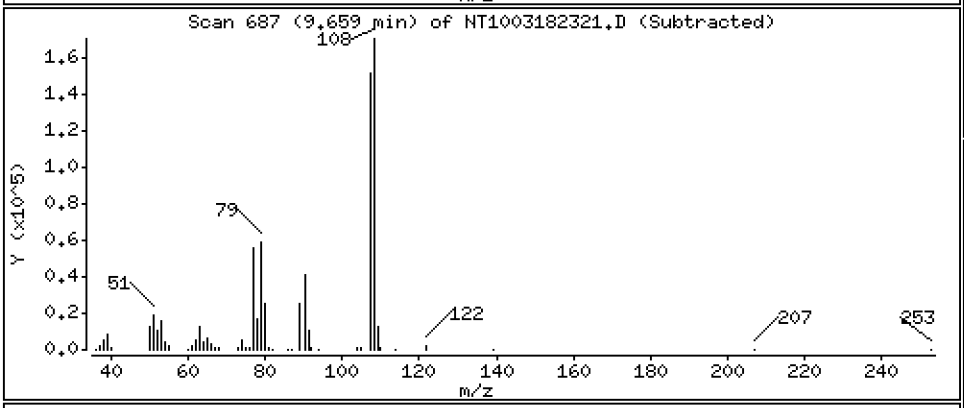
Column phase: ZB-5msi

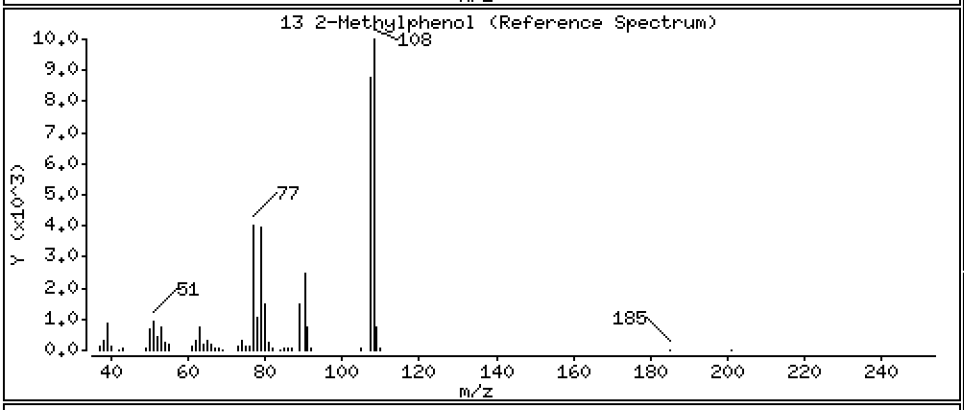
Column diameter: 0.25

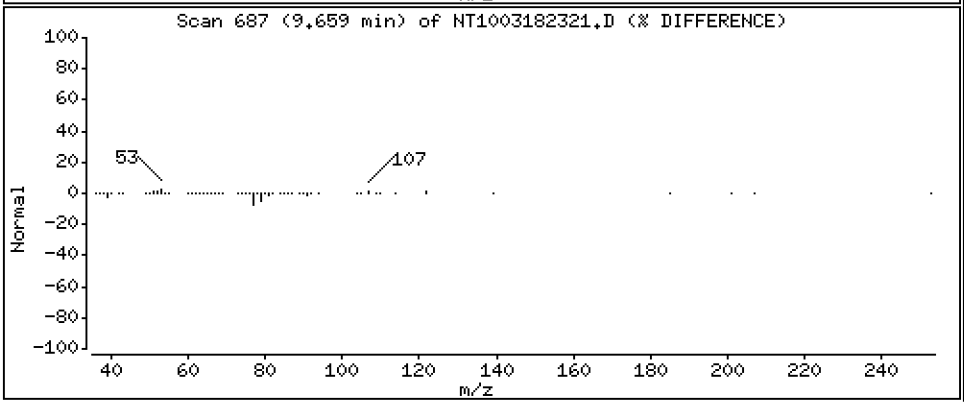
13 2-Methylphenol

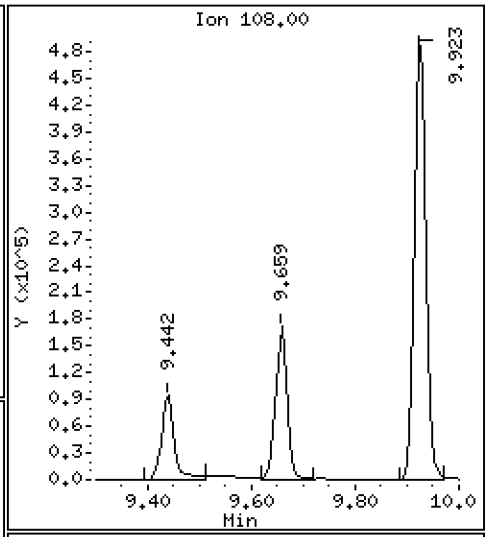
Concentration: 3.624 ug/mL

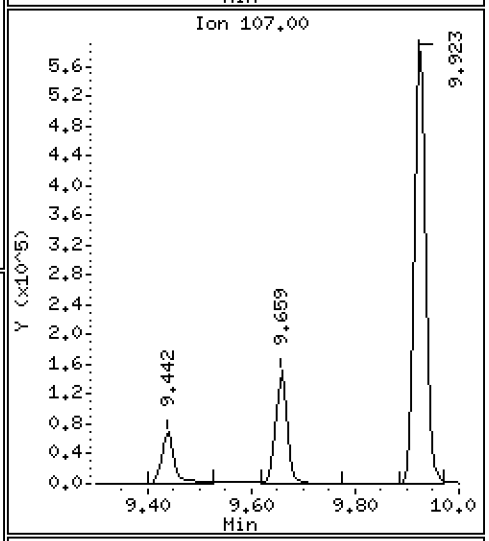


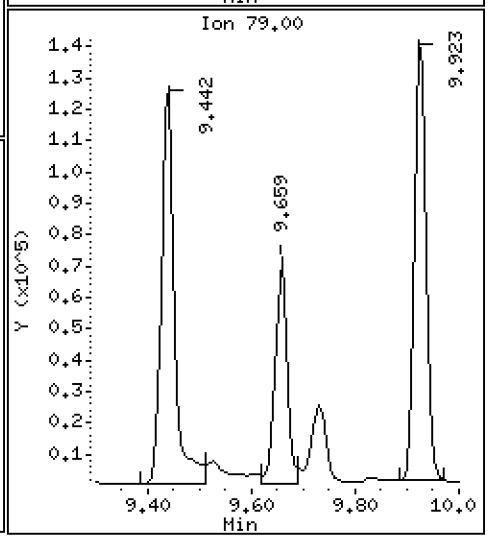












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

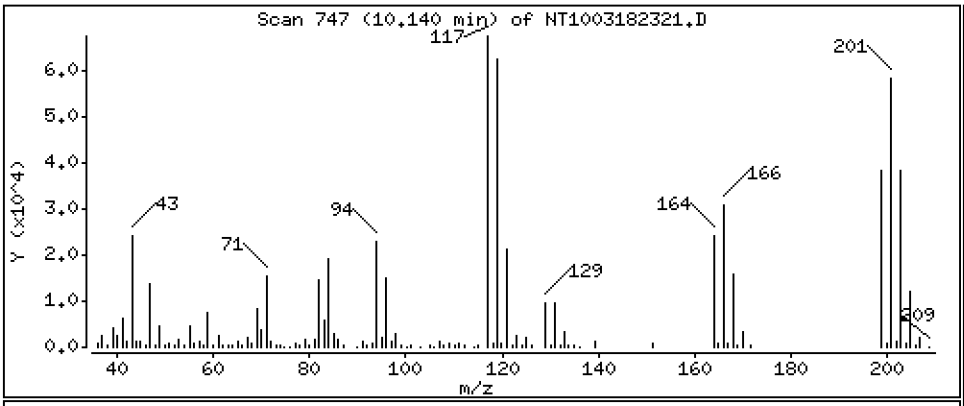
Operator: VTS

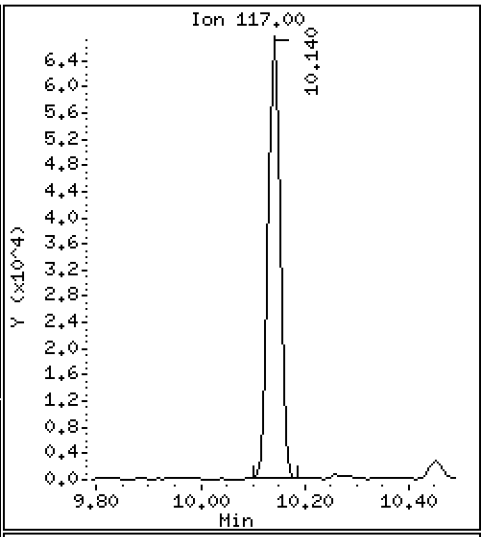
Column phase: ZB-5msi

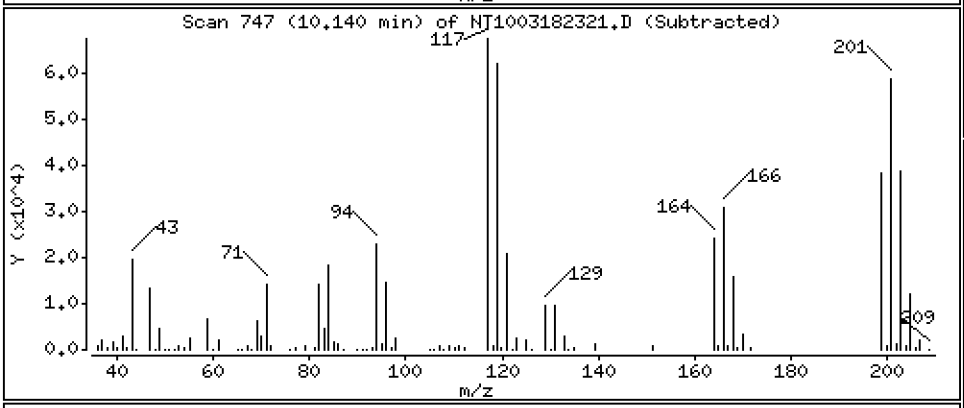
Column diameter: 0.25

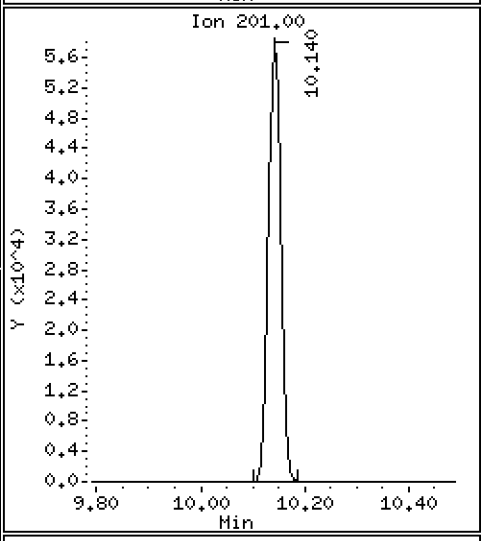
17 Hexachloroethane

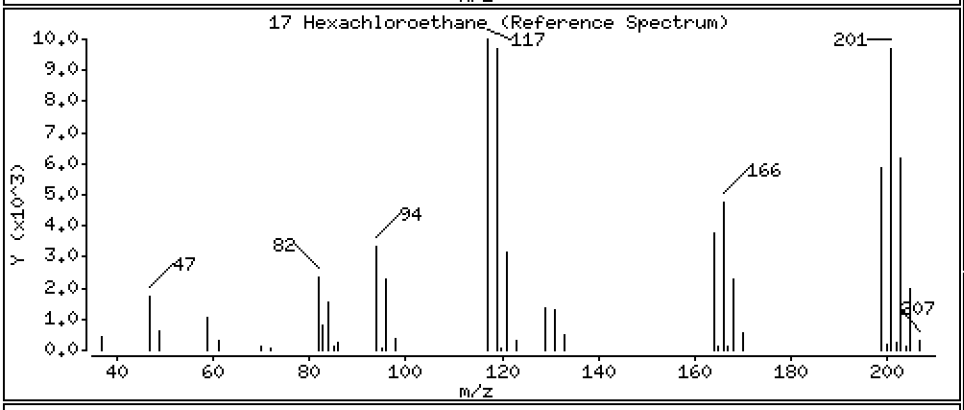
Concentration: 2.991 ug/mL

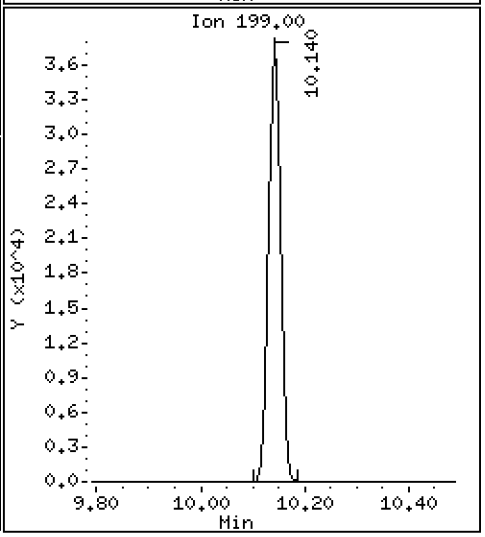


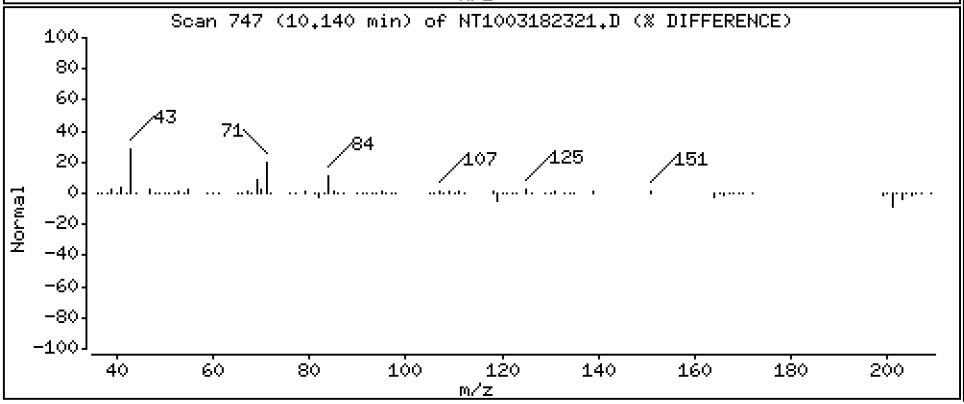












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

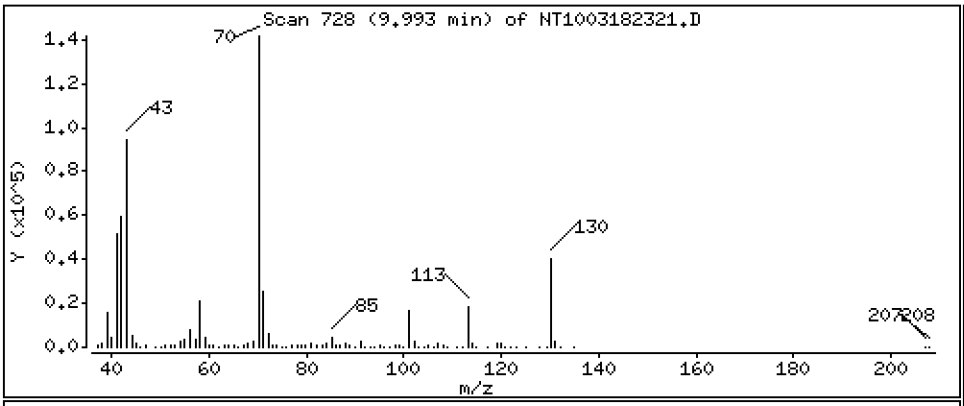
Operator: VTS

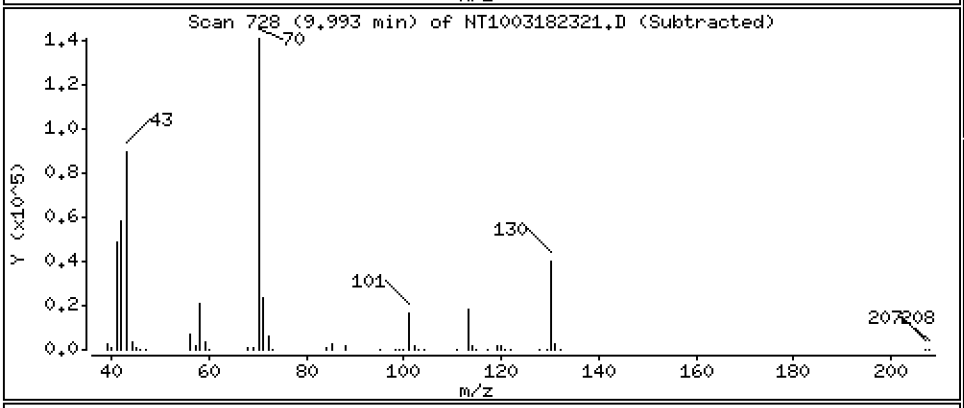
Column phase: ZB-5msi

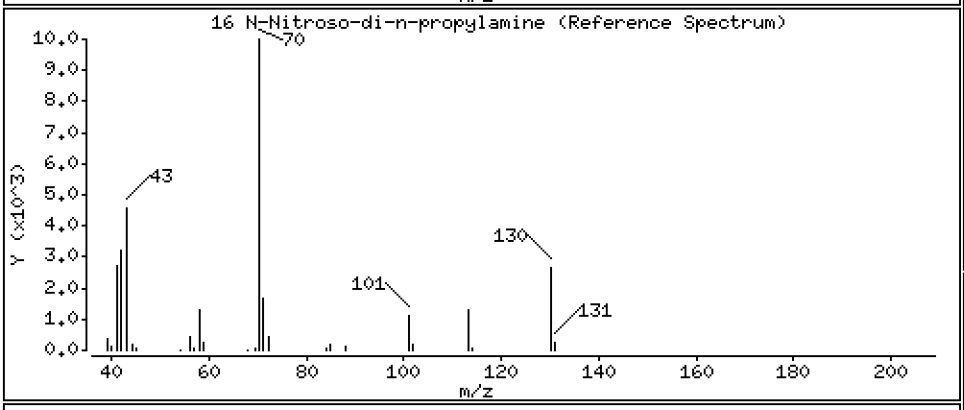
Column diameter: 0.25

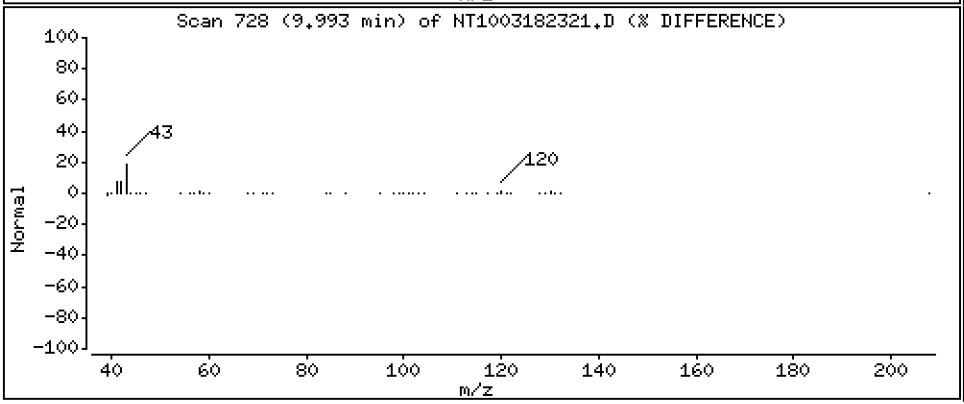
16 N-Nitroso-di-n-propylamine

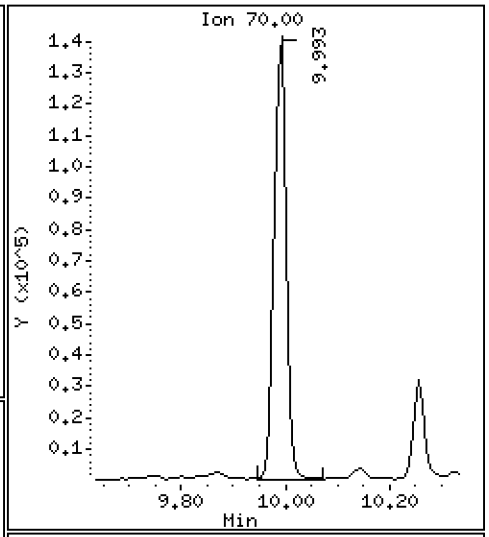
Concentration: 3.970 ug/mL

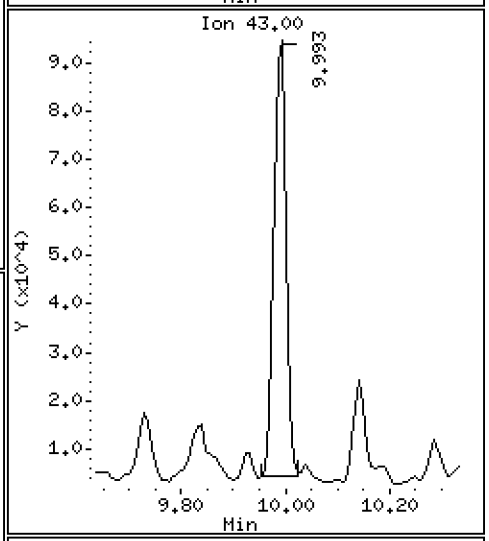


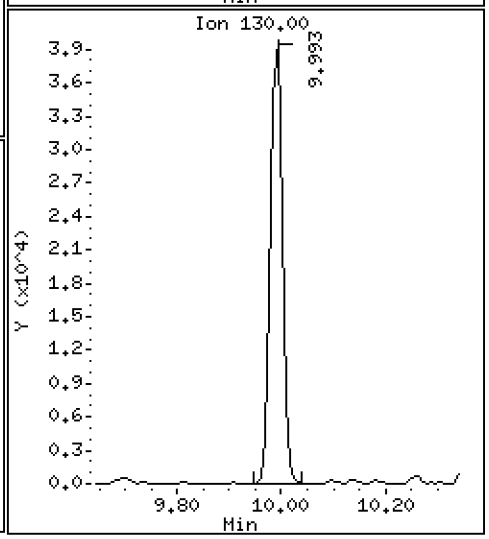












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

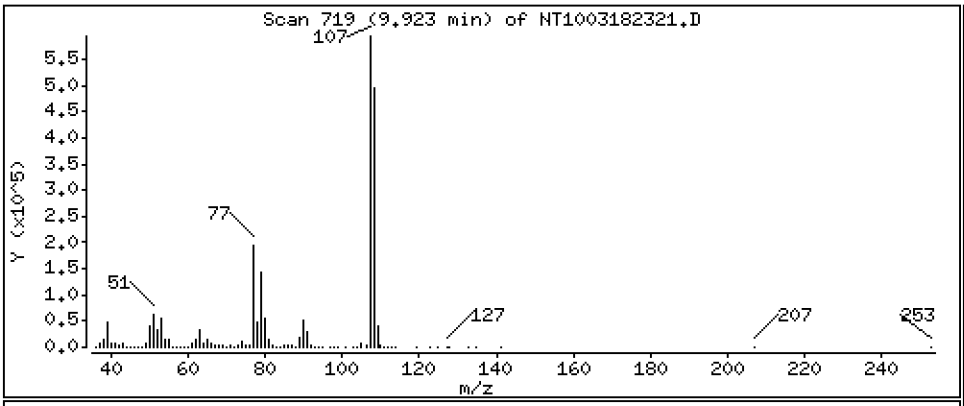
Operator: VTS

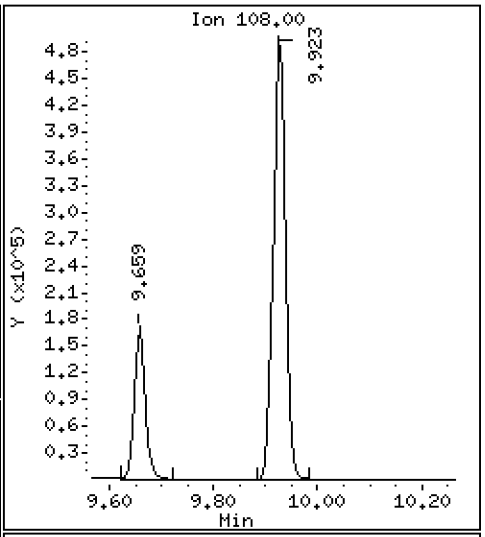
Column phase: ZB-5msi

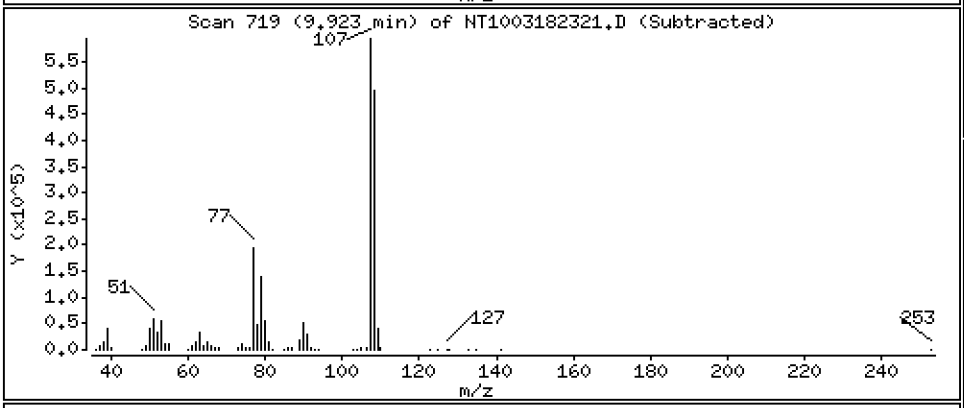
Column diameter: 0.25

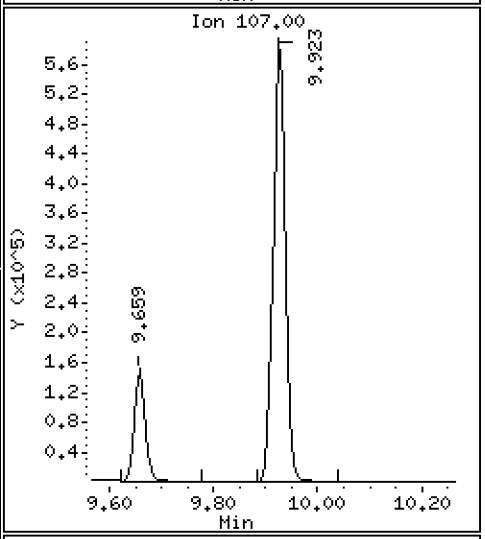
15 4-Methylphenol

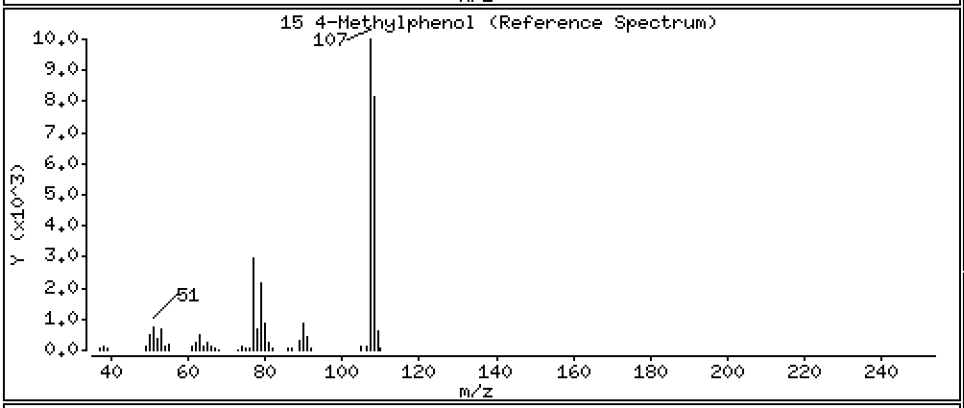
Concentration: 10.95 ug/mL

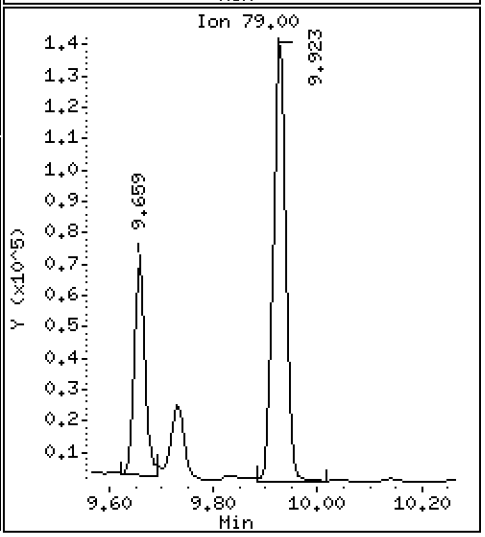


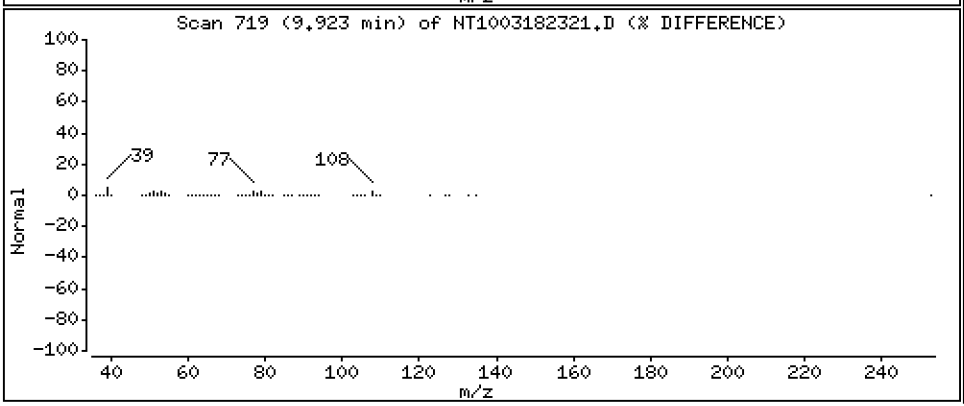












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

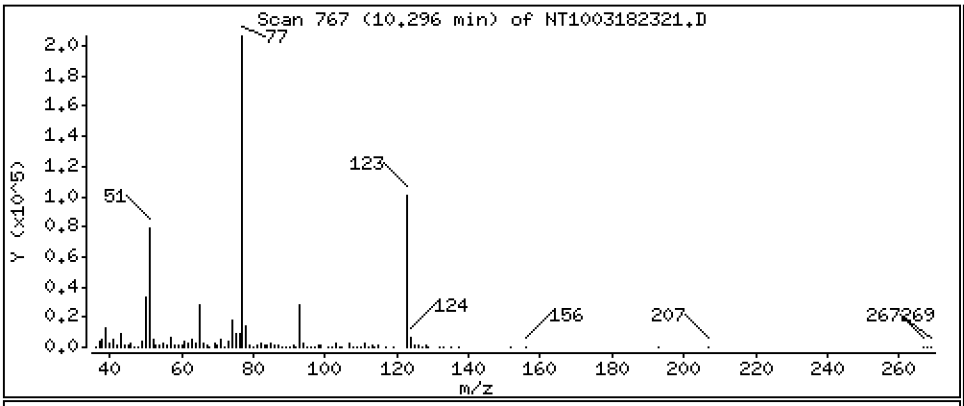
Operator: VTS

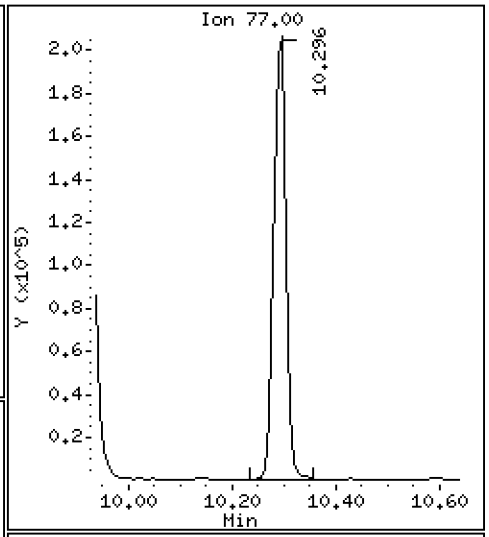
Column phase: ZB-5msi

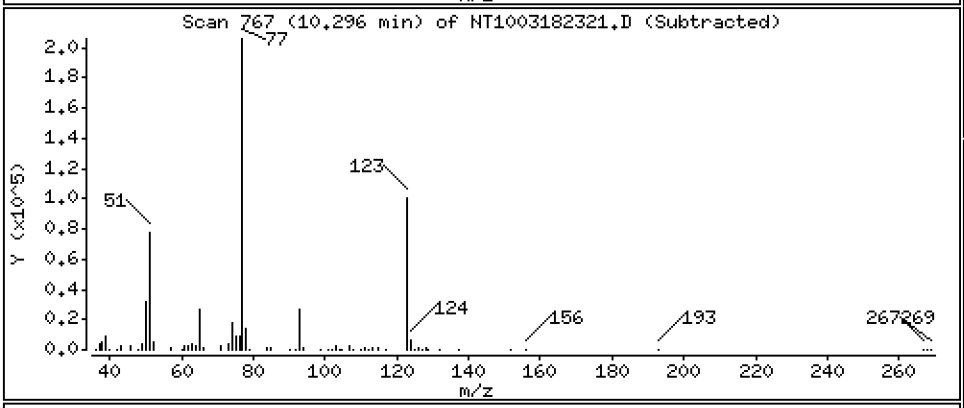
Column diameter: 0.25

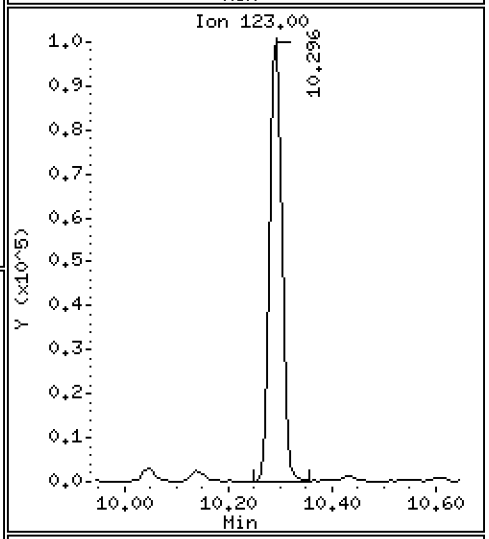
19 Nitrobenzene

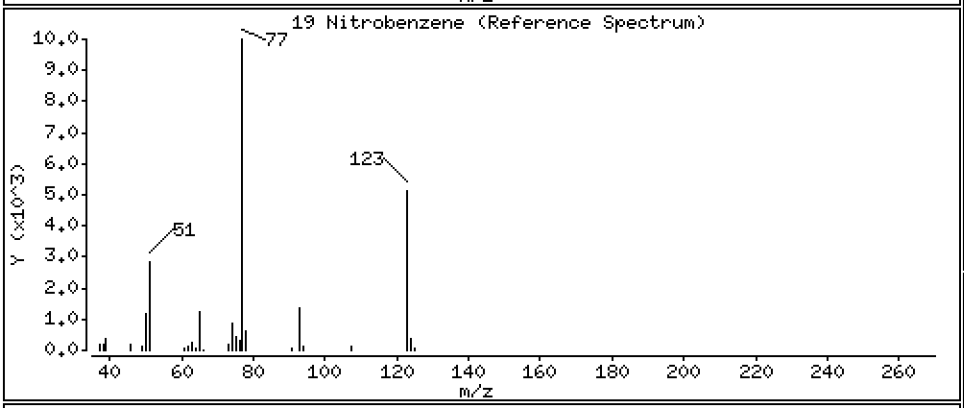
Concentration: 3.823 ug/mL

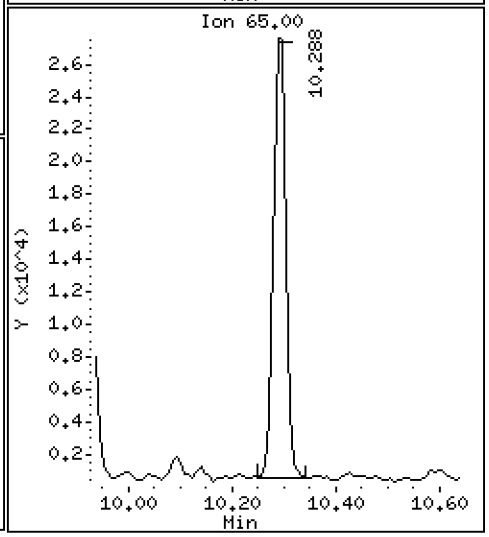


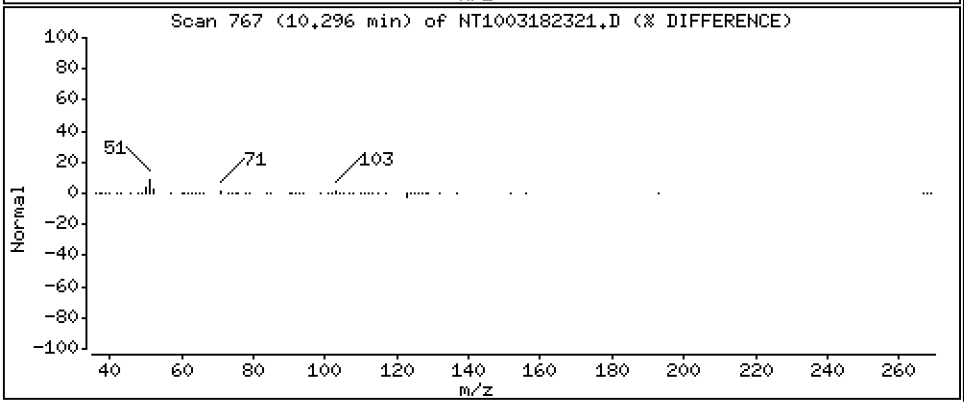












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

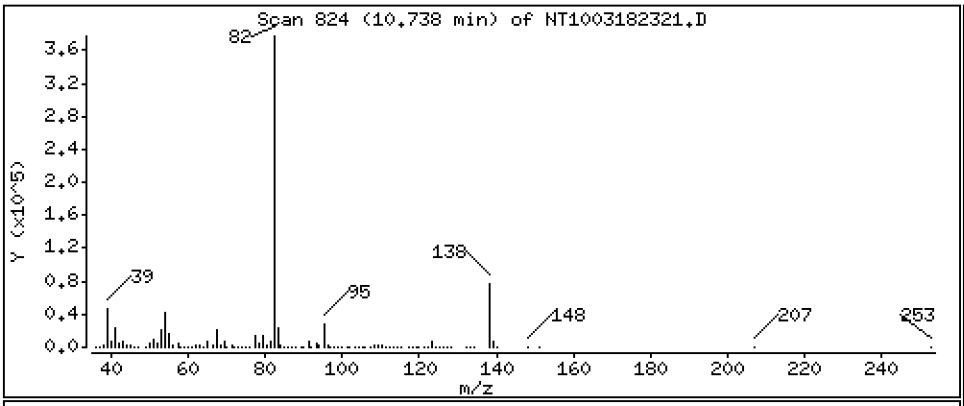
Operator: VTS

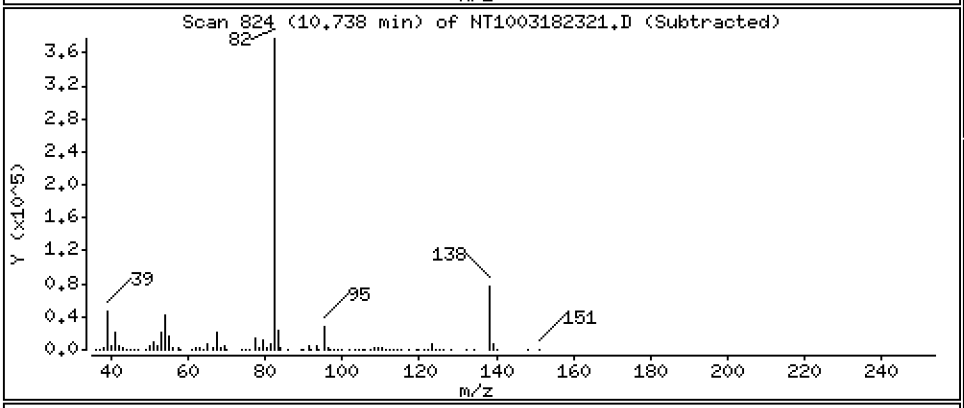
Column phase: ZB-5msi

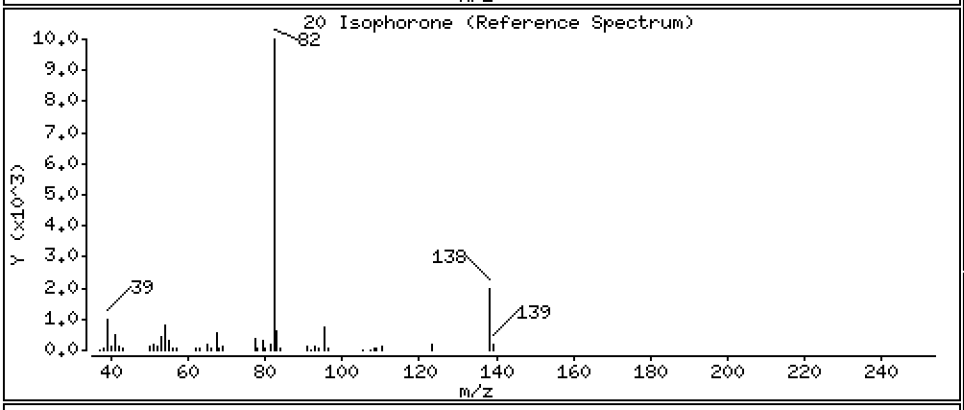
Column diameter: 0.25

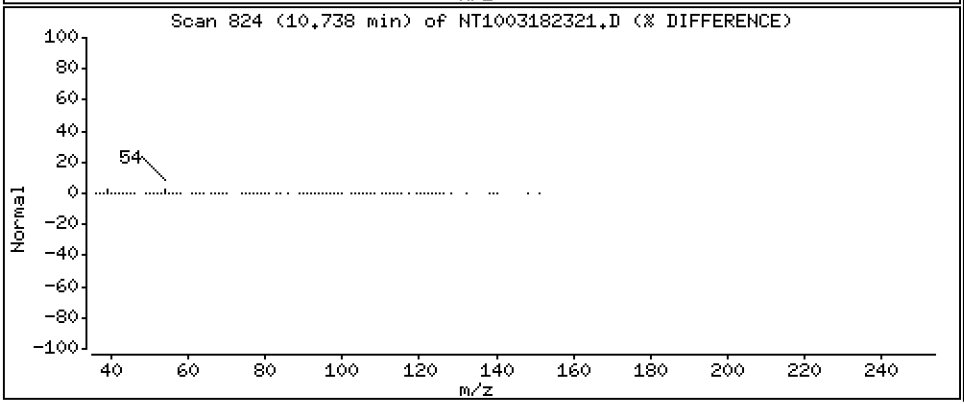
20 Isophorone

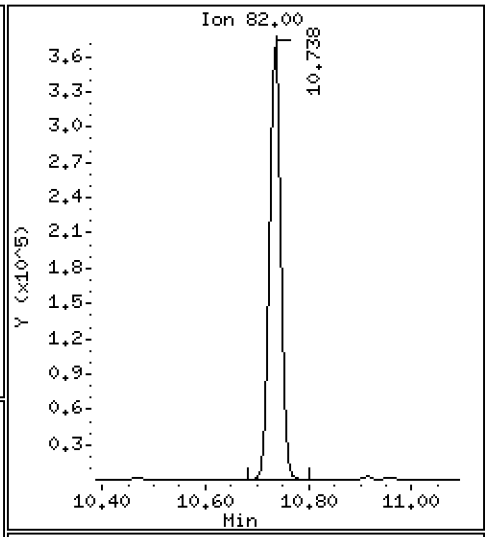
Concentration: 5.484 ug/mL

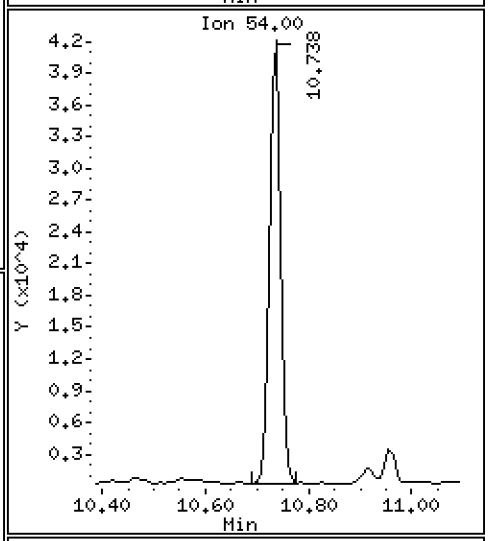


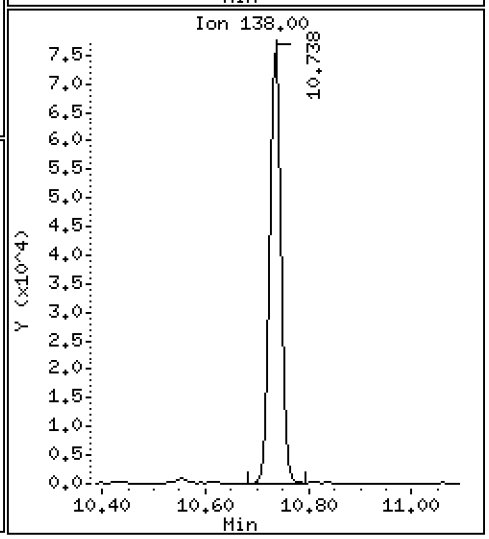












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

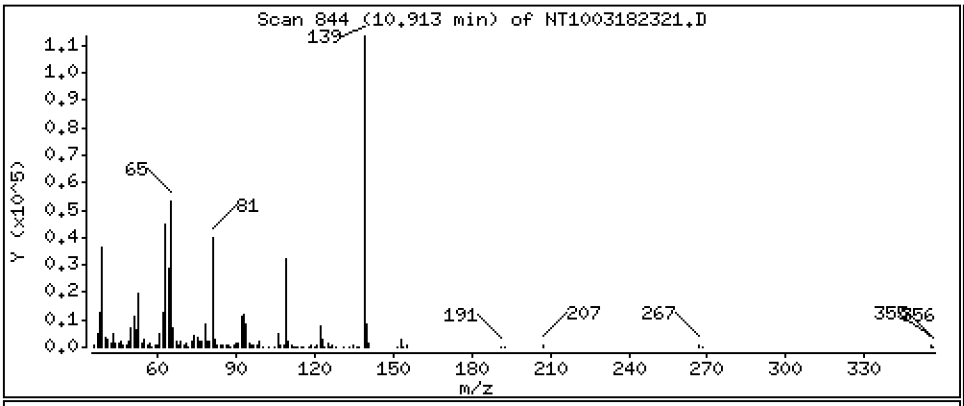
Operator: VTS

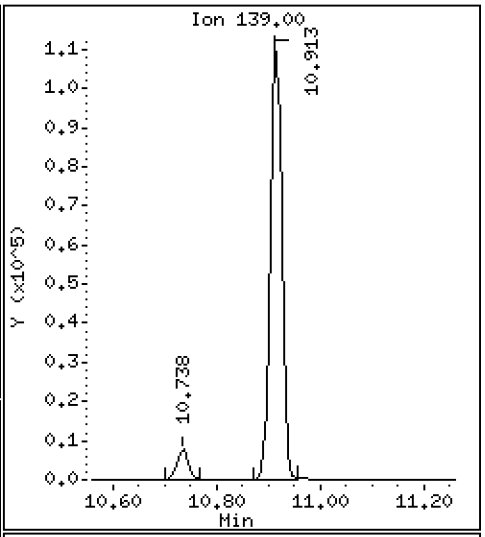
Column phase: ZB-5msi

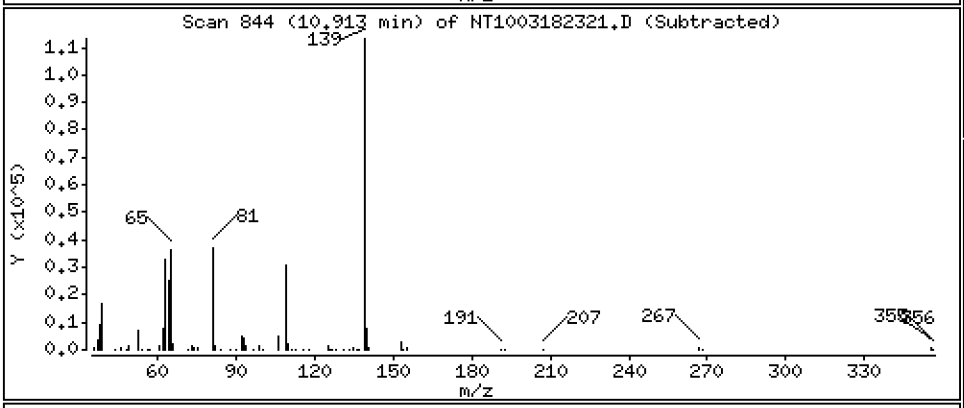
Column diameter: 0.25

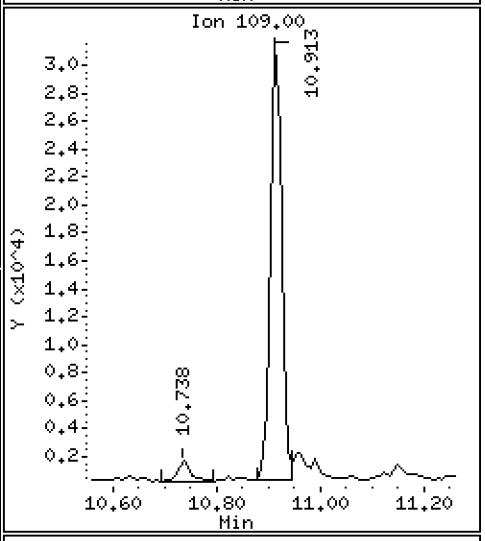
21 2-Nitrophenol

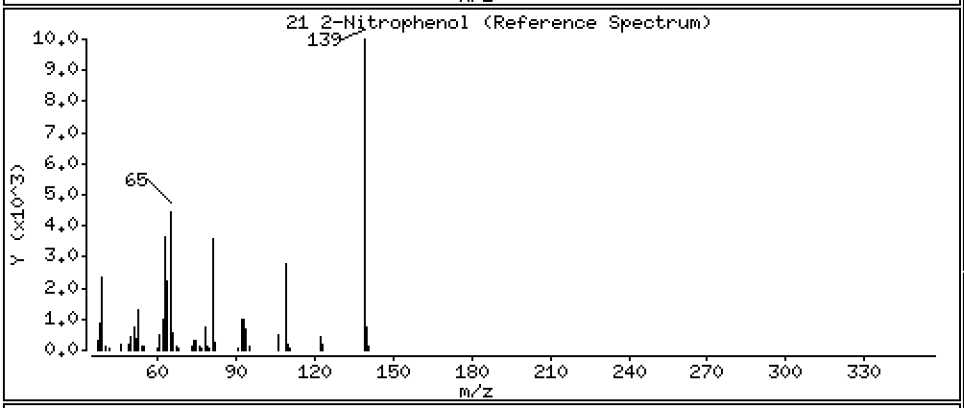
Concentration: 4.147 ug/mL

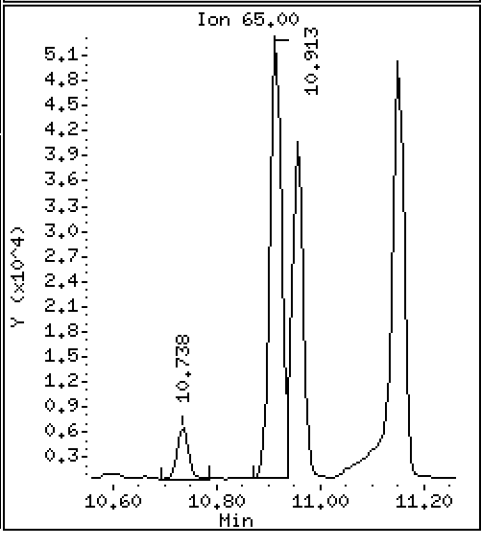


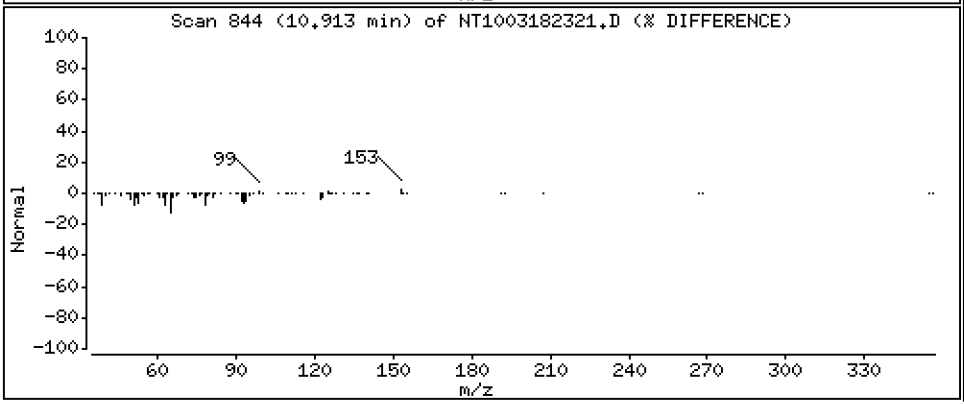












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

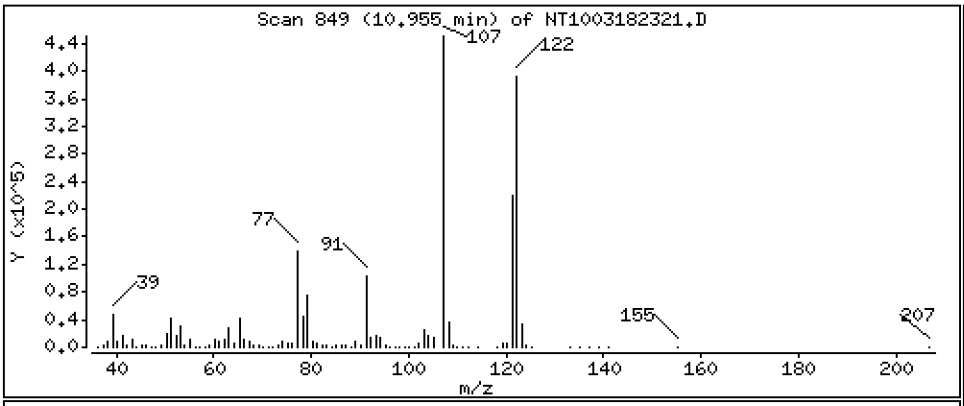
Operator: VTS

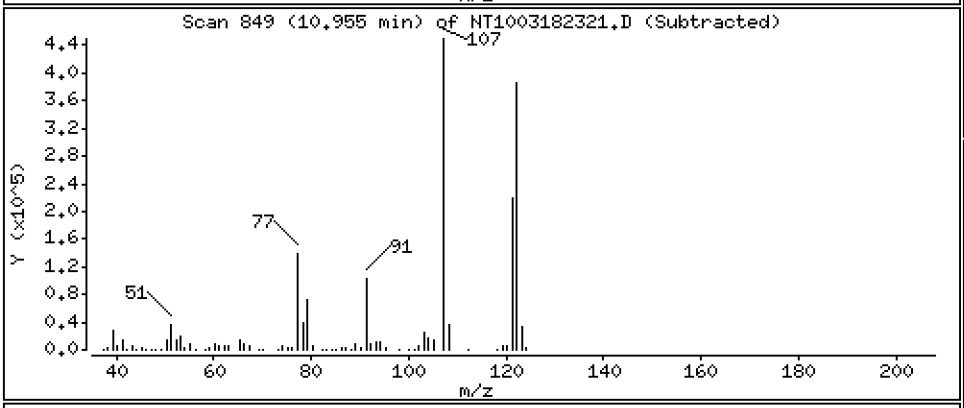
Column phase: ZB-5msi

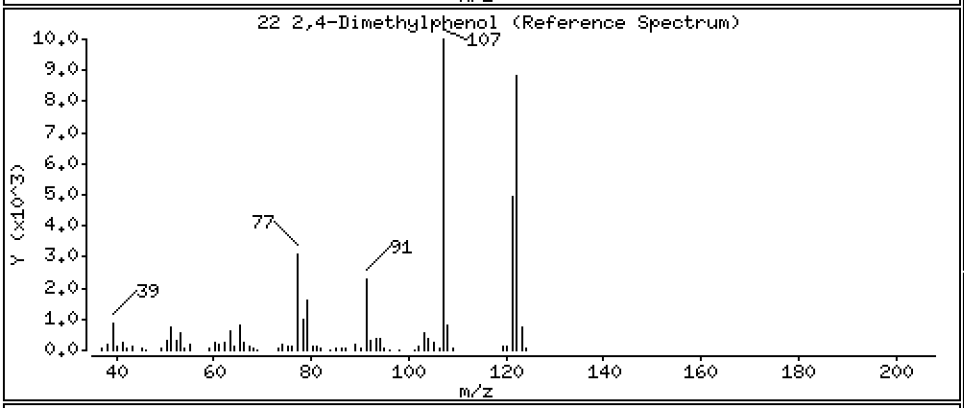
Column diameter: 0.25

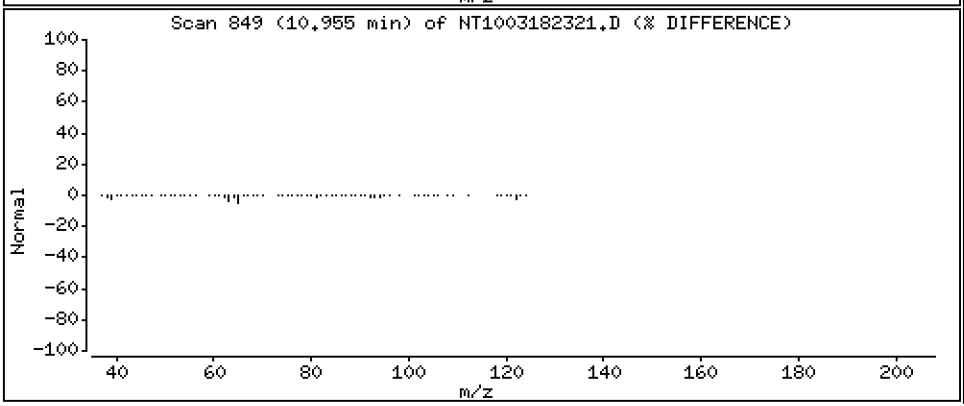
22 2,4-Dimethylphenol

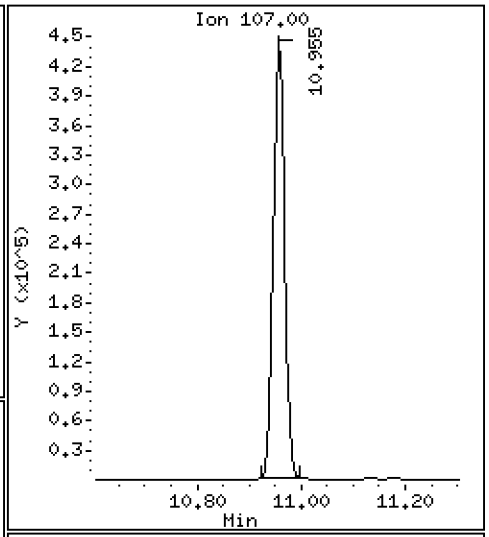
Concentration: 8.513 ug/mL

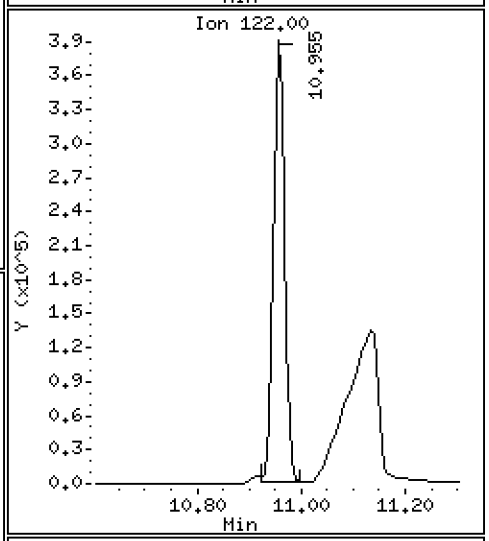


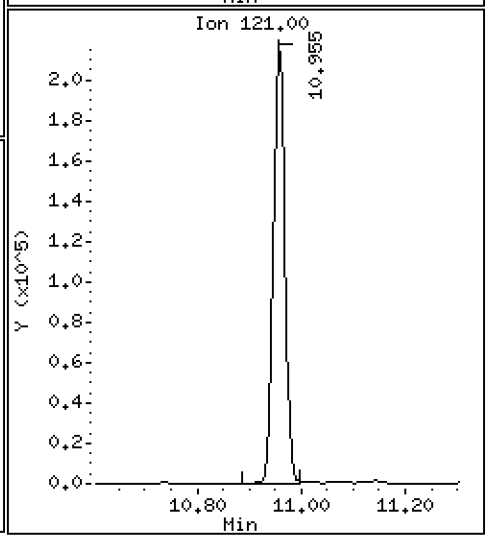












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

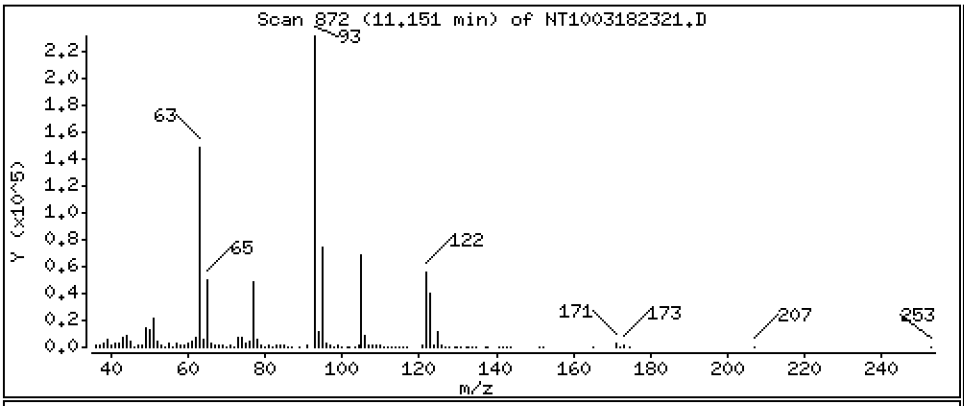
Operator: VTS

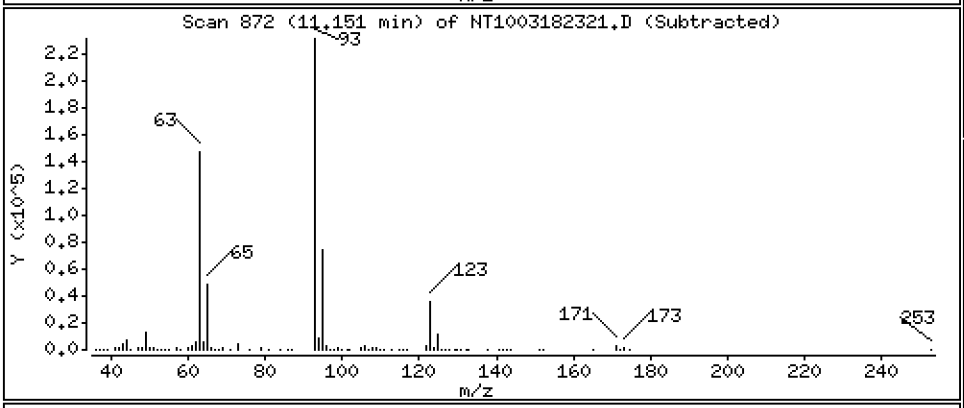
Column phase: ZB-5msi

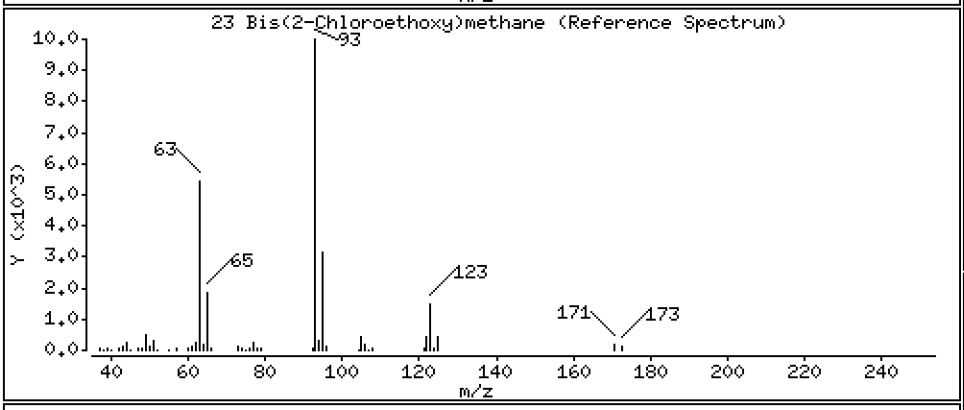
Column diameter: 0.25

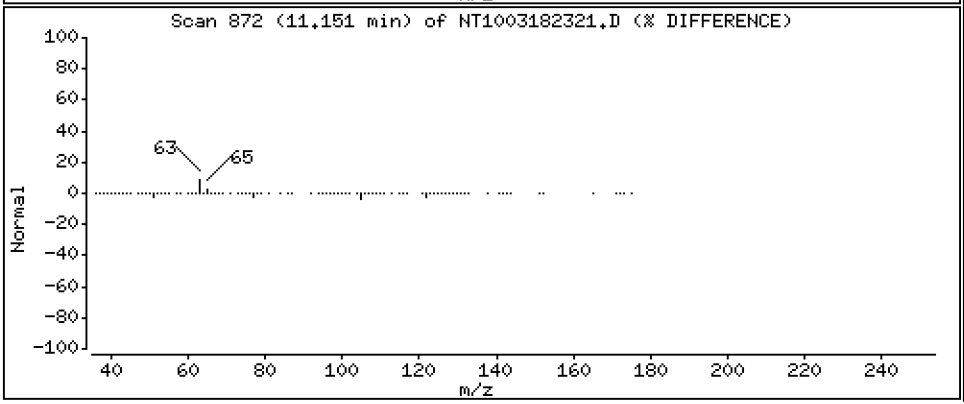
23 Bis(2-Chloroethoxy)methane

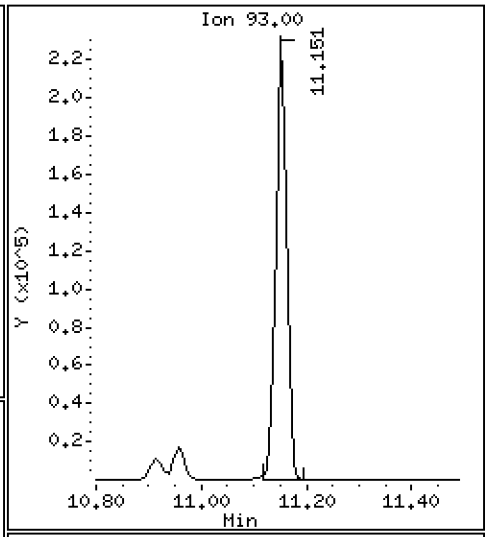
Concentration: 4.587 ug/mL

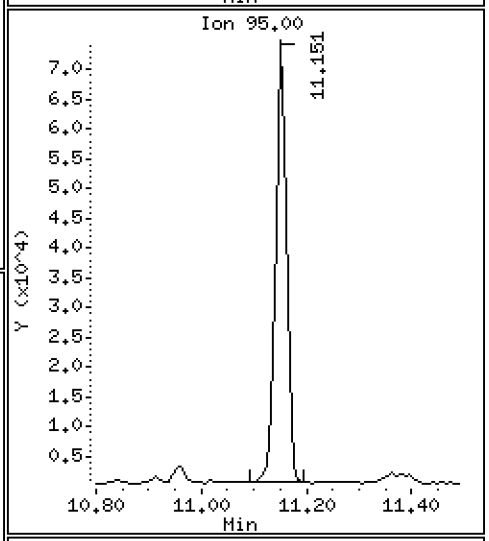


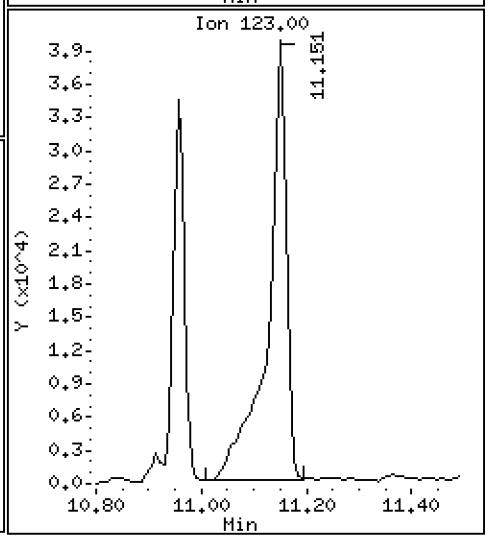












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

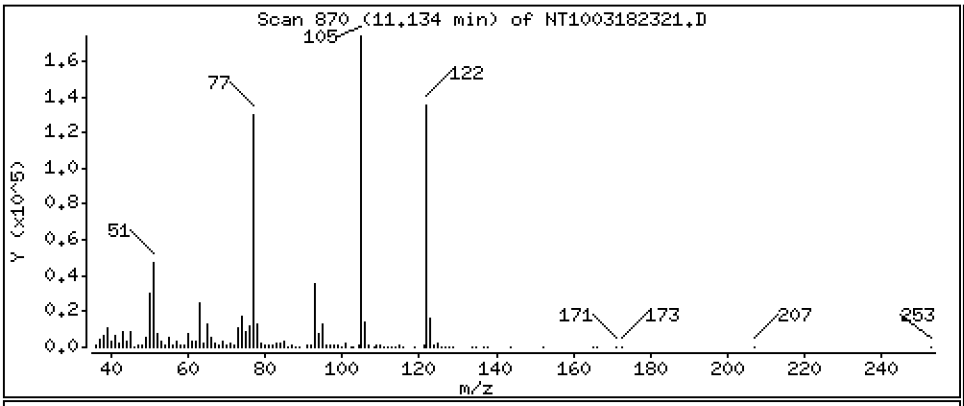
Operator: VTS

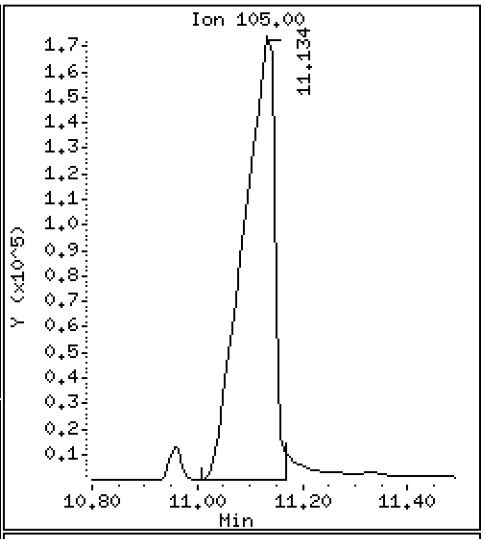
Column phase: ZB-5msi

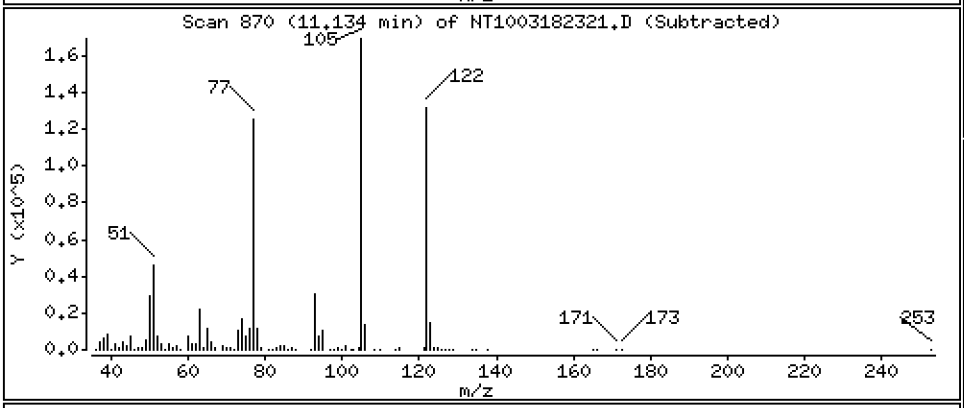
Column diameter: 0.25

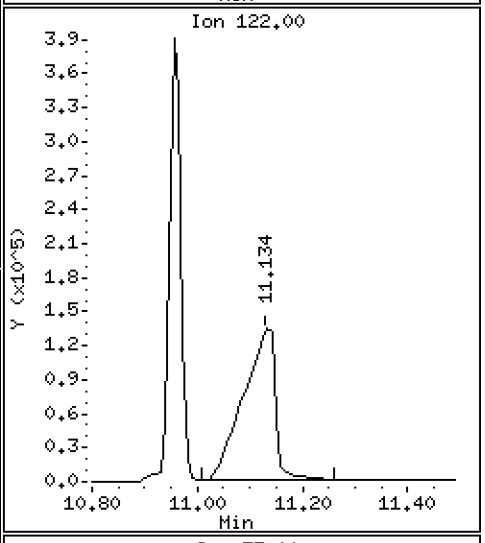
24 Benzoic acid

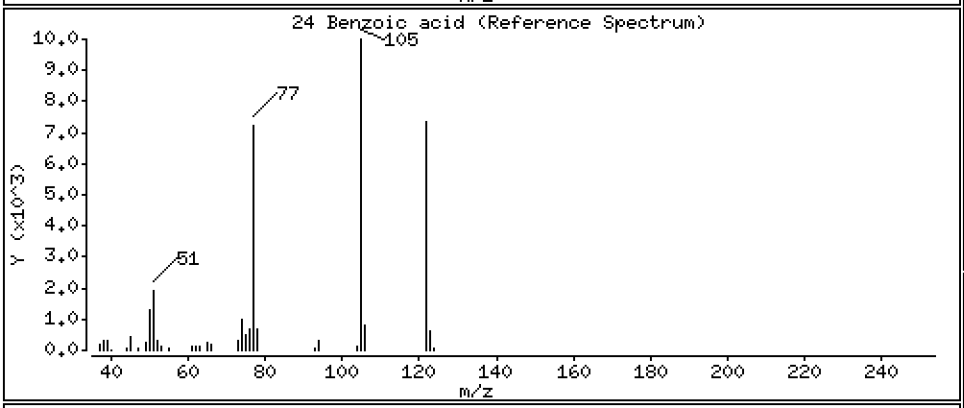
Concentration: 16.08 ug/mL

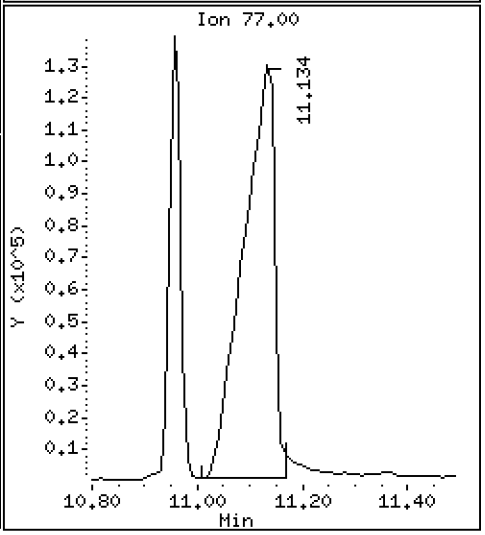


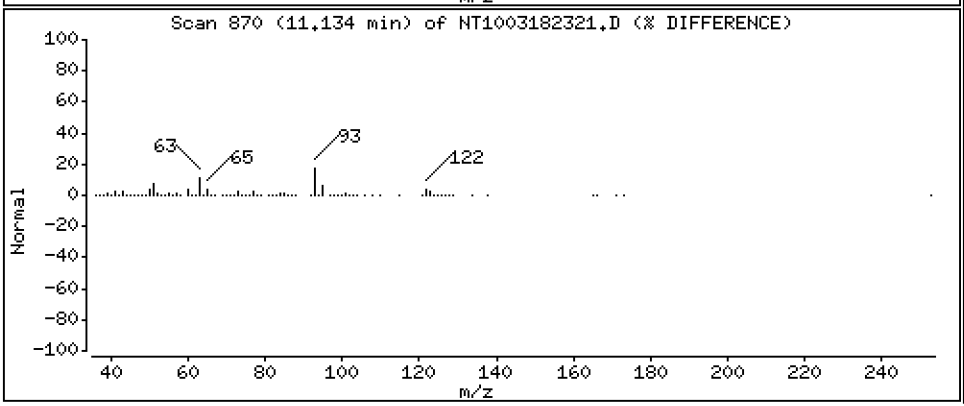












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

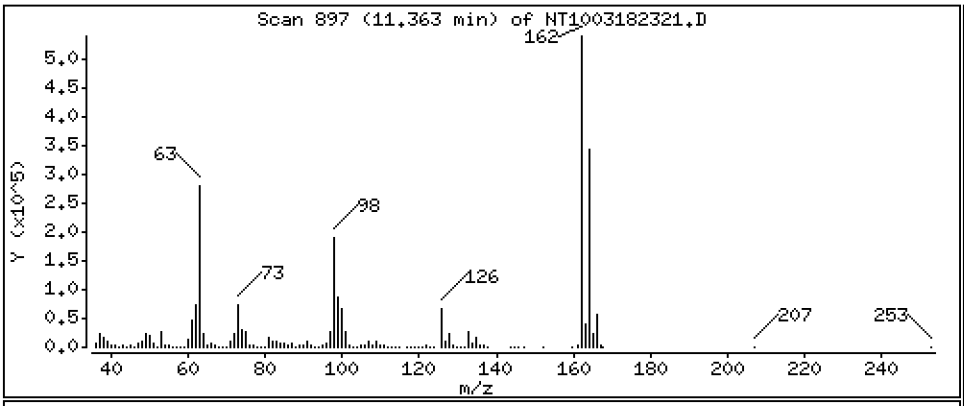
Operator: VTS

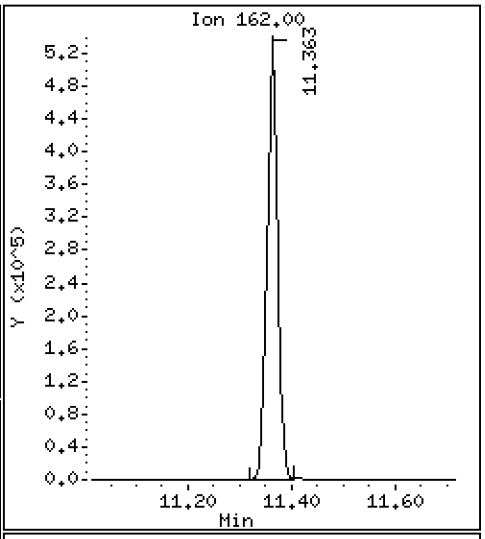
Column phase: ZB-5msi

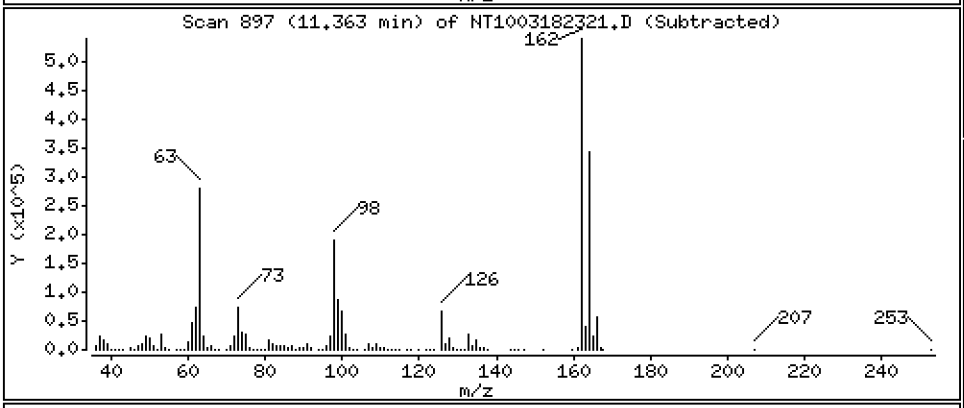
Column diameter: 0.25

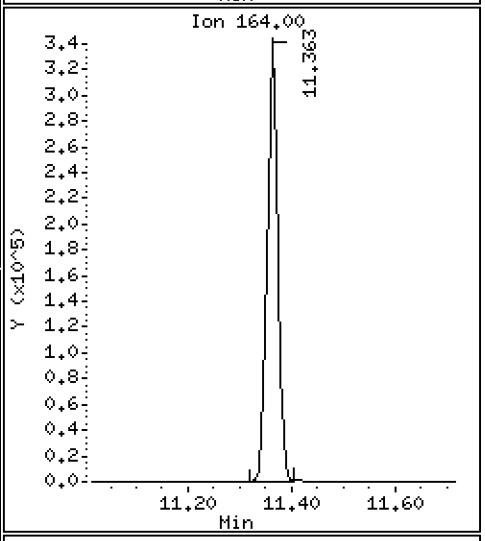
25 2,4-Dichlorophenol

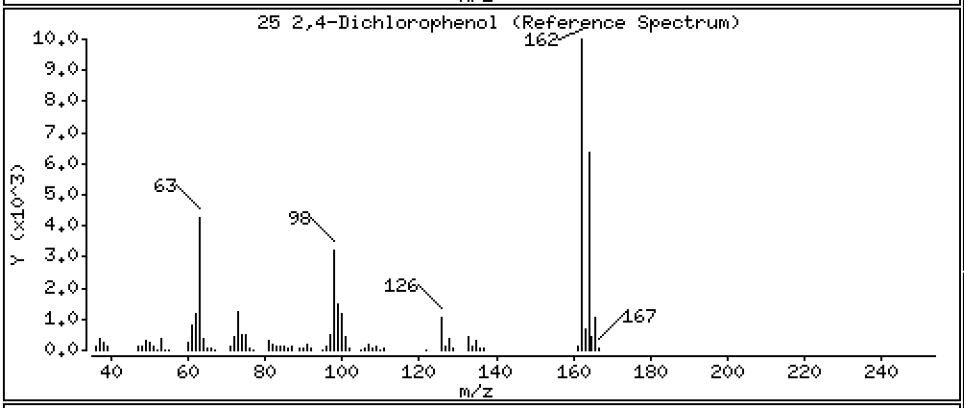
Concentration: 12.68 ug/mL

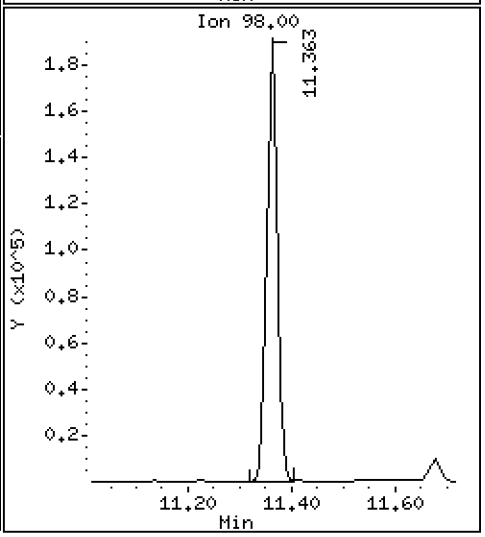


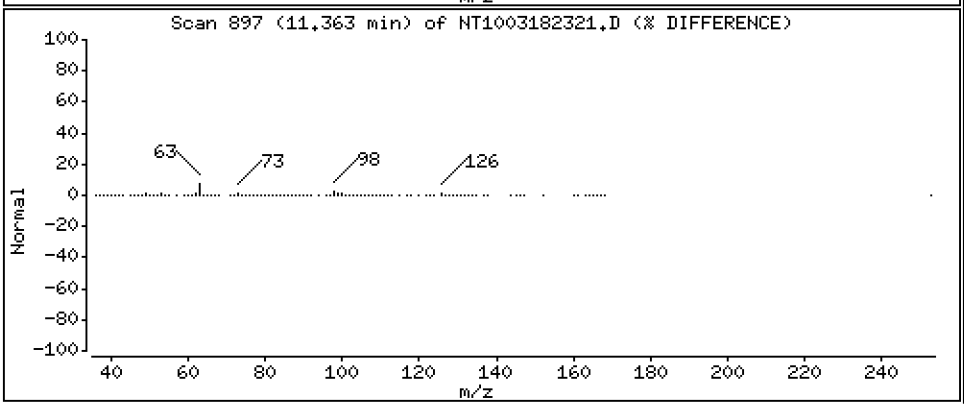












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

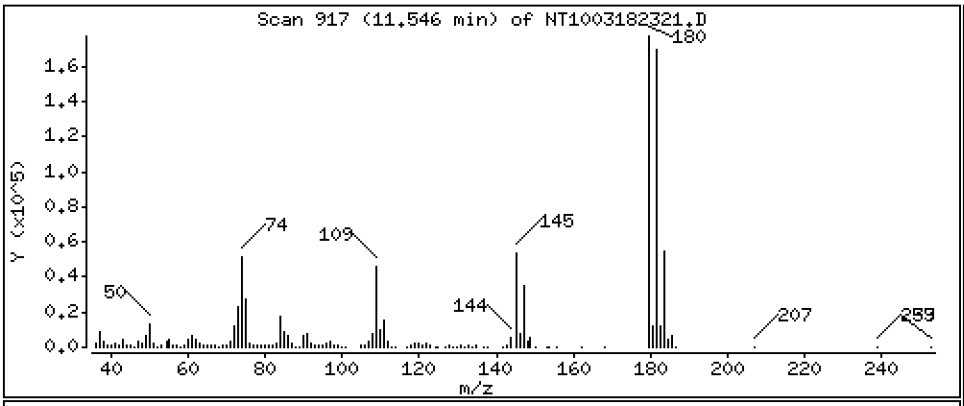
Operator: VTS

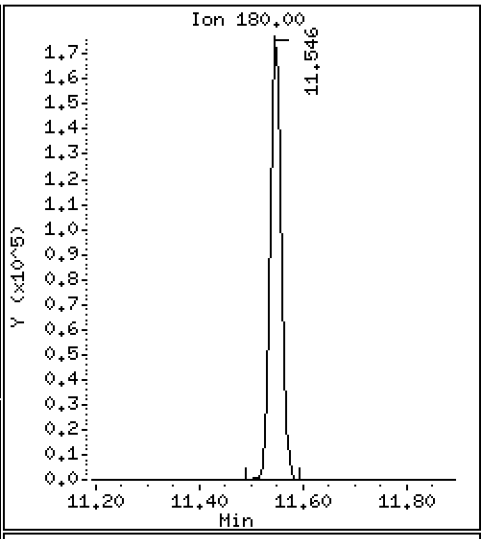
Column phase: ZB-5msi

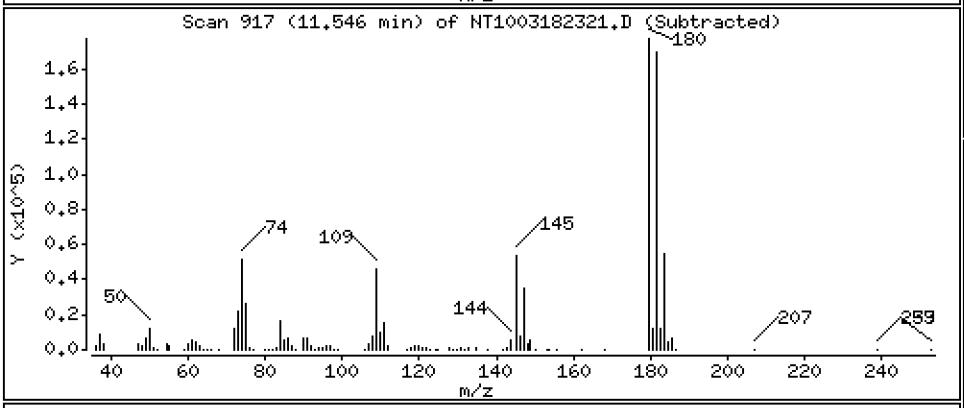
Column diameter: 0.25

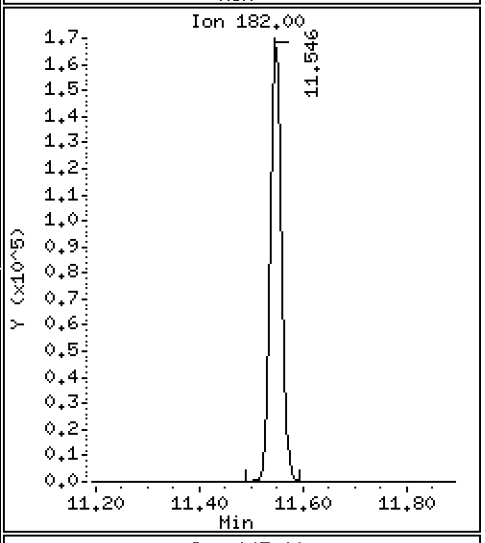
26 1,2,4-Trichlorobenzene

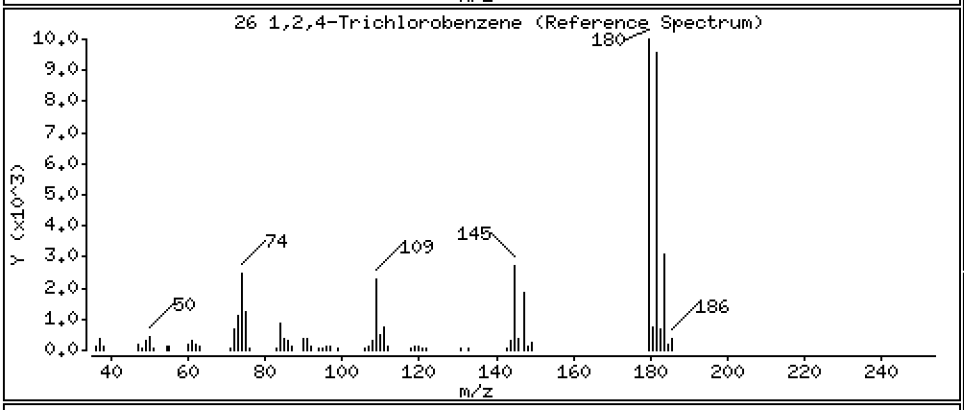
Concentration: 4.479 ug/mL

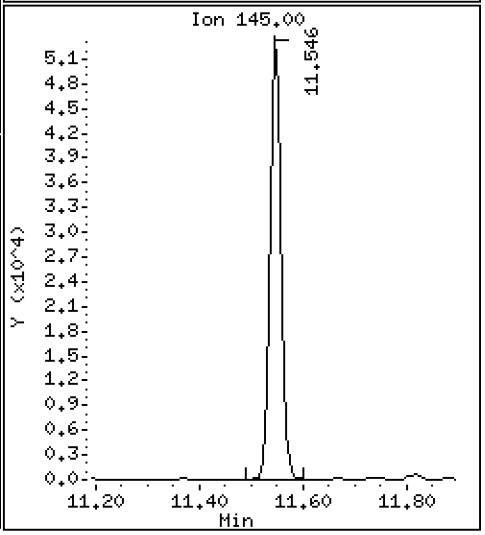


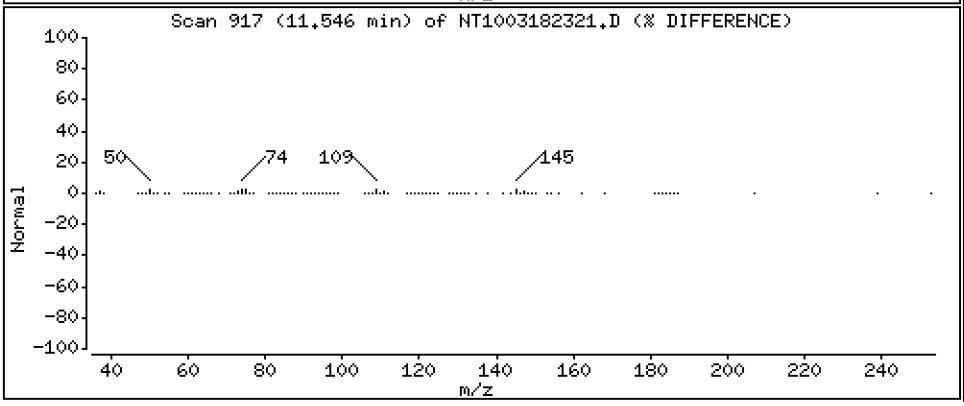












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

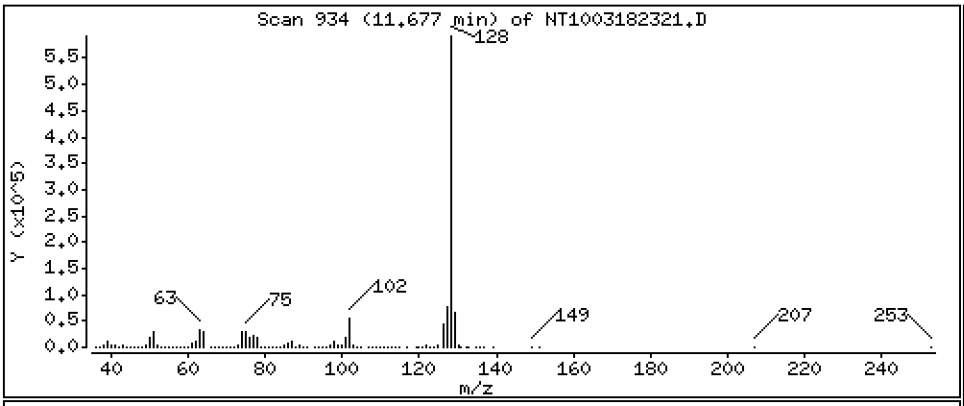
Operator: VTS

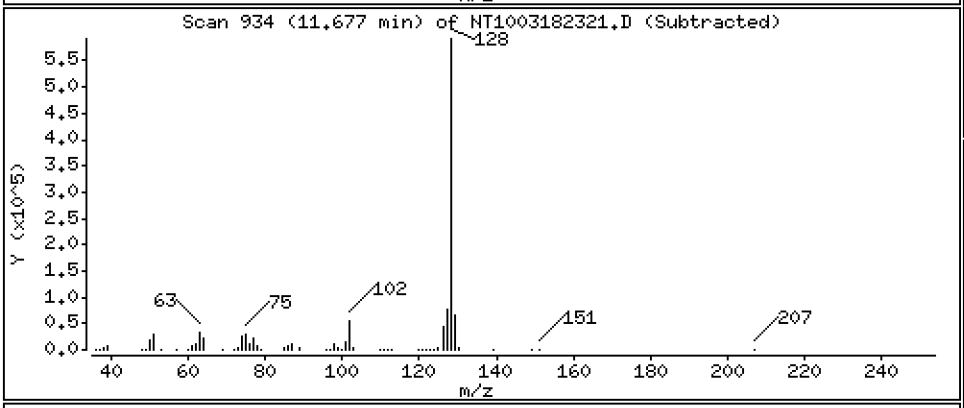
Column phase: ZB-5msi

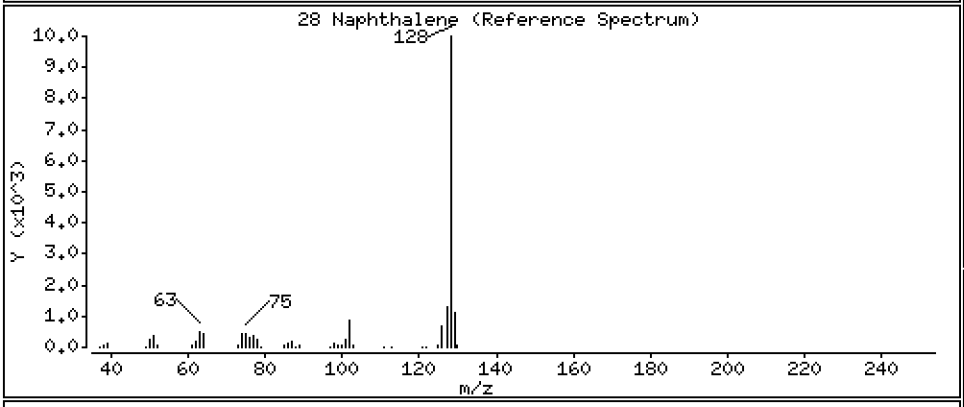
Column diameter: 0.25

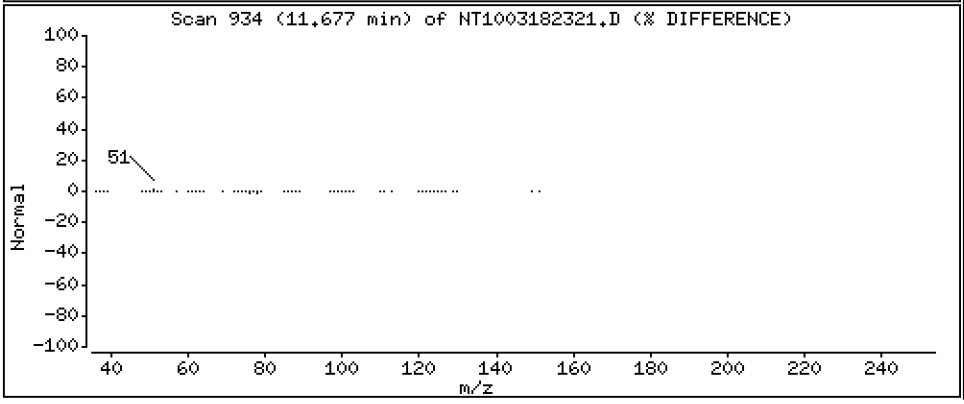
28 Naphthalene

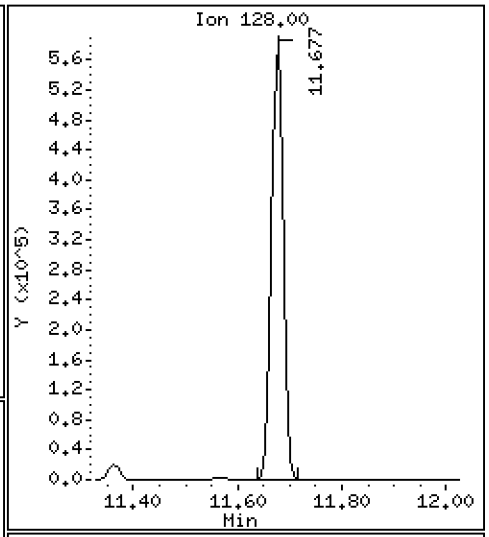
Concentration: 3.791 ug/mL

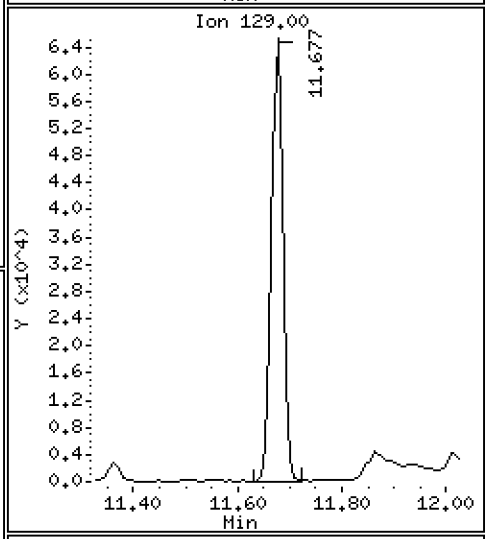


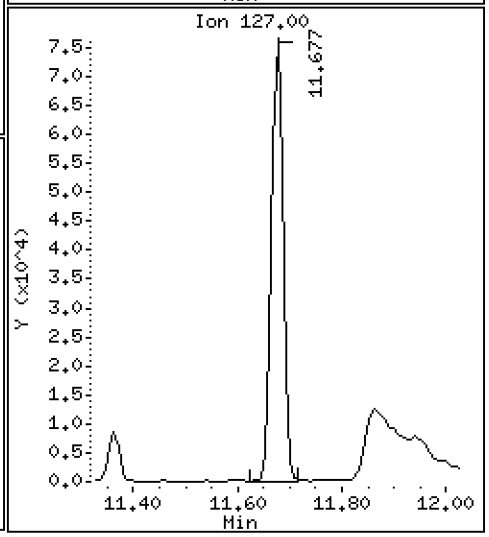












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

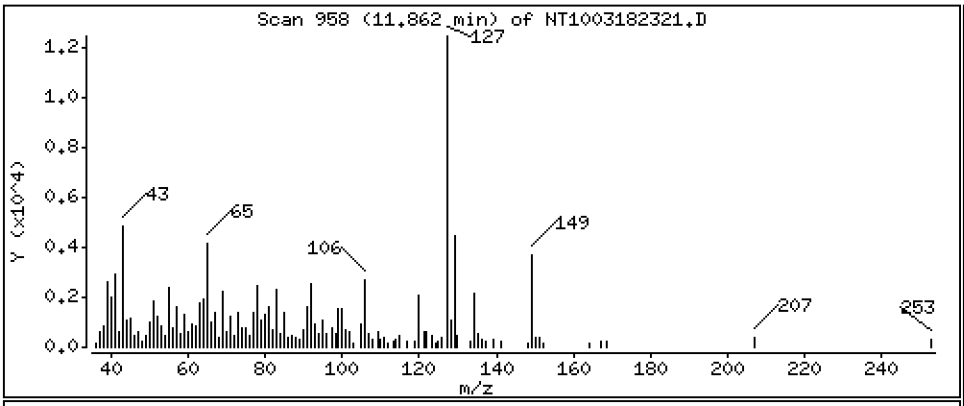
Operator: VTS

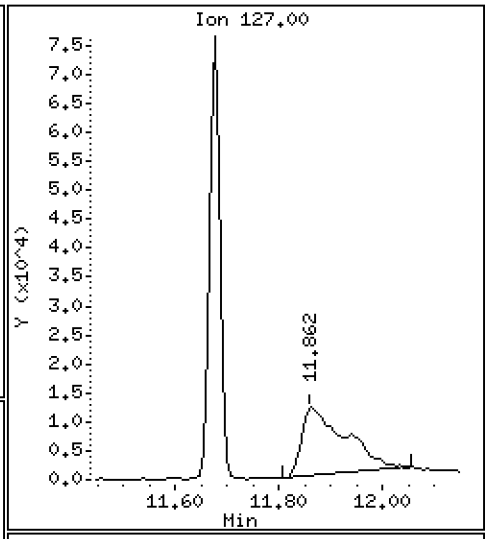
Column phase: ZB-5msi

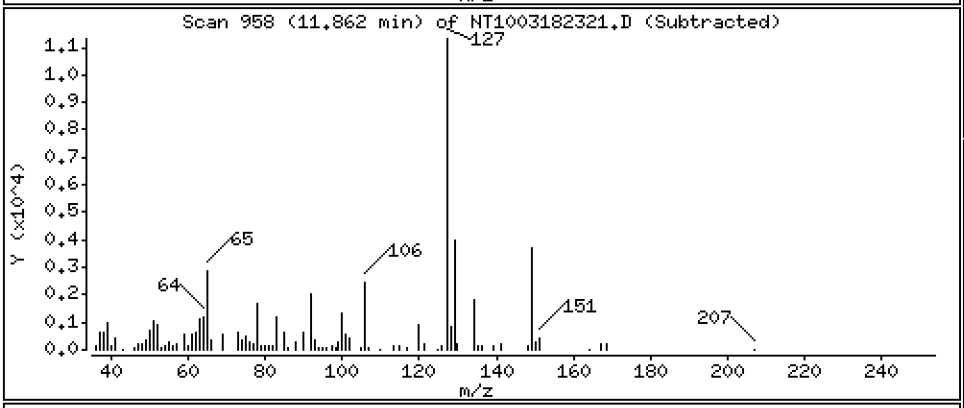
Column diameter: 0.25

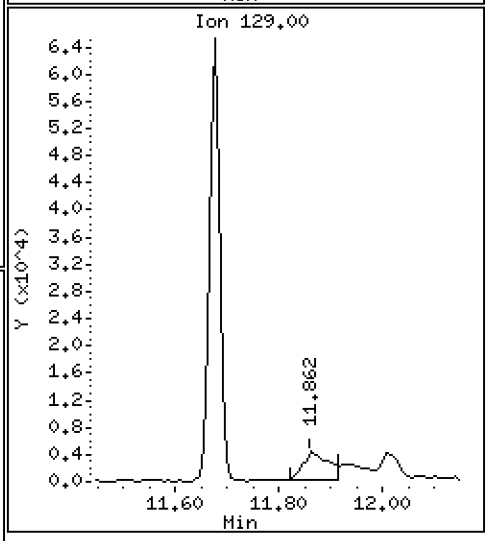
29 4-Chloroaniline

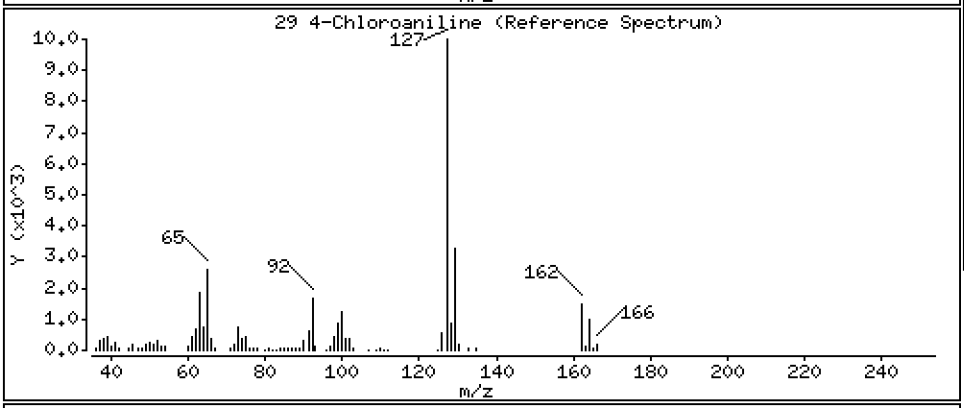
Concentration: 0.7626 ug/mL

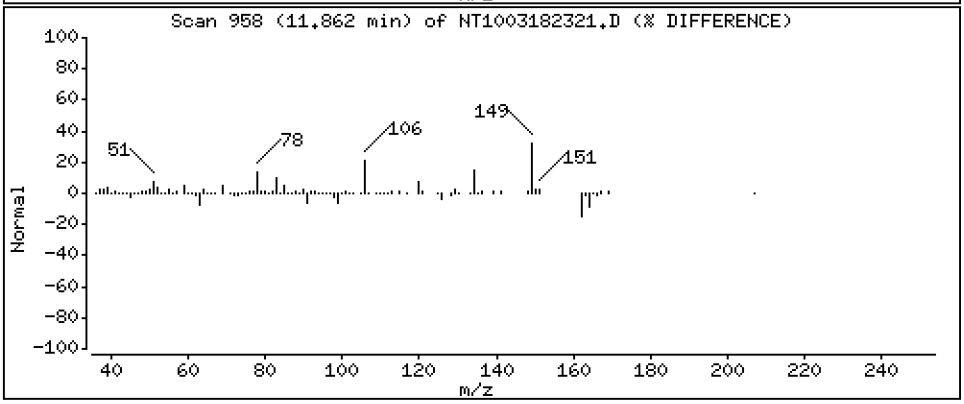












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

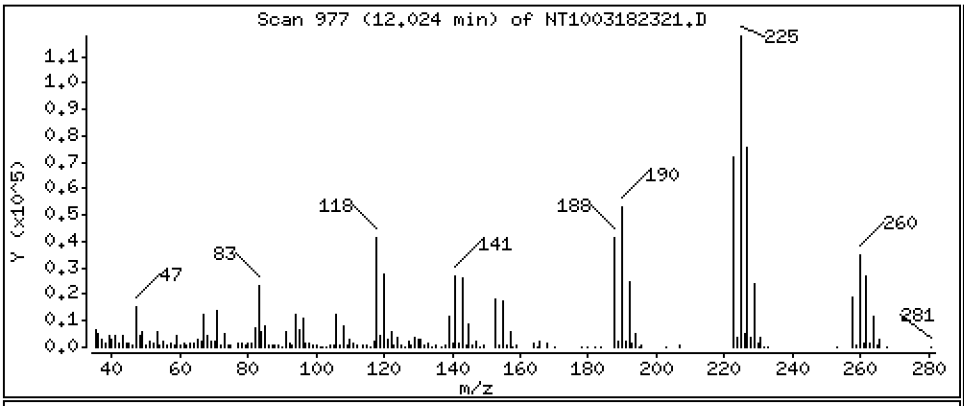
Operator: VTS

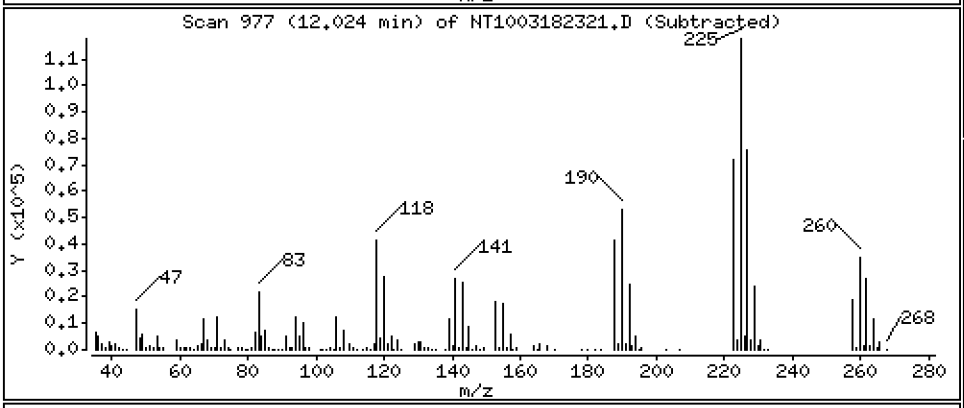
Column phase: ZB-5msi

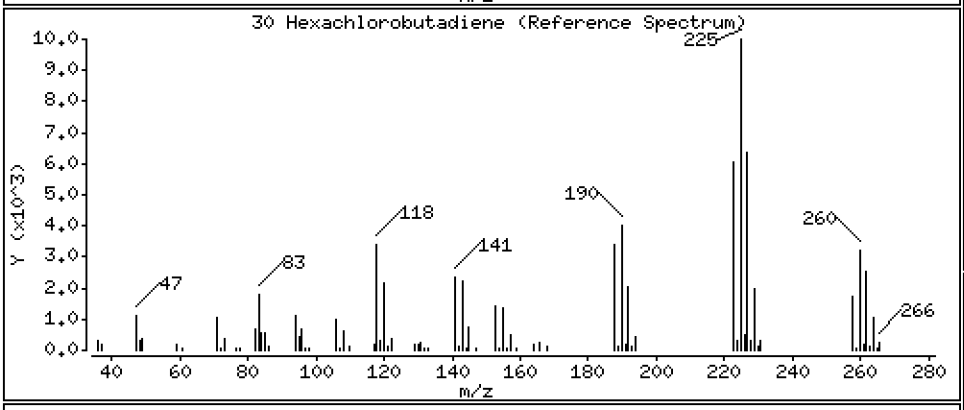
Column diameter: 0.25

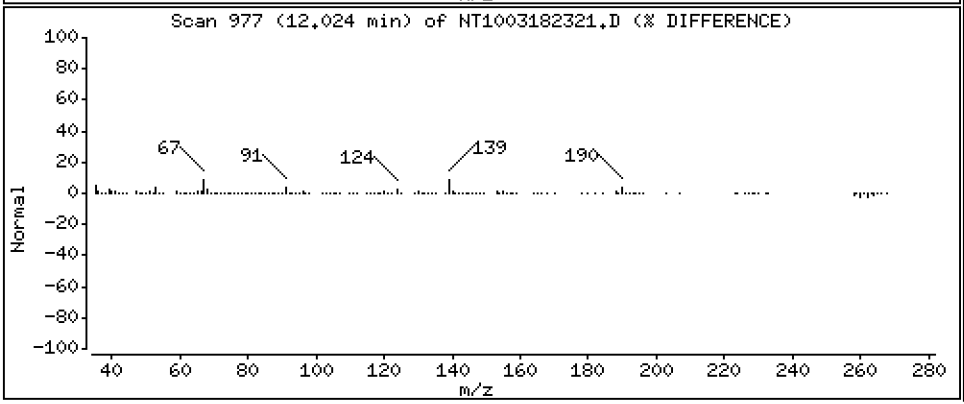
30 Hexachlorobutadiene

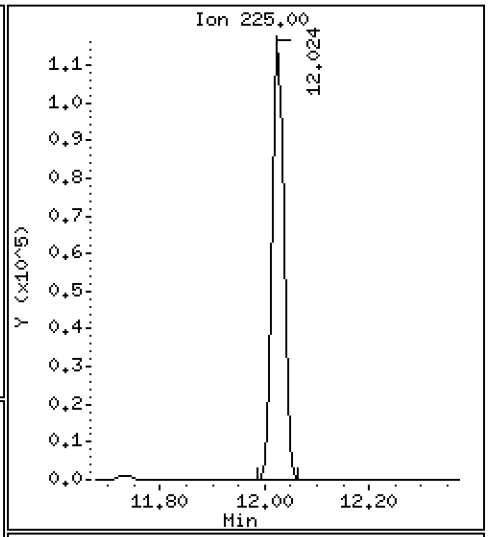
Concentration: 3.980 ug/mL

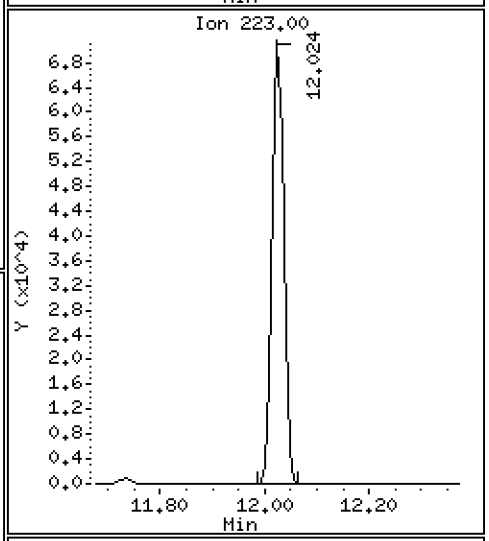


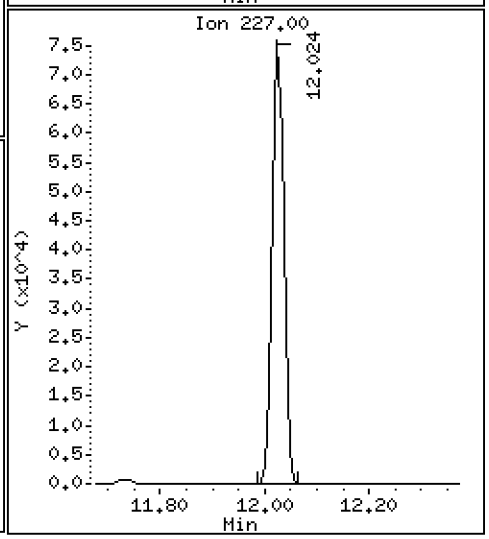












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

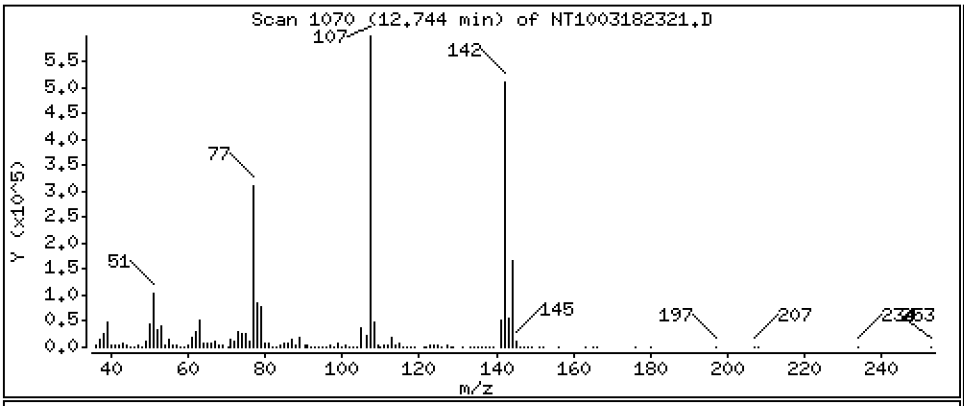
Operator: VTS

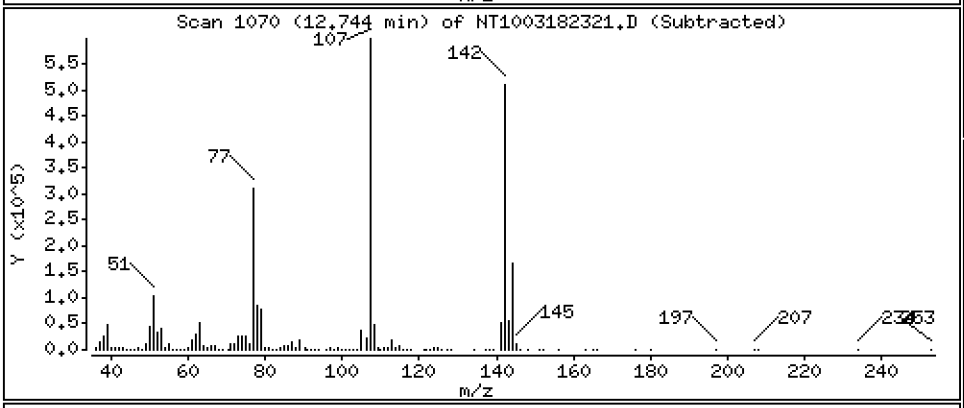
Column phase: ZB-5msi

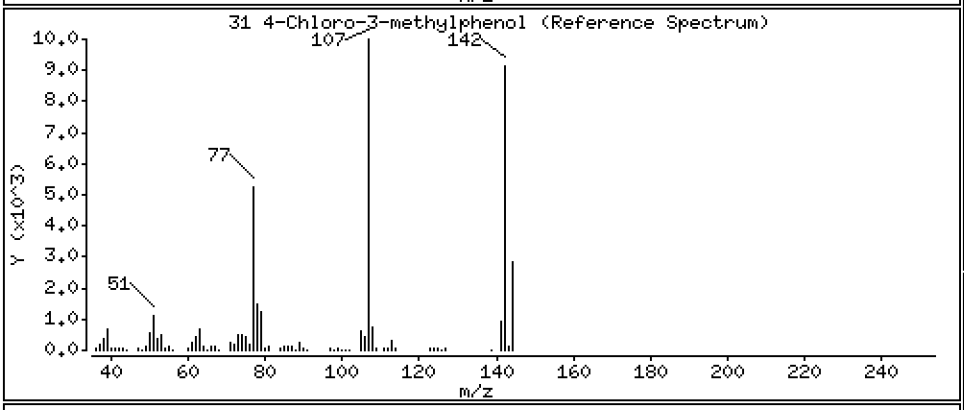
Column diameter: 0.25

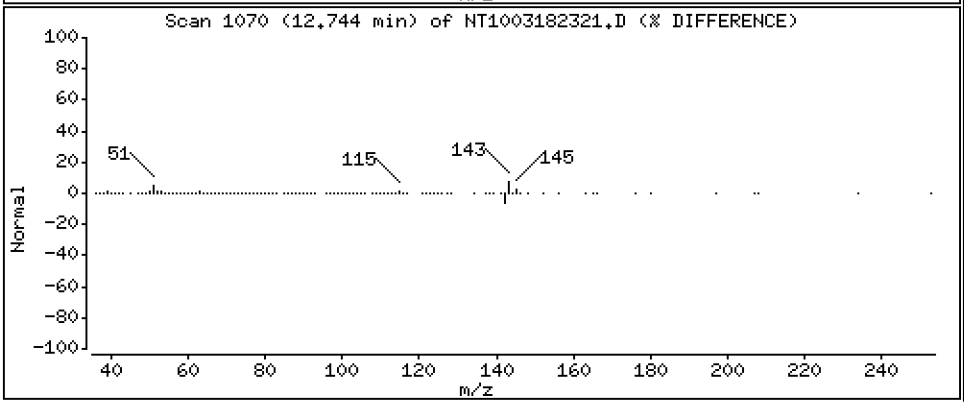
31 4-Chloro-3-methylphenol

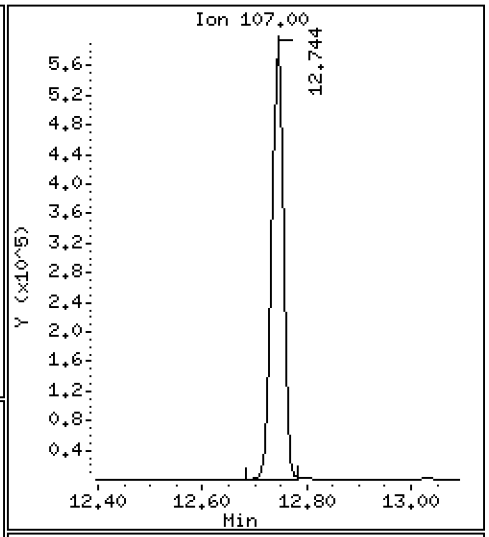
Concentration: 12.96 ug/mL

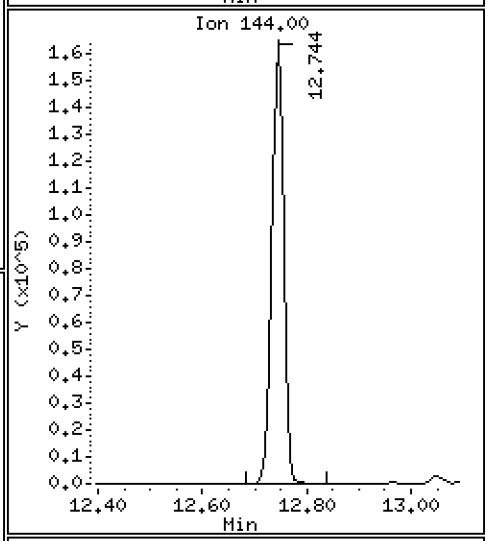


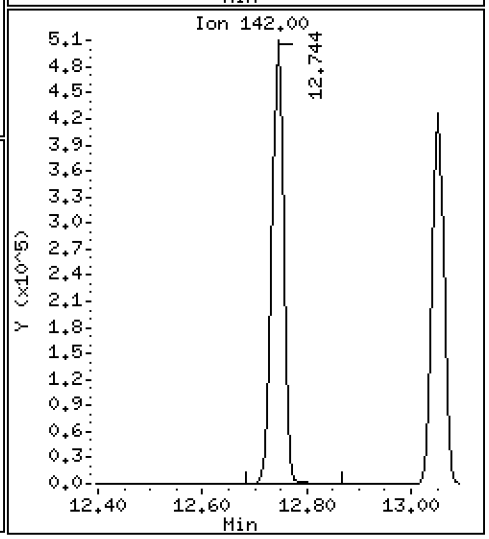












Date : 19-MAR-2023 06:29

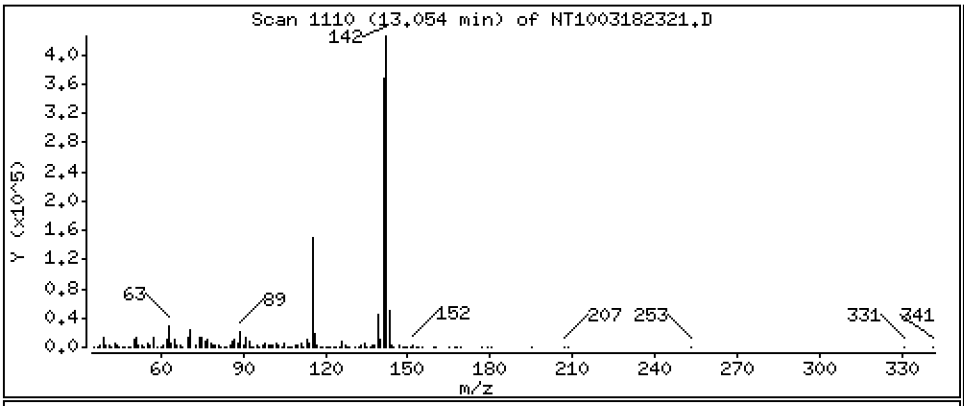
Client ID: Instrument: nt10.i

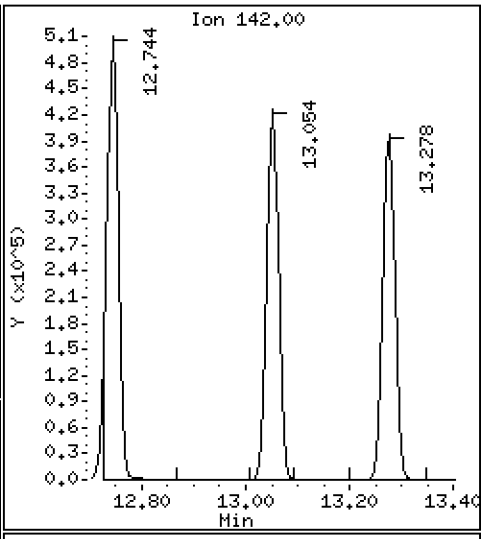
Sample Info: BLB0579-MS1

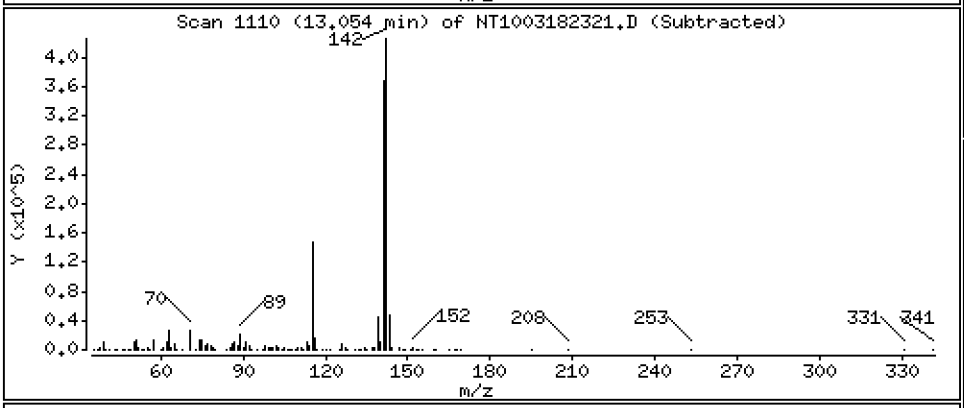
Operator: VTS

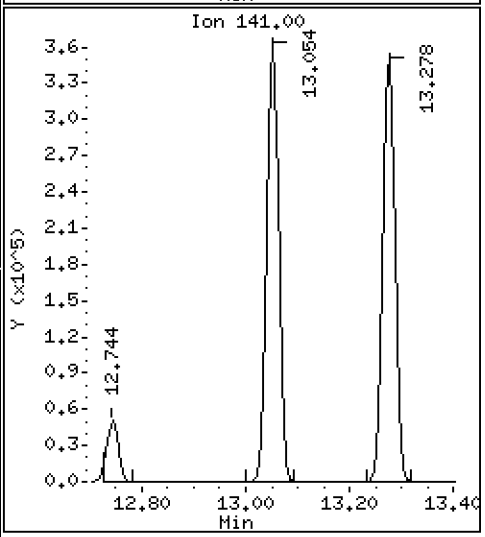
Column phase: ZB-5msi Column diameter: 0.25

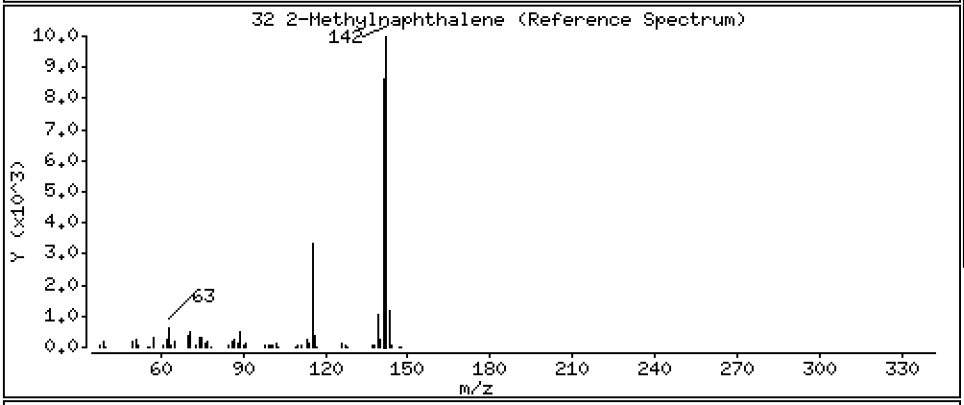
32 2-Methylnaphthalene Concentration: 3.901 ug/mL

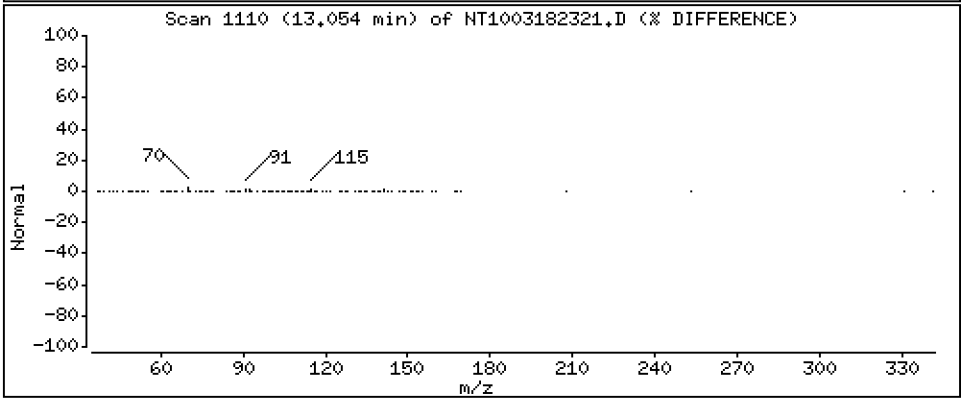












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

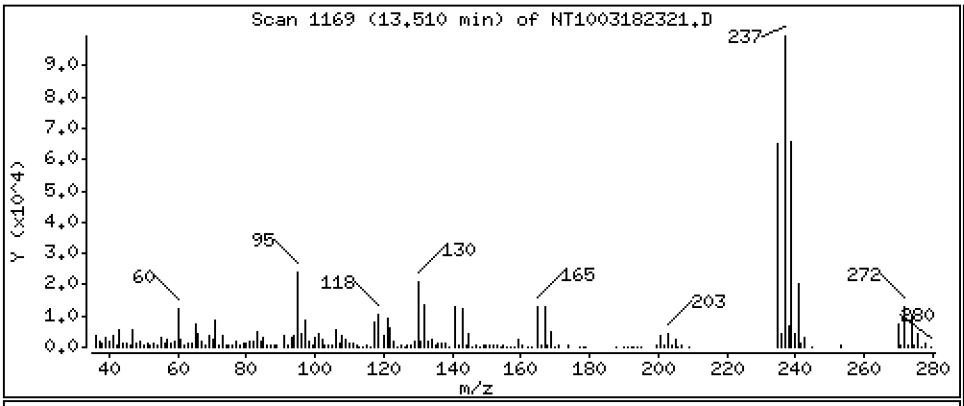
Operator: VTS

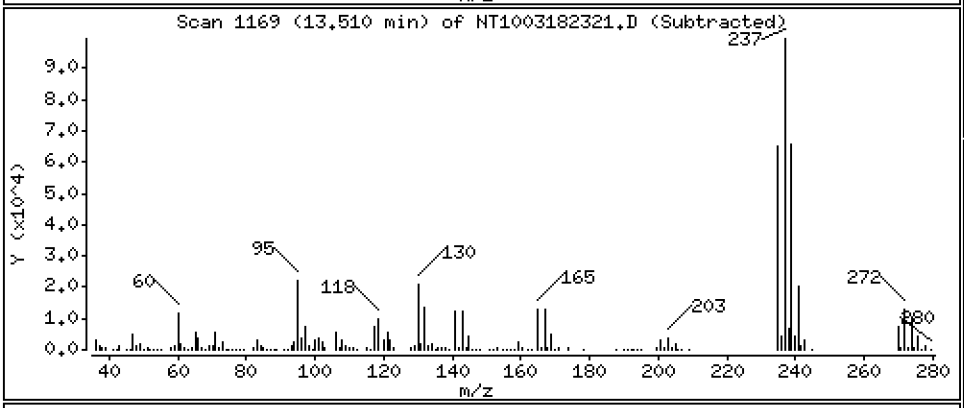
Column phase: ZB-5msi

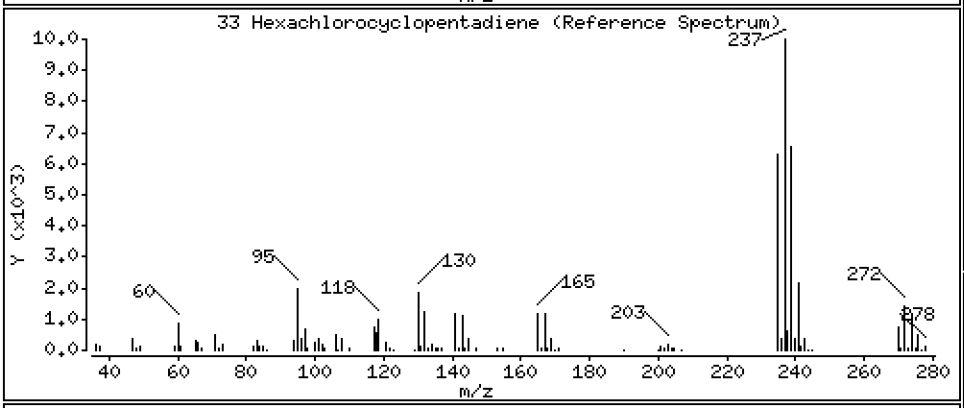
Column diameter: 0.25

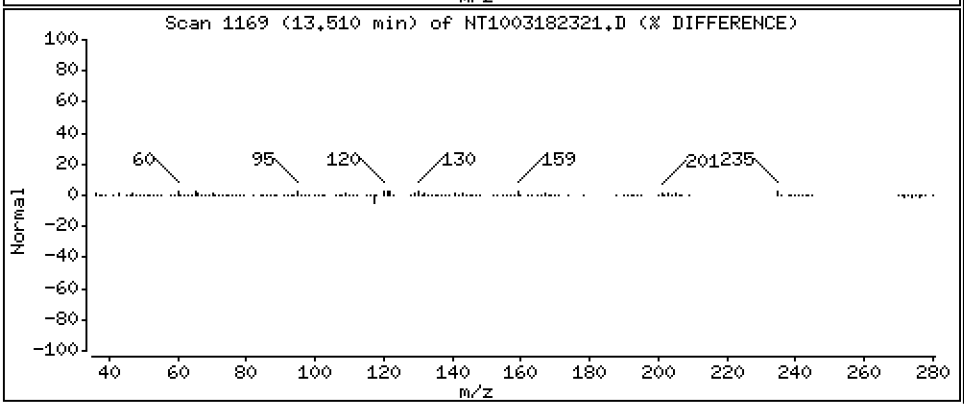
33 Hexachlorocyclopentadiene

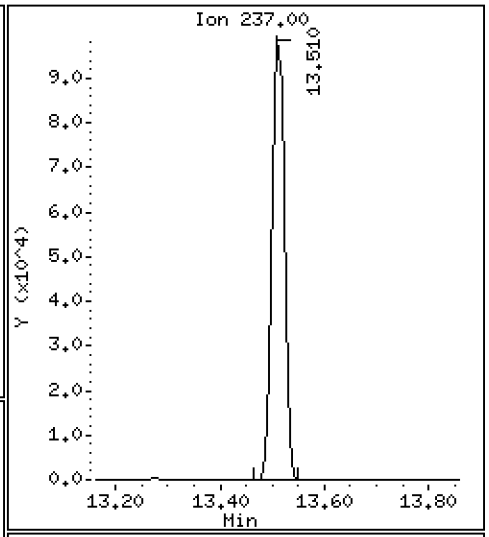
Concentration: 3.610 ug/mL

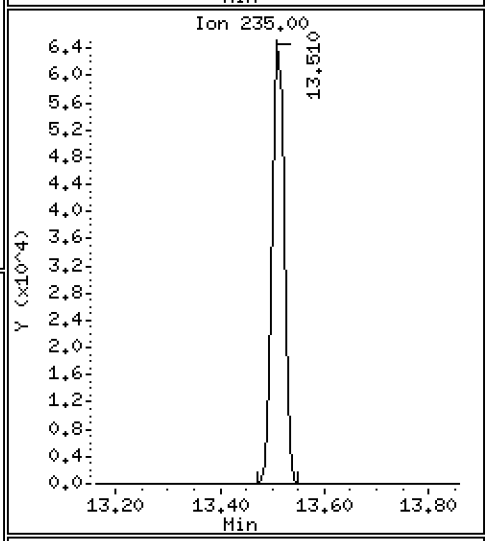


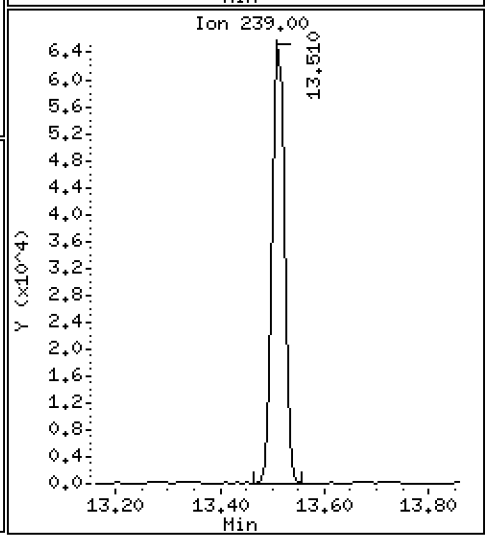












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

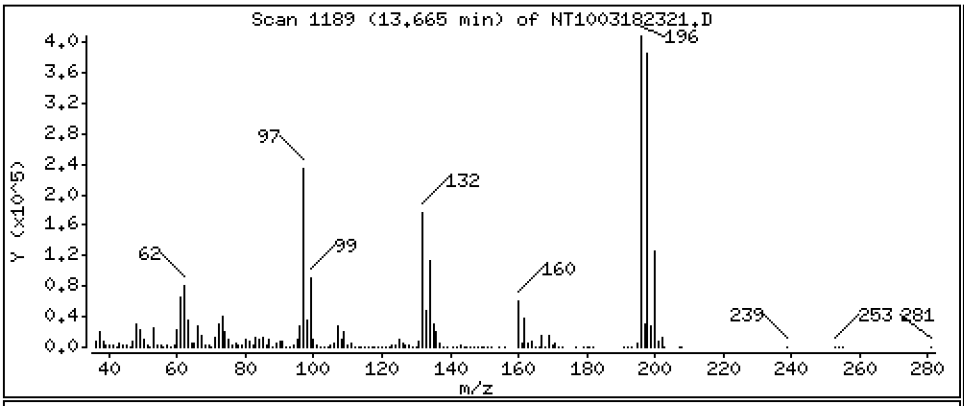
Operator: VTS

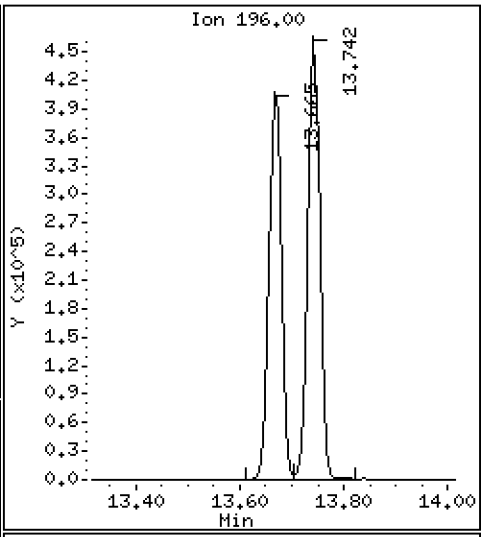
Column phase: ZB-5msi

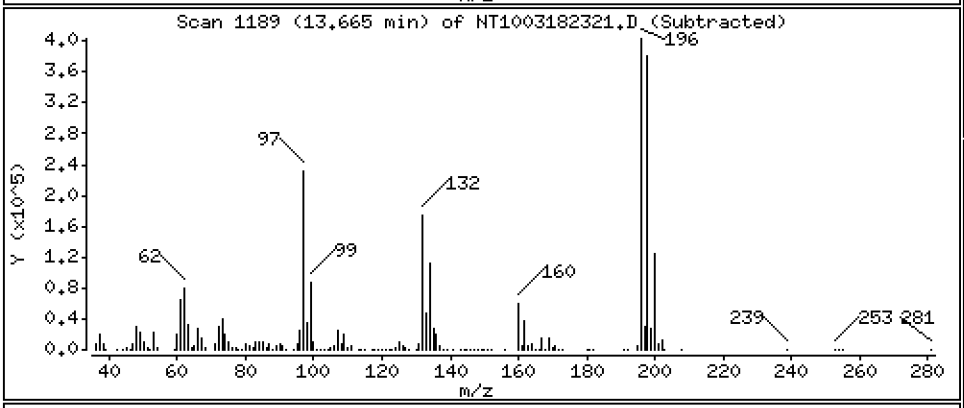
Column diameter: 0.25

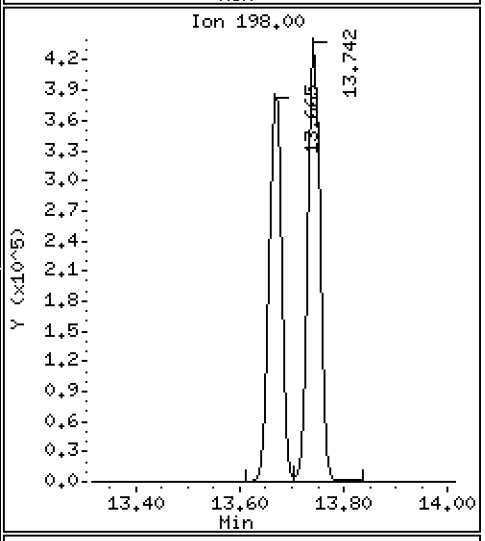
34 2,4,6-Trichlorophenol

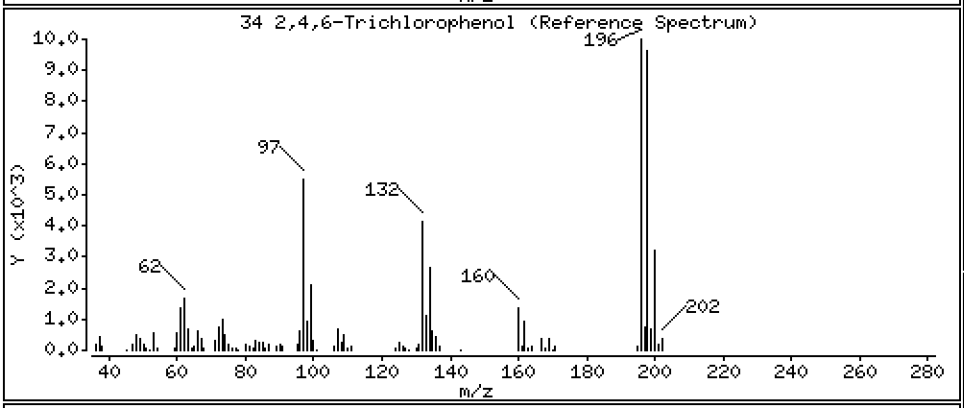
Concentration: 14.20 ug/mL

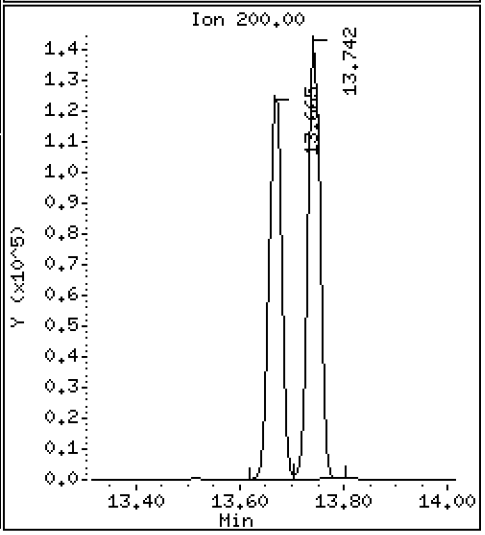


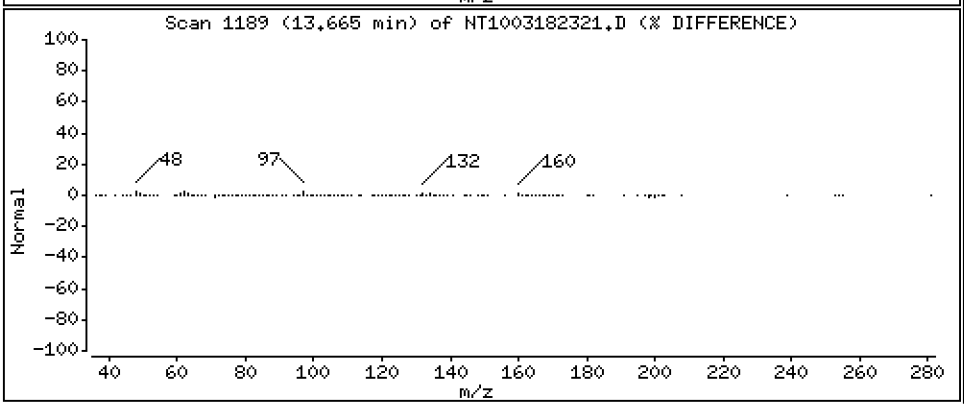












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

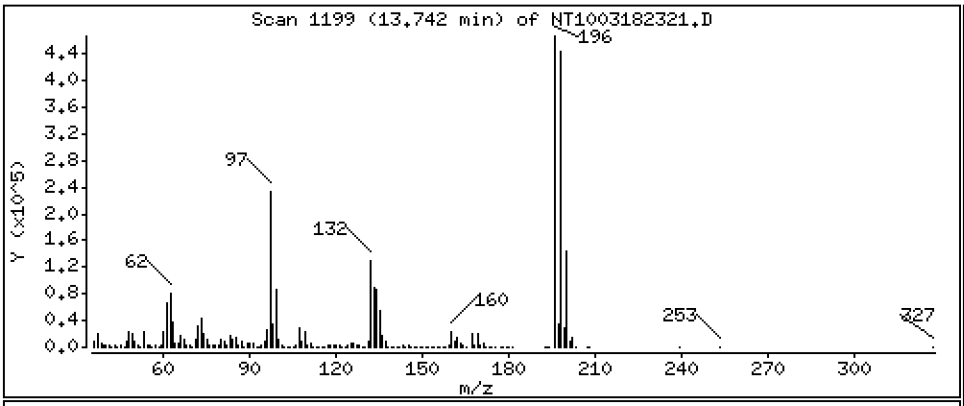
Operator: VTS

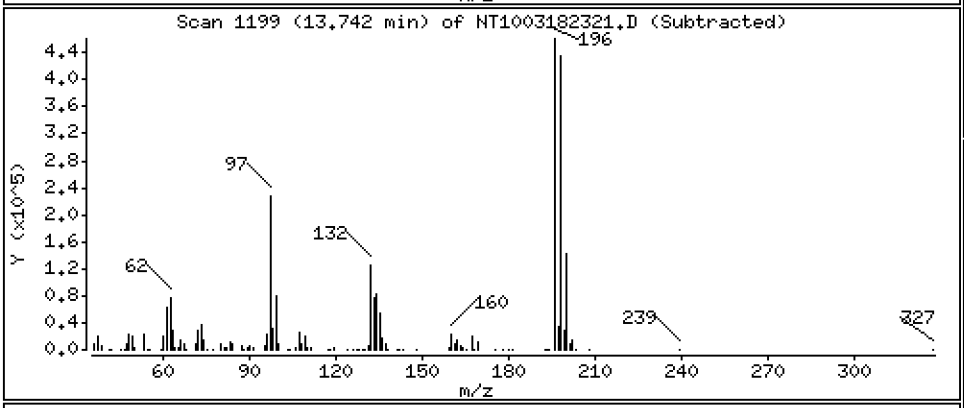
Column phase: ZB-5msi

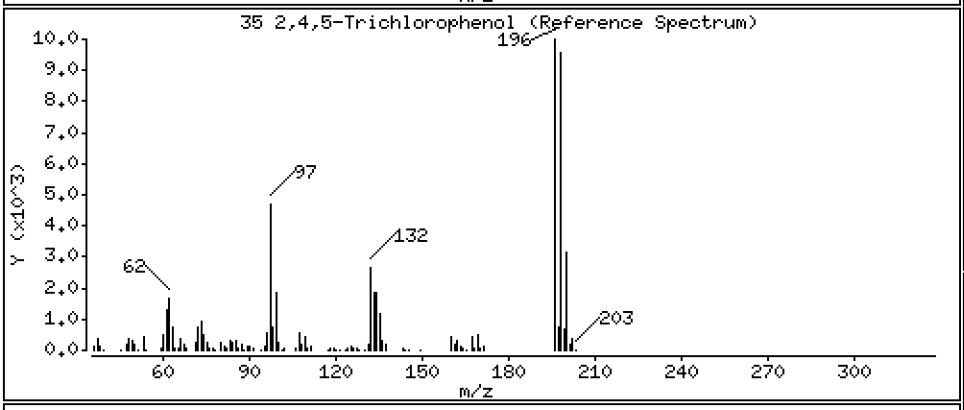
Column diameter: 0.25

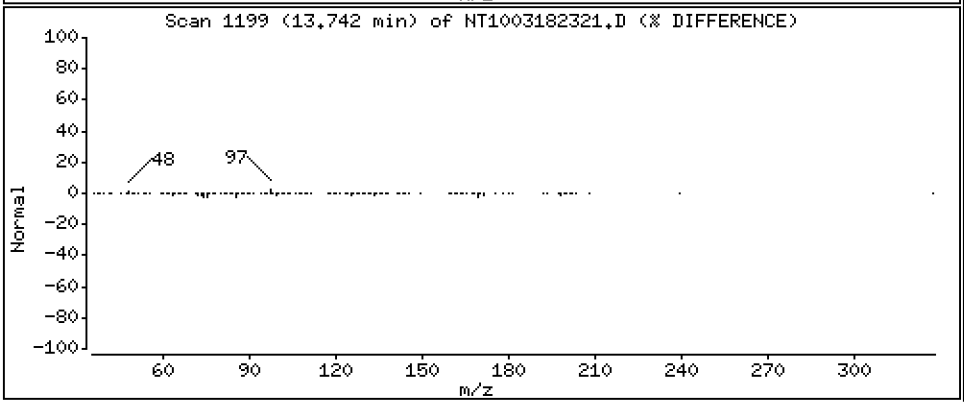
35 2,4,5-Trichlorophenol

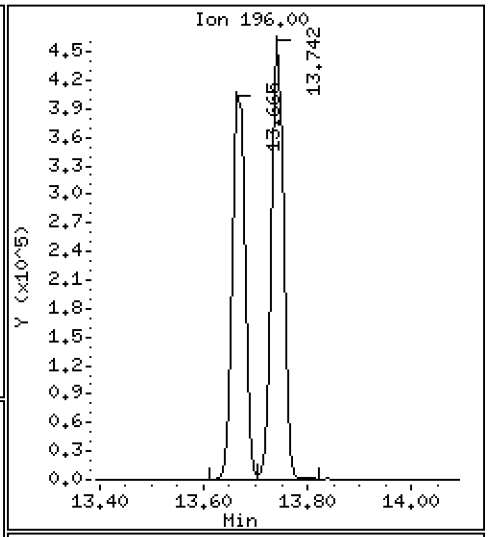
Concentration: 13.81 ug/mL

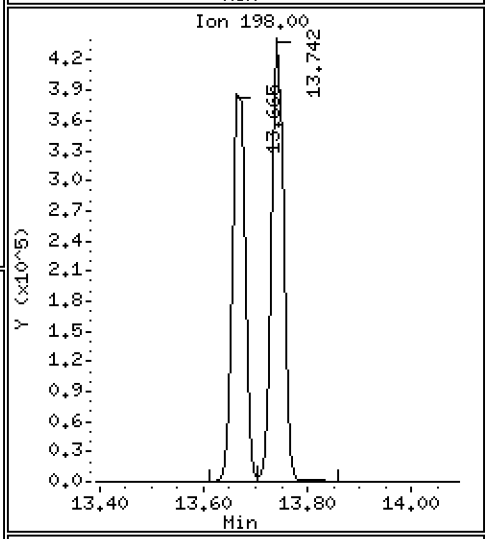


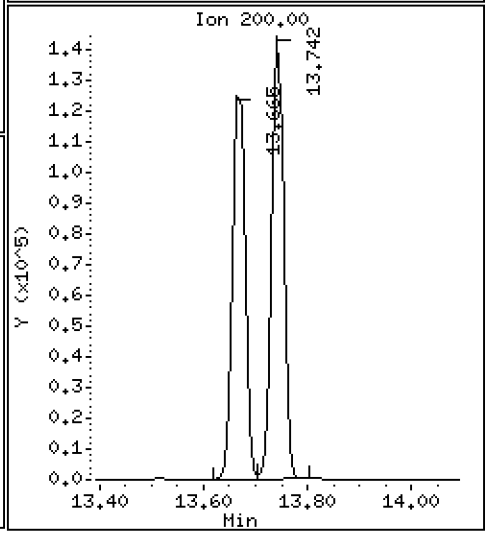












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

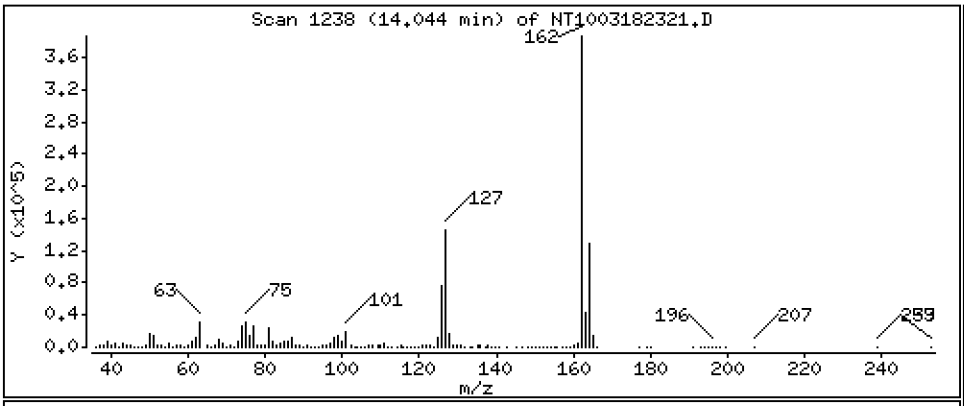
Operator: VTS

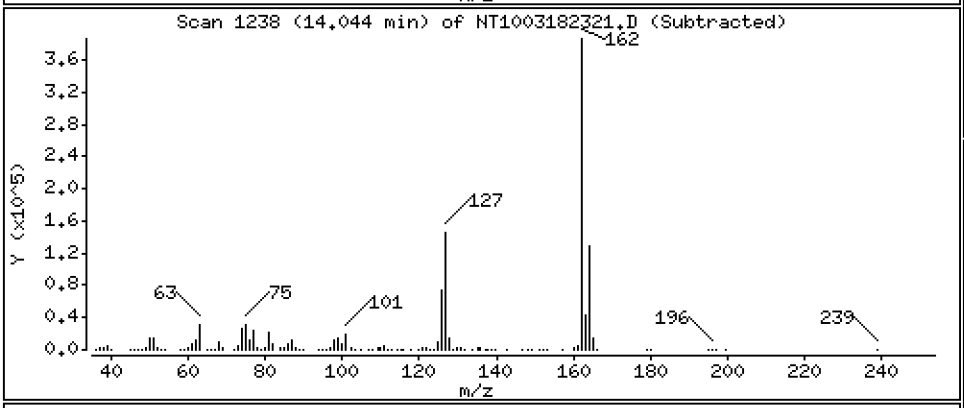
Column phase: ZB-5msi

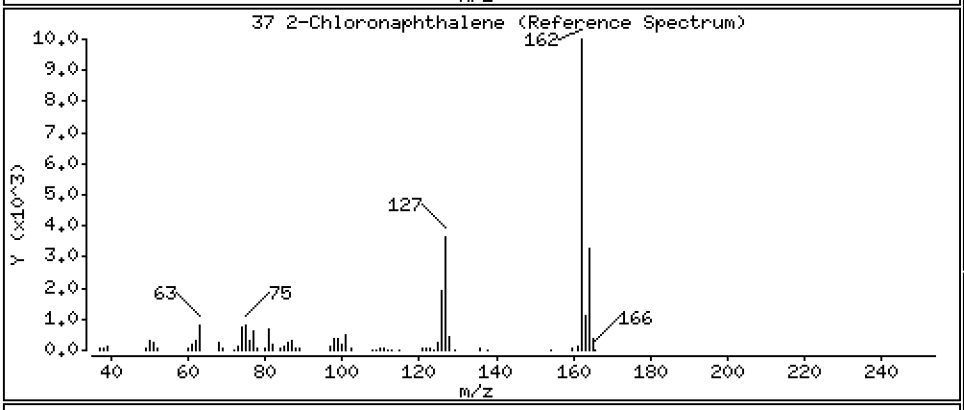
Column diameter: 0.25

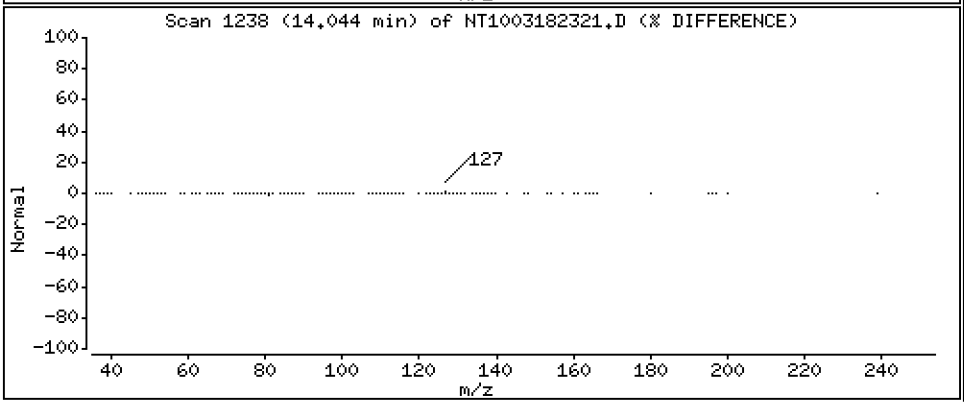
37 2-Chloronaphthalene

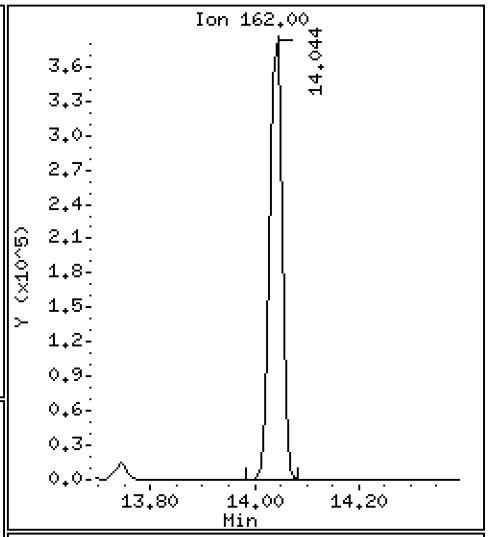
Concentration: 4.053 ug/mL

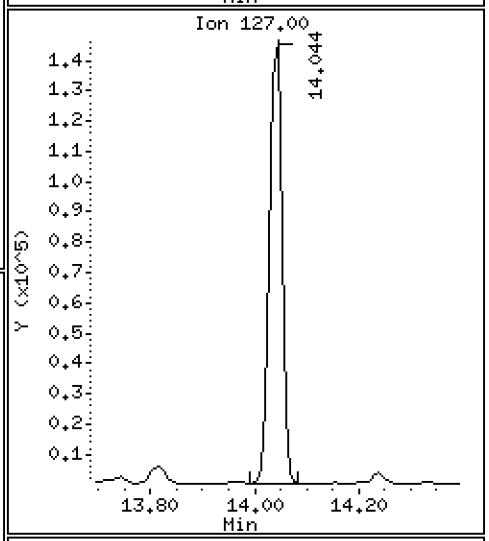


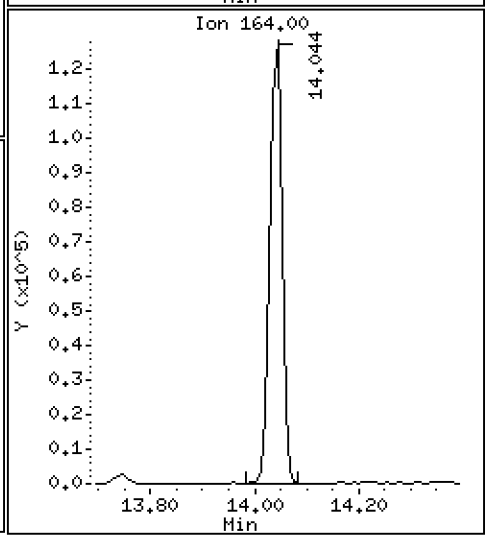












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

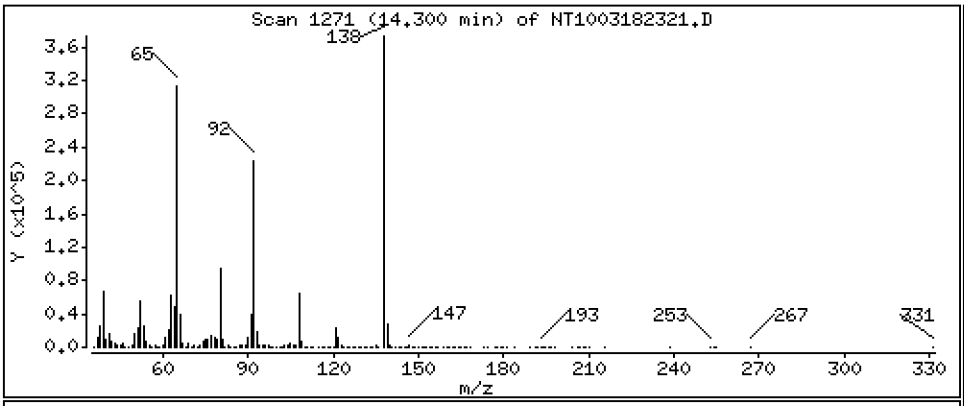
Operator: VTS

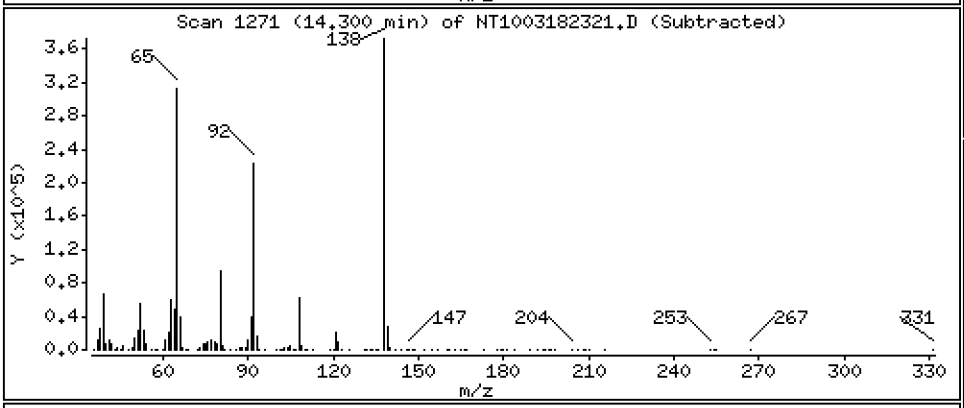
Column phase: ZB-5msi

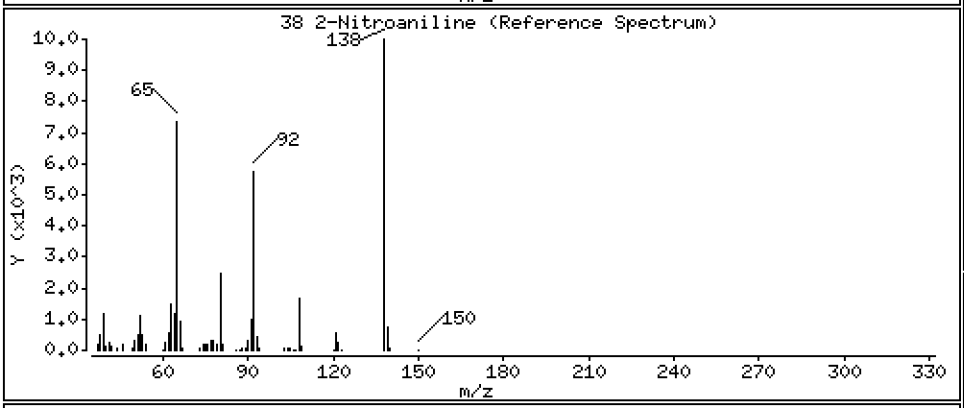
Column diameter: 0.25

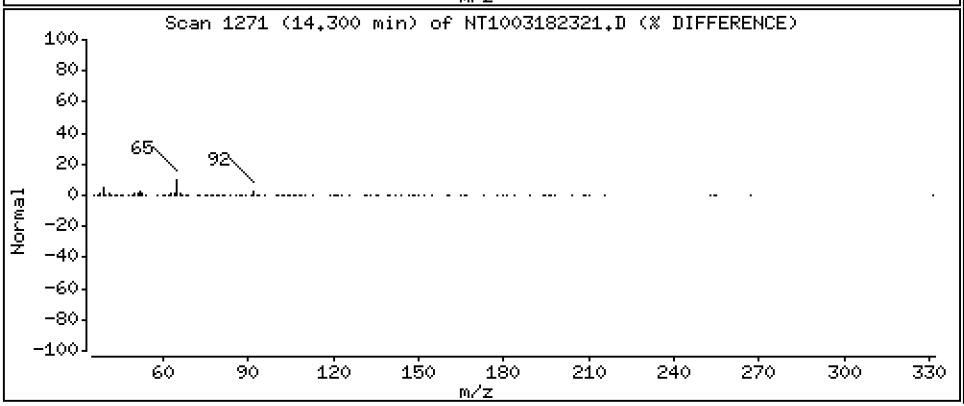
38 2-Nitroaniline

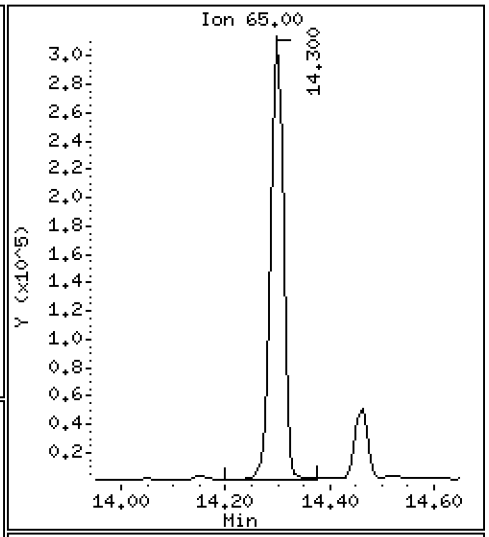
Concentration: 12.20 ug/mL

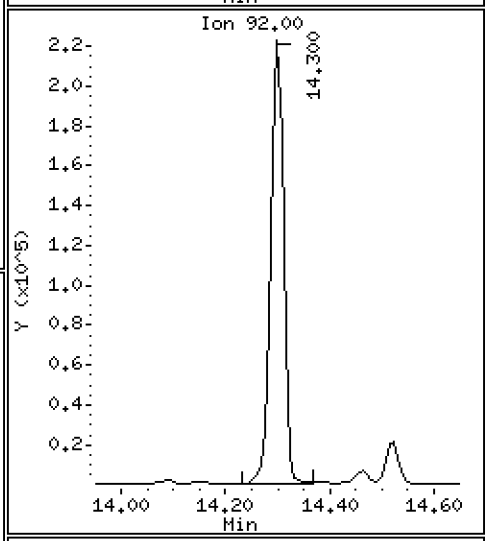


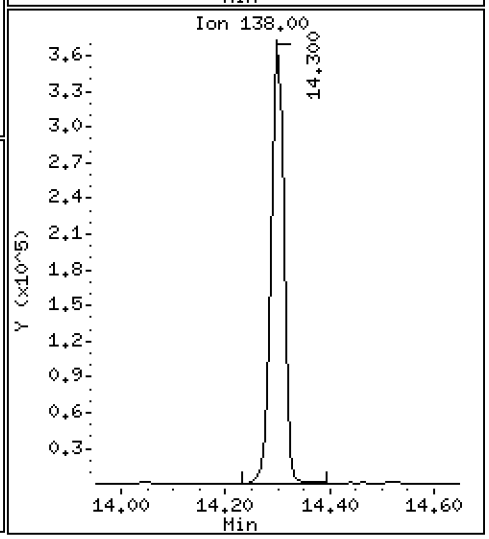












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

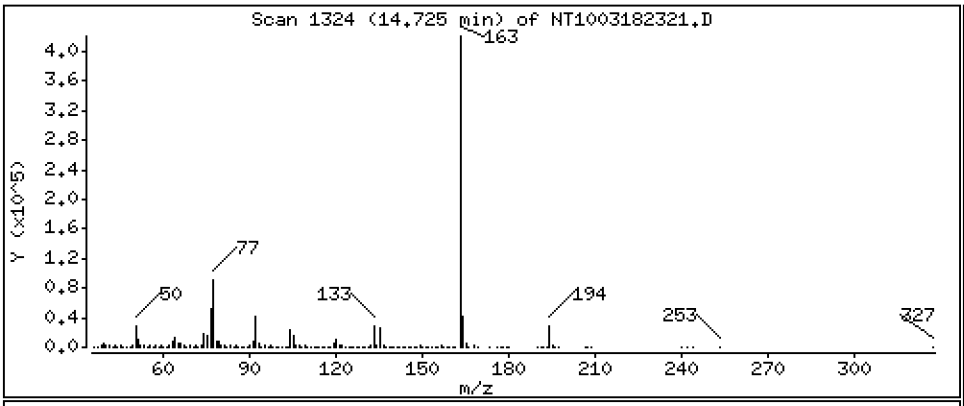
Operator: VTS

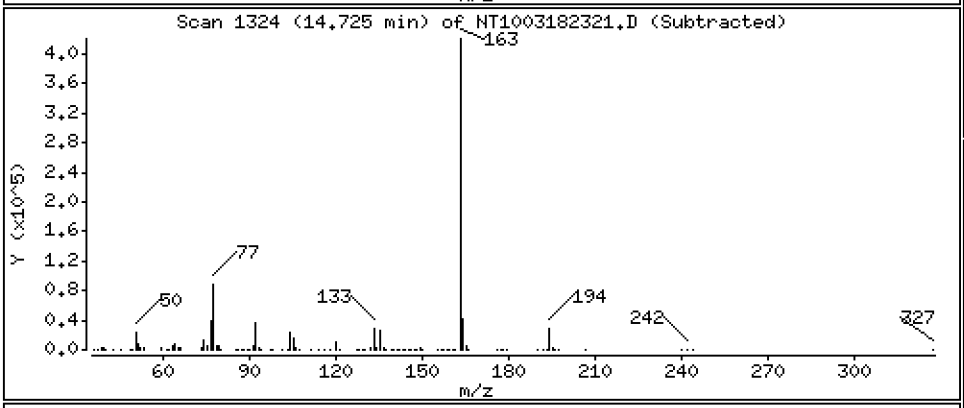
Column phase: ZB-5msi

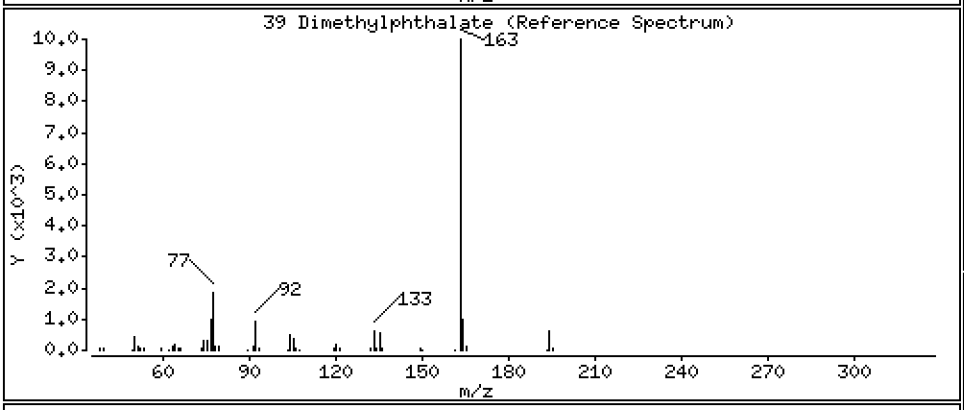
Column diameter: 0.25

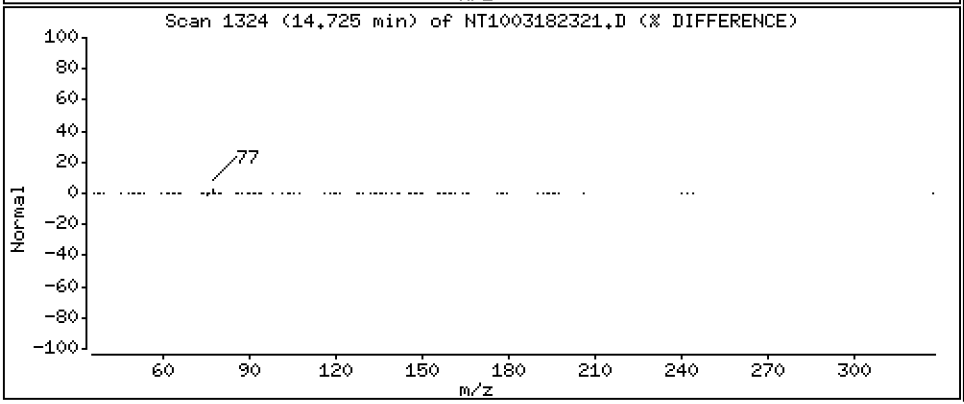
39 Dimethylphthalate

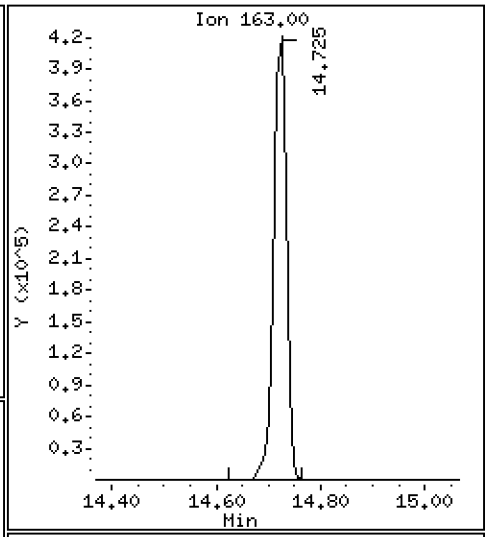
Concentration: 4.517 ug/mL

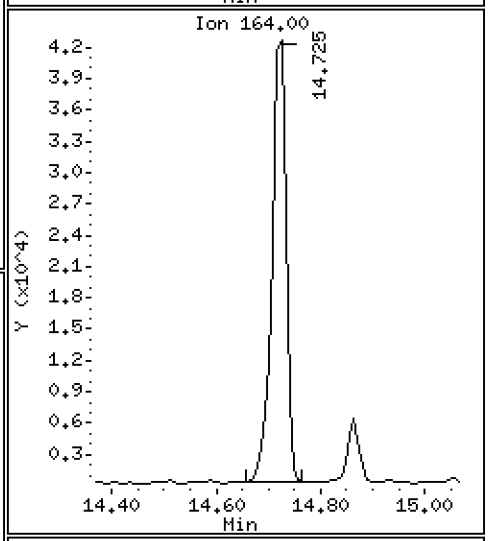


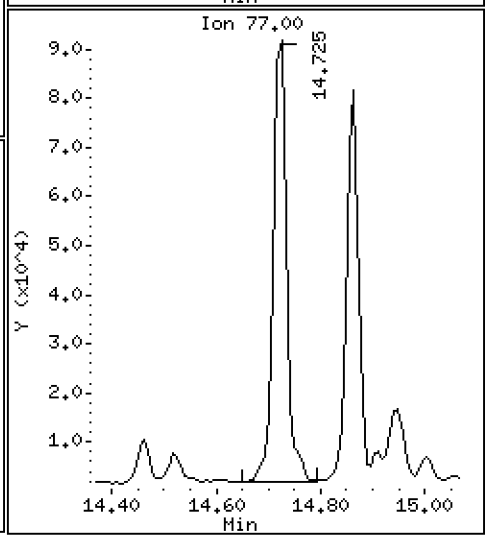












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

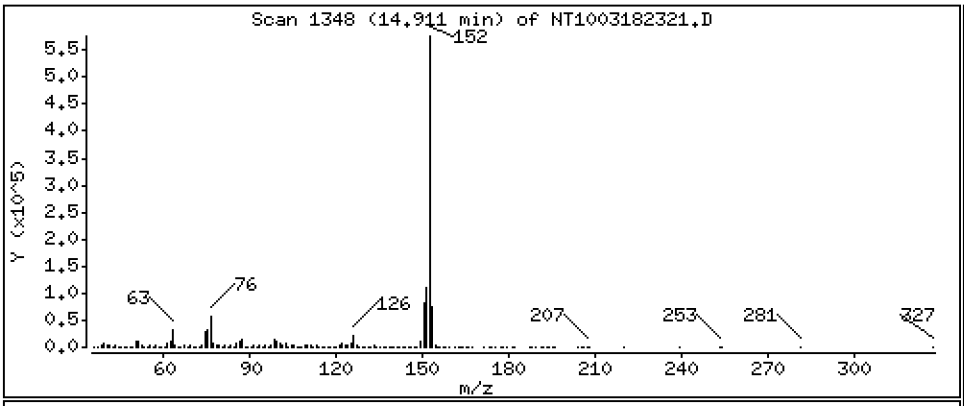
Operator: VTS

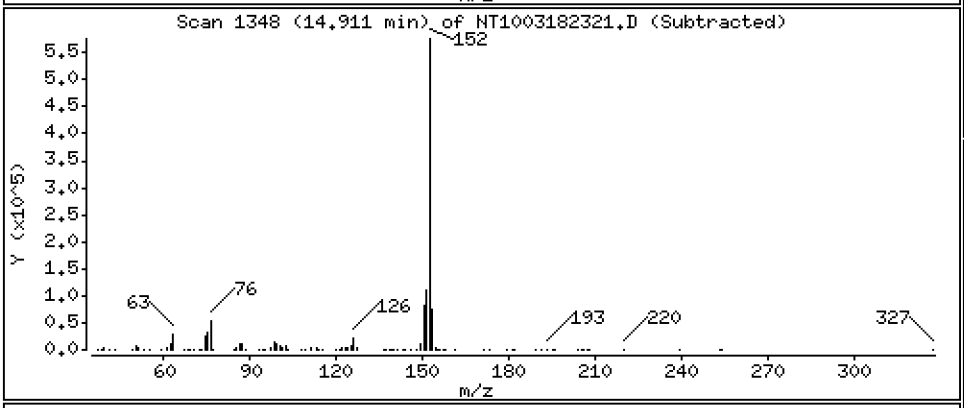
Column phase: ZB-5msi

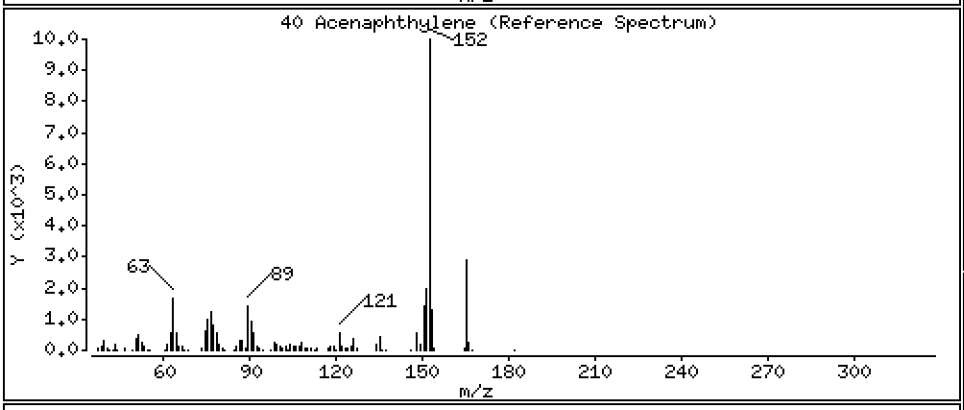
Column diameter: 0.25

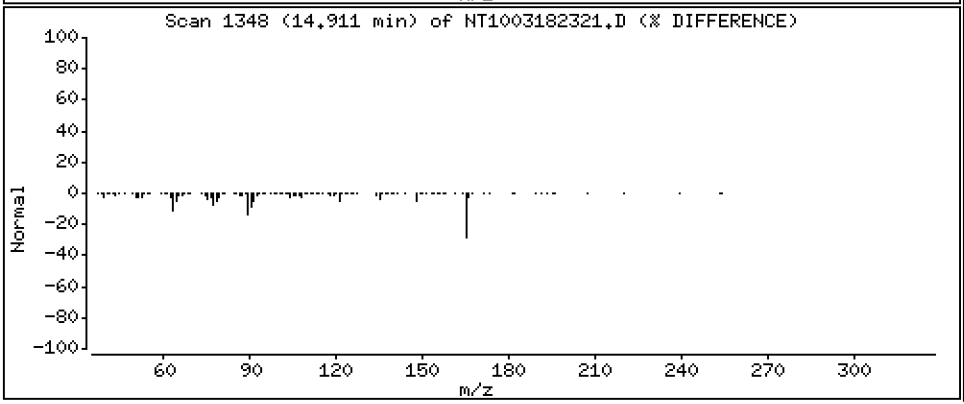
40 Acenaphthylene

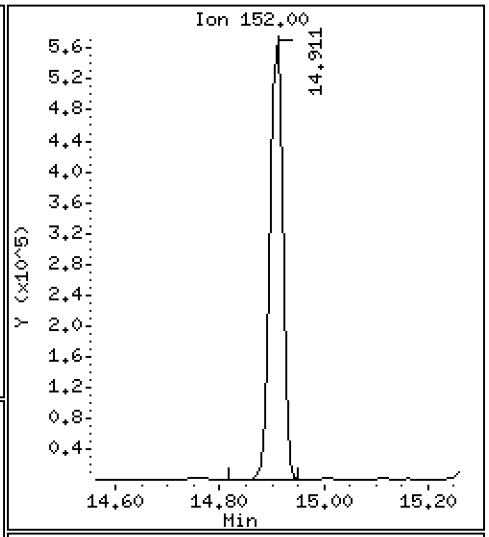
Concentration: 4.009 ug/mL

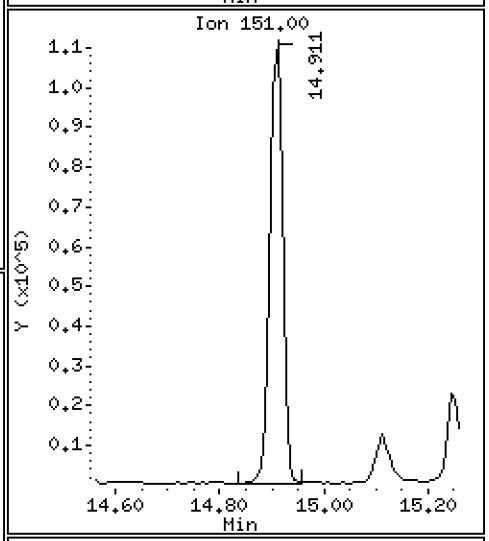


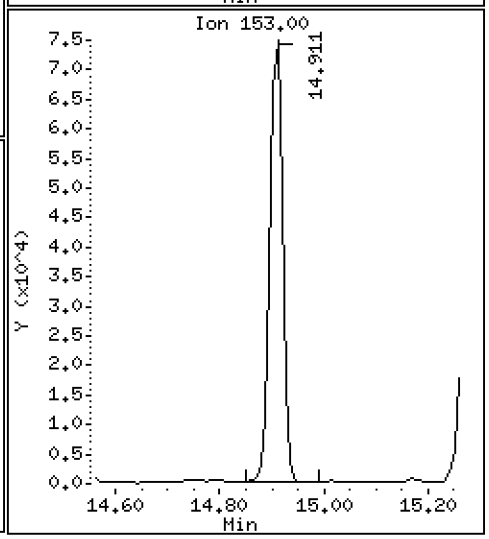












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

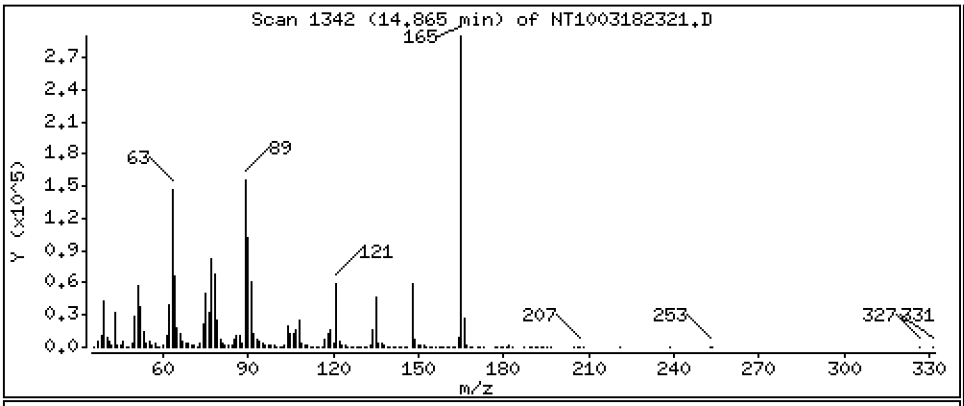
Operator: VTS

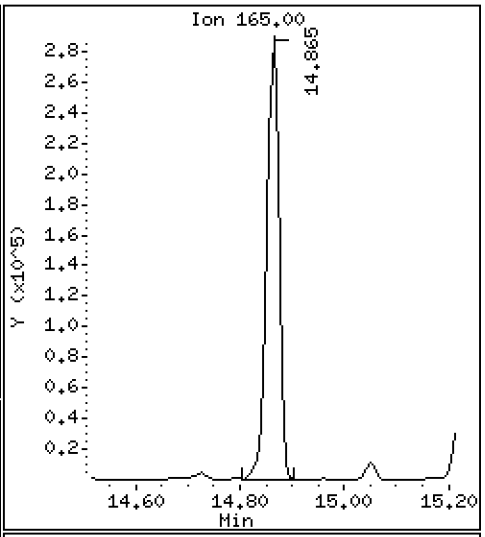
Column phase: ZB-5msi

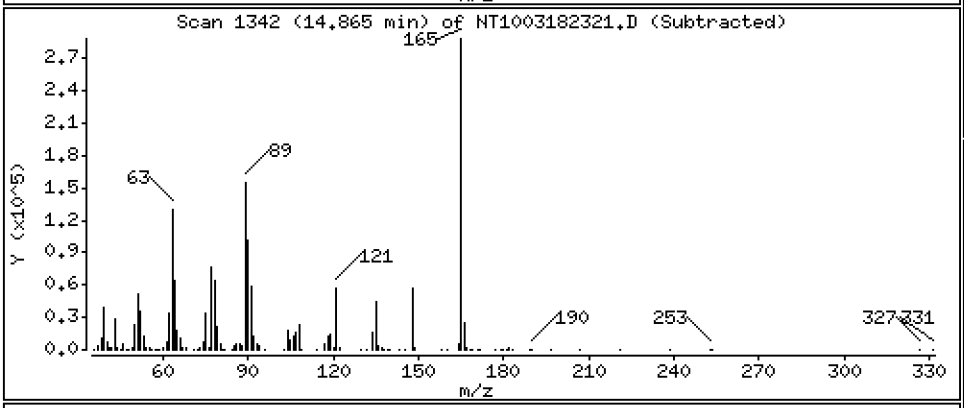
Column diameter: 0.25

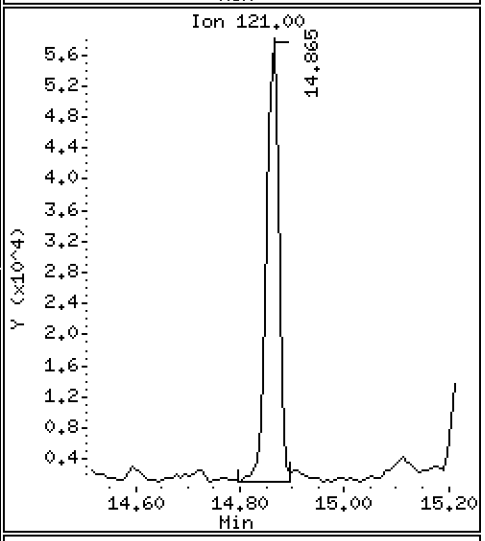
41 2,6-Dinitrotoluene

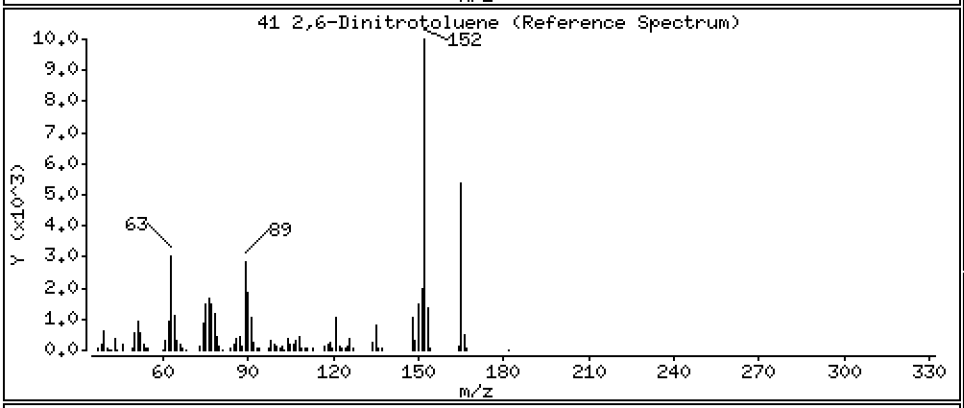
Concentration: 13.79 ug/mL

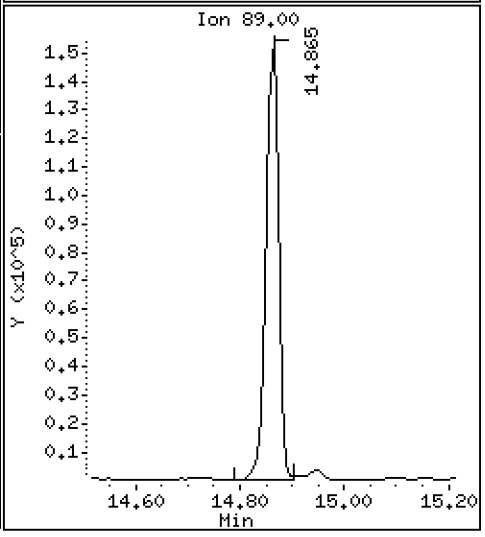


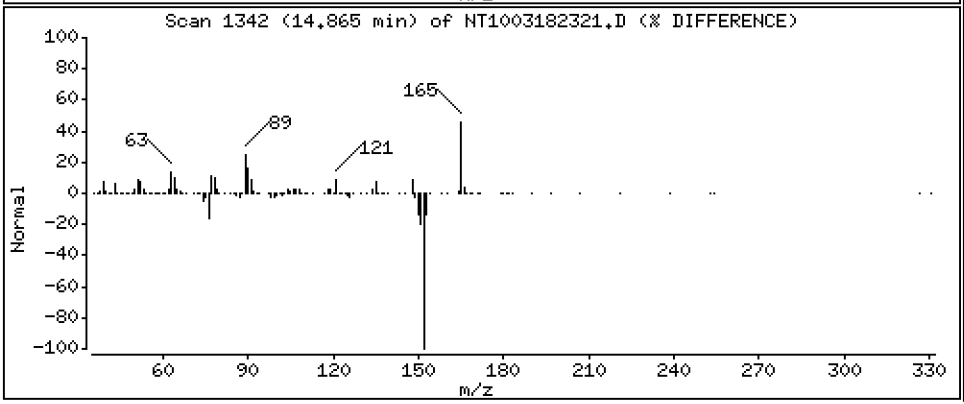












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

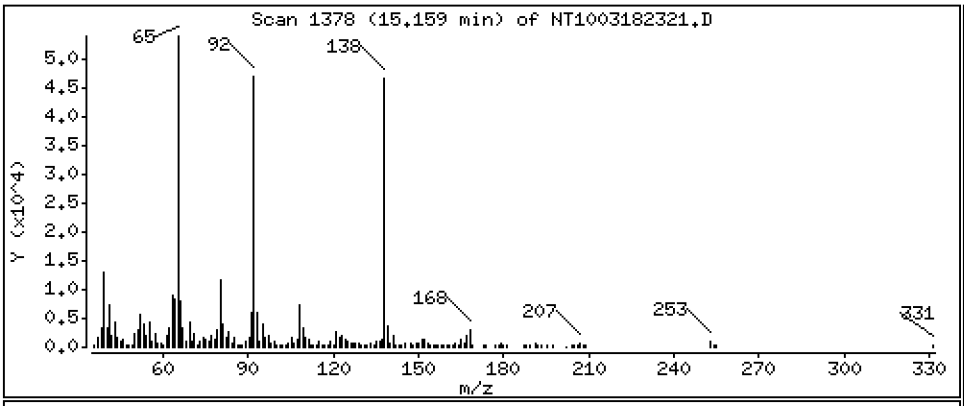
Operator: VTS

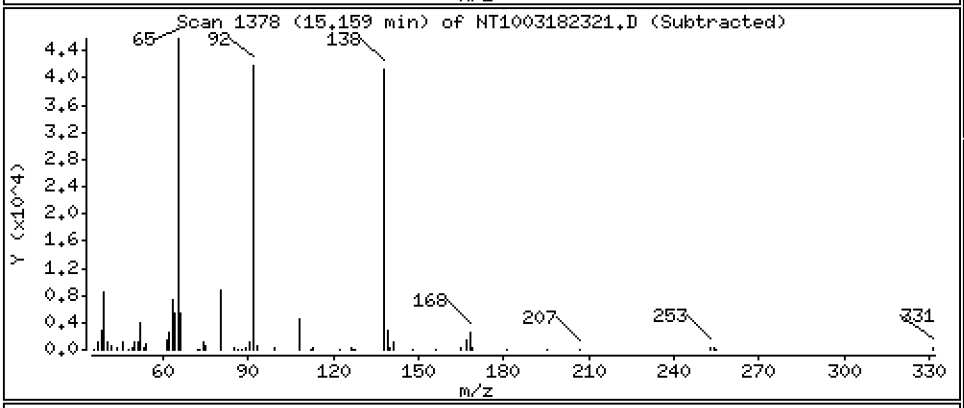
Column phase: ZB-5msi

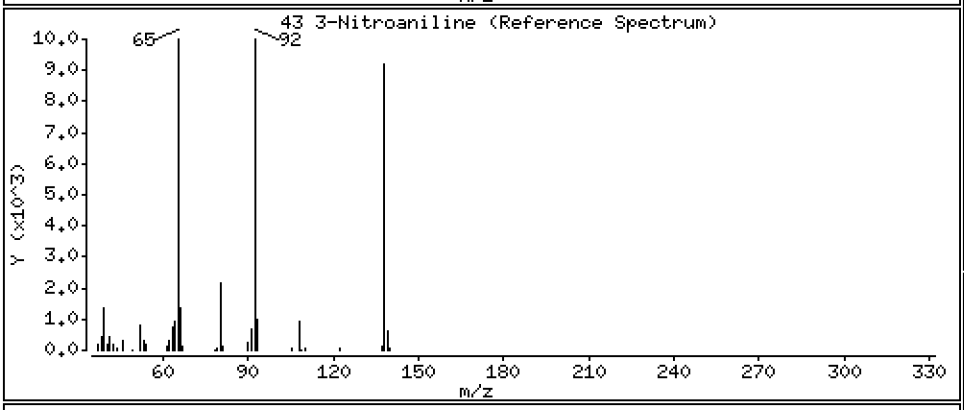
Column diameter: 0.25

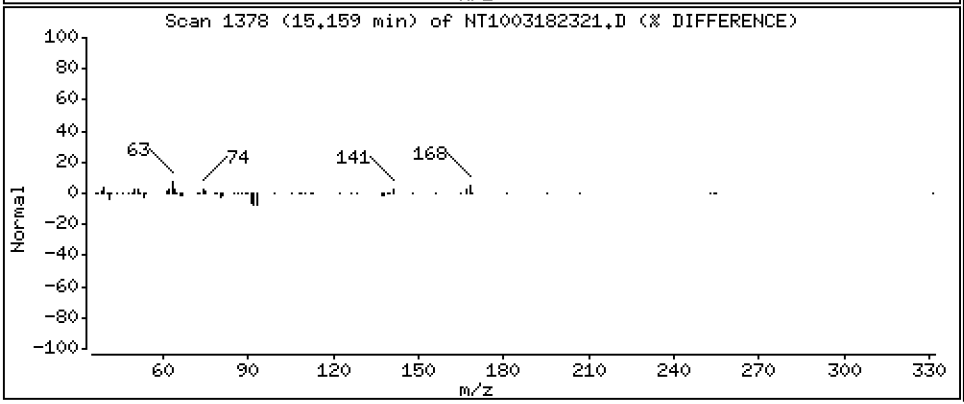
43 3-Nitroaniline

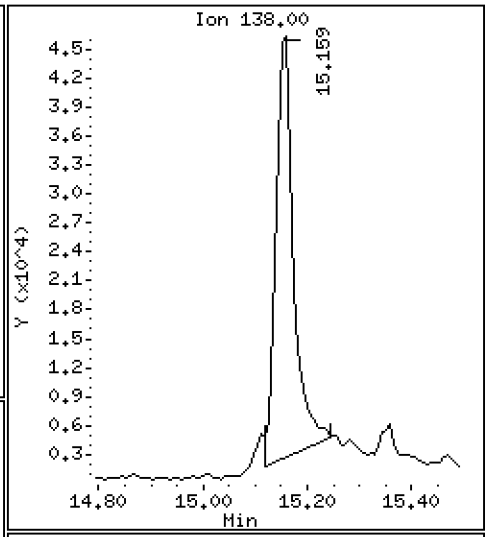
Concentration: 2.832 ug/mL

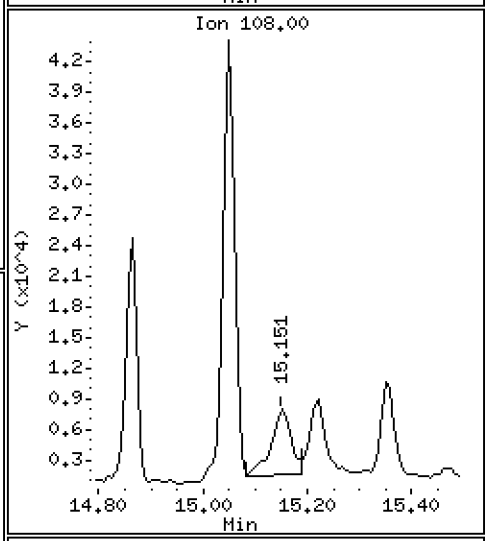


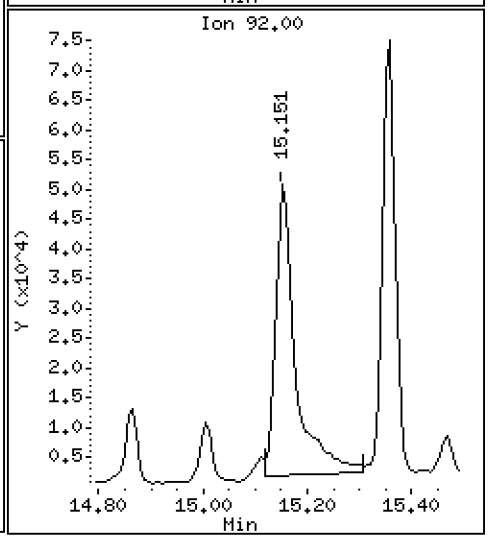












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

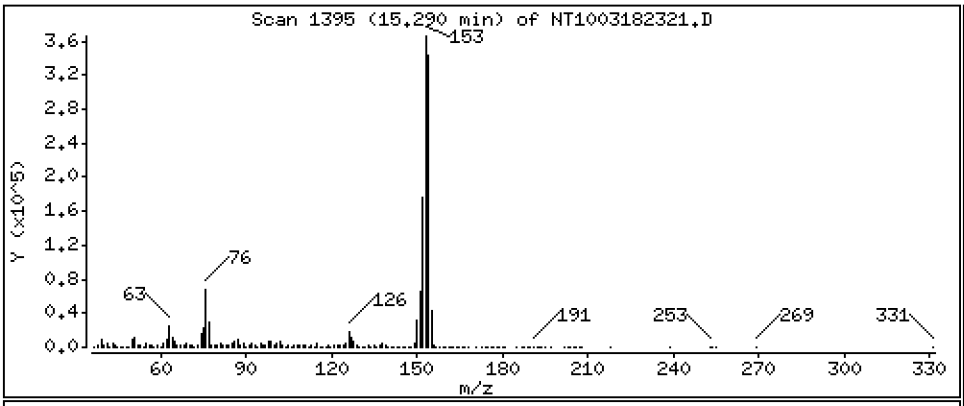
Operator: VTS

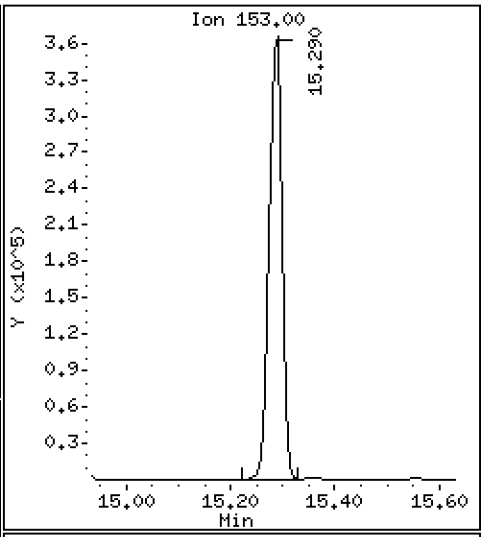
Column phase: ZB-5msi

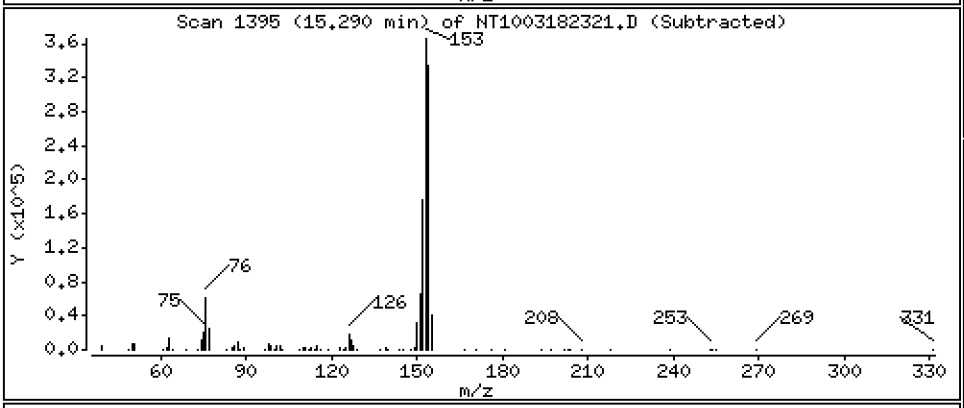
Column diameter: 0.25

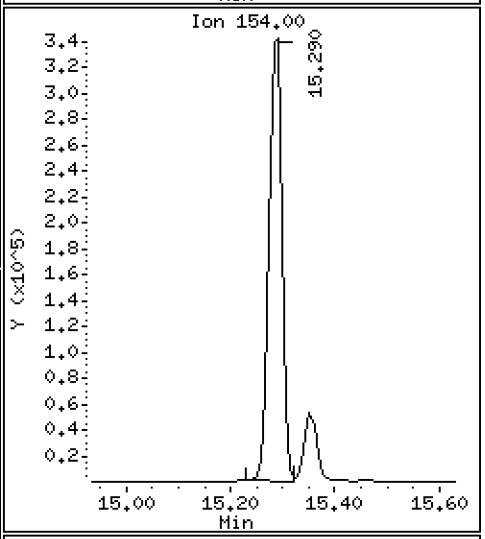
44 Acenaphthene

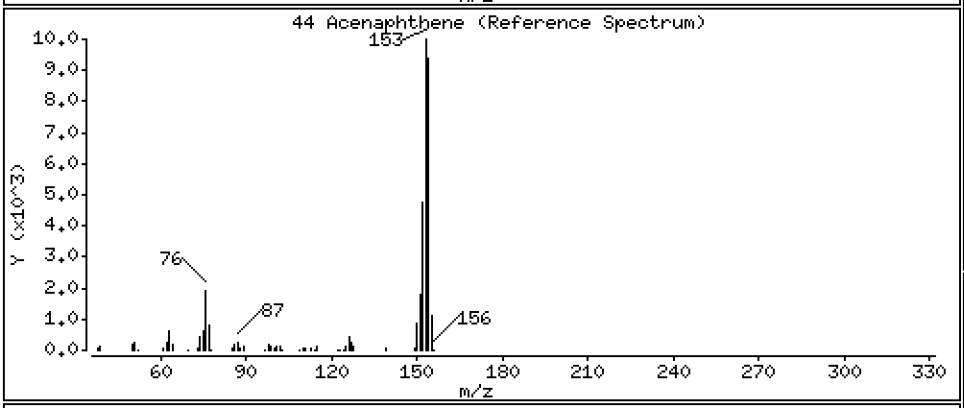
Concentration: 4.225 ug/mL

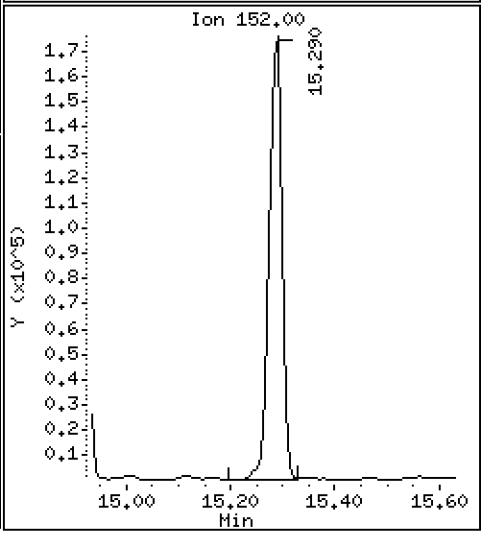


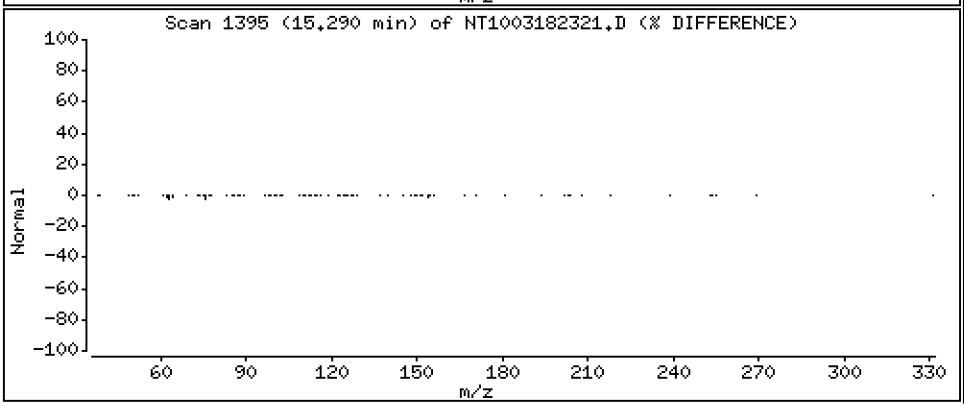












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

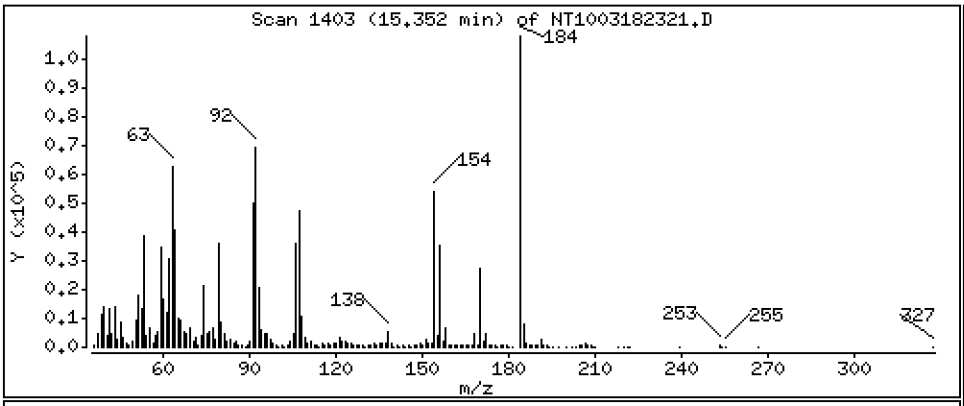
Operator: VTS

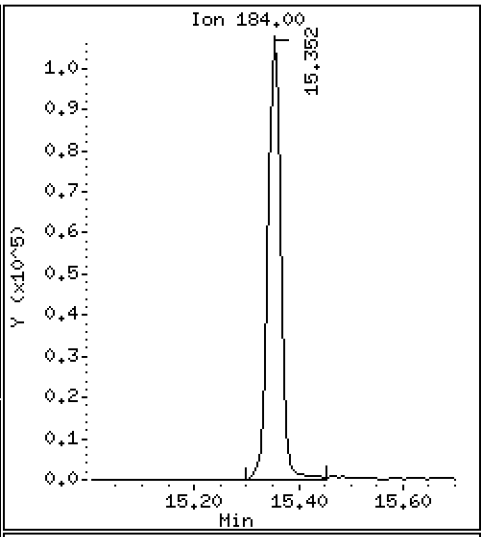
Column phase: ZB-5msi

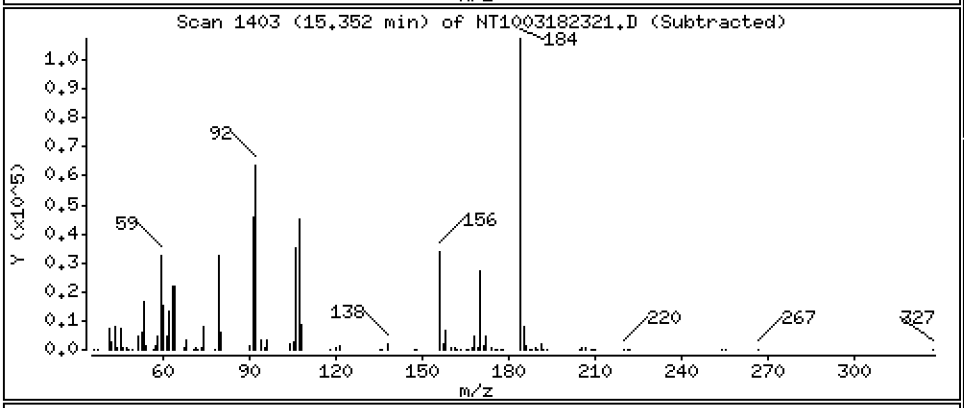
Column diameter: 0.25

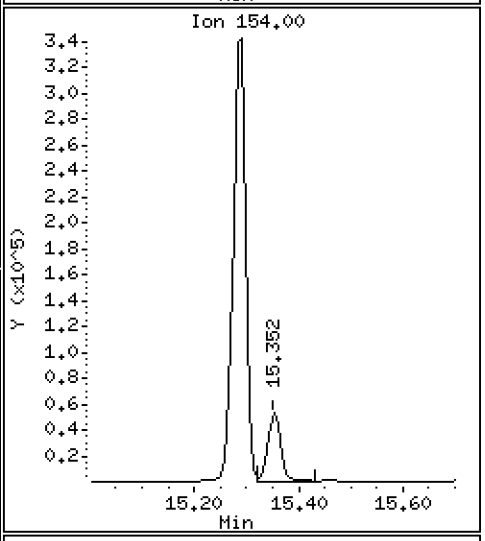
45 2,4-Dinitrophenol

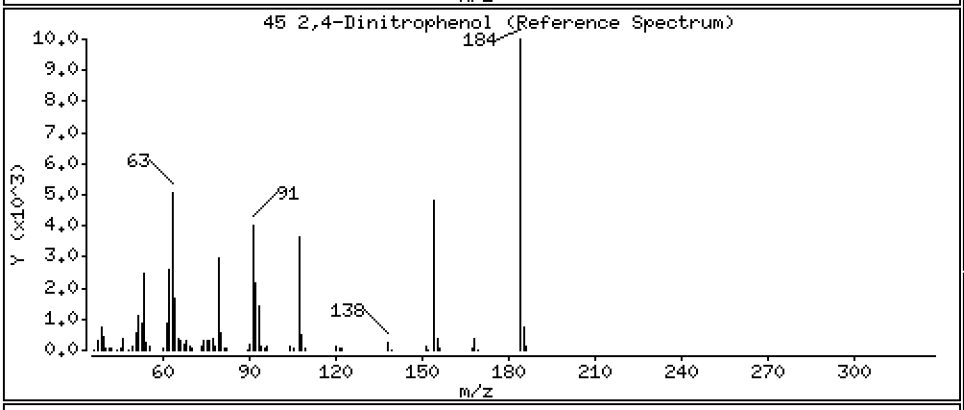
Concentration: 8.846 ug/mL

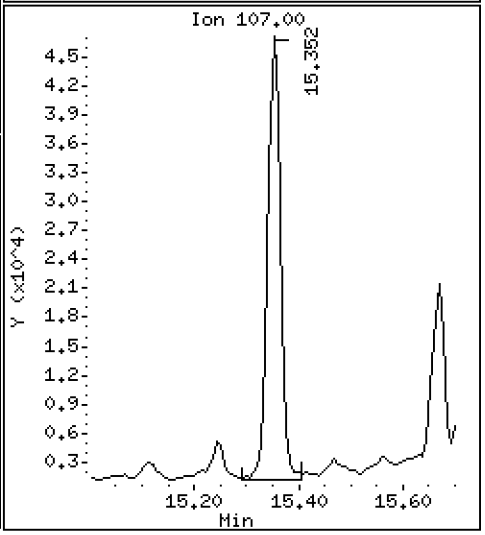


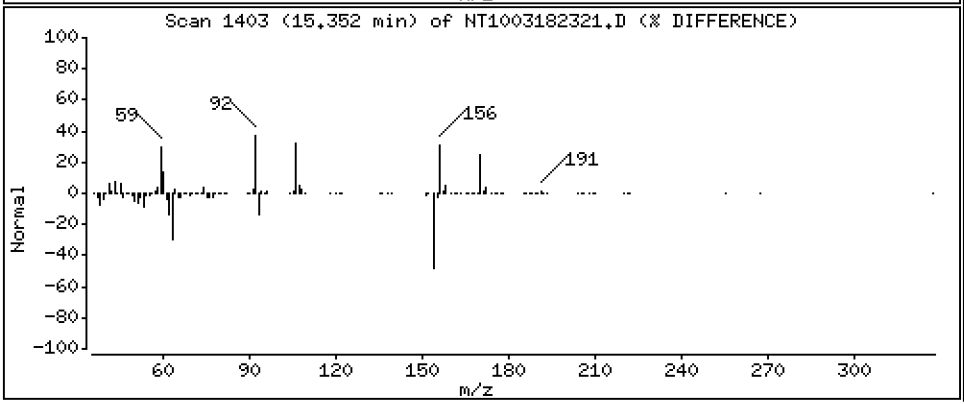












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

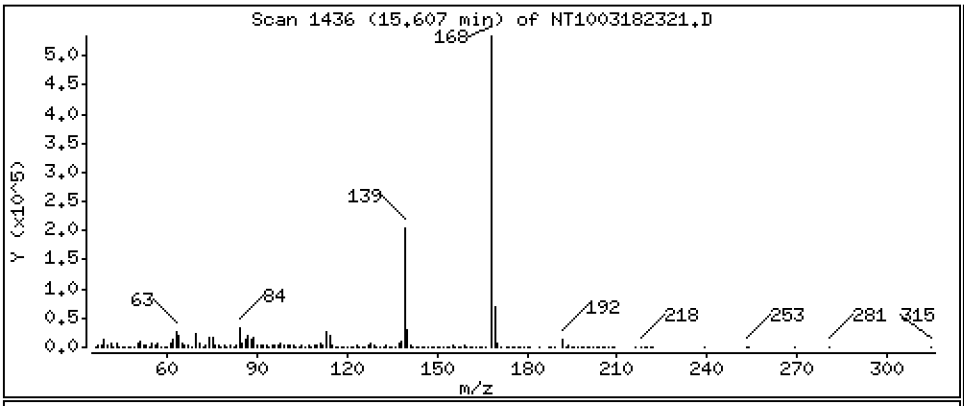
Operator: VTS

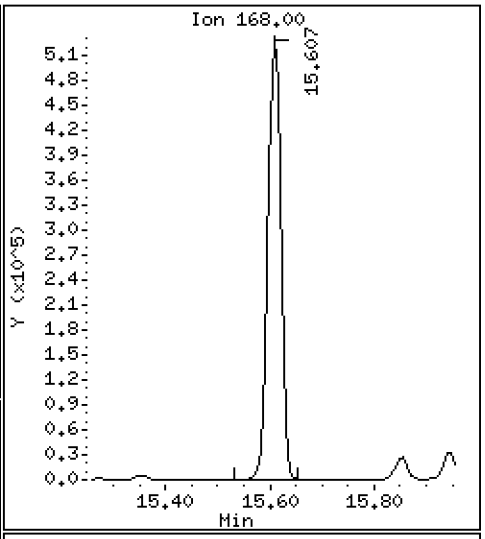
Column phase: ZB-5msi

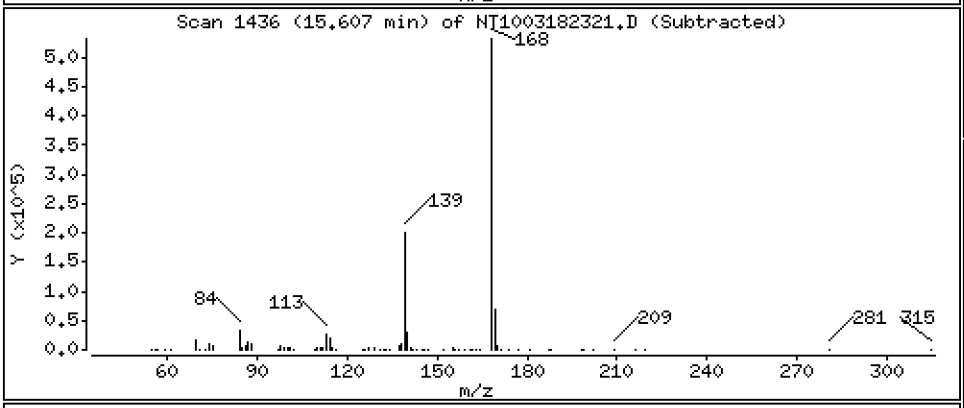
Column diameter: 0.25

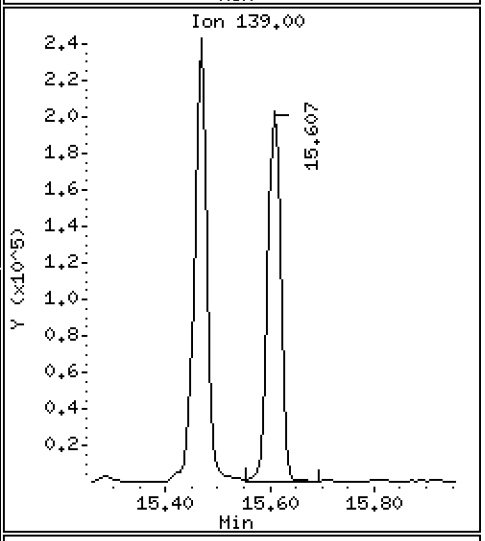
46 Dibenzofuran

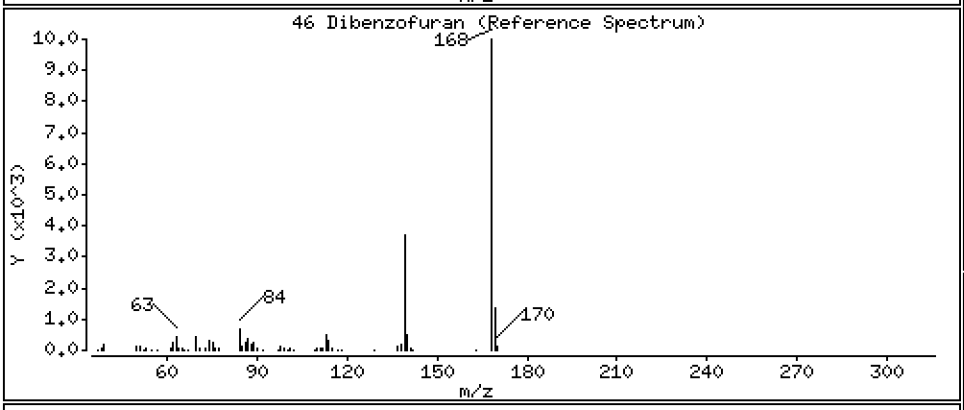
Concentration: 4.179 ug/mL

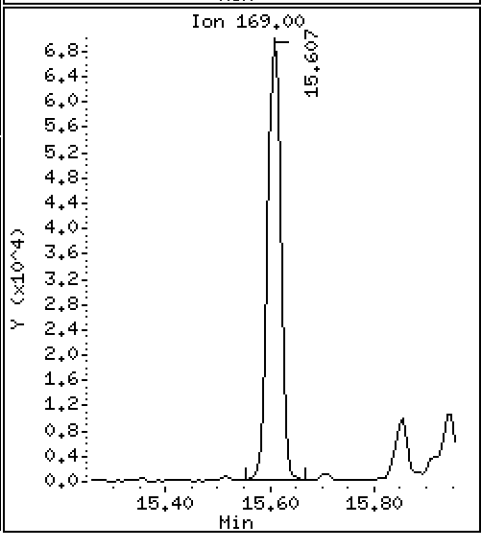


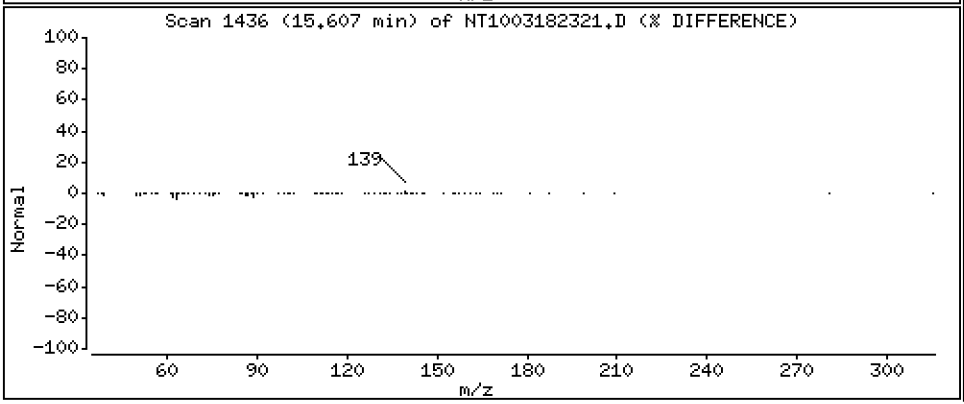












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

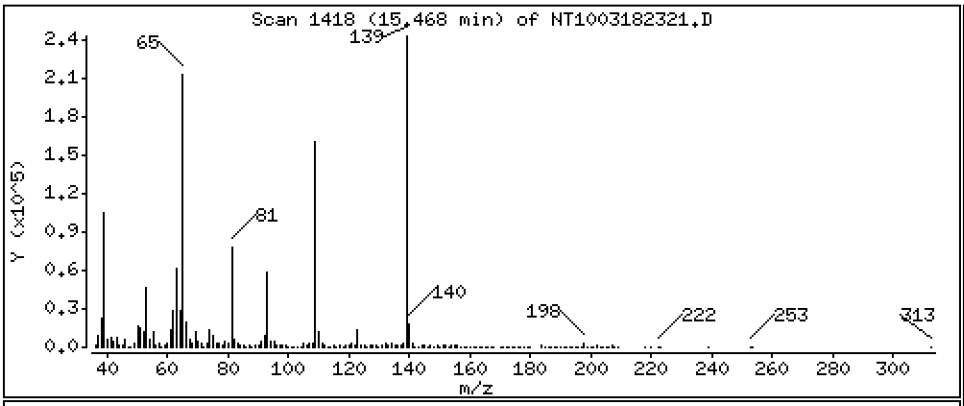
Operator: VTS

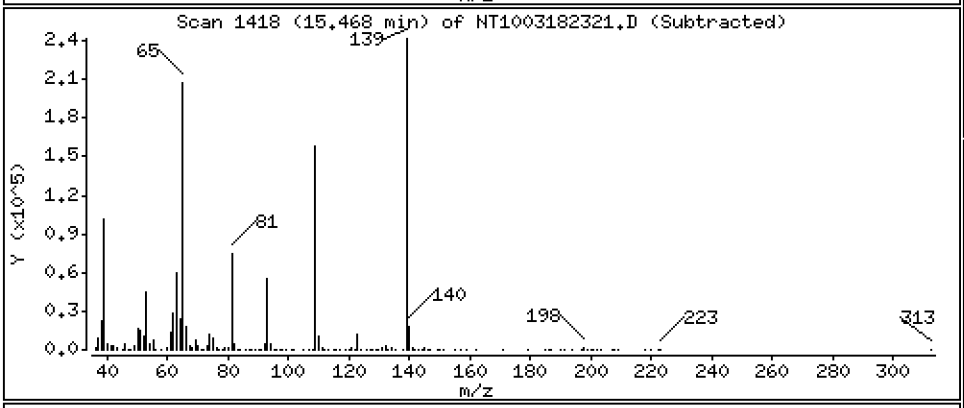
Column phase: ZB-5msi

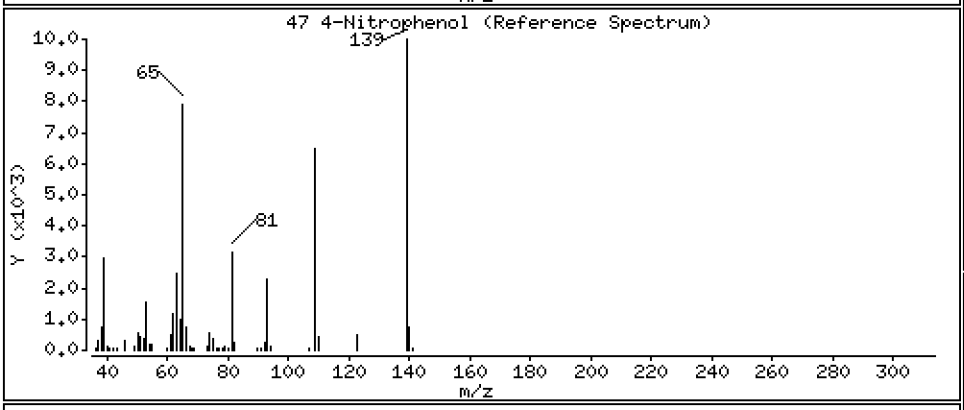
Column diameter: 0.25

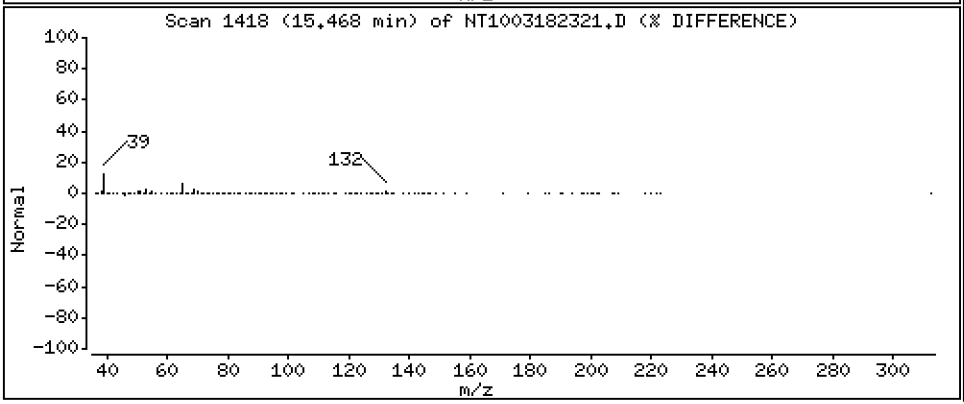
47 4-Nitrophenol

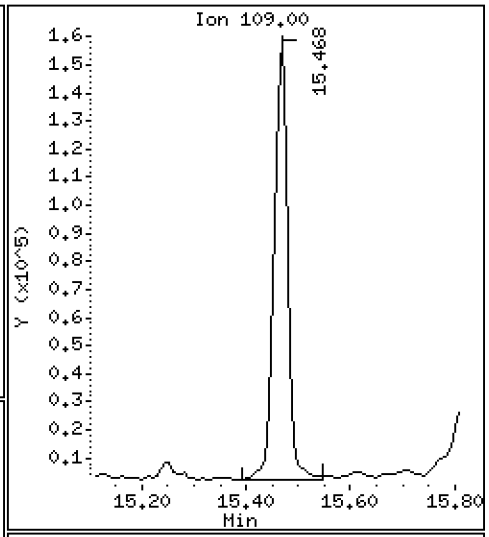
Concentration: 12.05 ug/mL

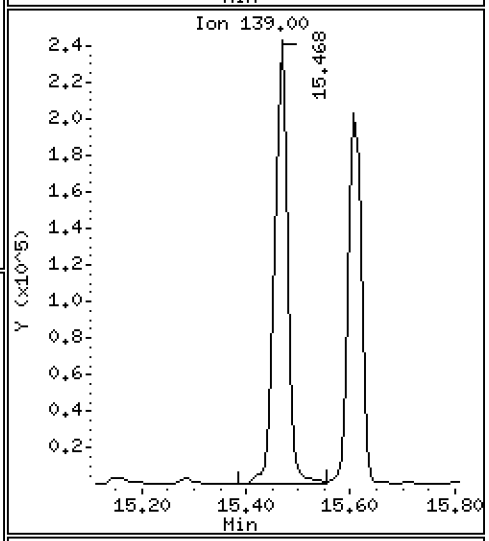


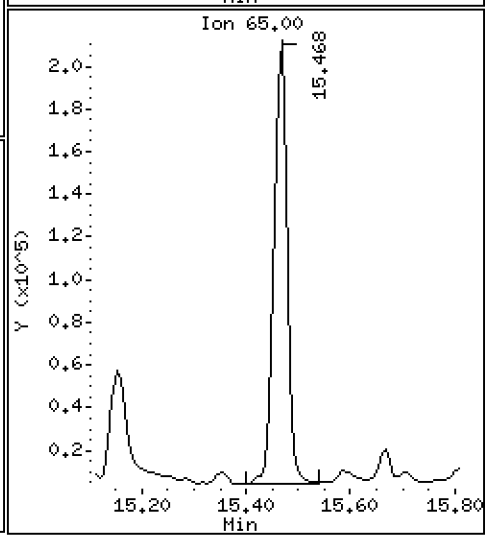












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

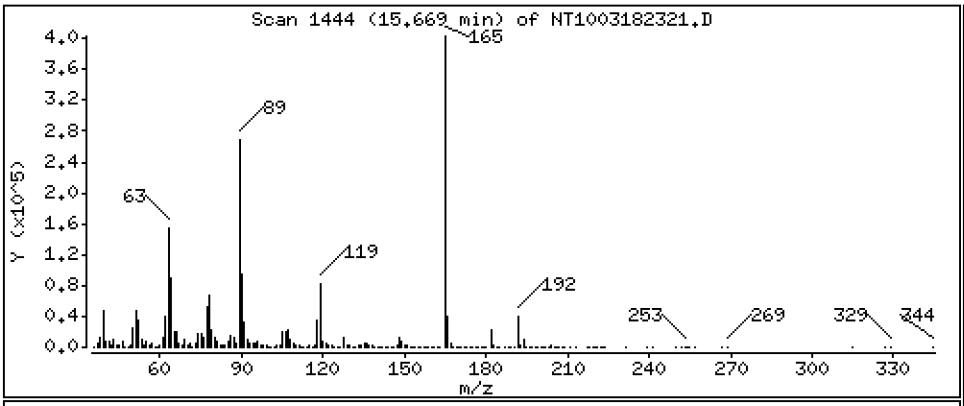
Operator: VTS

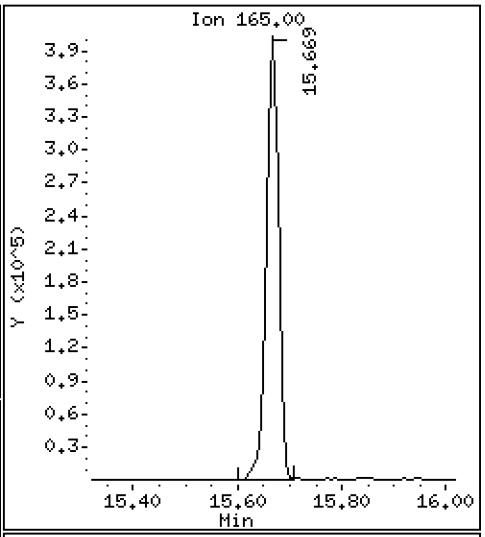
Column phase: ZB-5msi

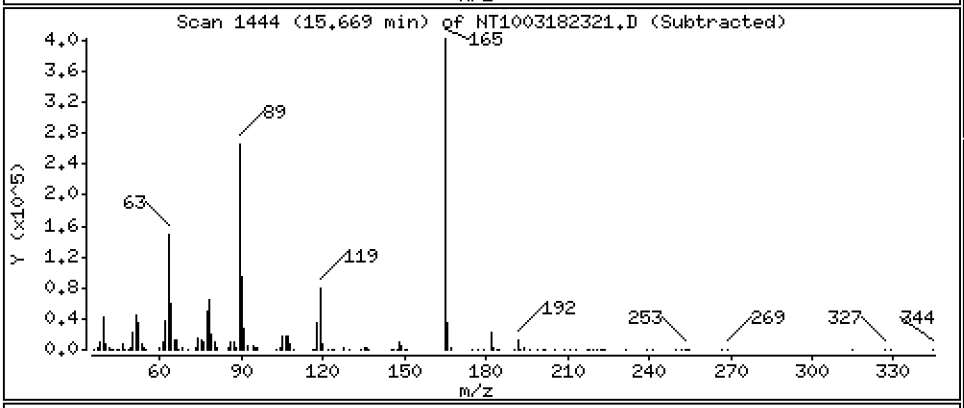
Column diameter: 0.25

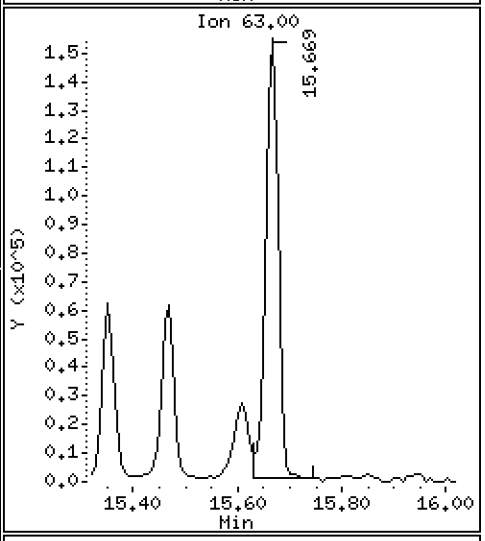
48 2,4-Dinitrotoluene

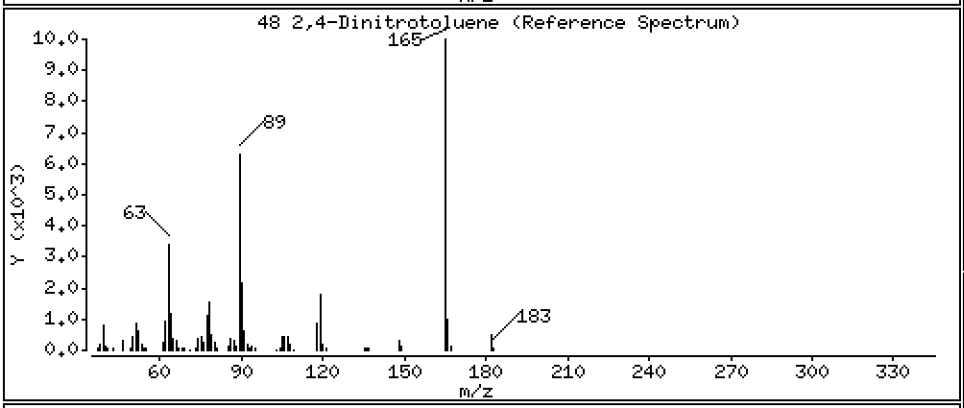
Concentration: 12.95 ug/mL

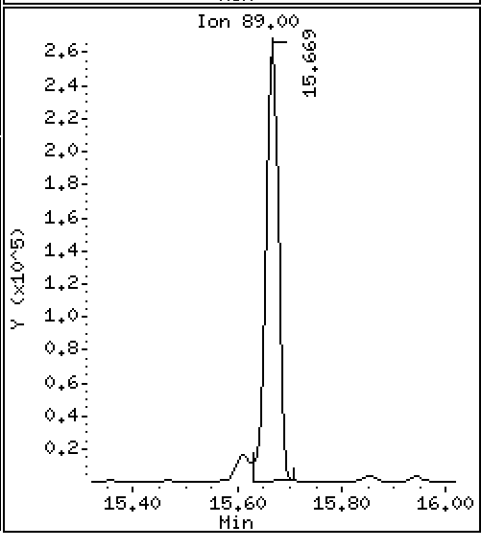


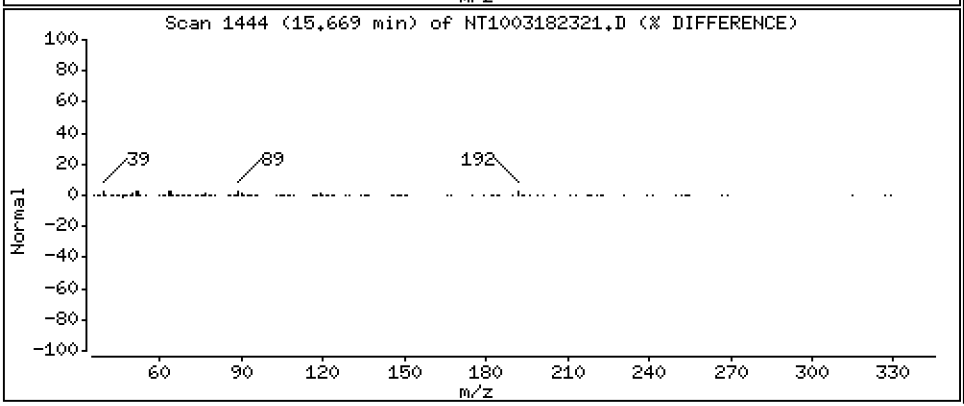












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

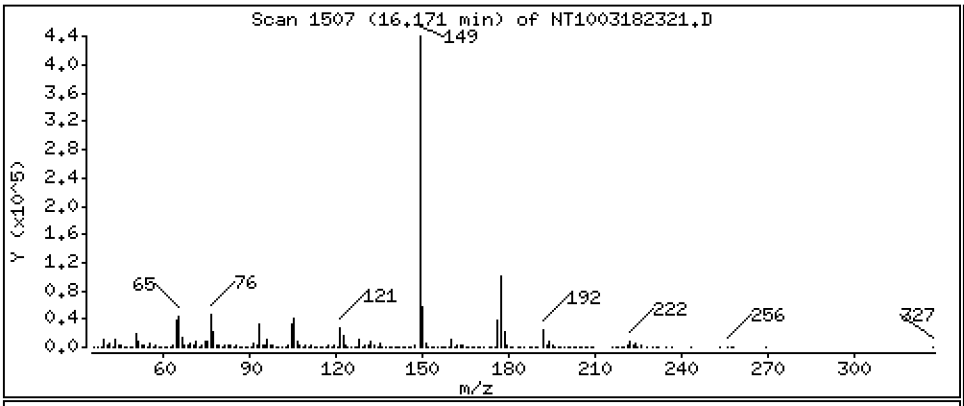
Operator: VTS

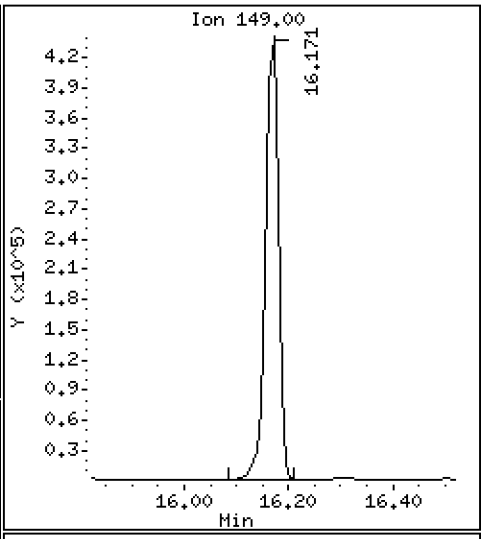
Column phase: ZB-5msi

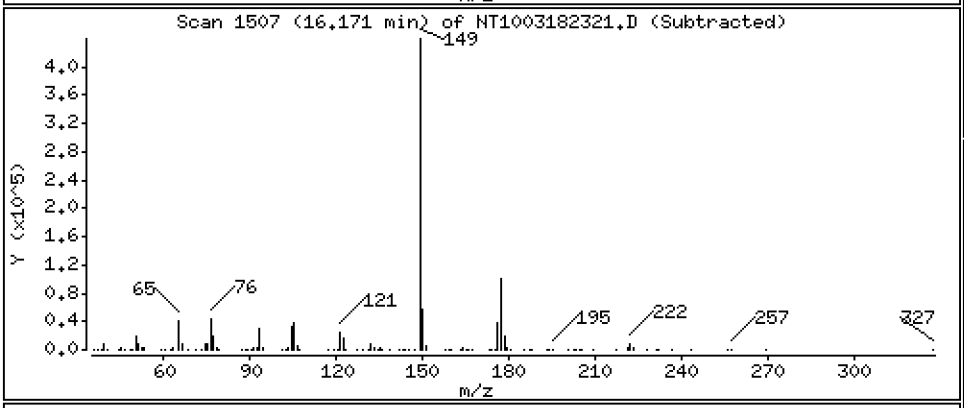
Column diameter: 0.25

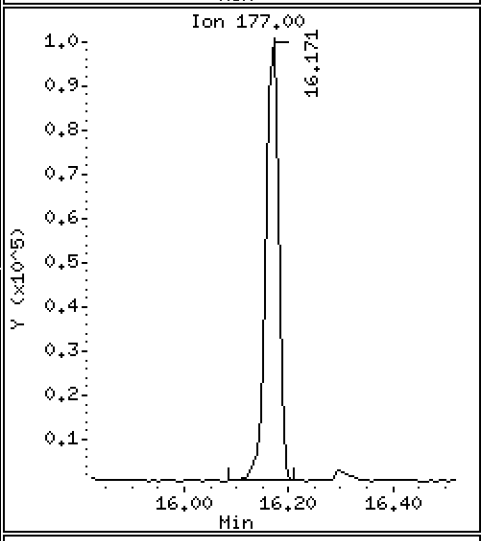
50 Diethylphthalate

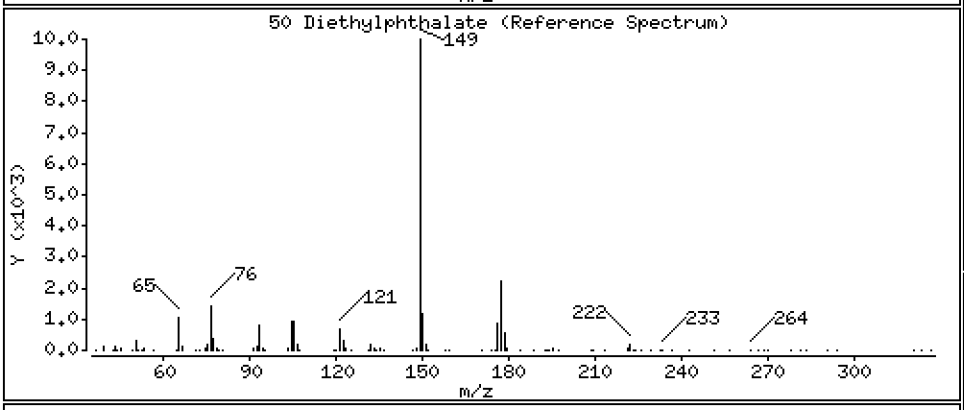
Concentration: 5.577 ug/mL

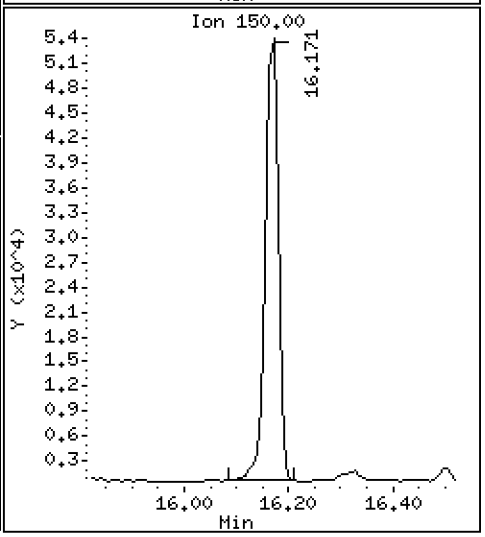


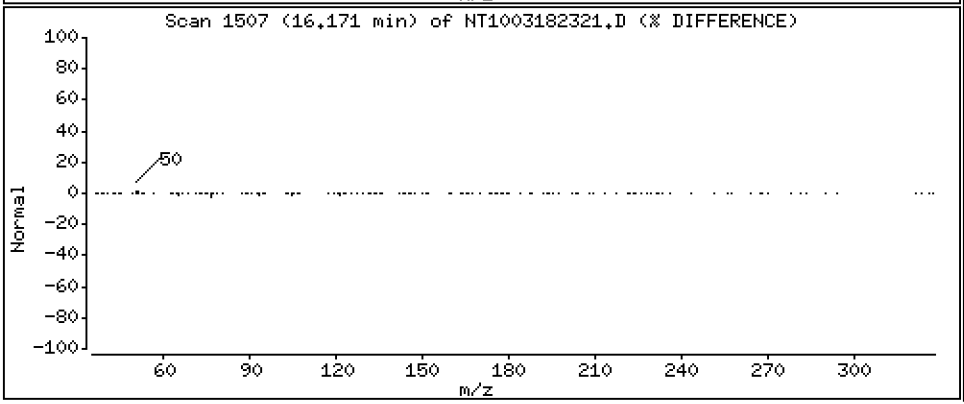












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

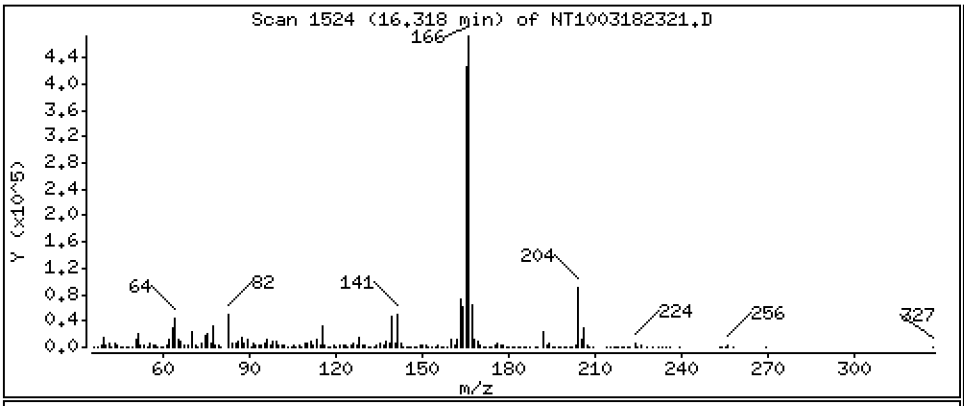
Operator: VTS

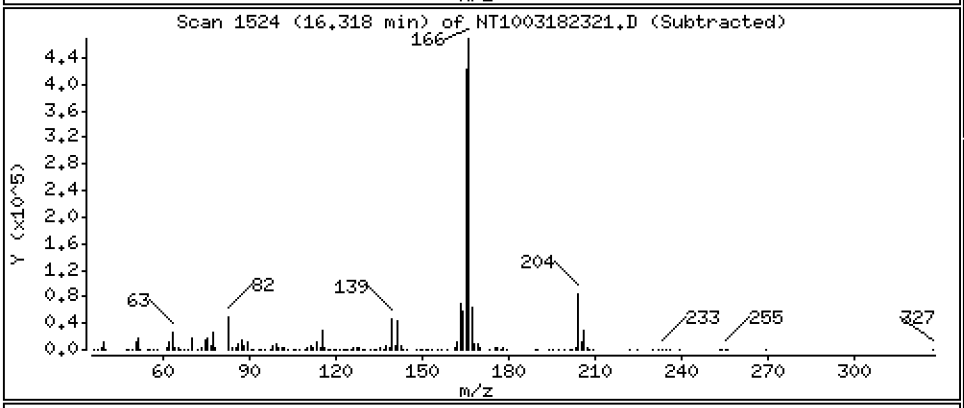
Column phase: ZB-5msi

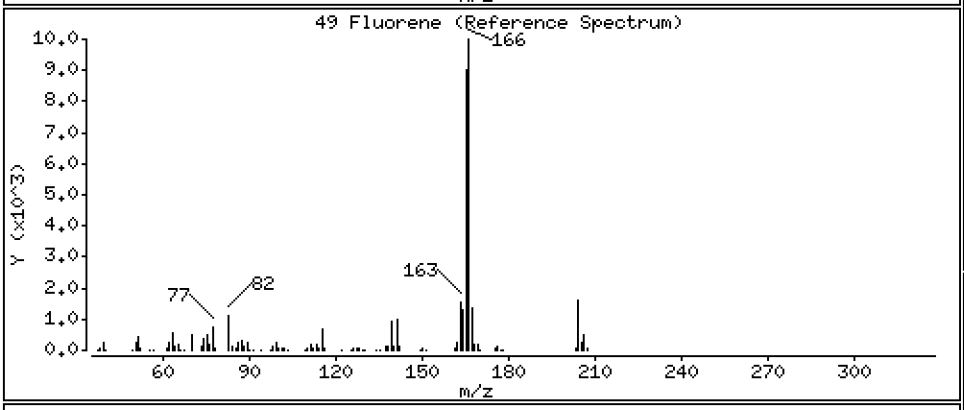
Column diameter: 0.25

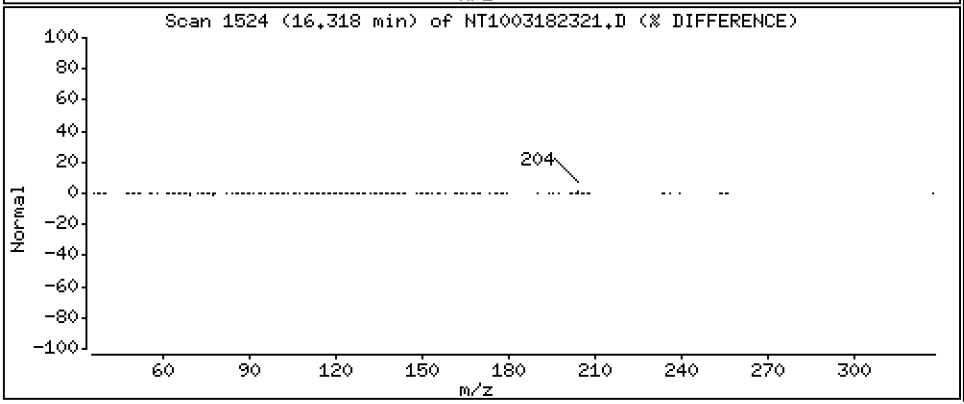
49 Fluorene

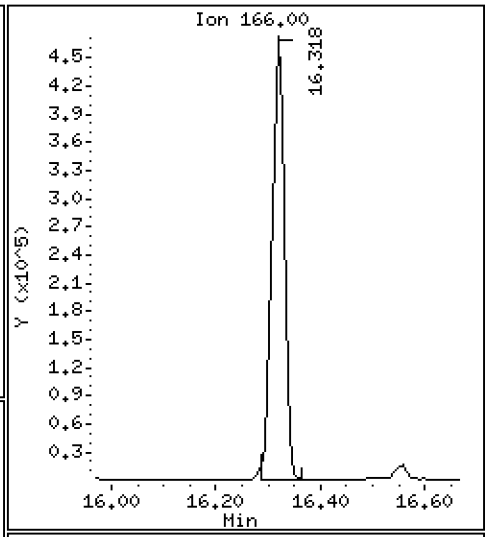
Concentration: 3.975 ug/mL

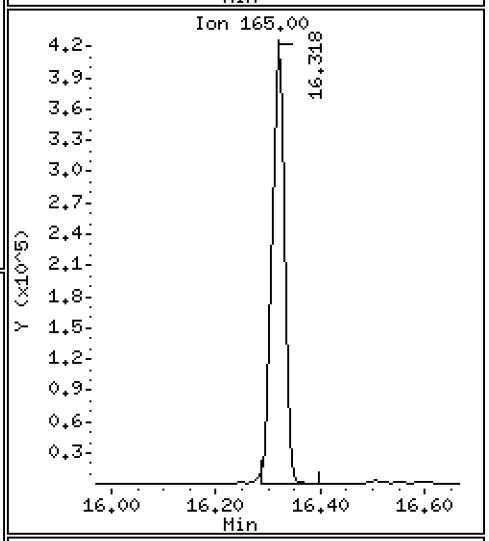


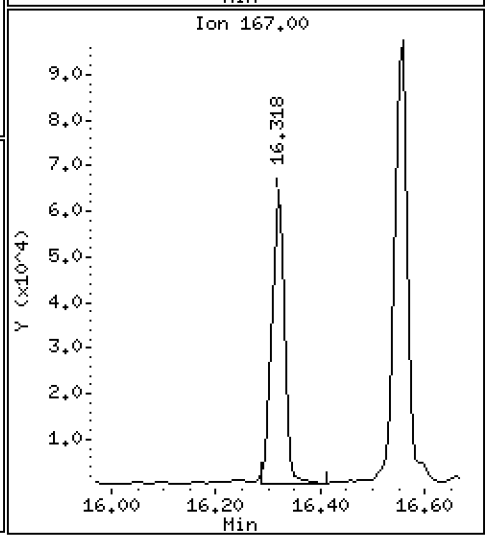












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

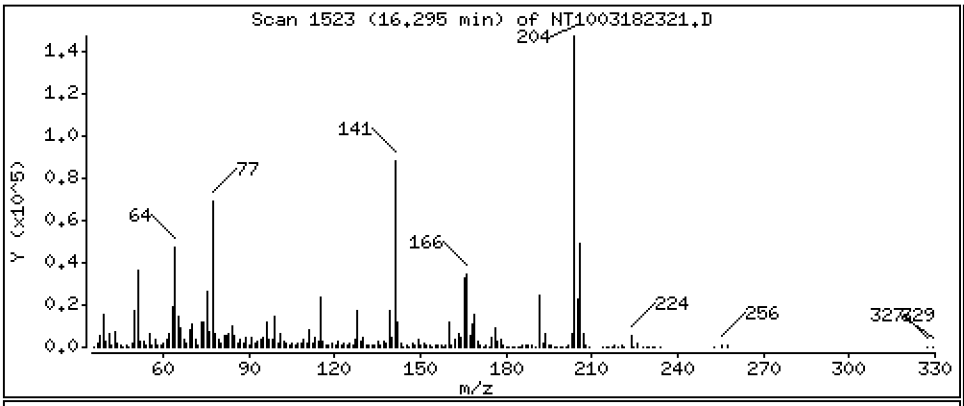
Operator: VTS

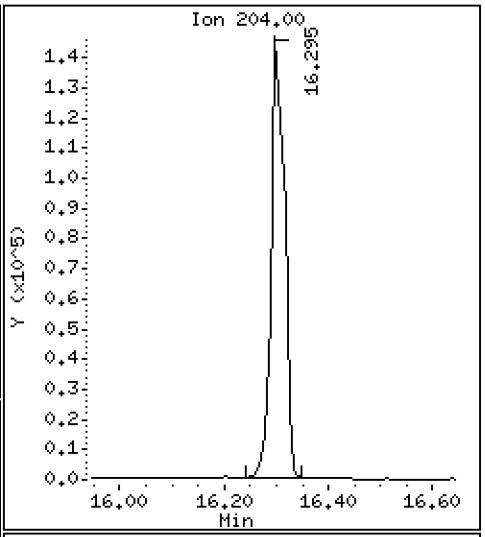
Column phase: ZB-5msi

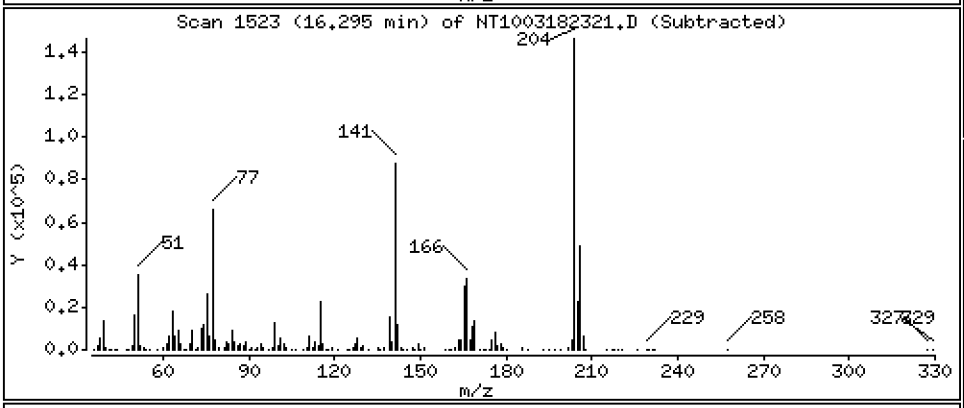
Column diameter: 0.25

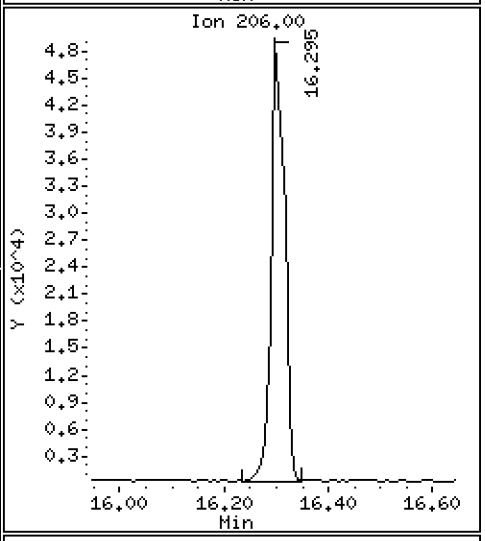
51 4-Chlorophenyl-phenylether

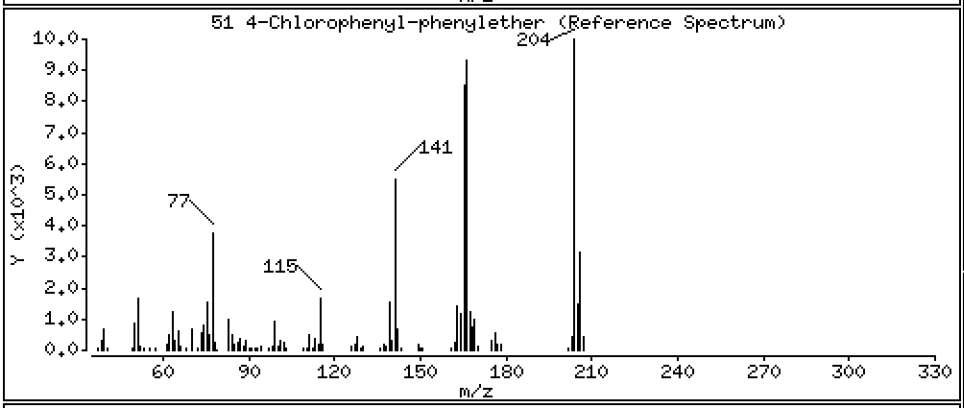
Concentration: 2.344 ug/mL

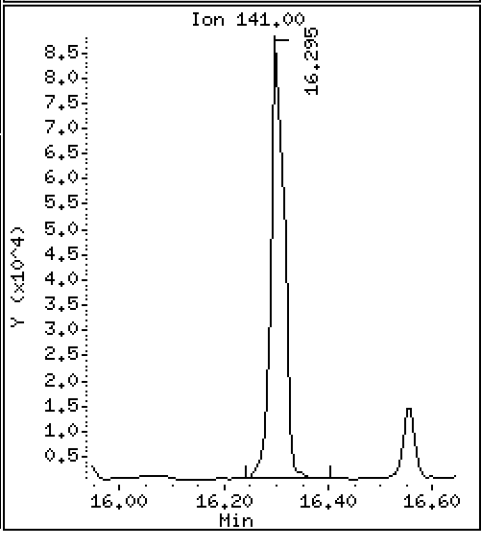


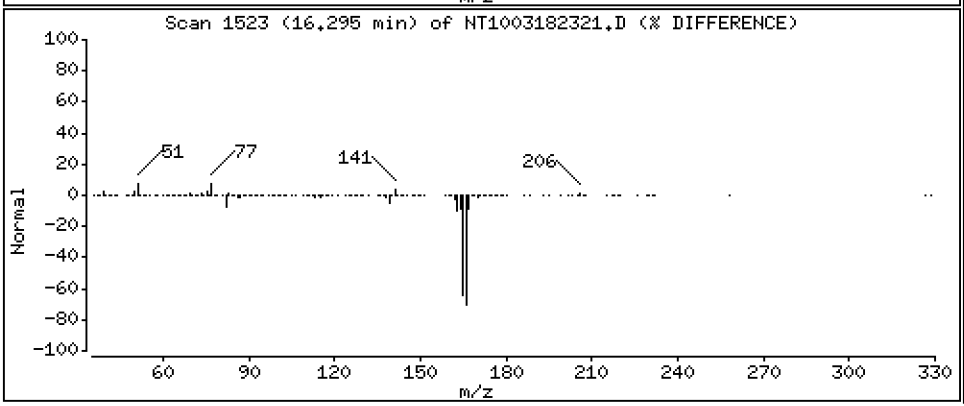












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

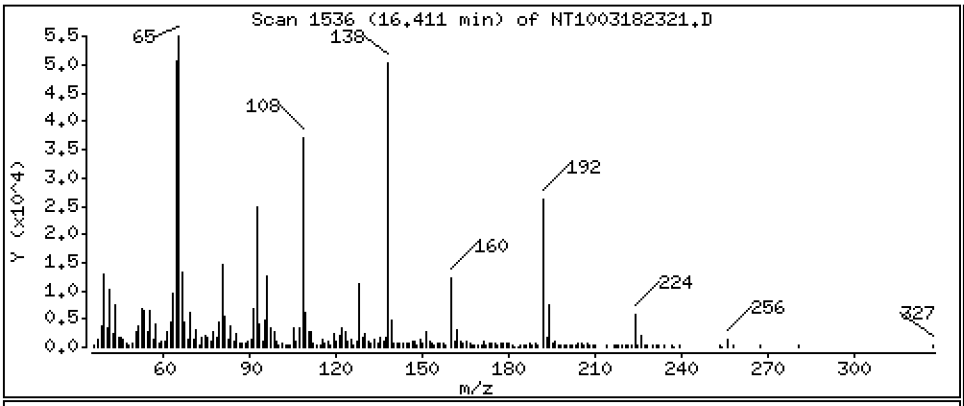
Operator: VTS

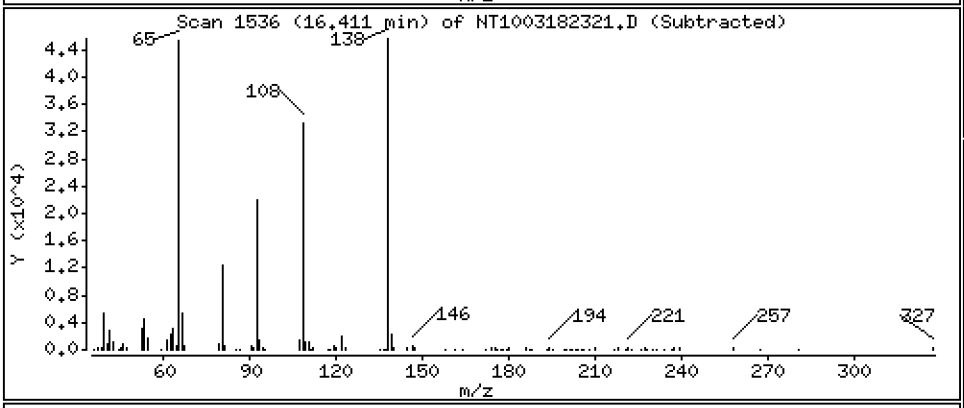
Column phase: ZB-5msi

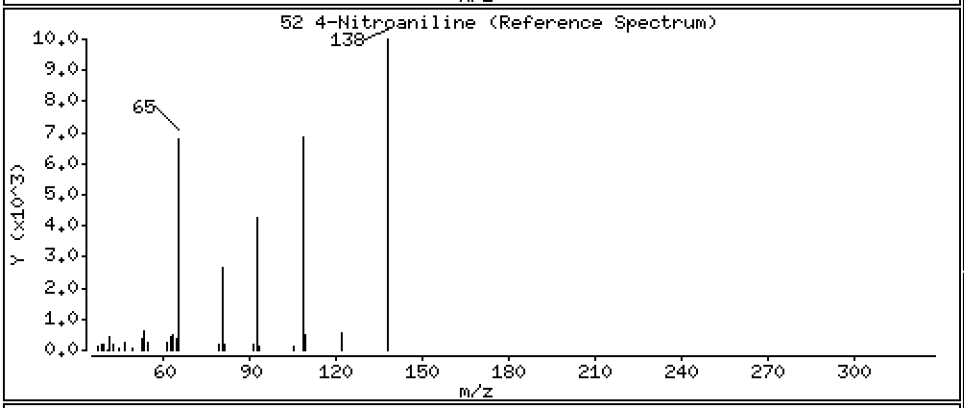
Column diameter: 0.25

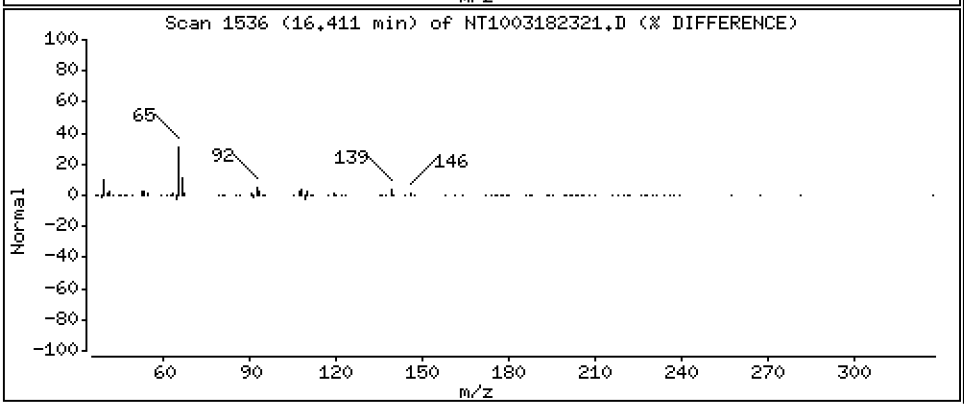
52 4-Nitroaniline

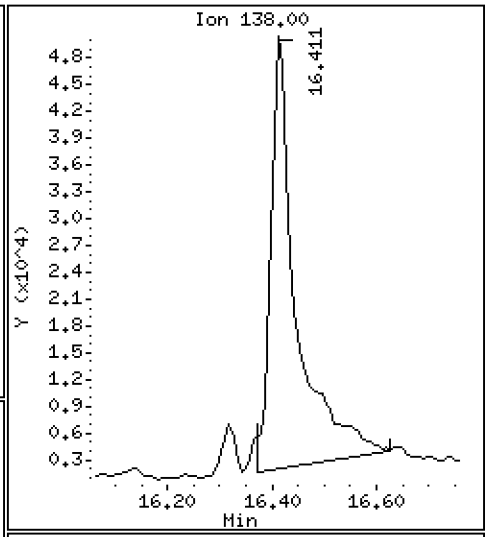
Concentration: 4.957 ug/mL

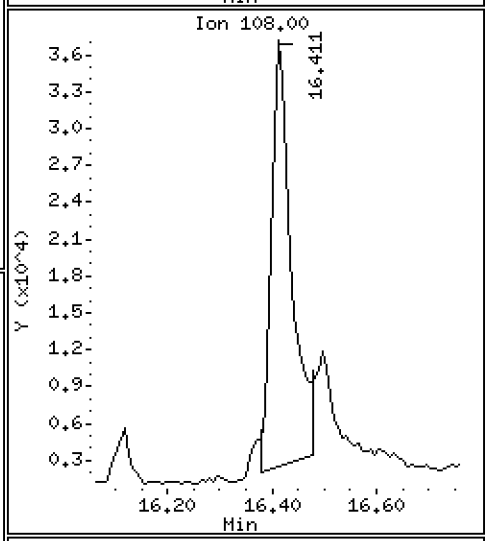


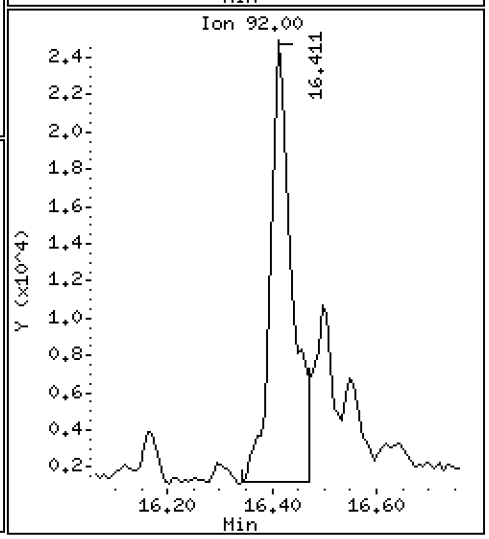












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

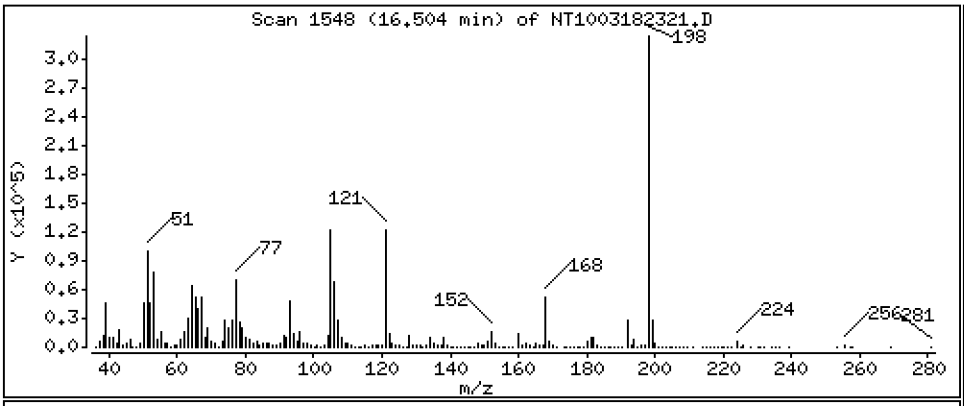
Operator: VTS

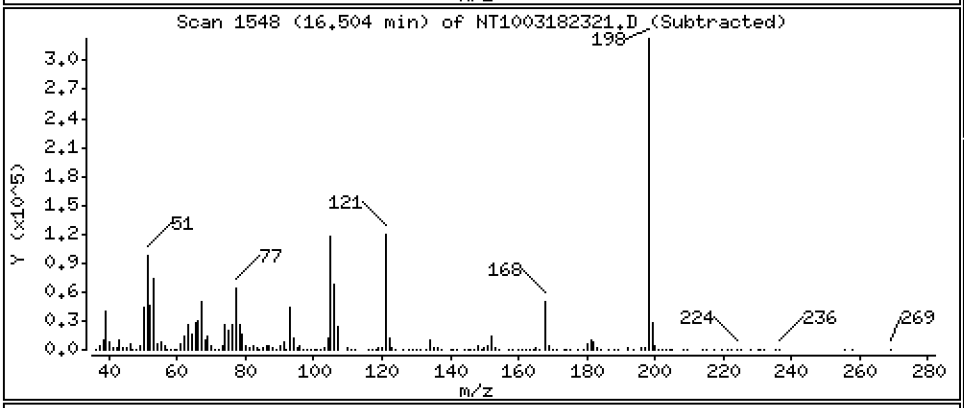
Column phase: ZB-5msi

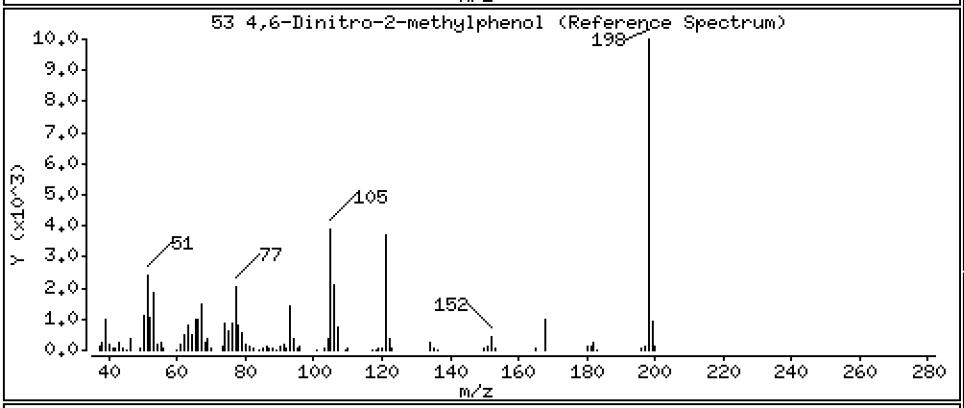
Column diameter: 0.25

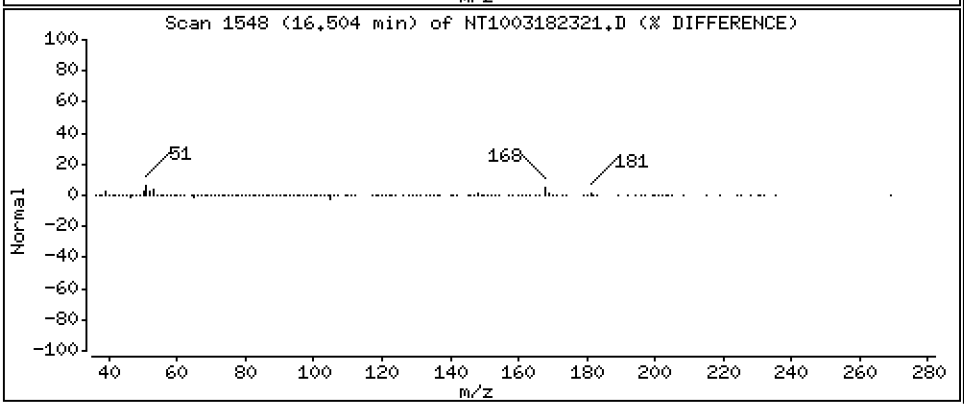
53 4,6-Dinitro-2-methylphenol

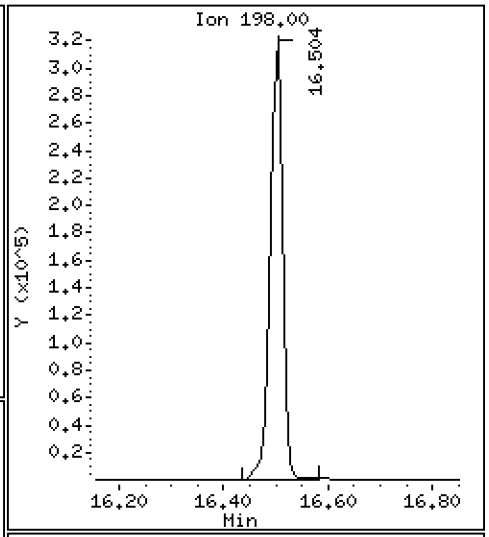
Concentration: 18.64 ug/mL

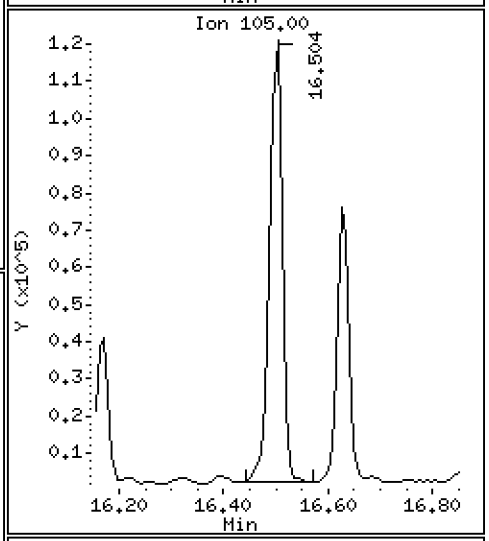


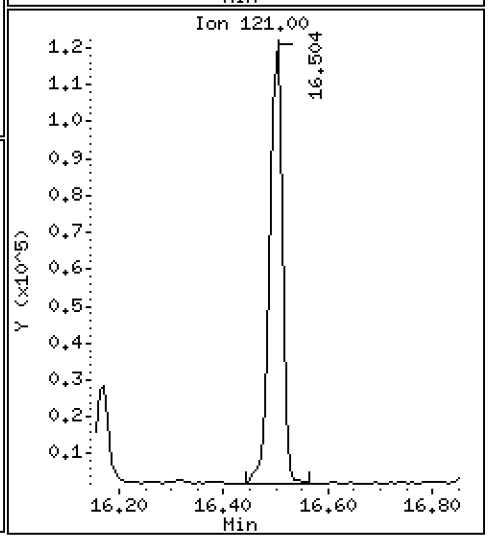












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

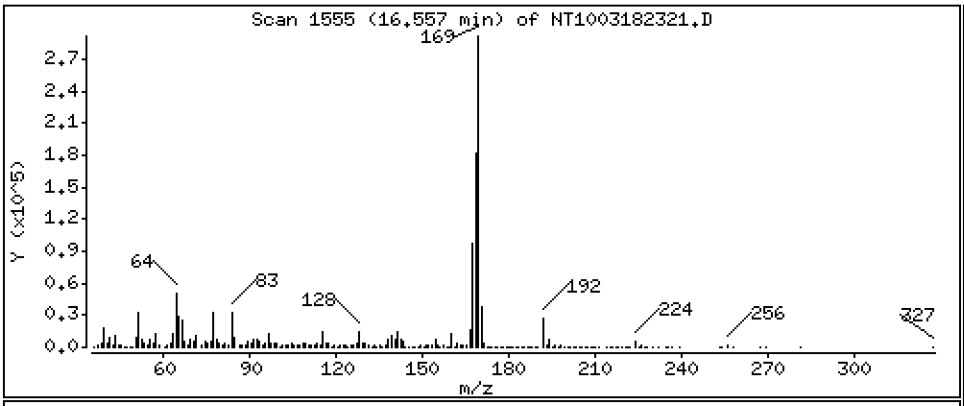
Operator: VTS

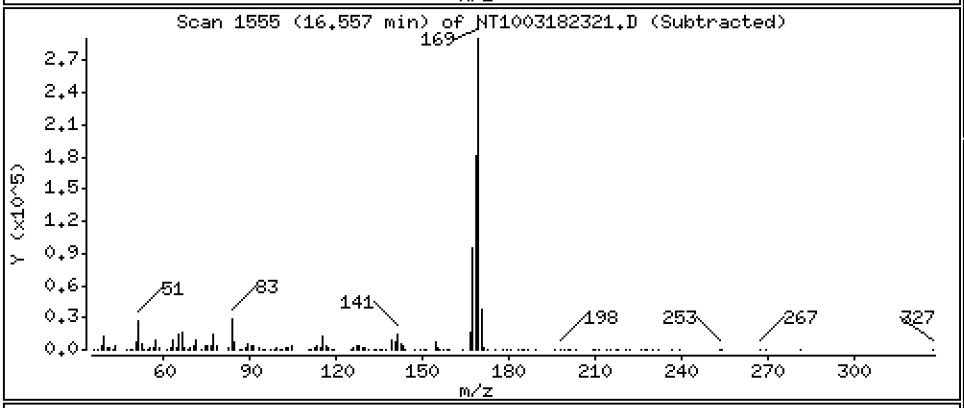
Column phase: ZB-5msi

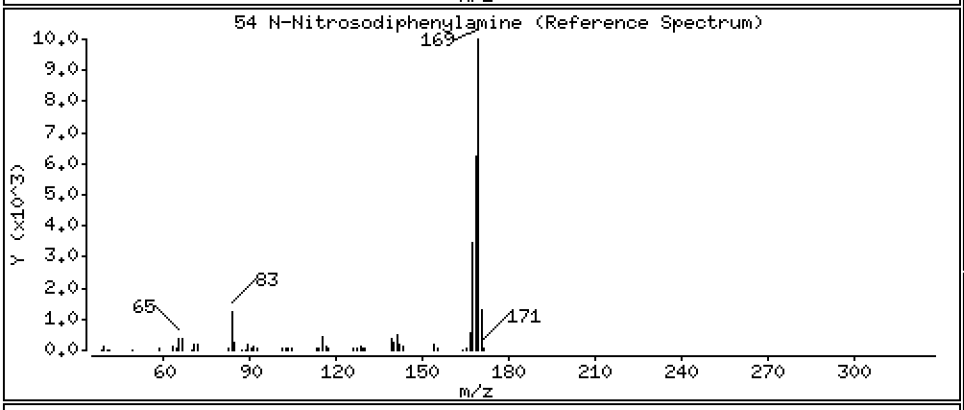
Column diameter: 0.25

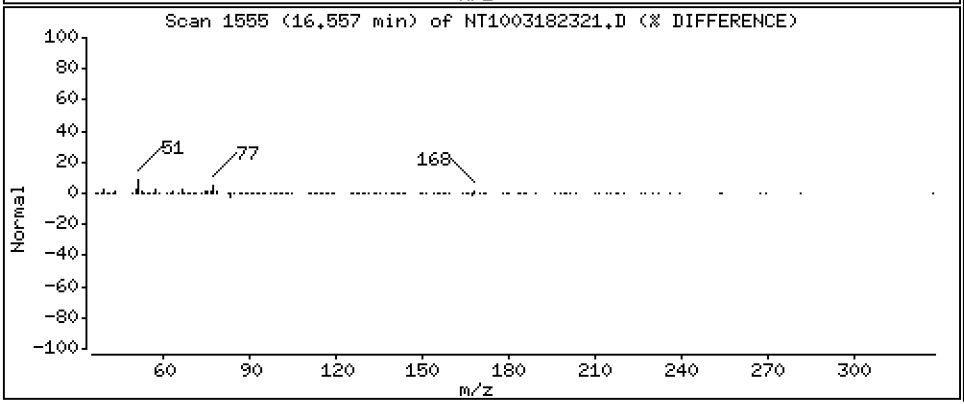
54 N-Nitrosodiphenylamine

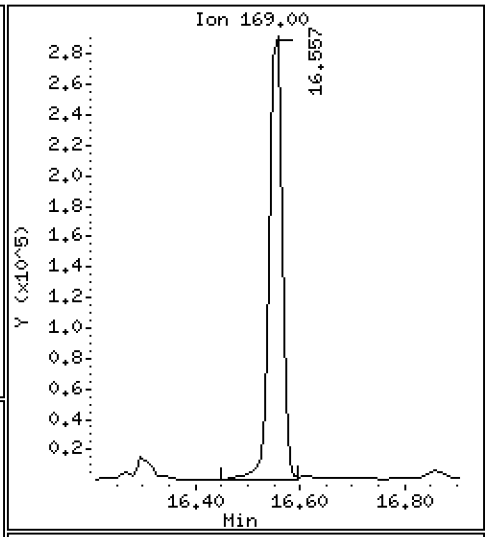
Concentration: 4.095 ug/mL

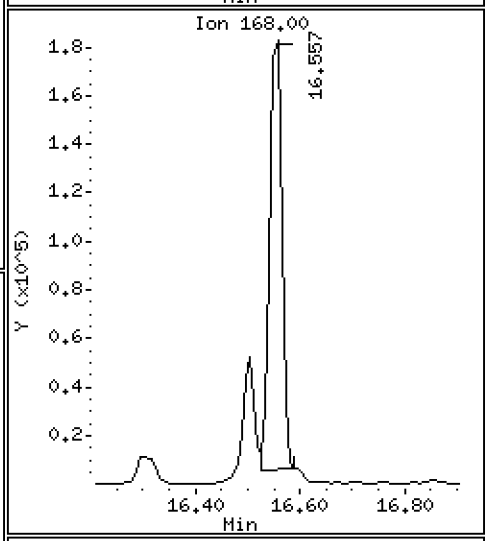


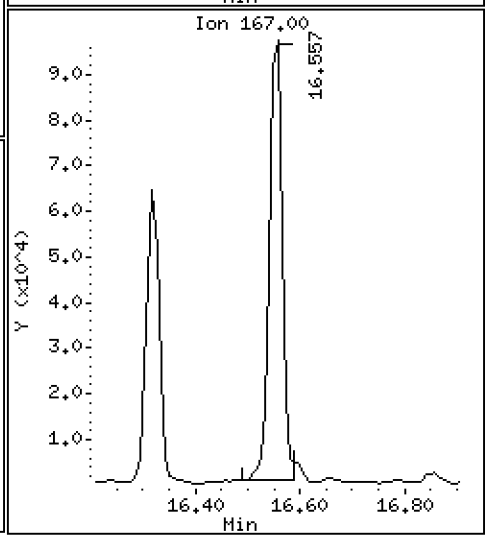












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

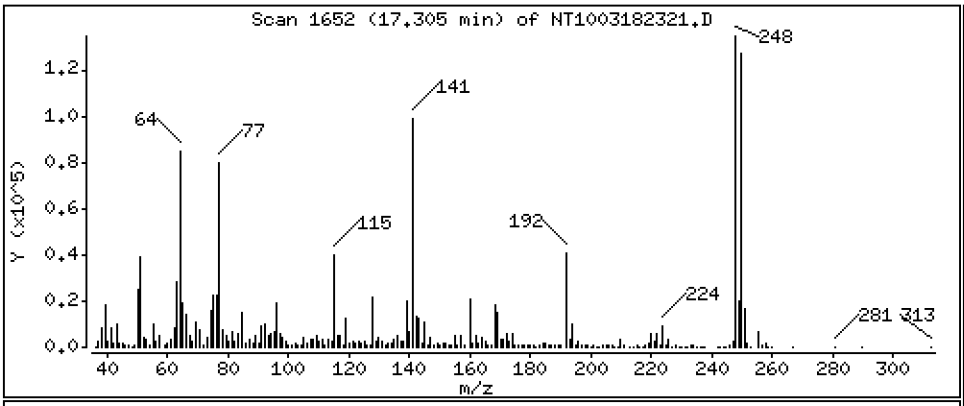
Operator: VTS

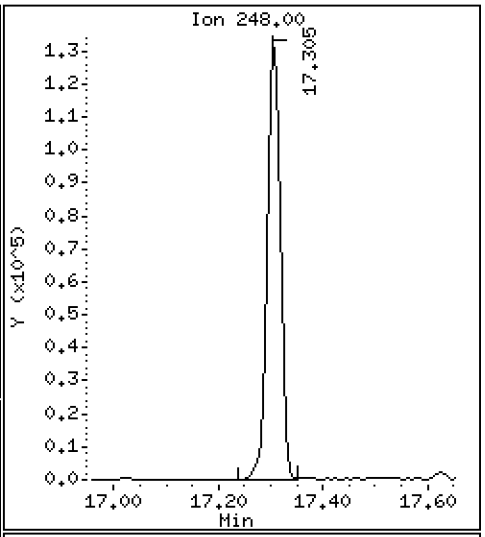
Column phase: ZB-5msi

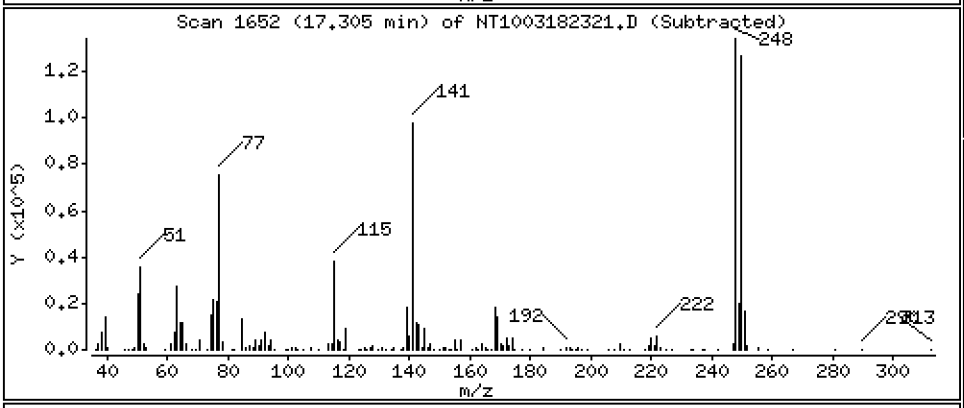
Column diameter: 0.25

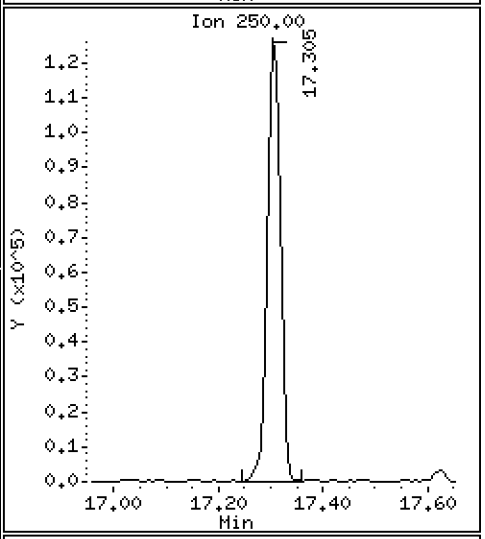
56 4-Bromophenyl-phenylether

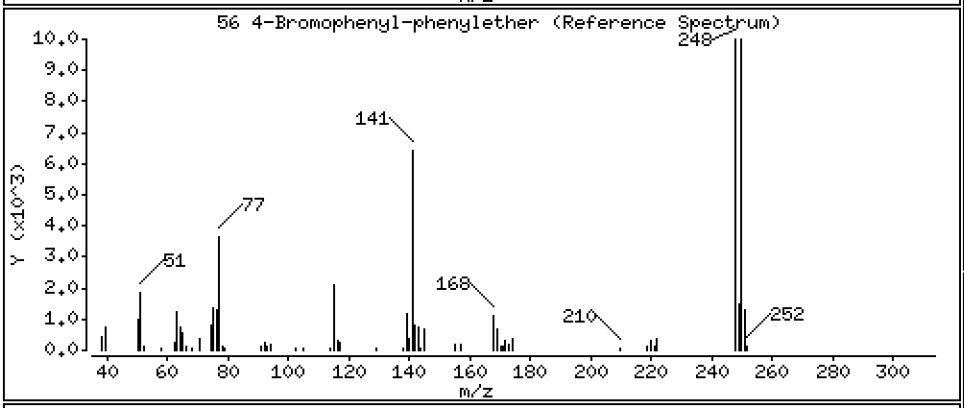
Concentration: 4.629 ug/mL

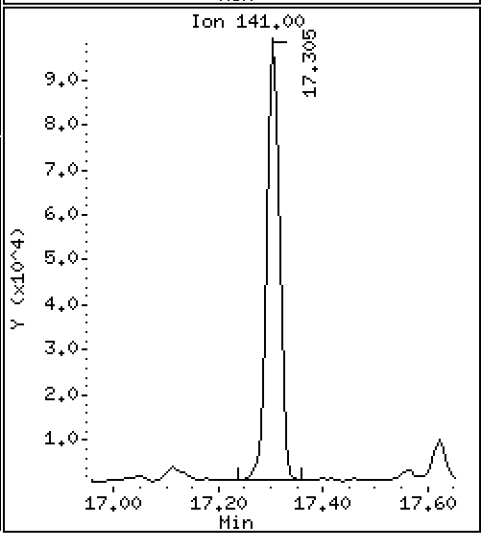


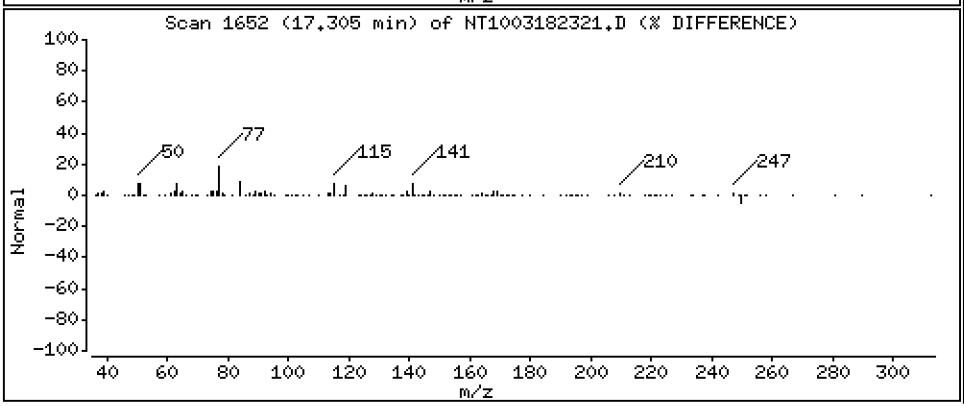












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

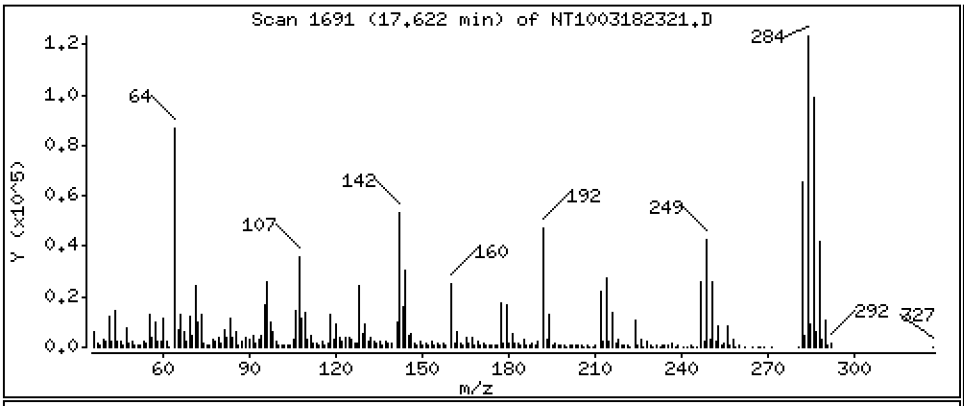
Operator: VTS

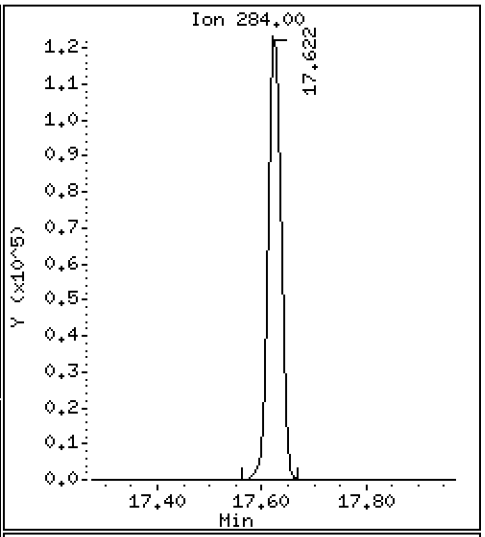
Column phase: ZB-5msi

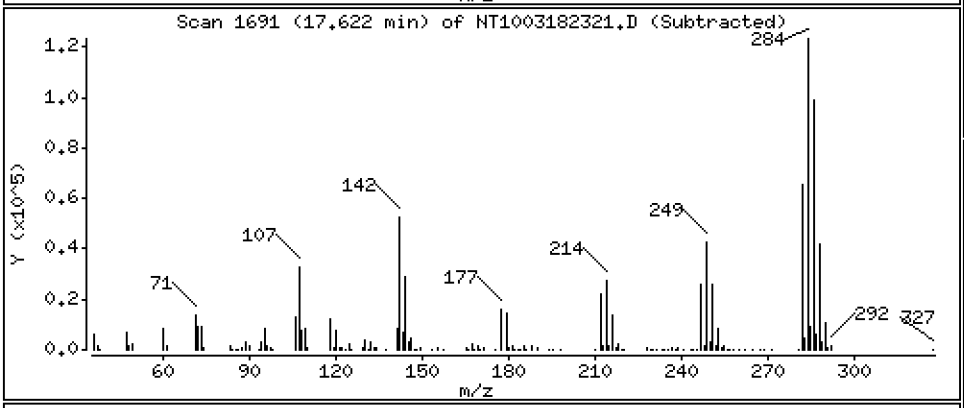
Column diameter: 0.25

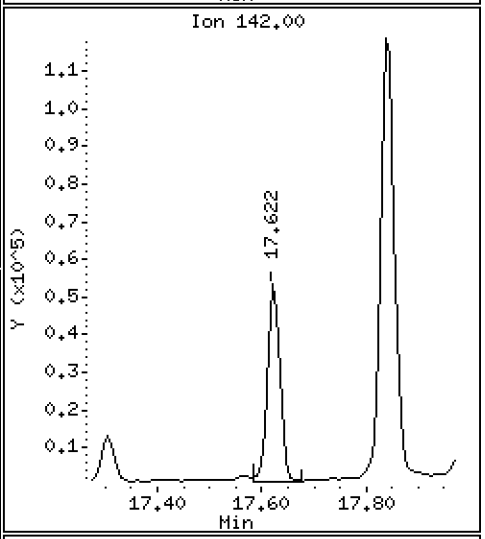
57 Hexachlorobenzene

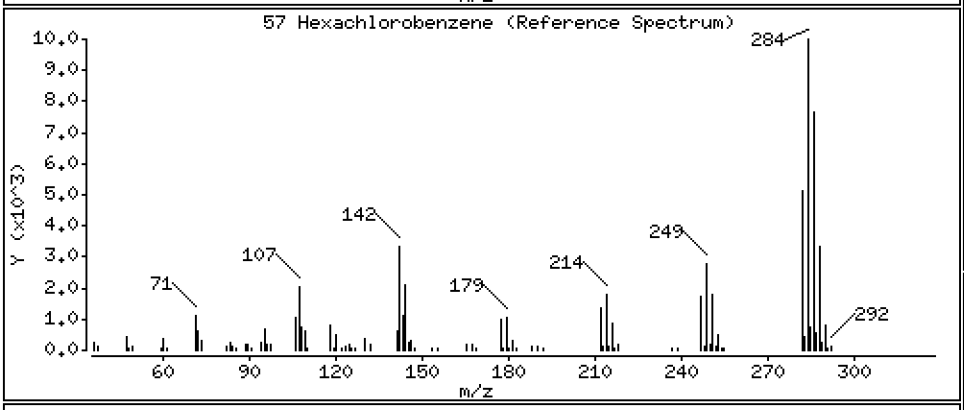
Concentration: 4.055 ug/mL

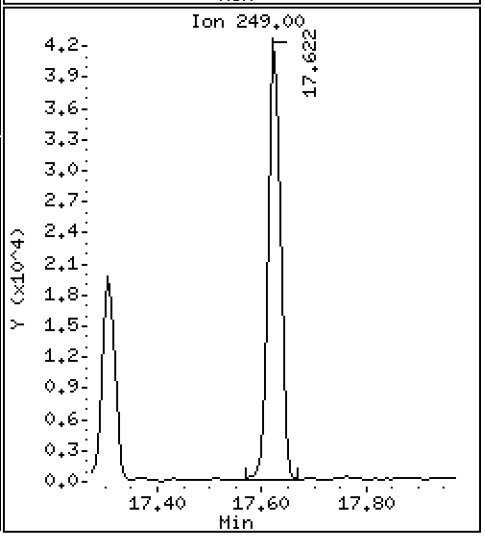


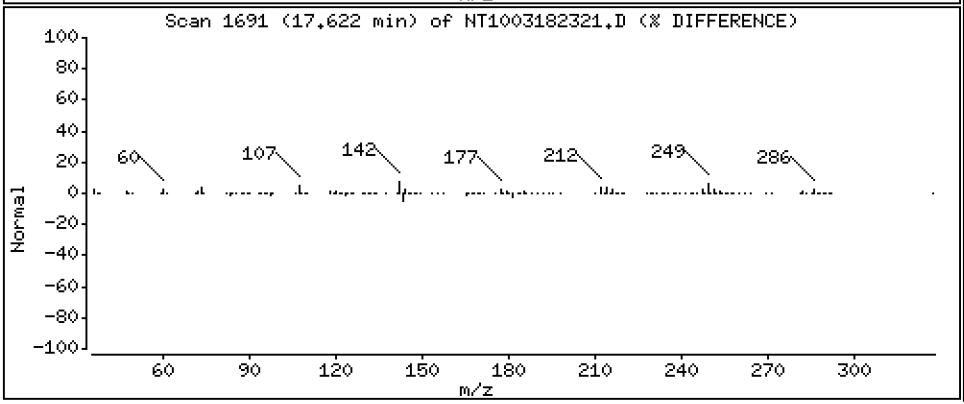












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

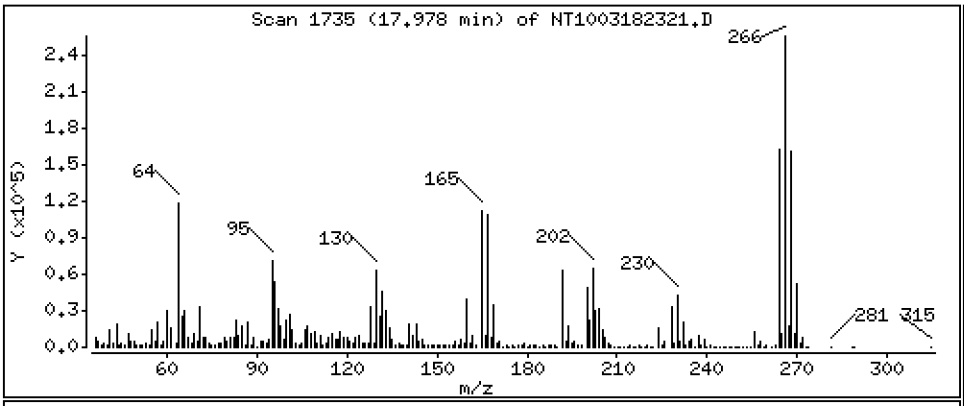
Operator: VTS

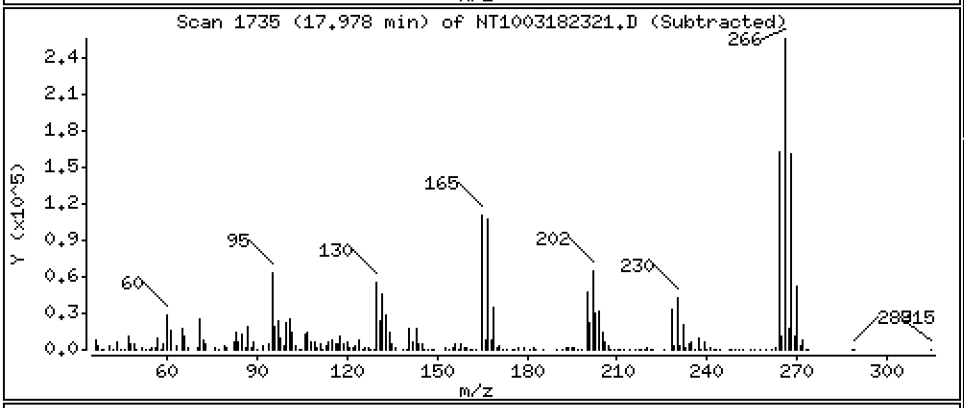
Column phase: ZB-5msi

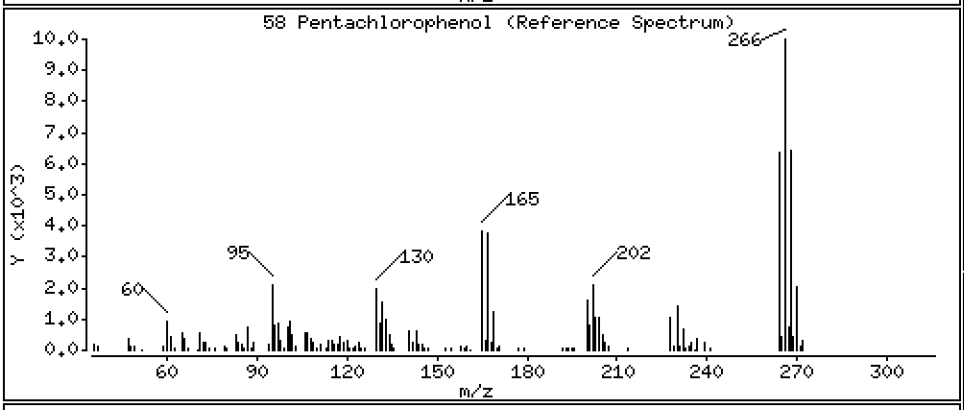
Column diameter: 0.25

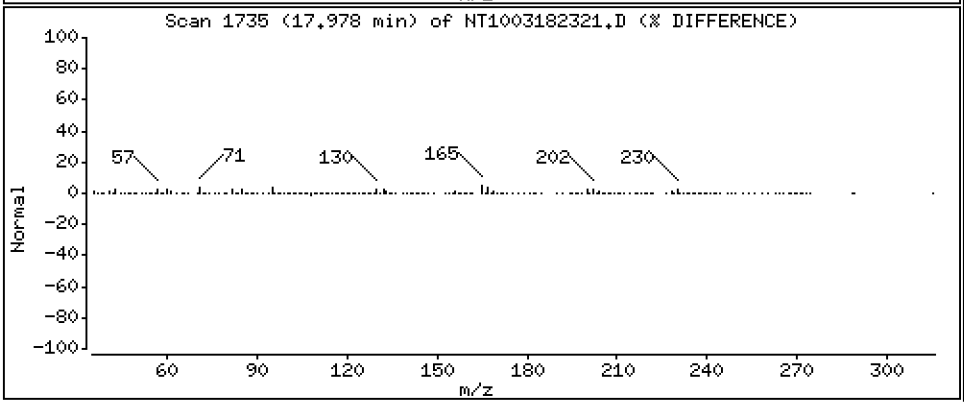
58 Pentachlorophenol

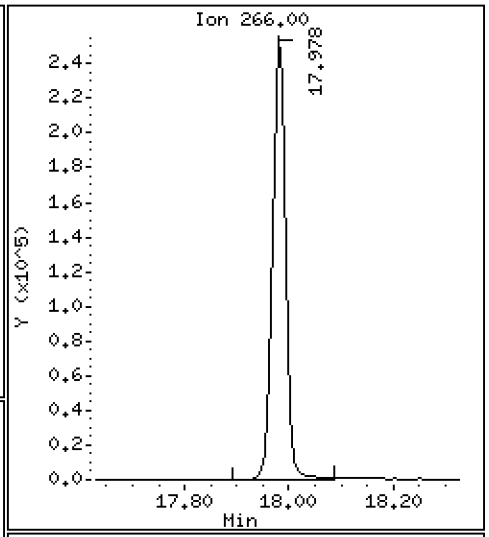
Concentration: 14.85 ug/mL

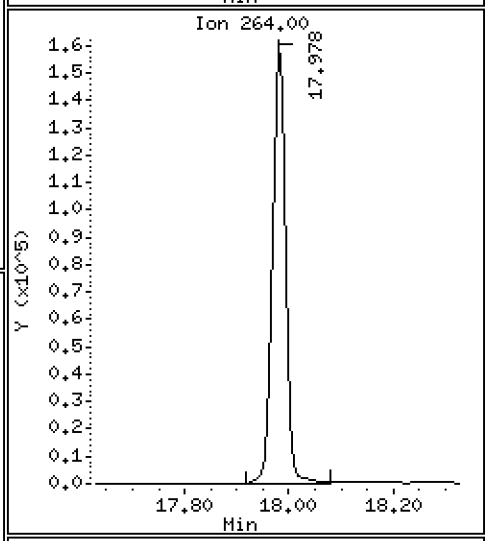


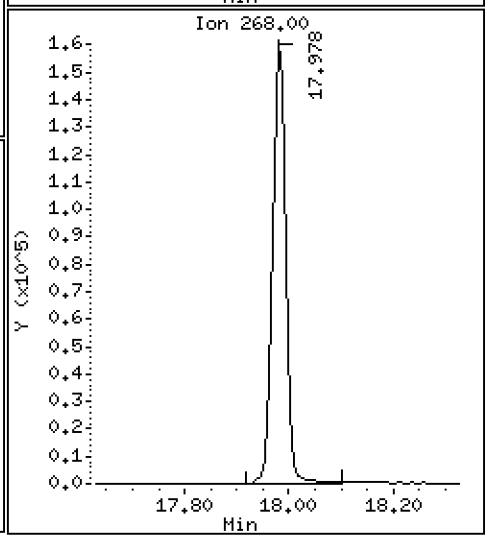












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

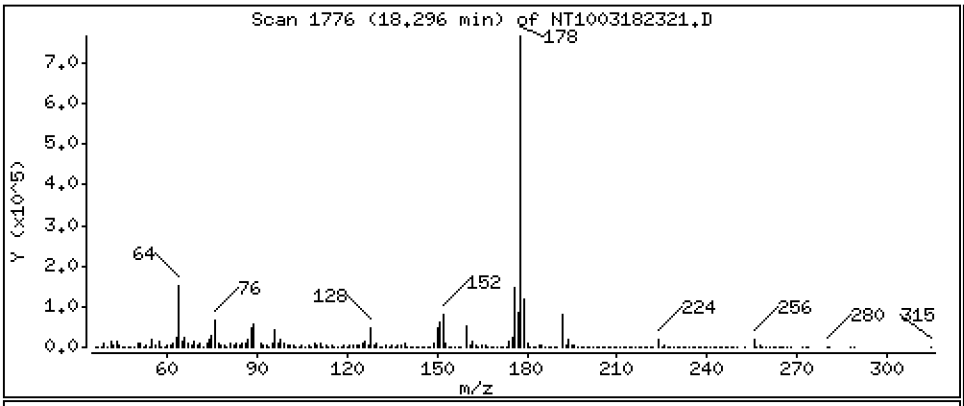
Operator: VTS

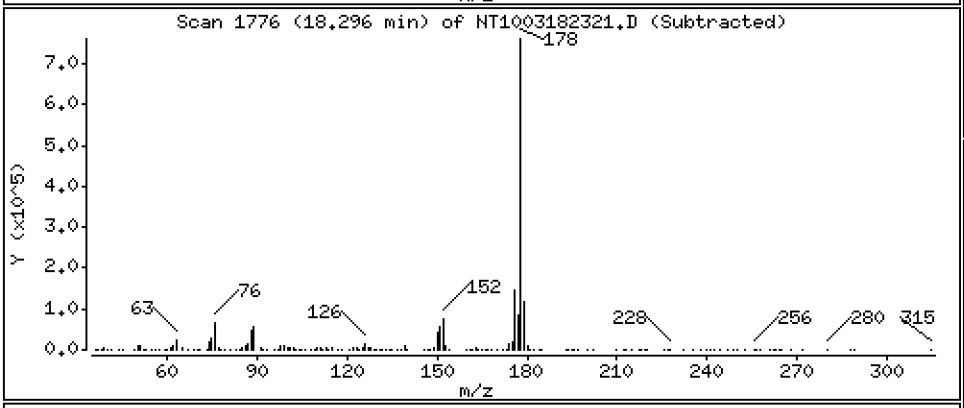
Column phase: ZB-5msi

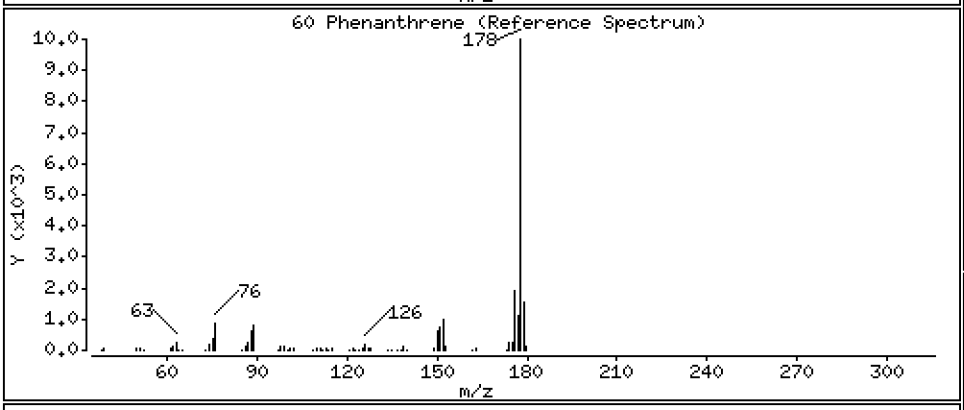
Column diameter: 0.25

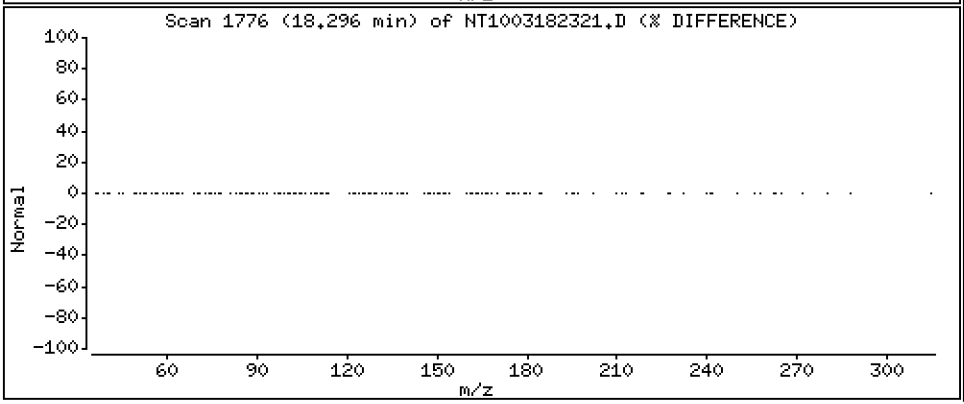
60 Phenanthrene

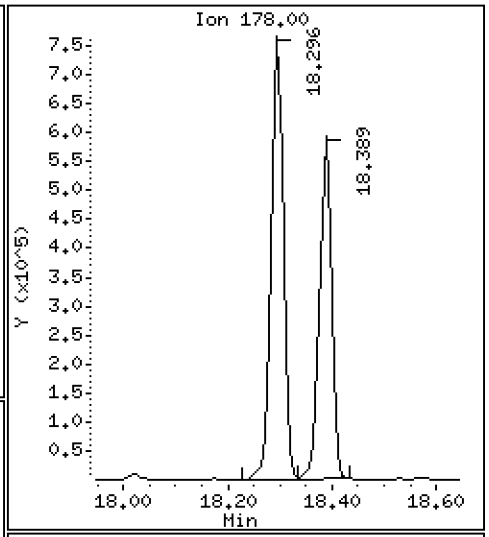
Concentration: 4.948 ug/mL

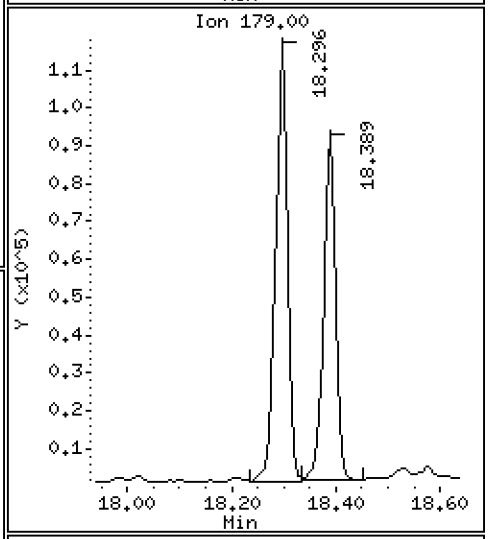


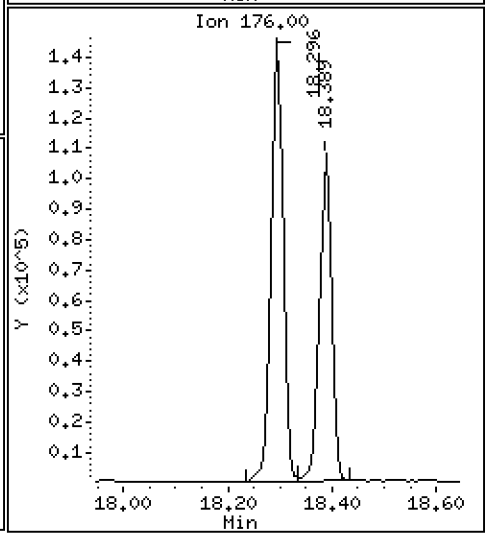












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

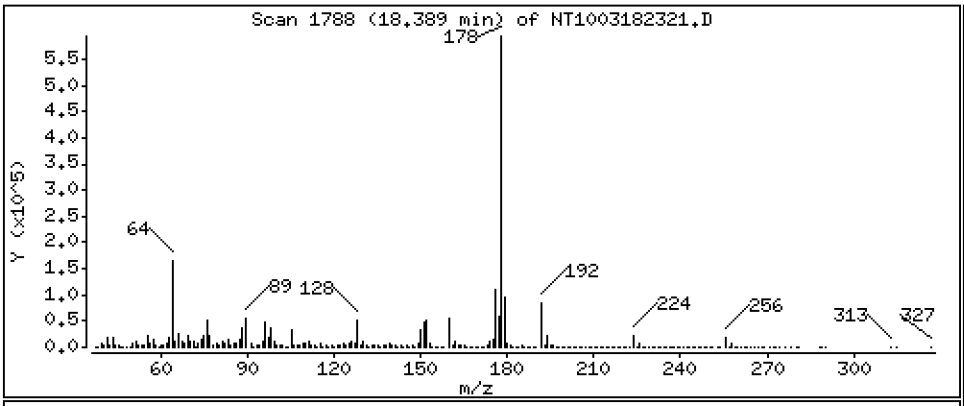
Operator: VTS

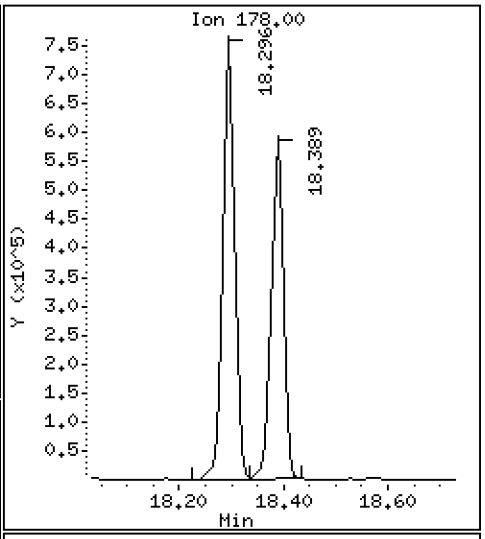
Column phase: ZB-5msi

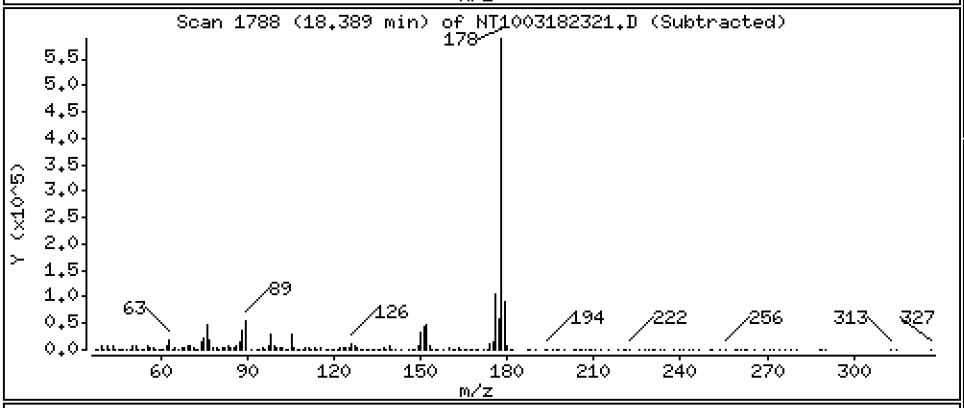
Column diameter: 0.25

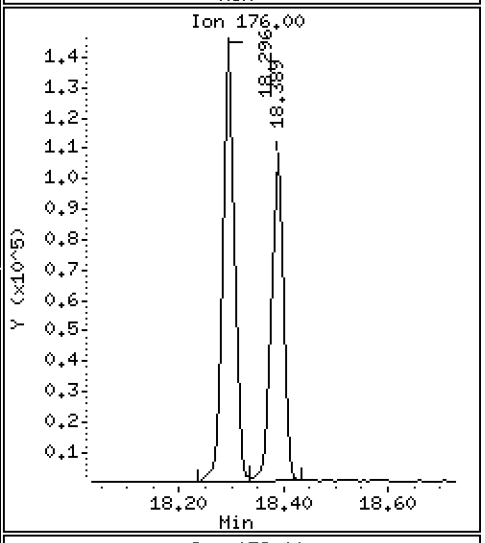
61 Anthracene

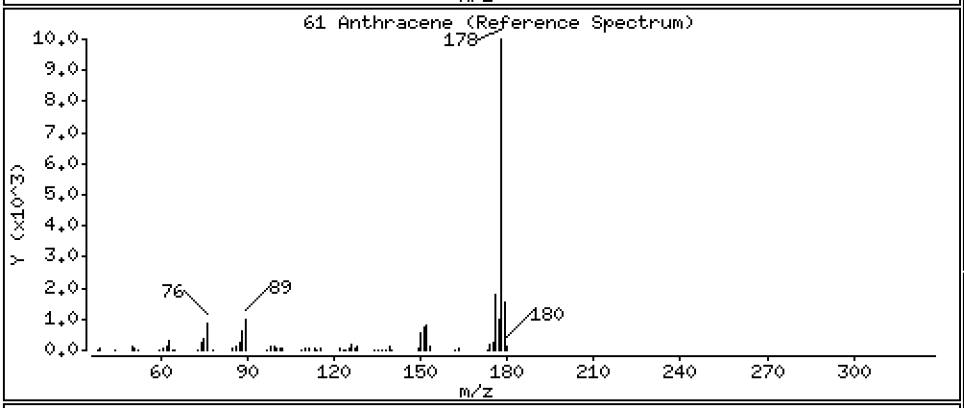
Concentration: 4.106 ug/mL

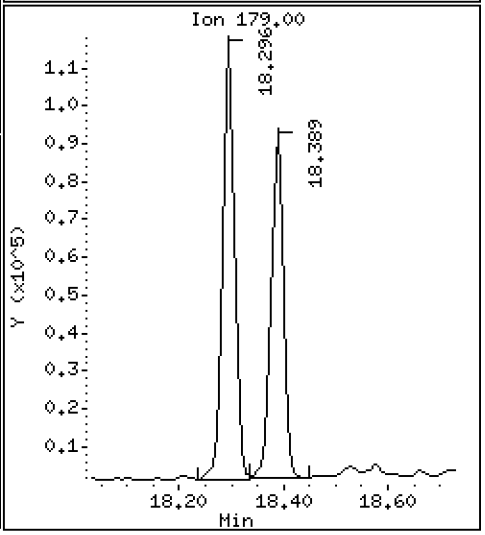


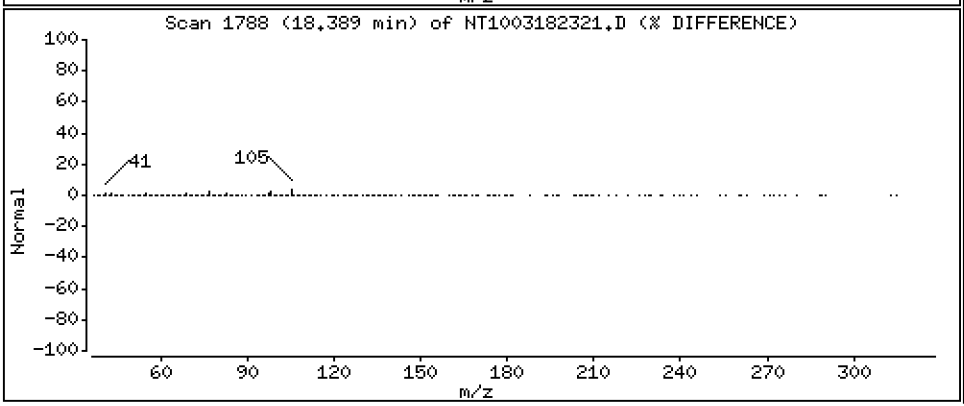












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

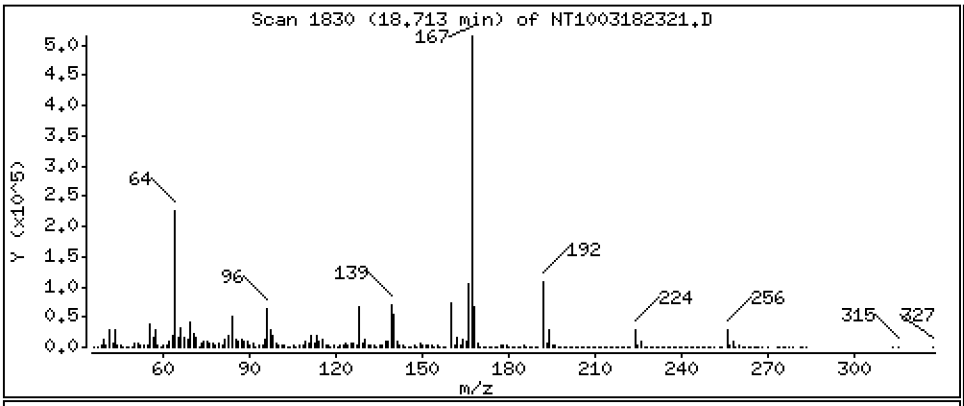
Operator: VTS

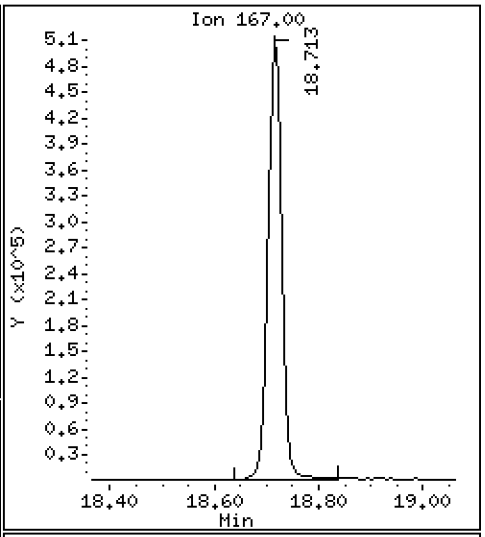
Column phase: ZB-5msi

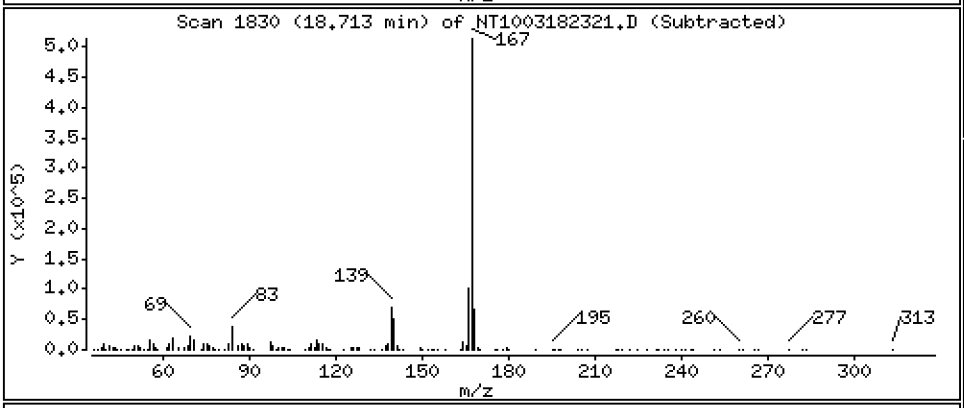
Column diameter: 0.25

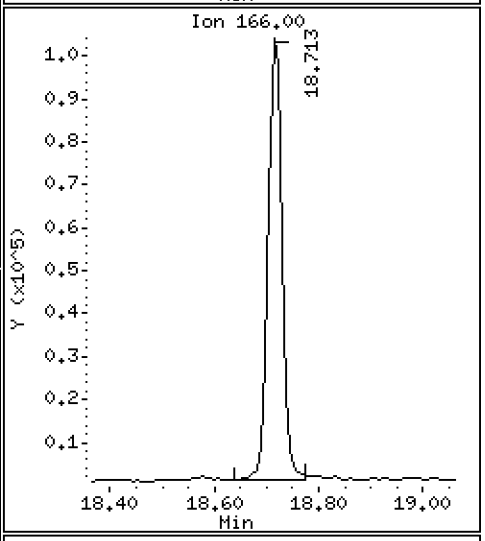
62 Carbazole

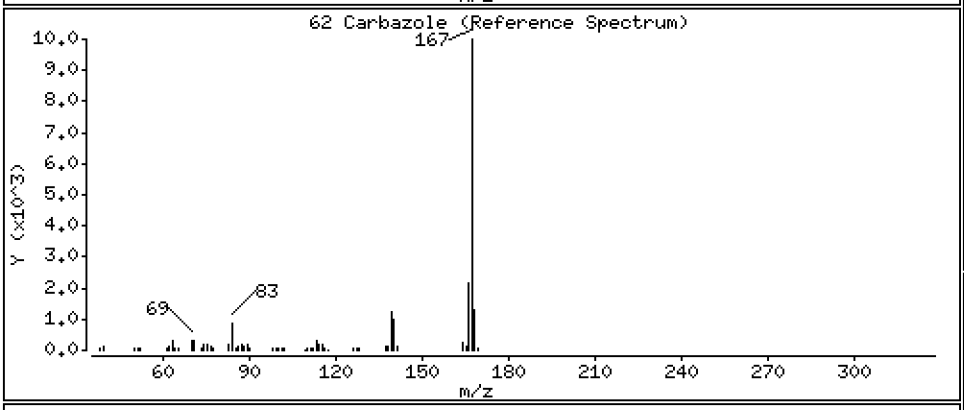
Concentration: 4.414 ug/mL

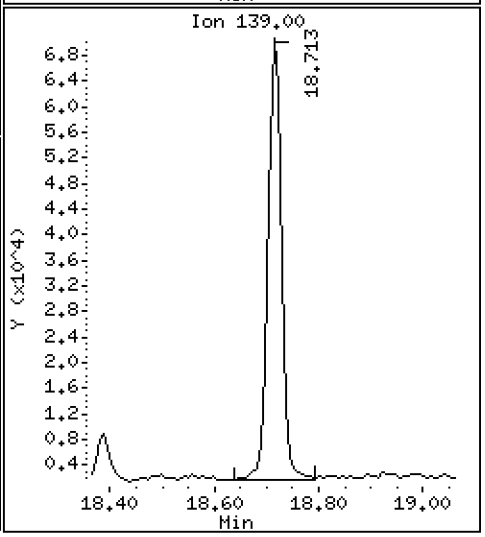


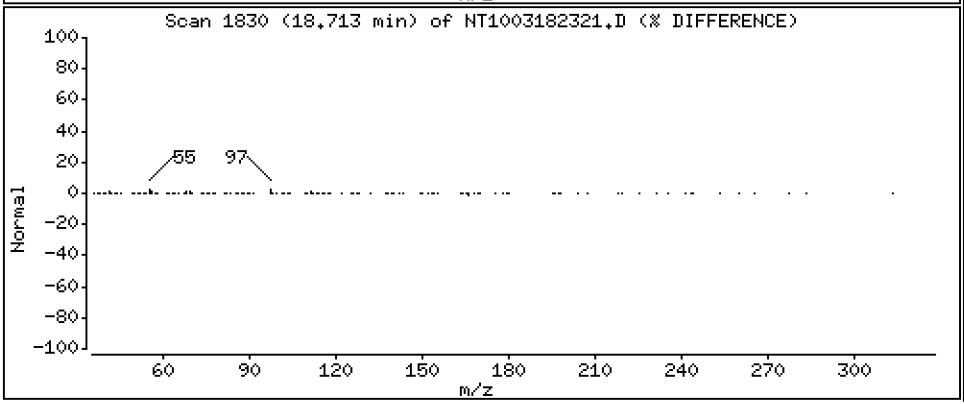












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

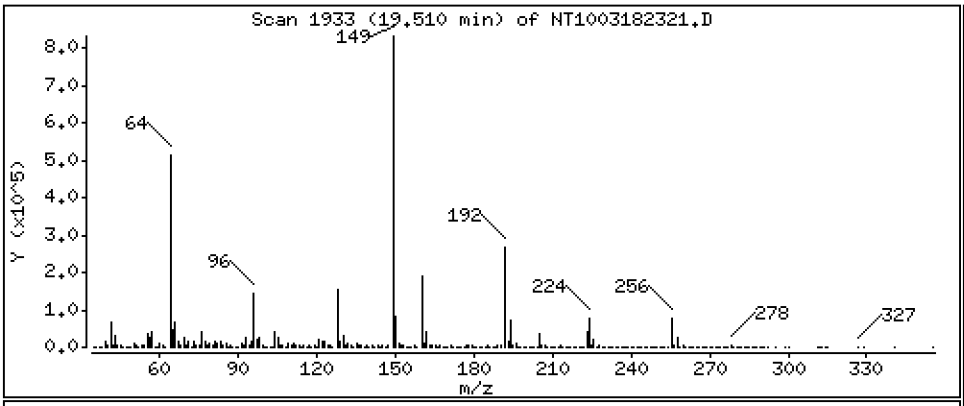
Operator: VTS

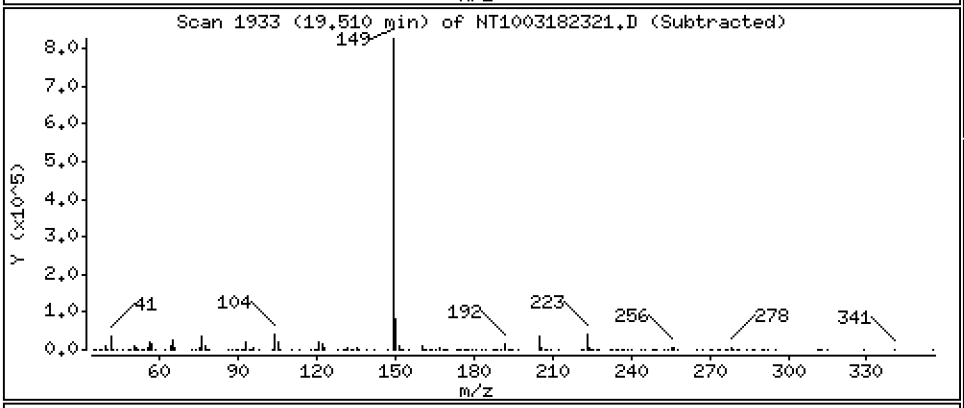
Column phase: ZB-5msi

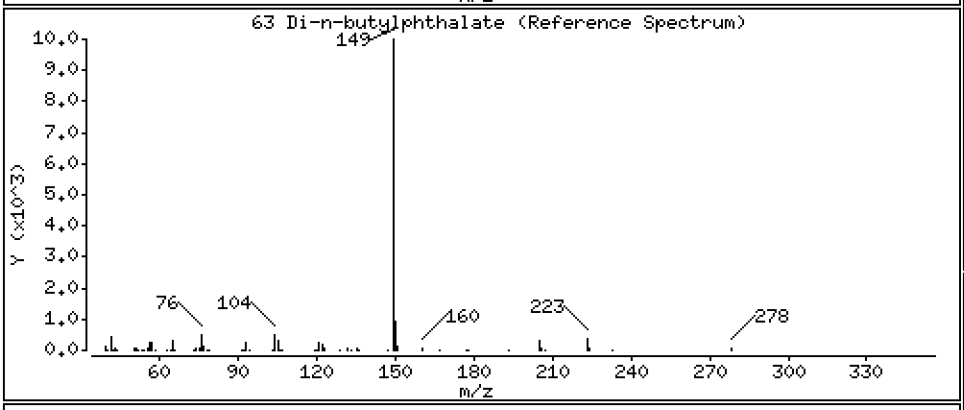
Column diameter: 0.25

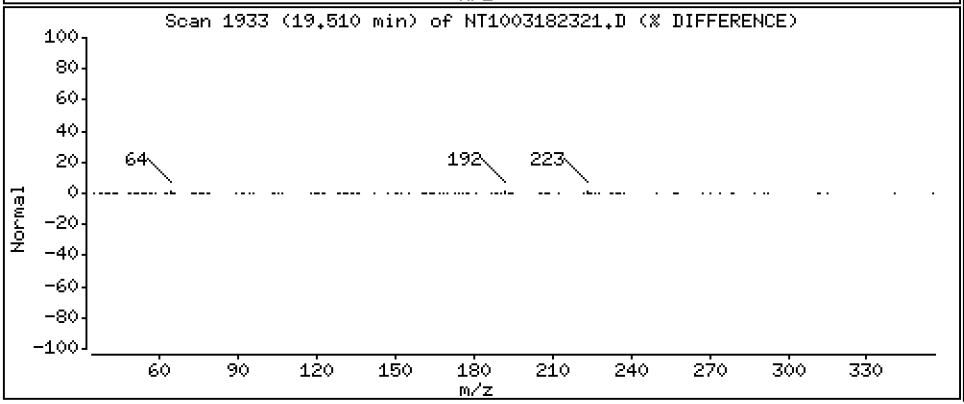
63 Di-n-butylphthalate

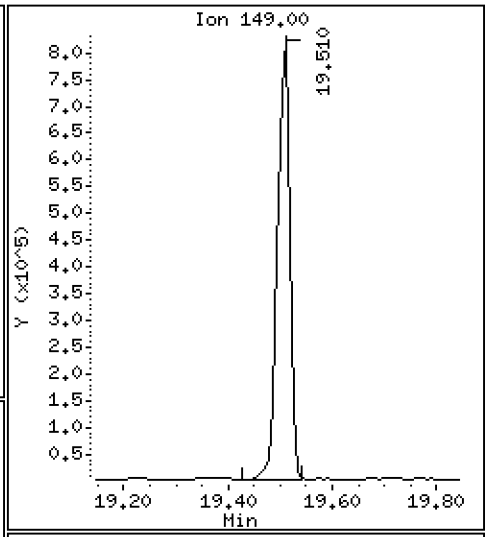
Concentration: 4.768 ug/mL

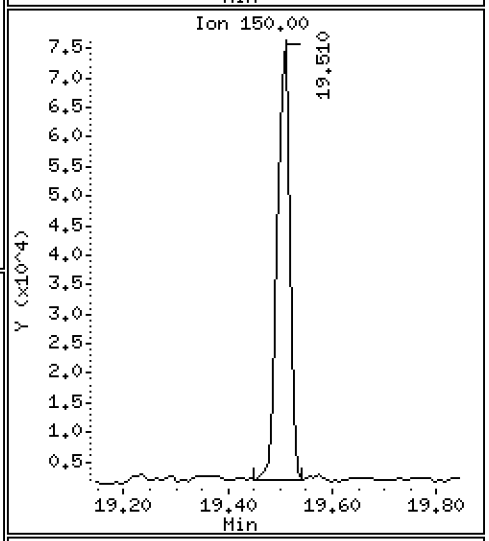


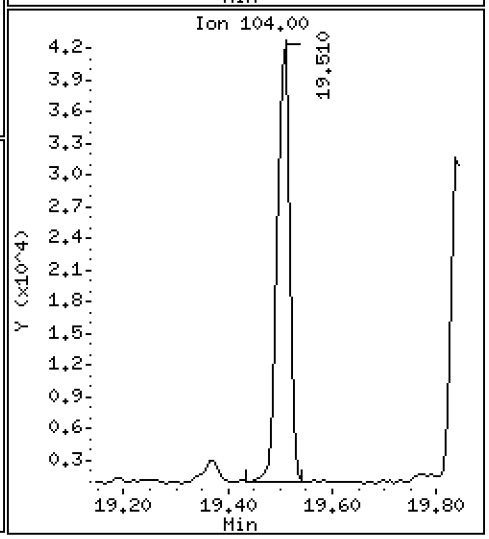












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

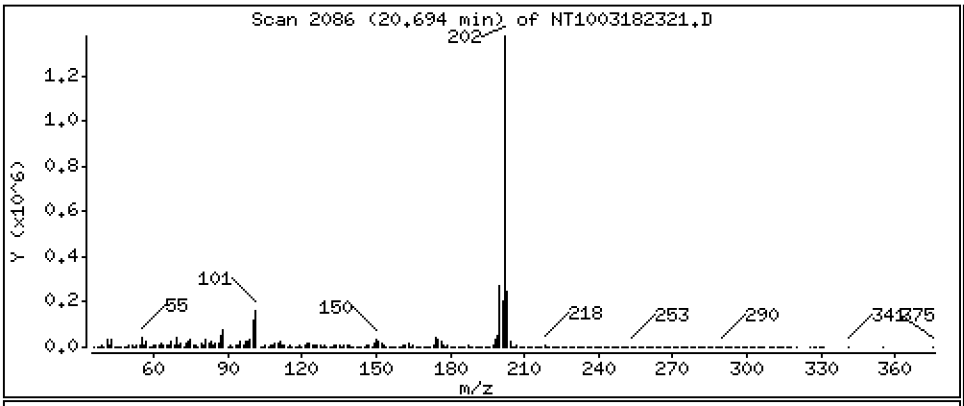
Operator: VTS

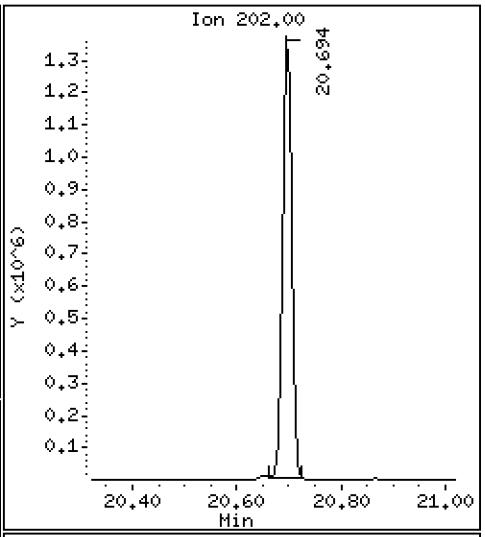
Column phase: ZB-5msi

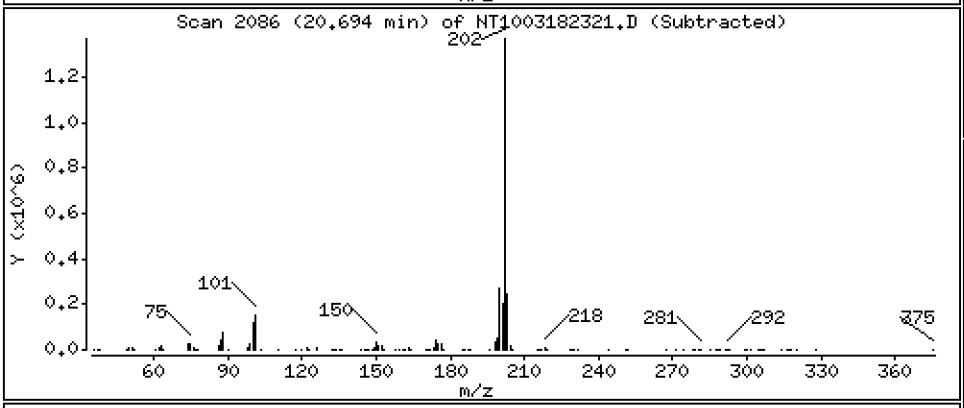
Column diameter: 0.25

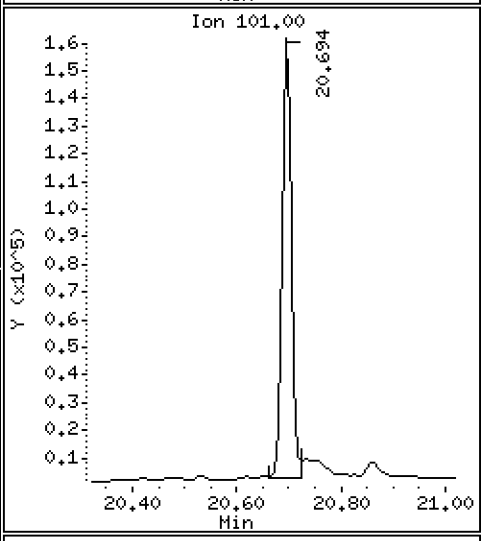
64 Fluoranthene

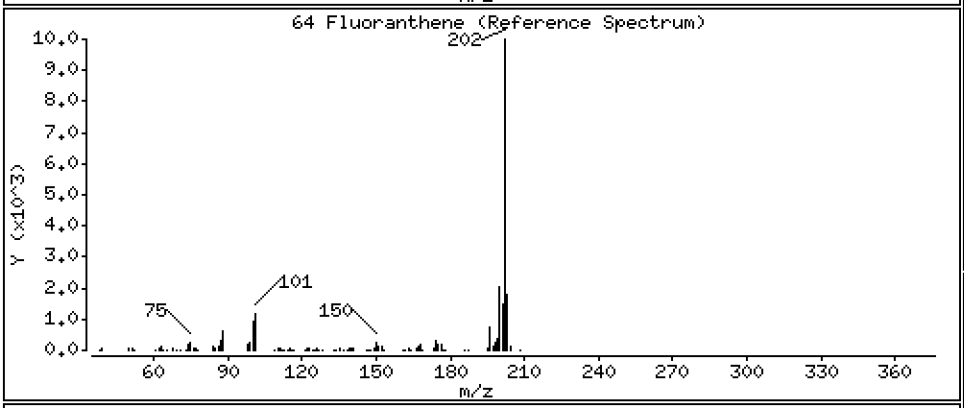
Concentration: 5.786 ug/mL

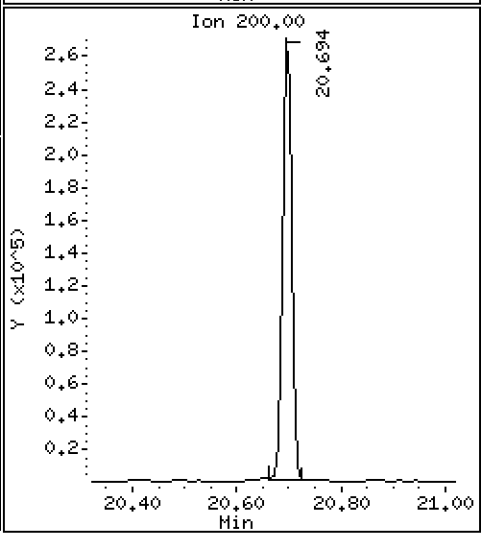


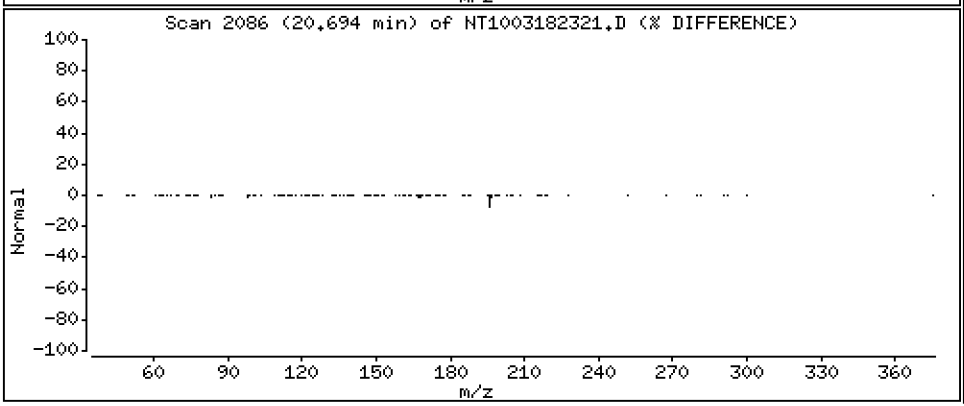












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

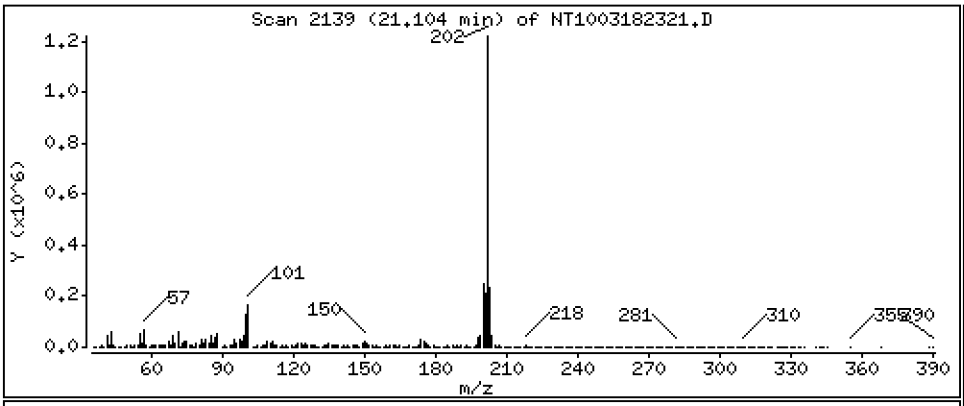
Operator: VTS

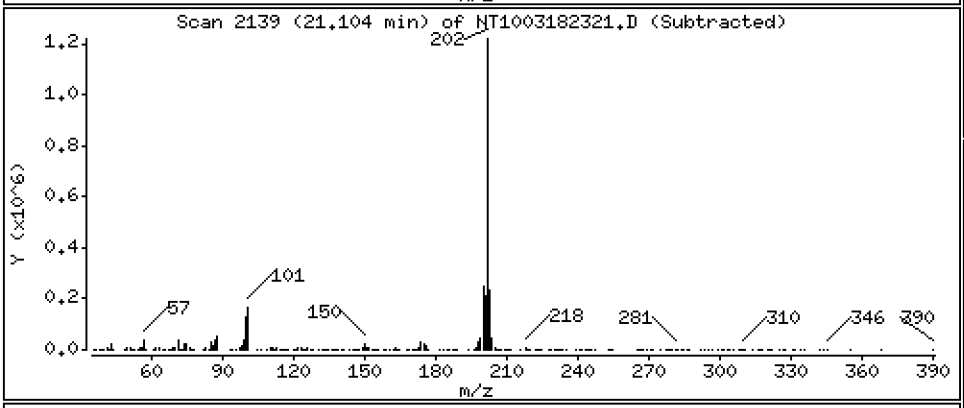
Column phase: ZB-5msi

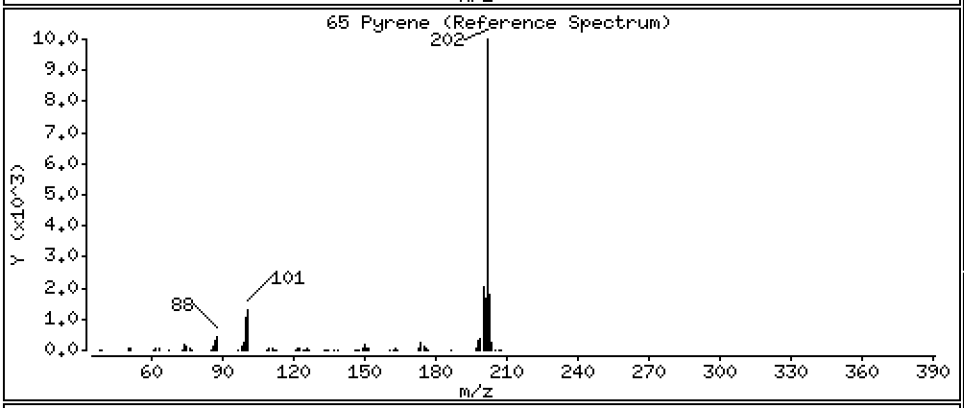
Column diameter: 0.25

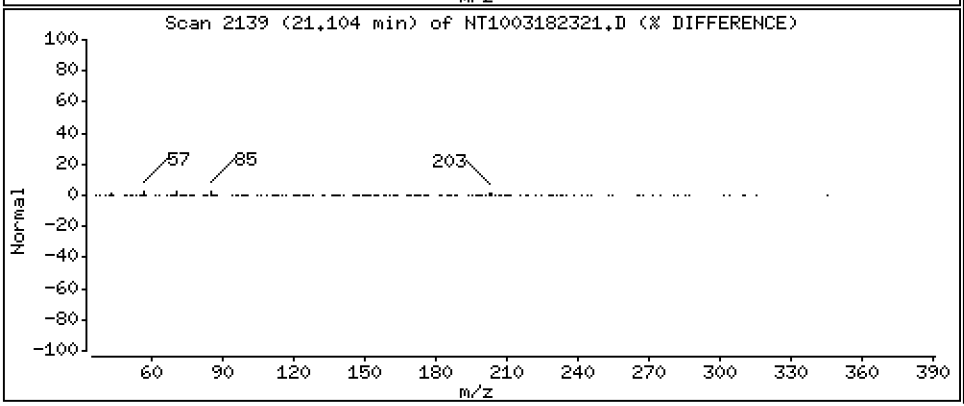
65 Pyrene

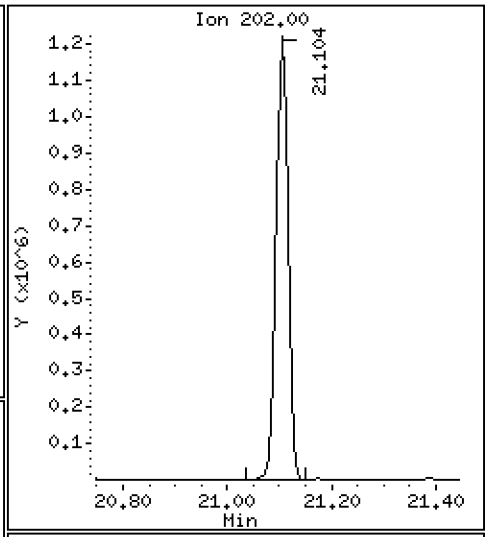
Concentration: 5.896 ug/mL

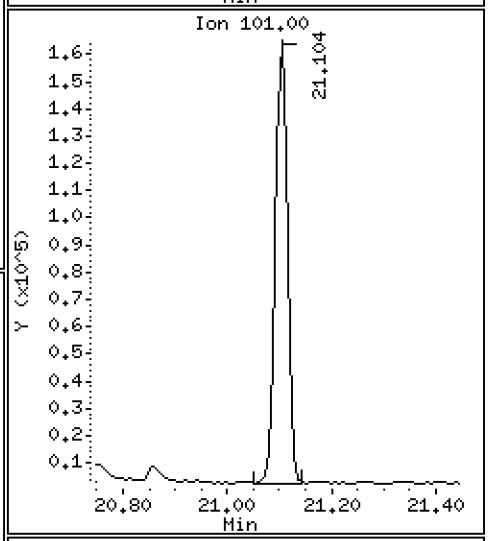


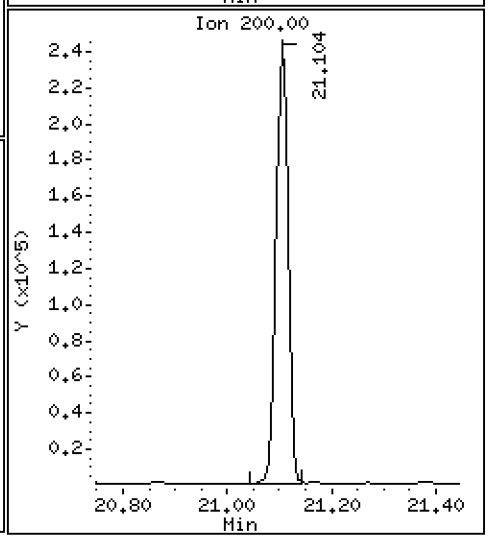












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

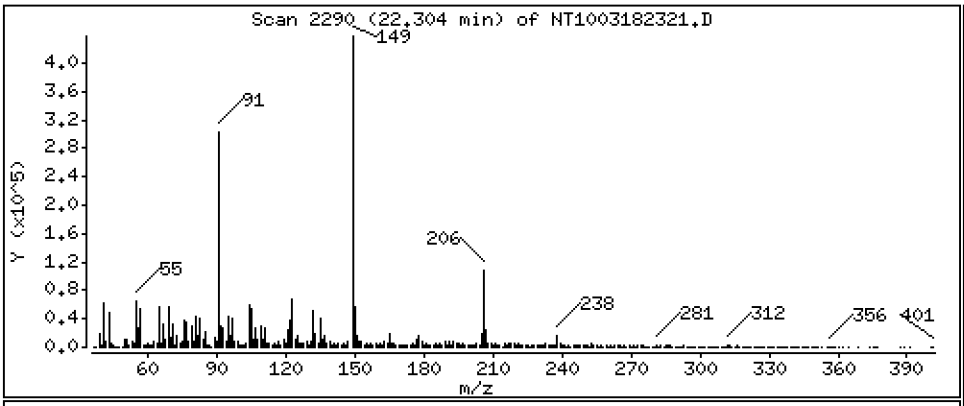
Operator: VTS

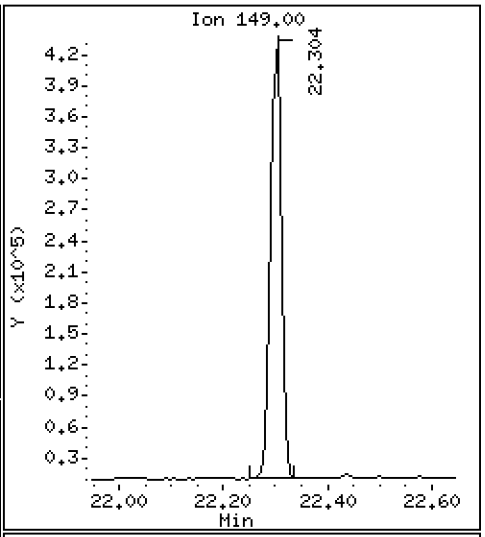
Column phase: ZB-5msi

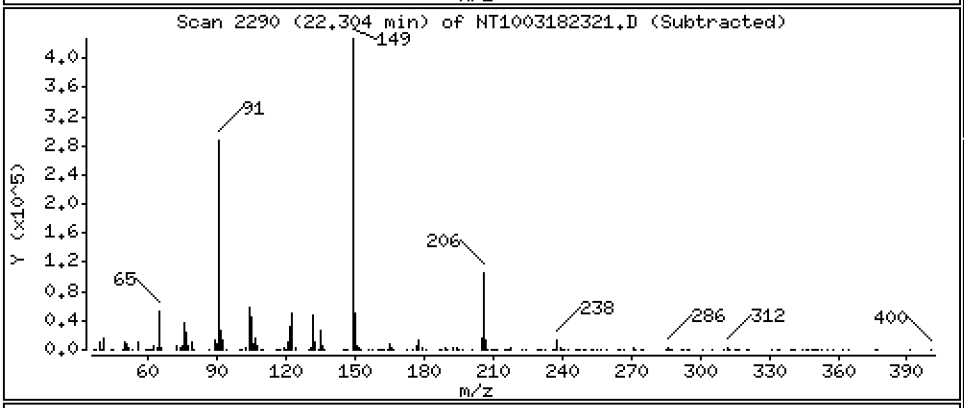
Column diameter: 0.25

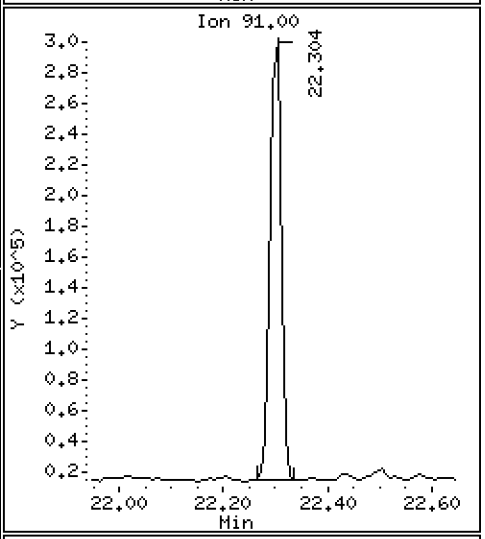
67 Butylbenzylphthalate

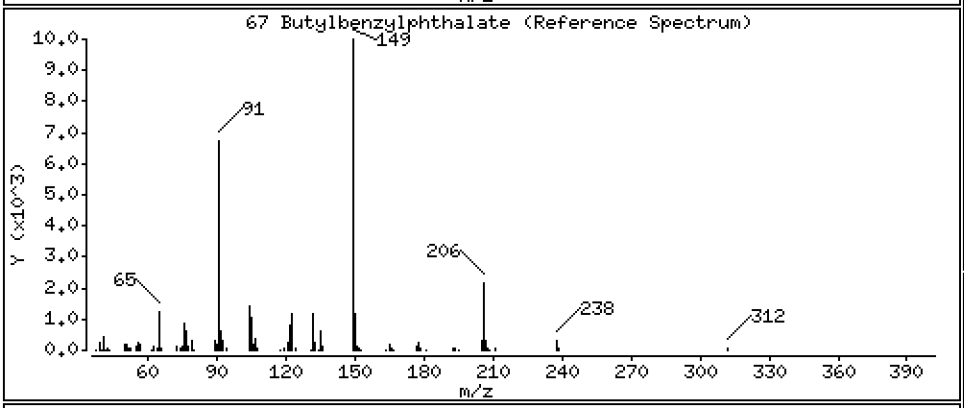
Concentration: 5.072 ug/mL

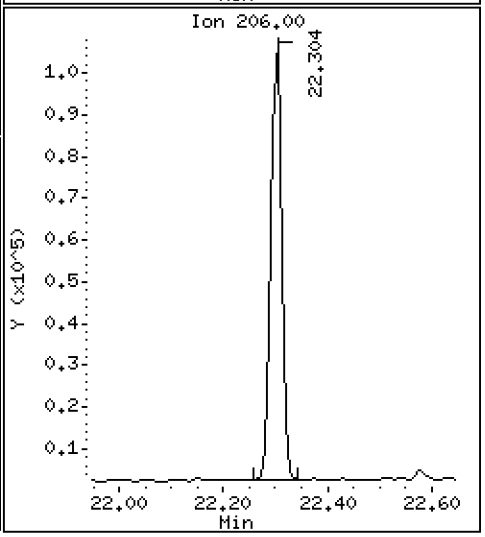


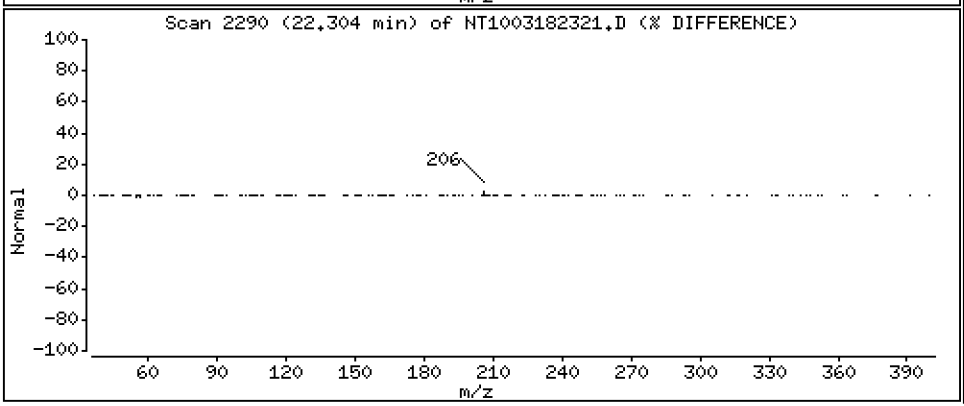












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

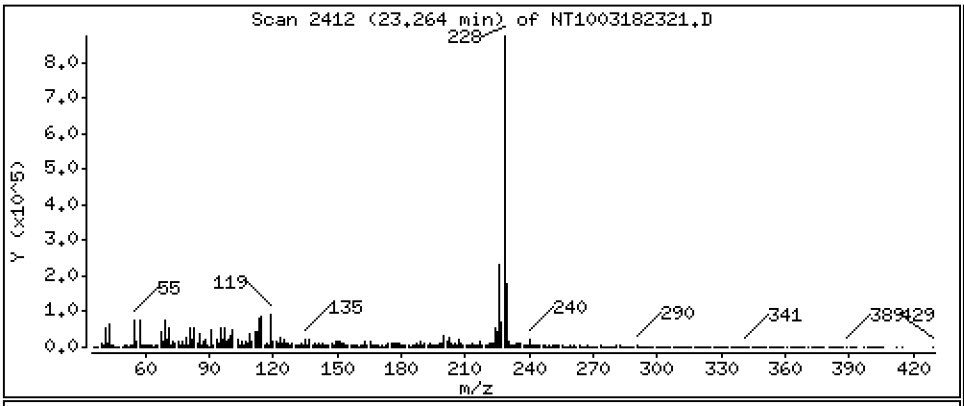
Operator: VTS

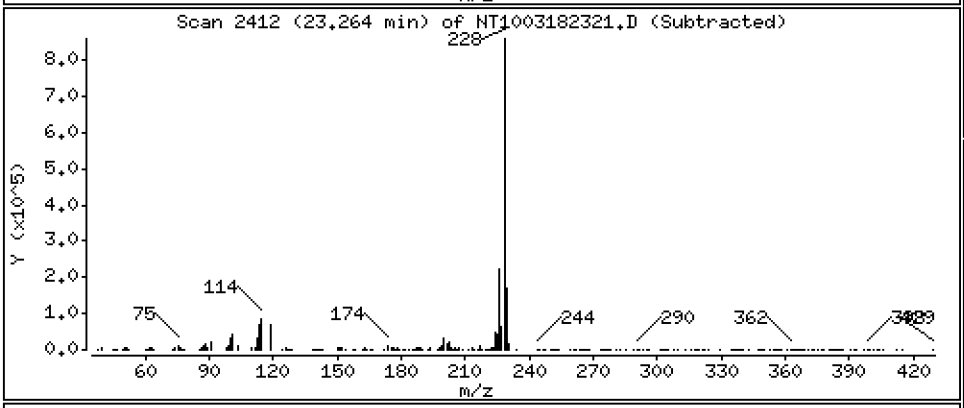
Column phase: ZB-5msi

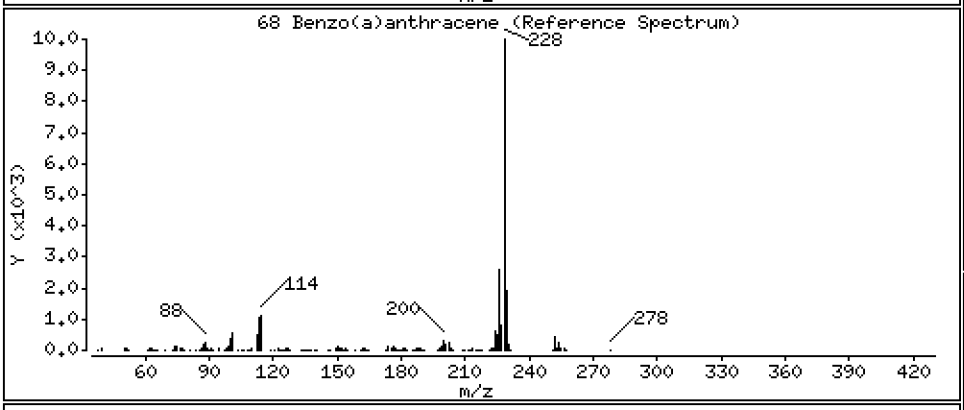
Column diameter: 0.25

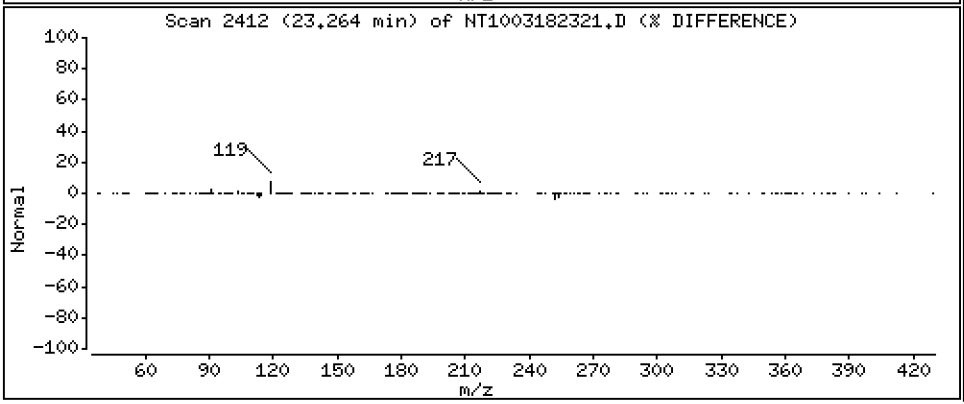
68 Benzo(a)anthracene

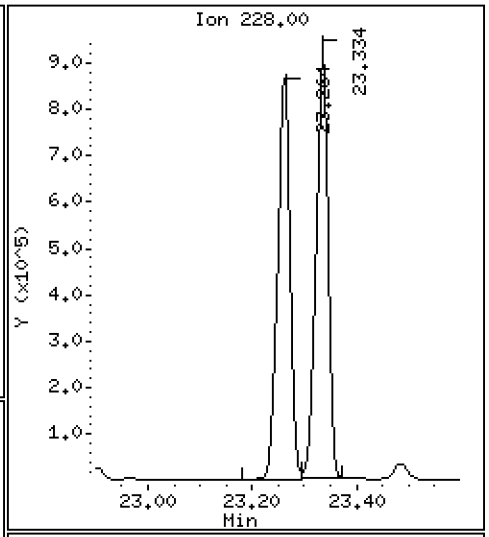
Concentration: 5.452 ug/mL

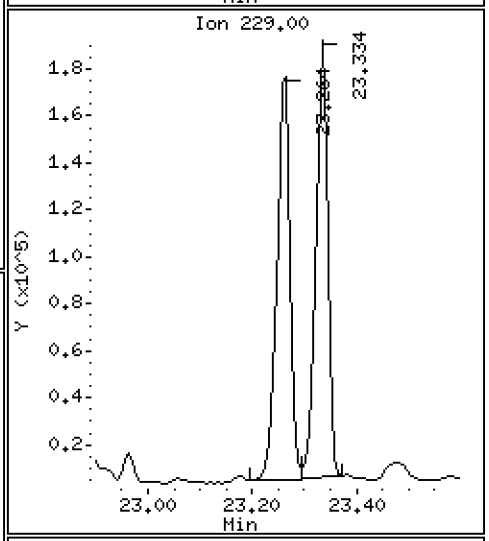


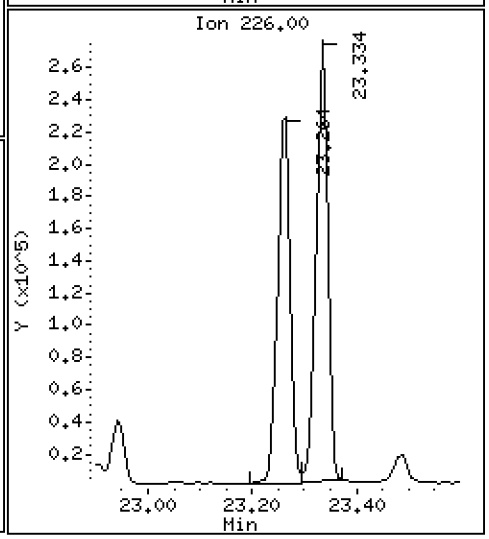












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

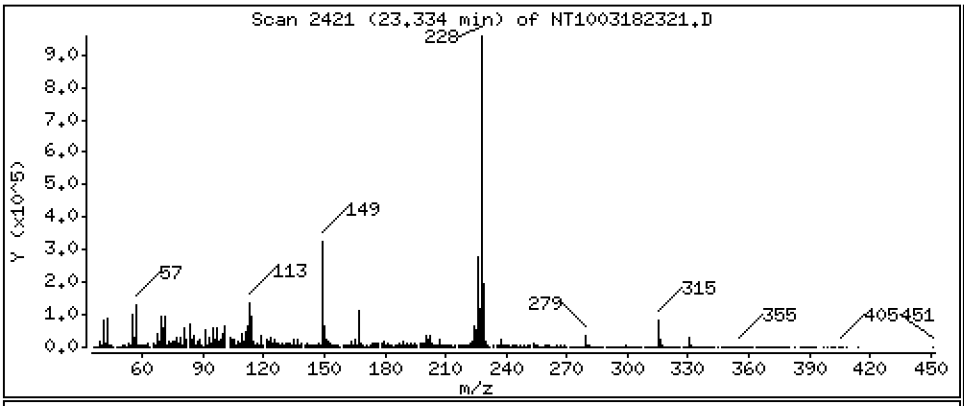
Operator: VTS

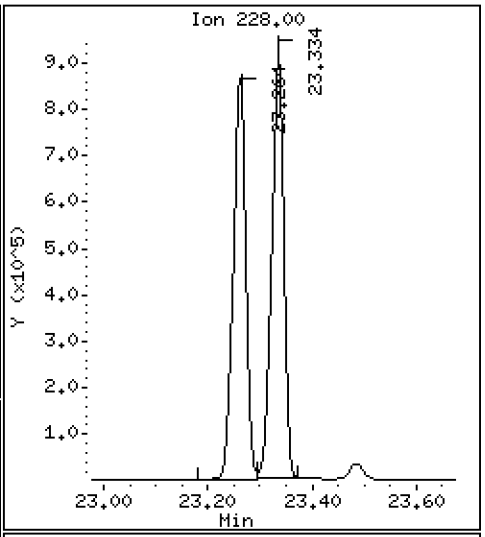
Column phase: ZB-5msi

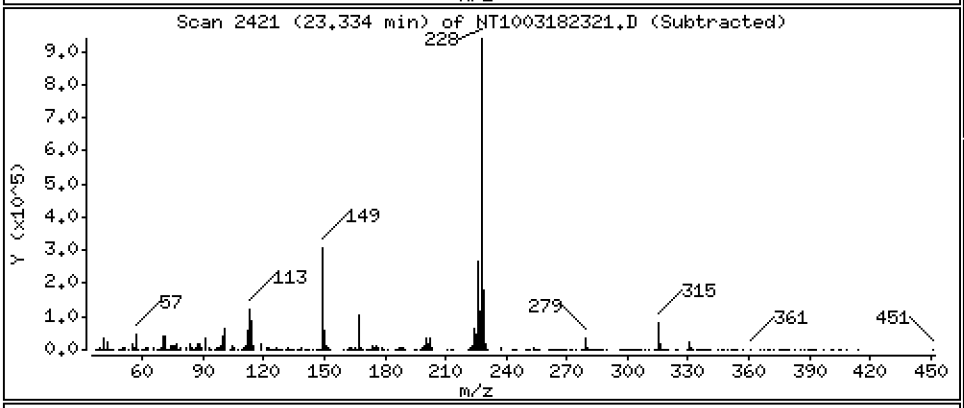
Column diameter: 0.25

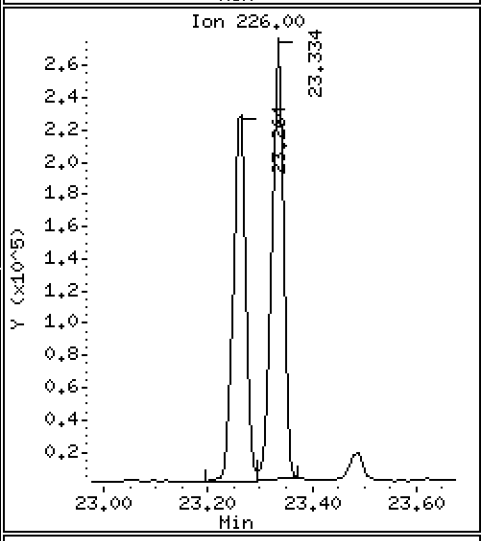
71 Chrysene

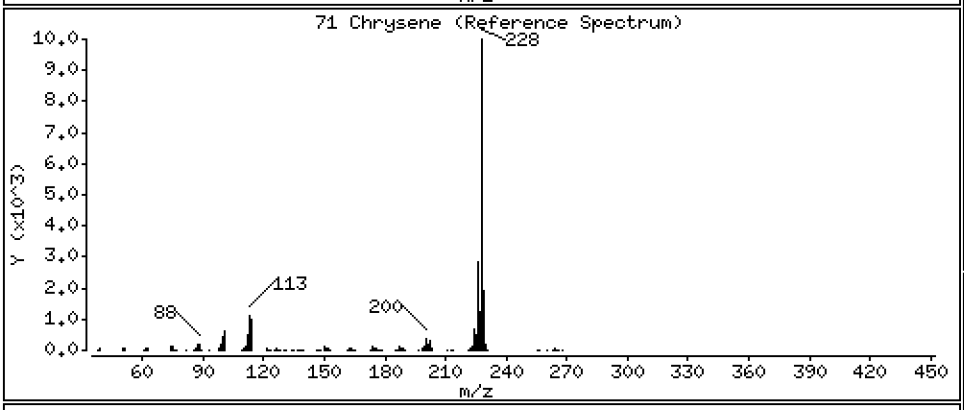
Concentration: 5.521 ug/mL

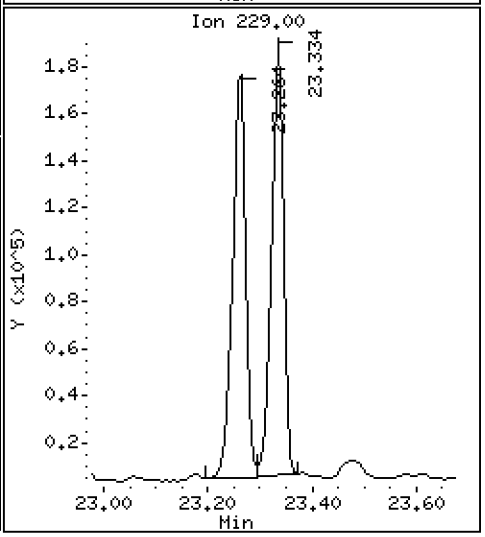


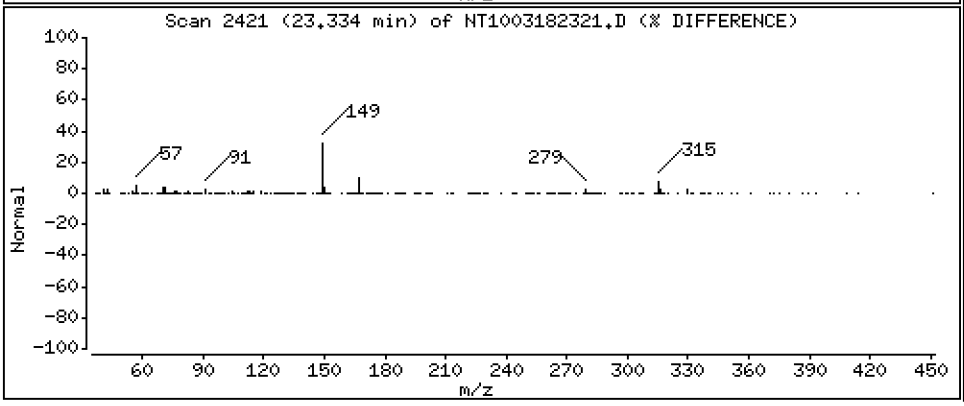












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

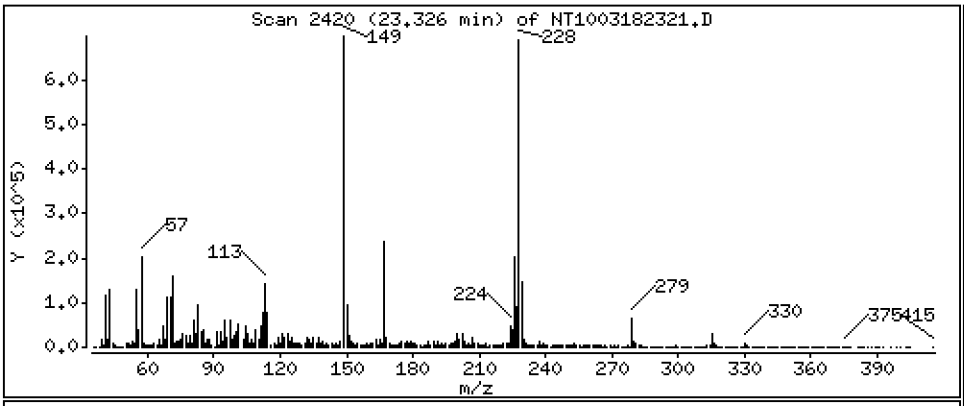
Operator: VTS

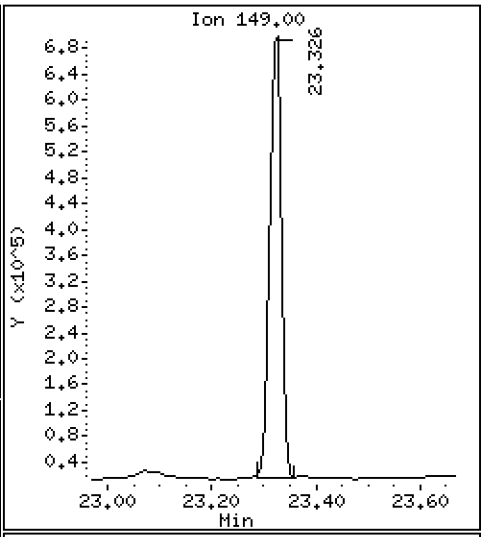
Column phase: ZB-5msi

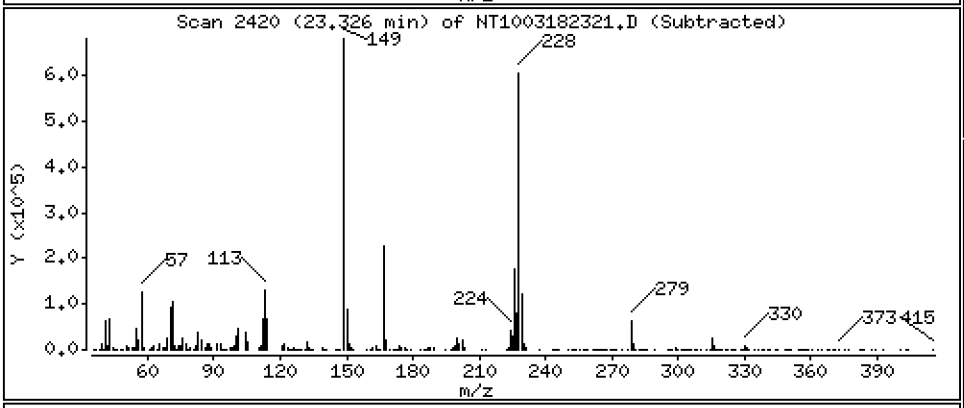
Column diameter: 0.25

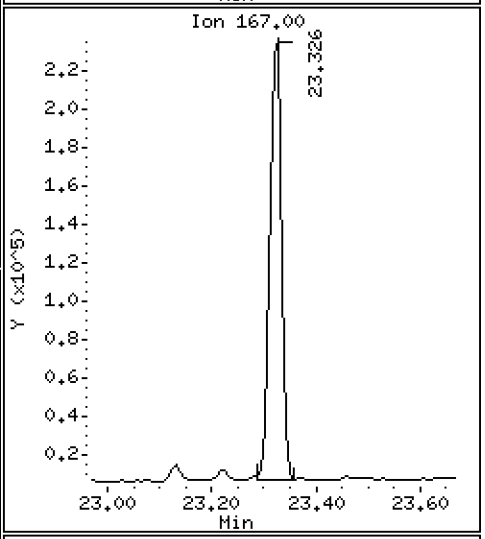
72 bis(2-Ethylhexyl)phthalate

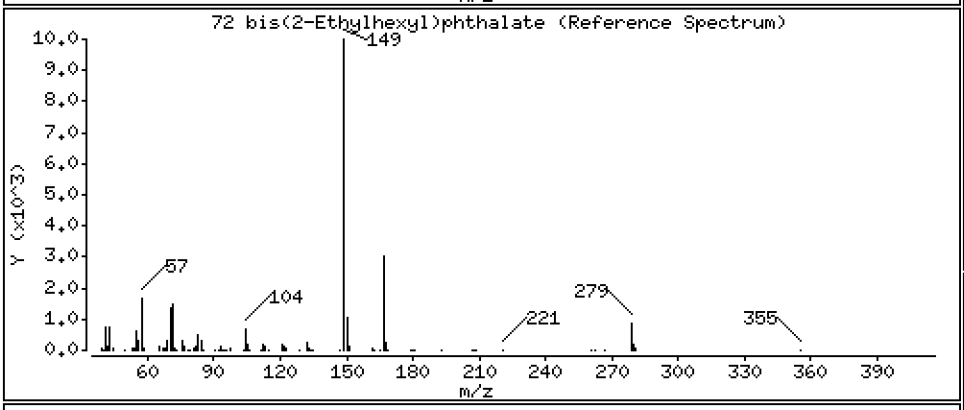
Concentration: 5.216 ug/mL

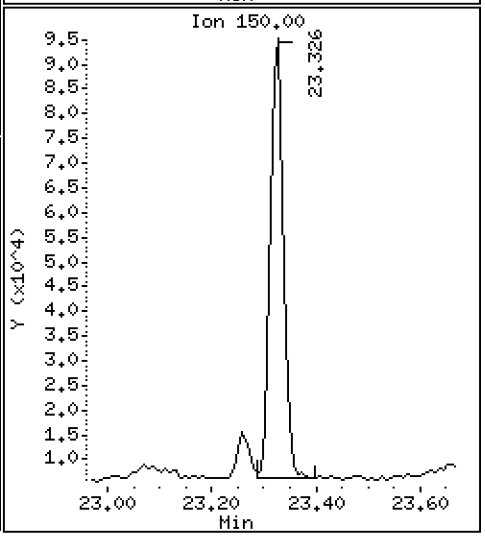


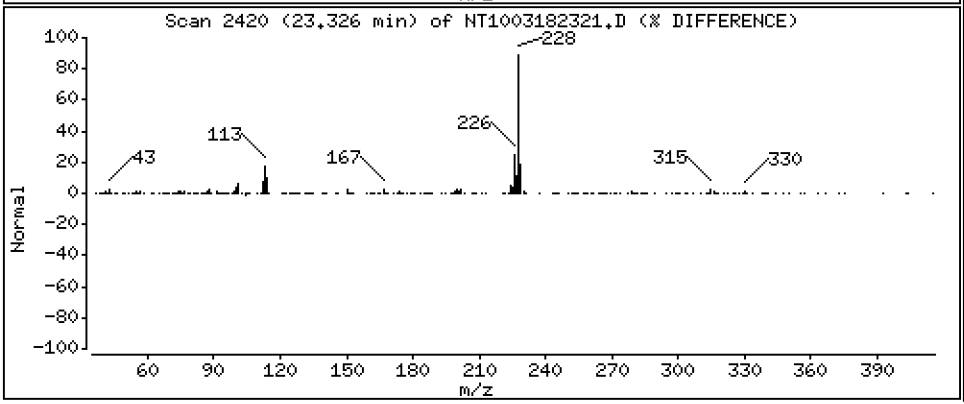












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

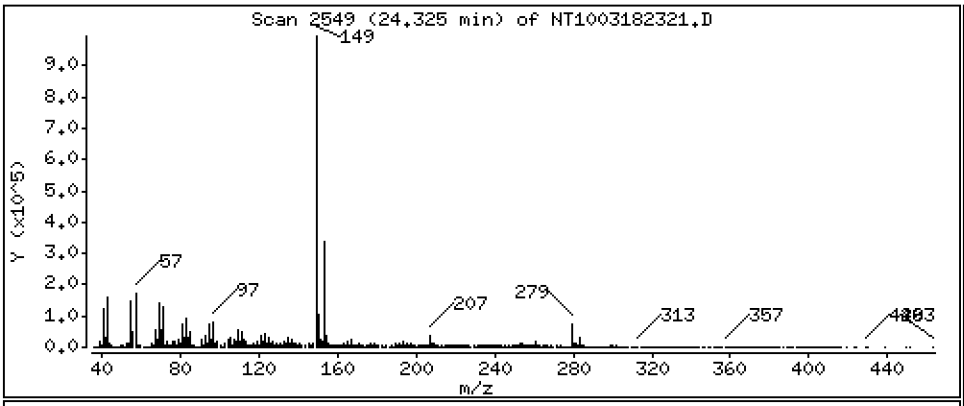
Operator: VTS

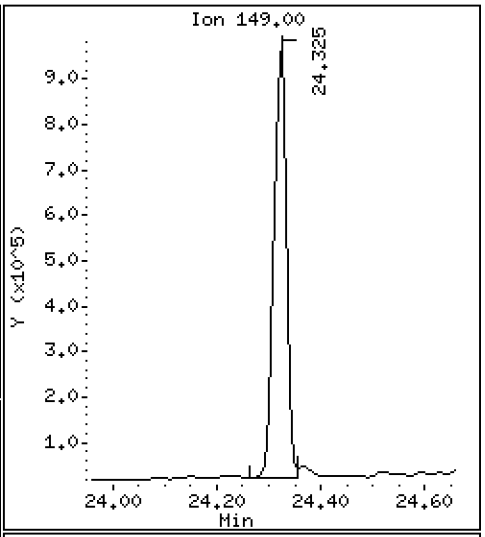
Column phase: ZB-5msi

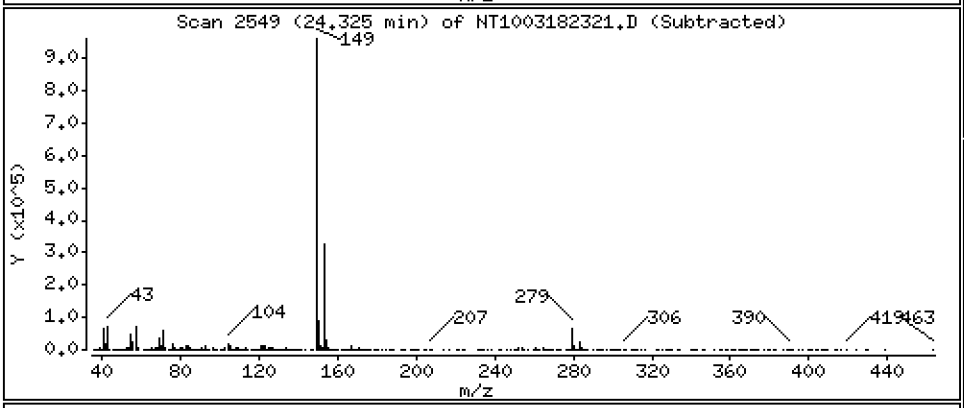
Column diameter: 0.25

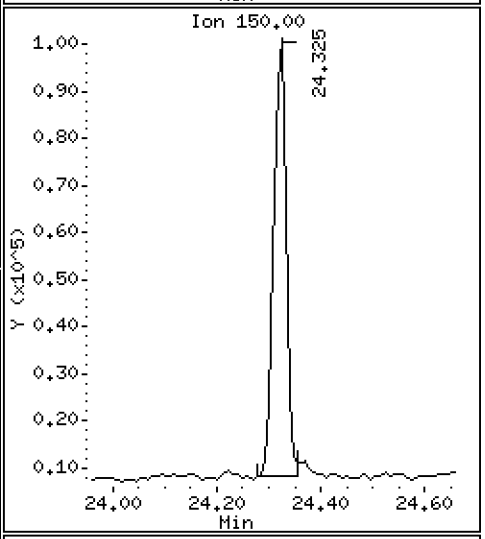
73 Di-n-octylphthalate

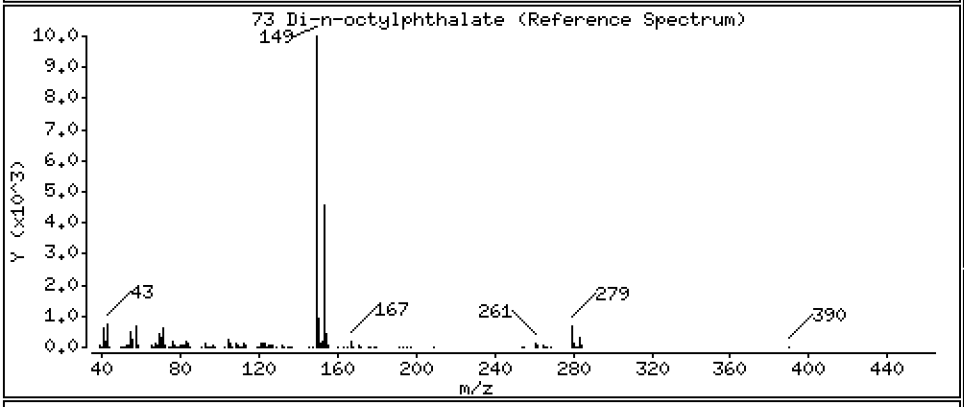
Concentration: 4.456 ug/mL

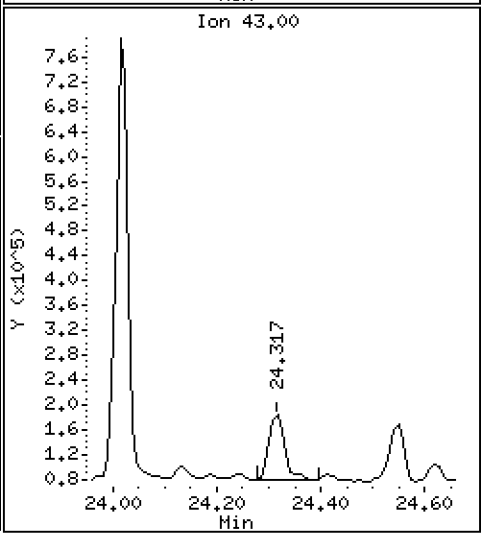


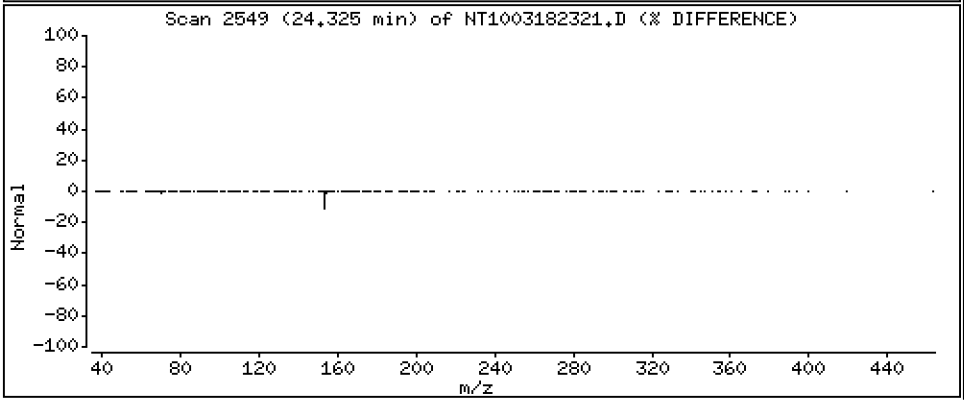












Date : 19-MAR-2023 06:29

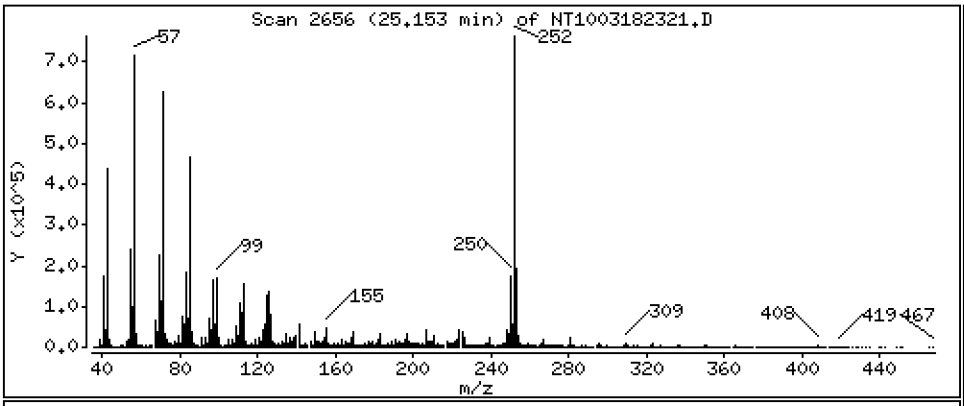
Client ID: Instrument: nt10.i

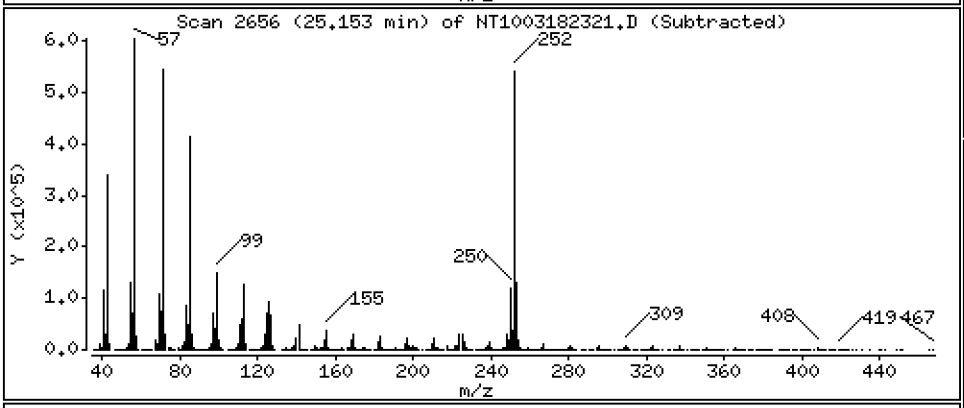
Sample Info: BLB0579-MS1

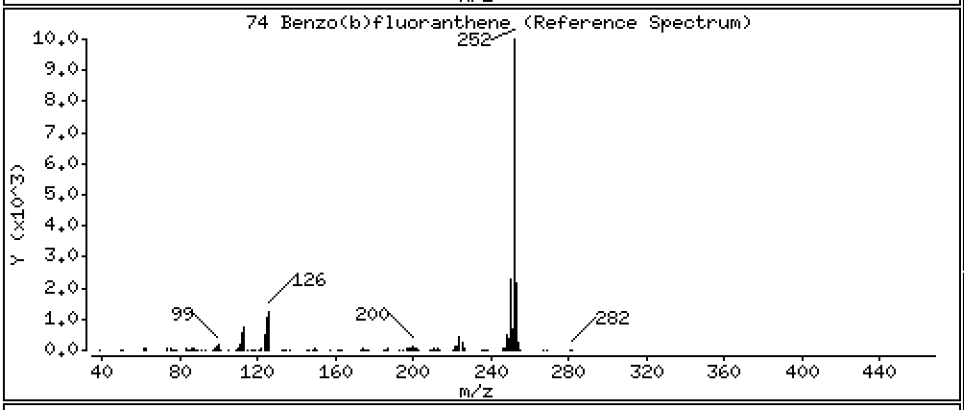
Operator: VTS

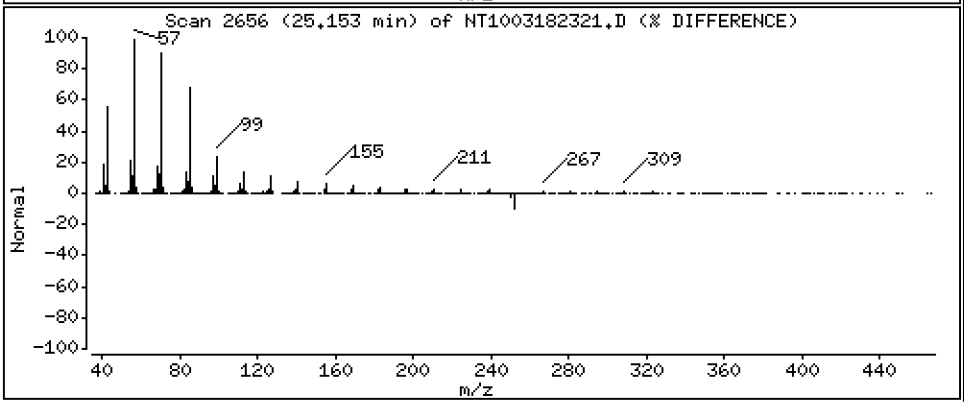
Column phase: ZB-5msi Column diameter: 0.25

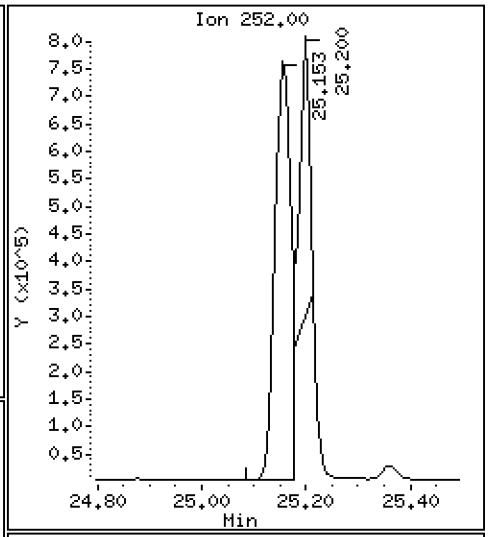
74 Benzo(b)fluoranthene Concentration: 6.064 ug/mL

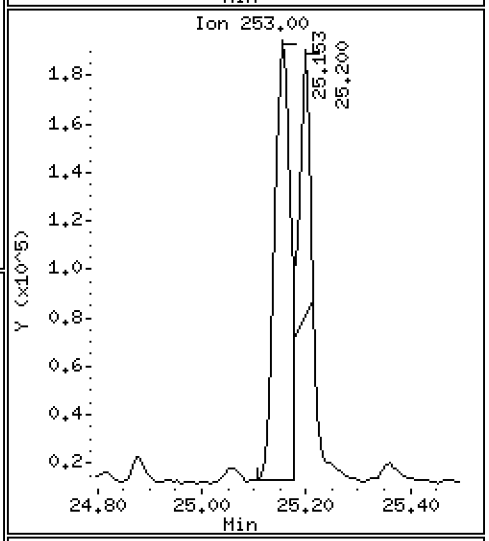


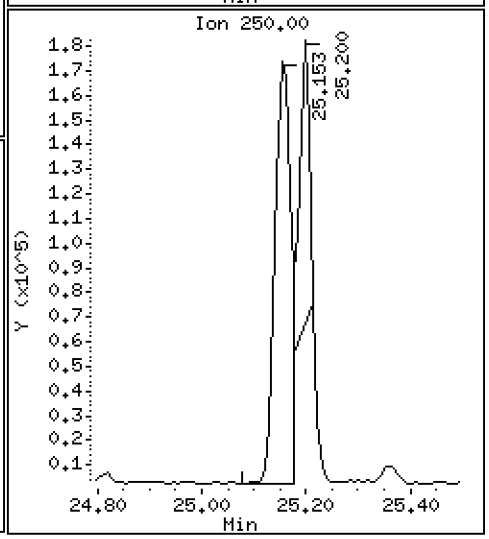












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

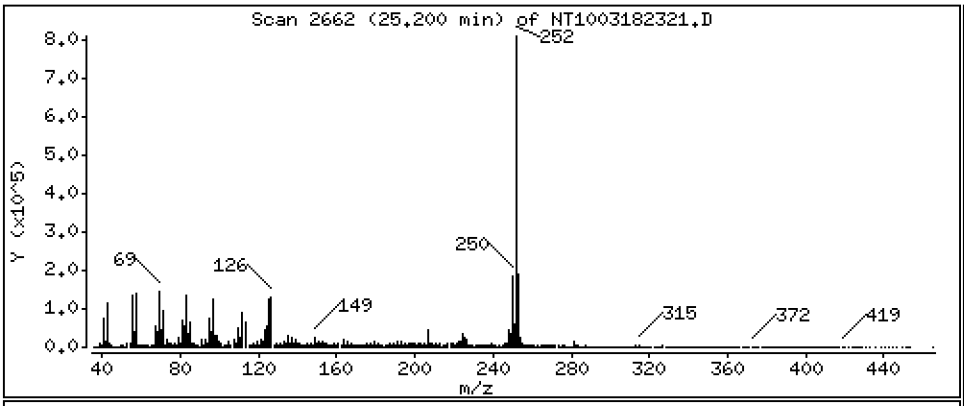
Operator: VTS

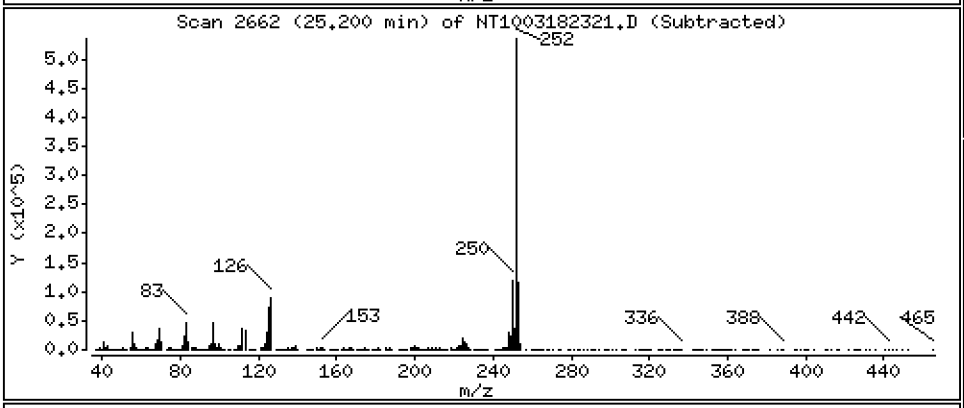
Column phase: ZB-5msi

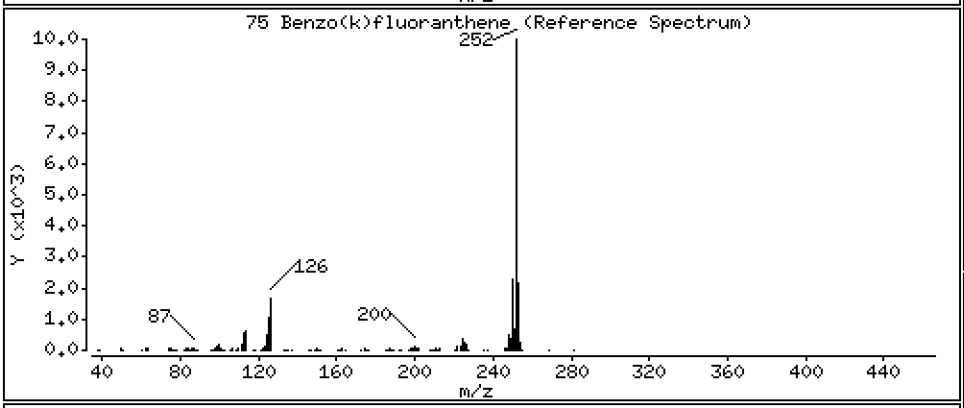
Column diameter: 0.25

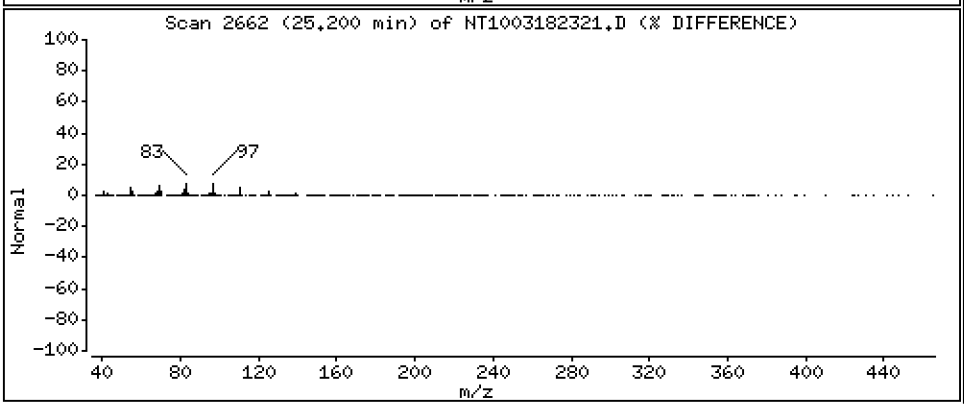
75 Benzo(k)fluoranthene

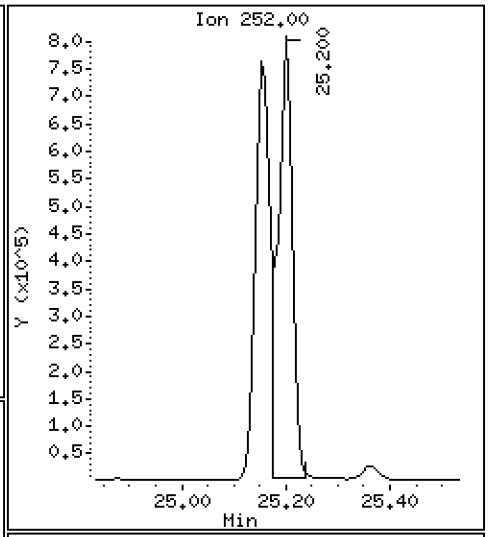
Concentration: 5.849 ug/mL

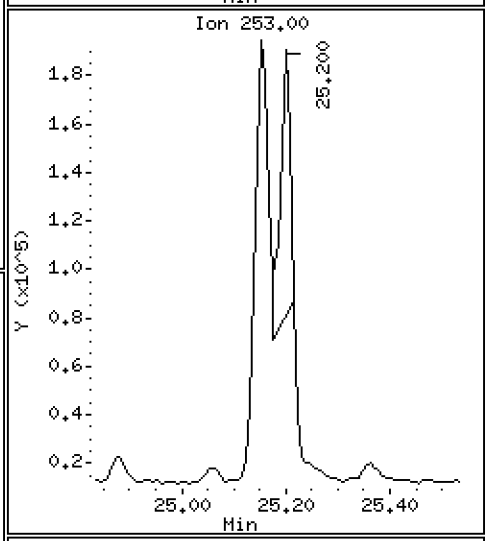


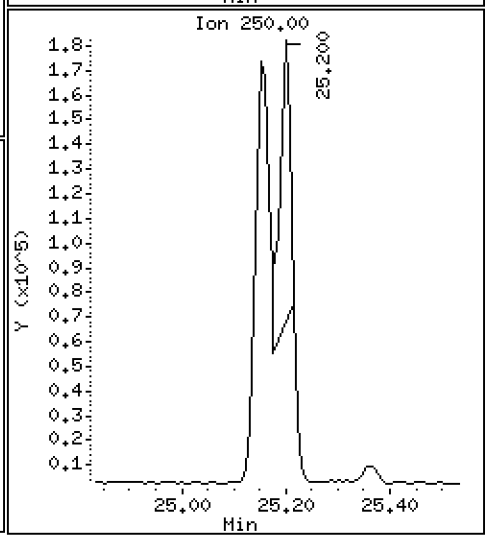












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

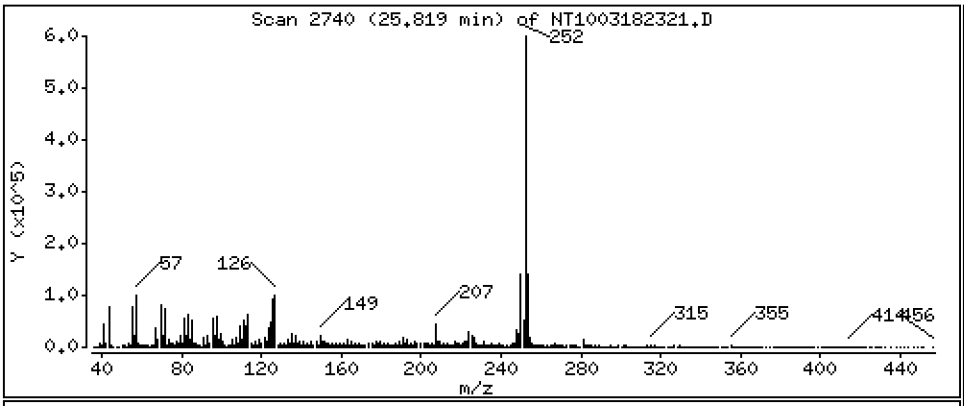
Operator: VTS

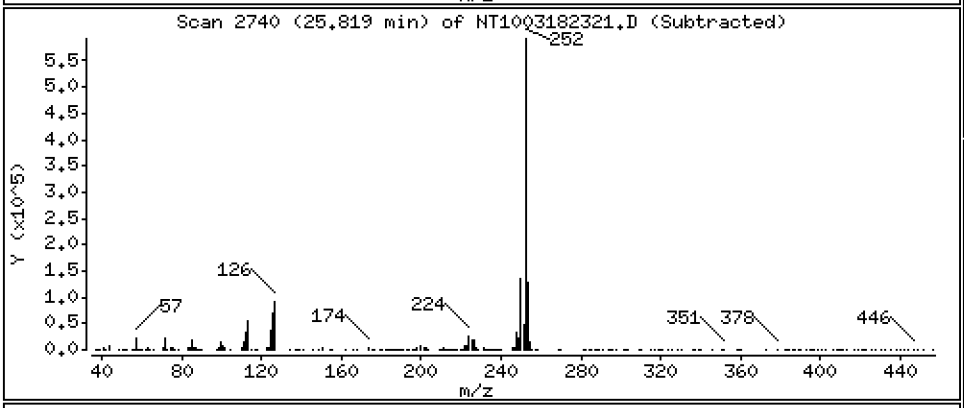
Column phase: ZB-5msi

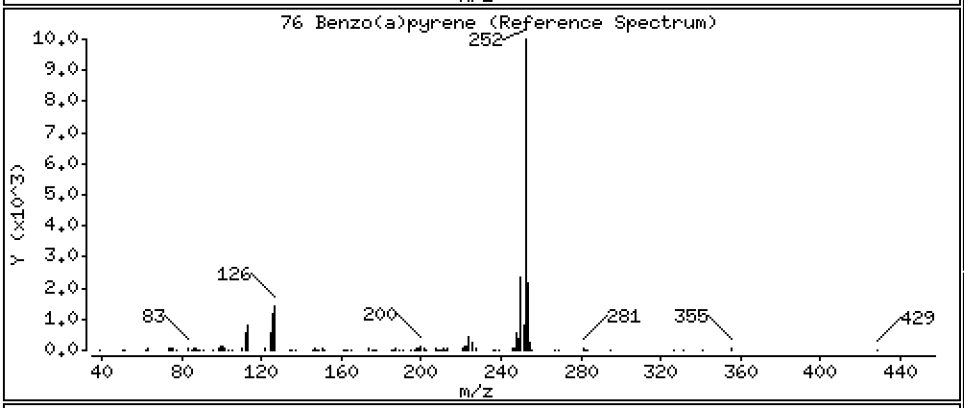
Column diameter: 0.25

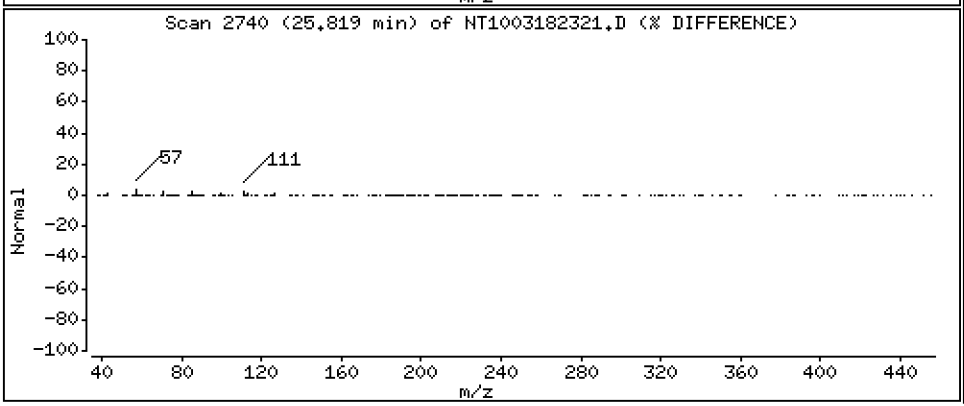
76 Benzo(a)pyrene

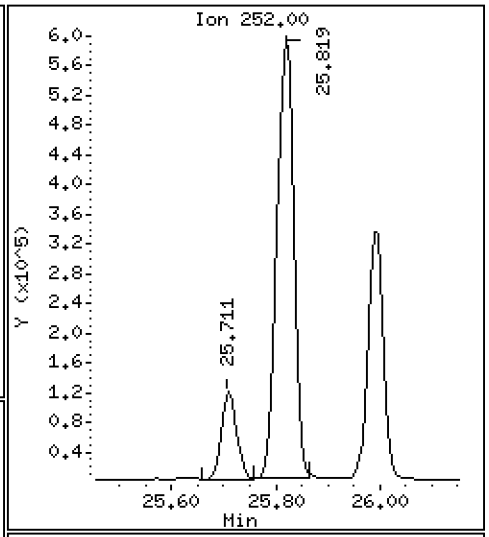
Concentration: 5.606 ug/mL

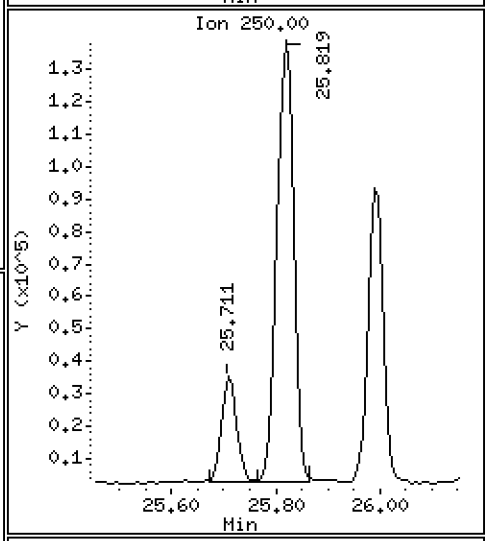


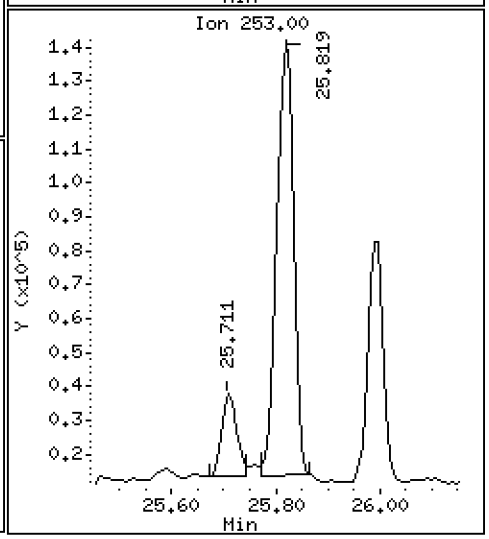












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

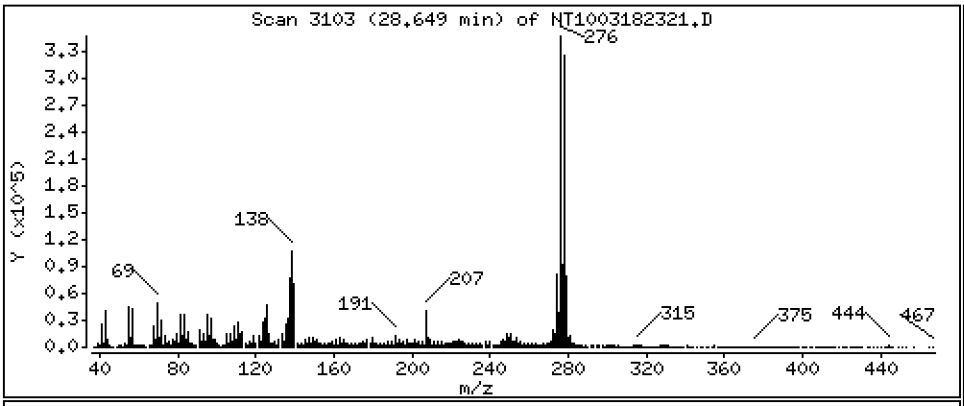
Operator: VTS

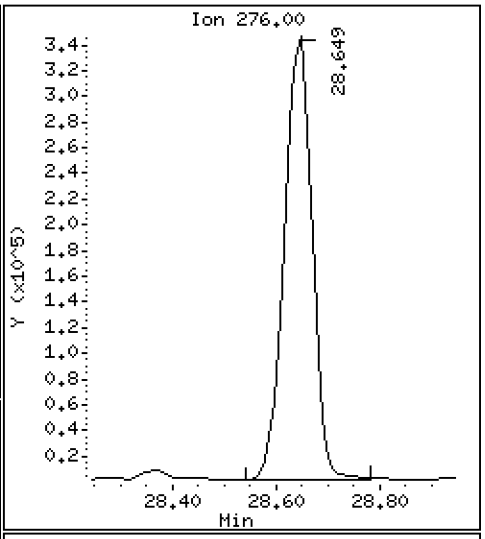
Column phase: ZB-5msi

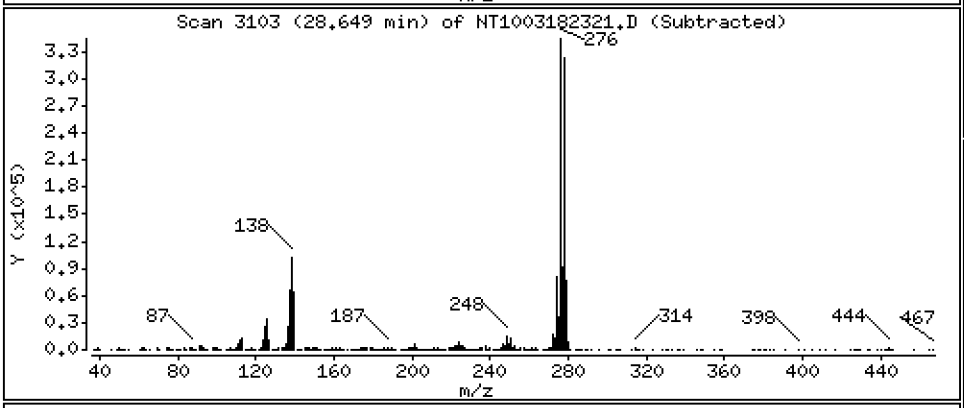
Column diameter: 0.25

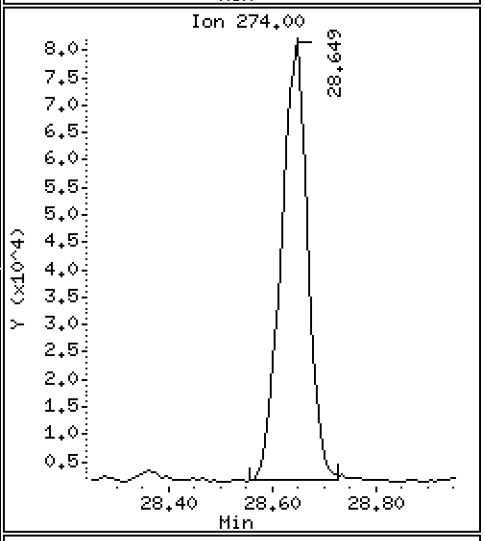
78 Indeno(1,2,3-cd)pyrene

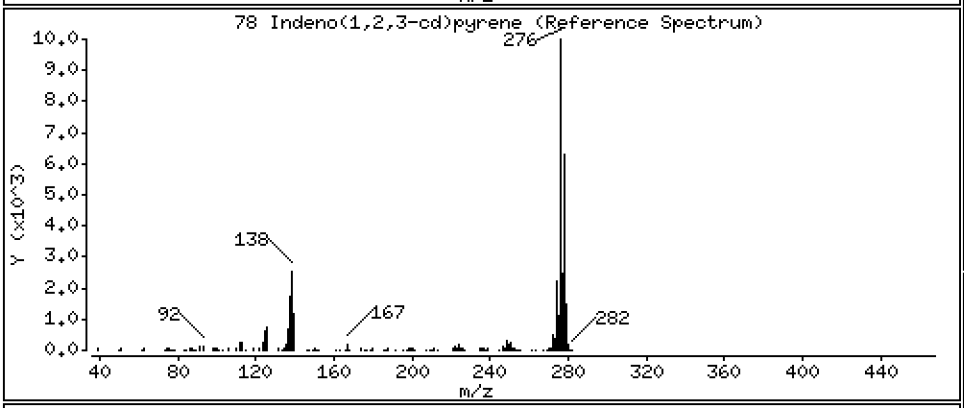
Concentration: 4.338 ug/mL

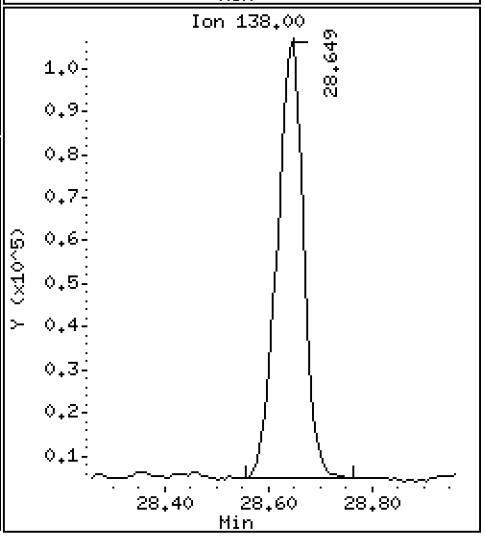


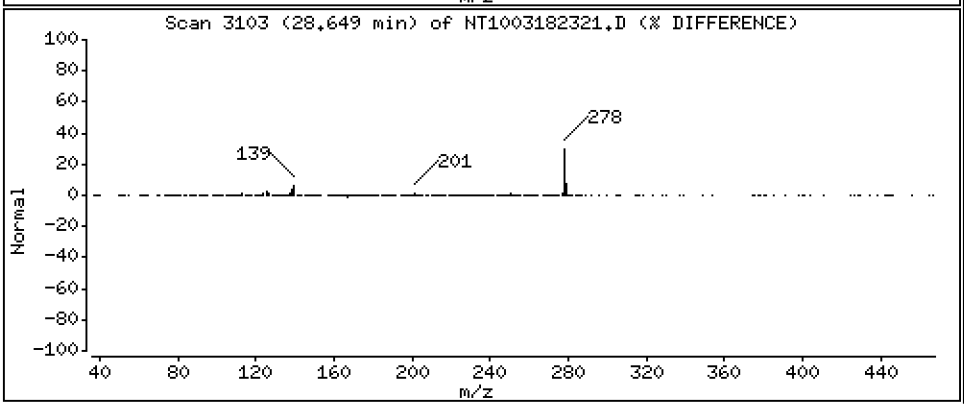












Date : 19-MAR-2023 06:29

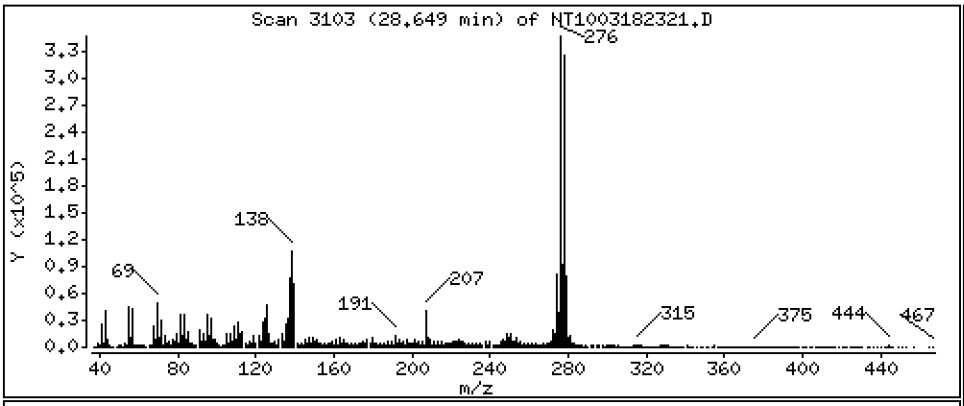
Client ID: Instrument: nt10.i

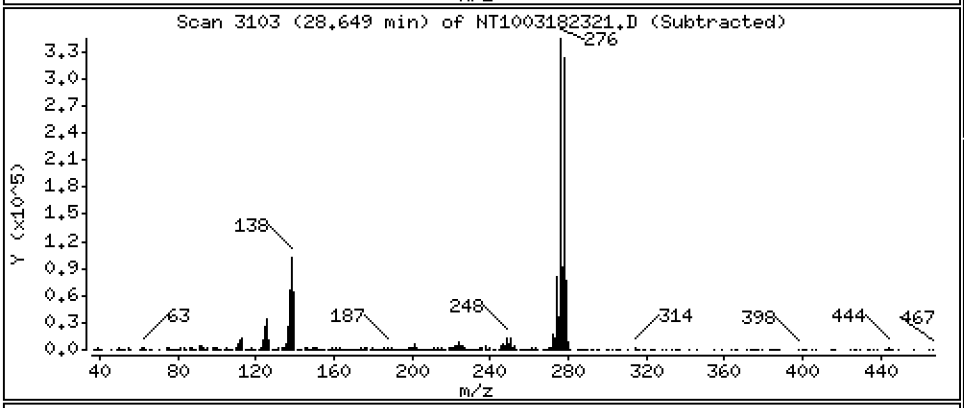
Sample Info: BLB0579-MS1

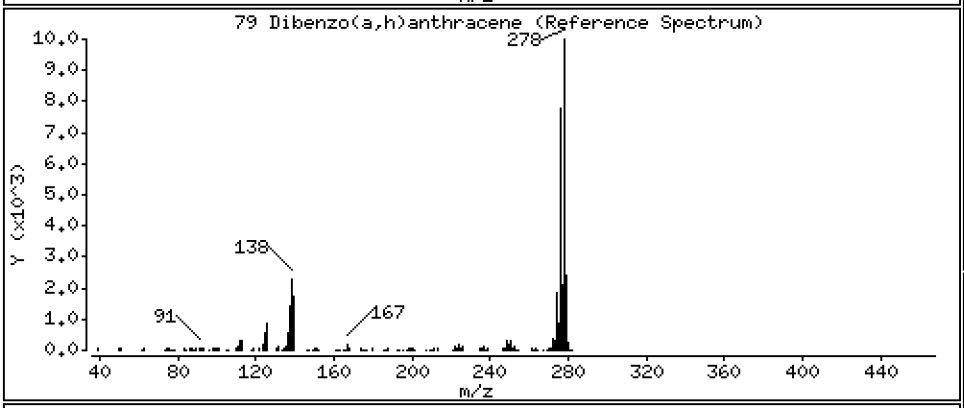
Operator: VTS

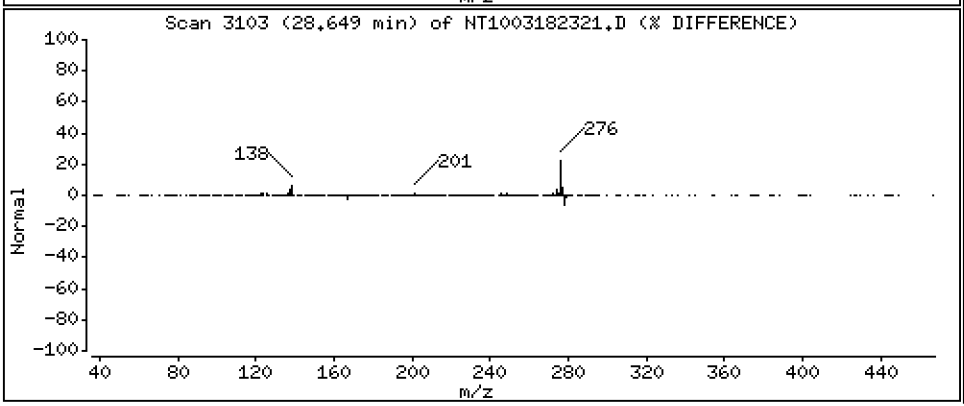
Column phase: ZB-5msi Column diameter: 0.25

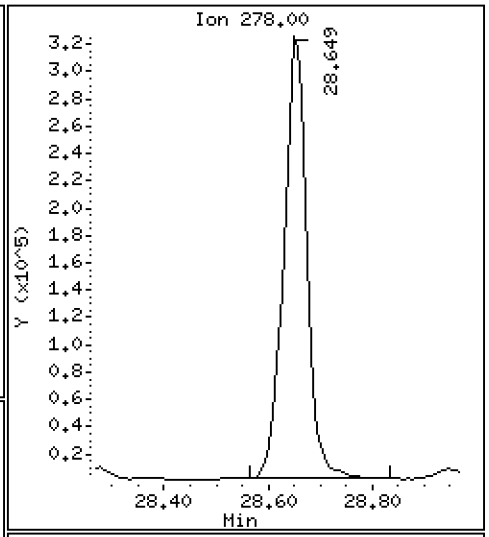
79 Dibenzo(a,h)anthracene Concentration: 4.129 ug/mL

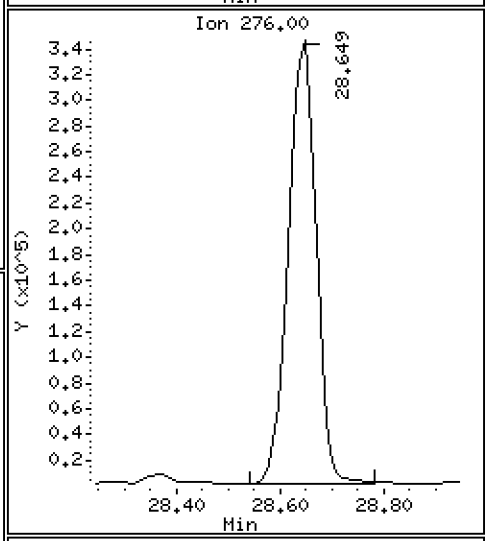


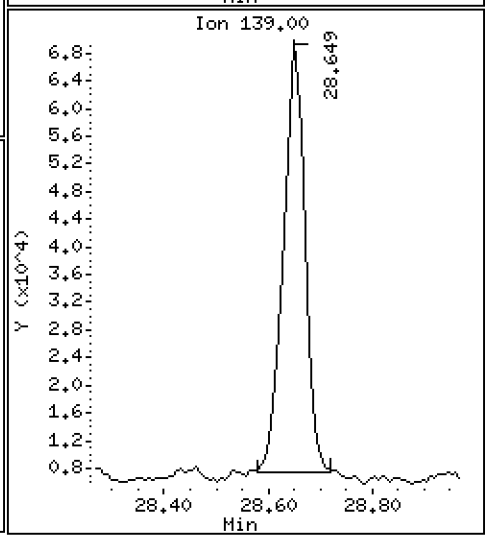












Date : 19-MAR-2023 06:29

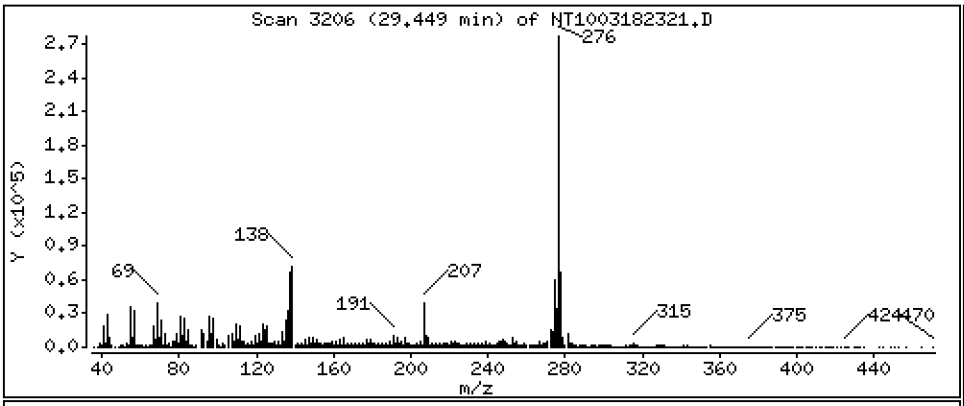
Client ID: Instrument: nt10.i

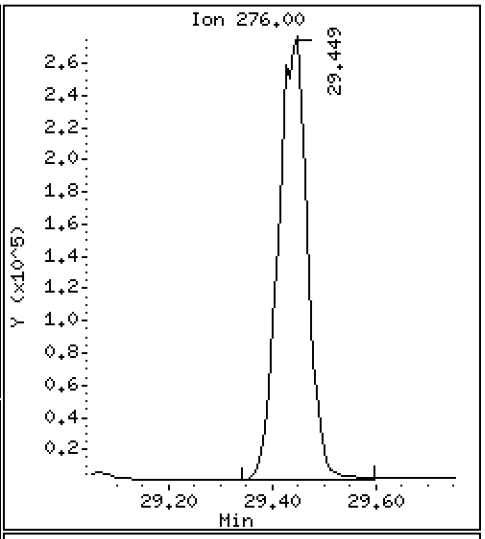
Sample Info: BLB0579-MS1

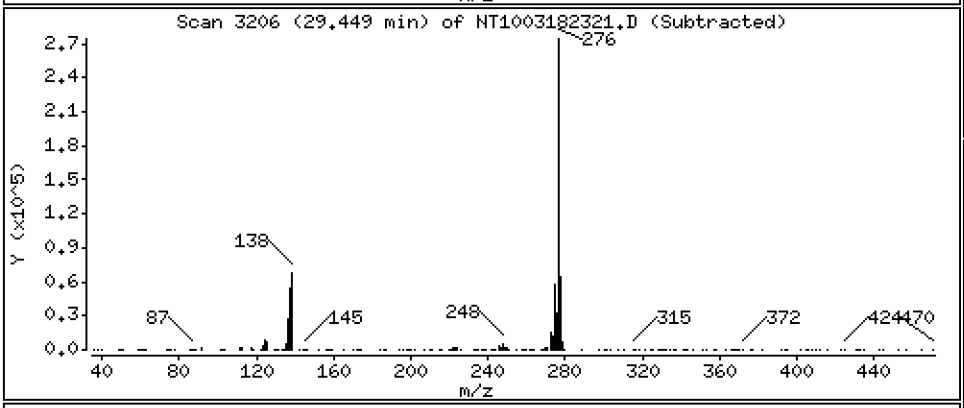
Operator: VTS

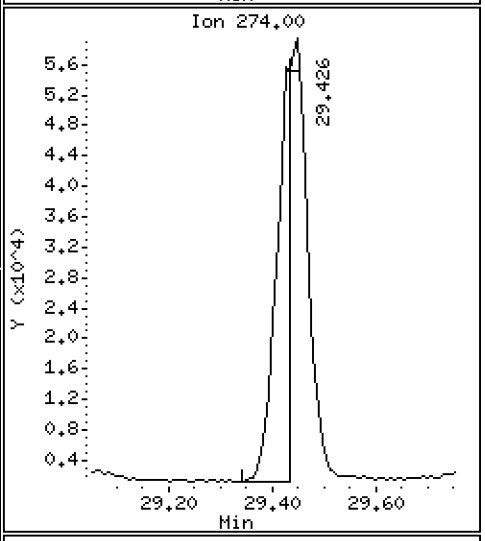
Column phase: ZB-5msi Column diameter: 0.25

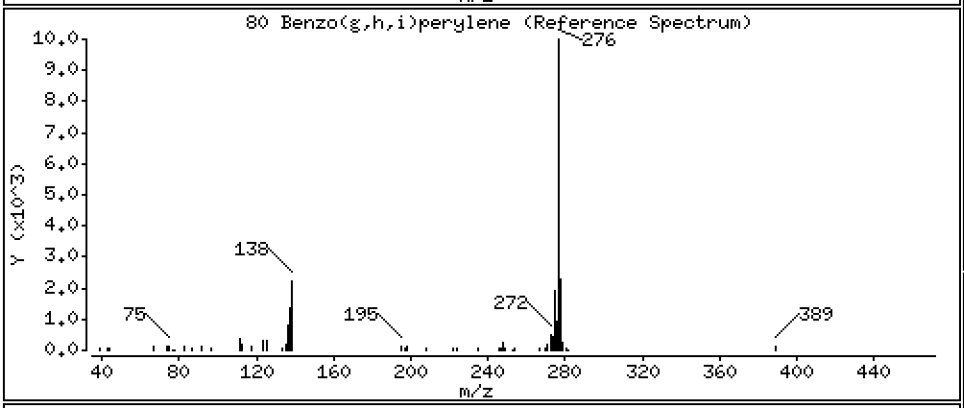
80 Benzo(g,h,i)perylene Concentration: 4.214 ug/mL

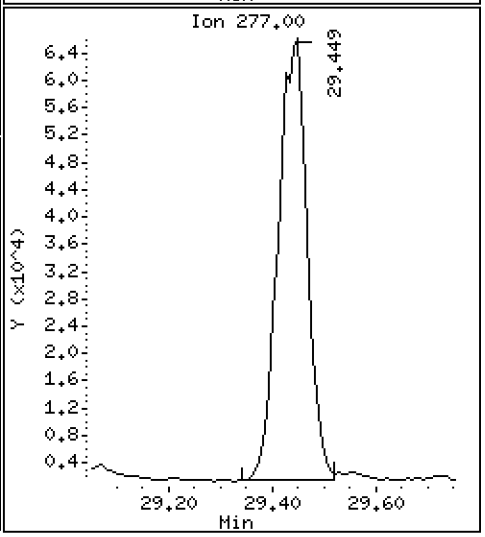


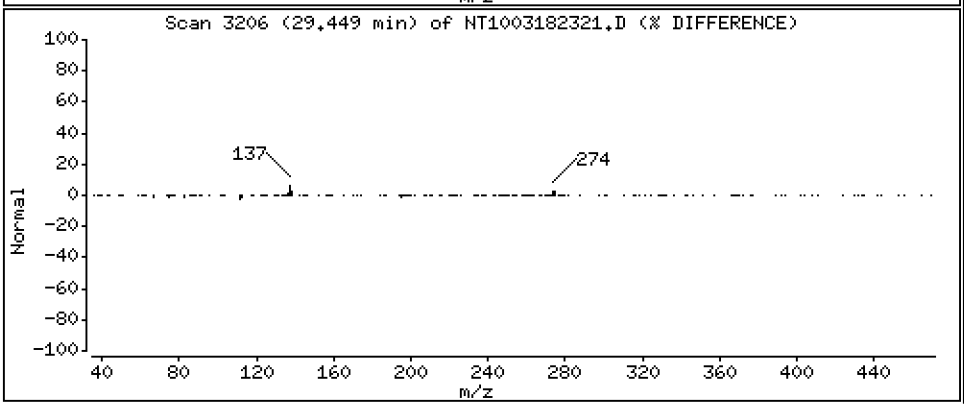












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

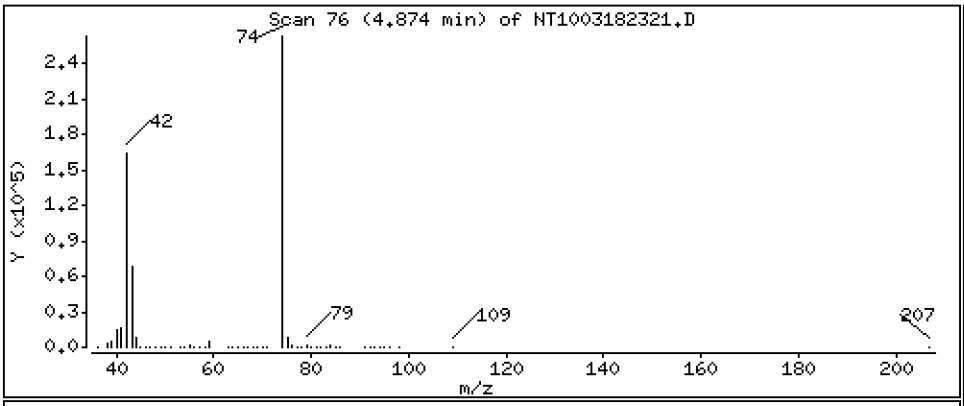
Operator: VTS

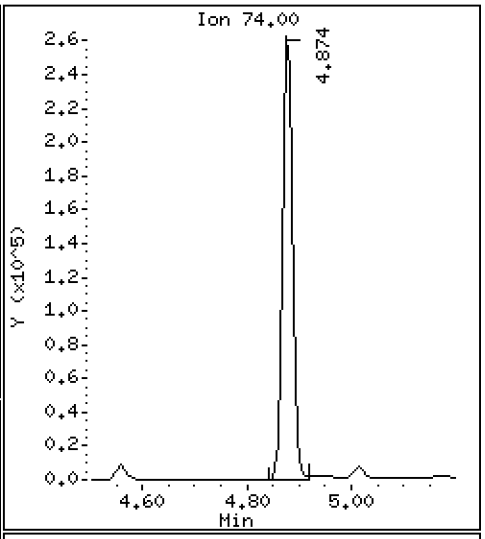
Column phase: ZB-5msi

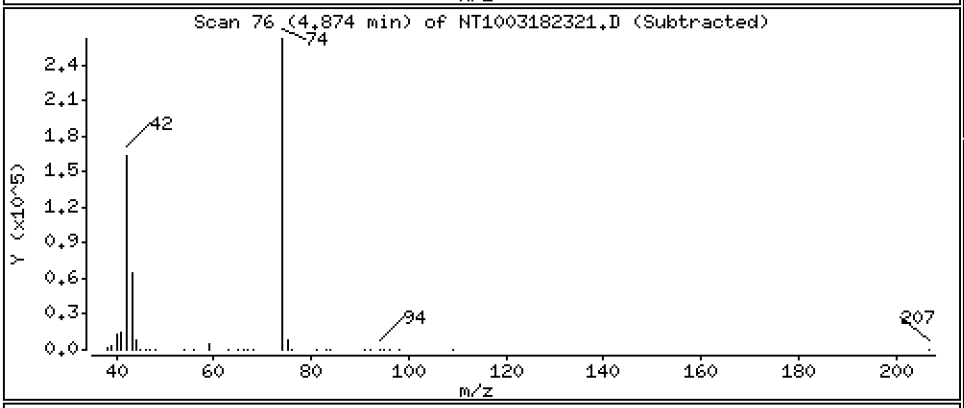
Column diameter: 0.25

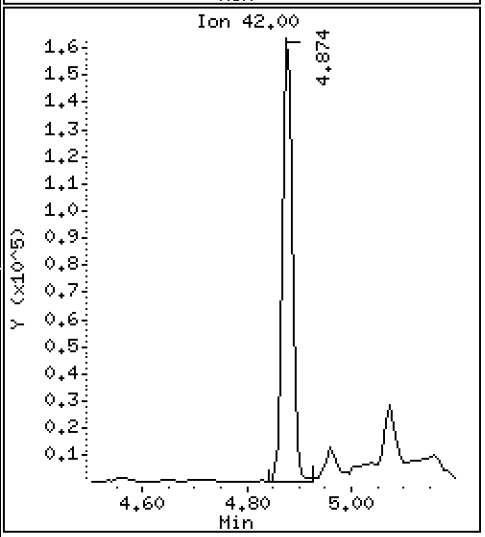
90 N-Nitrosodimethylamine

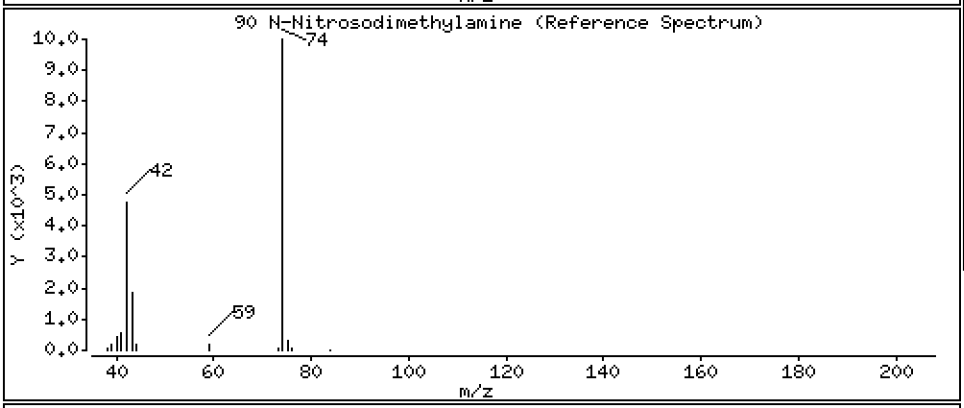
Concentration: 8.256 ug/mL

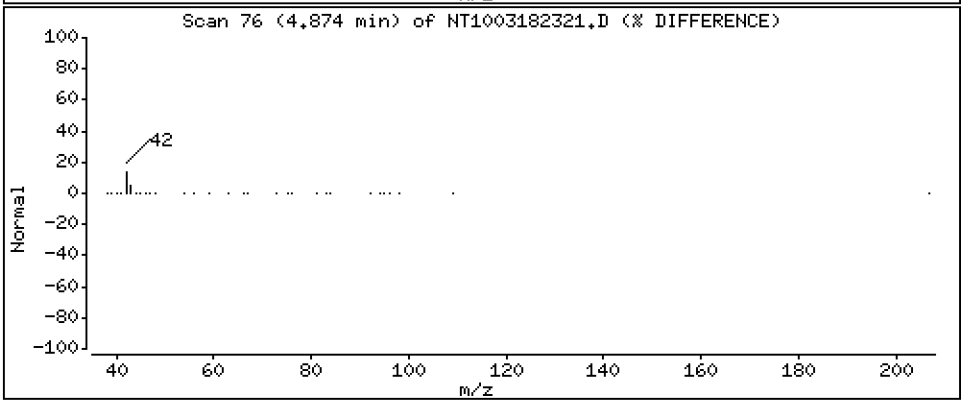












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

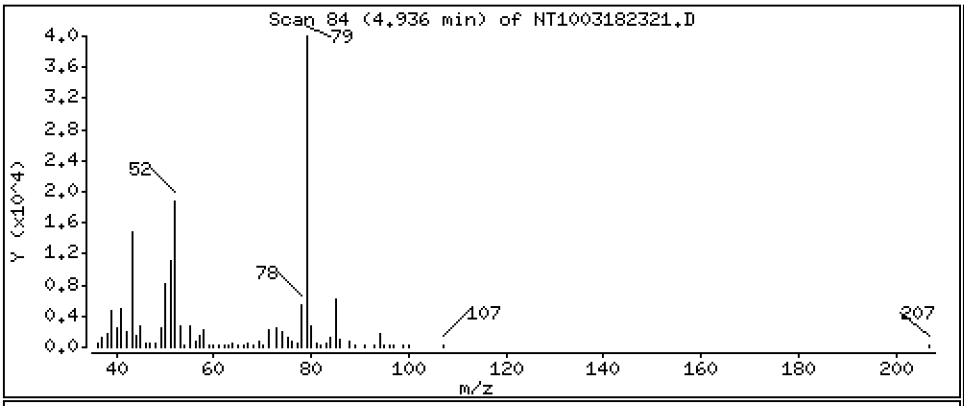
Operator: VTS

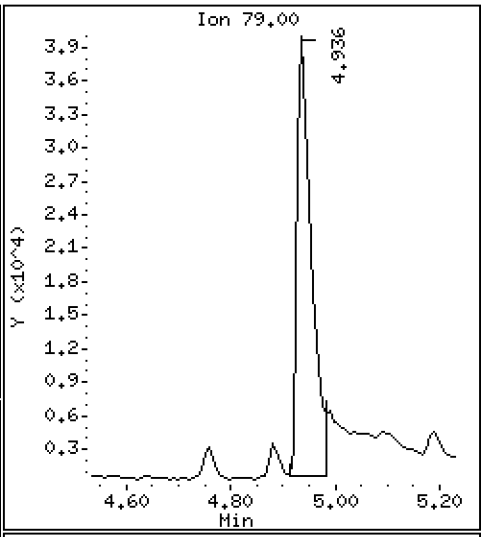
Column phase: ZB-5msi

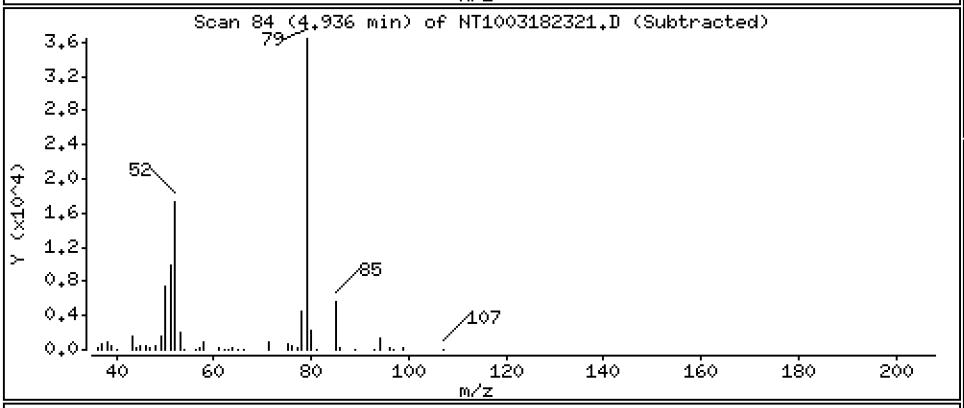
Column diameter: 0.25

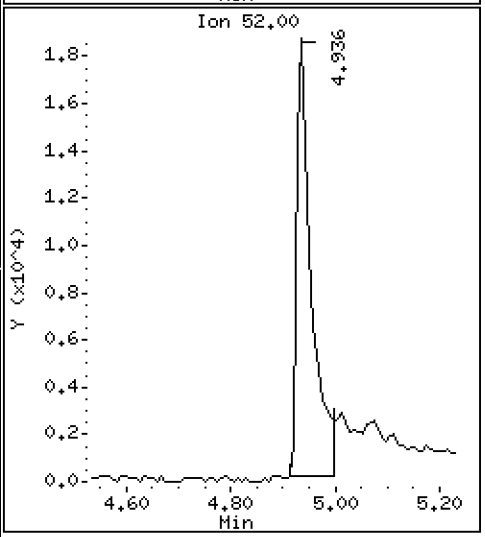
103 Pyridine

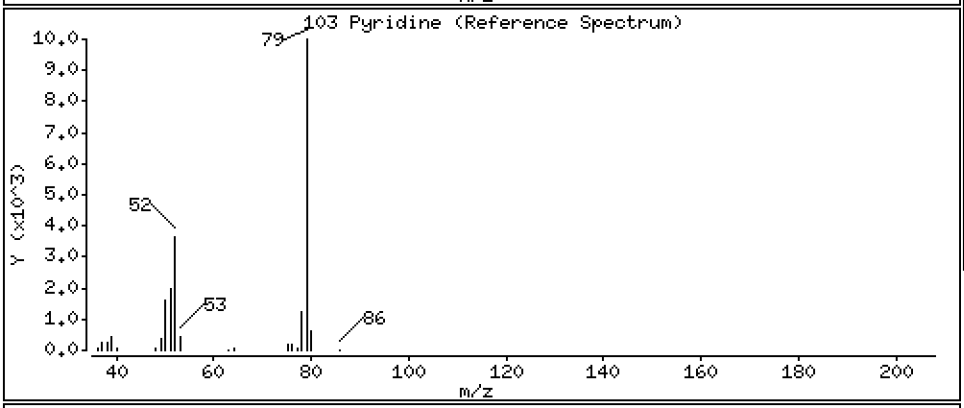
Concentration: 1.130 ug/mL

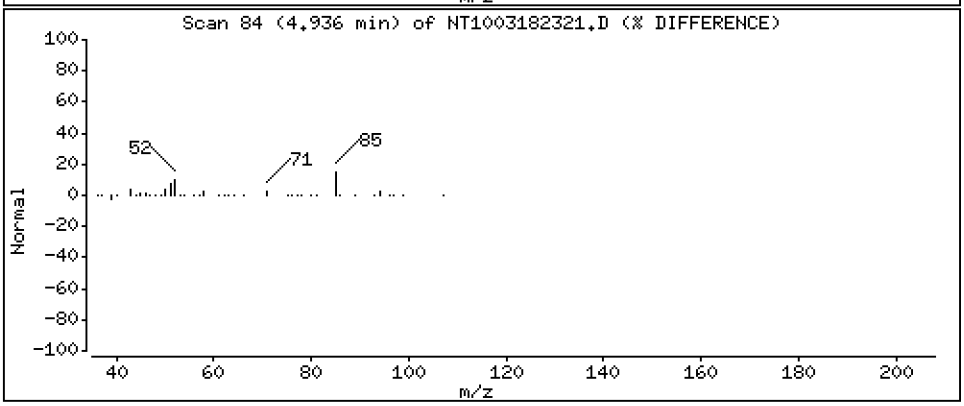












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

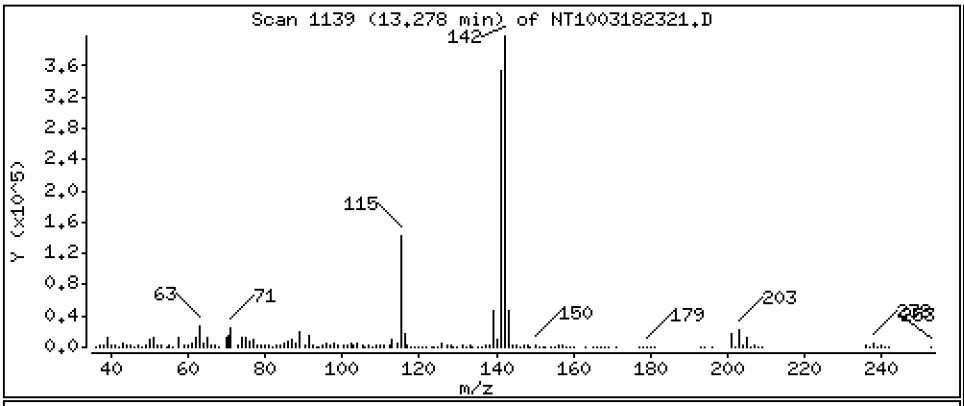
Operator: VTS

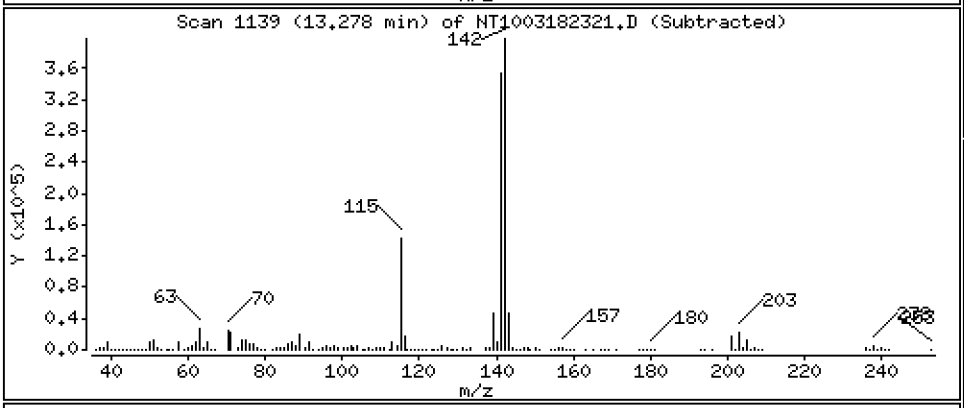
Column phase: ZB-5msi

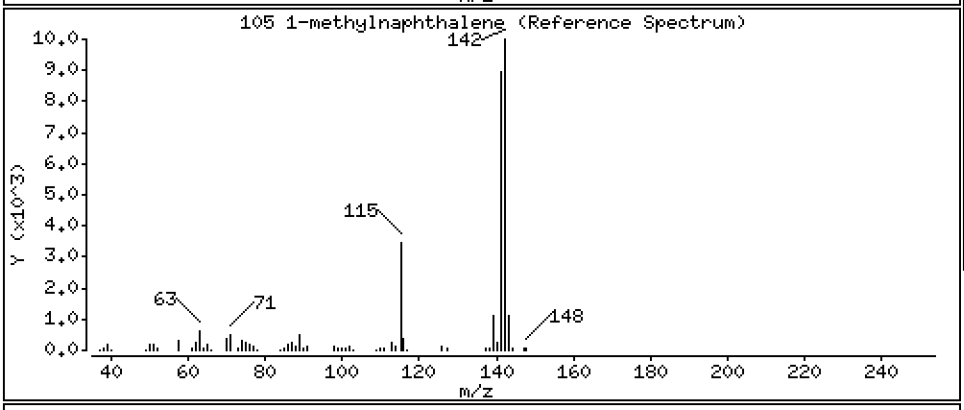
Column diameter: 0.25

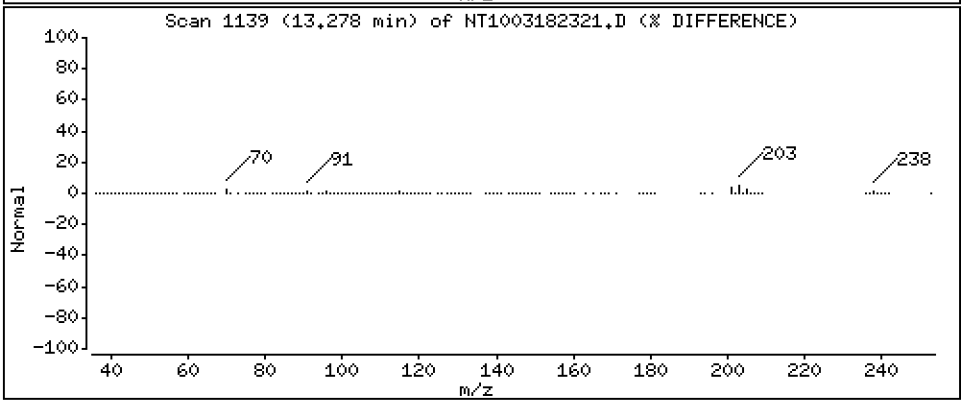
105 1-methylnaphthalene

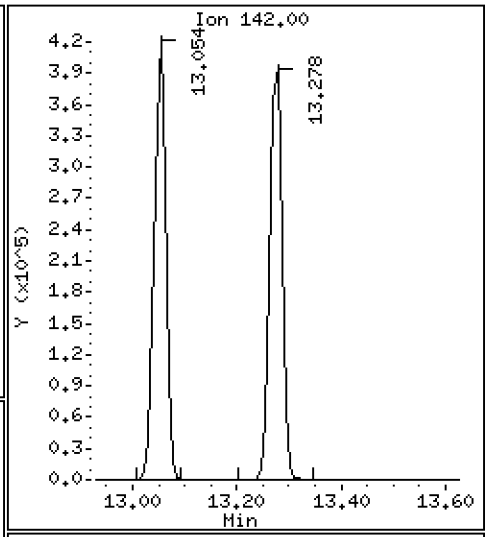
Concentration: 4.149 ug/mL

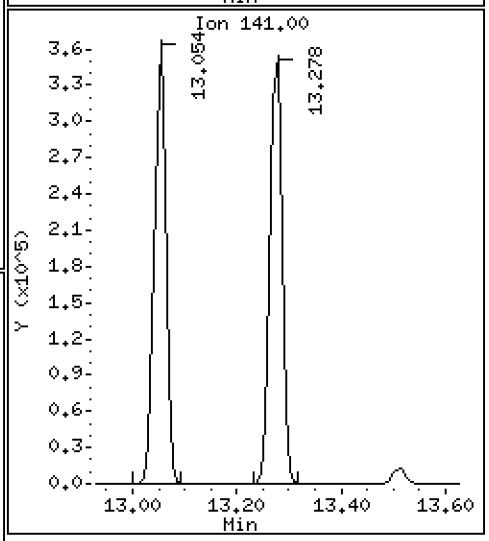












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

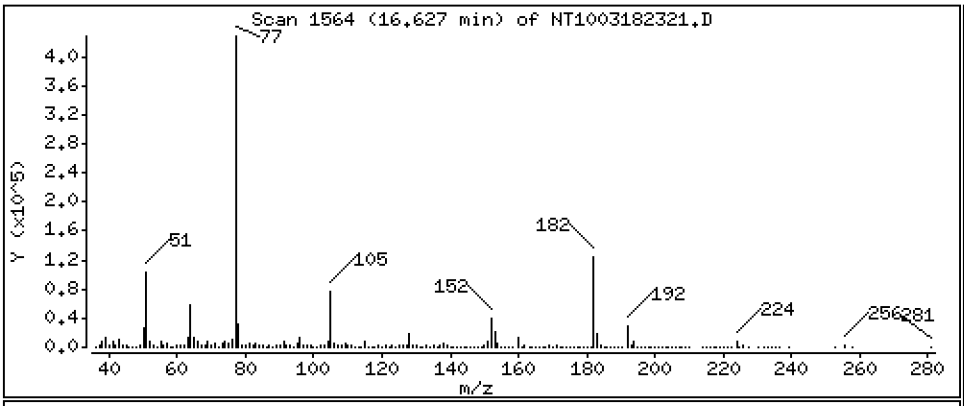
Operator: VTS

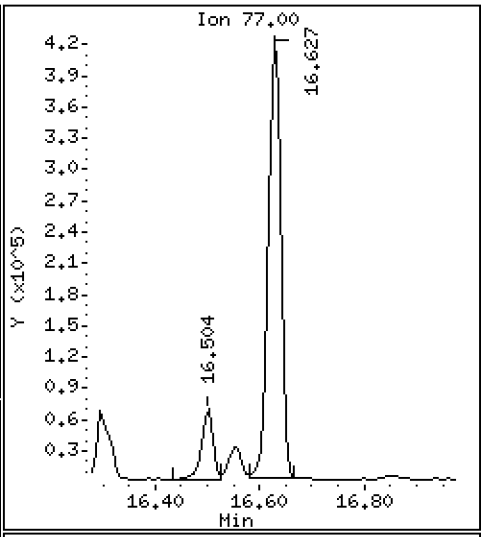
Column phase: ZB-5msi

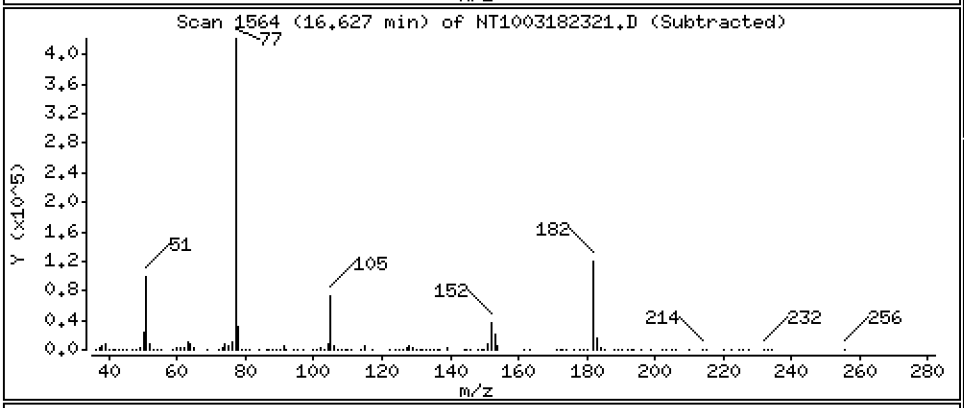
Column diameter: 0.25

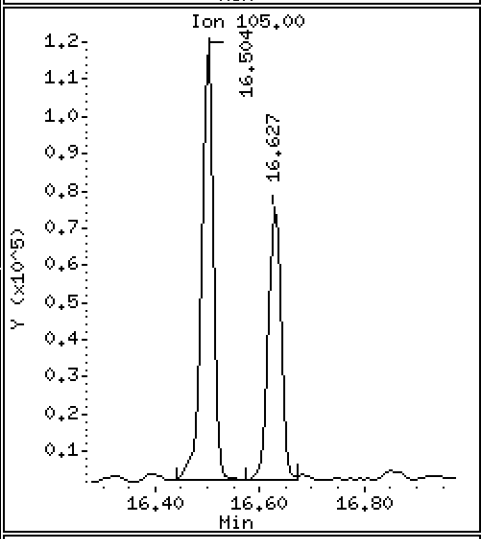
111 Azobenzene (1,2-DP-Hydrazine)

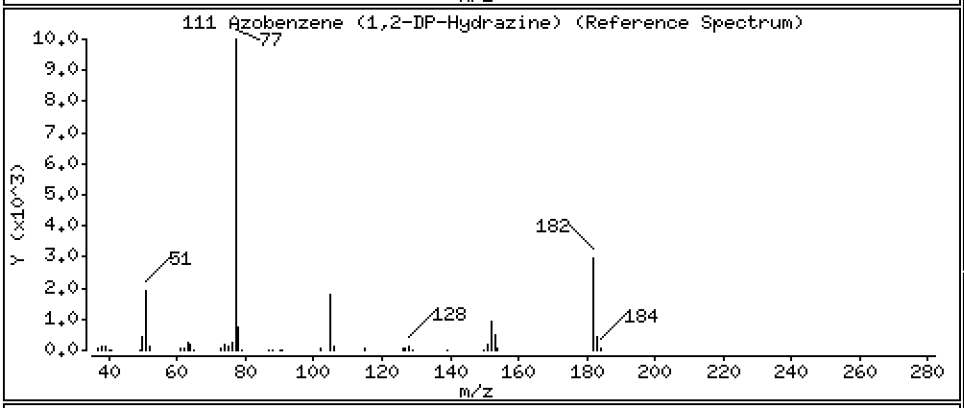
Concentration: 4.038 ug/mL

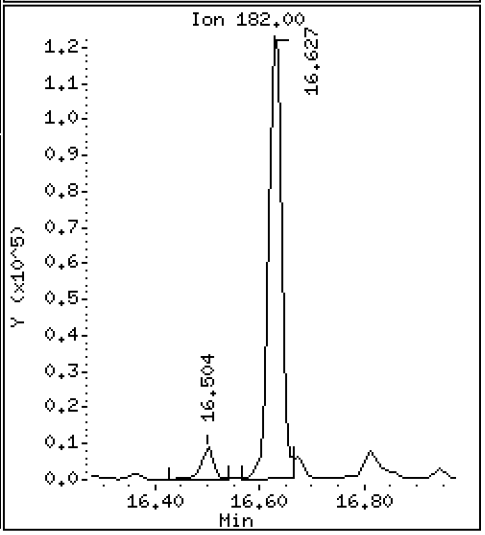


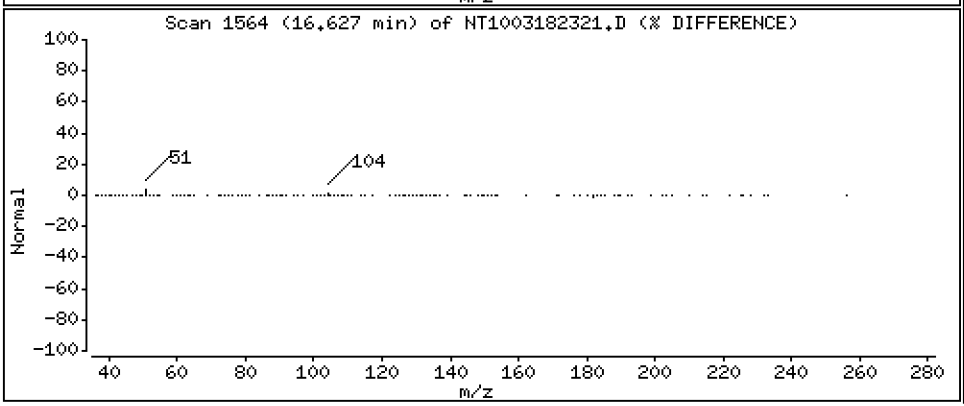












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

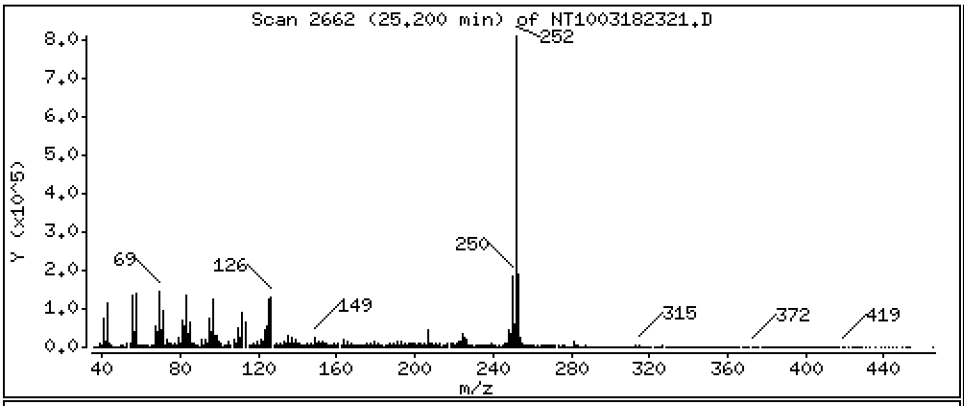
Operator: VTS

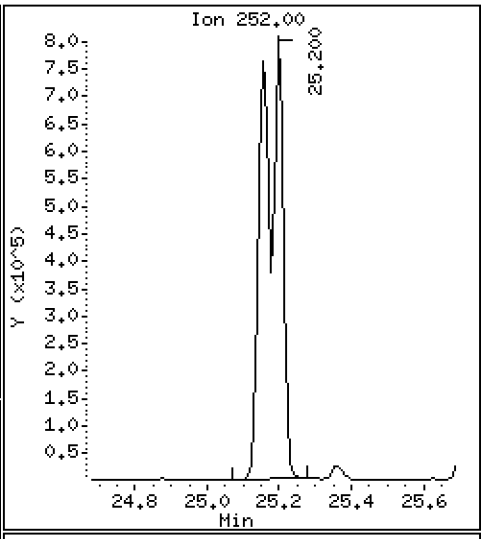
Column phase: ZB-5msi

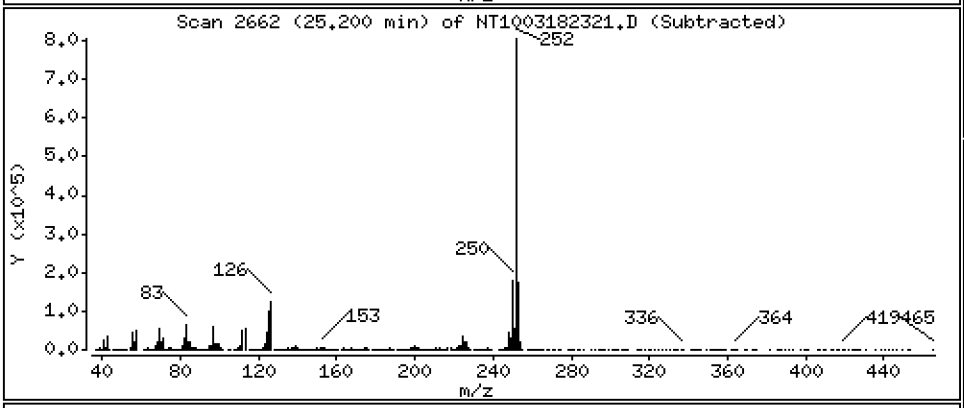
Column diameter: 0.25

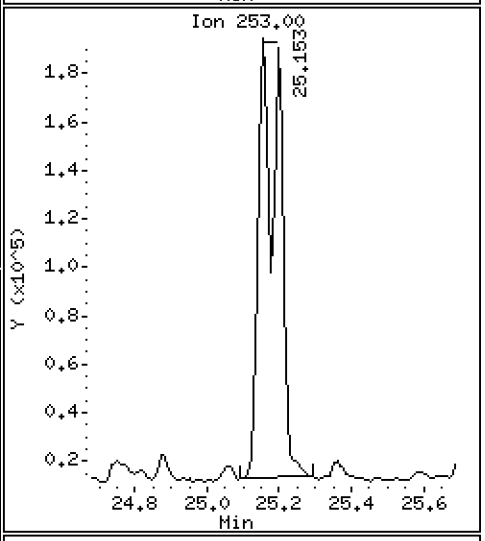
187 Total Benzofluoranthenes

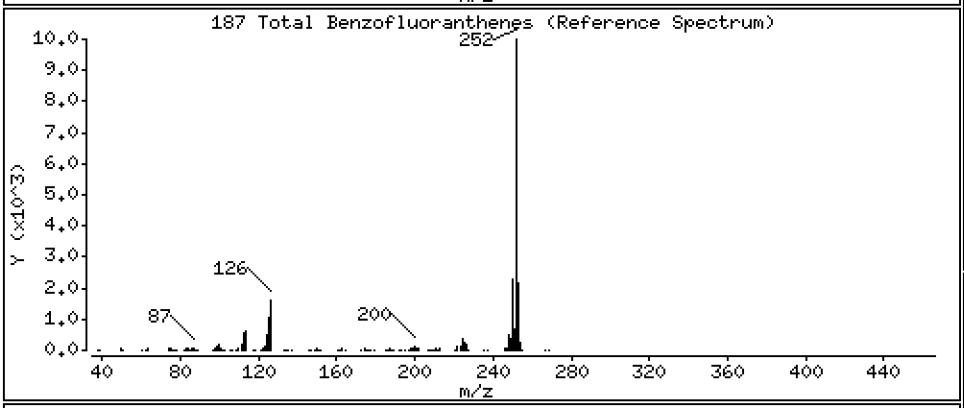
Concentration: 11.77 ug/mL

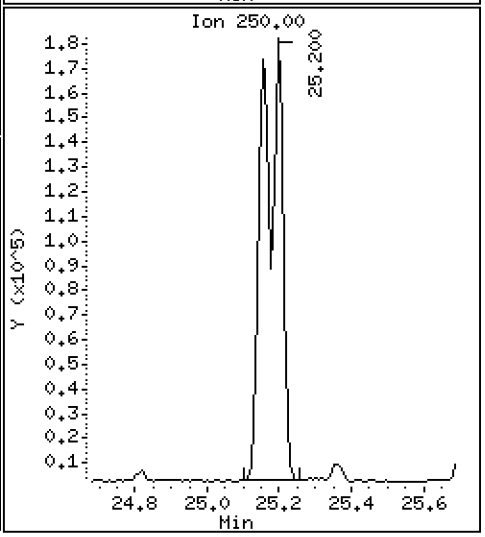


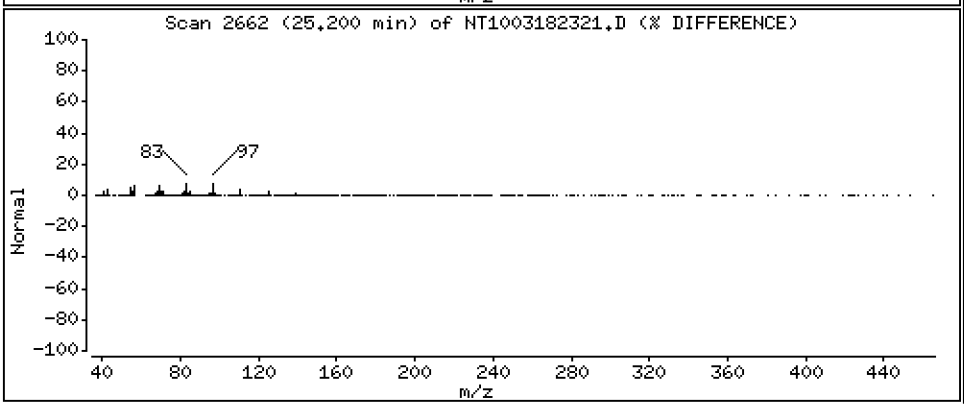












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS1

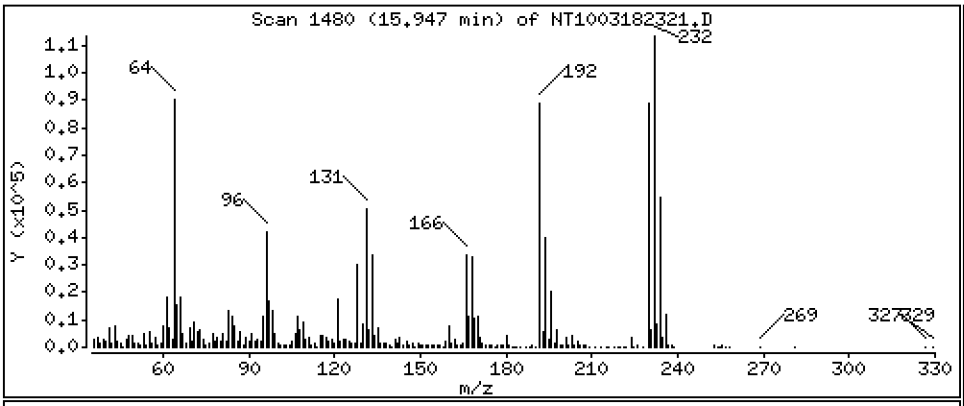
Operator: VTS

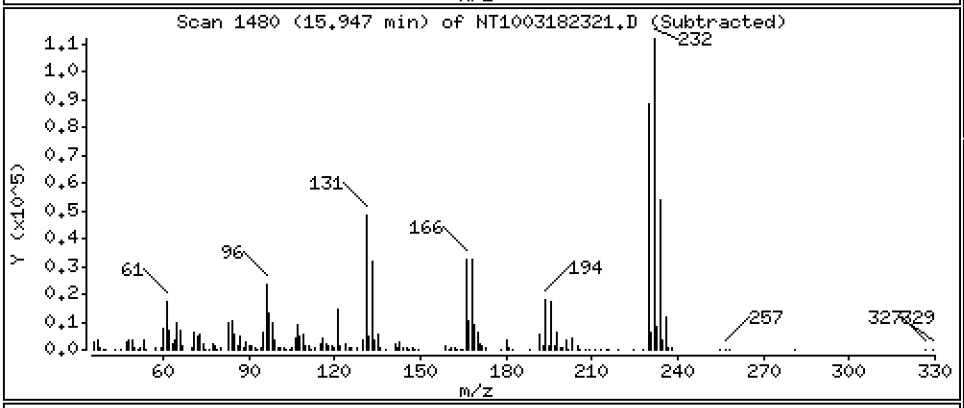
Column phase: ZB-5msi

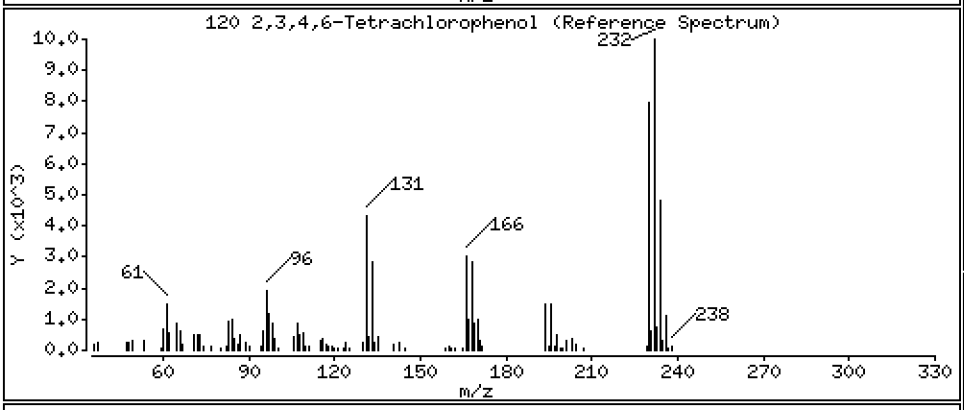
Column diameter: 0.25

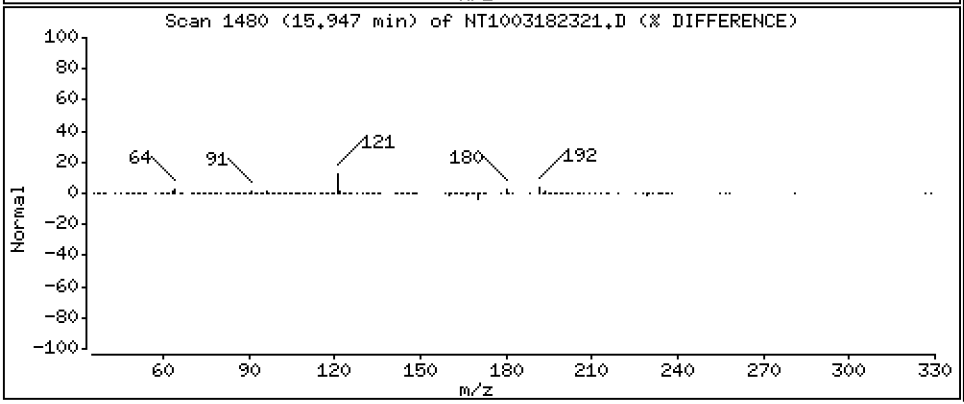
120 2,3,4,6-Tetrachlorophenol

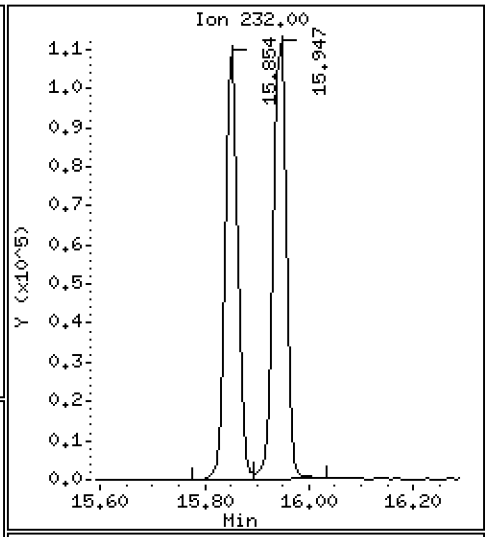
Concentration: 3.906 ug/mL

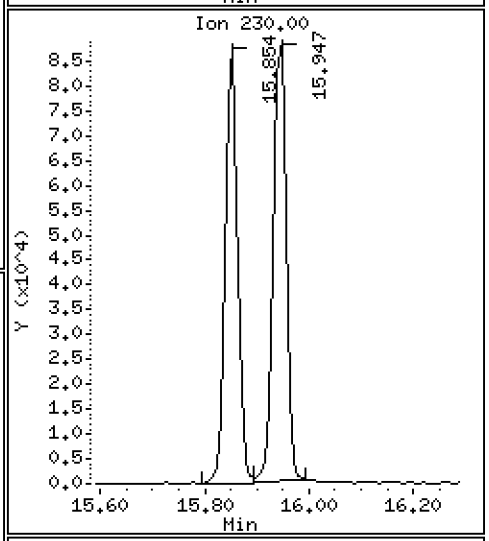


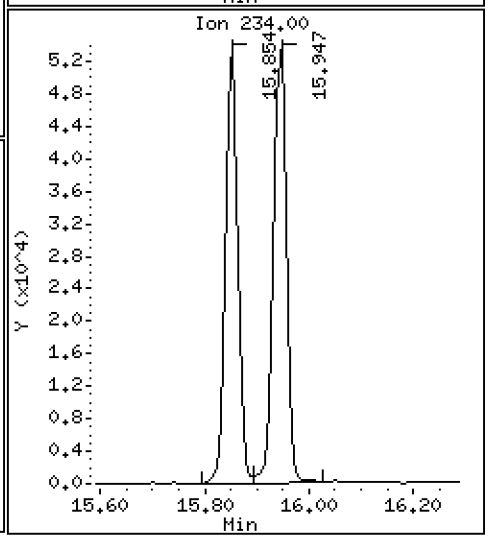












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182321.D
Lab Smp Id: BLB0579-MS1
Inj Date : 19-MAR-2023 06:29
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-MS1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.975	6.967	(0.761)	380057	5.44212	5.442
$	2	Phenol-d5	99	8.536	8.528	(0.931)	527991	5.76317	5.763
	3	Phenol	94	8.559	8.551	(0.933)	884363	9.28932	9.289
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	466451	5.96237	5.962
	4	Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	282065	3.99473	3.995
	6	2-Chlorophenol	128	8.845	8.837	(0.965)	295154	3.62242	3.622
	7	1,3-Dichlorobenzene	146	9.108	9.107	(0.993)	310053	3.59937	3.599
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	230931	4.00000	
	9	1,4-Dichlorobenzene	146	9.201	9.200	(1.003)	308008	3.70140	3.701
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	199958	3.55905	3.559
	12	1,2-Dichlorobenzene	146	9.558	9.557	(1.042)	307009	3.74883	3.749
	11	Benzyl alcohol	108	9.441	9.433	(1.030)	164020	3.67058	3.671
	14	2,2'-oxybis(1-Chloropropane)	121	9.728	9.728	(1.061)	102018	4.24189	4.242
	13	2-Methylphenol	108	9.659	9.651	(1.053)	251474	3.62358	3.624
	17	Hexachloroethane	117	10.140	10.140	(1.106)	102129	2.99134	2.991
	16	N-Nitroso-di-n-propylamine	70	9.992	9.984	(1.090)	217533	3.96969	3.970
	15	4-Methylphenol	108	9.923	9.915	(1.082)	800487	10.9471	10.95
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.881)	328488	3.82208	3.822
	19	Nitrobenzene	77	10.295	10.287	(0.885)	322431	3.82283	3.823
	20	Isophorone	82	10.737	10.737	(0.923)	591739	5.48425	5.484
	21	2-Nitrophenol	139	10.912	10.912	(0.938)	170823	4.14694	4.147
	22	2,4-Dimethylphenol	107	10.955	10.955	(0.941)	659537	8.51346	8.513
	23	Bis(2-Chloroethoxy)methane	93	11.150	11.150	(0.958)	330626	4.58735	4.587
	24	Benzoic acid	105	11.133	11.150	(0.957)	718328	16.0829	16.08
	25	2,4-Dichlorophenol	162	11.362	11.362	(0.976)	786169	12.6813	12.68
	26	1,2,4-Trichlorobenzene	180	11.545	11.545	(0.992)	325962	4.47923	4.479
*	27	Naphthalene-d8	136	11.638	11.638	(1.000)	851477	4.00000	
	28	Naphthalene	128	11.676	11.676	(1.003)	855203	3.79132	3.791
	29	4-Chloroaniline	127	11.862	11.800	(1.019)	67107	0.76259	0.7626(M)
	30	Hexachlorobutadiene	225	12.024	12.024	(1.033)	169692	3.97963	3.980
	31	4-Chloro-3-methylphenol	107	12.744	12.743	(1.095)	869813	12.9606	12.96
	32	2-Methylnaphthalene	142	13.053	13.053	(1.122)	634963	3.90065	3.901
	33	Hexachlorocyclopentadiene	237	13.510	13.510	(0.888)	154578	3.60991	3.610

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.665	13.664	(0.898)	649539	14.2039	14.20
	35 2,4,5-Trichlorophenol	196	13.742	13.742	(0.903)	701898	13.8136	13.81
$	36 2-Fluorobiphenyl	172	13.827	13.827	(0.908)	711840	3.88934	3.889
	37 2-Chloronaphthalene	162	14.044	14.044	(0.923)	600611	4.05282	4.053
	38 2-Nitroaniline	65	14.299	14.299	(0.939)	507973	12.2026	12.20
	39 Dimethylphthalate	163	14.725	14.717	(0.967)	678945	4.51711	4.517
	40 Acenaphthylene	152	14.911	14.910	(0.980)	925812	4.00915	4.009
	41 2,6-Dinitrotoluene	165	14.864	14.864	(0.977)	447821	13.7921	13.79
*	42 Acenaphthene-d10	164	15.220	15.220	(1.000)	462680	4.00000	
	43 3-Nitroaniline	138	15.158	15.143	(0.996)	103799	2.83230	2.832
	44 Acenaphthene	153	15.290	15.282	(1.005)	602785	4.22529	4.225
	45 2,4-Dinitrophenol	184	15.352	15.351	(1.009)	176372	8.84614	8.846
	46 Dibenzofuran	168	15.607	15.606	(1.025)	879153	4.17897	4.179
	47 4-Nitrophenol	109	15.467	15.460	(1.016)	275619	12.0477	12.05
	48 2,4-Dinitrotoluene	165	15.668	15.668	(1.029)	622969	12.9536	12.95
	50 Diethylphthalate	149	16.171	16.171	(1.062)	822515	5.57742	5.577
	49 Fluorene	166	16.318	16.318	(1.072)	657967	3.97543	3.975
	51 4-Chlorophenyl-phenylether	204	16.295	16.295	(1.071)	184483	2.34400	2.344
	52 4-Nitroaniline	138	16.410	16.410	(1.078)	163726	4.95733	4.957
	53 4,6-Dinitro-2-methylphenol	198	16.503	16.503	(0.904)	498448	18.6404	18.64
	54 N-Nitrosodiphenylamine	169	16.557	16.557	(0.907)	474736	4.09467	4.095
$	55 2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	148766	6.89600	6.896
	56 4-Bromophenyl-phenylether	248	17.305	17.305	(0.948)	224512	4.62886	4.629
	57 Hexachlorobenzene	284	17.622	17.621	(0.966)	206206	4.05500	4.055
	58 Pentachlorophenol	266	17.978	17.978	(0.985)	459930	14.8490	14.85
*	59 Phenanthrene-d10	188	18.249	18.241	(1.000)	867188	4.00000	
	60 Phenanthrene	178	18.295	18.295	(1.003)	1170080	4.94825	4.948
	61 Anthracene	178	18.388	18.380	(1.008)	931264	4.10557	4.106
	62 Carbazole	167	18.713	18.713	(1.025)	897290	4.41449	4.414
	63 Di-n-butylphthalate	149	19.510	19.494	(1.069)	1296376	4.76755	4.768
	64 Fluoranthene	202	20.694	20.670	(0.889)	1755964	5.78598	5.786
	65 Pyrene	202	21.104	21.096	(0.906)	1835445	5.89563	5.896
$	66 Terphenyl-d14	244	21.382	21.374	(0.918)	911301	3.89783	3.898
	67 Butylbenzylphthalate	149	22.304	22.296	(0.958)	572499	5.07213	5.072
	68 Benzo(a)anthracene	228	23.264	23.248	(0.999)	1453592	5.45250	5.452
*	69 Chrysene-d12	240	23.287	23.279	(1.000)	755284	4.00000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	23.333	23.326	(1.002)	1438061	5.52133	5.521
	72 bis(2-Ethylhexyl)phthalate	149	23.326	23.318	(0.960)	1013469	5.21609	5.216
*	134 Di-n-octylphthalate-d4	153	24.309	24.301	(1.000)	1324046	4.00000	
	73 Di-n-octylphthalate	149	24.324	24.309	(1.001)	1544024	4.45614	4.456
	74 Benzo(b)fluoranthene	252	25.153	25.145	(0.970)	1590411	6.06433	6.064
	75 Benzo(k)fluoranthene	252	25.199	25.184	(0.972)	1557628	5.84913	5.849(MH)
	76 Benzo(a)pyrene	252	25.819	25.803	(0.996)	1314548	5.60641	5.606
*	77 Perylene-d12	264	25.935	25.919	(1.000)	809058	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.649	28.594	(1.105)	1294100	4.33817	4.338
	79 Dibenzo(a,h)anthracene	278	28.649	28.618	(1.105)	1022488	4.12860	4.129
	80 Benzo(g,h,i)perylene	276	29.449	29.402	(1.135)	1087865	4.21394	4.214
	90 N-Nitrosodimethylamine	74	4.874	4.850	(0.532)	367854	8.25636	8.256
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	4.935	4.881	(0.538)	77309	1.12982	1.130
	105 1-methylnaphthalene	142	13.278	13.277	(1.141)	618830	4.14920	4.149
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.626	(1.092)	665249	4.03828	4.038

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.199	25.184	(0.972)	2980941	11.7724	11.77(M)
120 2,3,4,6-Tetrachlorophenol	232	15.947	15.939	(1.048)	186491	3.90628	3.906

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182321.D
Lab Smp Id: BLB0579-MS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	230931	10.21
27 Naphthalene-d8	795859	397930	1591718	851477	6.99
42 Acenaphthene-d10	432510	216255	865020	462680	6.98
59 Phenanthrene-d10	808891	404446	1617782	867188	7.21
69 Chrysene-d12	657926	328963	1315852	755284	14.80
134 Di-n-octylphthala	1187734	593867	2375468	1324046	11.48
77 Perylene-d12	770107	385054	1540214	809058	5.06

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.04
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.03
134 Di-n-octylphthala	24.30	23.80	24.80	24.31	0.03
77 Perylene-d12	25.92	25.42	26.42	25.94	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182321.D

Lab ID: BLB0579-MS1
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 06:29

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.019	1.014	0.0053	4-Chloroaniline
0.538	0.532	0.0059	Pyridine

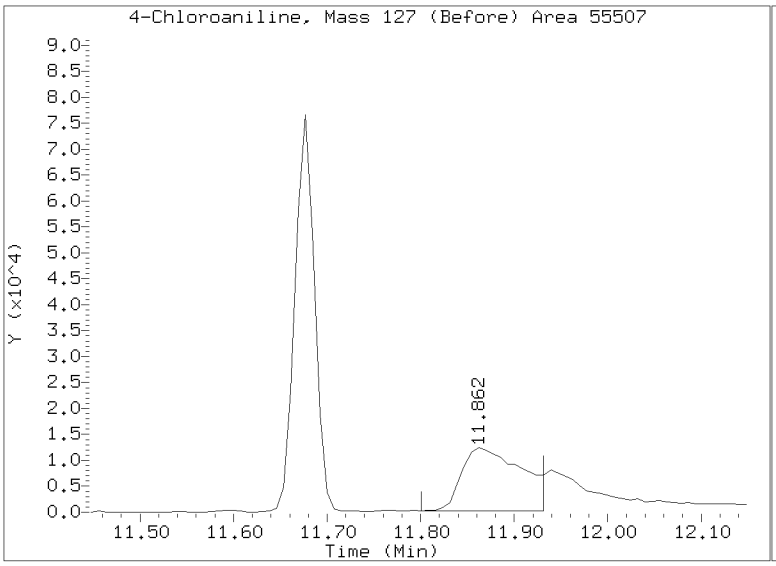
RRT check based on Ccal File: NT1003182316.D

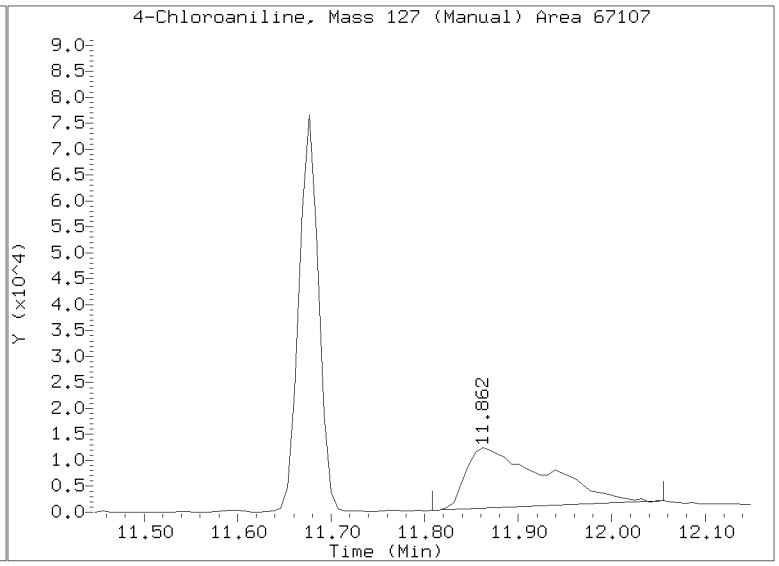
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

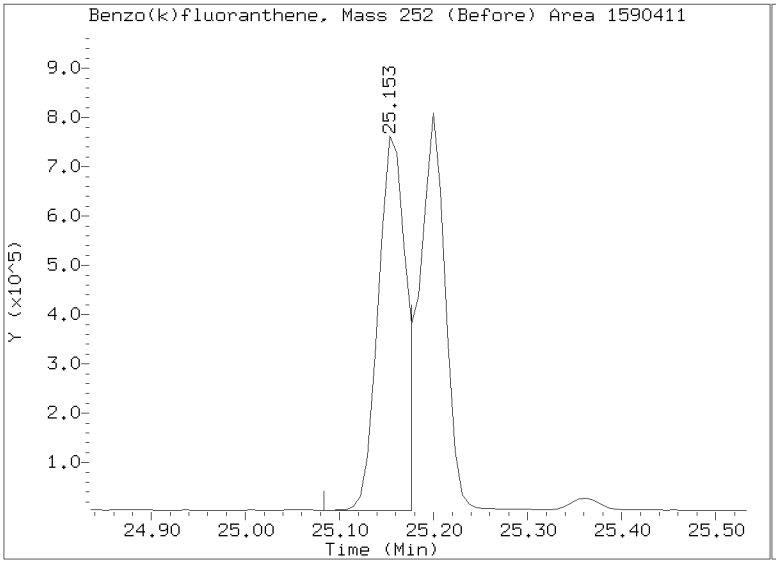
* Only compounds listed in the work order have been verified by the analyst *

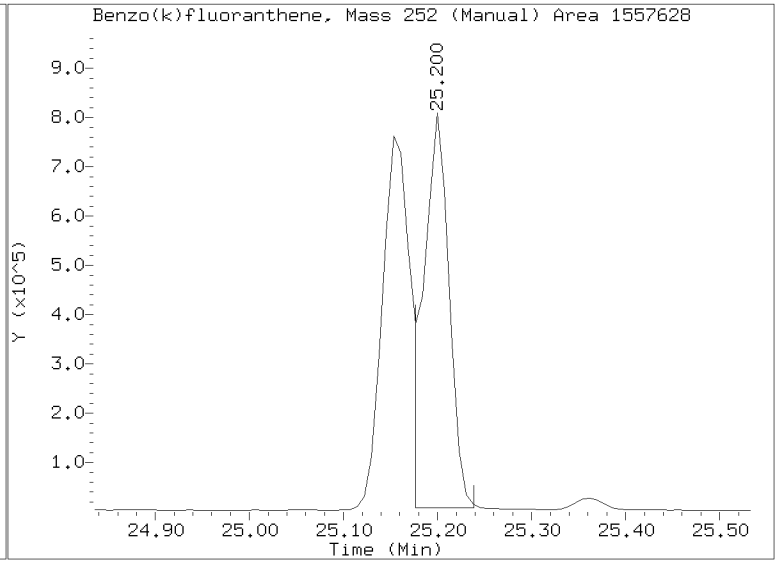
Quant Ion Manual Peak Adjustment Report

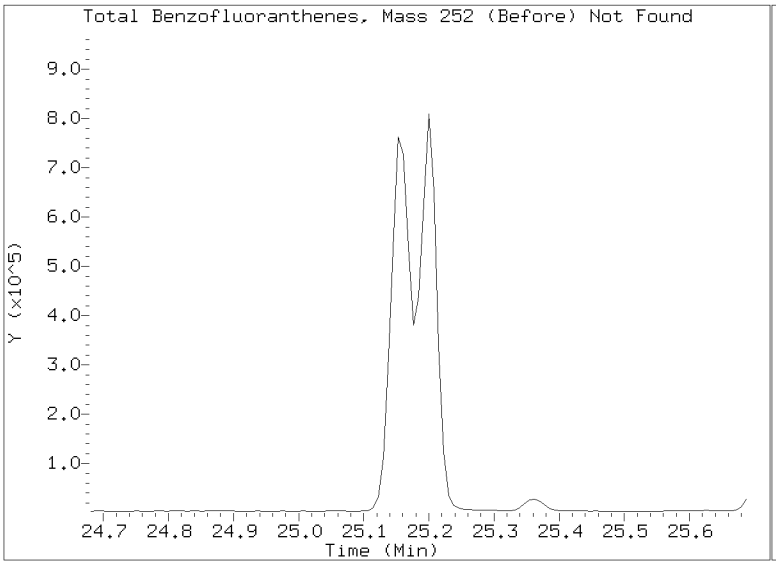
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182321.D
Injection Date: 19-MAR-2023 06:29
Lab ID:BLB0579-MS1 Client ID:
Report Date: 04/04/2023 10:37

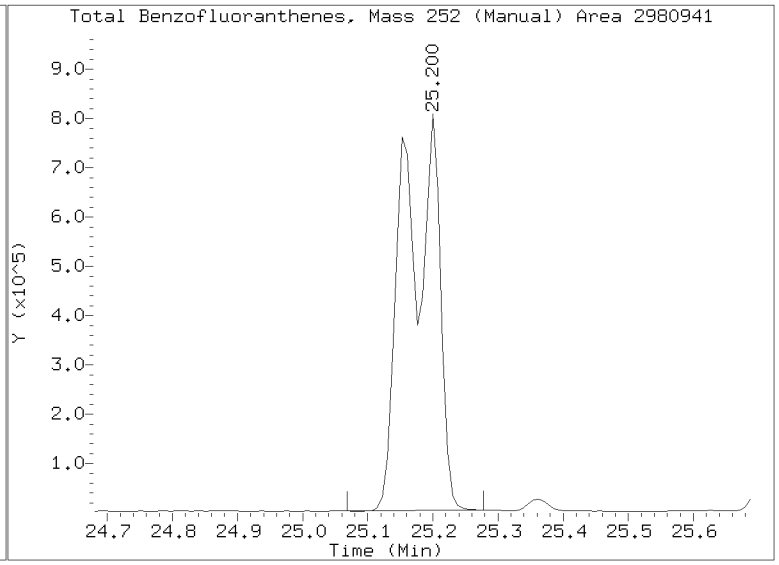












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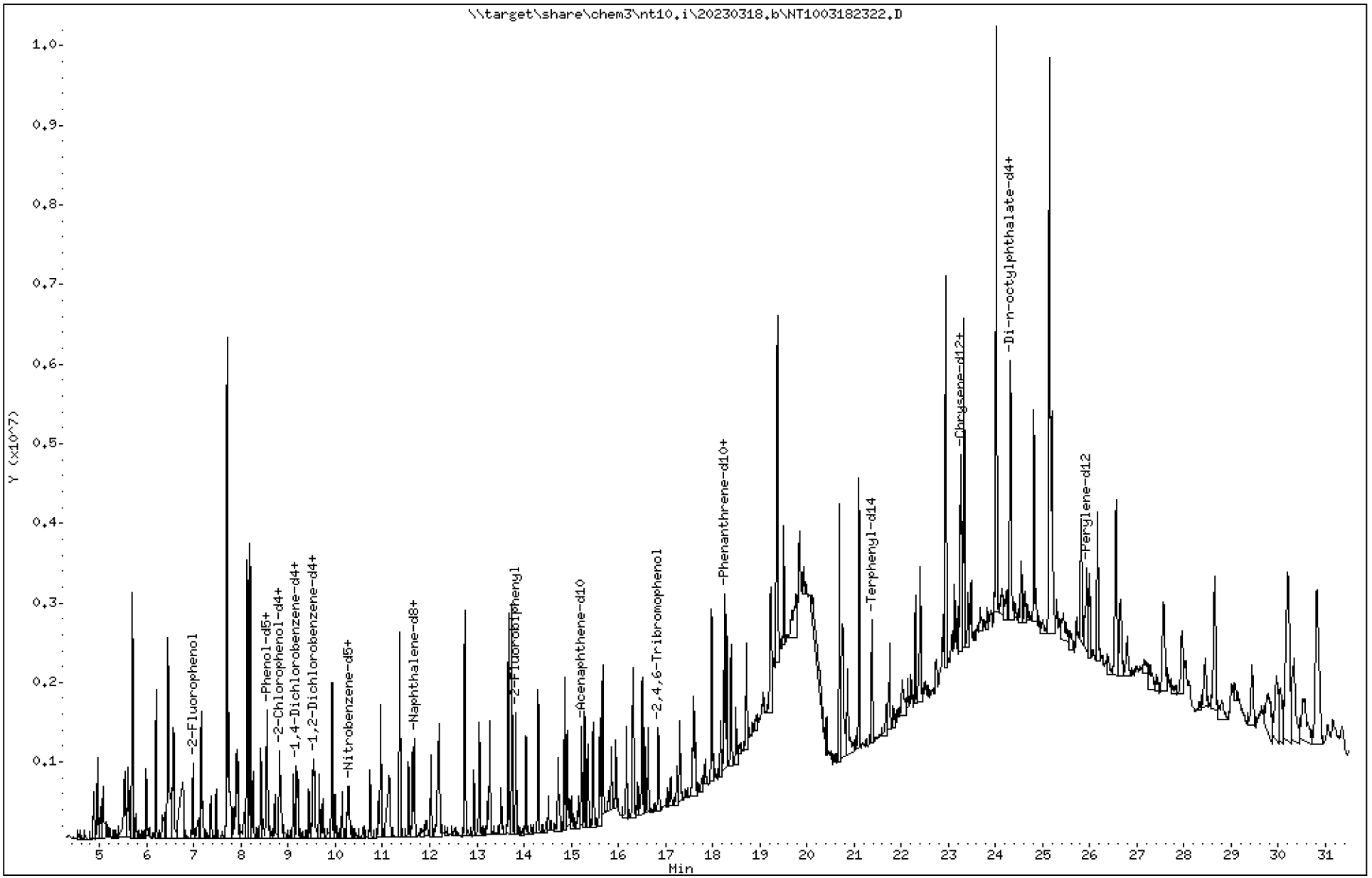
Date : 19-MAR-2023 07:08
Client ID:
Sample Info: BLB0579-MSD1

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS
Column diameter: 0.25



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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

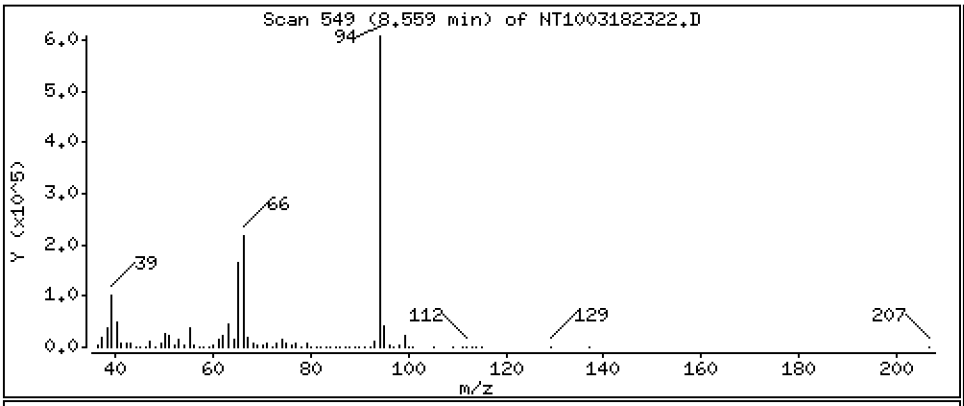
Operator: VTS

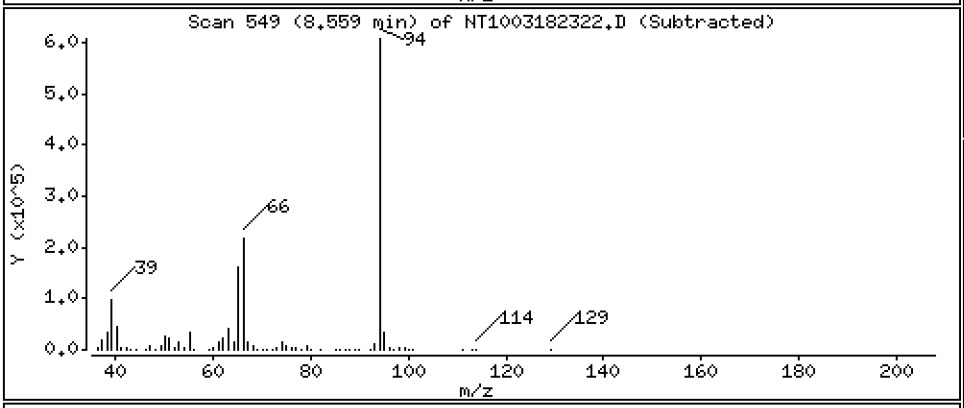
Column phase: ZB-5msi

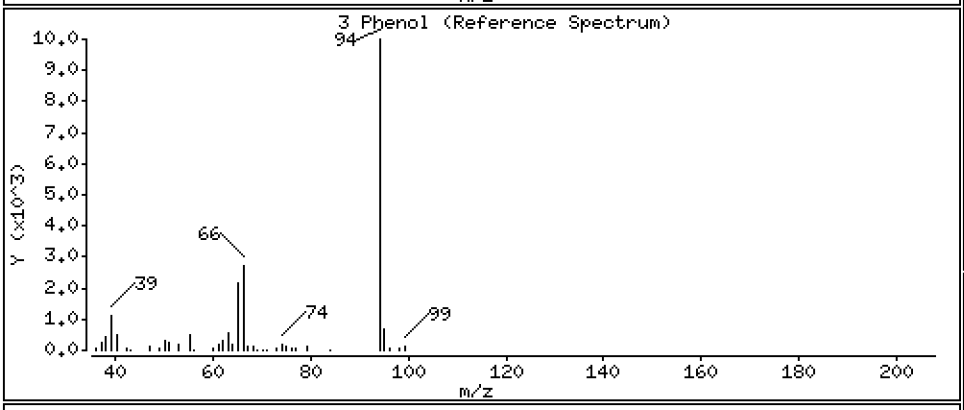
Column diameter: 0.25

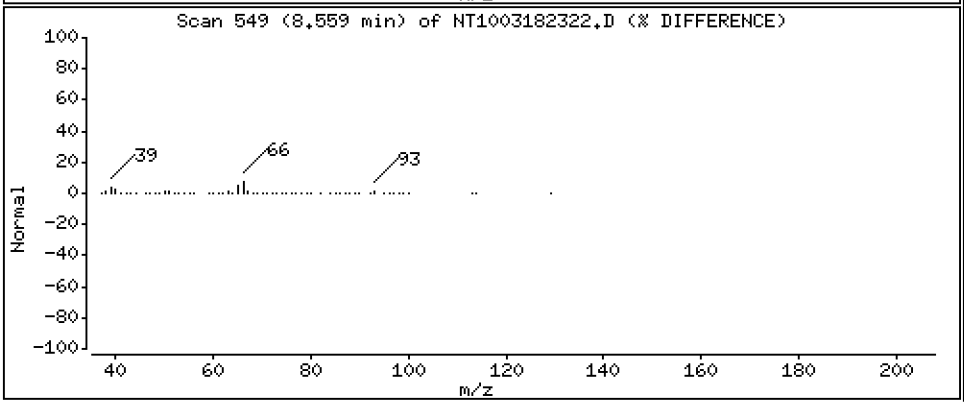
3 Phenol

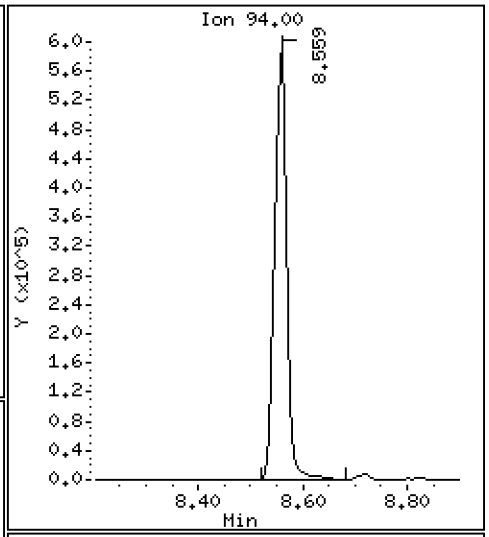
Concentration: 8.977 ug/mL

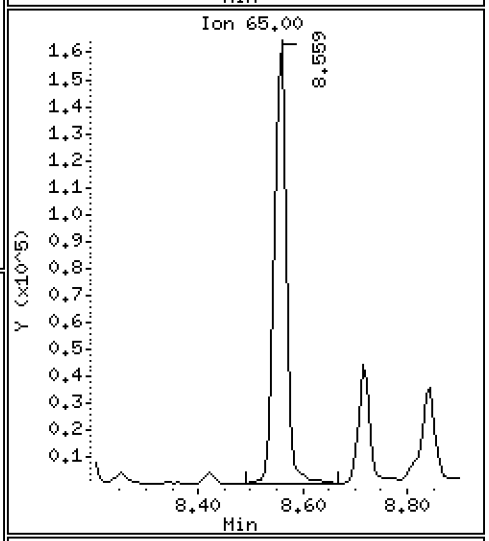


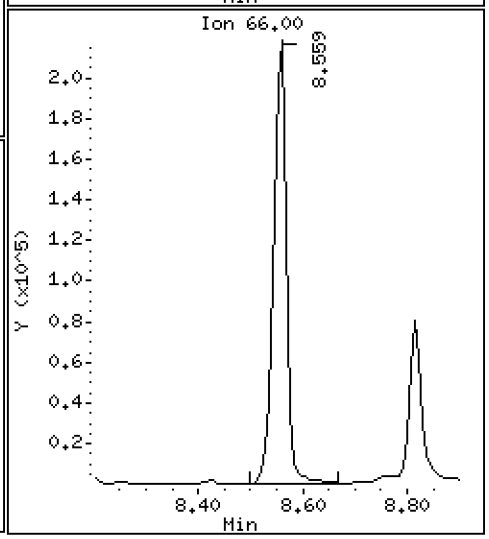












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

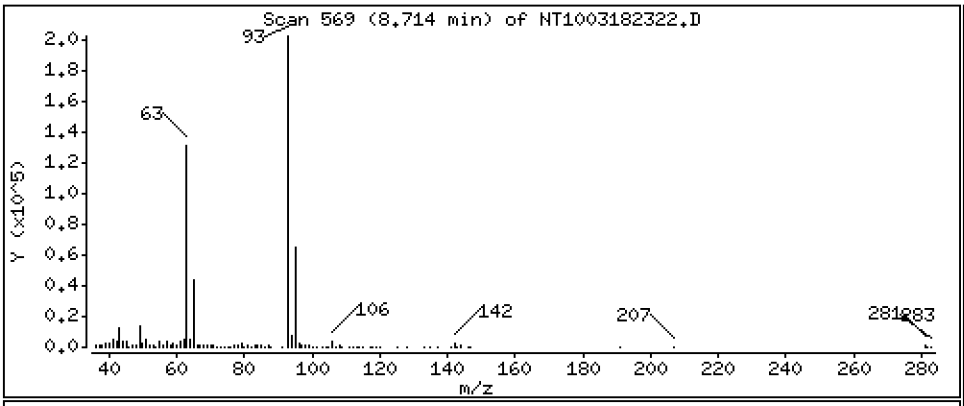
Operator: VTS

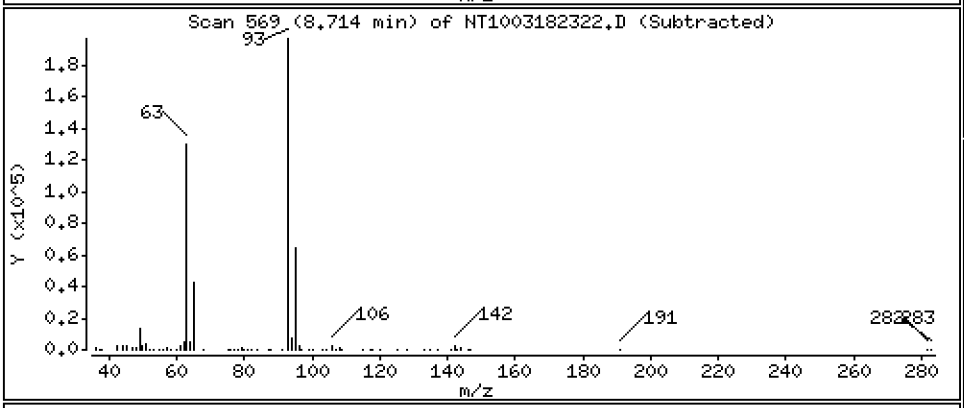
Column phase: ZB-5msi

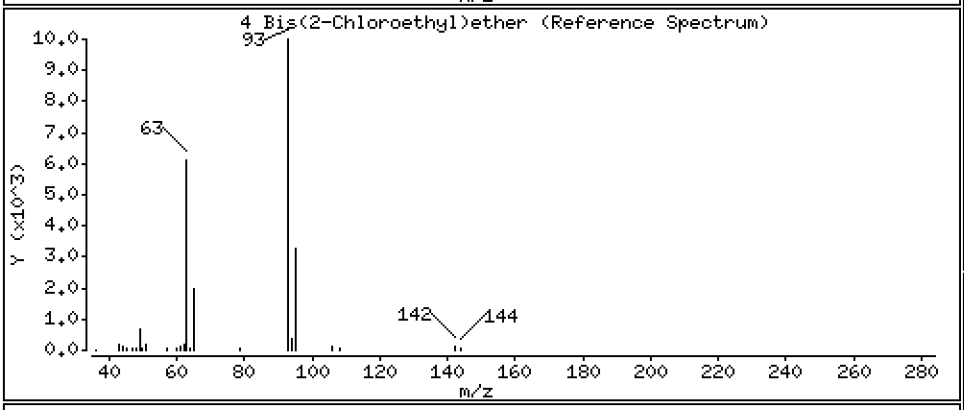
Column diameter: 0.25

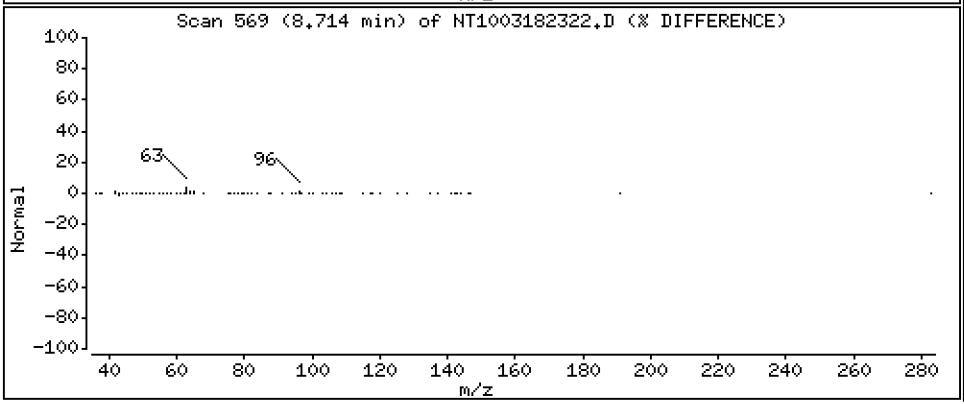
4 Bis(2-Chloroethyl)ether

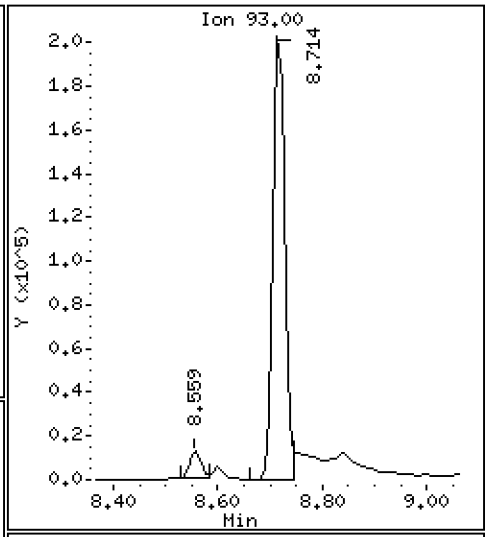
Concentration: 3.992 ug/mL

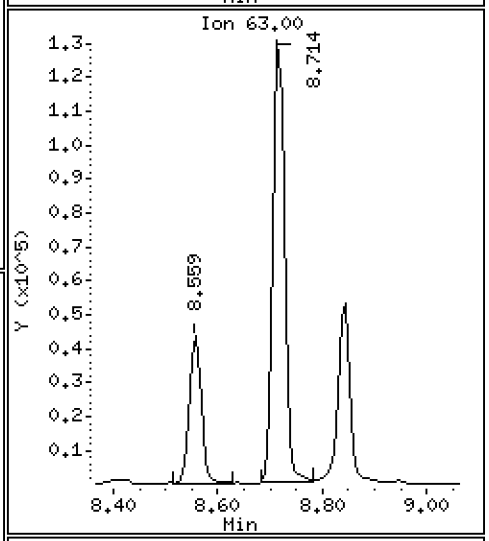


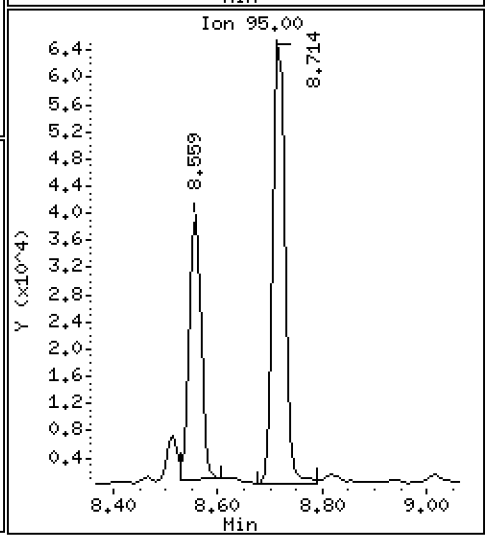












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

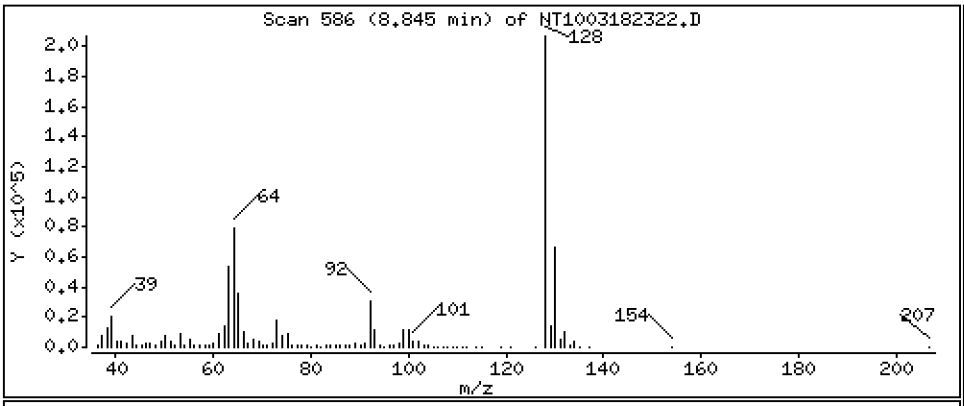
Operator: VTS

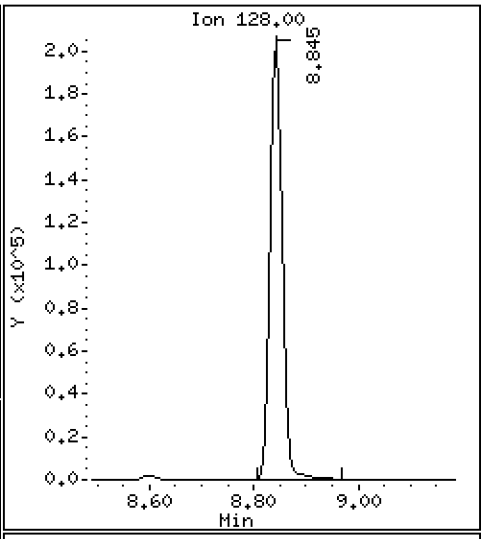
Column phase: ZB-5msi

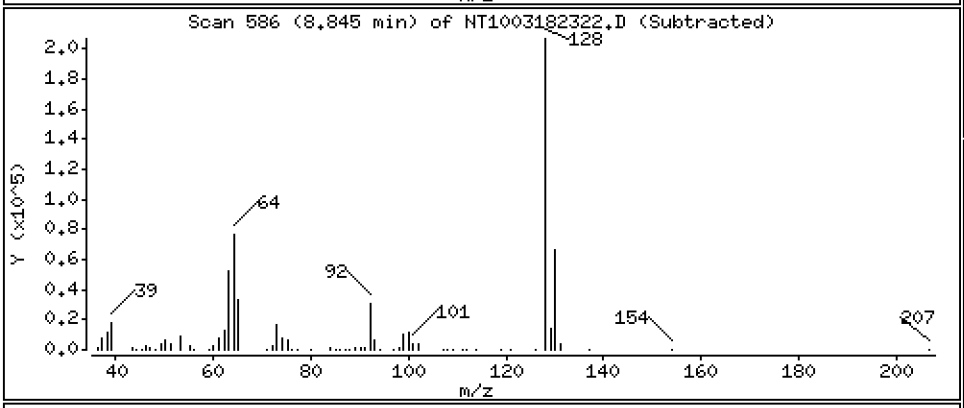
Column diameter: 0.25

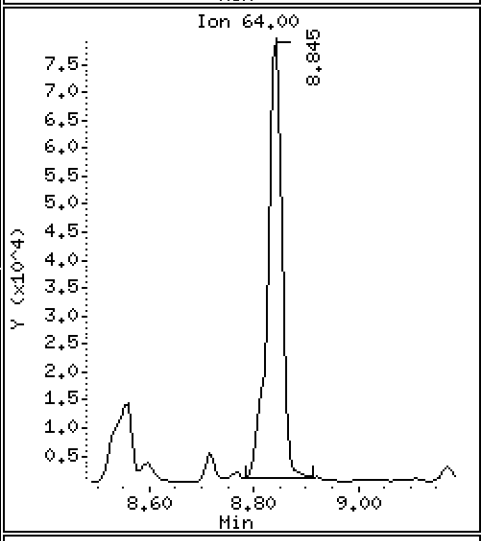
6 2-Chlorophenol

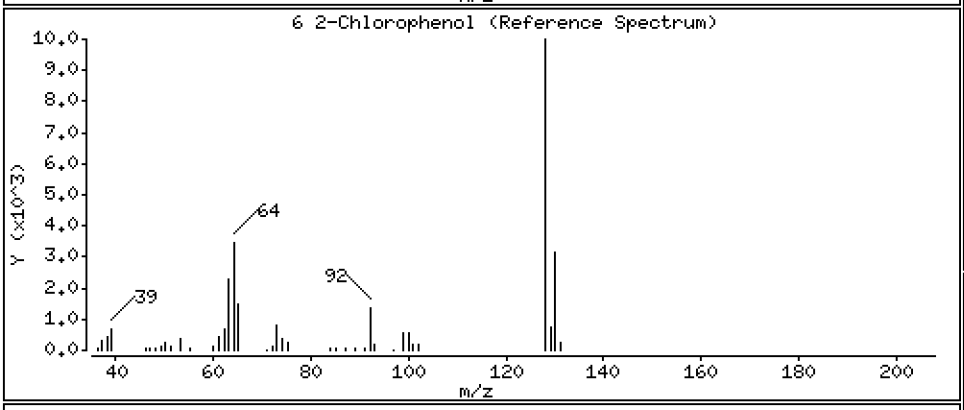
Concentration: 3.649 ug/mL

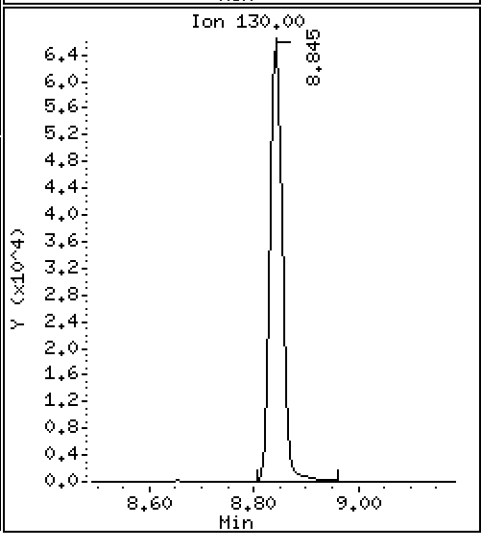


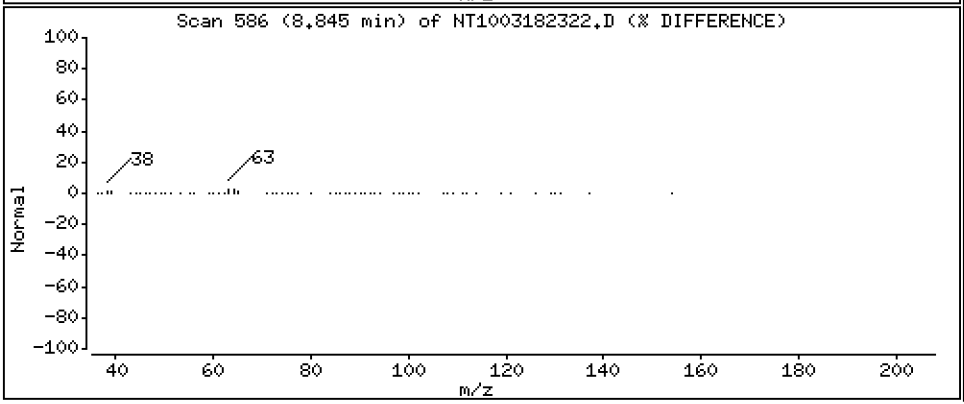












Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

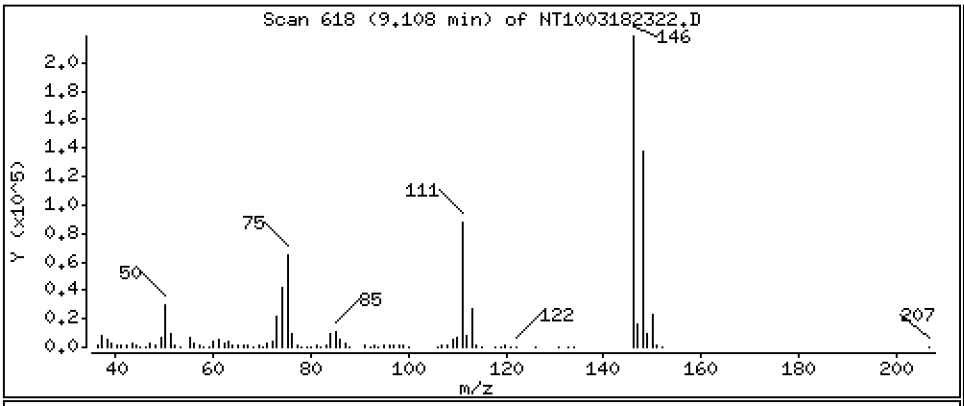
Operator: VTS

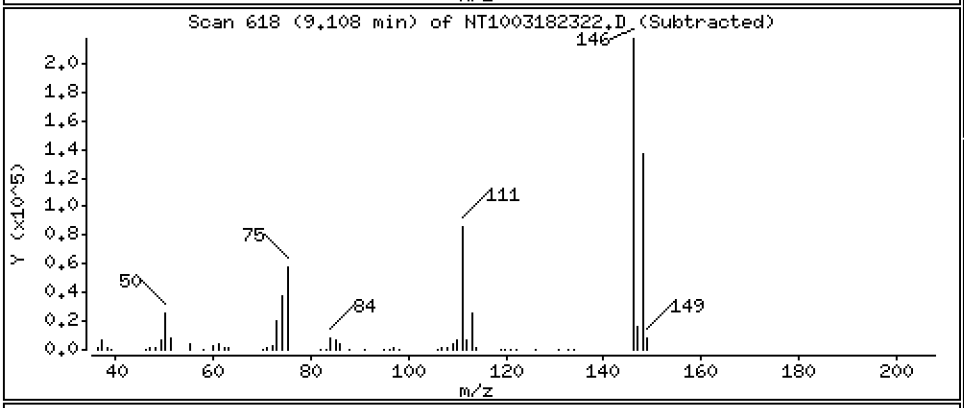
Column phase: ZB-5msi

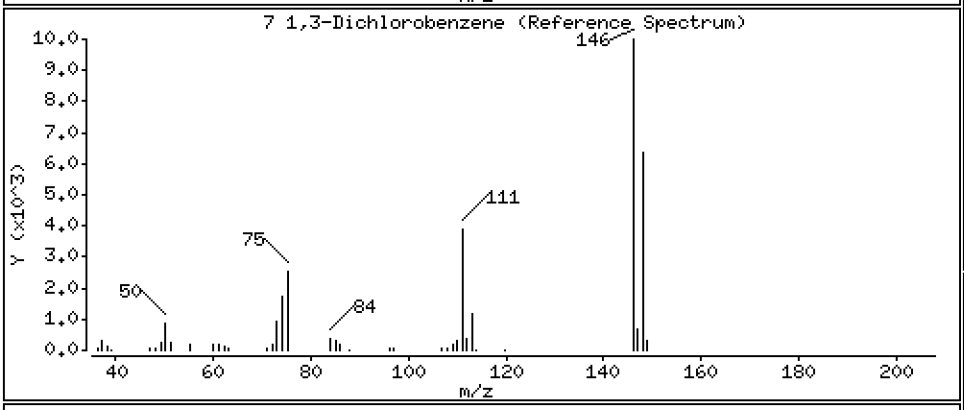
Column diameter: 0.25

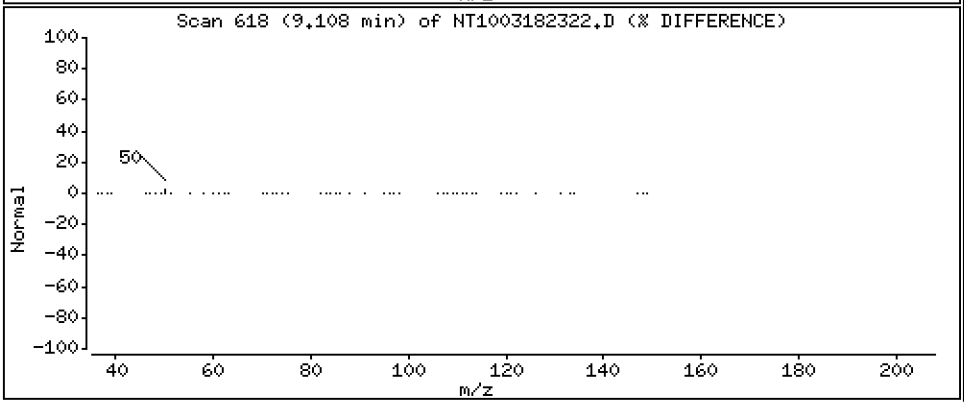
7 1,3-Dichlorobenzene

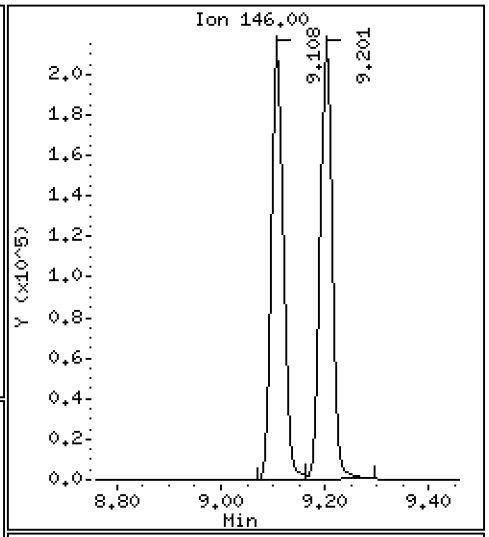
Concentration: 3.659 ug/mL

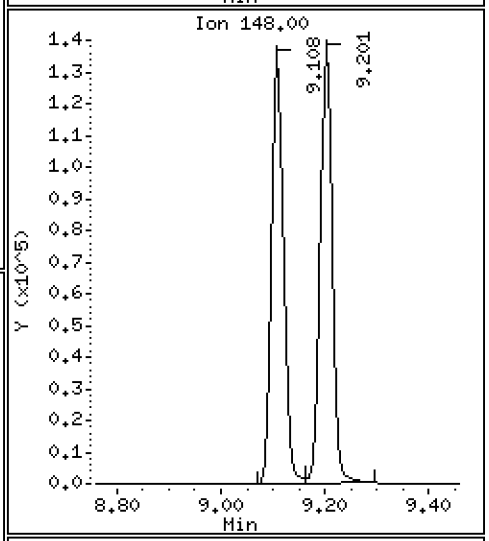


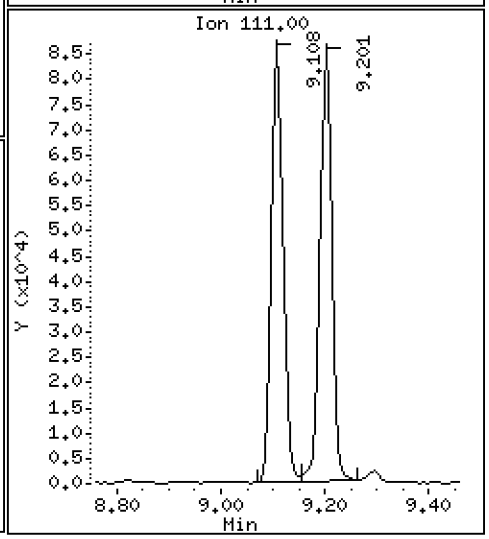












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

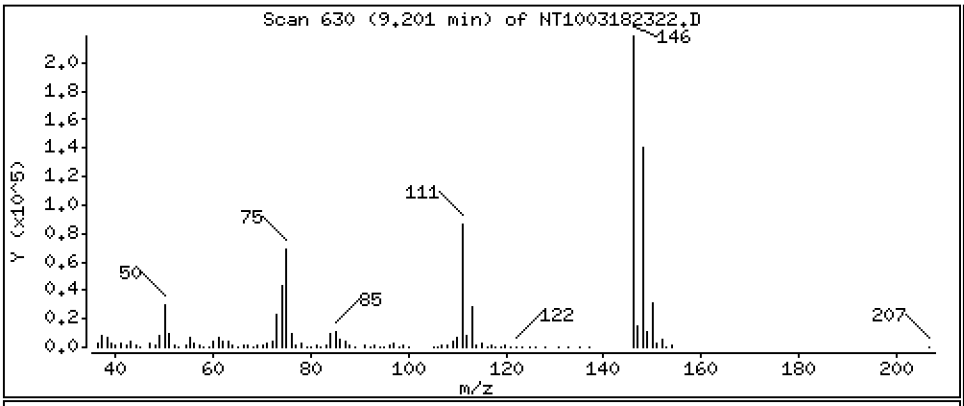
Operator: VTS

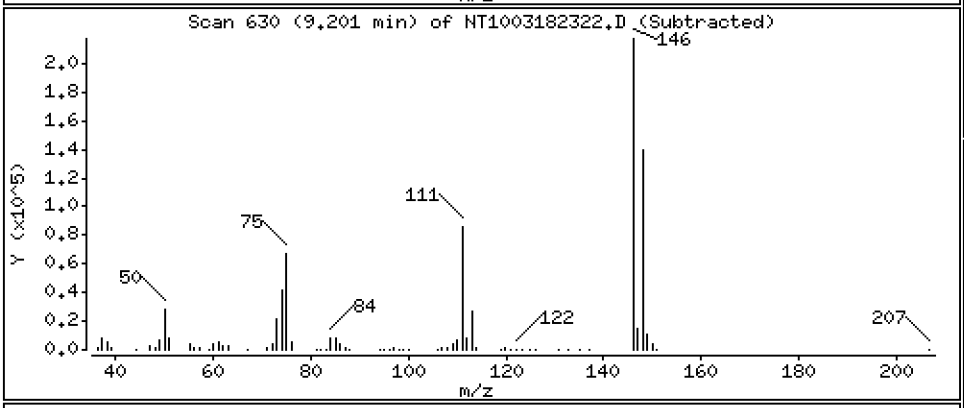
Column phase: ZB-5msi

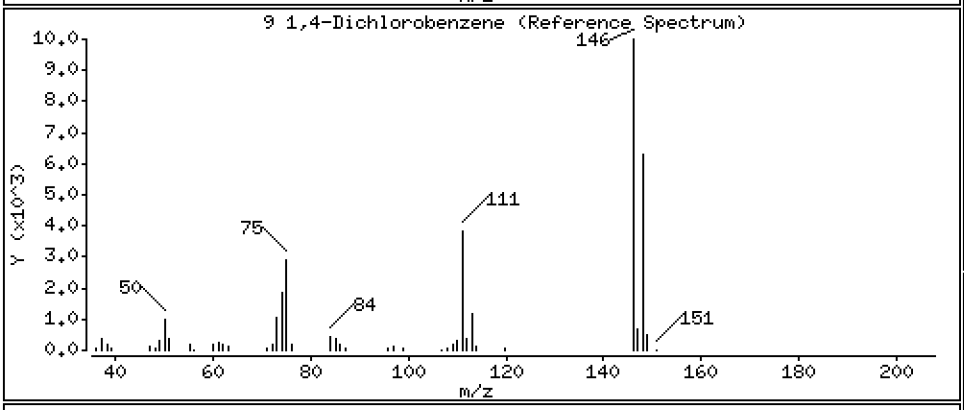
Column diameter: 0.25

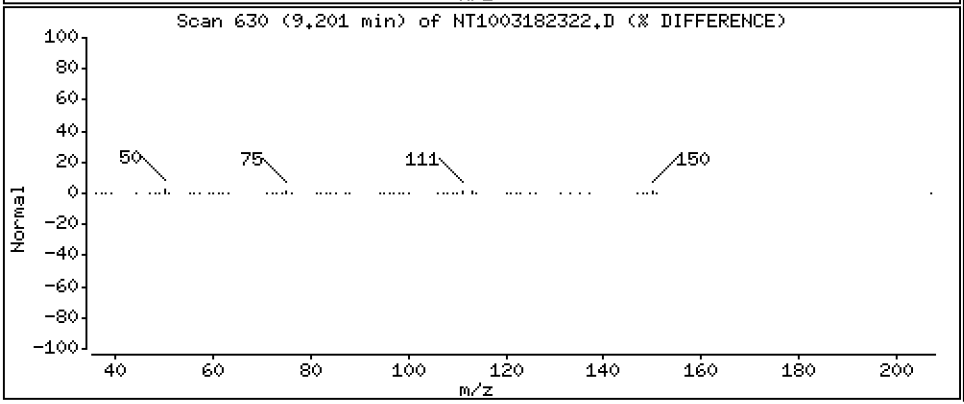
9 1,4-Dichlorobenzene

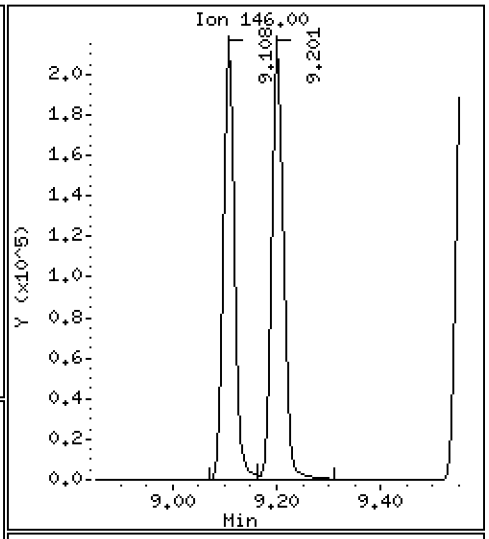
Concentration: 3.742 ug/mL

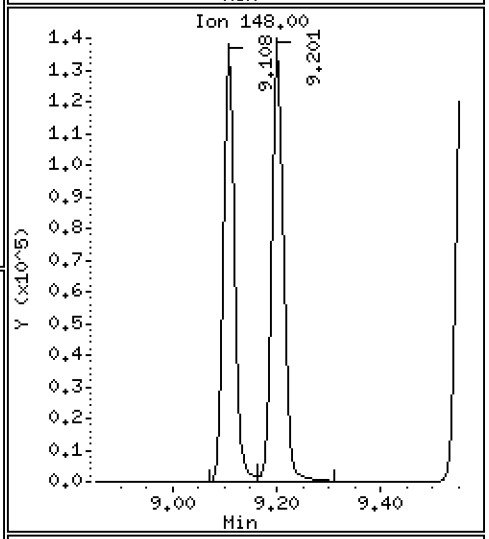


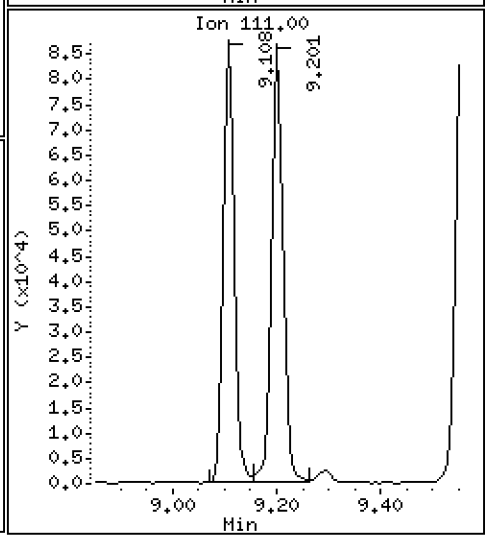












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

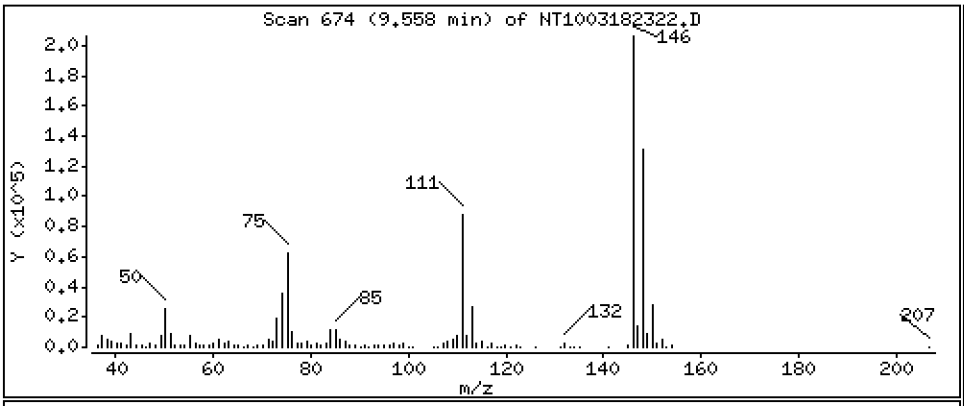
Operator: VTS

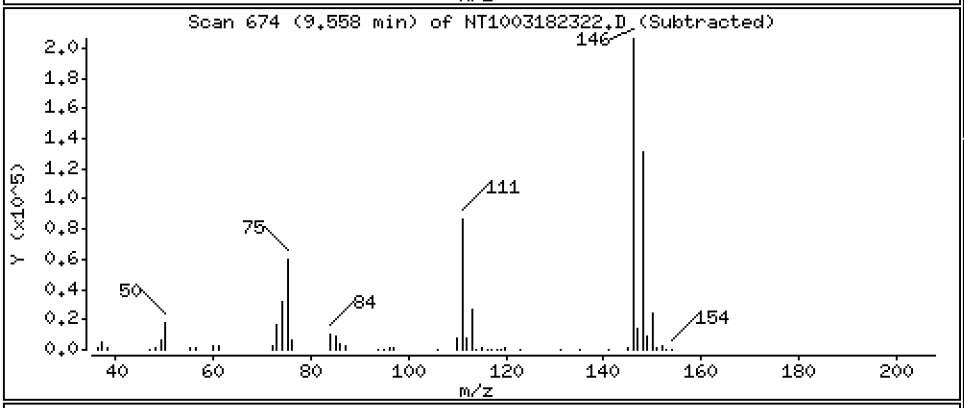
Column phase: ZB-5msi

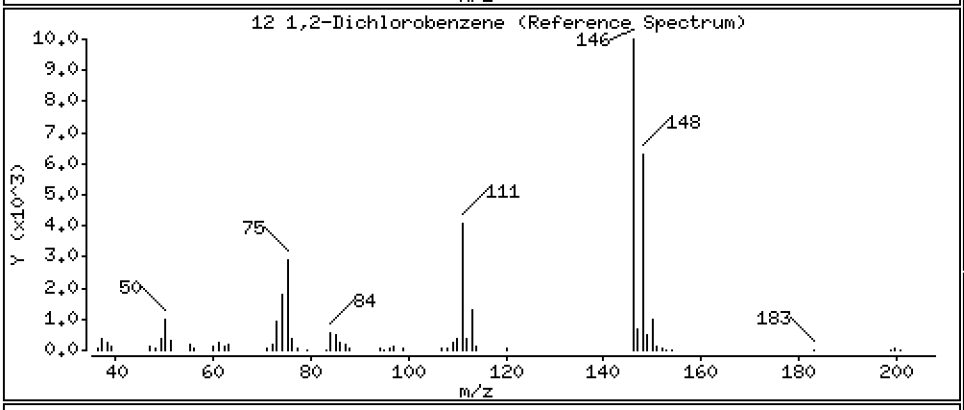
Column diameter: 0.25

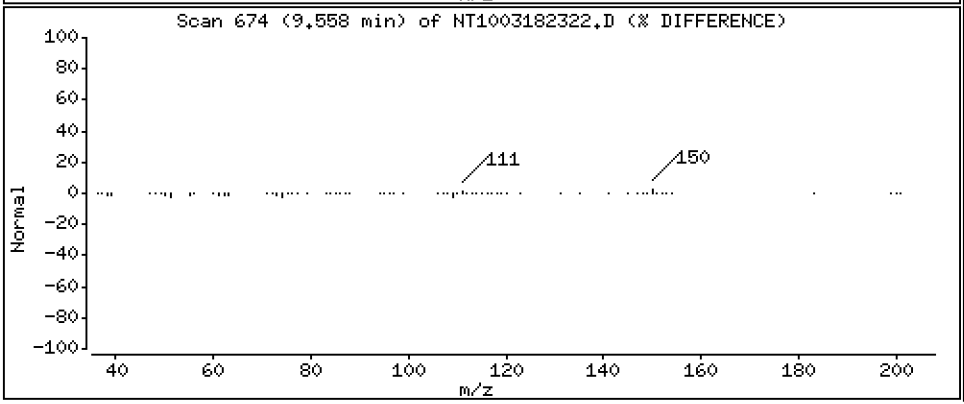
12 1,2-Dichlorobenzene

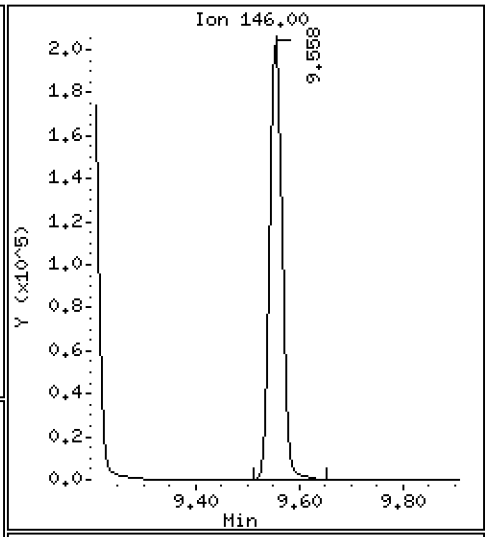
Concentration: 3.728 ug/mL

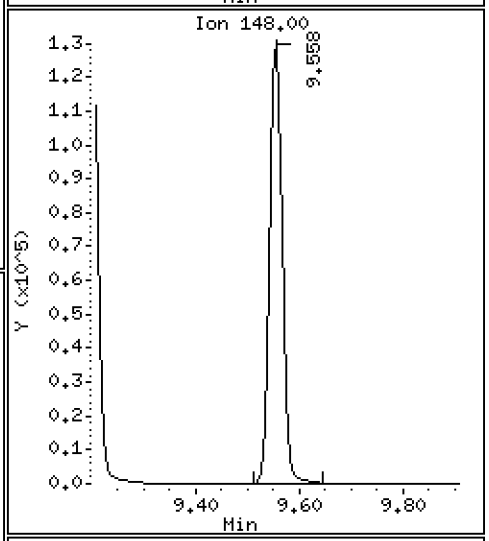


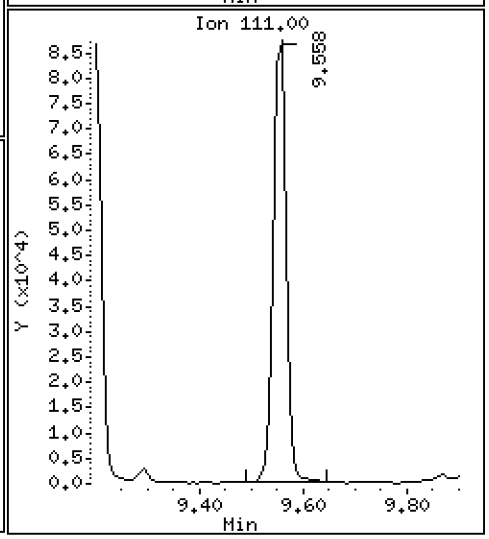












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

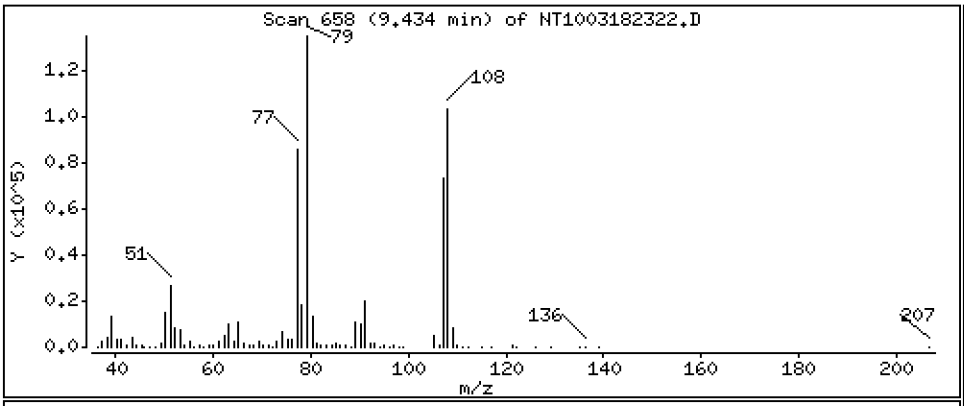
Operator: VTS

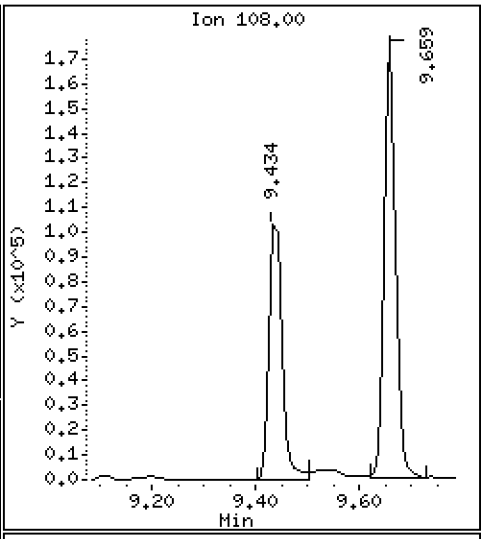
Column phase: ZB-5msi

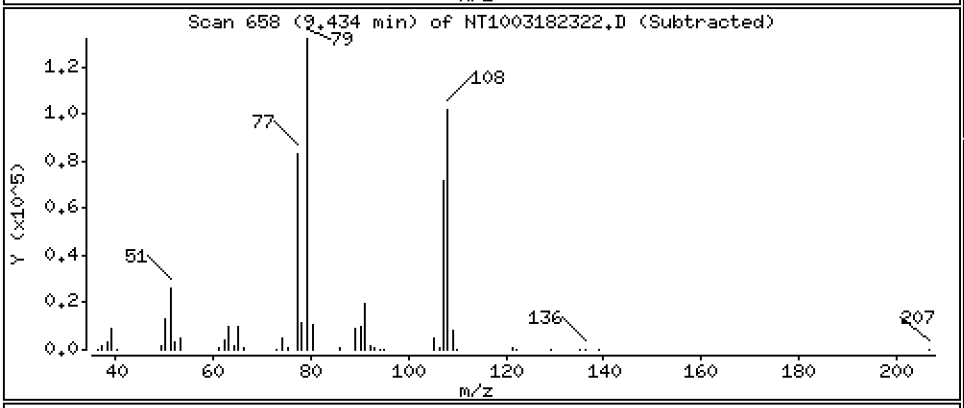
Column diameter: 0.25

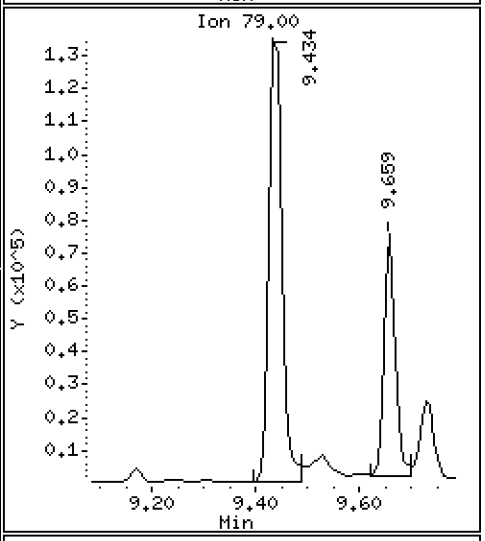
11 Benzyl alcohol

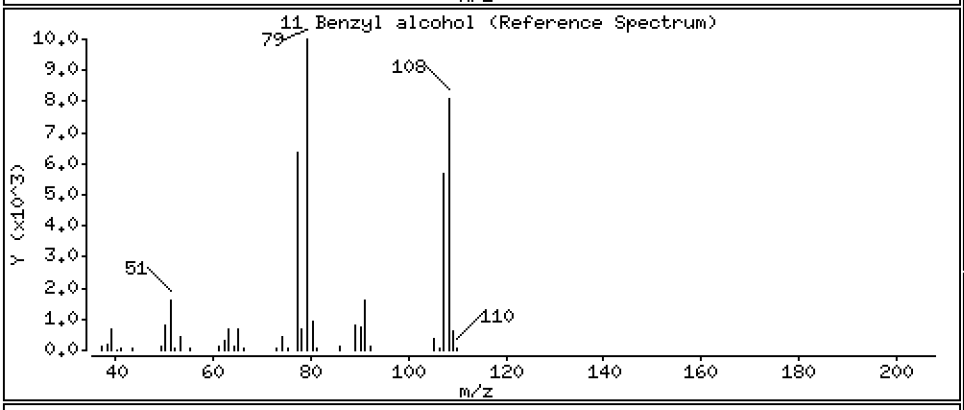
Concentration: 3.609 ug/mL

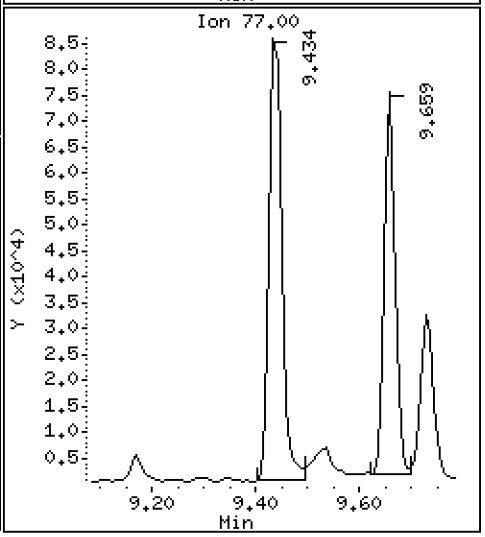


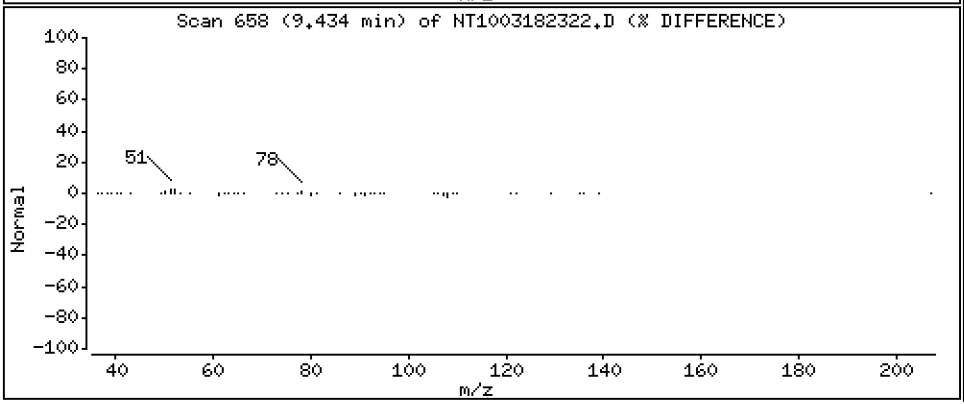












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

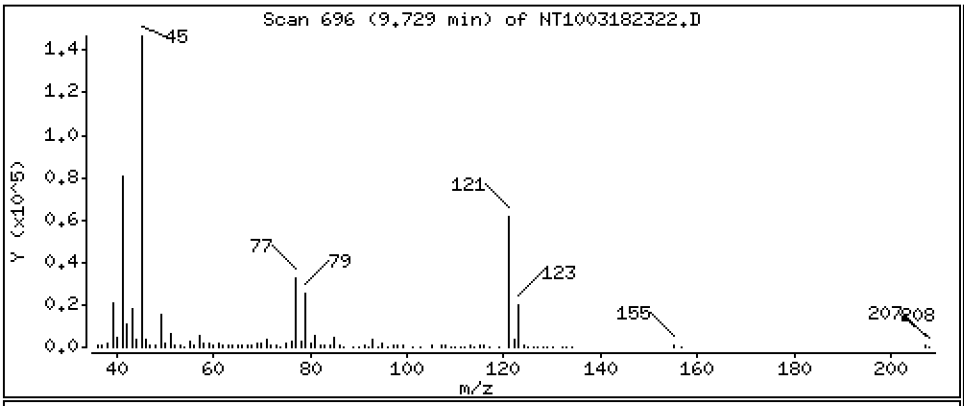
Operator: VTS

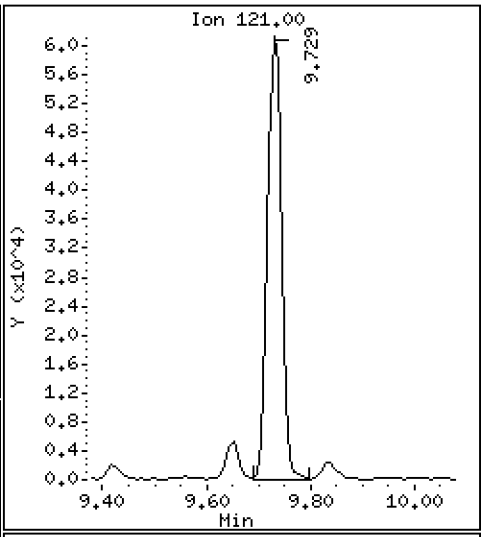
Column phase: ZB-5msi

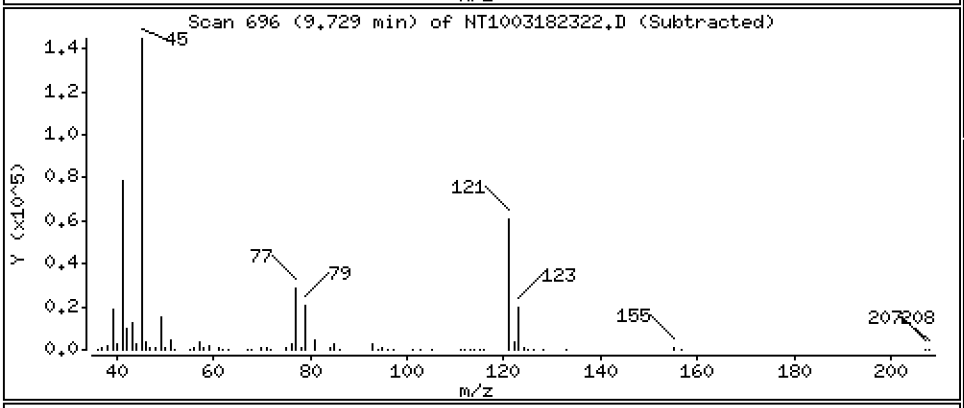
Column diameter: 0.25

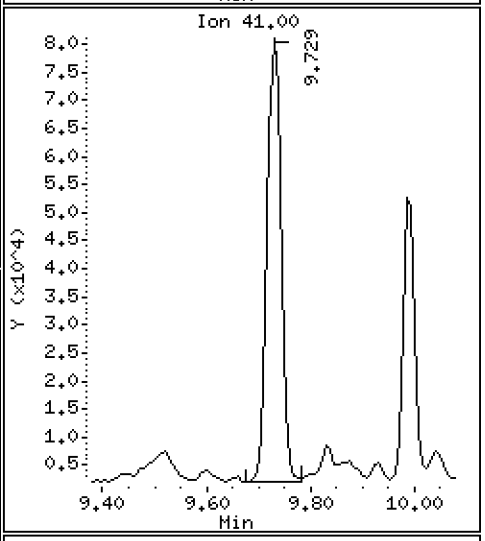
14 2,2'-oxybis(1-Chloropropane)

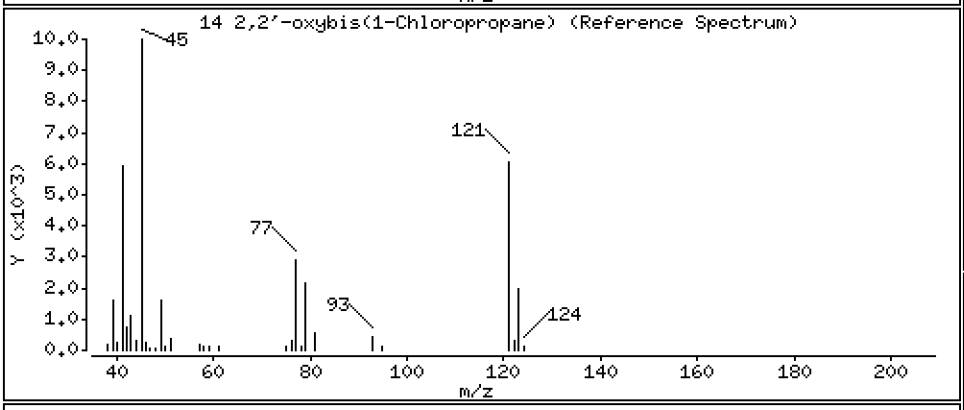
Concentration: 4.344 ug/mL

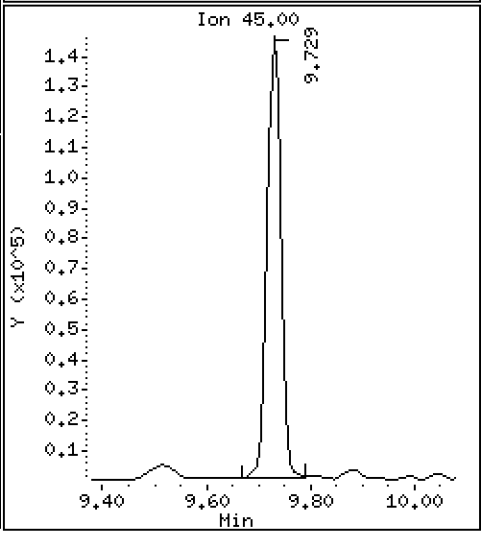


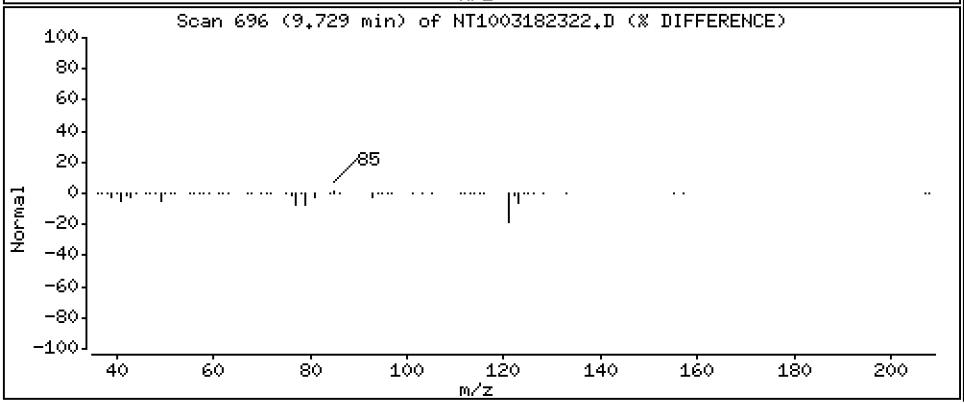












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

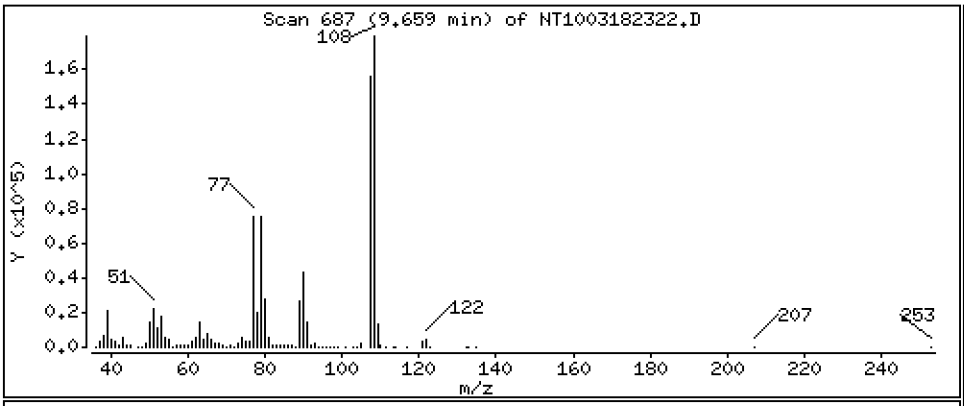
Operator: VTS

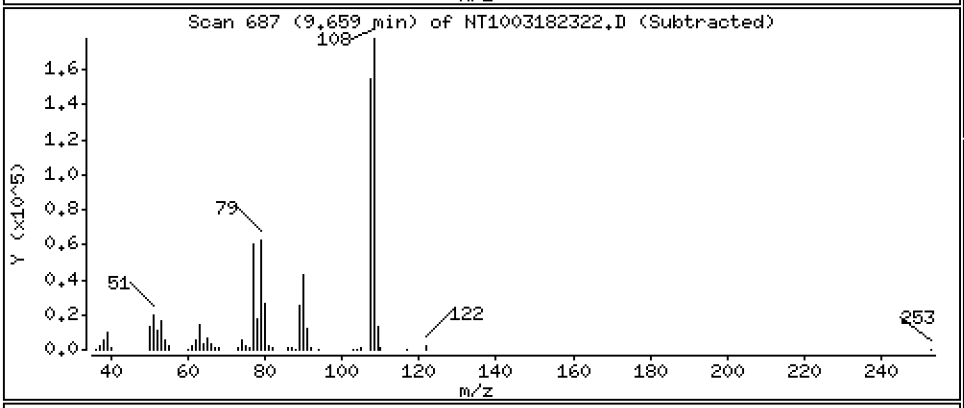
Column phase: ZB-5msi

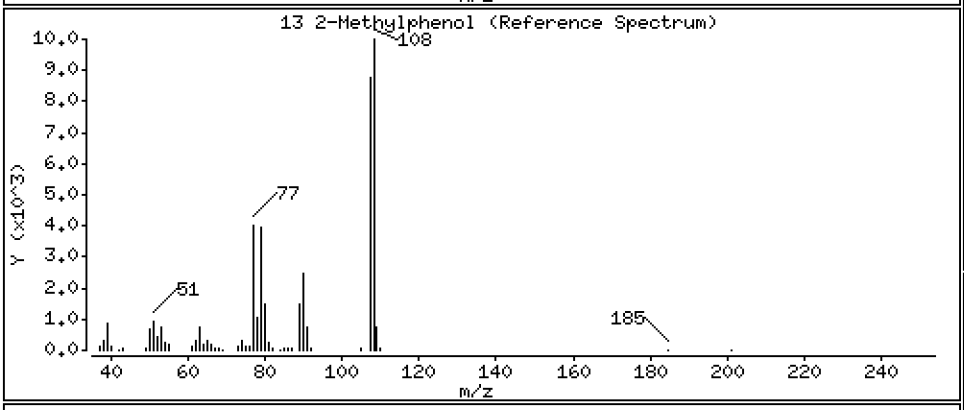
Column diameter: 0.25

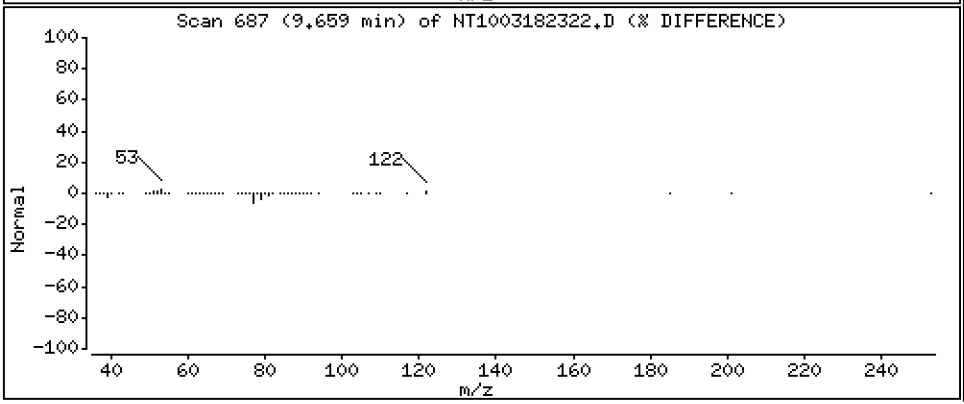
13 2-Methylphenol

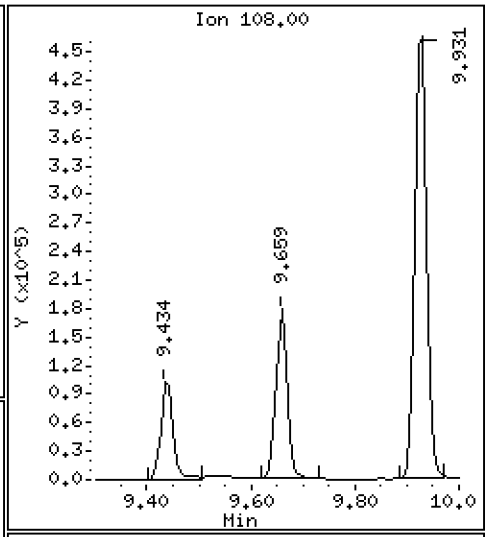
Concentration: 3.542 ug/mL

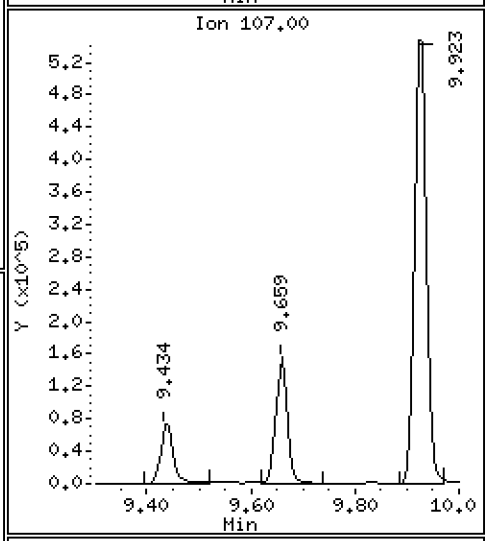


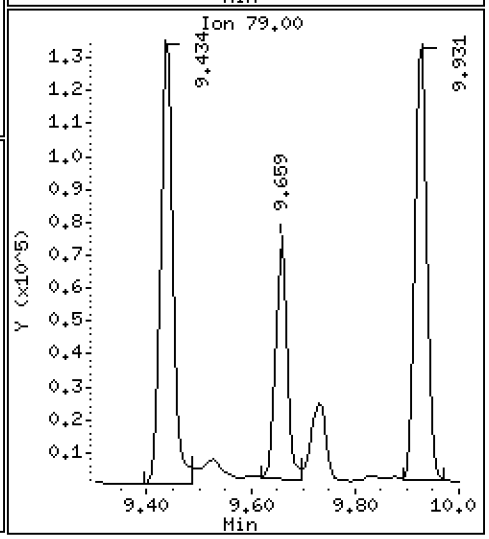












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

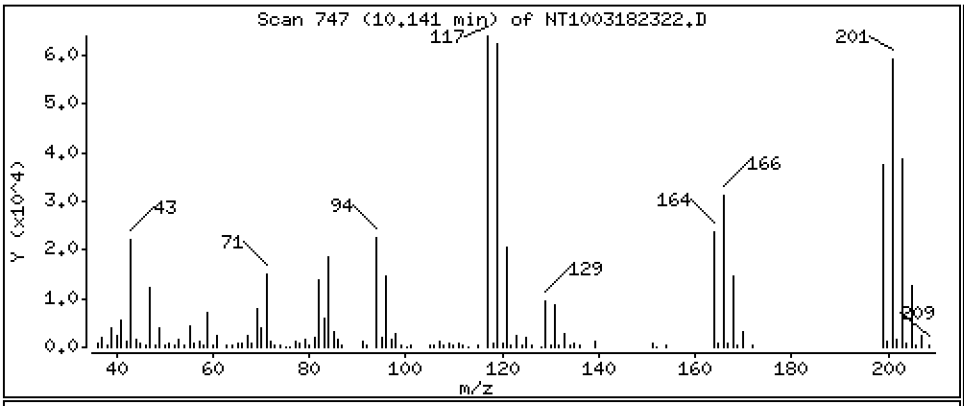
Operator: VTS

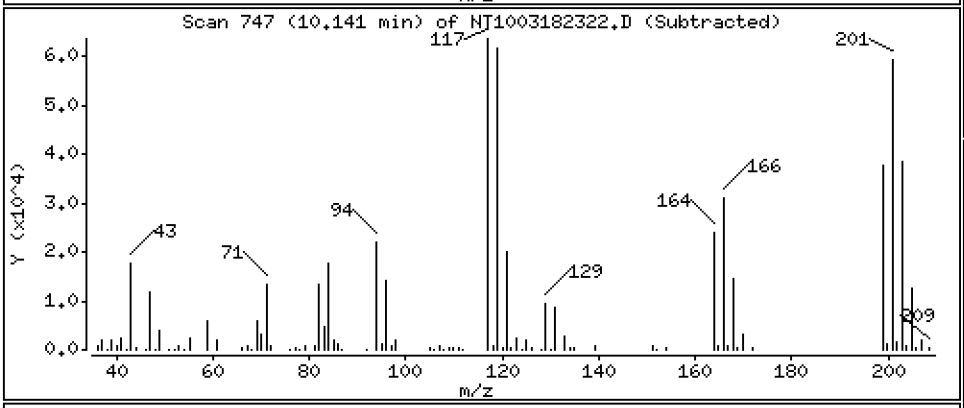
Column phase: ZB-5msi

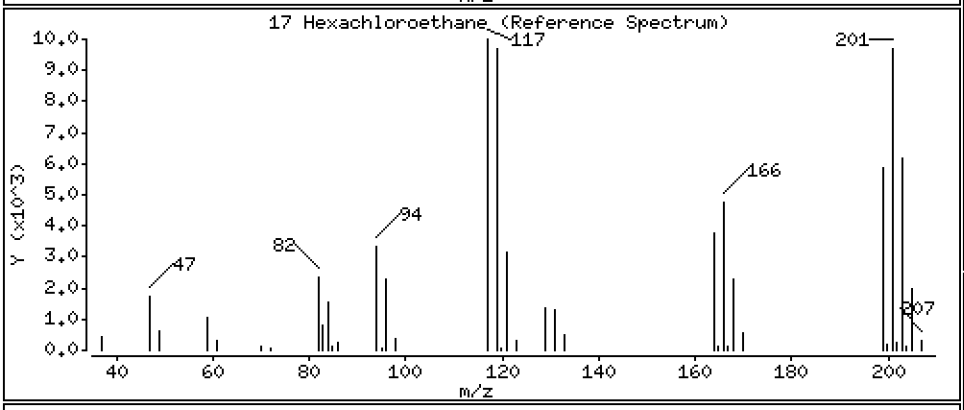
Column diameter: 0.25

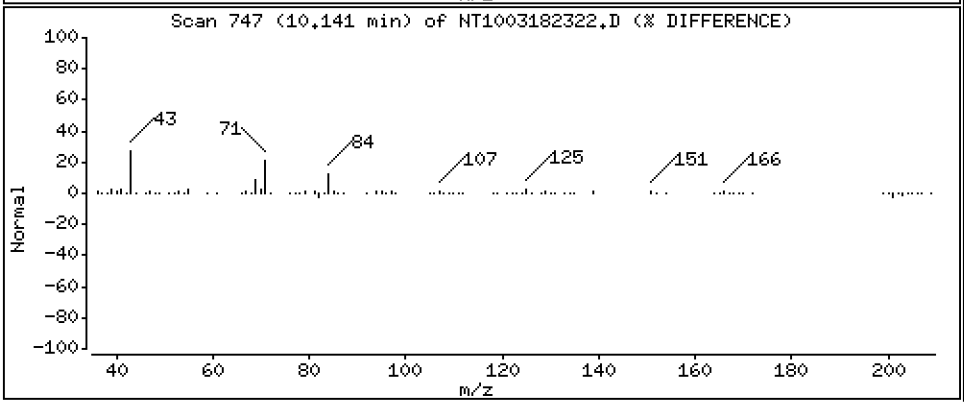
17 Hexachloroethane

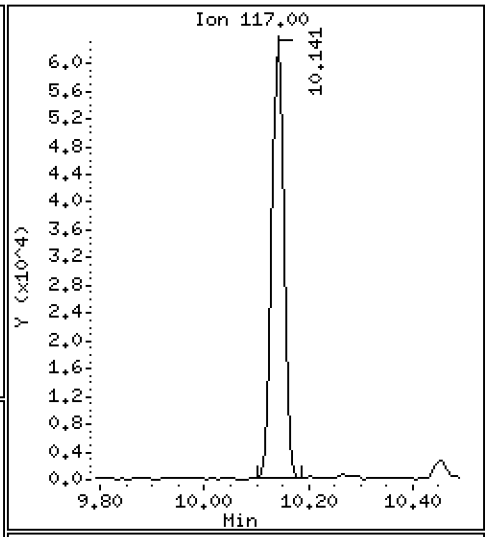
Concentration: 2.643 ug/mL

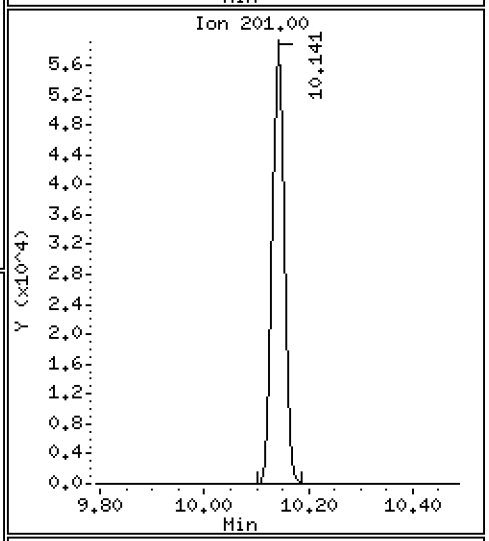


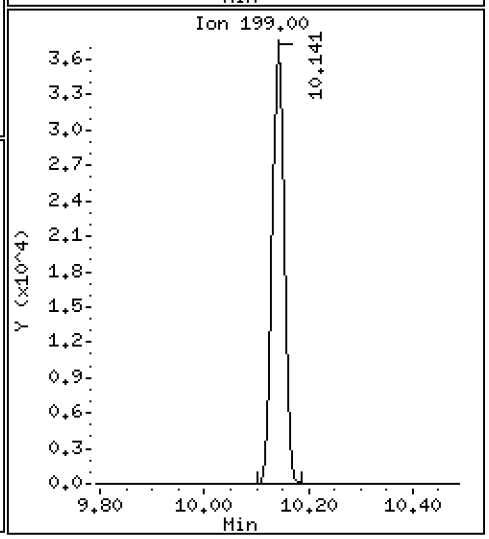












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

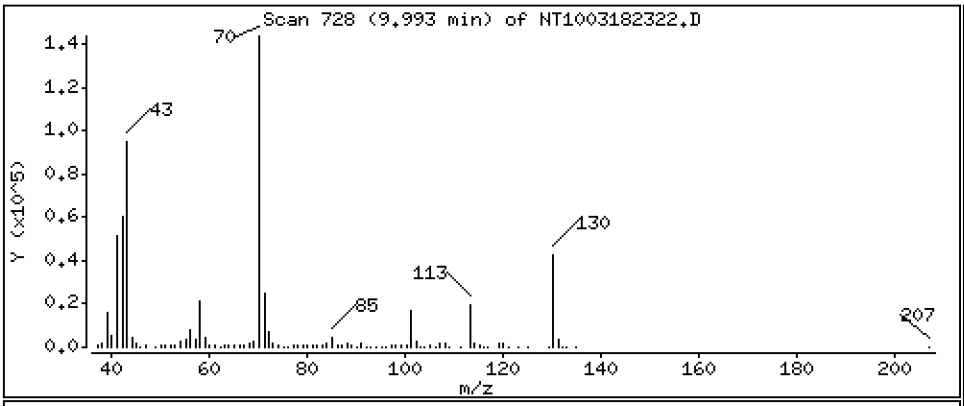
Operator: VTS

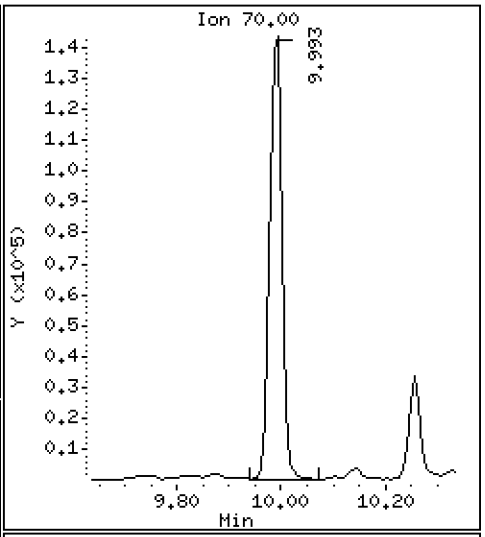
Column phase: ZB-5msi

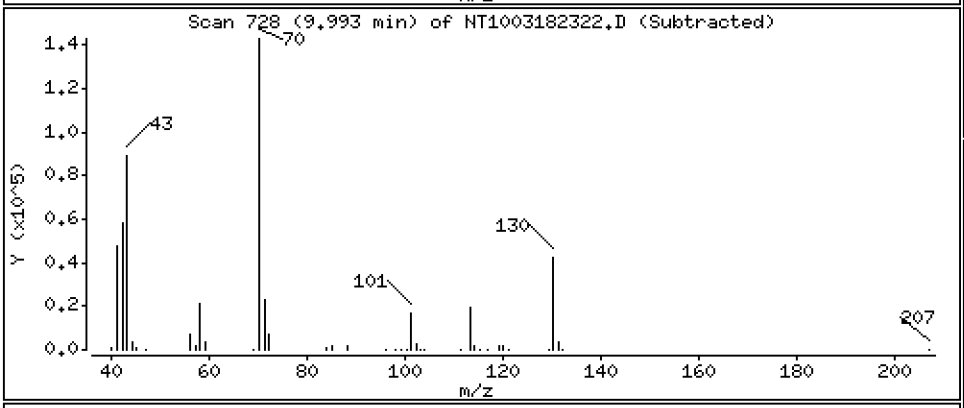
Column diameter: 0.25

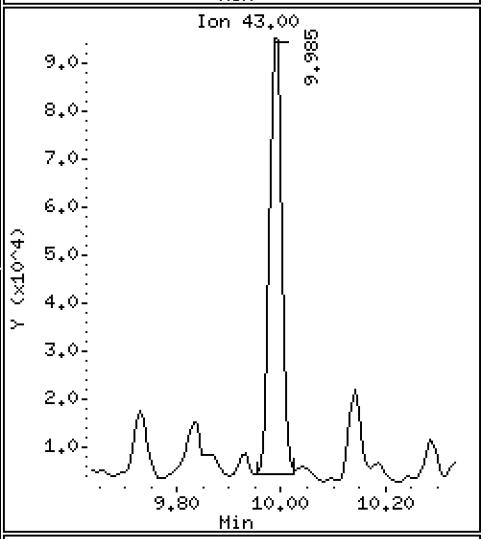
16 N-Nitroso-di-n-propylamine

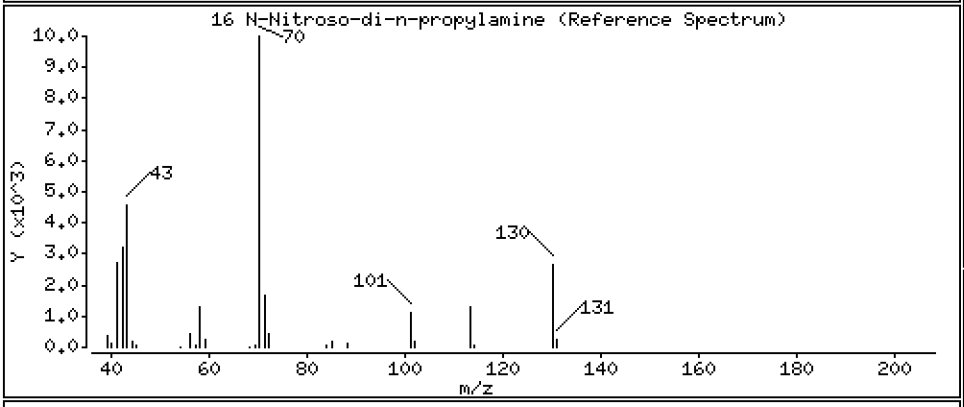
Concentration: 3.868 ug/mL

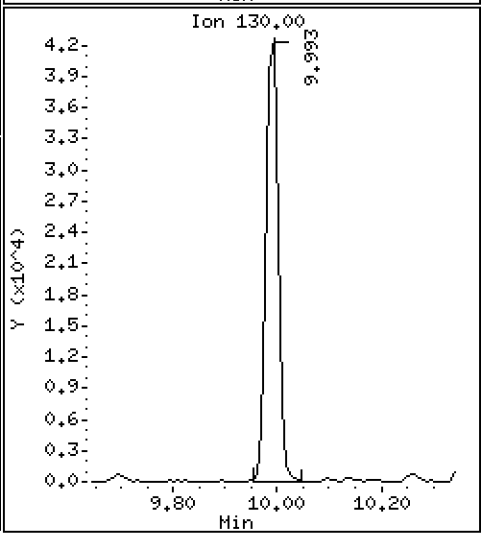


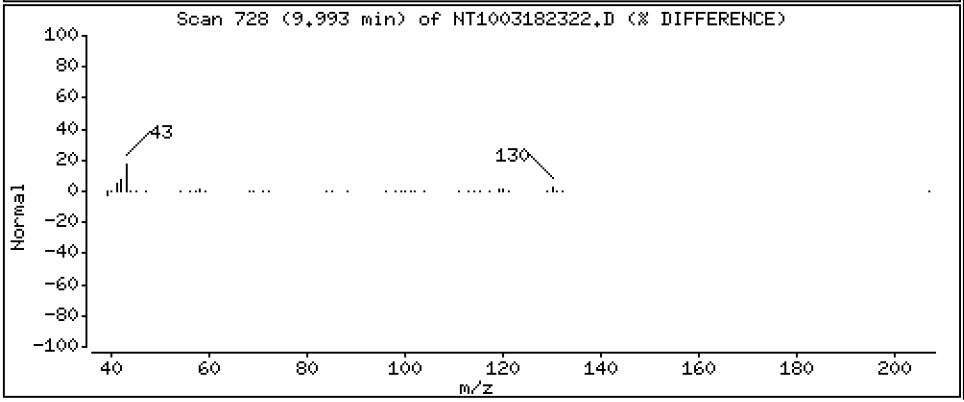












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

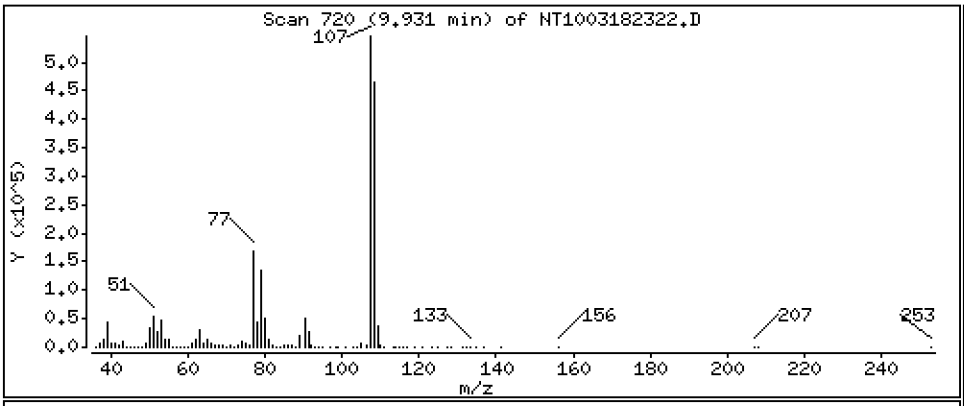
Operator: VTS

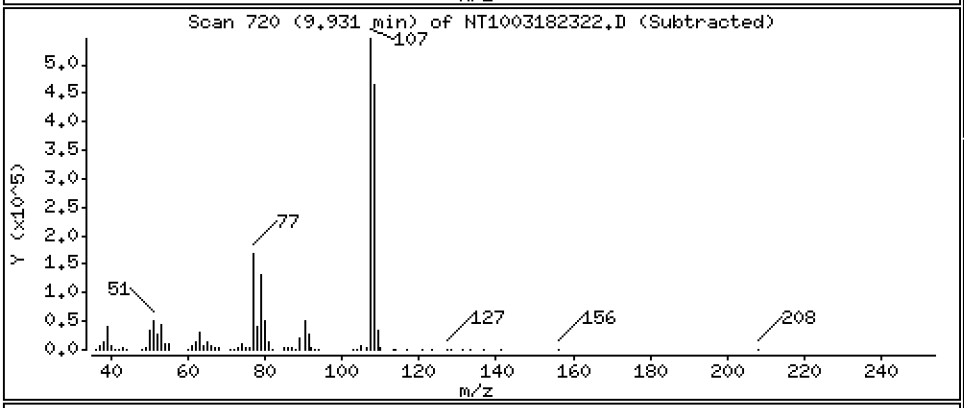
Column phase: ZB-5msi

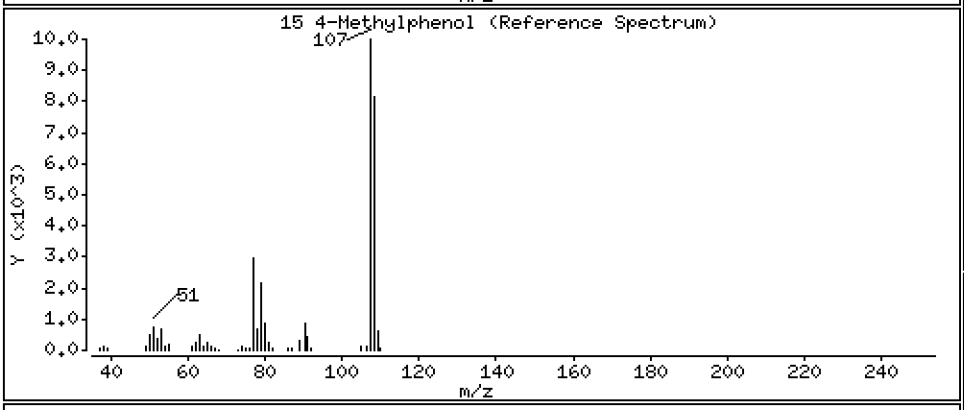
Column diameter: 0.25

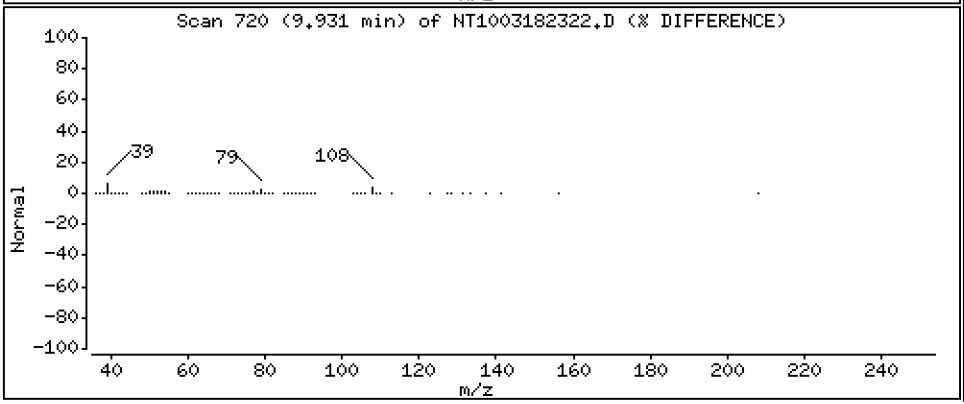
15 4-Methylphenol

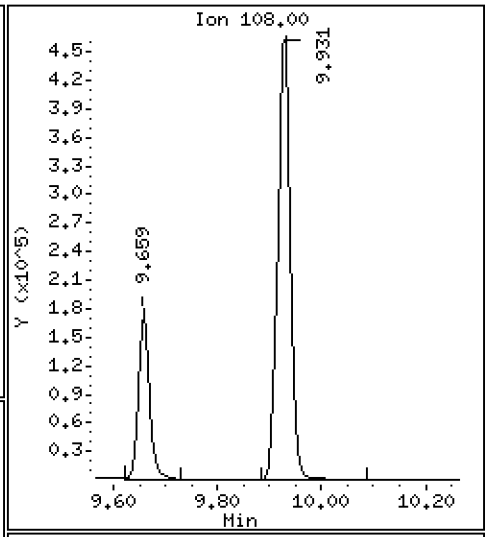
Concentration: 10.12 ug/mL

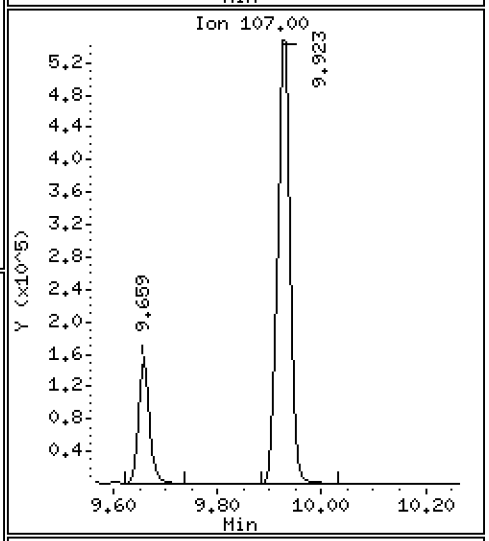


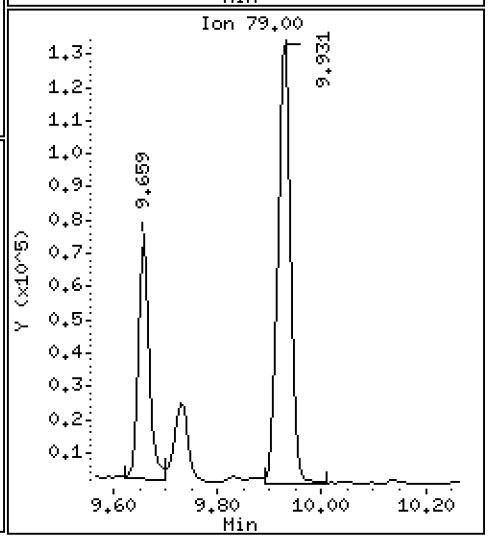












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

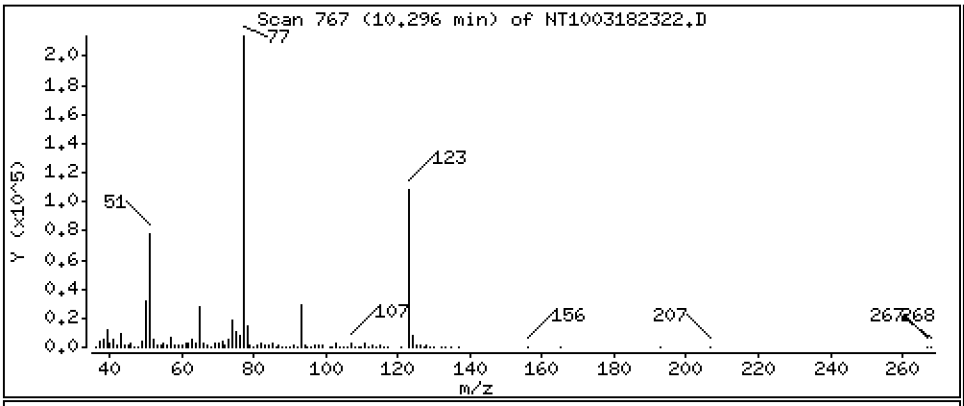
Operator: VTS

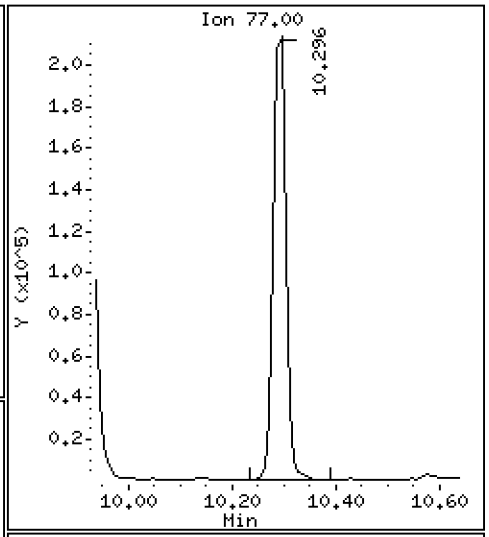
Column phase: ZB-5msi

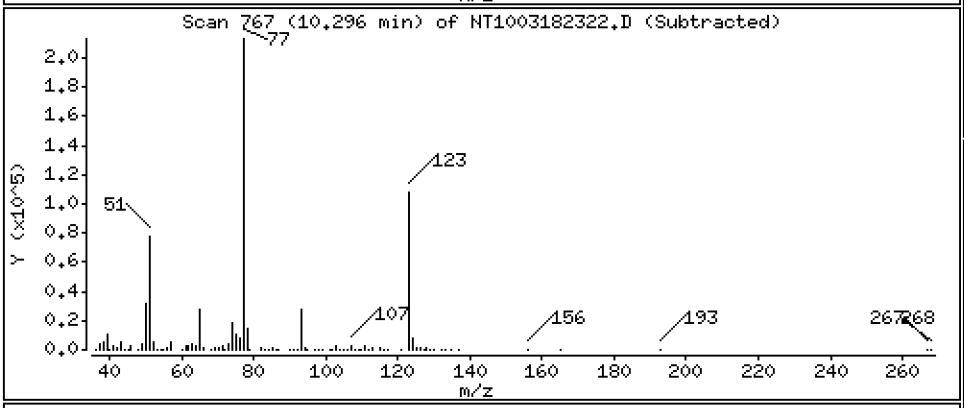
Column diameter: 0.25

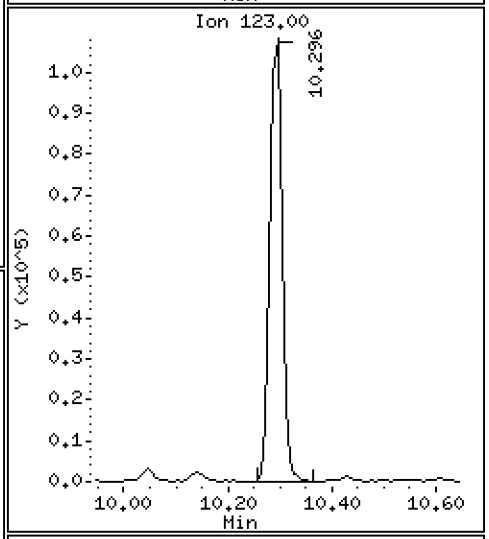
19 Nitrobenzene

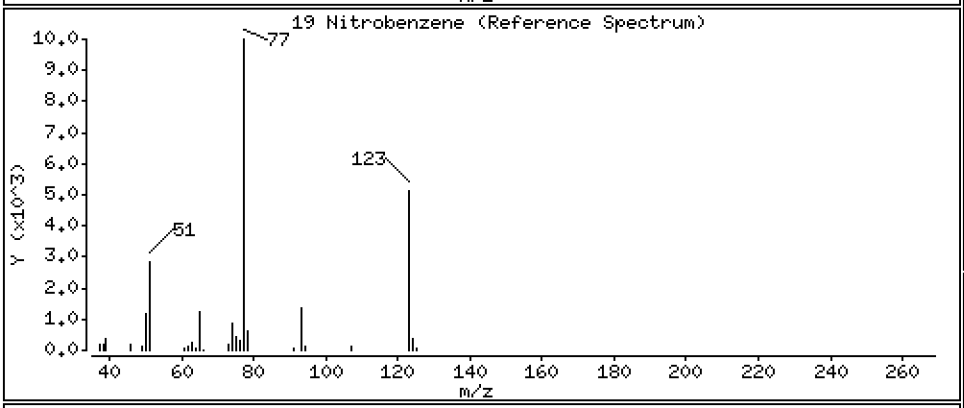
Concentration: 3.823 ug/mL

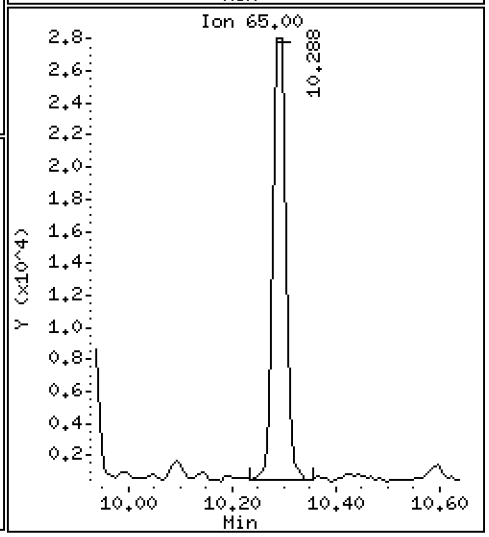


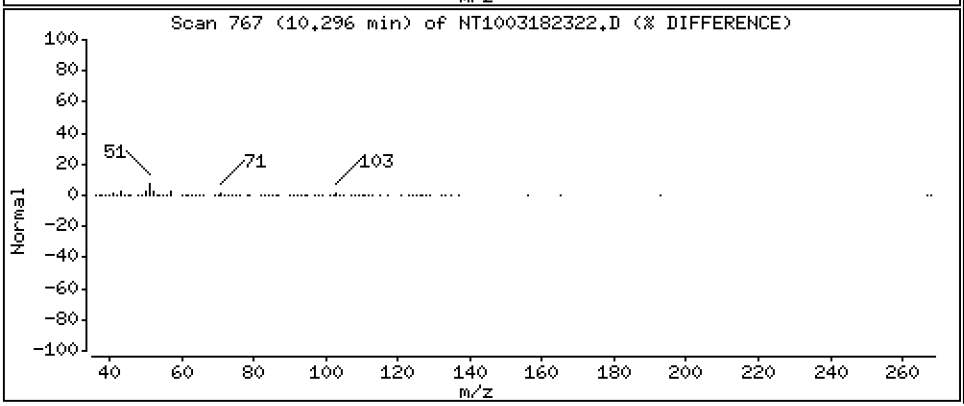












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

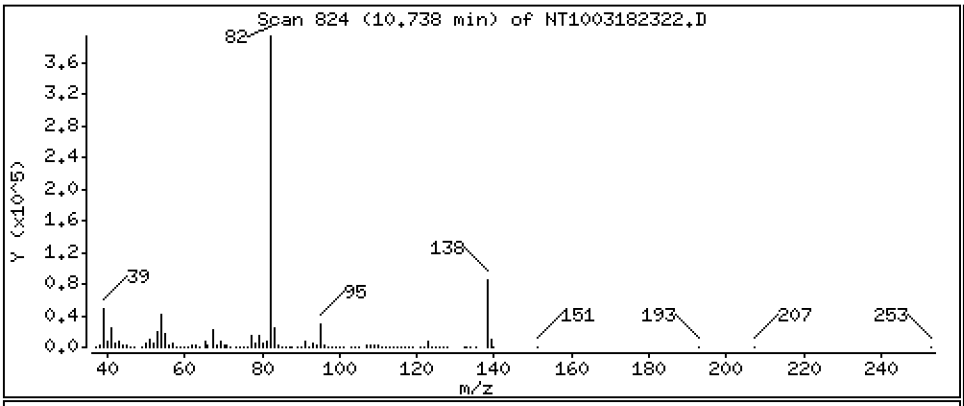
Operator: VTS

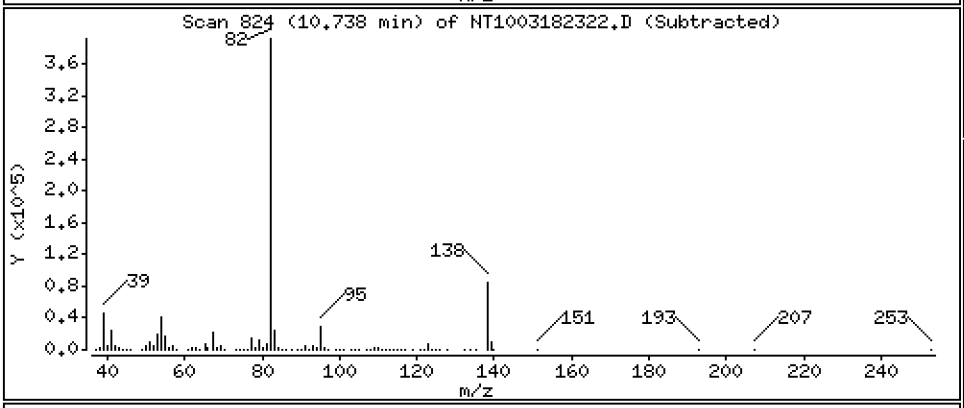
Column phase: ZB-5msi

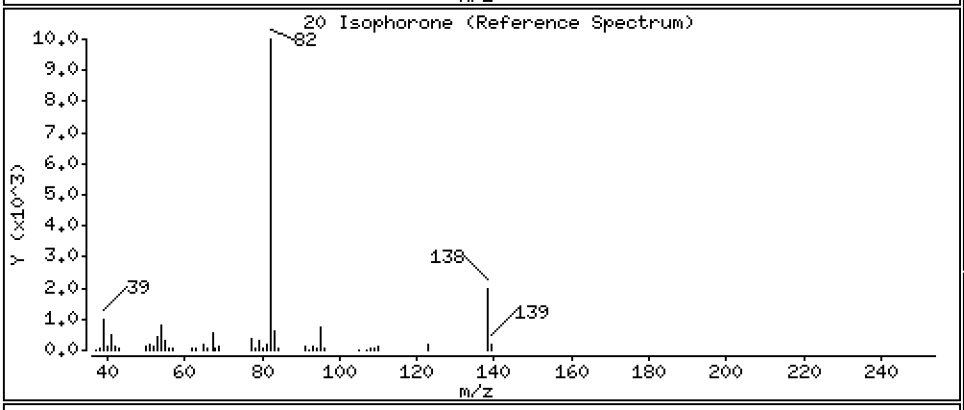
Column diameter: 0.25

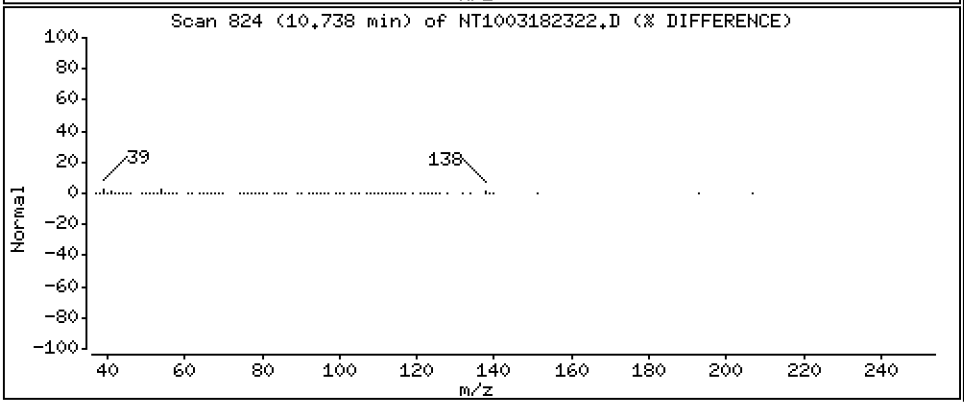
20 Isophorone

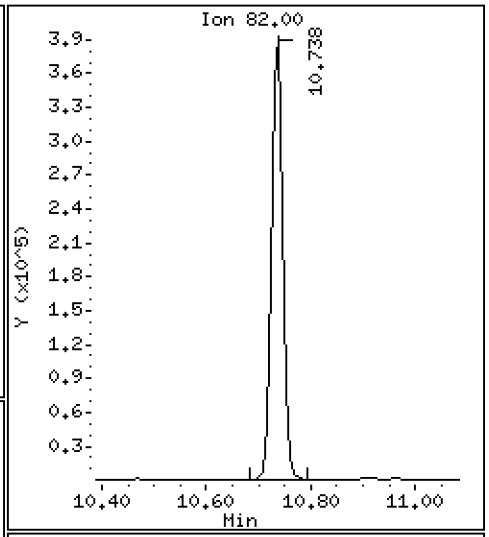
Concentration: 5.387 ug/mL

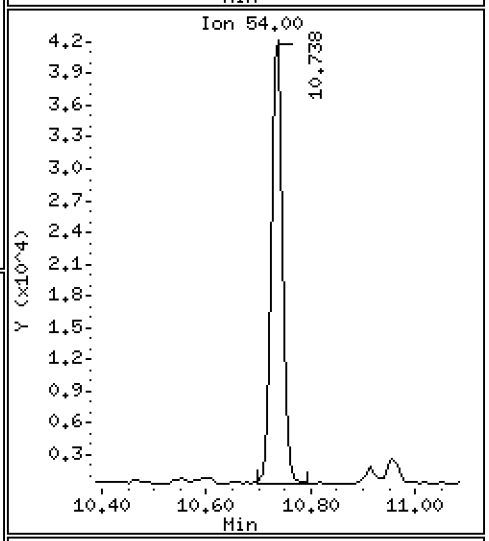


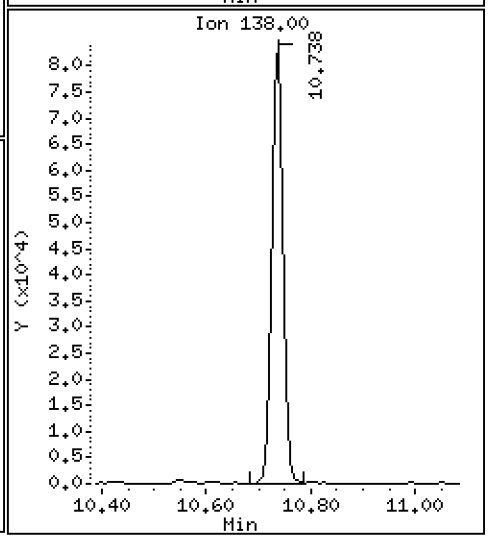












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

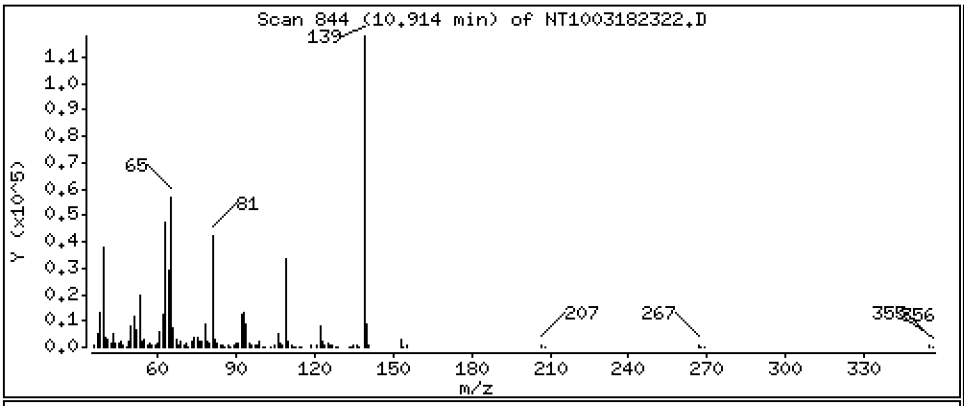
Operator: VTS

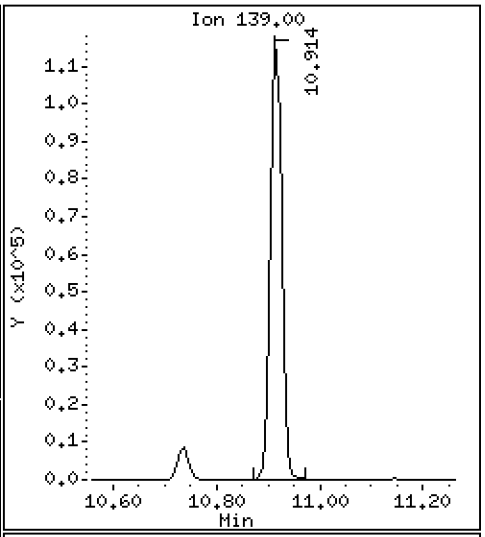
Column phase: ZB-5msi

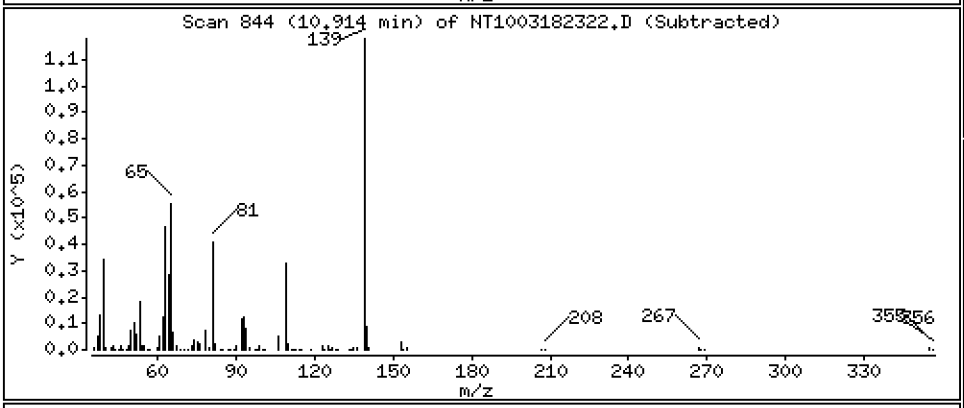
Column diameter: 0.25

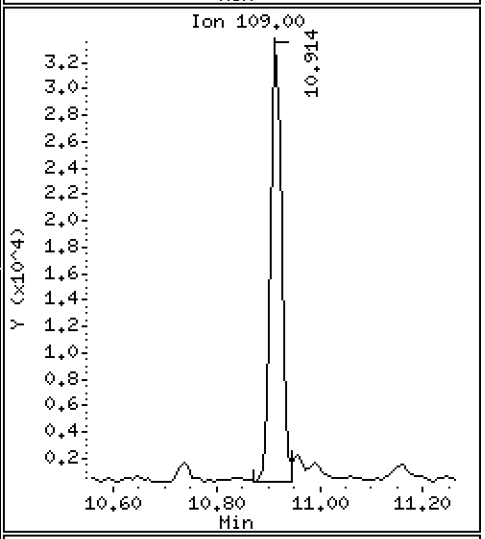
21 2-Nitrophenol

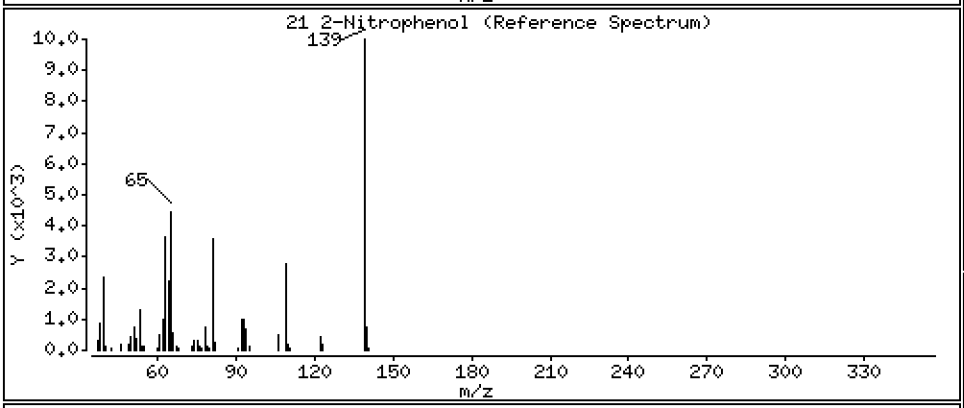
Concentration: 4.145 ug/mL

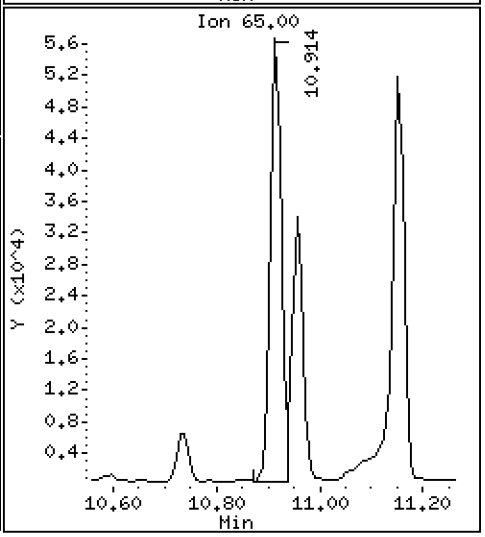


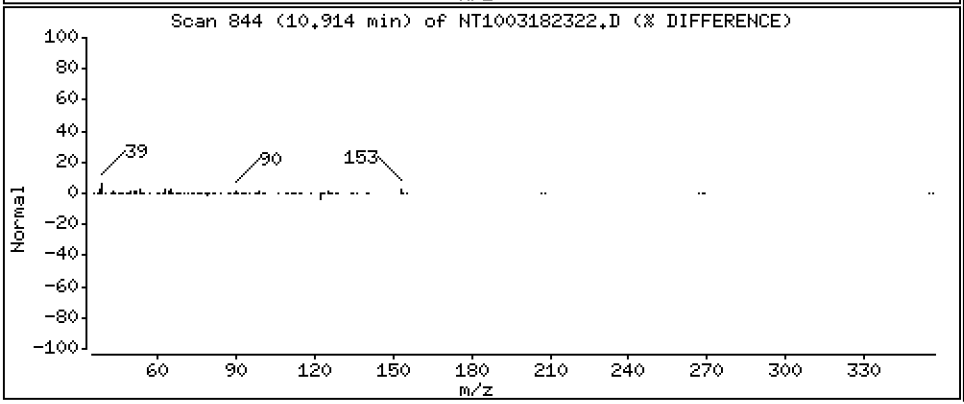












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

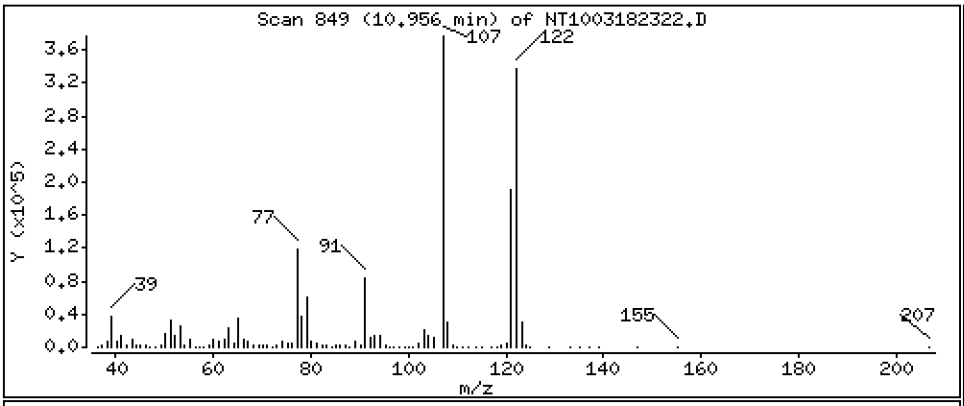
Operator: VTS

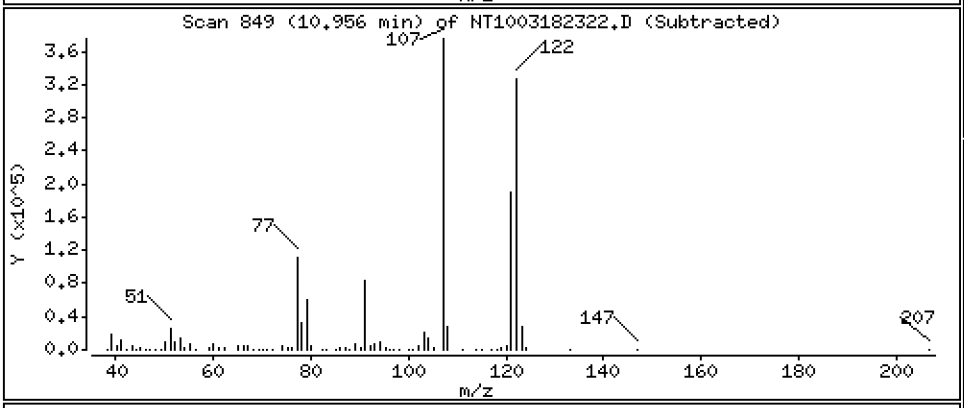
Column phase: ZB-5msi

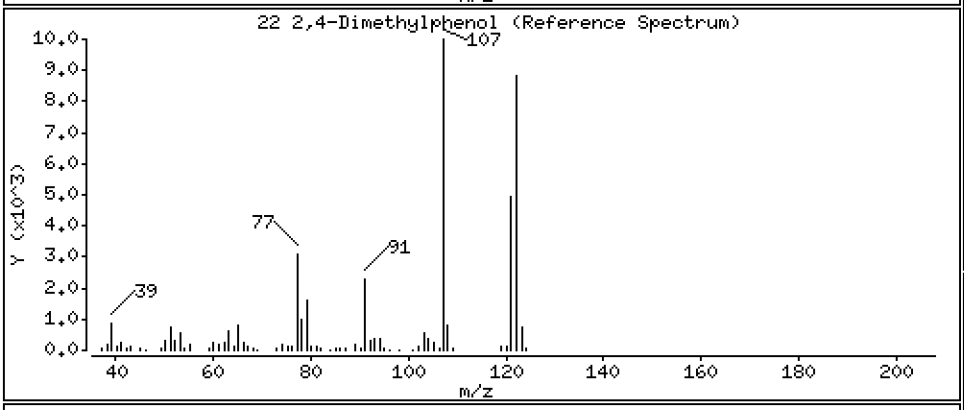
Column diameter: 0.25

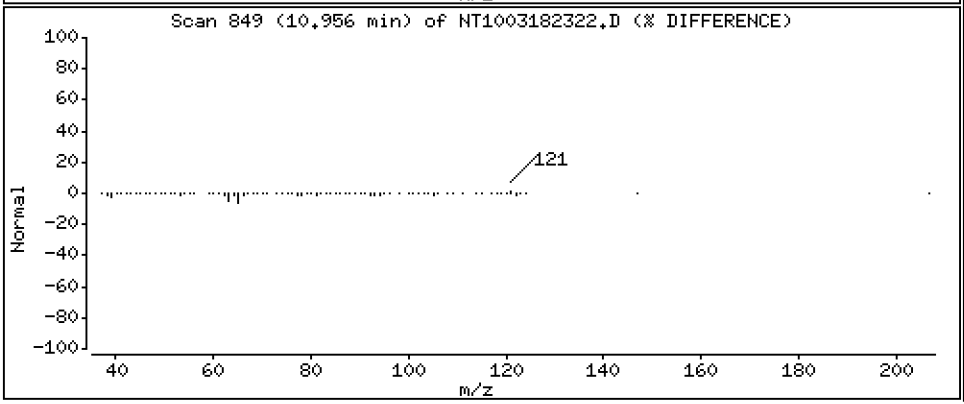
22 2,4-Dimethylphenol

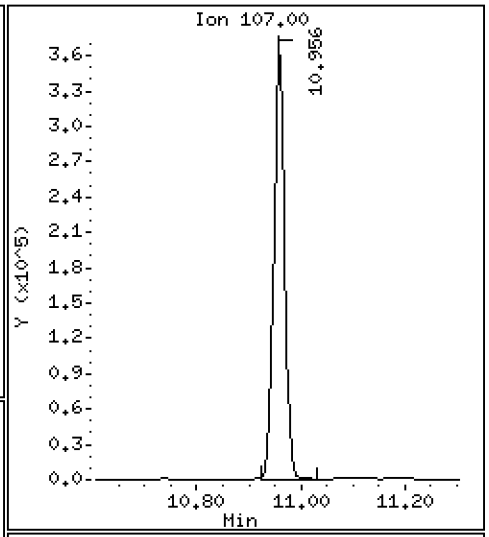
Concentration: 6.759 ug/mL

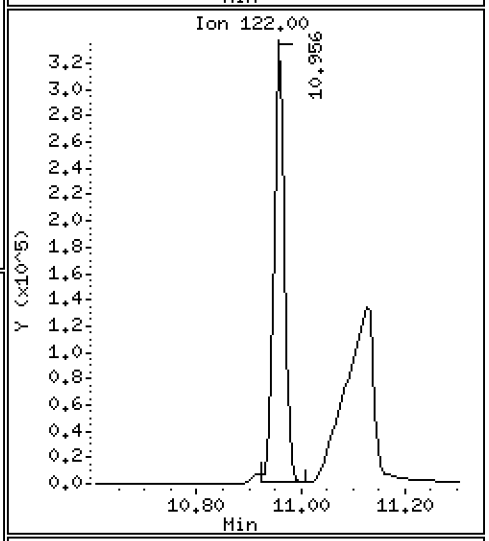


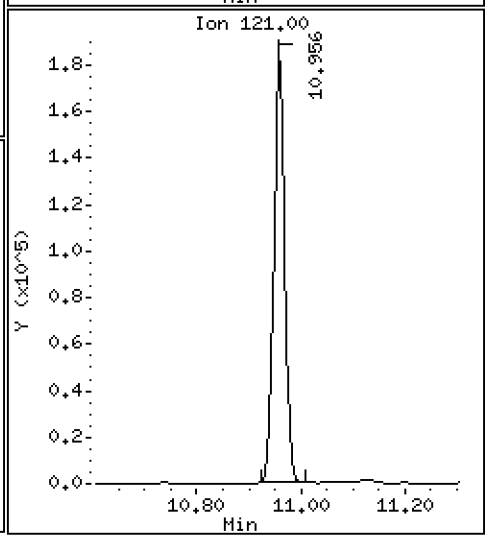












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

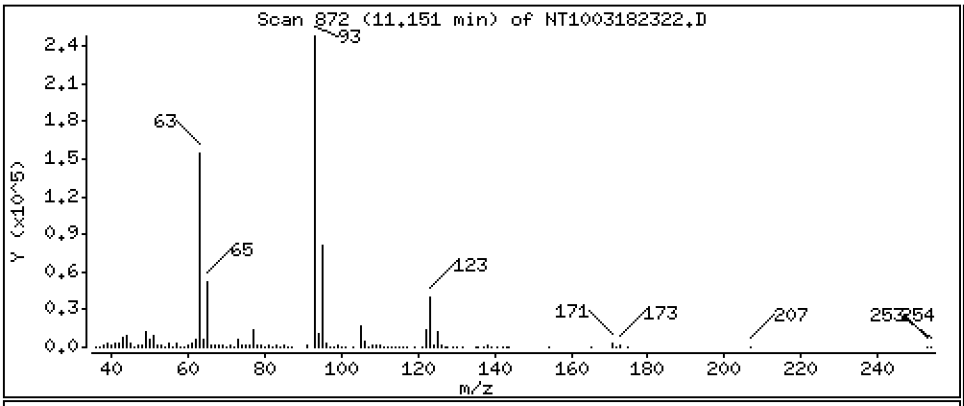
Operator: VTS

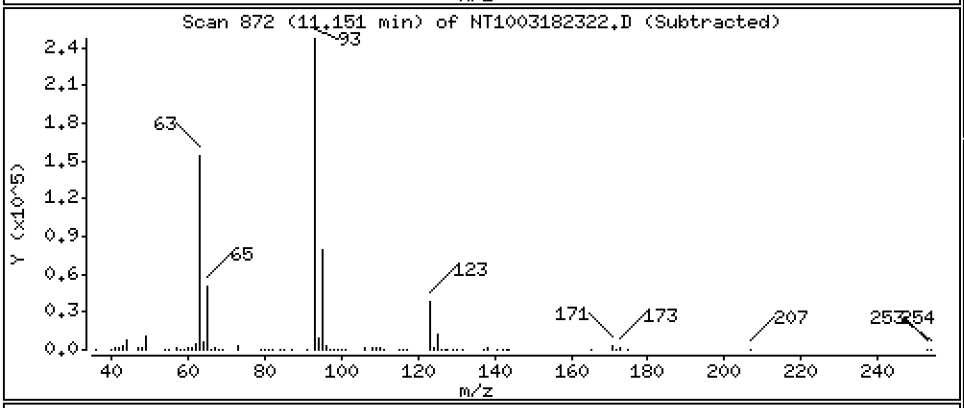
Column phase: ZB-5msi

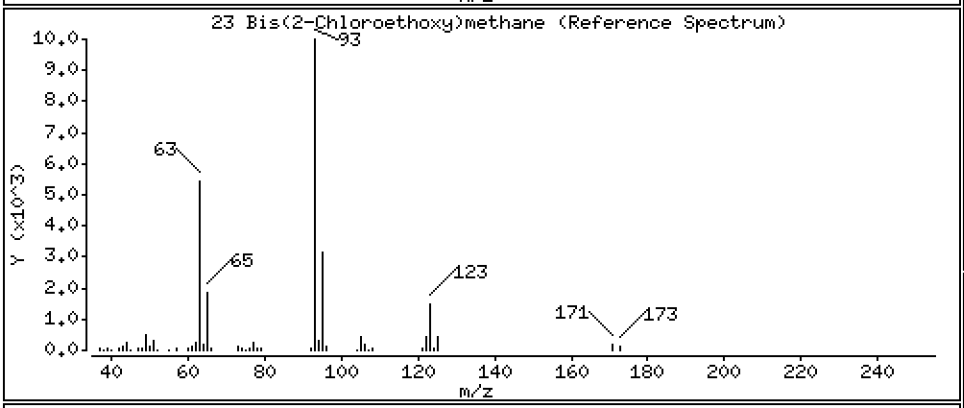
Column diameter: 0.25

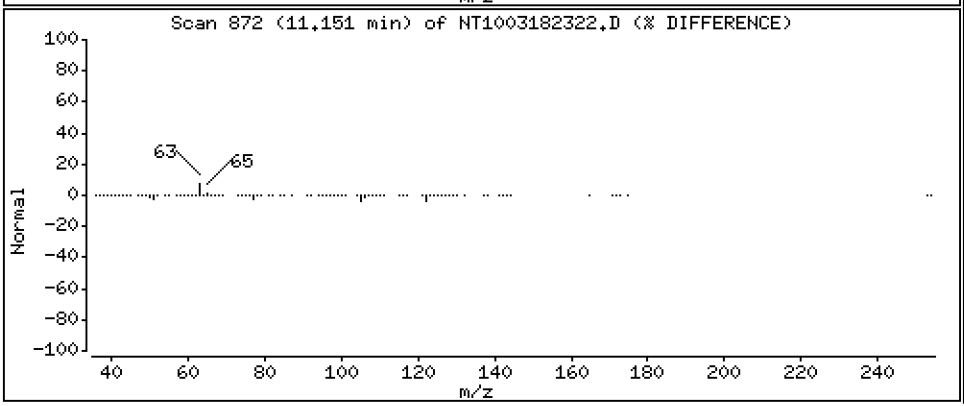
23 Bis(2-Chloroethoxy)methane

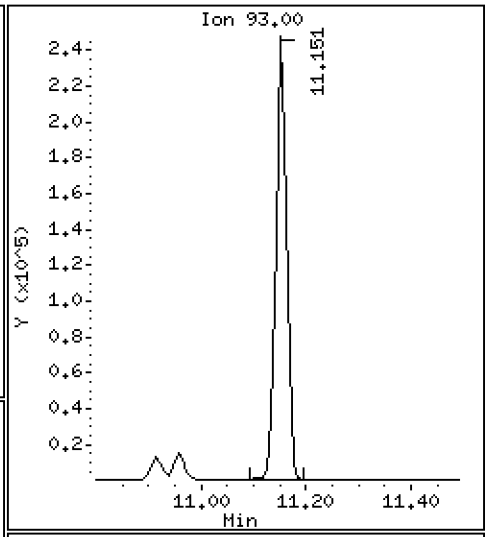
Concentration: 4.597 ug/mL

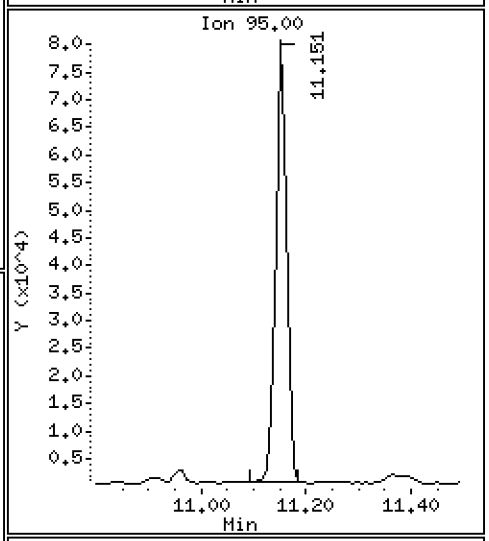


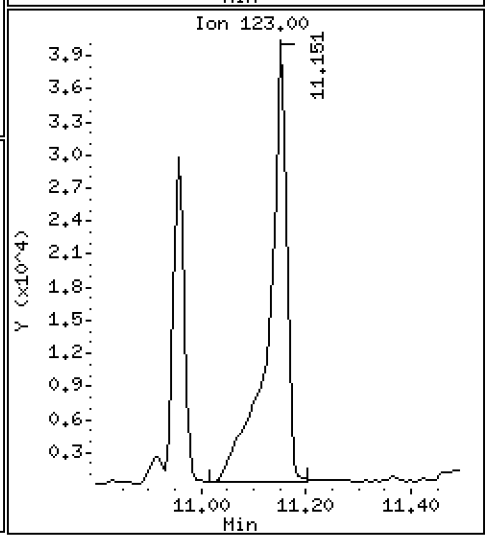












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

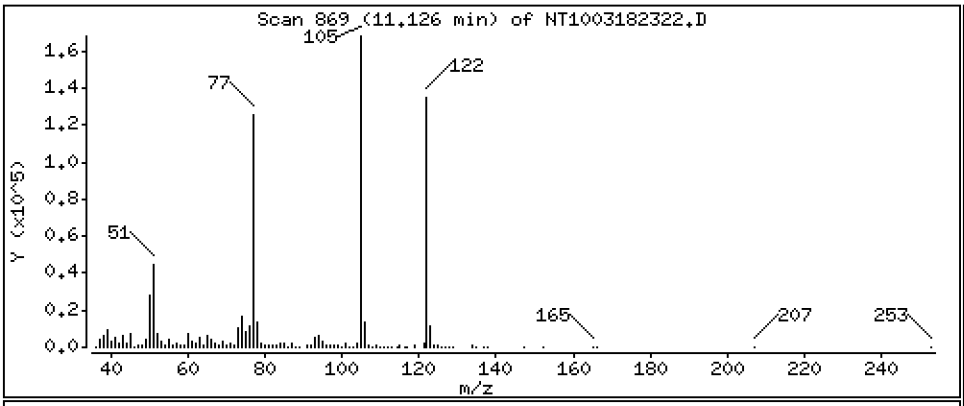
Operator: VTS

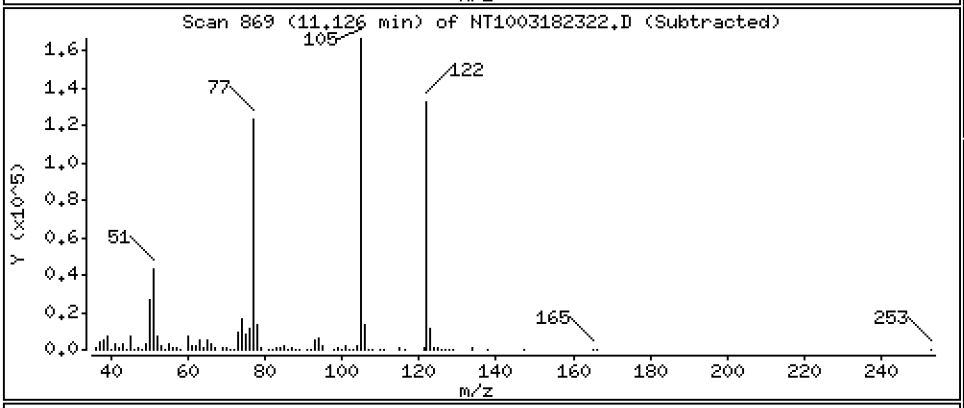
Column phase: ZB-5msi

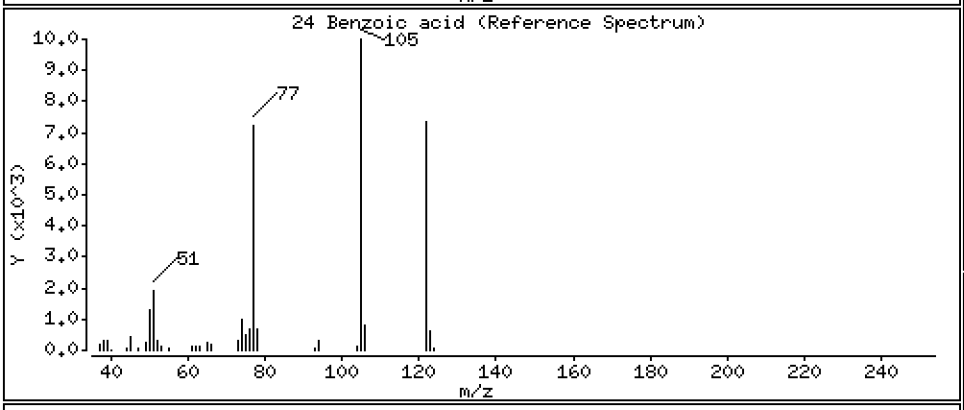
Column diameter: 0.25

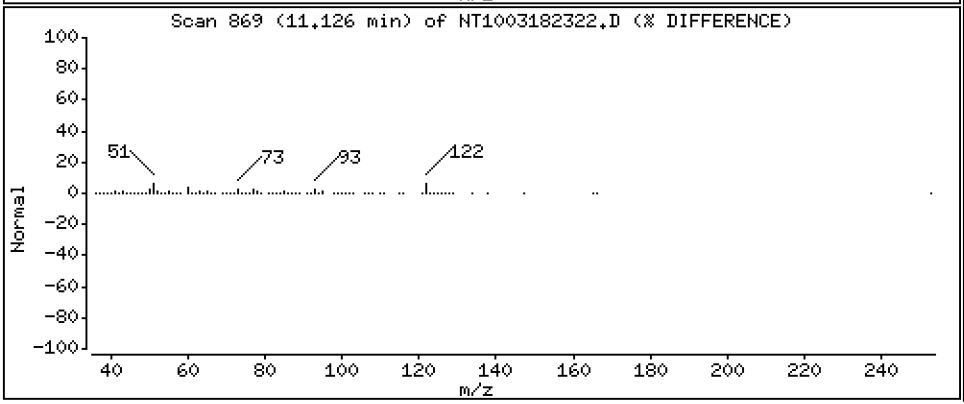
24 Benzoic acid

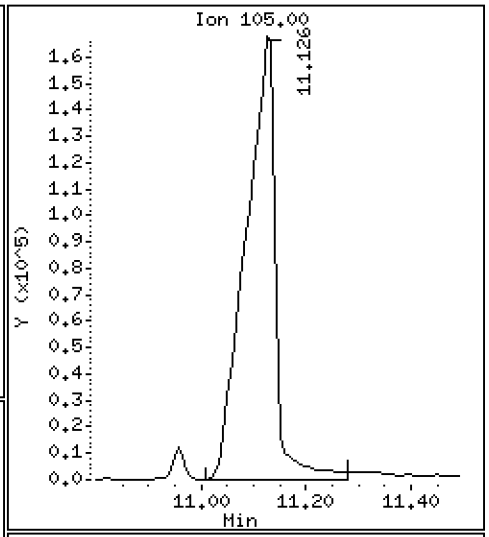
Concentration: 14.20 ug/mL

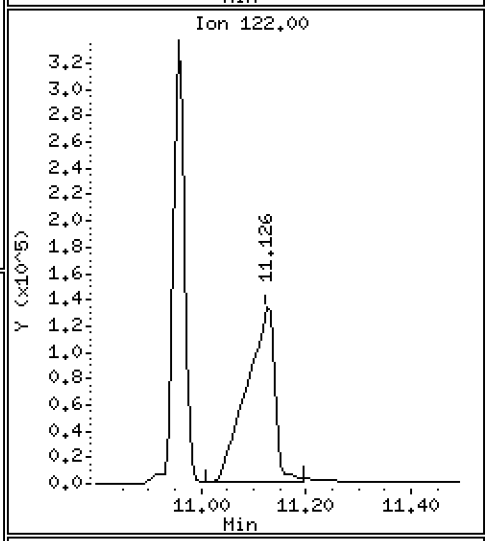


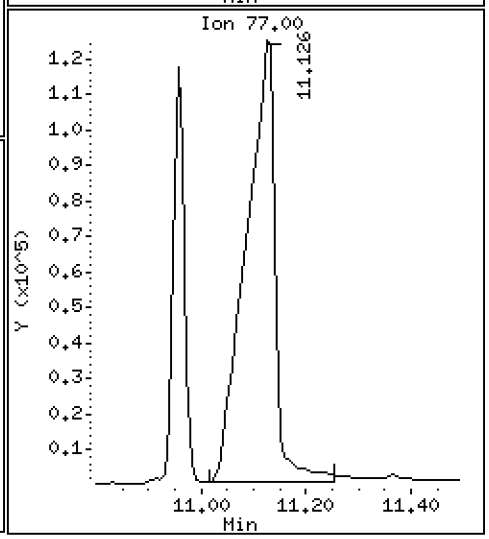












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

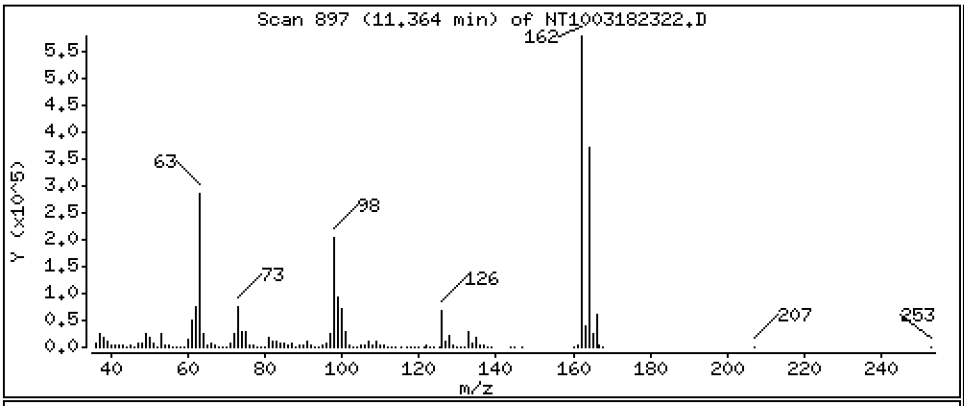
Operator: VTS

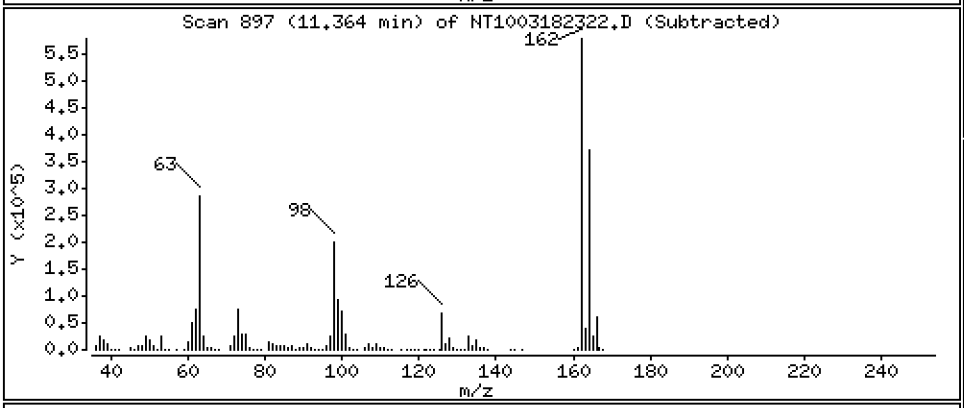
Column phase: ZB-5msi

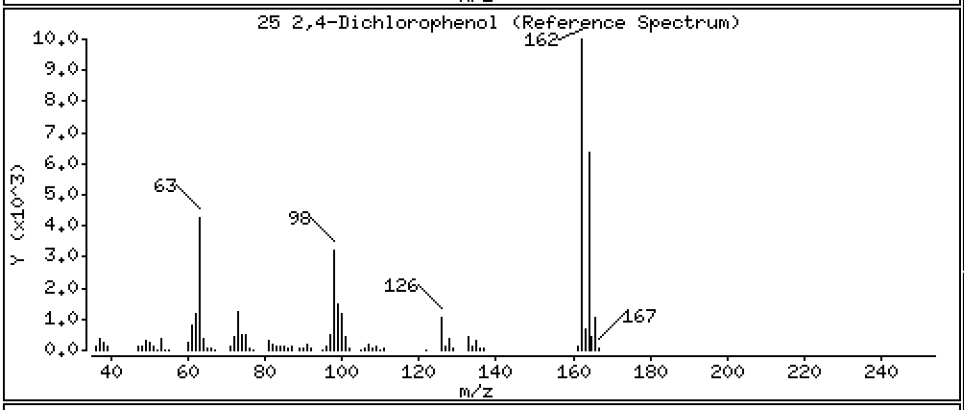
Column diameter: 0.25

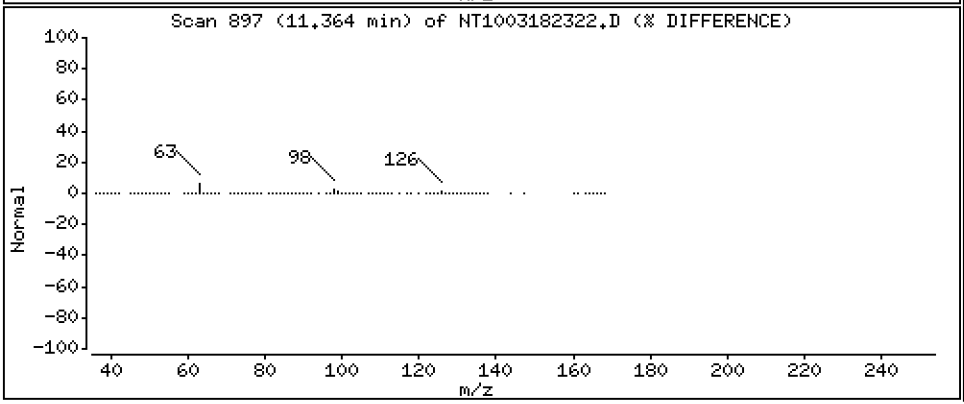
25 2,4-Dichlorophenol

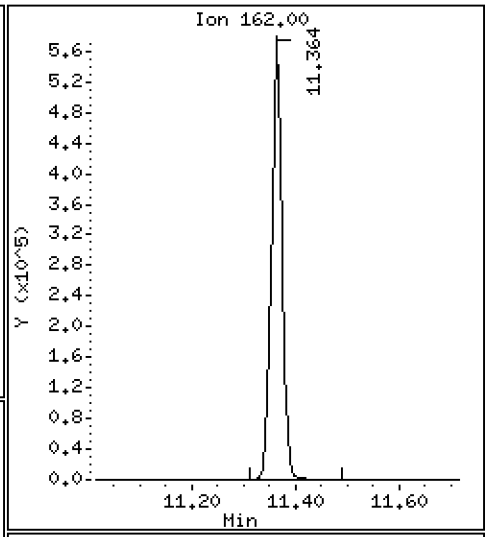
Concentration: 12.98 ug/mL

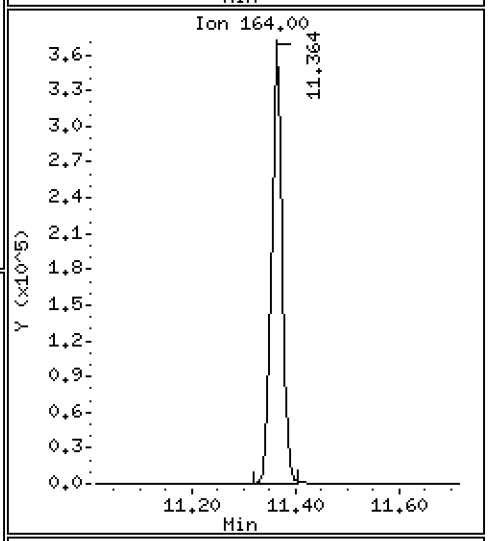


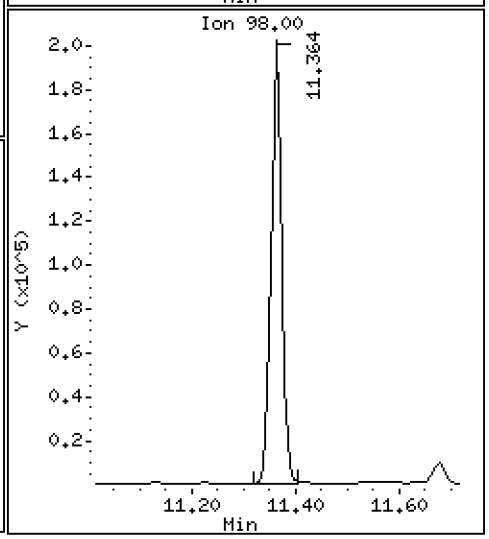












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

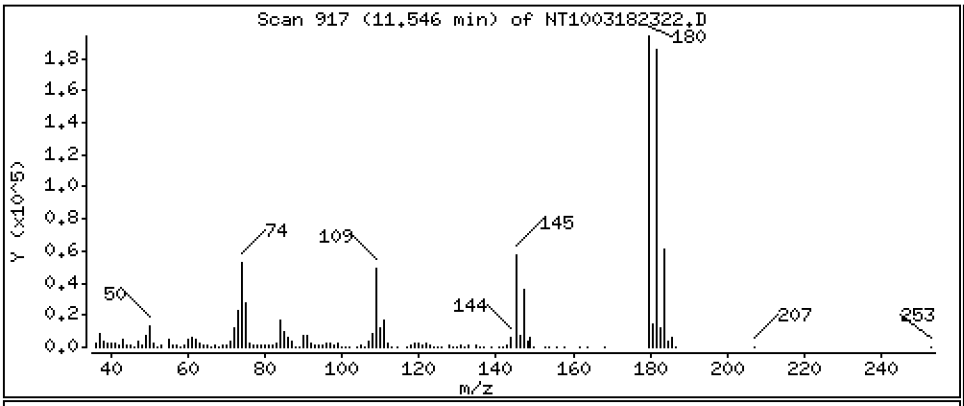
Operator: VTS

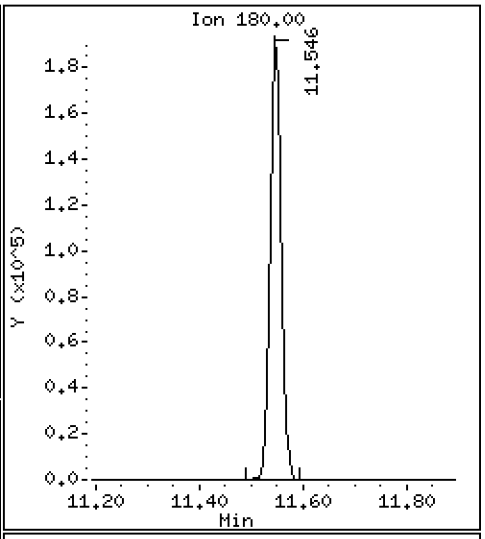
Column phase: ZB-5msi

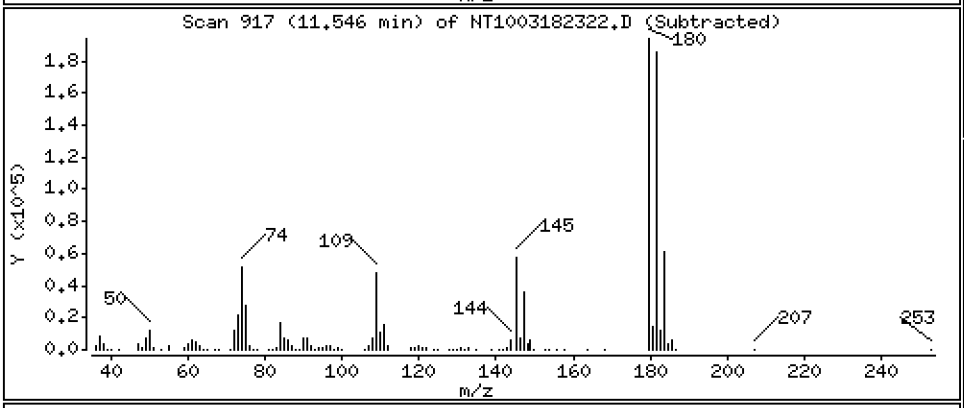
Column diameter: 0.25

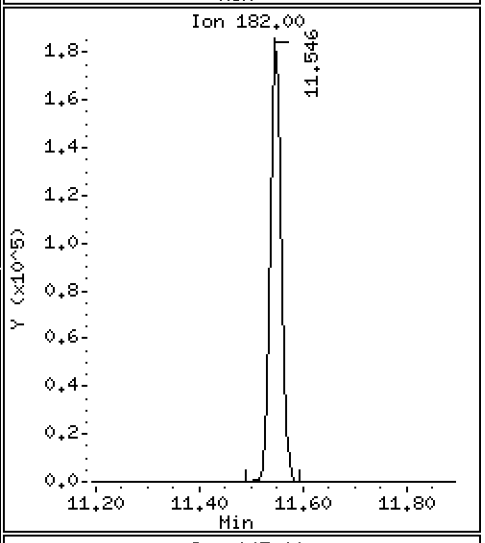
26 1,2,4-Trichlorobenzene

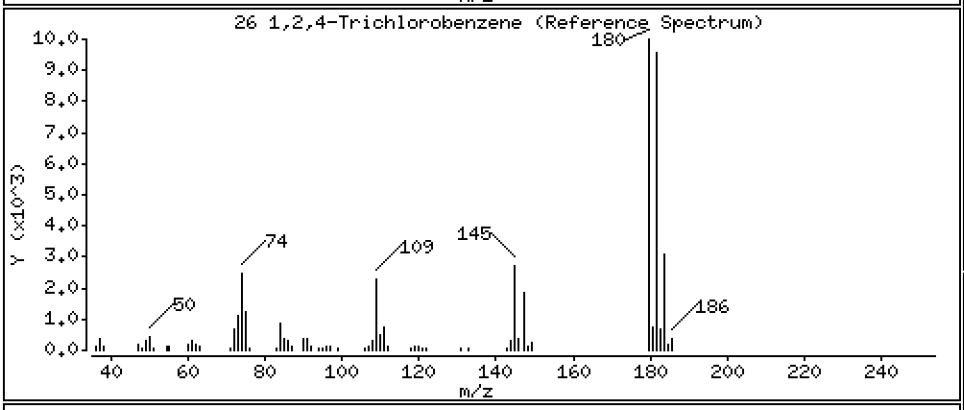
Concentration: 4.578 ug/mL

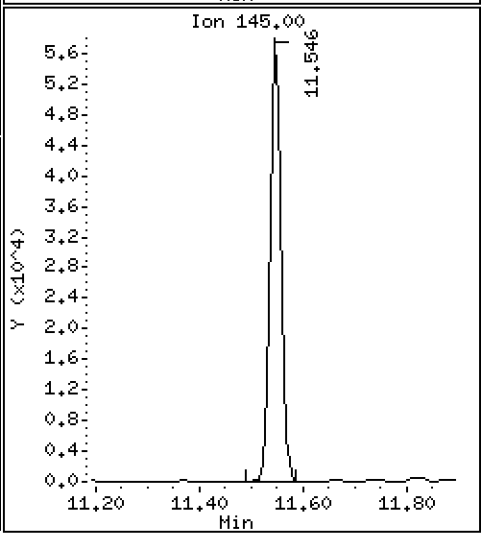


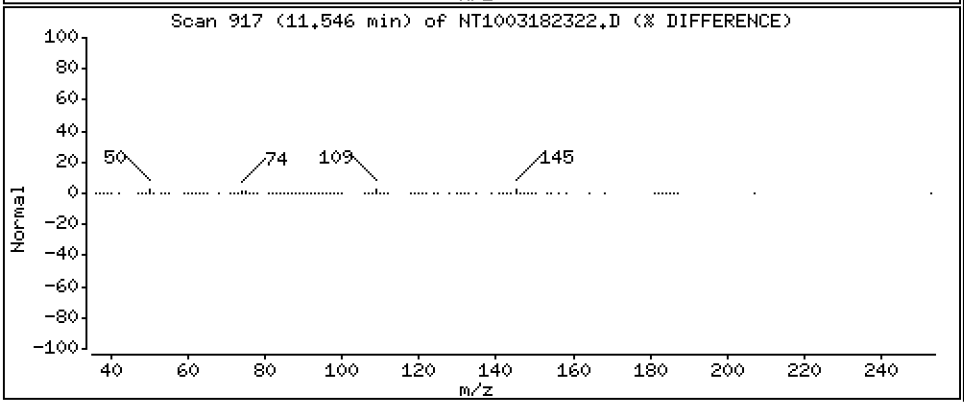












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

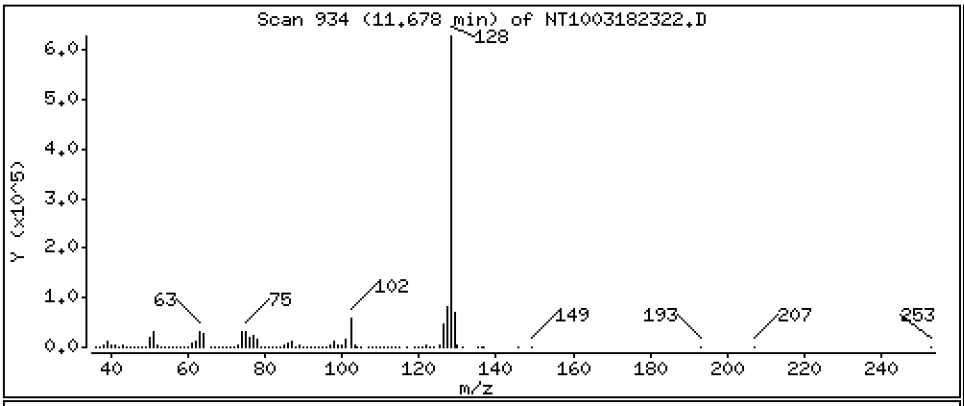
Operator: VTS

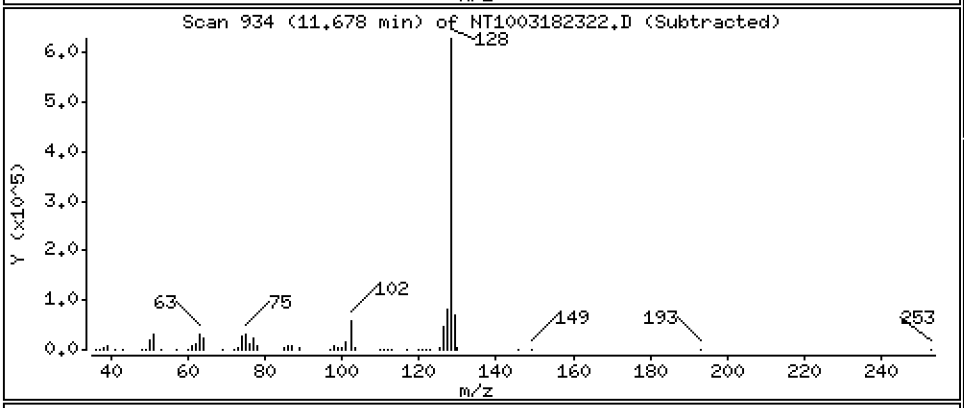
Column phase: ZB-5msi

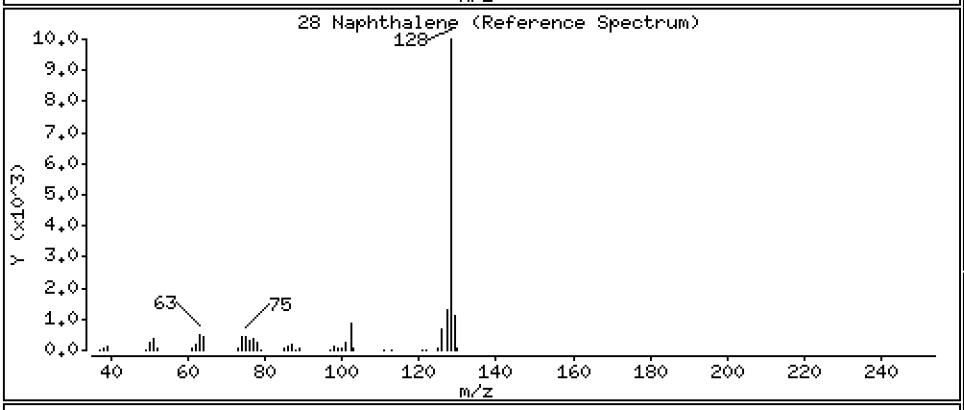
Column diameter: 0.25

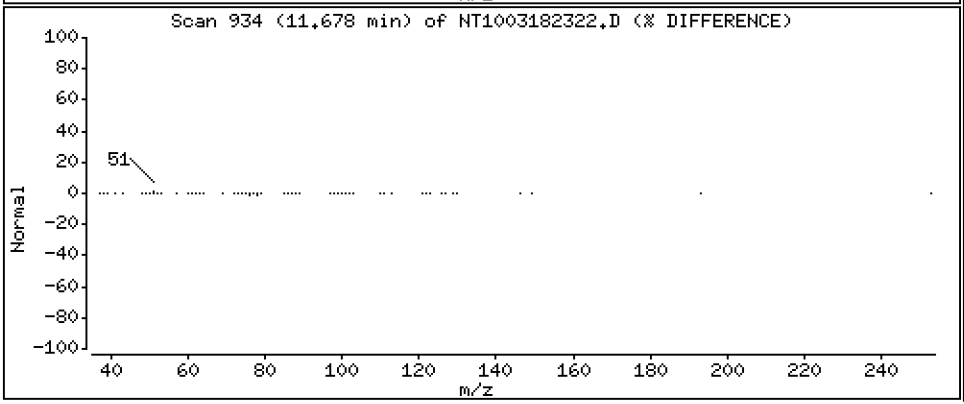
28 Naphthalene

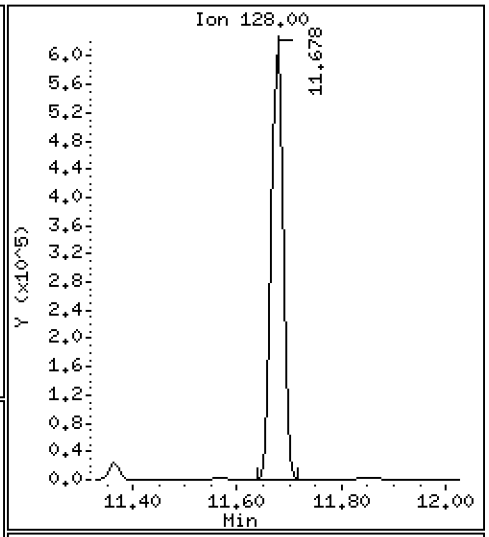
Concentration: 3.838 ug/mL

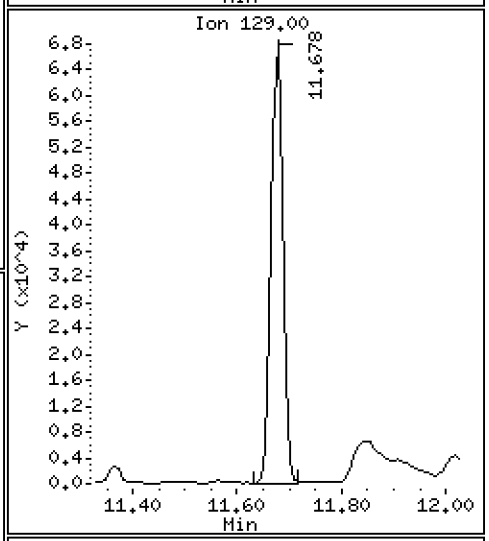


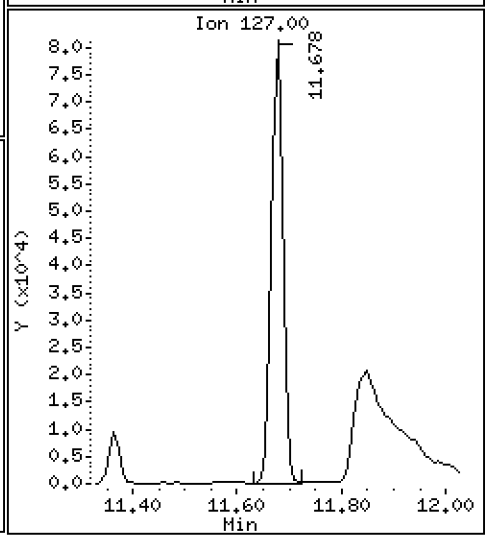












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

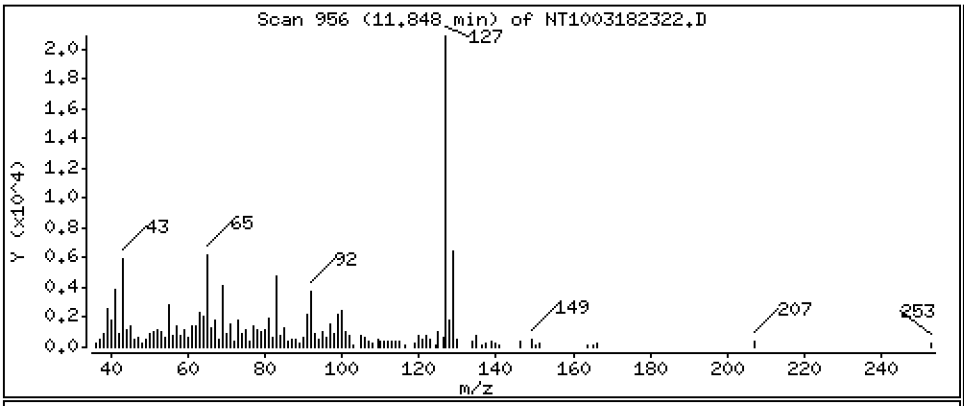
Operator: VTS

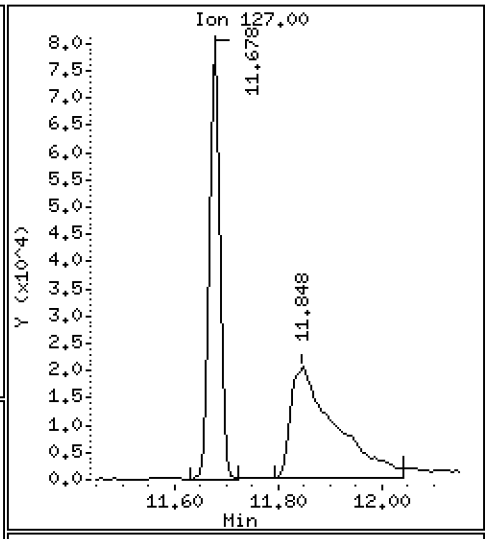
Column phase: ZB-5msi

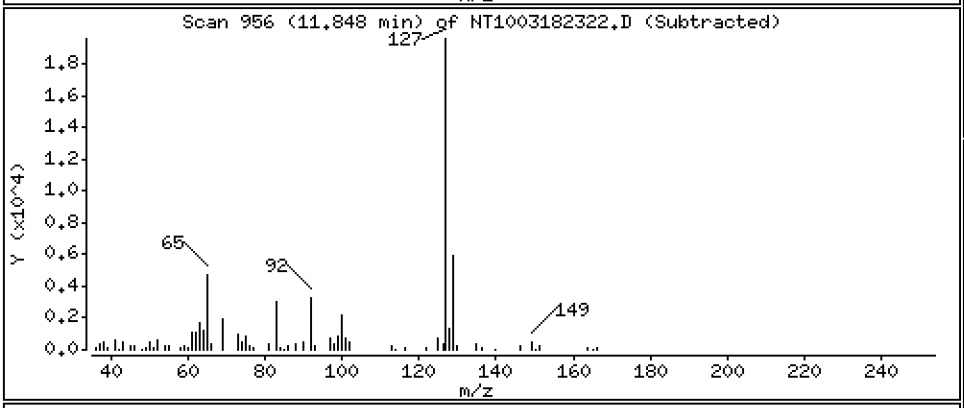
Column diameter: 0.25

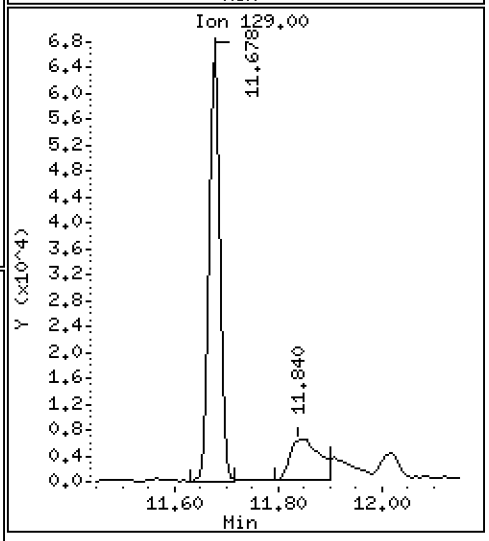
29 4-Chloroaniline

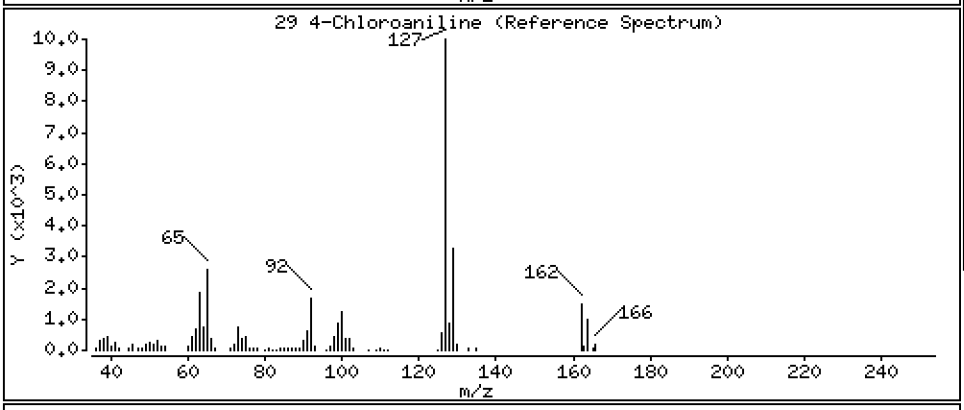
Concentration: 1.336 ug/mL

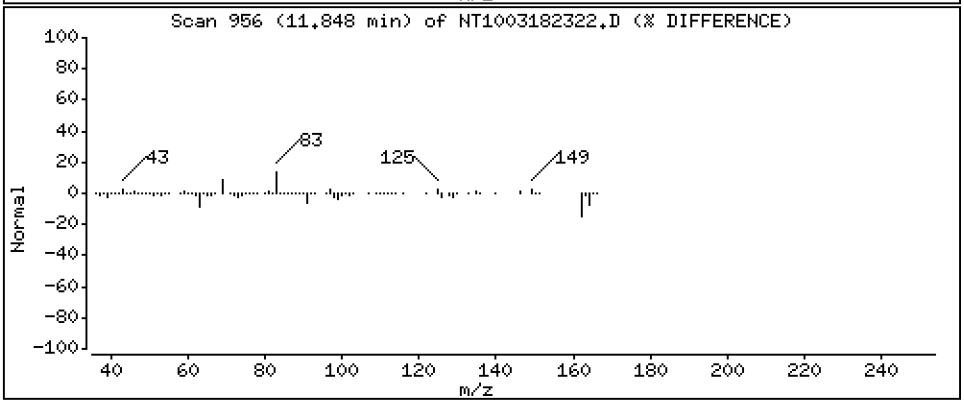












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

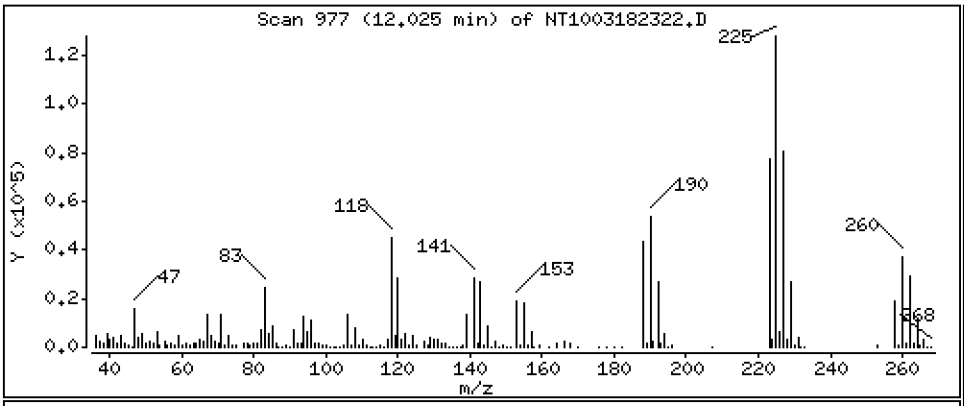
Operator: VTS

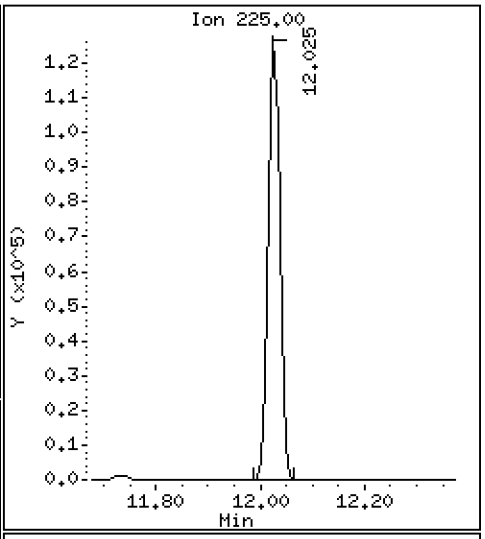
Column phase: ZB-5msi

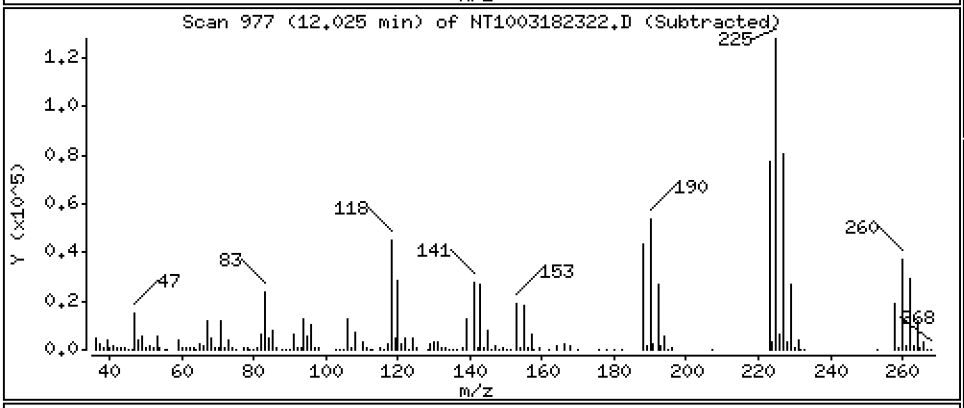
Column diameter: 0.25

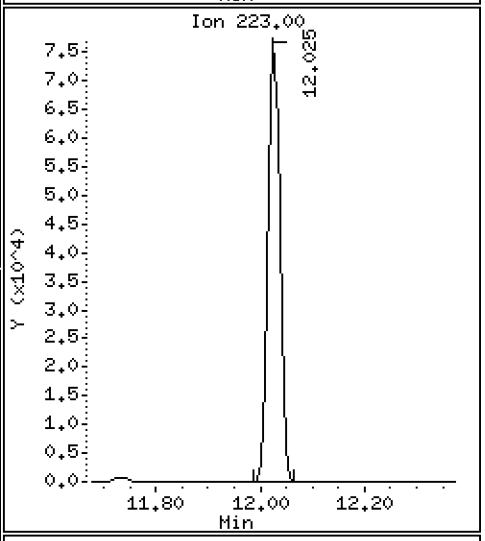
30 Hexachlorobutadiene

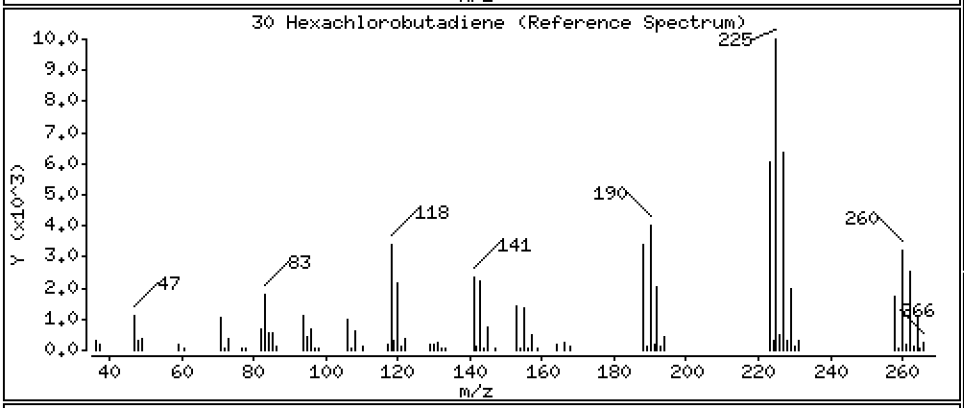
Concentration: 4.115 ug/mL

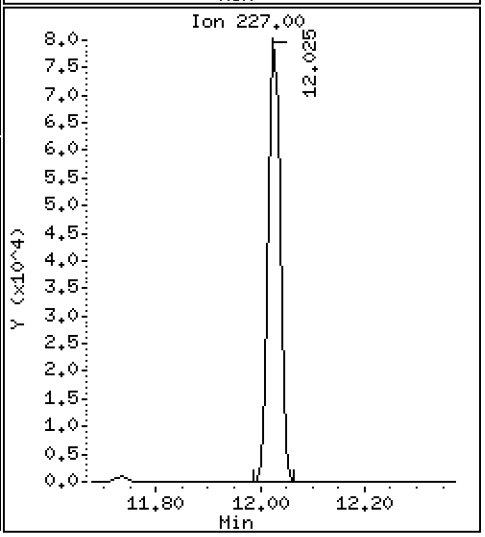


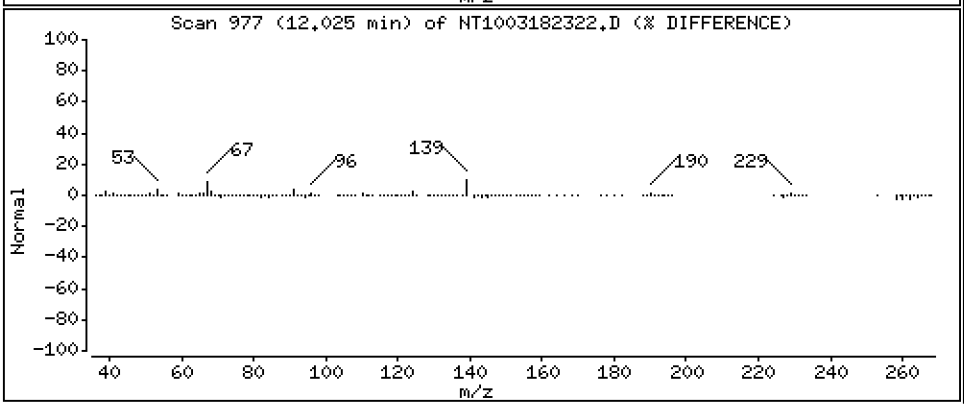












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

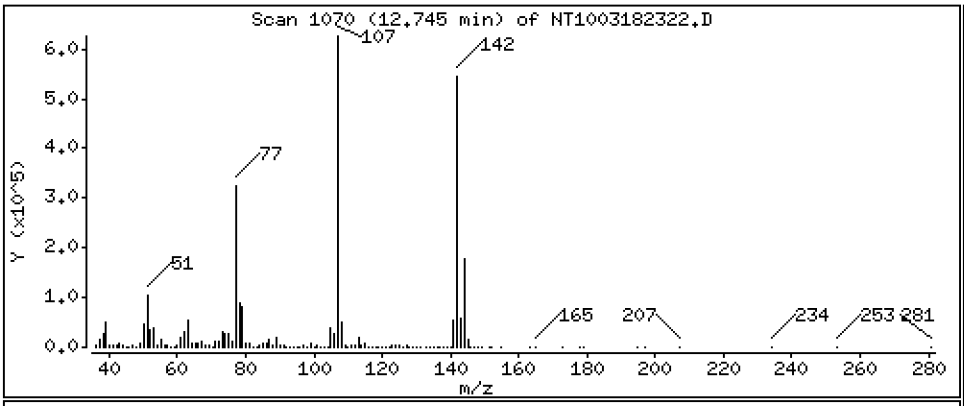
Operator: VTS

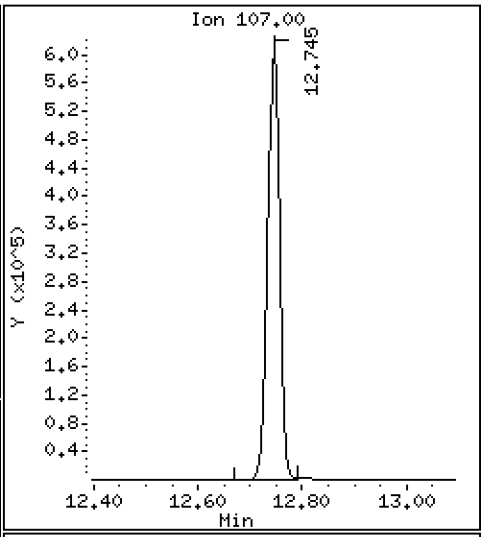
Column phase: ZB-5msi

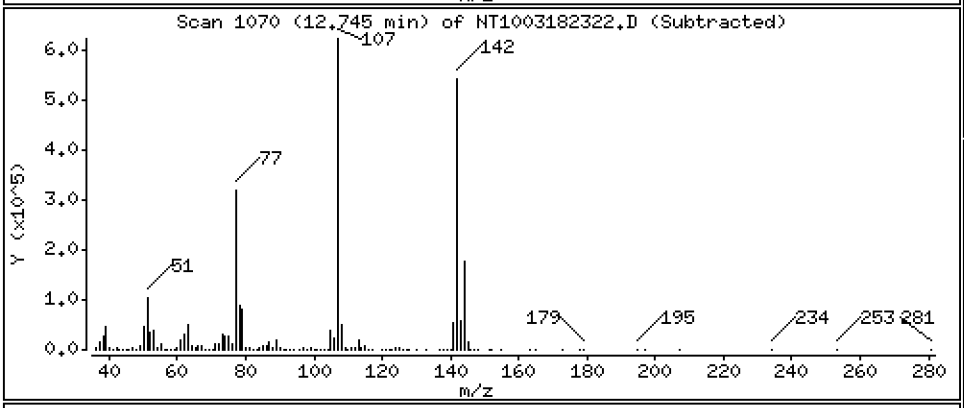
Column diameter: 0.25

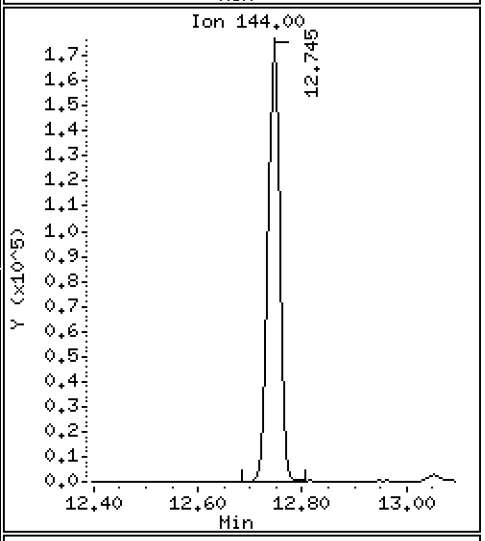
31 4-Chloro-3-methylphenol

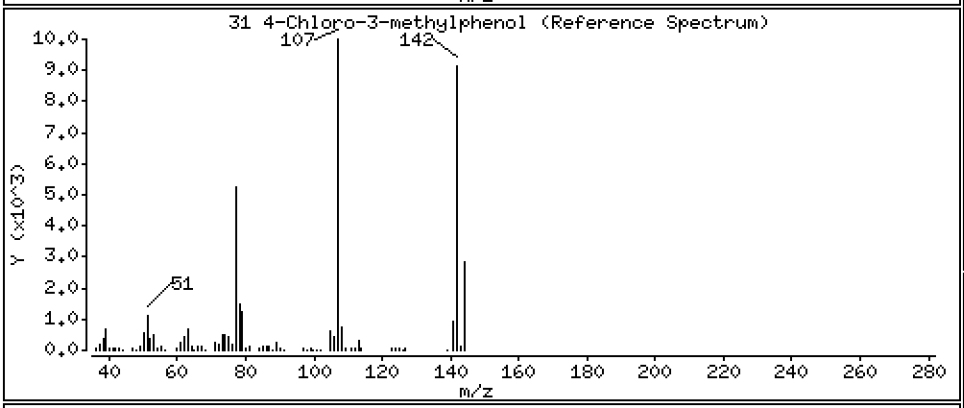
Concentration: 12.92 ug/mL

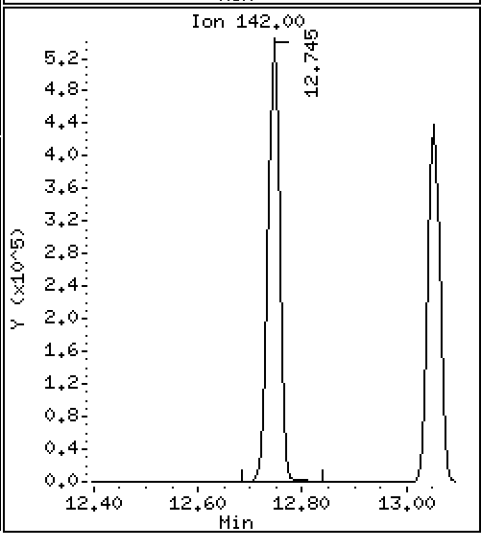


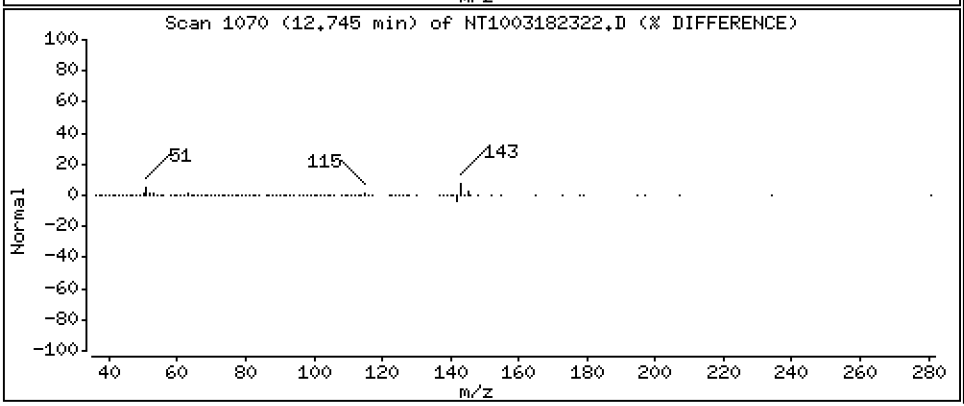












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

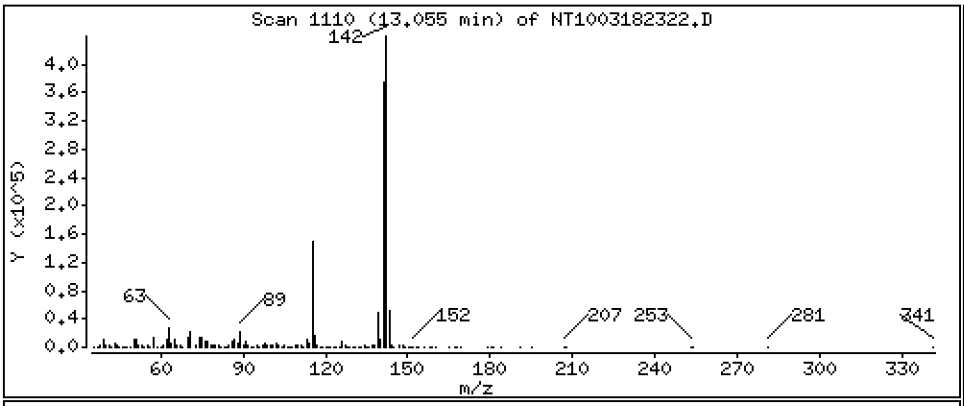
Operator: VTS

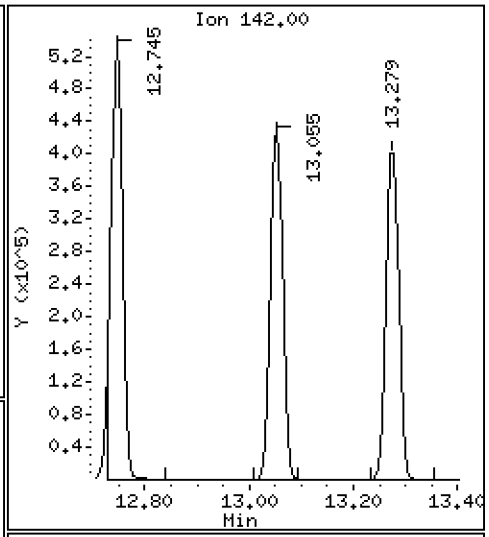
Column phase: ZB-5msi

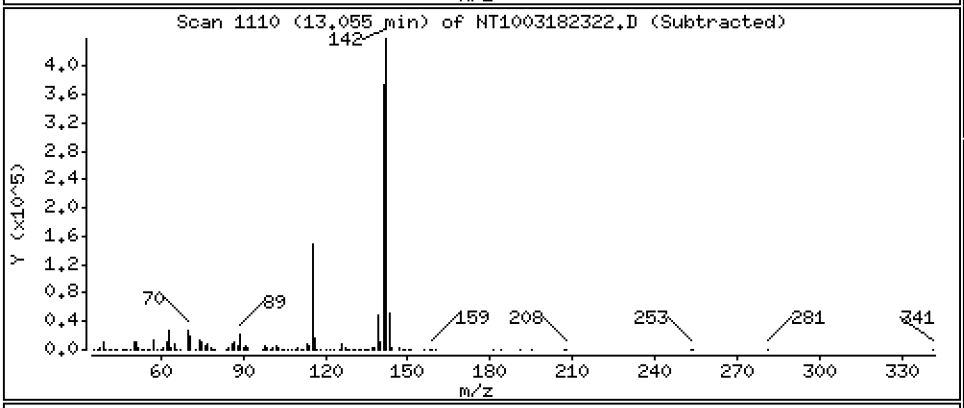
Column diameter: 0.25

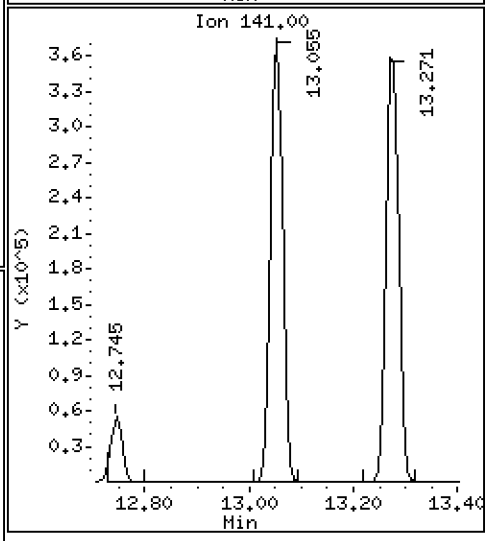
32 2-Methylnaphthalene

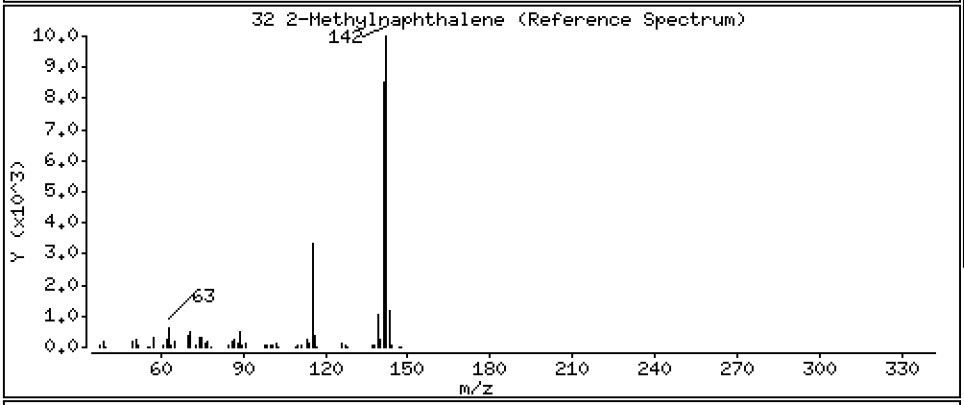
Concentration: 3.908 ug/mL

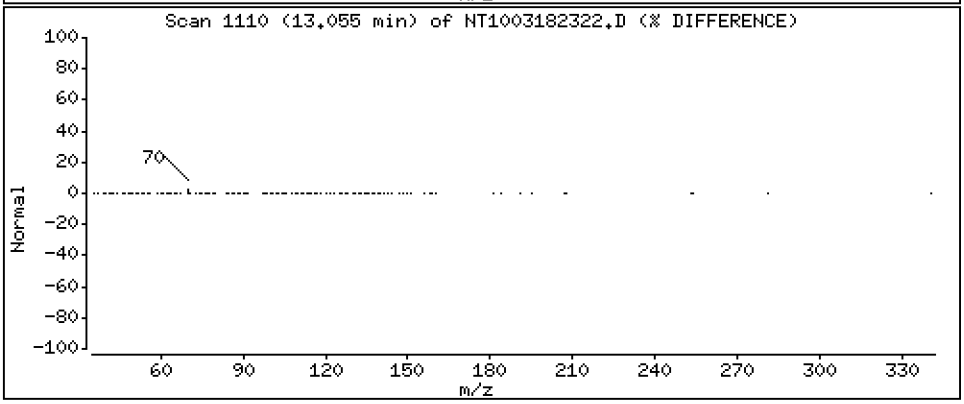












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

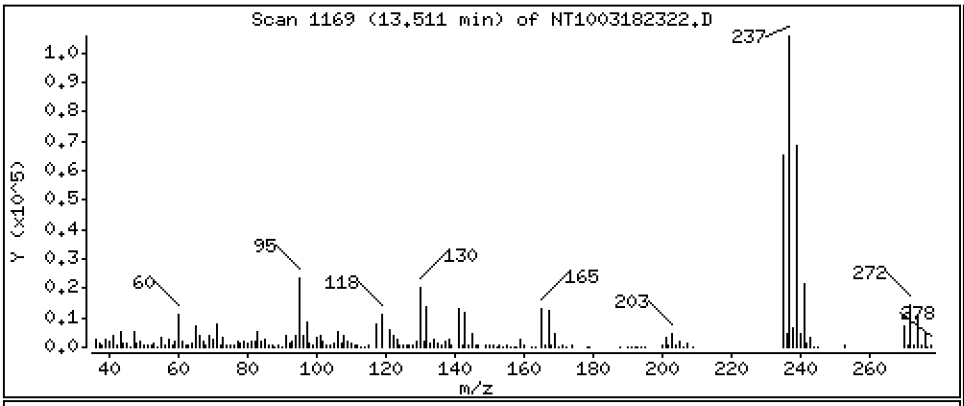
Operator: VTS

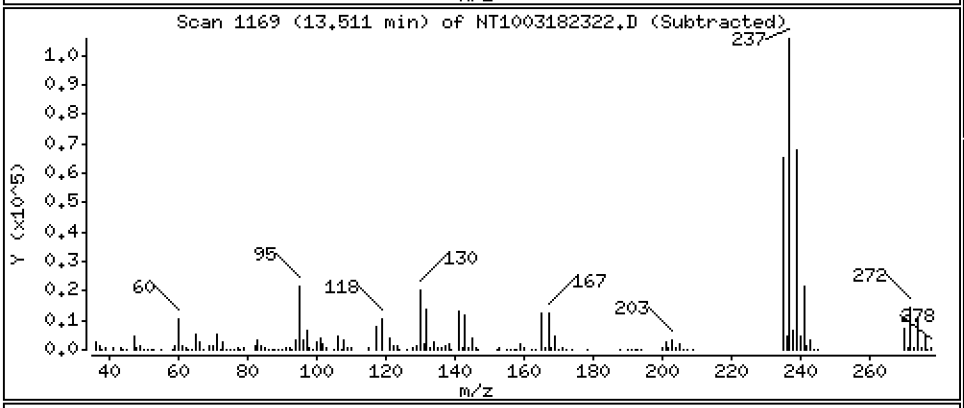
Column phase: ZB-5msi

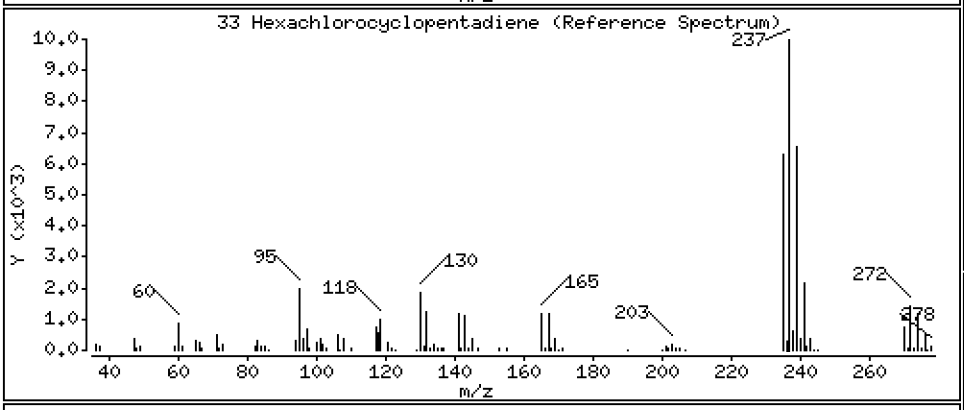
Column diameter: 0.25

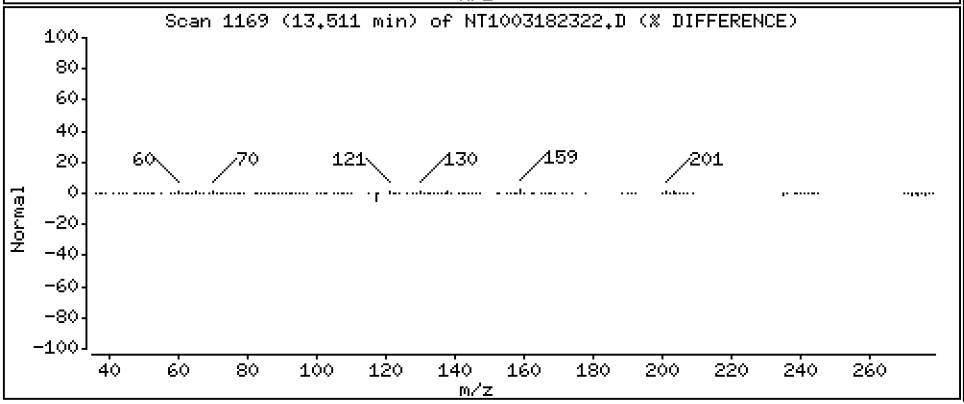
33 Hexachlorocyclopentadiene

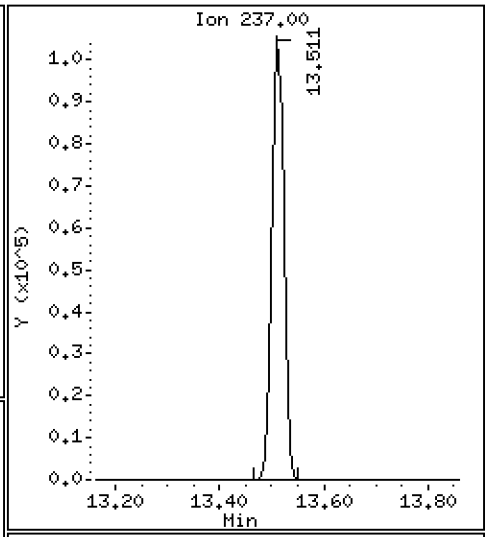
Concentration: 3.462 ug/mL

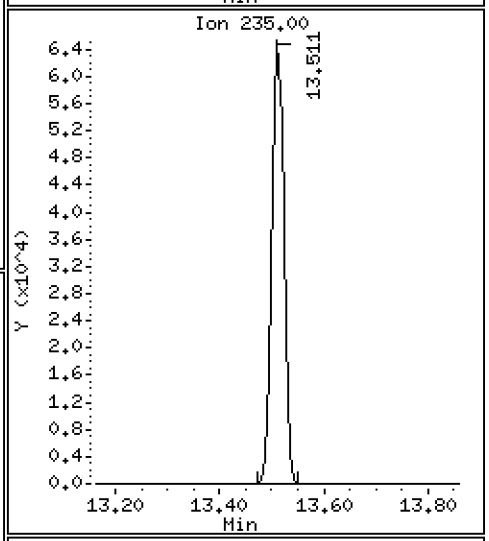


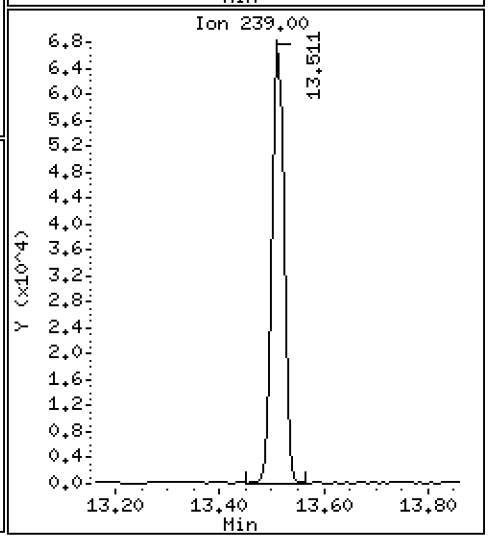












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

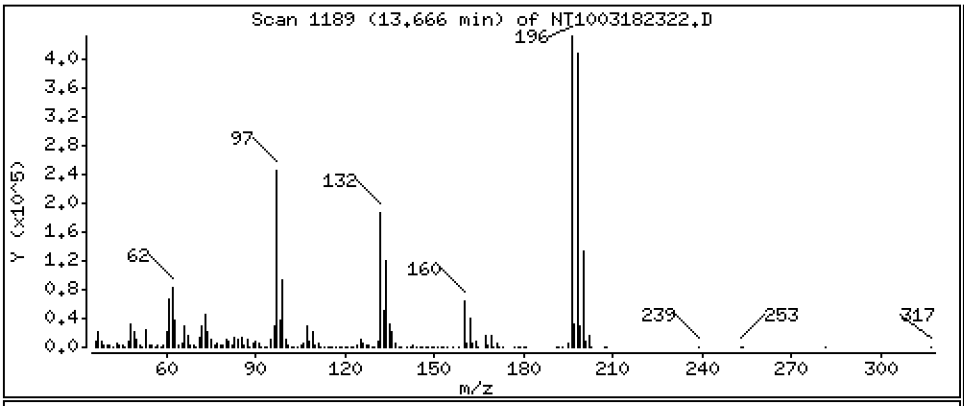
Operator: VTS

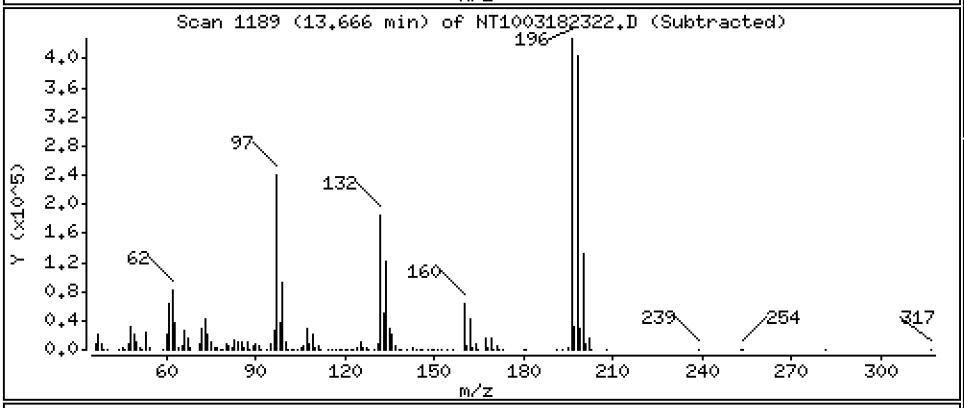
Column phase: ZB-5msi

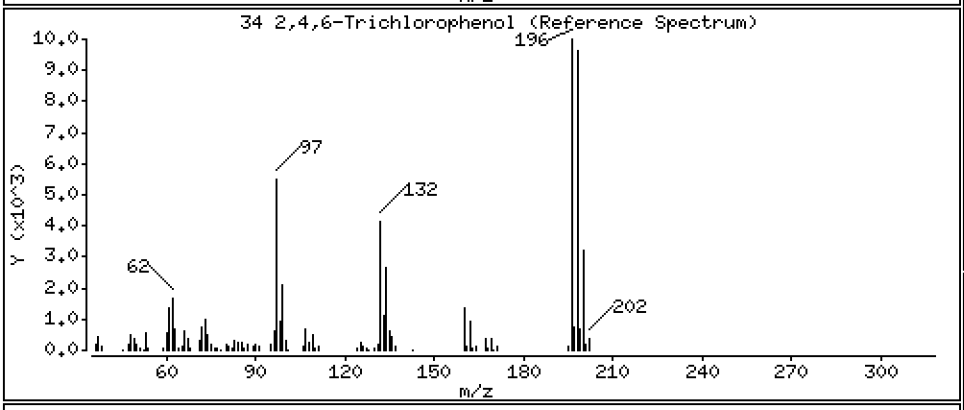
Column diameter: 0.25

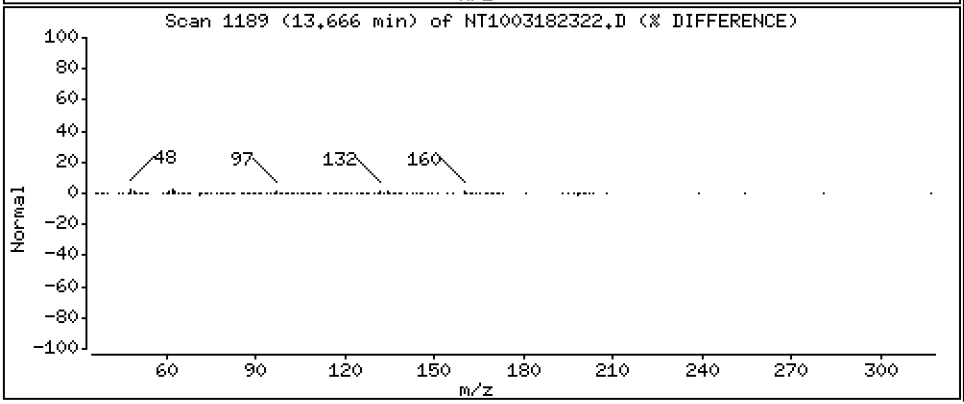
34 2,4,6-Trichlorophenol

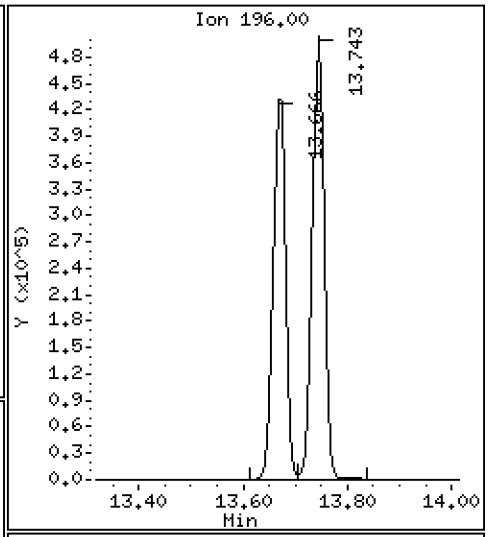
Concentration: 14.07 ug/mL

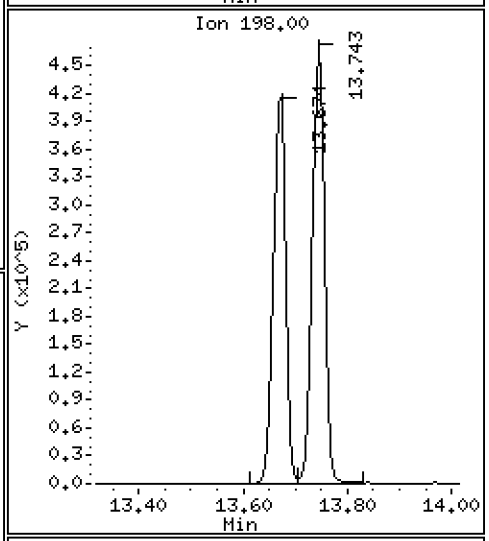


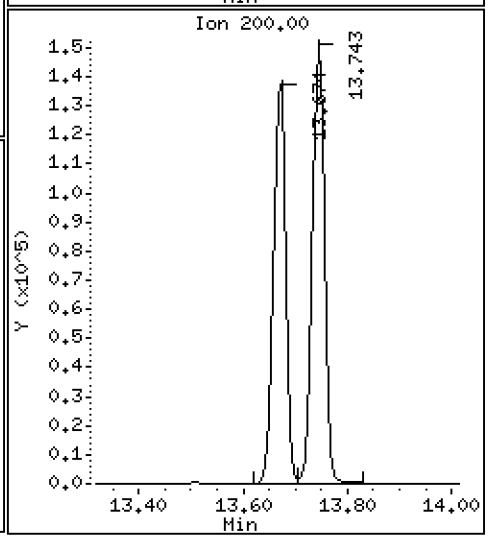












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

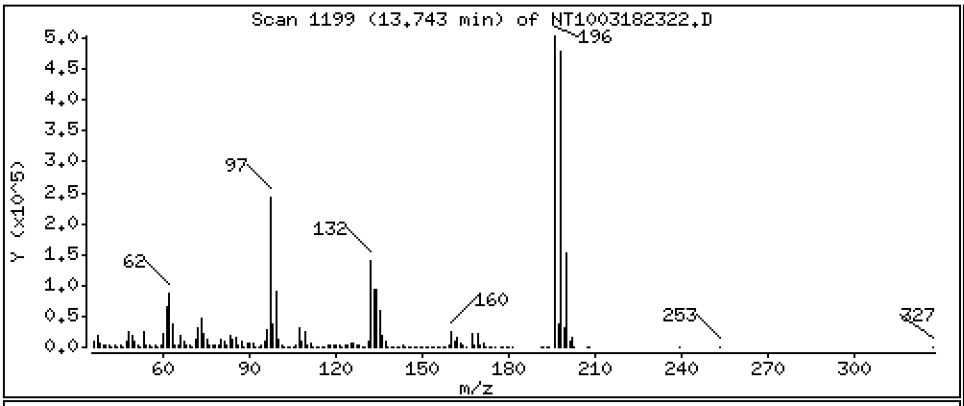
Operator: VTS

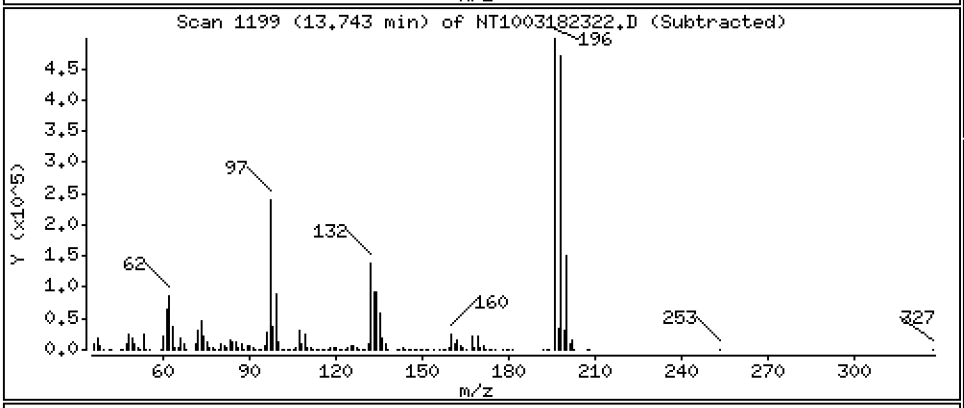
Column phase: ZB-5msi

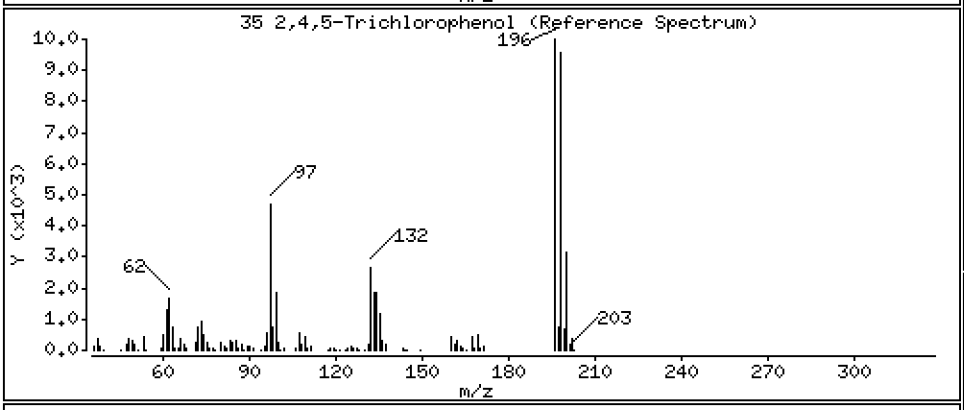
Column diameter: 0.25

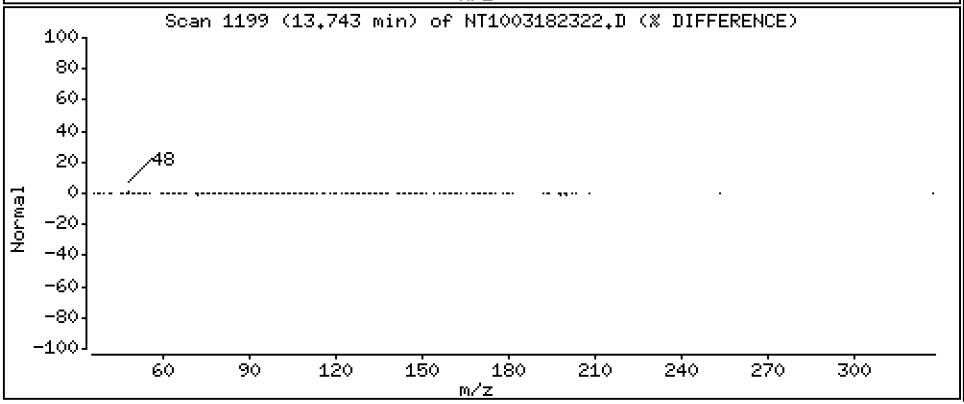
35 2,4,5-Trichlorophenol

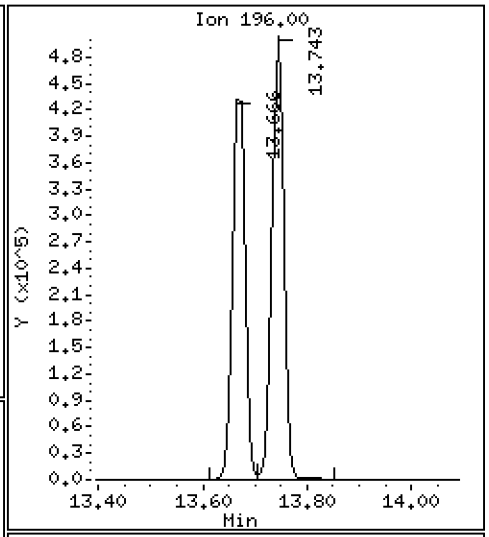
Concentration: 13.84 ug/mL

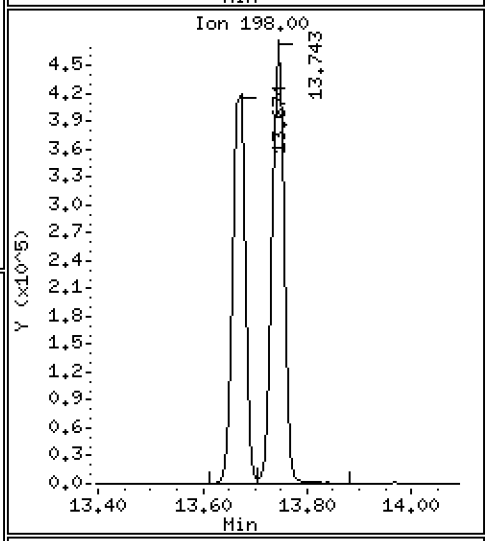


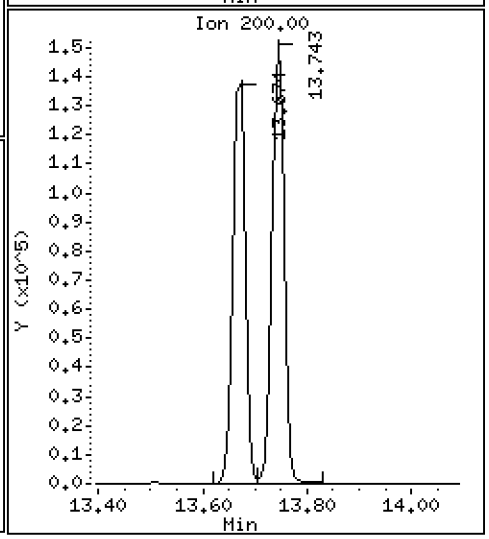












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

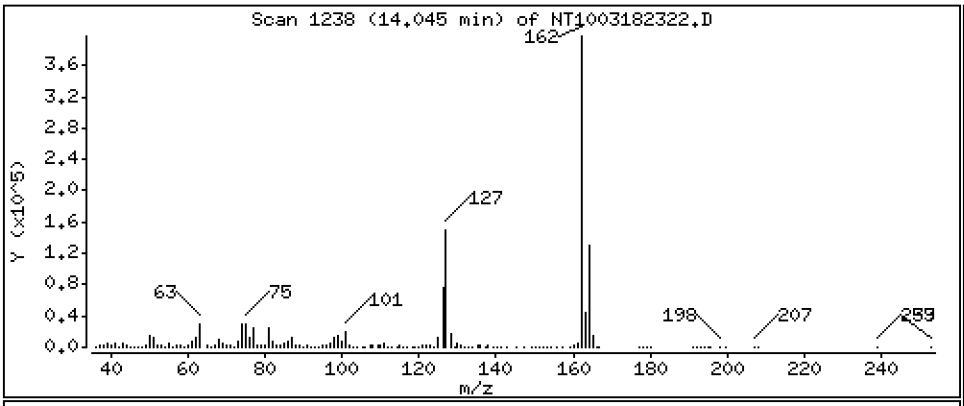
Operator: VTS

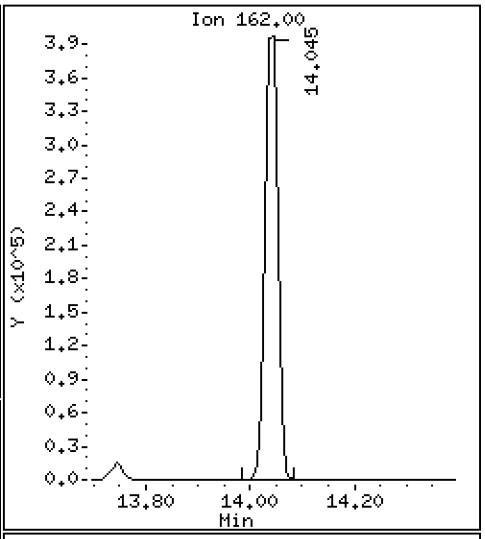
Column phase: ZB-5msi

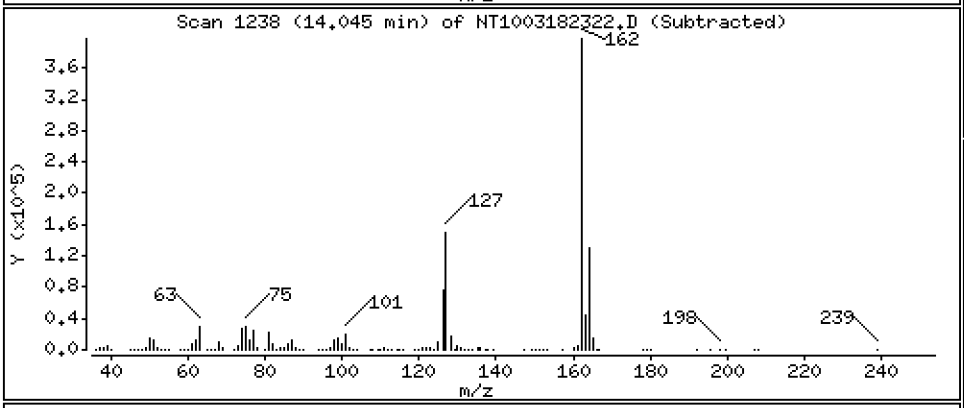
Column diameter: 0.25

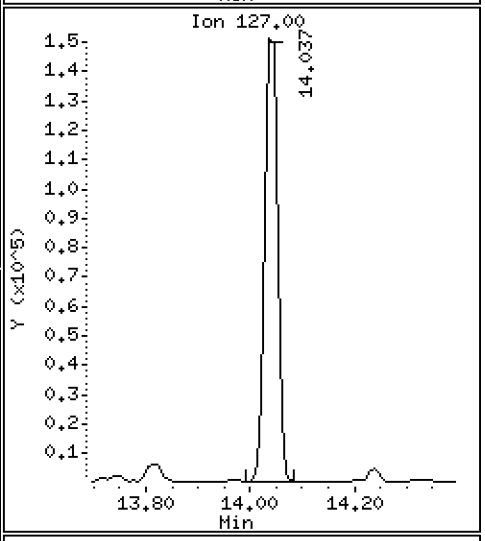
37 2-Chloronaphthalene

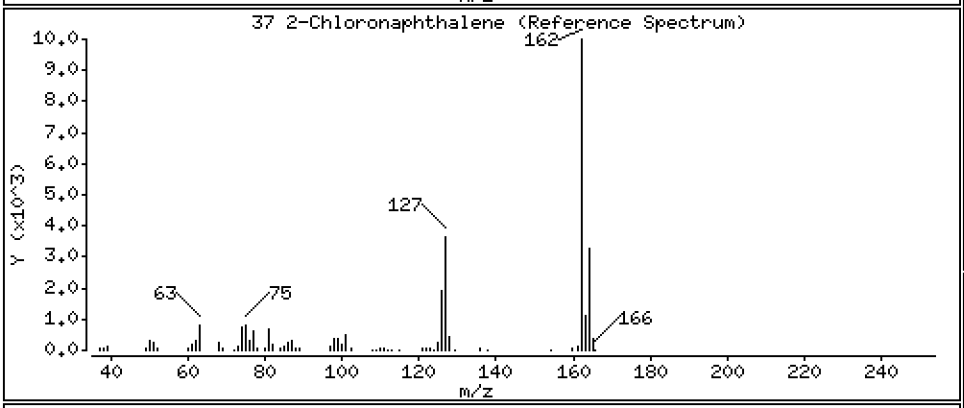
Concentration: 4.078 ug/mL

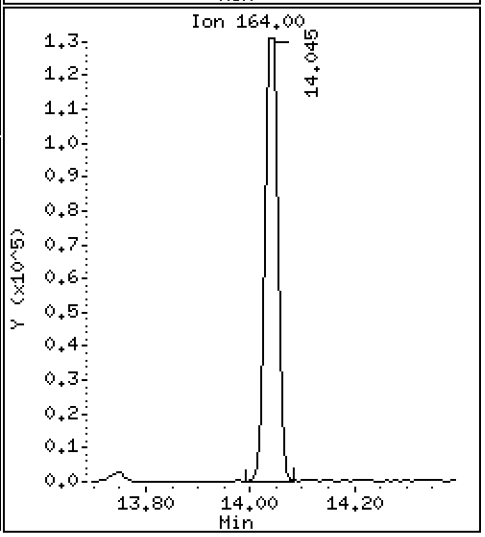


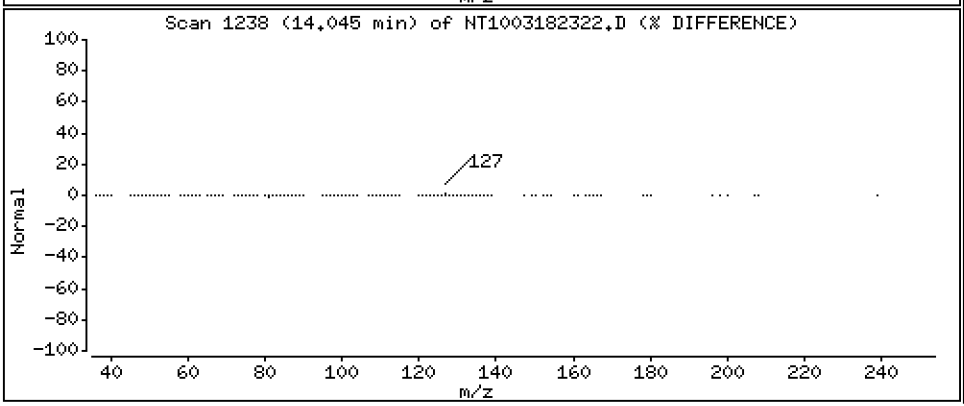












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

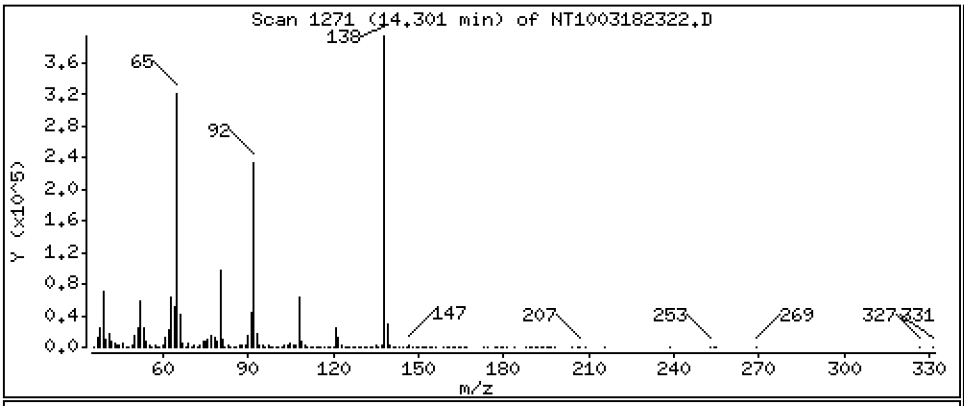
Operator: VTS

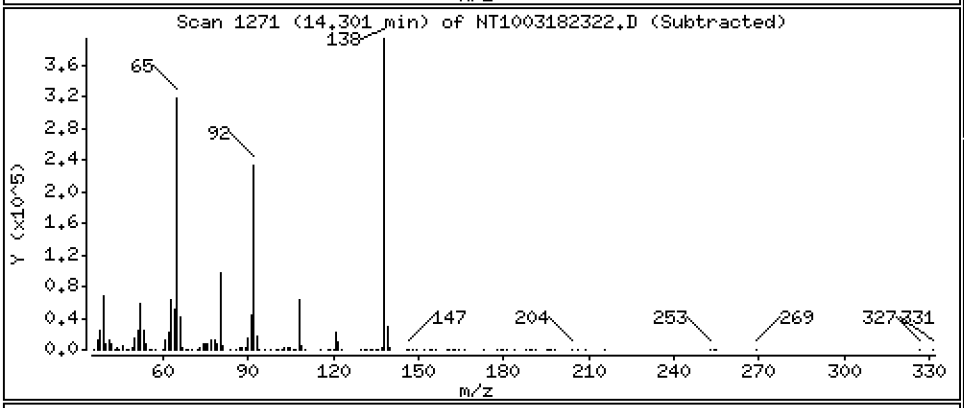
Column phase: ZB-5msi

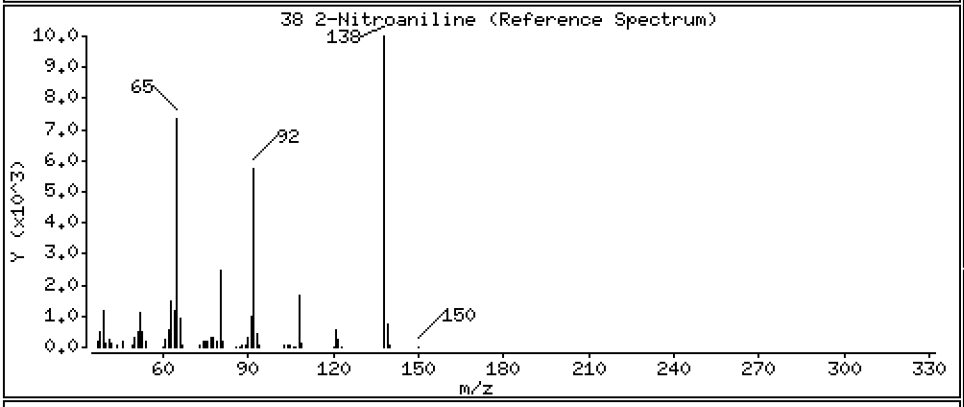
Column diameter: 0.25

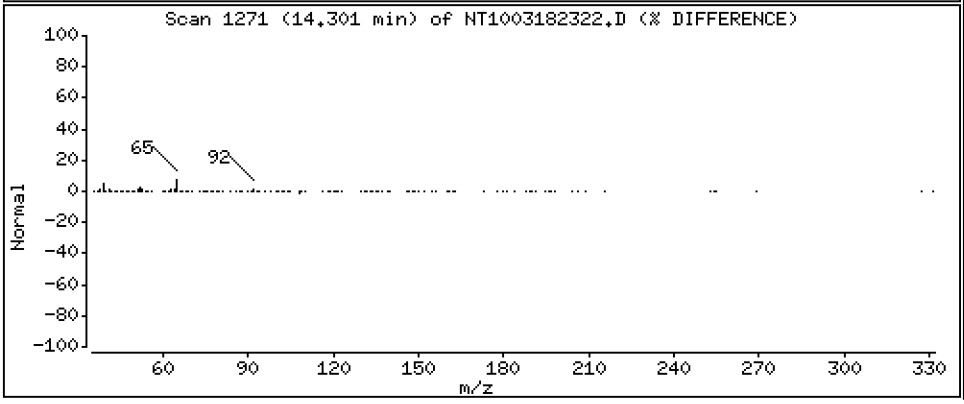
38 2-Nitroaniline

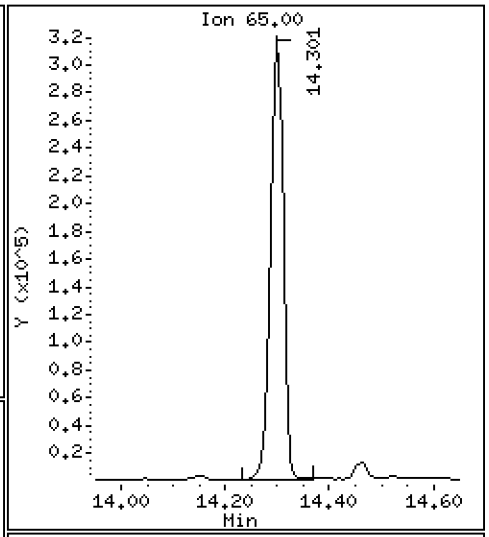
Concentration: 11.57 ug/mL

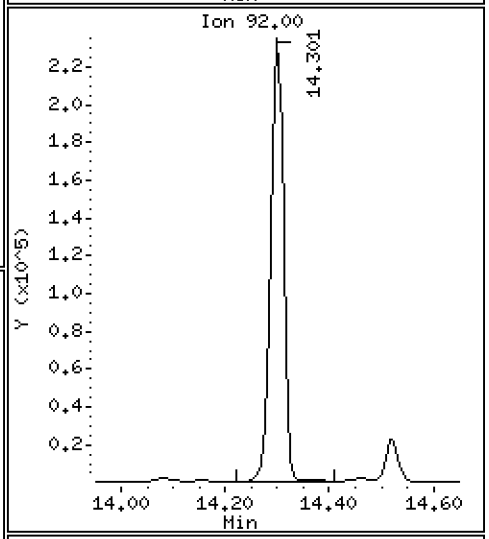


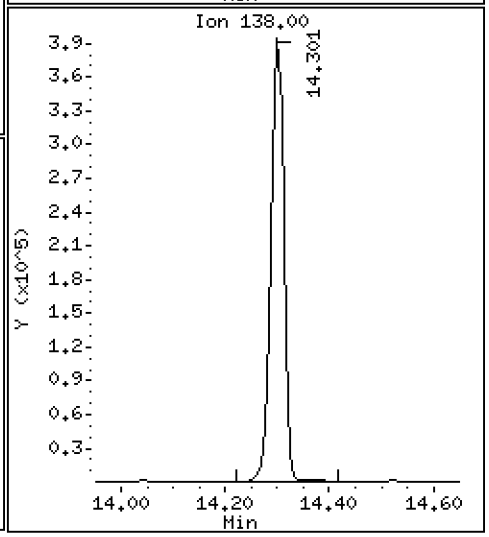












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

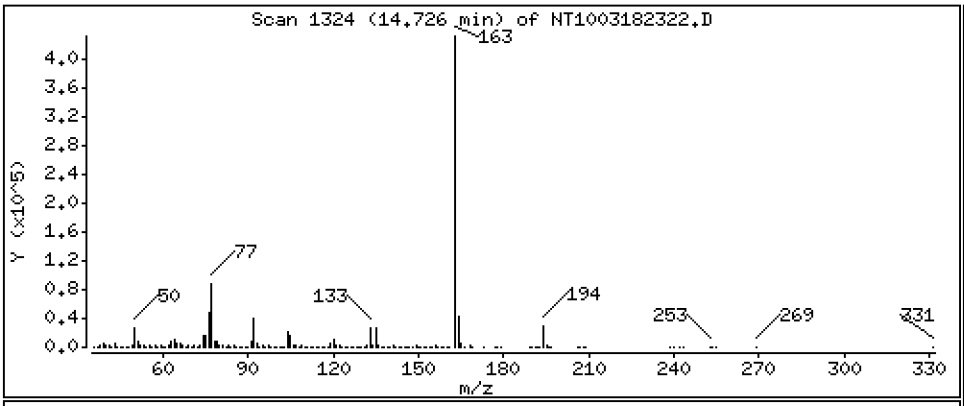
Operator: VTS

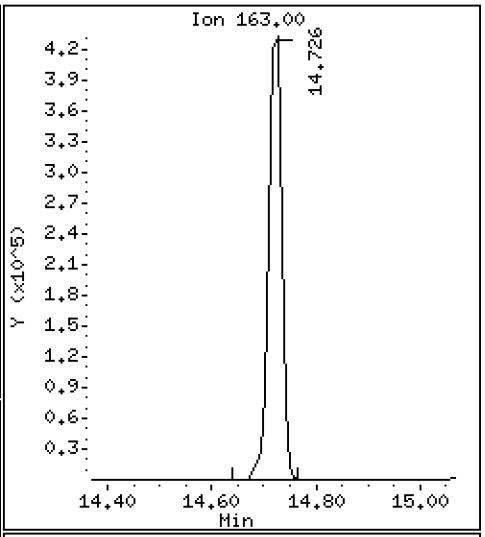
Column phase: ZB-5msi

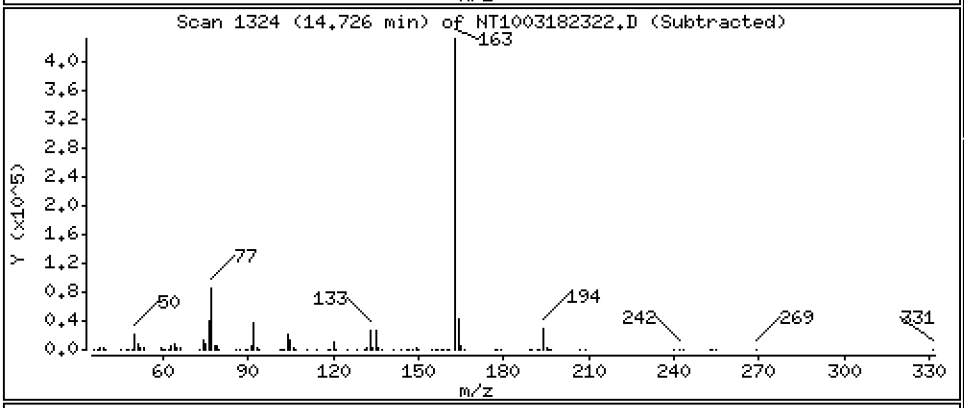
Column diameter: 0.25

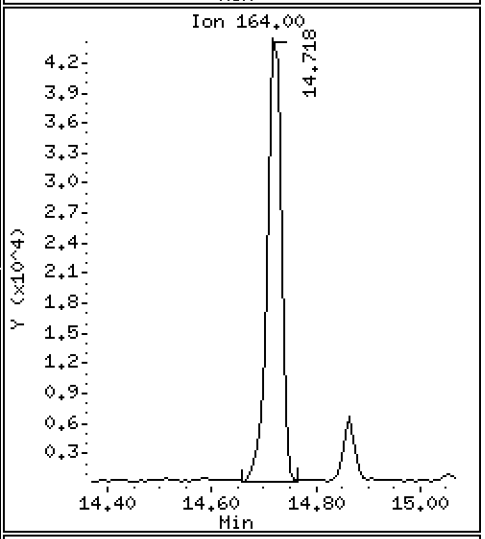
39 Dimethylphthalate

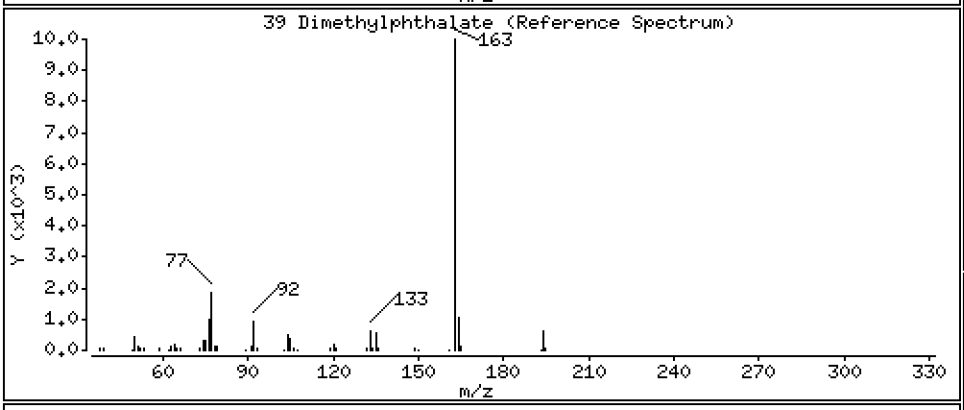
Concentration: 4.515 ug/mL

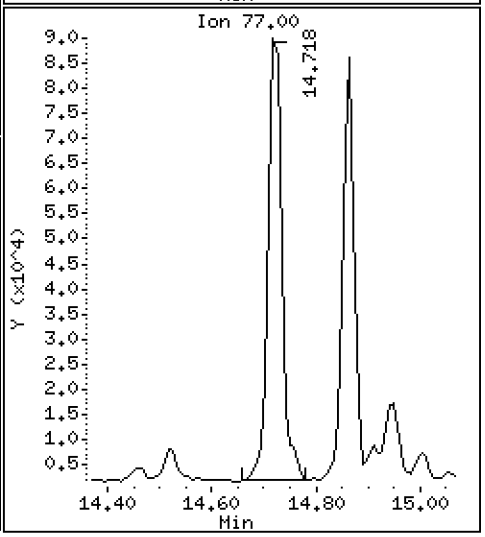


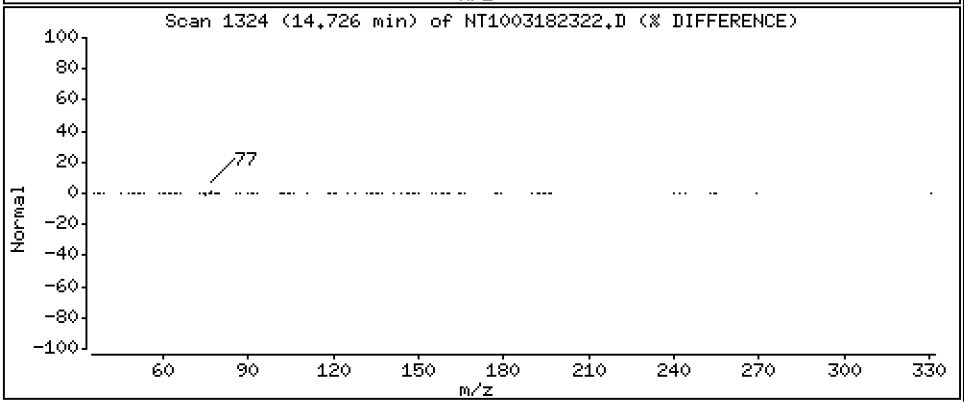












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

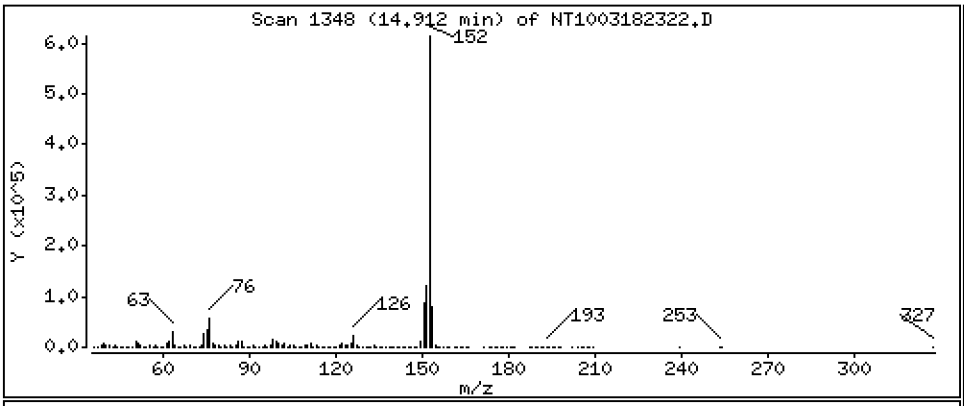
Operator: VTS

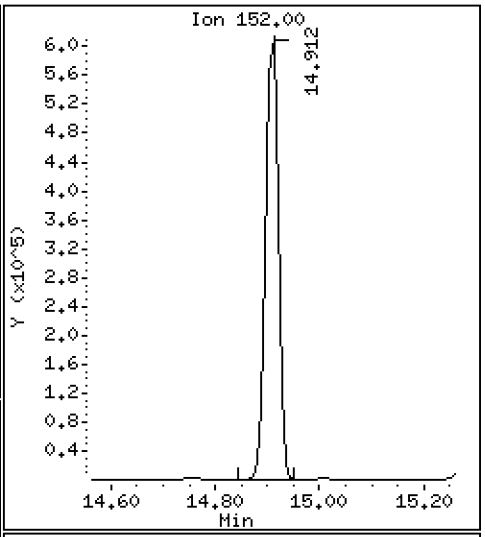
Column phase: ZB-5msi

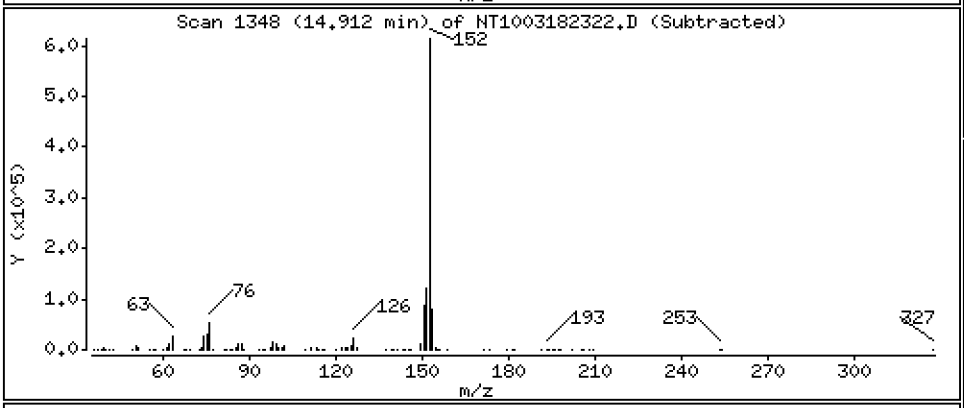
Column diameter: 0.25

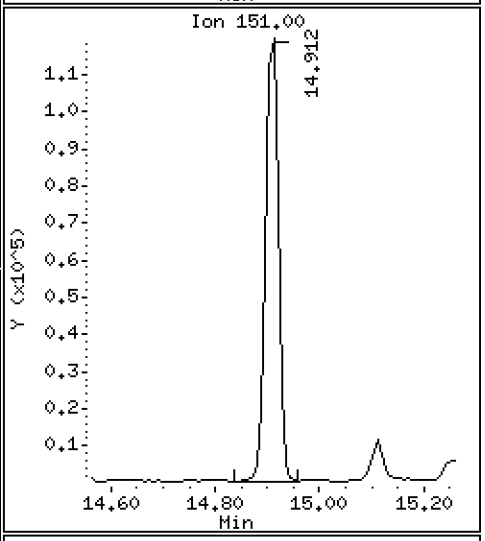
40 Acenaphthylene

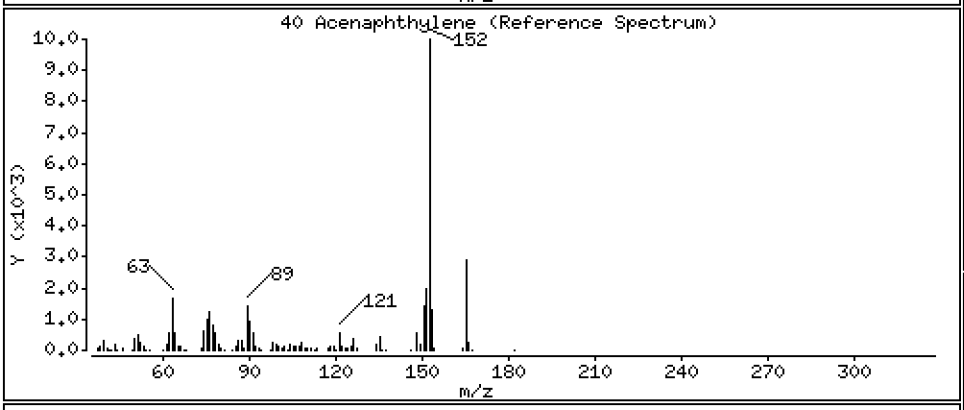
Concentration: 4.022 ug/mL

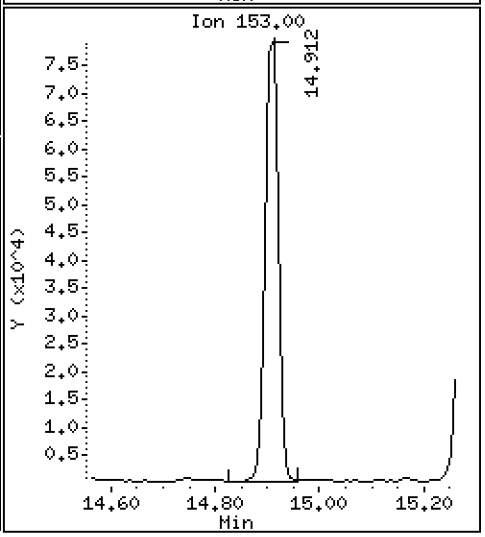


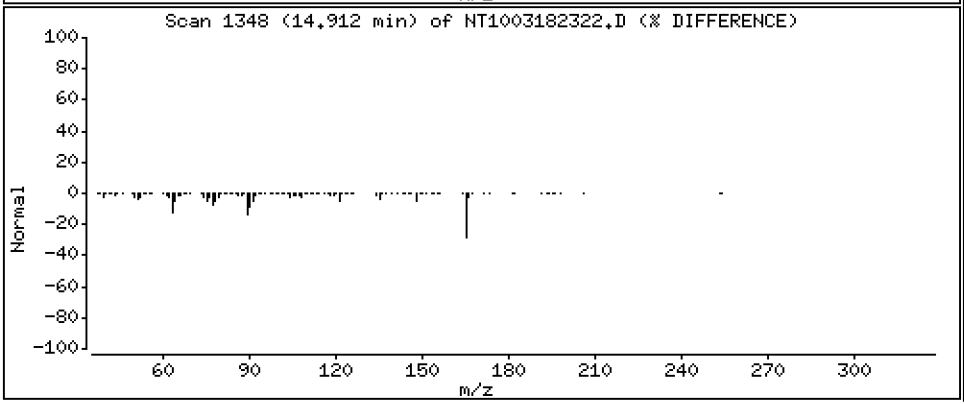












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

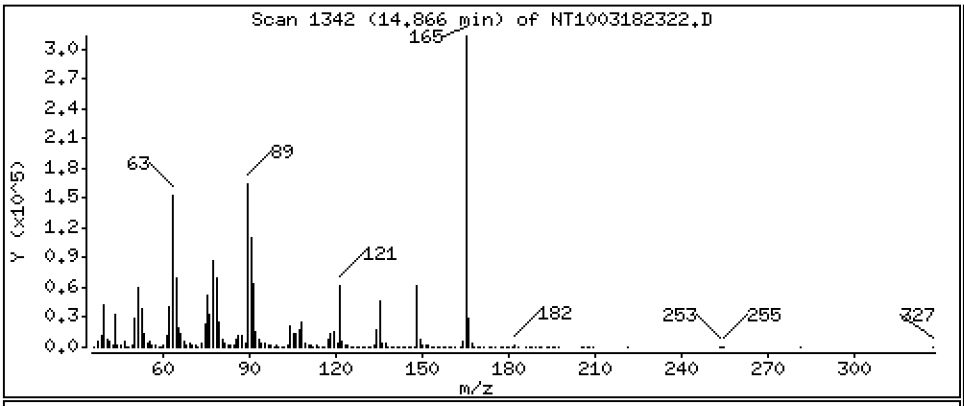
Operator: VTS

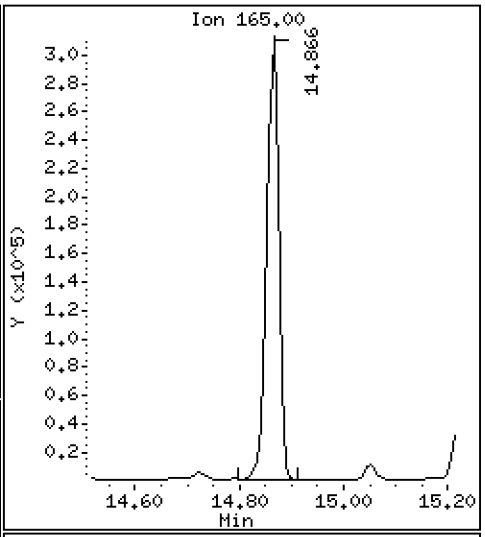
Column phase: ZB-5msi

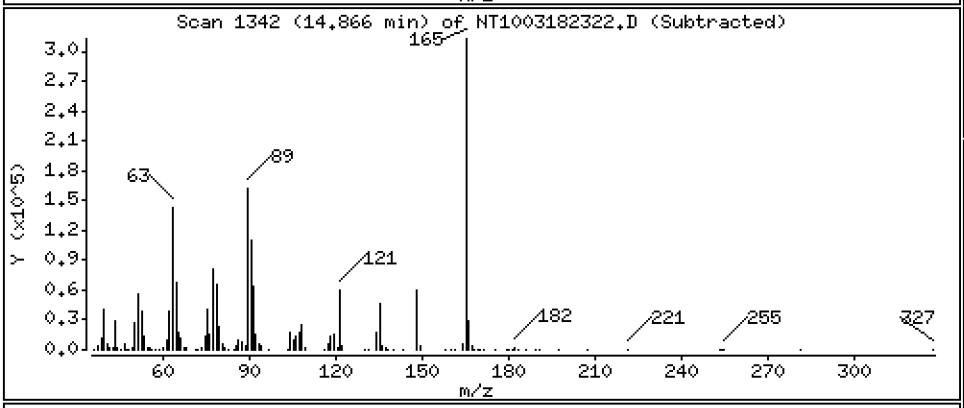
Column diameter: 0.25

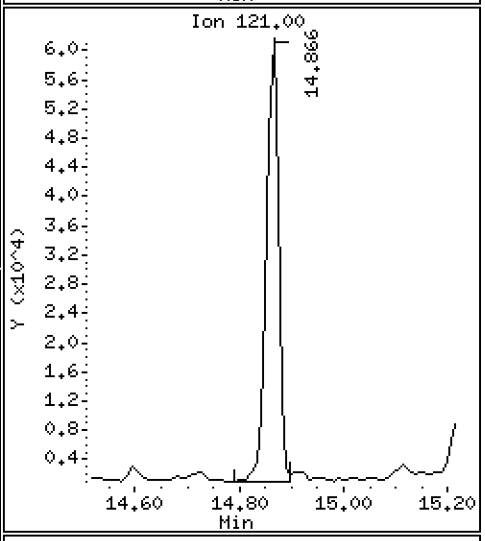
41 2,6-Dinitrotoluene

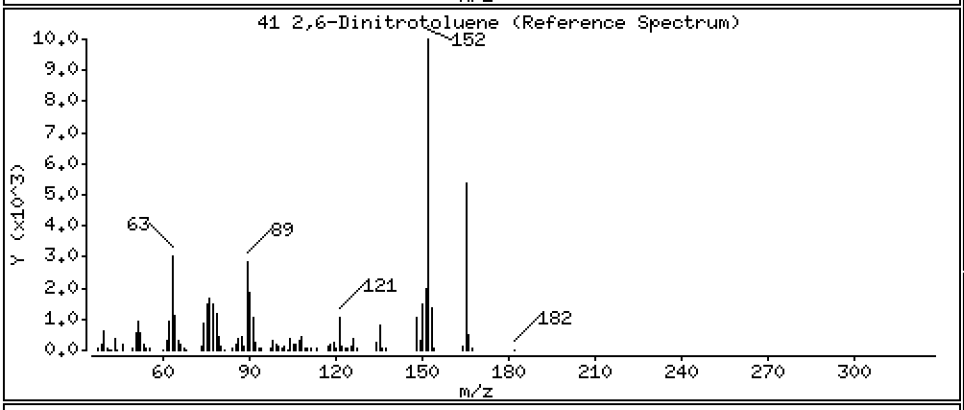
Concentration: 13.73 ug/mL

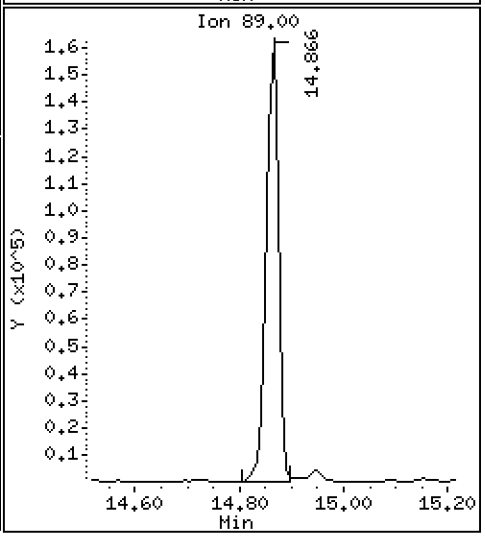


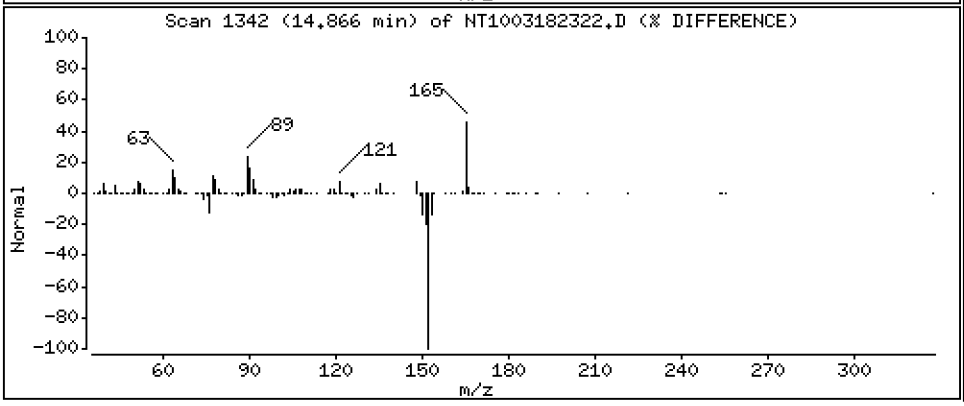












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

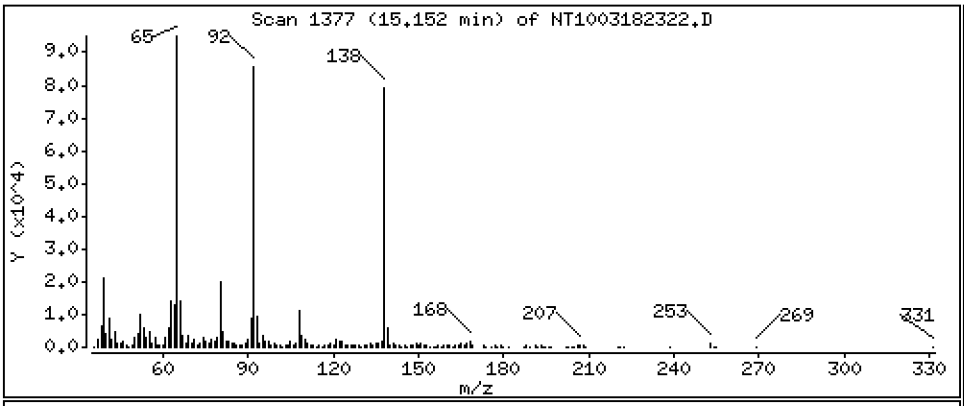
Operator: VTS

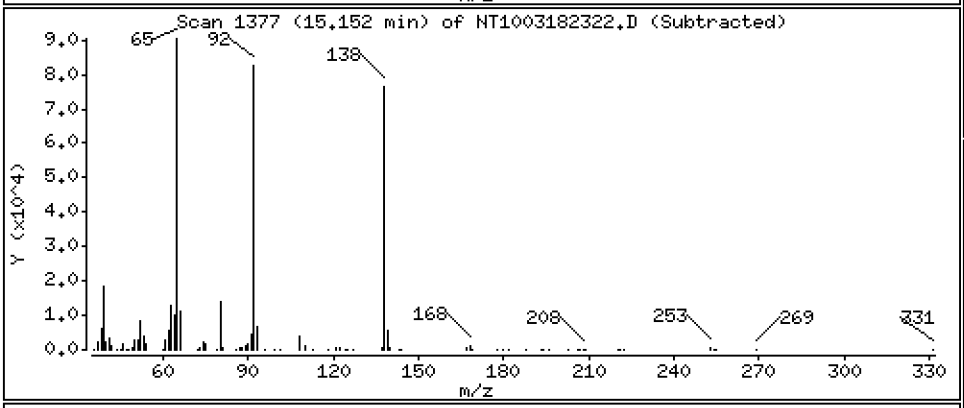
Column phase: ZB-5msi

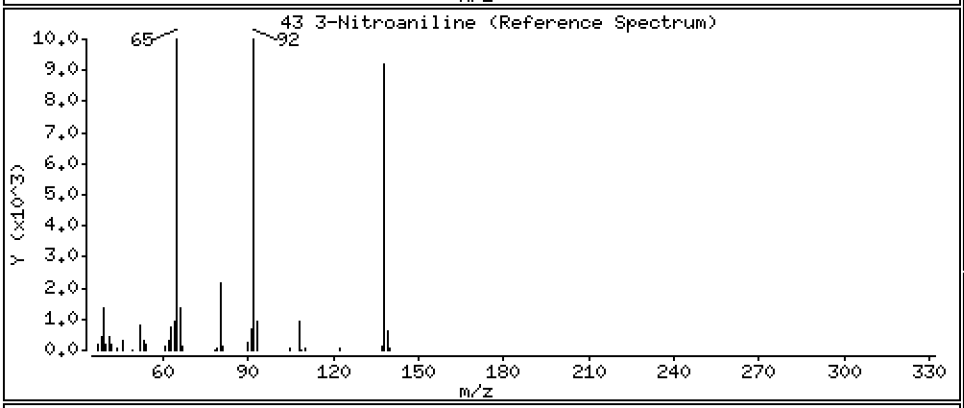
Column diameter: 0.25

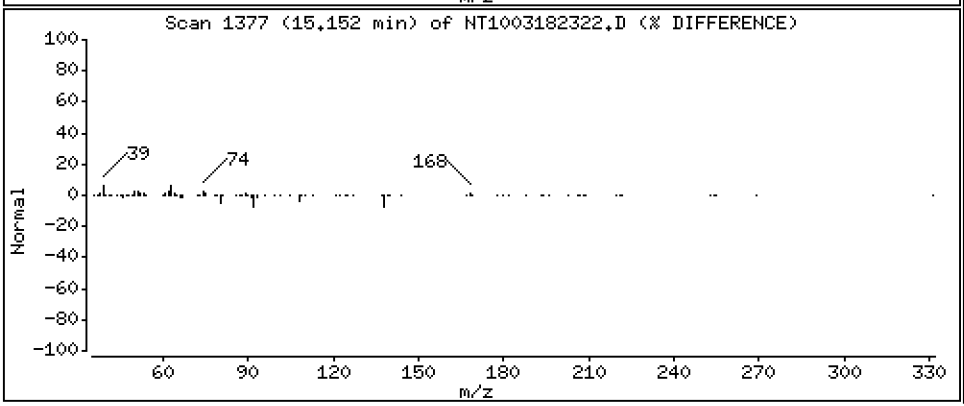
43 3-Nitroaniline

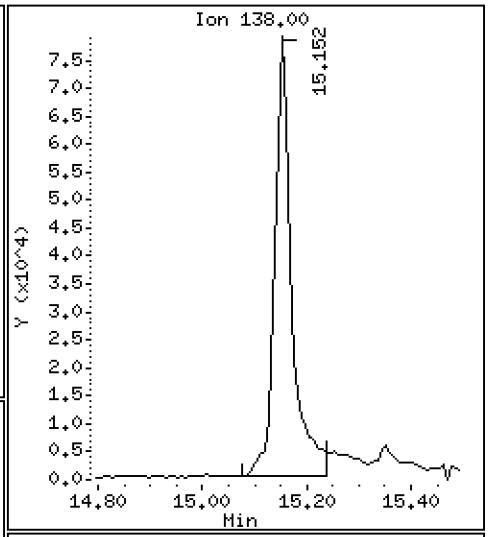
Concentration: 4.919 ug/mL

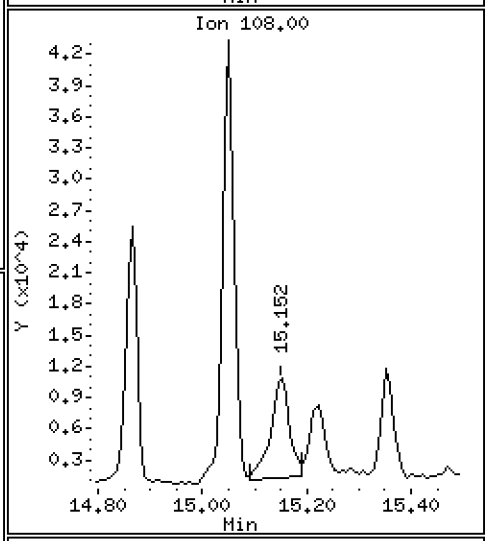


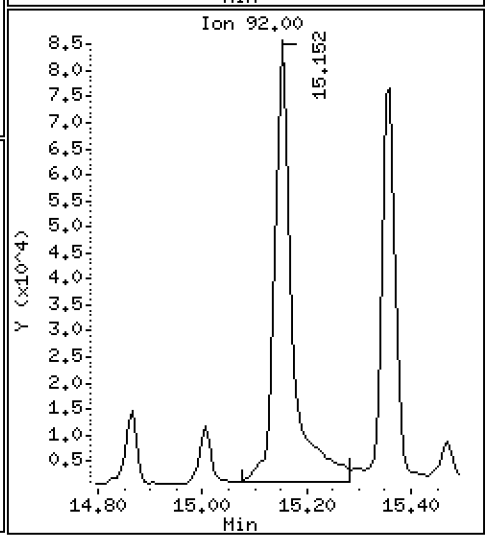












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

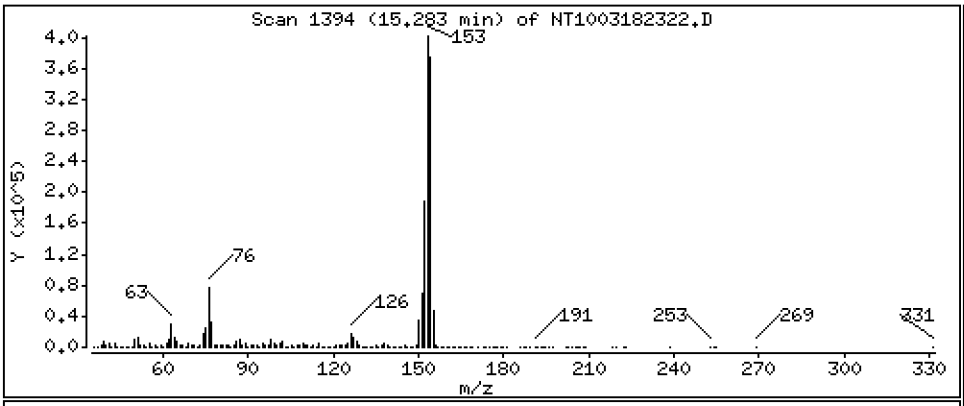
Operator: VTS

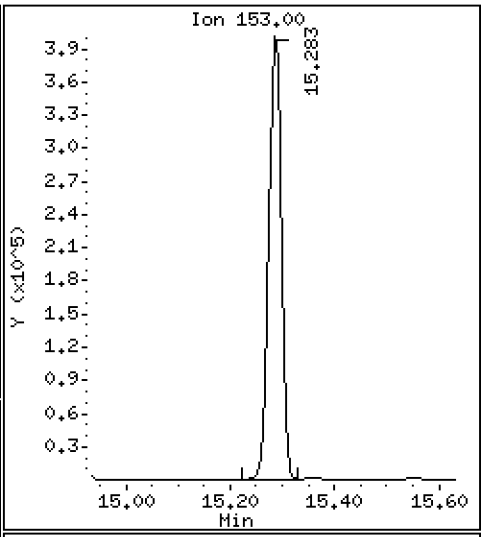
Column phase: ZB-5msi

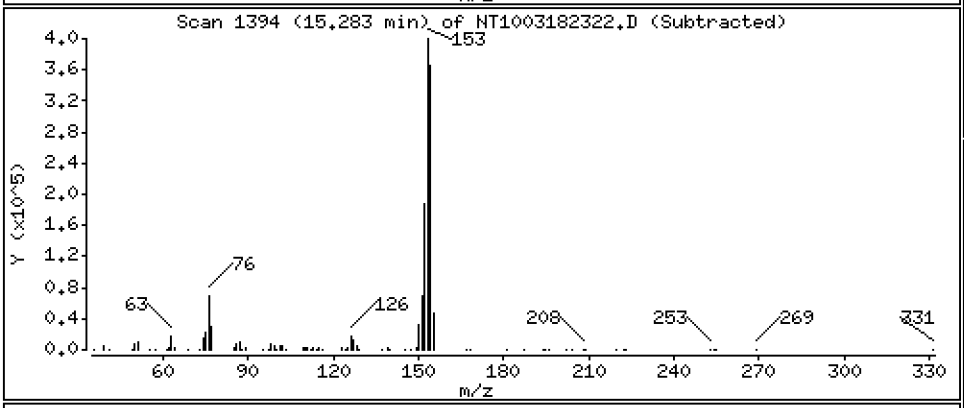
Column diameter: 0.25

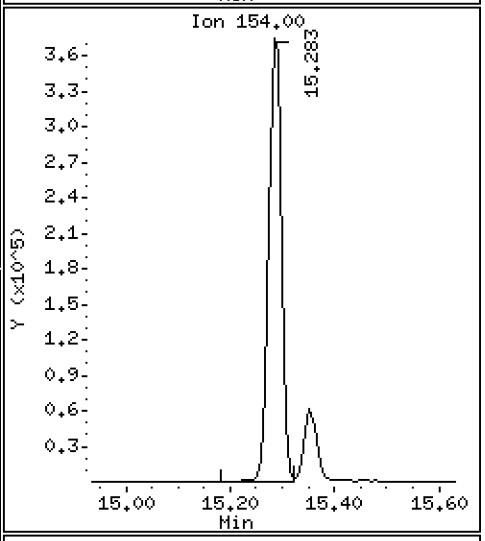
44 Acenaphthene

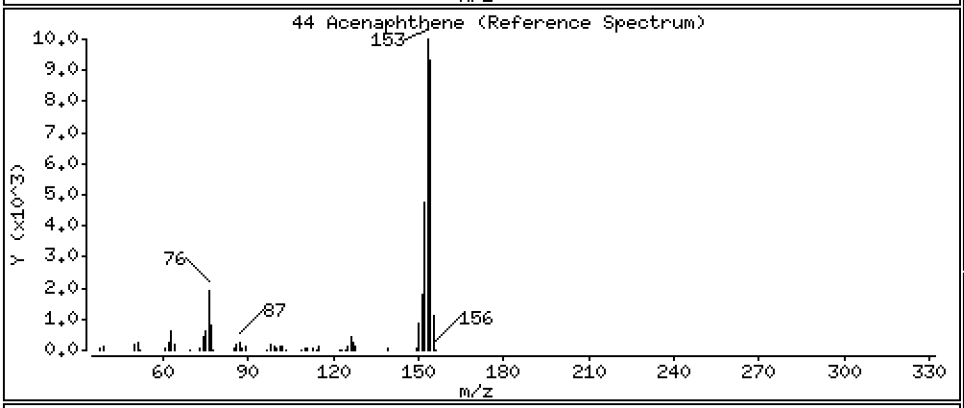
Concentration: 4.200 ug/mL

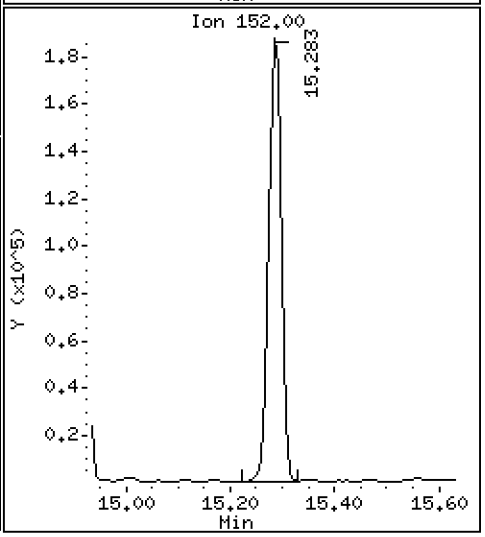


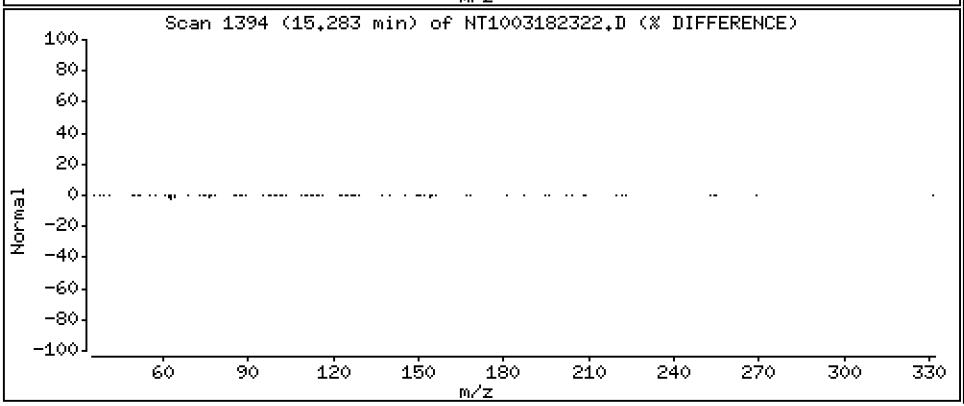












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

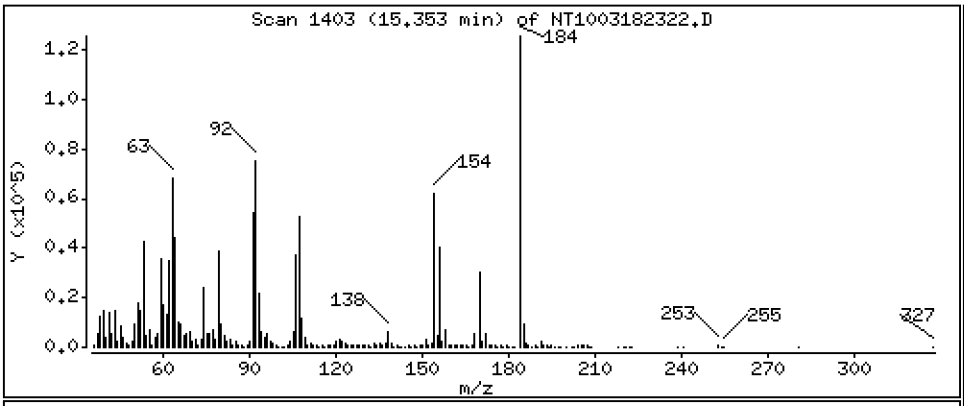
Operator: VTS

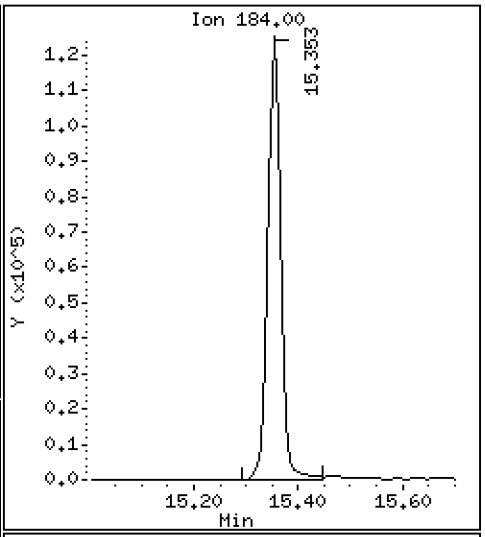
Column phase: ZB-5msi

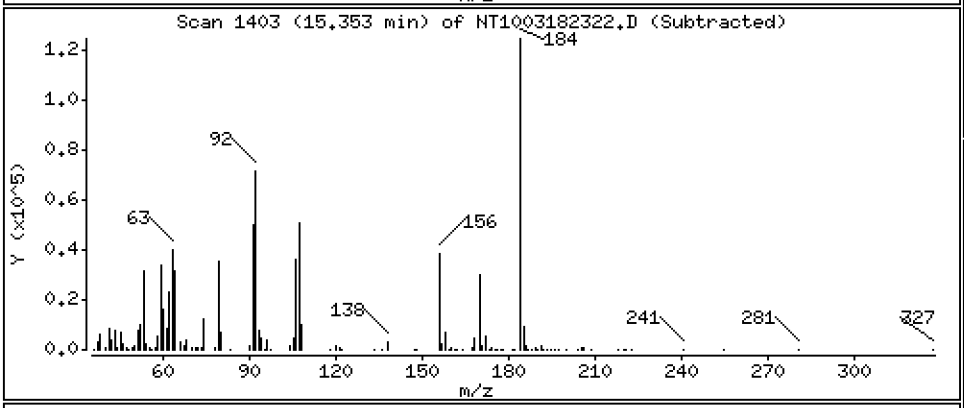
Column diameter: 0.25

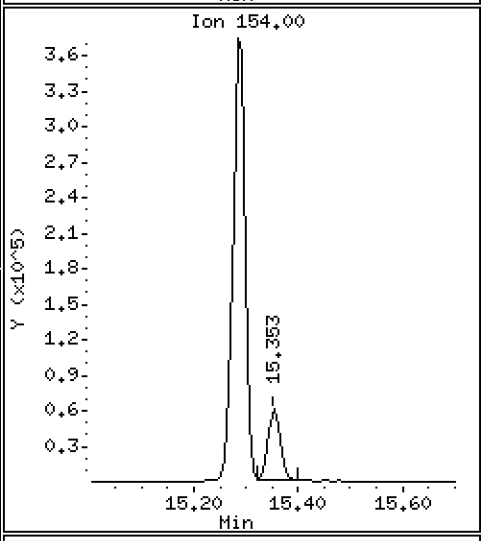
45 2,4-Dinitrophenol

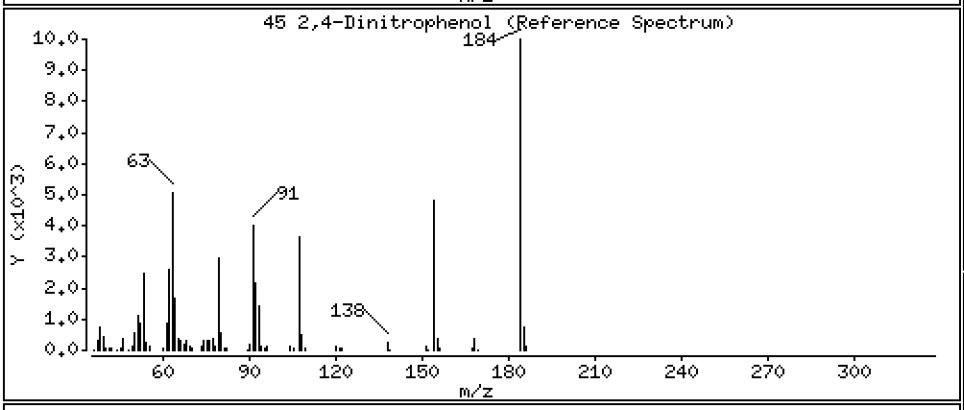
Concentration: 9.616 ug/mL

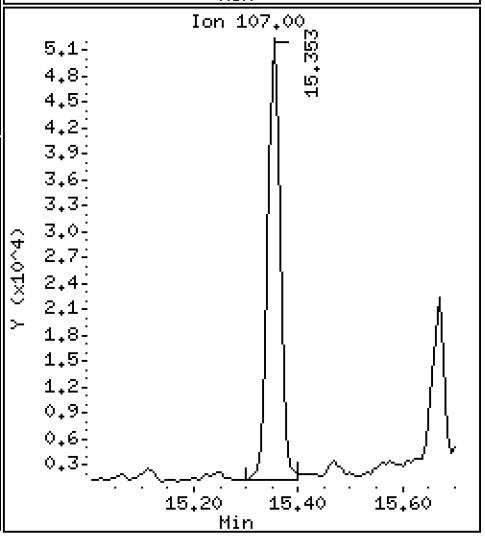


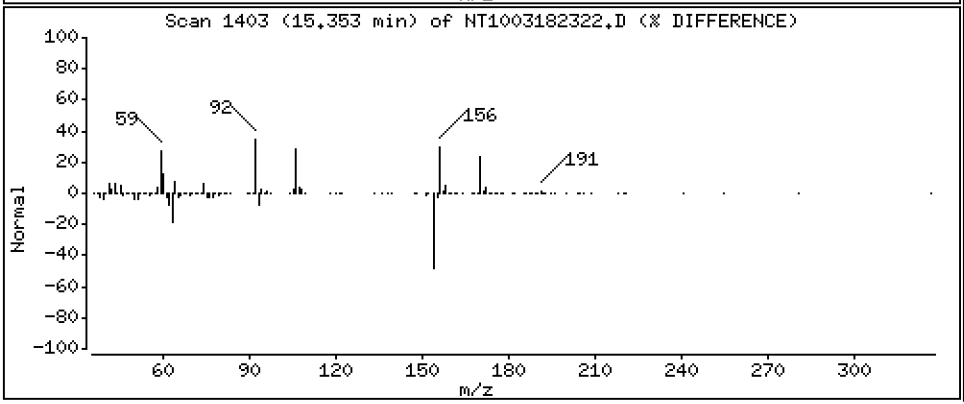












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

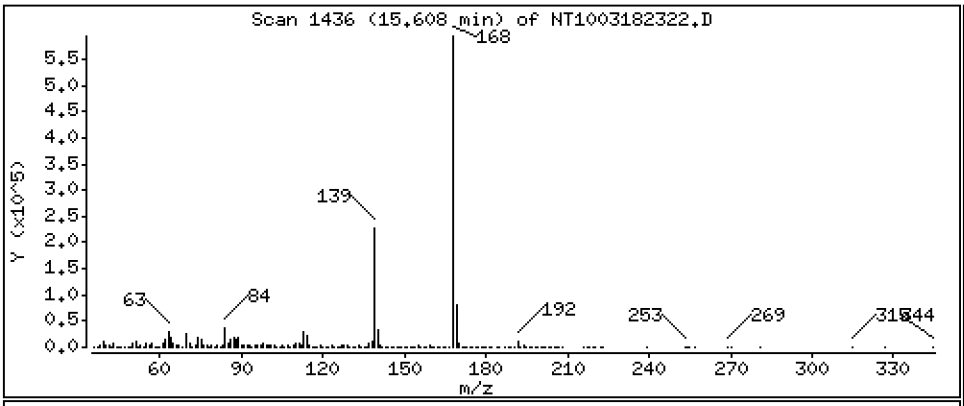
Operator: VTS

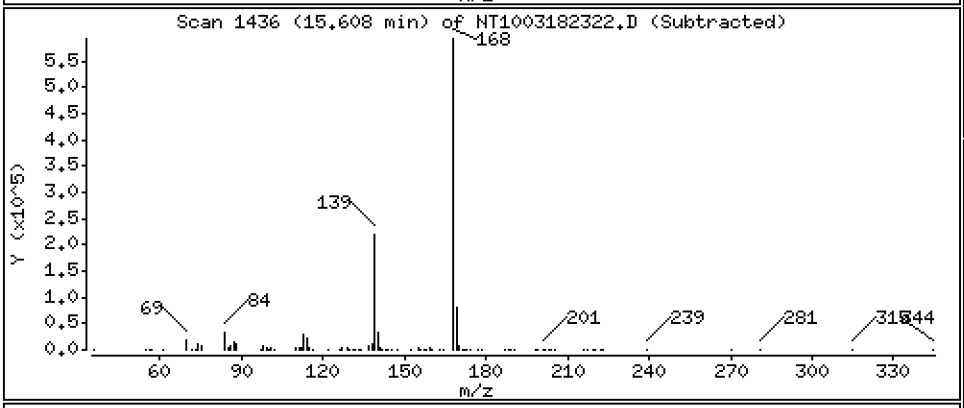
Column phase: ZB-5msi

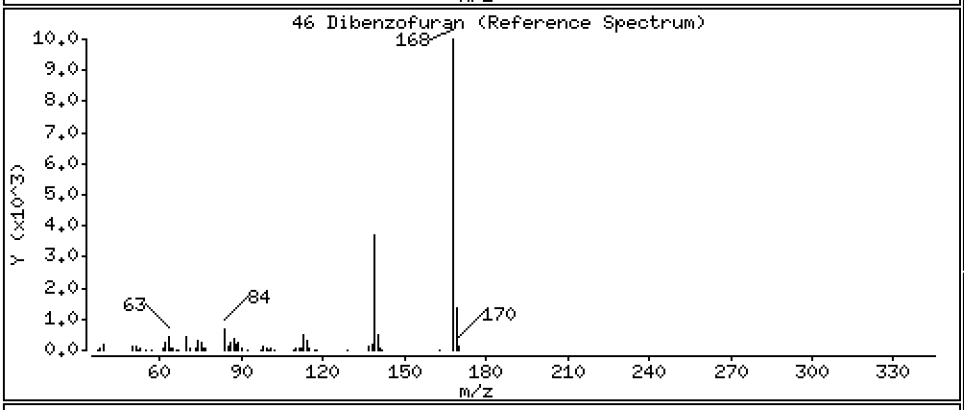
Column diameter: 0.25

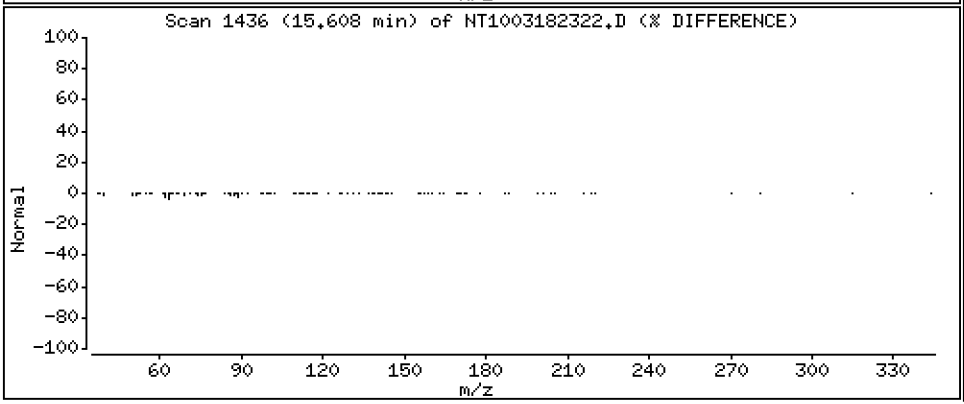
46 Dibenzofuran

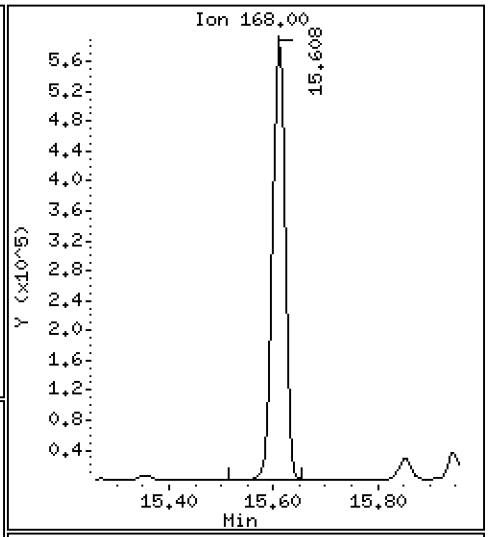
Concentration: 4.195 ug/mL

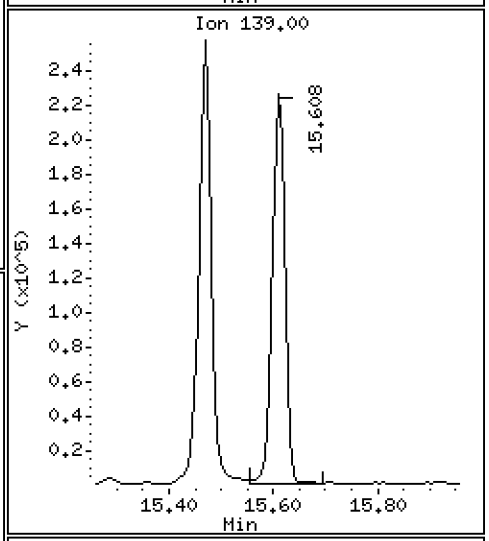


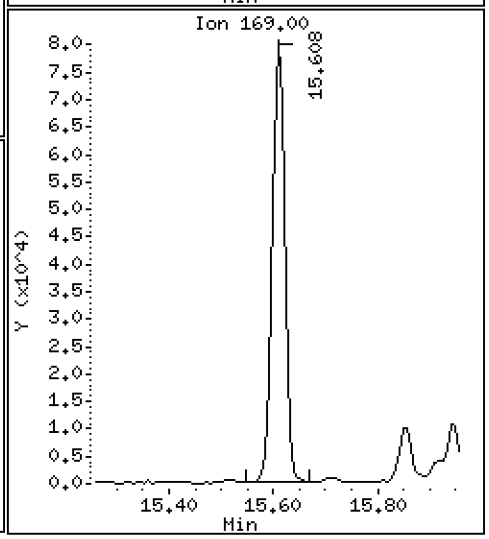












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

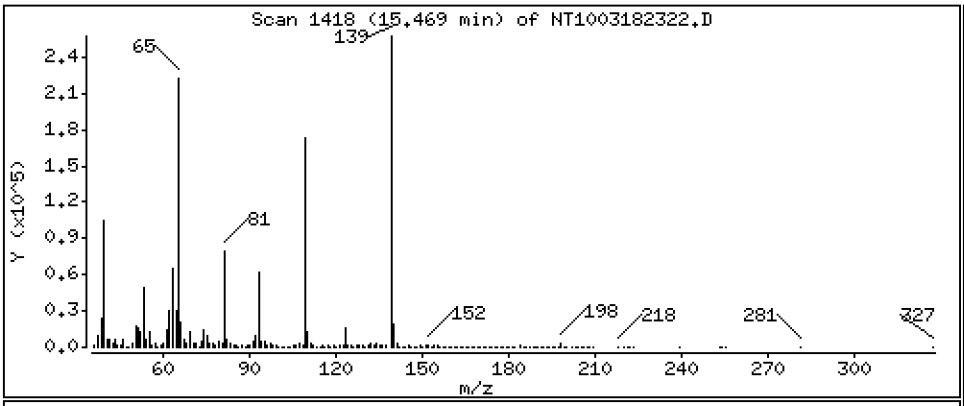
Operator: VTS

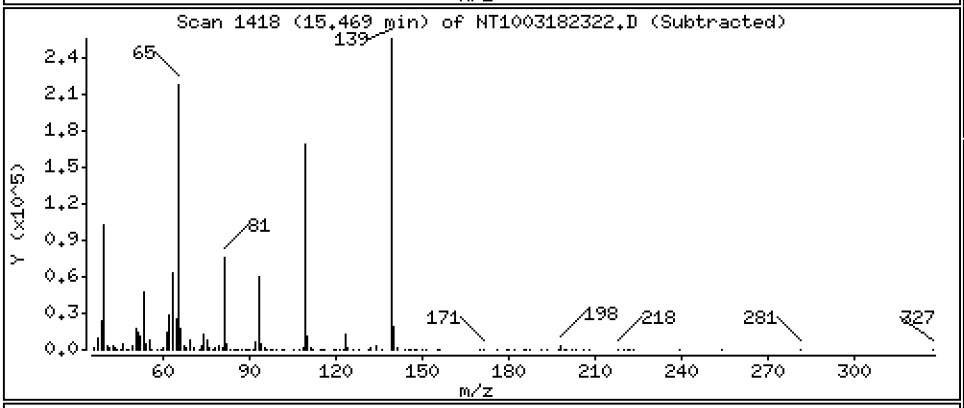
Column phase: ZB-5msi

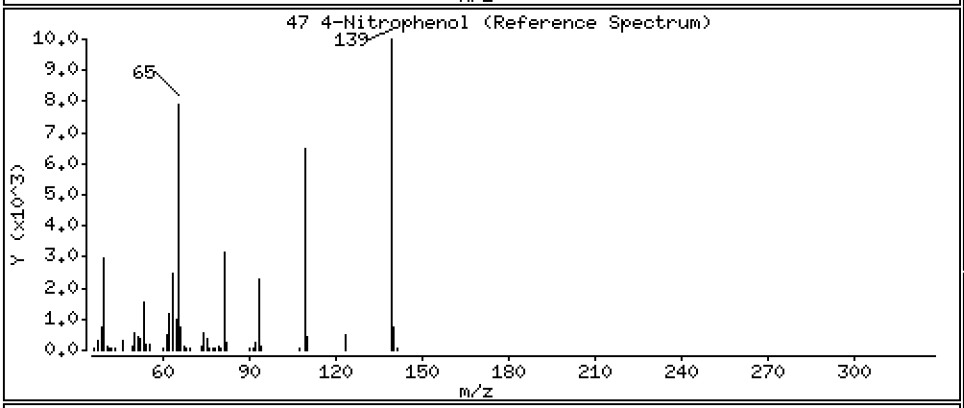
Column diameter: 0.25

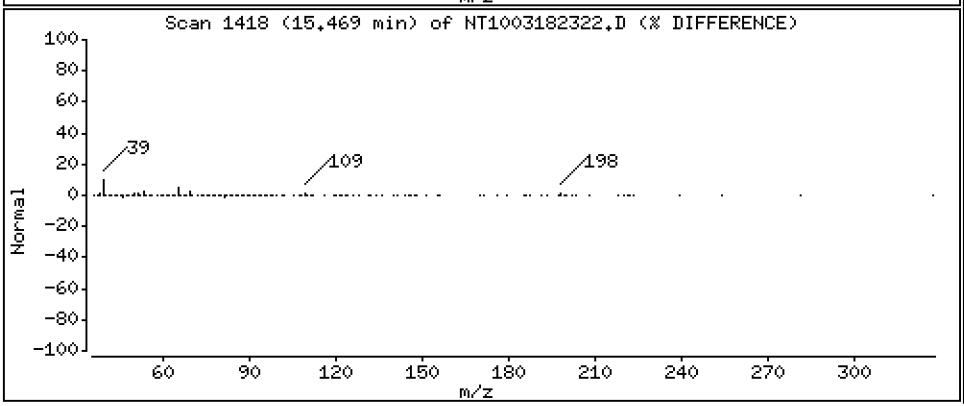
47 4-Nitrophenol

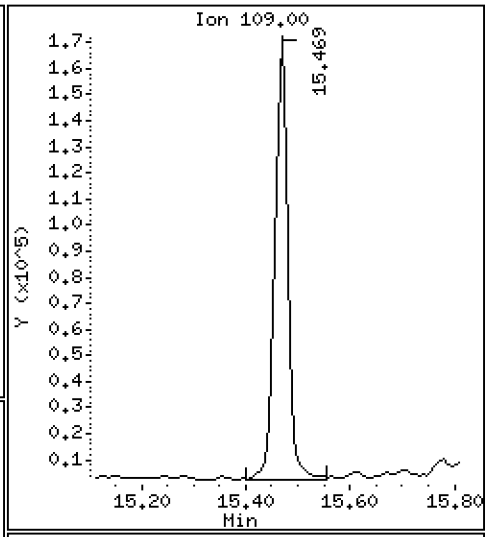
Concentration: 11.75 ug/mL

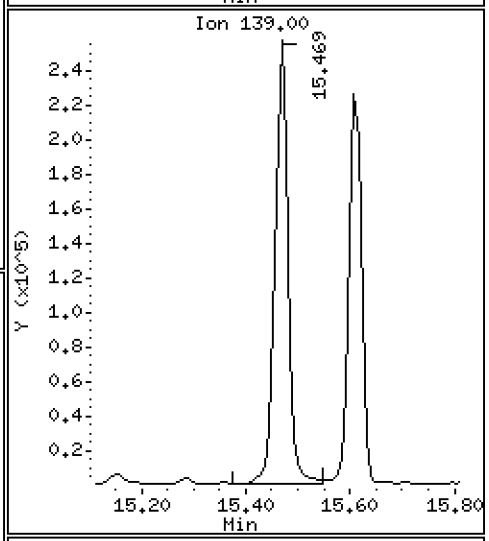


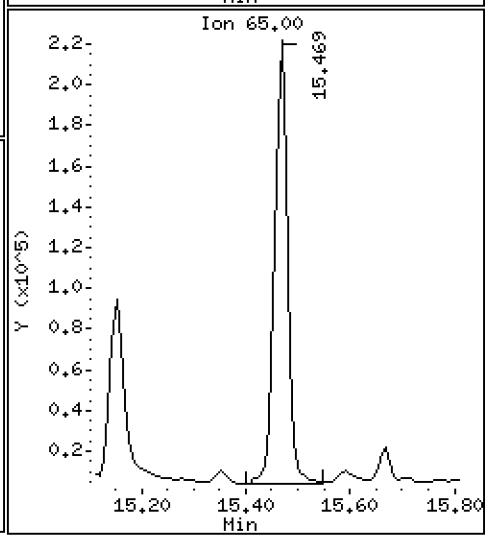












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

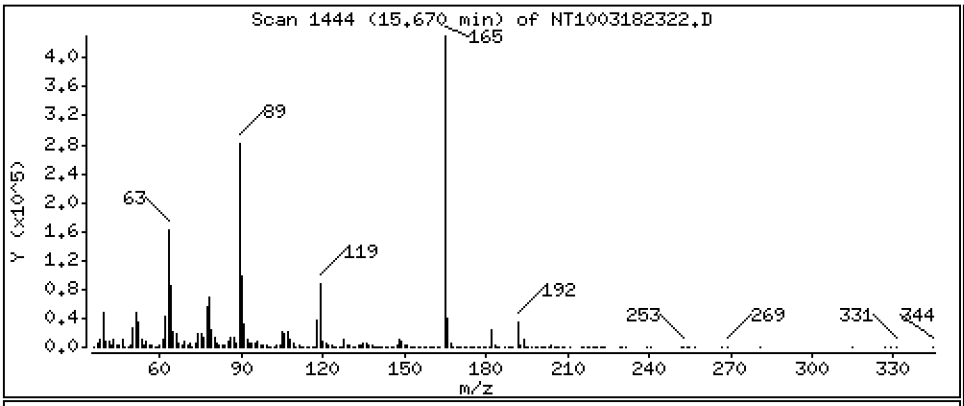
Operator: VTS

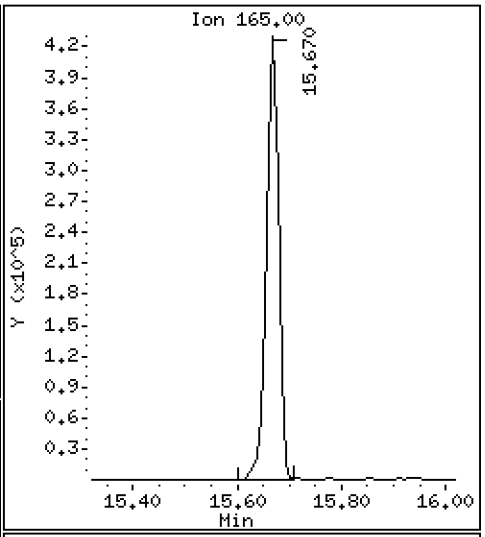
Column phase: ZB-5msi

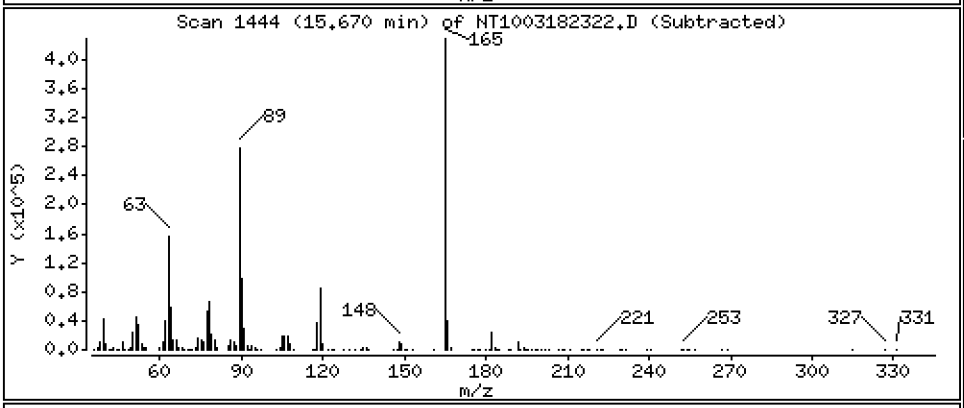
Column diameter: 0.25

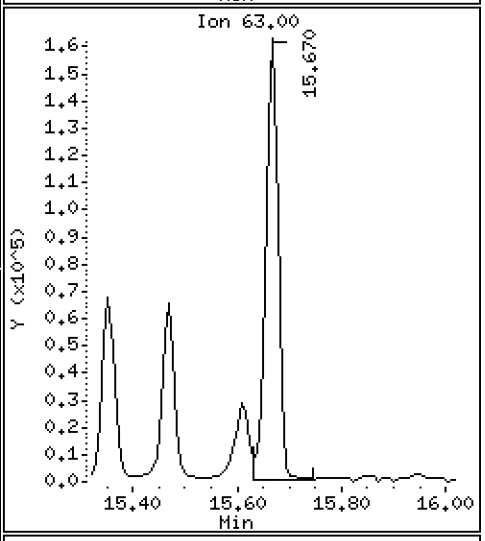
48 2,4-Dinitrotoluene

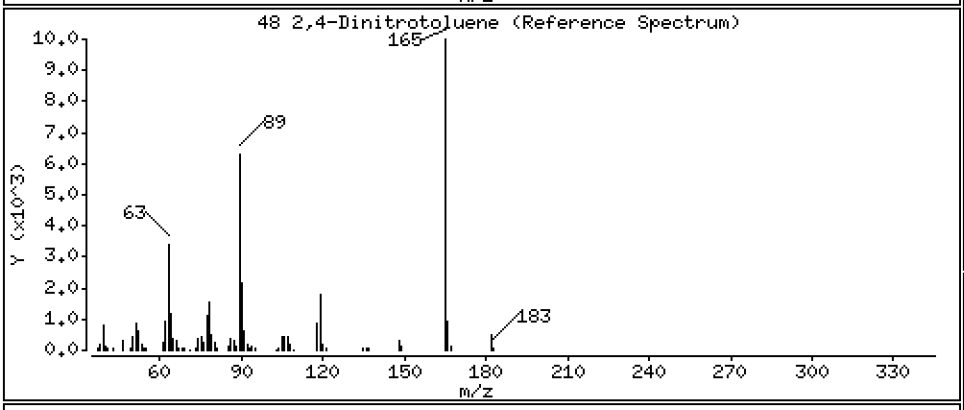
Concentration: 12.94 ug/mL

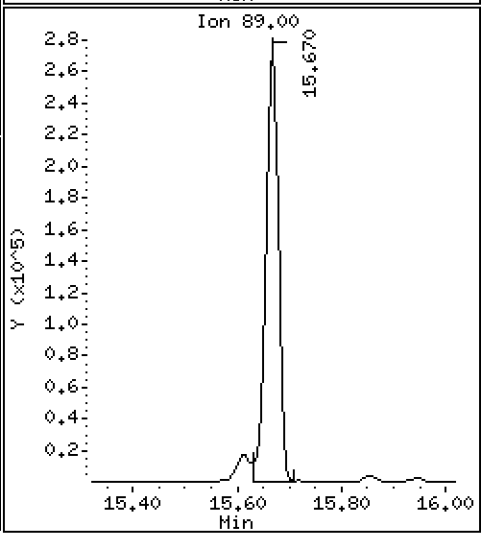


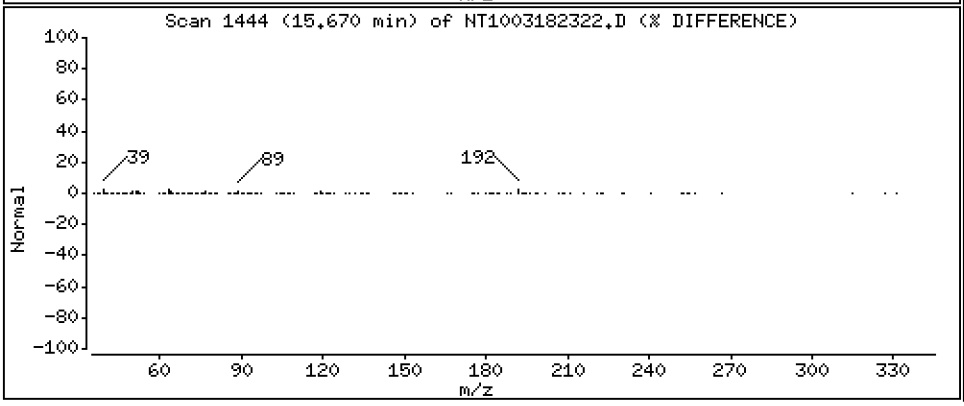












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

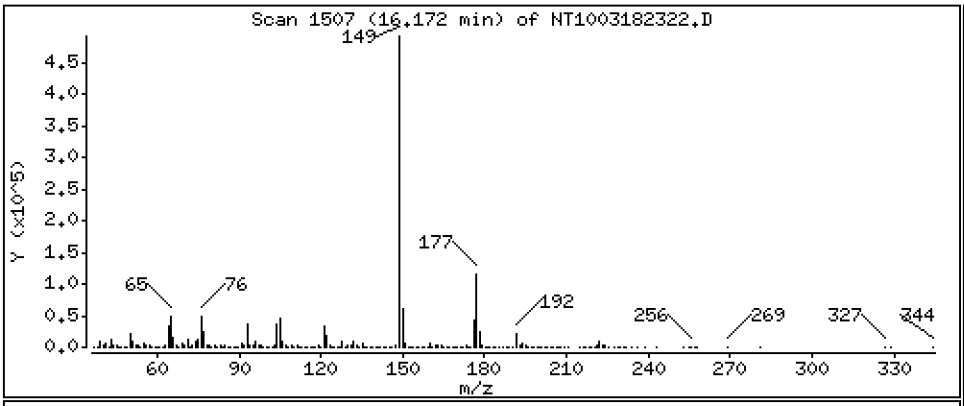
Operator: VTS

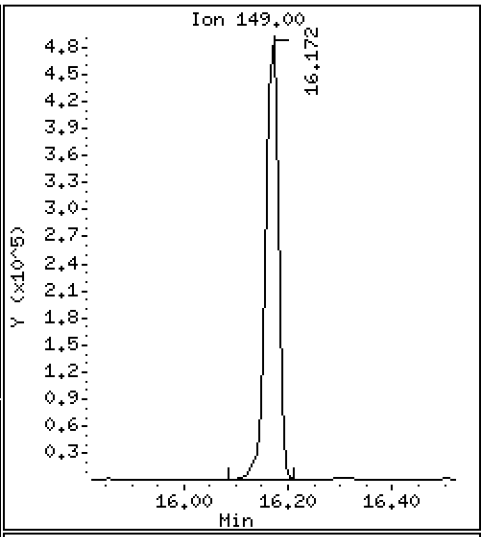
Column phase: ZB-5msi

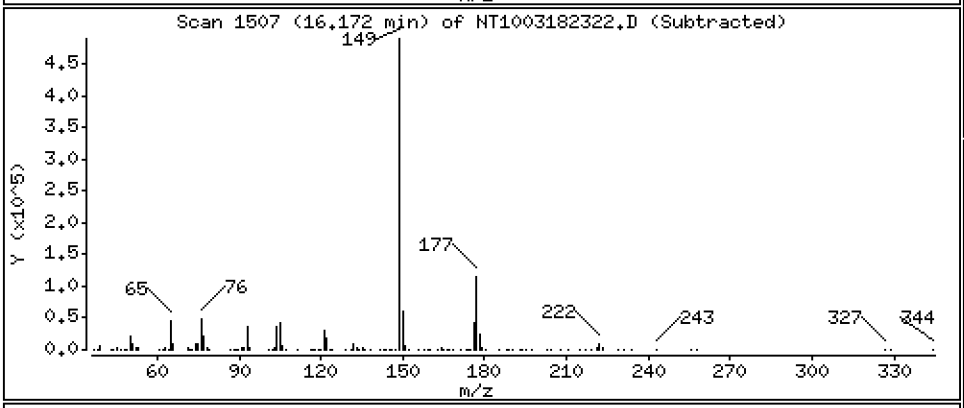
Column diameter: 0.25

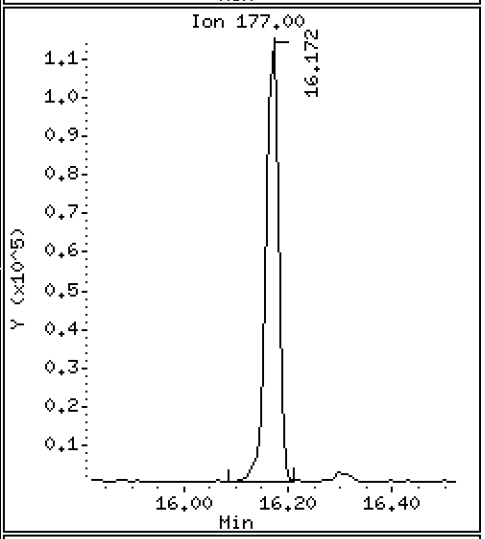
50 Diethylphthalate

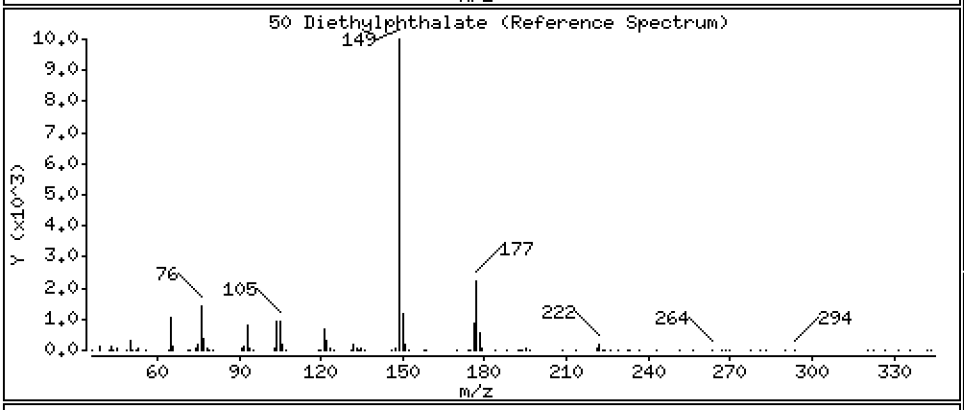
Concentration: 5.763 ug/mL

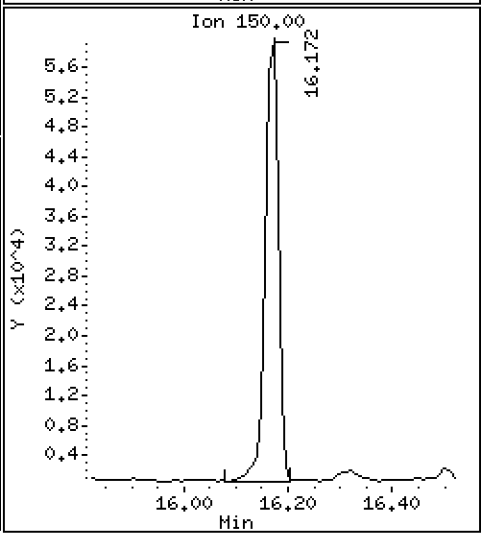


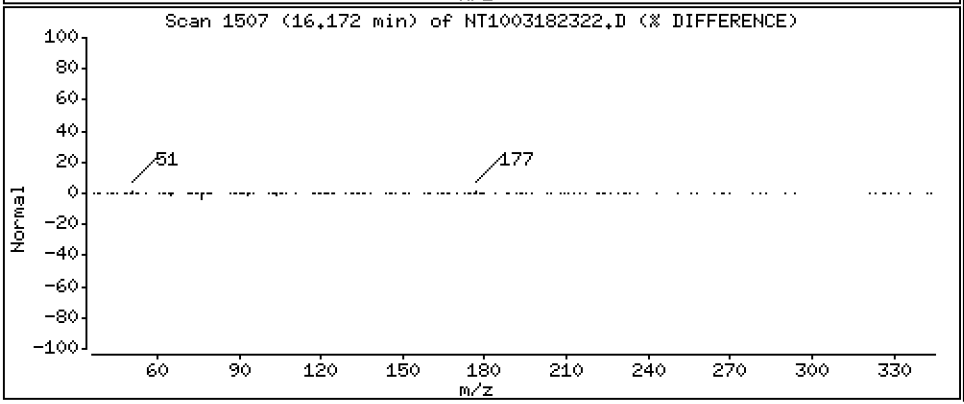












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

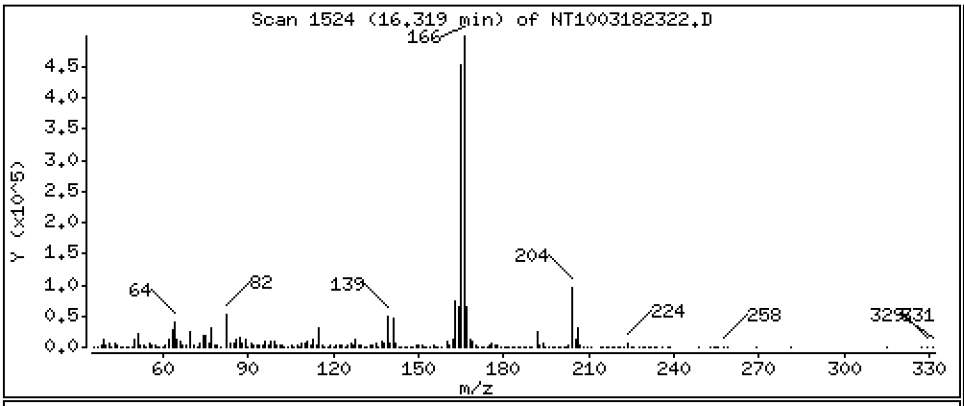
Operator: VTS

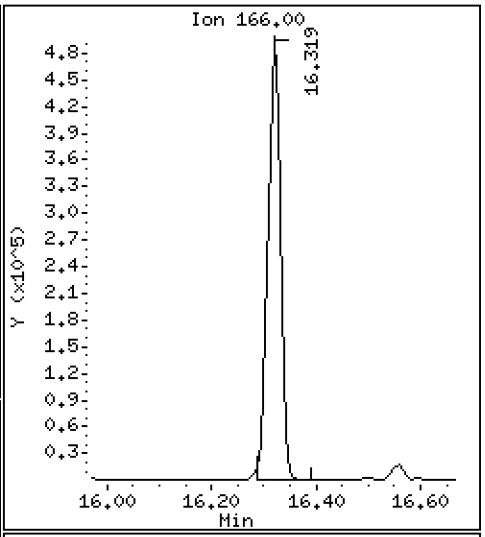
Column phase: ZB-5msi

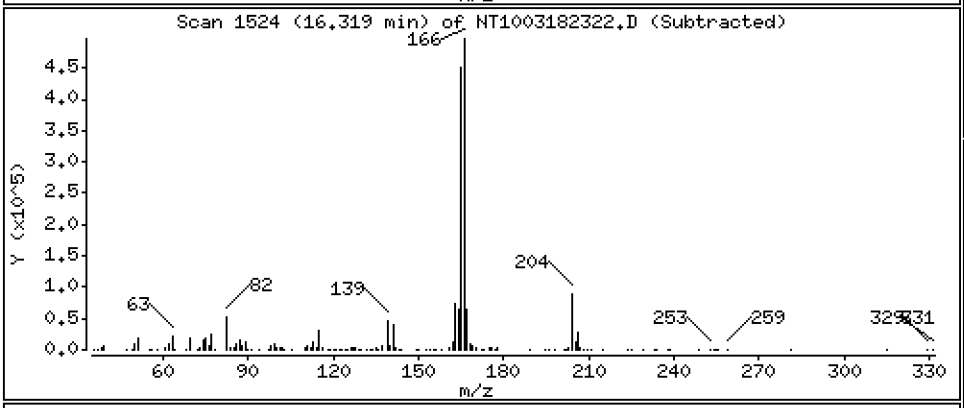
Column diameter: 0.25

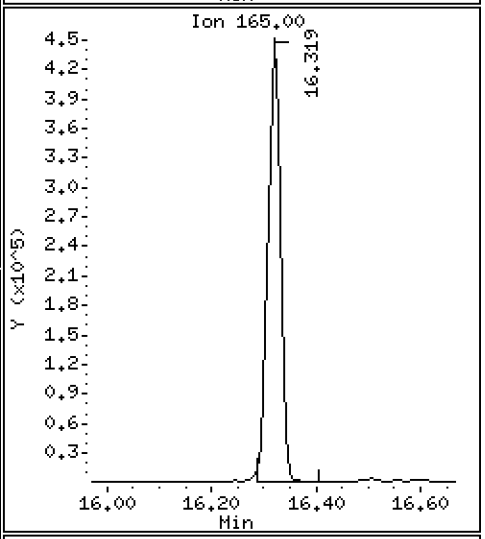
49 Fluorene

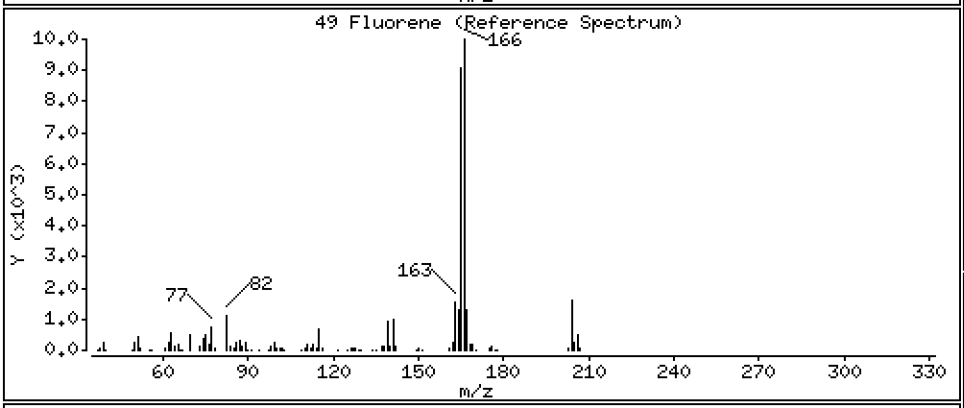
Concentration: 3.787 ug/mL

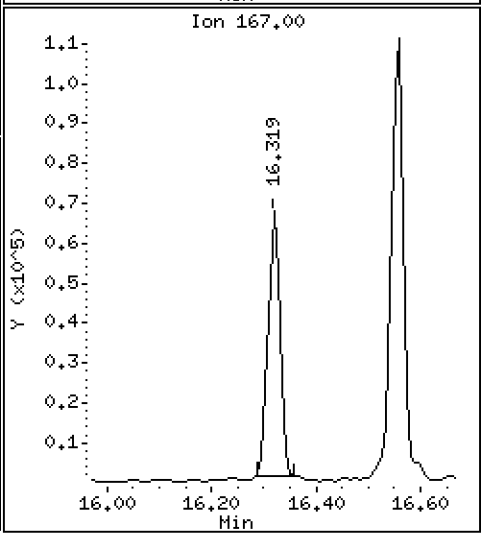


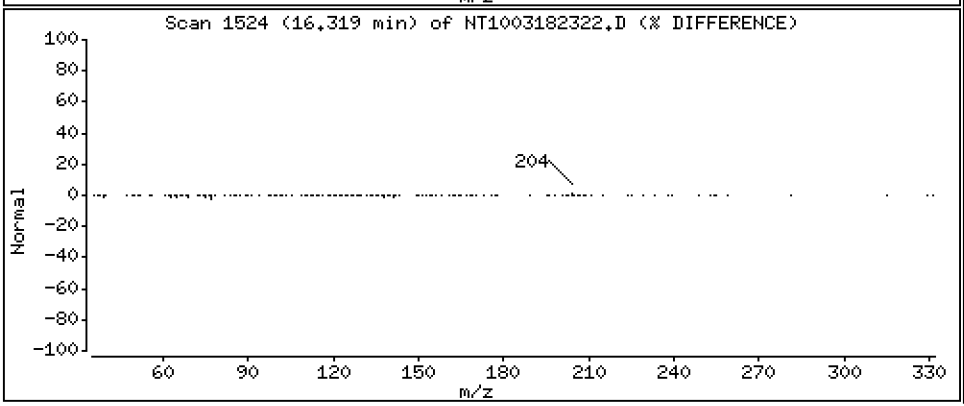












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

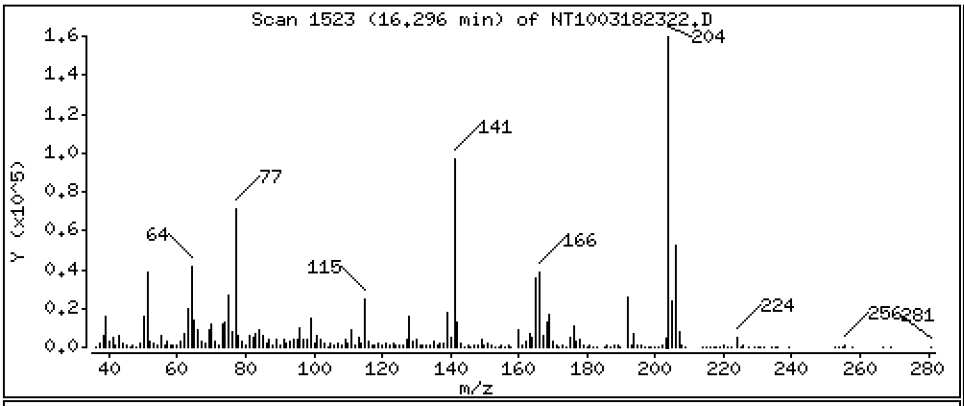
Operator: VTS

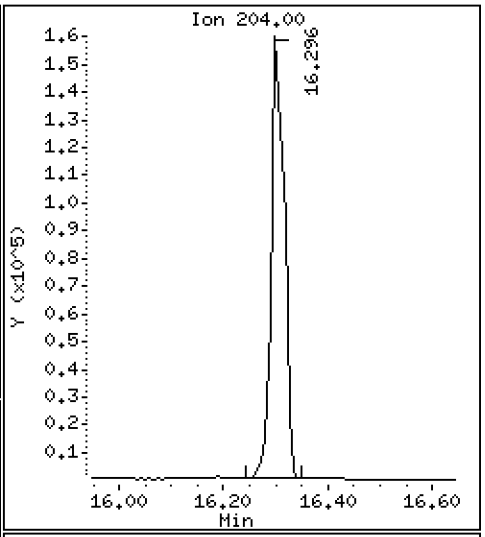
Column phase: ZB-5msi

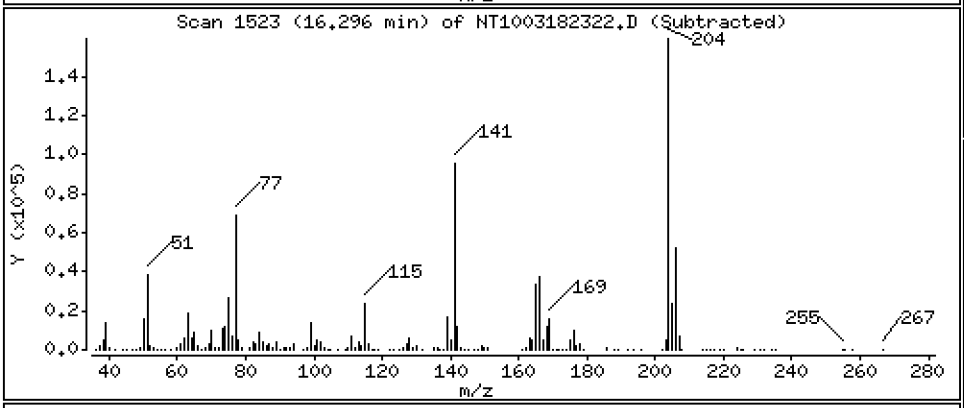
Column diameter: 0.25

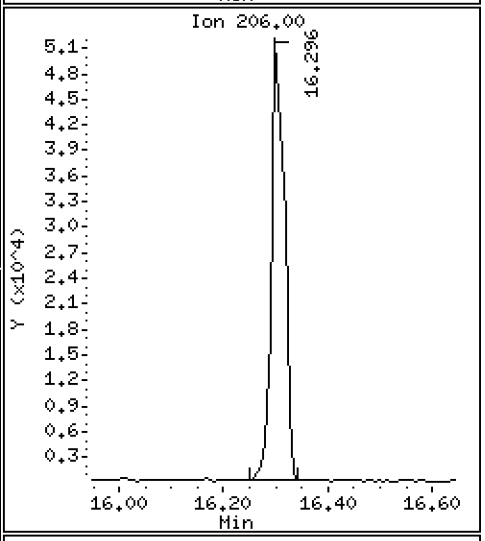
51 4-Chlorophenyl-phenylether

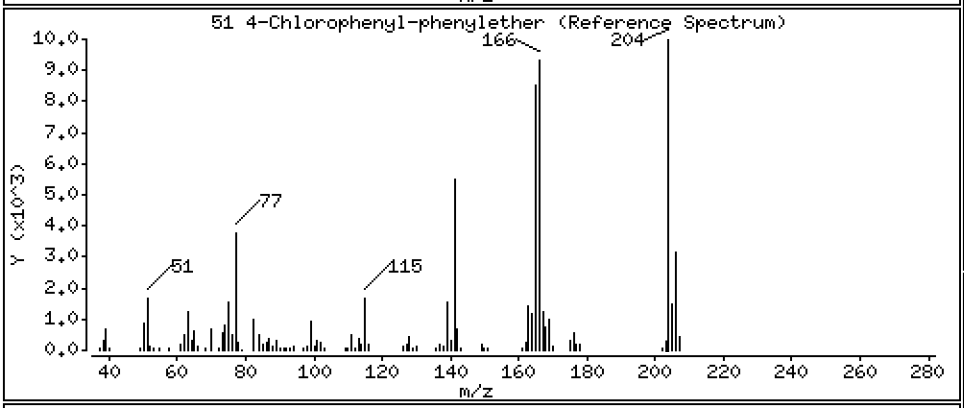
Concentration: 2.309 ug/mL

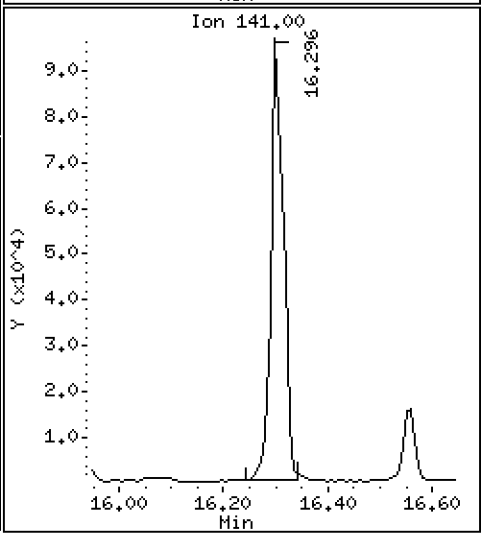


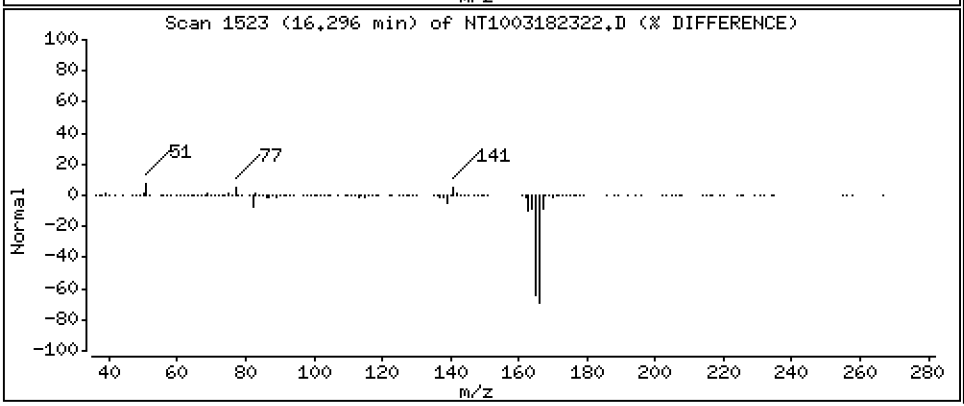












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

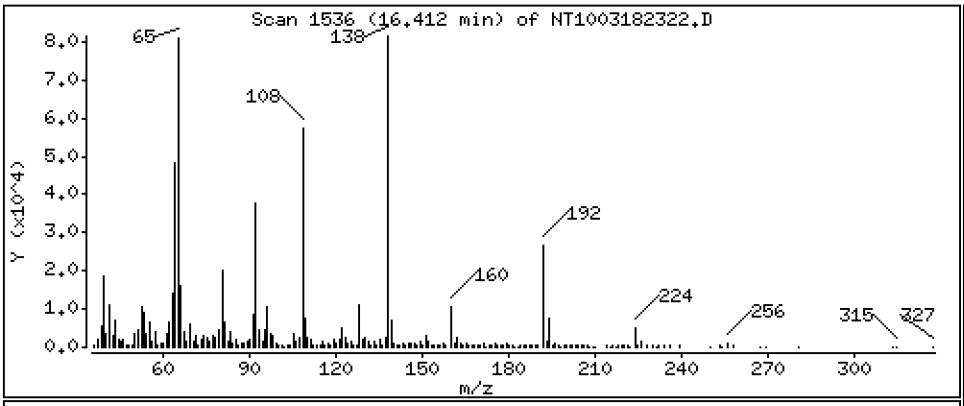
Operator: VTS

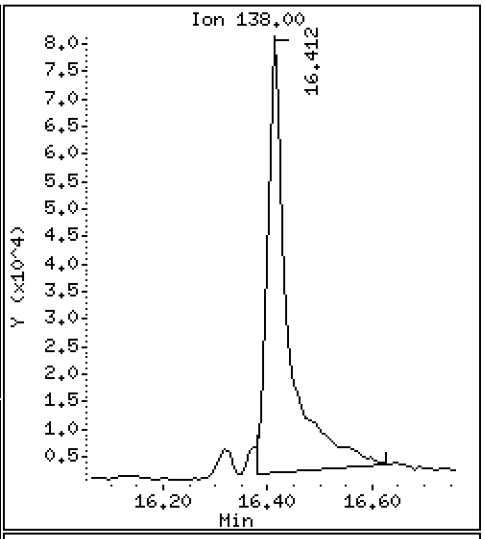
Column phase: ZB-5msi

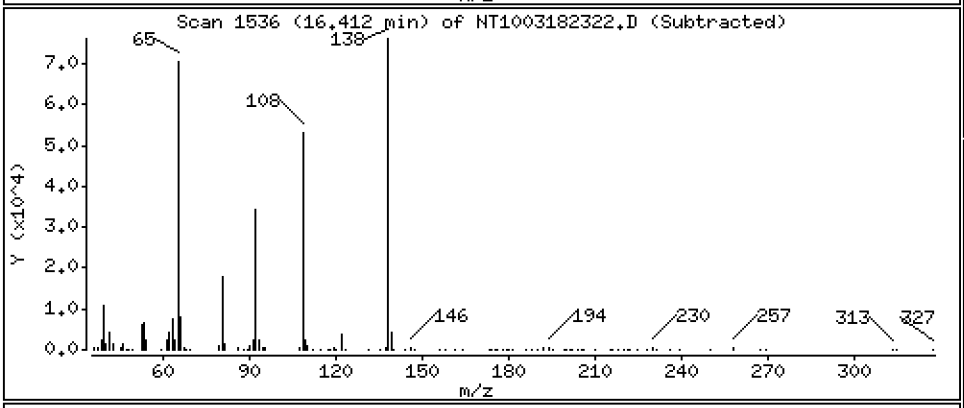
Column diameter: 0.25

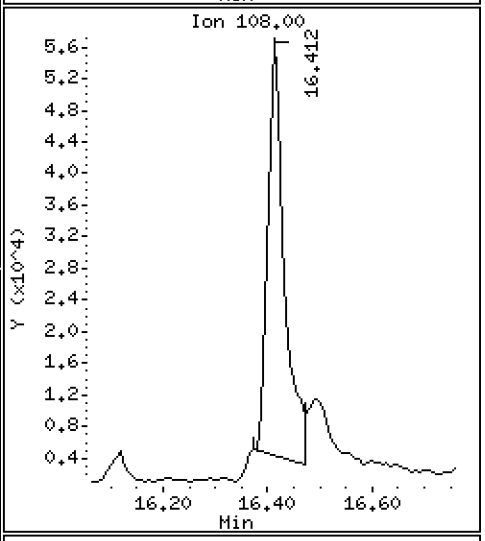
52 4-Nitroaniline

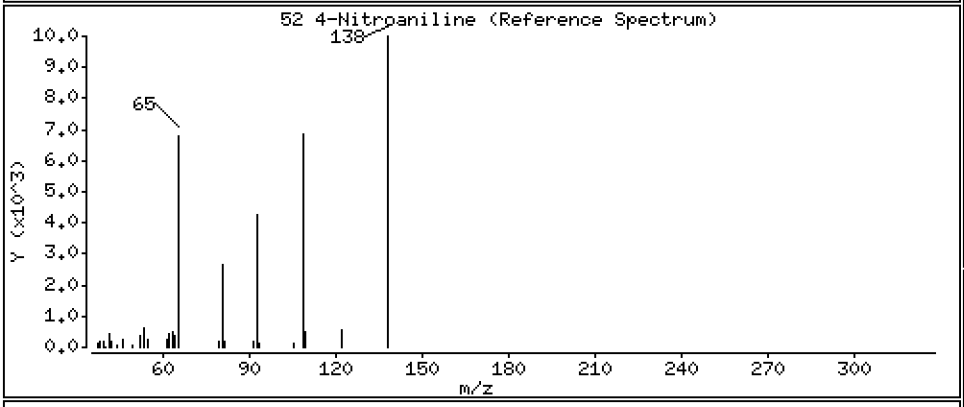
Concentration: 6.105 ug/mL

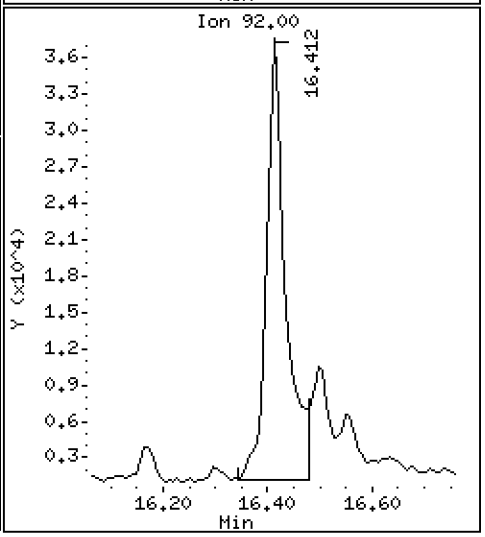


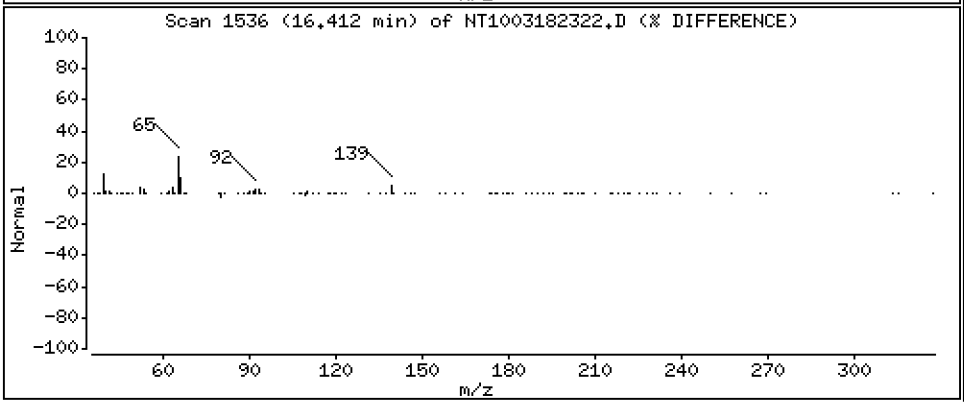












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

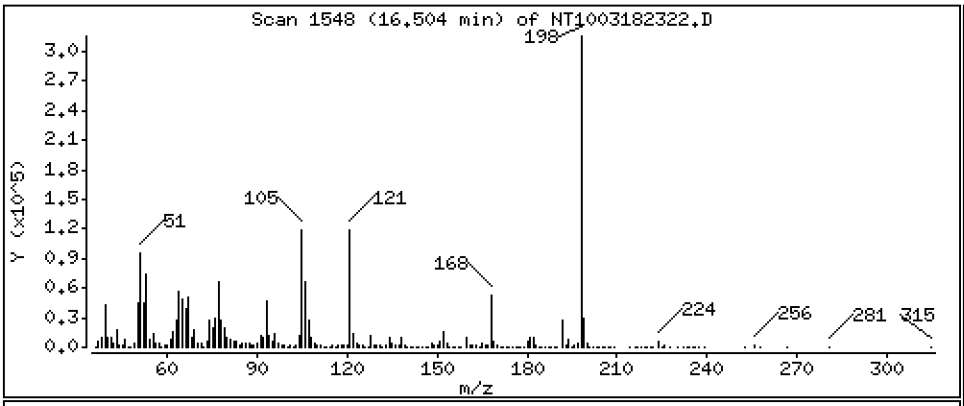
Operator: VTS

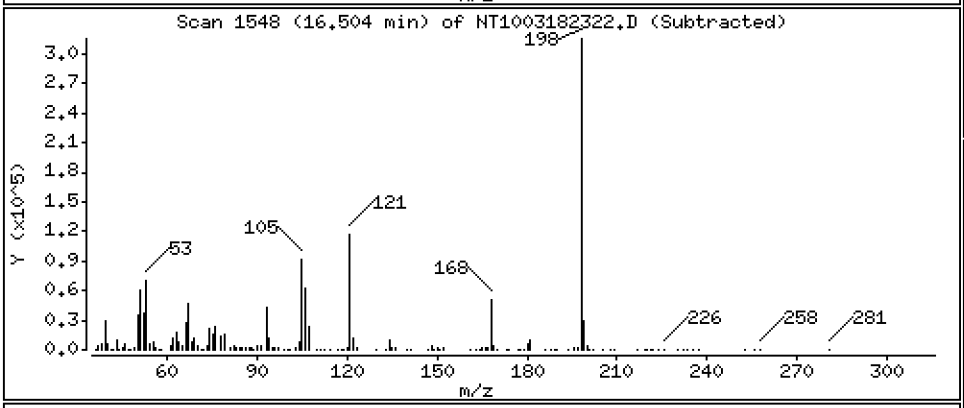
Column phase: ZB-5msi

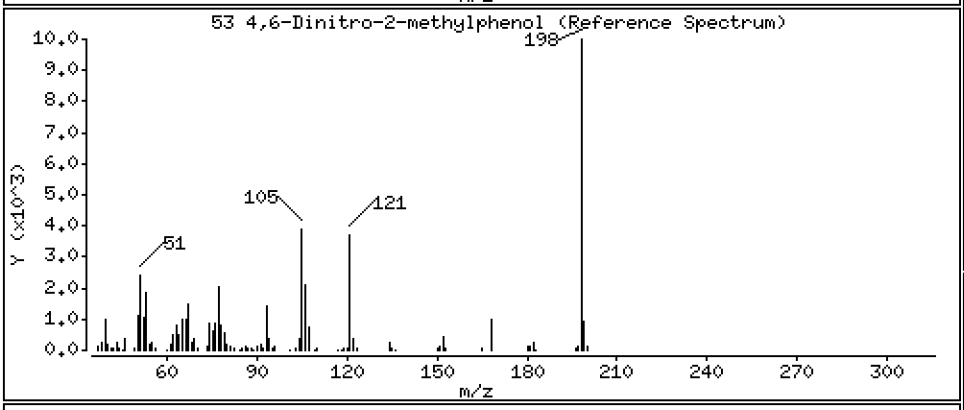
Column diameter: 0.25

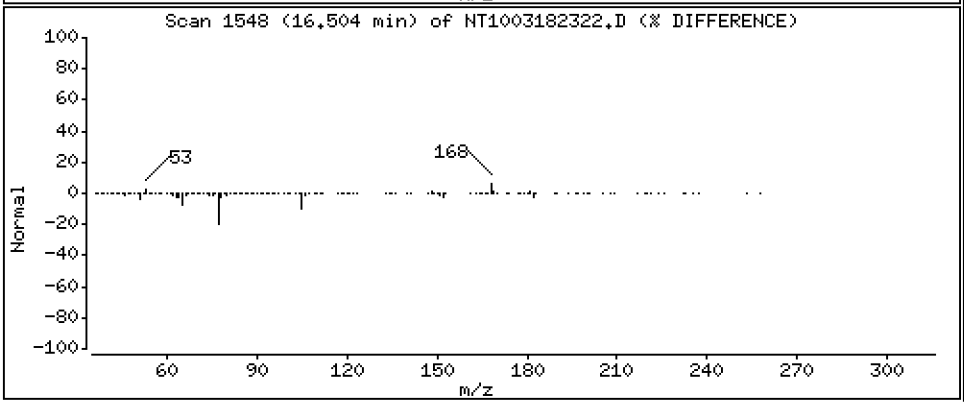
53 4,6-Dinitro-2-methylphenol

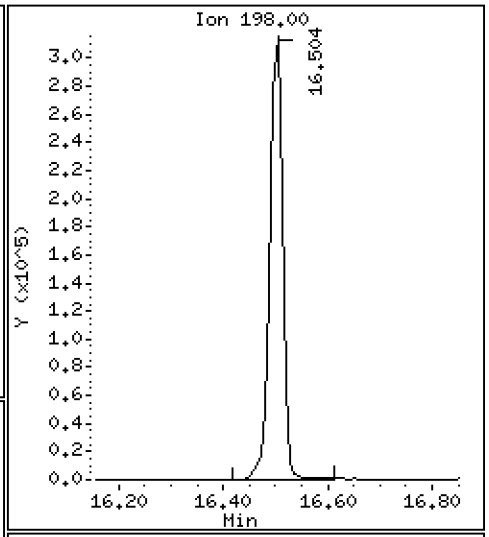
Concentration: 17.86 ug/mL

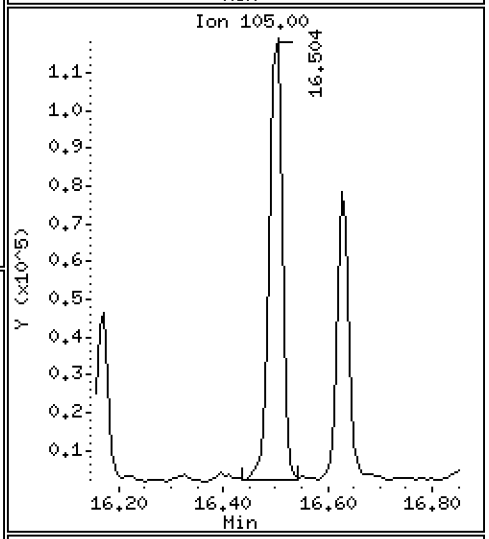


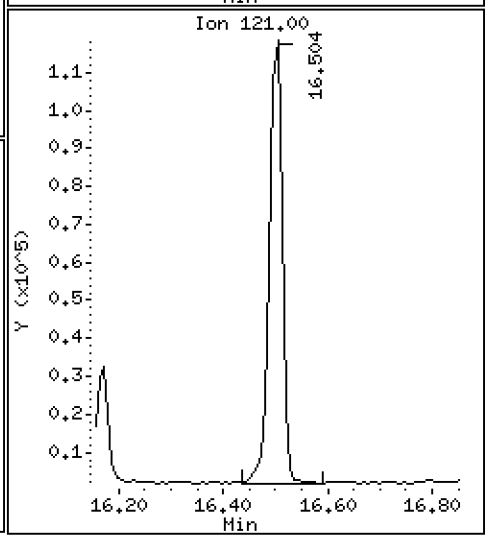












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

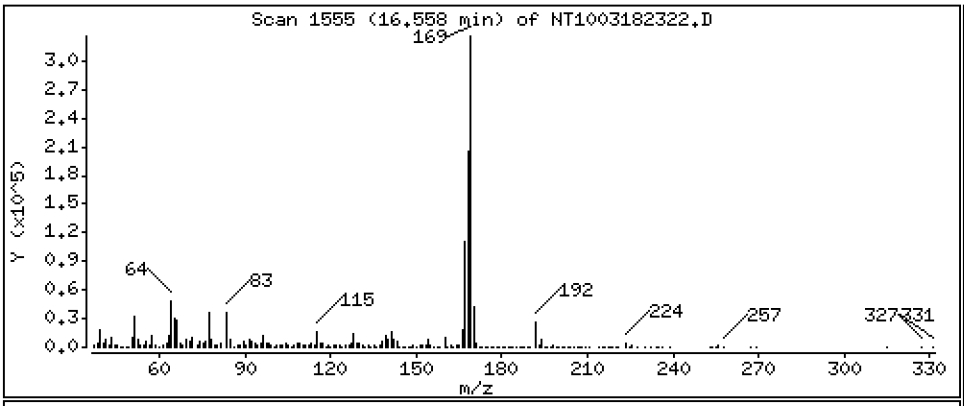
Operator: VTS

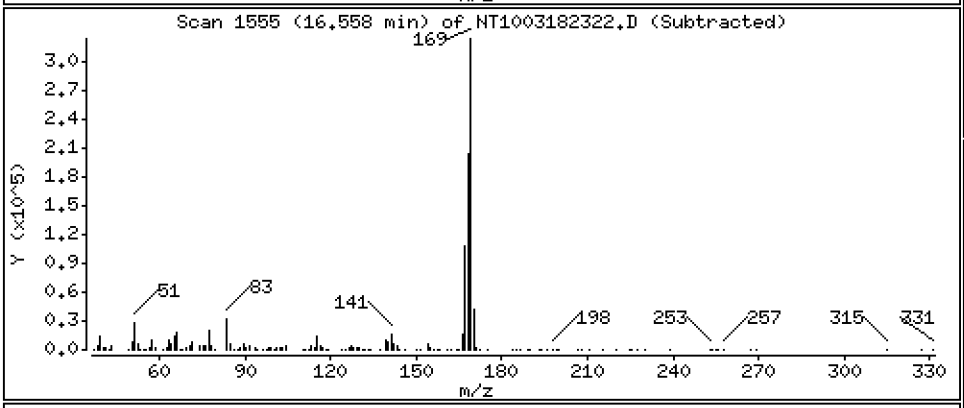
Column phase: ZB-5msi

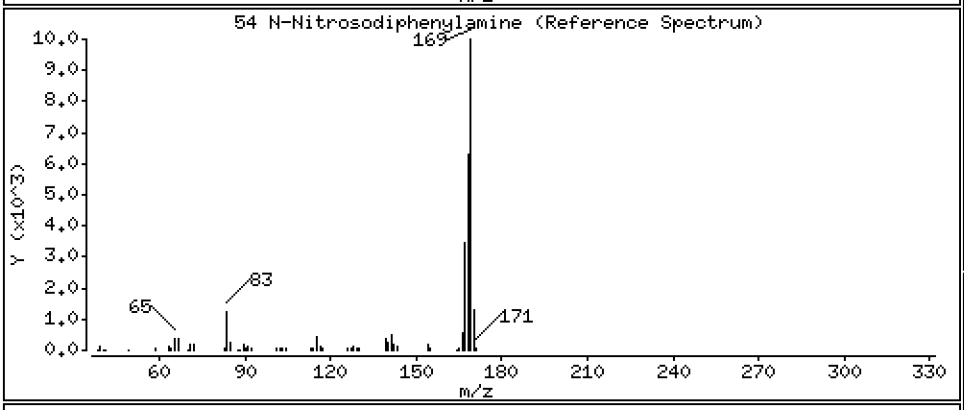
Column diameter: 0.25

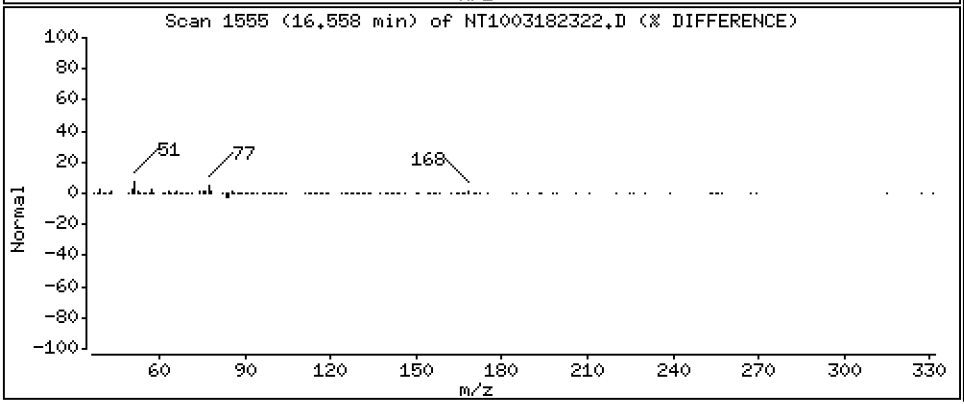
54 N-Nitrosodiphenylamine

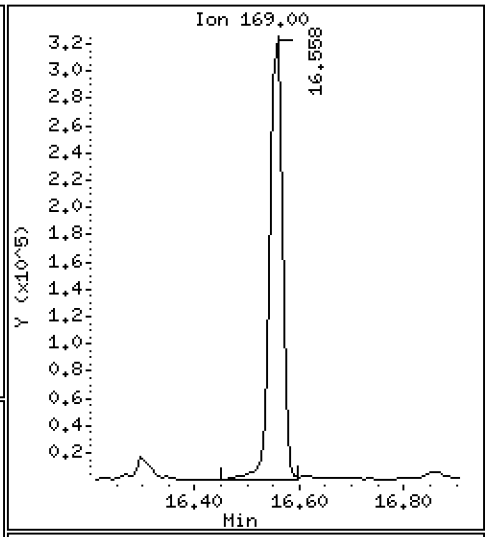
Concentration: 4.170 ug/mL

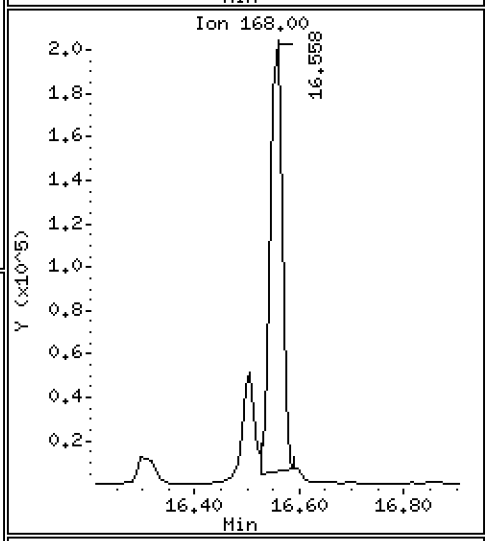


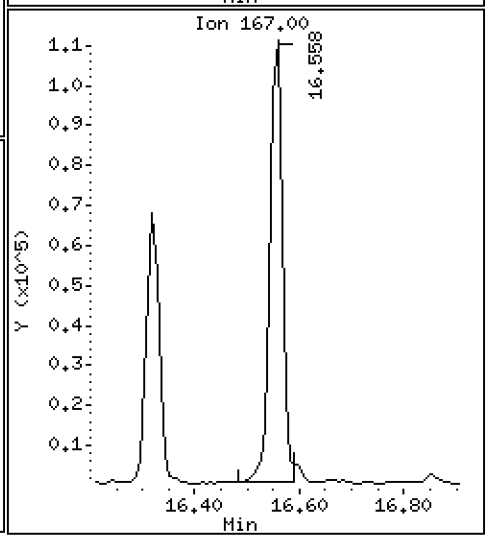












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

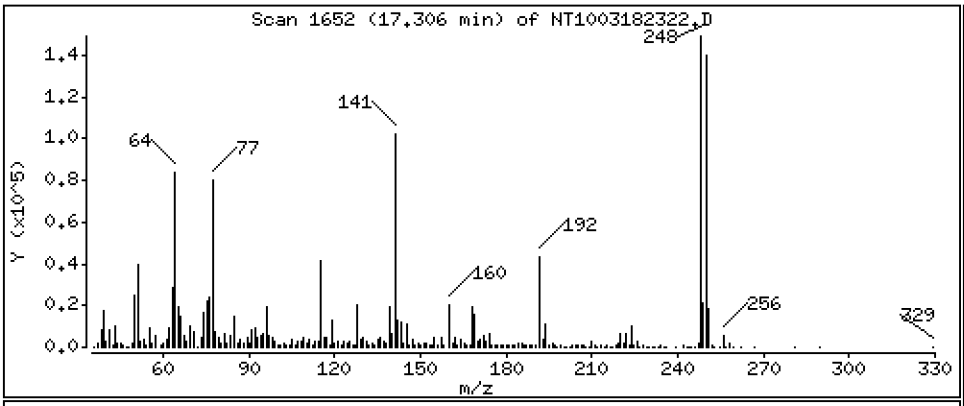
Operator: VTS

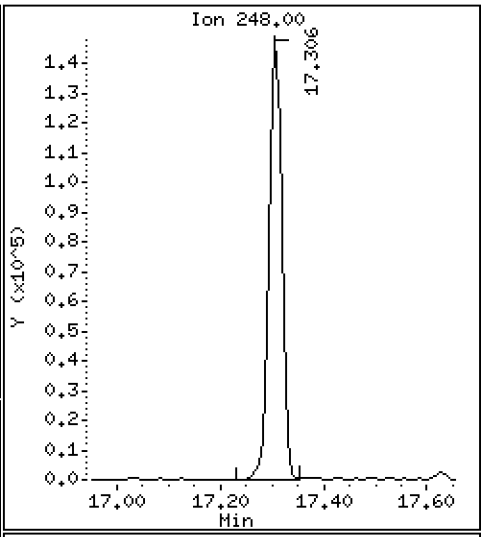
Column phase: ZB-5msi

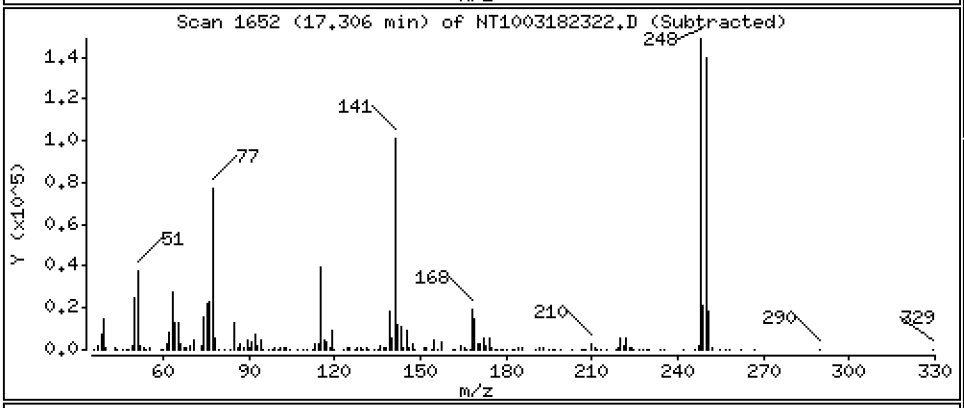
Column diameter: 0.25

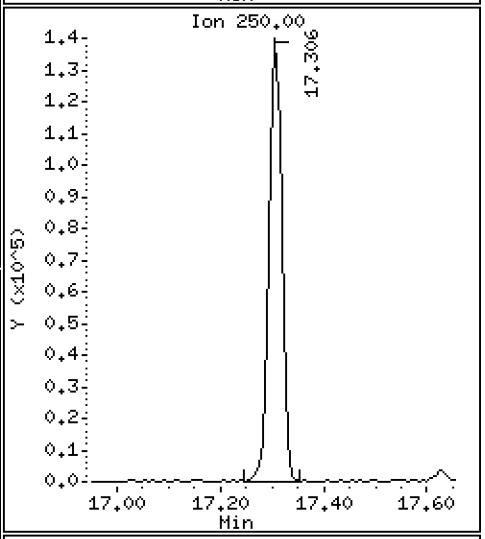
56 4-Bromophenyl-phenylether

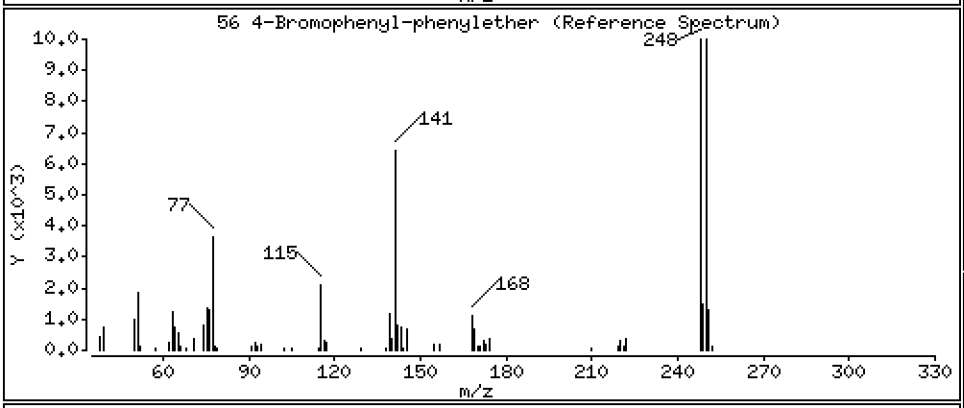
Concentration: 4.625 ug/mL

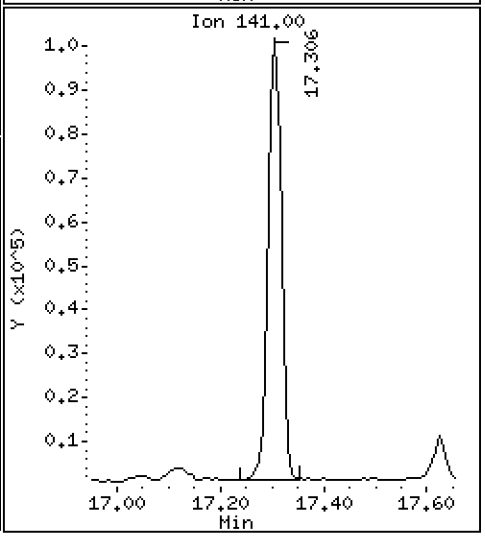


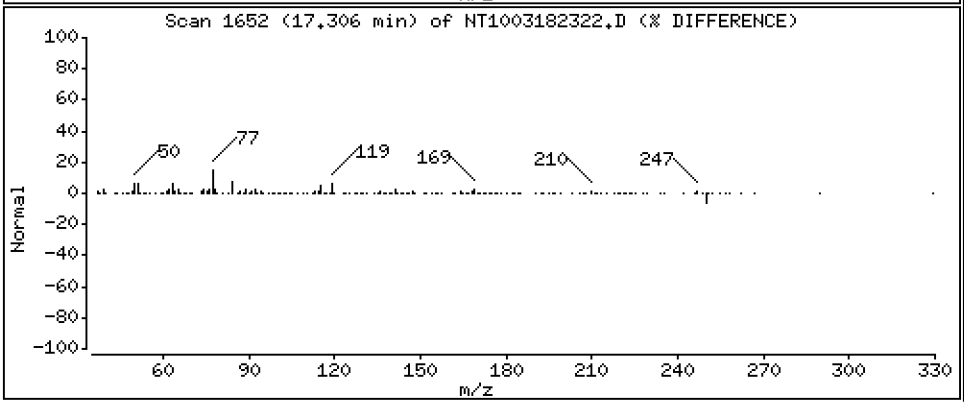












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

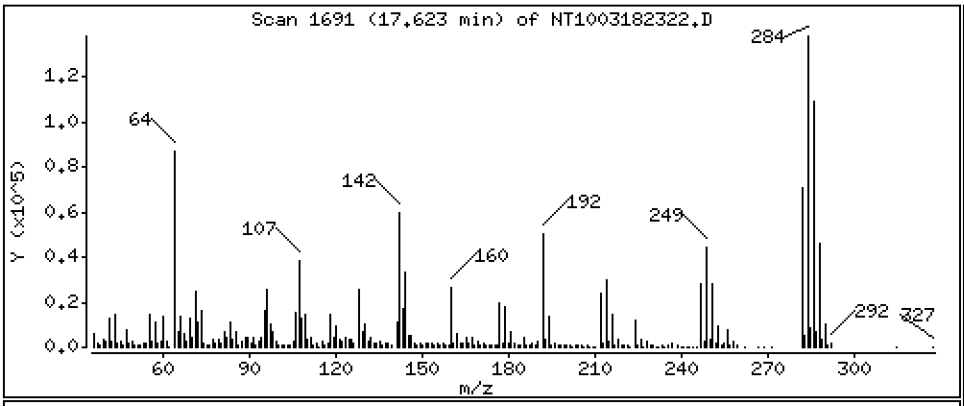
Operator: VTS

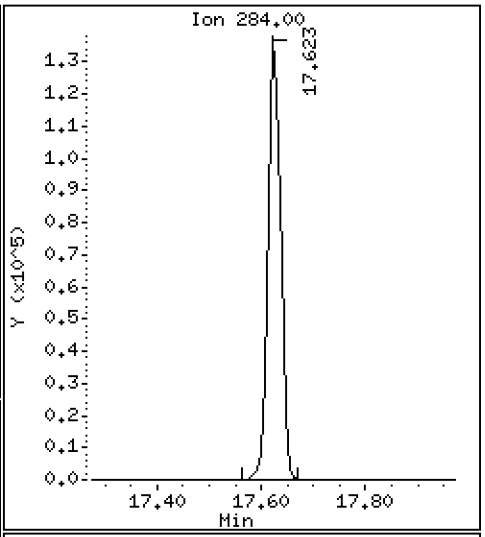
Column phase: ZB-5msi

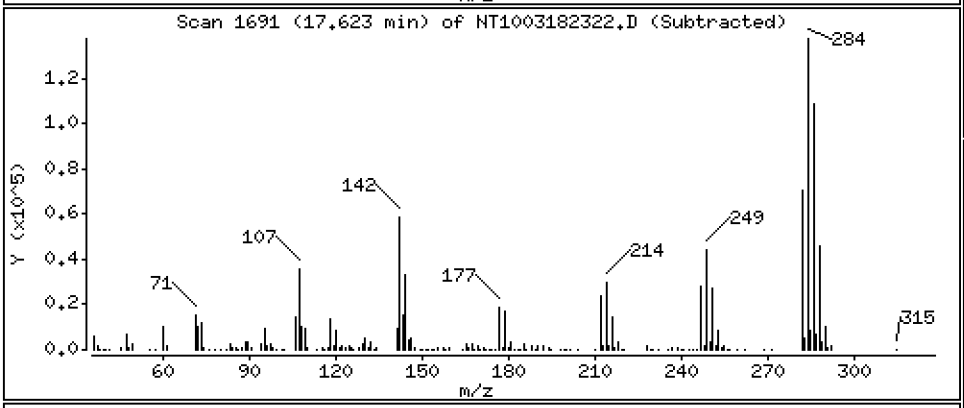
Column diameter: 0.25

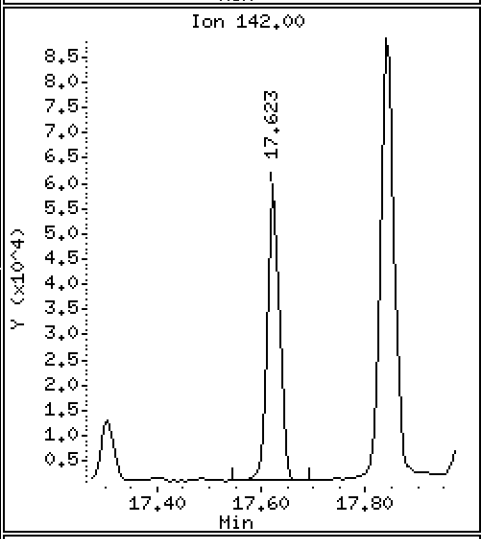
57 Hexachlorobenzene

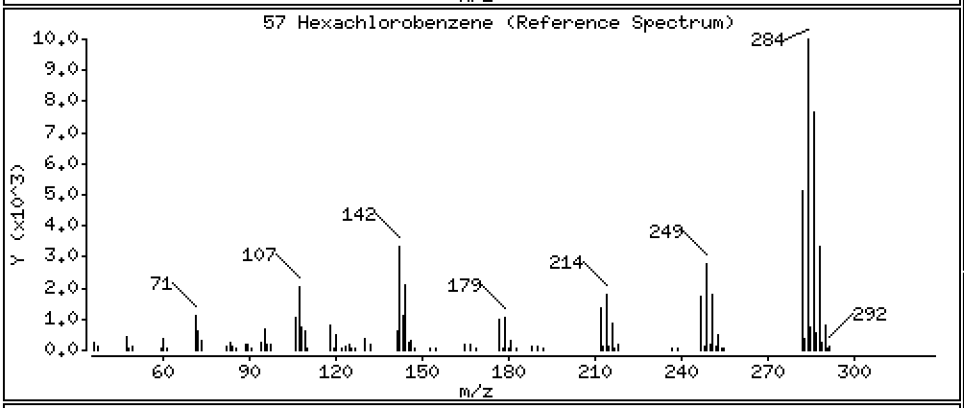
Concentration: 4.120 ug/mL

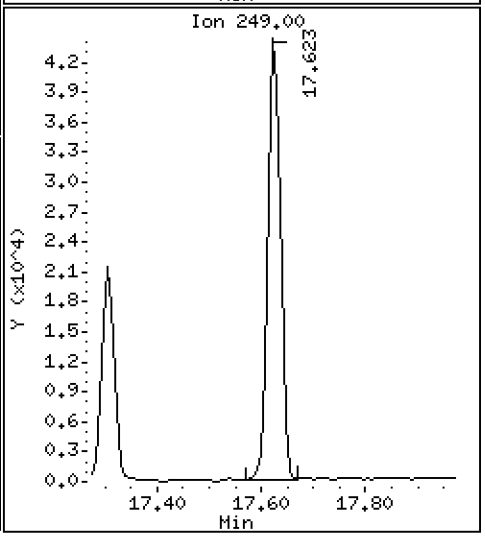


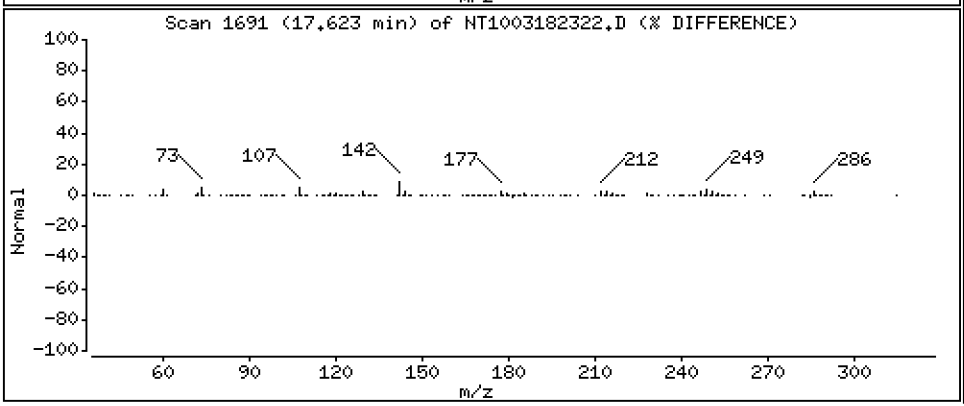












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

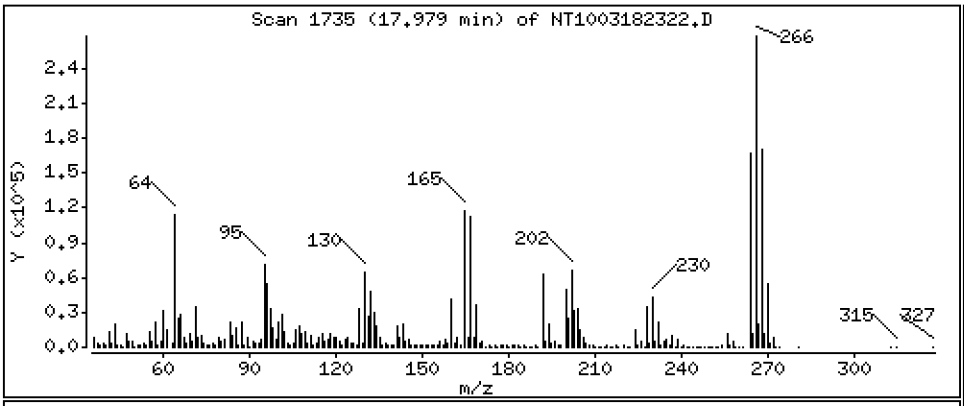
Operator: VTS

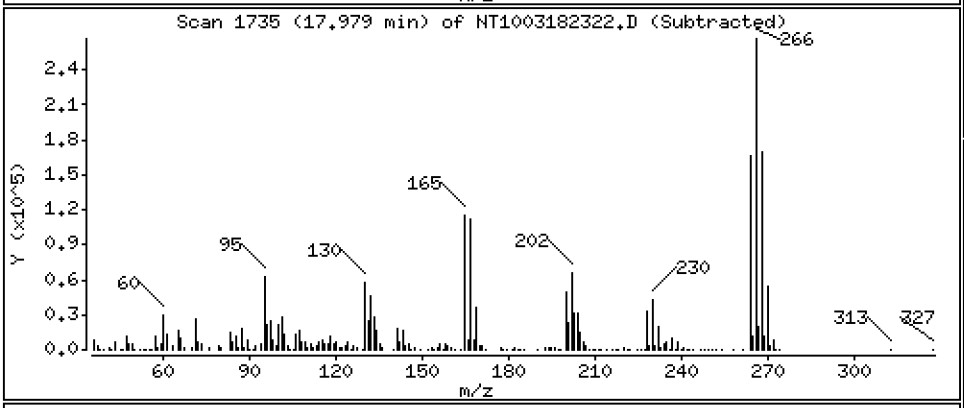
Column phase: ZB-5msi

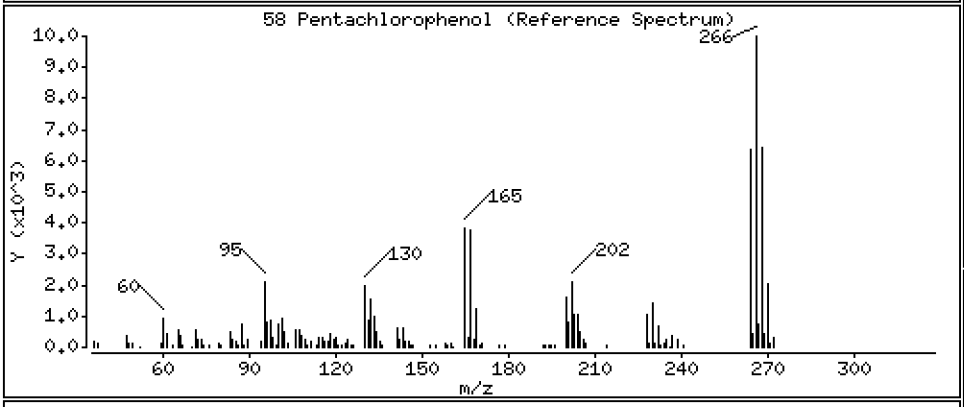
Column diameter: 0.25

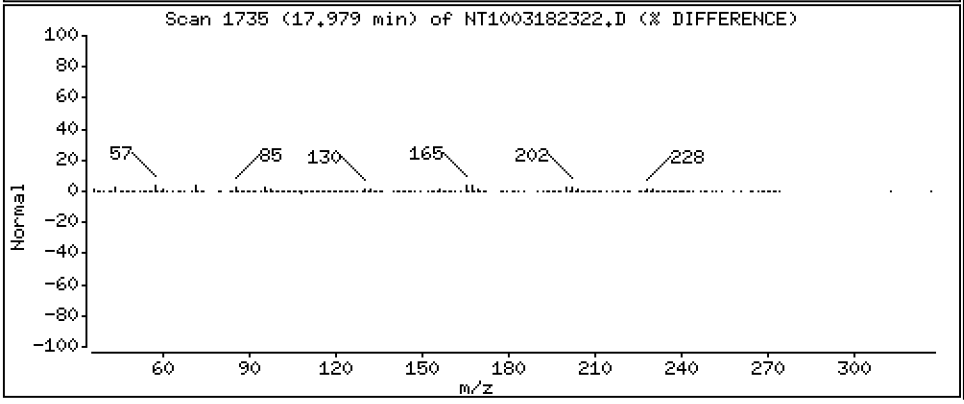
58 Pentachlorophenol

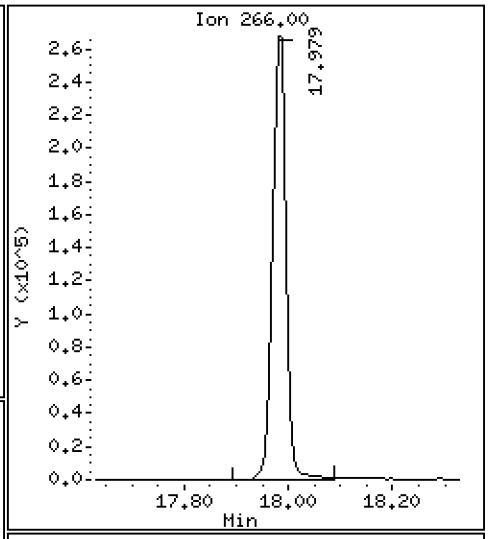
Concentration: 15.09 ug/mL

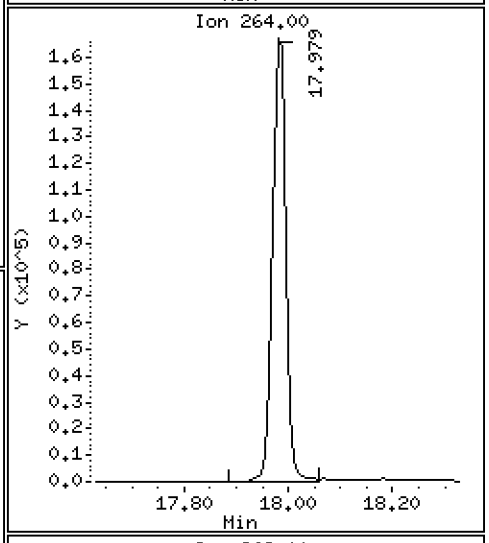


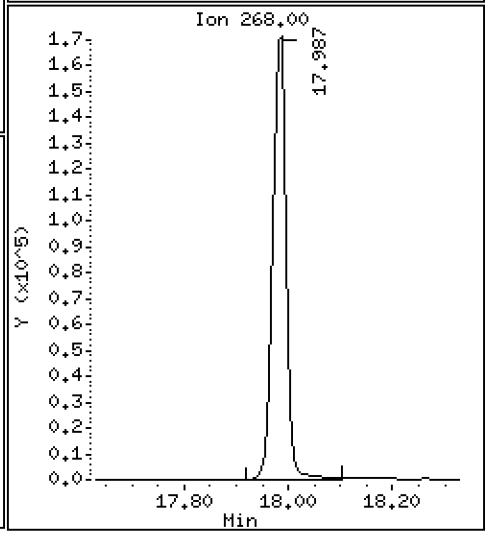












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

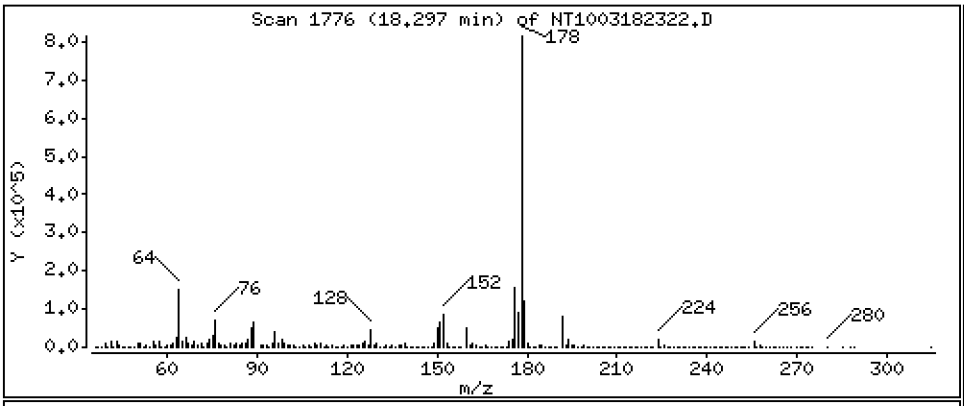
Operator: VTS

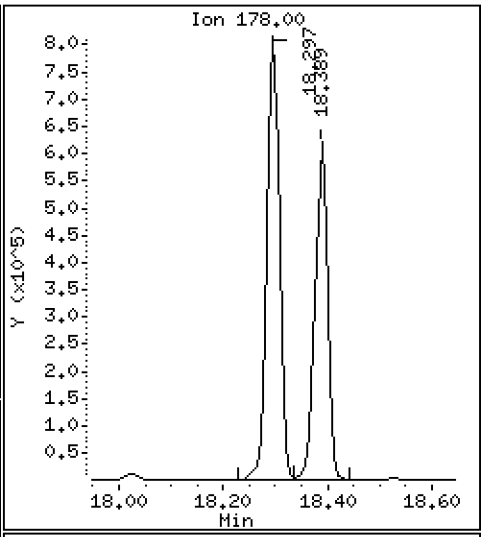
Column phase: ZB-5msi

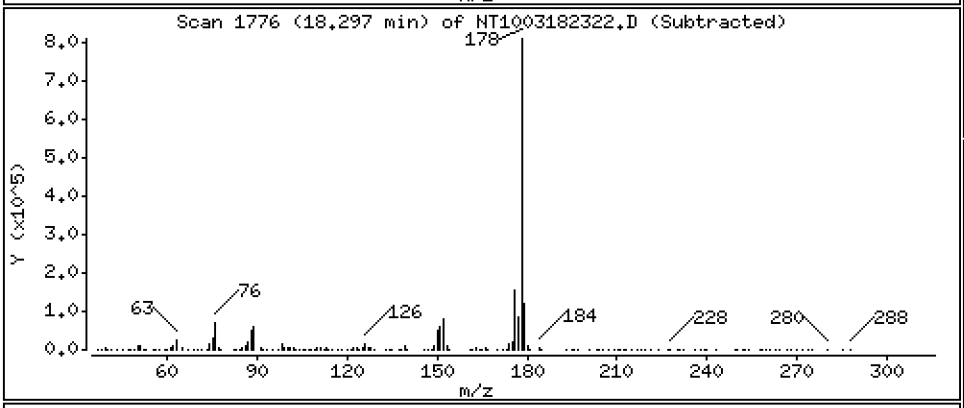
Column diameter: 0.25

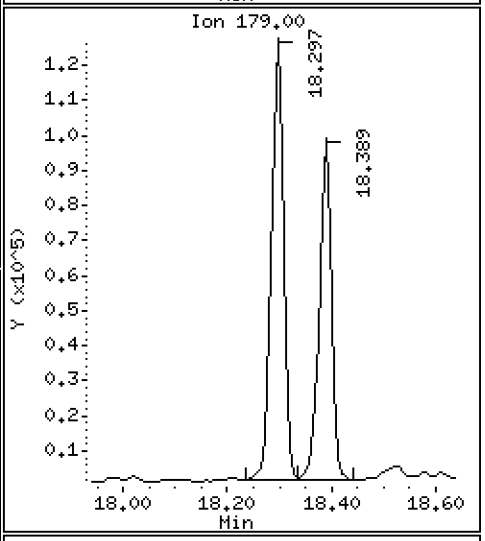
60 Phenanthrene

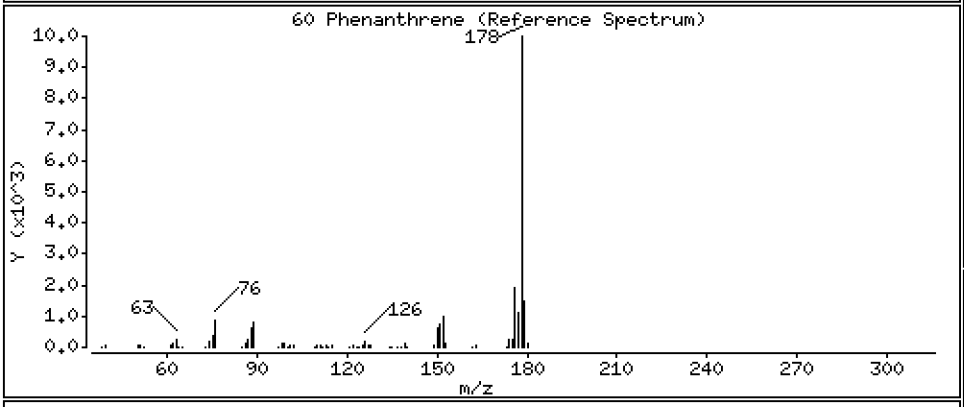
Concentration: 5.096 ug/mL

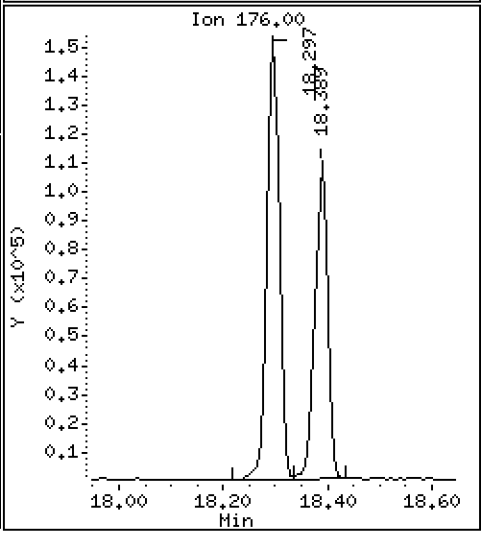


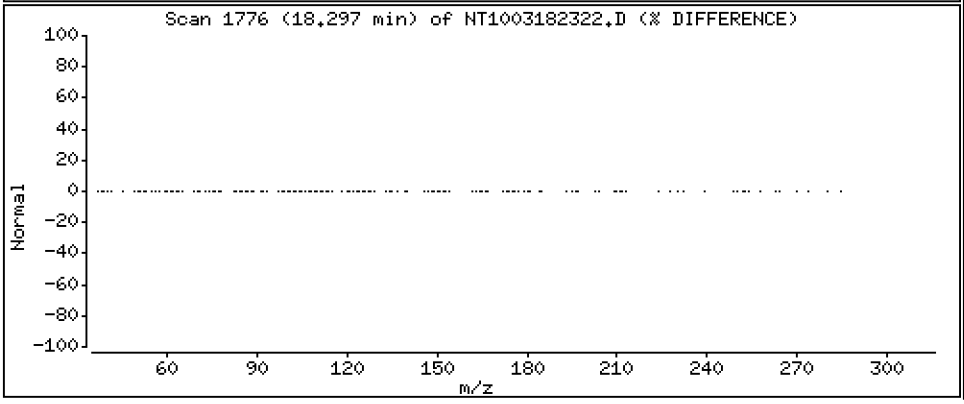












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

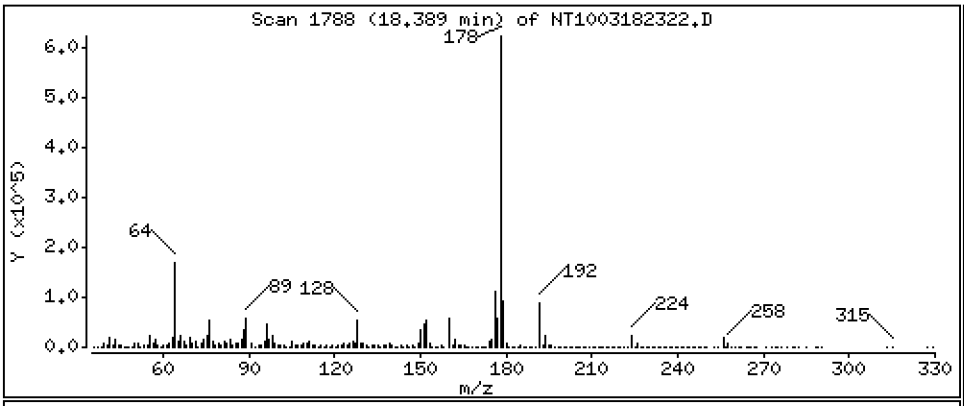
Operator: VTS

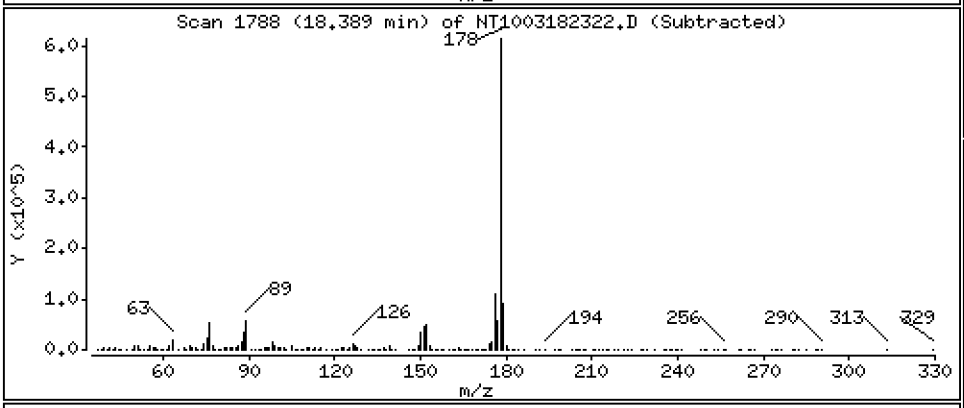
Column phase: ZB-5msi

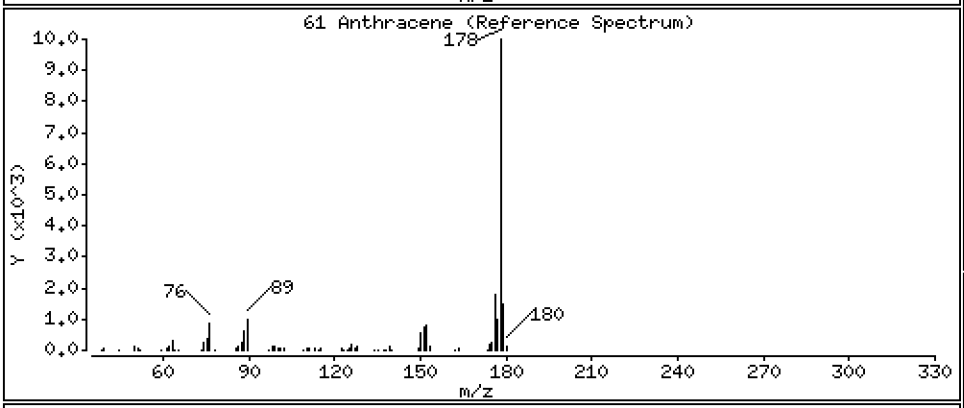
Column diameter: 0.25

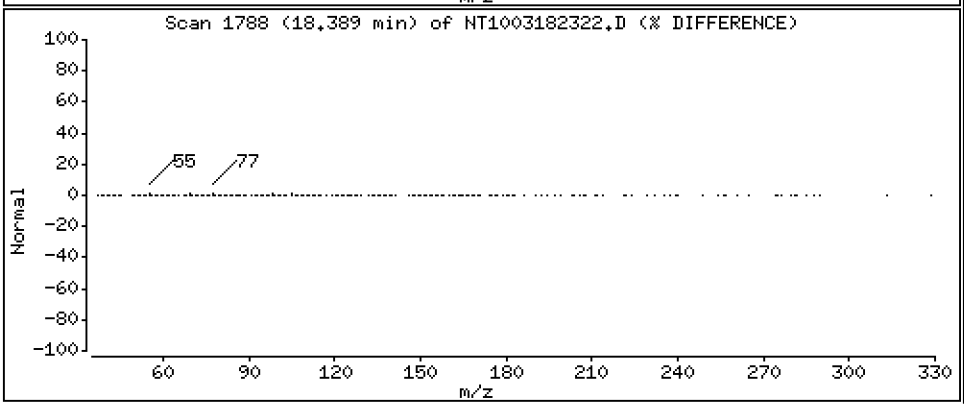
61 Anthracene

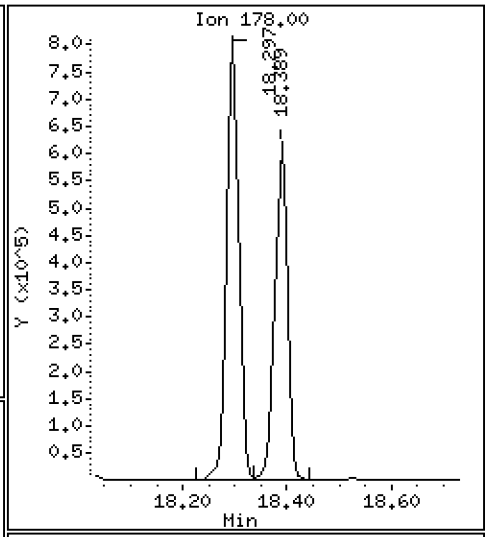
Concentration: 4.173 ug/mL

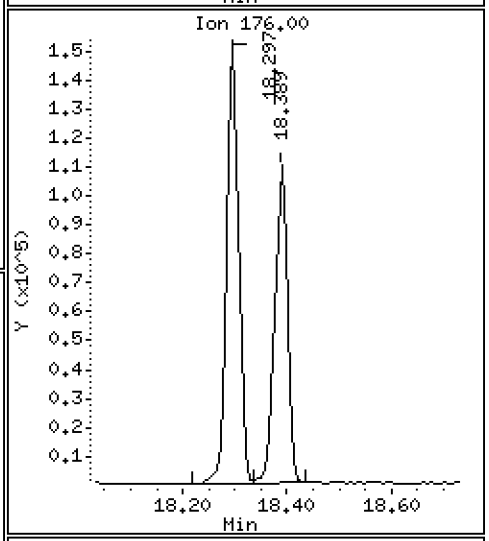


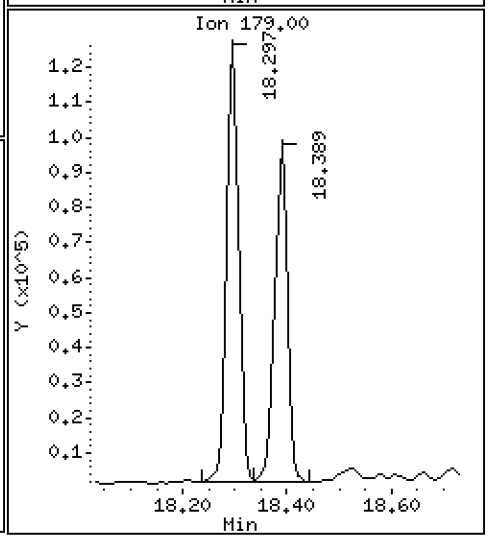












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

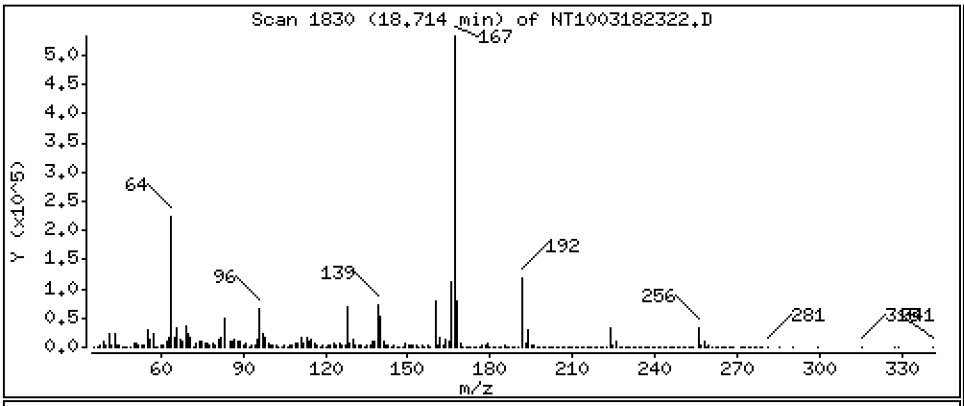
Operator: VTS

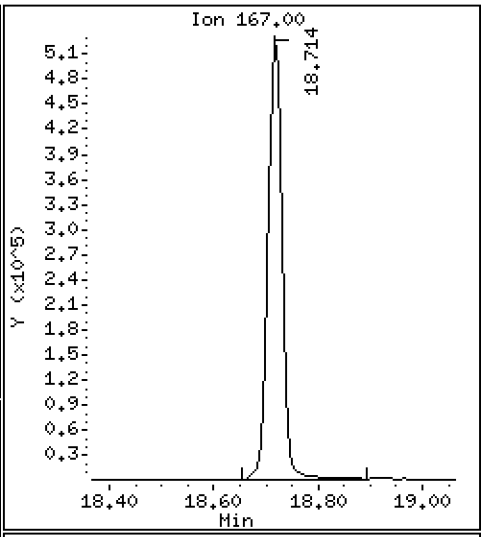
Column phase: ZB-5msi

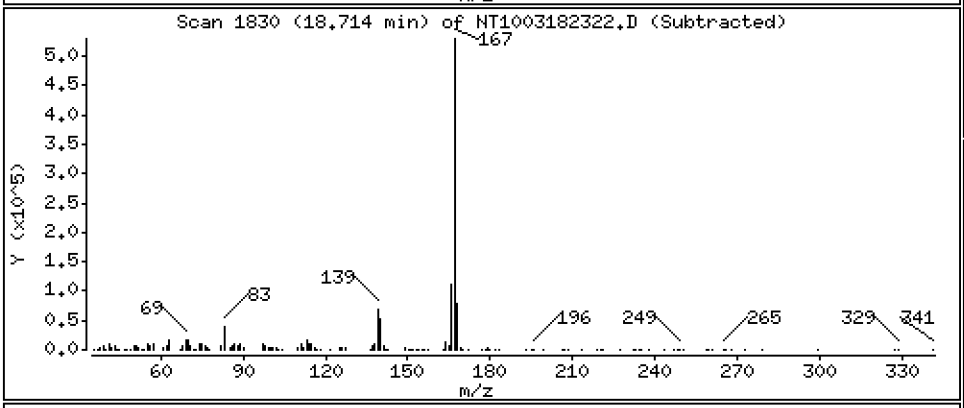
Column diameter: 0.25

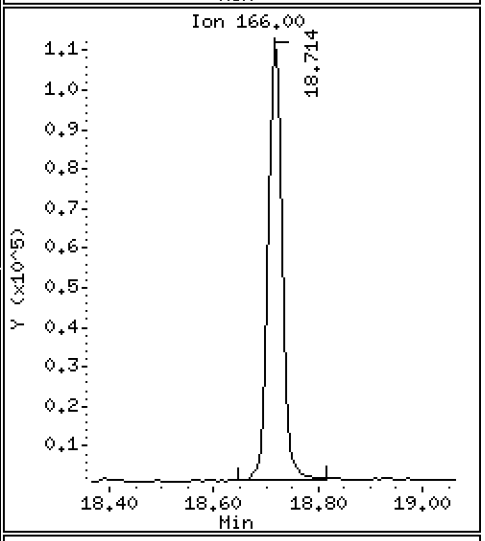
62 Carbazole

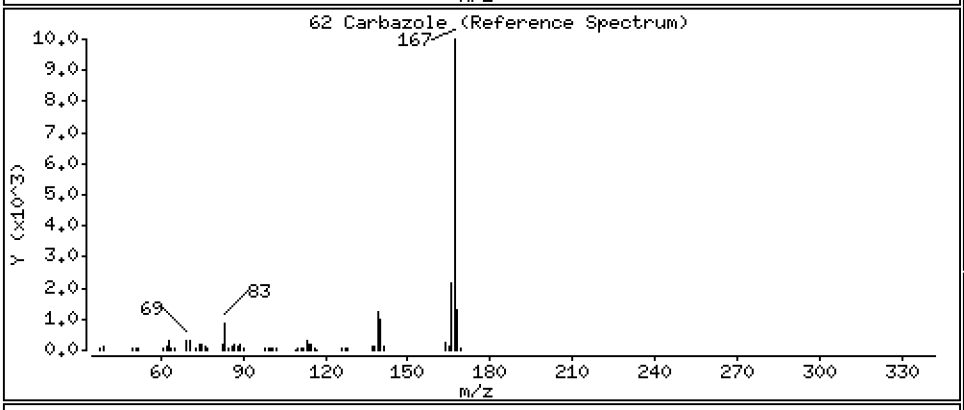
Concentration: 4.428 ug/mL

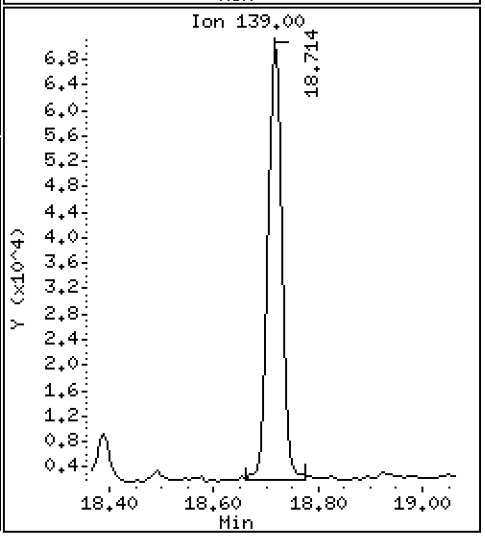


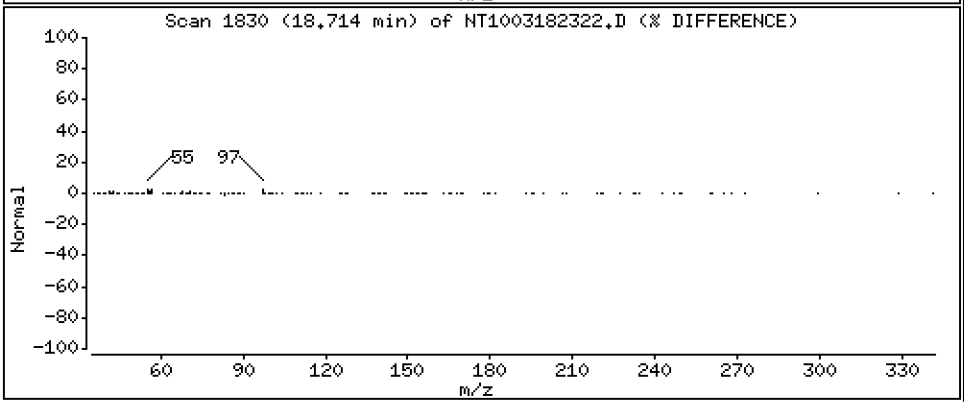












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

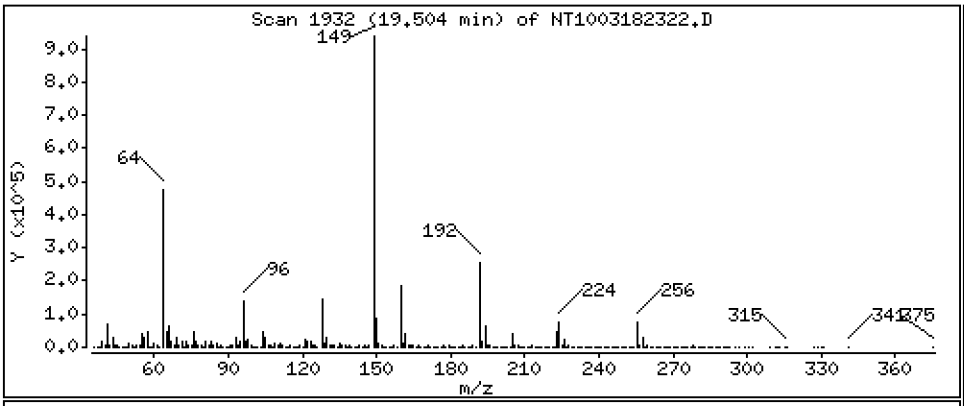
Operator: VTS

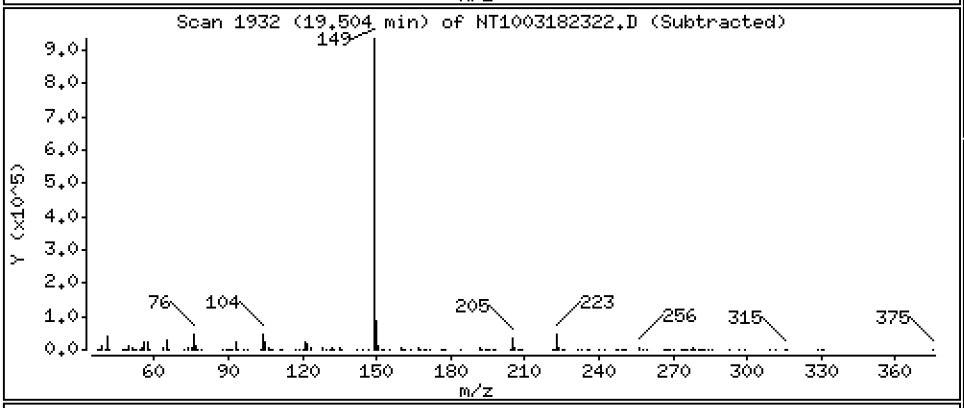
Column phase: ZB-5msi

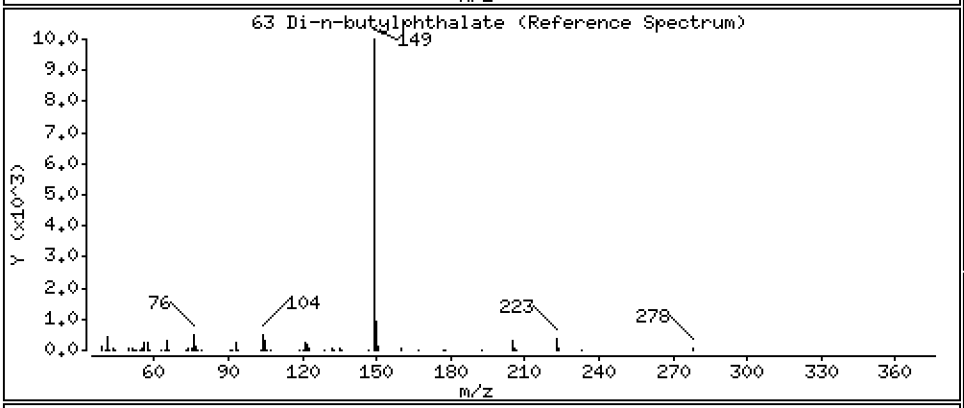
Column diameter: 0.25

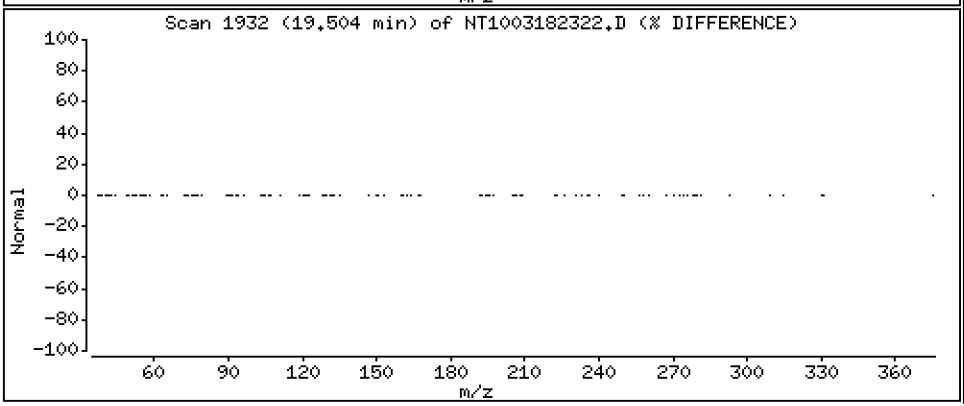
63 Di-n-butylphthalate

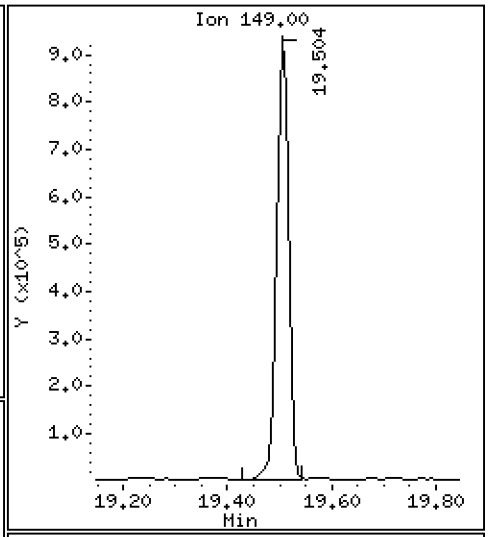
Concentration: 4.827 ug/mL

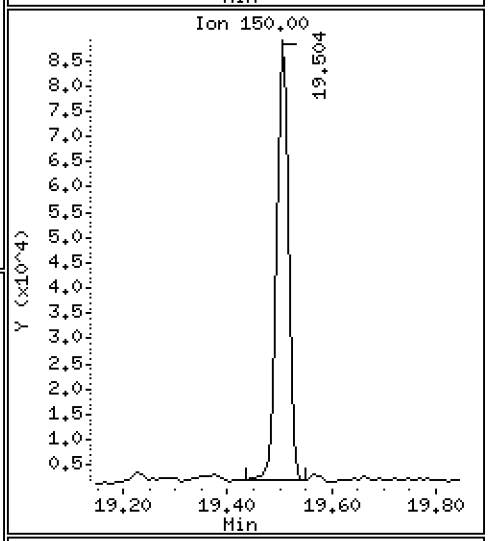


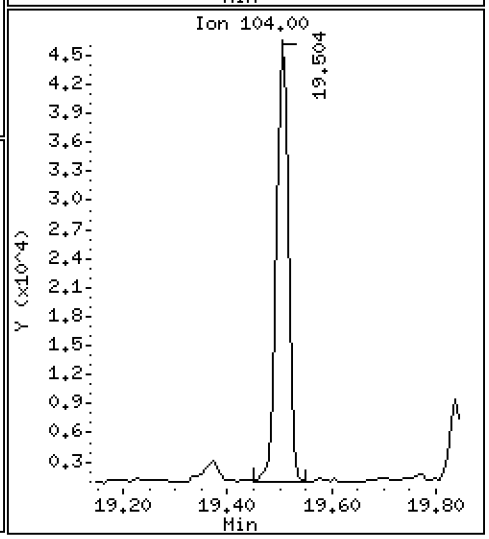












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

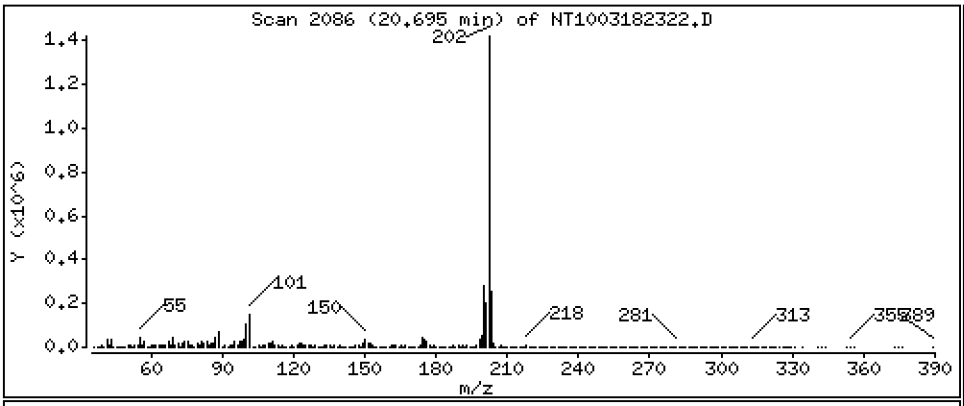
Operator: VTS

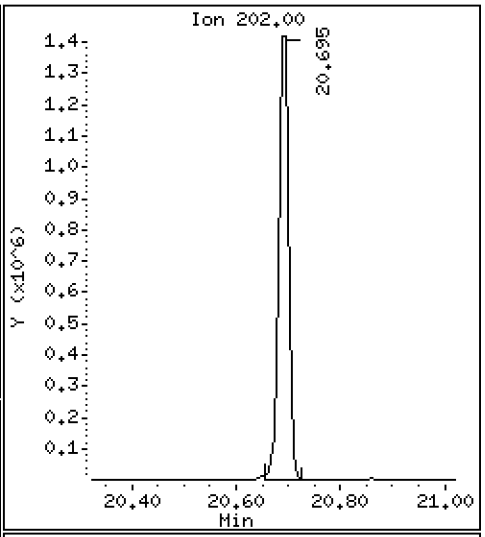
Column phase: ZB-5msi

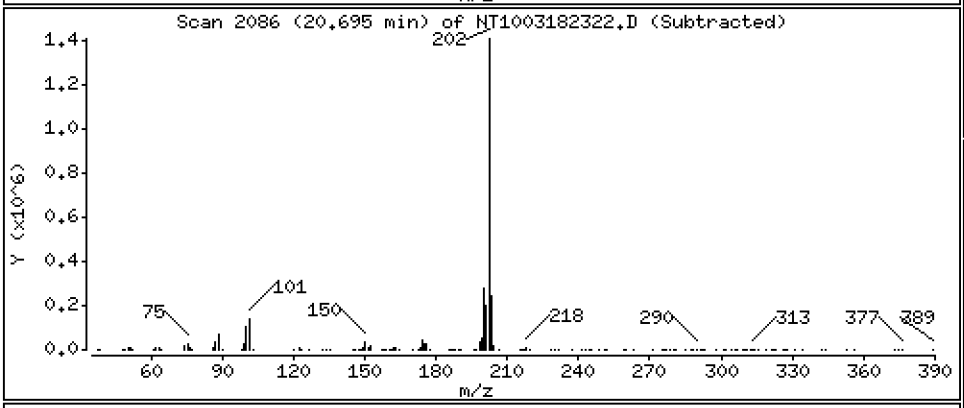
Column diameter: 0.25

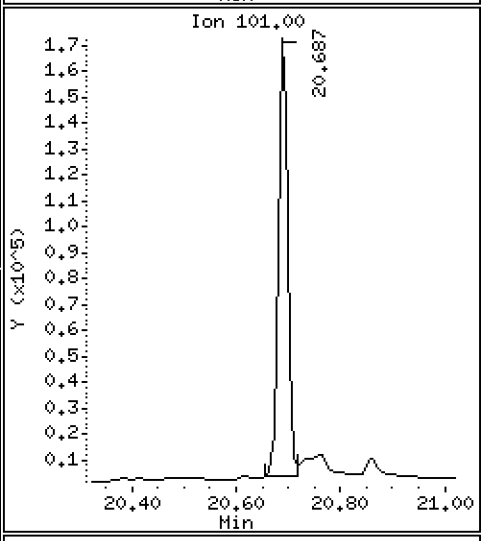
64 Fluoranthene

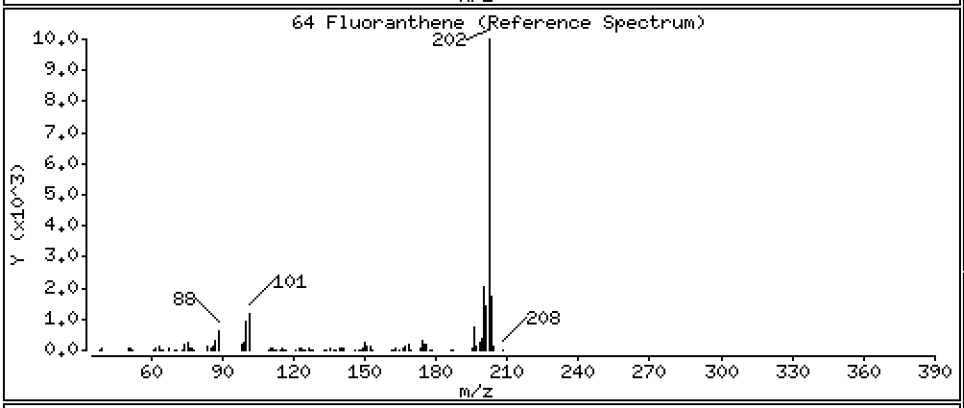
Concentration: 6.214 ug/mL

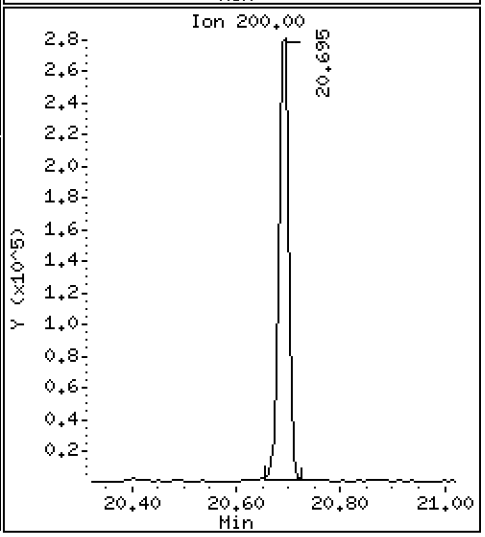


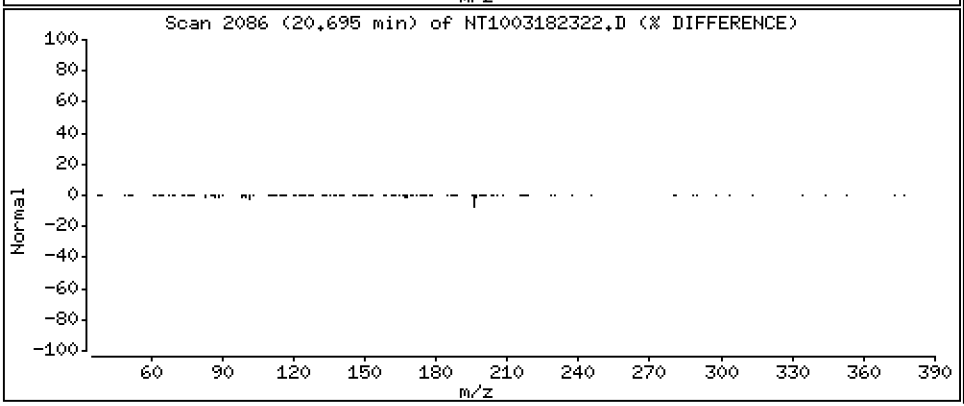












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

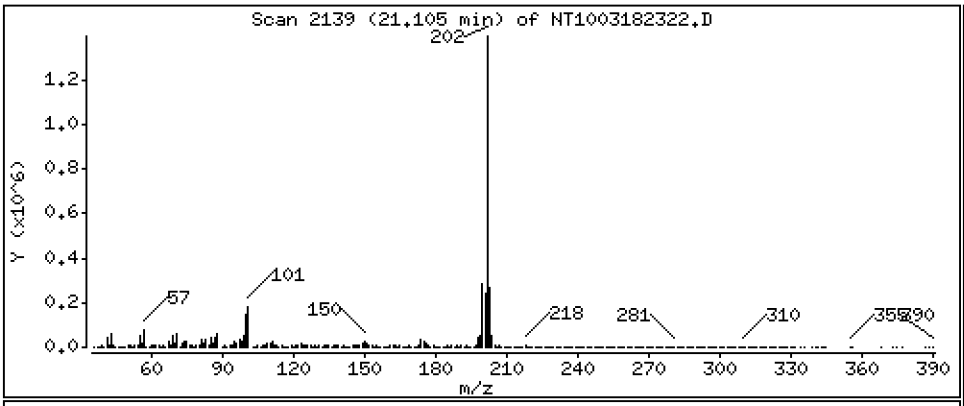
Operator: VTS

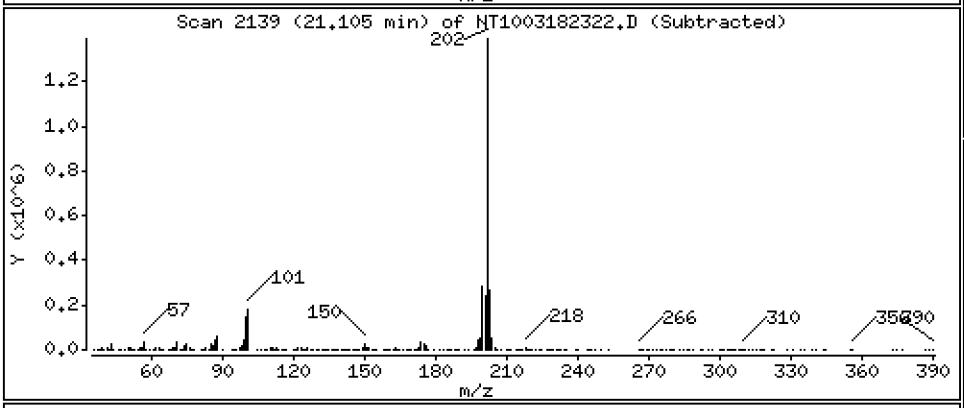
Column phase: ZB-5msi

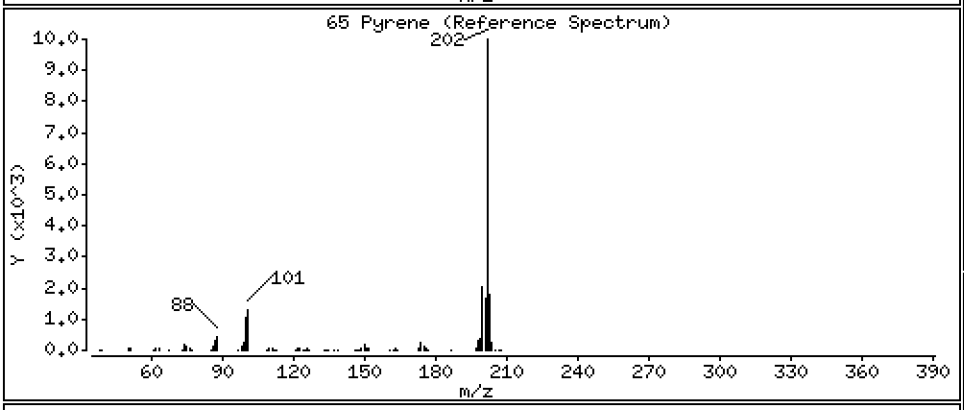
Column diameter: 0.25

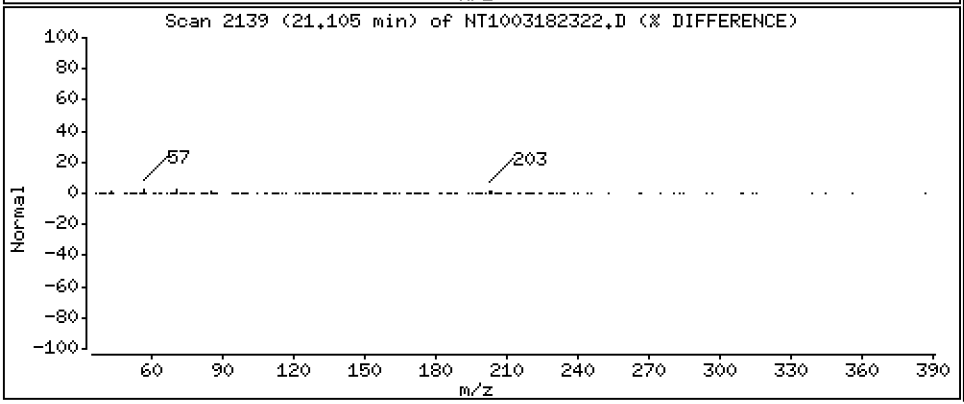
65 Pyrene

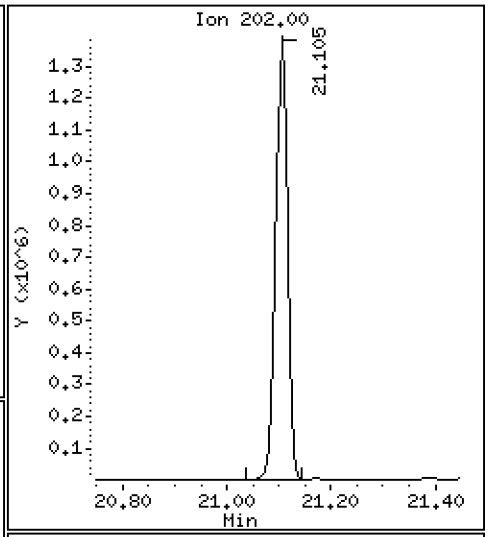
Concentration: 6.346 ug/mL

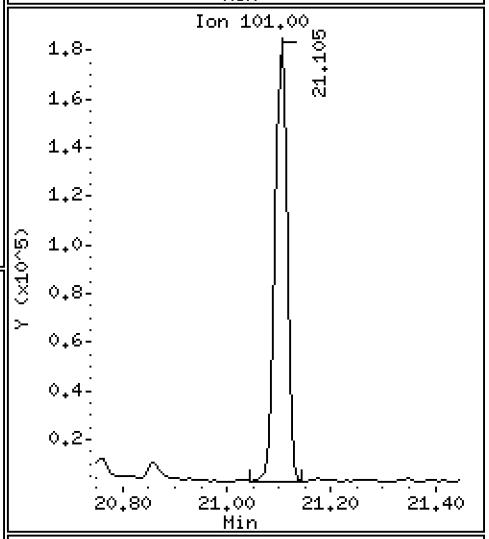


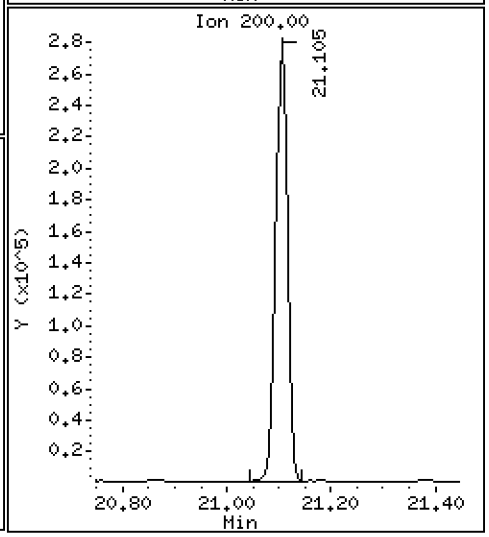












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

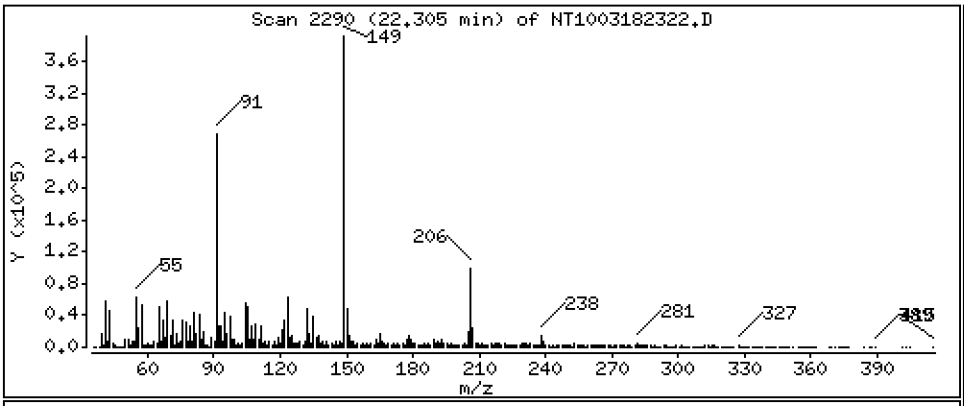
Operator: VTS

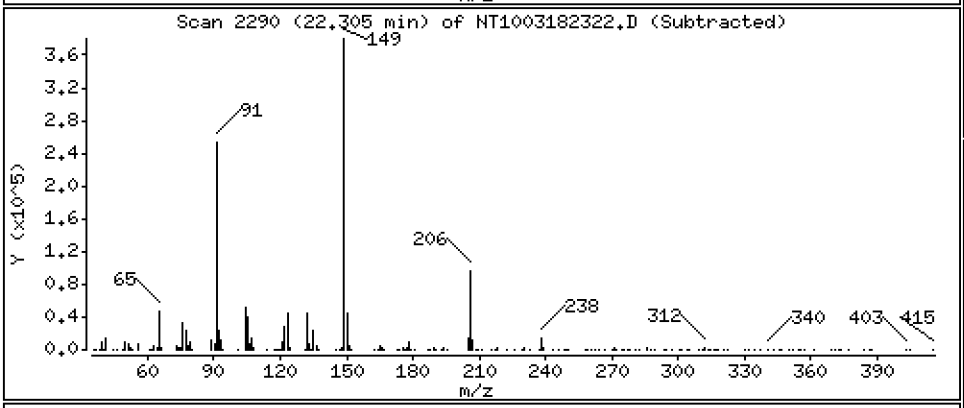
Column phase: ZB-5msi

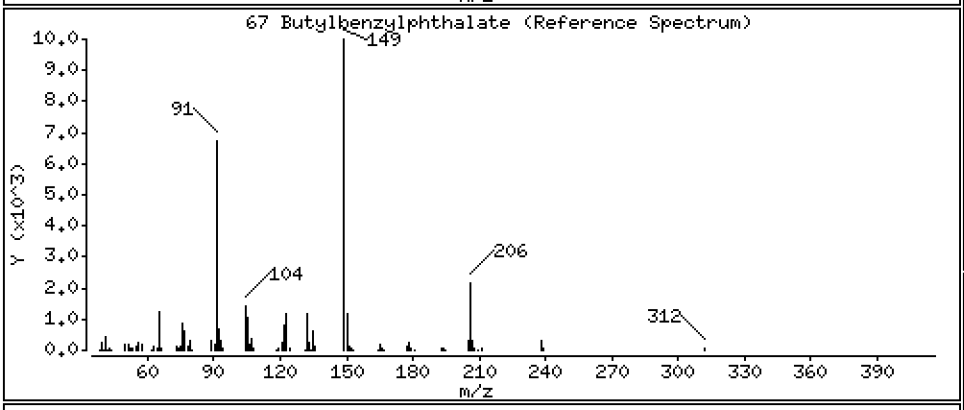
Column diameter: 0.25

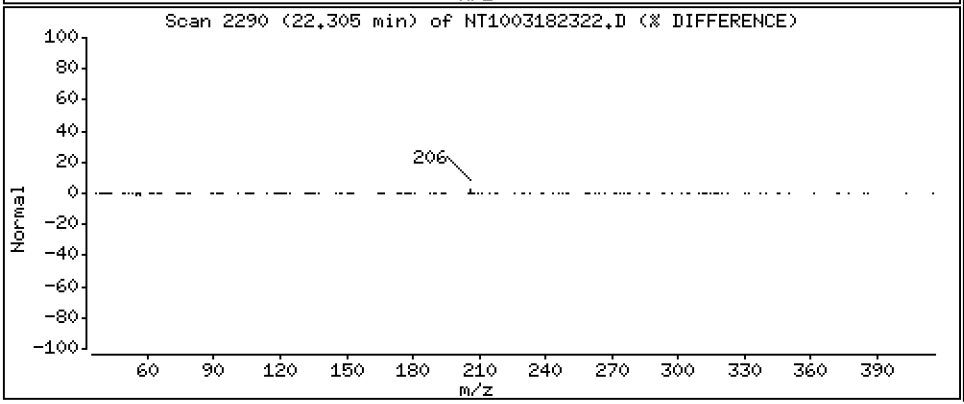
67 Butylbenzylphthalate

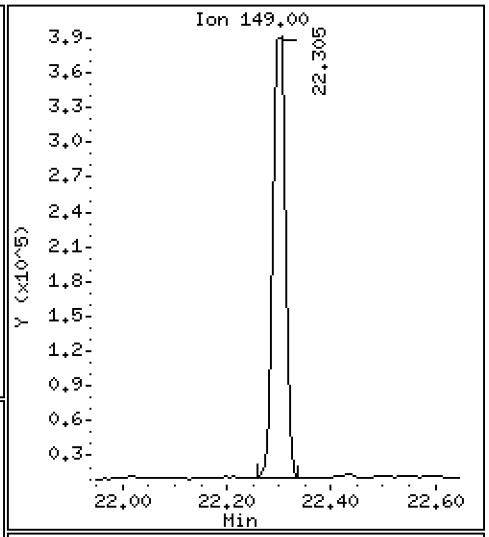
Concentration: 5.022 ug/mL

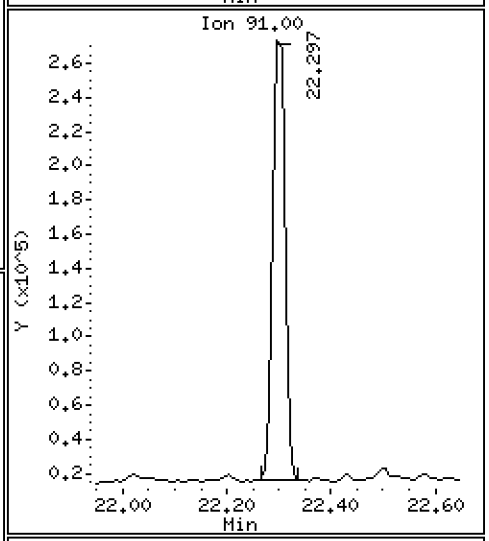


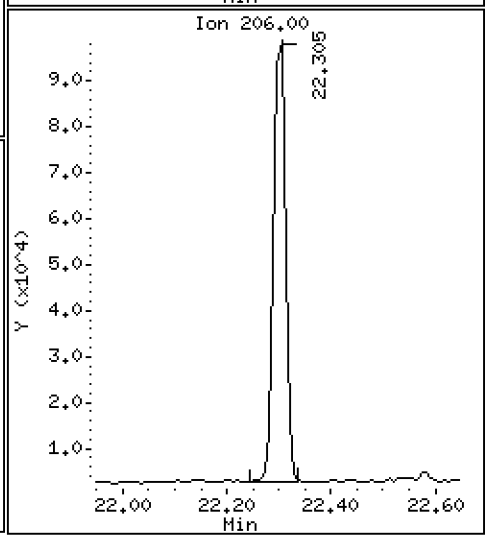












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

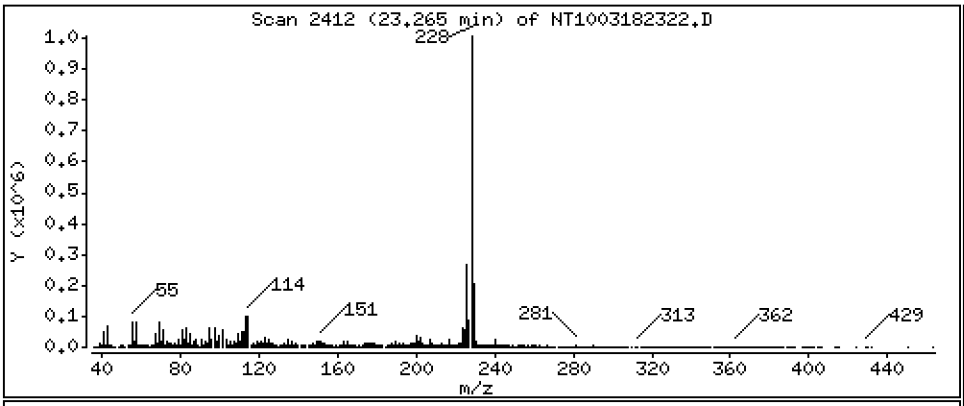
Operator: VTS

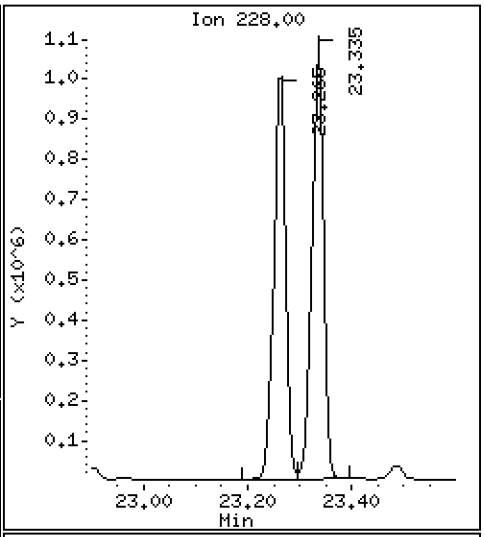
Column phase: ZB-5msi

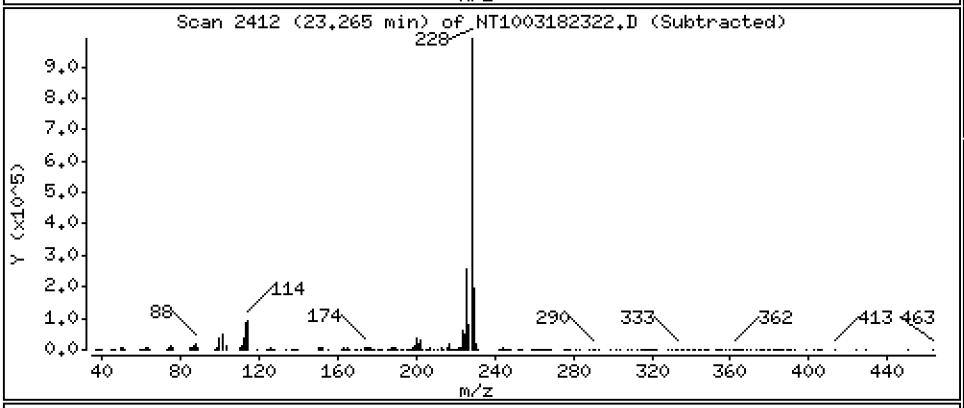
Column diameter: 0.25

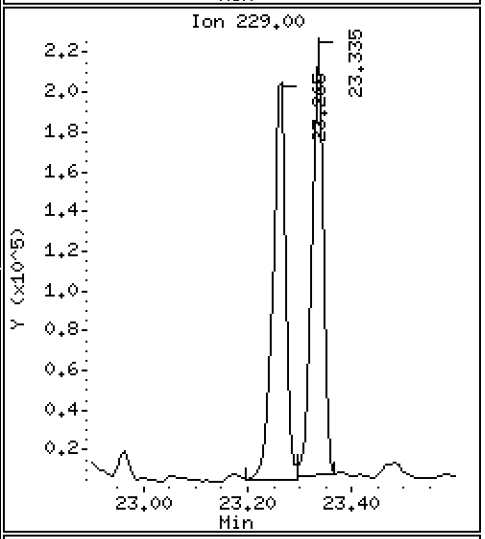
68 Benzo(a)anthracene

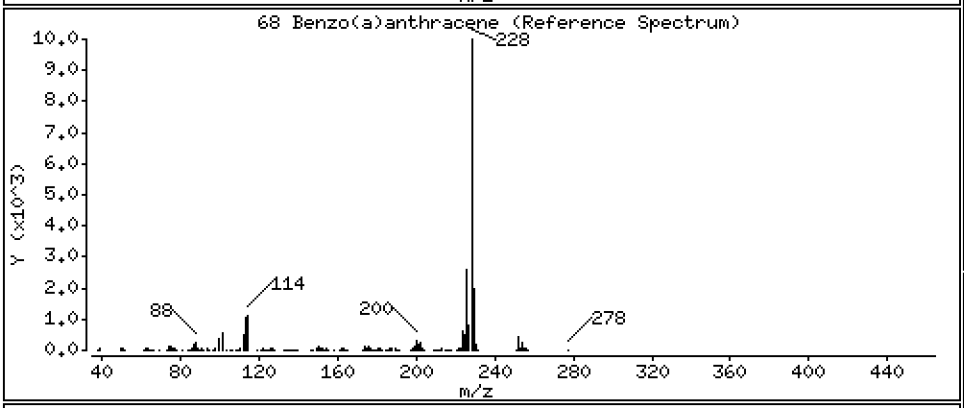
Concentration: 5.805 ug/mL

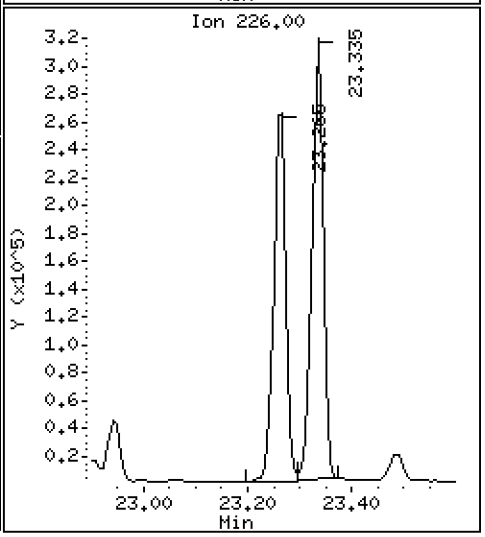


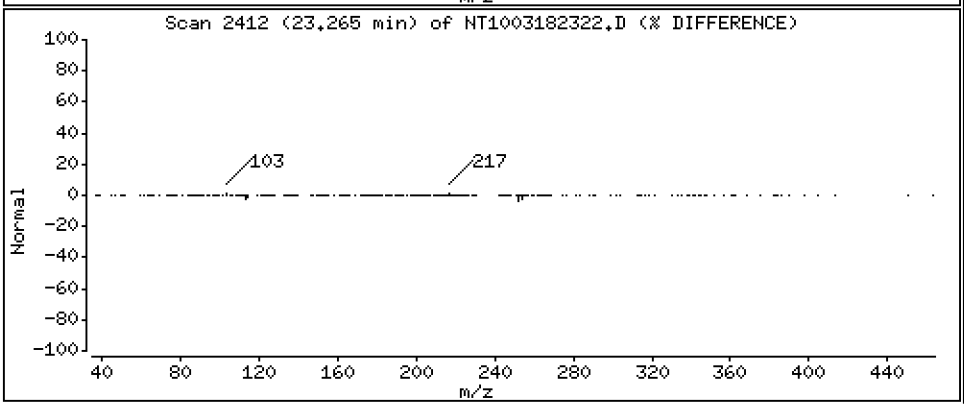












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

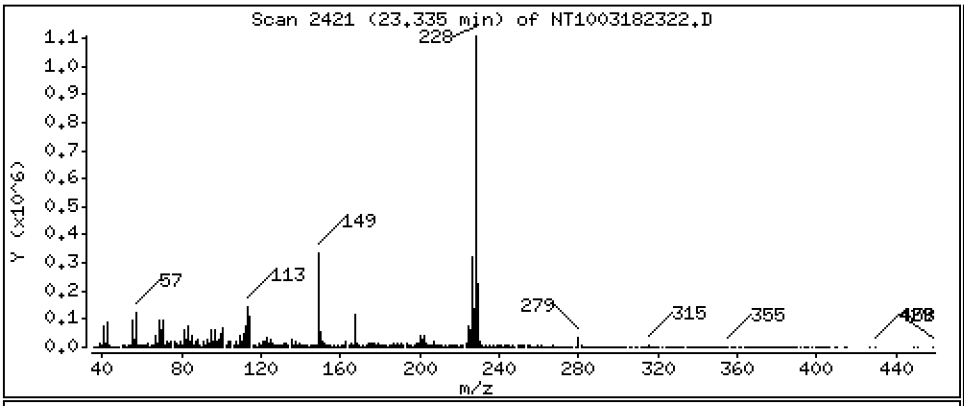
Operator: VTS

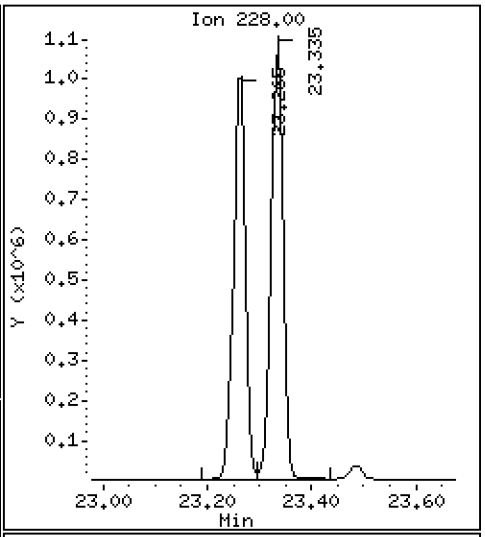
Column phase: ZB-5msi

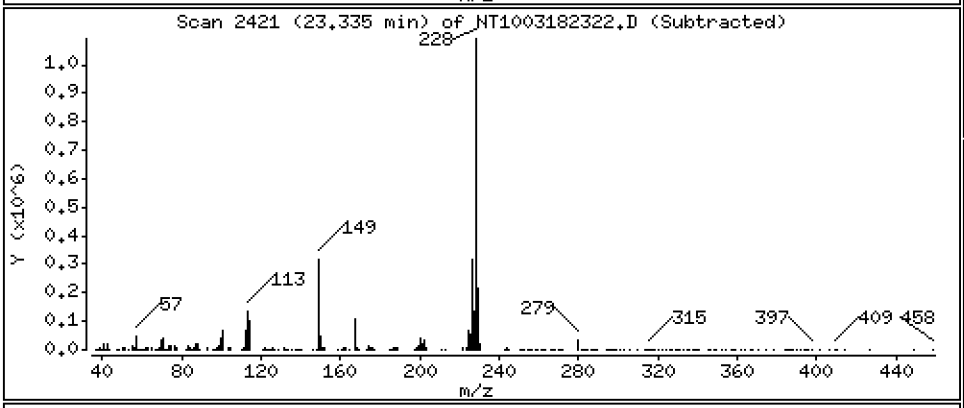
Column diameter: 0.25

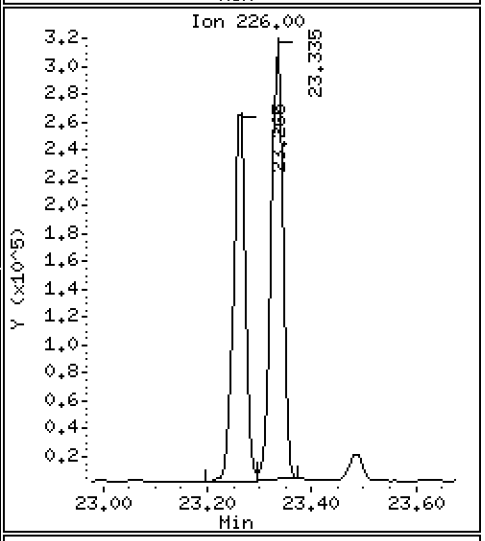
71 Chrysene

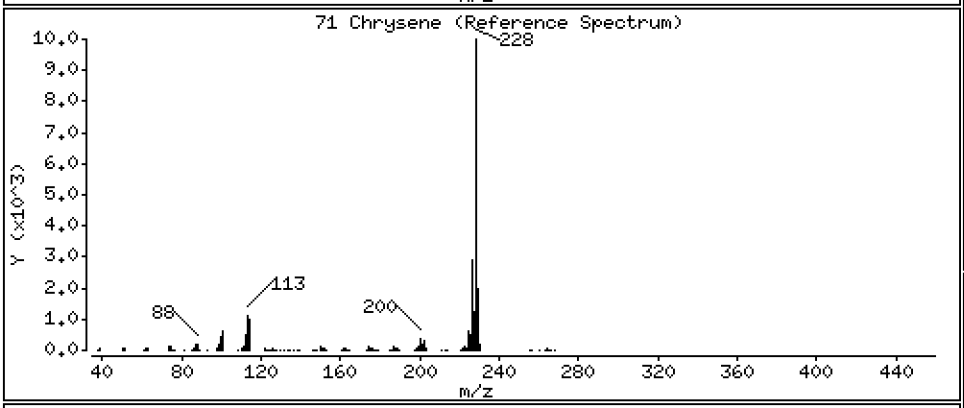
Concentration: 6.010 ug/mL

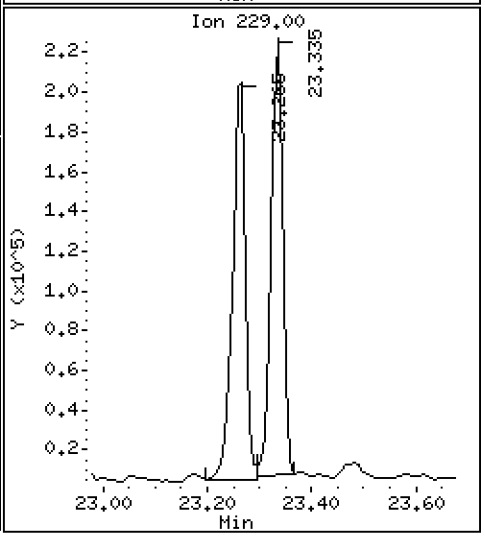


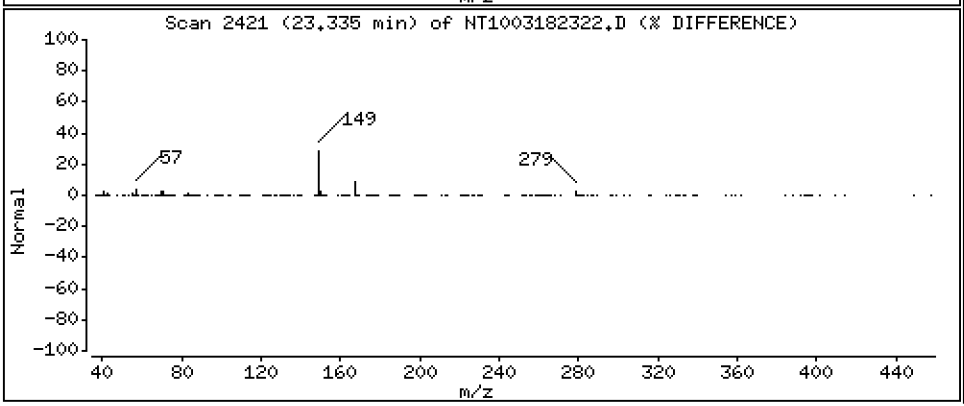












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

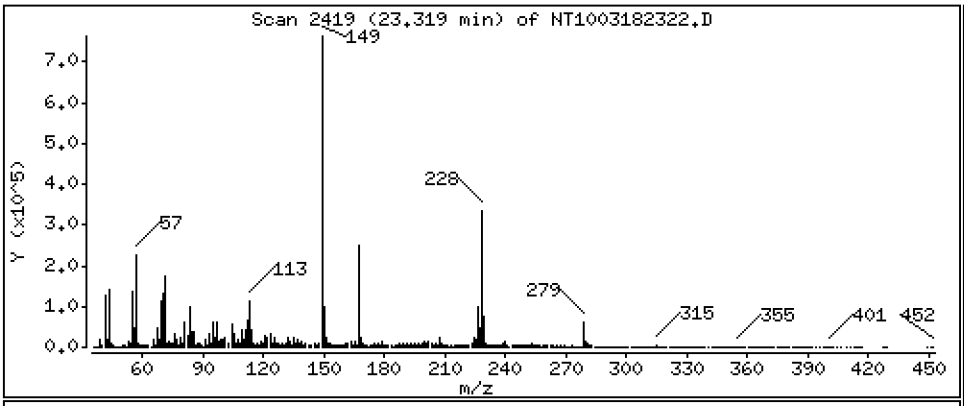
Operator: VTS

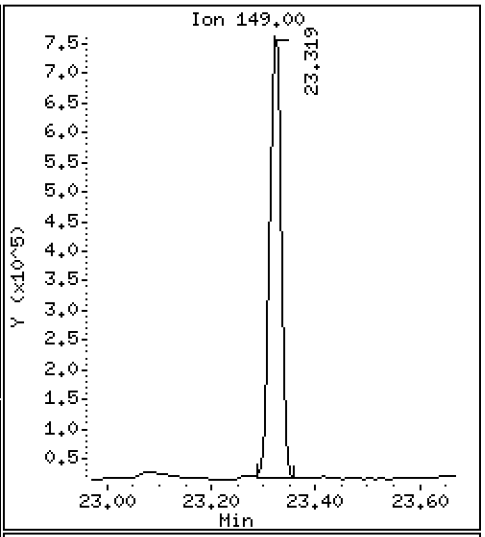
Column phase: ZB-5msi

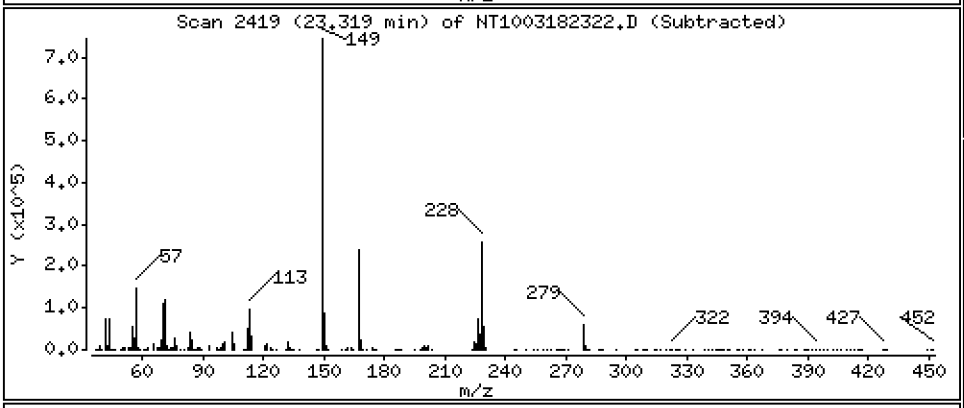
Column diameter: 0.25

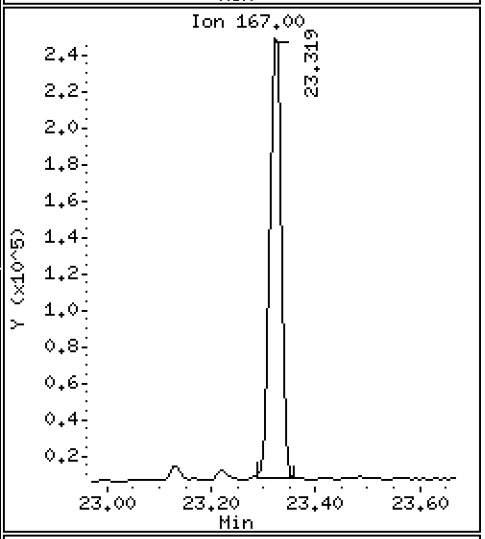
72 bis(2-Ethylhexyl)phthalate

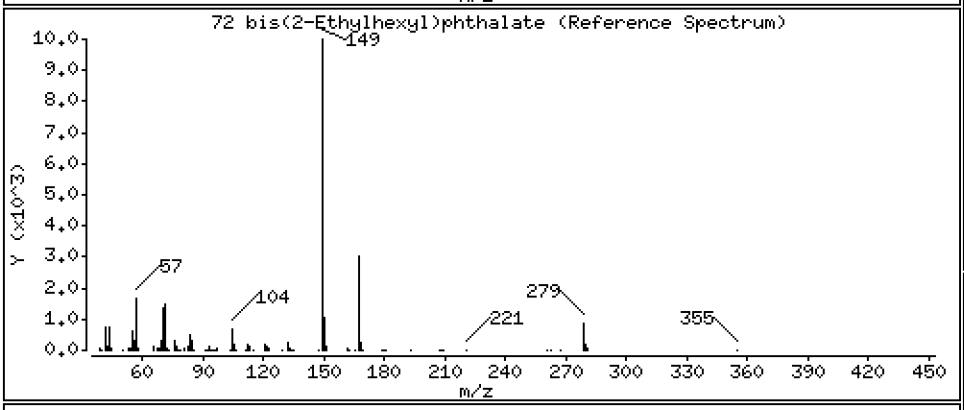
Concentration: 5.305 ug/mL

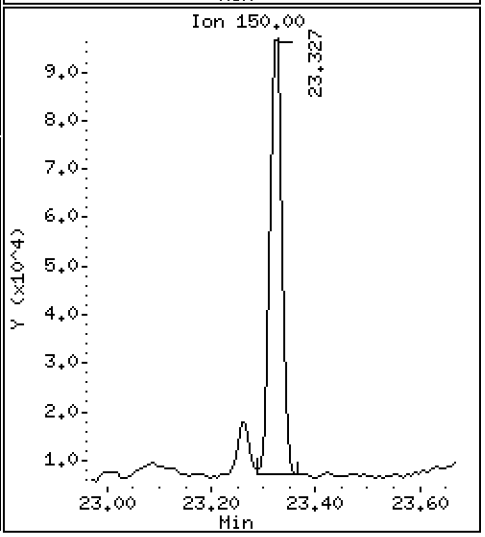


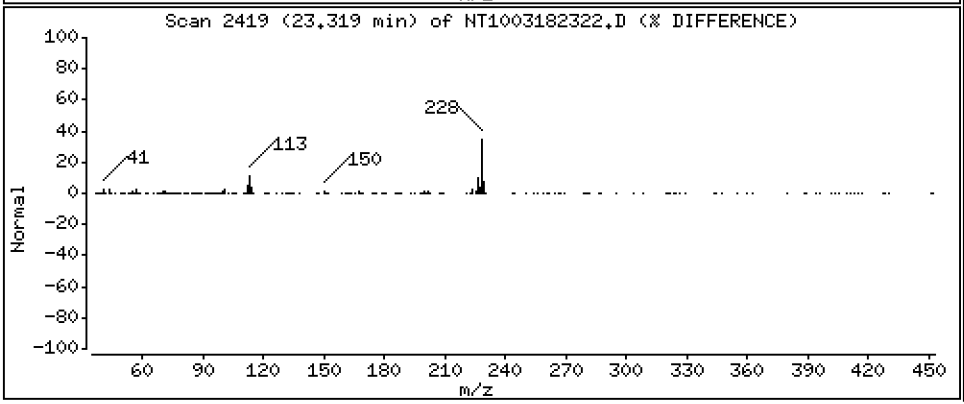












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

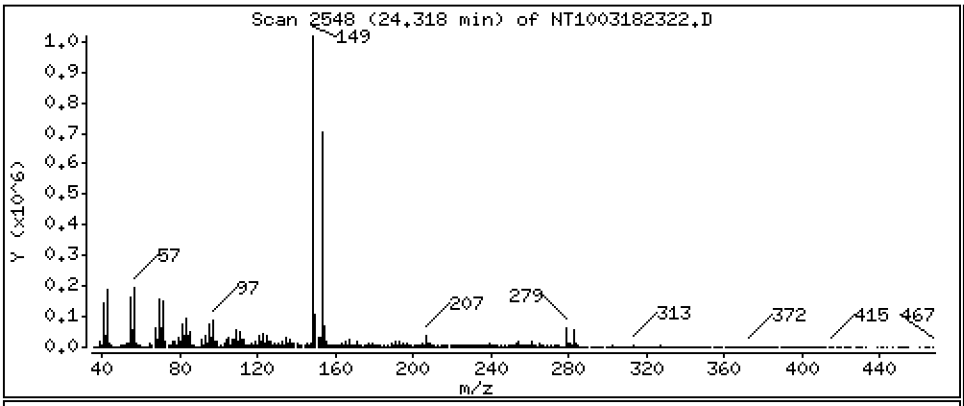
Operator: VTS

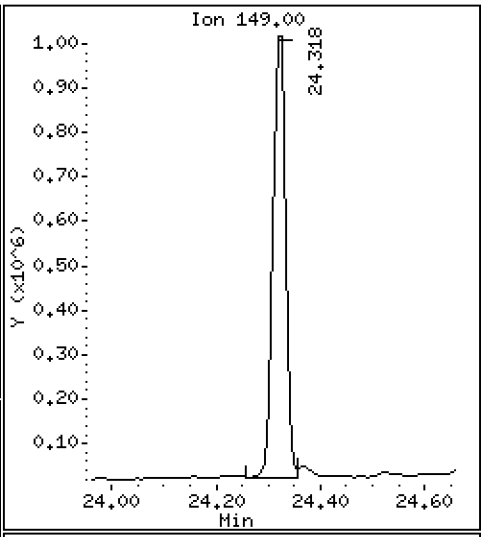
Column phase: ZB-5msi

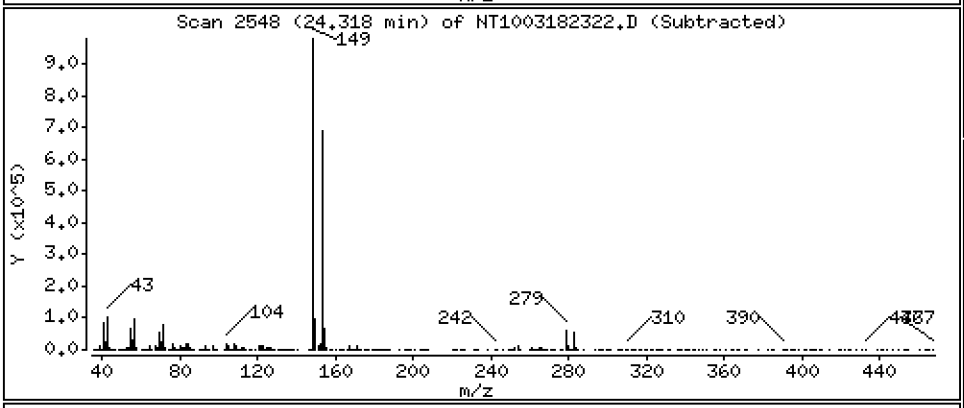
Column diameter: 0.25

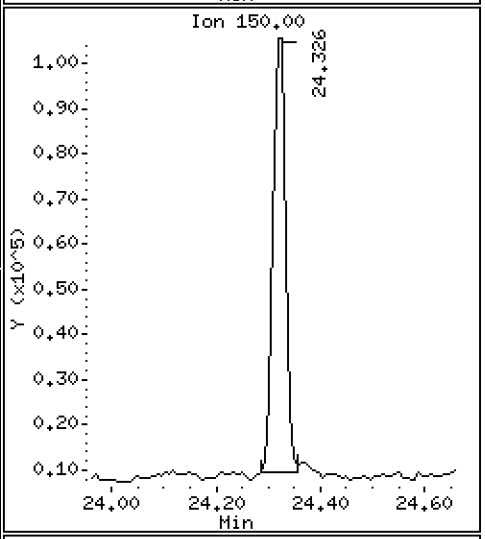
73 Di-n-octylphthalate

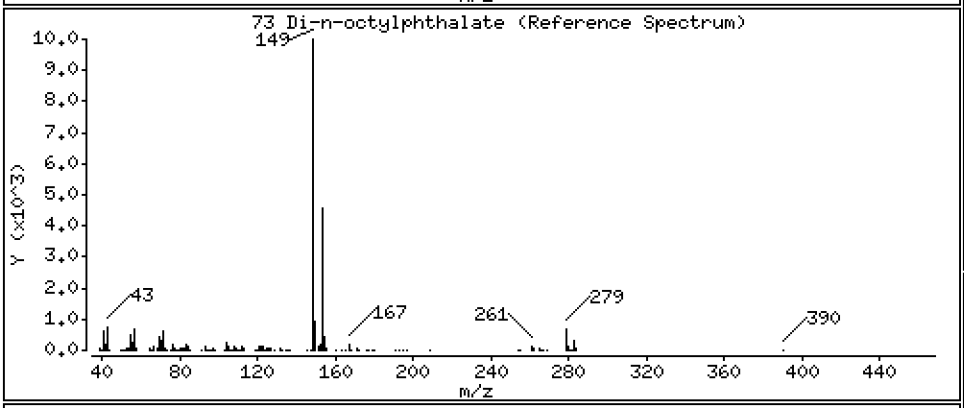
Concentration: 4.445 ug/mL

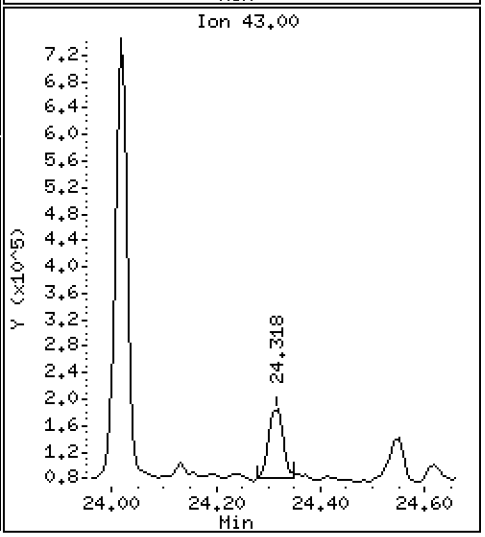


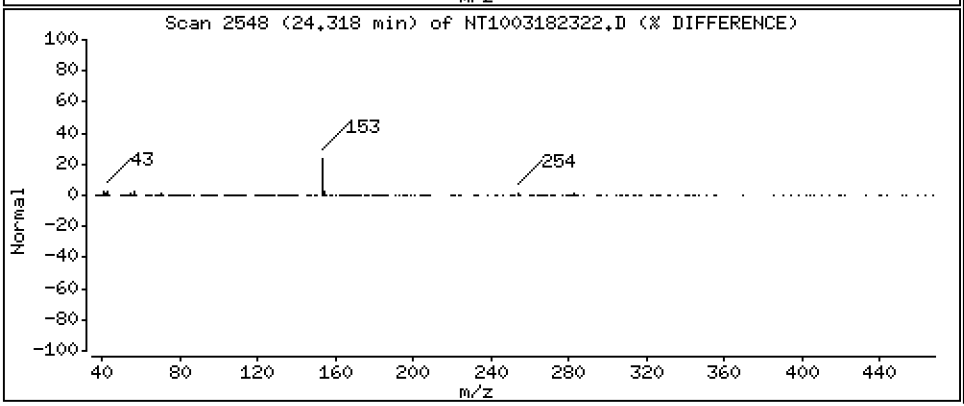












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

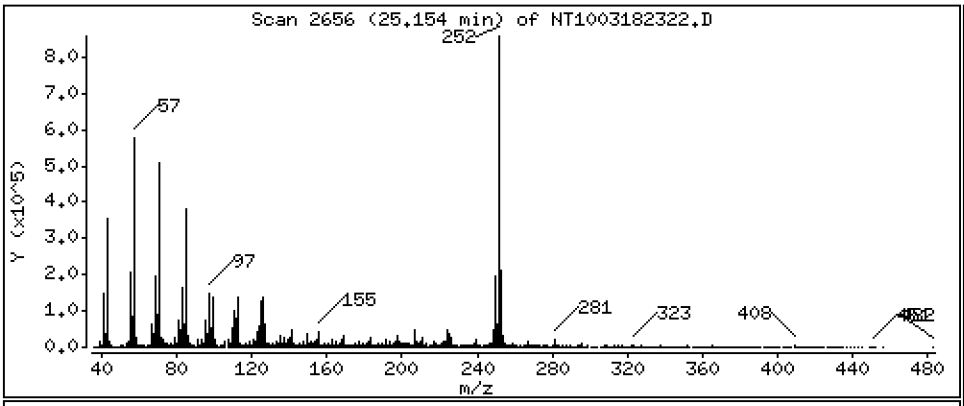
Operator: VTS

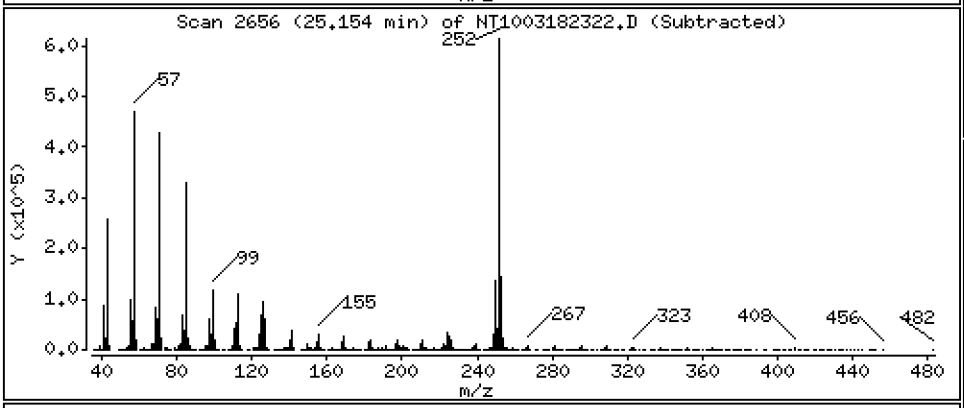
Column phase: ZB-5msi

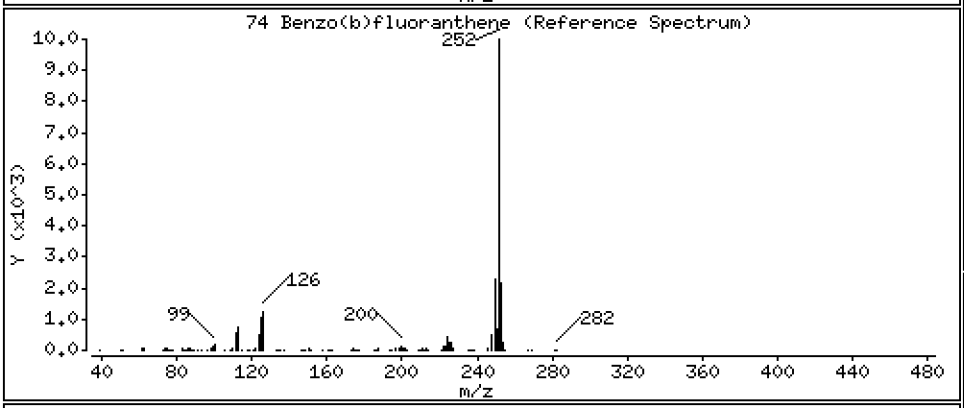
Column diameter: 0.25

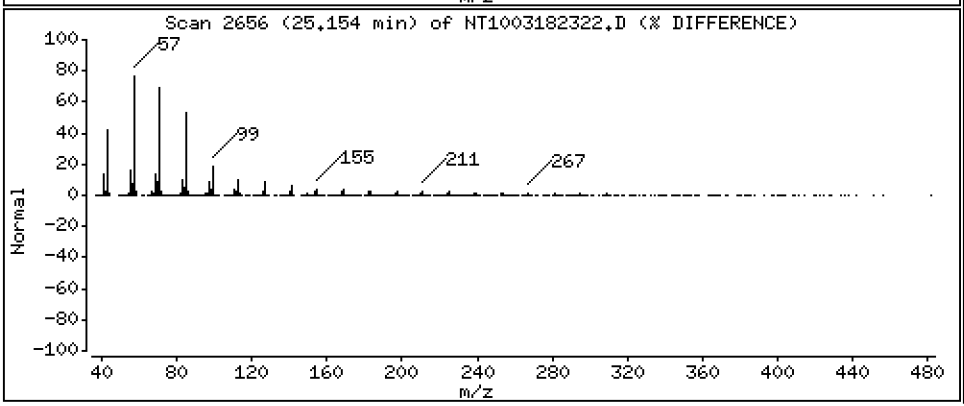
74 Benzo(b)fluoranthene

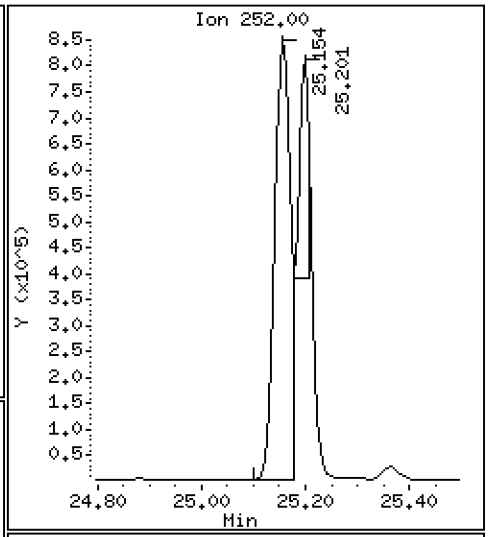
Concentration: 6.161 ug/mL

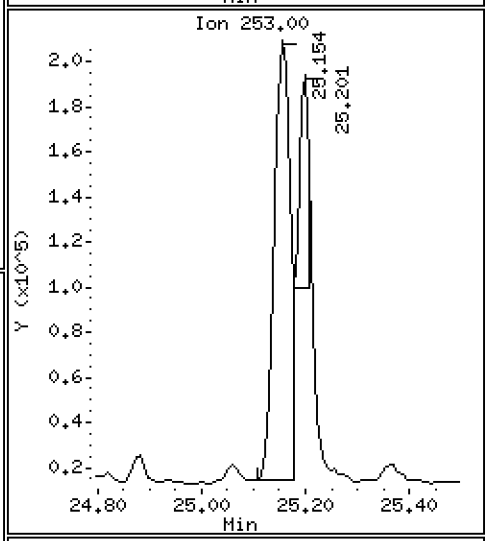


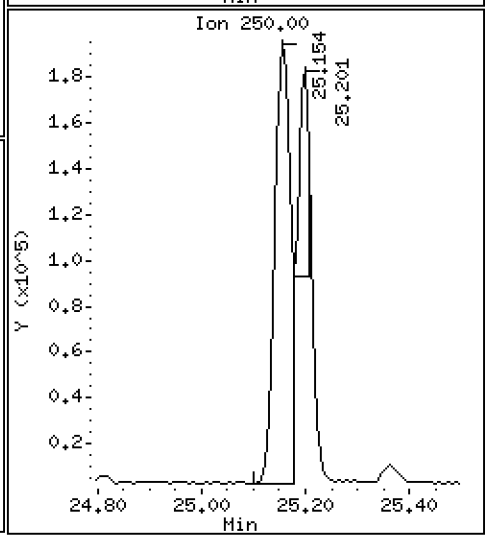












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

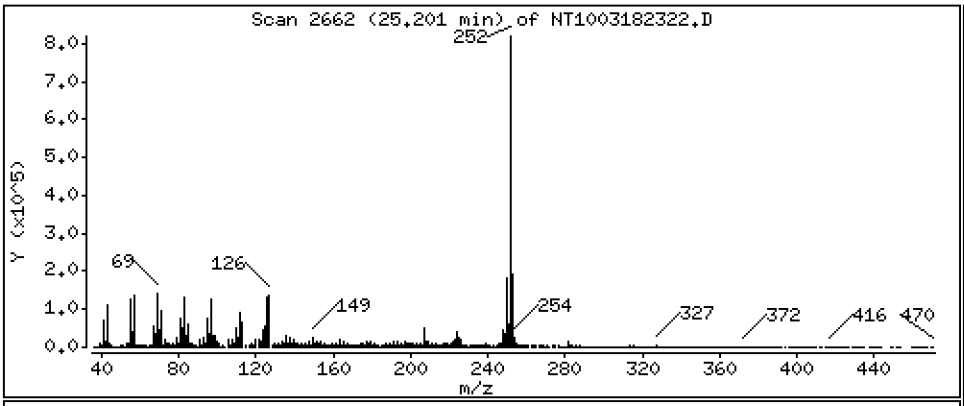
Operator: VTS

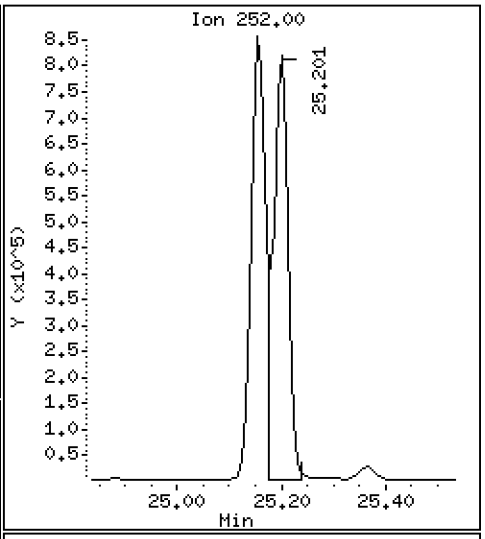
Column phase: ZB-5msi

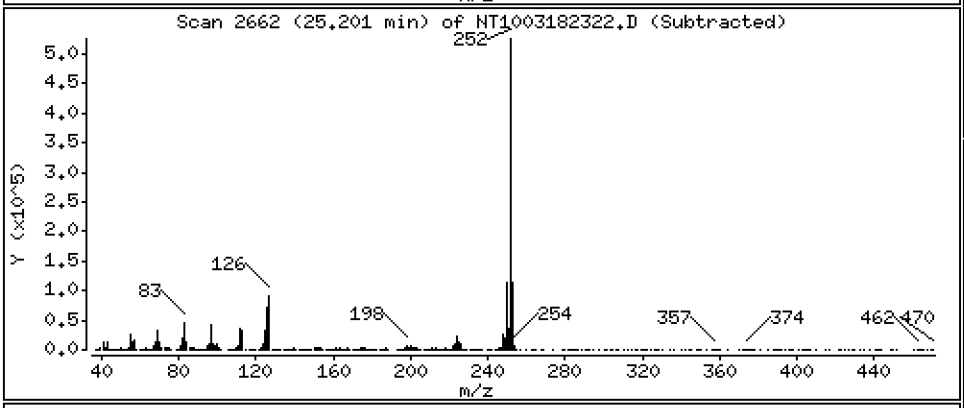
Column diameter: 0.25

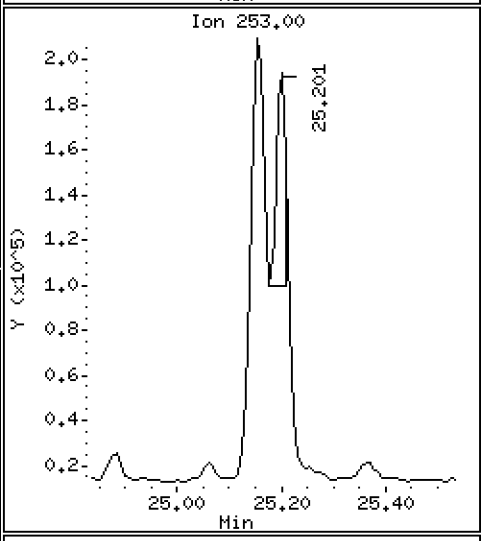
75 Benzo(k)fluoranthene

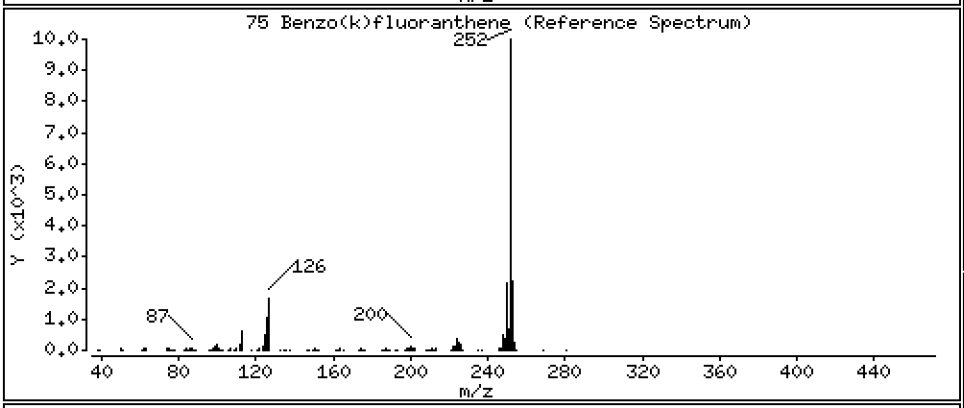
Concentration: 5.737 ug/mL

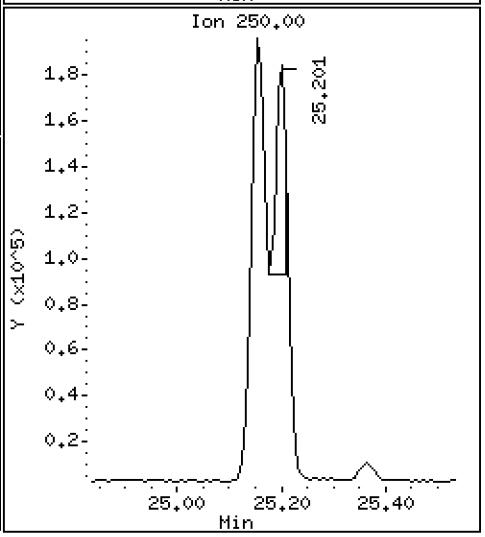


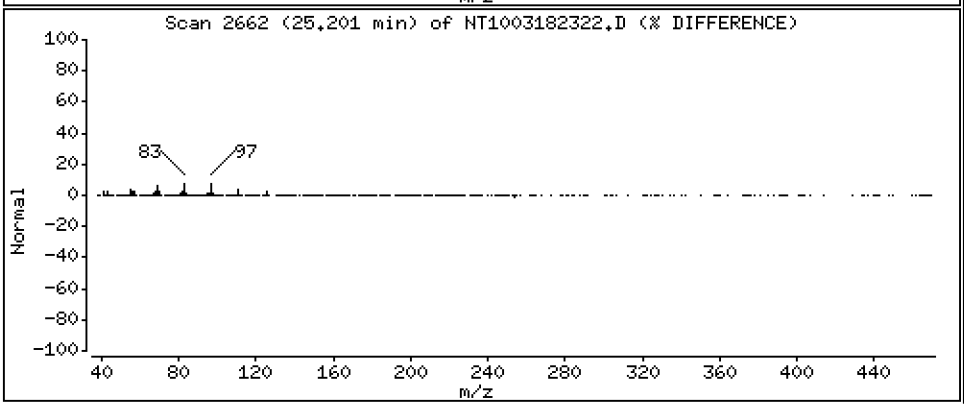












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

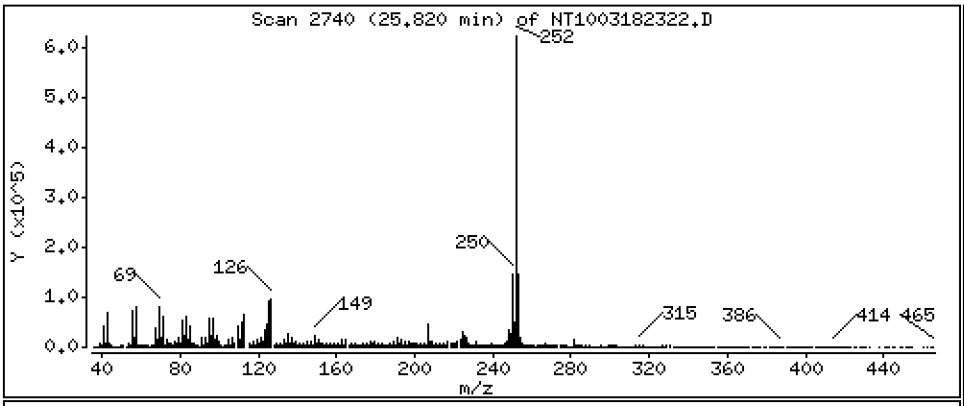
Operator: VTS

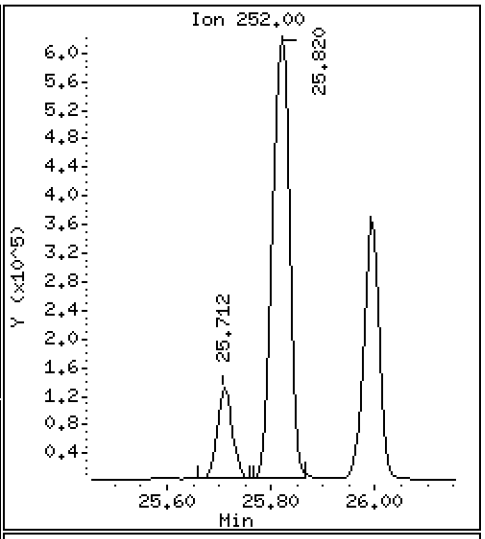
Column phase: ZB-5msi

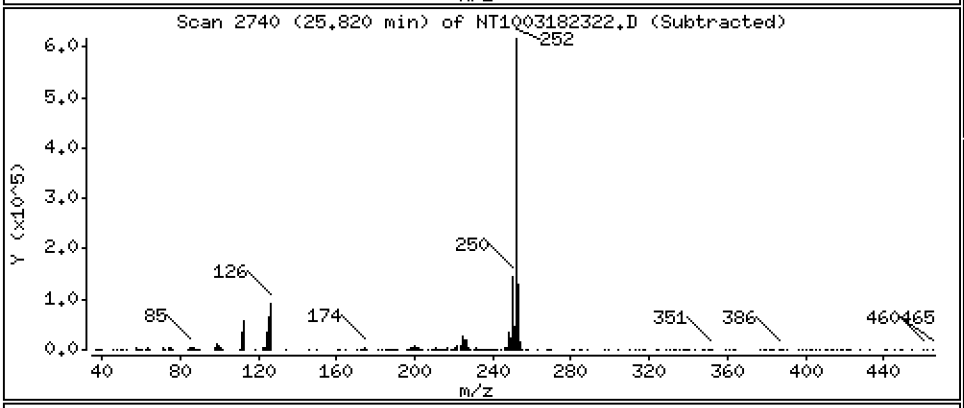
Column diameter: 0.25

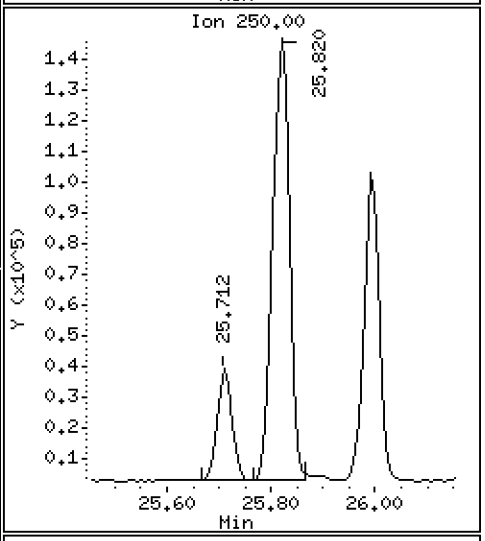
76 Benzo(a)pyrene

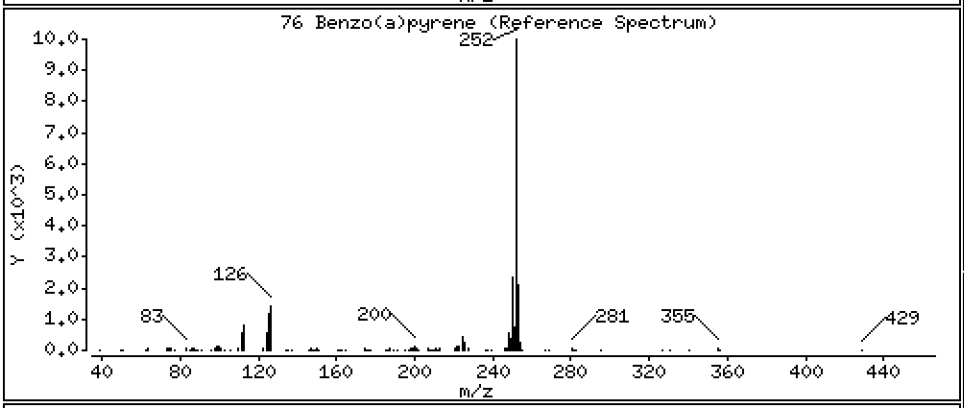
Concentration: 5.456 ug/mL

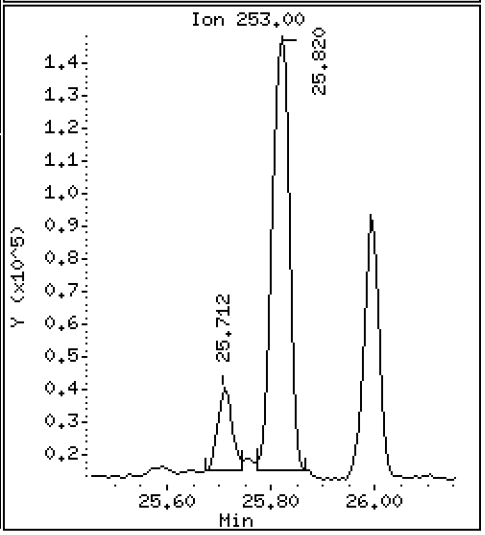


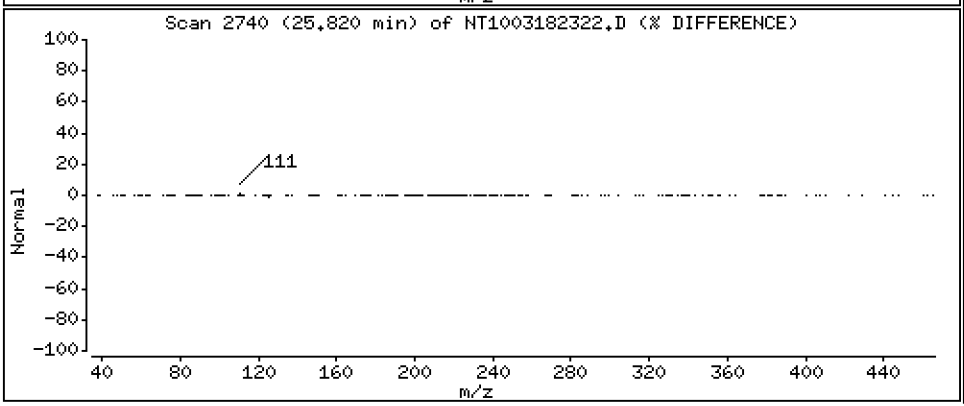












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

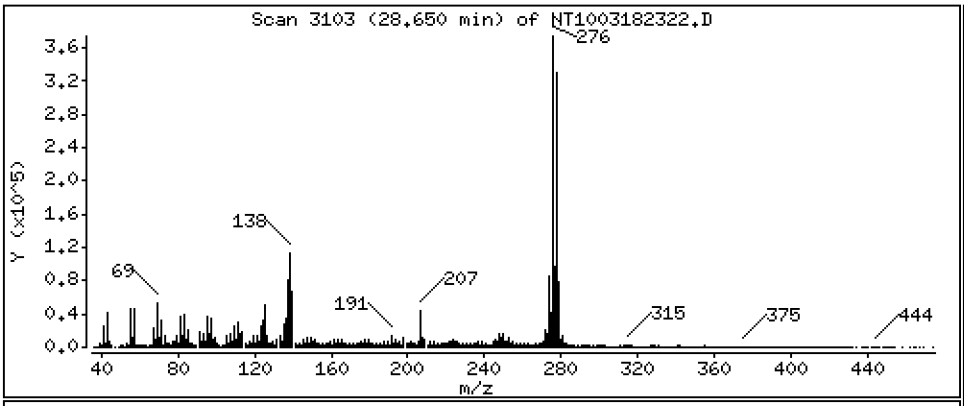
Operator: VTS

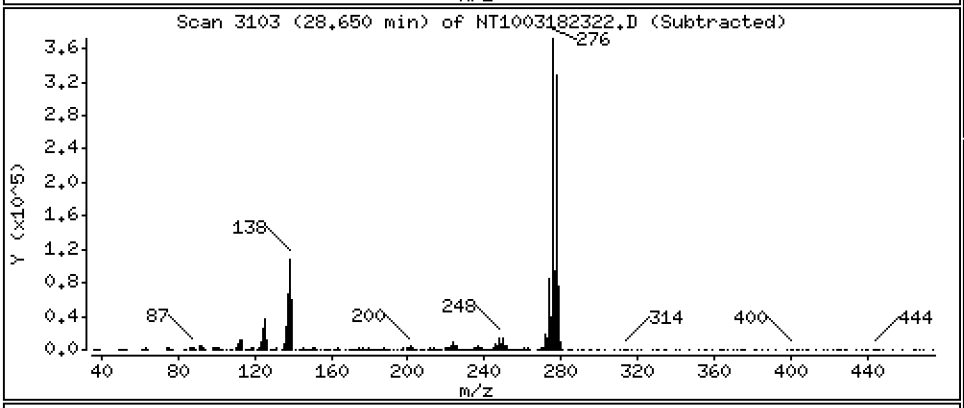
Column phase: ZB-5msi

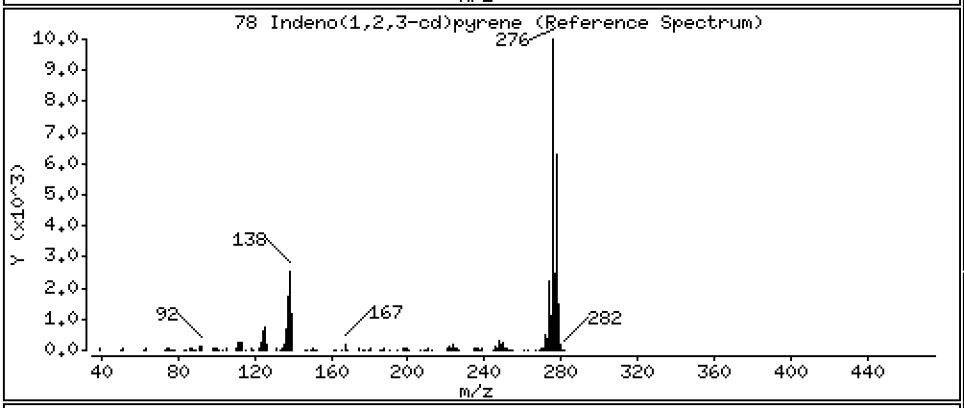
Column diameter: 0.25

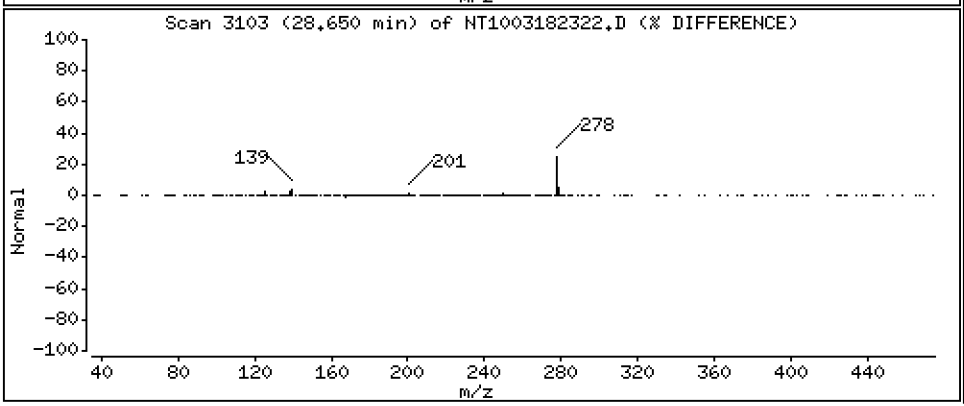
78 Indeno(1,2,3-cd)pyrene

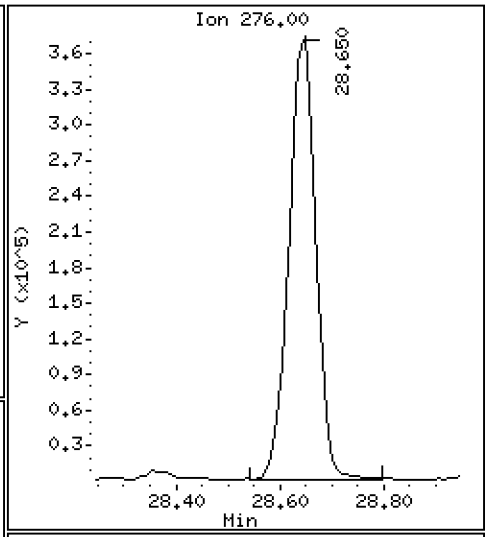
Concentration: 4.231 ug/mL

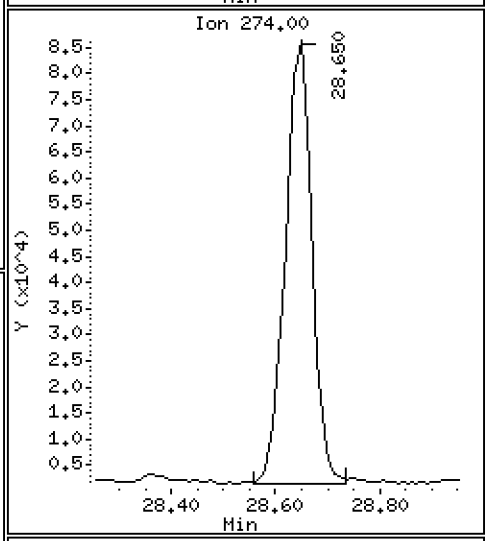


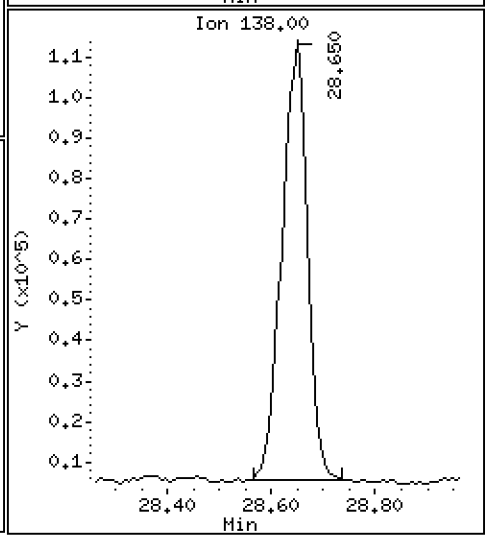












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

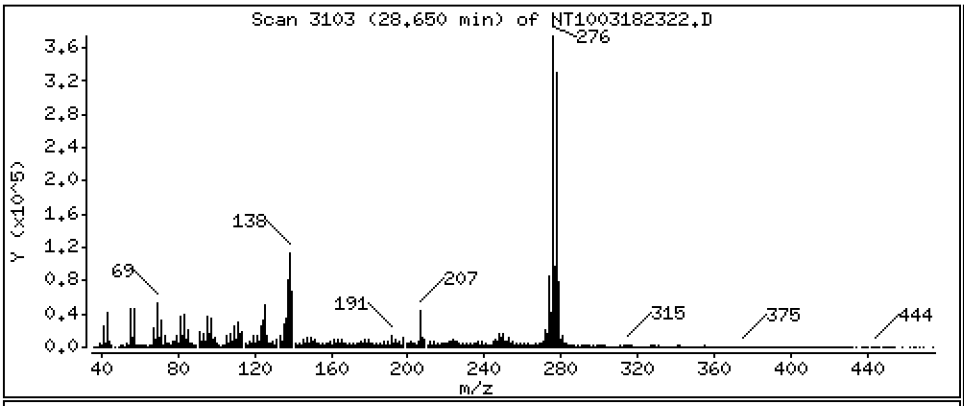
Operator: VTS

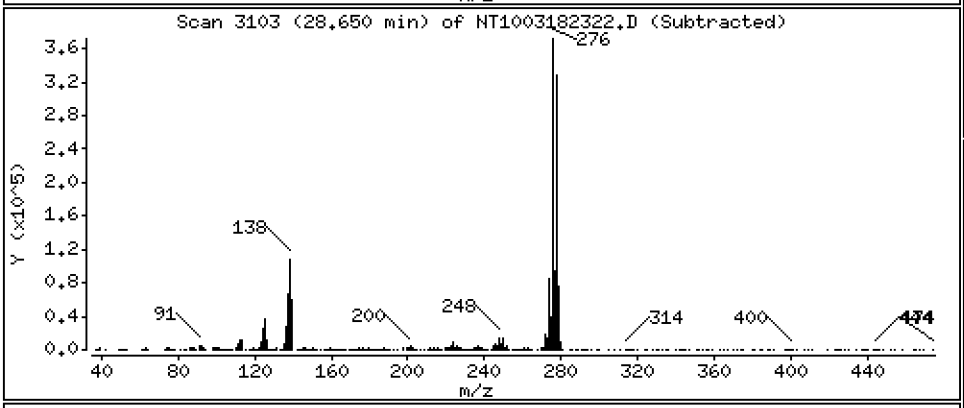
Column phase: ZB-5msi

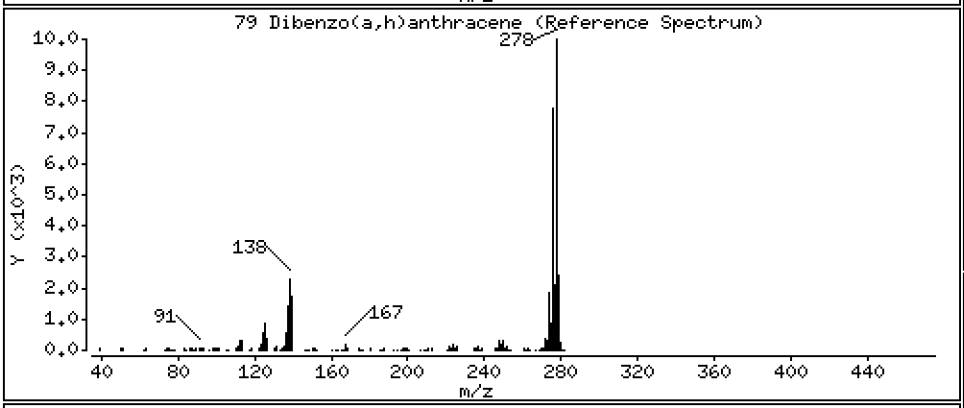
Column diameter: 0.25

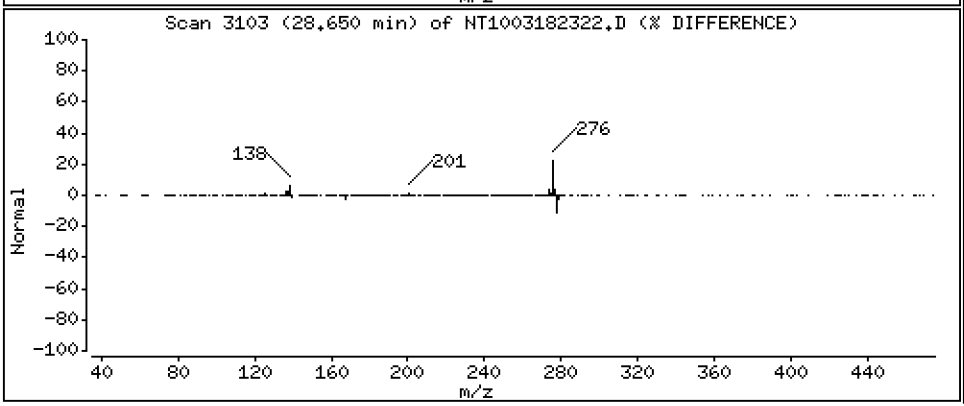
79 Dibenzo(a,h)anthracene

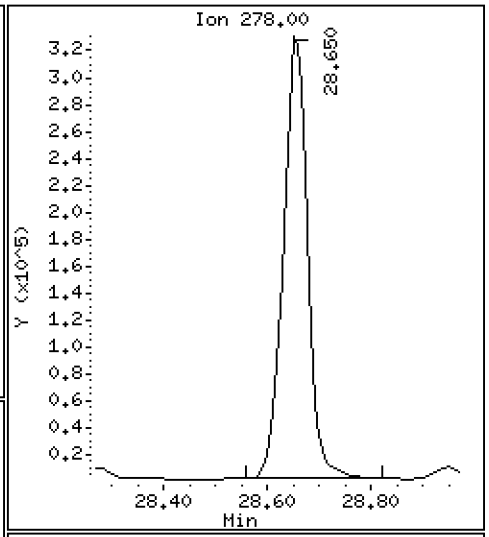
Concentration: 4.056 ug/mL

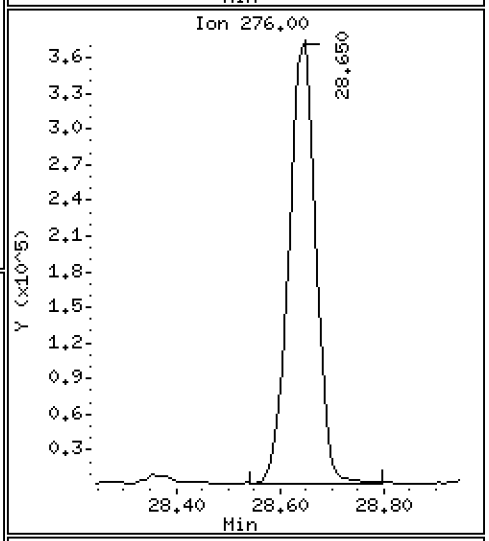


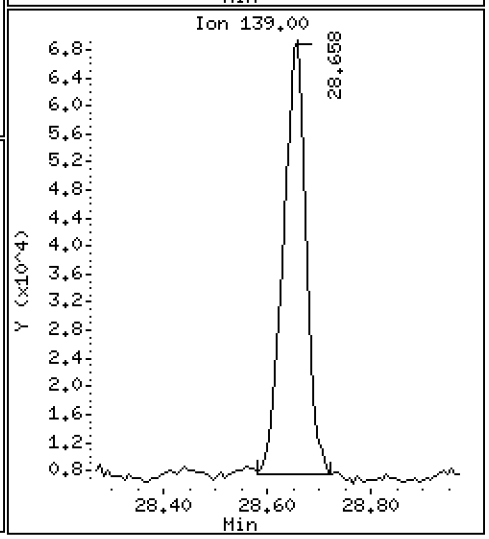












Date : 19-MAR-2023 07:08

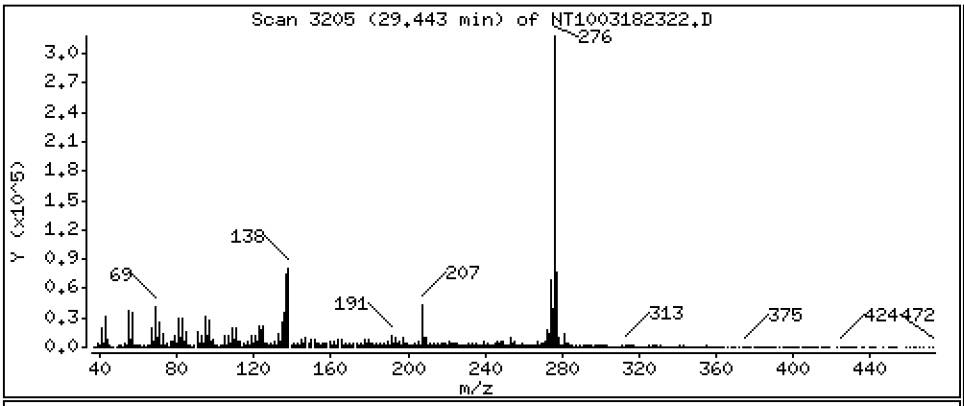
Client ID: Instrument: nt10.i

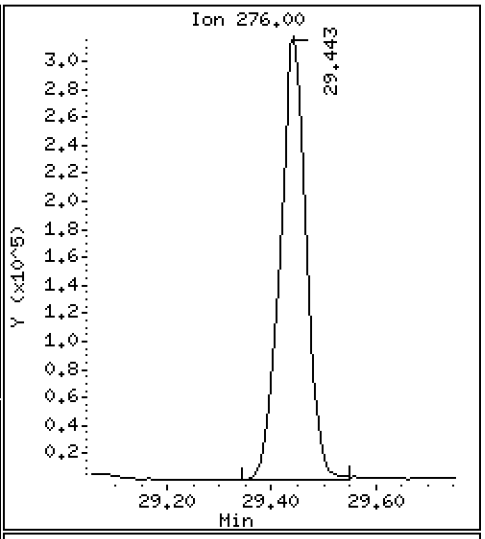
Sample Info: BLB0579-MSD1

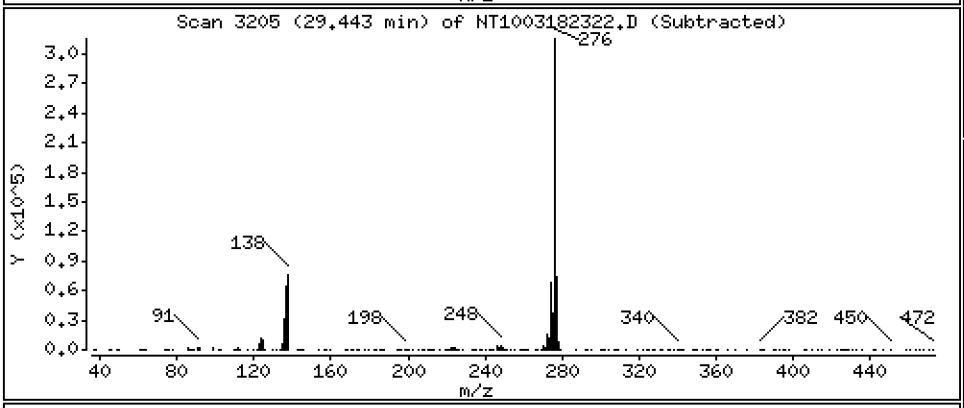
Operator: VTS

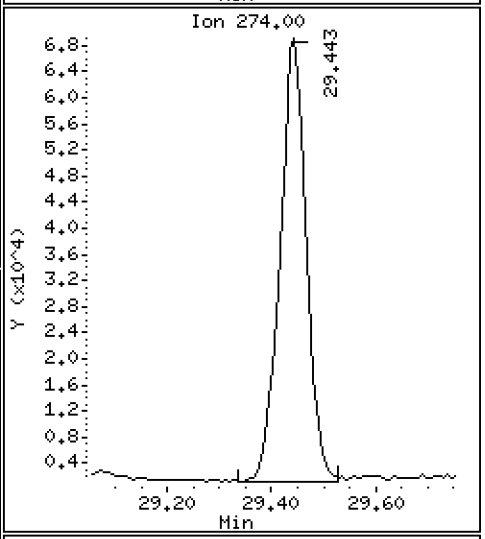
Column phase: ZB-5msi Column diameter: 0.25

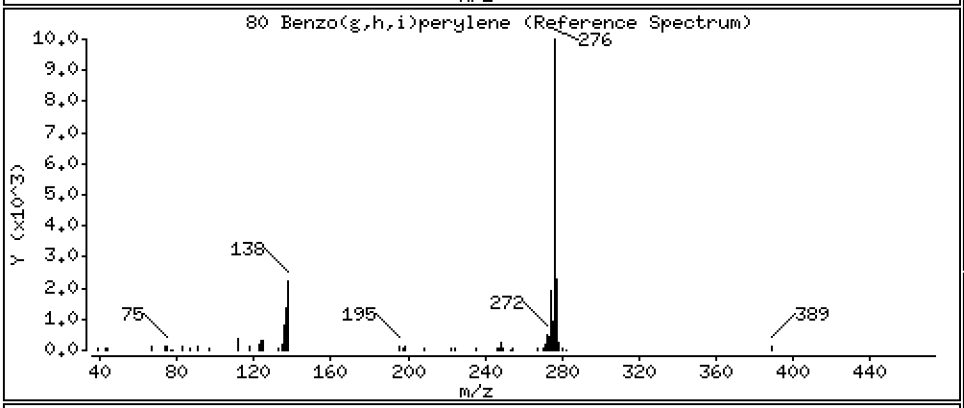
80 Benzo(g,h,i)perylene Concentration: 4.013 ug/mL

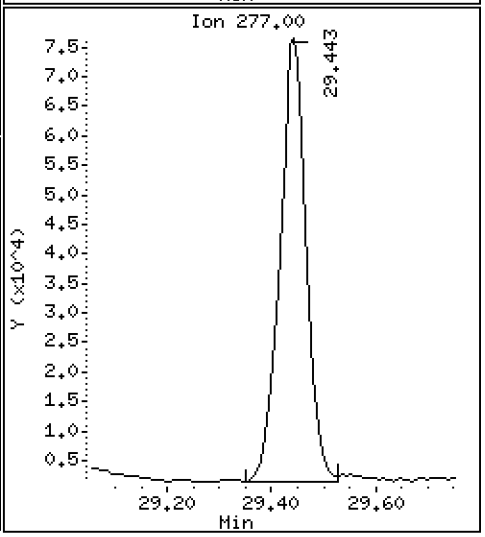


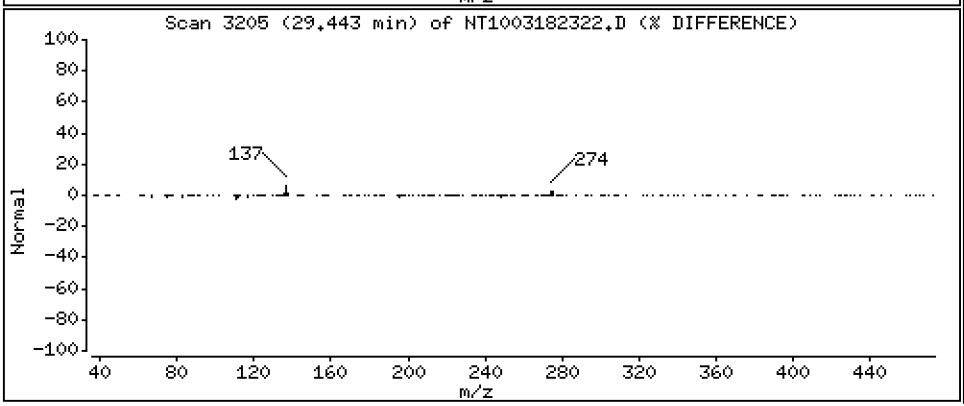












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

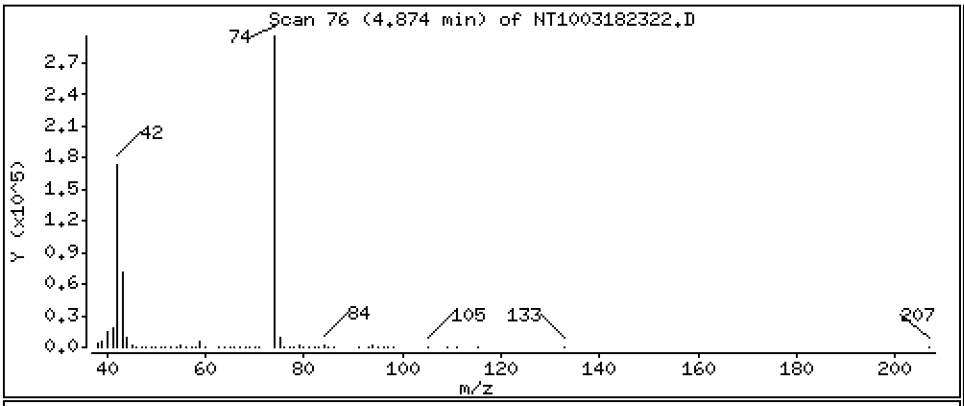
Operator: VTS

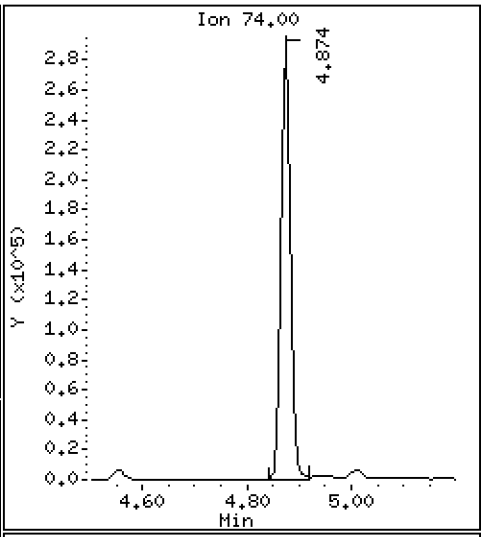
Column phase: ZB-5msi

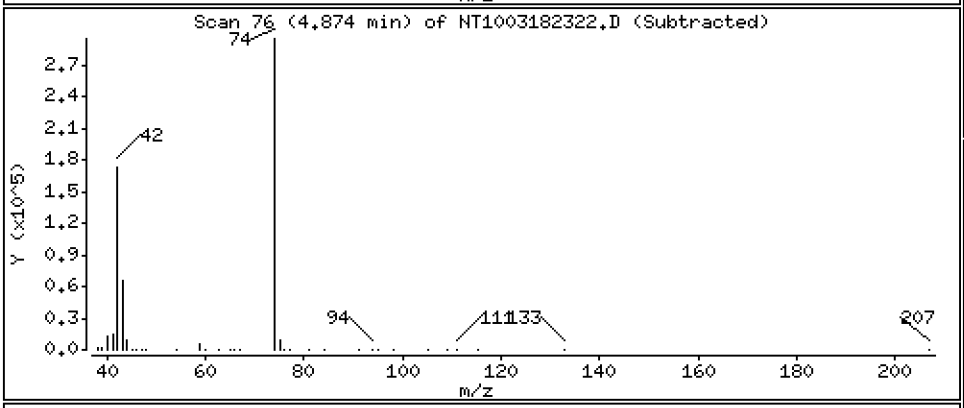
Column diameter: 0.25

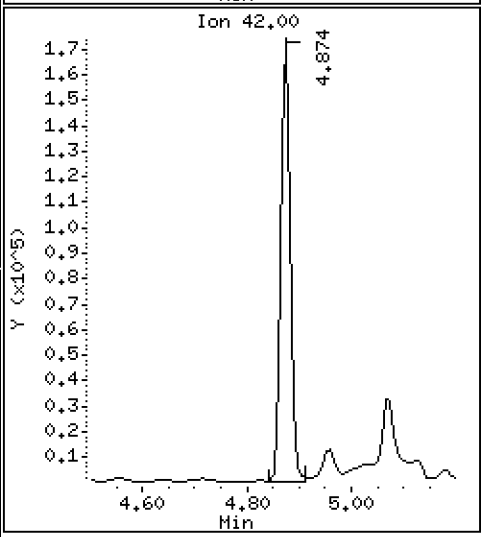
90 N-Nitrosodimethylamine

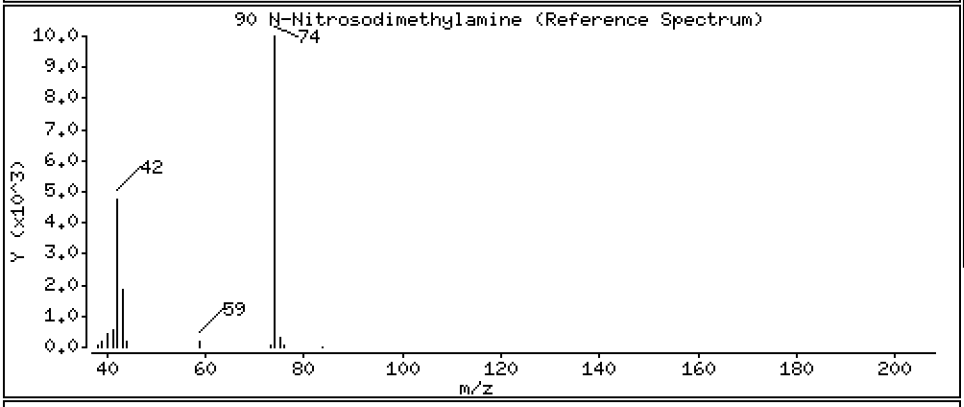
Concentration: 8.101 ug/mL

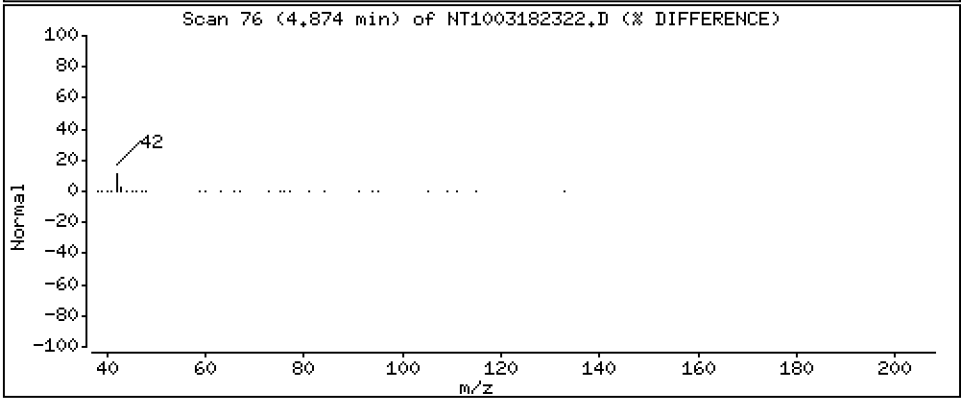












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

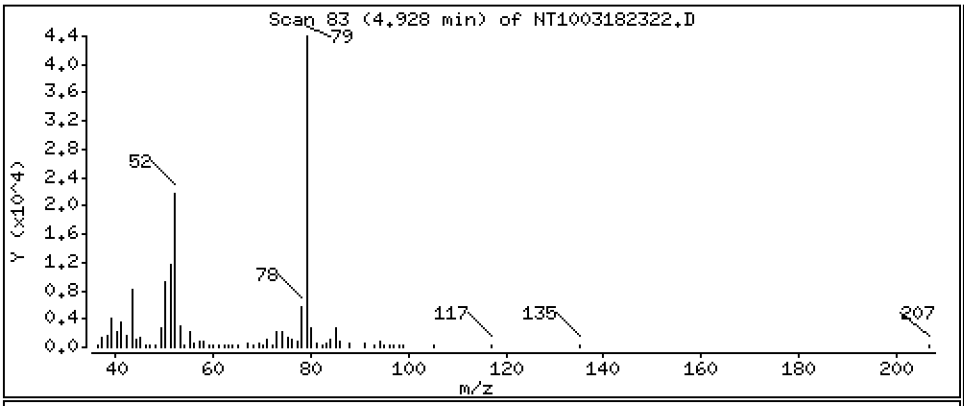
Operator: VTS

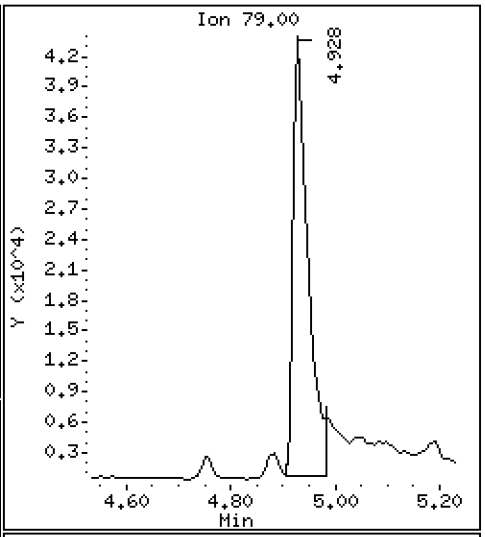
Column phase: ZB-5msi

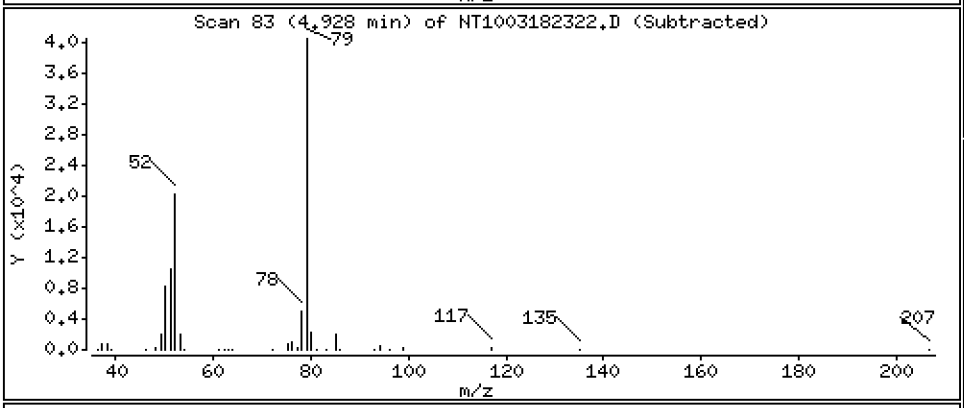
Column diameter: 0.25

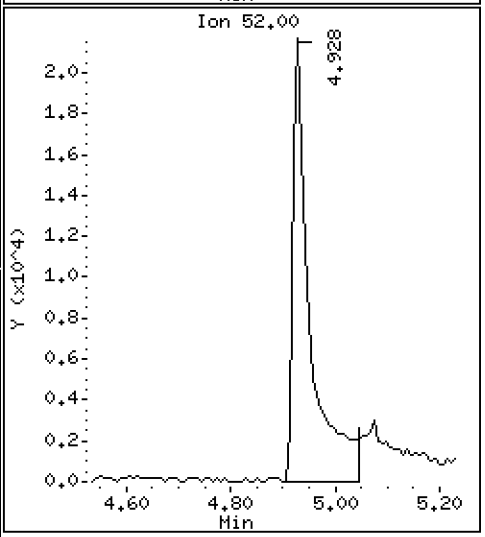
103 Pyridine

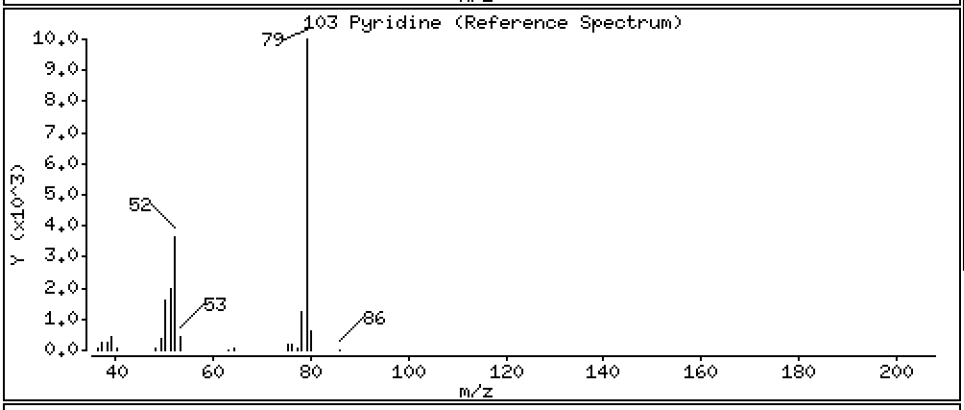
Concentration: 1.220 ug/mL

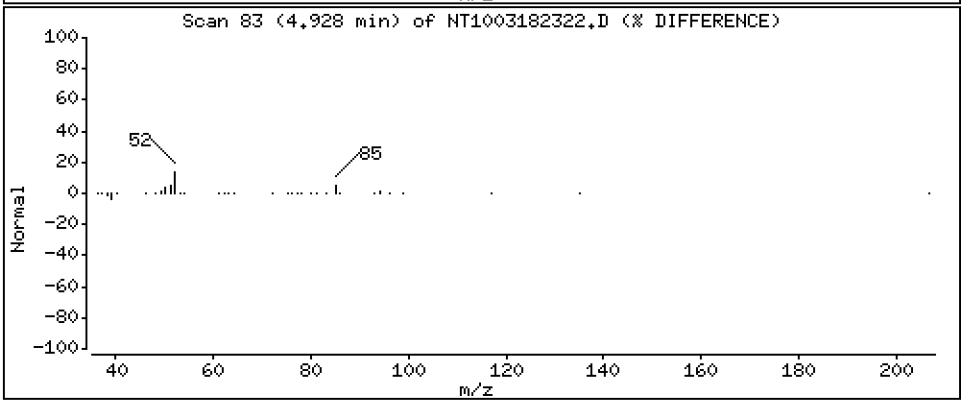












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

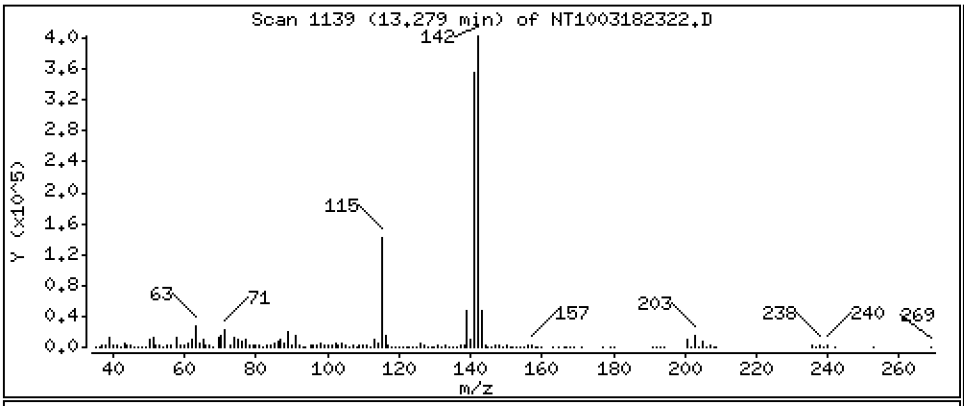
Operator: VTS

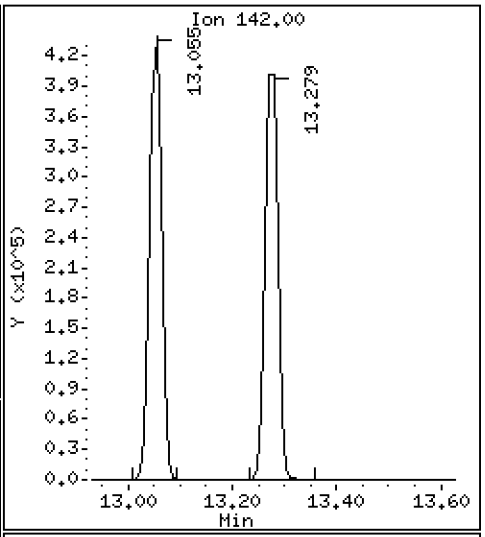
Column phase: ZB-5msi

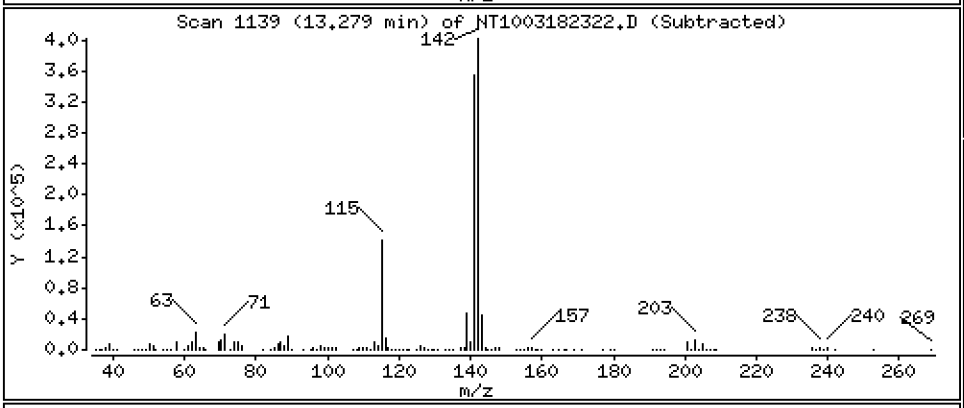
Column diameter: 0.25

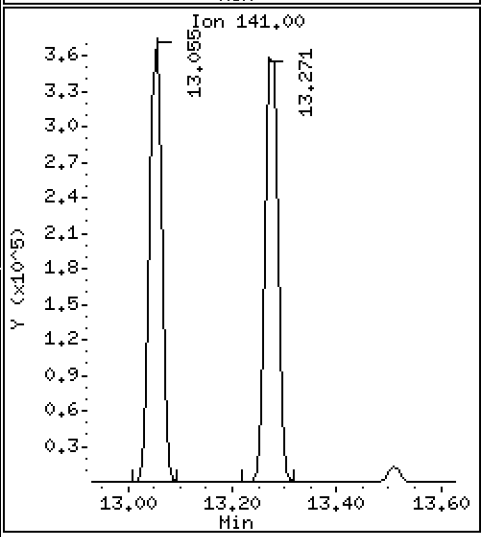
105 1-methylnaphthalene

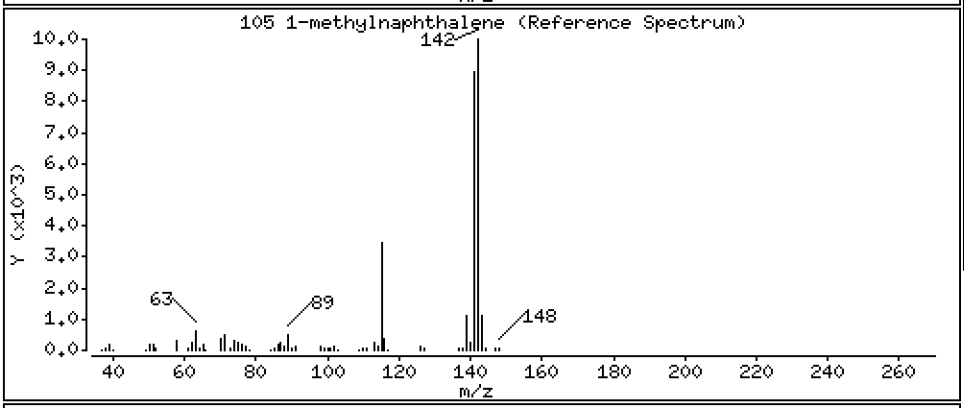
Concentration: 4.183 ug/mL

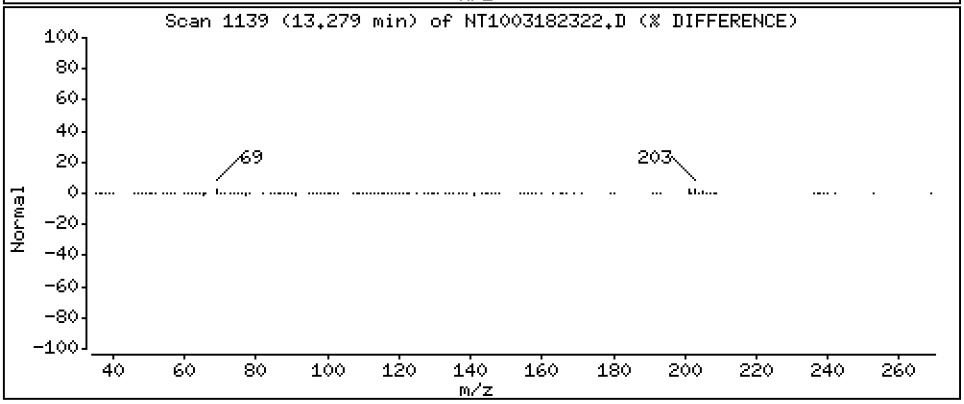












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

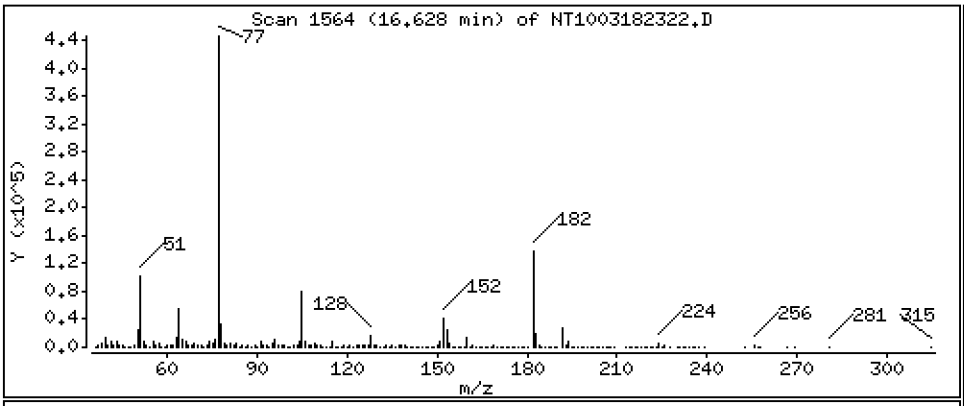
Operator: VTS

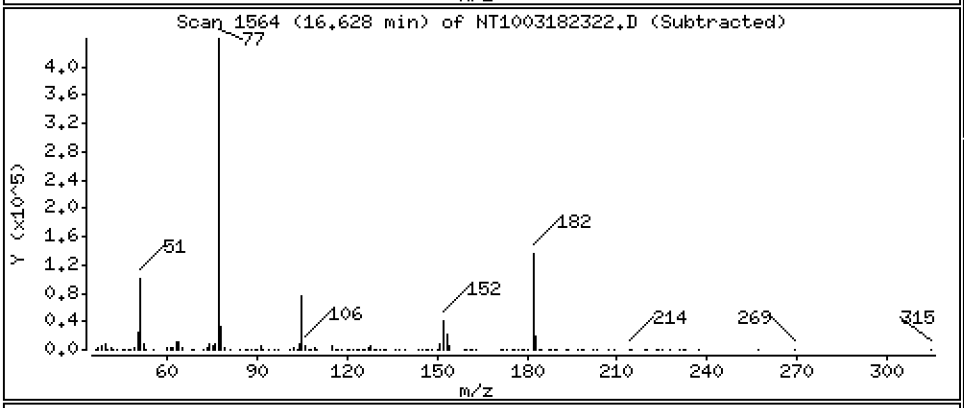
Column phase: ZB-5msi

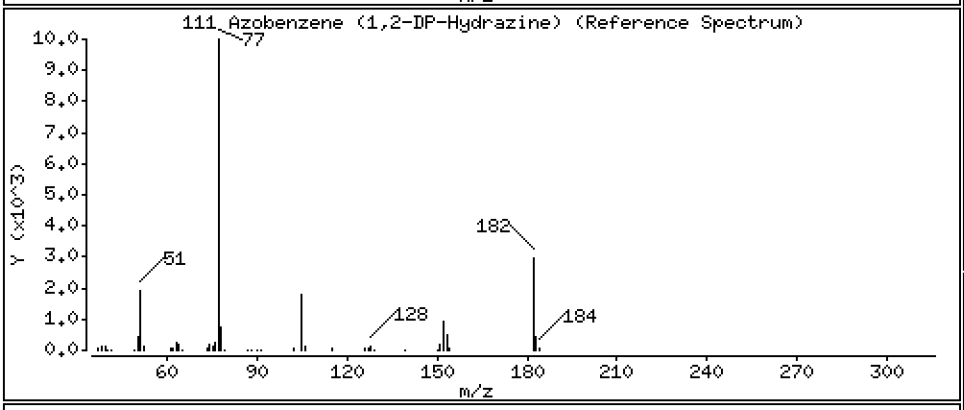
Column diameter: 0.25

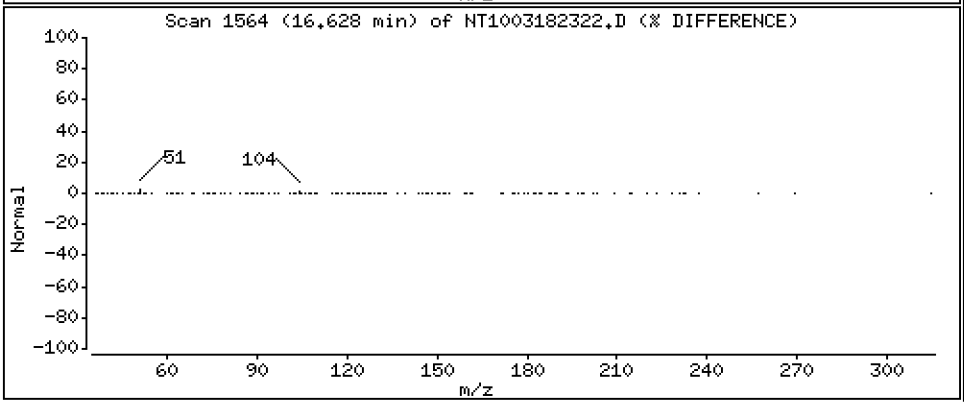
111 Azobenzene (1,2-DP-Hydrazine)

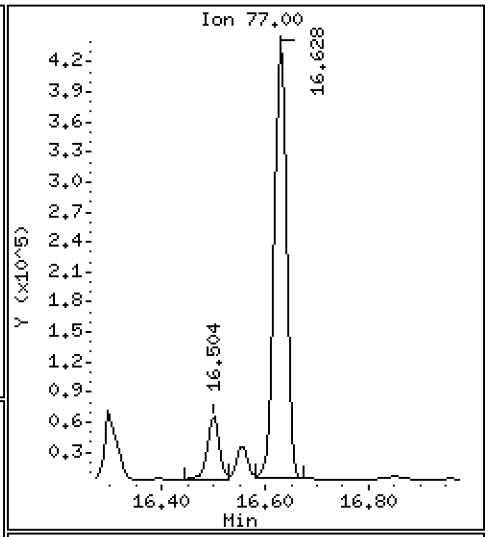
Concentration: 3.856 ug/mL

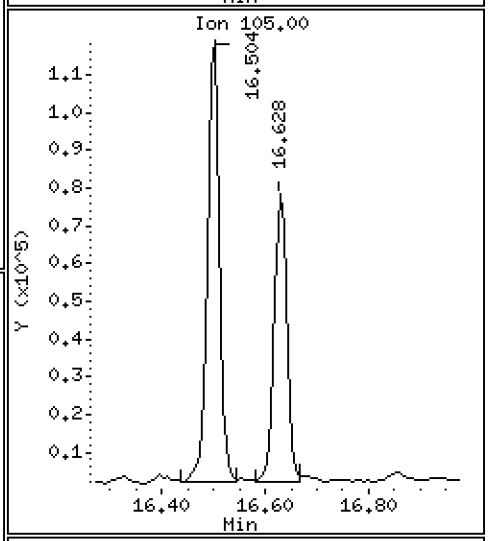


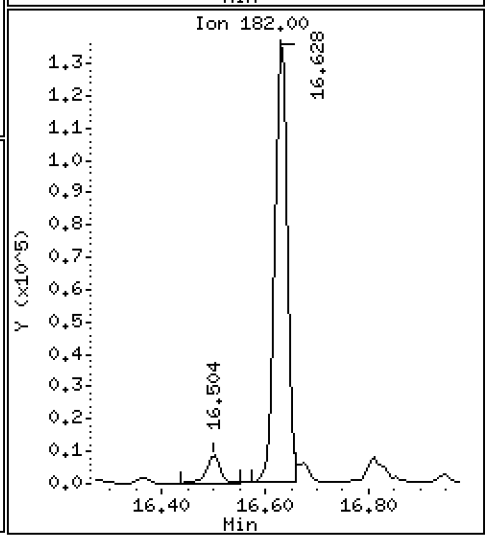












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

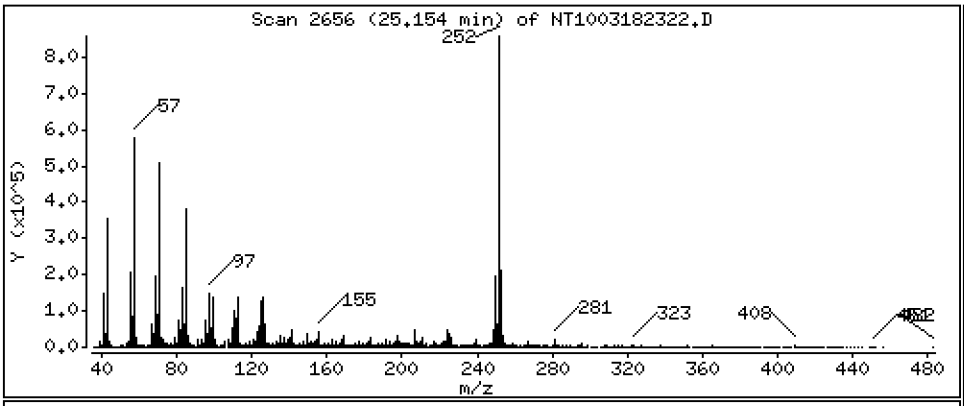
Operator: VTS

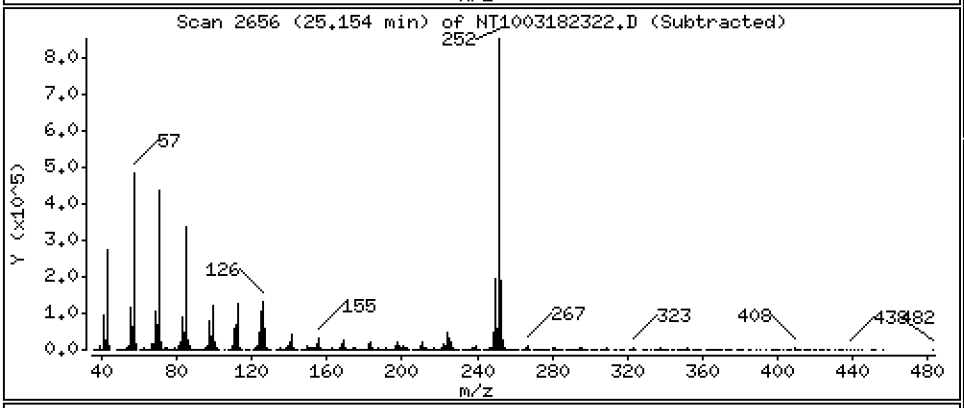
Column phase: ZB-5msi

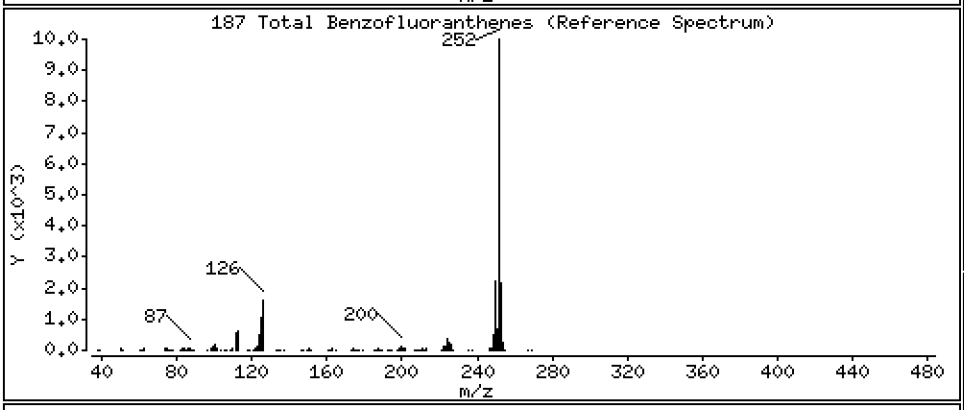
Column diameter: 0.25

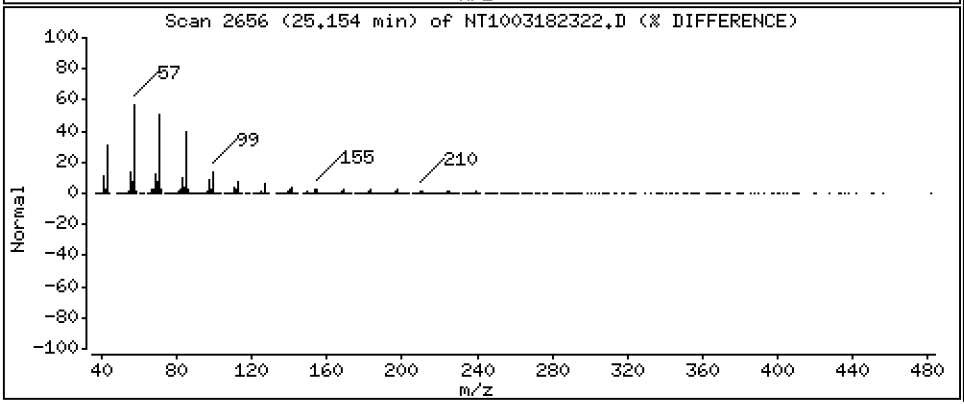
187 Total Benzofluoranthenes

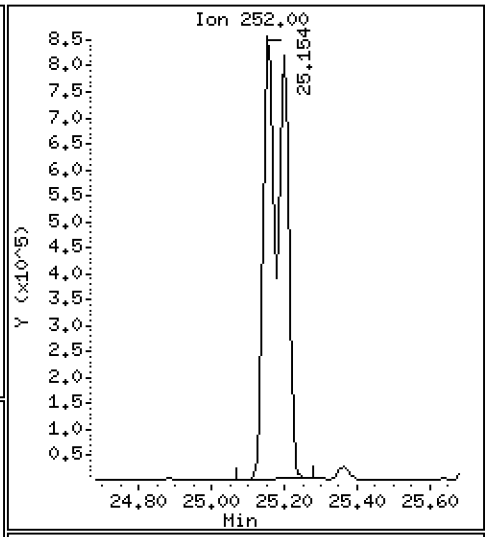
Concentration: 11.73 ug/mL

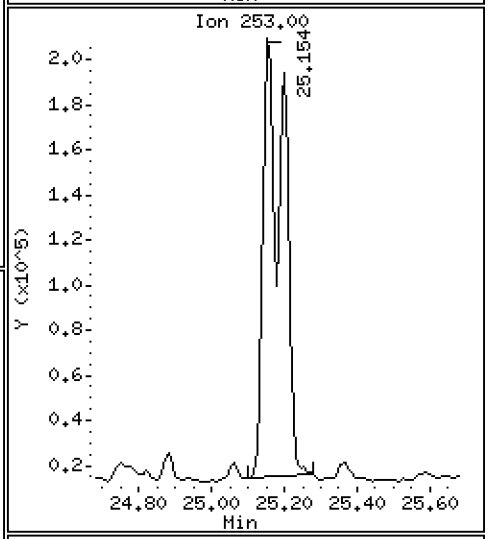


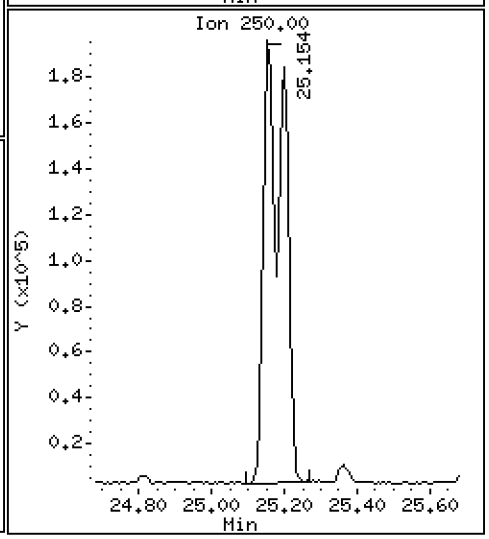












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Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD1

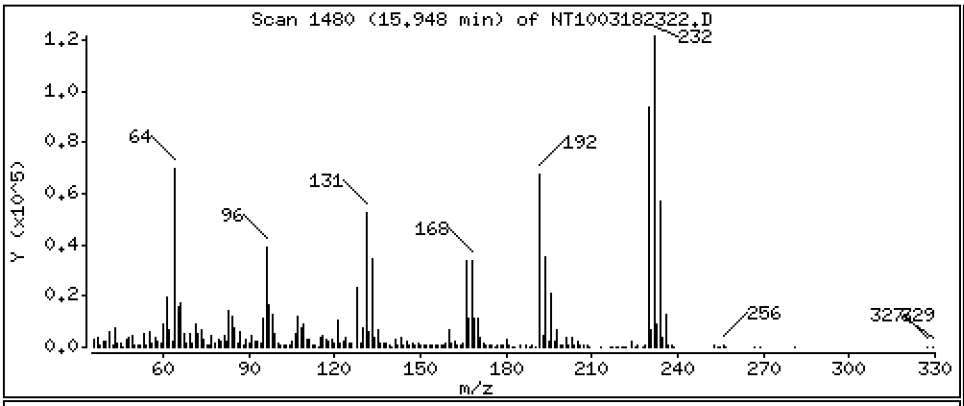
Operator: VTS

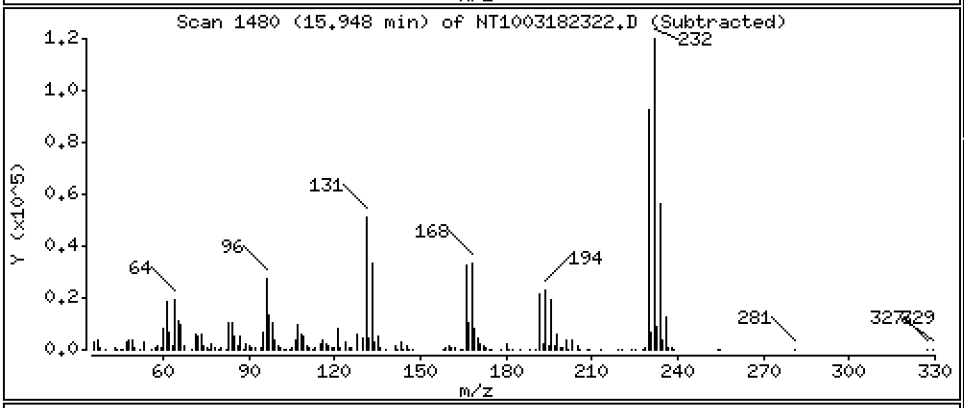
Column phase: ZB-5msi

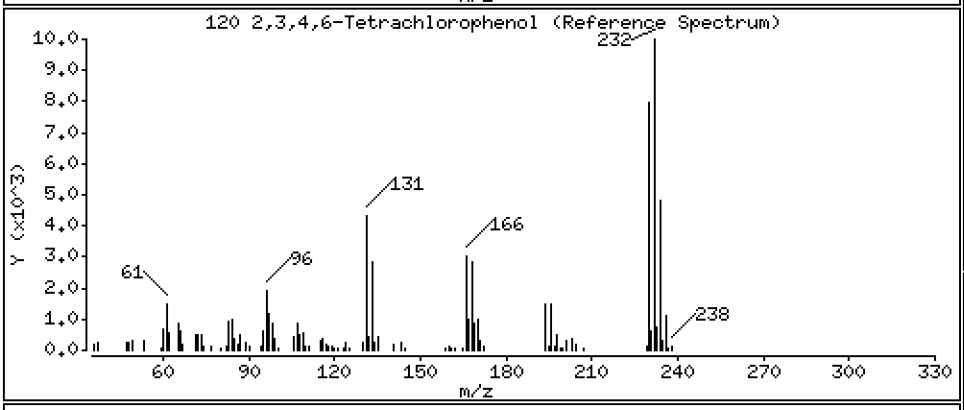
Column diameter: 0.25

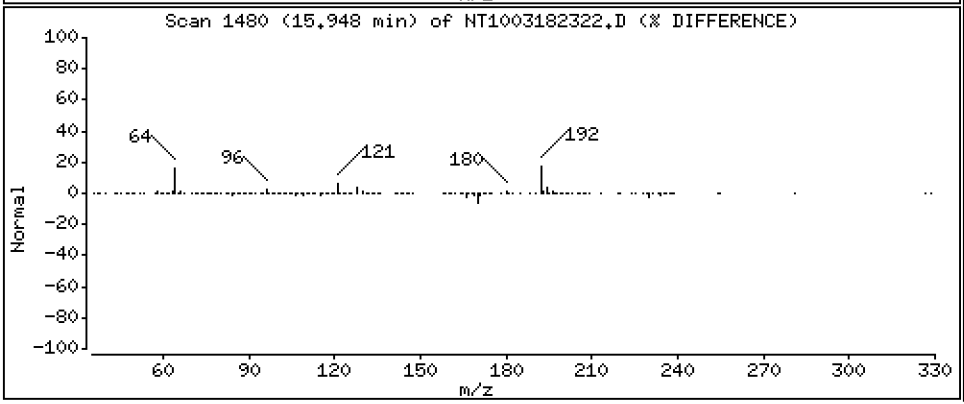
120 2,3,4,6-Tetrachlorophenol

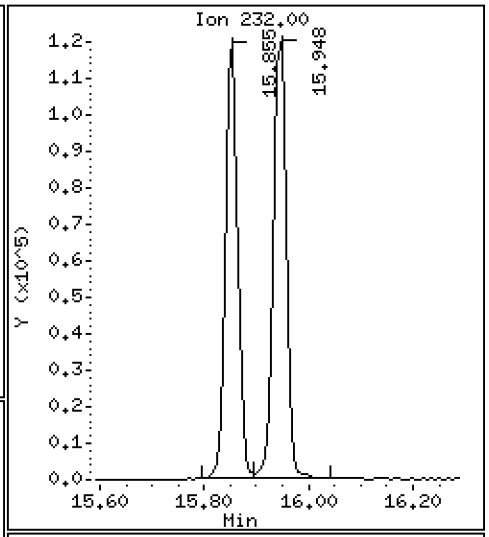
Concentration: 3.874 ug/mL

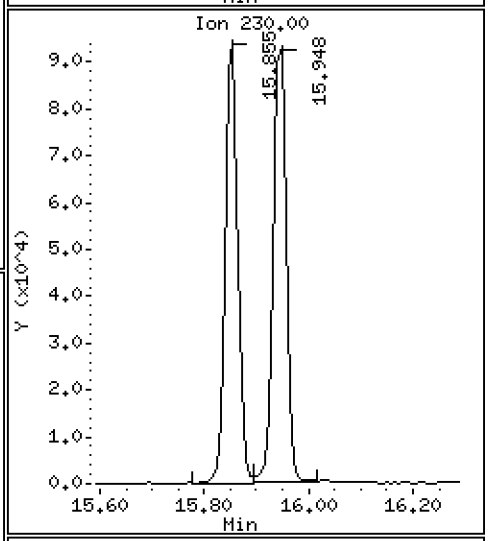


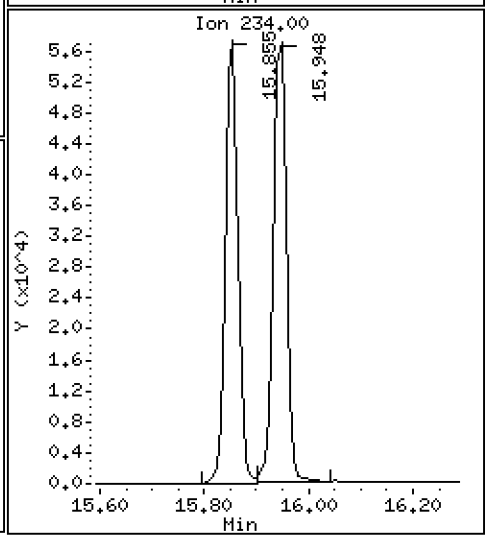












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182322.D
Lab Smp Id: BLB0579-MSD1
Inj Date : 19-MAR-2023 07:08
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-MSD1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.975	6.967	(0.761)	415621	5.58724	5.587
$	2	Phenol-d5	99	8.536	8.528	(0.931)	549969	5.63577	5.636
	3	Phenol	94	8.559	8.551	(0.933)	910321	8.97695	8.977
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	493102	5.91739	5.917
	4	Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	300255	3.99217	3.992
	6	2-Chlorophenol	128	8.845	8.837	(0.965)	316703	3.64908	3.649
	7	1,3-Dichlorobenzene	146	9.108	9.107	(0.993)	335772	3.65945	3.659
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	245981	4.00000	
	9	1,4-Dichlorobenzene	146	9.201	9.200	(1.003)	331718	3.74243	3.742
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	217374	3.63232	3.632
	12	1,2-Dichlorobenzene	146	9.558	9.557	(1.042)	325159	3.72753	3.728
	11	Benzyl alcohol	108	9.434	9.433	(1.029)	171755	3.60851	3.609
	14	2,2'-oxybis(1-Chloropropane)	121	9.729	9.728	(1.061)	111276	4.34375	4.344
	13	2-Methylphenol	108	9.659	9.651	(1.053)	261803	3.54160	3.542
	17	Hexachloroethane	117	10.140	10.140	(1.106)	96128	2.64331	2.643
	16	N-Nitroso-di-n-propylamine	70	9.993	9.984	(1.090)	225746	3.86752	3.868
	15	4-Methylphenol	108	9.930	9.915	(1.083)	788311	10.1210	10.12
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.881)	343577	3.77793	3.778
	19	Nitrobenzene	77	10.295	10.287	(0.885)	341173	3.82272	3.823
	20	Isophorone	82	10.738	10.737	(0.923)	614999	5.38656	5.387
	21	2-Nitrophenol	139	10.913	10.912	(0.938)	180651	4.14450	4.145
	22	2,4-Dimethylphenol	107	10.956	10.955	(0.941)	554064	6.75891	6.759
	23	Bis(2-Chloroethoxy)methane	93	11.151	11.150	(0.958)	350553	4.59651	4.597
	24	Benzoic acid	105	11.126	11.150	(0.956)	667761	14.1953	14.20
	25	2,4-Dichlorophenol	162	11.363	11.362	(0.976)	851527	12.9806	12.98
	26	1,2,4-Trichlorobenzene	180	11.546	11.545	(0.992)	352508	4.57778	4.578
*	27	Naphthalene-d8	136	11.639	11.638	(1.000)	900997	4.00000	
	28	Naphthalene	128	11.677	11.676	(1.003)	916080	3.83799	3.838
	29	4-Chloroaniline	127	11.847	11.800	(1.018)	124430	1.33629	1.336
	30	Hexachlorobutadiene	225	12.025	12.024	(1.033)	185653	4.11465	4.115
	31	4-Chloro-3-methylphenol	107	12.745	12.743	(1.095)	917838	12.9245	12.92
	32	2-Methylnaphthalene	142	13.054	13.053	(1.122)	673085	3.90758	3.908
	33	Hexachlorocyclopentadiene	237	13.511	13.510	(0.888)	158039	3.46250	3.462

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.665	13.664	(0.898)	685964	14.0728	14.07
35	2,4,5-Trichlorophenol	196	13.743	13.742	(0.903)	749673	13.8415	13.84
$ 36	2-Fluorobiphenyl	172	13.828	13.827	(0.908)	764852	3.92056	3.921
37	2-Chloronaphthalene	162	14.045	14.044	(0.923)	644155	4.07785	4.078
38	2-Nitroaniline	65	14.300	14.299	(0.939)	513539	11.5734	11.57
39	Dimethylphthalate	163	14.726	14.717	(0.967)	723387	4.51517	4.515
40	Acenaphthylene	152	14.912	14.910	(0.980)	990110	4.02245	4.022
41	2,6-Dinitrotoluene	165	14.865	14.864	(0.977)	475135	13.7284	13.73
* 42	Acenaphthene-d10	164	15.221	15.220	(1.000)	493178	4.00000	
43	3-Nitroaniline	138	15.151	15.143	(0.995)	192165	4.91924	4.919
44	Acenaphthene	153	15.283	15.282	(1.004)	638626	4.19970	4.200
45	2,4-Dinitrophenol	184	15.352	15.351	(1.009)	204683	9.61622	9.616
46	Dibenzofuran	168	15.608	15.606	(1.025)	940685	4.19495	4.195
47	4-Nitrophenol	109	15.468	15.460	(1.016)	286556	11.7489	11.75
48	2,4-Dinitrotoluene	165	15.669	15.668	(1.029)	663267	12.9384	12.94
50	Diethylphthalate	149	16.172	16.171	(1.062)	905946	5.76326	5.763
49	Fluorene	166	16.319	16.318	(1.072)	668135	3.78722	3.787
51	4-Chlorophenyl-phenylether	204	16.296	16.295	(1.071)	193694	2.30884	2.309
52	4-Nitroaniline	138	16.411	16.410	(1.078)	214927	6.10517	6.105
53	4,6-Dinitro-2-methylphenol	198	16.504	16.503	(0.904)	510195	17.8554	17.86
54	N-Nitrosodiphenylamine	169	16.558	16.557	(0.907)	517081	4.17004	4.170
$ 55	2,4,6-Tribromophenol	330	16.851	16.850	(1.107)	160218	6.96825	6.968
56	4-Bromophenyl-phenylether	248	17.306	17.305	(0.948)	239913	4.62491	4.625
57	Hexachlorobenzene	284	17.623	17.621	(0.966)	224058	4.11969	4.120
58	Pentachlorophenol	266	17.979	17.978	(0.985)	499987	15.0857	15.09
* 59	Phenanthrene-d10	188	18.250	18.241	(1.000)	927466	4.00000	
60	Phenanthrene	178	18.296	18.295	(1.003)	1288781	5.09601	5.096
61	Anthracene	178	18.389	18.380	(1.008)	1012296	4.17276	4.173
62	Carbazole	167	18.714	18.713	(1.025)	962669	4.42833	4.428
63	Di-n-butylphthalate	149	19.503	19.494	(1.069)	1403784	4.82734	4.827
64	Fluoranthene	202	20.695	20.670	(0.889)	1969946	6.21402	6.214
65	Pyrene	202	21.105	21.096	(0.906)	2063772	6.34611	6.346
$ 66	Terphenyl-d14	244	21.383	21.374	(0.918)	978775	4.00775	4.008
67	Butylbenzylphthalate	149	22.305	22.296	(0.958)	591858	5.02158	5.022
68	Benzo(a)anthracene	228	23.265	23.248	(0.999)	1616498	5.80477	5.805
* 69	Chrysene-d12	240	23.288	23.279	(1.000)	788957	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.334	23.326	(1.002)	1635073	6.00981	6.010
72	bis(2-Ethylhexyl)phthalate	149	23.319	23.318	(0.959)	1085856	5.30462	5.305
* 134	Di-n-octylphthalate-d4	153	24.310	24.301	(1.000)	1394856	4.00000	
73	Di-n-octylphthalate	149	24.318	24.309	(1.000)	1622453	4.44478	4.445
74	Benzo(b)fluoranthene	252	25.154	25.145	(0.970)	1746257	6.16089	6.161
75	Benzo(k)fluoranthene	252	25.200	25.184	(0.972)	1651148	5.73688	5.737(MH)
76	Benzo(a)pyrene	252	25.820	25.803	(0.996)	1382503	5.45552	5.456
* 77	Perylene-d12	264	25.936	25.919	(1.000)	874415	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.650	28.594	(1.105)	1363992	4.23071	4.231
79	Dibenzo(a,h)anthracene	278	28.650	28.618	(1.105)	1085595	4.05578	4.056
80	Benzo(g,h,i)perylene	276	29.442	29.402	(1.135)	1119748	4.01325	4.013
90	N-Nitrosodimethylamine	74	4.874	4.850	(0.532)	384460	8.10112	8.101
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.928	4.881	(0.537)	88954	1.22047	1.220
105	1-methylnaphthalene	142	13.278	13.277	(1.141)	660117	4.18277	4.183
111	Azobenzene (1,2-DP-Hydrazine)	77	16.627	16.626	(1.092)	677170	3.85644	3.856

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.154	25.184	(0.970)	3208919	11.7255	11.73(M)
120 2,3,4,6-Tetrachlorophenol	232	15.948	15.939	(1.048)	197076	3.87359	3.874

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182322.D
Lab Smp Id: BLB0579-MSD1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	245981	17.39
27 Naphthalene-d8	795859	397930	1591718	900997	13.21
42 Acenaphthene-d10	432510	216255	865020	493178	14.03
59 Phenanthrene-d10	808891	404446	1617782	927466	14.66
69 Chrysene-d12	657926	328963	1315852	788957	19.92
134 Di-n-octylphthala	1187734	593867	2375468	1394856	17.44
77 Perylene-d12	770107	385054	1540214	874415	13.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.01
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.01
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.05
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.04
134 Di-n-octylphthala	24.30	23.80	24.80	24.31	0.04
77 Perylene-d12	25.92	25.42	26.42	25.94	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182322.D

Lab ID: BLB0579-MSD1
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 07:08

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

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.537	0.532	0.0051	Pyridine

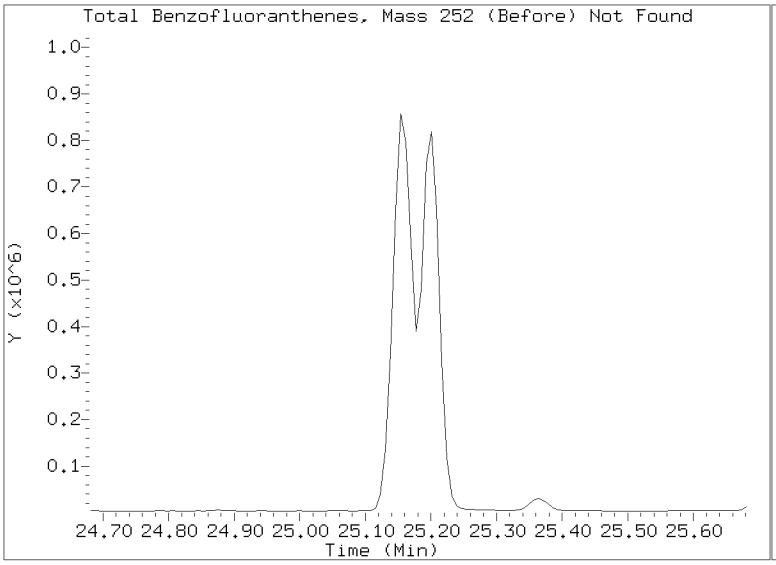
RRT check based on Ccal File: NT1003182316.D

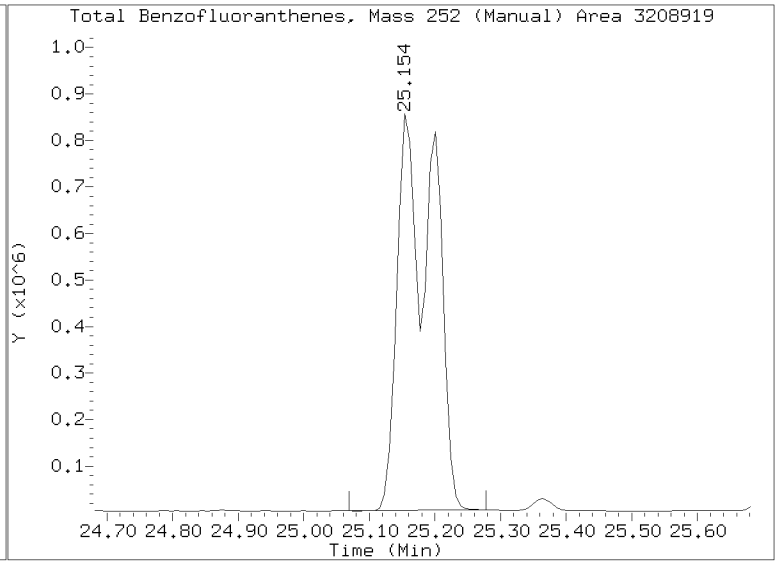
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

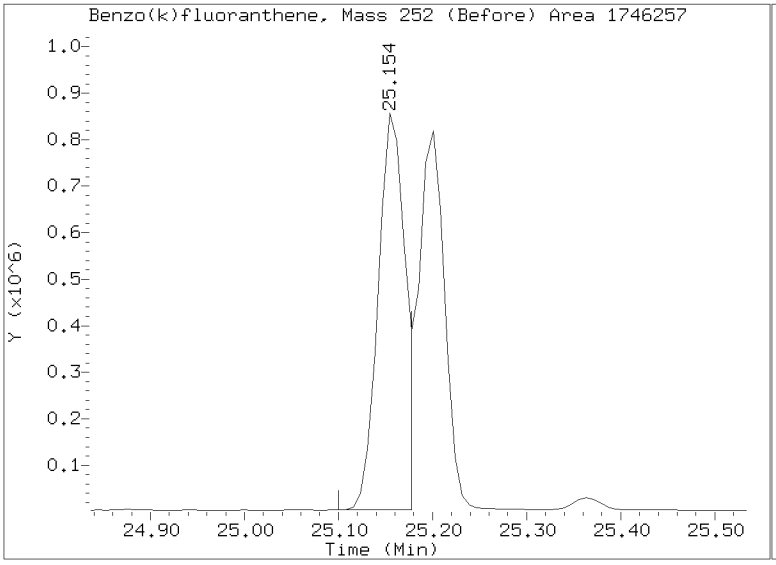
* Only compounds listed in the work order have been verified by the analyst *

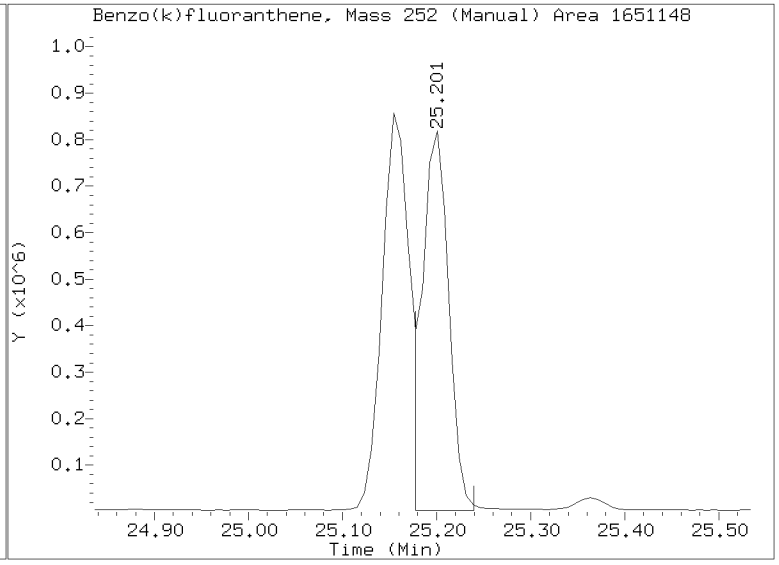
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182322.D
Injection Date: 19-MAR-2023 07:08
Lab ID:BLB0579-MSD1 Client ID:
Report Date: 04/04/2023 10:38









Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0579-SRM1
Batch: BLB0579
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 03/18/2023 22:50
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

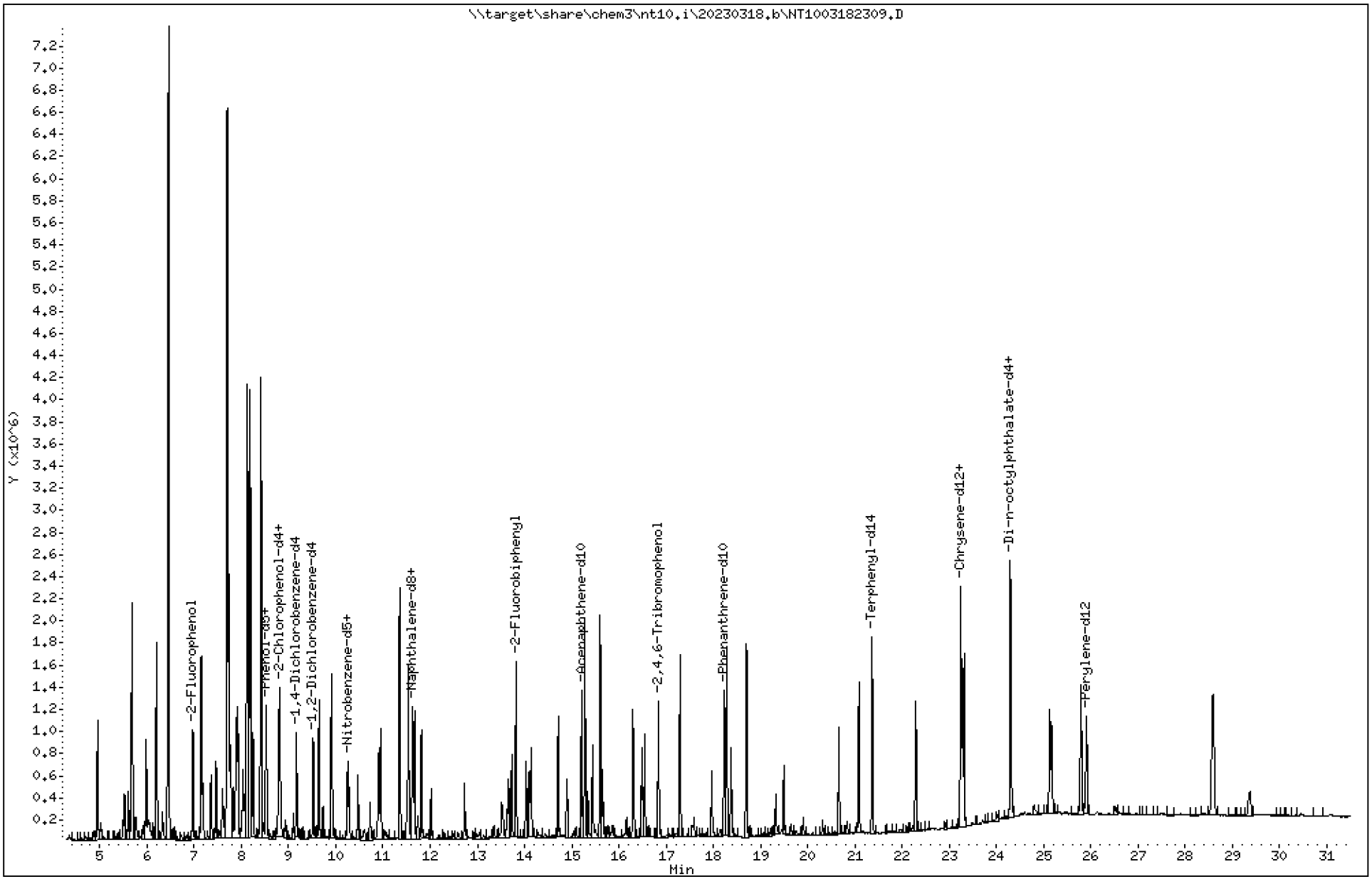
ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Phenol	2660.0	2470	43.9	200		92.7	26 - 174
4-Methylphenol	6617.0	6400	73.9	200		96.7	40 - 160
Naphthalene	4458.0	3570	42.4	200		80.1	25 - 175
Acenaphthylene	1948.0	1560	62.4	200		79.9	37 - 167
Dimethylphthalate	4537.0	4550	43.9	200		100	41 - 159
Acenaphthene	5489.0	5110	52.2	200		93.1	41 - 159
Dibenzofuran	6130.0	5800	141	200		94.6	45 - 155
Fluorene	3724.0	1910	146	200	Q	51.2	44 - 156
Phenanthrene	5052.0	4770	87.2	200		94.5	46 - 154
Anthracene	2866.0	2270	71.9	200		79.3	42 - 158
Fluoranthene	2497.0	2430	60.9	200		97.2	39 - 161
Pyrene	2964.0	2930	56.8	200		98.8	38 - 162
Butylbenzylphthalate	3511.0	4090	94.1	200		117	36 - 164
Benzo(a)anthracene	5751.0	5750	59.6	200		100	49 - 151
Chrysene	1477.0	1350	60.6	200		91.5	45 - 155
bis(2-Ethylhexyl)phthalate	2905.0	2430	54.6	500		83.7	26 - 174
Benzofluoranthenes, Total	6534.0	5650	100	400		86.5	40 - 160
Benzo(a)pyrene	5902.0	4610	42.3	200		78.1	43 - 157
Indeno(1,2,3-cd)pyrene	3914.0	3780	147	200		96.5	22 - 178
Dibenzo(a,h)anthracene	3420.0	3550	172	200		104	37 - 163
Benzo(g,h,i)perylene	1380.0	1400	136	200		101	35 - 165

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D
Date : 18-MAR-2023 22:50
Client ID:
Sample Info: BLB0579-SRM1

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

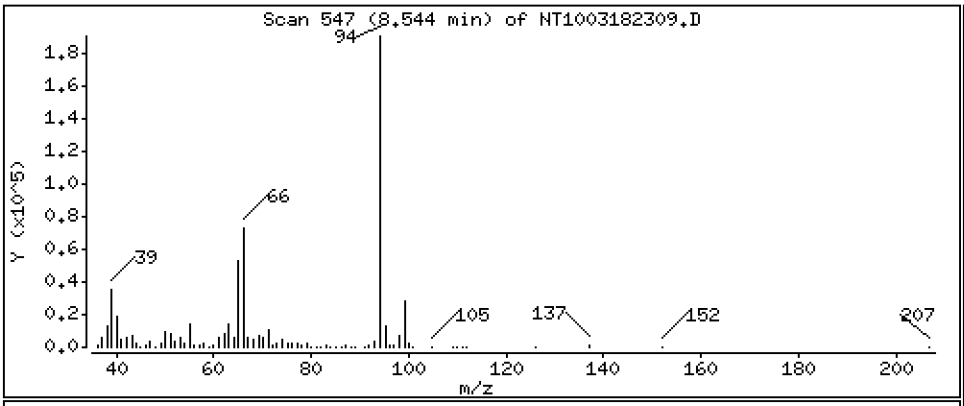
Operator: VTS

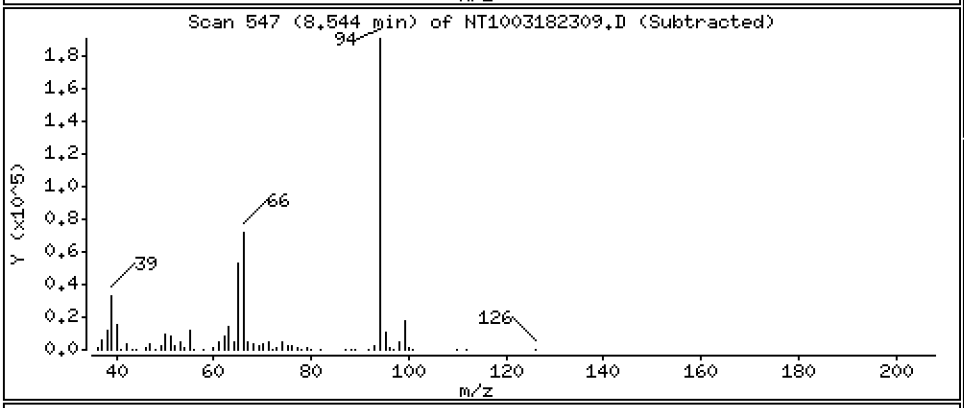
Column phase: ZB-5msi

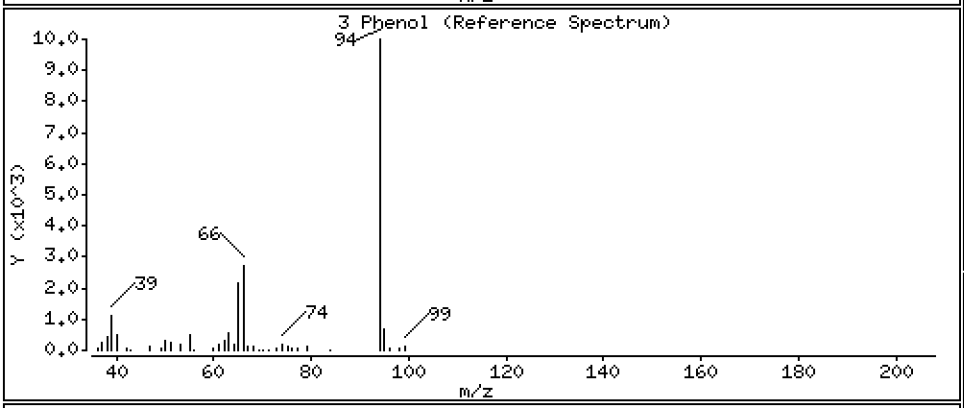
Column diameter: 0.25

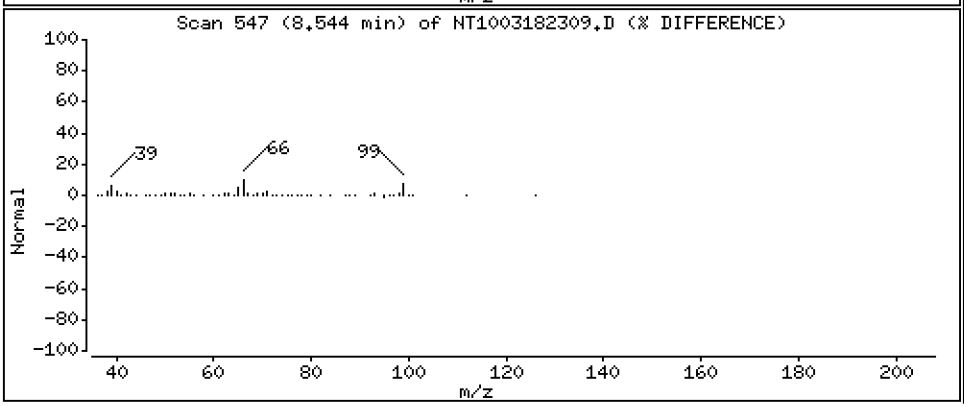
3 Phenol

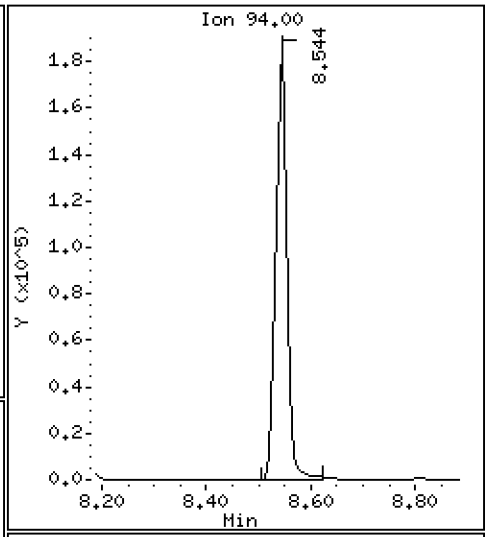
Concentration: 2.467 ug/mL

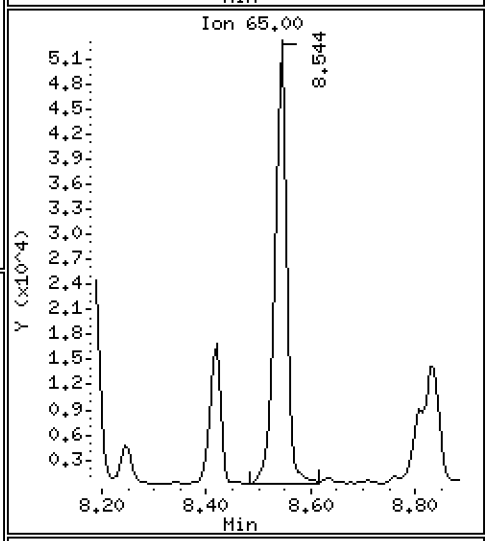


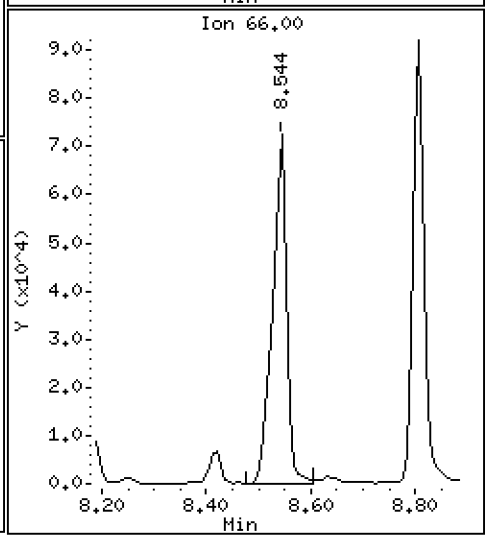












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

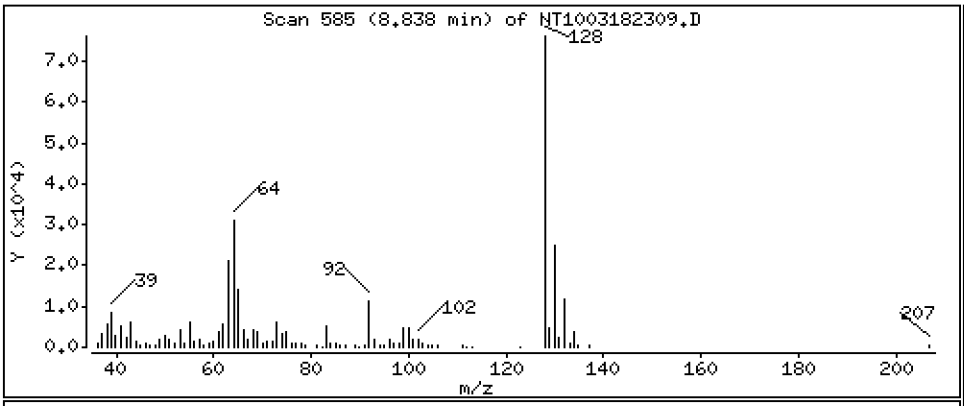
Operator: VTS

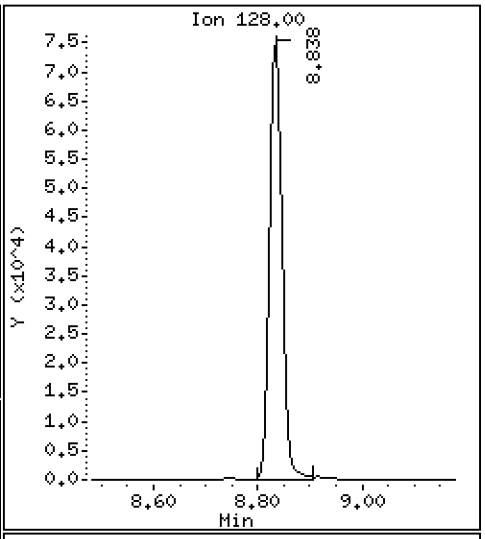
Column phase: ZB-5msi

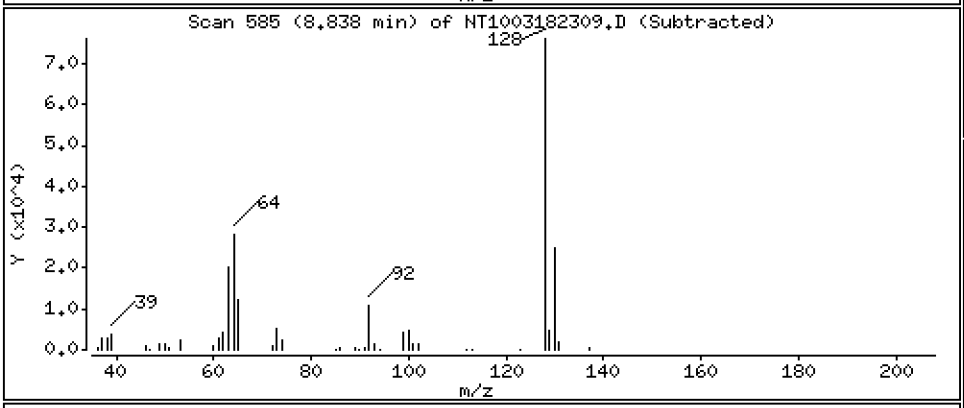
Column diameter: 0.25

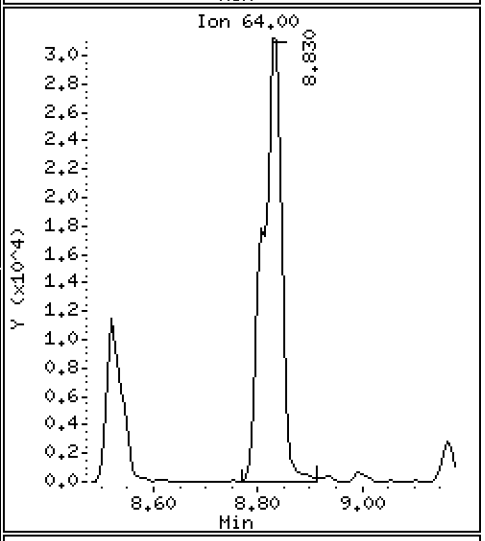
6 2-Chlorophenol

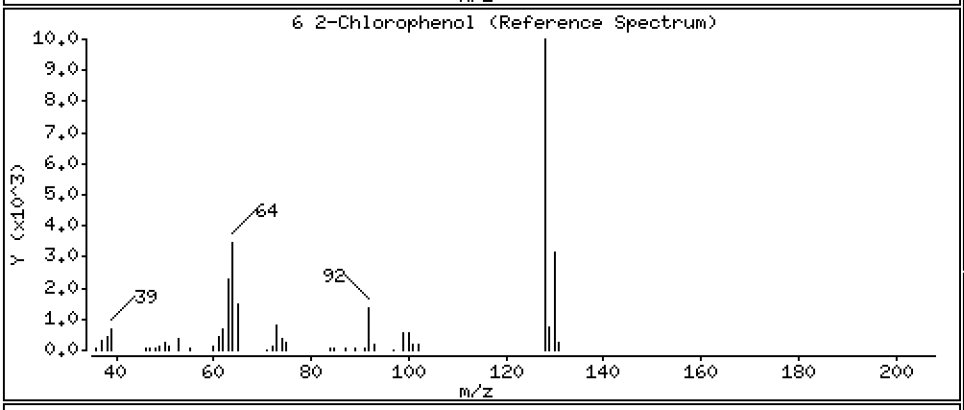
Concentration: 1.304 ug/mL

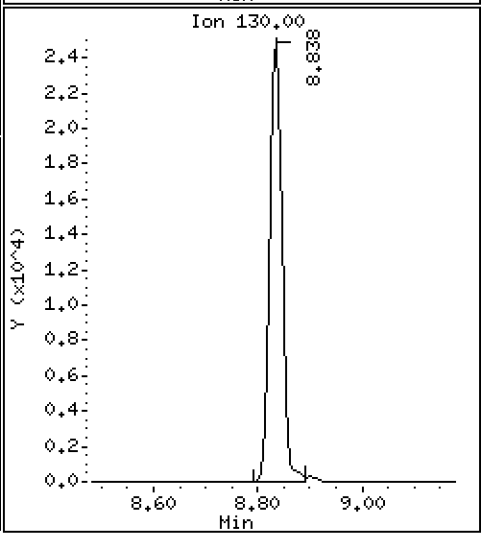


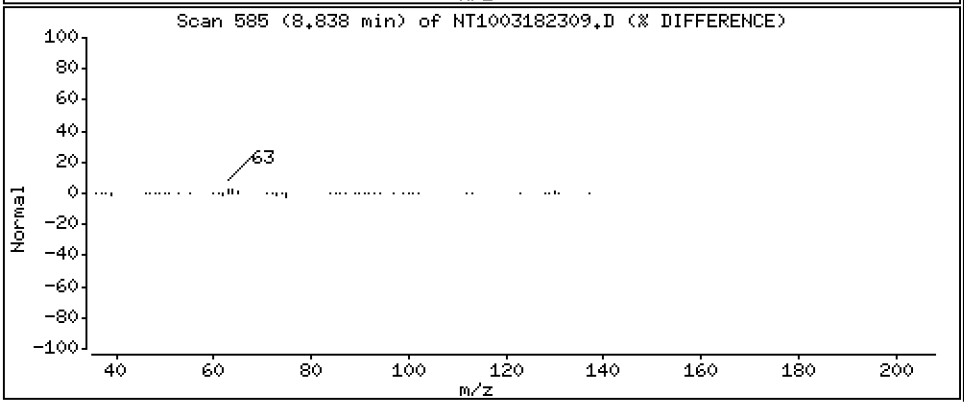












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

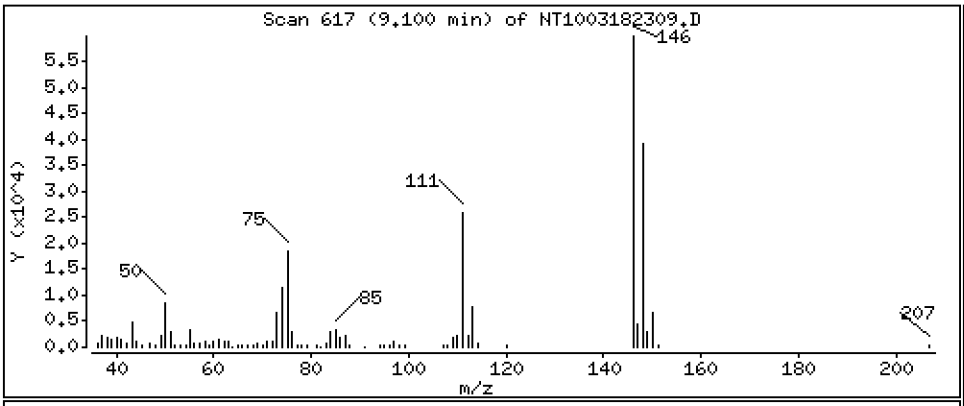
Operator: VTS

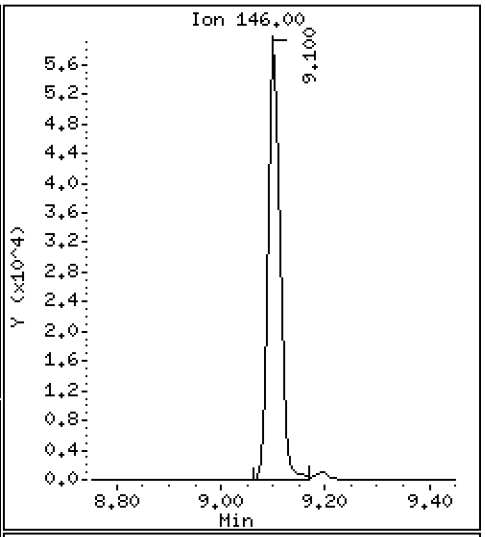
Column phase: ZB-5msi

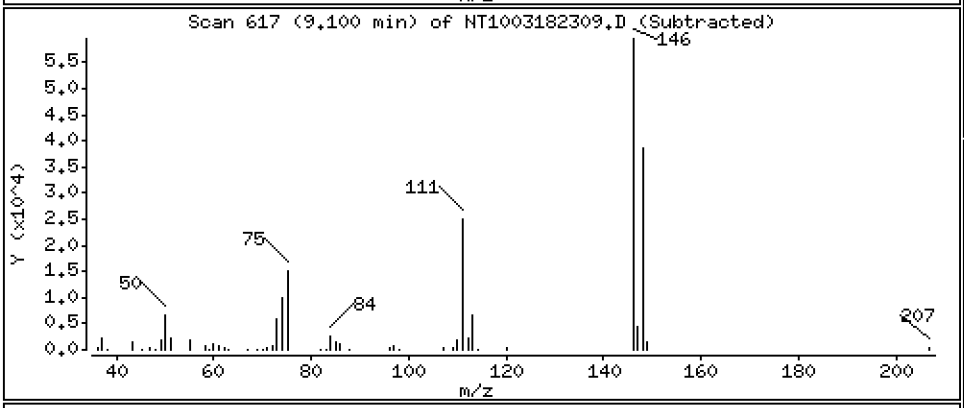
Column diameter: 0.25

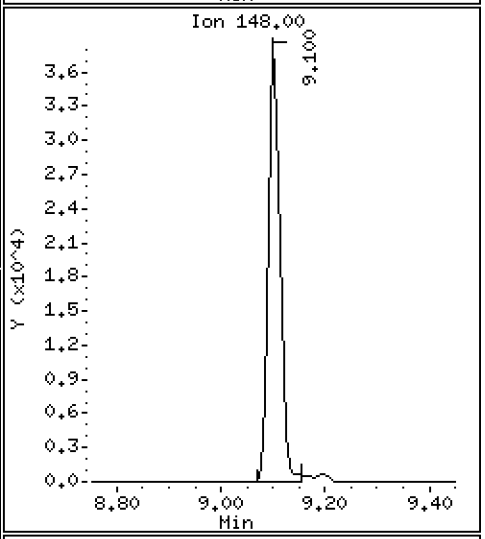
7 1,3-Dichlorobenzene

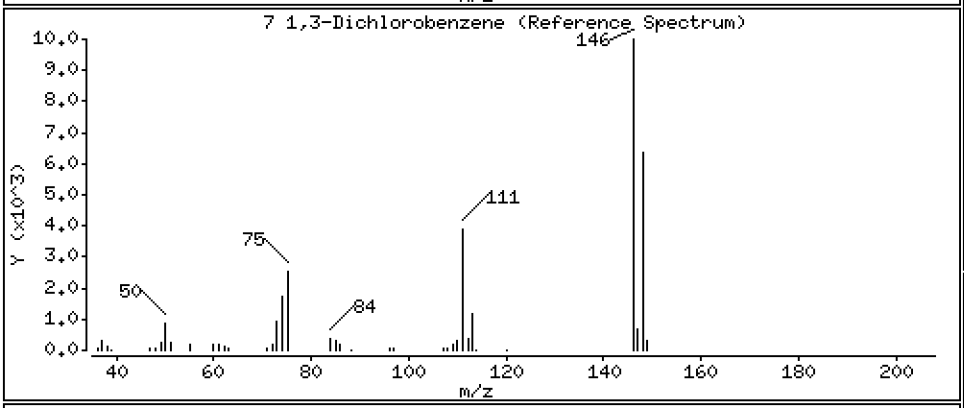
Concentration: 0.9344 ug/mL

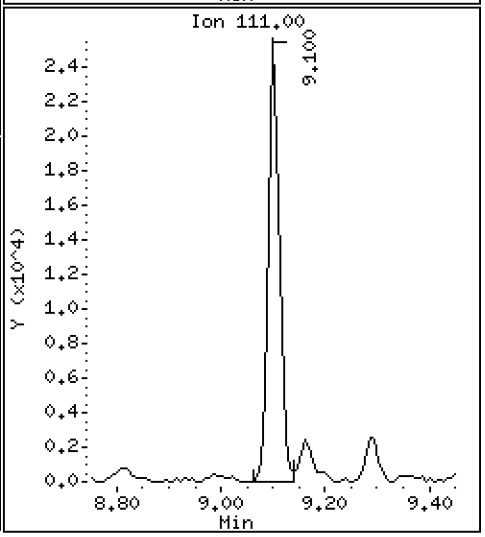


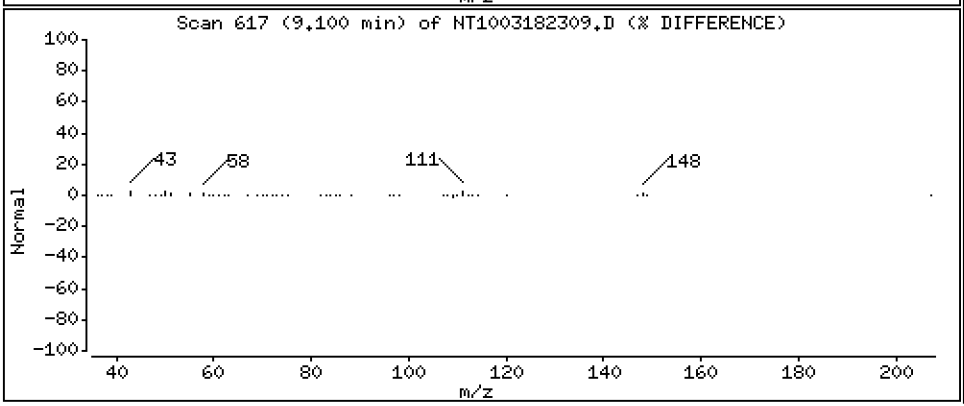












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

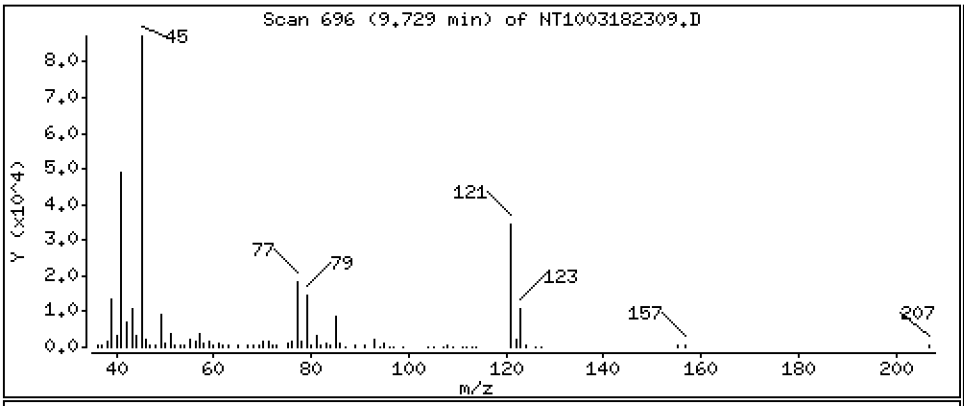
Operator: VTS

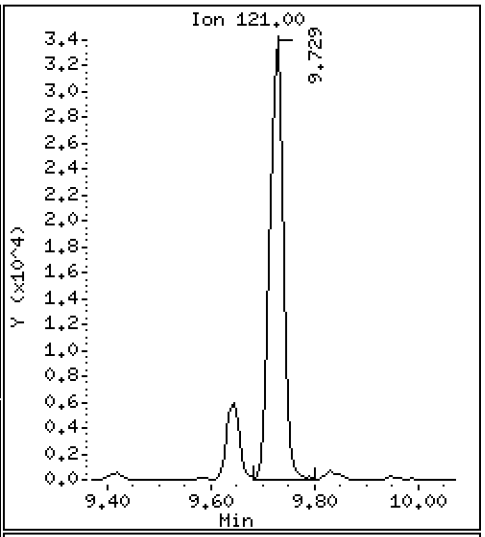
Column phase: ZB-5msi

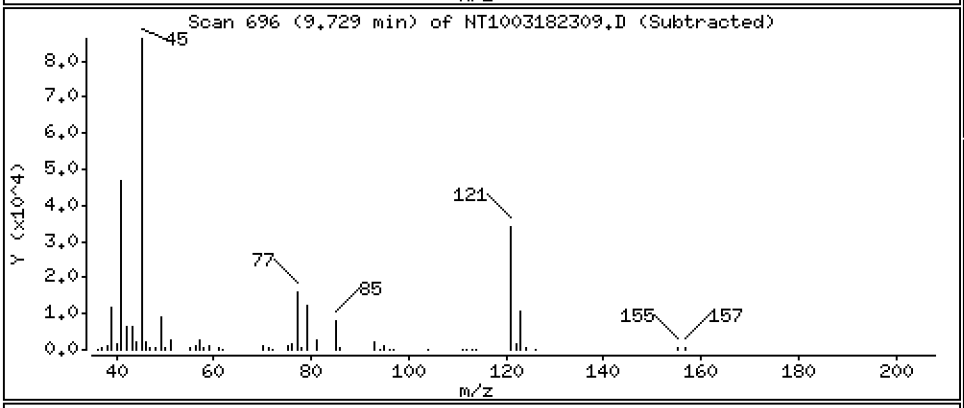
Column diameter: 0.25

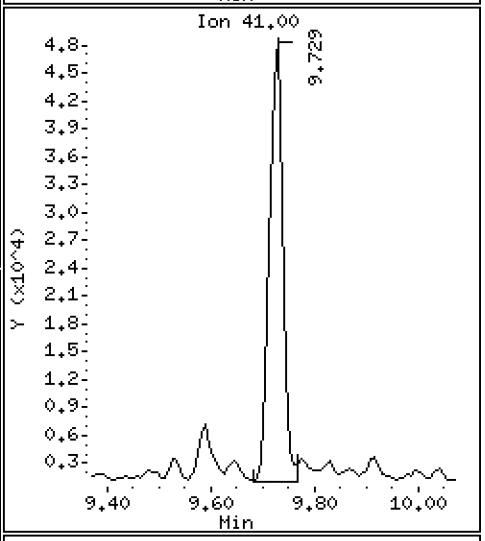
14 2,2'-oxybis(1-Chloropropane)

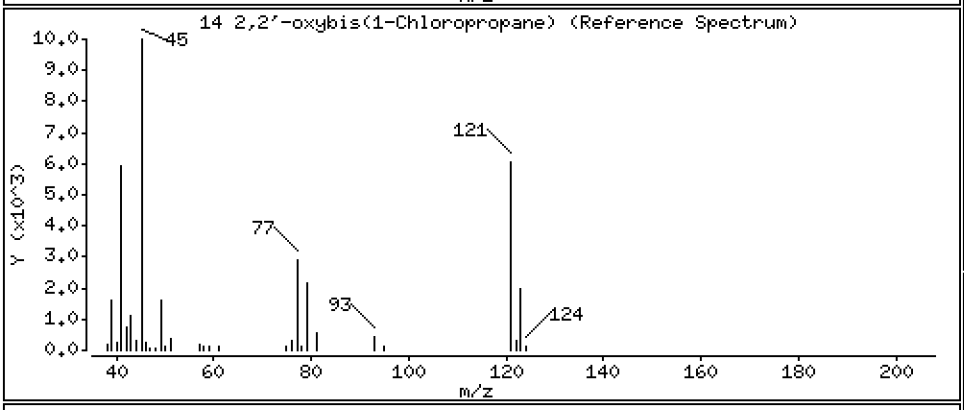
Concentration: 2.198 ug/mL

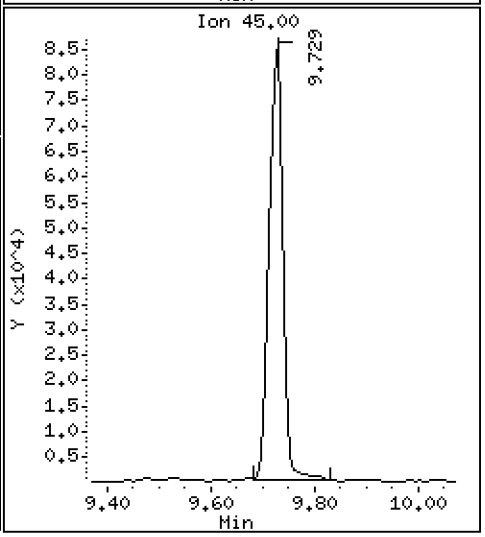


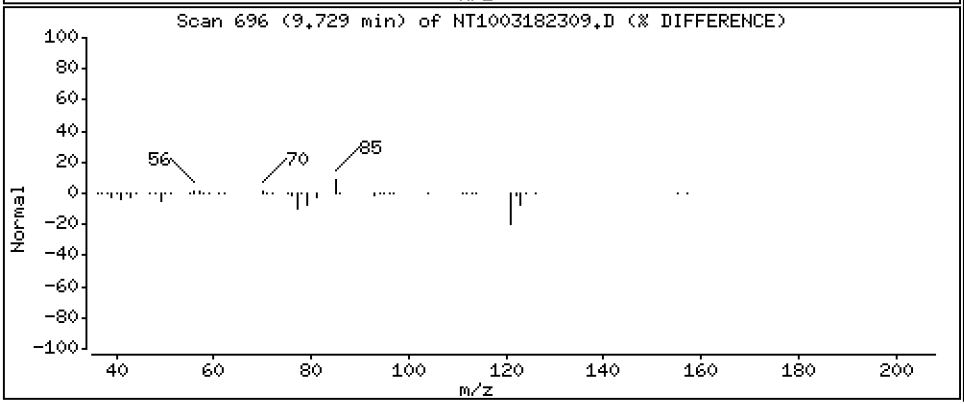












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

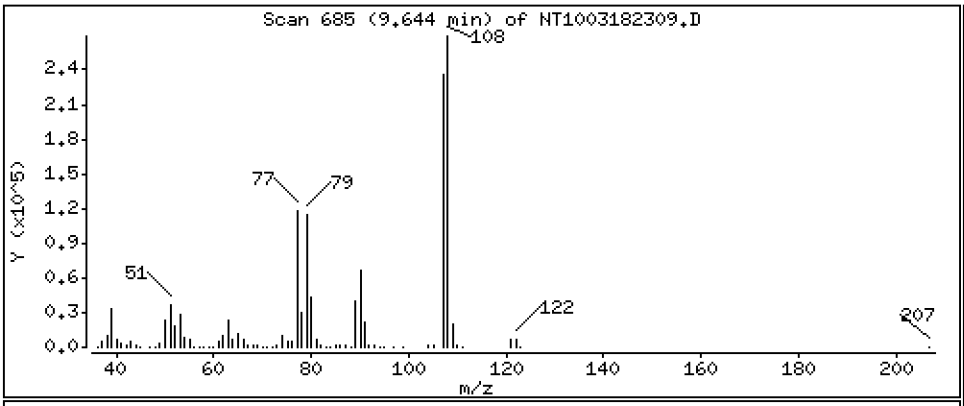
Operator: VTS

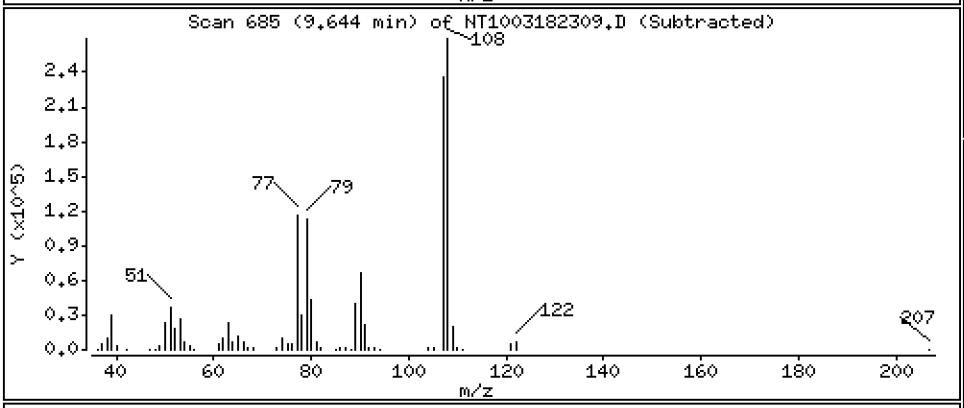
Column phase: ZB-5msi

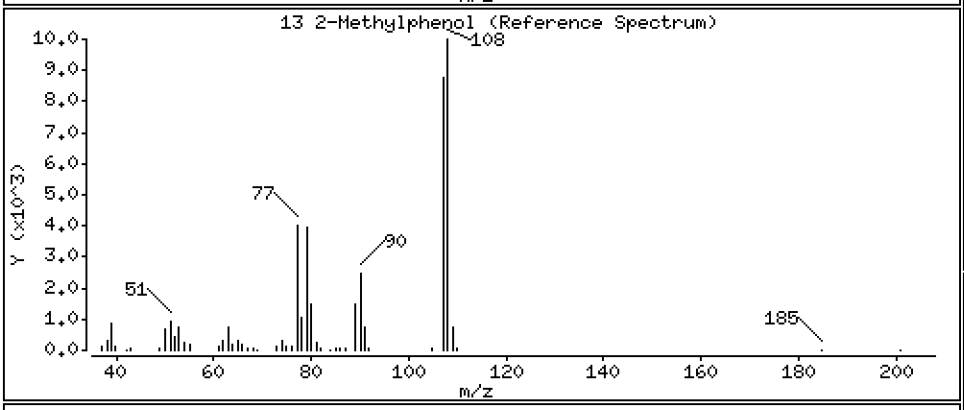
Column diameter: 0.25

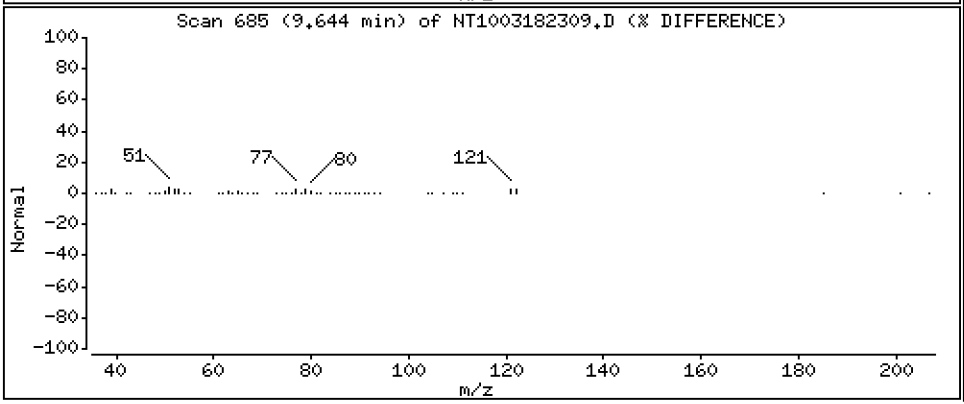
13 2-Methylphenol

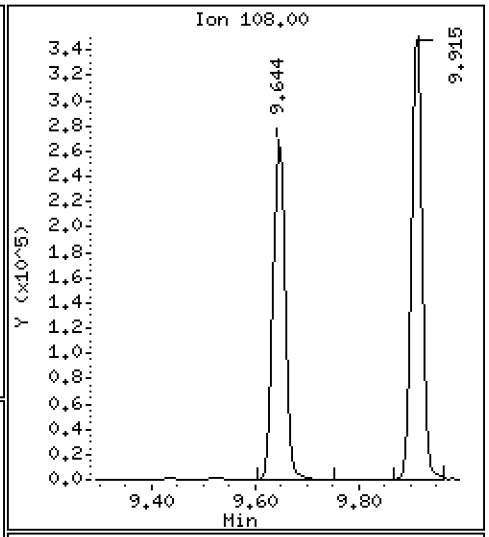
Concentration: 5.277 ug/mL

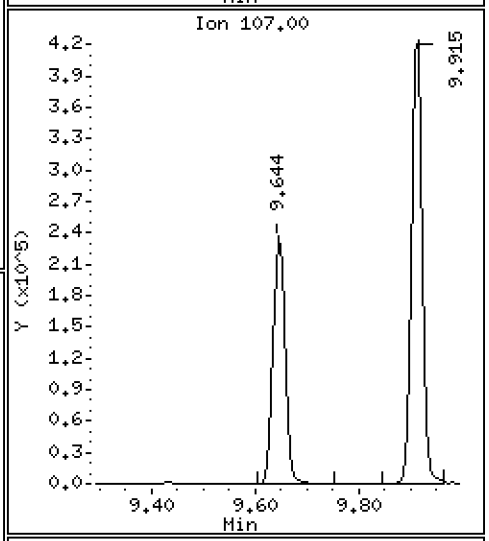


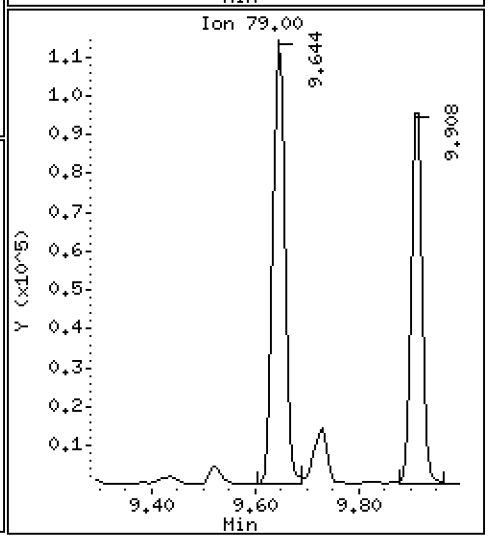












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

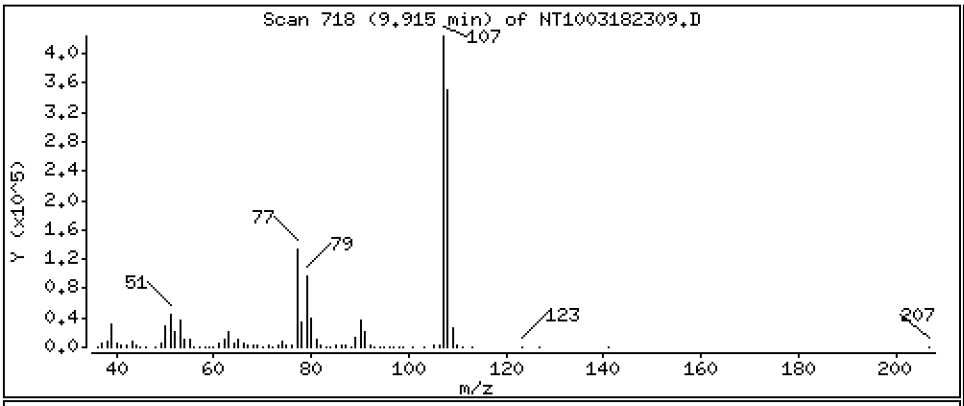
Operator: VTS

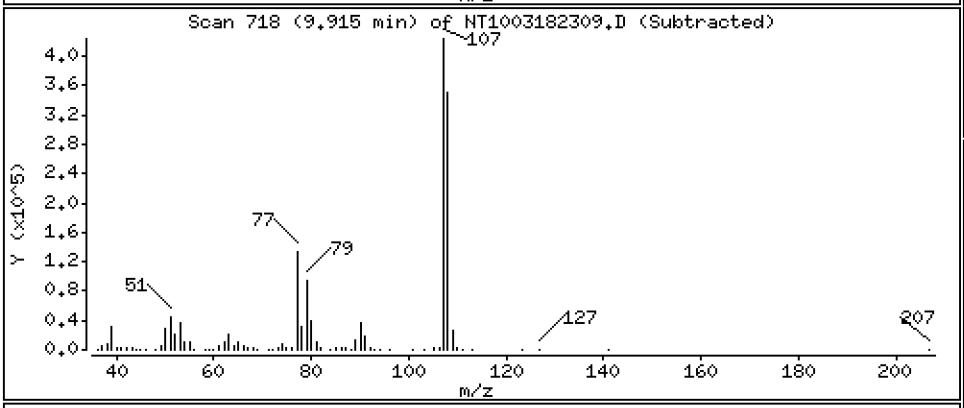
Column phase: ZB-5msi

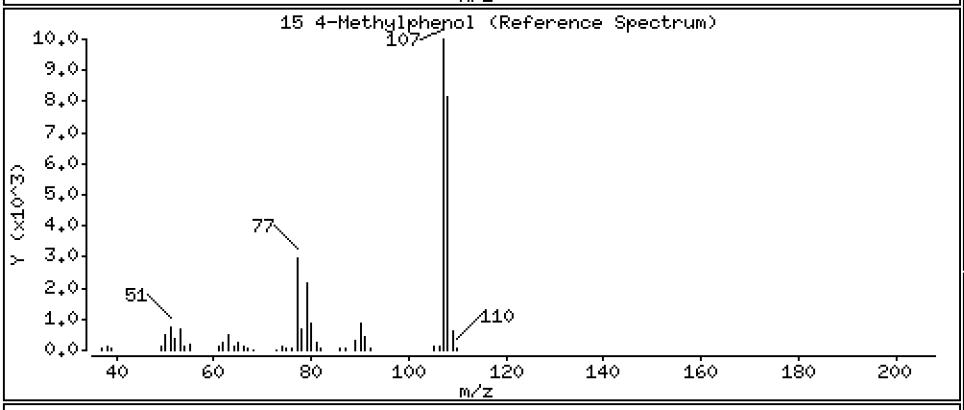
Column diameter: 0.25

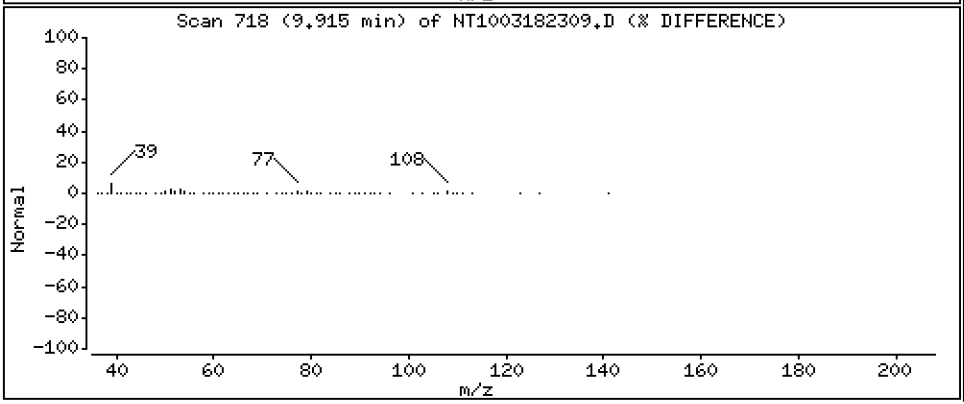
15 4-Methylphenol

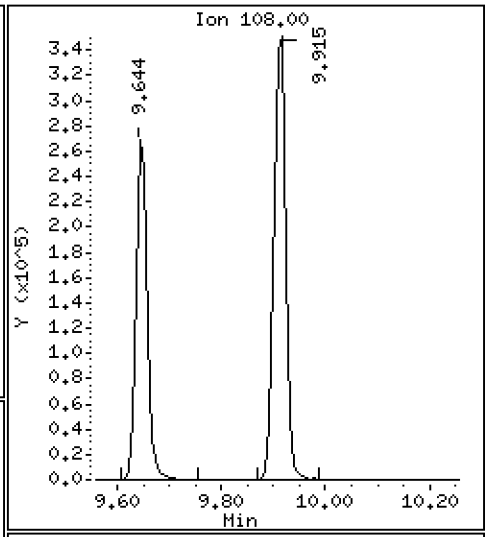
Concentration: 6.395 ug/mL

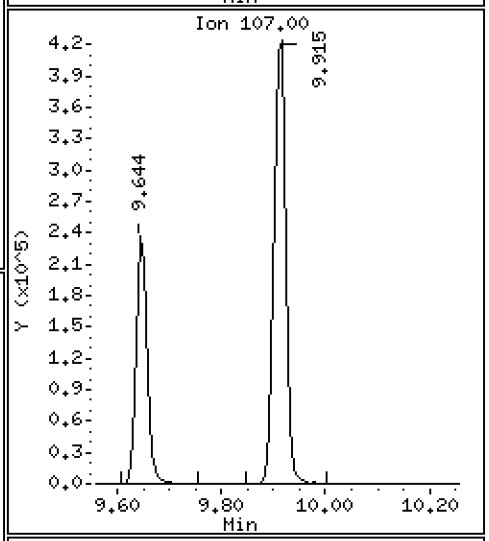


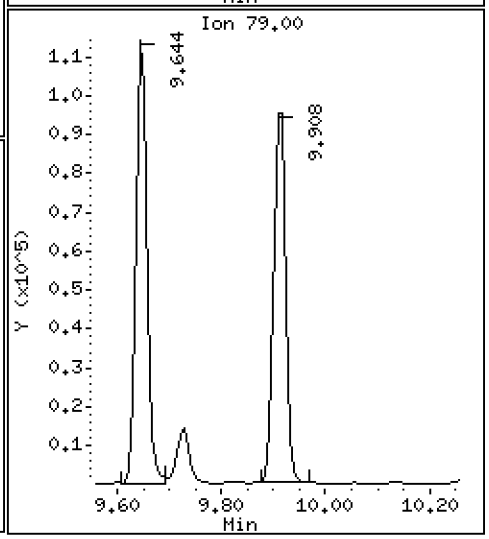












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

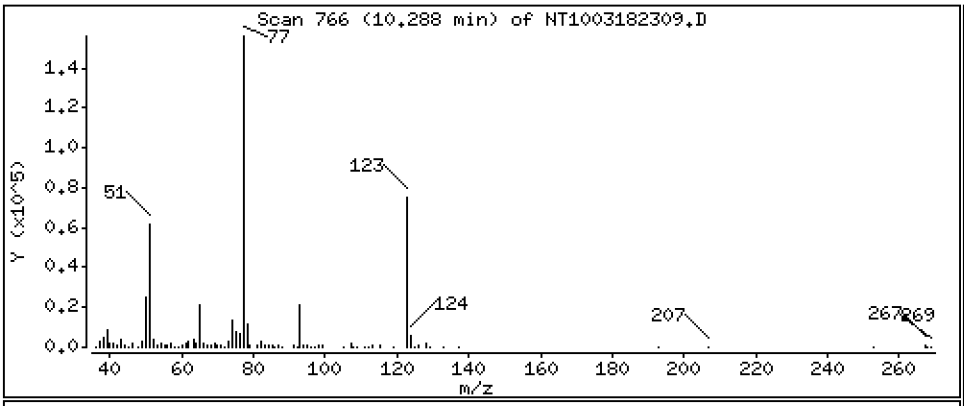
Operator: VTS

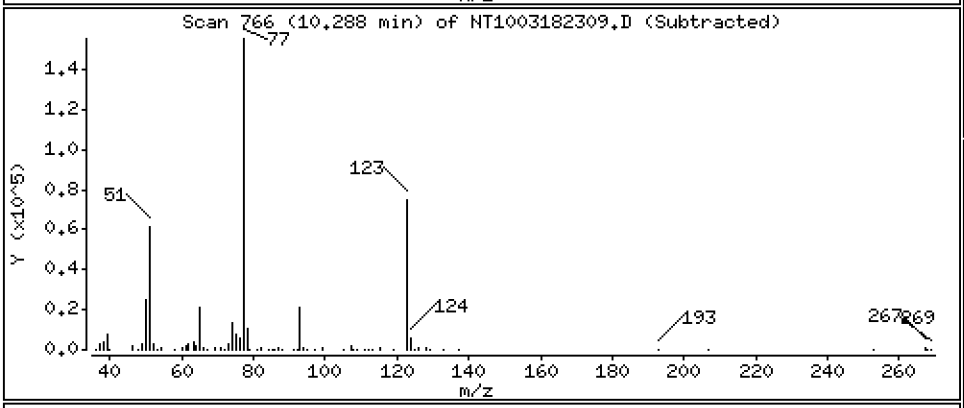
Column phase: ZB-5msi

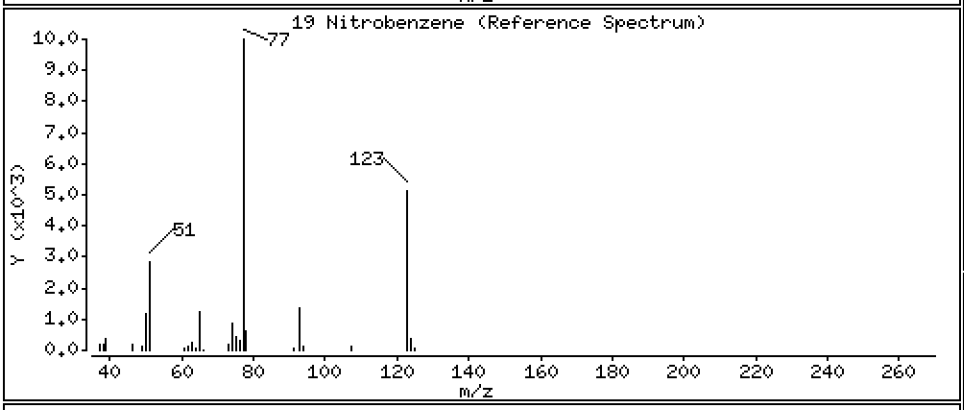
Column diameter: 0.25

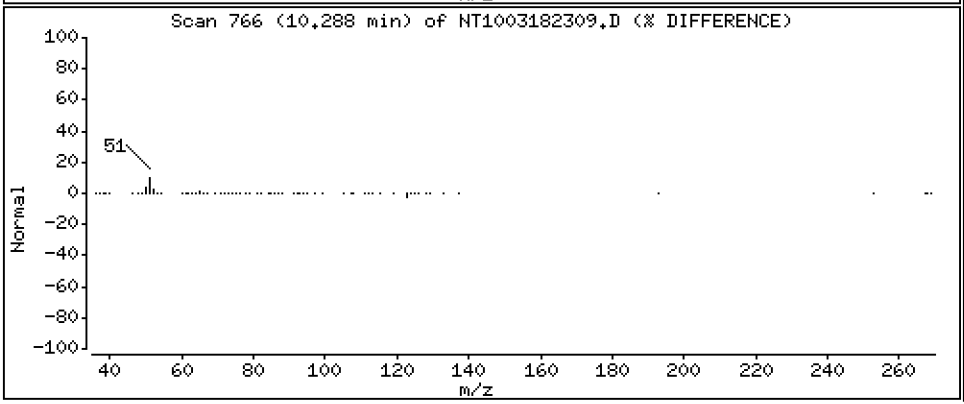
19 Nitrobenzene

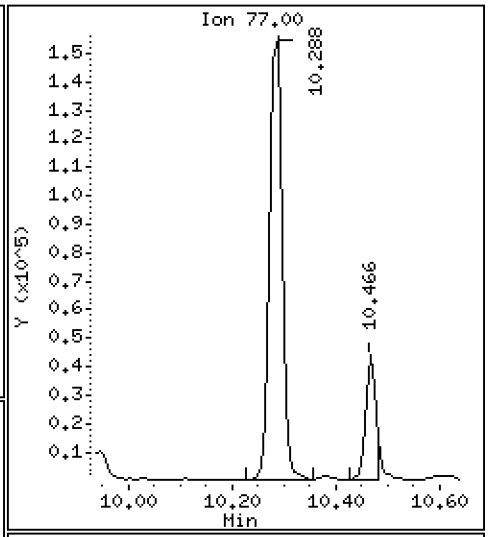
Concentration: 2.686 ug/mL

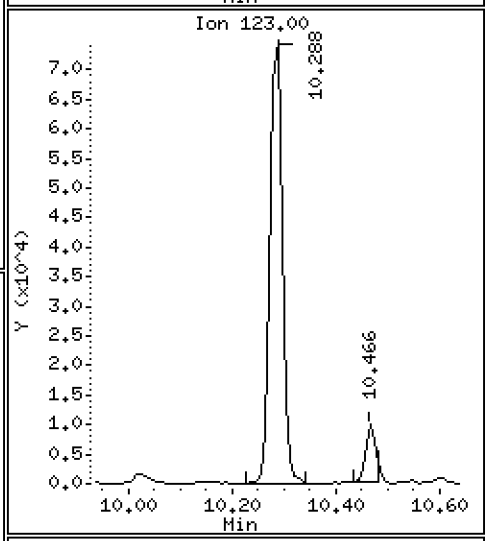


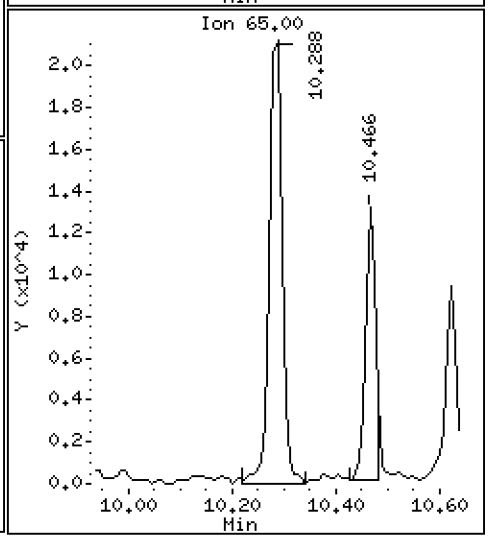












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

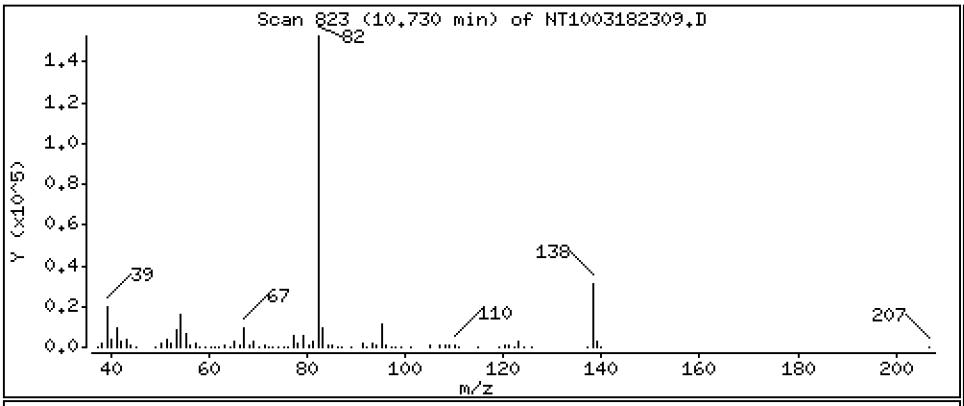
Operator: VTS

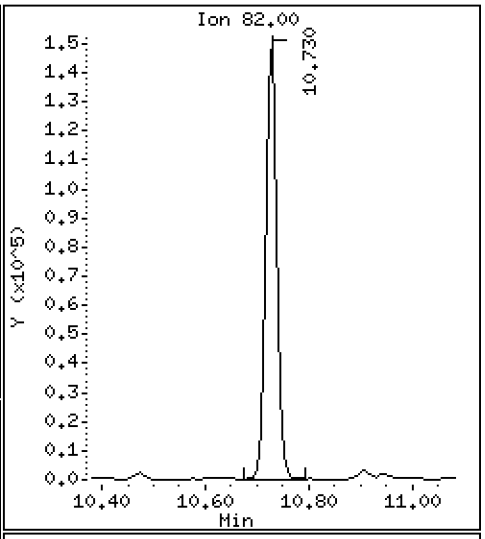
Column phase: ZB-5msi

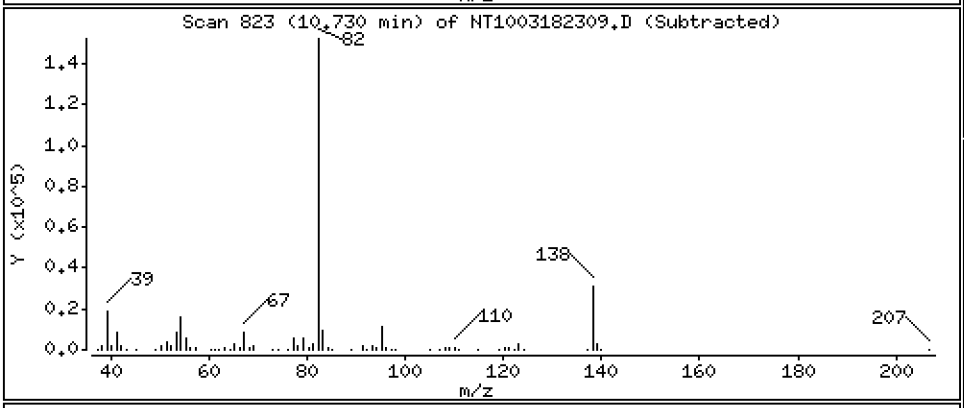
Column diameter: 0.25

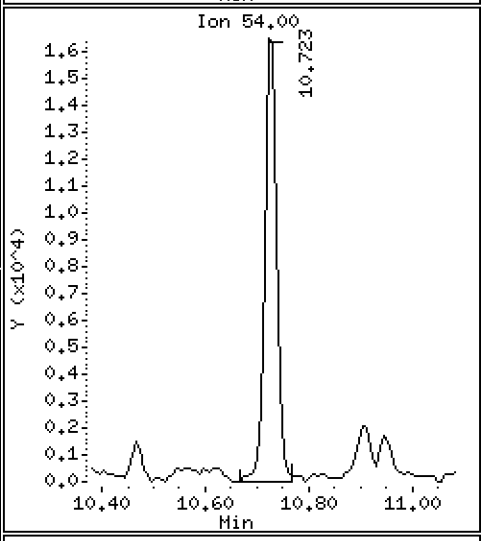
20 Isophorone

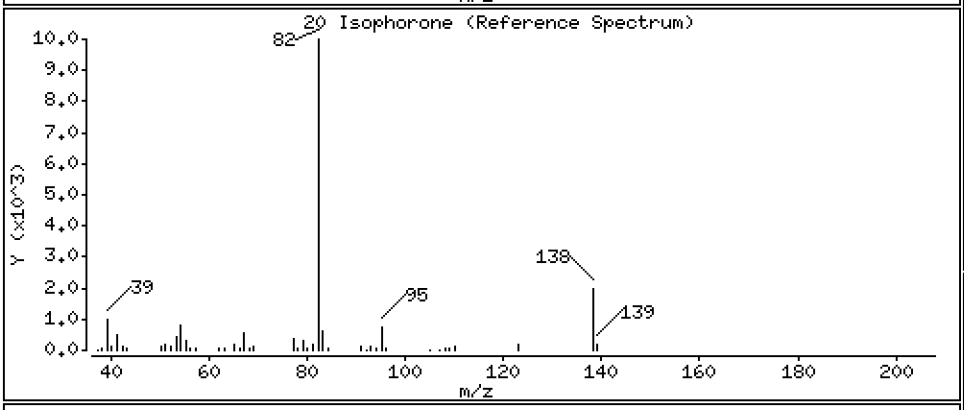
Concentration: 1.991 ug/mL

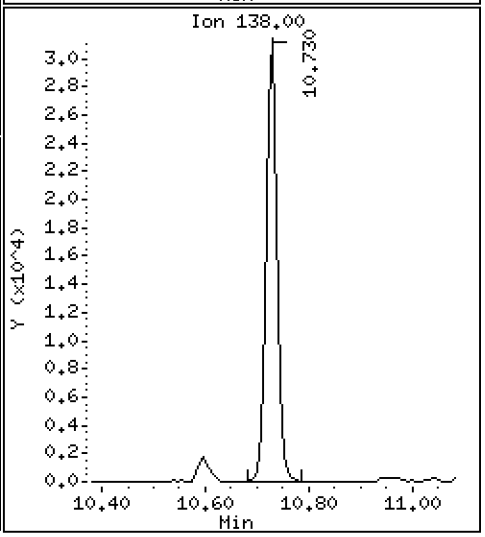


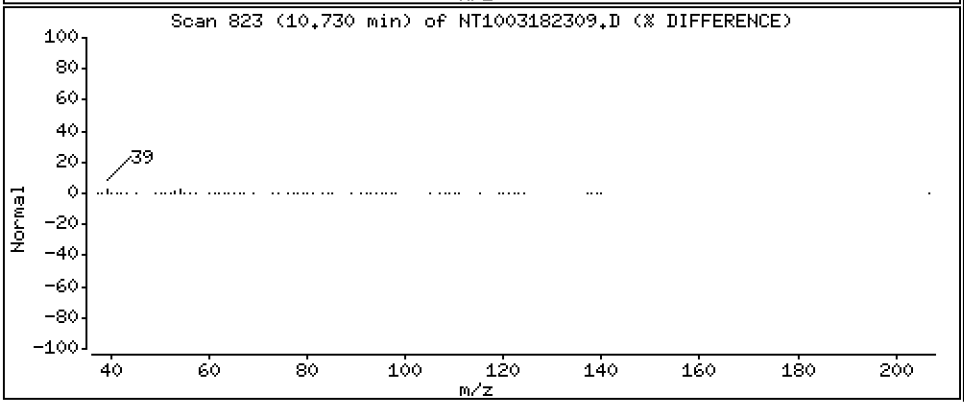












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

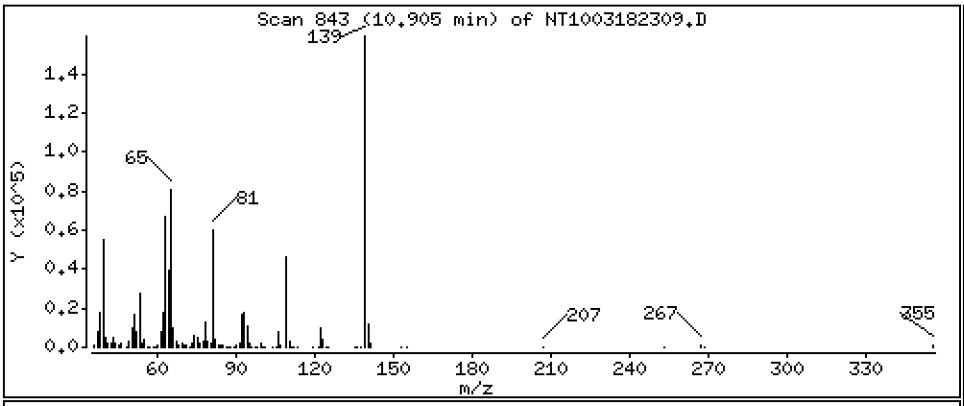
Operator: VTS

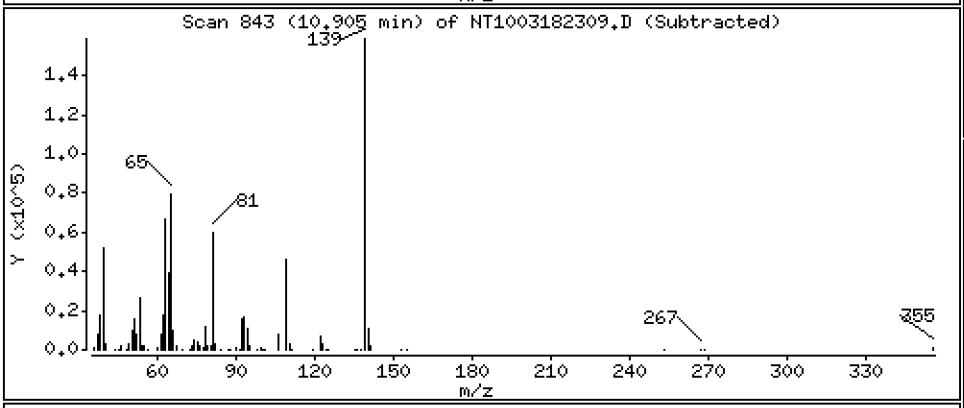
Column phase: ZB-5msi

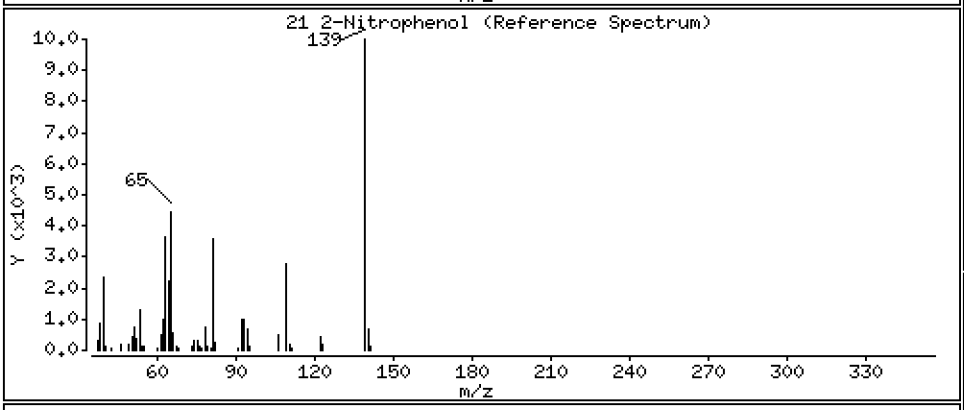
Column diameter: 0.25

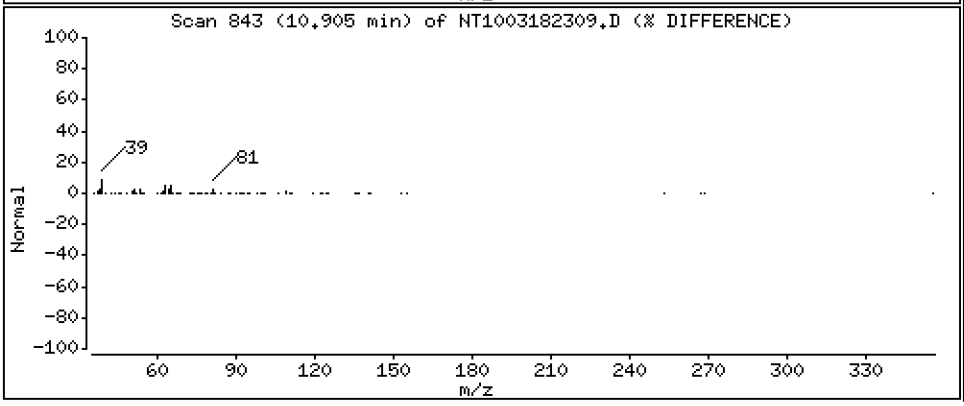
21 2-Nitrophenol

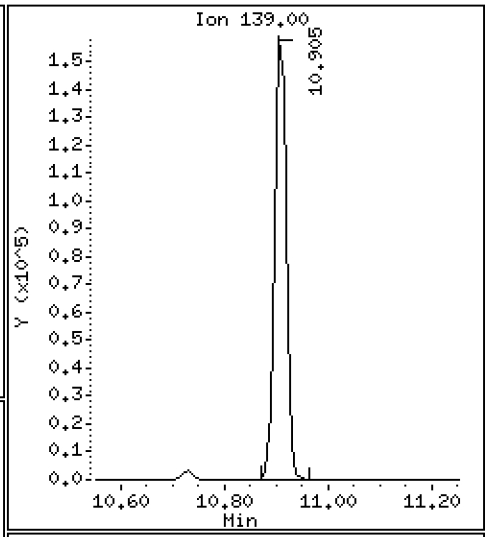
Concentration: 5.452 ug/mL

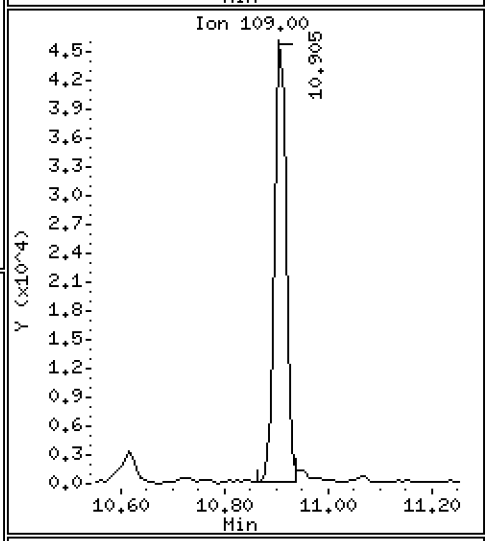


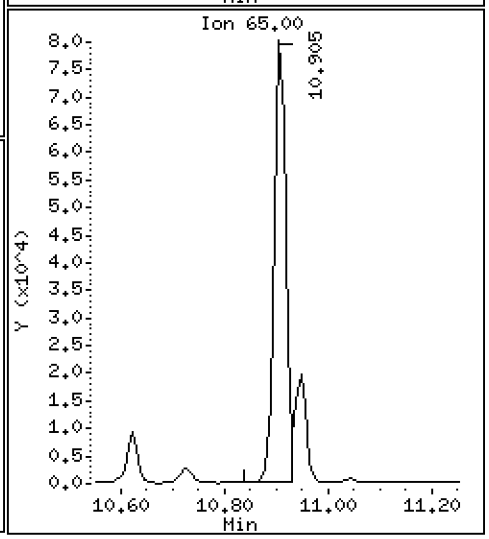












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

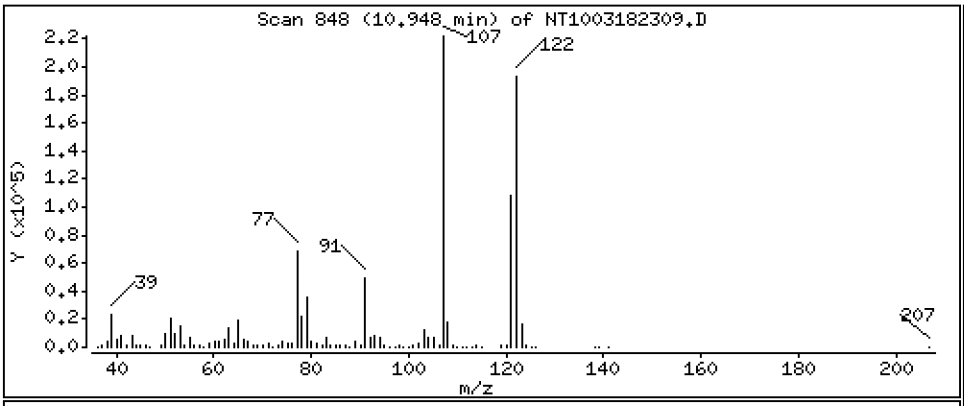
Operator: VTS

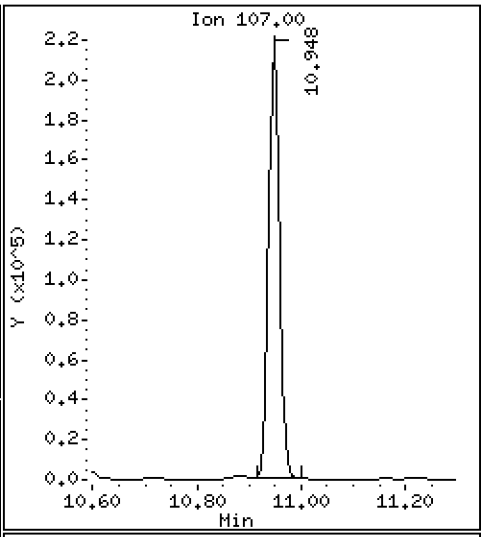
Column phase: ZB-5msi

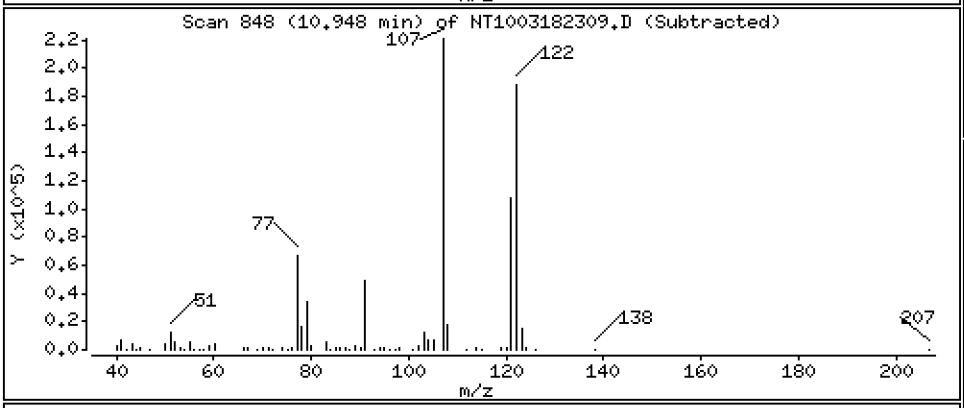
Column diameter: 0.25

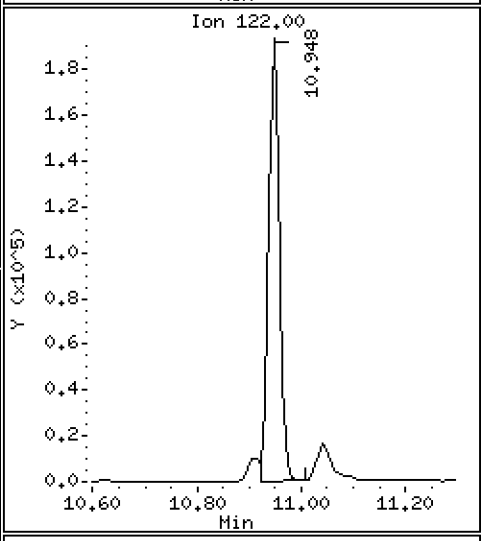
22 2,4-Dimethylphenol

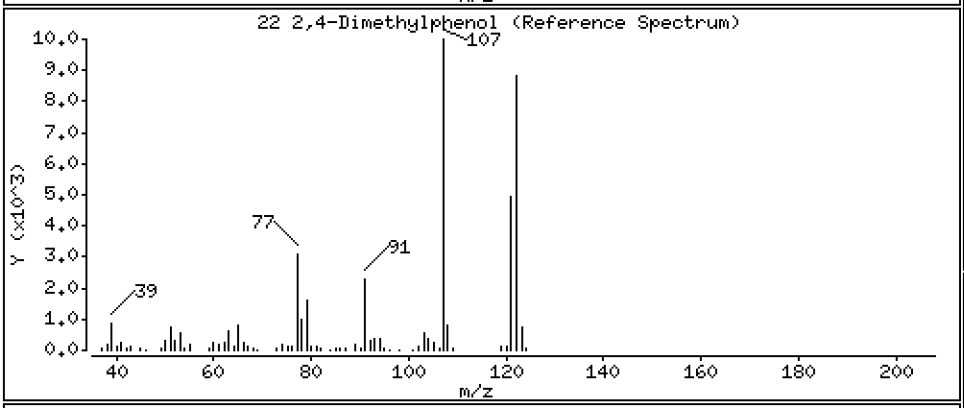
Concentration: 3.717 ug/mL

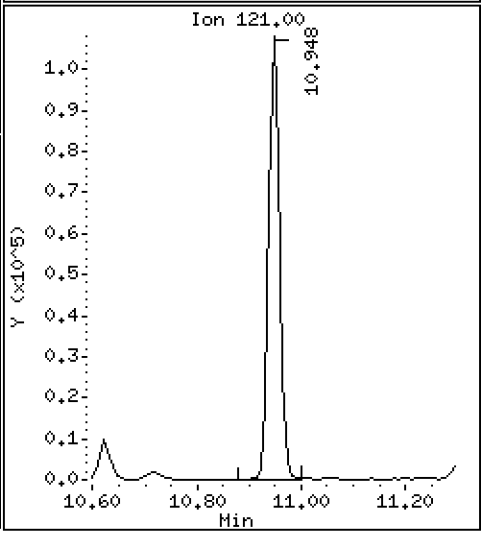


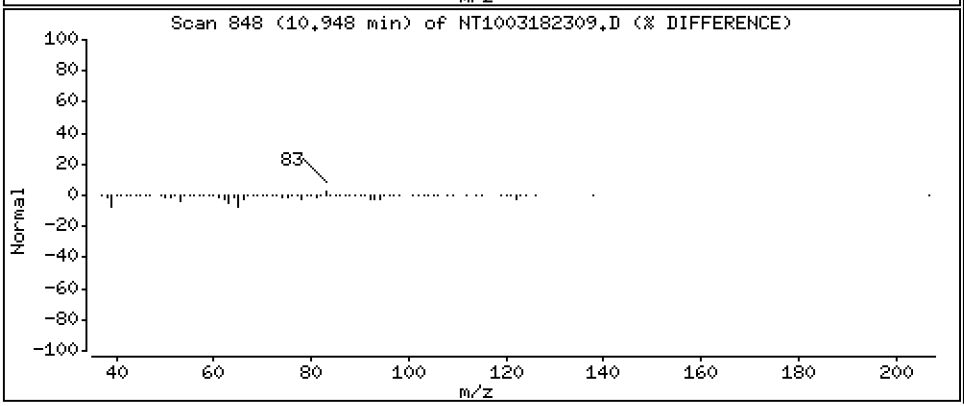












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

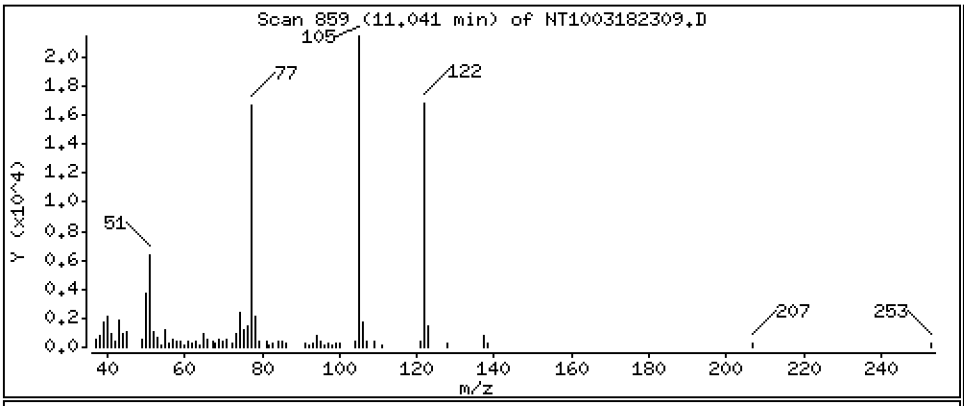
Operator: VTS

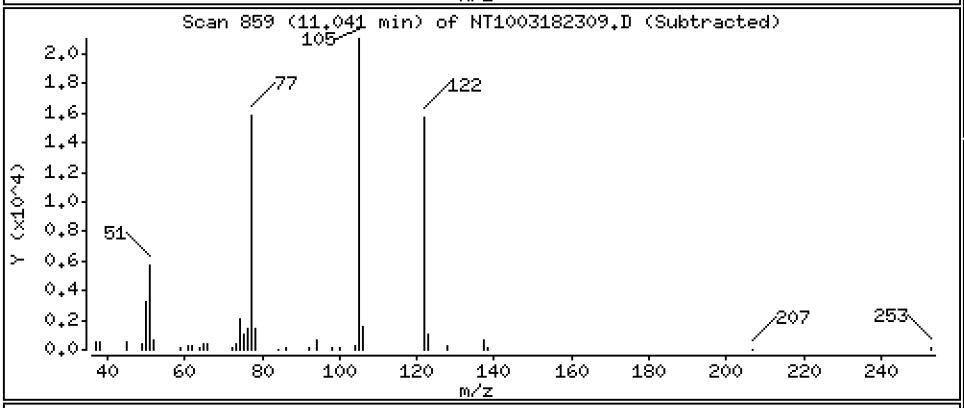
Column phase: ZB-5msi

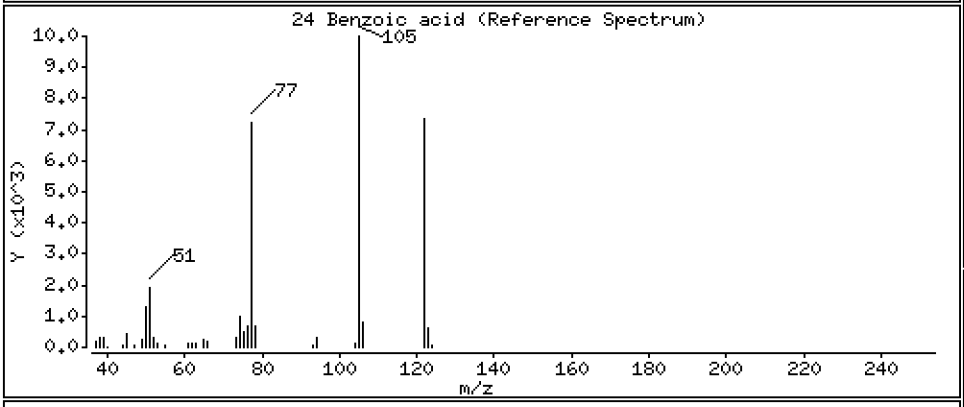
Column diameter: 0.25

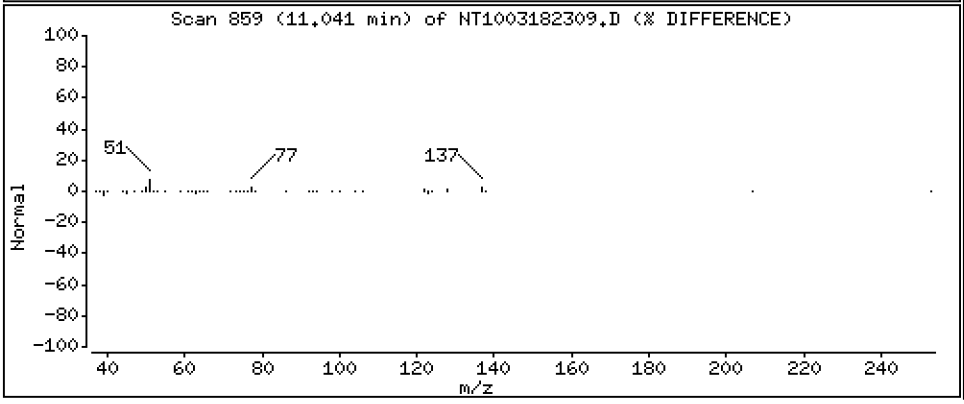
24 Benzoic acid

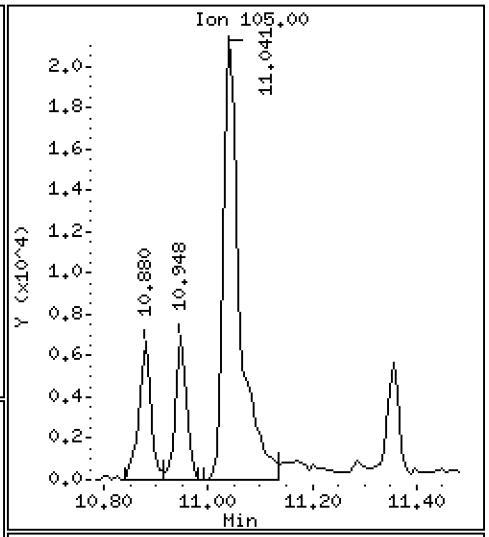
Concentration: 1.022 ug/mL

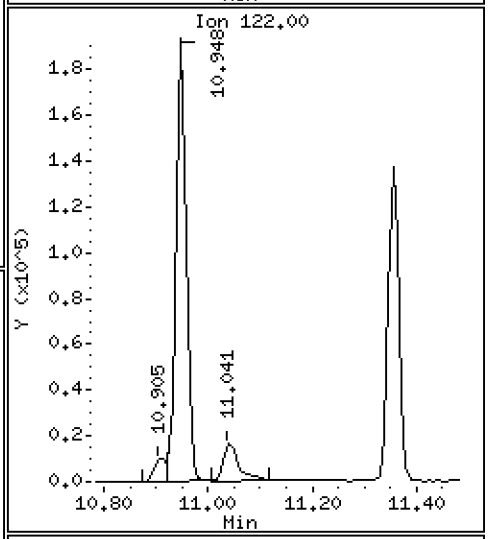


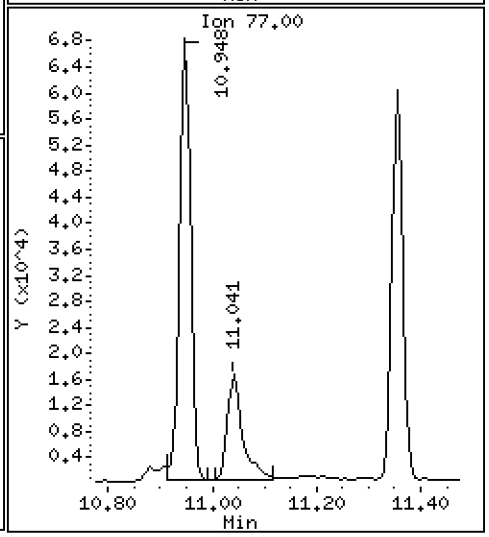












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

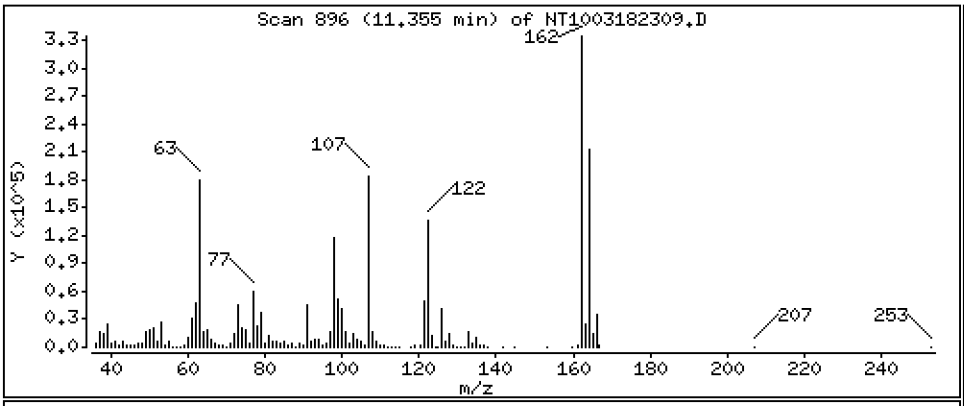
Operator: VTS

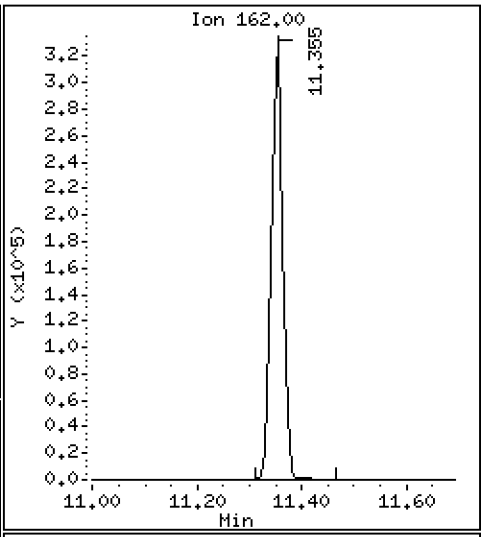
Column phase: ZB-5msi

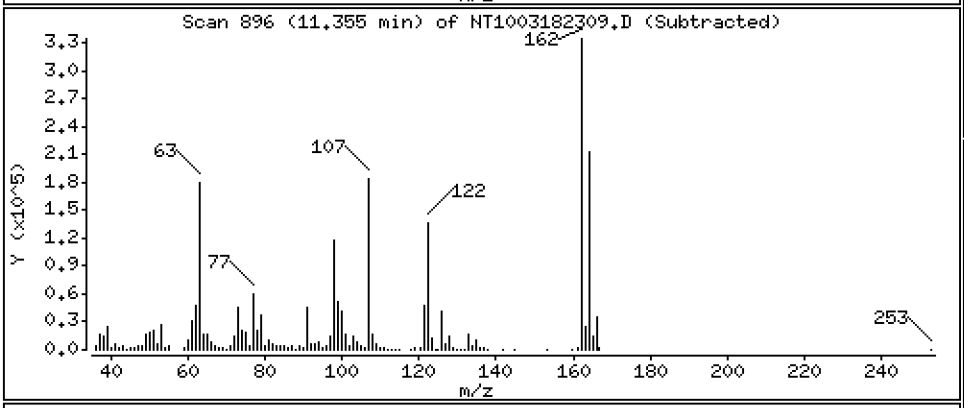
Column diameter: 0.25

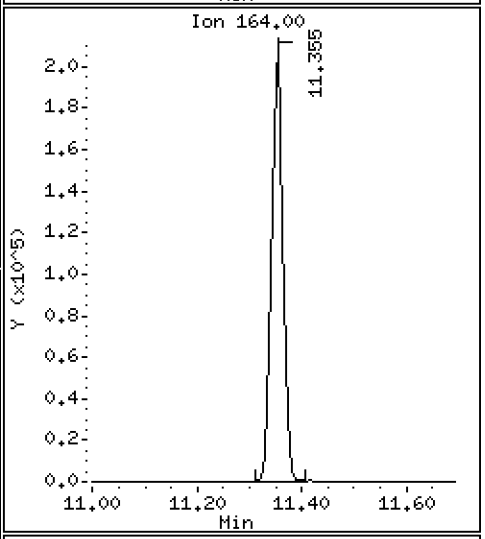
25 2,4-Dichlorophenol

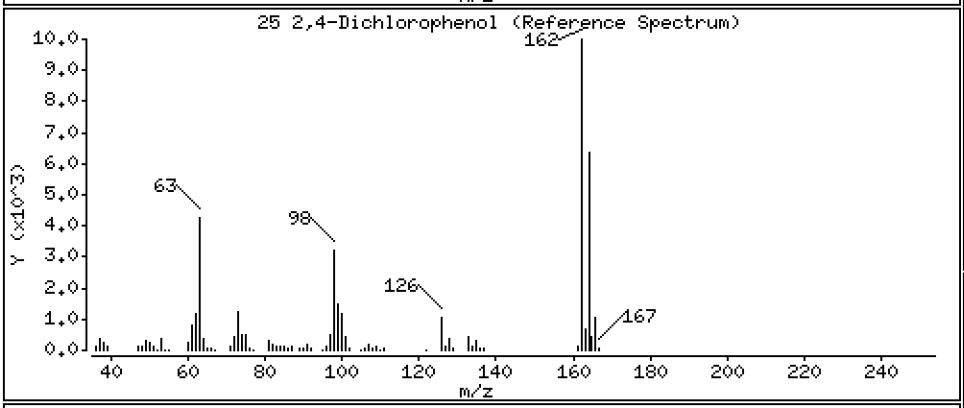
Concentration: 7.388 ug/mL

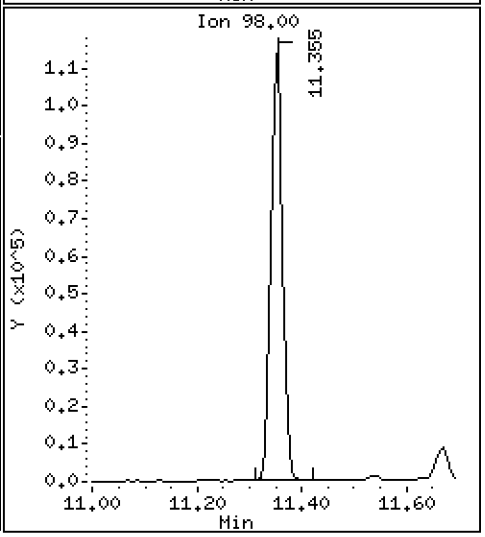


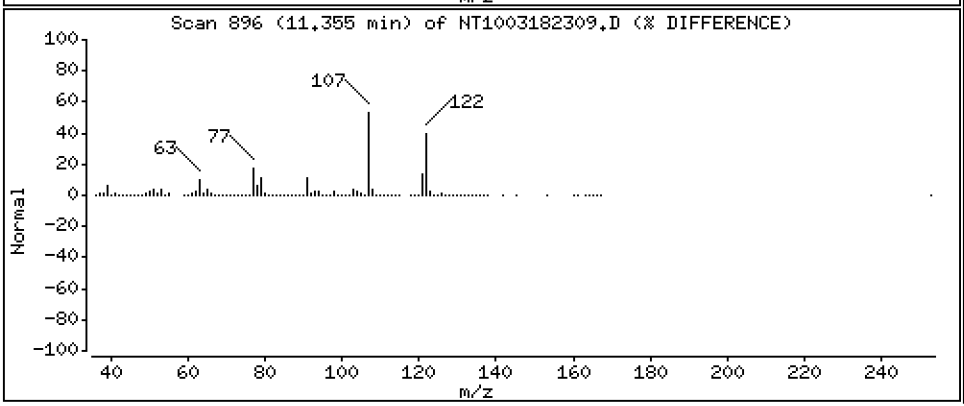












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

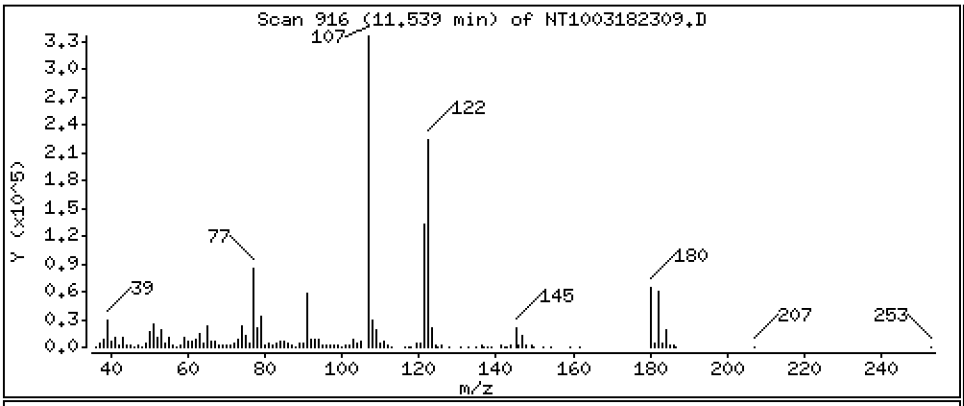
Operator: VTS

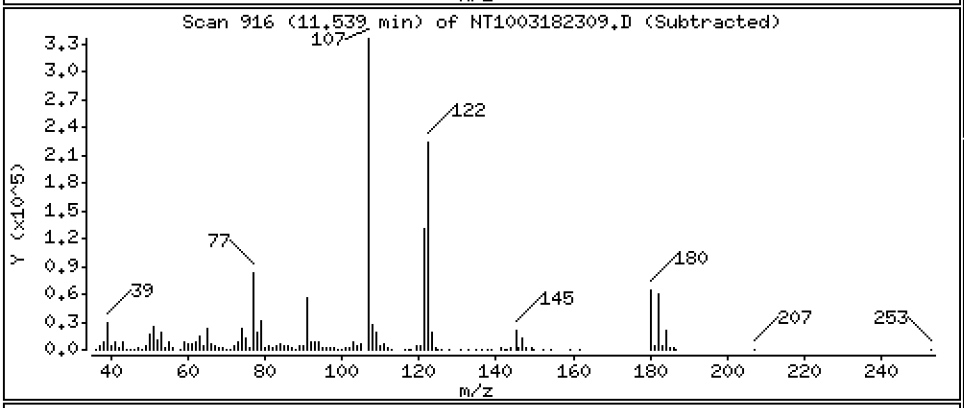
Column phase: ZB-5msi

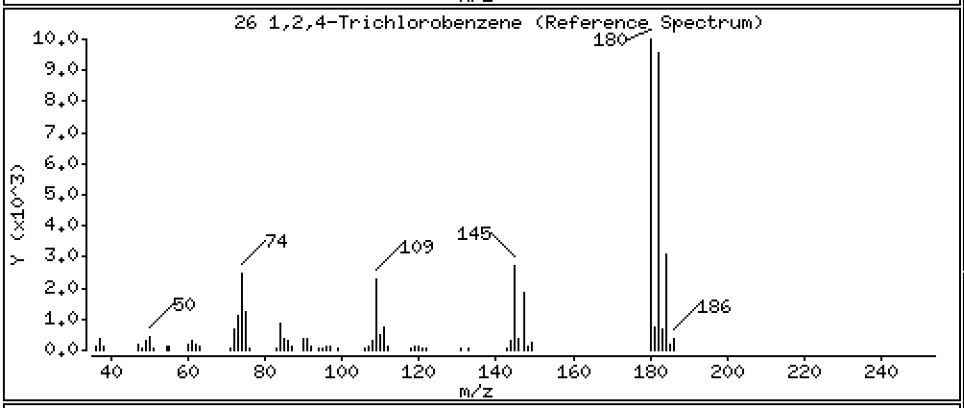
Column diameter: 0.25

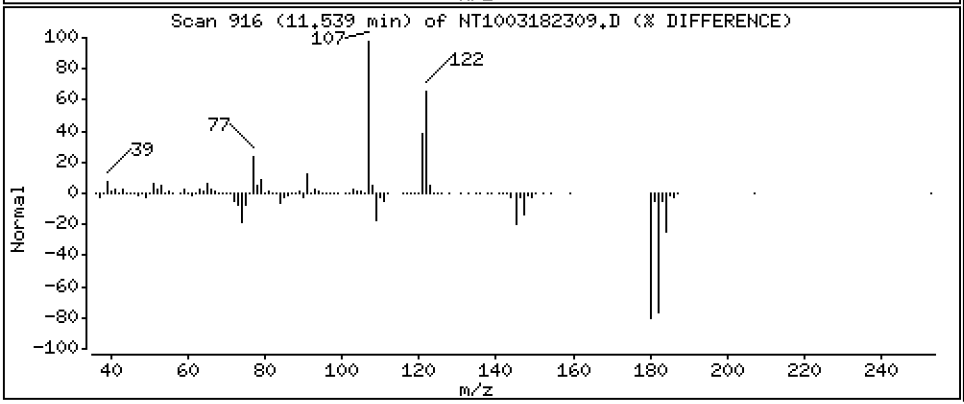
26 1,2,4-Trichlorobenzene

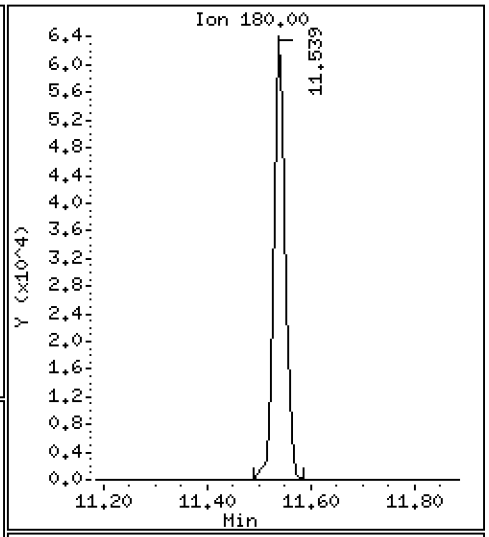
Concentration: 1.476 ug/mL

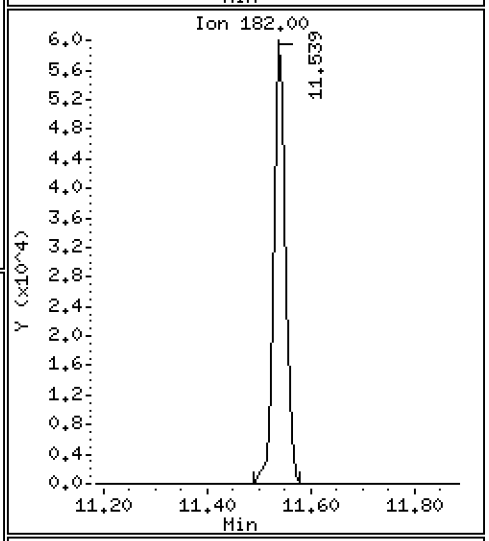


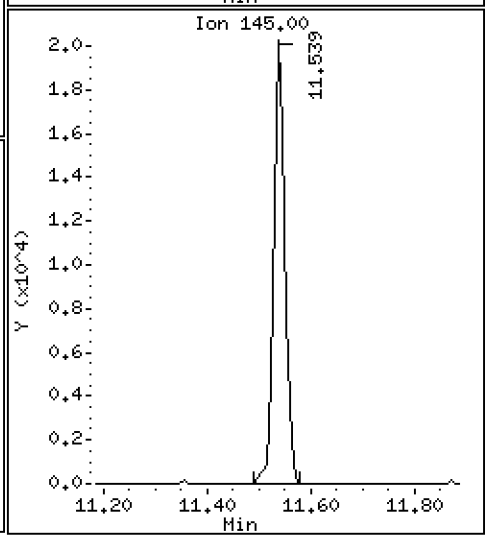












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

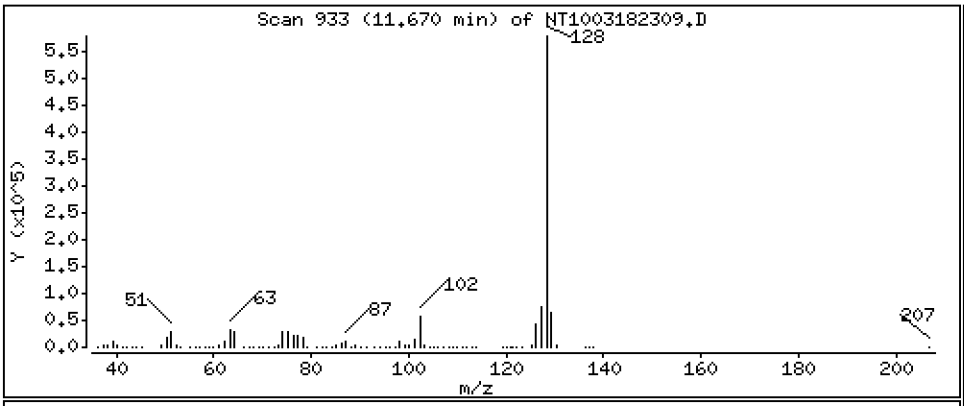
Operator: VTS

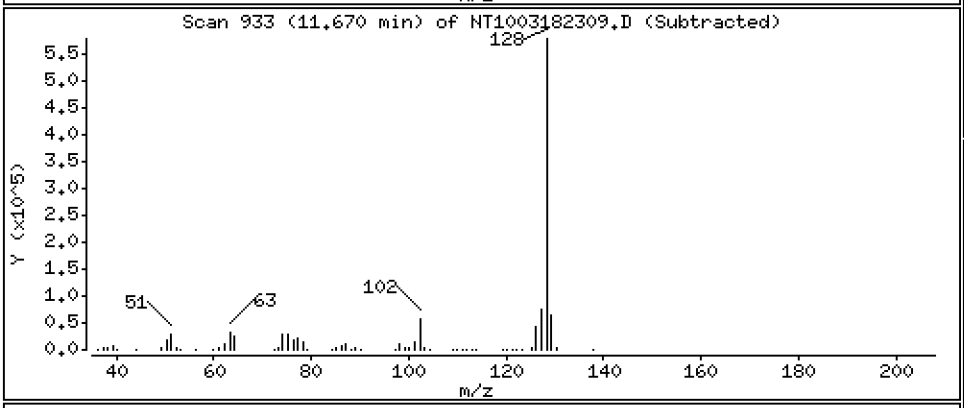
Column phase: ZB-5msi

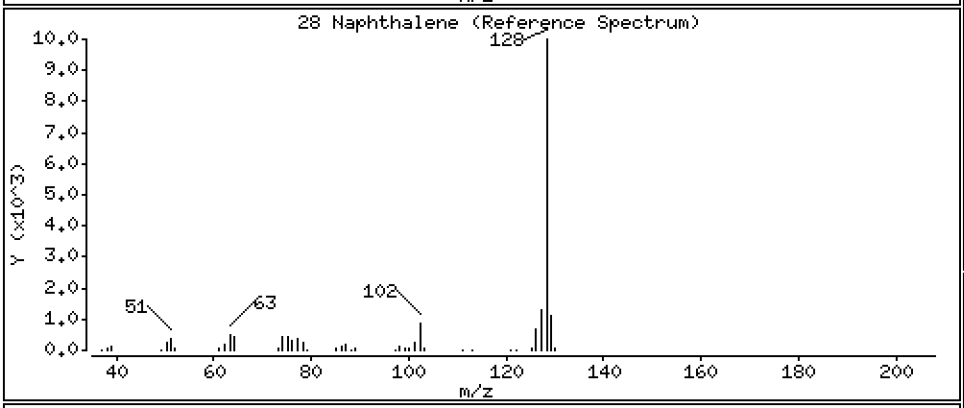
Column diameter: 0.25

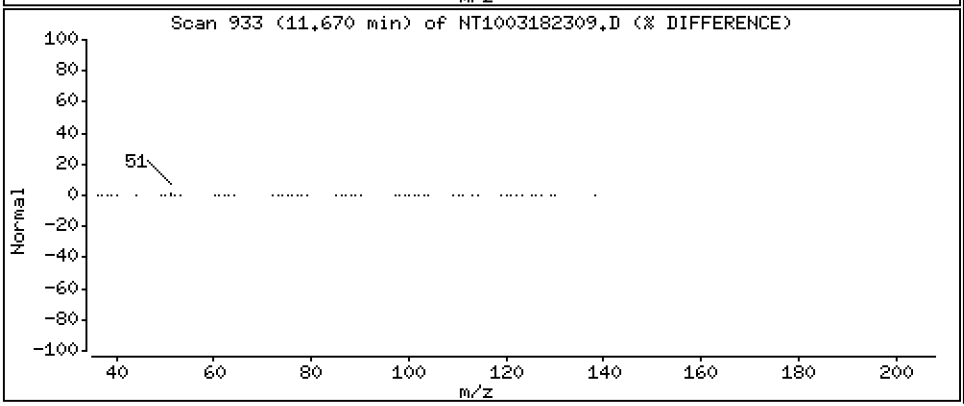
28 Naphthalene

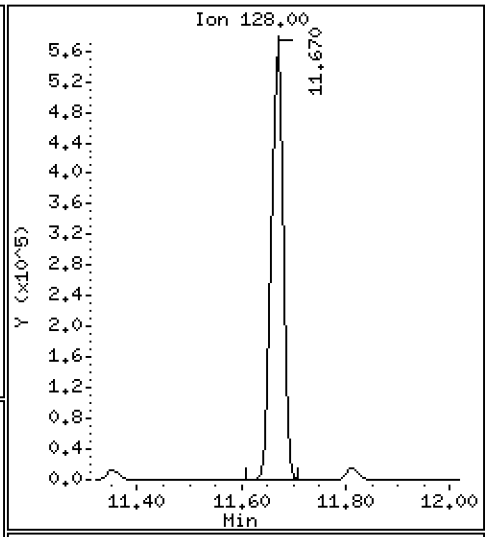
Concentration: 3.572 ug/mL

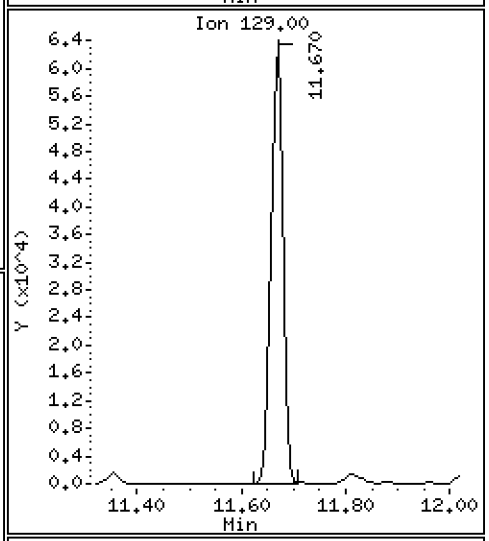


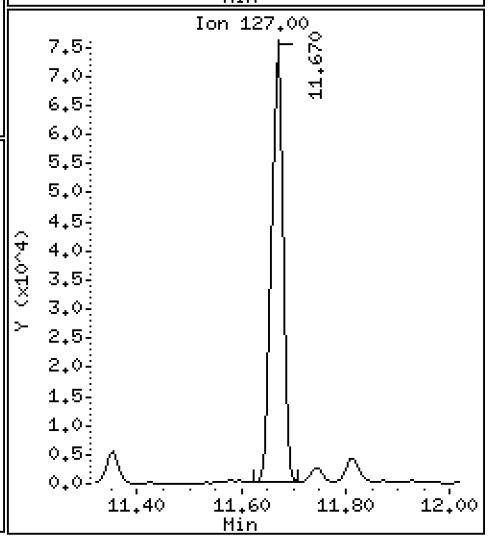












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

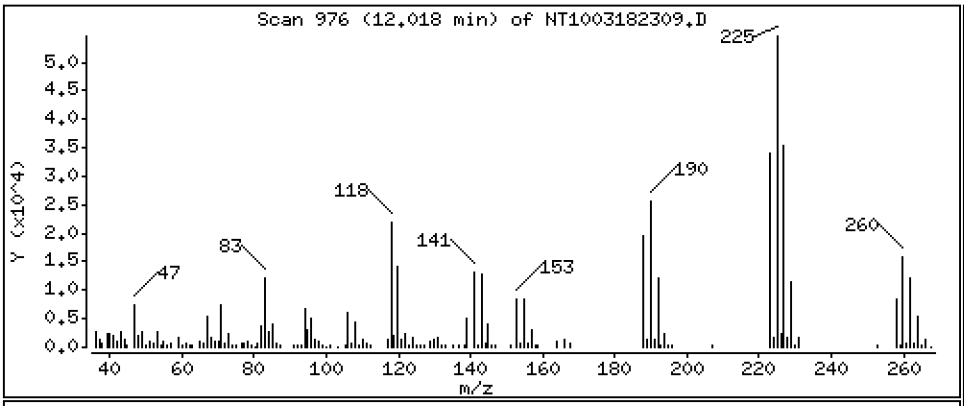
Operator: VTS

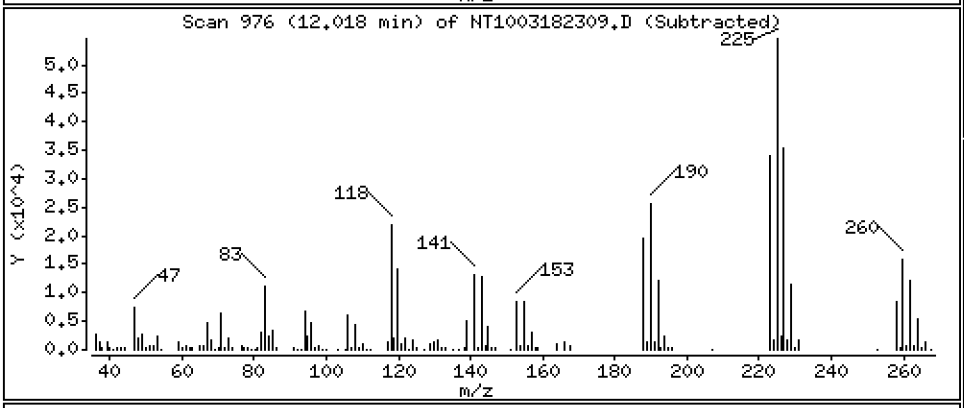
Column phase: ZB-5msi

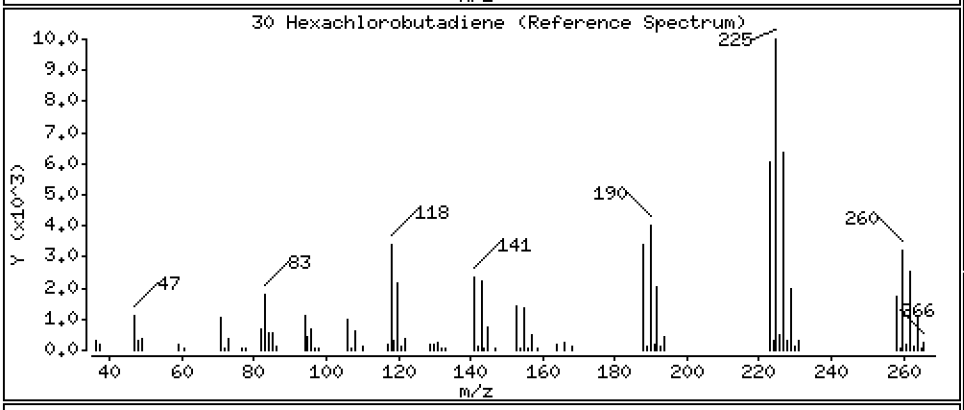
Column diameter: 0.25

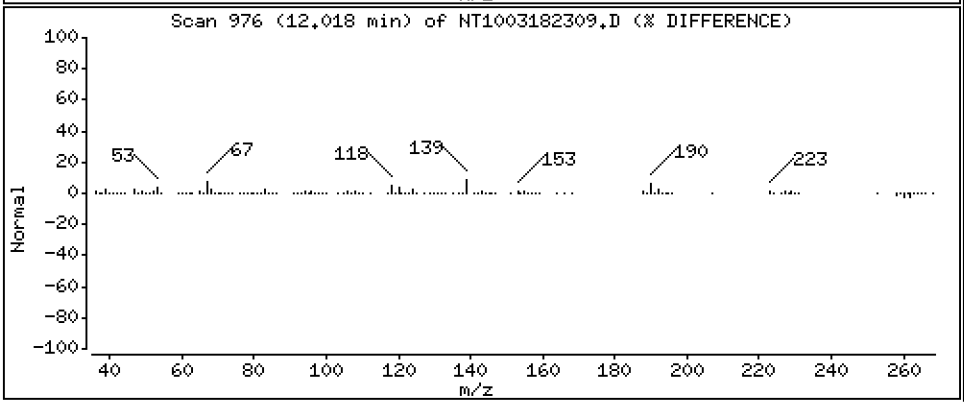
30 Hexachlorobutadiene

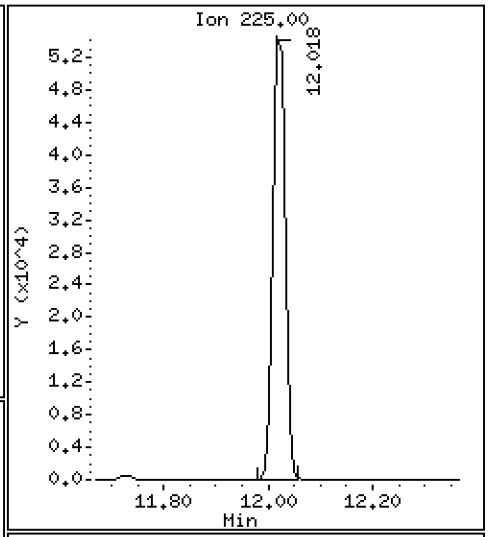
Concentration: 1.810 ug/mL

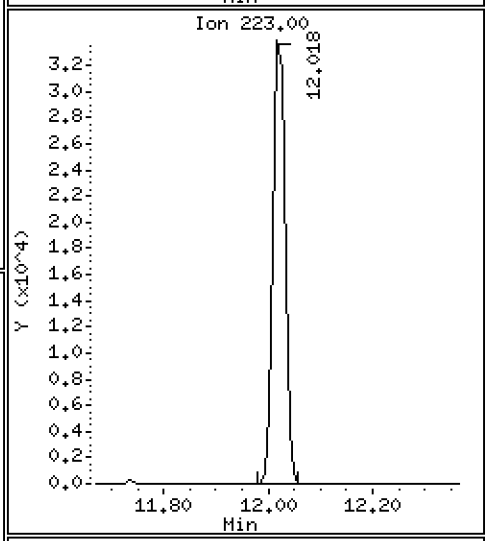


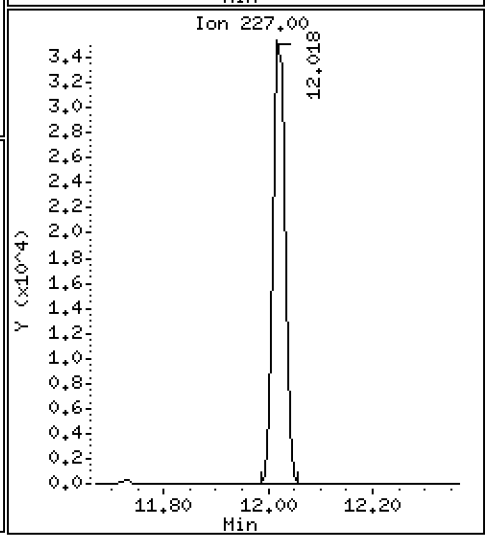












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

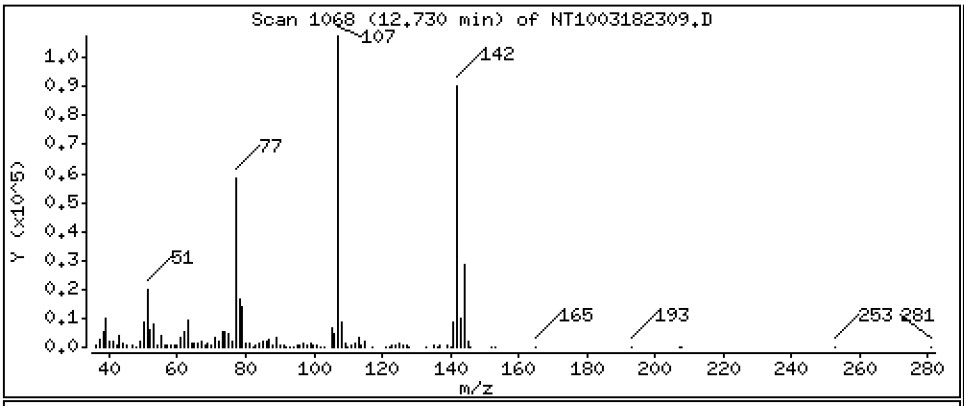
Operator: VTS

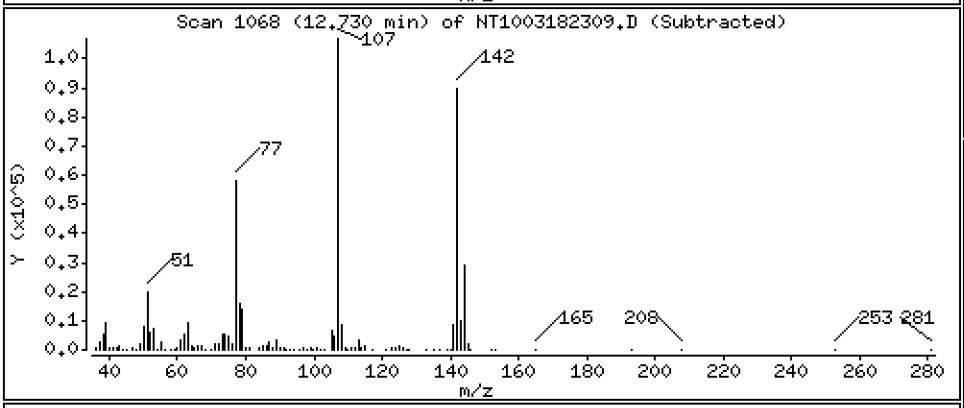
Column phase: ZB-5msi

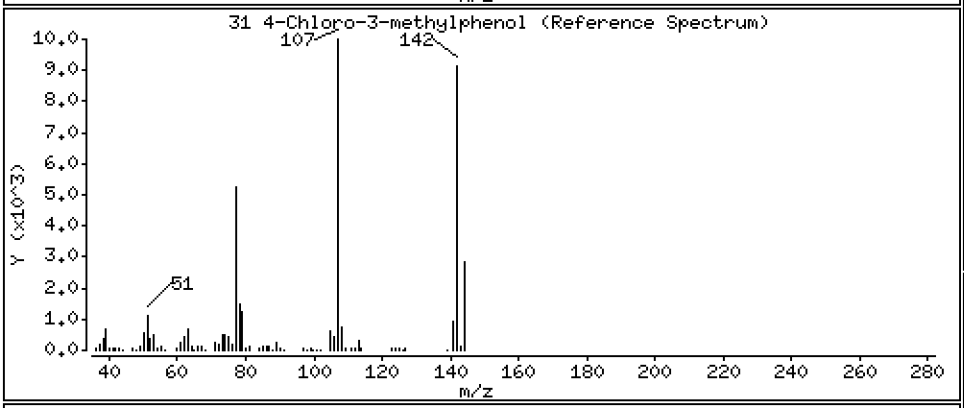
Column diameter: 0.25

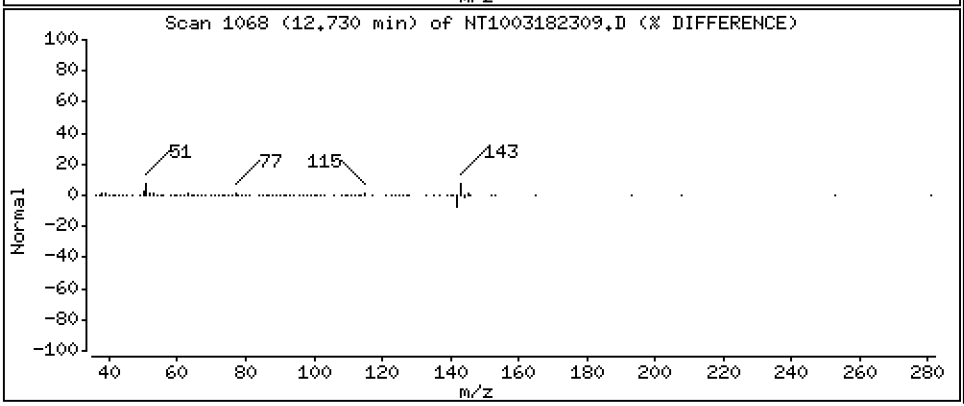
31 4-Chloro-3-methylphenol

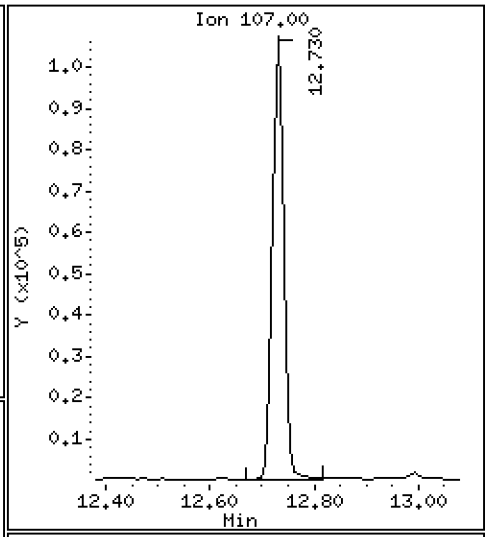
Concentration: 2.076 ug/mL

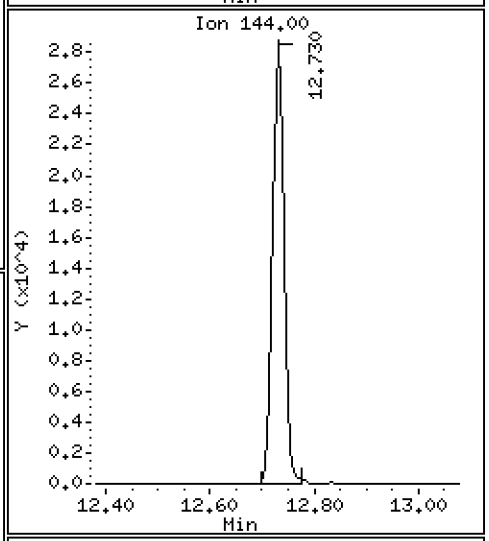


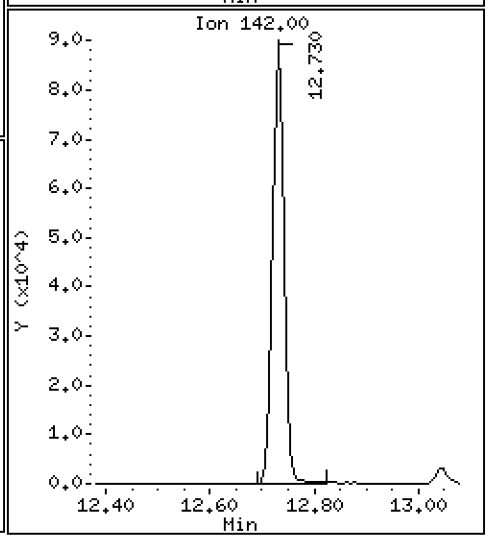












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

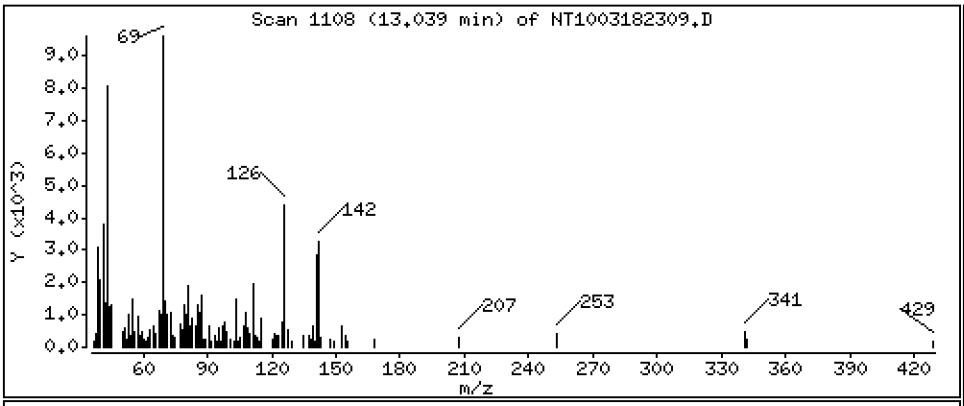
Operator: VTS

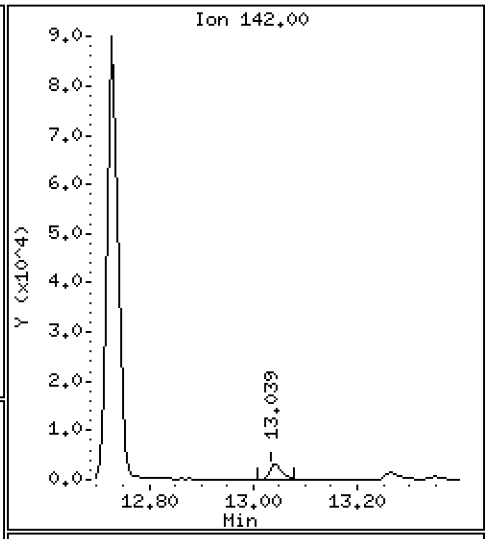
Column phase: ZB-5msi

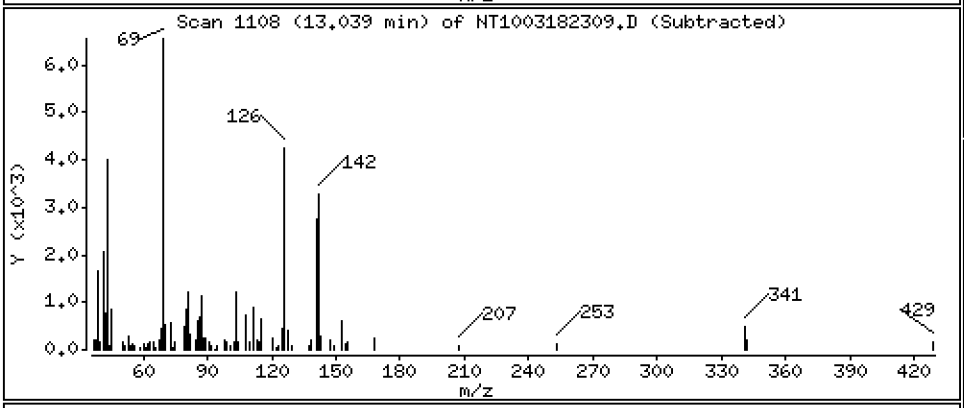
Column diameter: 0.25

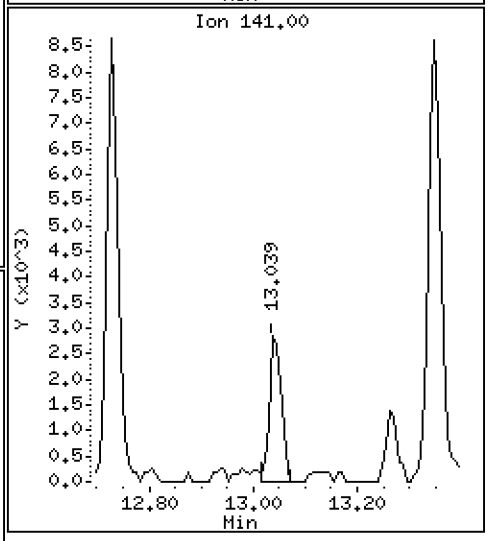
32 2-Methylnaphthalene

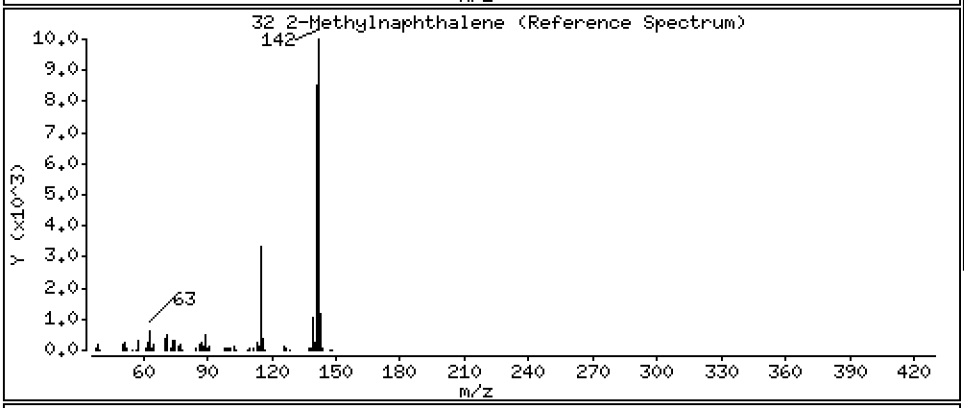
Concentration: 0.02820 ug/mL

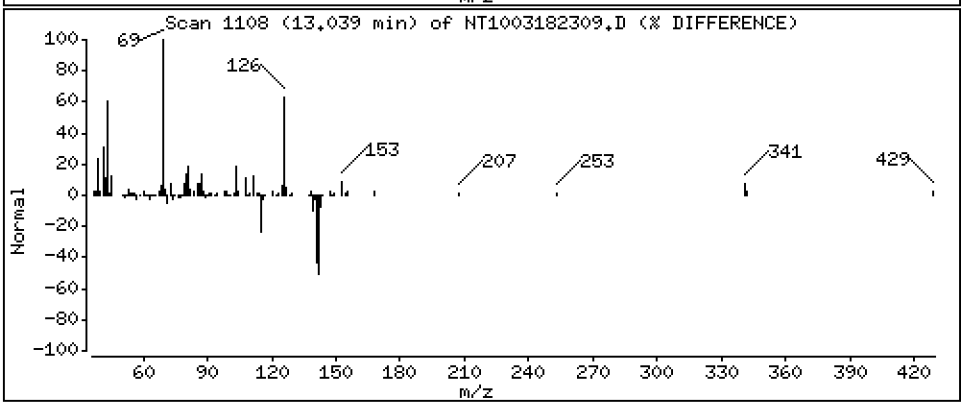












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

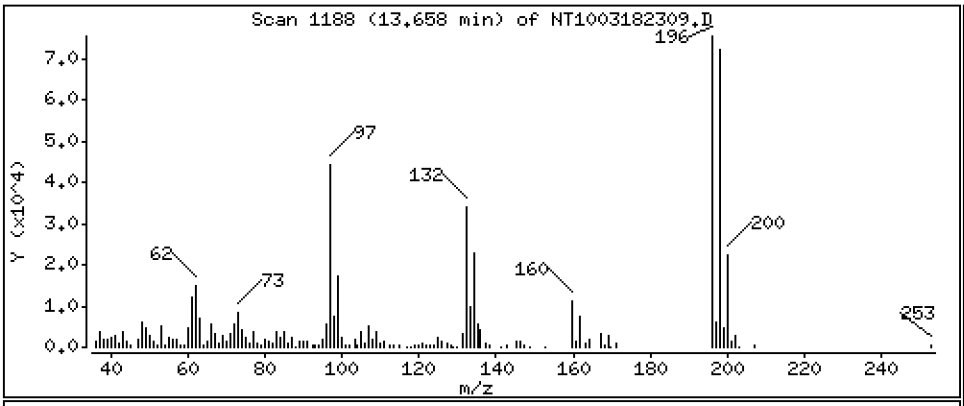
Operator: VTS

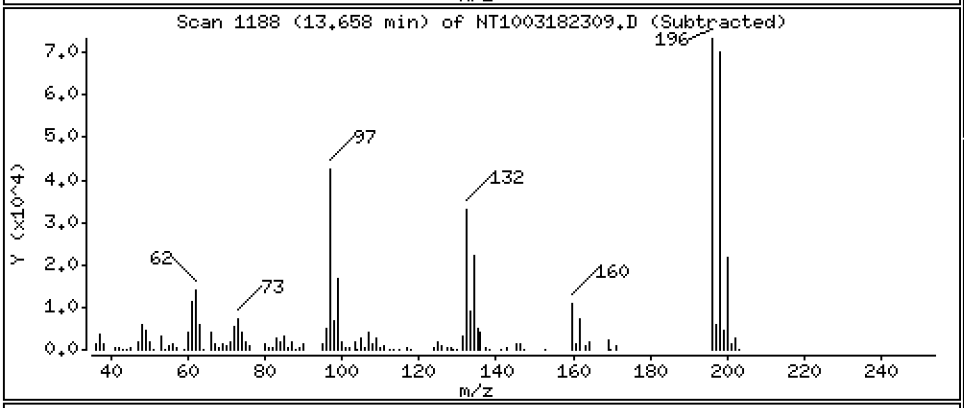
Column phase: ZB-5msi

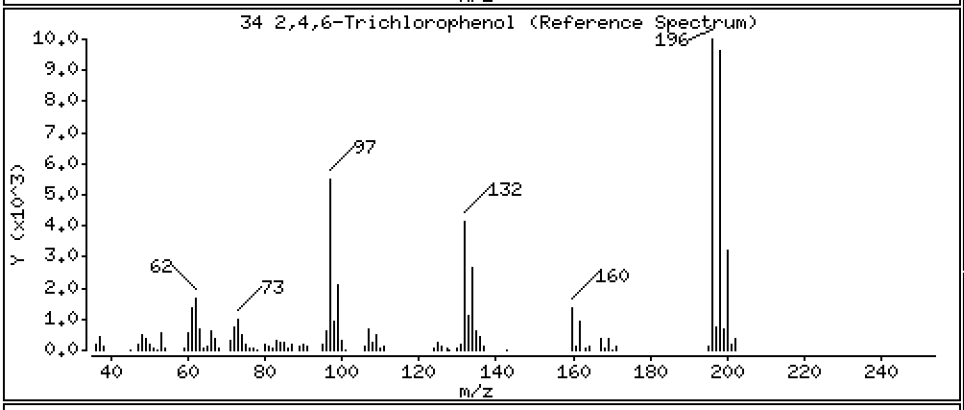
Column diameter: 0.25

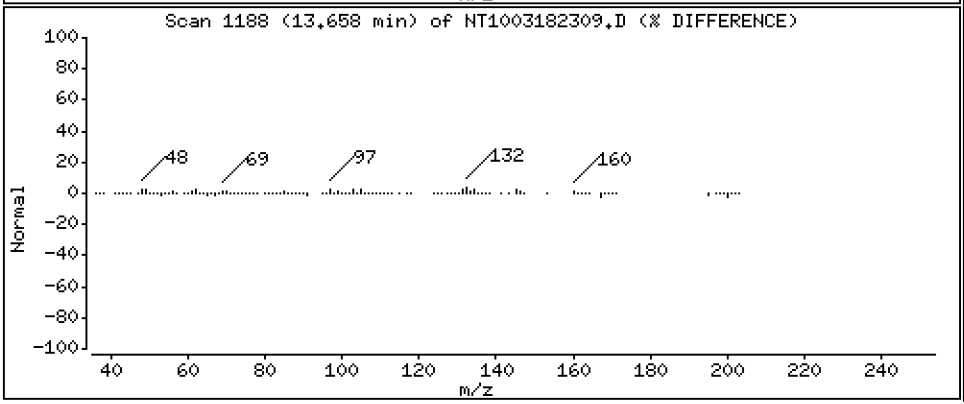
34 2,4,6-Trichlorophenol

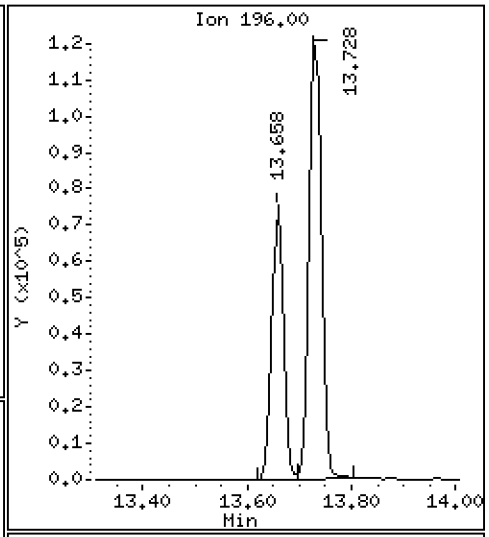
Concentration: 2.215 ug/mL

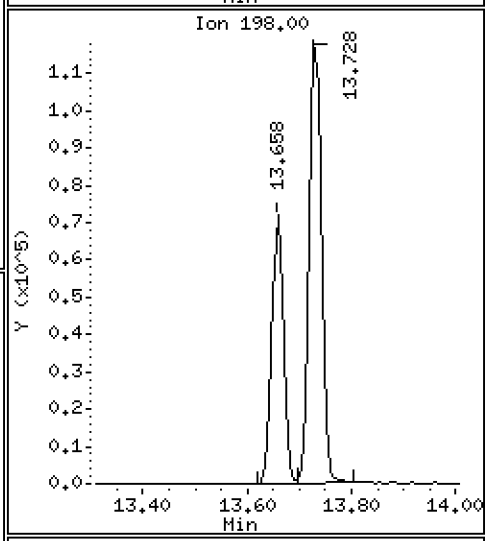


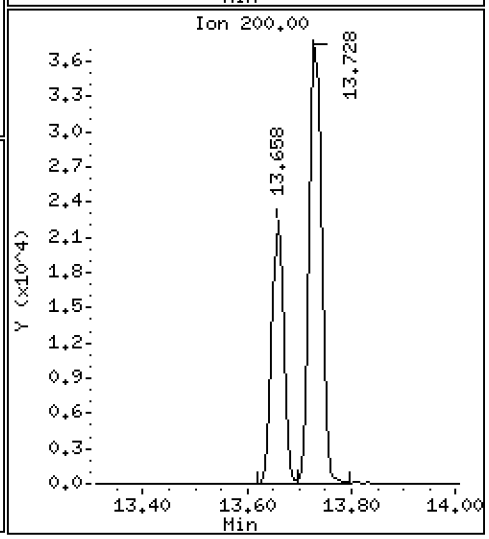












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

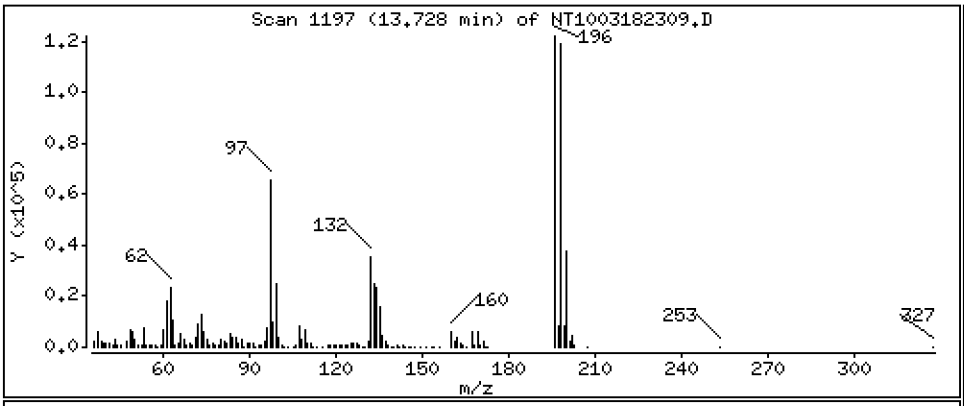
Operator: VTS

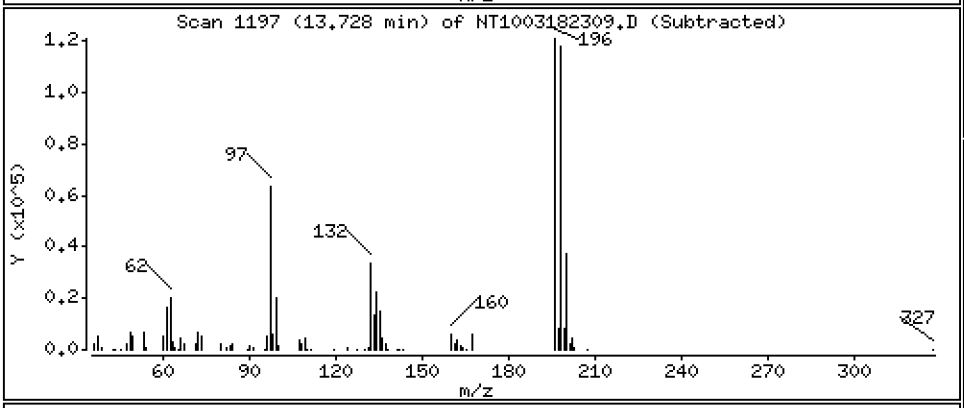
Column phase: ZB-5msi

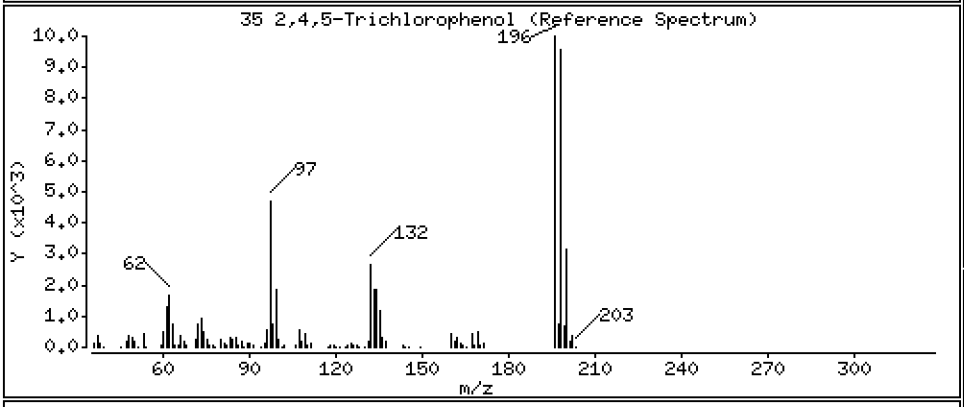
Column diameter: 0.25

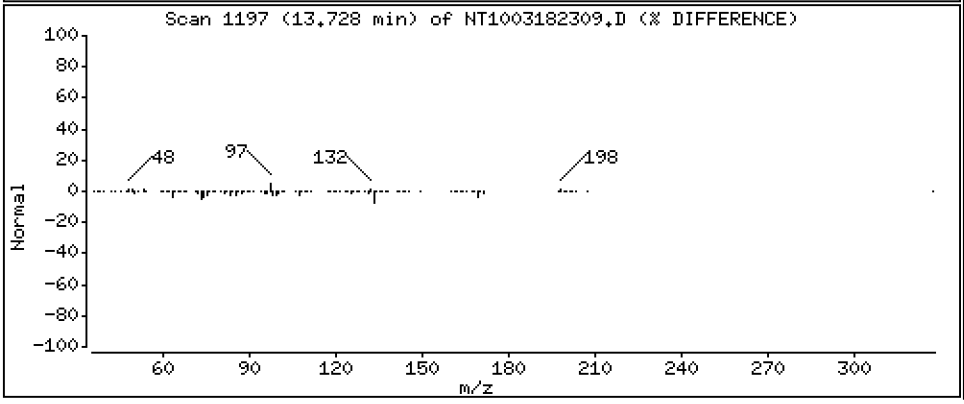
35 2,4,5-Trichlorophenol

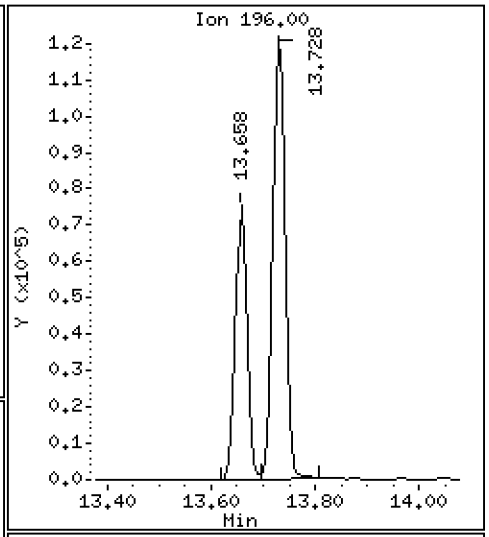
Concentration: 3.391 ug/mL

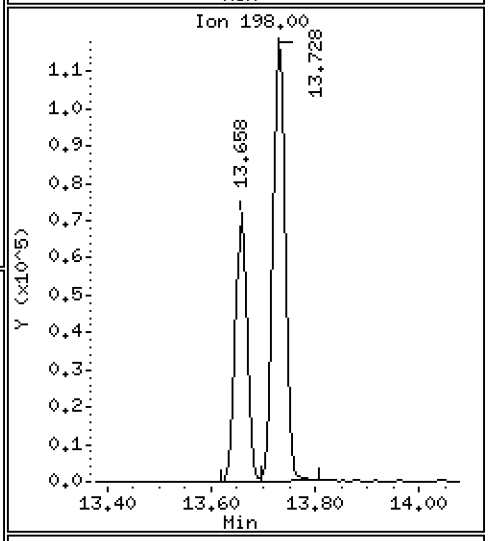


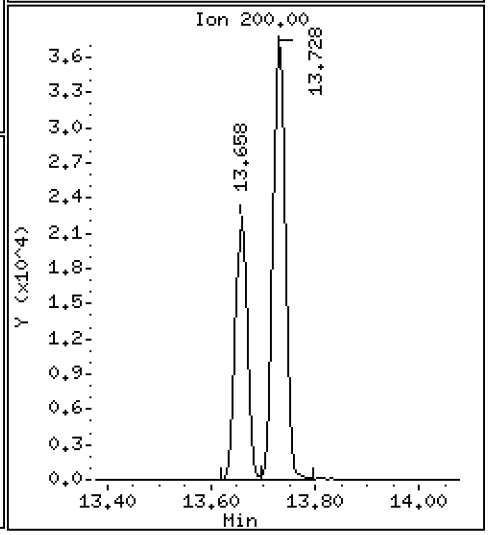












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

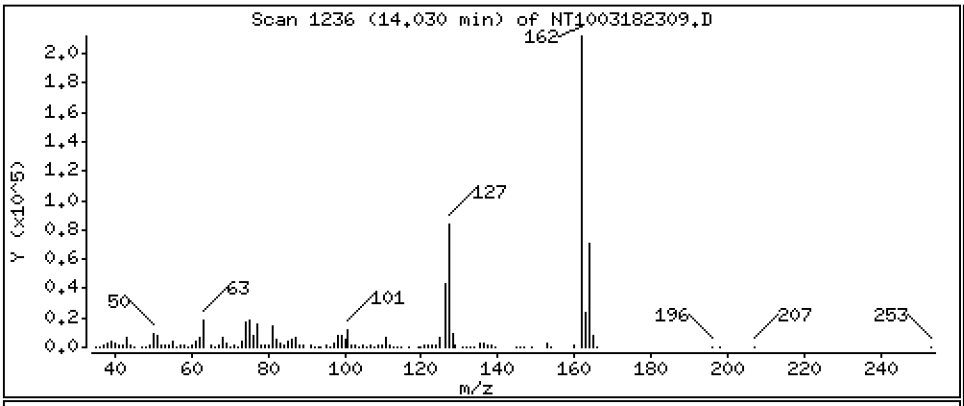
Operator: VTS

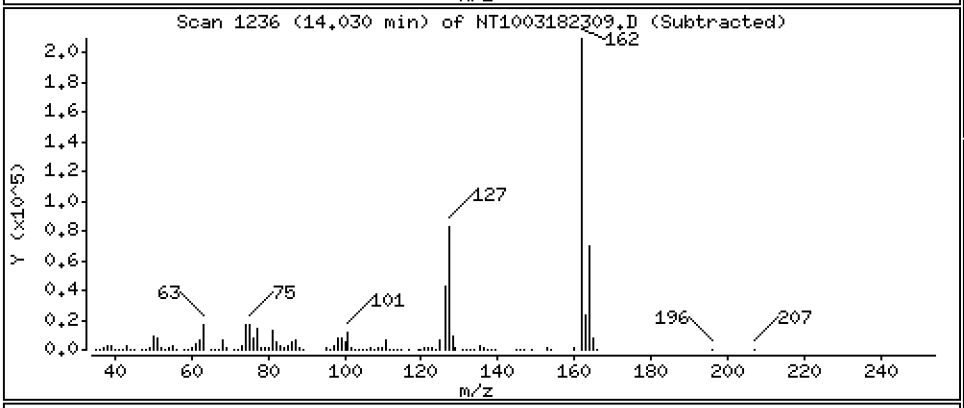
Column phase: ZB-5msi

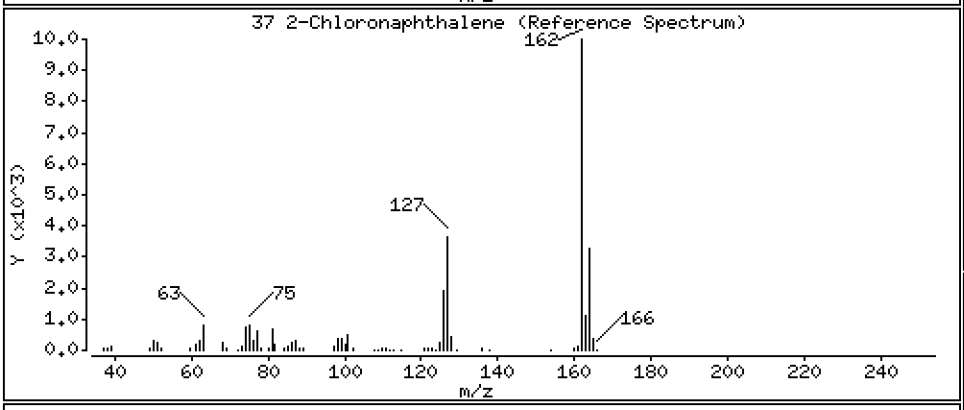
Column diameter: 0.25

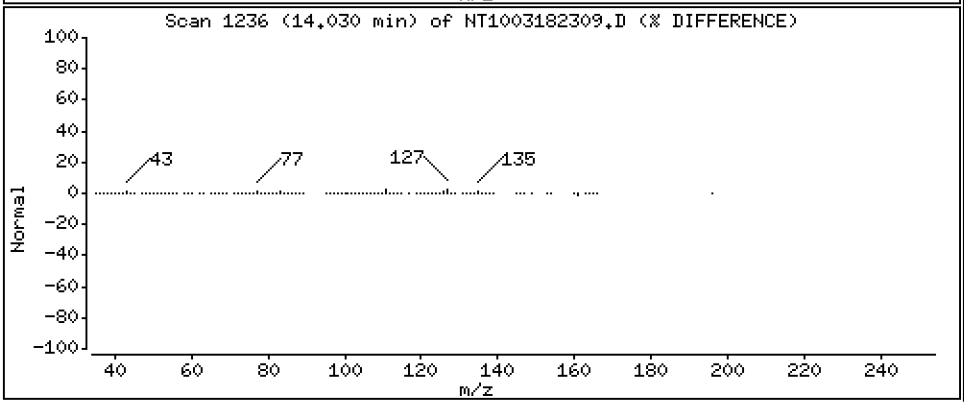
37 2-Chloronaphthalene

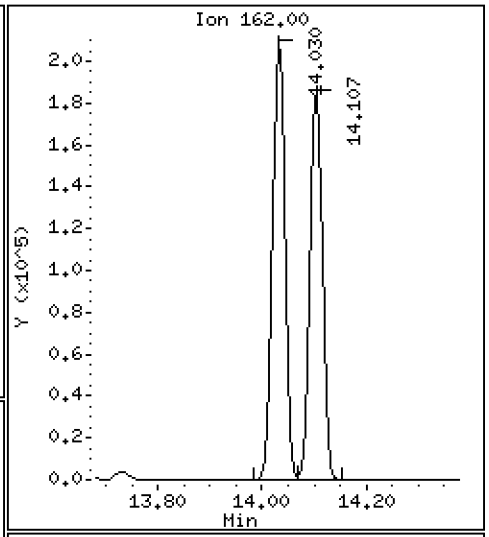
Concentration: 2.028 ug/mL

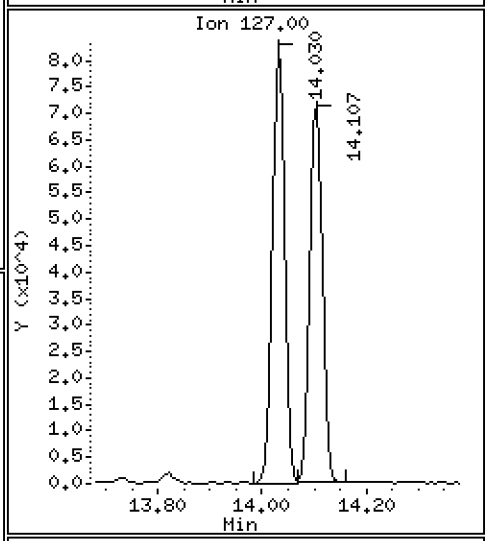


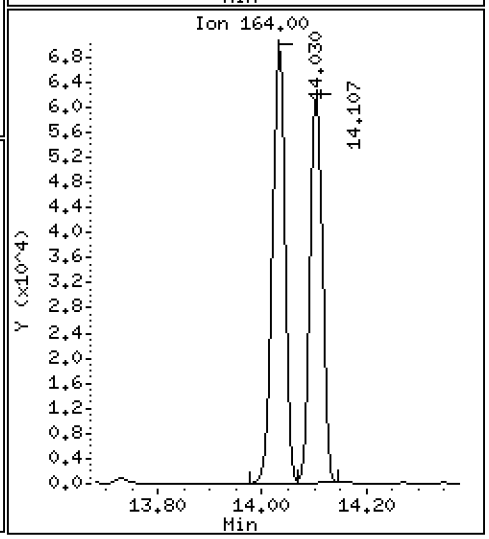












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

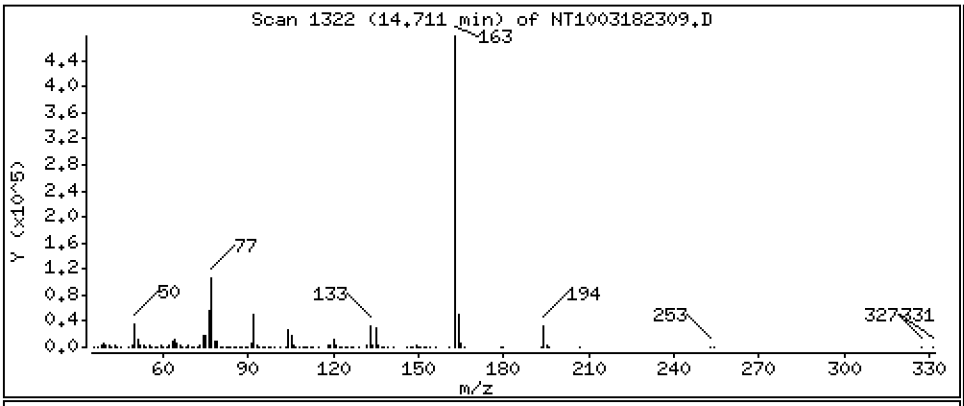
Operator: VTS

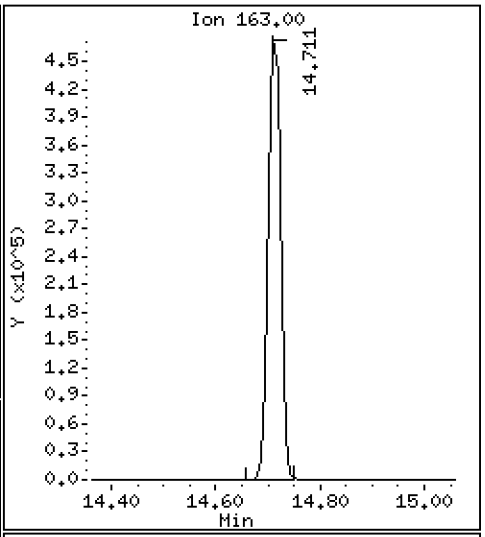
Column phase: ZB-5msi

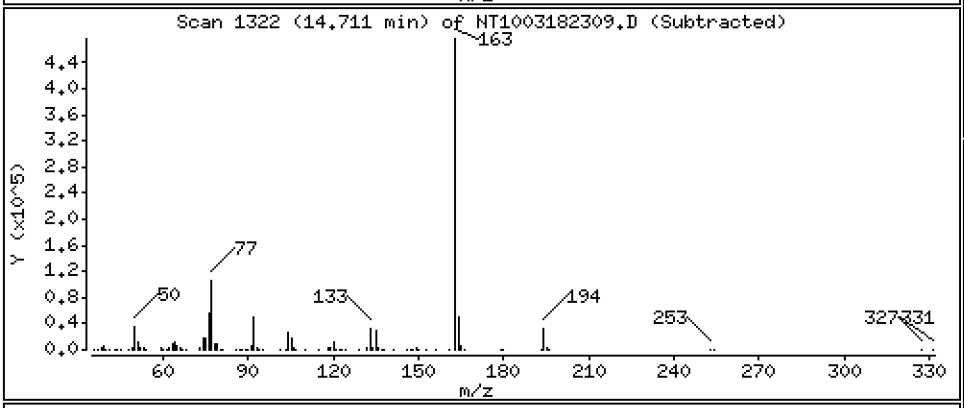
Column diameter: 0.25

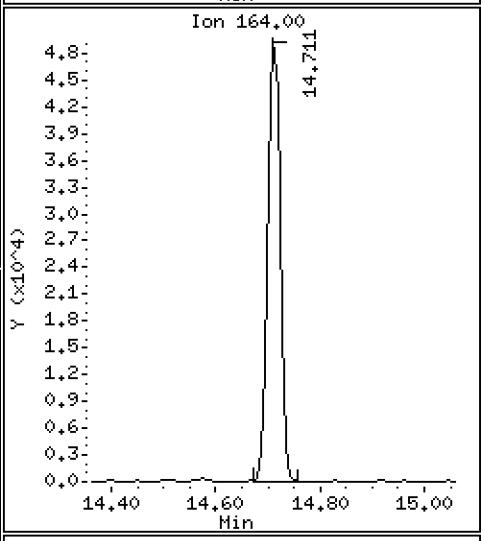
39 Dimethylphthalate

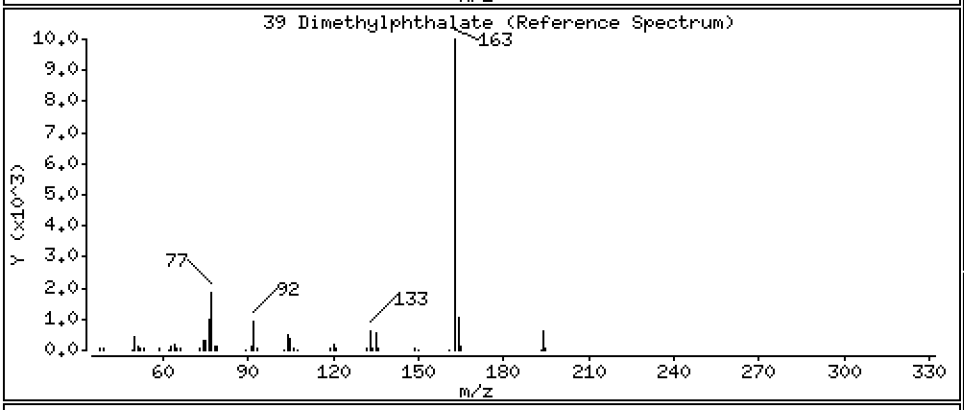
Concentration: 4.553 ug/mL

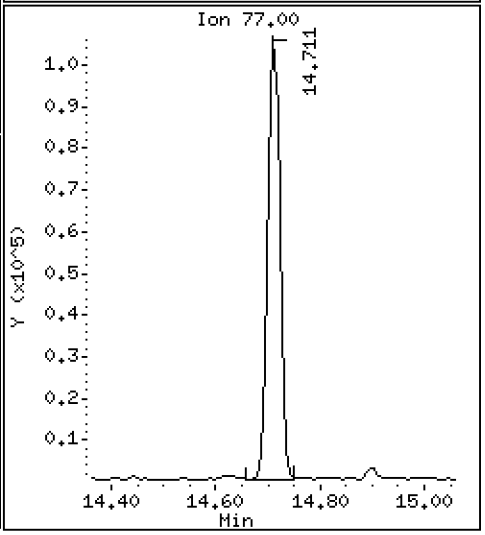


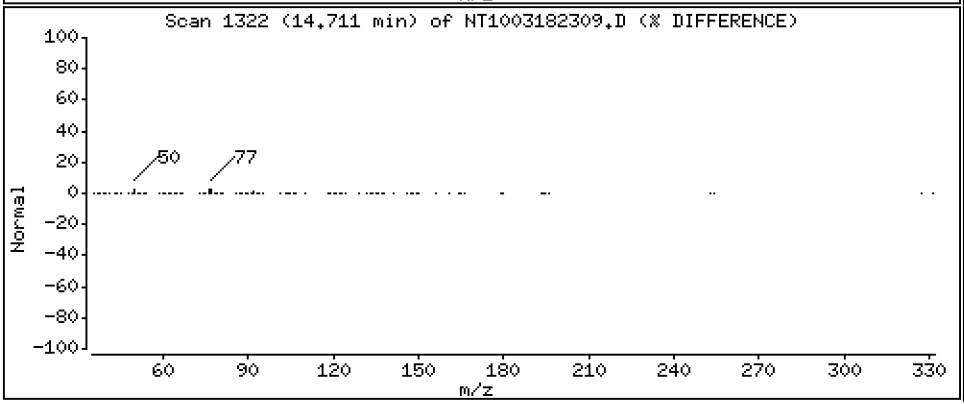












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

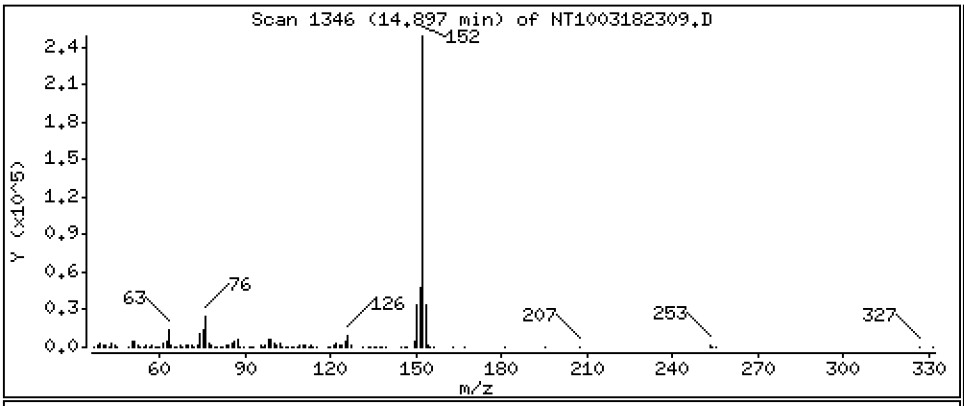
Operator: VTS

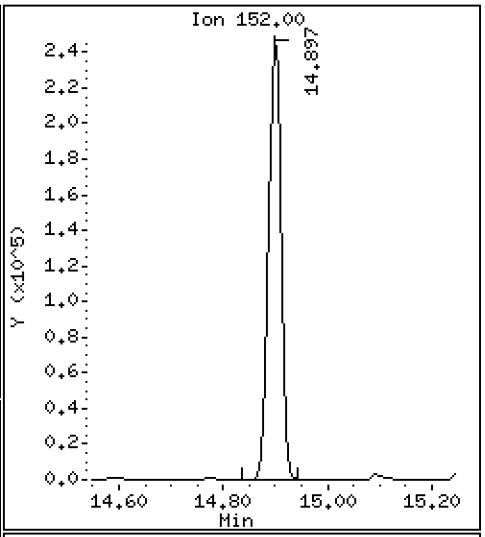
Column phase: ZB-5msi

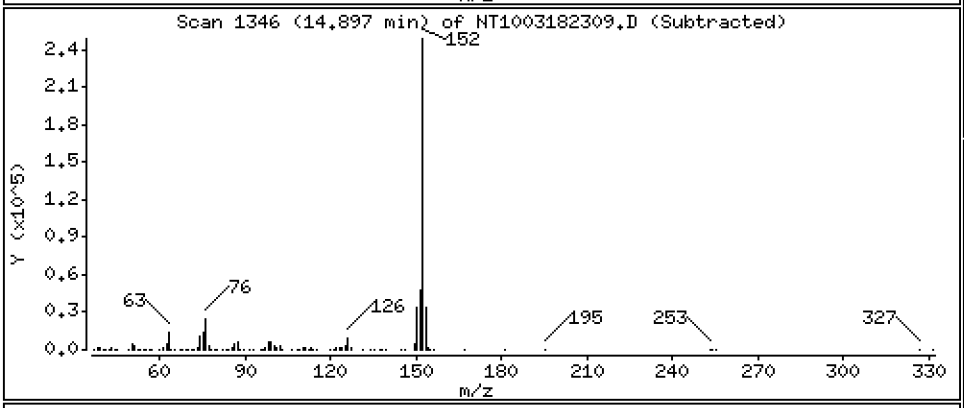
Column diameter: 0.25

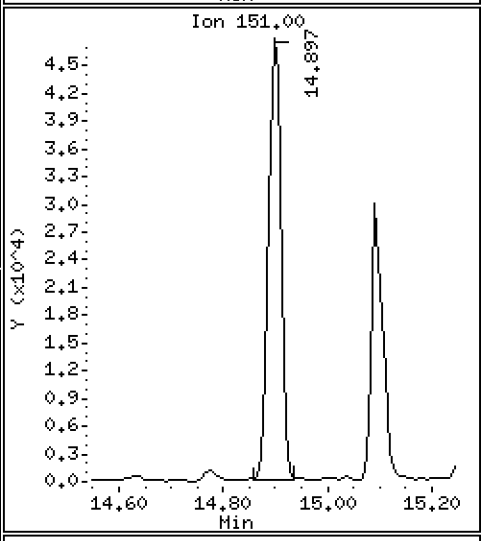
40 Acenaphthylene

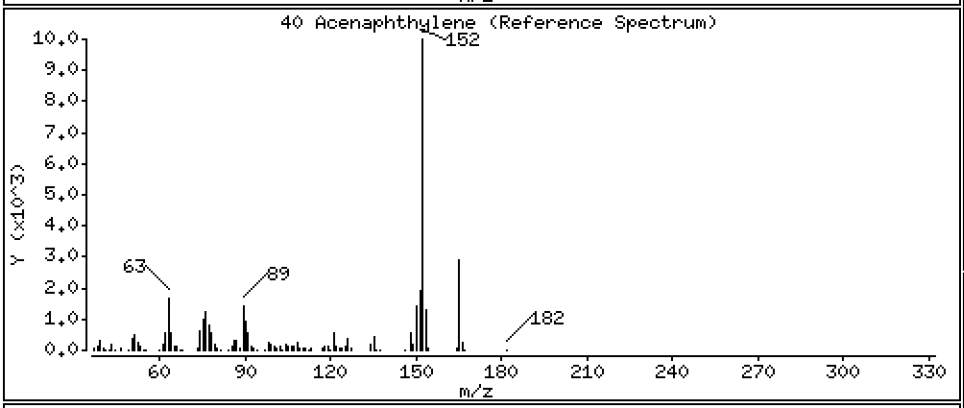
Concentration: 1.556 ug/mL

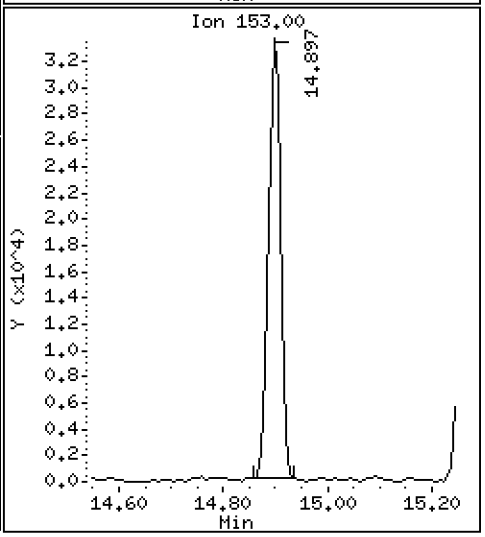


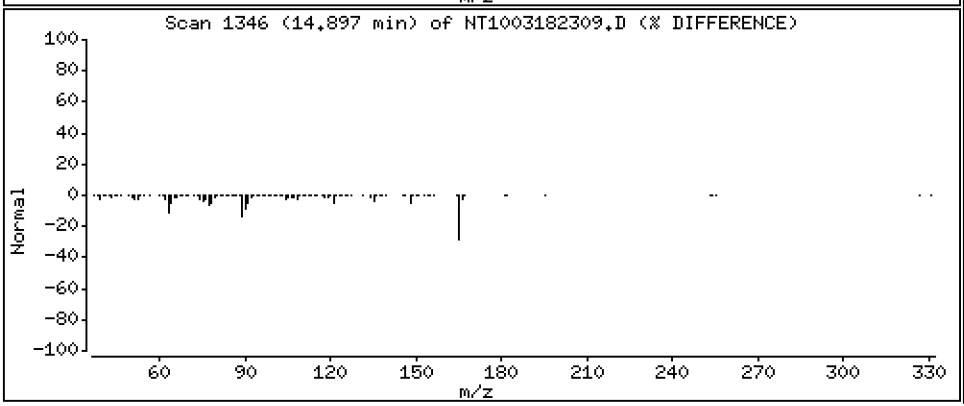












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

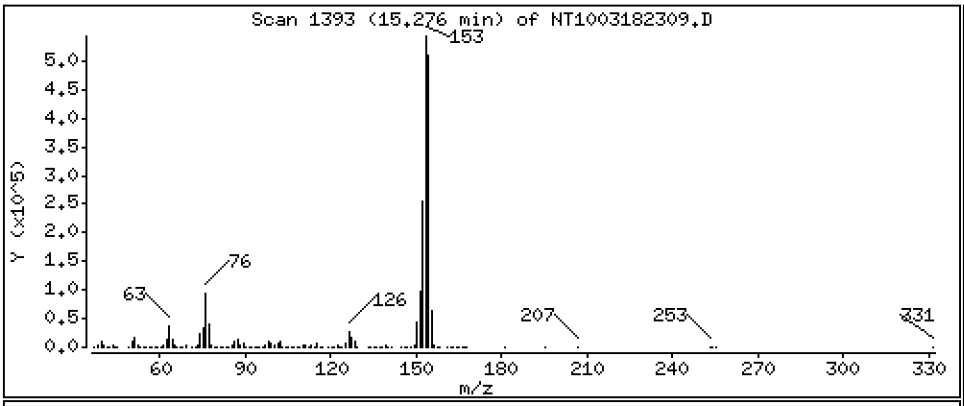
Operator: VTS

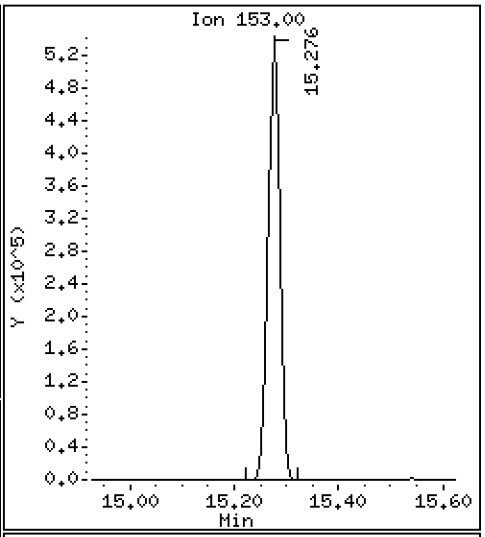
Column phase: ZB-5msi

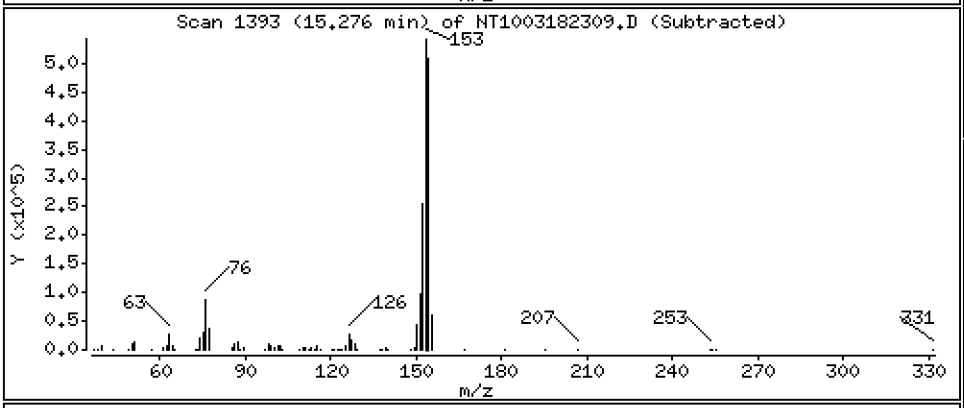
Column diameter: 0.25

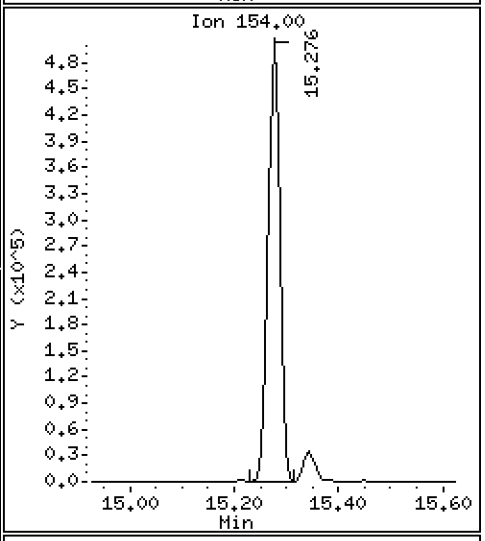
44 Acenaphthene

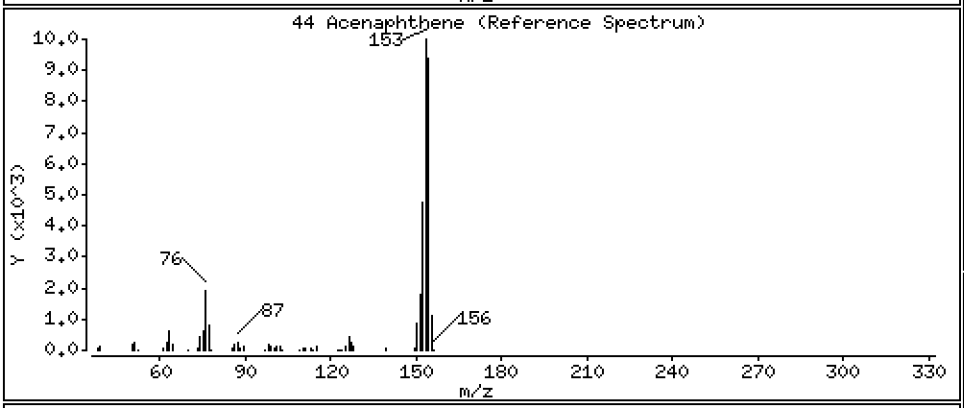
Concentration: 5.108 ug/mL

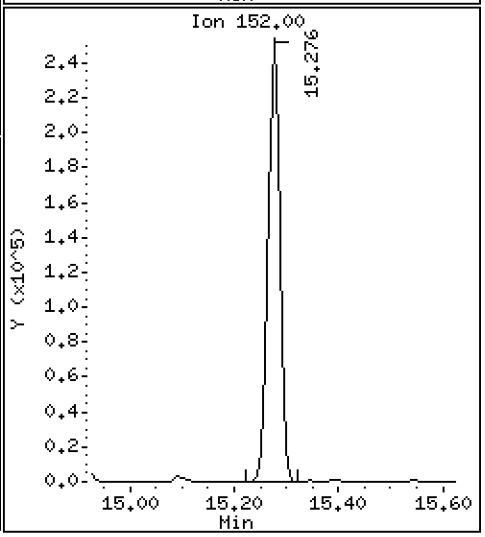


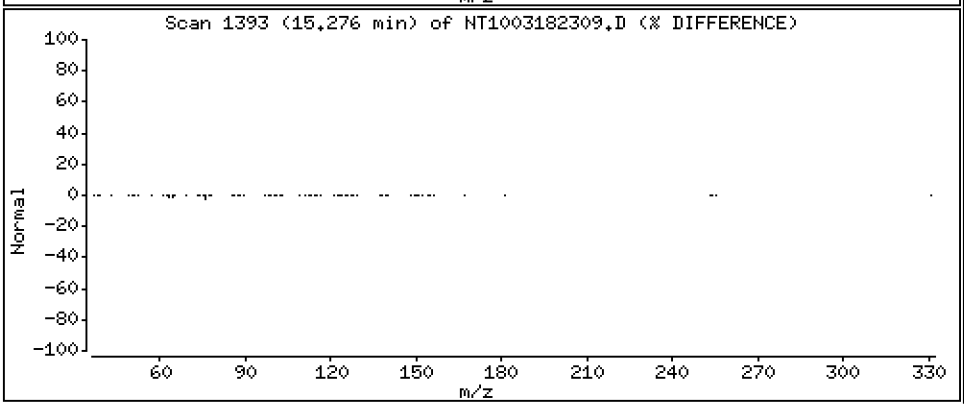












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

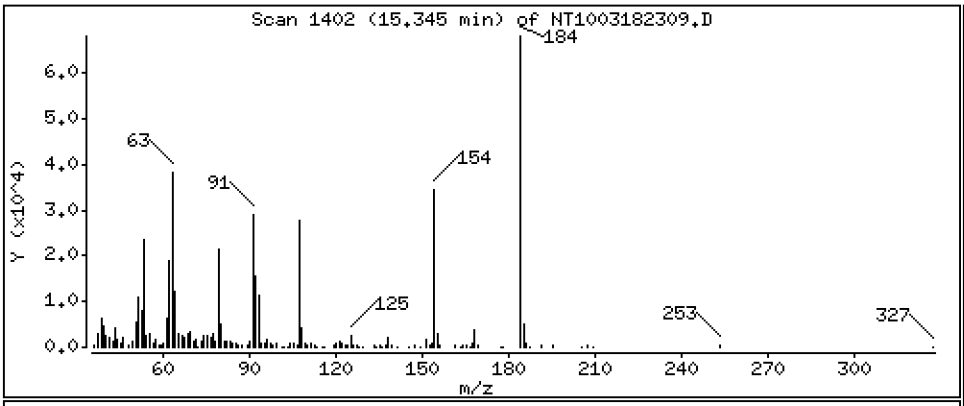
Operator: VTS

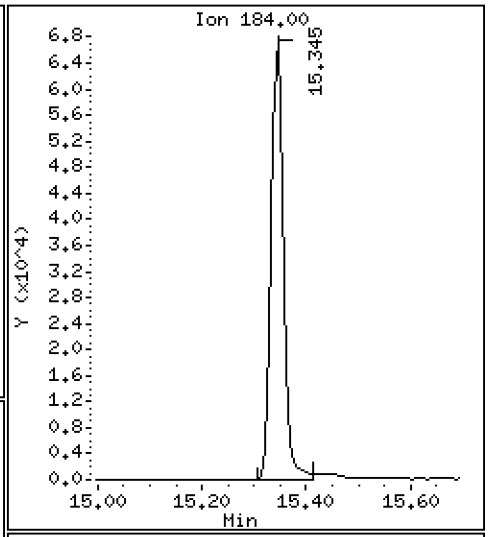
Column phase: ZB-5msi

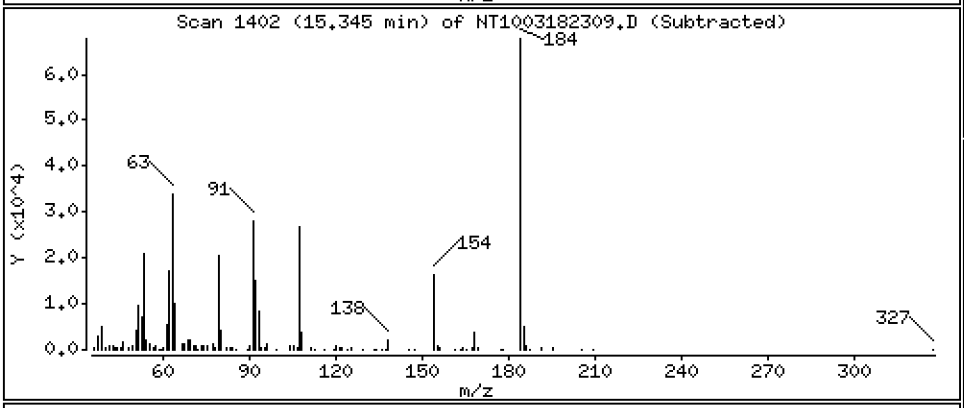
Column diameter: 0.25

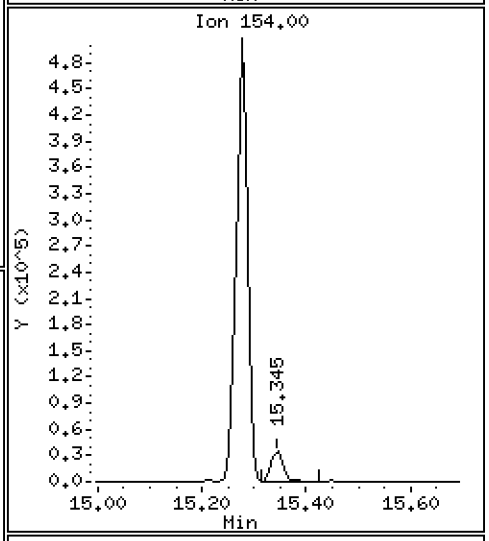
45 2,4-Dinitrophenol

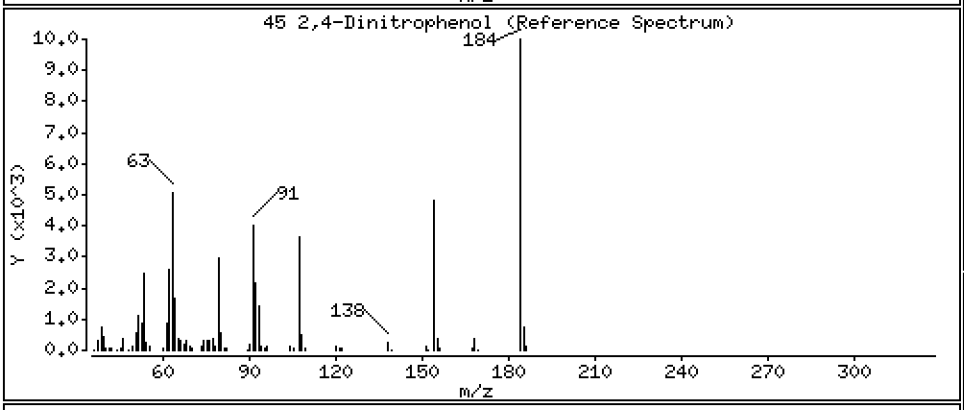
Concentration: 4.824 ug/mL

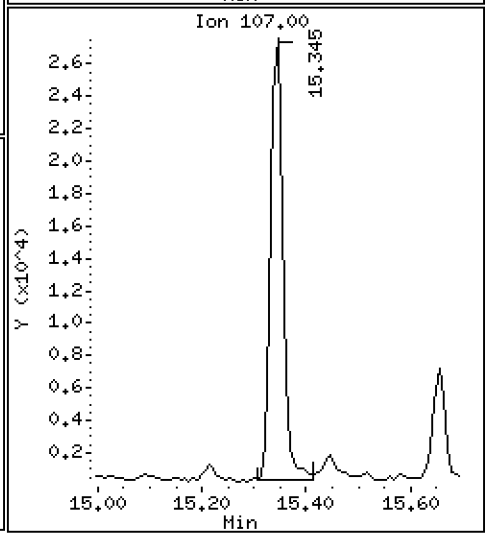


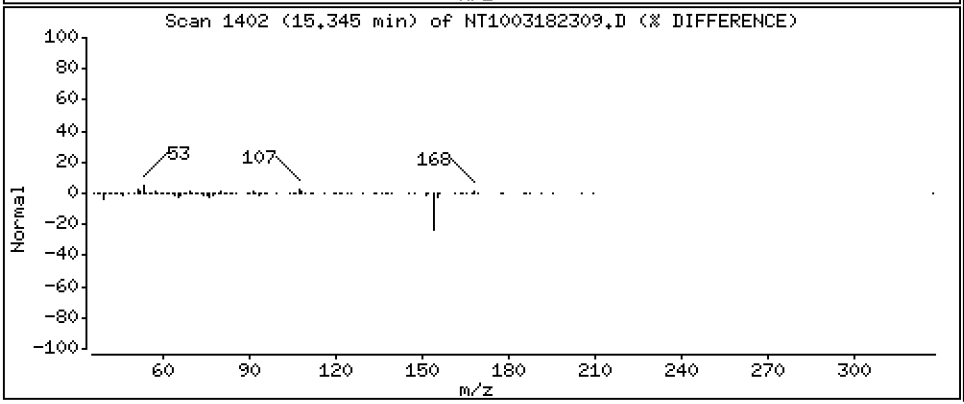












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

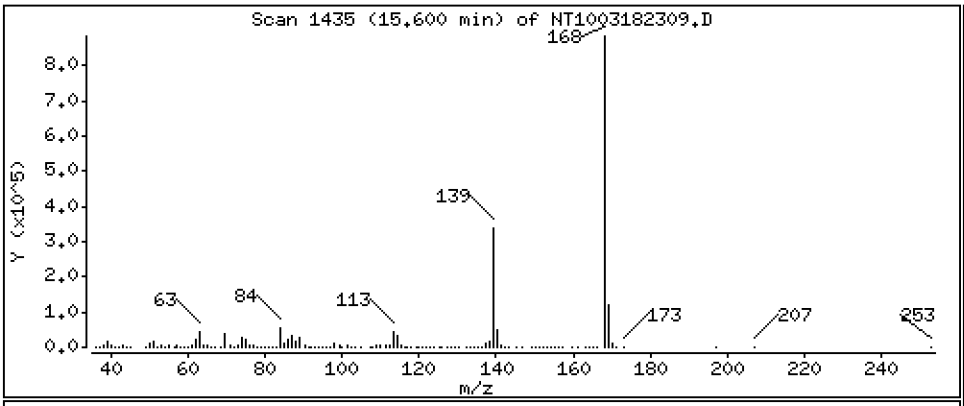
Operator: VTS

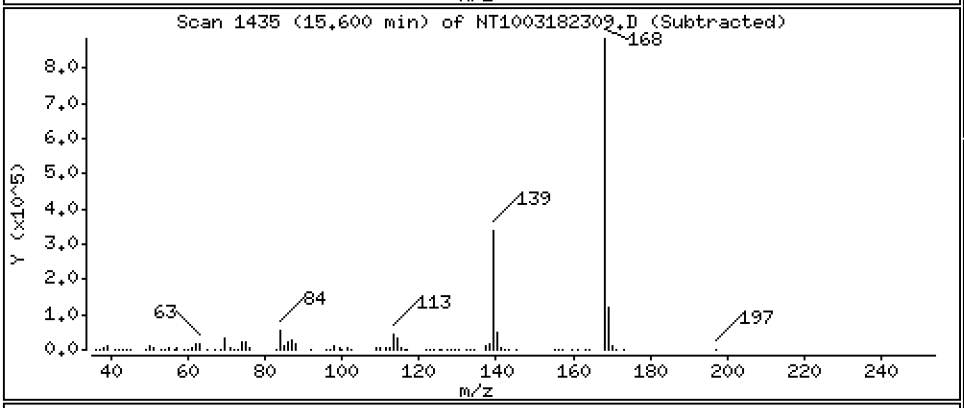
Column phase: ZB-5msi

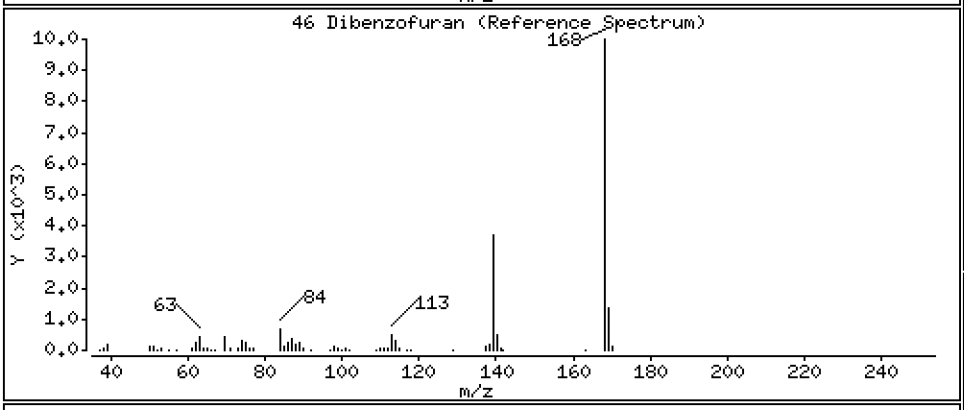
Column diameter: 0.25

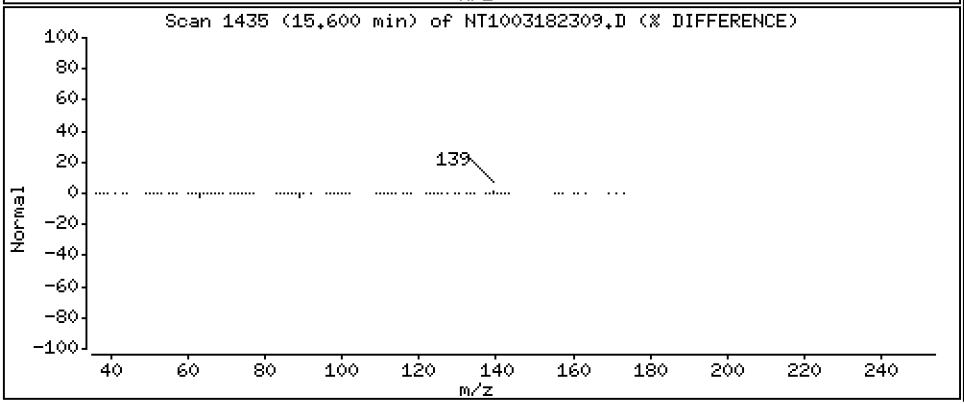
46 Dibenzofuran

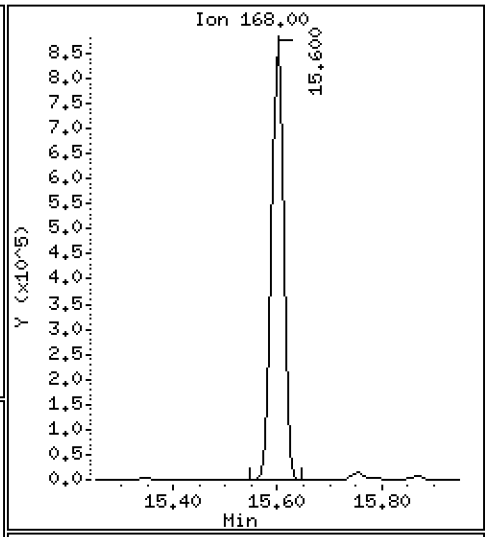
Concentration: 5.802 ug/mL

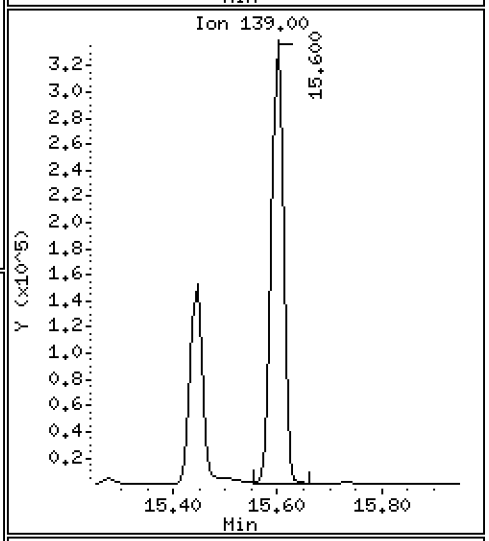


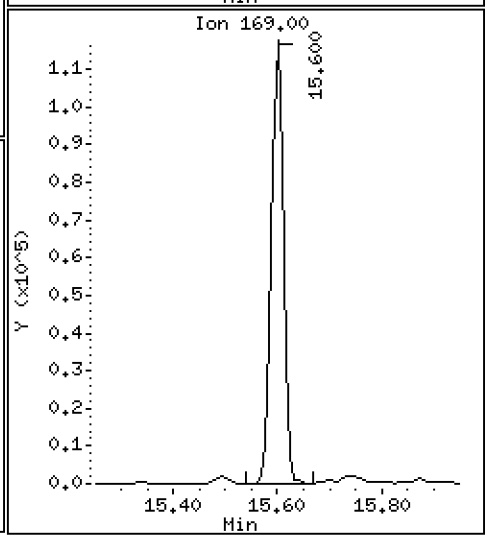












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

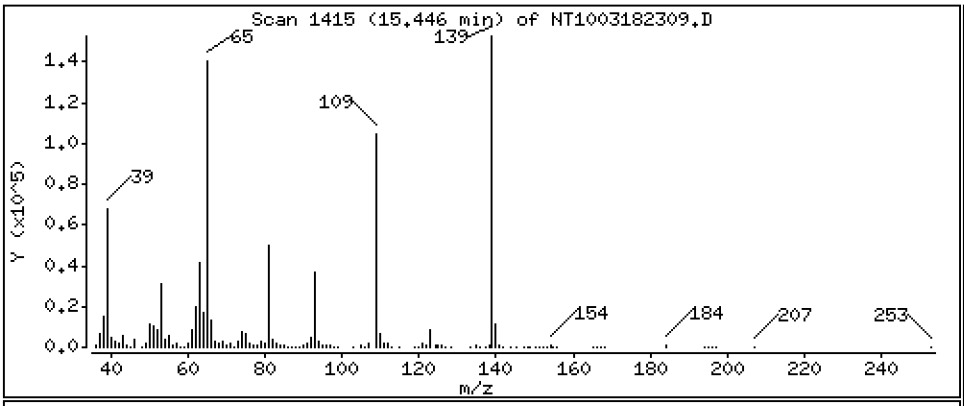
Operator: VTS

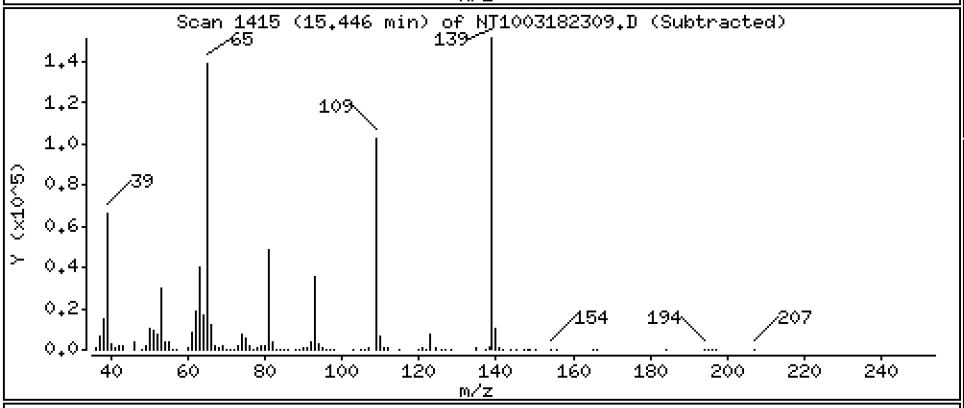
Column phase: ZB-5msi

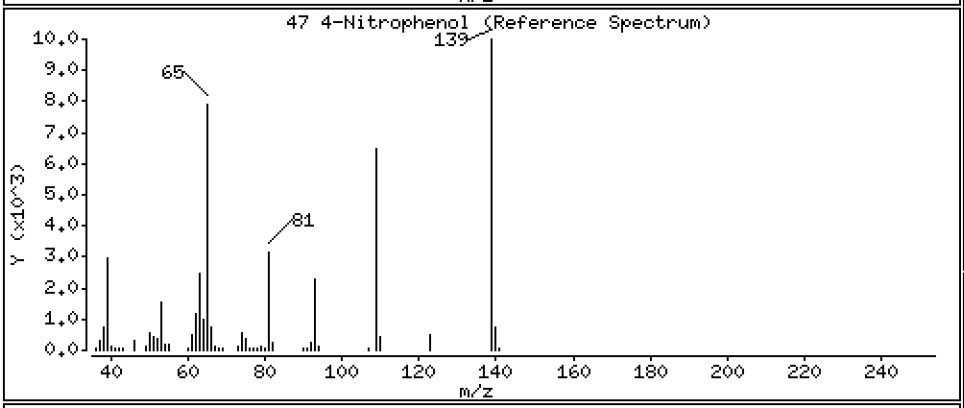
Column diameter: 0.25

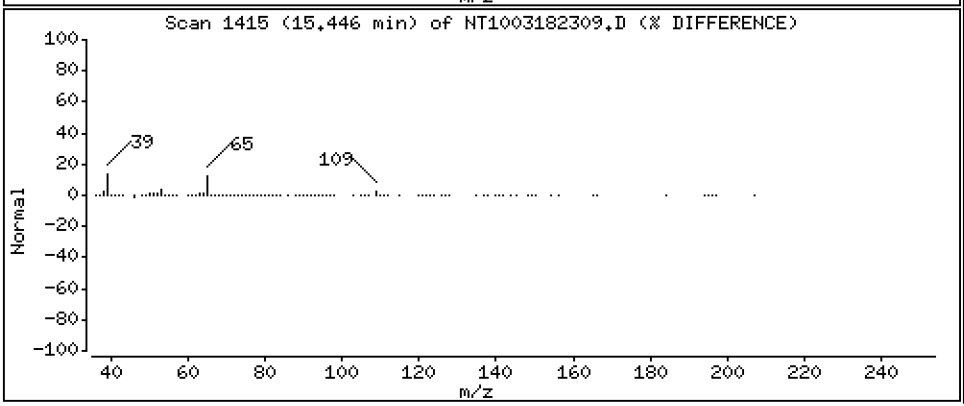
47 4-Nitrophenol

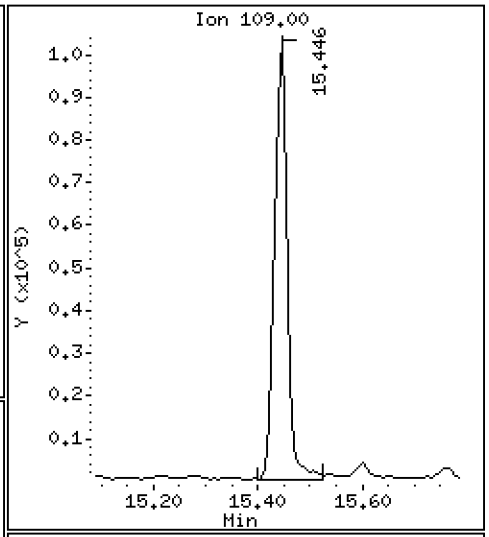
Concentration: 6.733 ug/mL

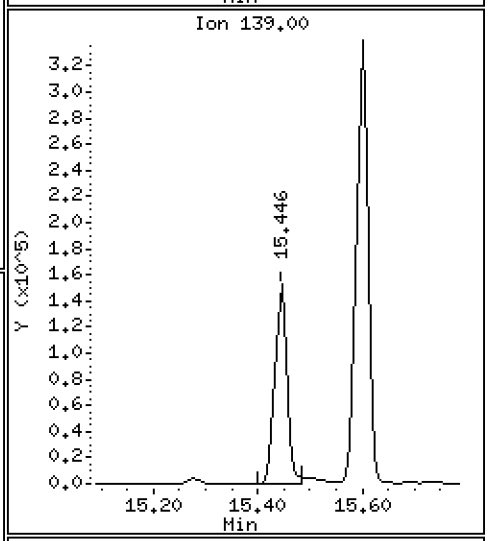


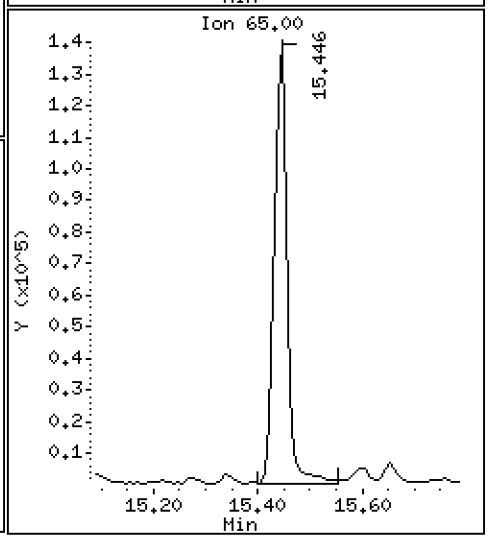












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

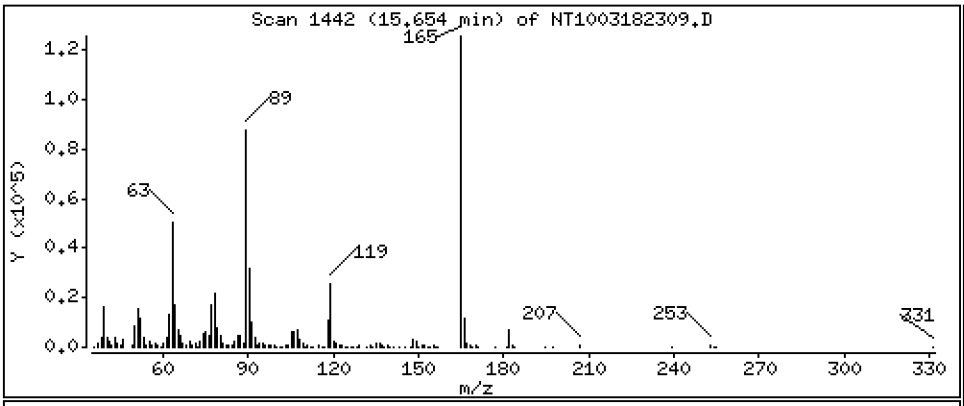
Operator: VTS

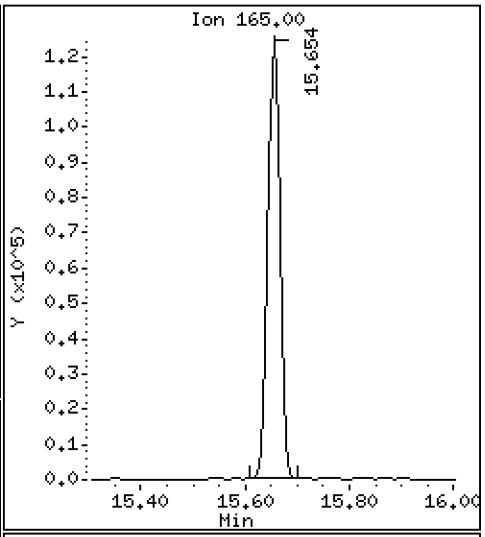
Column phase: ZB-5msi

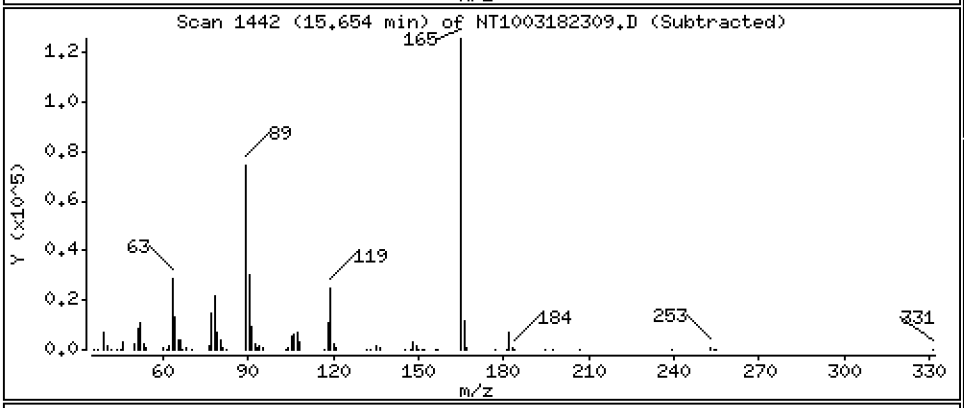
Column diameter: 0.25

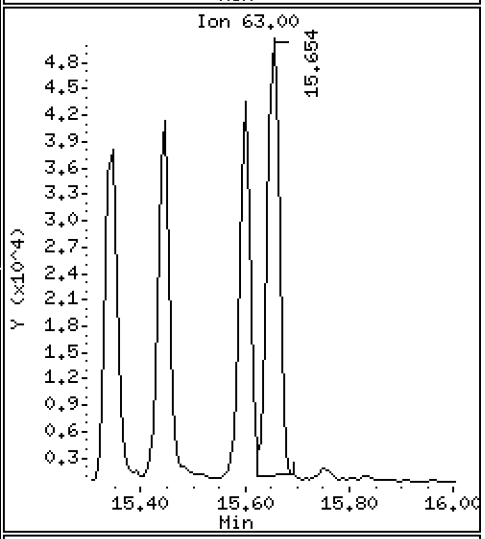
48 2,4-Dinitrotoluene

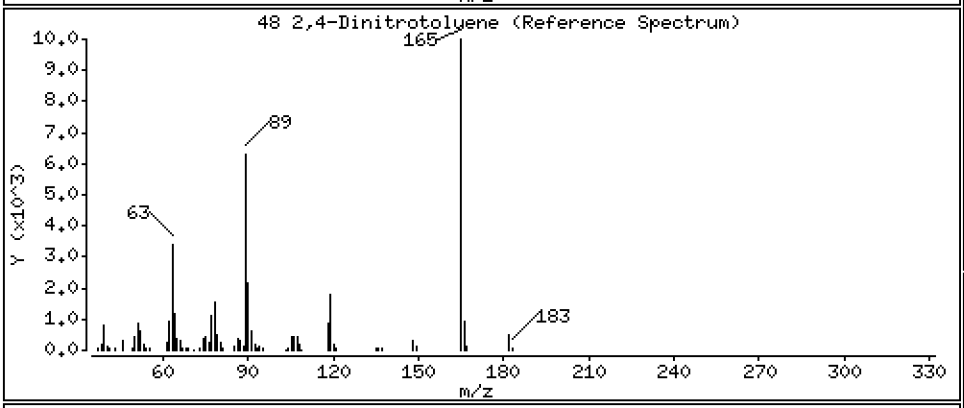
Concentration: 3.599 ug/mL

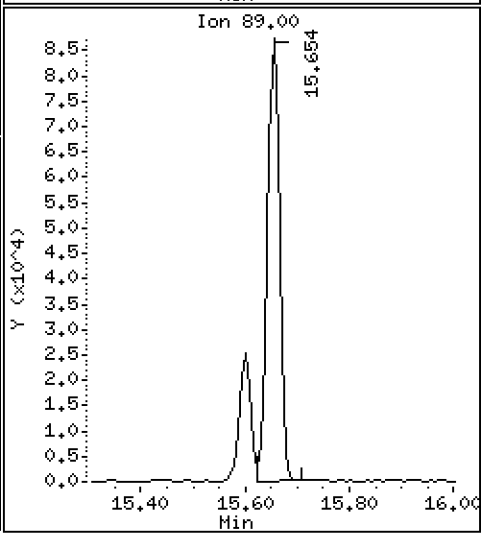


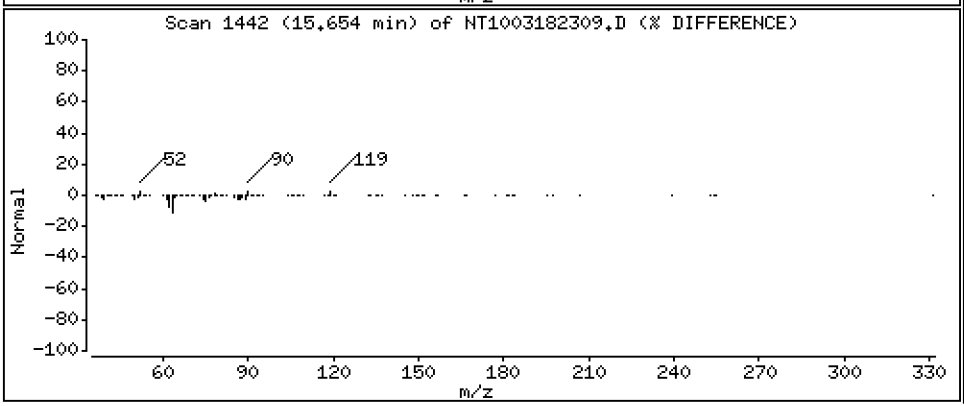












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

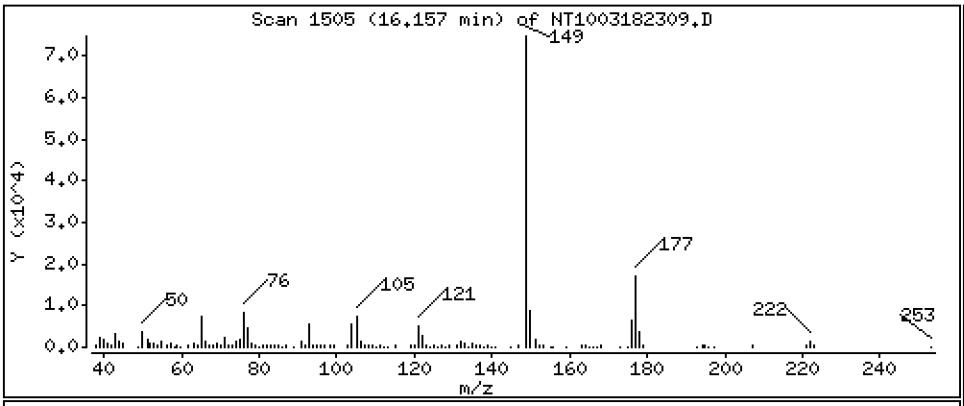
Operator: VTS

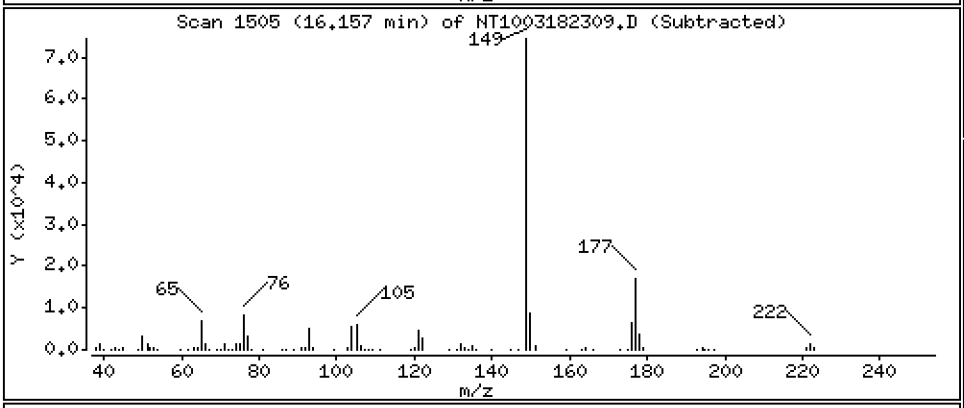
Column phase: ZB-5msi

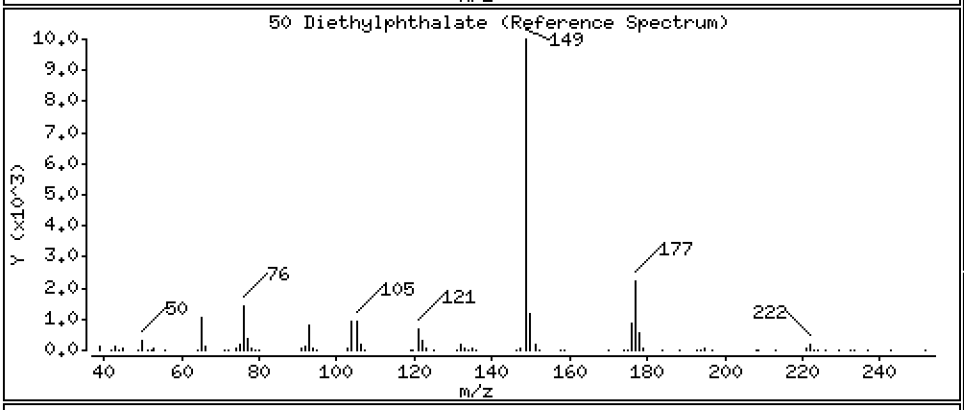
Column diameter: 0.25

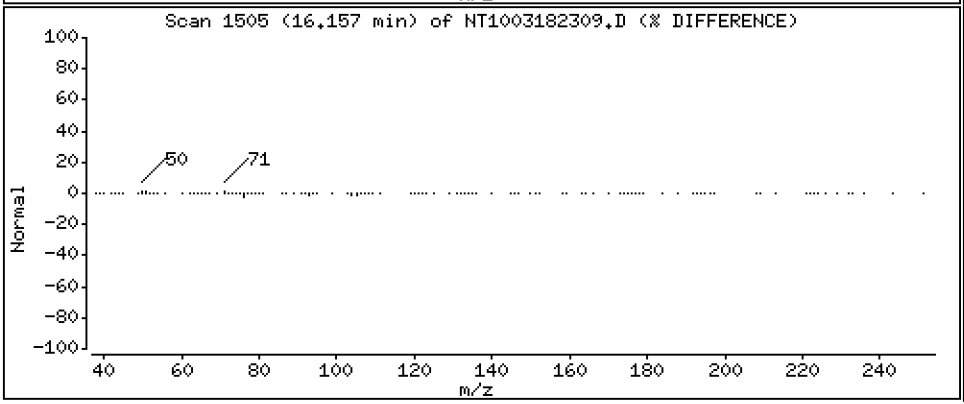
50 Diethylphthalate

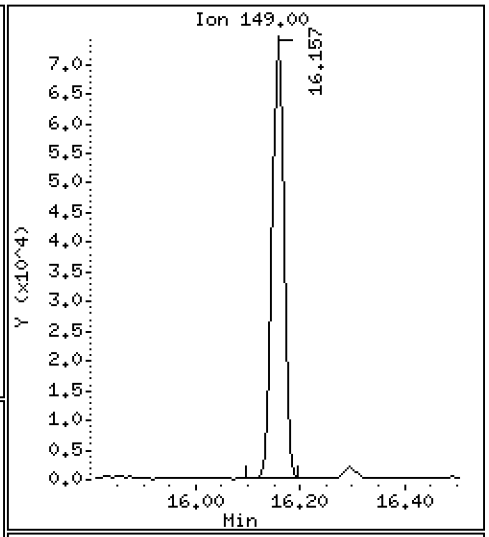
Concentration: 0.8109 ug/mL

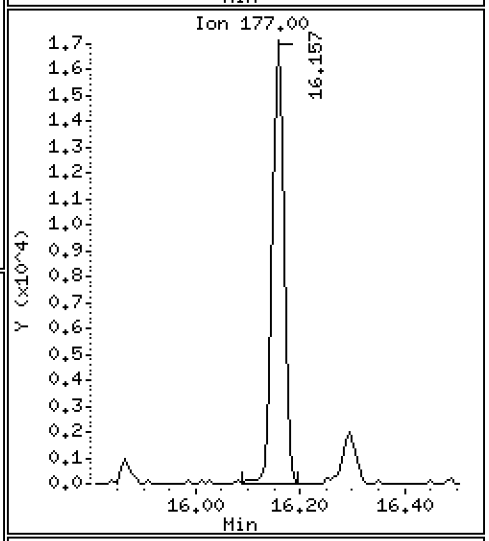


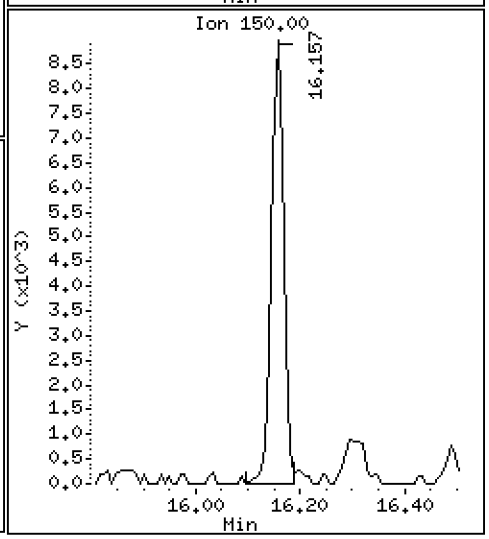












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

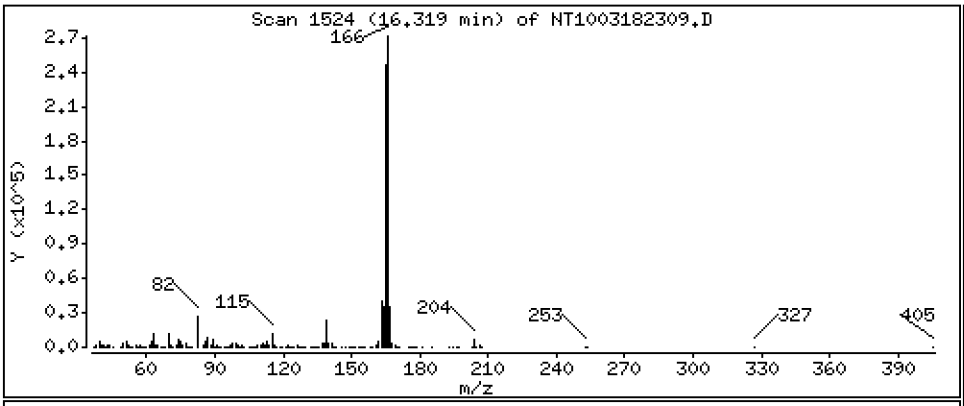
Operator: VTS

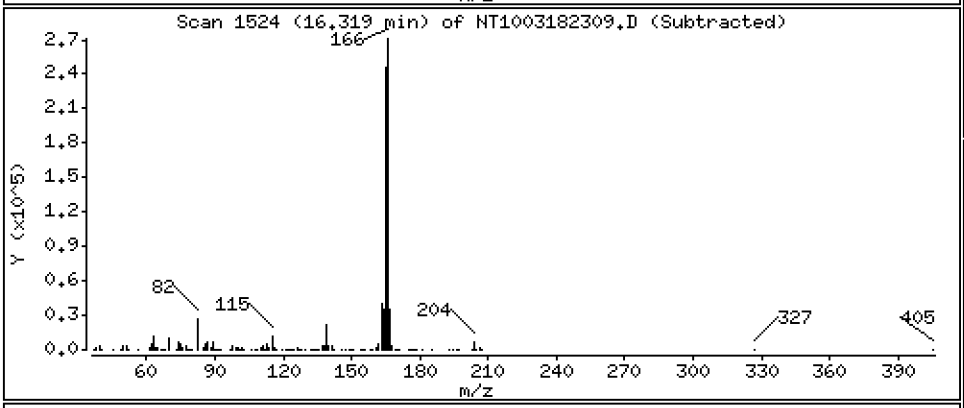
Column phase: ZB-5msi

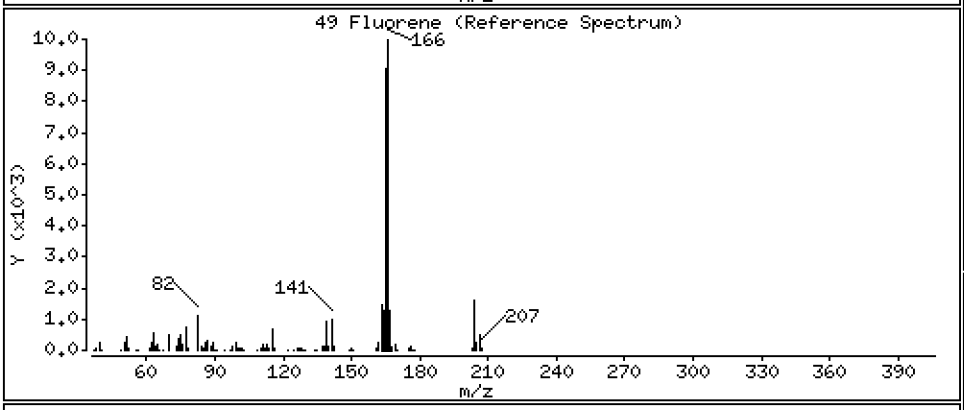
Column diameter: 0.25

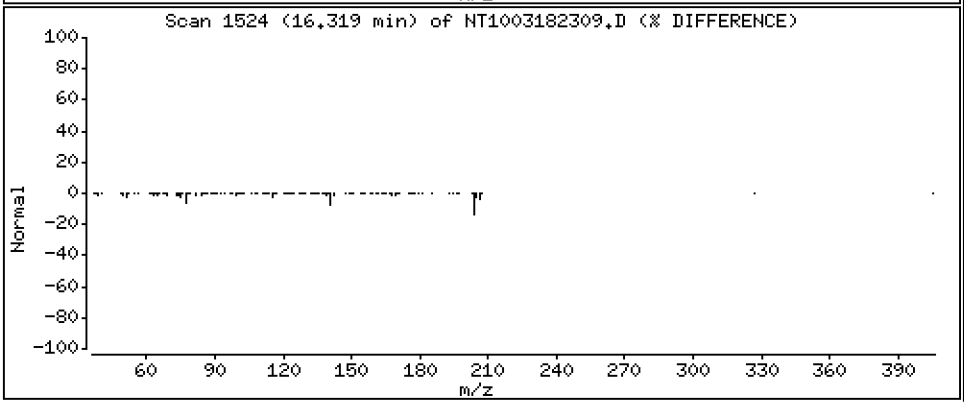
49 Fluorene

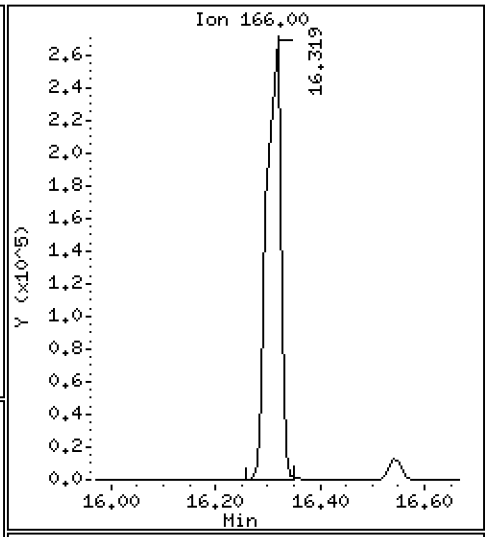
Concentration: 1.907 ug/mL

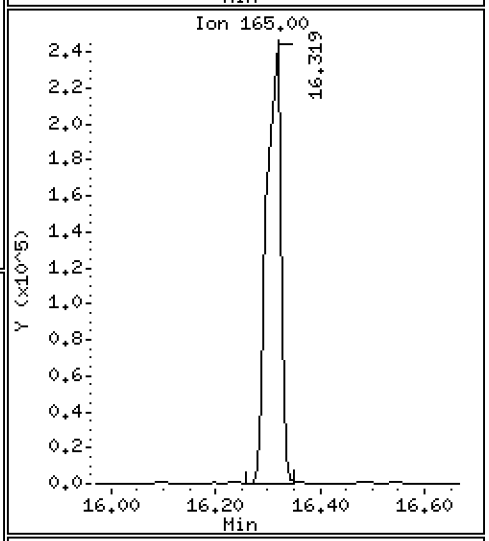


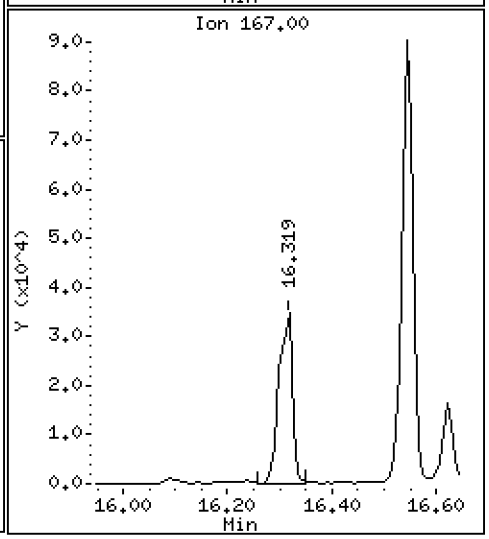












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

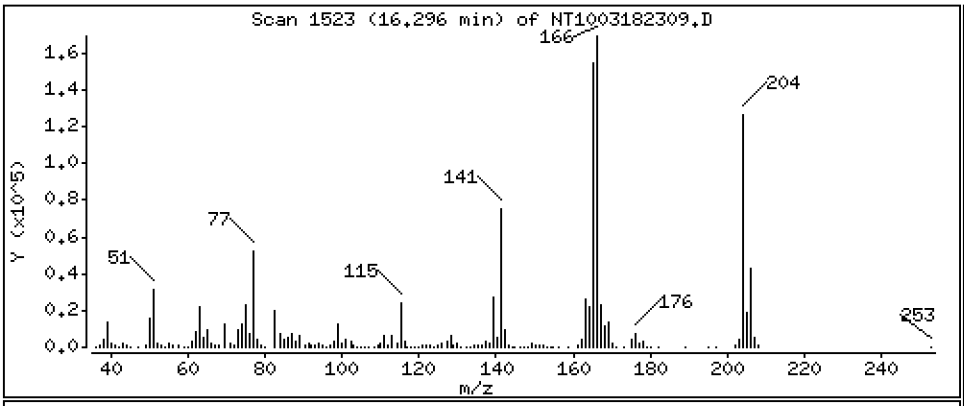
Operator: VTS

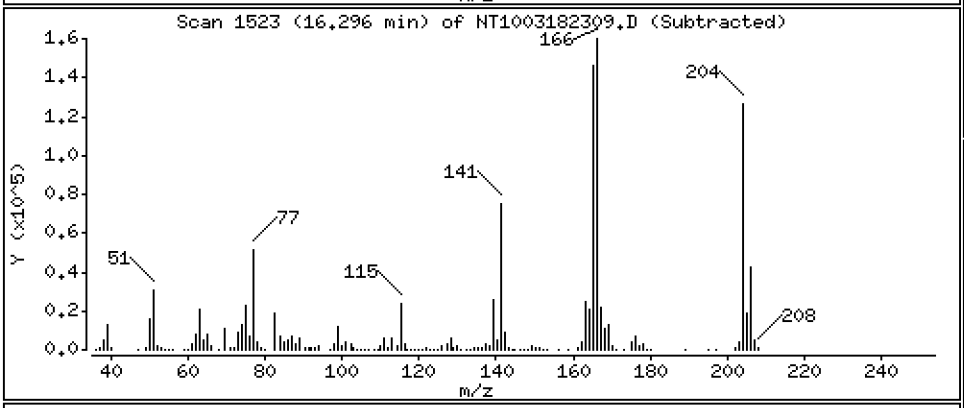
Column phase: ZB-5msi

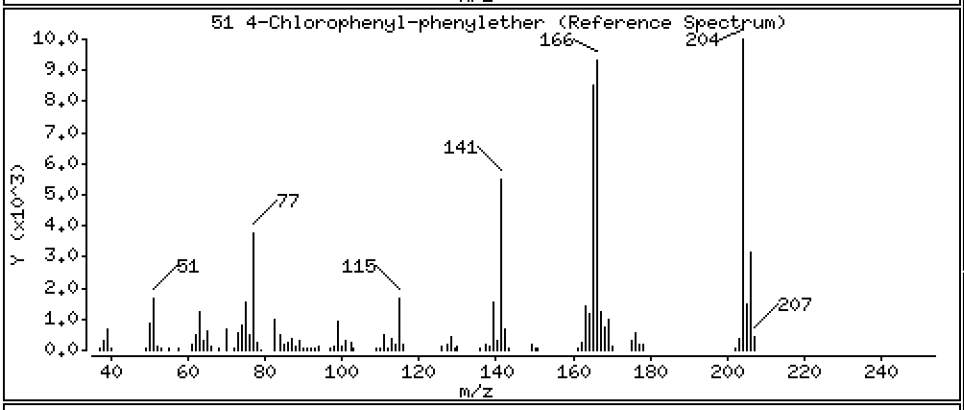
Column diameter: 0.25

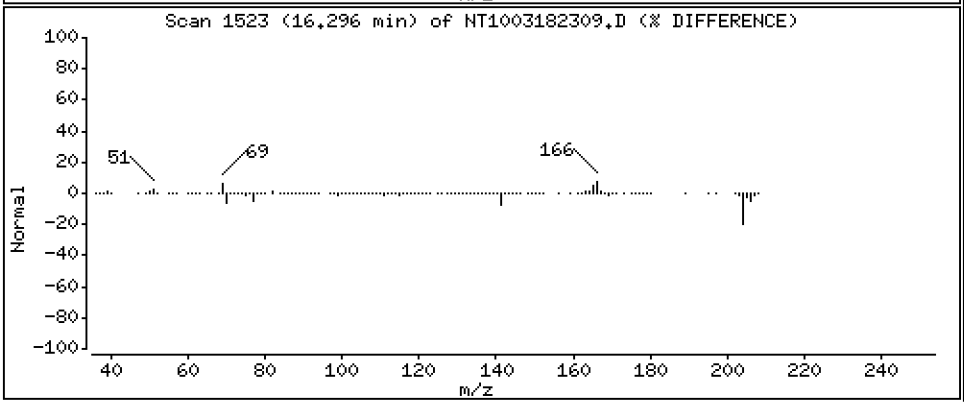
51 4-Chlorophenyl-phenylether

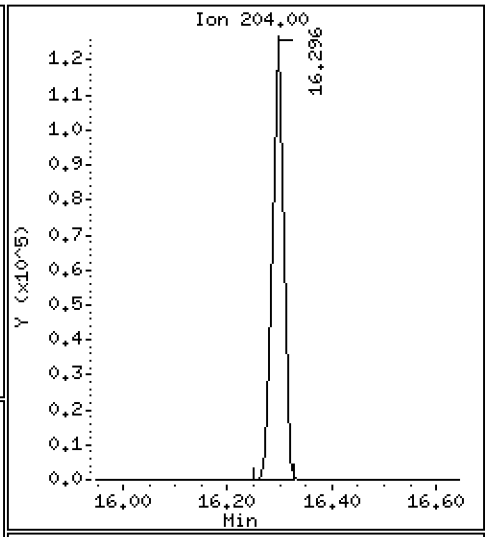
Concentration: 1.804 ug/mL

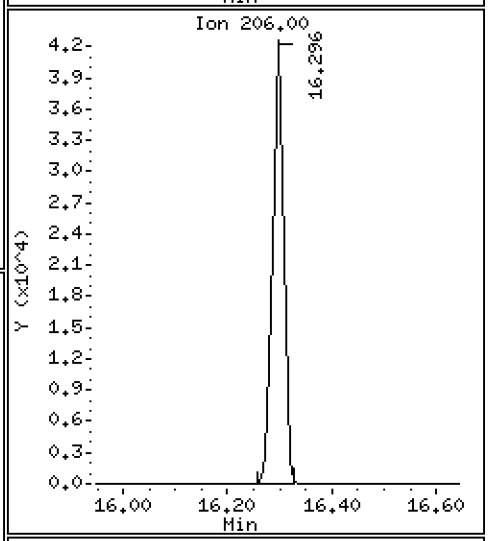


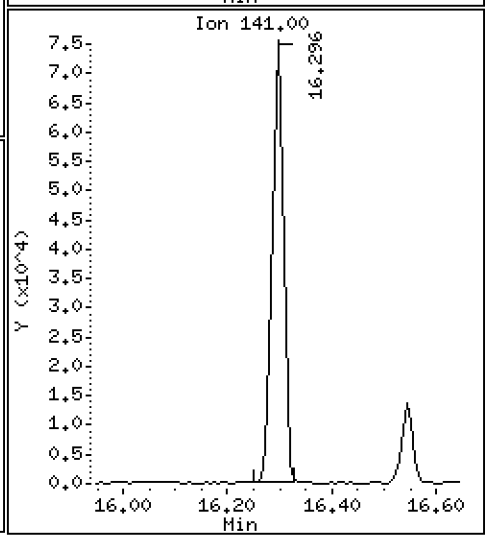












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

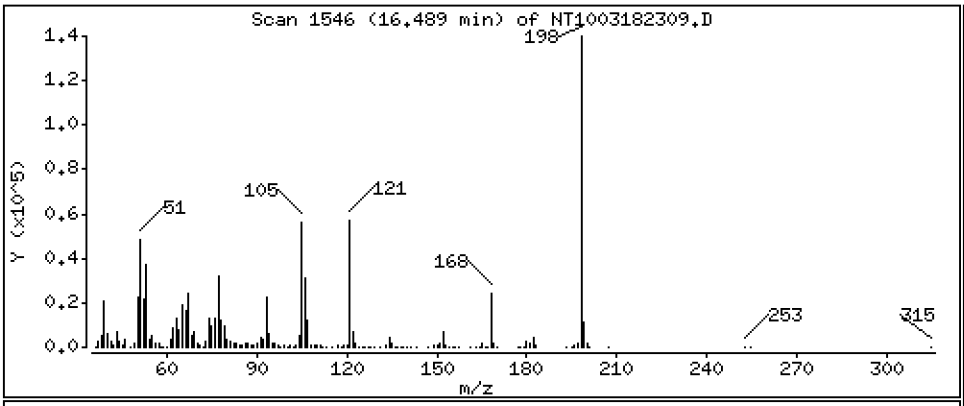
Operator: VTS

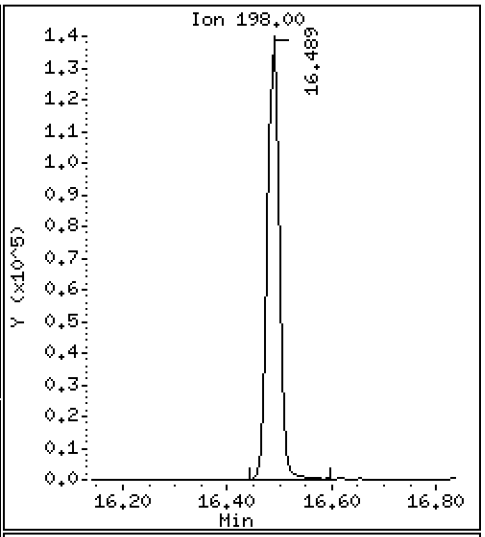
Column phase: ZB-5msi

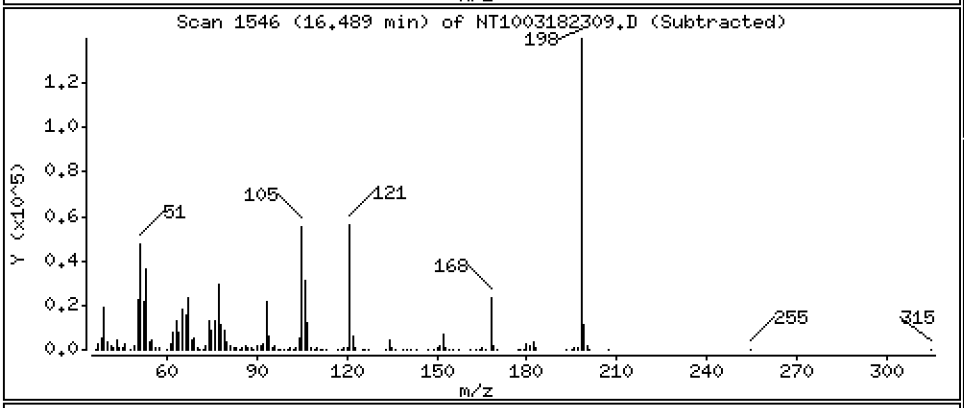
Column diameter: 0.25

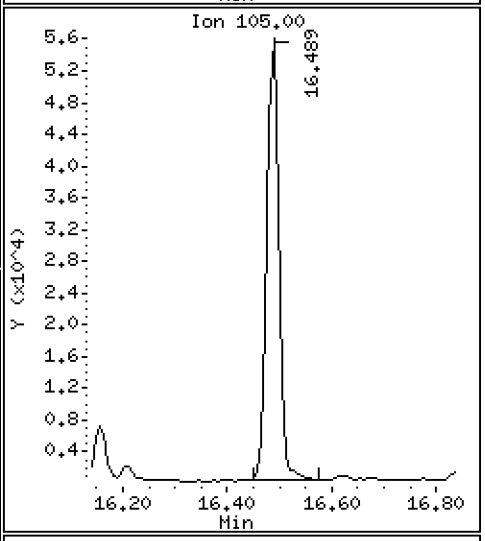
53 4,6-Dinitro-2-methylphenol

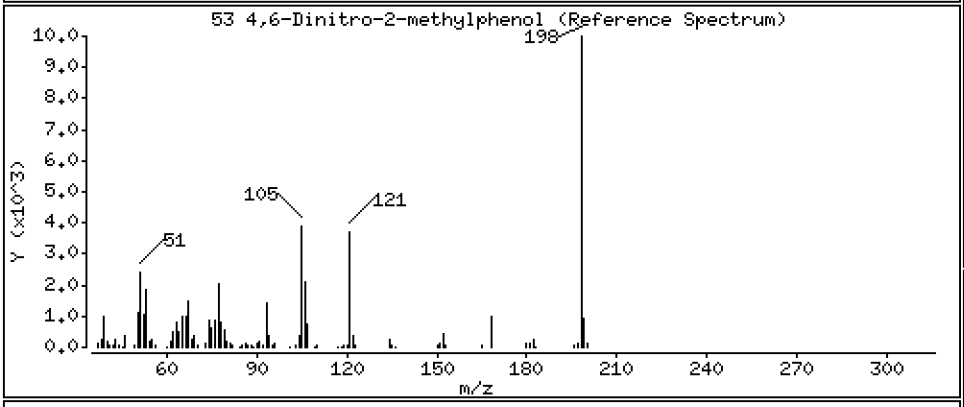
Concentration: 7.656 ug/mL

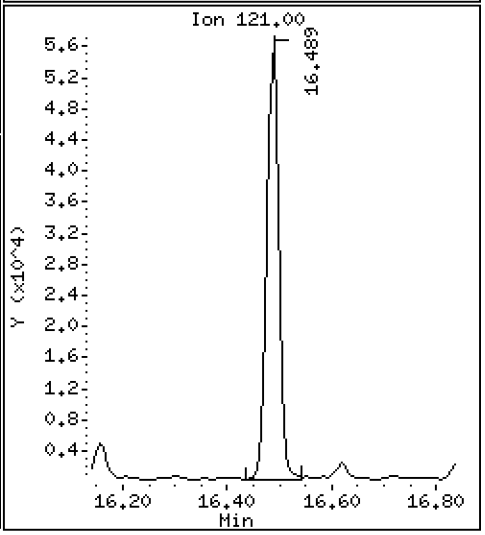


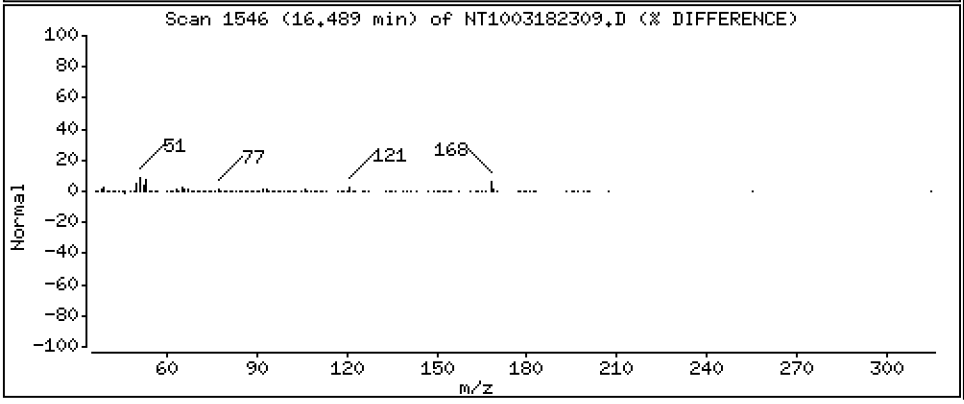












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

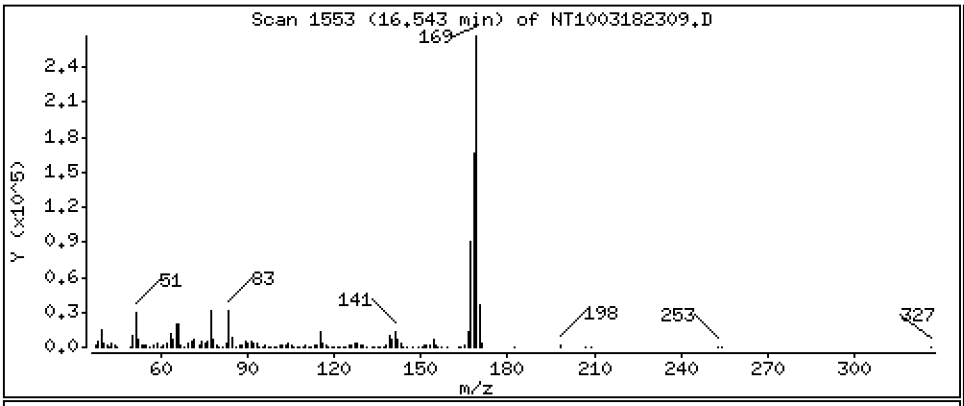
Operator: VTS

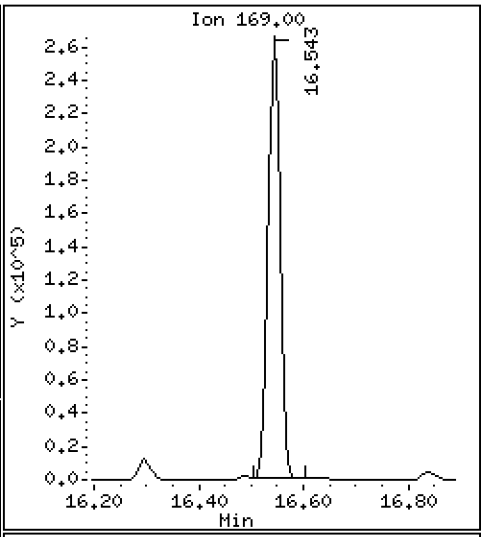
Column phase: ZB-5msi

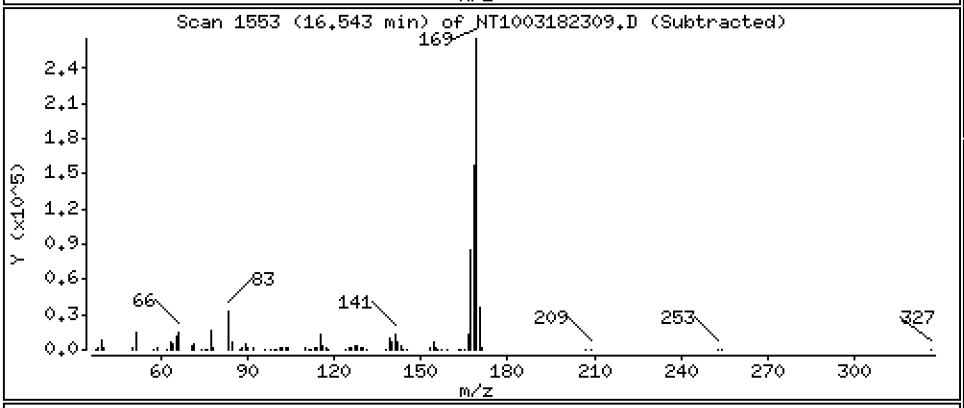
Column diameter: 0.25

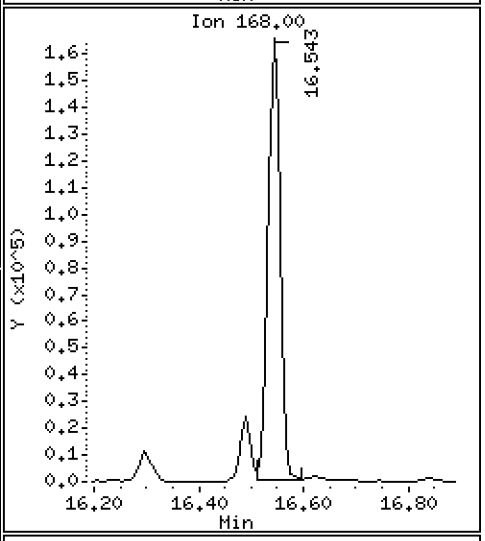
54 N-Nitrosodiphenylamine

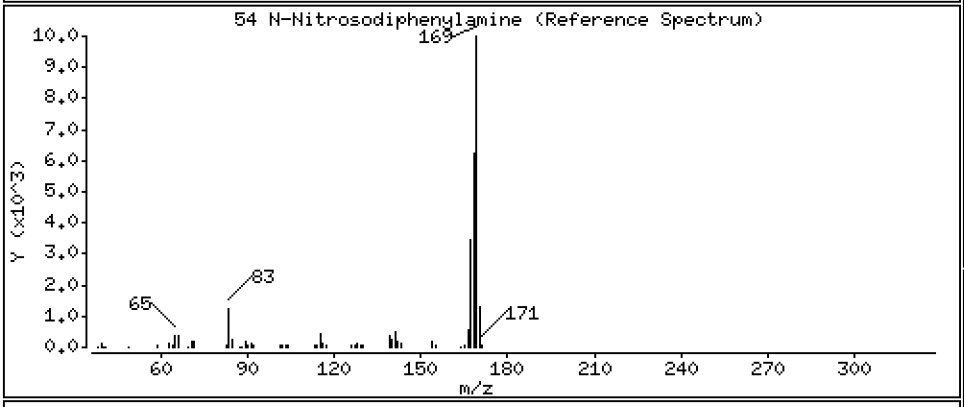
Concentration: 3.367 ug/mL

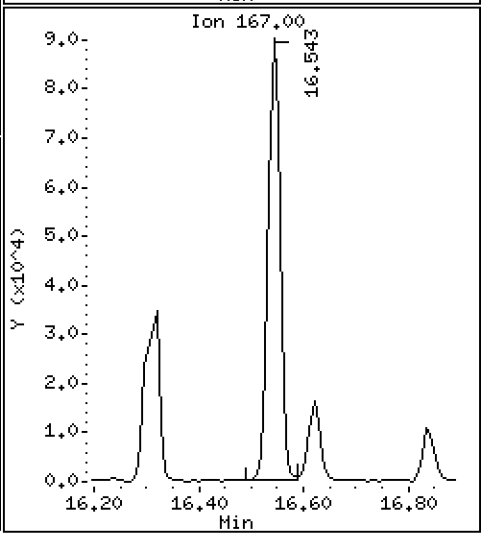


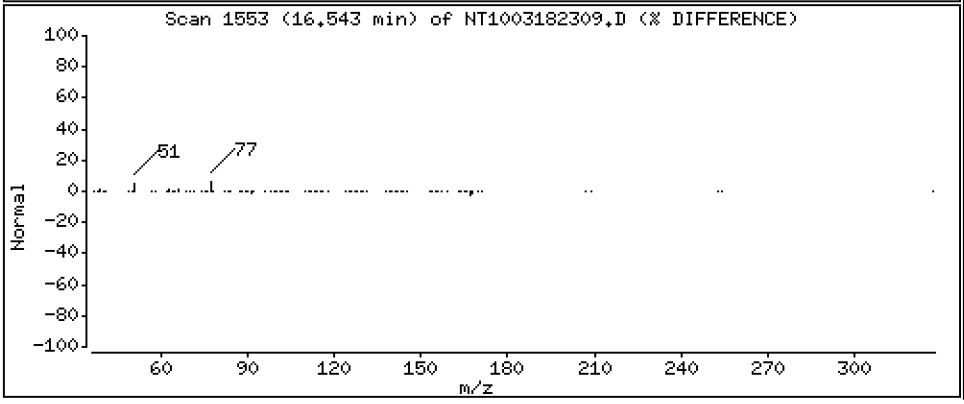












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

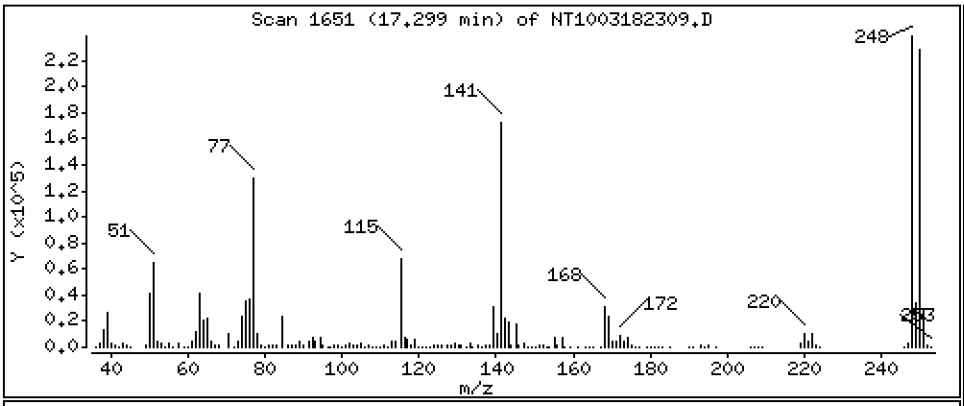
Operator: VTS

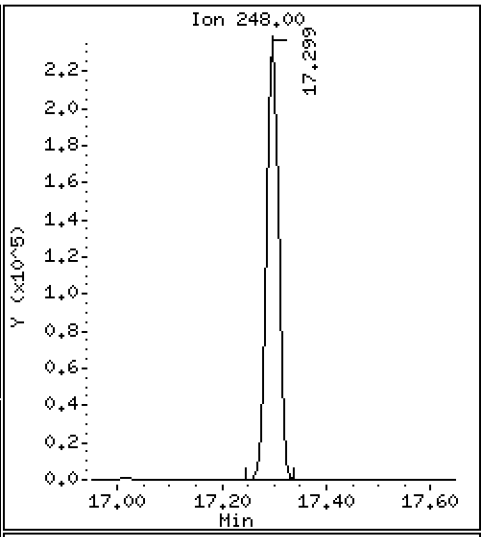
Column phase: ZB-5msi

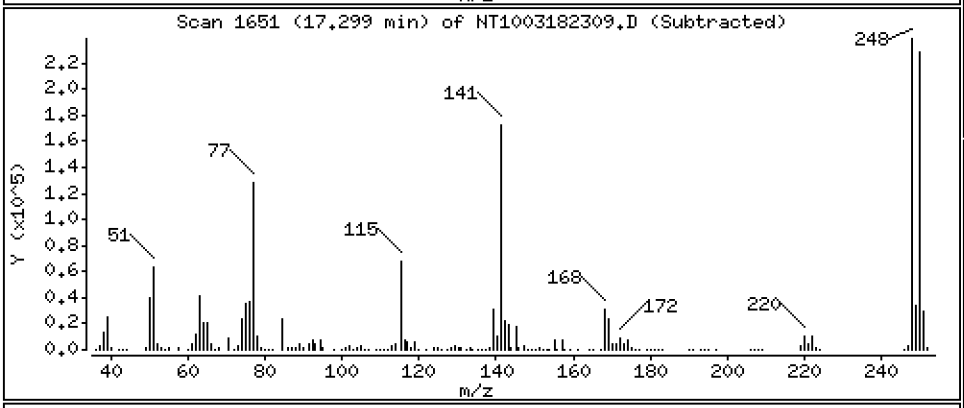
Column diameter: 0.25

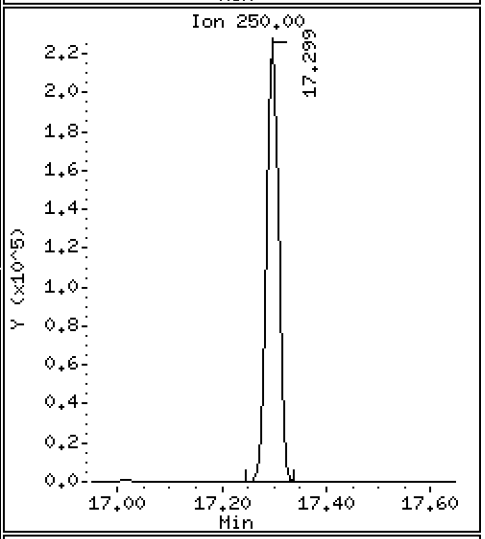
56 4-Bromophenyl-phenylether

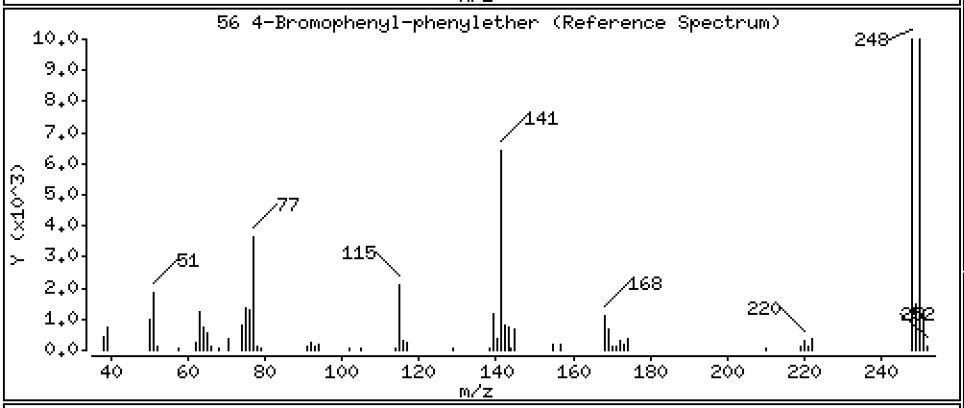
Concentration: 7.181 ug/mL

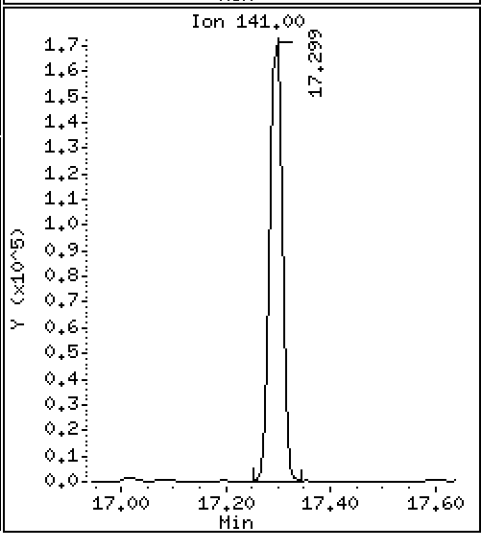


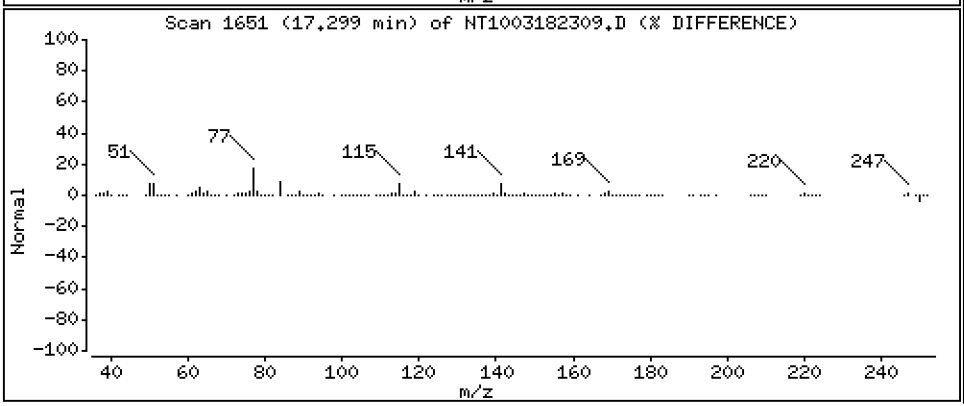












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

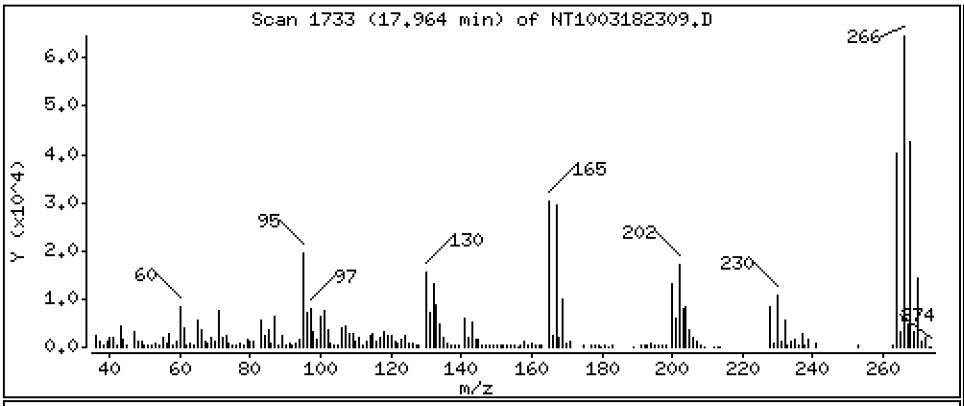
Operator: VTS

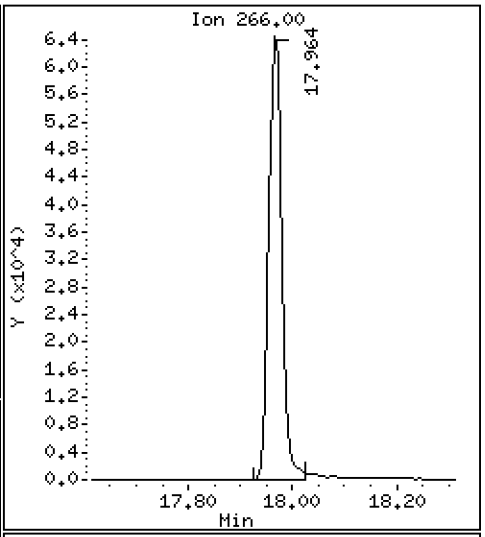
Column phase: ZB-5msi

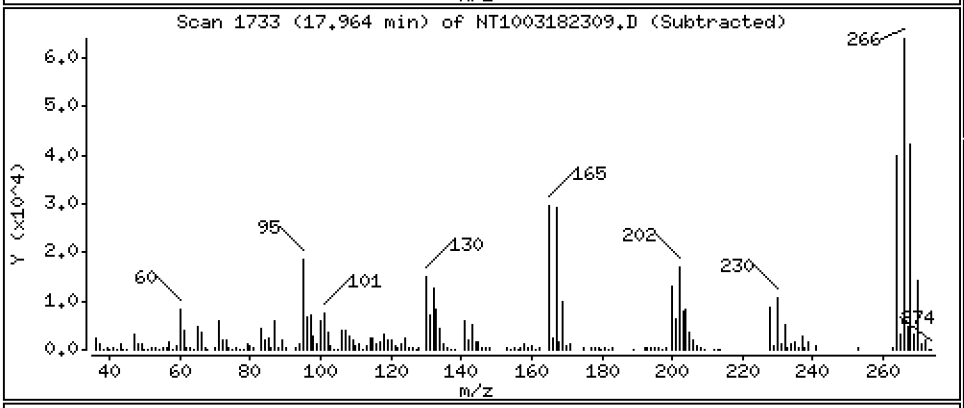
Column diameter: 0.25

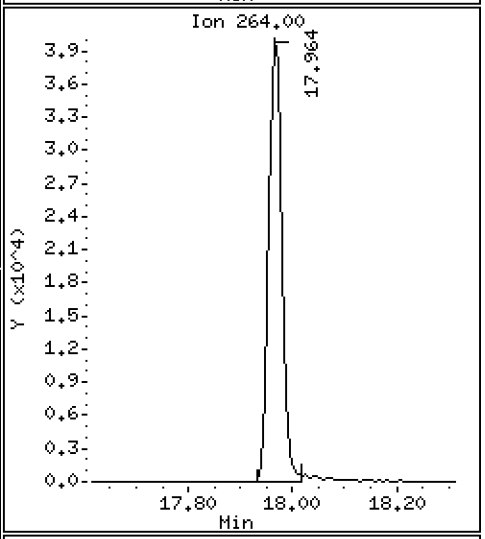
58 Pentachlorophenol

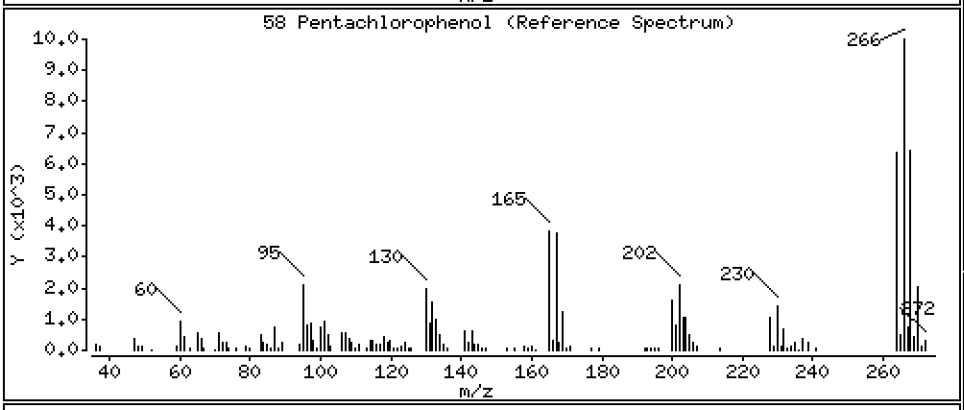
Concentration: 3.477 ug/mL

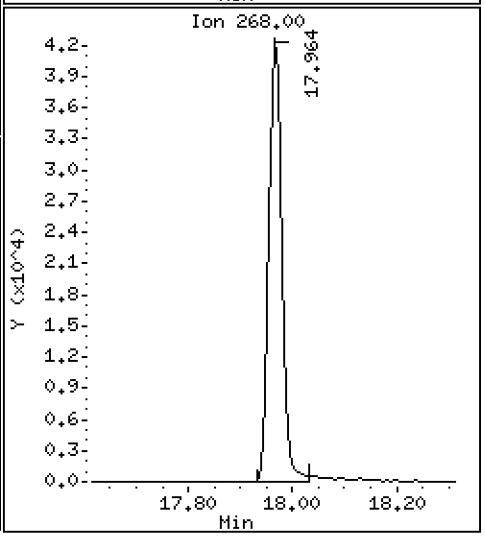


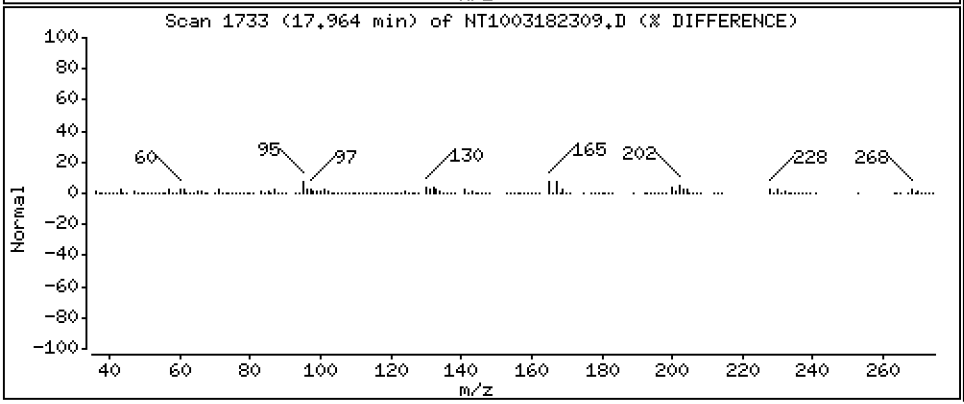












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

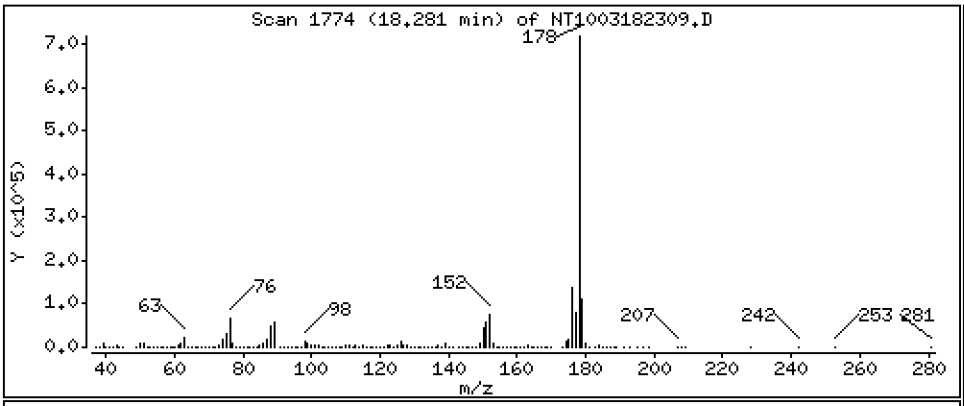
Operator: VTS

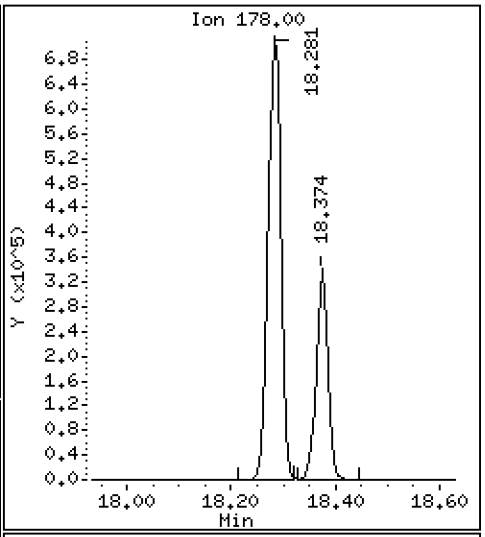
Column phase: ZB-5msi

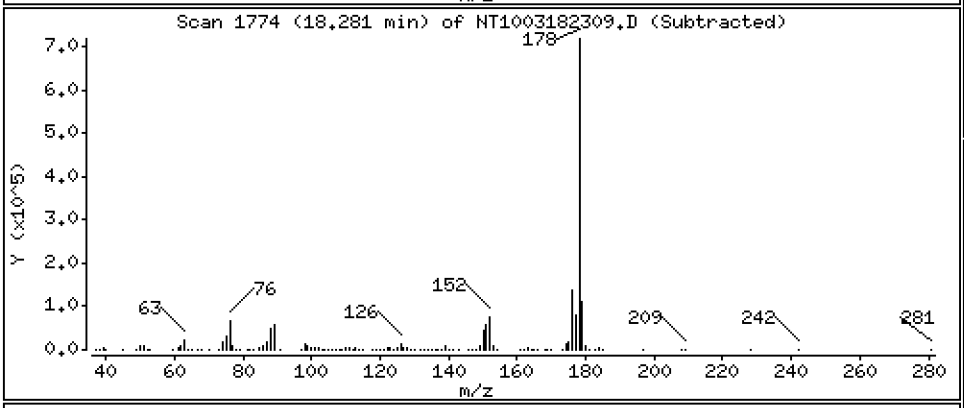
Column diameter: 0.25

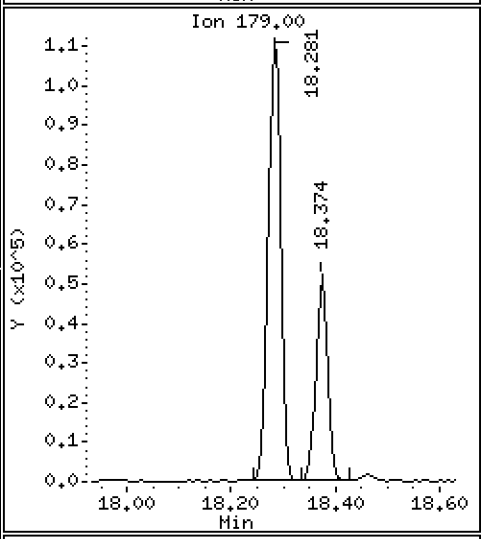
60 Phenanthrene

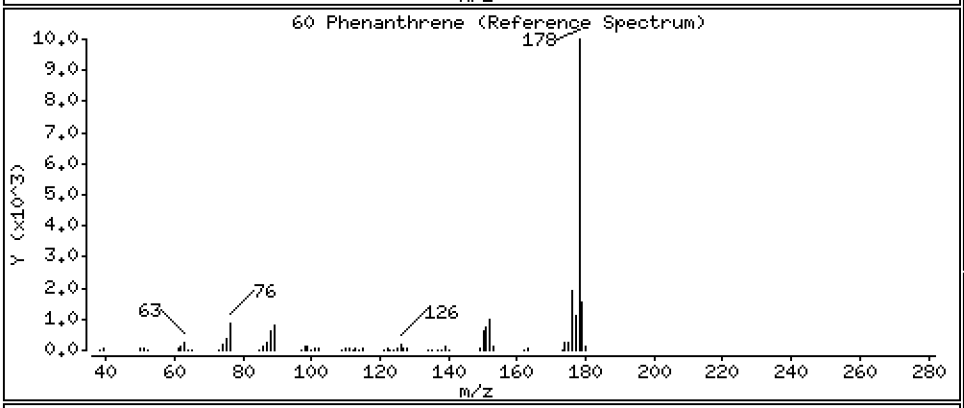
Concentration: 4.772 ug/mL

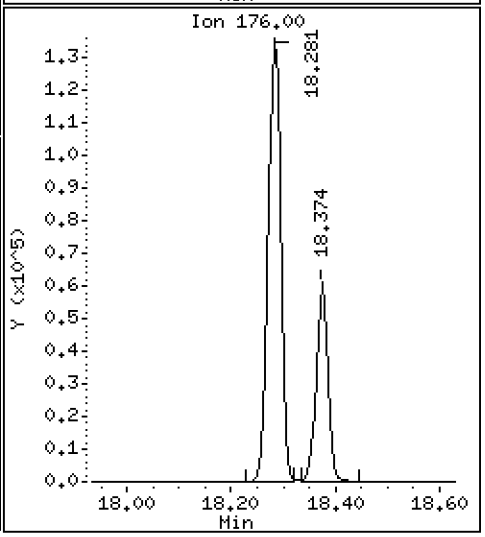


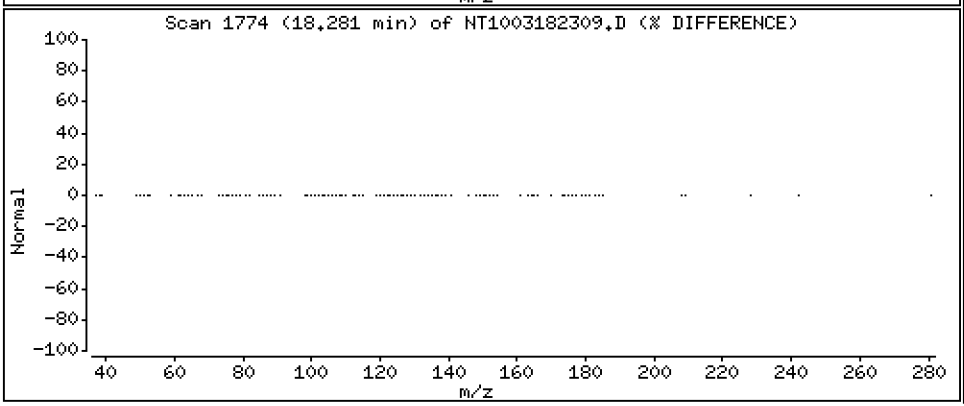












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

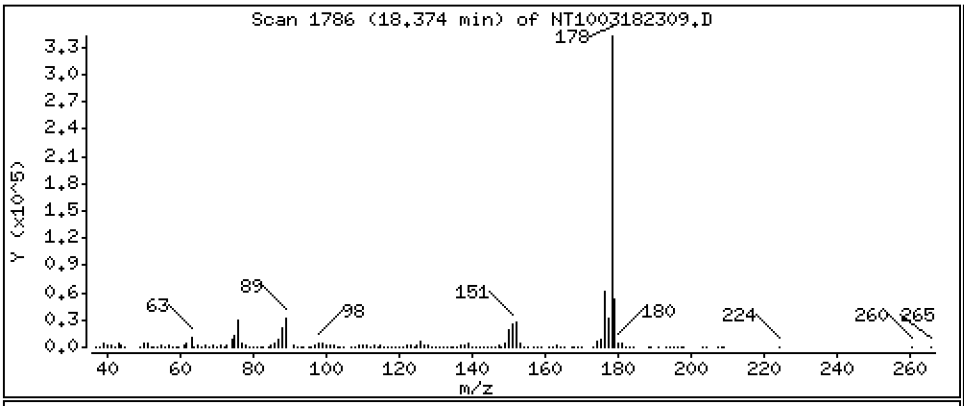
Operator: VTS

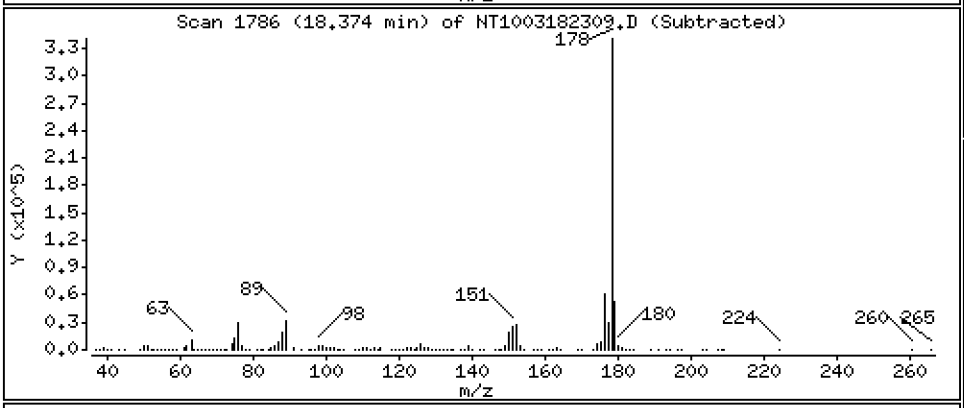
Column phase: ZB-5msi

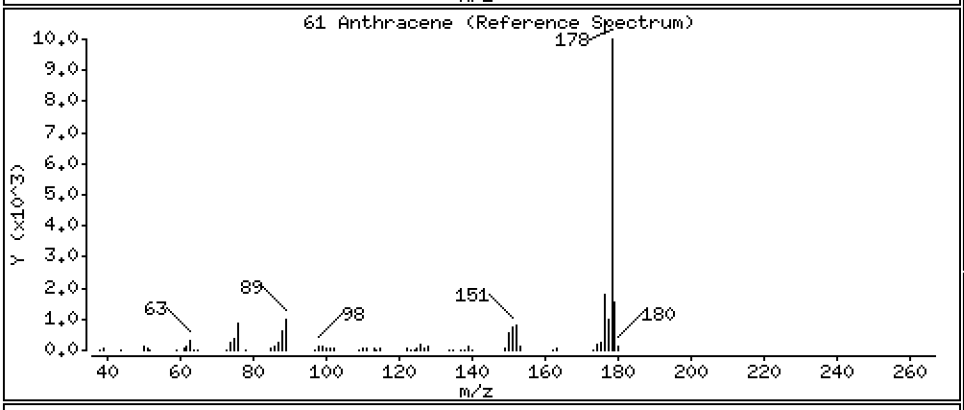
Column diameter: 0.25

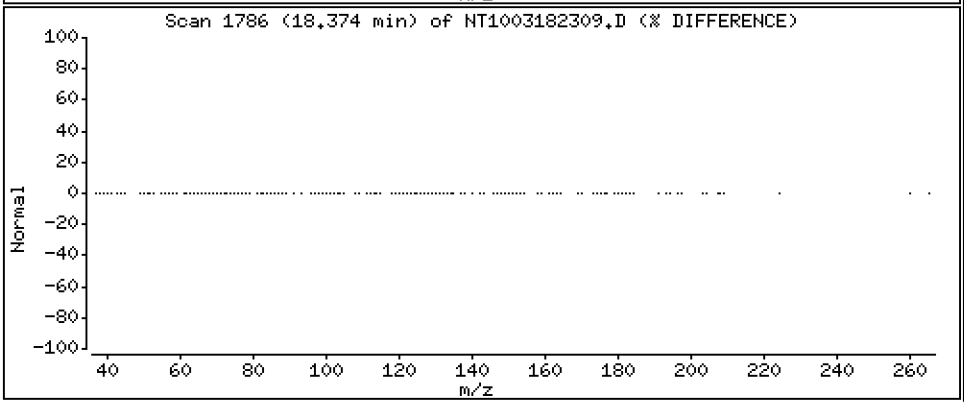
61 Anthracene

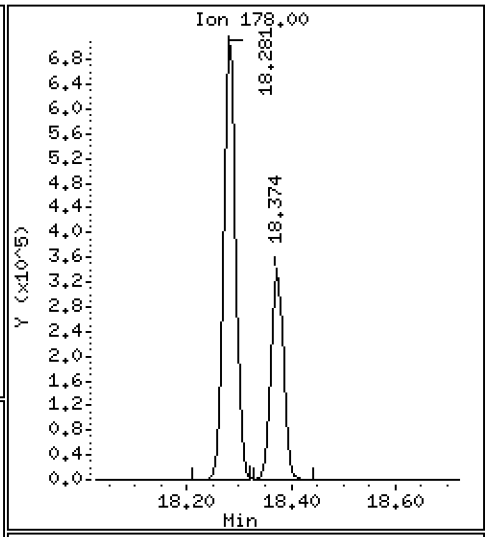
Concentration: 2.274 ug/mL

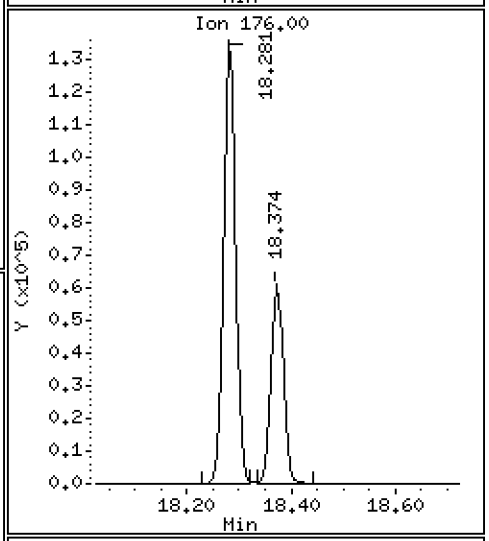


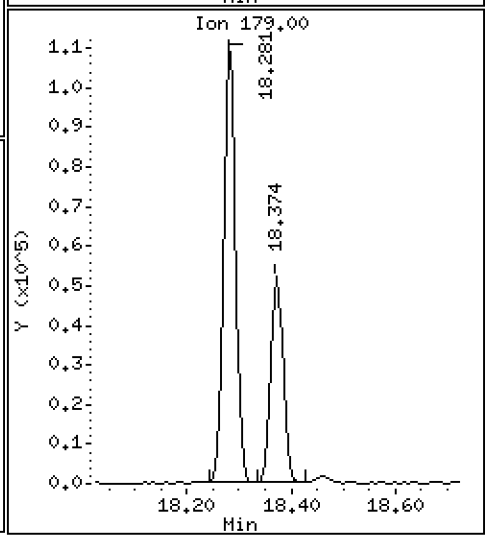












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

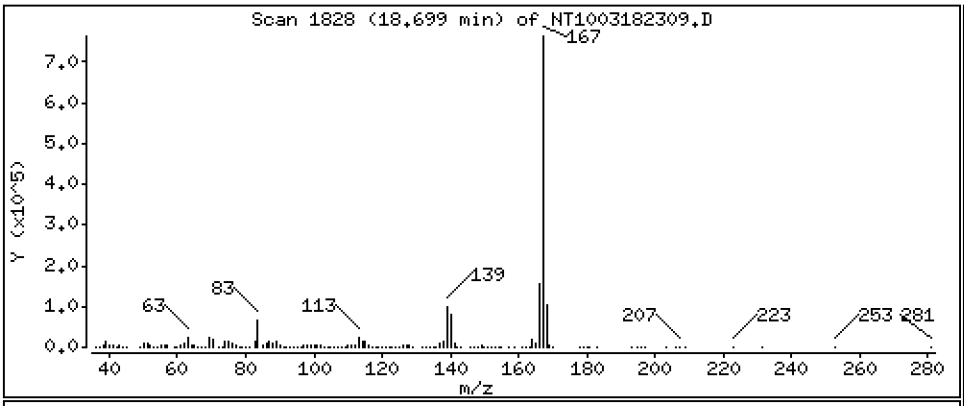
Operator: VTS

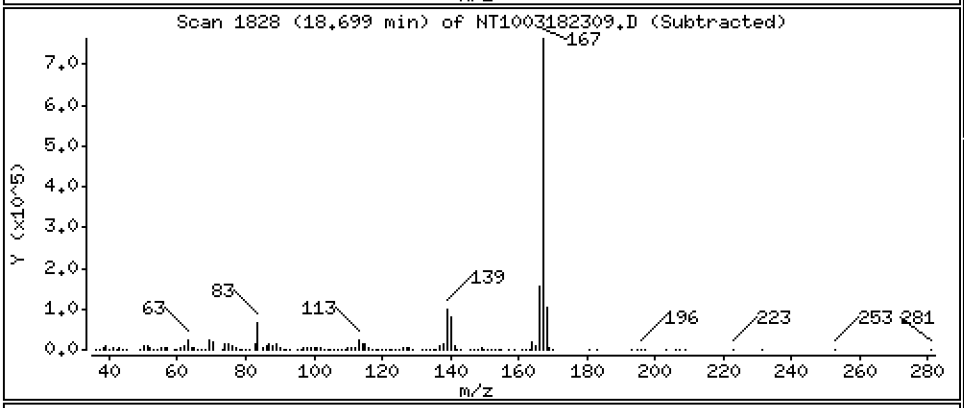
Column phase: ZB-5msi

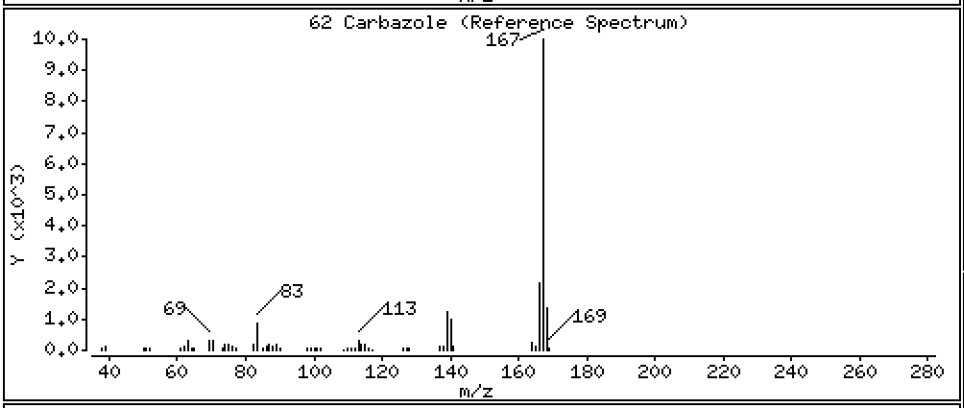
Column diameter: 0.25

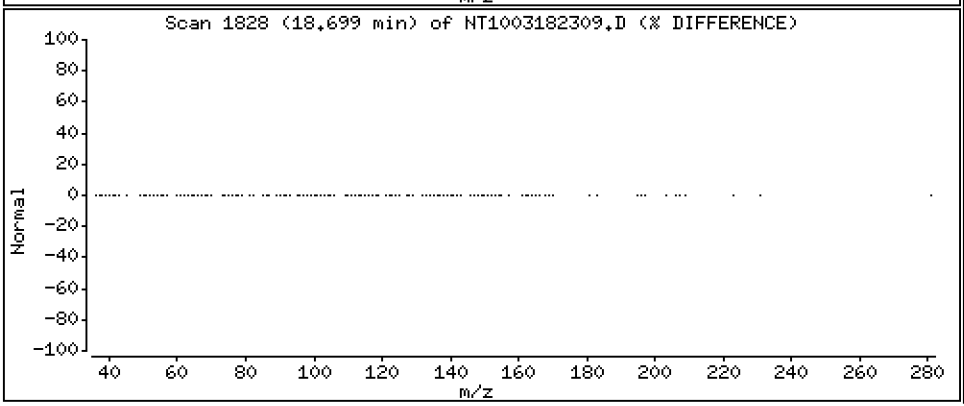
62 Carbazole

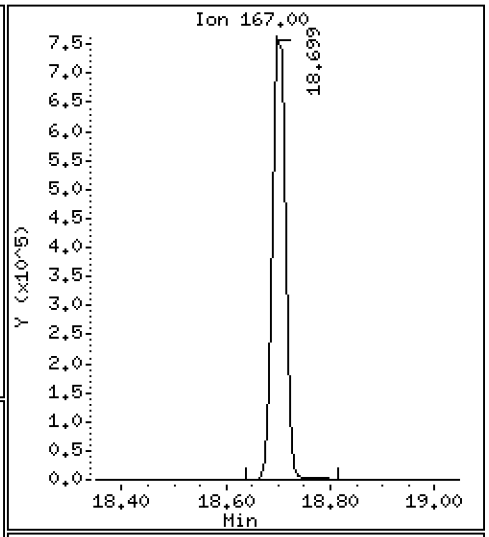
Concentration: 6.030 ug/mL

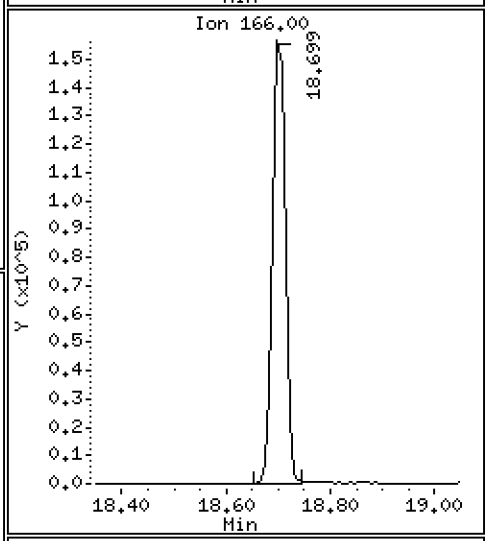


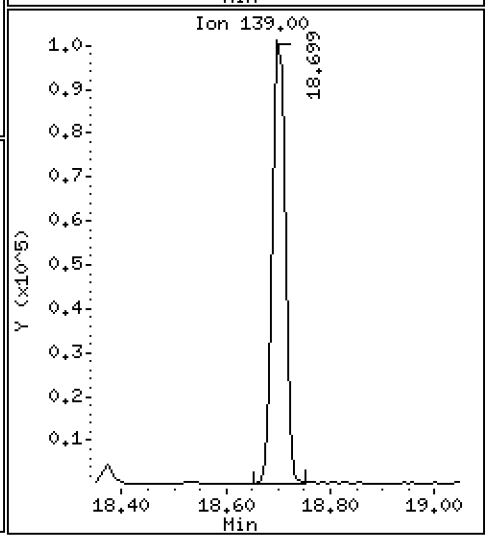












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

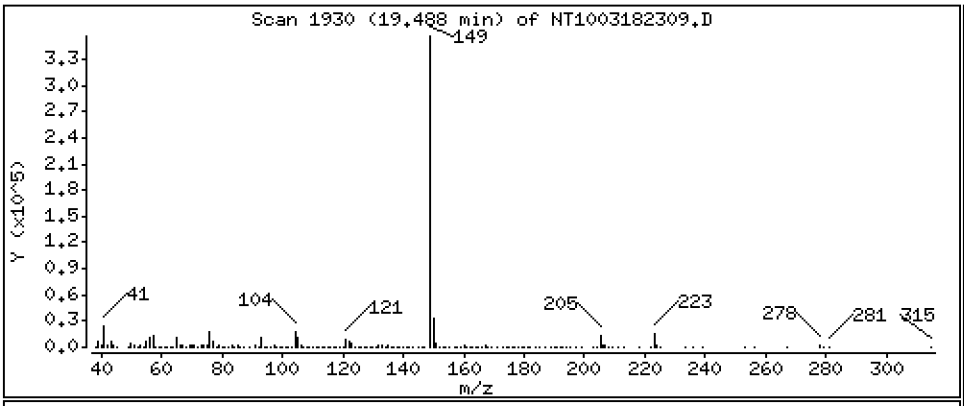
Operator: VTS

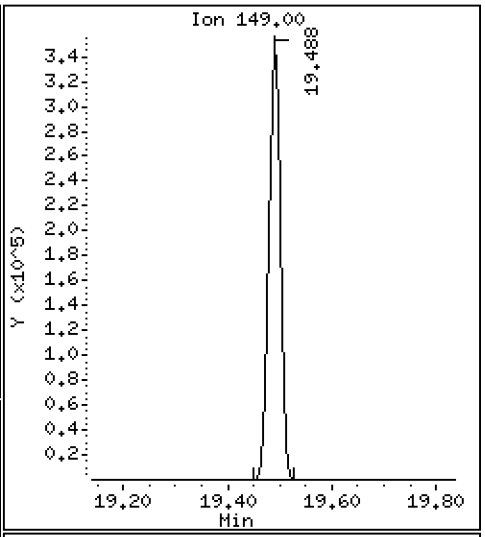
Column phase: ZB-5msi

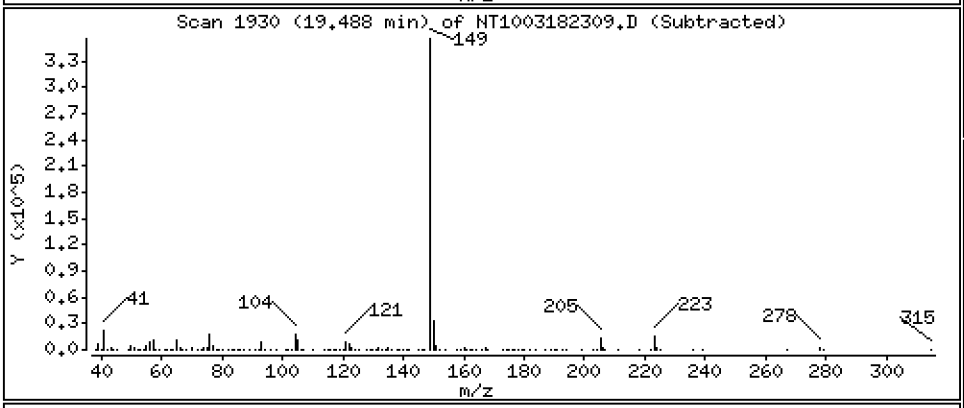
Column diameter: 0.25

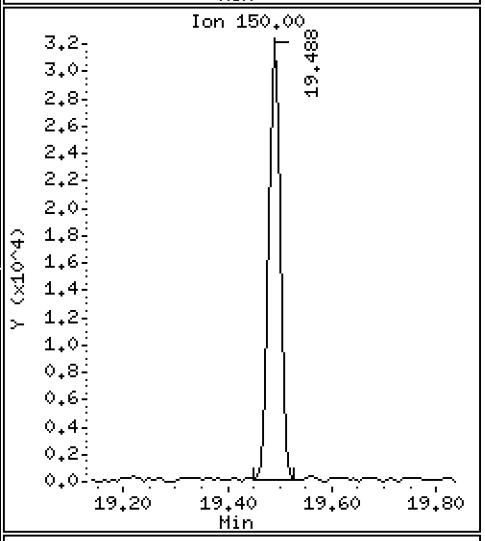
63 Di-n-butylphthalate

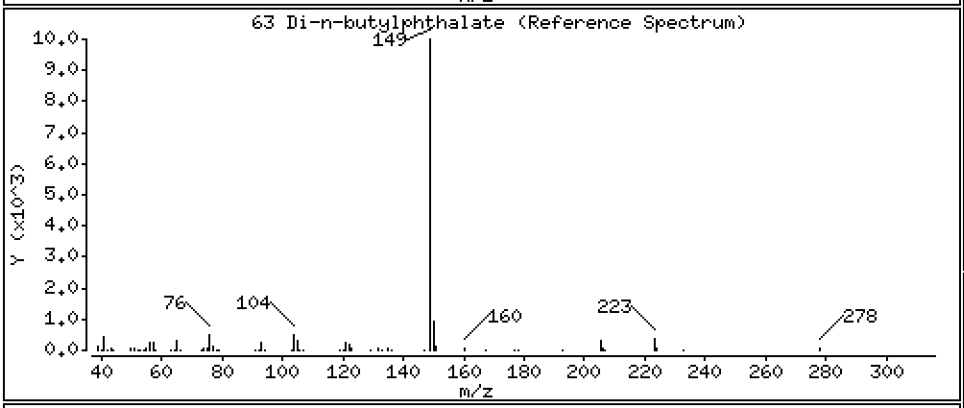
Concentration: 1.804 ug/mL

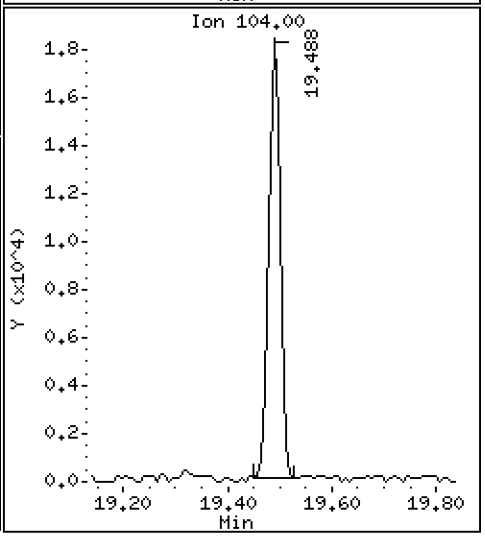


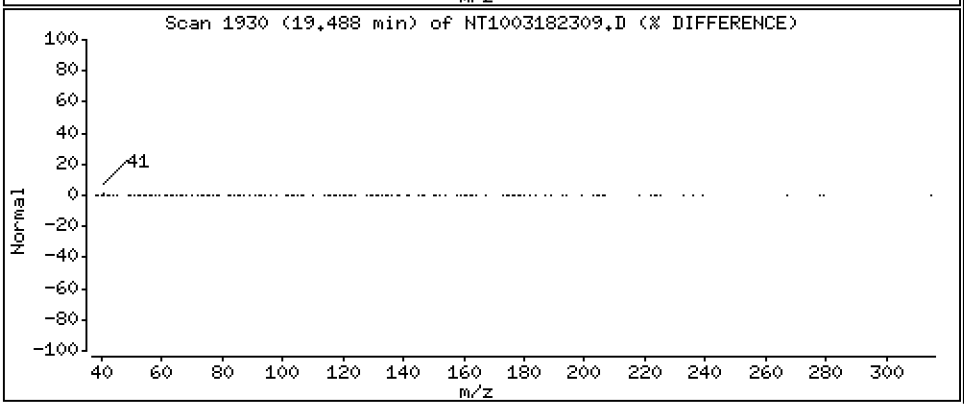












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

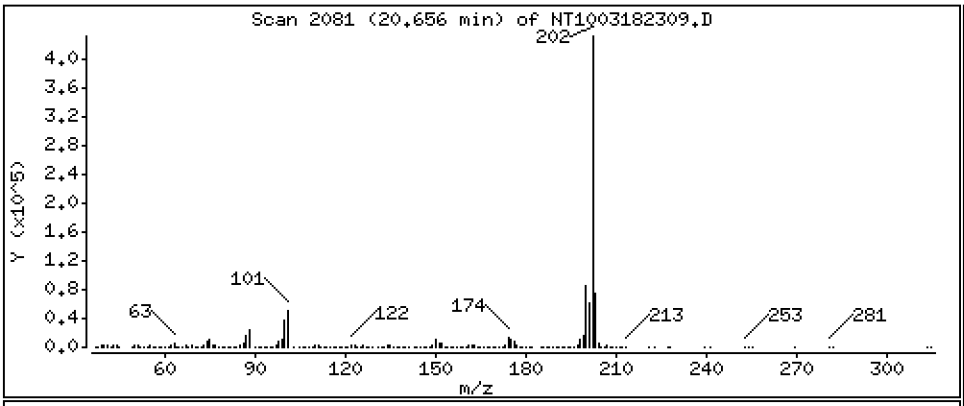
Operator: VTS

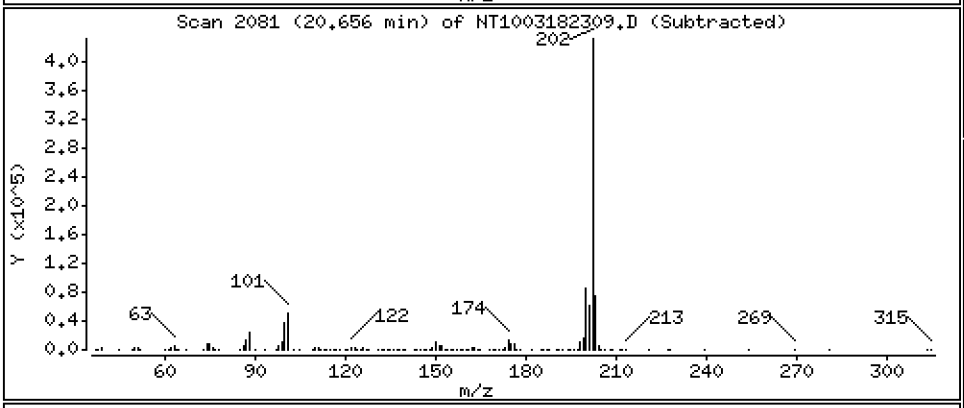
Column phase: ZB-5msi

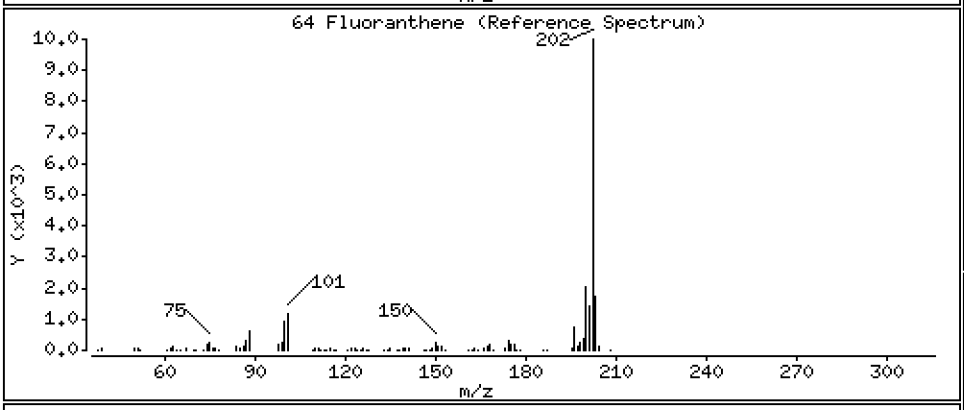
Column diameter: 0.25

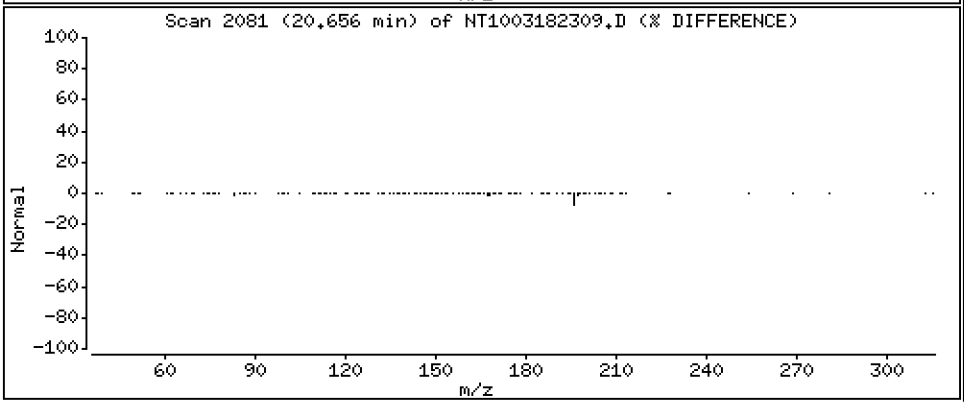
64 Fluoranthene

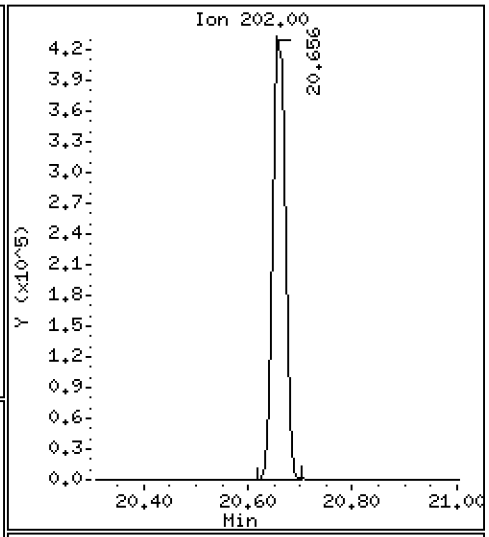
Concentration: 2.428 ug/mL

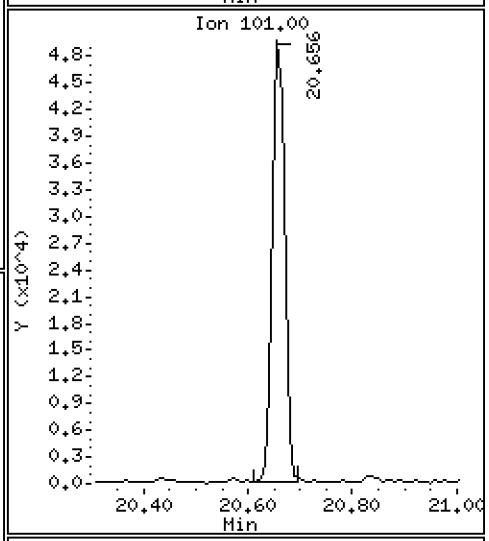


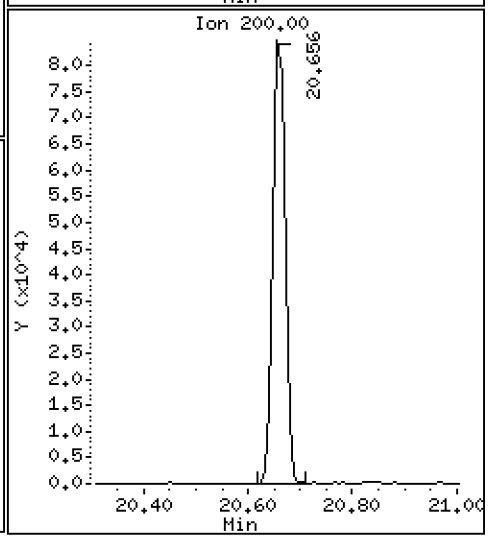












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

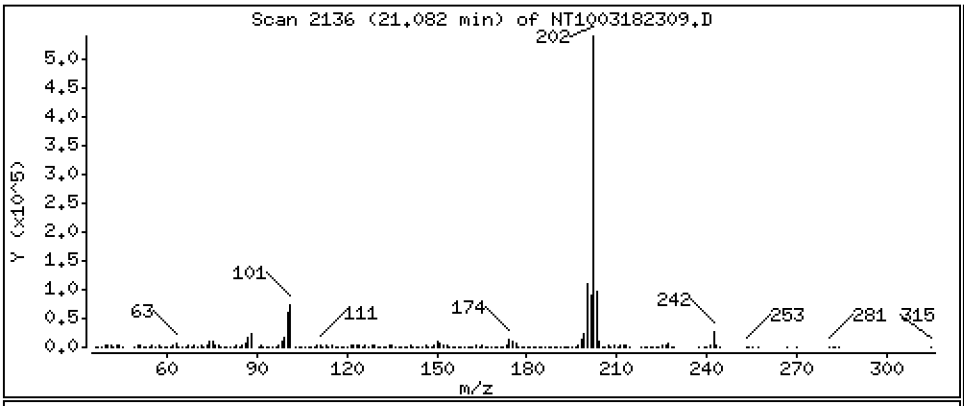
Operator: VTS

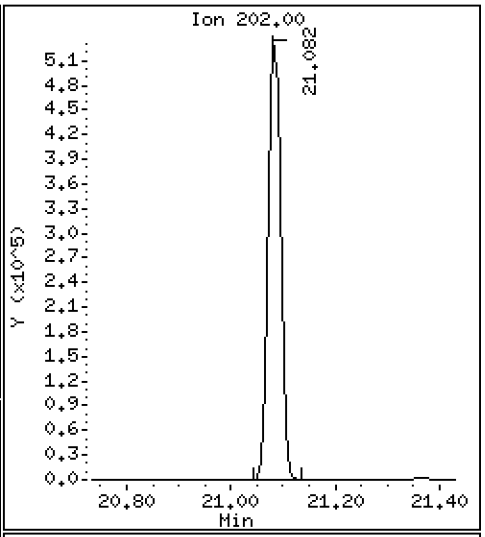
Column phase: ZB-5msi

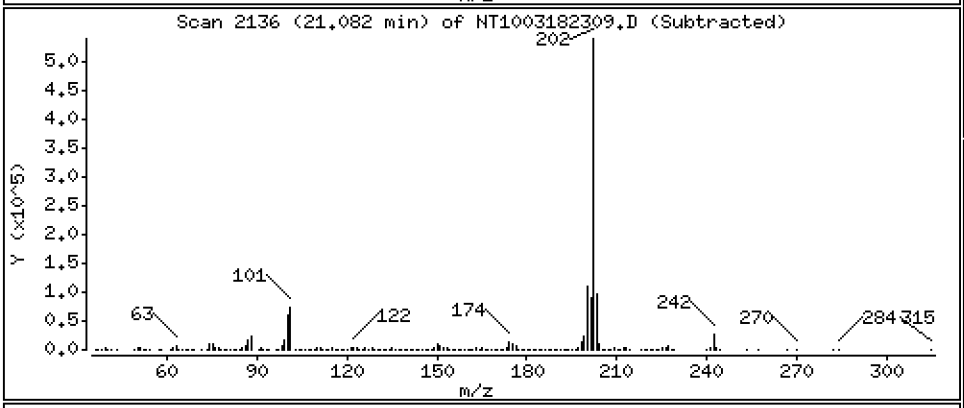
Column diameter: 0.25

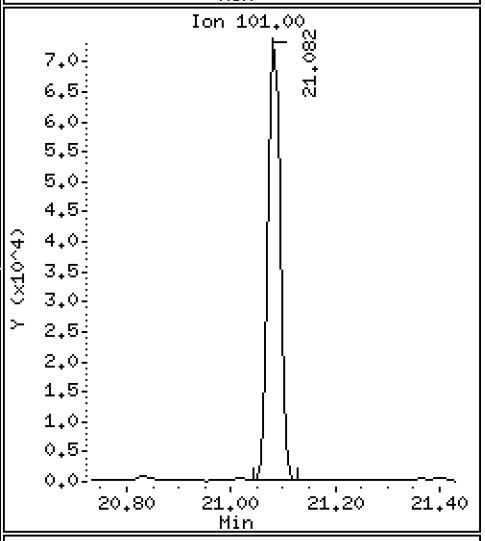
65 Pyrene

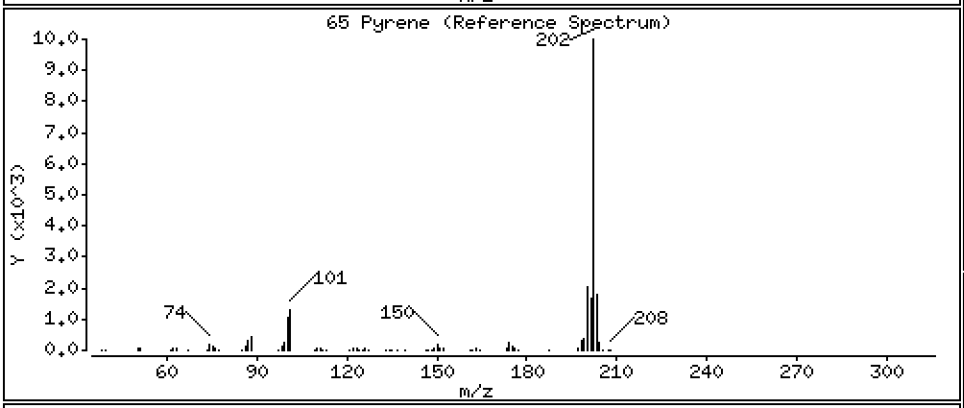
Concentration: 2.928 ug/mL

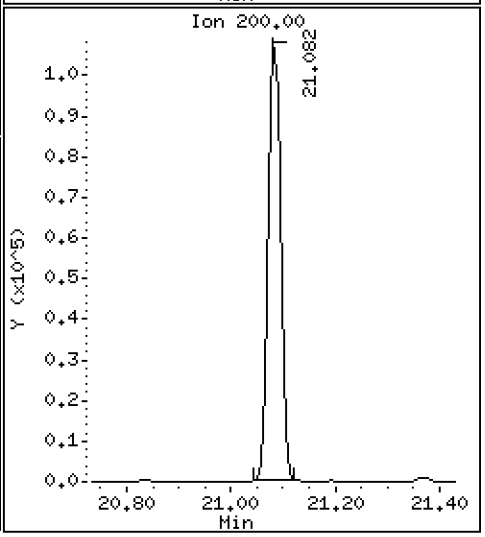


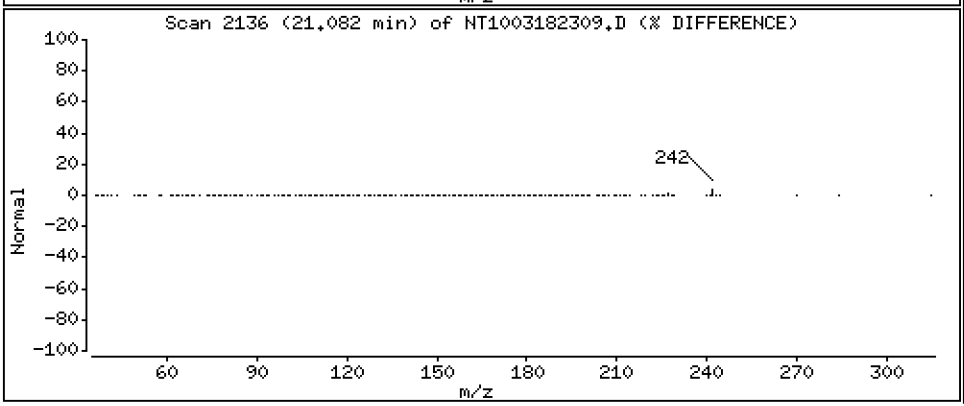












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

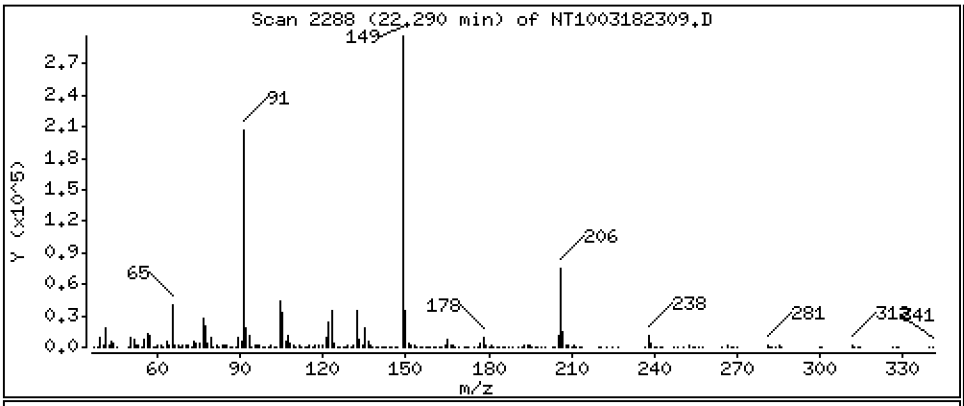
Operator: VTS

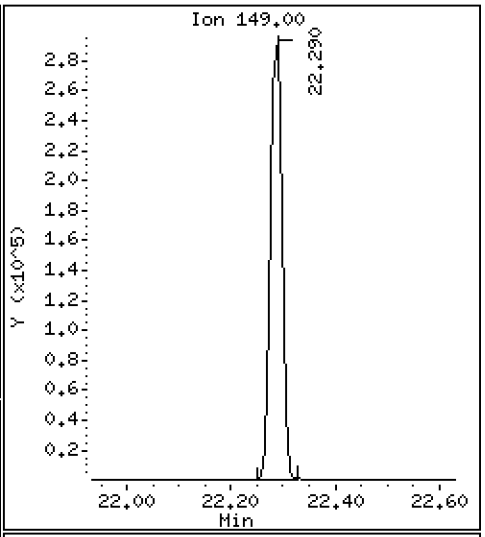
Column phase: ZB-5msi

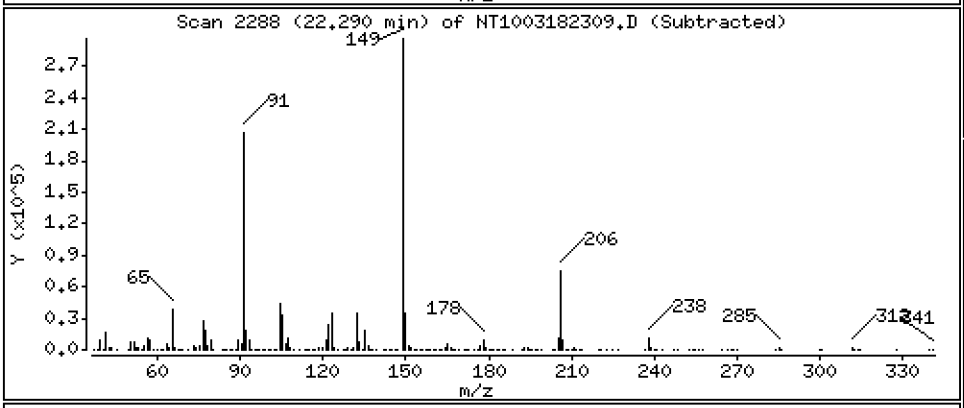
Column diameter: 0.25

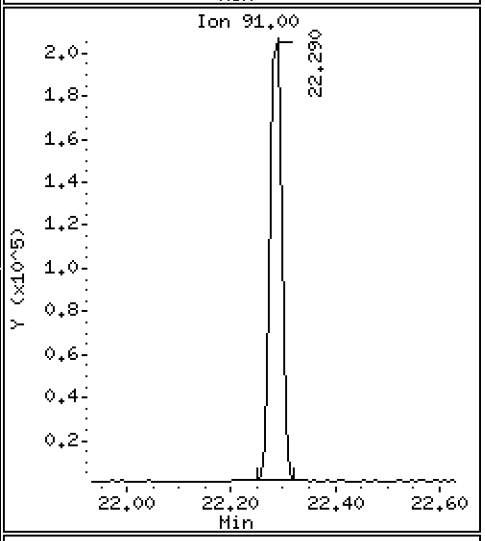
67 Butylbenzylphthalate

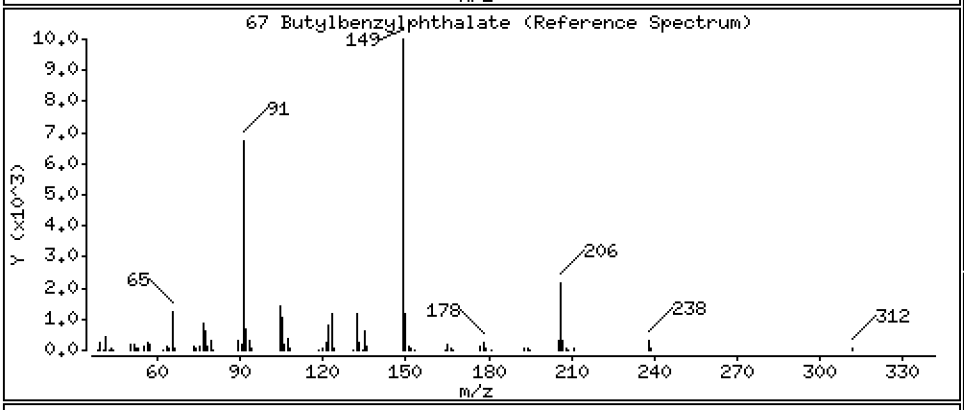
Concentration: 4.092 ug/mL

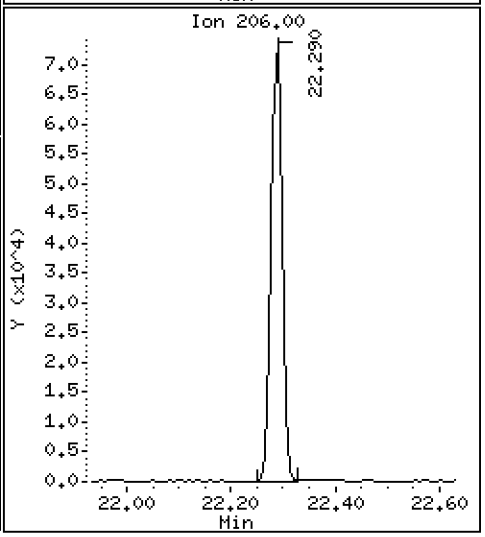


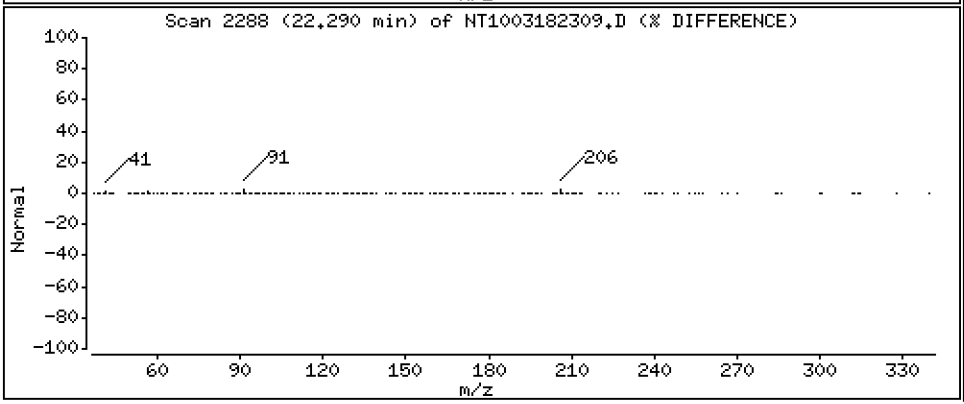












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

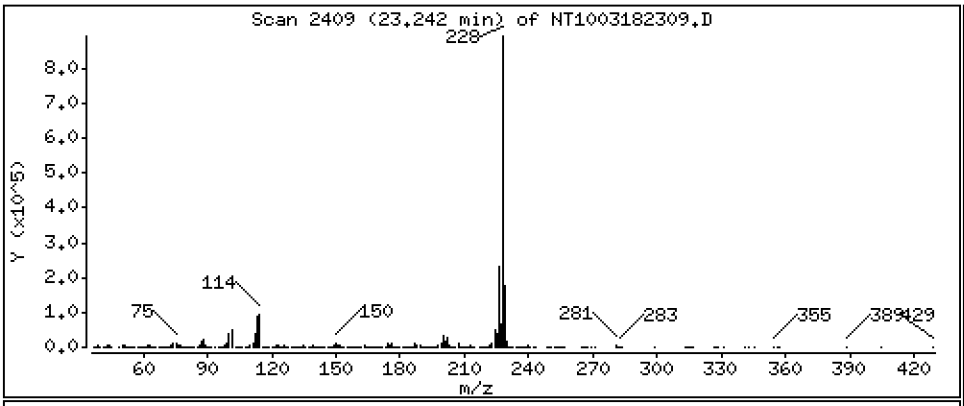
Operator: VTS

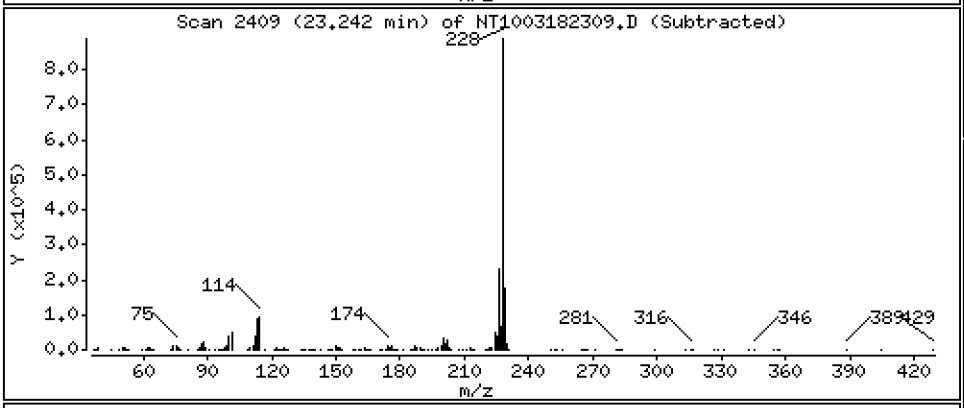
Column phase: ZB-5msi

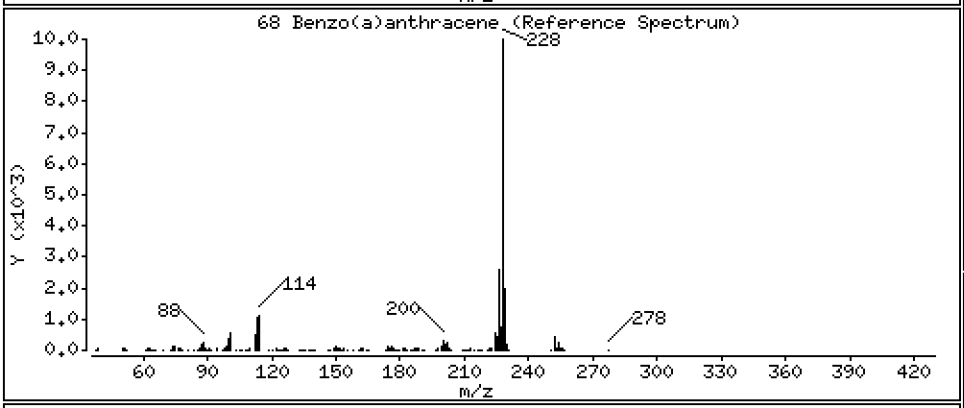
Column diameter: 0.25

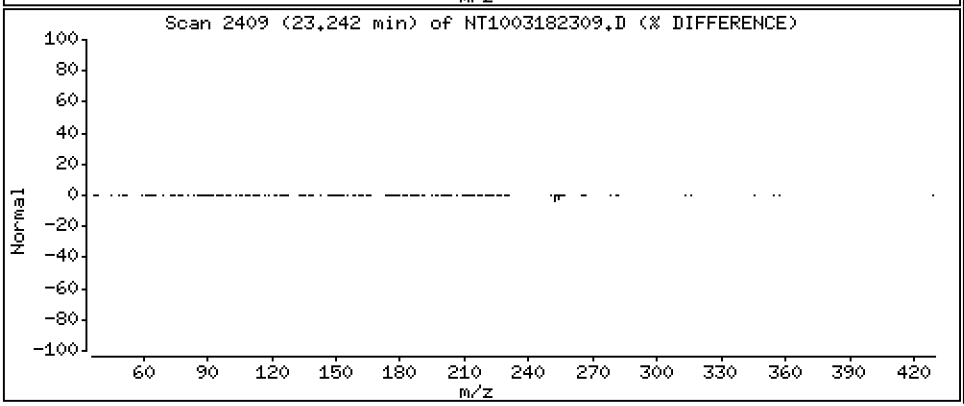
68 Benzo(a)anthracene

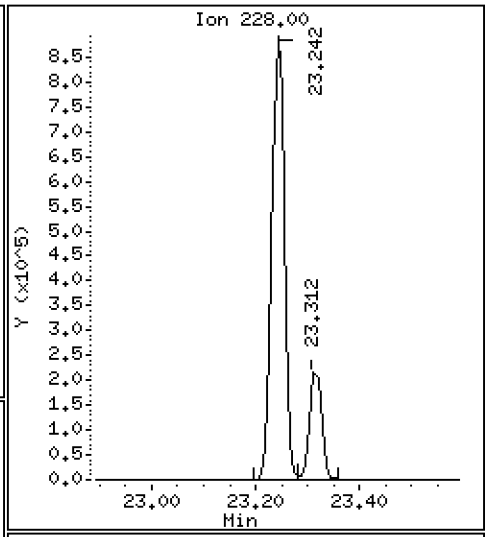
Concentration: 5.749 ug/mL

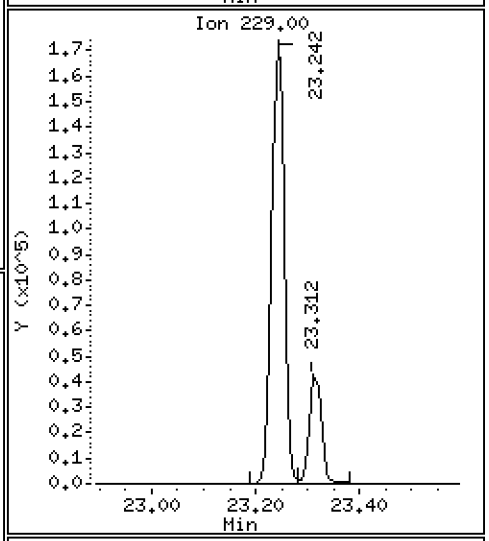


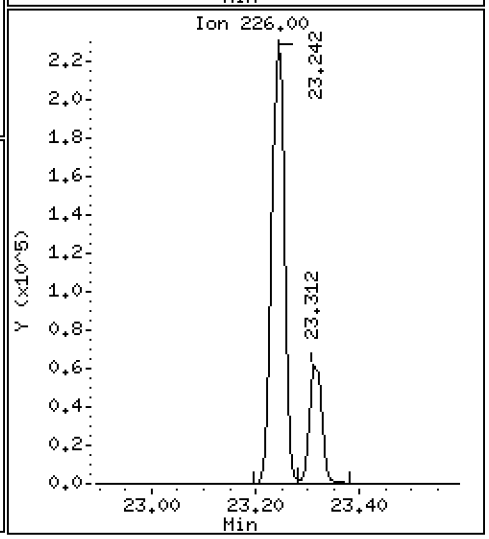












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

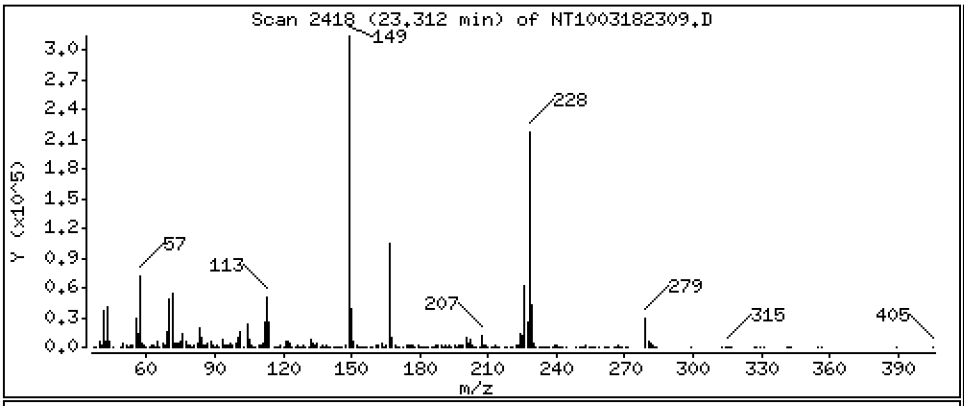
Operator: VTS

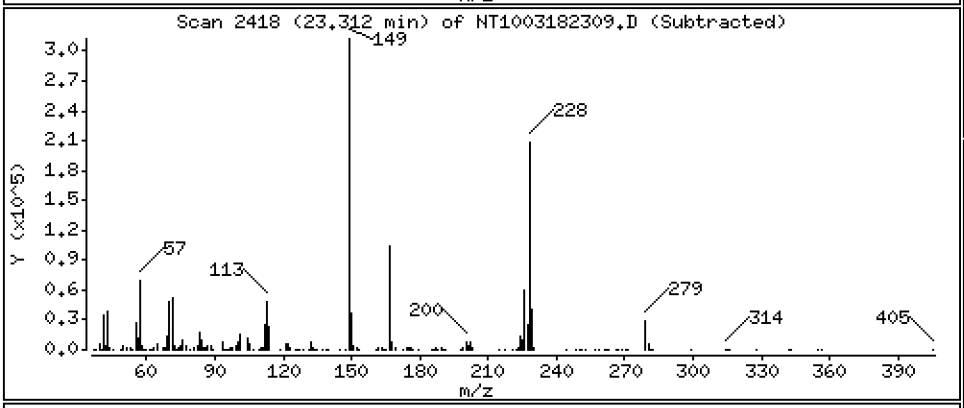
Column phase: ZB-5msi

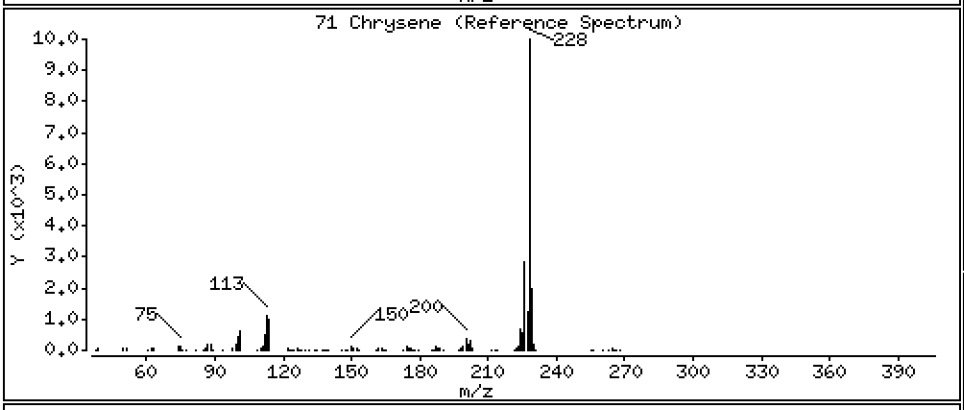
Column diameter: 0.25

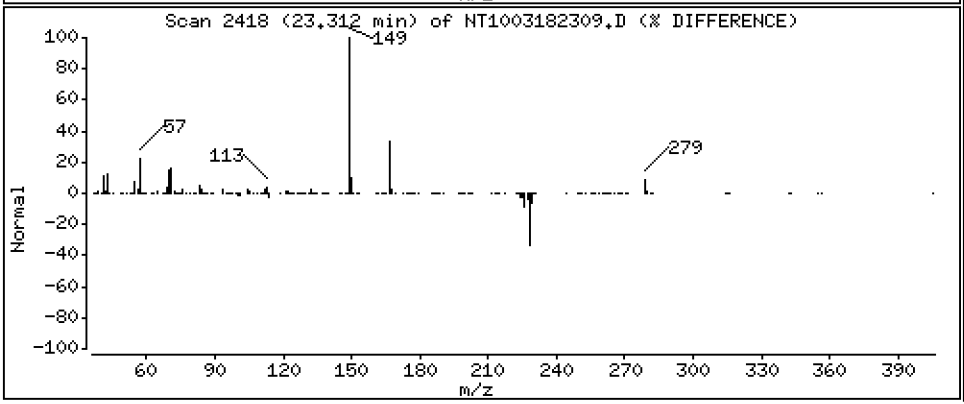
71 Chrysene

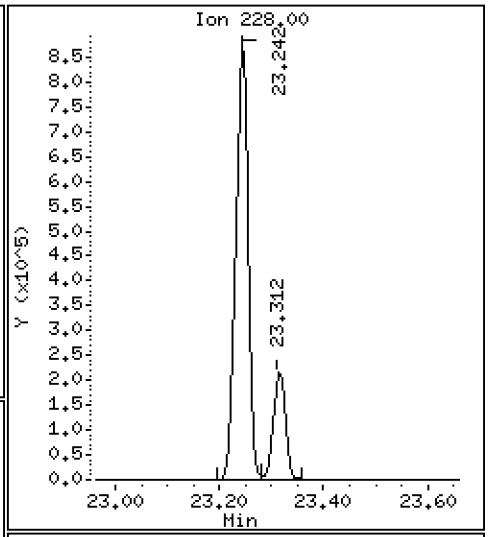
Concentration: 1.351 ug/mL

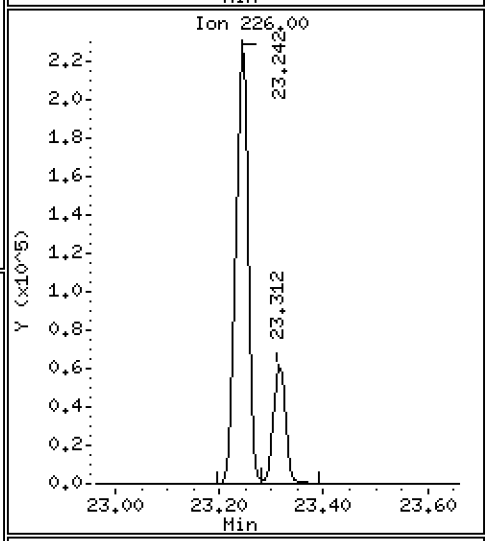


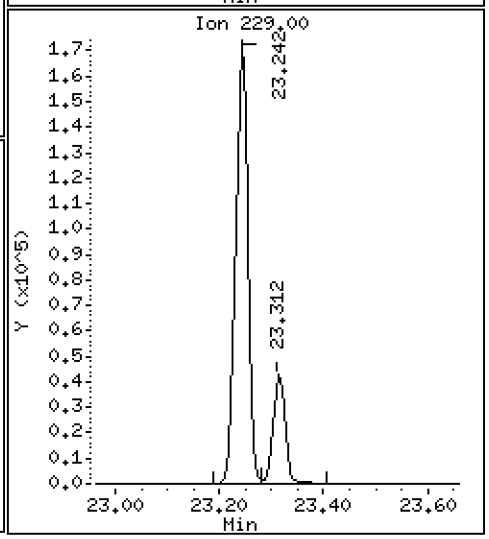












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

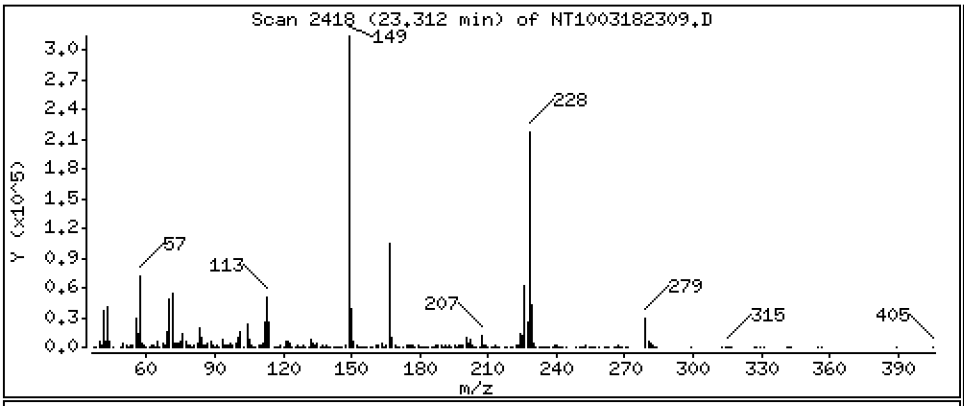
Operator: VTS

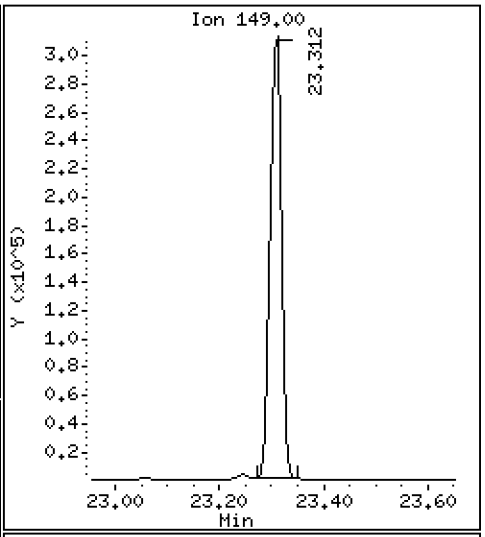
Column phase: ZB-5msi

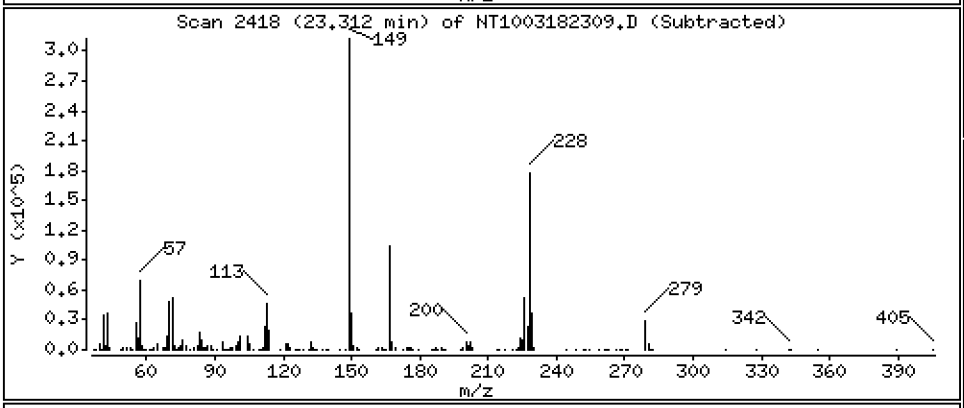
Column diameter: 0.25

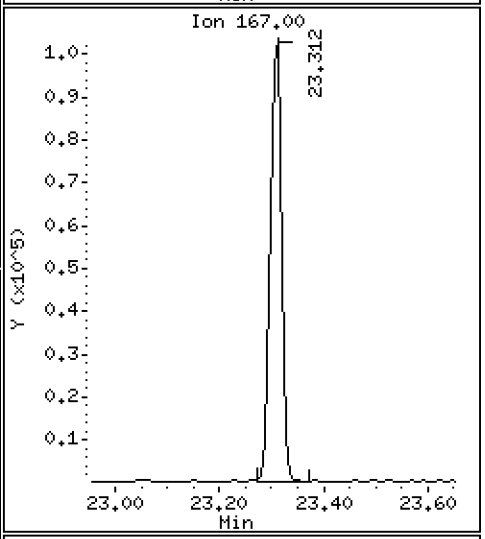
72 bis(2-Ethylhexyl)phthalate

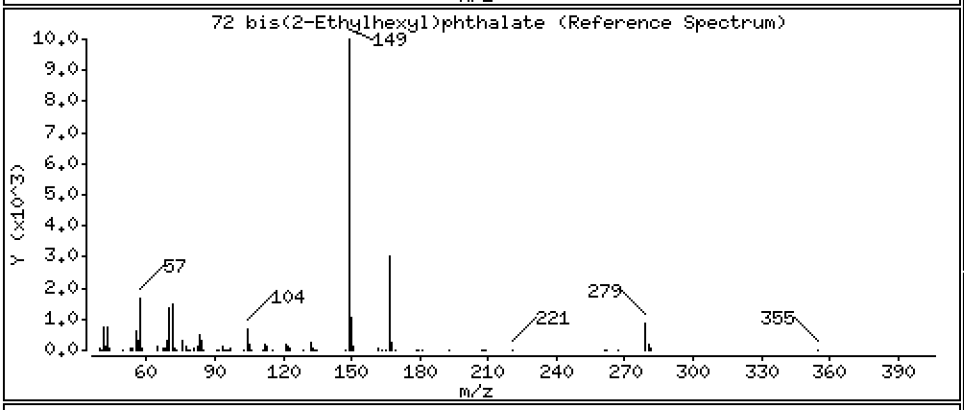
Concentration: 2.432 ug/mL

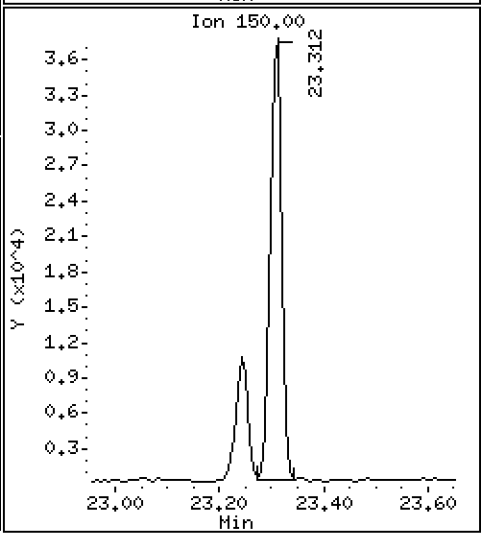


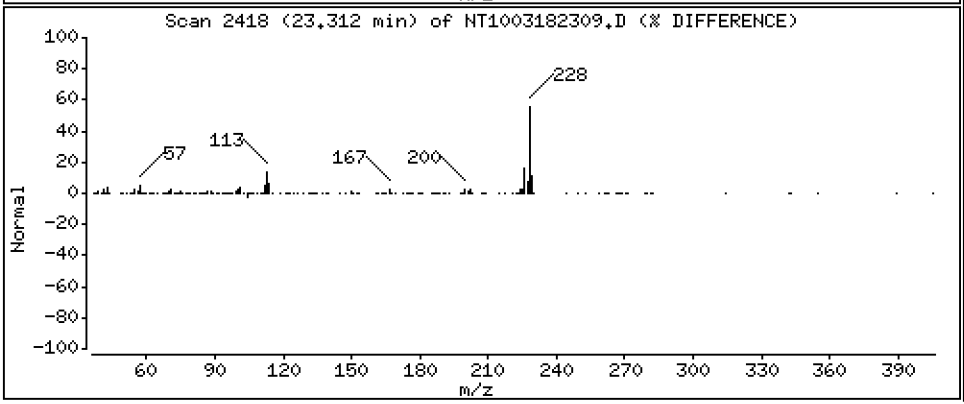












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

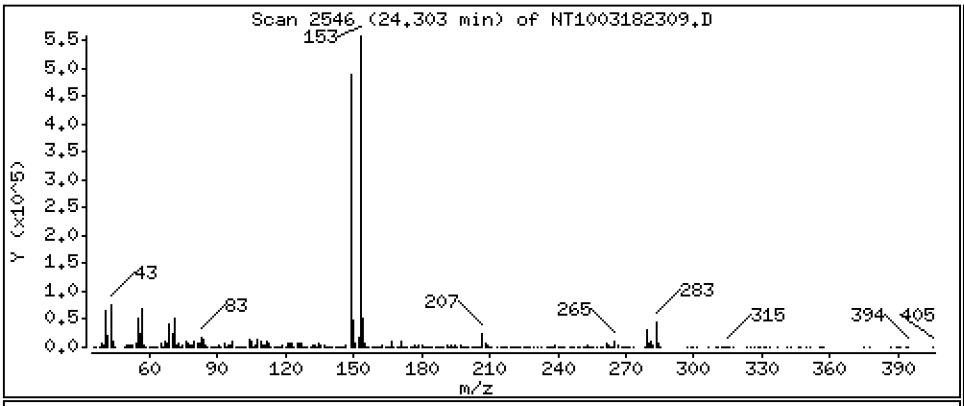
Operator: VTS

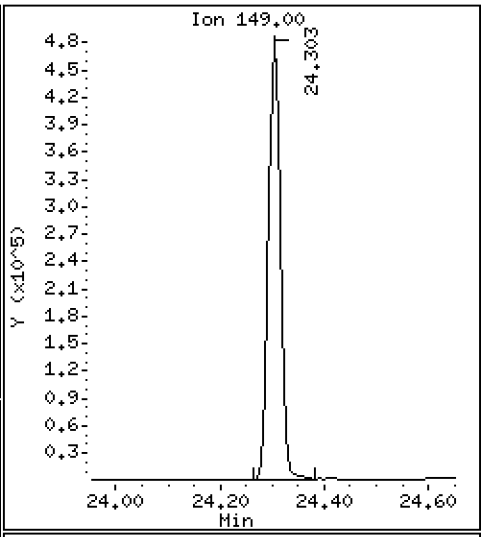
Column phase: ZB-5msi

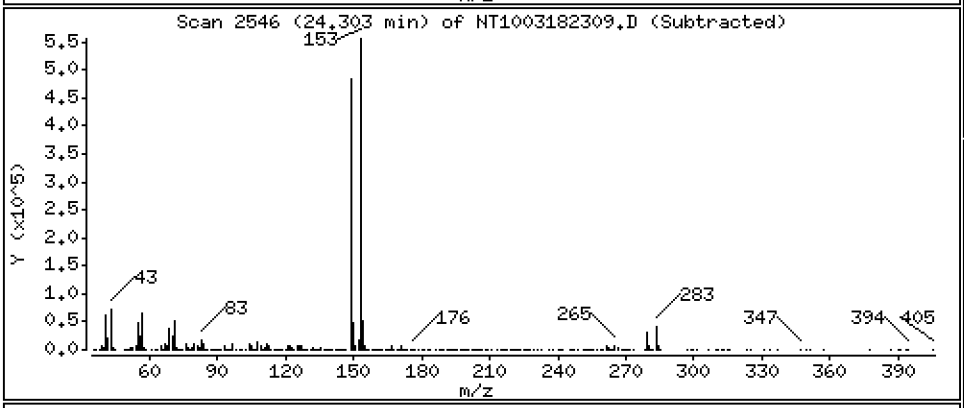
Column diameter: 0.25

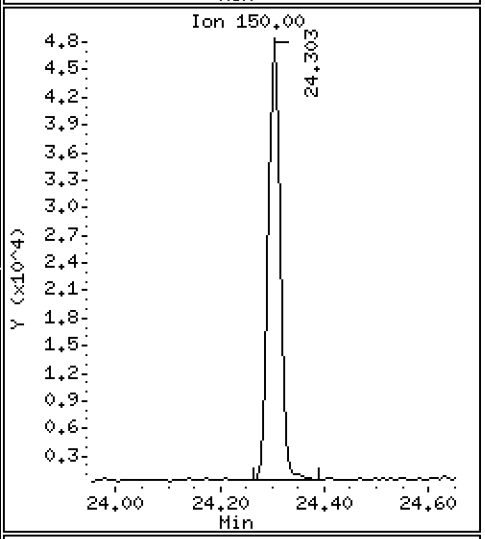
73 Di-n-octylphthalate

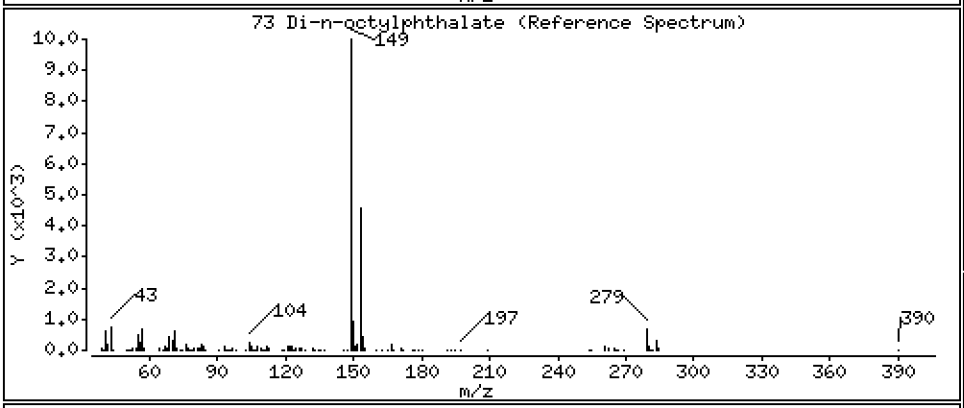
Concentration: 2.181 ug/mL

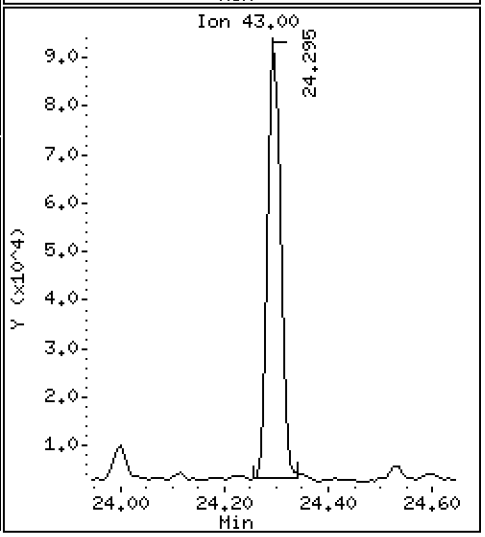


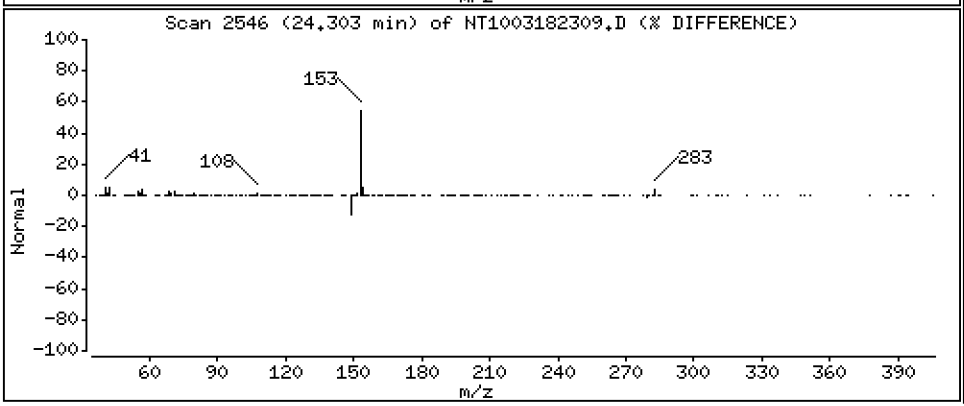












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

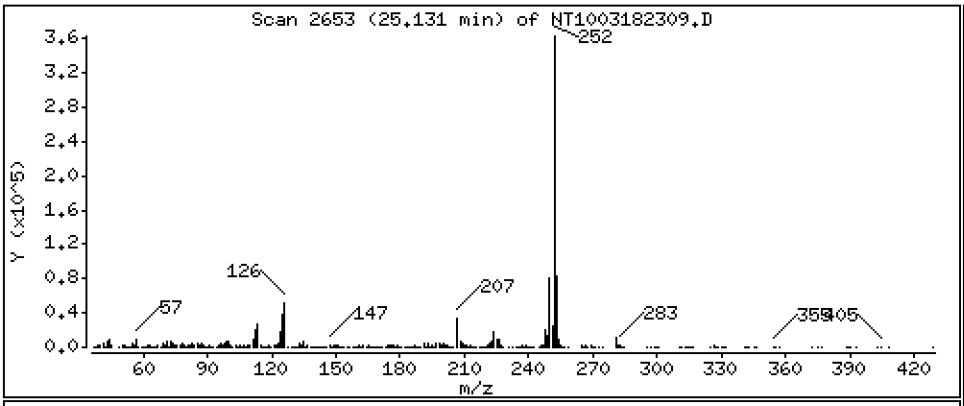
Operator: VTS

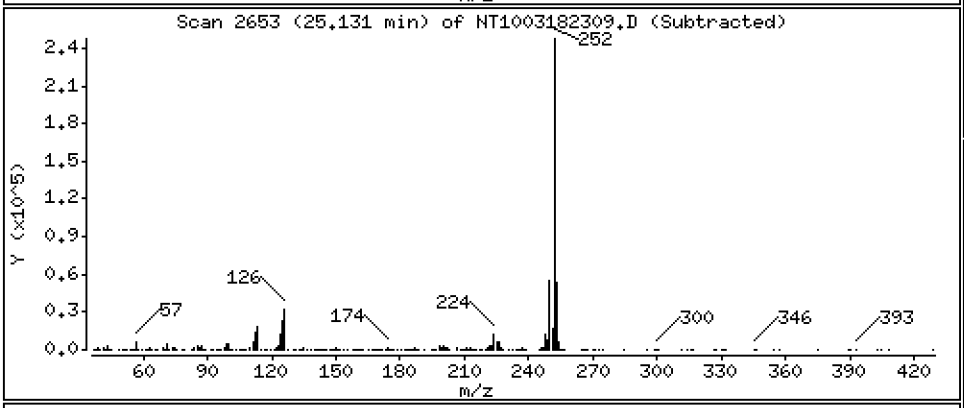
Column phase: ZB-5msi

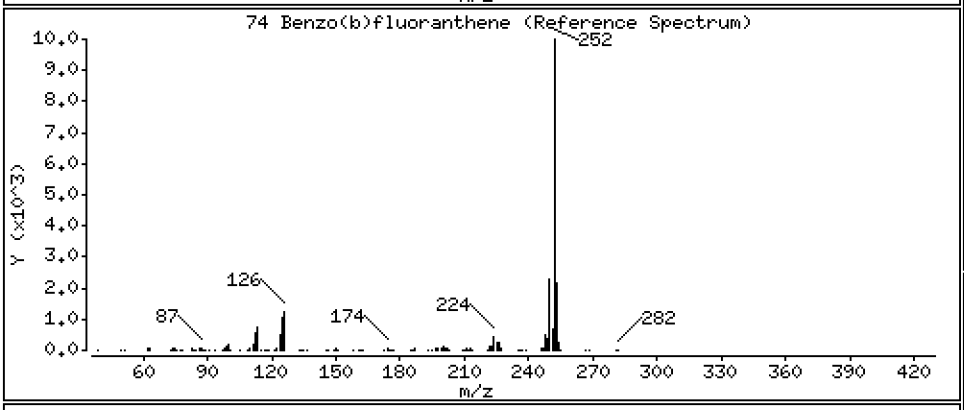
Column diameter: 0.25

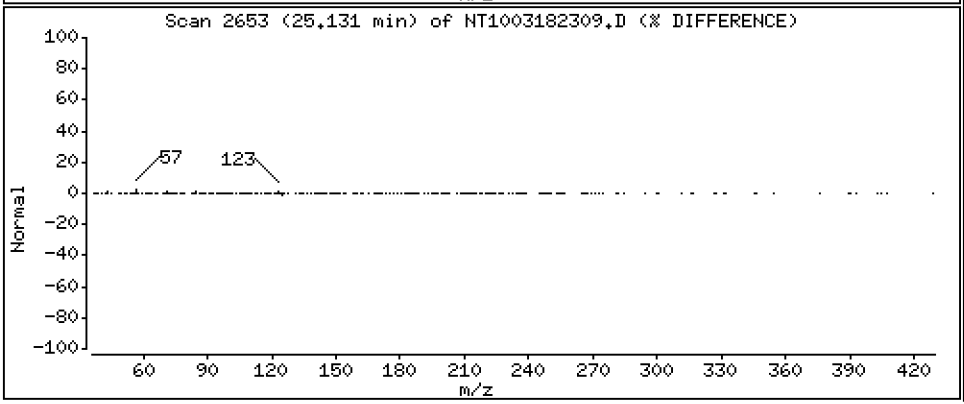
74 Benzo(b)fluoranthene

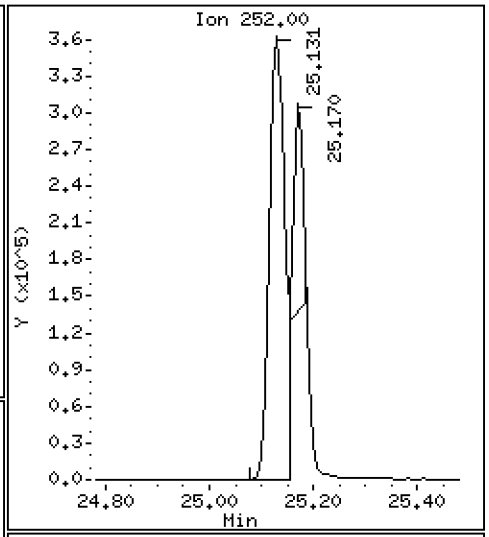
Concentration: 3.199 ug/mL

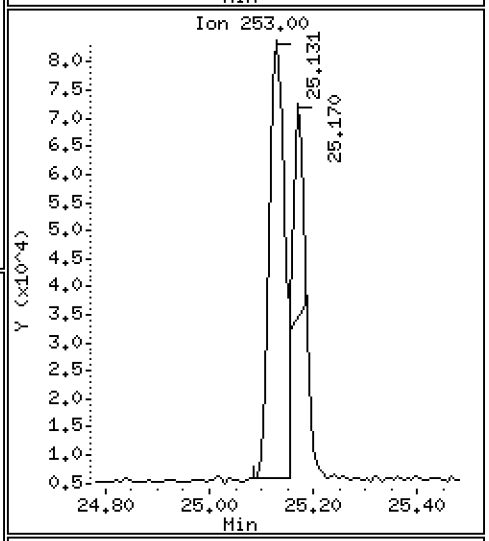


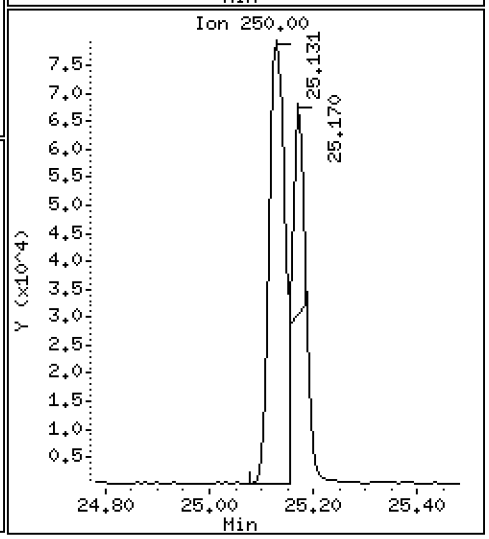












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

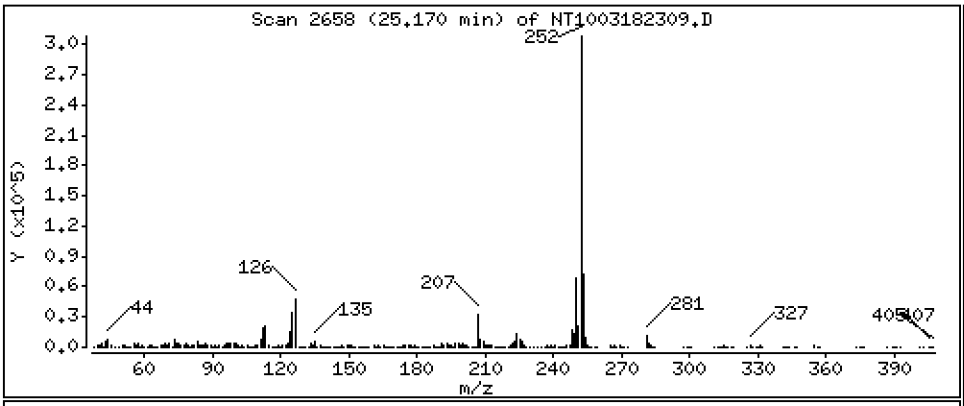
Operator: VTS

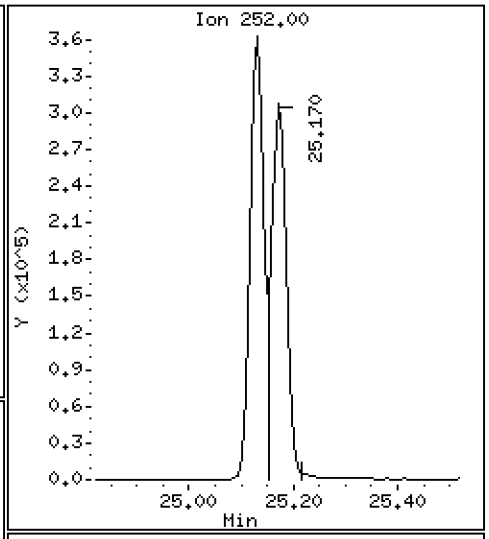
Column phase: ZB-5msi

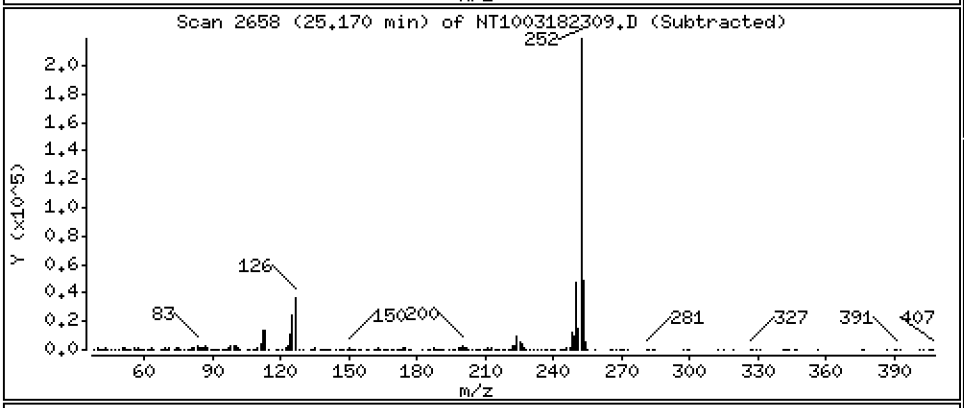
Column diameter: 0.25

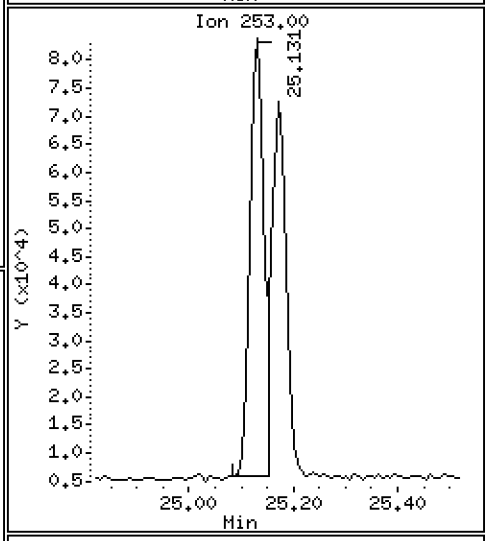
75 Benzo(k)fluoranthene

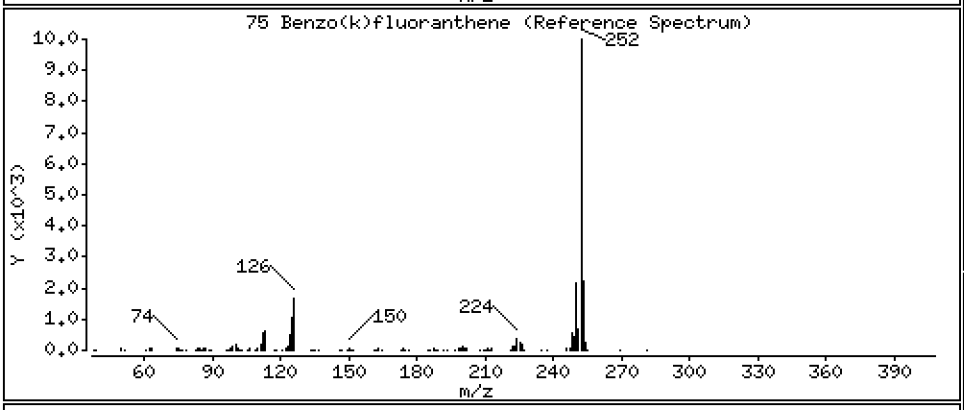
Concentration: 2.580 ug/mL

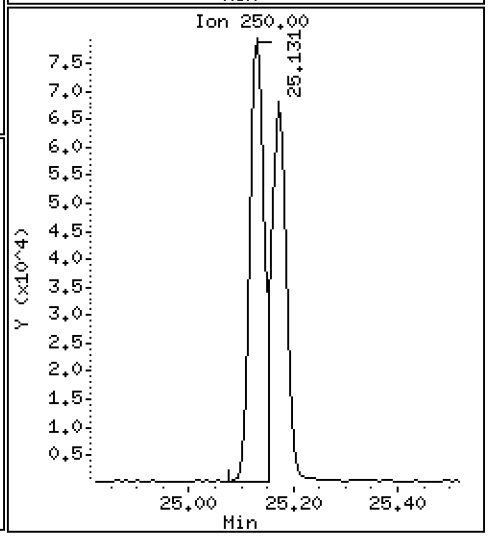


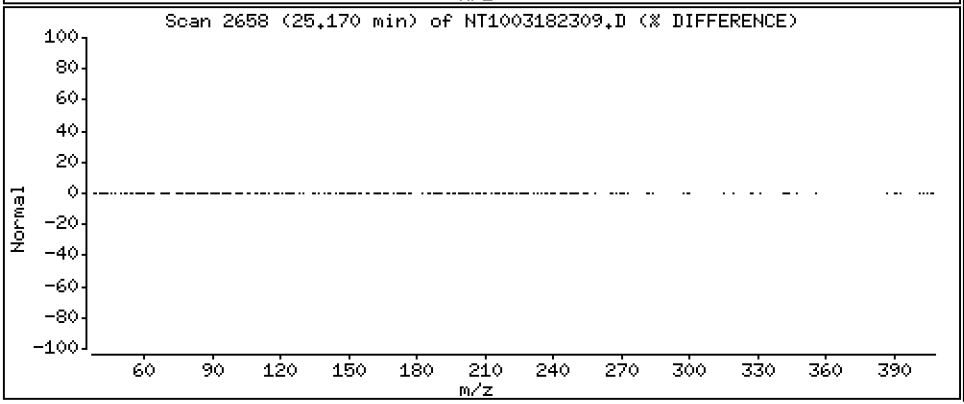












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

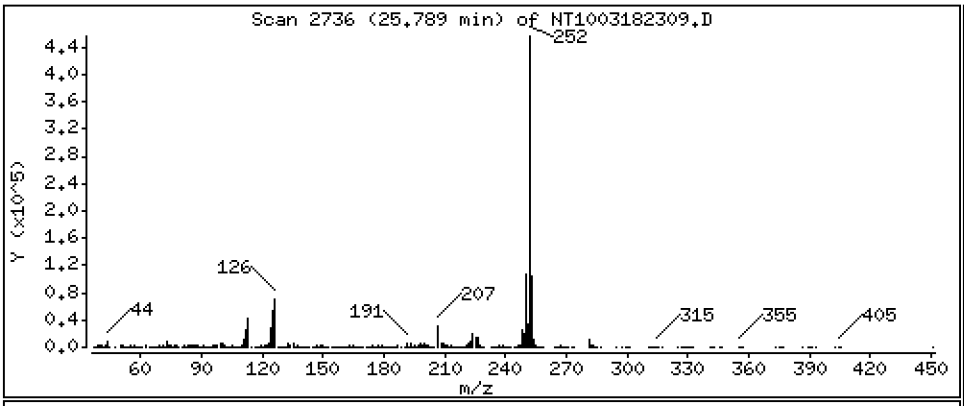
Operator: VTS

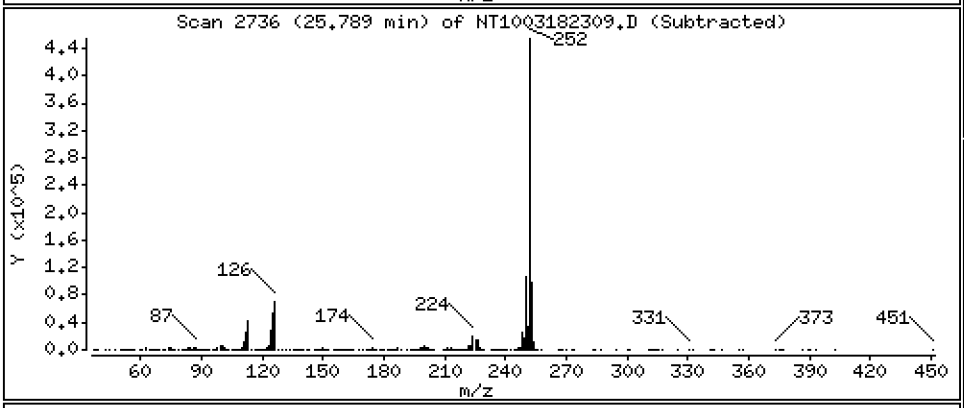
Column phase: ZB-5msi

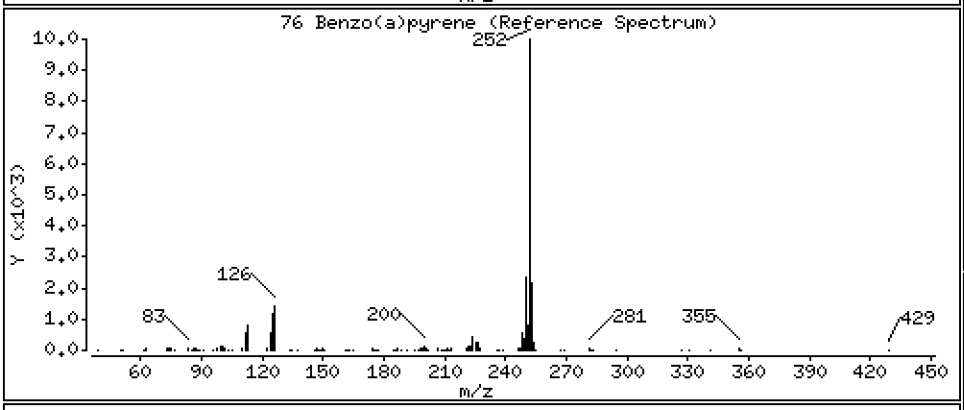
Column diameter: 0.25

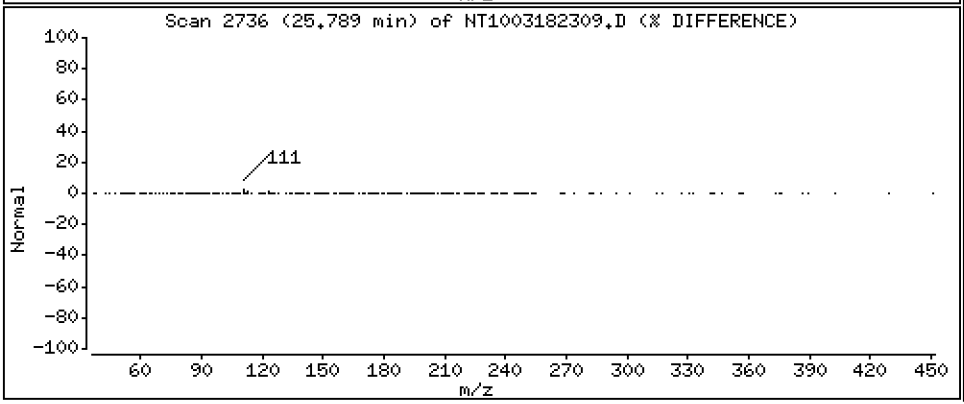
76 Benzo(a)pyrene

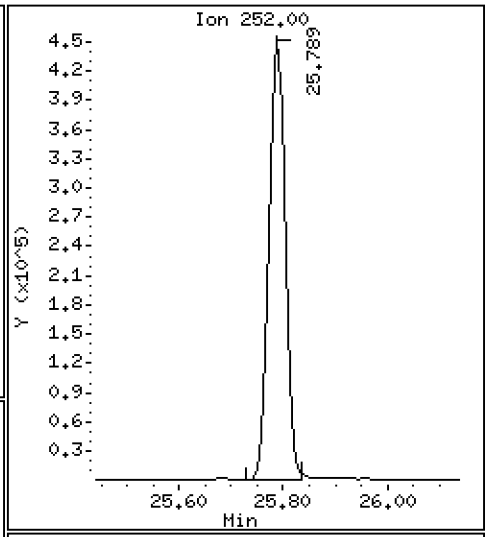
Concentration: 4.607 ug/mL

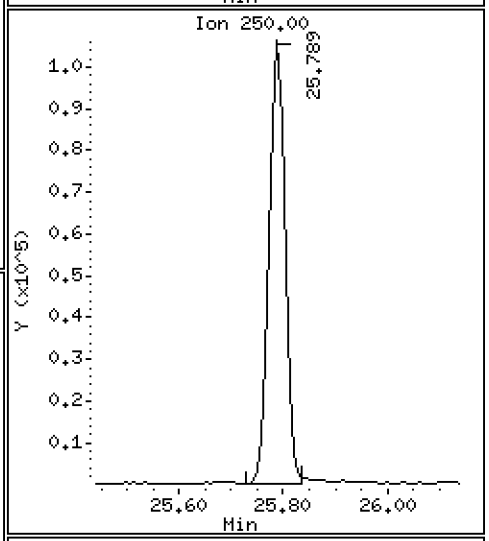


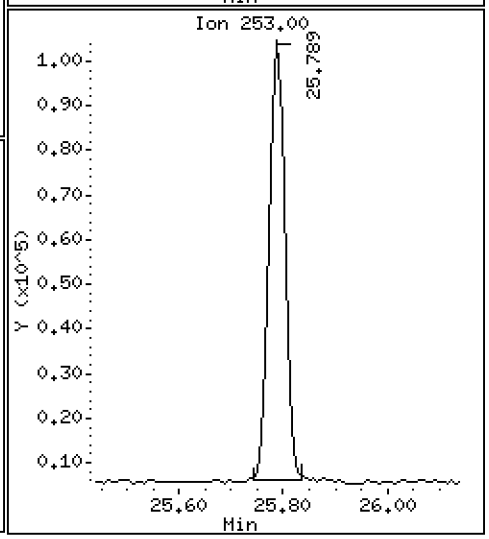












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

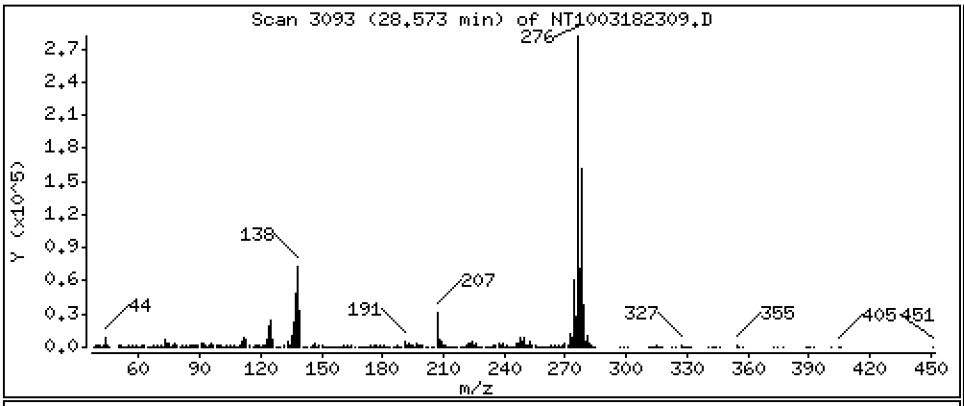
Operator: VTS

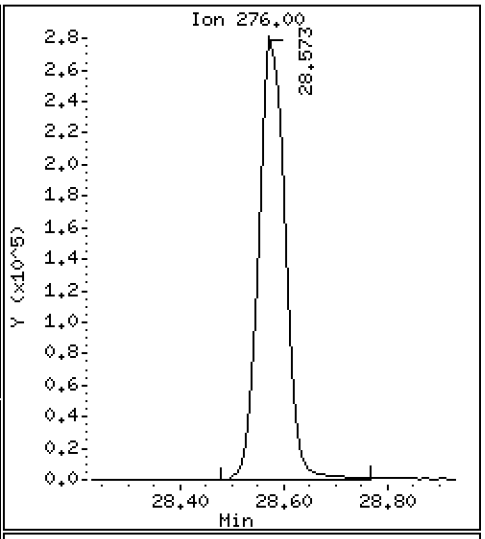
Column phase: ZB-5msi

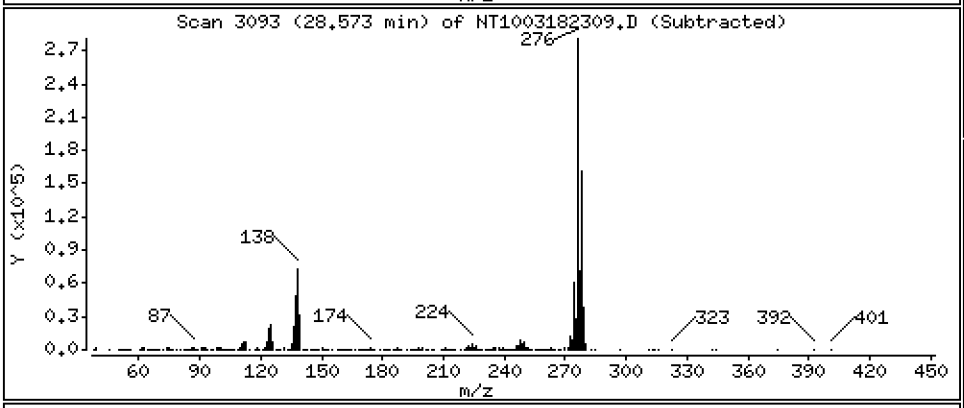
Column diameter: 0.25

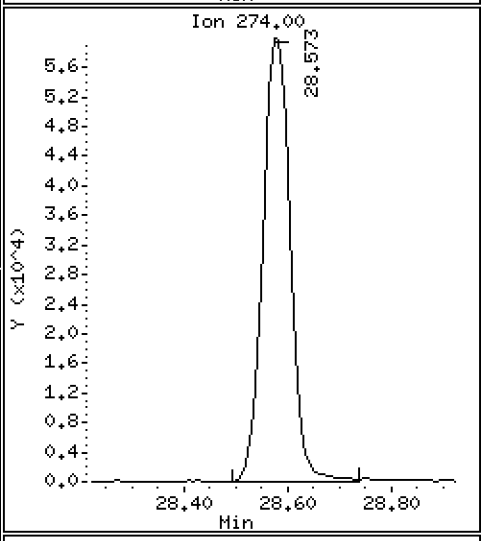
78 Indeno(1,2,3-cd)pyrene

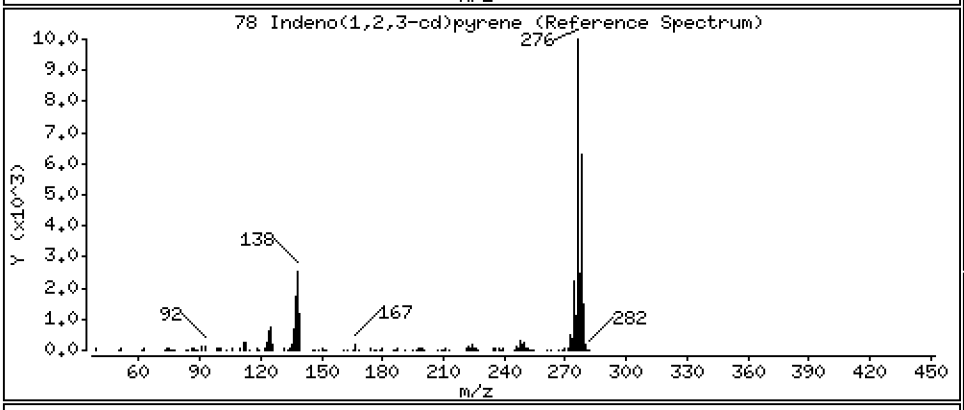
Concentration: 3.778 ug/mL

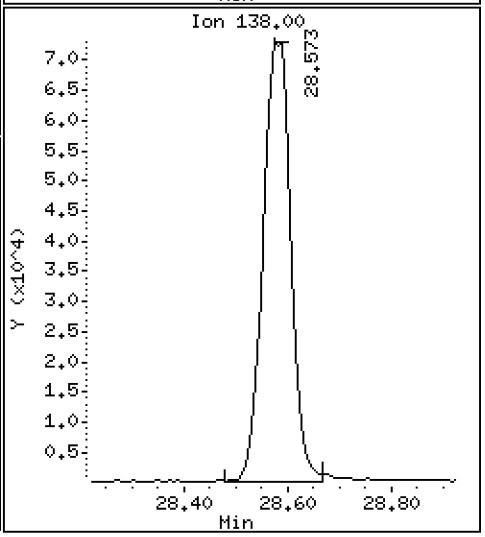


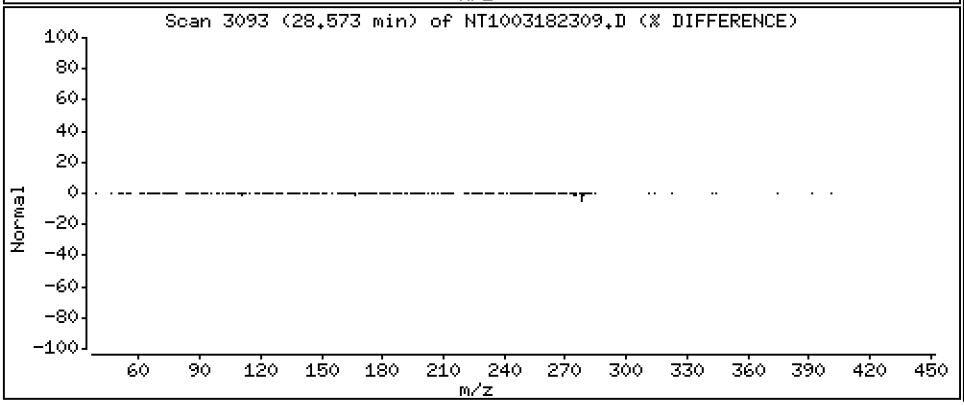












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

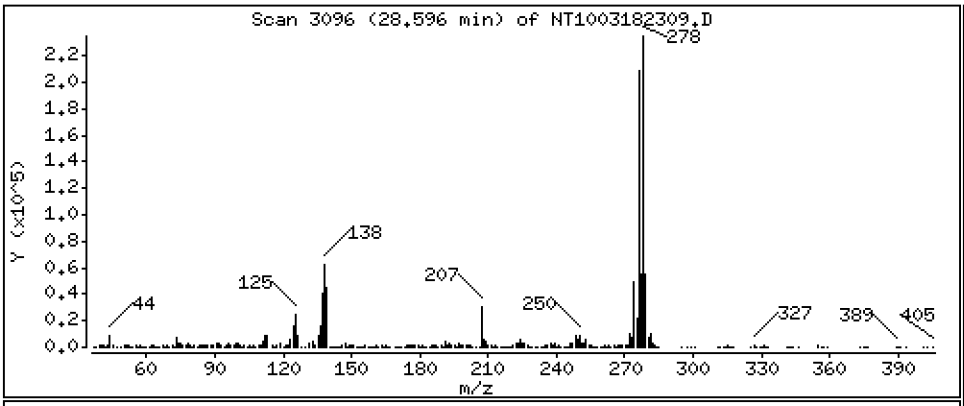
Operator: VTS

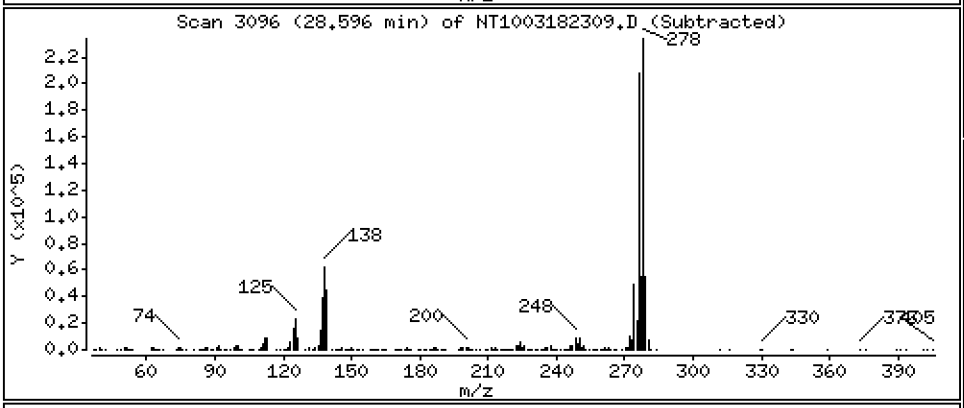
Column phase: ZB-5msi

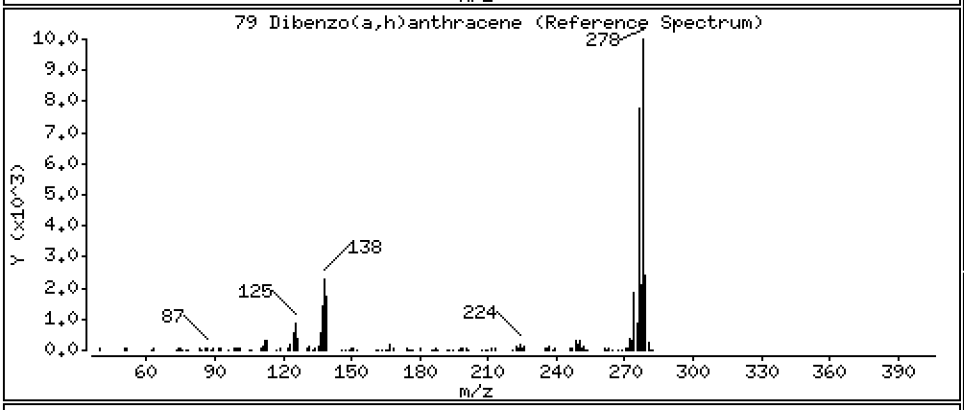
Column diameter: 0.25

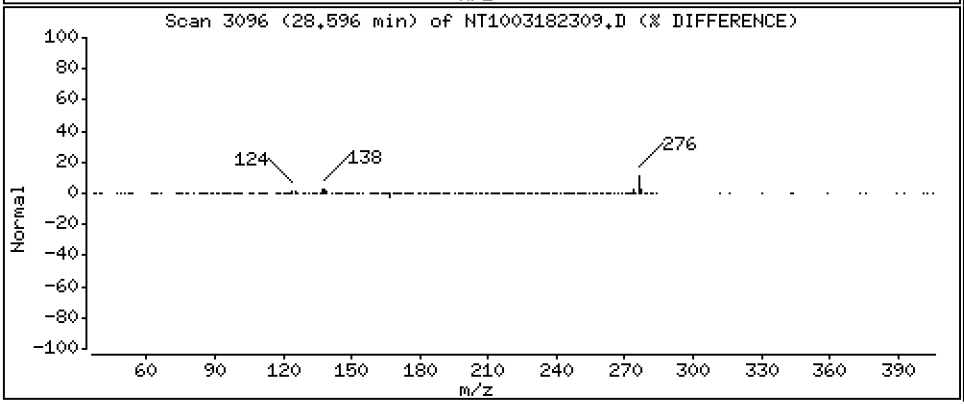
79 Dibenzo(a,h)anthracene

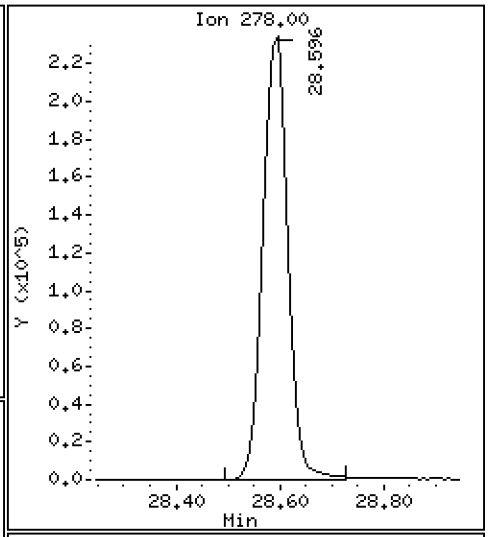
Concentration: 3.546 ug/mL

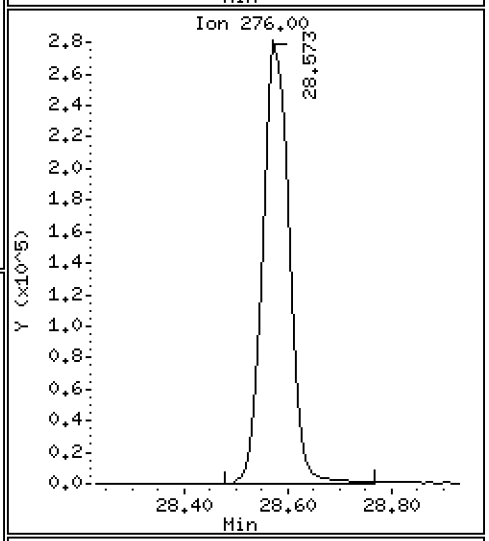


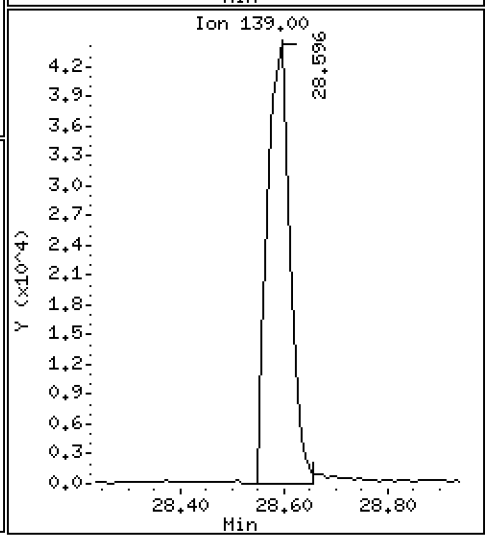












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

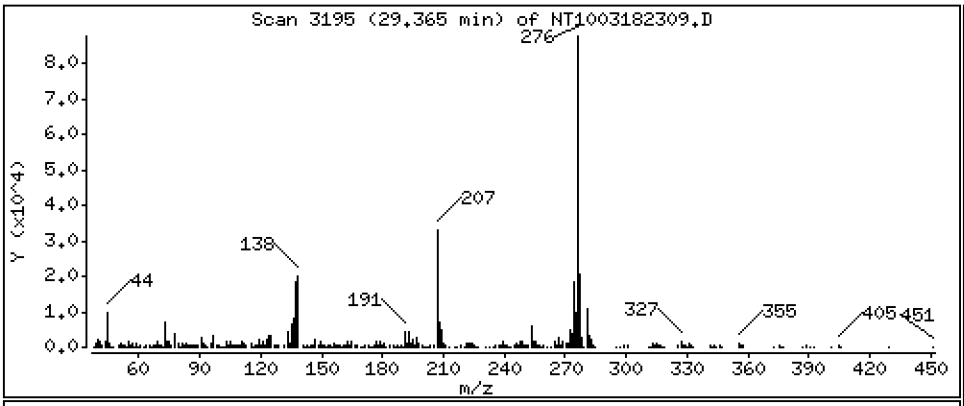
Operator: VTS

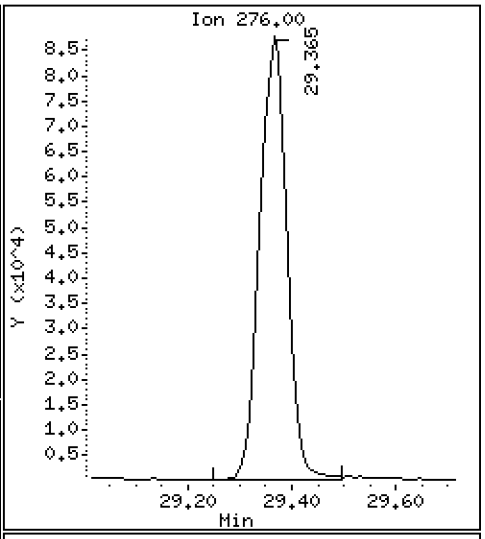
Column phase: ZB-5msi

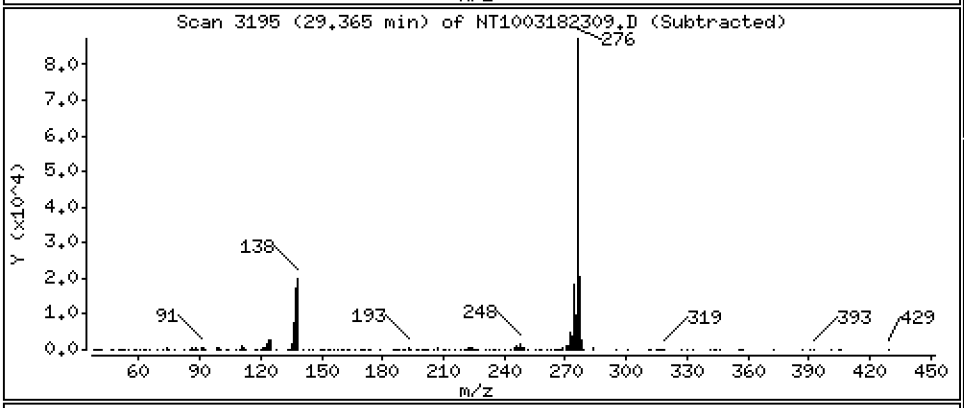
Column diameter: 0.25

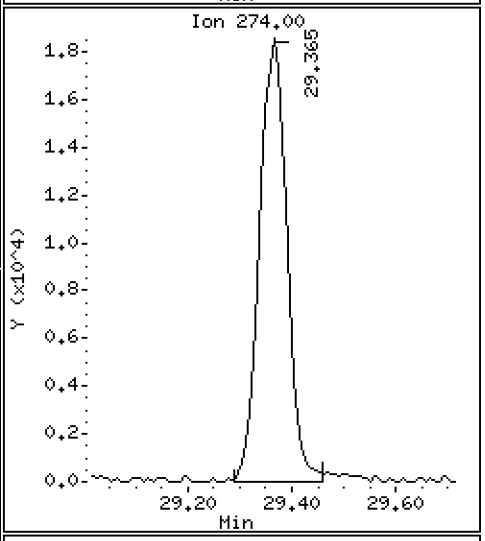
80 Benzo(g,h,i)perylene

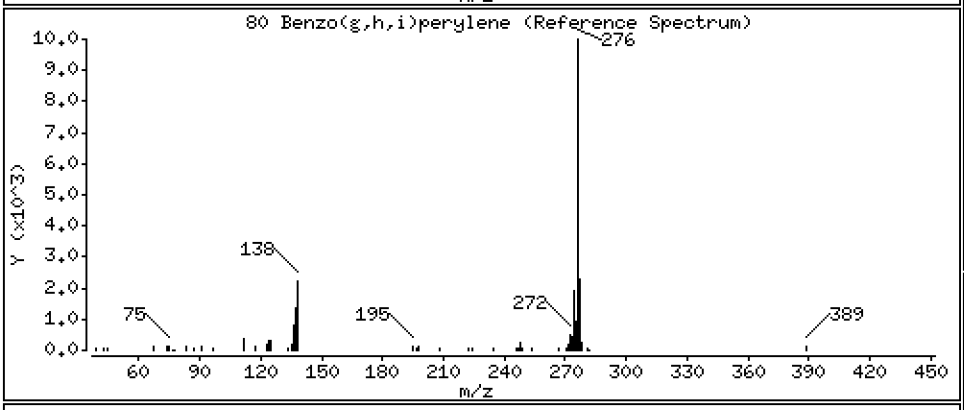
Concentration: 1.399 ug/mL

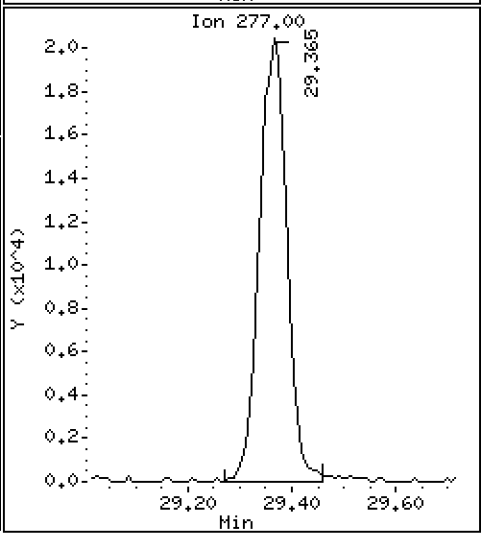


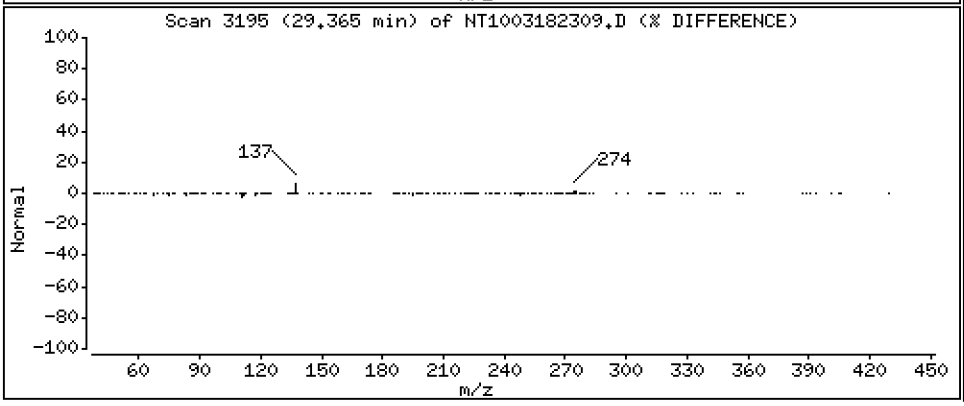












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

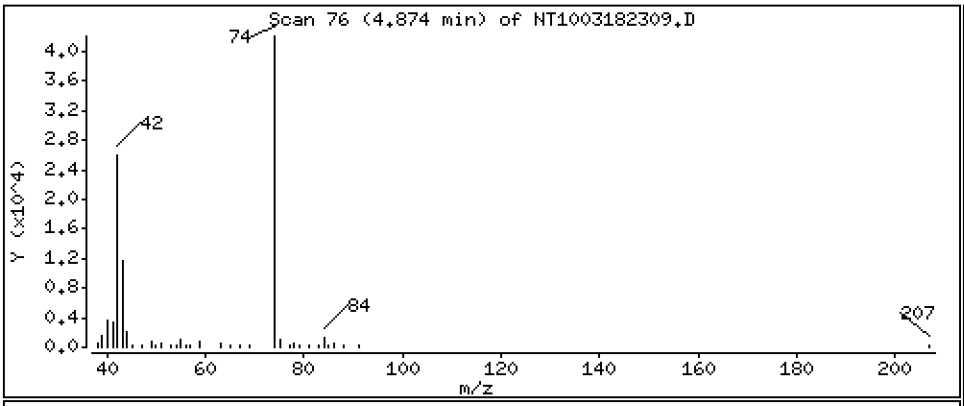
Operator: VTS

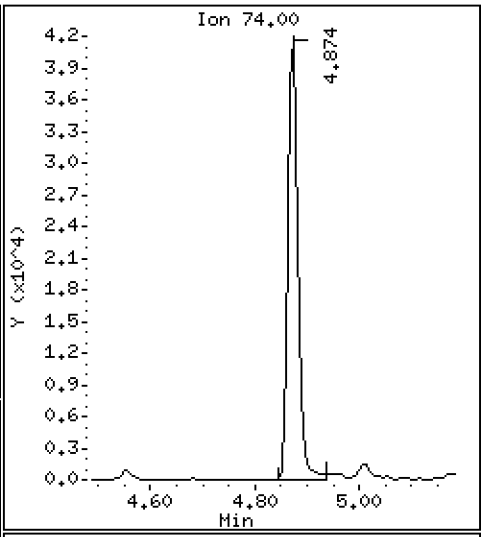
Column phase: ZB-5msi

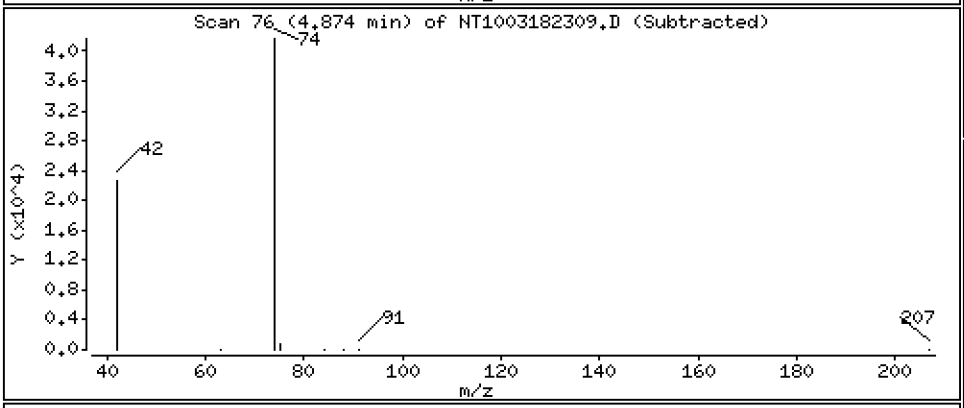
Column diameter: 0.25

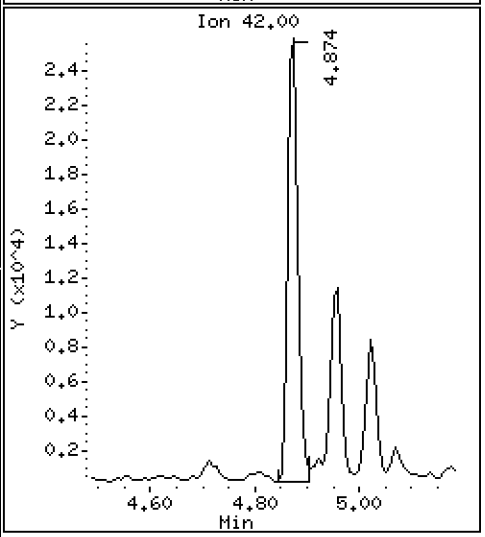
90 N-Nitrosodimethylamine

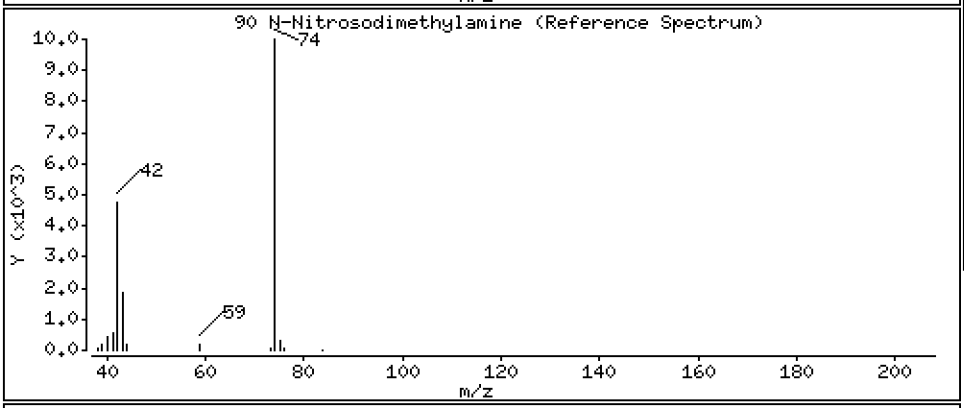
Concentration: 1.177 ug/mL

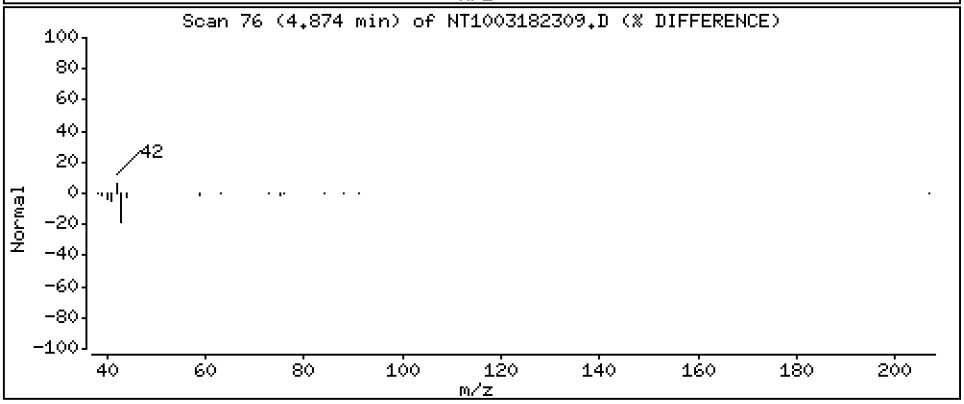












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

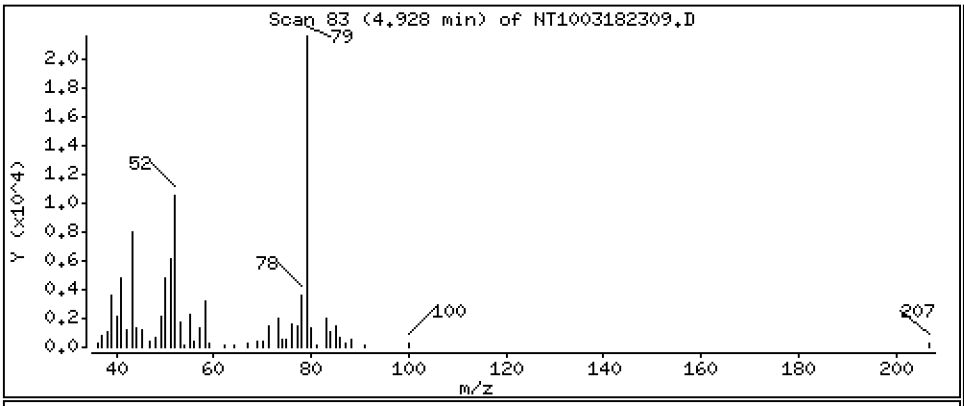
Operator: VTS

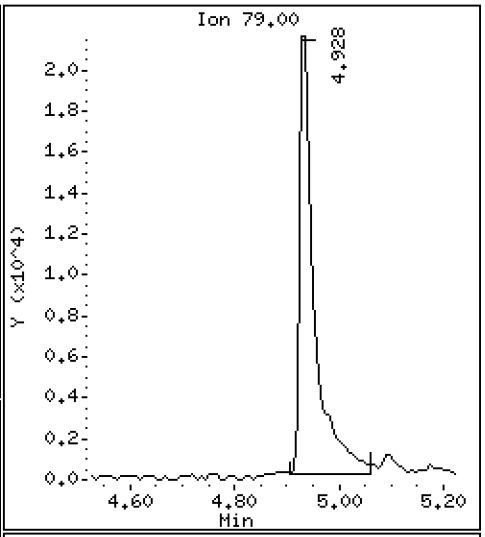
Column phase: ZB-5msi

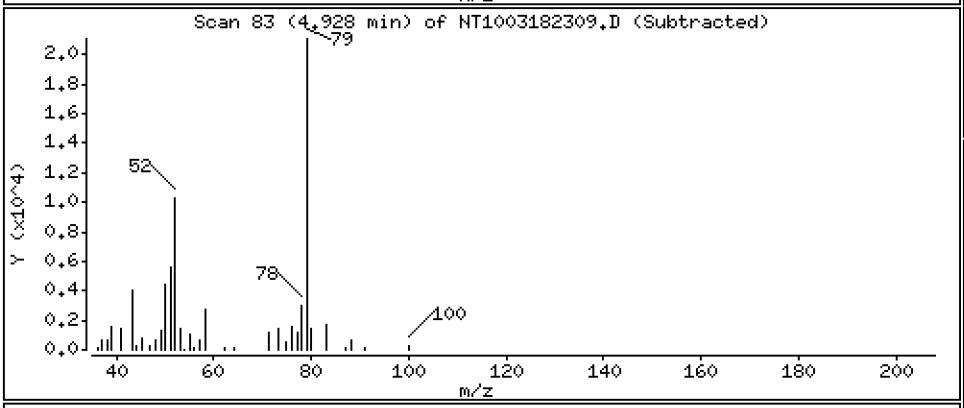
Column diameter: 0.25

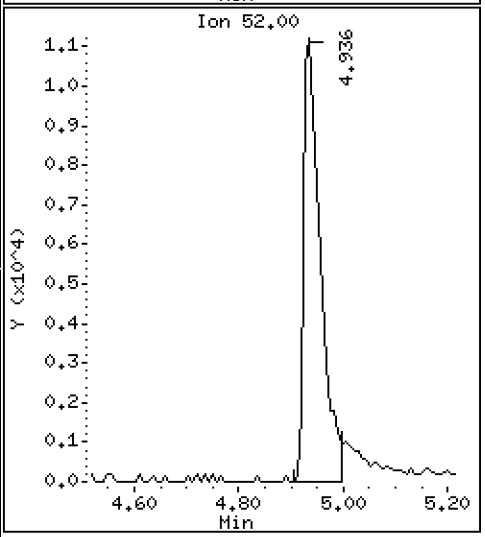
103 Pyridine

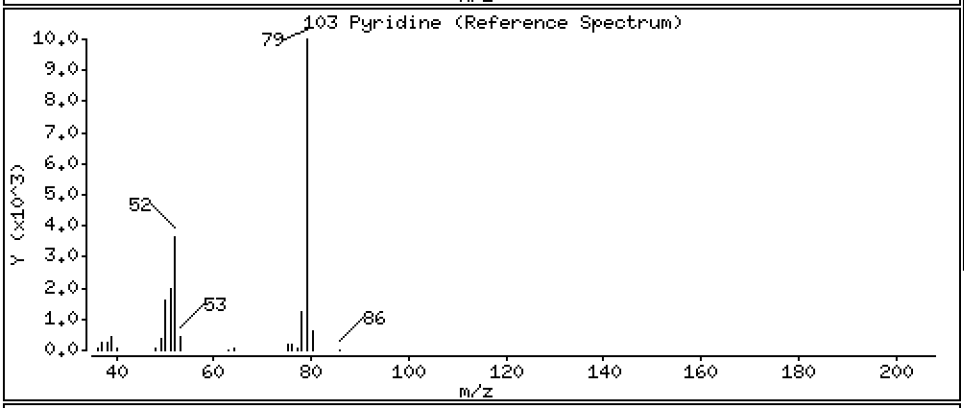
Concentration: 0.5617 ug/mL

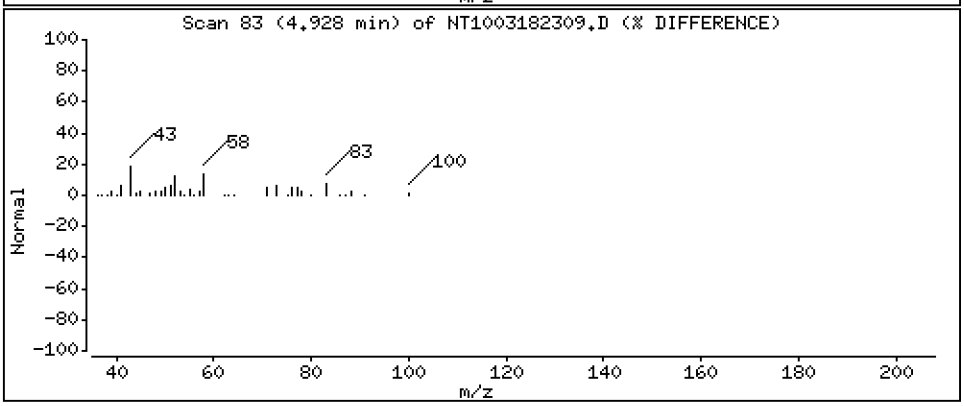












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

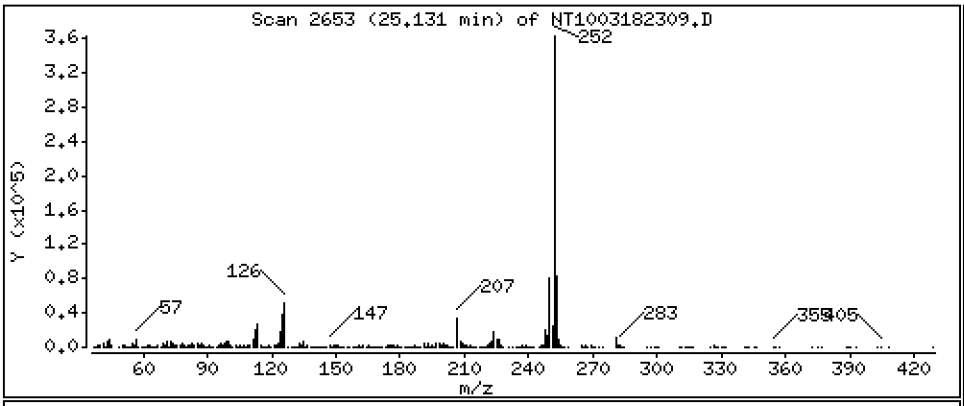
Operator: VTS

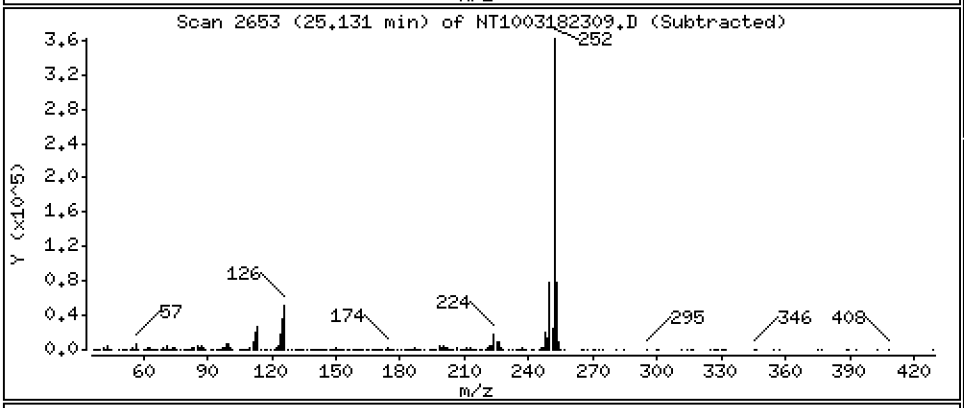
Column phase: ZB-5msi

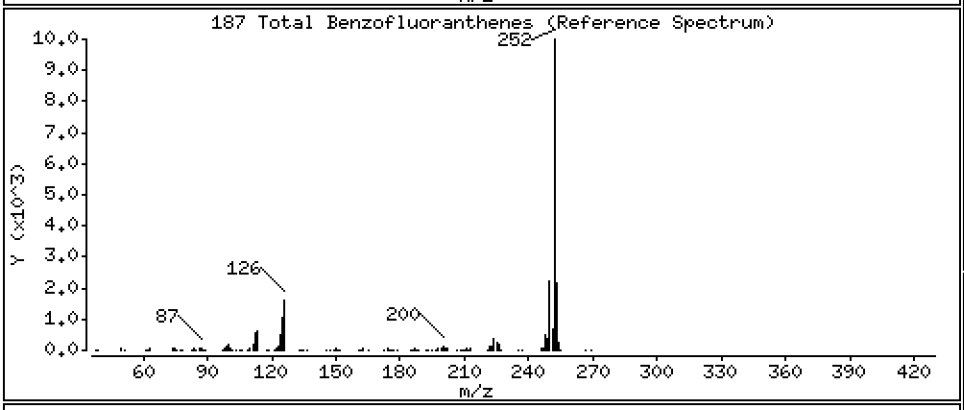
Column diameter: 0.25

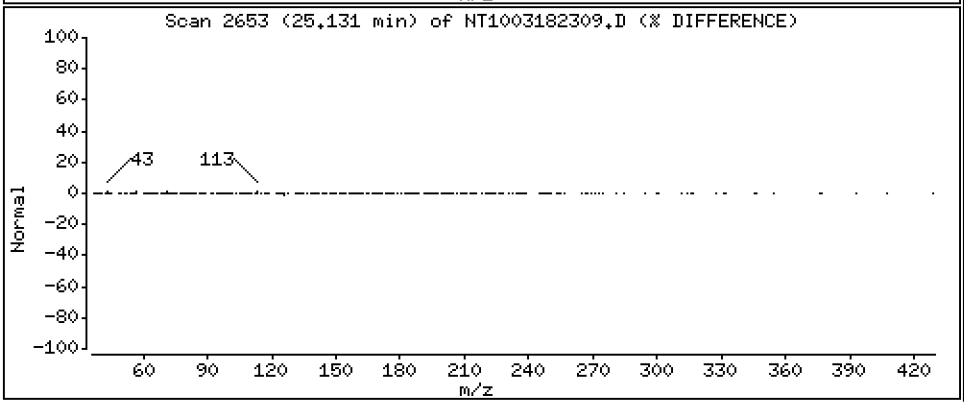
187 Total Benzofluoranthenes

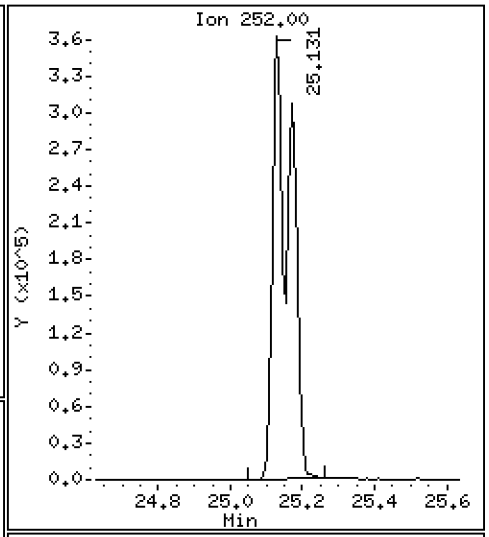
Concentration: 5.653 ug/mL

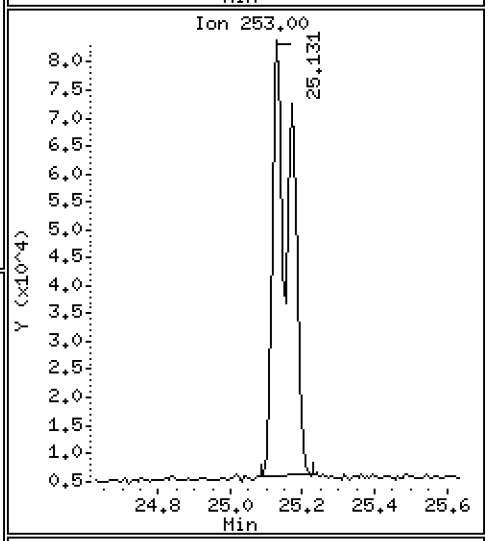


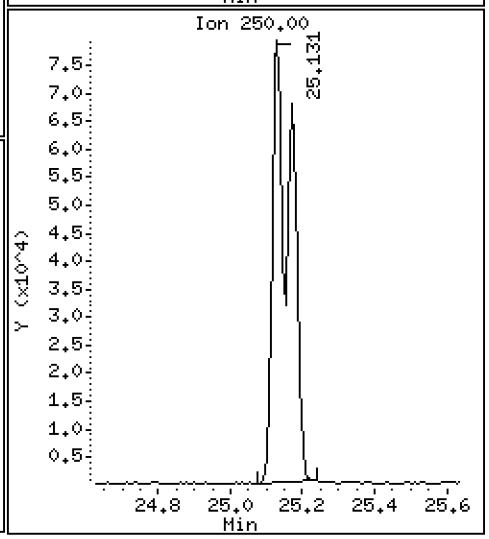












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM1

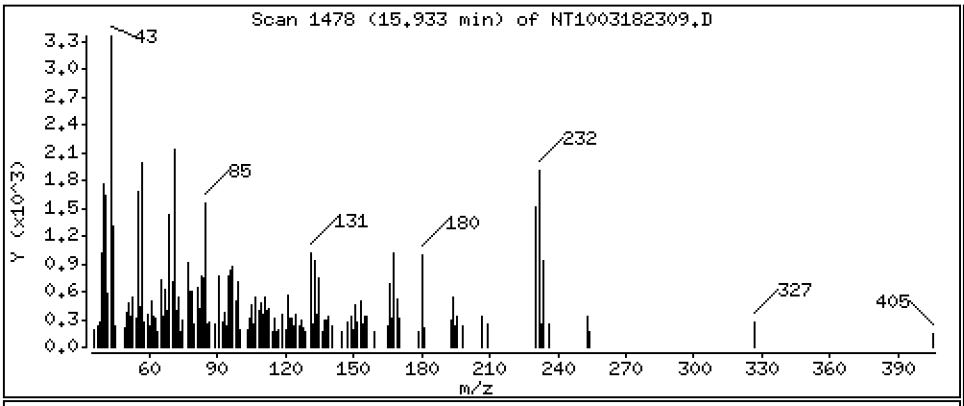
Operator: VTS

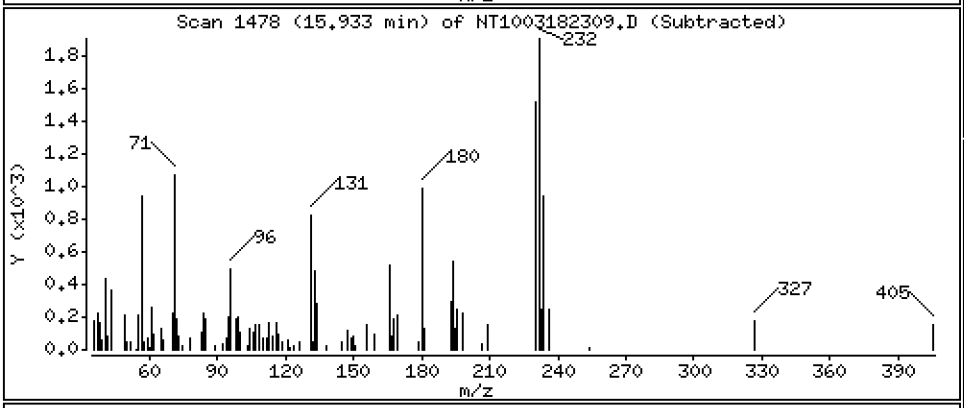
Column phase: ZB-5msi

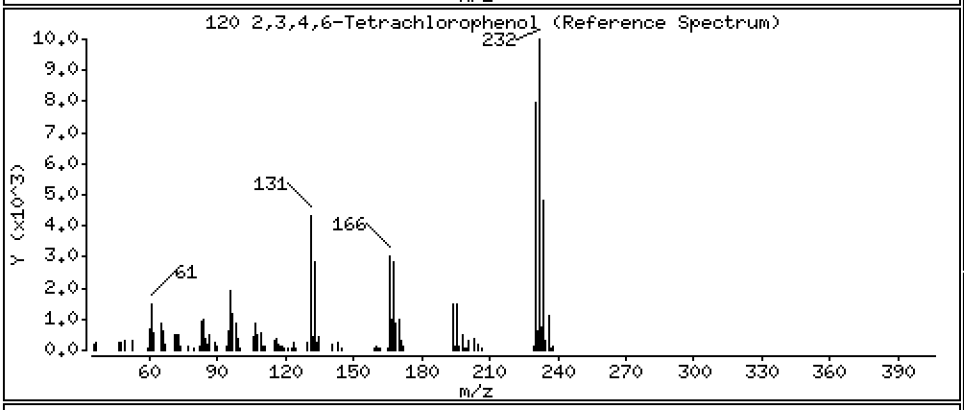
Column diameter: 0.25

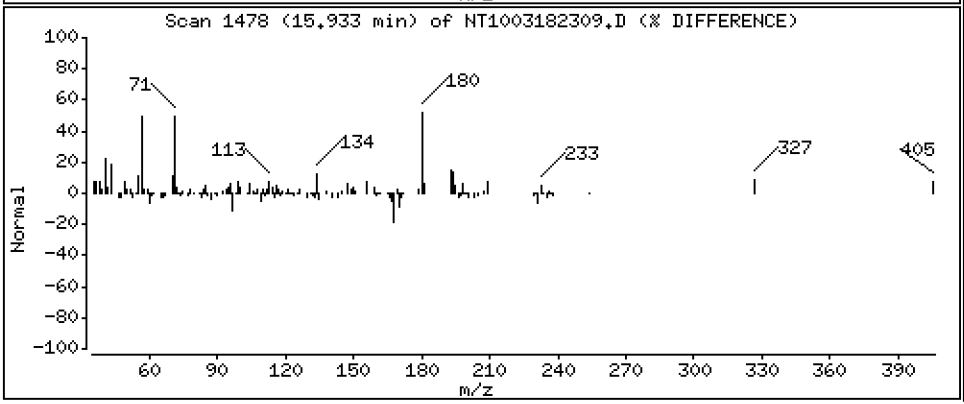
120 2,3,4,6-Tetrachlorophenol

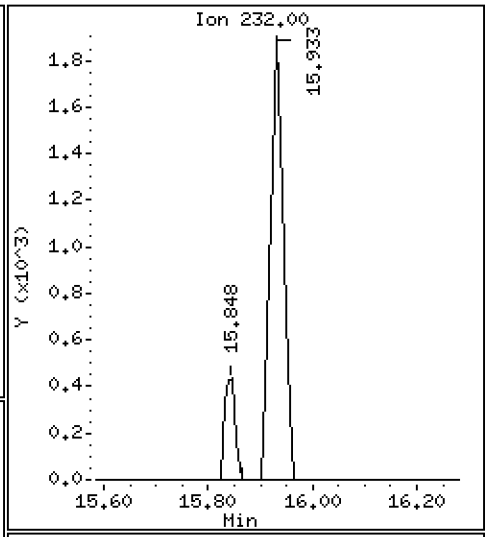
Concentration: 0.06175 ug/mL

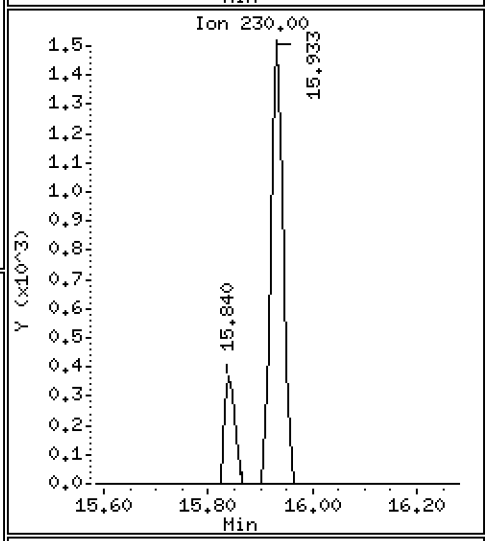


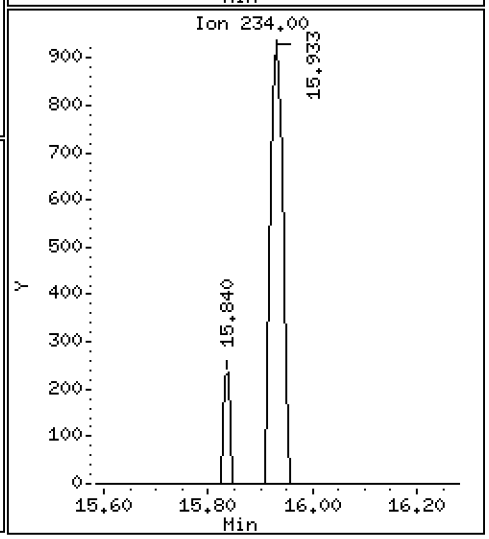












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182309.D
Lab Smp Id: BLB0579-SRM1
Inj Date : 18-MAR-2023 22:50
Operator : VTS Inst ID: nt10.i
Smp Info : BLB0579-SRM1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.975	6.952	(0.761)	447713	5.66512	5.665
$	2 Phenol-d5	99	8.520	8.520	(0.930)	611319	5.89647	5.896
	3 Phenol	94	8.544	8.536	(0.932)	265783	2.46701	2.467
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	549450	6.20627	6.206
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	8.837	8.829	(0.965)	120199	1.30359	1.304
	7 1,3-Dichlorobenzene	146	9.100	9.100	(0.993)	91089	0.93443	0.9344
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	261332	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	248253	3.90463	3.905
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	9.729	9.721	(1.062)	59833	2.19843	2.198
	13 2-Methylphenol	108	9.643	9.643	(1.053)	414459	5.27734	5.277
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.915	9.907	(1.082)	529211	6.39536	6.395
$	18 Nitrobenzene-d5	82	10.249	10.249	(0.881)	394699	4.21090	4.211
	19 Nitrobenzene	77	10.287	10.287	(0.884)	247047	2.68569	2.686
	20 Isophorone	82	10.730	10.730	(0.923)	234271	1.99083	1.991
	21 2-Nitrophenol	139	10.905	10.905	(0.938)	245295	5.45214	5.452
	22 2,4-Dimethylphenol	107	10.947	10.947	(0.941)	314064	3.71718	3.717
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	11.041	11.134	(0.949)	48059	1.02233	1.022
	25 2,4-Dichlorophenol	162	11.355	11.346	(0.976)	499494	7.38764	7.388
	26 1,2,4-Trichlorobenzene	180	11.538	11.538	(0.992)	117184	1.47650	1.476
*	27 Naphthalene-d8	136	11.631	11.623	(1.000)	928634	4.00000	
	28 Naphthalene	128	11.670	11.669	(1.003)	878683	3.57175	3.572
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	12.017	12.017	(1.033)	84186	1.81030	1.810
	31 4-Chloro-3-methylphenol	107	12.729	12.729	(1.094)	151945	2.07593	2.076
	32 2-Methylnaphthalene	142	13.039	13.046	(1.121)	5007	0.02820	0.02820
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.658	13.658	(0.898)	110503	2.21490	2.215
	35	2,4,5-Trichlorophenol	196	13.727	13.727	(0.902)	187995	3.39124	3.391
$	36	2-Fluorobiphenyl	172	13.820	13.820	(0.908)	842383	4.21873	4.219
	37	2-Chloronaphthalene	162	14.029	14.029	(0.922)	327959	2.02844	2.028
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	14.710	14.710	(0.967)	746540	4.55258	4.553
	40	Acenaphthylene	152	14.896	14.896	(0.979)	392058	1.55618	1.556
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.213	15.213	(1.000)	504780	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	15.275	15.275	(1.004)	795002	5.10789	5.108
	45	2,4-Dinitrophenol	184	15.345	15.345	(1.009)	104080	4.82351	4.824
	46	Dibenzofuran	168	15.600	15.600	(1.025)	1331634	5.80188	5.802
	47	4-Nitrophenol	109	15.445	15.437	(1.015)	168620	6.73317	6.733
	48	2,4-Dinitrotoluene	165	15.654	15.654	(1.029)	191783	3.59941	3.599
	50	Diethylphthalate	149	16.156	16.156	(1.062)	130473	0.81094	0.8109
	49	Fluorene	166	16.319	16.319	(1.073)	344255	1.90651	1.907
	51	4-Chlorophenyl-phenylether	204	16.296	16.296	(1.071)	154864	1.80356	1.804
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	16.489	16.489	(0.904)	207494	7.65594	7.656
	54	N-Nitrosodiphenylamine	169	16.543	16.542	(0.907)	400514	3.36723	3.367
$	55	2,4,6-Tribromophenol	330	16.843	16.843	(1.107)	170863	7.26330	7.263
	56	4-Bromophenyl-phenylether	248	17.298	17.298	(0.949)	357307	7.18067	7.181
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	17.963	17.963	(0.985)	108010	3.47747	3.477
*	59	Phenanthrene-d10	188	18.234	18.234	(1.000)	889660	4.00000	
	60	Phenanthrene	178	18.281	18.281	(1.003)	1157698	4.77222	4.772
	61	Anthracene	178	18.373	18.373	(1.008)	529204	2.27412	2.274
	62	Carbazole	167	18.698	18.698	(1.025)	1257404	6.02992	6.030
	63	Di-n-butylphthalate	149	19.488	19.488	(1.069)	504926	1.80416	1.804
	64	Fluoranthene	202	20.656	20.656	(0.888)	680625	2.42786	2.428
	65	Pyrene	202	21.081	21.081	(0.906)	842129	2.92835	2.928
$	66	Terphenyl-d14	244	21.368	21.360	(0.918)	1038252	4.80749	4.807
	67	Butylbenzylphthalate	149	22.289	22.281	(0.958)	423827	4.09213	4.092
	68	Benzo(a)anthracene	228	23.242	23.241	(0.999)	1415686	5.74876	5.749
*	69	Chrysene-d12	240	23.272	23.272	(1.000)	697679	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	23.311	23.311	(1.002)	325140	1.35142	1.351
	72	bis(2-Ethylhexyl)phthalate	149	23.311	23.303	(0.960)	452307	2.43188	2.432
*	134	Di-n-octylphthalate-d4	153	24.294	24.294	(1.000)	1269802	4.00000	
	73	Di-n-octylphthalate	149	24.302	24.302	(1.000)	724896	2.18146	2.181
	74	Benzo(b)fluoranthene	252	25.130	25.130	(0.970)	734758	3.19881	3.199
	75	Benzo(k)fluoranthene	252	25.169	25.169	(0.972)	601815	2.58025	2.580(M)
	76	Benzo(a)pyrene	252	25.789	25.789	(0.996)	946105	4.60700	4.607
*	77	Perylene-d12	264	25.905	25.897	(1.000)	708612	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.572	28.580	(1.103)	987010	3.77774	3.778
	79	Dibenzo(a,h)anthracene	278	28.595	28.595	(1.104)	769214	3.54620	3.546
	80	Benzo(g,h,i)perylene	276	29.364	29.364	(1.134)	316298	1.39888	1.399
	90	N-Nitrosodimethylamine	74	4.874	4.835	(0.532)	59368	1.17748	1.177
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	4.928	4.874	(0.538)	43496	0.56172	0.5617
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.130	25.130	(0.970)	1253786	5.65333	5.653(M)
120 2,3,4,6-Tetrachlorophenol	232	15.932	15.932	(1.047)	3136	0.06175	0.06175

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182309.D
Lab Smp Id: BLB0579-SRM1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	261332	40.19
27 Naphthalene-d8	688740	344370	1377480	928634	34.83
42 Acenaphthene-d10	373663	186832	747326	504780	35.09
59 Phenanthrene-d10	652323	326162	1304646	889660	36.38
69 Chrysene-d12	537141	268571	1074282	697679	29.89
134 Di-n-octylphthala	947608	473804	1895216	1269802	34.00
77 Perylene-d12	602550	301275	1205100	708612	17.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	0.00
77 Perylene-d12	25.90	25.40	26.40	25.91	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182309.D

Lab ID: BLB0579-SRM1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 22:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0086	Benzoic acid
0.538	0.532	0.0059	Pyridine

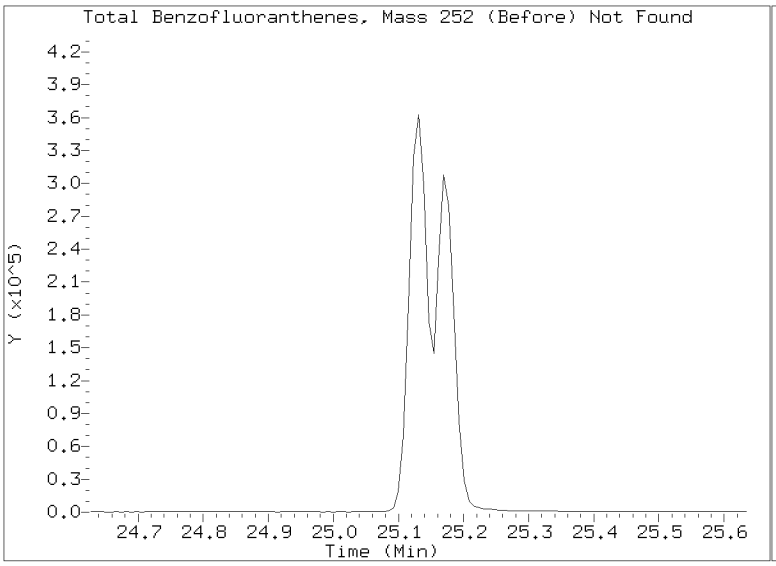
RRT check based on Ccal File: NT1003182302.D

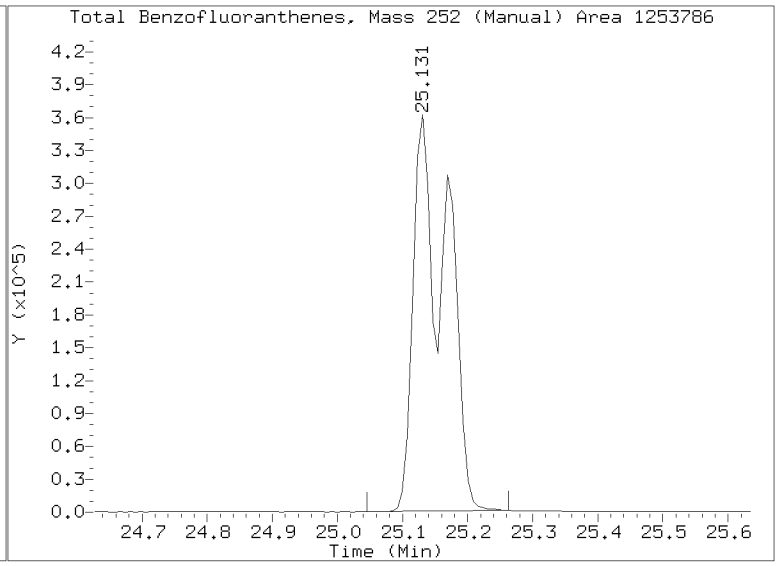
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

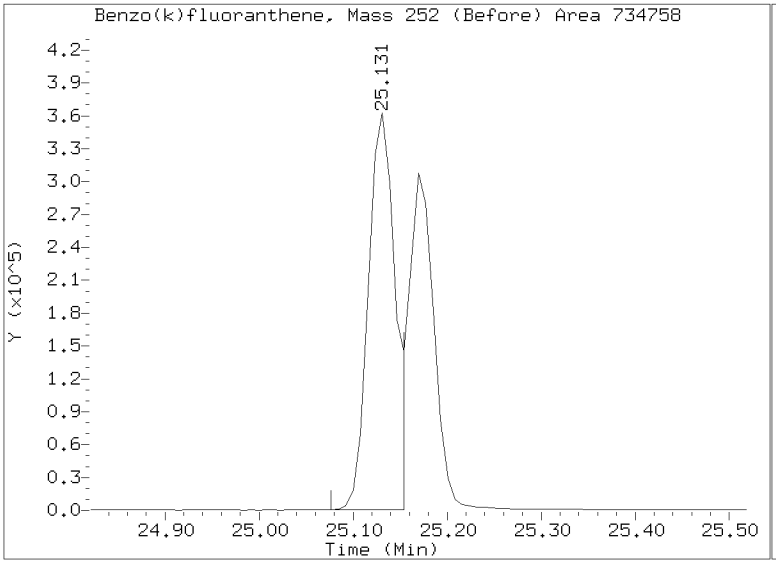
* Only compounds listed in the work order have been verified by the analyst *

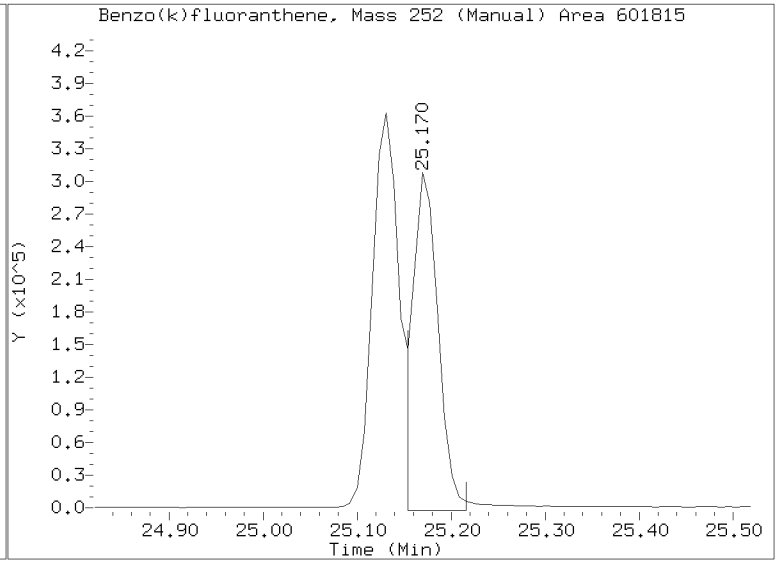
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182309.D
Injection Date: 18-MAR-2023 22:50
Lab ID:BLB0579-SRM1 Client ID:
Report Date: 04/04/2023 08:57









Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E

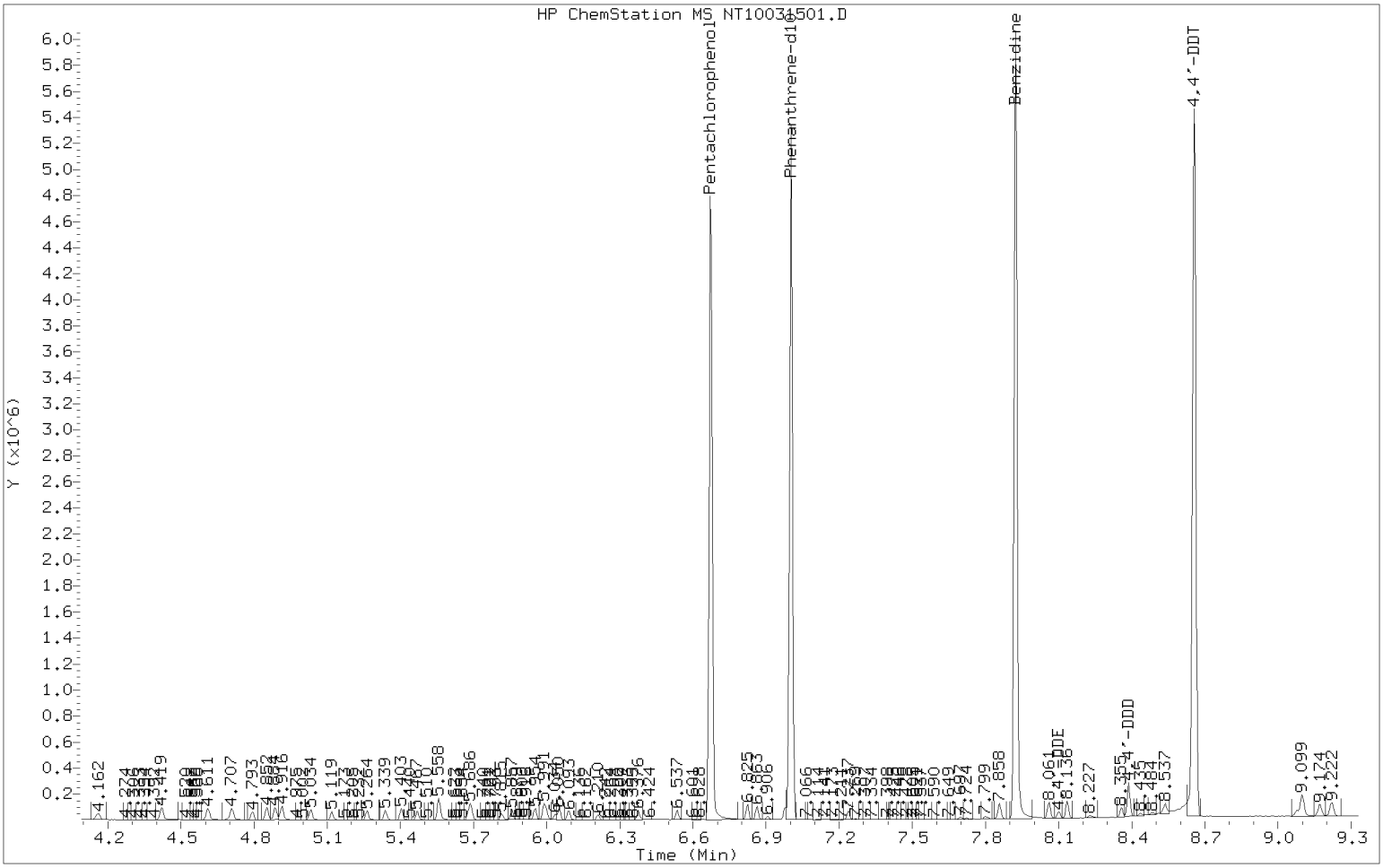
Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT10031501.D	Injection Date:	03/15/23
Instrument ID:	NT10	Injection Time:	20:19
Sequence:	SLC0228	Lab Sample ID:	SLC0228-TUN1

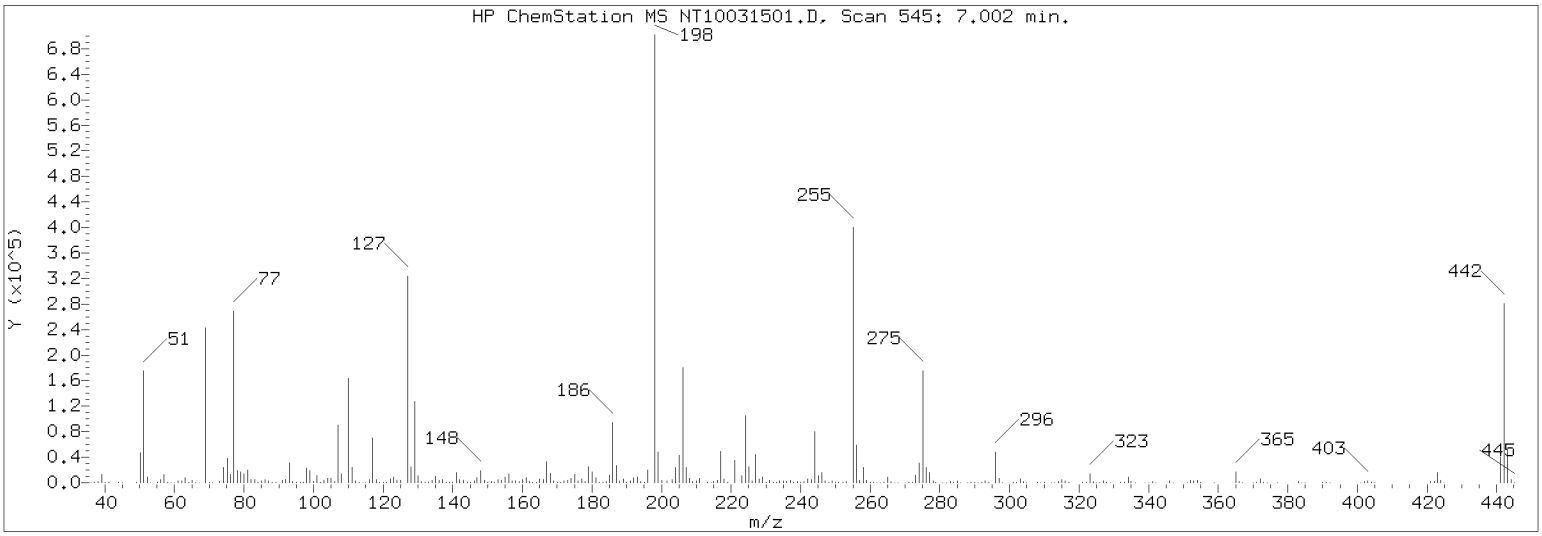
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.372	PASS
69	Less than 100% of 198	36.5	PASS
70	Less than 2% of 69	0.498	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.88	PASS
365	1 - 100% of 198	2.52	PASS
441	Less than 150% of 443	77.1	PASS
442	1 - 200% of 198	42.8	PASS
443	15 - 24% of 442	18.5	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0228-TUN1	NT10031501.D	03/15/2023	20:19
Cal Standard	SLC0228-CAL7	NT10031502.D	03/15/2023	20:34
Cal Standard	SLC0228-CAL6	NT10031503.D	03/15/2023	21:12
Cal Standard	SLC0228-CAL5	NT10031504.D	03/15/2023	21:50
Cal Standard	SLC0228-CAL4	NT10031505.D	03/15/2023	22:28
Cal Standard	SLC0228-CAL3	NT10031506.D	03/15/2023	23:06
Cal Standard	SLC0228-CAL2	NT10031507.D	03/15/2023	23:44
Cal Standard	SLC0228-CAL1	NT10031508.D	03/16/2023	0:22
Secondary Cal Check	SLC0228-SCV1	NT10031511.D	03/16/2023	2:16
Initial Cal Blank	SLC0228-ICB1	NT10031512.D	03/16/2023	2:54

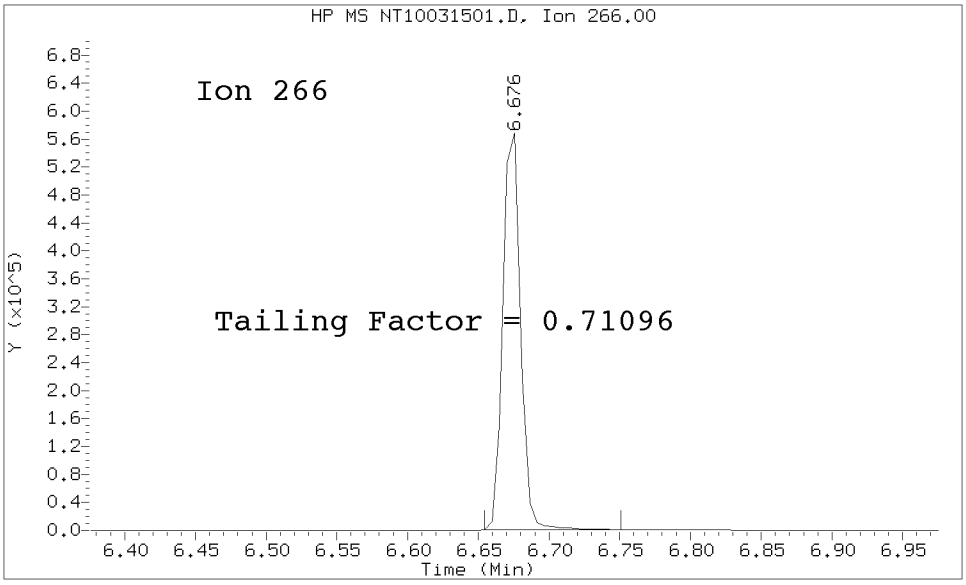
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/NT10031501.D/NT10031501.D
Method Used: \20230315.b\DFTPP8270E.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SLC0228-TUN1 SLC0228-TUN1
Report Date: 03/16/2023 12:23



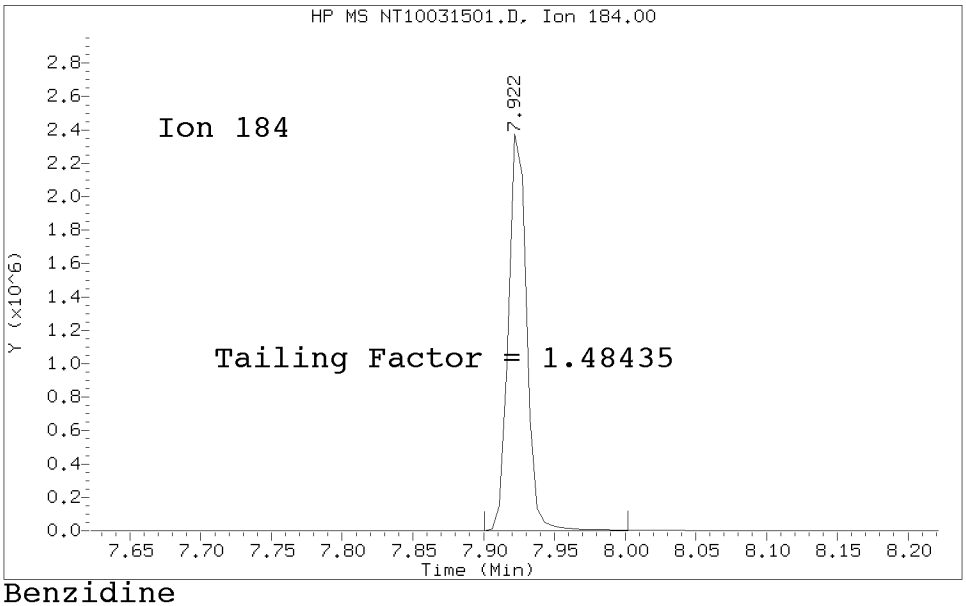


Datafile Analyzed: /20230315.b/NT10031501.D/NT10031501.D
Method Used: \20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SEQ-TUN1
Report Date: 03/16/2023 12:23



Pentachlorophenol
==========
 Exp. RT = 6.676
Found RT = 6.676

Tail Factor = 0.711 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 7.922
Found RT = 7.922

Tail Factor = 1.484 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7109557	2.000	PASS
Benzidine	1.4843493	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	962640			N/A
4,4-DDE	5158	0.5	20.0	PASS
4,4-DDD	41277	4.1	20.0	PASS
4,4-DDD + DDE	46435	4.6	20.0	PASS

Tuning Sample, nt10.i/20230315.b/NT10031501.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.14 (0.37)
69	Mass 69 relative abundance	36.50
70	Less than 2.00% of mass 69	0.18 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
365	1.00 - 100.00% of mass 198	2.52
441	Less than 150.00% of mass 443	6.11 (77.09)
442	Less than 200.00% of mass 198	42.80
443	15.00 - 24.00% of mass 442	7.92 (18.52)

Data File: NT10031501.D
Spectrum: Avg. Scans 544-546 (7.00), Background Scan 536
Location of Maximum: 198.00
Number of points: 316

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	226	124.00	3185	207.00	17112	293.00	2318
37.00	575	125.00	2909	208.00	4722	294.00	588
38.00	1820	127.00	243264	209.00	1586	295.00	171
39.00	10159	128.00	18696	210.00	2002	296.00	36168
40.00	405	129.00	96304	211.00	5093	297.00	5056
41.00	312	130.00	8257	213.00	371	298.00	351
42.00	59	131.00	1626	214.00	74	301.00	422
45.00	283	132.00	820	215.00	1549	302.00	552
49.00	910	133.00	415	216.00	2822	303.00	4130
50.00	35800	134.00	2800	217.00	36520	304.00	1107
51.00	136000	135.00	7704	218.00	4515	305.00	126
52.00	7201	136.00	3195	219.00	360	308.00	532
53.00	294	137.00	3970	221.00	25672	309.00	330
55.00	668	138.00	948	222.00	2863	310.00	461
56.00	4206	139.00	563	223.00	8094	312.00	63
57.00	9877	140.00	1193	224.00	76160	313.00	360
58.00	478	141.00	12476	225.00	18680	314.00	1762
59.00	106	142.00	3876	226.00	2197	315.00	4011
60.00	125	143.00	2757	227.00	32752	316.00	2200
61.00	1897	144.00	726	228.00	4949	317.00	416
62.00	2103	145.00	710	229.00	6725	321.00	1068
63.00	6654	146.00	2200	230.00	933	322.00	491
64.00	895	147.00	6157	231.00	2854	323.00	10541
65.00	3279	148.00	13642	232.00	574	324.00	1817
66.00	188	149.00	2992	233.00	660	325.00	178
67.00	249	150.00	753	234.00	2022	326.00	218
68.00	704	151.00	1678	235.00	2475	327.00	2103
69.00	189184	152.00	893	236.00	1621	328.00	1092
70.00	943	153.00	4091	237.00	2803	329.00	211
71.00	156	154.00	3154	238.00	375	332.00	739
73.00	1307	155.00	6743	239.00	1387	333.00	975
74.00	18768	156.00	10344	240.00	943	334.00	6536
75.00	30000	157.00	2091	241.00	1718	335.00	1733
76.00	10364	158.00	2204	242.00	4096	336.00	201
77.00	207552	159.00	1689	243.00	3931	339.00	148
78.00	14246	160.00	3864	244.00	58560	340.00	135
79.00	13356	161.00	5891	245.00	7760	341.00	1142
80.00	10539	162.00	1637	246.00	11941	342.00	277
81.00	15173	163.00	475	247.00	2526	346.00	2192
82.00	3906	164.00	608	248.00	602	347.00	346
83.00	3545	165.00	4507	249.00	2169	351.00	182
84.00	178	166.00	3807	250.00	370	352.00	3059
85.00	2559	167.00	24880	251.00	462	353.00	1950
86.00	4226	168.00	11639	252.00	590	354.00	3010
87.00	1998	169.00	2046	253.00	1331	355.00	569
88.00	783	170.00	776	255.00	296384	359.00	242
89.00	418	171.00	1036	256.00	43272	365.00	13085
91.00	3237	172.00	2248	257.00	3394	366.00	1813
92.00	3764	173.00	2906	258.00	18176	367.00	150

93.00	24104	174.00	5113	259.00	2926	370.00	291
94.00	1672	175.00	9851	260.00	520	371.00	690
95.00	503	176.00	2588	261.00	479	372.00	4605
96.00	1130	177.00	4756	262.00	60	373.00	1002
97.00	380	178.00	1657	263.00	151	374.00	50
98.00	17936	179.00	18424	264.00	377	377.00	67
99.00	14658	180.00	12975	265.00	6992	383.00	1157
100.00	1303	181.00	6000	266.00	984	384.00	328
101.00	8724	182.00	963	267.00	105	385.00	50
102.00	480	183.00	493	268.00	248	390.00	595
103.00	2859	184.00	1456	270.00	285	391.00	401
104.00	5461	185.00	9317	271.00	631	392.00	204
105.00	5056	186.00	70384	272.00	750	401.00	211
106.00	1781	187.00	20112	273.00	8749	402.00	1564
107.00	67936	188.00	2185	274.00	23296	403.00	2292
108.00	10471	189.00	4453	275.00	129008	404.00	796
109.00	595	190.00	772	276.00	17320	405.00	237
110.00	122760	191.00	2090	277.00	11470	421.00	1827
111.00	18400	192.00	5915	278.00	2005	422.00	1658
112.00	2357	193.00	6863	279.00	468	423.00	12304
113.00	756	194.00	1470	281.00	147	424.00	2795
114.00	128	195.00	841	282.00	368	425.00	263
115.00	298	196.00	14341	283.00	1453	441.00	31664
116.00	3871	198.00	518272	284.00	874	442.00	221824
117.00	54088	199.00	35680	285.00	2012	443.00	41072
118.00	3919	200.00	2830	286.00	333	444.00	3778
119.00	531	201.00	2302	288.00	146	445.00	177
120.00	920	203.00	3657	289.00	446		
121.00	362	204.00	18200	290.00	444		
122.00	4396	205.00	31664	291.00	199		
123.00	6778	206.00	132736	292.00	486		

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00046	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: 625.1/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	0.2	1.622083	0.5	1.744385	1	1.738913	2.5	1.741727	5	1.626447	10	1.548455
4-Methylphenol	0.2	1.143833	0.5	1.244	1	1.307883	2.5	1.374404	5	1.286966	10	1.25011
Naphthalene	0.2	1.114243	0.5	1.09175	1	1.076291	2.5	1.085156	5	1.039419	10	1.030535
2-Methylnaphthalene	0.2	0.7568101	0.5	0.7669962	1	0.7731469	2.5	0.7905566	5	0.7700416	10	0.7603408
Acenaphthylene	0.2	1.914149	0.5	2.075865	1	2.064925	2.5	2.101795	5	1.969132	10	1.984368
Dimethylphthalate	0.2	1.323382	0.5	1.369259	1	1.345764	2.5	1.337994	5	1.267312	10	1.259852
Acenaphthene	0.2	1.282509	0.5	1.261686	1	1.254791	2.5	1.256369	5	1.196404	10	1.205595
Dibenzofuran	0.2	1.836794	0.5	1.892326	1	1.842035	2.5	1.892208	5	1.79473	10	1.763428
Fluorene	0.2	1.406055	0.5	1.451029	1	1.476714	2.5	1.500425	5	1.400817	10	1.414686
Phenanthrene	0.2	1.132198	0.5	1.106313	1	1.120881	2.5	1.127028	5	1.051992	10	1.053617
Anthracene	0.2	0.9557141	0.5	1.01224	1	1.065265	2.5	1.115342	5	1.052956	10	1.080994
Fluoranthene	0.2	1.36328	0.5	1.520561	1	1.561968	2.5	1.693508	5	1.749137	10	1.631866
Pyrene	0.2	1.456041	0.5	1.609441	1	1.630818	2.5	1.727629	5	1.739198	10	1.667931
Butylbenzylphthalate	0.2	0.3340669	0.5	0.4333599	1	0.4863695	2.5	0.5550659	5	0.5940761	10	0.626307
Benzo(a)anthracene	0.2	1.366436	0.5	1.427814	1	1.430217	2.5	1.485547	5	1.41212	10	1.389236
Chrysene	0.2	1.359447	0.5	1.429869	1	1.401334	2.5	1.407173	5	1.374198	10	1.361188
bis(2-Ethylhexyl)phthalate	0.2	0.3420314	0.5	0.4459806	1	0.5288449	2.5	0.5865203	5	0.5882303	10	0.5899108
Benzofluoranthenes, Total	0.4	1.195721	1	1.245168	2	1.253078	5	1.280546	10	1.251547	20	1.288474
Benzo(a)pyrene	0.2	0.9927352	0.5	1.101345	1	1.122317	2.5	1.22032	5	1.206385	10	1.233412
Indeno(1,2,3-cd)pyrene	0.2	1.121524	0.5	1.32292	1	1.409944	2.5	1.590272	5	1.628941	10	1.583568
Dibenzo(a,h)anthracene	0.2	0.9256101	0.5	1.109076	1	1.176882	2.5	1.320958	5	1.350104	10	1.305995
Benzo(g,h,i)perylene	0.2	0.9796118	0.5	1.132402	1	1.201964	2.5	1.357402	5	1.42789	10	1.366327
2-Fluorophenol	0.3	1.17021	0.75	1.261679	1.5	1.266774	3.75	1.303968	7.5	1.210352	15	1.167768
Phenol-d5	0.3	1.485429	0.75	1.590369	1.5	1.618326	3.75	1.691404	7.5	1.609716	15	1.575522
2-Chlorophenol-d4	0.3	1.261338	0.75	1.355292	1.5	1.384443	3.75	1.420173	7.5	1.374898	15	1.357401
1,2-Dichlorobenzene-d4	0.2	0.9420816	0.5	0.9800826	1	1.025212	2.5	1.023568	5	0.9490201	10	0.9543478
Nitrobenzene-d5	0.2	0.3650764	0.5	0.3986882	1	0.4101461	2.5	0.4261085	5	0.4187027	10	0.4110496

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00046	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: 625.1/8270E ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2-Fluorobiphenyl	0.2	1.623527	0.5	1.630708	1	1.616933	2.5	1.625878	5	1.553266	10	1.544261
2,4,6-Tribromophenol	0.3	9.930622E-02	0.75	0.135101	1.5	0.1514052	3.75	0.1764476	7.5	0.177783	15	0.1895637
p-Terphenyl-d14	0.2	1.184567	0.5	1.243423	1	1.268525	2.5	1.295244	5	1.260569	10	1.21091

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00046	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: 625.1/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Phenol	20	1.521085										
4-Methylphenol	20	1.258843										
Naphthalene	20	0.9802185										
2-Methylnaphthalene	20	0.7350977										
Acenaphthylene	20	1.864621										
Dimethylphthalate	20	1.192451										
Acenaphthene	20	1.176068										
Dibenzofuran	20	1.709758										
Fluorene	20	1.366348										
Phenanthrene	20	1.042964										
Anthracene	20	1.041424										
Fluoranthene	20	1.730564										
Pyrene	20	1.710349										
Butylbenzylphthalate	20	0.6757807										
Benzo(a)anthracene	20	1.371766										
Chrysene	20	1.322435										
bis(2-Ethylhexyl)phthalate	20	0.5927596										
Benzofluoranthenes, Total	40	1.248781										
Benzo(a)pyrene	20	1.238145										
Indeno(1,2,3-cd)pyrene	20	1.666622										
Dibenzo(a,h)anthracene	20	1.382416										
Benzo(g,h,i)perylene	20	1.468793										
2-Fluorophenol	30	1.086771										
Phenol-d5	30	1.537369										
2-Chlorophenol-d4	30	1.332016										
1,2-Dichlorobenzene-d4	20	0.937777										
Nitrobenzene-d5	20	0.3964415										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00046	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: 625.1/8270E ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2-Fluorobiphenyl	20	1.481453										
2,4,6-Tribromophenol	30	0.1805241										
p-Terphenyl-d14	20	1.204127										

INITIAL CALIBRATION DATA

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00046	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: 625.1/8270E ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Phenol	1.649014	5.7			RSD (15)	
4-Methylphenol	1.266577	5.6			RSD (15)	
Naphthalene	1.059659	4.3			RSD (15)	
2-Methylnaphthalene	0.7647129	2.2			RSD (15)	
Acenaphthylene	1.996408	4.4			RSD (15)	
Dimethylphthalate	1.299431	4.8			RSD (15)	
Acenaphthene	1.233346	3.2			RSD (15)	
Dibenzofuran	1.818754	3.7			RSD (15)	
Fluorene	1.430868	3.3			RSD (15)	
Phenanthrene	1.090713	3.6			RSD (15)	
Anthracene	1.046276	4.9			RSD (15)	
Fluoranthene	1.607269	8.5			RSD (15)	
Pyrene	1.648772	5.9			RSD (15)	
Butylbenzylphthalate	0.5292894	22.5		0.9997	QCOD (0.99)	
Benzo(a)anthracene	1.411877	2.9			RSD (15)	
Chrysene	1.379378	2.6			RSD (15)	
bis(2-Ethylhexyl)phthalate	0.5248968	18.5		0.9999	QCOD (0.99)	
Benzofluoranthenes, Total	1.251902	2.4			RSD (15)	
Benzo(a)pyrene	1.159237	7.9			RSD (15)	
Indeno(1,2,3-cd)pyrene	1.474827	13.5			RSD (15)	
Dibenzo(a,h)anthracene	1.224434	13.4			RSD (15)	
Benzo(g,h,i)perylene	1.276341	13.9			RSD (15)	
2-Fluorophenol	1.209646	6.2			RSD (15)	
Phenol-d5	1.586876	4.1			RSD (15)	
2-Chlorophenol-d4	1.35508	3.7			RSD (15)	
1,2-Dichlorobenzene-d4	0.9731556	3.9			RSD (15)	
Nitrobenzene-d5	0.4037447	4.9			RSD (15)	
2-Fluorobiphenyl	1.582289	3.6			RSD (15)	
2,4,6-Tribromophenol	0.1585901	20.3		0.9993	QCOD (0.99)	
p-Terphenyl-d14	1.238195	3.2			RSD (15)	

Printed: 3/16/2023 1:05:08PM

ANALYSIS SEQUENCE

SLC0228

Instrument ID: NT10
Calibration ID: GC00046
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0228-TUN1	MS Tune	QC		1	K004775		03/15/2023 20:19	NT10031501.D	JGR	
SLC0228-CAL7	CAL 20	QC		2	K011111	K010831	03/15/2023 20:34	NT10031502.D	VTS	
SLC0228-CAL6	CAL 10	QC		3	K011110	K010831	03/15/2023 21:12	NT10031503.D	VTS	
SLC0228-CAL5	CAL 5	QC		4	K011109	K010831	03/15/2023 21:50	NT10031504.D	VTS	
SLC0228-CAL4	CAL 2.5	QC		5	K011108	K010831	03/15/2023 22:28	NT10031505.D	VTS	
SLC0228-CAL3	CAL 1.0	QC		6	K011107	K010831	03/15/2023 23:06	NT10031506.D	VTS	
SLC0228-CAL2	CAL 0.5	QC		7	K011106	K010831	03/15/2023 23:44	NT10031507.D	VTS	
SLC0228-CAL1	CAL 0.2	QC		8	K011105	K010831	03/16/2023 00:22	NT10031508.D	VTS	
SLC0228-SCV1	SCV 5.0	QC		9	L002833	K010831	03/16/2023 02:16	NT10031511.D	VTS	
SLC0228-ICB1	Initial Cal Blank	QC		10	K005156	K010831	03/16/2023 02:54	NT10031512.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b

	Time	Filename	LabID	ClientId	DF																			
1	2019	NT10031501.D	SLC0228-TUN1		1	|NO ISTDS FOUND||																		
2	2034	NT10031502.D	SLC0228-CAL7		1	| 9.30	177375	||11.78	659656	||15.38	352987	||18.42	587447	||23.46	356463	||26.19	404994	||24.49	617041	|				
3	2112	NT10031503.D	SLC0228-CAL6		1	| 9.30	174984	||11.78	633941	||15.38	344087	||18.42	605930	||23.46	437116	||26.18	463440	||24.48	674085	|				
4	2150	NT10031504.D	SLC0228-CAL5		1	| 9.30	171542	||11.78	624466	||15.38	337226	||18.42	572849	||23.45	347068	||26.18	421549	||24.48	500317	|				
5	2228	NT10031505.D	SLC0228-CAL4		1	| 9.30	158570	||11.78	582079	||15.38	306729	||18.42	522311	||23.45	356282	||26.18	420725	||24.48	471925	|				
6	2306	NT10031506.D	SLC0228-CAL3		1	| 9.29	172257	||11.78	625894	||15.38	330997	||18.42	568685	||23.45	426836	||26.18	489106	||24.48	555437	|				
7	2344	NT10031507.D	SLC0228-CAL2		1	| 9.30	176328	||11.78	638835	||15.38	333617	||18.42	594262	||23.45	428263	||26.18	479116	||24.48	530893	|				
8	0022	NT10031508.D	SLC0228-CAL1		1	| 9.29	173382	||11.77	622719	||15.38	323444	||18.42	582036	||23.45	443504	||26.18	490725	||24.48	540769	|				
9	0100	NT10031509.D	SEQ-SIM2		1	| 9.29	175576	||11.78	624440	||15.38	329518	||18.42	581173	||23.45	424576	||26.18	472151	||24.48	491201	|				
10	0138	NT10031510.D	SEQ-SIM1		1	| 9.30	172228	||11.77	609518	||15.38	313933	||18.42	564567	||23.45	413842	||26.18	461161	||24.48	469814	|				
11	0216	NT10031511.D	SLC0228-SCV1		1	| 9.30	154809	||11.78	570882	||15.38	303490	||18.42	533431	||23.46	435381	||26.19	494648	||24.49	660827	|				
12	0254	NT10031512.D	SLC0228-ICB1		1	| 9.30	173115	||11.78	625865	||15.38	328712	||18.42	592693	||23.45	442208	||26.18	499804	||24.48	526309	|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b

Instrument: nt10.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
2019	NT10031501.D	SLC0228-TUN1	1	NO MANUAL INTEGRATION
2034	NT10031502.D	SLC0228-CAL7	1	Benzoic acid,
2112	NT10031503.D	SLC0228-CAL6	1	2,2'-oxybis(1-Chloropropane),
2150	NT10031504.D	SLC0228-CAL5	1	2,2'-oxybis(1-Chloropropane),
2228	NT10031505.D	SLC0228-CAL4	1	2,2'-oxybis(1-Chloropropane),
2306	NT10031506.D	SLC0228-CAL3	1	2,2'-oxybis(1-Chloropropane),
2344	NT10031507.D	SLC0228-CAL2	1	2,2'-oxybis(1-Chloropropane), Benzoic acid,
0022	NT10031508.D	SLC0228-CAL1	1	2,2'-oxybis(1-Chloropropane), 1,2-Dichlorobenzene-d4,
0100	NT10031509.D	SEQ-SIM2	1	NO MANUAL INTEGRATION
0138	NT10031510.D	SEQ-SIM1	1	NO MANUAL INTEGRATION
0216	NT10031511.D	SLC0228-SCV1	1	NO MANUAL INTEGRATION
0254	NT10031512.D	SLC0228-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 13:06

NT10031501.D	Data Locked	van, 16-Mar-2023 13:06
NT10031502.D	Data Locked	van, 16-Mar-2023 13:06
NT10031503.D	Data Locked	van, 16-Mar-2023 13:06
NT10031504.D	Data Locked	van, 16-Mar-2023 13:06
NT10031505.D	Data Locked	van, 16-Mar-2023 13:06
NT10031506.D	Data Locked	van, 16-Mar-2023 13:06
NT10031507.D	Data Locked	van, 16-Mar-2023 13:06
NT10031508.D	Data Locked	van, 16-Mar-2023 13:06
NT10031509.D	Data Locked	van, 16-Mar-2023 13:06
NT10031510.D	Data Locked	van, 16-Mar-2023 13:06
NT10031511.D	Data Locked	van, 16-Mar-2023 13:06
NT10031512.D	Data Locked	van, 16-Mar-2023 13:06

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INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Calibration File Names:
Level 1: \\target\share\chem3\nt10.i\20230315.b\NT10031508.D
Level 2: \\target\share\chem3\nt10.i\20230315.b\NT10031507.D
Level 3: \\target\share\chem3\nt10.i\20230315.b\NT10031506.D
Level 4: \\target\share\chem3\nt10.i\20230315.b\NT10031505.D
Level 5: \\target\share\chem3\nt10.i\20230315.b\NT10031504.D
Level 6: \\target\share\chem3\nt10.i\20230315.b\NT10031503.D
Level 7: \\target\share\chem3\nt10.i\20230315.b\NT10031502.D

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

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Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

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Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Force
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Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
120 2,3,4,6-Tetrachlorophenol	3113	11604	26430	82842	169344	374893						
	832943						QUAD	0.000e+000	2.48576	-0.15608	0.99970	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

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Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
116 Dibutyl Phenyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
115 Tributyl Phosphate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
114 Beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
113 Diphenyl Oxide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
112 Biphenyl	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.36599 / 1.39306	1.46769	1.42898	1.48330	1.43111	1.39920	AVRG		1.42419		2.92872	
110 Tetrachloroguaiacol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
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Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
105 1-methylnaphthalene	0.70080	0.71097	0.71031	0.71759	0.70593	0.69611						
	0.66277						AVRG		0.70064		2.58648	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	

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

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
3 Phenol	1.62208	1.74439	1.73891	1.74173	1.62645	1.54845					
	1.52108						AVRG		1.64901		5.72558
4 Bis(2-Chloroethyl)ether	1.27683	1.24672	1.27324	1.27820	1.20197	1.15937					
	1.12492						AVRG		1.22304		5.07805

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Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
6 2-Chlorophenol	1.31836	1.41731	1.42385	1.43622	1.37595	1.46817					
	1.43943						AVRG		1.41133		3.51032
7 1,3-Dichlorobenzene	1.56095	1.60573	1.54200	1.54039	1.43756	1.41097					
	1.34684						AVRG		1.49206		6.30691
9 1,4-Dichlorobenzene	1.48239	1.47806	1.50605	1.46974	1.41044	1.40120					
	1.34165						AVRG		1.44136		4.05847
11 Benzyl alcohol	0.61725	0.73191	0.78594	0.84185	0.81966	0.81121					
	0.81015						AVRG		0.77400		9.98909
12 1,2-Dichlorobenzene	1.45921	1.48260	1.47819	1.46666	1.37638	1.35694					
	1.30961						AVRG		1.41851		4.90685
13 2-Methylphenol	1.09919	1.21769	1.25424	1.27936	1.21240	1.18086					
	1.17082						AVRG		1.20208		4.92825
14 2,2'-oxybis(1-Chloropropane)	0.43522	0.42661	0.43105	0.42276	0.39592	0.39745					
	0.40701						AVRG		0.41658		3.89547

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.14383	1.24400	1.30788	1.37440	1.28697	1.25011					
	1.25884						AVRG		1.26658		5.55066
16 N-Nitroso-di-n-propylamine	0.88706	0.94832	0.97868	1.00698	0.96681	0.92156					
	0.93481						AVRG		0.94917		4.15918
17 Hexachloroethane	0.58022	0.59004	0.60326	0.60841	0.58693	0.58291					
	0.58784						AVRG		0.59137		1.77557
19 Nitrobenzene	0.38078	0.40475	0.41137	0.41334	0.39831	0.38702					
	0.37799						AVRG		0.39622		3.65024
20 Isophorone	0.43358	0.46625	0.48978	0.51777	0.50778	0.56780					
	0.56515						AVRG		0.50687		9.71300
21 2-Nitrophenol	+++++	0.13597	0.15387	0.18600	0.19598	0.19551					
	0.19693						AVRG		0.17738		14.69885
22 2,4-Dimethylphenol	0.34977	0.37592	0.37563	0.37929	0.35984	0.35410					
	0.33882						AVRG		0.36191		4.26888

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
23 Bis(2-Chloroethoxy)methane	0.34150	0.35424	0.35450	0.35426	0.32695	0.32213					
	0.31648						AVRG		0.33858		4.89393
24 Benzoic acid	+++++	22417	66707	255448	660270	1448000					
	3461038						QUAD	0.000e+000	4.94987	-0.21794	0.99939
25 2,4-Dichlorophenol	0.23282	0.27832	0.29083	0.34192	0.30456	0.30206					
	0.28812						AVRG		0.29123		11.26110
26 1,2,4-Trichlorobenzene	0.36331	0.36162	0.35565	0.34701	0.33055	0.32721					
	0.30769						AVRG		0.34186		6.06312
28 Naphthalene	1.11424	1.09175	1.07629	1.08516	1.03942	1.03054					
	0.98022						AVRG		1.05966		4.30817
29 4-Chloroaniline	0.37193	0.41433	0.41901	0.42776	0.42475	0.42130					
	0.41465						AVRG		0.41339		4.58016
30 Hexachlorobutadiene	0.20420	0.20378	0.20957	0.20328	0.19562	0.19813					
	0.18759						AVRG		0.20031		3.58980

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
31 4-Chloro-3-methylphenol	+++++	0.29534	0.30559	0.32408	0.32488	0.32531					
	0.31645						AVRG		0.31527		3.91891
32 2-Methylnaphthalene	0.75681	0.76700	0.77315	0.79056	0.77004	0.76034					
	0.73510						AVRG		0.76471		2.22131
33 Hexachlorocyclopentadiene	+++++	0.32165	0.33383	0.38329	0.38506	0.39494					
	0.40240						AVRG		0.37020		9.13748
34 2,4,6-Trichlorophenol	+++++	0.34057	0.37275	0.40914	0.40785	0.42738					
	0.41440						AVRG		0.39535		8.19371
35 2,4,5-Trichlorophenol	+++++	0.39438	0.41480	0.45747	0.45138	0.46294					
	0.45473						AVRG		0.43928		6.35086
37 2-Chloronaphthalene	1.31831	1.32063	1.30168	1.33284	1.25800	1.22443					
	1.21247						AVRG		1.28119		3.83736
38 2-Nitroaniline	+++++	0.31701	0.34135	0.38455	0.37858	0.37163					
	0.36621						AVRG		0.35989		7.15743

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
39 Dimethylphthalate	1.32338	1.36926	1.34576	1.33799	1.26731	1.25985					
	1.19245						AVRG		1.29943		4.77776
40 Acenaphthylene	1.91415	2.07587	2.06493	2.10180	1.96913	1.98437					
	1.86462						AVRG		1.99641		4.43977
41 2,6-Dinitrotoluene	+++++	0.24183	0.26775	0.29467	0.29272	0.29827					
	0.28900						AVRG		0.28071		7.79723
43 3-Nitroaniline	+++++	0.28085	0.30392	0.33270	0.32419	0.33426					
	0.32509						AVRG		0.31683		6.52864
44 Acenaphthene	1.28251	1.26169	1.25479	1.25637	1.19640	1.20560					
	1.17607						AVRG		1.23335		3.24756
45 2,4-Dinitrophenol	+++++	6815	25006	95470	266923	674586					
	1465989						QUAD	0.000e+000	5.90362	-0.26772	0.99767
46 Dibenzofuran	1.83679	1.89233	1.84203	1.89221	1.79473	1.76343					
	1.70976						AVRG		1.81875		3.70158

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Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
47 4-Nitrophenol	+++++	10811	26972	72524	160601	346416					
	684596						QUAD	0.000e+000	5.01739	0.06496	0.99964
48 2,4-Dinitrotoluene	7302	27229	61485	155514	337620	723393					
	1405429						QUAD	0.000e+000	2.35401	0.03800	0.99969
49 Fluorene	1.40605	1.45103	1.47671	1.50043	1.40082	1.41469					
	1.36635						AVRG		1.43087		3.28917
50 Diethylphthalate	1.20144	1.24989	1.30138	1.31975	1.24786	1.27783					
	1.32643						AVRG		1.27494		3.52654
51 4-Chlorophenyl-phenylether	0.69799	0.68992	0.68629	0.69085	0.66721	0.67242					
	0.65828						AVRG		0.68042		2.13873
52 4-Nitroaniline	+++++	0.27470	0.28009	0.23607	0.29239	0.32686					
	0.30307						AVRG		0.28553		10.68771
53 4,6-Dinitro-2-methylphenol	+++++	16474	45458	137459	335578	794181					
	1560214						QUAD	0.000e+000	8.27405	-0.28973	0.99917

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.52887	0.55193	0.55561	0.56260	0.51812	0.51180					
	0.51457						AVRG		0.53479		4.00425
56 4-Bromophenyl-phenylether	0.19782	0.21343	0.22682	0.23565	0.23145	0.23263					
	0.22827						AVRG		0.22372		6.02001
57 Hexachlorobenzene	0.24985	0.23051	0.24765	0.24355	0.22752	0.22384					
	0.21902						AVRG		0.23456		5.24539
58 Pentachlorophenol	+++++	11460	28829	82114	191672	452371					
	885410						QUAD	0.000e+000	7.20876	-0.39477	0.99931
60 Phenanthrene	1.13220	1.10631	1.12088	1.12703	1.05199	1.05362					
	1.04296						AVRG		1.09071		3.61900
61 Anthracene	0.95571	1.01224	1.06526	1.11534	1.05296	1.08099					
	1.04142						AVRG		1.04628		4.89905
62 Carbazole	0.88933	0.95562	0.99664	0.98309	0.89914	0.95168					
	0.88743						AVRG		0.93756		4.84977

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	22443	69653	154356	388084	843782	1947970					
	3613228						QUAD	0.000e+000	0.79314	0.00278	0.99940
64 Fluoranthene	1.36328	1.52056	1.56197	1.69351	1.74914	1.63187					
	1.73056						AVRG		1.60727		8.51839
65 Pyrene	1.45604	1.60944	1.63082	1.72763	1.73920	1.66793					
	1.71035						AVRG		1.64877		5.94096
67 Butylbenzylphthalate	7408	23199	51900	123600	257731	684422					
	1204454						QUAD	0.000e+000	1.72914	-0.07421	0.99990
68 Benzo(a)anthracene	1.36644	1.42781	1.43022	1.48555	1.41212	1.38924					
	1.37177						AVRG		1.41188		2.92087
70 3,3'-Dichlorobenzidine	+++++	0.41680	0.45352	0.46701	0.40921	0.46337					
	0.50355						AVRG		0.45224		7.71340
71 Chrysene	1.35945	1.42987	1.40133	1.40717	1.37420	1.36119					
	1.32243						AVRG		1.37938		2.61415

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Compound	0.2000000 Level 1	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20.0000 Level 7										
72 bis(2-Ethylhexyl)phthalate	9248	29596	73435	172996	367877	994125					
	1828785						QUAD	0.000e+000	1.70957	-0.00774	0.99996
73 Di-n-octylphthalate	1.13505	1.06235	1.05217	1.05751	1.02687	1.01350					
	0.97997						AVRG		1.04677		4.63862
74 Benzo(b)fluoranthene	1.17883	1.29968	1.27339	1.34308	1.32964	1.39410					
	1.25750						AVRG		1.29660		5.33463
75 Benzo(k)fluoranthene	1.32608	1.27815	1.33166	1.33571	1.27907	1.30669					
	1.35881						AVRG		1.31660		2.28881
187 Total Benzofluoranthenes	1.19572	1.24517	1.25308	1.28055	1.25155	1.28847					
	1.24878						AVRG		1.25190		2.38989
76 Benzo(a)pyrene	0.99274	1.10134	1.12232	1.22032	1.20639	1.23341					
	1.23814						AVRG		1.15924		7.88419
78 Indeno(1,2,3-cd)pyrene	1.12152	1.32292	1.40994	1.59027	1.62894	1.58357					
	1.66662						AVRG		1.47483		13.49853

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Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
79 Dibenzo(a,h)anthracene	0.92561	1.10908	1.17688	1.32096	1.35010	1.30600					
	1.38242						AVRG		1.22443		13.40261
80 Benzo(g,h,i)perylene	0.97961	1.13240	1.20196	1.35740	1.42789	1.36633					
	1.46879						AVRG		1.27634		13.90451
90 N-Nitrosodimethylamine	0.77338	0.85958	0.80600	0.83443	0.77037	0.71258					
	0.64576						AVRG		0.77173		9.49214
91 Aniline	1.71731	1.77469	1.73024	1.75620	1.67046	1.59418					
	1.58456						AVRG		1.68966		4.49435
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	0.58897	0.67279	0.70566	0.65150	0.69961					
	0.64270						AVRG		0.66021		6.50918
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
98 Retene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
99 Perylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
100 3-beta-Coprostanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
101 Cholesterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	<-
102 beta-Sitosterol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000	
103 Pyridine	1.12693 / 1.00113	1.33308	1.27029	1.29268	1.21465	1.05774	AVRG		1.18522		10.61953	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 1 2-Fluorophenol	1.17021	1.26168	1.26677	1.30397	1.21035	1.16777						
	1.08677						AVRG		1.20965		6.15640	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+000		0.000e+000	<-
$ 2 Phenol-d5	1.48543	1.59037	1.61833	1.69140	1.60972	1.57552						
	1.53737						AVRG		1.58688		4.09370	
$ 5 2-Chlorophenol-d4	1.26134	1.35529	1.38444	1.42017	1.37490	1.35740						
	1.33202						AVRG		1.35508		3.66724	
$ 10 1,2-Dichlorobenzene-d4	0.94208	0.98008	1.02521	1.02357	0.94902	0.95435						
	0.93778						AVRG		0.97316		3.85694	

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

Compound	0.2000000 Level 1 / 20.0000 Level 7	0.5000000 Level 2	1.0000 Level 3	2.5000 Level 4	5.0000 Level 5	10.0000 Level 6	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2
$ 18 Nitrobenzene-d5	0.36508	0.39869	0.41015	0.42611	0.41870	0.41105					
	0.39644						AVRG		0.40374		4.94574
$ 36 2-Fluorobiphenyl	1.62353	1.63071	1.61693	1.62588	1.55327	1.54426					
	1.48145						AVRG		1.58229		3.61230
$ 55 2,4,6-Tribromophenol	2409	8451	18793	50739	112412	244599					
	477920						QUAD	0.000e+000	5.31174	0.15583	0.99955
$ 66 Terphenyl-d14	1.18457	1.24342	1.26852	1.29524	1.26057	1.21091					
	1.20413						AVRG		1.23819		3.21084
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 20:34
End Cal Date : 16-MAR-2023 00:22
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Last Edit : 16-Mar-2023 10:24 van

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	NT10031502	NT10031503	NT10031504	NT10031505	NT10031506	NT10031507	NT10031508
INJ.DATE:	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	16-MAR-2023
INJ.TIME:	20:34	21:12	21:50	22:28	23:06	23:44	00:22

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	7.068	7.068	7.068	7.068	7.068	7.068	7.068	7.068	4.068-10.068	7.068	0.000
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.196	16.196-22.196	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
* 134 Di-n-octylphthalate-d4	24.488	24.479	24.480	24.480	24.479	24.480	24.480	24.480	21.480-27.480	24.481	0.003
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.110	16.101	16.102	16.103	16.109	16.102	16.103	16.103	13.103-19.103	16.104	0.004
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	16.805	16.796	16.797	16.790	16.797	16.797	16.790	16.790	13.790-19.790	16.796	0.005
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.140	14.140-20.140	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.070	12.070-18.070	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.232	12.232-18.232	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.374	13.374-19.374	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.120	10.120-16.120	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.096	11.096-17.096	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.735	8.735-14.735	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
	105 1-methylnaphthalene	13.433	13.432	13.433	13.426	13.432	13.425	13.426	13.426	10.426-16.426	13.430	0.004
	151 1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
	152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
	153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
	154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
	155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
	156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
	157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
	158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
	159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
	160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
	161 1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
	162 1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
	163 1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
	164 1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
	165 1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
	166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
	167 2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$	2 Phenol-d5	8.652	8.644	8.637	8.629	8.636	8.637	8.637	8.637	5.637-11.637	8.639	0.007
	3 Phenol	8.675	8.659	8.660	8.660	8.652	8.660	8.652	8.652	5.652-11.652	8.660	0.008
	4 Bis(2-Chloroethyl)ethe	8.845	8.845	8.837	8.838	8.837	8.837	8.838	8.838	5.838-11.838	8.840	0.004
$	5 2-Chlorophenol-d4	8.938	8.937	8.930	8.930	8.930	8.930	8.930	8.930	5.930-11.930	8.932	0.004

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.969	8.961	8.961	8.961	8.961	8.961	8.961	8.961	5.961-11.961	8.962	0.003
	7 1,3-Dichlorobenzene	9.240	9.239	9.232	9.232	9.239	9.232	9.232	9.232	6.232-12.232	9.235	0.004
*	8 1,4-Dichlorobenzene-d4	9.302	9.301	9.302	9.302	9.294	9.302	9.294	9.294	6.294-12.294	9.299	0.004
	9 1,4-Dichlorobenzene	9.333	9.332	9.325	9.325	9.325	9.333	9.325	9.325	6.325-12.325	9.328	0.004
$	10 1,2-Dichlorobenzene-d4	9.666	9.658	9.659	9.659	9.658	9.659	9.659	9.659	6.659-12.659	9.660	0.003
	11 Benzyl alcohol	9.565	9.557	9.558	9.558	9.557	9.558	9.558	9.558	6.558-12.558	9.559	0.003
	12 1,2-Dichlorobenzene	9.690	9.689	9.682	9.682	9.682	9.682	9.682	9.682	6.682-12.682	9.684	0.004
	13 2-Methylphenol	9.775	9.775	9.775	9.775	9.767	9.767	9.767	9.767	6.767-12.767	9.772	0.004
	14 2,2'-oxybis(1-Chloropr	9.861	9.860	9.860	9.861	9.860	9.853	9.861	9.861	6.861-12.861	9.859	0.003
	15 4-Methylphenol	10.047	10.039	10.039	10.031	10.031	10.031	10.031	10.031	7.031-13.031	10.036	0.006
	16 N-Nitroso-di-n-propyla	10.132	10.124	10.117	10.117	10.109	10.117	10.109	10.109	7.109-13.109	10.118	0.008
	17 Hexachloroethane	10.280	10.279	10.272	10.272	10.272	10.272	10.272	10.272	7.272-13.272	10.274	0.004
$	18 Nitrobenzene-d5	10.396	10.388	10.388	10.388	10.388	10.388	10.388	10.388	7.388-13.388	10.389	0.003
	19 Nitrobenzene	10.435	10.427	10.427	10.419	10.419	10.419	10.419	10.419	7.419-13.419	10.424	0.006
	20 Isophorone	10.885	10.869	10.862	10.862	10.861	10.862	10.862	10.862	7.862-13.862	10.866	0.009
	21 2-Nitrophenol	11.057	11.047	11.047	11.048	11.047	11.047	11.048	11.048	8.048-14.048	11.049	0.003
	22 2,4-Dimethylphenol	11.091	11.089	11.081	11.082	11.081	11.081	11.082	11.082	8.082-14.082	11.084	0.004
	23 Bis(2-Chloroethoxy)met	11.294	11.285	11.285	11.286	11.285	11.285	11.286	11.286	8.286-14.286	11.286	0.003
	24 Benzoic acid	11.413	11.327	11.276	11.226	11.183	11.166	+++++	11.166	8.166-14.166	11.265	0.094
	25 2,4-Dichlorophenol	11.506	11.497	11.497	11.489	11.488	11.489	11.489	11.489	8.489-14.489	11.494	0.007
	26 1,2,4-Trichlorobenzene	11.693	11.692	11.685	11.685	11.684	11.685	11.685	11.685	8.685-14.685	11.687	0.004
*	27 Naphthalene-d8	11.778	11.777	11.777	11.778	11.777	11.777	11.770	11.770	8.770-14.770	11.776	0.003
	28 Naphthalene	11.824	11.815	11.816	11.817	11.816	11.816	11.817	11.817	8.817-14.817	11.817	0.003
	29 4-Chloroaniline	11.948	11.939	11.939	11.940	11.939	11.939	11.940	11.940	8.940-14.940	11.941	0.003

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	12.172	12.171	12.171	12.172	12.171	12.171	12.172	12.172	9.172-15.172	12.171	0.001
	31 4-Chloro-3-methylpheno	12.892	12.883	12.875	12.876	12.875	12.883	12.876	12.876	9.876-15.876	12.880	0.006
	32 2-Methylnaphthalene	13.209	13.208	13.200	13.201	13.200	13.208	13.201	13.201	10.201-16.201	13.204	0.004
	33 Hexachlorocyclopentadi	13.673	13.665	13.665	13.666	13.665	13.673	13.666	13.666	10.666-16.666	13.667	0.004
	34 2,4,6-Trichlorophenol	13.828	13.819	13.820	13.820	13.819	13.820	13.820	13.820	10.820-16.820	13.821	0.003
	35 2,4,5-Trichlorophenol	13.898	13.889	13.889	13.890	13.889	13.889	13.890	13.890	10.890-16.890	13.891	0.003
$	36 2-Fluorobiphenyl	13.991	13.982	13.982	13.983	13.982	13.982	13.975	13.975	10.975-16.975	13.982	0.004
	37 2-Chloronaphthalene	14.207	14.198	14.199	14.200	14.199	14.199	14.192	14.192	11.192-17.192	14.199	0.004
	38 2-Nitroaniline	14.470	14.454	14.454	14.447	14.454	14.446	14.447	14.447	11.447-17.447	14.453	0.008
	39 Dimethylphthalate	14.888	14.880	14.880	14.873	14.872	14.880	14.873	14.873	11.873-17.873	14.878	0.006
	40 Acenaphthylene	15.074	15.073	15.066	15.067	15.073	15.066	15.067	15.067	12.067-18.067	15.069	0.004
	41 2,6-Dinitrotoluene	15.036	15.027	15.019	15.020	15.019	15.019	15.012	15.012	12.012-18.012	15.022	0.007
*	42 Acenaphthene-d10	15.384	15.383	15.383	15.384	15.383	15.383	15.384	15.384	12.384-18.384	15.383	0.001
	43 3-Nitroaniline	15.322	15.313	15.306	15.299	15.298	15.298	15.299	15.299	12.299-18.299	15.305	0.009
	44 Acenaphthene	15.453	15.452	15.445	15.446	15.452	15.452	15.446	15.446	12.446-18.446	15.449	0.004
	45 2,4-Dinitrophenol	15.538	15.522	15.514	15.515	15.514	15.514	15.515	15.515	12.515-18.515	15.519	0.009
	46 Dibenzofuran	15.778	15.777	15.769	15.770	15.769	15.769	15.770	15.770	12.770-18.770	15.772	0.004
	47 4-Nitrophenol	15.623	15.607	15.599	15.600	15.599	15.599	15.592	15.592	12.592-18.592	15.603	0.010
	48 2,4-Dinitrotoluene	15.840	15.831	15.824	15.824	15.823	15.824	15.817	15.817	12.817-18.817	15.826	0.007
	49 Fluorene	16.489	16.488	16.488	16.481	16.488	16.488	16.481	16.481	13.481-19.481	16.486	0.003
	50 Diethylphthalate	16.342	16.333	16.326	16.327	16.326	16.326	16.319	16.319	13.319-19.319	16.329	0.007
	51 4-Chlorophenyl-phenyle	16.474	16.473	16.465	16.466	16.473	16.473	16.466	16.466	13.466-19.466	16.470	0.004
	52 4-Nitroaniline	16.605	16.588	16.573	16.566	16.565	16.565	16.566	16.566	13.566-19.566	16.576	0.015
	53 4,6-Dinitro-2-methylph	16.690	16.673	16.666	16.659	16.658	16.666	16.659	16.659	13.659-19.659	16.667	0.011

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.728	16.719	16.720	16.720	16.719	16.720	16.713	16.713	13.713-19.713	16.720	0.004
$	55 2,4,6-Tribromophenol	17.029	17.020	17.020	17.021	17.020	17.020	17.021	17.021	14.021-20.021	17.022	0.003
	56 4-Bromophenyl-phenylet	17.476	17.475	17.475	17.476	17.475	17.475	17.476	17.476	14.476-20.476	17.476	0.001
	57 Hexachlorobenzene	17.801	17.800	17.792	17.793	17.800	17.792	17.793	17.793	14.793-20.793	17.796	0.004
	58 Pentachlorophenol	18.157	18.148	18.149	18.149	18.148	18.149	18.149	18.149	15.149-21.149	18.150	0.003
*	59 Phenanthrene-d10	18.420	18.419	18.419	18.420	18.419	18.419	18.420	18.420	15.420-21.420	18.420	0.001
	60 Phenanthrene	18.474	18.473	18.466	18.467	18.466	18.466	18.467	18.467	15.467-21.467	18.468	0.004
	61 Anthracene	18.567	18.566	18.559	18.559	18.558	18.559	18.559	18.559	15.559-21.559	18.561	0.004
	62 Carbazole	18.892	18.883	18.884	18.884	18.883	18.884	18.884	18.884	15.884-21.884	18.885	0.003
	63 Di-n-butylphthalate	19.666	19.665	19.665	19.666	19.665	19.665	19.666	19.666	16.666-22.666	19.665	0.001
	64 Fluoranthene	20.850	20.841	20.841	20.842	20.841	20.841	20.842	20.842	17.842-23.842	20.842	0.003
	65 Pyrene	21.275	21.266	21.267	21.267	21.266	21.267	21.267	21.267	18.267-24.267	21.268	0.003
$	66 Terphenyl-d14	21.546	21.545	21.537	21.546	21.545	21.545	21.538	21.538	18.538-24.538	21.543	0.004
	67 Butylbenzylphthalate	22.467	22.458	22.459	22.460	22.459	22.459	22.460	22.460	19.460-25.460	22.460	0.003
	68 Benzo(a)anthracene	23.427	23.426	23.419	23.420	23.419	23.427	23.420	23.420	20.420-26.420	23.423	0.004
*	69 Chrysene-d12	23.458	23.457	23.450	23.451	23.450	23.450	23.451	23.451	20.451-26.451	23.452	0.004
	70 3,3'-Dichlorobenzidine	23.389	23.380	23.372	23.373	23.372	23.372	23.373	23.373	20.373-26.373	23.376	0.006
	71 Chrysene	23.505	23.504	23.496	23.497	23.496	23.496	23.489	23.489	20.489-26.489	23.498	0.005
	72 bis(2-Ethylhexyl)phtha	23.482	23.481	23.473	23.482	23.481	23.481	23.474	23.474	20.474-26.474	23.479	0.004
	73 Di-n-octylphthalate	24.496	24.495	24.495	24.496	24.487	24.487	24.488	24.488	21.488-27.488	24.492	0.004
	74 Benzo(b)fluoranthene	25.378	25.377	25.370	25.371	25.370	25.370	25.363	25.363	22.363-28.363	25.371	0.005
	75 Benzo(k)fluoranthene	25.433	25.424	25.416	25.417	25.416	25.409	25.409	25.409	22.409-28.409	25.418	0.008
	187 Total Benzofluoranthen	25.433	25.424	25.416	25.371	25.416	25.409	25.409	25.409	22.409-28.409	25.411	0.020
	76 Benzo(a)pyrene	26.075	26.066	26.059	26.060	26.059	26.059	26.052	26.052	23.052-29.052	26.061	0.007

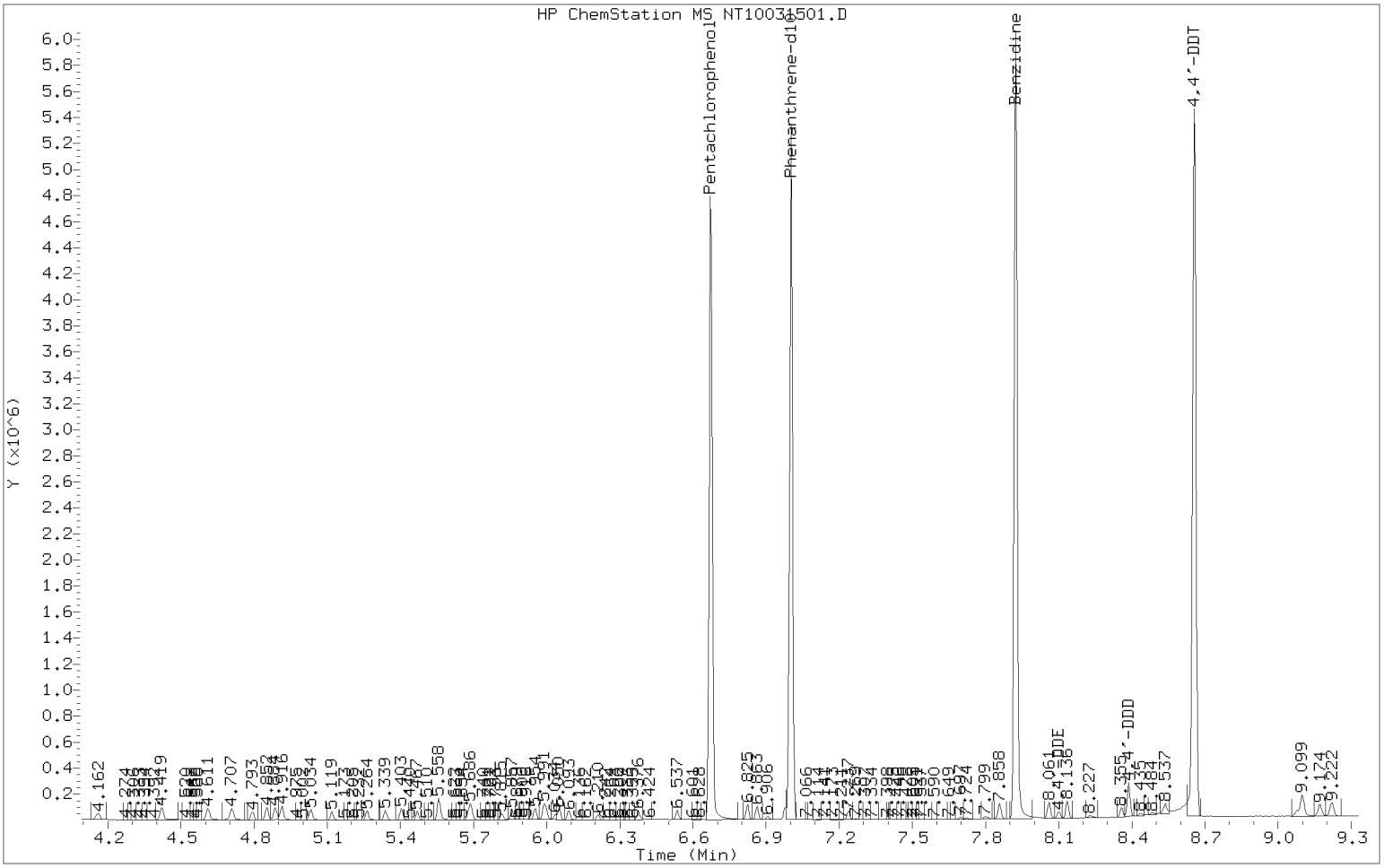
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

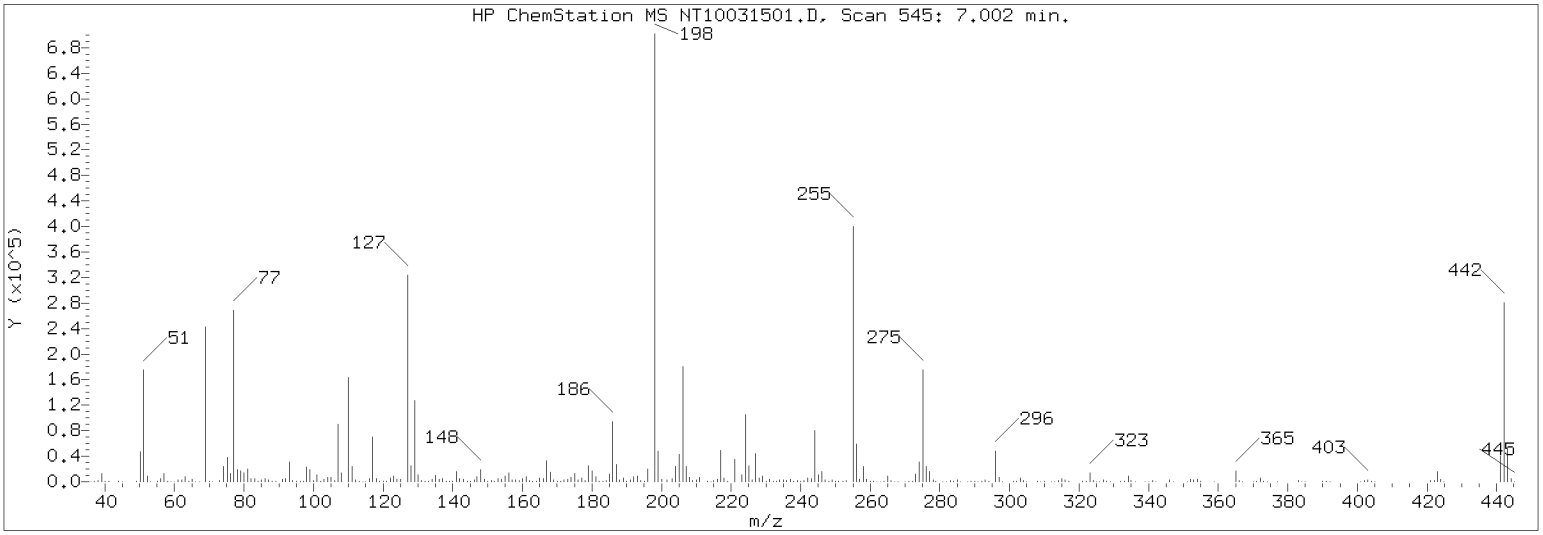
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Batch File: \\target\share\chem3\nt10.i\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.191	26.183	26.183	26.184	26.183	26.183	26.184	26.184	23.184-29.184	26.184	0.003
	78 Indeno(1,2,3-cd)pyrene	29.037	29.020	29.005	28.998	29.005	28.997	28.990	28.990	25.990-31.990	29.008	0.016
	79 Dibenzo(a,h)anthracene	29.052	29.028	29.021	29.021	29.013	29.013	29.006	29.006	26.006-32.006	29.022	0.015
	80 Benzo(g,h,i)perylene	29.884	29.859	29.836	29.837	29.836	29.828	29.821	29.821	26.821-32.821	29.843	0.021
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.952	4.936	4.928	4.928	4.936	4.936	4.936	4.936	1.936-7.936	4.936	0.008
	91 Aniline	8.768	8.760	8.752	8.753	8.752	8.752	8.753	8.753	5.753-11.753	8.756	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.074	21.073	21.065	21.066	21.073	21.073	21.066	21.066	18.066-24.066	21.070	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.787	15.787-21.787	+++++	+++++
	99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.361	21.361-27.361	+++++	+++++
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.952	4.951	4.951	4.959	4.974	4.982	4.998	4.998	1.998-7.998	4.967	0.018
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

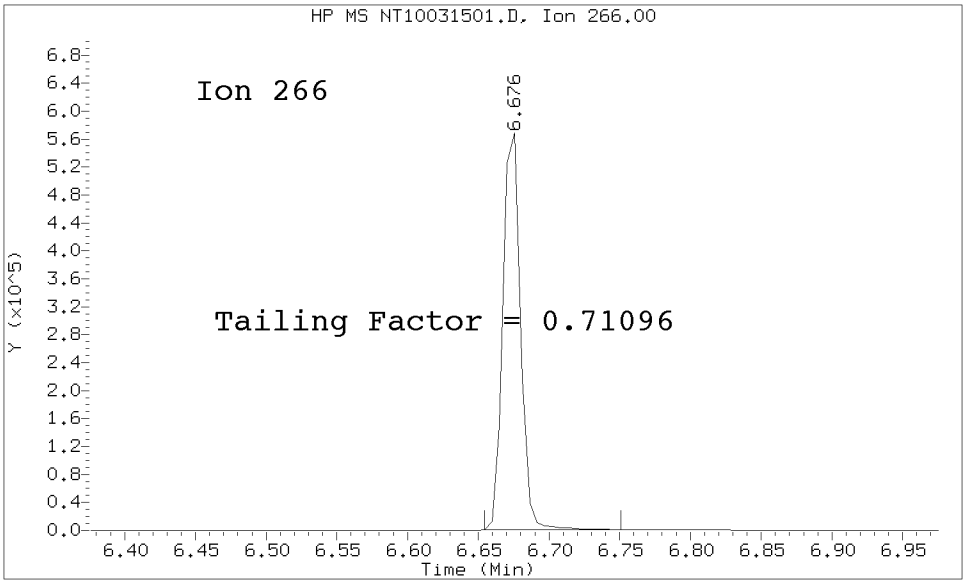
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/NT10031501.D/NT10031501.D
Method Used: \20230315.b\DFTPP8270E.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SLC0228-TUN1 SLC0228-TUN1
Report Date: 03/16/2023 12:23



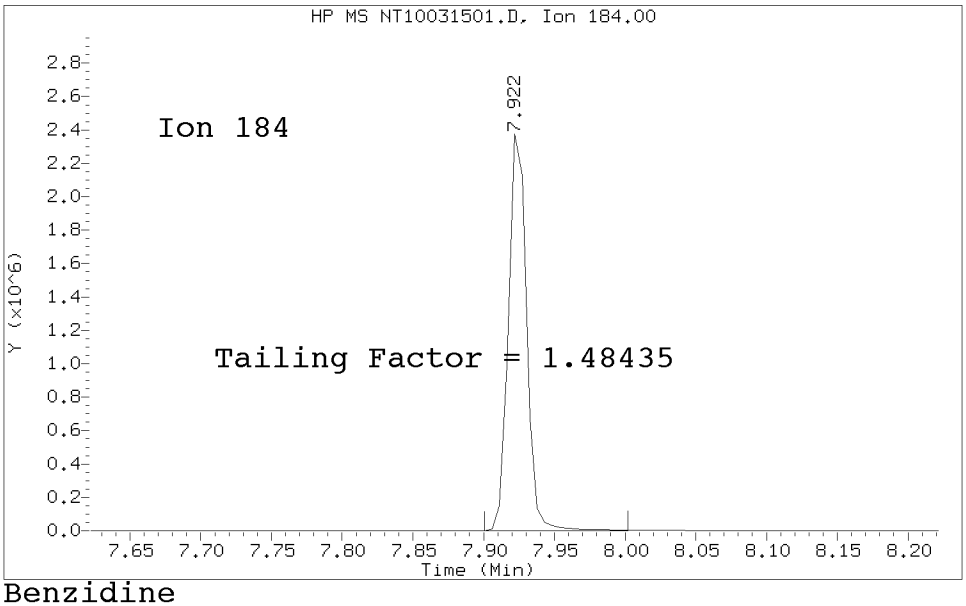


Datafile Analyzed: /20230315.b/NT10031501.D/NT10031501.D
Method Used: \20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SEQ-TUN1
Report Date: 03/16/2023 12:23



Pentachlorophenol
==========
 Exp. RT = 6.676
Found RT = 6.676

Tail Factor = 0.711 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 7.922
Found RT = 7.922

Tail Factor = 1.484 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7109557	2.000	PASS
Benzidine	1.4843493	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	962640			N/A
4,4-DDE	5158	0.5	20.0	PASS
4,4-DDD	41277	4.1	20.0	PASS
4,4-DDD + DDE	46435	4.6	20.0	PASS

Tuning Sample, nt10.i/20230315.b/NT10031501.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.14 (0.37)
69	Mass 69 relative abundance	36.50
70	Less than 2.00% of mass 69	0.18 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
365	1.00 - 100.00% of mass 198	2.52
441	Less than 150.00% of mass 443	6.11 (77.09)
442	Less than 200.00% of mass 198	42.80
443	15.00 - 24.00% of mass 442	7.92 (18.52)

Data File: NT10031501.D
Spectrum: Avg. Scans 544-546 (7.00), Background Scan 536
Location of Maximum: 198.00
Number of points: 316

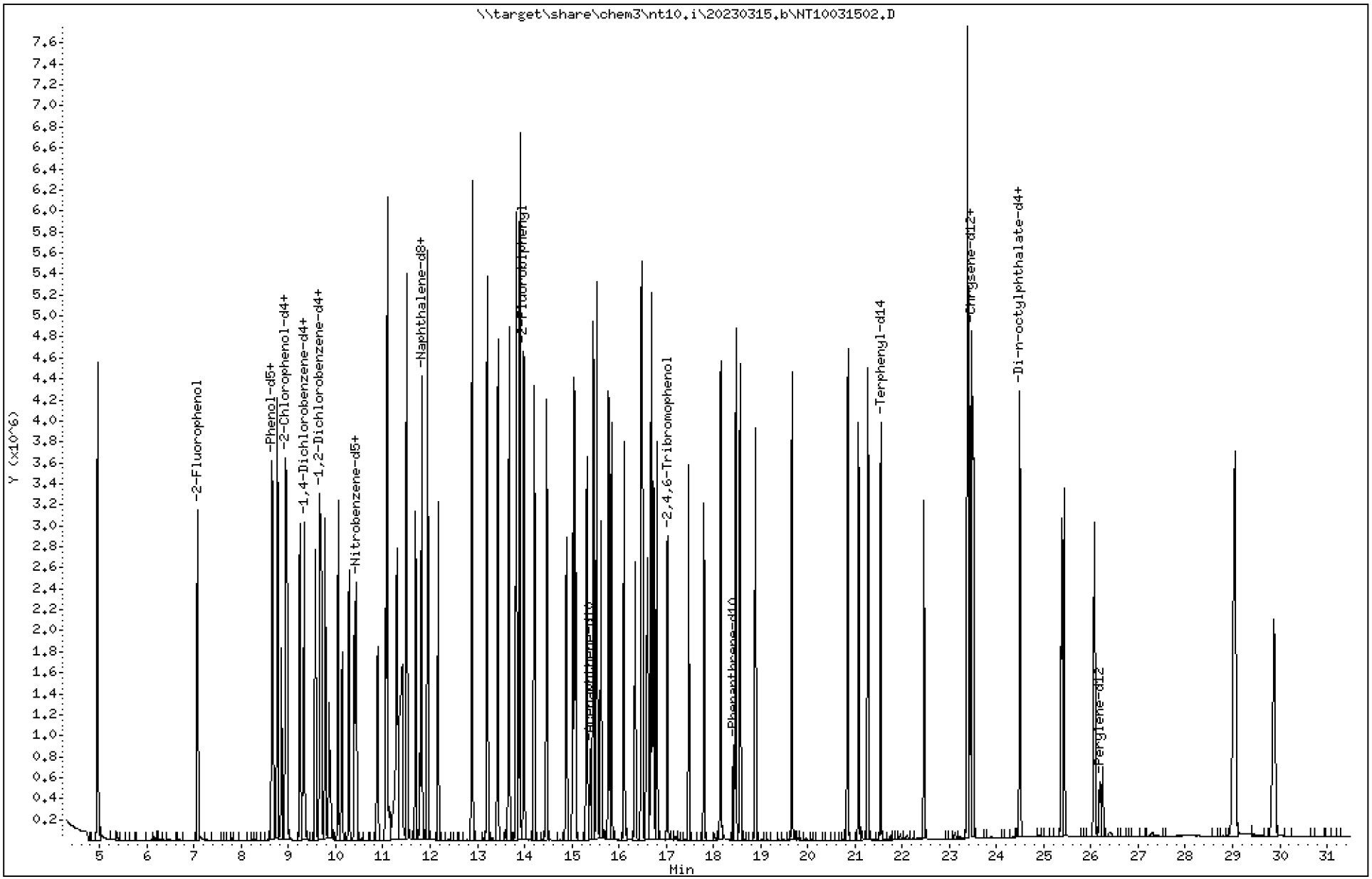
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	226	124.00	3185	207.00	17112	293.00	2318
37.00	575	125.00	2909	208.00	4722	294.00	588
38.00	1820	127.00	243264	209.00	1586	295.00	171
39.00	10159	128.00	18696	210.00	2002	296.00	36168
40.00	405	129.00	96304	211.00	5093	297.00	5056
41.00	312	130.00	8257	213.00	371	298.00	351
42.00	59	131.00	1626	214.00	74	301.00	422
45.00	283	132.00	820	215.00	1549	302.00	552
49.00	910	133.00	415	216.00	2822	303.00	4130
50.00	35800	134.00	2800	217.00	36520	304.00	1107
51.00	136000	135.00	7704	218.00	4515	305.00	126
52.00	7201	136.00	3195	219.00	360	308.00	532
53.00	294	137.00	3970	221.00	25672	309.00	330
55.00	668	138.00	948	222.00	2863	310.00	461
56.00	4206	139.00	563	223.00	8094	312.00	63
57.00	9877	140.00	1193	224.00	76160	313.00	360
58.00	478	141.00	12476	225.00	18680	314.00	1762
59.00	106	142.00	3876	226.00	2197	315.00	4011
60.00	125	143.00	2757	227.00	32752	316.00	2200
61.00	1897	144.00	726	228.00	4949	317.00	416
62.00	2103	145.00	710	229.00	6725	321.00	1068
63.00	6654	146.00	2200	230.00	933	322.00	491
64.00	895	147.00	6157	231.00	2854	323.00	10541
65.00	3279	148.00	13642	232.00	574	324.00	1817
66.00	188	149.00	2992	233.00	660	325.00	178
67.00	249	150.00	753	234.00	2022	326.00	218
68.00	704	151.00	1678	235.00	2475	327.00	2103
69.00	189184	152.00	893	236.00	1621	328.00	1092
70.00	943	153.00	4091	237.00	2803	329.00	211
71.00	156	154.00	3154	238.00	375	332.00	739
73.00	1307	155.00	6743	239.00	1387	333.00	975
74.00	18768	156.00	10344	240.00	943	334.00	6536
75.00	30000	157.00	2091	241.00	1718	335.00	1733
76.00	10364	158.00	2204	242.00	4096	336.00	201
77.00	207552	159.00	1689	243.00	3931	339.00	148
78.00	14246	160.00	3864	244.00	58560	340.00	135
79.00	13356	161.00	5891	245.00	7760	341.00	1142
80.00	10539	162.00	1637	246.00	11941	342.00	277
81.00	15173	163.00	475	247.00	2526	346.00	2192
82.00	3906	164.00	608	248.00	602	347.00	346
83.00	3545	165.00	4507	249.00	2169	351.00	182
84.00	178	166.00	3807	250.00	370	352.00	3059
85.00	2559	167.00	24880	251.00	462	353.00	1950
86.00	4226	168.00	11639	252.00	590	354.00	3010
87.00	1998	169.00	2046	253.00	1331	355.00	569
88.00	783	170.00	776	255.00	296384	359.00	242
89.00	418	171.00	1036	256.00	43272	365.00	13085
91.00	3237	172.00	2248	257.00	3394	366.00	1813
92.00	3764	173.00	2906	258.00	18176	367.00	150

93.00	24104	174.00	5113	259.00	2926	370.00	291
94.00	1672	175.00	9851	260.00	520	371.00	690
95.00	503	176.00	2588	261.00	479	372.00	4605
96.00	1130	177.00	4756	262.00	60	373.00	1002
97.00	380	178.00	1657	263.00	151	374.00	50
98.00	17936	179.00	18424	264.00	377	377.00	67
99.00	14658	180.00	12975	265.00	6992	383.00	1157
100.00	1303	181.00	6000	266.00	984	384.00	328
101.00	8724	182.00	963	267.00	105	385.00	50
102.00	480	183.00	493	268.00	248	390.00	595
103.00	2859	184.00	1456	270.00	285	391.00	401
104.00	5461	185.00	9317	271.00	631	392.00	204
105.00	5056	186.00	70384	272.00	750	401.00	211
106.00	1781	187.00	20112	273.00	8749	402.00	1564
107.00	67936	188.00	2185	274.00	23296	403.00	2292
108.00	10471	189.00	4453	275.00	129008	404.00	796
109.00	595	190.00	772	276.00	17320	405.00	237
110.00	122760	191.00	2090	277.00	11470	421.00	1827
111.00	18400	192.00	5915	278.00	2005	422.00	1658
112.00	2357	193.00	6863	279.00	468	423.00	12304
113.00	756	194.00	1470	281.00	147	424.00	2795
114.00	128	195.00	841	282.00	368	425.00	263
115.00	298	196.00	14341	283.00	1453	441.00	31664
116.00	3871	198.00	518272	284.00	874	442.00	221824
117.00	54088	199.00	35680	285.00	2012	443.00	41072
118.00	3919	200.00	2830	286.00	333	444.00	3778
119.00	531	201.00	2302	288.00	146	445.00	177
120.00	920	203.00	3657	289.00	446		
121.00	362	204.00	18200	290.00	444		
122.00	4396	205.00	31664	291.00	199		
123.00	6778	206.00	132736	292.00	486		

Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031502.D
Date : 15-MAR-2023 20:34
Client ID:
Sample Info: SLC0228-CAL7

Instrument: nt10.i
Operator: VTS
Column diameter: 0.25

Column phase: ZB-5msi



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031502.D
Lab Smp Id: SLC0228-CAL7
Inj Date : 15-MAR-2023 20:34
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL7
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.068	7.068	(0.760)	1445745	30.0000	26.95
$	2 Phenol-d5	99	8.652	8.636	(0.930)	2045181	30.0000	29.06
	3 Phenol	94	8.675	8.652	(0.933)	1349012	20.0000	18.45
$	5 2-Chlorophenol-d4	132	8.937	8.930	(0.961)	1771997	30.0000	29.49
	4 Bis(2-Chloroethyl)ether	93	8.845	8.837	(0.951)	997663	20.0000	18.40
	6 2-Chlorophenol	128	8.968	8.961	(0.964)	1276591	20.0000	20.40
	7 1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	1194475	20.0000	18.05
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	177375	4.00000	
	9 1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	1189876	20.0000	18.62
$	10 1,2-Dichlorobenzene-d4	152	9.666	9.658	(1.039)	831691	20.0000	19.27
	12 1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	1161461	20.0000	18.46
	11 Benzyl alcohol	108	9.565	9.557	(1.028)	718505	20.0000	20.93
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	360967	20.0000	19.54
	13 2-Methylphenol	108	9.775	9.767	(1.051)	1038369	20.0000	19.48
	17 Hexachloroethane	117	10.279	10.271	(1.105)	521340	20.0000	19.88
	16 N-Nitroso-di-n-propylamine	70	10.132	10.108	(1.089)	829060	20.0000	19.70
	15 4-Methylphenol	108	10.046	10.031	(1.080)	1116436	20.0000	19.88
$	18 Nitrobenzene-d5	82	10.396	10.388	(0.883)	1307575	20.0000	19.64
	19 Nitrobenzene	77	10.434	10.419	(0.886)	1246701	20.0000	19.08
	20 Isophorone	82	10.884	10.861	(0.924)	1864039	20.0000	22.30
	21 2-Nitrophenol	139	11.056	11.048	(0.939)	649545	20.0000	19.99
	22 2,4-Dimethylphenol	107	11.090	11.082	(0.942)	2235062	40.0000	37.24
	23 Bis(2-Chloroethoxy)methane	93	11.294	11.285	(0.959)	1043843	20.0000	18.69
	24 Benzoic acid	105	11.413	11.166	(0.969)	3461038	80.0000	79.88(M)
	25 2,4-Dichlorophenol	162	11.506	11.489	(0.977)	1900569	40.0000	39.57
	26 1,2,4-Trichlorobenzene	180	11.693	11.685	(0.993)	1014837	20.0000	18.00
*	27 Naphthalene-d8	136	11.778	11.770	(1.000)	659656	4.00000	
	28 Naphthalene	128	11.824	11.816	(1.004)	3233035	20.0000	18.50
	29 4-Chloroaniline	127	11.947	11.940	(1.014)	2735281	40.0000	40.12
	30 Hexachlorobutadiene	225	12.172	12.172	(1.033)	618722	20.0000	18.73
	31 4-Chloro-3-methylphenol	107	12.891	12.876	(1.095)	2087503	40.0000	40.15
	32 2-Methylnaphthalene	142	13.209	13.201	(1.121)	2424558	20.0000	19.23
	33 Hexachlorocyclopentadiene	237	13.673	13.665	(0.889)	1420413	40.0000	43.48

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34 2,4,6-Trichlorophenol	196	13.828	13.820	(0.899)	1462769	40.0000	41.93
	35 2,4,5-Trichlorophenol	196	13.897	13.890	(0.903)	1605152	40.0000	41.41
$	36 2-Fluorobiphenyl	172	13.990	13.975	(0.909)	2614669	20.0000	18.73
	37 2-Chloronaphthalene	162	14.207	14.191	(0.924)	2139935	20.0000	18.93
	38 2-Nitroaniline	65	14.470	14.447	(0.941)	1292686	40.0000	40.70
	39 Dimethylphthalate	163	14.888	14.873	(0.968)	2104599	20.0000	18.35
	40 Acenaphthylene	152	15.074	15.066	(0.980)	3290934	20.0000	18.68
	41 2,6-Dinitrotoluene	165	15.035	15.012	(0.977)	1020135	40.0000	41.18
*	42 Acenaphthene-d10	164	15.383	15.383	(1.000)	352987	4.00000	
	43 3-Nitroaniline	138	15.321	15.298	(0.996)	1147538	40.0000	41.04
	44 Acenaphthene	153	15.453	15.445	(1.005)	2075684	20.0000	19.07
	45 2,4-Dinitrophenol	184	15.538	15.515	(1.010)	1465989	80.0000	79.60
	46 Dibenzofuran	168	15.777	15.770	(1.026)	3017611	20.0000	18.80
	47 4-Nitrophenol	109	15.623	15.592	(1.016)	684596	40.0000	39.90
	48 2,4-Dinitrotoluene	165	15.839	15.817	(1.030)	1405429	40.0000	39.90
	50 Diethylphthalate	149	16.342	16.319	(1.062)	2341062	20.0000	20.81
	49 Fluorene	166	16.489	16.481	(1.072)	2411516	20.0000	19.10
	51 4-Chlorophenyl-phenylether	204	16.473	16.466	(1.071)	1161824	20.0000	19.35
	52 4-Nitroaniline	138	16.604	16.566	(1.079)	1069800	40.0000	42.46
	53 4,6-Dinitro-2-methylphenol	198	16.689	16.658	(0.906)	1560214	80.0000	79.73
	54 N-Nitrosodiphenylamine	169	16.728	16.712	(0.908)	1511403	20.0000	19.24
$	55 2,4,6-Tribromophenol	330	17.028	17.021	(1.107)	477920	30.0000	29.91
	56 4-Bromophenyl-phenylether	248	17.476	17.476	(0.949)	670470	20.0000	20.41
	57 Hexachlorobenzene	284	17.800	17.793	(0.966)	643302	20.0000	18.67
	58 Pentachlorophenol	266	18.157	18.149	(0.986)	885410	40.0000	39.87
*	59 Phenanthrene-d10	188	18.420	18.420	(1.000)	587447	4.00000	
	60 Phenanthrene	178	18.474	18.466	(1.003)	3063430	20.0000	19.12
	61 Anthracene	178	18.567	18.559	(1.008)	3058907	20.0000	19.91
	62 Carbazole	167	18.892	18.884	(1.026)	2606590	20.0000	18.93
	63 Di-n-butylphthalate	149	19.665	19.666	(1.068)	3613228	20.0000	19.93
	64 Fluoranthene	202	20.849	20.841	(0.889)	3084411	20.0000	21.53
	65 Pyrene	202	21.275	21.267	(0.907)	3048380	20.0000	20.75
$	66 Terphenyl-d14	244	21.545	21.538	(0.918)	2146134	20.0000	19.45
	67 Butylbenzylphthalate	149	22.467	22.460	(0.958)	1204454	20.0000	19.98
	68 Benzo(a)anthracene	228	23.427	23.419	(0.999)	2444920	20.0000	19.43
*	69 Chrysene-d12	240	23.458	23.450	(1.000)	356463	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.388	23.373	(0.997)	2692461	60.0000	66.81
	71 Chrysene	228	23.504	23.489	(1.002)	2356995	20.0000	19.17
	72 bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	1828785	20.0000	20.00
*	134 Di-n-octylphthalate-d4	153	24.488	24.480	(1.000)	617041	4.00000	
	73 Di-n-octylphthalate	149	24.495	24.488	(1.000)	3023393	20.0000	18.72
	74 Benzo(b)fluoranthene	252	25.378	25.362	(0.969)	2546409	20.0000	19.40
	75 Benzo(k)fluoranthene	252	25.432	25.409	(0.971)	2751549	20.0000	20.64
	76 Benzo(a)pyrene	252	26.075	26.052	(0.996)	2507206	20.0000	21.36
*	77 Perylene-d12	264	26.191	26.183	(1.000)	404994	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	29.036	28.990	(1.109)	3374860	20.0000	22.60
	79 Dibenzo(a,h)anthracene	278	29.052	29.005	(1.109)	2799351	20.0000	22.58
	80 Benzo(g,h,i)perylene	276	29.883	29.821	(1.141)	2974262	20.0000	23.02
	90 N-Nitrosodimethylamine	74	4.951	4.936	(0.532)	1145410	40.0000	33.47
	91 Aniline	93	8.767	8.752	(0.943)	2810605	40.0000	37.51
	93 Benzidine	184	21.073	21.066	(0.898)	2290972	40.0000	38.94
	103 Pyridine	79	4.951	4.997	(0.532)	1775759	40.0000	33.79
	105 1-methylnaphthalene	142	13.433	13.425	(1.141)	2185994	20.0000	18.92
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.805	16.789	(1.092)	2458654	20.0000	19.56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.432	25.409	(0.971)	5057487	40.0000	39.90
120 2,3,4,6-Tetrachlorophenol	232	16.110	16.103	(1.047)	832943	20.0000	19.99

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031502.D
Lab Smp Id: SLC0228-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	177375	3.40
27 Naphthalene-d8	624466	312233	1248932	659656	5.64
42 Acenaphthene-d10	337226	168613	674452	352987	4.67
59 Phenanthrene-d10	572849	286425	1145698	587447	2.55
69 Chrysene-d12	347068	173534	694136	356463	2.71
134 Di-n-octylphthala	500317	250159	1000634	617041	23.33
77 Perylene-d12	421549	210775	843098	404994	-3.93

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.04
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.18	25.68	26.68	26.19	0.03

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

REVIEW SUMMARY FOR FILE - NT10031502.D

Lab ID: SLC0228-CAL7
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 20:34

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.969	0.000	0.9690	Benzoic acid
0.532	0.538	-0.0054	Pyridine

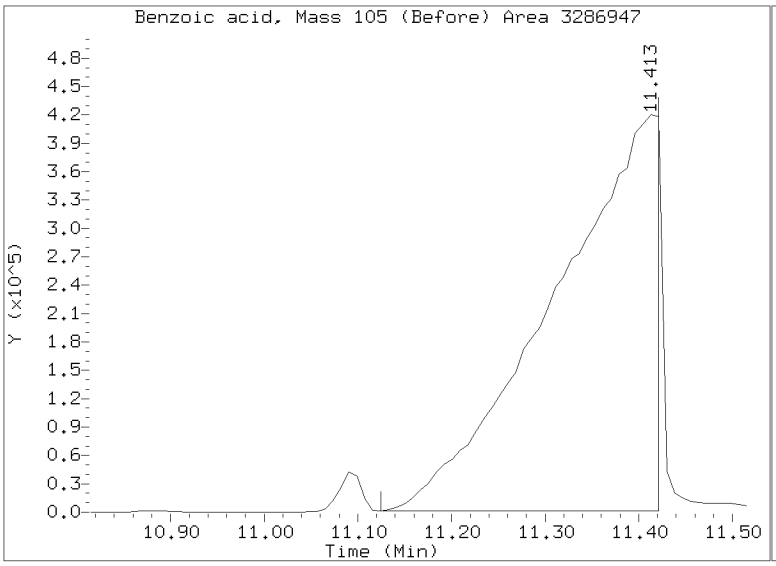
RRT check based on Ccal File: NT10031508.D

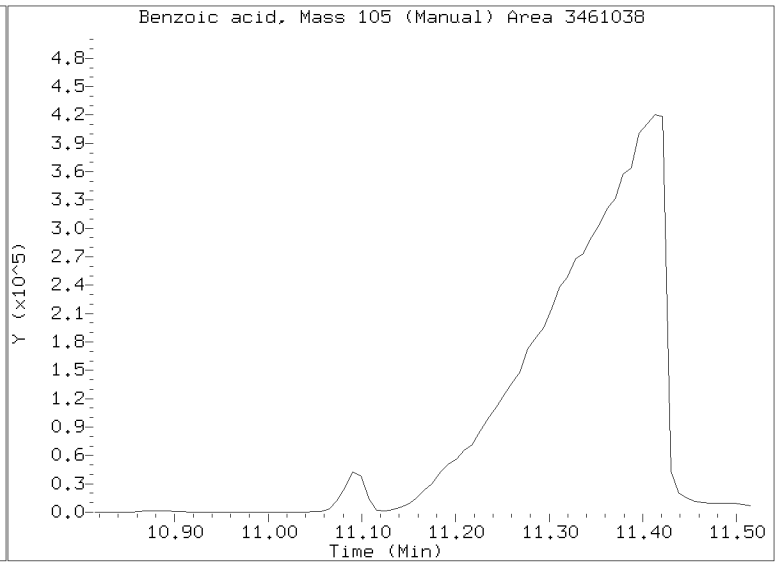
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031502.D
Injection Date: 15-MAR-2023 20:34
Lab ID:SLC0228-CAL7 Client ID:
Report Date: 03/16/2023 12:20





Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031503.D

Date : 15-MAR-2023 21:12

Client ID:

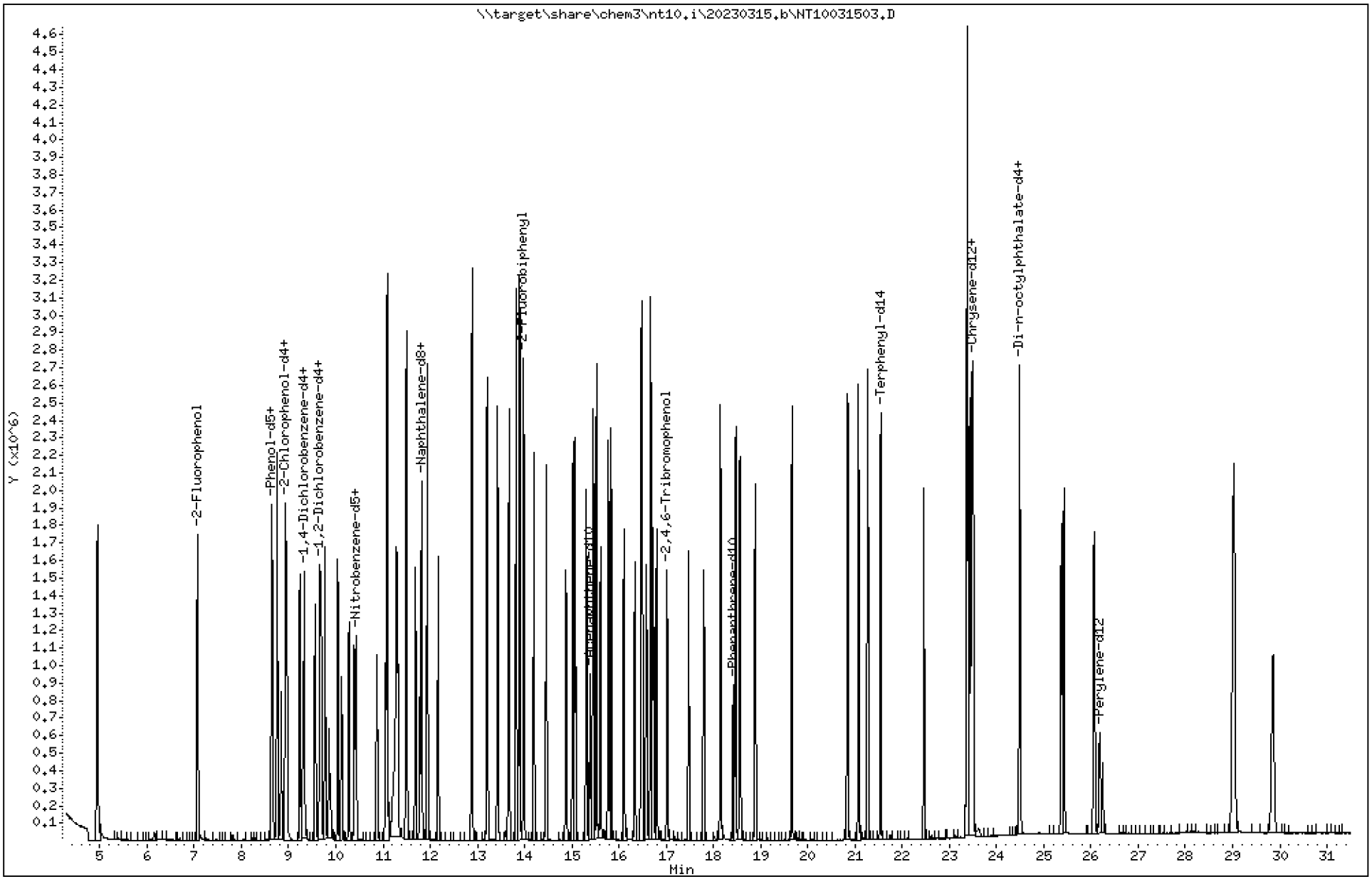
Instrument: nt10.i

Sample Info: SLC0228-CAL6

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031503.D
Lab Smp Id: SLC0228-CAL6
Inj Date : 15-MAR-2023 21:12
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL6
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.067	7.068	(0.760)	766278	15.0000	14.48
$	2 Phenol-d5	99	8.643	8.636	(0.929)	1033842	15.0000	14.89
	3 Phenol	94	8.659	8.652	(0.931)	677387	10.0000	9.390
$	5 2-Chlorophenol-d4	132	8.937	8.930	(0.961)	890713	15.0000	15.03
	4 Bis(2-Chloroethyl)ether	93	8.844	8.837	(0.951)	507177	10.0000	9.479
	6 2-Chlorophenol	128	8.960	8.961	(0.963)	642264	10.0000	10.40
	7 1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	617243	10.0000	9.457
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	174984	4.00000	
	9 1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	612971	10.0000	9.721
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.038)	417489	10.0000	9.807
	12 1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	593607	10.0000	9.566
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	354873	10.0000	10.48
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	173870	10.0000	9.541(M)
	13 2-Methylphenol	108	9.774	9.767	(1.051)	516580	10.0000	9.823
	17 Hexachloroethane	117	10.279	10.271	(1.105)	255000	10.0000	9.857
	16 N-Nitroso-di-n-propylamine	70	10.124	10.108	(1.088)	403145	10.0000	9.709
	15 4-Methylphenol	108	10.038	10.031	(1.079)	546873	10.0000	9.870
$	18 Nitrobenzene-d5	82	10.387	10.388	(0.882)	651453	10.0000	10.18
	19 Nitrobenzene	77	10.426	10.419	(0.885)	613375	10.0000	9.768
	20 Isophorone	82	10.868	10.861	(0.923)	899885	10.0000	11.20
	21 2-Nitrophenol	139	11.046	11.048	(0.938)	309860	10.0000	10.04
	22 2,4-Dimethylphenol	107	11.089	11.082	(0.942)	1122389	20.0000	19.46
	23 Bis(2-Chloroethoxy)methane	93	11.284	11.285	(0.958)	510533	10.0000	9.514
	24 Benzoic acid	105	11.327	11.166	(0.962)	1448000	40.0000	40.68
	25 2,4-Dichlorophenol	162	11.496	11.489	(0.976)	957443	20.0000	20.74
	26 1,2,4-Trichlorobenzene	180	11.691	11.685	(0.993)	518573	10.0000	9.571
*	27 Naphthalene-d8	136	11.776	11.770	(1.000)	633941	4.00000	
	28 Naphthalene	128	11.815	11.816	(1.003)	1633246	10.0000	9.725
	29 4-Chloroaniline	127	11.939	11.940	(1.014)	1335407	20.0000	20.38
	30 Hexachlorobutadiene	225	12.170	12.172	(1.033)	314014	10.0000	9.891
	31 4-Chloro-3-methylphenol	107	12.882	12.876	(1.094)	1031139	20.0000	20.64
	32 2-Methylnaphthalene	142	13.207	13.201	(1.122)	1205028	10.0000	9.943
	33 Hexachlorocyclopentadiene	237	13.664	13.665	(0.888)	679471	20.0000	21.34

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.819	13.820	(0.898)	735280	20.0000	21.62
	35	2,4,5-Trichlorophenol	196	13.888	13.890	(0.903)	796463	20.0000	21.08
$	36	2-Fluorobiphenyl	172	13.981	13.975	(0.909)	1328400	10.0000	9.760
	37	2-Chloronaphthalene	162	14.198	14.191	(0.923)	1053277	10.0000	9.557
	38	2-Nitroaniline	65	14.453	14.447	(0.940)	639357	20.0000	20.65
	39	Dimethylphthalate	163	14.879	14.873	(0.967)	1083747	10.0000	9.695
	40	Acenaphthylene	152	15.073	15.066	(0.980)	1706988	10.0000	9.940
	41	2,6-Dinitrotoluene	165	15.026	15.012	(0.977)	513157	20.0000	21.25
*	42	Acenaphthene-d10	164	15.382	15.383	(1.000)	344087	4.00000	
	43	3-Nitroaniline	138	15.313	15.298	(0.995)	575069	20.0000	21.10
	44	Acenaphthene	153	15.452	15.445	(1.005)	1037074	10.0000	9.775
	45	2,4-Dinitrophenol	184	15.521	15.515	(1.009)	674586	40.0000	42.18
	46	Dibenzofuran	168	15.776	15.770	(1.026)	1516932	10.0000	9.696
	47	4-Nitrophenol	109	15.606	15.592	(1.015)	346416	20.0000	20.47
	48	2,4-Dinitrotoluene	165	15.830	15.817	(1.029)	723393	20.0000	20.47
	50	Diethylphthalate	149	16.333	16.319	(1.062)	1099214	10.0000	10.02
	49	Fluorene	166	16.487	16.481	(1.072)	1216938	10.0000	9.887
	51	4-Chlorophenyl-phenylether	204	16.472	16.466	(1.071)	578431	10.0000	9.882
	52	4-Nitroaniline	138	16.588	16.566	(1.078)	562336	20.0000	22.89
	53	4,6-Dinitro-2-methylphenol	198	16.673	16.658	(0.905)	794181	40.0000	41.39
	54	N-Nitrosodiphenylamine	169	16.719	16.712	(0.908)	775287	10.0000	9.570
$	55	2,4,6-Tribromophenol	330	17.020	17.021	(1.106)	244599	15.0000	15.42
	56	4-Bromophenyl-phenylether	248	17.474	17.476	(0.949)	352401	10.0000	10.40
	57	Hexachlorobenzene	284	17.799	17.793	(0.966)	339084	10.0000	9.543
	58	Pentachlorophenol	266	18.148	18.149	(0.985)	452371	20.0000	20.65
*	59	Phenanthrene-d10	188	18.418	18.420	(1.000)	605930	4.00000	
	60	Phenanthrene	178	18.473	18.466	(1.003)	1596045	10.0000	9.660
	61	Anthracene	178	18.565	18.559	(1.008)	1637517	10.0000	10.33
	62	Carbazole	167	18.883	18.884	(1.025)	1441624	10.0000	10.15
	63	Di-n-butylphthalate	149	19.664	19.666	(1.068)	1947970	10.0000	10.31
	64	Fluoranthene	202	20.840	20.841	(0.888)	1783287	10.0000	10.15
	65	Pyrene	202	21.266	21.267	(0.907)	1822698	10.0000	10.12
$	66	Terphenyl-d14	244	21.544	21.538	(0.918)	1323270	10.0000	9.780
	67	Butylbenzylphthalate	149	22.458	22.460	(0.957)	684422	10.0000	10.10
	68	Benzo(a)anthracene	228	23.426	23.419	(0.999)	1518143	10.0000	9.840
*	69	Chrysene-d12	240	23.457	23.450	(1.000)	437116	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.379	23.373	(0.997)	1519096	30.0000	30.74
	71	Chrysene	228	23.503	23.489	(1.002)	1487493	10.0000	9.868
	72	bis(2-Ethylhexyl)phthalate	149	23.480	23.474	(0.959)	994125	10.0000	10.02
*	134	Di-n-octylphthalate-d4	153	24.479	24.480	(1.000)	674085	4.00000	
	73	Di-n-octylphthalate	149	24.494	24.488	(1.001)	1707970	10.0000	9.682
	74	Benzo(b)fluoranthene	252	25.377	25.362	(0.969)	1615210	10.0000	10.75
	75	Benzo(k)fluoranthene	252	25.423	25.409	(0.971)	1513928	10.0000	9.925
	76	Benzo(a)pyrene	252	26.066	26.052	(0.996)	1429031	10.0000	10.64
*	77	Perylene-d12	264	26.182	26.183	(1.000)	463440	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	29.020	28.990	(1.108)	1834722	10.0000	10.74
	79	Dibenzo(a,h)anthracene	278	29.027	29.005	(1.109)	1513126	10.0000	10.67
	80	Benzo(g,h,i)perylene	276	29.859	29.821	(1.140)	1583026	10.0000	10.71
	90	N-Nitrosodimethylamine	74	4.935	4.936	(0.531)	623452	20.0000	18.47
	91	Aniline	93	8.759	8.752	(0.942)	1394783	20.0000	18.87
	93	Benzidine	184	21.072	21.066	(0.898)	1529058	20.0000	21.19
	103	Pyridine	79	4.951	4.997	(0.532)	925439	20.0000	17.85
	105	1-methylnaphthalene	142	13.432	13.425	(1.141)	1103224	10.0000	9.935
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.796	16.789	(1.092)	1203614	10.0000	9.825

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.423	25.409	(0.971)	2985651	20.0000	20.58
120 2,3,4,6-Tetrachlorophenol	232	16.101	16.103	(1.047)	374893	10.0000	10.09

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031503.D
Lab Smp Id: SLC0228-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	174984	2.01
27 Naphthalene-d8	624466	312233	1248932	633941	1.52
42 Acenaphthene-d10	337226	168613	674452	344087	2.03
59 Phenanthrene-d10	572849	286425	1145698	605930	5.77
69 Chrysene-d12	347068	173534	694136	437116	25.95
134 Di-n-octylphthala	500317	250159	1000634	674085	34.73
77 Perylene-d12	421549	210775	843098	463440	9.94

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	-0.00
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	-0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.03
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	-0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	-0.00

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

REVIEW SUMMARY FOR FILE - NT10031503.D

Lab ID: SLC0228-CAL6
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 21:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.962	0.000	0.9618	Benzoic acid
0.532	0.538	-0.0054	Pyridine

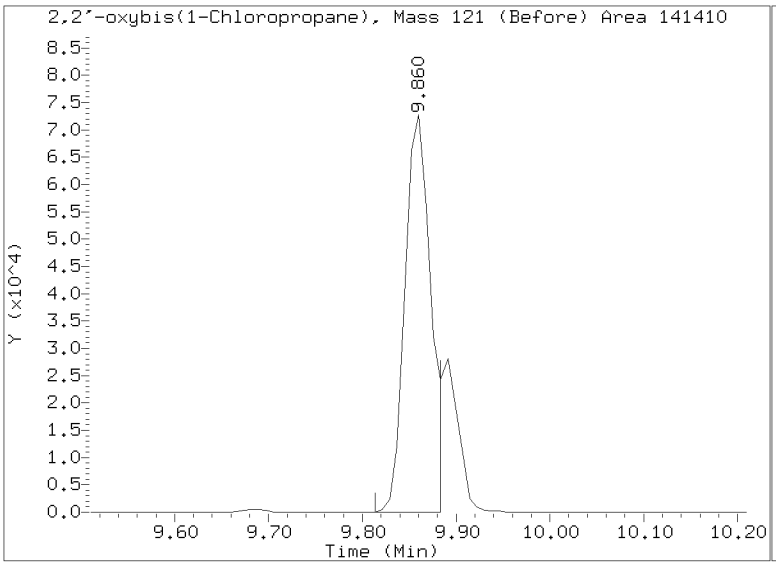
RRT check based on Ccal File: NT10031508.D

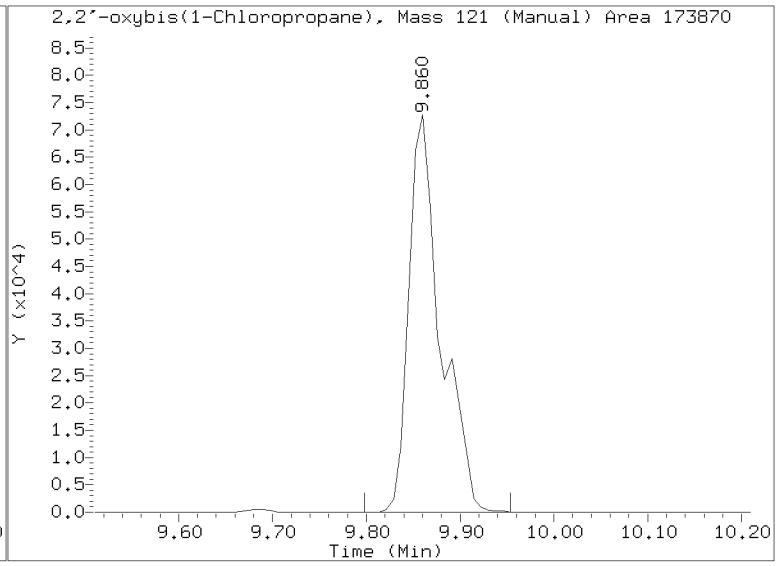
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031503.D
Injection Date: 15-MAR-2023 21:12
Lab ID:SLC0228-CAL6 Client ID:
Report Date: 03/16/2023 12:20





Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031504.D

Page 1

Date : 15-MAR-2023 21:50

Client ID:

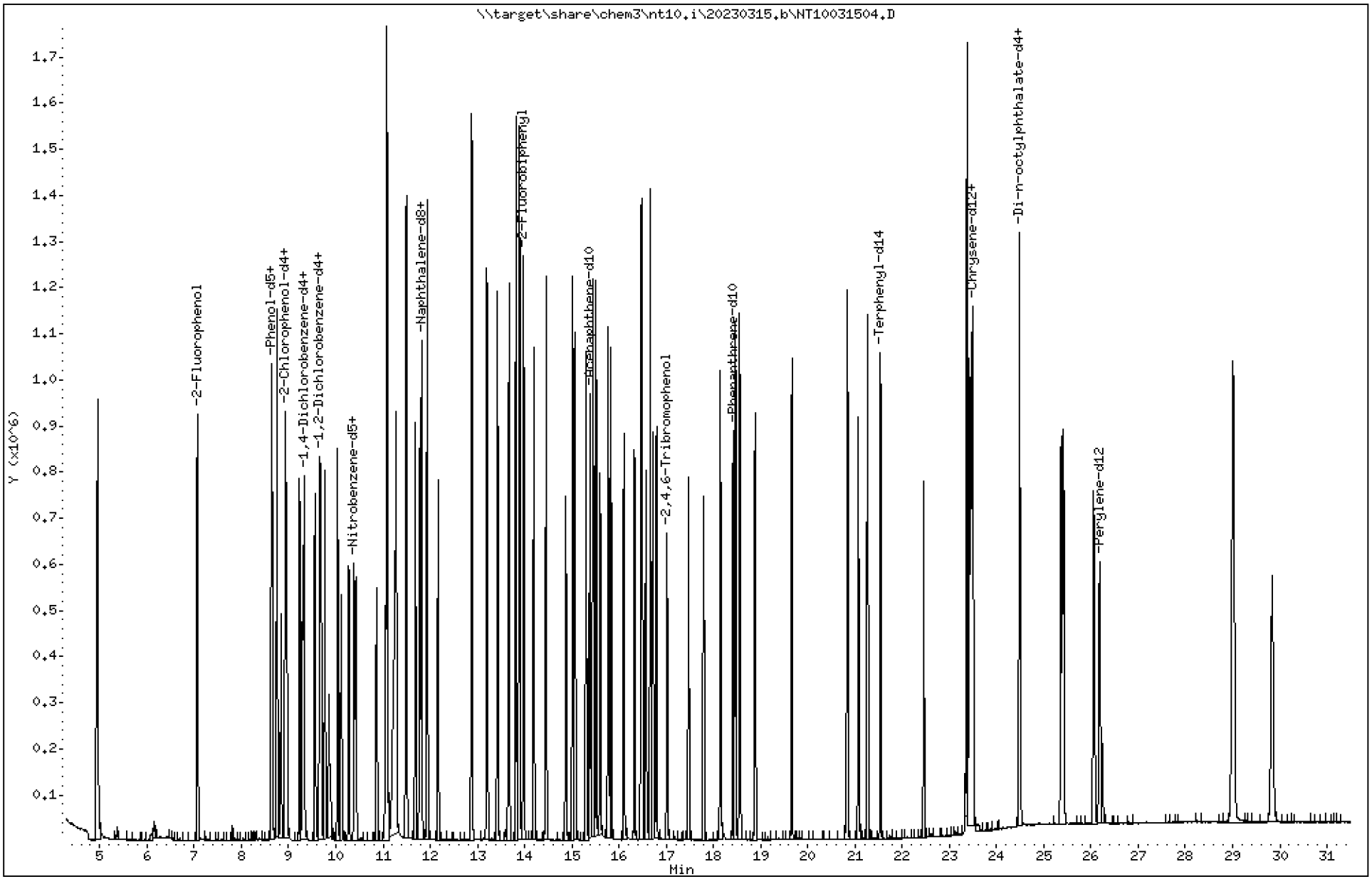
Instrument: nt10.i

Sample Info: SLC0228-CAL5

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031504.D
Lab Smp Id: SLC0228-CAL5
Inj Date : 15-MAR-2023 21:50
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL5
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.068	7.068	(0.760)	389299	7.50000	7.504
$	2 Phenol-d5	99	8.636	8.636	(0.928)	517751	7.50000	7.608
	3 Phenol	94	8.659	8.652	(0.931)	348755	5.00000	4.932
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.960)	442224	7.50000	7.610
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	257735	5.00000	4.914
	6 2-Chlorophenol	128	8.960	8.961	(0.963)	295042	5.00000	4.875
	7 1,3-Dichlorobenzene	146	9.231	9.231	(0.992)	308253	5.00000	4.817
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	171542	4.00000	
	9 1,4-Dichlorobenzene	146	9.324	9.325	(1.002)	302437	5.00000	4.893
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.038)	203496	5.00000	4.876
	12 1,2-Dichlorobenzene	146	9.681	9.682	(1.041)	295133	5.00000	4.851
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	175758	5.00000	5.295
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	84897	5.00000	4.752(M)
	13 2-Methylphenol	108	9.775	9.767	(1.051)	259972	5.00000	5.043
	17 Hexachloroethane	117	10.271	10.271	(1.104)	125853	5.00000	4.962
	16 N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	207311	5.00000	5.093
	15 4-Methylphenol	108	10.038	10.031	(1.079)	275961	5.00000	5.080
$	18 Nitrobenzene-d5	82	10.388	10.388	(0.882)	326832	5.00000	5.185
	19 Nitrobenzene	77	10.426	10.419	(0.885)	310914	5.00000	5.026
	20 Isophorone	82	10.861	10.861	(0.922)	396361	5.00000	5.009
	21 2-Nitrophenol	139	11.047	11.048	(0.938)	152976	5.00000	5.059
	22 2,4-Dimethylphenol	107	11.081	11.082	(0.941)	561764	10.0000	9.887
	23 Bis(2-Chloroethoxy)methane	93	11.284	11.285	(0.958)	255208	5.00000	4.828
	24 Benzoic acid	105	11.276	11.166	(0.957)	660270	20.0000	19.96
	25 2,4-Dichlorophenol	162	11.497	11.489	(0.976)	475467	10.0000	10.46
	26 1,2,4-Trichlorobenzene	180	11.684	11.685	(0.992)	258021	5.00000	4.835
*	27 Naphthalene-d8	136	11.777	11.770	(1.000)	624466	4.00000	
	28 Naphthalene	128	11.815	11.816	(1.003)	811352	5.00000	4.904
	29 4-Chloroaniline	127	11.939	11.940	(1.014)	663111	10.0000	10.27
	30 Hexachlorobutadiene	225	12.171	12.172	(1.033)	152701	5.00000	4.883
	31 4-Chloro-3-methylphenol	107	12.875	12.876	(1.093)	507195	10.0000	10.30
	32 2-Methylnaphthalene	142	13.200	13.201	(1.121)	601081	5.00000	5.035
	33 Hexachlorocyclopentadiene	237	13.664	13.665	(0.888)	324634	10.0000	10.40

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.819	13.820	(0.898)	343842	10.0000	10.32
35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	380542	10.0000	10.28
$ 36	2-Fluorobiphenyl	172	13.982	13.975	(0.909)	654752	5.00000	4.908
37	2-Chloronaphthalene	162	14.198	14.191	(0.923)	530286	5.00000	4.909
38	2-Nitroaniline	65	14.454	14.447	(0.940)	319171	10.0000	10.52
39	Dimethylphthalate	163	14.879	14.873	(0.967)	534213	5.00000	4.876
40	Acenaphthylene	152	15.065	15.066	(0.979)	830053	5.00000	4.932
41	2,6-Dinitrotoluene	165	15.019	15.012	(0.976)	246779	10.0000	10.43
* 42	Acenaphthene-d10	164	15.382	15.383	(1.000)	337226	4.00000	
43	3-Nitroaniline	138	15.305	15.298	(0.995)	273315	10.0000	10.23
44	Acenaphthene	153	15.444	15.445	(1.004)	504323	5.00000	4.850
45	2,4-Dinitrophenol	184	15.514	15.515	(1.009)	266923	20.0000	18.02
46	Dibenzofuran	168	15.769	15.770	(1.025)	756537	5.00000	4.934
47	4-Nitrophenol	109	15.599	15.592	(1.014)	160601	10.0000	9.617
48	2,4-Dinitrotoluene	165	15.823	15.817	(1.029)	337620	10.0000	9.579
50	Diethylphthalate	149	16.326	16.319	(1.061)	526014	5.00000	4.894
49	Fluorene	166	16.488	16.481	(1.072)	590490	5.00000	4.895
51	4-Chlorophenyl-phenylether	204	16.465	16.466	(1.070)	281249	5.00000	4.903
52	4-Nitroaniline	138	16.573	16.566	(1.077)	246501	10.0000	10.24
53	4,6-Dinitro-2-methylphenol	198	16.665	16.658	(0.905)	335578	20.0000	18.99
54	N-Nitrosodiphenylamine	169	16.719	16.712	(0.908)	371008	5.00000	4.844
$ 55	2,4,6-Tribromophenol	330	17.020	17.021	(1.106)	112412	7.50000	7.152
56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	165732	5.00000	5.173
57	Hexachlorobenzene	284	17.792	17.793	(0.966)	162915	5.00000	4.850
58	Pentachlorophenol	266	18.148	18.149	(0.985)	191672	10.0000	9.471
* 59	Phenanthrene-d10	188	18.419	18.420	(1.000)	572849	4.00000	
60	Phenanthrene	178	18.465	18.466	(1.003)	753291	5.00000	4.822
61	Anthracene	178	18.558	18.559	(1.008)	753981	5.00000	5.032
62	Carbazole	167	18.883	18.884	(1.025)	643836	5.00000	4.795
63	Di-n-butylphthalate	149	19.664	19.666	(1.068)	843782	5.00000	4.697
64	Fluoranthene	202	20.840	20.841	(0.889)	758837	5.00000	5.441
65	Pyrene	202	21.266	21.267	(0.907)	754525	5.00000	5.274
$ 66	Terphenyl-d14	244	21.537	21.538	(0.918)	546879	5.00000	5.090
67	Butylbenzylphthalate	149	22.458	22.460	(0.958)	257731	5.00000	4.972
68	Benzo(a)anthracene	228	23.418	23.419	(0.999)	612627	5.00000	5.001
* 69	Chrysene-d12	240	23.449	23.450	(1.000)	347068	4.00000	
70	3,3'-Dichlorobenzidine	252	23.372	23.373	(0.997)	532591	15.0000	13.57
71	Chrysene	228	23.496	23.489	(1.002)	596175	5.00000	4.981
72	bis(2-Ethylhexyl)phthalate	149	23.473	23.474	(0.959)	367877	5.00000	5.011
* 134	Di-n-octylphthalate-d4	153	24.479	24.480	(1.000)	500317	4.00000	
73	Di-n-octylphthalate	149	24.495	24.488	(1.001)	642200	5.00000	4.905
74	Benzo(b)fluoranthene	252	25.369	25.362	(0.969)	700635	5.00000	5.127(H)
75	Benzo(k)fluoranthene	252	25.416	25.409	(0.971)	673988	5.00000	4.857
76	Benzo(a)pyrene	252	26.058	26.052	(0.995)	635688	5.00000	5.203
* 77	Perylene-d12	264	26.182	26.183	(1.000)	421549	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.004	28.990	(1.108)	858348	5.00000	5.522
79	Dibenzo(a,h)anthracene	278	29.020	29.005	(1.108)	711419	5.00000	5.513
80	Benzo(g,h,i)perylene	276	29.836	29.821	(1.140)	752407	5.00000	5.594
90	N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	330376	10.0000	9.982
91	Aniline	93	8.752	8.752	(0.941)	716385	10.0000	9.886
93	Benzidine	184	21.065	21.066	(0.898)	565285	10.0000	9.868
103	Pyridine	79	4.951	4.997	(0.532)	520909	10.0000	10.25
105	1-methylnaphthalene	142	13.432	13.425	(1.141)	551037	5.00000	5.038
111	Azobenzene (1,2-DP-Hydrazine)	77	16.796	16.789	(1.092)	603260	5.00000	5.024

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.416	25.409	(0.971)	1318971	10.0000	9.997
120 2,3,4,6-Tetrachlorophenol	232	16.101	16.103	(1.047)	169344	5.00000	4.836

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031504.D
Lab Smp Id: SLC0228-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	171542	0.00
27 Naphthalene-d8	624466	312233	1248932	624466	0.00
42 Acenaphthene-d10	337226	168613	674452	337226	0.00
59 Phenanthrene-d10	572849	286425	1145698	572849	0.00
69 Chrysene-d12	347068	173534	694136	347068	0.00
134 Di-n-octylphthala	500317	250159	1000634	500317	0.00
77 Perylene-d12	421549	210775	843098	421549	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.00
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	0.00

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

REVIEW SUMMARY FOR FILE - NT10031504.D

Lab ID: SLC0228-CAL5
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 21:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9575	Benzoic acid
0.532	0.538	-0.0054	Pyridine

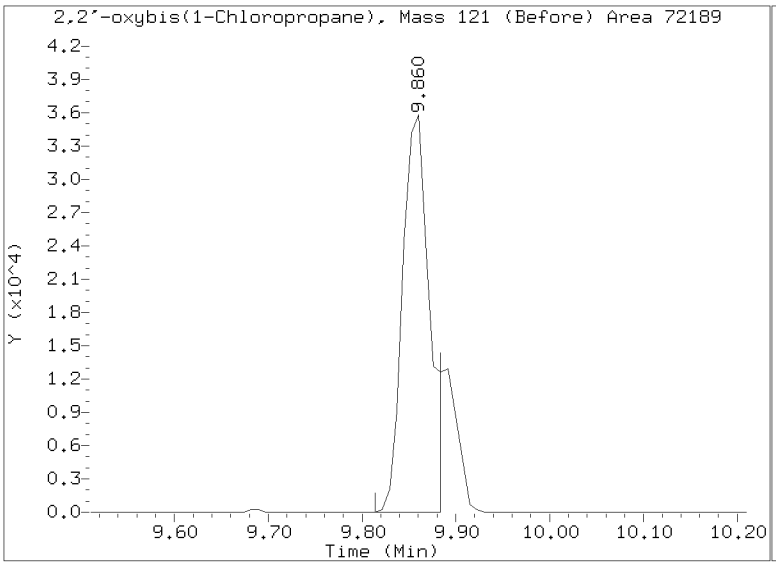
RRT check based on Ccal File: NT10031508.D

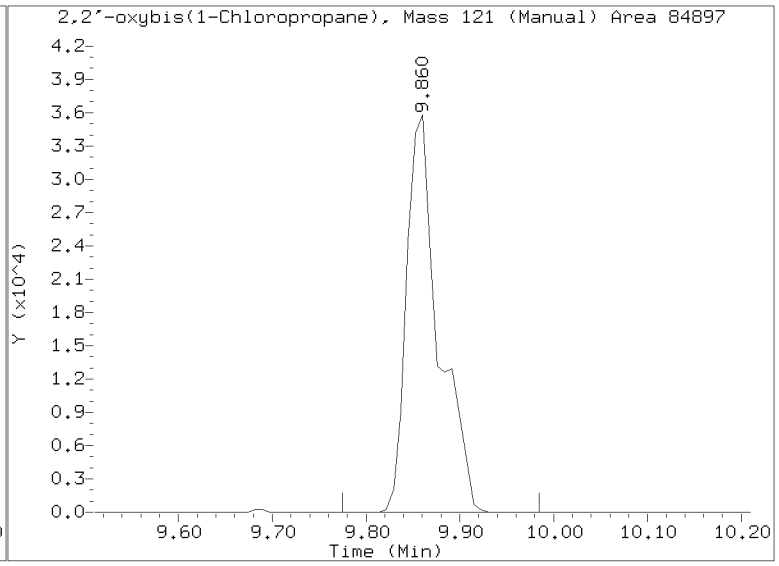
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

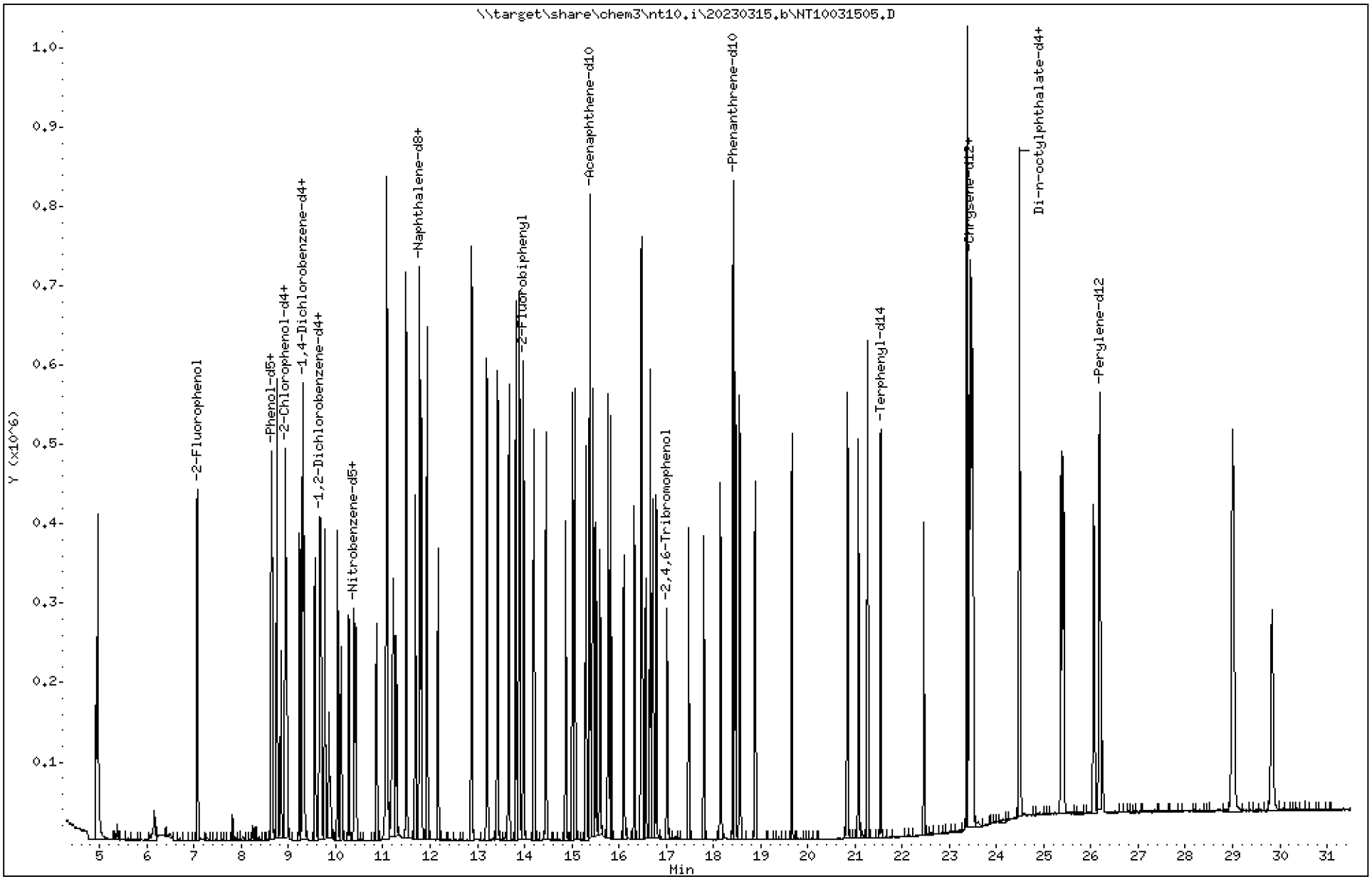
Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031504.D
Injection Date: 15-MAR-2023 21:50
Lab ID:SLC0228-CAL5 Client ID:
Report Date: 03/16/2023 12:20





Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031505.D
Date : 15-MAR-2023 22:28
Client ID:
Sample Info: SLC0228-CAL4

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031505.D
Lab Smp Id: SLC0228-CAL4
Inj Date : 15-MAR-2023 22:28
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL4
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.068	7.068	(0.760)	193847	3.75000	4.042
$	2 Phenol-d5	99	8.628	8.636	(0.928)	251443	3.75000	3.997
	3 Phenol	94	8.659	8.652	(0.931)	172616	2.50000	2.641
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.960)	211122	3.75000	3.930
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	126678	2.50000	2.613
	6 2-Chlorophenol	128	8.961	8.961	(0.963)	142338	2.50000	2.544
	7 1,3-Dichlorobenzene	146	9.231	9.231	(0.992)	152662	2.50000	2.581
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	158570	4.00000	
	9 1,4-Dichlorobenzene	146	9.325	9.325	(1.002)	145660	2.50000	2.549
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.038)	101442	2.50000	2.630
	12 1,2-Dichlorobenzene	146	9.682	9.682	(1.041)	145355	2.50000	2.585
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	83433	2.50000	2.719
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	41898	2.50000	2.537(M)
	13 2-Methylphenol	108	9.775	9.767	(1.051)	126793	2.50000	2.661
	17 Hexachloroethane	117	10.271	10.271	(1.104)	60297	2.50000	2.572
	16 N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	99798	2.50000	2.652
	15 4-Methylphenol	108	10.031	10.031	(1.078)	136212	2.50000	2.713
$	18 Nitrobenzene-d5	82	10.388	10.388	(0.882)	155018	2.50000	2.638
	19 Nitrobenzene	77	10.419	10.419	(0.885)	150373	2.50000	2.608
	20 Isophorone	82	10.861	10.861	(0.922)	188366	2.50000	2.554
	21 2-Nitrophenol	139	11.048	11.048	(0.938)	67668	2.50000	2.408
	22 2,4-Dimethylphenol	107	11.082	11.082	(0.941)	275973	5.00000	5.211
	23 Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.958)	128878	2.50000	2.616
	24 Benzoic acid	105	11.226	11.166	(0.953)	255448	10.0000	8.521
	25 2,4-Dichlorophenol	162	11.489	11.489	(0.975)	248784	5.00000	5.870
	26 1,2,4-Trichlorobenzene	180	11.685	11.685	(0.992)	126241	2.50000	2.538
*	27 Naphthalene-d8	136	11.778	11.770	(1.000)	582079	4.00000	
	28 Naphthalene	128	11.816	11.816	(1.003)	394779	2.50000	2.560
	29 4-Chloroaniline	127	11.940	11.940	(1.014)	311237	5.00000	5.174
	30 Hexachlorobutadiene	225	12.172	12.172	(1.033)	73952	2.50000	2.537
	31 4-Chloro-3-methylphenol	107	12.876	12.876	(1.093)	235798	5.00000	5.140
	32 2-Methylnaphthalene	142	13.201	13.201	(1.121)	287604	2.50000	2.584
	33 Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	146958	5.00000	5.177

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	156867	5.00000	5.174
	35 2,4,5-Trichlorophenol	196	13.890	13.890	(0.903)	175400	5.00000	5.207
$	36 2-Fluorobiphenyl	172	13.983	13.975	(0.909)	311690	2.50000	2.569
	37 2-Chloronaphthalene	162	14.199	14.191	(0.923)	255513	2.50000	2.601
	38 2-Nitroaniline	65	14.447	14.447	(0.939)	147440	5.00000	5.343
	39 Dimethylphthalate	163	14.873	14.873	(0.967)	256501	2.50000	2.574
	40 Acenaphthylene	152	15.066	15.066	(0.979)	402926	2.50000	2.632
	41 2,6-Dinitrotoluene	165	15.020	15.012	(0.976)	112979	5.00000	5.249
*	42 Acenaphthene-d10	164	15.383	15.383	(1.000)	306729	4.00000	
	43 3-Nitroaniline	138	15.298	15.298	(0.994)	127560	5.00000	5.250
	44 Acenaphthene	153	15.445	15.445	(1.004)	240853	2.50000	2.547
	45 2,4-Dinitrophenol	184	15.515	15.515	(1.009)	95470	10.0000	7.246
	46 Dibenzofuran	168	15.770	15.770	(1.025)	362747	2.50000	2.601
	47 4-Nitrophenol	109	15.600	15.592	(1.014)	72524	5.00000	4.760
	48 2,4-Dinitrotoluene	165	15.824	15.817	(1.029)	155514	5.00000	4.813
	50 Diethylphthalate	149	16.326	16.319	(1.061)	253004	2.50000	2.588
	49 Fluorene	166	16.481	16.481	(1.071)	287640	2.50000	2.622
	51 4-Chlorophenyl-phenylether	204	16.466	16.466	(1.070)	132439	2.50000	2.538
	52 4-Nitroaniline	138	16.566	16.566	(1.077)	90510	5.00000	4.134
	53 4,6-Dinitro-2-methylphenol	198	16.658	16.658	(0.904)	137459	10.0000	8.630
	54 N-Nitrosodiphenylamine	169	16.720	16.712	(0.908)	183659	2.50000	2.630
$	55 2,4,6-Tribromophenol	330	17.021	17.021	(1.106)	50739	3.75000	3.532
	56 4-Bromophenyl-phenylether	248	17.476	17.476	(0.949)	76926	2.50000	2.633
	57 Hexachlorobenzene	284	17.793	17.793	(0.966)	79507	2.50000	2.596
	58 Pentachlorophenol	266	18.149	18.149	(0.985)	82114	5.00000	4.494
*	59 Phenanthrene-d10	188	18.420	18.420	(1.000)	522311	4.00000	
	60 Phenanthrene	178	18.466	18.466	(1.003)	367912	2.50000	2.583
	61 Anthracene	178	18.559	18.559	(1.008)	364097	2.50000	2.665
	62 Carbazole	167	18.884	18.884	(1.025)	320923	2.50000	2.621
	63 Di-n-butylphthalate	149	19.665	19.666	(1.068)	388084	2.50000	2.363
	64 Fluoranthene	202	20.841	20.841	(0.889)	377104	2.50000	2.634
	65 Pyrene	202	21.267	21.267	(0.907)	384702	2.50000	2.620
$	66 Terphenyl-d14	244	21.545	21.538	(0.919)	288420	2.50000	2.615
	67 Butylbenzylphthalate	149	22.459	22.460	(0.958)	123600	2.50000	2.364
	68 Benzo(a)anthracene	228	23.419	23.419	(0.999)	330796	2.50000	2.630
*	69 Chrysene-d12	240	23.450	23.450	(1.000)	356282	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.373	23.373	(0.997)	311978	7.50000	7.745
	71 Chrysene	228	23.497	23.489	(1.002)	313344	2.50000	2.550
	72 bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	172996	2.50000	2.503
*	134 Di-n-octylphthalate-d4	153	24.480	24.480	(1.000)	471925	4.00000	
	73 Di-n-octylphthalate	149	24.495	24.488	(1.001)	311915	2.50000	2.526
	74 Benzo(b)fluoranthene	252	25.370	25.362	(0.969)	353167	2.50000	2.590(H)
	75 Benzo(k)fluoranthene	252	25.417	25.409	(0.971)	351229	2.50000	2.536
	76 Benzo(a)pyrene	252	26.059	26.052	(0.995)	320887	2.50000	2.632
*	77 Perylene-d12	264	26.183	26.183	(1.000)	420725	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.998	28.990	(1.107)	418167	2.50000	2.696
	79 Dibenzo(a,h)anthracene	278	29.021	29.005	(1.108)	347350	2.50000	2.697
	80 Benzo(g,h,i)perylene	276	29.836	29.821	(1.140)	356933	2.50000	2.659
	90 N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	165395	5.00000	5.406
	91 Aniline	93	8.752	8.752	(0.941)	348101	5.00000	5.197
	93 Benzidine	184	21.066	21.066	(0.898)	314268	5.00000	5.344
	103 Pyridine	79	4.959	4.997	(0.533)	256226	5.00000	5.453
	105 1-methylnaphthalene	142	13.425	13.425	(1.140)	261060	2.50000	2.560
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.789	16.789	(1.091)	284356	2.50000	2.604

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.370	25.409	(0.969)	673447	5.00000	5.114
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	82842	2.50000	2.640

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031505.D
Lab Smp Id: SLC0228-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	158570	-7.56
27 Naphthalene-d8	624466	312233	1248932	582079	-6.79
42 Acenaphthene-d10	337226	168613	674452	306729	-9.04
59 Phenanthrene-d10	572849	286425	1145698	522311	-8.82
69 Chrysene-d12	347068	173534	694136	356282	2.65
134 Di-n-octylphthala	500317	250159	1000634	471925	-5.67
77 Perylene-d12	421549	210775	843098	420725	-0.20

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	0.00

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

REVIEW SUMMARY FOR FILE - NT10031505.D

Lab ID: SLC0228-CAL4
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 22:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.000	0.9532	Benzoic acid

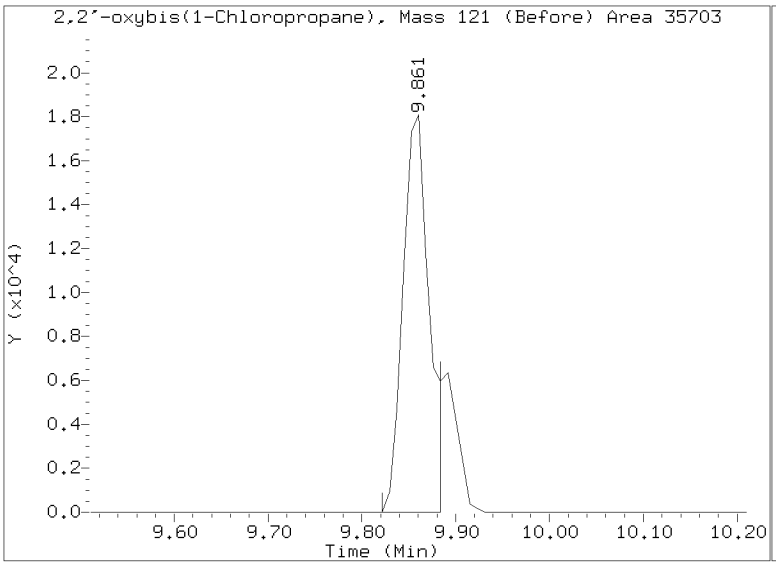
RRT check based on Ccal File: NT10031508.D

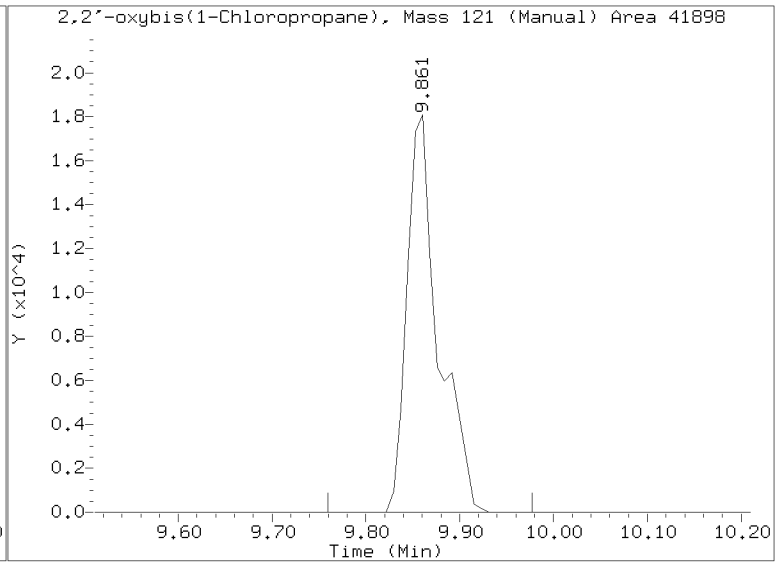
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

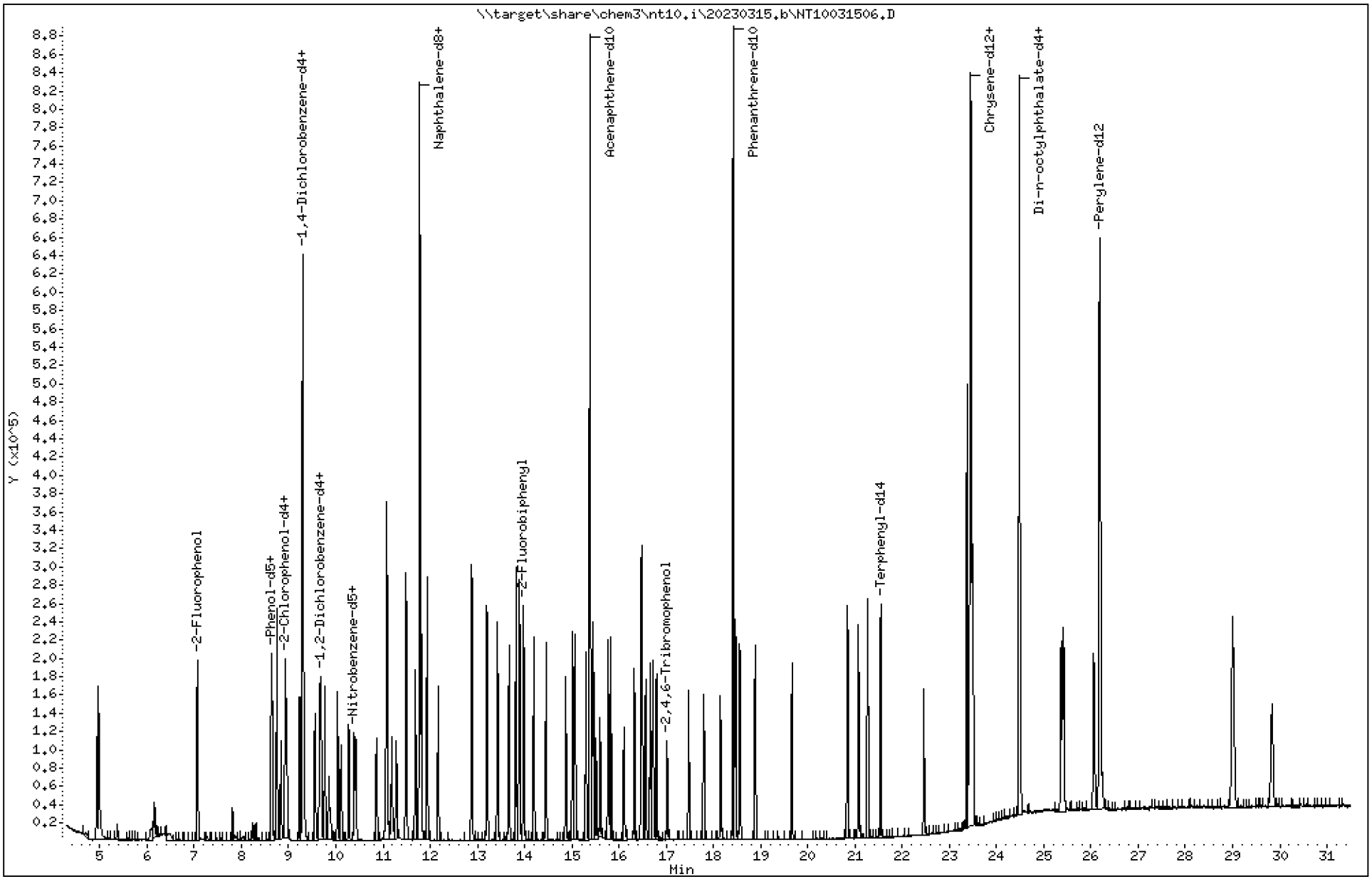
Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031505.D
Injection Date: 15-MAR-2023 22:28
Lab ID:SLC0228-CAL4 Client ID:
Report Date: 03/16/2023 12:20





Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031506.D
Date : 15-MAR-2023 23:06
Client ID:
Sample Info: SLC0228-CAL3

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031506.D
Lab Smp Id: SLC0228-CAL3
Inj Date : 15-MAR-2023 23:06
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL3
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.067	7.068	(0.761)	81829	1.50000	1.571
$	2 Phenol-d5	99	8.636	8.636	(0.929)	104538	1.50000	1.530
	3 Phenol	94	8.651	8.652	(0.931)	74885	1.00000	1.055
$	5 2-Chlorophenol-d4	132	8.929	8.930	(0.961)	89430	1.50000	1.533
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.951)	54831	1.00000	1.041
	6 2-Chlorophenol	128	8.960	8.961	(0.964)	61317	1.00000	1.009
	7 1,3-Dichlorobenzene	146	9.239	9.231	(0.994)	66405	1.00000	1.033
*	8 1,4-Dichlorobenzene-d4	152	9.293	9.293	(1.000)	172257	4.00000	
	9 1,4-Dichlorobenzene	146	9.324	9.325	(1.003)	64857	1.00000	1.045
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.039)	44150	1.00000	1.053
	12 1,2-Dichlorobenzene	146	9.681	9.682	(1.042)	63657	1.00000	1.042
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	33846	1.00000	1.015
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.061)	18563	1.00000	1.035(M)
	13 2-Methylphenol	108	9.767	9.767	(1.051)	54013	1.00000	1.043
	17 Hexachloroethane	117	10.271	10.271	(1.105)	25979	1.00000	1.020
	16 N-Nitroso-di-n-propylamine	70	10.108	10.108	(1.088)	42146	1.00000	1.031
	15 4-Methylphenol	108	10.031	10.031	(1.079)	56323	1.00000	1.033
$	18 Nitrobenzene-d5	82	10.388	10.388	(0.882)	64177	1.00000	1.016
	19 Nitrobenzene	77	10.419	10.419	(0.885)	64368	1.00000	1.038
	20 Isophorone	82	10.861	10.861	(0.922)	76637	1.00000	0.9663
	21 2-Nitrophenol	139	11.047	11.048	(0.938)	24076	1.00000	0.7981
	22 2,4-Dimethylphenol	107	11.081	11.082	(0.941)	117551	2.00000	2.064
	23 Bis(2-Chloroethoxy)methane	93	11.284	11.285	(0.958)	55470	1.00000	1.047
	24 Benzoic acid	105	11.182	11.166	(0.950)	66707	4.00000	2.100(H)
	25 2,4-Dichlorophenol	162	11.488	11.489	(0.975)	91015	2.00000	1.997
	26 1,2,4-Trichlorobenzene	180	11.684	11.685	(0.992)	55650	1.00000	1.040
*	27 Naphthalene-d8	136	11.777	11.770	(1.000)	625894	4.00000	
	28 Naphthalene	128	11.815	11.816	(1.003)	168411	1.00000	1.016
	29 4-Chloroaniline	127	11.939	11.940	(1.014)	131129	2.00000	2.027
	30 Hexachlorobutadiene	225	12.171	12.172	(1.033)	32792	1.00000	1.046
	31 4-Chloro-3-methylphenol	107	12.875	12.876	(1.093)	95632	2.00000	1.939
	32 2-Methylnaphthalene	142	13.200	13.201	(1.121)	120977	1.00000	1.011
	33 Hexachlorocyclopentadiene	237	13.664	13.665	(0.888)	55248	2.00000	1.804

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.819	13.820	(0.898)	61689	2.00000	1.886
	35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	68648	2.00000	1.889
$	36	2-Fluorobiphenyl	172	13.981	13.975	(0.909)	133800	1.00000	1.022
	37	2-Chloronaphthalene	162	14.198	14.191	(0.923)	107713	1.00000	1.016
	38	2-Nitroaniline	65	14.454	14.447	(0.940)	56493	2.00000	1.897
	39	Dimethylphthalate	163	14.872	14.873	(0.967)	111361	1.00000	1.036
	40	Acenaphthylene	152	15.073	15.066	(0.980)	170871	1.00000	1.034
	41	2,6-Dinitrotoluene	165	15.019	15.012	(0.976)	44313	2.00000	1.908
*	42	Acenaphthene-d10	164	15.382	15.383	(1.000)	330997	4.00000	
	43	3-Nitroaniline	138	15.297	15.298	(0.994)	50298	2.00000	1.918
	44	Acenaphthene	153	15.452	15.445	(1.005)	103833	1.00000	1.017
	45	2,4-Dinitrophenol	184	15.514	15.515	(1.009)	25006	4.00000	1.778
	46	Dibenzofuran	168	15.769	15.770	(1.025)	152427	1.00000	1.013
	47	4-Nitrophenol	109	15.599	15.592	(1.014)	26972	2.00000	1.637
	48	2,4-Dinitrotoluene	165	15.823	15.817	(1.029)	61485	2.00000	1.754
	50	Diethylphthalate	149	16.325	16.319	(1.061)	107688	1.00000	1.021
	49	Fluorene	166	16.488	16.481	(1.072)	122197	1.00000	1.032
	51	4-Chlorophenyl-phenylether	204	16.472	16.466	(1.071)	56790	1.00000	1.009
	52	4-Nitroaniline	138	16.565	16.566	(1.077)	46355	2.00000	1.962
	53	4,6-Dinitro-2-methylphenol	198	16.657	16.658	(0.904)	45458	4.00000	2.638
	54	N-Nitrosodiphenylamine	169	16.719	16.712	(0.908)	78992	1.00000	1.039
$	55	2,4,6-Tribromophenol	330	17.020	17.021	(1.106)	18793	1.50000	1.208
	56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	32247	1.00000	1.014
	57	Hexachlorobenzene	284	17.799	17.793	(0.966)	35208	1.00000	1.056
	58	Pentachlorophenol	266	18.148	18.149	(0.985)	28829	2.00000	1.458
*	59	Phenanthrene-d10	188	18.419	18.420	(1.000)	568685	4.00000	
	60	Phenanthrene	178	18.465	18.466	(1.003)	159357	1.00000	1.028
	61	Anthracene	178	18.558	18.559	(1.008)	151450	1.00000	1.018
	62	Carbazole	167	18.883	18.884	(1.025)	141694	1.00000	1.063
	63	Di-n-butylphthalate	149	19.664	19.666	(1.068)	154356	1.00000	0.8619
	64	Fluoranthene	202	20.840	20.841	(0.889)	166676	1.00000	0.9718
	65	Pyrene	202	21.266	21.267	(0.907)	174023	1.00000	0.9891
$	66	Terphenyl-d14	244	21.544	21.538	(0.919)	135363	1.00000	1.024
	67	Butylbenzylphthalate	149	22.458	22.460	(0.958)	51900	1.00000	0.8366
	68	Benzo(a)anthracene	228	23.418	23.419	(0.999)	152617	1.00000	1.013
*	69	Chrysene-d12	240	23.449	23.450	(1.000)	426836	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.372	23.373	(0.997)	145183	3.00000	3.008
	71	Chrysene	228	23.496	23.489	(1.002)	149535	1.00000	1.016
	72	bis(2-Ethylhexyl)phthalate	149	23.480	23.474	(0.959)	73435	1.00000	0.9036
*	134	Di-n-octylphthalate-d4	153	24.479	24.480	(1.000)	555437	4.00000	
	73	Di-n-octylphthalate	149	24.487	24.488	(1.000)	146103	1.00000	1.005
	74	Benzo(b)fluoranthene	252	25.369	25.362	(0.969)	155706	1.00000	0.9821(H)
	75	Benzo(k)fluoranthene	252	25.416	25.409	(0.971)	162831	1.00000	1.011
	76	Benzo(a)pyrene	252	26.058	26.052	(0.995)	137233	1.00000	0.9682
*	77	Perylene-d12	264	26.182	26.183	(1.000)	489106	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	29.004	28.990	(1.108)	172403	1.00000	0.9560
	79	Dibenzo(a,h)anthracene	278	29.012	29.005	(1.108)	143905	1.00000	0.9612
	80	Benzo(g,h,i)perylene	276	29.835	29.821	(1.140)	146972	1.00000	0.9417
	90	N-Nitrosodimethylamine	74	4.935	4.936	(0.531)	69420	2.00000	2.089
	91	Aniline	93	8.752	8.752	(0.942)	149023	2.00000	2.048
	93	Benzidine	184	21.072	21.066	(0.899)	143586	2.00000	2.038
	103	Pyridine	79	4.974	4.997	(0.535)	109408	2.00000	2.144
	105	1-methylnaphthalene	142	13.432	13.425	(1.141)	111144	1.00000	1.014
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.796	16.789	(1.092)	118247	1.00000	1.003

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.416	25.409	(0.971)	306444	2.00000	2.002
120 2,3,4,6-Tetrachlorophenol	232	16.109	16.103	(1.047)	26430	1.00000	0.7900

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031506.D
Lab Smp Id: SLC0228-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	172257	0.42
27 Naphthalene-d8	624466	312233	1248932	625894	0.23
42 Acenaphthene-d10	337226	168613	674452	330997	-1.85
59 Phenanthrene-d10	572849	286425	1145698	568685	-0.73
69 Chrysene-d12	347068	173534	694136	426836	22.98
134 Di-n-octylphthala	500317	250159	1000634	555437	11.02
77 Perylene-d12	421549	210775	843098	489106	16.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.29	-0.09
27 Naphthalene-d8	11.78	11.28	12.28	11.78	-0.00
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	-0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	-0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	-0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	-0.00

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

REVIEW SUMMARY FOR FILE - NT10031506.D

Lab ID: SLC0228-CAL3
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 23:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.000	0.9496	Benzoic acid

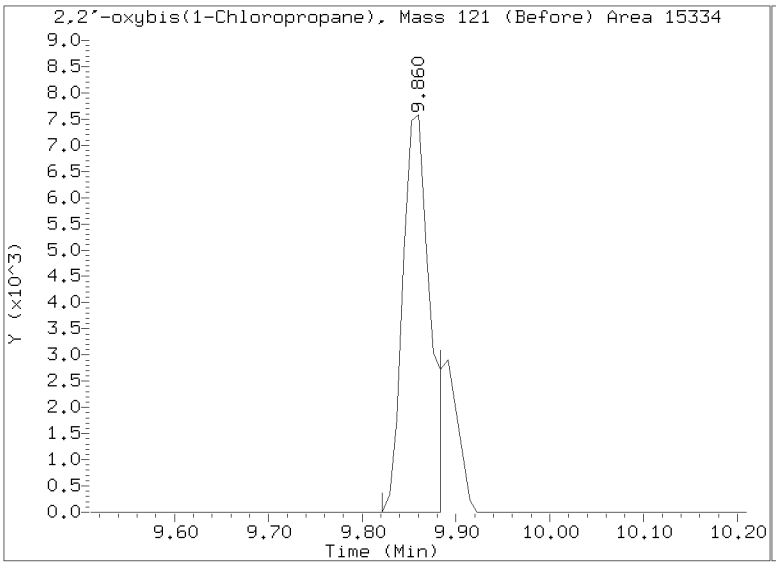
RRT check based on Ccal File: NT10031508.D

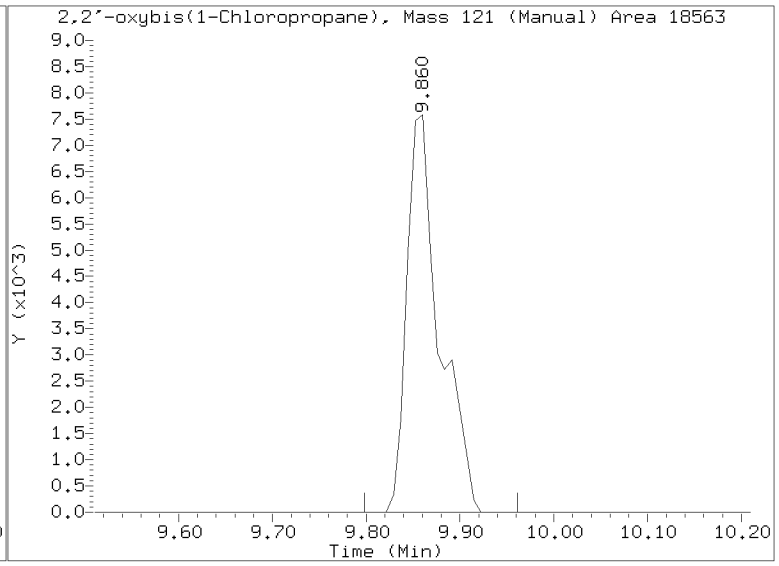
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031506.D
Injection Date: 15-MAR-2023 23:06
Lab ID:SLC0228-CAL3 Client ID:
Report Date: 03/16/2023 12:20





Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031507.D

Page 1

Date : 15-MAR-2023 23:44

Client ID:

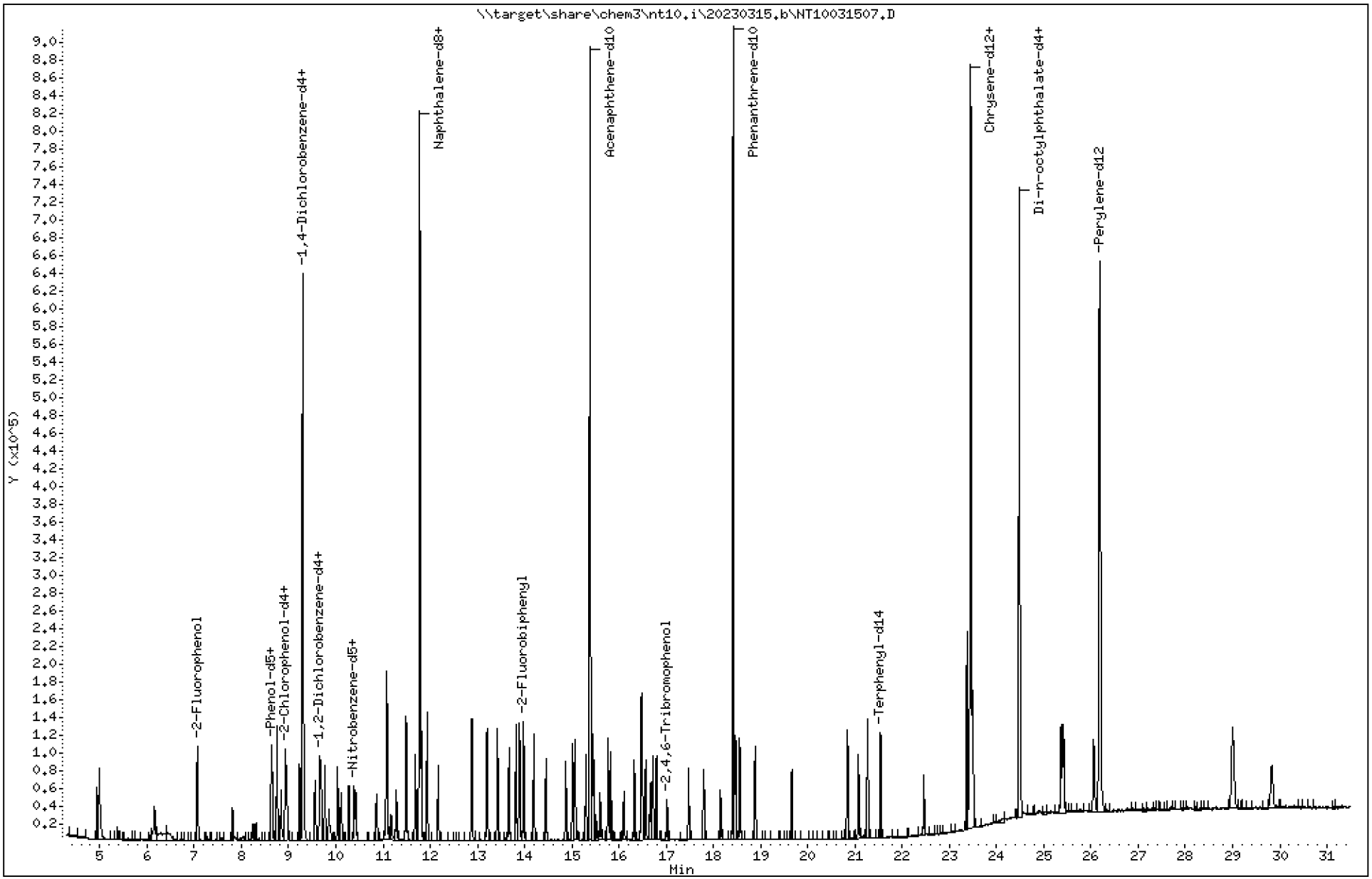
Instrument: nt10.i

Sample Info: SLC0228-CAL2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031507.D
Lab Smp Id: SLC0228-CAL2
Inj Date : 15-MAR-2023 23:44
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.068	7.068	(0.760)	41713	0.75000	0.7823
$	2 Phenol-d5	99	8.636	8.636	(0.928)	52580	0.75000	0.7517
	3 Phenol	94	8.659	8.652	(0.931)	38448	0.50000	0.5289
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.960)	44808	0.75000	0.7501
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	27479	0.50000	0.5097
	6 2-Chlorophenol	128	8.960	8.961	(0.963)	31239	0.50000	0.5021
	7 1,3-Dichlorobenzene	146	9.231	9.231	(0.992)	35392	0.50000	0.5381
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	176328	4.00000	
	9 1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	32578	0.50000	0.5127
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.038)	21602	0.50000	0.5036
	12 1,2-Dichlorobenzene	146	9.681	9.682	(1.041)	32678	0.50000	0.5226
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	16132	0.50000	0.4728
	14 2,2'-oxybis(1-Chloropropane)	121	9.852	9.860	(1.059)	9403	0.50000	0.5120(M)
	13 2-Methylphenol	108	9.767	9.767	(1.050)	26839	0.50000	0.5065
	17 Hexachloroethane	117	10.271	10.271	(1.104)	13005	0.50000	0.4989
	16 N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	20902	0.50000	0.4996
	15 4-Methylphenol	108	10.031	10.031	(1.078)	27419	0.50000	0.4911
$	18 Nitrobenzene-d5	82	10.388	10.388	(0.882)	31837	0.50000	0.4937
	19 Nitrobenzene	77	10.419	10.419	(0.885)	32321	0.50000	0.5108
	20 Isophorone	82	10.861	10.861	(0.922)	37232	0.50000	0.4599
	21 2-Nitrophenol	139	11.047	11.048	(0.938)	10858	0.50000	0.3528
	22 2,4-Dimethylphenol	107	11.081	11.082	(0.941)	60037	1.00000	1.033
	23 Bis(2-Chloroethoxy)methane	93	11.284	11.285	(0.958)	28288	0.50000	0.5231
	24 Benzoic acid	105	11.166	11.166	(0.948)	22417	2.00000	0.6937(MH)
	25 2,4-Dichlorophenol	162	11.488	11.489	(0.975)	44450	1.00000	0.9557
	26 1,2,4-Trichlorobenzene	180	11.684	11.685	(0.992)	28877	0.50000	0.5289
*	27 Naphthalene-d8	136	11.777	11.770	(1.000)	638835	4.00000	
	28 Naphthalene	128	11.815	11.816	(1.003)	87181	0.50000	0.5151
	29 4-Chloroaniline	127	11.939	11.940	(1.014)	66172	1.00000	1.002
	30 Hexachlorobutadiene	225	12.171	12.172	(1.033)	16273	0.50000	0.5087
	31 4-Chloro-3-methylphenol	107	12.883	12.876	(1.094)	47168	1.00000	0.9368
	32 2-Methylnaphthalene	142	13.208	13.201	(1.122)	61248	0.50000	0.5015
	33 Hexachlorocyclopentadiene	237	13.672	13.665	(0.889)	26827	1.00000	0.8689

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.819	13.820	(0.898)	28405	1.00000	0.8614
	35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	32893	1.00000	0.8978
$	36	2-Fluorobiphenyl	172	13.982	13.975	(0.909)	68004	0.50000	0.5153
	37	2-Chloronaphthalene	162	14.198	14.191	(0.923)	55073	0.50000	0.5154
	38	2-Nitroaniline	65	14.446	14.447	(0.939)	26440	1.00000	0.8809
	39	Dimethylphthalate	163	14.879	14.873	(0.967)	57101	0.50000	0.5269
	40	Acenaphthylene	152	15.065	15.066	(0.979)	86568	0.50000	0.5199
	41	2,6-Dinitrotoluene	165	15.019	15.012	(0.976)	20170	1.00000	0.8615
*	42	Acenaphthene-d10	164	15.382	15.383	(1.000)	333617	4.00000	
	43	3-Nitroaniline	138	15.297	15.298	(0.994)	23424	1.00000	0.8864
	44	Acenaphthene	153	15.452	15.445	(1.005)	52615	0.50000	0.5115
	45	2,4-Dinitrophenol	184	15.514	15.515	(1.009)	6815	2.00000	0.4819
	46	Dibenzofuran	168	15.769	15.770	(1.025)	78914	0.50000	0.5202
	47	4-Nitrophenol	109	15.599	15.592	(1.014)	10811	1.00000	0.6506
	48	2,4-Dinitrotoluene	165	15.823	15.817	(1.029)	27229	1.00000	0.7695
	50	Diethylphthalate	149	16.326	16.319	(1.061)	52123	0.50000	0.4902
	49	Fluorene	166	16.488	16.481	(1.072)	60511	0.50000	0.5070
	51	4-Chlorophenyl-phenylether	204	16.472	16.466	(1.071)	28771	0.50000	0.5070
	52	4-Nitroaniline	138	16.565	16.566	(1.077)	22911	1.00000	0.9621
	53	4,6-Dinitro-2-methylphenol	198	16.665	16.658	(0.905)	16474	2.00000	0.9166
	54	N-Nitrosodiphenylamine	169	16.719	16.712	(0.908)	40999	0.50000	0.5160
$	55	2,4,6-Tribromophenol	330	17.020	17.021	(1.106)	8451	0.75000	0.5386
	56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	15854	0.50000	0.4770
	57	Hexachlorobenzene	284	17.792	17.793	(0.966)	17123	0.50000	0.4914
	58	Pentachlorophenol	266	18.148	18.149	(0.985)	11460	1.00000	0.5555
*	59	Phenanthrene-d10	188	18.419	18.420	(1.000)	594262	4.00000	
	60	Phenanthrene	178	18.465	18.466	(1.003)	82180	0.50000	0.5072
	61	Anthracene	178	18.558	18.559	(1.008)	75192	0.50000	0.4837
	62	Carbazole	167	18.883	18.884	(1.025)	70986	0.50000	0.5096
	63	Di-n-butylphthalate	149	19.664	19.666	(1.068)	69653	0.50000	0.3720
	64	Fluoranthene	202	20.840	20.841	(0.889)	81400	0.50000	0.4730
	65	Pyrene	202	21.266	21.267	(0.907)	86158	0.50000	0.4881
$	66	Terphenyl-d14	244	21.545	21.538	(0.919)	66564	0.50000	0.5021
	67	Butylbenzylphthalate	149	22.458	22.460	(0.958)	23199	0.50000	0.3738
	68	Benzo(a)anthracene	228	23.426	23.419	(0.999)	76435	0.50000	0.5056
*	69	Chrysene-d12	240	23.449	23.450	(1.000)	428263	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.372	23.373	(0.997)	66937	1.50000	1.382
	71	Chrysene	228	23.496	23.489	(1.002)	76545	0.50000	0.5183
	72	bis(2-Ethylhexyl)phthalate	149	23.480	23.474	(0.959)	29596	0.50000	0.3811
*	134	Di-n-octylphthalate-d4	153	24.479	24.480	(1.000)	530893	4.00000	
	73	Di-n-octylphthalate	149	24.487	24.488	(1.000)	70499	0.50000	0.5074
	74	Benzo(b)fluoranthene	252	25.369	25.362	(0.969)	77837	0.50000	0.5012(H)
	75	Benzo(k)fluoranthene	252	25.408	25.409	(0.970)	76548	0.50000	0.4854
	76	Benzo(a)pyrene	252	26.059	26.052	(0.995)	65959	0.50000	0.4750
*	77	Perylene-d12	264	26.182	26.183	(1.000)	479116	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.997	28.990	(1.107)	79229	0.50000	0.4485
	79	Dibenzo(a,h)anthracene	278	29.012	29.005	(1.108)	66422	0.50000	0.4529
	80	Benzo(g,h,i)perylene	276	29.828	29.821	(1.139)	67819	0.50000	0.4436
	90	N-Nitrosodimethylamine	74	4.936	4.936	(0.531)	37892	1.00000	1.114
	91	Aniline	93	8.752	8.752	(0.941)	78232	1.00000	1.050
	93	Benzidine	184	21.073	21.066	(0.899)	63059	1.00000	0.8921
	103	Pyridine	79	4.982	4.997	(0.536)	58765	1.00000	1.125
	105	1-methylnaphthalene	142	13.424	13.425	(1.140)	56774	0.50000	0.5074
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.796	16.789	(1.092)	61206	0.50000	0.5153

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.408	25.409	(0.970)	149145	1.00000	0.9946
120 2,3,4,6-Tetrachlorophenol	232	16.101	16.103	(1.047)	11604	0.50000	0.3451

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031507.D
Lab Smp Id: SLC0228-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	176328	2.79
27 Naphthalene-d8	624466	312233	1248932	638835	2.30
42 Acenaphthene-d10	337226	168613	674452	333617	-1.07
59 Phenanthrene-d10	572849	286425	1145698	594262	3.74
69 Chrysene-d12	347068	173534	694136	428263	23.39
134 Di-n-octylphthala	500317	250159	1000634	530893	6.11
77 Perylene-d12	421549	210775	843098	479116	13.66

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.00
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	0.00

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

REVIEW SUMMARY FOR FILE - NT10031507.D

Lab ID: SLC0228-CAL2
nt10.i, 20230315.b\ABN.m,   15-MAR-2023 23:44

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.948	0.000	0.9481	Benzoic acid

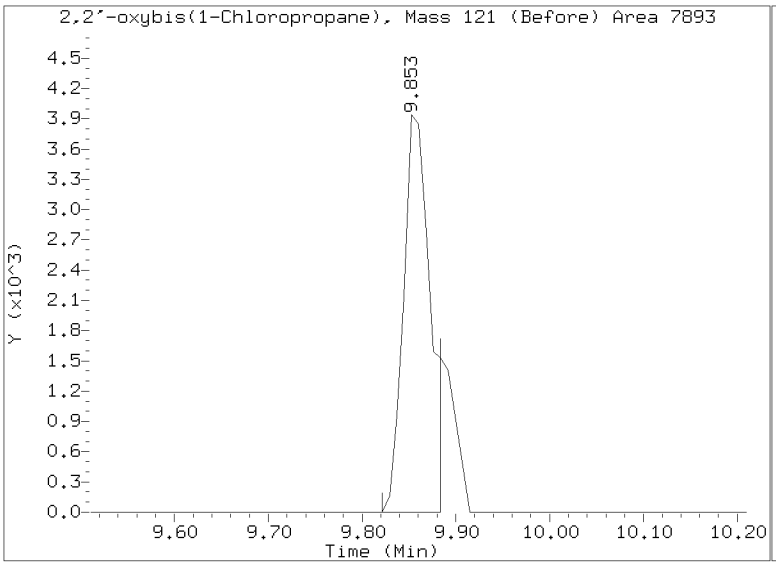
RRT check based on Ccal File: NT10031508.D

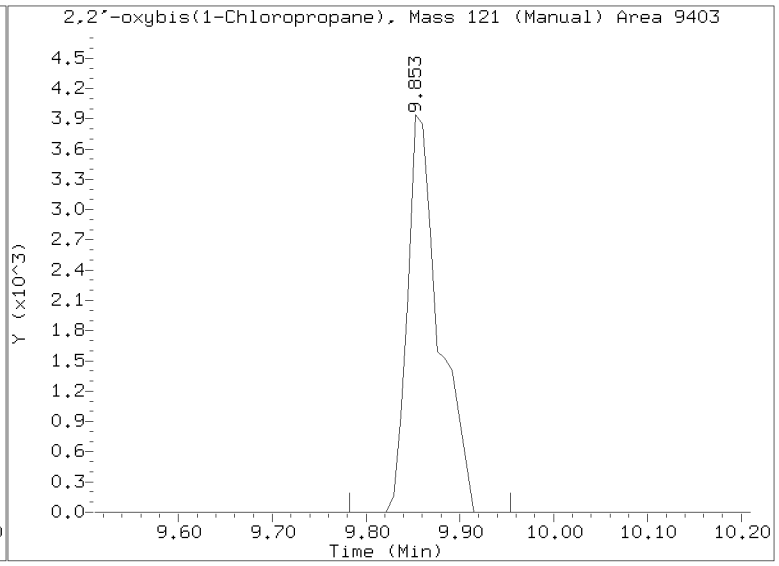
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

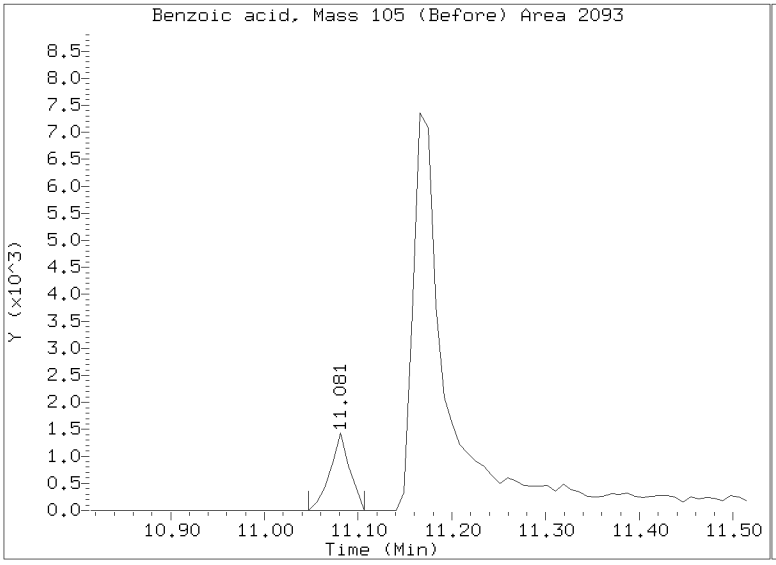
* Only compounds listed in the work order have been verified by the analyst *

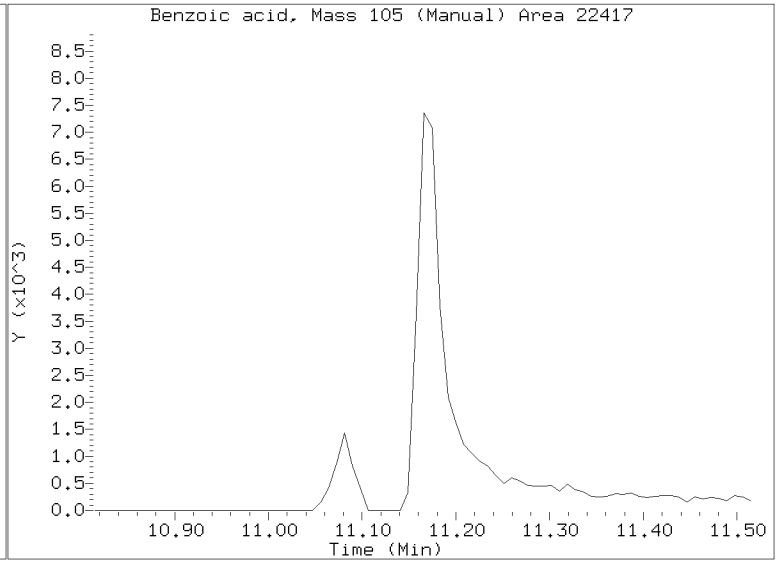
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031507.D
Injection Date: 15-MAR-2023 23:44
Lab ID:SLC0228-CAL2 Client ID:
Report Date: 03/16/2023 12:20



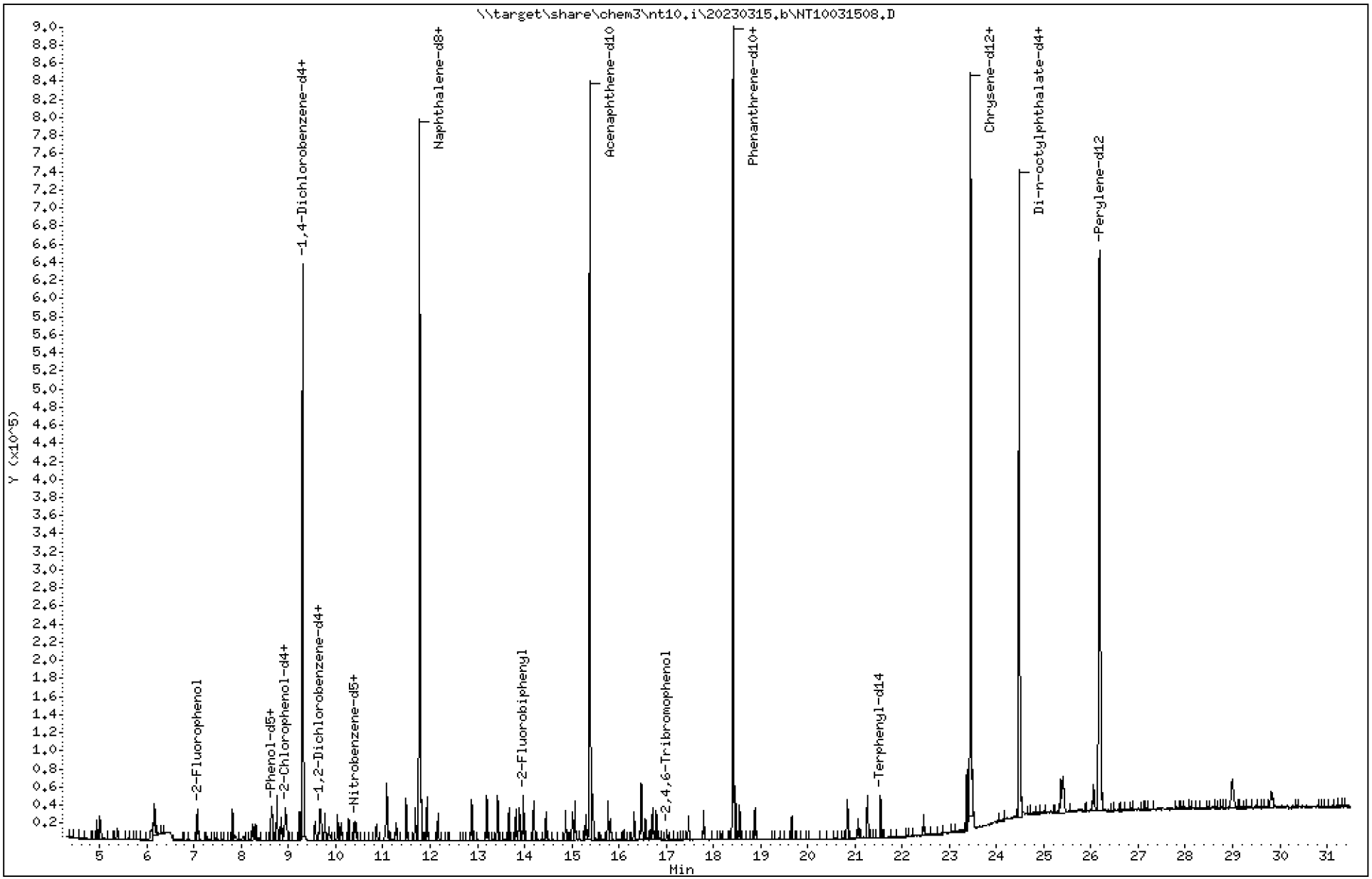






Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031508.D
Date : 16-MAR-2023 00:22
Client ID:
Sample Info: SLC0228-CAL1

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031508.D
Lab Smp Id: SLC0228-CAL1
Inj Date : 16-MAR-2023 00:22
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-CAL1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.068	7.068	(0.761)	15217	0.30000	0.2902
$	2 Phenol-d5	99	8.636	8.636	(0.929)	19316	0.30000	0.2808
	3 Phenol	94	8.652	8.652	(0.931)	14062	0.20000	0.1967
$	5 2-Chlorophenol-d4	132	8.930	8.930	(0.961)	16402	0.30000	0.2792
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.951)	11069	0.20000	0.2088
	6 2-Chlorophenol	128	8.961	8.961	(0.964)	11429	0.20000	0.1868
	7 1,3-Dichlorobenzene	146	9.231	9.231	(0.993)	13532	0.20000	0.2092
*	8 1,4-Dichlorobenzene-d4	152	9.293	9.293	(1.000)	173382	4.00000	
	9 1,4-Dichlorobenzene	146	9.325	9.325	(1.003)	12851	0.20000	0.2057
$	10 1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.039)	8167	0.20000	0.1936(M)
	12 1,2-Dichlorobenzene	146	9.682	9.682	(1.042)	12650	0.20000	0.2057
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	5351	0.20000	0.1595
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.061)	3773	0.20000	0.2090(M)
	13 2-Methylphenol	108	9.767	9.767	(1.051)	9529	0.20000	0.1829
	17 Hexachloroethane	117	10.271	10.271	(1.105)	5030	0.20000	0.1962
	16 N-Nitroso-di-n-propylamine	70	10.108	10.108	(1.088)	7690	0.20000	0.1869
	15 4-Methylphenol	108	10.031	10.031	(1.079)	9916	0.20000	0.1806
$	18 Nitrobenzene-d5	82	10.388	10.388	(0.883)	11367	0.20000	0.1808
	19 Nitrobenzene	77	10.419	10.419	(0.885)	11856	0.20000	0.1922
	20 Isophorone	82	10.861	10.861	(0.923)	13500	0.20000	0.1711
	21 2-Nitrophenol	139	11.048	11.048	(0.939)	3314	0.20000	0.1105
	22 2,4-Dimethylphenol	107	11.082	11.082	(0.942)	21781	0.40000	0.3844
	23 Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.959)	10633	0.20000	0.2017
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	11.489	11.489	(0.976)	14498	0.40000	0.3198
	26 1,2,4-Trichlorobenzene	180	11.685	11.685	(0.993)	11312	0.20000	0.2125
*	27 Naphthalene-d8	136	11.770	11.770	(1.000)	622719	4.00000	
	28 Naphthalene	128	11.816	11.816	(1.004)	34693	0.20000	0.2103
	29 4-Chloroaniline	127	11.940	11.940	(1.014)	23161	0.40000	0.3599
	30 Hexachlorobutadiene	225	12.172	12.172	(1.034)	6358	0.20000	0.2039
	31 4-Chloro-3-methylphenol	107	12.876	12.876	(1.094)	15112	0.40000	0.3079
	32 2-Methylnaphthalene	142	13.201	13.201	(1.122)	23564	0.20000	0.1979
	33 Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	8871	0.40000	0.2963

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	8113	0.40000	0.2538
	35	2,4,5-Trichlorophenol	196	13.890	13.890	(0.903)	10952	0.40000	0.3083
$	36	2-Fluorobiphenyl	172	13.975	13.975	(0.908)	26256	0.20000	0.2052
	37	2-Chloronaphthalene	162	14.191	14.191	(0.923)	21320	0.20000	0.2058
	38	2-Nitroaniline	65	14.447	14.447	(0.939)	7997	0.40000	0.2748
	39	Dimethylphthalate	163	14.873	14.873	(0.967)	21402	0.20000	0.2037
	40	Acenaphthylene	152	15.066	15.066	(0.979)	30956	0.20000	0.1918
	41	2,6-Dinitrotoluene	165	15.012	15.012	(0.976)	6371	0.40000	0.2807
*	42	Acenaphthene-d10	164	15.383	15.383	(1.000)	323444	4.00000	
	43	3-Nitroaniline	138	15.298	15.298	(0.994)	6696	0.40000	0.2614
	44	Acenaphthene	153	15.445	15.445	(1.004)	20741	0.20000	0.2080
	45	2,4-Dinitrophenol	184	15.515	15.515	(1.009)	447	0.80000	0.03263
	46	Dibenzofuran	168	15.770	15.770	(1.025)	29705	0.20000	0.2020
	47	4-Nitrophenol	109	15.592	15.592	(1.014)	2336	0.40000	0.1450
	48	2,4-Dinitrotoluene	165	15.816	15.817	(1.028)	7302	0.40000	0.2127
	50	Diethylphthalate	149	16.319	16.319	(1.061)	19430	0.20000	0.1885
	49	Fluorene	166	16.481	16.481	(1.071)	22739	0.20000	0.1965
	51	4-Chlorophenyl-phenylether	204	16.466	16.466	(1.070)	11288	0.20000	0.2052
	52	4-Nitroaniline	138	16.566	16.566	(1.077)	6775	0.40000	0.2934
	53	4,6-Dinitro-2-methylphenol	198	16.658	16.658	(0.904)	3116	0.80000	0.1772
	54	N-Nitrosodiphenylamine	169	16.712	16.712	(0.907)	15391	0.20000	0.1978
$	55	2,4,6-Tribromophenol	330	17.021	17.021	(1.106)	2409	0.30000	0.1583
	56	4-Bromophenyl-phenylether	248	17.476	17.476	(0.949)	5757	0.20000	0.1768
	57	Hexachlorobenzene	284	17.793	17.793	(0.966)	7271	0.20000	0.2130
	58	Pentachlorophenol	266	18.149	18.149	(0.985)	2441	0.40000	0.1209
*	59	Phenanthrene-d10	188	18.420	18.420	(1.000)	582036	4.00000	
	60	Phenanthrene	178	18.466	18.466	(1.003)	32949	0.20000	0.2076
	61	Anthracene	178	18.559	18.559	(1.008)	27813	0.20000	0.1827
	62	Carbazole	167	18.884	18.884	(1.025)	25881	0.20000	0.1897
	63	Di-n-butylphthalate	149	19.665	19.666	(1.068)	22443	0.20000	0.1223
	64	Fluoranthene	202	20.841	20.841	(0.889)	30231	0.20000	0.1696
	65	Pyrene	202	21.267	21.267	(0.907)	32288	0.20000	0.1766
$	66	Terphenyl-d14	244	21.538	21.538	(0.918)	26268	0.20000	0.1913
	67	Butylbenzylphthalate	149	22.459	22.460	(0.958)	7408	0.20000	0.1154
	68	Benzo(a)anthracene	228	23.419	23.419	(0.999)	30301	0.20000	0.1936
*	69	Chrysene-d12	240	23.450	23.450	(1.000)	443504	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.373	23.373	(0.997)	21879	0.60000	0.4363
	71	Chrysene	228	23.489	23.489	(1.002)	30146	0.20000	0.1971
	72	bis(2-Ethylhexyl)phthalate	149	23.473	23.474	(0.959)	9248	0.20000	0.1169
*	134	Di-n-octylphthalate-d4	153	24.480	24.480	(1.000)	540769	4.00000	
	73	Di-n-octylphthalate	149	24.488	24.488	(1.000)	30690	0.20000	0.2169
	74	Benzo(b)fluoranthene	252	25.362	25.362	(0.969)	28924	0.20000	0.1818(H)
	75	Benzo(k)fluoranthene	252	25.409	25.409	(0.970)	32537	0.20000	0.2014
	76	Benzo(a)pyrene	252	26.052	26.052	(0.995)	24358	0.20000	0.1713
*	77	Perylene-d12	264	26.183	26.183	(1.000)	490725	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.990	28.990	(1.107)	27518	0.20000	0.1521
	79	Dibenzo(a,h)anthracene	278	29.005	29.005	(1.108)	22711	0.20000	0.1512
	80	Benzo(g,h,i)perylene	276	29.821	29.821	(1.139)	24036	0.20000	0.1535
	90	N-Nitrosodimethylamine	74	4.936	4.936	(0.531)	13409	0.40000	0.4009
	91	Aniline	93	8.752	8.752	(0.942)	29775	0.40000	0.4065
	93	Benzidine	184	21.066	21.066	(0.898)	16630	0.40000	0.2272
	103	Pyridine	79	4.997	4.997	(0.538)	19539	0.40000	0.3803
	105	1-methylnaphthalene	142	13.425	13.425	(1.141)	21820	0.20000	0.2000
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.789	16.789	(1.091)	22091	0.20000	0.1918

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.409	25.409	(0.970)	58677	0.40000	0.3820
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	3113	0.20000	0.09564

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031508.D
Lab Smp Id: SLC0228-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	173382	1.07
27 Naphthalene-d8	624466	312233	1248932	622719	-0.28
42 Acenaphthene-d10	337226	168613	674452	323444	-4.09
59 Phenanthrene-d10	572849	286425	1145698	582036	1.60
69 Chrysene-d12	347068	173534	694136	443504	27.79
134 Di-n-octylphthala	500317	250159	1000634	540769	8.09
77 Perylene-d12	421549	210775	843098	490725	16.41

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.29	-0.08
27 Naphthalene-d8	11.78	11.28	12.28	11.77	-0.06
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	0.00

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

REVIEW SUMMARY FOR FILE - NT10031508.D

Lab ID: SLC0228-CAL1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 00:22

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

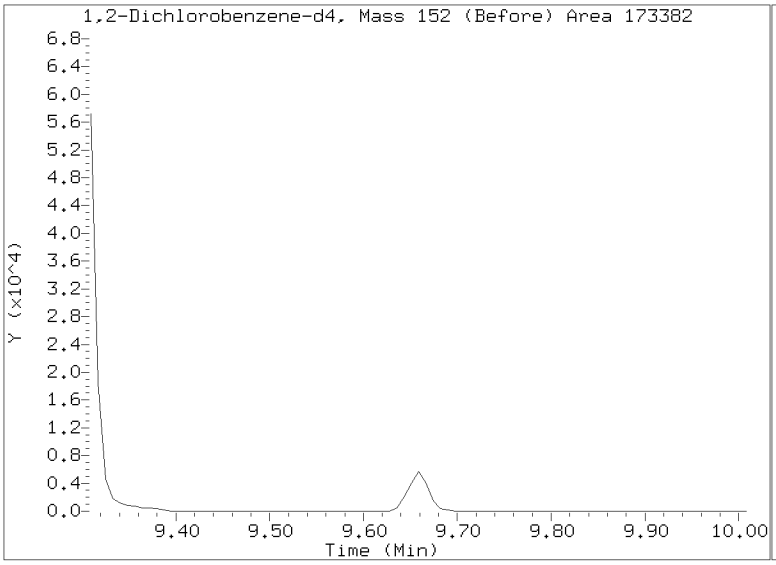
RRT check based on Ccal File: NT10031508.D

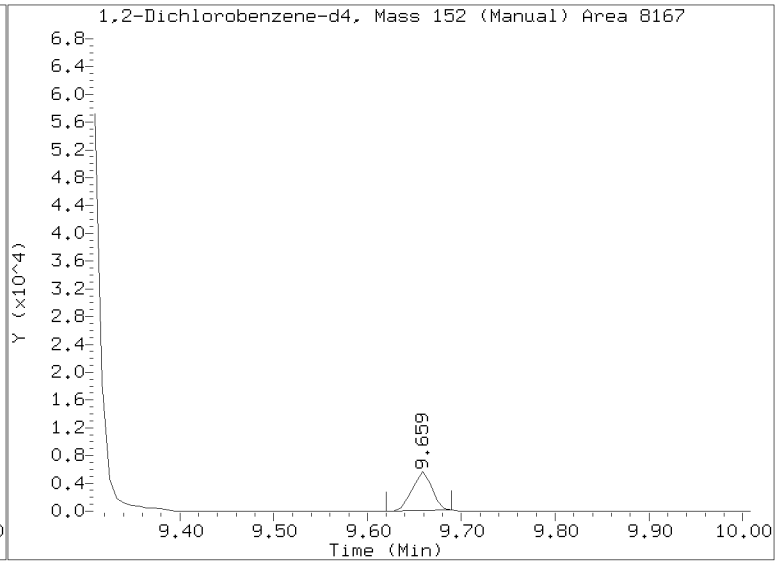
On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

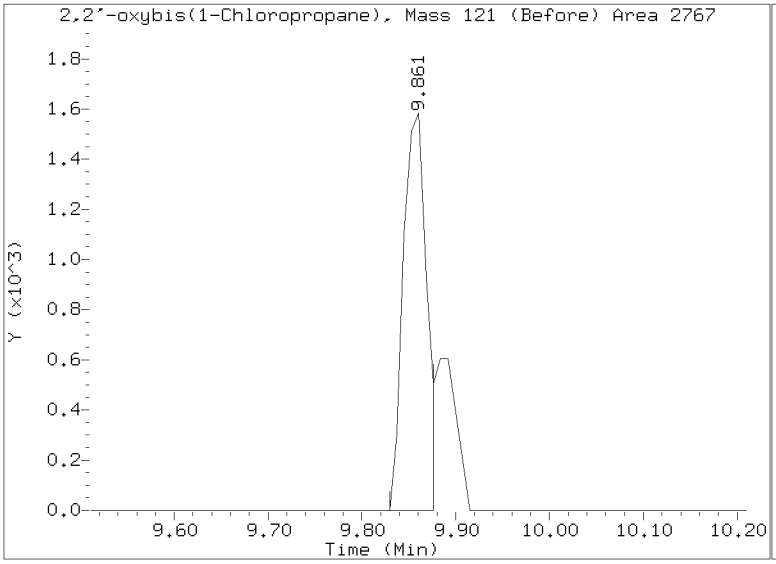
* Only compounds listed in the work order have been verified by the analyst *

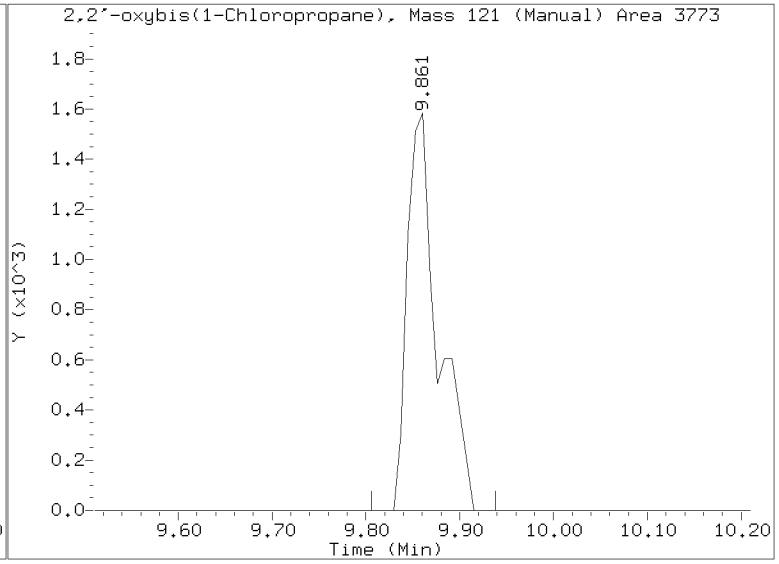
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/NT10031508.D
Injection Date: 16-MAR-2023 00:22
Lab ID:SLC0228-CAL1 Client ID:
Report Date: 03/16/2023 12:20







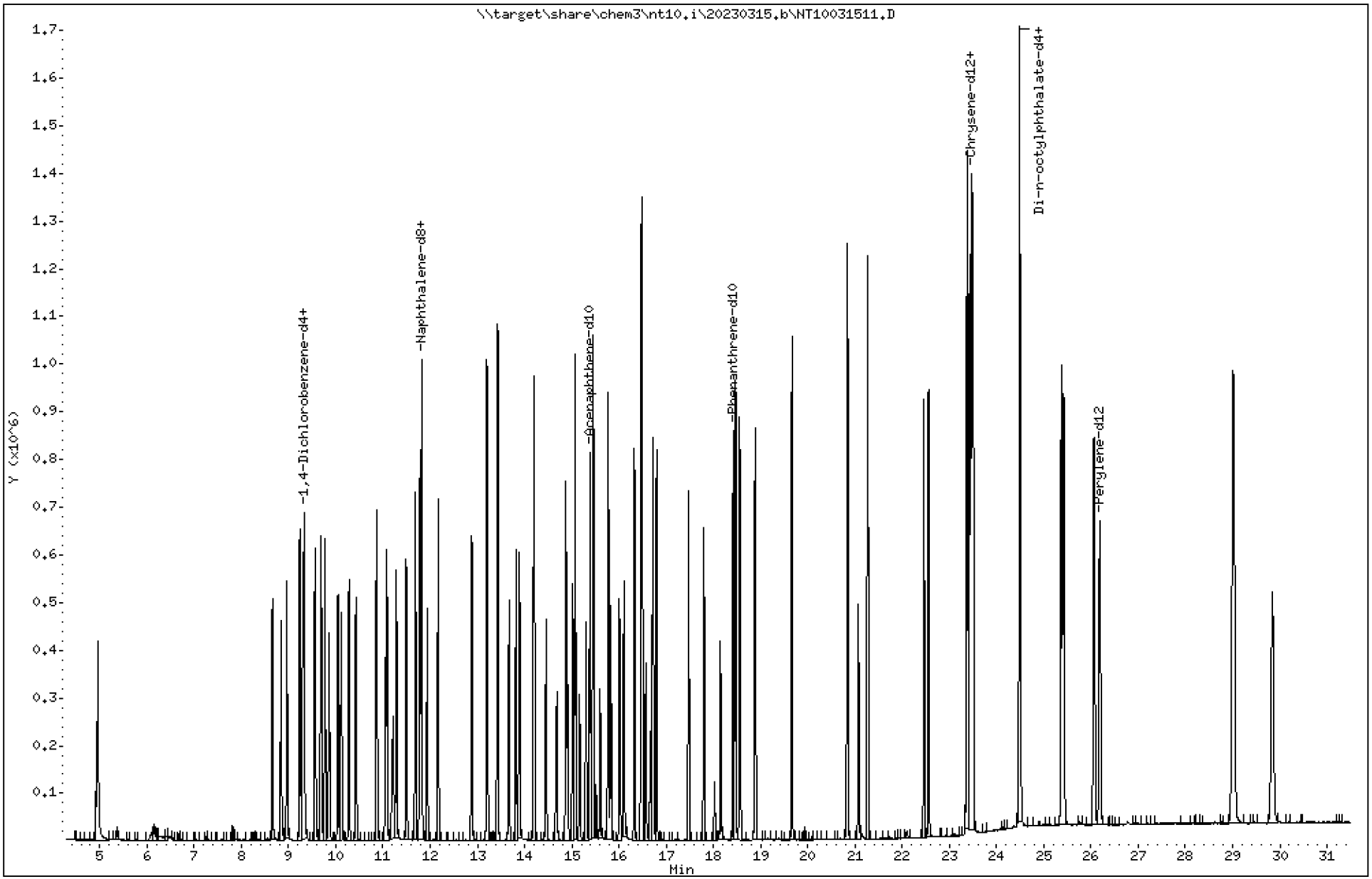


Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Date : 16-MAR-2023 02:16
Client ID:
Sample Info: SLC0228-SCV1

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

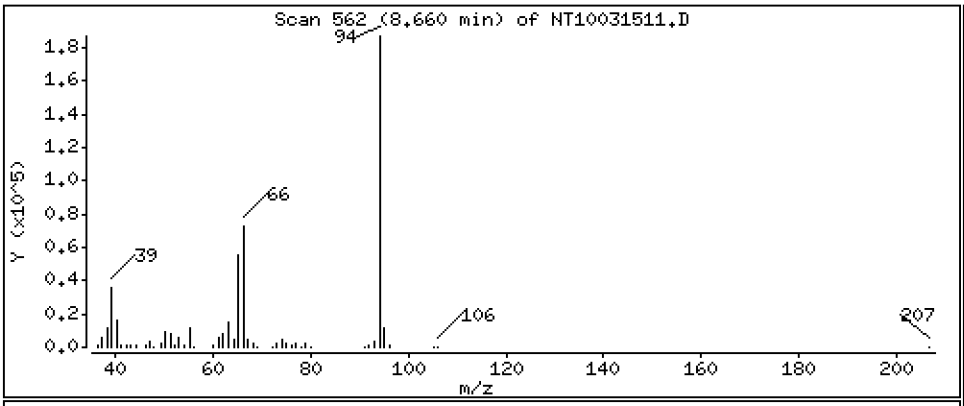
Operator: VTS

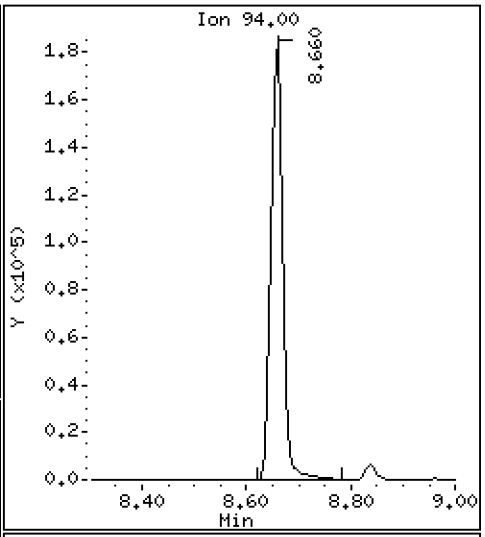
Column phase: ZB-5msi

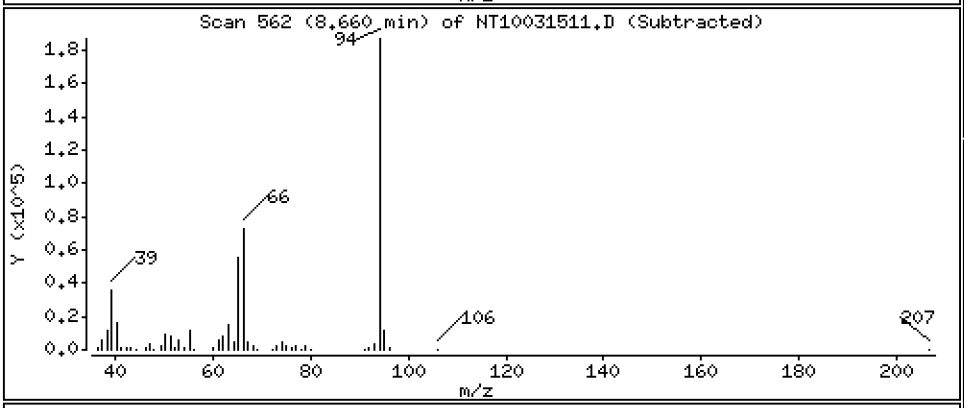
Column diameter: 0.25

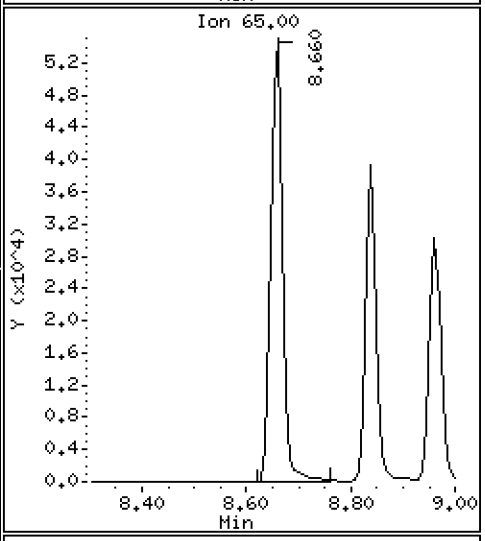
3 Phenol

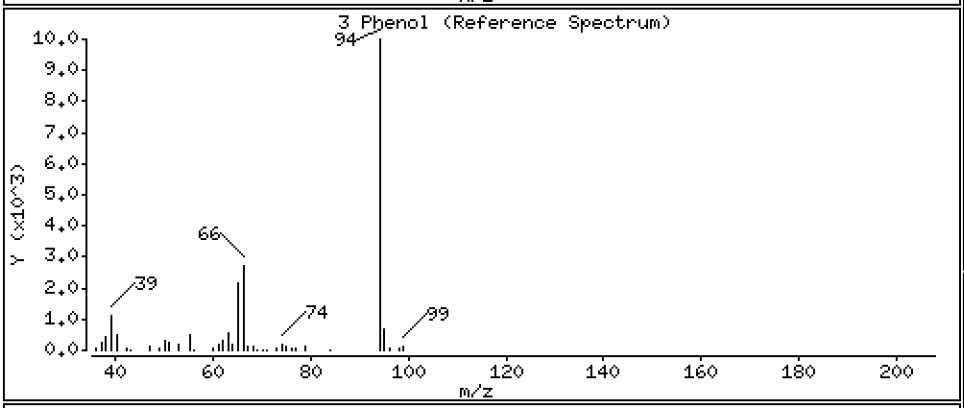
Concentration: 4.412 ug/mL

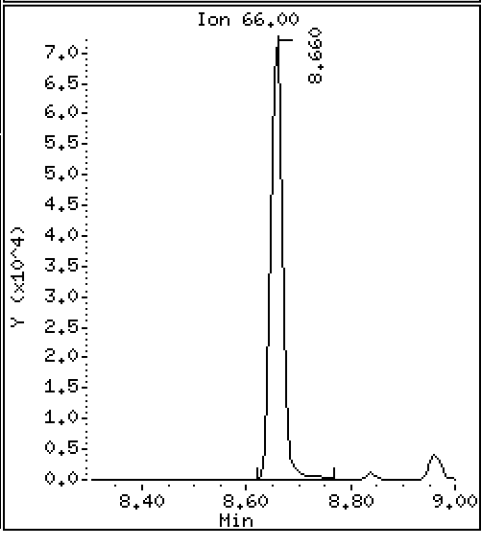


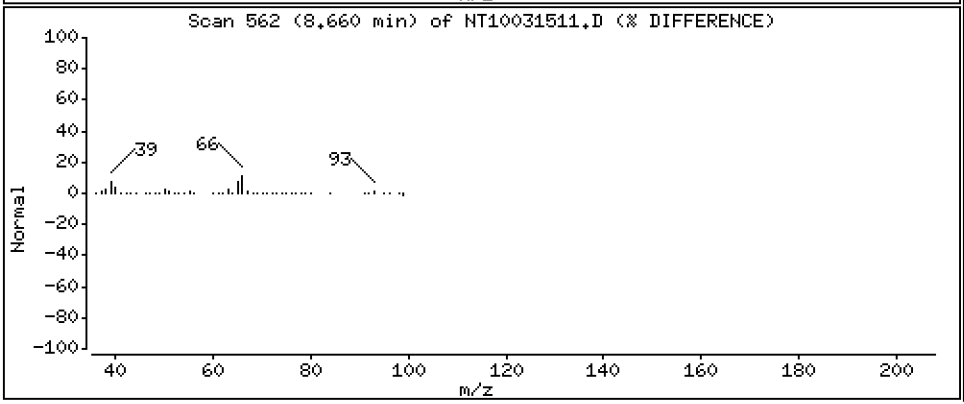












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

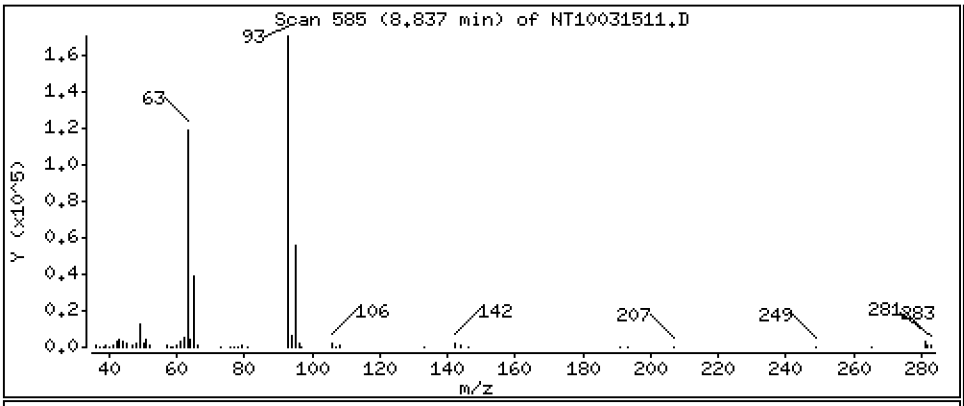
Operator: VTS

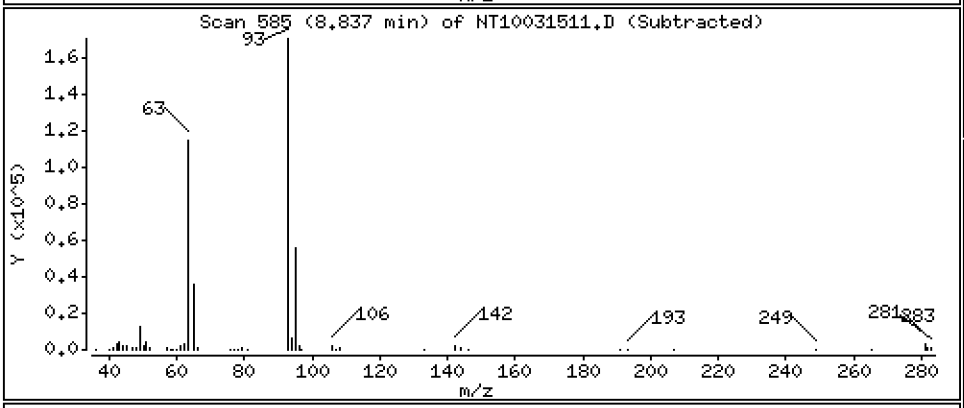
Column phase: ZB-5msi

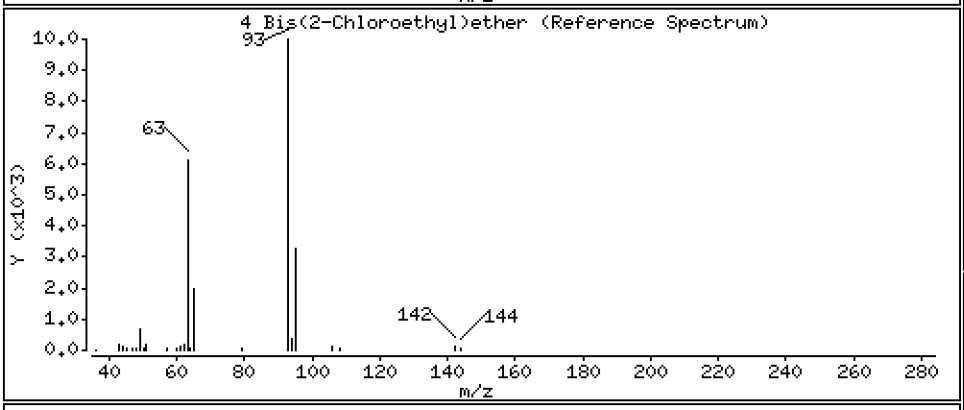
Column diameter: 0.25

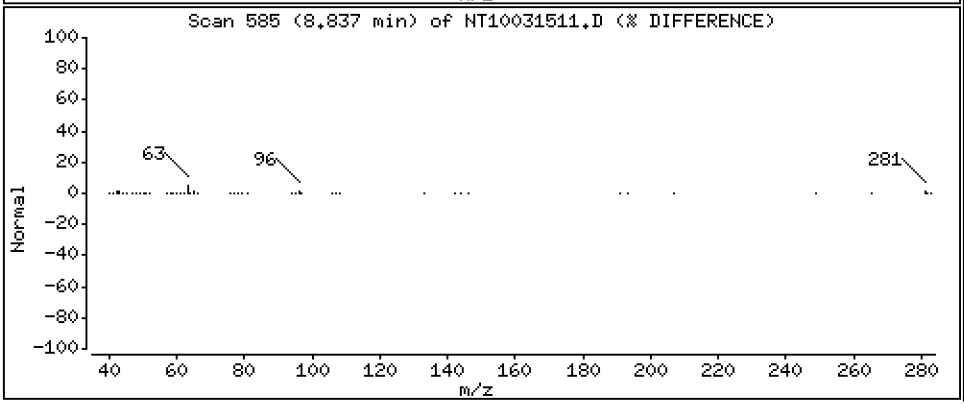
4 Bis(2-Chloroethyl)ether

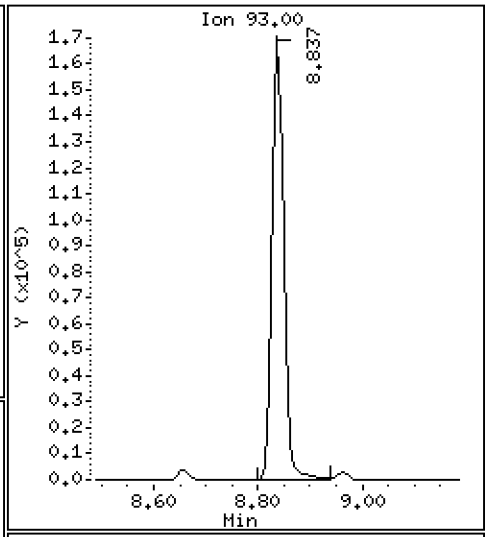
Concentration: 5.258 ug/mL

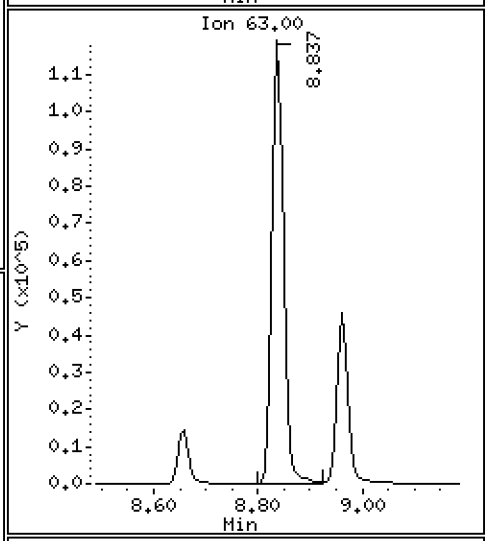


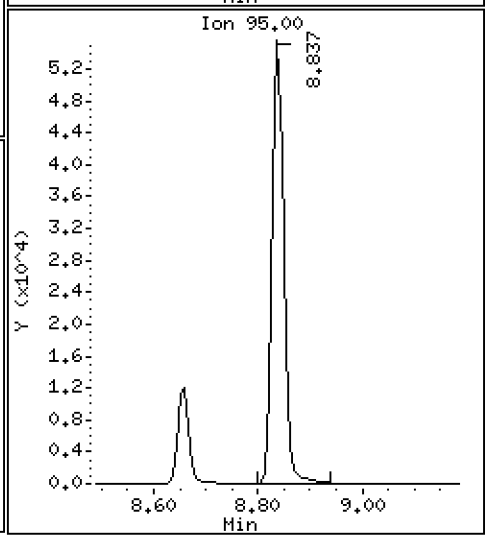












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

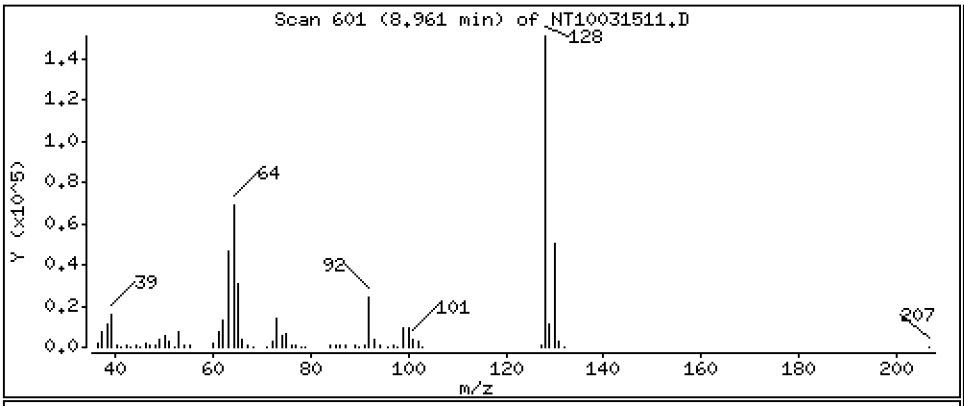
Operator: VTS

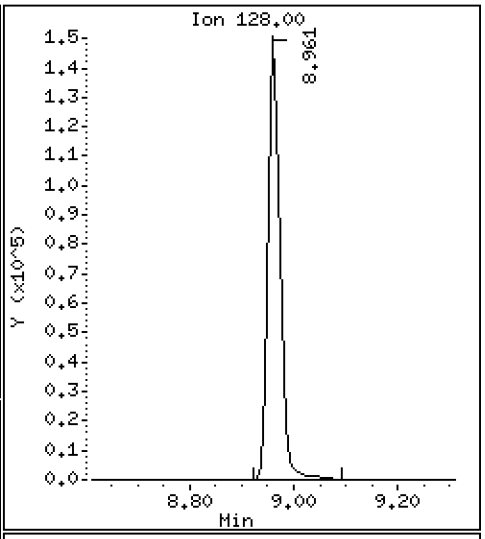
Column phase: ZB-5msi

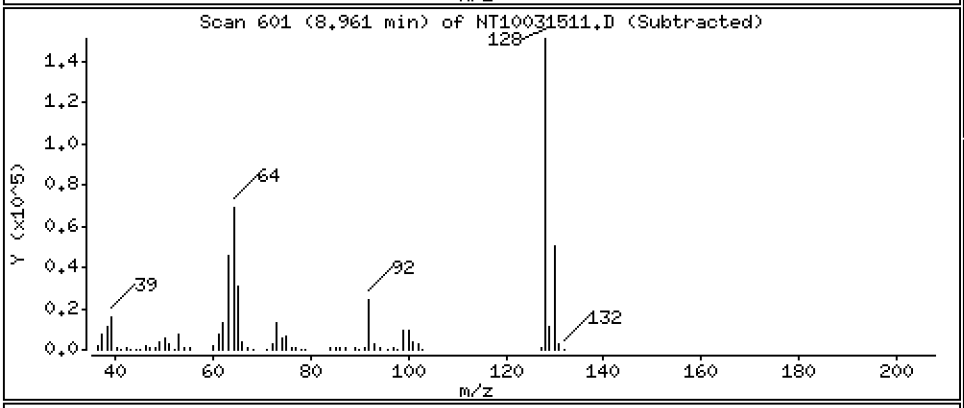
Column diameter: 0.25

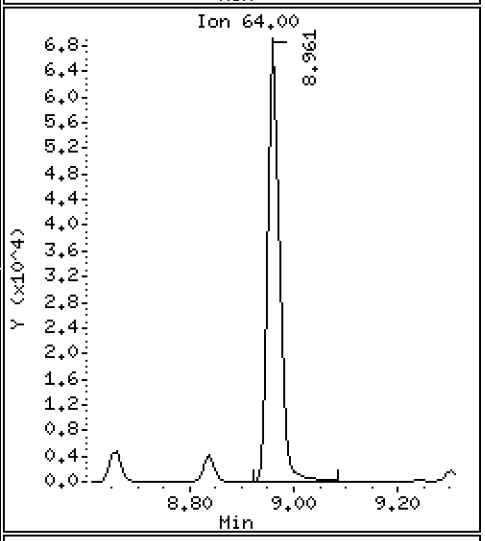
6 2-Chlorophenol

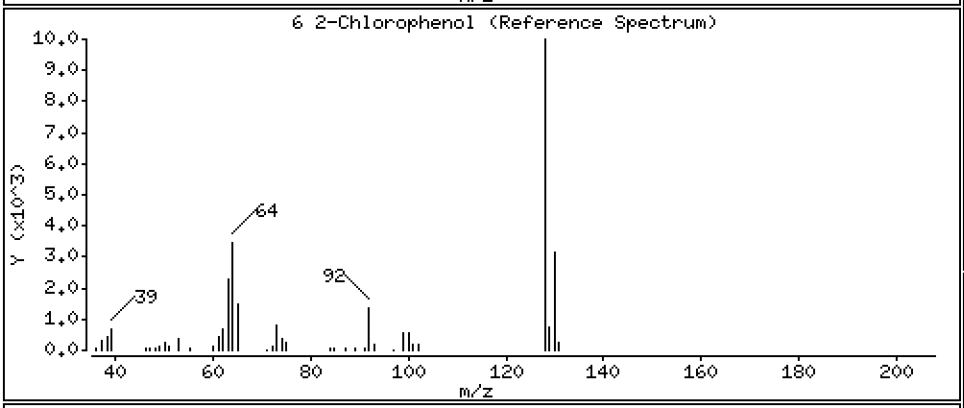
Concentration: 4.277 ug/mL

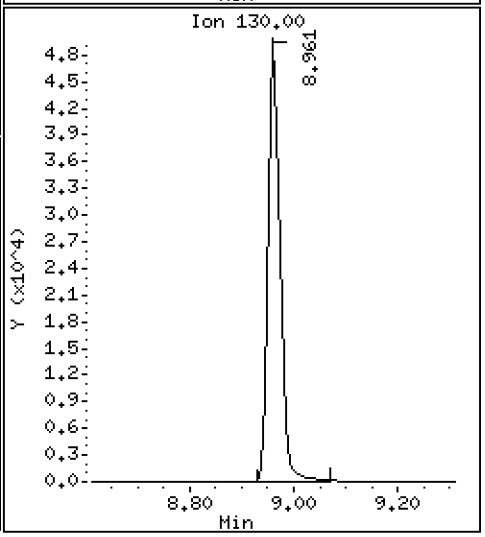


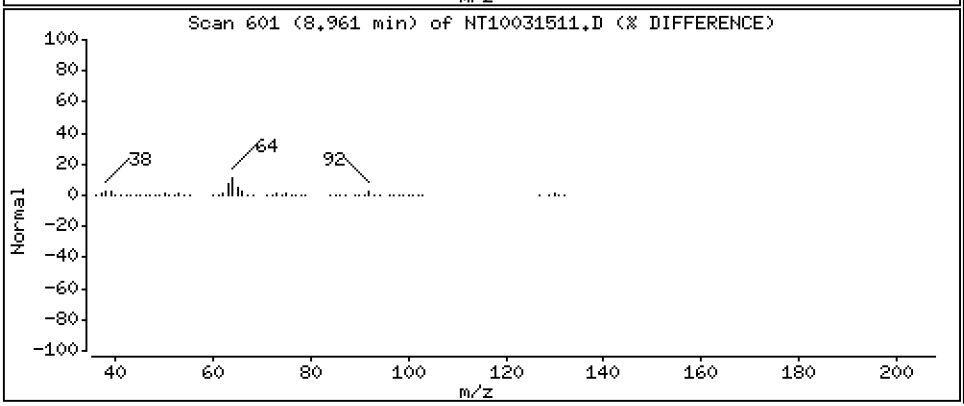












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

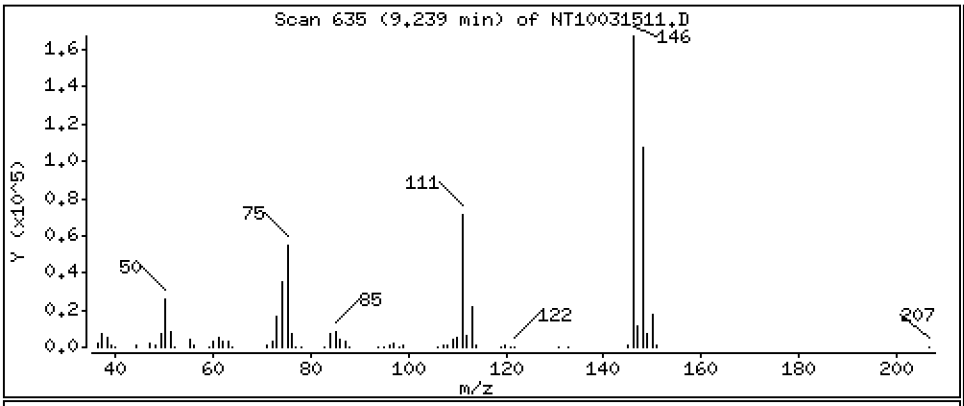
Operator: VTS

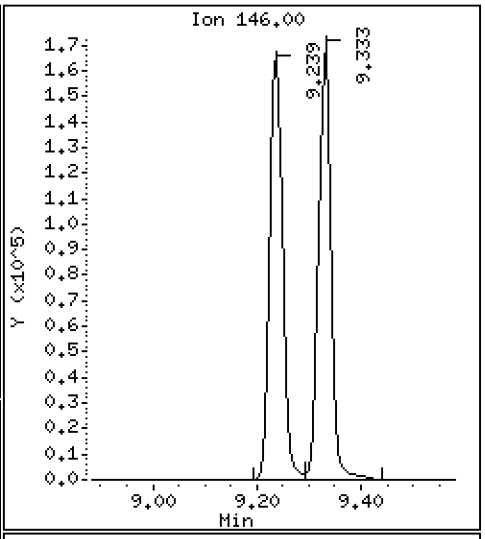
Column phase: ZB-5msi

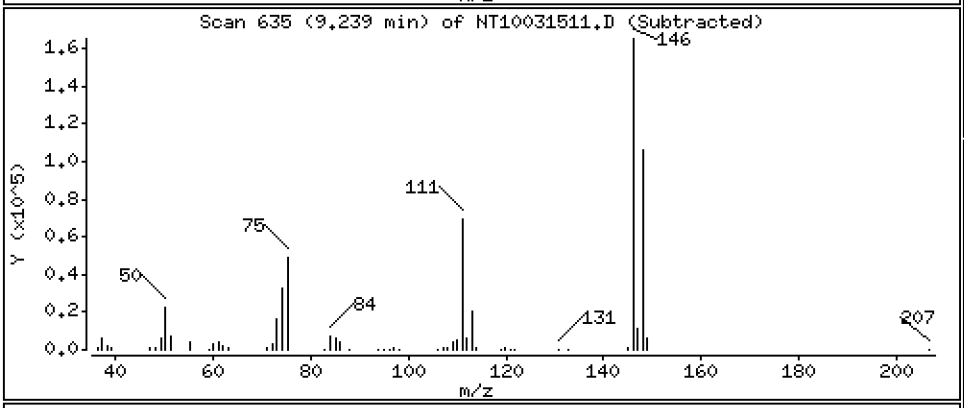
Column diameter: 0.25

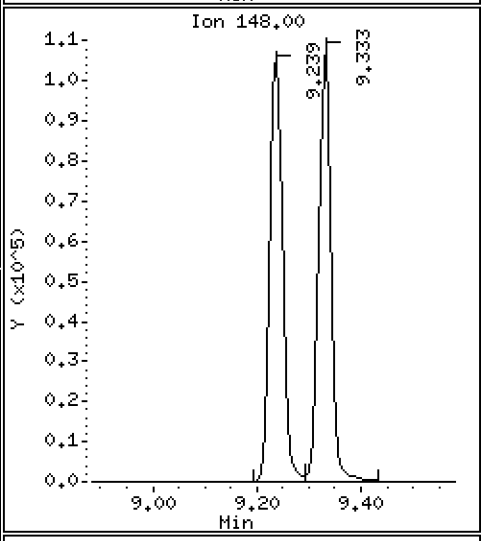
7 1,3-Dichlorobenzene

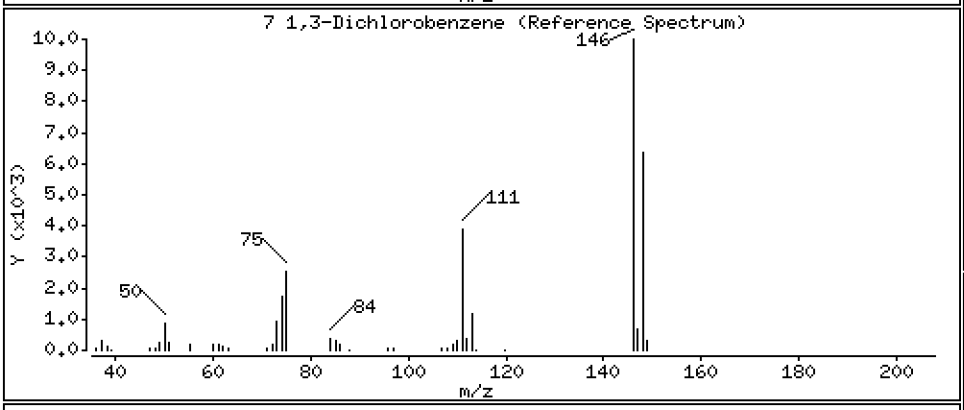
Concentration: 4.772 ug/mL

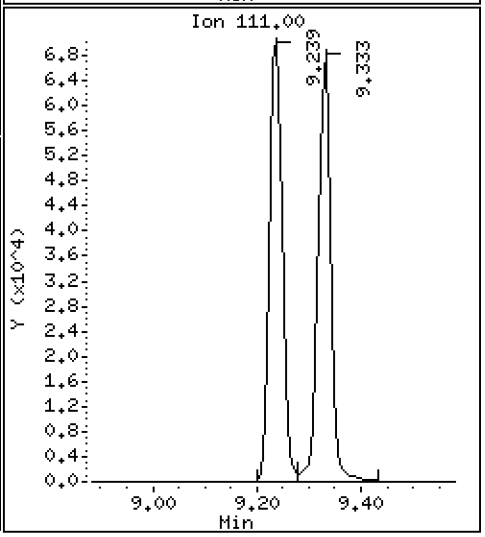


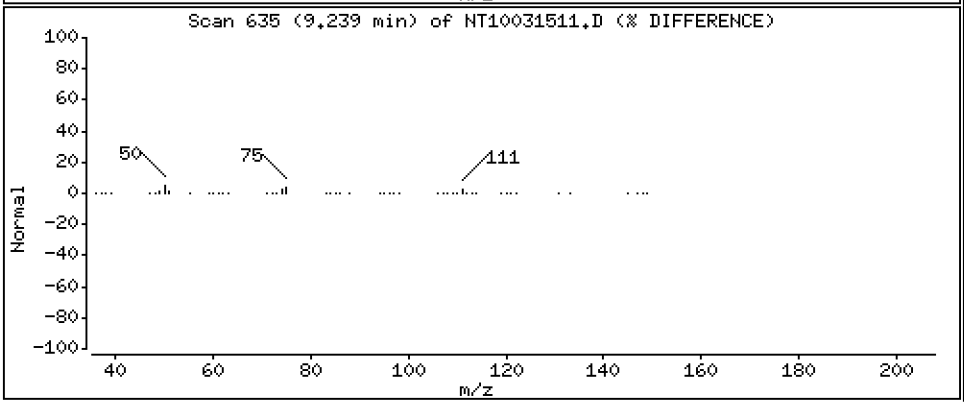












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

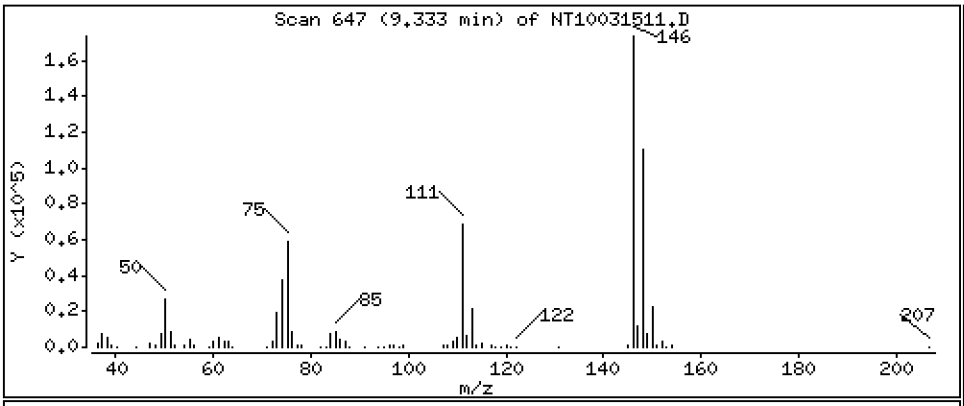
Operator: VTS

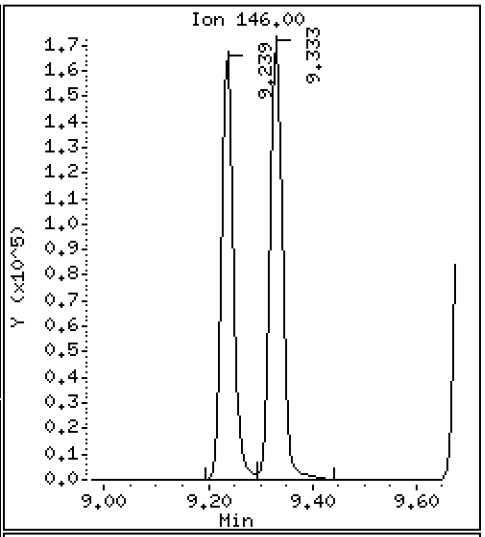
Column phase: ZB-5msi

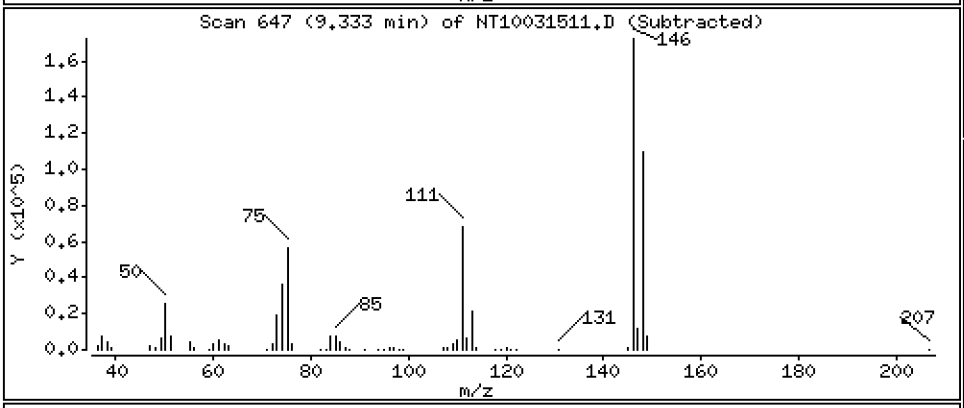
Column diameter: 0.25

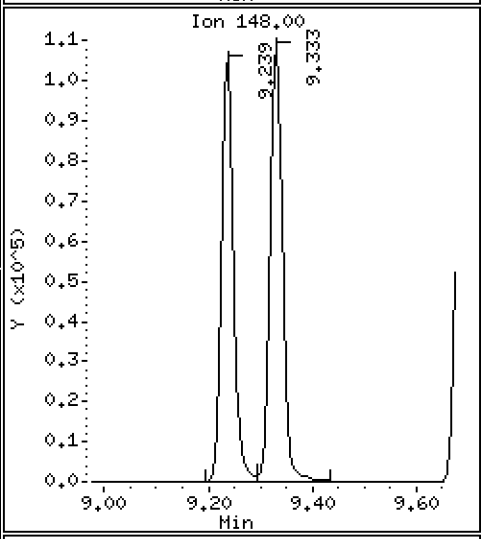
9 1,4-Dichlorobenzene

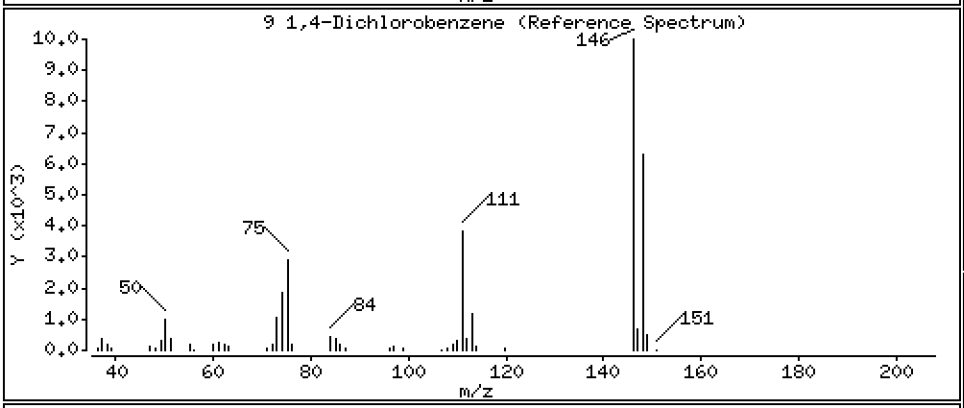
Concentration: 4.913 ug/mL

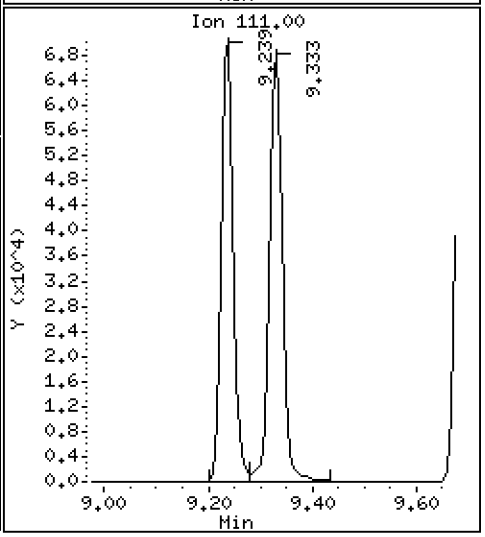


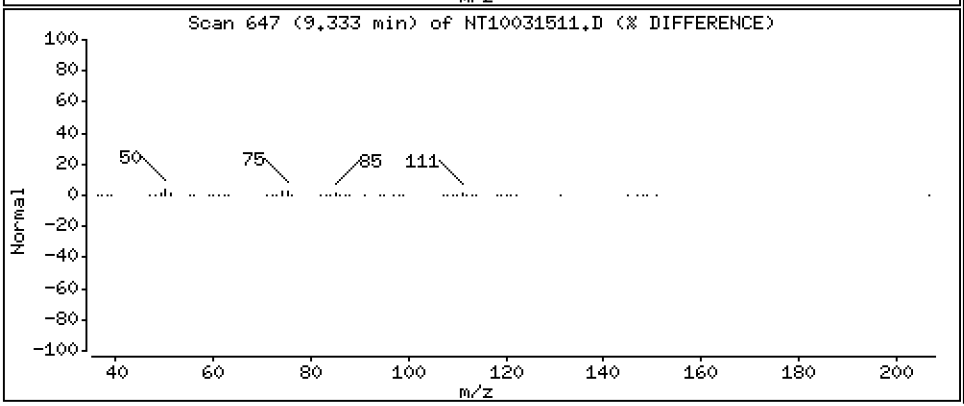












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

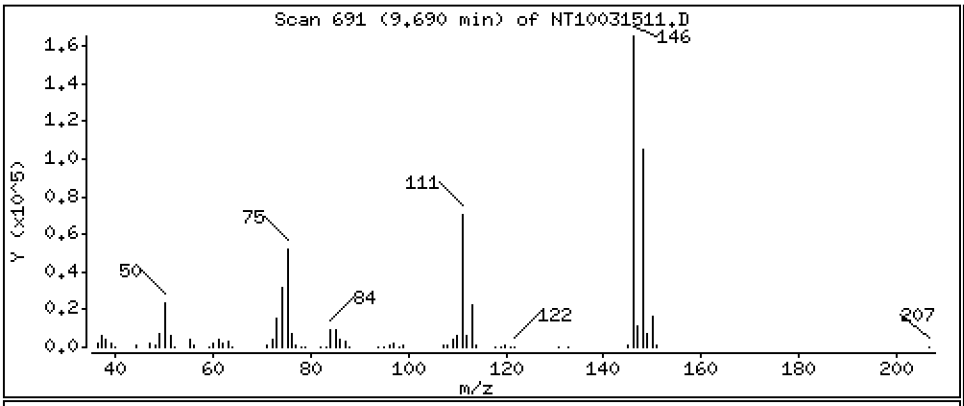
Operator: VTS

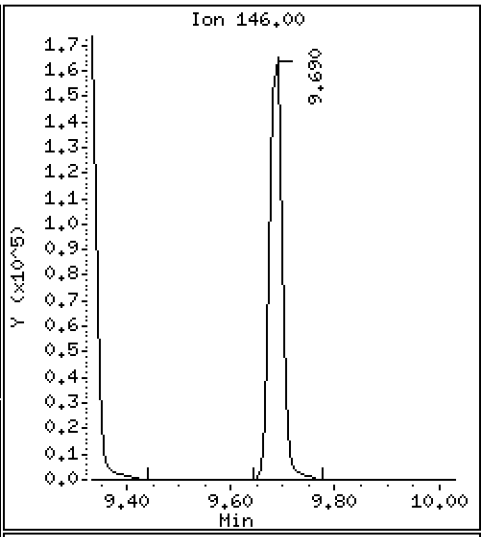
Column phase: ZB-5msi

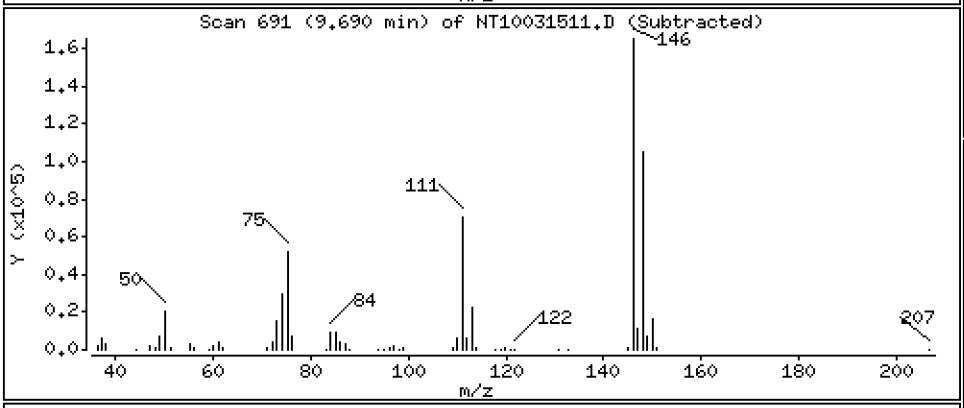
Column diameter: 0.25

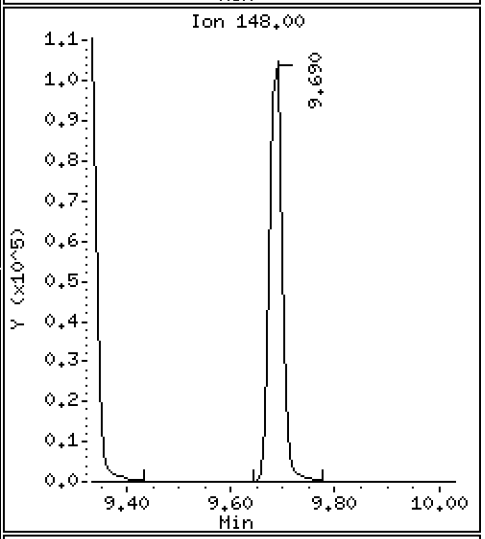
12 1,2-Dichlorobenzene

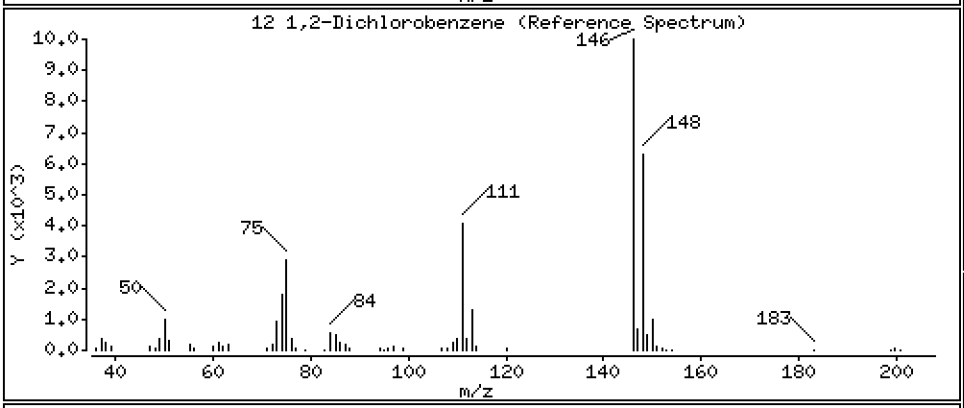
Concentration: 4.882 ug/mL

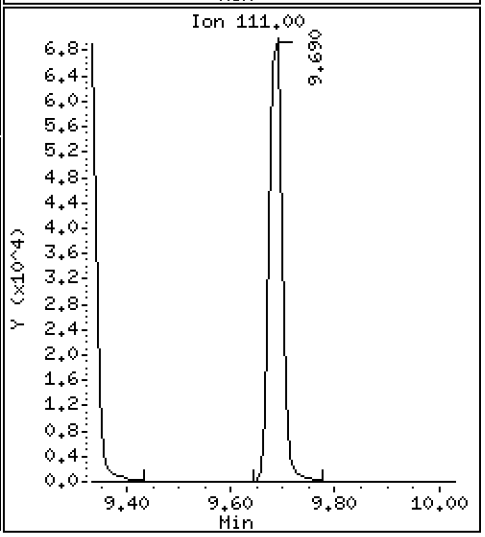


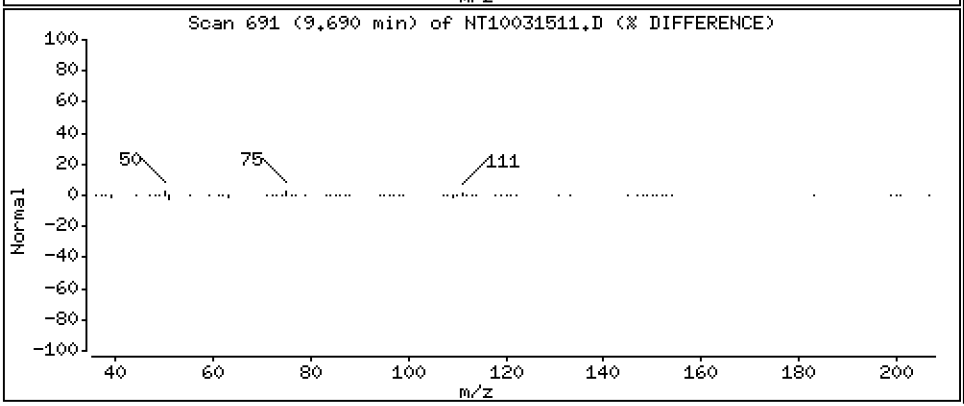












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

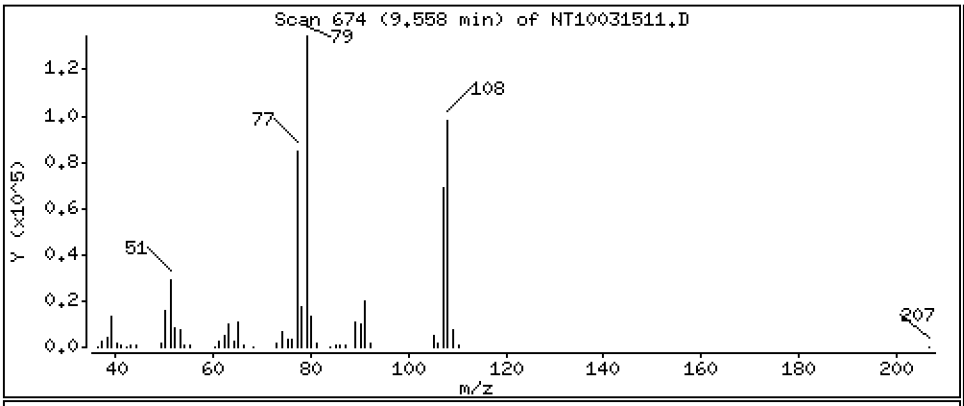
Operator: VTS

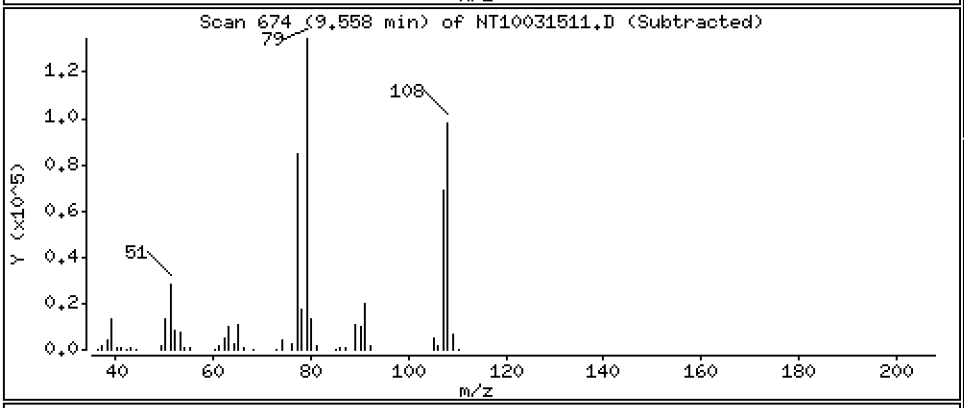
Column phase: ZB-5msi

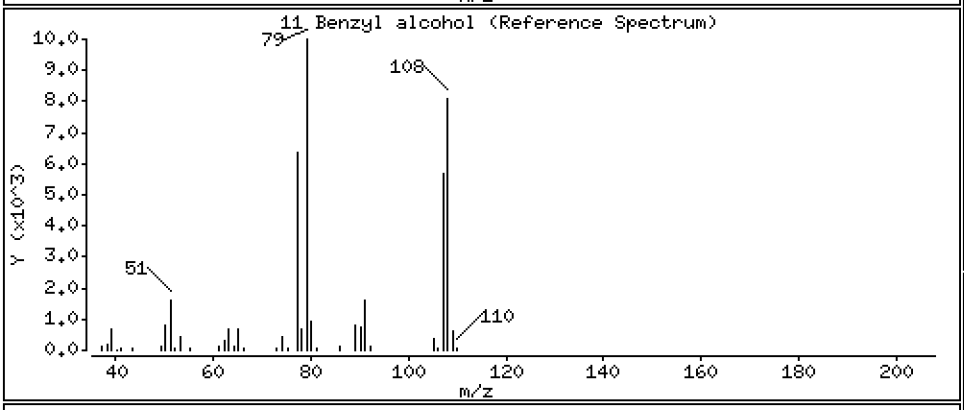
Column diameter: 0.25

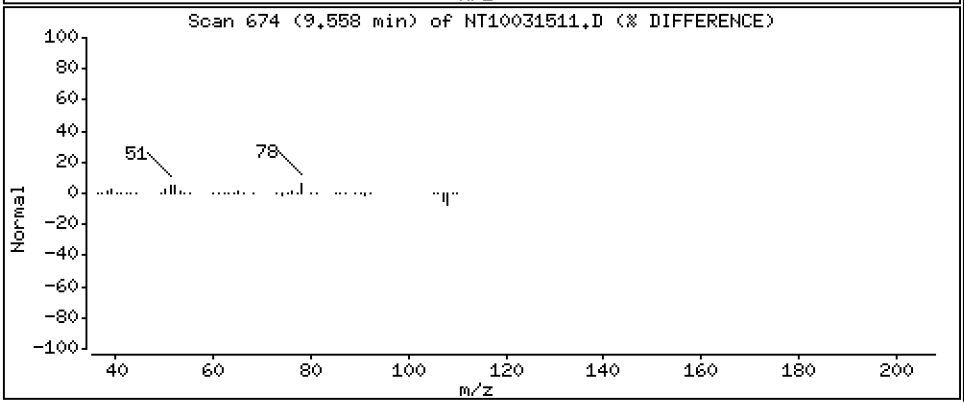
11 Benzyl alcohol

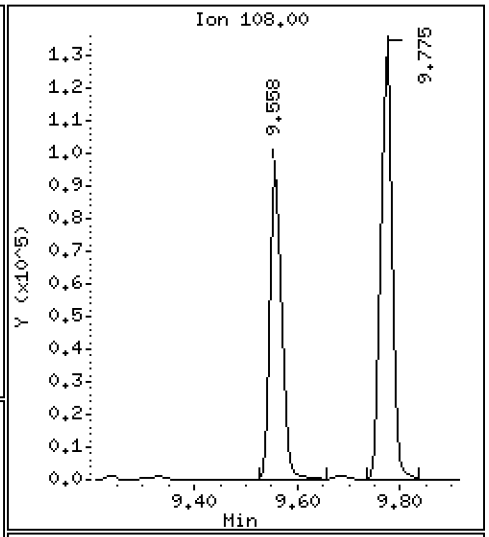
Concentration: 4.927 ug/mL

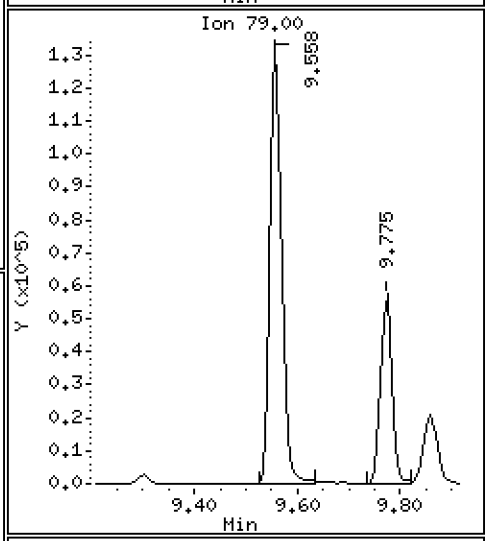


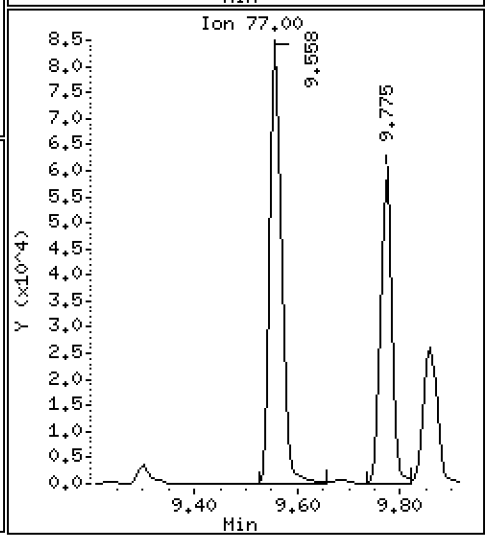












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

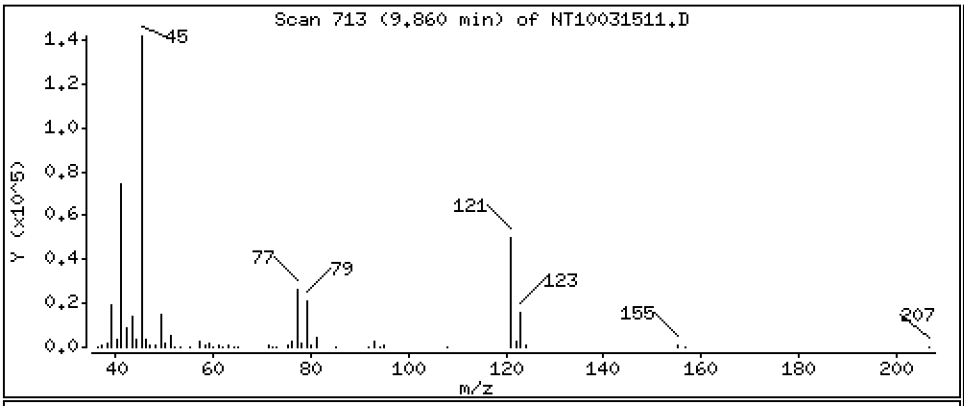
Operator: VTS

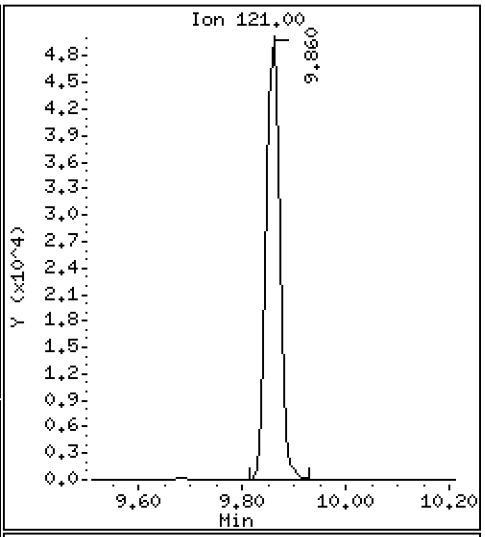
Column phase: ZB-5msi

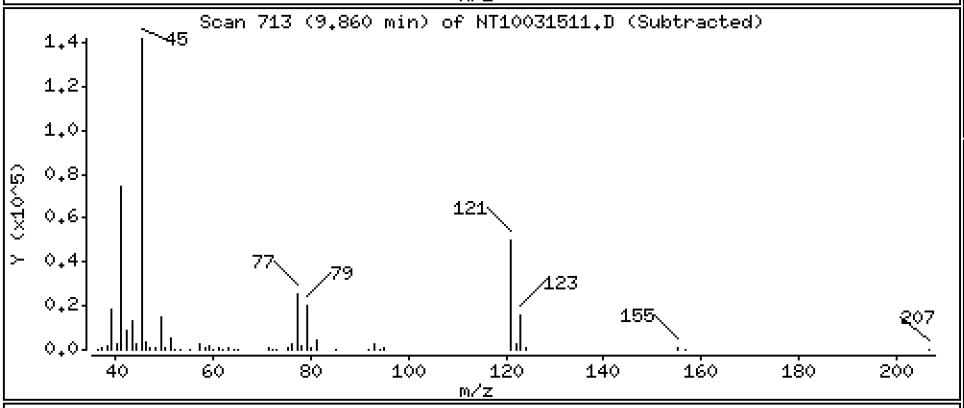
Column diameter: 0.25

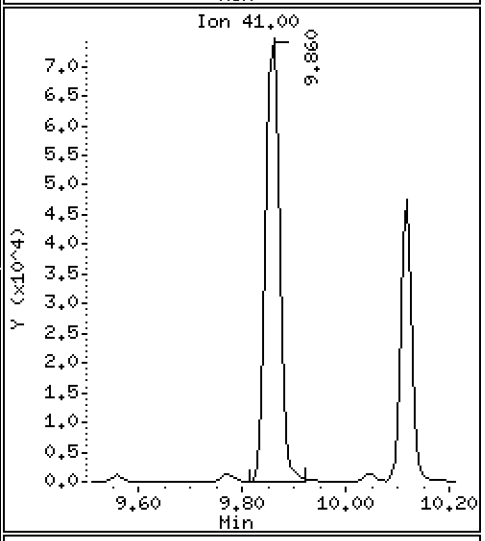
14 2,2'-oxybis(1-Chloropropane)

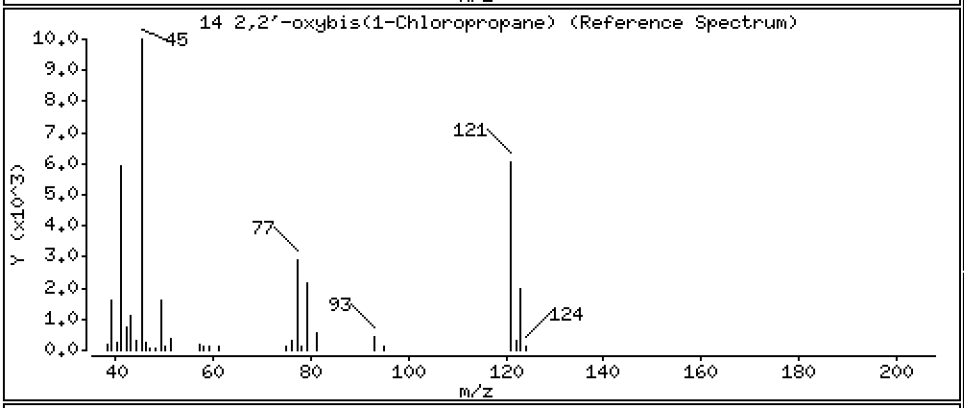
Concentration: 6.214 ug/mL

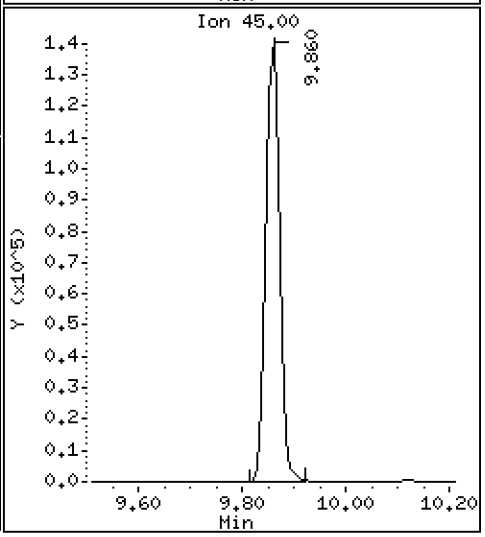


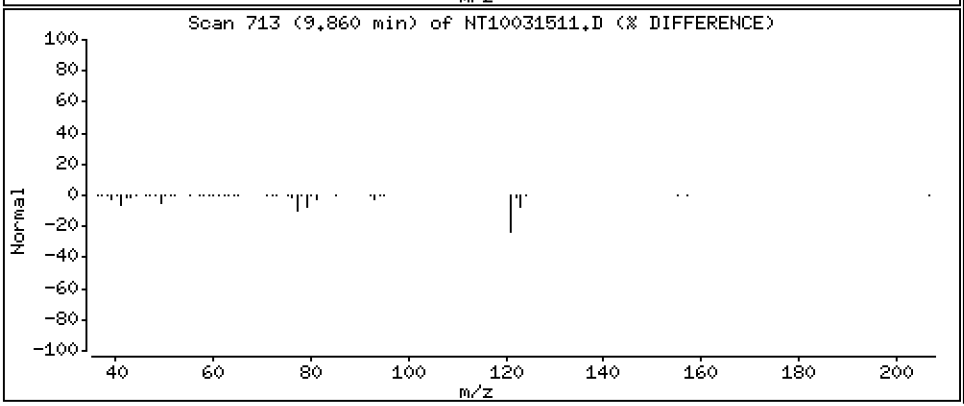












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

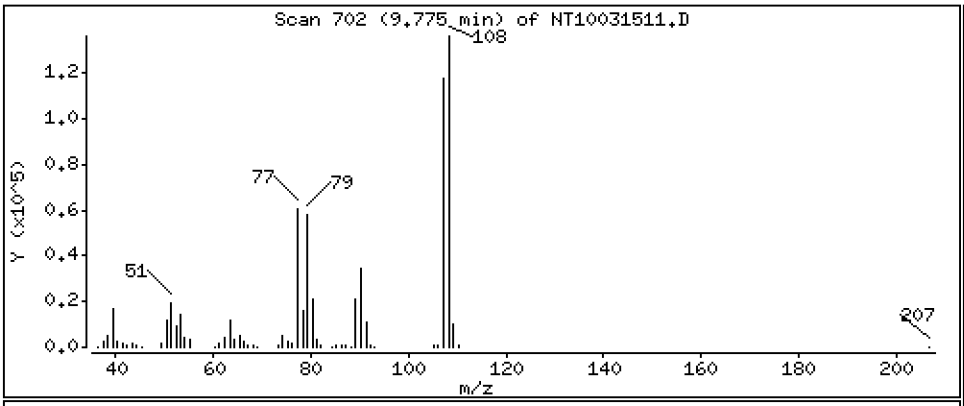
Operator: VTS

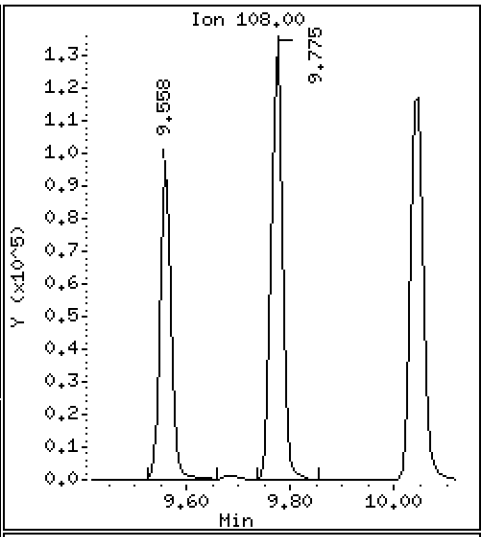
Column phase: ZB-5msi

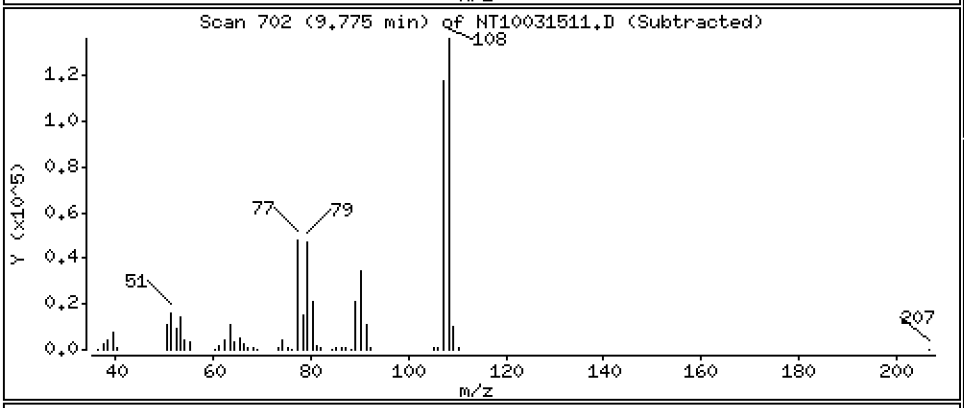
Column diameter: 0.25

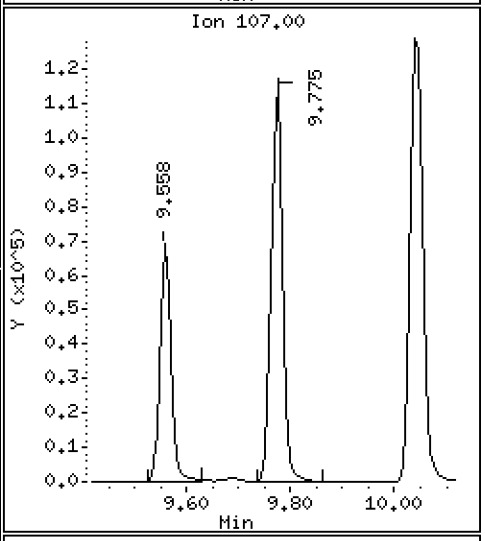
13 2-Methylphenol

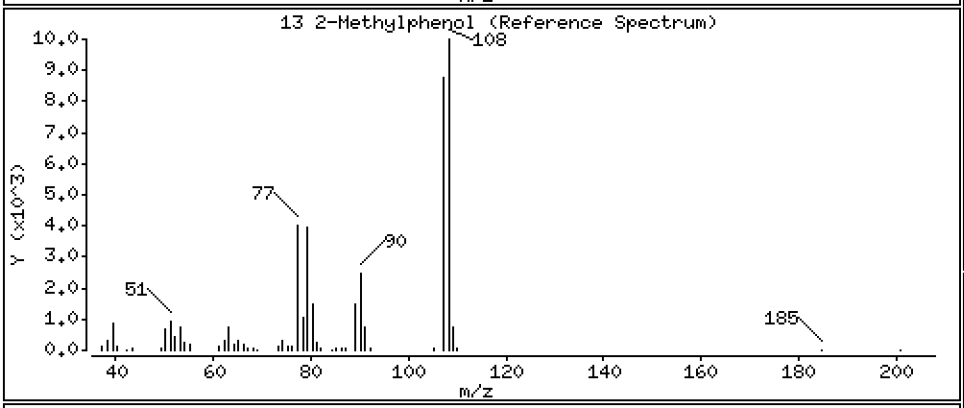
Concentration: 4.215 ug/mL

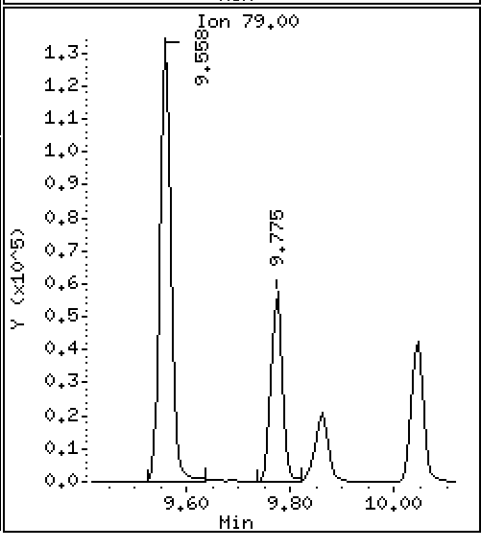


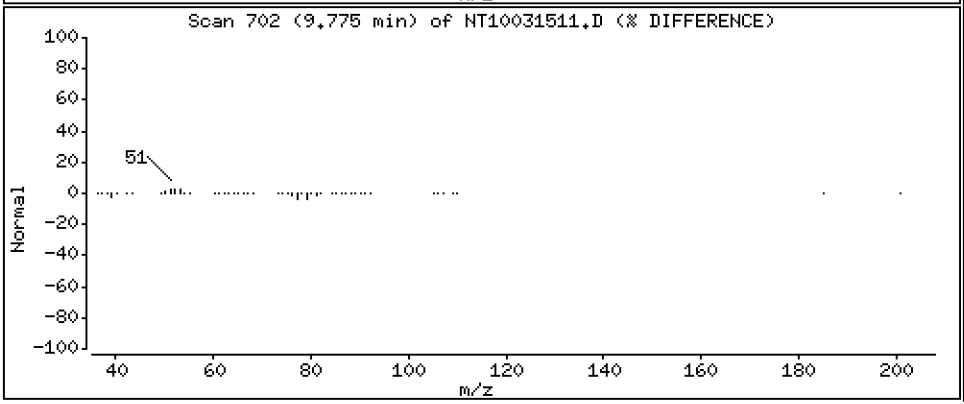












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

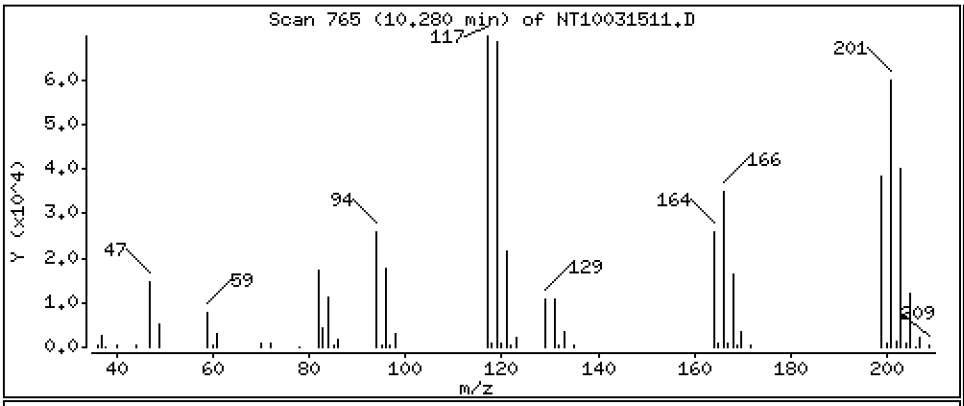
Operator: VTS

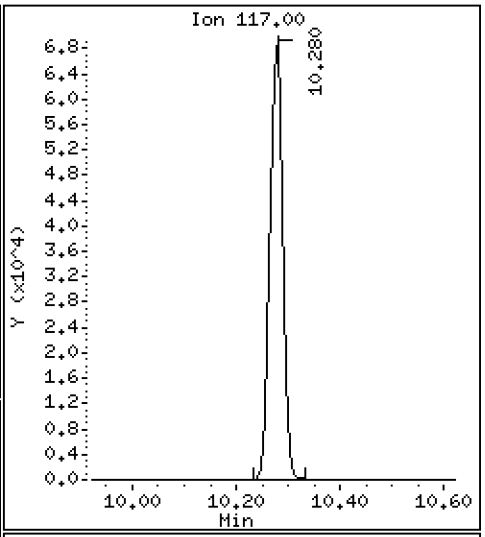
Column phase: ZB-5msi

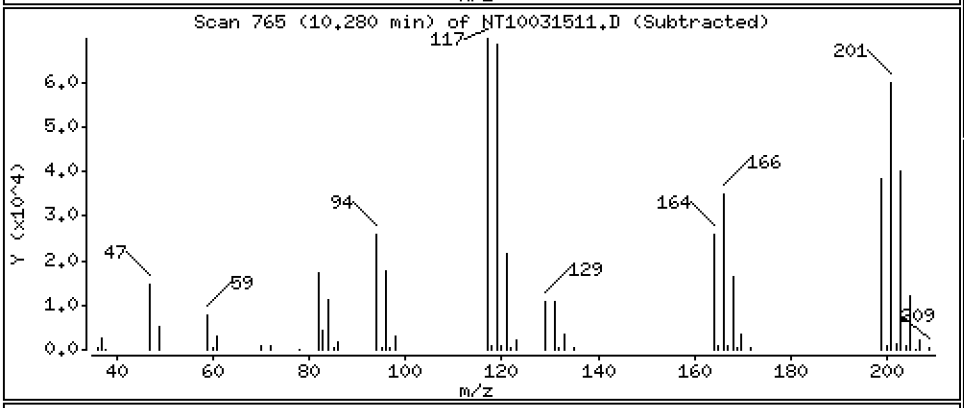
Column diameter: 0.25

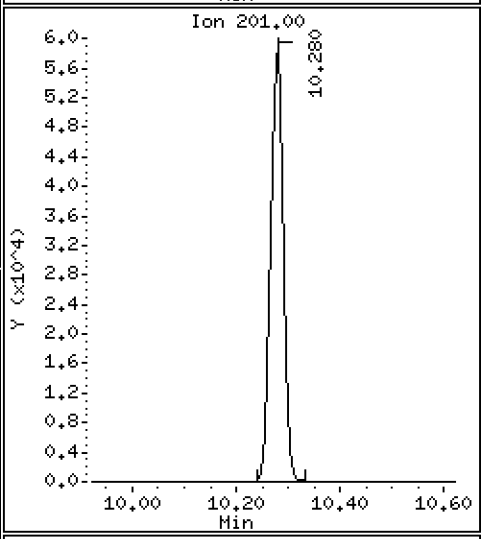
17 Hexachloroethane

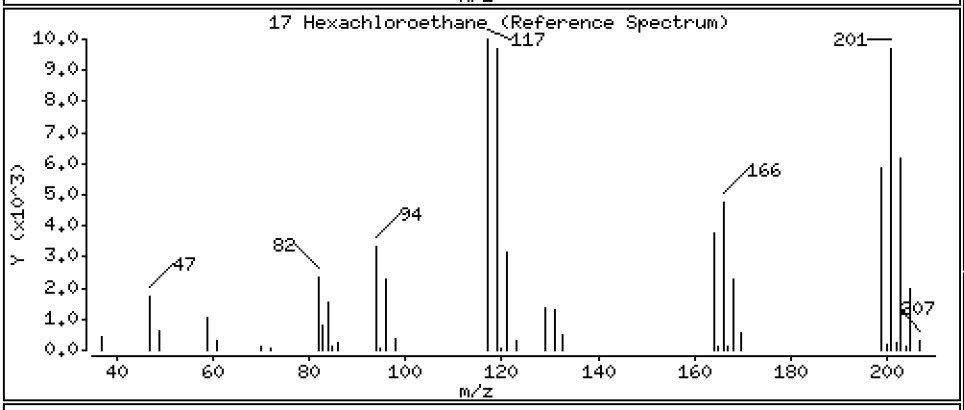
Concentration: 5.003 ug/mL

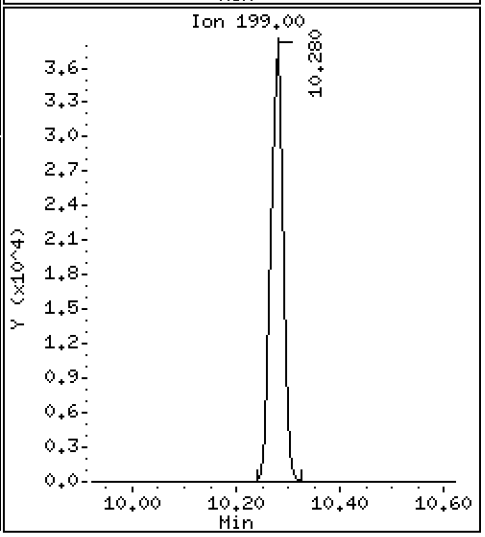


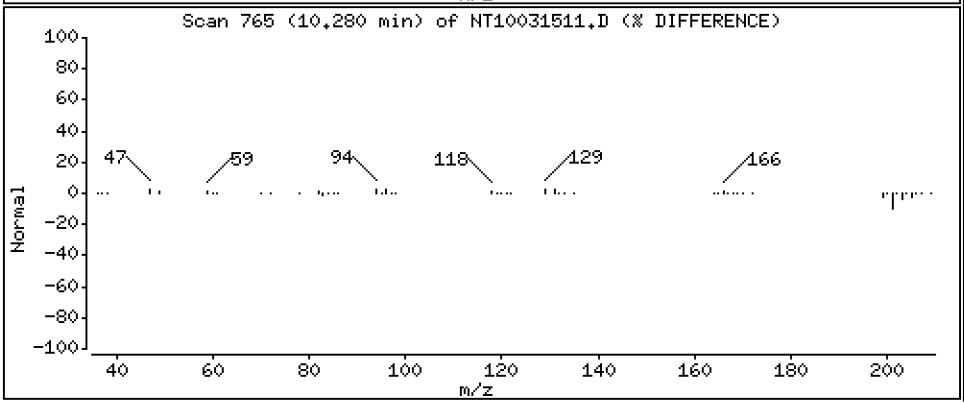












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

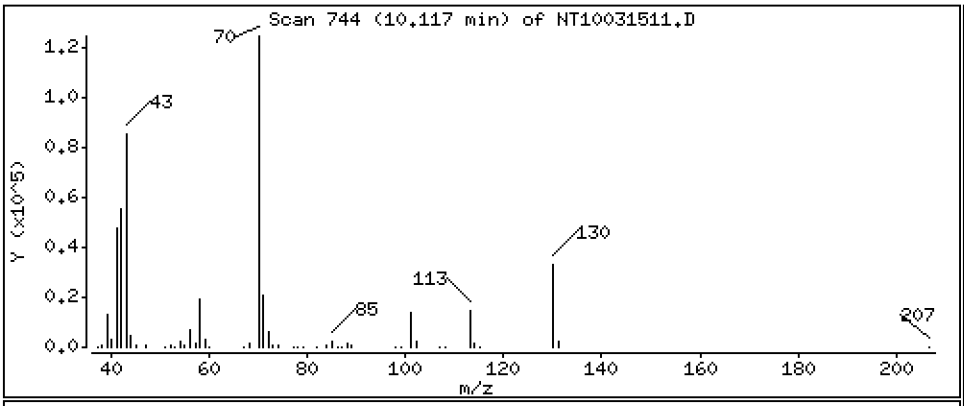
Operator: VTS

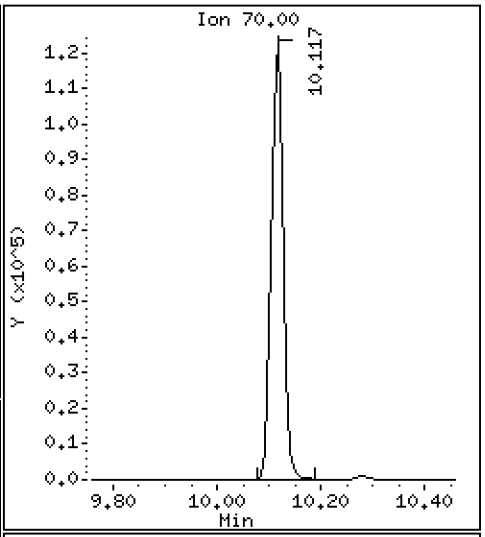
Column phase: ZB-5msi

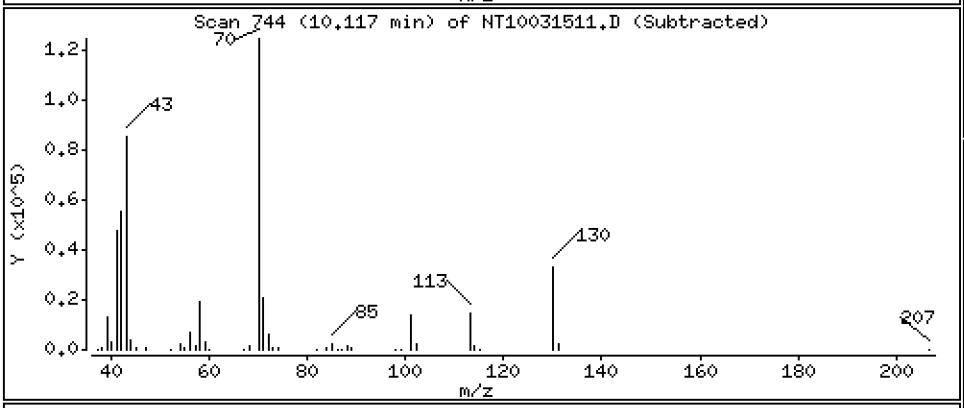
Column diameter: 0.25

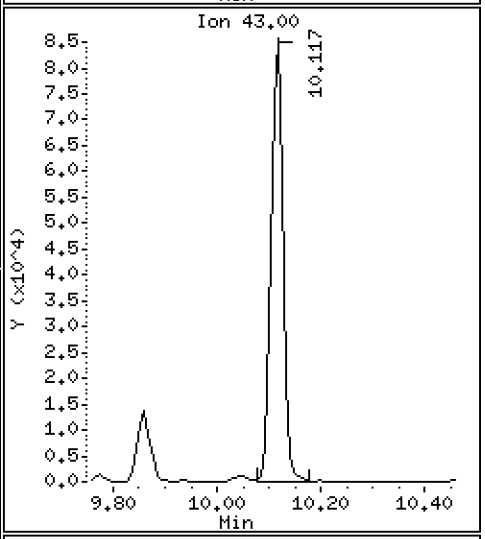
16 N-Nitroso-di-n-propylamine

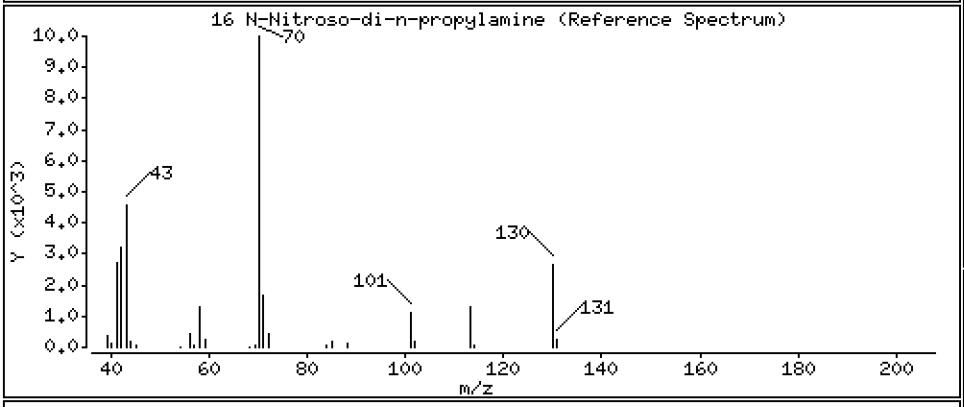
Concentration: 5.179 ug/mL

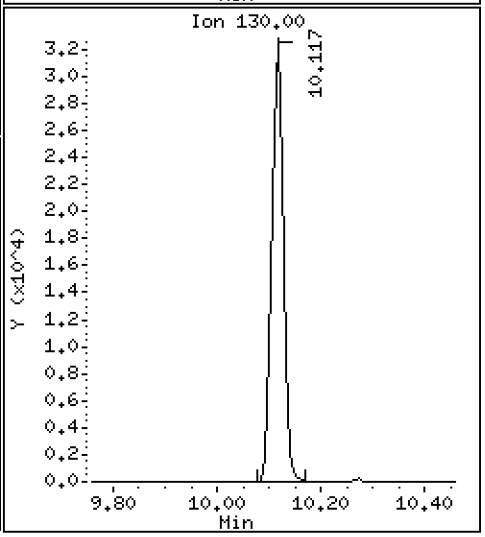


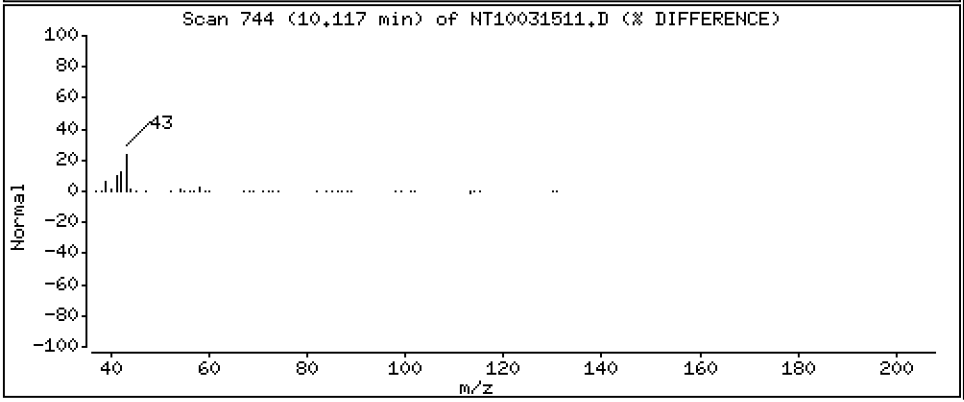












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

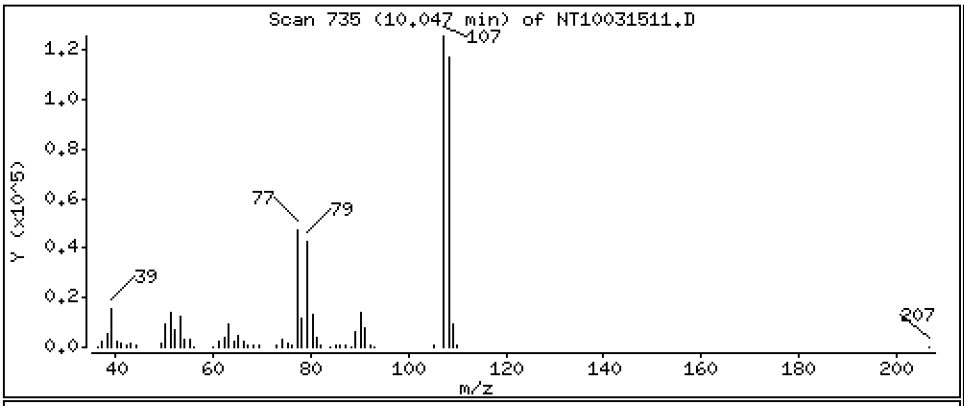
Operator: VTS

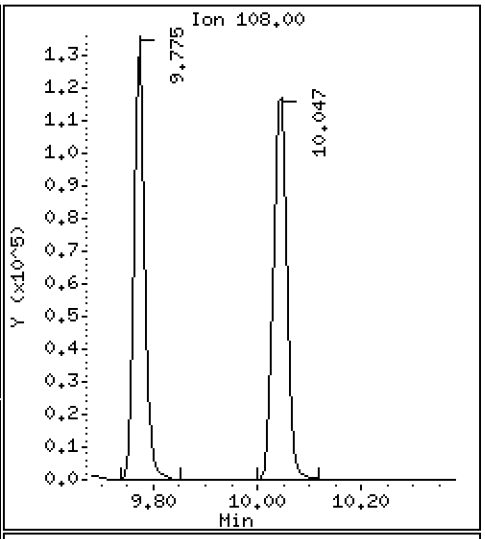
Column phase: ZB-5msi

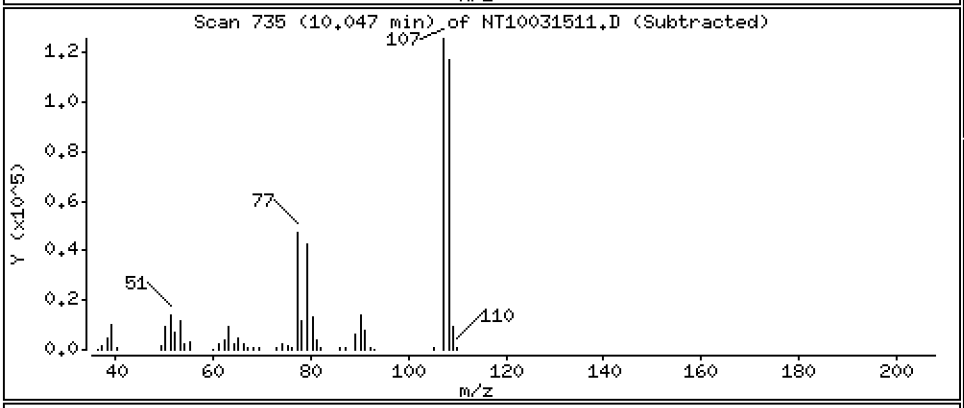
Column diameter: 0.25

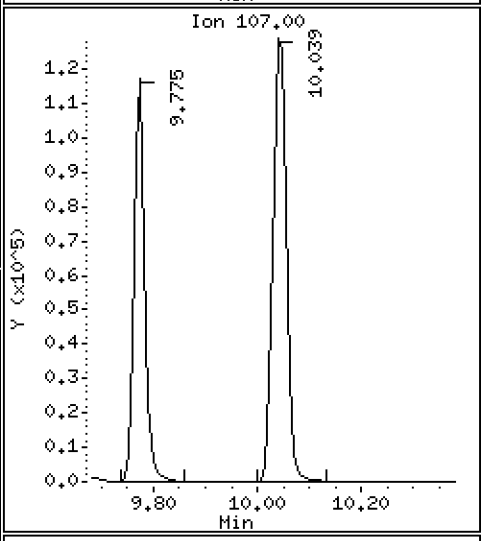
15 4-Methylphenol

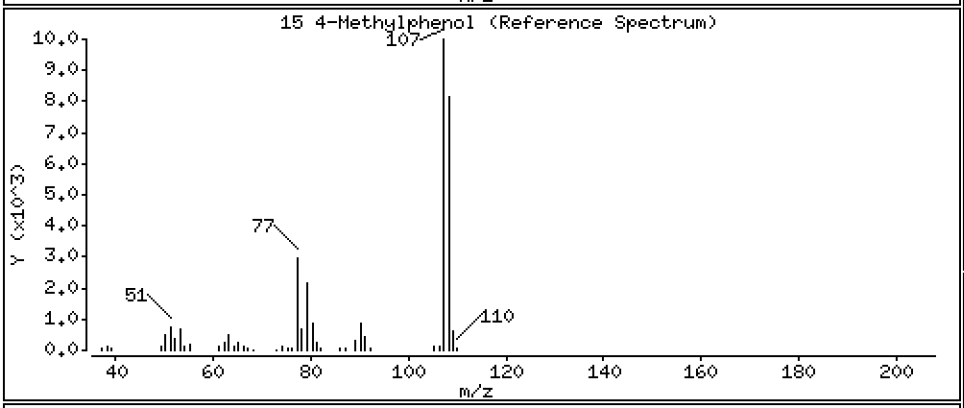
Concentration: 4.365 ug/mL

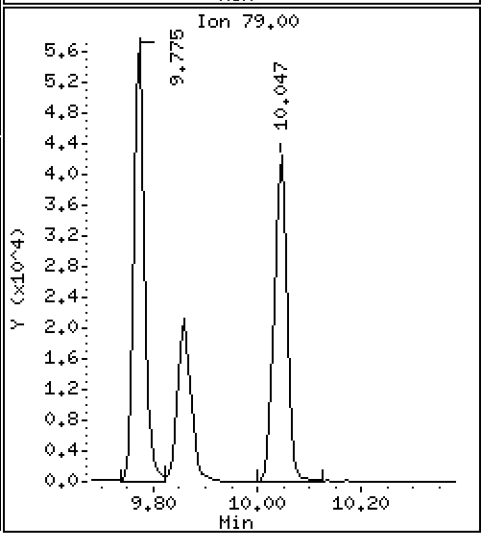


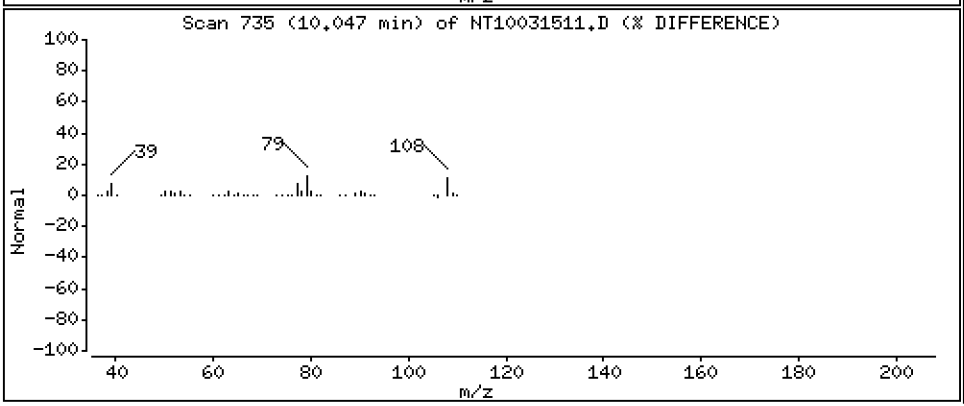












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

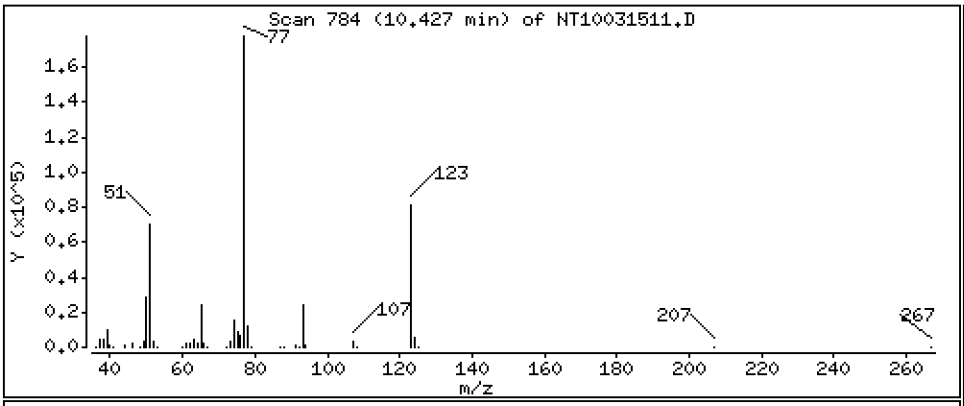
Operator: VTS

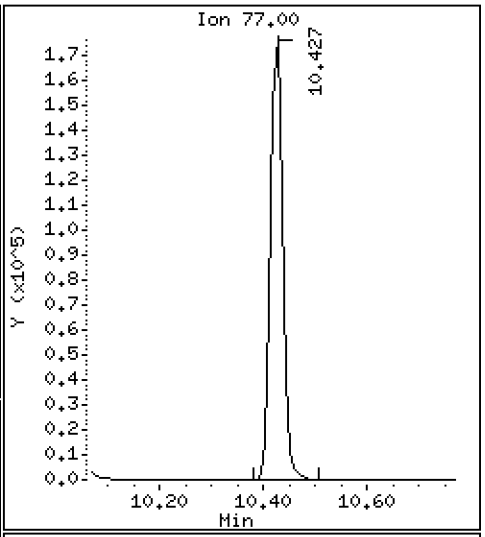
Column phase: ZB-5msi

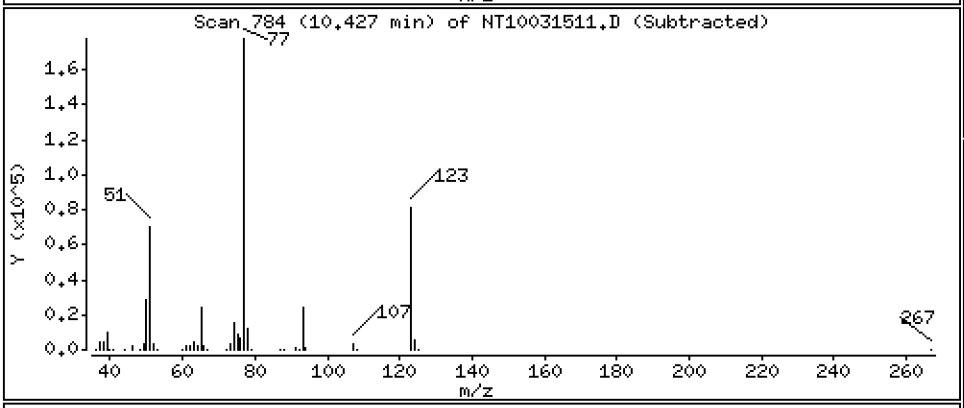
Column diameter: 0.25

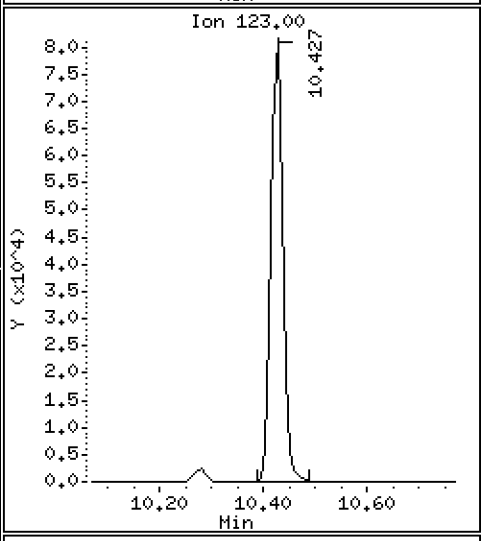
19 Nitrobenzene

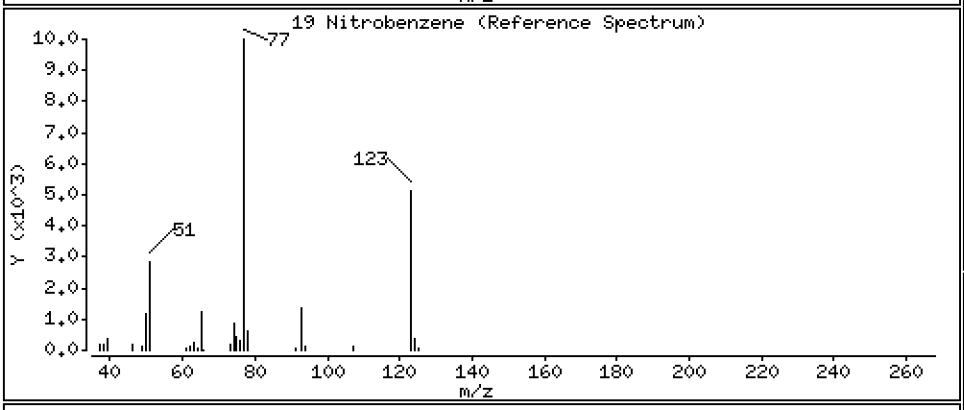
Concentration: 4.858 ug/mL

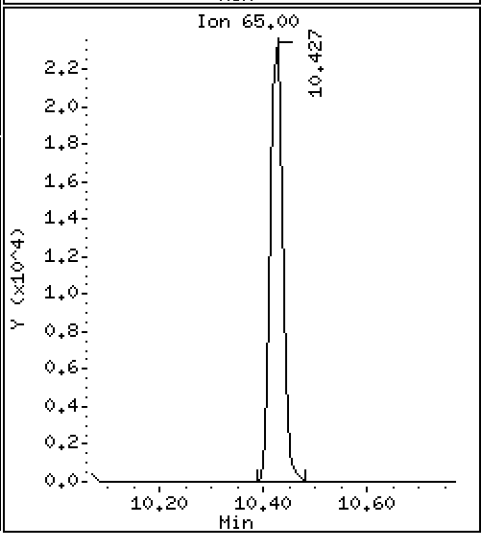


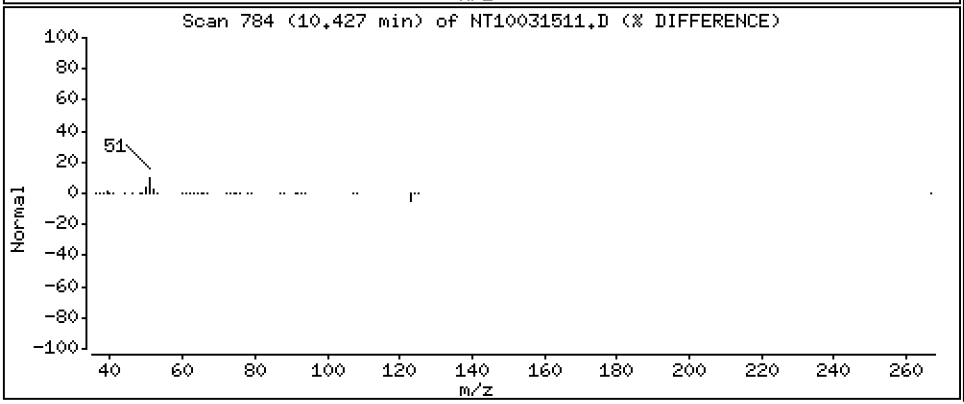












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

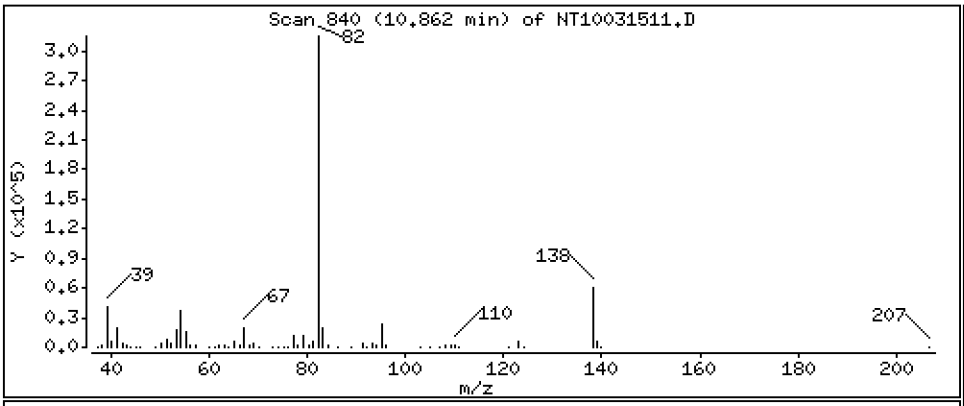
Operator: VTS

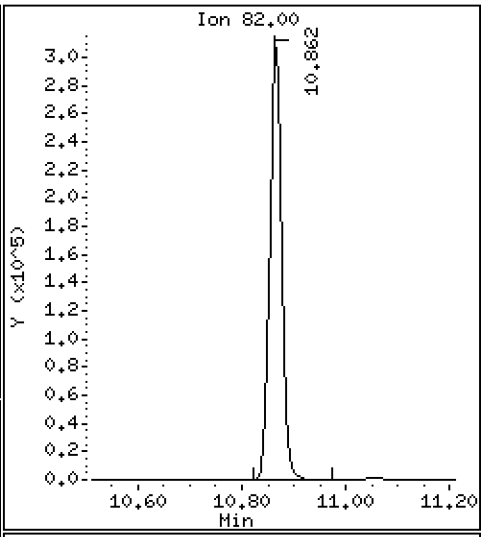
Column phase: ZB-5msi

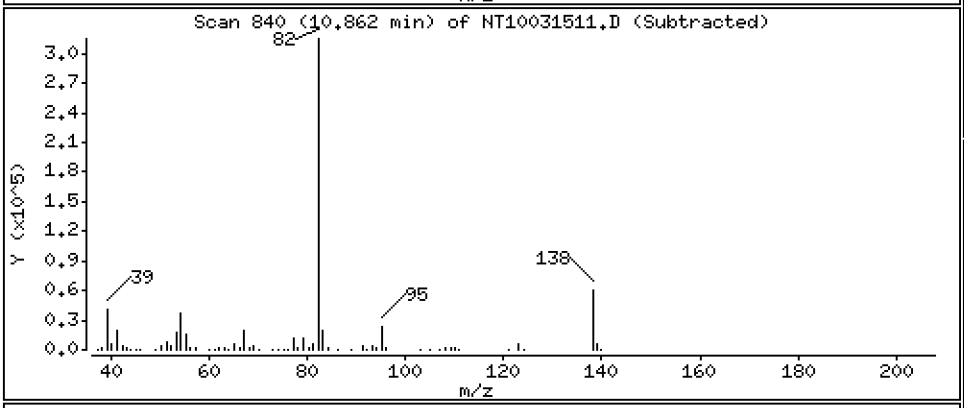
Column diameter: 0.25

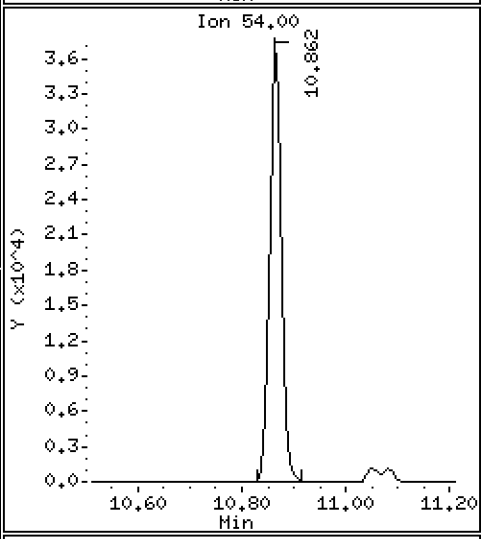
20 Isophorone

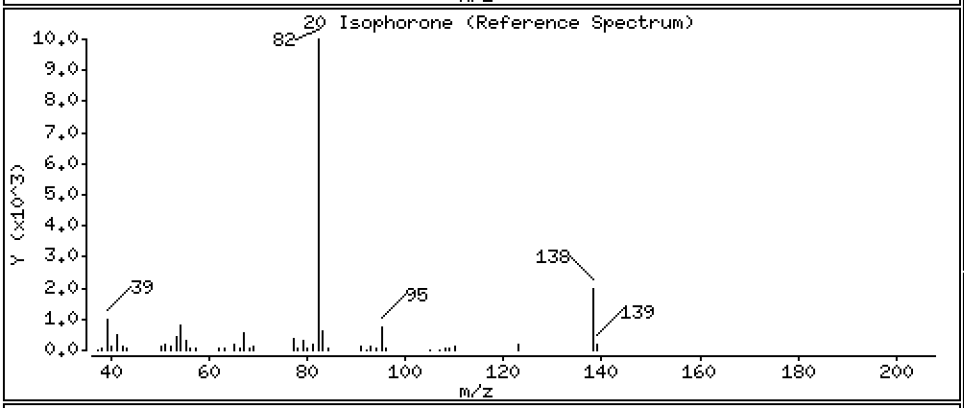
Concentration: 7.696 ug/mL

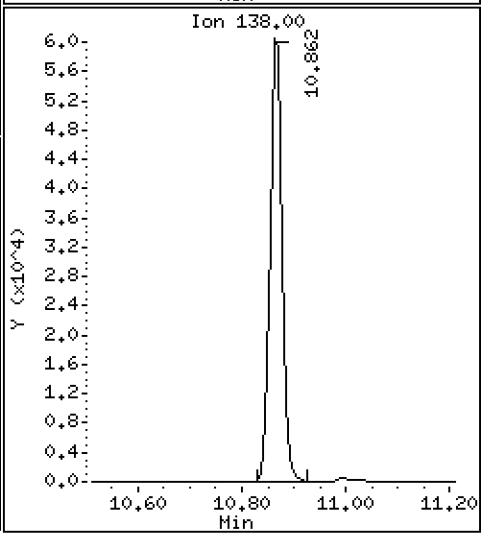


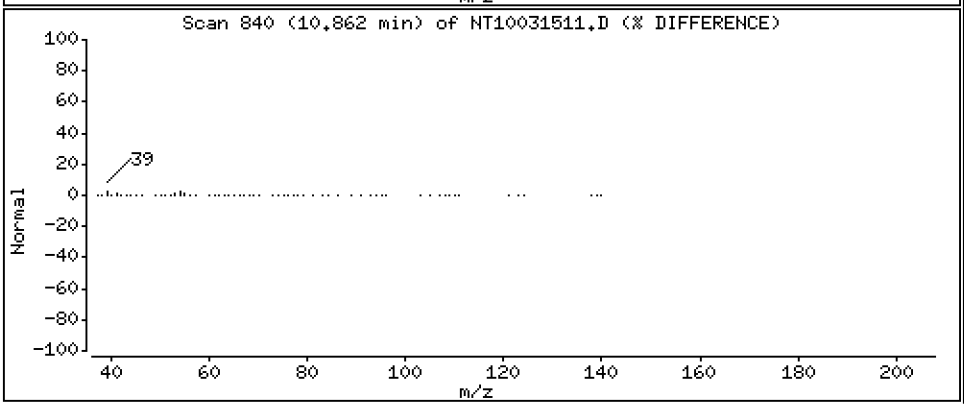












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

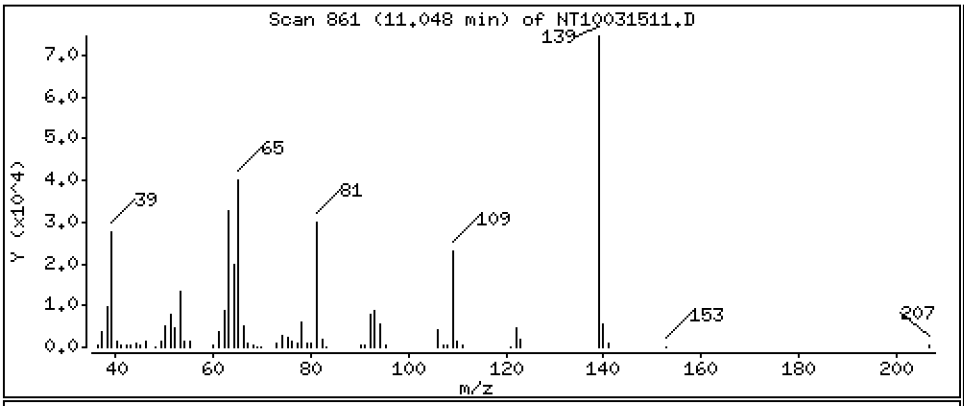
Operator: VTS

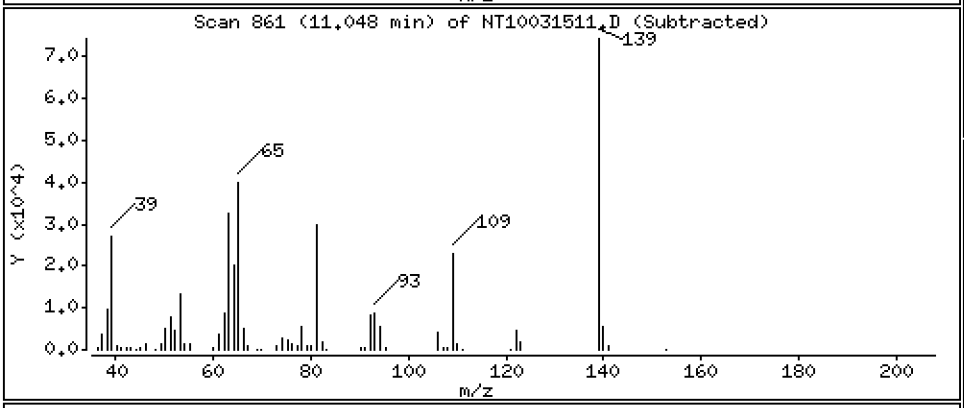
Column phase: ZB-5msi

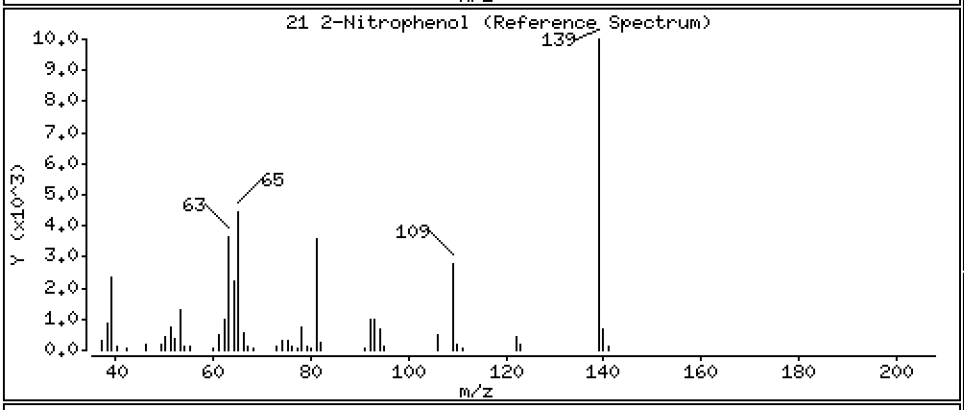
Column diameter: 0.25

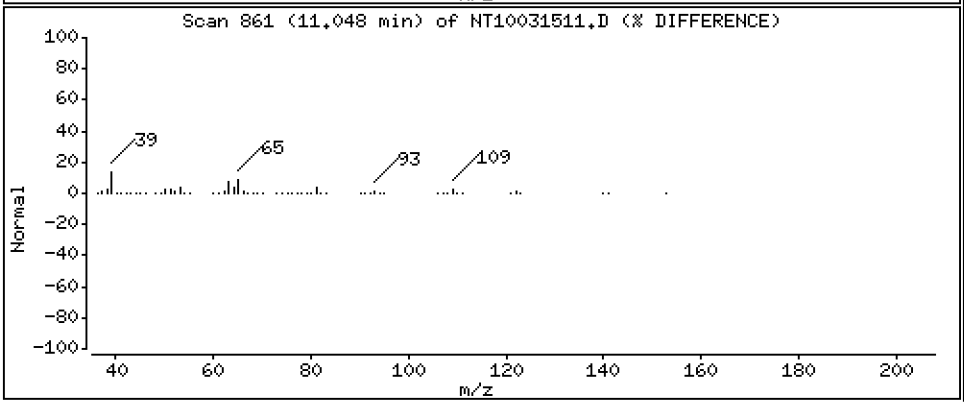
21 2-Nitrophenol

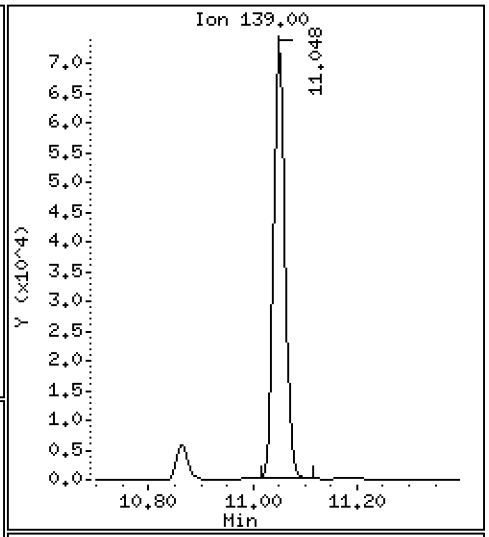
Concentration: 3.995 ug/mL

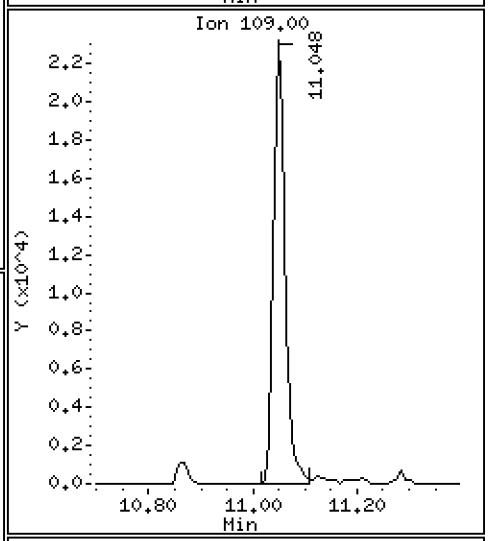


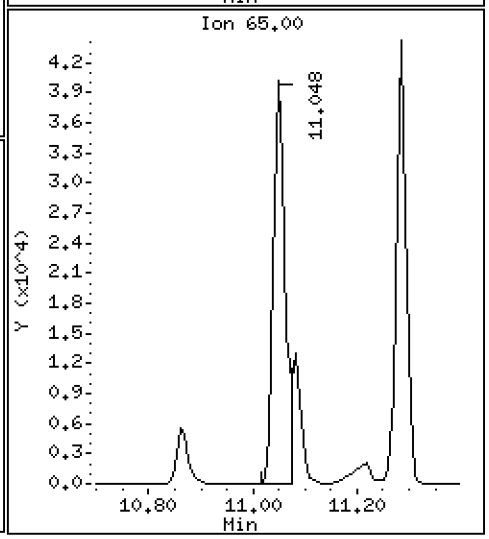












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

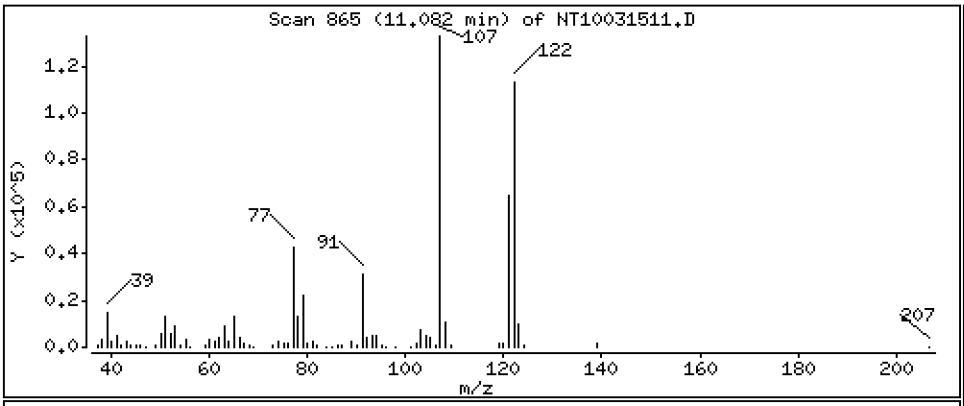
Operator: VTS

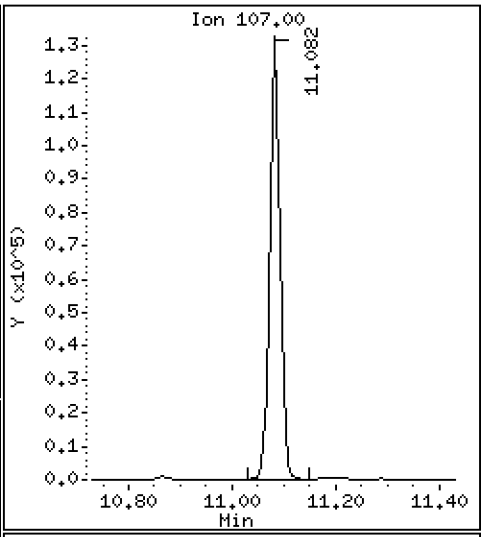
Column phase: ZB-5msi

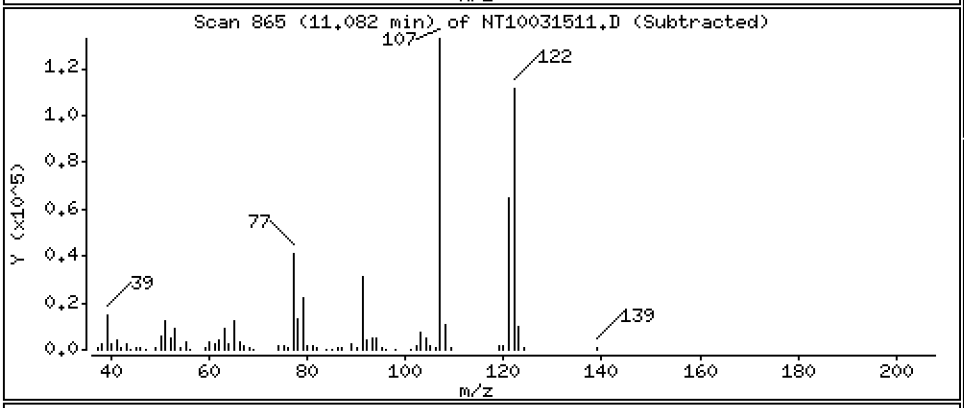
Column diameter: 0.25

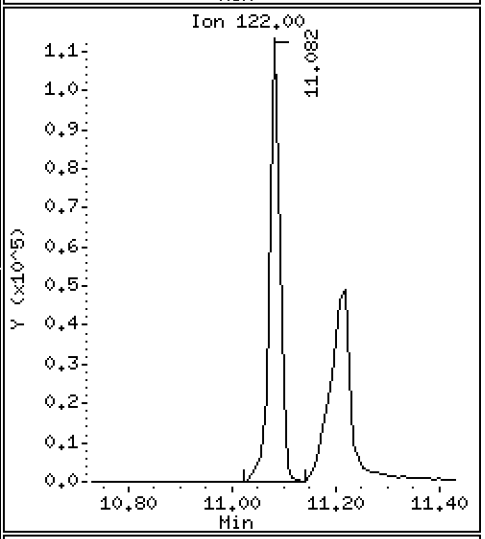
22 2,4-Dimethylphenol

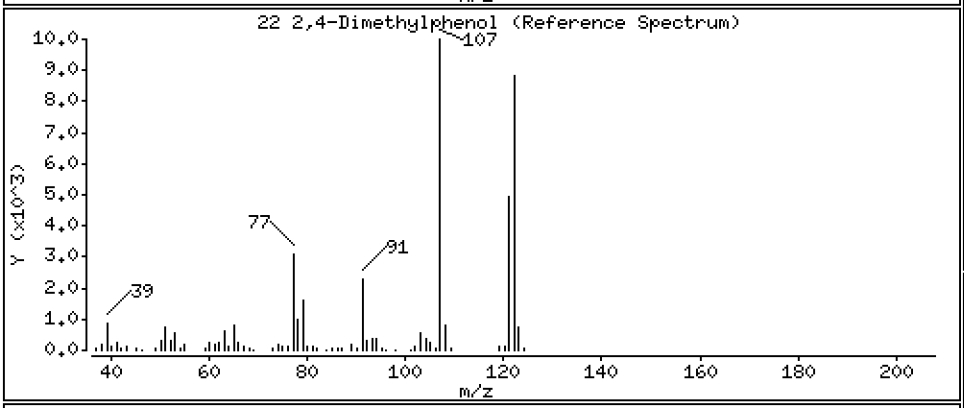
Concentration: 3.632 ug/mL

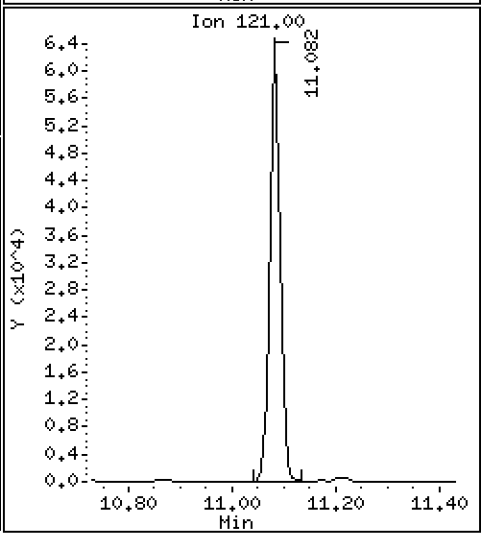


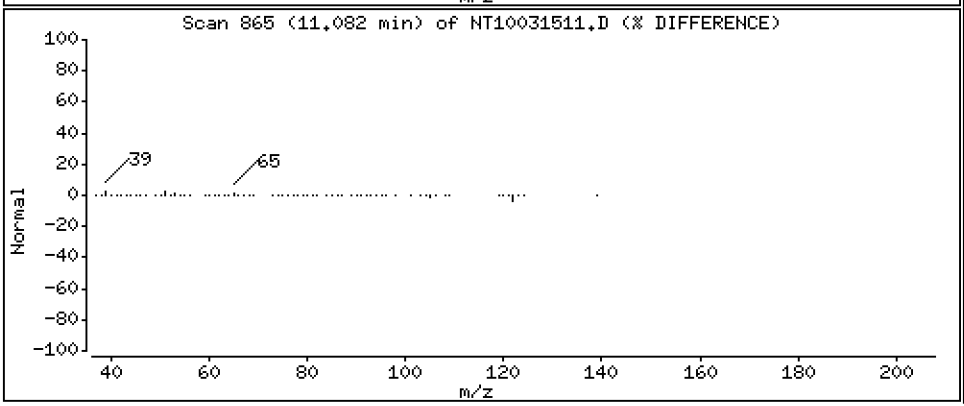












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

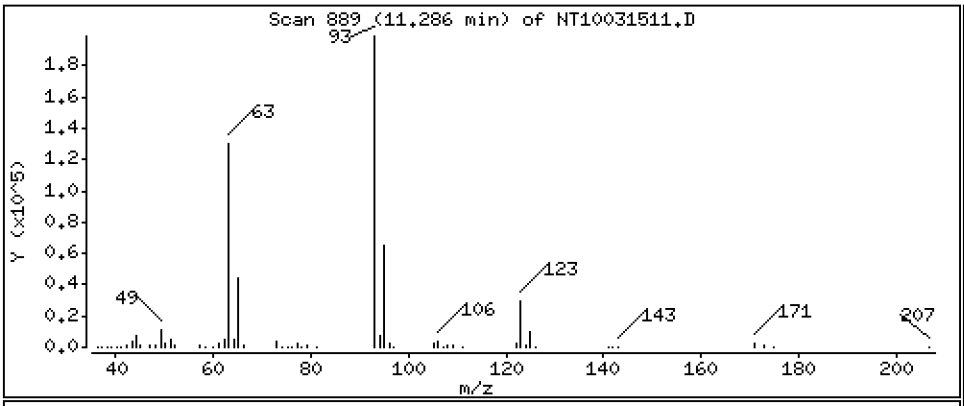
Operator: VTS

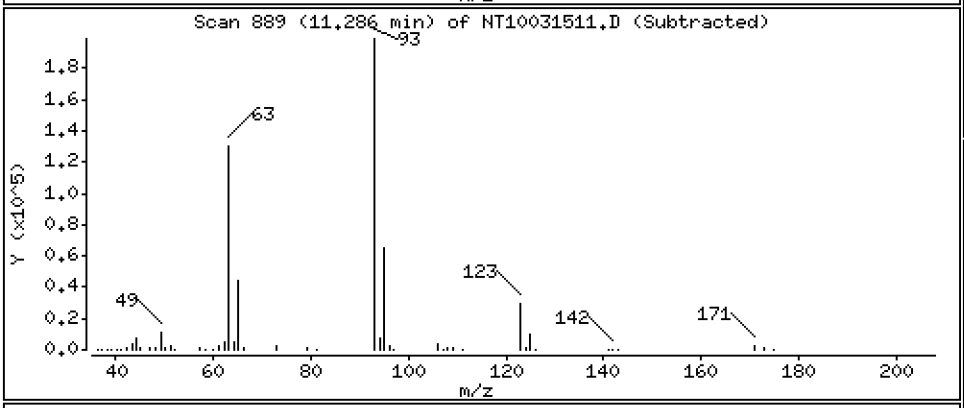
Column phase: ZB-5msi

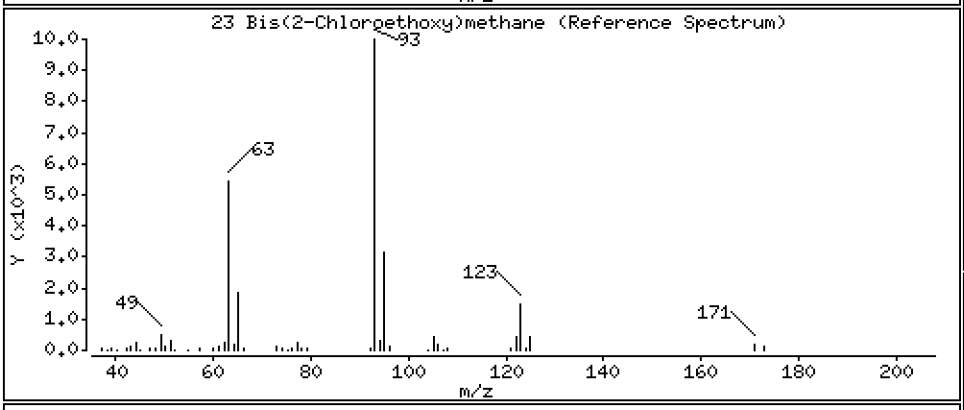
Column diameter: 0.25

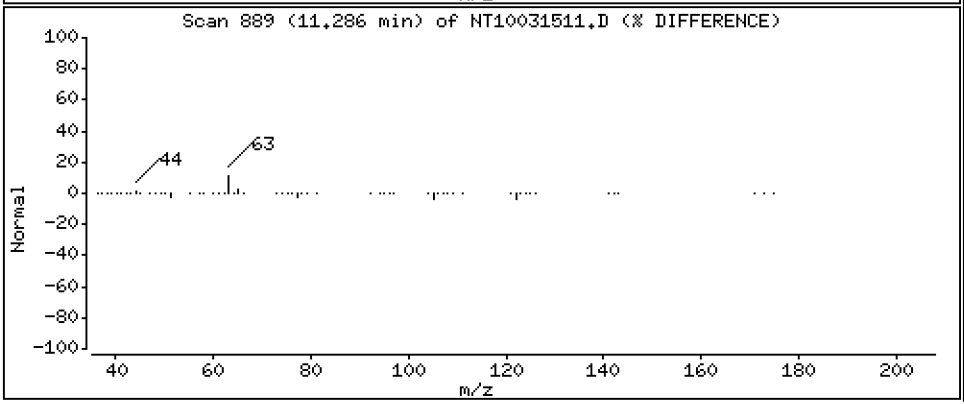
23 Bis(2-Chloroethoxy)methane

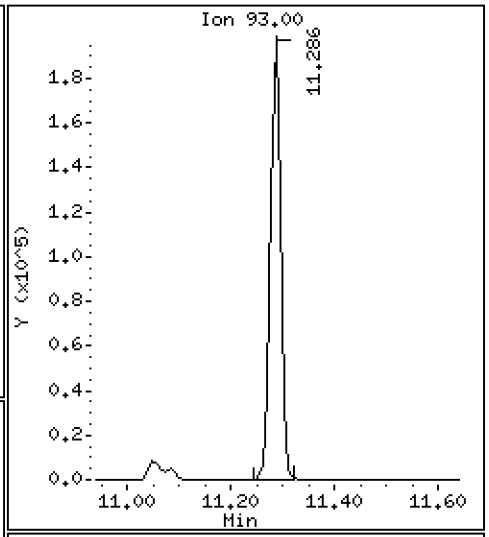
Concentration: 5.654 ug/mL

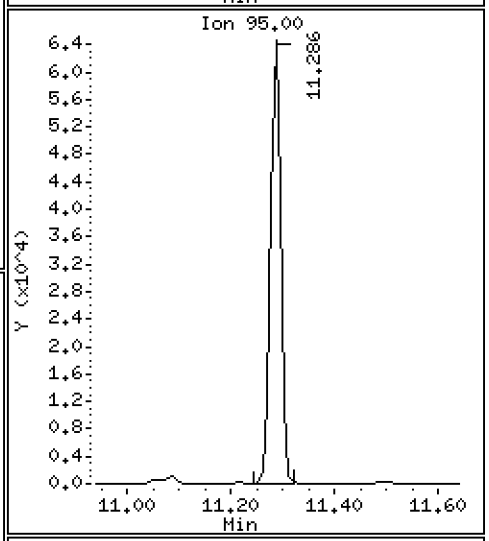


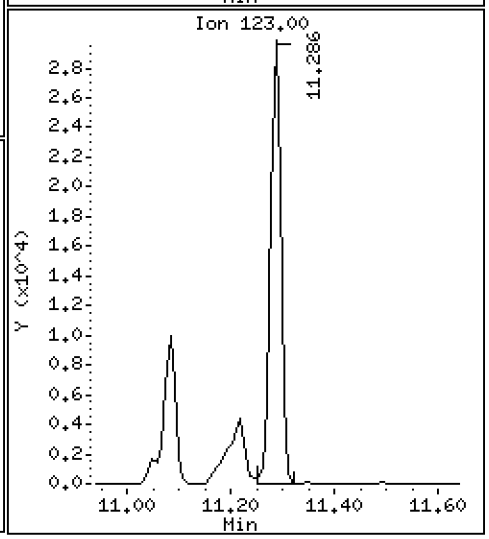












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

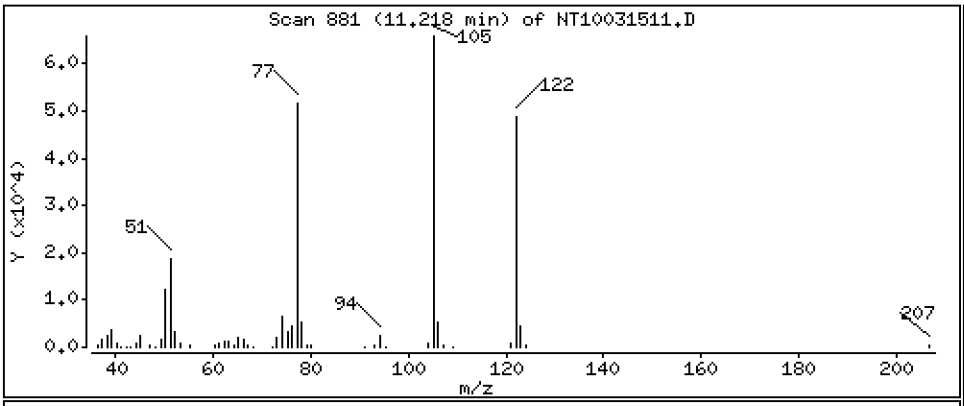
Operator: VTS

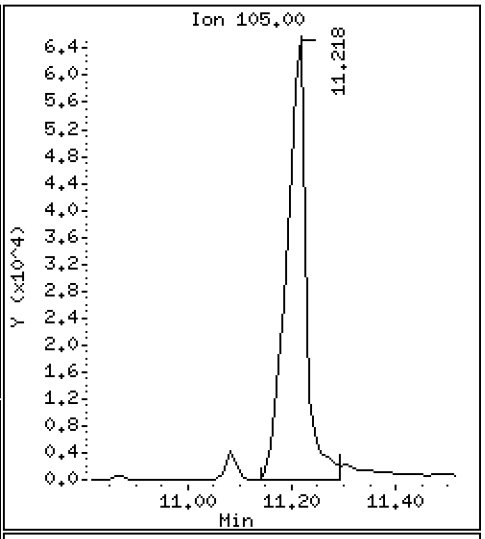
Column phase: ZB-5msi

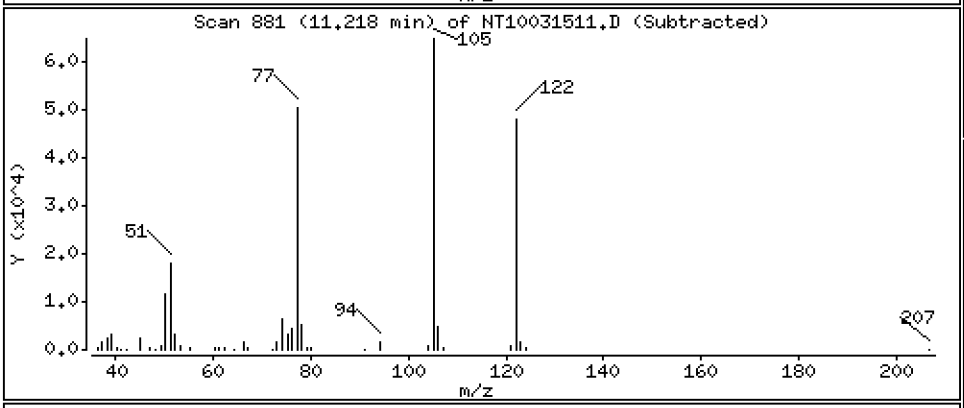
Column diameter: 0.25

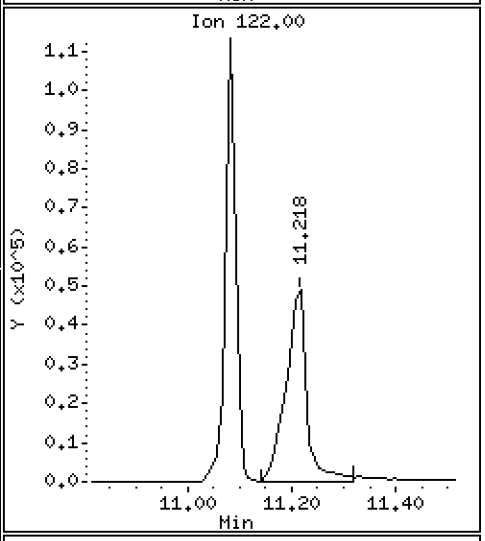
24 Benzoic acid

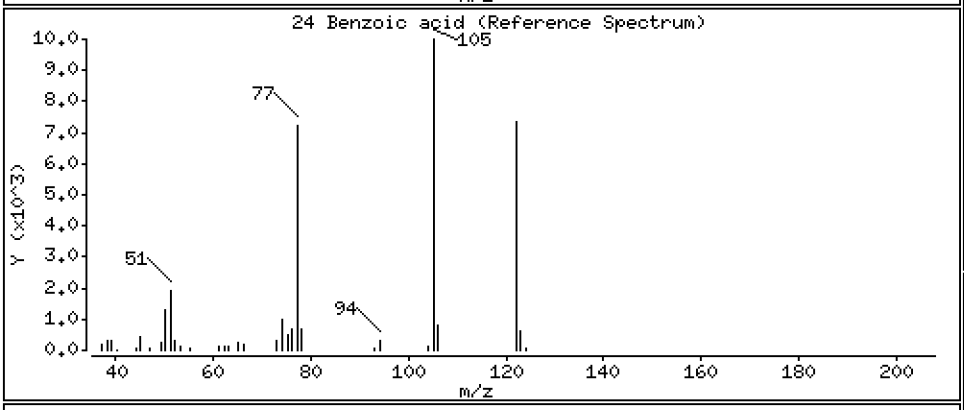
Concentration: 5.952 ug/mL

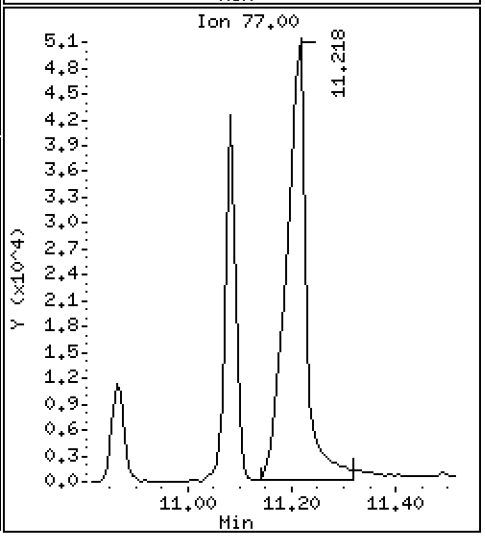


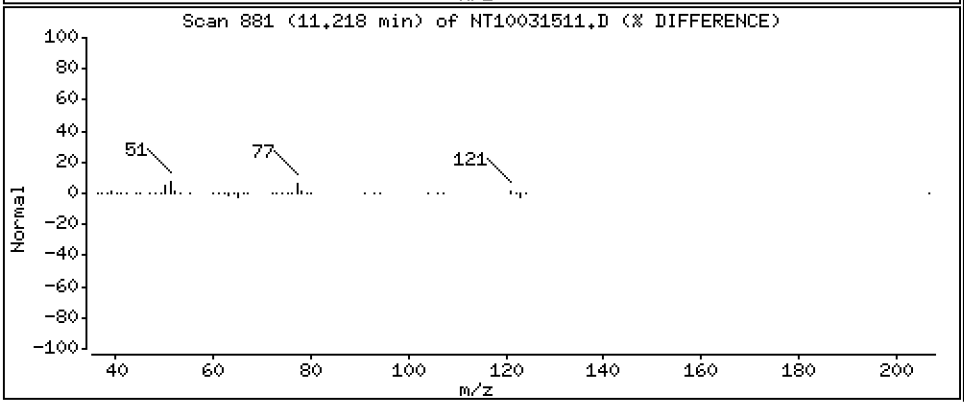












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

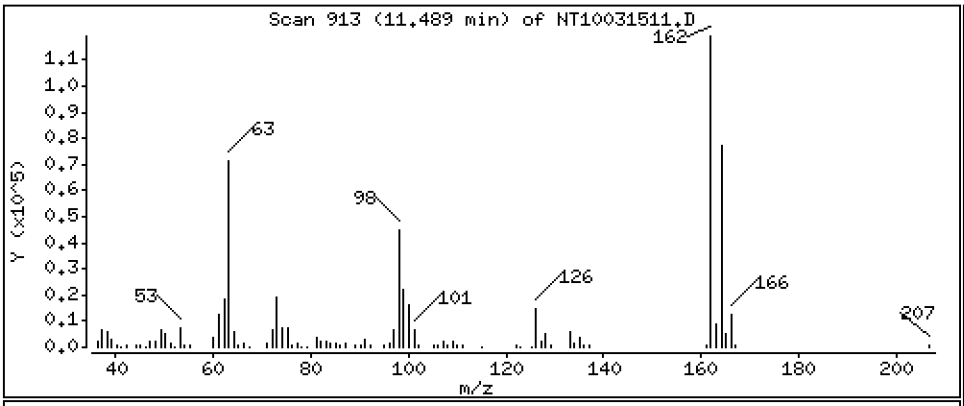
Operator: VTS

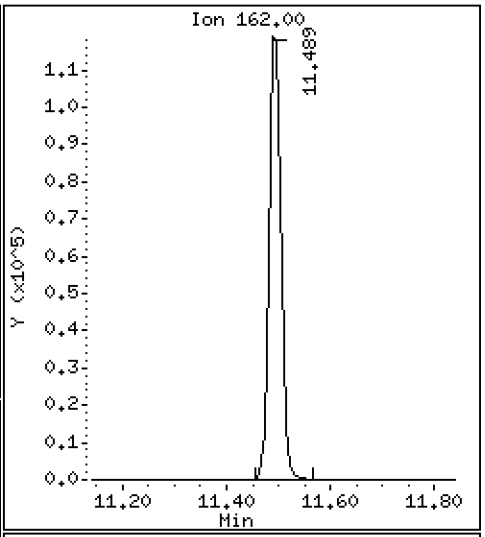
Column phase: ZB-5msi

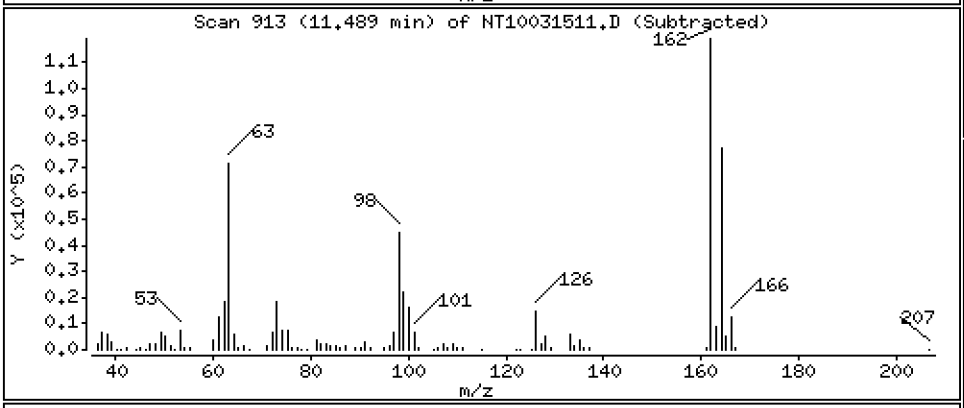
Column diameter: 0.25

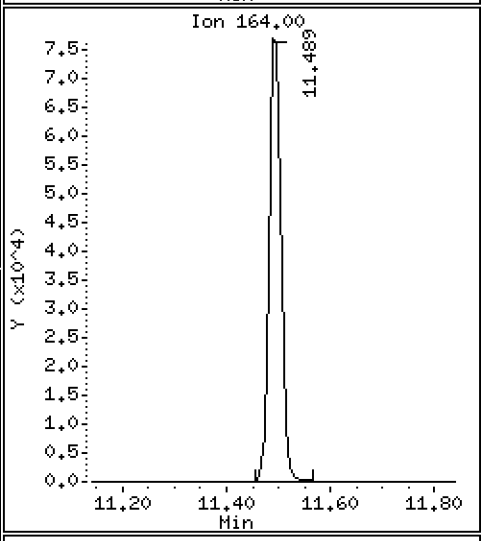
25 2,4-Dichlorophenol

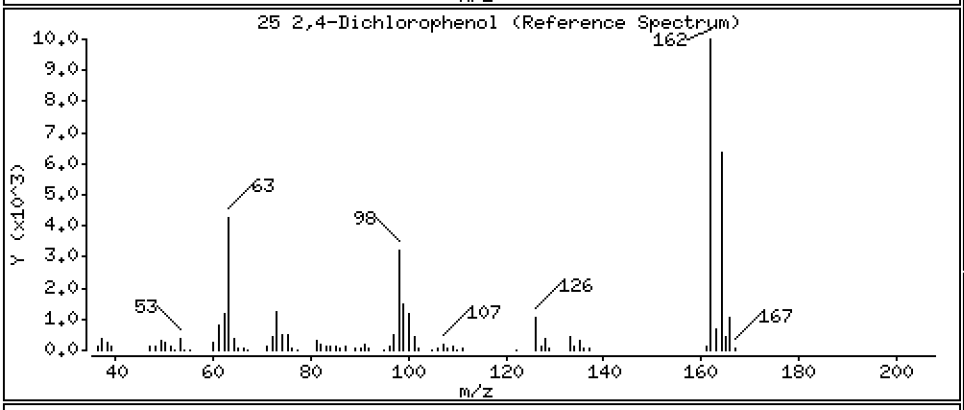
Concentration: 4.703 ug/mL

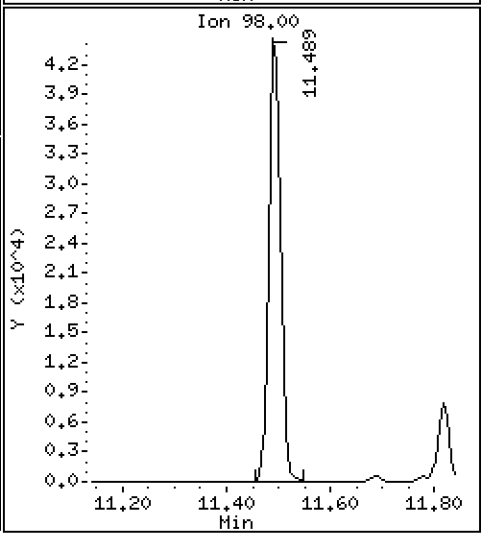


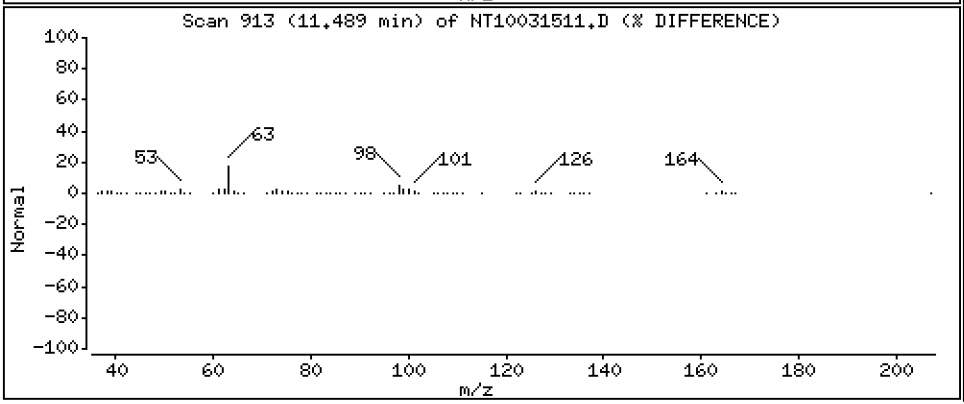












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

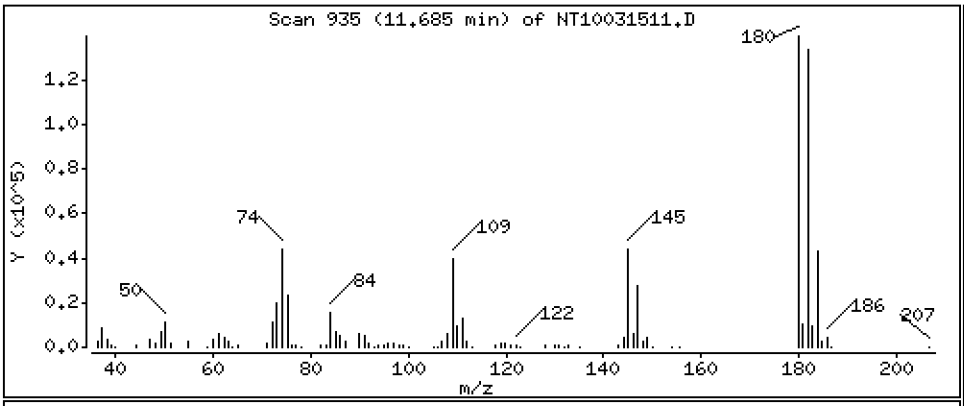
Operator: VTS

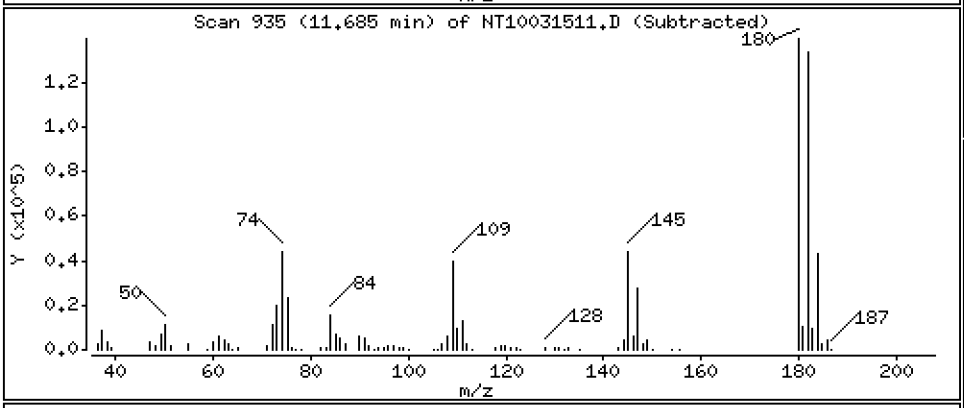
Column phase: ZB-5msi

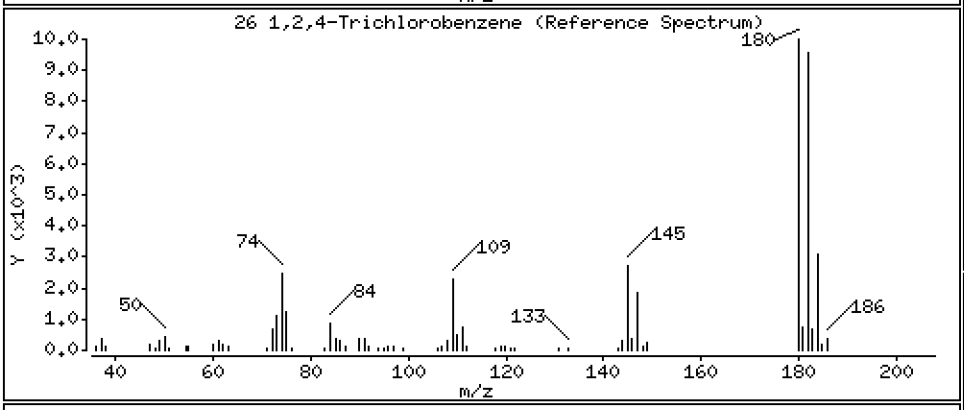
Column diameter: 0.25

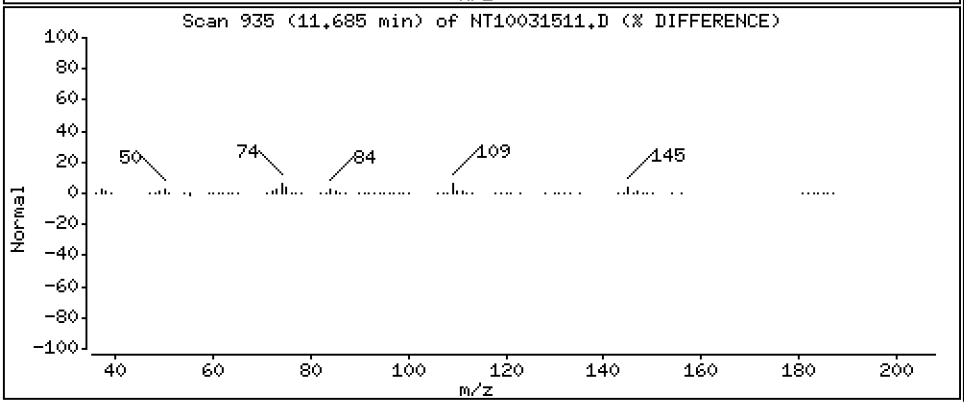
26 1,2,4-Trichlorobenzene

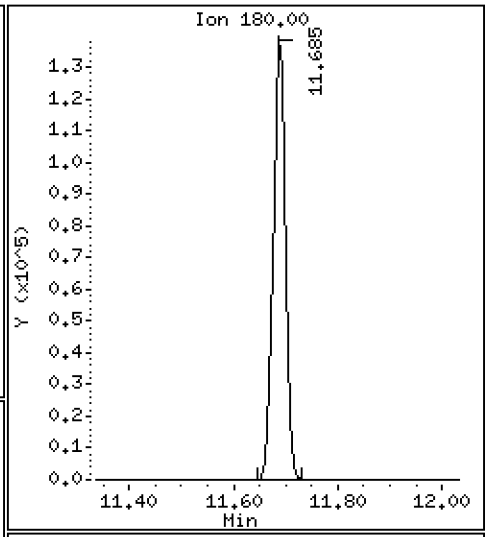
Concentration: 4.554 ug/mL

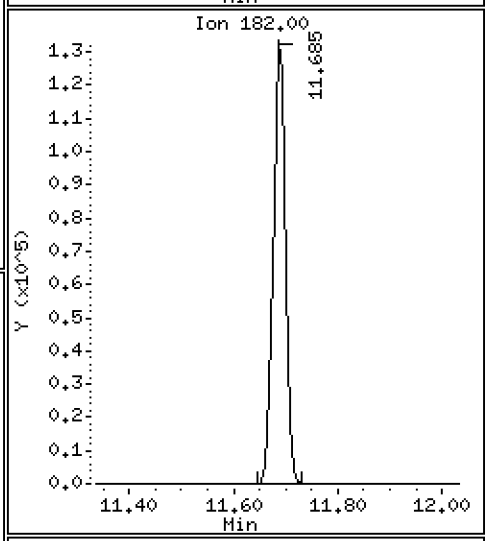


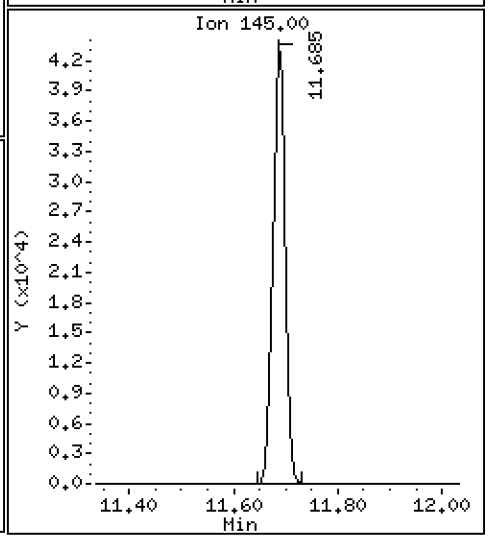












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

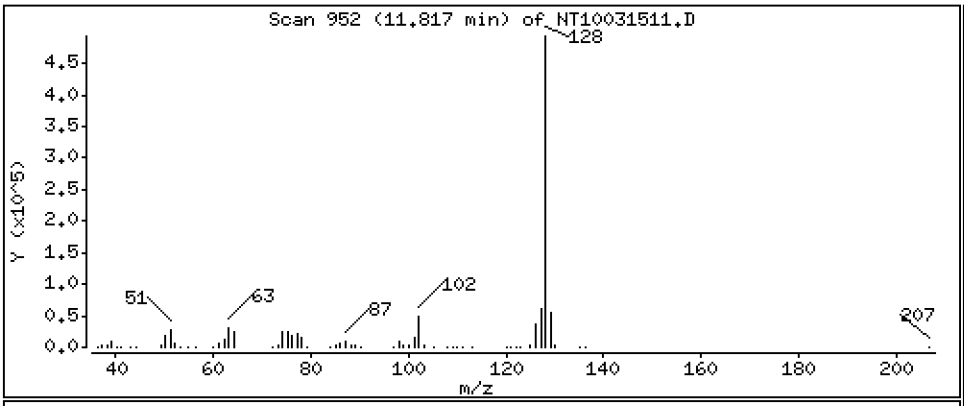
Operator: VTS

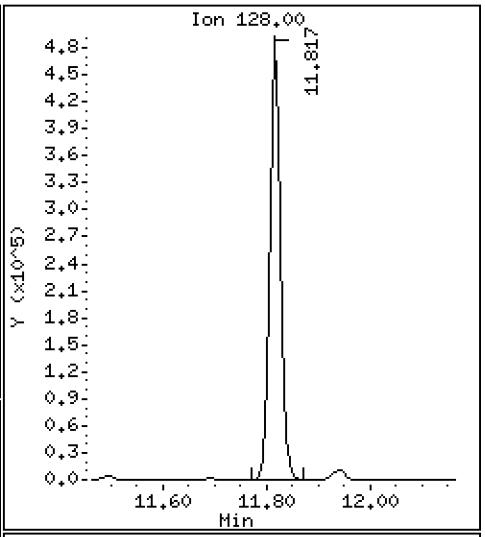
Column phase: ZB-5msi

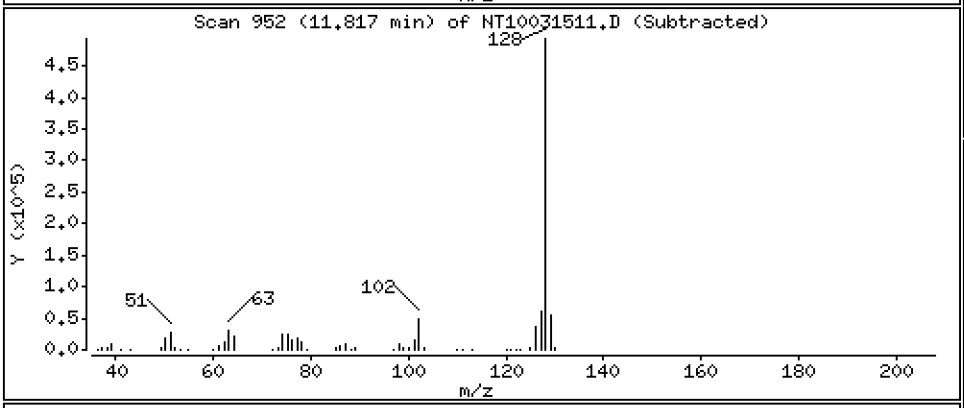
Column diameter: 0.25

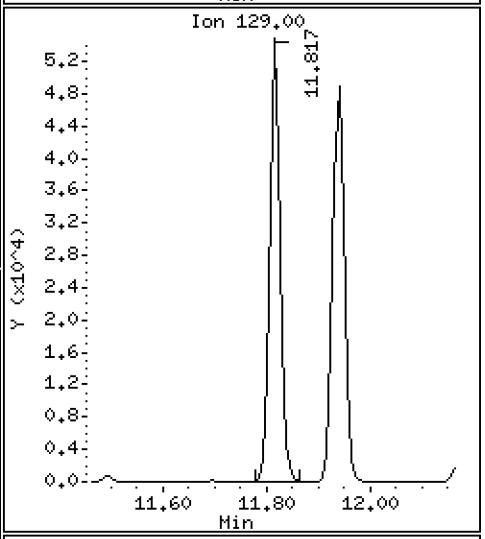
28 Naphthalene

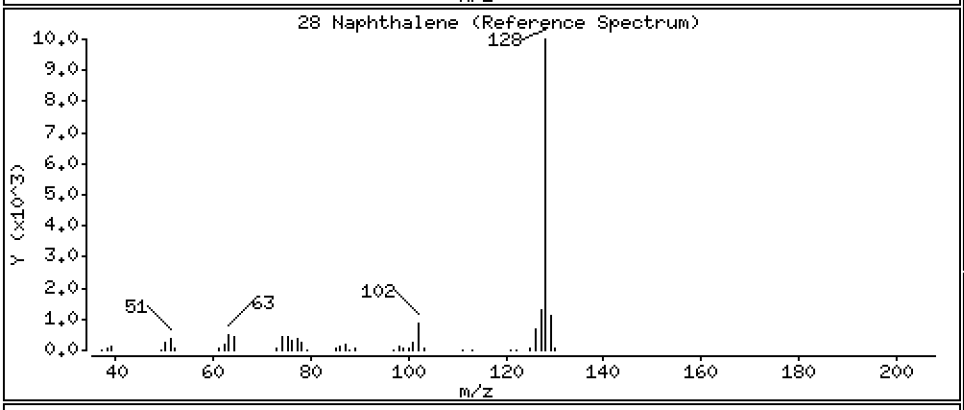
Concentration: 4.717 ug/mL

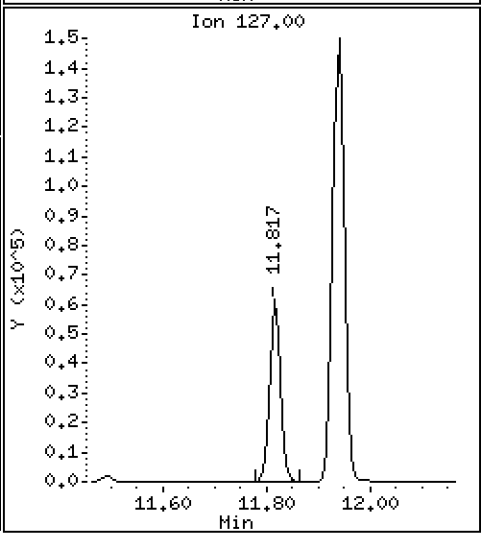


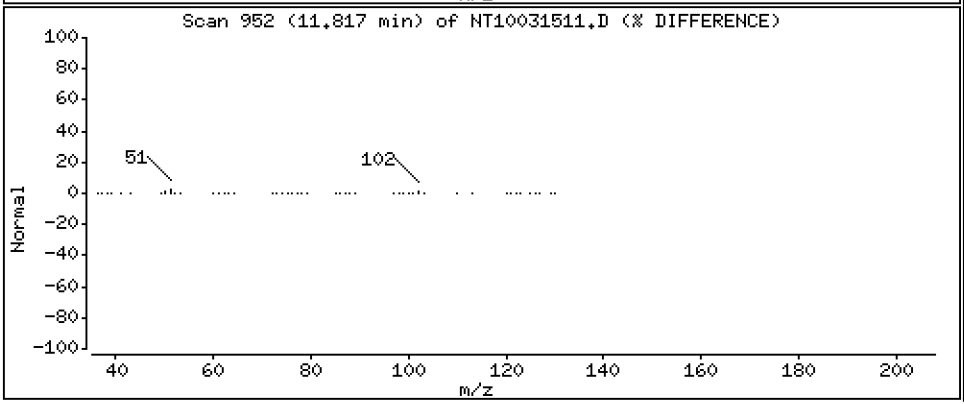












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

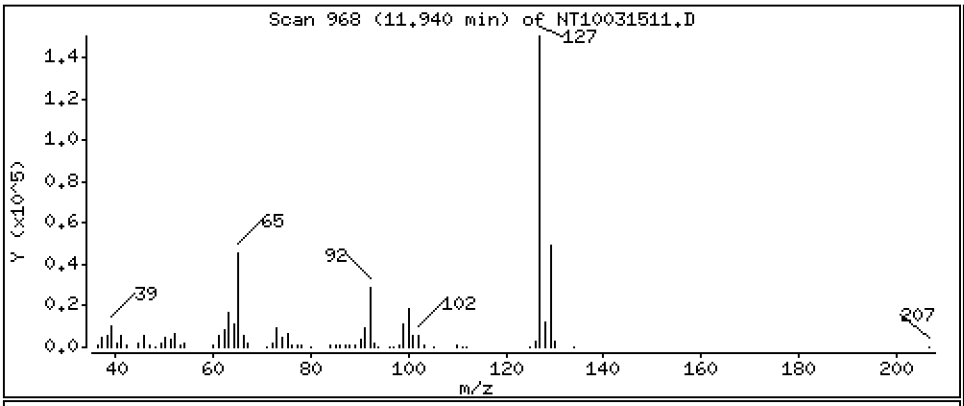
Operator: VTS

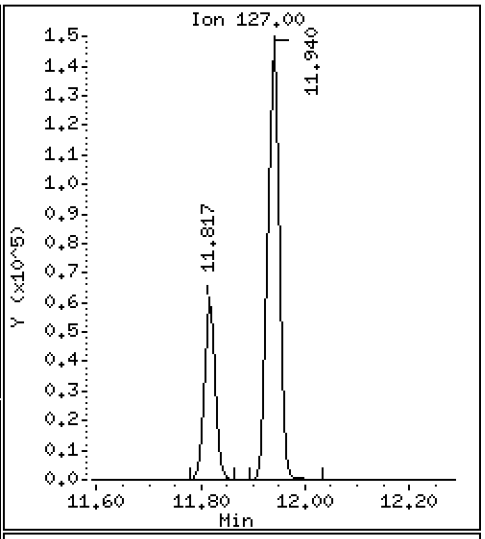
Column phase: ZB-5msi

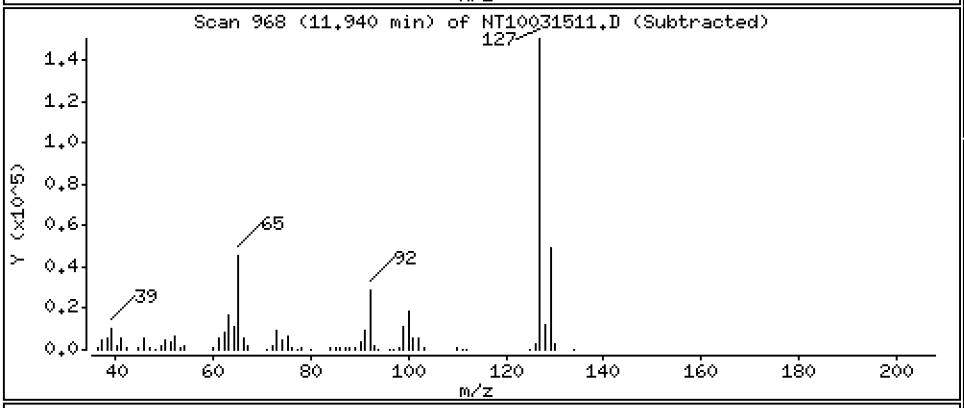
Column diameter: 0.25

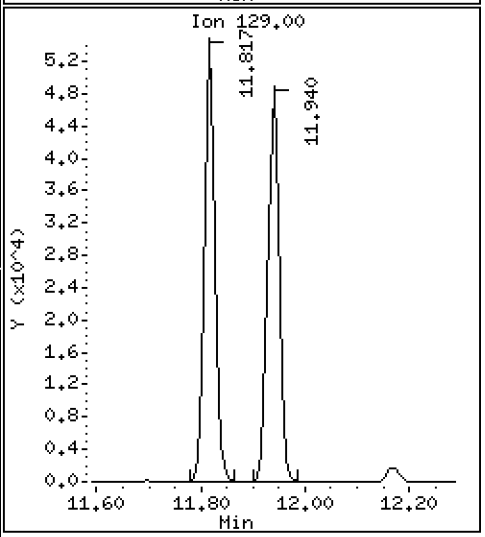
29 4-Chloroaniline

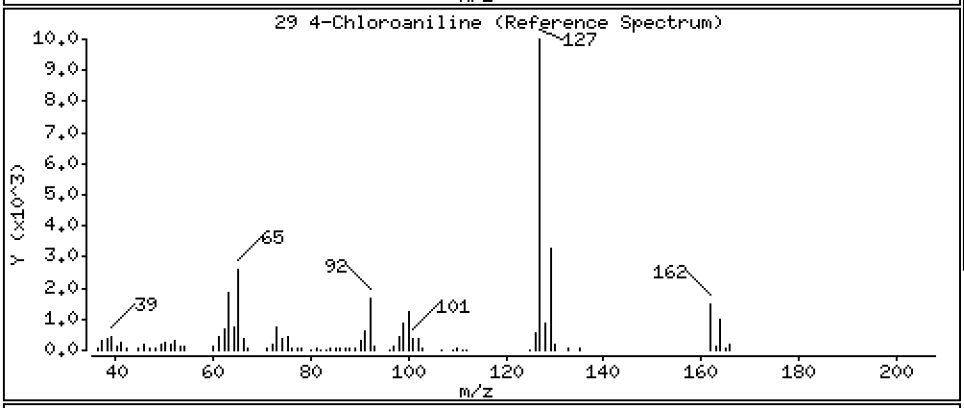
Concentration: 3.787 ug/mL

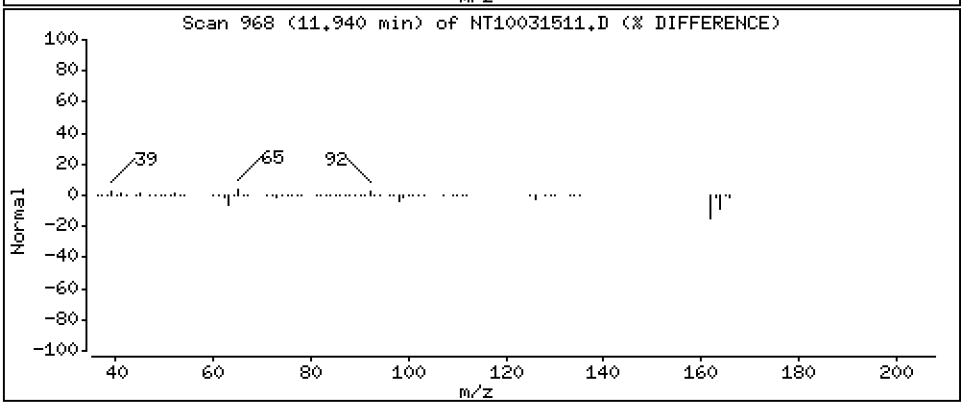












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

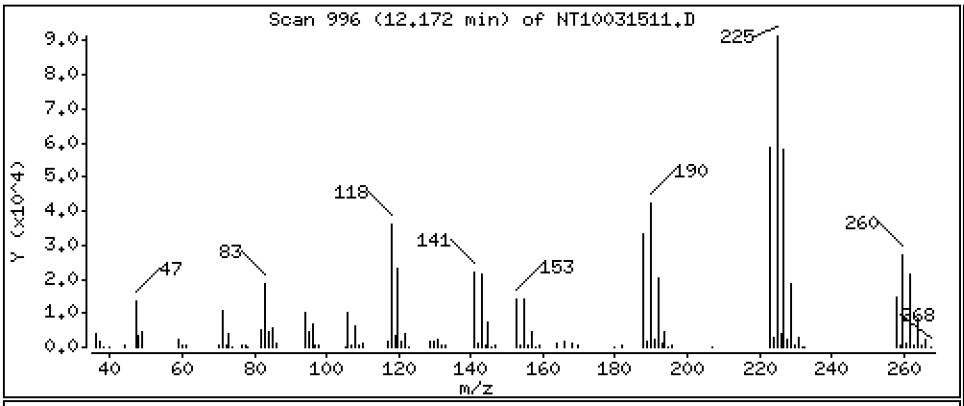
Operator: VTS

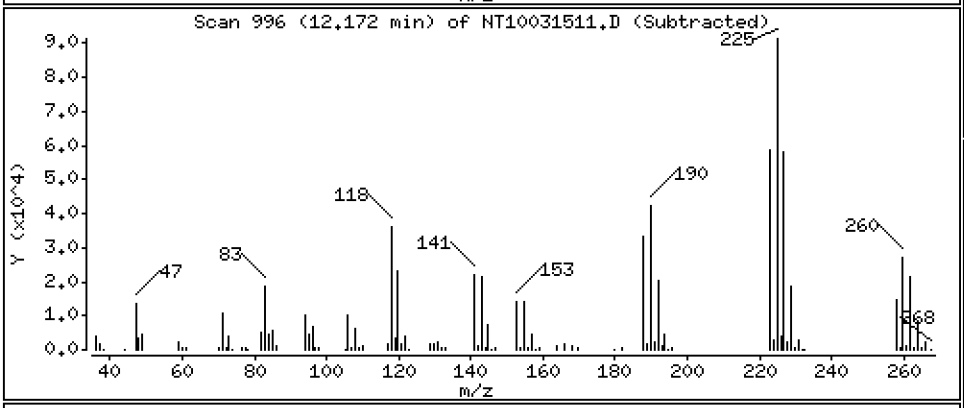
Column phase: ZB-5msi

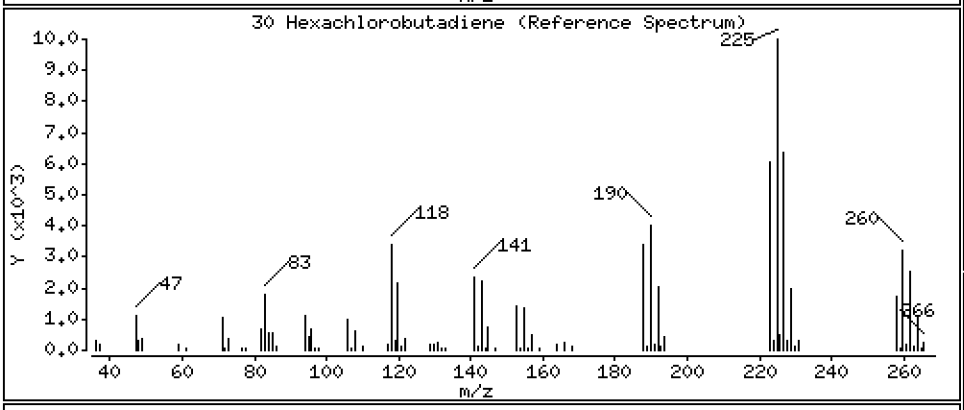
Column diameter: 0.25

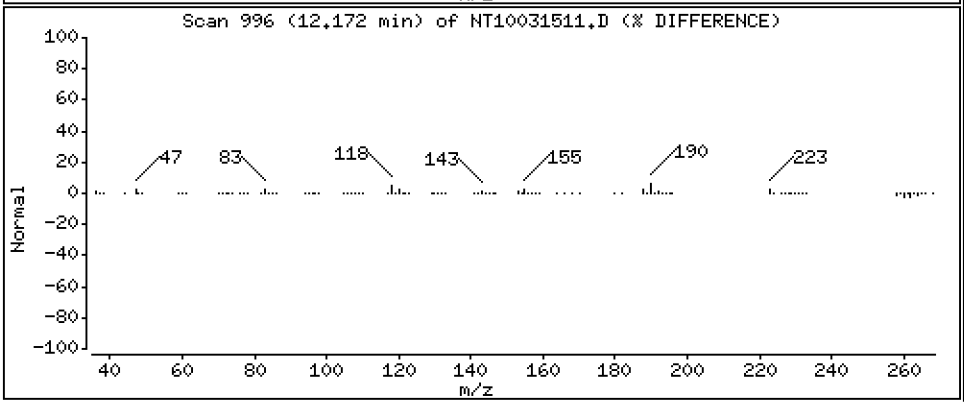
30 Hexachlorobutadiene

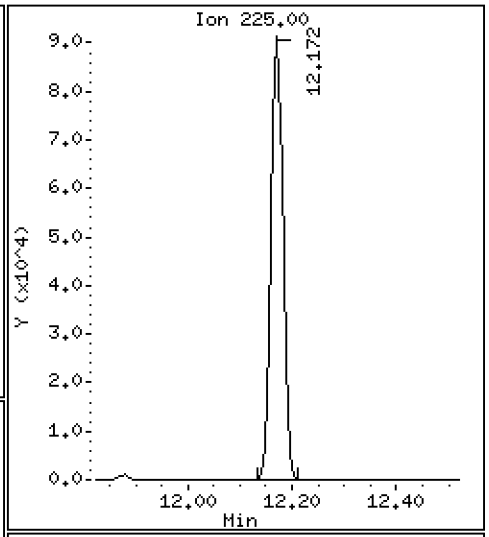
Concentration: 4.834 ug/mL

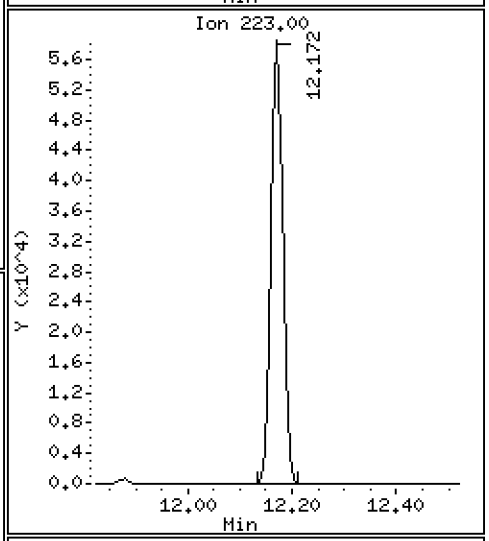


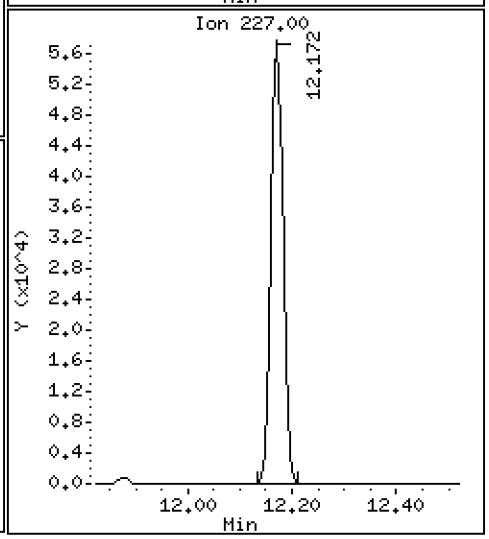












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

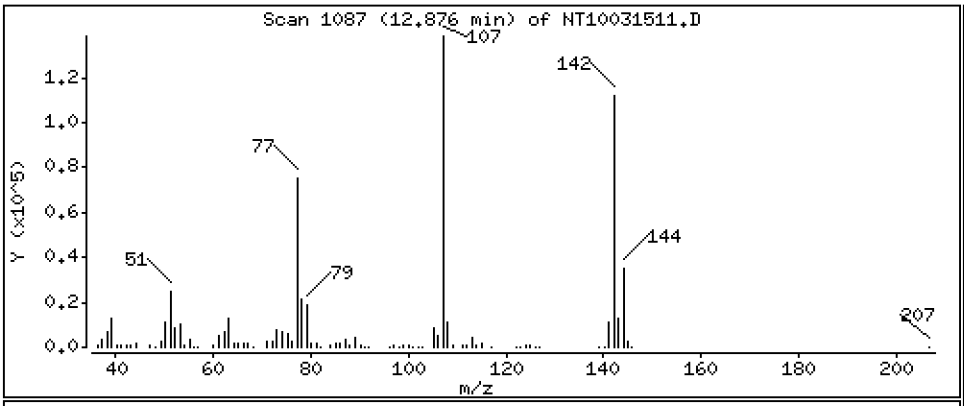
Operator: VTS

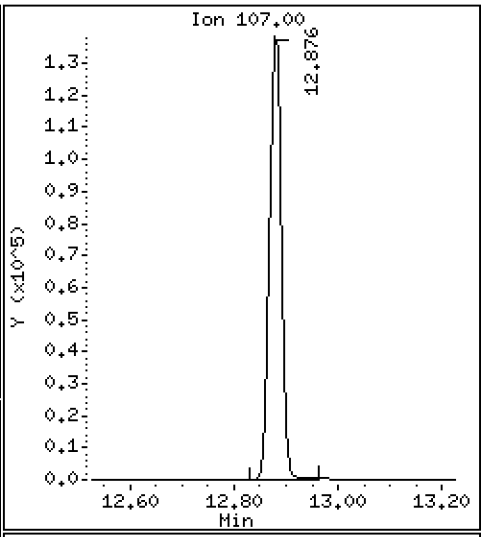
Column phase: ZB-5msi

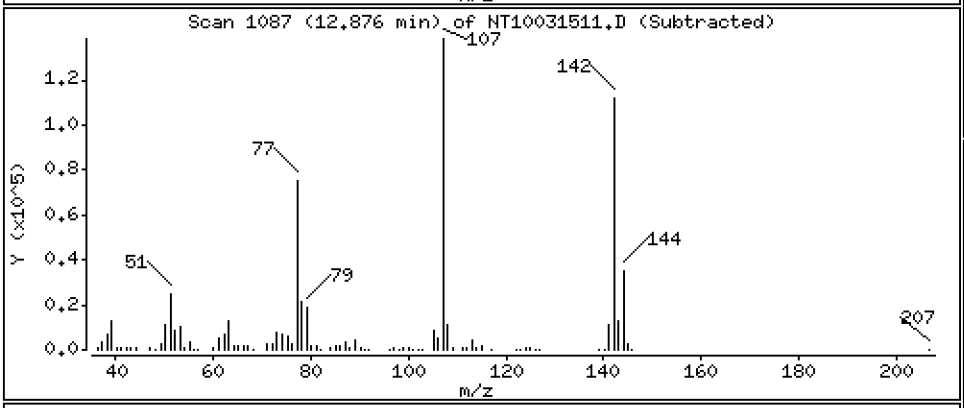
Column diameter: 0.25

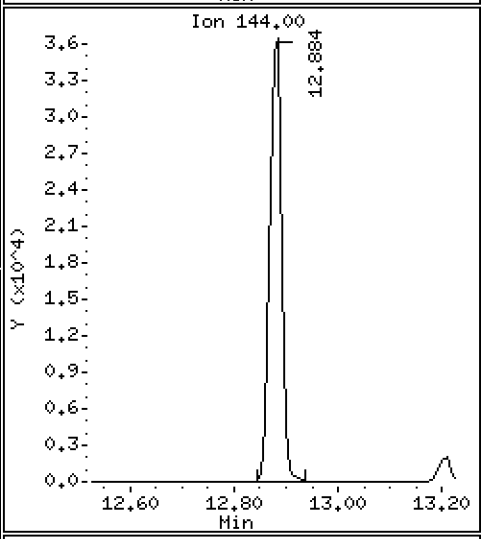
31 4-Chloro-3-methylphenol

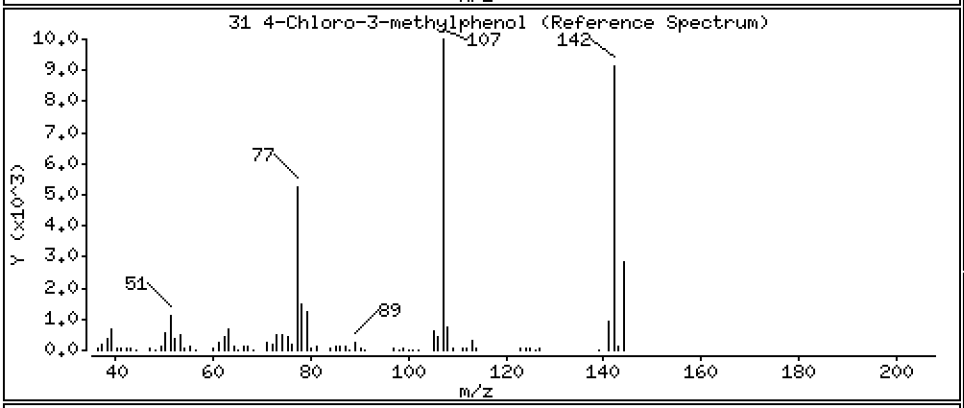
Concentration: 4.640 ug/mL

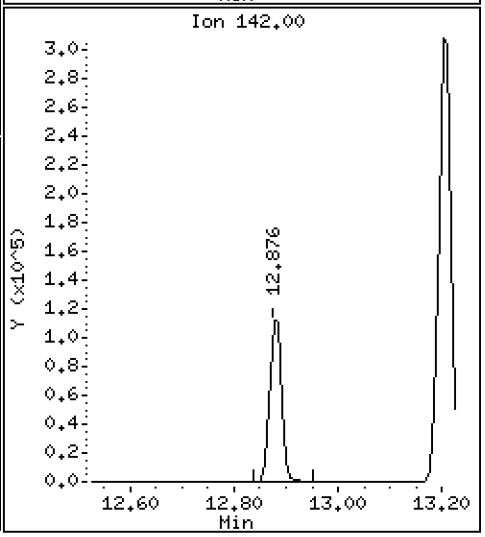


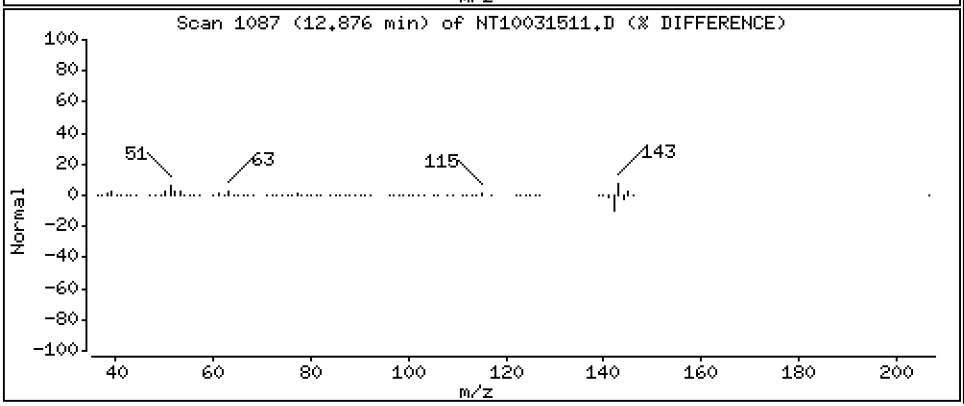












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

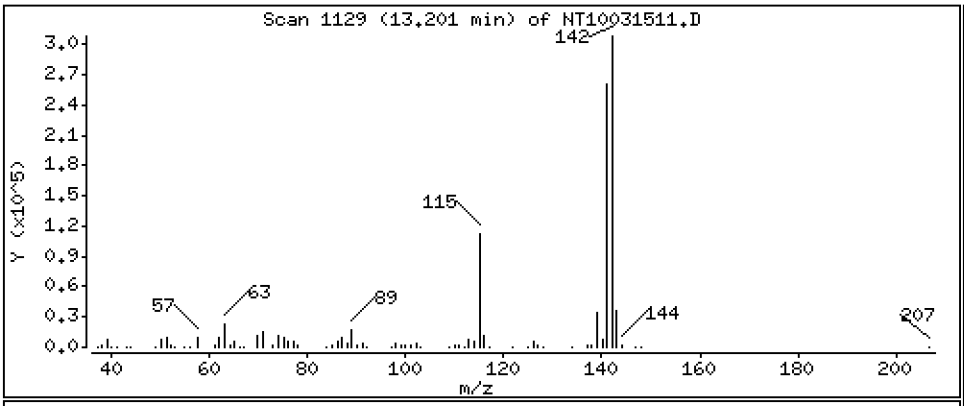
Operator: VTS

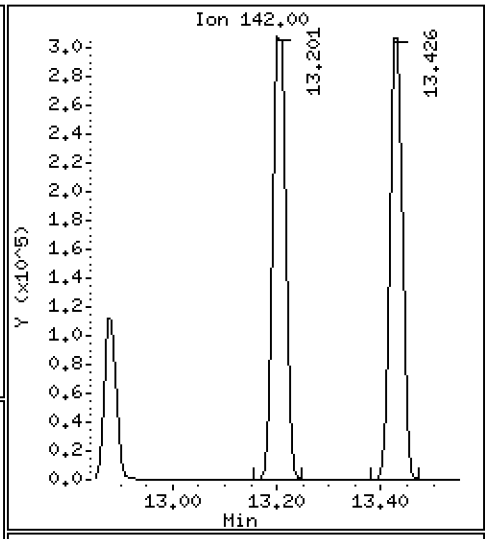
Column phase: ZB-5msi

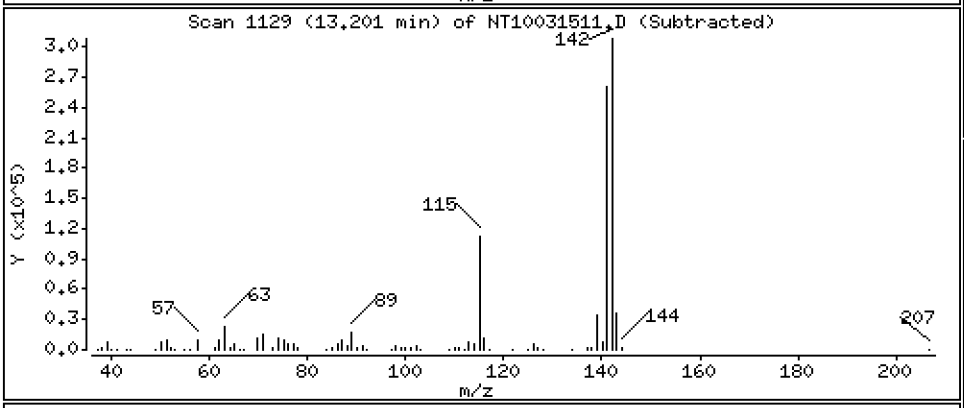
Column diameter: 0.25

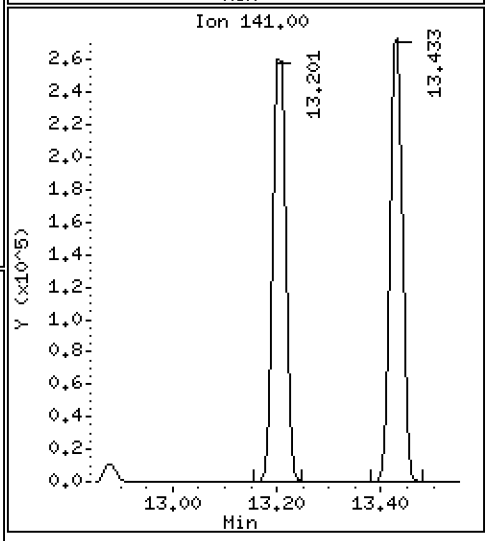
32 2-Methylnaphthalene

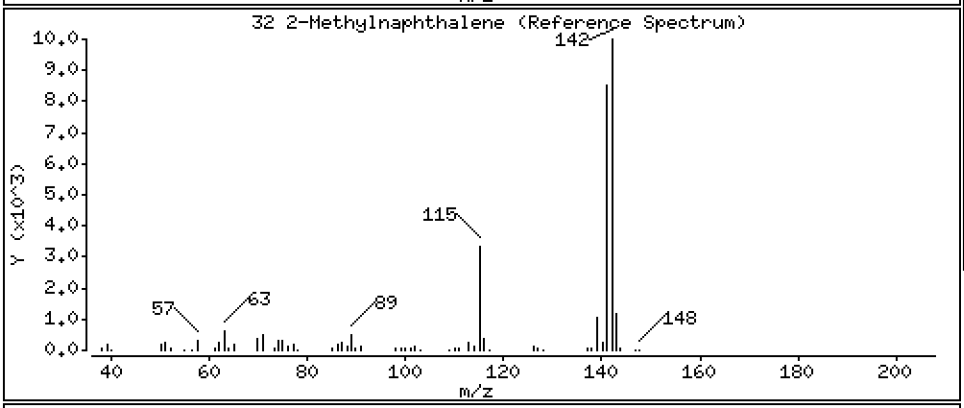
Concentration: 4.596 ug/mL

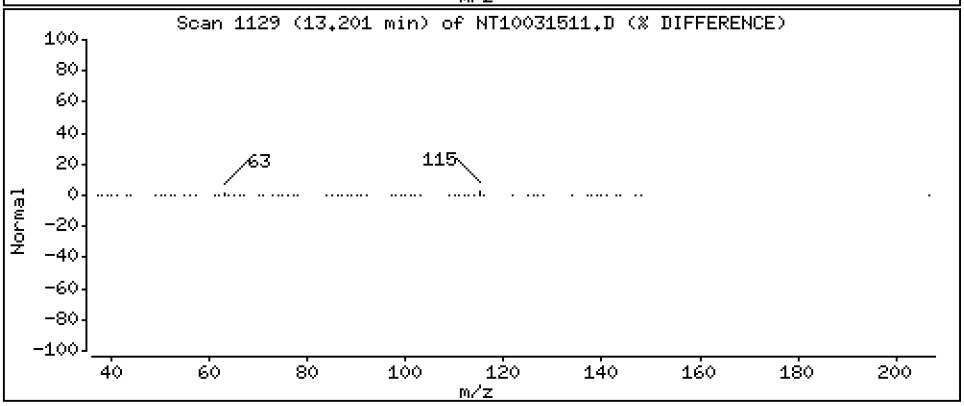












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

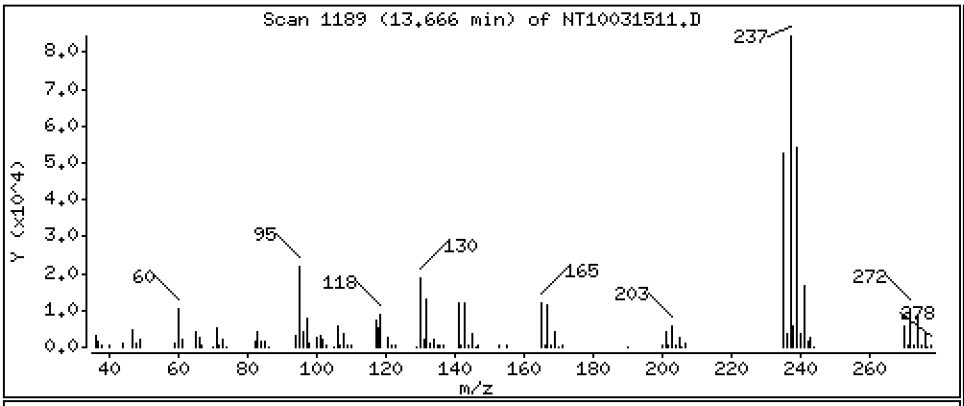
Operator: VTS

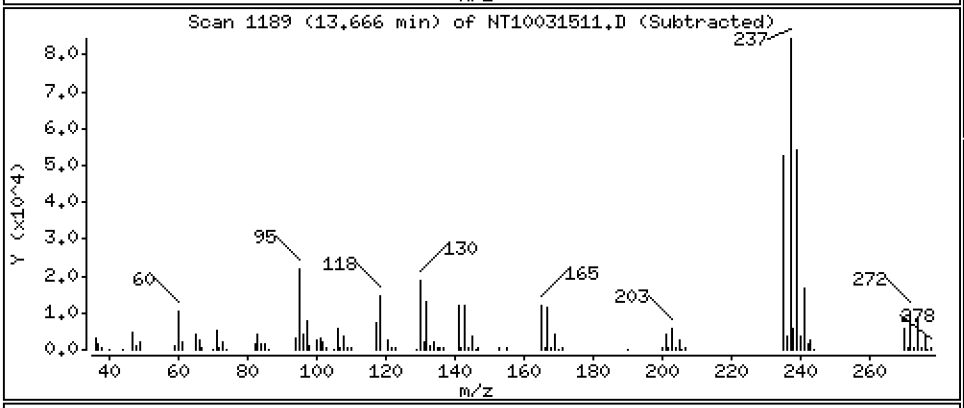
Column phase: ZB-5msi

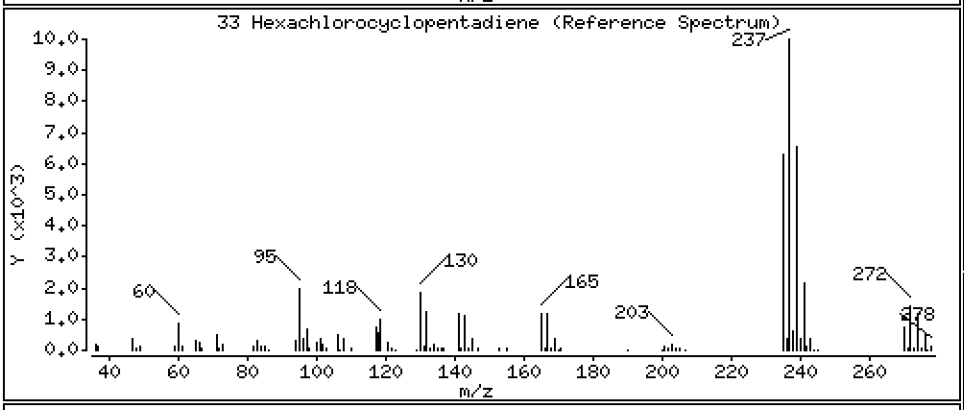
Column diameter: 0.25

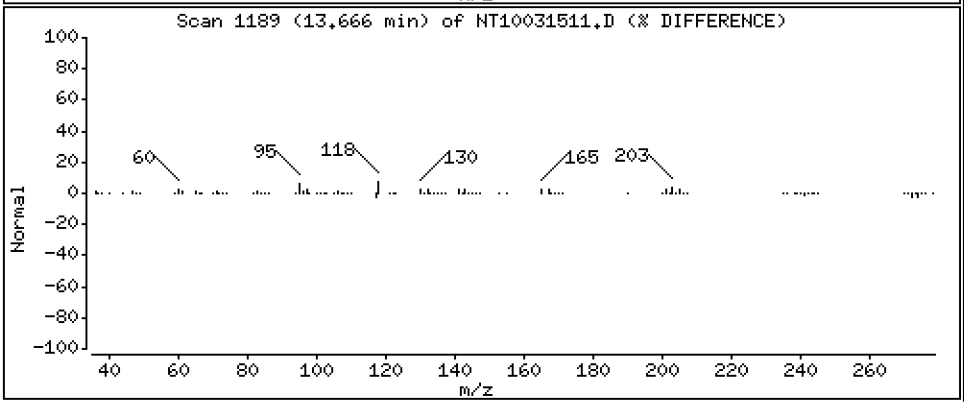
33 Hexachlorocyclopentadiene

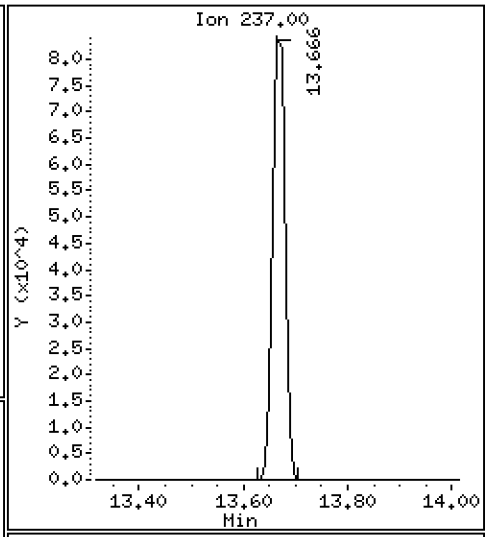
Concentration: 4.729 ug/mL

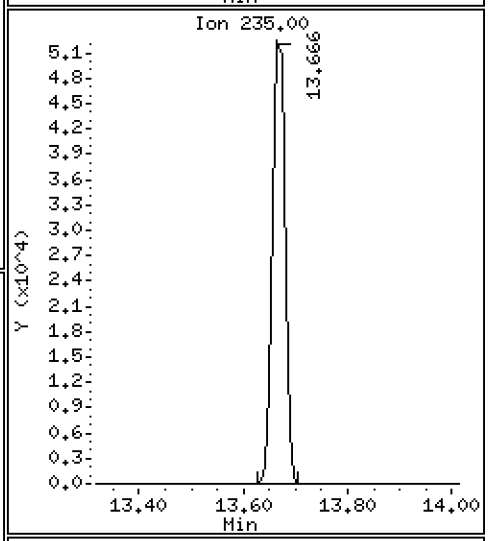


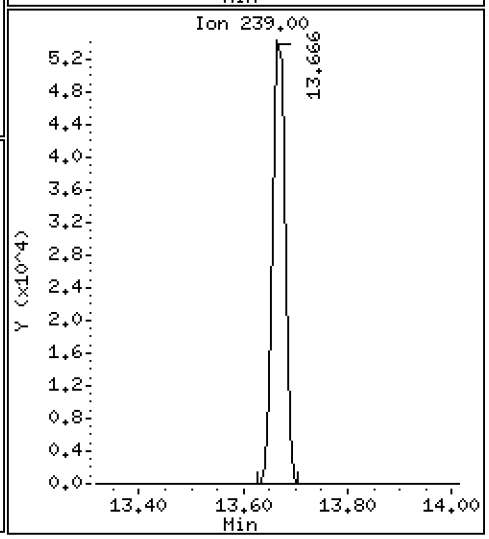












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

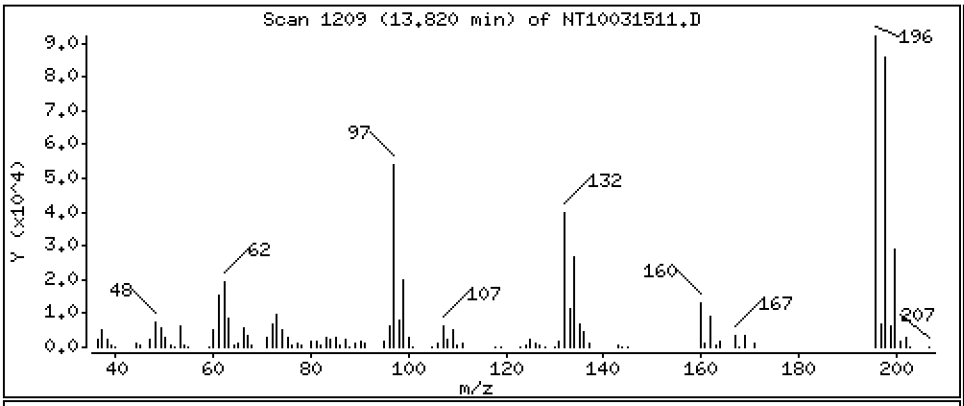
Operator: VTS

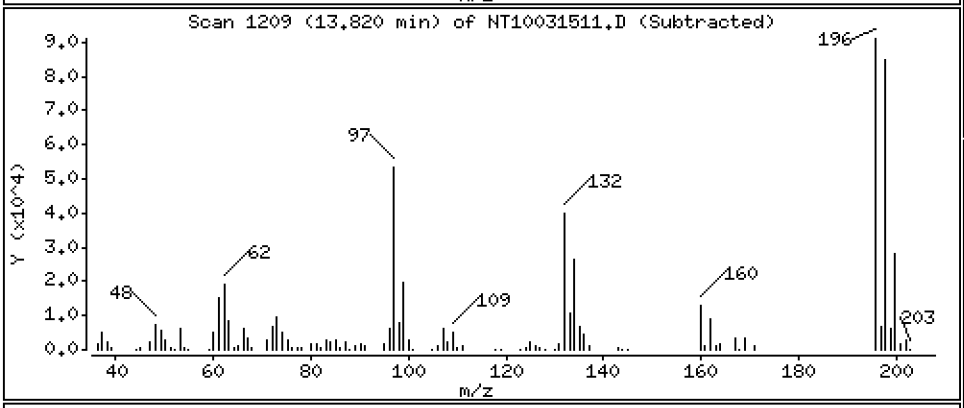
Column phase: ZB-5msi

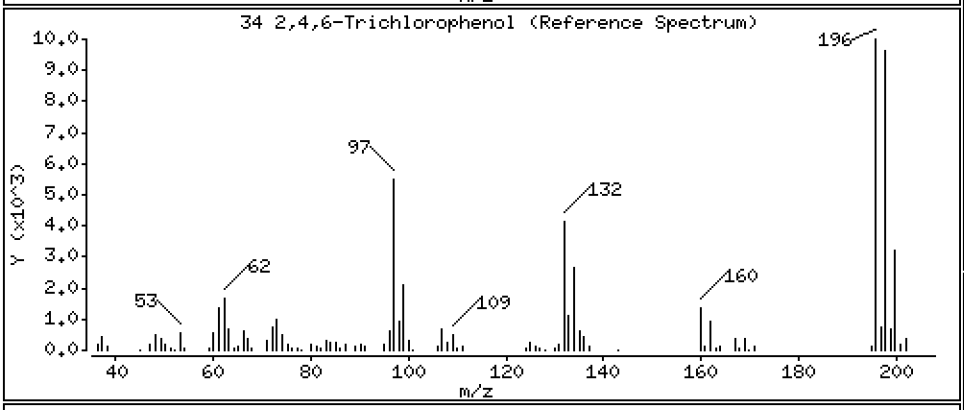
Column diameter: 0.25

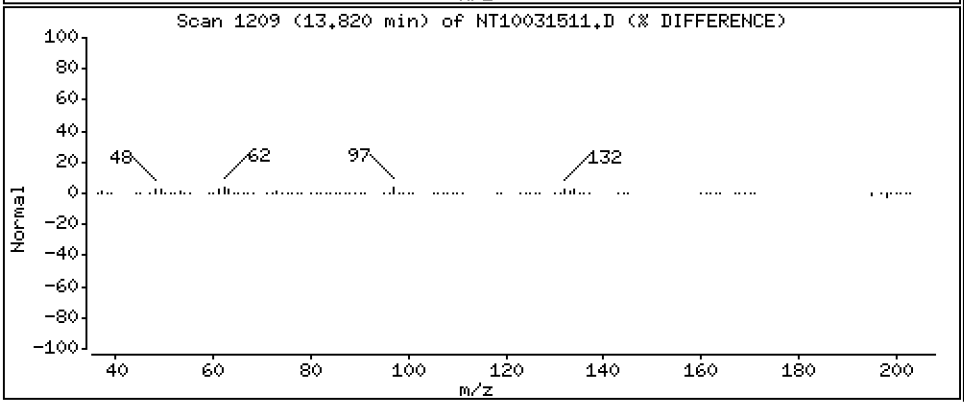
34 2,4,6-Trichlorophenol

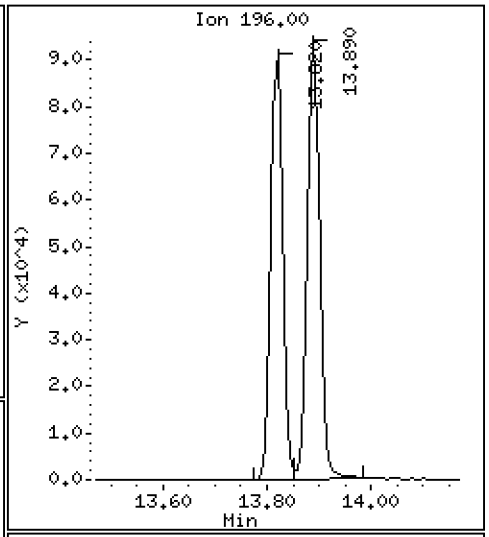
Concentration: 4.596 ug/mL

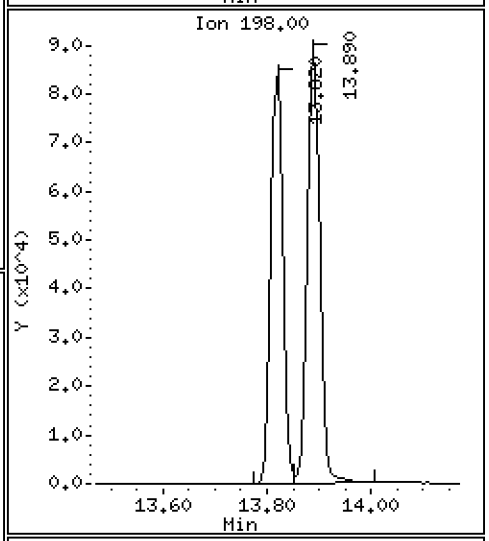


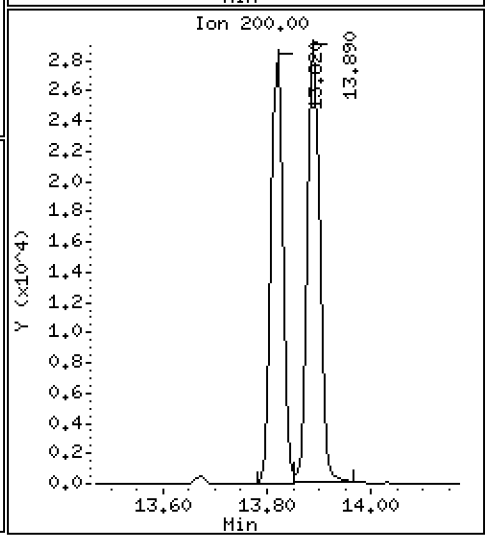












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

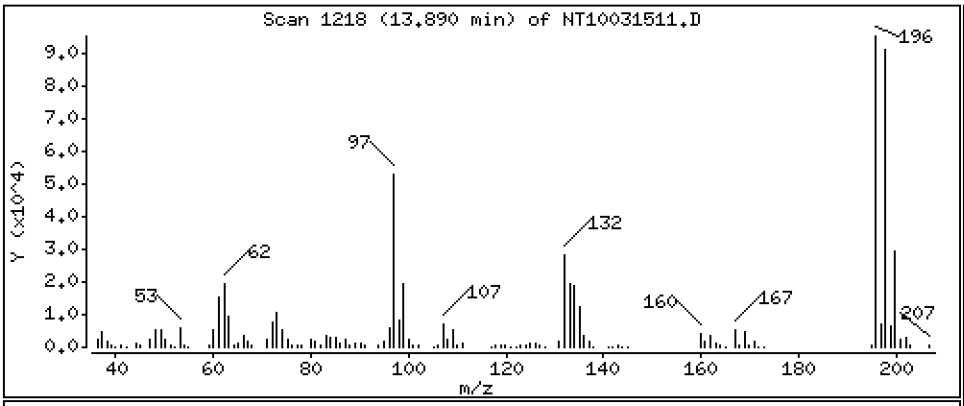
Operator: VTS

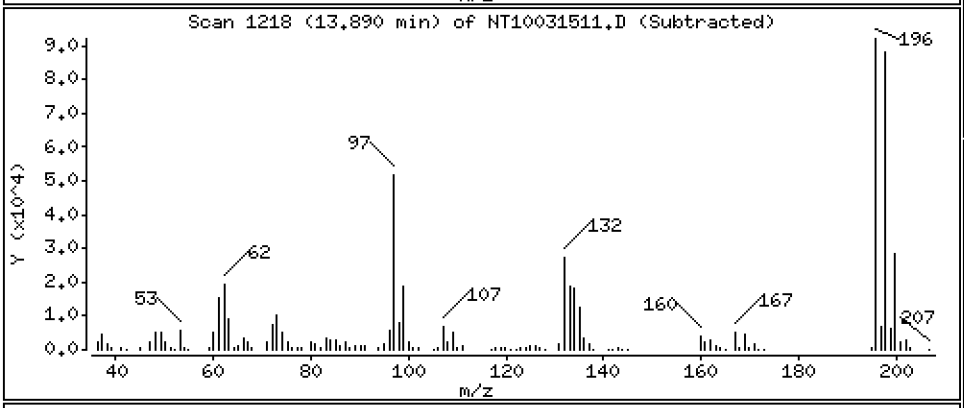
Column phase: ZB-5msi

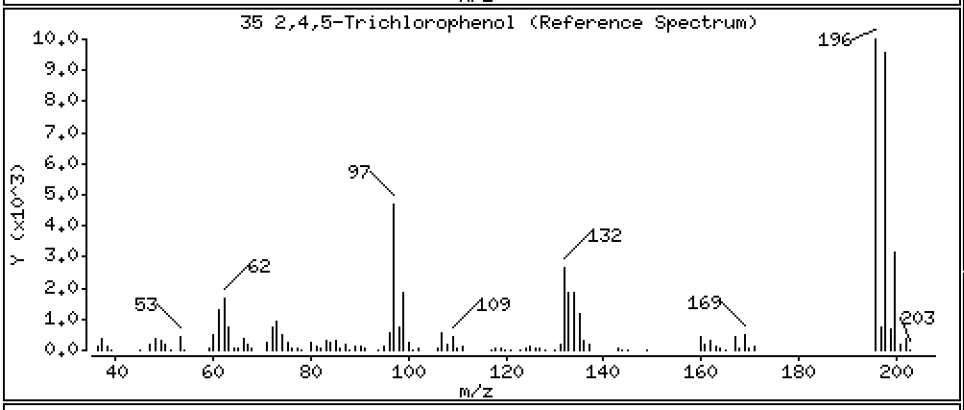
Column diameter: 0.25

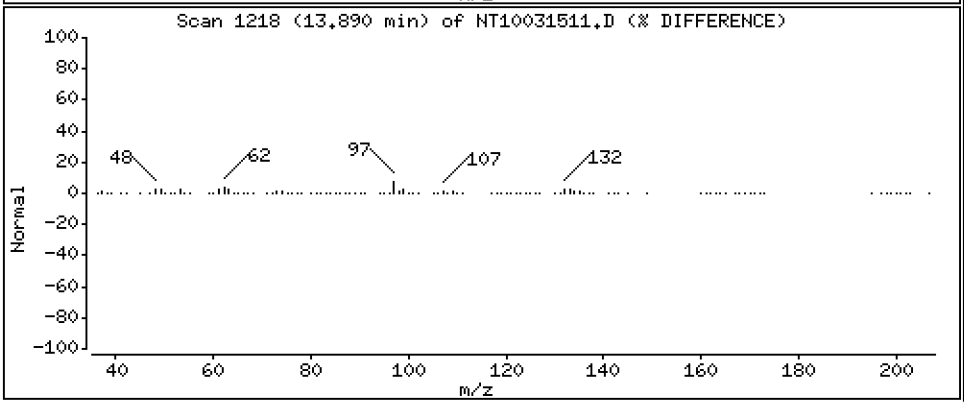
35 2,4,5-Trichlorophenol

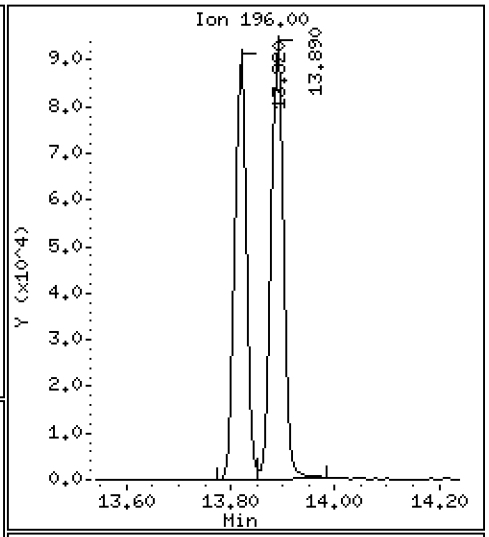
Concentration: 4.409 ug/mL

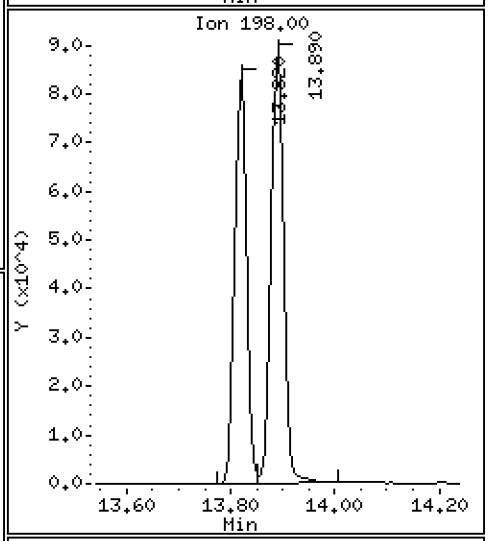


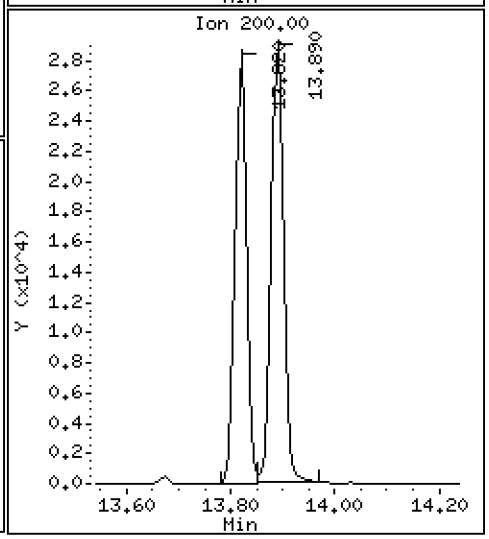












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

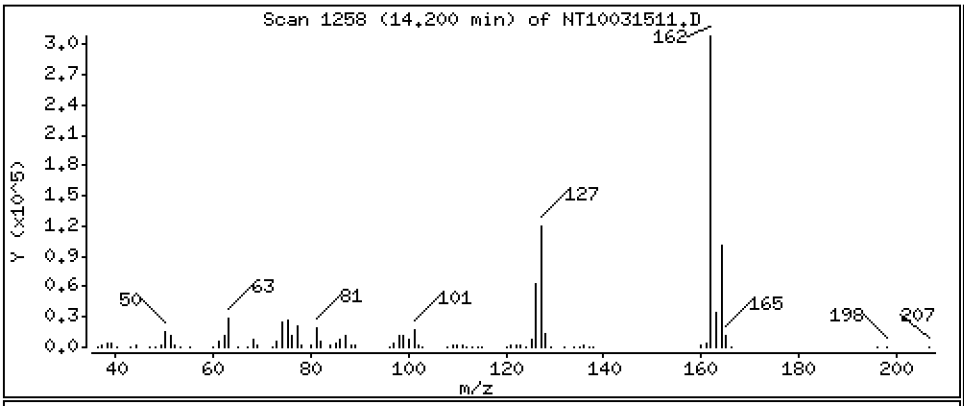
Operator: VTS

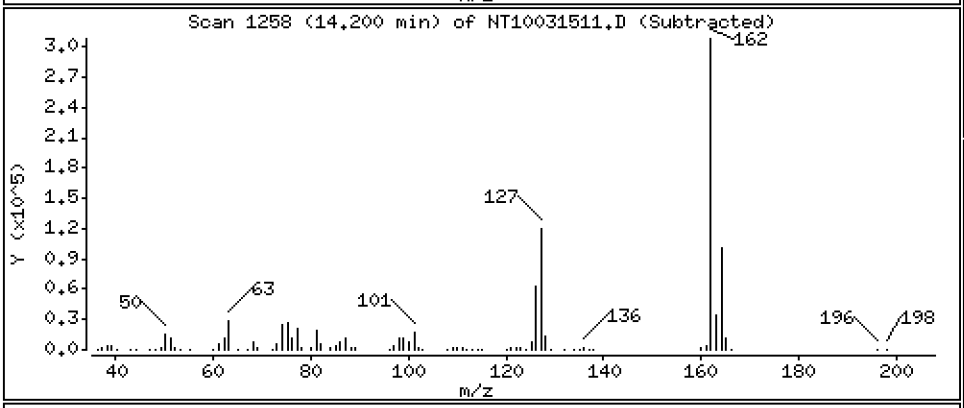
Column phase: ZB-5msi

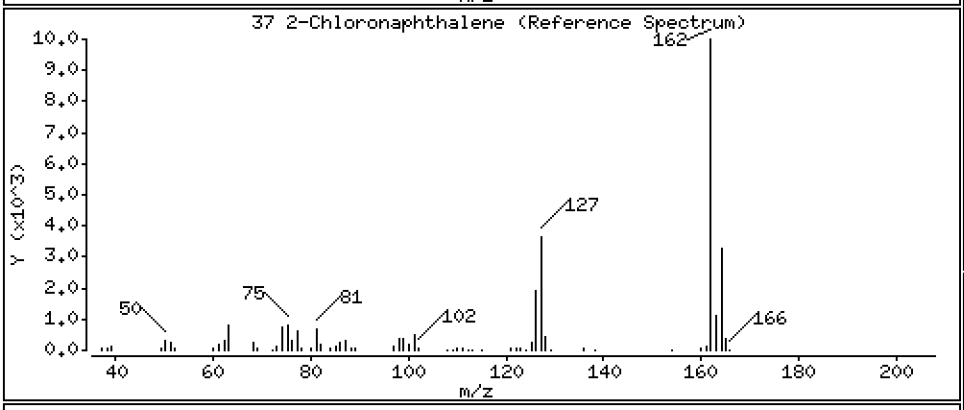
Column diameter: 0.25

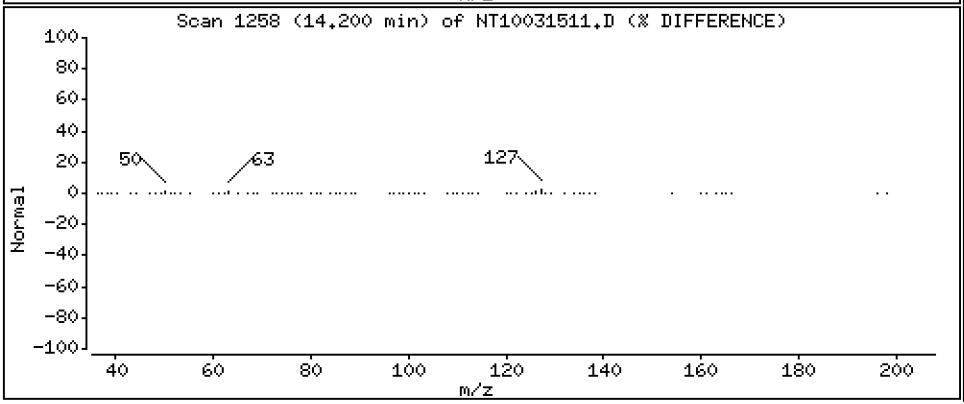
37 2-Chloronaphthalene

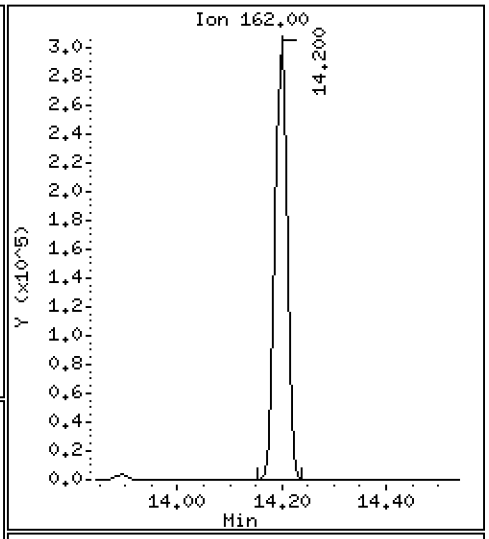
Concentration: 4.796 ug/mL

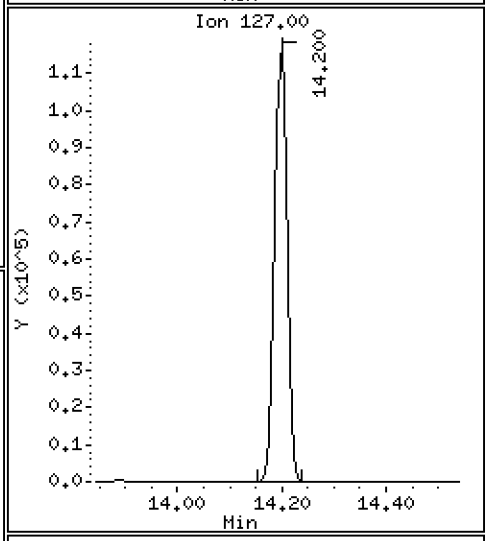


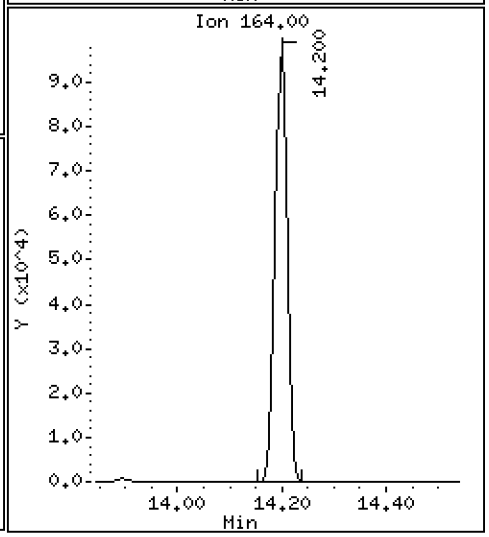












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

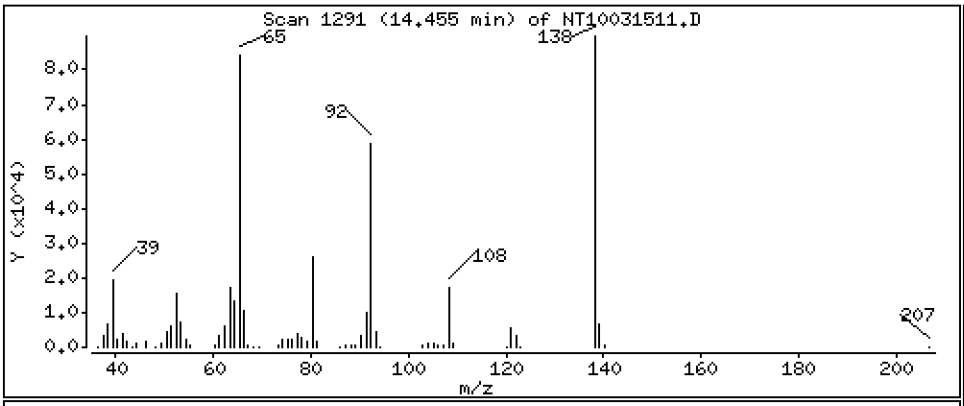
Operator: VTS

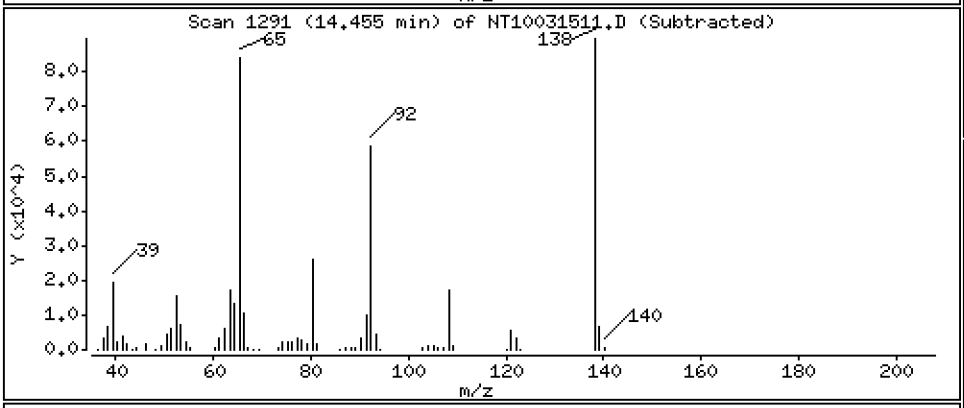
Column phase: ZB-5msi

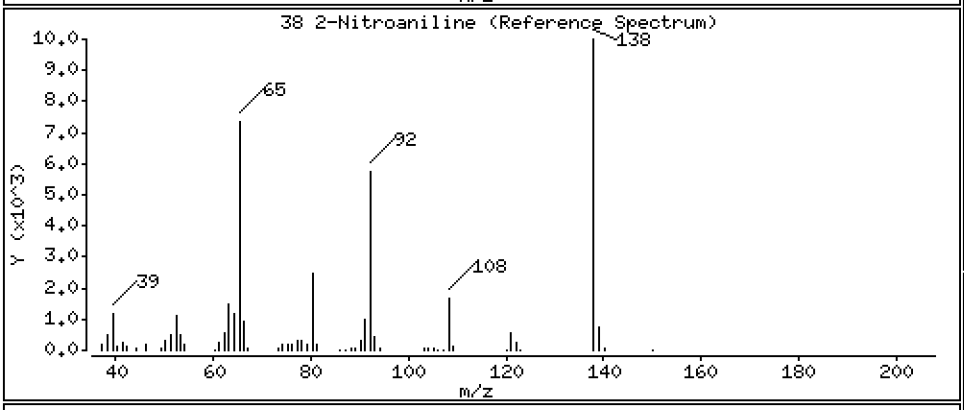
Column diameter: 0.25

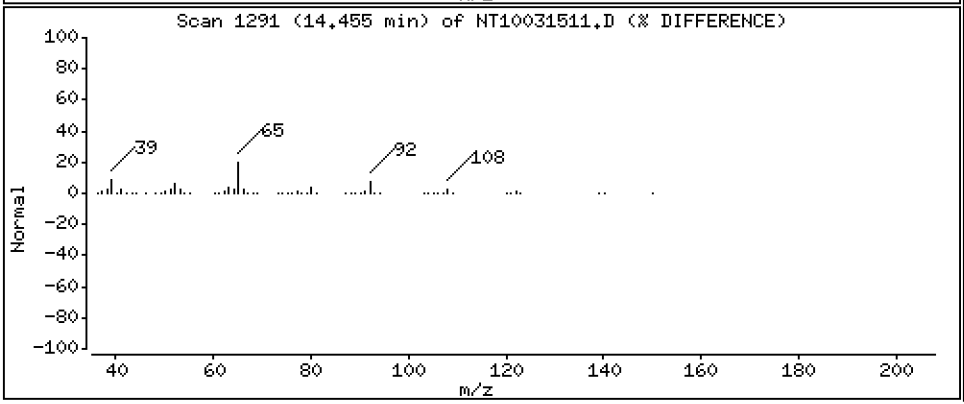
38 2-Nitroaniline

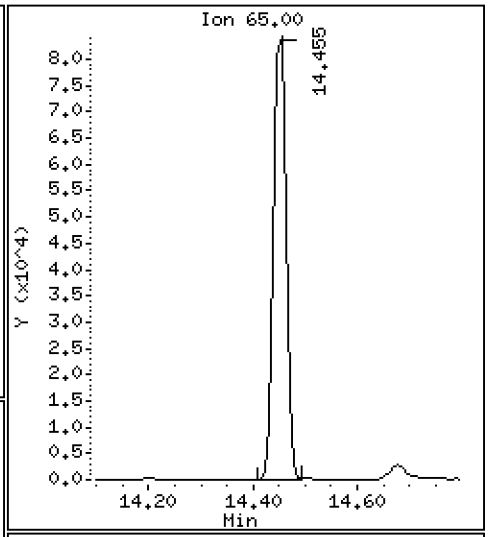
Concentration: 4.911 ug/mL

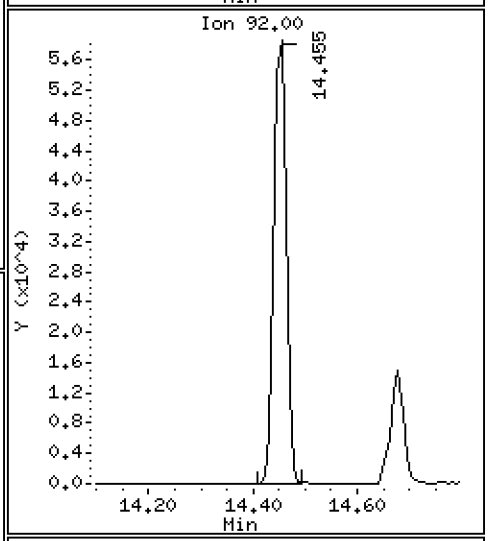


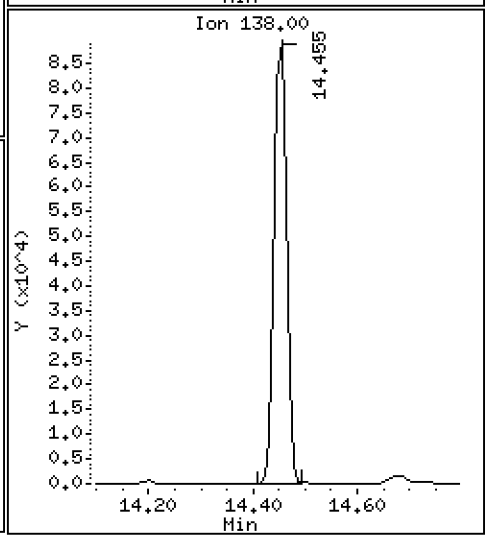












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

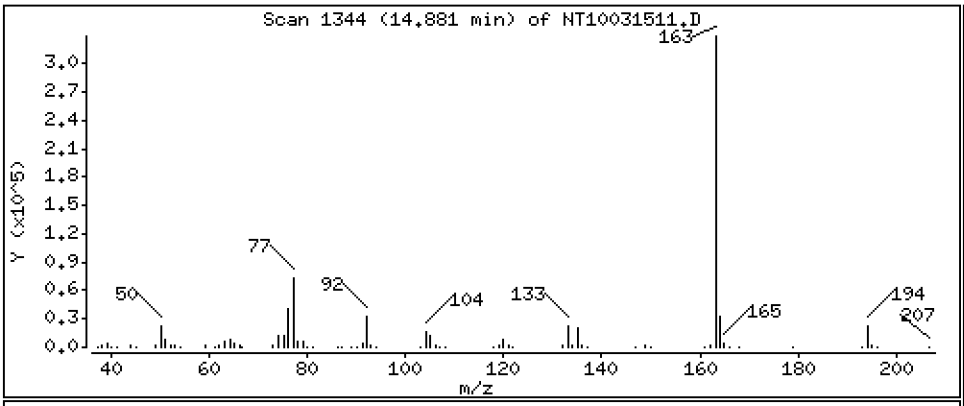
Operator: VTS

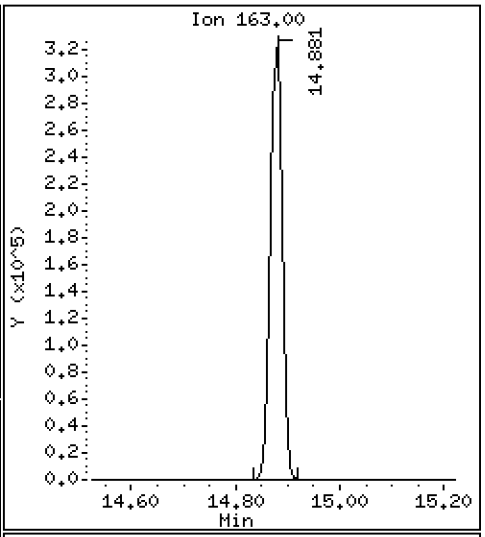
Column phase: ZB-5msi

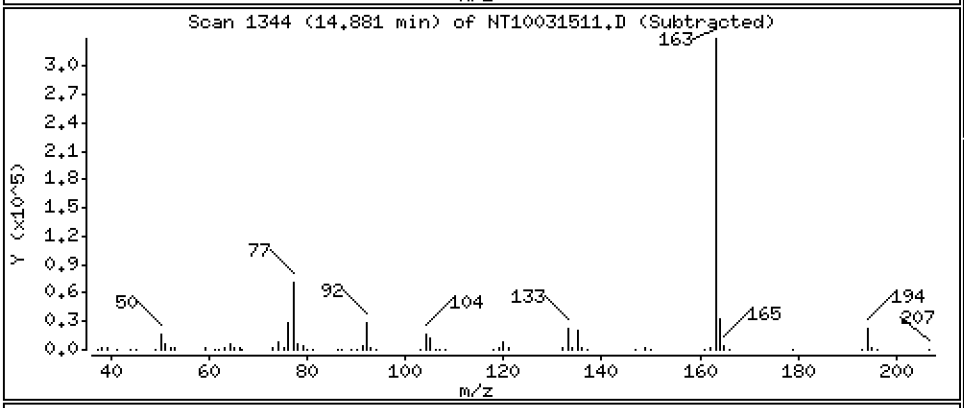
Column diameter: 0.25

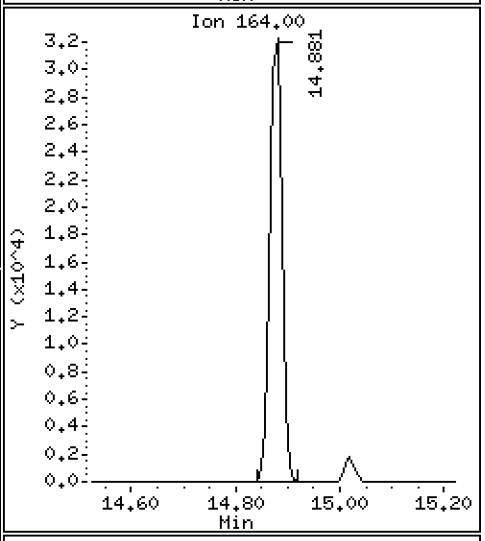
39 Dimethylphthalate

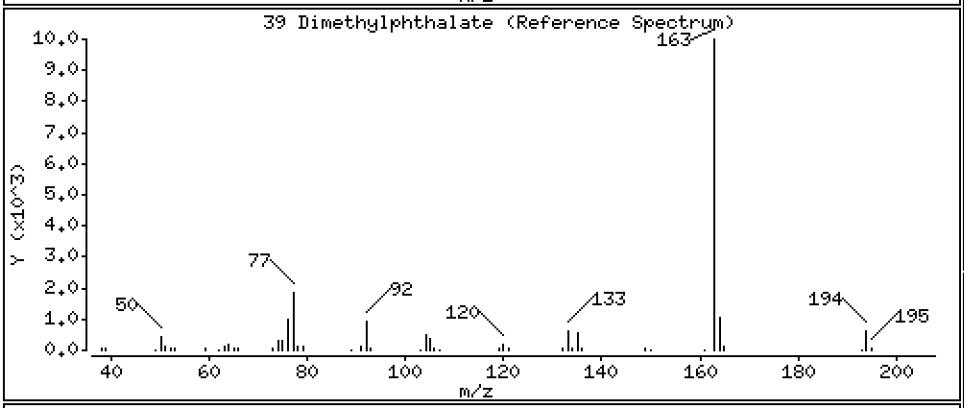
Concentration: 4.937 ug/mL

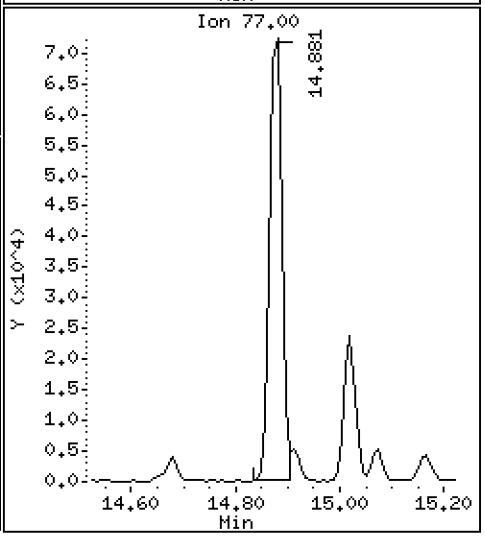


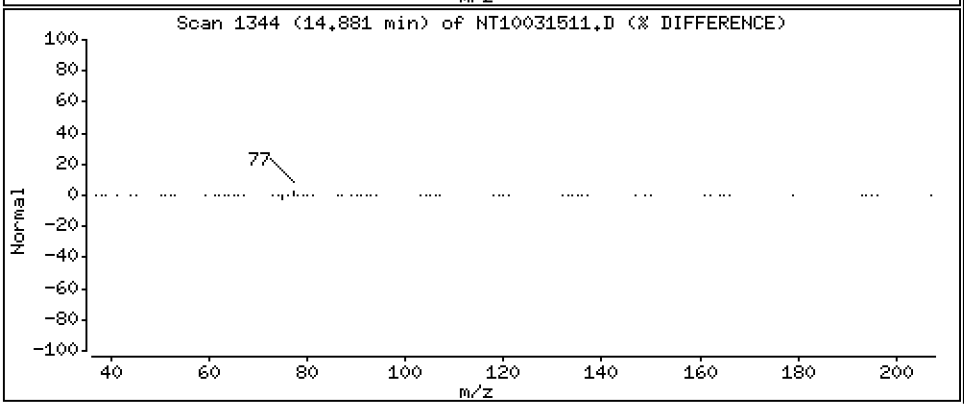












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

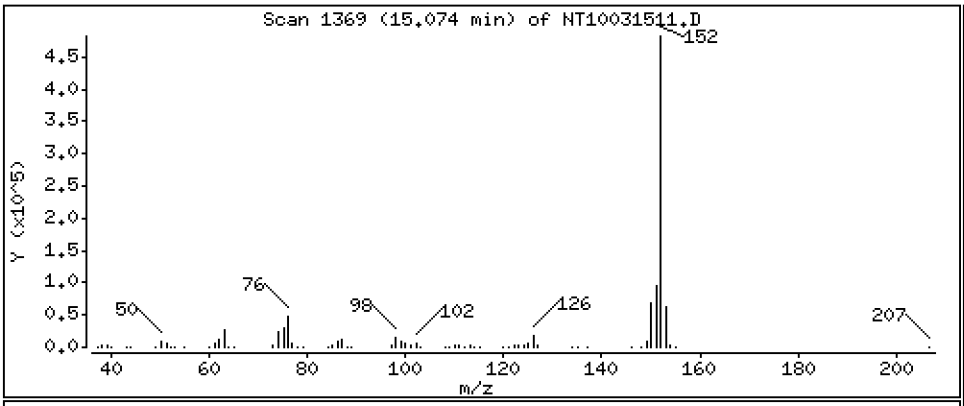
Operator: VTS

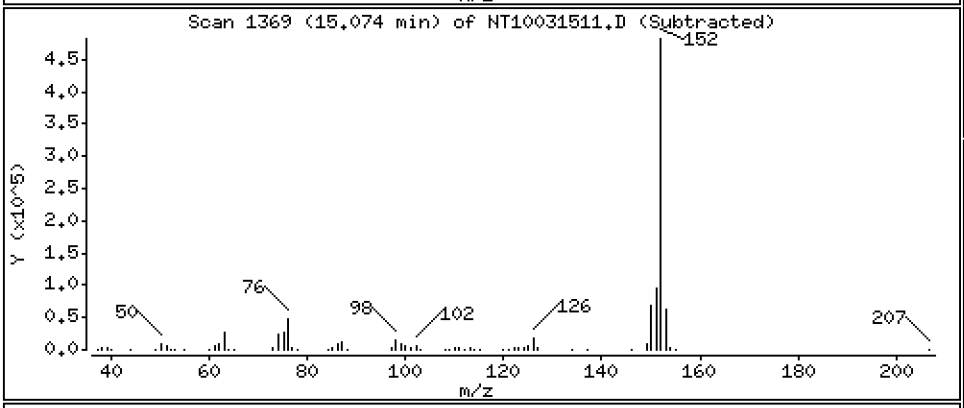
Column phase: ZB-5msi

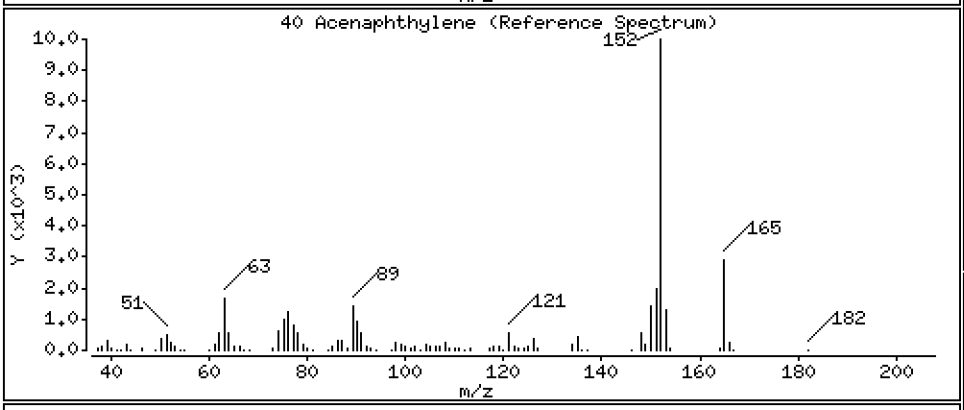
Column diameter: 0.25

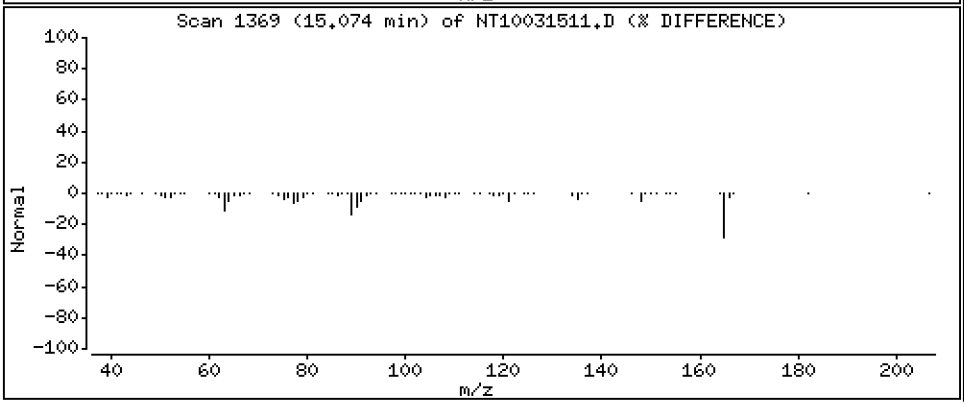
40 Acenaphthylene

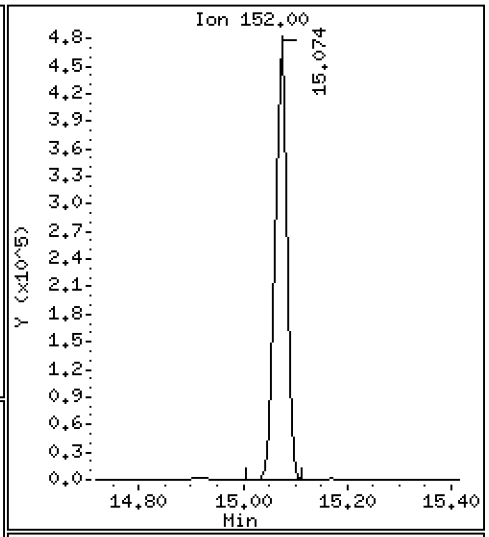
Concentration: 4.805 ug/mL

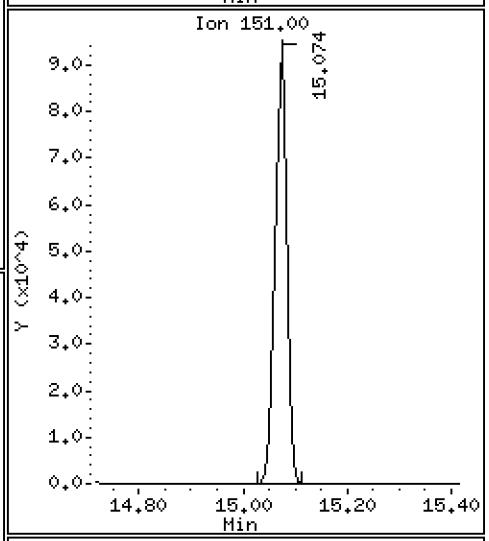


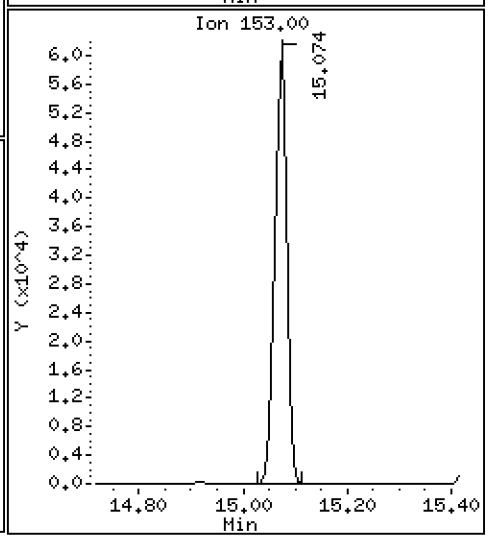












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

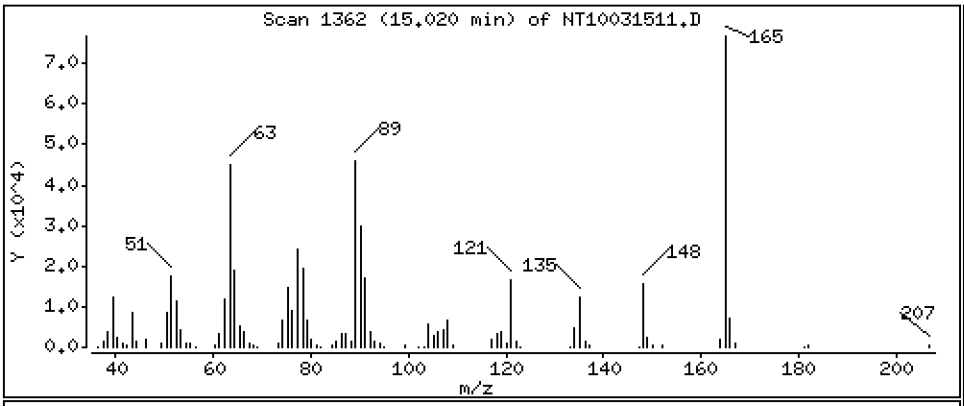
Operator: VTS

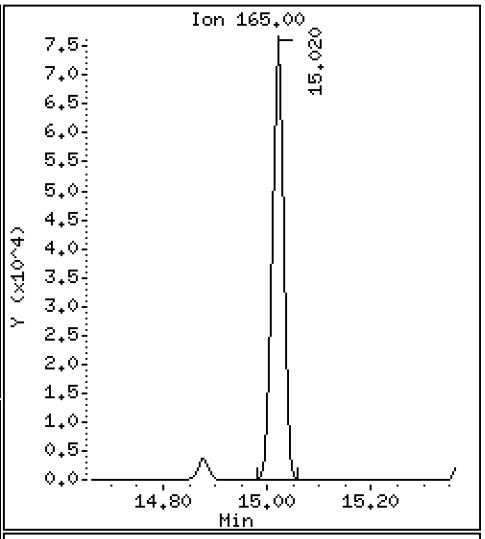
Column phase: ZB-5msi

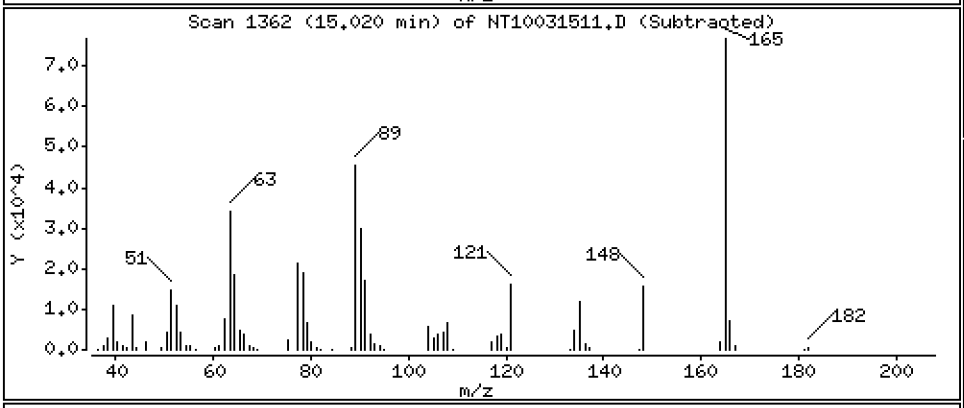
Column diameter: 0.25

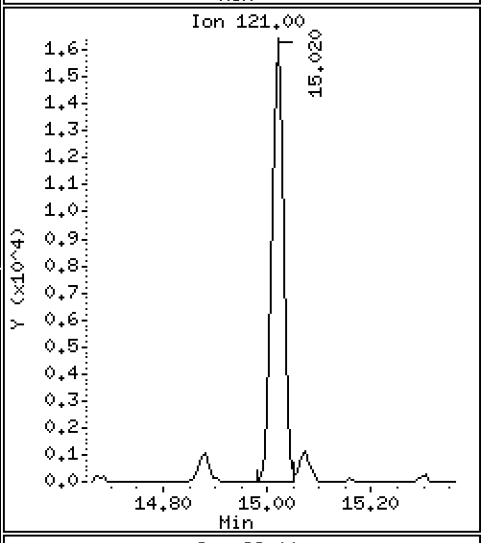
41 2,6-Dinitrotoluene

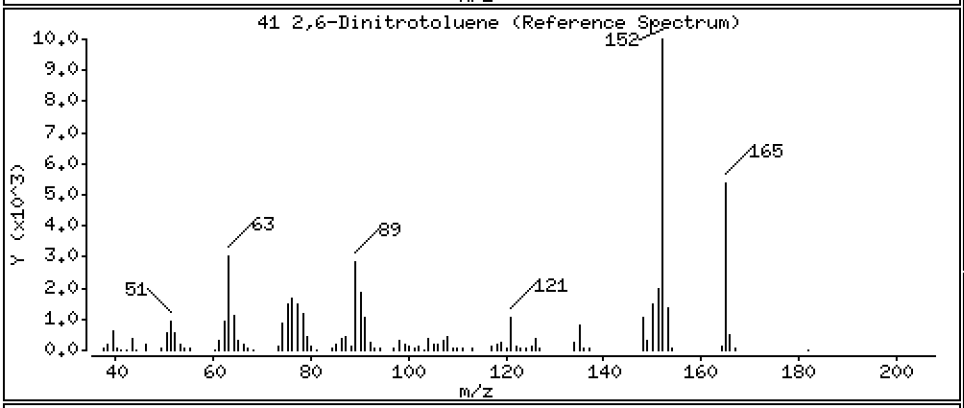
Concentration: 5.298 ug/mL

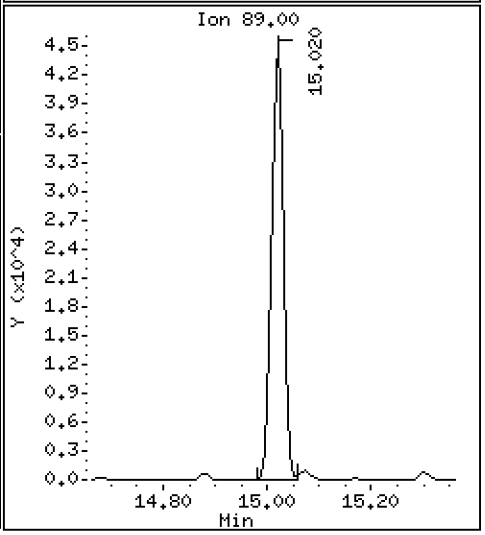


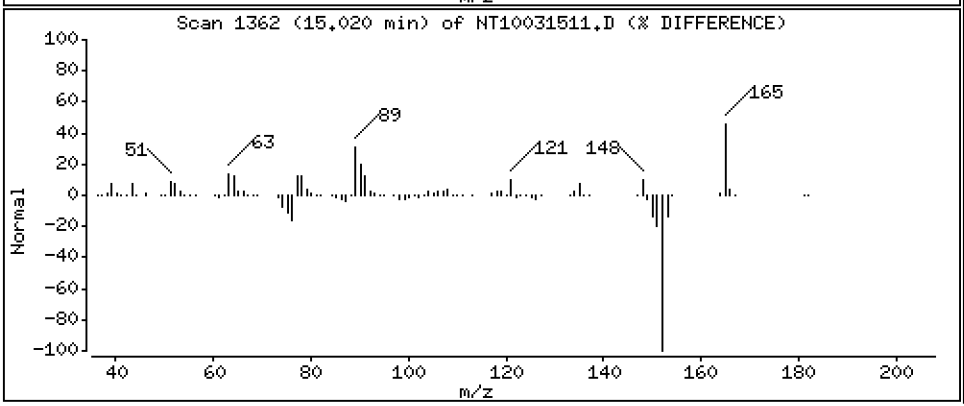












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

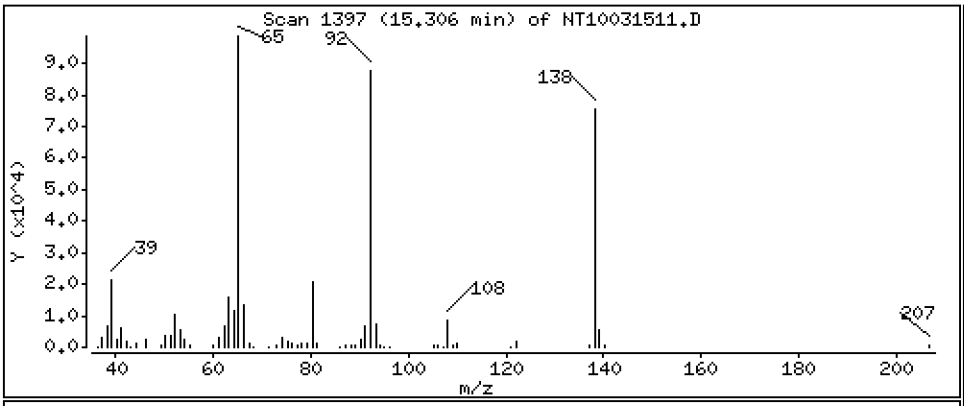
Operator: VTS

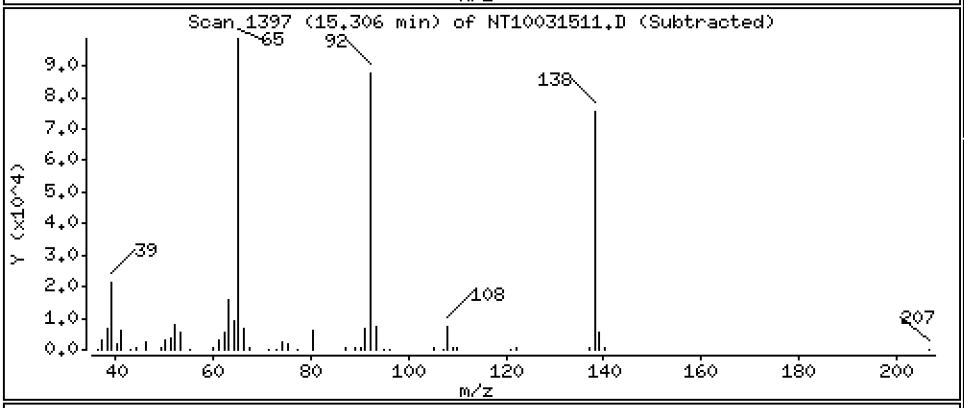
Column phase: ZB-5msi

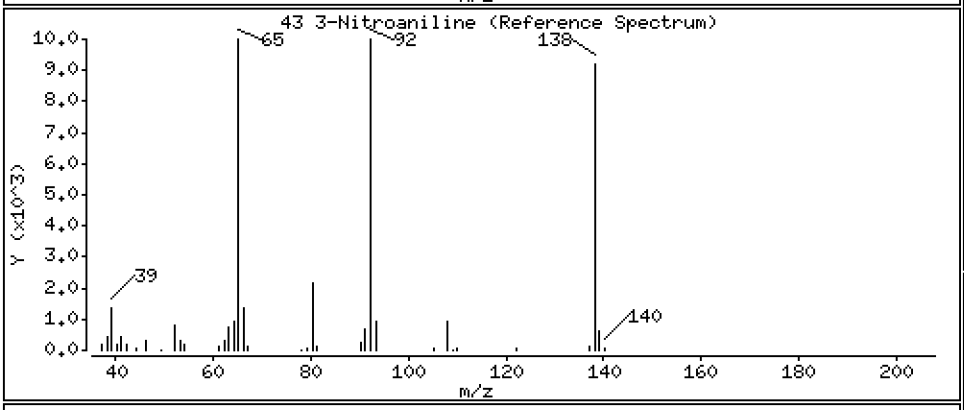
Column diameter: 0.25

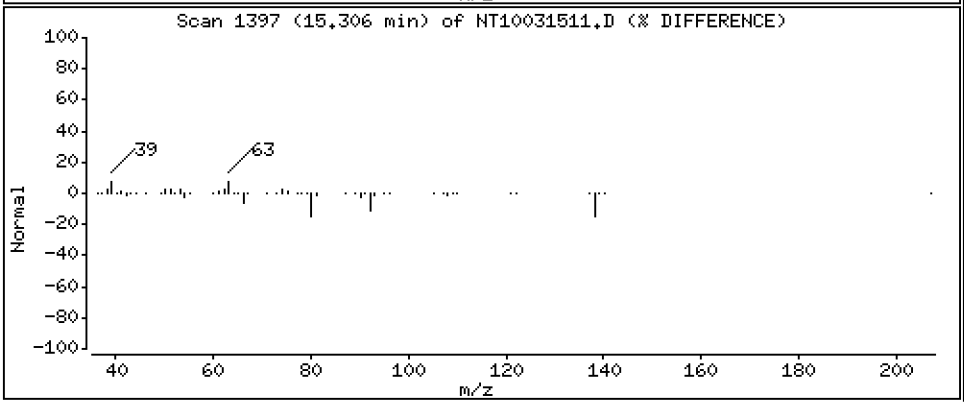
43 3-Nitroaniline

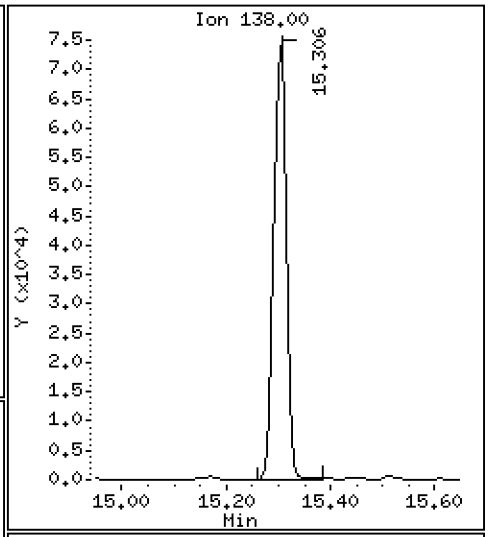
Concentration: 5.014 ug/mL

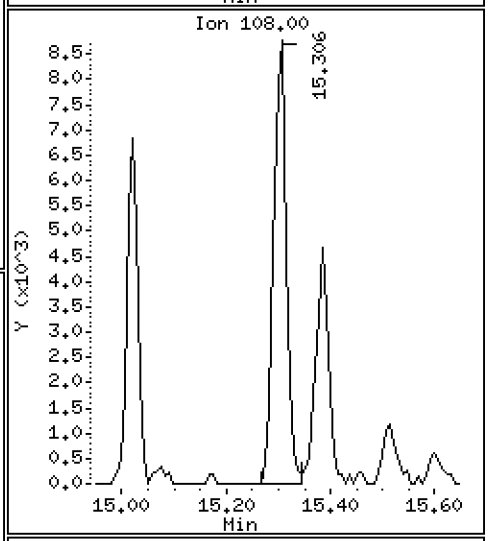


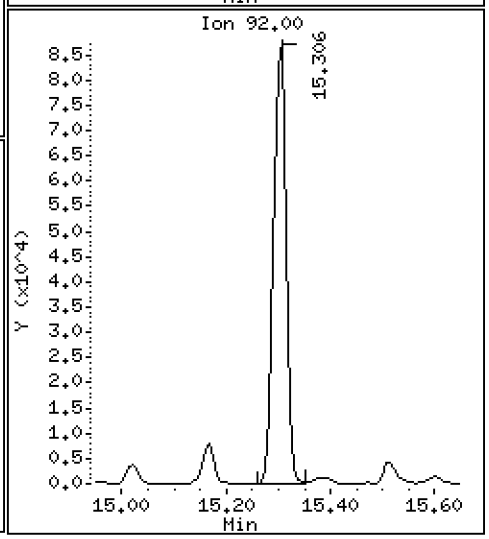












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

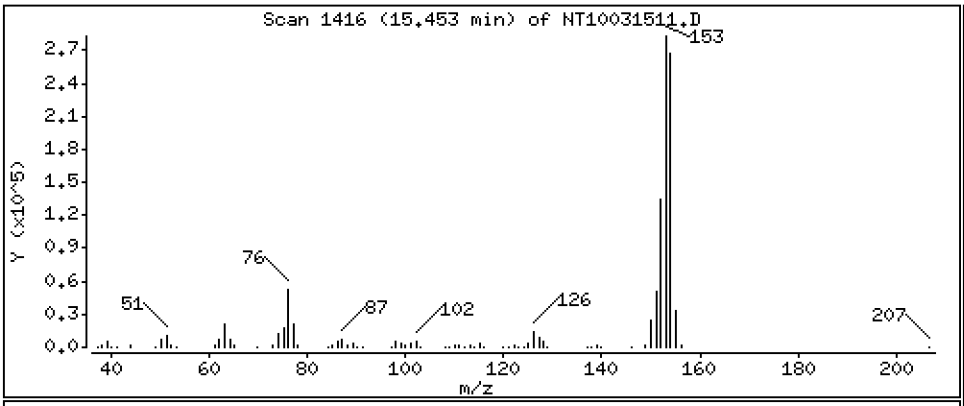
Operator: VTS

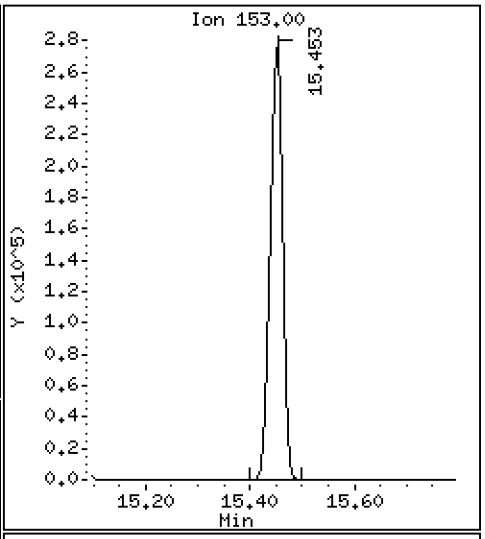
Column phase: ZB-5msi

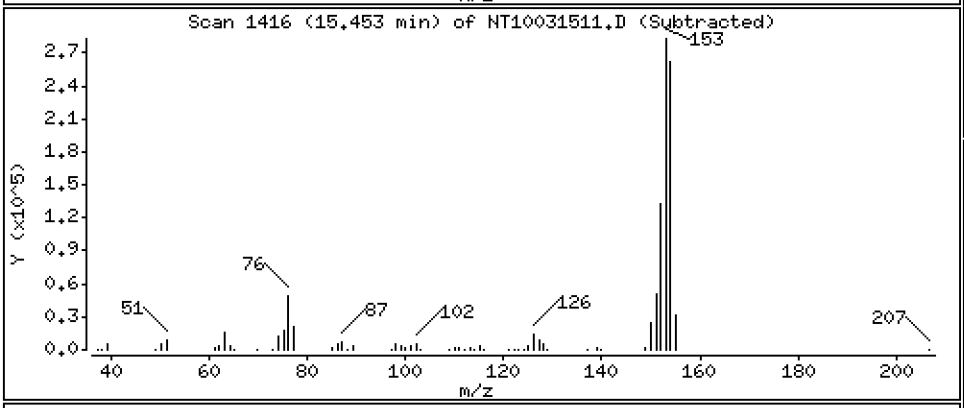
Column diameter: 0.25

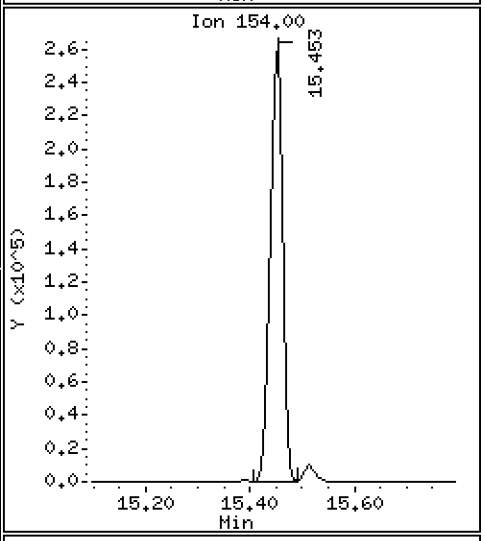
44 Acenaphthene

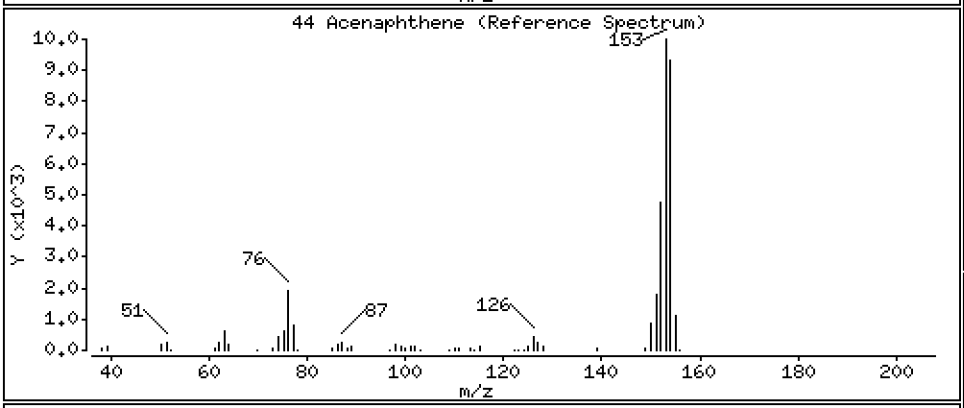
Concentration: 4.776 ug/mL

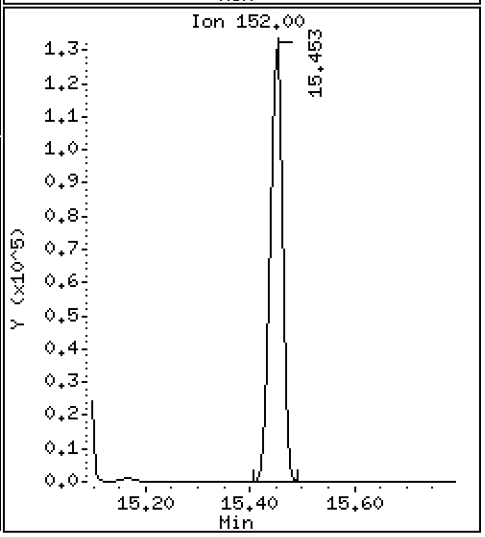


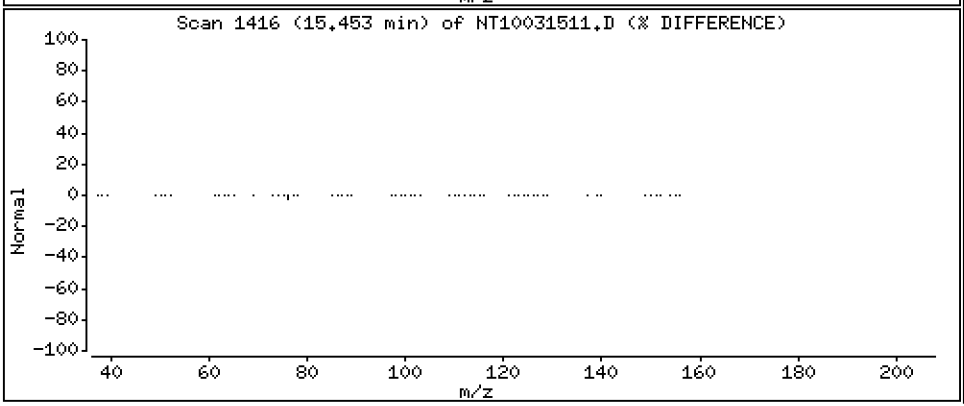












Date : 16-MAR-2023 02:16

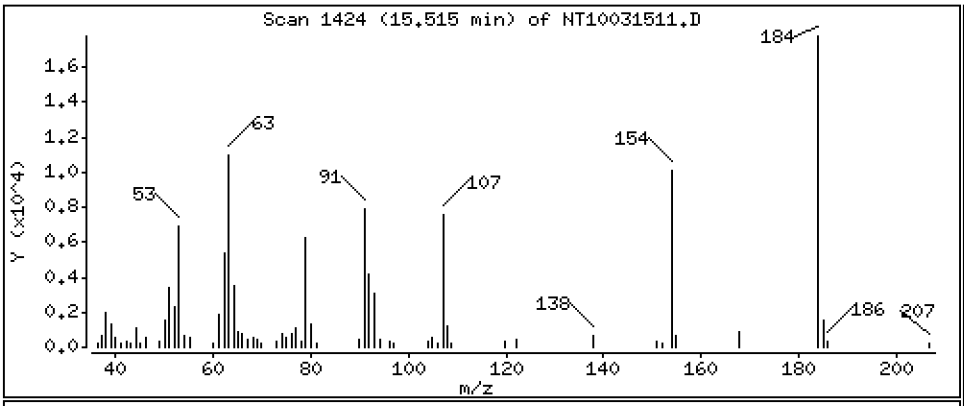
Client ID: Instrument: nt10.i

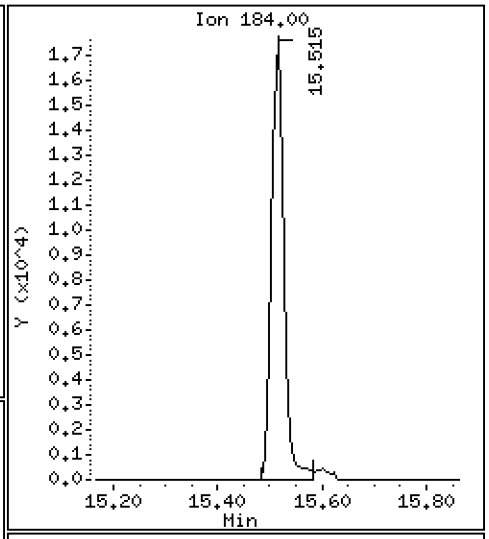
Sample Info: SLC0228-SCV1

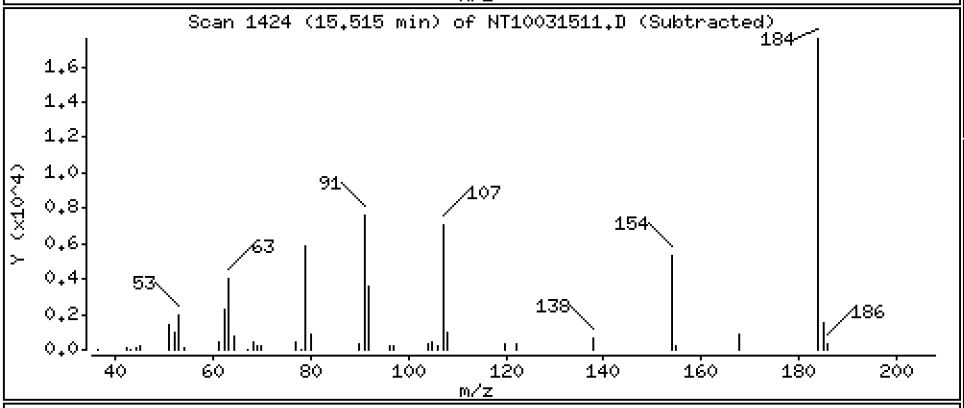
Operator: VTS

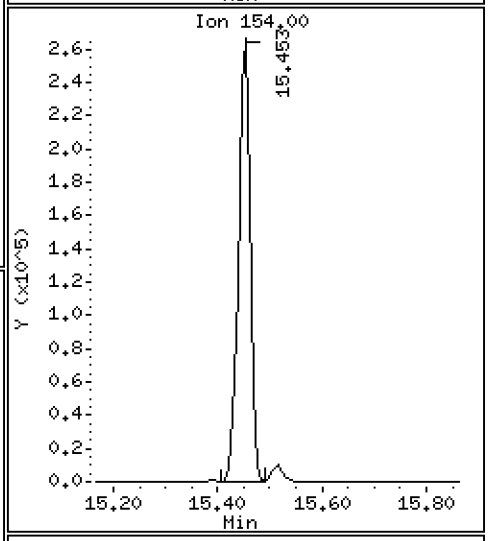
Column phase: ZB-5msi Column diameter: 0.25

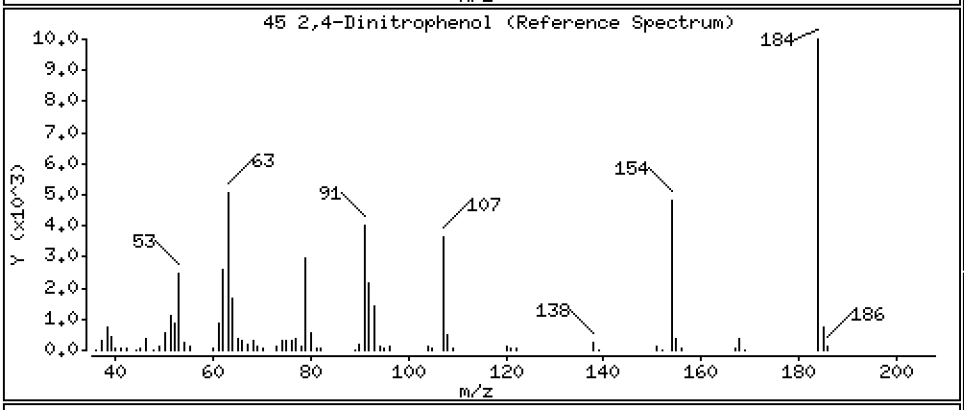
45 2,4-Dinitrophenol Concentration: 2.124 ug/mL

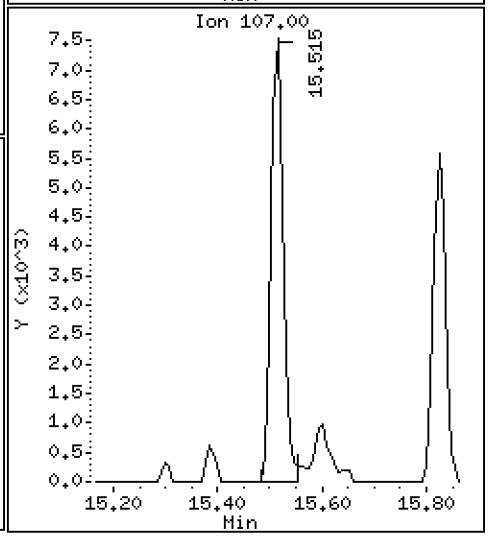


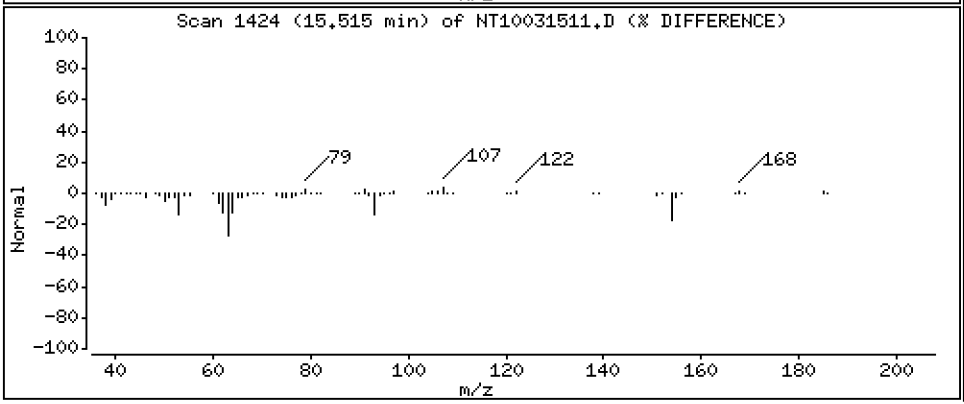












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

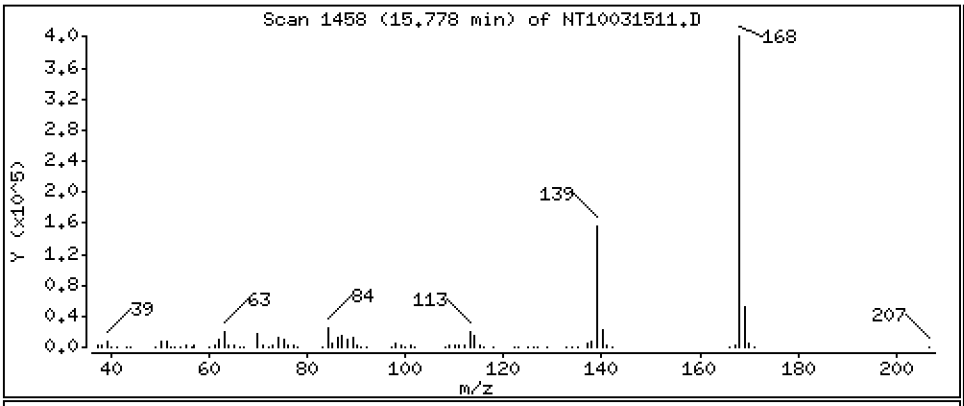
Operator: VTS

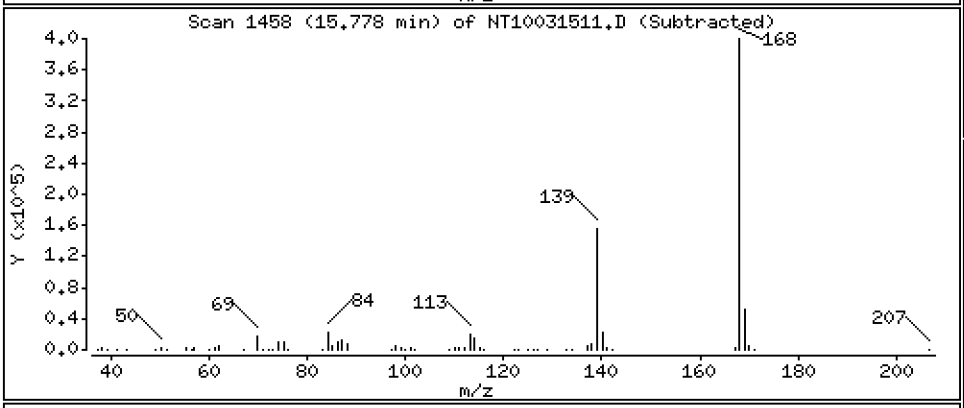
Column phase: ZB-5msi

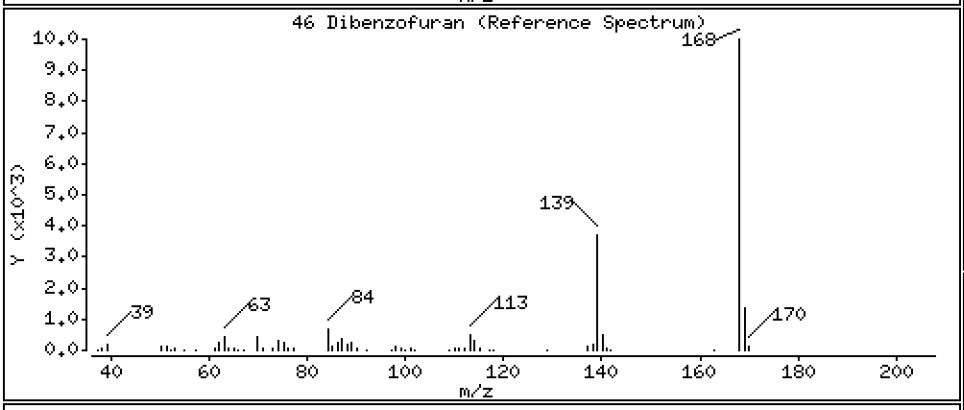
Column diameter: 0.25

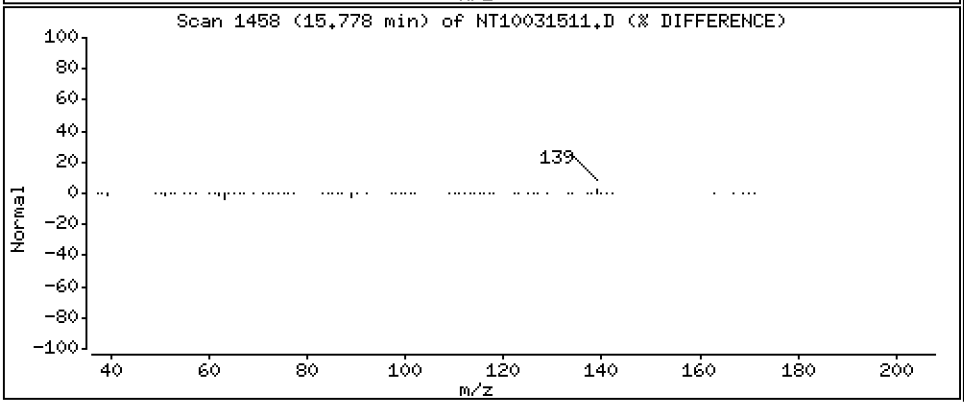
46 Dibenzofuran

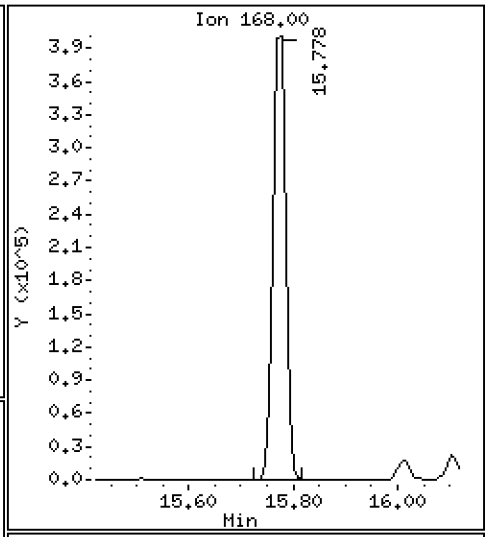
Concentration: 4.648 ug/mL

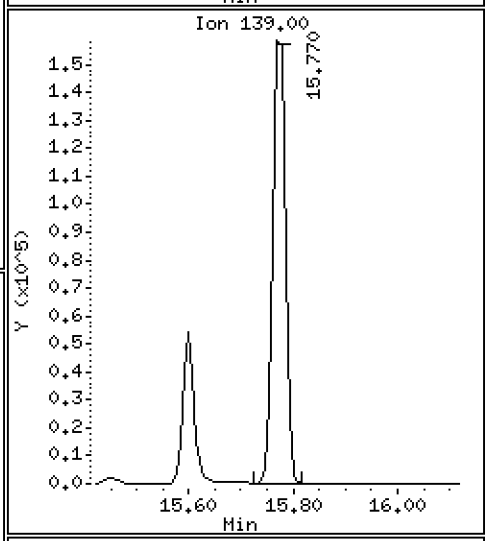


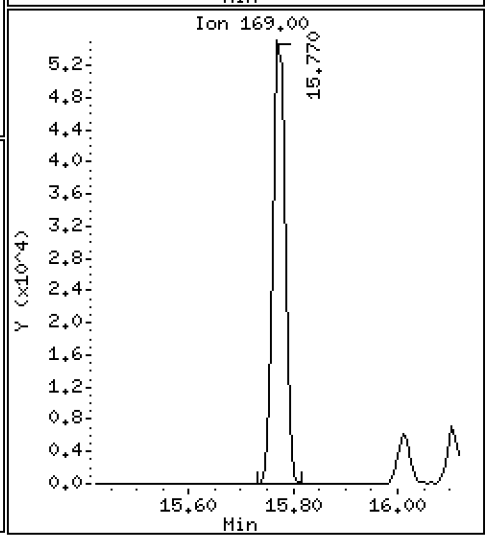












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

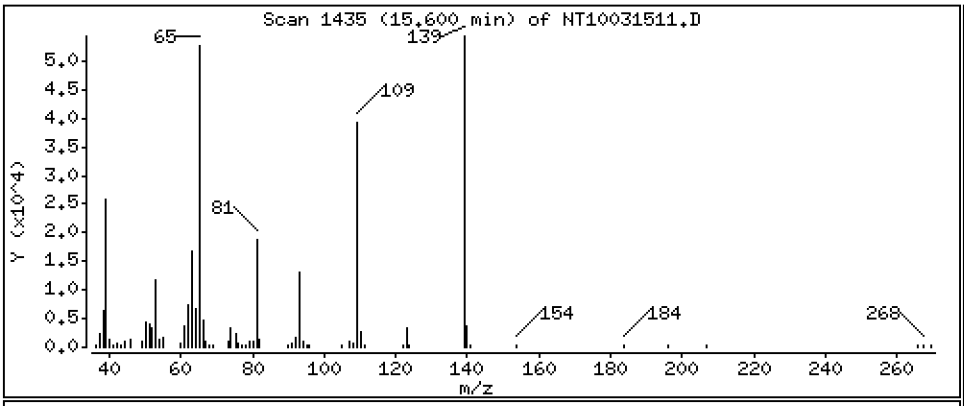
Operator: VTS

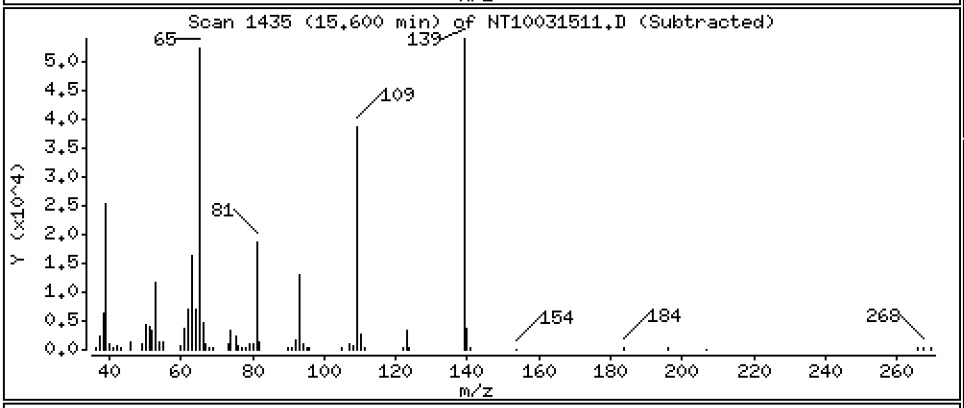
Column phase: ZB-5msi

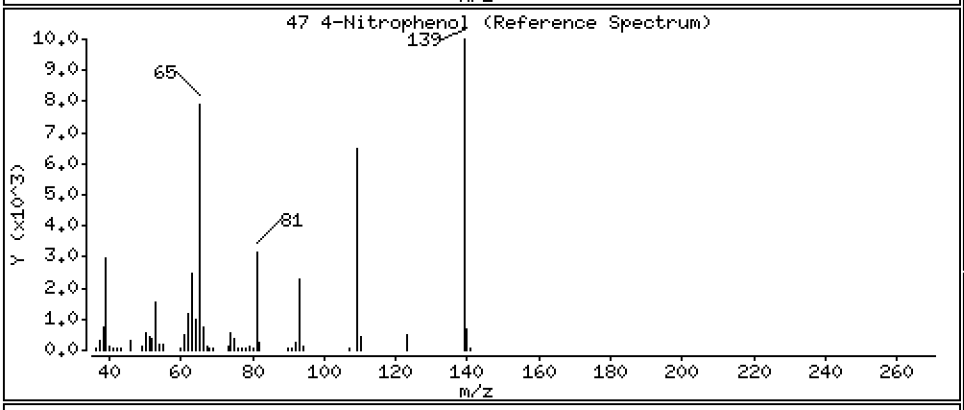
Column diameter: 0.25

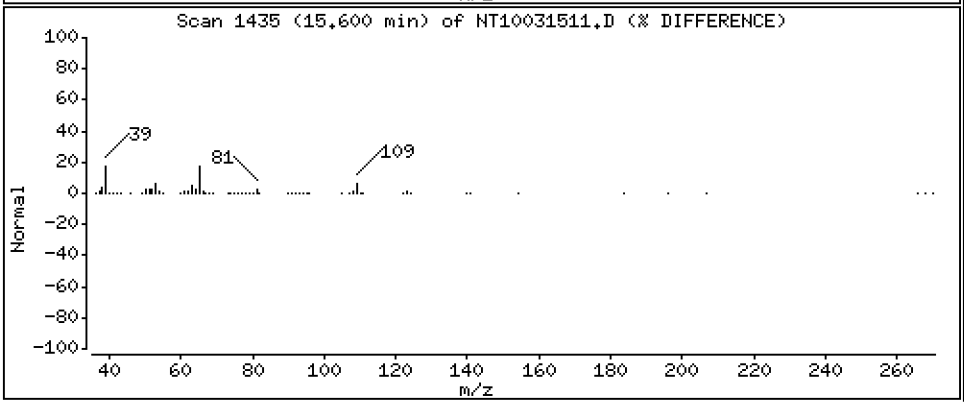
47 4-Nitrophenol

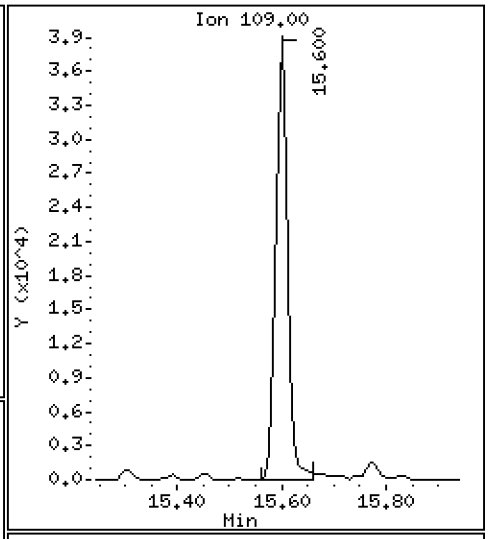
Concentration: 3.966 ug/mL

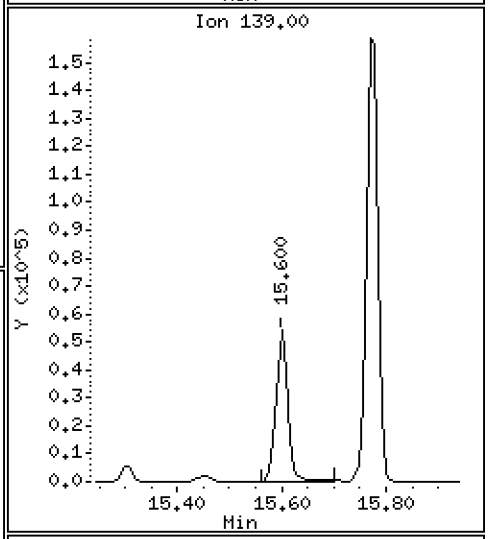


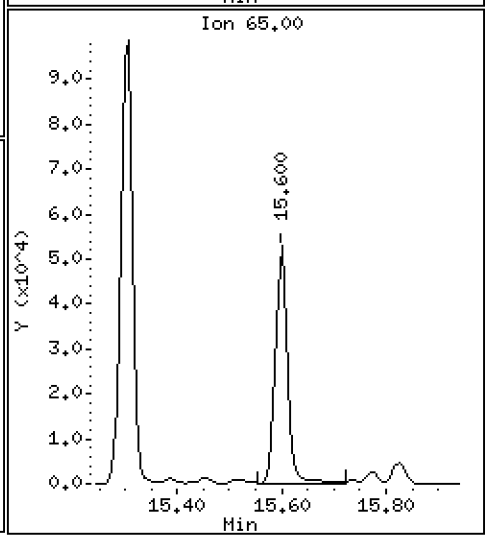












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

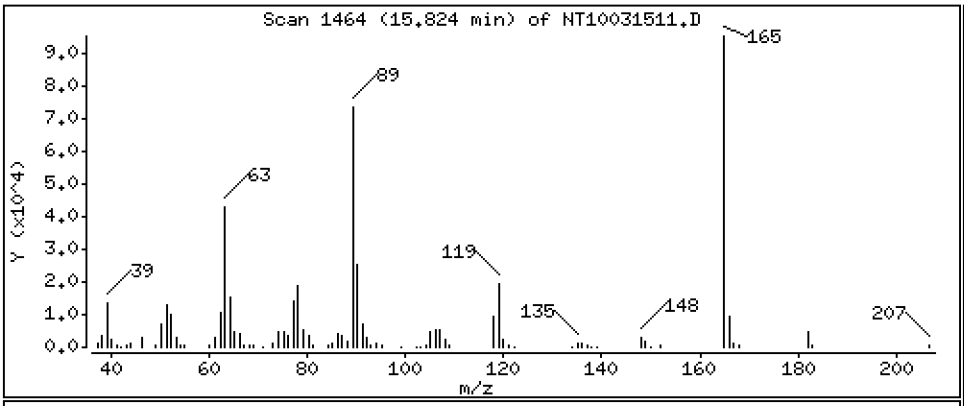
Operator: VTS

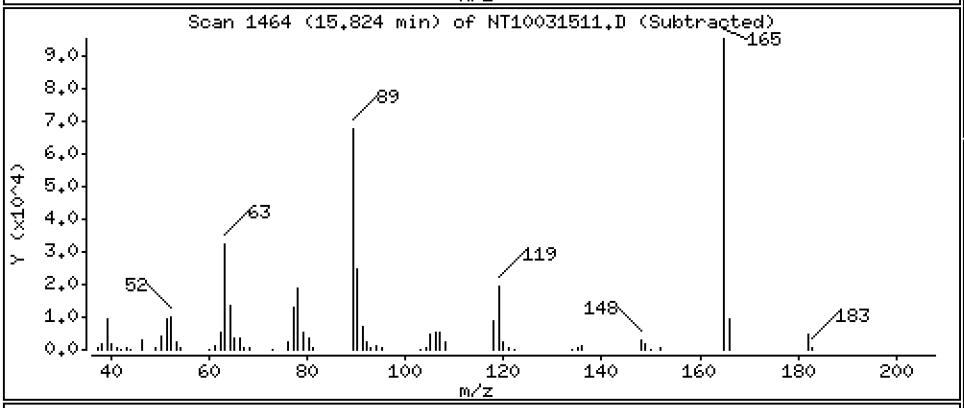
Column phase: ZB-5msi

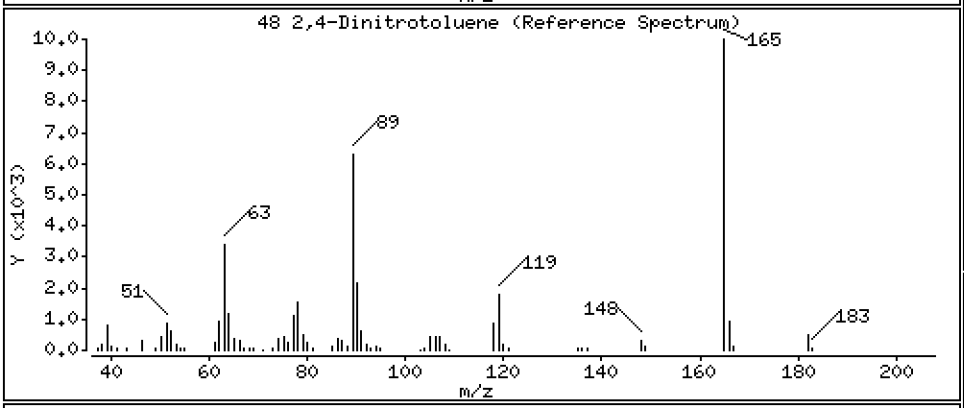
Column diameter: 0.25

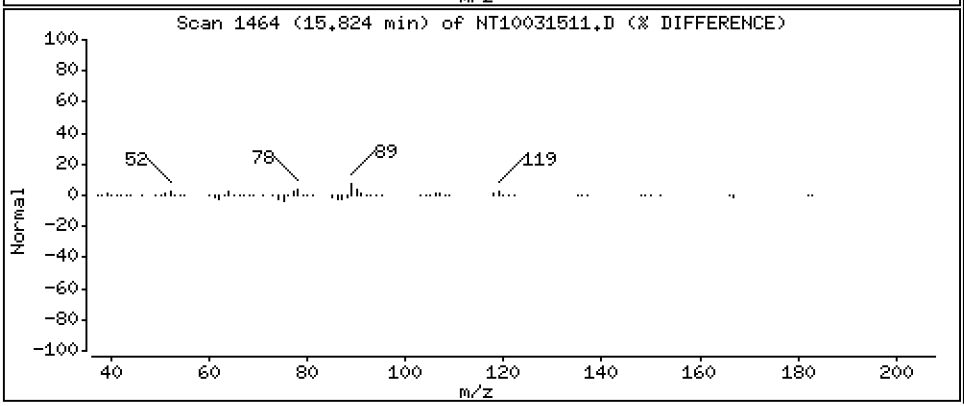
48 2,4-Dinitrotoluene

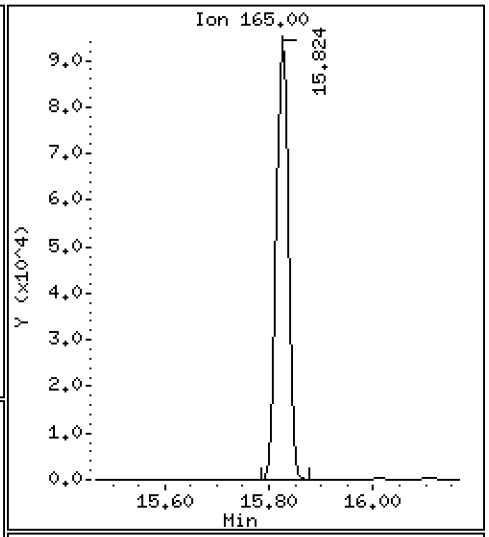
Concentration: 4.510 ug/mL

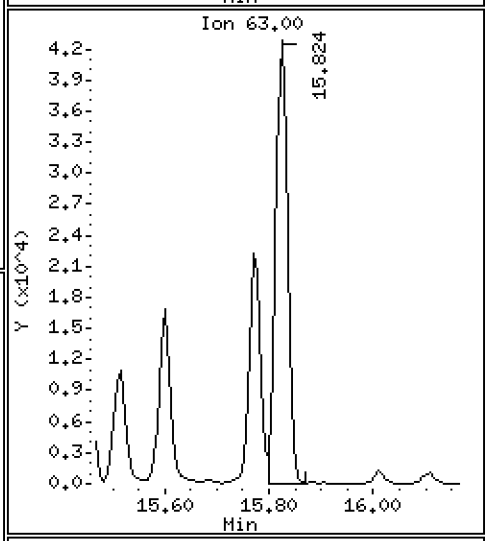


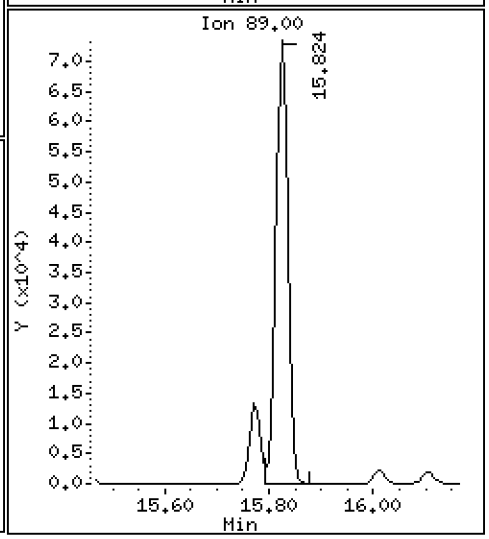












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

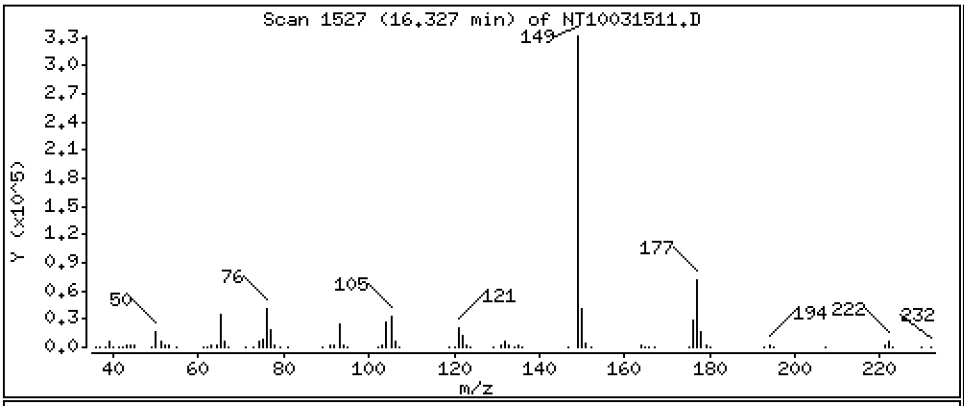
Operator: VTS

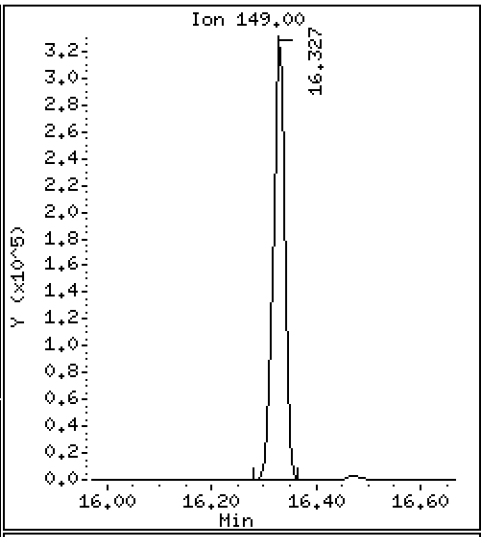
Column phase: ZB-5msi

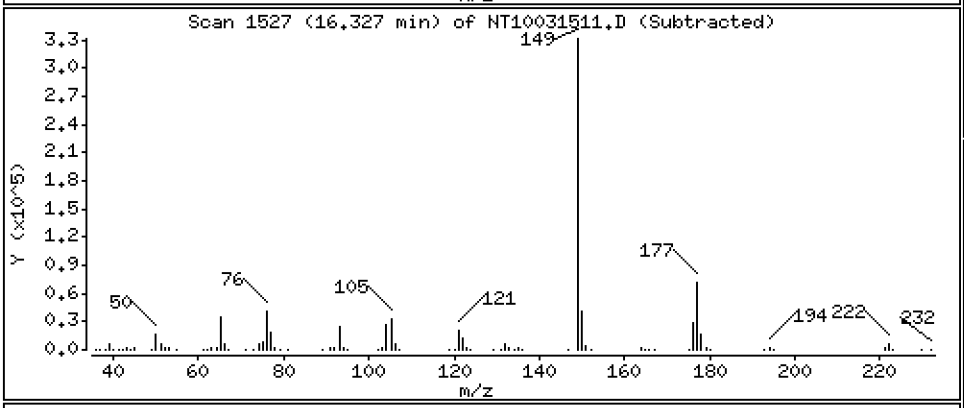
Column diameter: 0.25

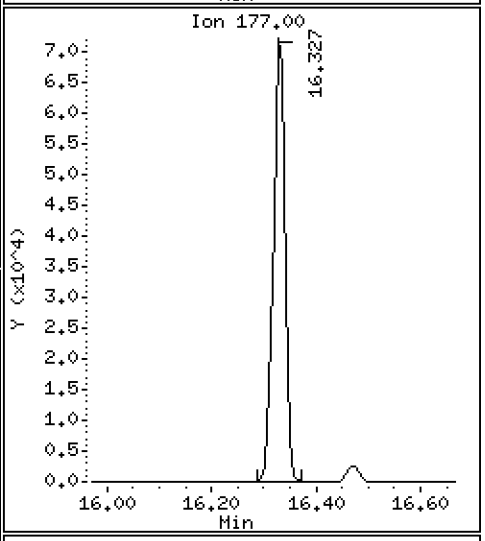
50 Diethylphthalate

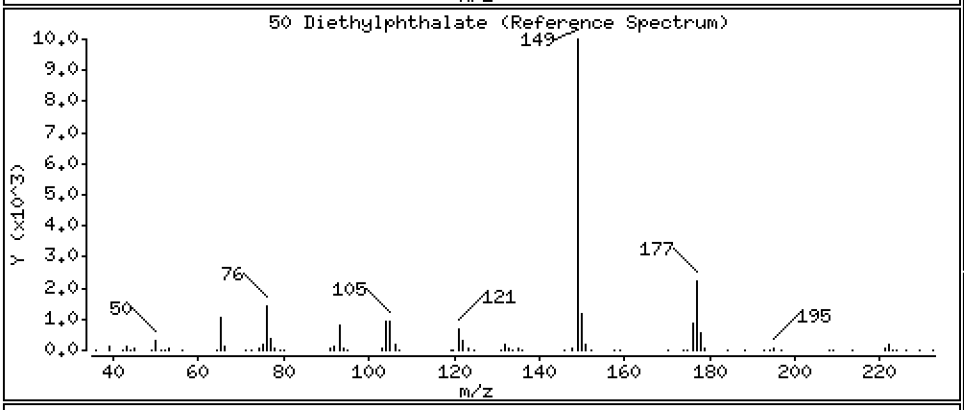
Concentration: 5.209 ug/mL

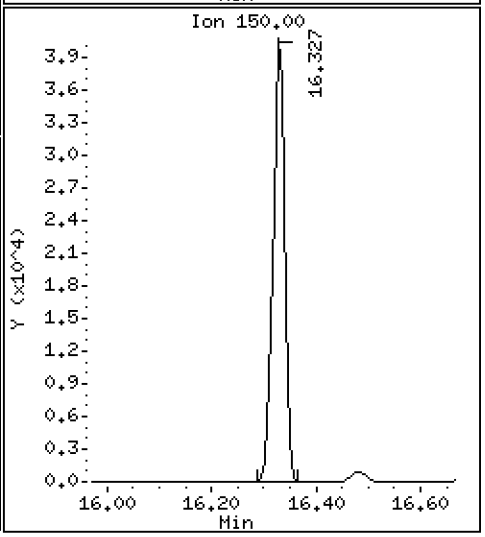


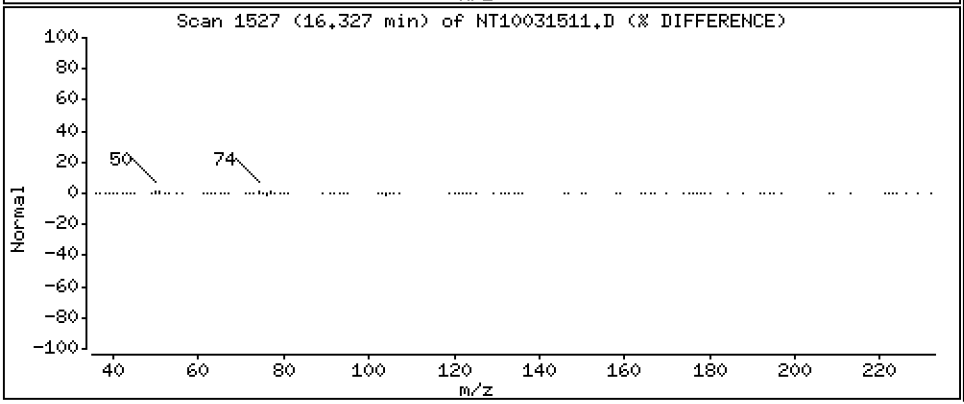












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

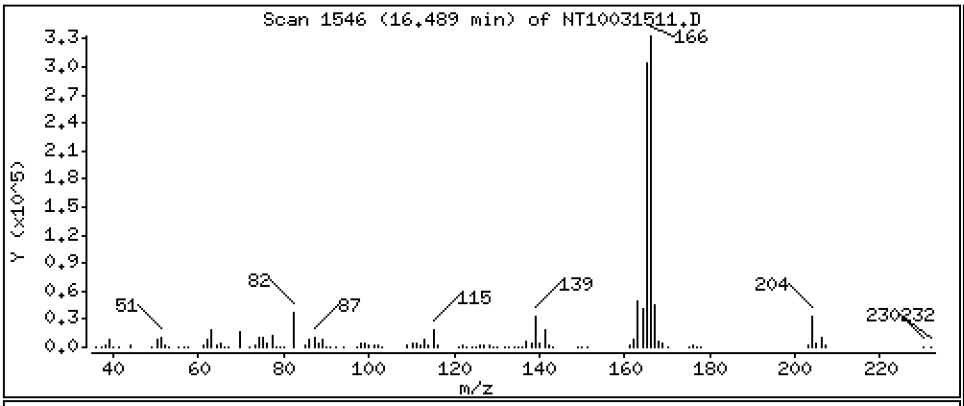
Operator: VTS

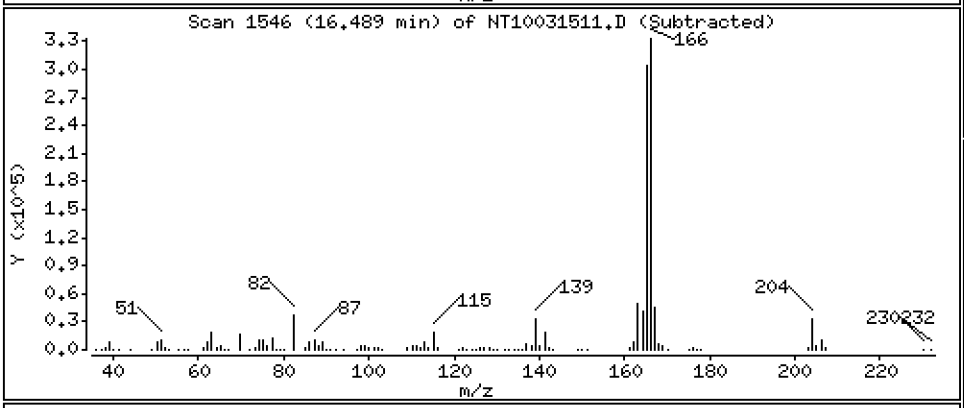
Column phase: ZB-5msi

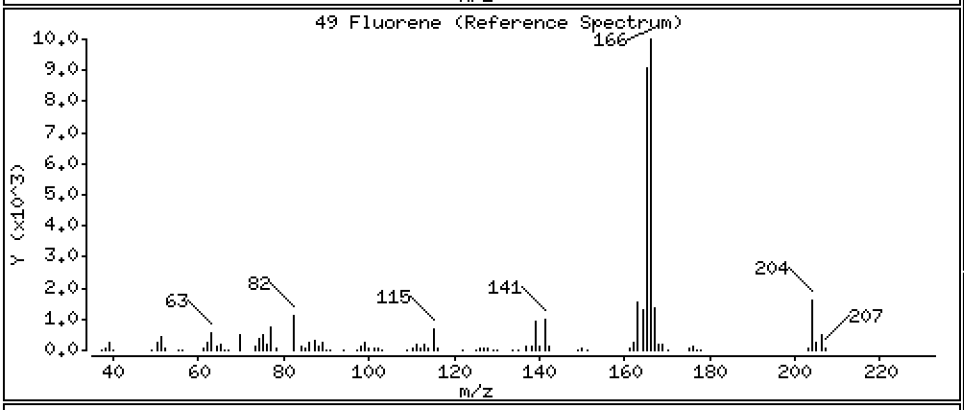
Column diameter: 0.25

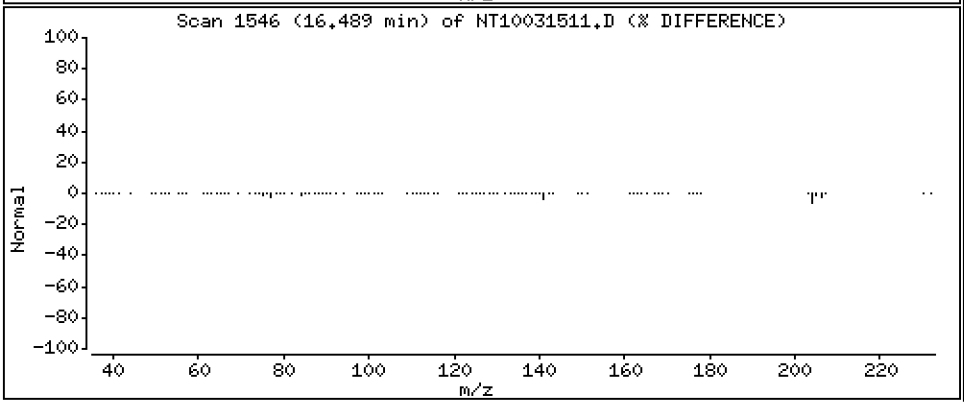
49 Fluorene

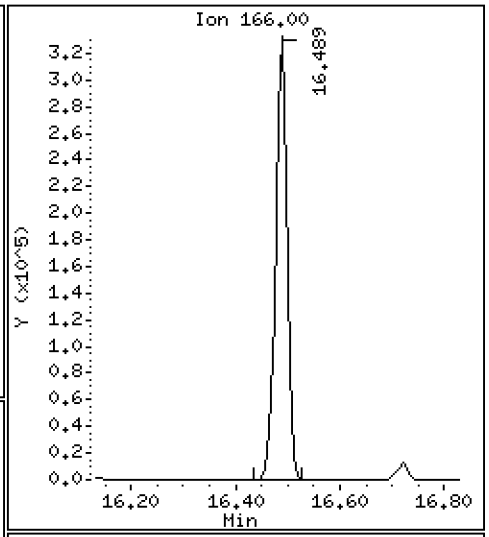
Concentration: 4.708 ug/mL

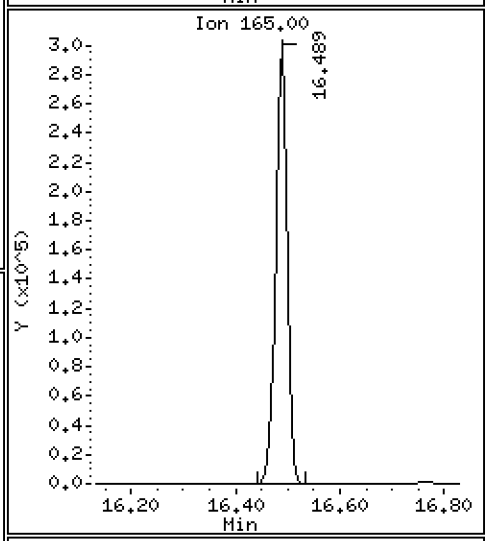


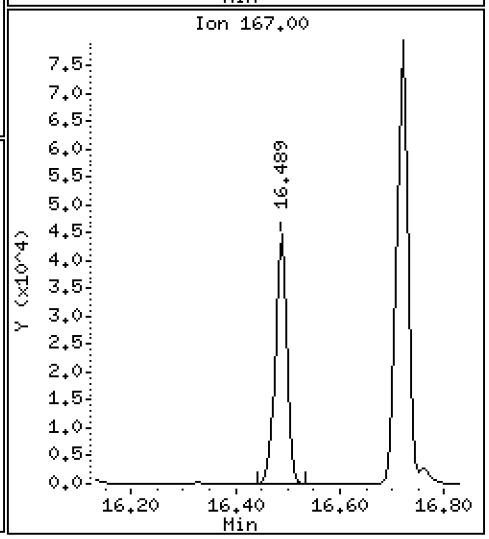












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

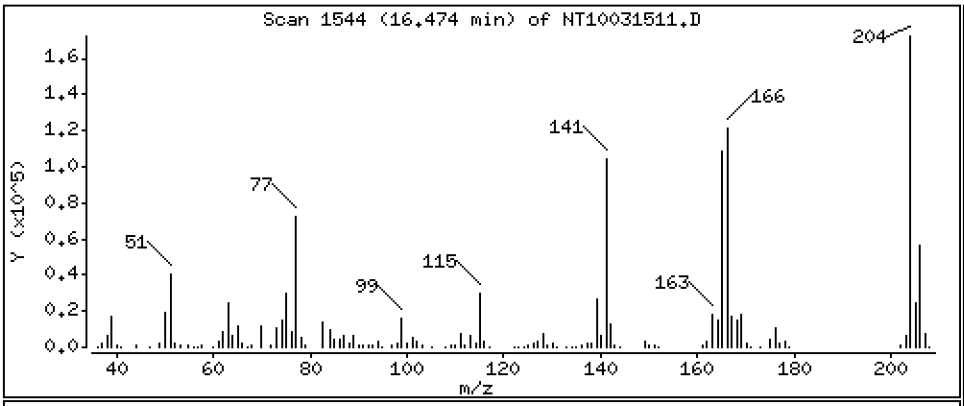
Operator: VTS

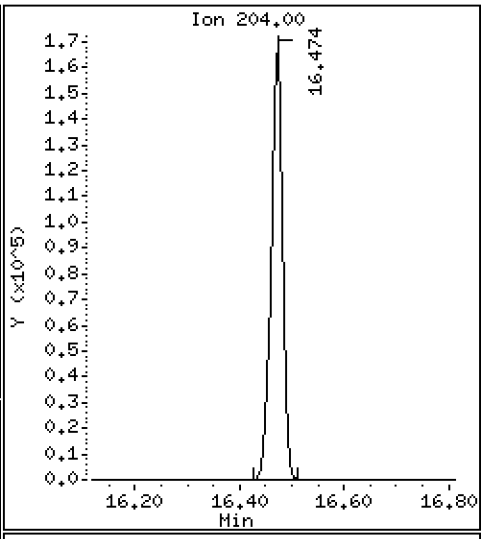
Column phase: ZB-5msi

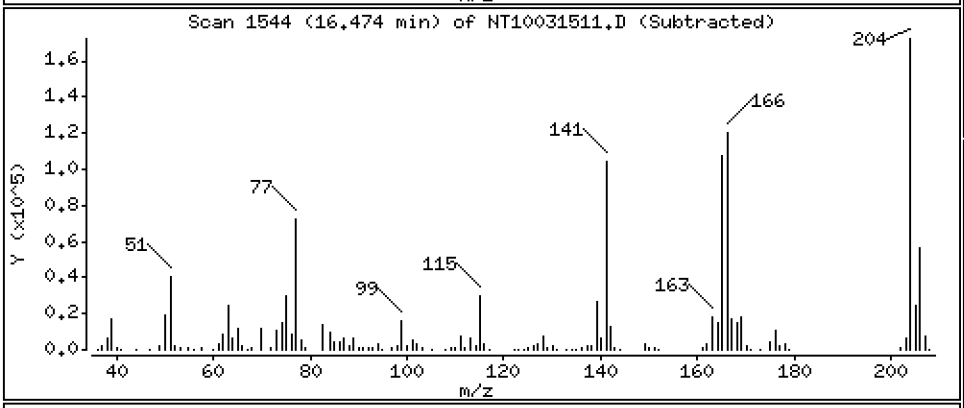
Column diameter: 0.25

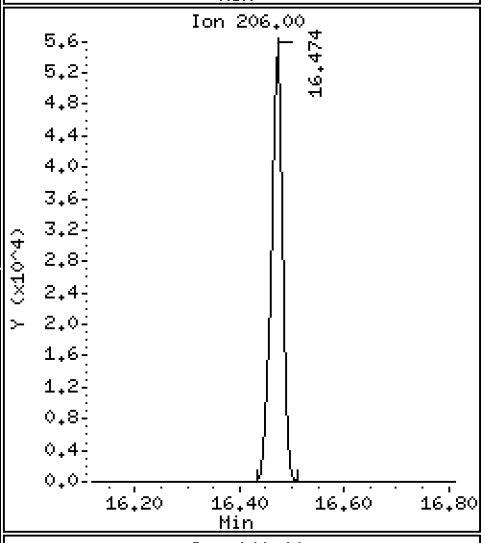
51 4-Chlorophenyl-phenylether

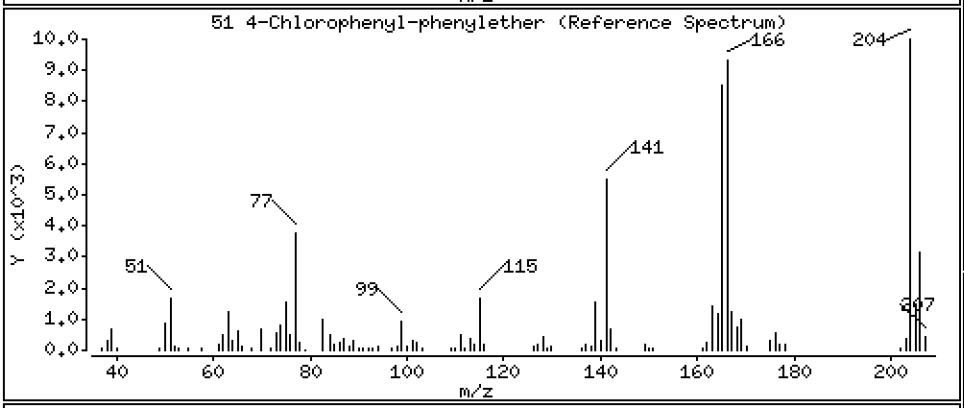
Concentration: 4.993 ug/mL

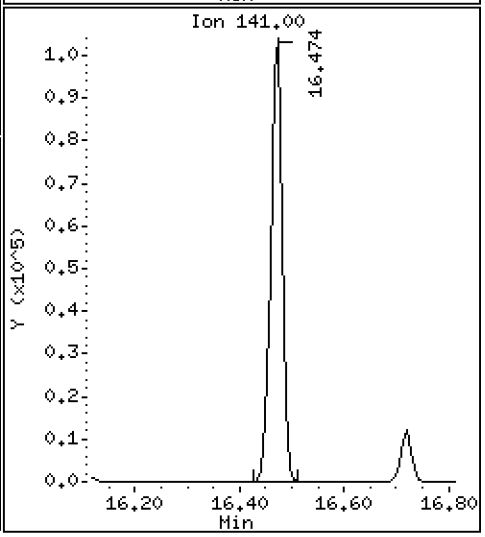


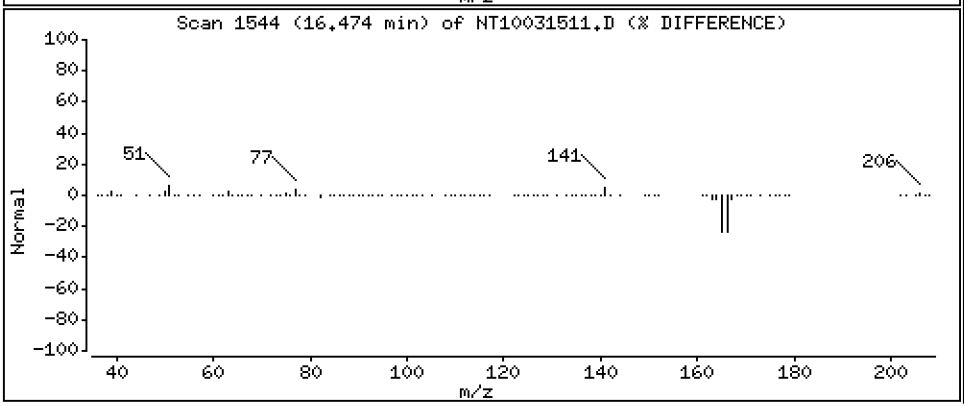












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

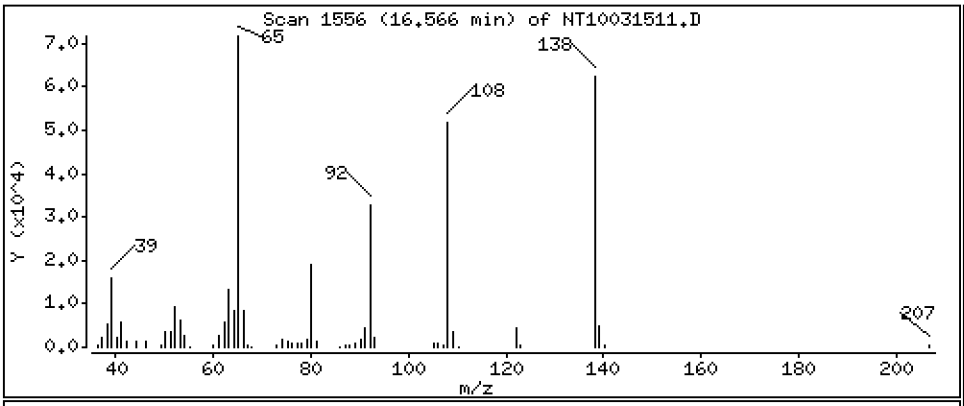
Operator: VTS

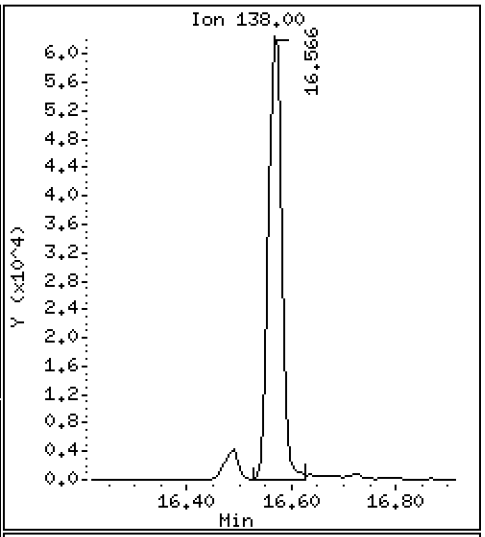
Column phase: ZB-5msi

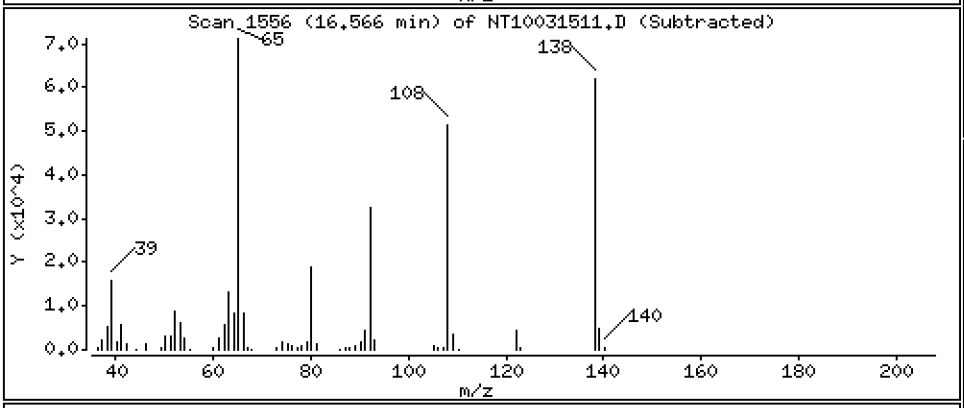
Column diameter: 0.25

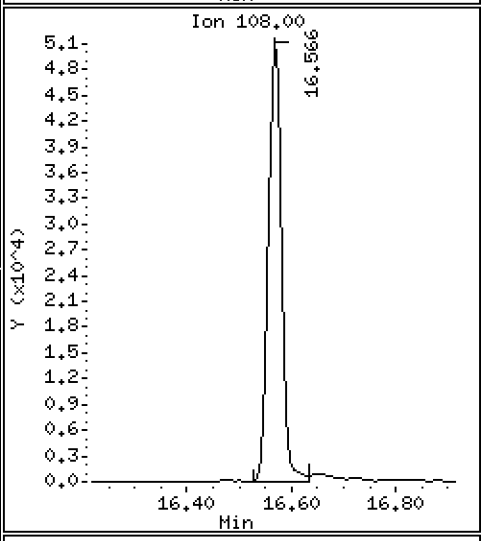
52 4-Nitroaniline

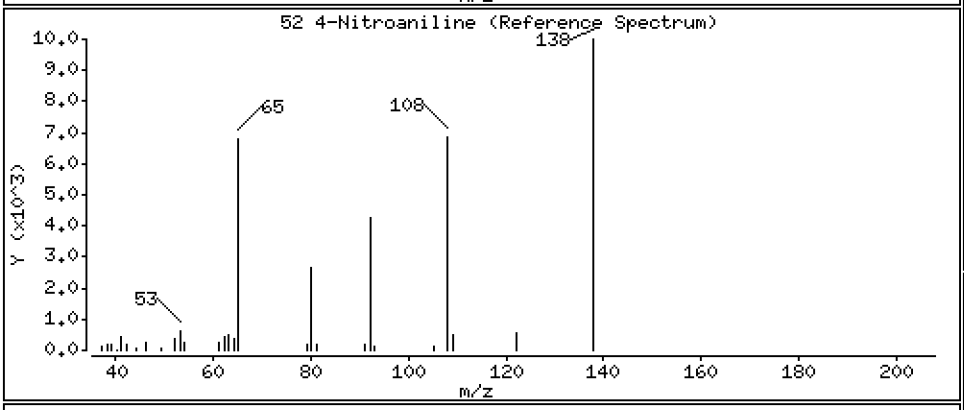
Concentration: 4.925 ug/mL

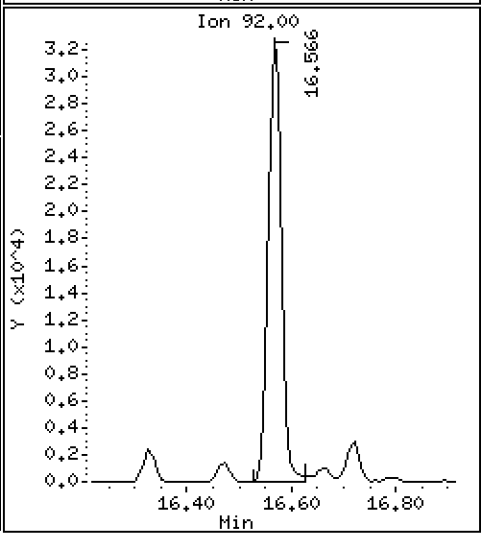


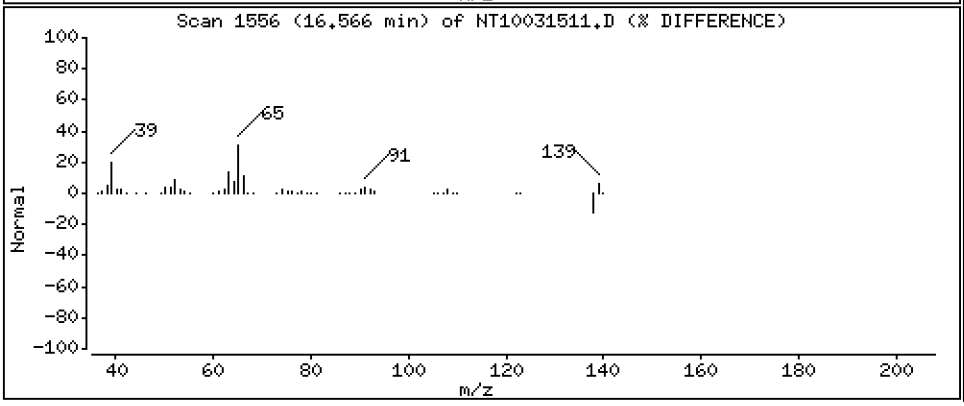












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

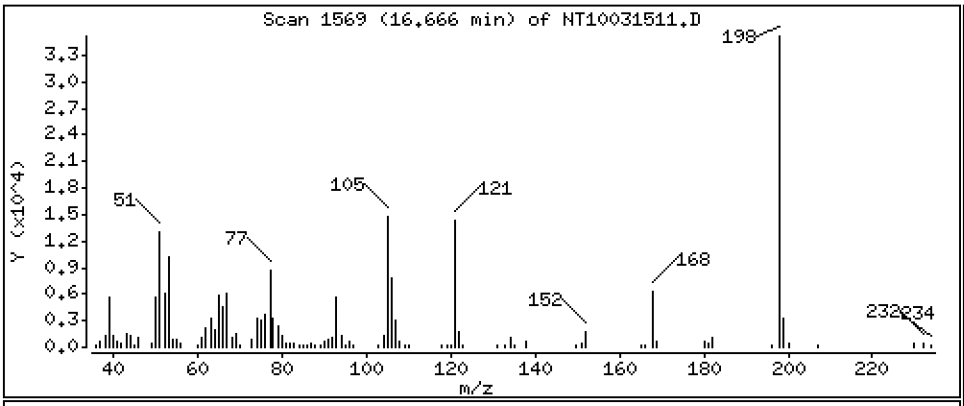
Operator: VTS

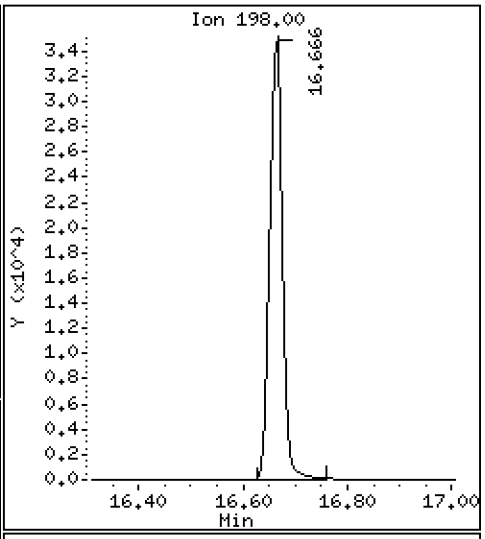
Column phase: ZB-5msi

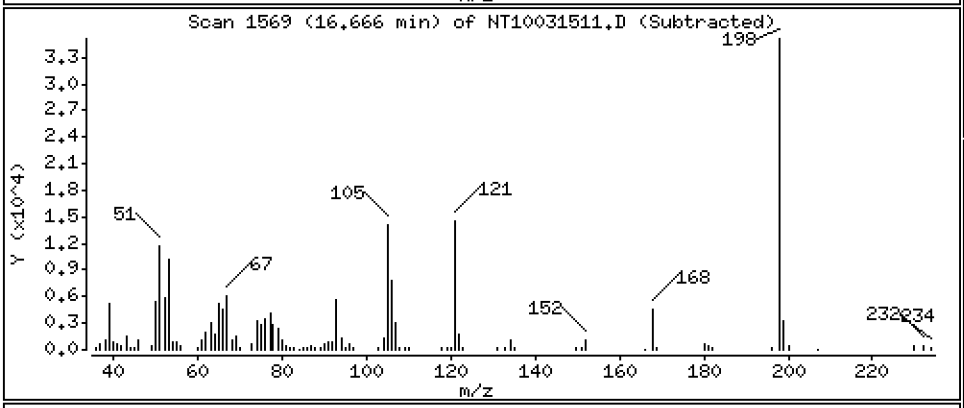
Column diameter: 0.25

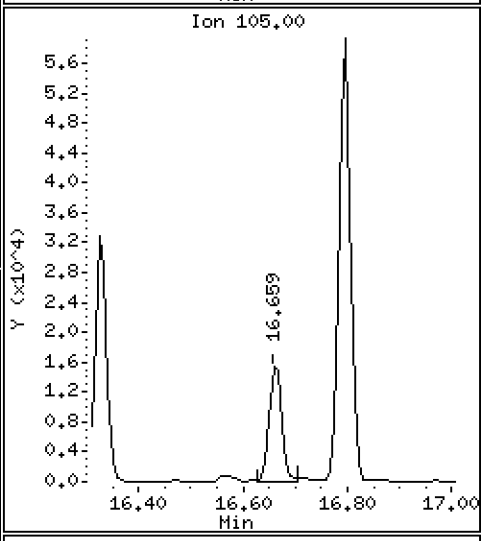
53 4,6-Dinitro-2-methylphenol

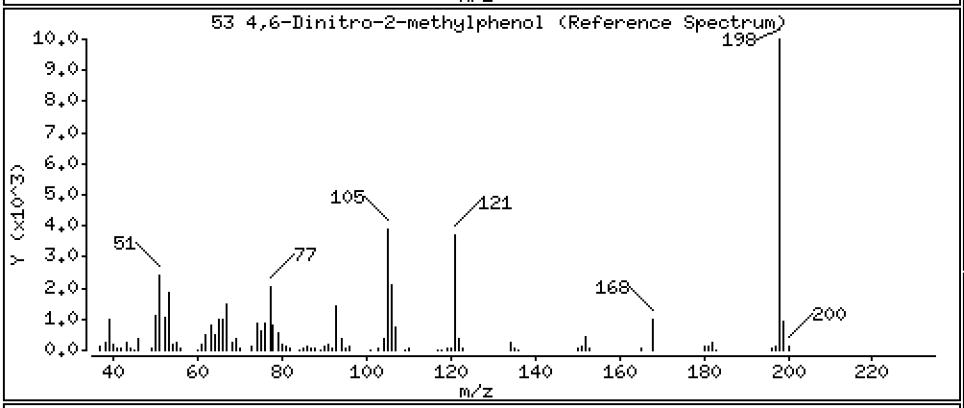
Concentration: 3.515 ug/mL

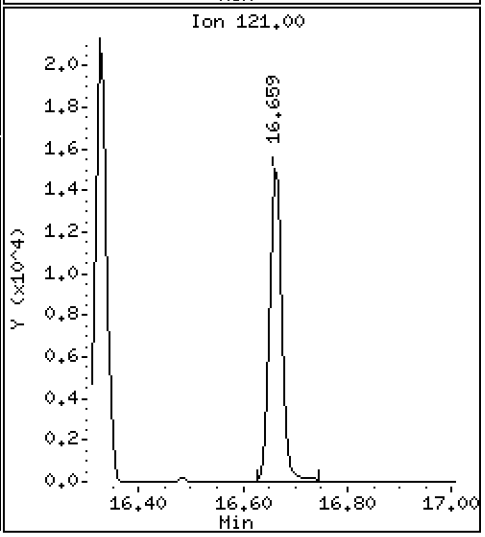


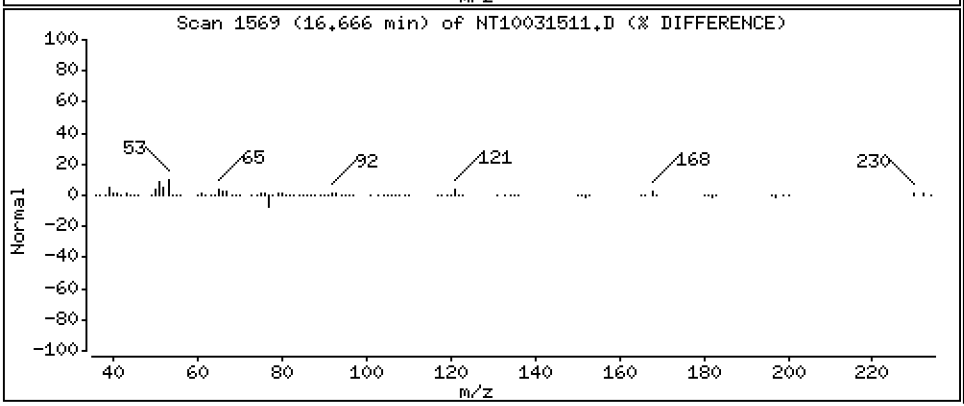












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

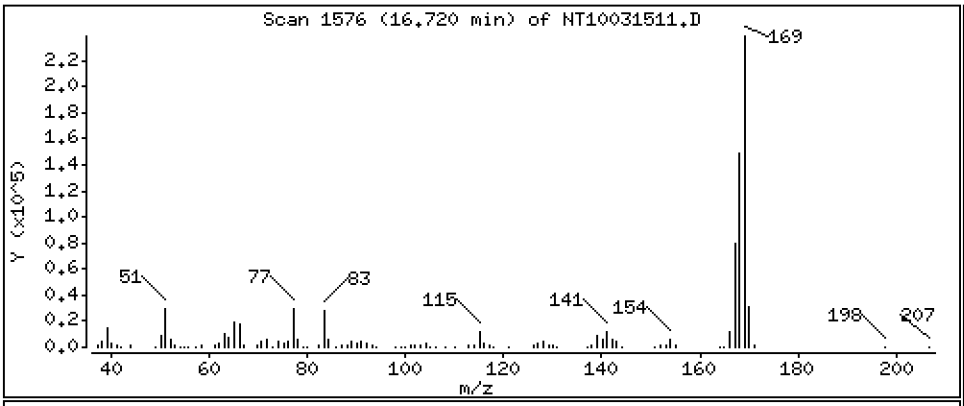
Operator: VTS

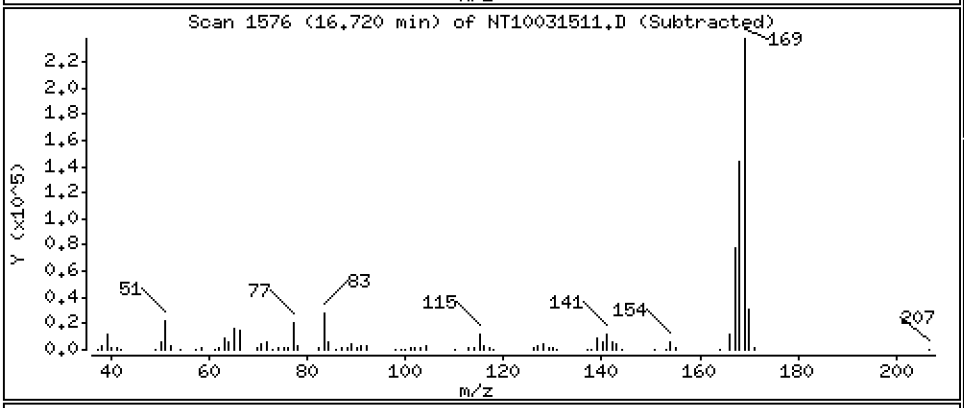
Column phase: ZB-5msi

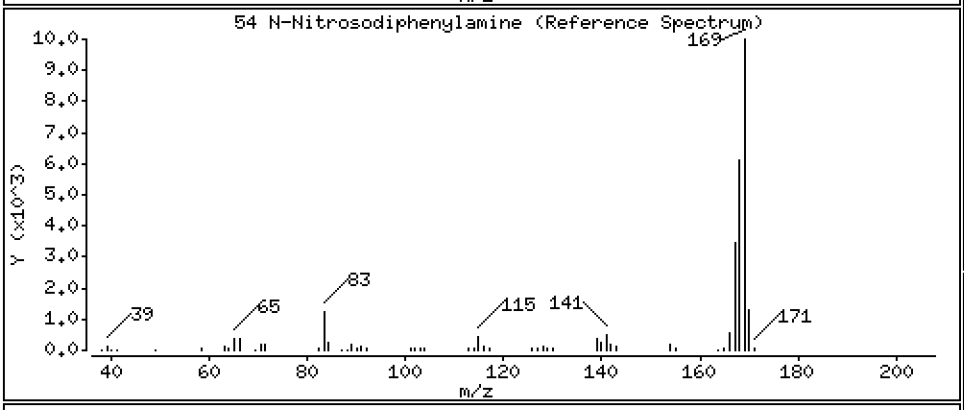
Column diameter: 0.25

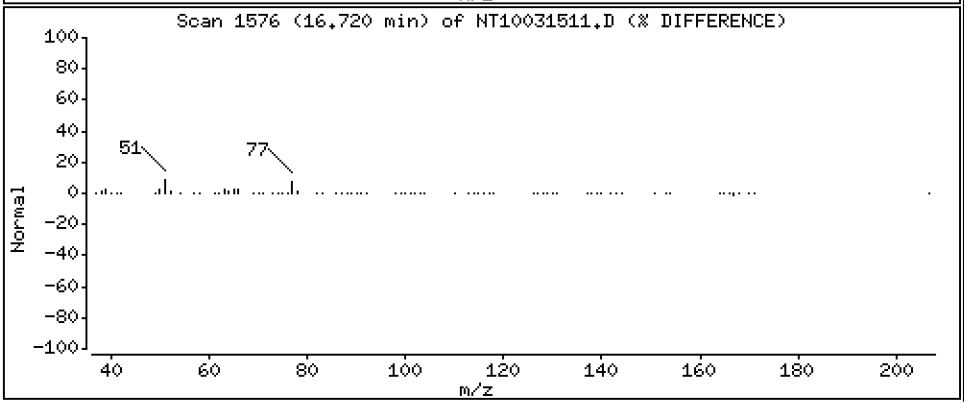
54 N-Nitrosodiphenylamine

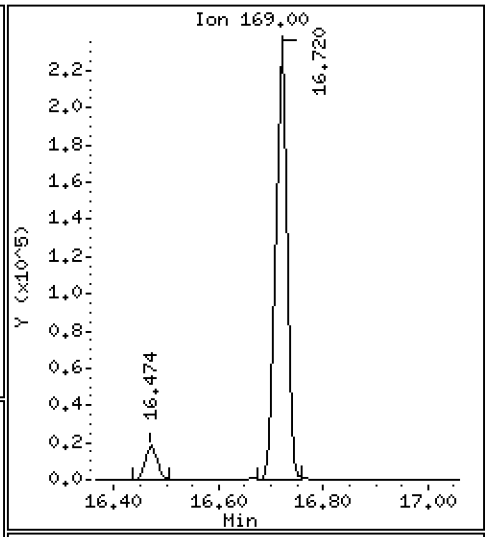
Concentration: 4.802 ug/mL

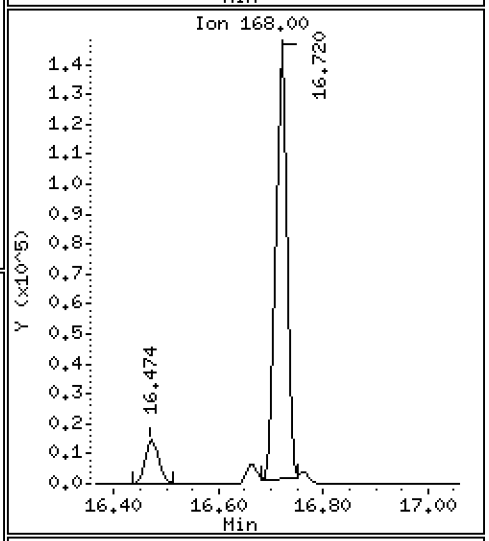


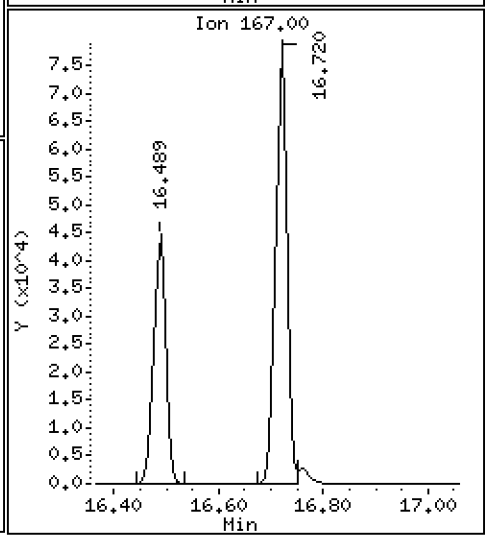












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

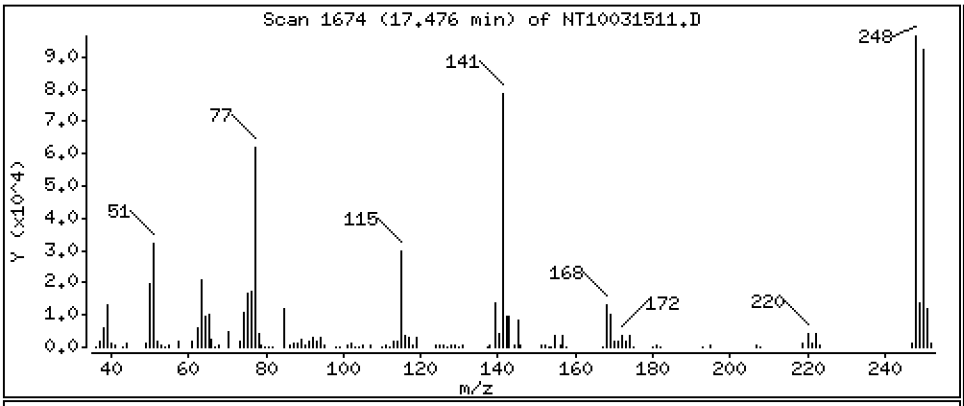
Operator: VTS

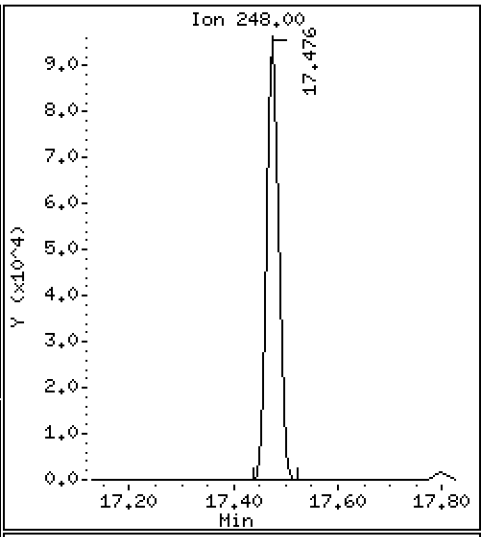
Column phase: ZB-5msi

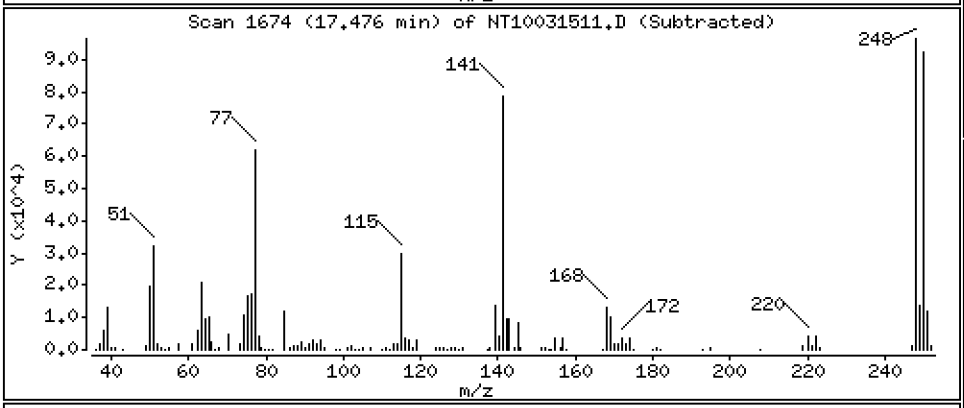
Column diameter: 0.25

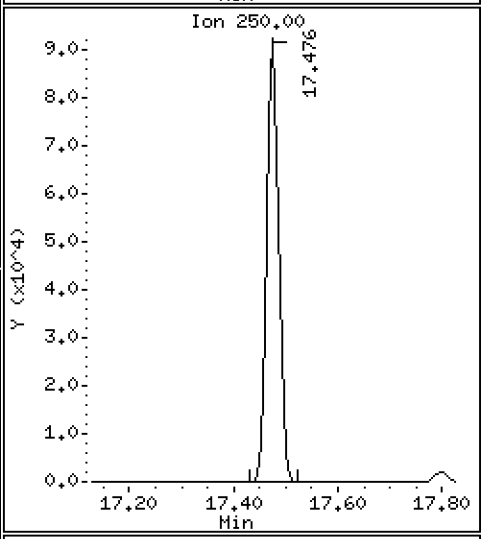
56 4-Bromophenyl-phenylether

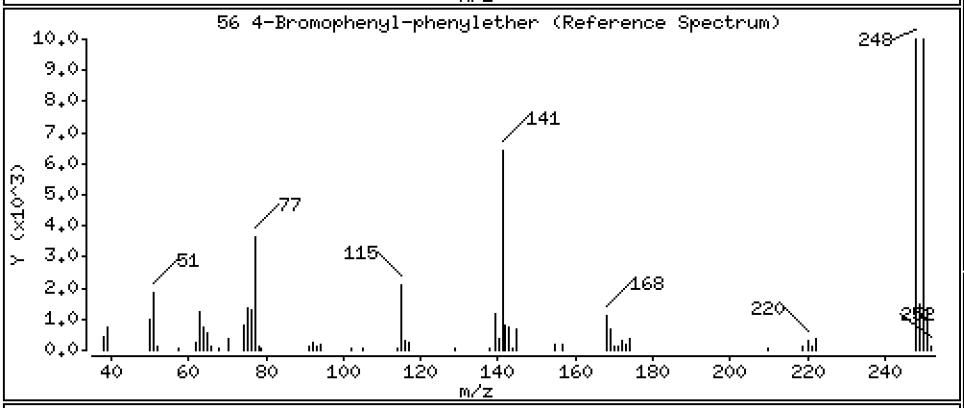
Concentration: 5.060 ug/mL

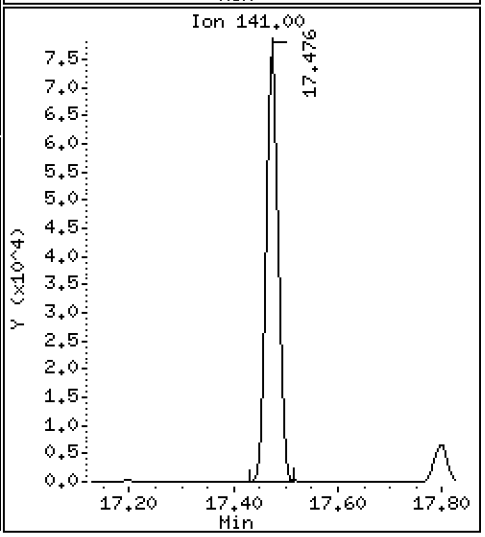


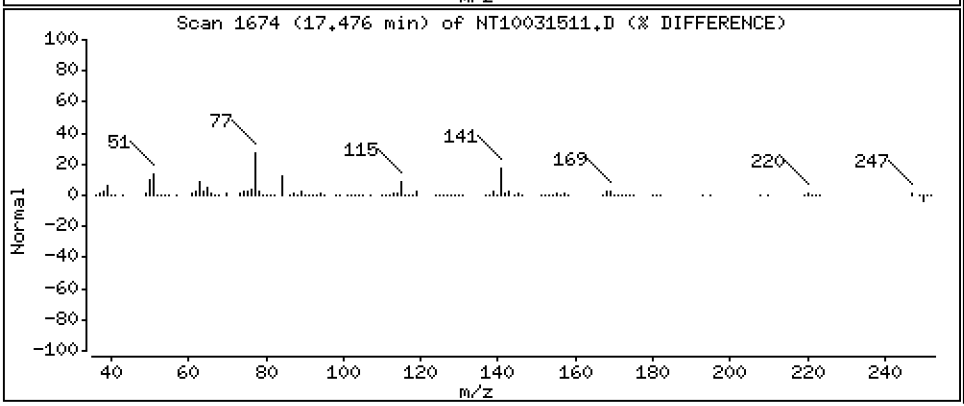












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

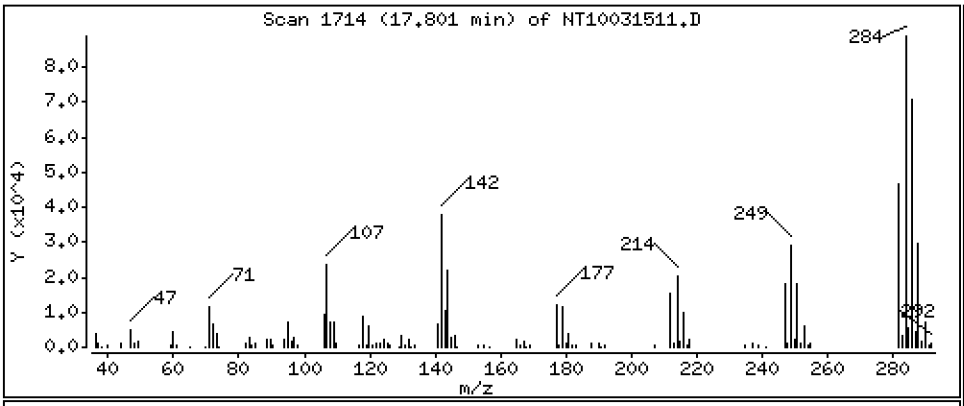
Operator: VTS

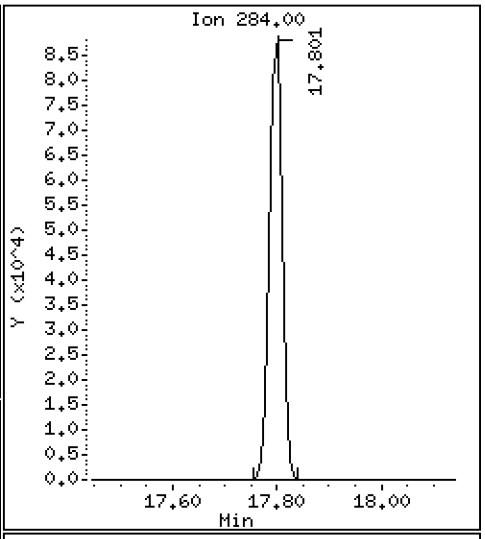
Column phase: ZB-5msi

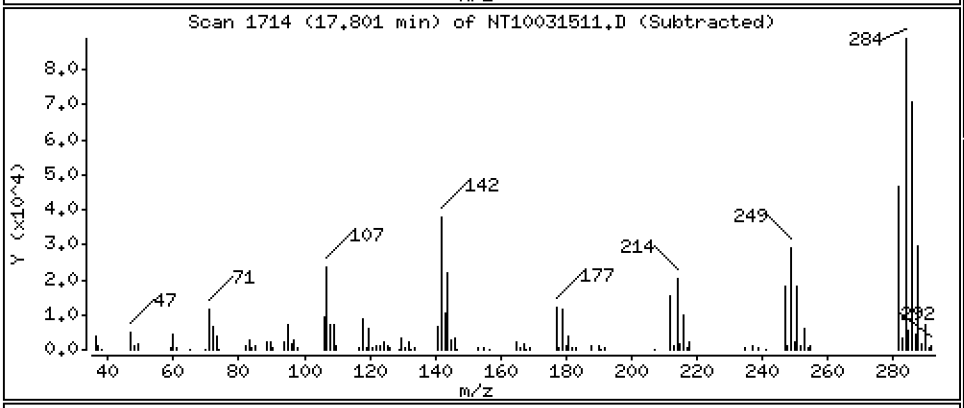
Column diameter: 0.25

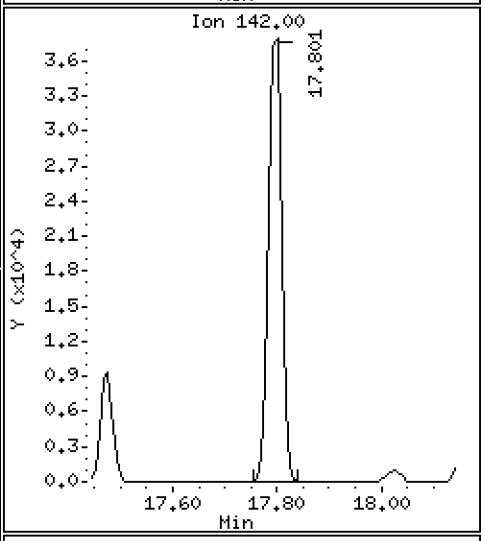
57 Hexachlorobenzene

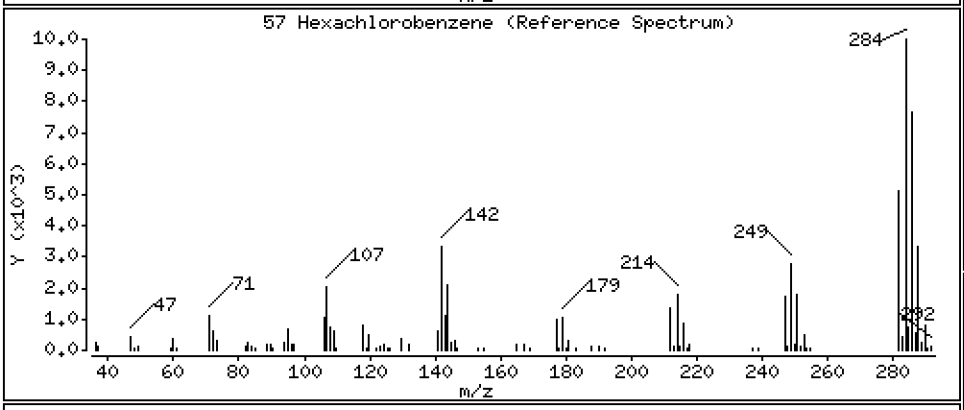
Concentration: 4.596 ug/mL

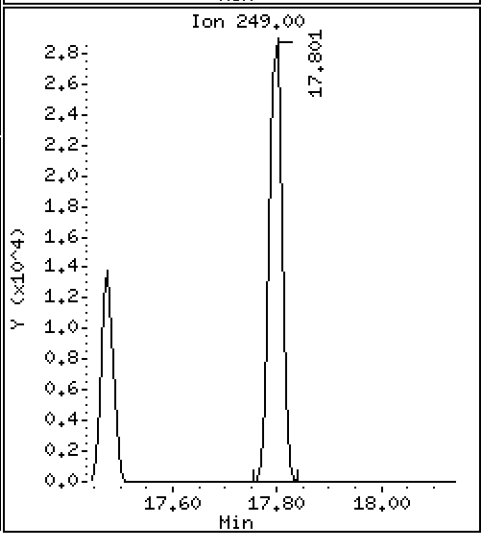


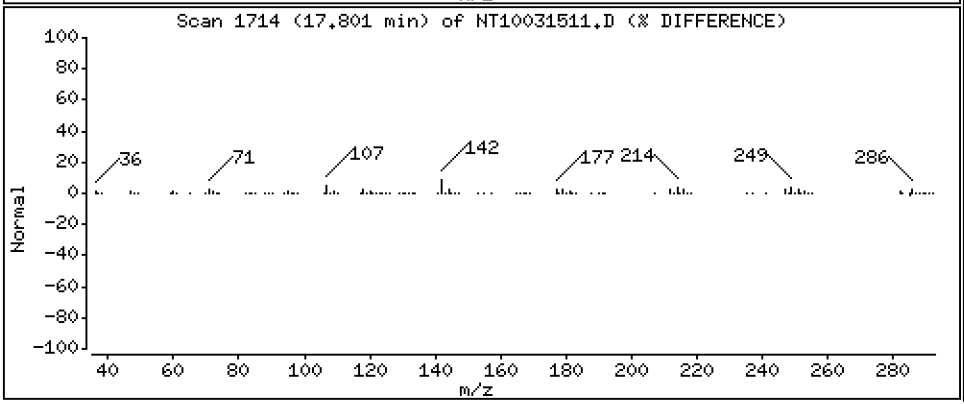












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

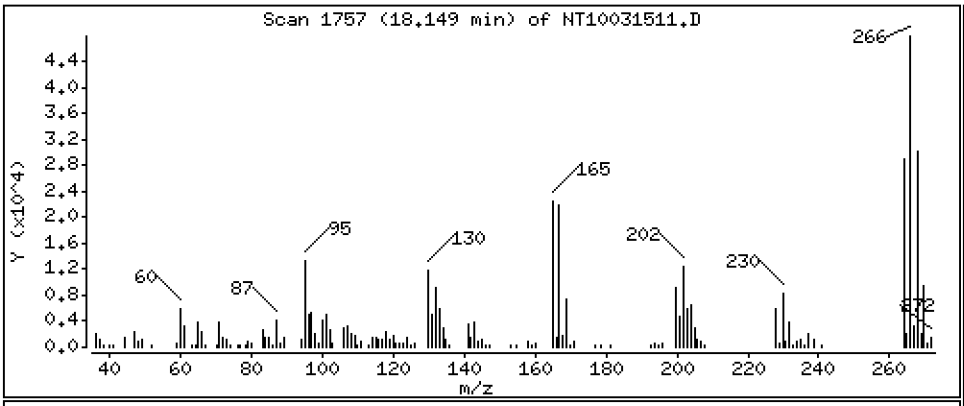
Operator: VTS

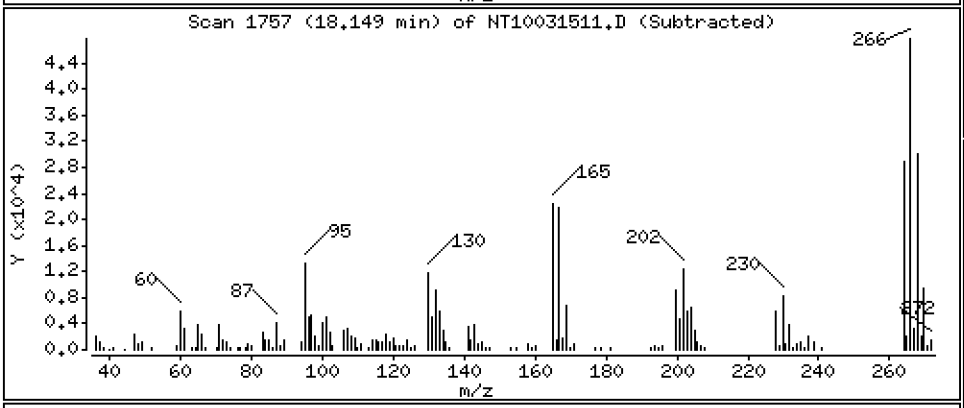
Column phase: ZB-5msi

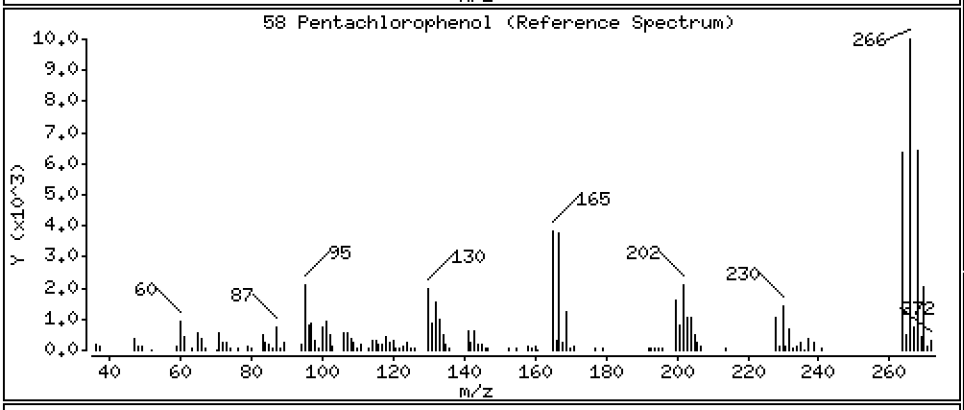
Column diameter: 0.25

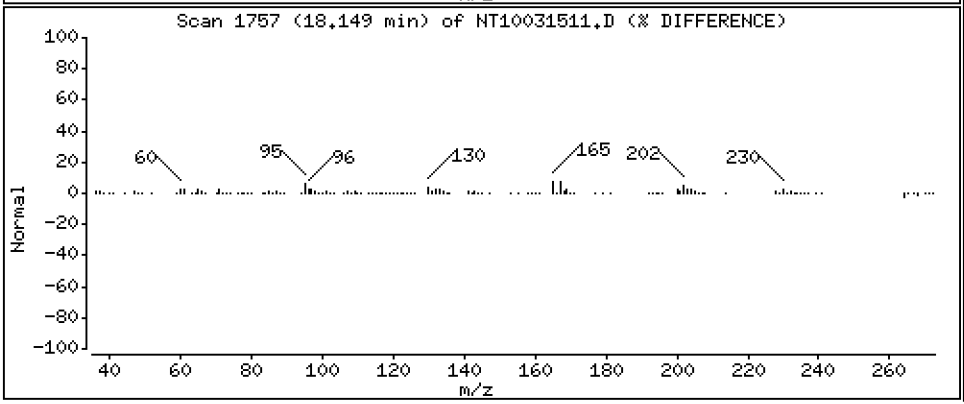
58 Pentachlorophenol

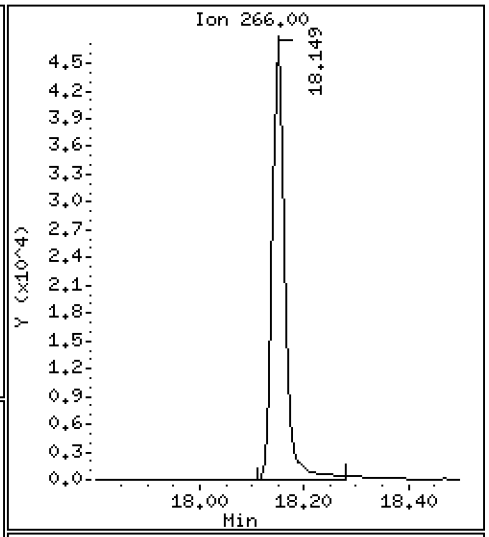
Concentration: 4.057 ug/mL

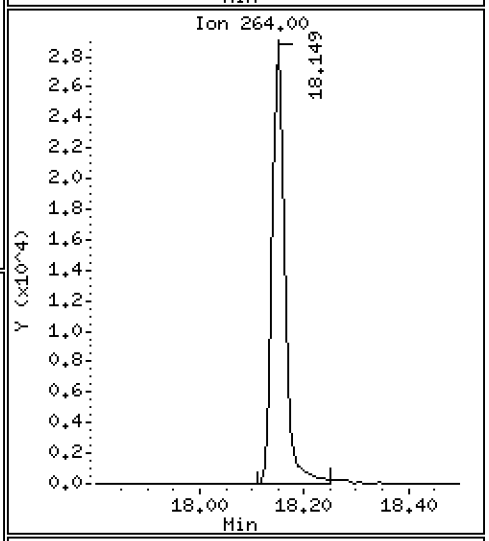


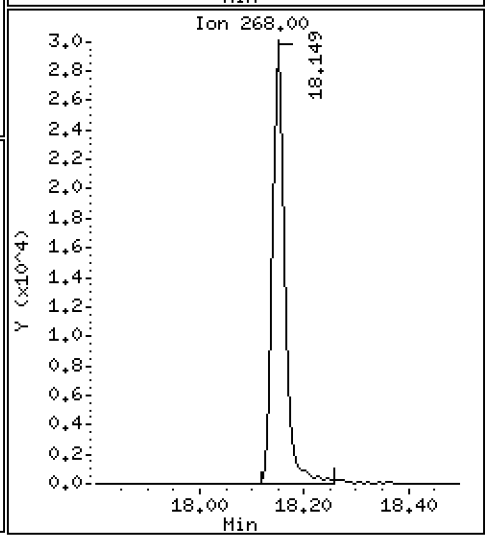












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

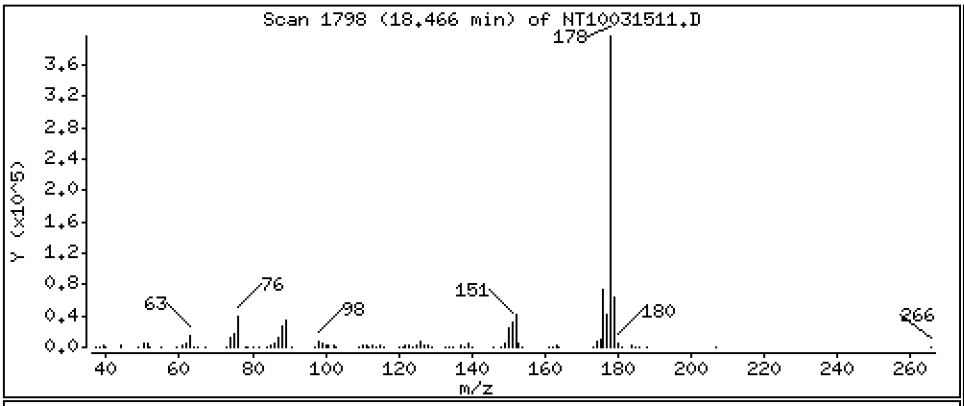
Operator: VTS

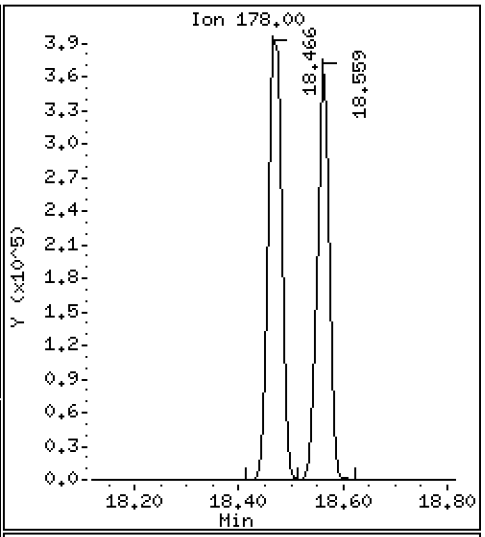
Column phase: ZB-5msi

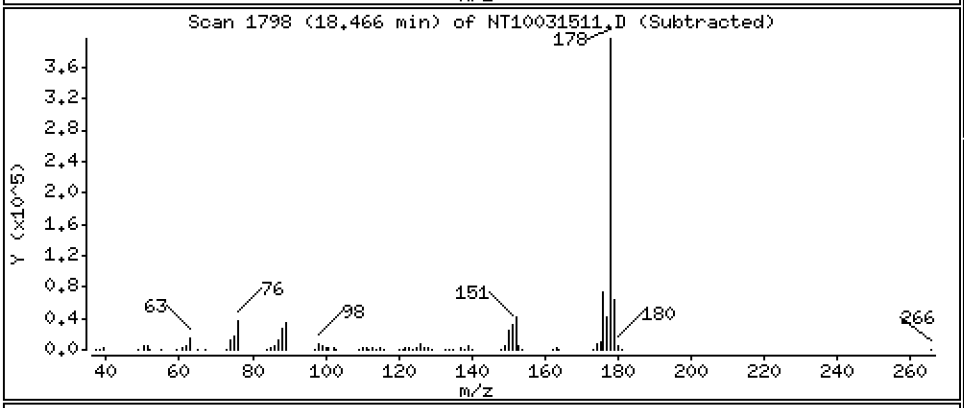
Column diameter: 0.25

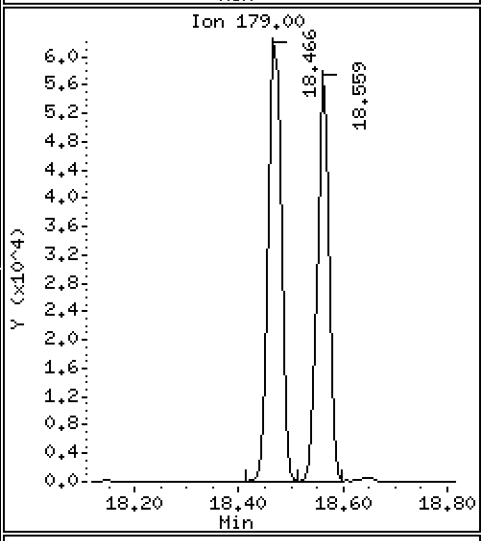
60 Phenanthrene

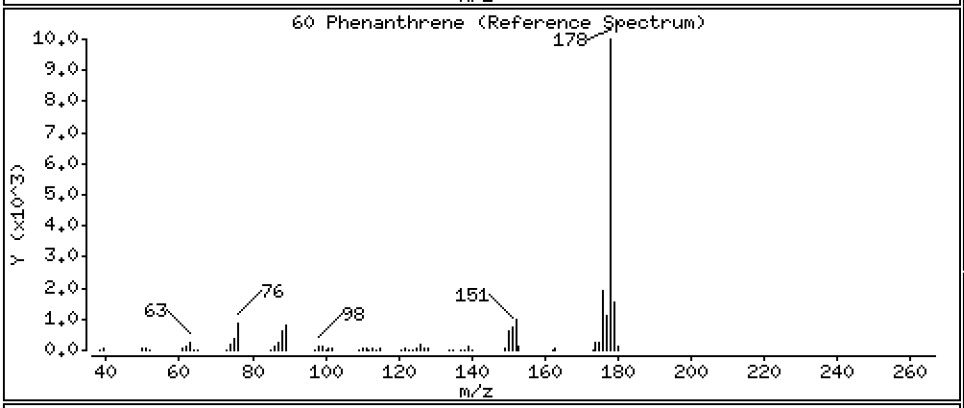
Concentration: 4.602 ug/mL

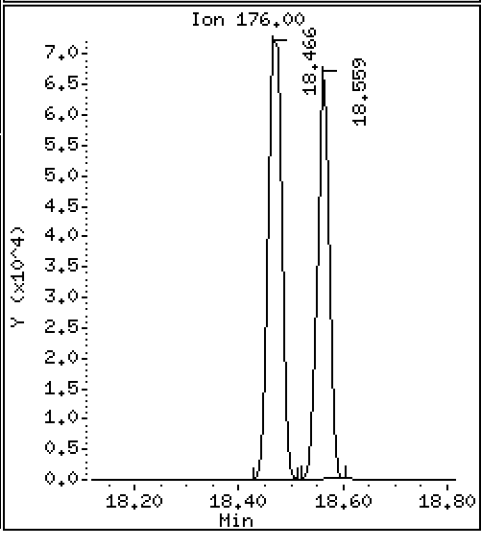


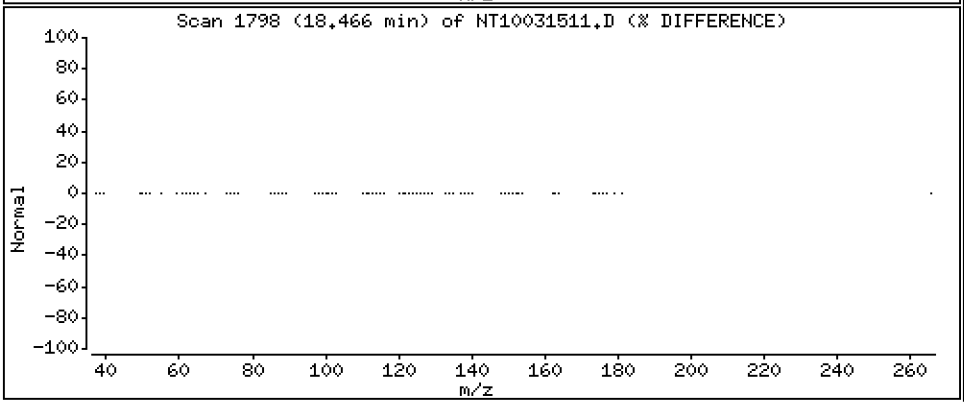












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

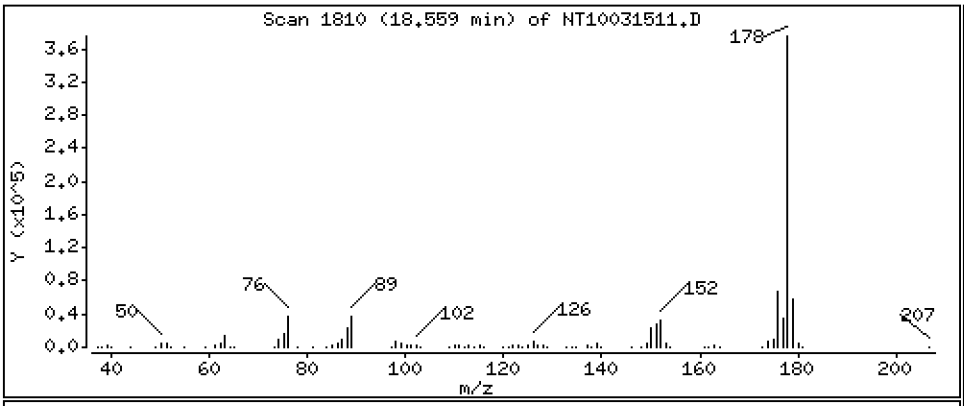
Operator: VTS

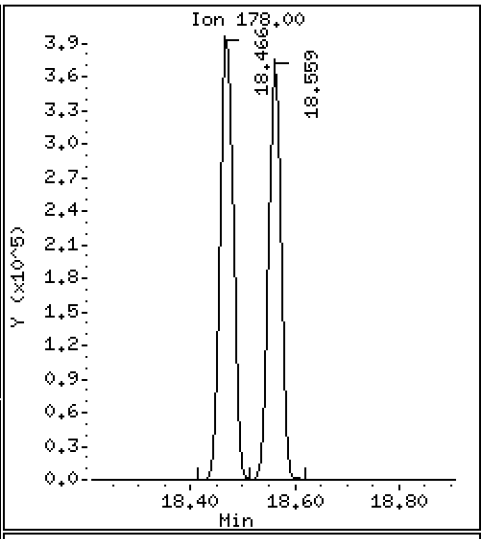
Column phase: ZB-5msi

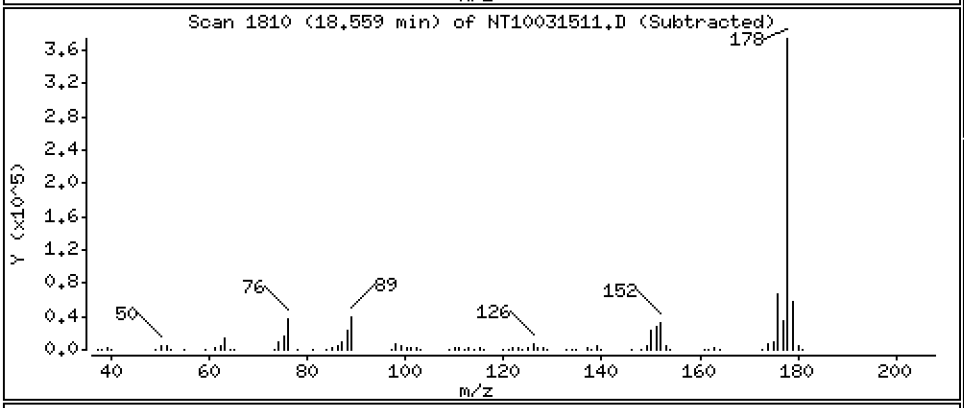
Column diameter: 0.25

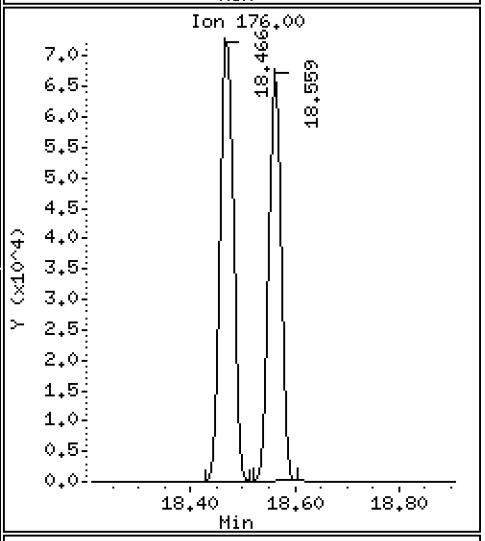
61 Anthracene

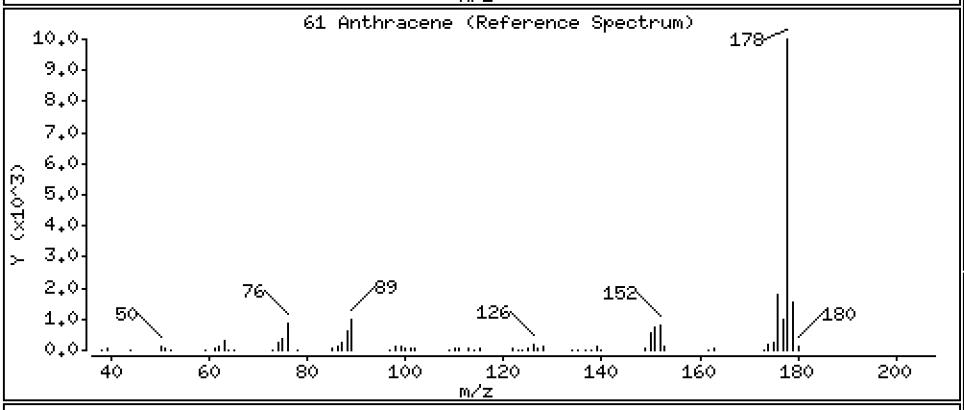
Concentration: 4.167 ug/mL

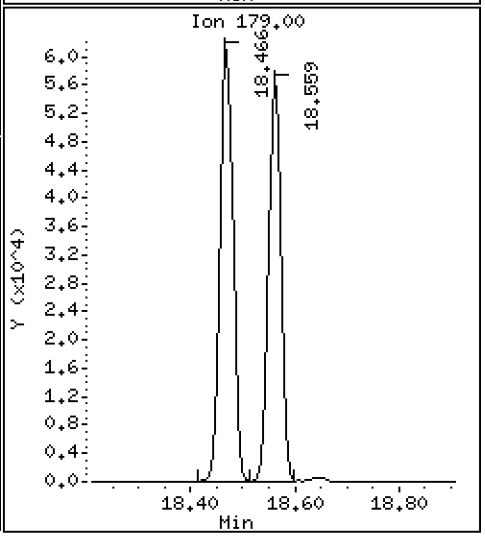


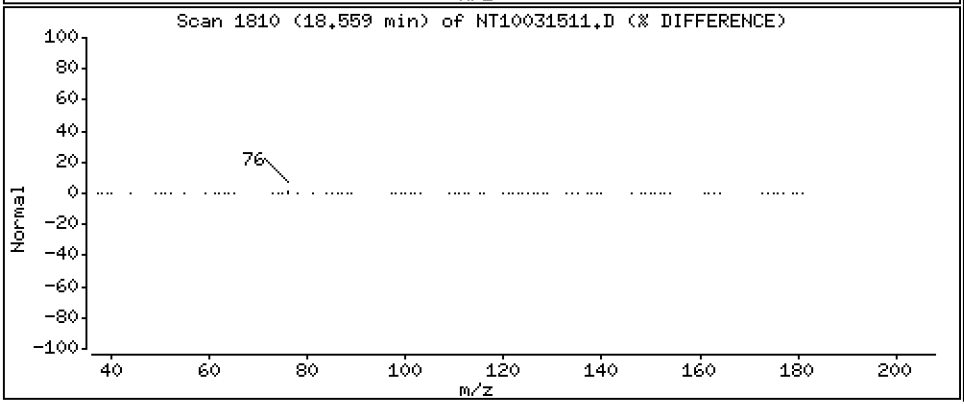












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

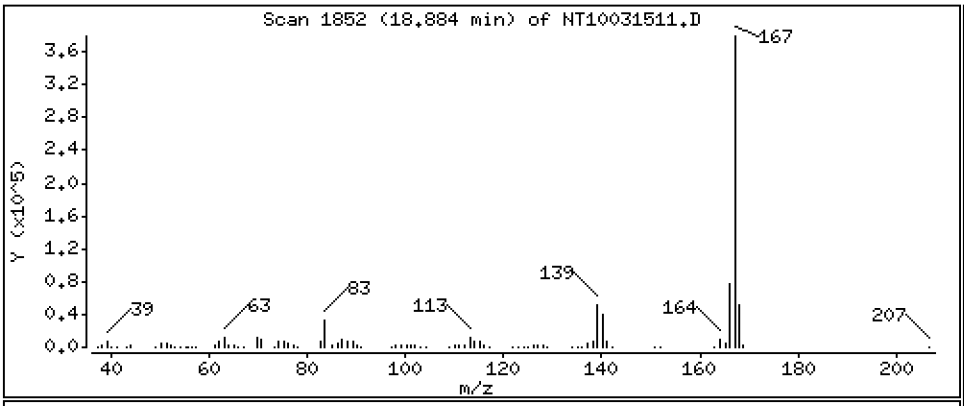
Operator: VTS

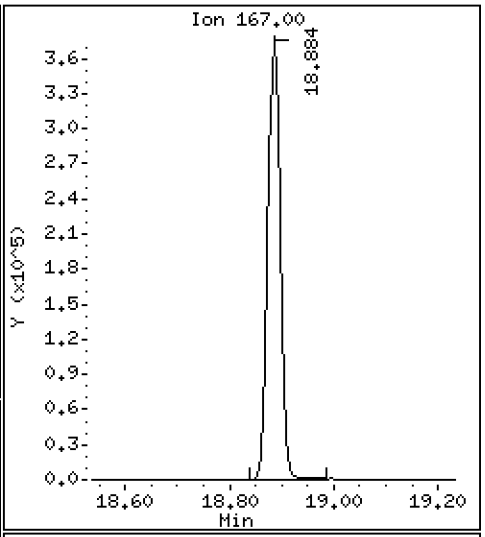
Column phase: ZB-5msi

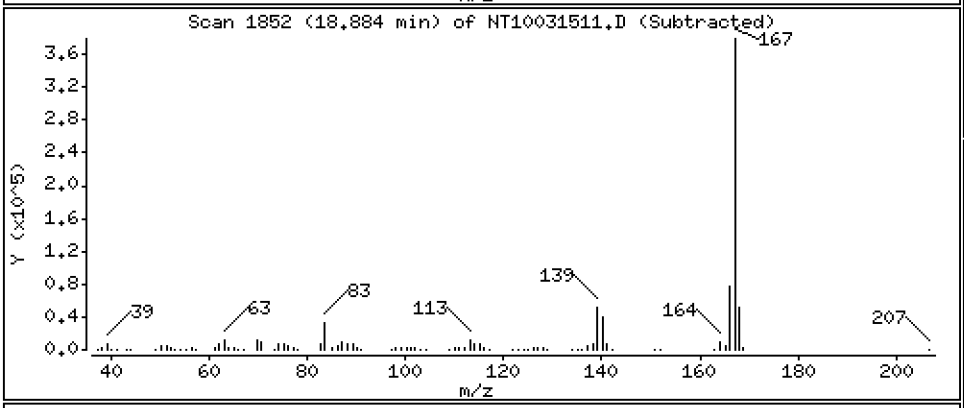
Column diameter: 0.25

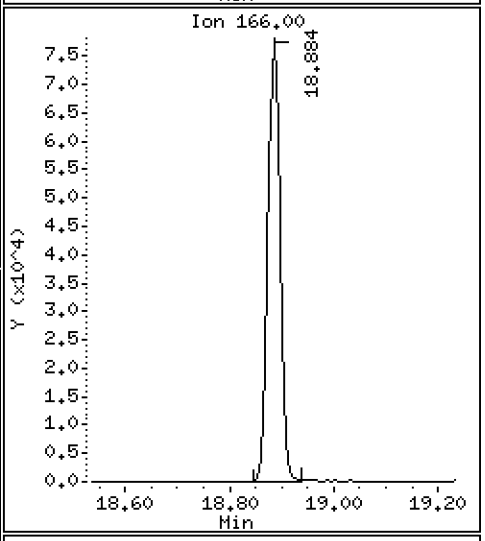
62 Carbazole

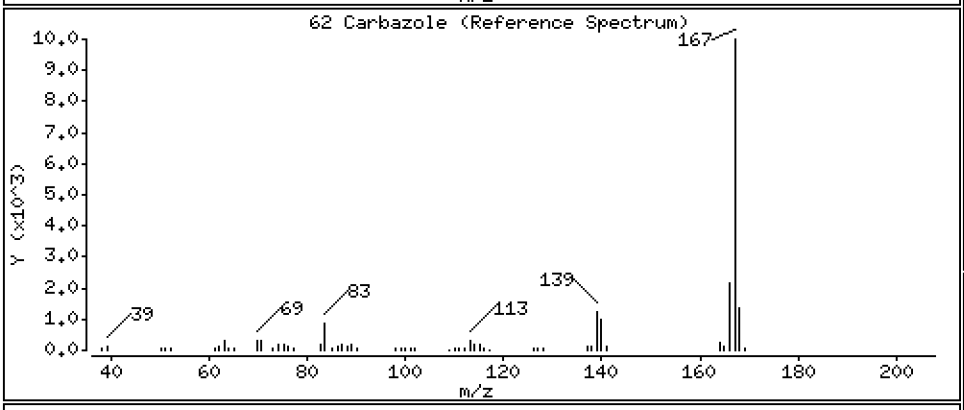
Concentration: 4.730 ug/mL

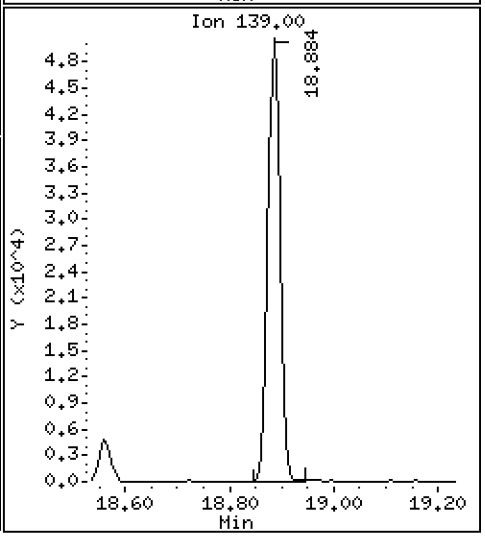


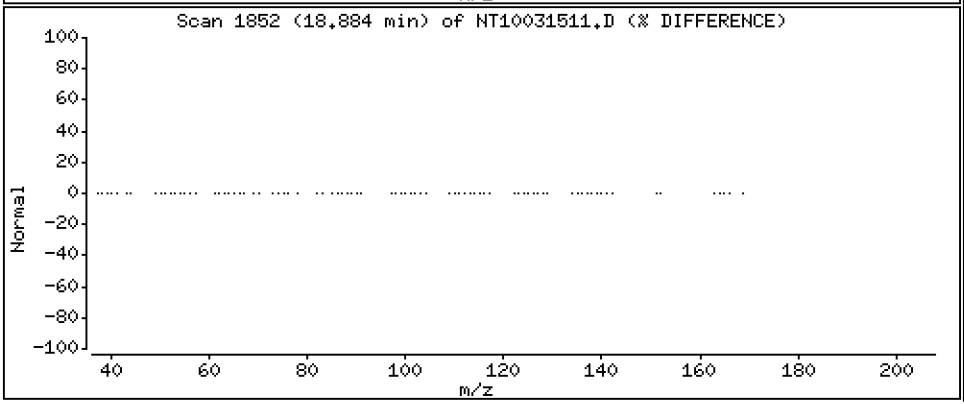












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

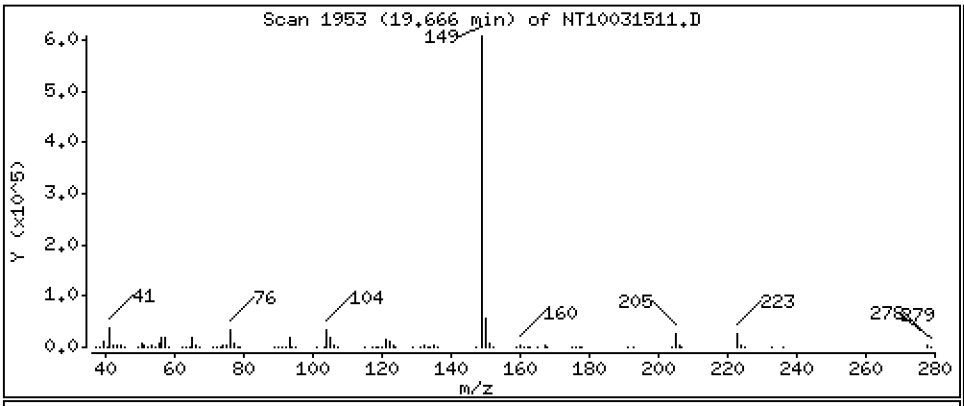
Operator: VTS

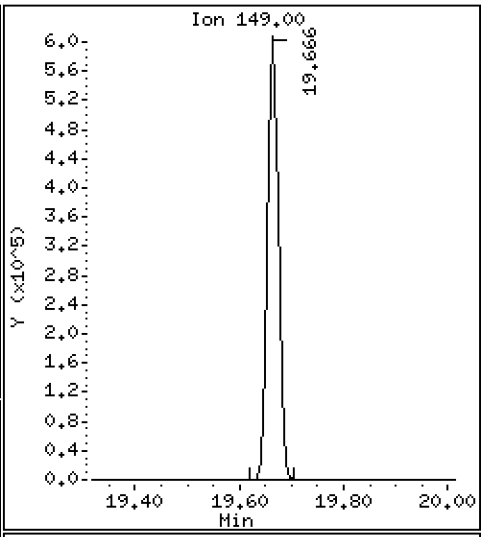
Column phase: ZB-5msi

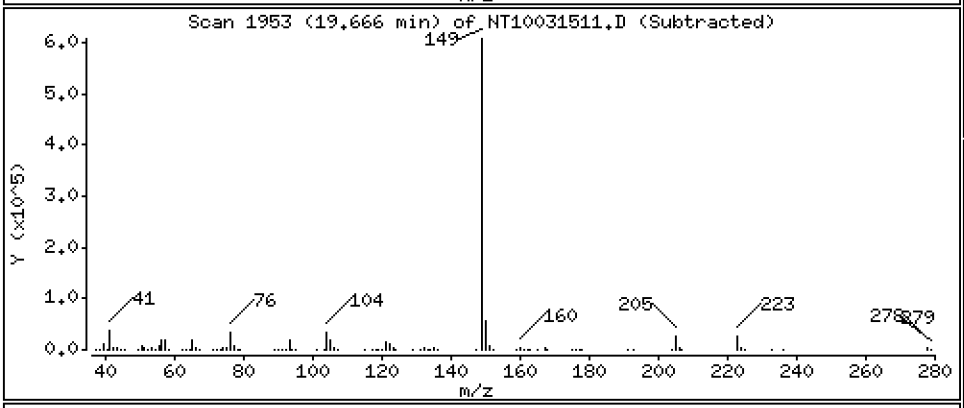
Column diameter: 0.25

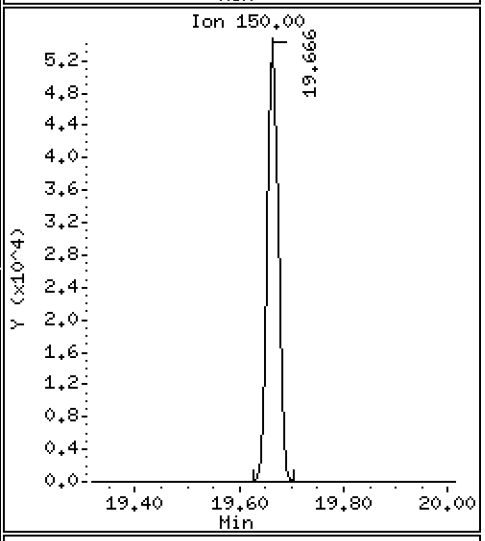
63 Di-n-butylphthalate

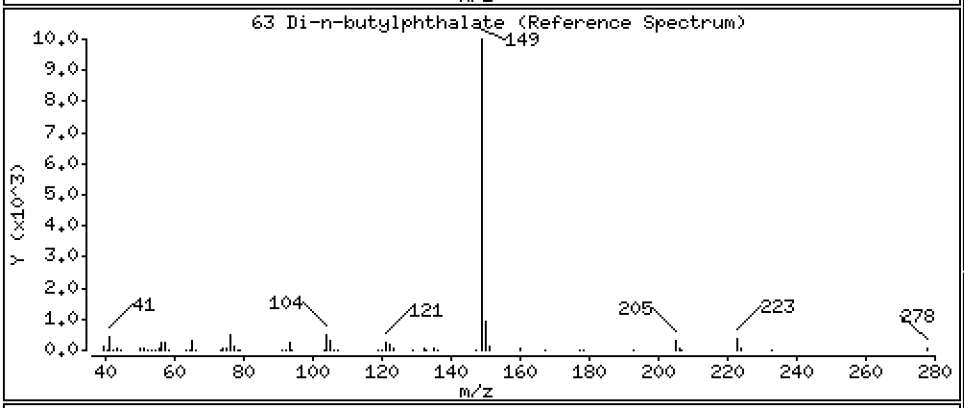
Concentration: 4.967 ug/mL

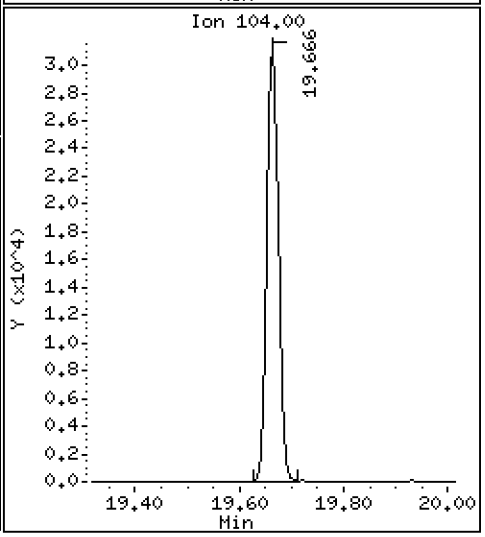


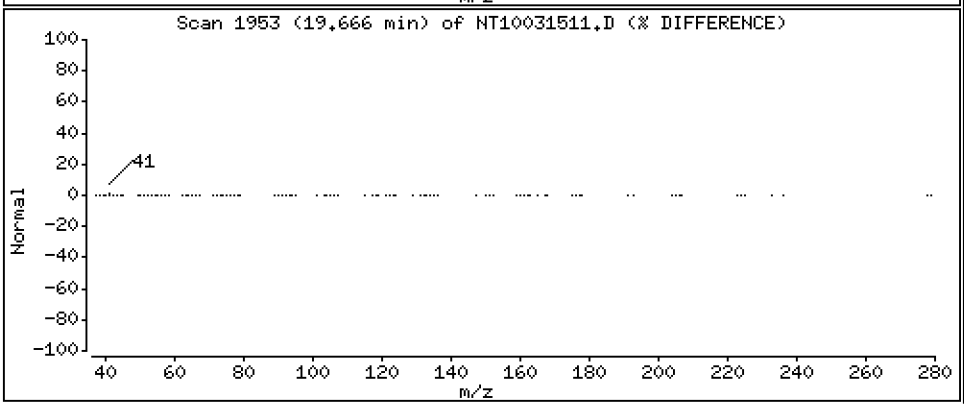












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

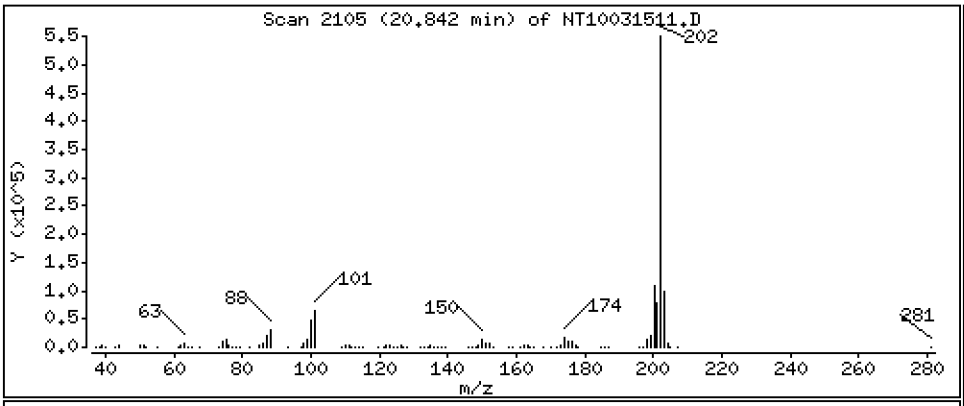
Operator: VTS

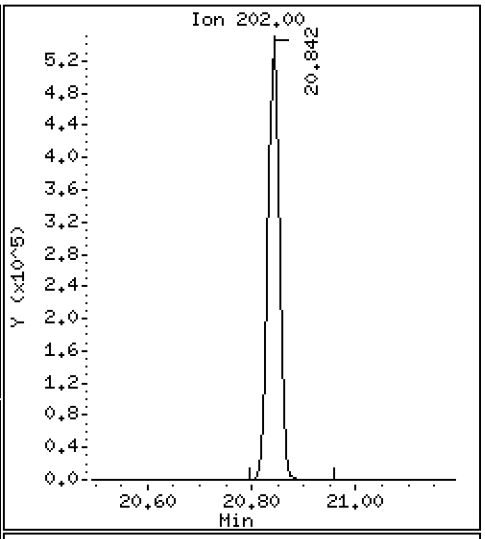
Column phase: ZB-5msi

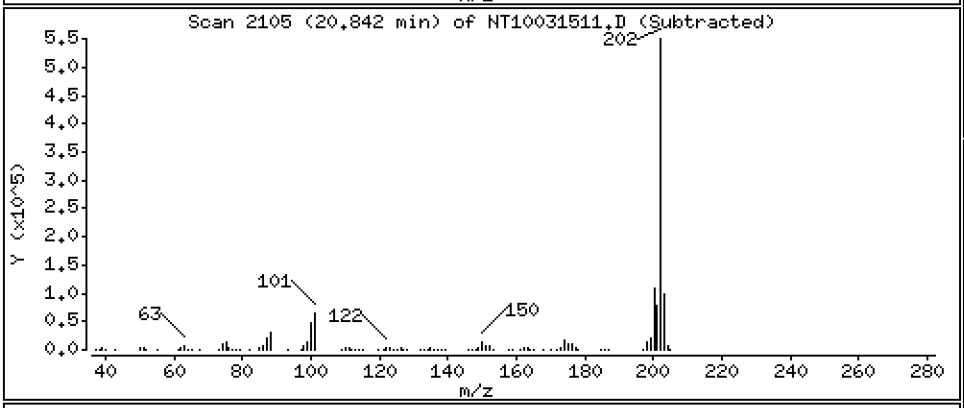
Column diameter: 0.25

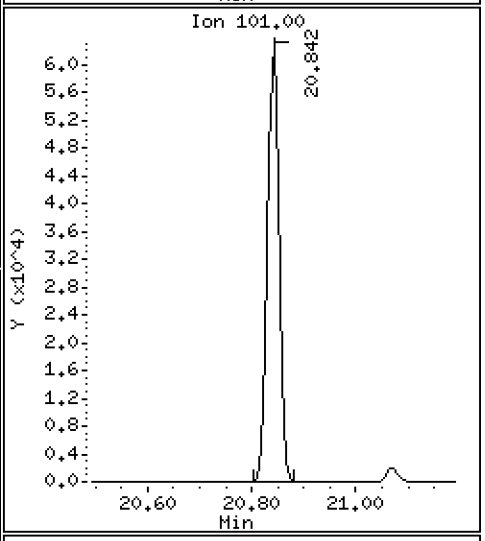
64 Fluoranthene

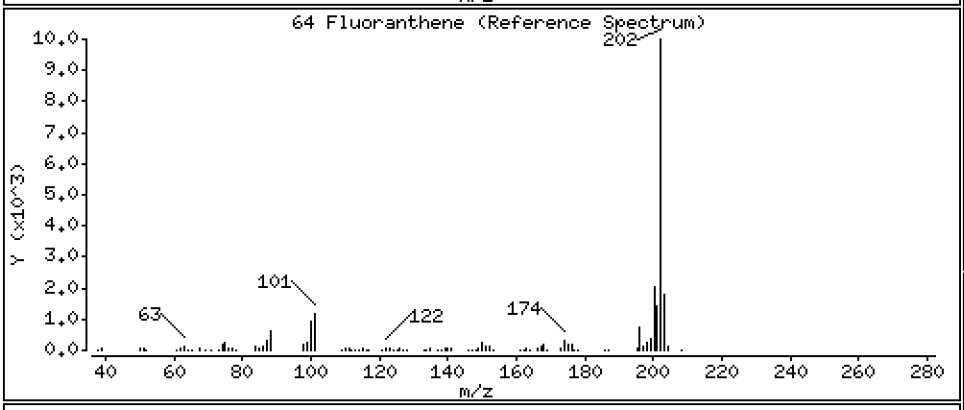
Concentration: 4.472 ug/mL

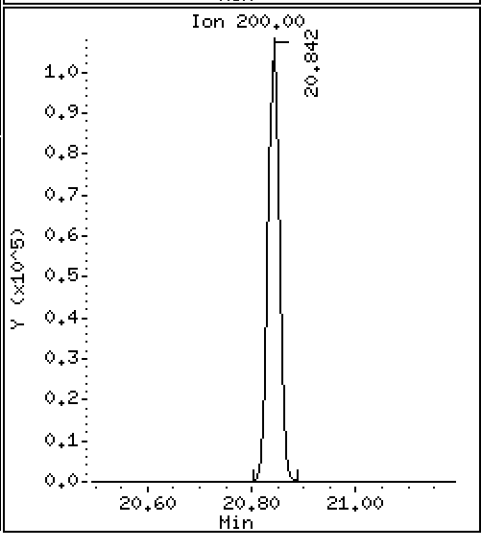


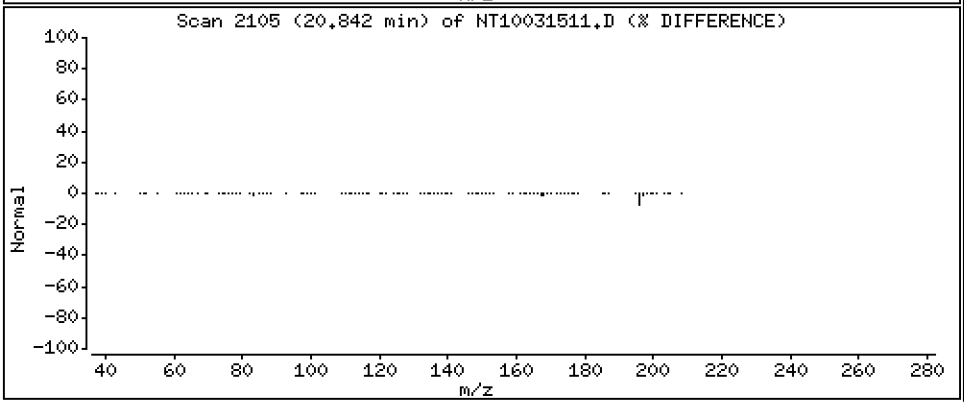












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

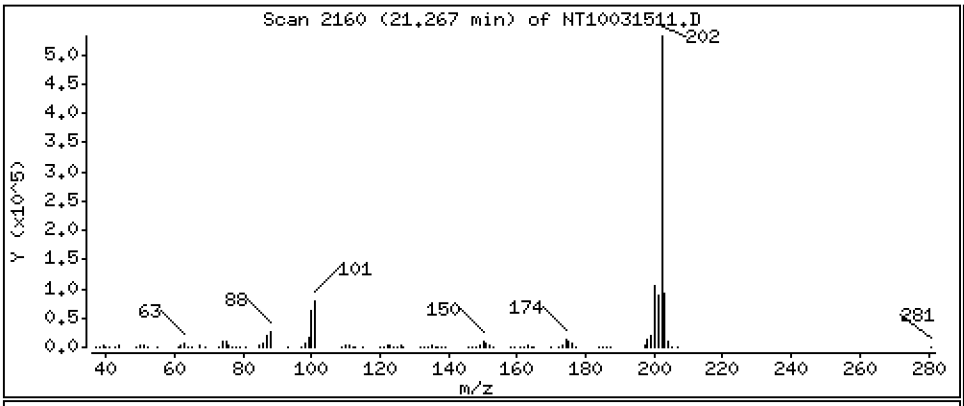
Operator: VTS

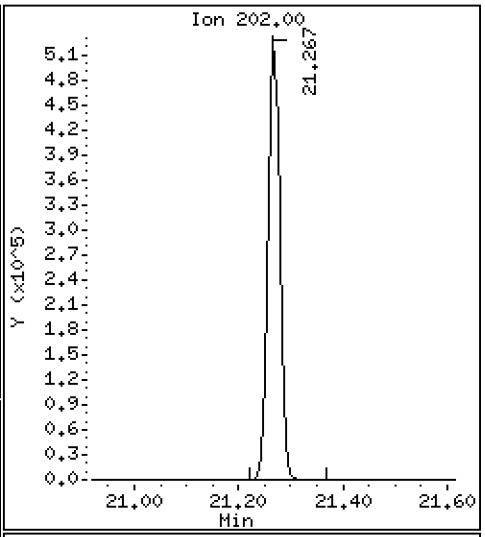
Column phase: ZB-5msi

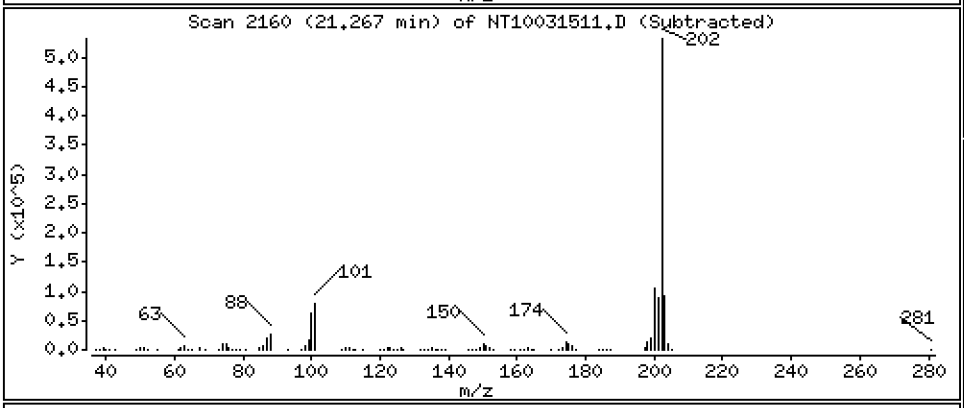
Column diameter: 0.25

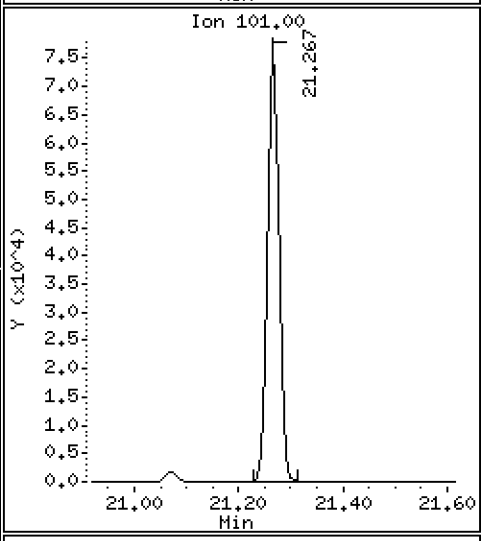
65 Pyrene

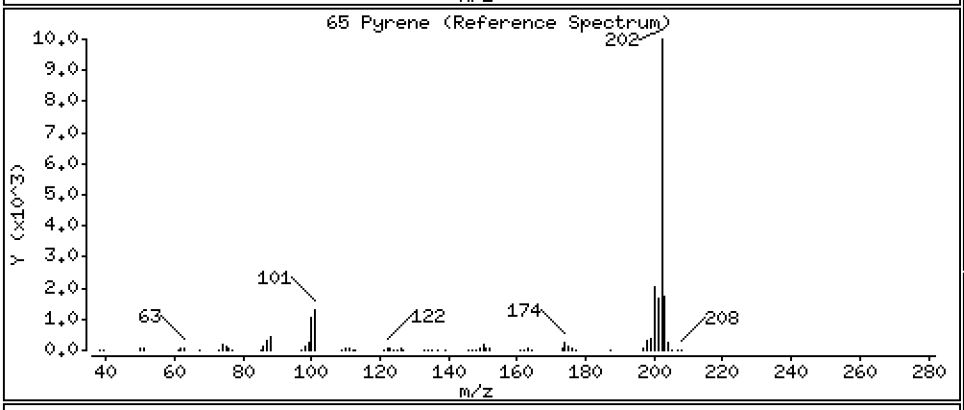
Concentration: 4.339 ug/mL

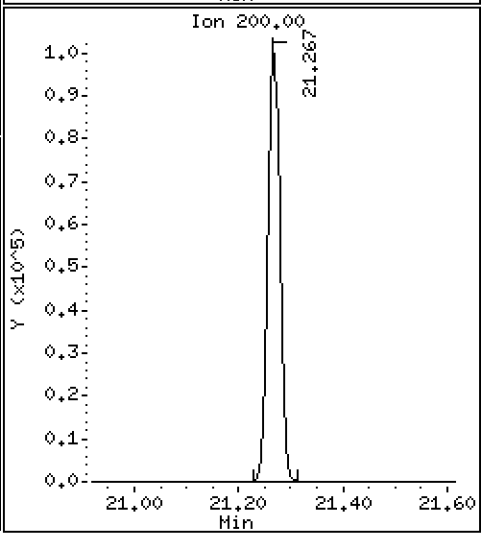


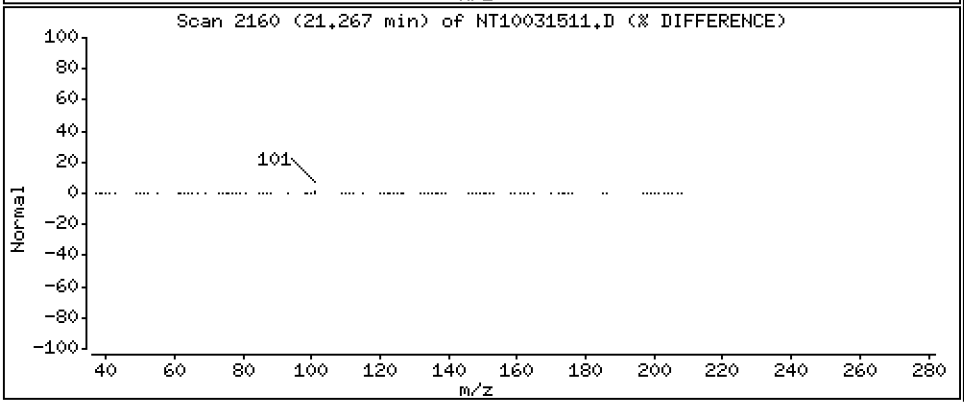












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

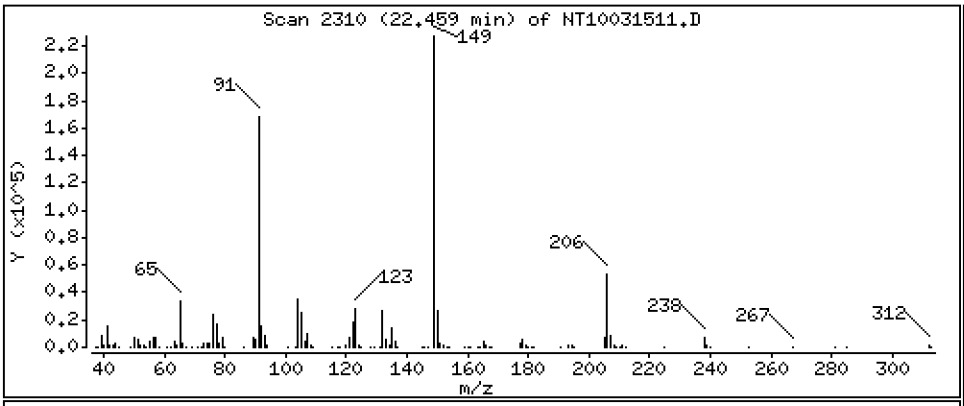
Operator: VTS

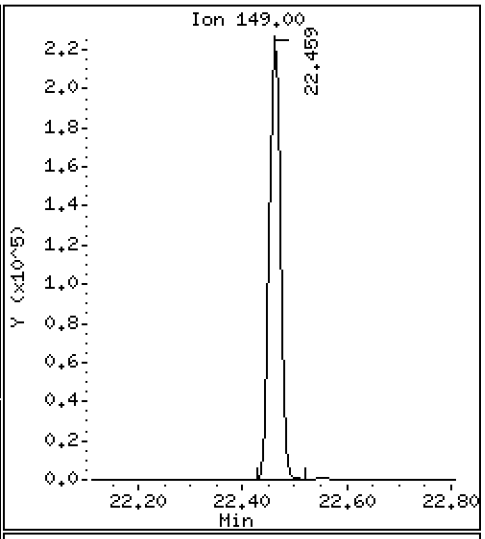
Column phase: ZB-5msi

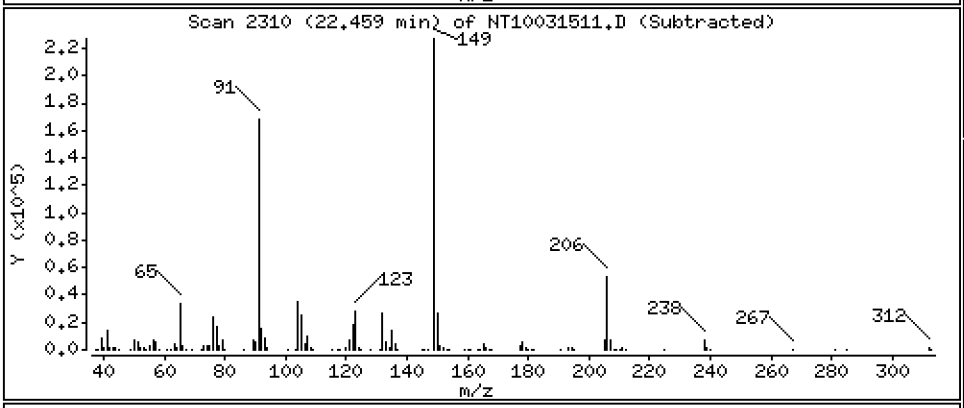
Column diameter: 0.25

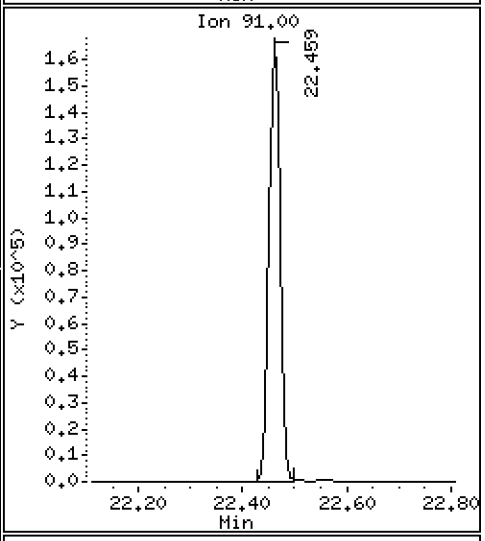
67 Butylbenzylphthalate

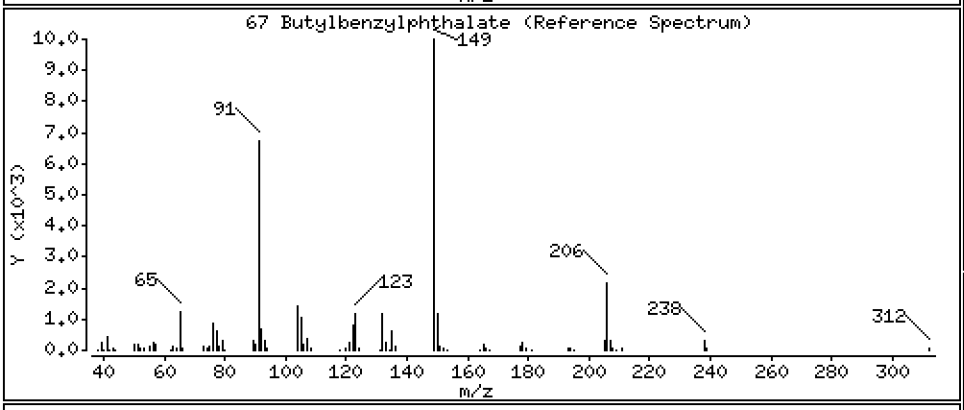
Concentration: 4.834 ug/mL

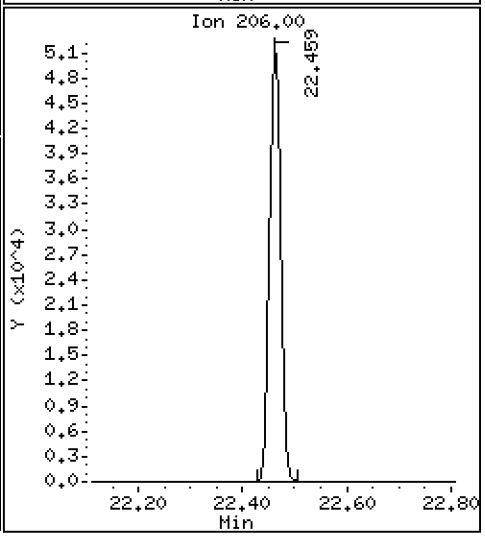


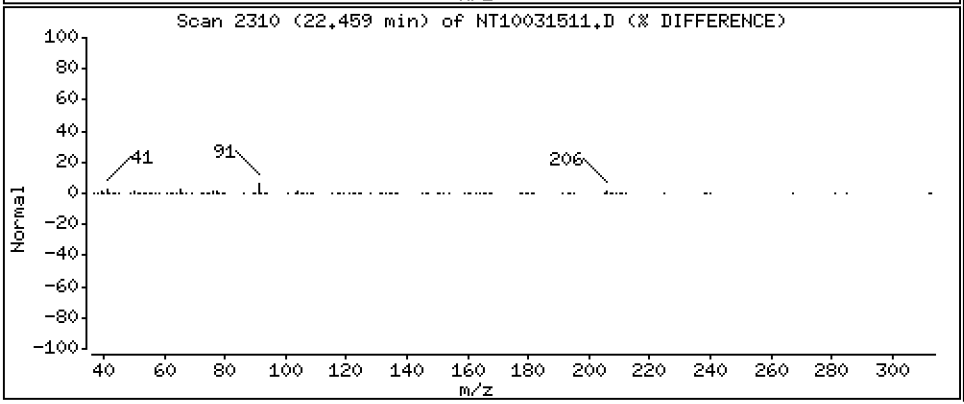












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

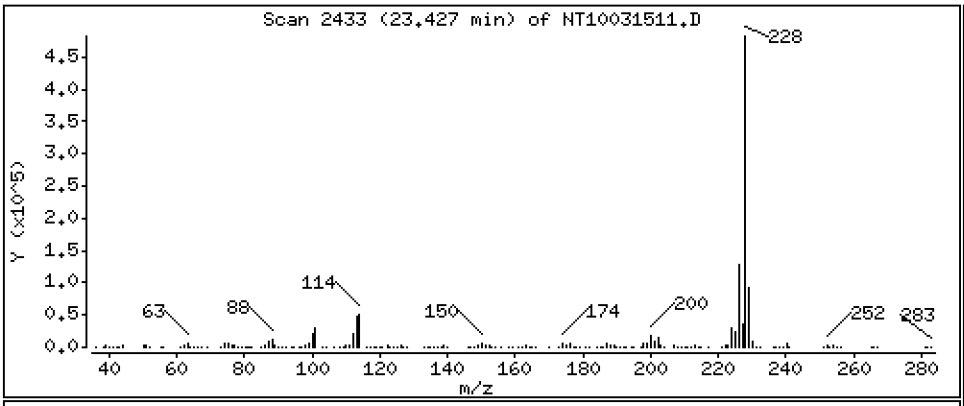
Operator: VTS

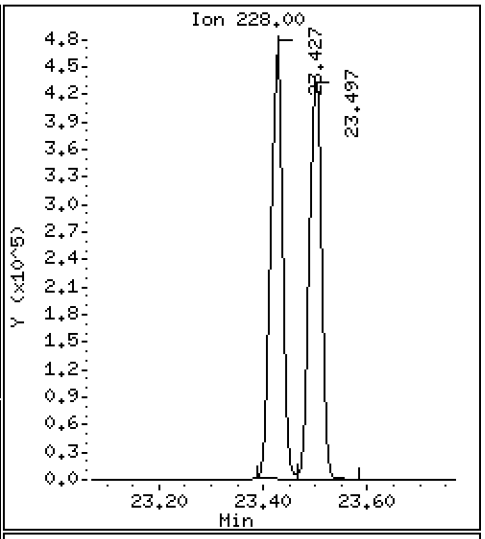
Column phase: ZB-5msi

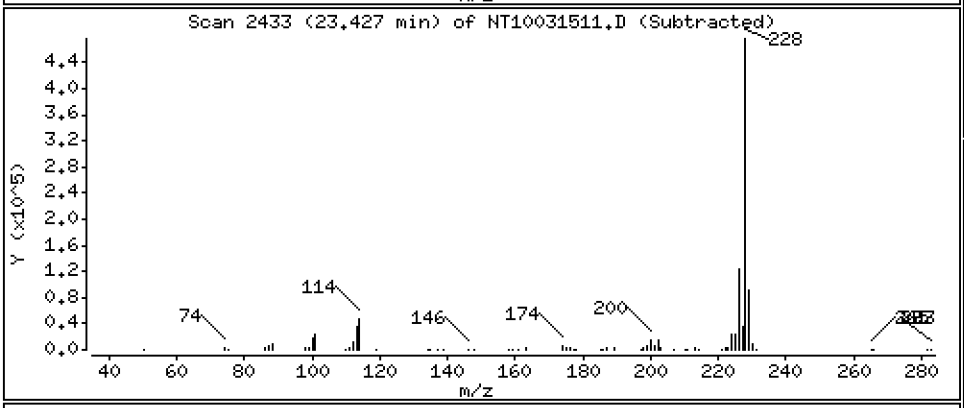
Column diameter: 0.25

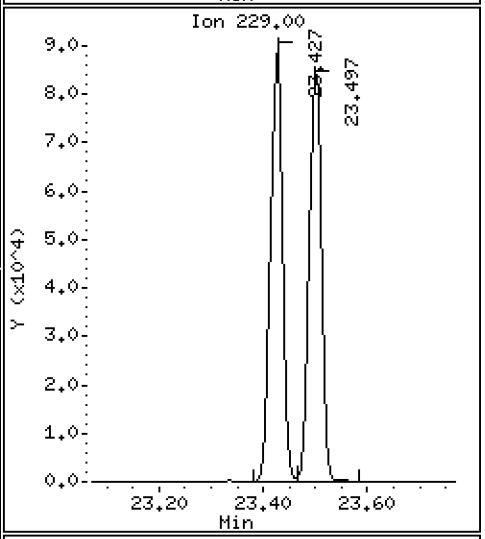
68 Benzo(a)anthracene

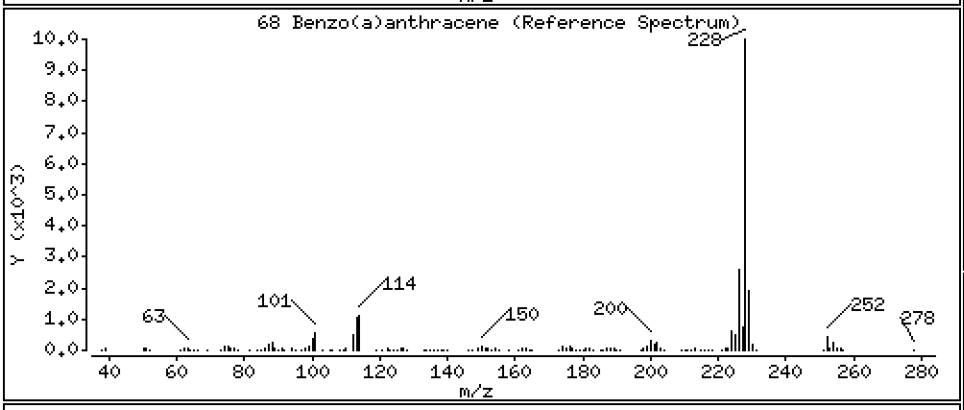
Concentration: 4.647 ug/mL

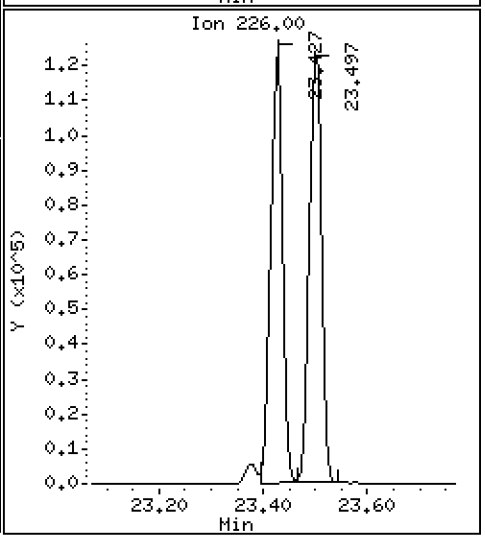


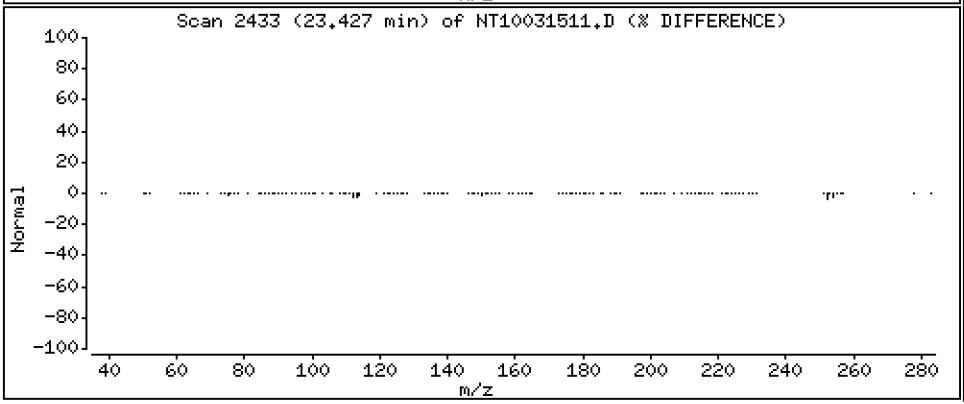












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

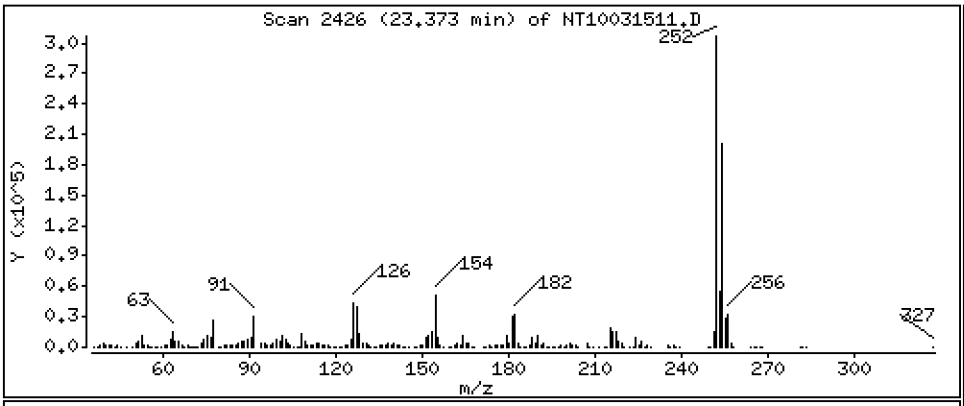
Operator: VTS

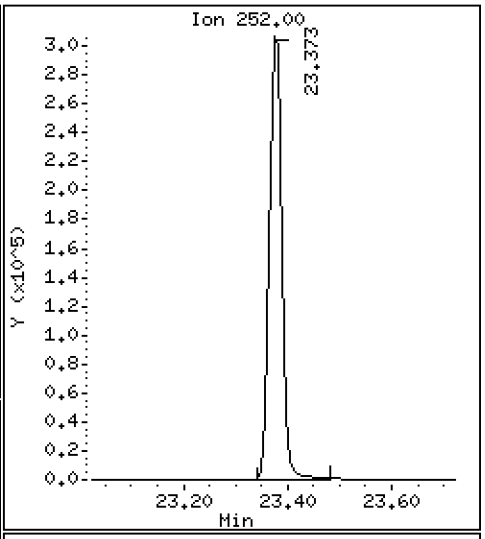
Column phase: ZB-5msi

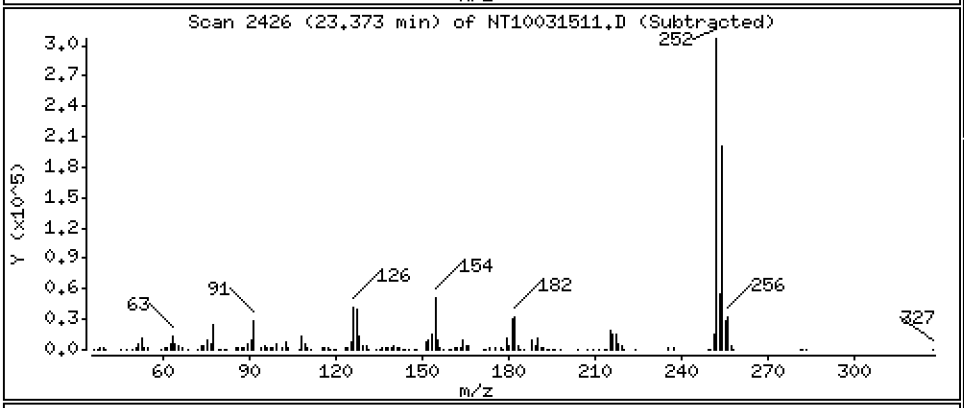
Column diameter: 0.25

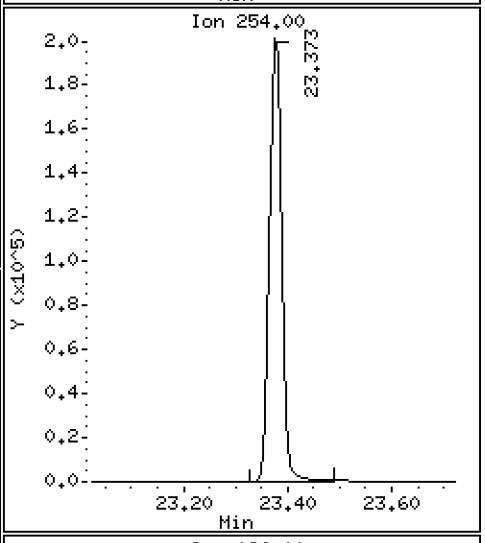
70 3,3'-Dichlorobenzidine

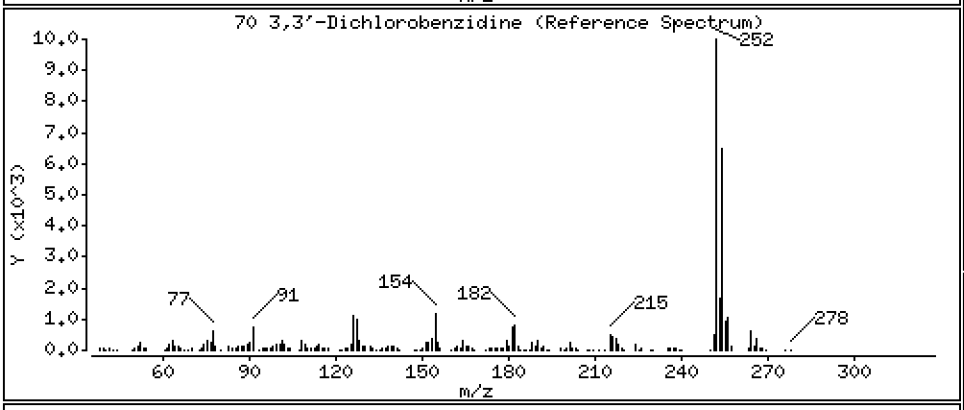
Concentration: 9.817 ug/mL

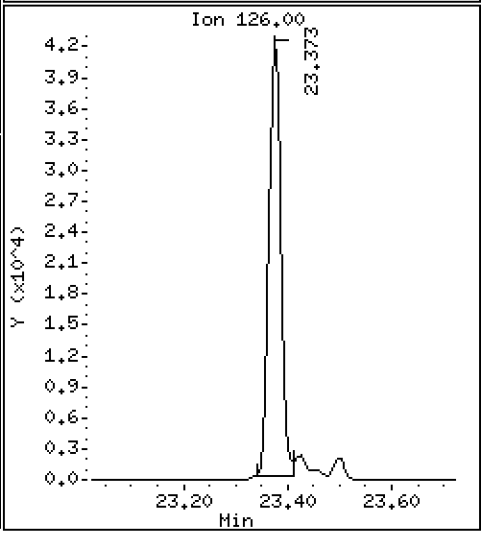


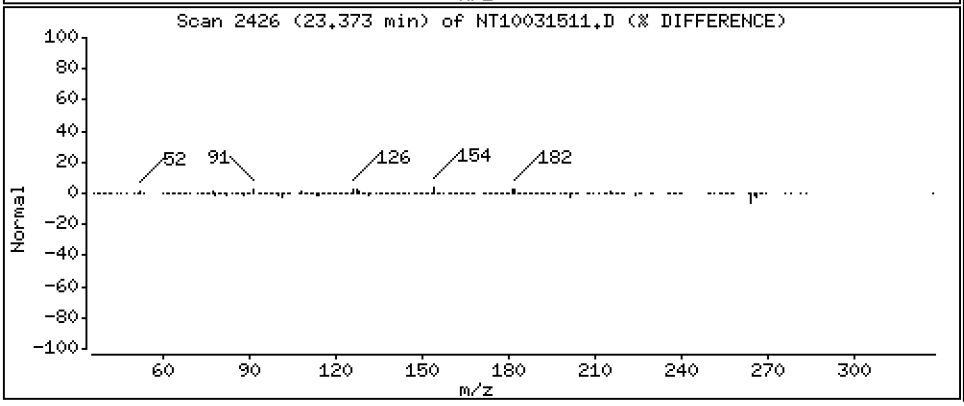












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

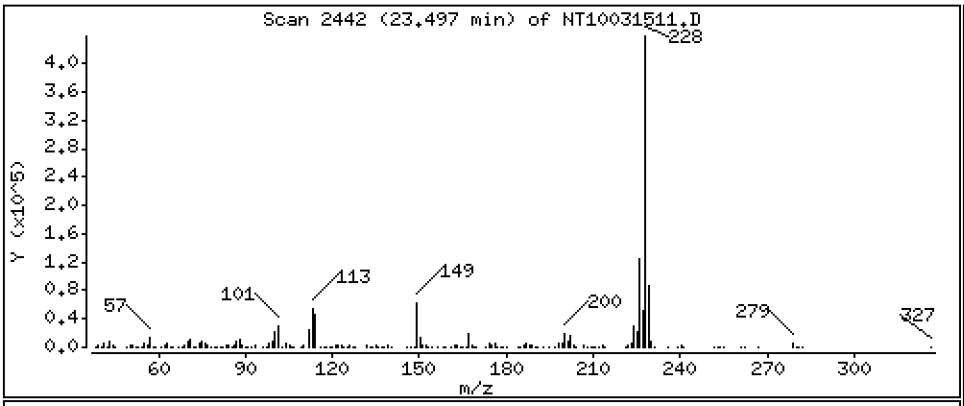
Operator: VTS

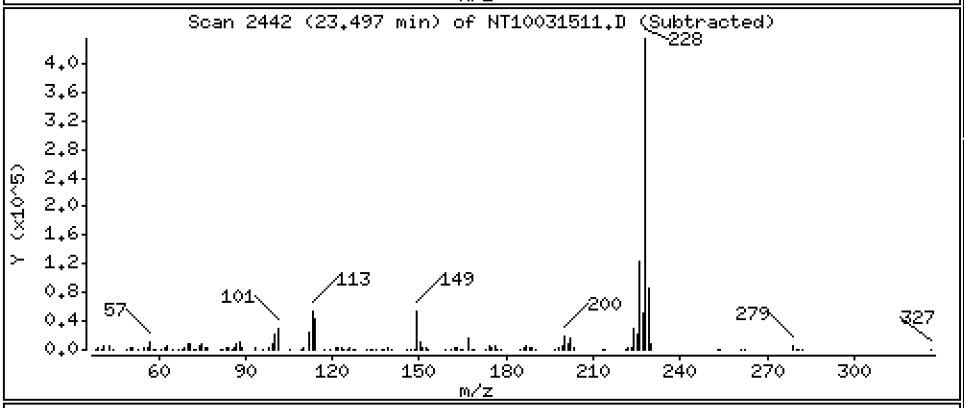
Column phase: ZB-5msi

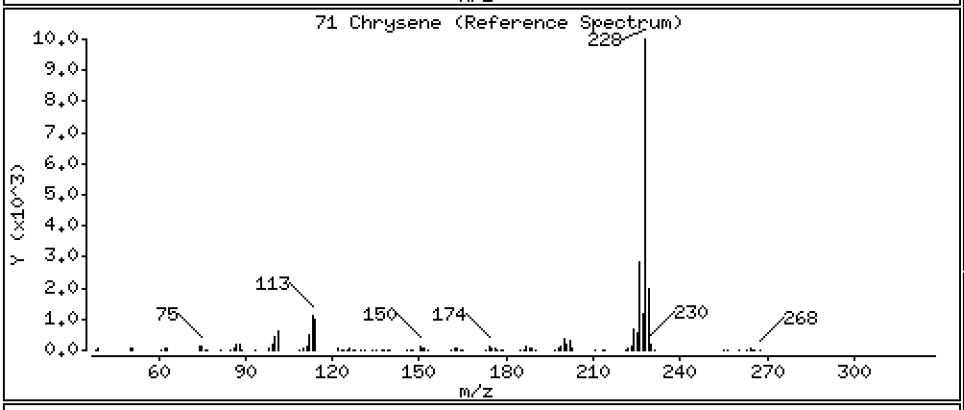
Column diameter: 0.25

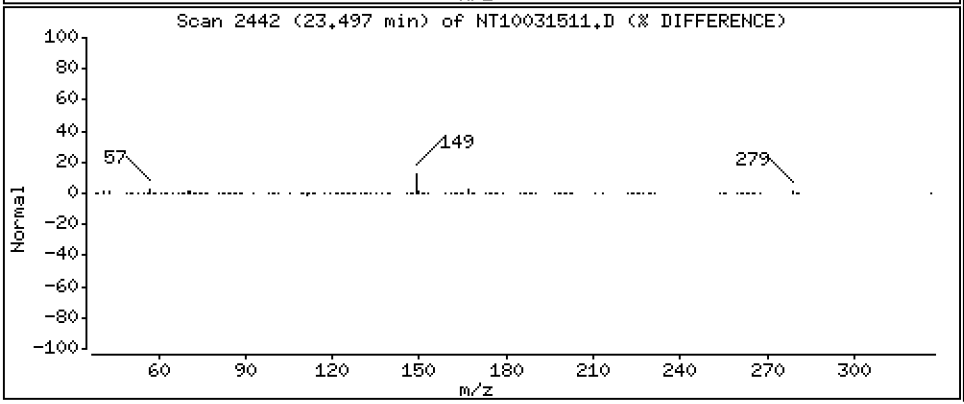
71 Chrysene

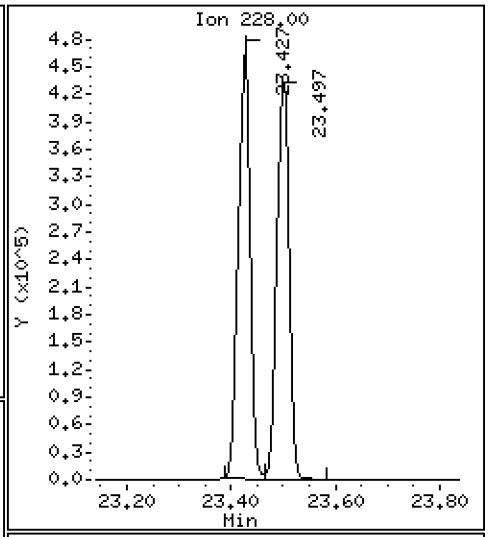
Concentration: 4.510 ug/mL

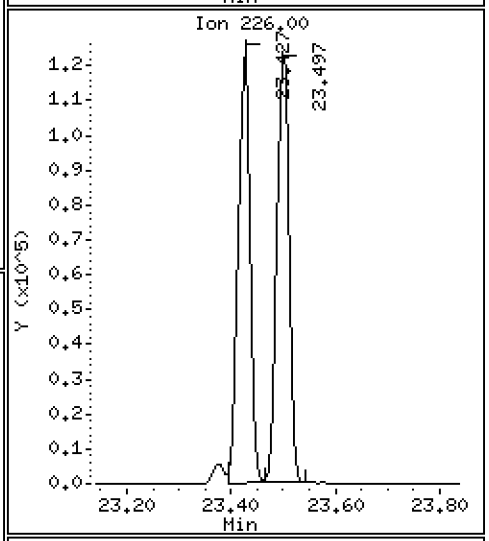


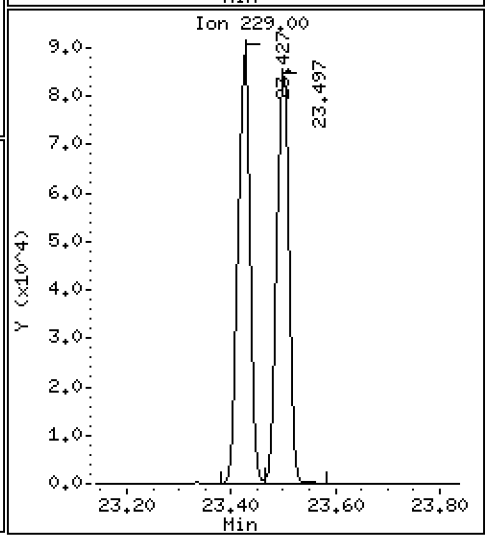












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

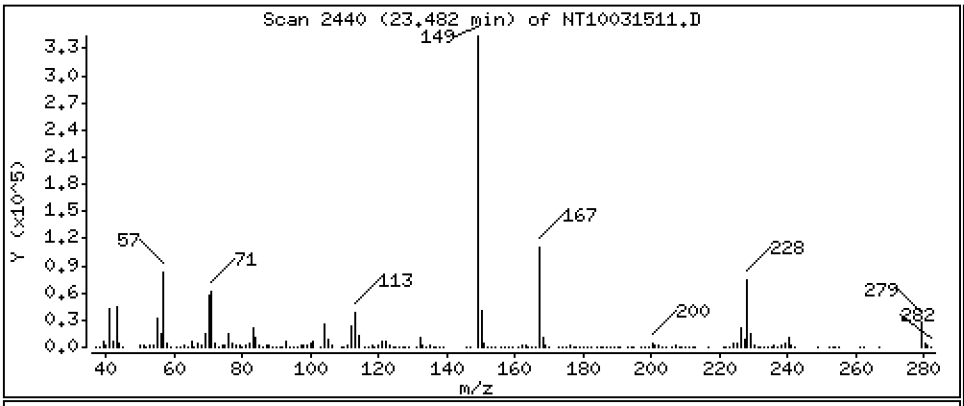
Operator: VTS

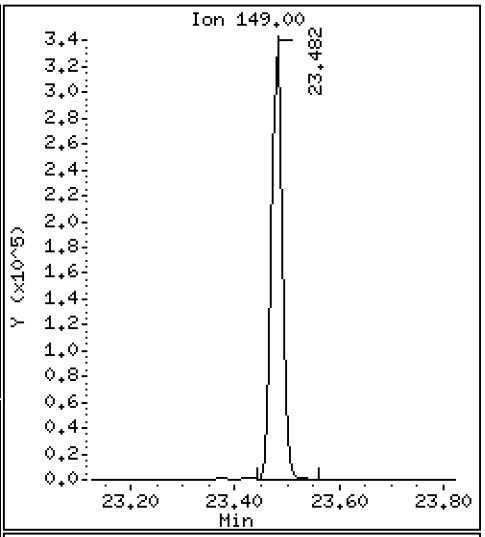
Column phase: ZB-5msi

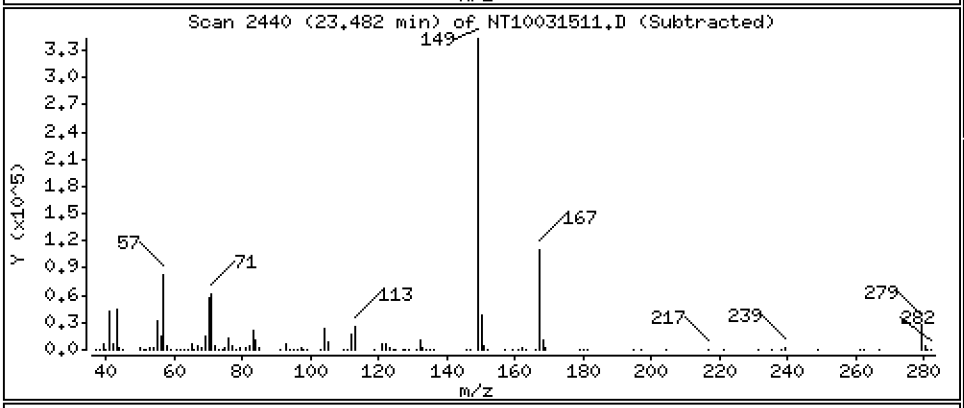
Column diameter: 0.25

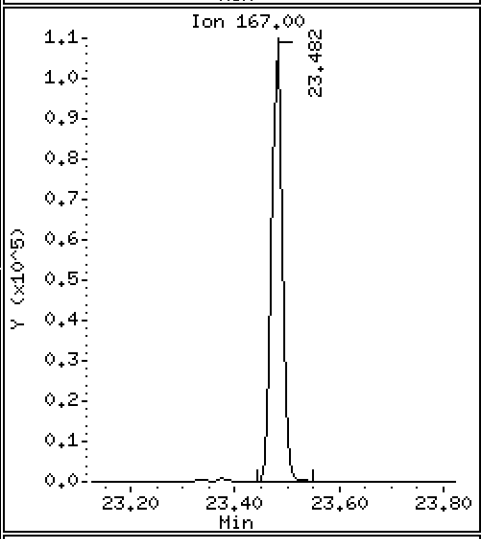
72 bis(2-Ethylhexyl)phthalate

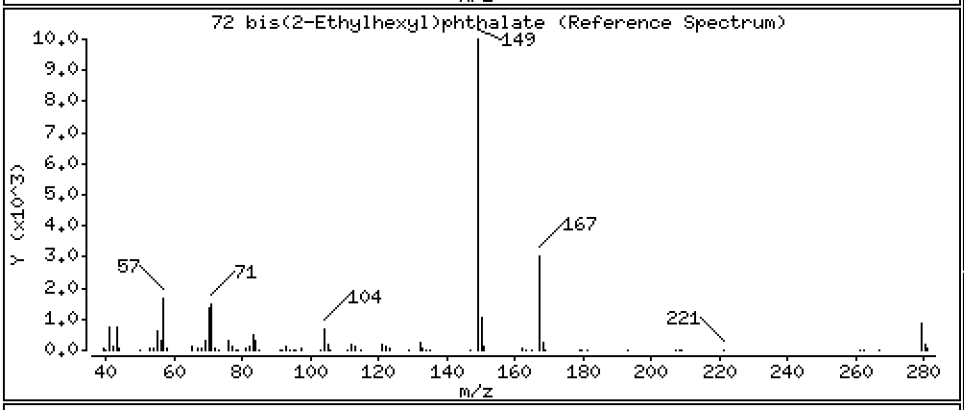
Concentration: 4.680 ug/mL

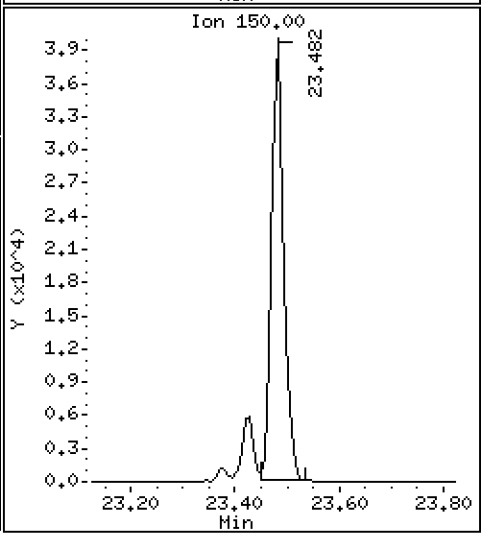


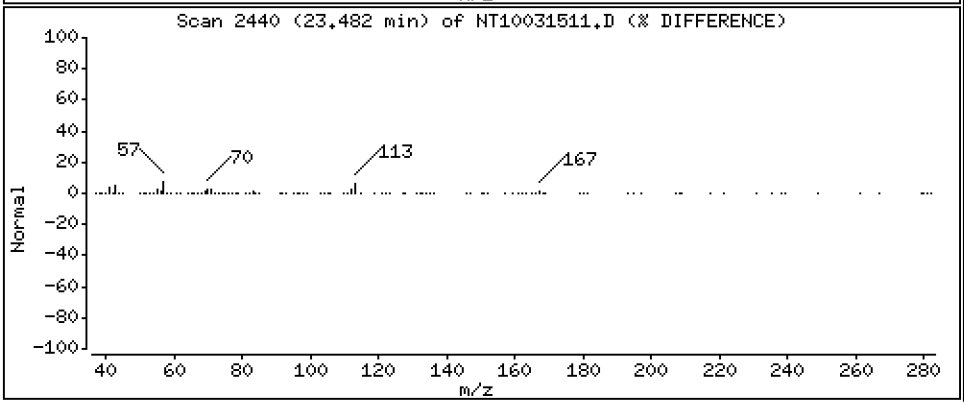












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

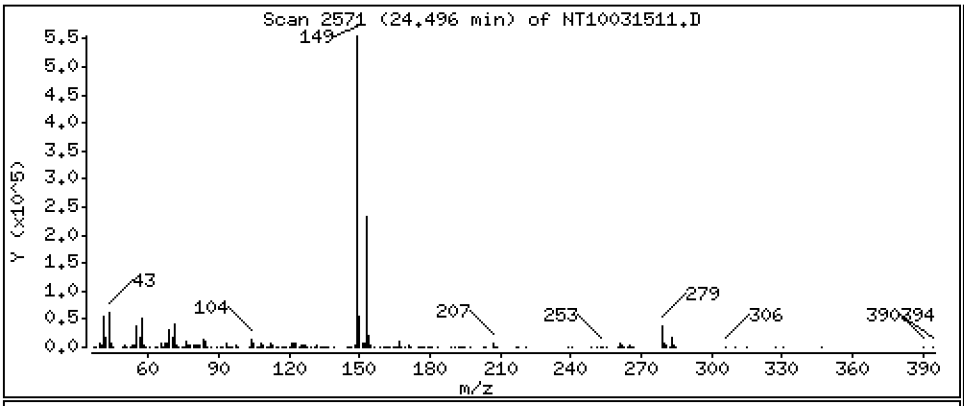
Operator: VTS

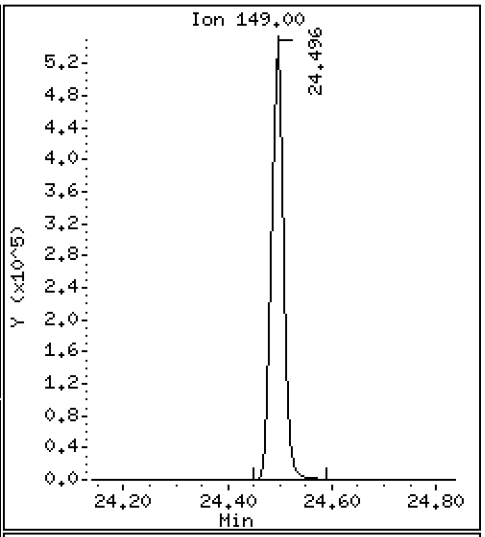
Column phase: ZB-5msi

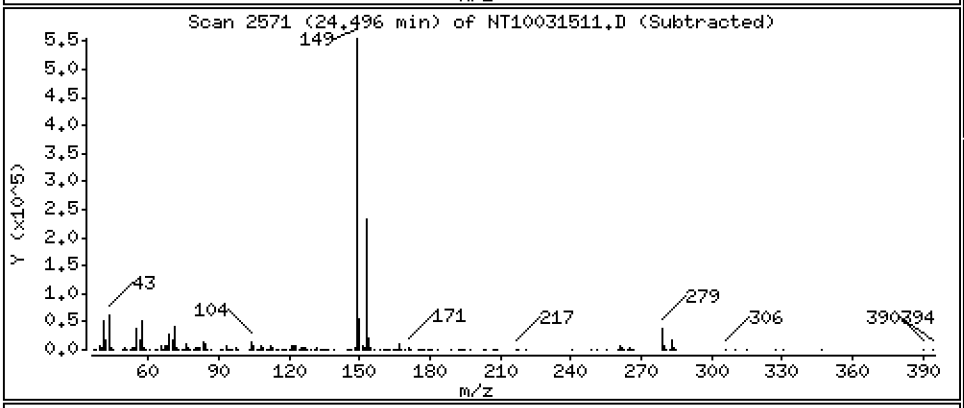
Column diameter: 0.25

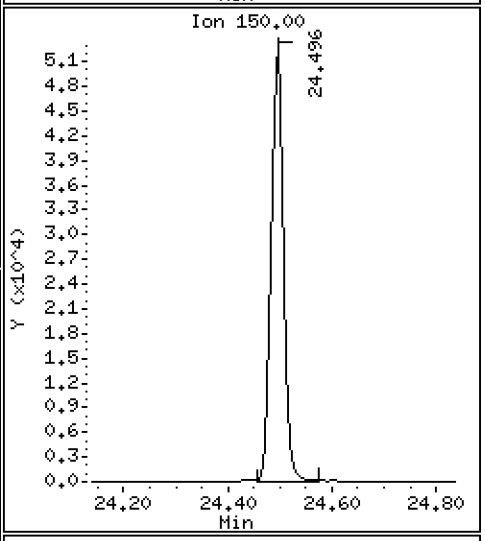
73 Di-n-octylphthalate

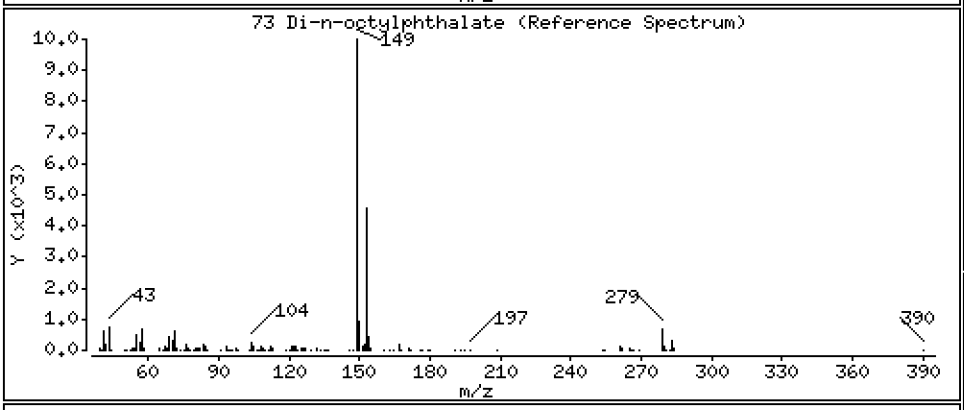
Concentration: 4.947 ug/mL

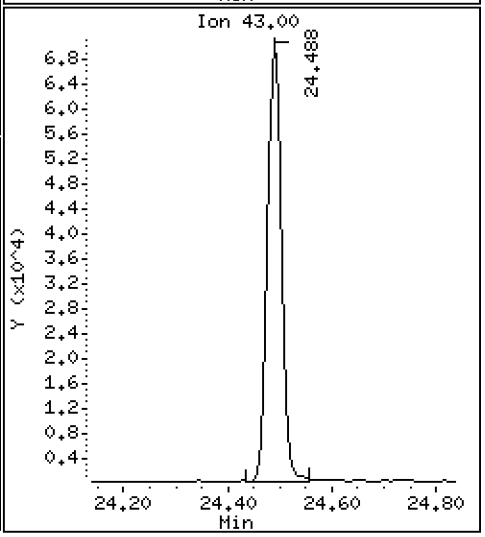


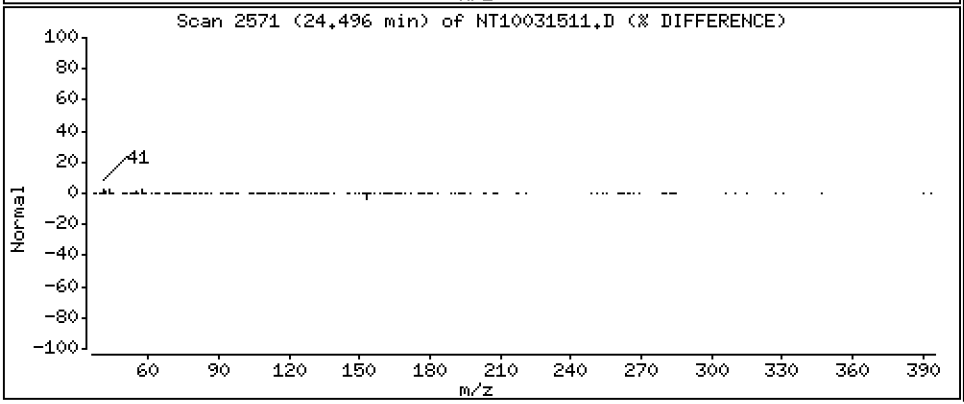












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

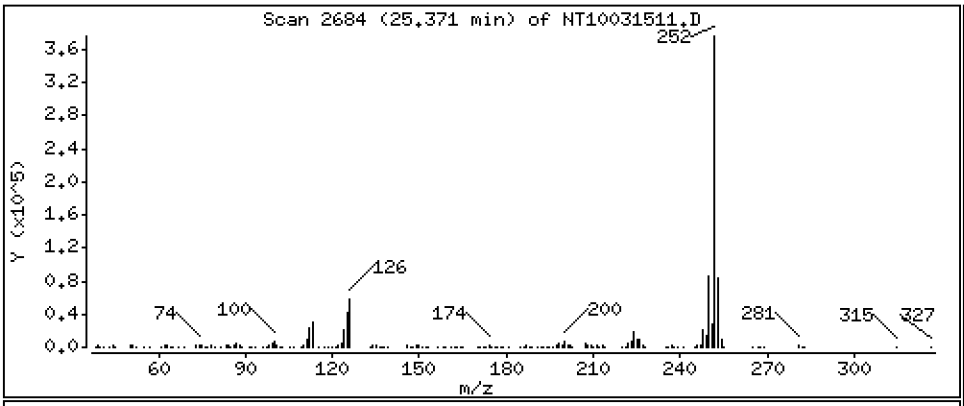
Operator: VTS

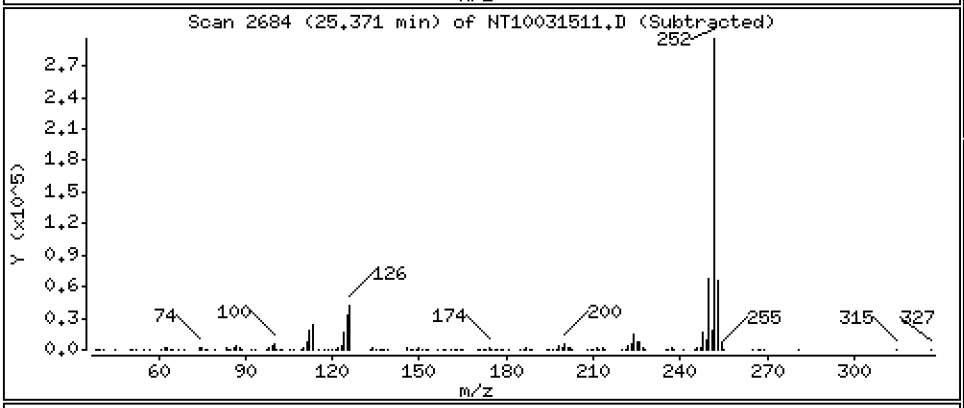
Column phase: ZB-5msi

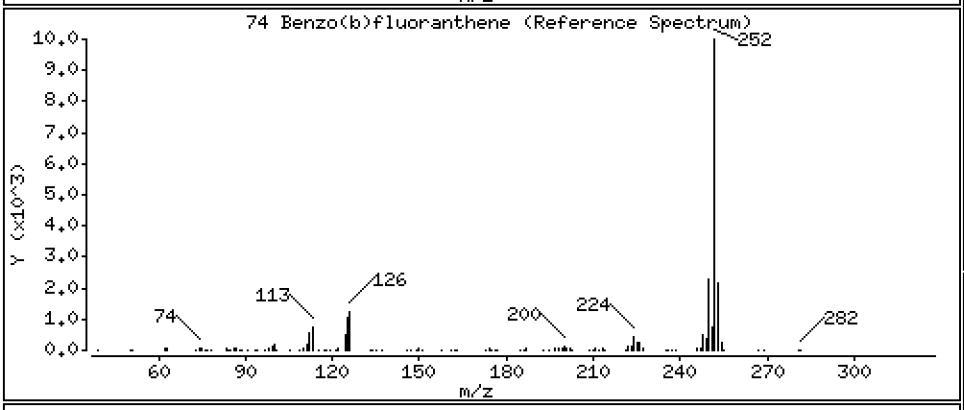
Column diameter: 0.25

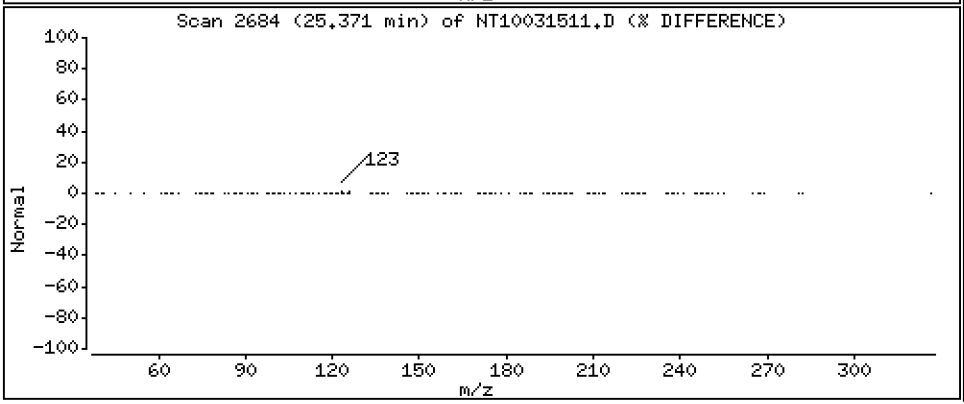
74 Benzo(b)fluoranthene

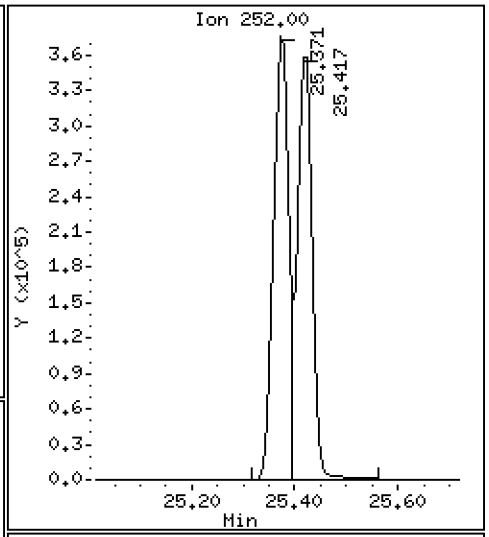
Concentration: 4.602 ug/mL

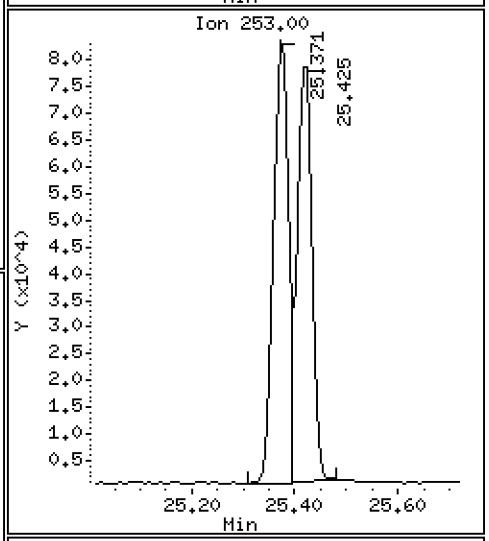


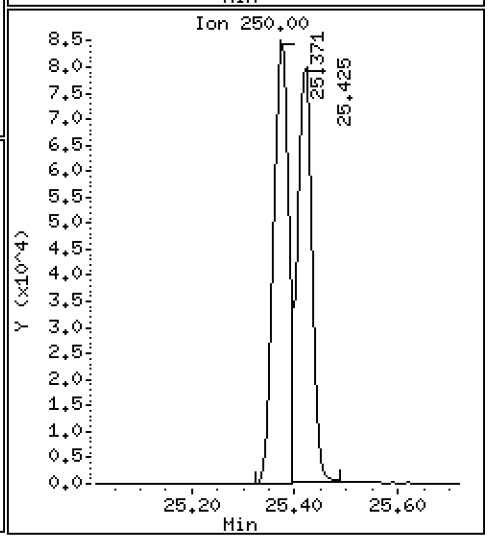












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

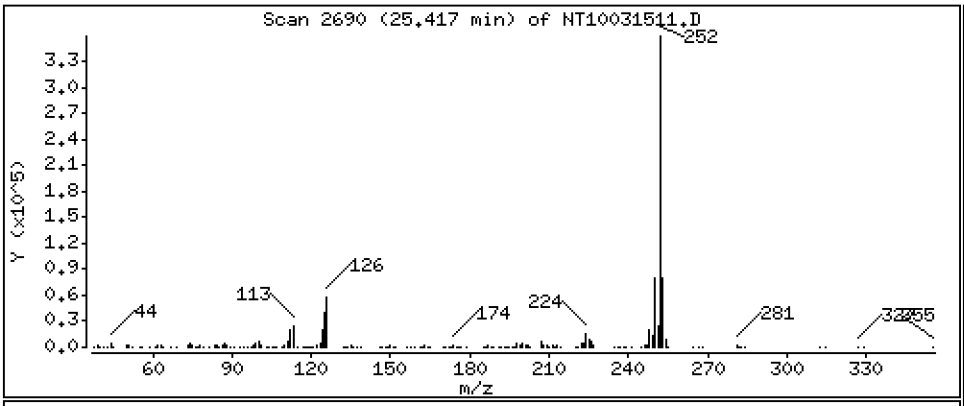
Operator: VTS

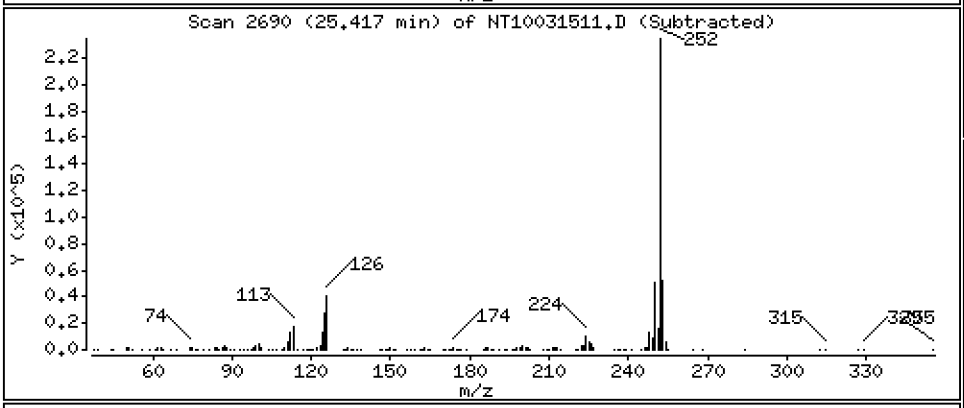
Column phase: ZB-5msi

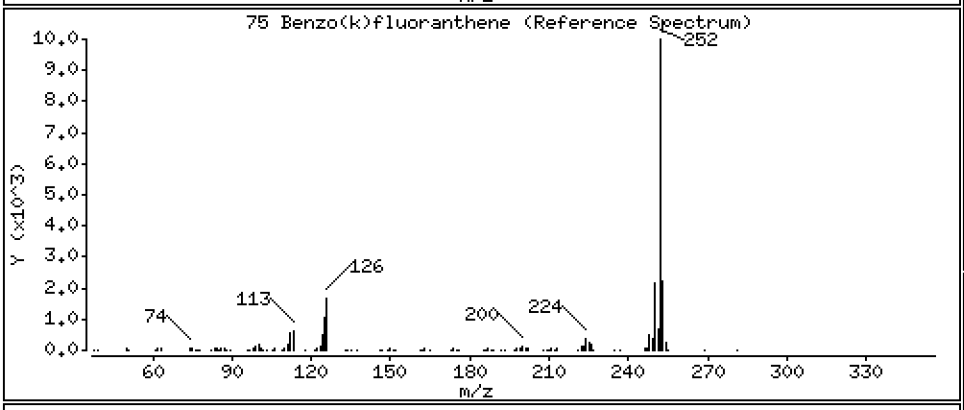
Column diameter: 0.25

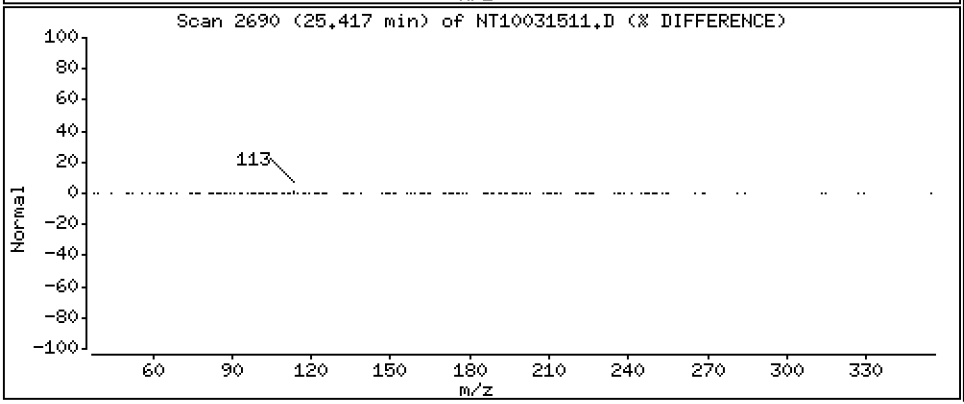
75 Benzo(k)fluoranthene

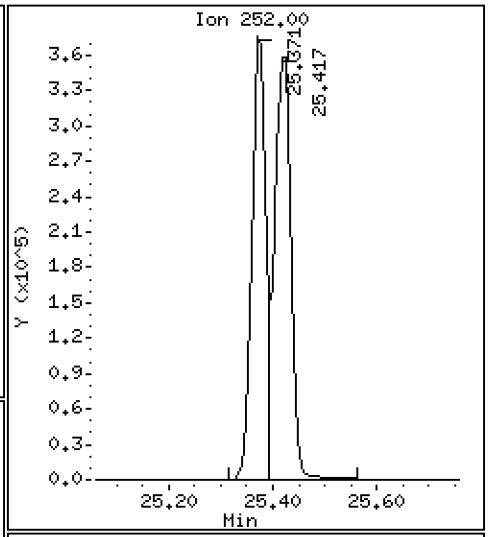
Concentration: 4.898 ug/mL

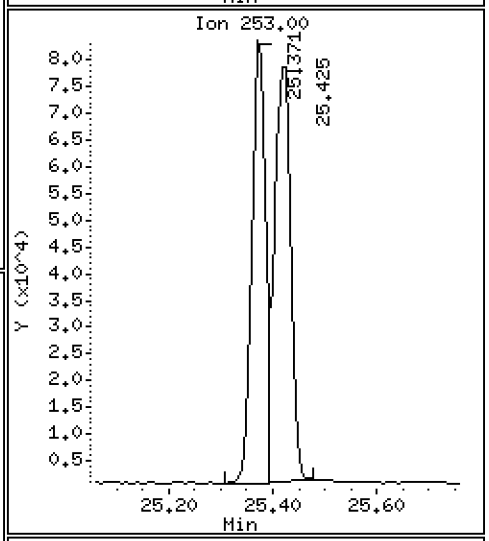


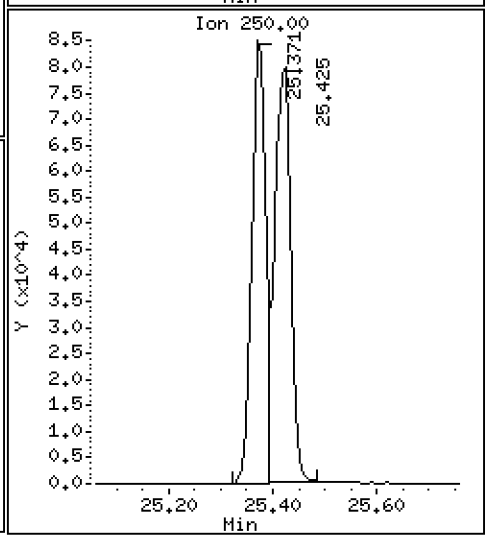












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

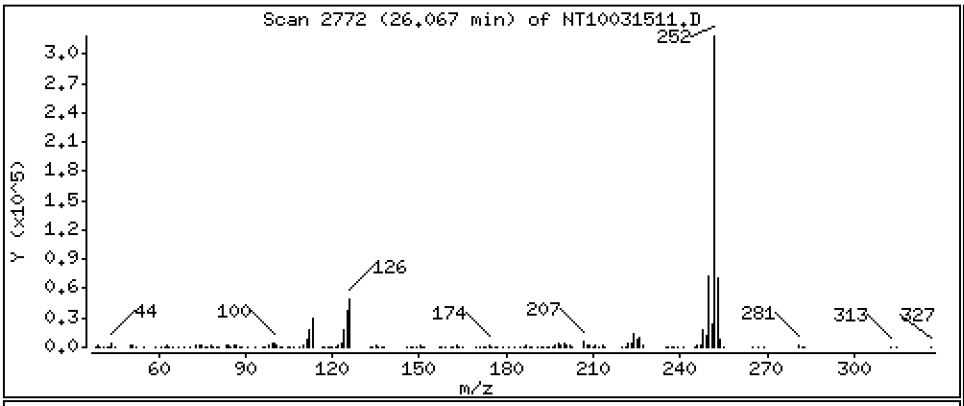
Operator: VTS

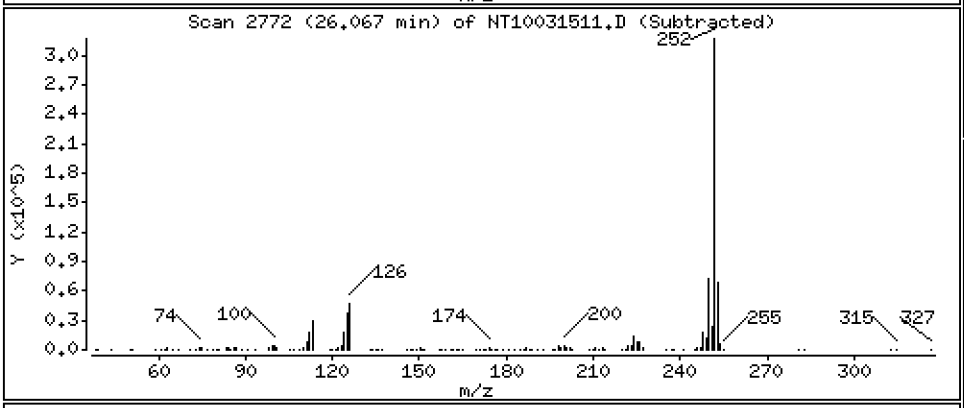
Column phase: ZB-5msi

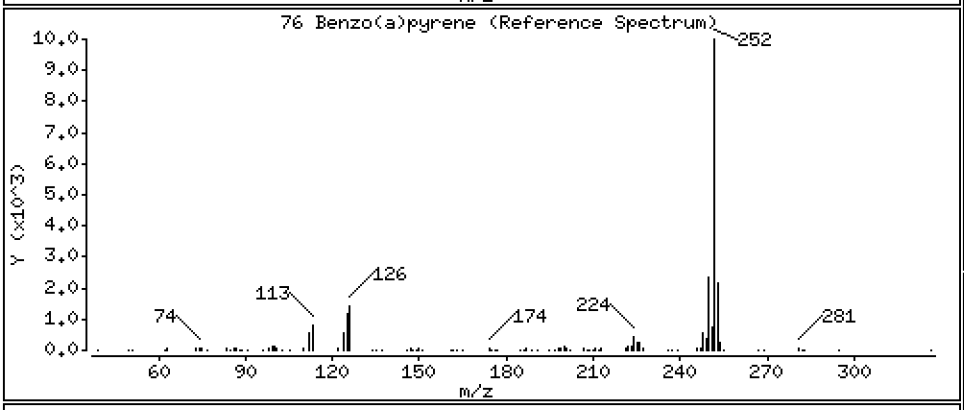
Column diameter: 0.25

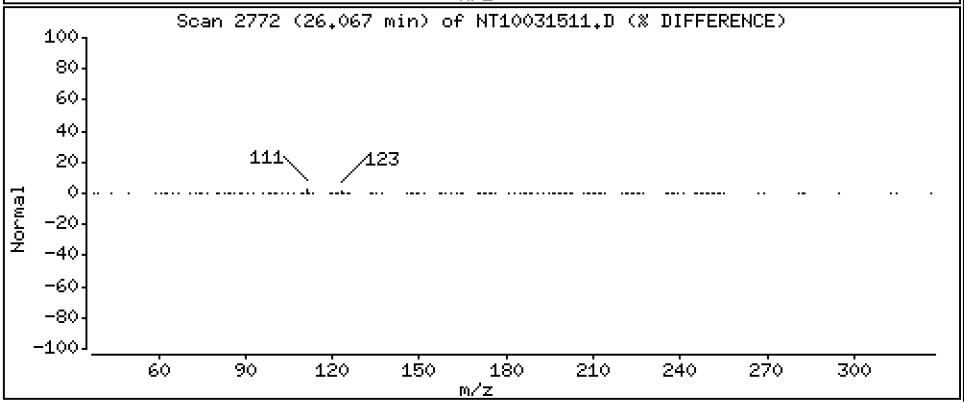
76 Benzo(a)pyrene

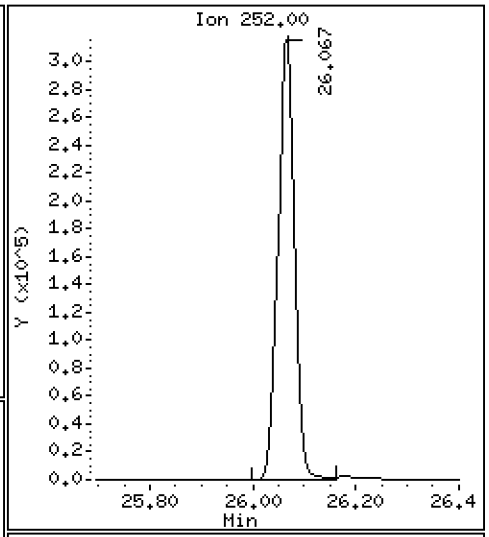
Concentration: 4.873 ug/mL

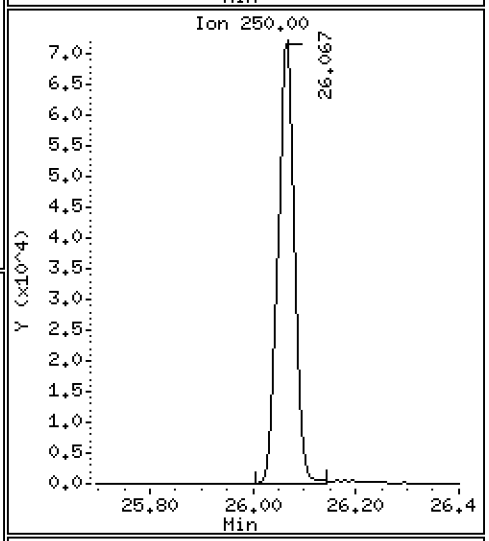


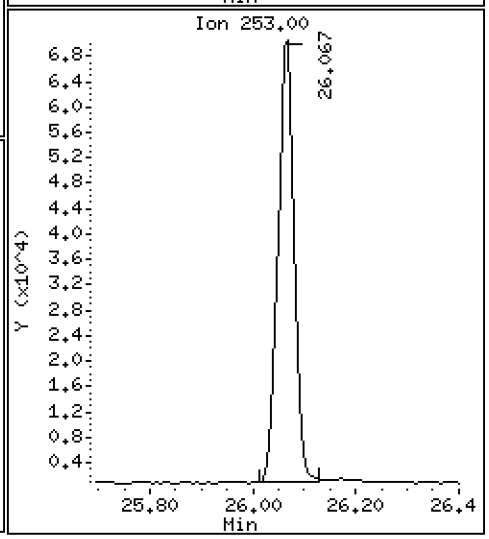












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

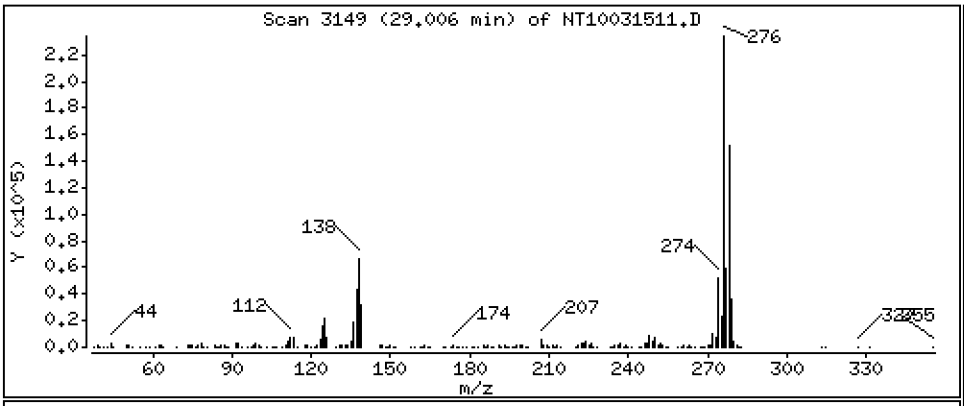
Operator: VTS

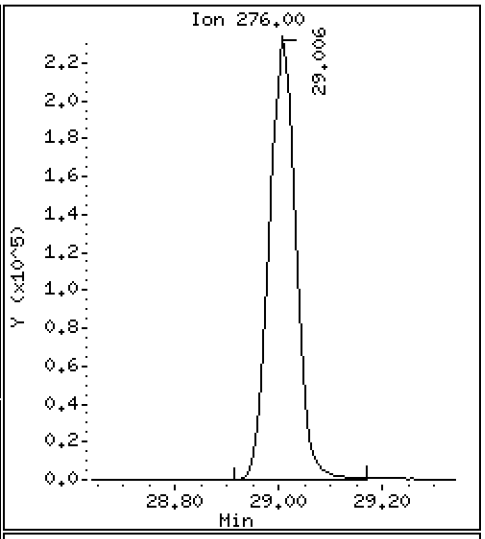
Column phase: ZB-5msi

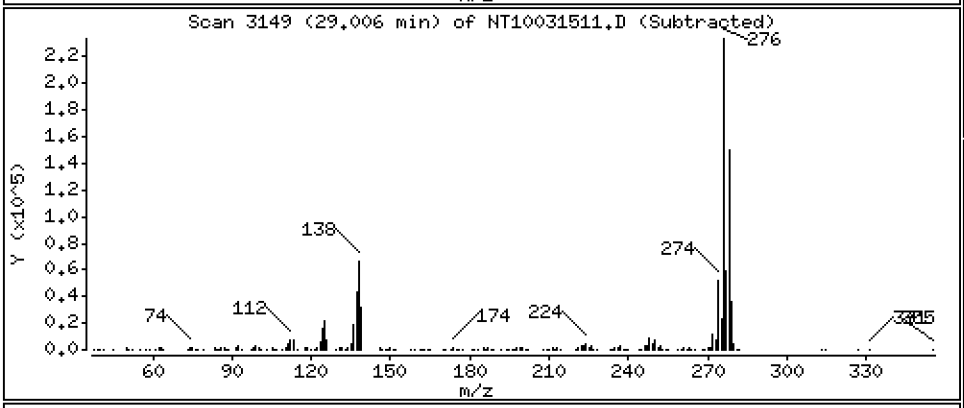
Column diameter: 0.25

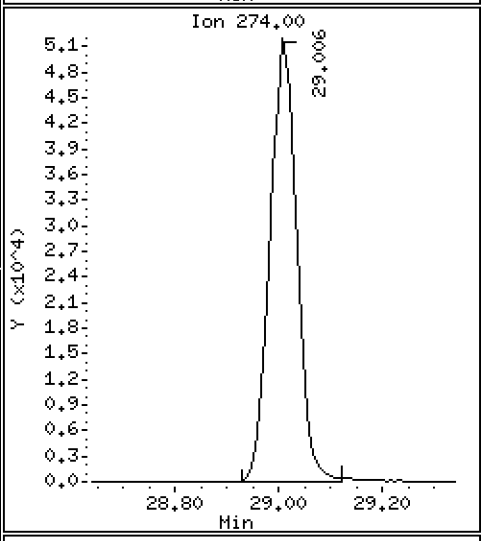
78 Indeno(1,2,3-cd)pyrene

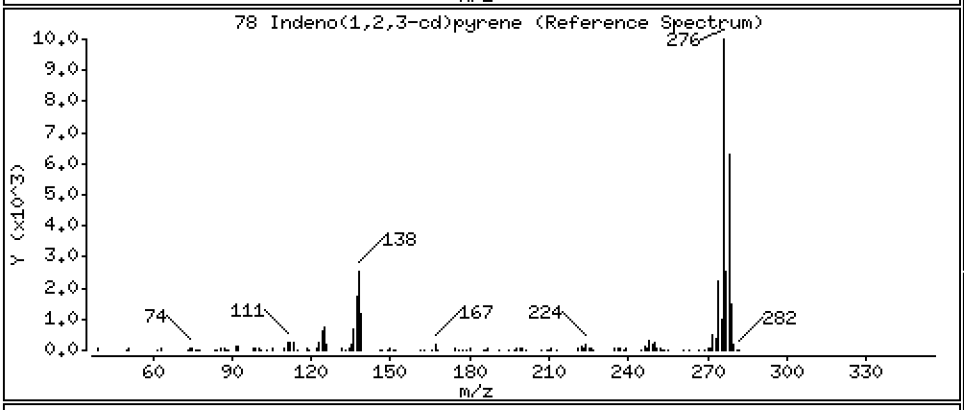
Concentration: 4.577 ug/mL

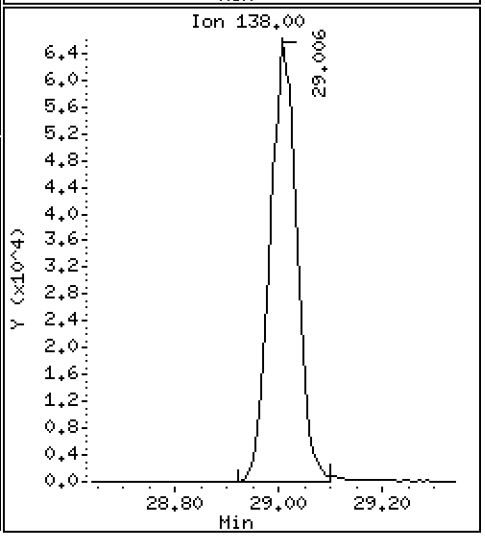


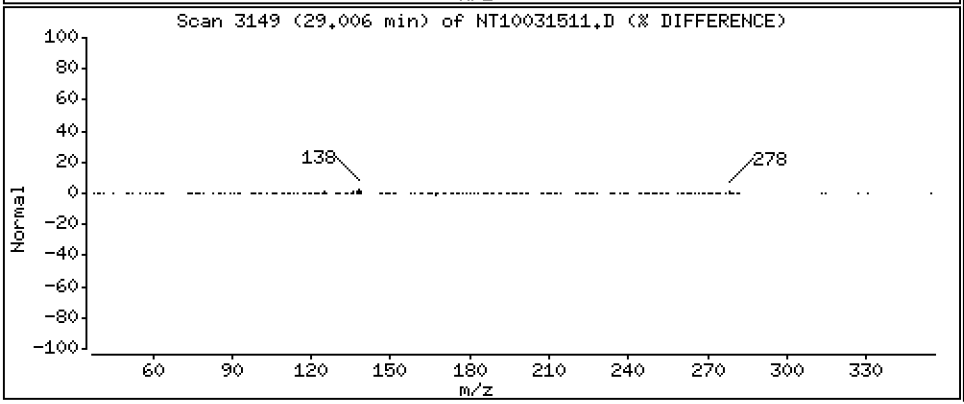












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

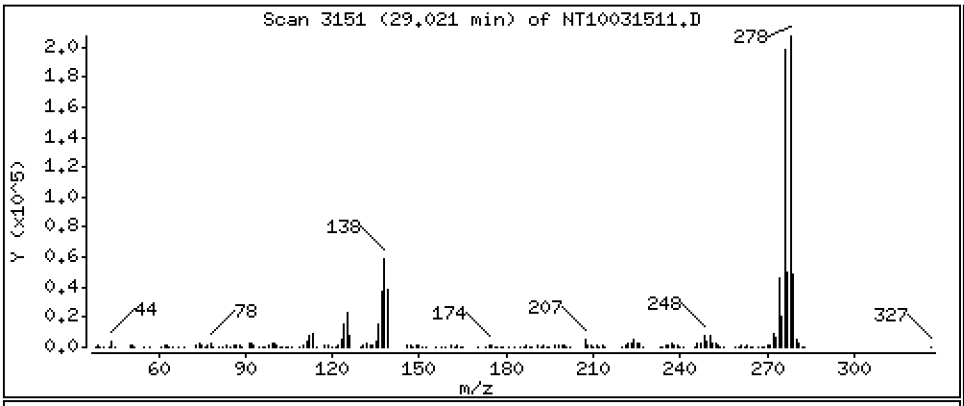
Operator: VTS

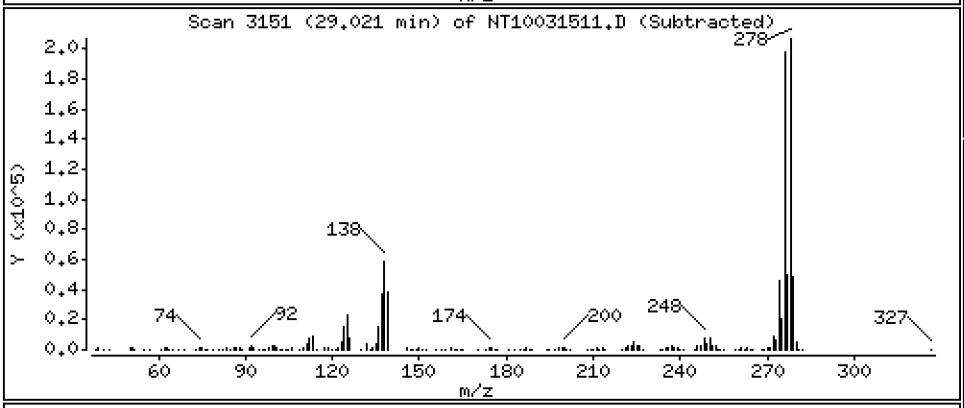
Column phase: ZB-5msi

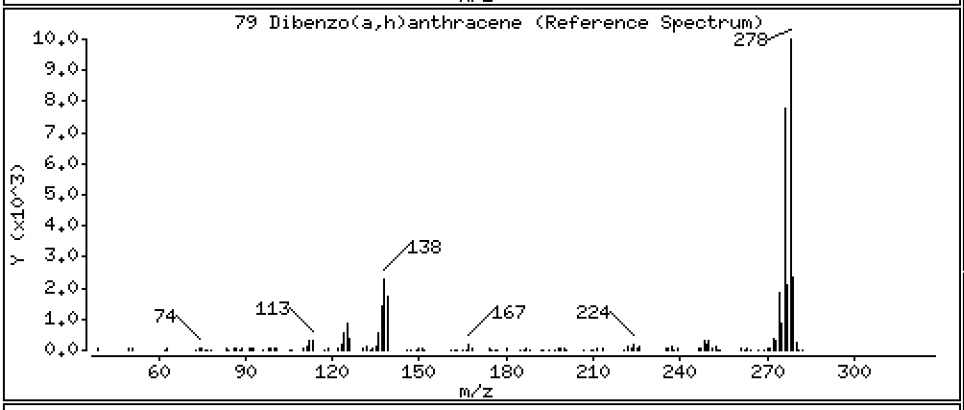
Column diameter: 0.25

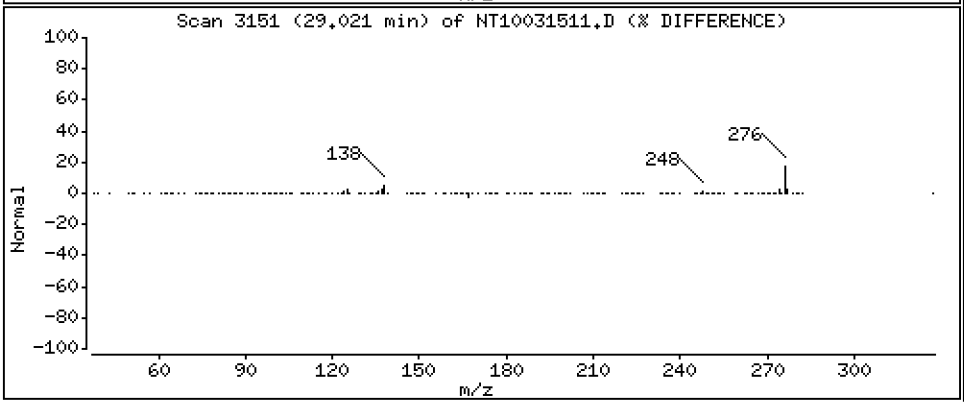
79 Dibenzo(a,h)anthracene

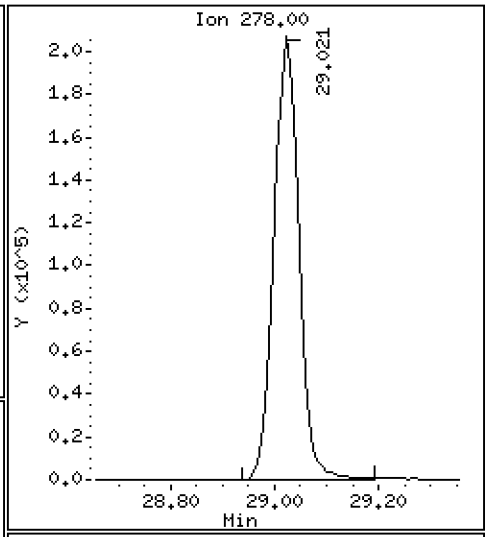
Concentration: 4.547 ug/mL

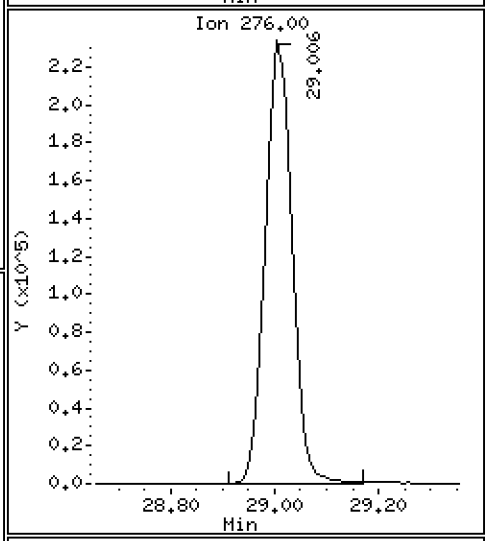


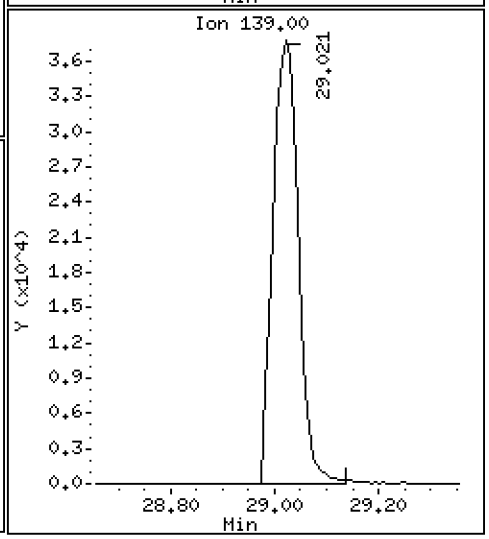












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

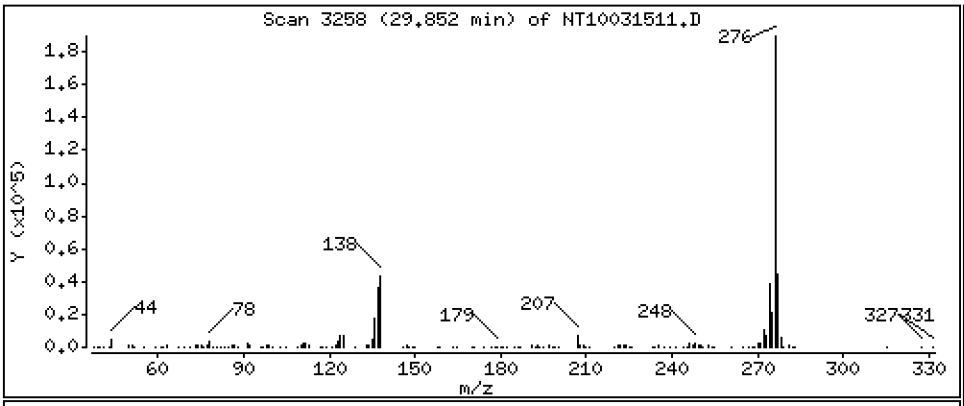
Operator: VTS

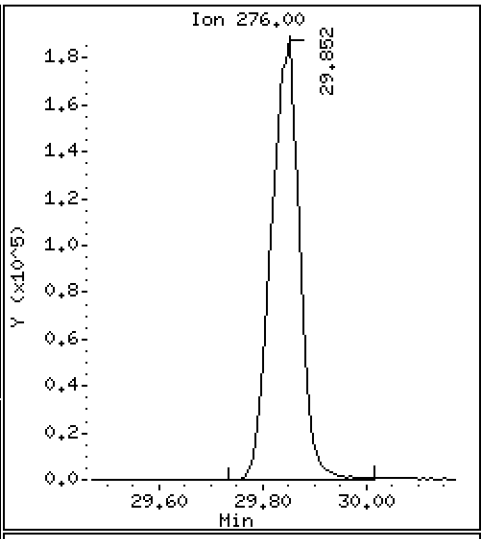
Column phase: ZB-5msi

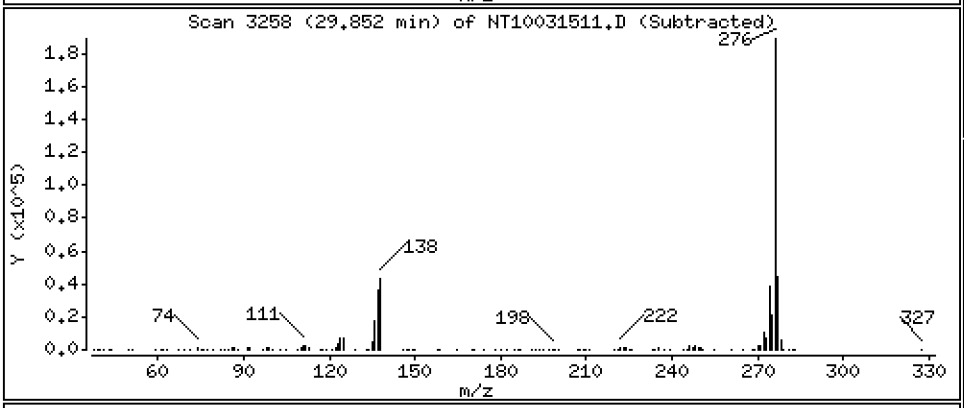
Column diameter: 0.25

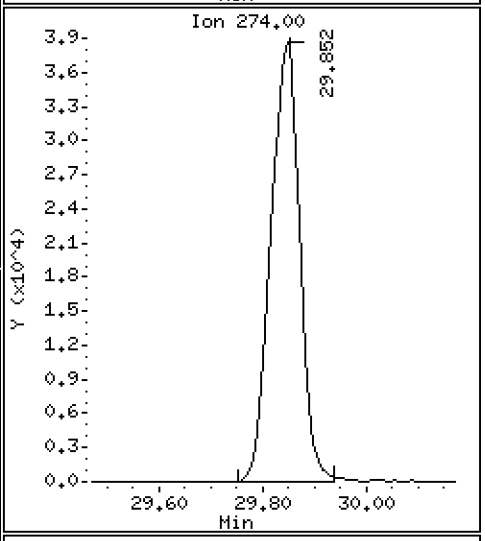
80 Benzo(g,h,i)perylene

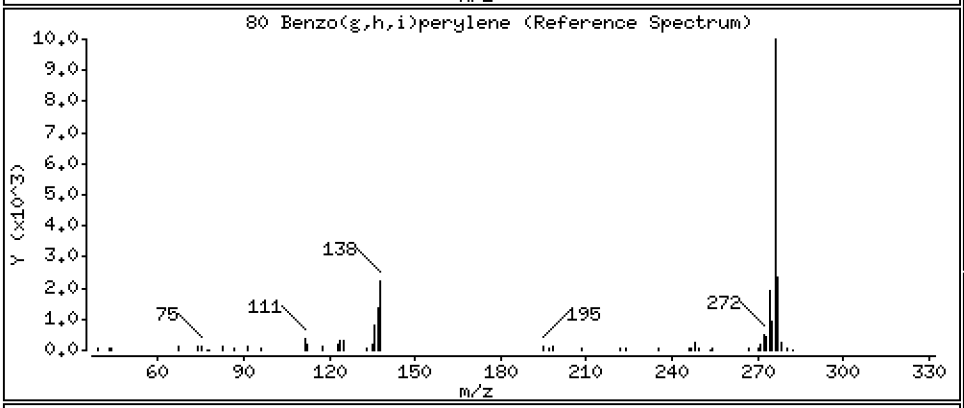
Concentration: 4.590 ug/mL

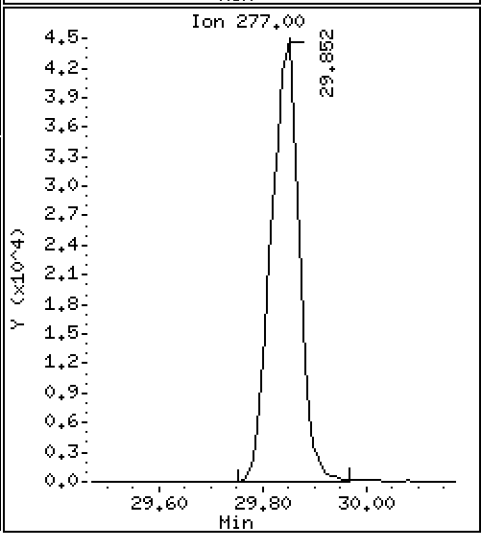


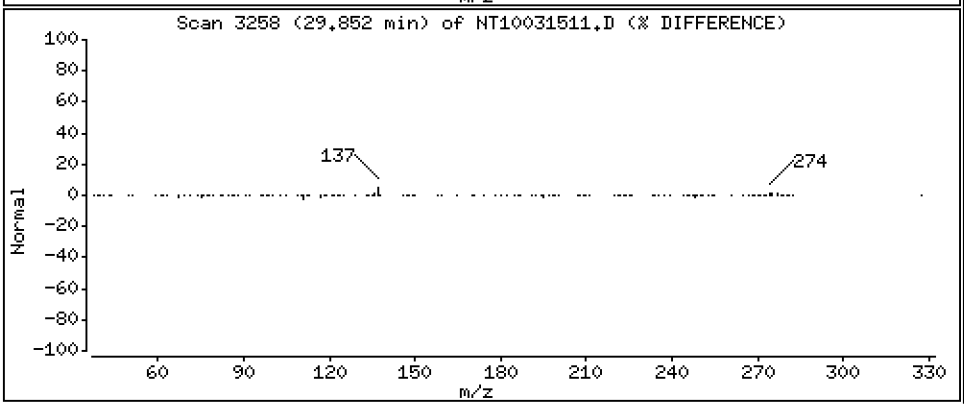












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

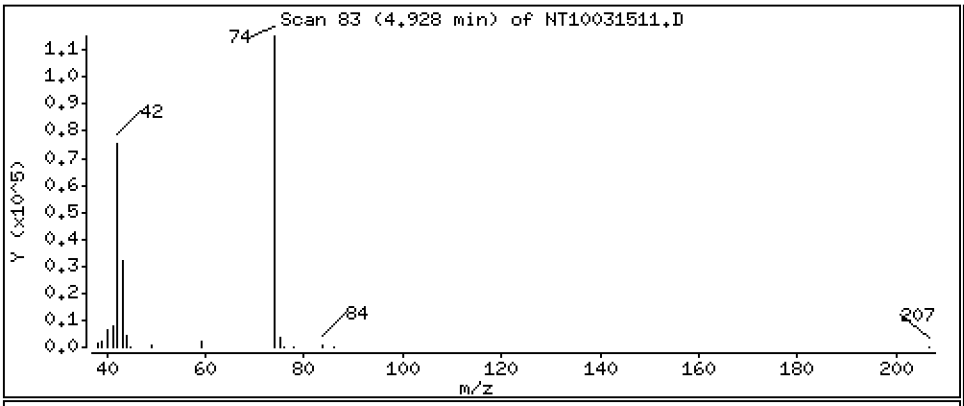
Operator: VTS

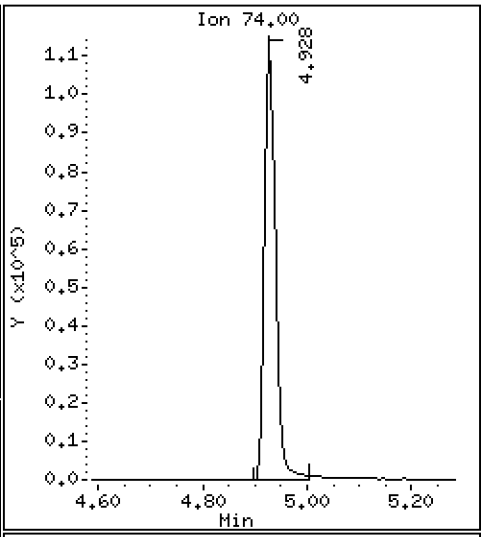
Column phase: ZB-5msi

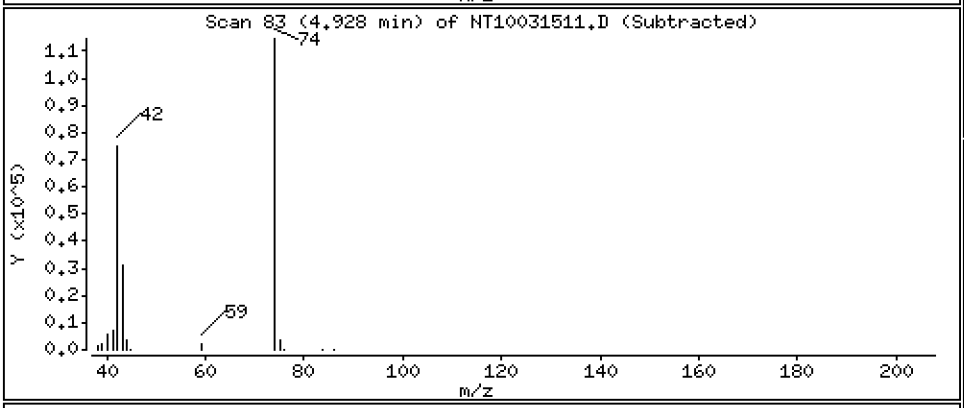
Column diameter: 0.25

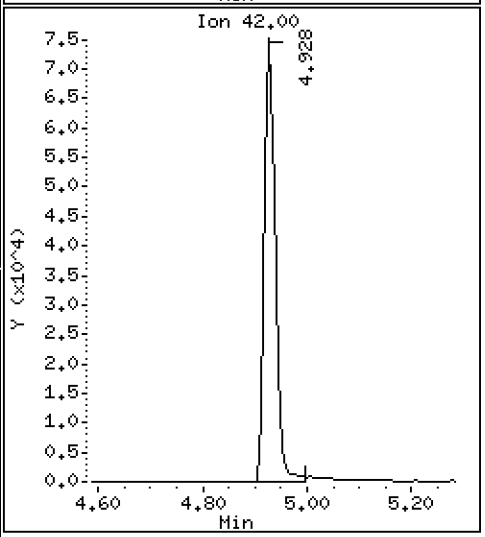
90 N-Nitrosodimethylamine

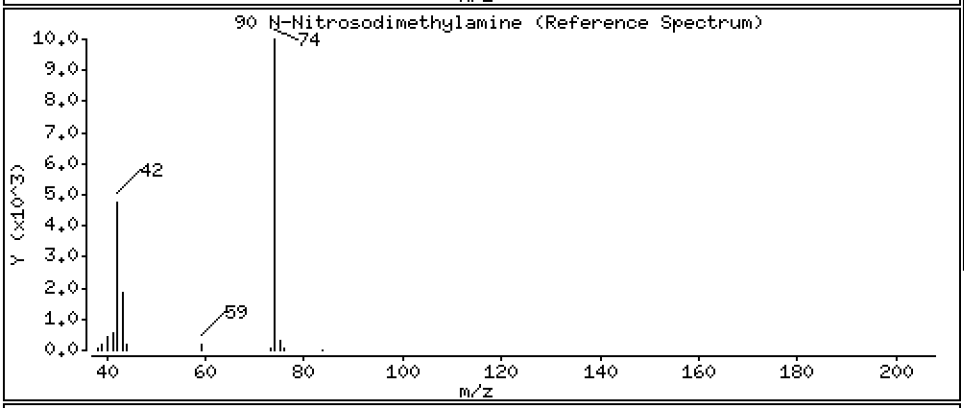
Concentration: 5.194 ug/mL

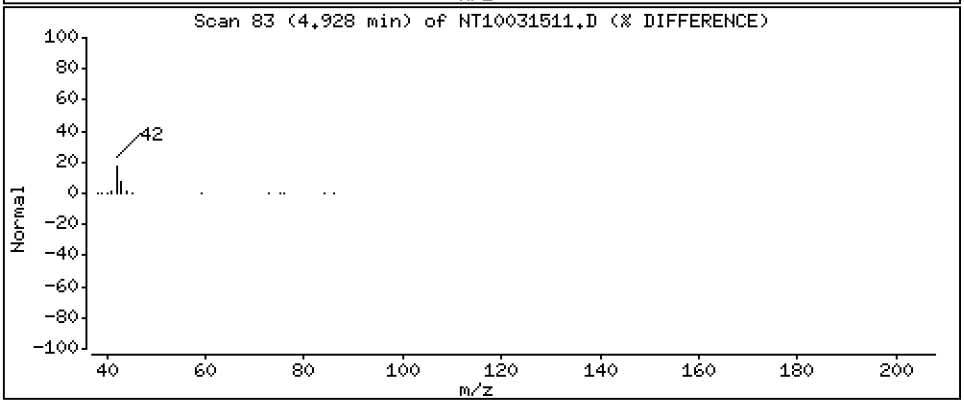












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

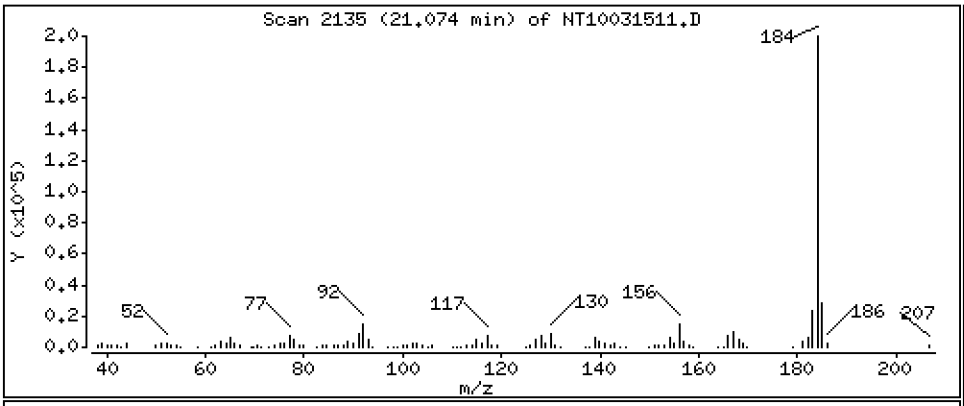
Operator: VTS

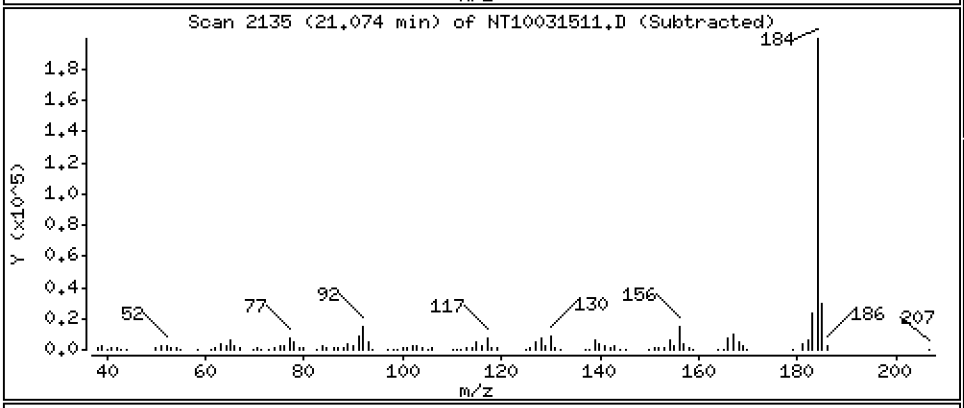
Column phase: ZB-5msi

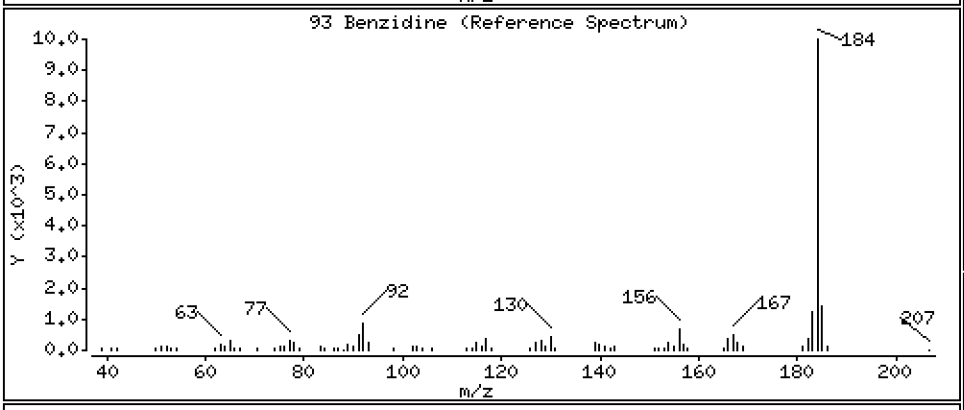
Column diameter: 0.25

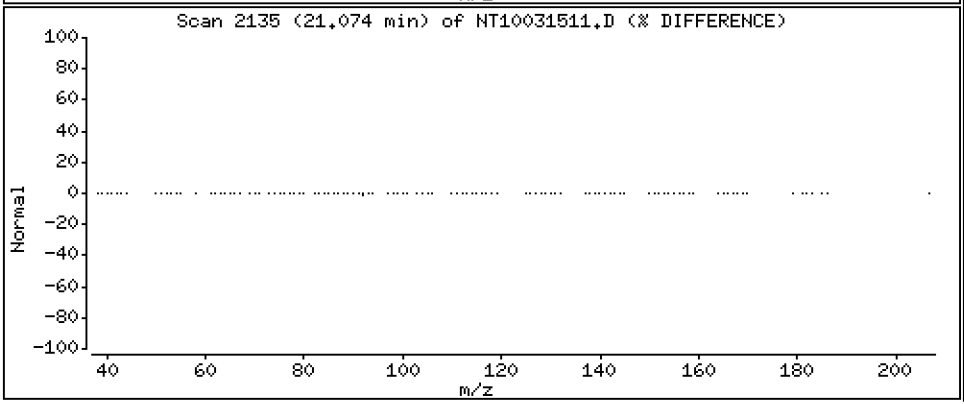
93 Benzidine

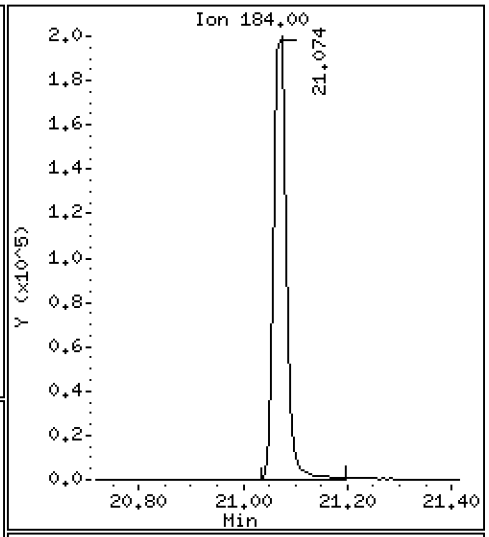
Concentration: 4.380 ug/mL

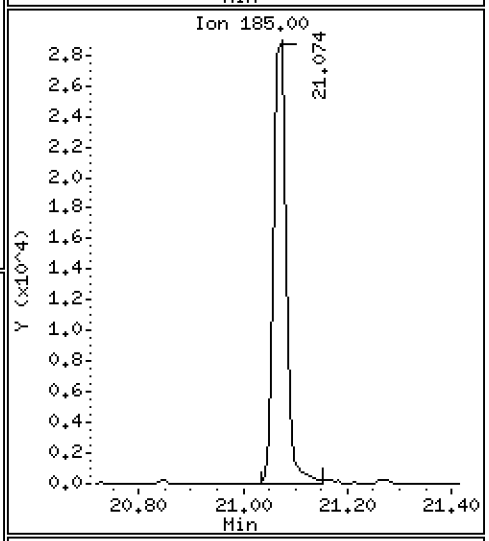


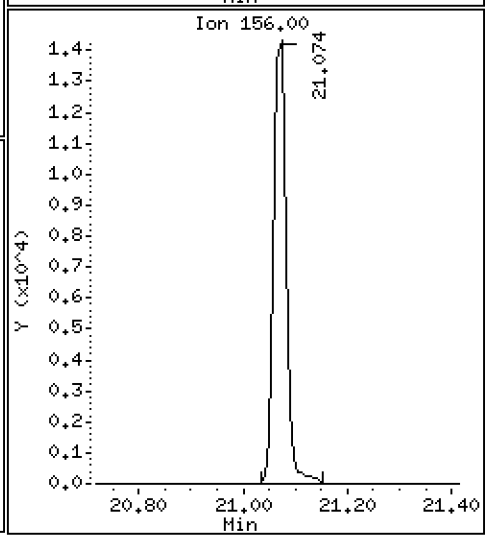












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

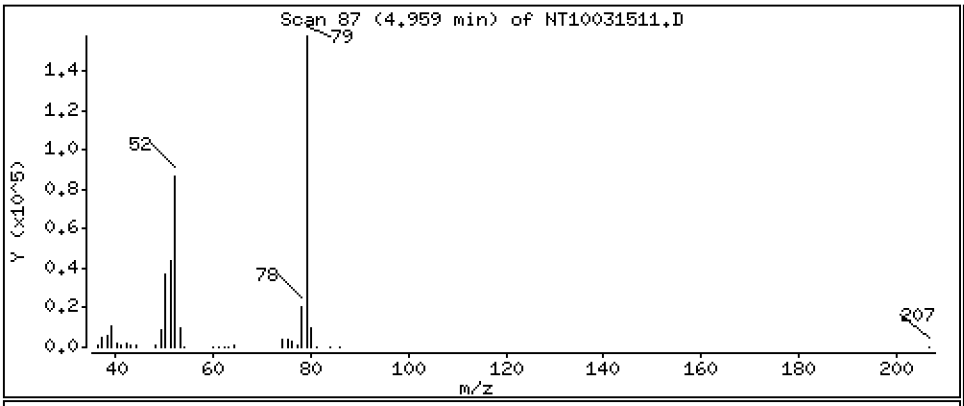
Operator: VTS

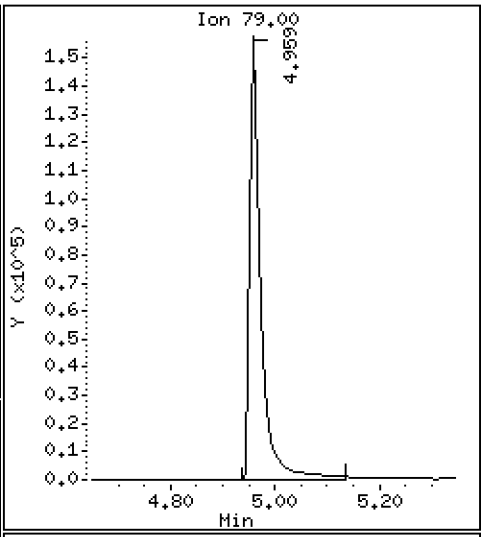
Column phase: ZB-5msi

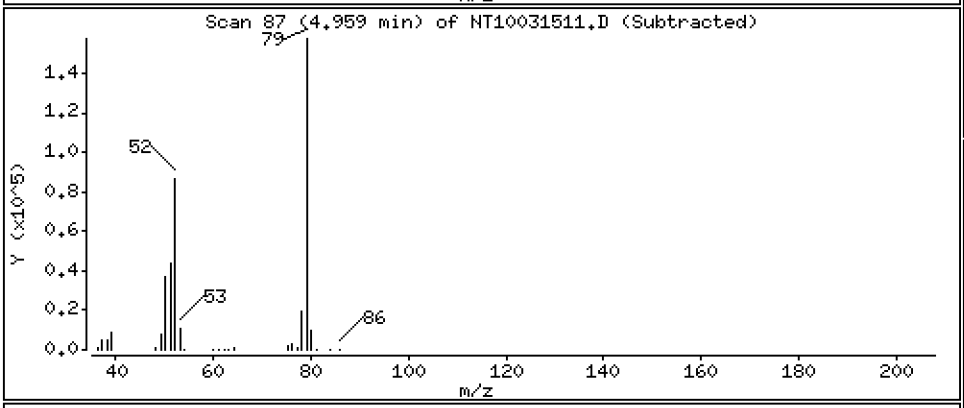
Column diameter: 0.25

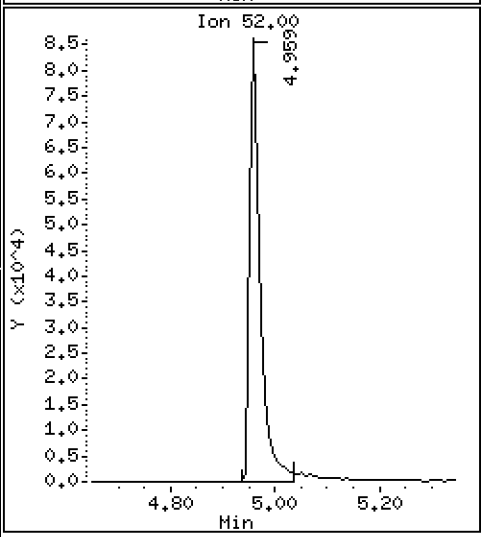
103 Pyridine

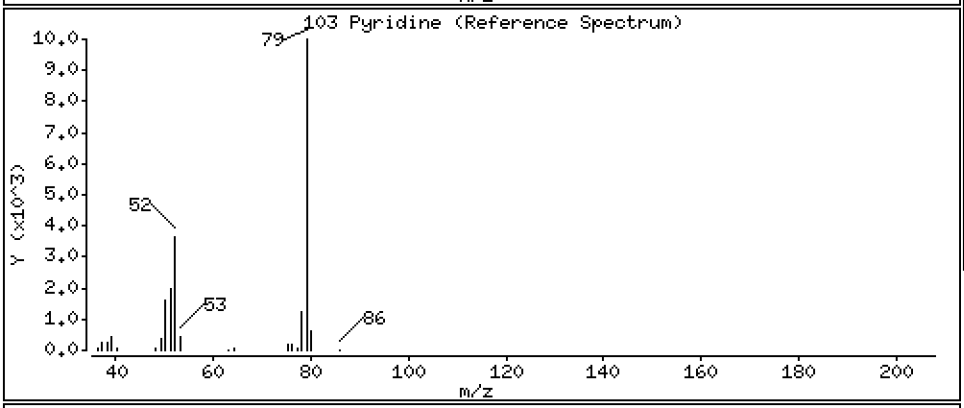
Concentration: 5.337 ug/mL

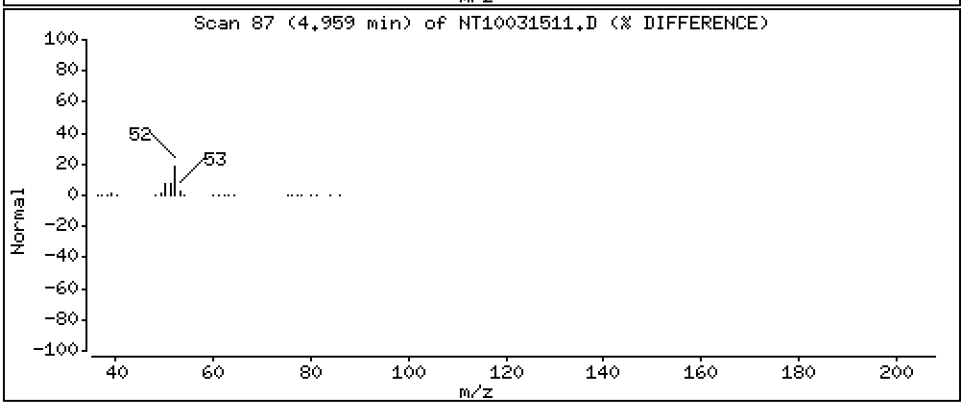












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

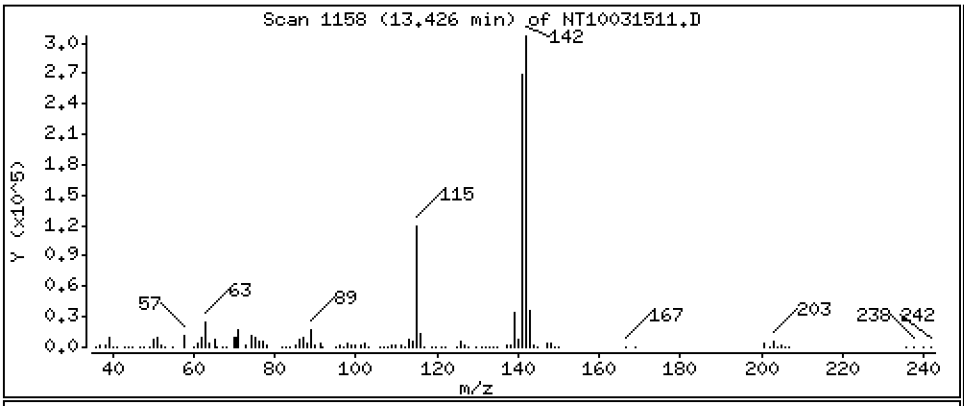
Operator: VTS

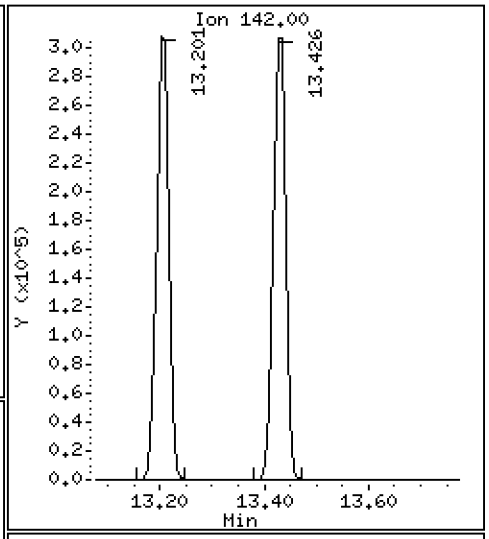
Column phase: ZB-5msi

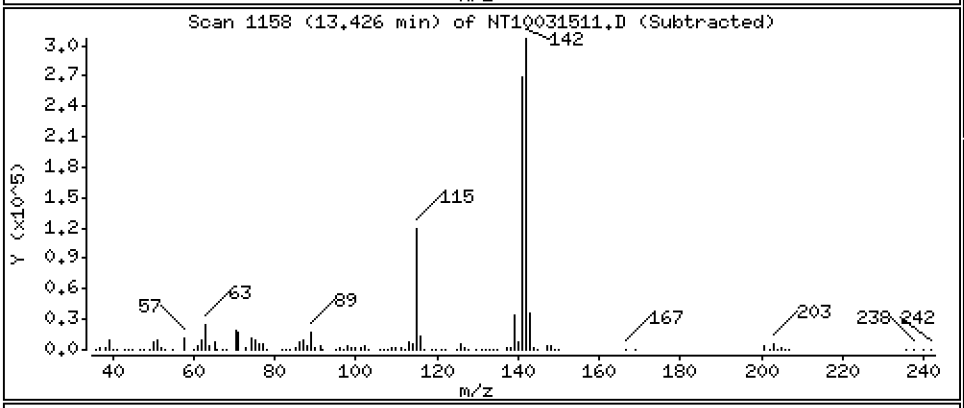
Column diameter: 0.25

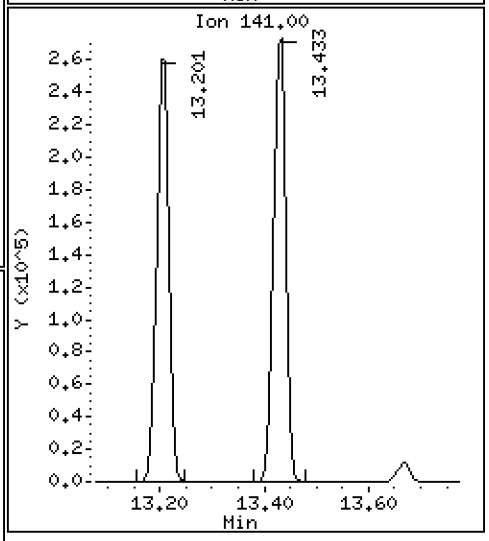
105 1-methylnaphthalene

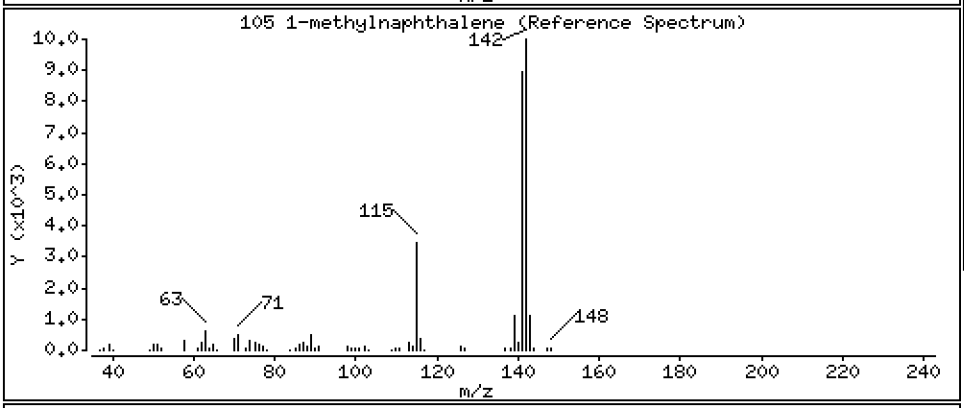
Concentration: 4.875 ug/mL

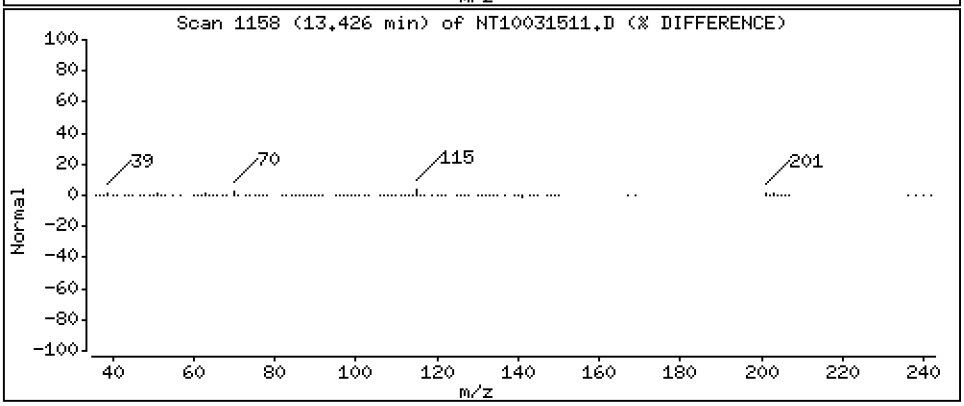












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

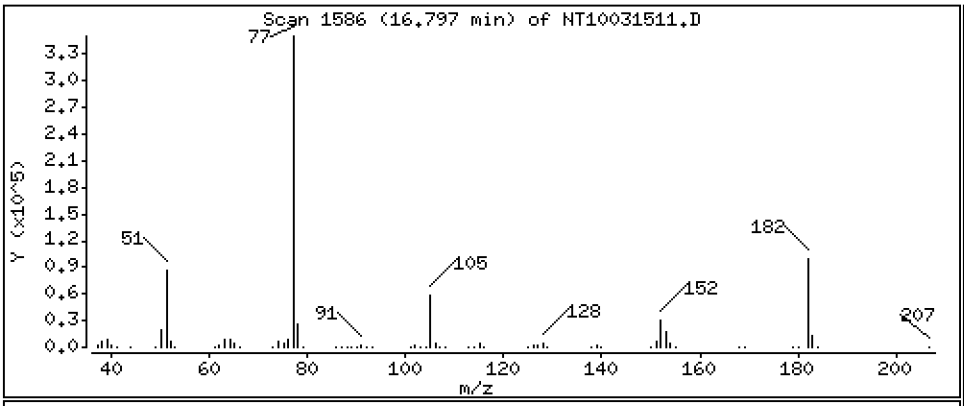
Operator: VTS

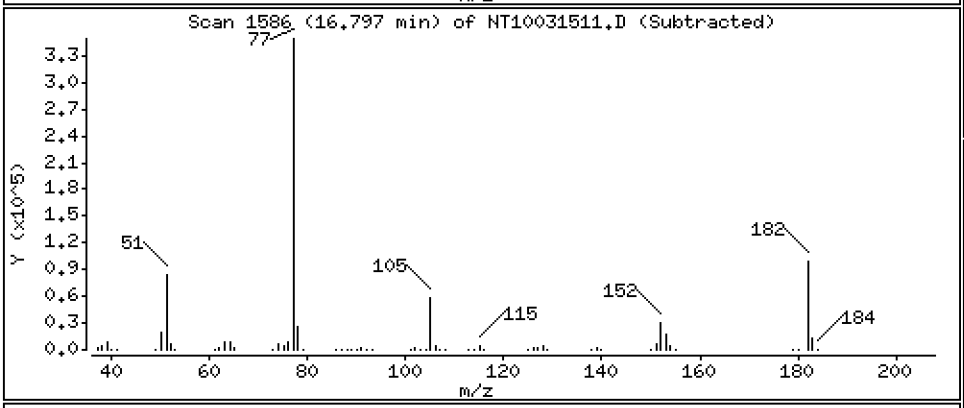
Column phase: ZB-5msi

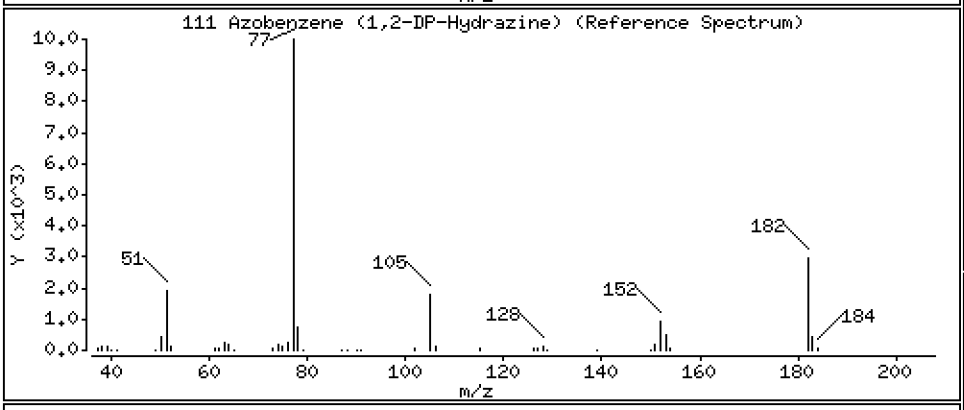
Column diameter: 0.25

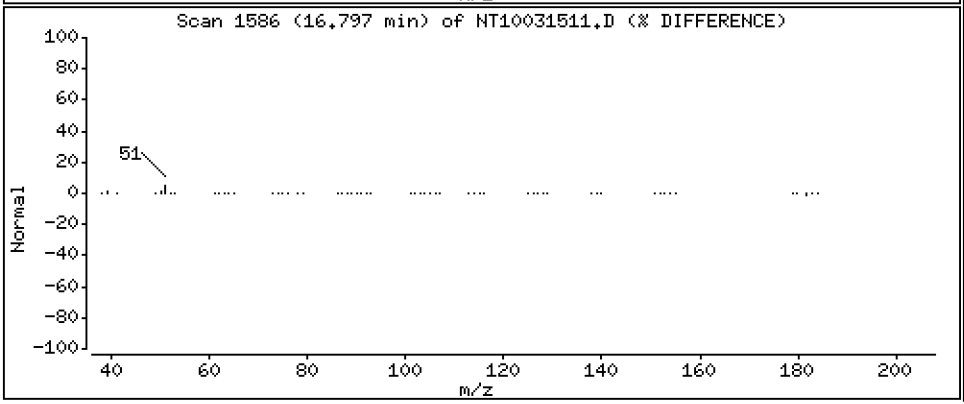
111 Azobenzene (1,2-DP-Hydrazine)

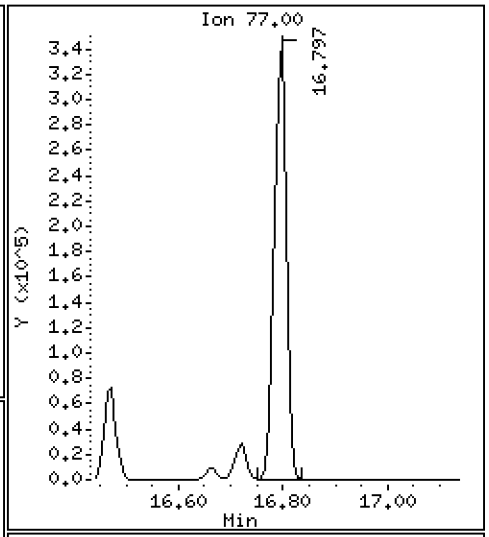
Concentration: 4.937 ug/mL

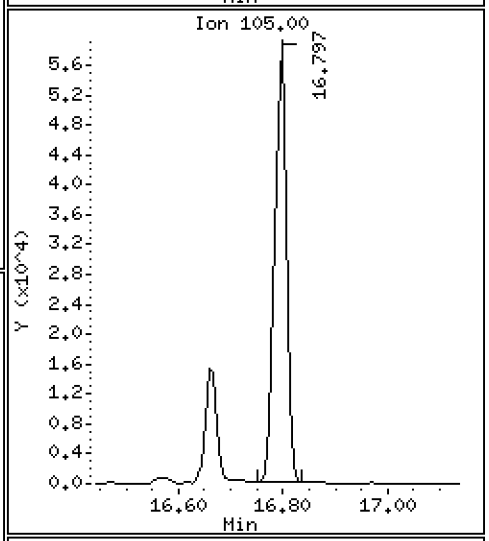


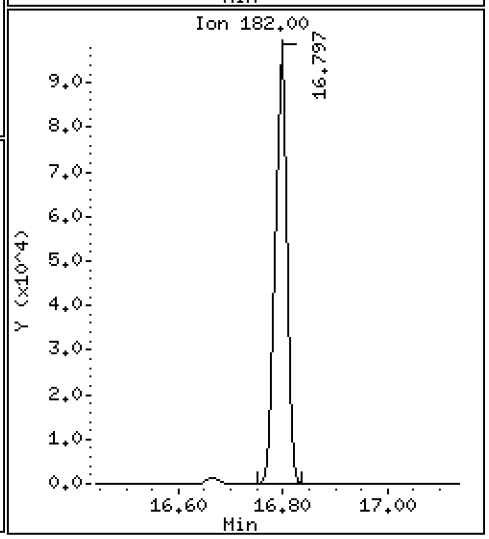












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

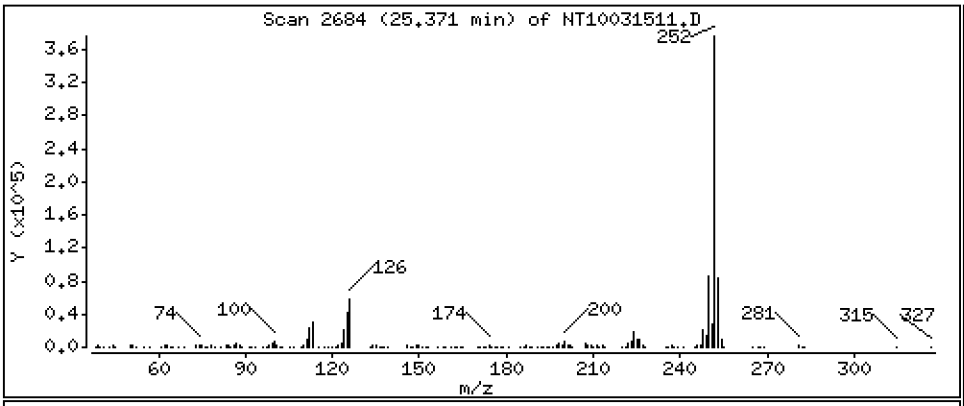
Operator: VTS

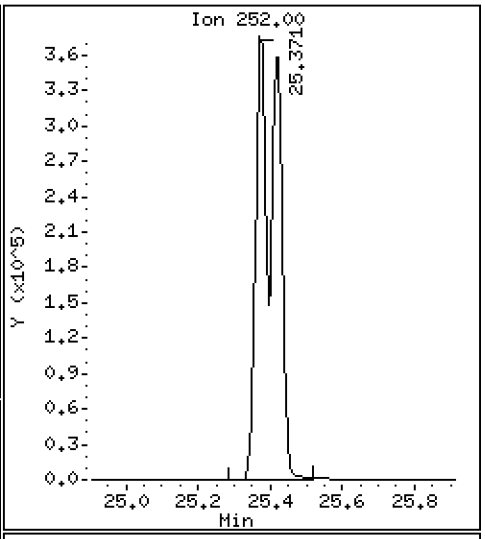
Column phase: ZB-5msi

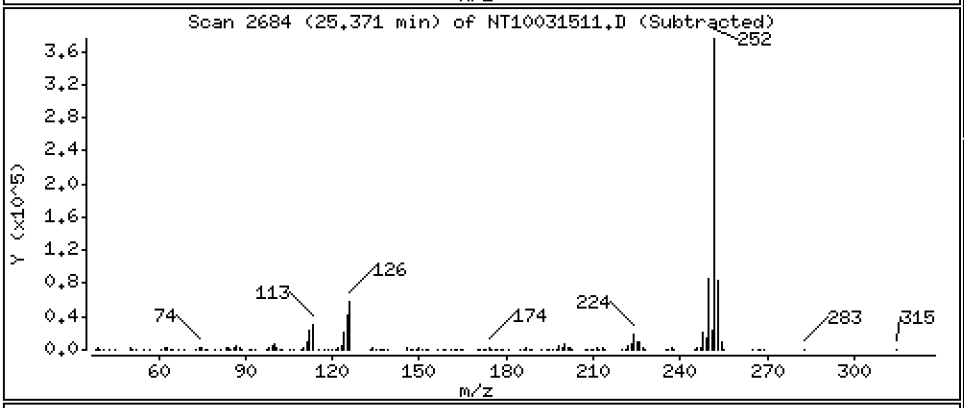
Column diameter: 0.25

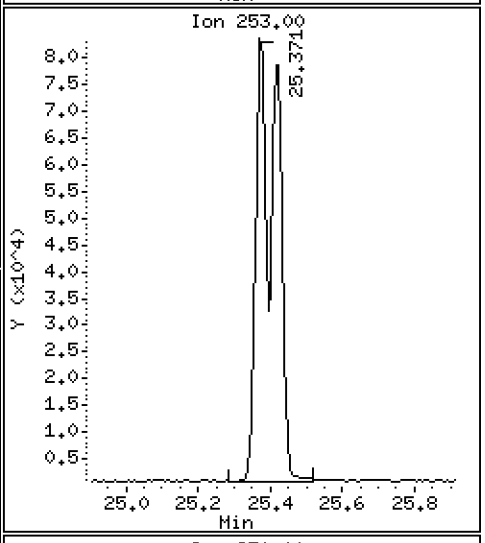
187 Total Benzofluoranthenes

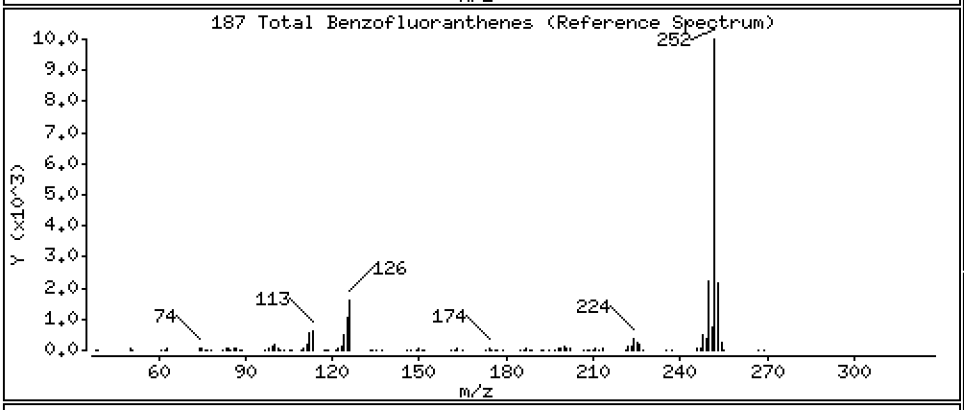
Concentration: 9.483 ug/mL

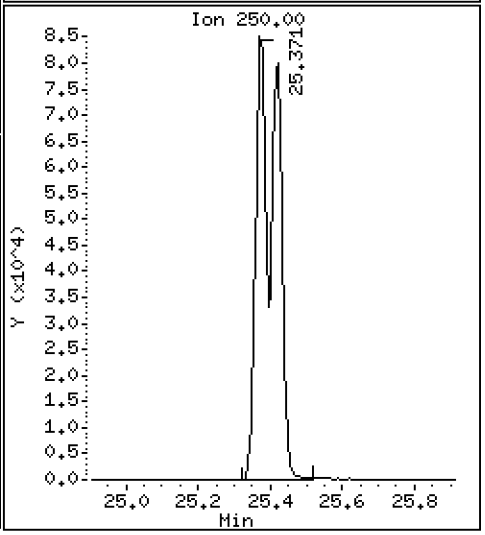


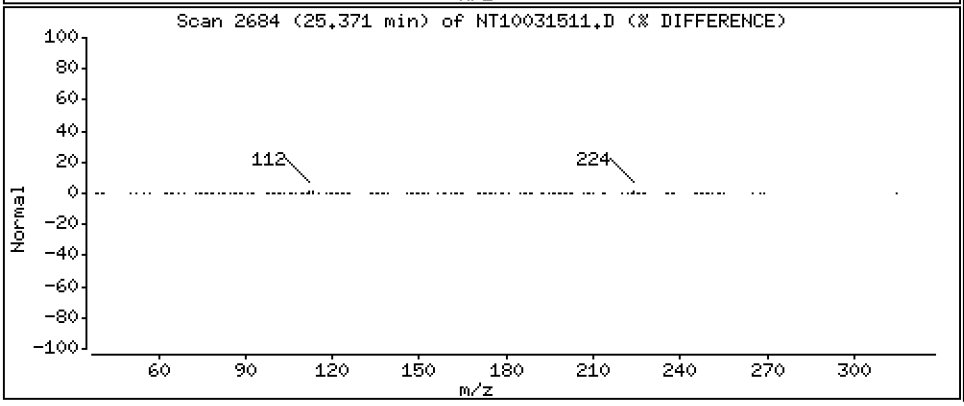












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

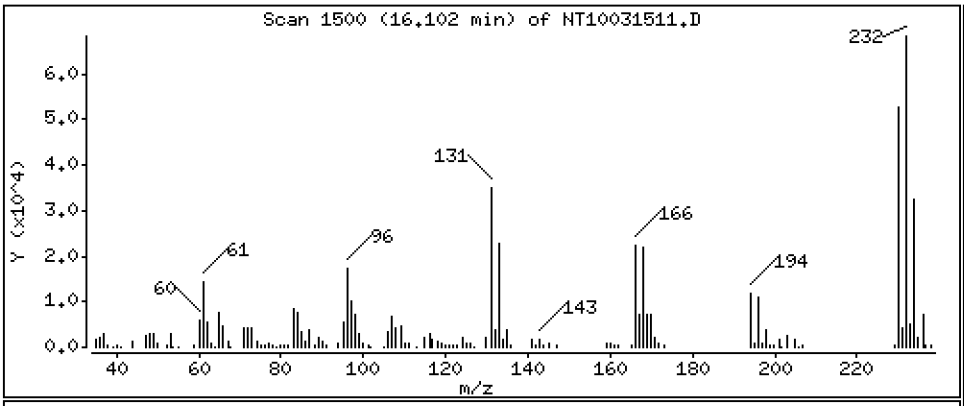
Operator: VTS

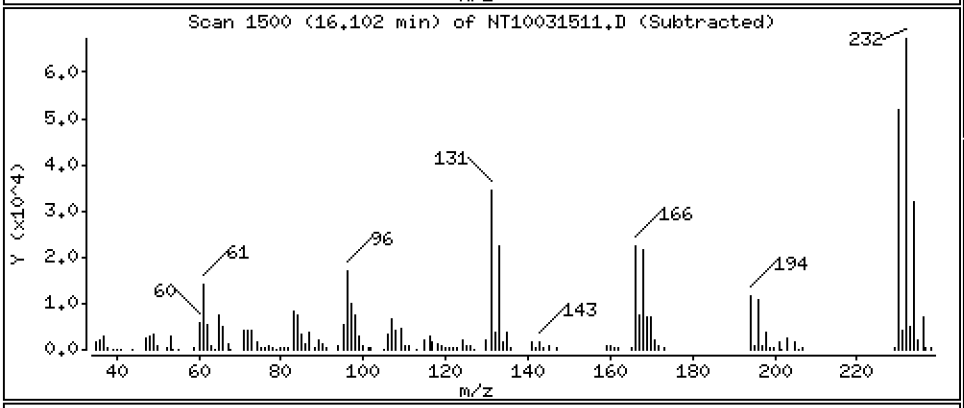
Column phase: ZB-5msi

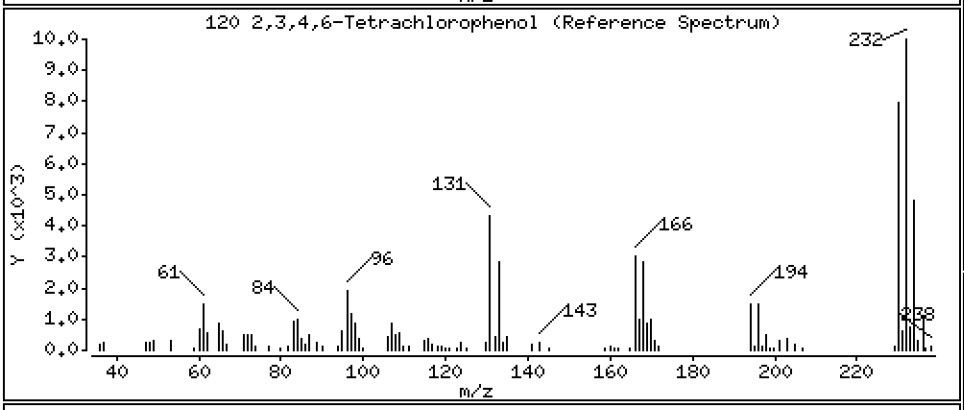
Column diameter: 0.25

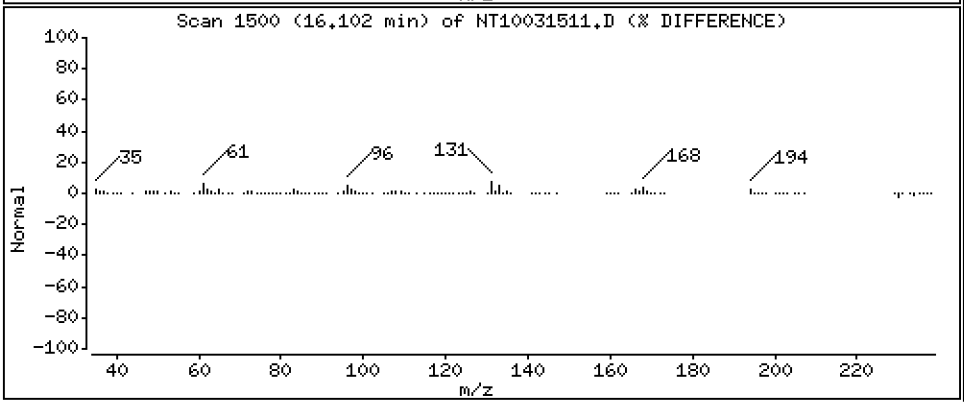
120 2,3,4,6-Tetrachlorophenol

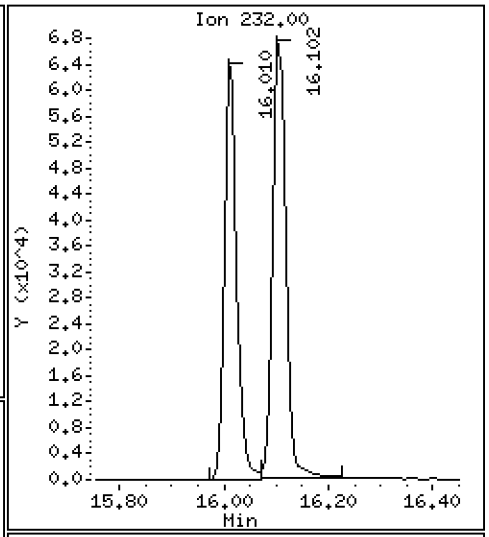
Concentration: 3.980 ug/mL

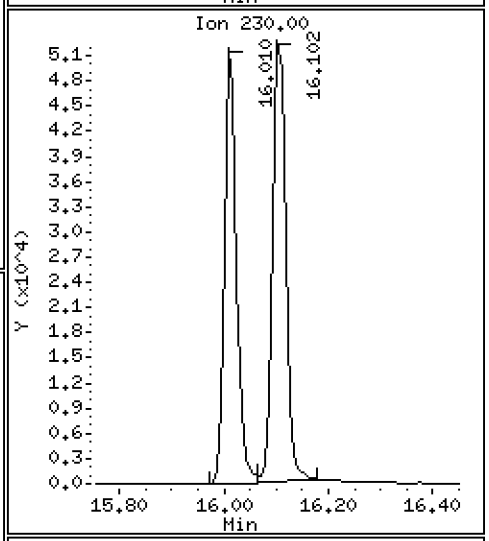


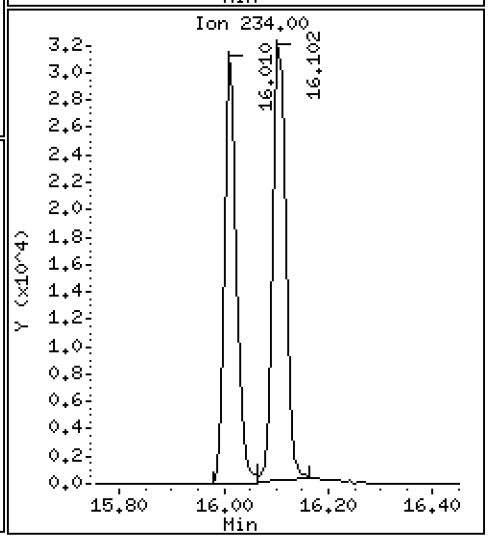












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Lab Smp Id: SLC0228-SCV1
Inj Date : 16-MAR-2023 02:16
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.659	8.652	(0.931)	281600	4.41237	4.412
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	248892	5.25818	5.258
6	2-Chlorophenol	128	8.960	8.961	(0.963)	233608	4.27685	4.277
7	1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	275540	4.77157	4.772
* 8	1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	154809	4.00000	
9	1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	274051	4.91272	4.913
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	268028	4.88215	4.882
11	Benzyl alcohol	108	9.557	9.557	(1.028)	147597	4.92722	4.927
14	2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	100179	6.21363	6.214
13	2-Methylphenol	108	9.775	9.767	(1.051)	196115	4.21542	4.215
17	Hexachloroethane	117	10.279	10.271	(1.105)	114513	5.00332	5.003
16	N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	190250	5.17896	5.179
15	4-Methylphenol	108	10.046	10.031	(1.080)	213951	4.36462	4.365
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.426	10.419	(0.885)	274714	4.85798	4.858
20	Isophorone	82	10.861	10.861	(0.922)	556741	7.69604	7.696
21	2-Nitrophenol	139	11.047	11.048	(0.938)	110302	3.99452	3.995
22	2,4-Dimethylphenol	107	11.081	11.082	(0.941)	188638	3.63181	3.632
23	Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.958)	273219	5.65409	5.654
24	Benzoic acid	105	11.217	11.166	(0.952)	173961	5.95241	5.952
25	2,4-Dichlorophenol	162	11.489	11.489	(0.975)	195480	4.70301	4.703
26	1,2,4-Trichlorobenzene	180	11.685	11.685	(0.992)	222176	4.55366	4.554
* 27	Naphthalene-d8	136	11.777	11.770	(1.000)	570882	4.00000	
28	Naphthalene	128	11.816	11.816	(1.003)	713318	4.71662	4.717
29	4-Chloroaniline	127	11.940	11.940	(1.014)	223402	3.78650	3.787
30	Hexachlorobutadiene	225	12.171	12.172	(1.033)	138198	4.83404	4.834
31	4-Chloro-3-methylphenol	107	12.876	12.876	(1.093)	208794	4.64027	4.640
32	2-Methylnaphthalene	142	13.201	13.201	(1.121)	501627	4.59617	4.596
33	Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	132827	4.72902	4.729

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	137849	4.59559	4.596
35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	146935	4.40855	4.409
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.199	14.191	(0.923)	466196	4.79589	4.796
38	2-Nitroaniline	65	14.454	14.447	(0.940)	134108	4.91137	4.911
39	Dimethylphthalate	163	14.880	14.873	(0.967)	486790	4.93747	4.937
40	Acenaphthylene	152	15.074	15.066	(0.980)	727839	4.80509	4.805
41	2,6-Dinitrotoluene	165	15.020	15.012	(0.976)	112840	5.29815	5.298
* 42	Acenaphthene-d10	164	15.383	15.383	(1.000)	303490	4.00000	
43	3-Nitroaniline	138	15.306	15.298	(0.995)	120530	5.01393	5.014
44	Acenaphthene	153	15.453	15.445	(1.005)	446914	4.77589	4.776
45	2,4-Dinitrophenol	184	15.515	15.515	(1.009)	27409	2.12395	2.124
46	Dibenzofuran	168	15.777	15.770	(1.026)	641379	4.64790	4.648
47	4-Nitrophenol	109	15.600	15.592	(1.014)	59816	3.96568	3.966
48	2,4-Dinitrotoluene	165	15.824	15.817	(1.029)	144262	4.51019	4.510
50	Diethylphthalate	149	16.326	16.319	(1.061)	503887	5.20905	5.209
49	Fluorene	166	16.489	16.481	(1.072)	511113	4.70796	4.708
51	4-Chlorophenyl-phenylether	204	16.473	16.466	(1.071)	257762	4.99294	4.993
52	4-Nitroaniline	138	16.566	16.566	(1.077)	106701	4.92532	4.925
53	4,6-Dinitro-2-methylphenol	198	16.666	16.658	(0.905)	56867	3.51509	3.515
54	N-Nitrosodiphenylamine	169	16.720	16.712	(0.908)	342454	4.80180	4.802
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	150956	5.05964	5.060
57	Hexachlorobenzene	284	17.800	17.793	(0.966)	143751	4.59553	4.596
58	Pentachlorophenol	266	18.149	18.149	(0.985)	75635	4.05676	4.057
* 59	Phenanthrene-d10	188	18.420	18.420	(1.000)	533431	4.00000	
60	Phenanthrene	178	18.466	18.466	(1.003)	669357	4.60181	4.602
61	Anthracene	178	18.559	18.559	(1.008)	581438	4.16715	4.167
62	Carbazole	167	18.884	18.884	(1.025)	591382	4.72989	4.730
63	Di-n-butylphthalate	149	19.665	19.666	(1.068)	830680	4.96738	4.967
64	Fluoranthene	202	20.841	20.841	(0.888)	782432	4.47248	4.472
65	Pyrene	202	21.267	21.267	(0.907)	778668	4.33892	4.339
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.459	22.460	(0.957)	314007	4.83397	4.834
68	Benzo(a)anthracene	228	23.427	23.419	(0.999)	714166	4.64722	4.647
* 69	Chrysene-d12	240	23.458	23.450	(1.000)	435381	4.00000	
70	3,3'-Dichlorobenzidine	252	23.373	23.373	(0.996)	483256	9.81738	9.817
71	Chrysene	228	23.497	23.489	(1.002)	677151	4.51017	4.510
72	bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	453669	4.67998	4.680
* 134	Di-n-octylphthalate-d4	153	24.487	24.480	(1.000)	660827	4.00000	
73	Di-n-octylphthalate	149	24.495	24.488	(1.000)	855562	4.94734	4.947
74	Benzo(b)fluoranthene	252	25.370	25.362	(0.969)	737887	4.60200	4.602(H)
75	Benzo(k)fluoranthene	252	25.416	25.409	(0.970)	797521	4.89839	4.898
76	Benzo(a)pyrene	252	26.067	26.052	(0.995)	698616	4.87338	4.873
* 77	Perylene-d12	264	26.191	26.183	(1.000)	494648	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.005	28.990	(1.107)	834672	4.57655	4.577
79	Dibenzo(a,h)anthracene	278	29.021	29.005	(1.108)	688433	4.54663	4.547
80	Benzo(g,h,i)perylene	276	29.852	29.821	(1.140)	724463	4.59000	4.590
90	N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	155126	5.19378	5.194
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	21.073	21.066	(0.898)	314737	4.37985	4.380
103	Pyridine	79	4.959	4.997	(0.533)	244801	5.33678	5.337
105	1-methylnaphthalene	142	13.425	13.425	(1.140)	487498	4.87520	4.875
111	Azobenzene (1,2-DP-Hydrazine)	77	16.797	16.789	(1.092)	533524	4.93744	4.937

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.370	25.409	(0.969)	1468165	9.48349	9.483
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	124685	3.97959	3.980

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511.D
Lab Smp Id: SLC0228-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	154809	-9.75
27 Naphthalene-d8	624466	312233	1248932	570882	-8.58
42 Acenaphthene-d10	337226	168613	674452	303490	-10.00
59 Phenanthrene-d10	572849	286425	1145698	533431	-6.88
69 Chrysene-d12	347068	173534	694136	435381	25.45
134 Di-n-octylphthala	500317	250159	1000634	660827	32.08
77 Perylene-d12	421549	210775	843098	494648	17.34

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.04
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.18	25.68	26.68	26.19	0.03

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

REVIEW SUMMARY FOR FILE - NT10031511.D

Lab ID: SLC0228-SCV1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

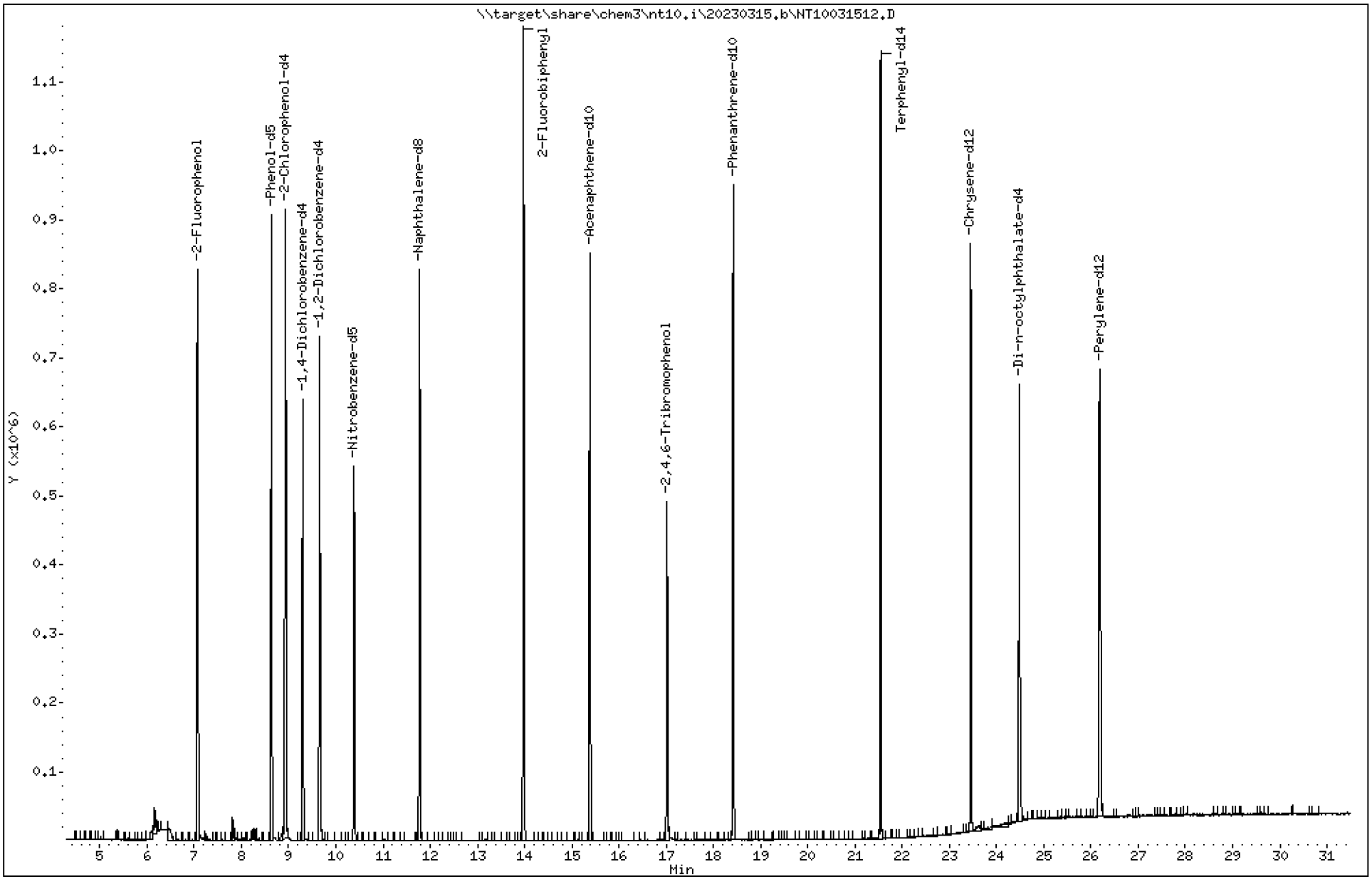
RRT check based on Ccal File: NT10031508.D

On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031512.D
Date : 16-MAR-2023 02:54
Client ID:
Sample Info: SLC0228-ICB1

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031512.D
Lab Smp Id: SLC0228-ICB1
Inj Date : 16-MAR-2023 02:54
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-ICB1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$ 1	2-Fluorophenol	112	7.067	7.068	(0.760)	362536	6.92497	6.925
$ 2	Phenol-d5	99	8.636	8.636	(0.928)	477145	6.94756	6.948
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.929	8.930	(0.960)	416453	7.10111	7.101
4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
6	2-Chlorophenol	128	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	173115	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.658	9.658	(1.038)	194128	4.60926	4.609
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
17	Hexachloroethane	117	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
$ 18	Nitrobenzene-d5	82	10.387	10.388	(0.882)	294159	4.65645	4.656
19	Nitrobenzene	77	Compound Not Detected.					
20	Isophorone	82	Compound Not Detected.					
21	2-Nitrophenol	139	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
23	Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
25	2,4-Dichlorophenol	162	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.776	11.770	(1.000)	625865	4.00000	
28	Naphthalene	128	Compound Not Detected.					
29	4-Chloroaniline	127	Compound Not Detected.					
30	Hexachlorobutadiene	225	Compound Not Detected.					
31	4-Chloro-3-methylphenol	107	Compound Not Detected.					
32	2-Methylnaphthalene	142	Compound Not Detected.					
33	Hexachlorocyclopentadiene	237	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS ON-COLUMN	CONCENTRATIONS FINAL
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
	34	2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35	2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36	2-Fluorobiphenyl	172	13.981	13.975	(0.909)	615156	4.73090	4.731
	37	2-Chloronaphthalene	162	Compound Not Detected.					
	38	2-Nitroaniline	65	Compound Not Detected.					
	39	Dimethylphthalate	163	Compound Not Detected.					
	40	Acenaphthylene	152	Compound Not Detected.					
	41	2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42	Acenaphthene-d10	164	15.382	15.383	(1.000)	328712	4.00000	
	43	3-Nitroaniline	138	Compound Not Detected.					
	44	Acenaphthene	153	Compound Not Detected.					
	45	2,4-Dinitrophenol	184	Compound Not Detected.					
	46	Dibenzofuran	168	Compound Not Detected.					
	47	4-Nitrophenol	109	Compound Not Detected.					
	48	2,4-Dinitrotoluene	165	Compound Not Detected.					
	50	Diethylphthalate	149	Compound Not Detected.					
	49	Fluorene	166	Compound Not Detected.					
	51	4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52	4-Nitroaniline	138	Compound Not Detected.					
	53	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55	2,4,6-Tribromophenol	330	17.020	17.021	(1.106)	85879	5.59351	5.594
	56	4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57	Hexachlorobenzene	284	Compound Not Detected.					
	58	Pentachlorophenol	266	Compound Not Detected.					
*	59	Phenanthrene-d10	188	18.419	18.420	(1.000)	592693	4.00000	
	60	Phenanthrene	178	Compound Not Detected.					
	61	Anthracene	178	Compound Not Detected.					
	62	Carbazole	167	Compound Not Detected.					
	63	Di-n-butylphthalate	149	Compound Not Detected.					
	64	Fluoranthene	202	Compound Not Detected.					
	65	Pyrene	202	Compound Not Detected.					
$	66	Terphenyl-d14	244	21.544	21.538	(0.919)	627405	4.58345	4.583
	67	Butylbenzylphthalate	149	Compound Not Detected.					
	68	Benzo(a)anthracene	228	Compound Not Detected.					
*	69	Chrysene-d12	240	23.449	23.450	(1.000)	442208	4.00000	
	70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71	Chrysene	228	Compound Not Detected.					
	72	bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134	Di-n-octylphthalate-d4	153	24.479	24.480	(1.000)	526309	4.00000	
	73	Di-n-octylphthalate	149	Compound Not Detected.					
	74	Benzo(b)fluoranthene	252	Compound Not Detected.					
	75	Benzo(k)fluoranthene	252	Compound Not Detected.					
	76	Benzo(a)pyrene	252	Compound Not Detected.					
*	77	Perylene-d12	264	26.182	26.183	(1.000)	499804	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79	Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80	Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90	N-Nitrosodimethylamine	74	Compound Not Detected.					
	91	Aniline	93	Compound Not Detected.					
	93	Benzidine	184	Compound Not Detected.					
	103	Pyridine	79	Compound Not Detected.					
	105	1-methylnaphthalene	142	Compound Not Detected.					
	111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031512.D
Lab Smp Id: SLC0228-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	173115	0.92
27 Naphthalene-d8	624466	312233	1248932	625865	0.22
42 Acenaphthene-d10	337226	168613	674452	328712	-2.52
59 Phenanthrene-d10	572849	286425	1145698	592693	3.46
69 Chrysene-d12	347068	173534	694136	442208	27.41
134 Di-n-octylphthala	500317	250159	1000634	526309	5.20
77 Perylene-d12	421549	210775	843098	499804	18.56

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	-0.00
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	-0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	-0.00
134 Di-n-octylphthala	24.48	23.98	24.98	24.48	-0.00
77 Perylene-d12	26.18	25.68	26.68	26.18	-0.00

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

REVIEW SUMMARY FOR FILE - NT10031512.D

Lab ID: SLC0228-ICB1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 02:54

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: NT10031508.D

On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0228-SCV1
Sequence: SLC0228
Sequence Name: SCV 5.0
Standard ID: L002833

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.4	-11.8	20.00
4-Methylphenol	5.0000	4.4	-12.7	20.00
Naphthalene	5.0000	4.7	-5.7	20.00
2-Methylnaphthalene	5.0000	4.6	-8.1	20.00
Acenaphthylene	5.0000	4.8	-3.9	20.00
Dimethylphthalate	5.0000	4.9	-1.3	20.00
Acenaphthene	5.0000	4.8	-4.5	20.00
Dibenzofuran	5.0000	4.6	-7.0	20.00
Fluorene	5.0000	4.7	-5.8	20.00
Phenanthrene	5.0000	4.6	-8.0	20.00
Anthracene	5.0000	4.2	-16.7	20.00
Fluoranthene	5.0000	4.5	-10.6	20.00
Pyrene	5.0000	4.3	-13.2	20.00
Butylbenzylphthalate	5.0000	4.8	-3.3	20.00
Benzo(a)anthracene	5.0000	4.6	-7.1	20.00
Chrysene	5.0000	4.5	-9.8	20.00
bis(2-Ethylhexyl)phthalate	5.0000	4.7	-6.4	20.00
Benzofluoranthenes, Total	10.000	9.5	-5.2	20.00
Benzo(a)pyrene	5.0000	4.9	-2.5	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.6	-8.5	20.00
Dibenzo(a,h)anthracene	5.0000	4.5	-9.1	20.00
Benzo(g,h,i)perylene	5.0000	4.6	-8.2	20.00

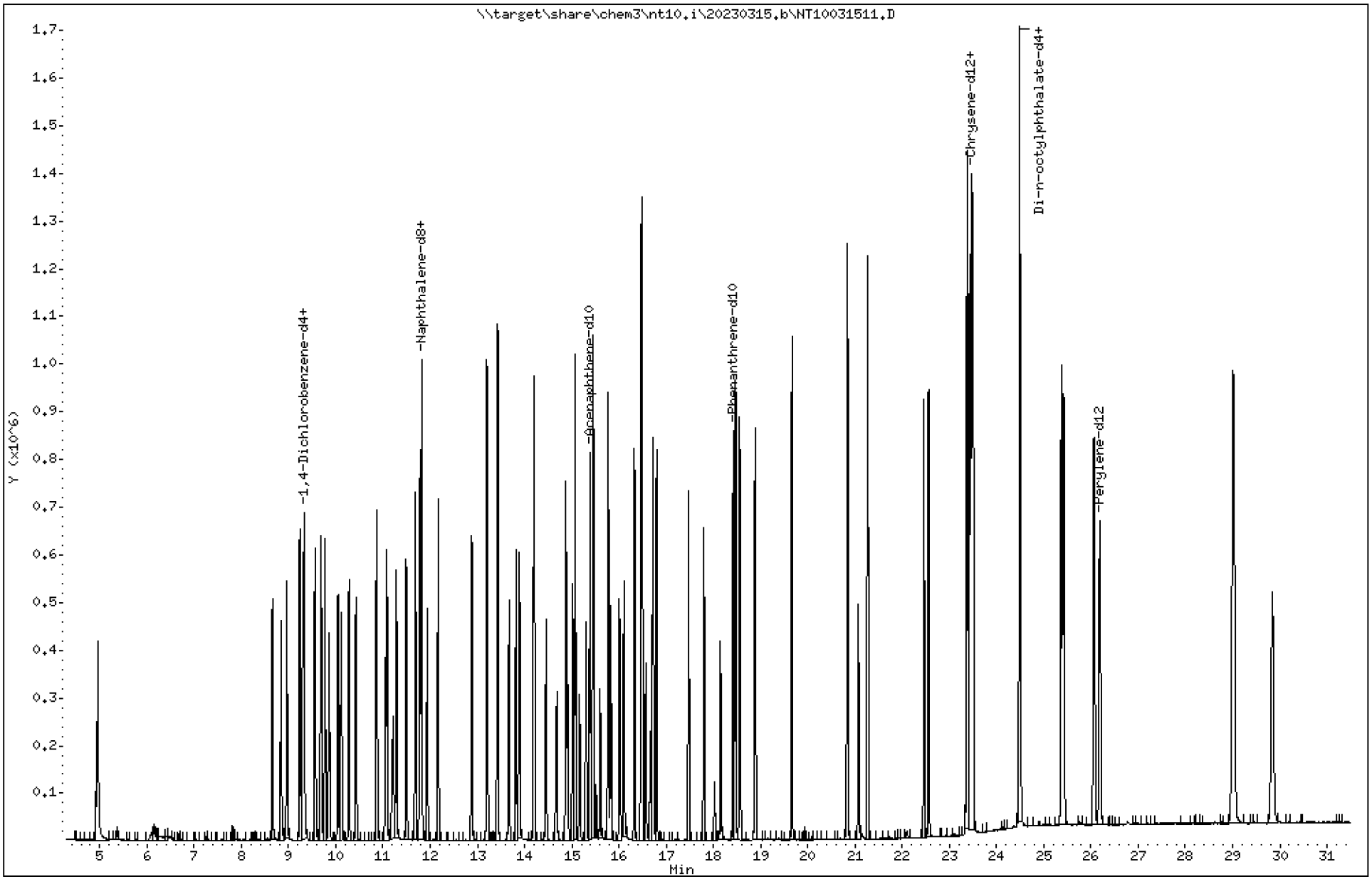
* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Date : 16-MAR-2023 02:16
Client ID:
Sample Info: SLC0228-SCV1

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

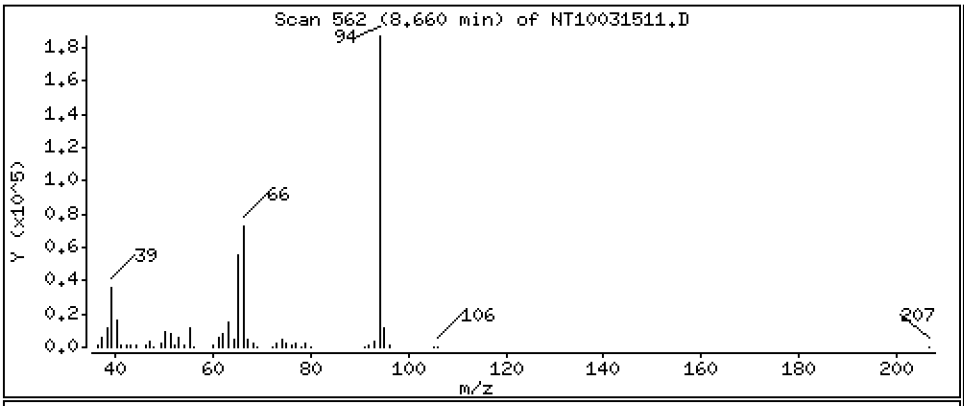
Operator: VTS

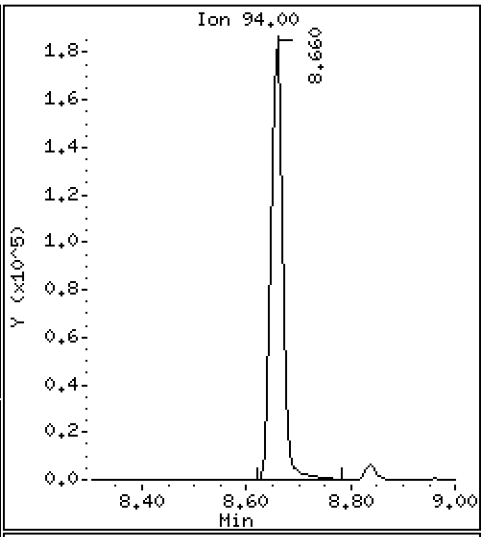
Column phase: ZB-5msi

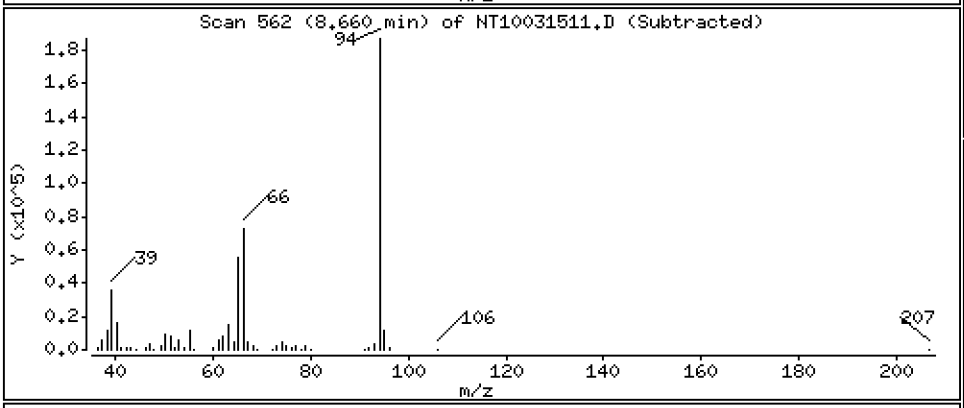
Column diameter: 0.25

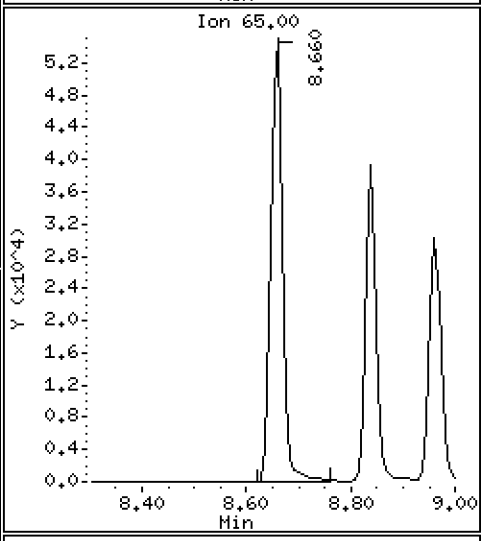
3 Phenol

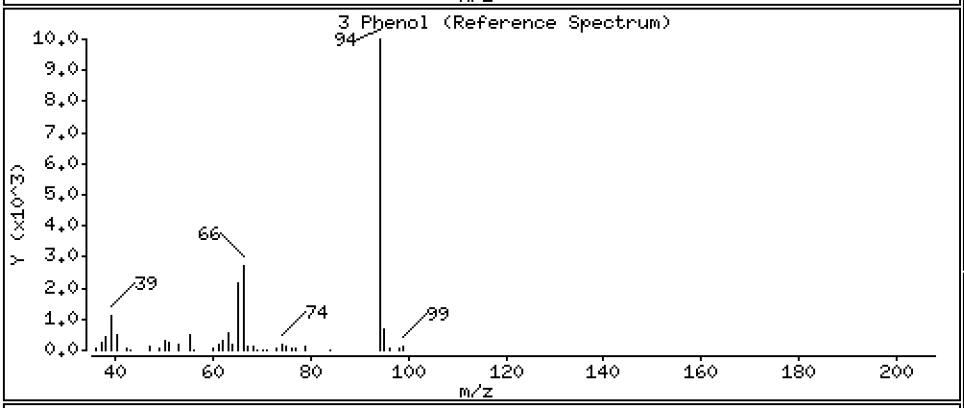
Concentration: 4.412 ug/mL

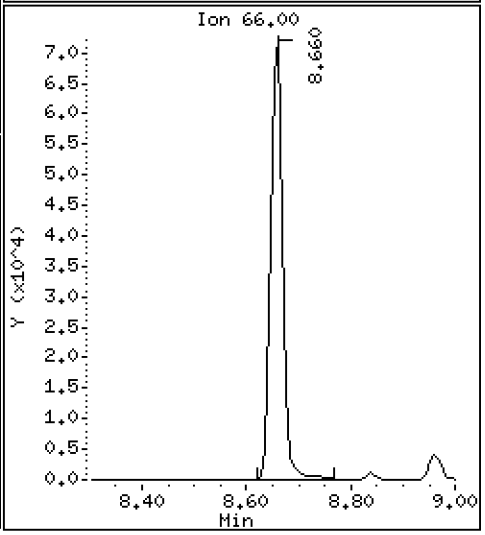


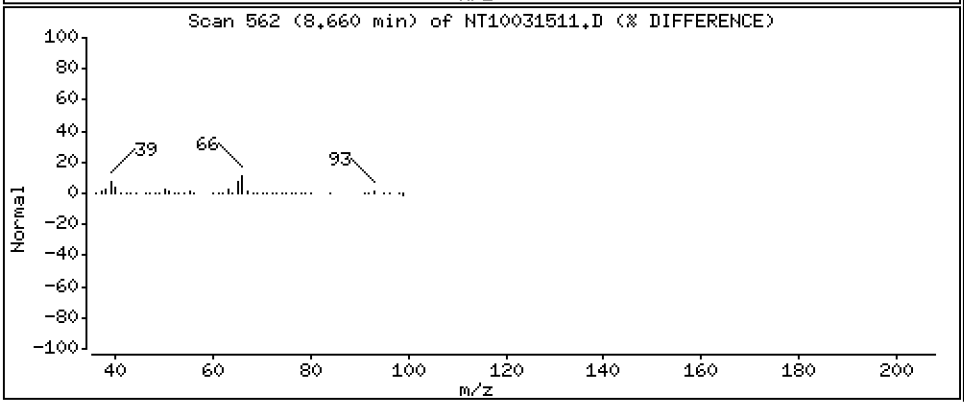












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

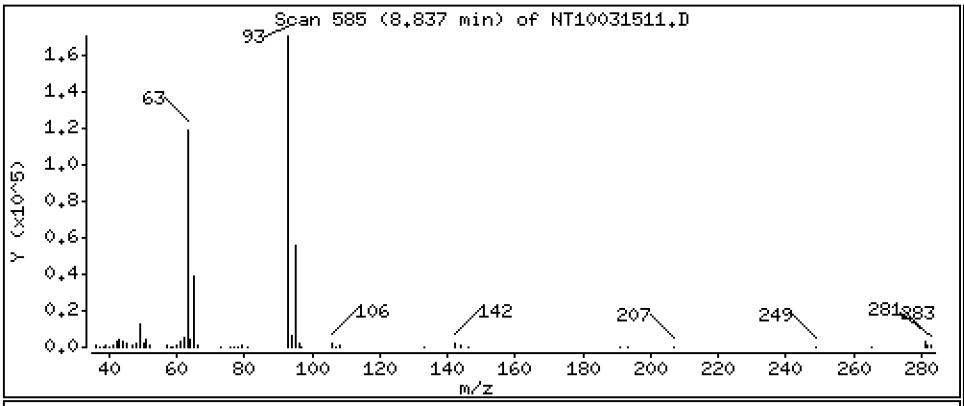
Operator: VTS

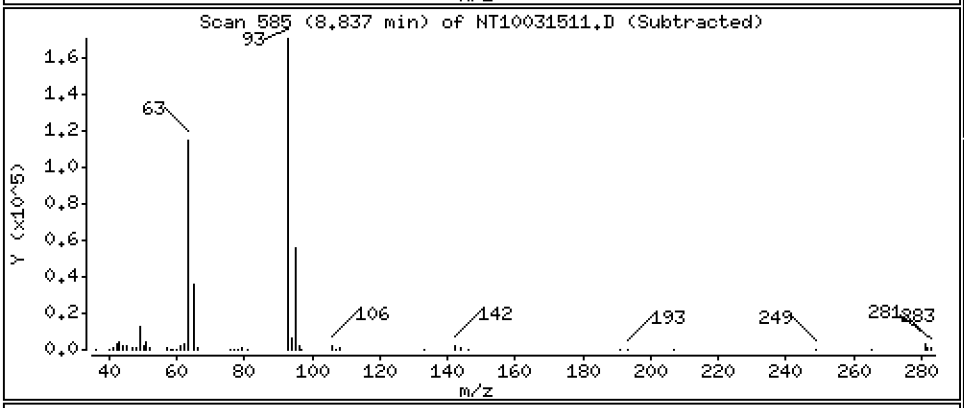
Column phase: ZB-5msi

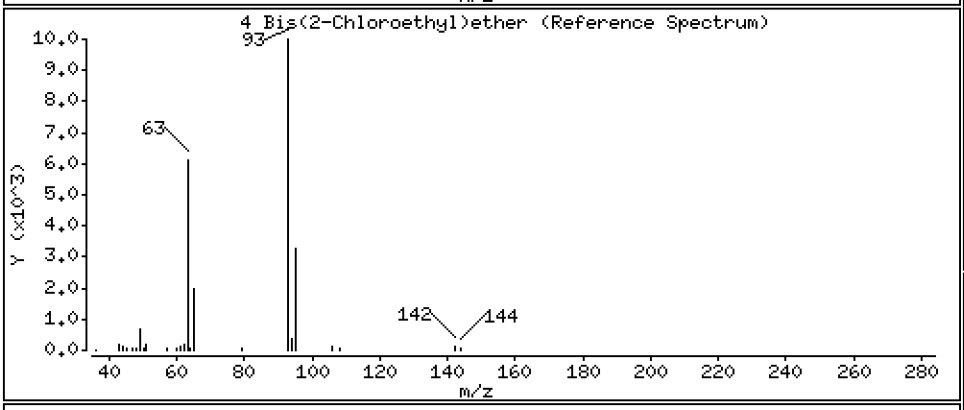
Column diameter: 0.25

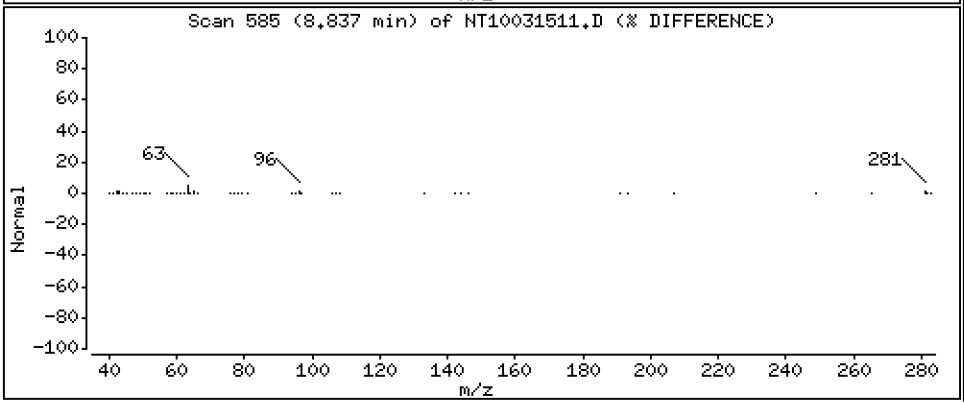
4 Bis(2-Chloroethyl)ether

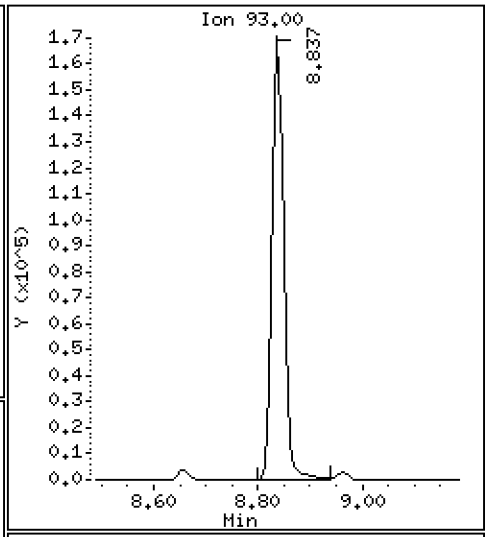
Concentration: 5.258 ug/mL

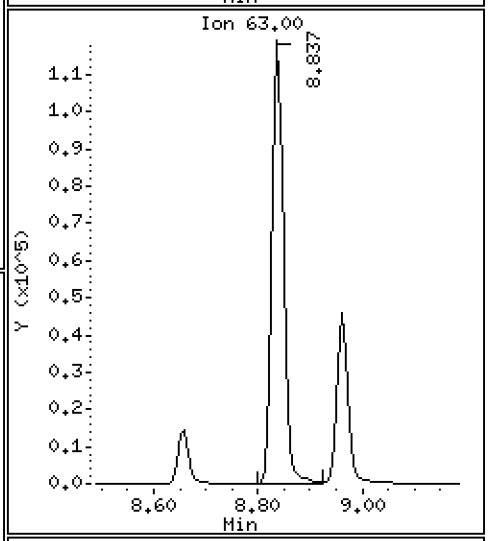


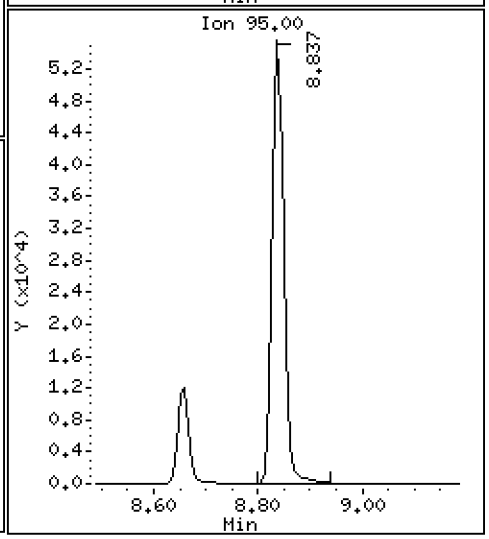












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

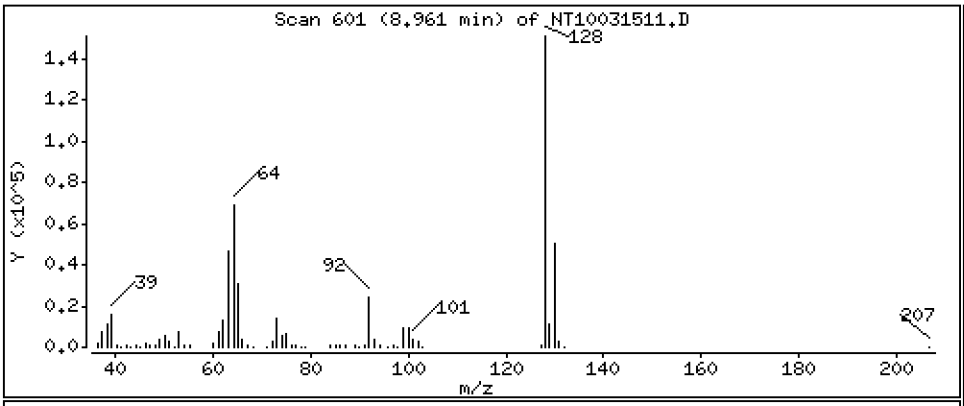
Operator: VTS

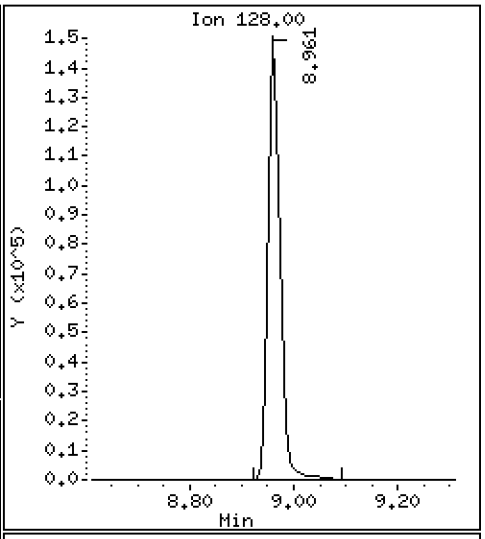
Column phase: ZB-5msi

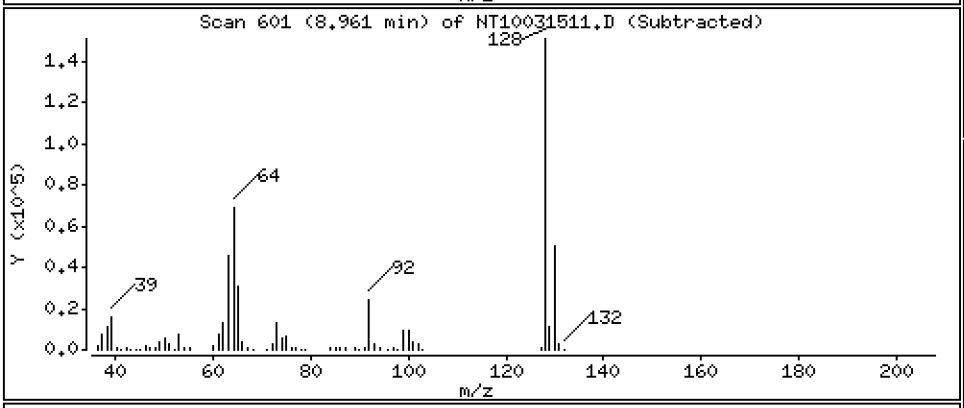
Column diameter: 0.25

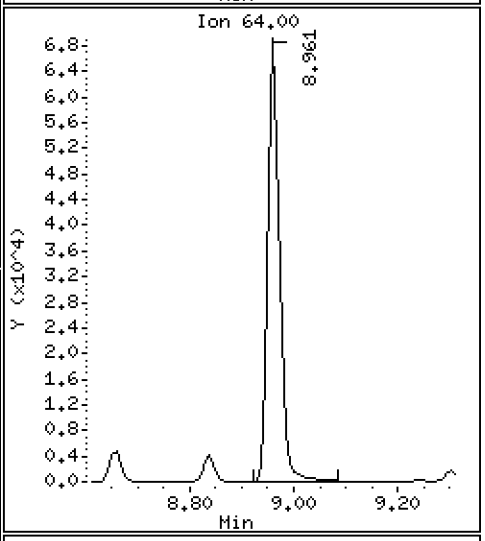
6 2-Chlorophenol

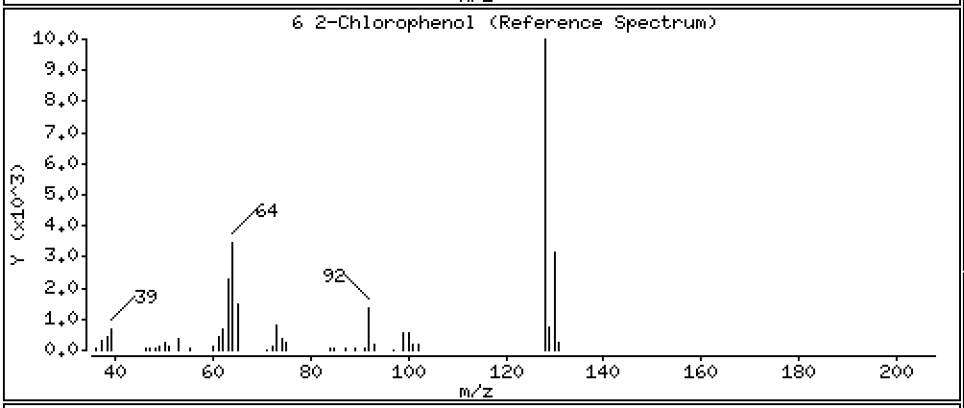
Concentration: 4.277 ug/mL

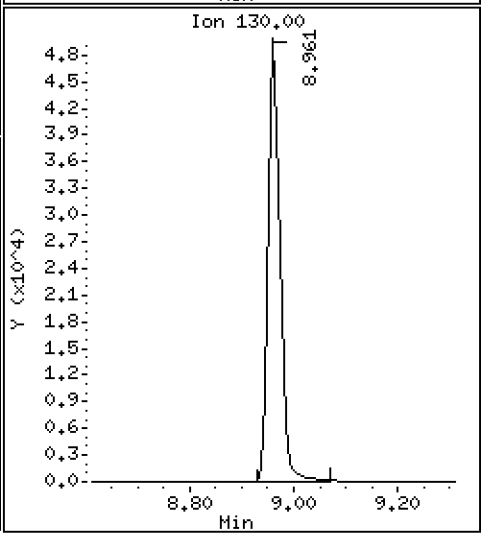


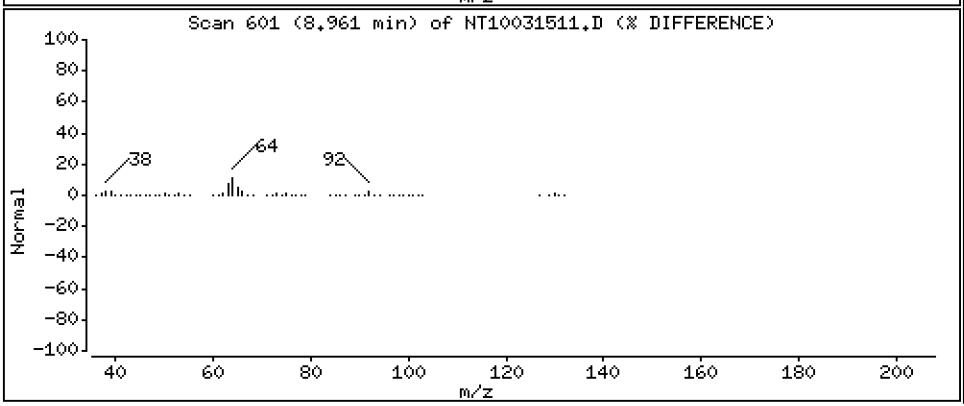












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

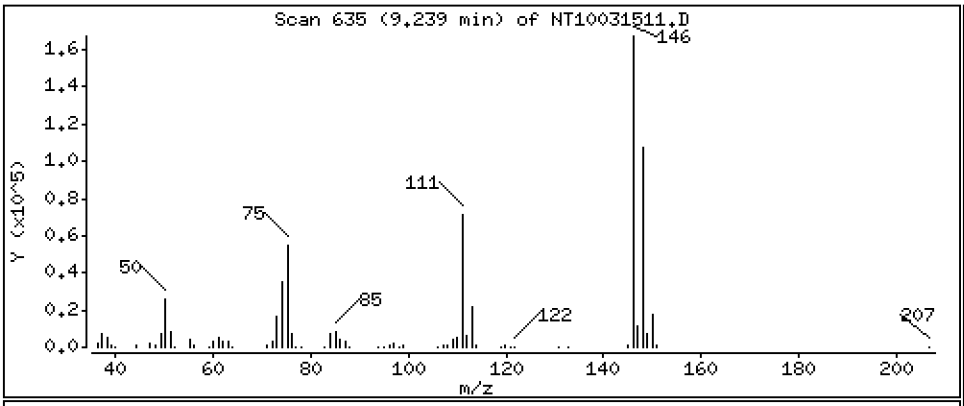
Operator: VTS

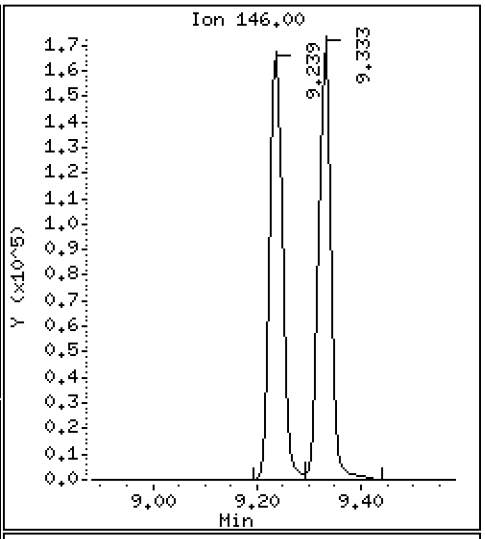
Column phase: ZB-5msi

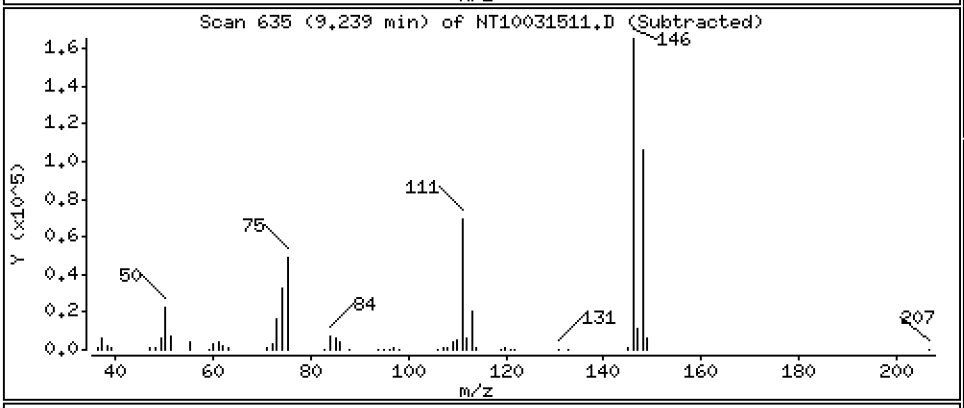
Column diameter: 0.25

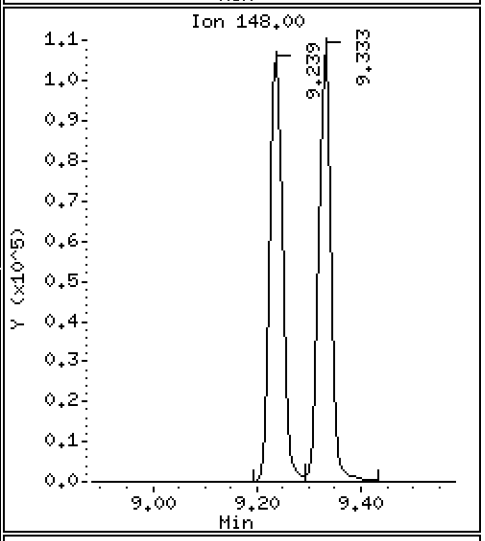
7 1,3-Dichlorobenzene

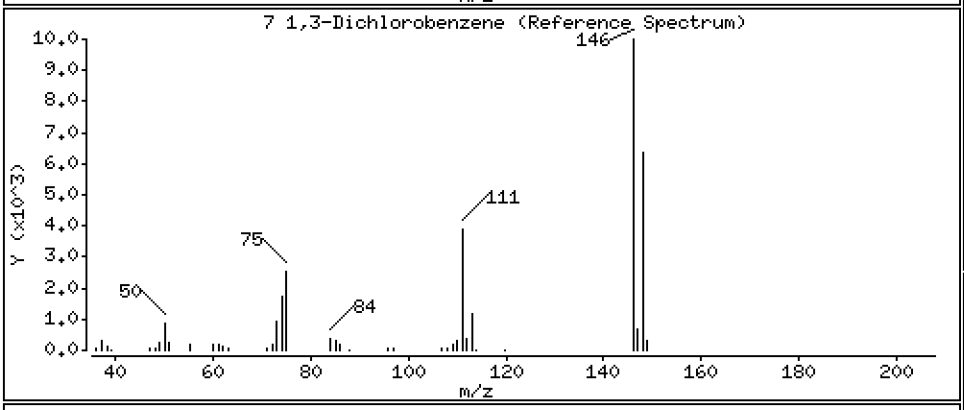
Concentration: 4.772 ug/mL

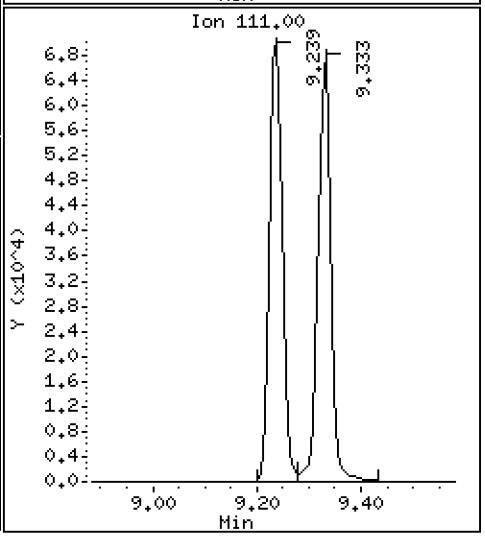


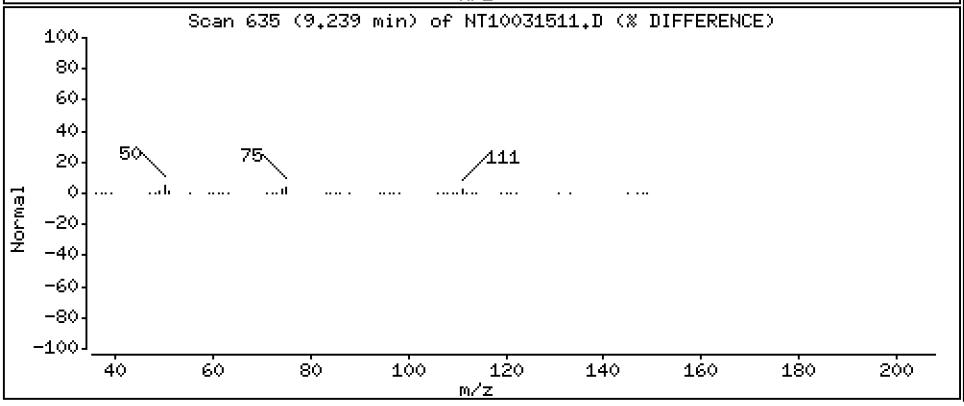












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

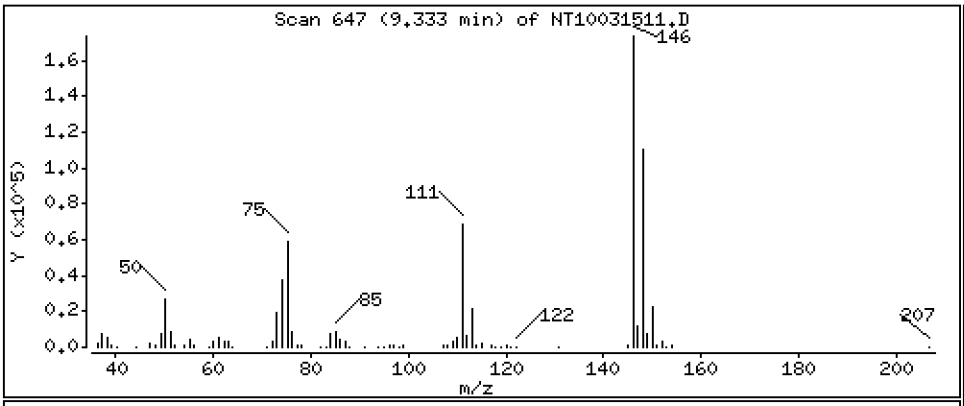
Operator: VTS

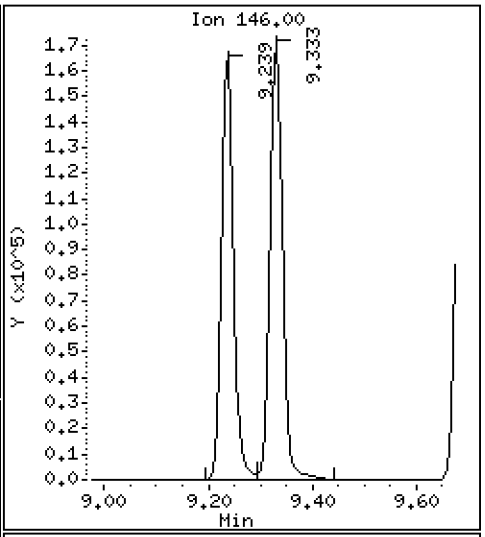
Column phase: ZB-5msi

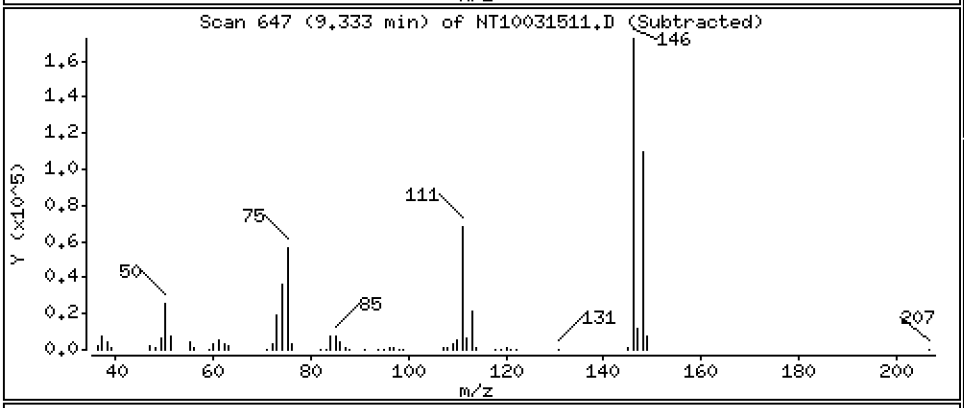
Column diameter: 0.25

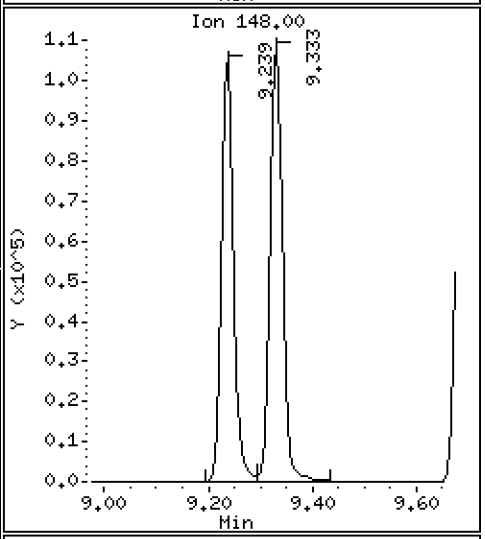
9 1,4-Dichlorobenzene

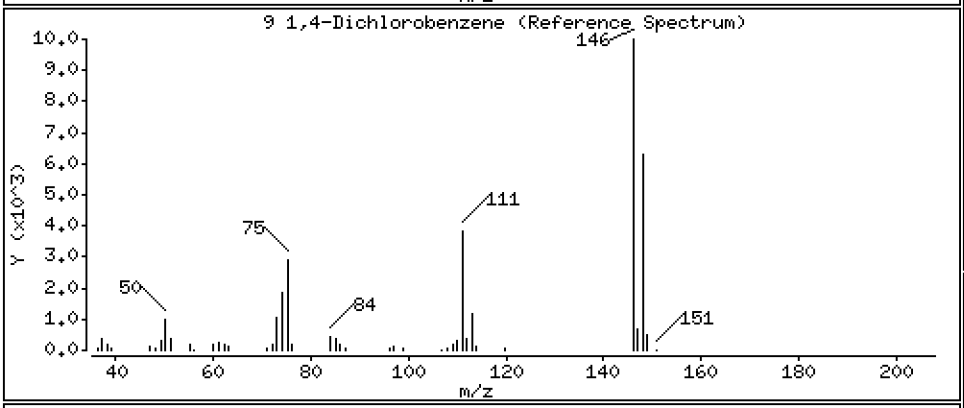
Concentration: 4.913 ug/mL

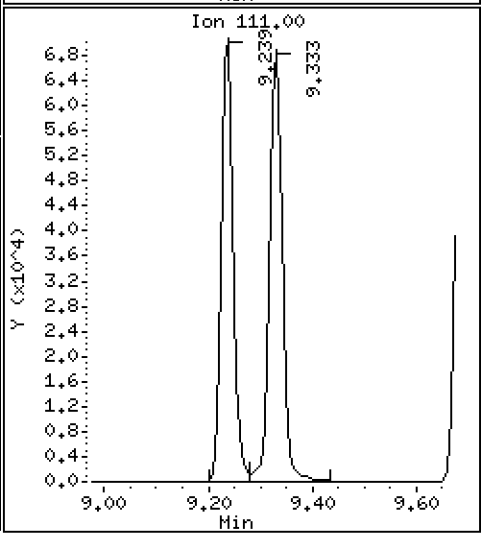


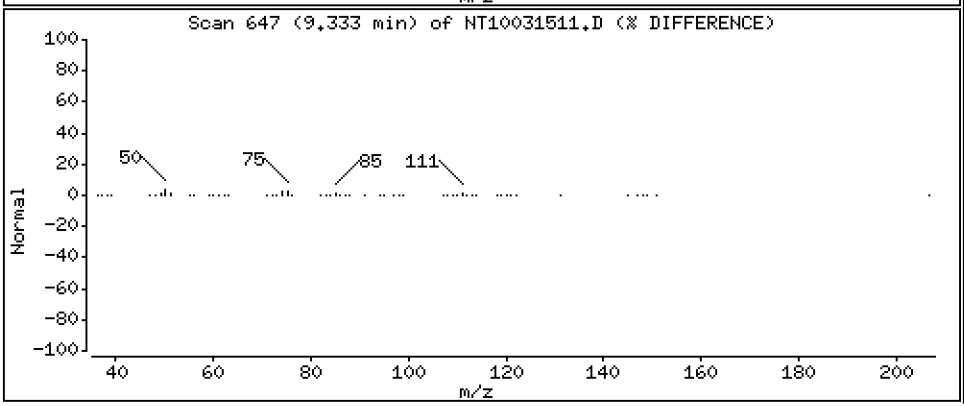












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

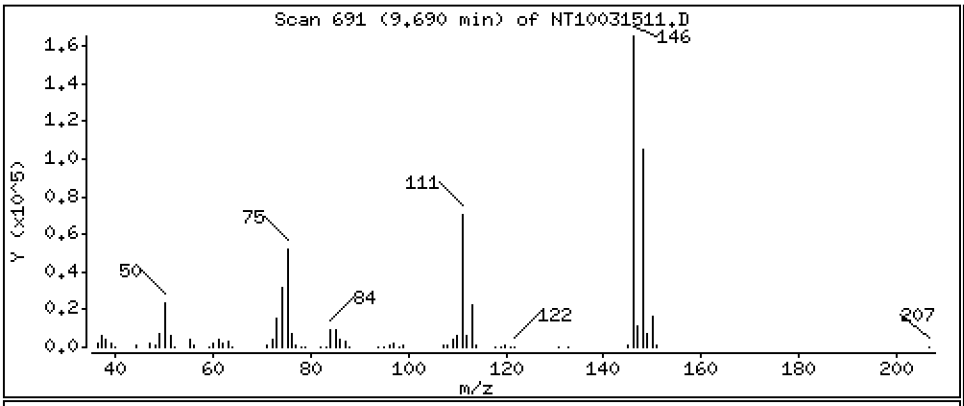
Operator: VTS

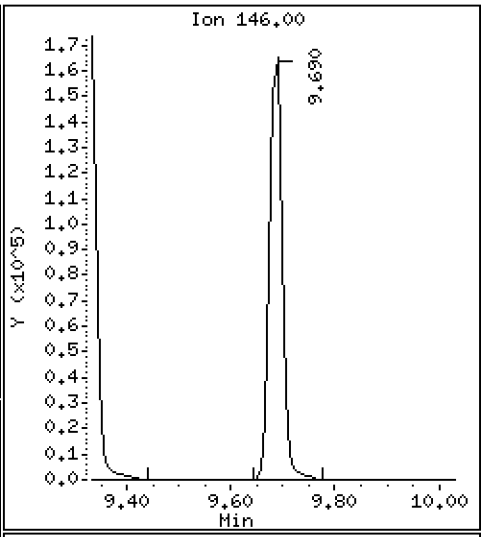
Column phase: ZB-5msi

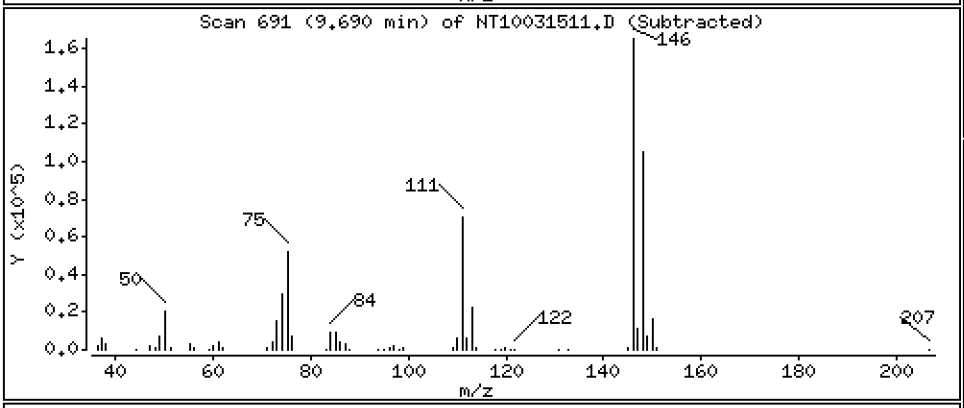
Column diameter: 0.25

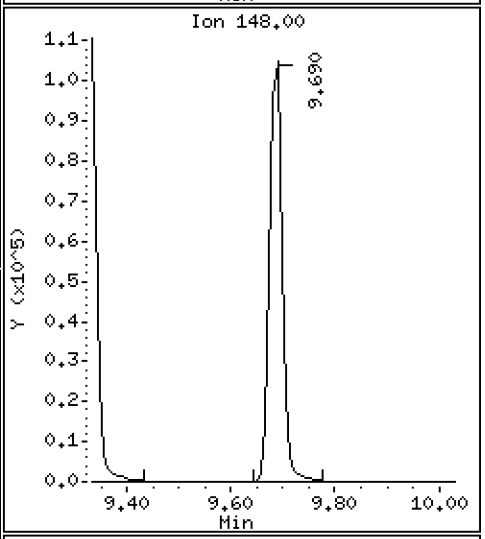
12 1,2-Dichlorobenzene

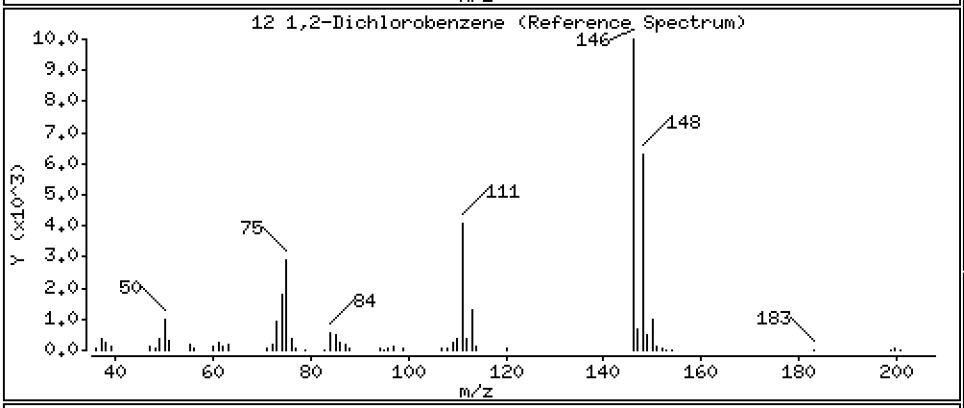
Concentration: 4.882 ug/mL

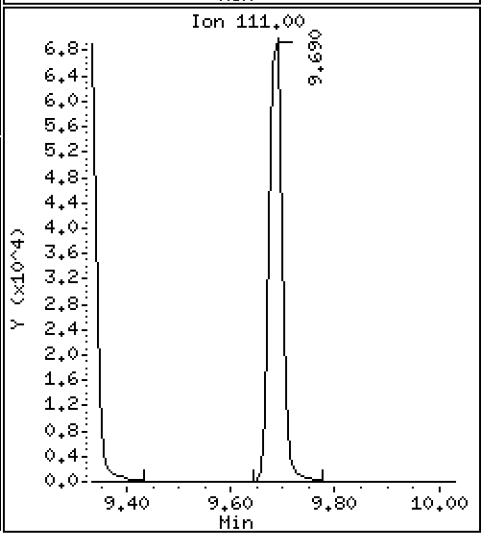


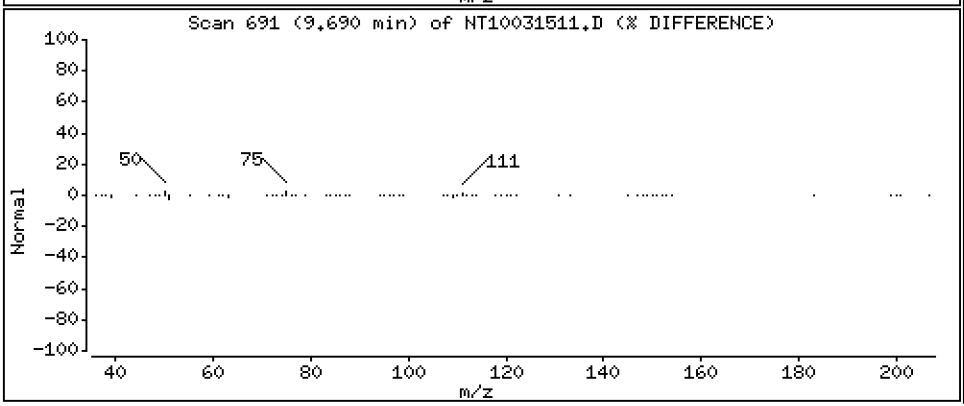












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

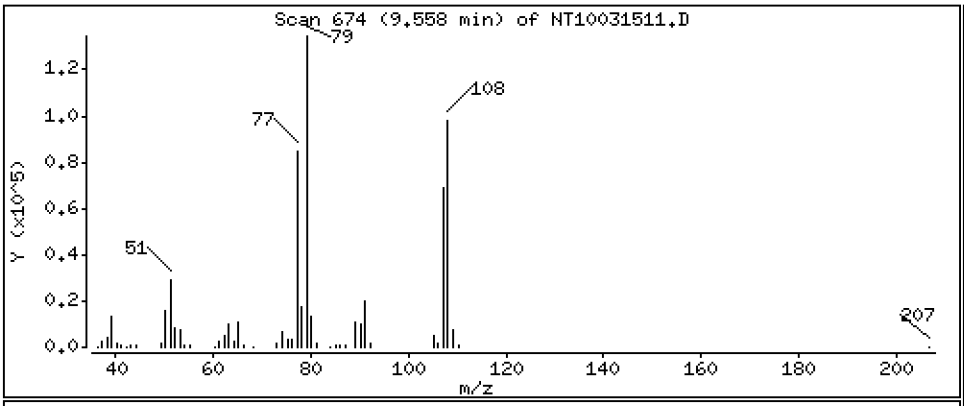
Operator: VTS

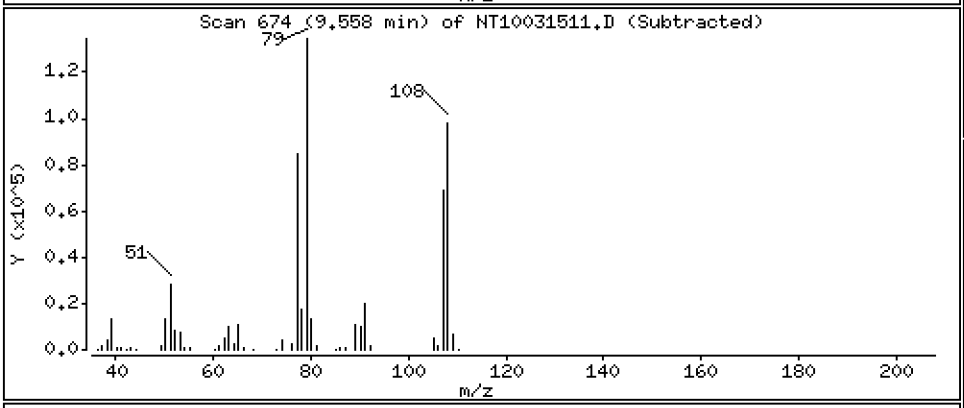
Column phase: ZB-5msi

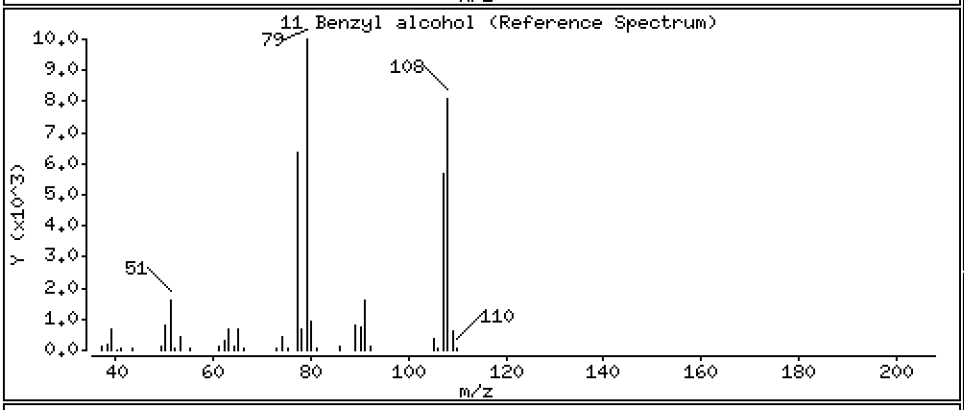
Column diameter: 0.25

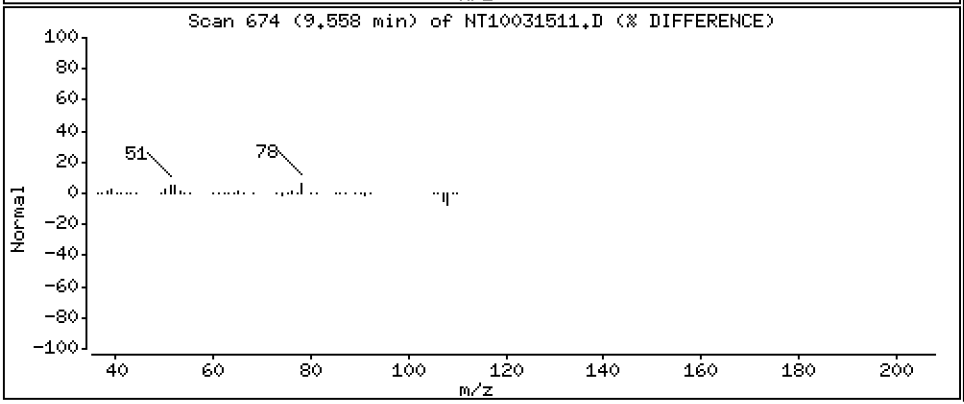
11 Benzyl alcohol

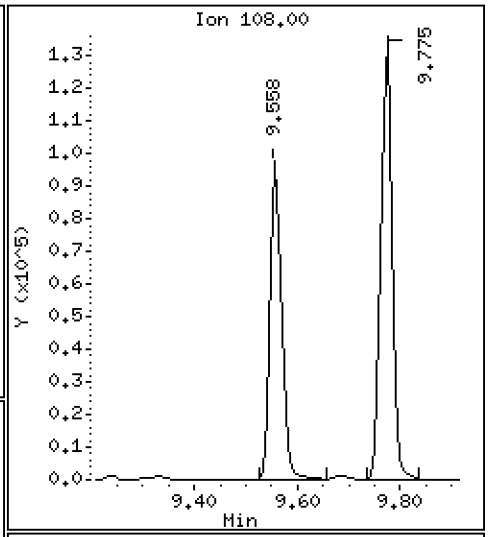
Concentration: 4.927 ug/mL

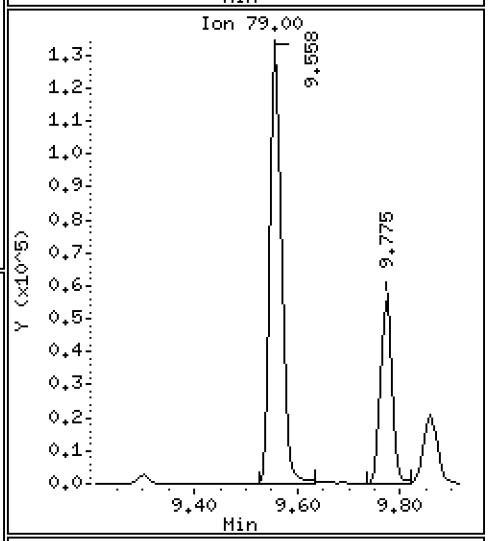


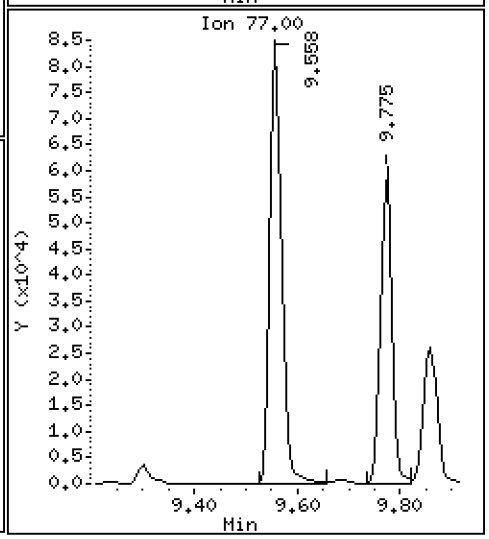












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

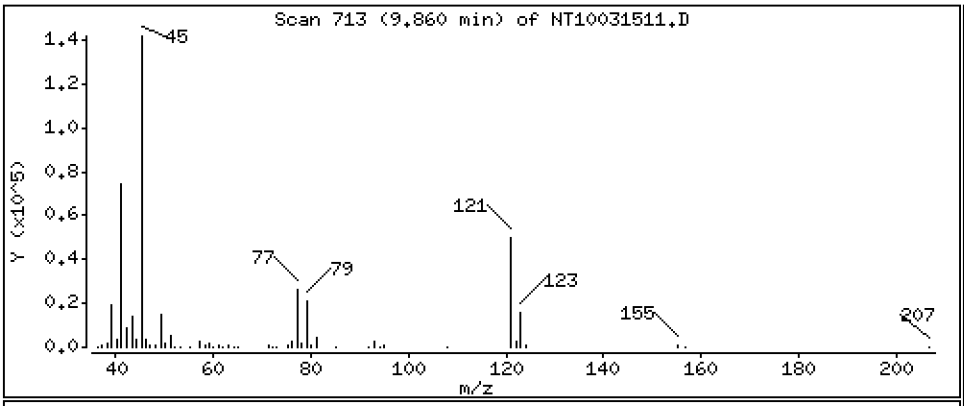
Operator: VTS

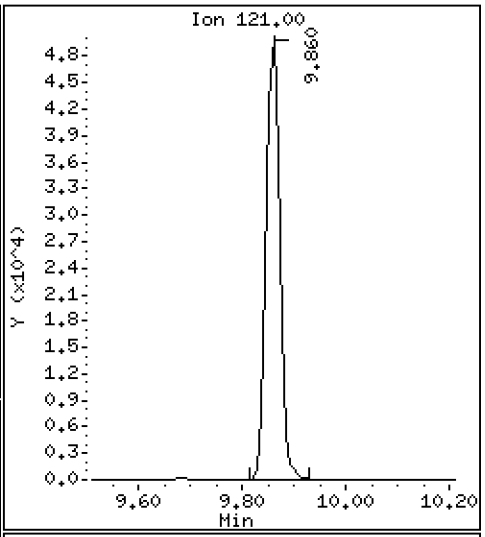
Column phase: ZB-5msi

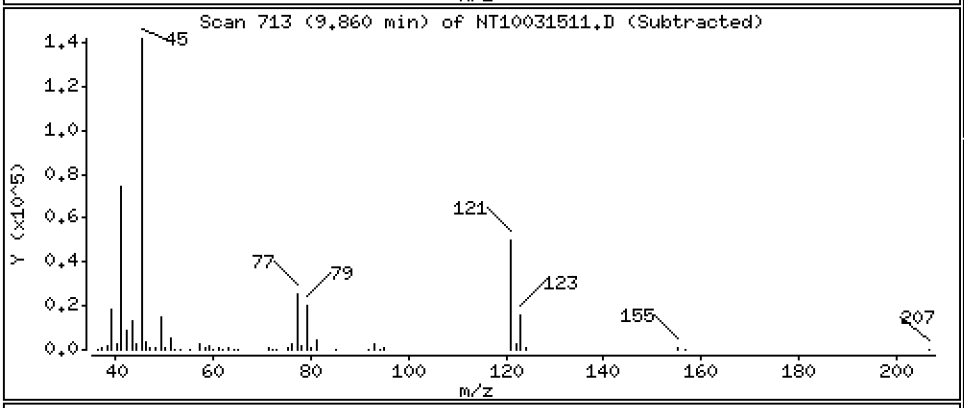
Column diameter: 0.25

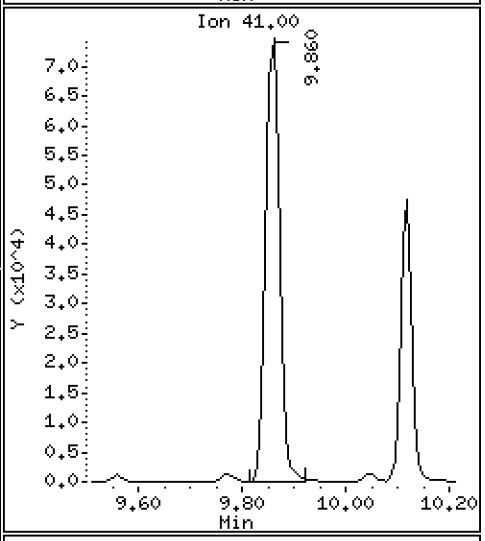
14 2,2'-oxybis(1-Chloropropane)

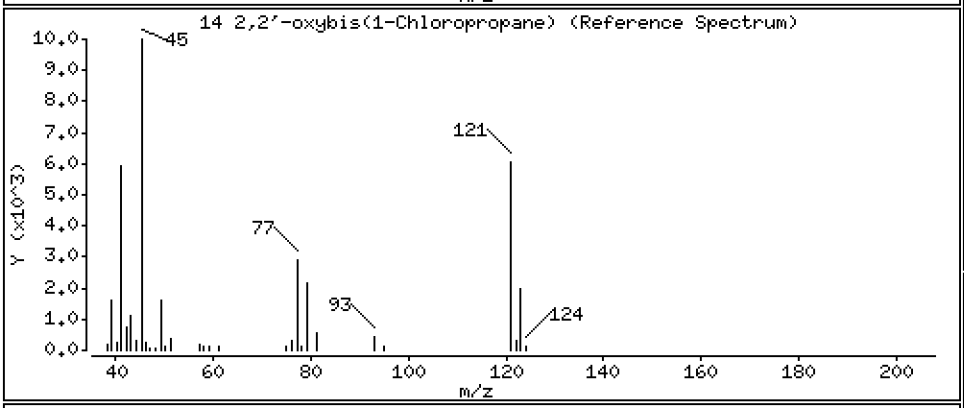
Concentration: 6.214 ug/mL

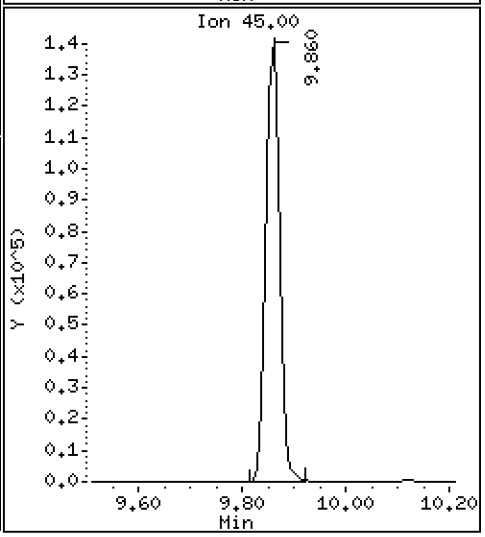


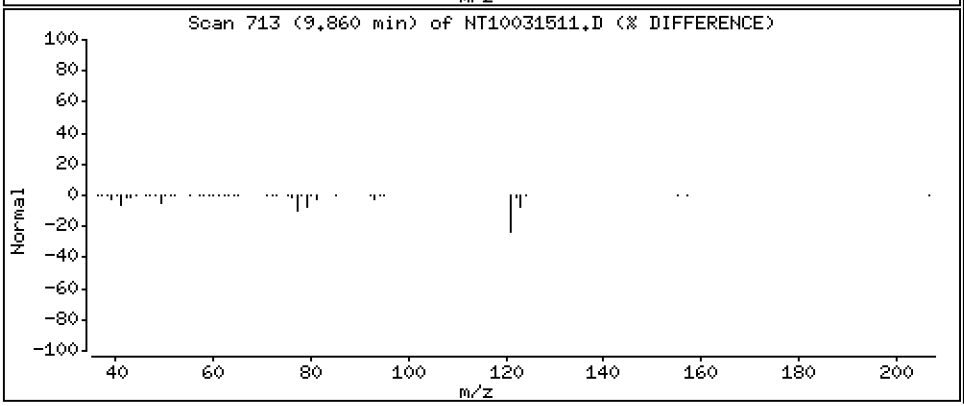












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

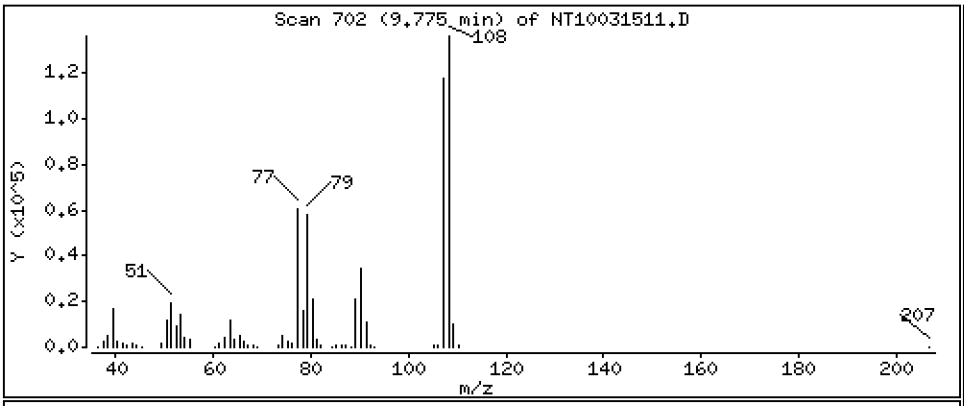
Operator: VTS

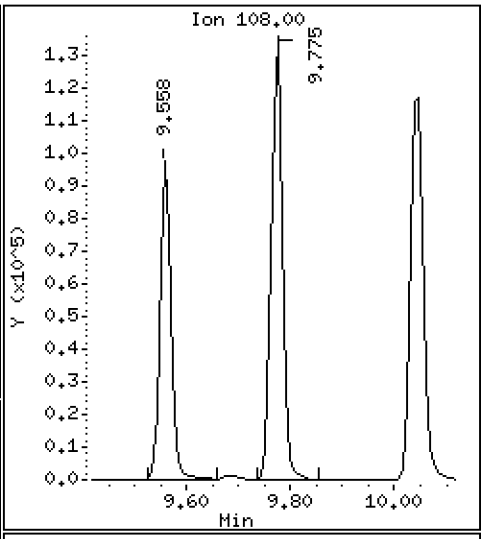
Column phase: ZB-5msi

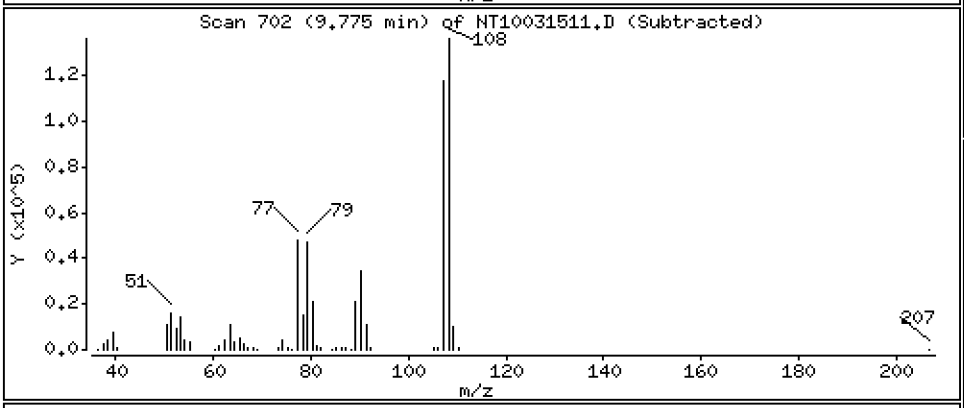
Column diameter: 0.25

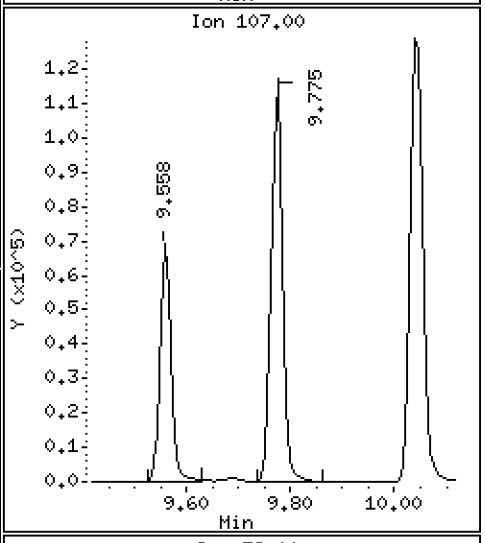
13 2-Methylphenol

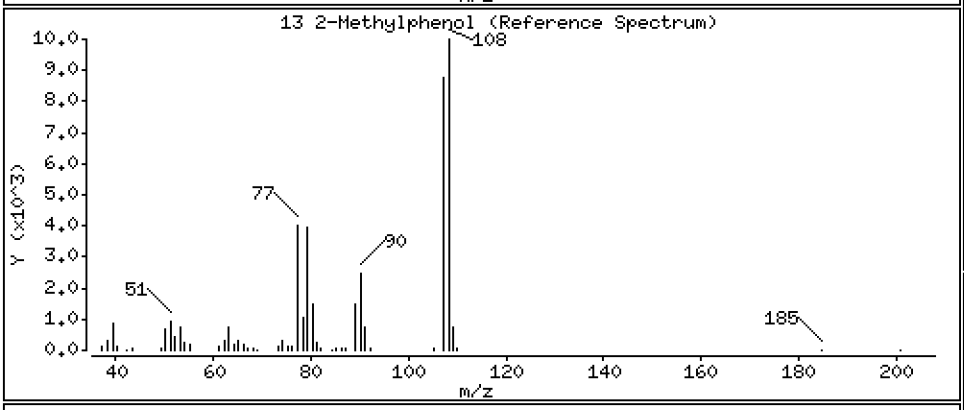
Concentration: 4.215 ug/mL

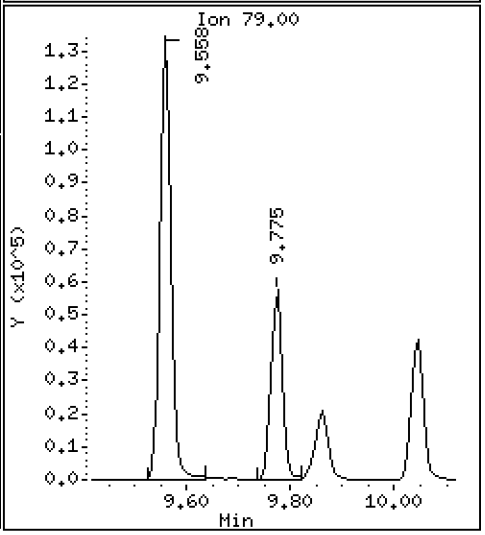


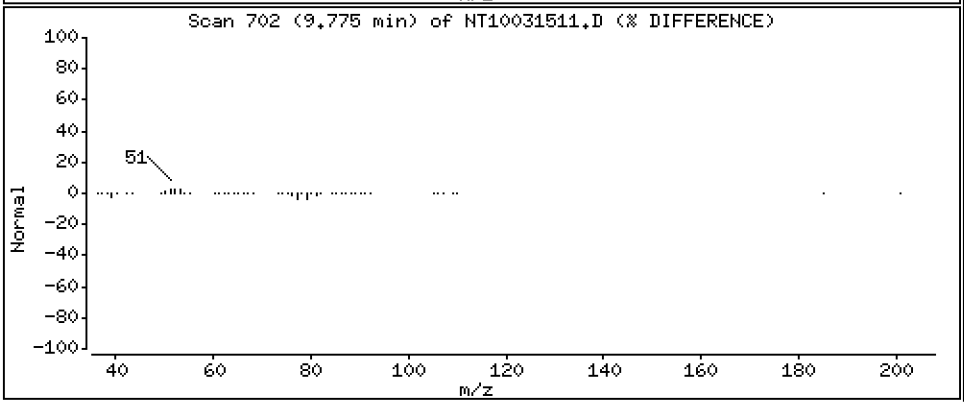












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

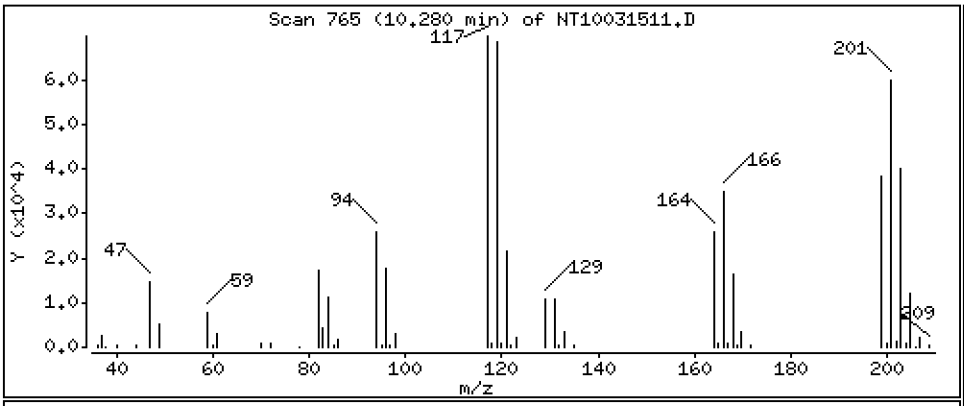
Operator: VTS

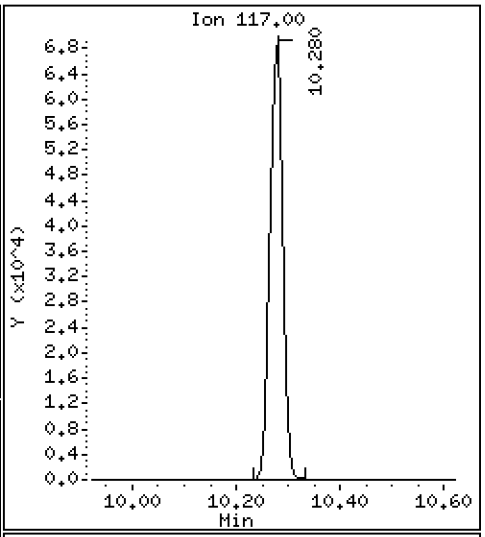
Column phase: ZB-5msi

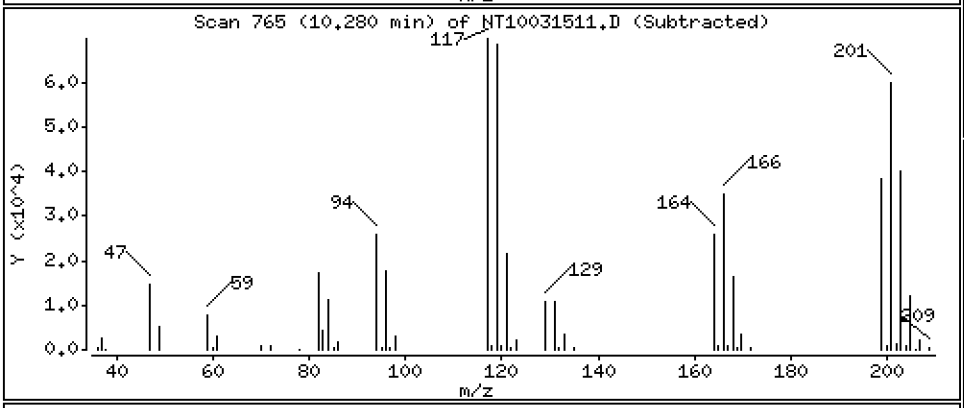
Column diameter: 0.25

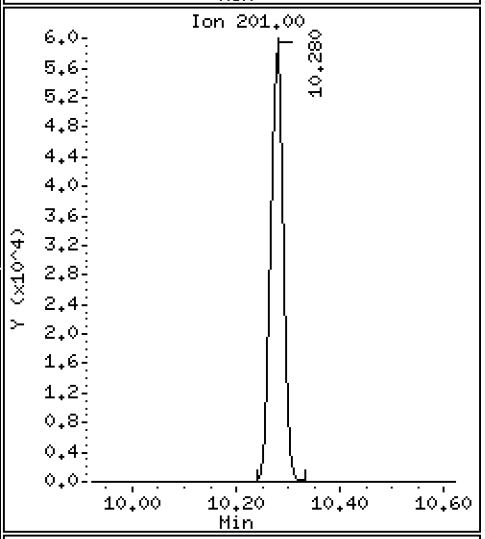
17 Hexachloroethane

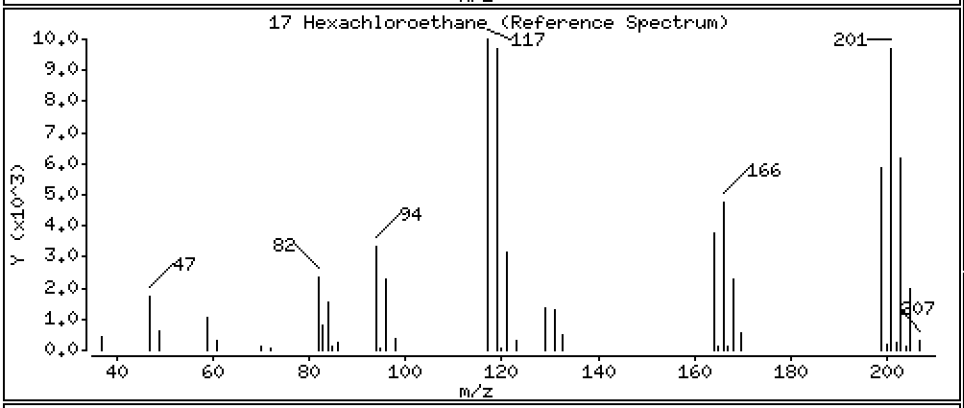
Concentration: 5.003 ug/mL

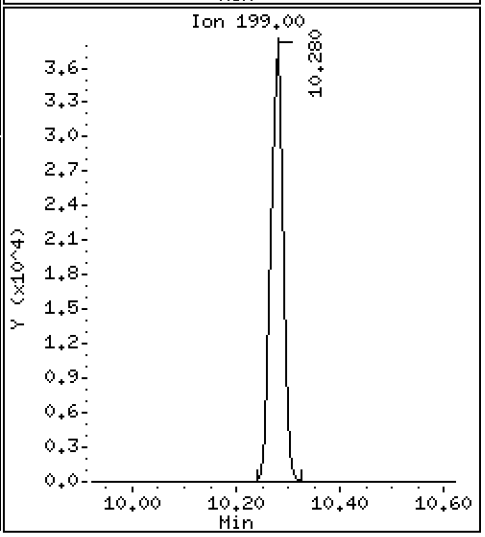


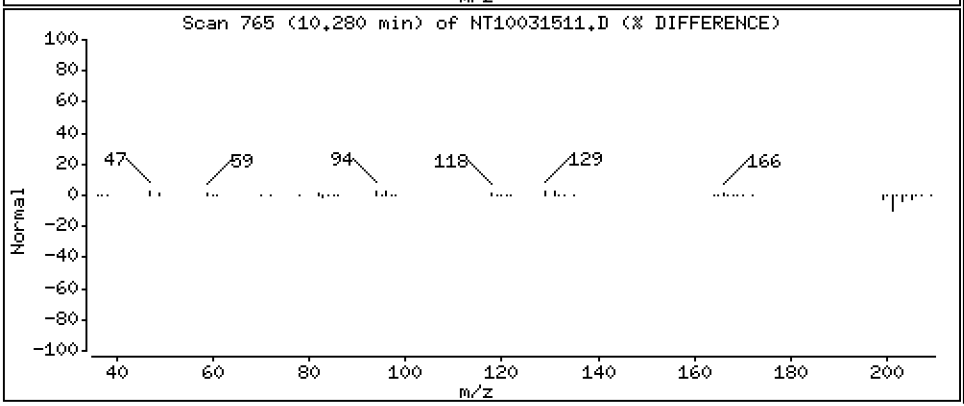












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

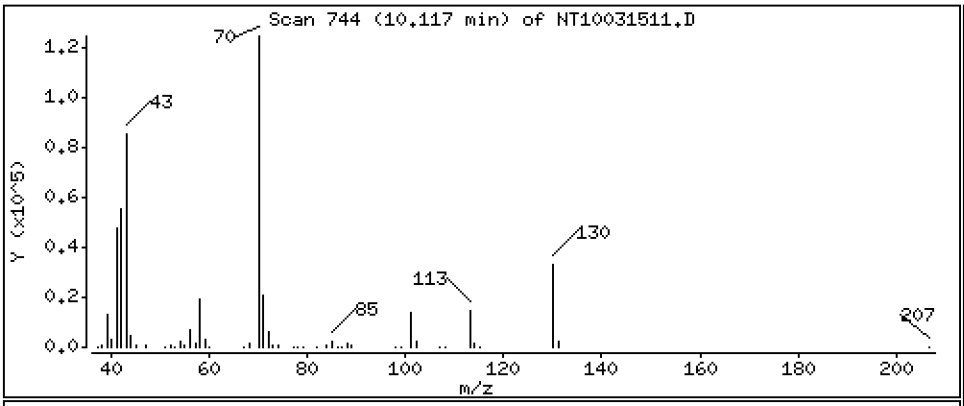
Operator: VTS

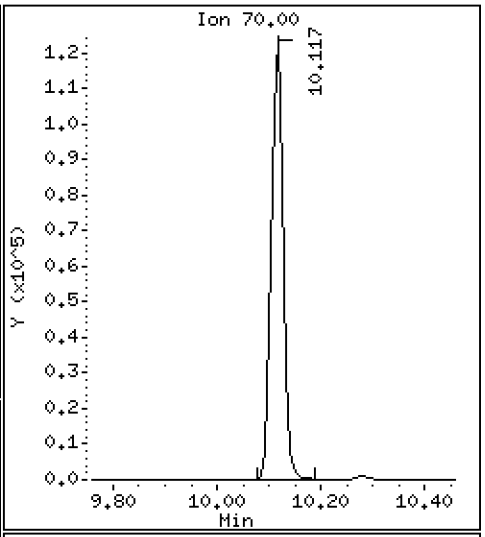
Column phase: ZB-5msi

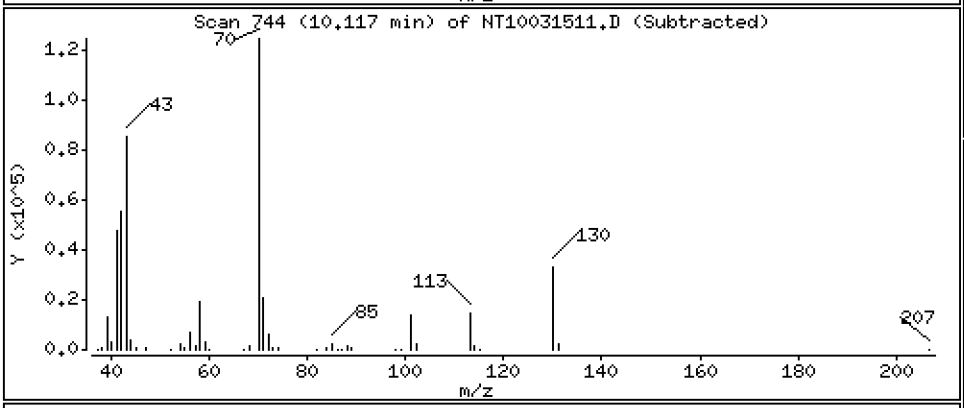
Column diameter: 0.25

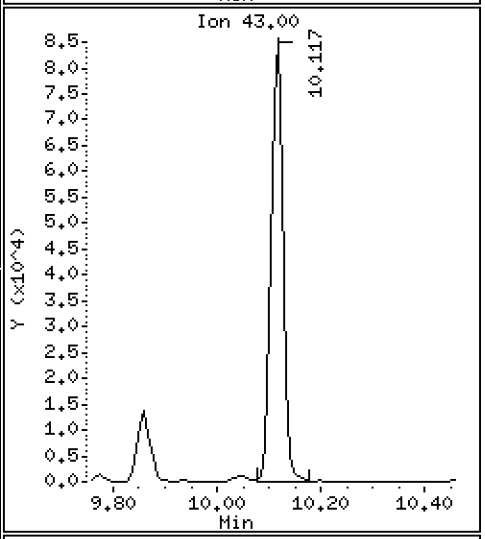
16 N-Nitroso-di-n-propylamine

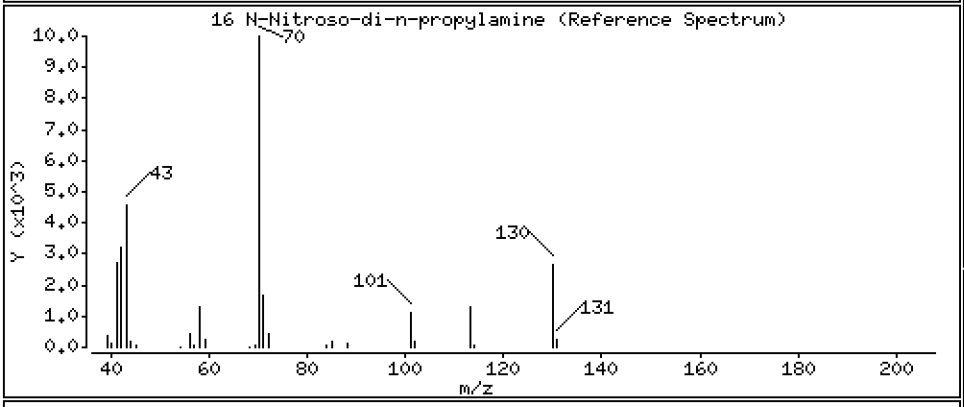
Concentration: 5.179 ug/mL

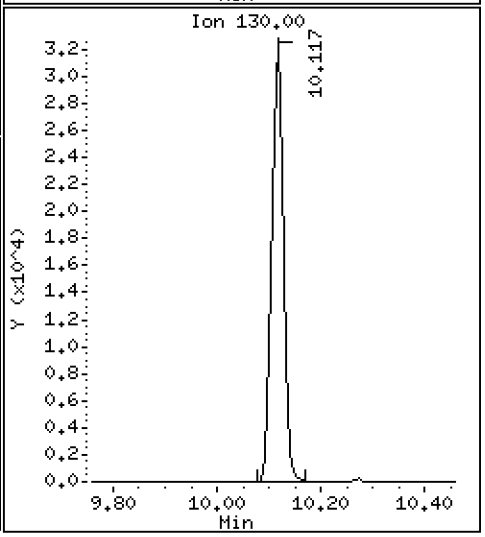


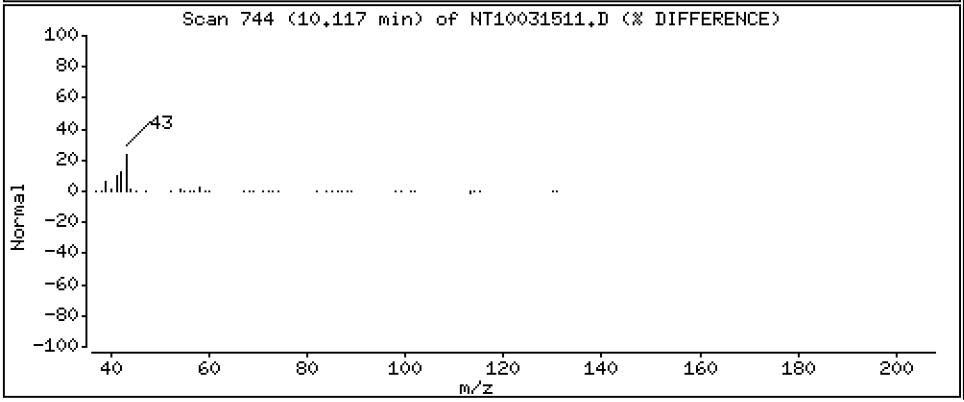












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

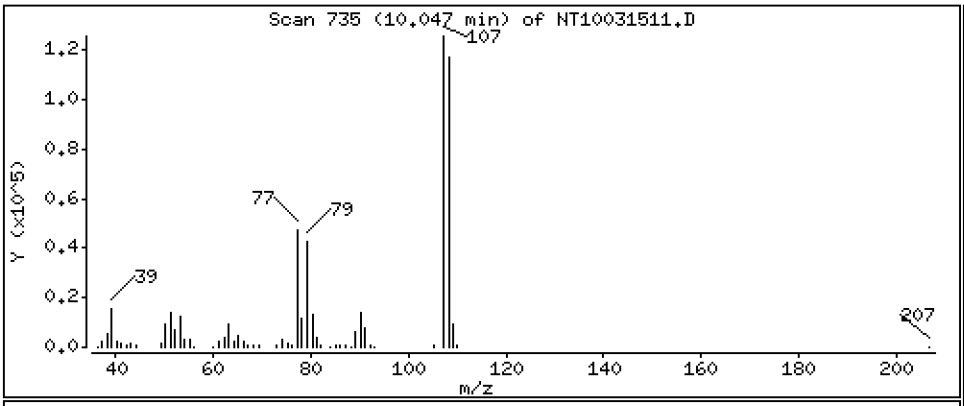
Operator: VTS

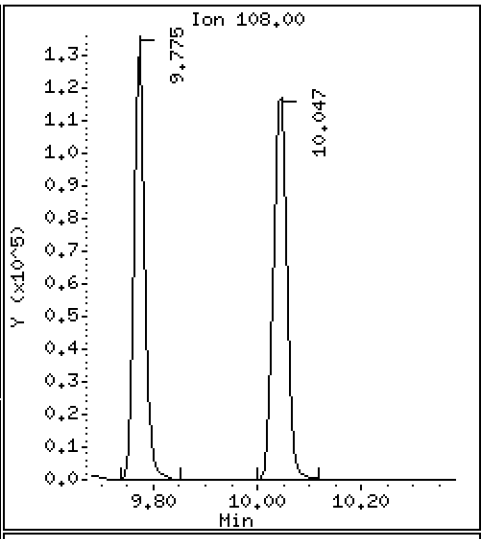
Column phase: ZB-5msi

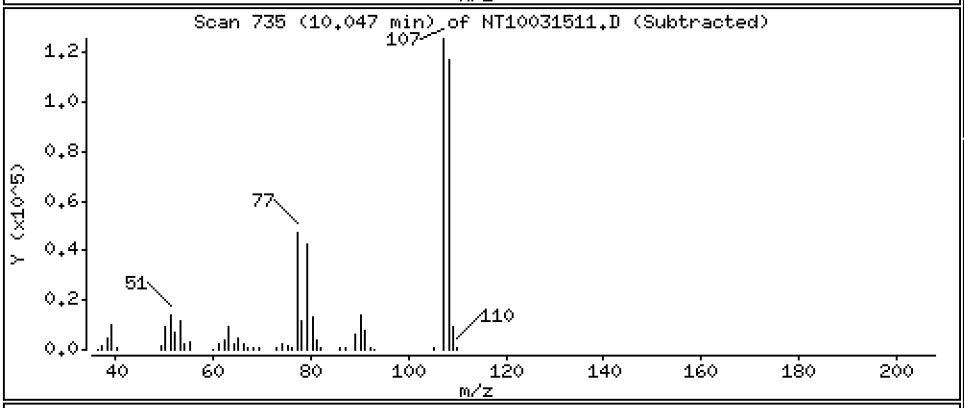
Column diameter: 0.25

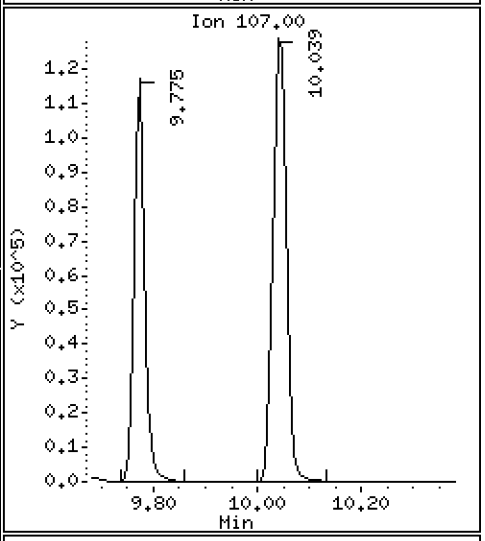
15 4-Methylphenol

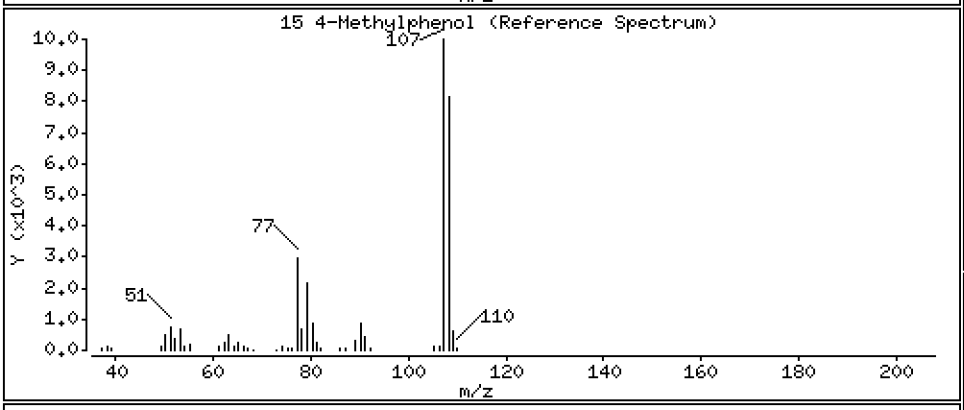
Concentration: 4.365 ug/mL

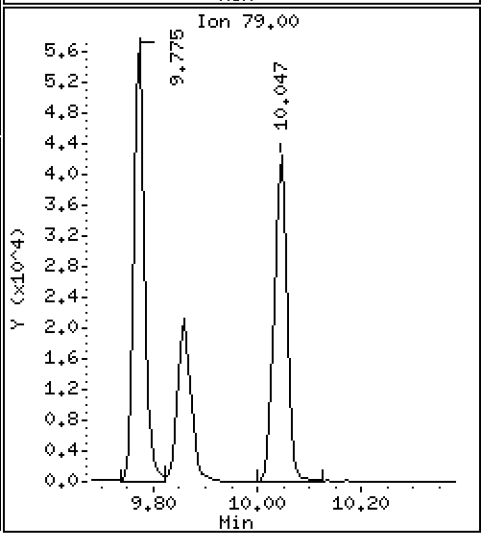


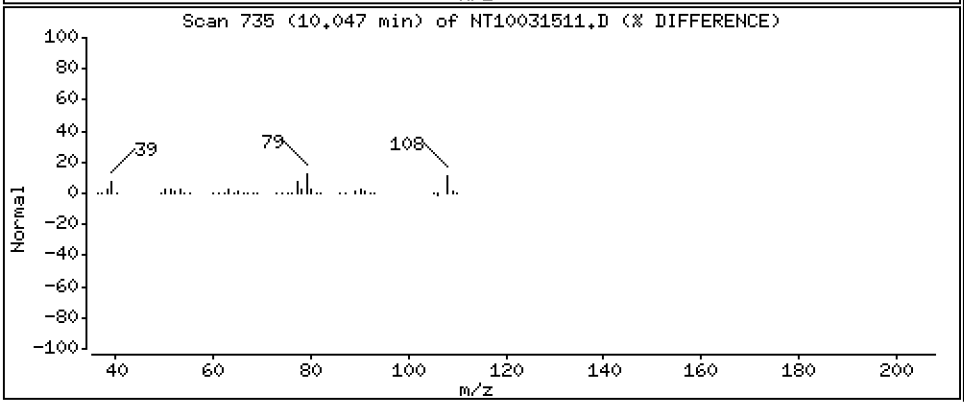












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

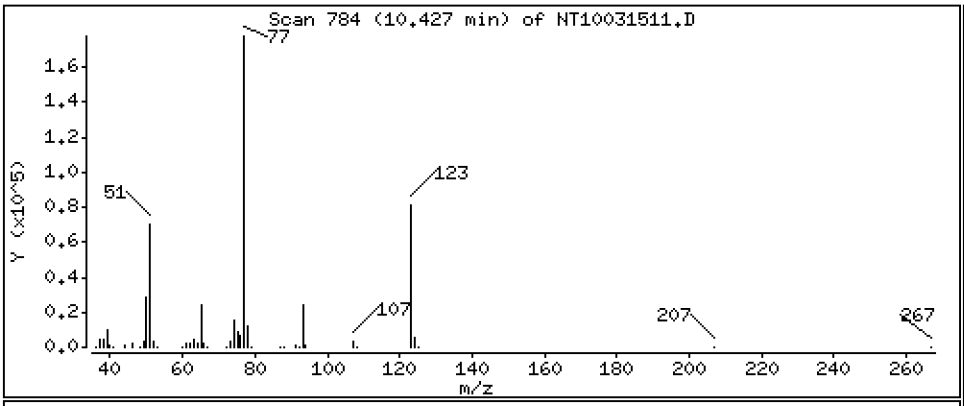
Operator: VTS

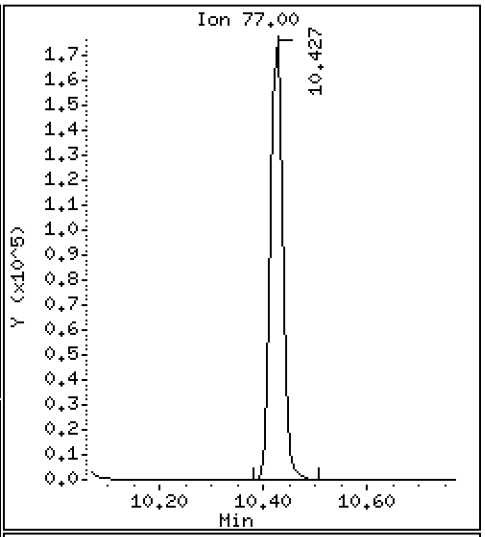
Column phase: ZB-5msi

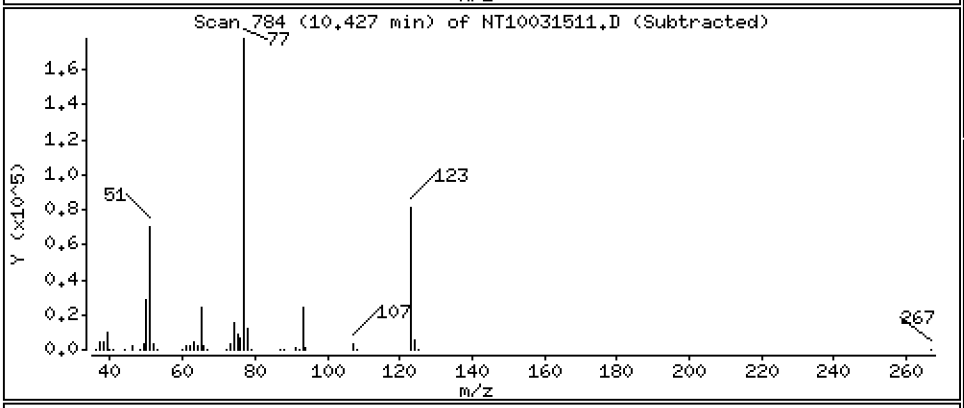
Column diameter: 0.25

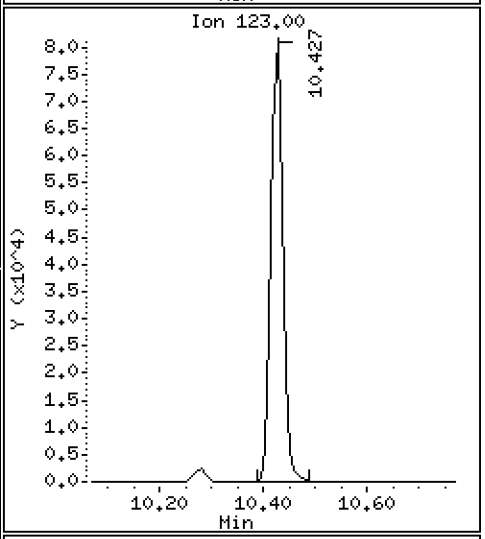
19 Nitrobenzene

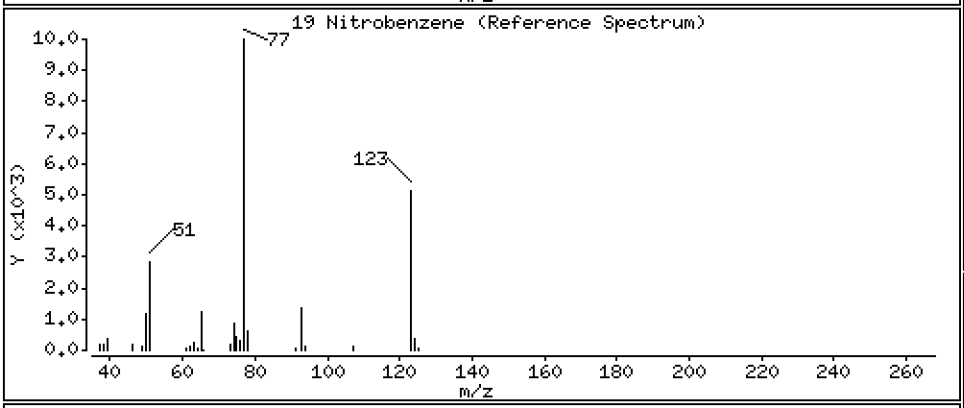
Concentration: 4.858 ug/mL

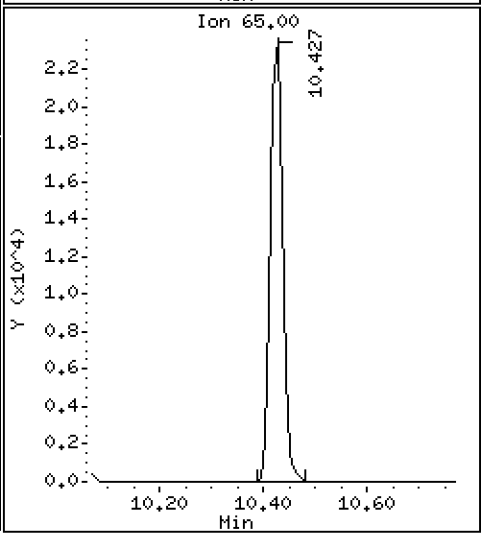


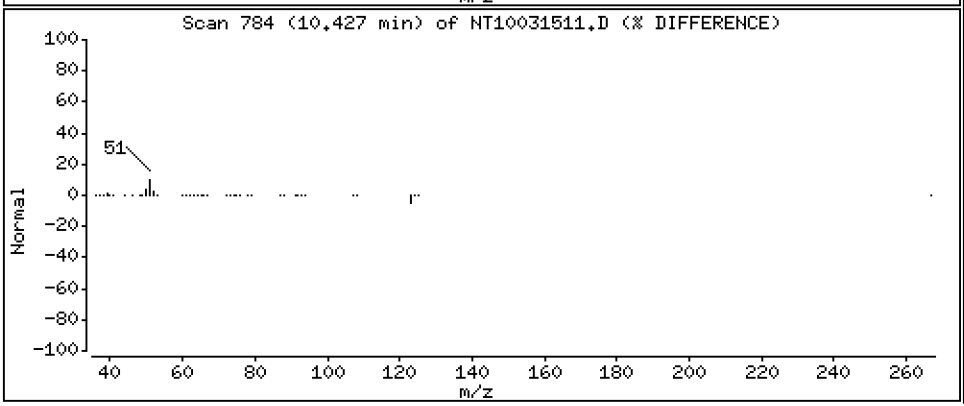












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

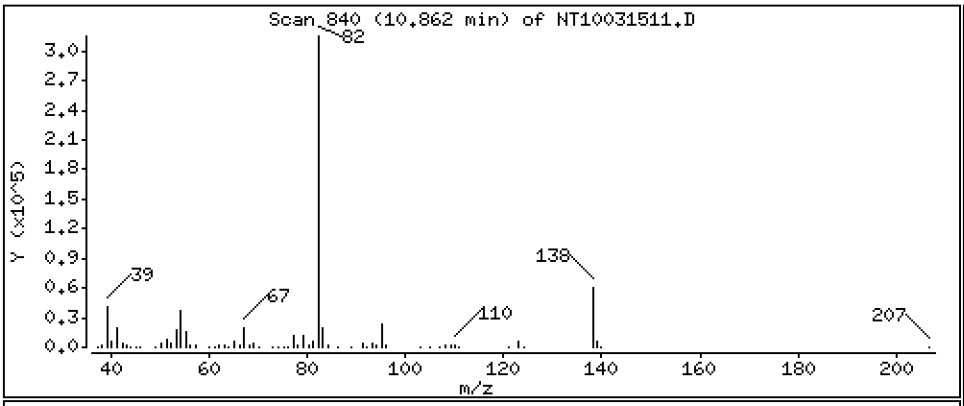
Operator: VTS

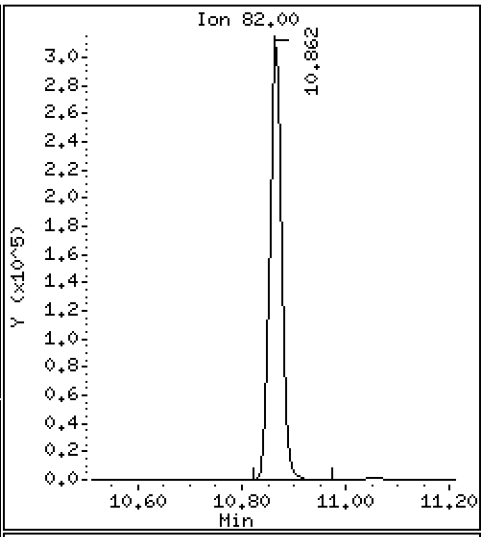
Column phase: ZB-5msi

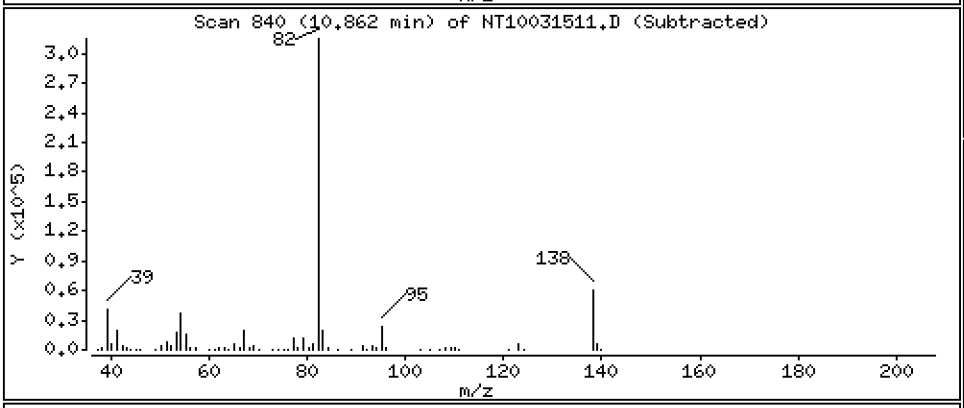
Column diameter: 0.25

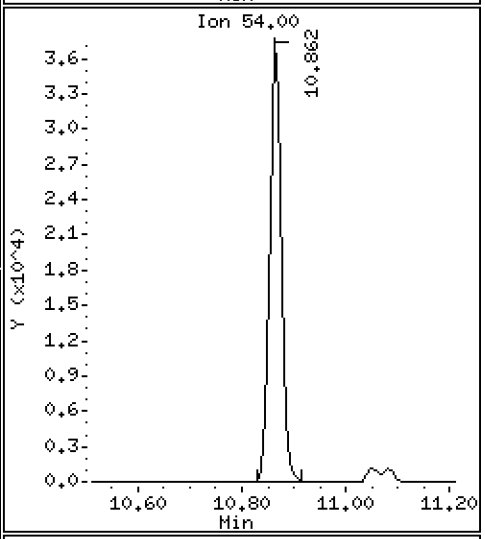
20 Isophorone

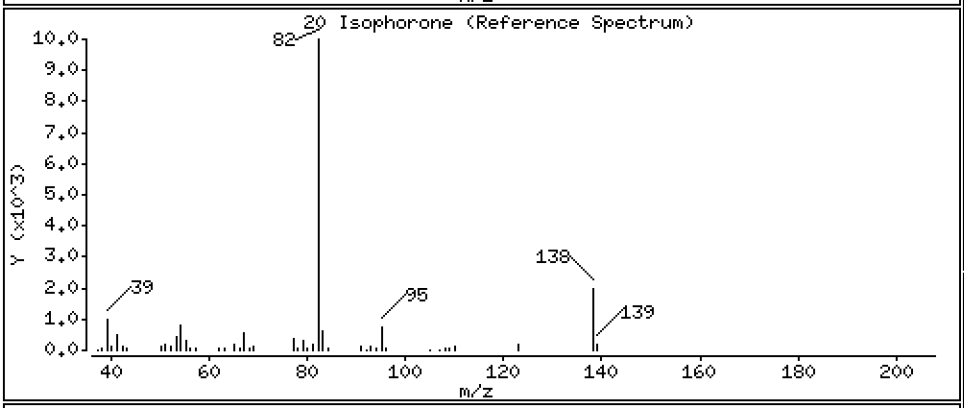
Concentration: 7.696 ug/mL

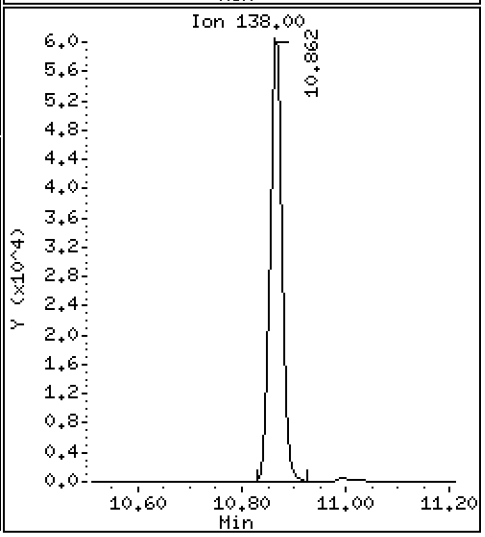


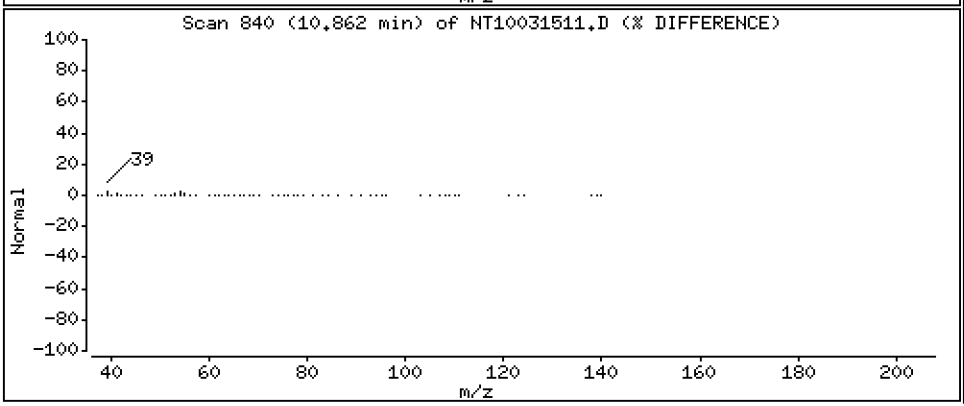












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

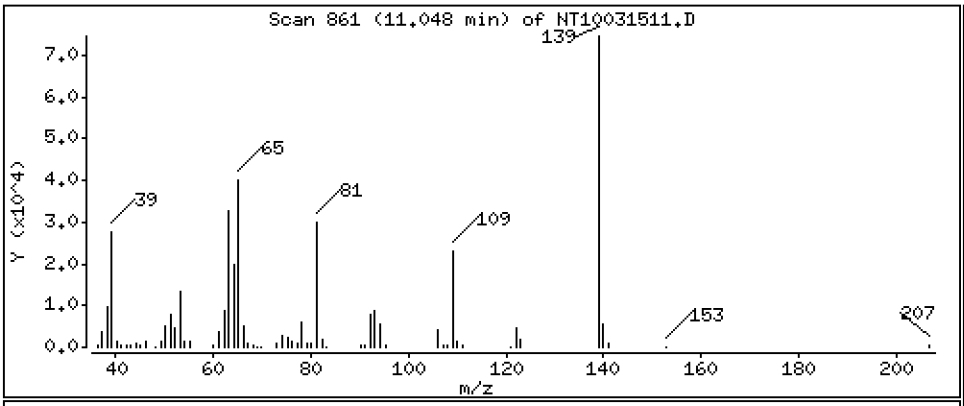
Operator: VTS

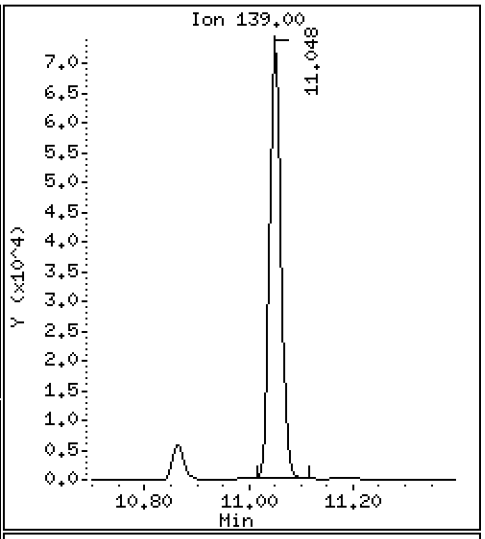
Column phase: ZB-5msi

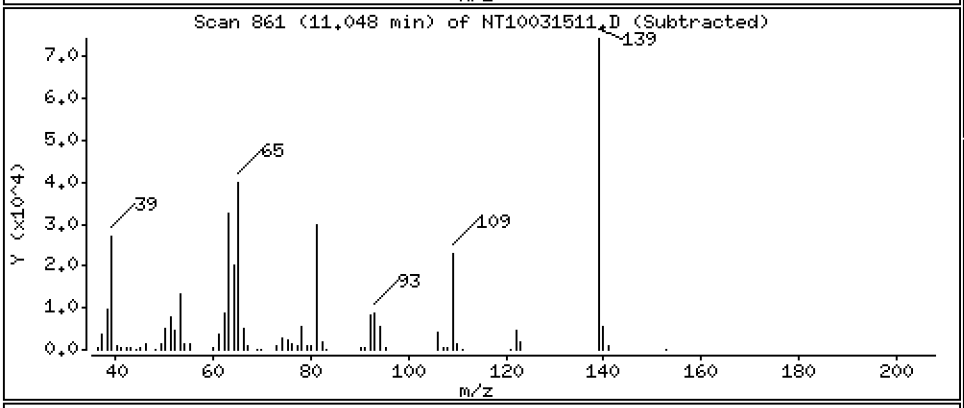
Column diameter: 0.25

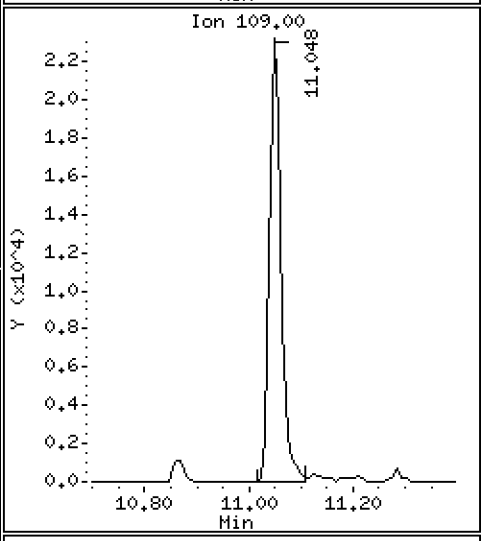
21 2-Nitrophenol

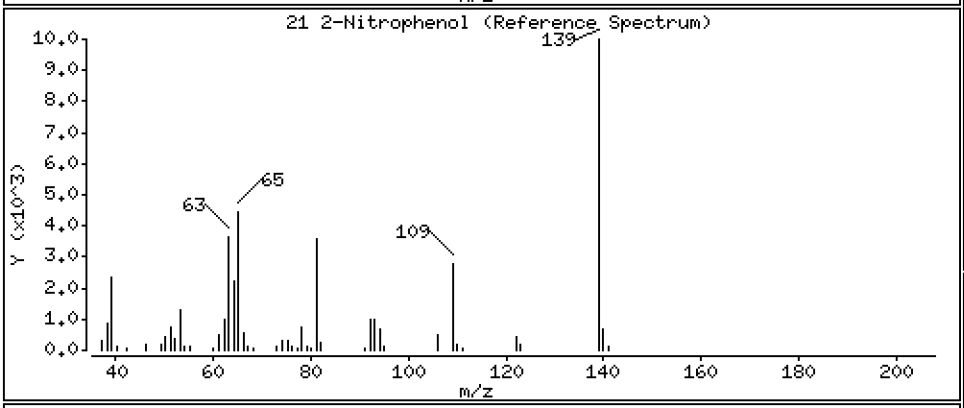
Concentration: 3.995 ug/mL

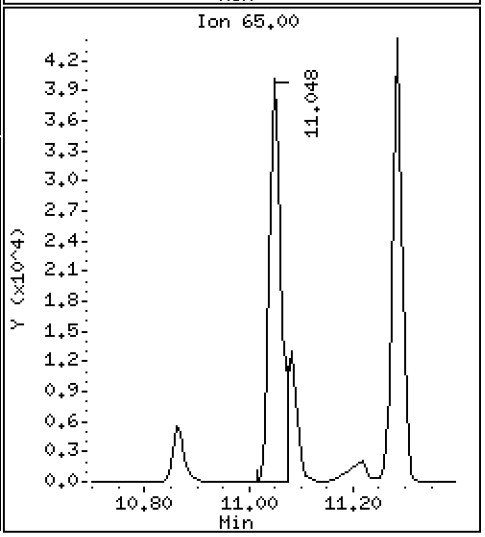


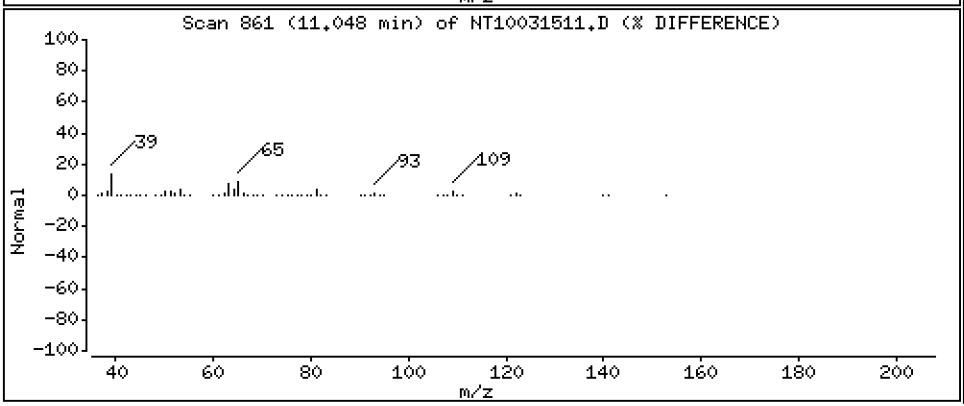












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

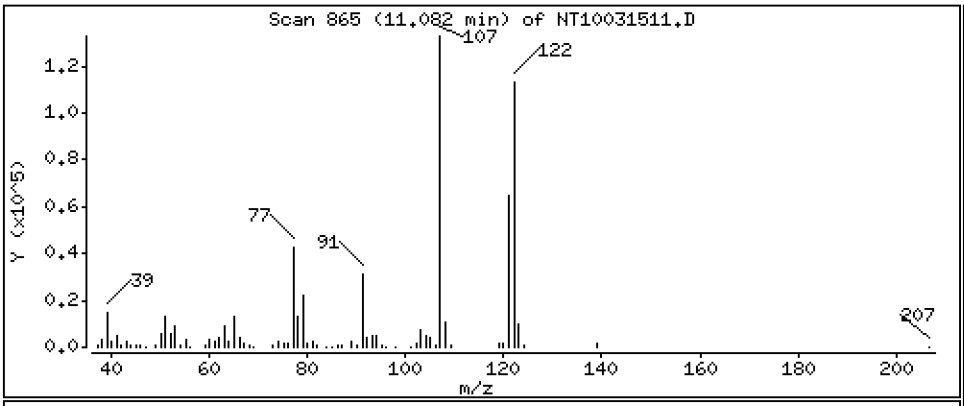
Operator: VTS

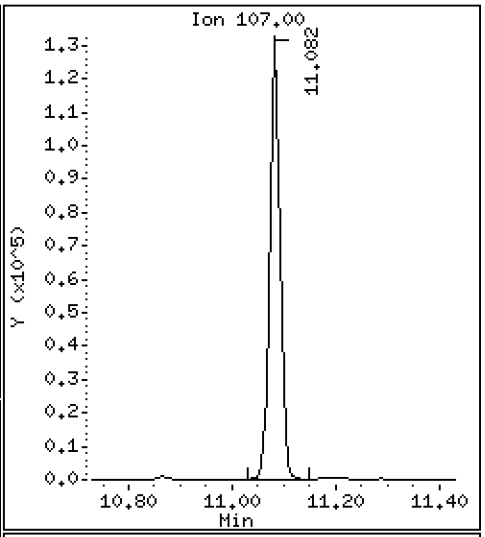
Column phase: ZB-5msi

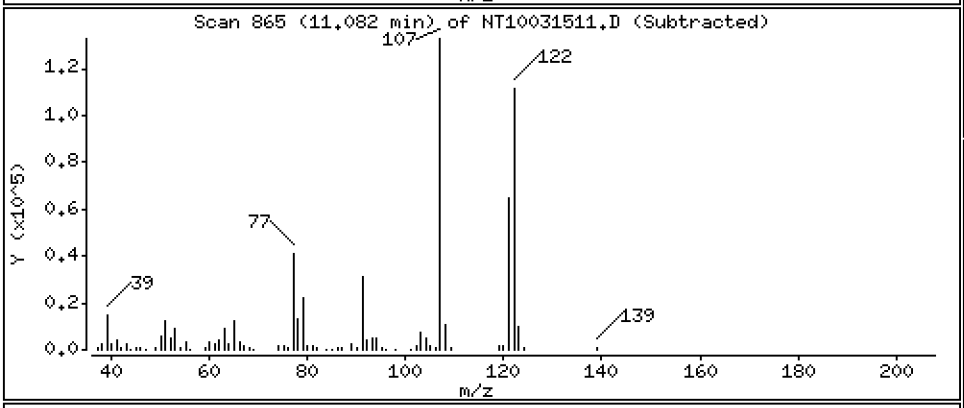
Column diameter: 0.25

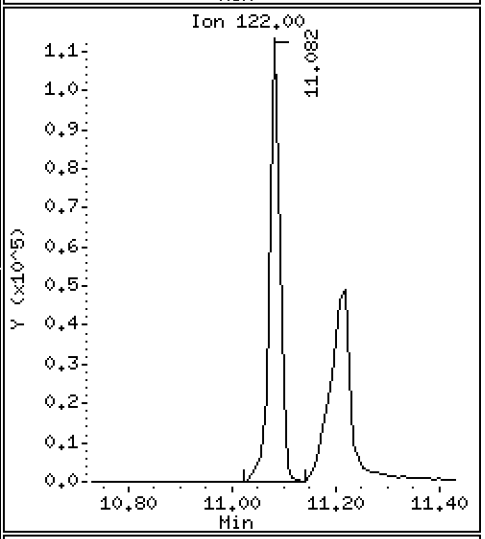
22 2,4-Dimethylphenol

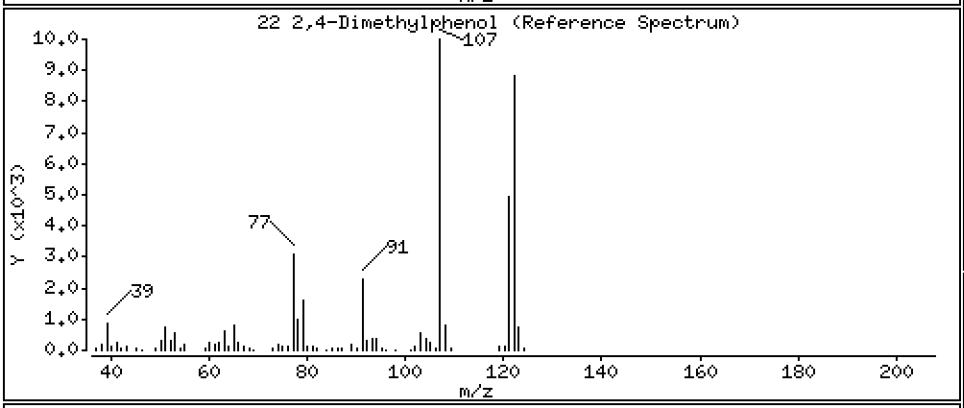
Concentration: 3.632 ug/mL

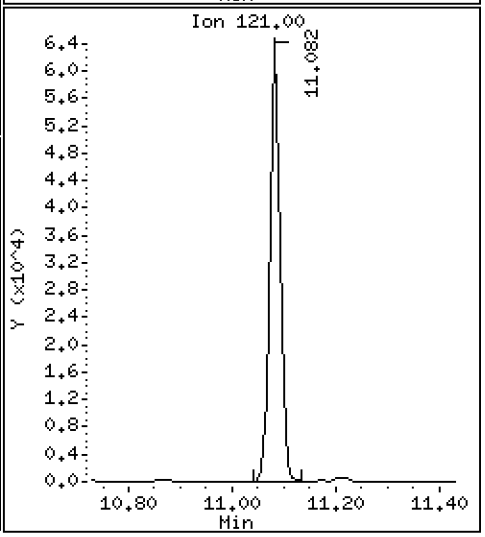


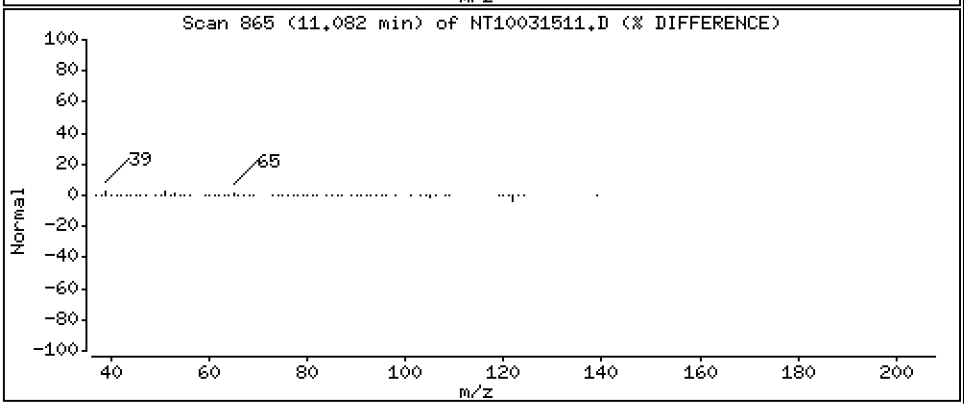












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

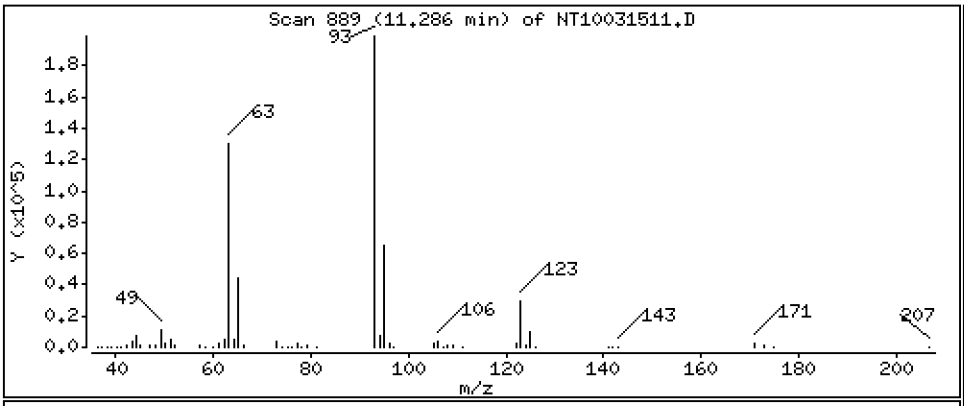
Operator: VTS

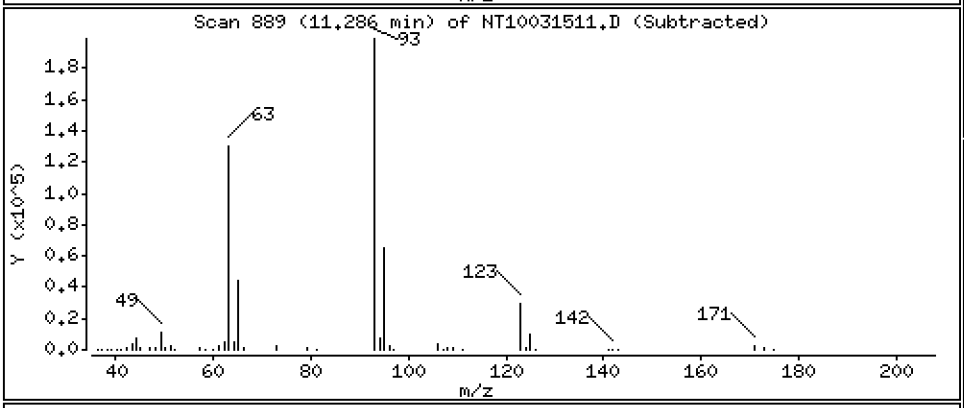
Column phase: ZB-5msi

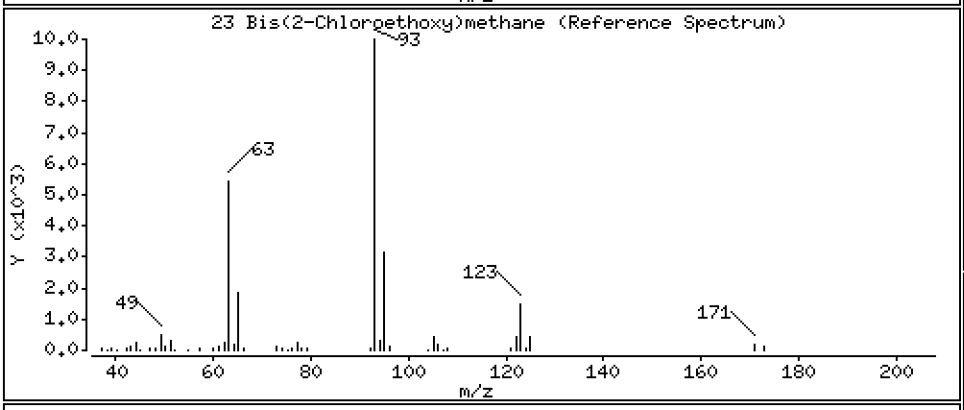
Column diameter: 0.25

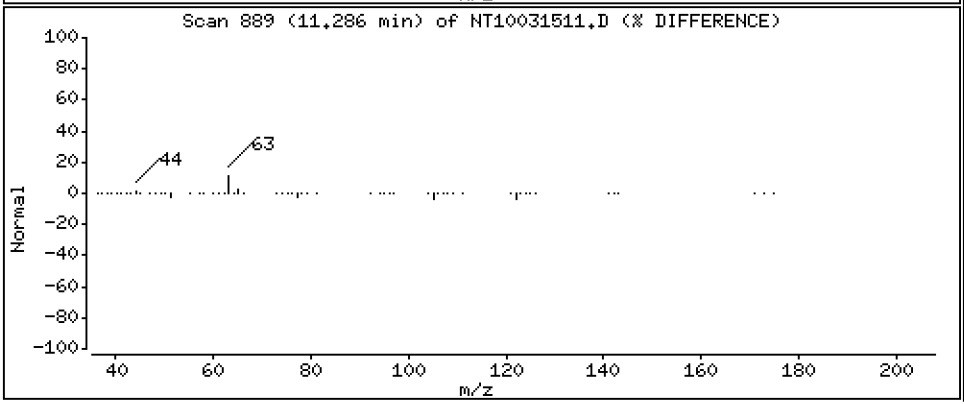
23 Bis(2-Chloroethoxy)methane

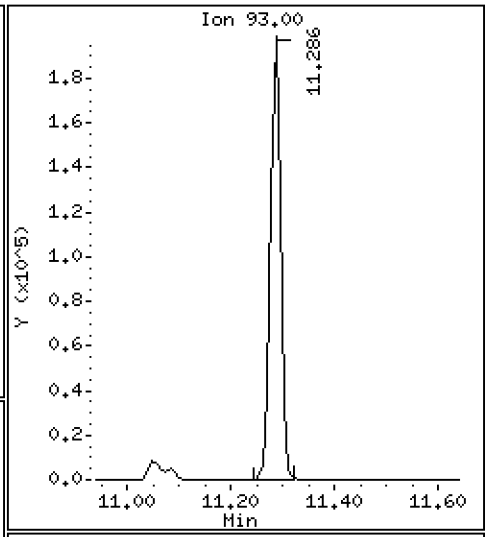
Concentration: 5.654 ug/mL

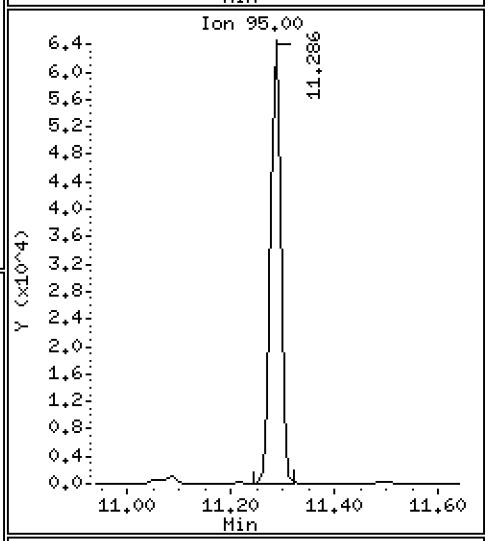


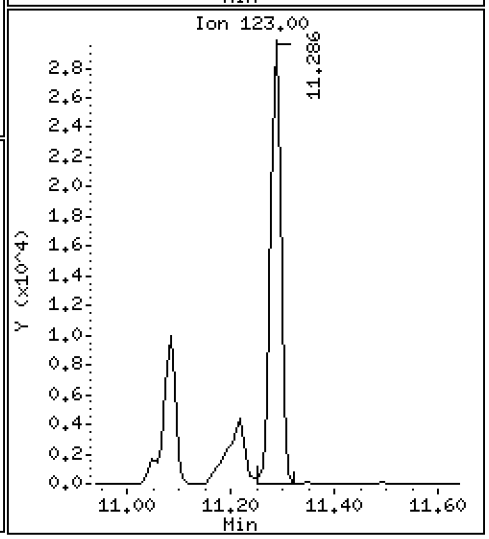












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

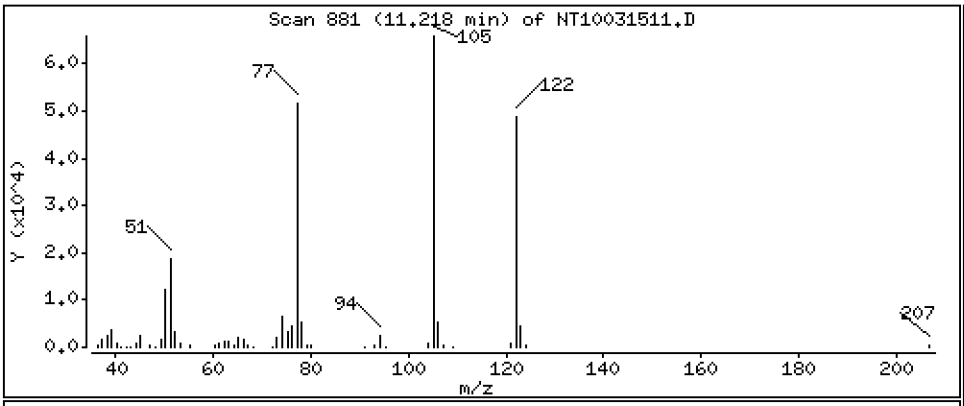
Operator: VTS

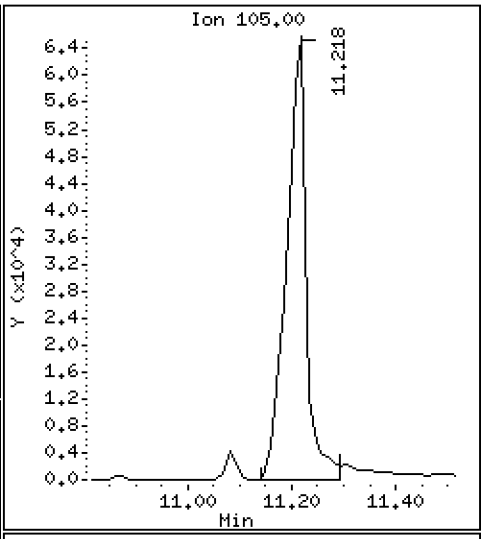
Column phase: ZB-5msi

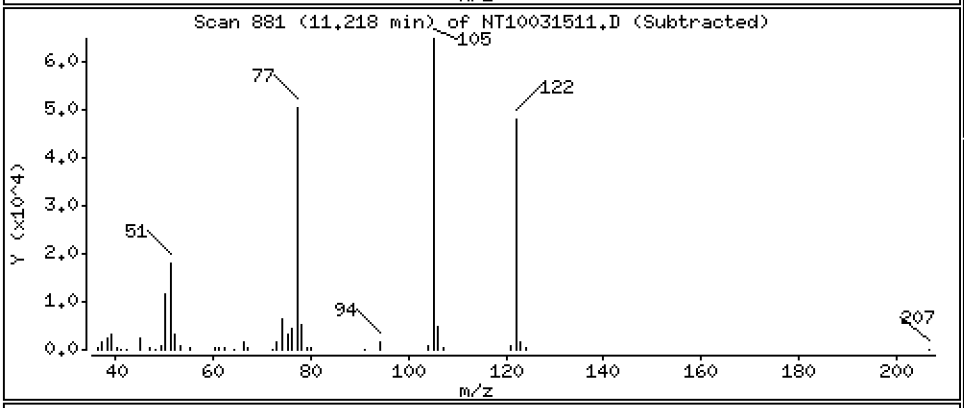
Column diameter: 0.25

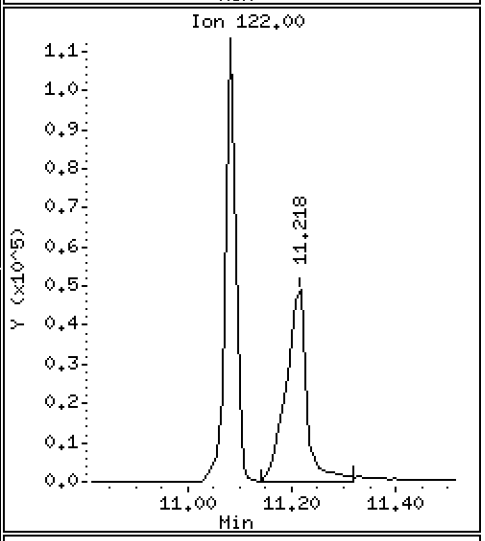
24 Benzoic acid

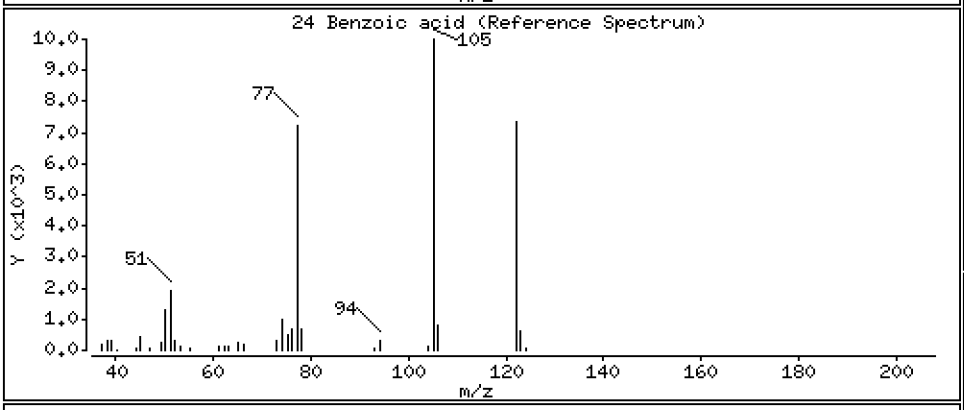
Concentration: 5.952 ug/mL

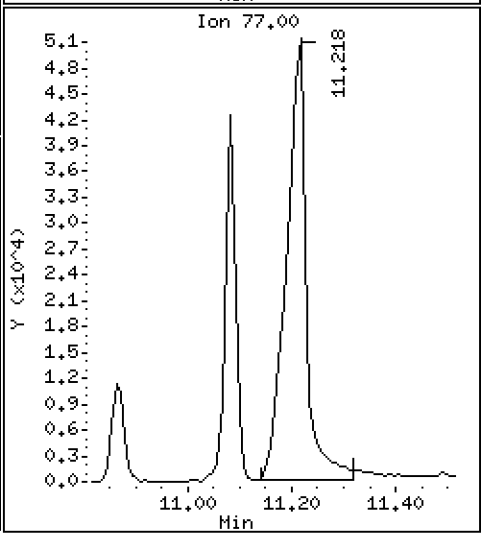


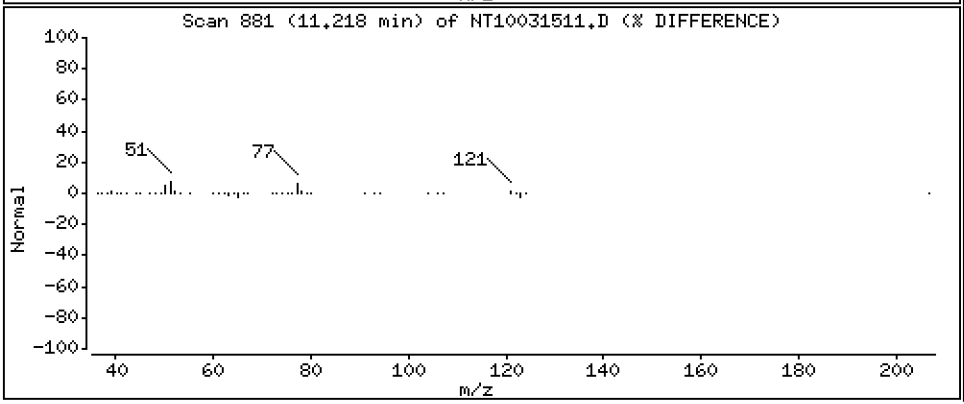












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

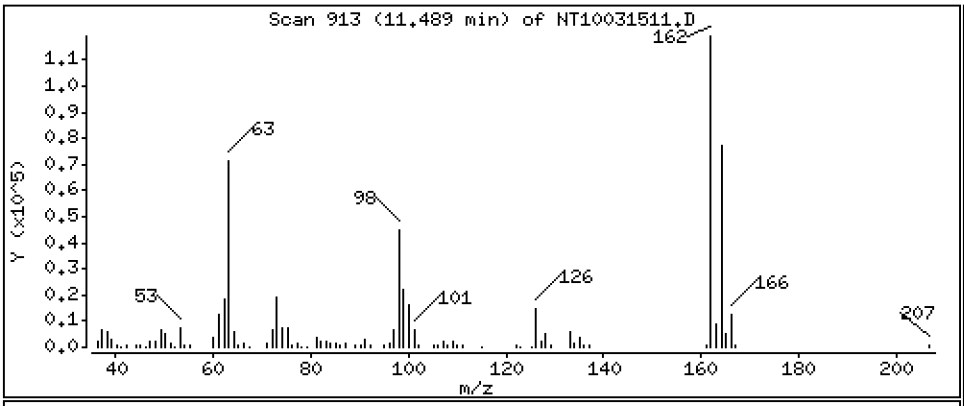
Operator: VTS

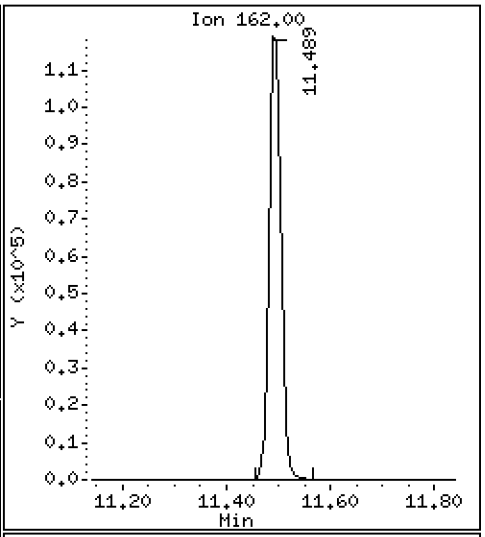
Column phase: ZB-5msi

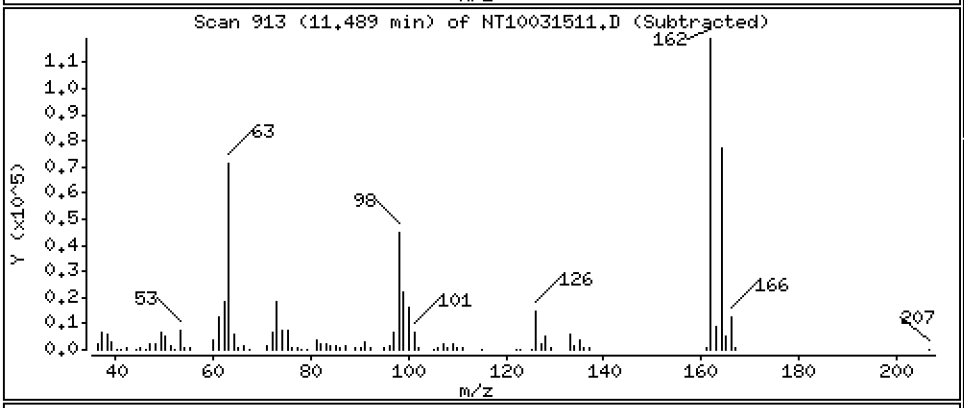
Column diameter: 0.25

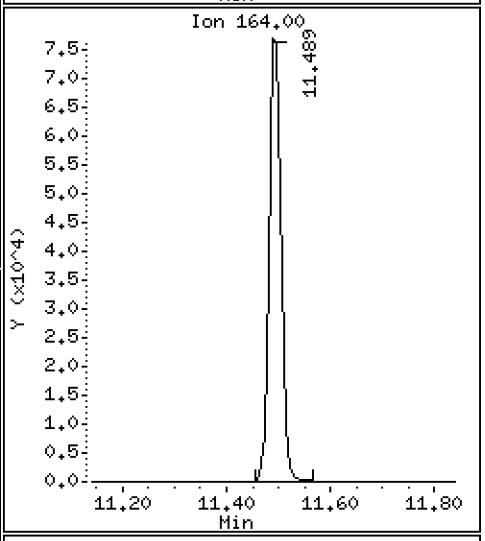
25 2,4-Dichlorophenol

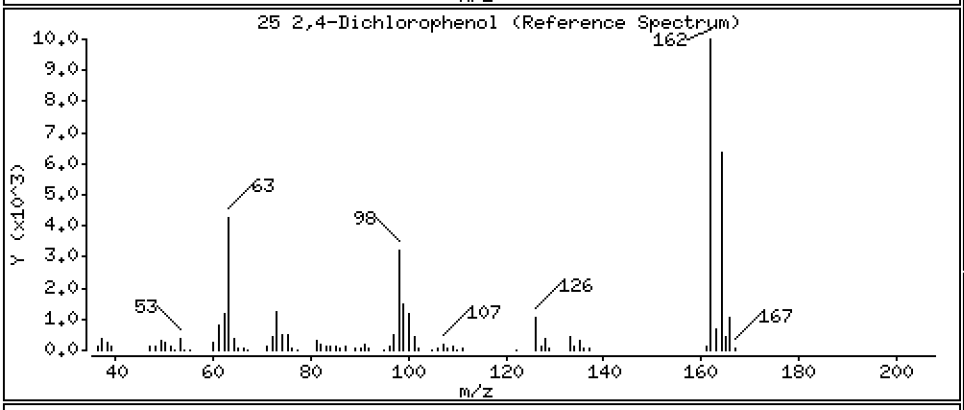
Concentration: 4.703 ug/mL

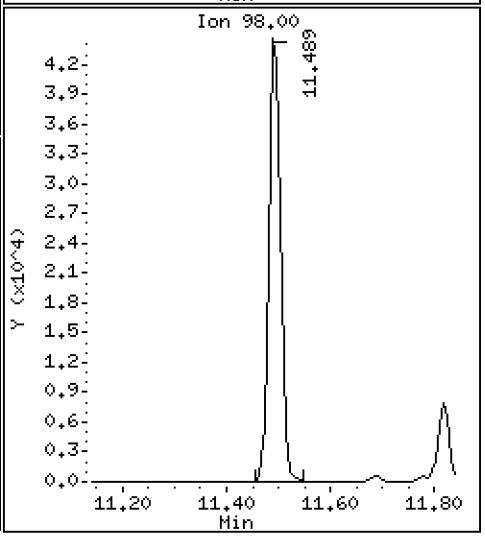


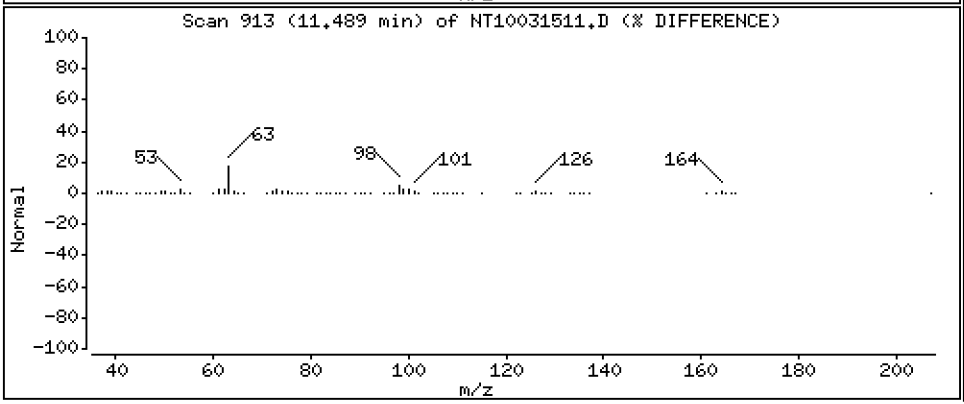












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

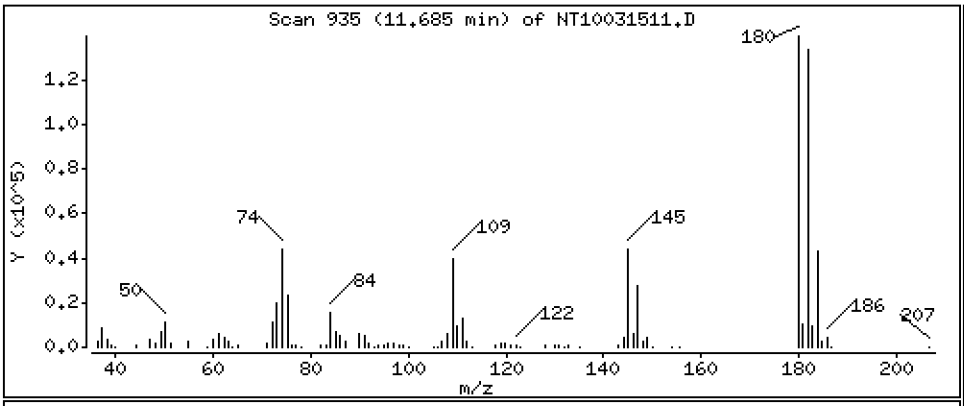
Operator: VTS

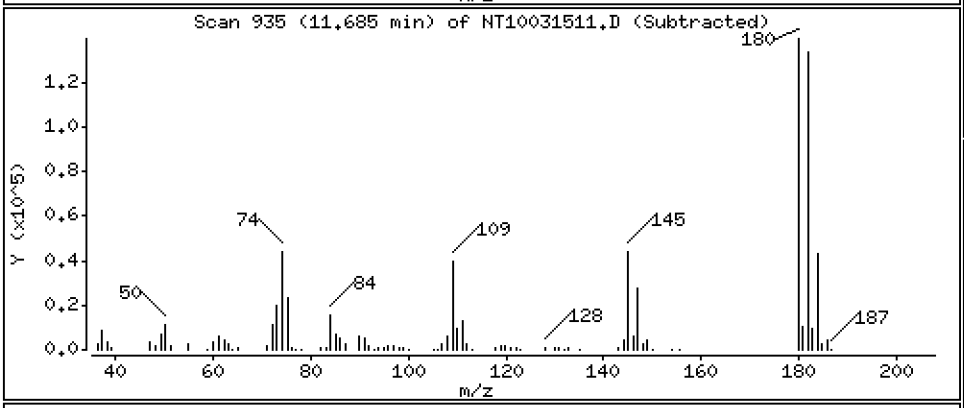
Column phase: ZB-5msi

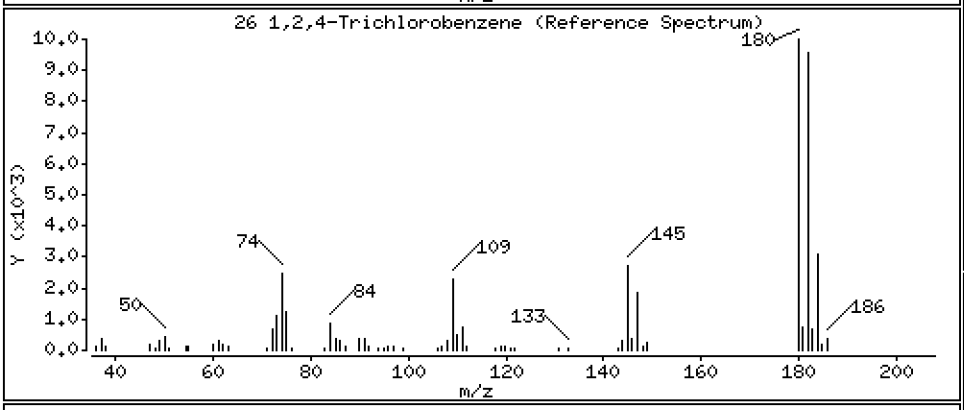
Column diameter: 0.25

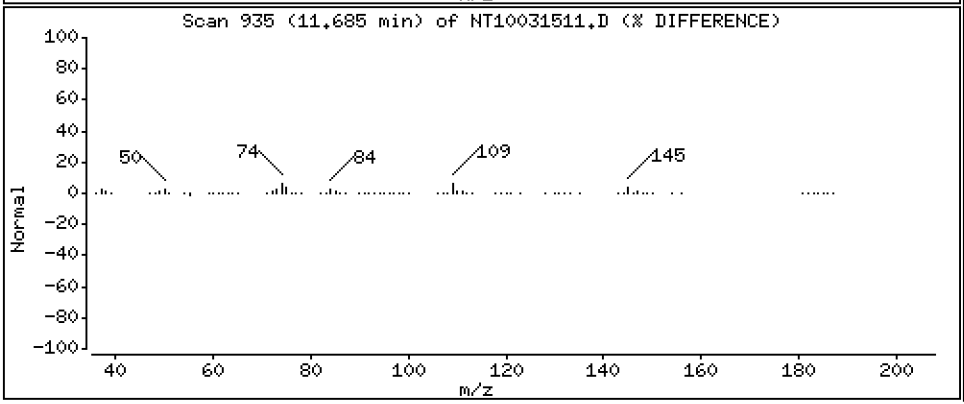
26 1,2,4-Trichlorobenzene

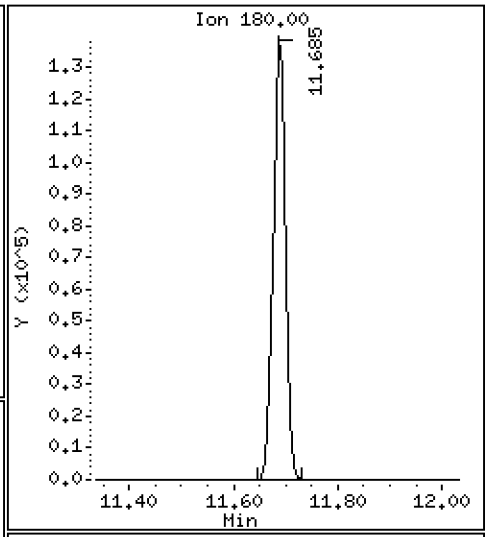
Concentration: 4.554 ug/mL

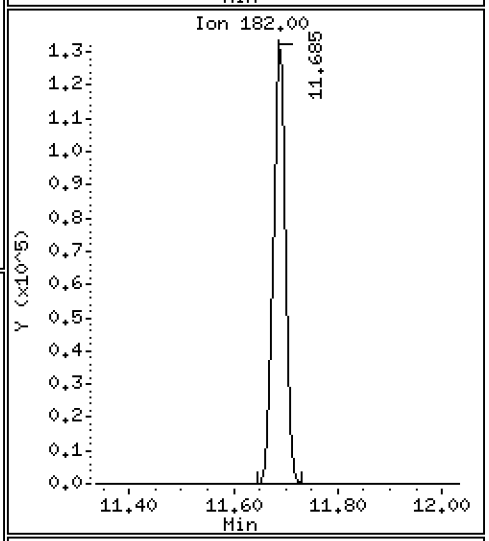


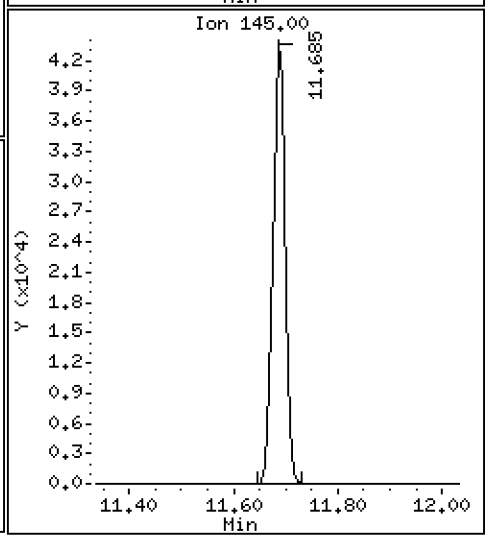












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

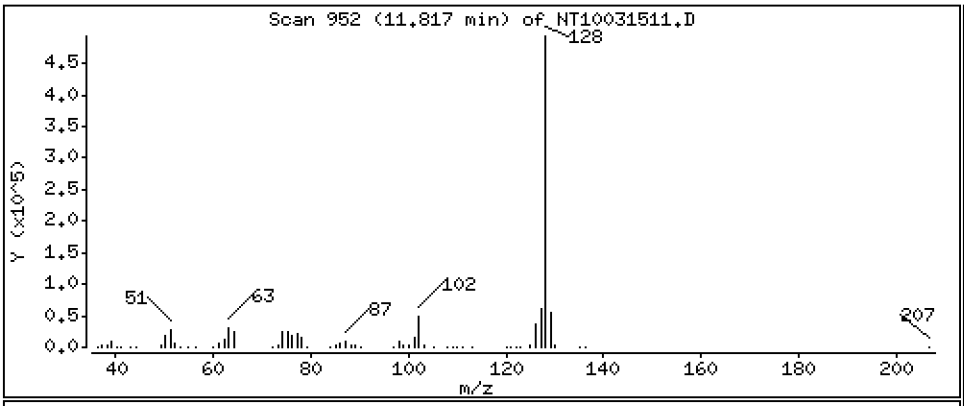
Operator: VTS

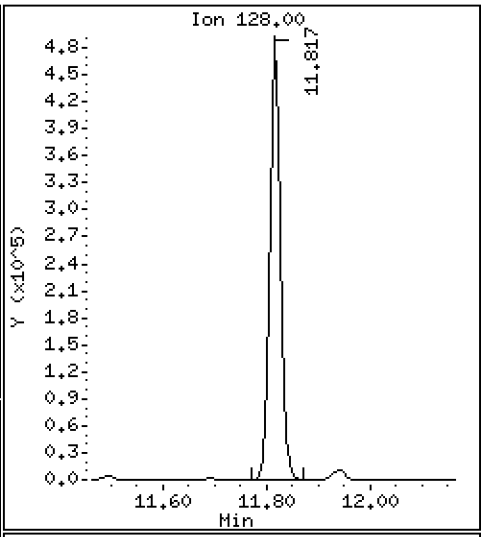
Column phase: ZB-5msi

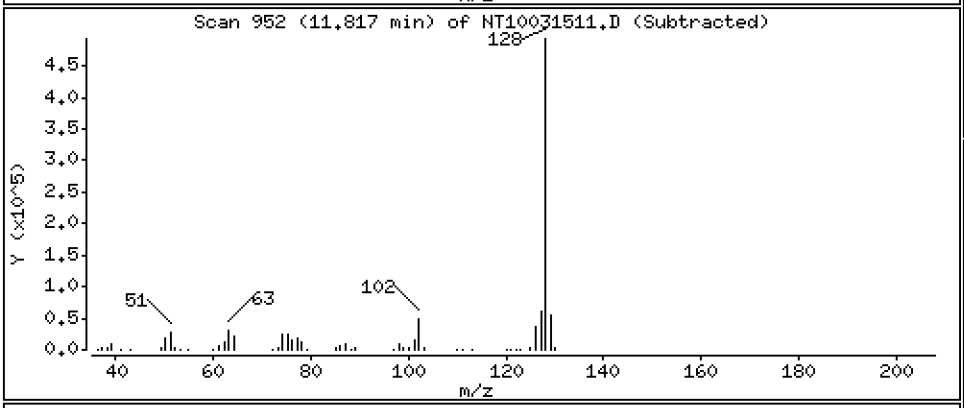
Column diameter: 0.25

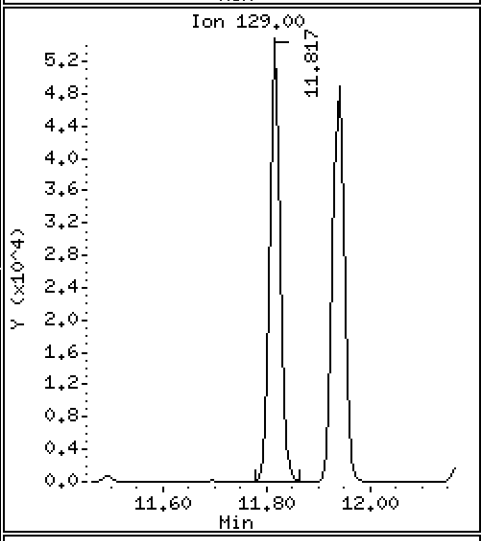
28 Naphthalene

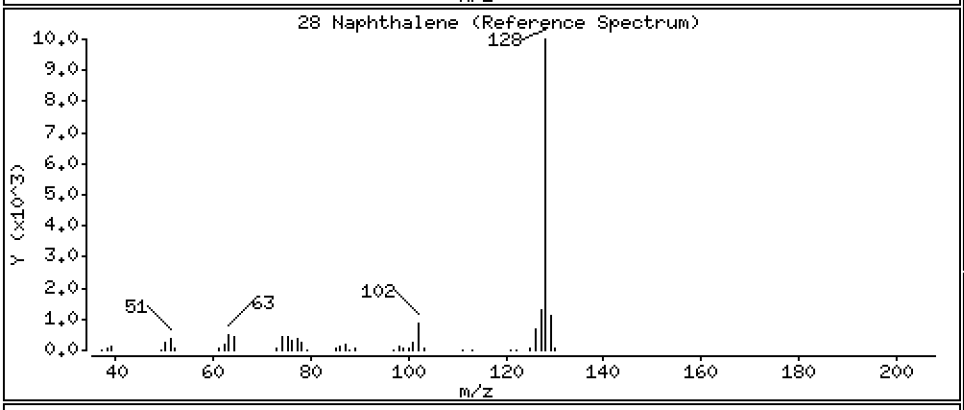
Concentration: 4.717 ug/mL

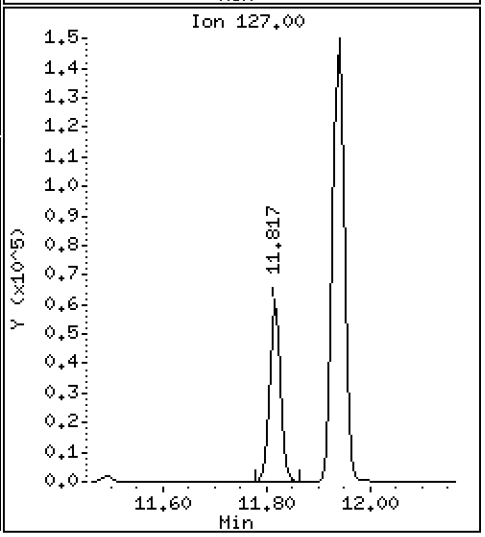


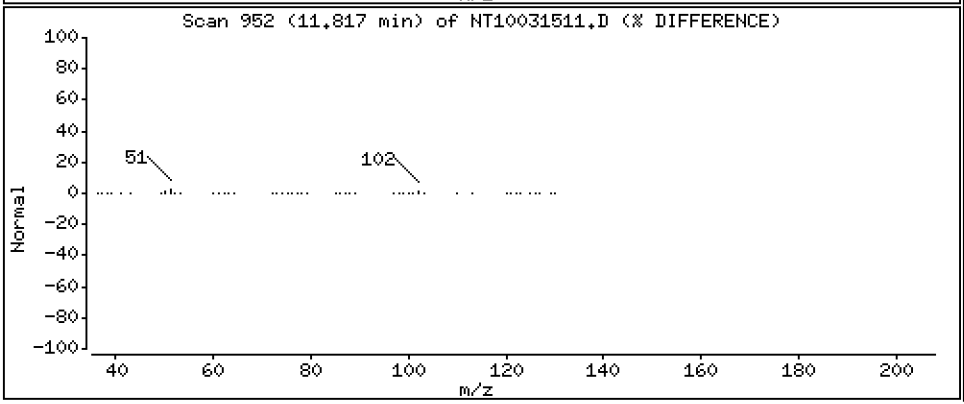












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

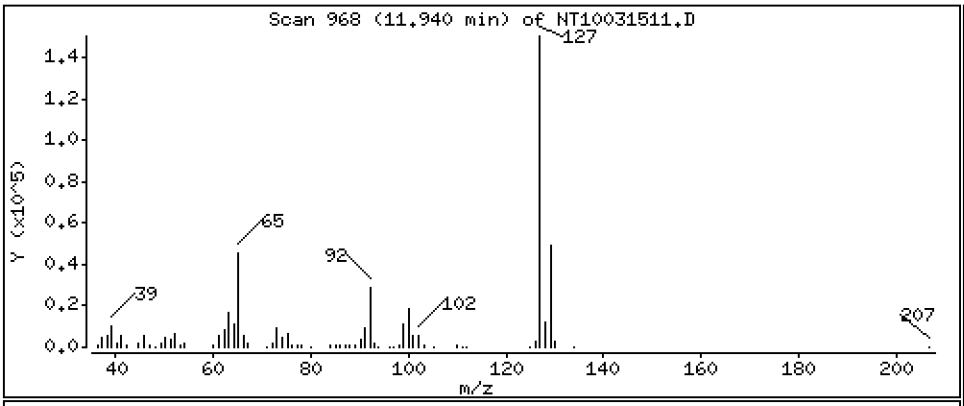
Operator: VTS

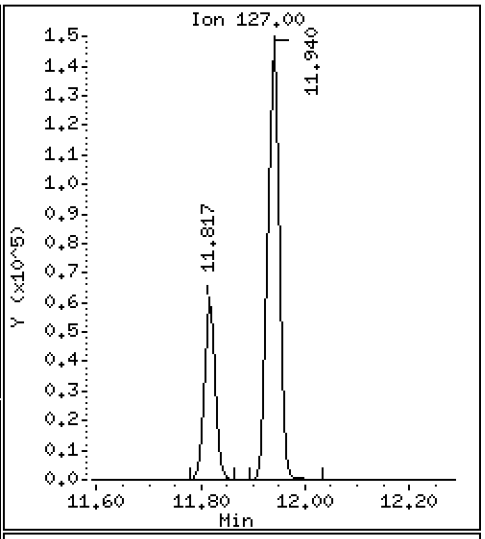
Column phase: ZB-5msi

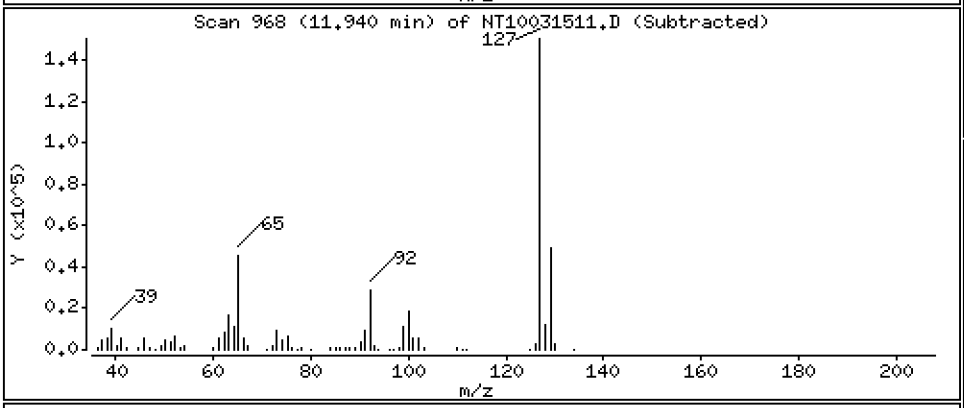
Column diameter: 0.25

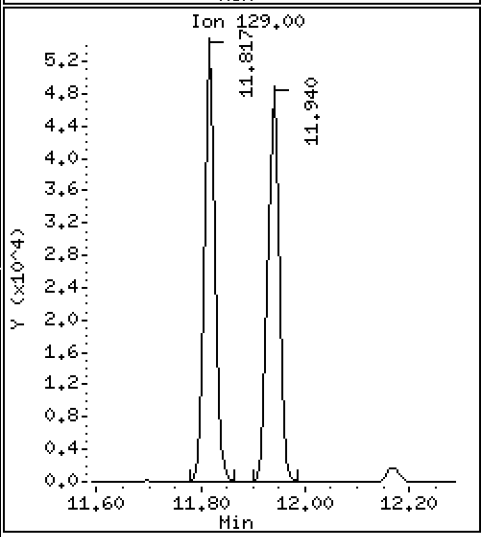
29 4-Chloroaniline

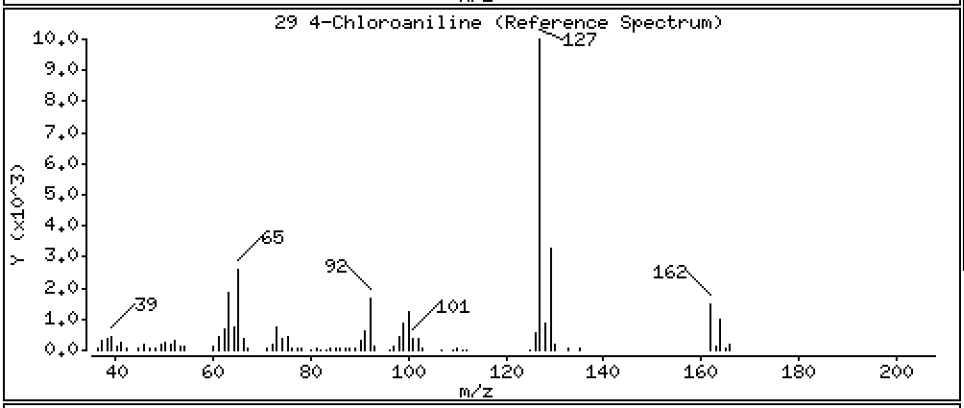
Concentration: 3.787 ug/mL

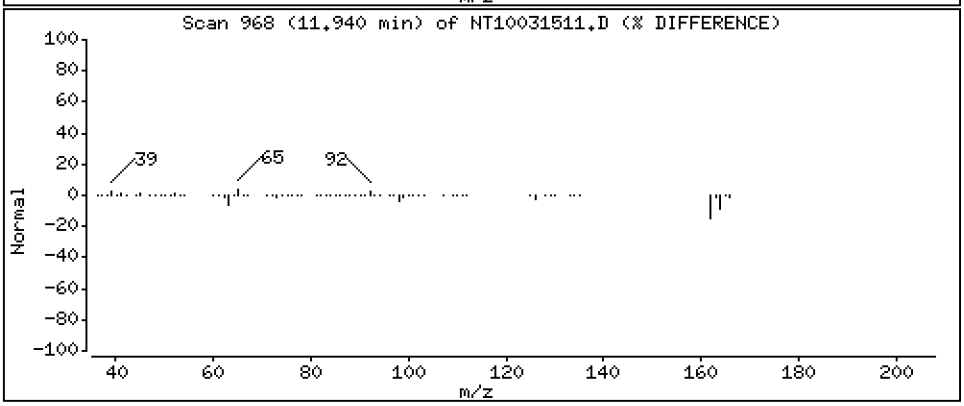












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

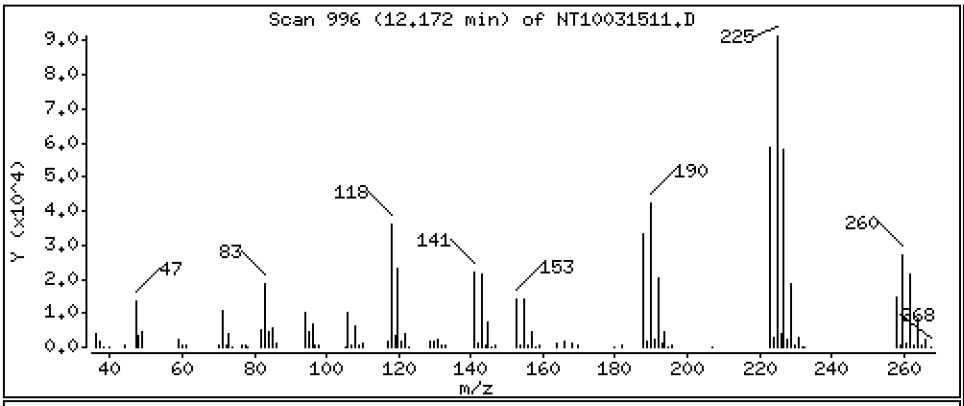
Operator: VTS

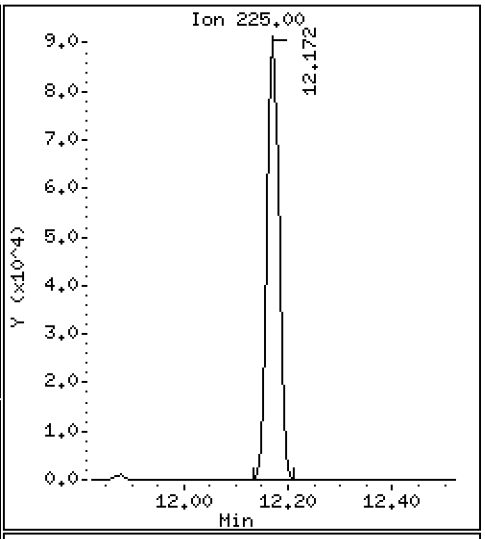
Column phase: ZB-5msi

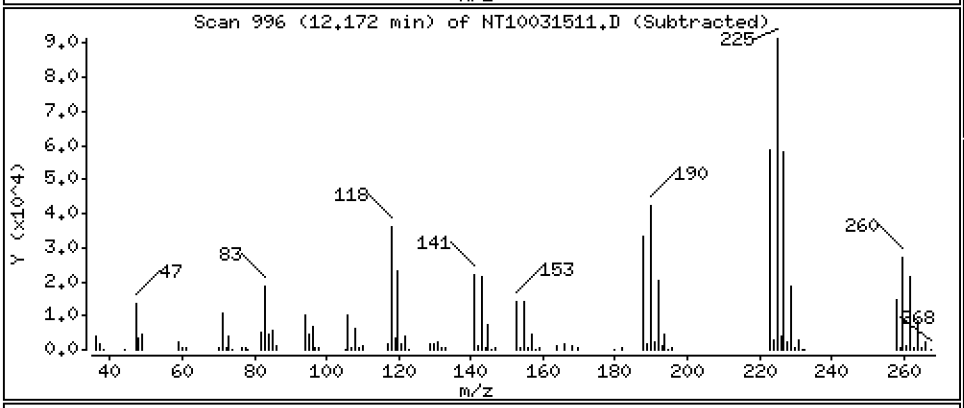
Column diameter: 0.25

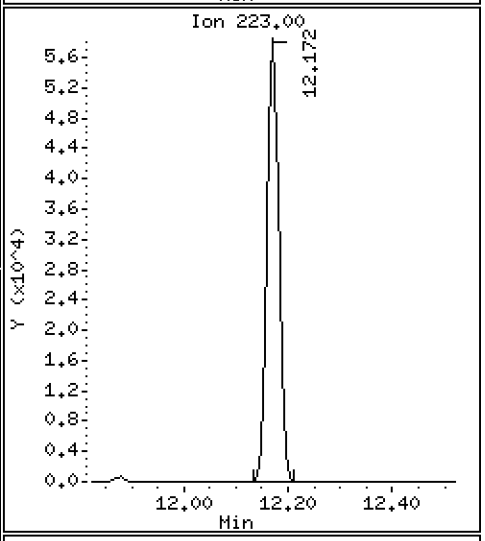
30 Hexachlorobutadiene

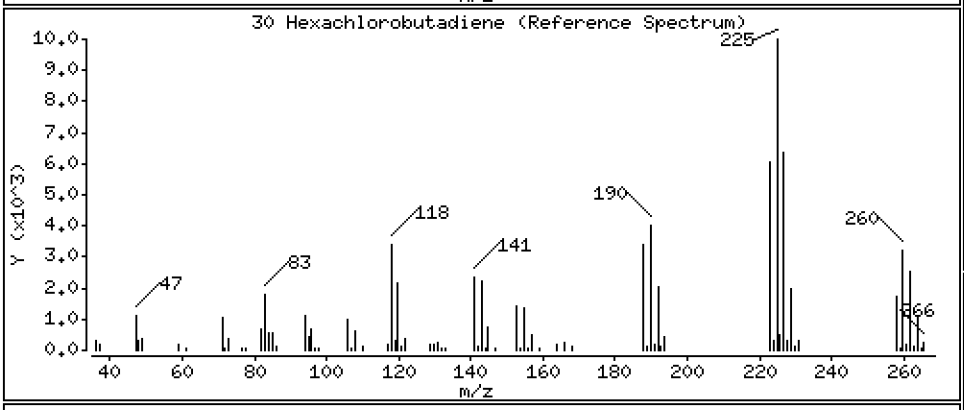
Concentration: 4.834 ug/mL

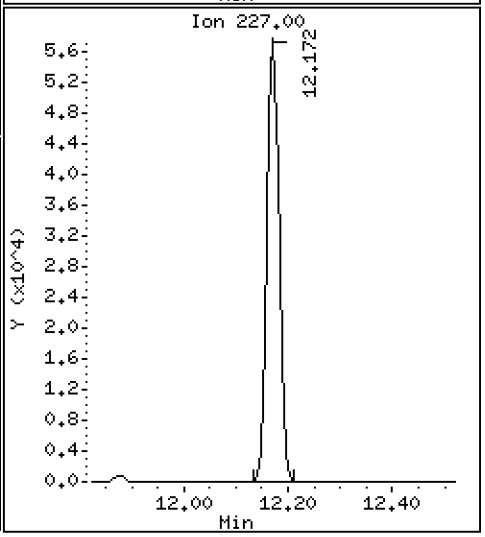


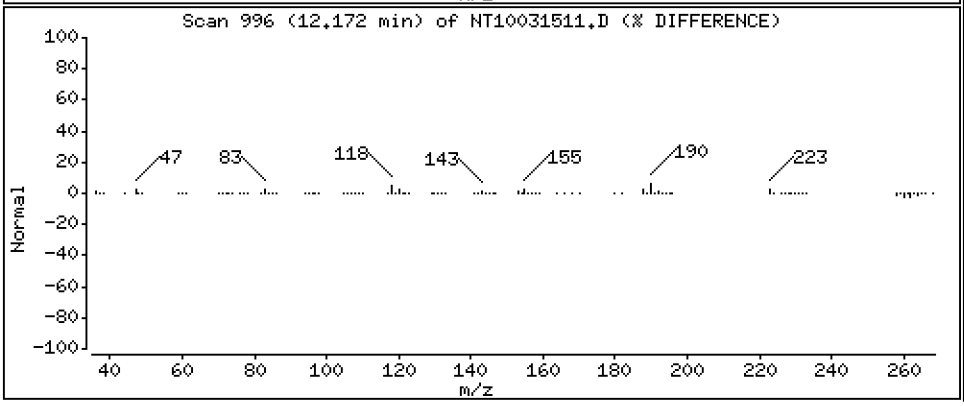












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

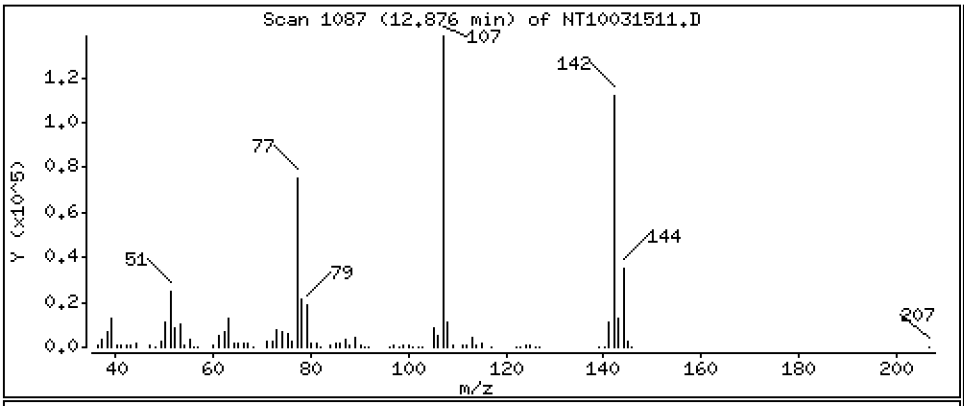
Operator: VTS

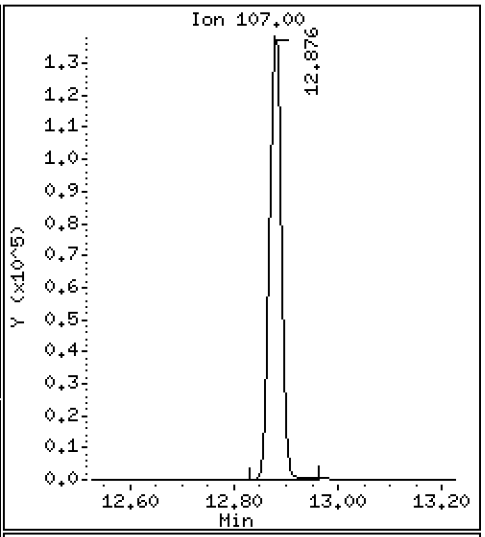
Column phase: ZB-5msi

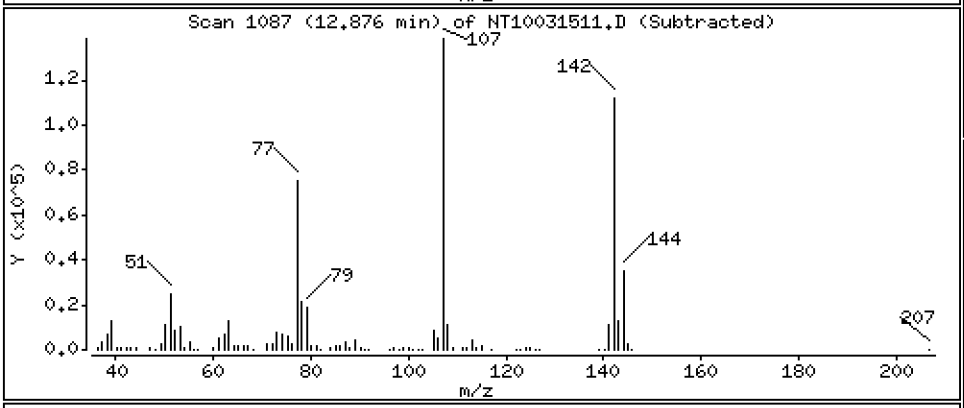
Column diameter: 0.25

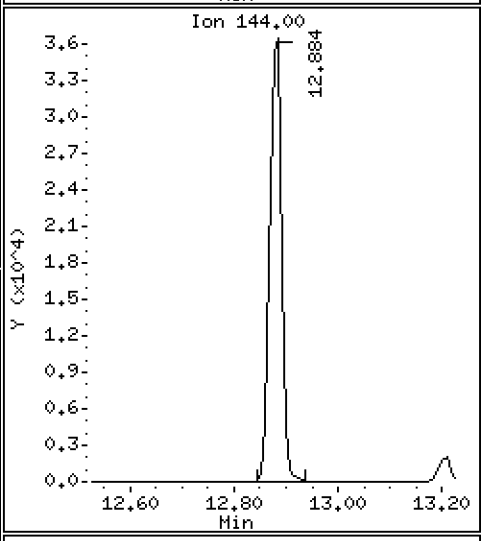
31 4-Chloro-3-methylphenol

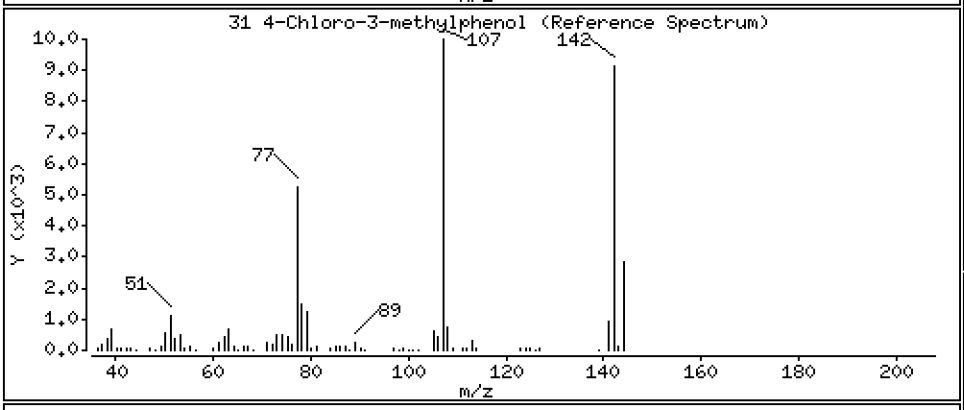
Concentration: 4.640 ug/mL

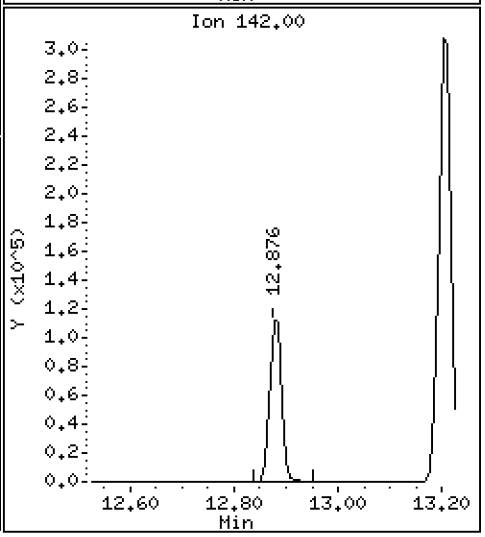


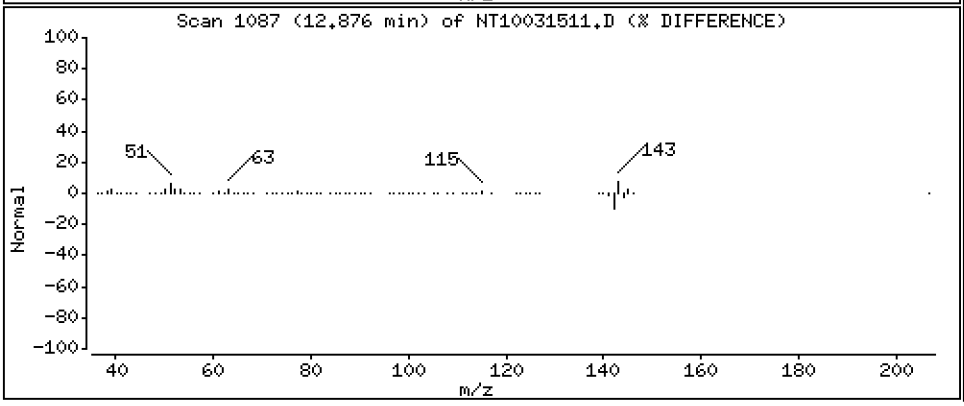












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

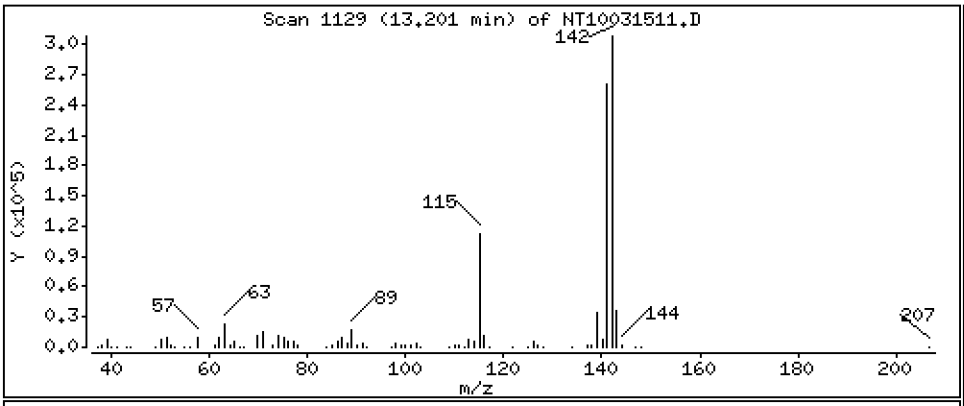
Operator: VTS

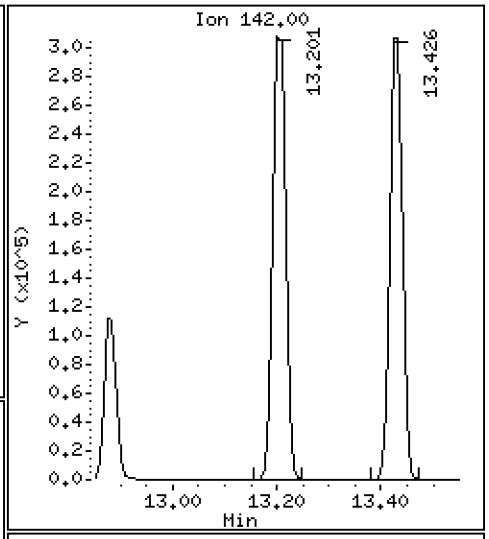
Column phase: ZB-5msi

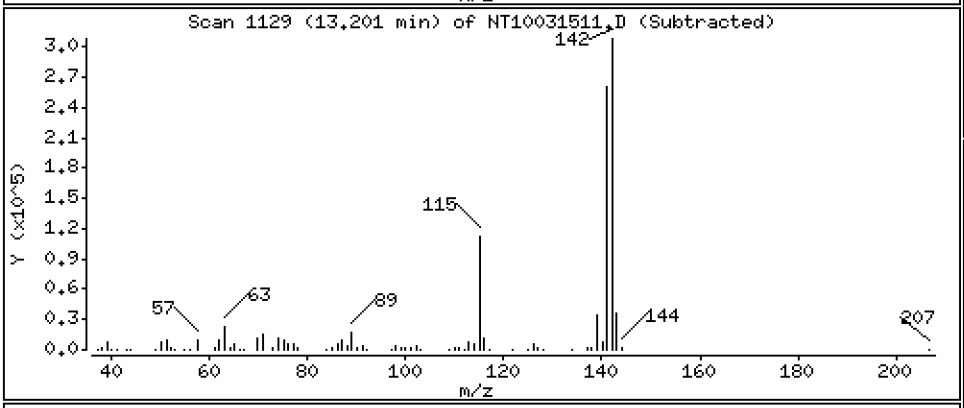
Column diameter: 0.25

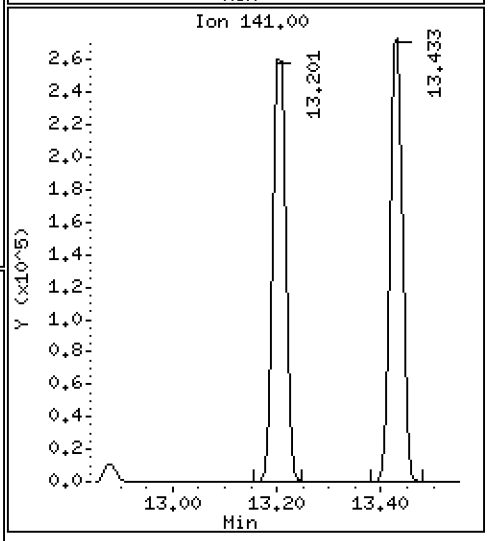
32 2-Methylnaphthalene

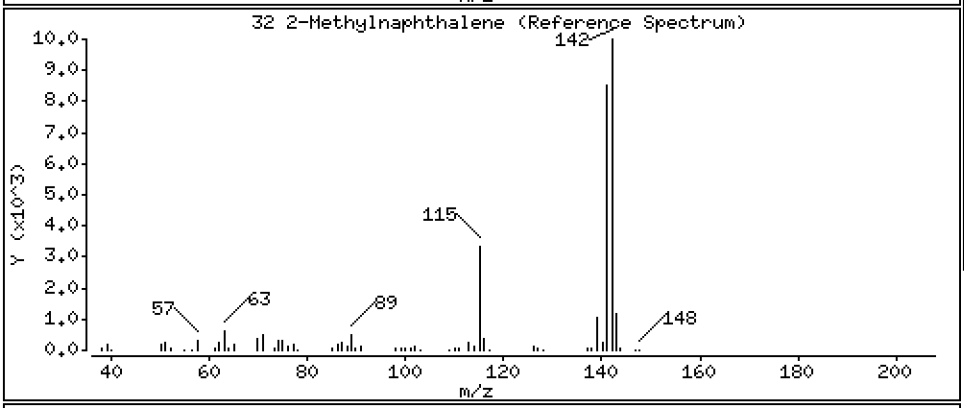
Concentration: 4.596 ug/mL

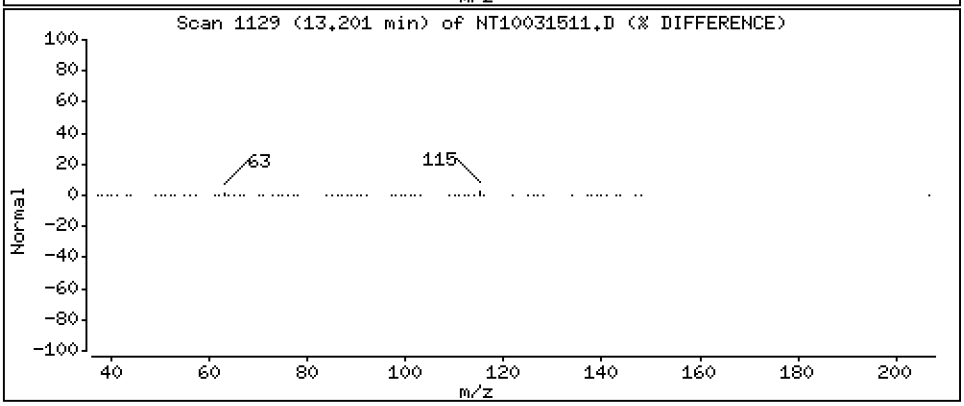












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

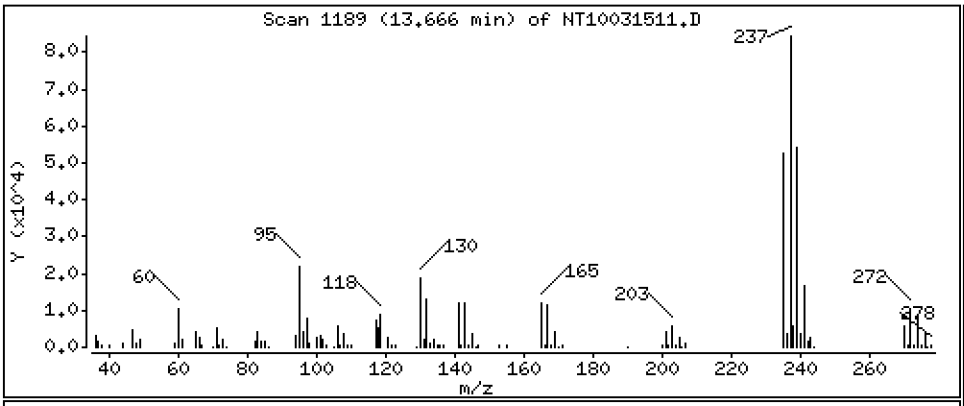
Operator: VTS

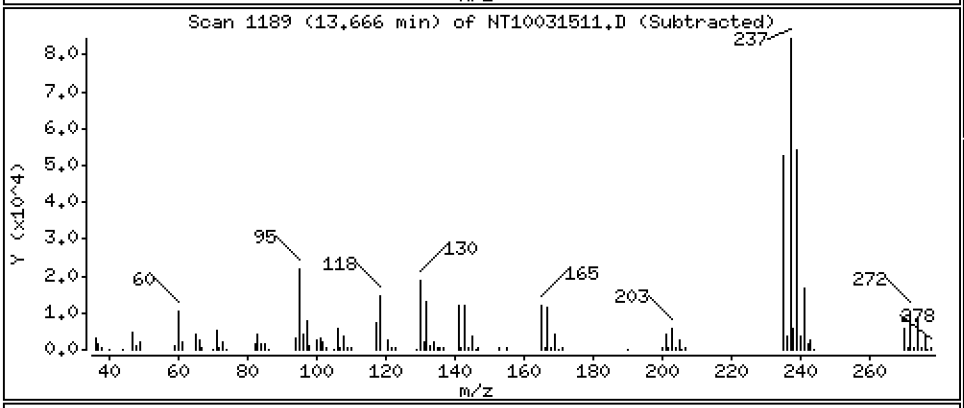
Column phase: ZB-5msi

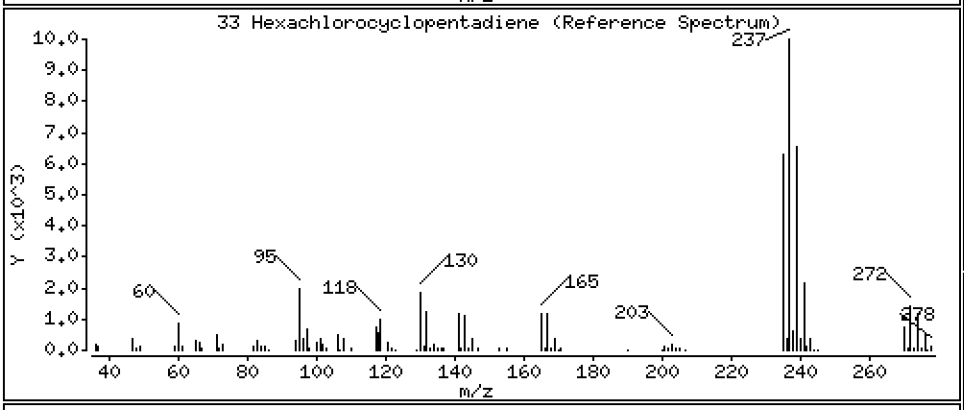
Column diameter: 0.25

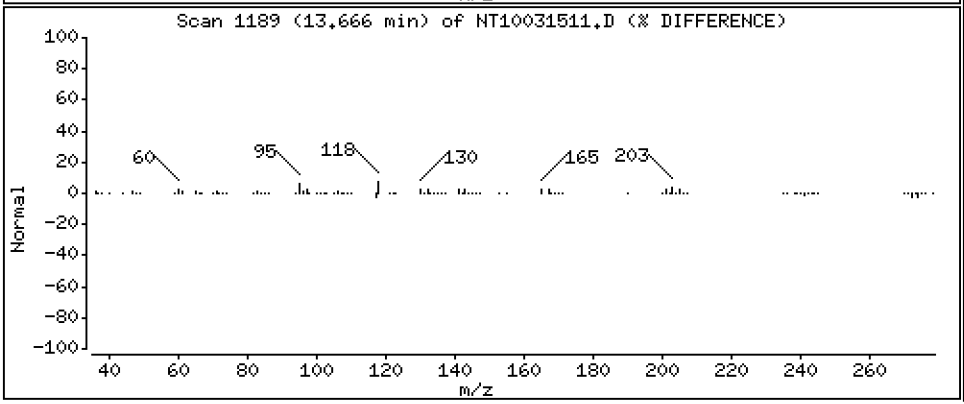
33 Hexachlorocyclopentadiene

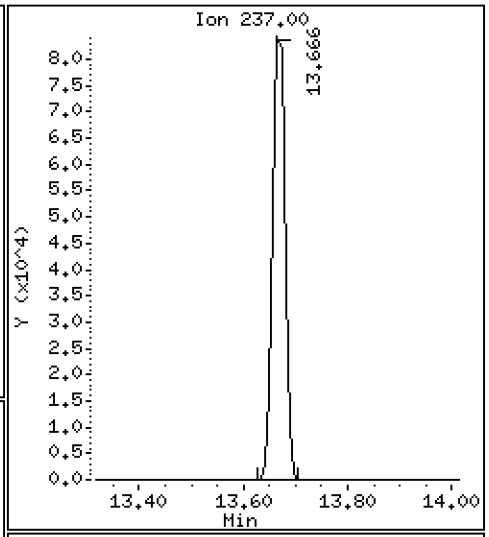
Concentration: 4.729 ug/mL

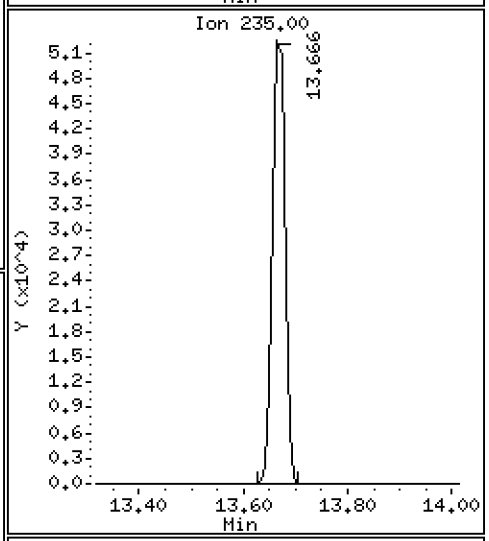


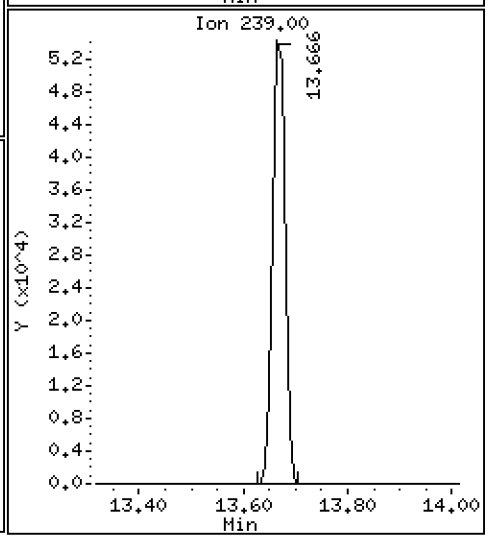












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

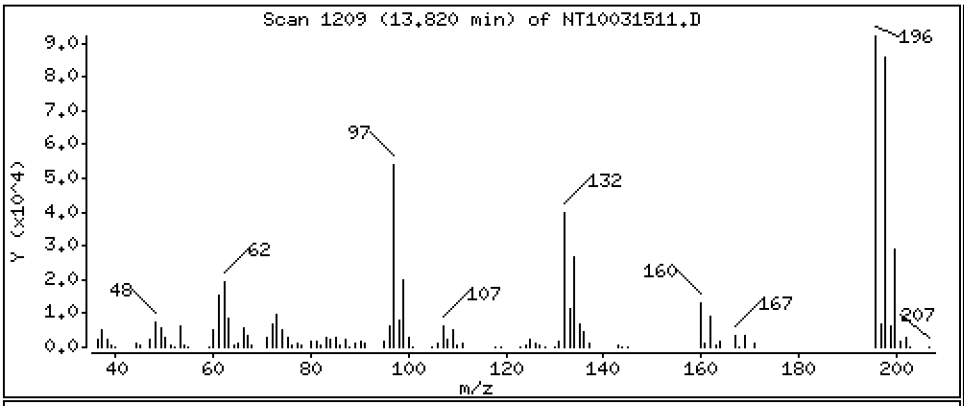
Operator: VTS

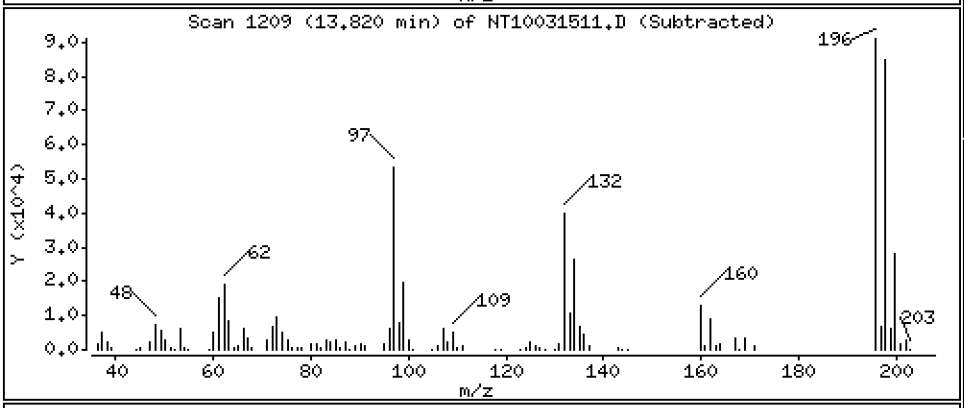
Column phase: ZB-5msi

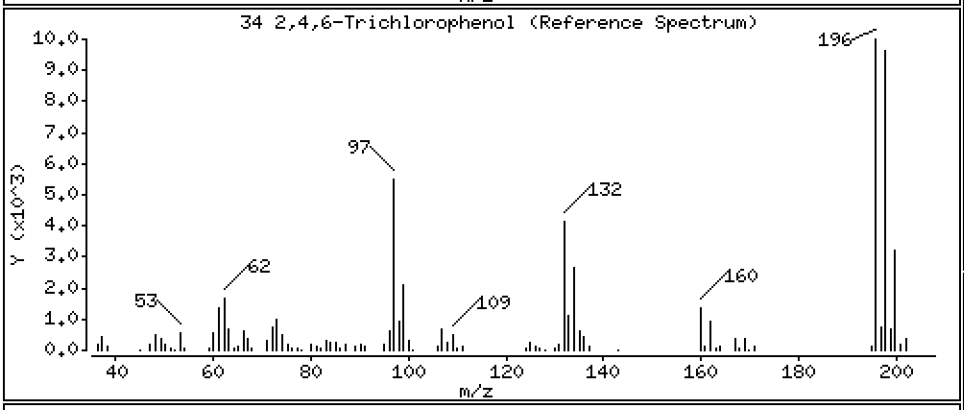
Column diameter: 0.25

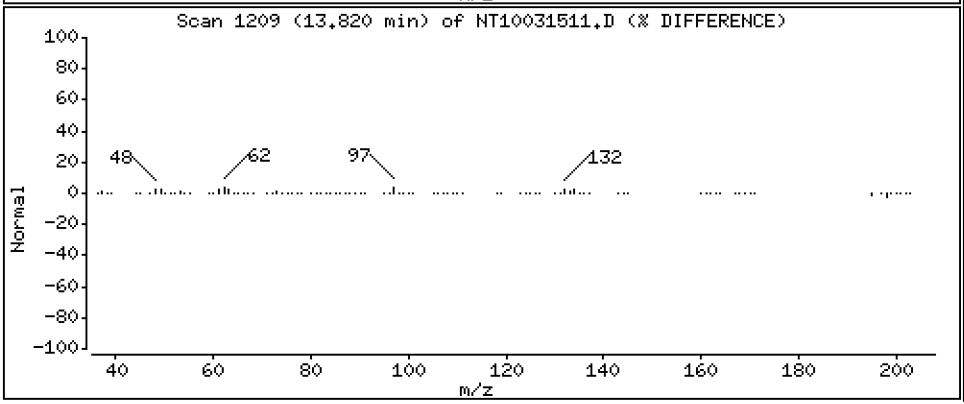
34 2,4,6-Trichlorophenol

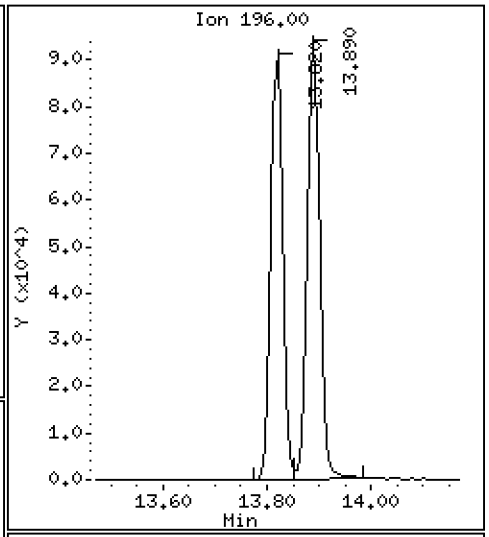
Concentration: 4.596 ug/mL

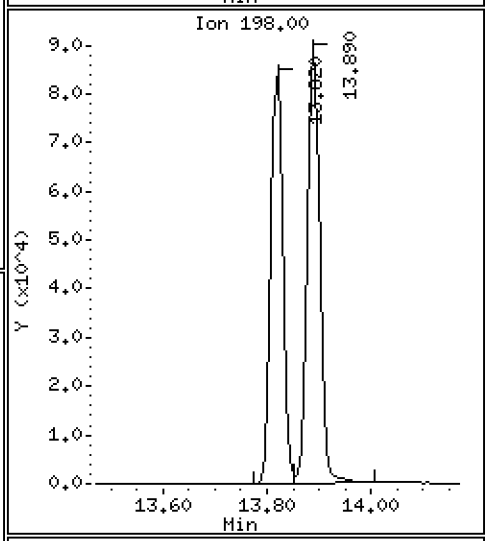


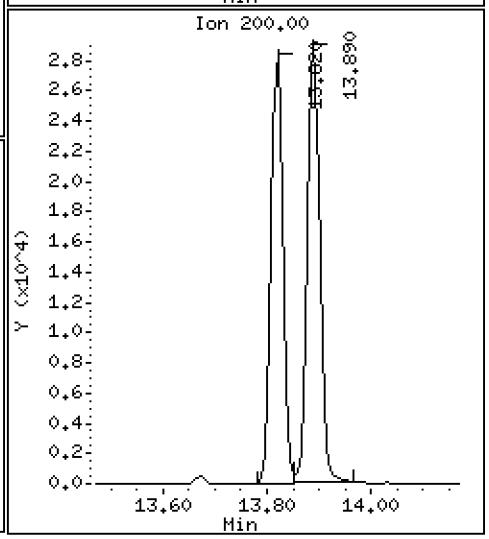












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

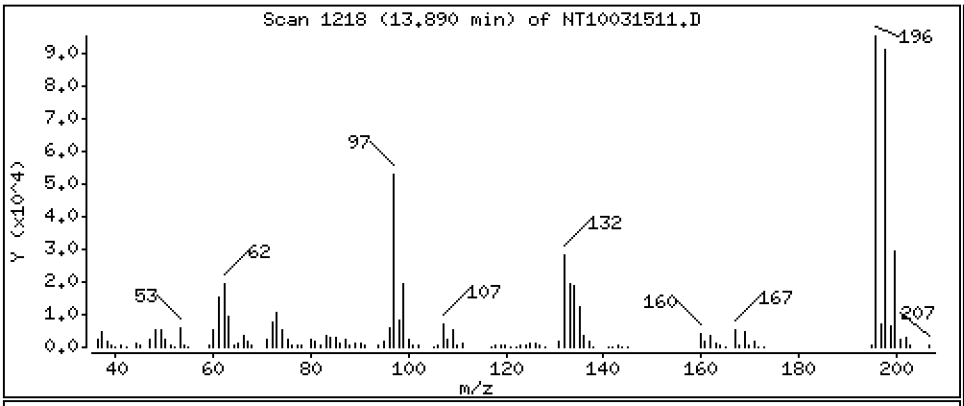
Operator: VTS

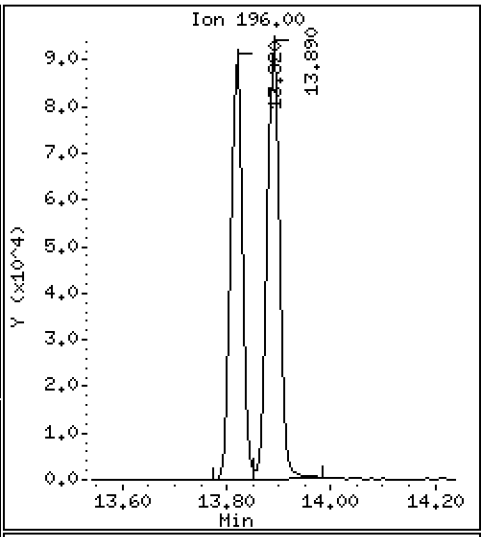
Column phase: ZB-5msi

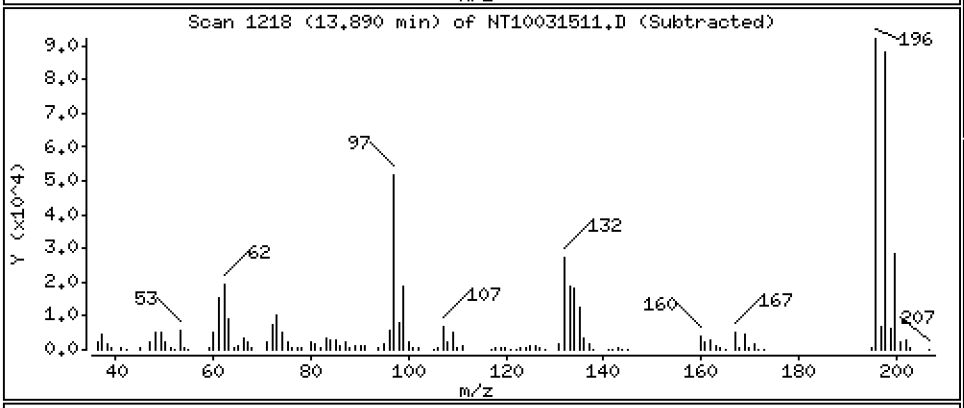
Column diameter: 0.25

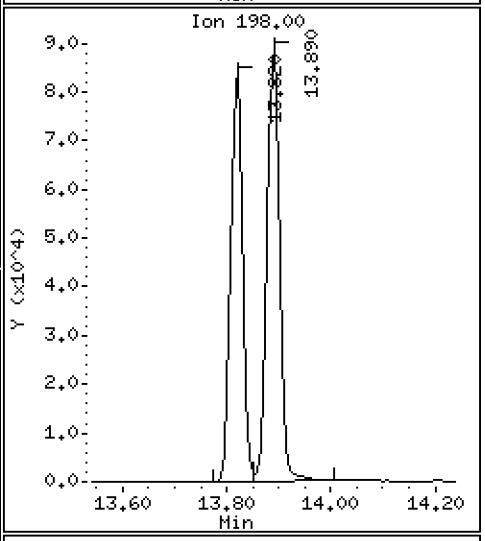
35 2,4,5-Trichlorophenol

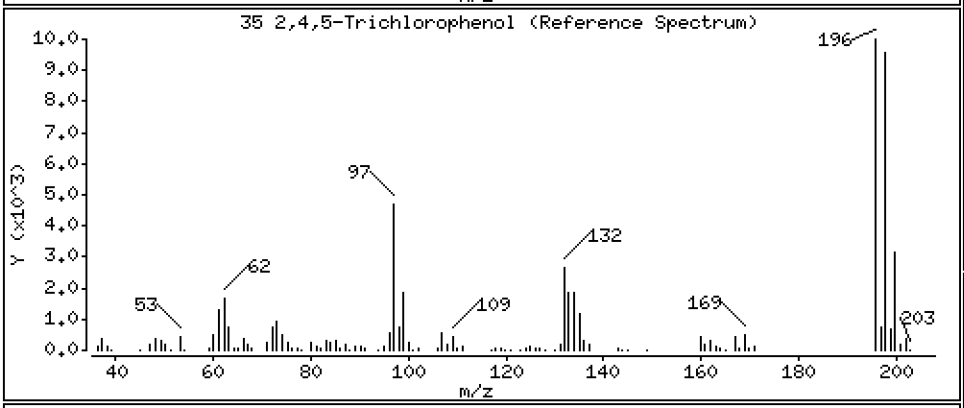
Concentration: 4.409 ug/mL

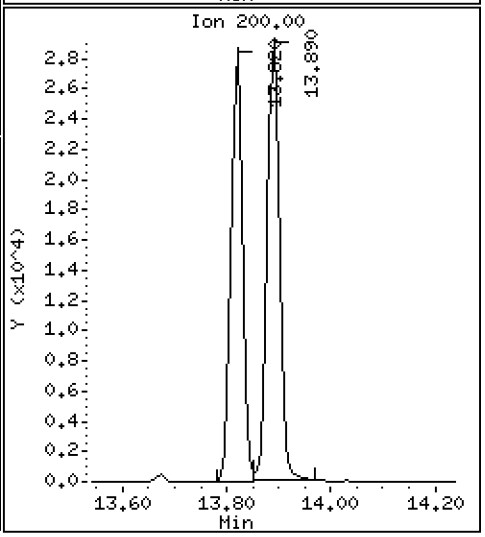


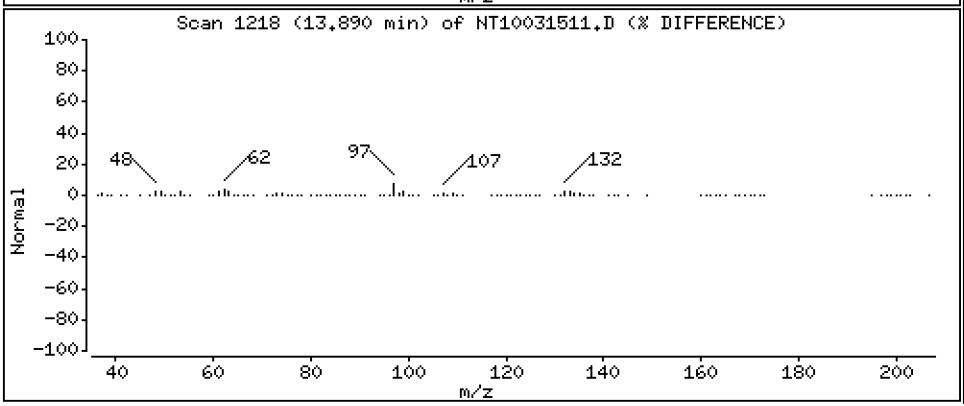












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

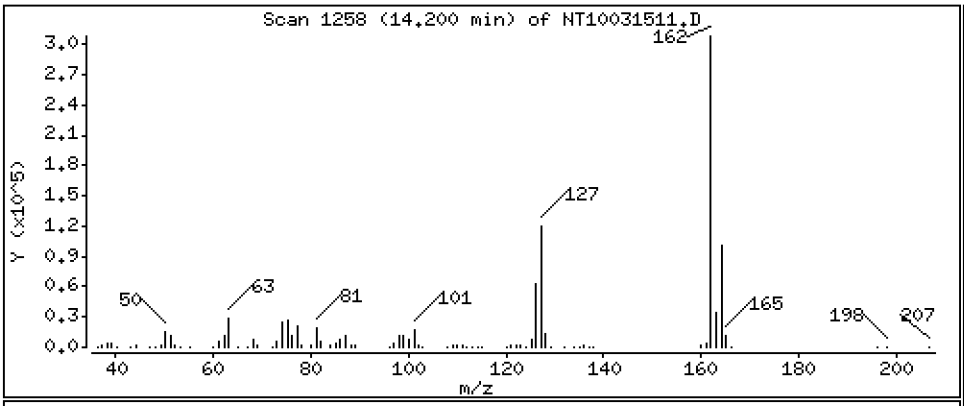
Operator: VTS

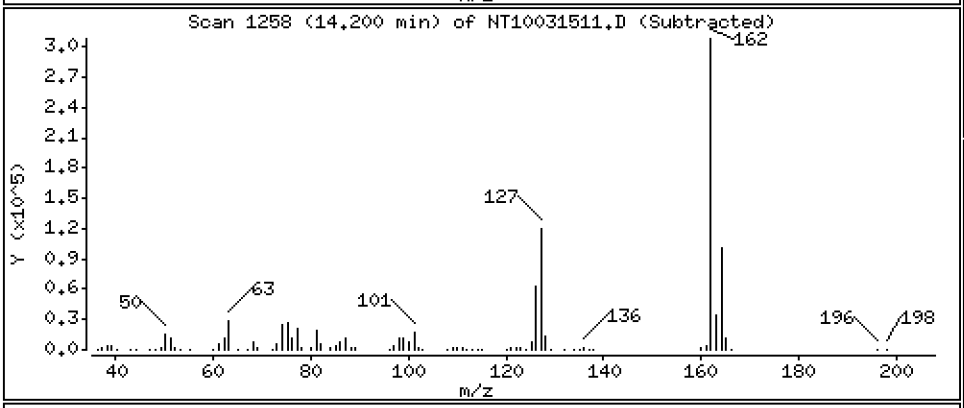
Column phase: ZB-5msi

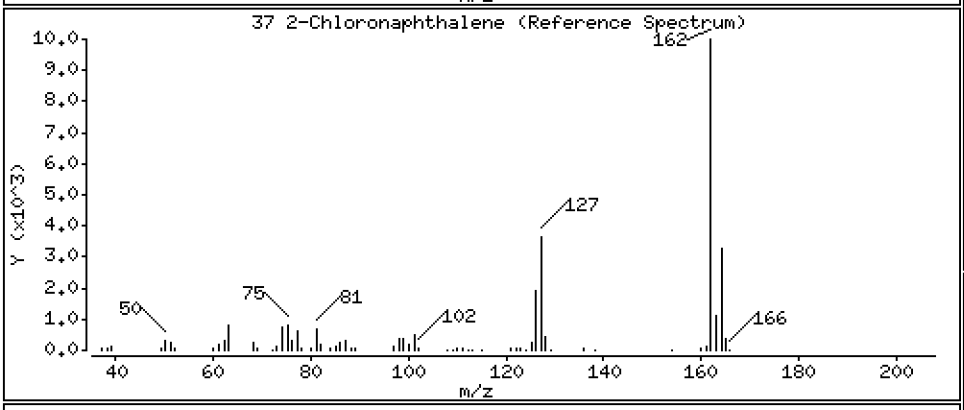
Column diameter: 0.25

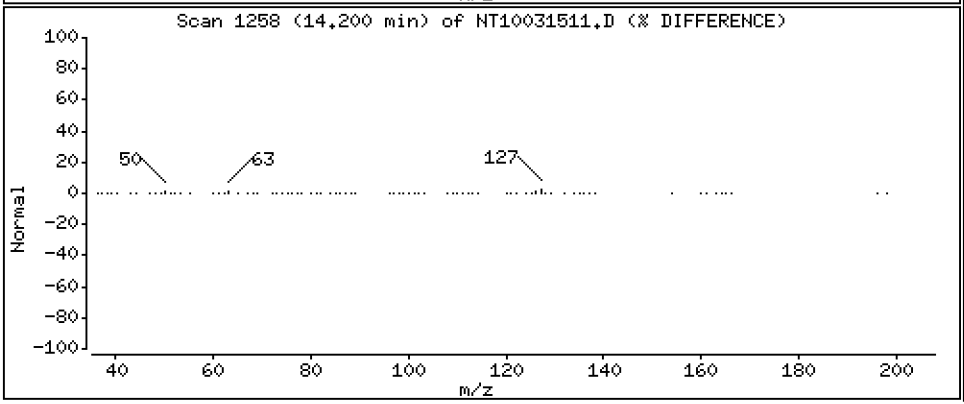
37 2-Chloronaphthalene

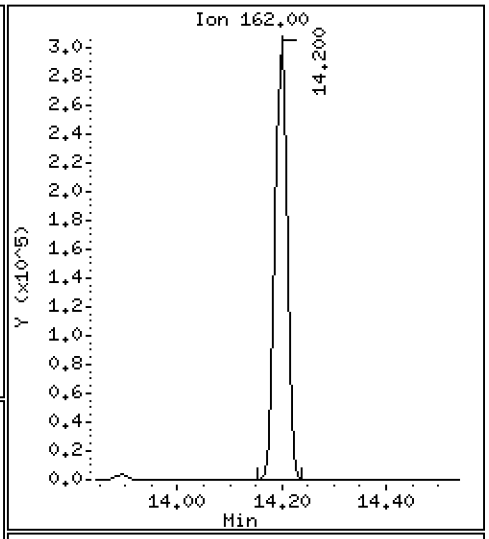
Concentration: 4.796 ug/mL

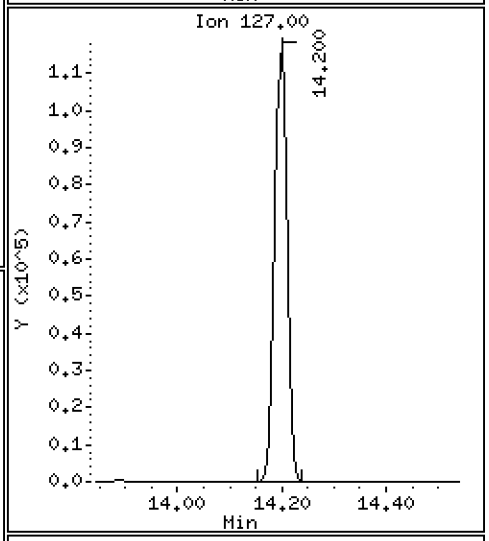


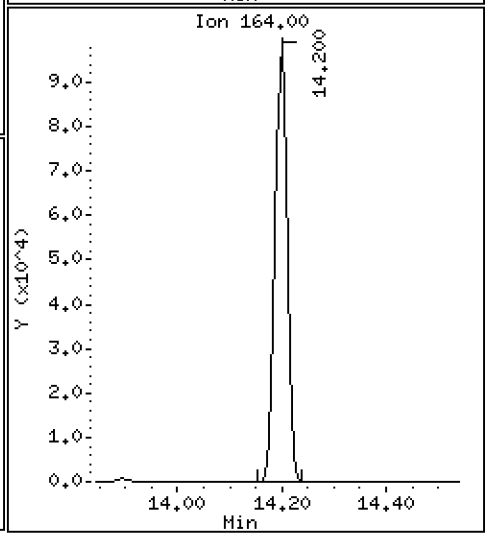












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

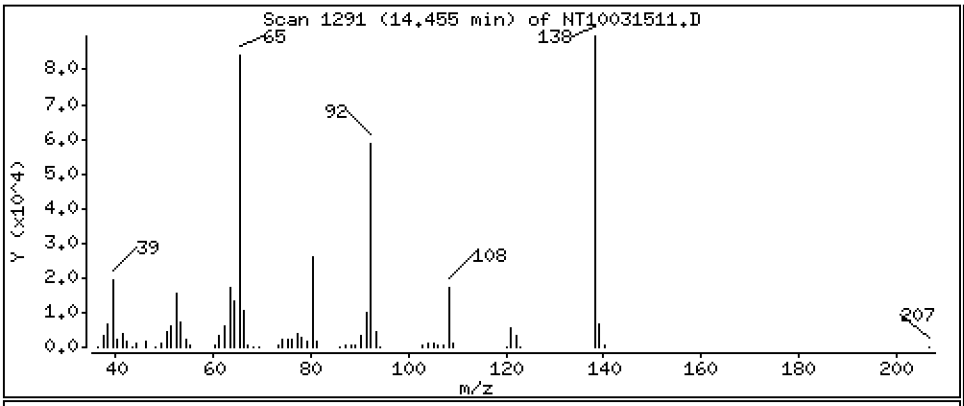
Operator: VTS

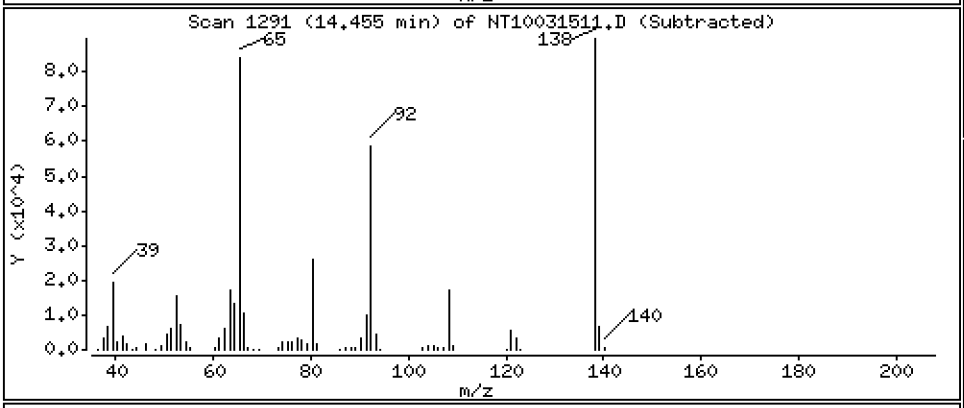
Column phase: ZB-5msi

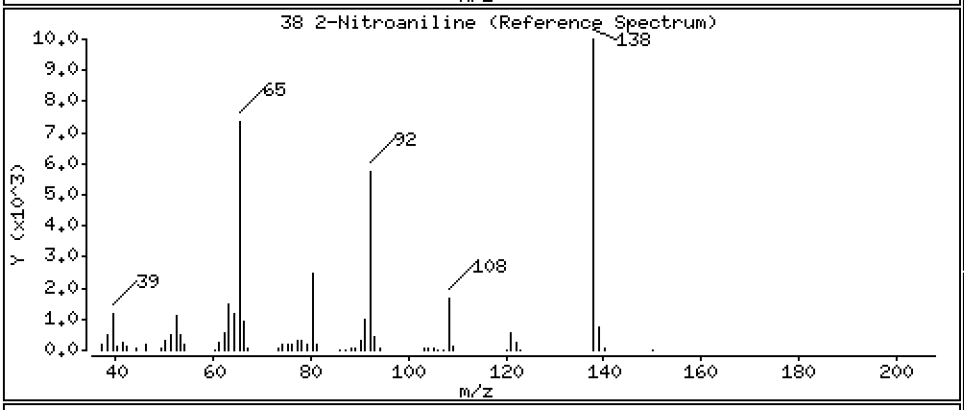
Column diameter: 0.25

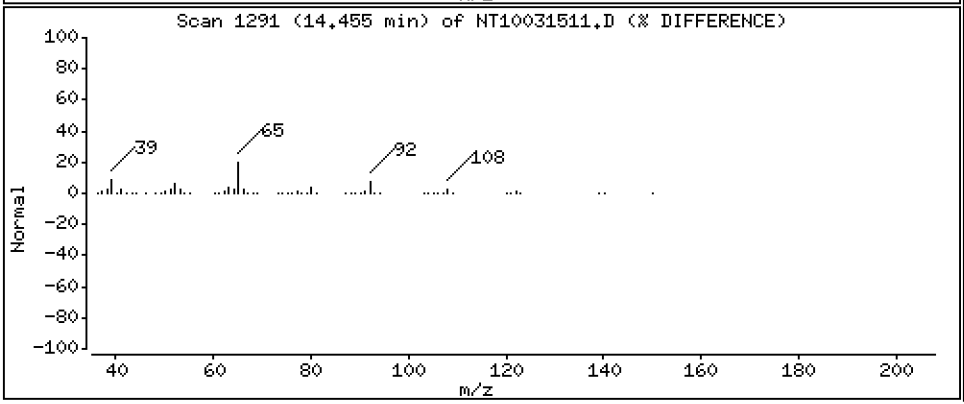
38 2-Nitroaniline

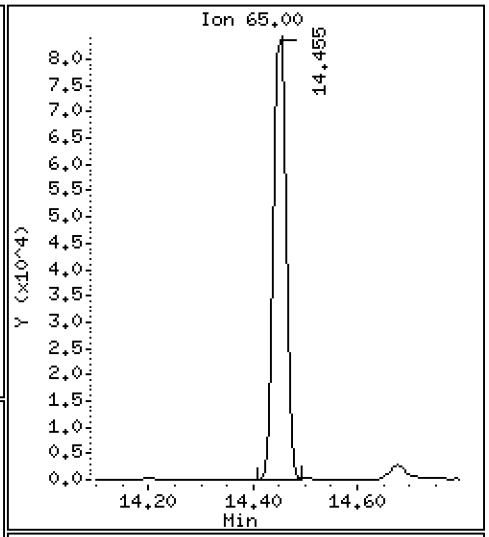
Concentration: 4.911 ug/mL

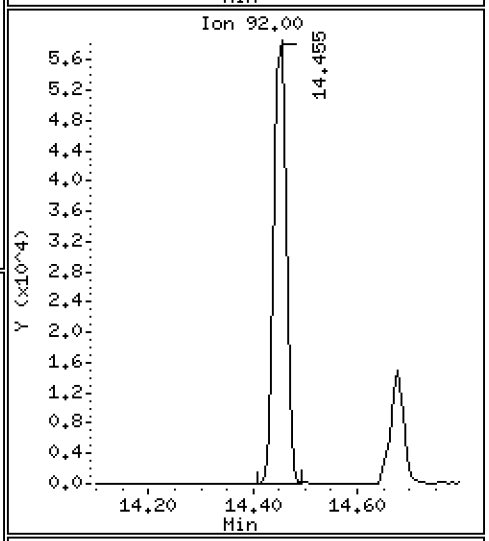


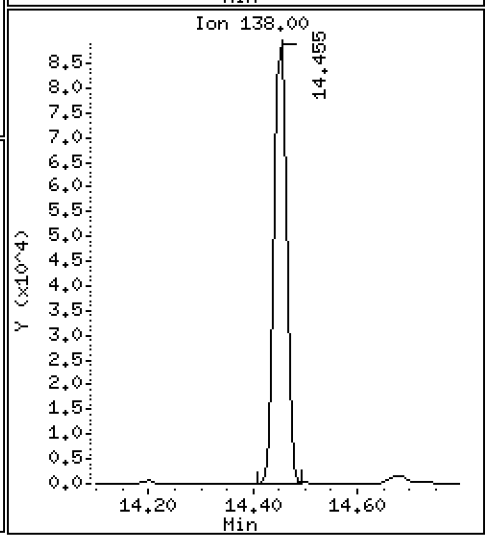












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

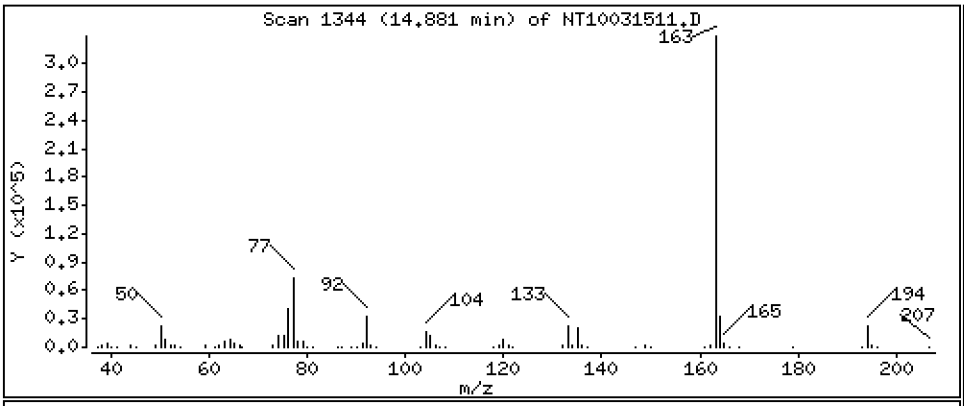
Operator: VTS

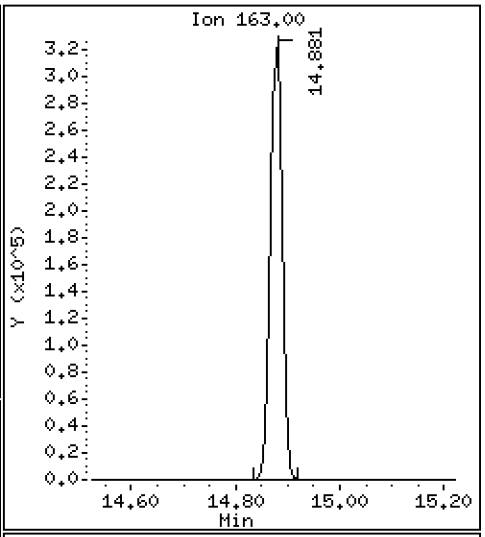
Column phase: ZB-5msi

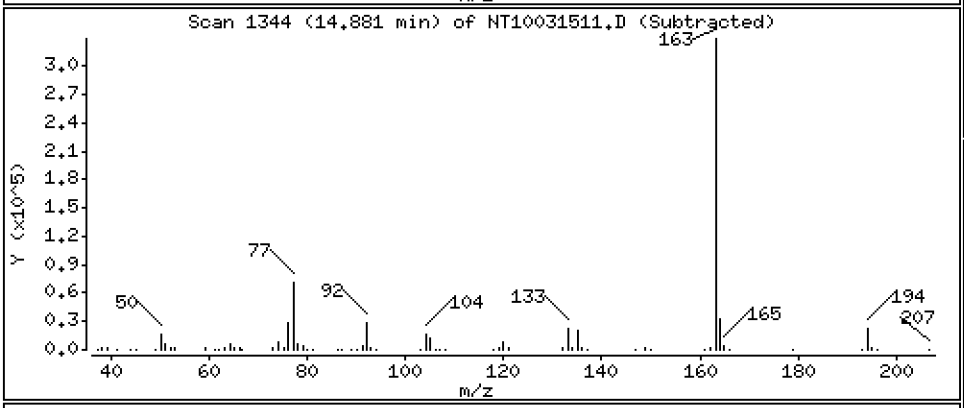
Column diameter: 0.25

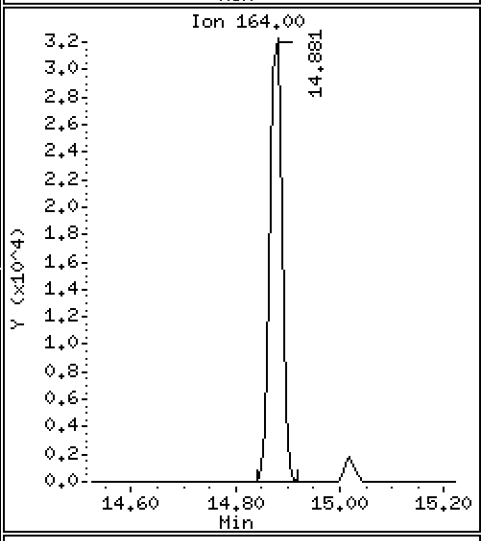
39 Dimethylphthalate

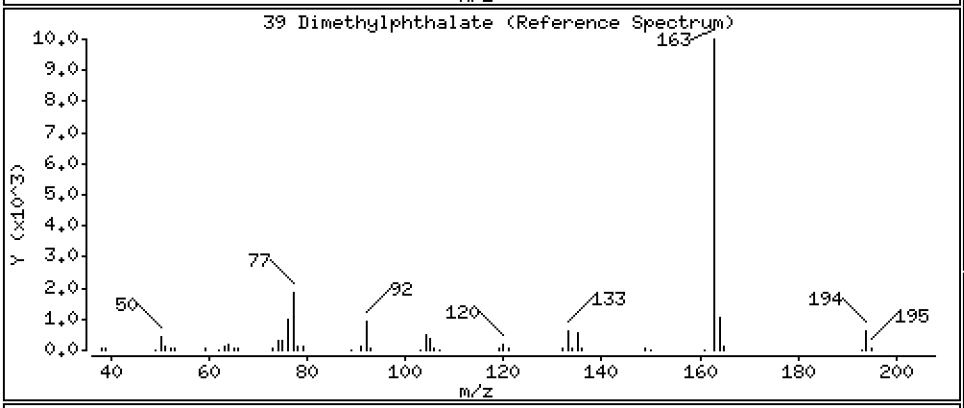
Concentration: 4.937 ug/mL

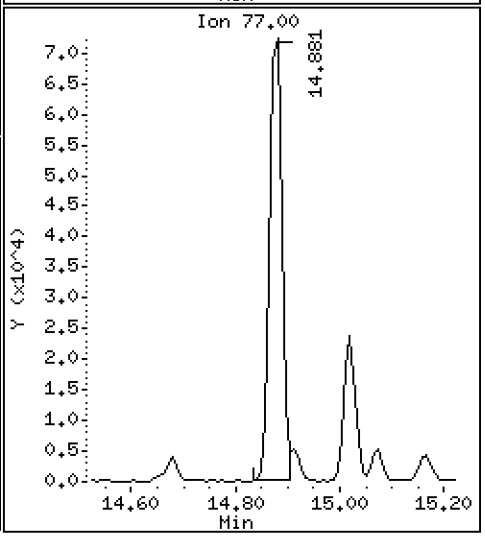


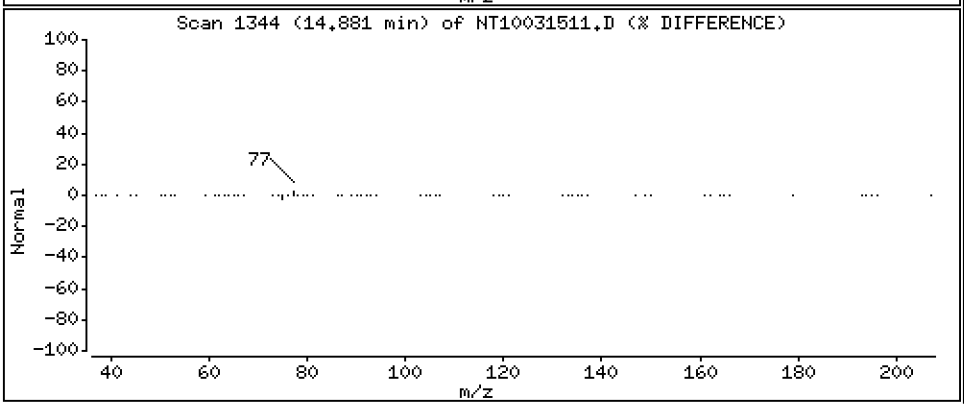












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

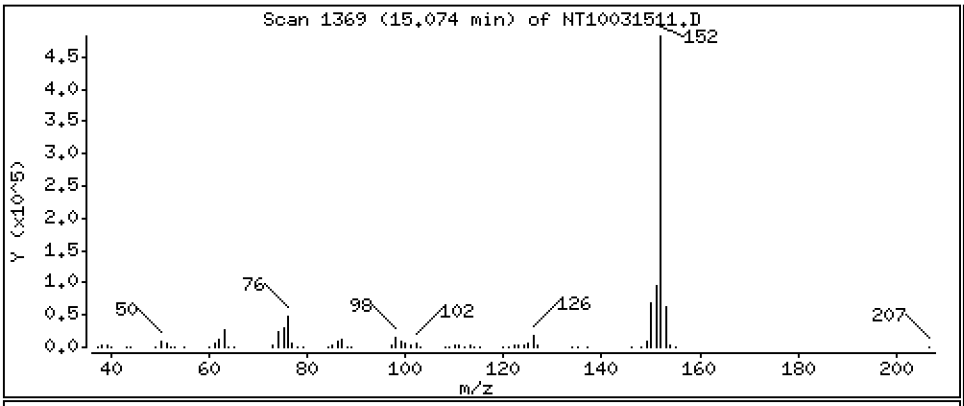
Operator: VTS

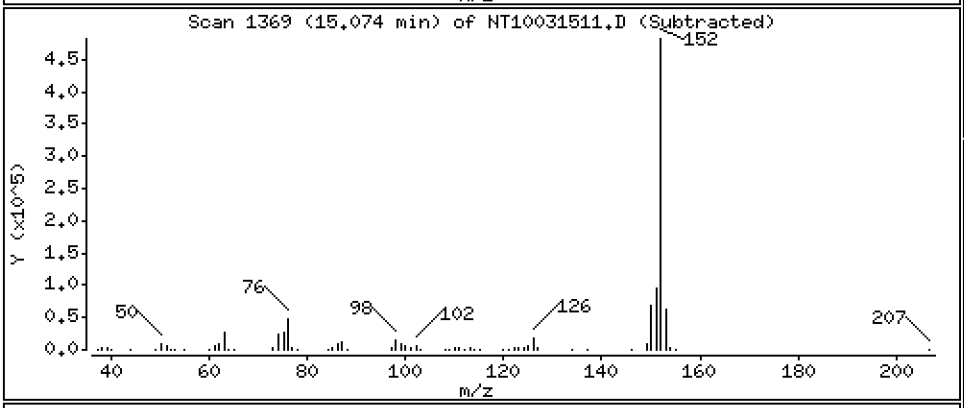
Column phase: ZB-5msi

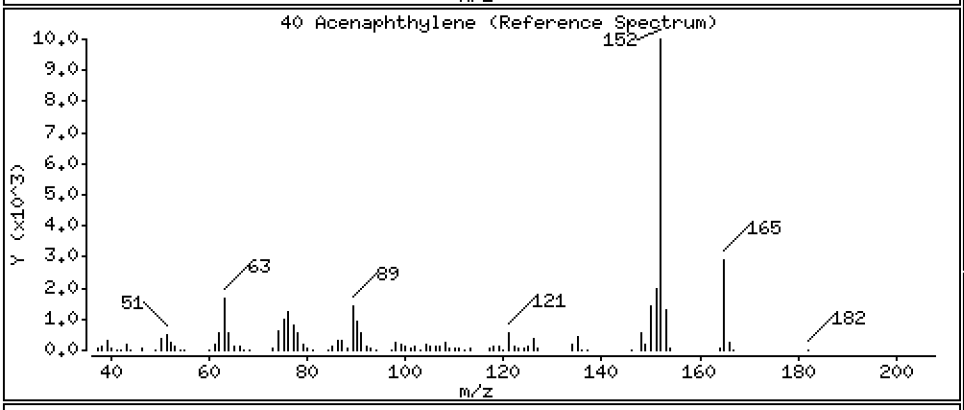
Column diameter: 0.25

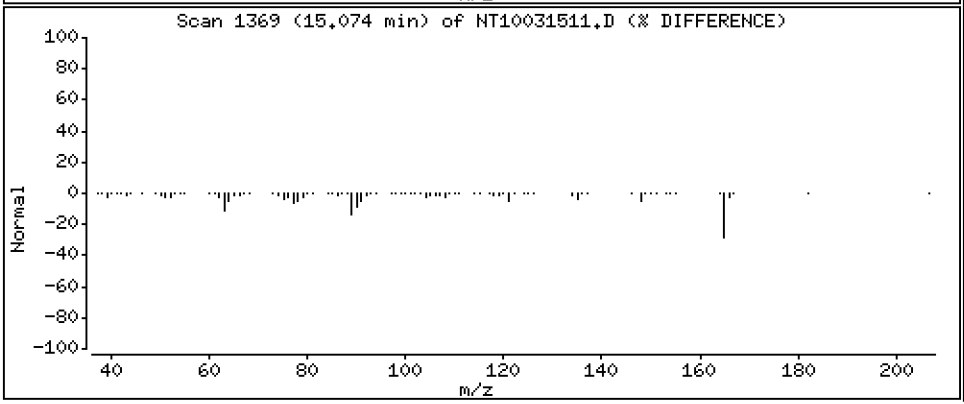
40 Acenaphthylene

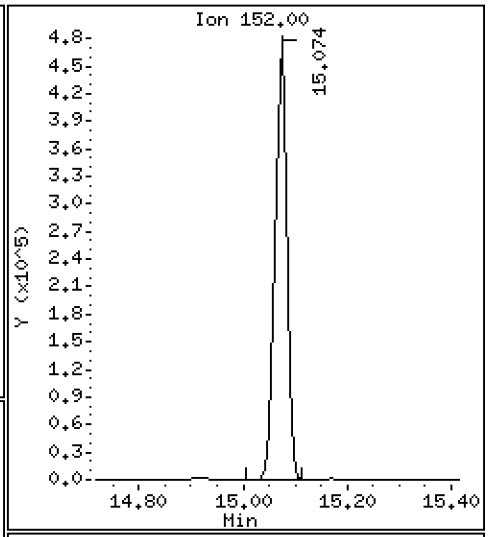
Concentration: 4.805 ug/mL

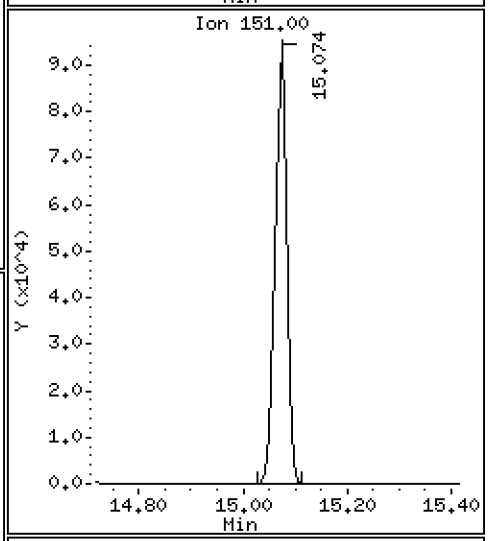


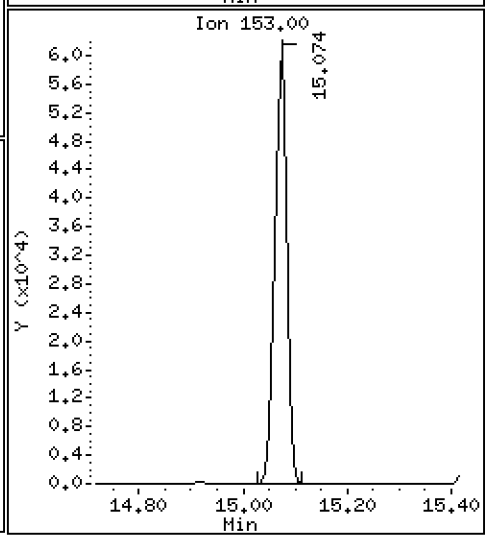












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

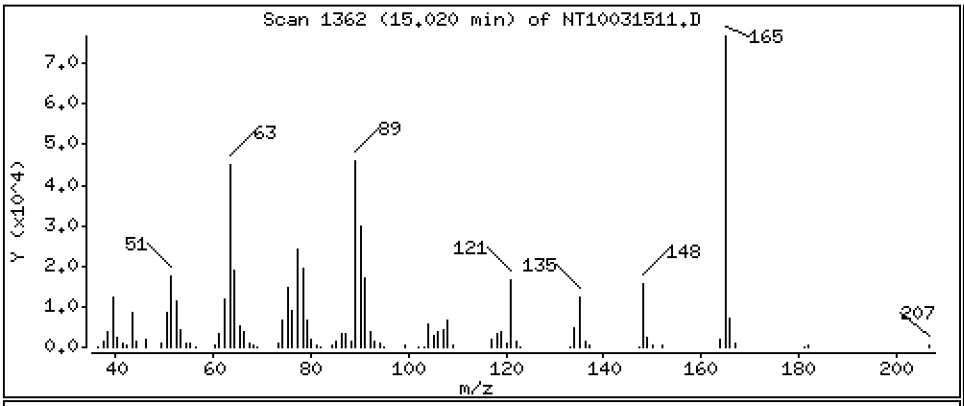
Operator: VTS

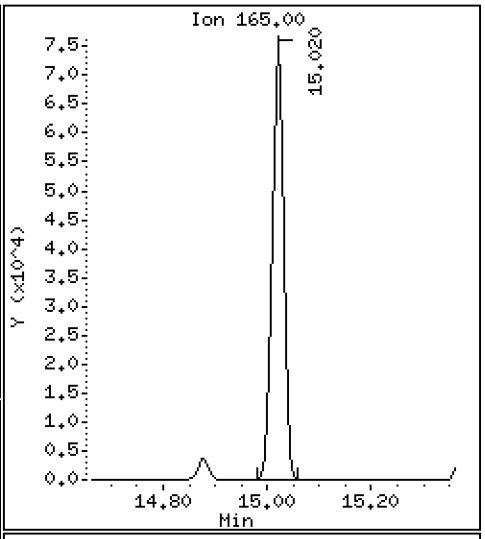
Column phase: ZB-5msi

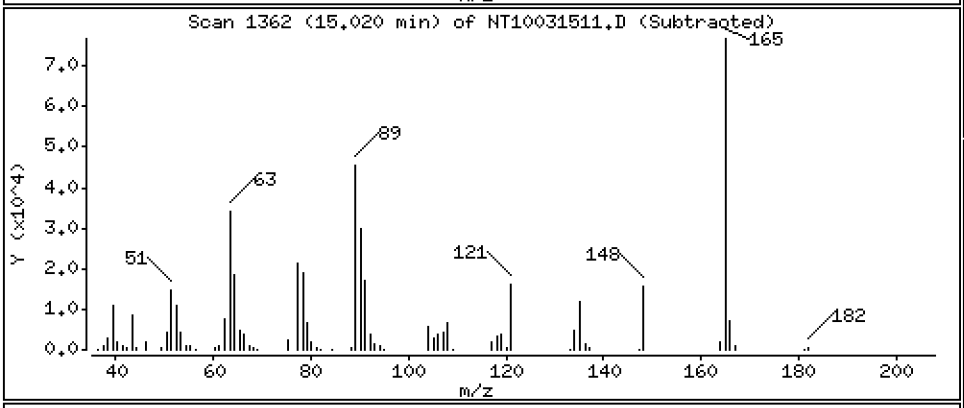
Column diameter: 0.25

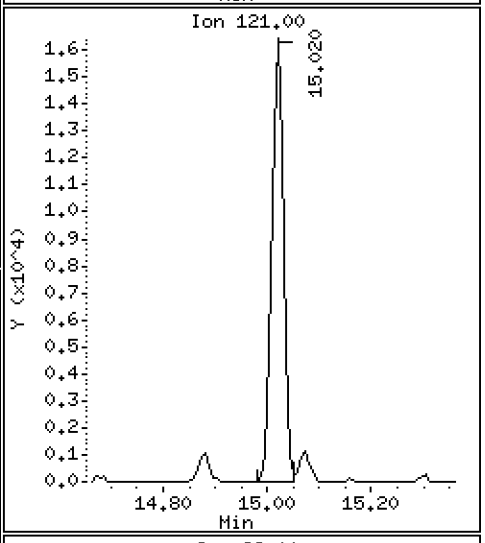
41 2,6-Dinitrotoluene

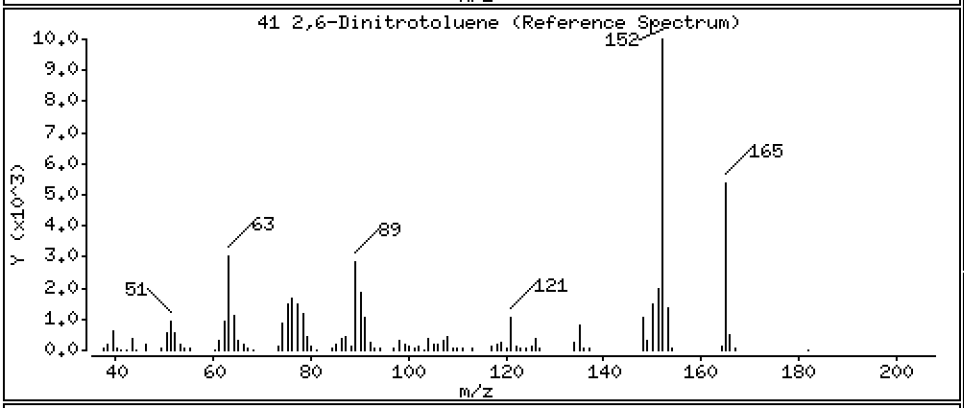
Concentration: 5.298 ug/mL

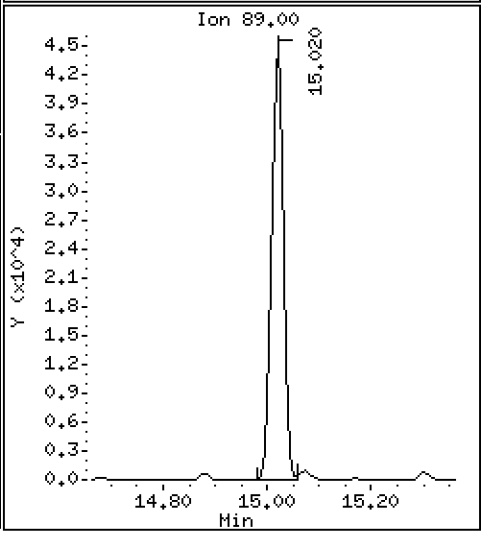


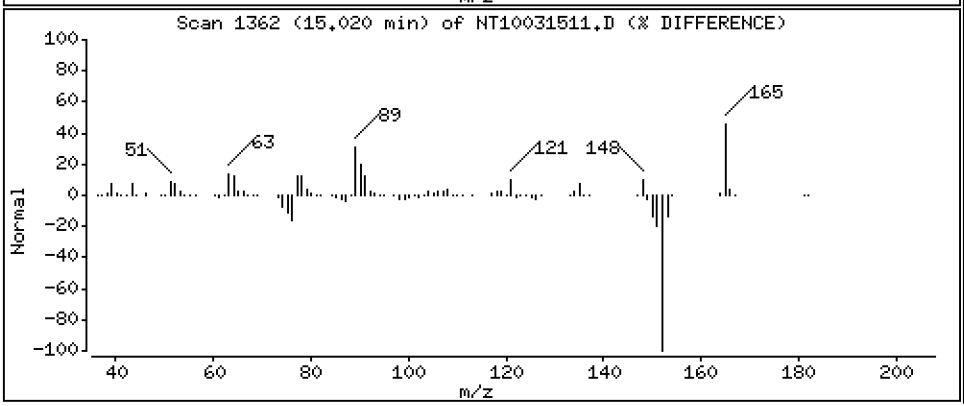












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

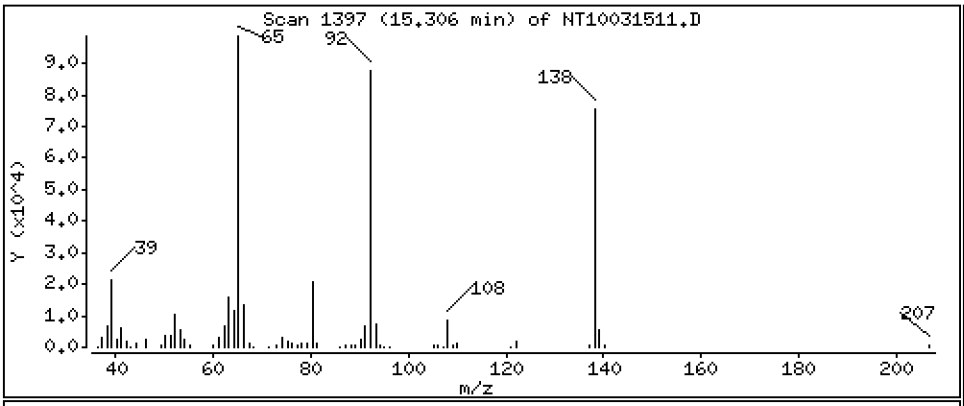
Operator: VTS

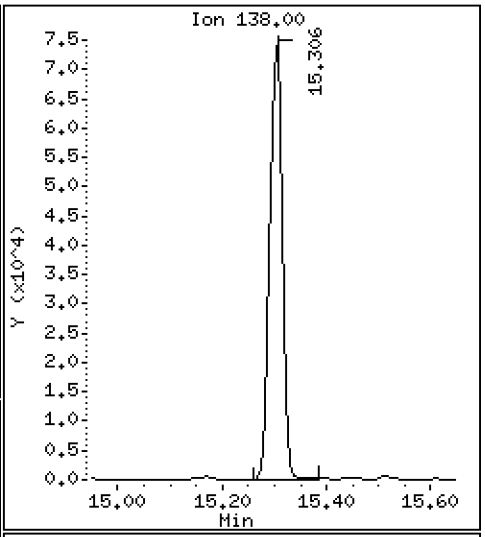
Column phase: ZB-5msi

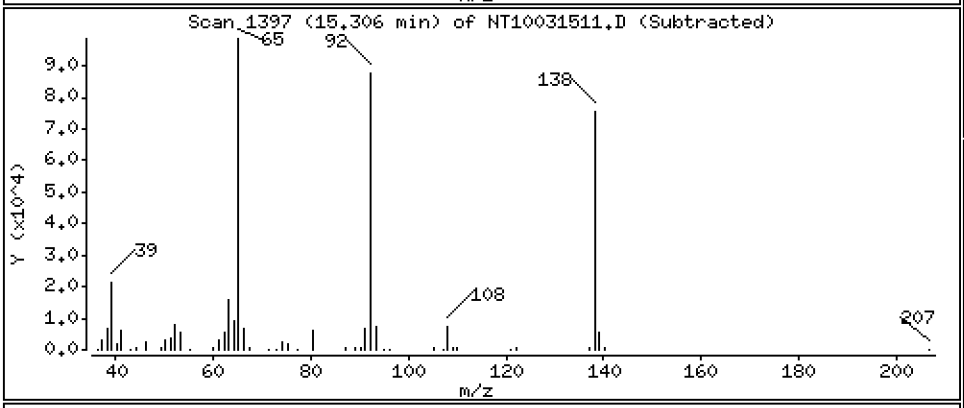
Column diameter: 0.25

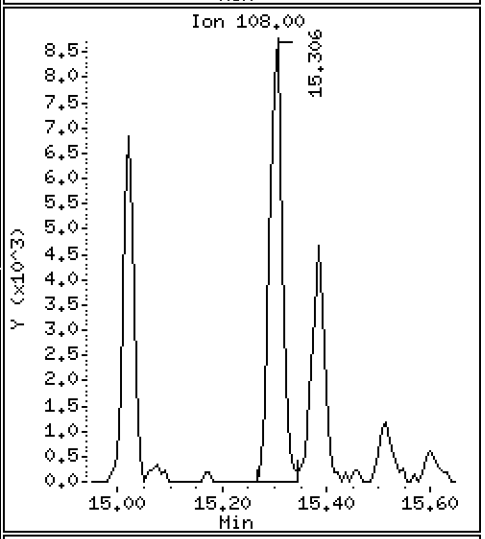
43 3-Nitroaniline

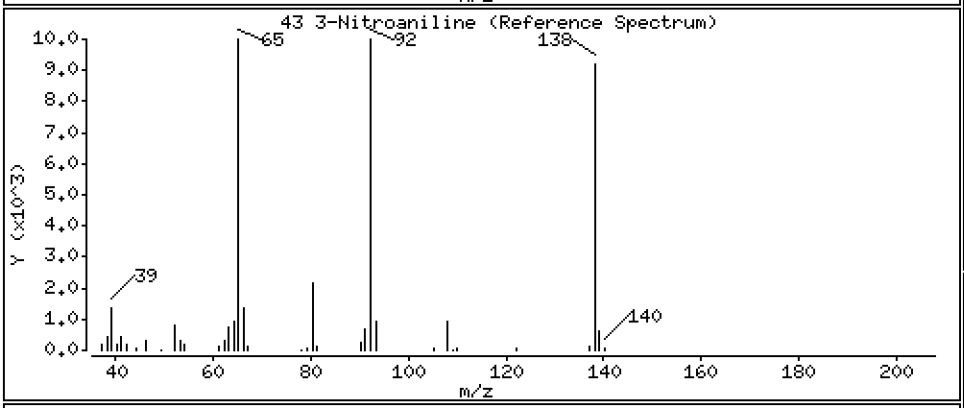
Concentration: 5.014 ug/mL

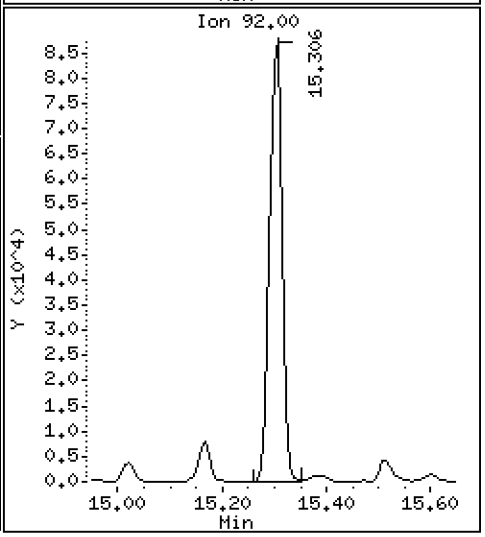


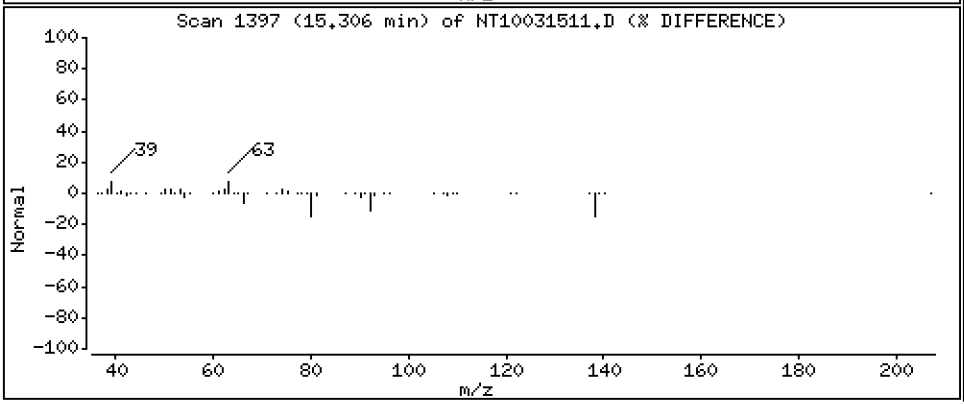












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

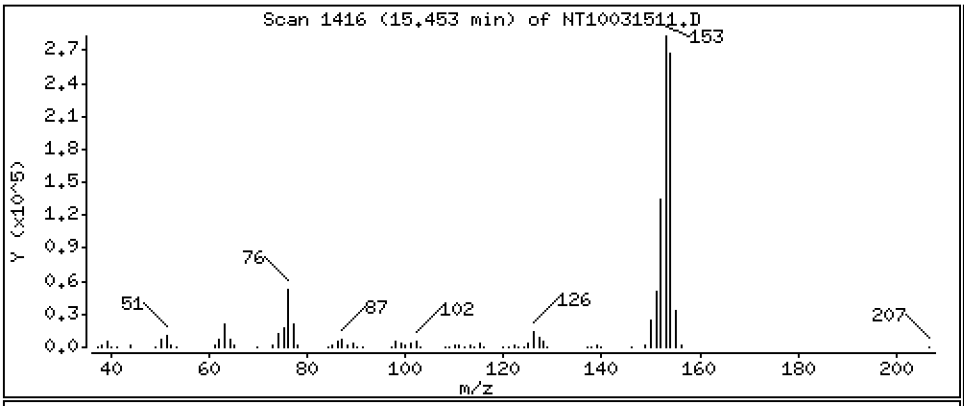
Operator: VTS

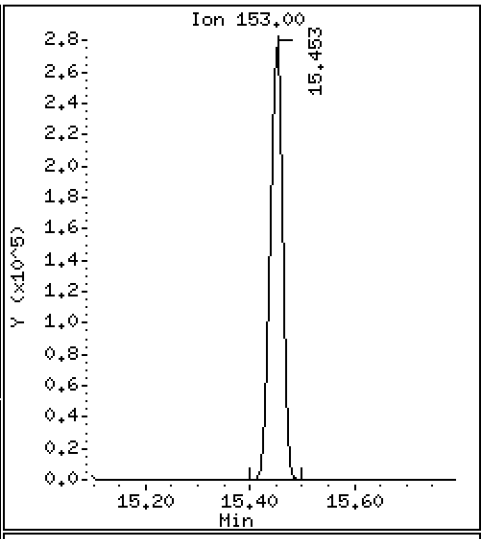
Column phase: ZB-5msi

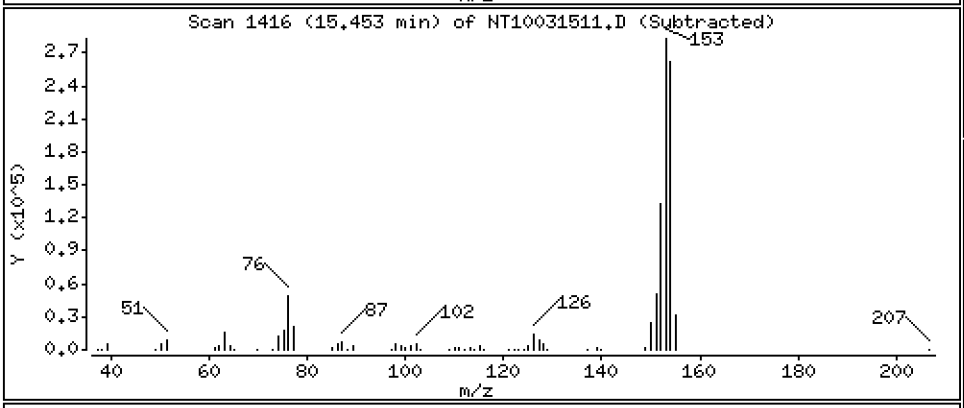
Column diameter: 0.25

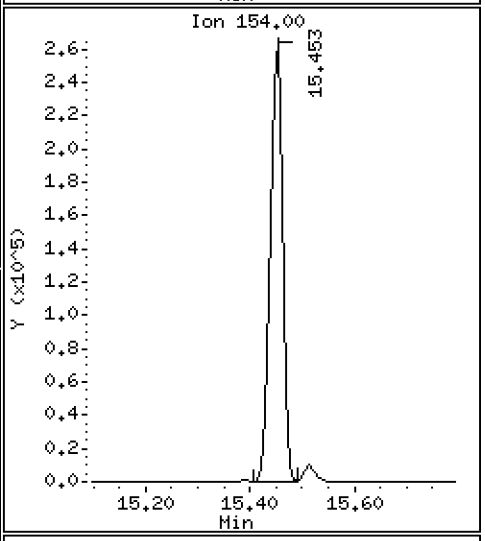
44 Acenaphthene

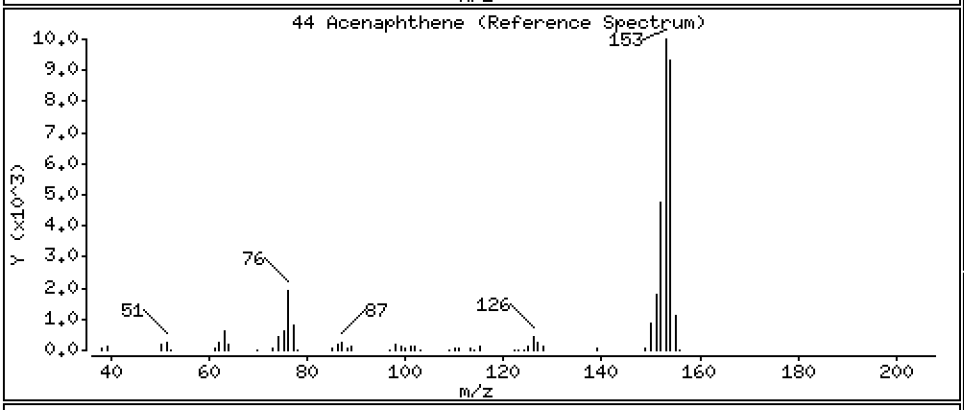
Concentration: 4.776 ug/mL

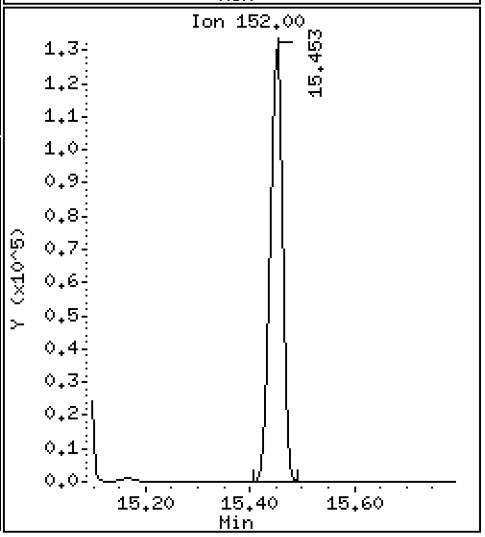


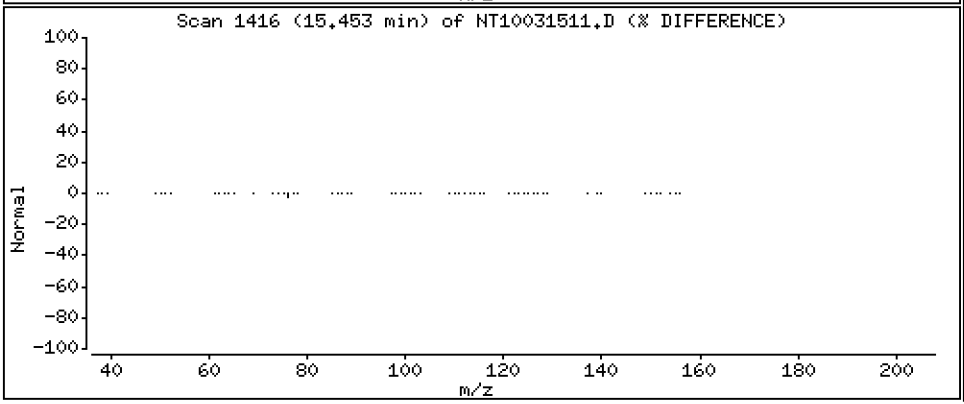












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

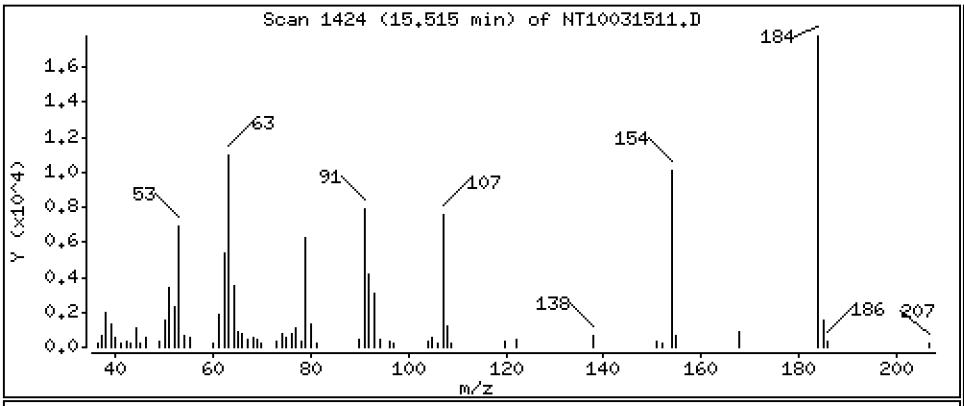
Operator: VTS

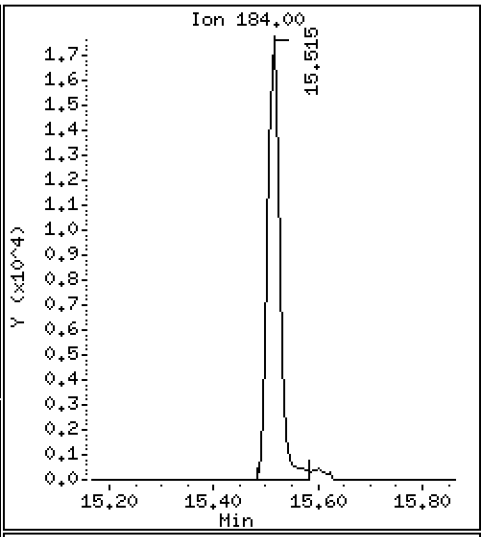
Column phase: ZB-5msi

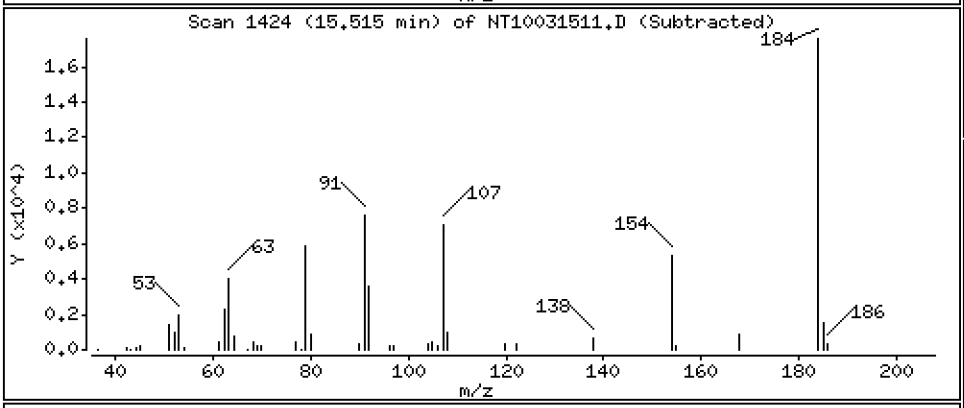
Column diameter: 0.25

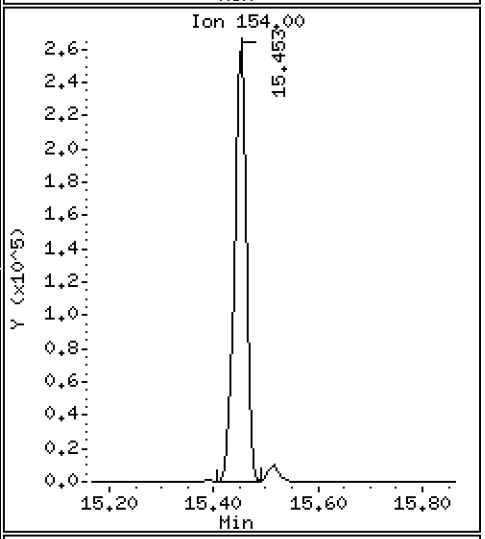
45 2,4-Dinitrophenol

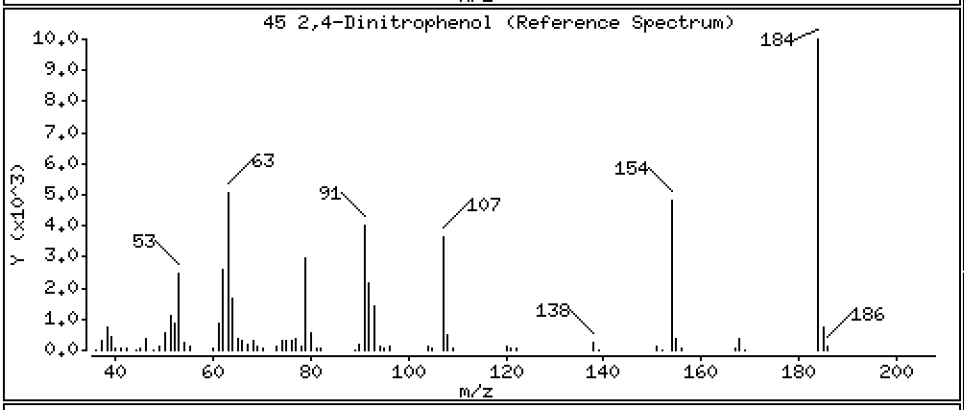
Concentration: 2.124 ug/mL

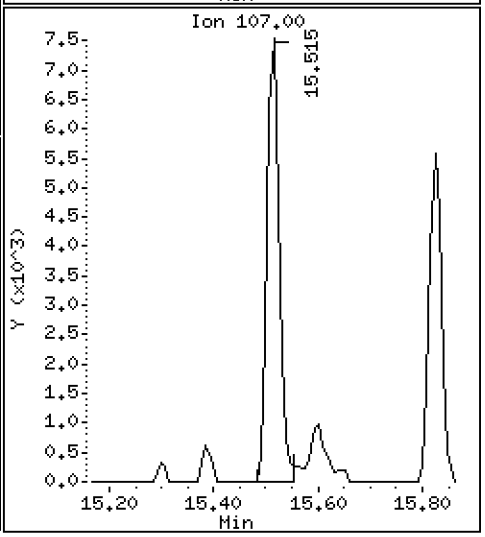


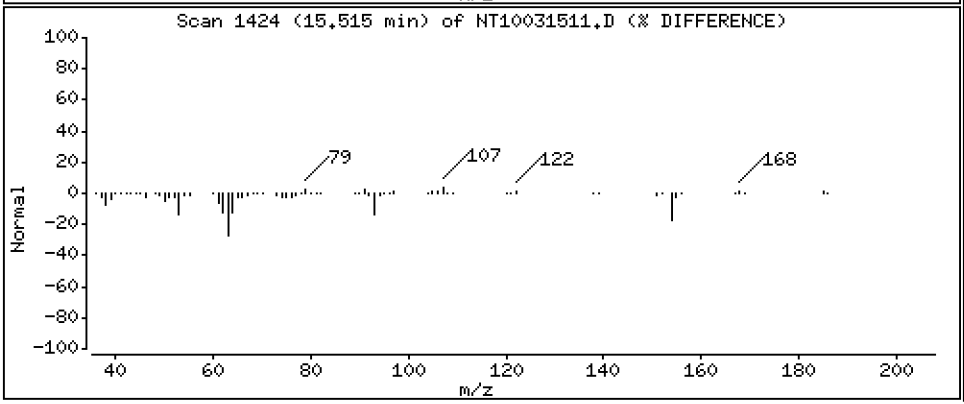












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

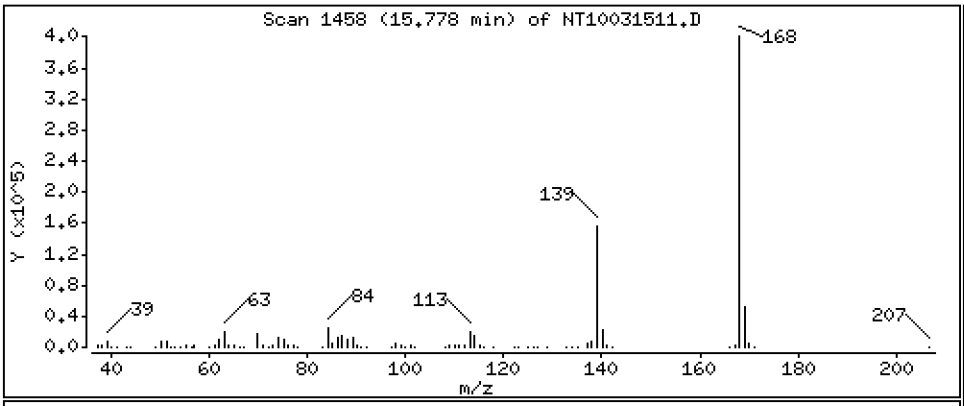
Operator: VTS

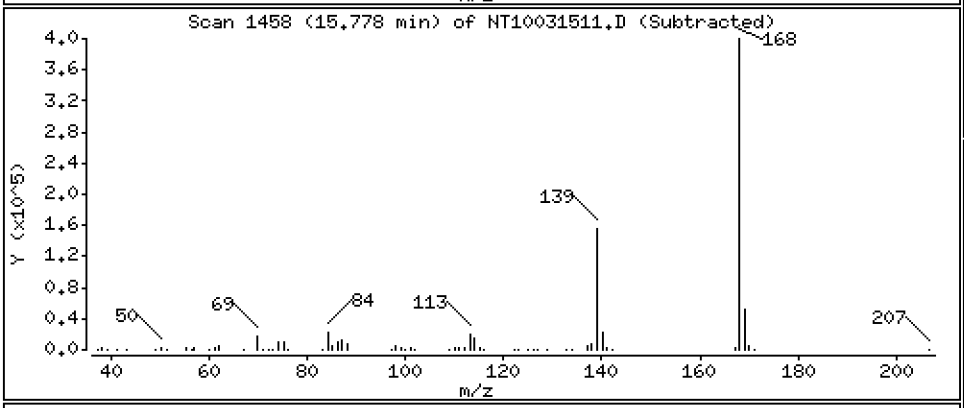
Column phase: ZB-5msi

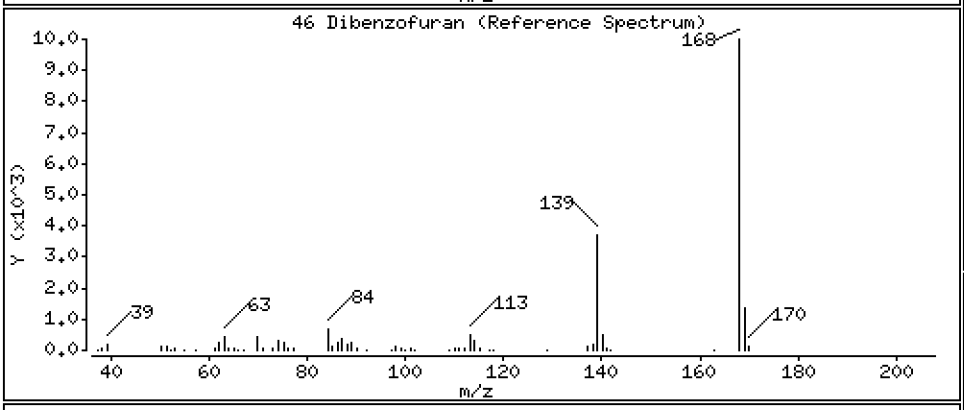
Column diameter: 0.25

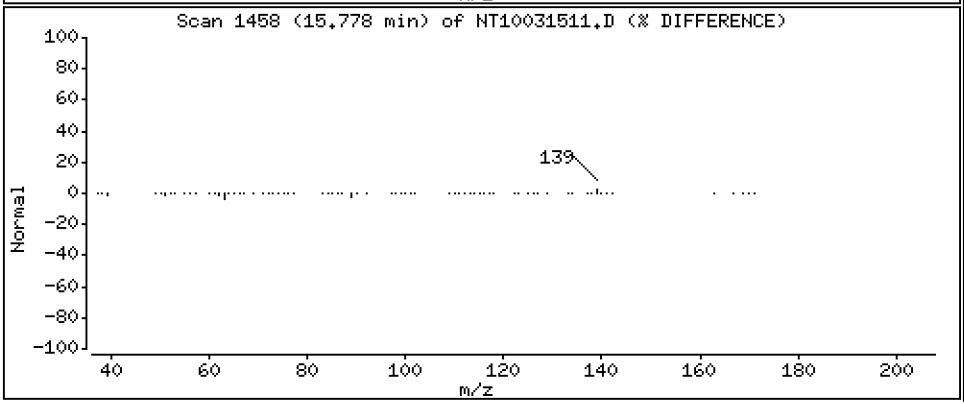
46 Dibenzofuran

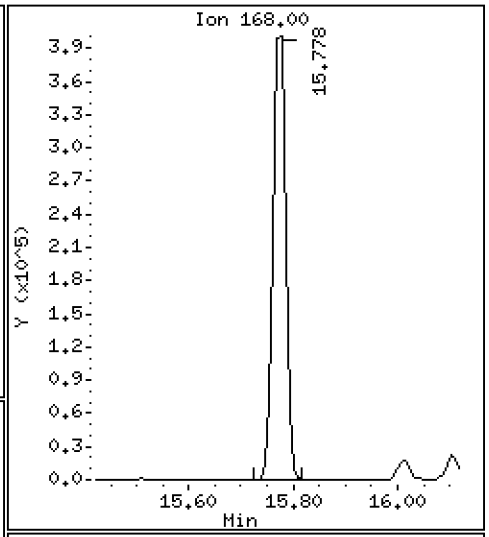
Concentration: 4.648 ug/mL

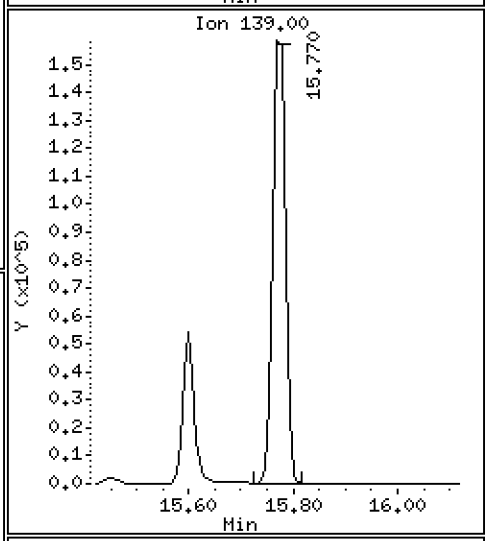


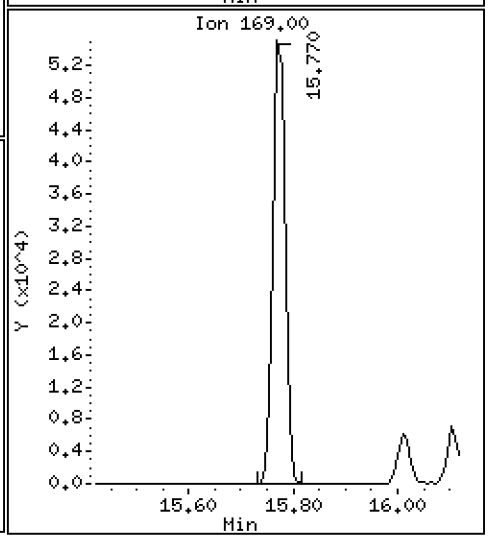












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

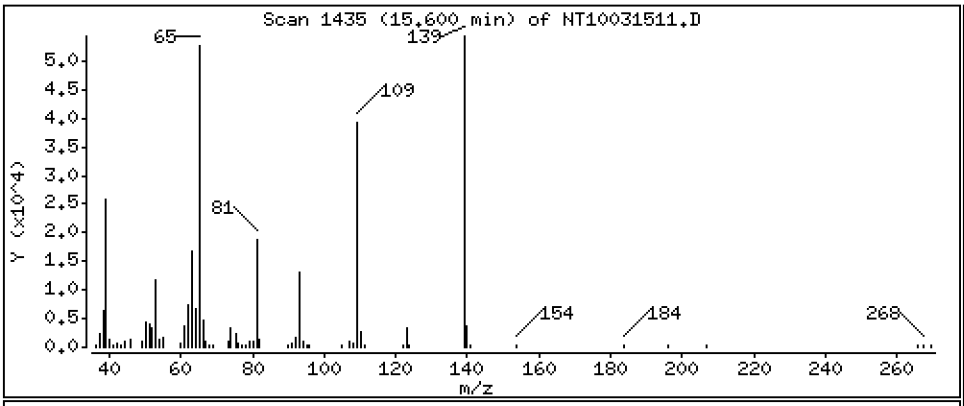
Operator: VTS

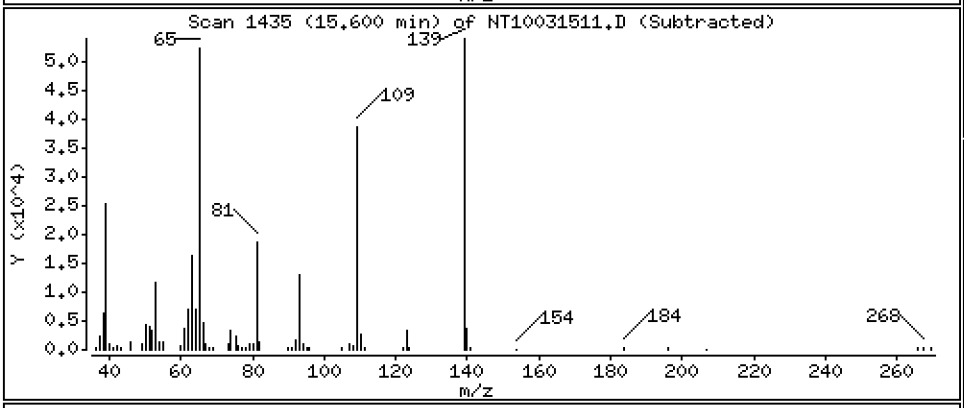
Column phase: ZB-5msi

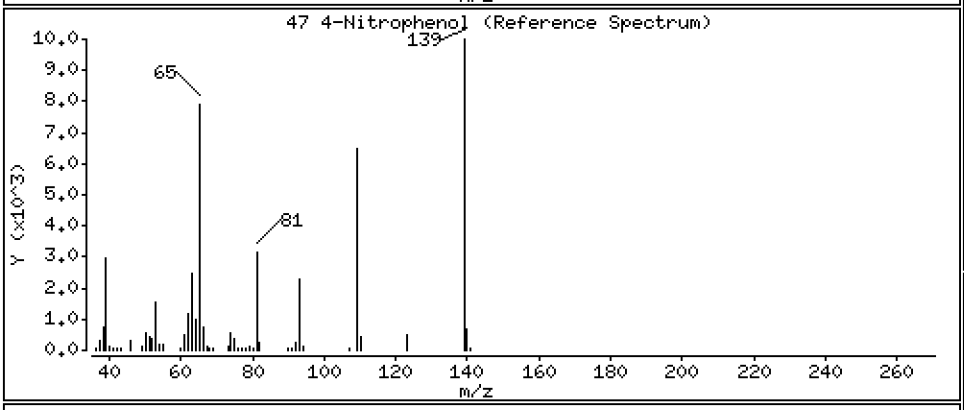
Column diameter: 0.25

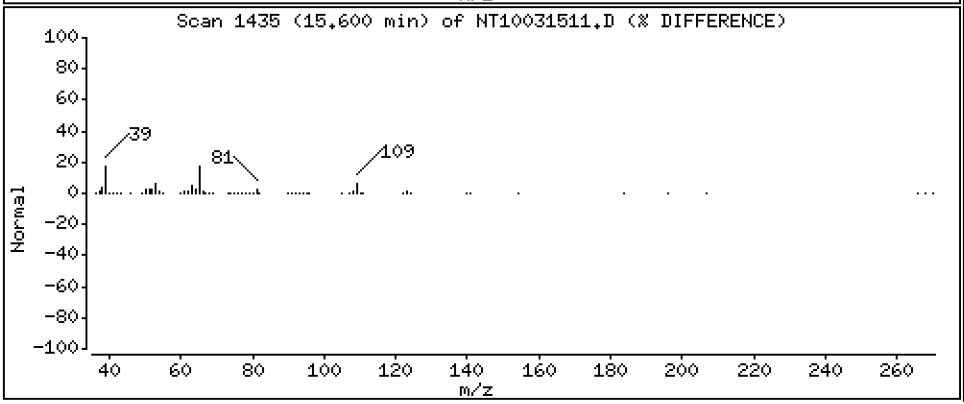
47 4-Nitrophenol

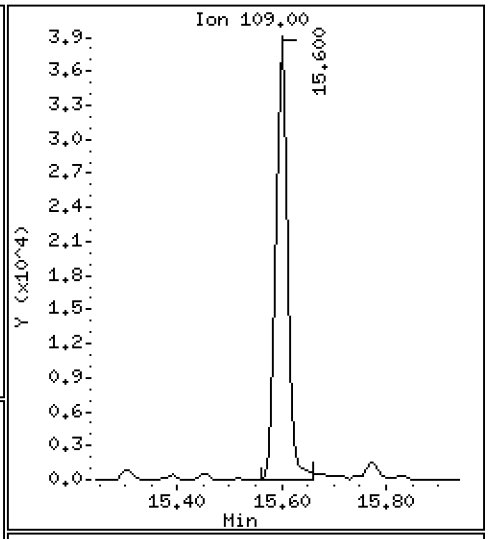
Concentration: 3.966 ug/mL

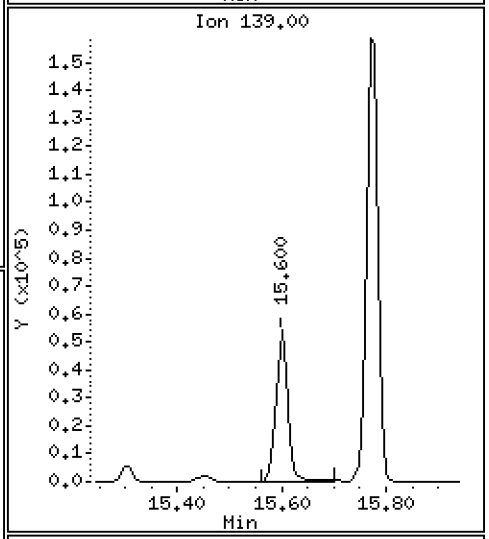


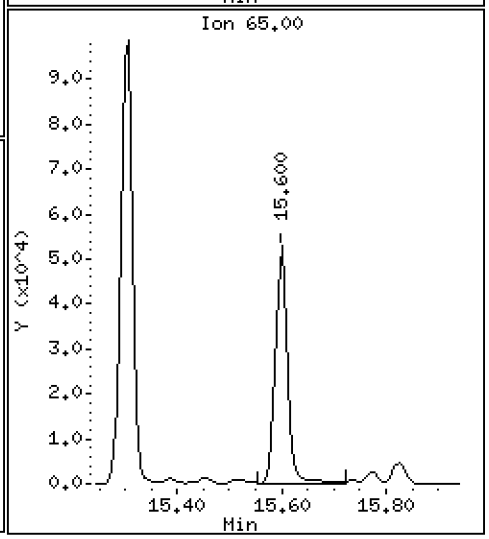












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

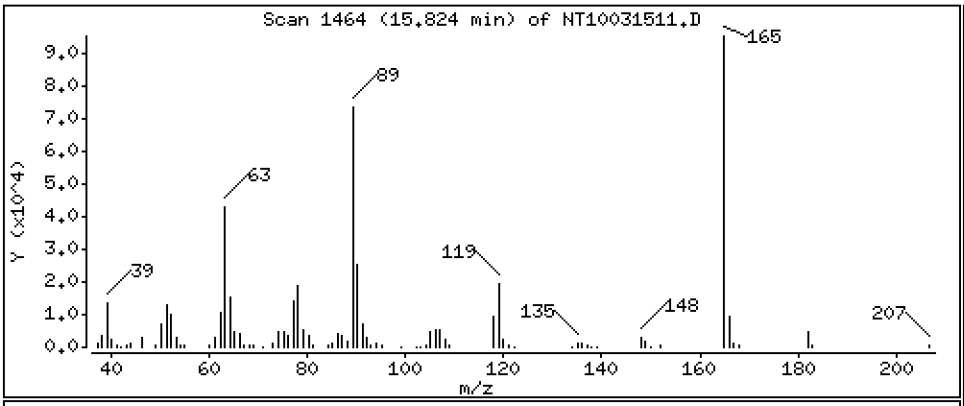
Operator: VTS

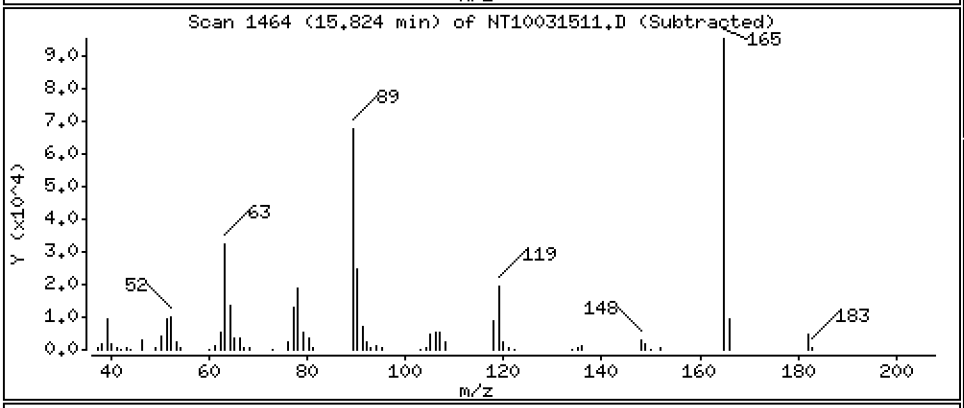
Column phase: ZB-5msi

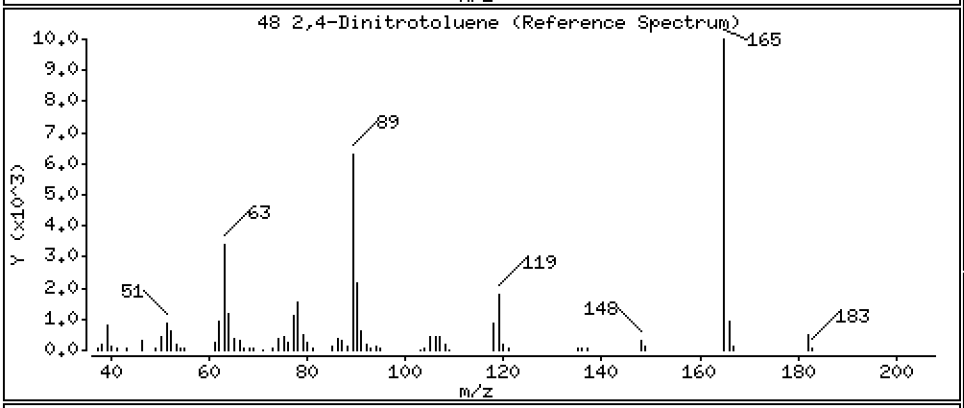
Column diameter: 0.25

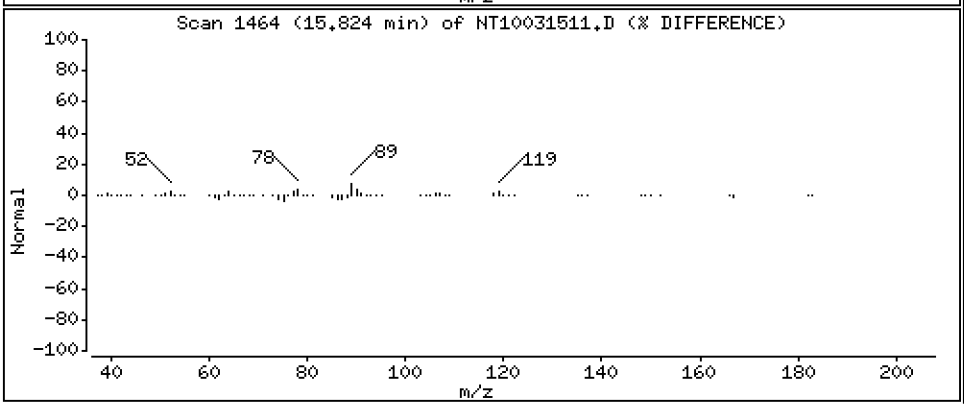
48 2,4-Dinitrotoluene

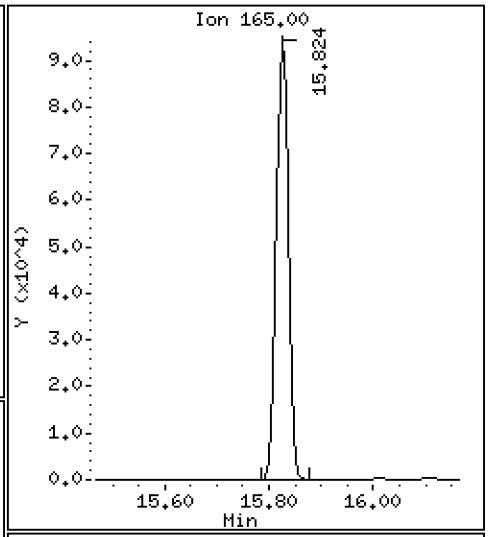
Concentration: 4.510 ug/mL

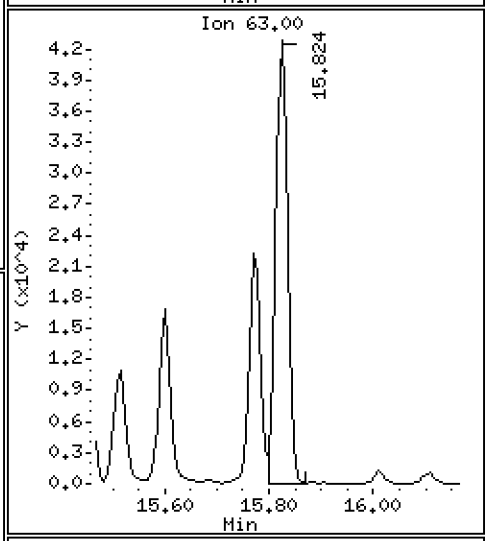


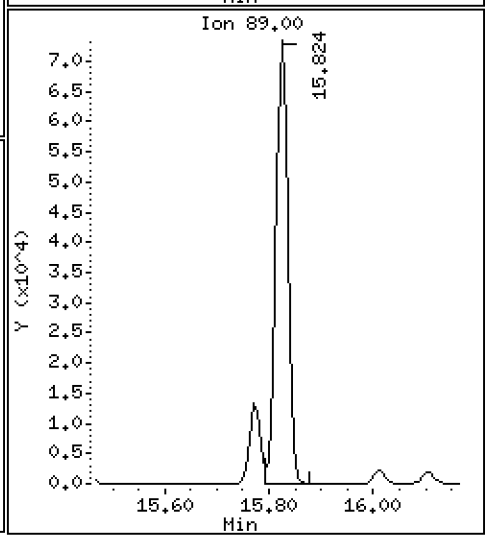












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

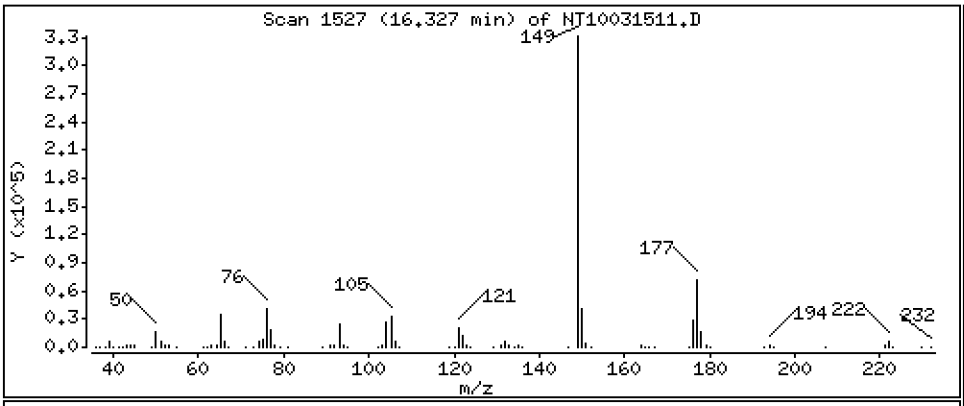
Operator: VTS

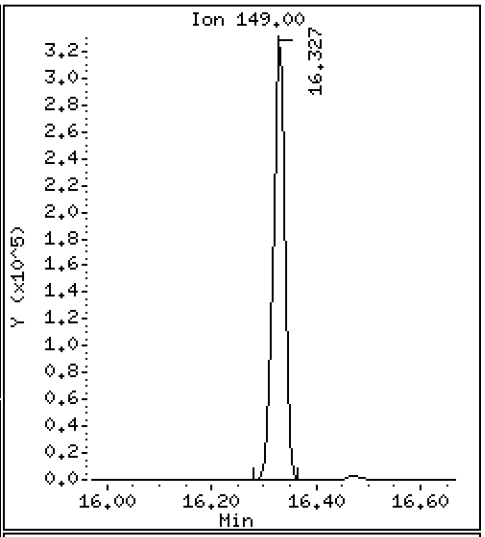
Column phase: ZB-5msi

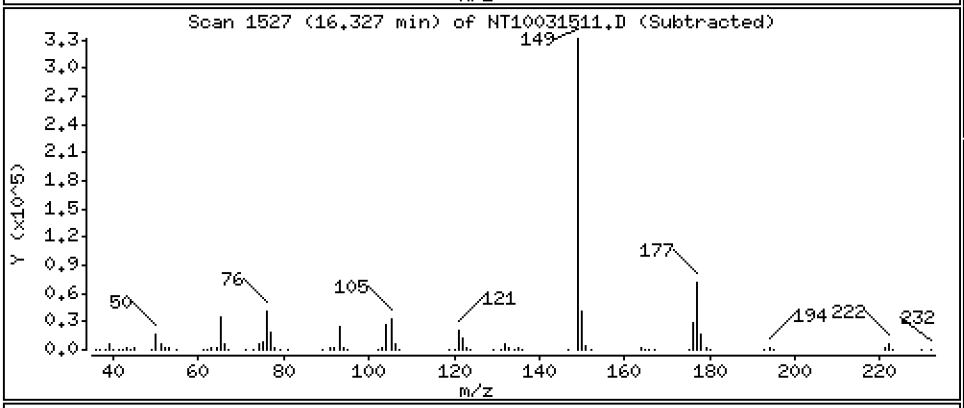
Column diameter: 0.25

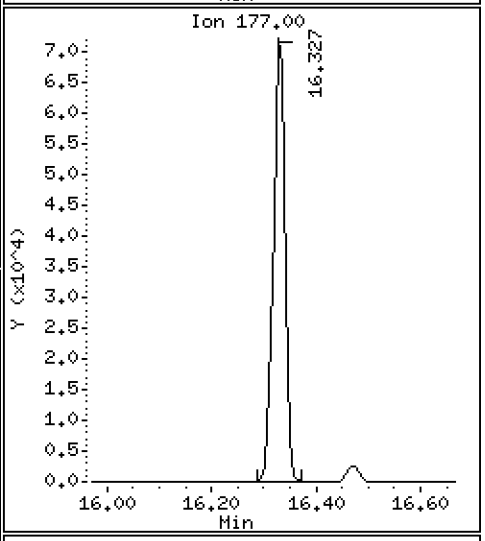
50 Diethylphthalate

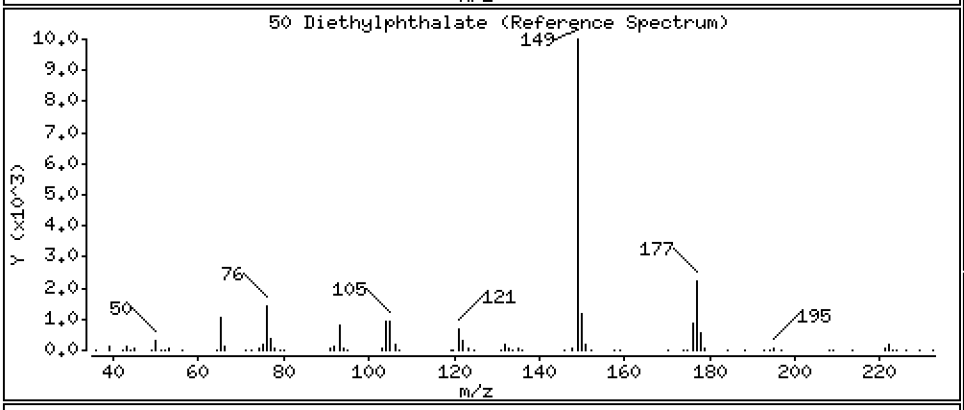
Concentration: 5.209 ug/mL

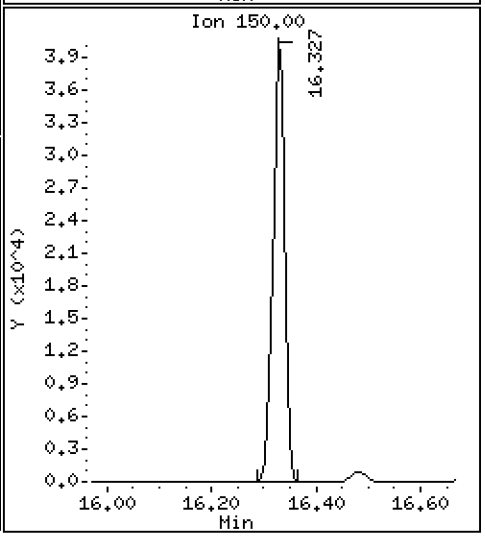


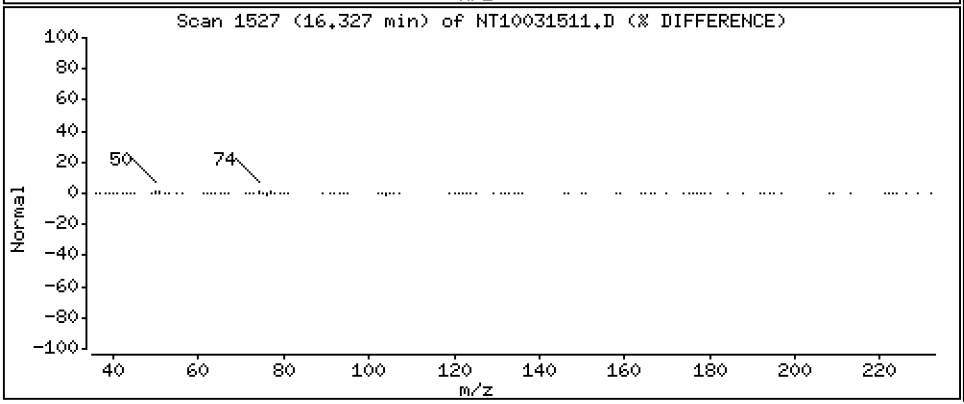












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

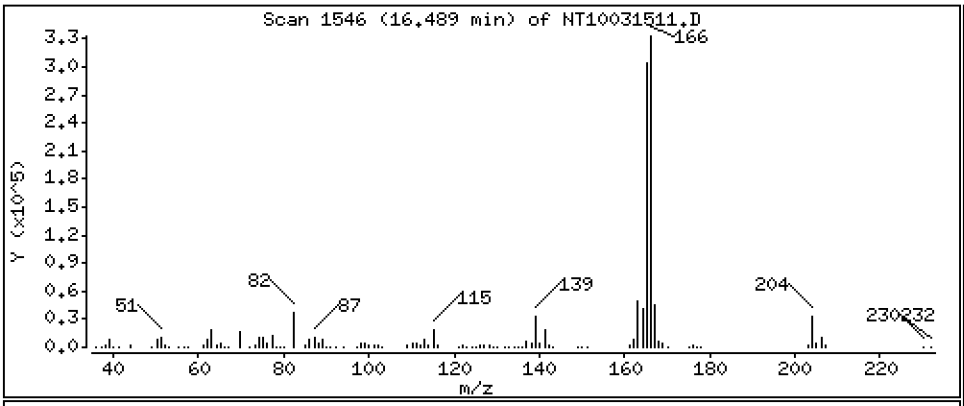
Operator: VTS

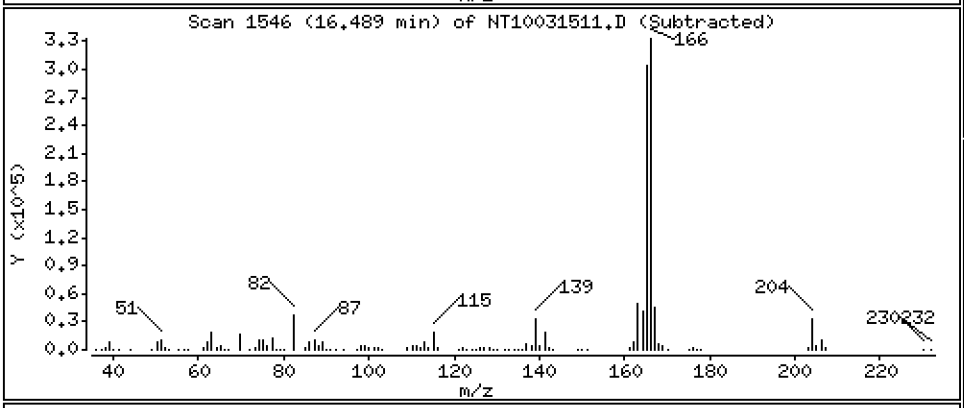
Column phase: ZB-5msi

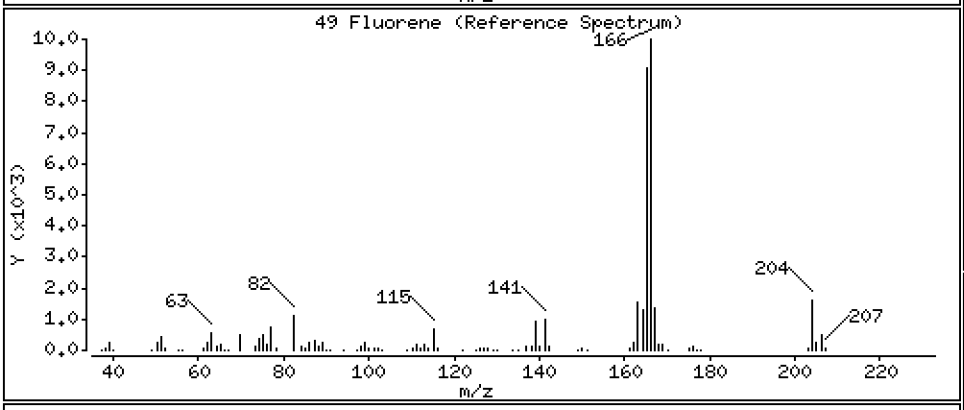
Column diameter: 0.25

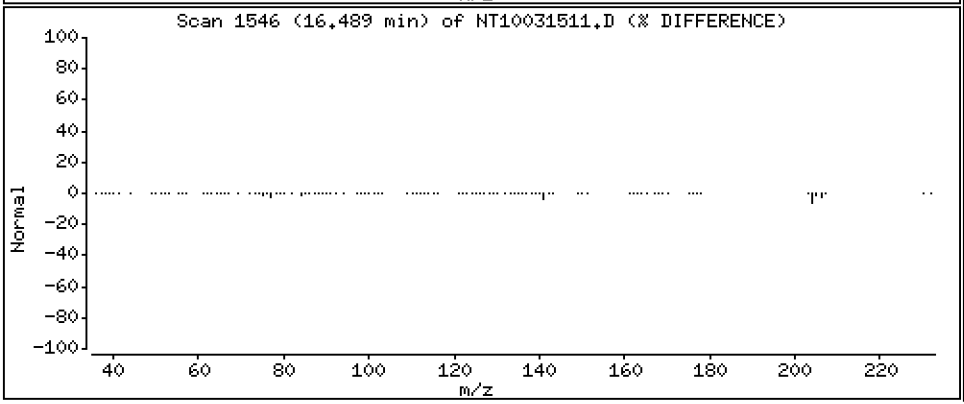
49 Fluorene

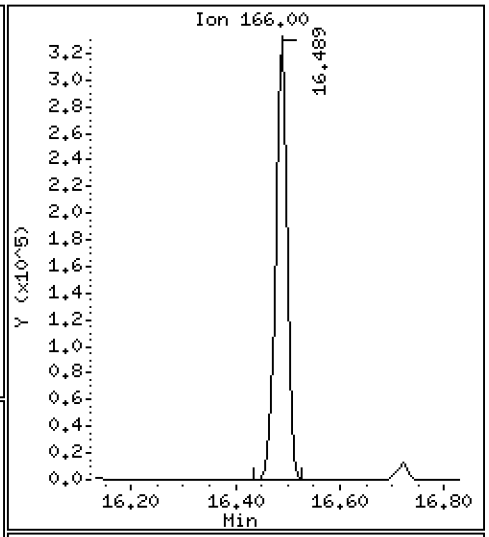
Concentration: 4.708 ug/mL

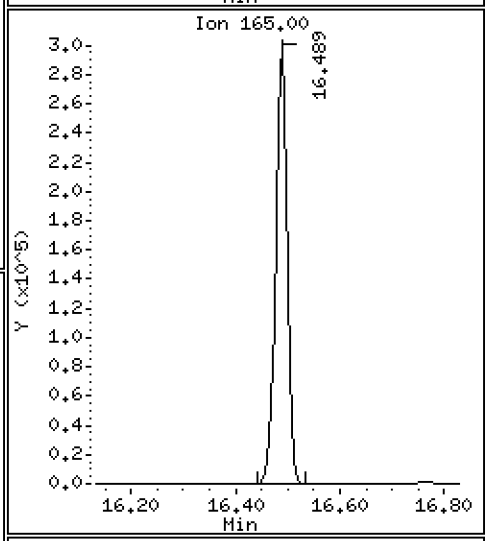


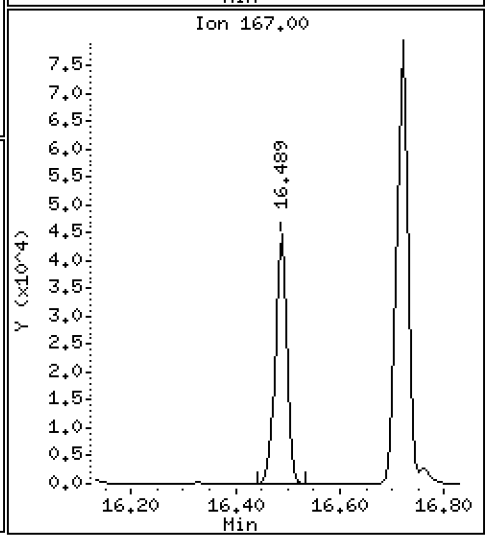












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

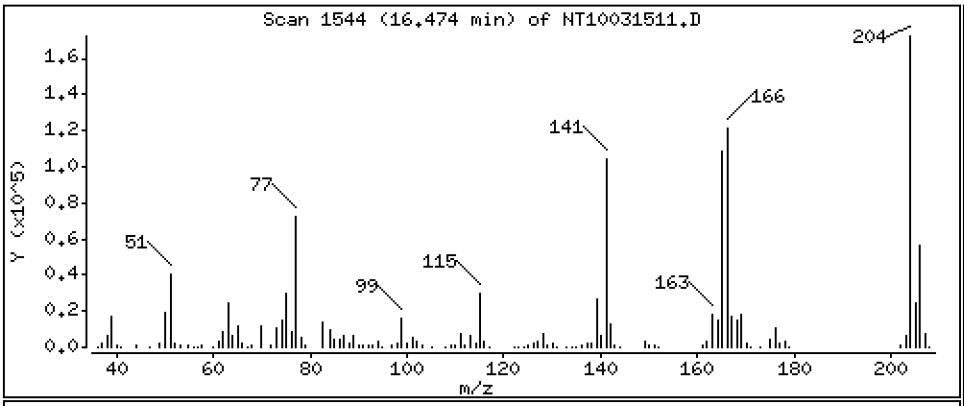
Operator: VTS

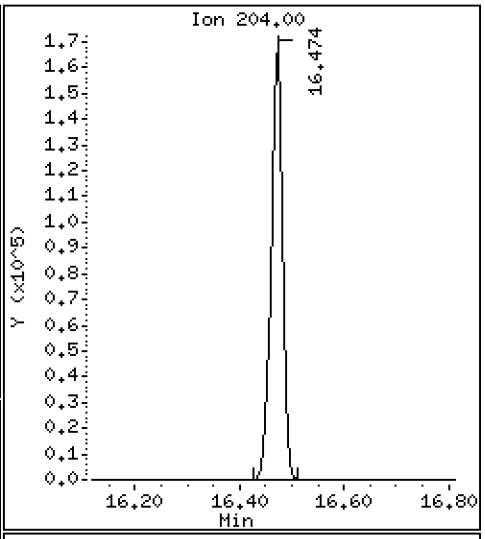
Column phase: ZB-5msi

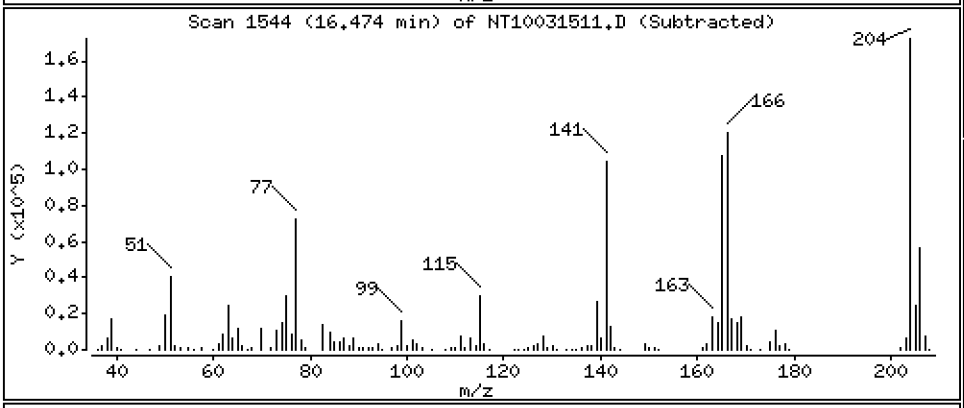
Column diameter: 0.25

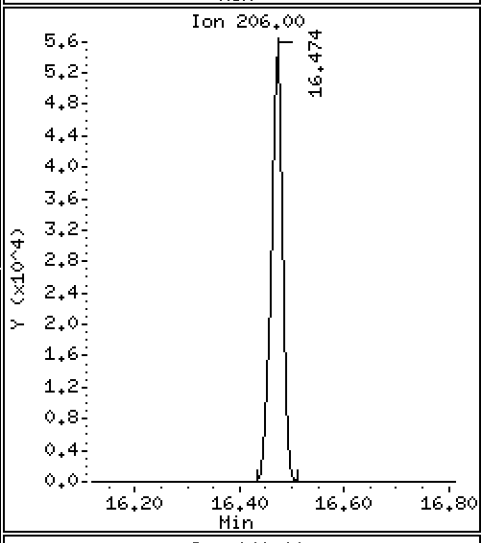
51 4-Chlorophenyl-phenylether

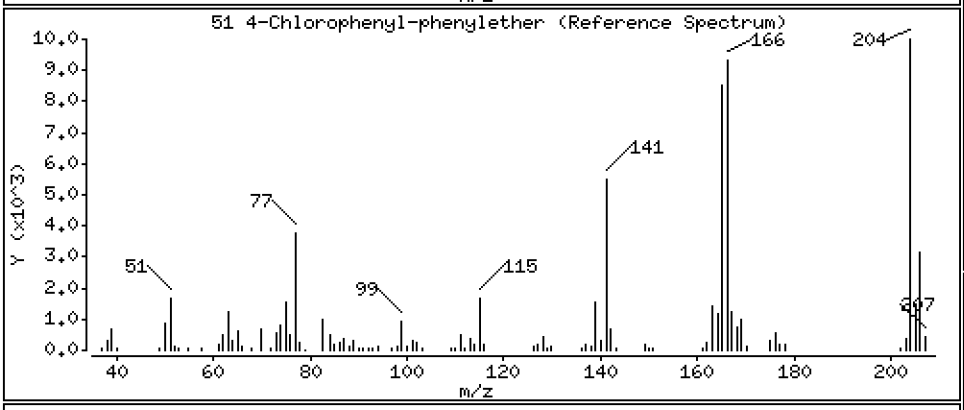
Concentration: 4.993 ug/mL

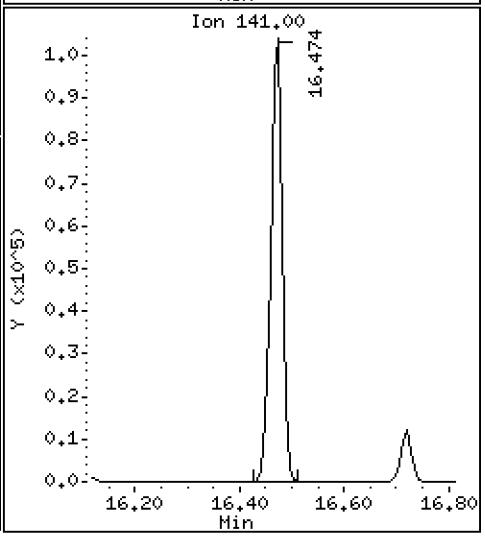


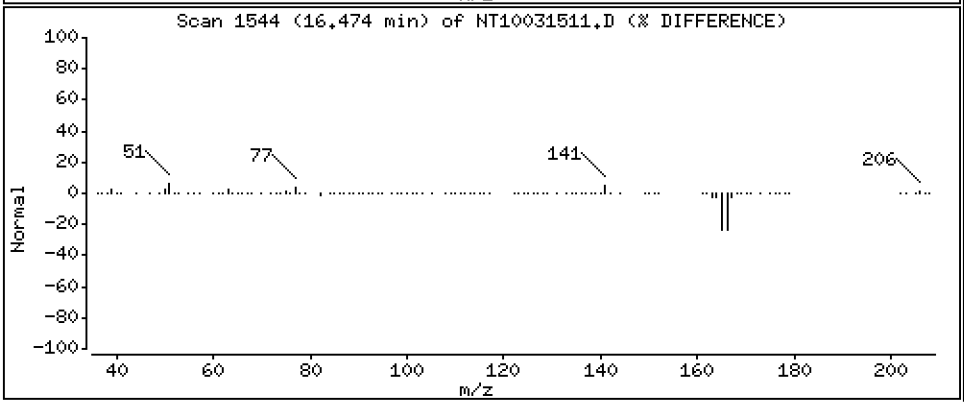












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

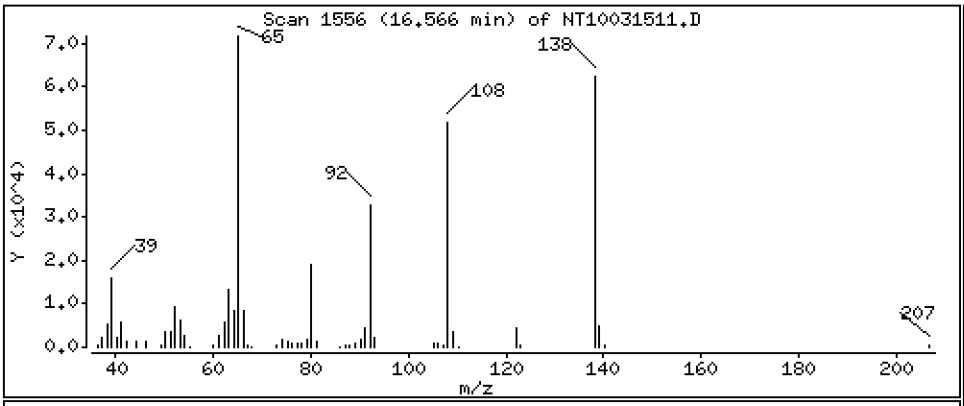
Operator: VTS

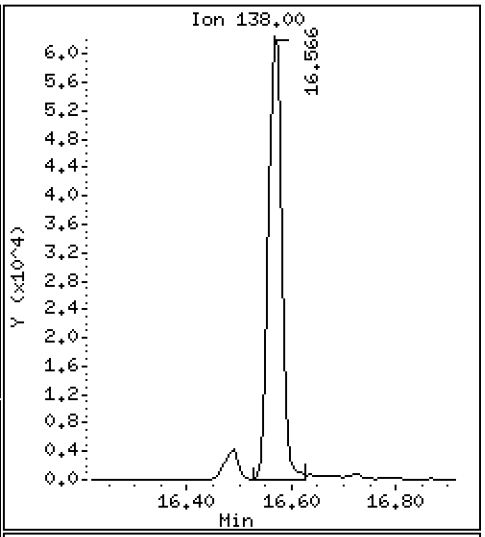
Column phase: ZB-5msi

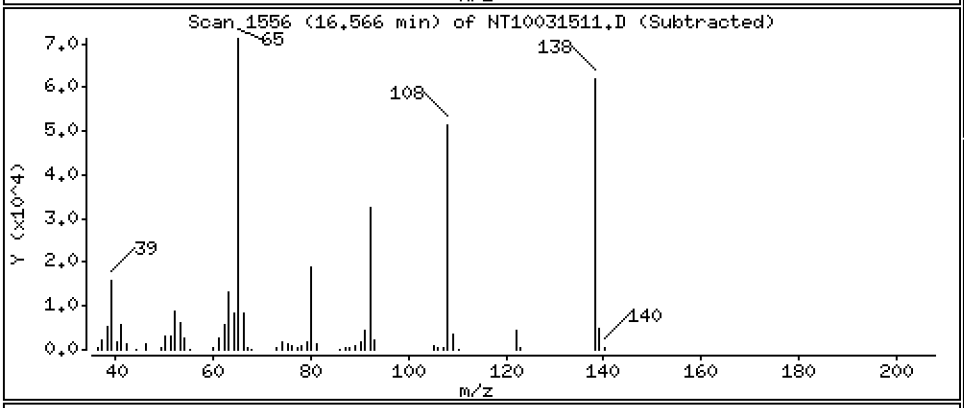
Column diameter: 0.25

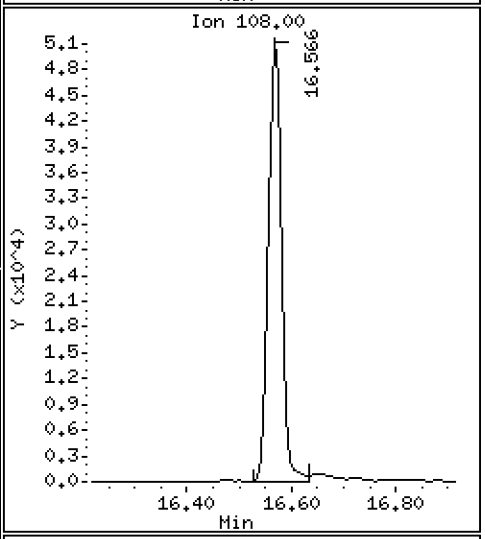
52 4-Nitroaniline

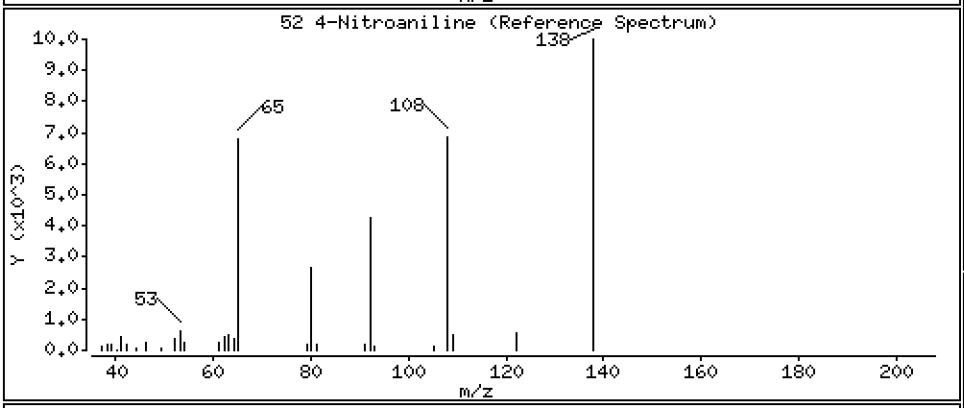
Concentration: 4.925 ug/mL

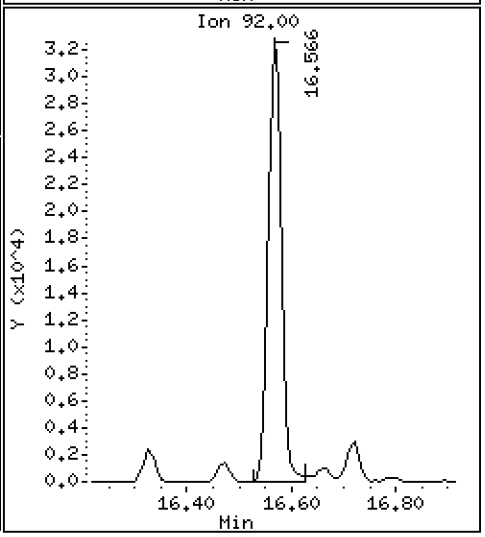


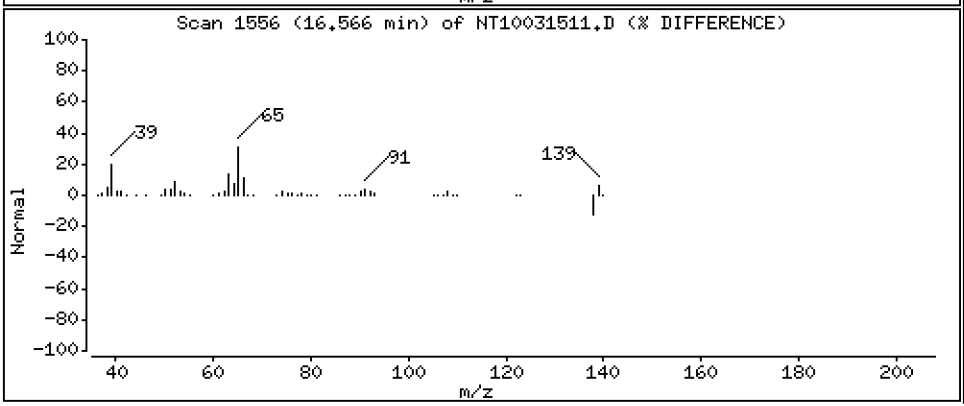












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

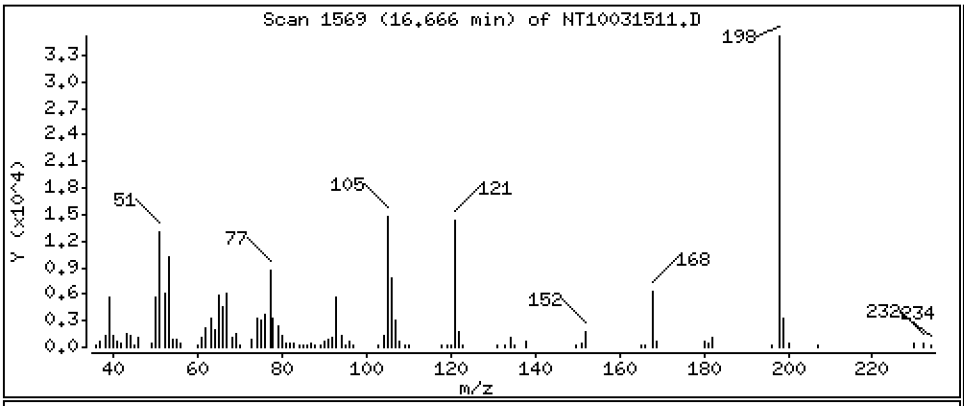
Operator: VTS

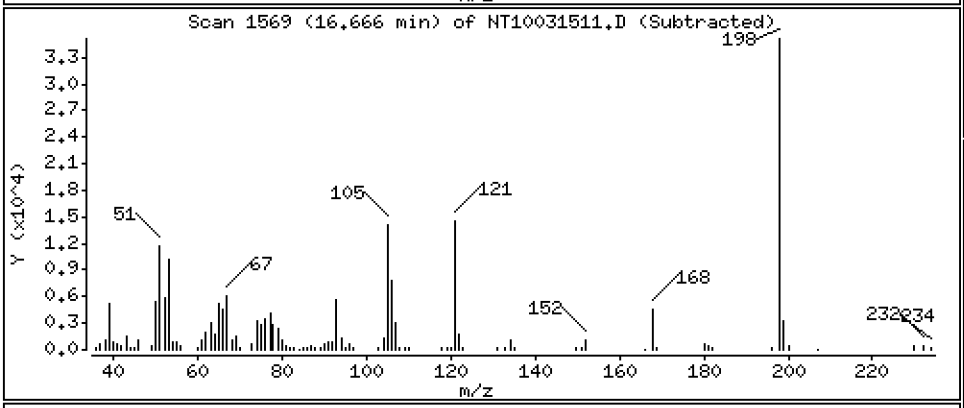
Column phase: ZB-5msi

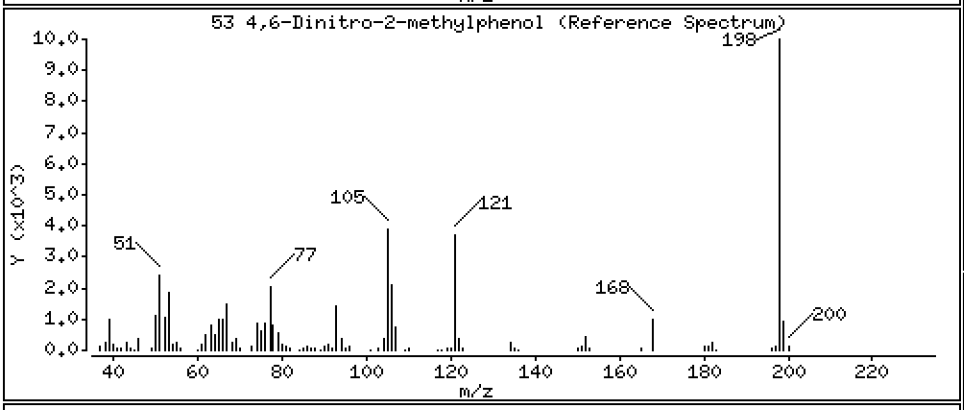
Column diameter: 0.25

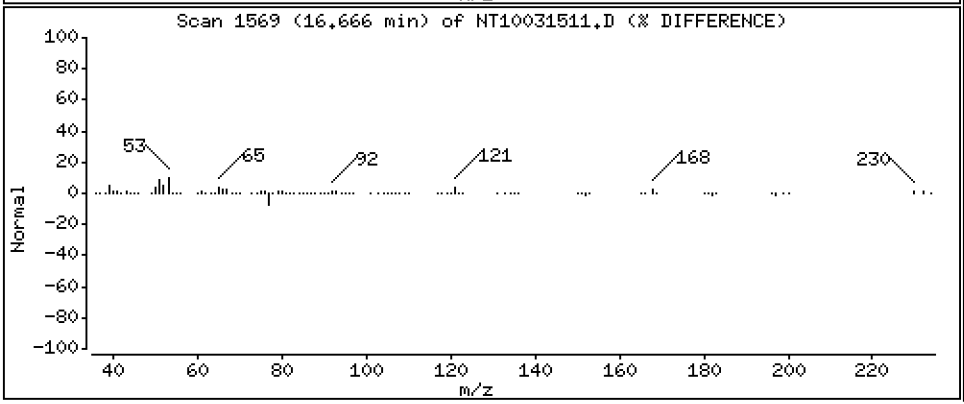
53 4,6-Dinitro-2-methylphenol

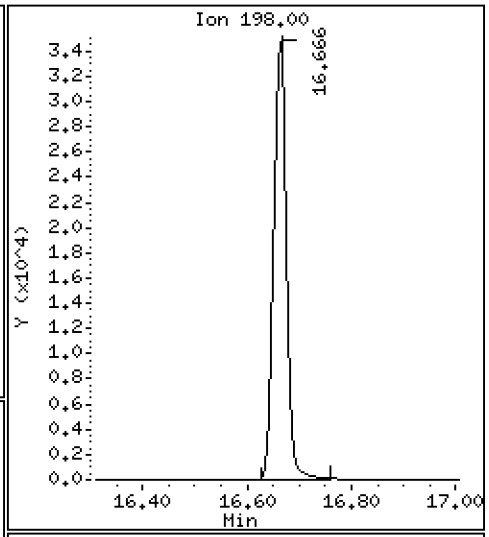
Concentration: 3.515 ug/mL

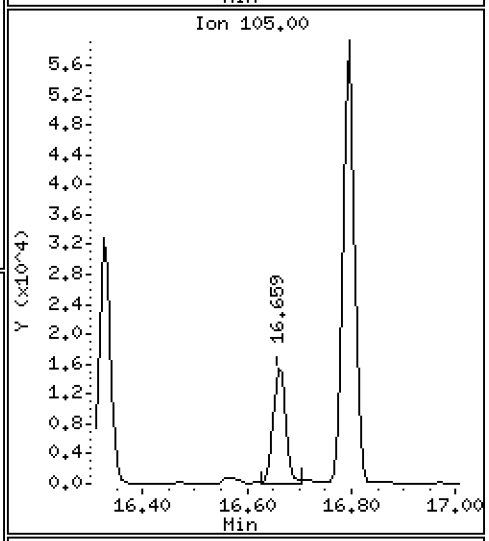


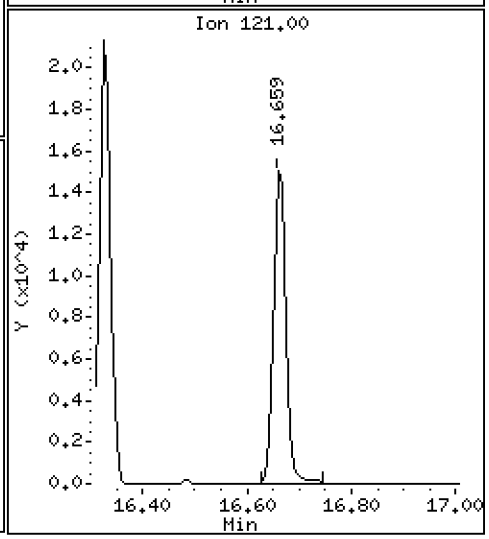












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

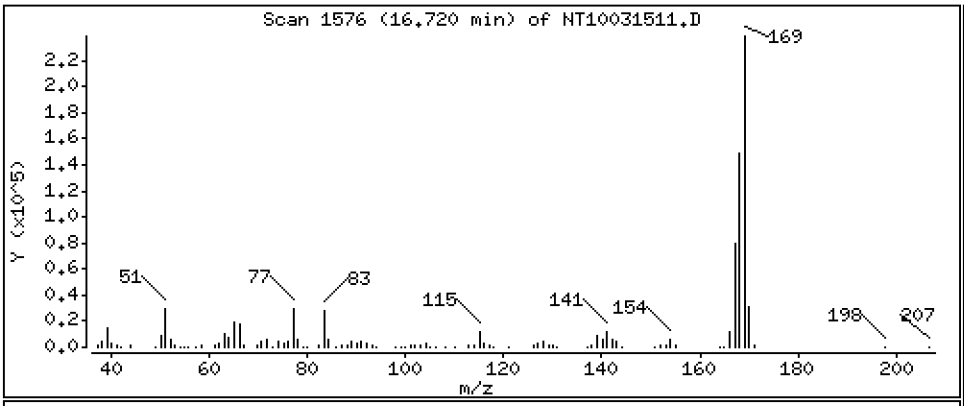
Operator: VTS

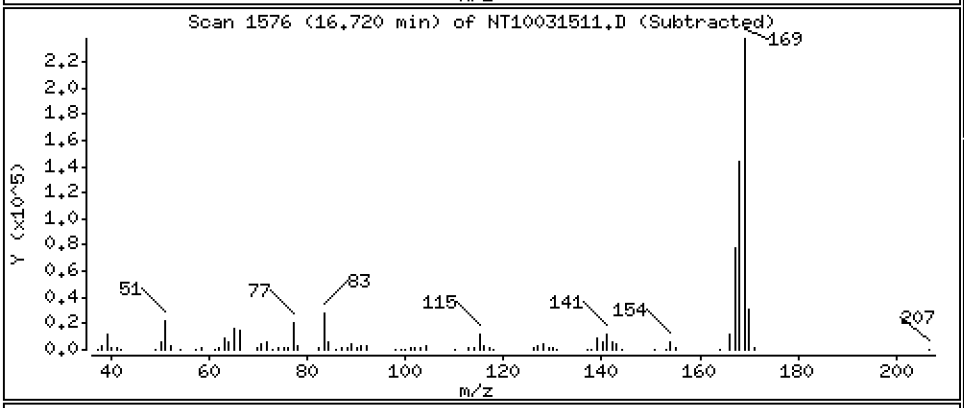
Column phase: ZB-5msi

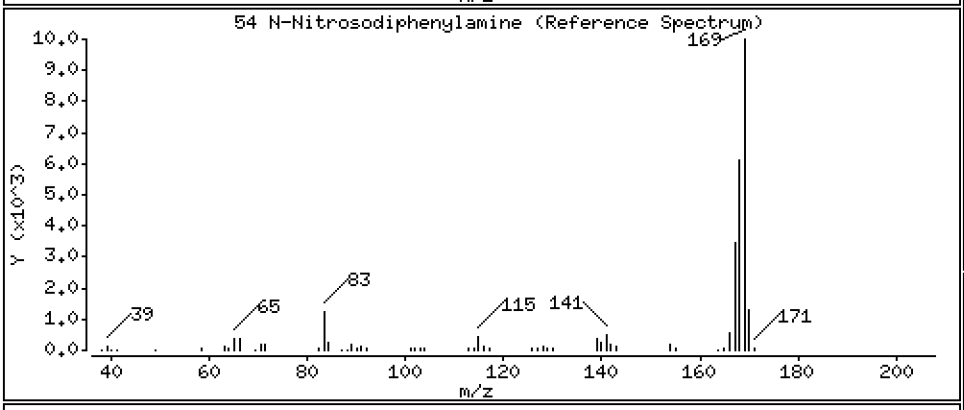
Column diameter: 0.25

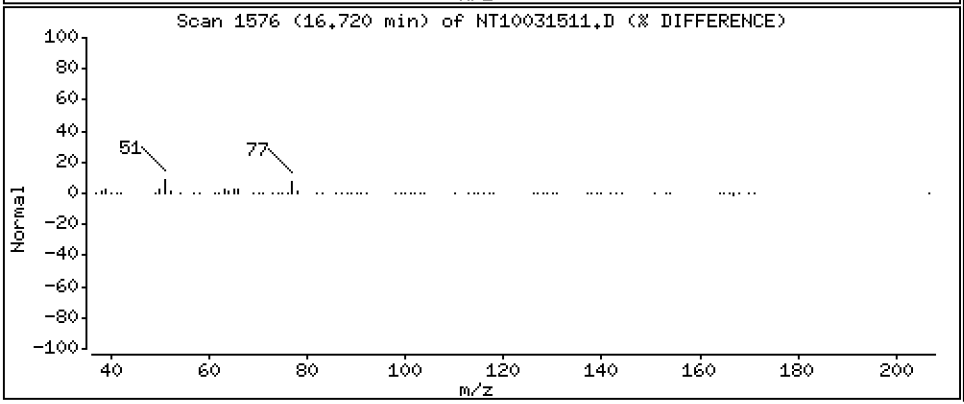
54 N-Nitrosodiphenylamine

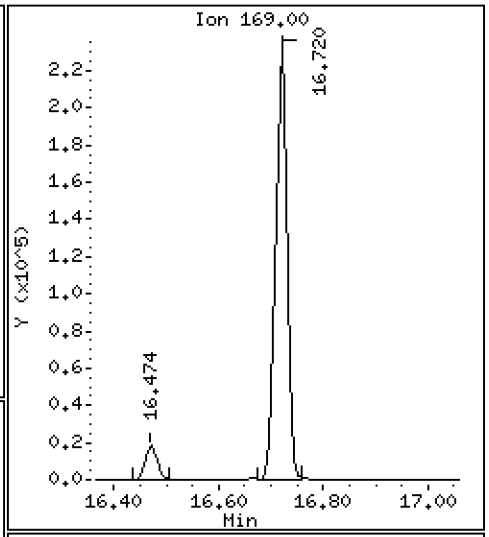
Concentration: 4.802 ug/mL

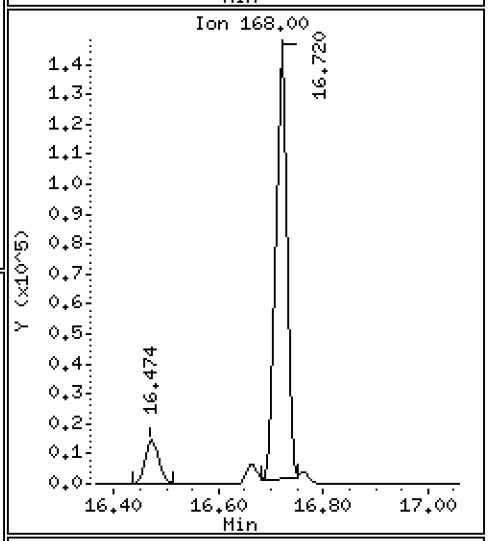


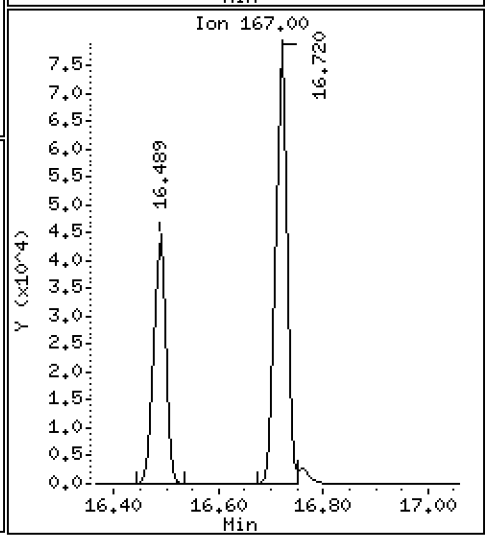












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

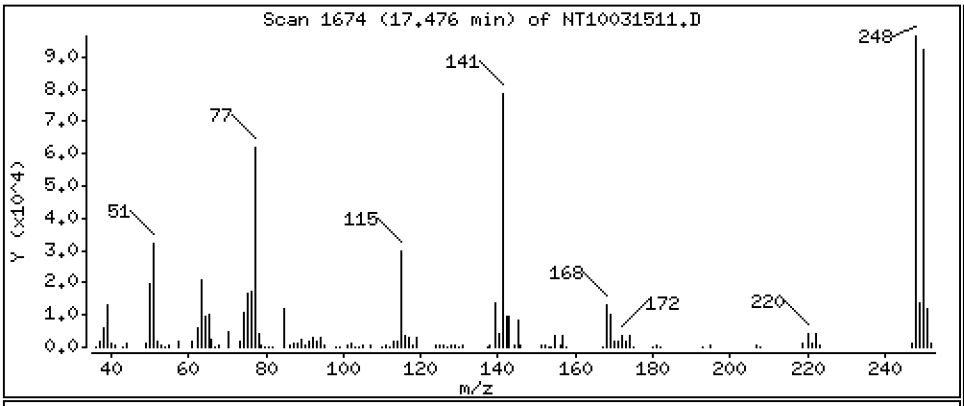
Operator: VTS

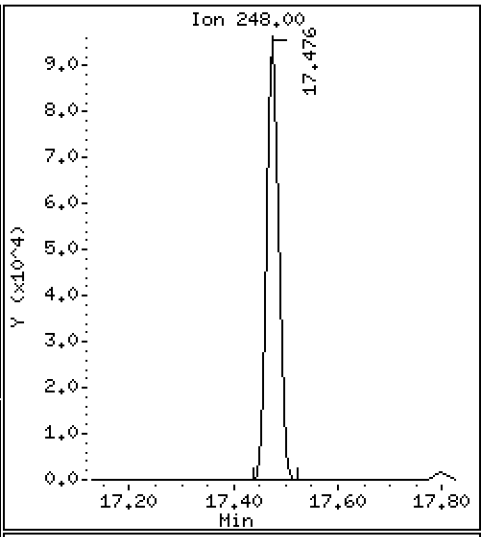
Column phase: ZB-5msi

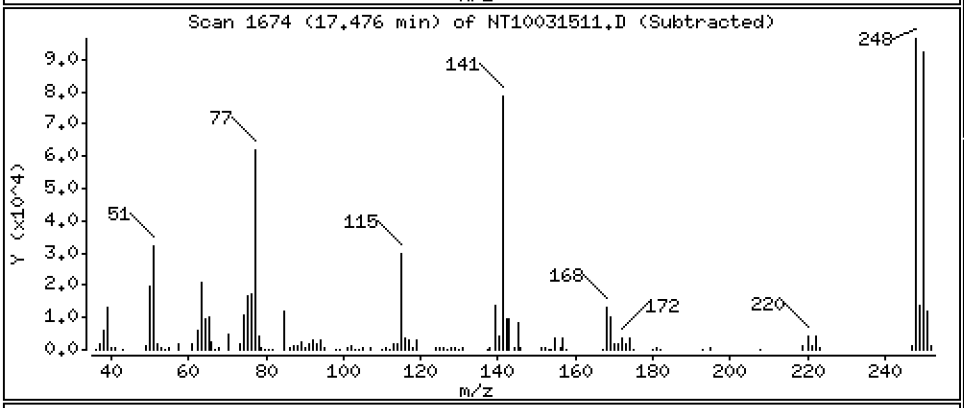
Column diameter: 0.25

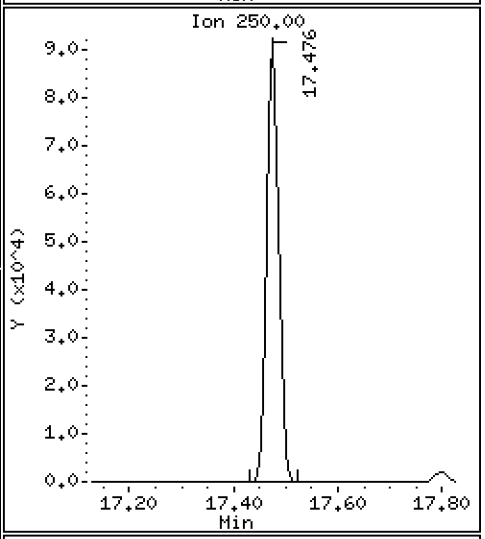
56 4-Bromophenyl-phenylether

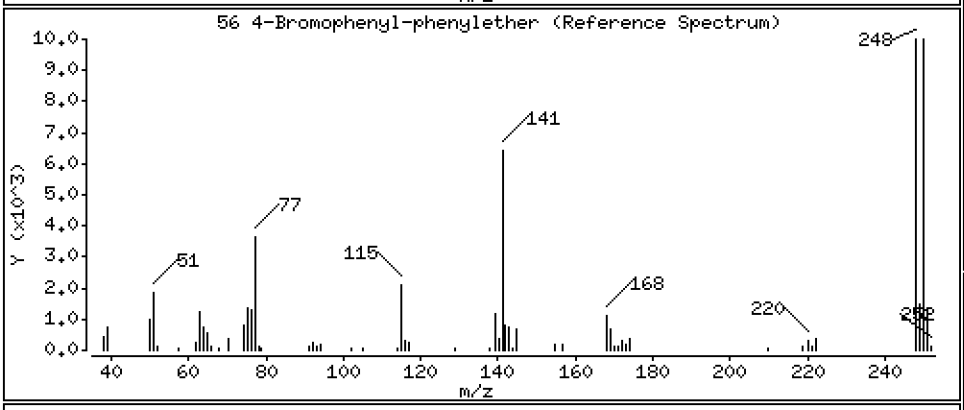
Concentration: 5.060 ug/mL

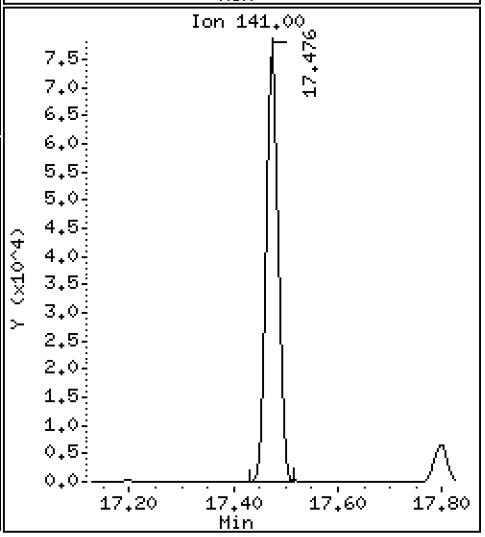


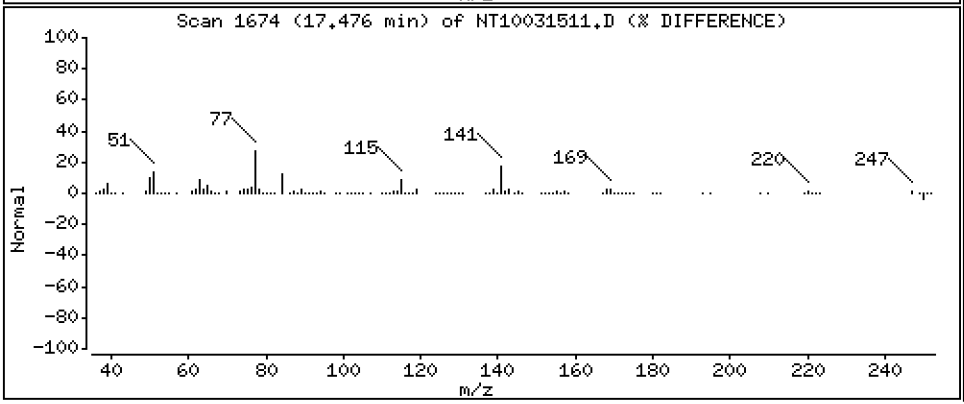












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

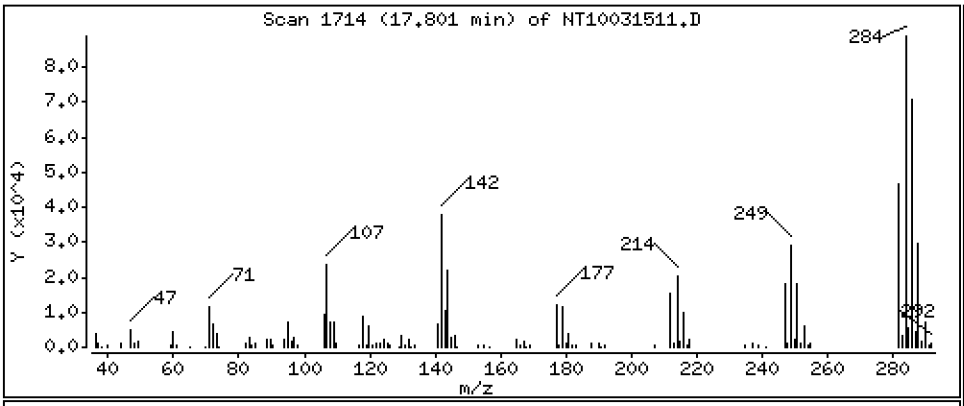
Operator: VTS

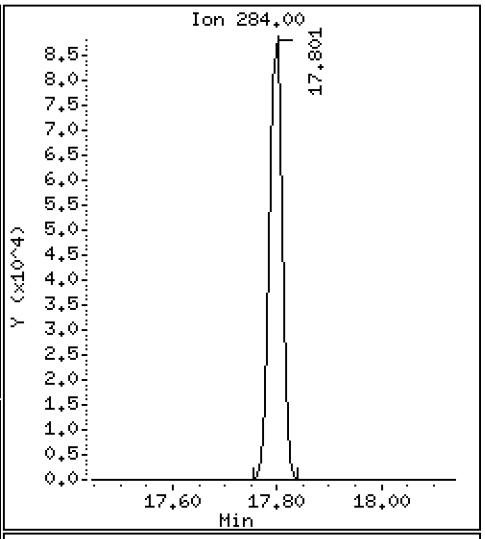
Column phase: ZB-5msi

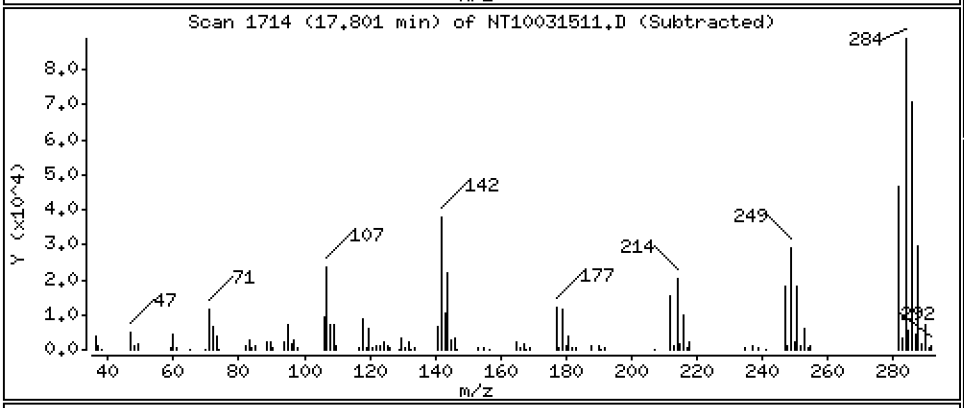
Column diameter: 0.25

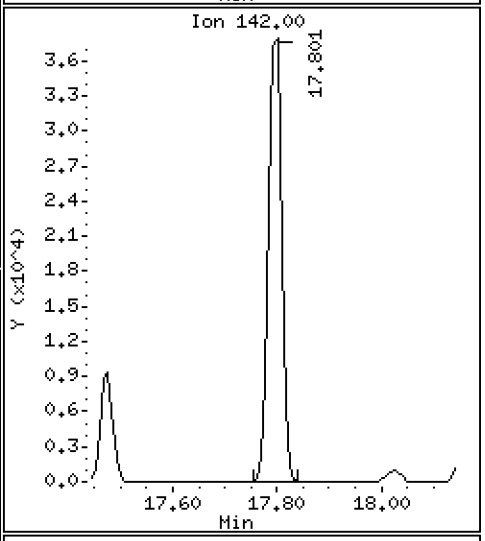
57 Hexachlorobenzene

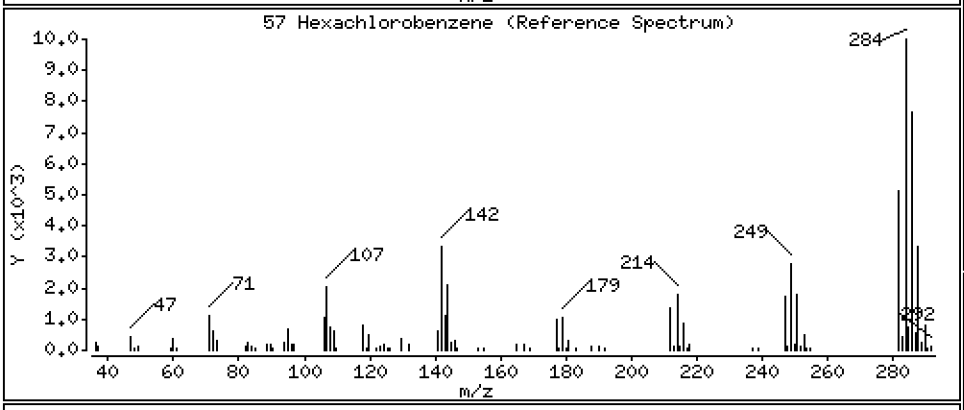
Concentration: 4.596 ug/mL

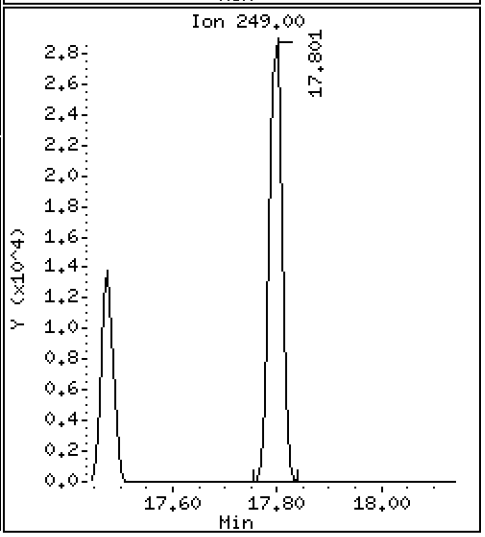


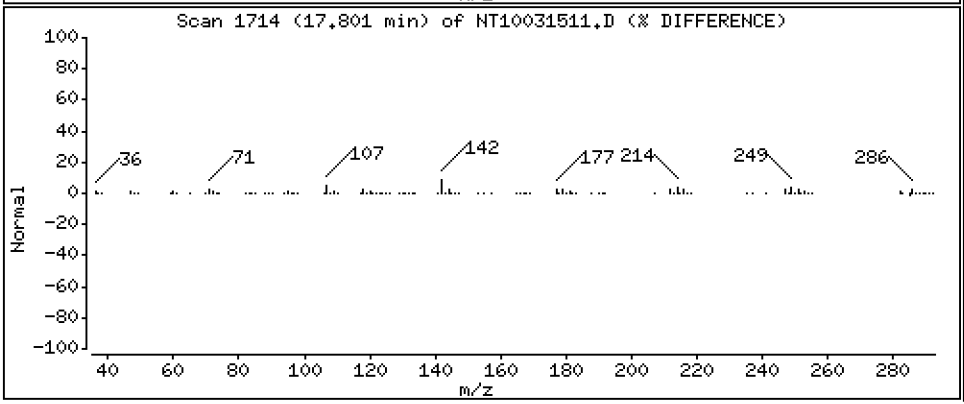












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

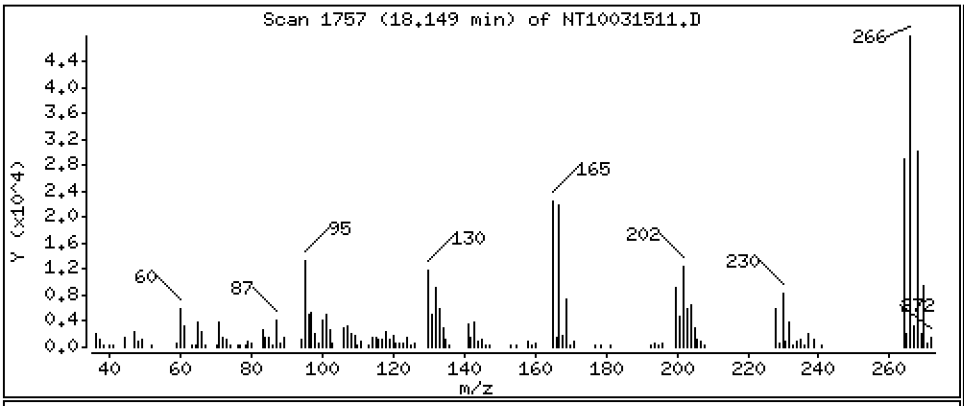
Operator: VTS

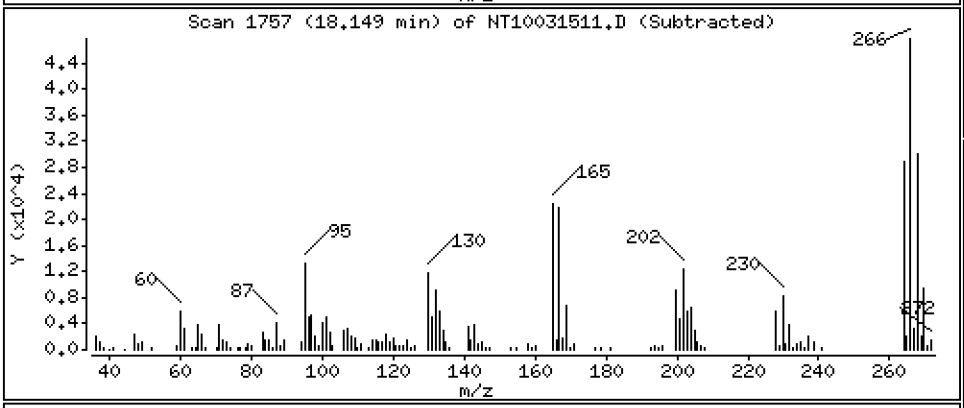
Column phase: ZB-5msi

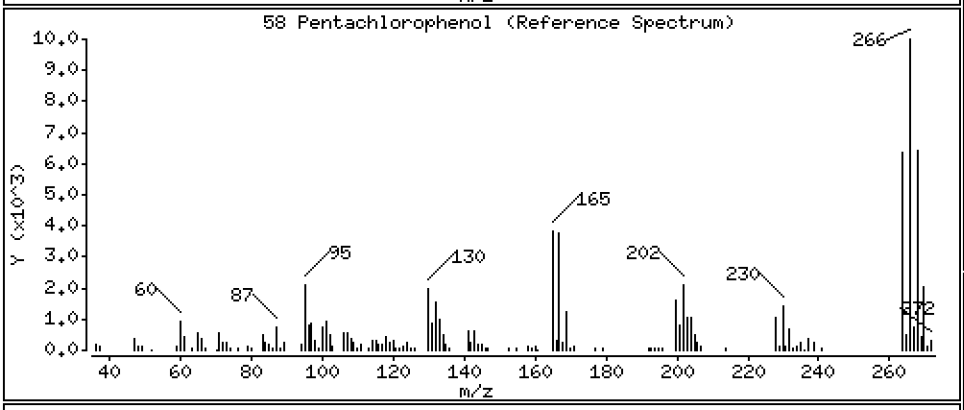
Column diameter: 0.25

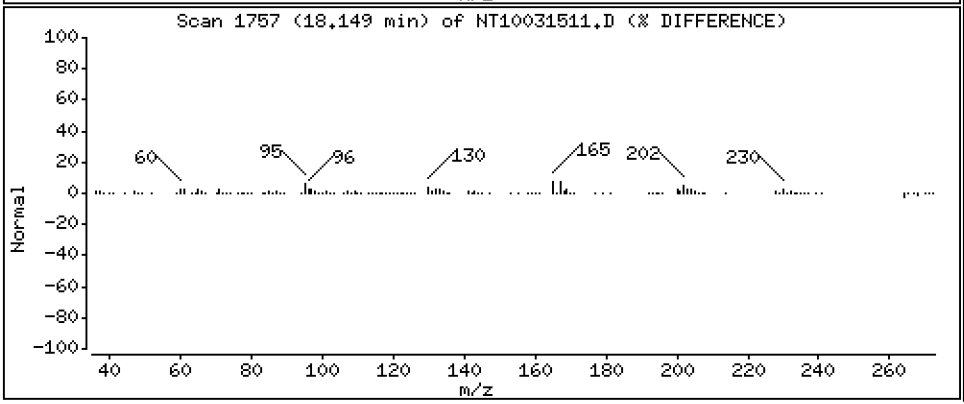
58 Pentachlorophenol

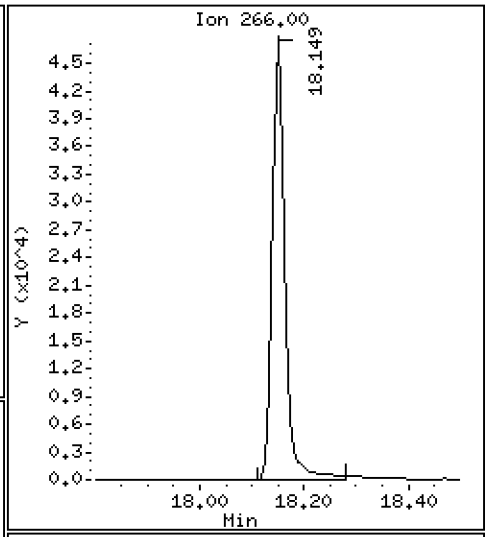
Concentration: 4.057 ug/mL

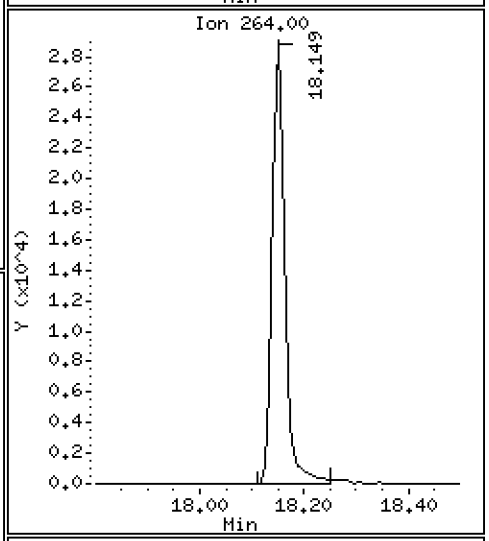


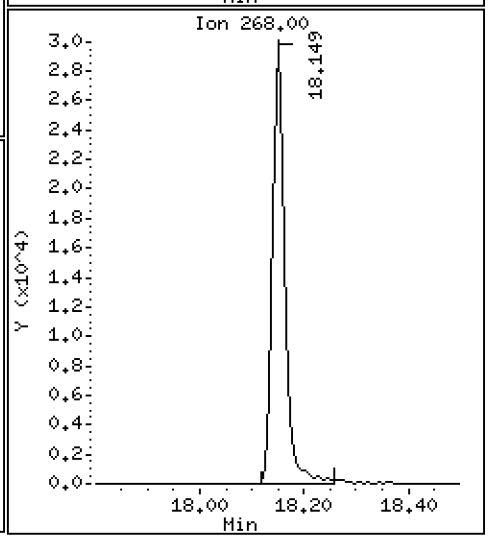












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

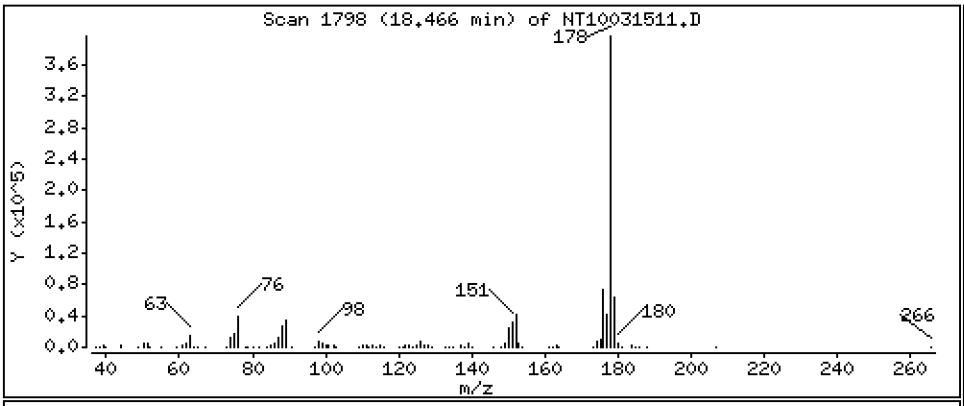
Operator: VTS

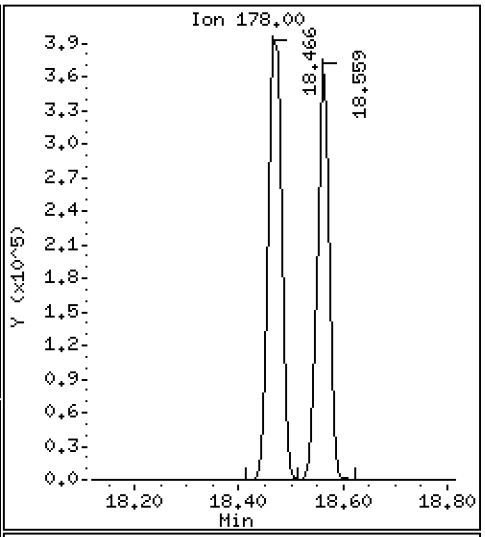
Column phase: ZB-5msi

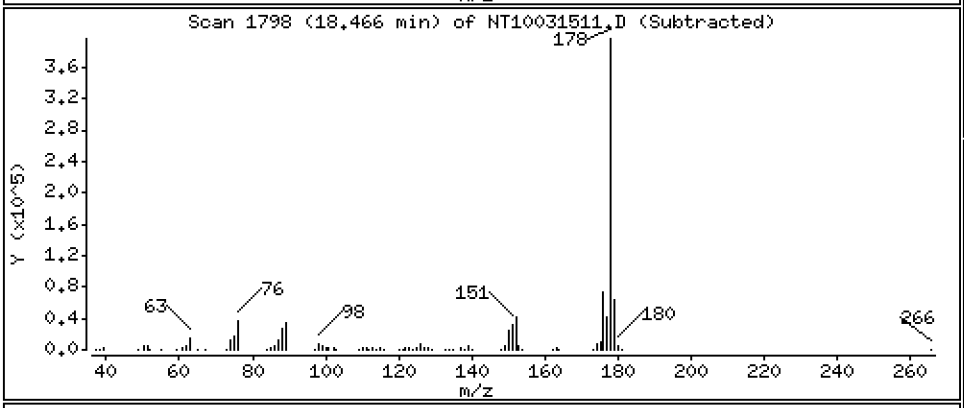
Column diameter: 0.25

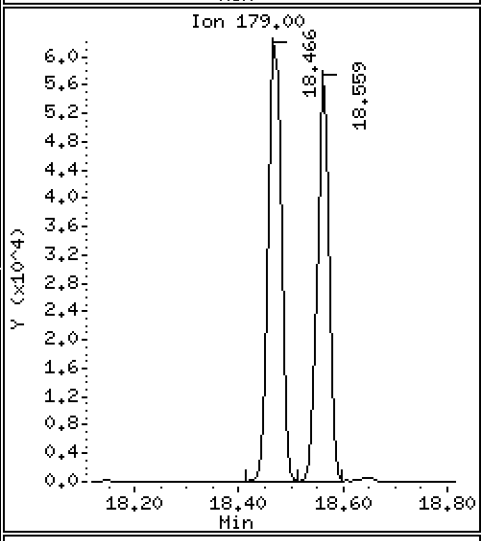
60 Phenanthrene

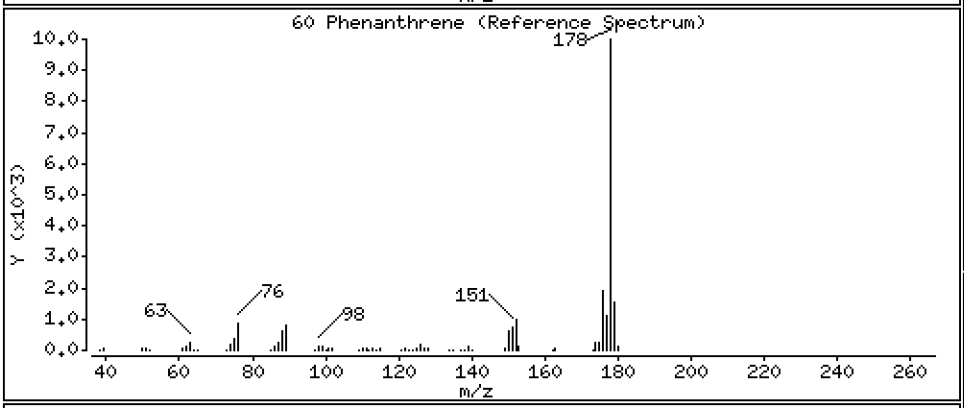
Concentration: 4.602 ug/mL

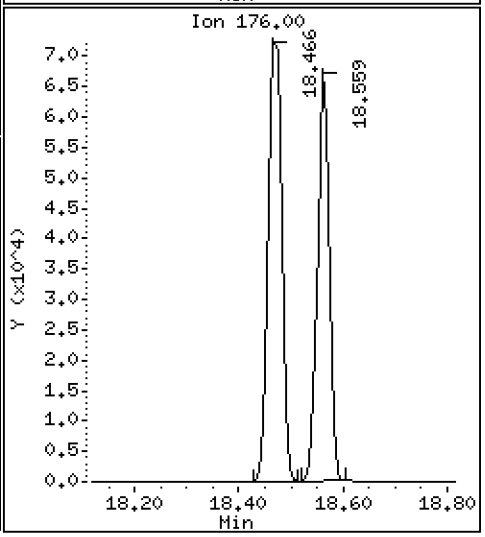


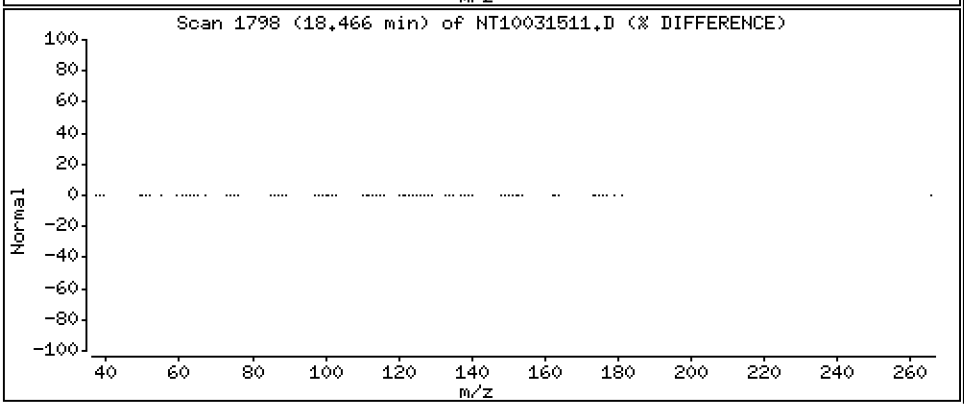












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

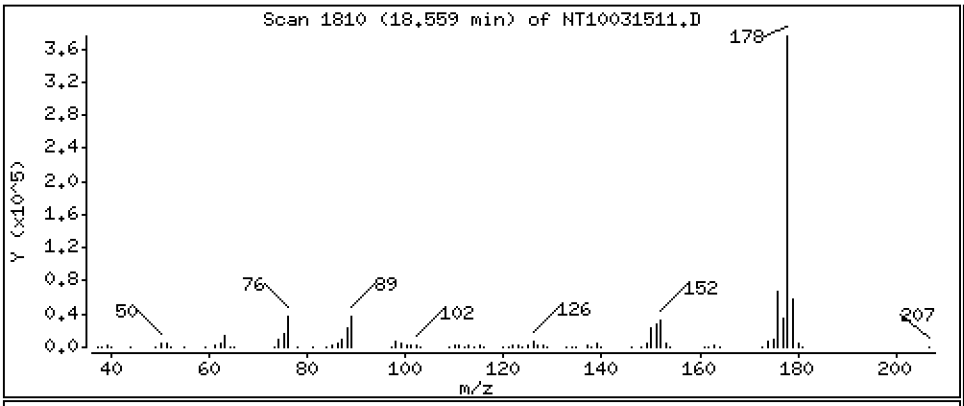
Operator: VTS

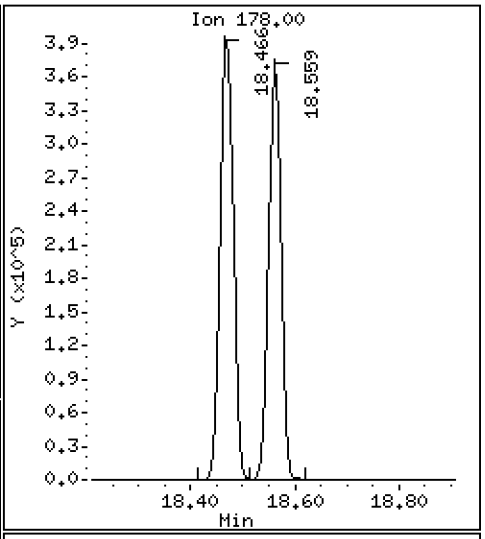
Column phase: ZB-5msi

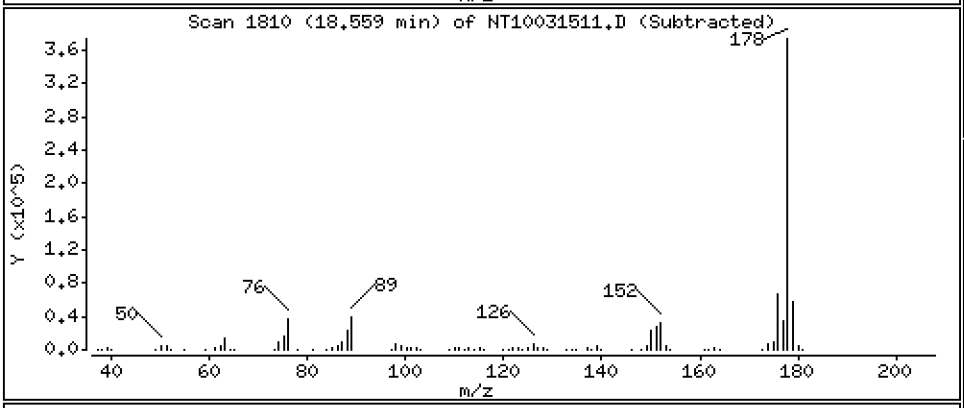
Column diameter: 0.25

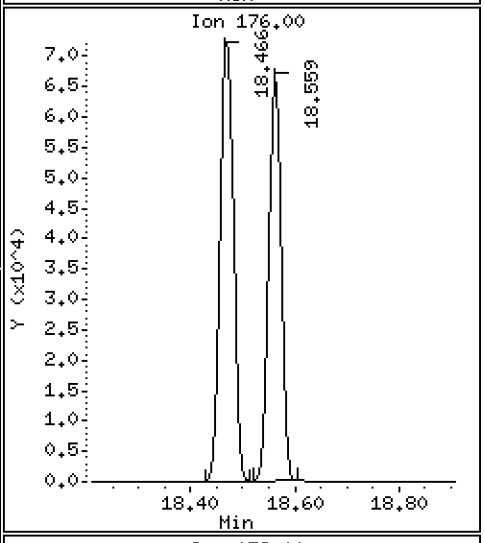
61 Anthracene

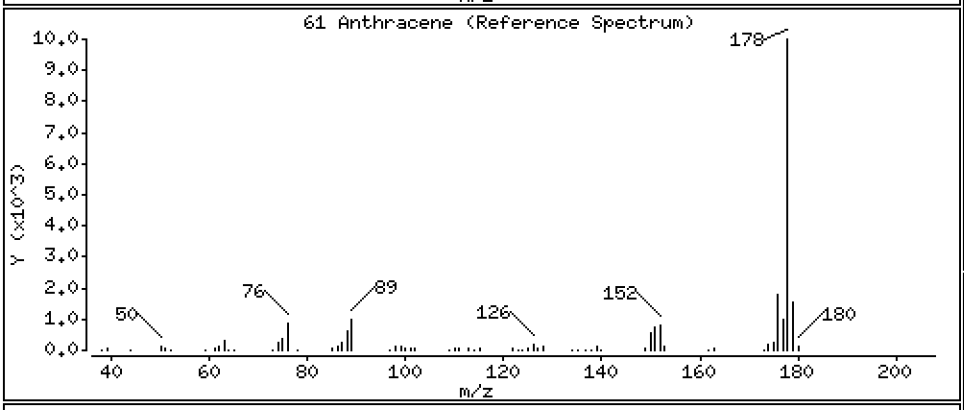
Concentration: 4.167 ug/mL

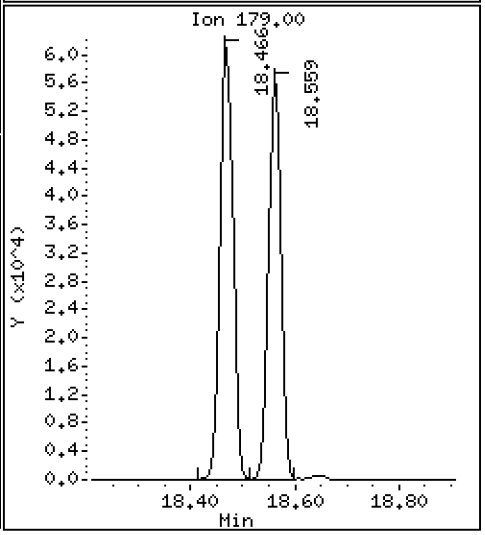


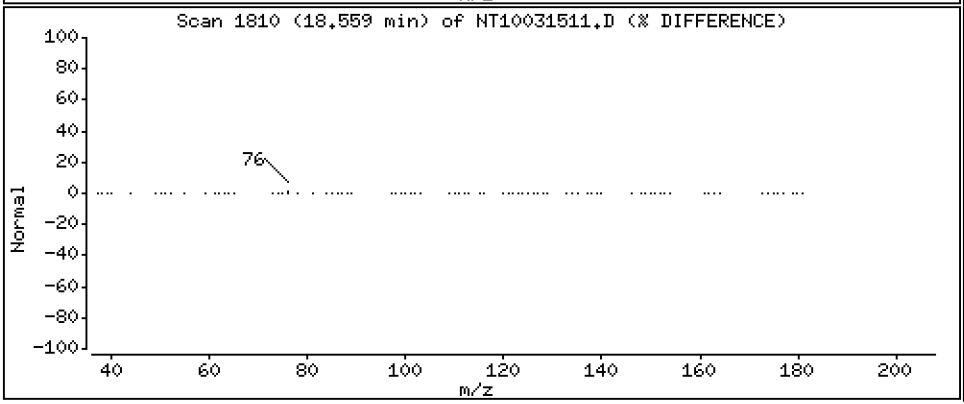












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

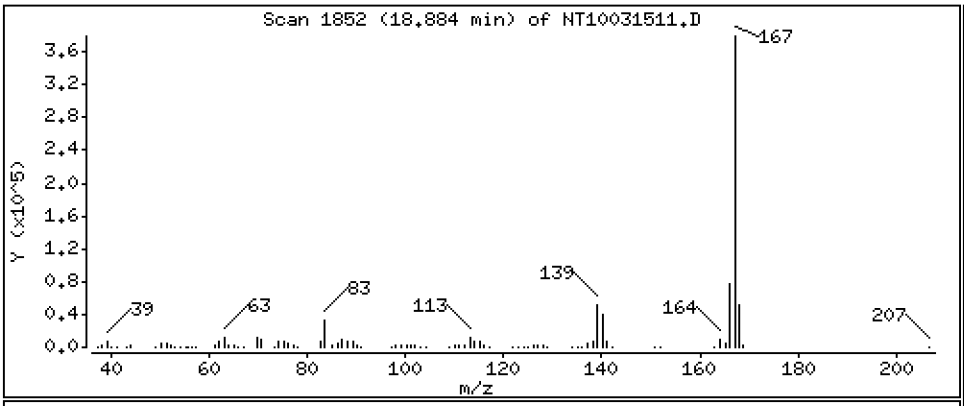
Operator: VTS

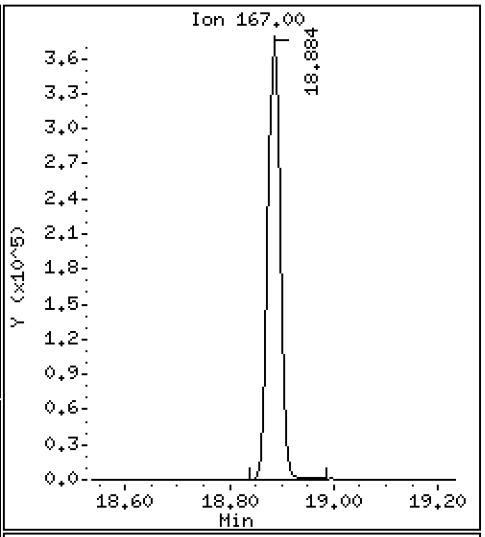
Column phase: ZB-5msi

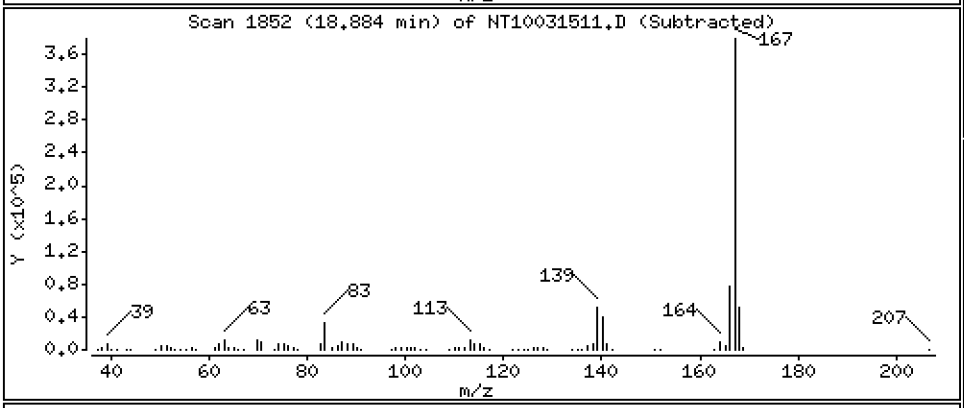
Column diameter: 0.25

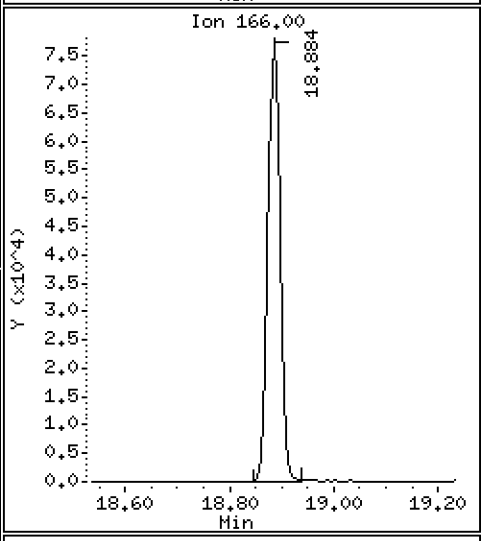
62 Carbazole

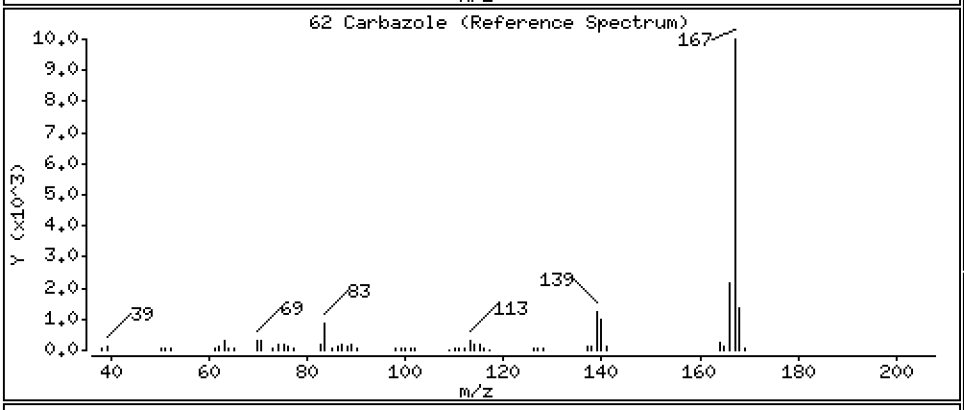
Concentration: 4.730 ug/mL

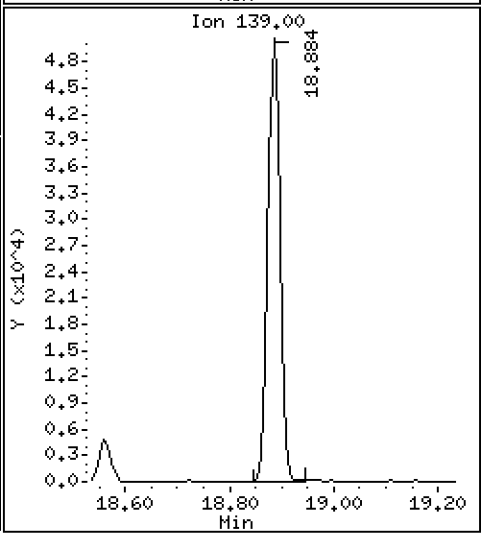


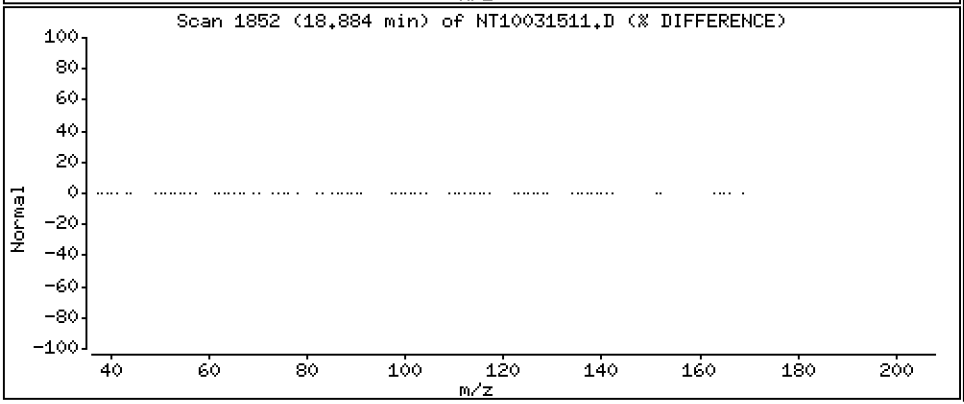












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

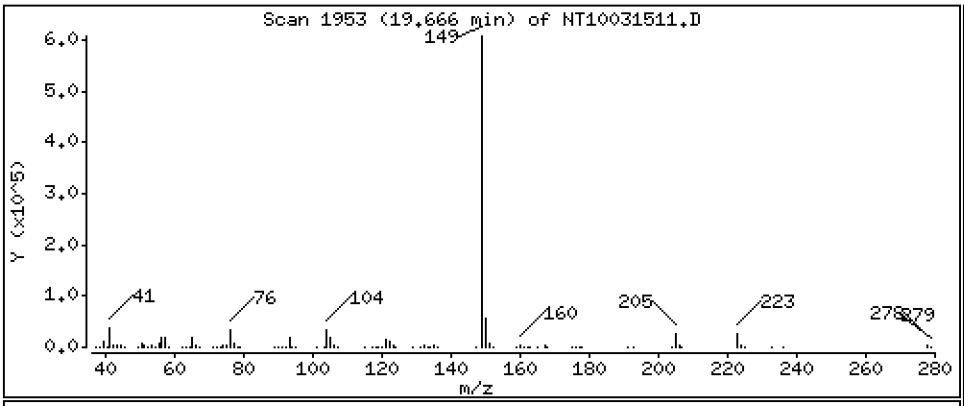
Operator: VTS

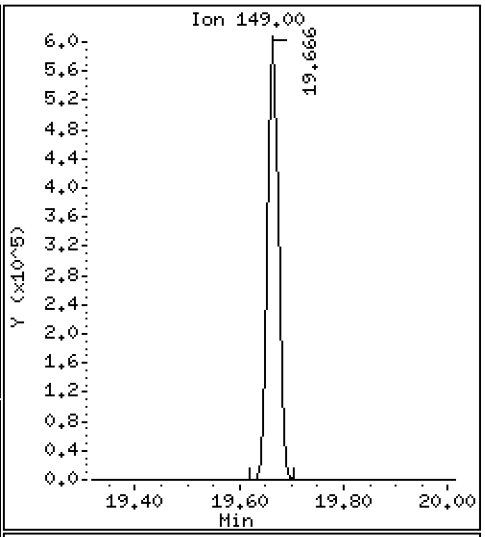
Column phase: ZB-5msi

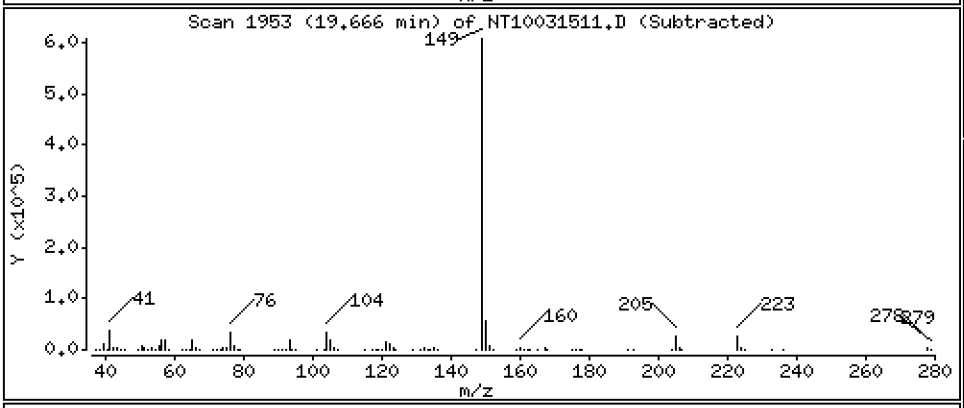
Column diameter: 0.25

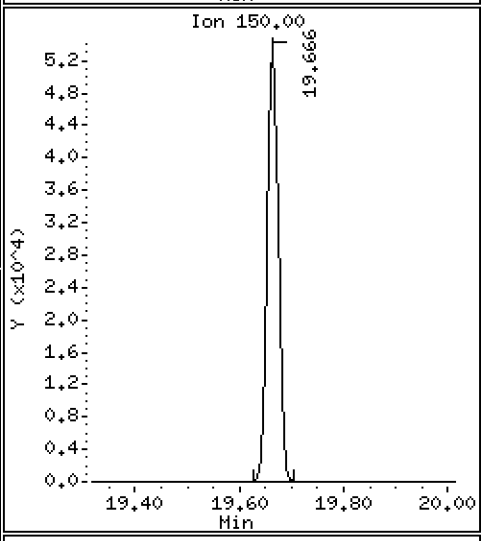
63 Di-n-butylphthalate

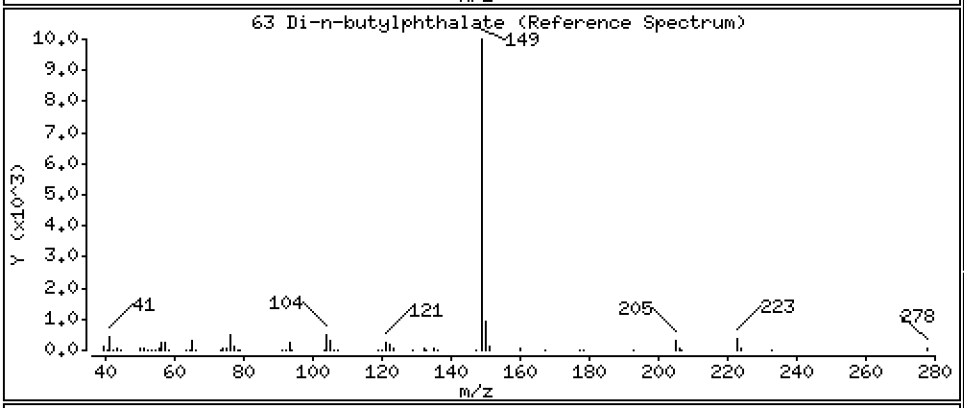
Concentration: 4.967 ug/mL

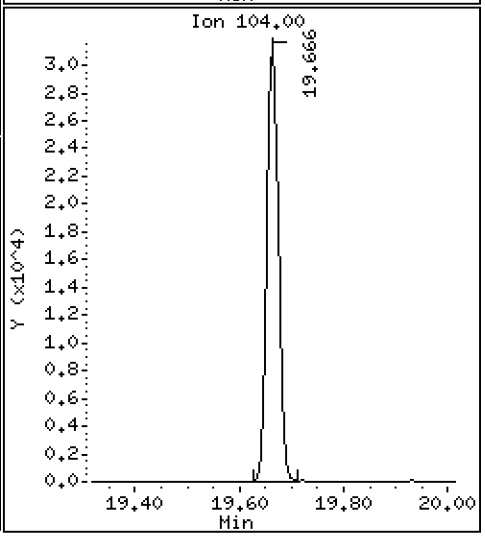


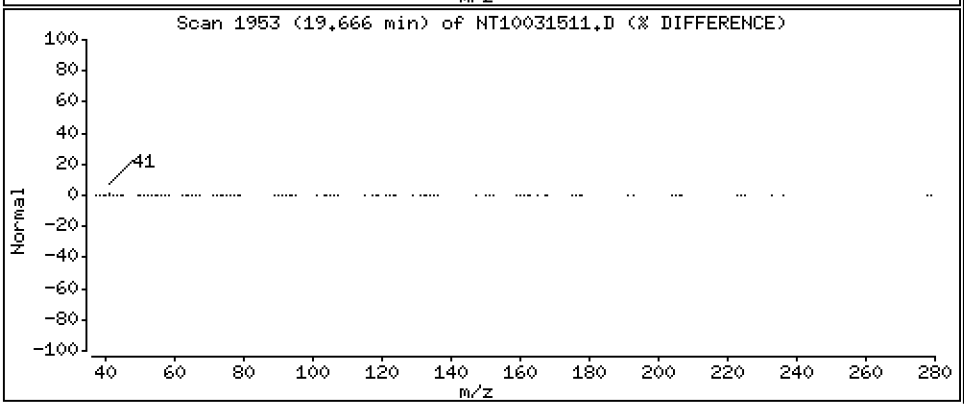












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

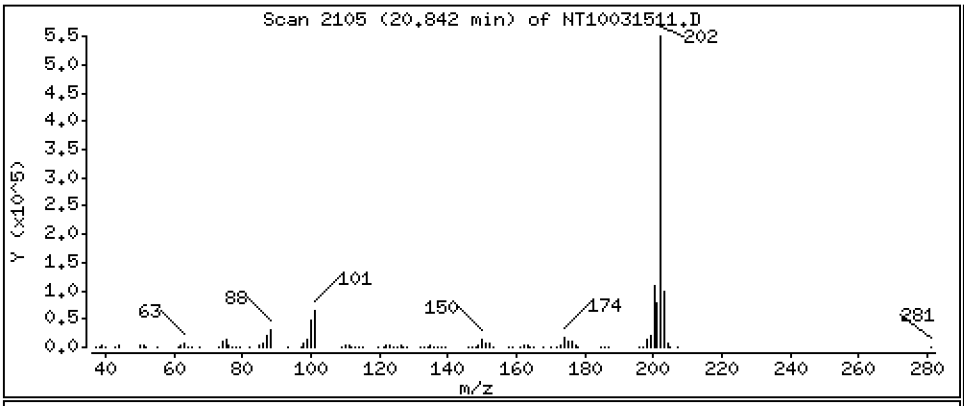
Operator: VTS

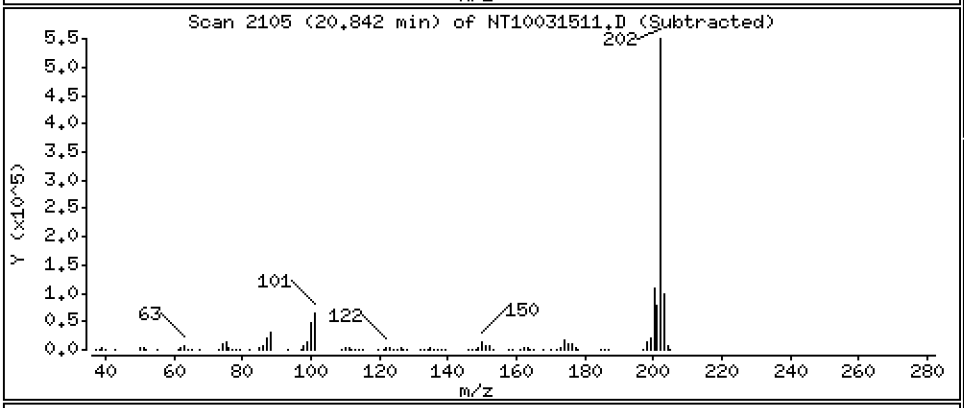
Column phase: ZB-5msi

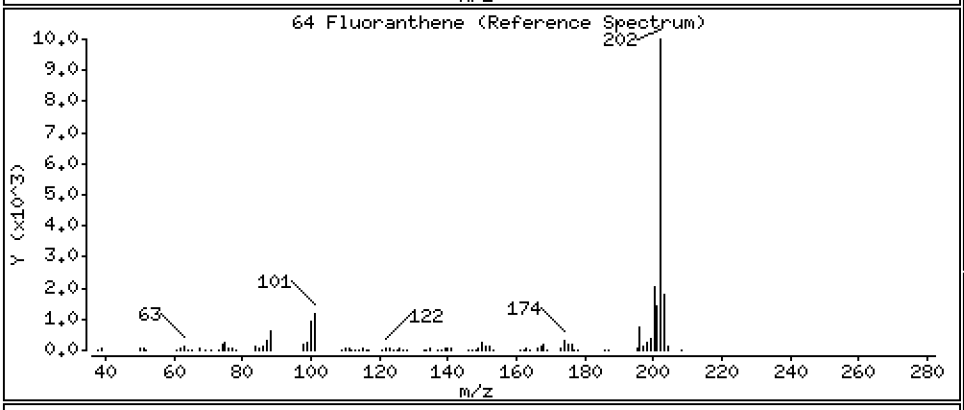
Column diameter: 0.25

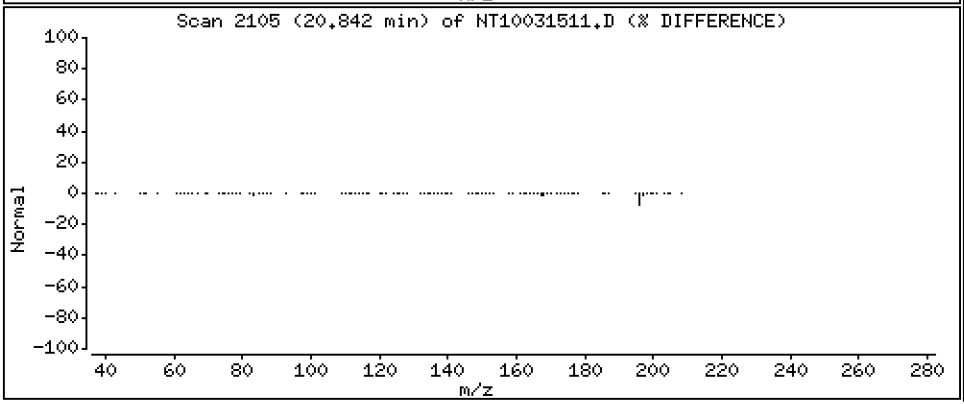
64 Fluoranthene

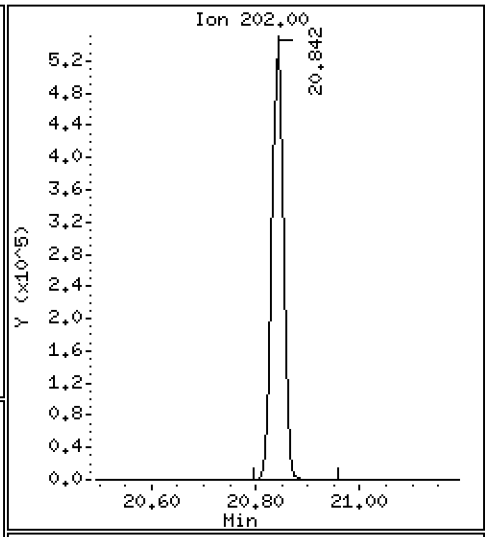
Concentration: 4.472 ug/mL

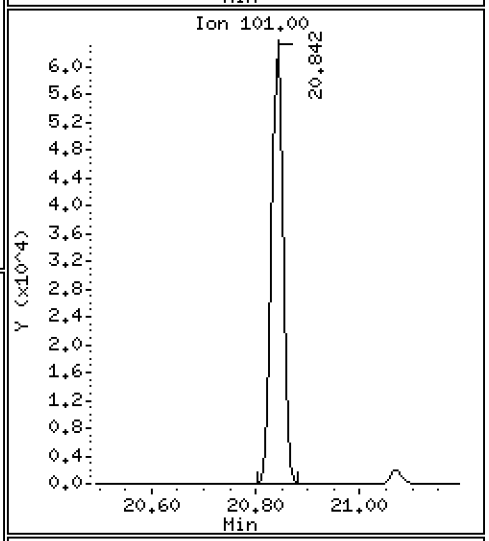


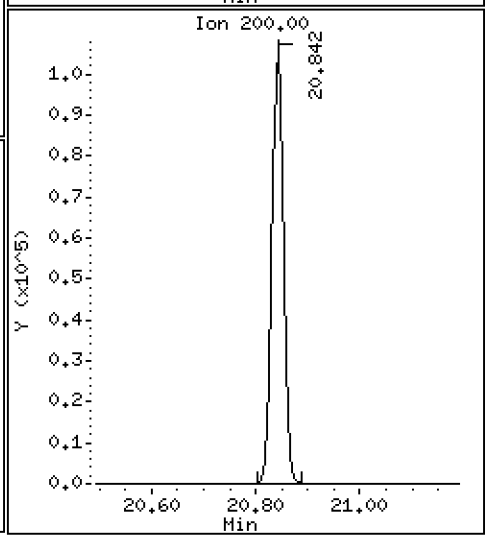












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

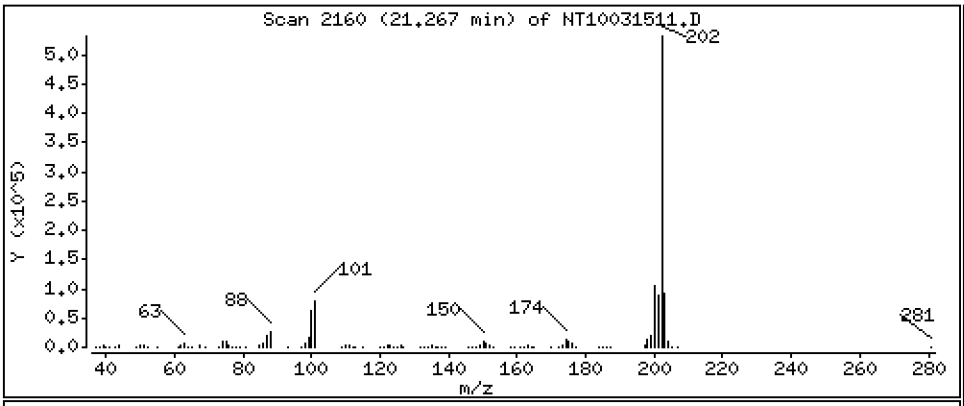
Operator: VTS

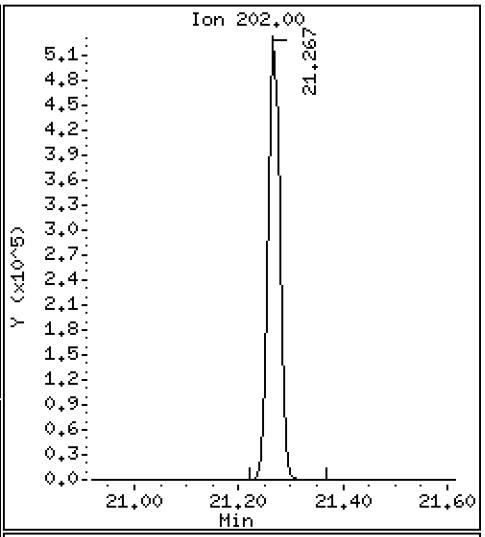
Column phase: ZB-5msi

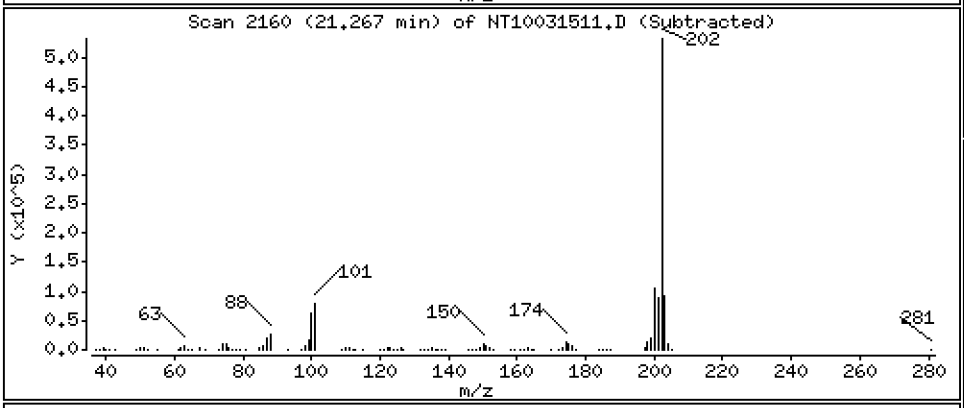
Column diameter: 0.25

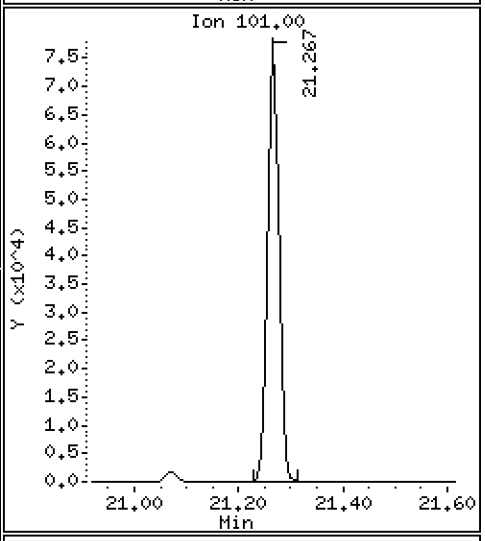
65 Pyrene

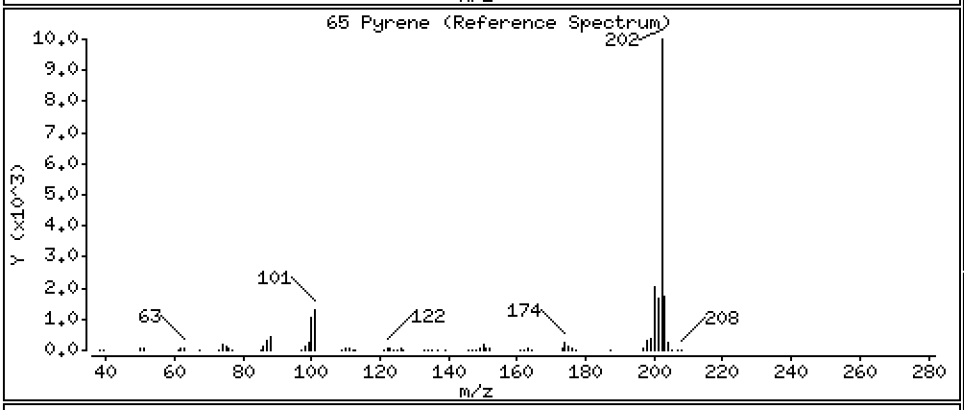
Concentration: 4.339 ug/mL

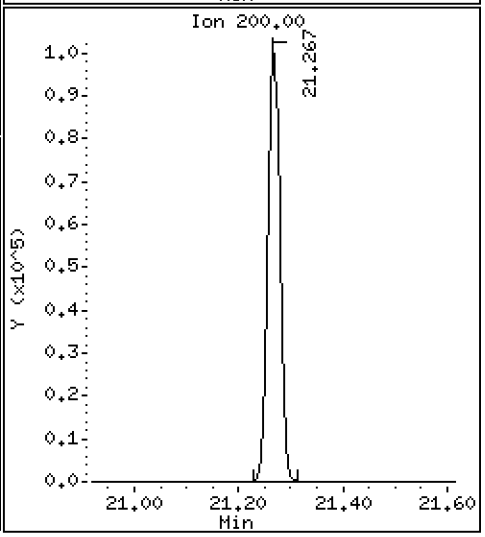


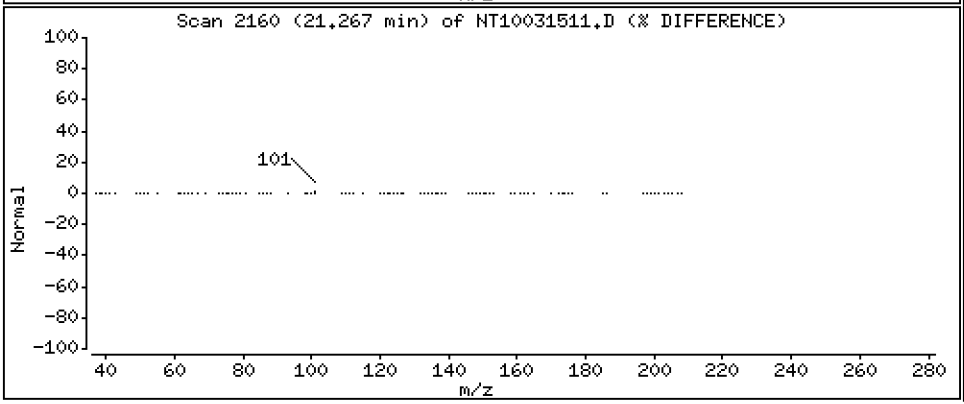












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

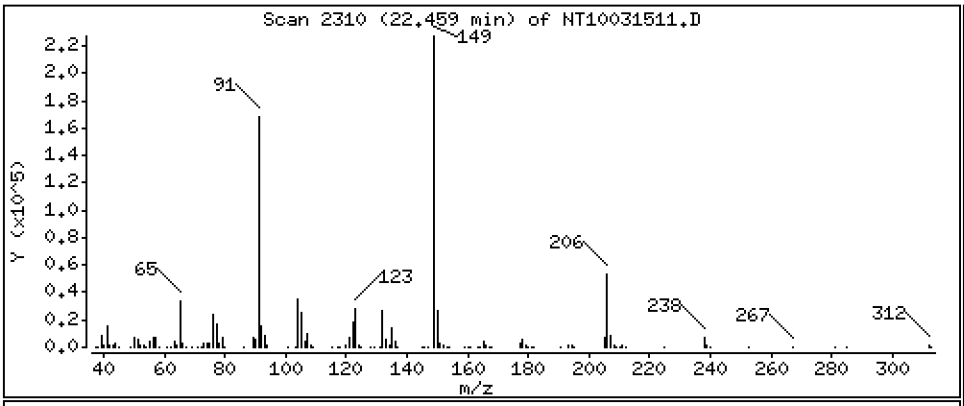
Operator: VTS

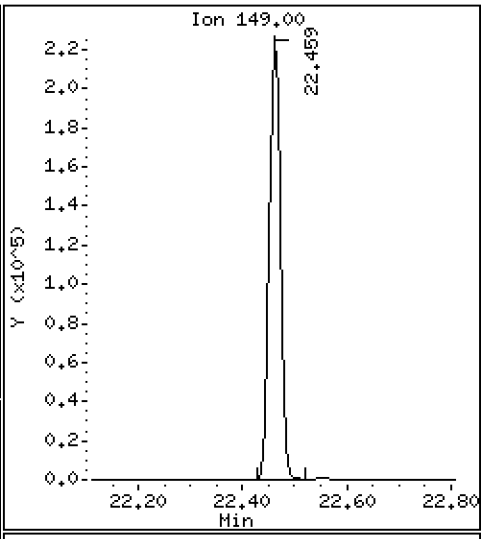
Column phase: ZB-5msi

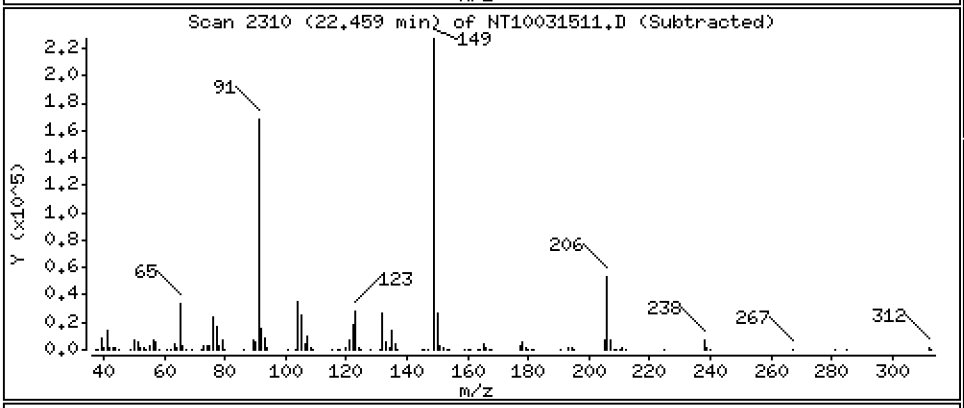
Column diameter: 0.25

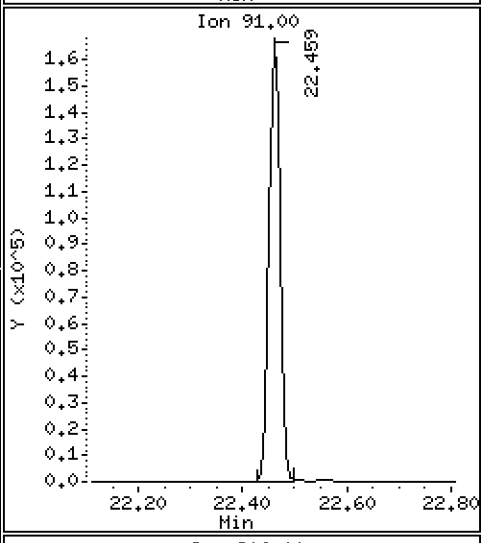
67 Butylbenzylphthalate

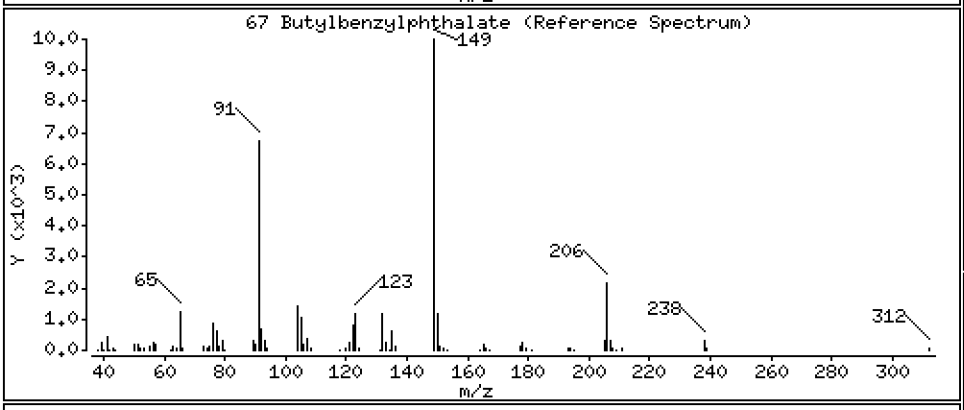
Concentration: 4.834 ug/mL

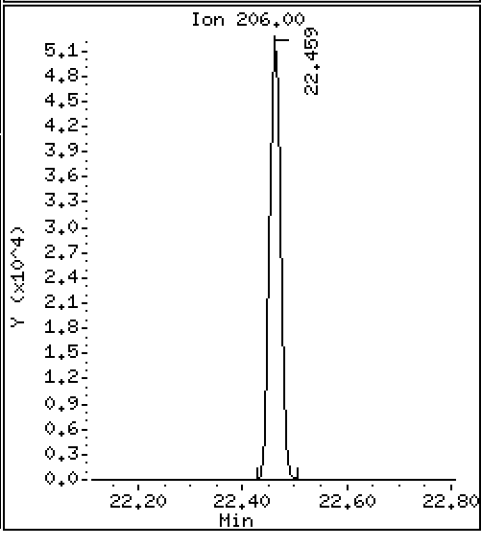


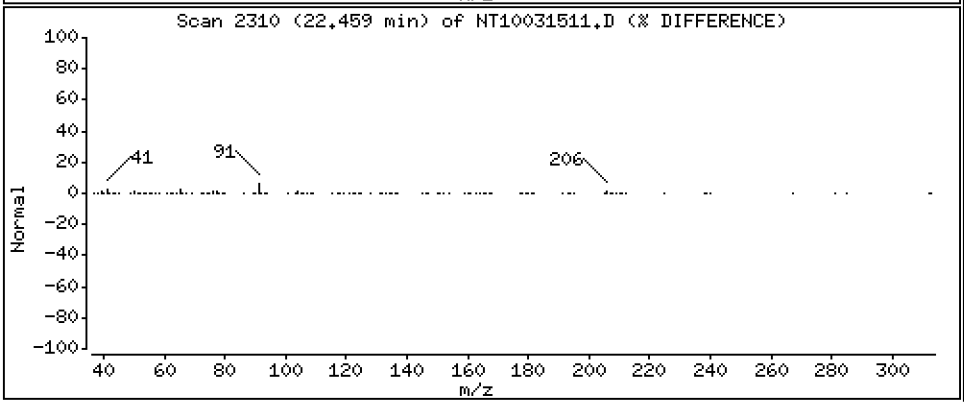












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

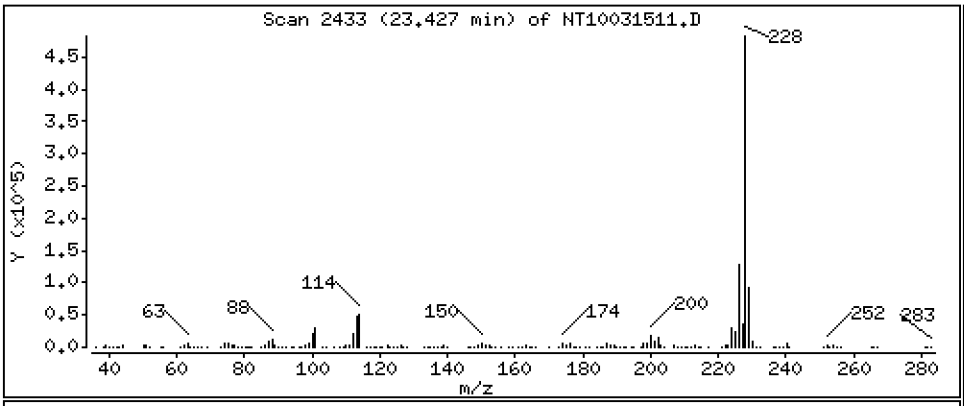
Operator: VTS

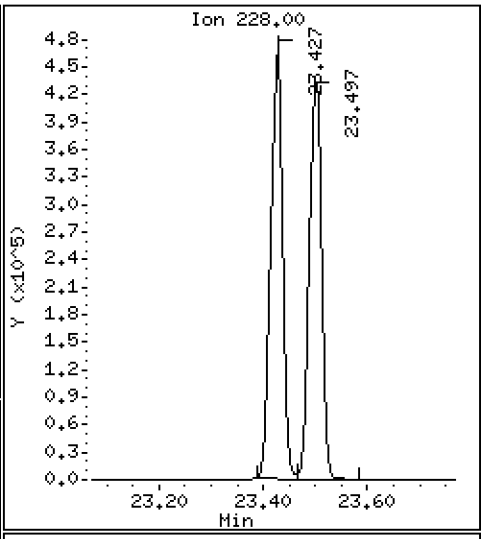
Column phase: ZB-5msi

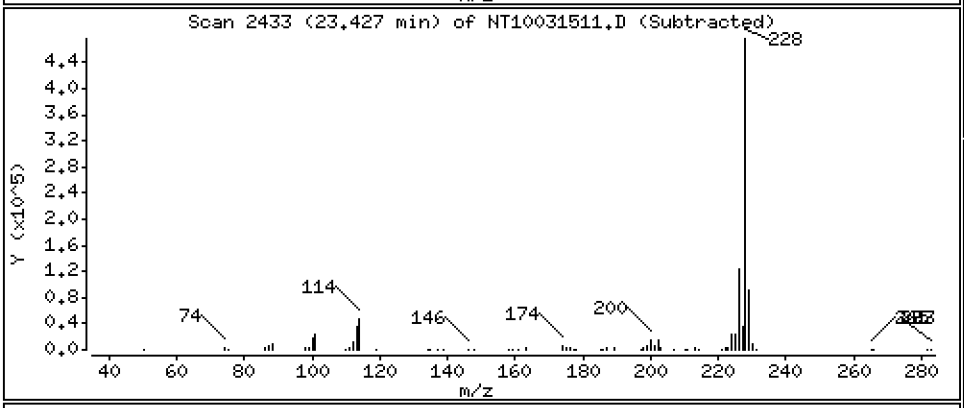
Column diameter: 0.25

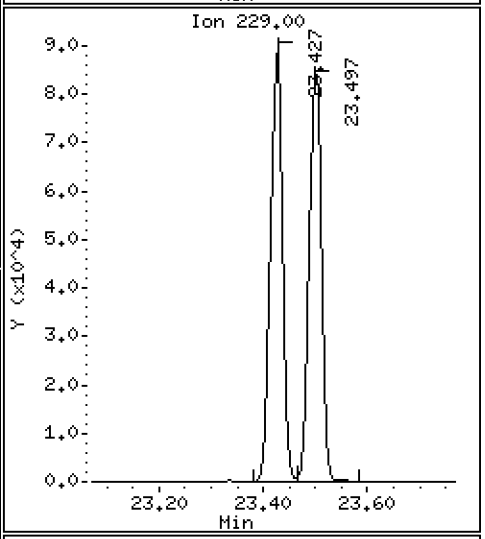
68 Benzo(a)anthracene

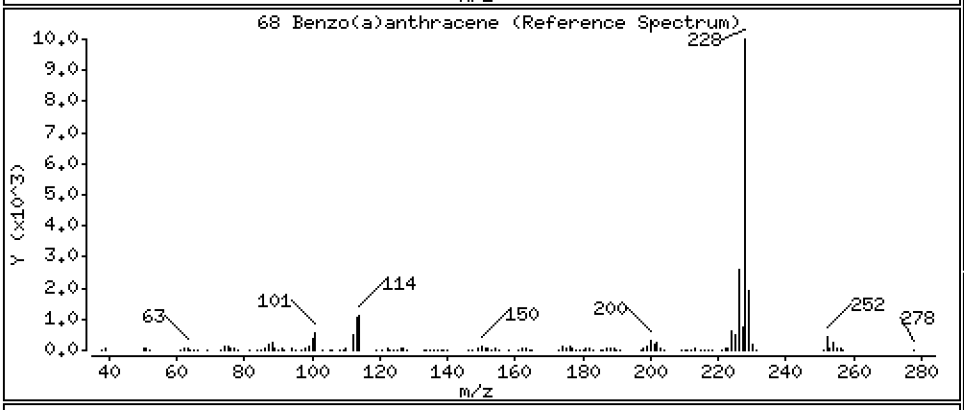
Concentration: 4.647 ug/mL

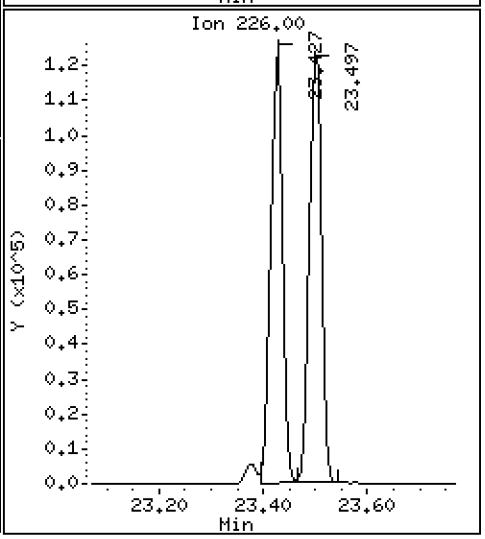


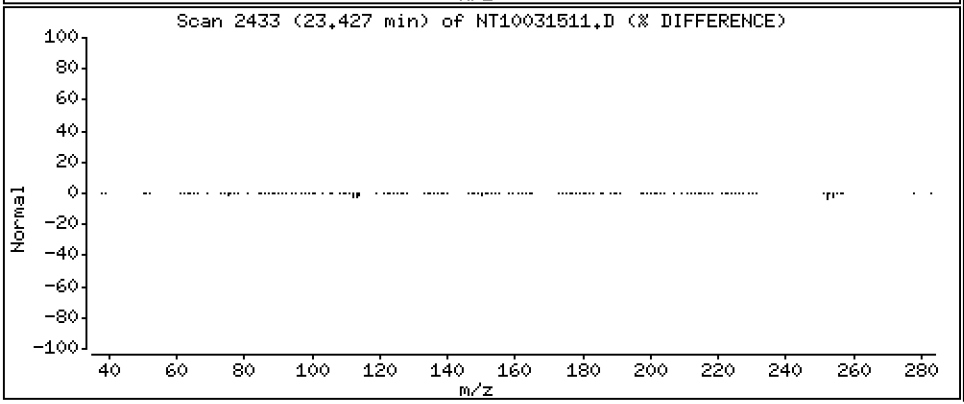












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

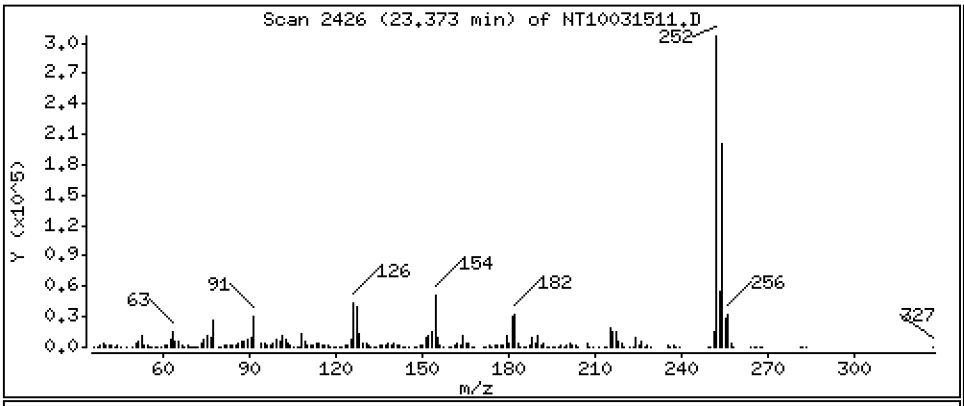
Operator: VTS

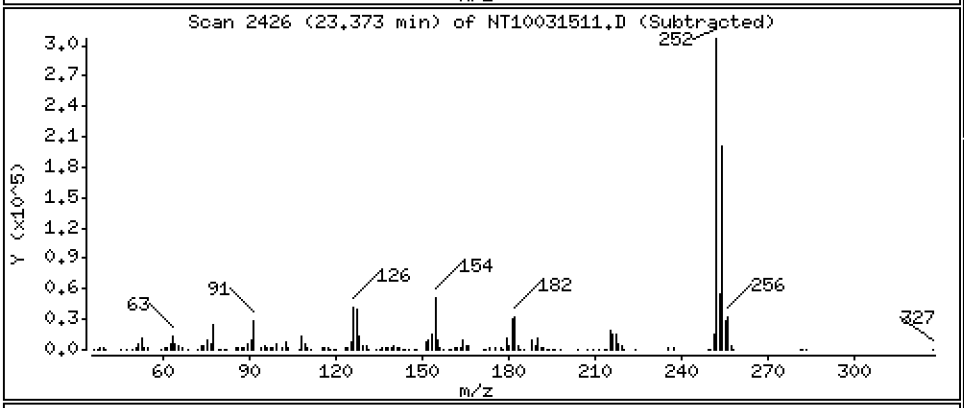
Column phase: ZB-5msi

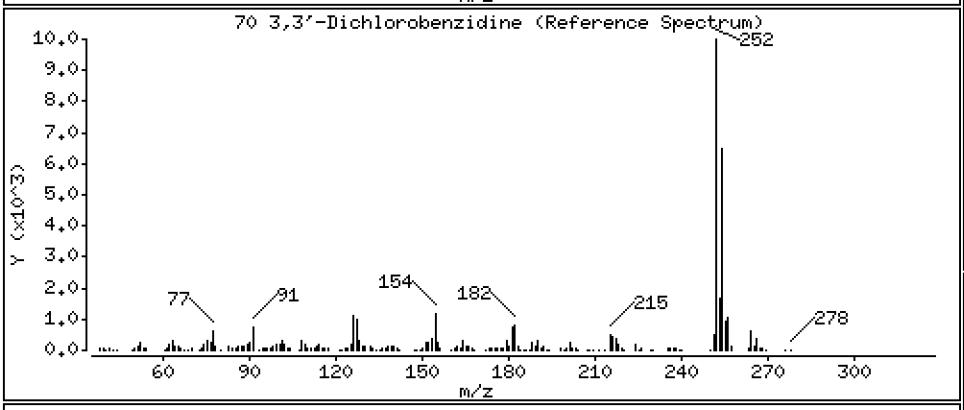
Column diameter: 0.25

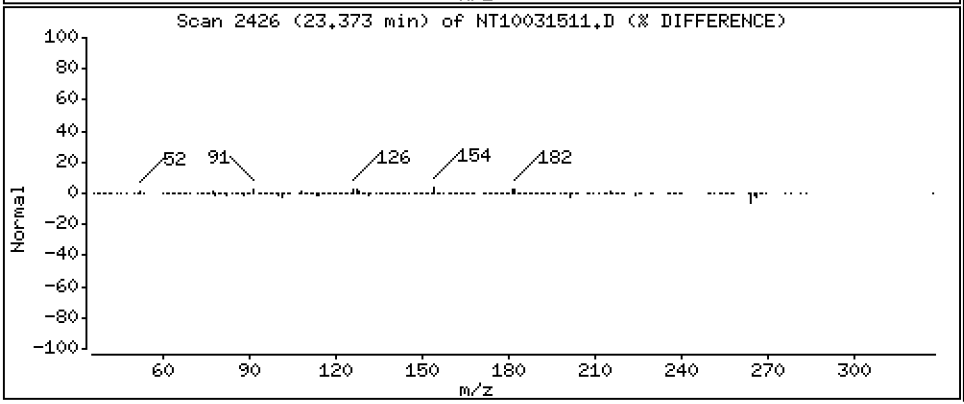
70 3,3'-Dichlorobenzidine

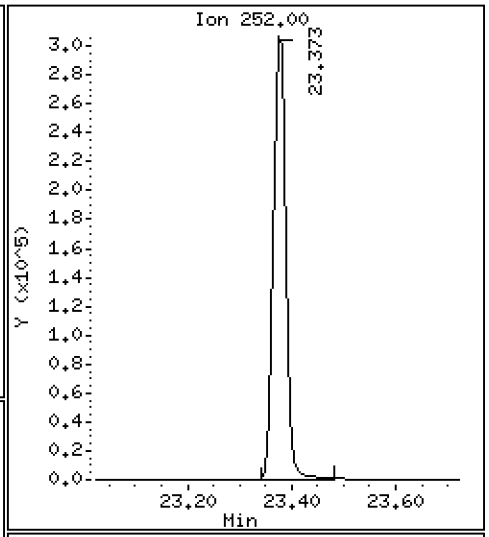
Concentration: 9.817 ug/mL

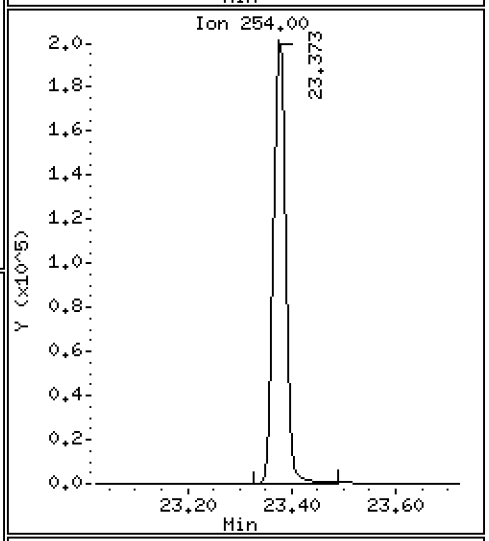


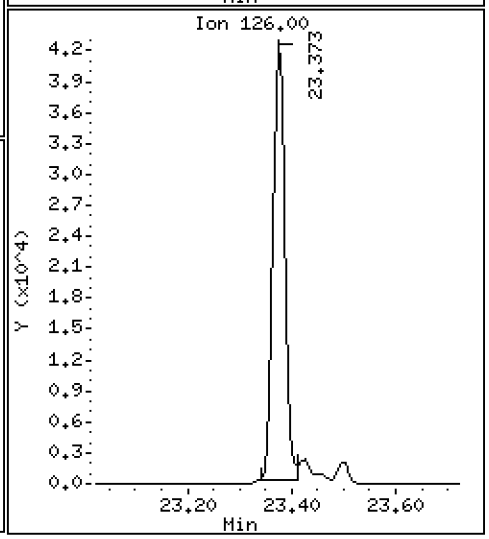












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

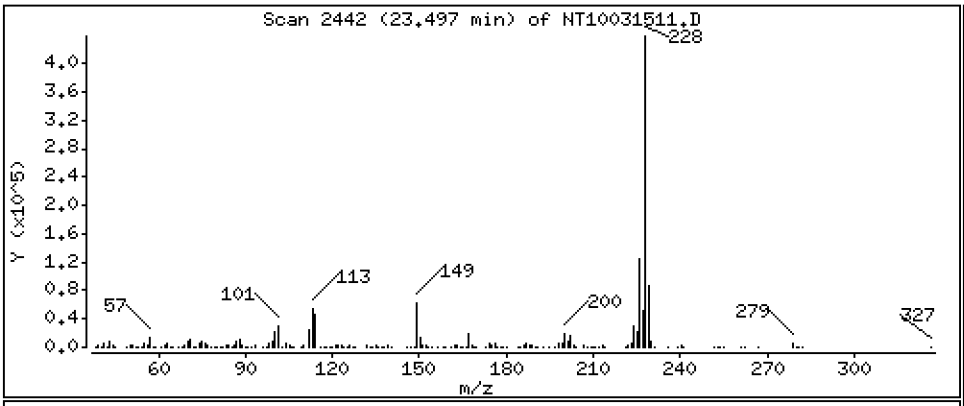
Operator: VTS

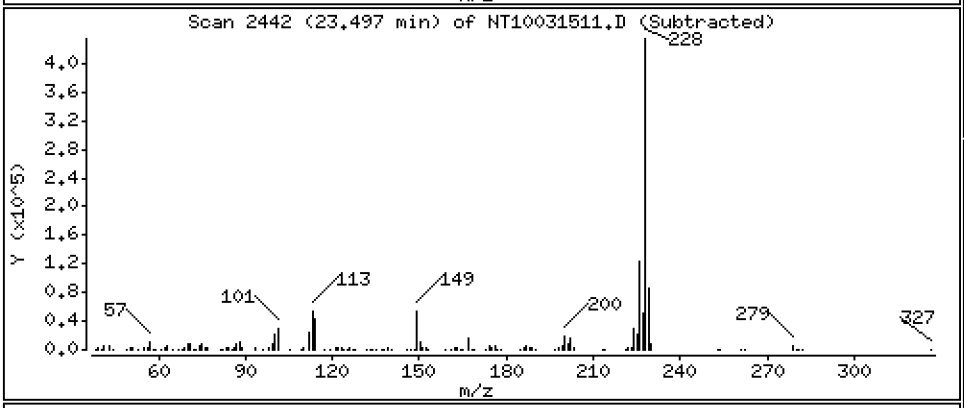
Column phase: ZB-5msi

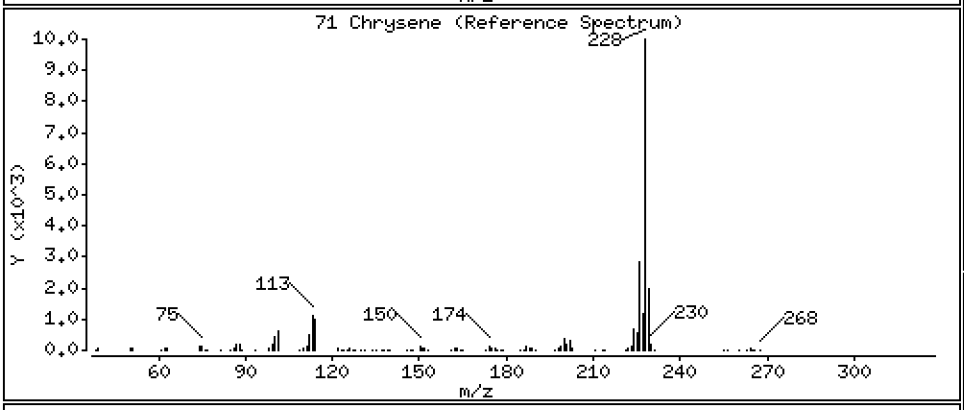
Column diameter: 0.25

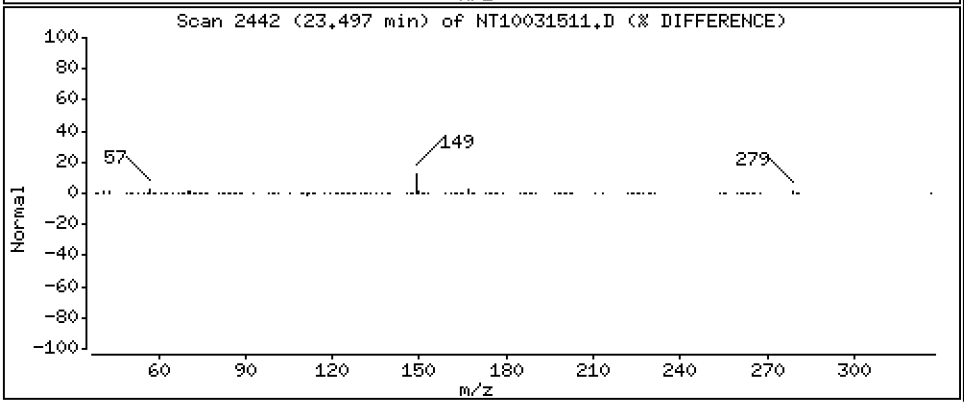
71 Chrysene

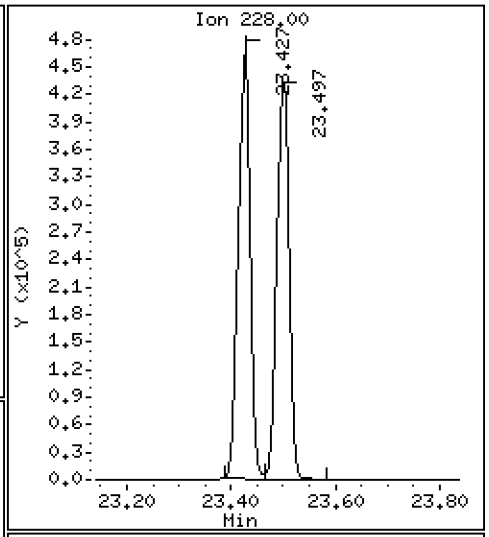
Concentration: 4.510 ug/mL

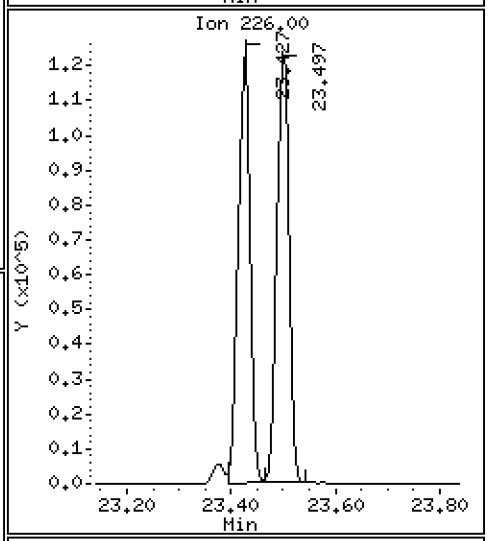


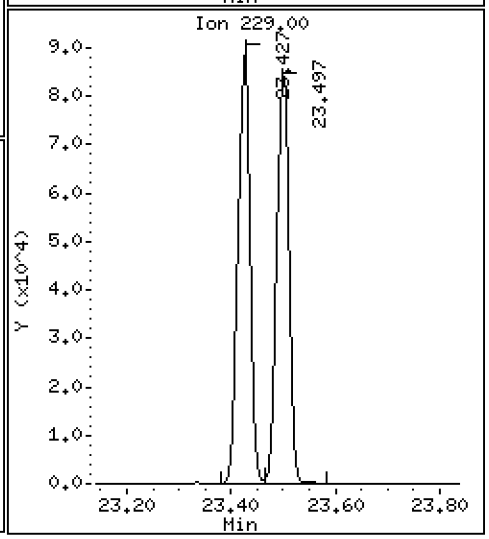












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

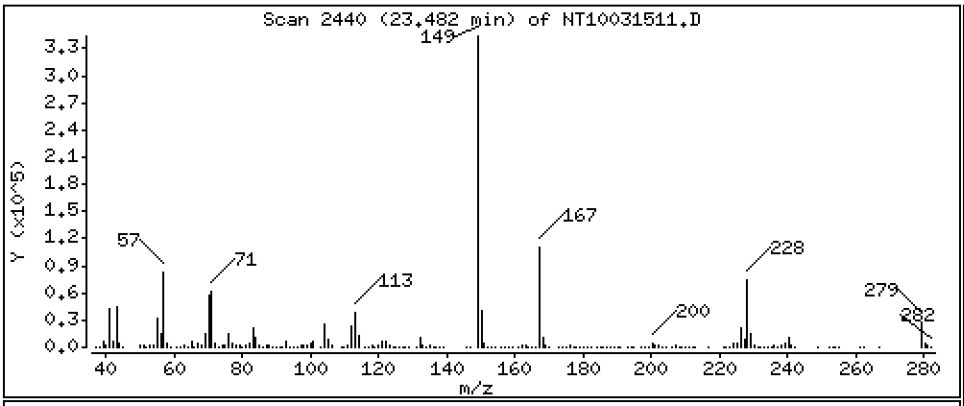
Operator: VTS

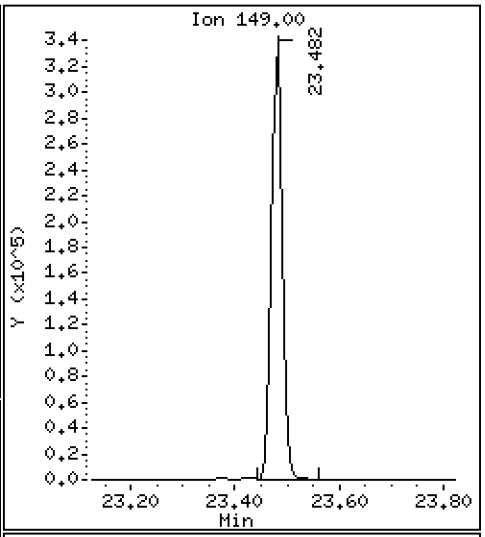
Column phase: ZB-5msi

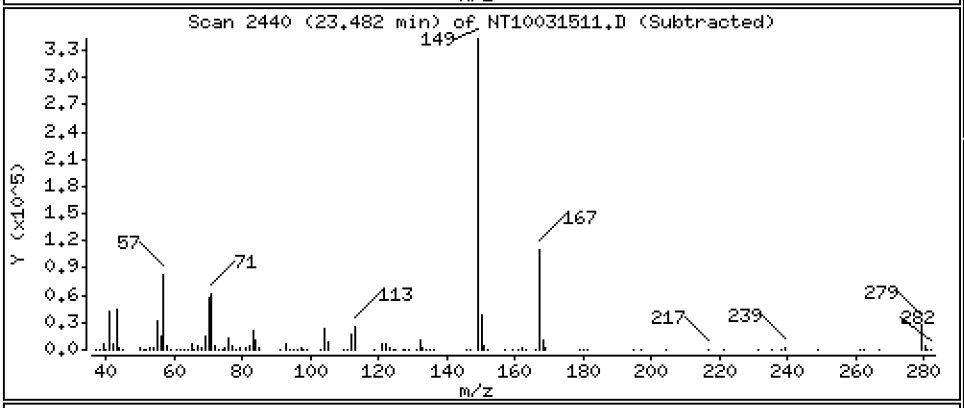
Column diameter: 0.25

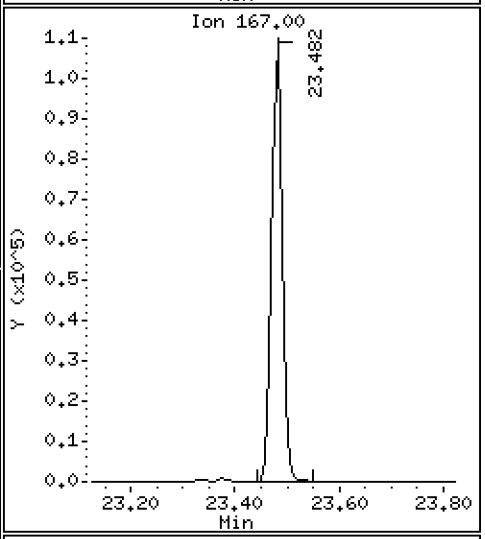
72 bis(2-Ethylhexyl)phthalate

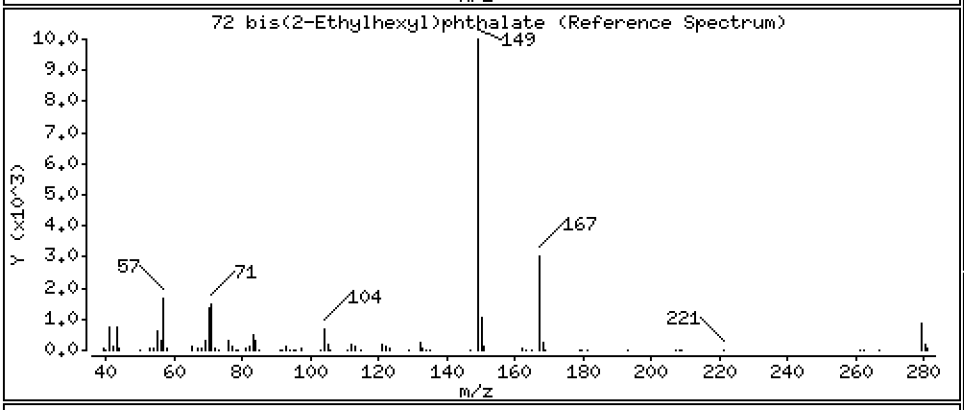
Concentration: 4.680 ug/mL

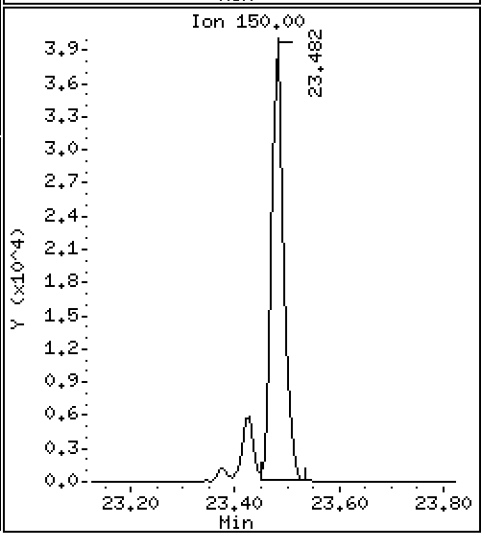


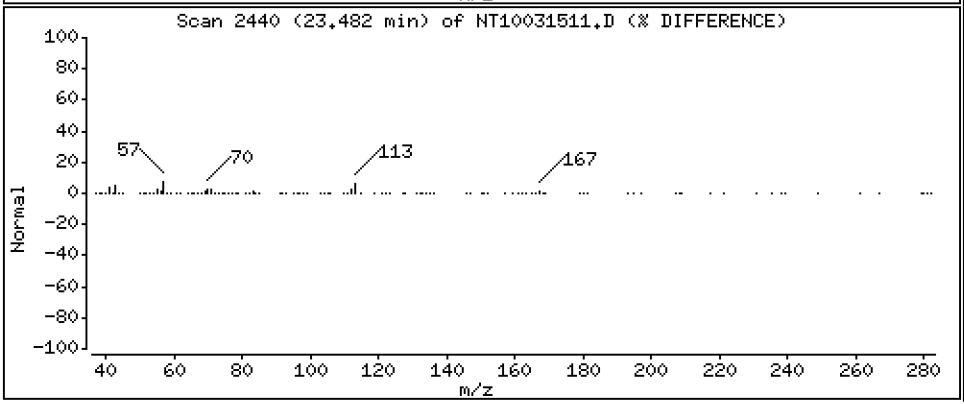












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

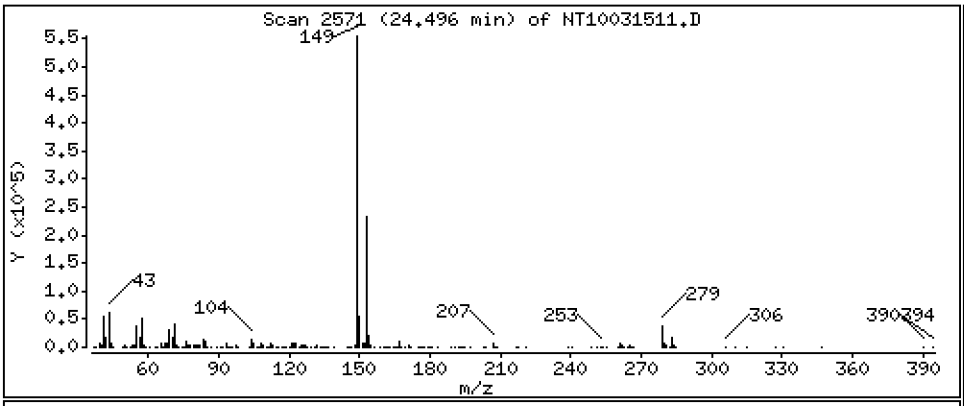
Operator: VTS

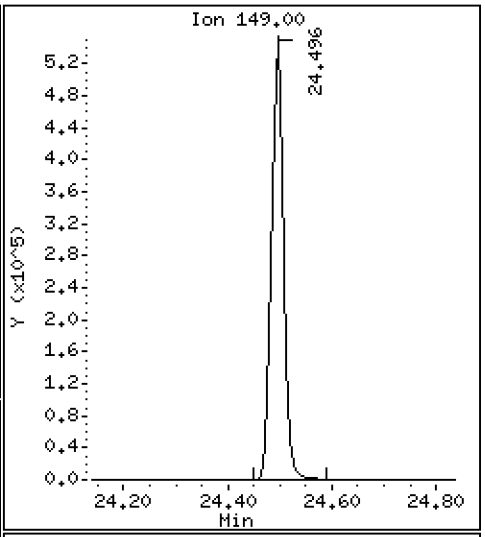
Column phase: ZB-5msi

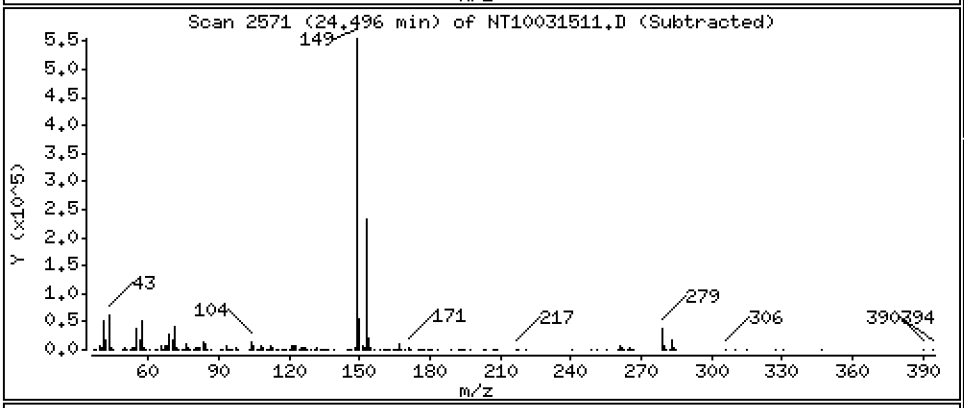
Column diameter: 0.25

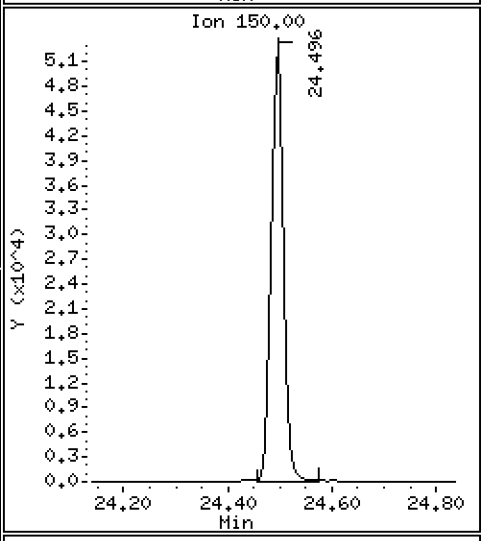
73 Di-n-octylphthalate

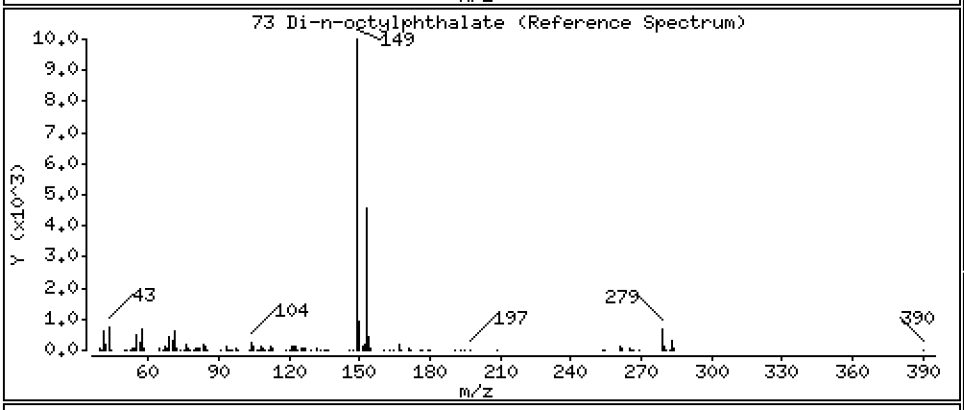
Concentration: 4.947 ug/mL

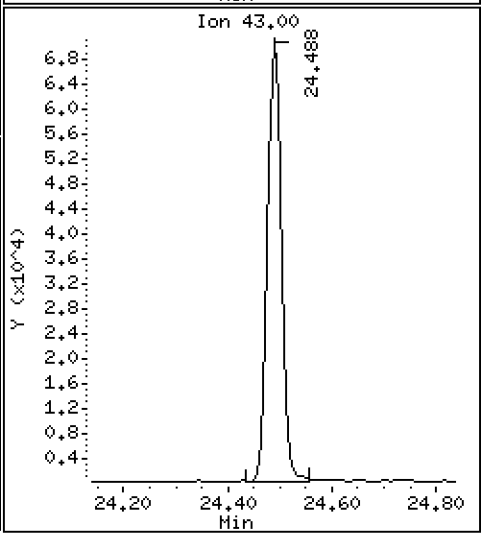


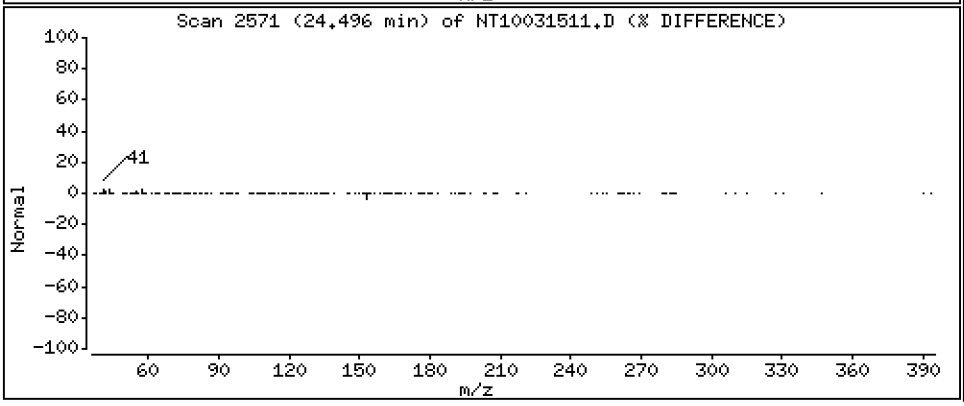












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

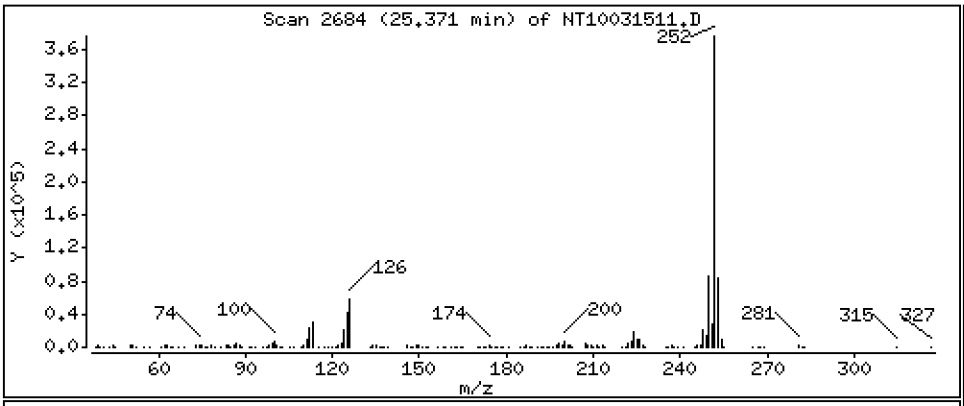
Operator: VTS

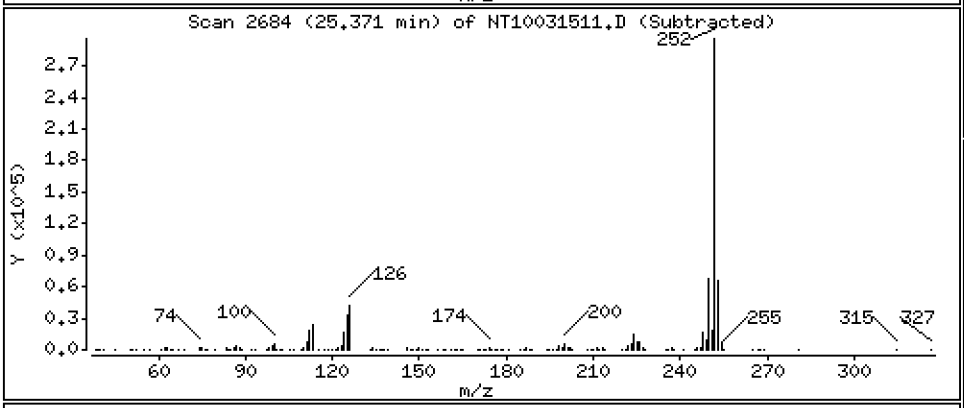
Column phase: ZB-5msi

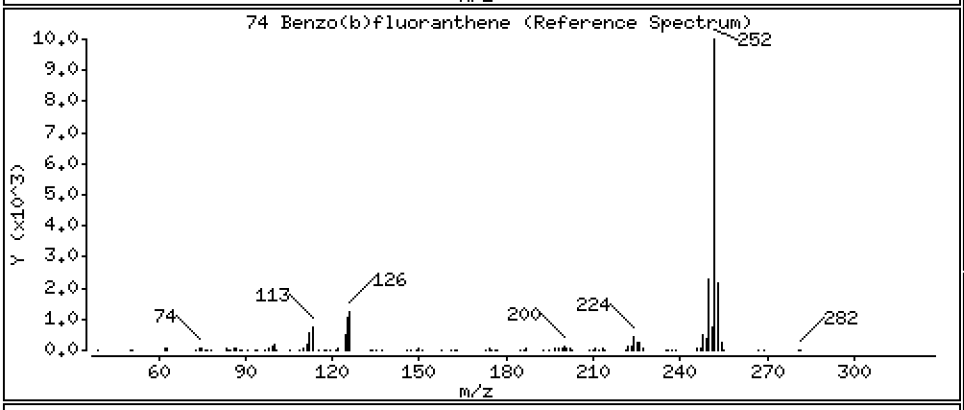
Column diameter: 0.25

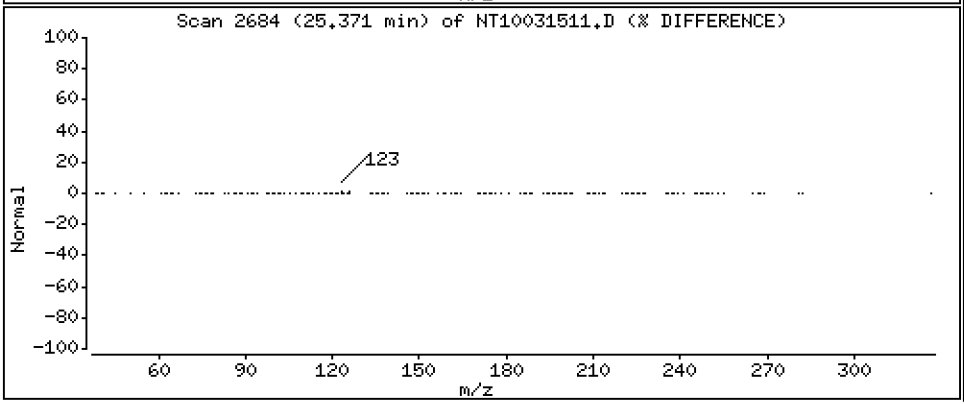
74 Benzo(b)fluoranthene

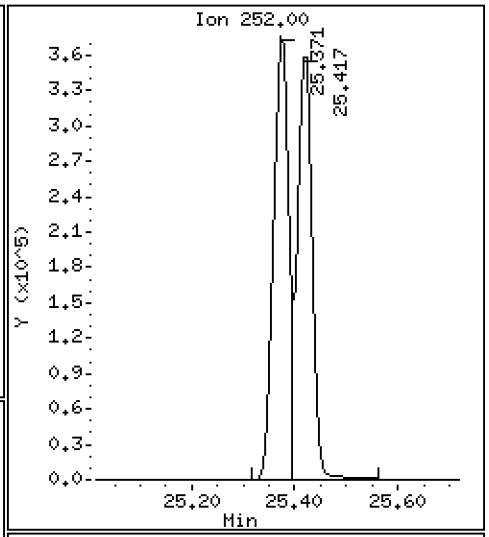
Concentration: 4.602 ug/mL

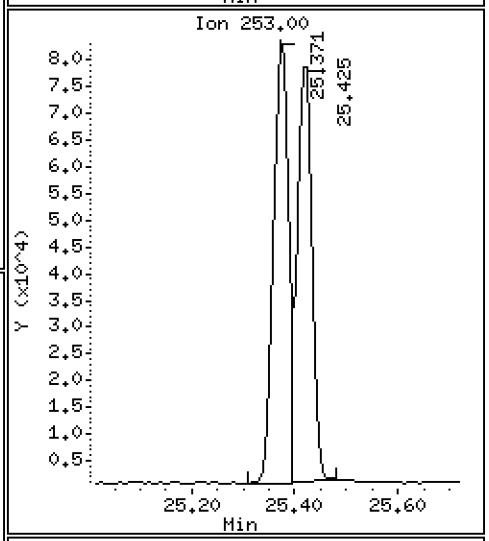


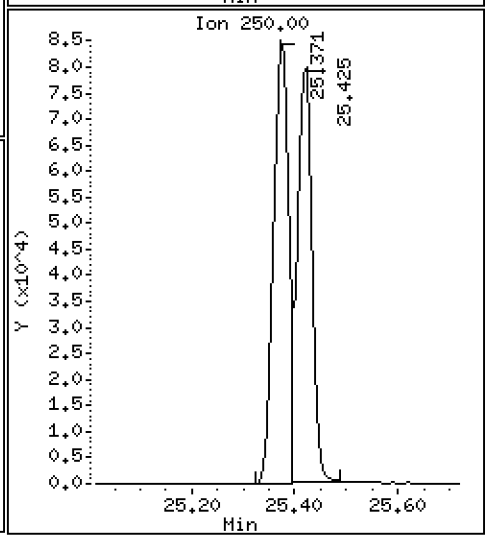












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

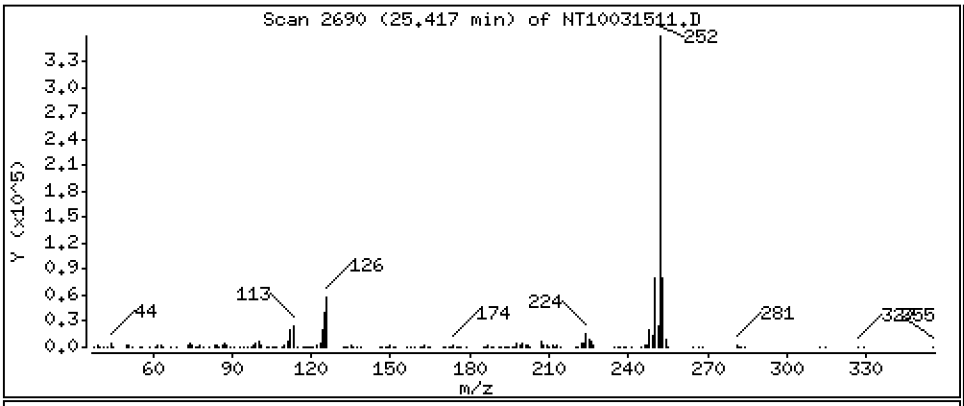
Operator: VTS

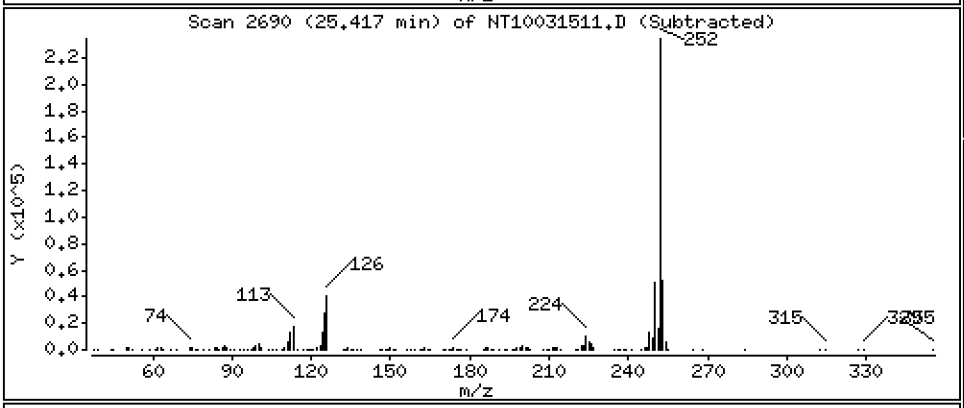
Column phase: ZB-5msi

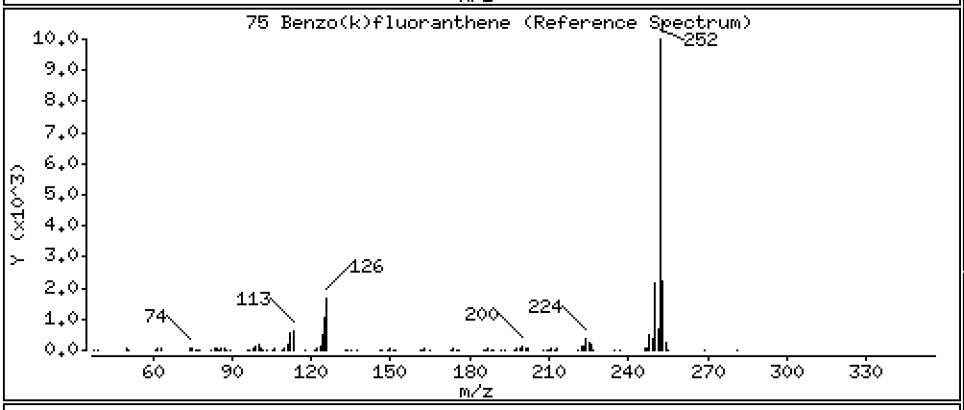
Column diameter: 0.25

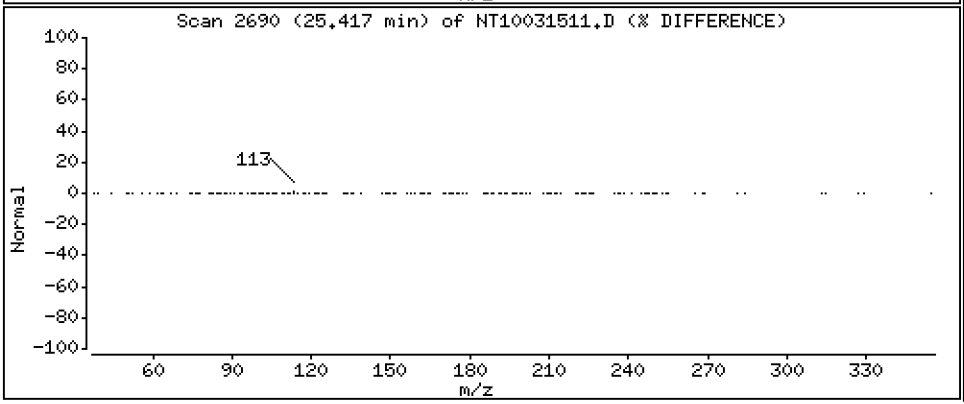
75 Benzo(k)fluoranthene

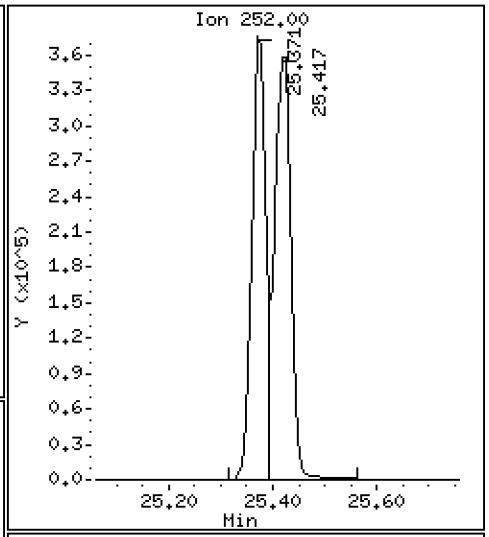
Concentration: 4.898 ug/mL

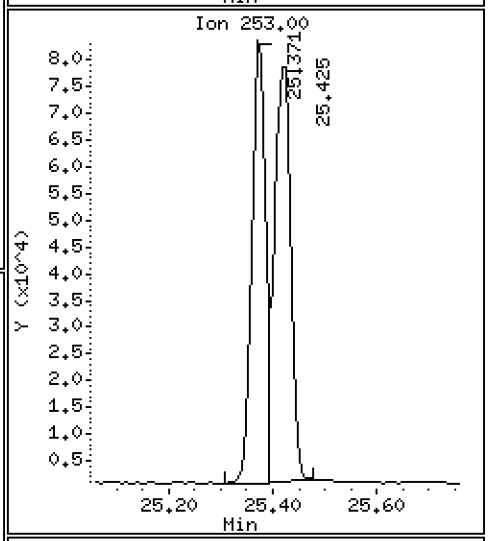


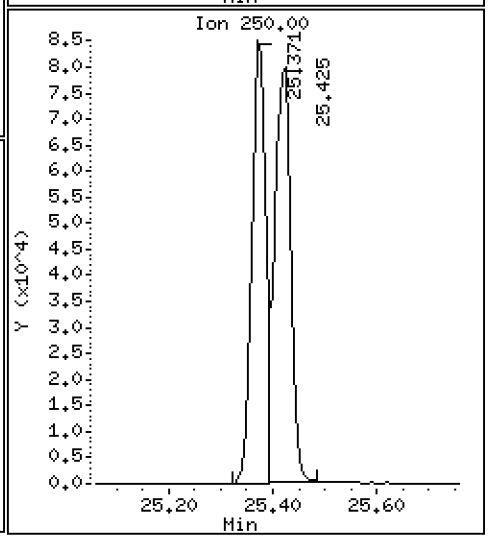












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

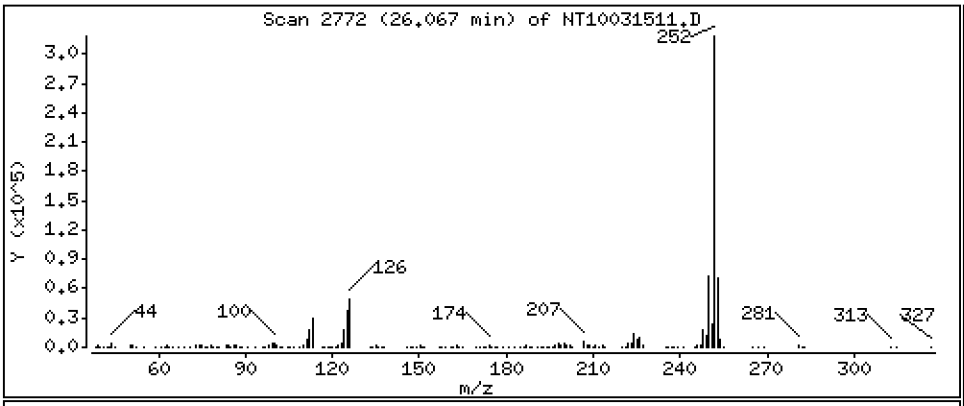
Operator: VTS

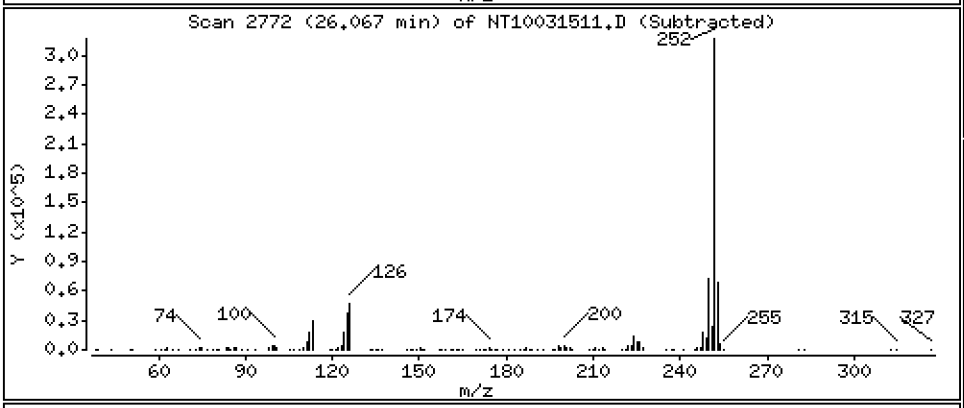
Column phase: ZB-5msi

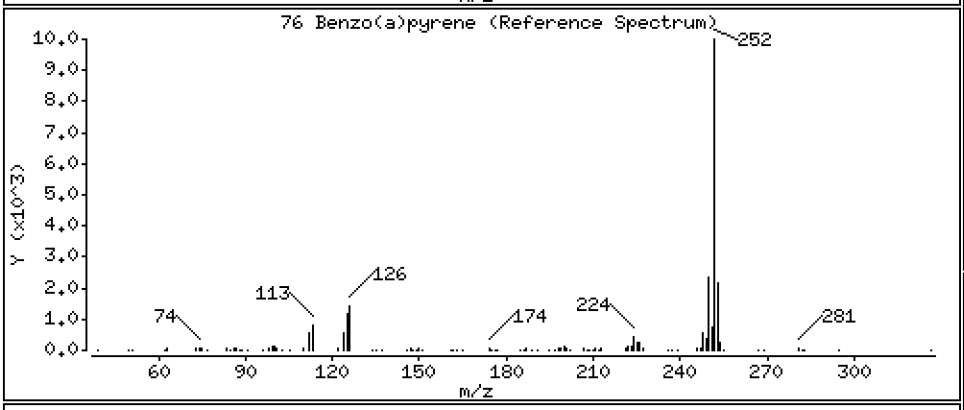
Column diameter: 0.25

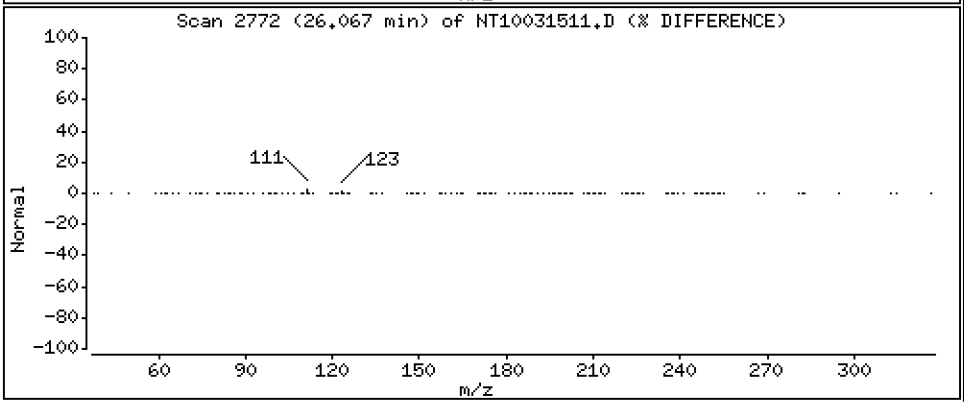
76 Benzo(a)pyrene

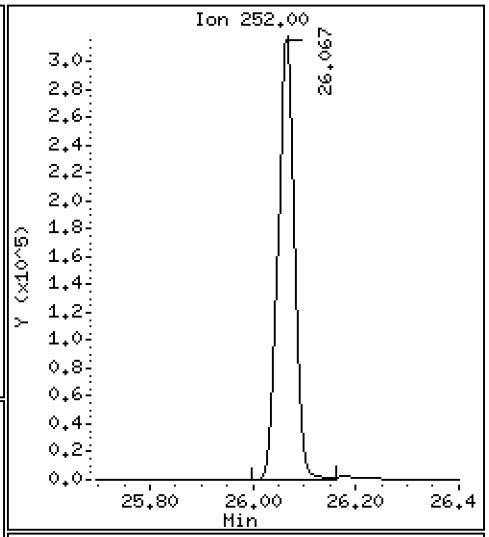
Concentration: 4.873 ug/mL

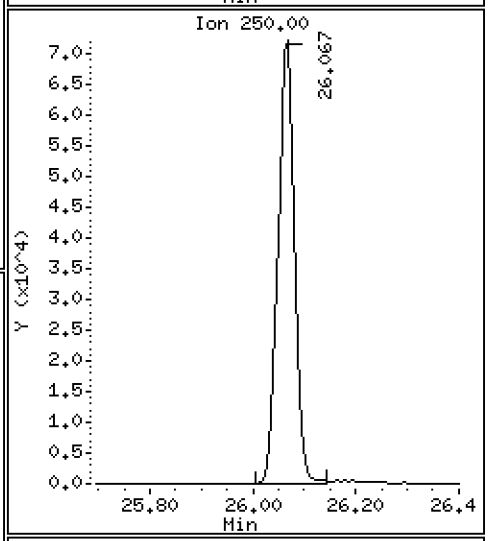


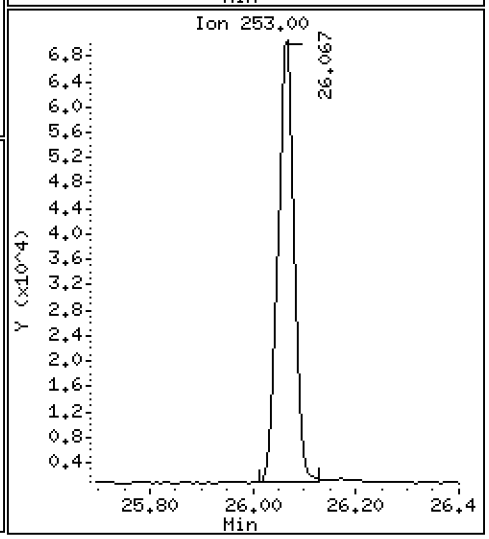












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

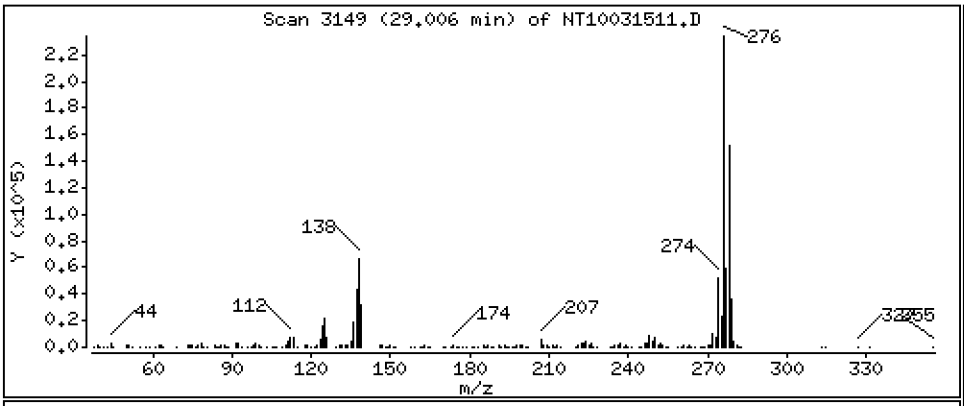
Operator: VTS

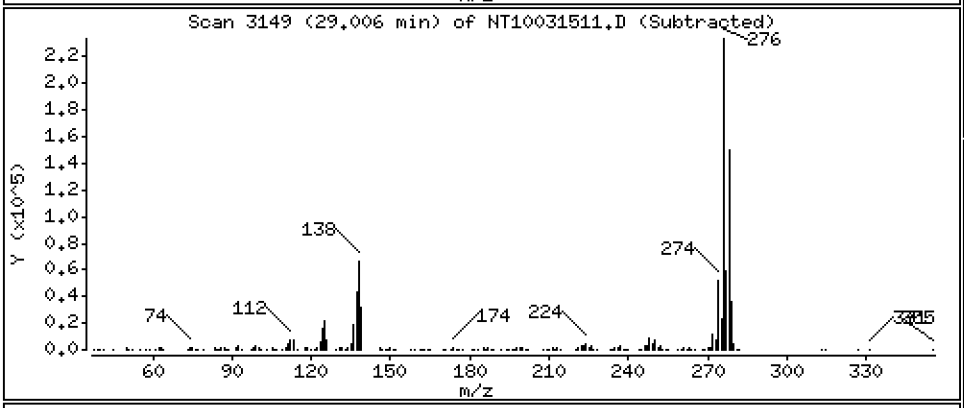
Column phase: ZB-5msi

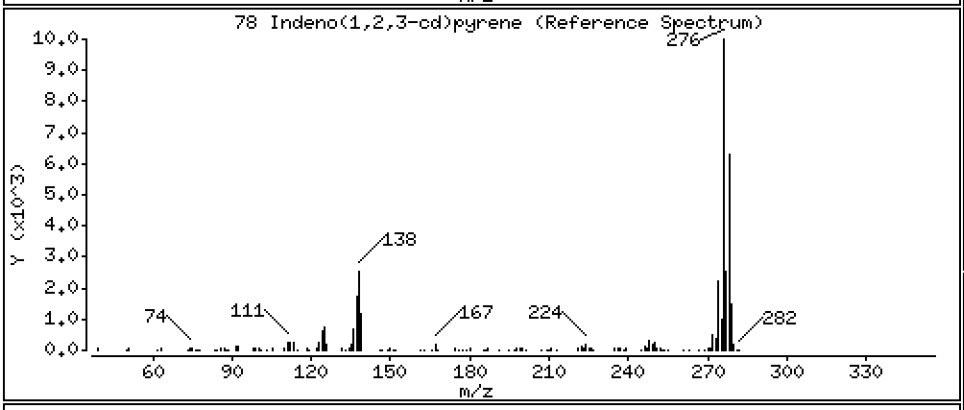
Column diameter: 0.25

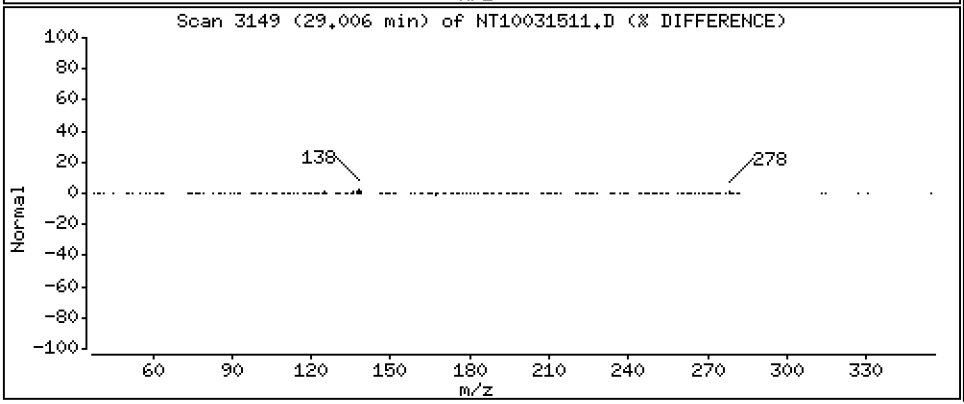
78 Indeno(1,2,3-cd)pyrene

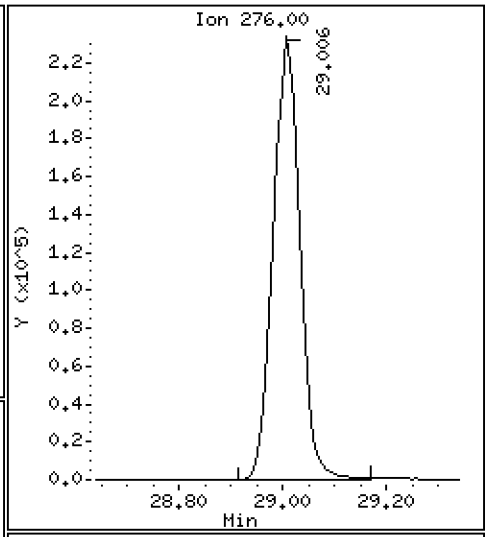
Concentration: 4.577 ug/mL

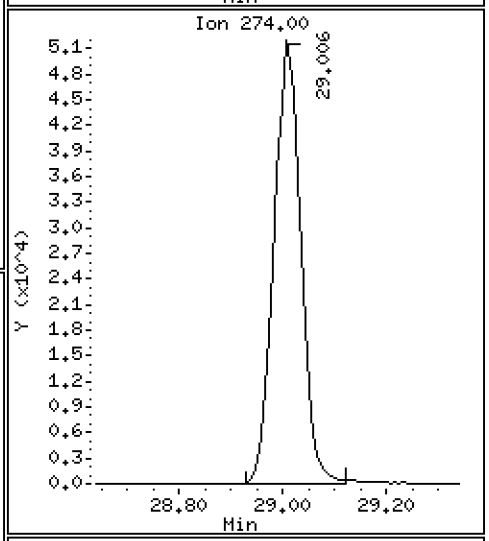


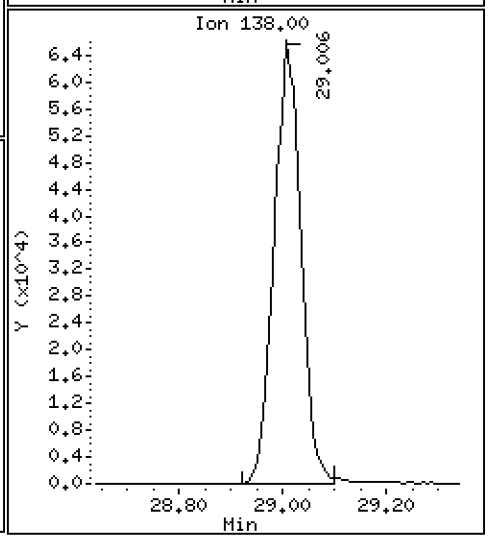












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

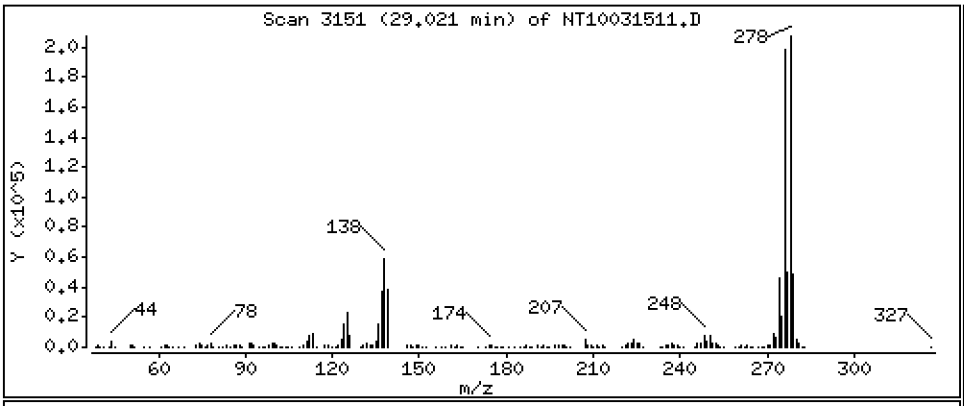
Operator: VTS

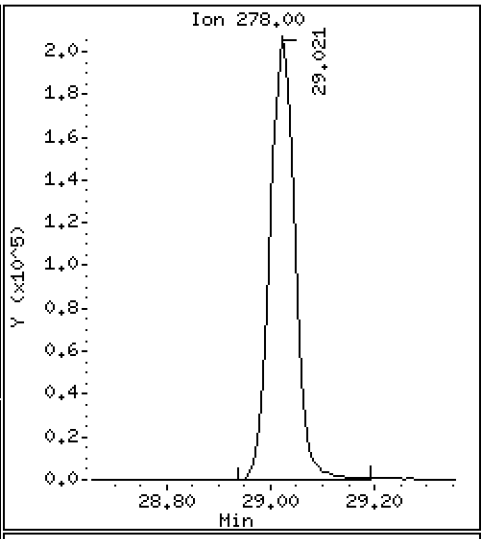
Column phase: ZB-5msi

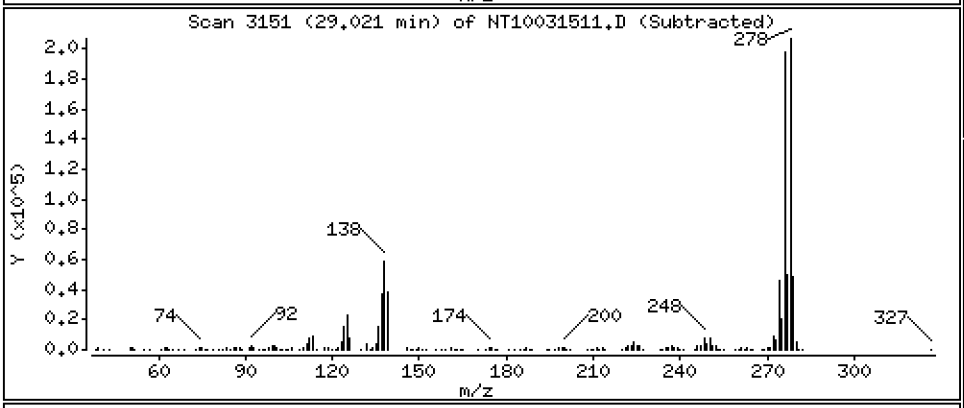
Column diameter: 0.25

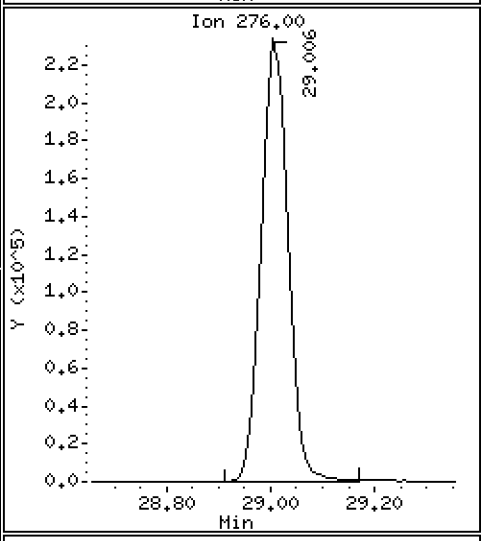
79 Dibenzo(a,h)anthracene

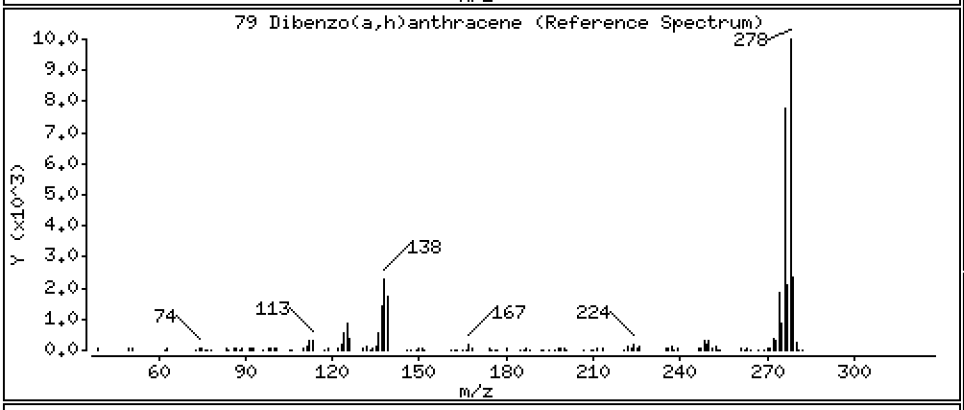
Concentration: 4.547 ug/mL

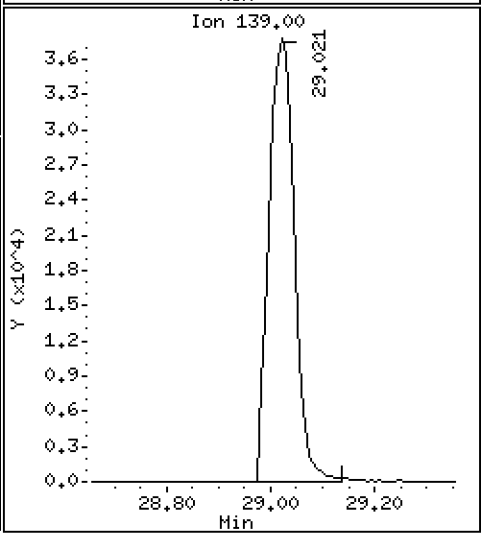


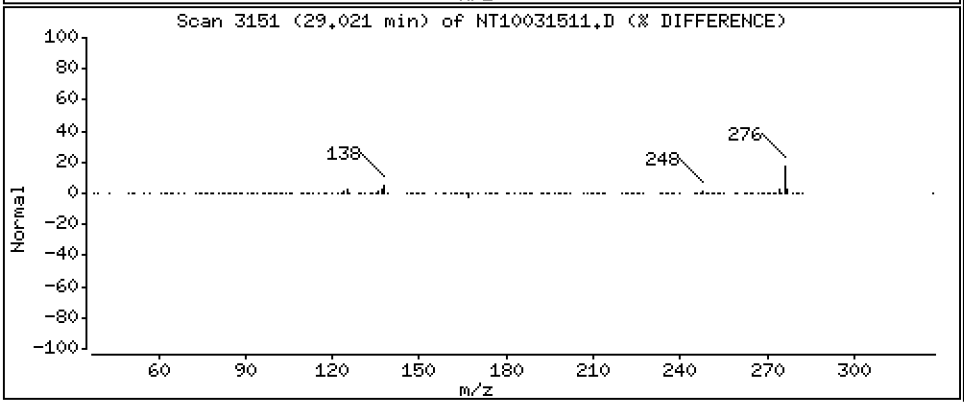












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

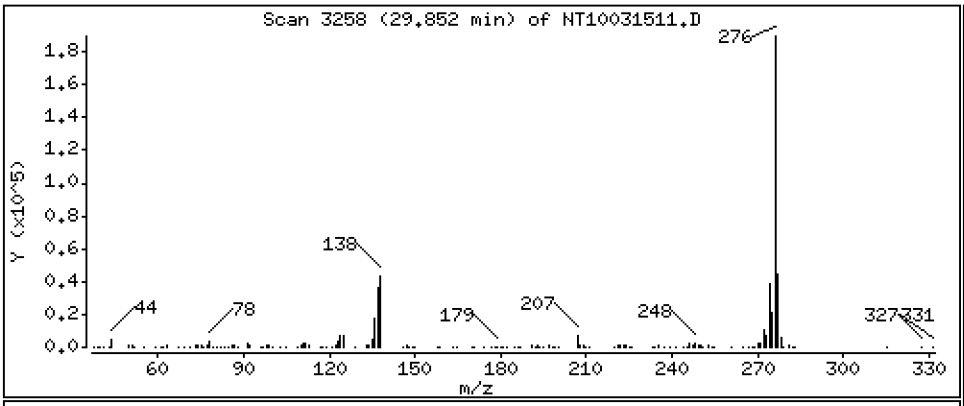
Operator: VTS

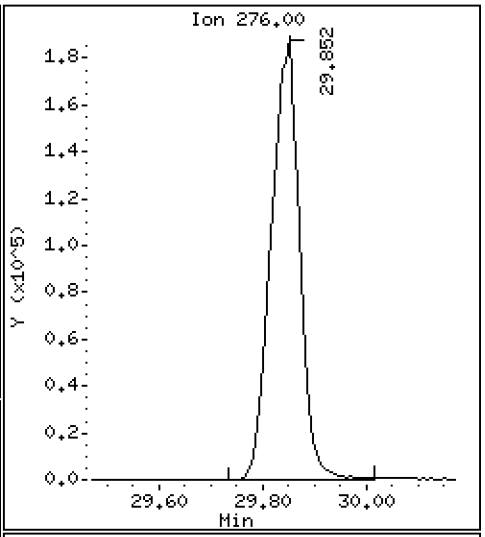
Column phase: ZB-5msi

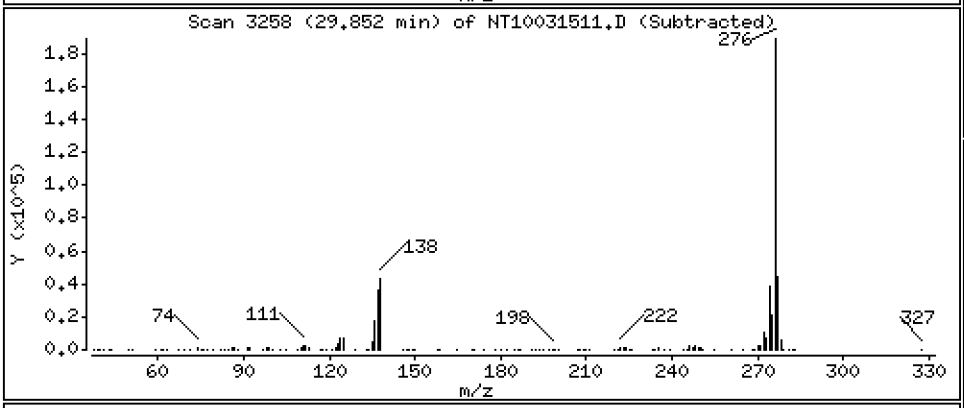
Column diameter: 0.25

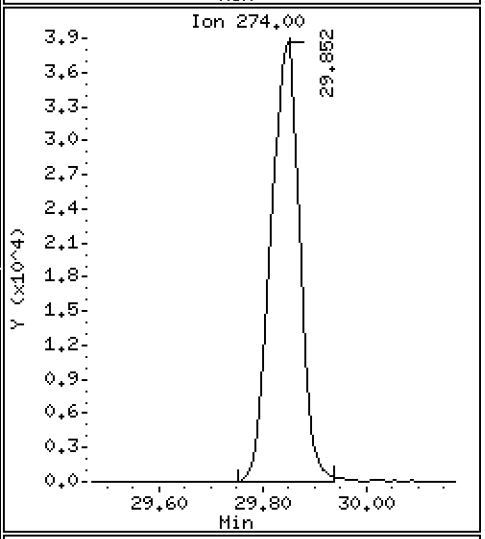
80 Benzo(g,h,i)perylene

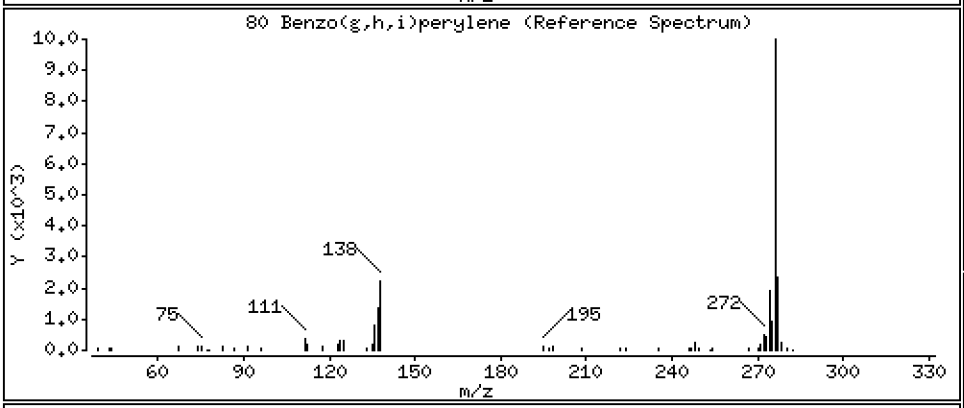
Concentration: 4.590 ug/mL

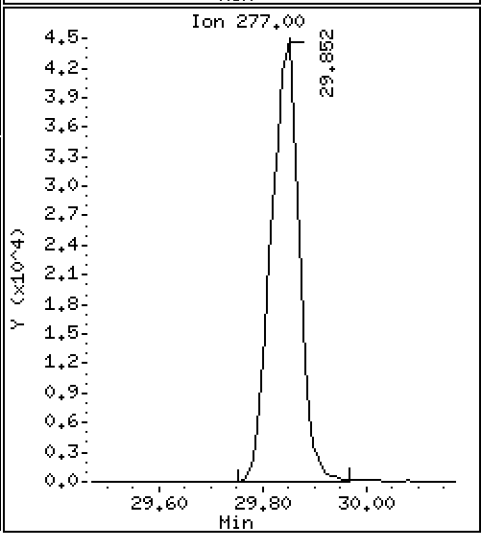


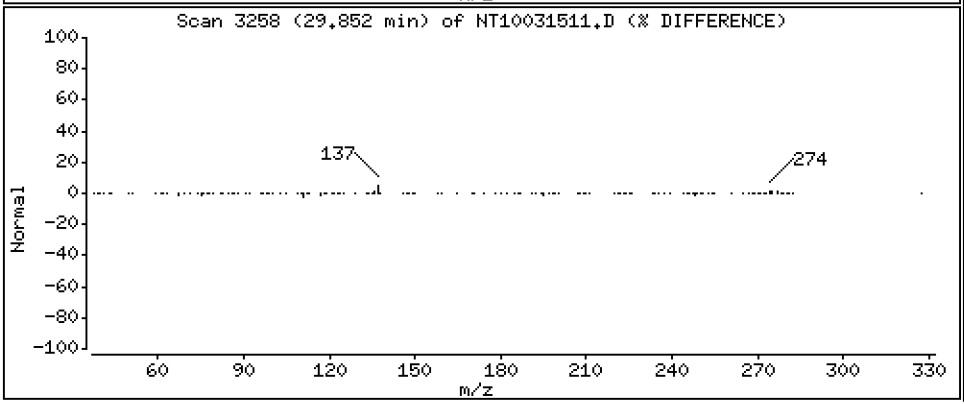












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

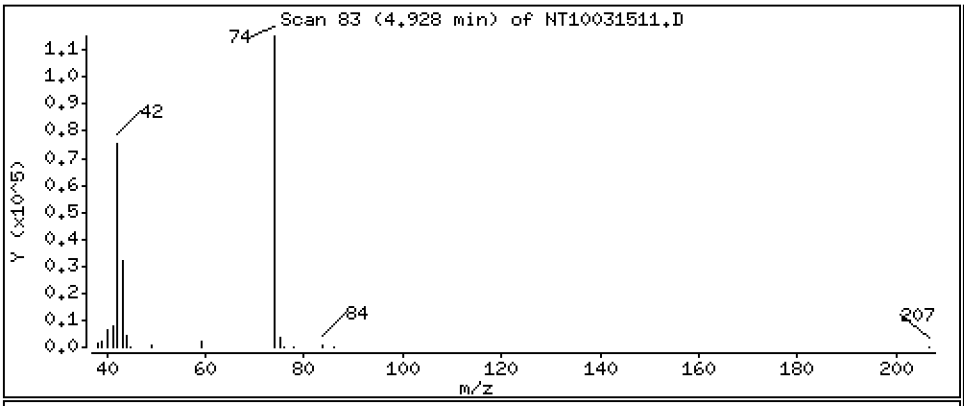
Operator: VTS

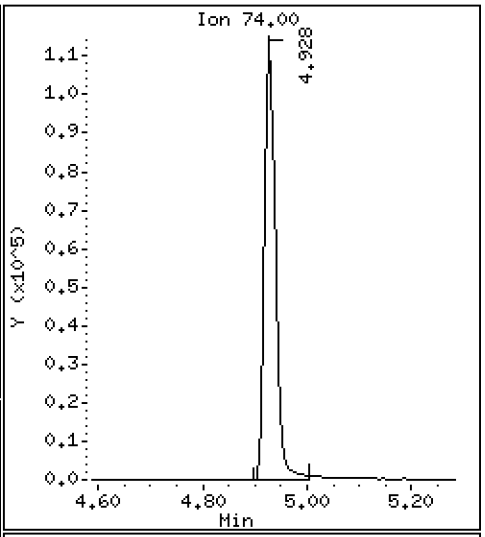
Column phase: ZB-5msi

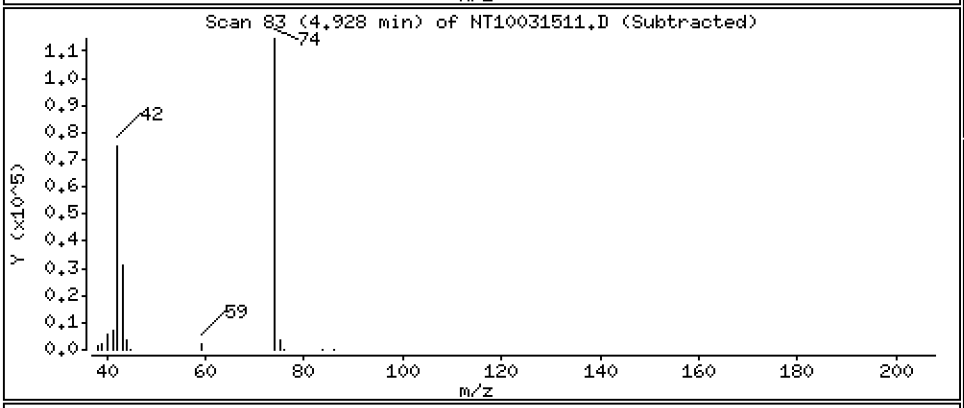
Column diameter: 0.25

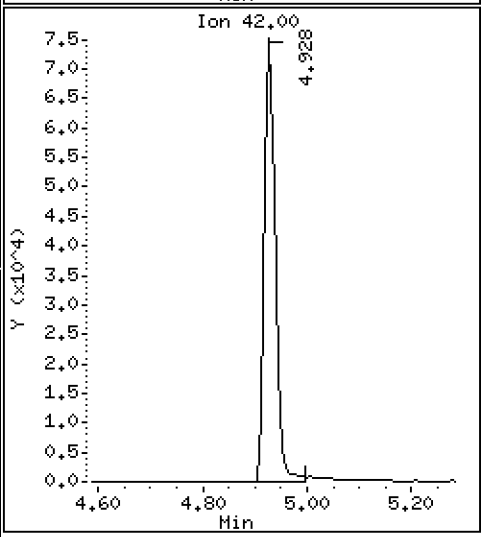
90 N-Nitrosodimethylamine

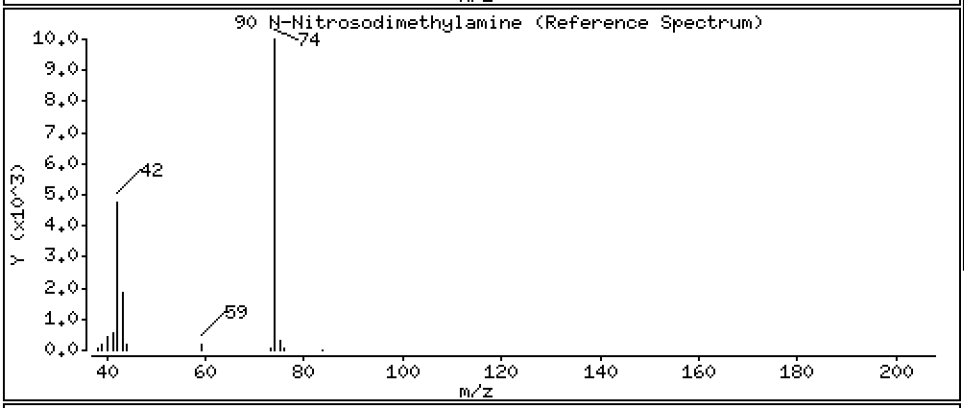
Concentration: 5.194 ug/mL

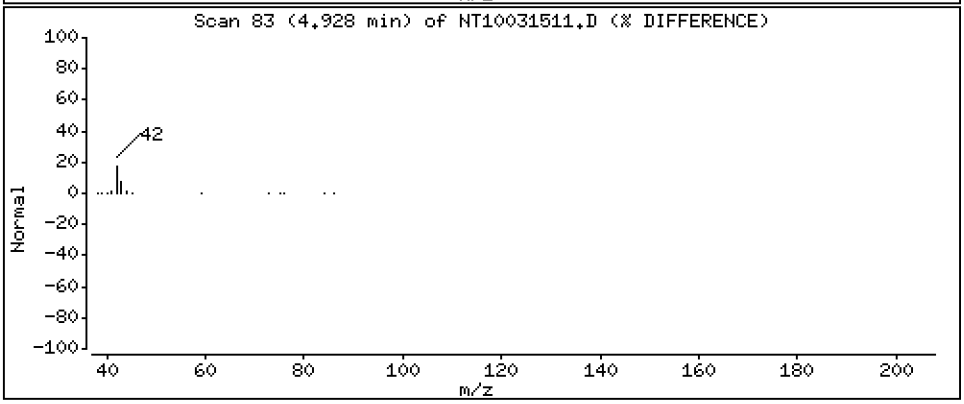












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

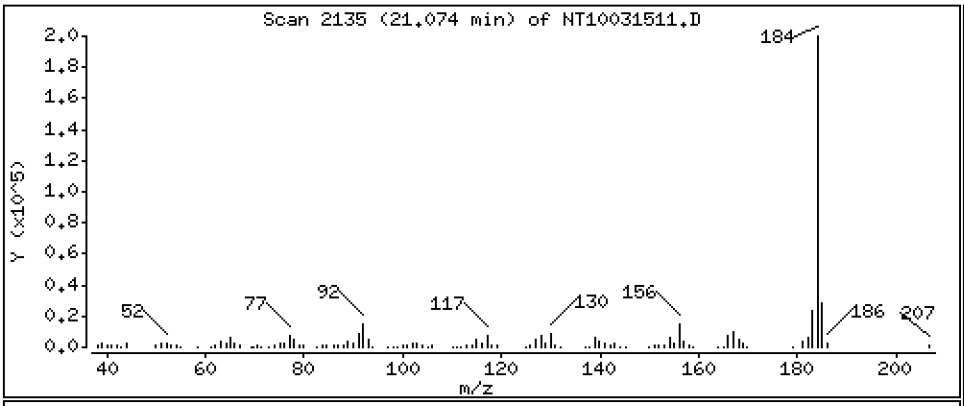
Operator: VTS

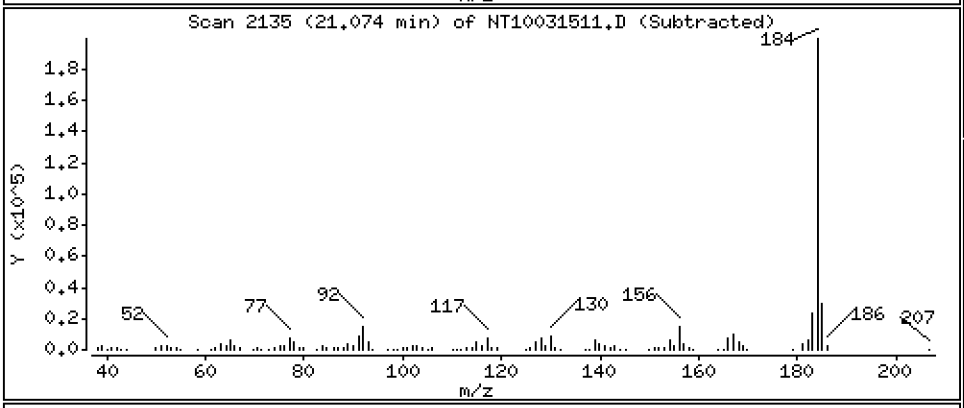
Column phase: ZB-5msi

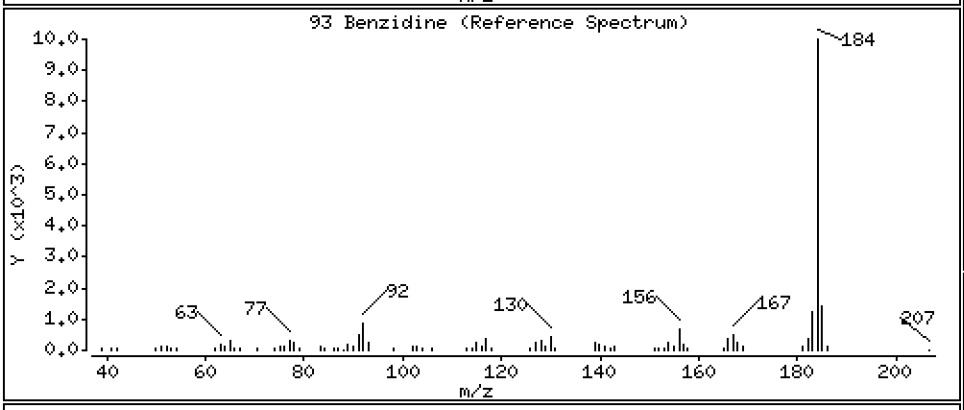
Column diameter: 0.25

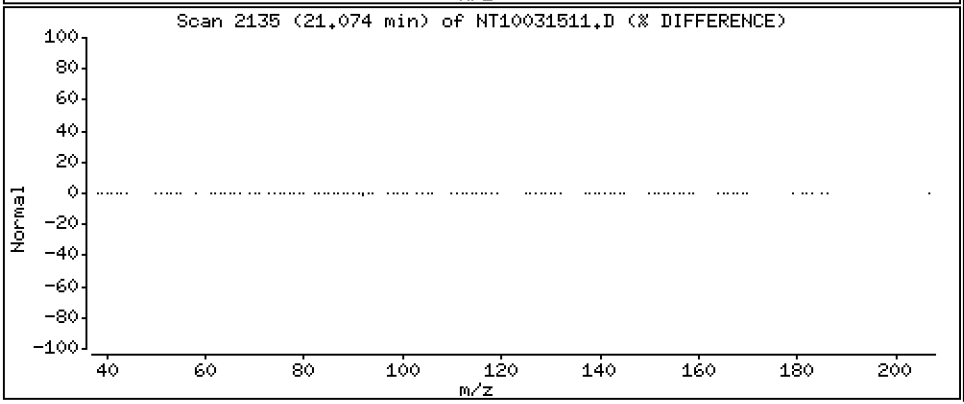
93 Benzidine

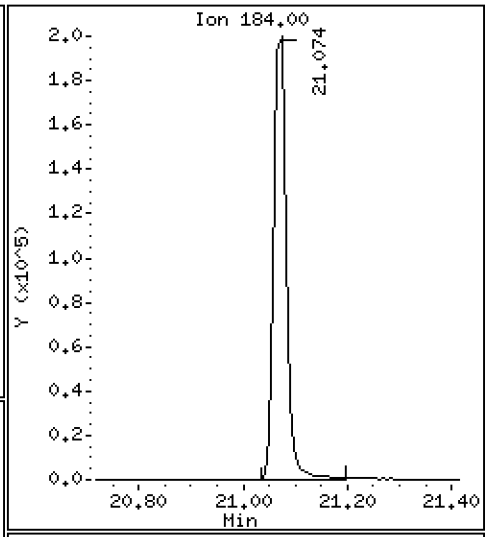
Concentration: 4.380 ug/mL

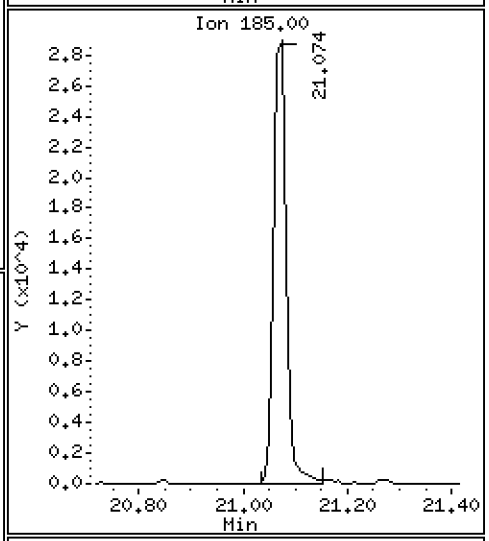


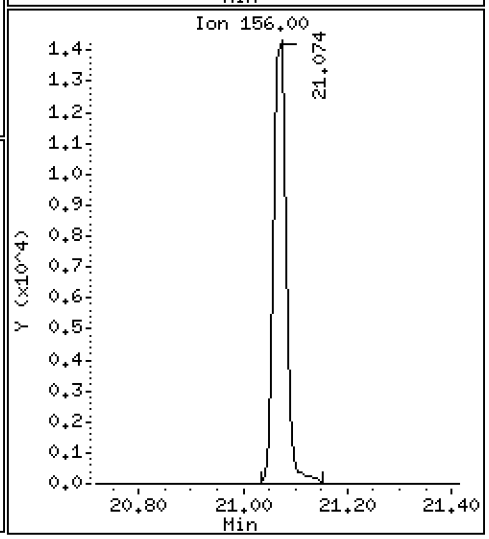












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

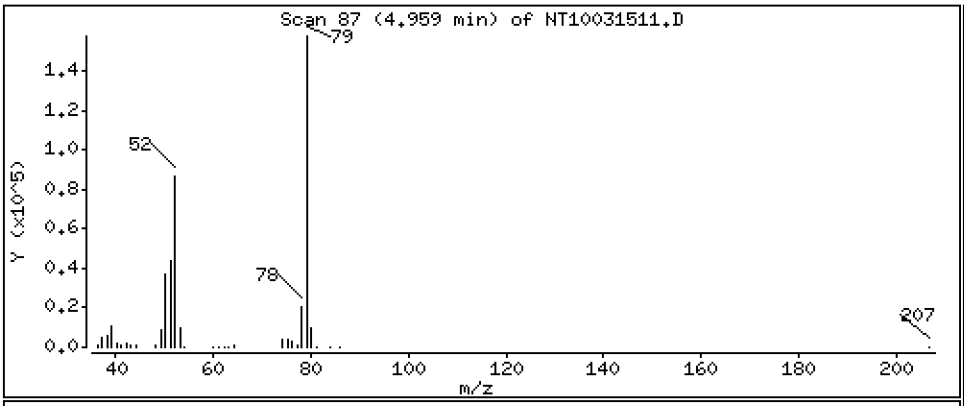
Operator: VTS

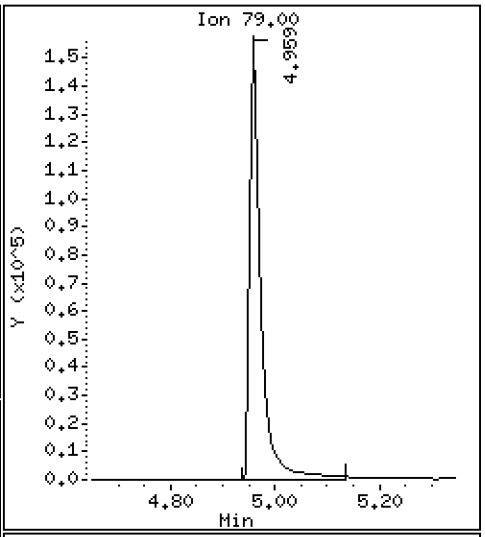
Column phase: ZB-5msi

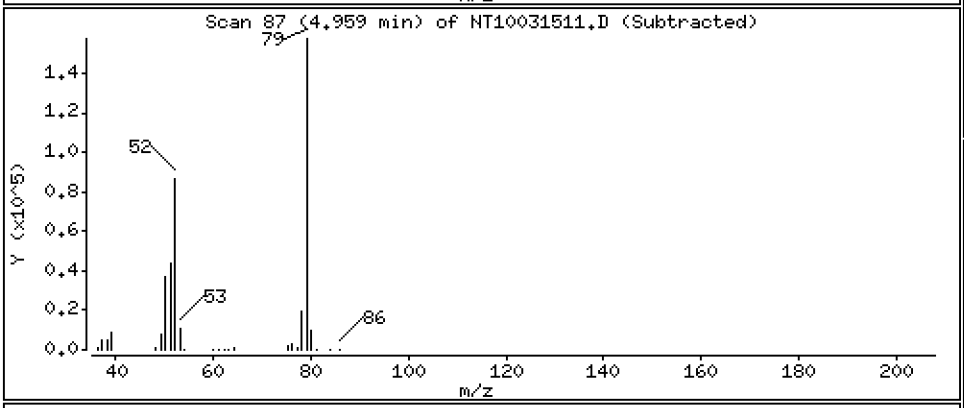
Column diameter: 0.25

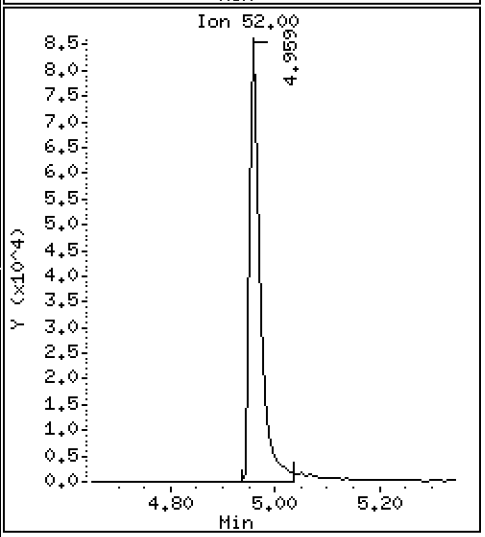
103 Pyridine

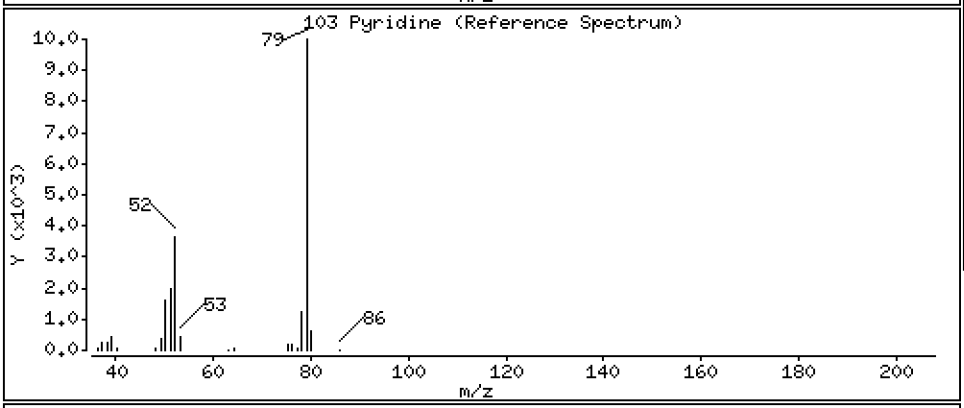
Concentration: 5.337 ug/mL

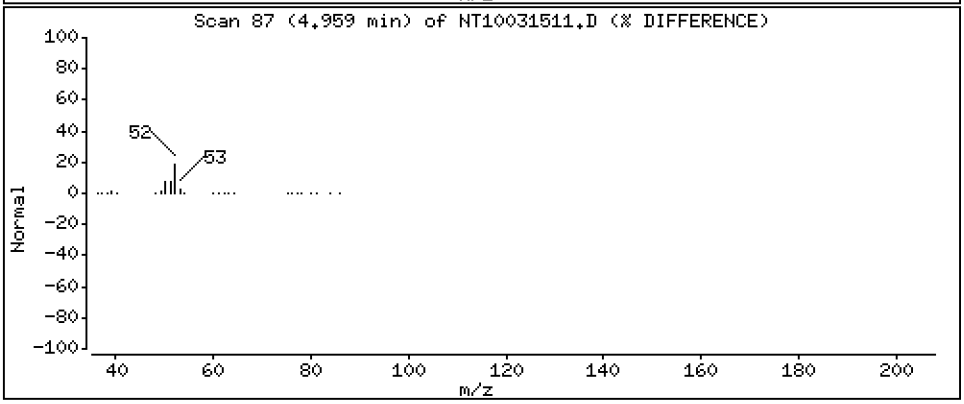












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

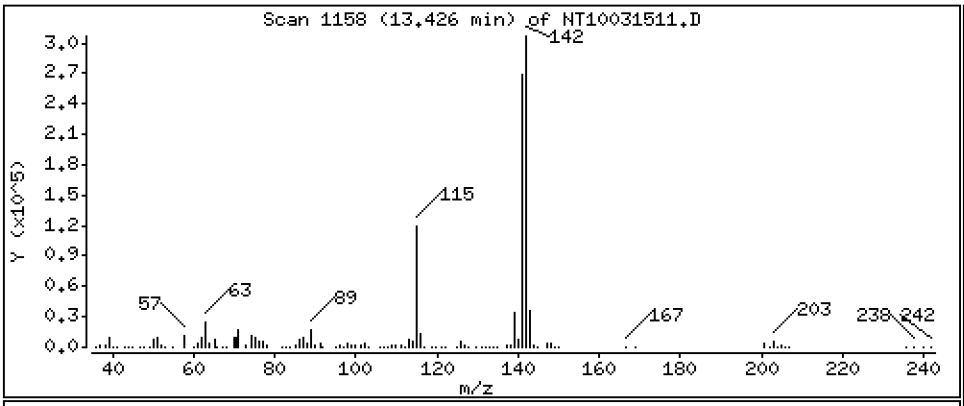
Operator: VTS

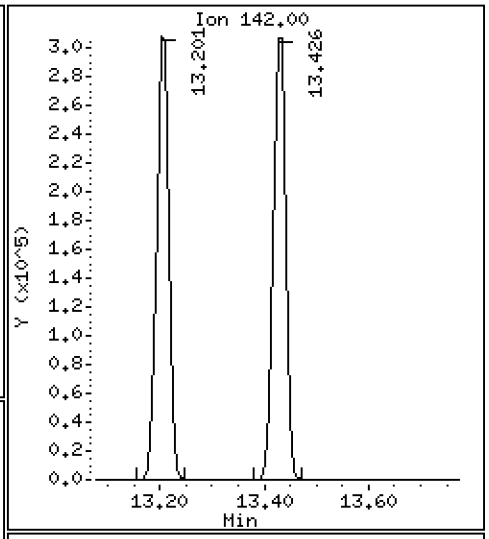
Column phase: ZB-5msi

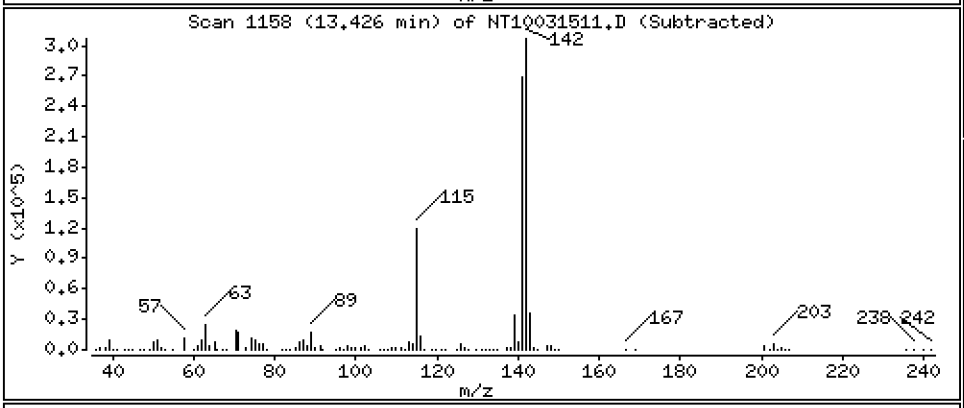
Column diameter: 0.25

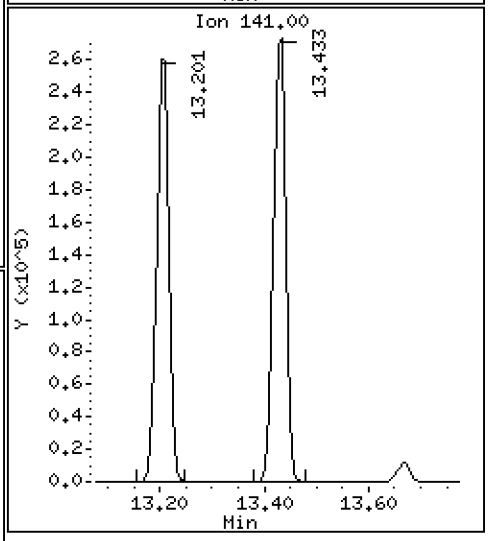
105 1-methylnaphthalene

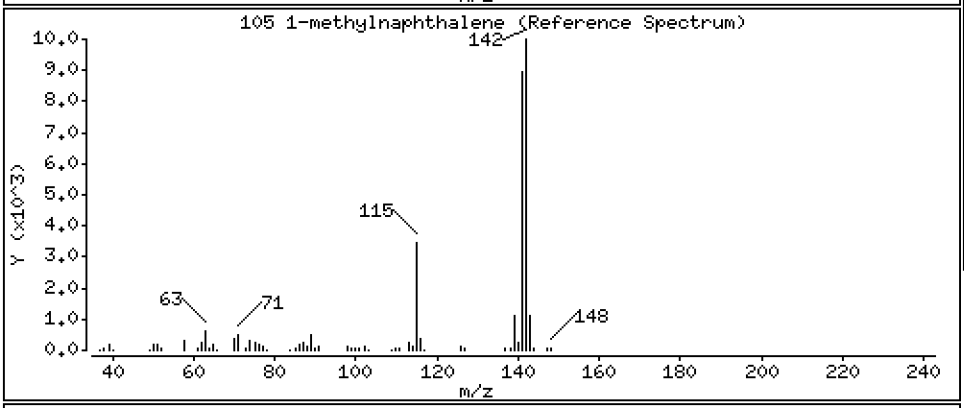
Concentration: 4.875 ug/mL

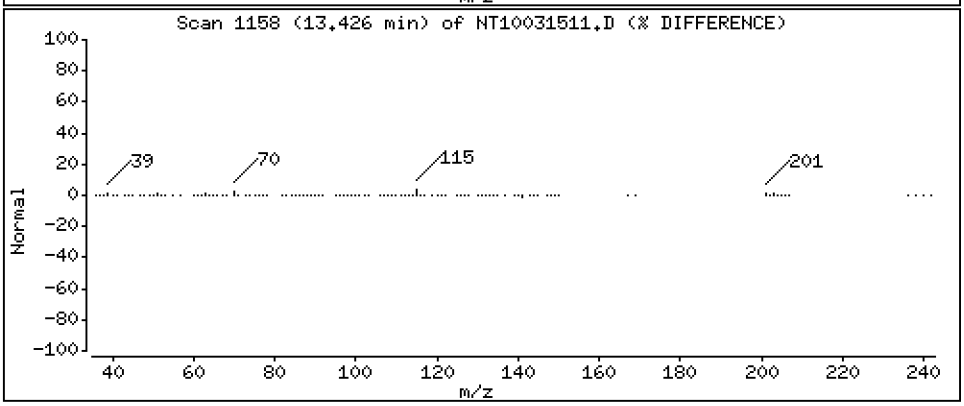












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

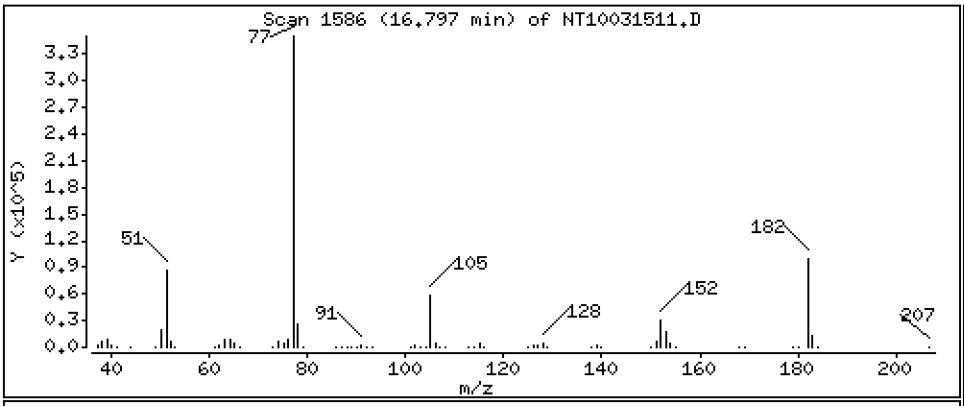
Operator: VTS

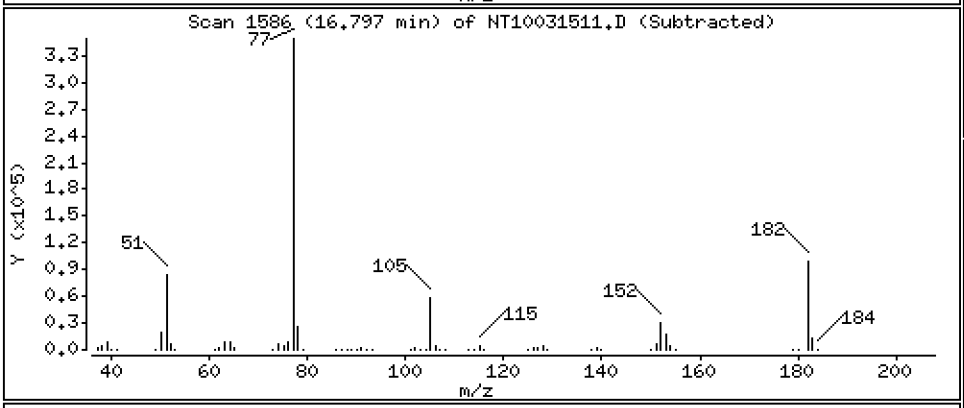
Column phase: ZB-5msi

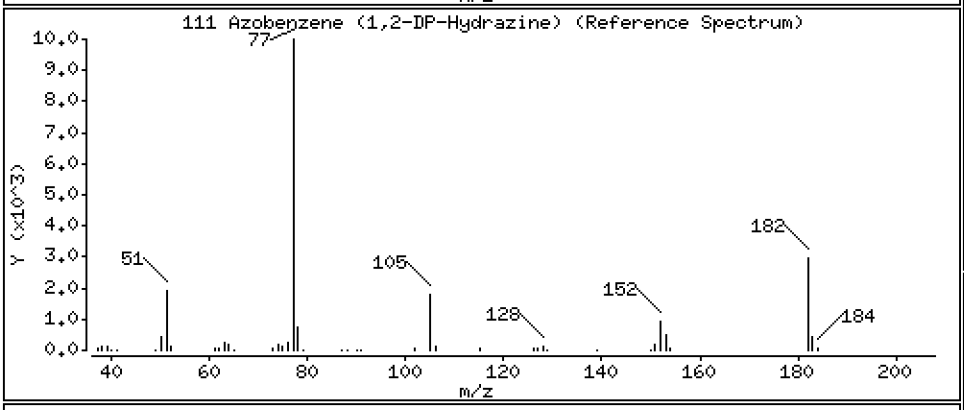
Column diameter: 0.25

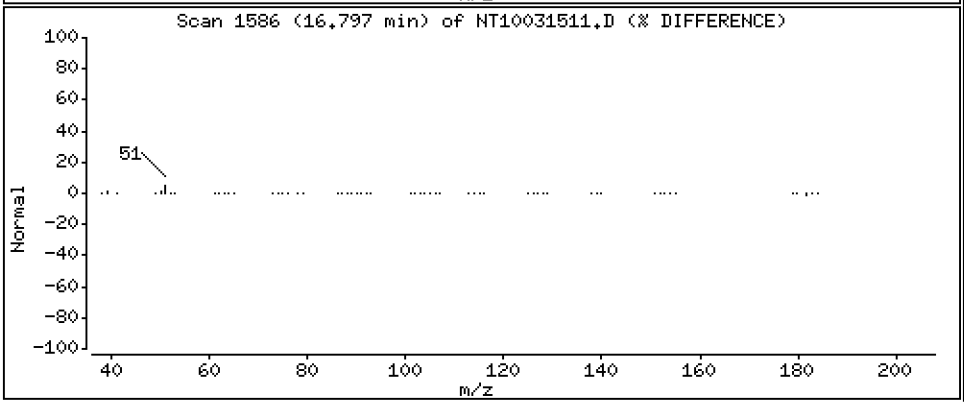
111 Azobenzene (1,2-DP-Hydrazine)

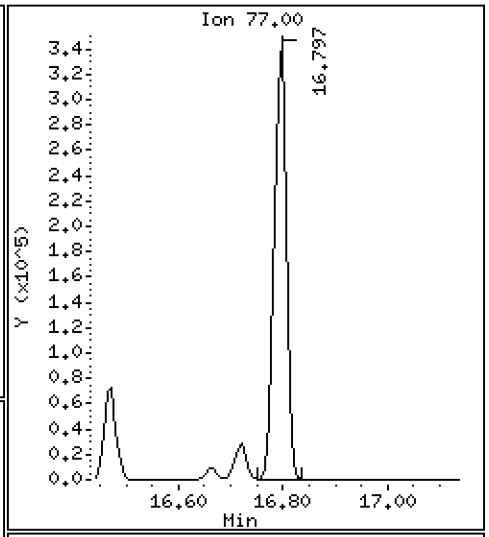
Concentration: 4.937 ug/mL

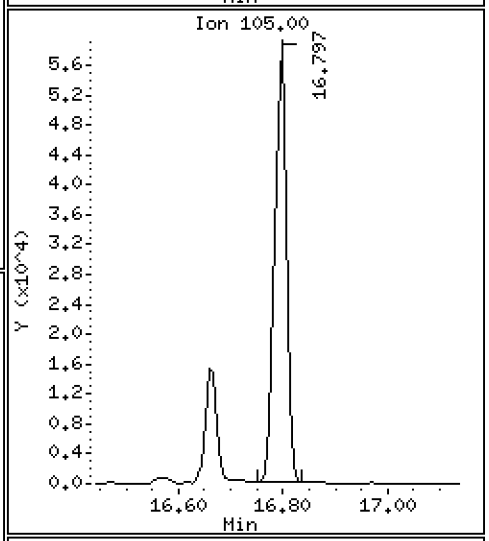


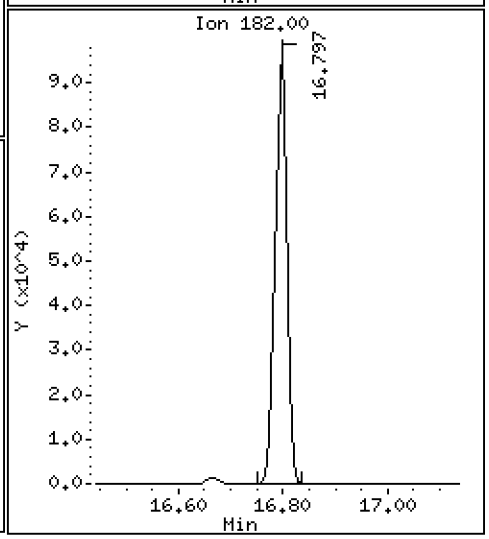












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

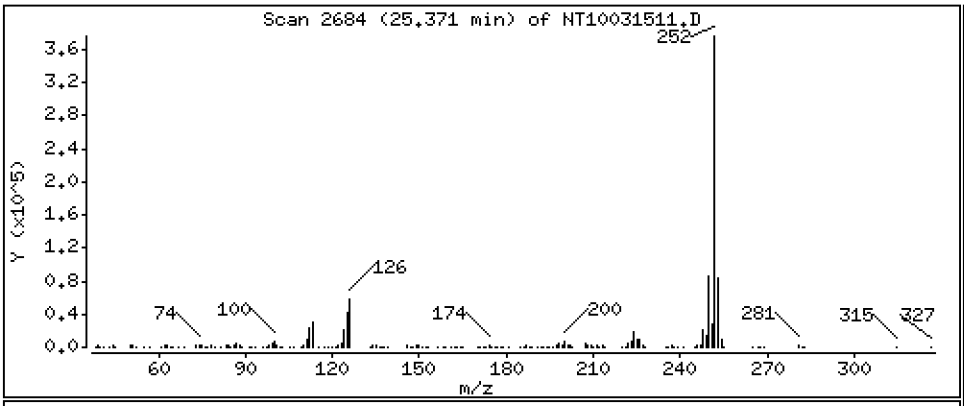
Operator: VTS

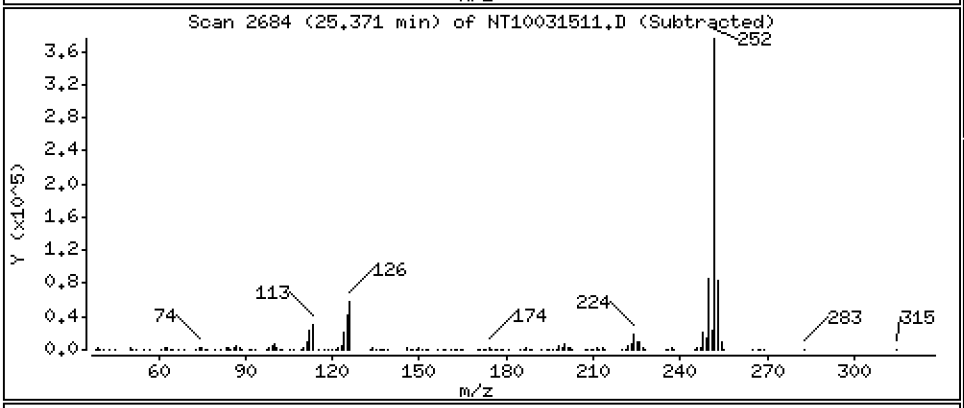
Column phase: ZB-5msi

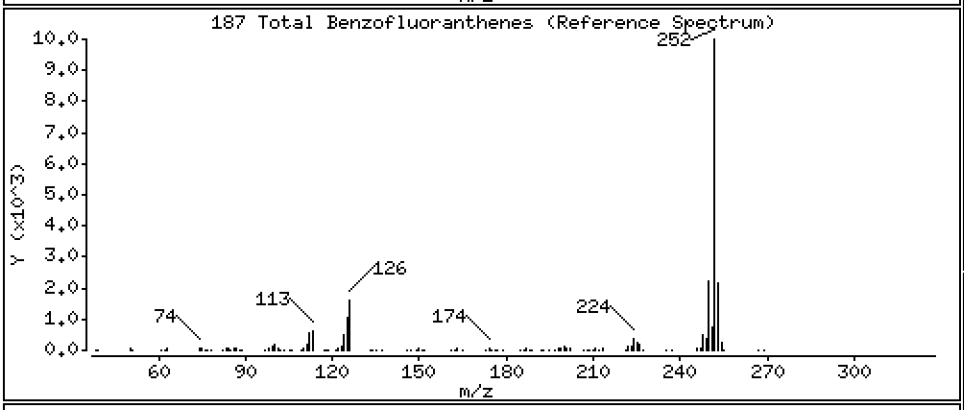
Column diameter: 0.25

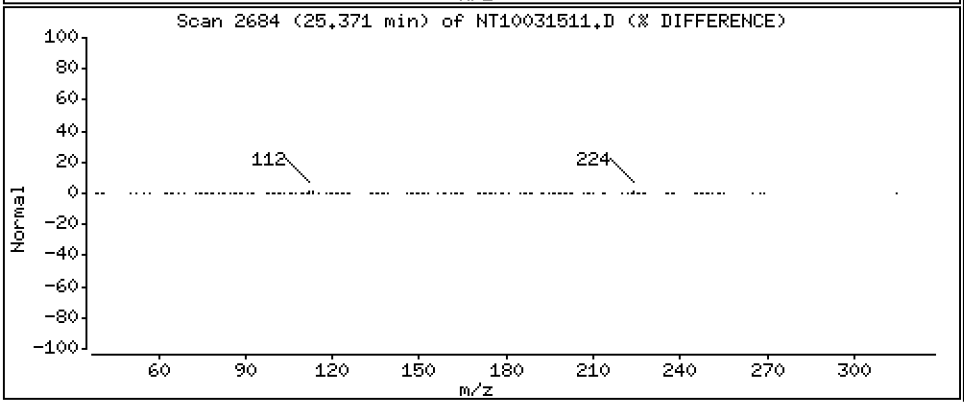
187 Total Benzofluoranthenes

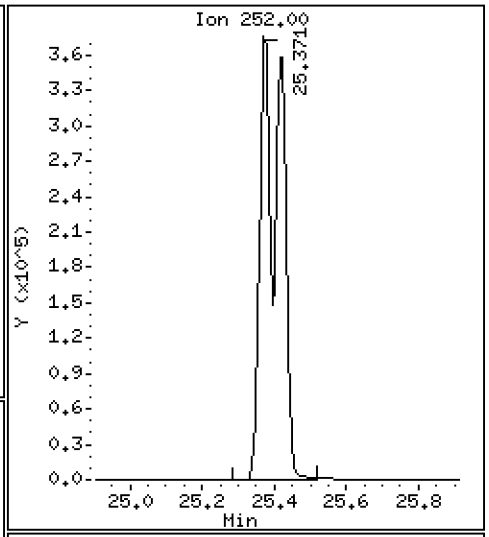
Concentration: 9.483 ug/mL

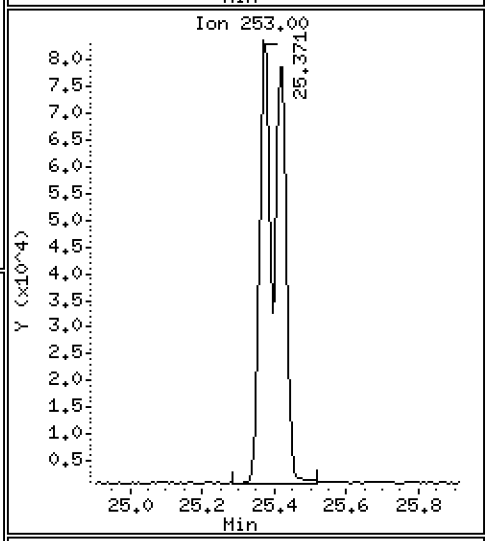


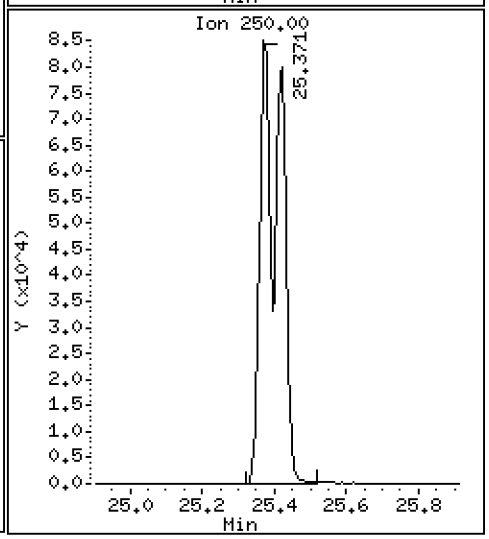












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

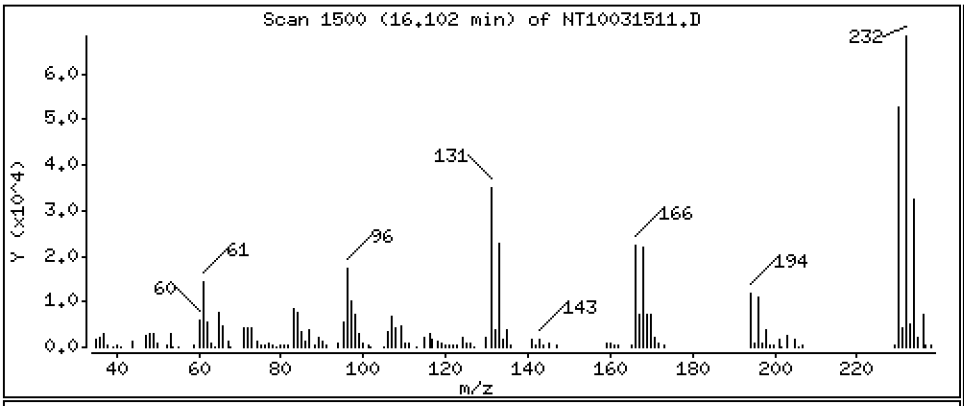
Operator: VTS

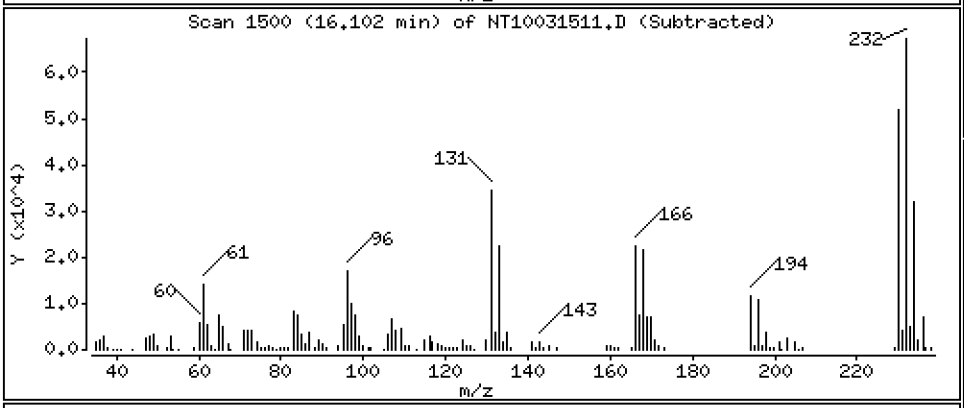
Column phase: ZB-5msi

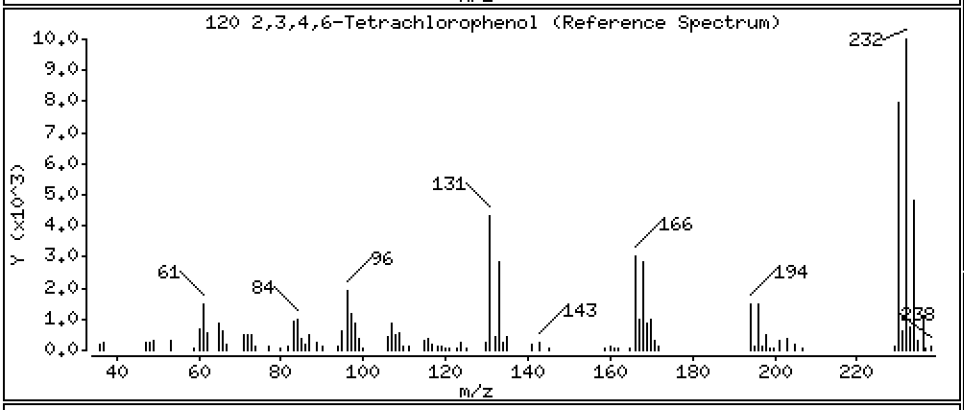
Column diameter: 0.25

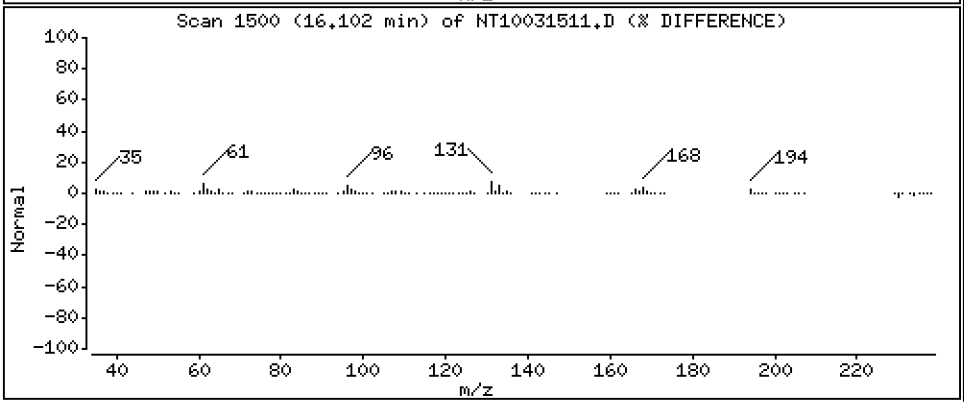
120 2,3,4,6-Tetrachlorophenol

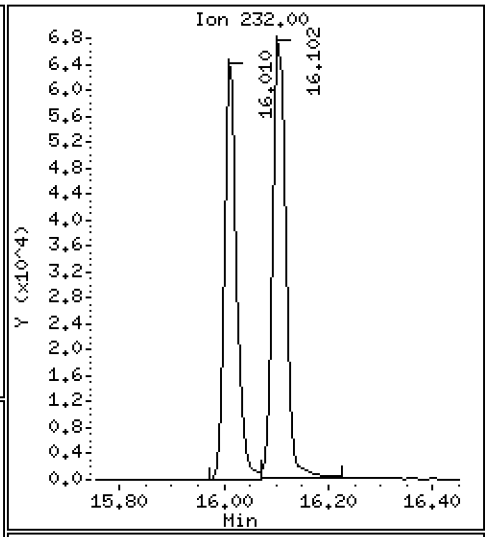
Concentration: 3.980 ug/mL

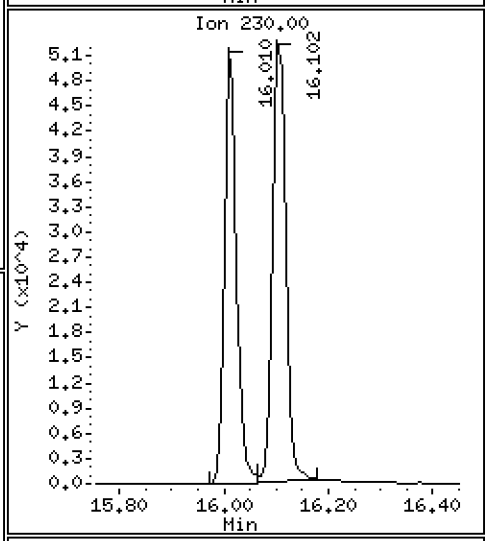


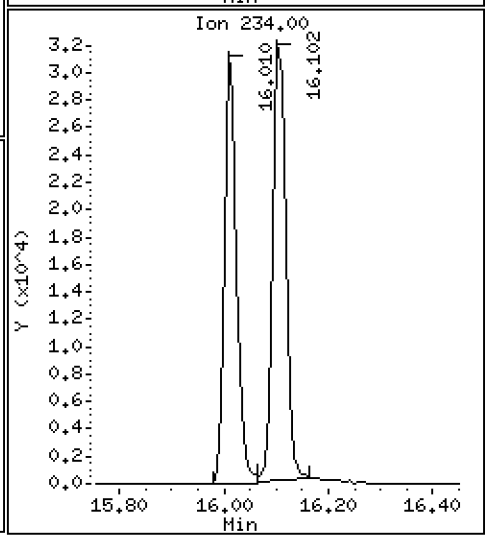












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Lab Smp Id: SLC0228-SCV1
Inj Date : 16-MAR-2023 02:16
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.659	8.652	(0.931)	281600	4.41237	4.412
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	248892	5.25818	5.258
6	2-Chlorophenol	128	8.960	8.961	(0.963)	233608	4.27685	4.277
7	1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	275540	4.77157	4.772
* 8	1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	154809	4.00000	
9	1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	274051	4.91272	4.913
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	268028	4.88215	4.882
11	Benzyl alcohol	108	9.557	9.557	(1.028)	147597	4.92722	4.927
14	2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	100179	6.21363	6.214
13	2-Methylphenol	108	9.775	9.767	(1.051)	196115	4.21542	4.215
17	Hexachloroethane	117	10.279	10.271	(1.105)	114513	5.00332	5.003
16	N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	190250	5.17896	5.179
15	4-Methylphenol	108	10.046	10.031	(1.080)	213951	4.36462	4.365
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.426	10.419	(0.885)	274714	4.85798	4.858
20	Isophorone	82	10.861	10.861	(0.922)	556741	7.69604	7.696
21	2-Nitrophenol	139	11.047	11.048	(0.938)	110302	3.99452	3.995
22	2,4-Dimethylphenol	107	11.081	11.082	(0.941)	188638	3.63181	3.632
23	Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.958)	273219	5.65409	5.654
24	Benzoic acid	105	11.217	11.166	(0.952)	173961	5.95241	5.952
25	2,4-Dichlorophenol	162	11.489	11.489	(0.975)	195480	4.70301	4.703
26	1,2,4-Trichlorobenzene	180	11.685	11.685	(0.992)	222176	4.55366	4.554
* 27	Naphthalene-d8	136	11.777	11.770	(1.000)	570882	4.00000	
28	Naphthalene	128	11.816	11.816	(1.003)	713318	4.71662	4.717
29	4-Chloroaniline	127	11.940	11.940	(1.014)	223402	3.78650	3.787
30	Hexachlorobutadiene	225	12.171	12.172	(1.033)	138198	4.83404	4.834
31	4-Chloro-3-methylphenol	107	12.876	12.876	(1.093)	208794	4.64027	4.640
32	2-Methylnaphthalene	142	13.201	13.201	(1.121)	501627	4.59617	4.596
33	Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	132827	4.72902	4.729

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	137849	4.59559	4.596
35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	146935	4.40855	4.409
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.199	14.191	(0.923)	466196	4.79589	4.796
38	2-Nitroaniline	65	14.454	14.447	(0.940)	134108	4.91137	4.911
39	Dimethylphthalate	163	14.880	14.873	(0.967)	486790	4.93747	4.937
40	Acenaphthylene	152	15.074	15.066	(0.980)	727839	4.80509	4.805
41	2,6-Dinitrotoluene	165	15.020	15.012	(0.976)	112840	5.29815	5.298
* 42	Acenaphthene-d10	164	15.383	15.383	(1.000)	303490	4.00000	
43	3-Nitroaniline	138	15.306	15.298	(0.995)	120530	5.01393	5.014
44	Acenaphthene	153	15.453	15.445	(1.005)	446914	4.77589	4.776
45	2,4-Dinitrophenol	184	15.515	15.515	(1.009)	27409	2.12395	2.124
46	Dibenzofuran	168	15.777	15.770	(1.026)	641379	4.64790	4.648
47	4-Nitrophenol	109	15.600	15.592	(1.014)	59816	3.96568	3.966
48	2,4-Dinitrotoluene	165	15.824	15.817	(1.029)	144262	4.51019	4.510
50	Diethylphthalate	149	16.326	16.319	(1.061)	503887	5.20905	5.209
49	Fluorene	166	16.489	16.481	(1.072)	511113	4.70796	4.708
51	4-Chlorophenyl-phenylether	204	16.473	16.466	(1.071)	257762	4.99294	4.993
52	4-Nitroaniline	138	16.566	16.566	(1.077)	106701	4.92532	4.925
53	4,6-Dinitro-2-methylphenol	198	16.666	16.658	(0.905)	56867	3.51509	3.515
54	N-Nitrosodiphenylamine	169	16.720	16.712	(0.908)	342454	4.80180	4.802
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	150956	5.05964	5.060
57	Hexachlorobenzene	284	17.800	17.793	(0.966)	143751	4.59553	4.596
58	Pentachlorophenol	266	18.149	18.149	(0.985)	75635	4.05676	4.057
* 59	Phenanthrene-d10	188	18.420	18.420	(1.000)	533431	4.00000	
60	Phenanthrene	178	18.466	18.466	(1.003)	669357	4.60181	4.602
61	Anthracene	178	18.559	18.559	(1.008)	581438	4.16715	4.167
62	Carbazole	167	18.884	18.884	(1.025)	591382	4.72989	4.730
63	Di-n-butylphthalate	149	19.665	19.666	(1.068)	830680	4.96738	4.967
64	Fluoranthene	202	20.841	20.841	(0.888)	782432	4.47248	4.472
65	Pyrene	202	21.267	21.267	(0.907)	778668	4.33892	4.339
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.459	22.460	(0.957)	314007	4.83397	4.834
68	Benzo(a)anthracene	228	23.427	23.419	(0.999)	714166	4.64722	4.647
* 69	Chrysene-d12	240	23.458	23.450	(1.000)	435381	4.00000	
70	3,3'-Dichlorobenzidine	252	23.373	23.373	(0.996)	483256	9.81738	9.817
71	Chrysene	228	23.497	23.489	(1.002)	677151	4.51017	4.510
72	bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	453669	4.67998	4.680
* 134	Di-n-octylphthalate-d4	153	24.487	24.480	(1.000)	660827	4.00000	
73	Di-n-octylphthalate	149	24.495	24.488	(1.000)	855562	4.94734	4.947
74	Benzo(b)fluoranthene	252	25.370	25.362	(0.969)	737887	4.60200	4.602(H)
75	Benzo(k)fluoranthene	252	25.416	25.409	(0.970)	797521	4.89839	4.898
76	Benzo(a)pyrene	252	26.067	26.052	(0.995)	698616	4.87338	4.873
* 77	Perylene-d12	264	26.191	26.183	(1.000)	494648	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.005	28.990	(1.107)	834672	4.57655	4.577
79	Dibenzo(a,h)anthracene	278	29.021	29.005	(1.108)	688433	4.54663	4.547
80	Benzo(g,h,i)perylene	276	29.852	29.821	(1.140)	724463	4.59000	4.590
90	N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	155126	5.19378	5.194
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	21.073	21.066	(0.898)	314737	4.37985	4.380
103	Pyridine	79	4.959	4.997	(0.533)	244801	5.33678	5.337
105	1-methylnaphthalene	142	13.425	13.425	(1.140)	487498	4.87520	4.875
111	Azobenzene (1,2-DP-Hydrazine)	77	16.797	16.789	(1.092)	533524	4.93744	4.937

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.370	25.409	(0.969)	1468165	9.48349	9.483
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	124685	3.97959	3.980

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511.D
Lab Smp Id: SLC0228-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	154809	-9.75
27 Naphthalene-d8	624466	312233	1248932	570882	-8.58
42 Acenaphthene-d10	337226	168613	674452	303490	-10.00
59 Phenanthrene-d10	572849	286425	1145698	533431	-6.88
69 Chrysene-d12	347068	173534	694136	435381	25.45
134 Di-n-octylphthala	500317	250159	1000634	660827	32.08
77 Perylene-d12	421549	210775	843098	494648	17.34

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.04
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.18	25.68	26.68	26.19	0.03

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

REVIEW SUMMARY FOR FILE - NT10031511.D

Lab ID: SLC0228-SCV1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: NT10031508.D

On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0228-SCV1
Sequence: SLC0228
Standard ID: L002833

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	5.0000	4.4	-11.8	20.00
4-Methylphenol	5.0000	4.4	-12.7	20.00
Naphthalene	5.0000	4.7	-5.7	20.00
2-Methylnaphthalene	5.0000	4.6	-8.1	20.00
Acenaphthylene	5.0000	4.8	-3.9	20.00
Dimethylphthalate	5.0000	4.9	-1.3	20.00
Acenaphthene	5.0000	4.8	-4.5	20.00
Dibenzofuran	5.0000	4.6	-7.0	20.00
Fluorene	5.0000	4.7	-5.8	20.00
Phenanthrene	5.0000	4.6	-8.0	20.00
Anthracene	5.0000	4.2	-16.7	20.00
Fluoranthene	5.0000	4.5	-10.6	20.00
Pyrene	5.0000	4.3	-13.2	20.00
Butylbenzylphthalate	5.0000	4.8	-3.3	20.00
Benzo(a)anthracene	5.0000	4.6	-7.1	20.00
Chrysene	5.0000	4.5	-9.8	20.00
bis(2-Ethylhexyl)phthalate	5.0000	4.7	-6.4	20.00
Benzofluoranthenes, Total	10.000	9.5	-5.2	20.00
Benzo(a)pyrene	5.0000	4.9	-2.5	20.00
Indeno(1,2,3-cd)pyrene	5.0000	4.6	-8.5	20.00
Dibenzo(a,h)anthracene	5.0000	4.5	-9.1	20.00
Benzo(g,h,i)perylene	5.0000	4.6	-8.2	20.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Page 1

Date : 16-MAR-2023 02:16

Client ID:

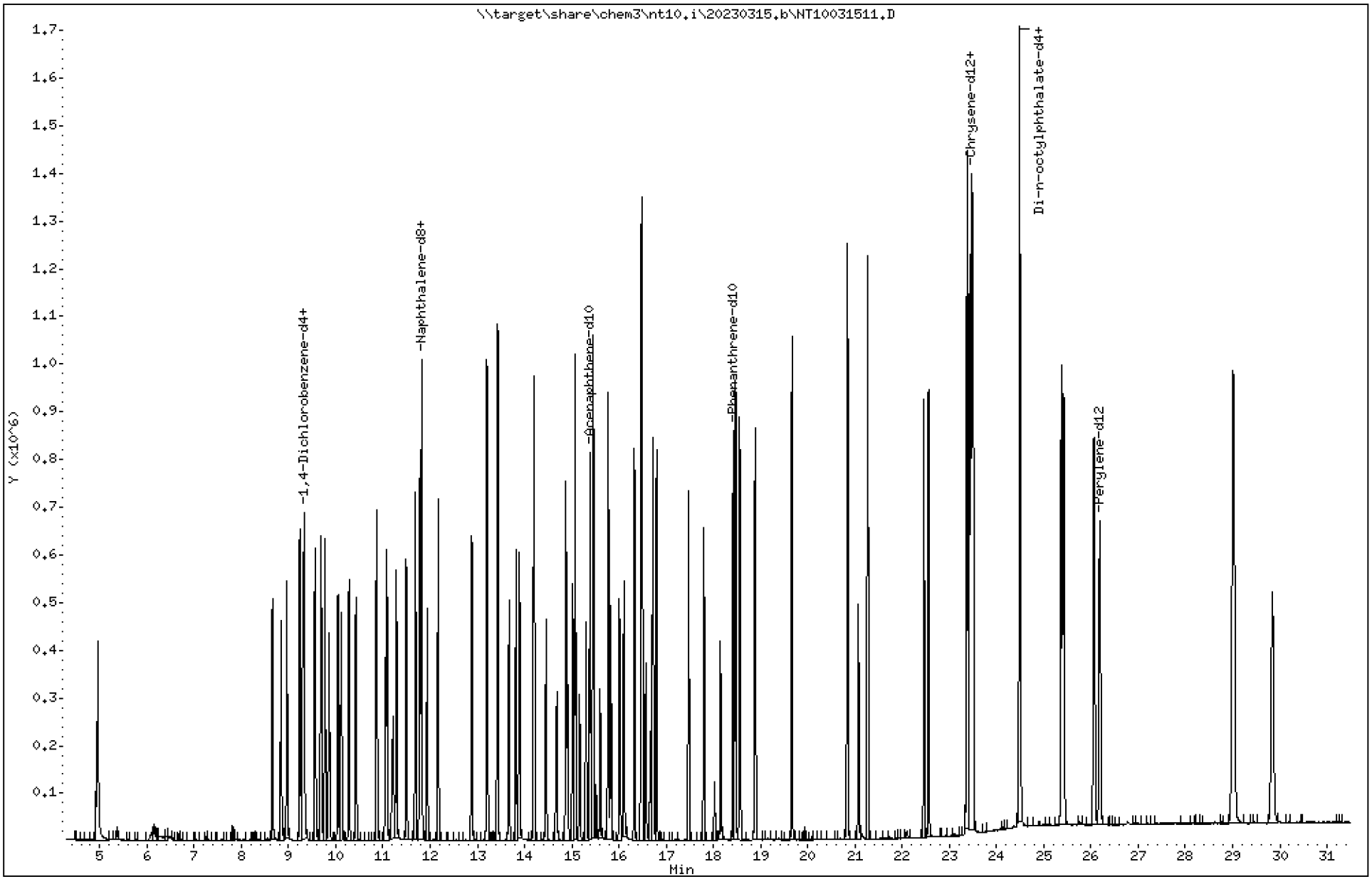
Instrument: nt10.i

Sample Info: SLC0228-SCV1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

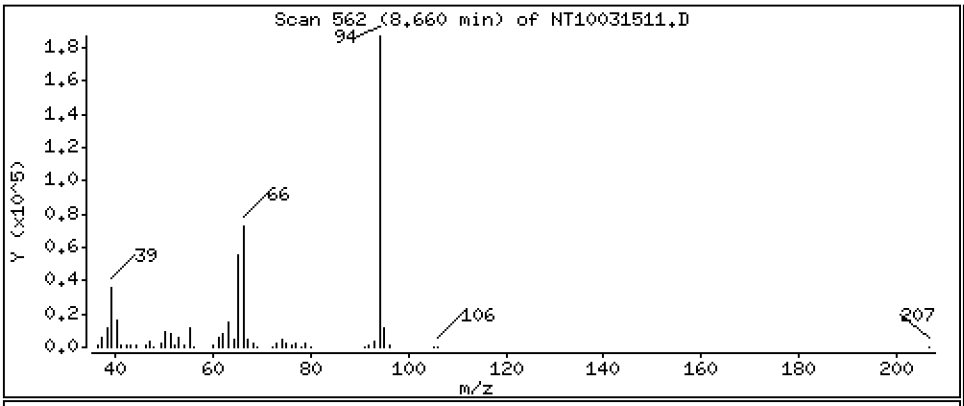
Operator: VTS

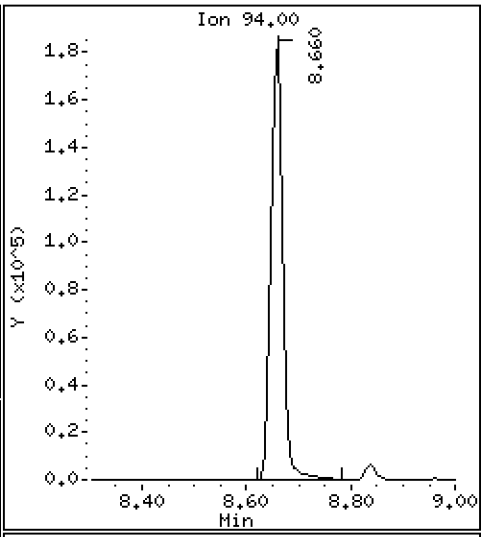
Column phase: ZB-5msi

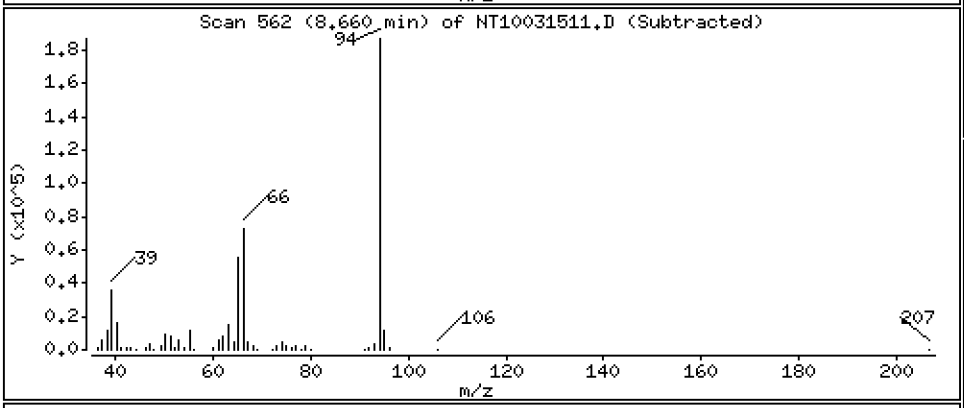
Column diameter: 0.25

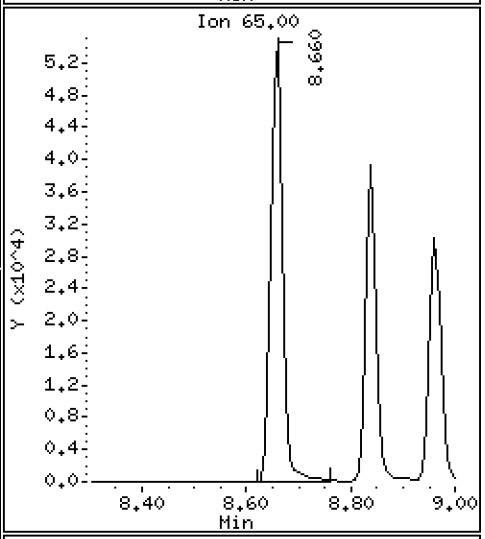
3 Phenol

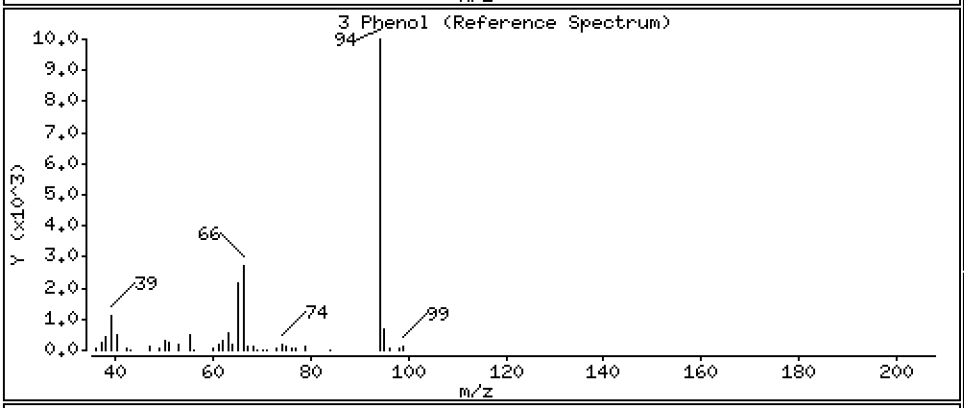
Concentration: 4.412 ug/mL

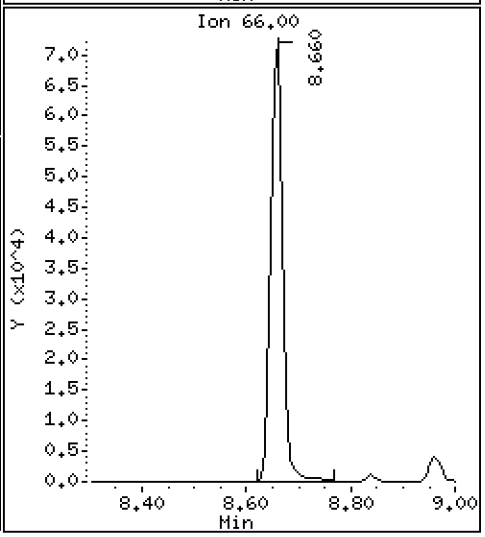


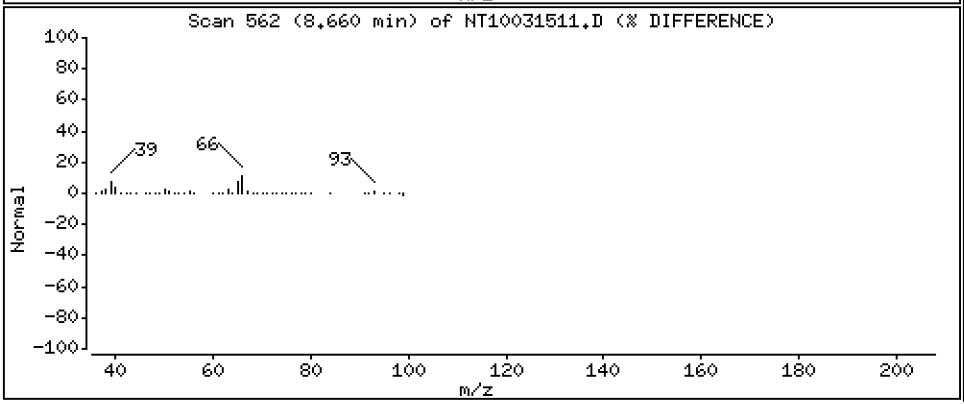












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

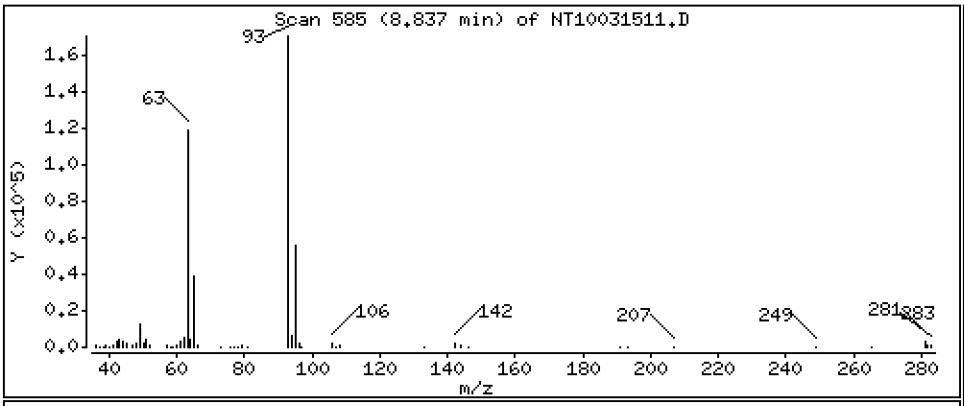
Operator: VTS

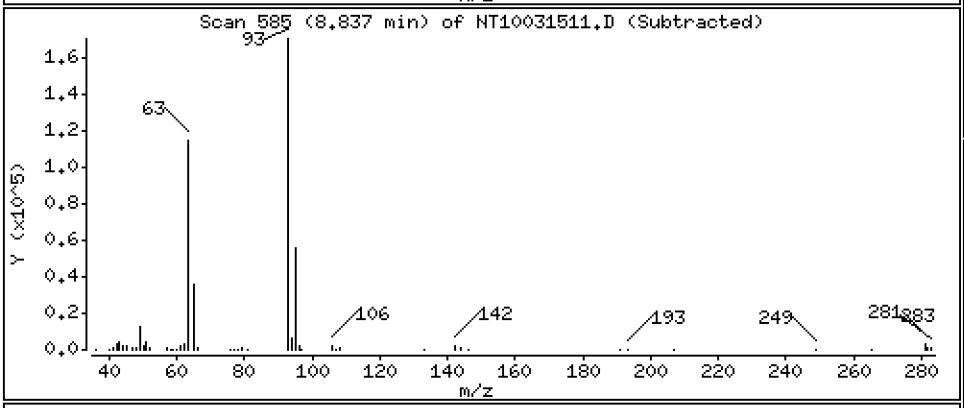
Column phase: ZB-5msi

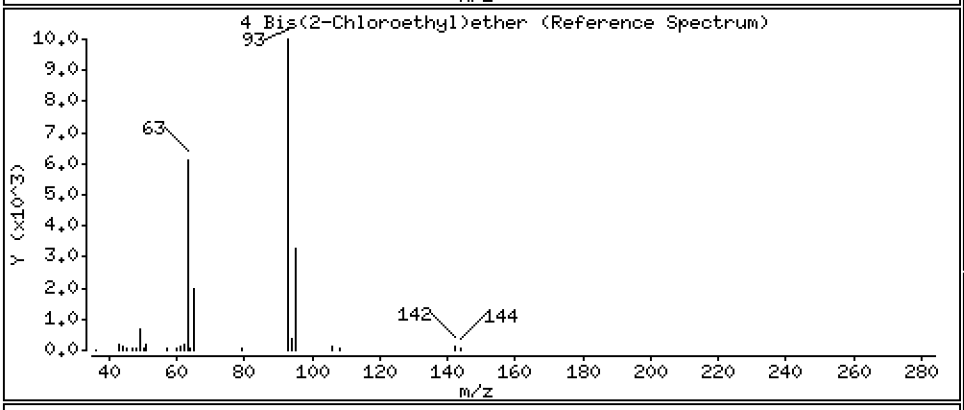
Column diameter: 0.25

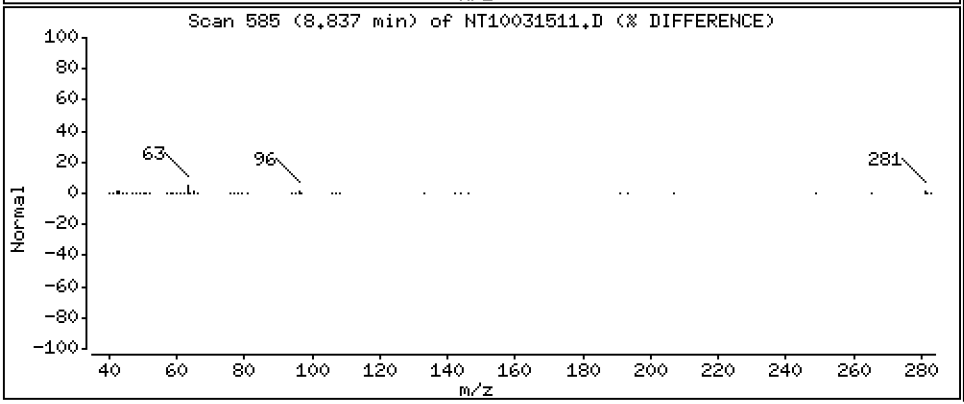
4 Bis(2-Chloroethyl)ether

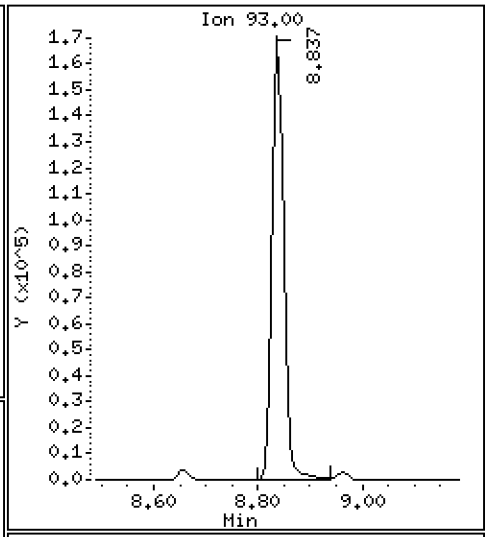
Concentration: 5.258 ug/mL

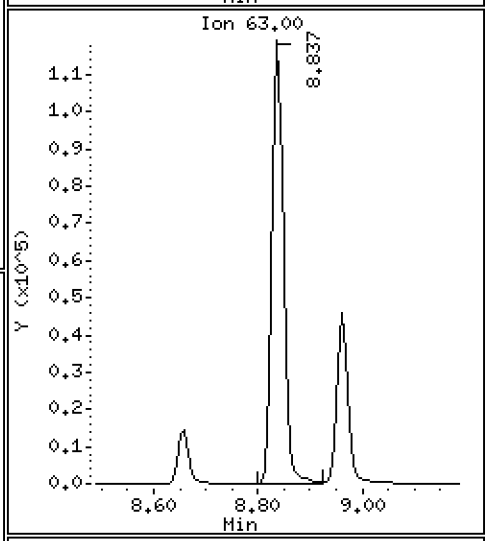


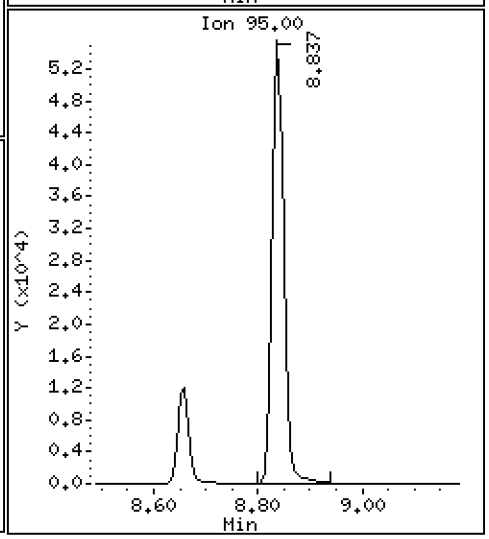












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

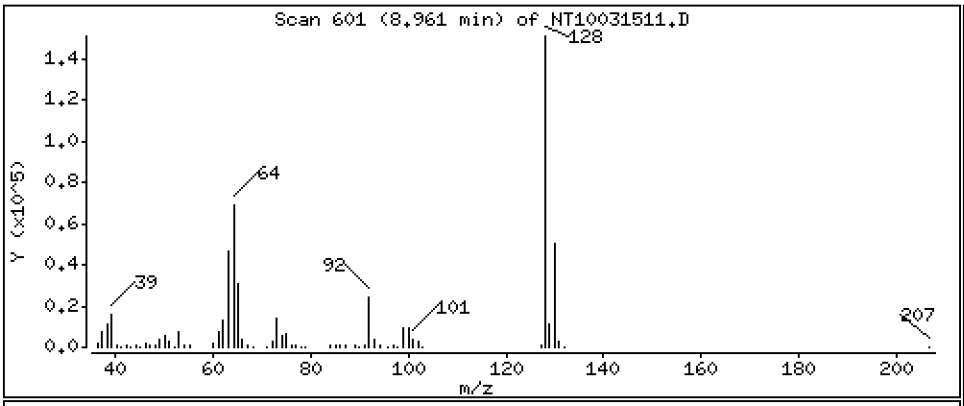
Operator: VTS

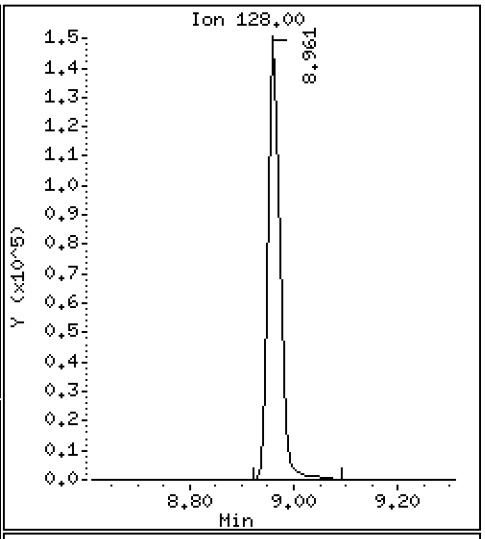
Column phase: ZB-5msi

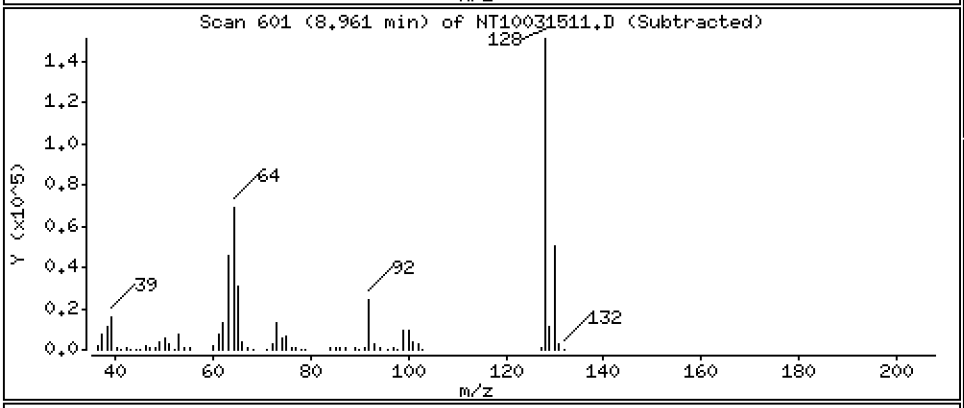
Column diameter: 0.25

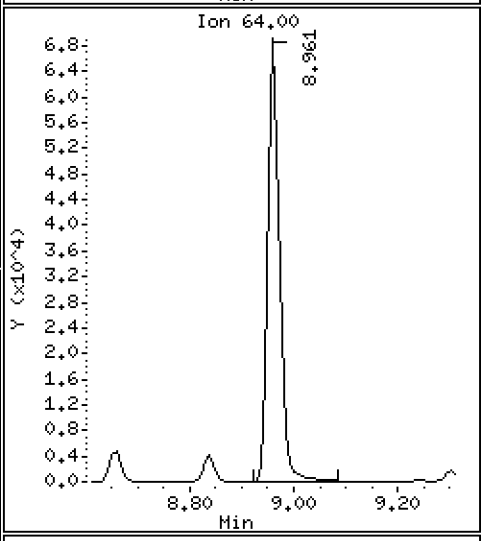
6 2-Chlorophenol

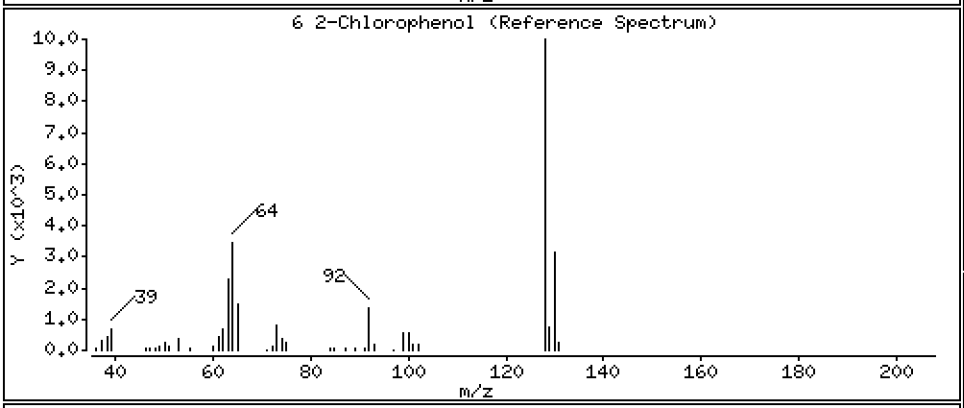
Concentration: 4.277 ug/mL

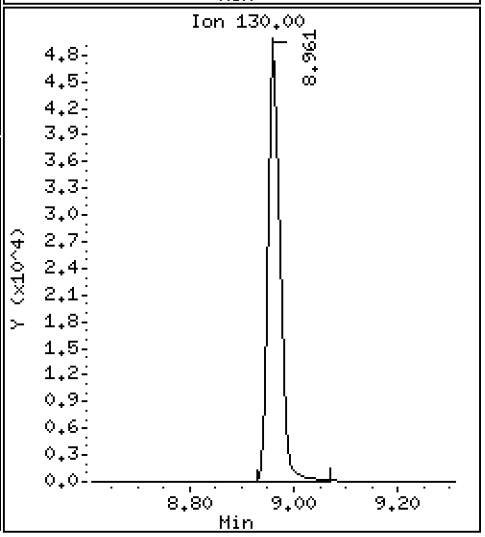


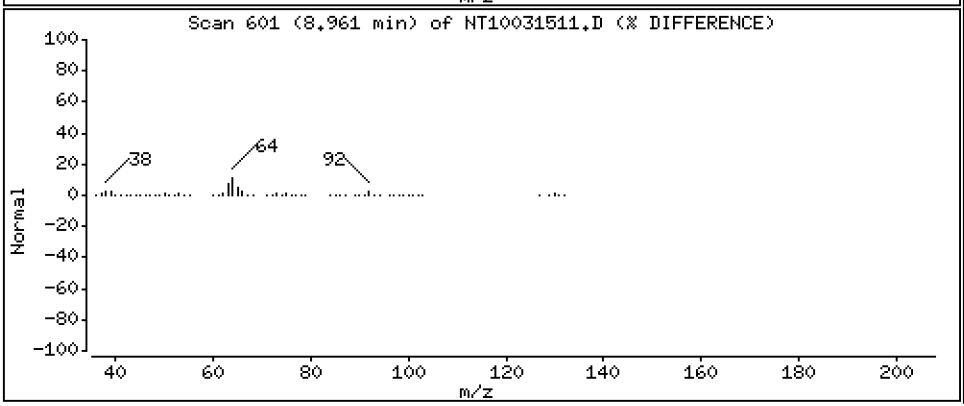












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

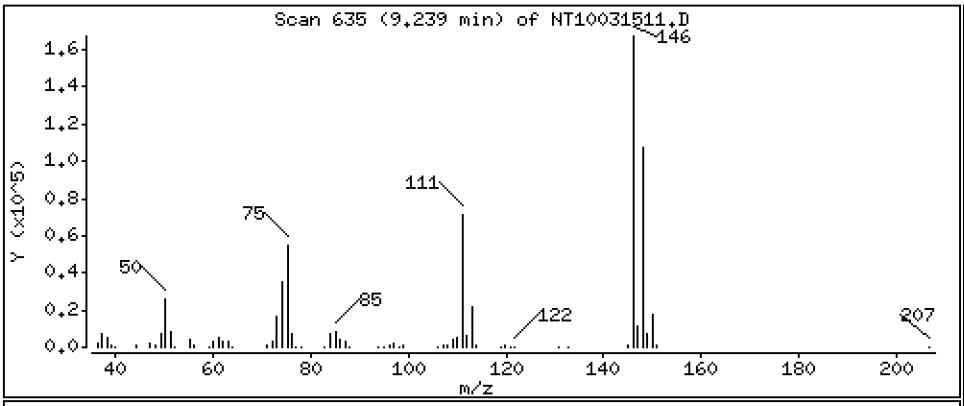
Operator: VTS

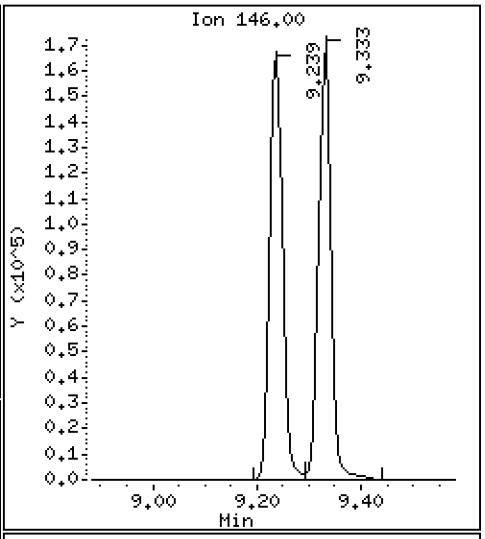
Column phase: ZB-5msi

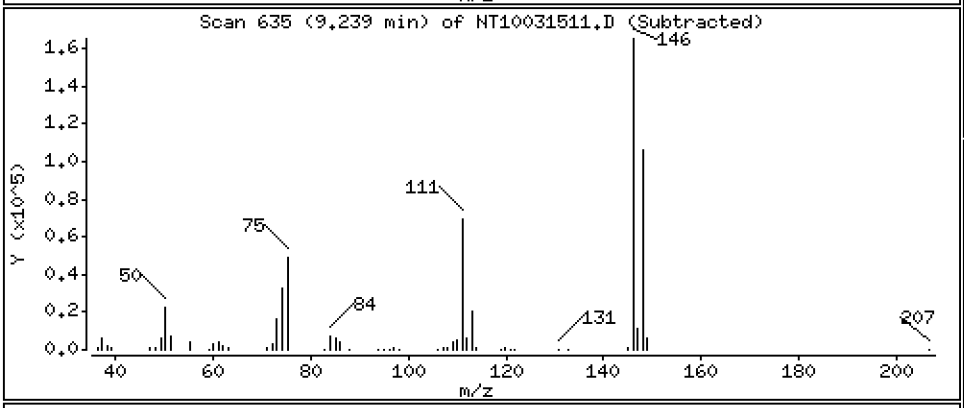
Column diameter: 0.25

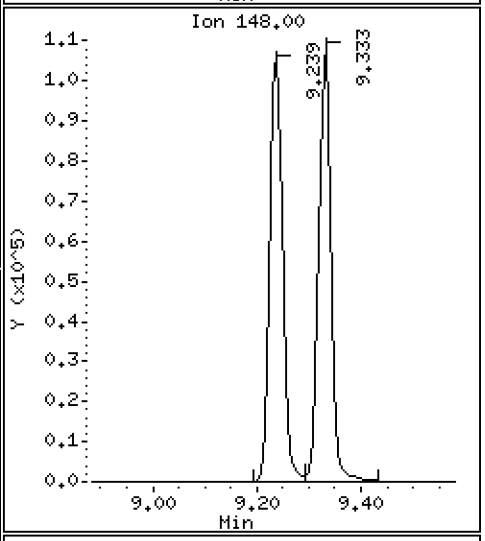
7 1,3-Dichlorobenzene

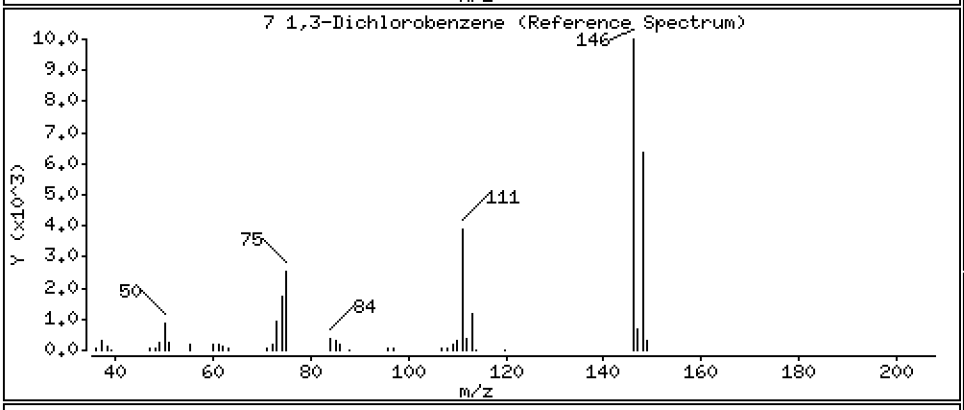
Concentration: 4.772 ug/mL

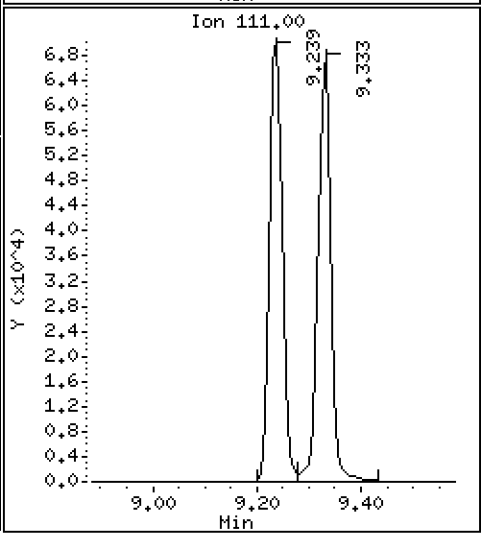


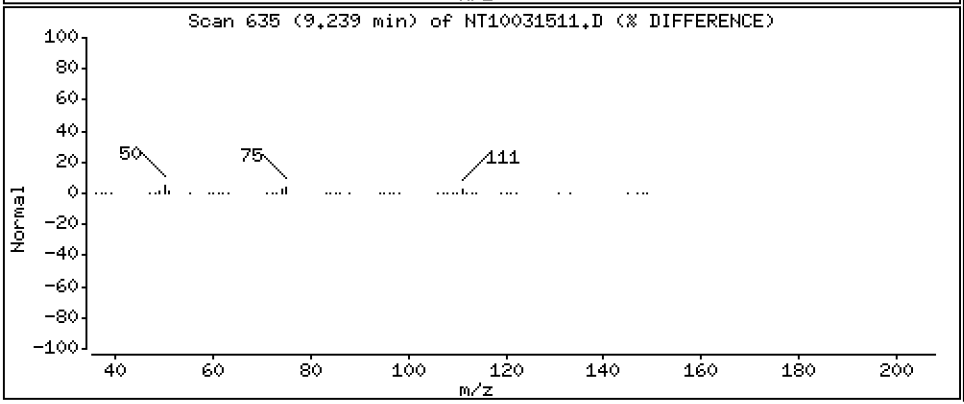












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

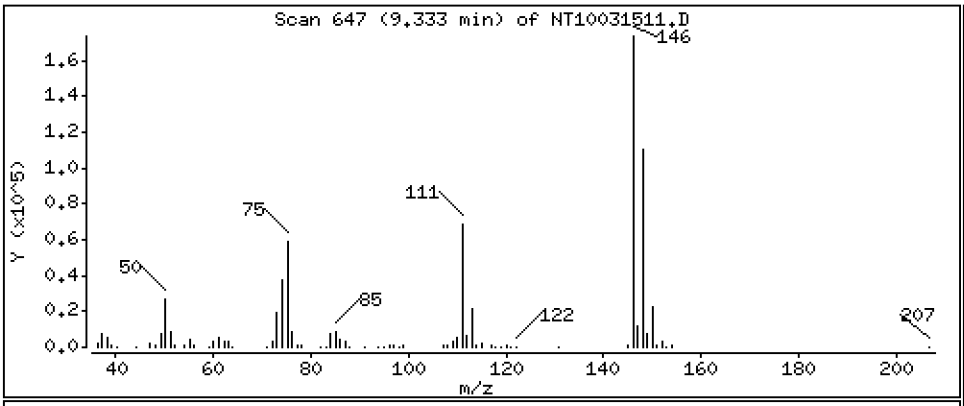
Operator: VTS

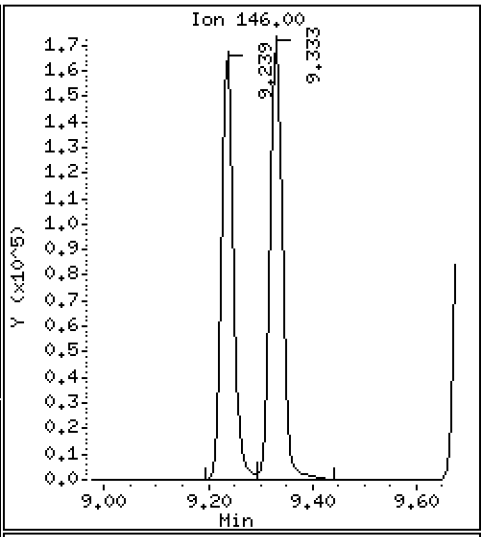
Column phase: ZB-5msi

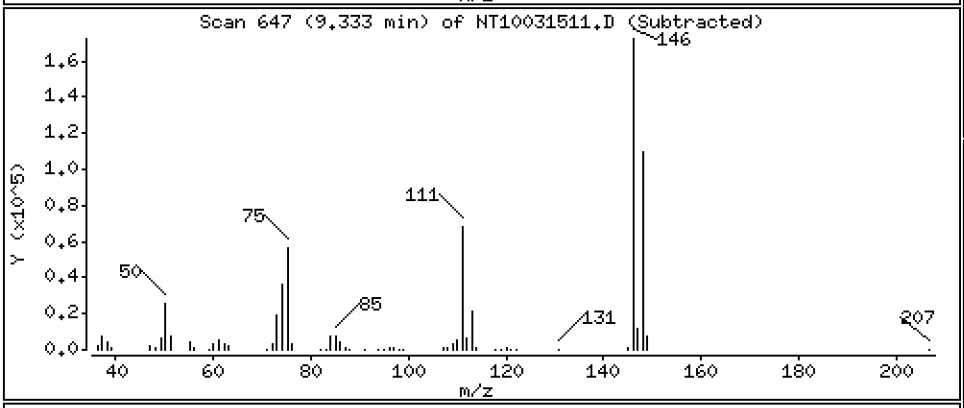
Column diameter: 0.25

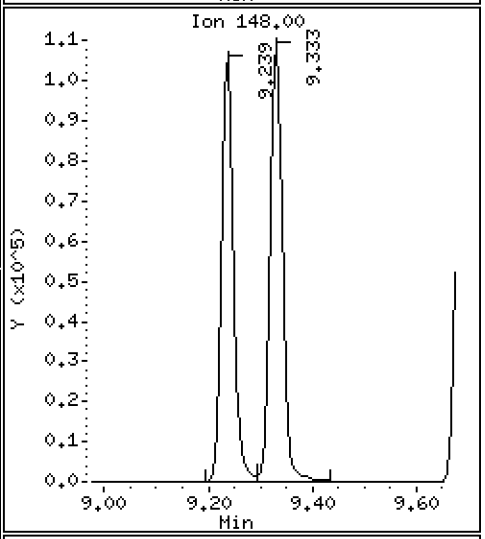
9 1,4-Dichlorobenzene

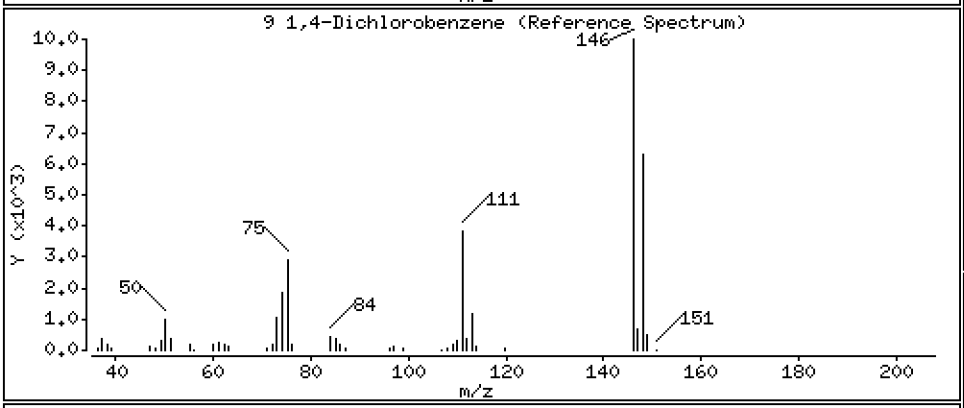
Concentration: 4.913 ug/mL

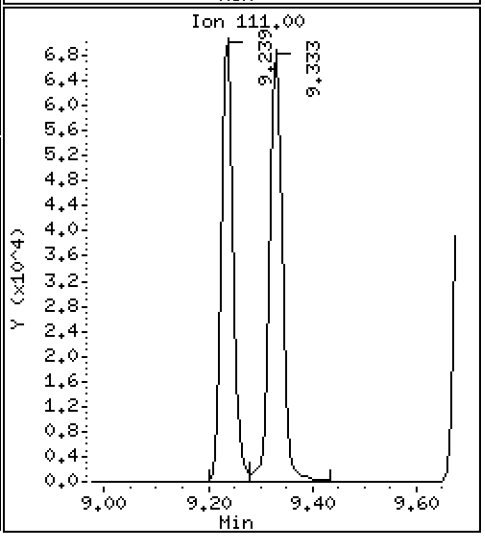


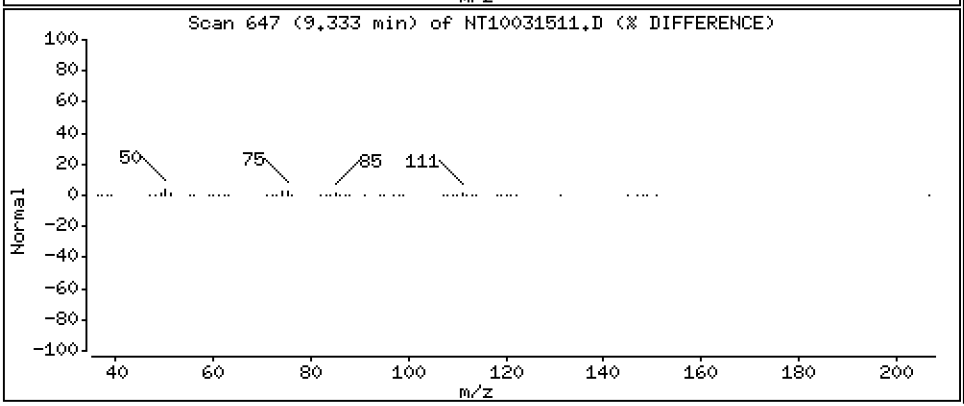












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

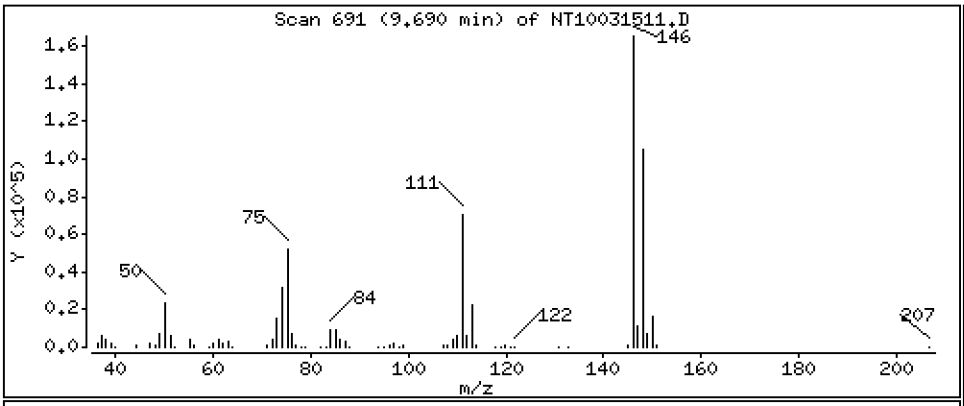
Operator: VTS

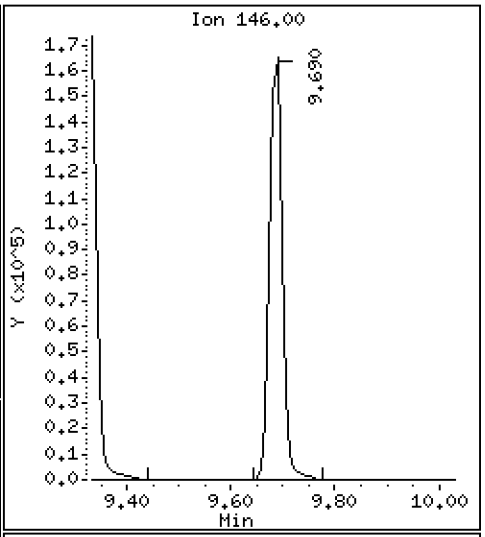
Column phase: ZB-5msi

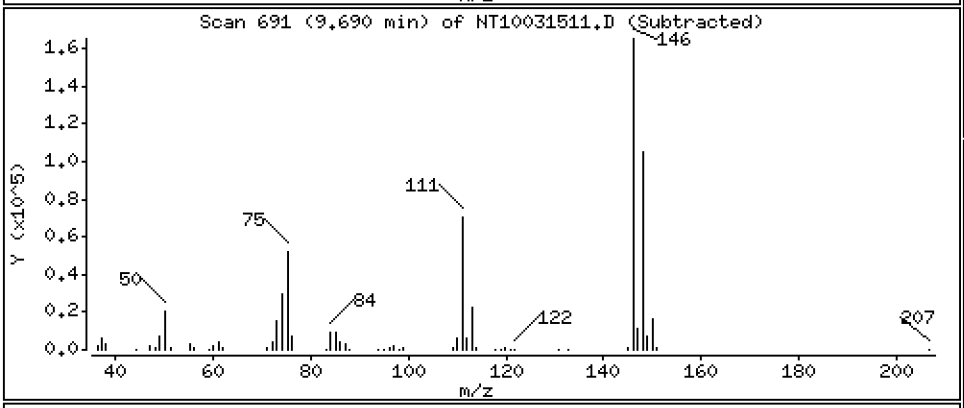
Column diameter: 0.25

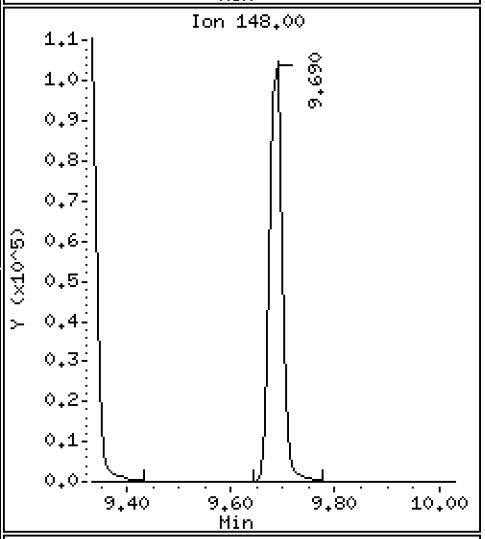
12 1,2-Dichlorobenzene

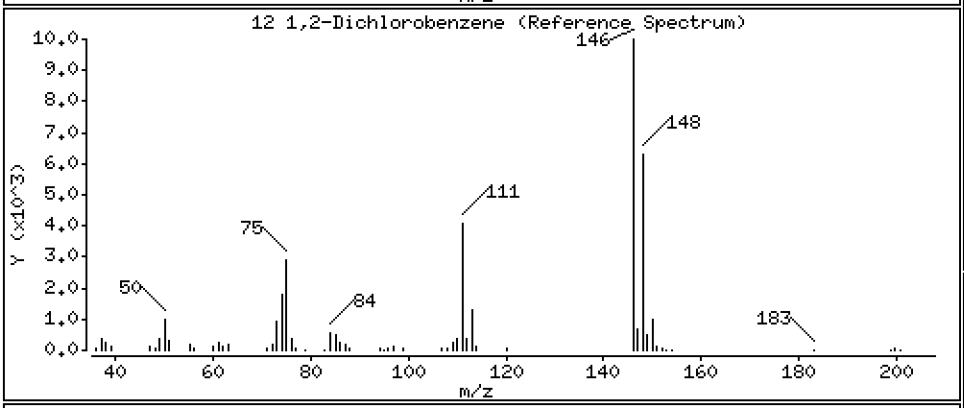
Concentration: 4.882 ug/mL

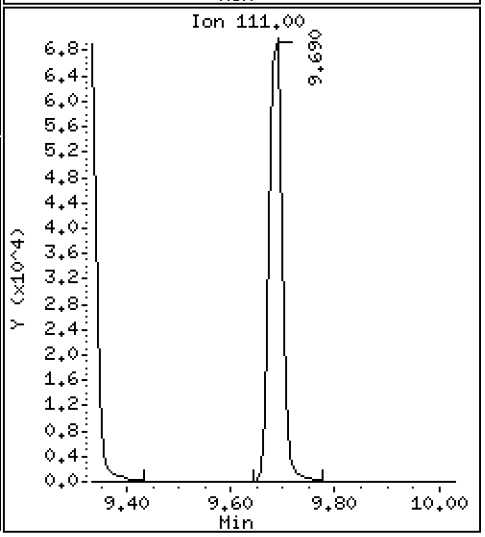


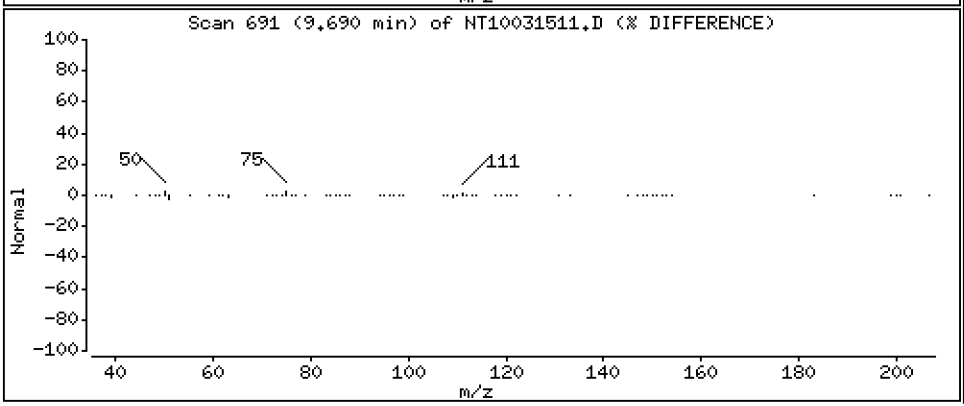












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

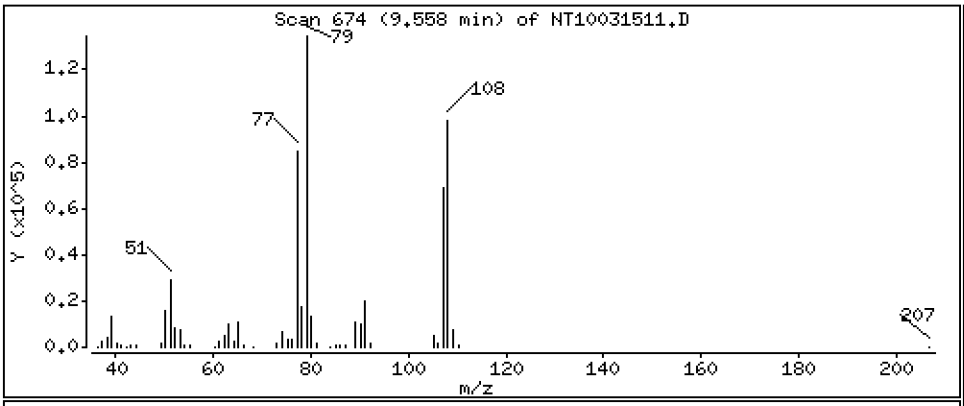
Operator: VTS

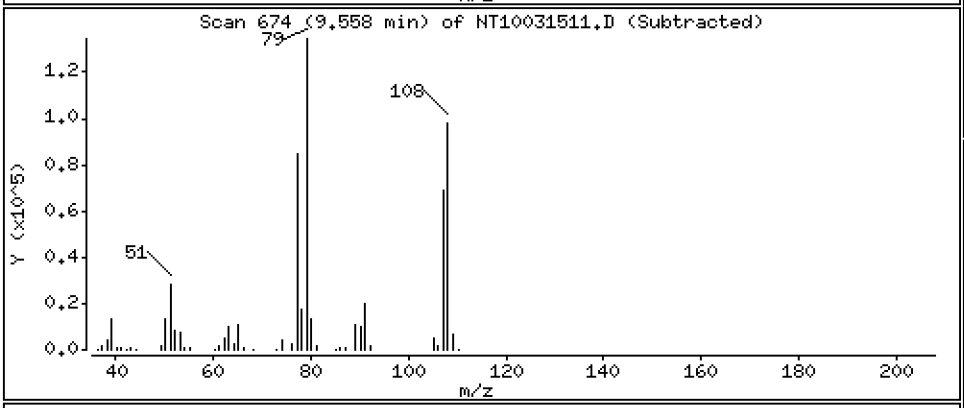
Column phase: ZB-5msi

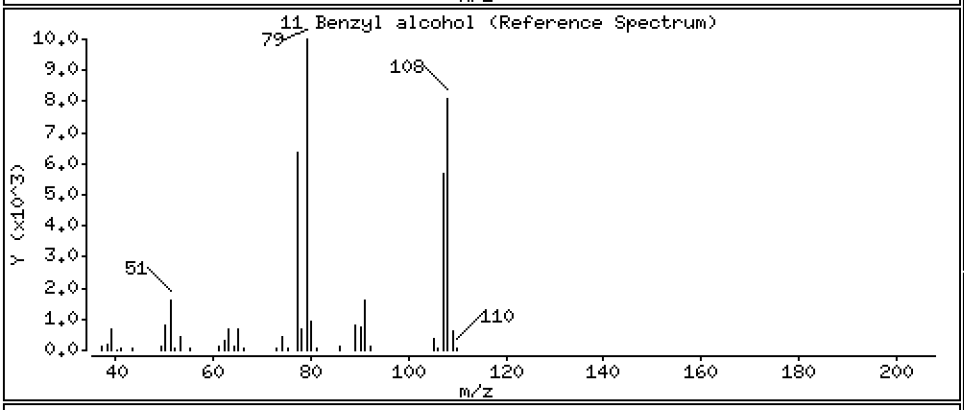
Column diameter: 0.25

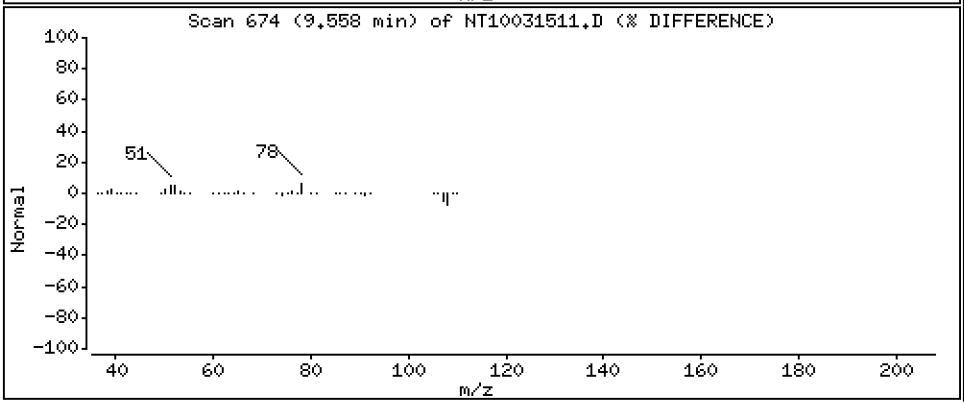
11 Benzyl alcohol

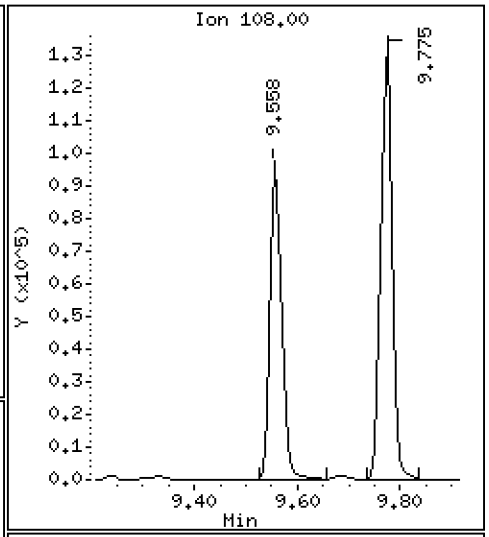
Concentration: 4.927 ug/mL

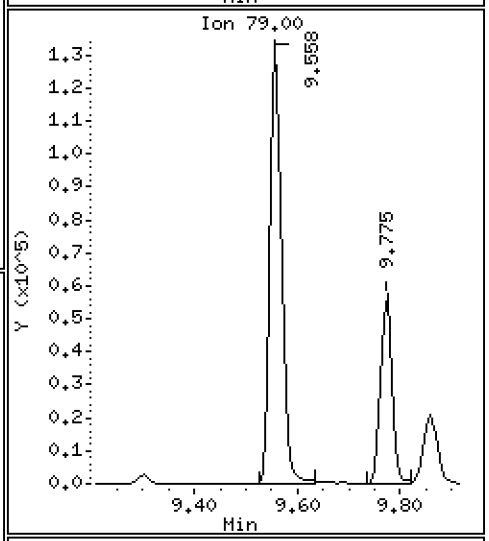


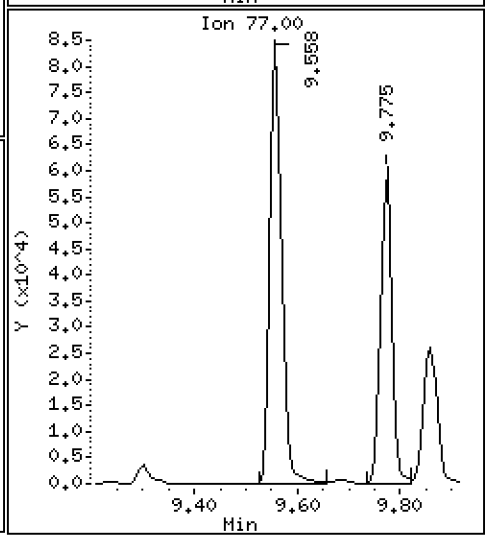












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

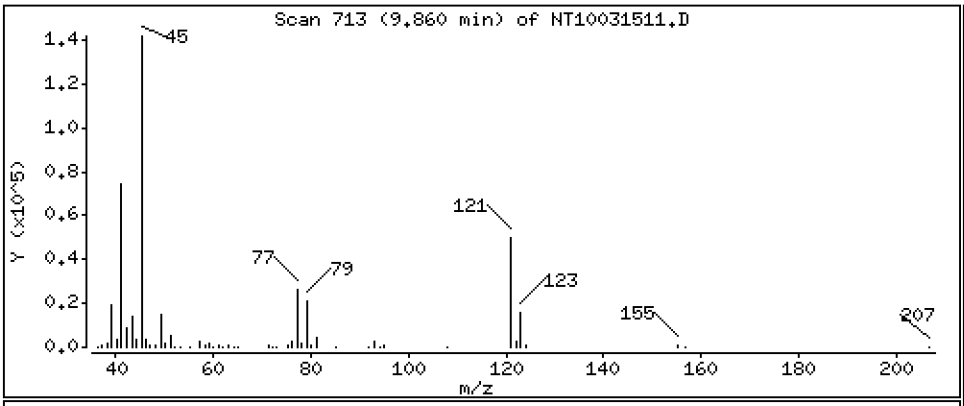
Operator: VTS

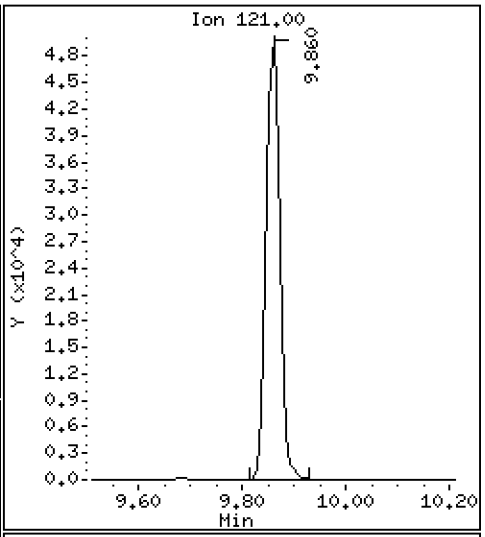
Column phase: ZB-5msi

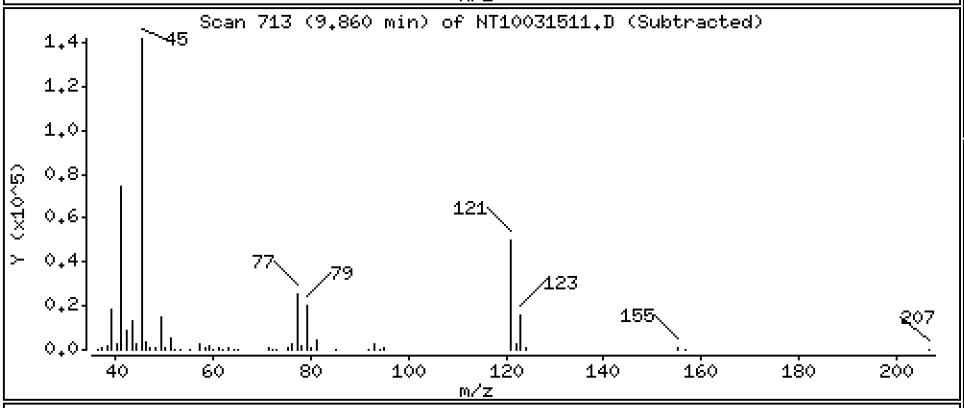
Column diameter: 0.25

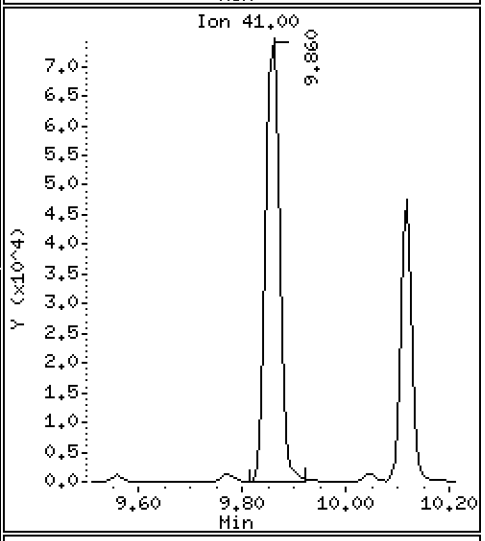
14 2,2'-oxybis(1-Chloropropane)

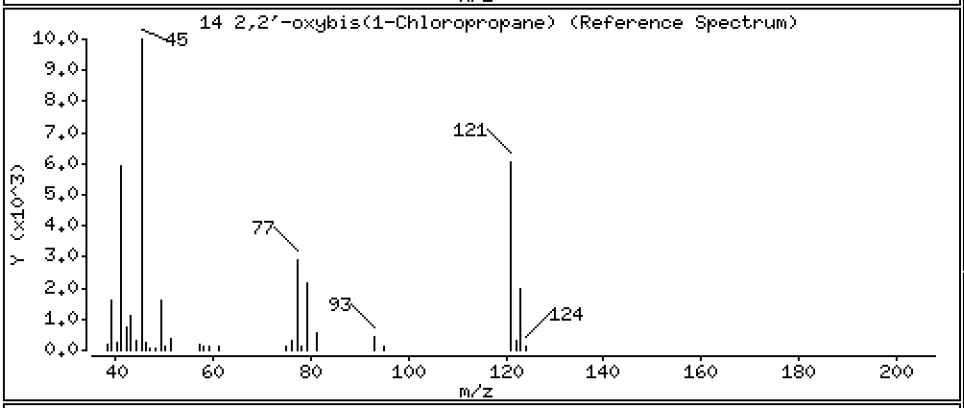
Concentration: 6.214 ug/mL

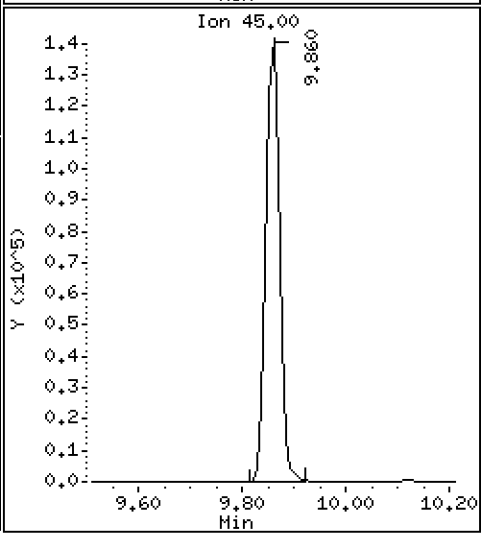


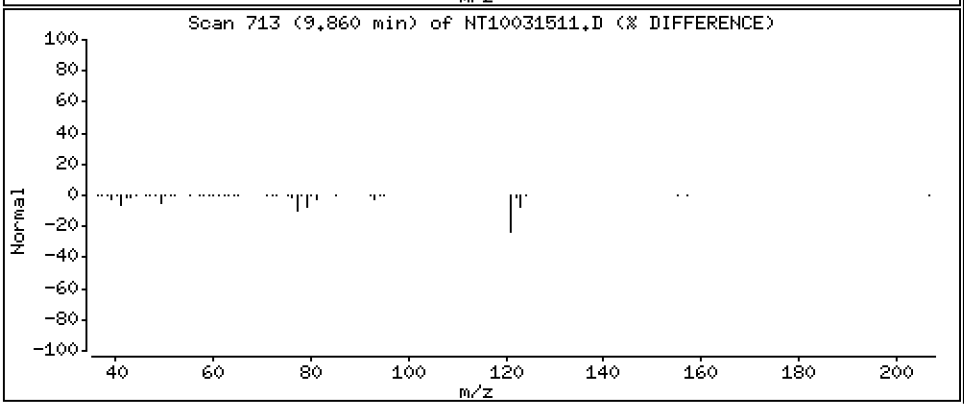












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

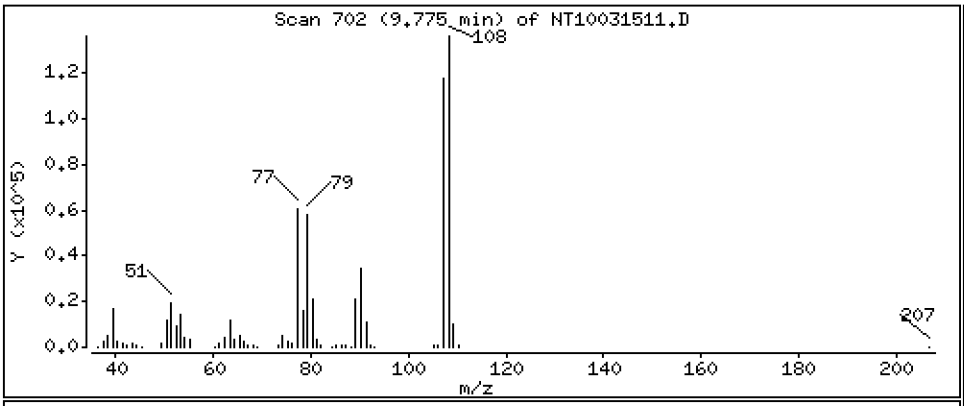
Operator: VTS

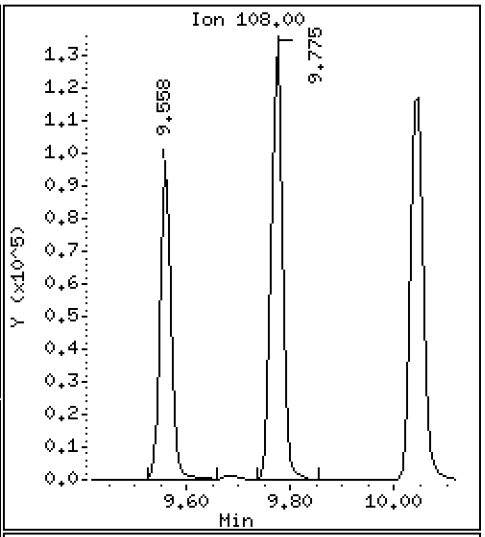
Column phase: ZB-5msi

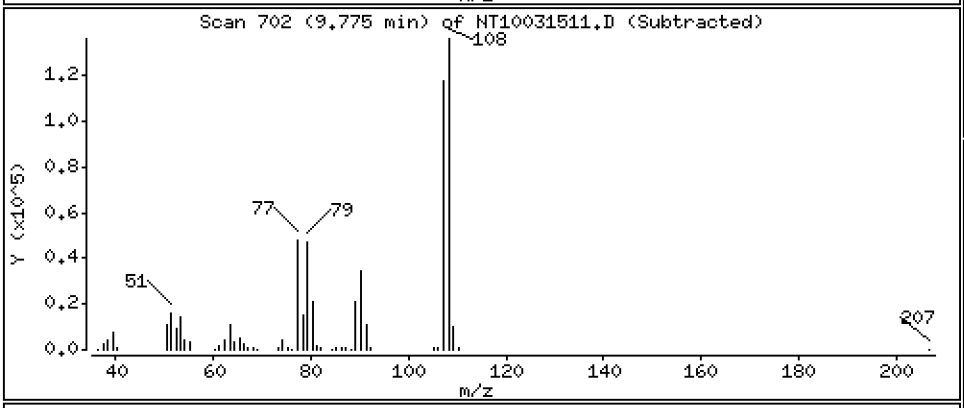
Column diameter: 0.25

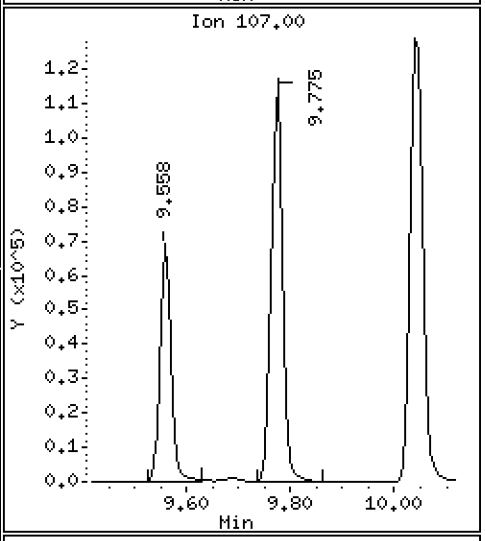
13 2-Methylphenol

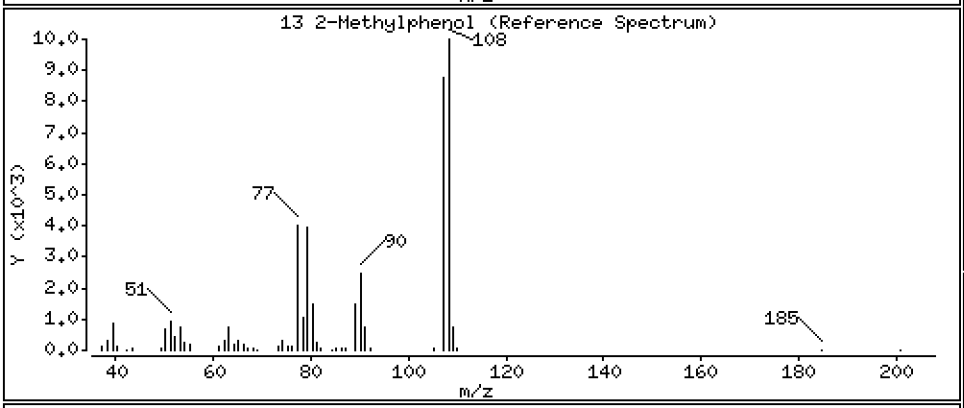
Concentration: 4.215 ug/mL

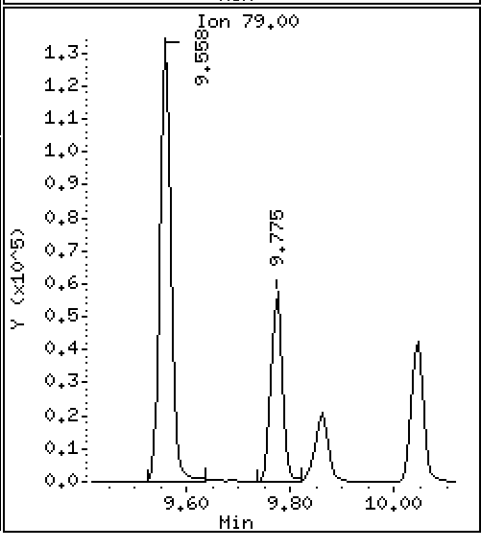


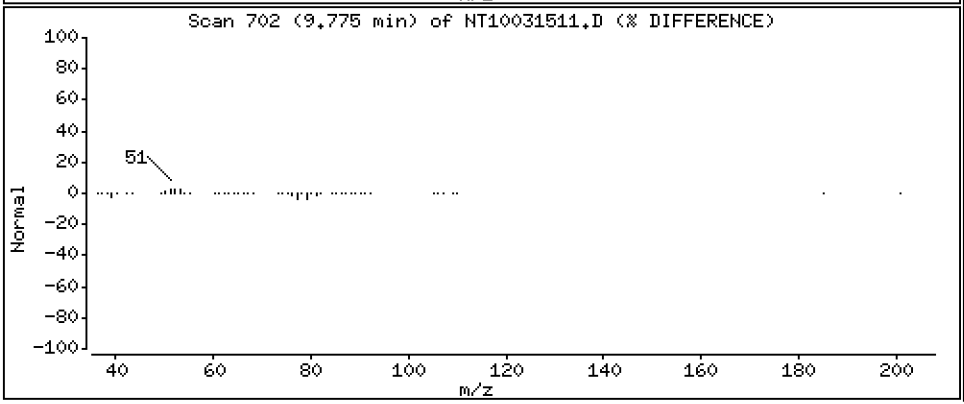












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

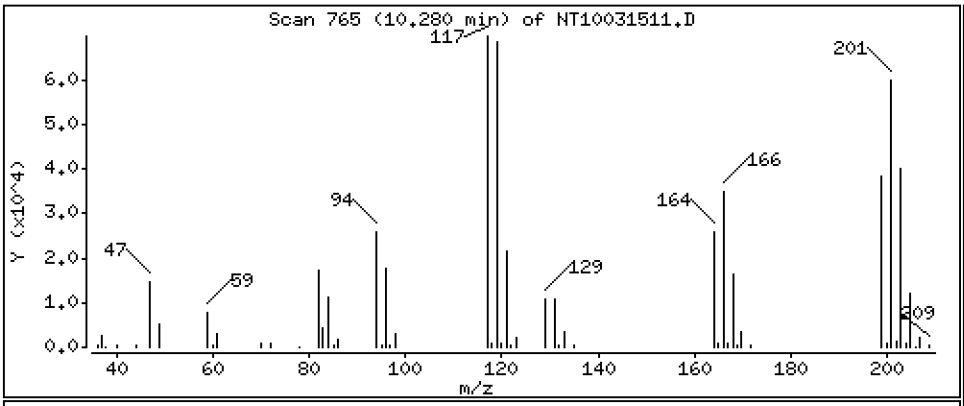
Operator: VTS

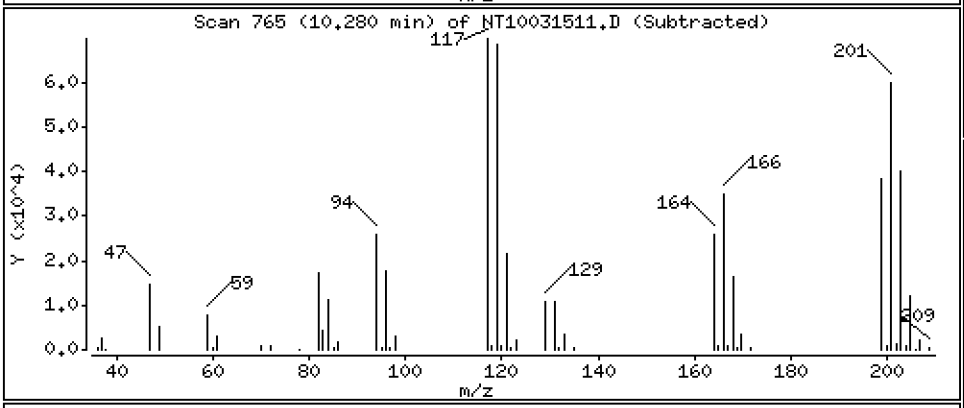
Column phase: ZB-5msi

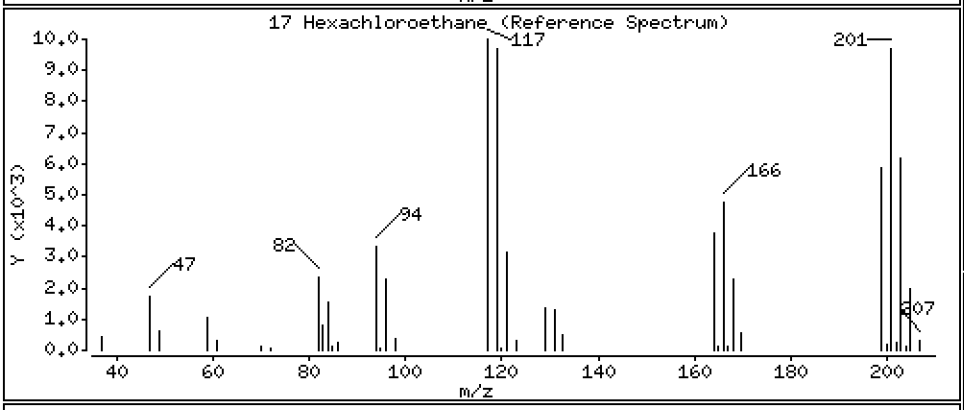
Column diameter: 0.25

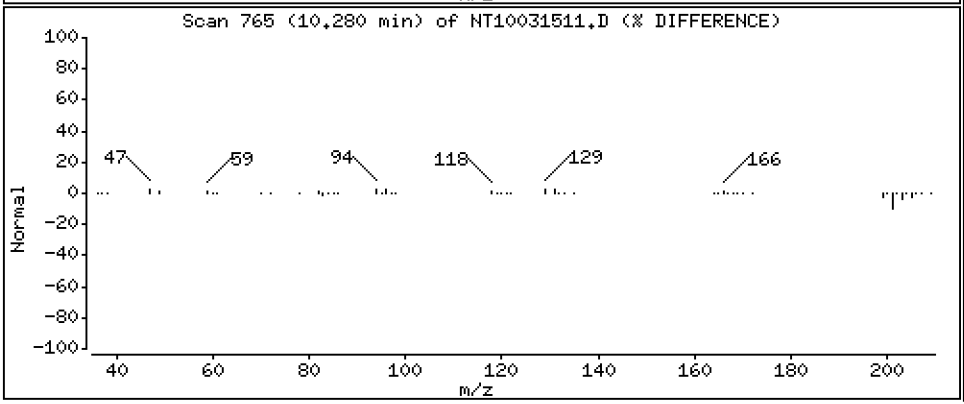
17 Hexachloroethane

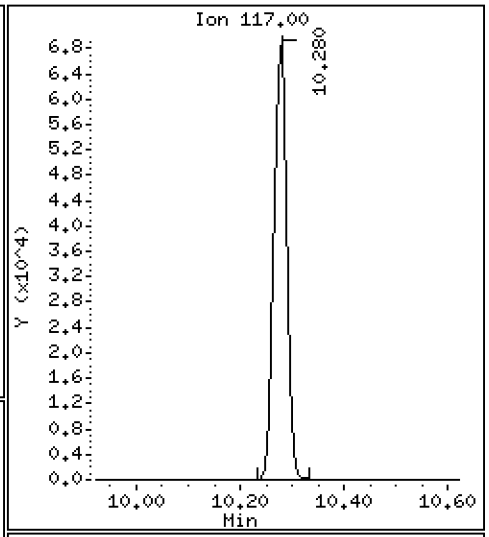
Concentration: 5.003 ug/mL

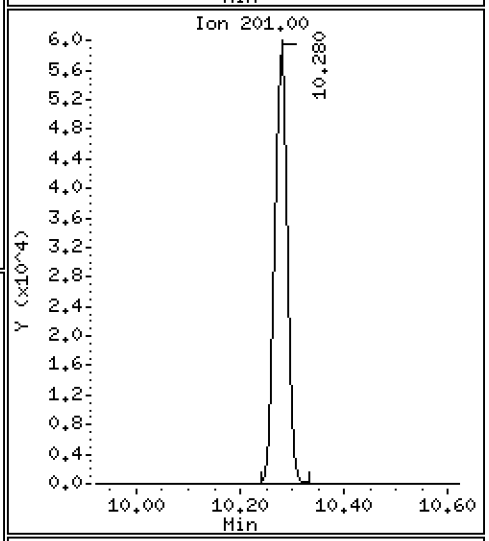


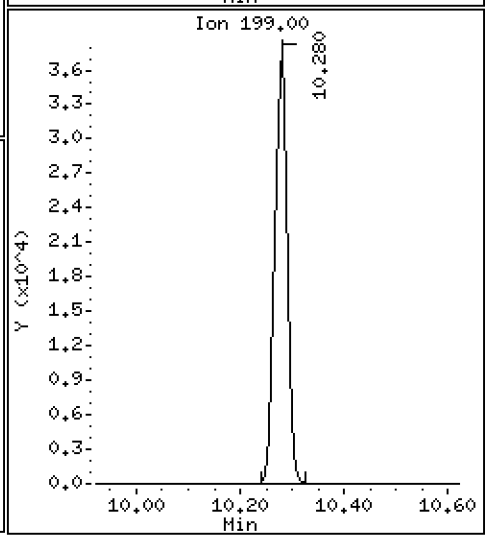












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

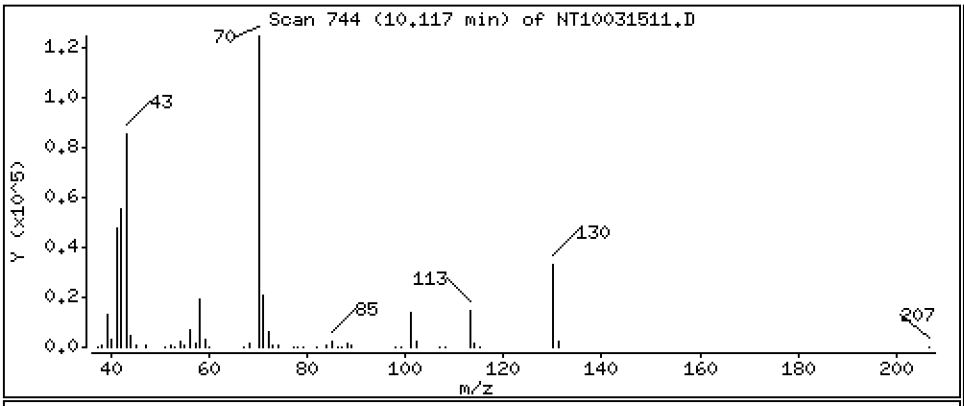
Operator: VTS

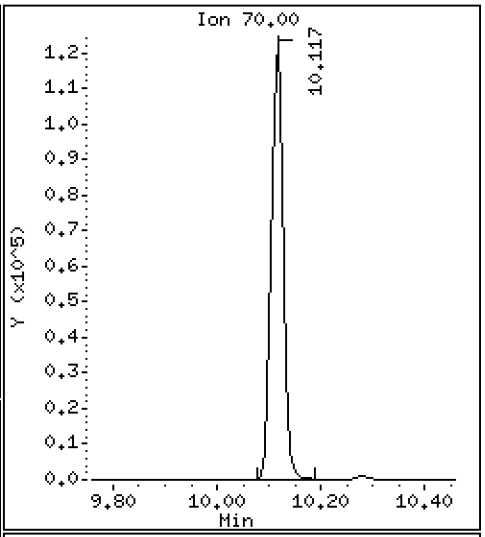
Column phase: ZB-5msi

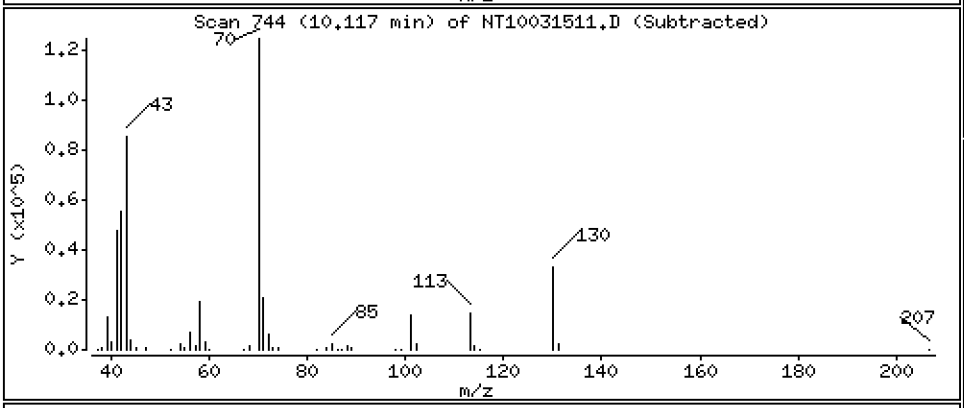
Column diameter: 0.25

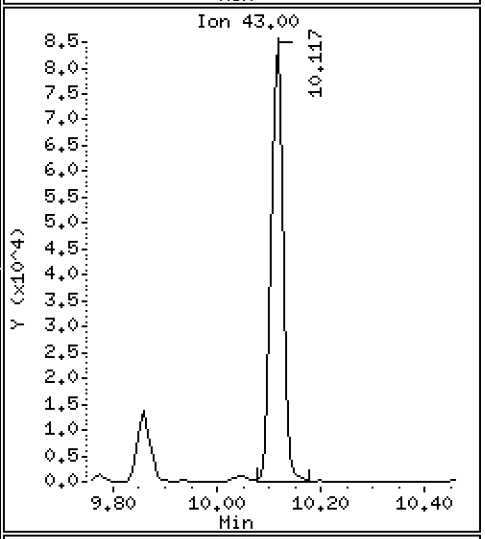
16 N-Nitroso-di-n-propylamine

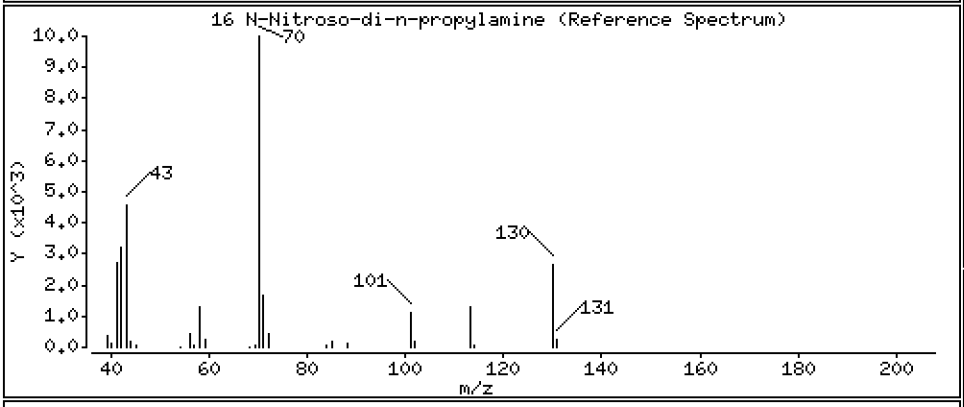
Concentration: 5.179 ug/mL

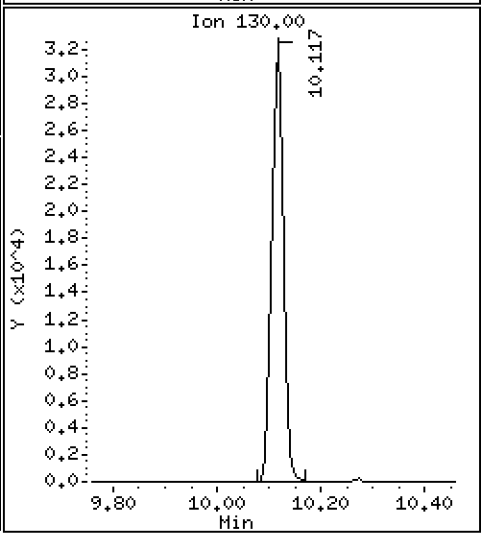


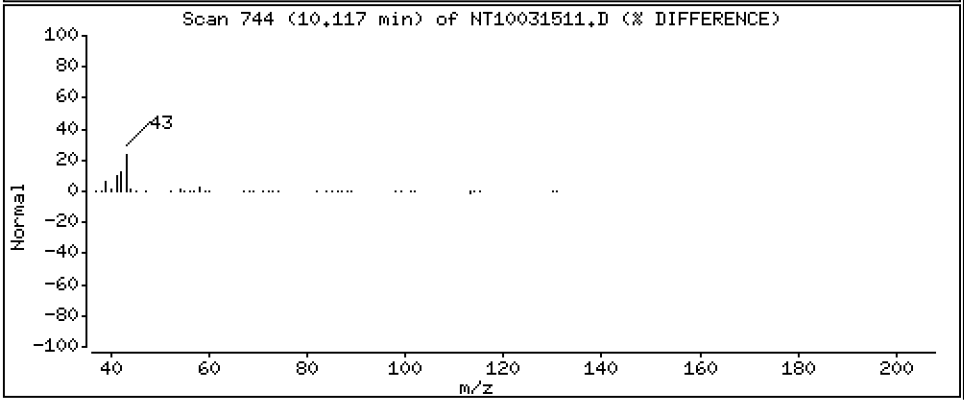












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

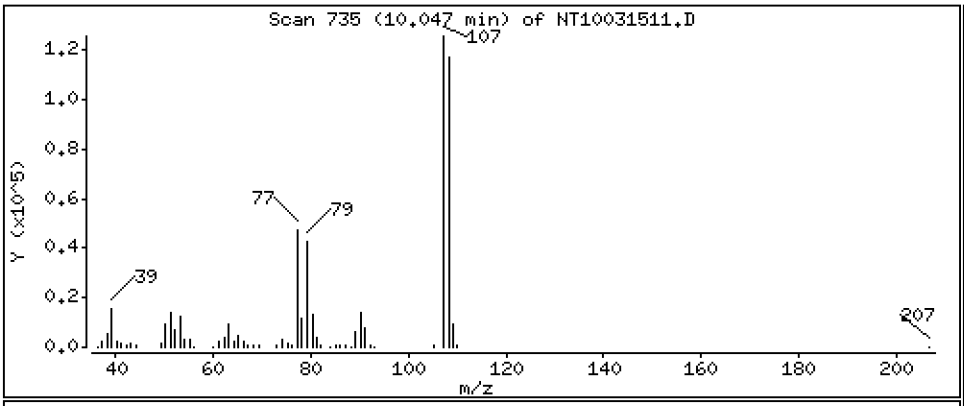
Operator: VTS

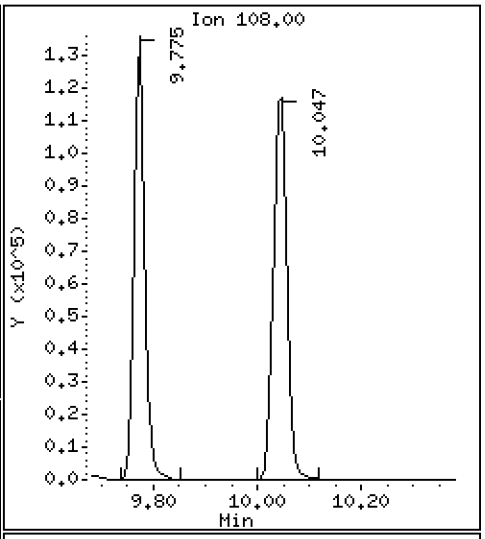
Column phase: ZB-5msi

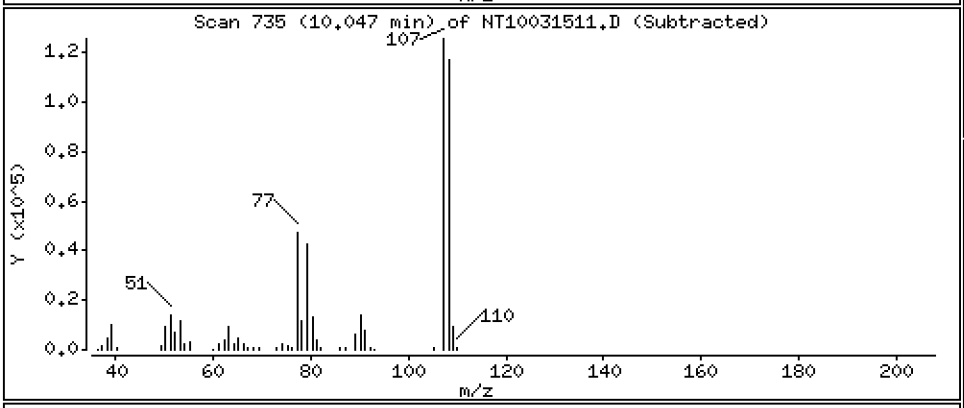
Column diameter: 0.25

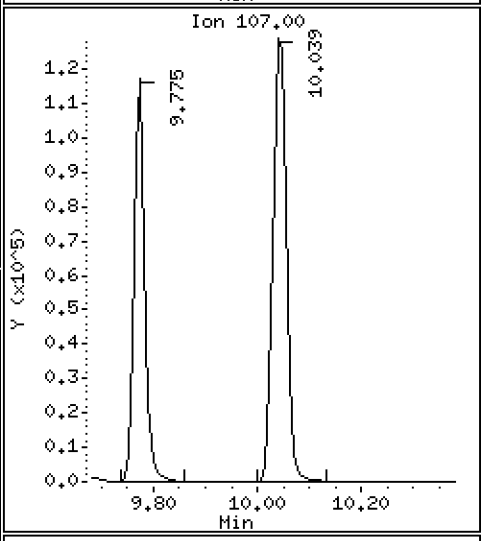
15 4-Methylphenol

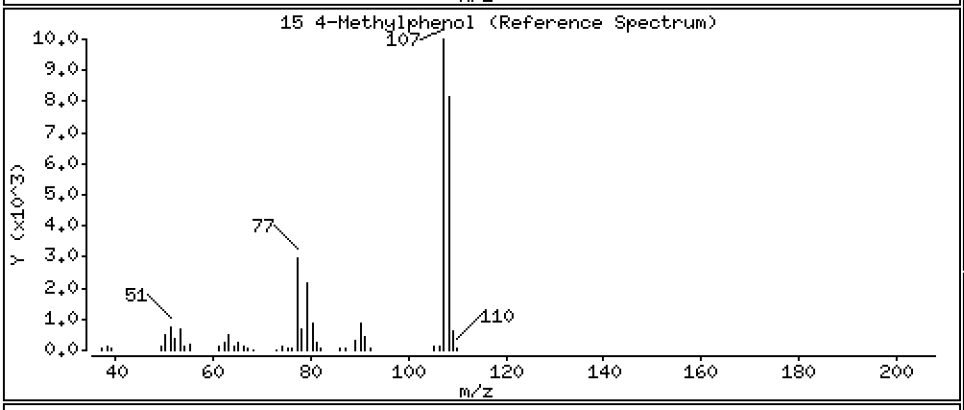
Concentration: 4.365 ug/mL

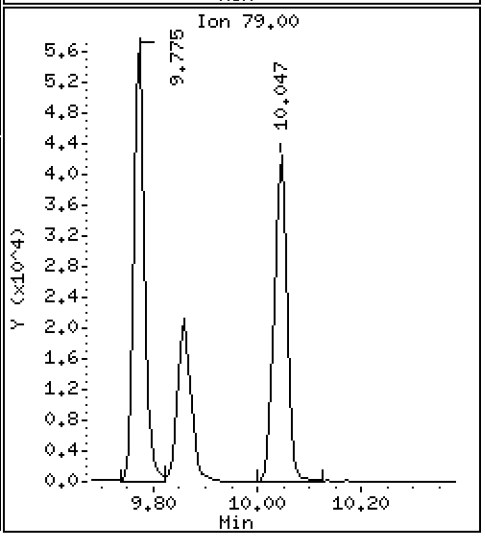


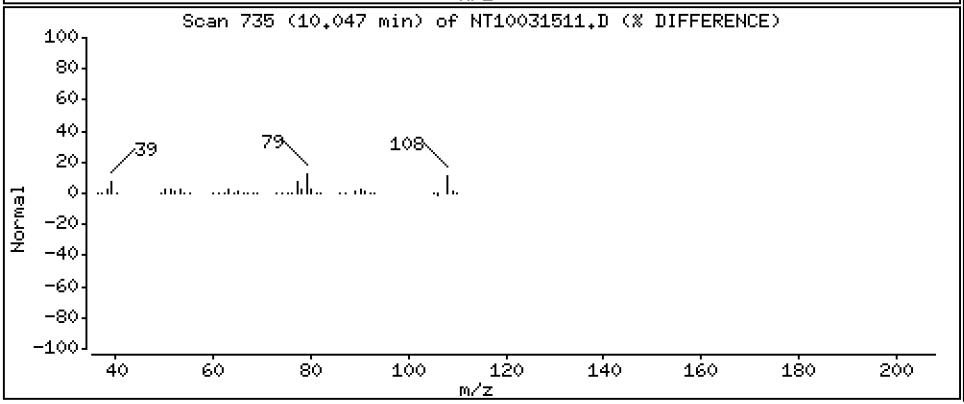












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

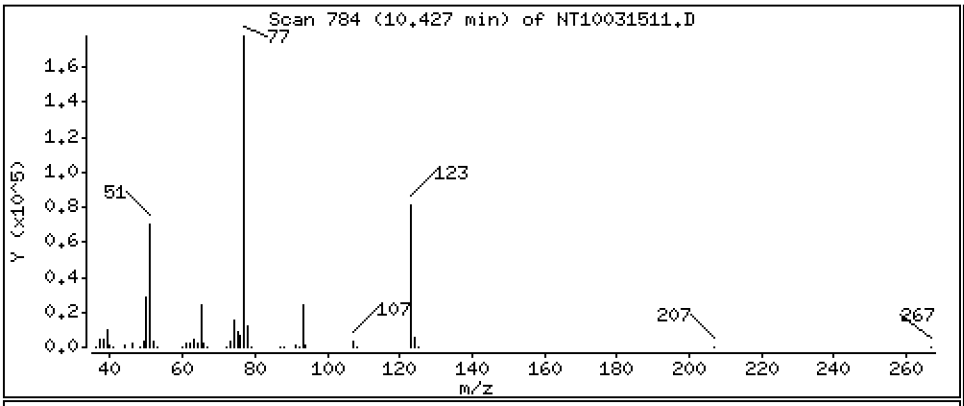
Operator: VTS

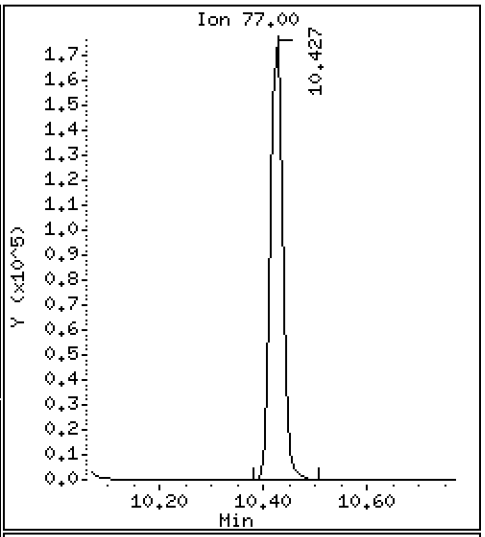
Column phase: ZB-5msi

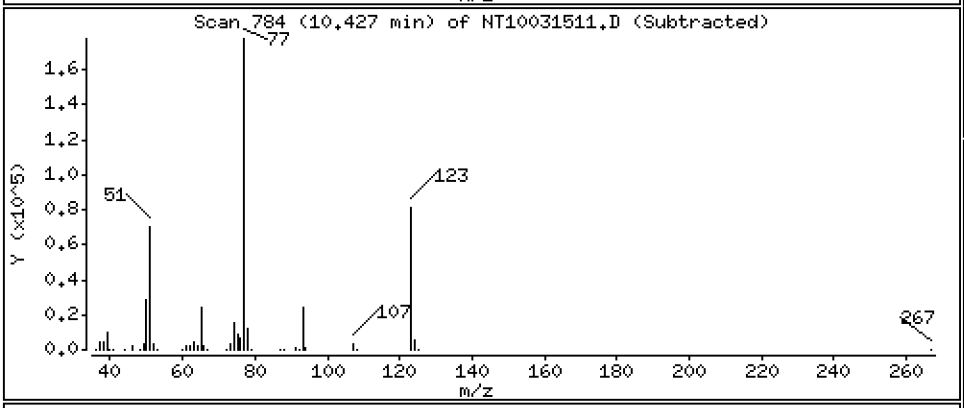
Column diameter: 0.25

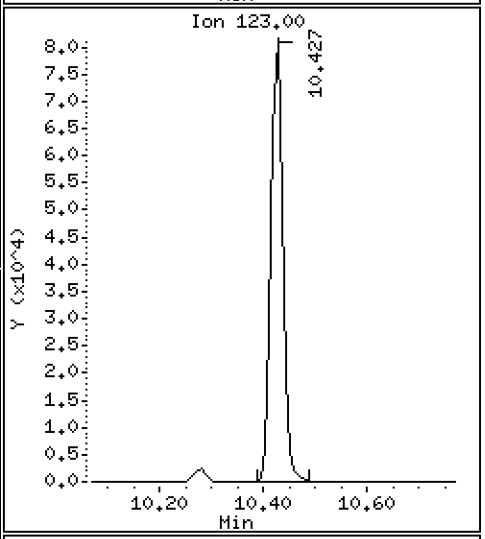
19 Nitrobenzene

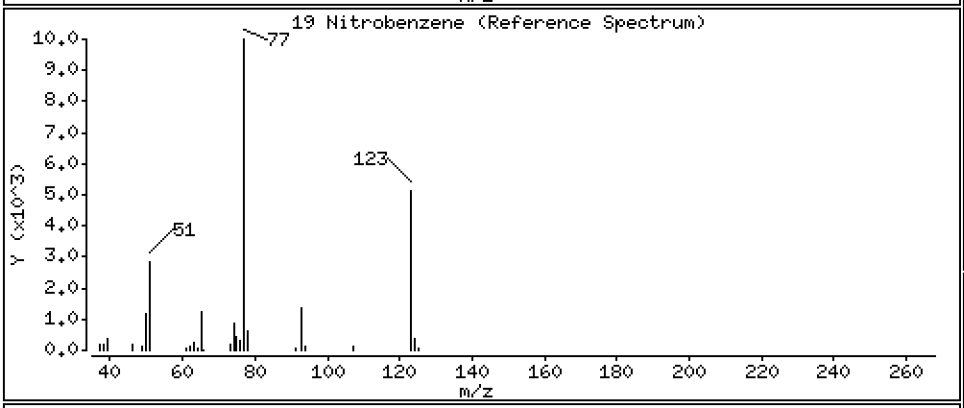
Concentration: 4.858 ug/mL

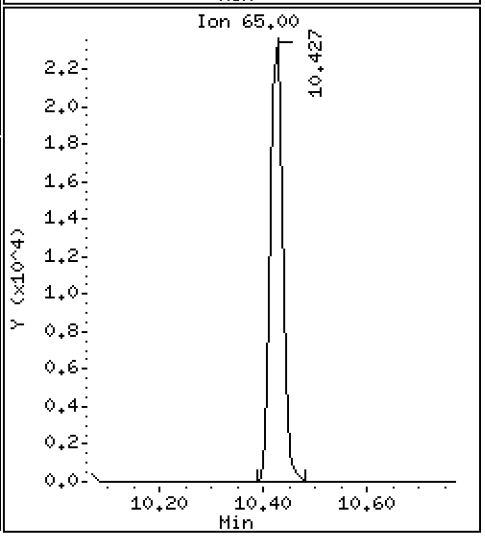


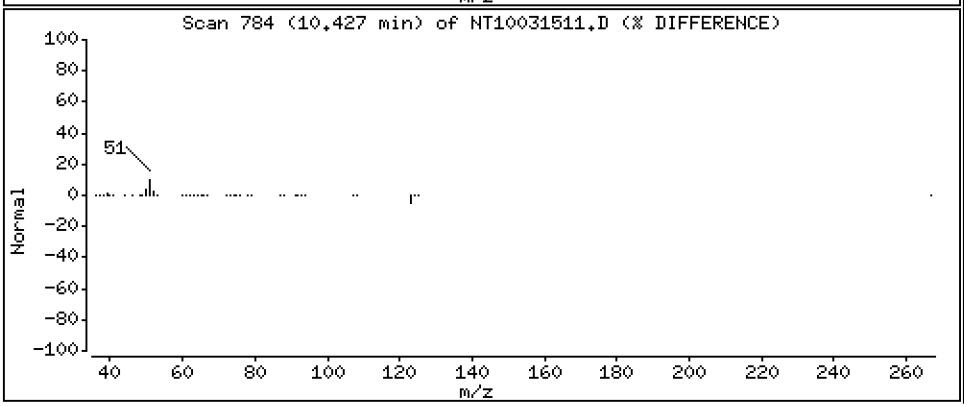












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

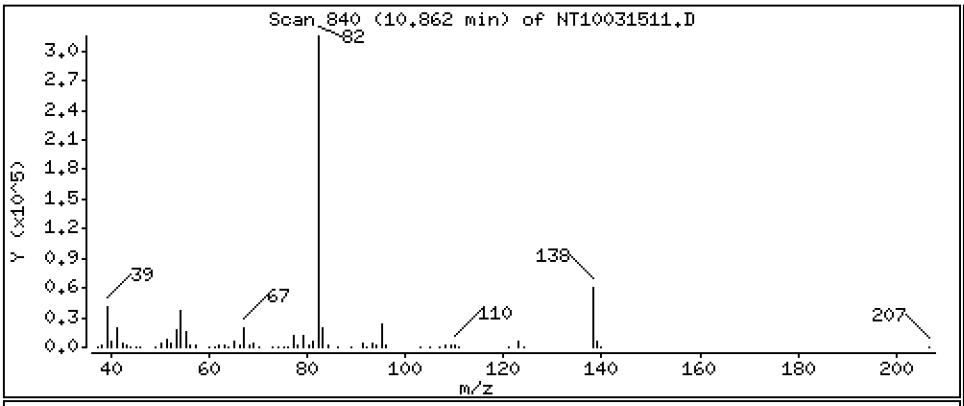
Operator: VTS

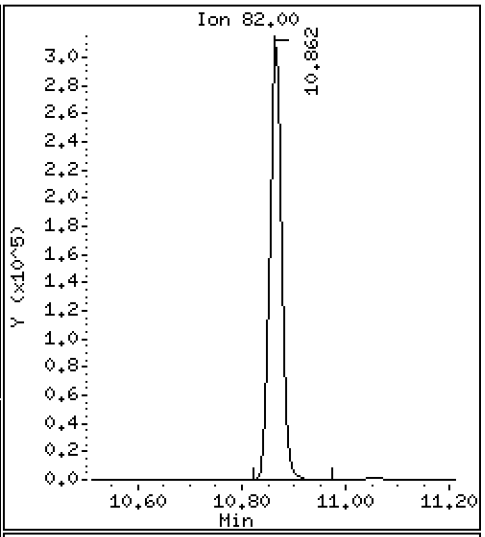
Column phase: ZB-5msi

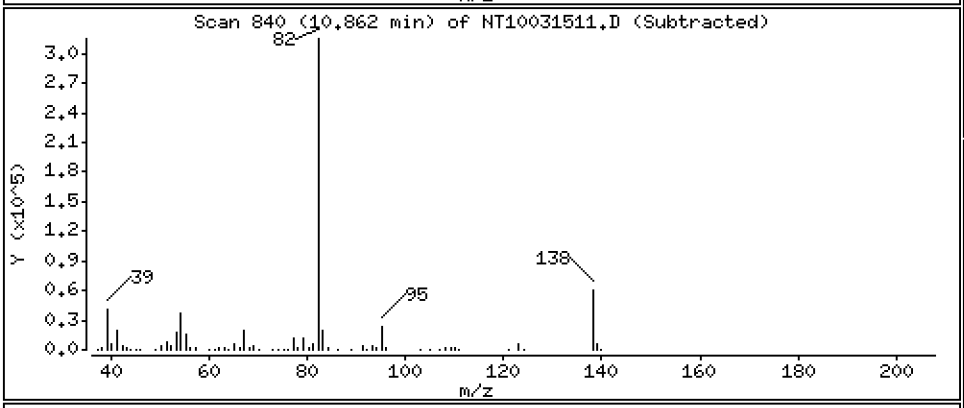
Column diameter: 0.25

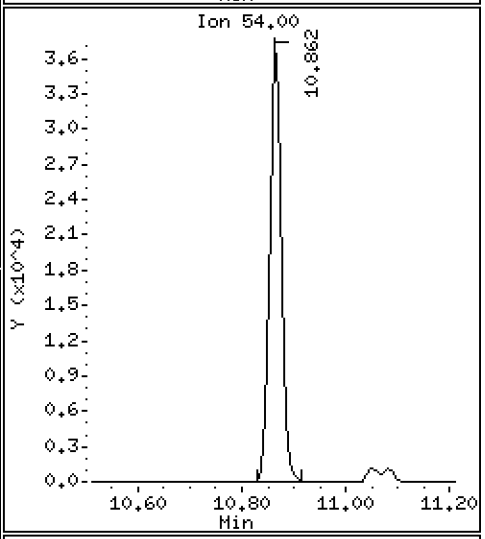
20 Isophorone

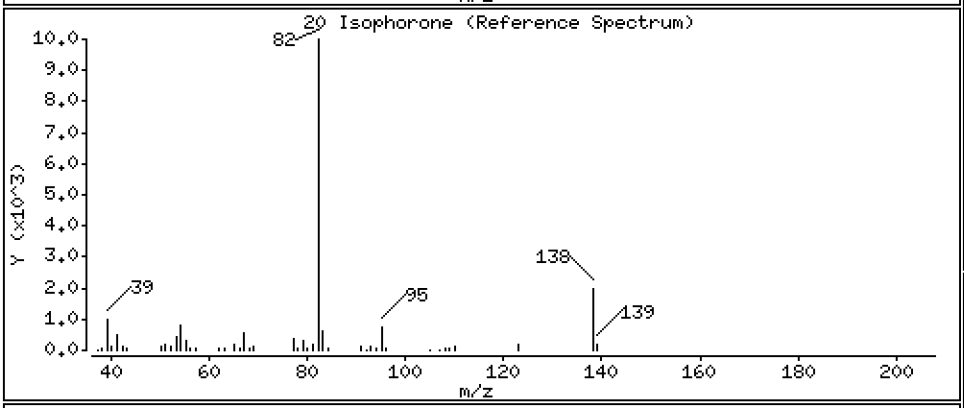
Concentration: 7.696 ug/mL

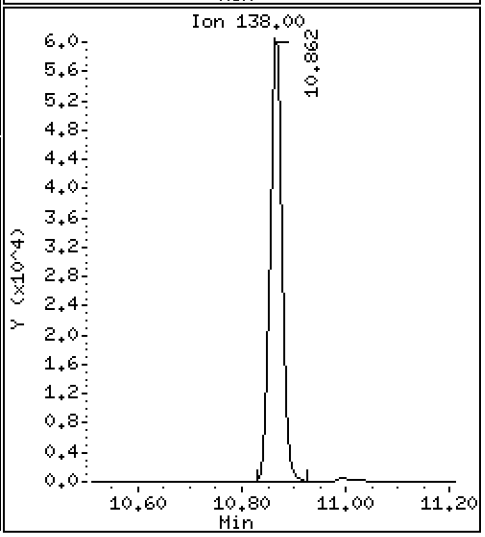


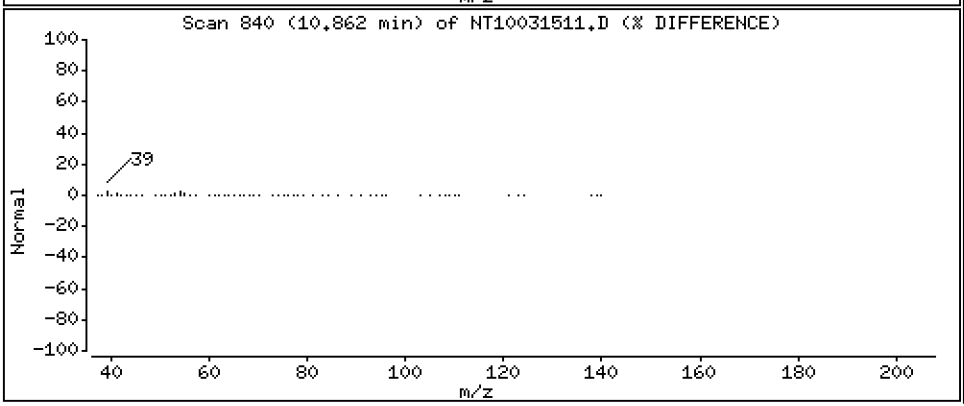












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

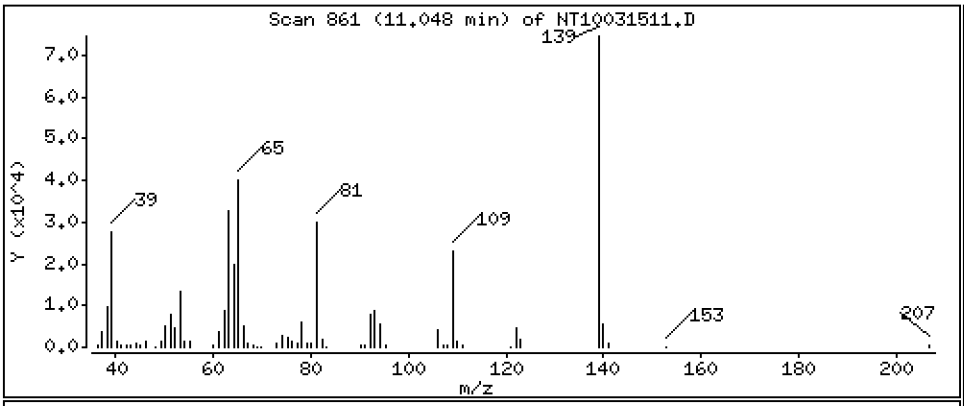
Operator: VTS

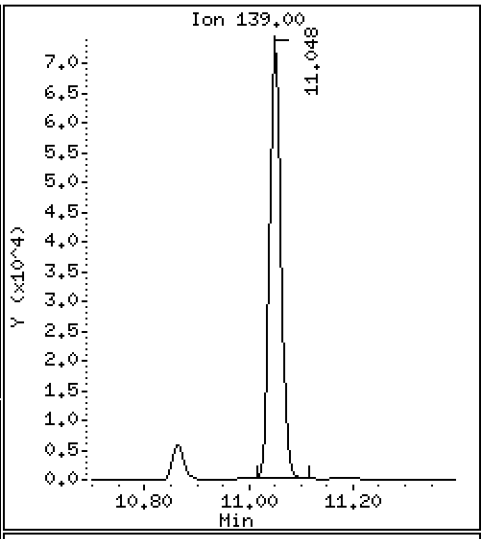
Column phase: ZB-5msi

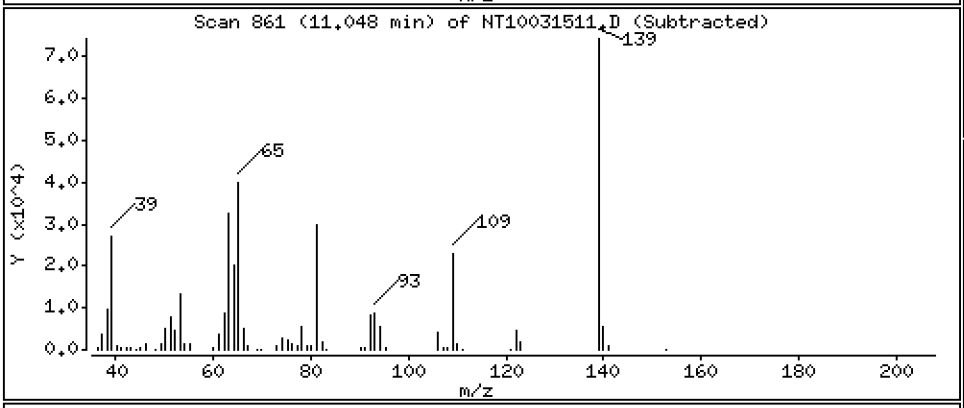
Column diameter: 0.25

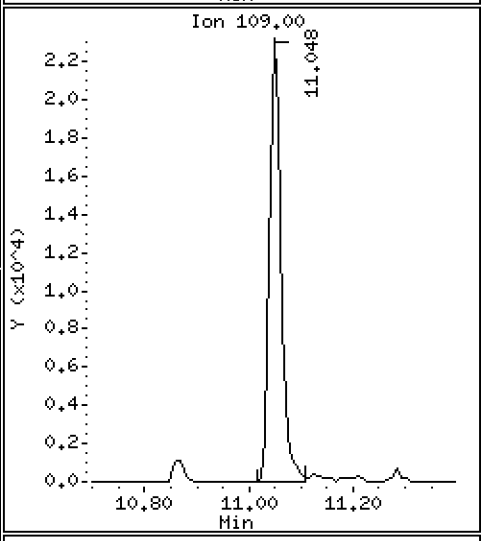
21 2-Nitrophenol

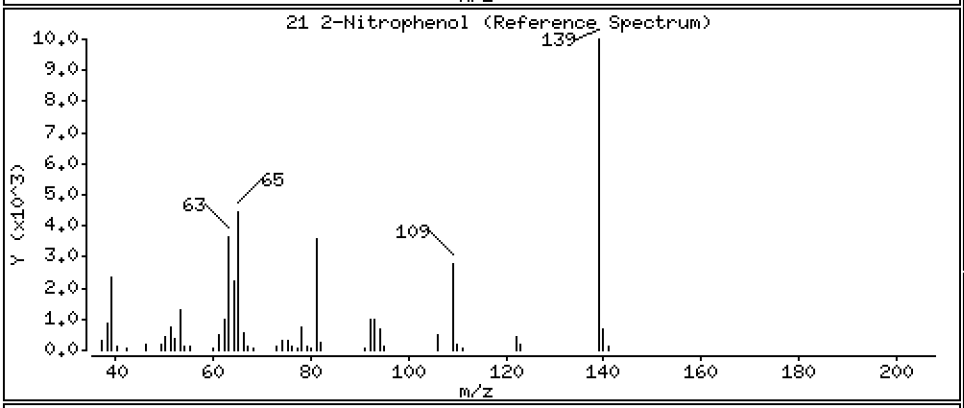
Concentration: 3.995 ug/mL

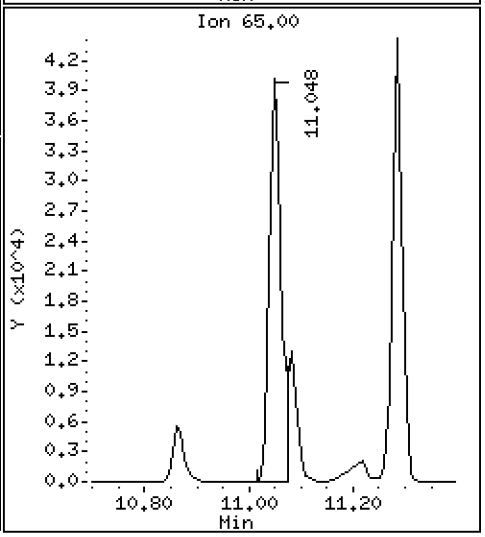


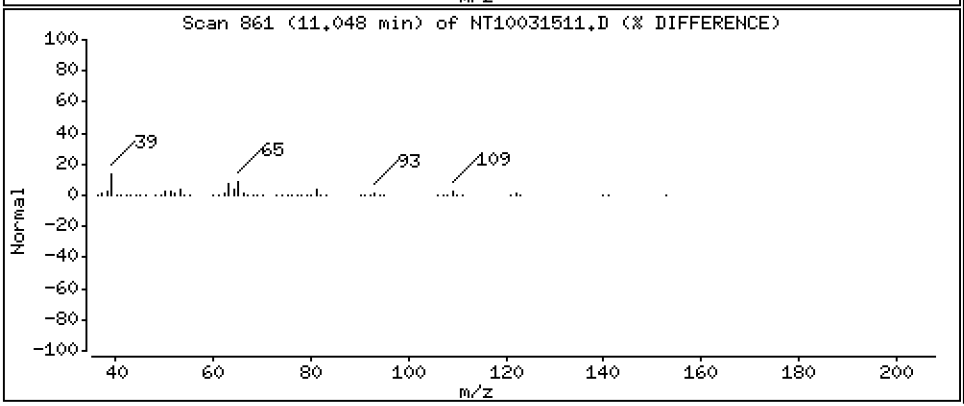












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

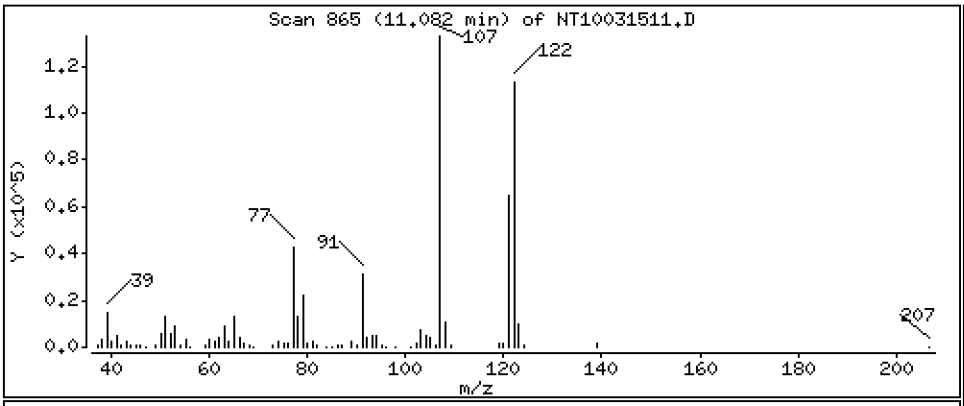
Operator: VTS

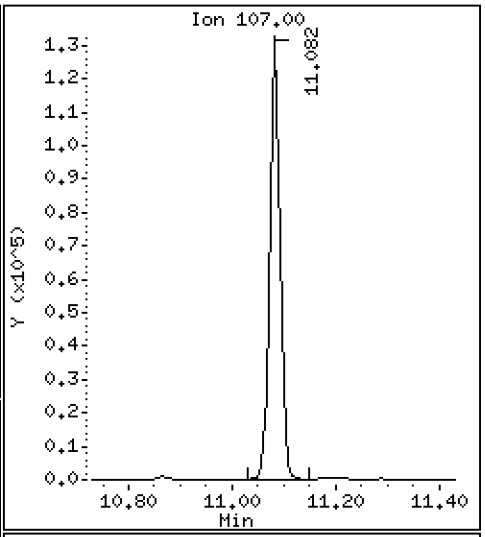
Column phase: ZB-5msi

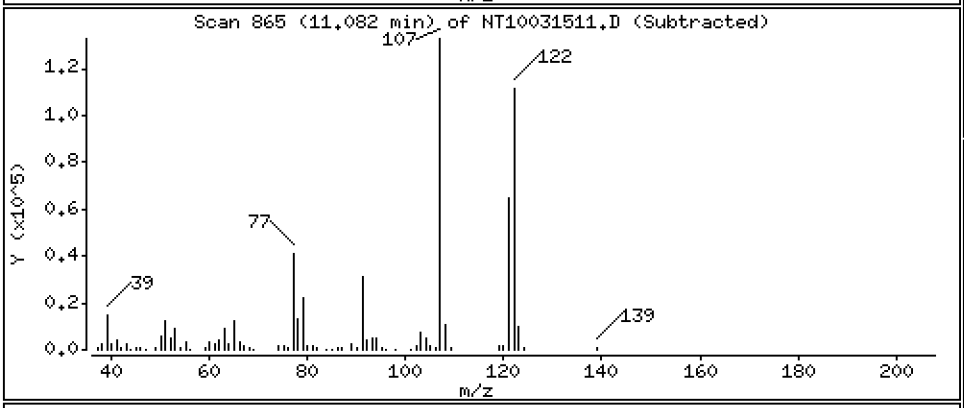
Column diameter: 0.25

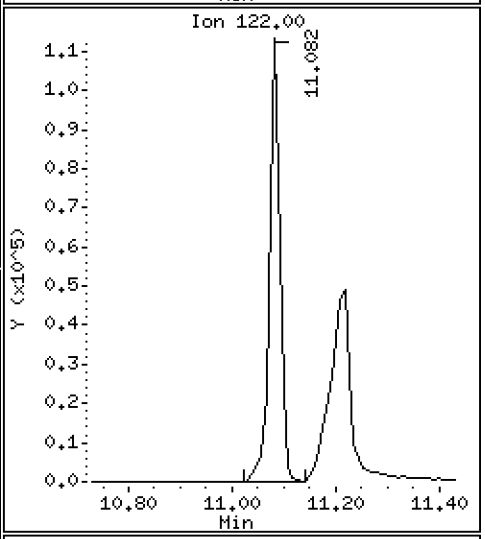
22 2,4-Dimethylphenol

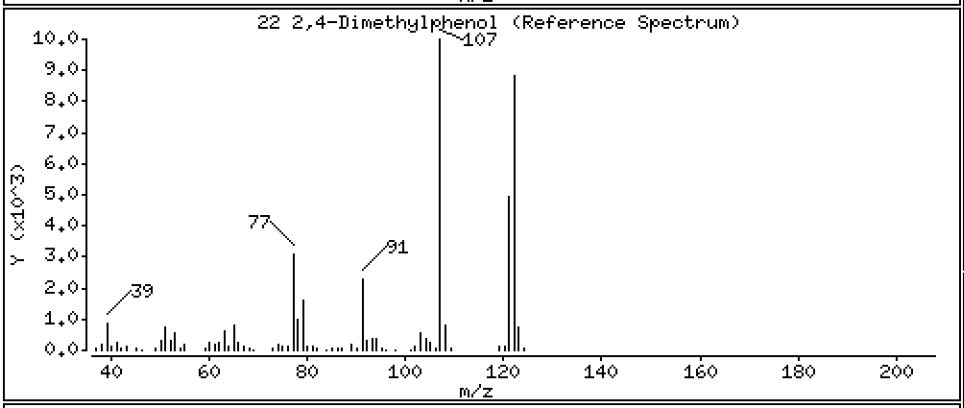
Concentration: 3.632 ug/mL

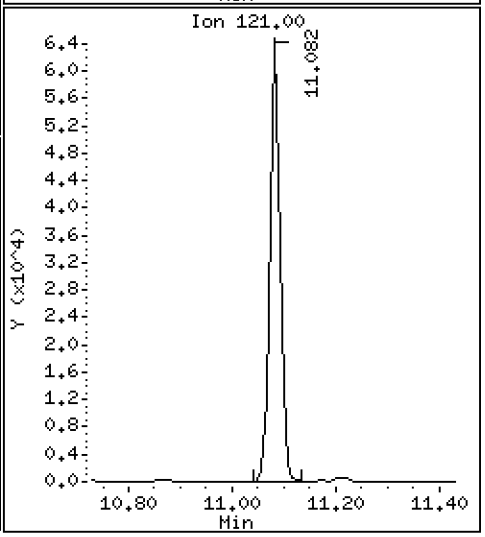


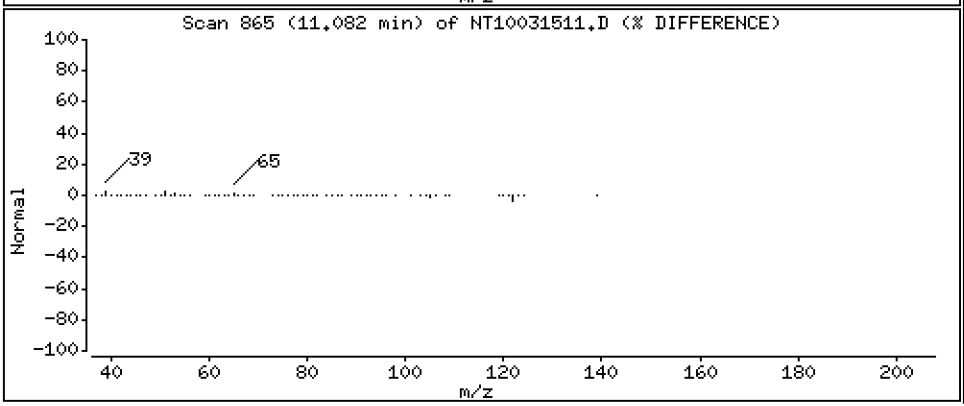












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

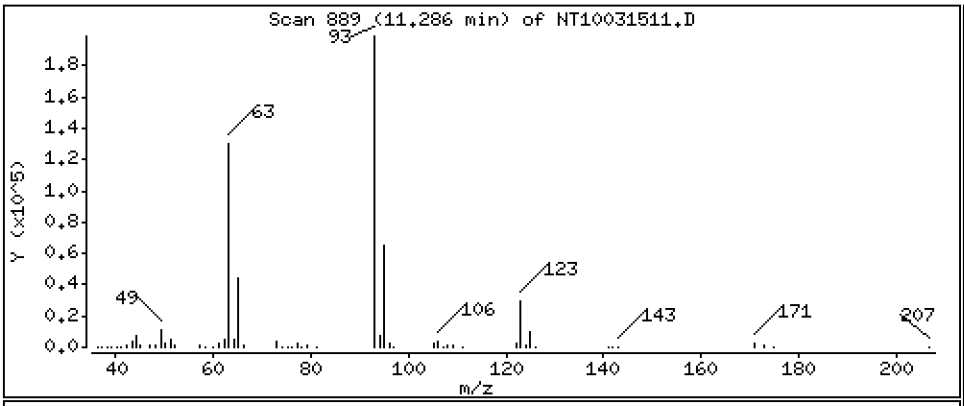
Operator: VTS

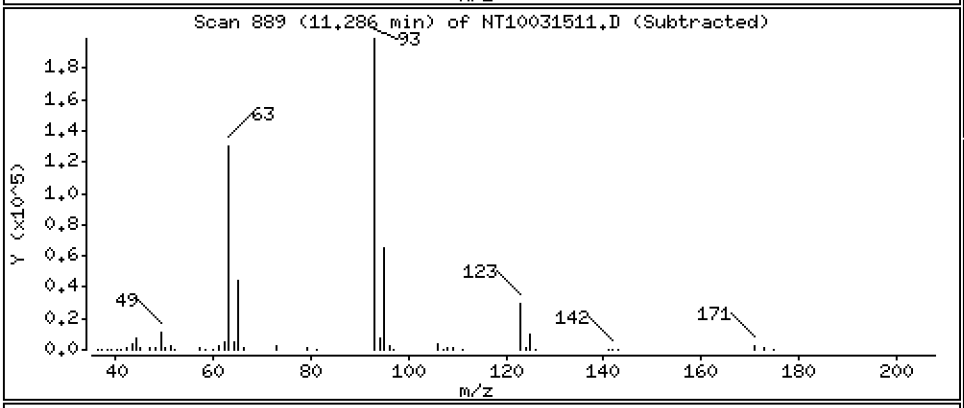
Column phase: ZB-5msi

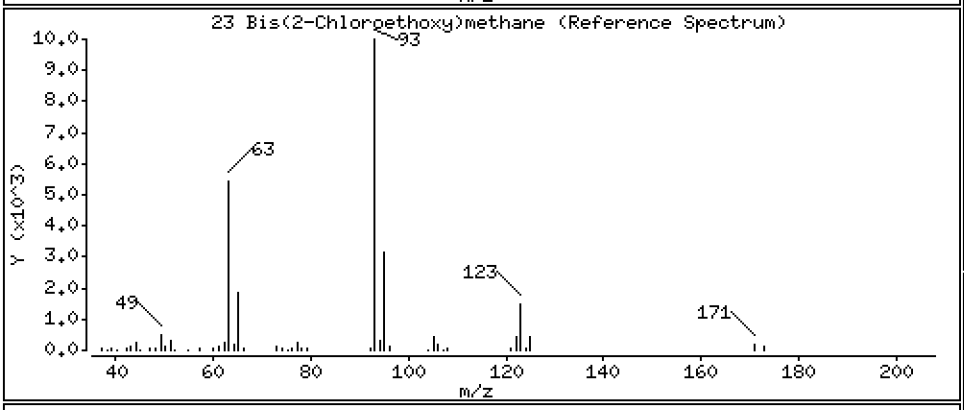
Column diameter: 0.25

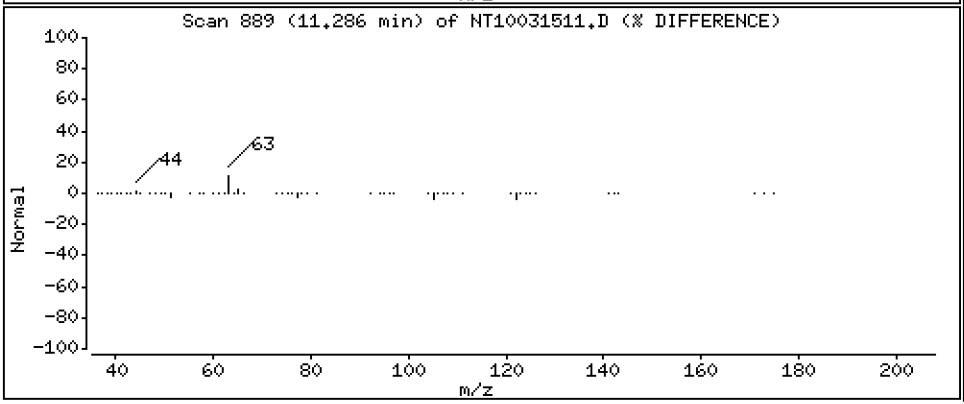
23 Bis(2-Chloroethoxy)methane

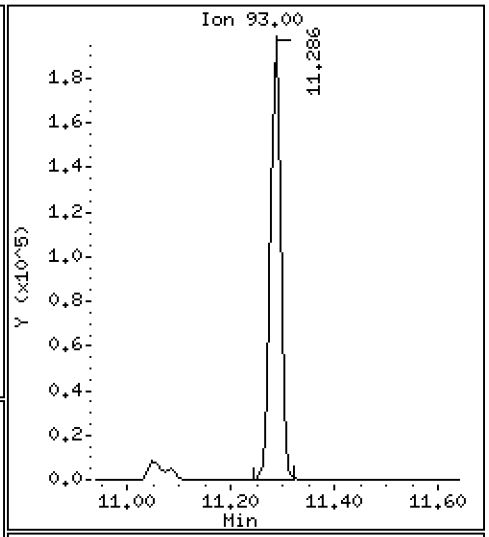
Concentration: 5.654 ug/mL

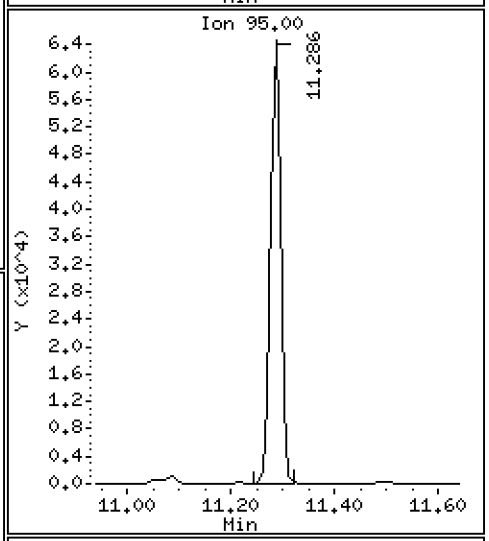


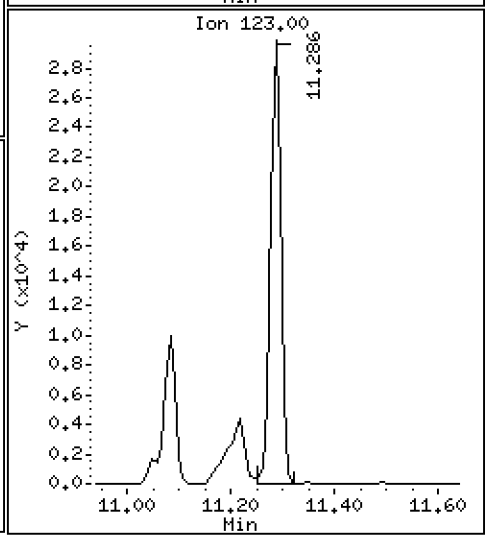












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

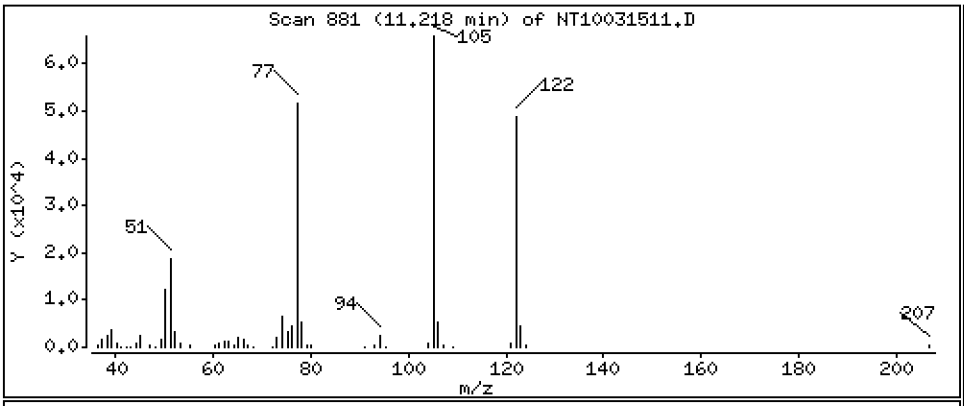
Operator: VTS

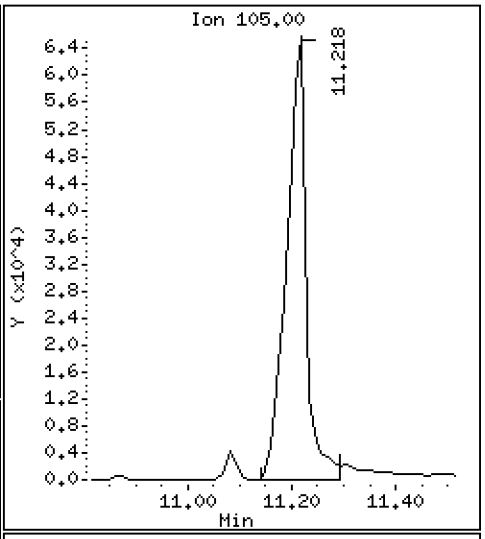
Column phase: ZB-5msi

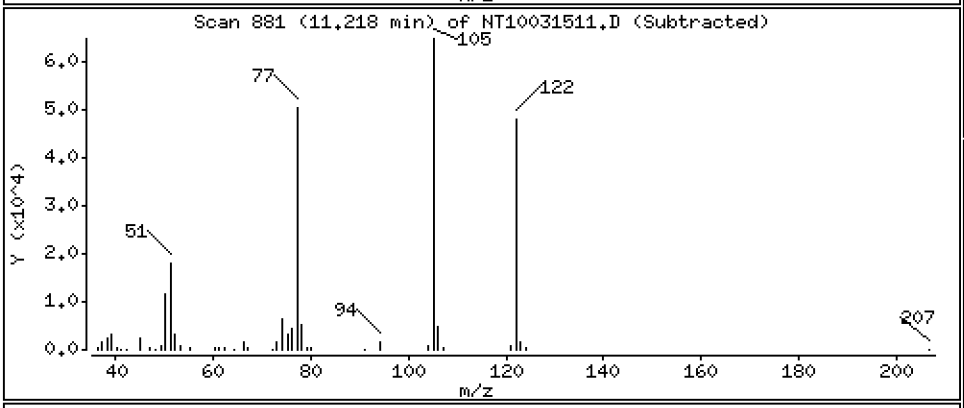
Column diameter: 0.25

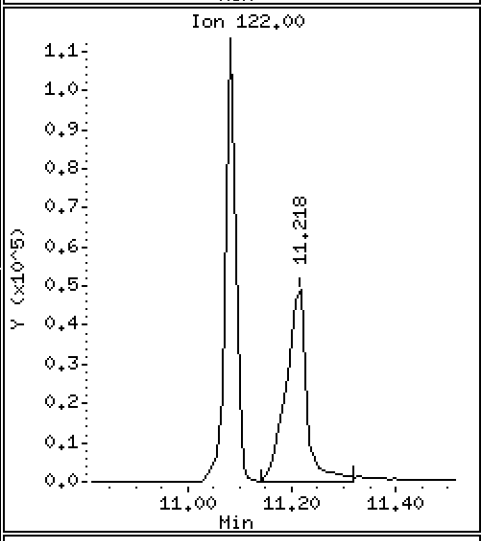
24 Benzoic acid

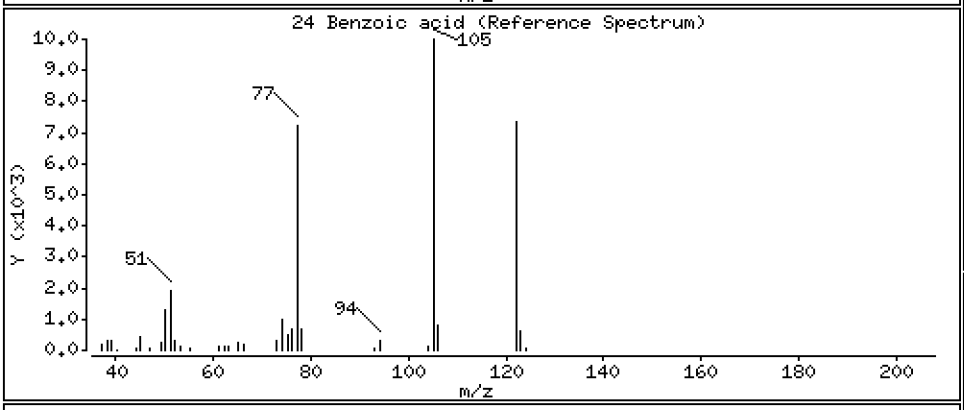
Concentration: 5.952 ug/mL

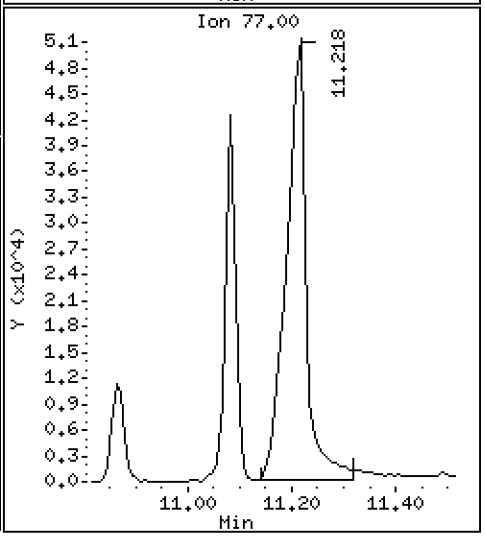


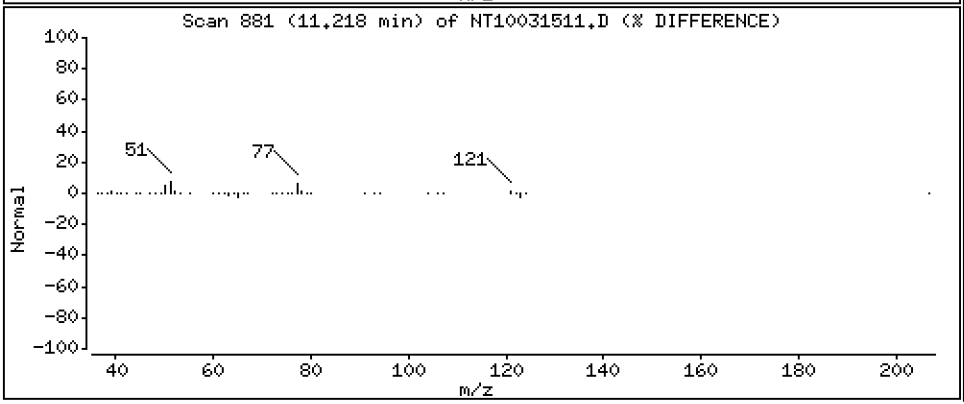












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

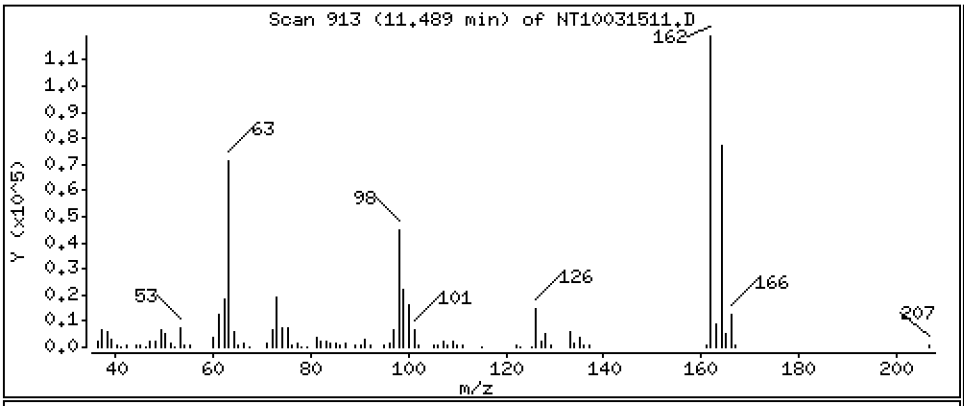
Operator: VTS

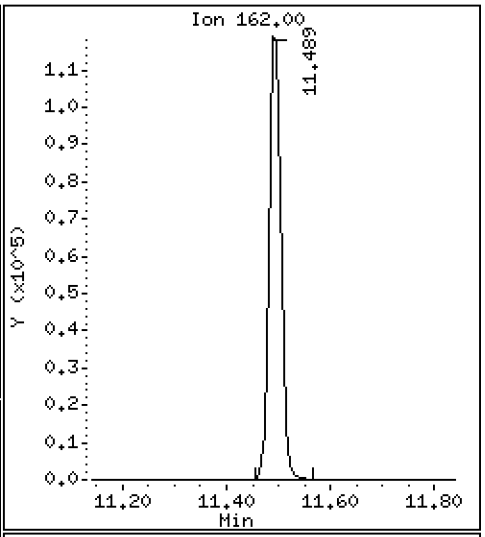
Column phase: ZB-5msi

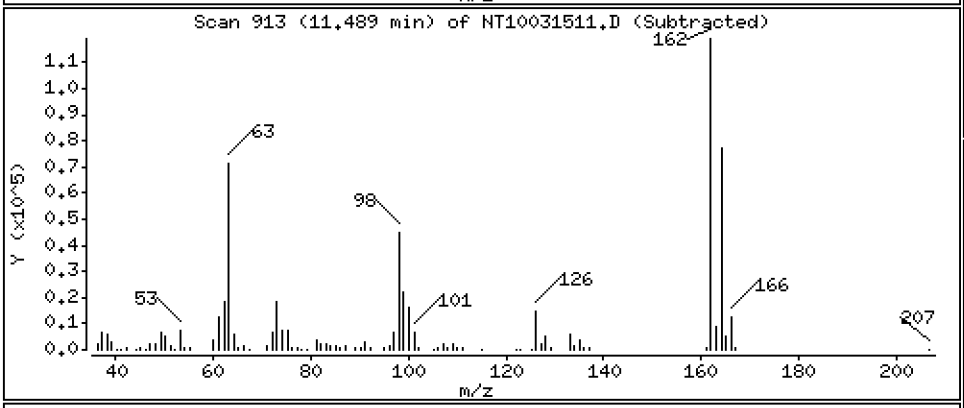
Column diameter: 0.25

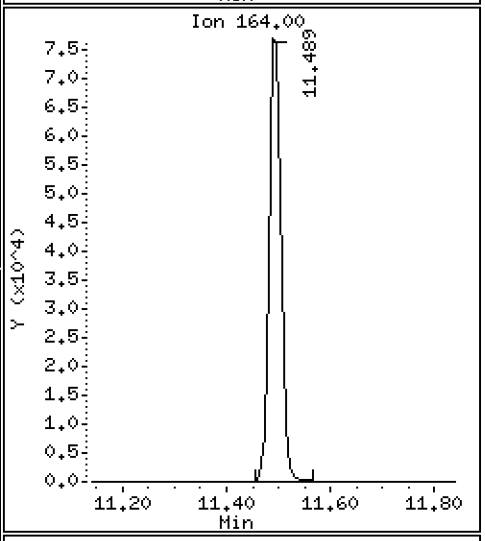
25 2,4-Dichlorophenol

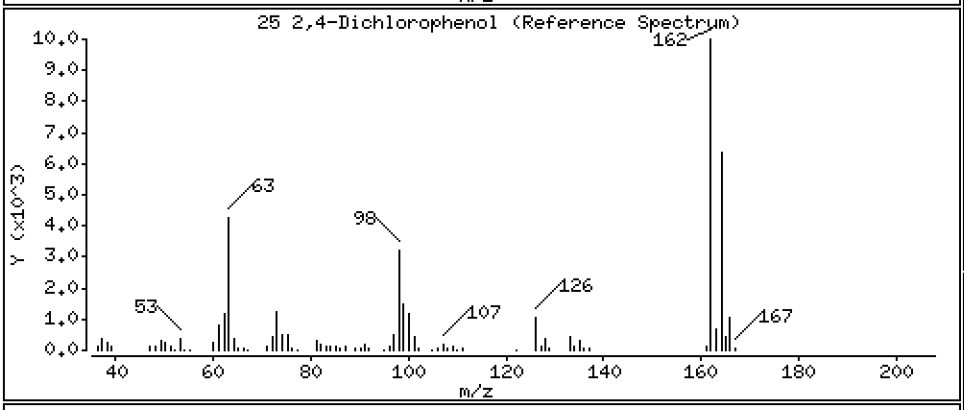
Concentration: 4.703 ug/mL

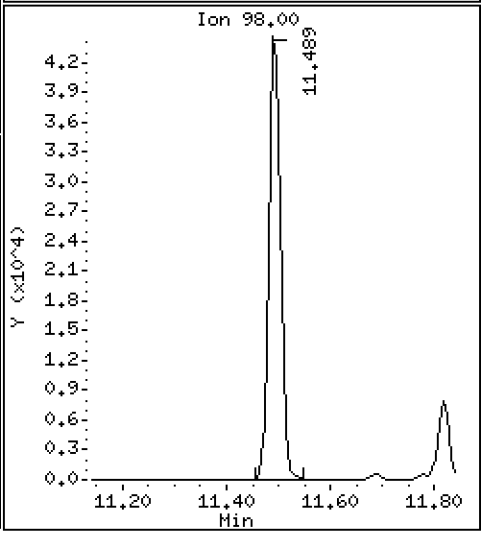


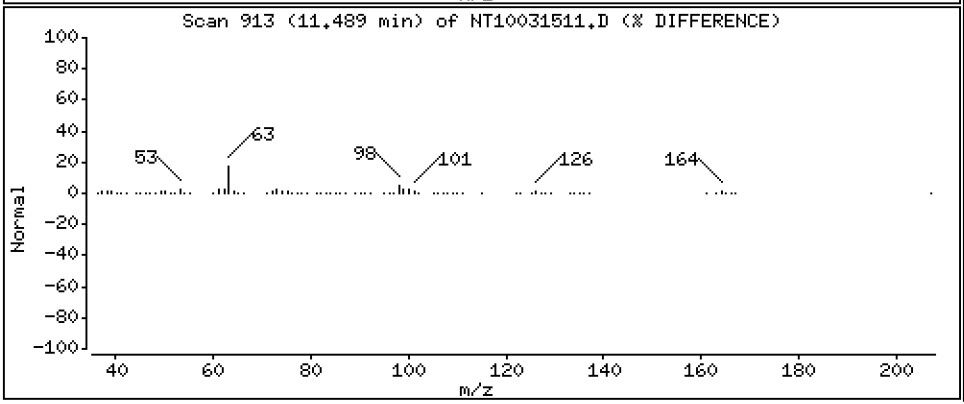












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

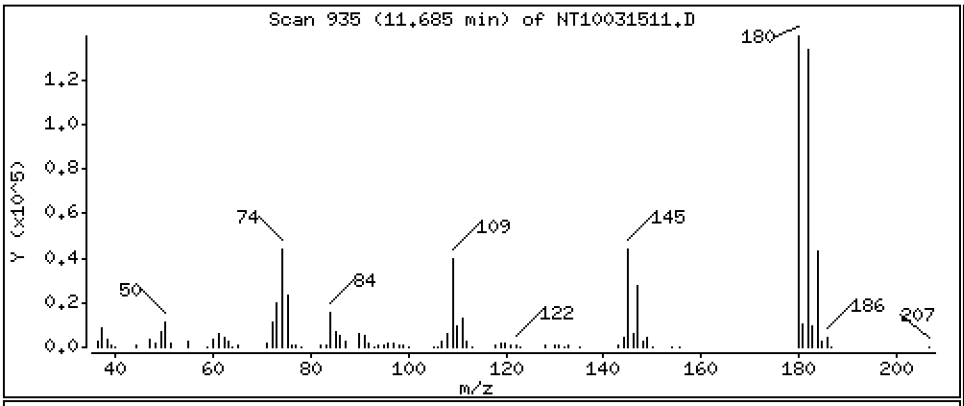
Operator: VTS

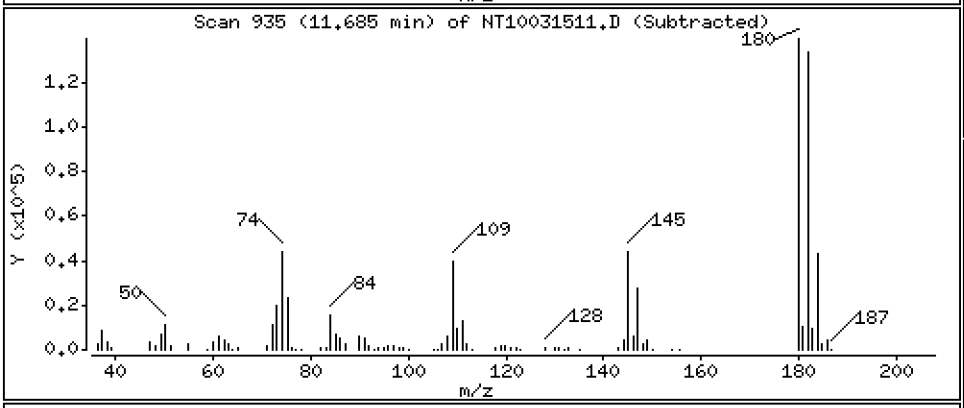
Column phase: ZB-5msi

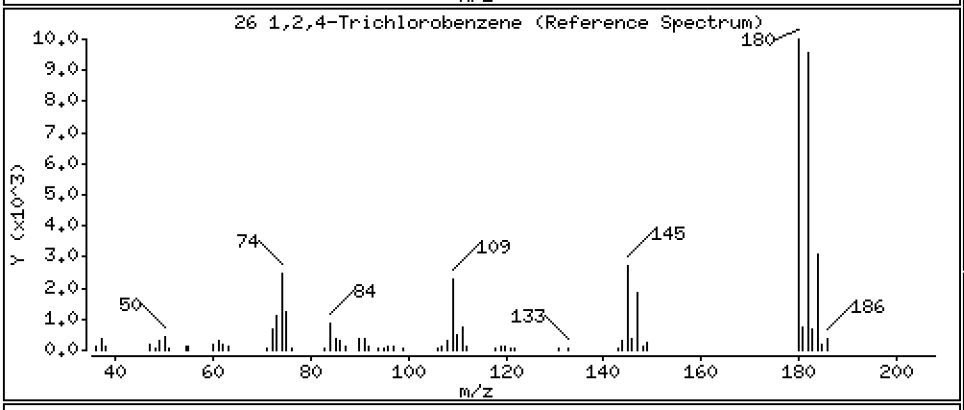
Column diameter: 0.25

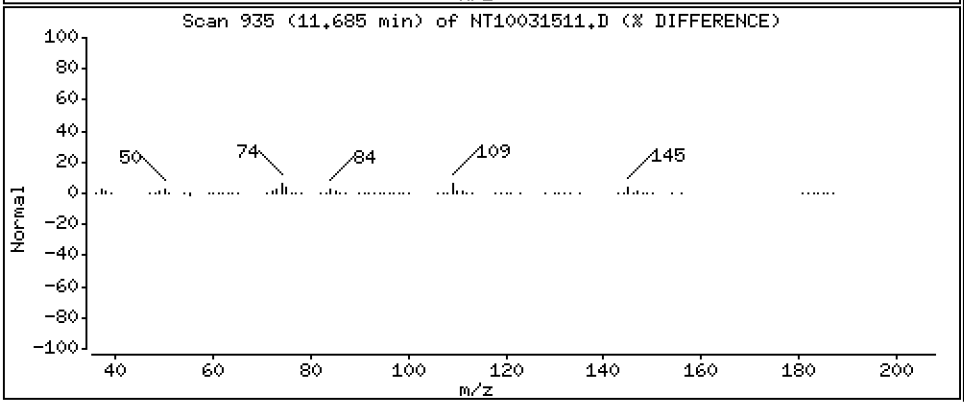
26 1,2,4-Trichlorobenzene

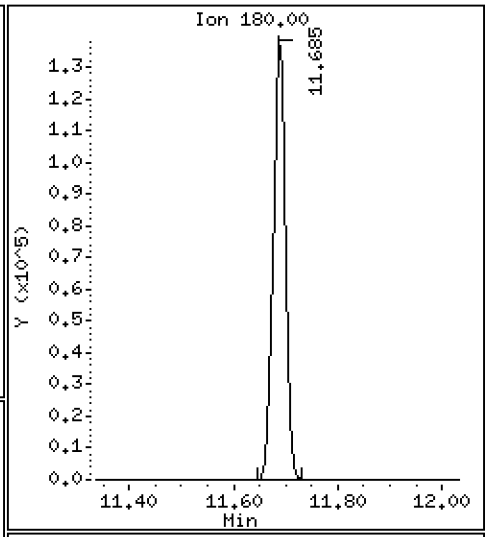
Concentration: 4.554 ug/mL

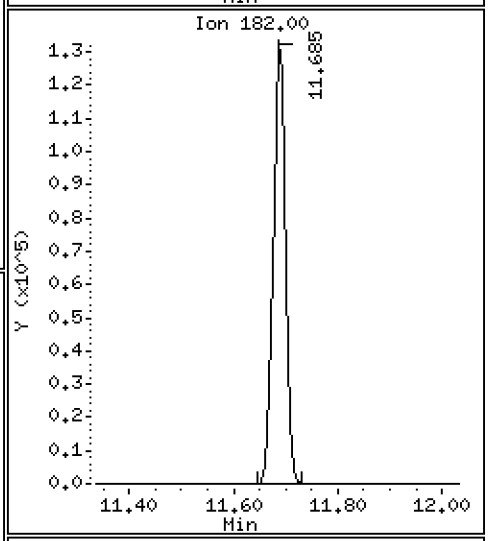


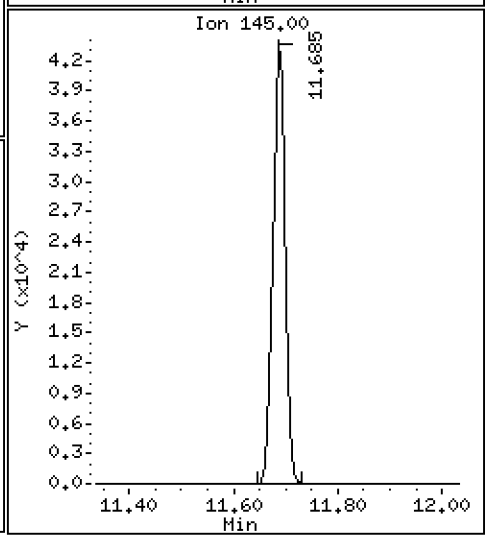












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

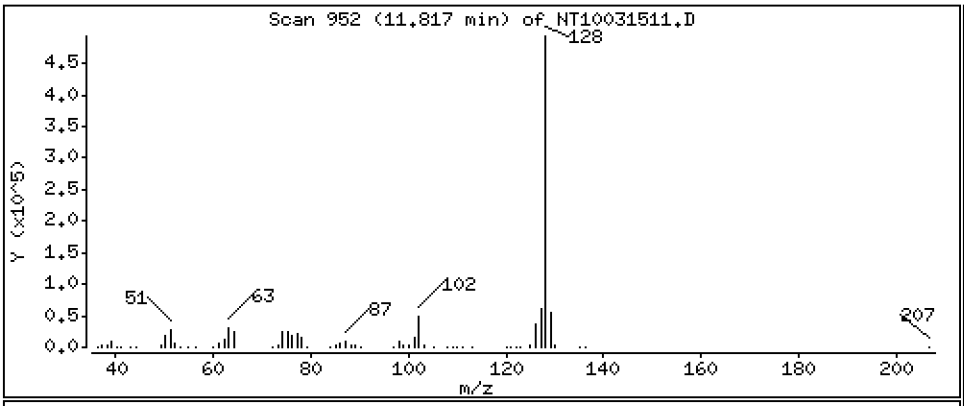
Operator: VTS

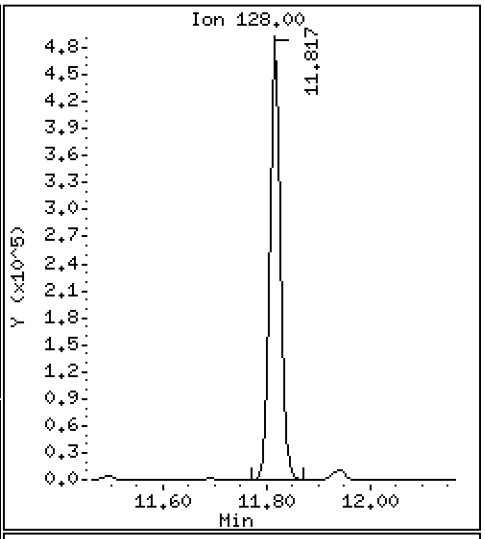
Column phase: ZB-5msi

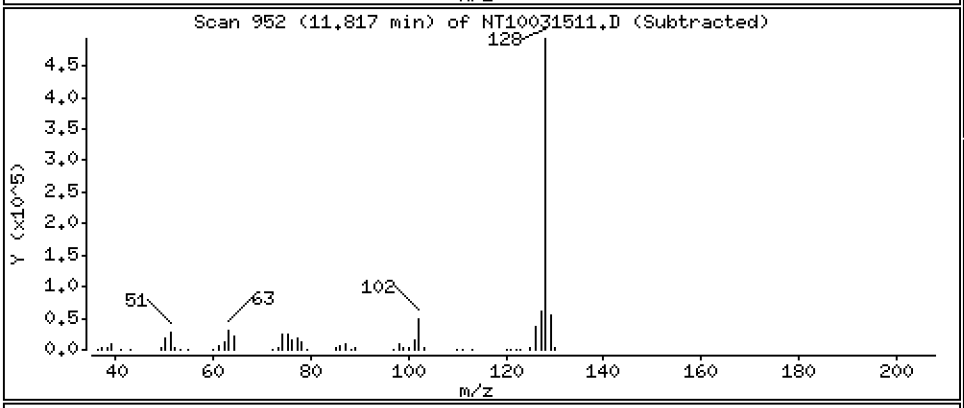
Column diameter: 0.25

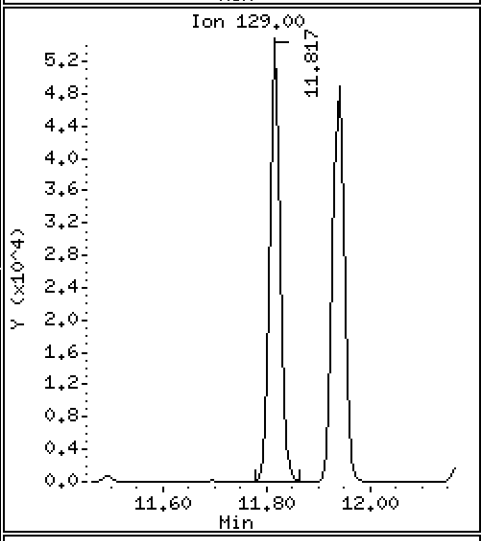
28 Naphthalene

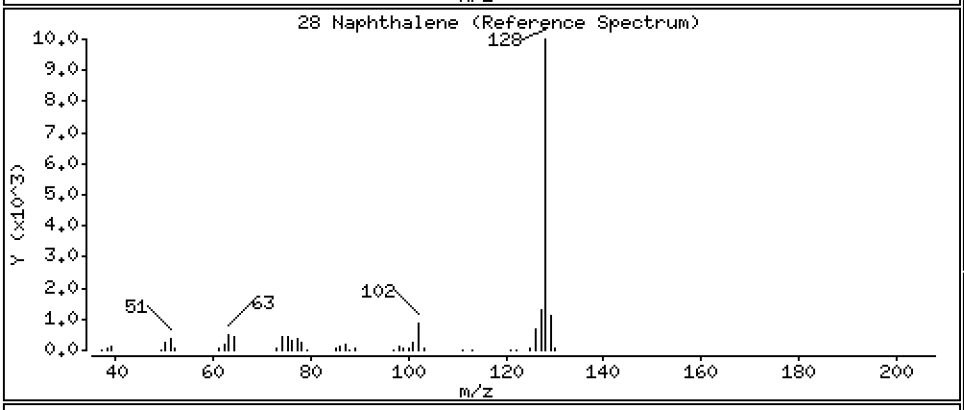
Concentration: 4.717 ug/mL

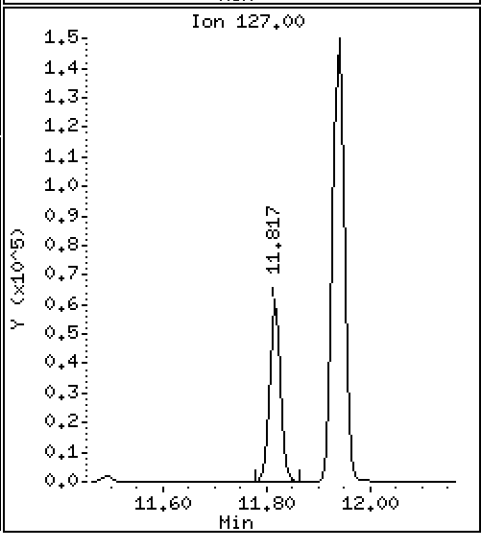


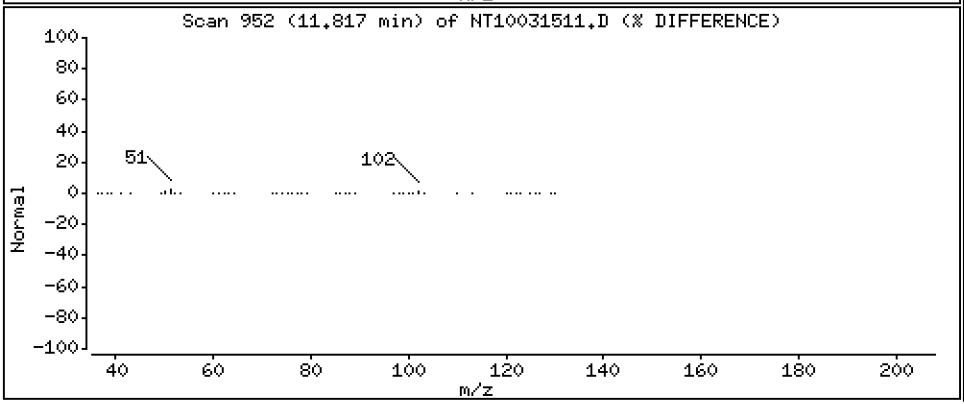












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

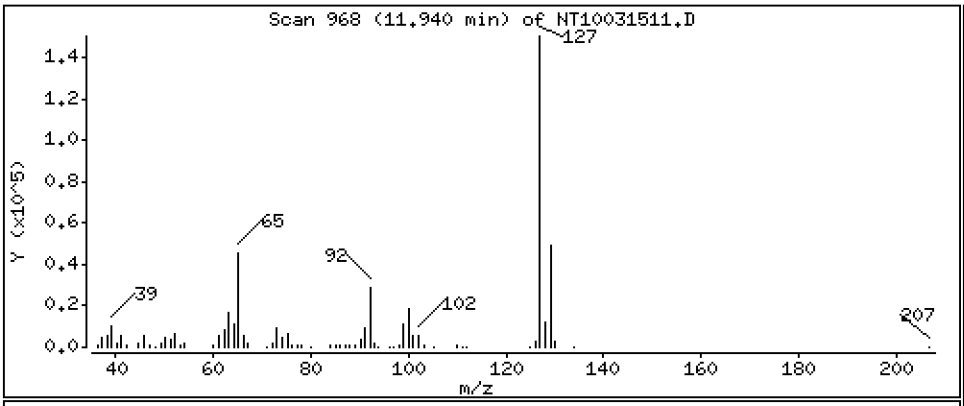
Operator: VTS

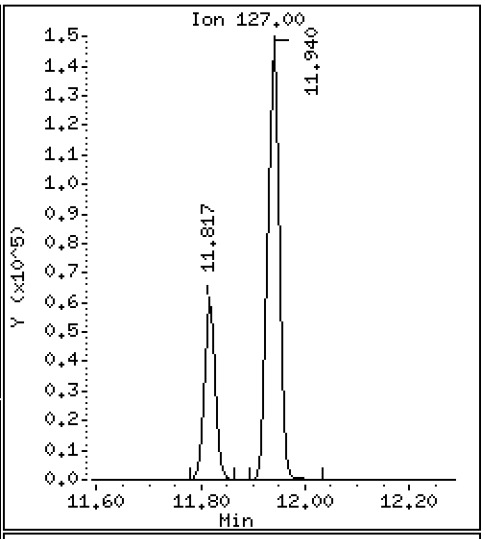
Column phase: ZB-5msi

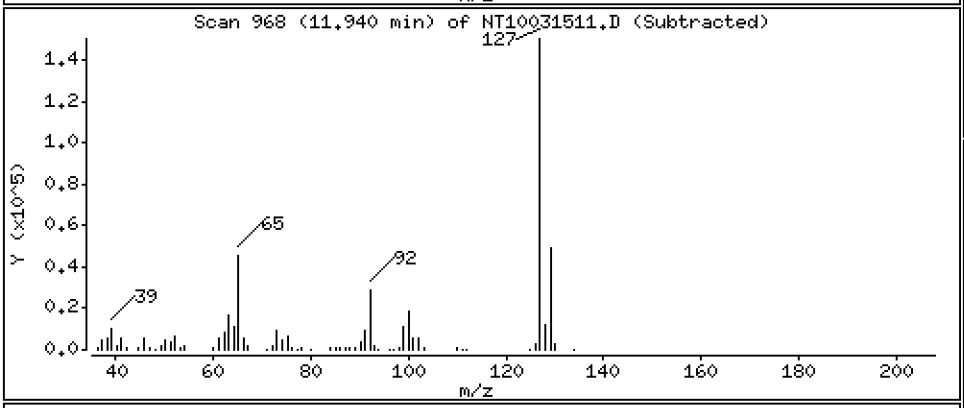
Column diameter: 0.25

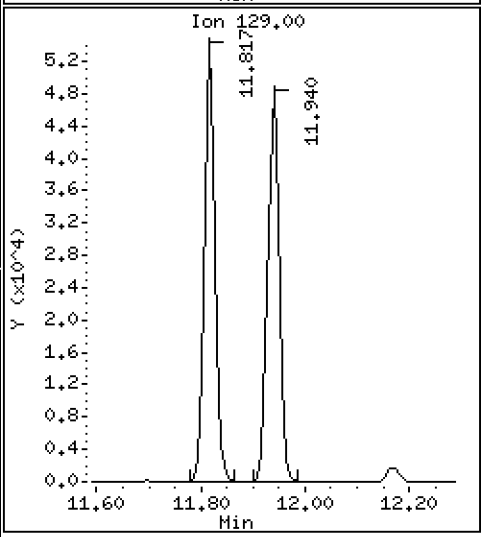
29 4-Chloroaniline

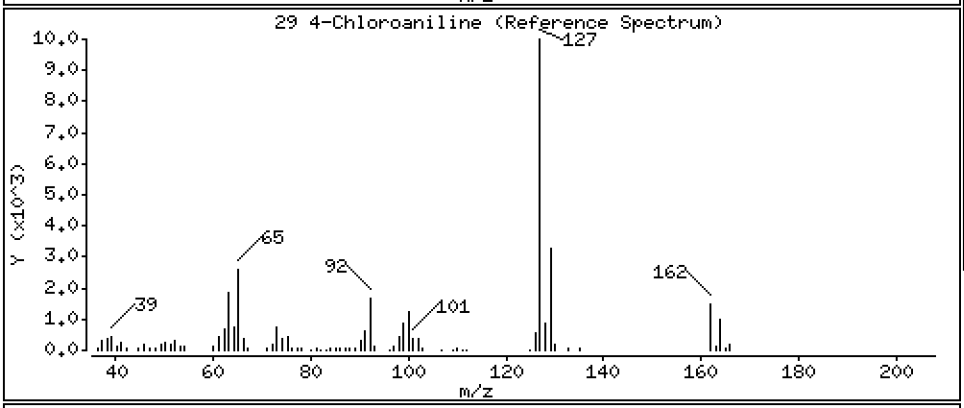
Concentration: 3.787 ug/mL

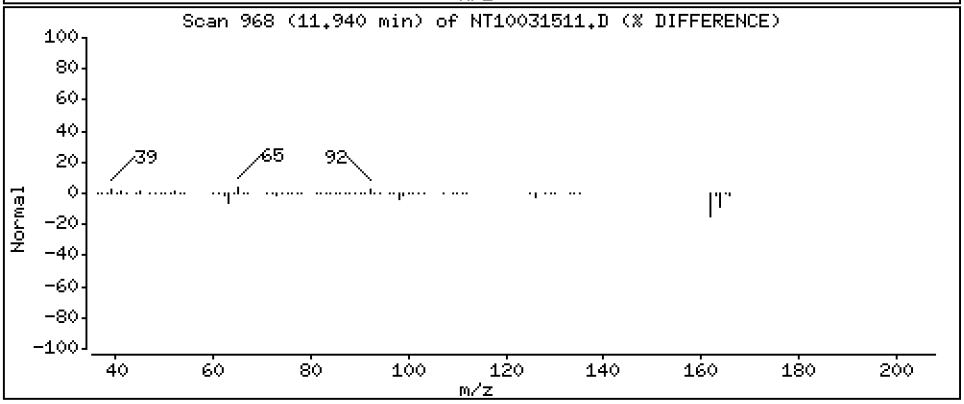












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

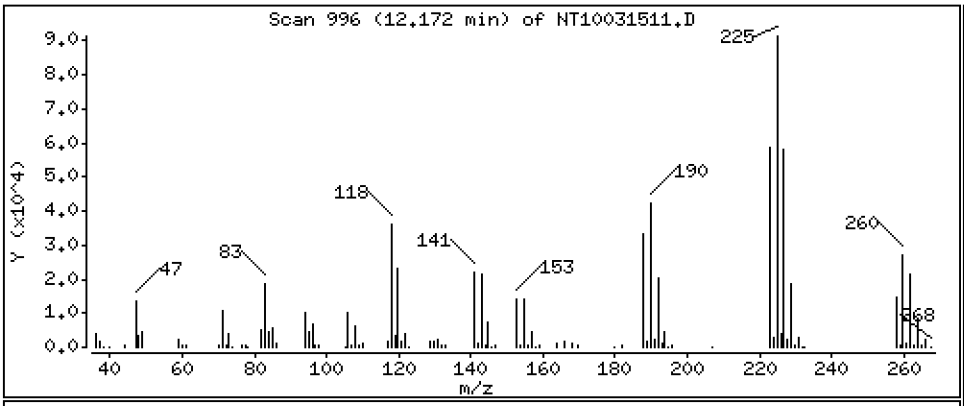
Operator: VTS

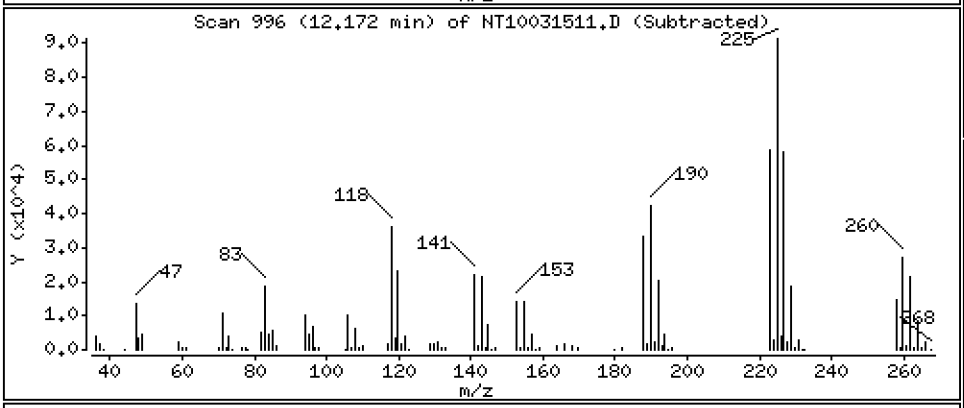
Column phase: ZB-5msi

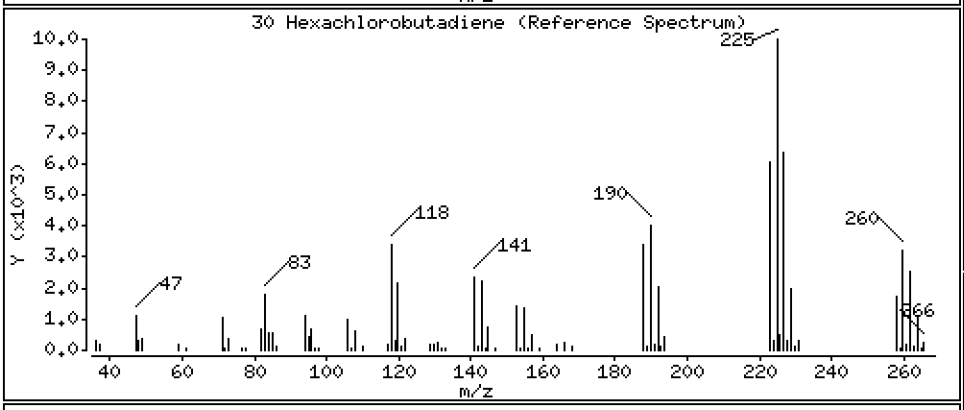
Column diameter: 0.25

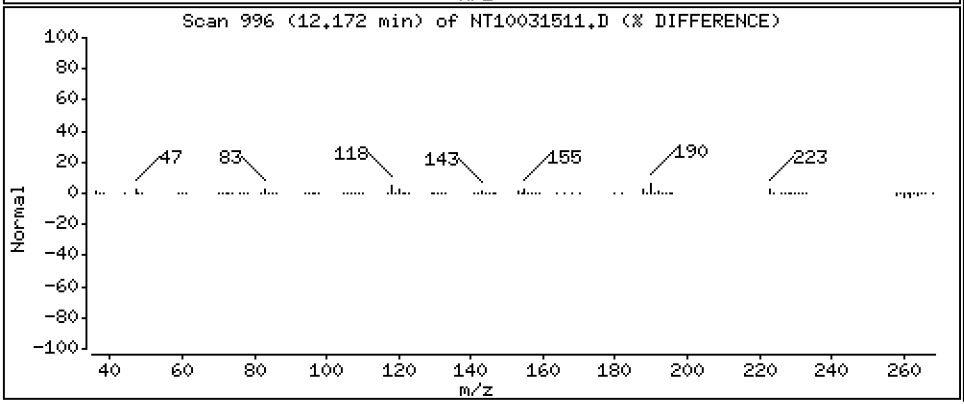
30 Hexachlorobutadiene

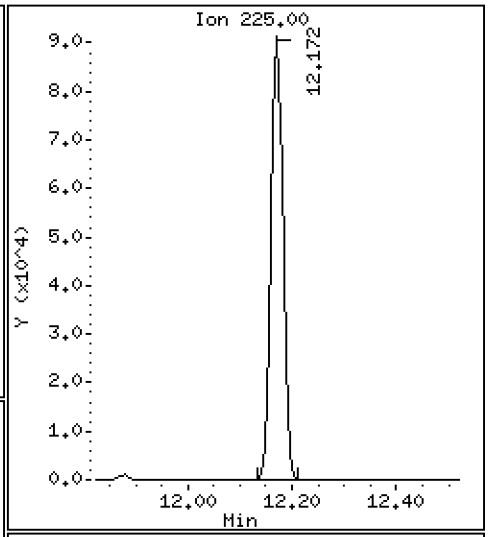
Concentration: 4.834 ug/mL

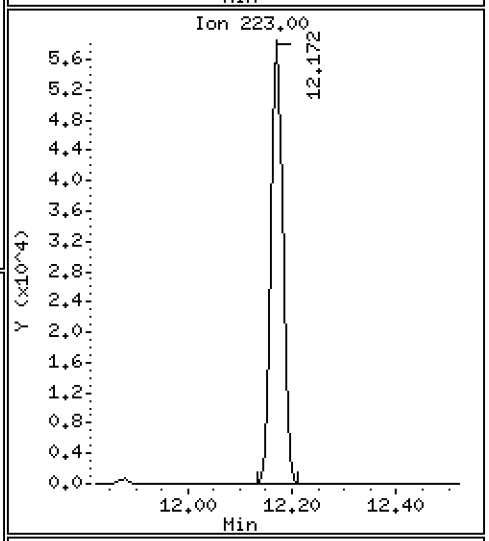


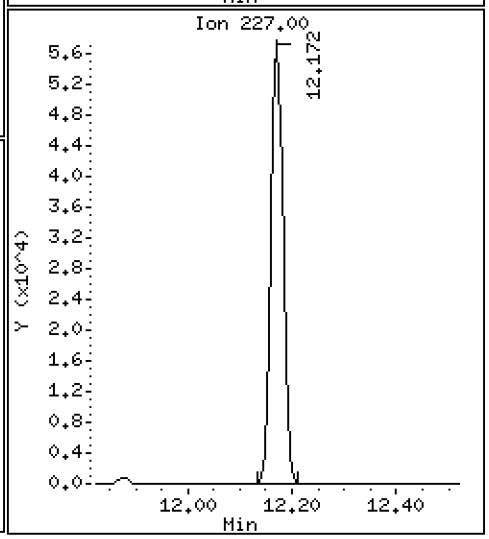












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

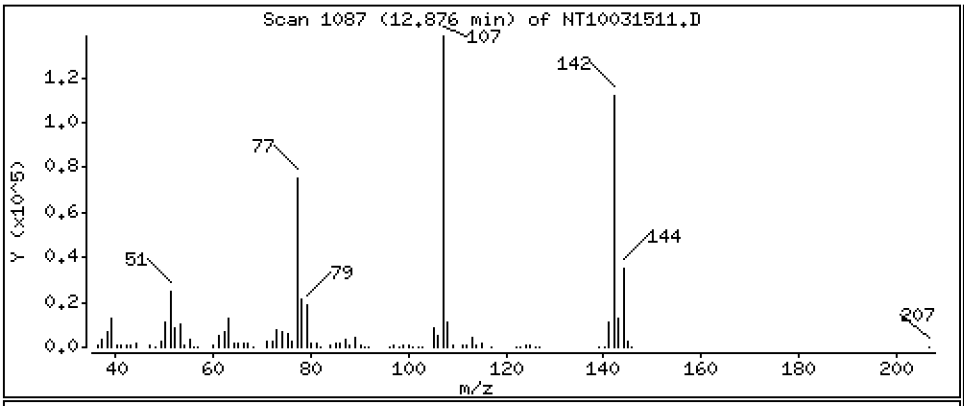
Operator: VTS

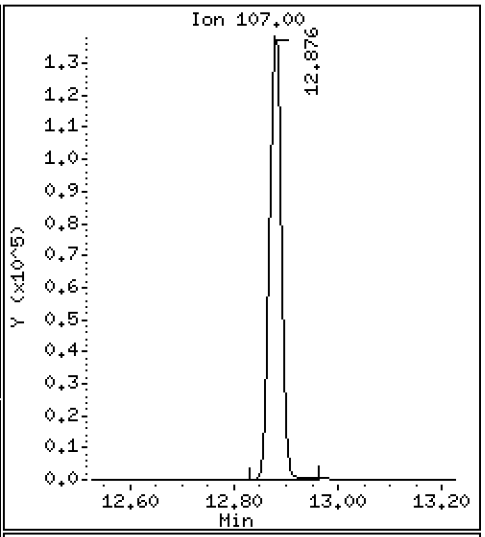
Column phase: ZB-5msi

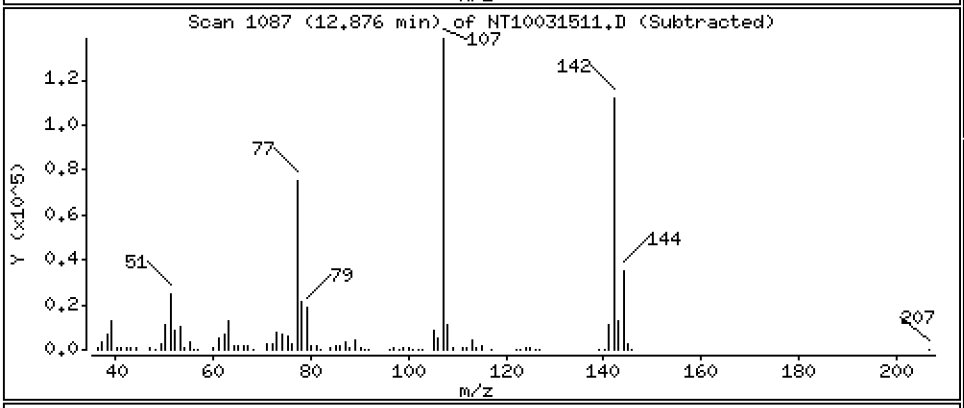
Column diameter: 0.25

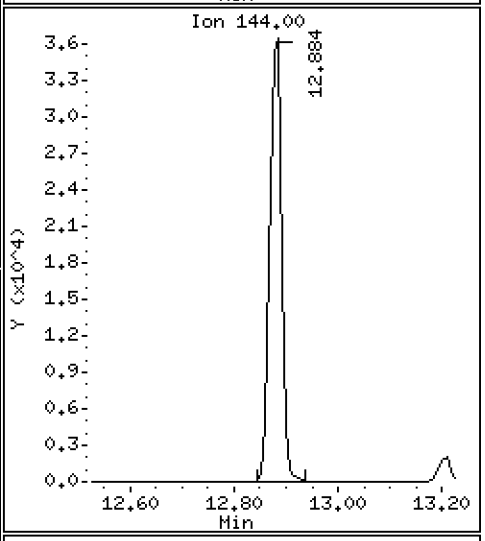
31 4-Chloro-3-methylphenol

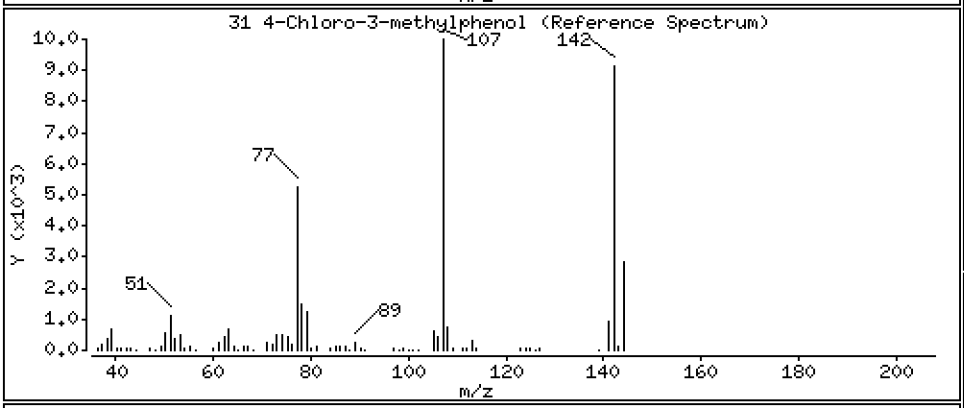
Concentration: 4.640 ug/mL

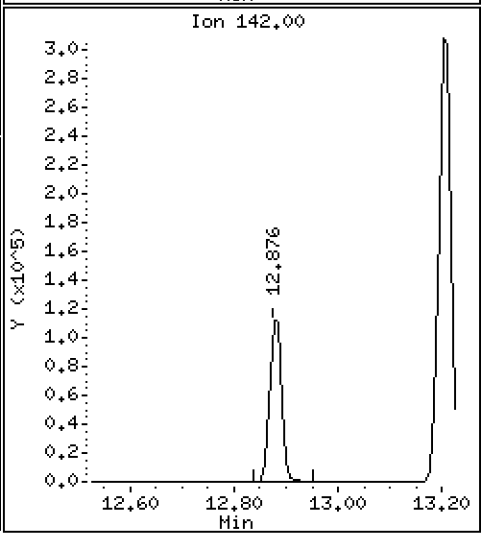


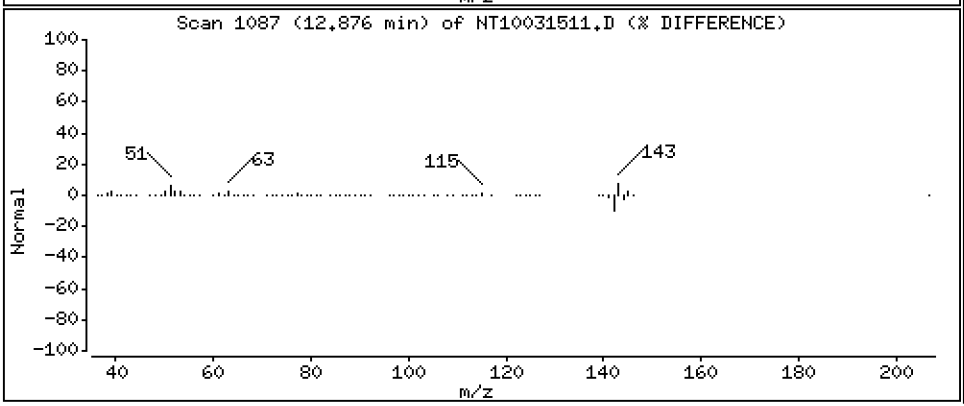












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

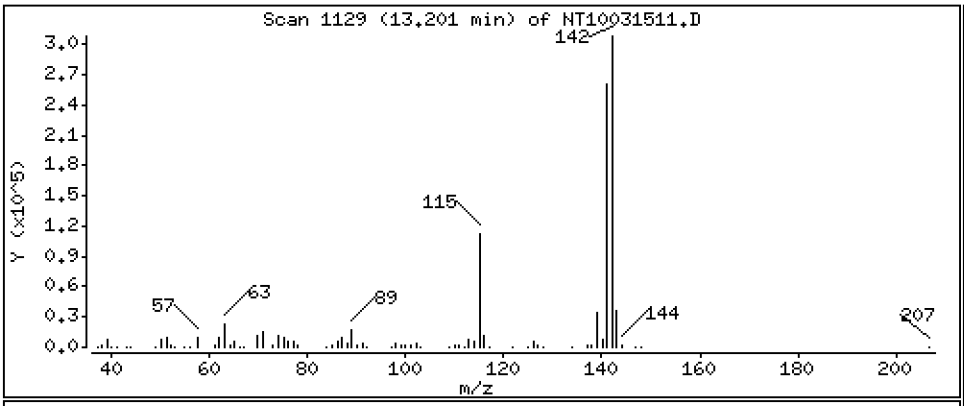
Operator: VTS

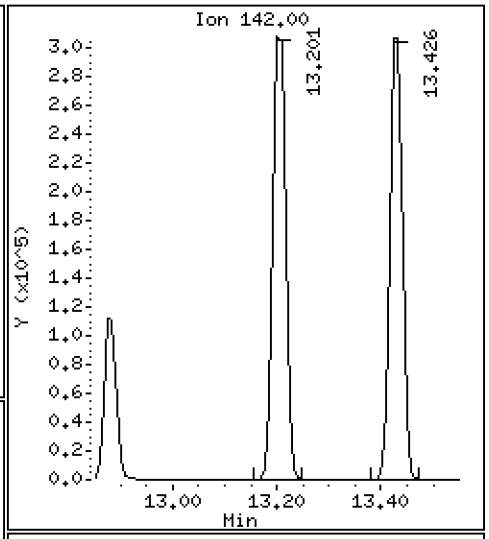
Column phase: ZB-5msi

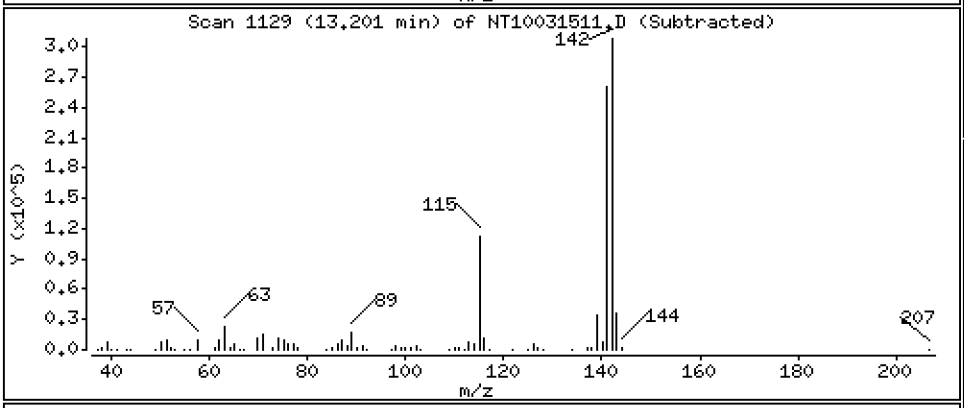
Column diameter: 0.25

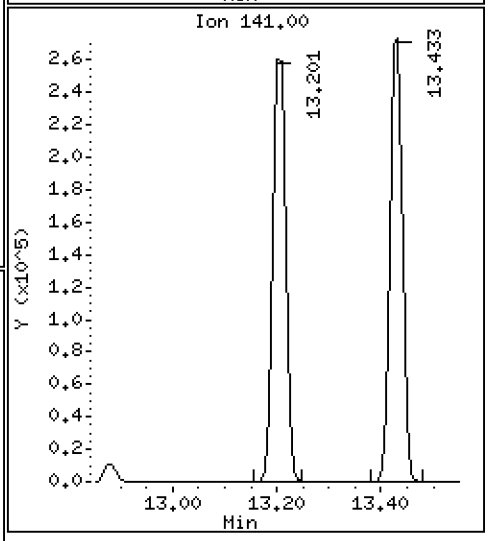
32 2-Methylnaphthalene

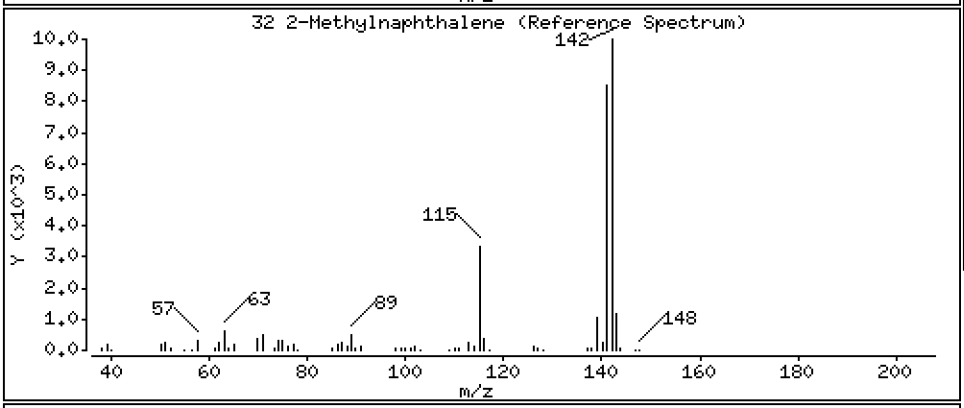
Concentration: 4.596 ug/mL

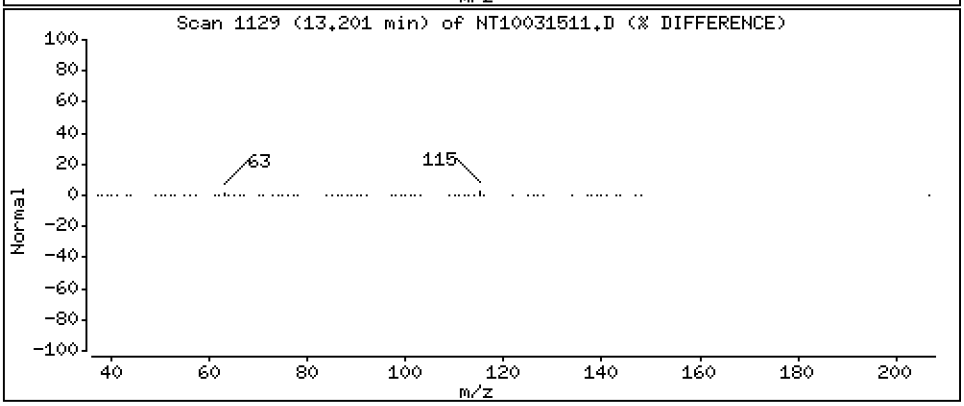












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

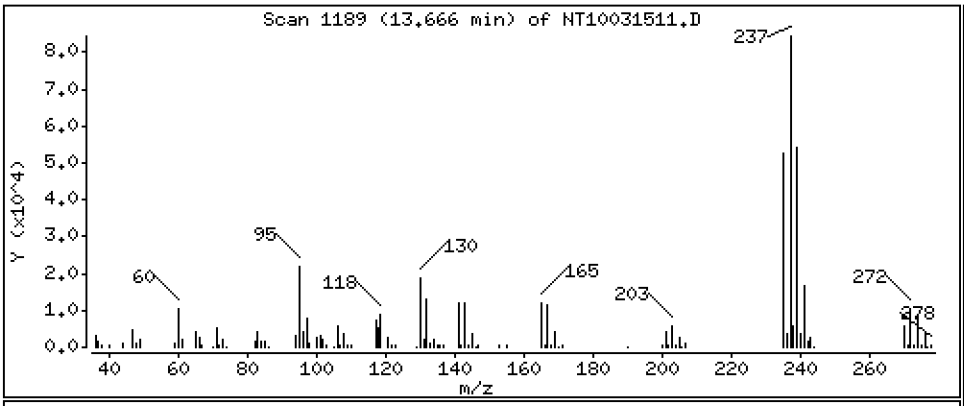
Operator: VTS

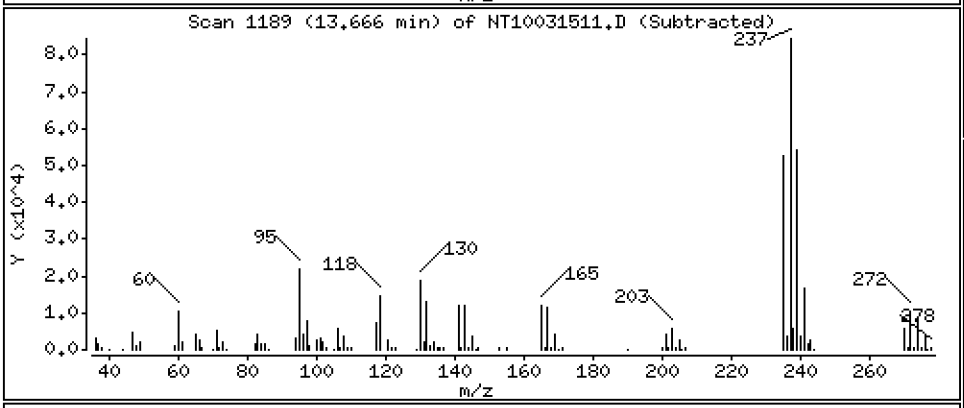
Column phase: ZB-5msi

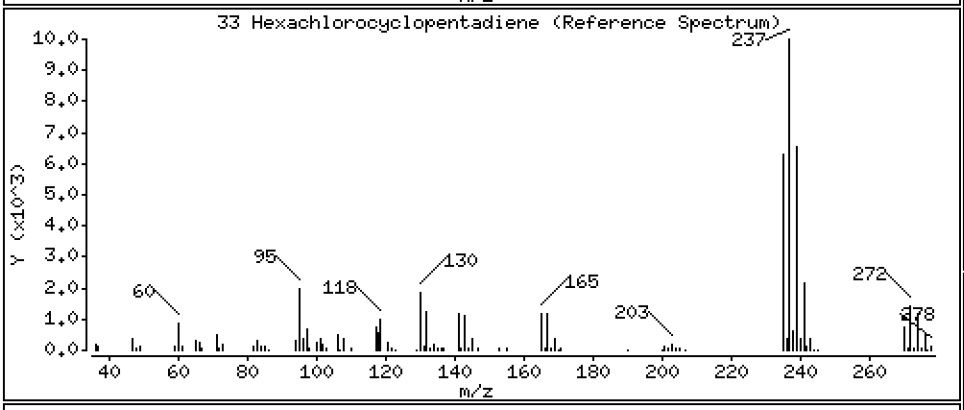
Column diameter: 0.25

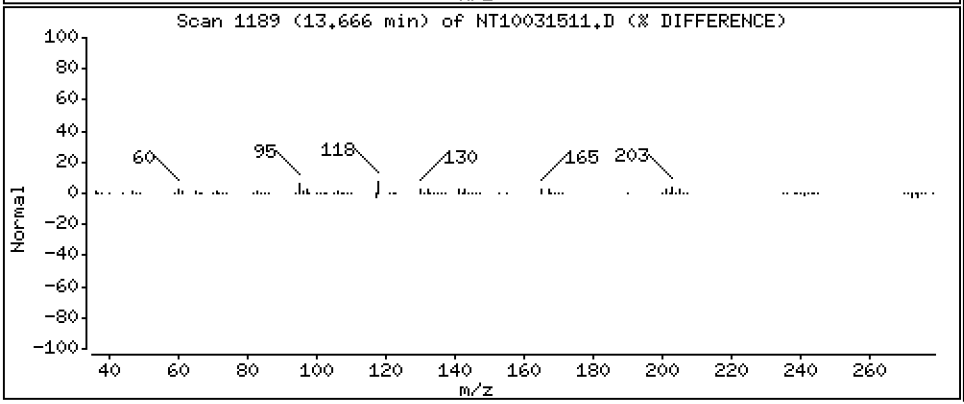
33 Hexachlorocyclopentadiene

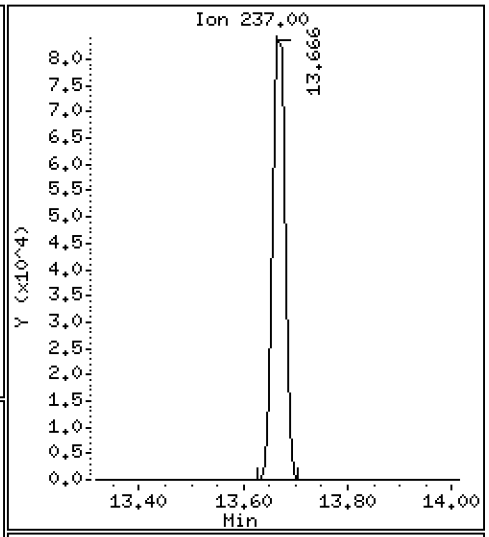
Concentration: 4.729 ug/mL

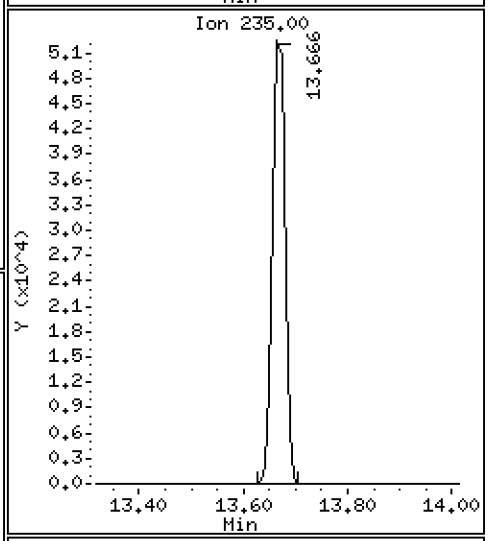


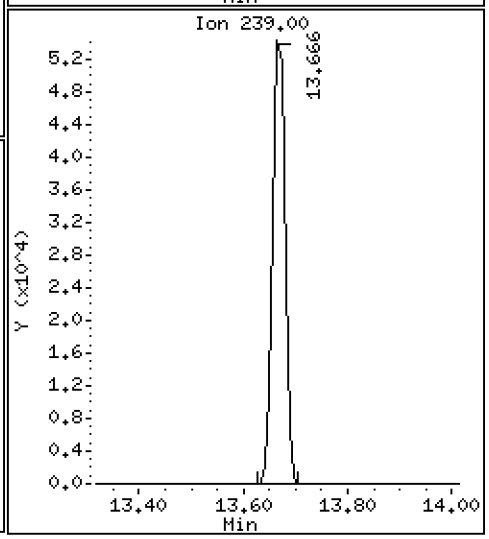












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

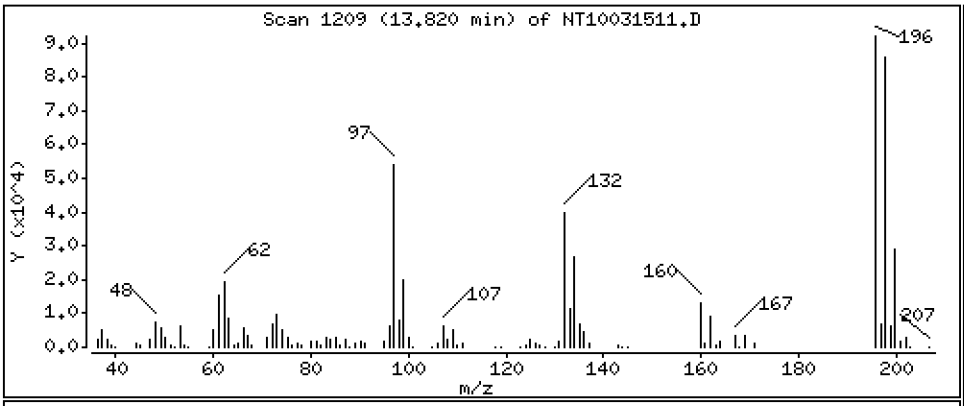
Operator: VTS

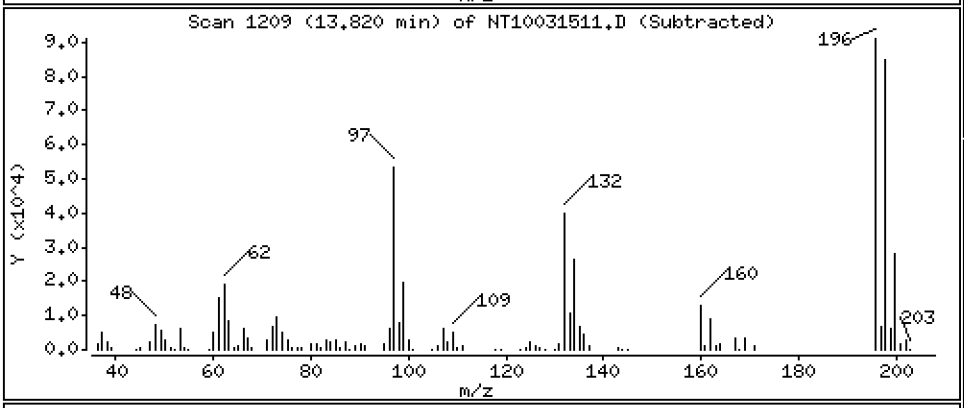
Column phase: ZB-5msi

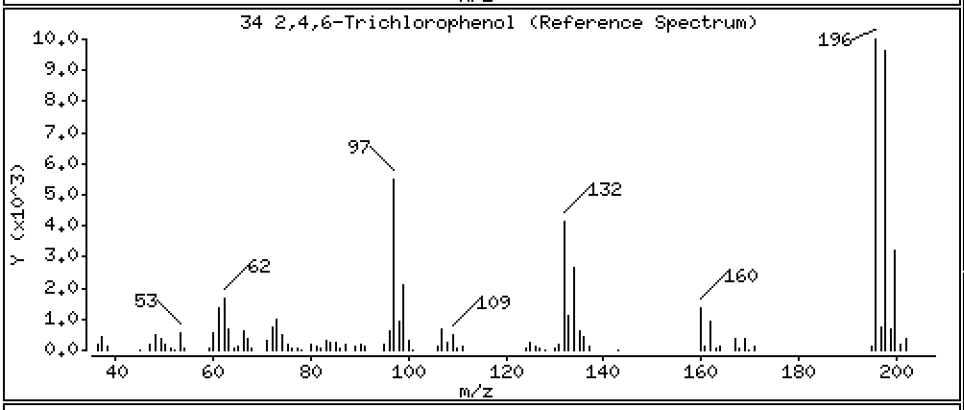
Column diameter: 0.25

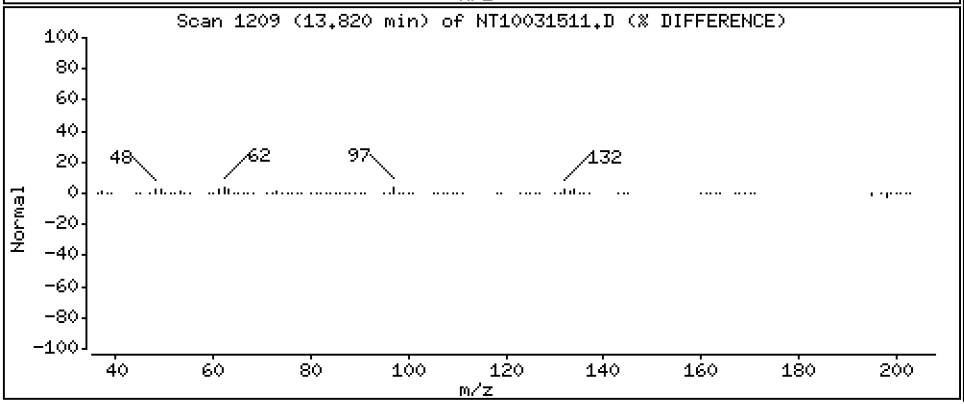
34 2,4,6-Trichlorophenol

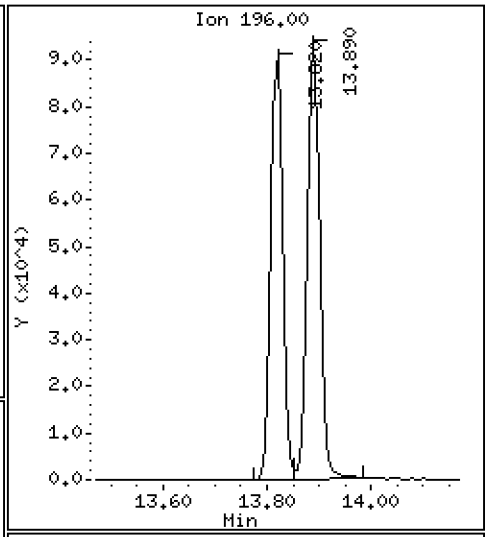
Concentration: 4.596 ug/mL

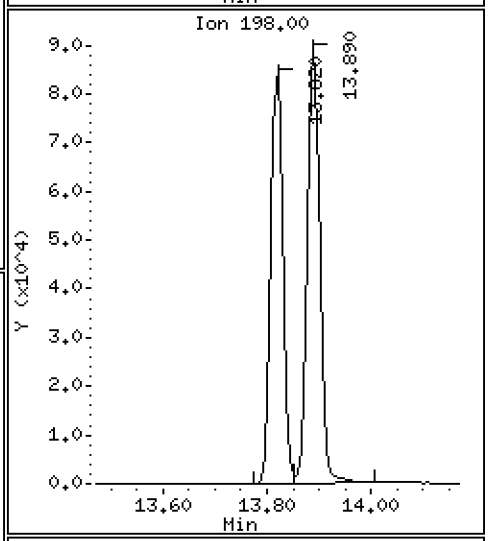


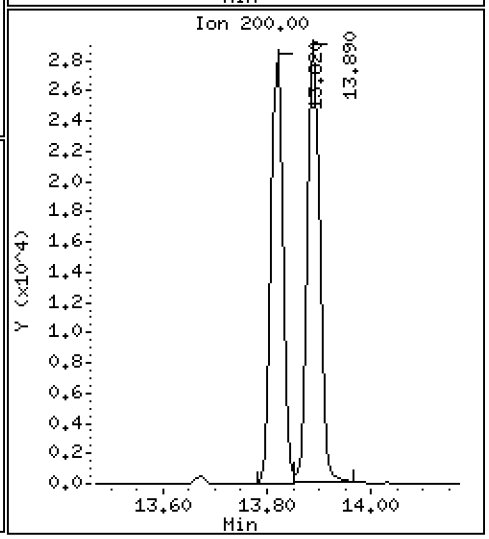












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

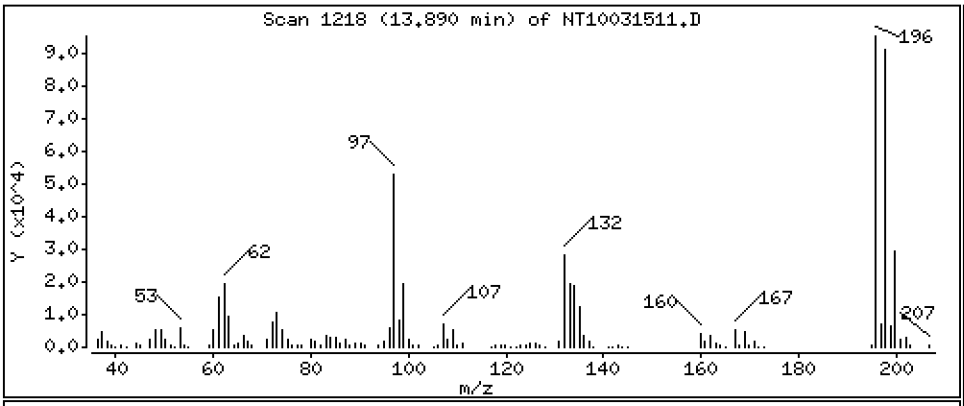
Operator: VTS

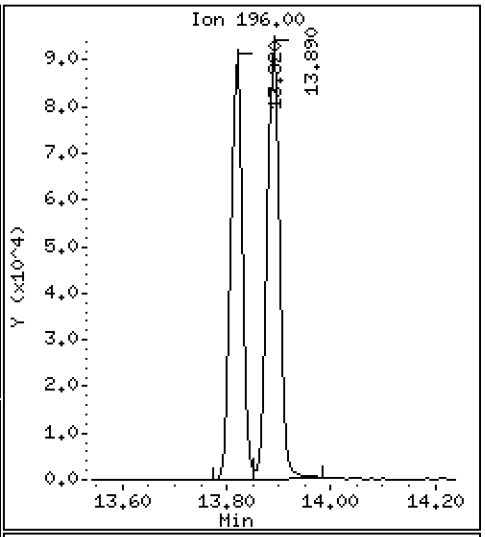
Column phase: ZB-5msi

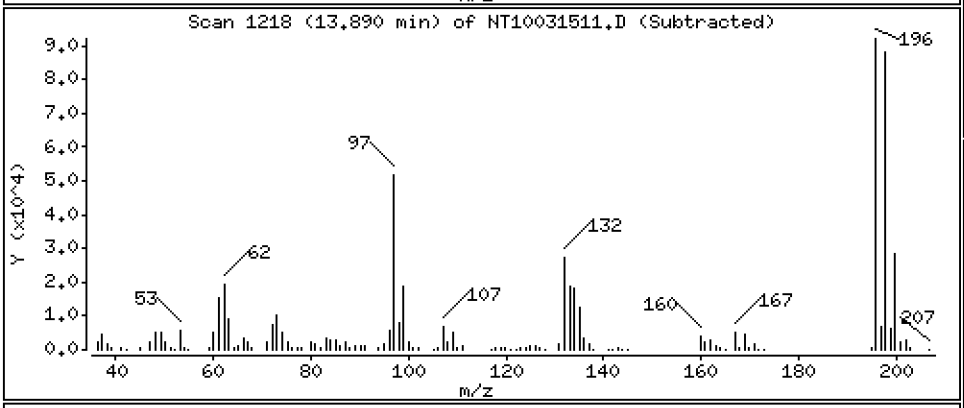
Column diameter: 0.25

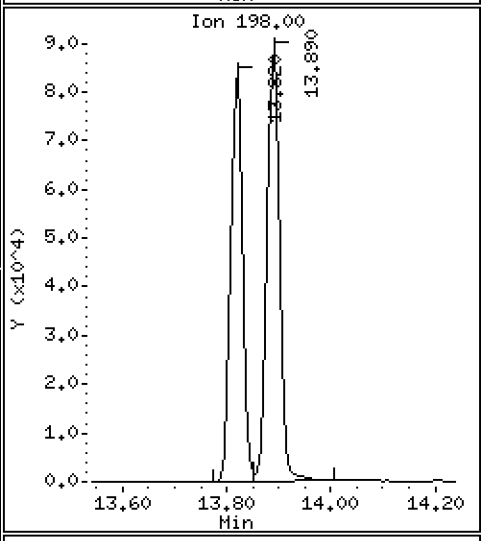
35 2,4,5-Trichlorophenol

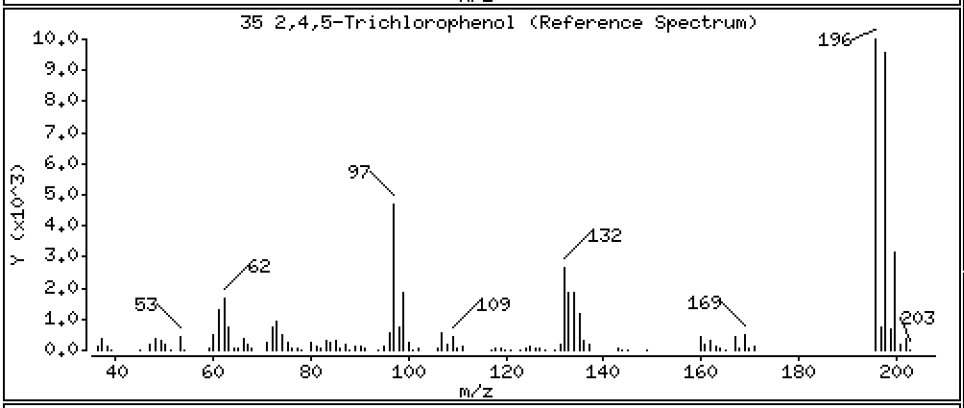
Concentration: 4.409 ug/mL

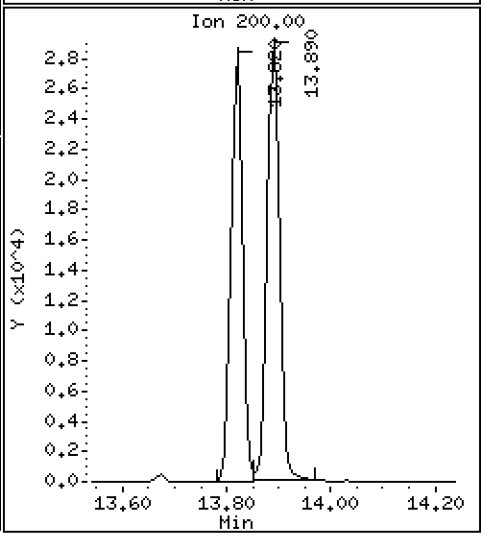


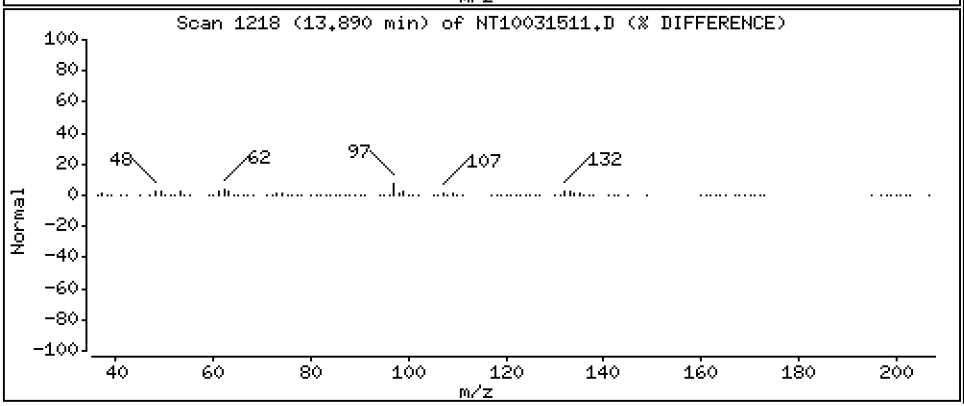












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

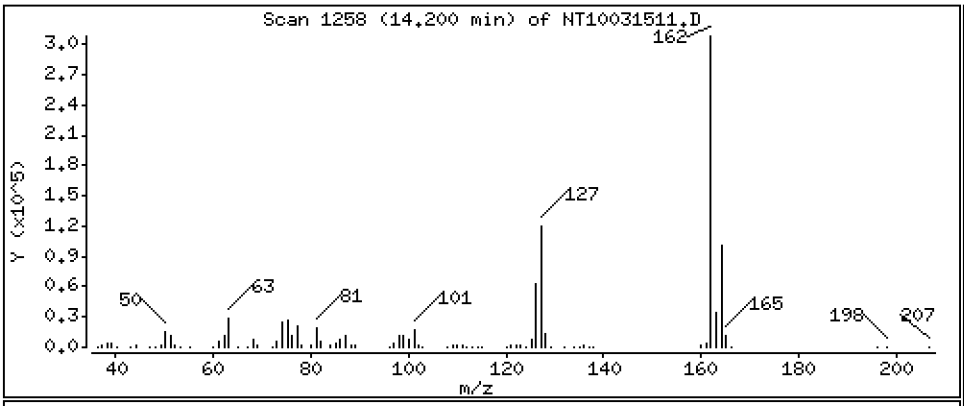
Operator: VTS

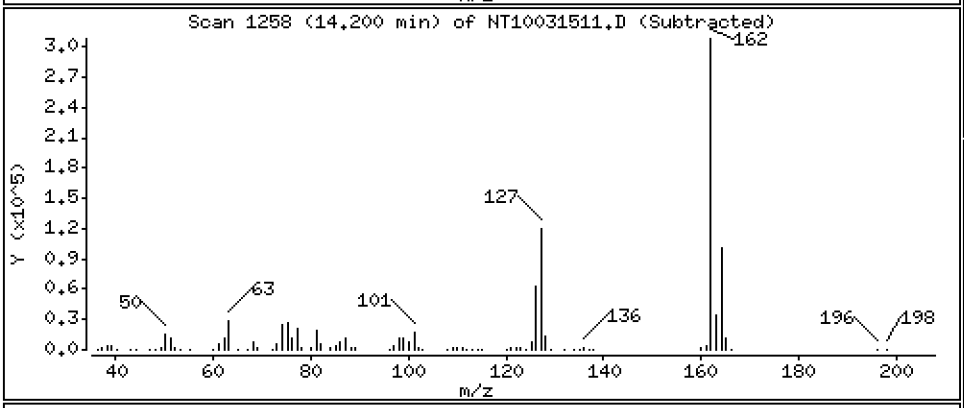
Column phase: ZB-5msi

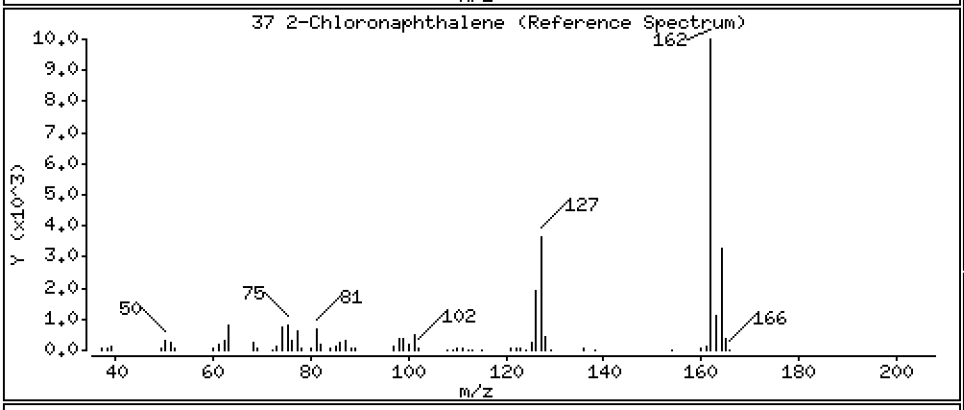
Column diameter: 0.25

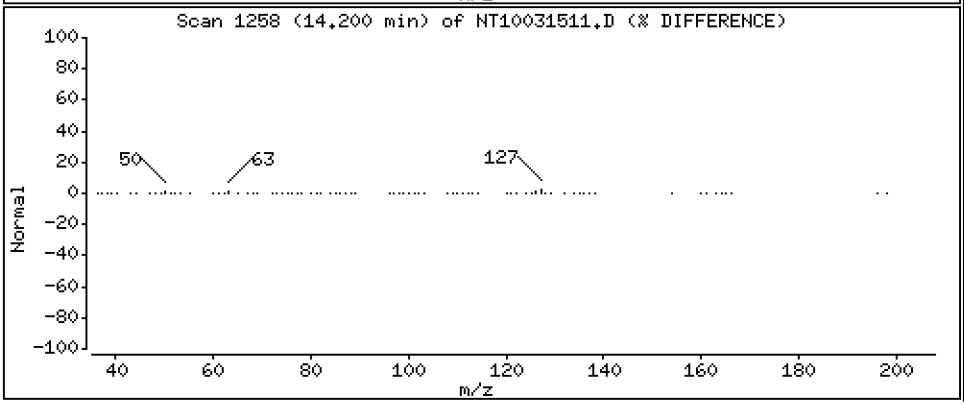
37 2-Chloronaphthalene

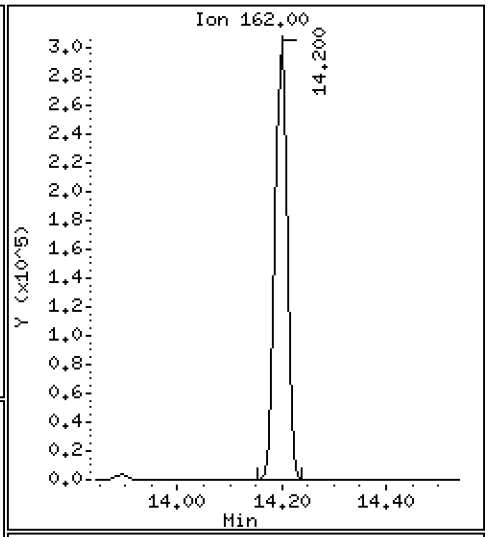
Concentration: 4.796 ug/mL

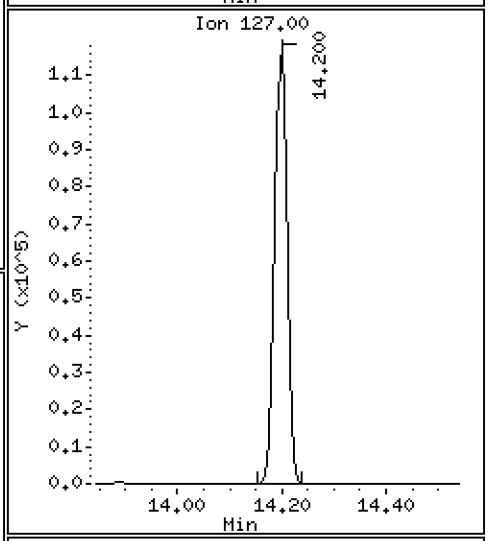


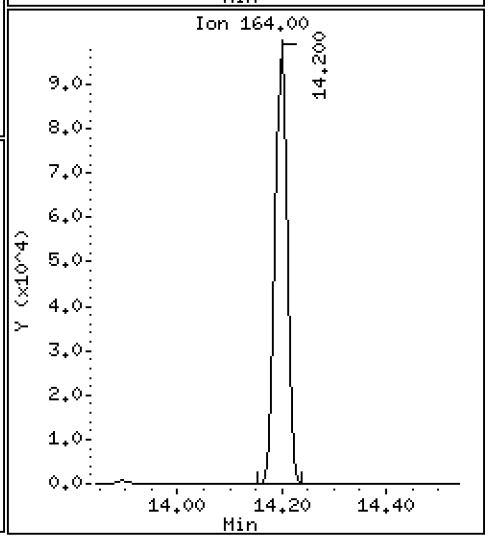












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

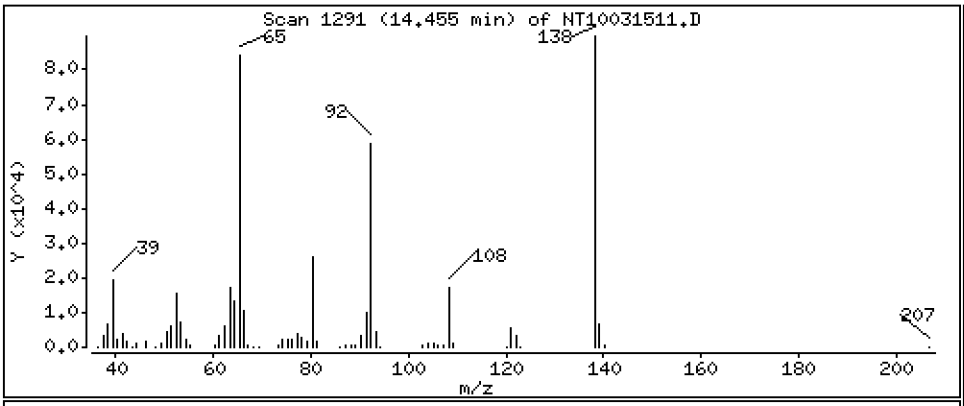
Operator: VTS

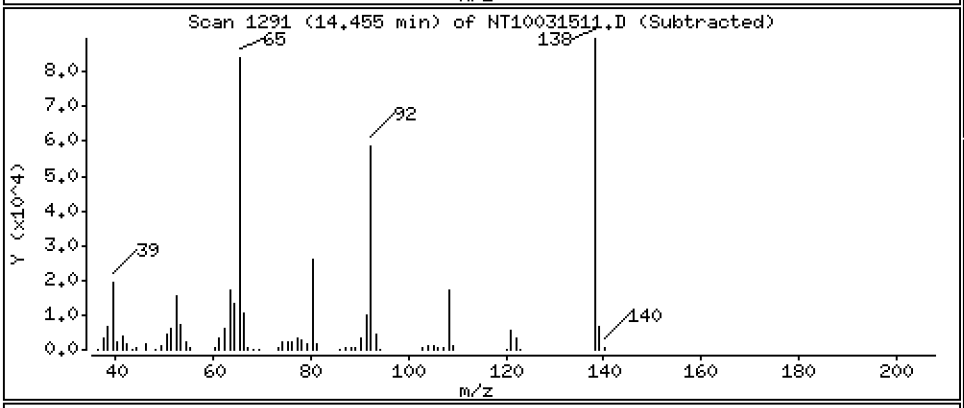
Column phase: ZB-5msi

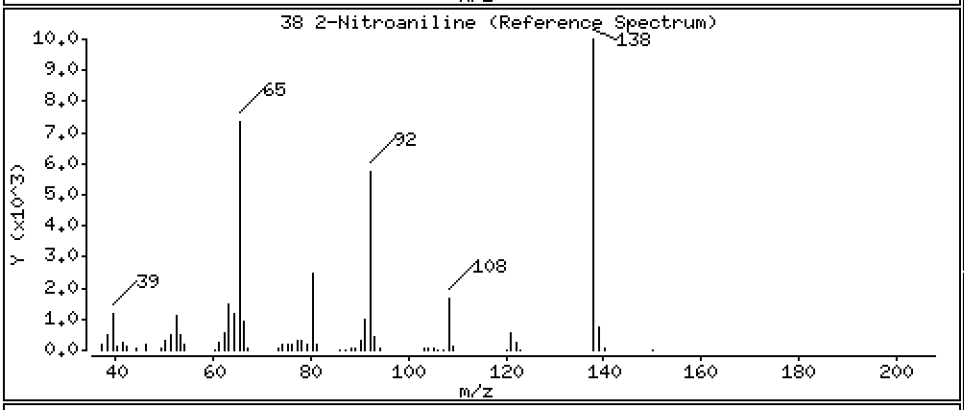
Column diameter: 0.25

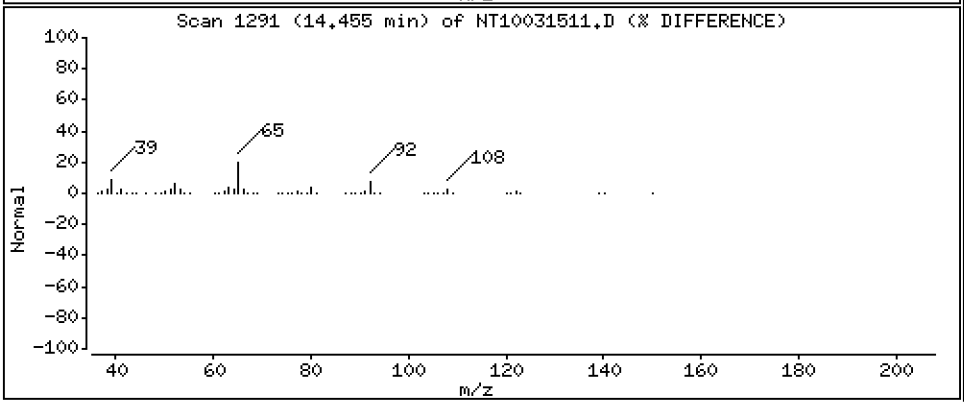
38 2-Nitroaniline

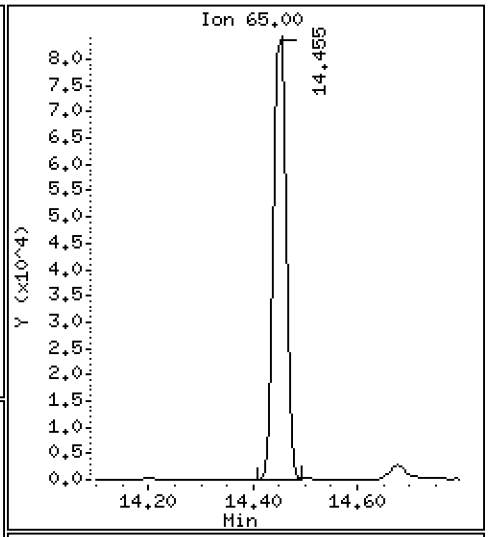
Concentration: 4.911 ug/mL

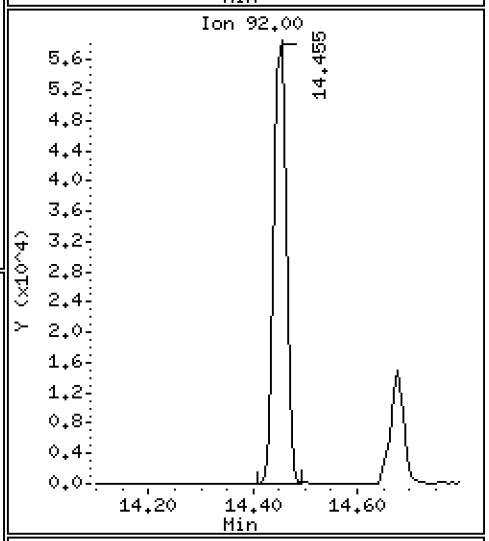


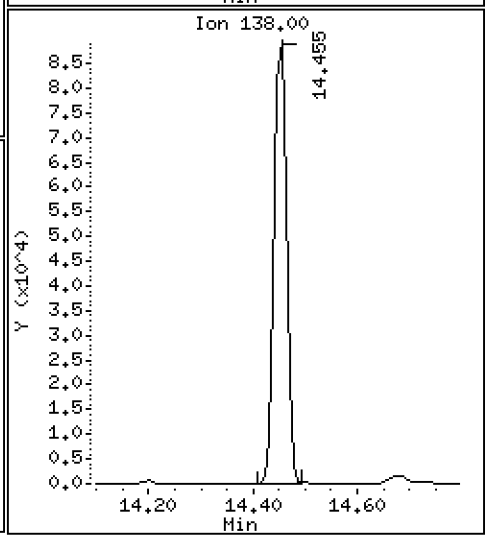












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

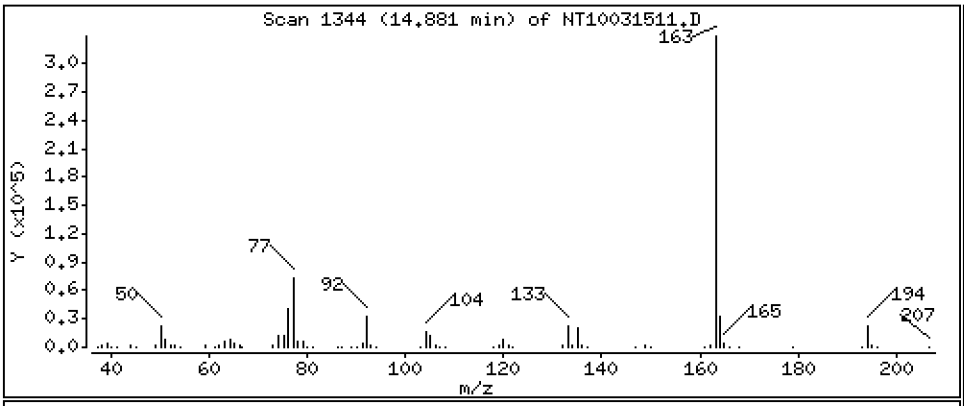
Operator: VTS

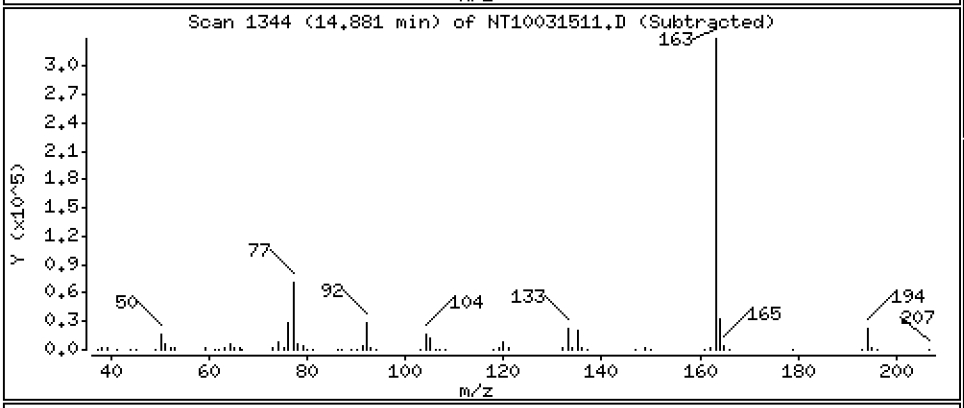
Column phase: ZB-5msi

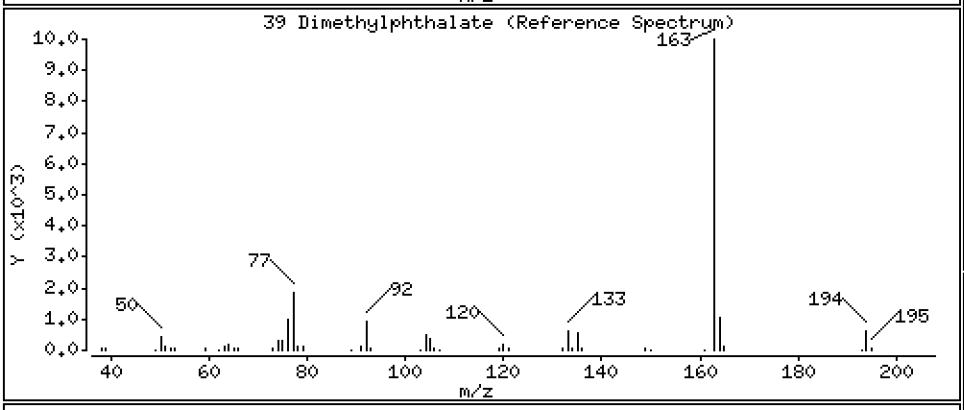
Column diameter: 0.25

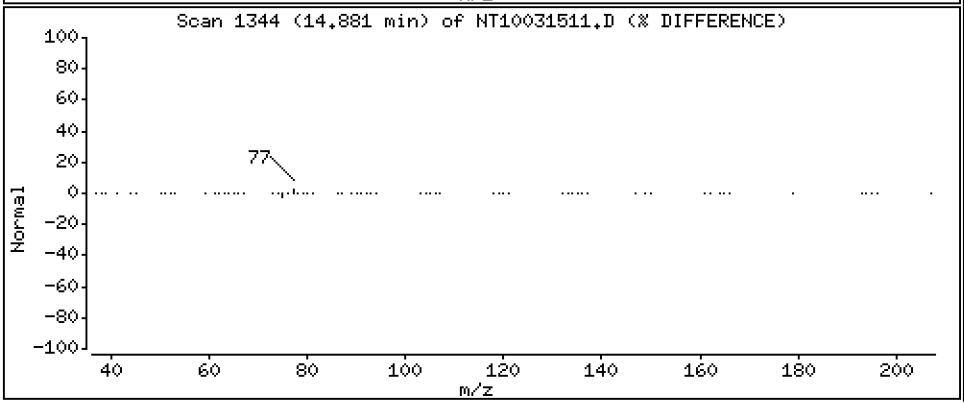
39 Dimethylphthalate

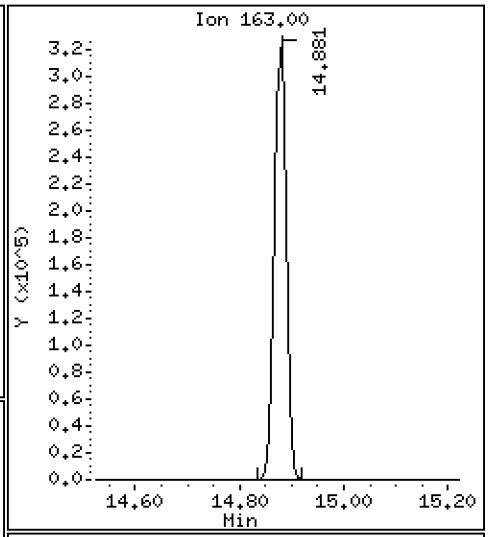
Concentration: 4.937 ug/mL

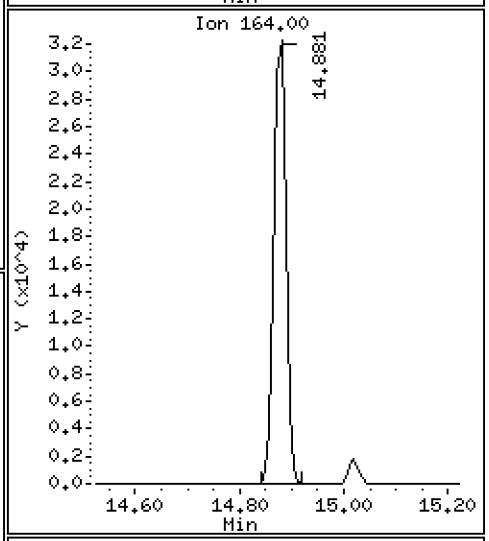


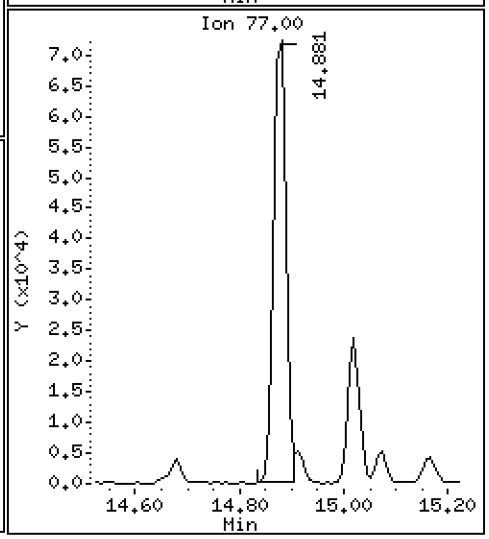












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

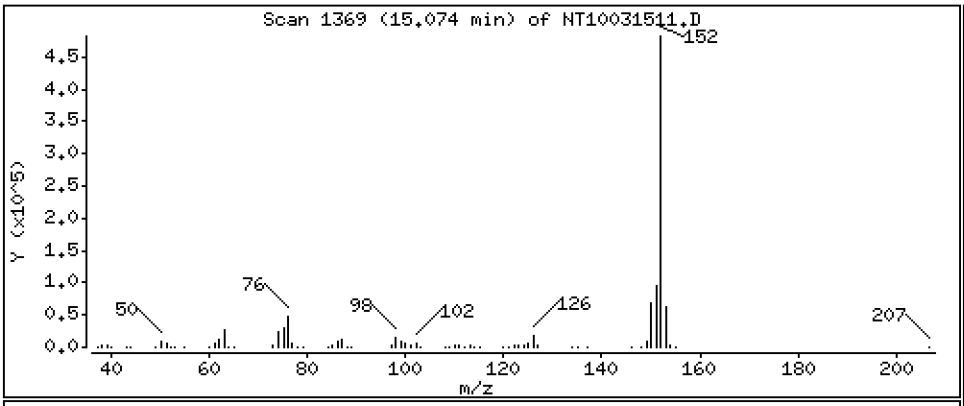
Operator: VTS

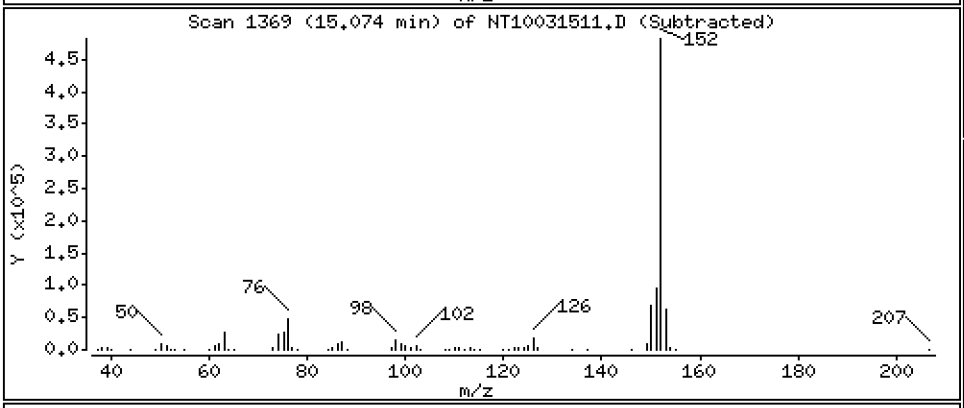
Column phase: ZB-5msi

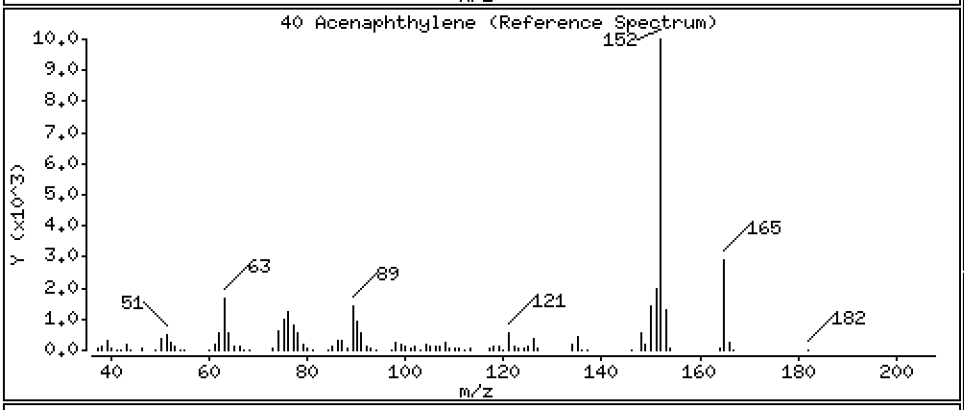
Column diameter: 0.25

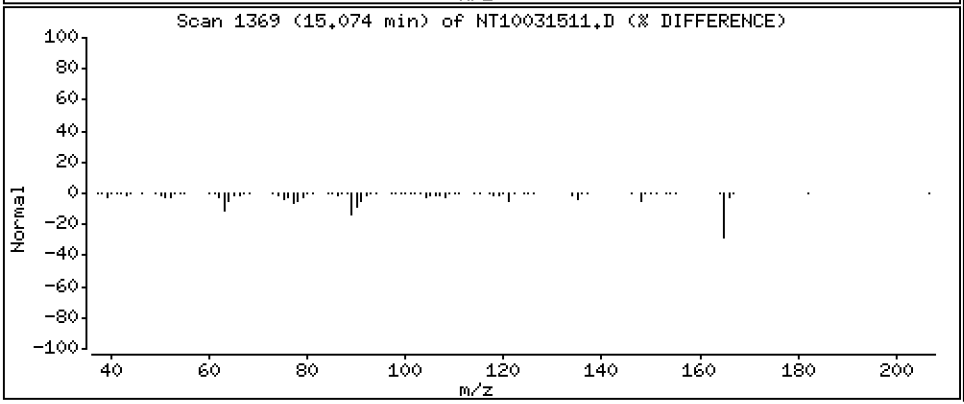
40 Acenaphthylene

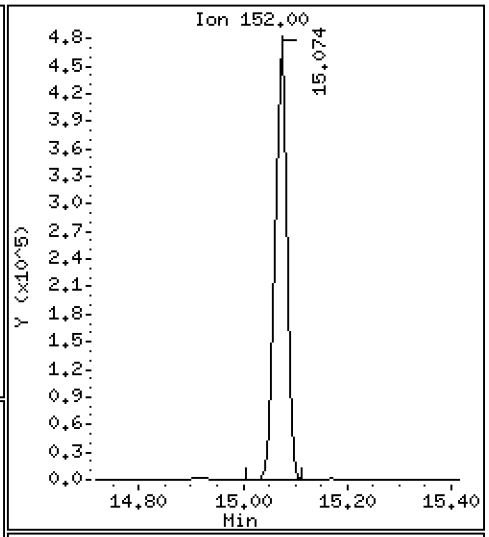
Concentration: 4.805 ug/mL

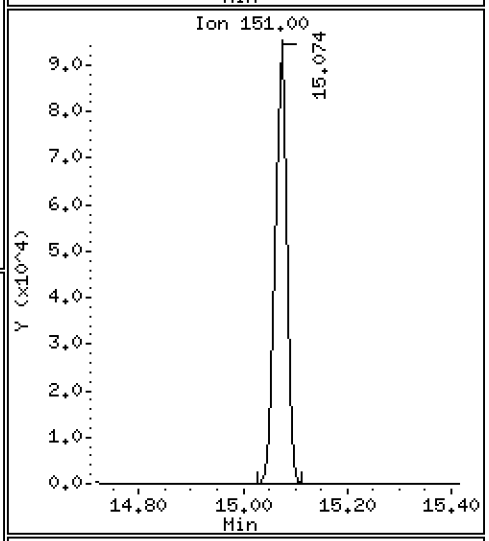


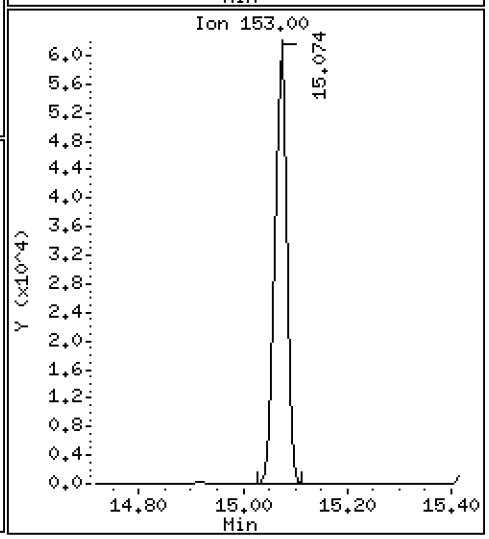












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

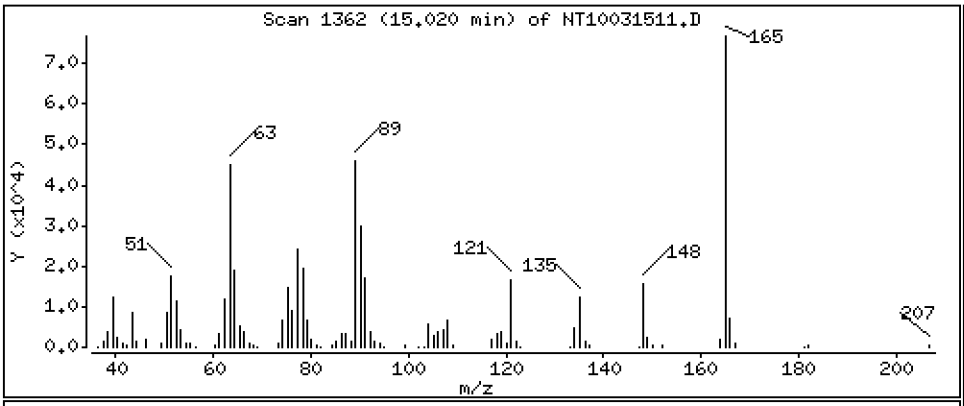
Operator: VTS

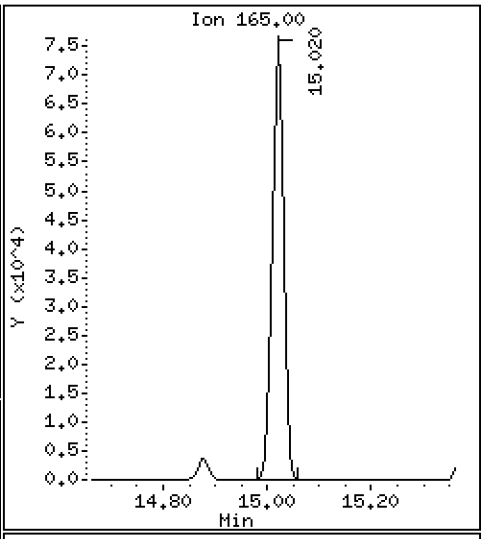
Column phase: ZB-5msi

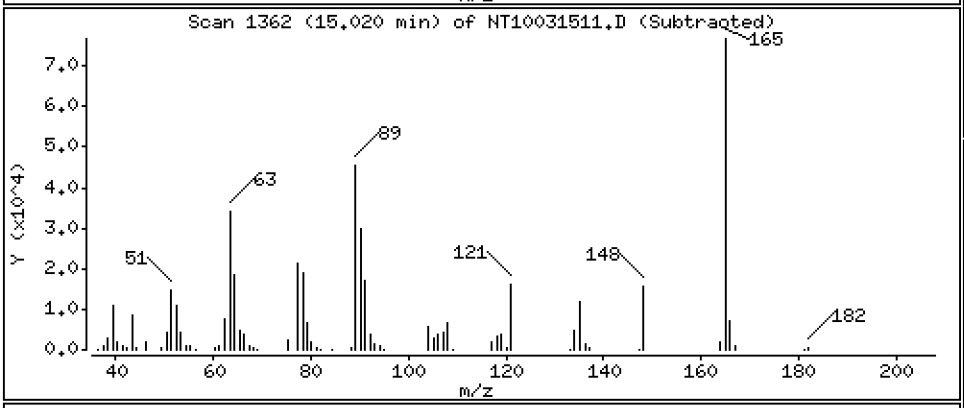
Column diameter: 0.25

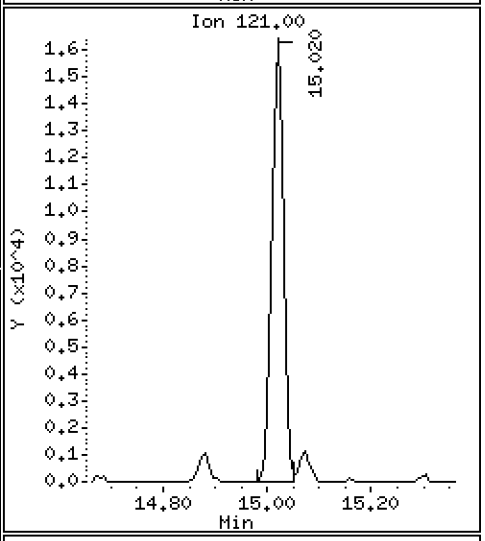
41 2,6-Dinitrotoluene

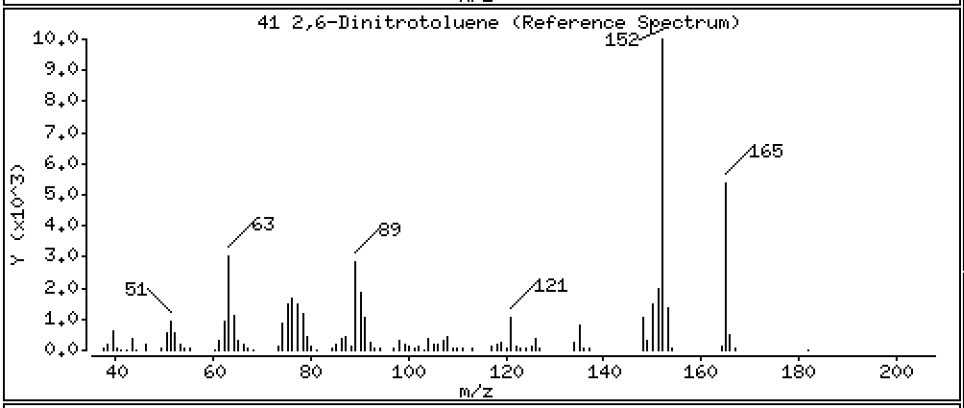
Concentration: 5.298 ug/mL

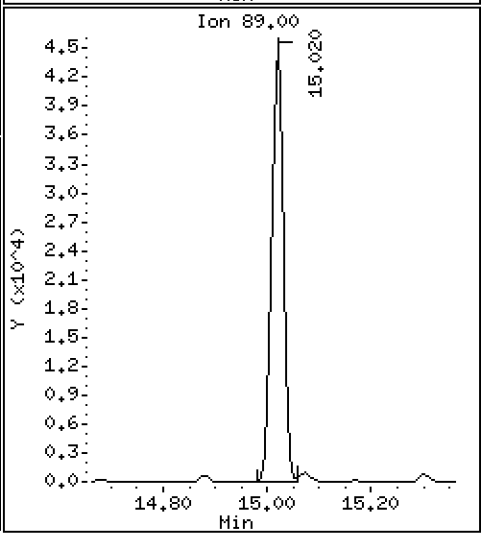


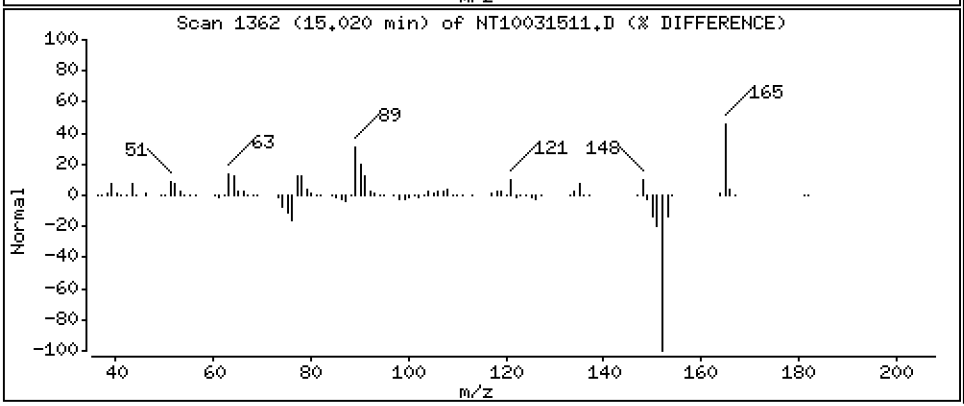












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

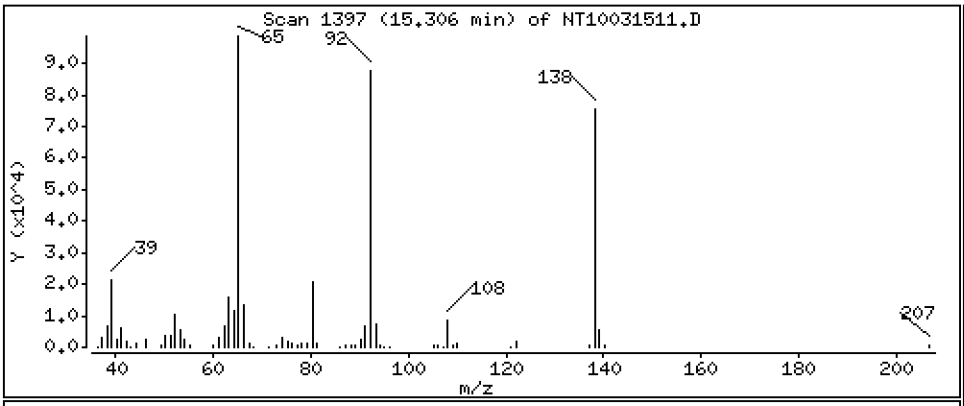
Operator: VTS

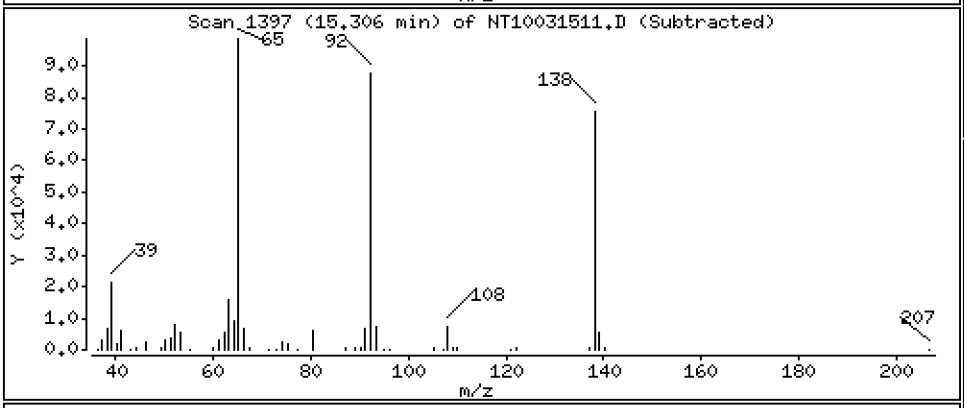
Column phase: ZB-5msi

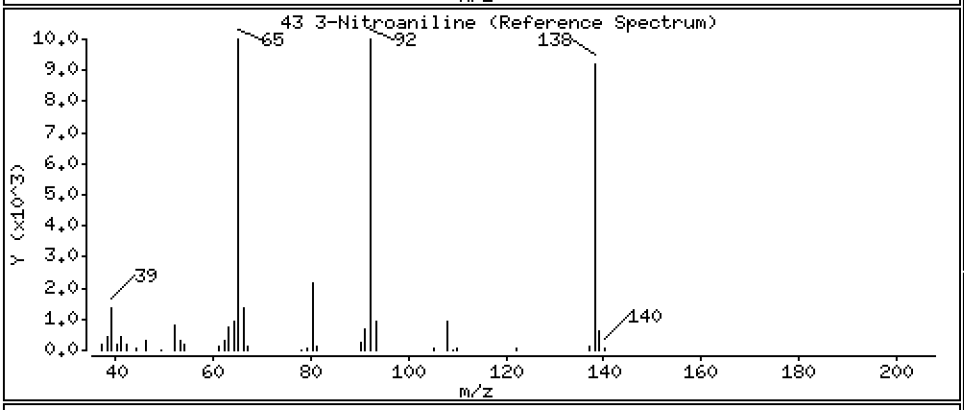
Column diameter: 0.25

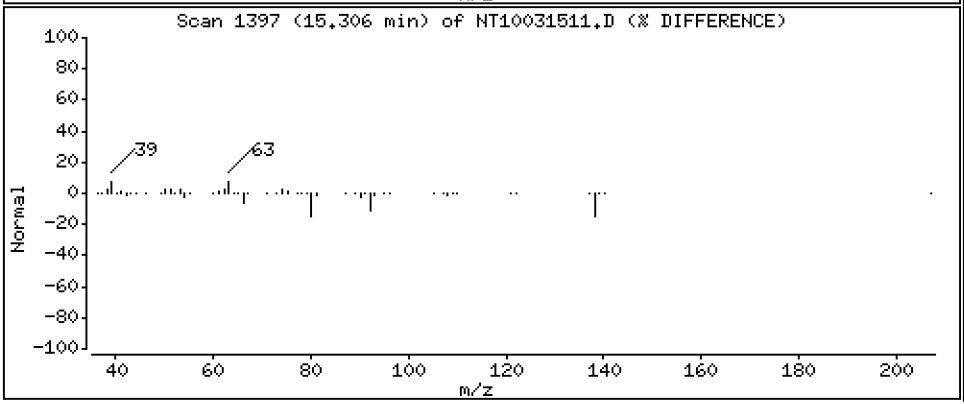
43 3-Nitroaniline

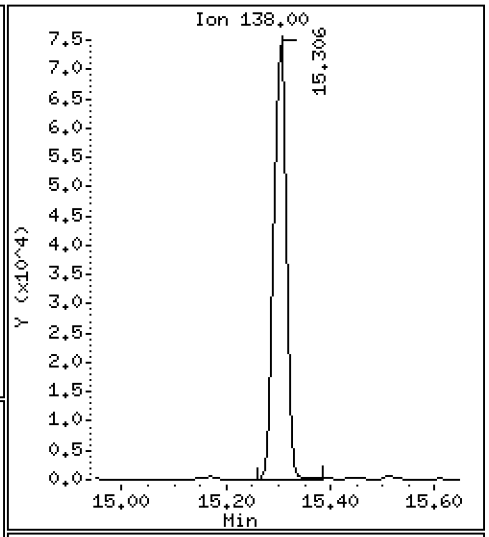
Concentration: 5.014 ug/mL

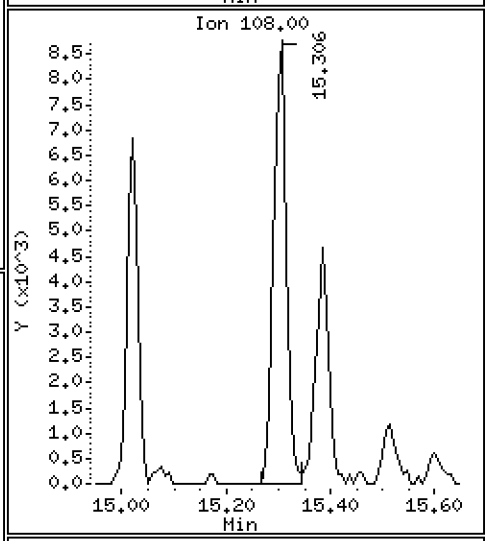


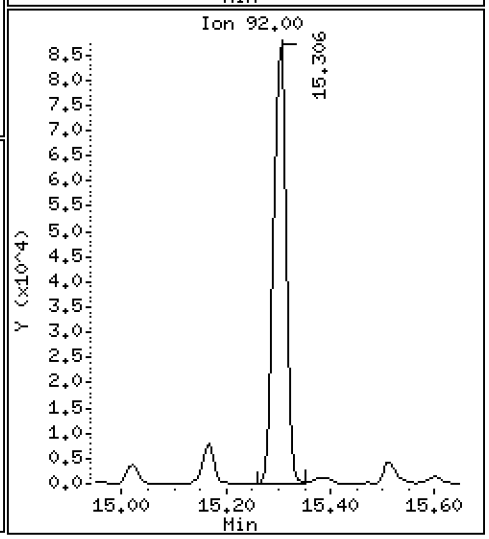












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

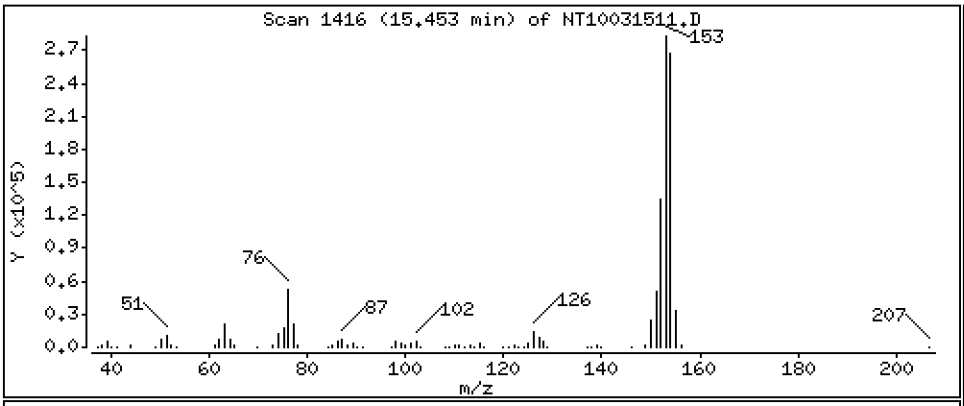
Operator: VTS

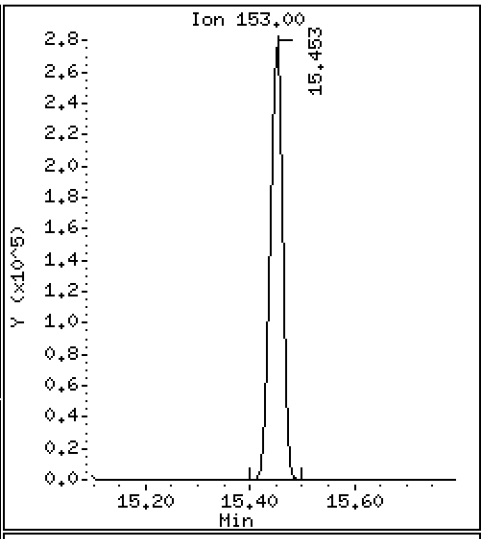
Column phase: ZB-5msi

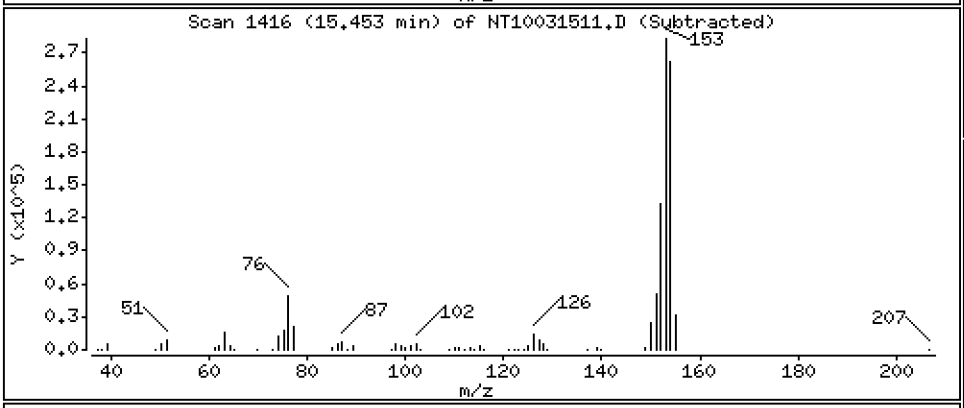
Column diameter: 0.25

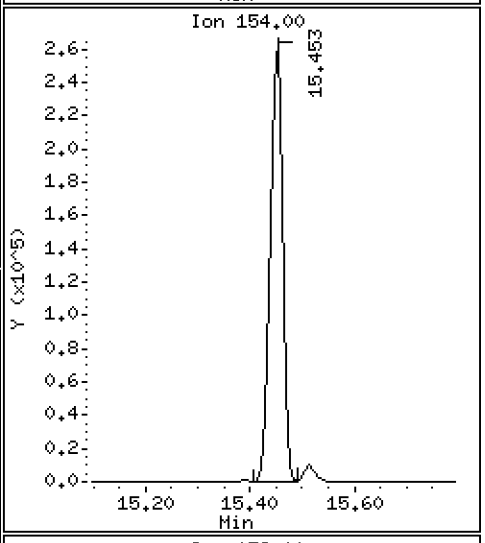
44 Acenaphthene

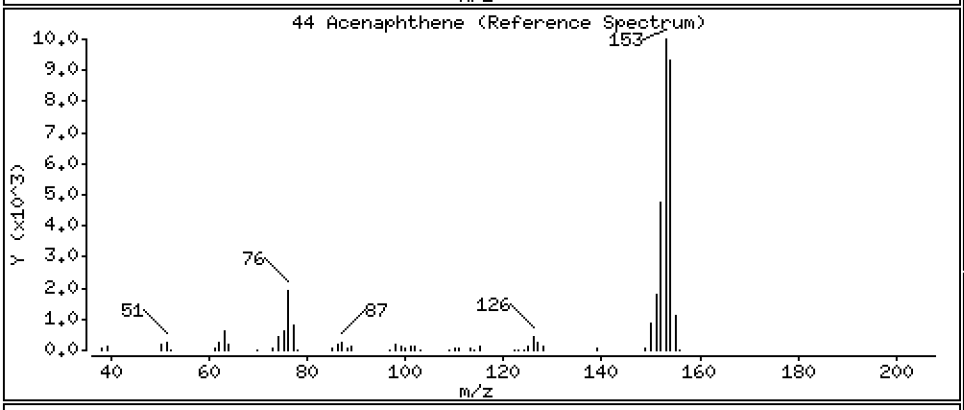
Concentration: 4.776 ug/mL

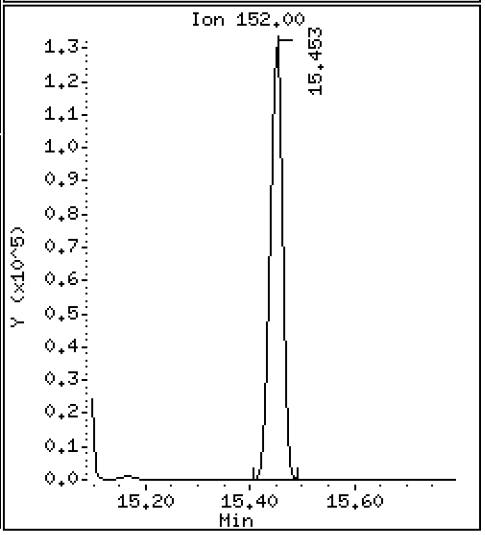


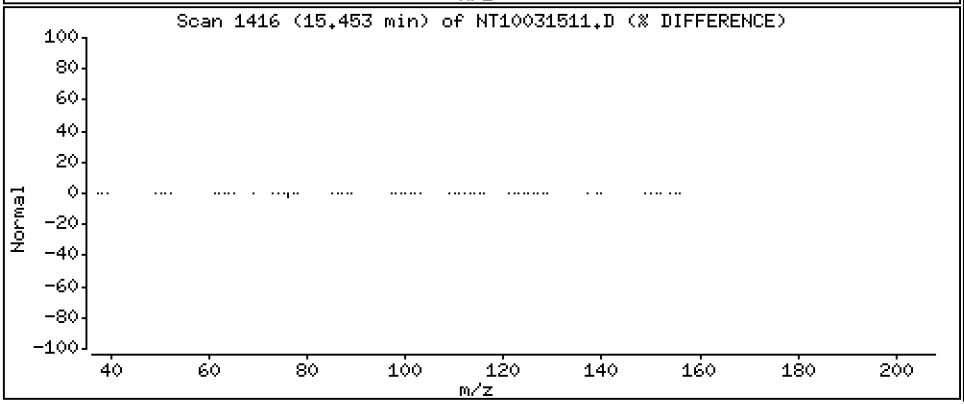












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

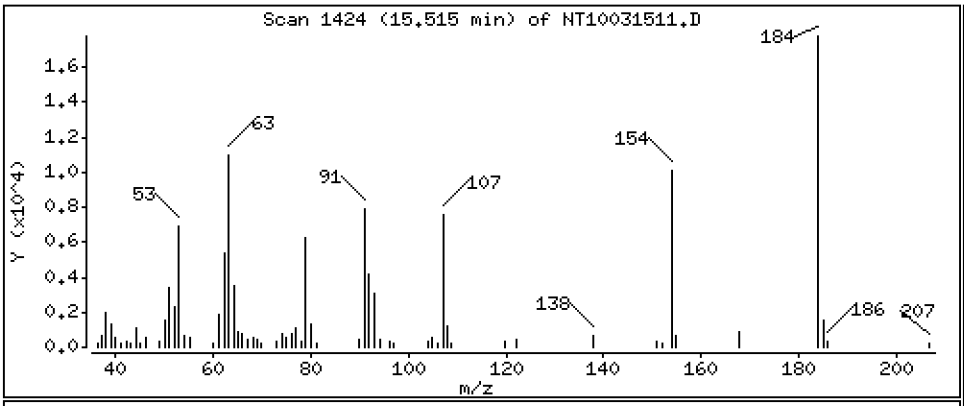
Operator: VTS

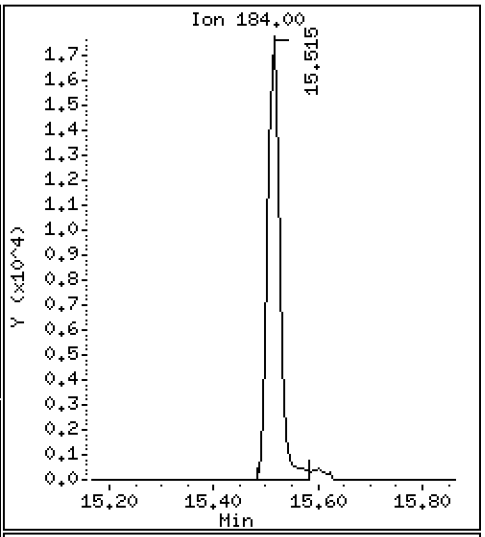
Column phase: ZB-5msi

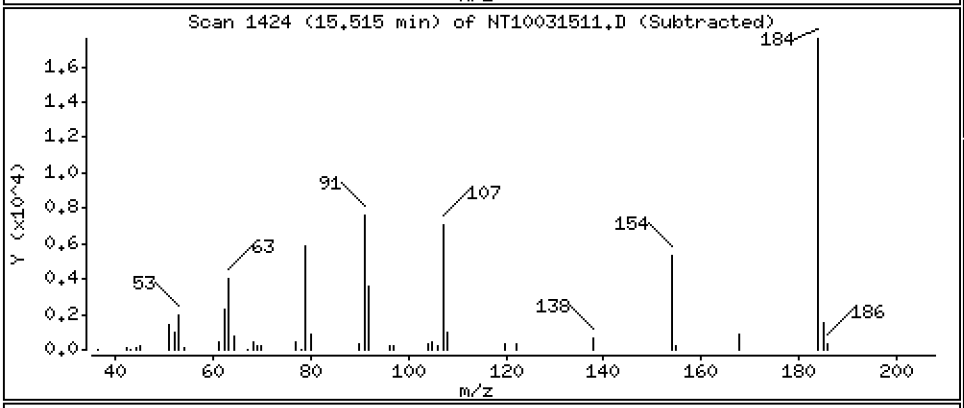
Column diameter: 0.25

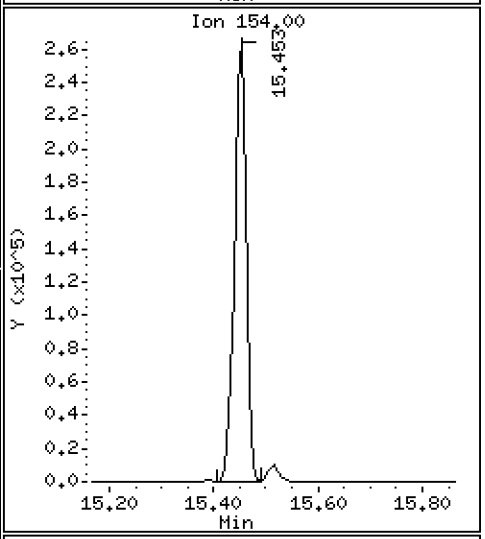
45 2,4-Dinitrophenol

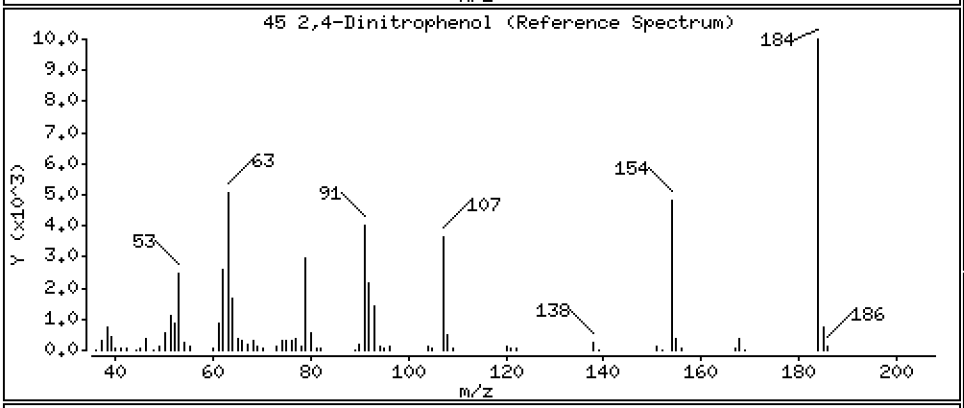
Concentration: 2.124 ug/mL

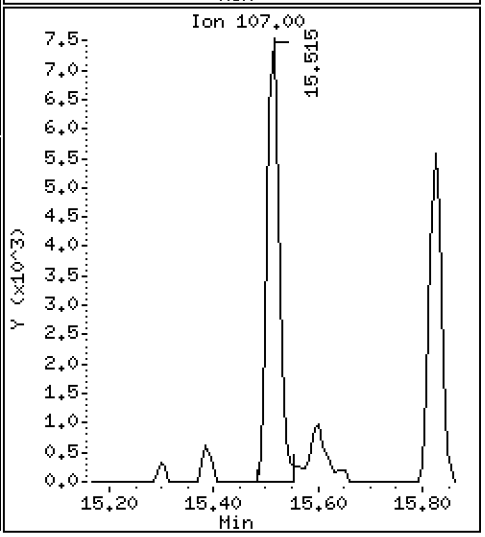


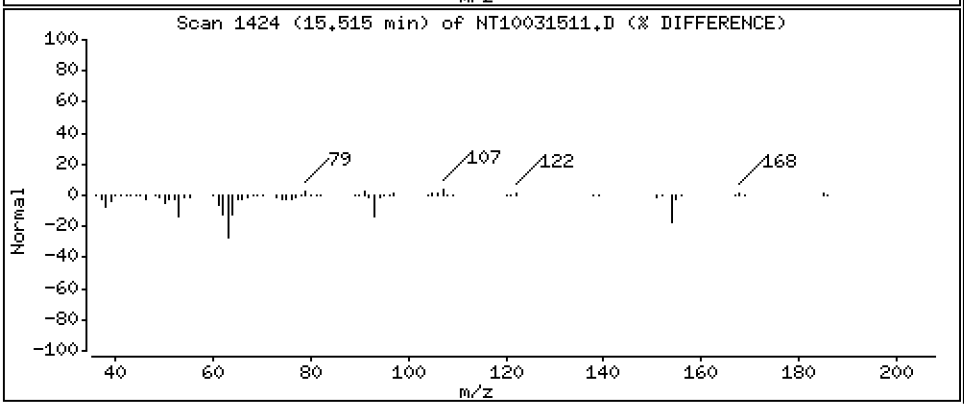












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

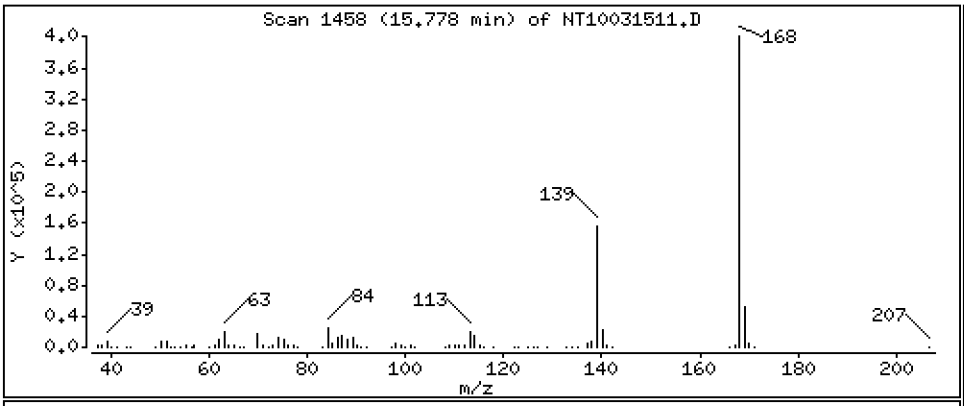
Operator: VTS

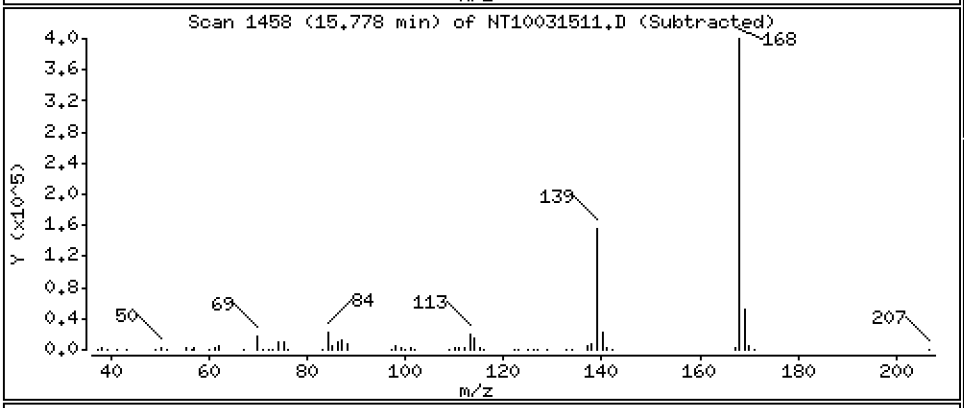
Column phase: ZB-5msi

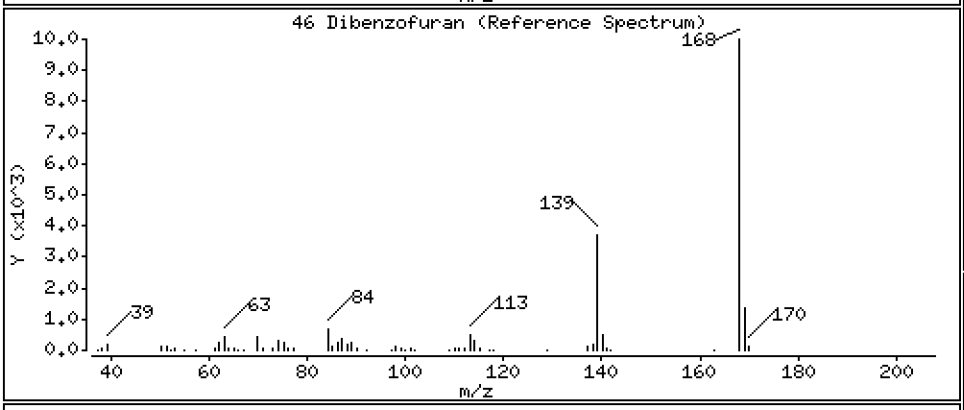
Column diameter: 0.25

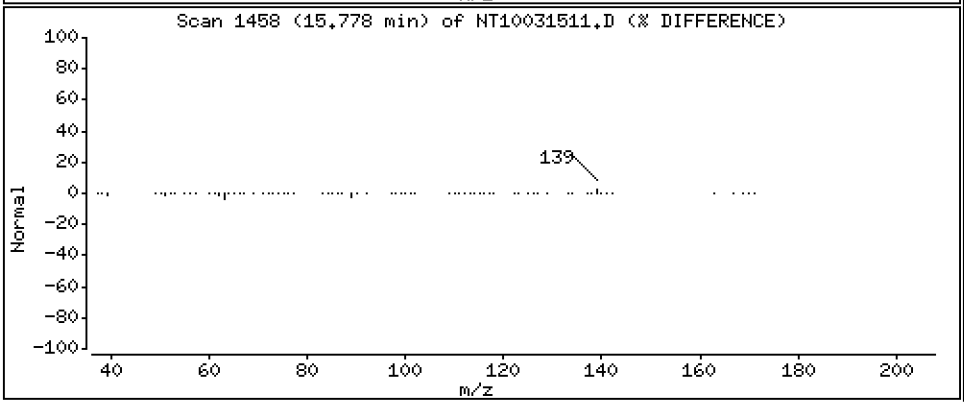
46 Dibenzofuran

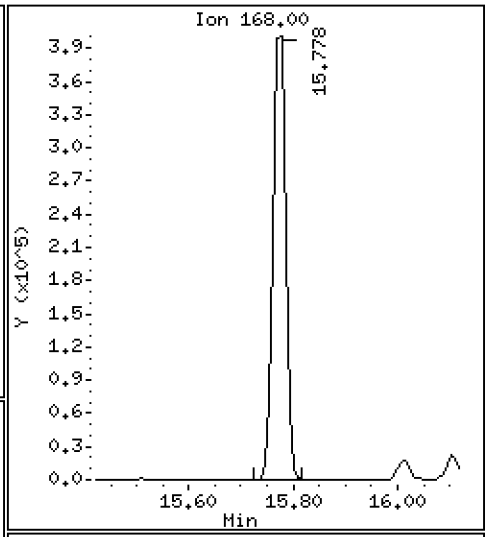
Concentration: 4.648 ug/mL

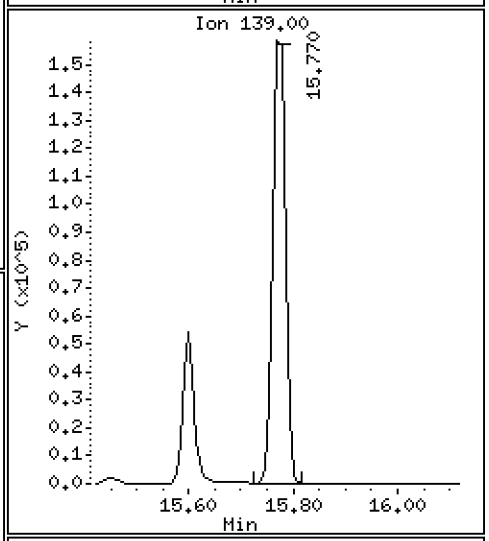


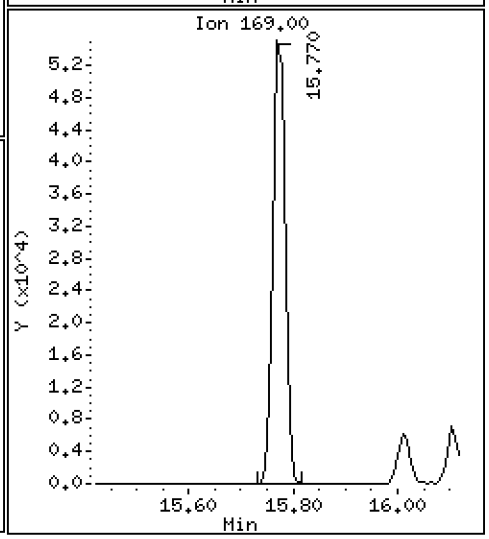












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

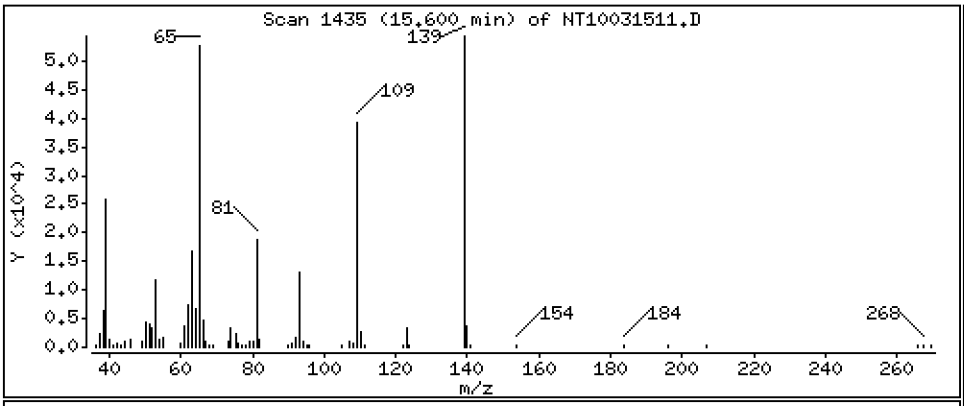
Operator: VTS

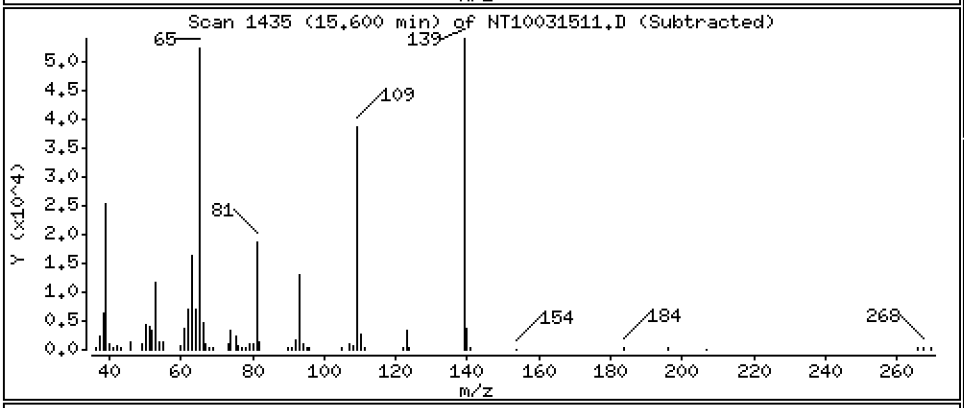
Column phase: ZB-5msi

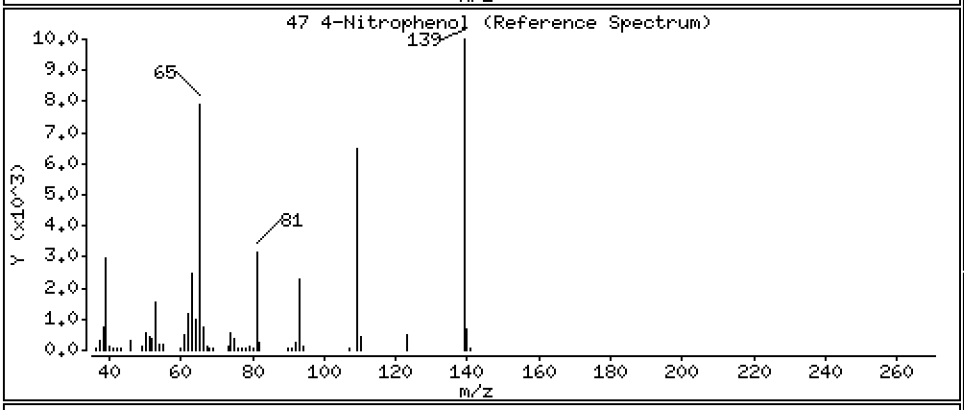
Column diameter: 0.25

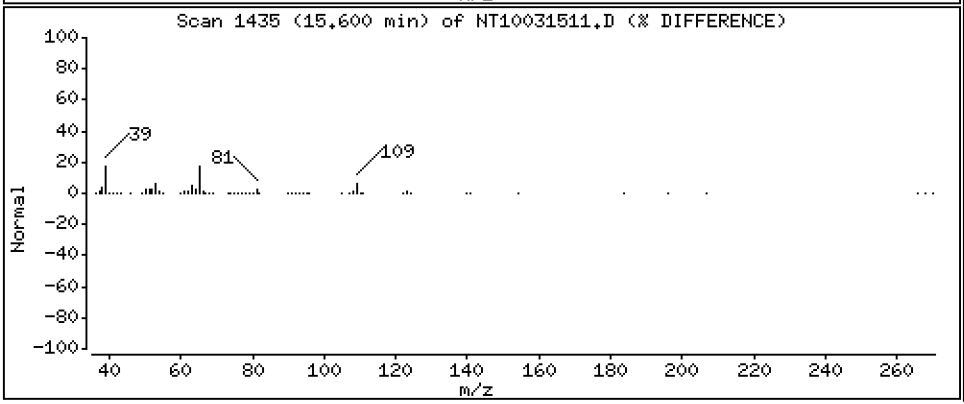
47 4-Nitrophenol

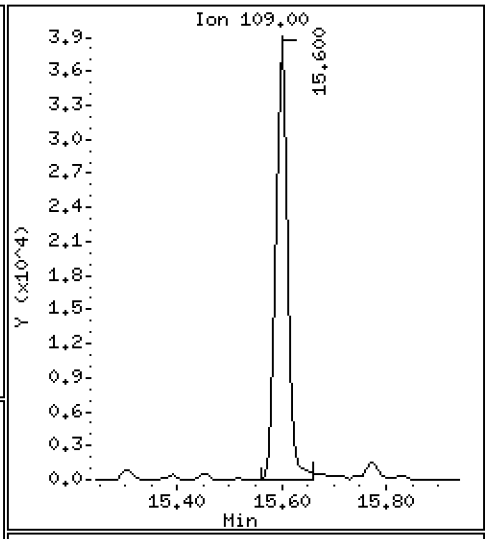
Concentration: 3.966 ug/mL

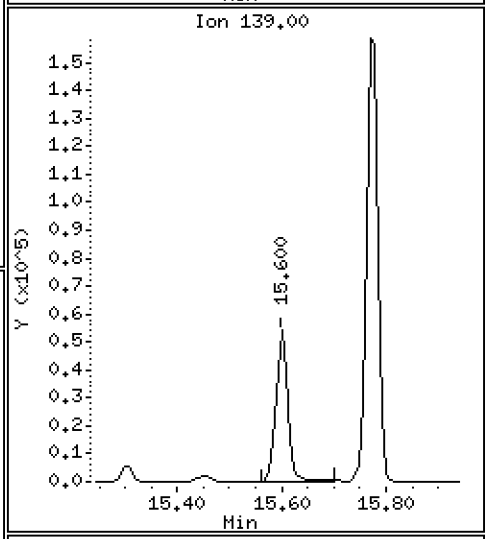


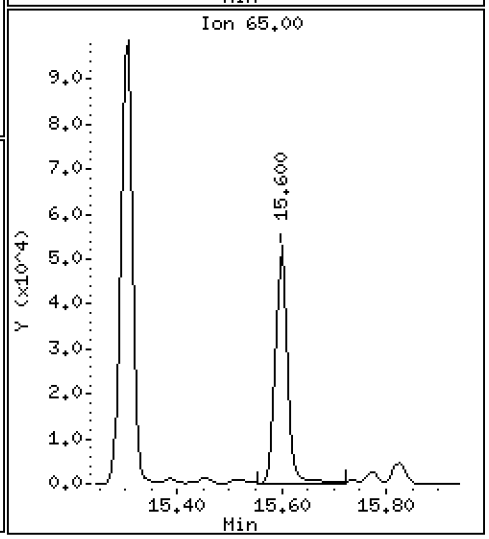












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

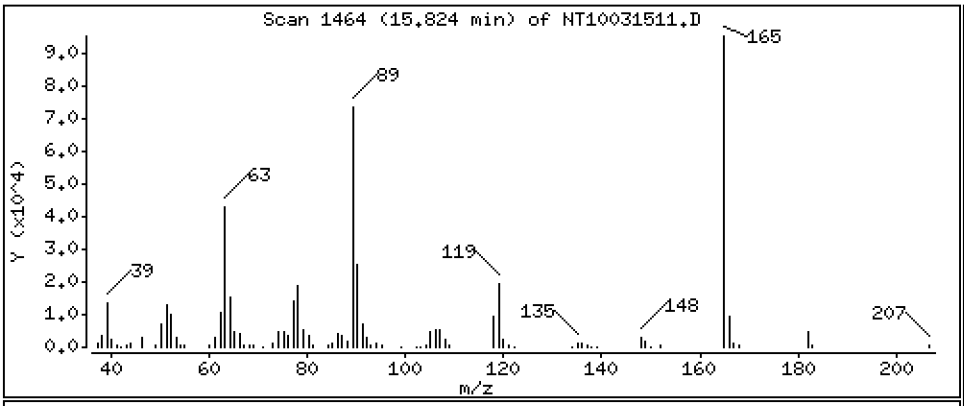
Operator: VTS

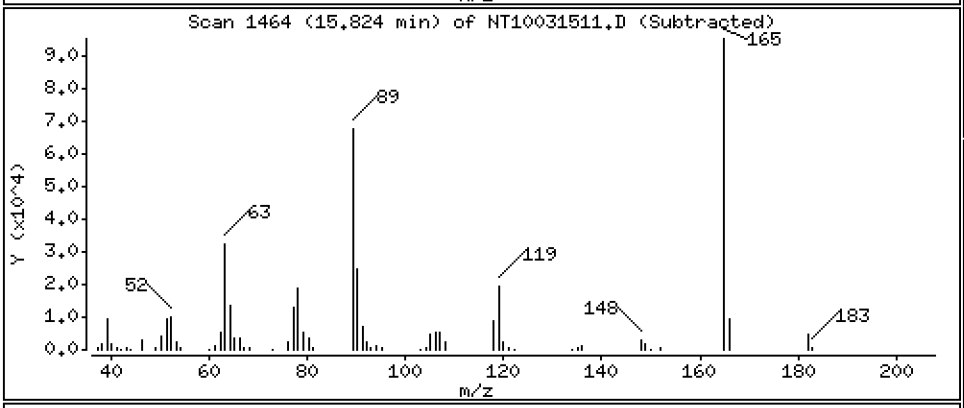
Column phase: ZB-5msi

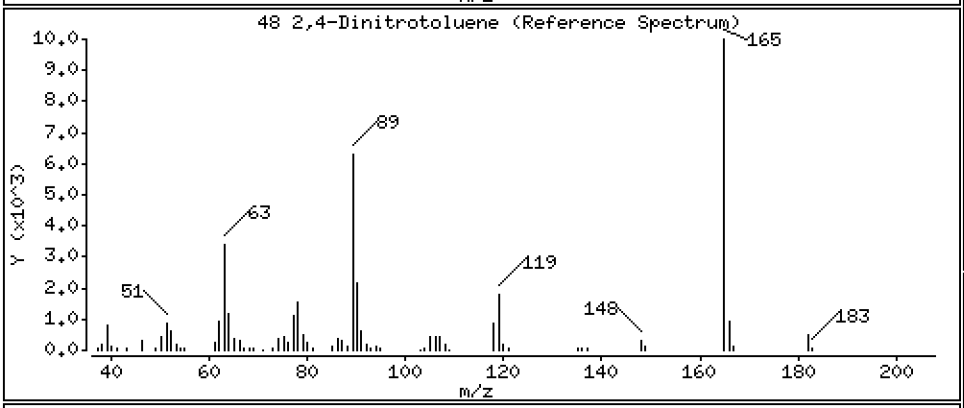
Column diameter: 0.25

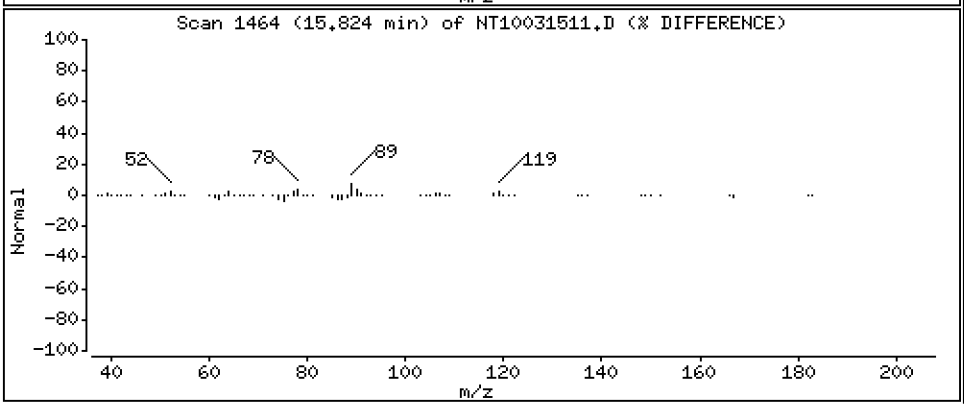
48 2,4-Dinitrotoluene

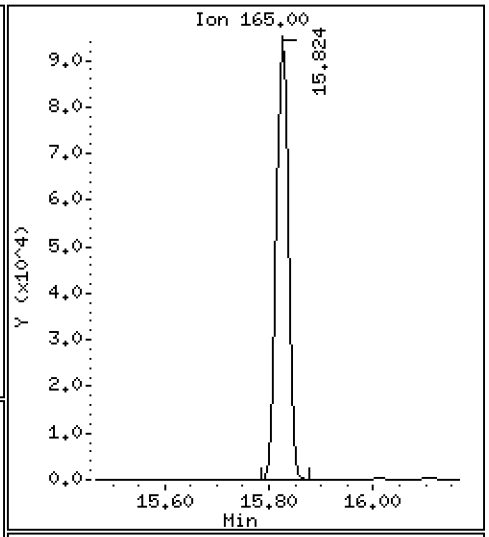
Concentration: 4.510 ug/mL

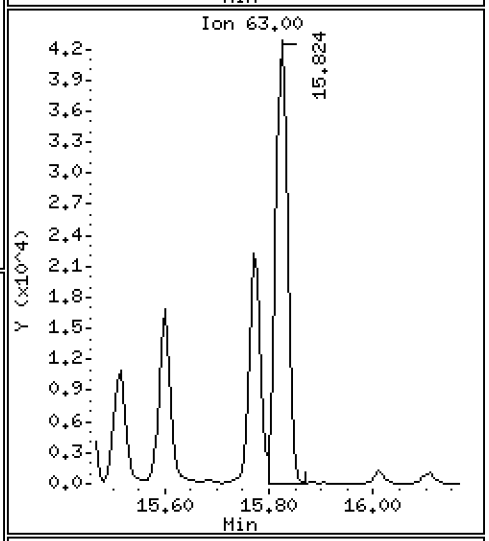


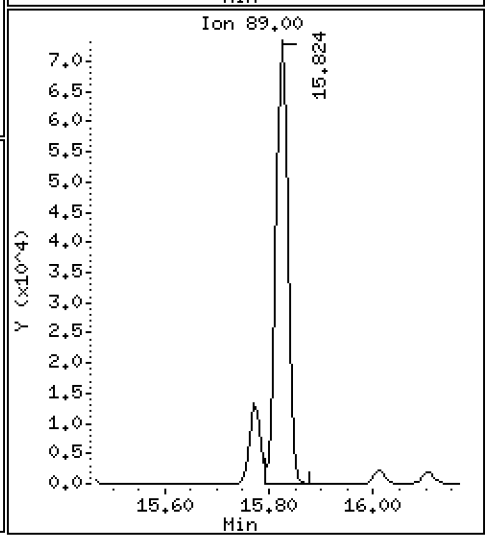












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

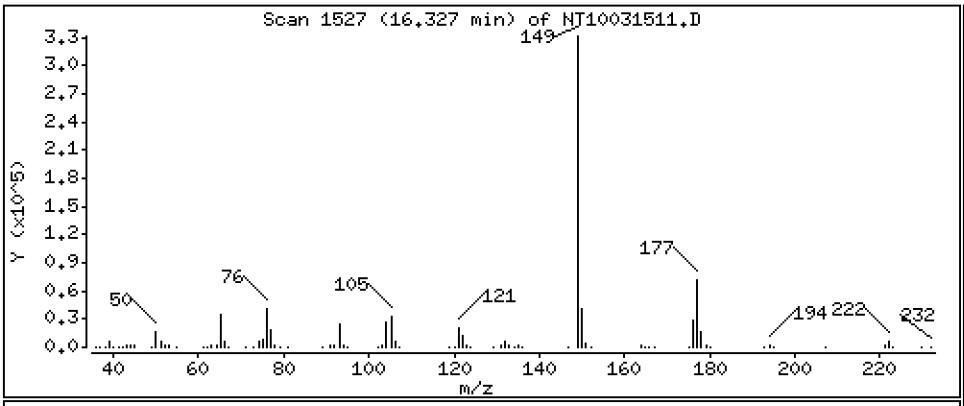
Operator: VTS

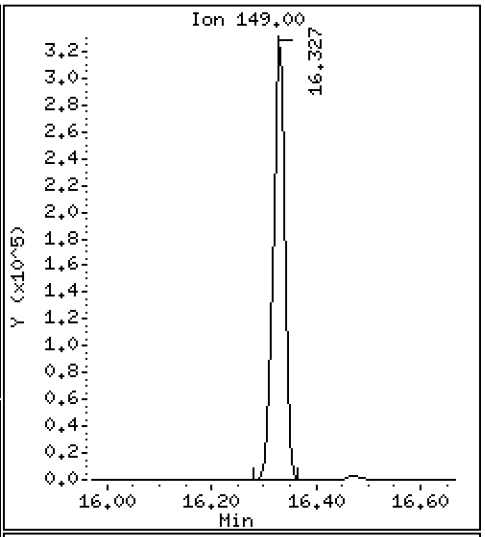
Column phase: ZB-5msi

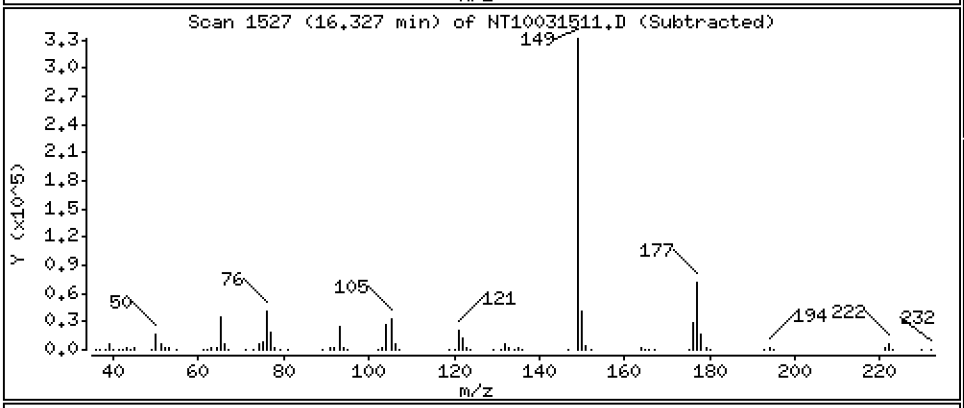
Column diameter: 0.25

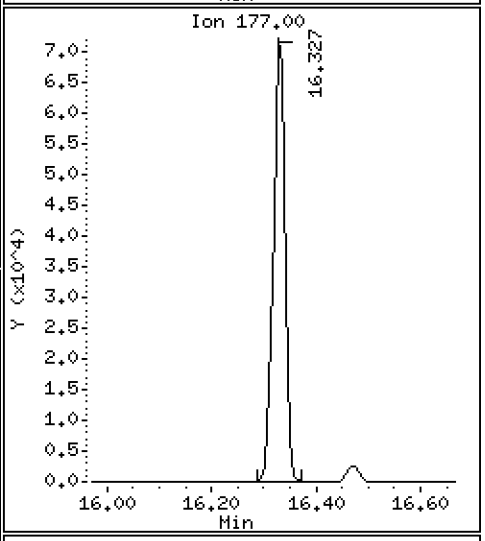
50 Diethylphthalate

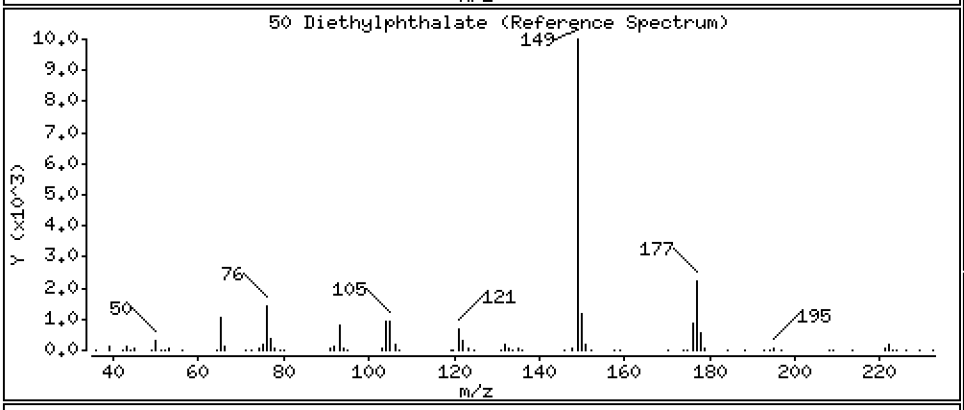
Concentration: 5.209 ug/mL

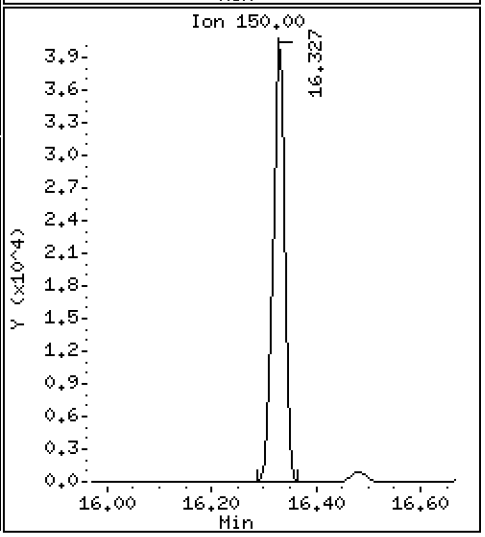


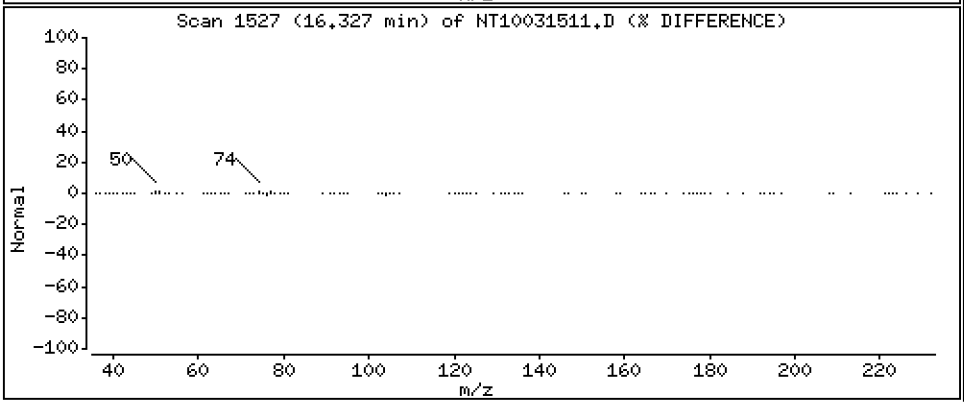












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

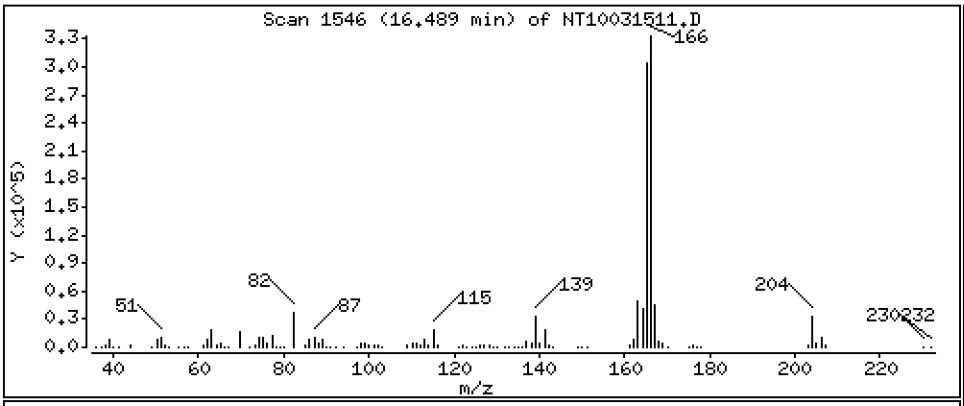
Operator: VTS

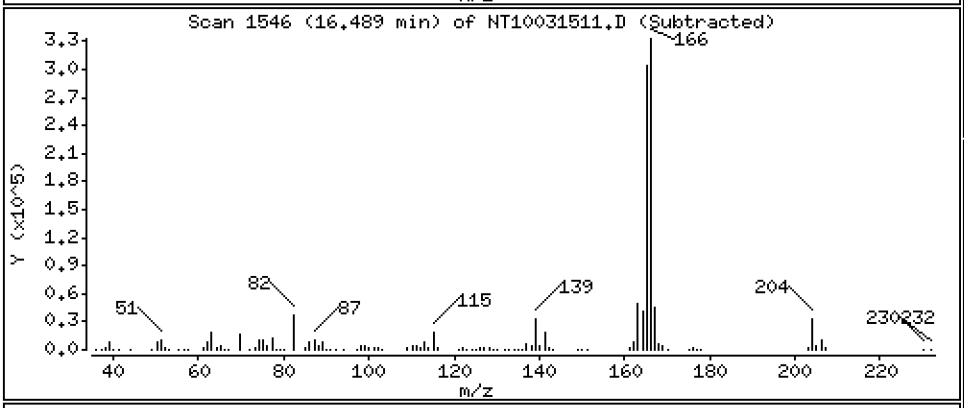
Column phase: ZB-5msi

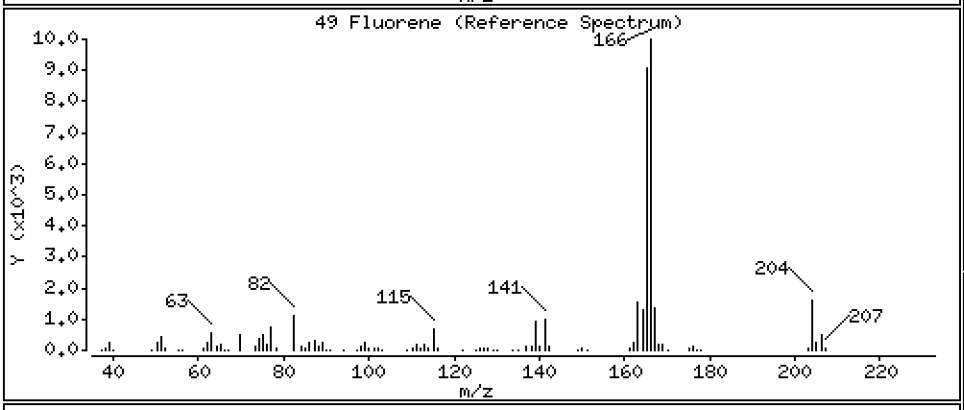
Column diameter: 0.25

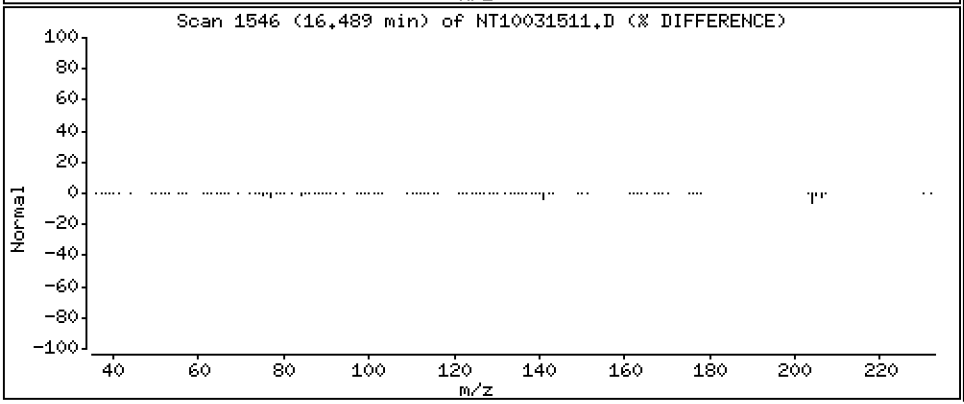
49 Fluorene

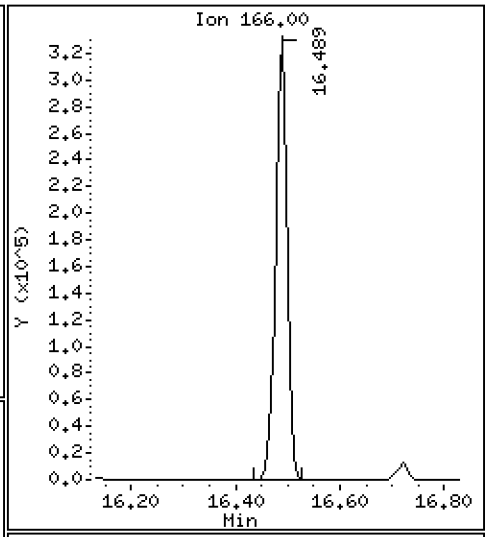
Concentration: 4.708 ug/mL

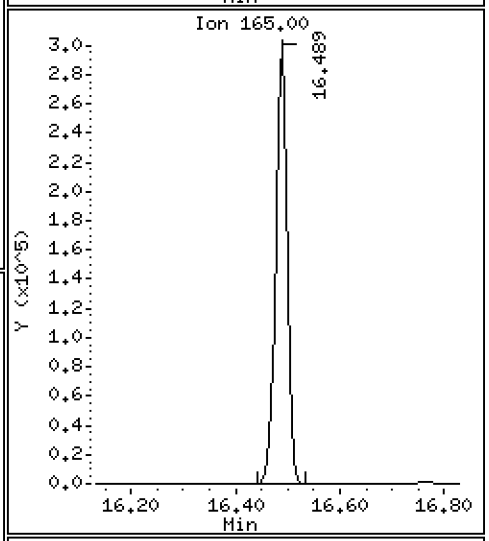


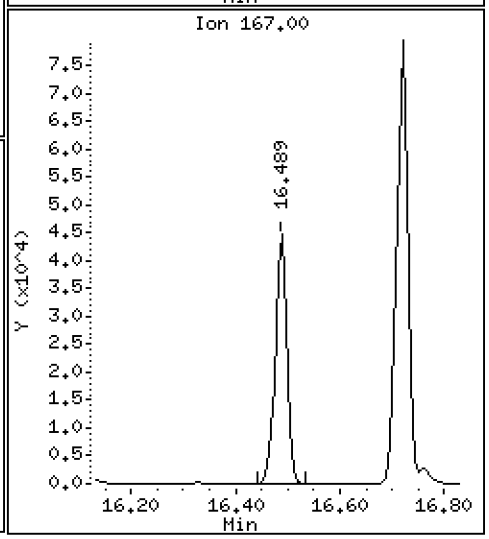












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

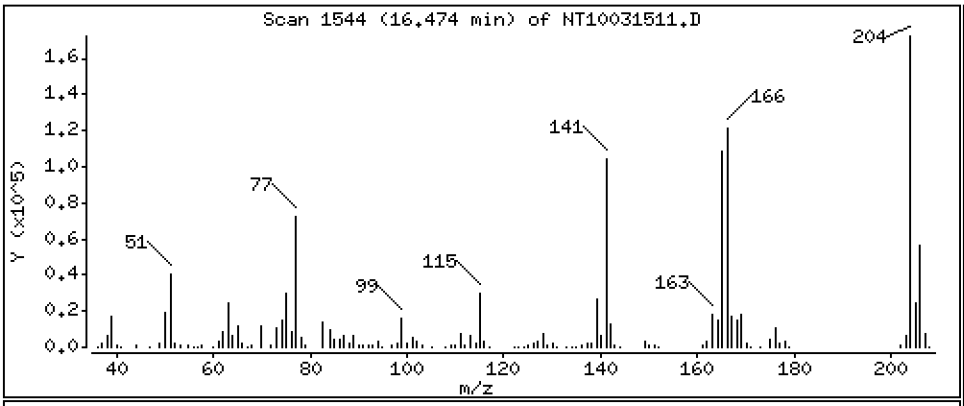
Operator: VTS

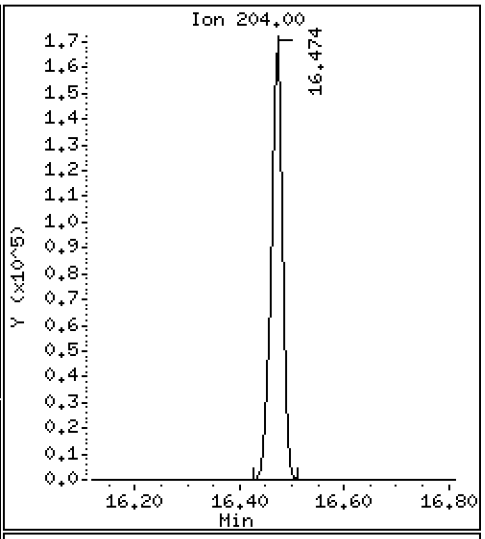
Column phase: ZB-5msi

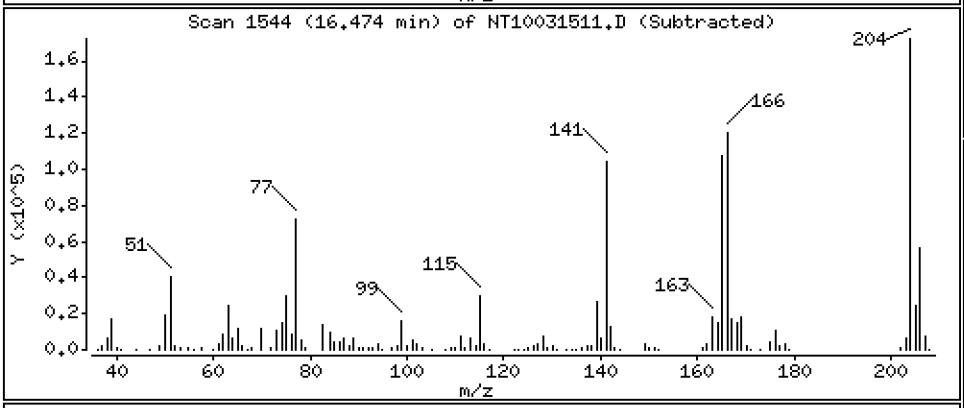
Column diameter: 0.25

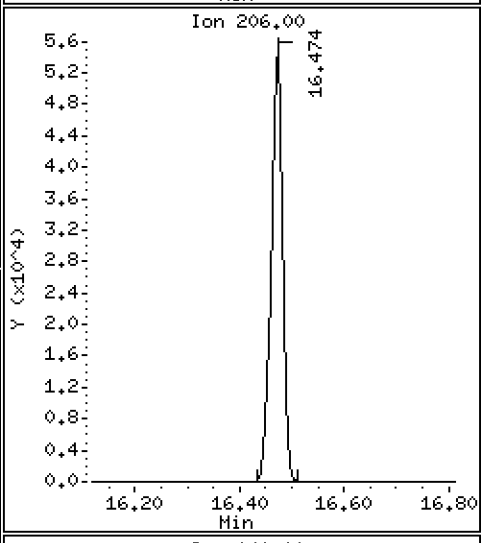
51 4-Chlorophenyl-phenylether

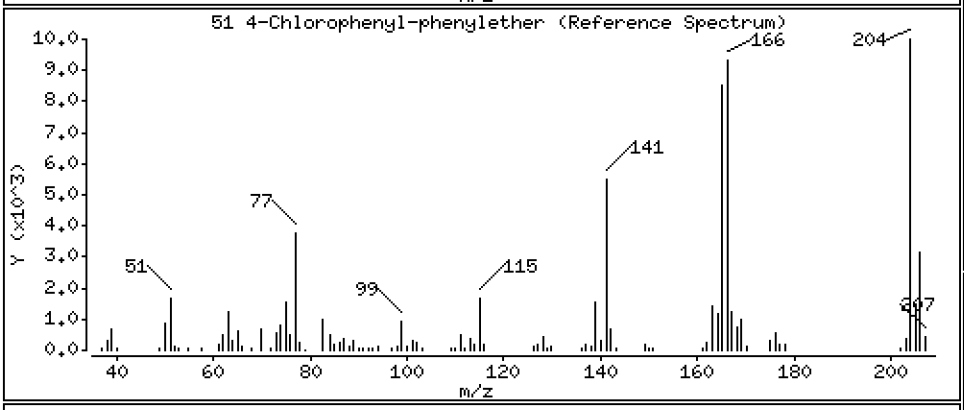
Concentration: 4.993 ug/mL

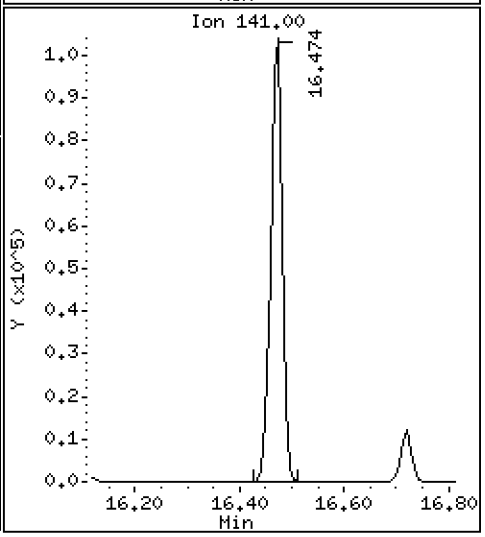


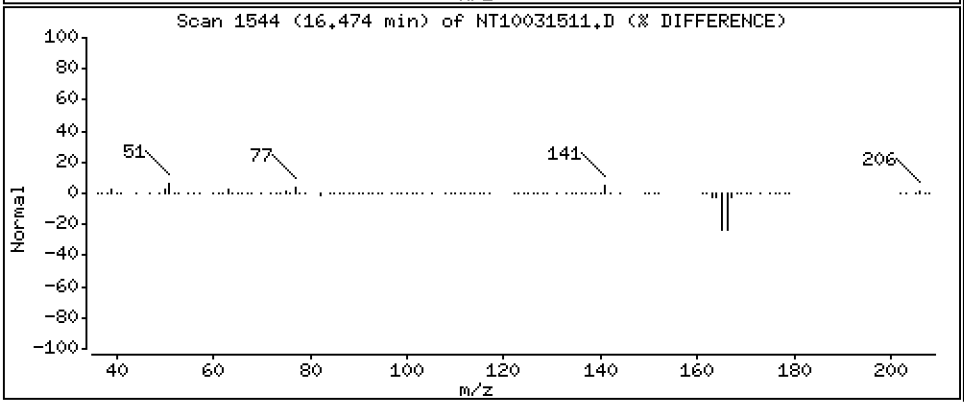












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

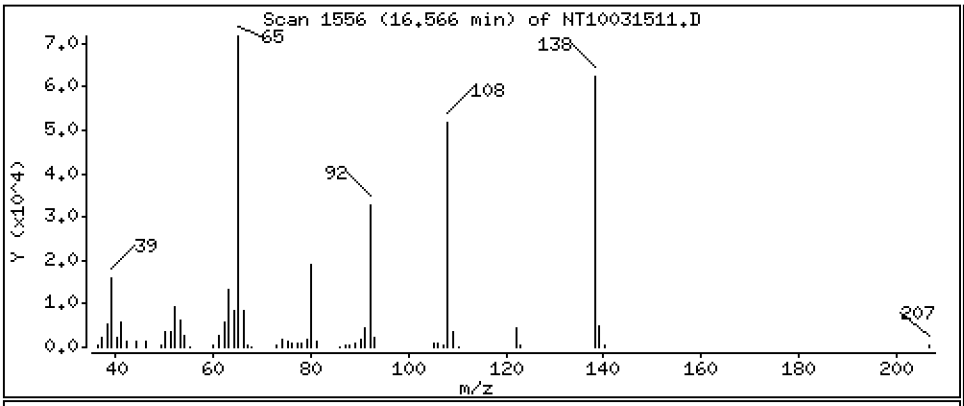
Operator: VTS

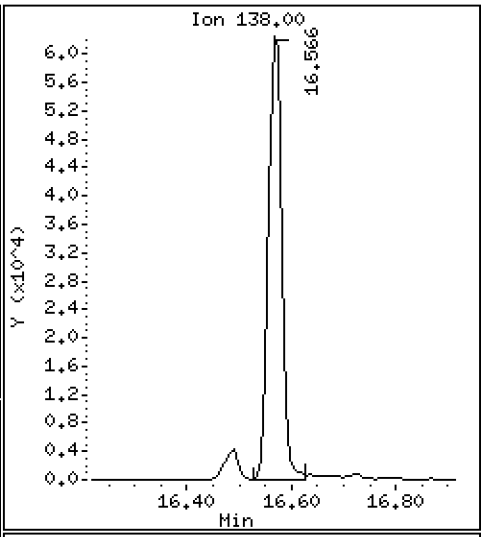
Column phase: ZB-5msi

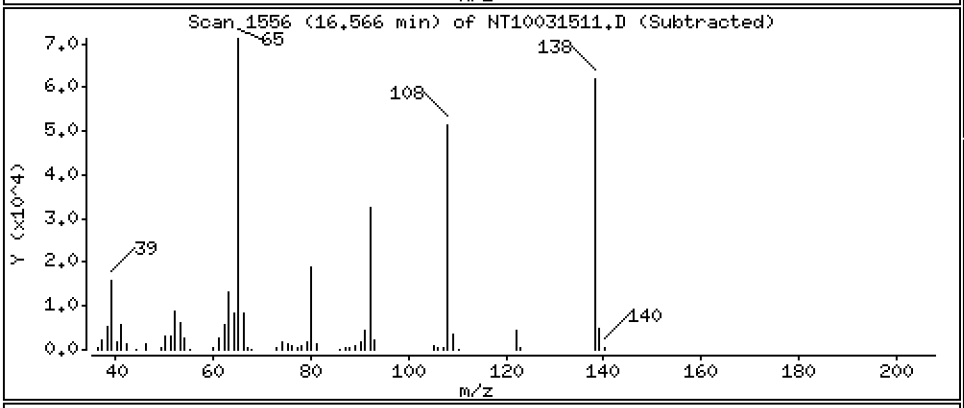
Column diameter: 0.25

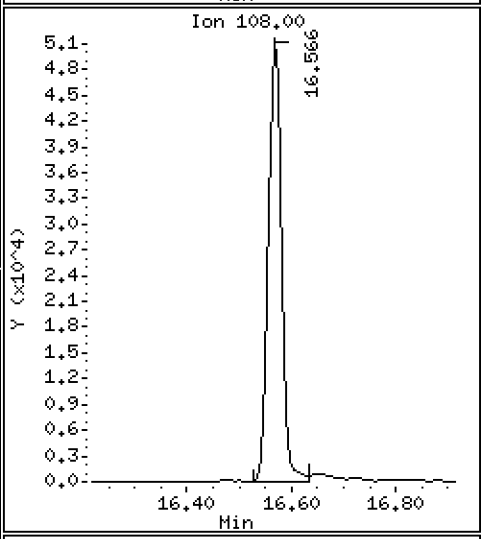
52 4-Nitroaniline

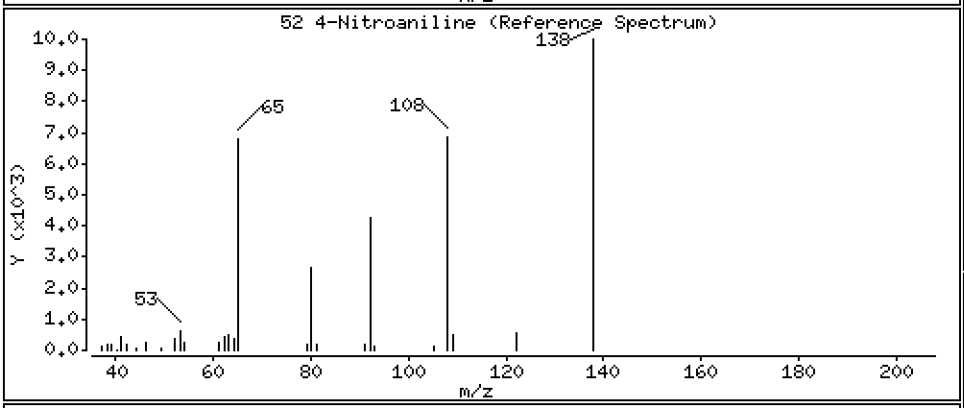
Concentration: 4.925 ug/mL

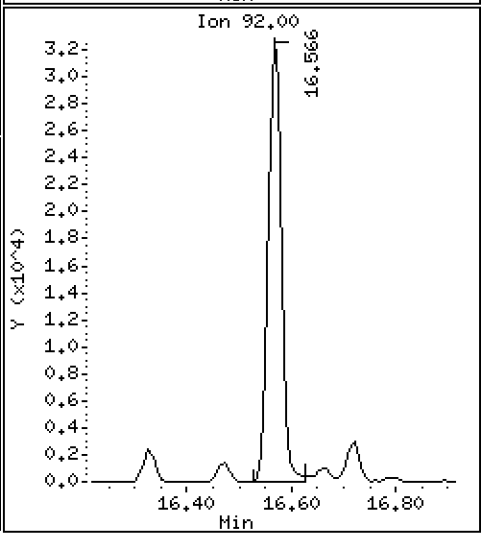


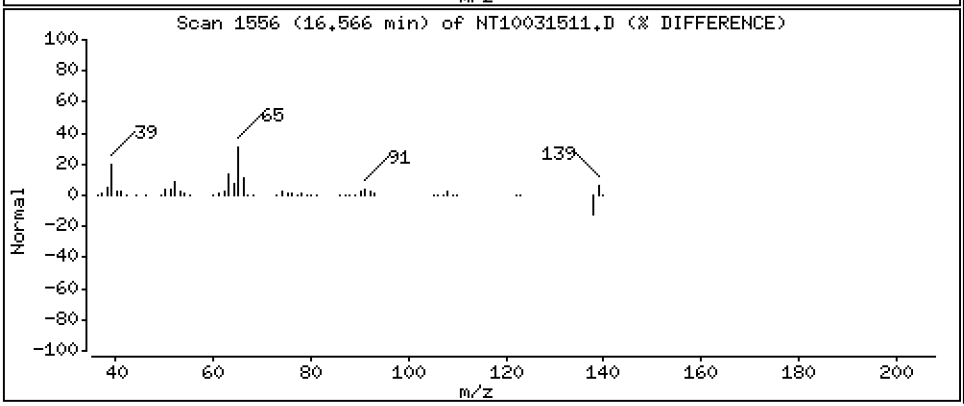












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

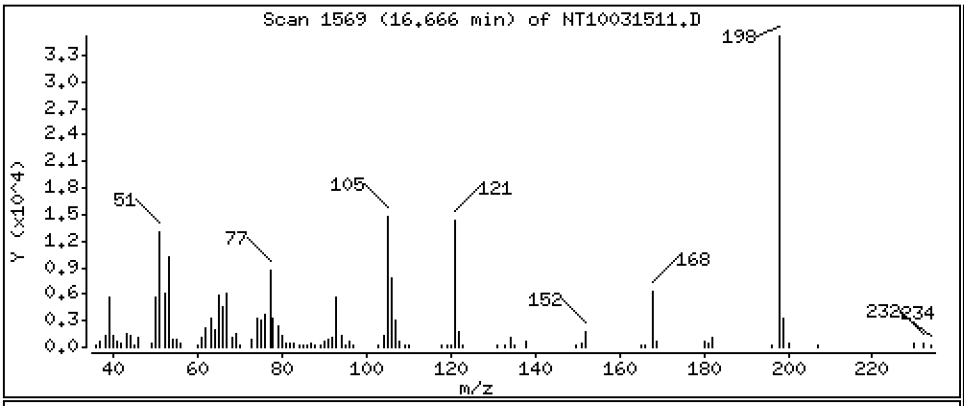
Operator: VTS

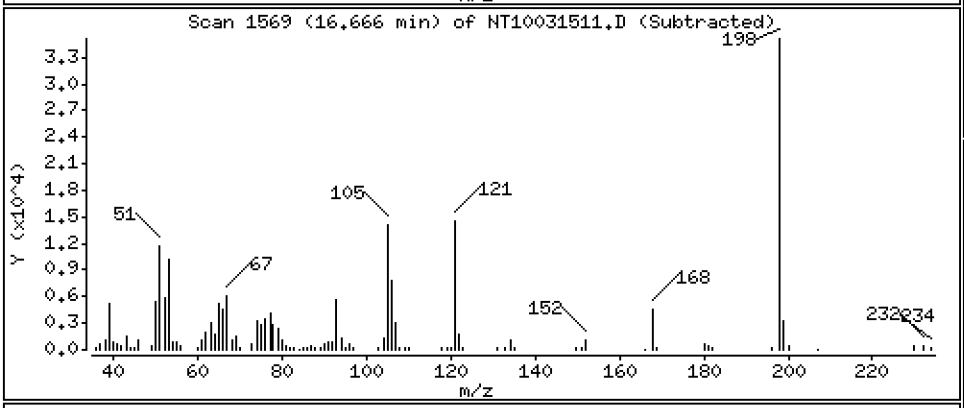
Column phase: ZB-5msi

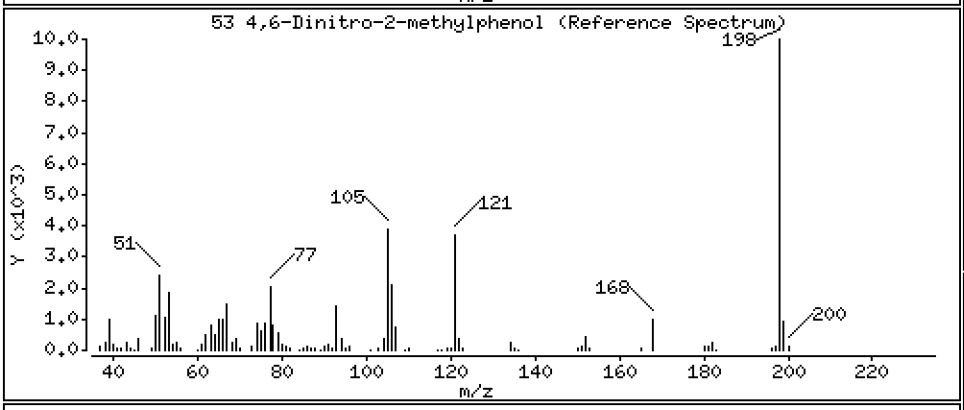
Column diameter: 0.25

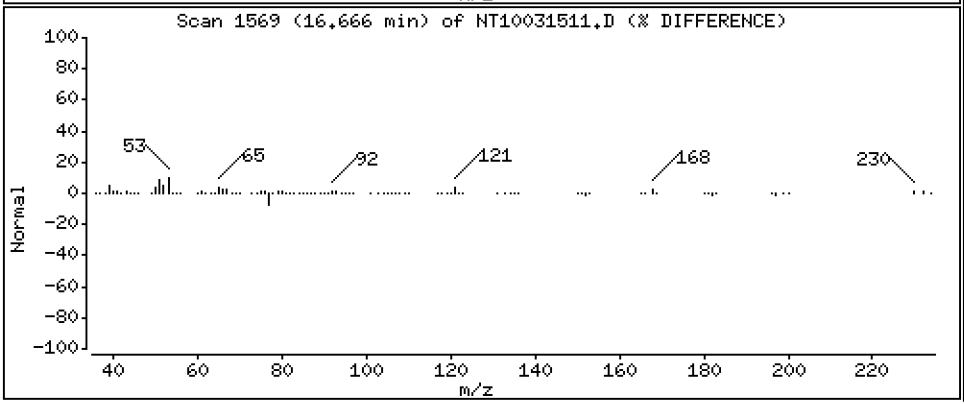
53 4,6-Dinitro-2-methylphenol

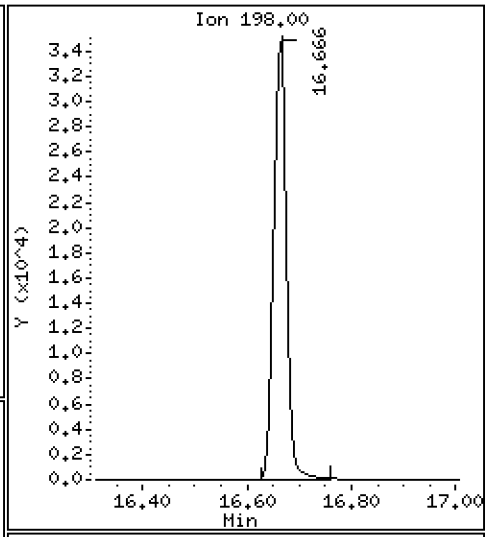
Concentration: 3.515 ug/mL

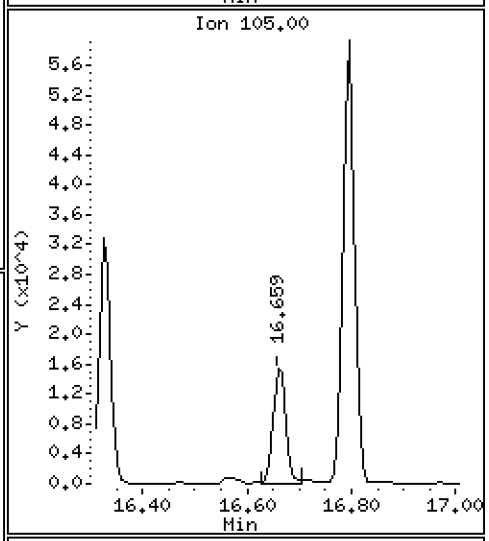


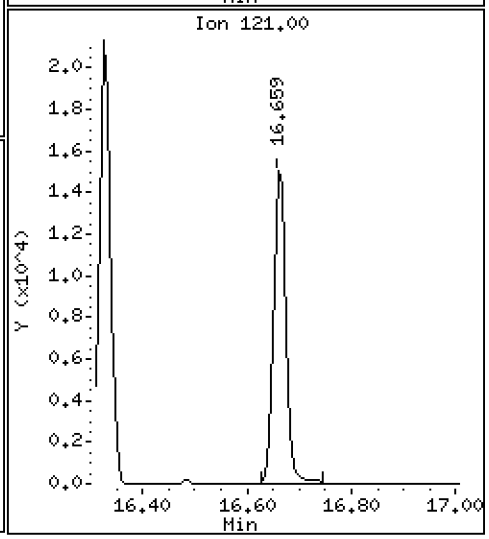












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

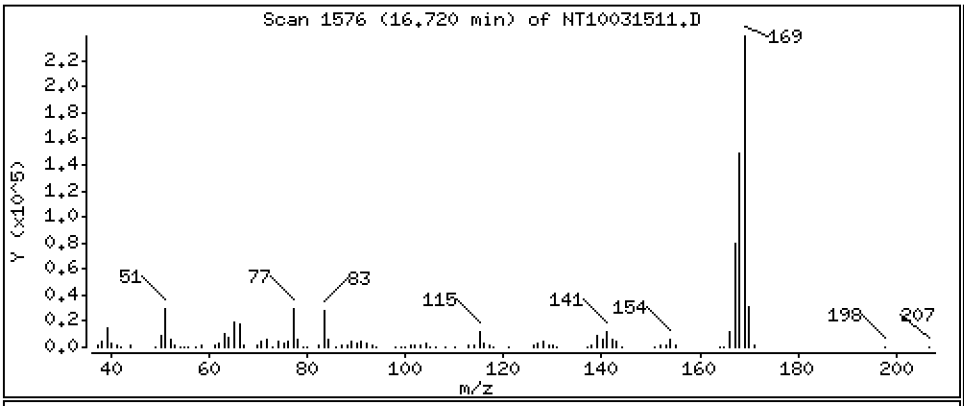
Operator: VTS

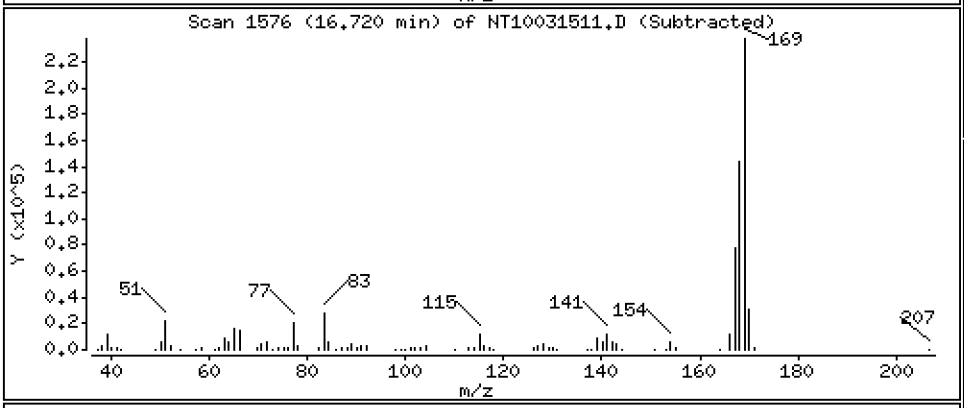
Column phase: ZB-5msi

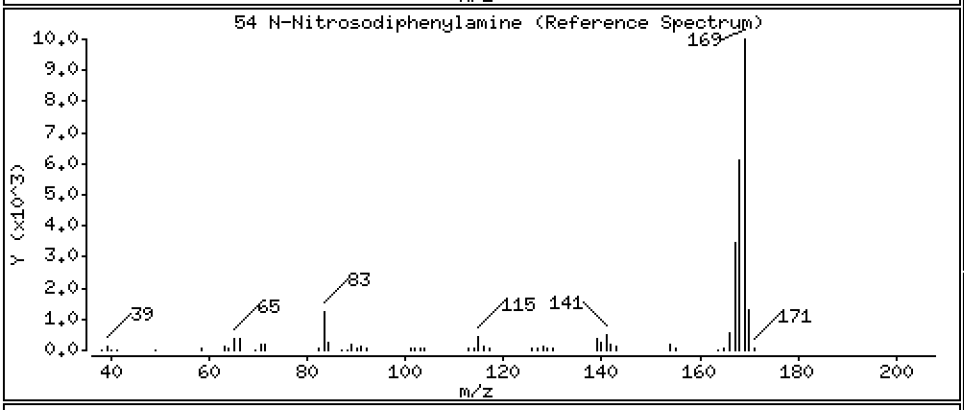
Column diameter: 0.25

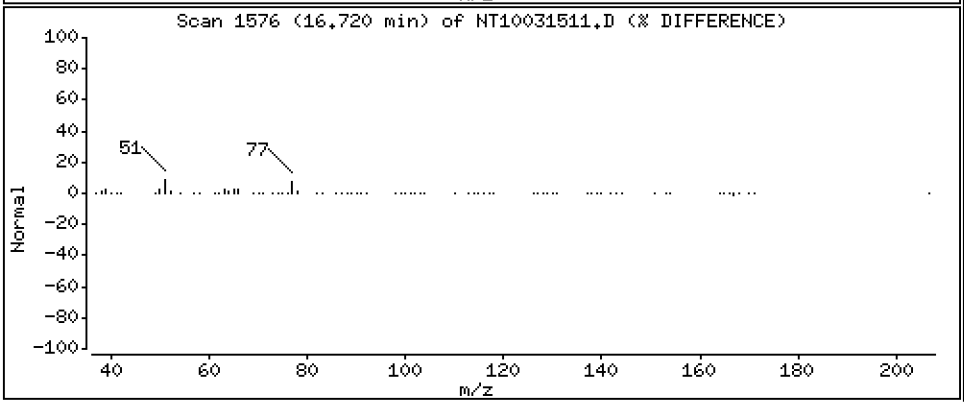
54 N-Nitrosodiphenylamine

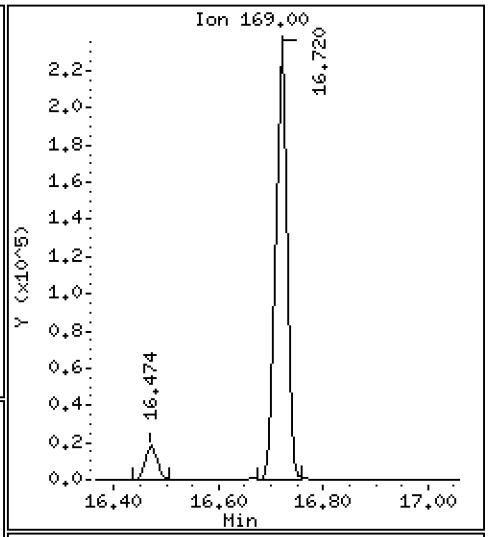
Concentration: 4.802 ug/mL

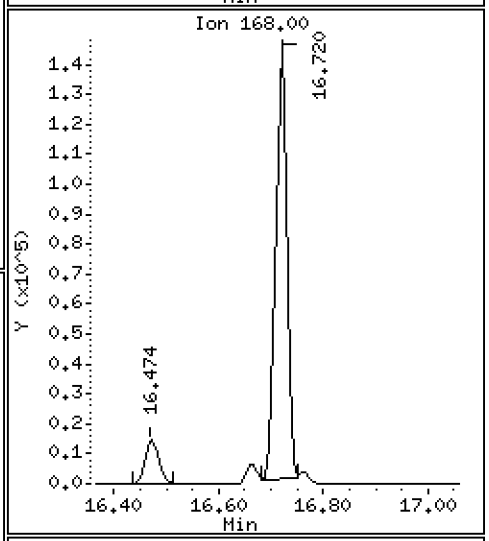


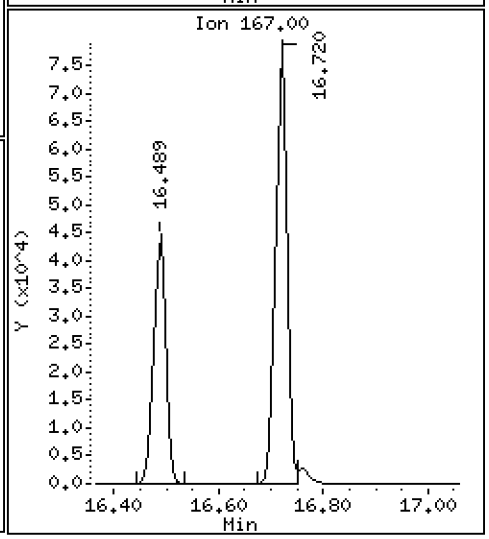












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

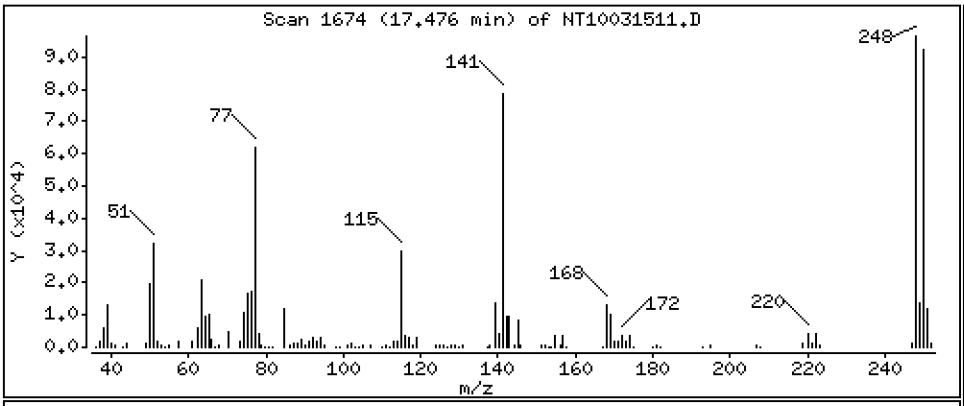
Operator: VTS

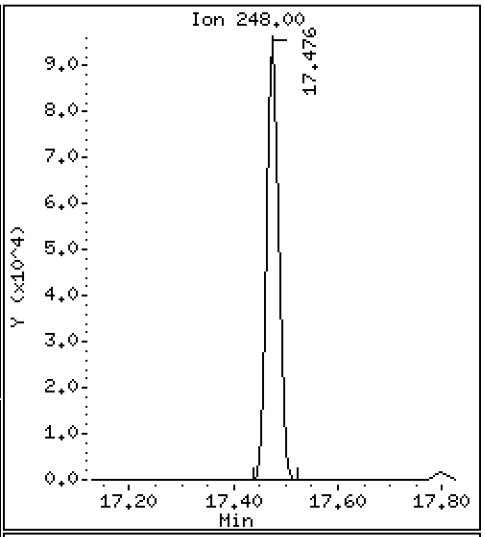
Column phase: ZB-5msi

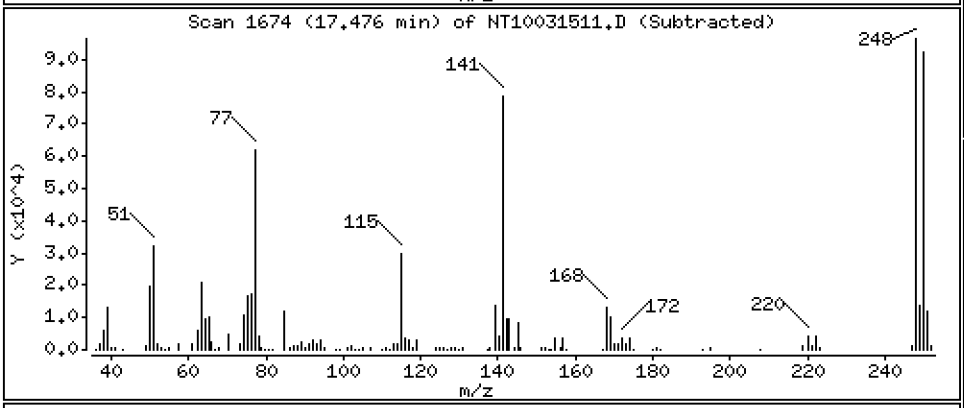
Column diameter: 0.25

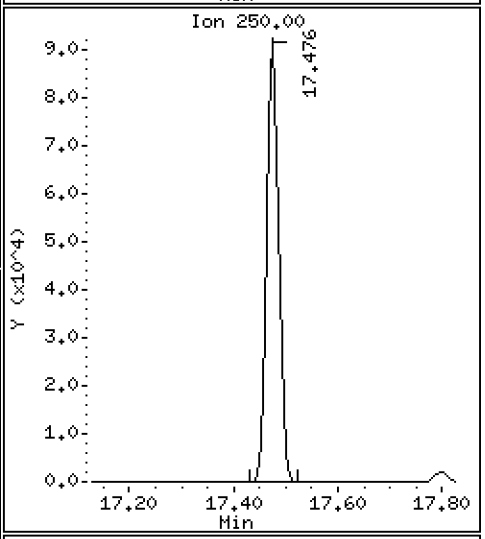
56 4-Bromophenyl-phenylether

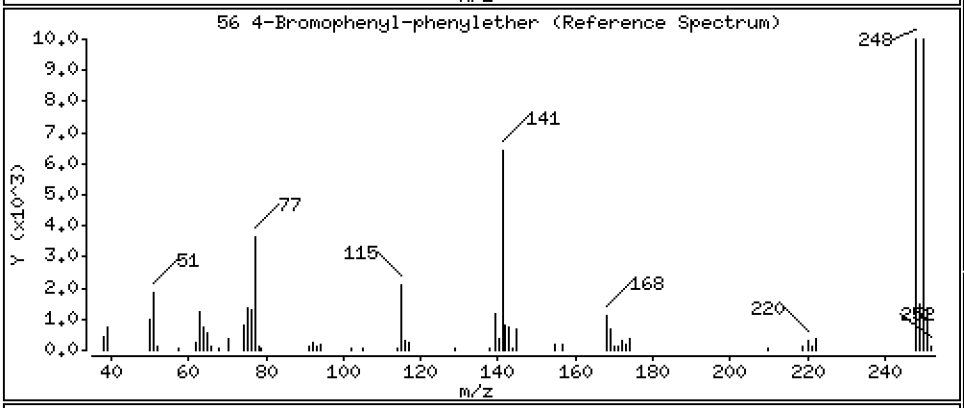
Concentration: 5.060 ug/mL

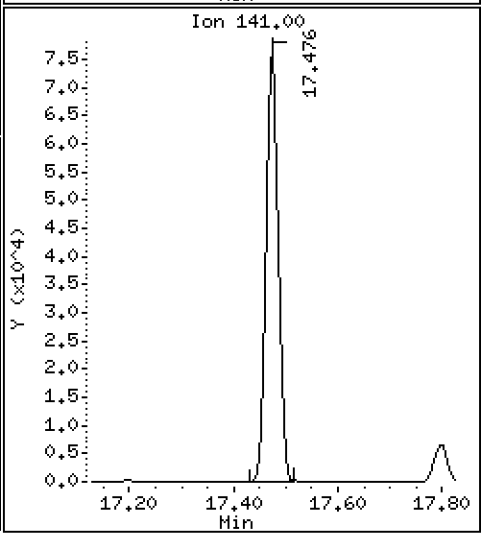


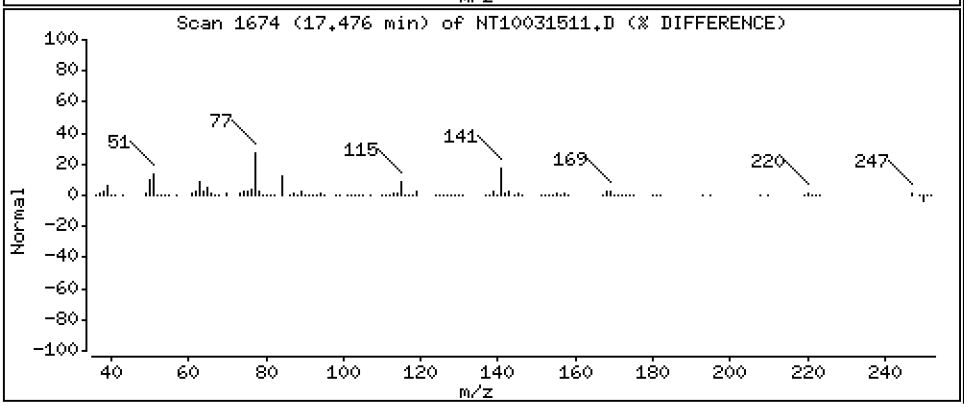












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

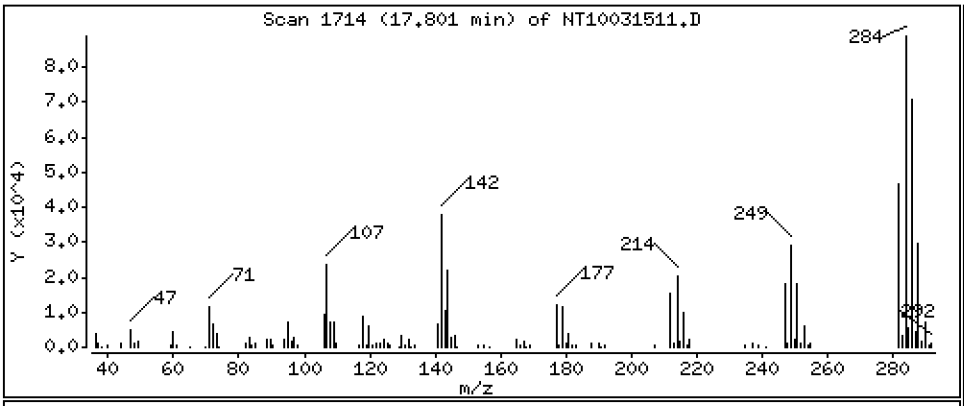
Operator: VTS

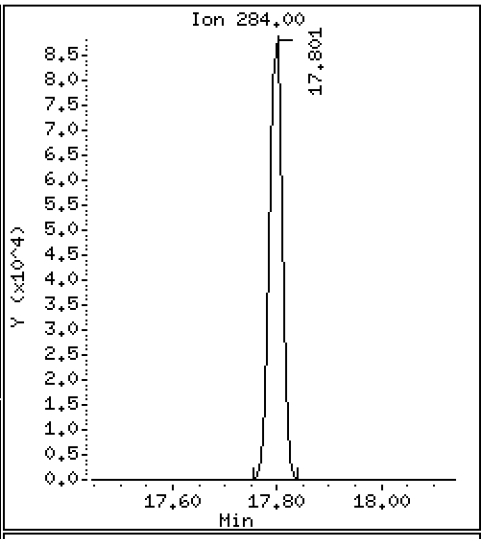
Column phase: ZB-5msi

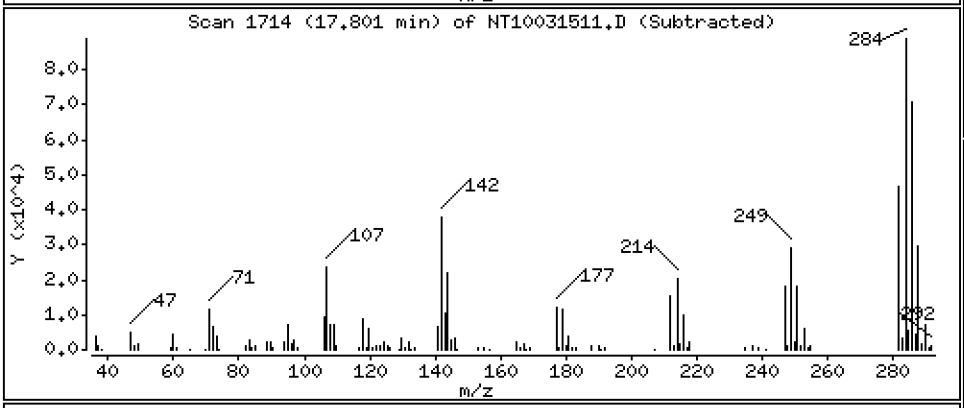
Column diameter: 0.25

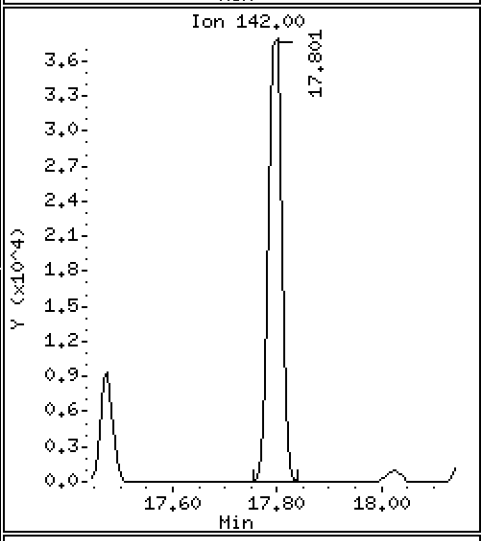
57 Hexachlorobenzene

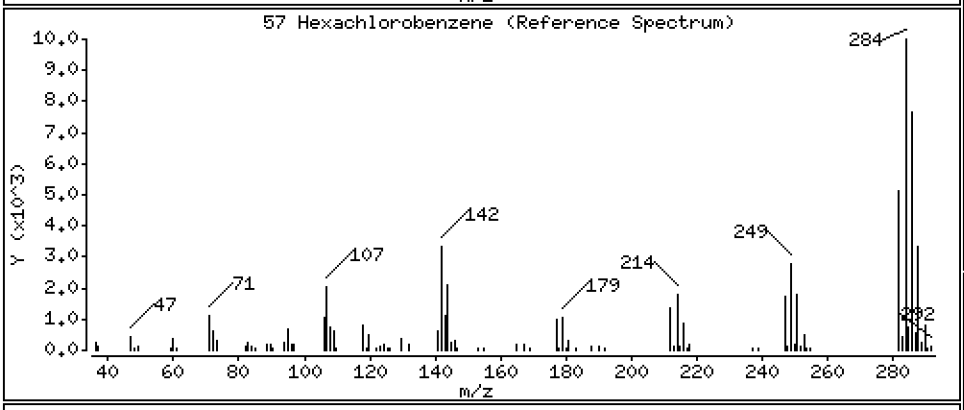
Concentration: 4.596 ug/mL

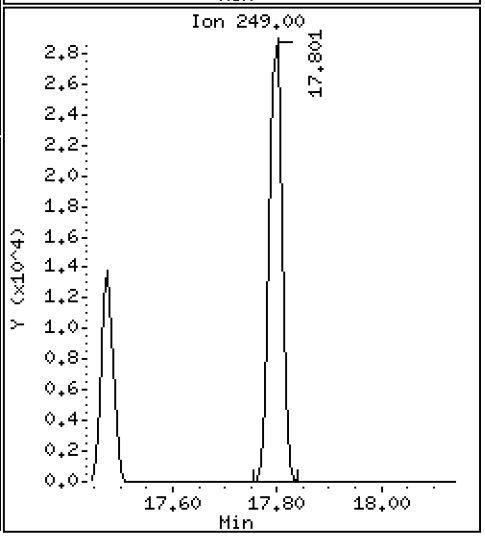


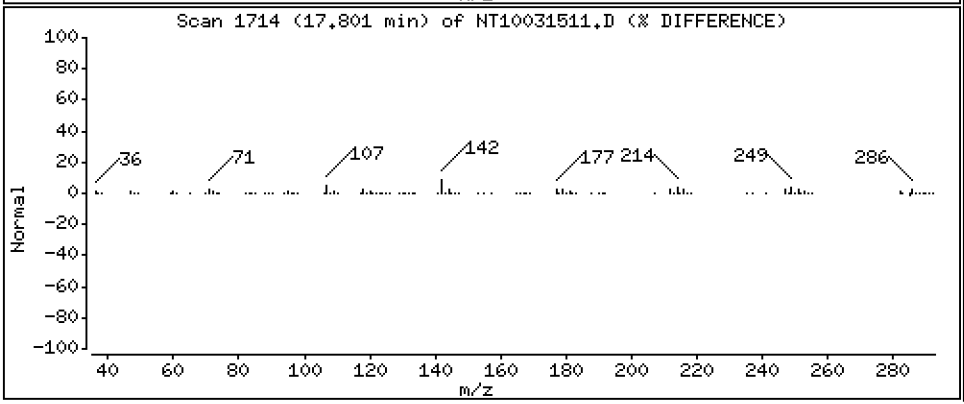












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

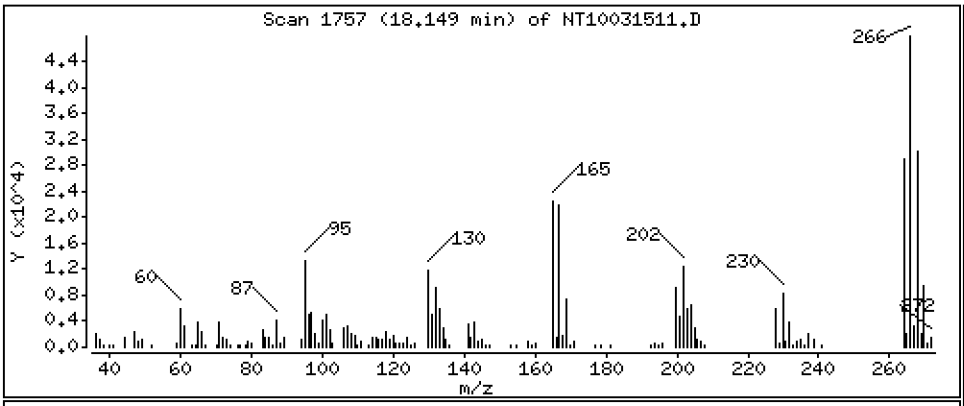
Operator: VTS

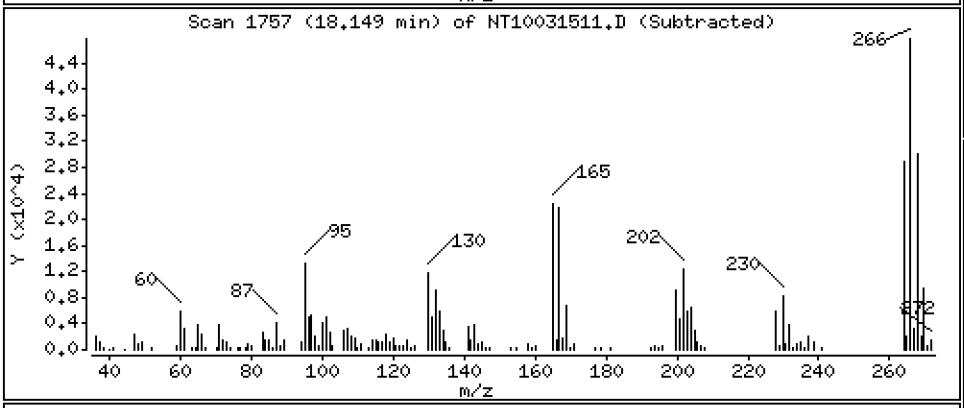
Column phase: ZB-5msi

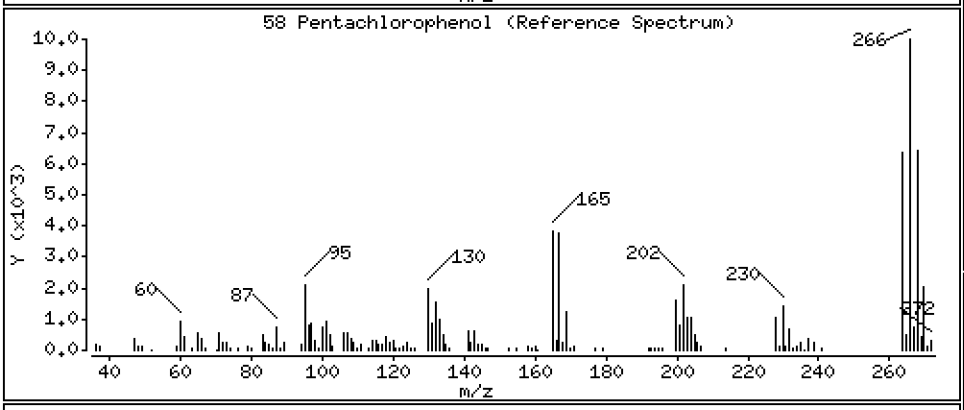
Column diameter: 0.25

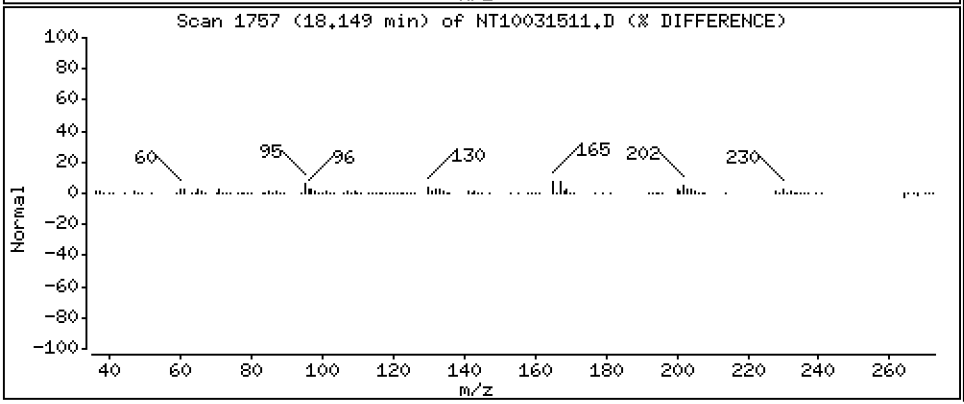
58 Pentachlorophenol

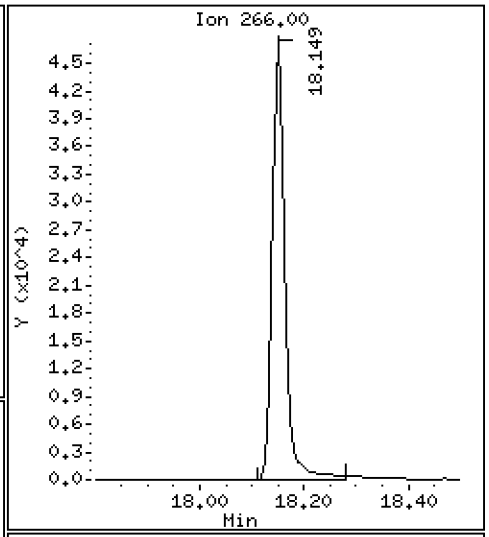
Concentration: 4.057 ug/mL

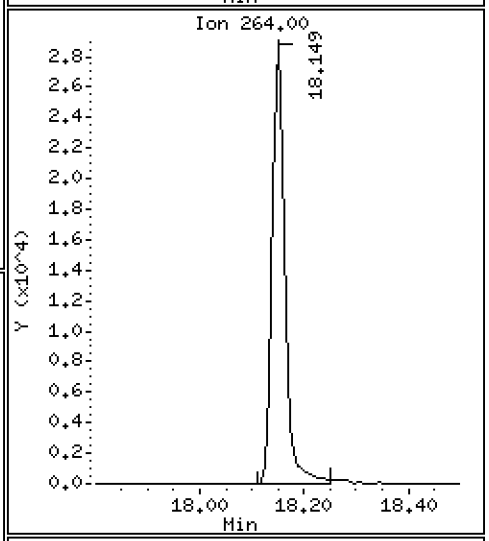


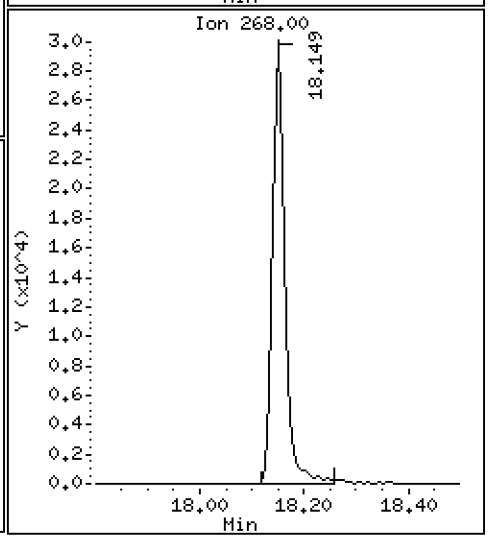












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

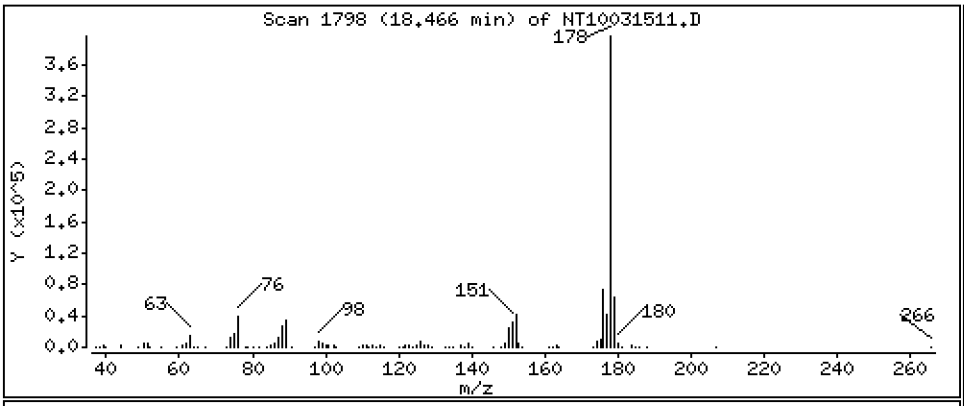
Operator: VTS

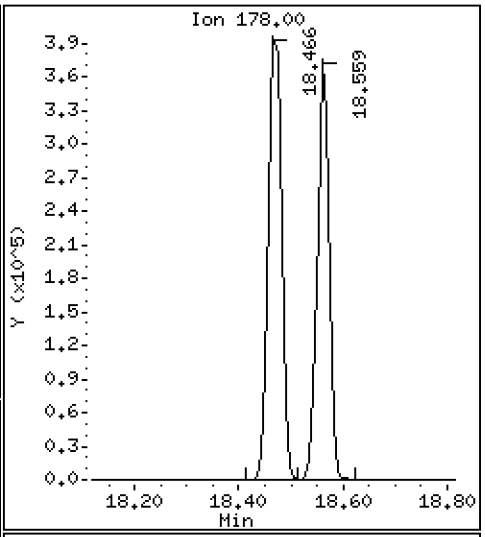
Column phase: ZB-5msi

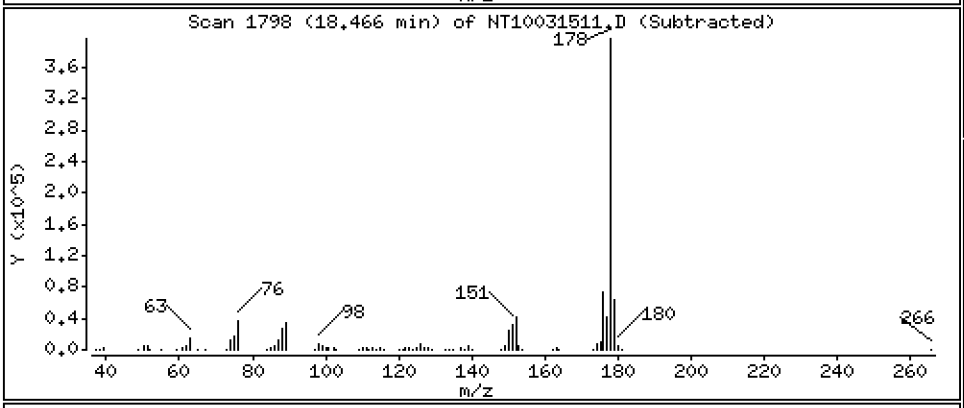
Column diameter: 0.25

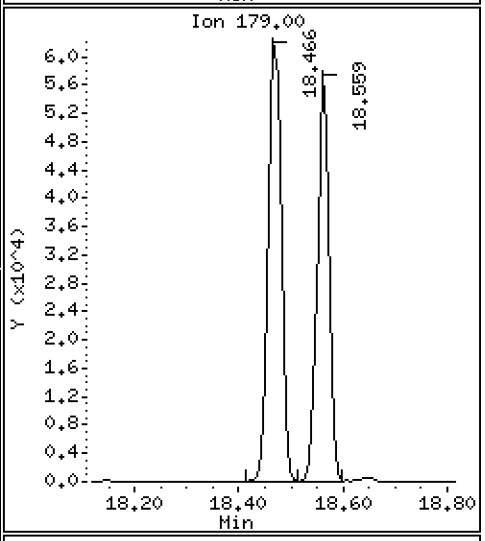
60 Phenanthrene

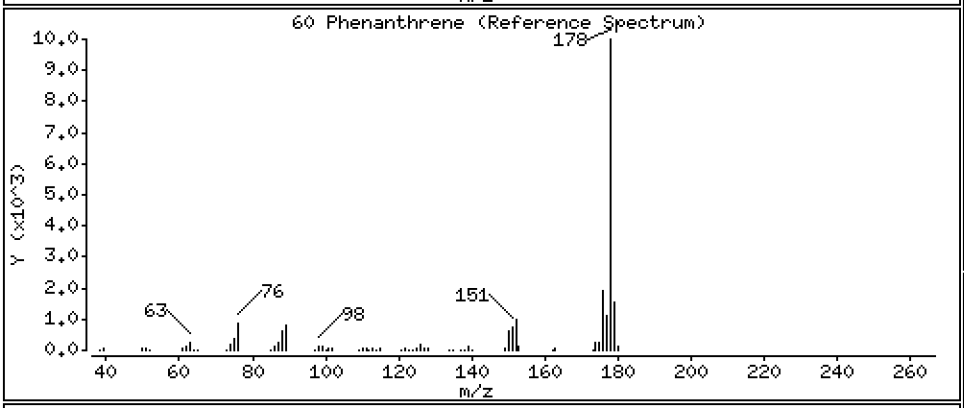
Concentration: 4.602 ug/mL

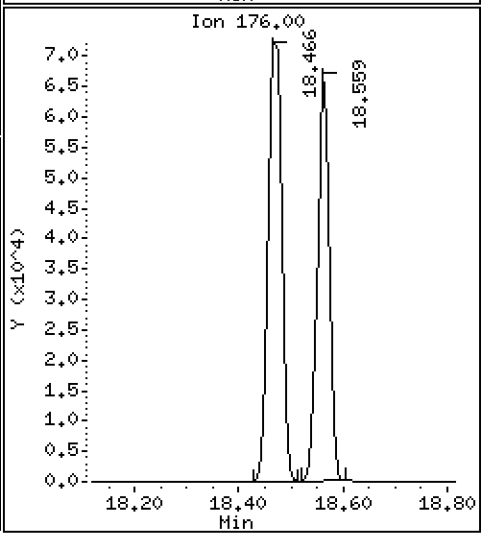


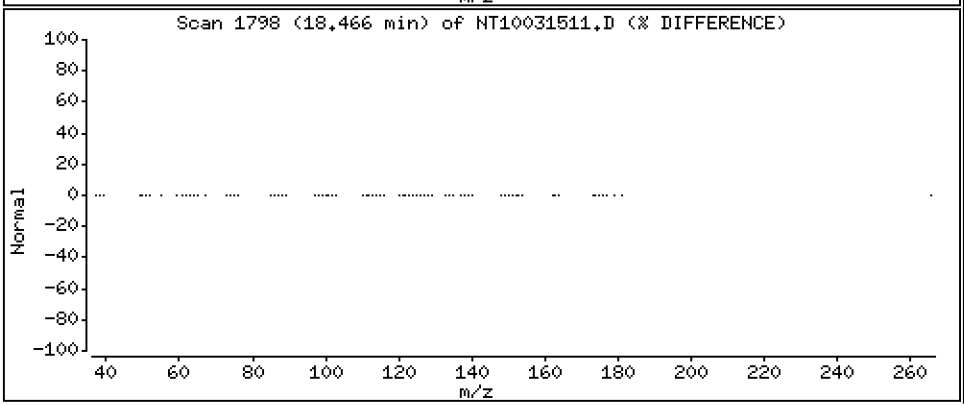












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

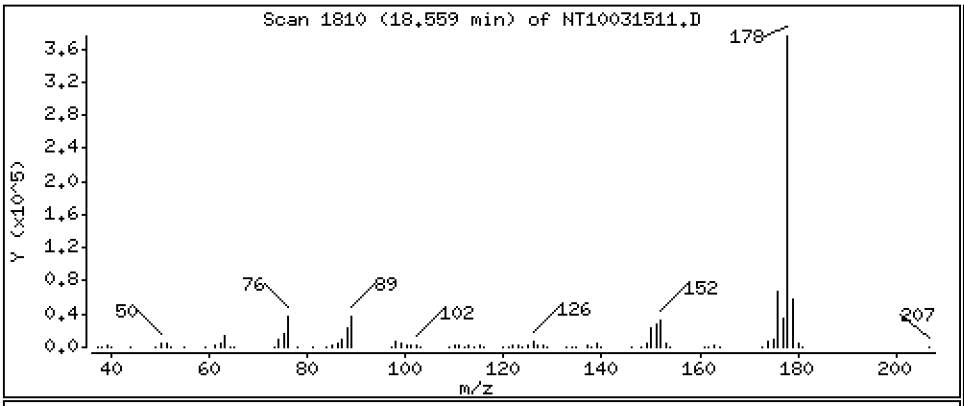
Operator: VTS

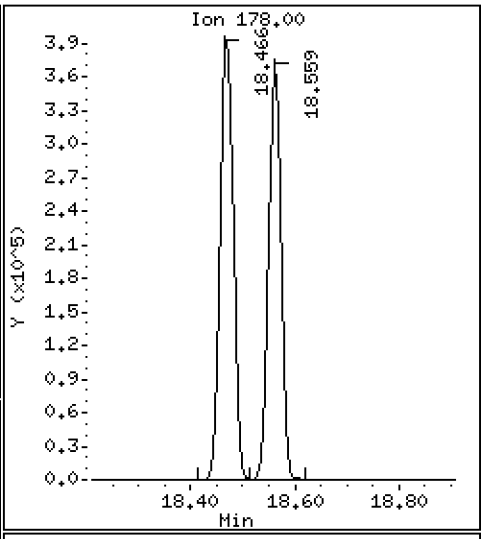
Column phase: ZB-5msi

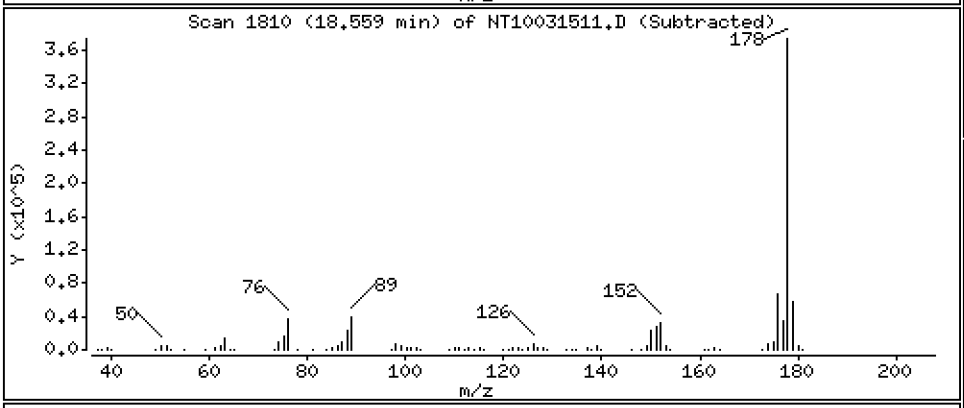
Column diameter: 0.25

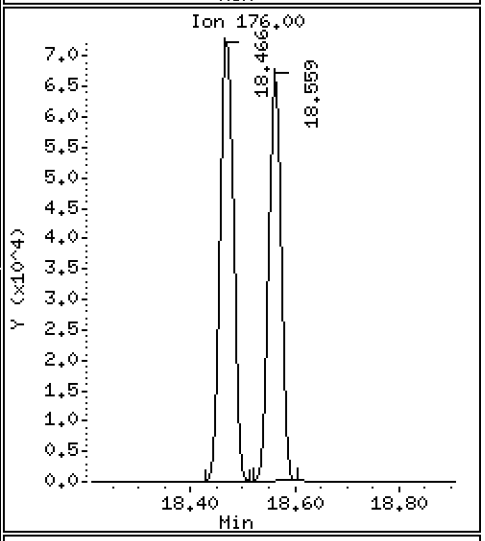
61 Anthracene

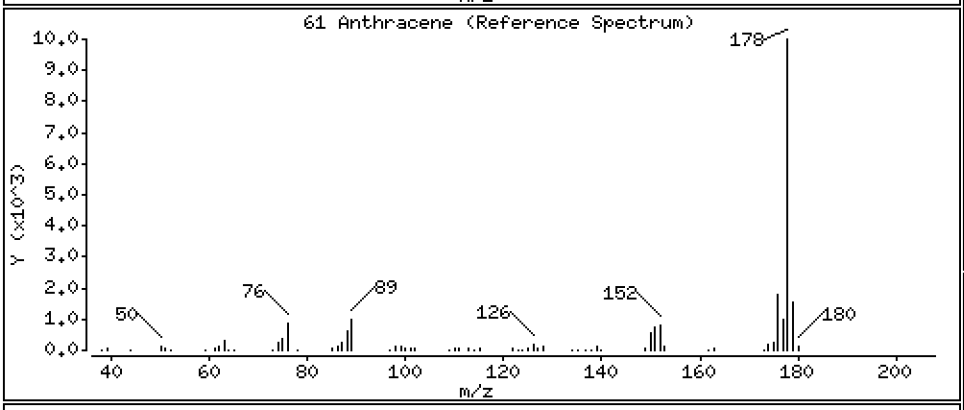
Concentration: 4.167 ug/mL

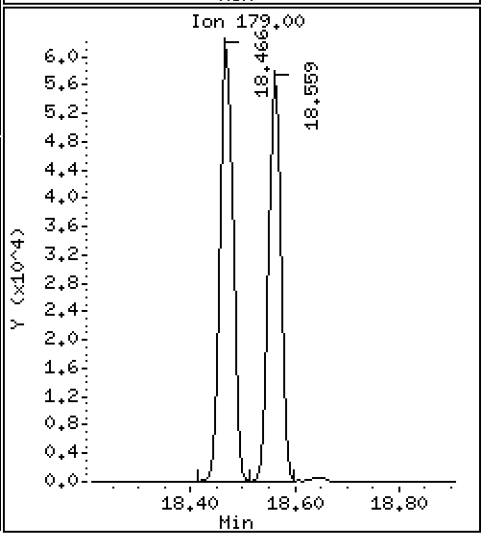


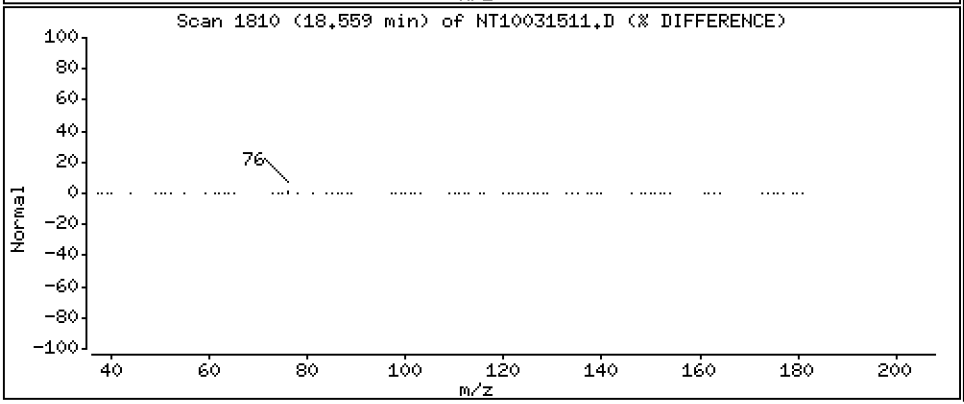












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

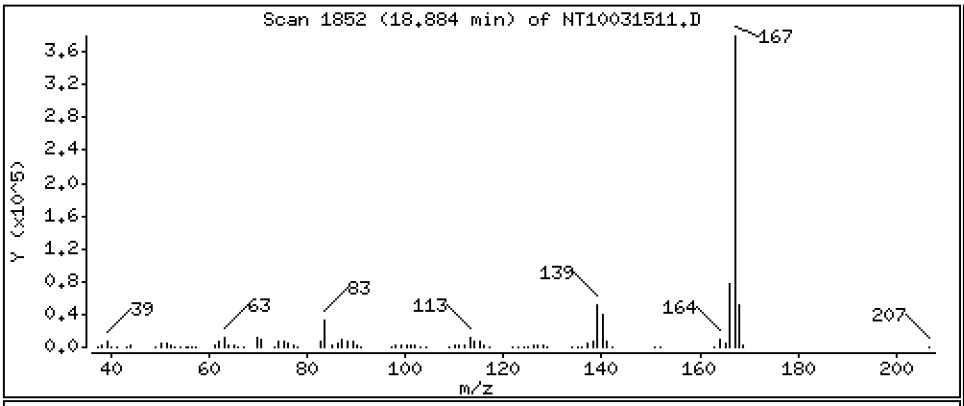
Operator: VTS

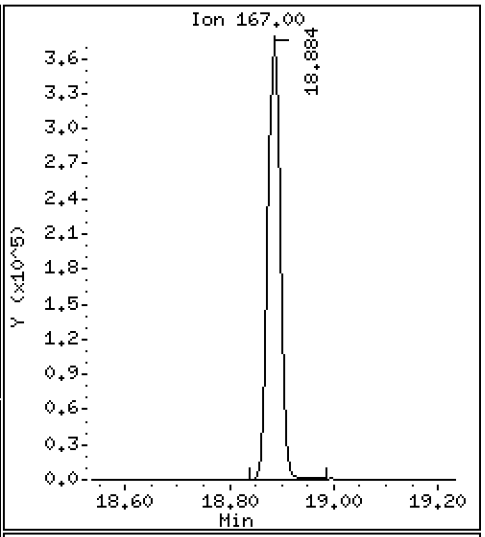
Column phase: ZB-5msi

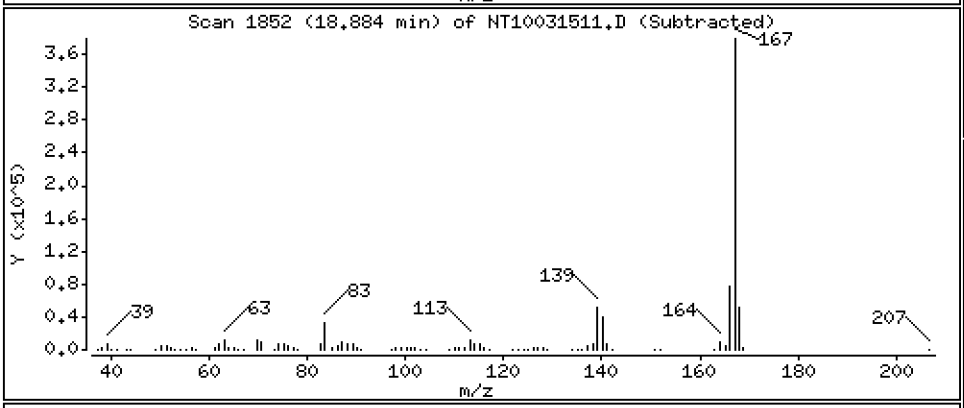
Column diameter: 0.25

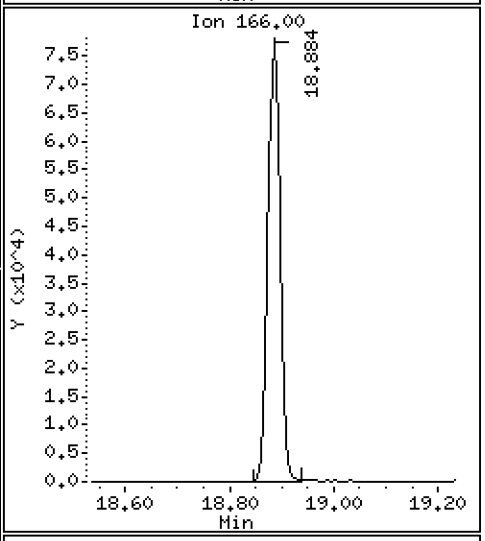
62 Carbazole

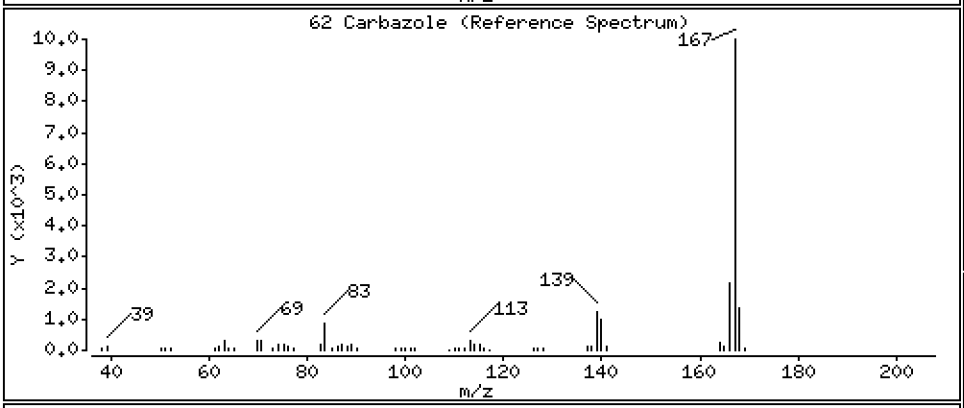
Concentration: 4.730 ug/mL

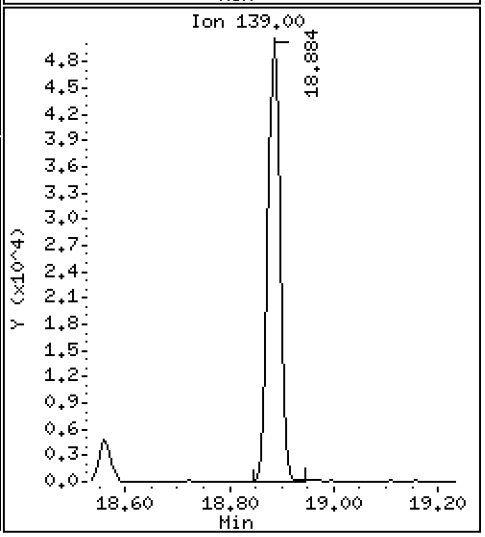


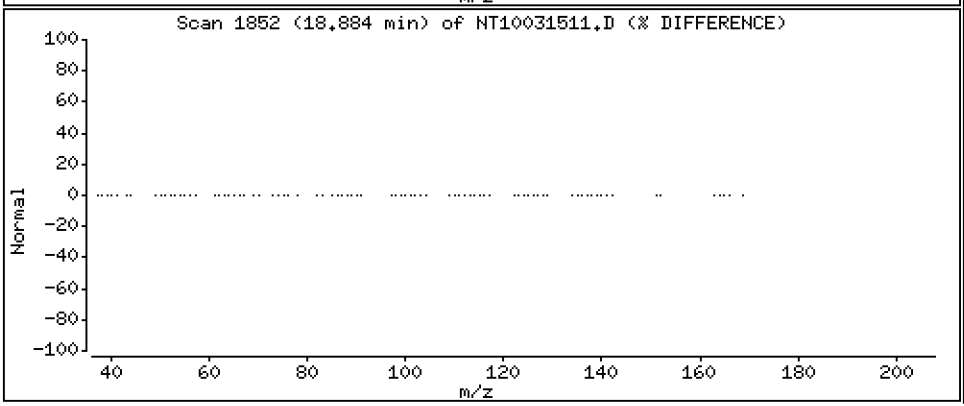












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

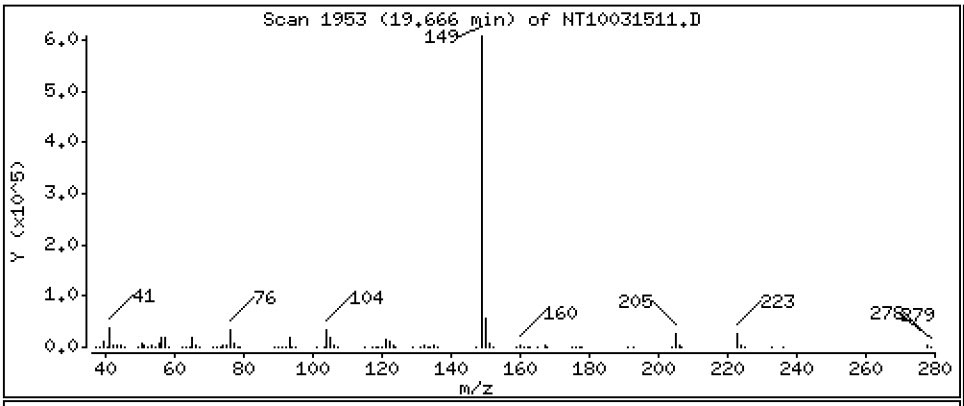
Operator: VTS

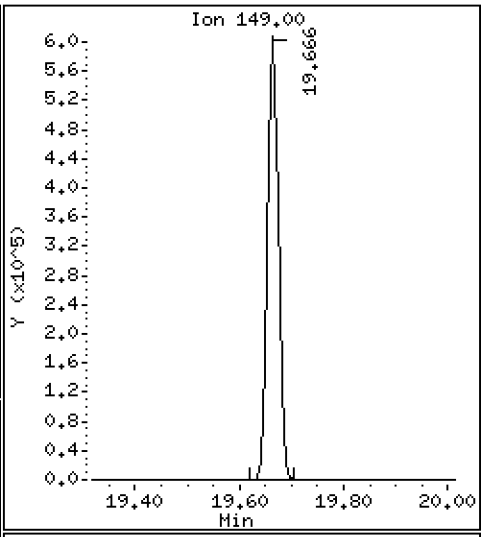
Column phase: ZB-5msi

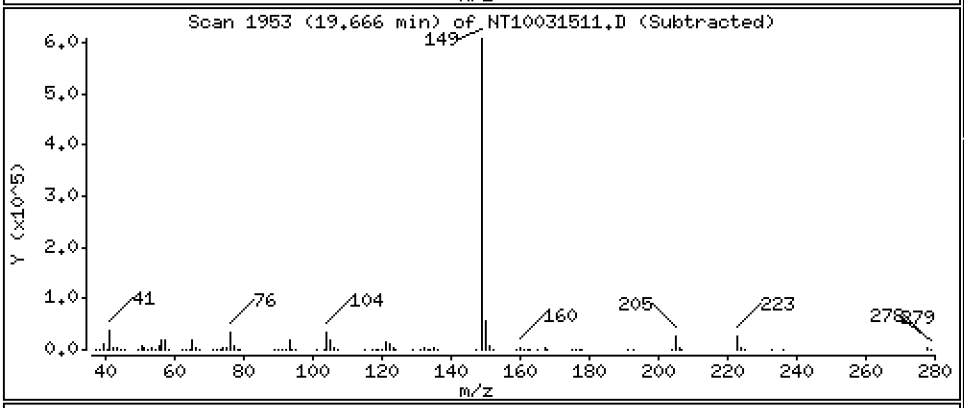
Column diameter: 0.25

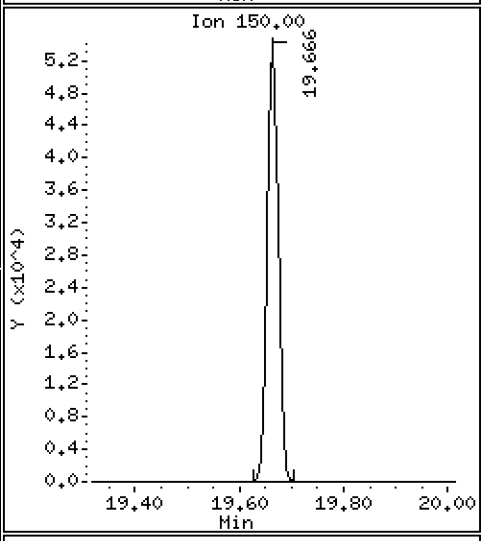
63 Di-n-butylphthalate

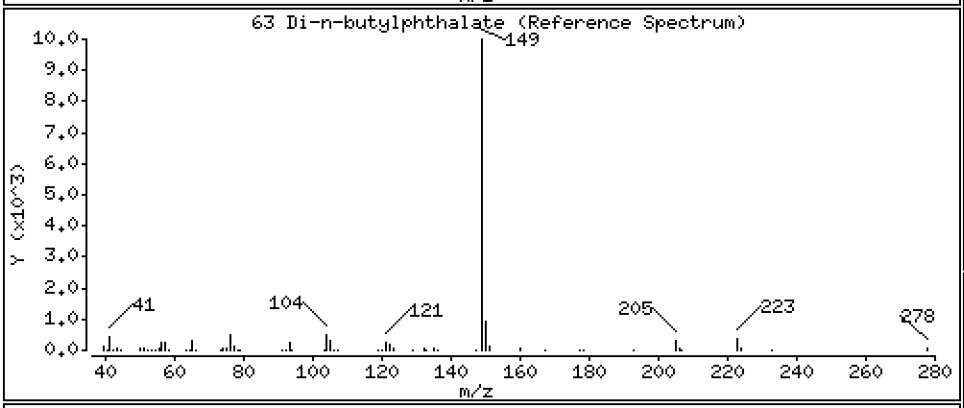
Concentration: 4.967 ug/mL

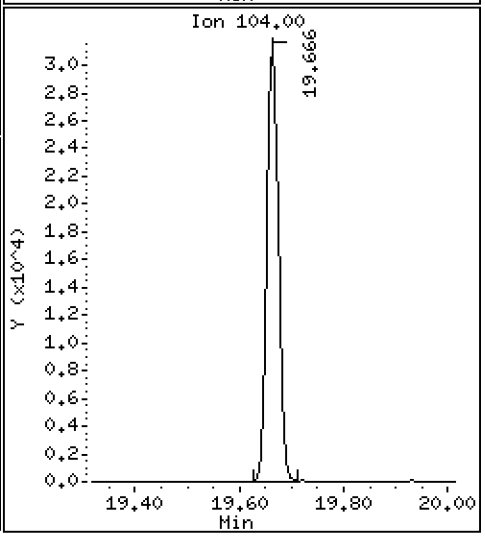


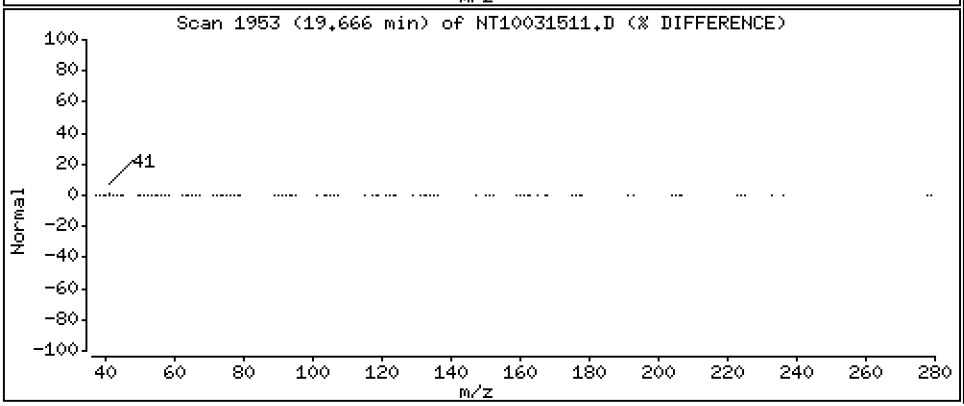












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

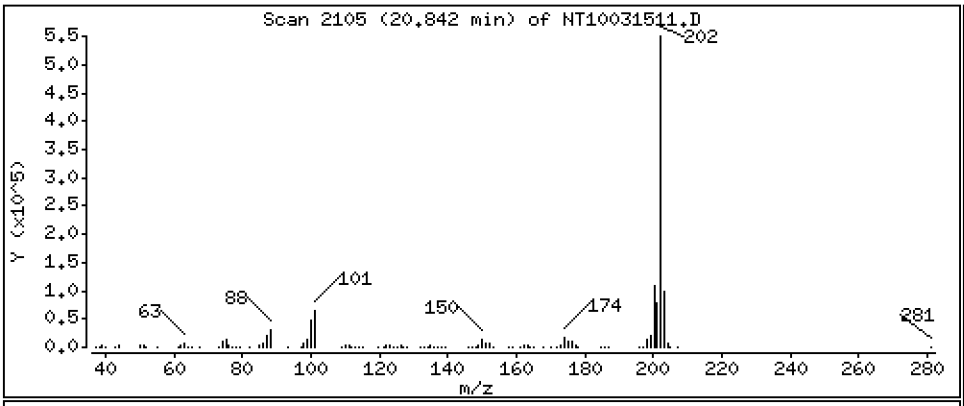
Operator: VTS

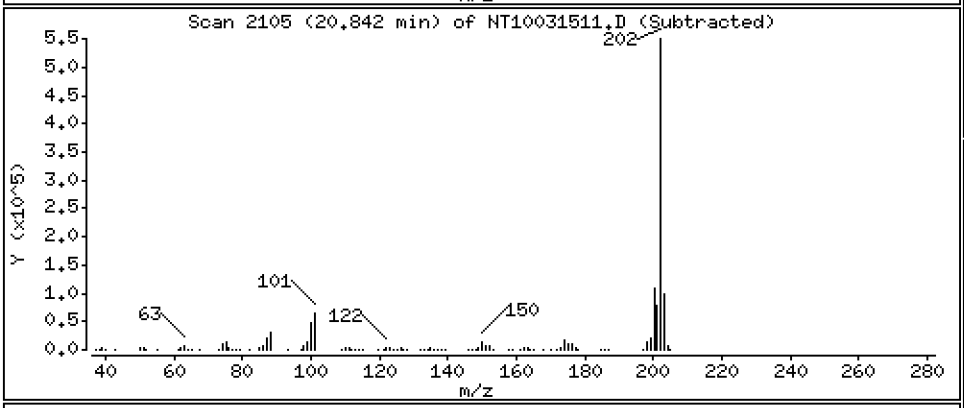
Column phase: ZB-5msi

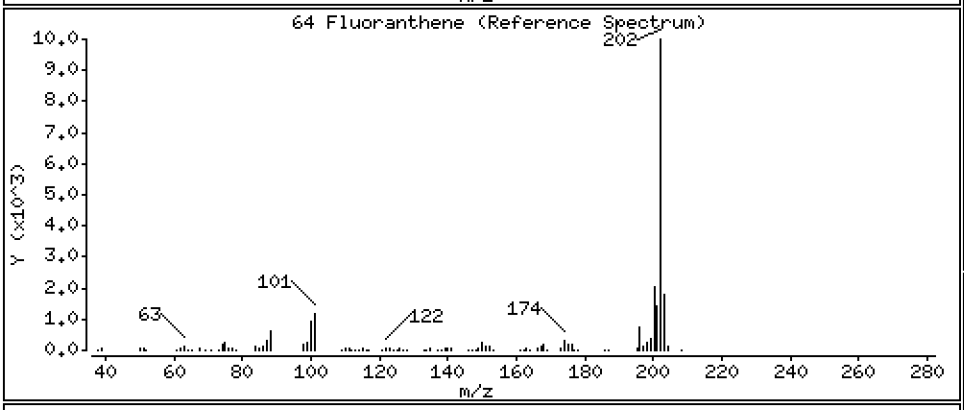
Column diameter: 0.25

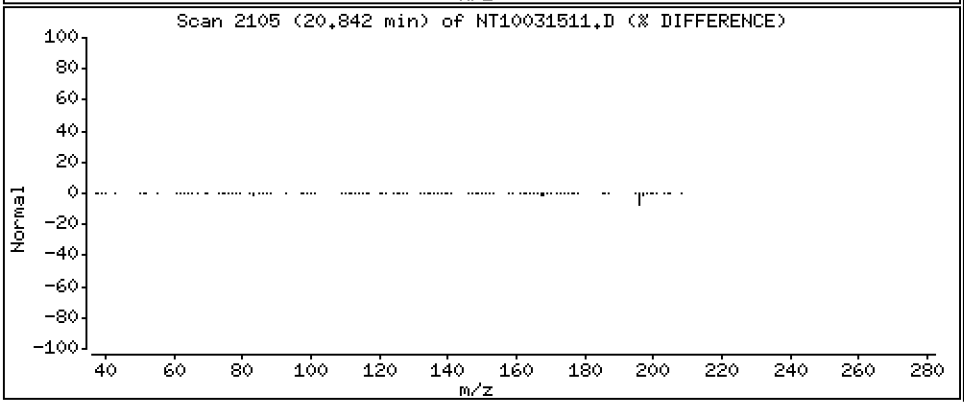
64 Fluoranthene

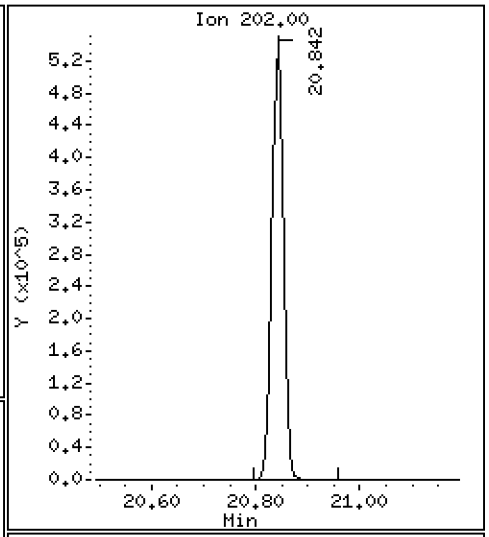
Concentration: 4.472 ug/mL

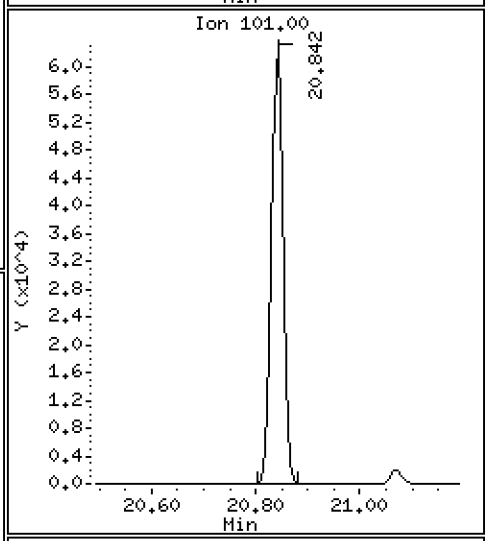


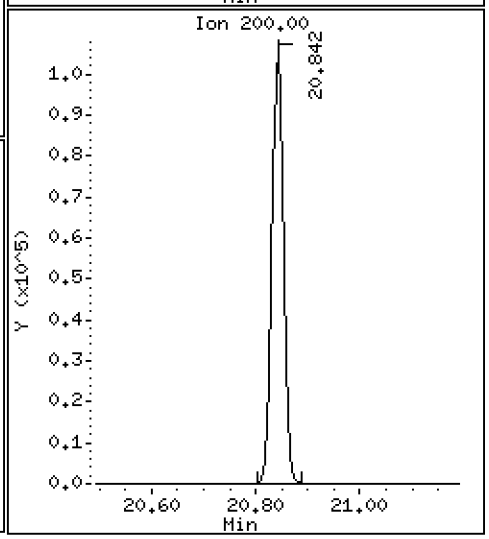












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

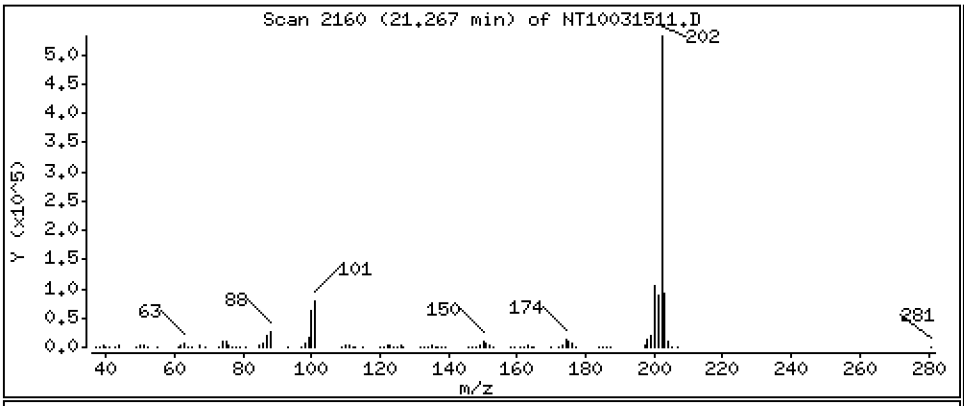
Operator: VTS

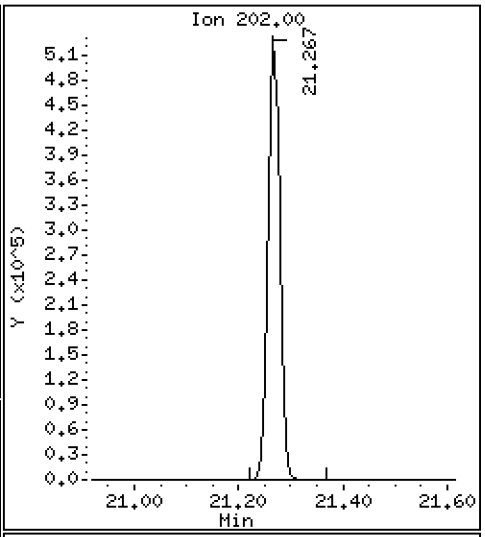
Column phase: ZB-5msi

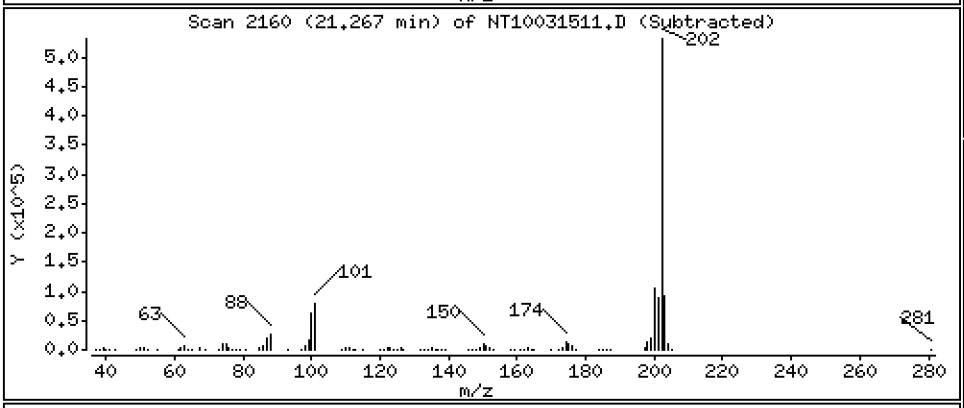
Column diameter: 0.25

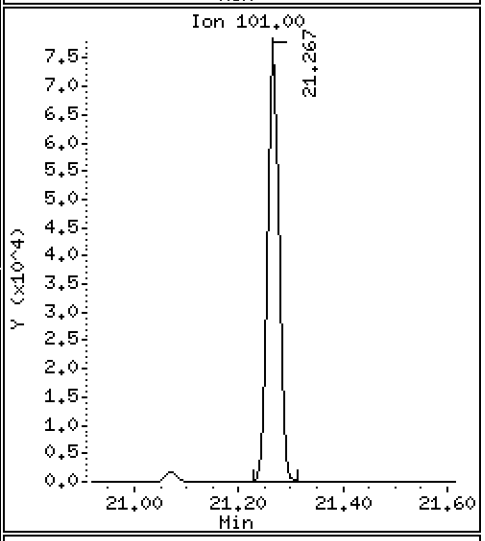
65 Pyrene

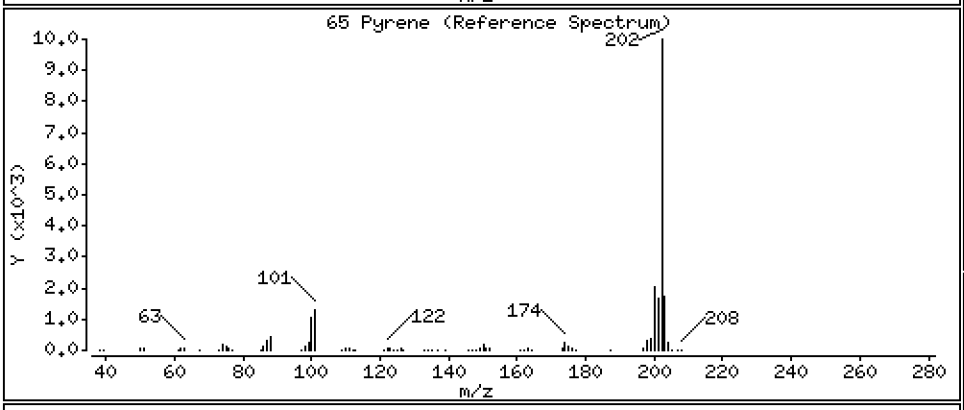
Concentration: 4.339 ug/mL

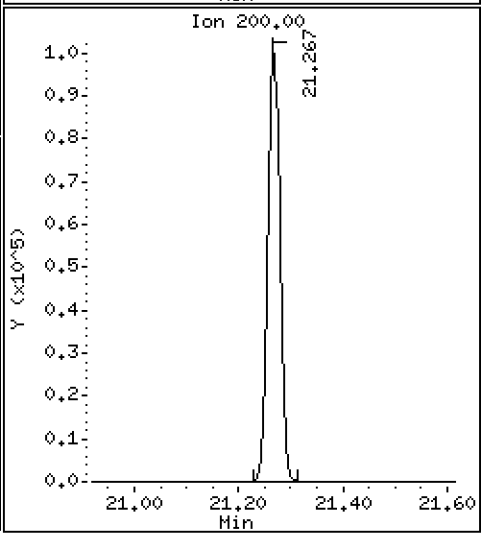


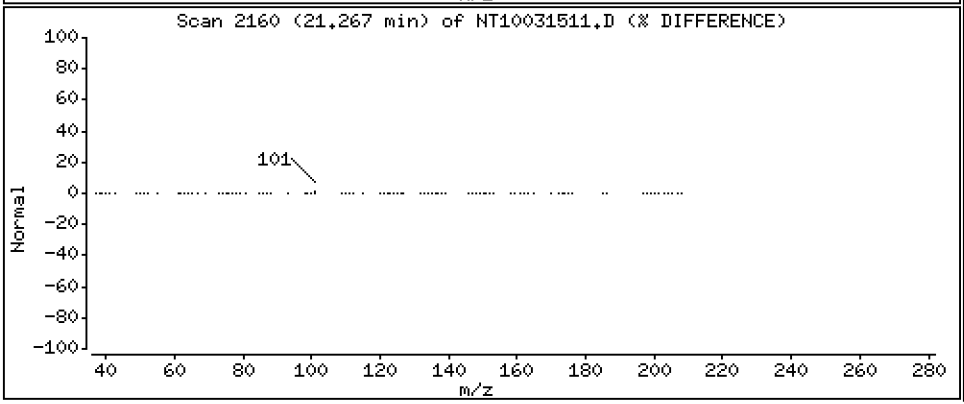












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

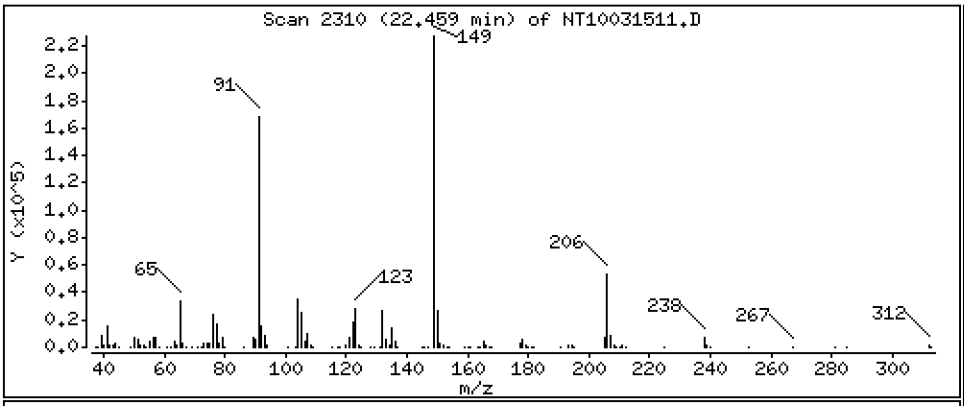
Operator: VTS

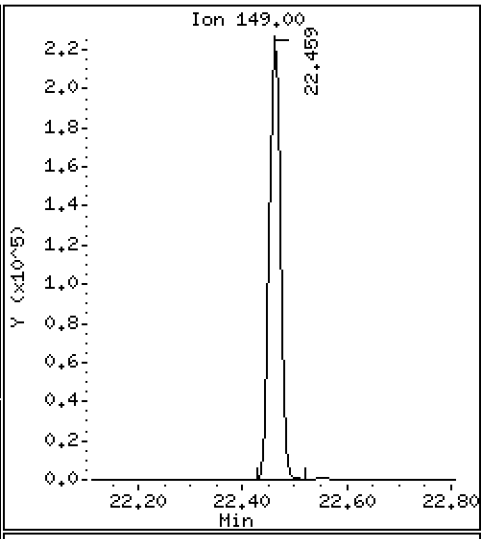
Column phase: ZB-5msi

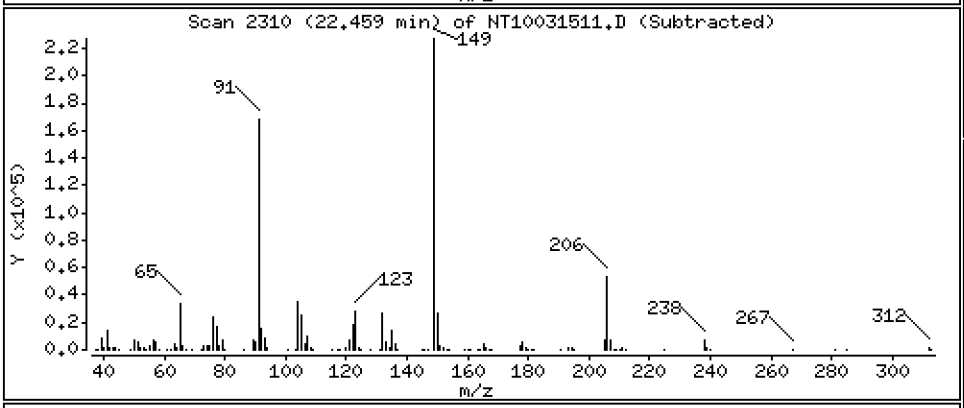
Column diameter: 0.25

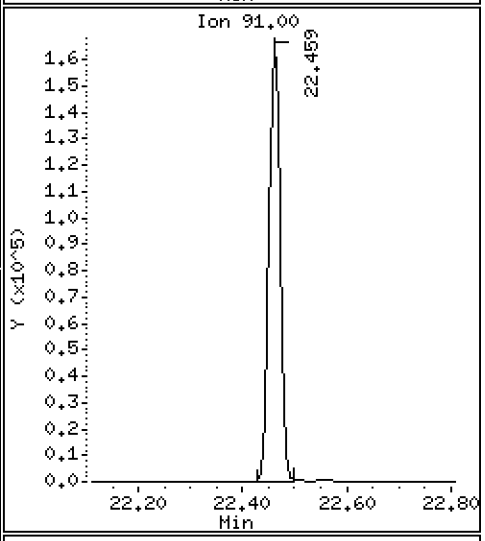
67 Butylbenzylphthalate

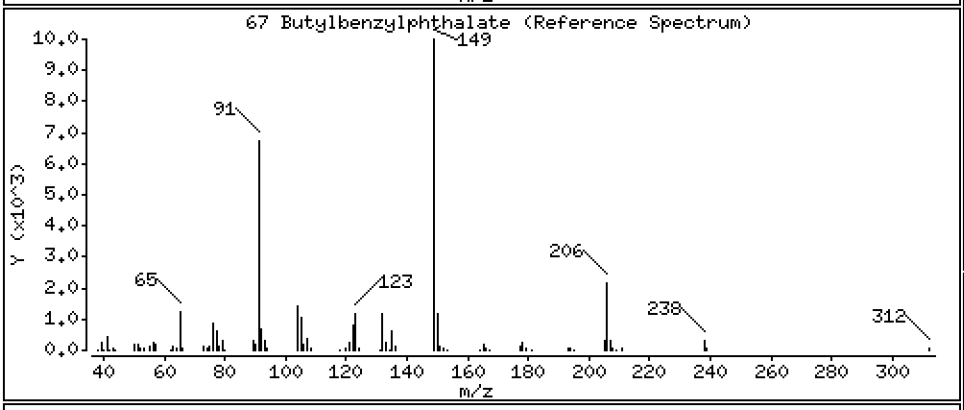
Concentration: 4.834 ug/mL

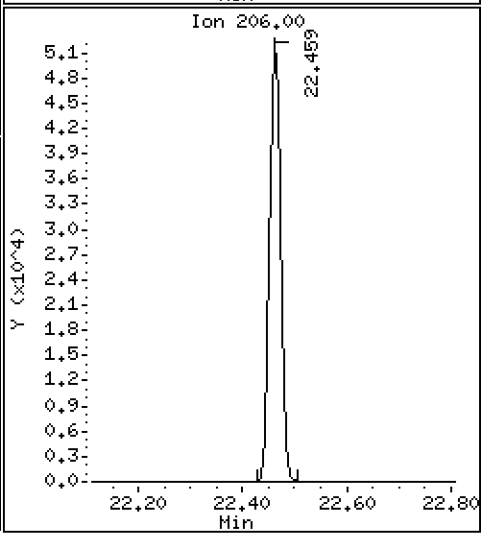


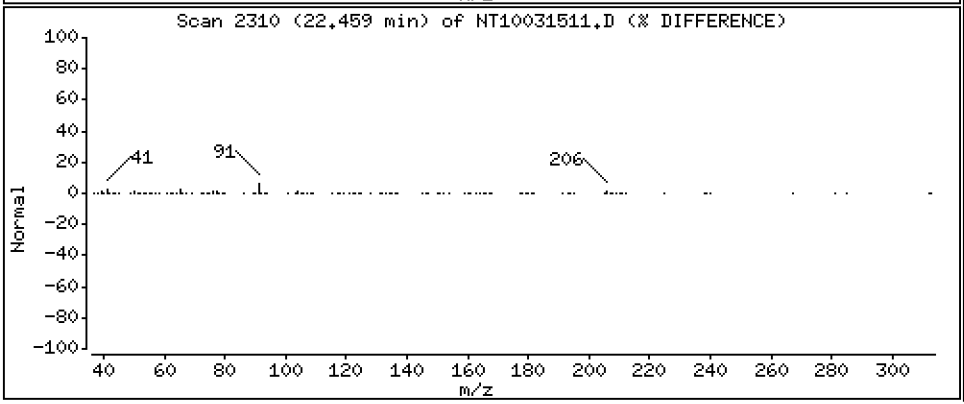












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

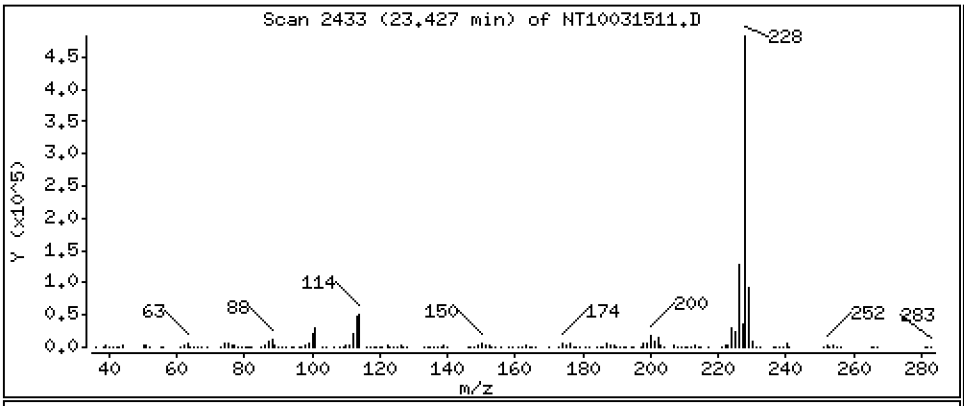
Operator: VTS

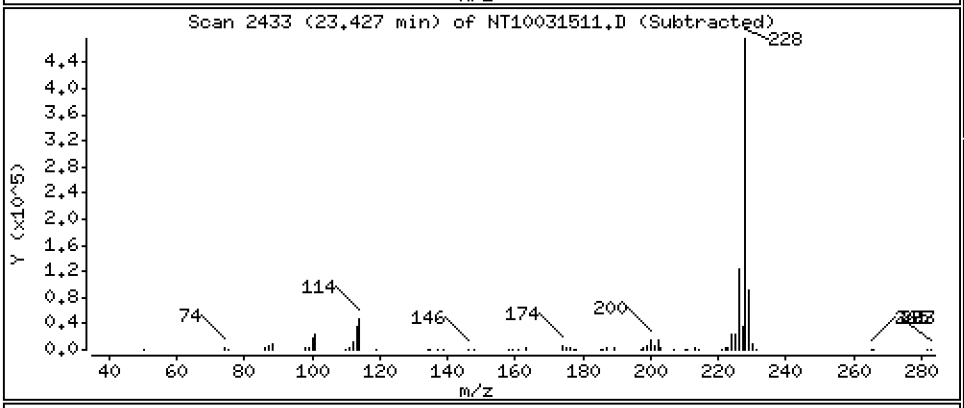
Column phase: ZB-5msi

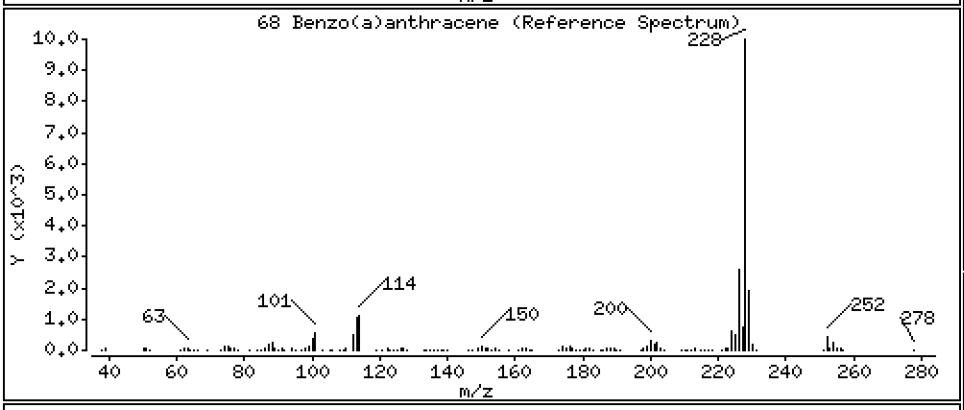
Column diameter: 0.25

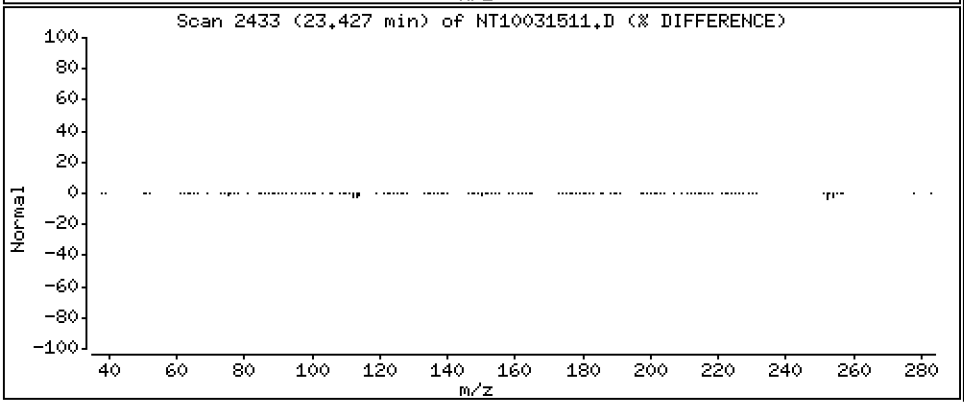
68 Benzo(a)anthracene

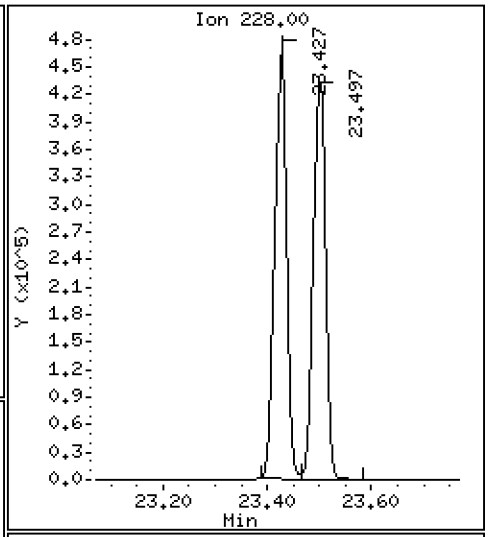
Concentration: 4.647 ug/mL

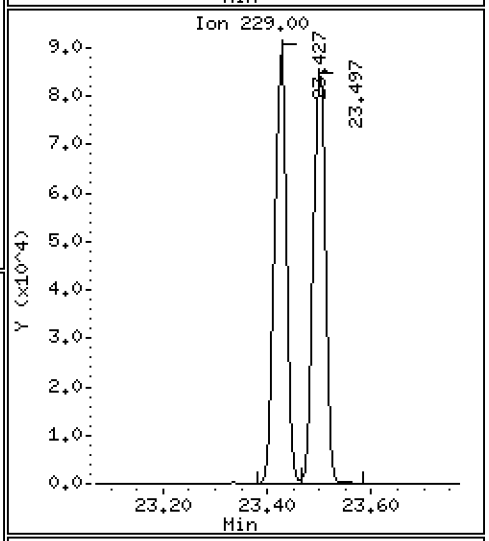


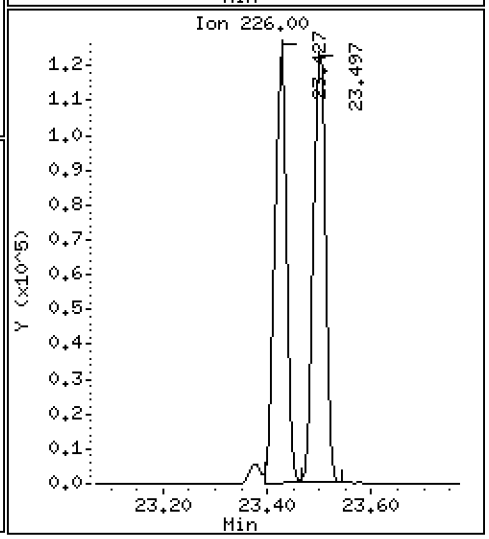












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

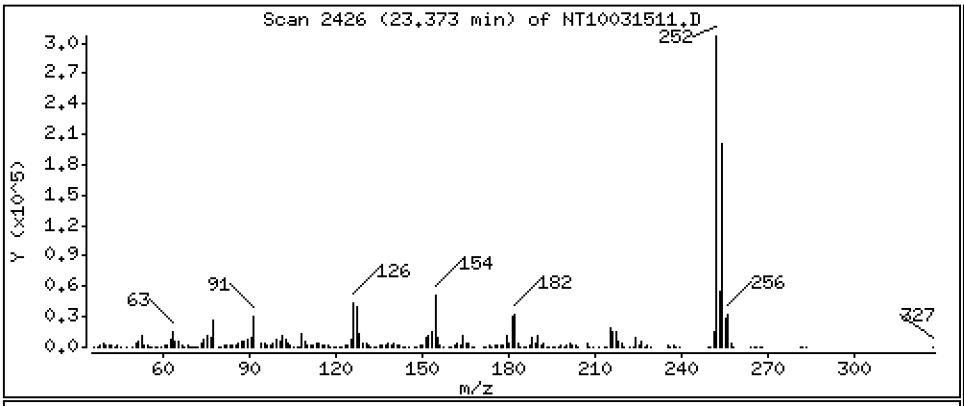
Operator: VTS

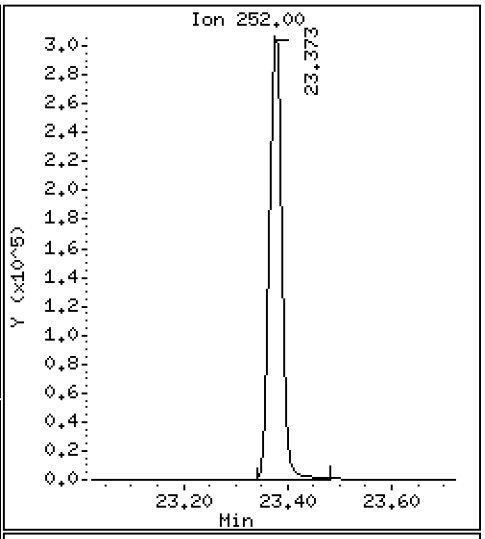
Column phase: ZB-5msi

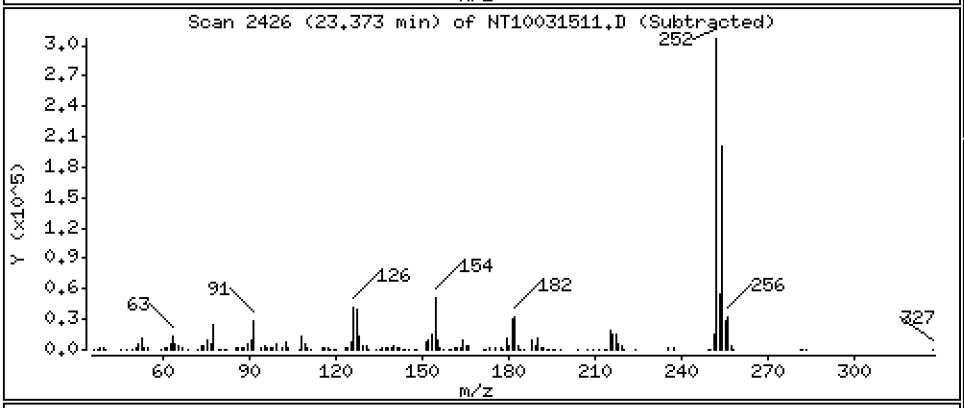
Column diameter: 0.25

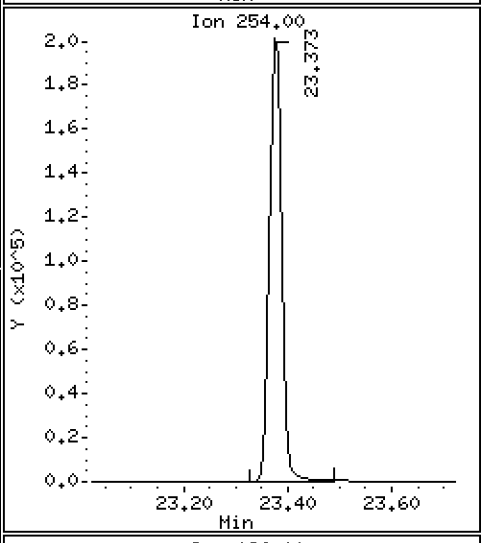
70 3,3'-Dichlorobenzidine

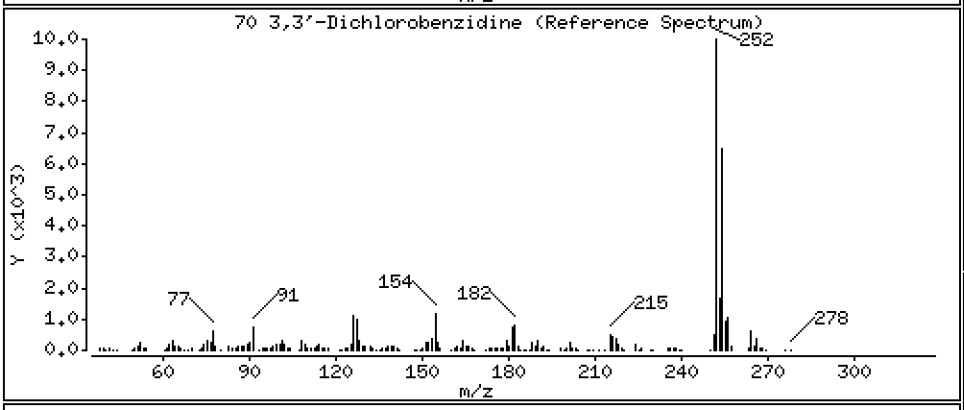
Concentration: 9.817 ug/mL

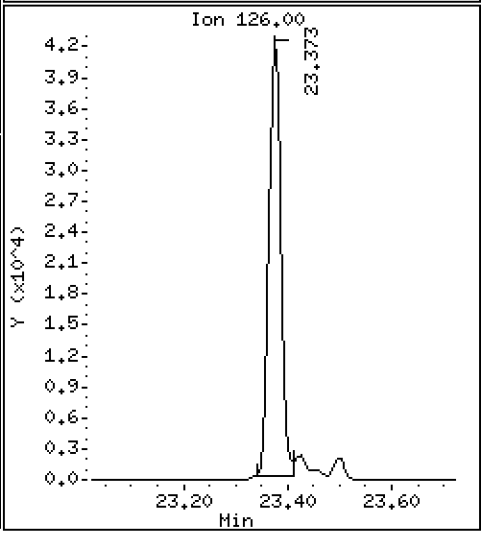


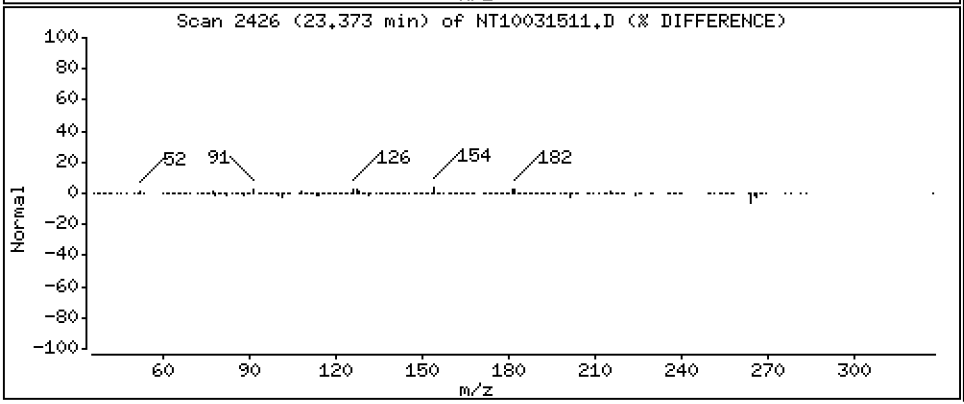












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

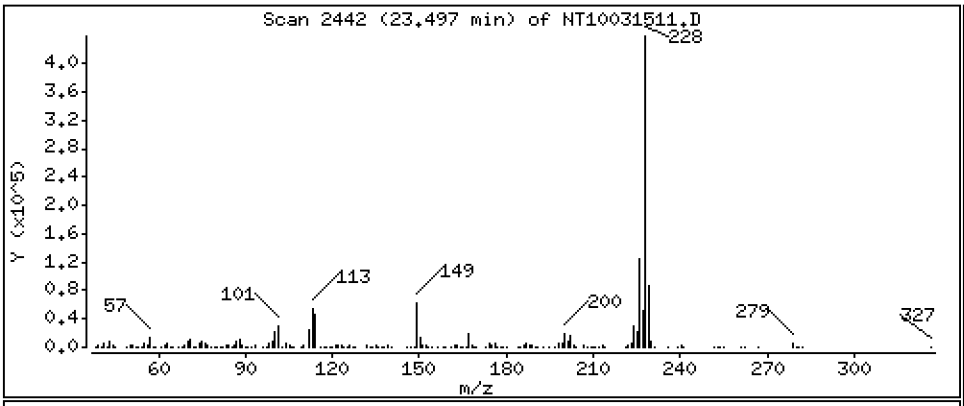
Operator: VTS

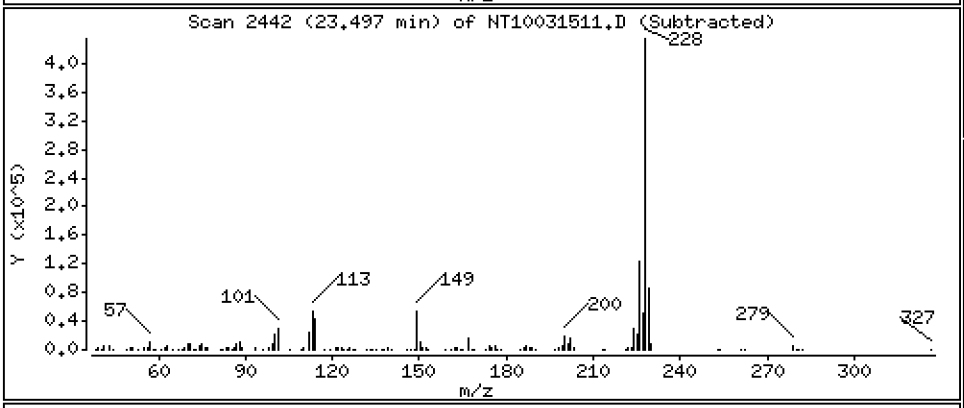
Column phase: ZB-5msi

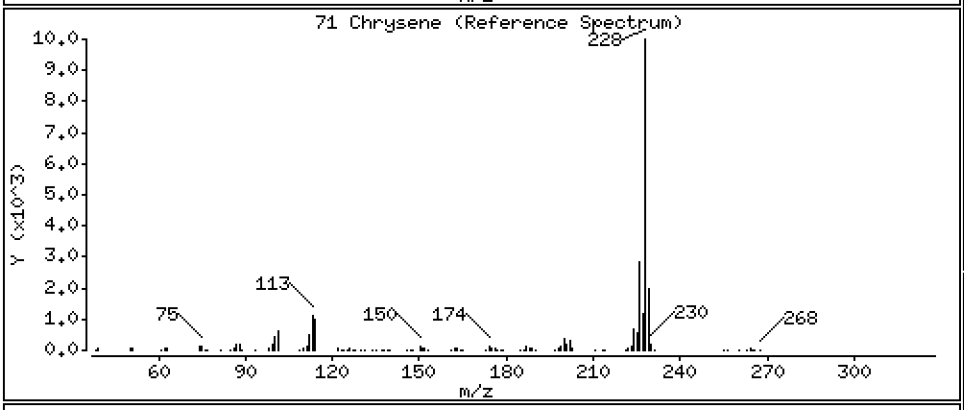
Column diameter: 0.25

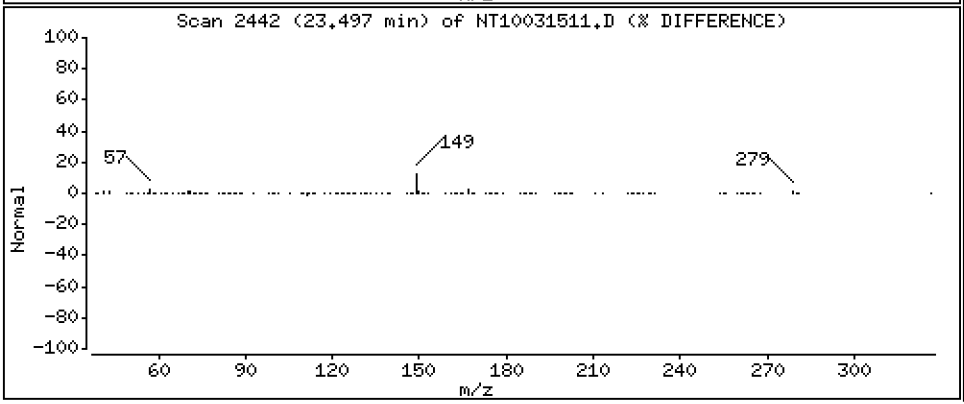
71 Chrysene

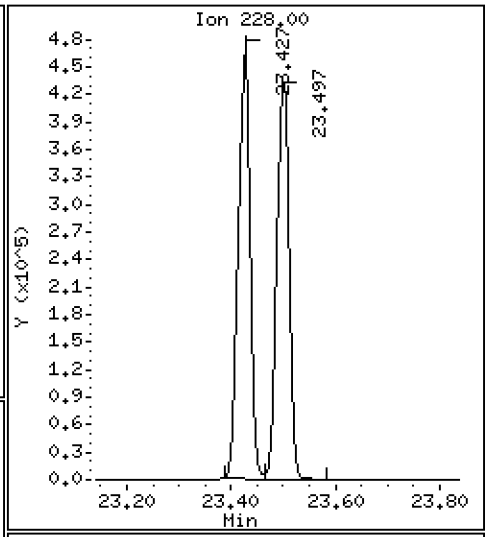
Concentration: 4.510 ug/mL

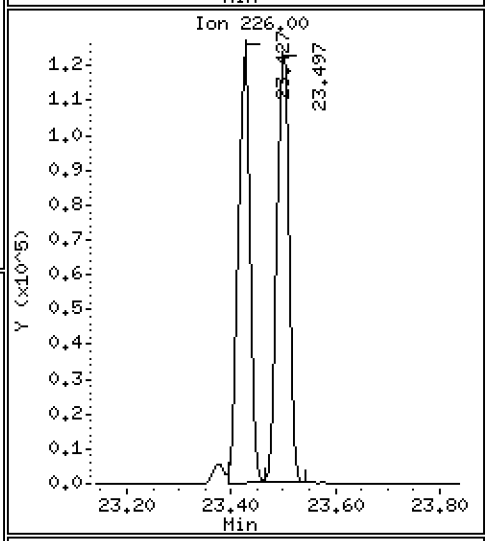


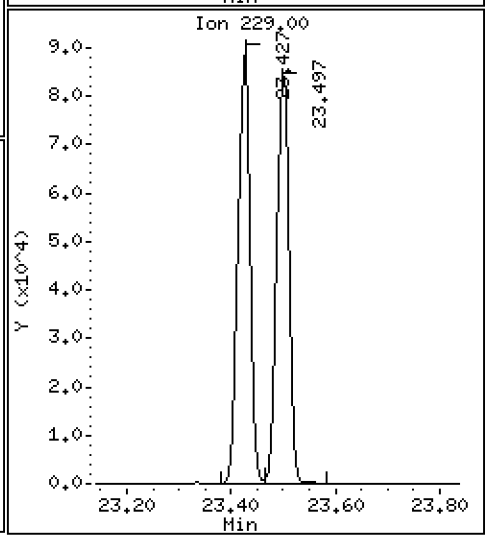












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

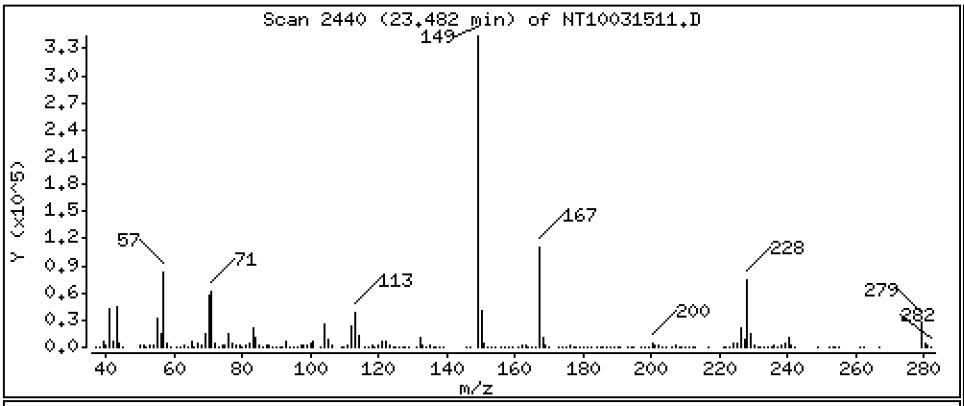
Operator: VTS

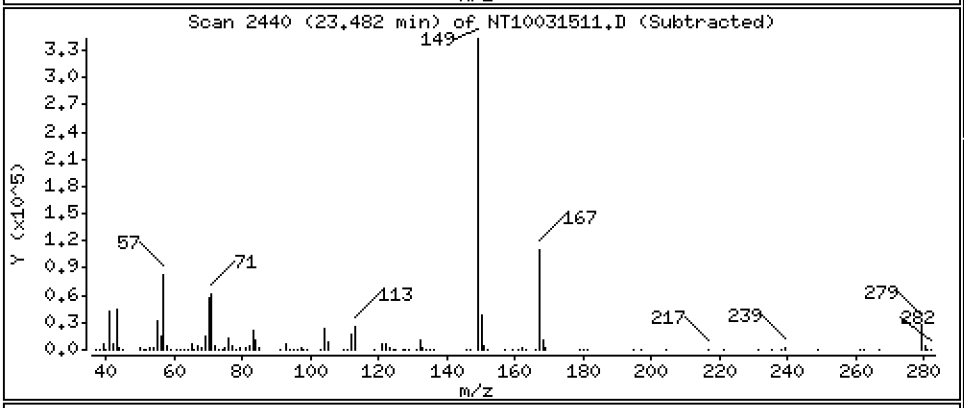
Column phase: ZB-5msi

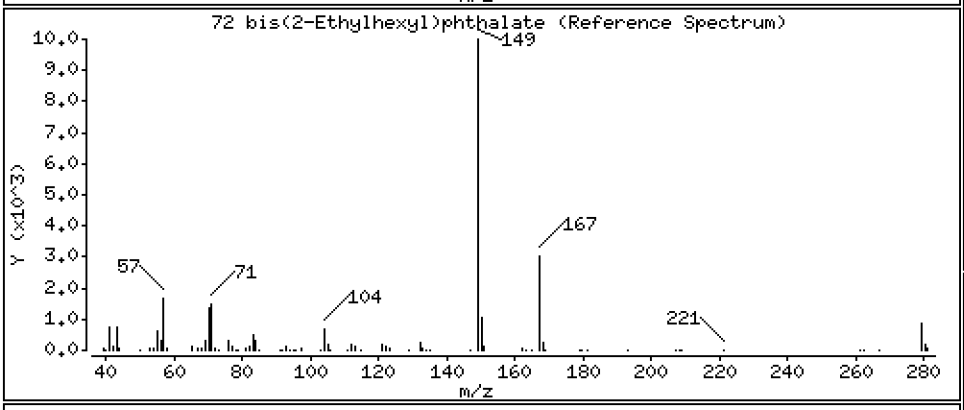
Column diameter: 0.25

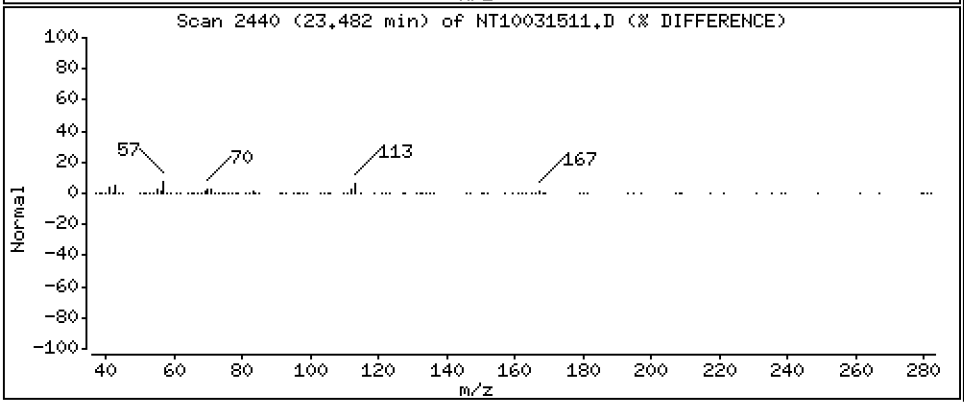
72 bis(2-Ethylhexyl)phthalate

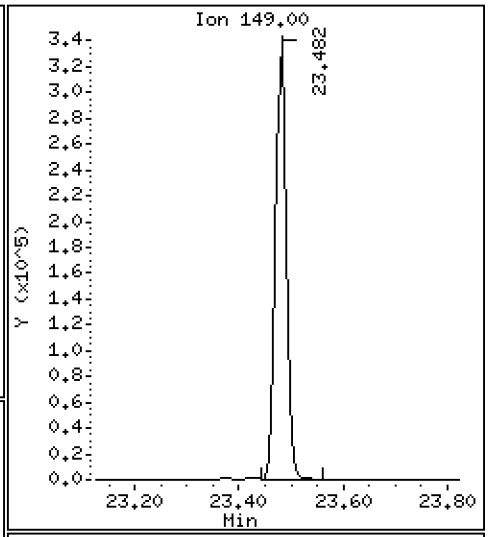
Concentration: 4.680 ug/mL

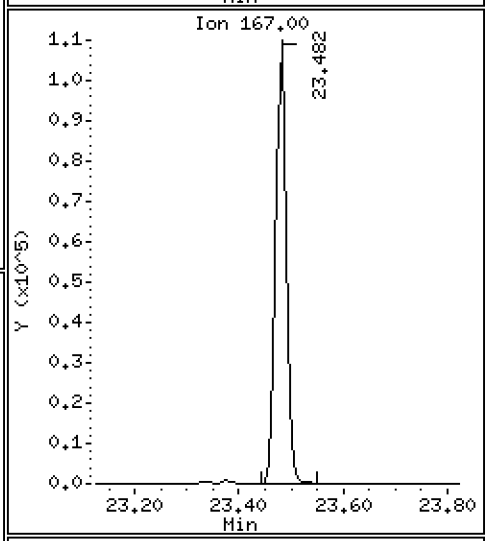


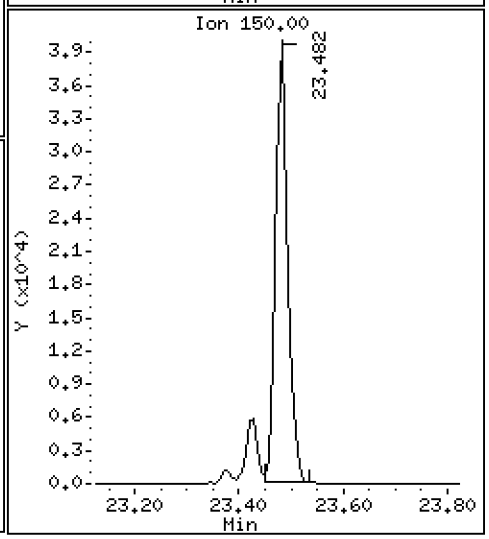












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

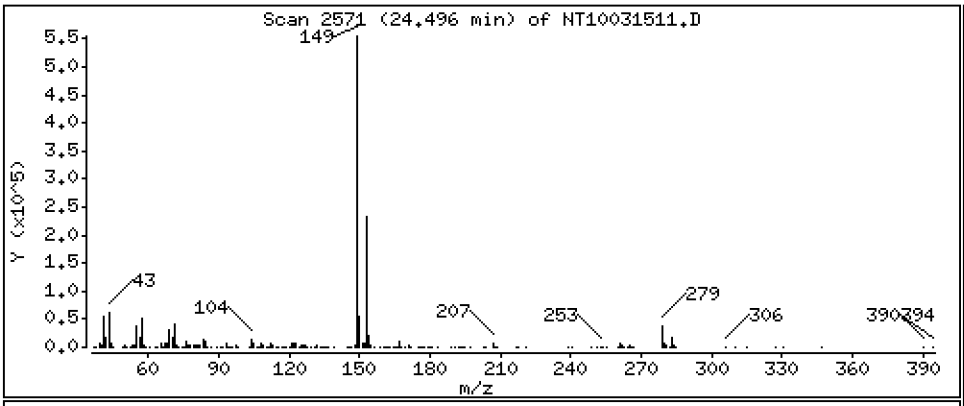
Operator: VTS

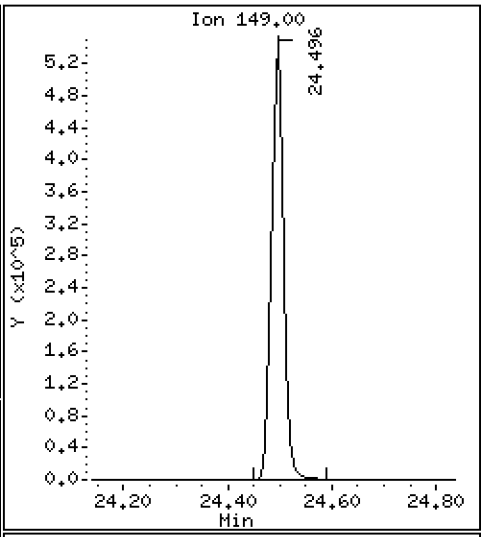
Column phase: ZB-5msi

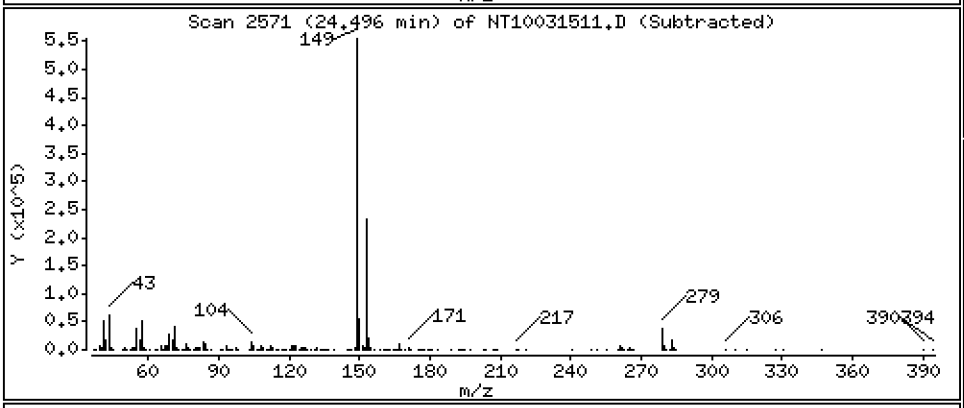
Column diameter: 0.25

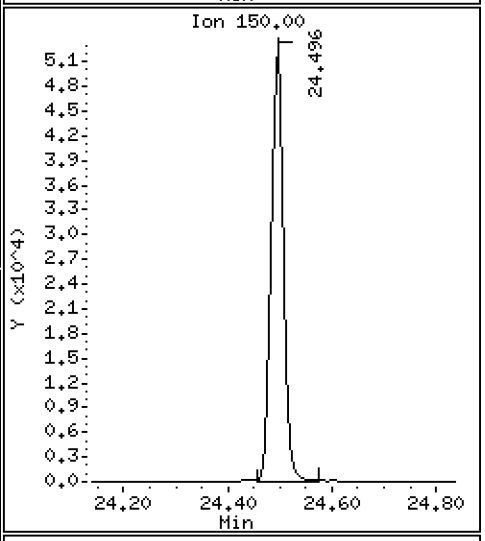
73 Di-n-octylphthalate

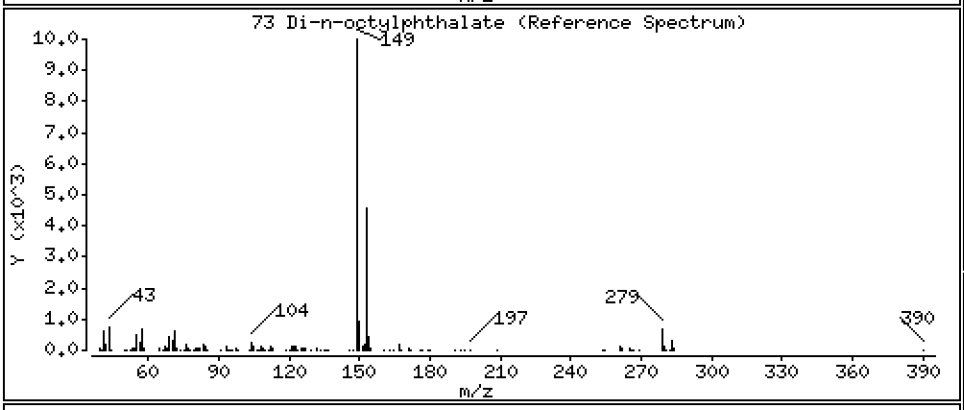
Concentration: 4.947 ug/mL

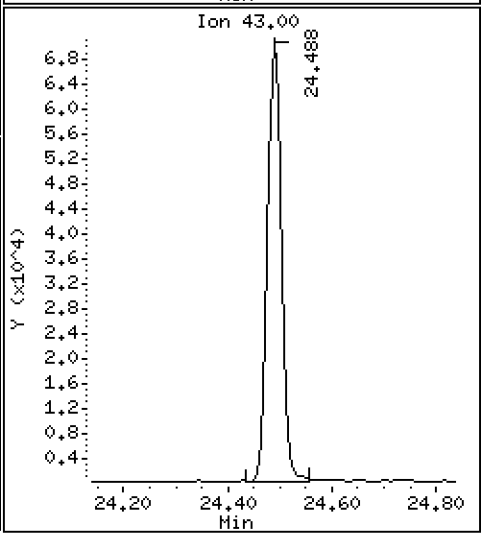


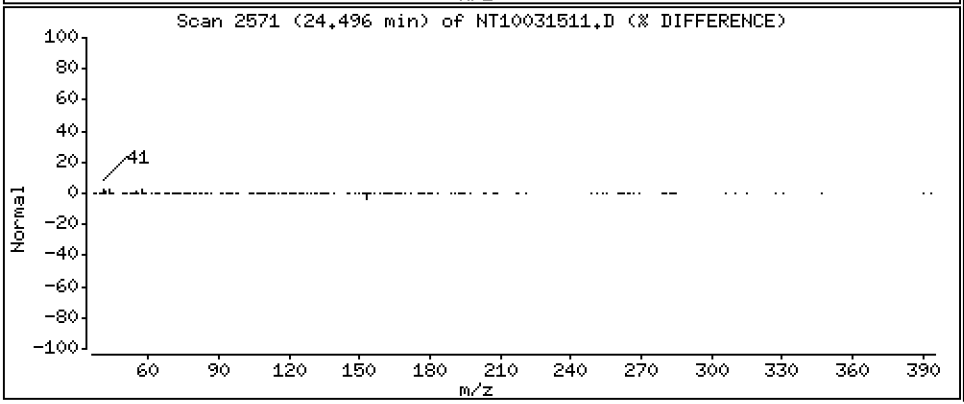












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

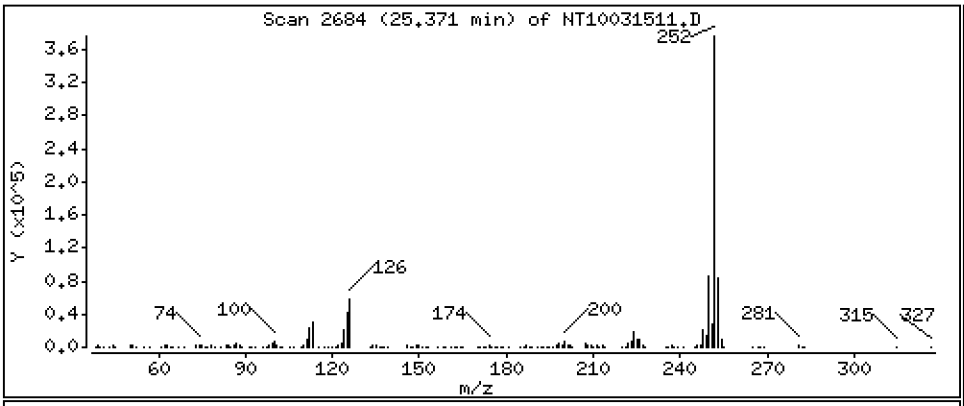
Operator: VTS

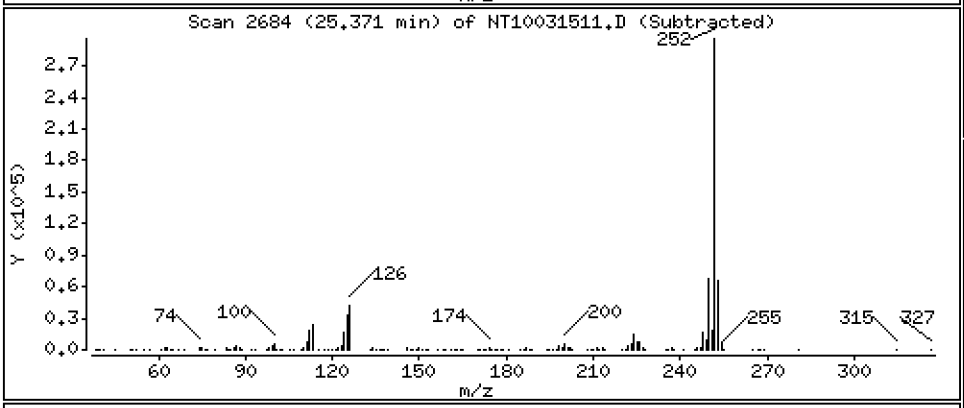
Column phase: ZB-5msi

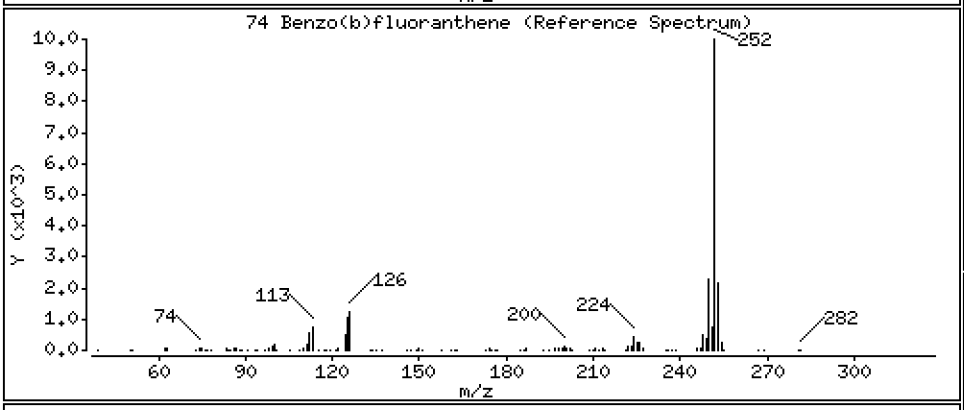
Column diameter: 0.25

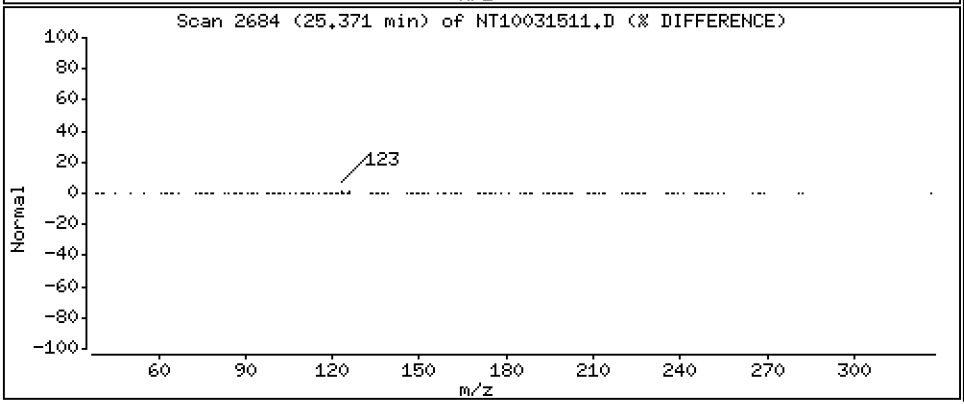
74 Benzo(b)fluoranthene

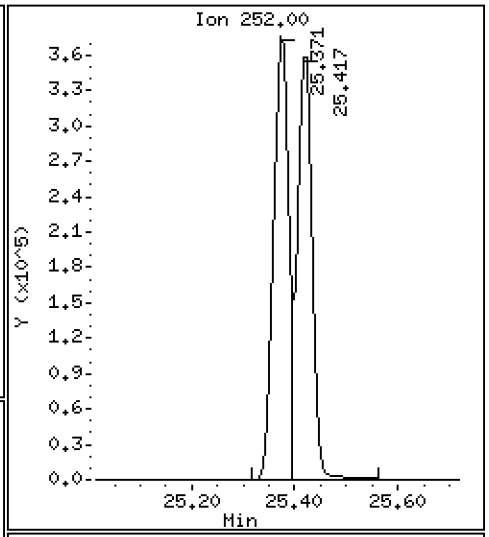
Concentration: 4.602 ug/mL

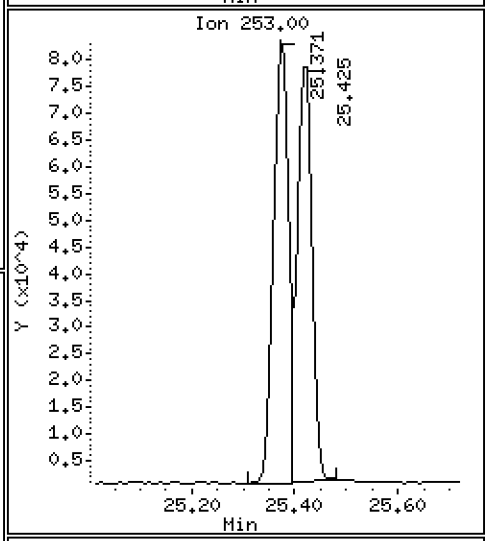


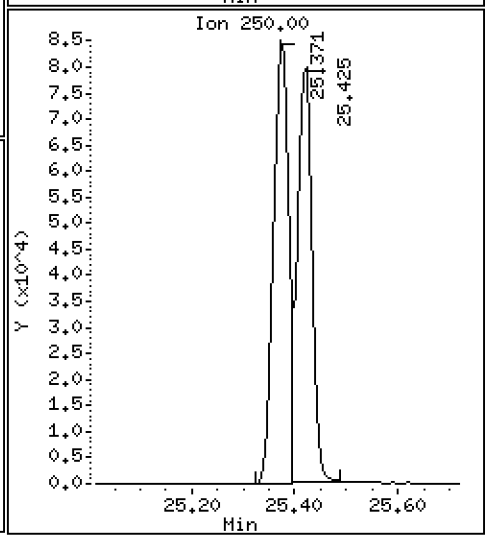












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

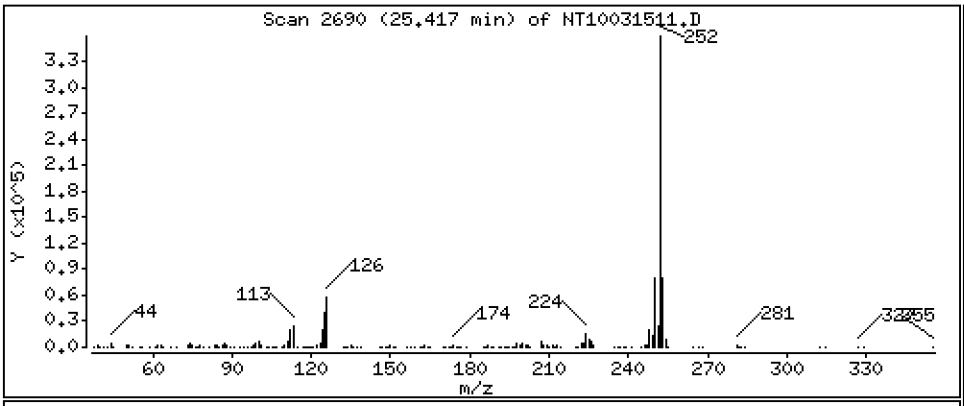
Operator: VTS

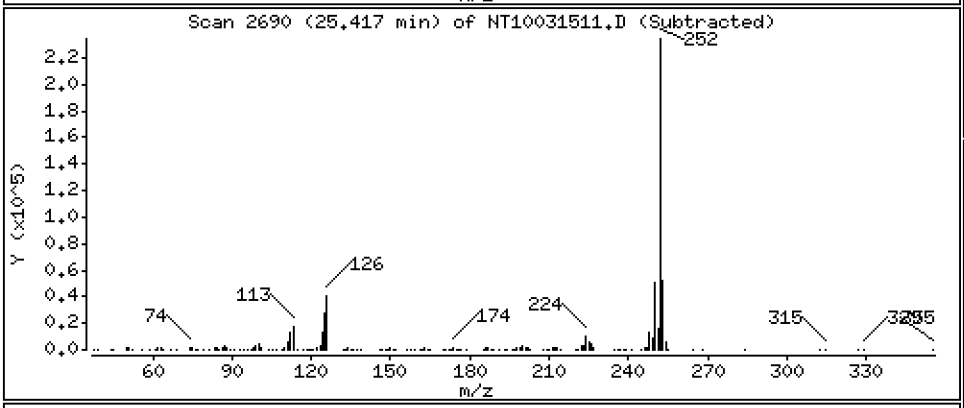
Column phase: ZB-5msi

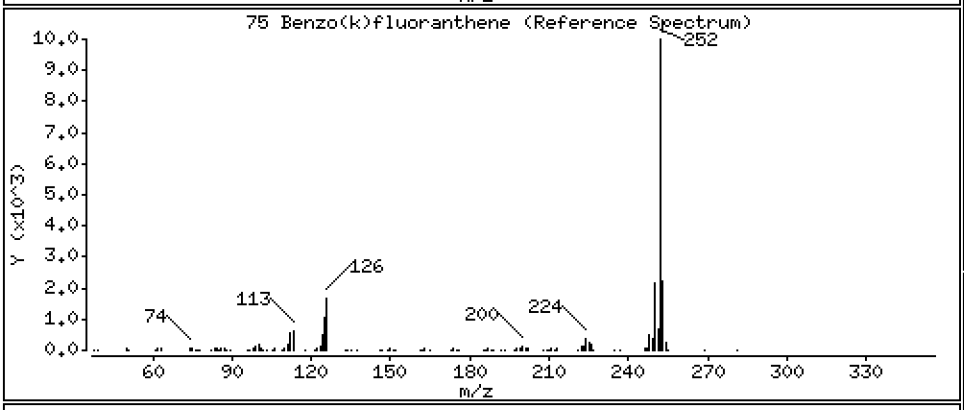
Column diameter: 0.25

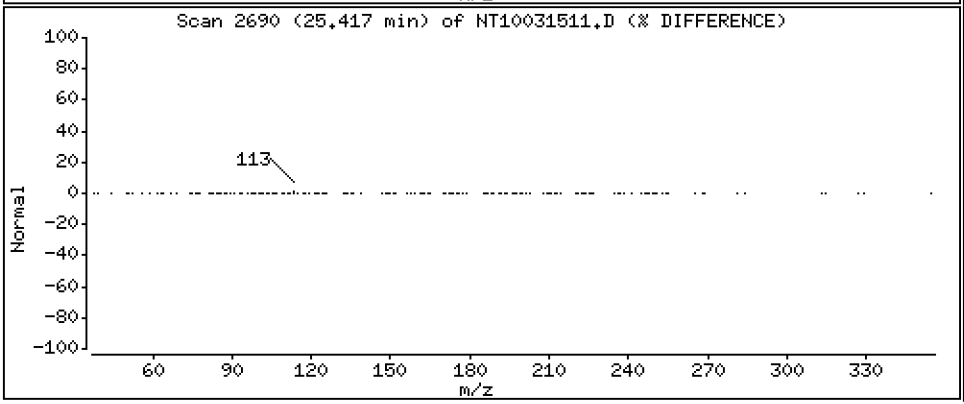
75 Benzo(k)fluoranthene

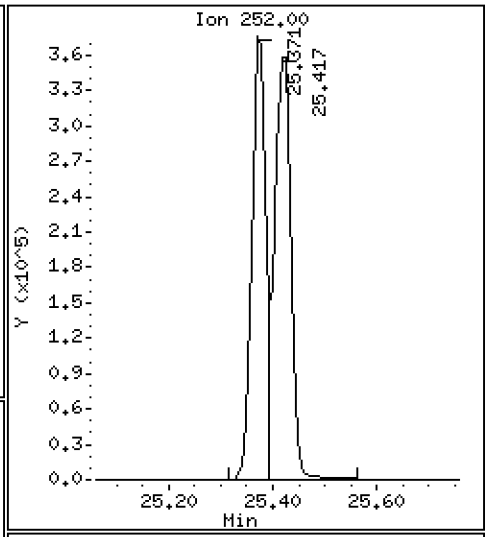
Concentration: 4.898 ug/mL

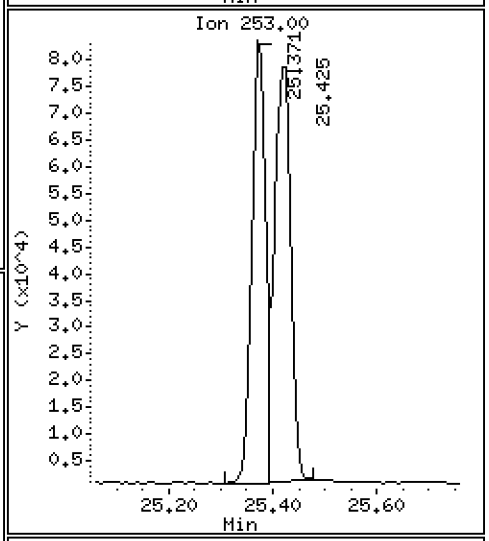


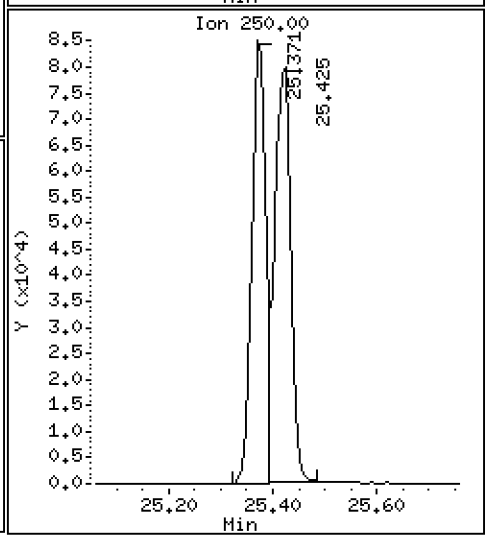












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

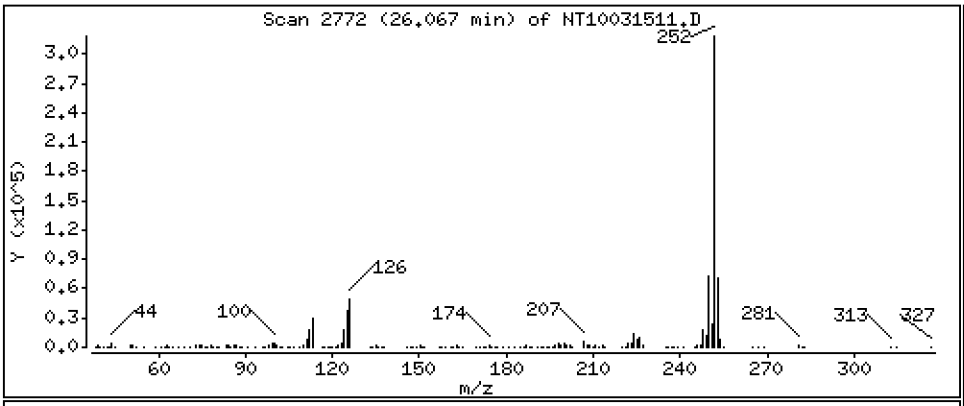
Operator: VTS

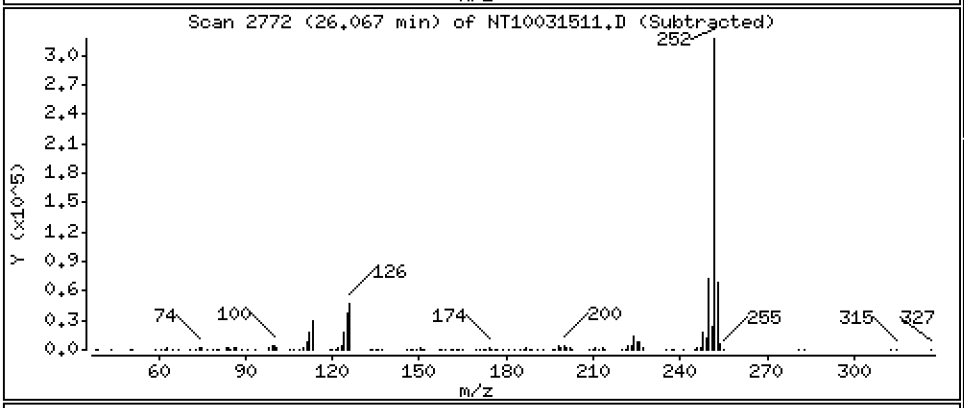
Column phase: ZB-5msi

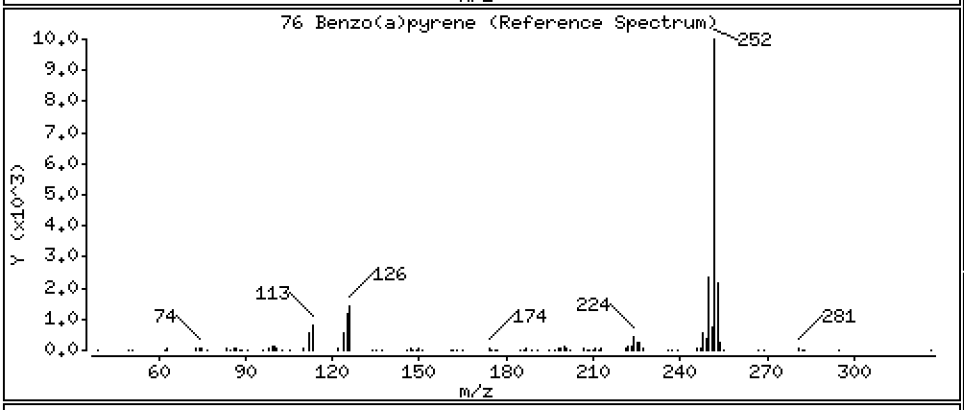
Column diameter: 0.25

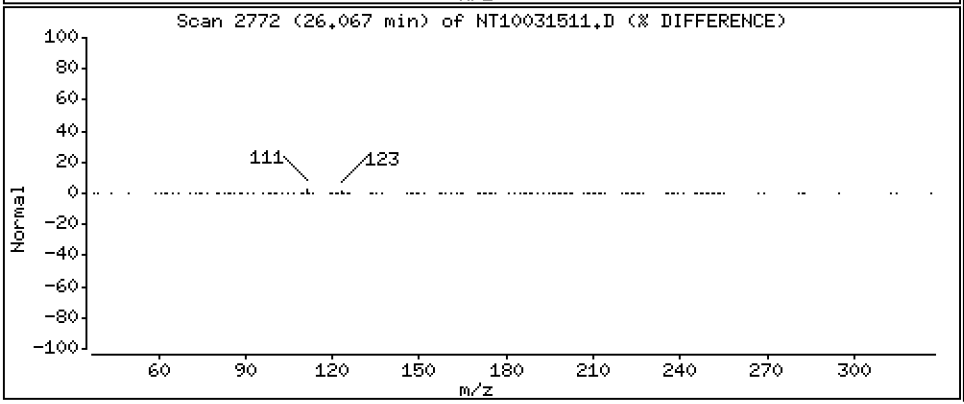
76 Benzo(a)pyrene

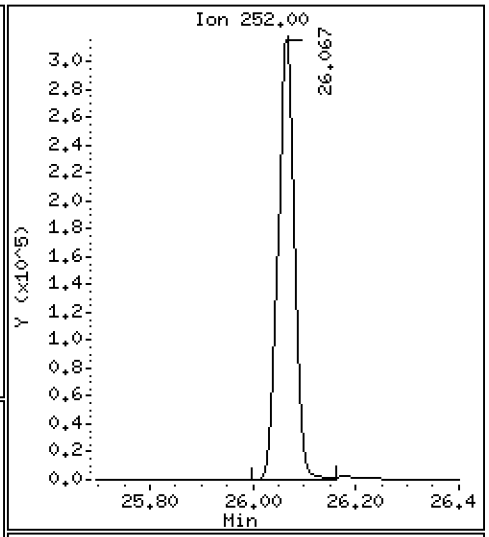
Concentration: 4.873 ug/mL

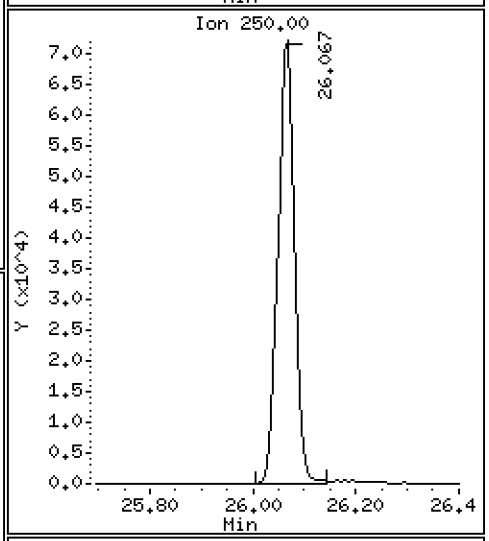


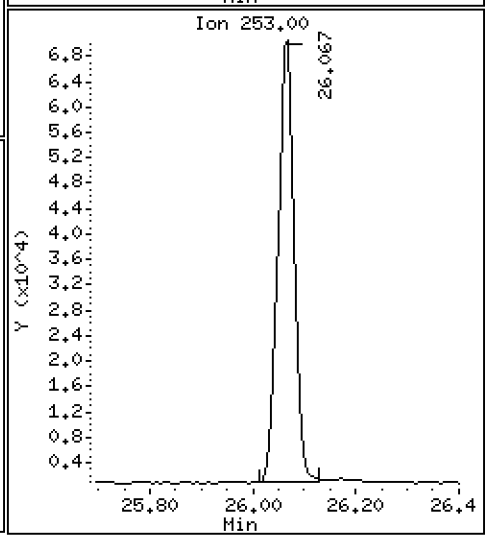












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

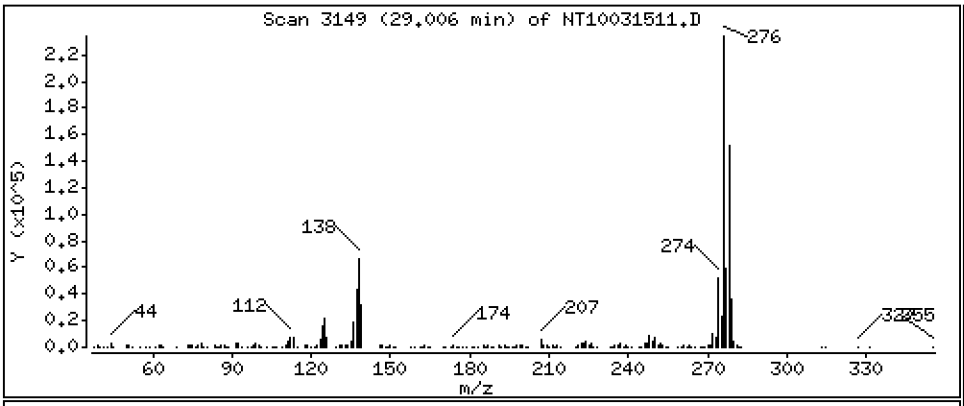
Operator: VTS

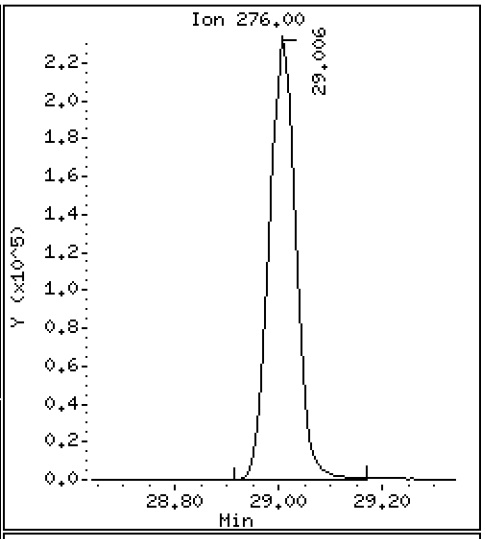
Column phase: ZB-5msi

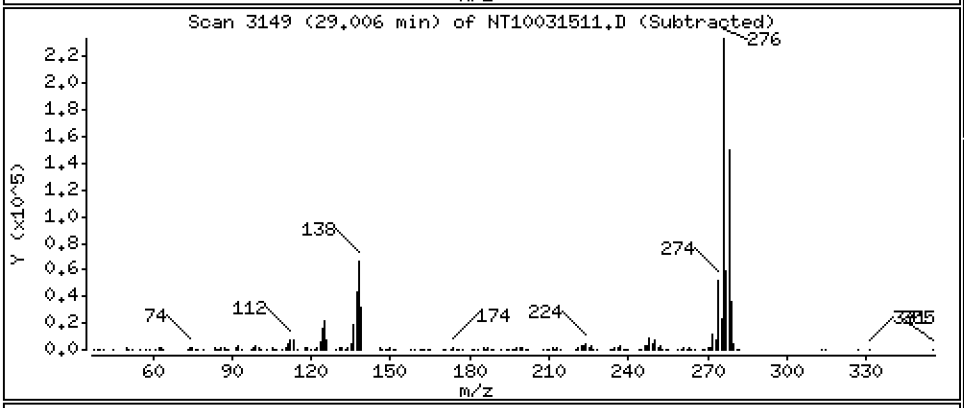
Column diameter: 0.25

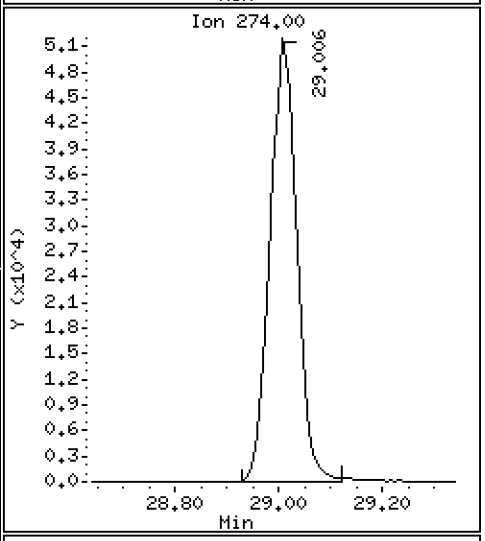
78 Indeno(1,2,3-cd)pyrene

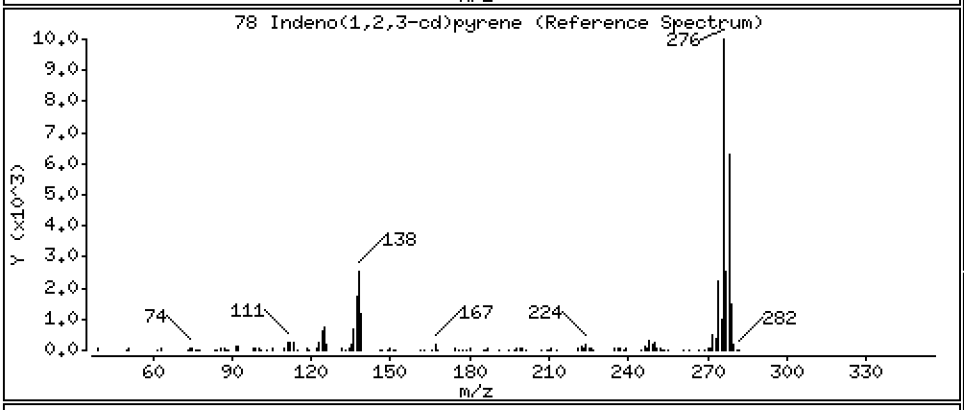
Concentration: 4.577 ug/mL

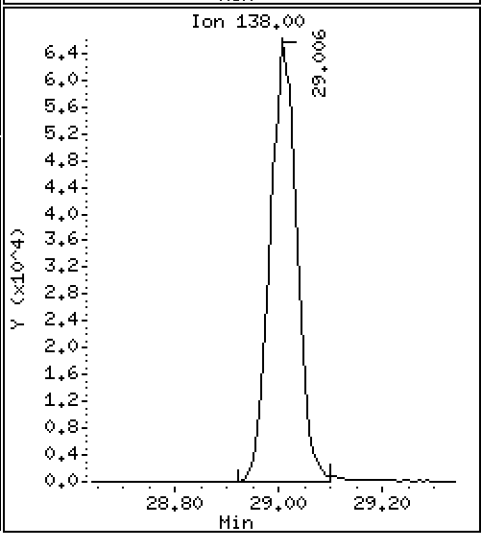


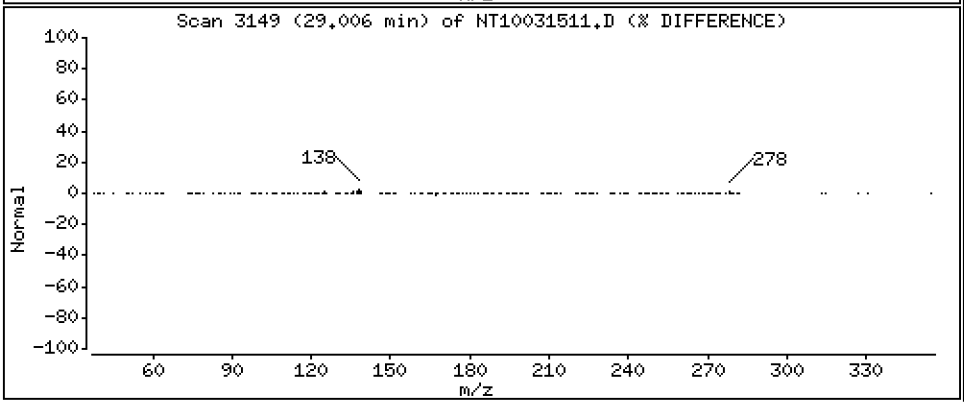












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

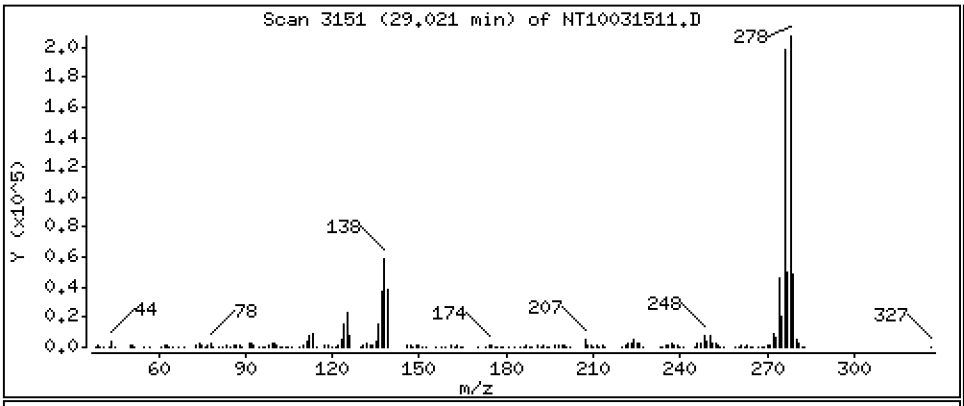
Operator: VTS

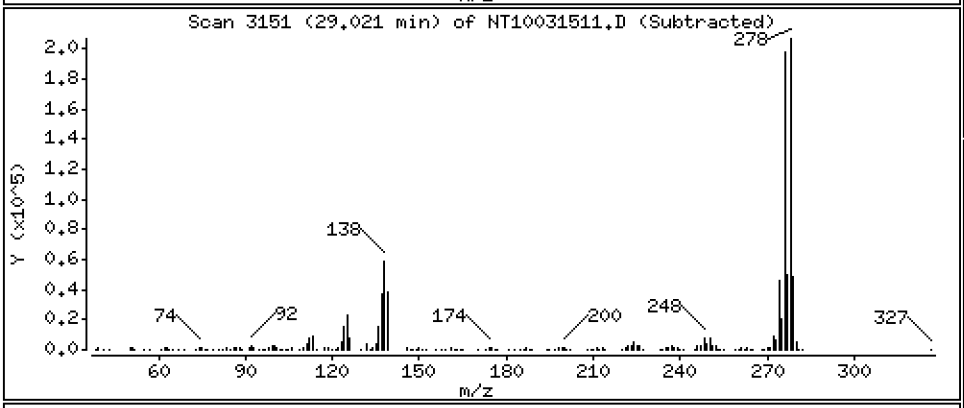
Column phase: ZB-5msi

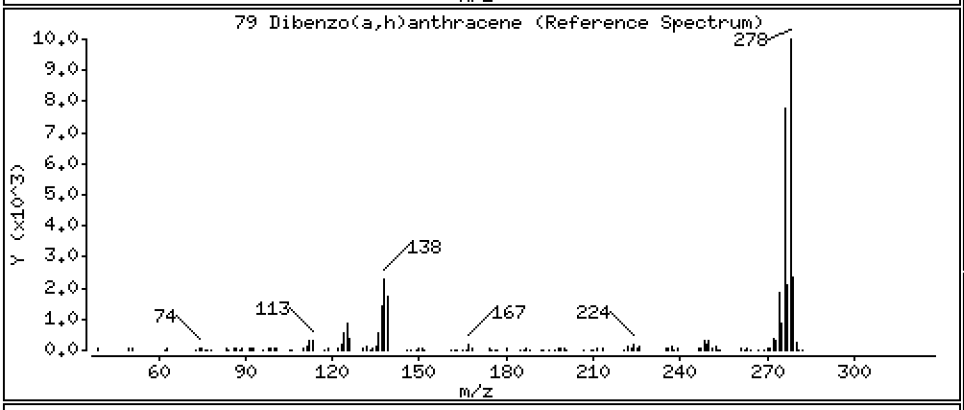
Column diameter: 0.25

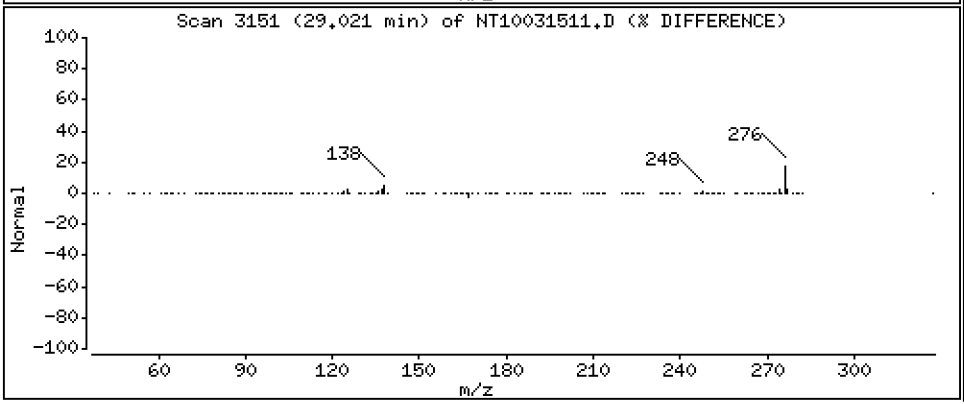
79 Dibenzo(a,h)anthracene

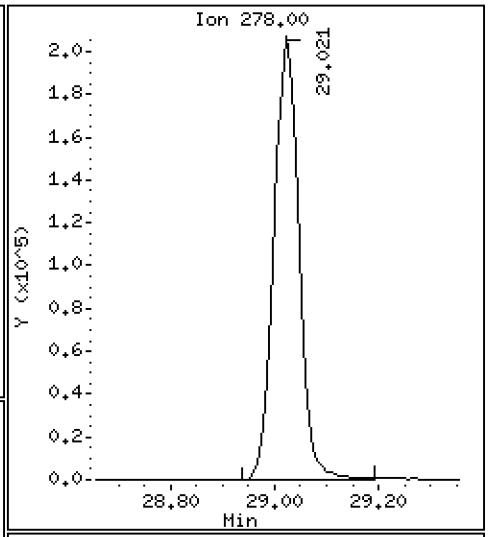
Concentration: 4.547 ug/mL

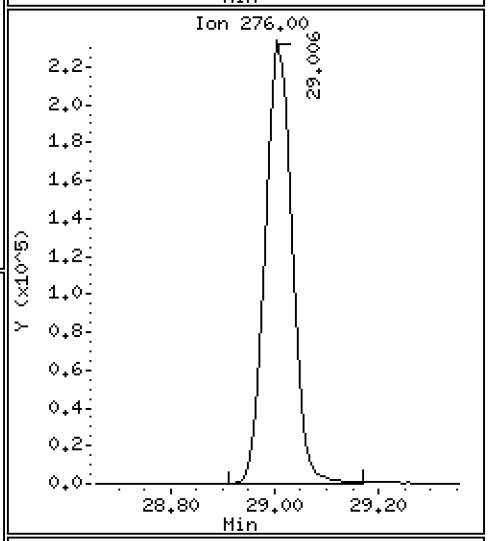


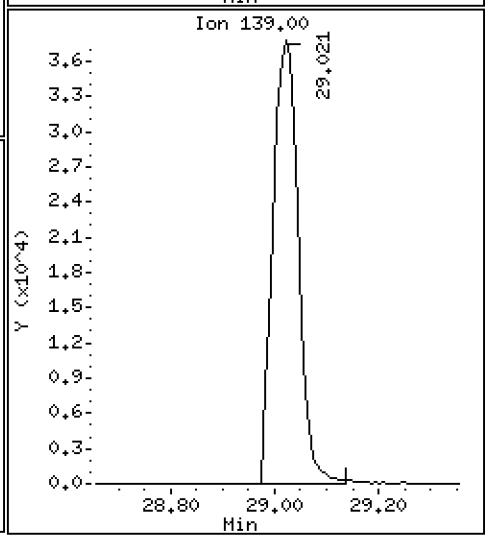












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

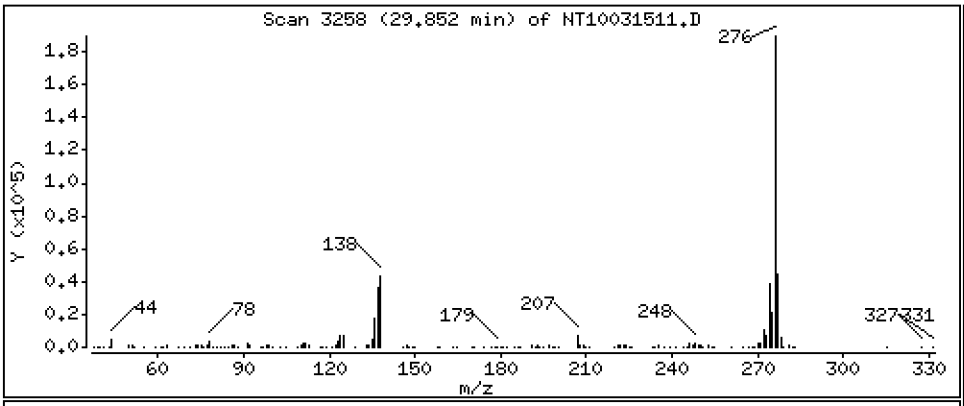
Operator: VTS

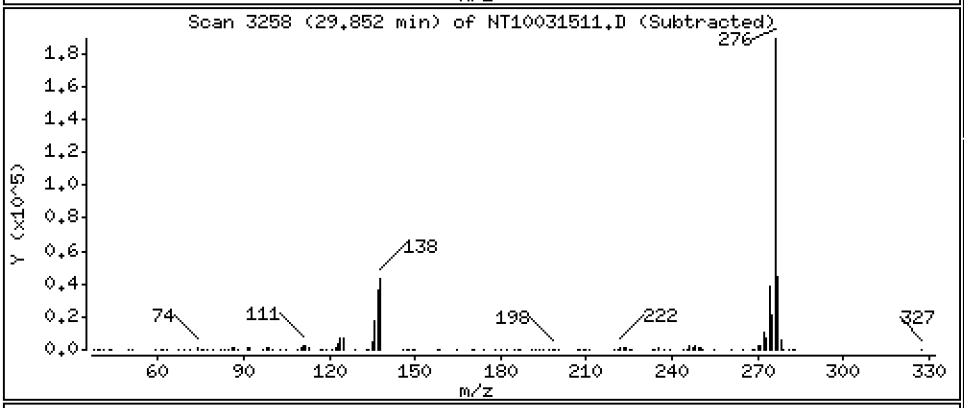
Column phase: ZB-5msi

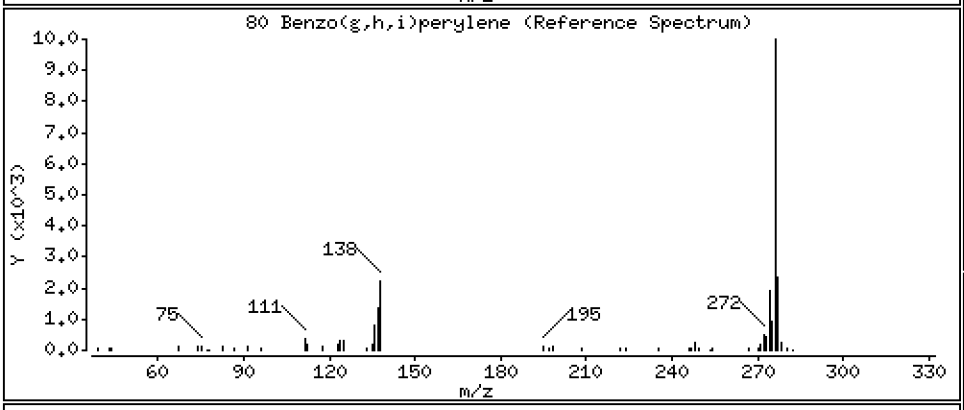
Column diameter: 0.25

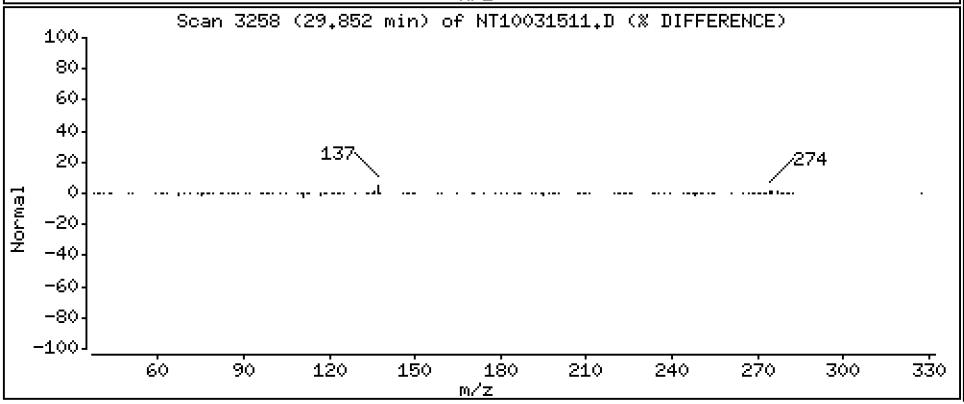
80 Benzo(g,h,i)perylene

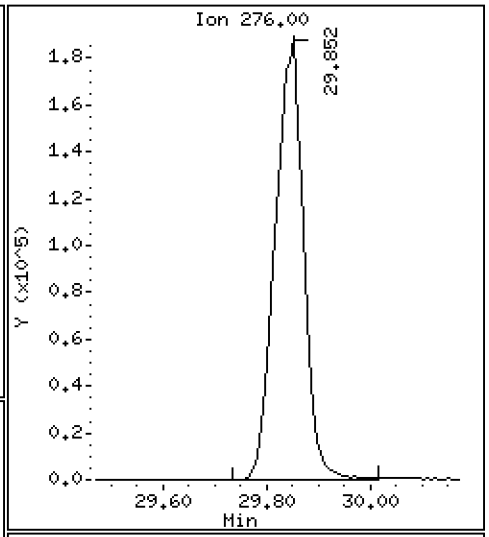
Concentration: 4.590 ug/mL

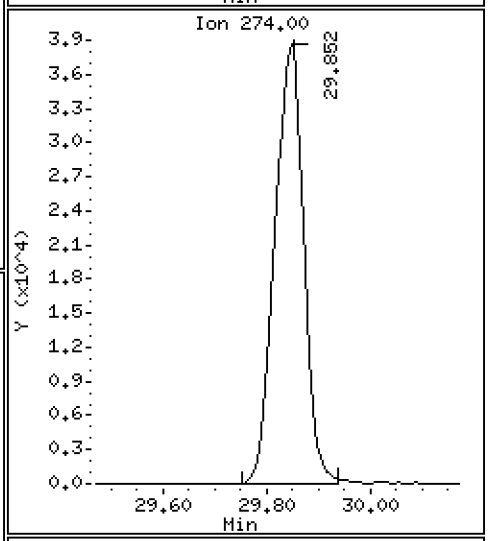


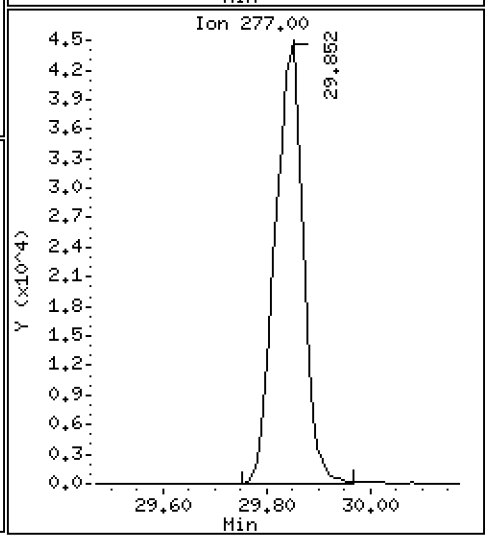












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

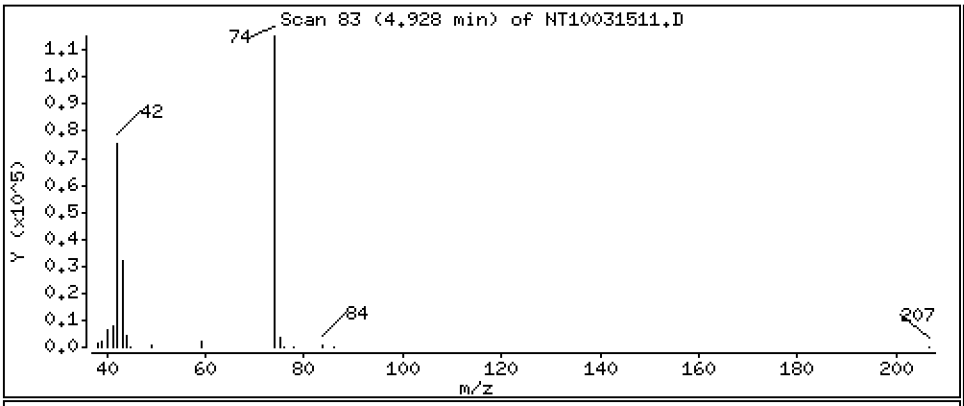
Operator: VTS

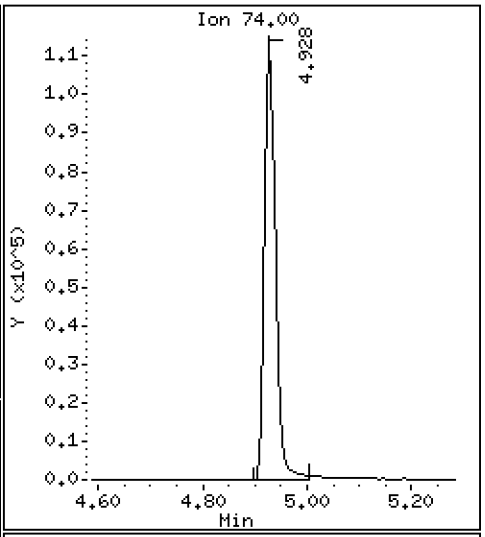
Column phase: ZB-5msi

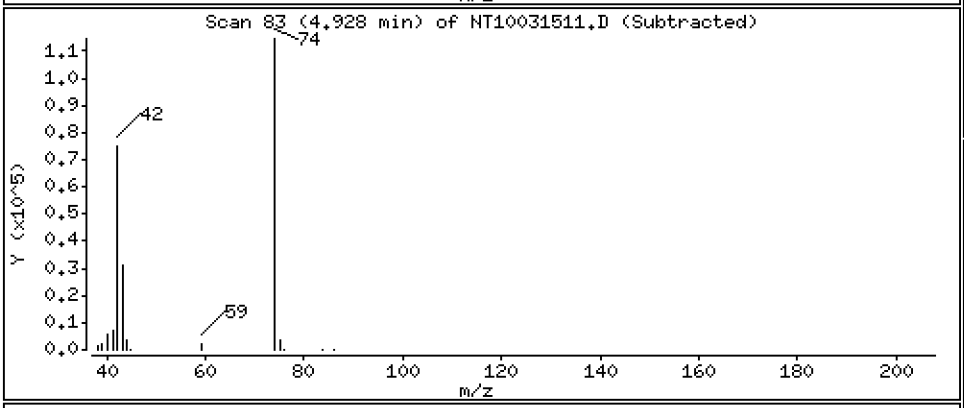
Column diameter: 0.25

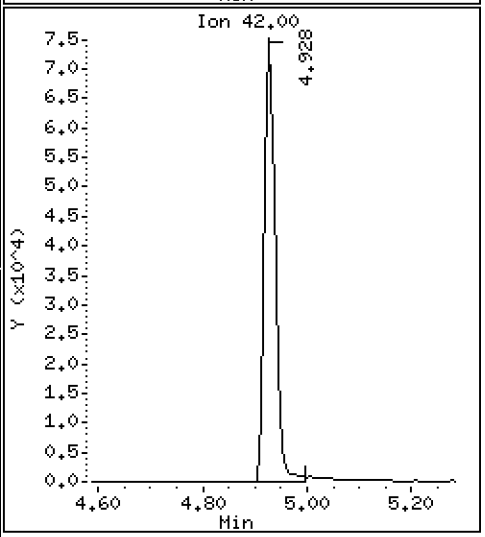
90 N-Nitrosodimethylamine

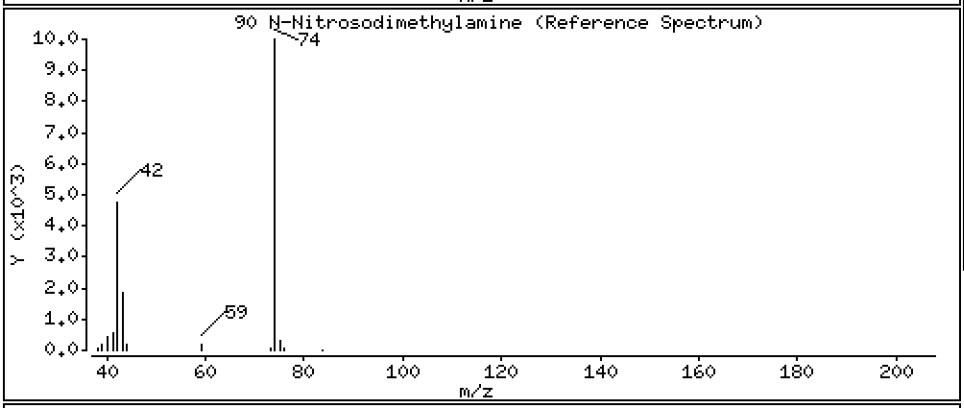
Concentration: 5.194 ug/mL

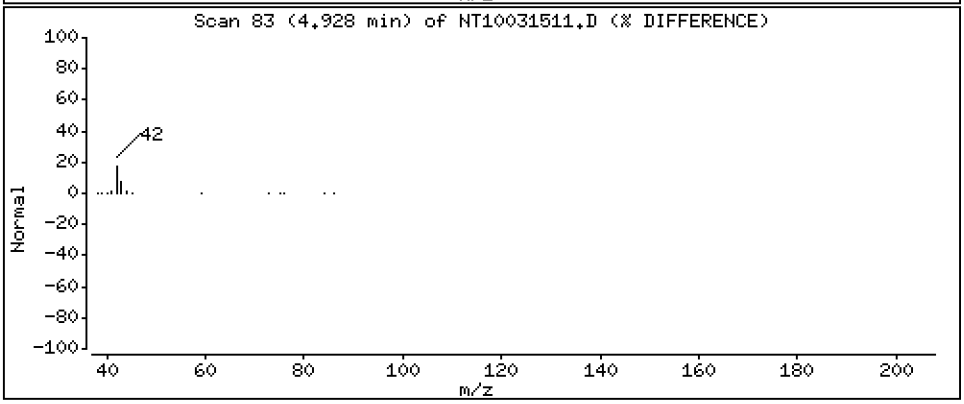












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

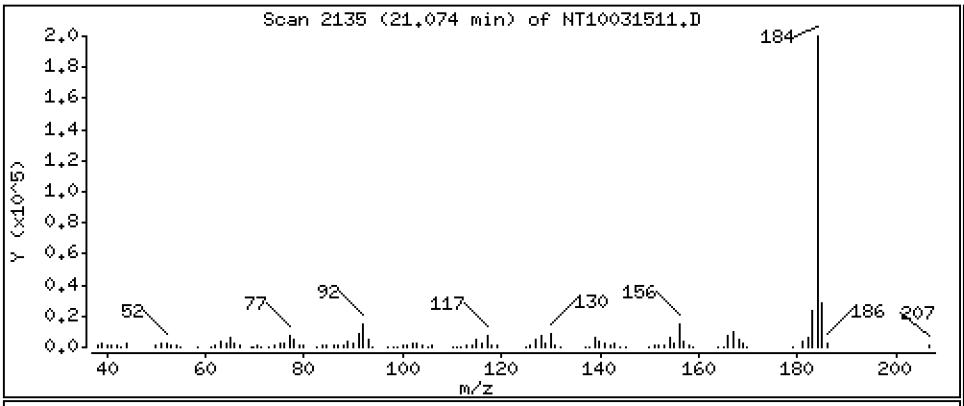
Operator: VTS

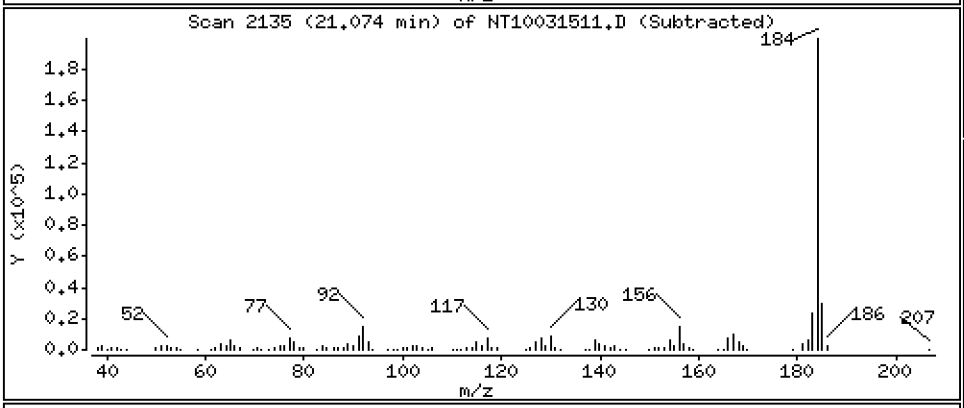
Column phase: ZB-5msi

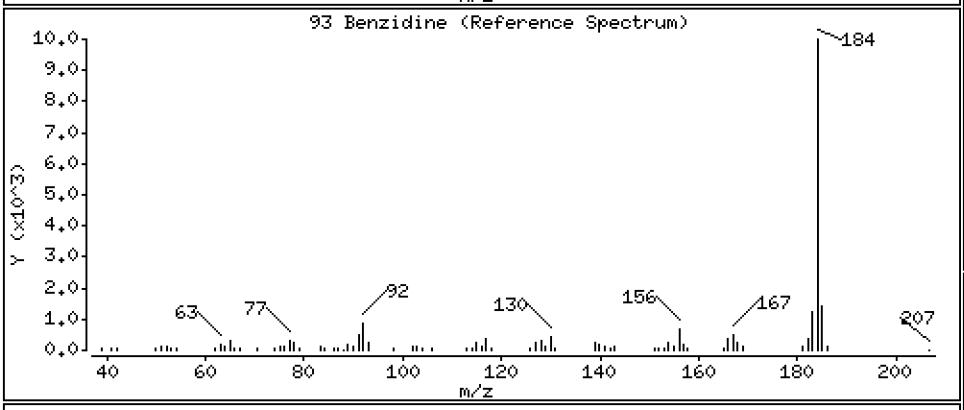
Column diameter: 0.25

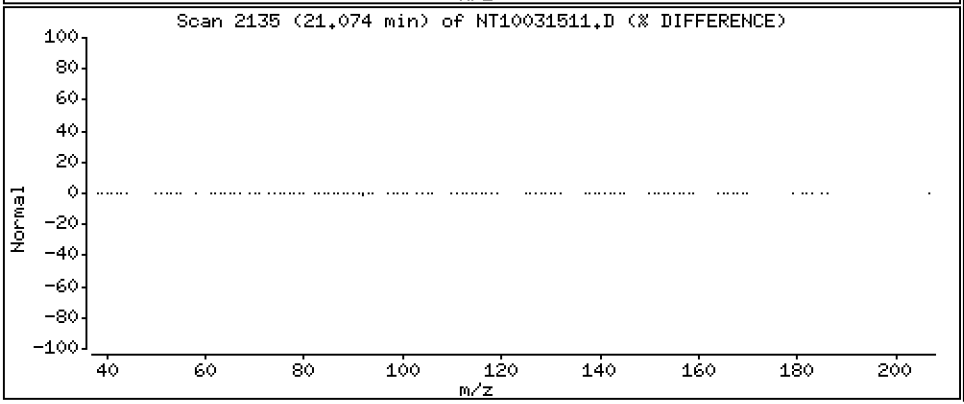
93 Benzidine

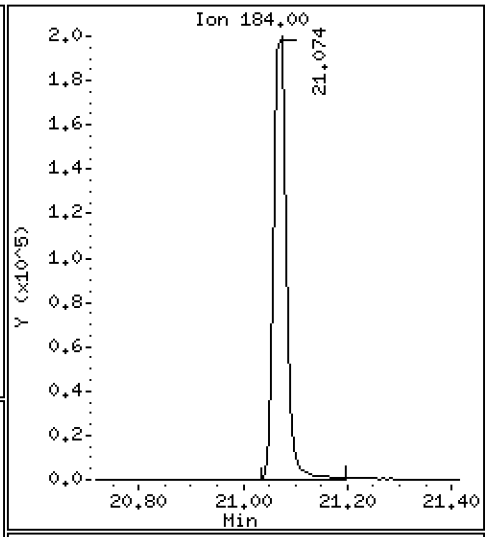
Concentration: 4.380 ug/mL

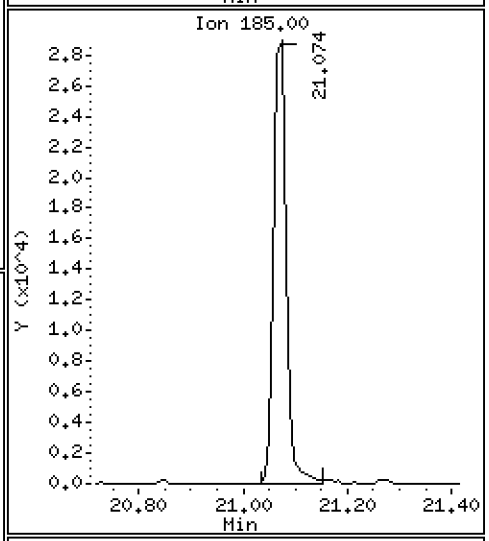


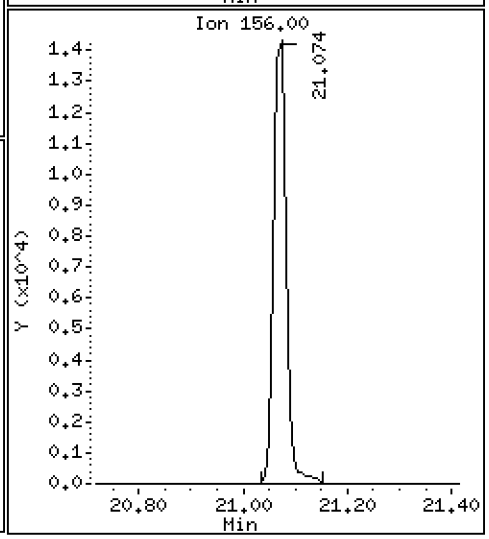












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

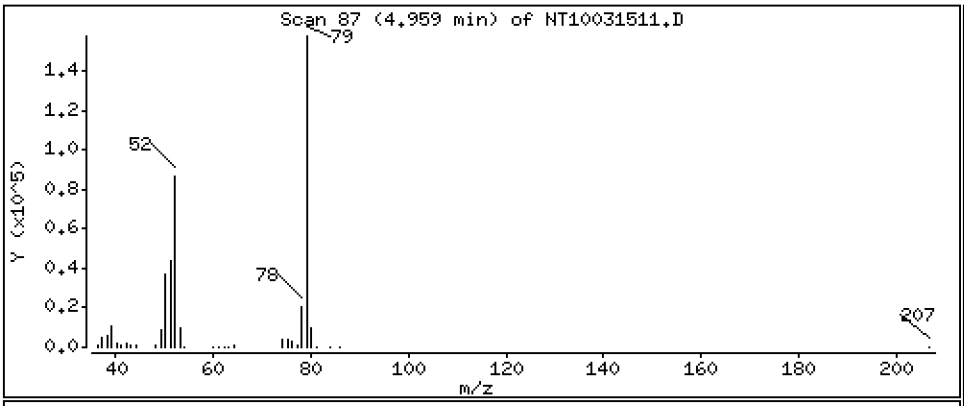
Operator: VTS

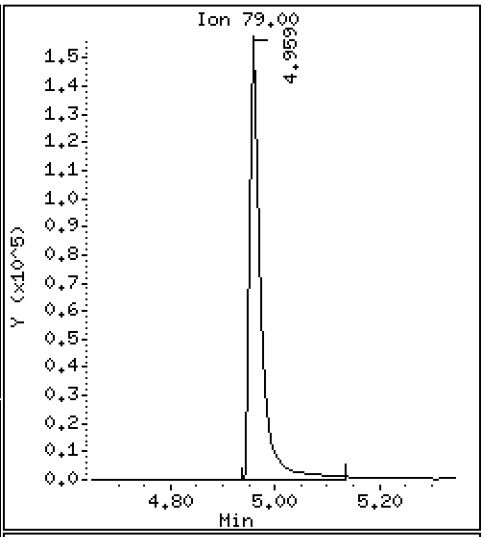
Column phase: ZB-5msi

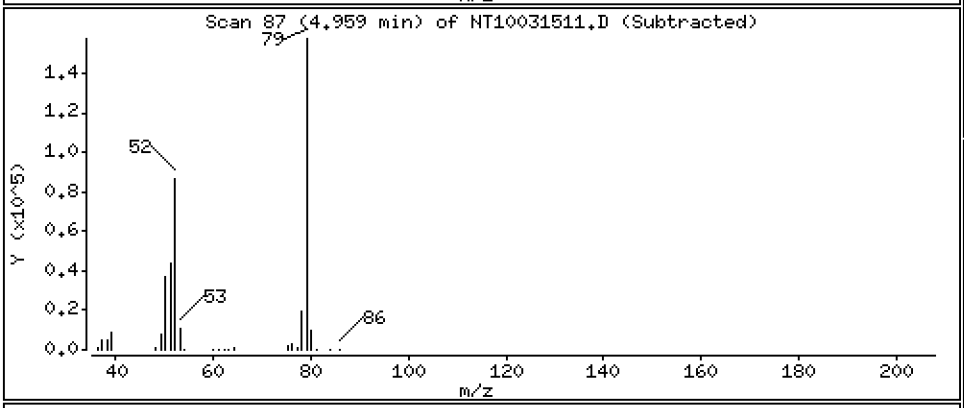
Column diameter: 0.25

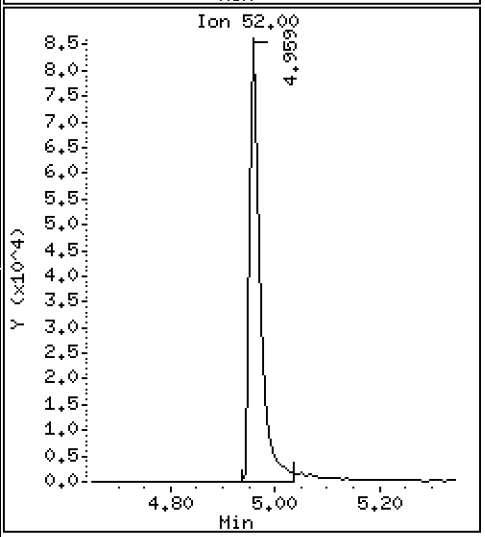
103 Pyridine

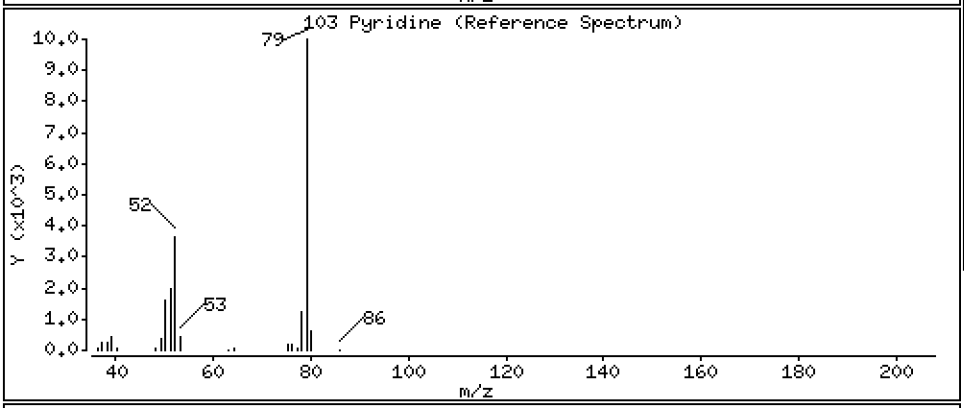
Concentration: 5.337 ug/mL

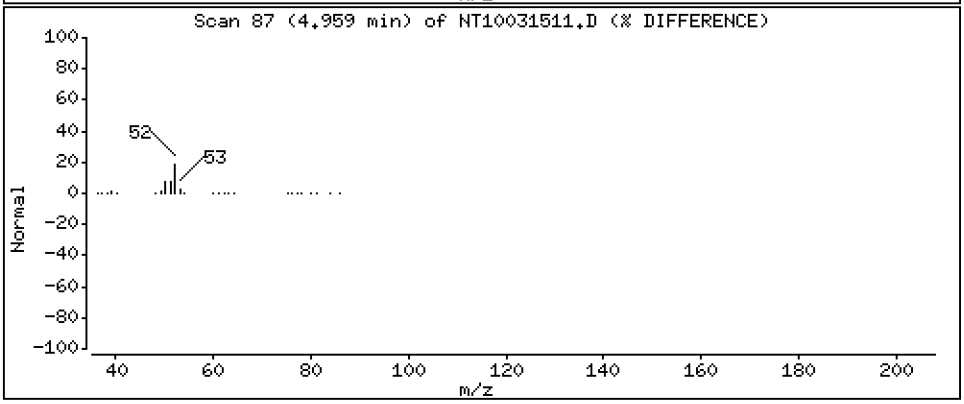












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

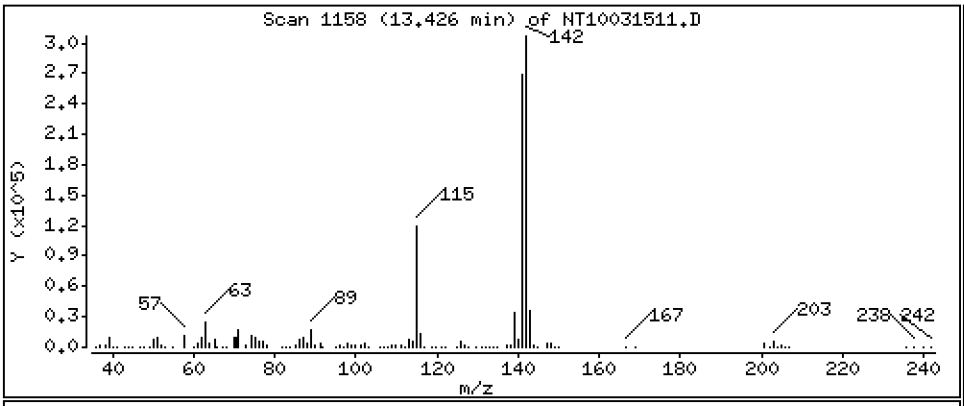
Operator: VTS

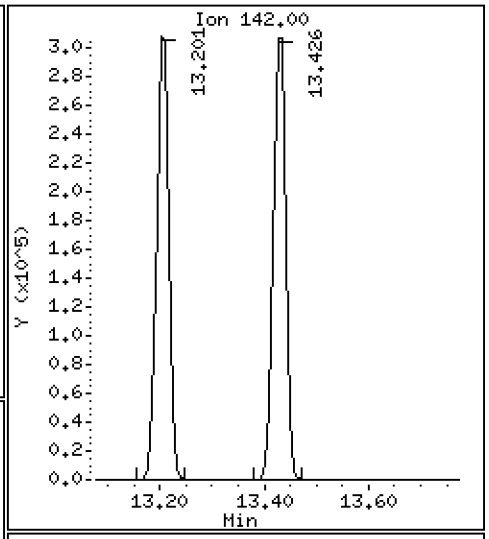
Column phase: ZB-5msi

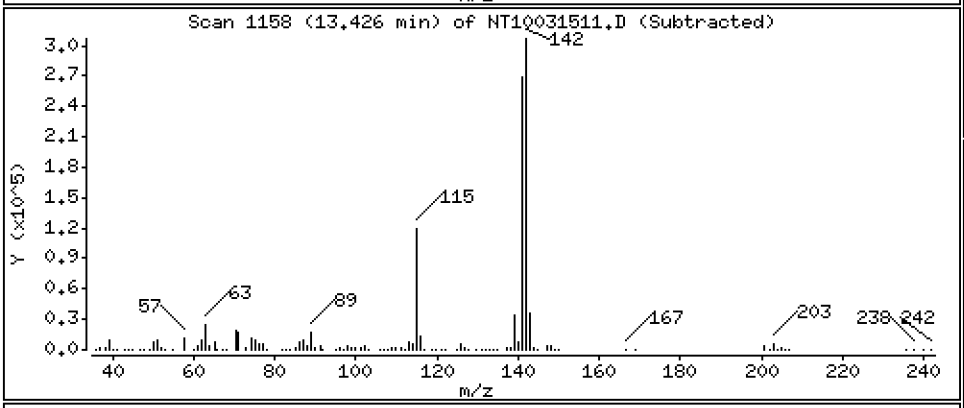
Column diameter: 0.25

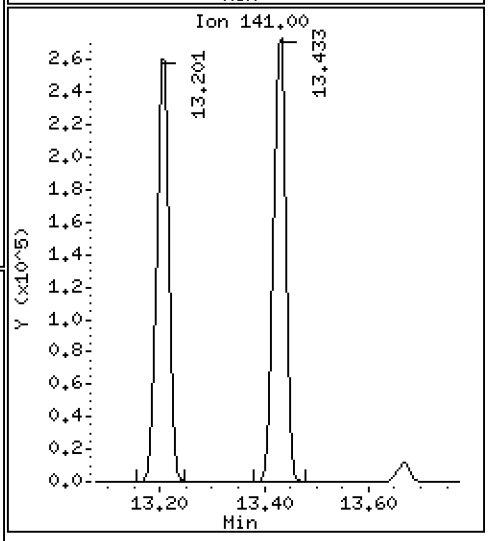
105 1-methylnaphthalene

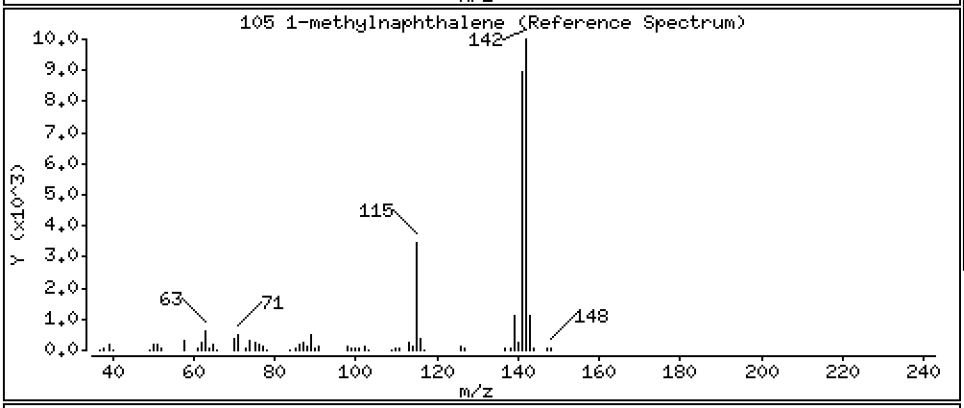
Concentration: 4.875 ug/mL

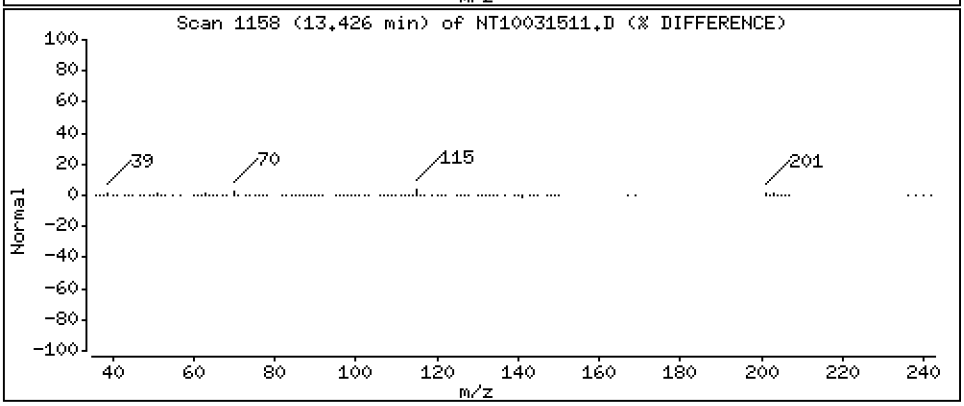












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

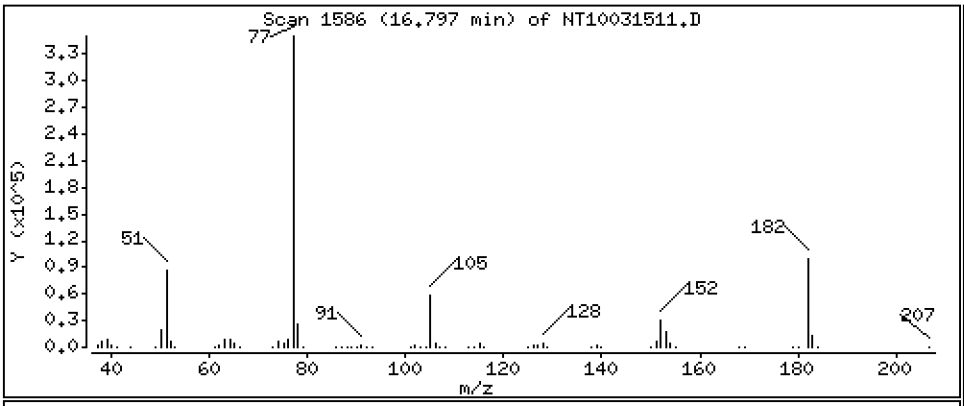
Operator: VTS

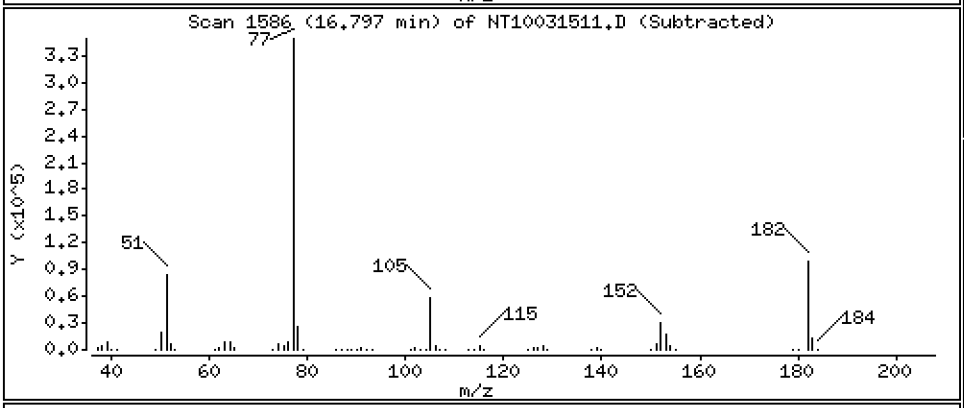
Column phase: ZB-5msi

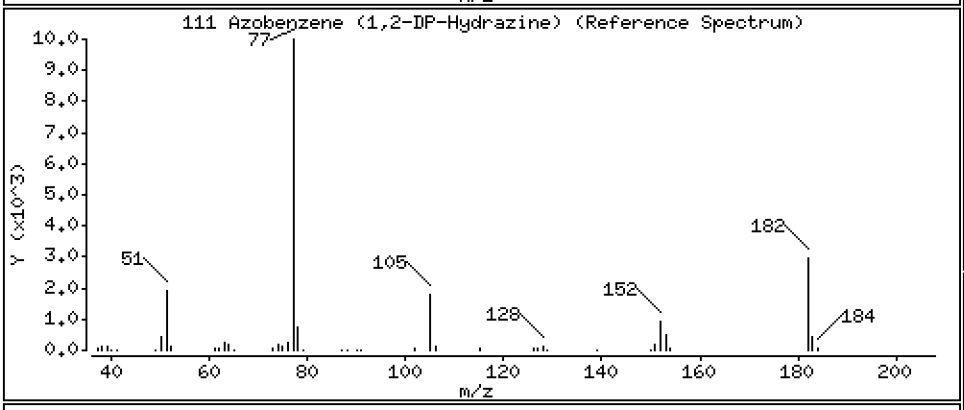
Column diameter: 0.25

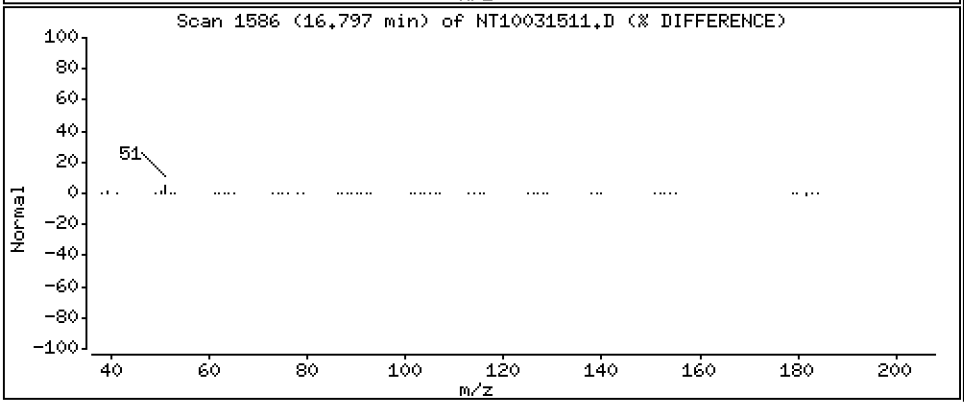
111 Azobenzene (1,2-DP-Hydrazine)

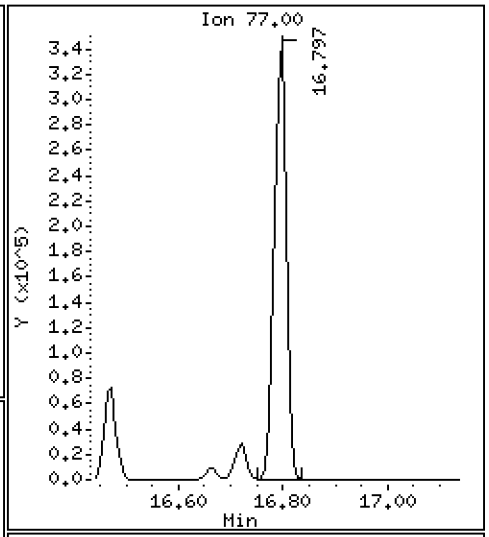
Concentration: 4.937 ug/mL

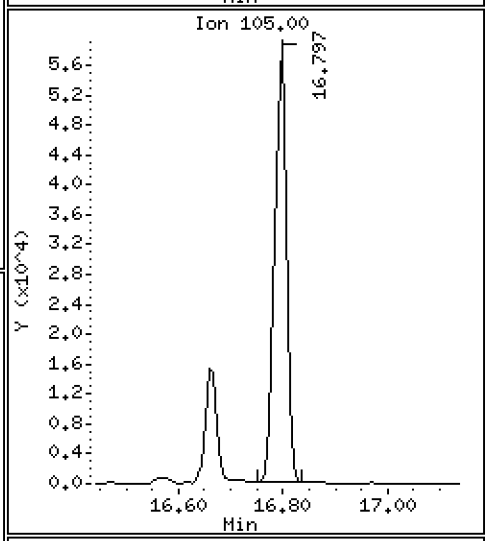


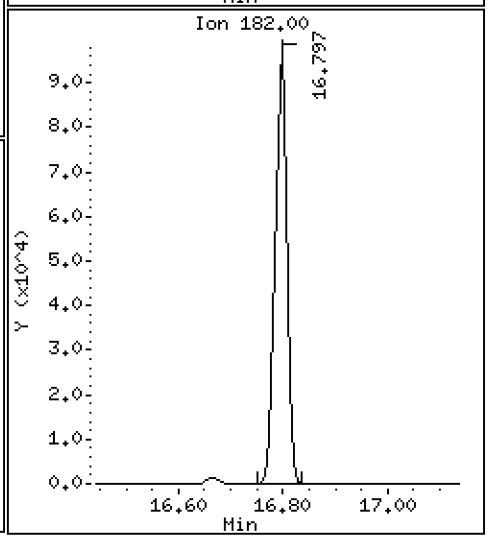












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

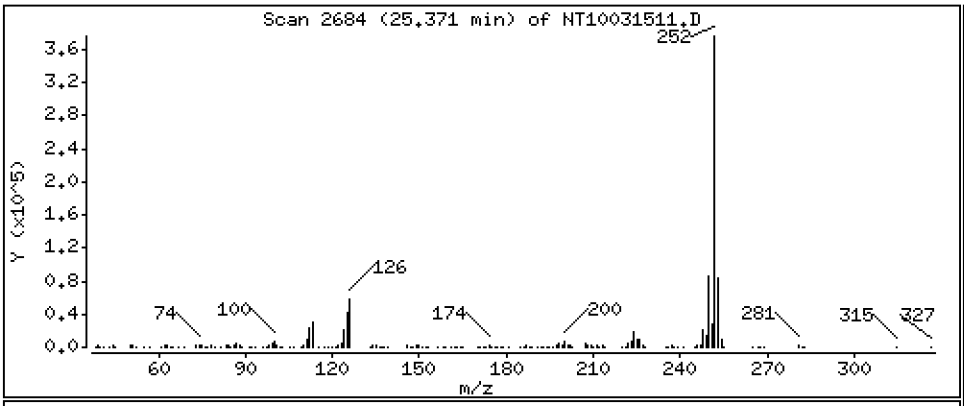
Operator: VTS

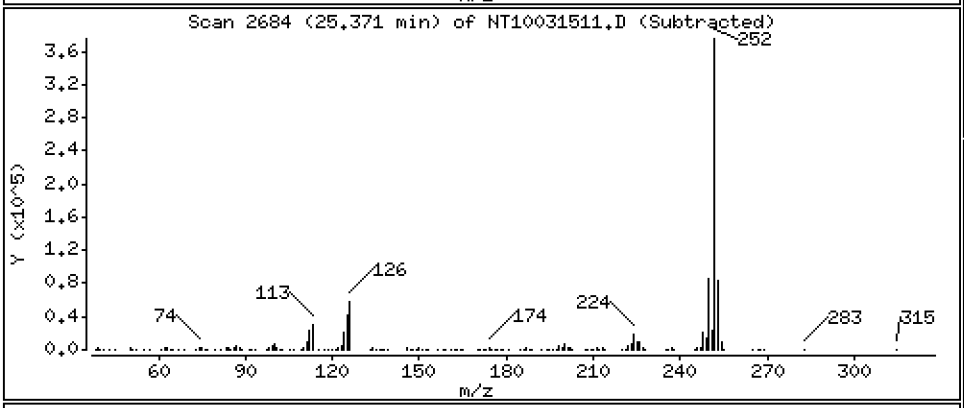
Column phase: ZB-5msi

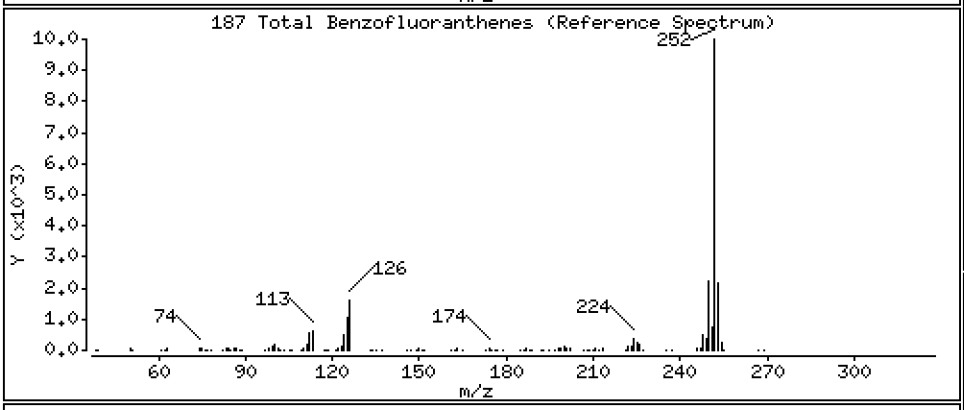
Column diameter: 0.25

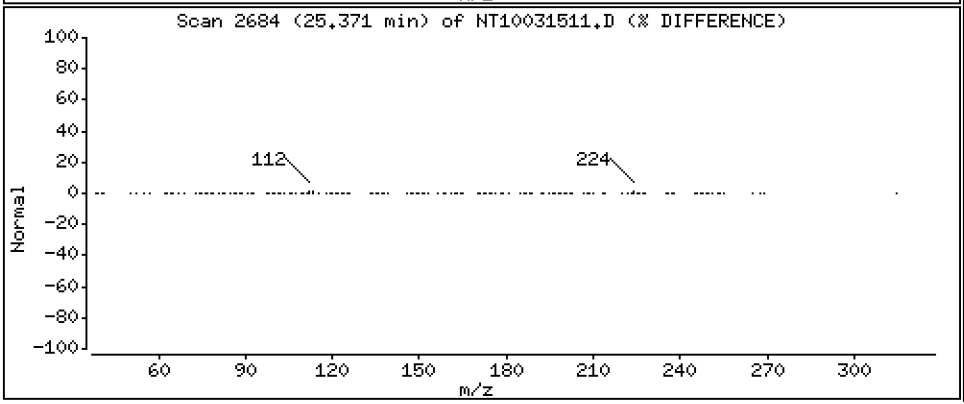
187 Total Benzofluoranthenes

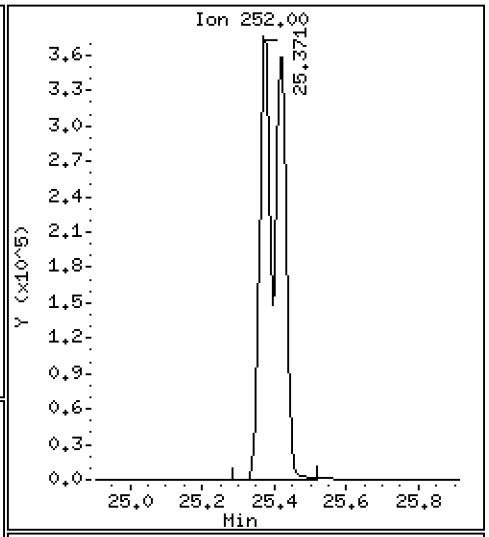
Concentration: 9.483 ug/mL

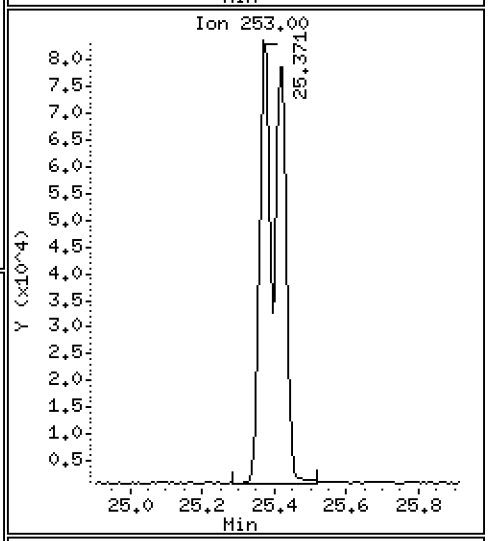


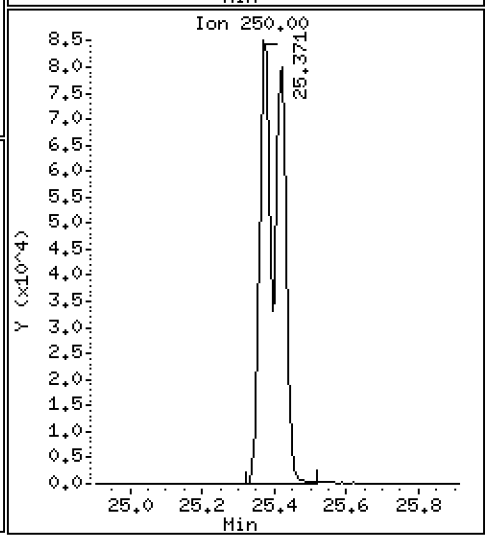












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

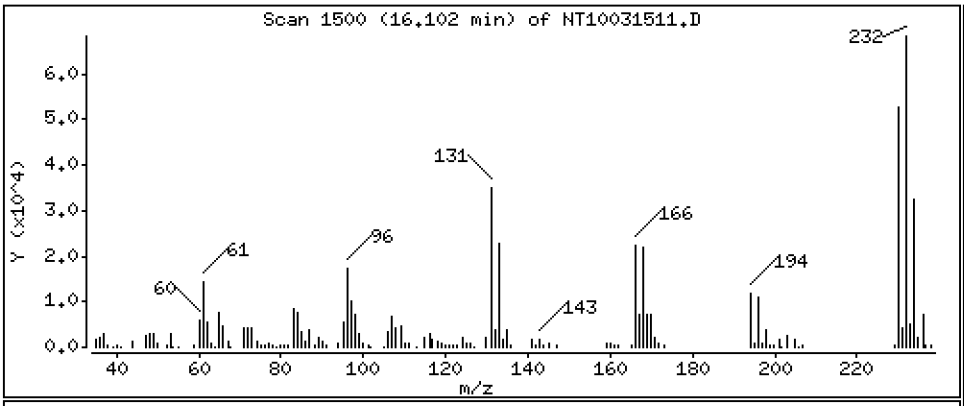
Operator: VTS

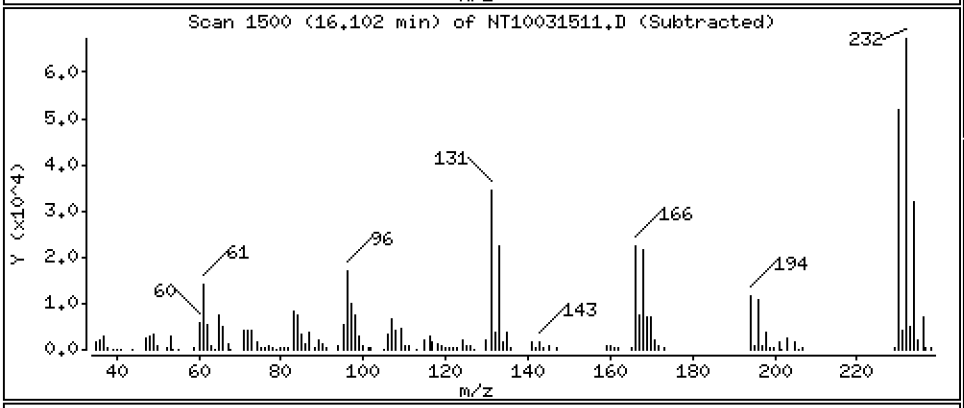
Column phase: ZB-5msi

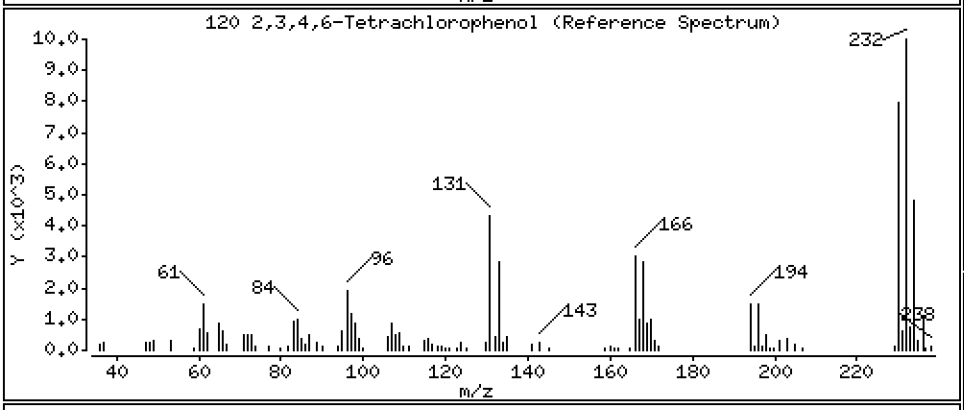
Column diameter: 0.25

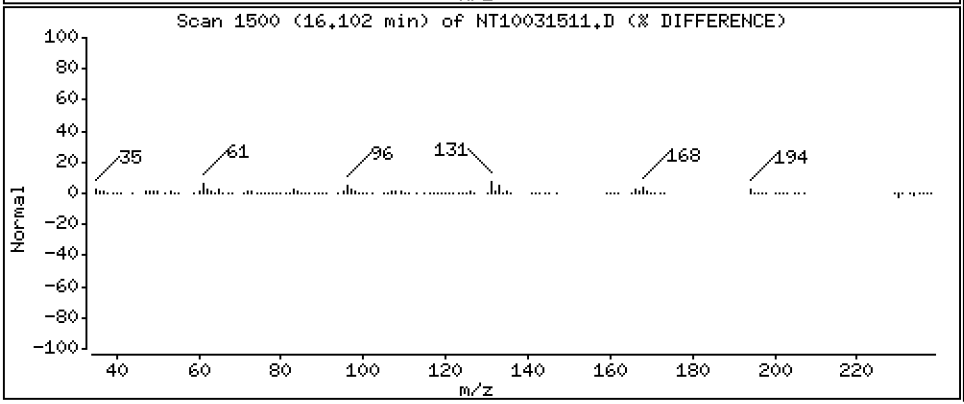
120 2,3,4,6-Tetrachlorophenol

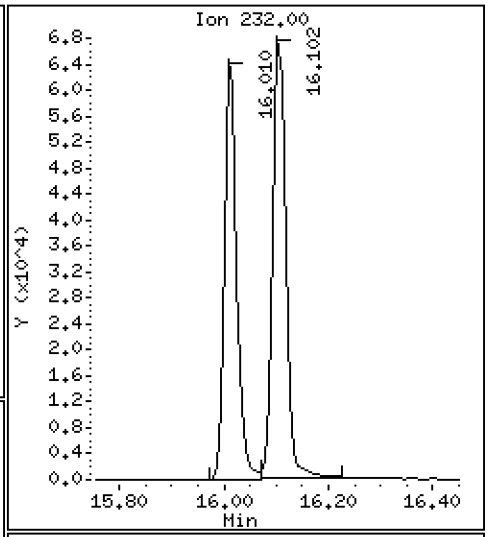
Concentration: 3.980 ug/mL

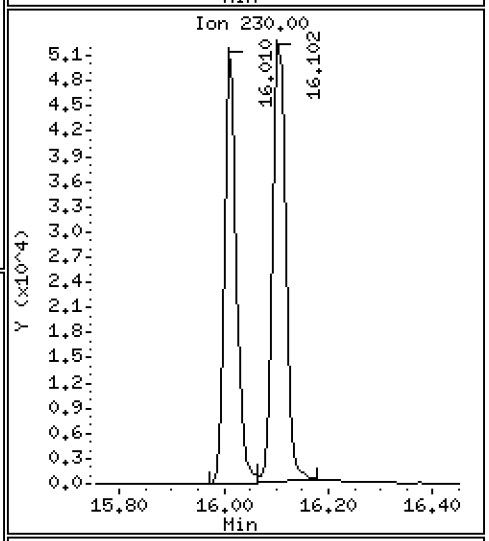


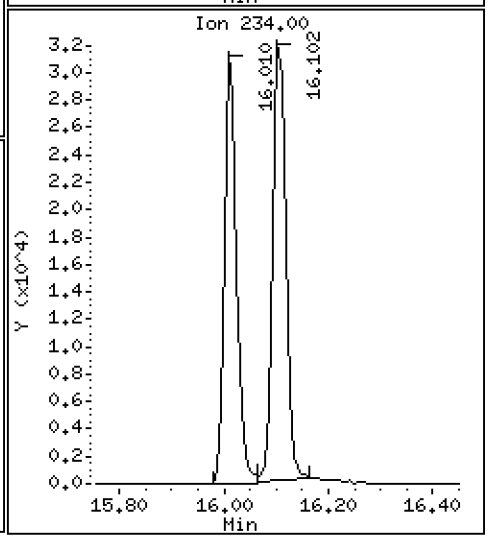












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Lab Smp Id: SLC0228-SCV1
Inj Date : 16-MAR-2023 02:16
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$	1 2-Fluorophenol	112	Compound Not Detected.					
$	2 Phenol-d5	99	Compound Not Detected.					
	3 Phenol	94	8.659	8.652	(0.931)	281600	4.41237	4.412
$	5 2-Chlorophenol-d4	132	Compound Not Detected.					
	4 Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	248892	5.25818	5.258
	6 2-Chlorophenol	128	8.960	8.961	(0.963)	233608	4.27685	4.277
	7 1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	275540	4.77157	4.772
*	8 1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	154809	4.00000	
	9 1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	274051	4.91272	4.913
$	10 1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12 1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	268028	4.88215	4.882
	11 Benzyl alcohol	108	9.557	9.557	(1.028)	147597	4.92722	4.927
	14 2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	100179	6.21363	6.214
	13 2-Methylphenol	108	9.775	9.767	(1.051)	196115	4.21542	4.215
	17 Hexachloroethane	117	10.279	10.271	(1.105)	114513	5.00332	5.003
	16 N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	190250	5.17896	5.179
	15 4-Methylphenol	108	10.046	10.031	(1.080)	213951	4.36462	4.365
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	10.426	10.419	(0.885)	274714	4.85798	4.858
	20 Isophorone	82	10.861	10.861	(0.922)	556741	7.69604	7.696
	21 2-Nitrophenol	139	11.047	11.048	(0.938)	110302	3.99452	3.995
	22 2,4-Dimethylphenol	107	11.081	11.082	(0.941)	188638	3.63181	3.632
	23 Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.958)	273219	5.65409	5.654
	24 Benzoic acid	105	11.217	11.166	(0.952)	173961	5.95241	5.952
	25 2,4-Dichlorophenol	162	11.489	11.489	(0.975)	195480	4.70301	4.703
	26 1,2,4-Trichlorobenzene	180	11.685	11.685	(0.992)	222176	4.55366	4.554
*	27 Naphthalene-d8	136	11.777	11.770	(1.000)	570882	4.00000	
	28 Naphthalene	128	11.816	11.816	(1.003)	713318	4.71662	4.717
	29 4-Chloroaniline	127	11.940	11.940	(1.014)	223402	3.78650	3.787
	30 Hexachlorobutadiene	225	12.171	12.172	(1.033)	138198	4.83404	4.834
	31 4-Chloro-3-methylphenol	107	12.876	12.876	(1.093)	208794	4.64027	4.640
	32 2-Methylnaphthalene	142	13.201	13.201	(1.121)	501627	4.59617	4.596
	33 Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	132827	4.72902	4.729

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	137849	4.59559	4.596
35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	146935	4.40855	4.409
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.199	14.191	(0.923)	466196	4.79589	4.796
38	2-Nitroaniline	65	14.454	14.447	(0.940)	134108	4.91137	4.911
39	Dimethylphthalate	163	14.880	14.873	(0.967)	486790	4.93747	4.937
40	Acenaphthylene	152	15.074	15.066	(0.980)	727839	4.80509	4.805
41	2,6-Dinitrotoluene	165	15.020	15.012	(0.976)	112840	5.29815	5.298
* 42	Acenaphthene-d10	164	15.383	15.383	(1.000)	303490	4.00000	
43	3-Nitroaniline	138	15.306	15.298	(0.995)	120530	5.01393	5.014
44	Acenaphthene	153	15.453	15.445	(1.005)	446914	4.77589	4.776
45	2,4-Dinitrophenol	184	15.515	15.515	(1.009)	27409	2.12395	2.124
46	Dibenzofuran	168	15.777	15.770	(1.026)	641379	4.64790	4.648
47	4-Nitrophenol	109	15.600	15.592	(1.014)	59816	3.96568	3.966
48	2,4-Dinitrotoluene	165	15.824	15.817	(1.029)	144262	4.51019	4.510
50	Diethylphthalate	149	16.326	16.319	(1.061)	503887	5.20905	5.209
49	Fluorene	166	16.489	16.481	(1.072)	511113	4.70796	4.708
51	4-Chlorophenyl-phenylether	204	16.473	16.466	(1.071)	257762	4.99294	4.993
52	4-Nitroaniline	138	16.566	16.566	(1.077)	106701	4.92532	4.925
53	4,6-Dinitro-2-methylphenol	198	16.666	16.658	(0.905)	56867	3.51509	3.515
54	N-Nitrosodiphenylamine	169	16.720	16.712	(0.908)	342454	4.80180	4.802
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	150956	5.05964	5.060
57	Hexachlorobenzene	284	17.800	17.793	(0.966)	143751	4.59553	4.596
58	Pentachlorophenol	266	18.149	18.149	(0.985)	75635	4.05676	4.057
* 59	Phenanthrene-d10	188	18.420	18.420	(1.000)	533431	4.00000	
60	Phenanthrene	178	18.466	18.466	(1.003)	669357	4.60181	4.602
61	Anthracene	178	18.559	18.559	(1.008)	581438	4.16715	4.167
62	Carbazole	167	18.884	18.884	(1.025)	591382	4.72989	4.730
63	Di-n-butylphthalate	149	19.665	19.666	(1.068)	830680	4.96738	4.967
64	Fluoranthene	202	20.841	20.841	(0.888)	782432	4.47248	4.472
65	Pyrene	202	21.267	21.267	(0.907)	778668	4.33892	4.339
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.459	22.460	(0.957)	314007	4.83397	4.834
68	Benzo(a)anthracene	228	23.427	23.419	(0.999)	714166	4.64722	4.647
* 69	Chrysene-d12	240	23.458	23.450	(1.000)	435381	4.00000	
70	3,3'-Dichlorobenzidine	252	23.373	23.373	(0.996)	483256	9.81738	9.817
71	Chrysene	228	23.497	23.489	(1.002)	677151	4.51017	4.510
72	bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	453669	4.67998	4.680
* 134	Di-n-octylphthalate-d4	153	24.487	24.480	(1.000)	660827	4.00000	
73	Di-n-octylphthalate	149	24.495	24.488	(1.000)	855562	4.94734	4.947
74	Benzo(b)fluoranthene	252	25.370	25.362	(0.969)	737887	4.60200	4.602(H)
75	Benzo(k)fluoranthene	252	25.416	25.409	(0.970)	797521	4.89839	4.898
76	Benzo(a)pyrene	252	26.067	26.052	(0.995)	698616	4.87338	4.873
* 77	Perylene-d12	264	26.191	26.183	(1.000)	494648	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.005	28.990	(1.107)	834672	4.57655	4.577
79	Dibenzo(a,h)anthracene	278	29.021	29.005	(1.108)	688433	4.54663	4.547
80	Benzo(g,h,i)perylene	276	29.852	29.821	(1.140)	724463	4.59000	4.590
90	N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	155126	5.19378	5.194
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	21.073	21.066	(0.898)	314737	4.37985	4.380
103	Pyridine	79	4.959	4.997	(0.533)	244801	5.33678	5.337
105	1-methylnaphthalene	142	13.425	13.425	(1.140)	487498	4.87520	4.875
111	Azobenzene (1,2-DP-Hydrazine)	77	16.797	16.789	(1.092)	533524	4.93744	4.937

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.370	25.409	(0.969)	1468165	9.48349	9.483
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	124685	3.97959	3.980

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511.D
Lab Smp Id: SLC0228-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	154809	-9.75
27 Naphthalene-d8	624466	312233	1248932	570882	-8.58
42 Acenaphthene-d10	337226	168613	674452	303490	-10.00
59 Phenanthrene-d10	572849	286425	1145698	533431	-6.88
69 Chrysene-d12	347068	173534	694136	435381	25.45
134 Di-n-octylphthala	500317	250159	1000634	660827	32.08
77 Perylene-d12	421549	210775	843098	494648	17.34

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.04
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.18	25.68	26.68	26.19	0.03

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

REVIEW SUMMARY FOR FILE - NT10031511.D

Lab ID: SLC0228-SCV1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: NT10031508.D

On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0504-LCV1
Sequence: SLC0504
Standard ID: K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	-6.9	50.00
4-Methylphenol	0.20000	0.2	-15.4	50.00
Naphthalene	0.20000	0.2	4.7	50.00
2-Methylnaphthalene	0.20000	0.2	2.0	50.00
Acenaphthylene	0.20000	0.2	-0.01	50.00
Dimethylphthalate	0.20000	0.2	4.8	50.00
Acenaphthene	0.20000	0.2	3.3	50.00
Dibenzofuran	0.20000	0.2	2.8	50.00
Fluorene	0.20000	0.1	-41.3	50.00
Phenanthrene	0.20000	0.2	2.9	50.00
Anthracene	0.20000	0.2	-3.8	50.00
Fluoranthene	0.20000	0.2	-4.3	50.00
Pyrene	0.20000	0.2	-2.5	50.00
Butylbenzylphthalate	0.20000	0.2	-3.2	50.00
Benzo(a)anthracene	0.20000	0.2	7.1	50.00
Chrysene	0.20000	0.2	1.7	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	-23.5	50.00
Benzofluoranthenes, Total	0.40000	0.4	2.6	50.00
Benzo(a)pyrene	0.20000	0.2	-0.05	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.2	1.9	50.00
Dibenzo(a,h)anthracene	0.20000	0.2	5.0	50.00
Benzo(g,h,i)perylene	0.20000	0.2	4.3	50.00
2-Fluorophenol	0.30000	0.293	-2.3	50.00
Phenol-d5	0.30000	0.265	-11.8	50.00
2-Chlorophenol-d4	0.30000	0.280	-6.5	50.00
1,2-Dichlorobenzene-d4	0.20000	0.214	6.8	50.00
Nitrobenzene-d5	0.20000	0.194	-3.2	50.00
2-Fluorobiphenyl	0.20000	0.209	4.4	50.00
2,4,6-Tribromophenol	0.30000	0.190	-36.6	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

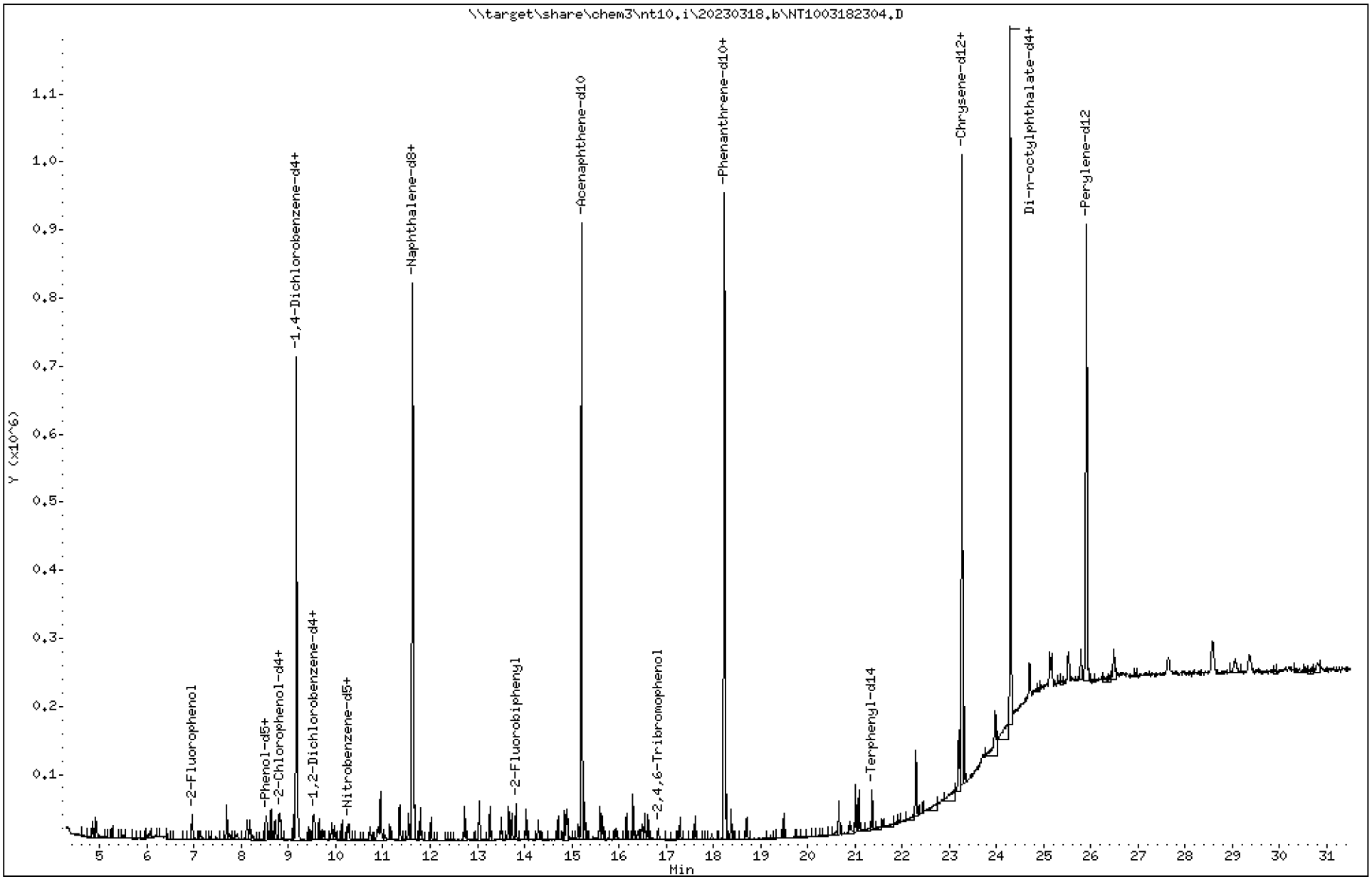
Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0504-LCV1
Sequence: SLC0504
Standard ID: K011105

p-Terphenyl-d14	0.20000	0.199	-0.4	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D
Date : 18-MAR-2023 19:37
Client ID:
Sample Info: SLC0504-LCV1

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

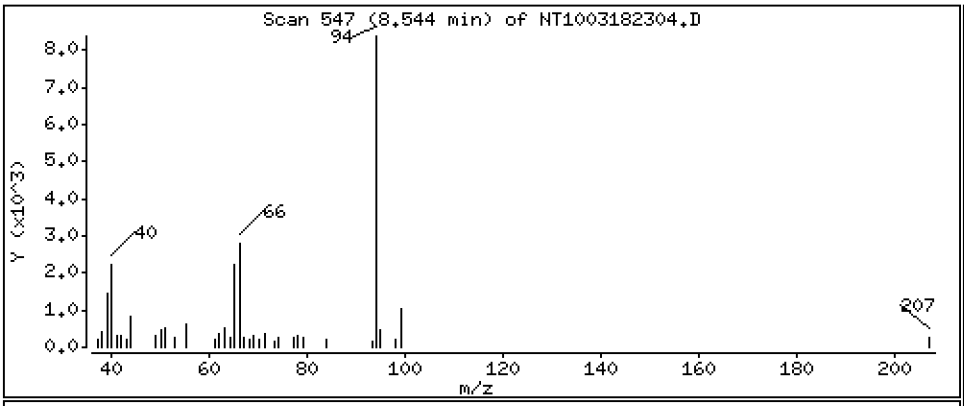
Operator: VTS

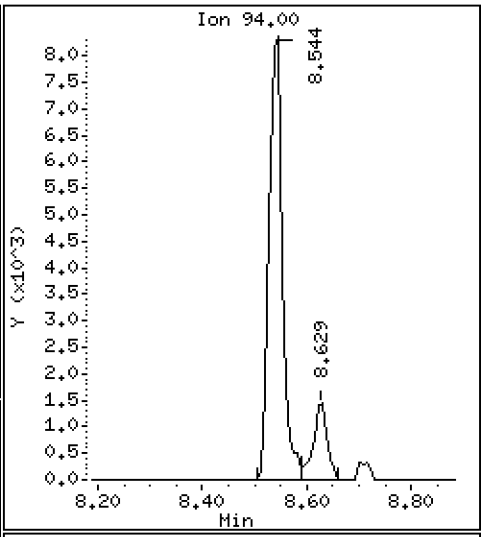
Column phase: ZB-5msi

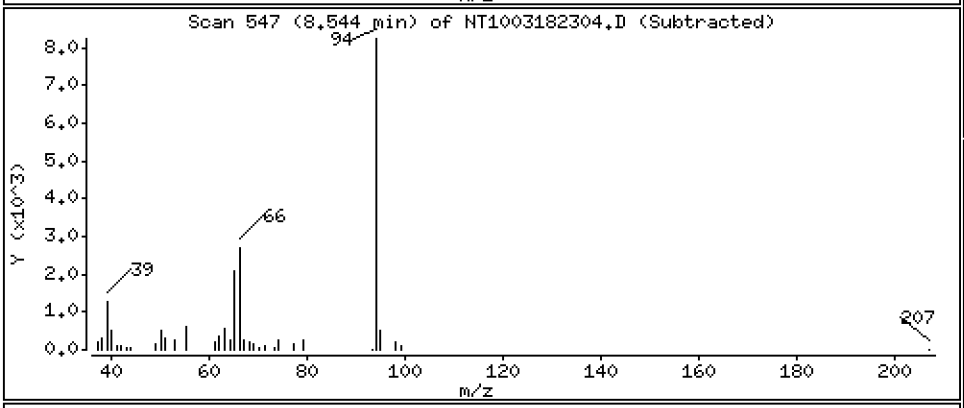
Column diameter: 0.25

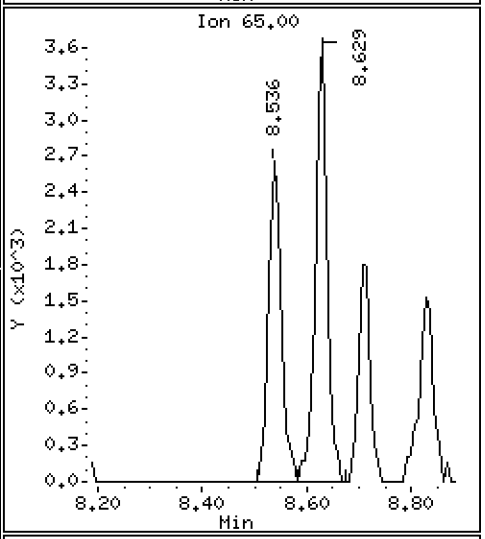
3 Phenol

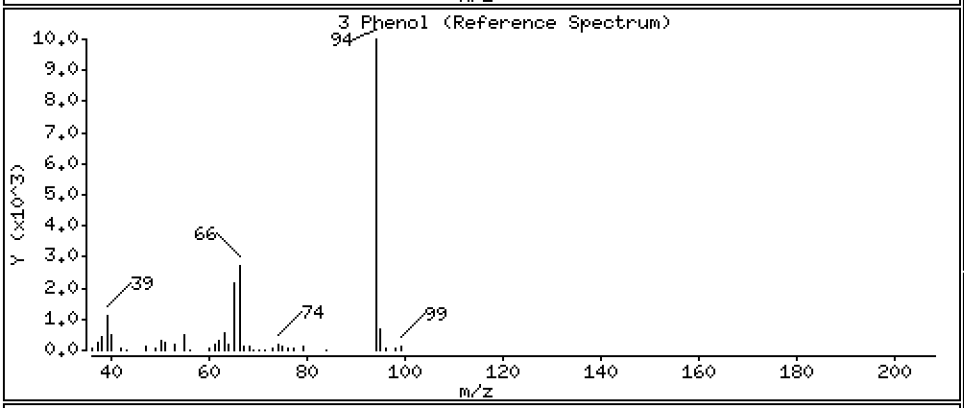
Concentration: 0.1863 ug/mL

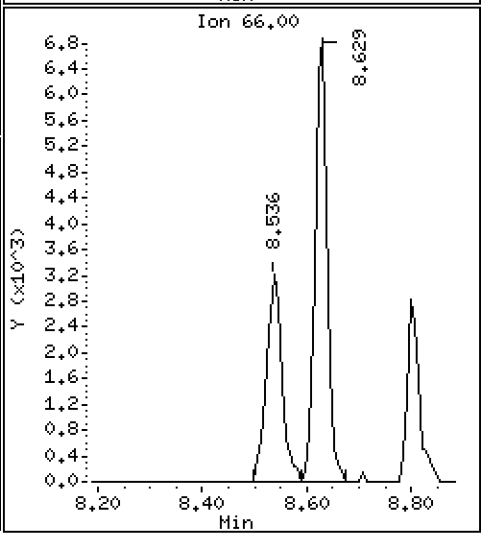


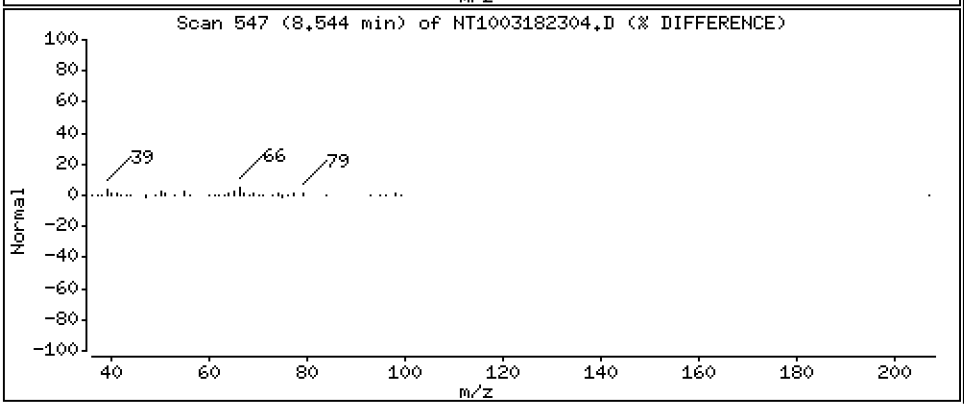












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

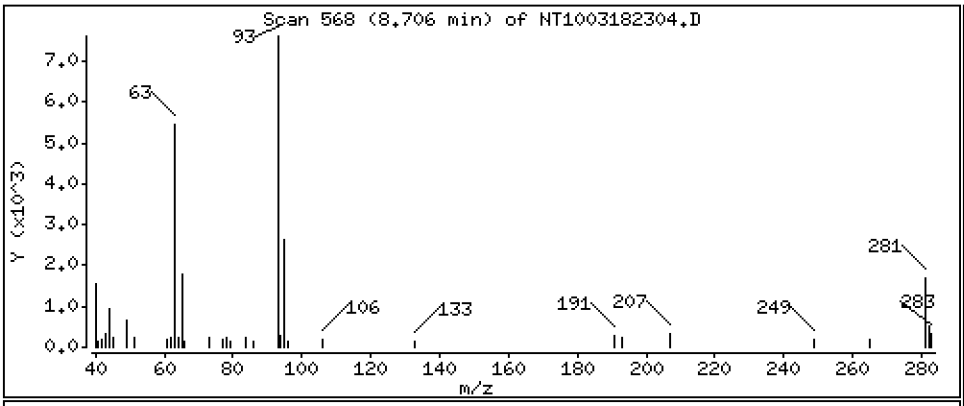
Operator: VTS

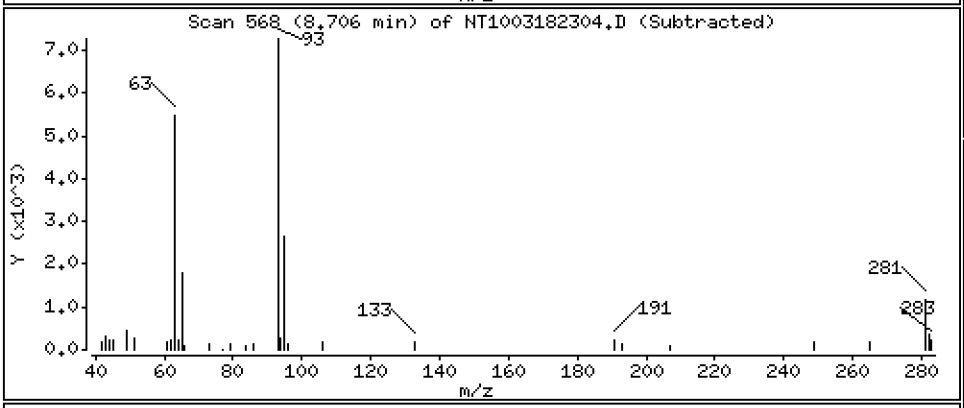
Column phase: ZB-5msi

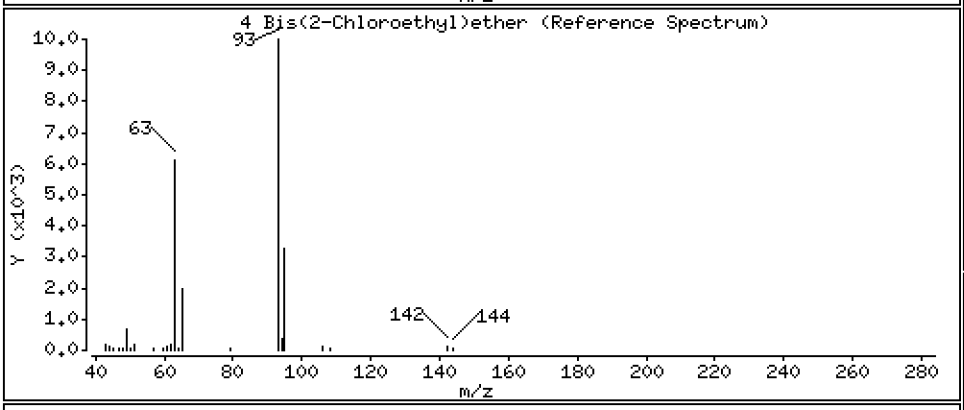
Column diameter: 0.25

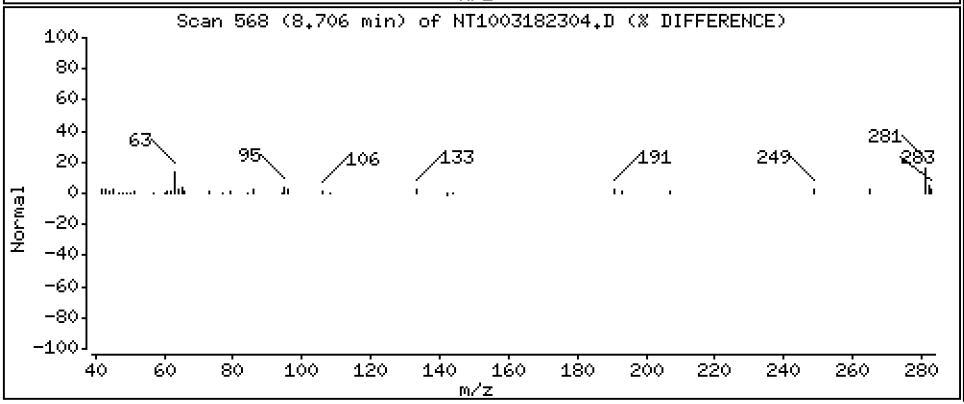
4 Bis(2-Chloroethyl)ether

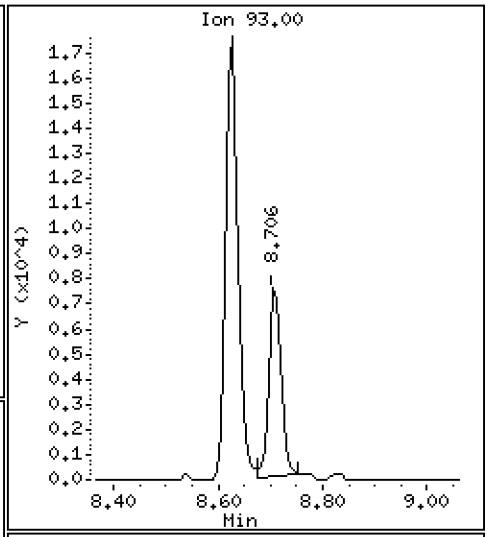
Concentration: 0.2032 ug/mL

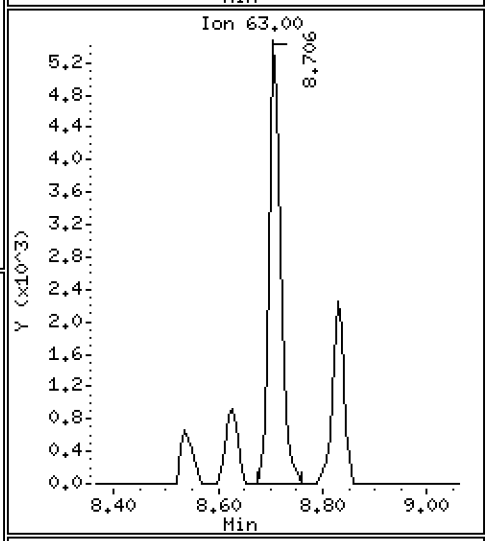


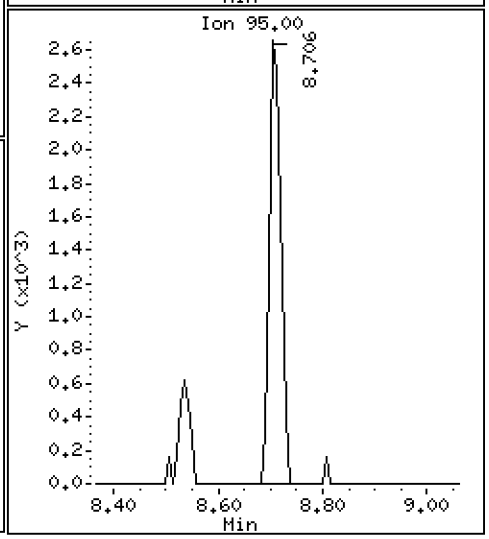












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

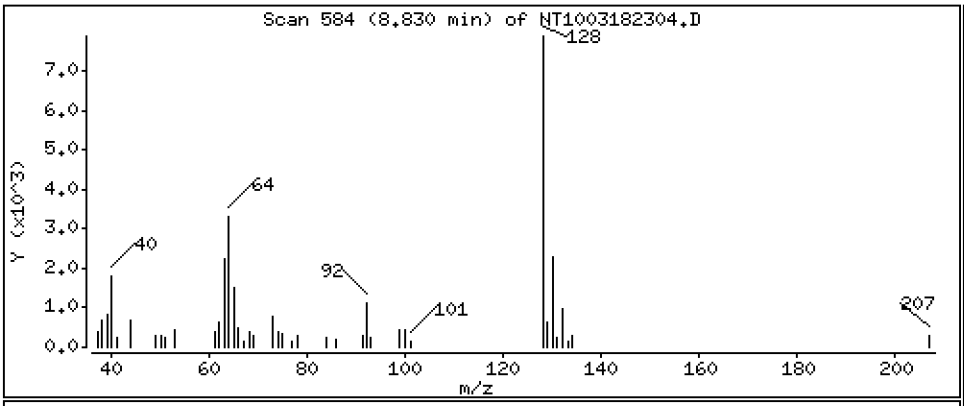
Operator: VTS

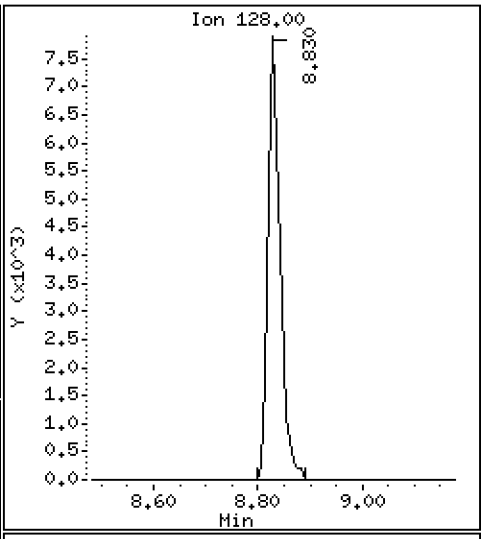
Column phase: ZB-5msi

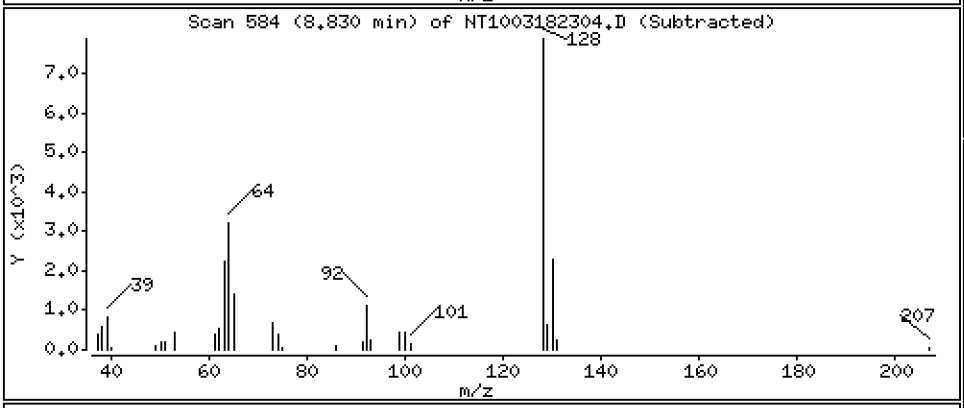
Column diameter: 0.25

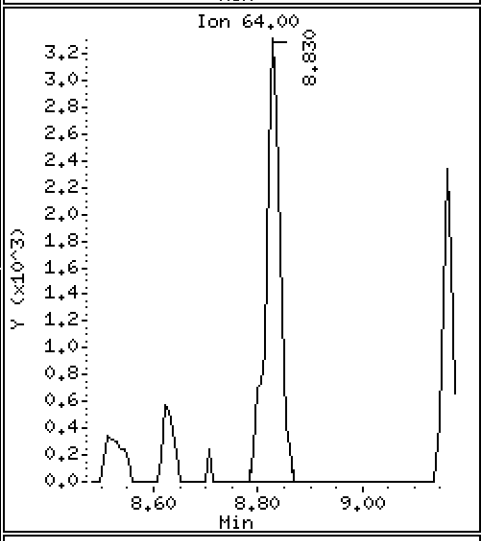
6 2-Chlorophenol

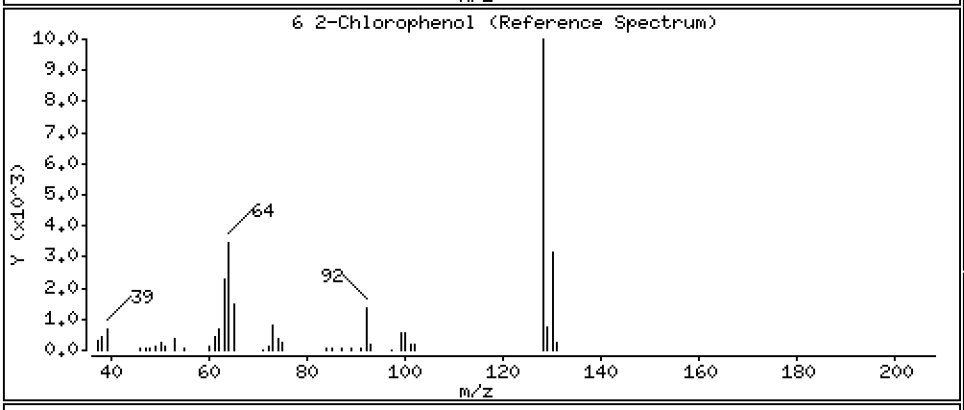
Concentration: 0.1881 ug/mL

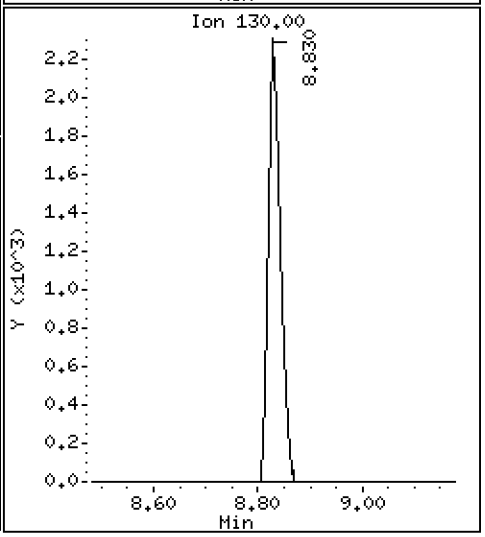


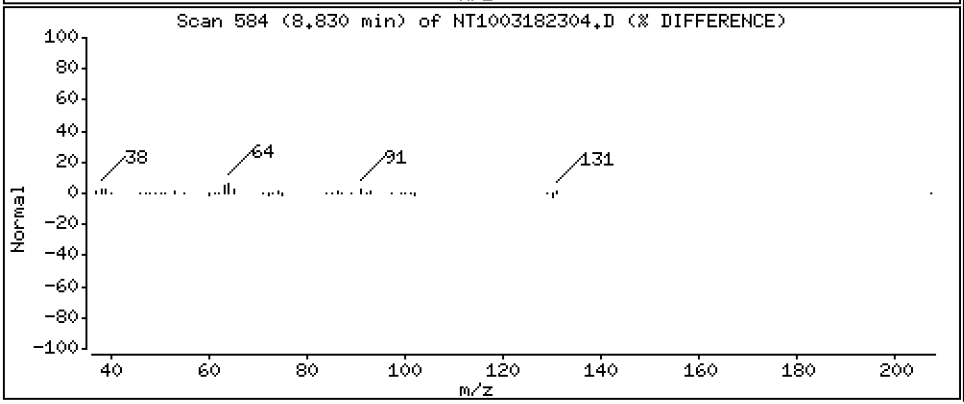












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

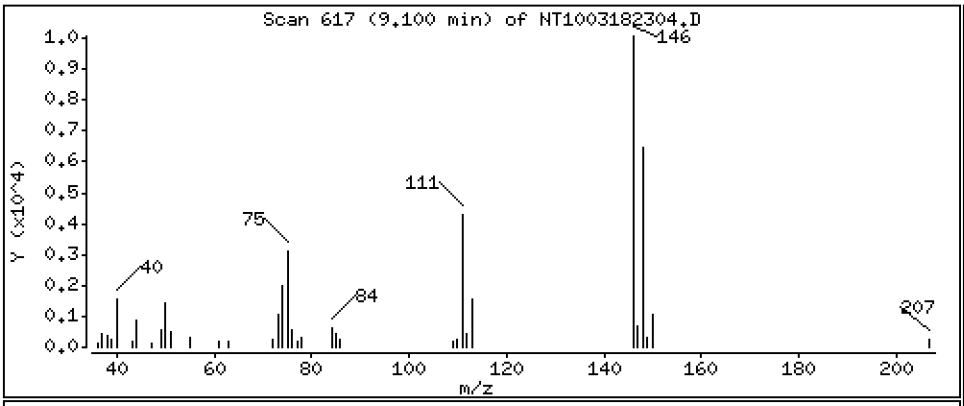
Operator: VTS

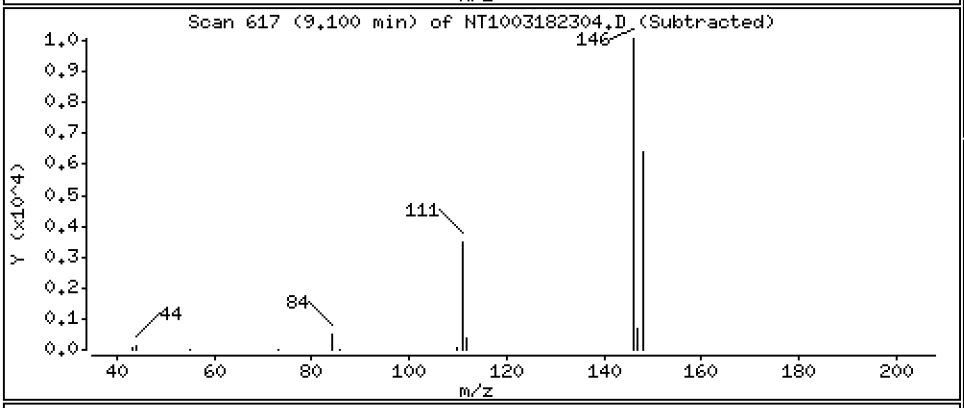
Column phase: ZB-5msi

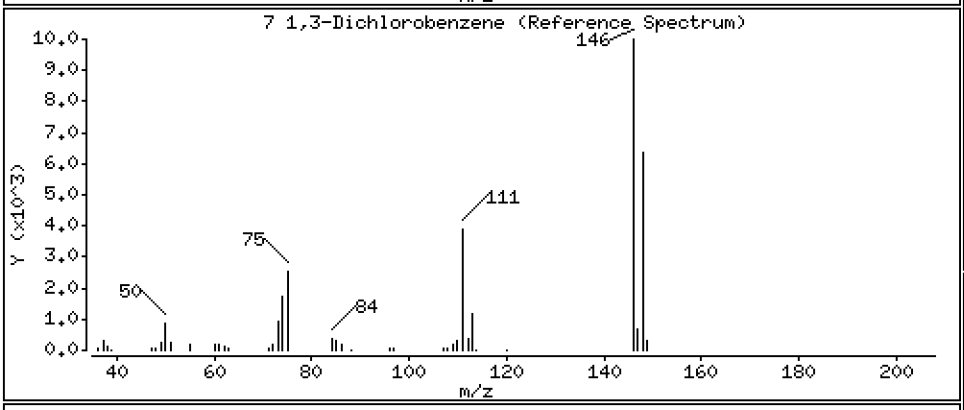
Column diameter: 0.25

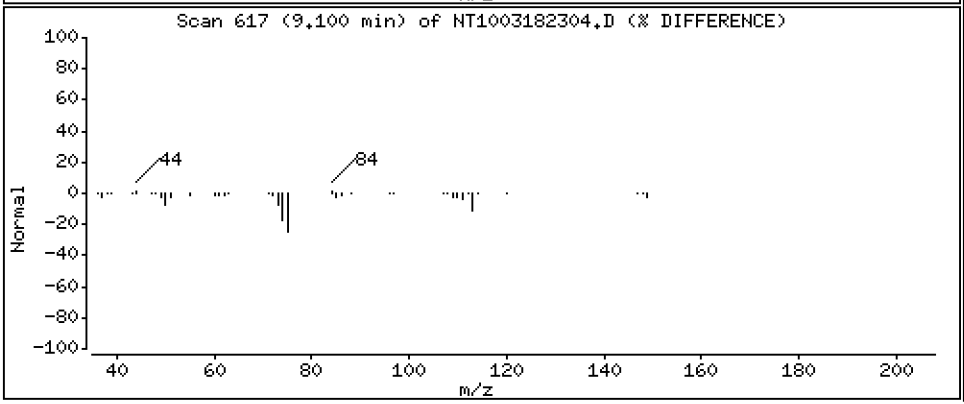
7 1,3-Dichlorobenzene

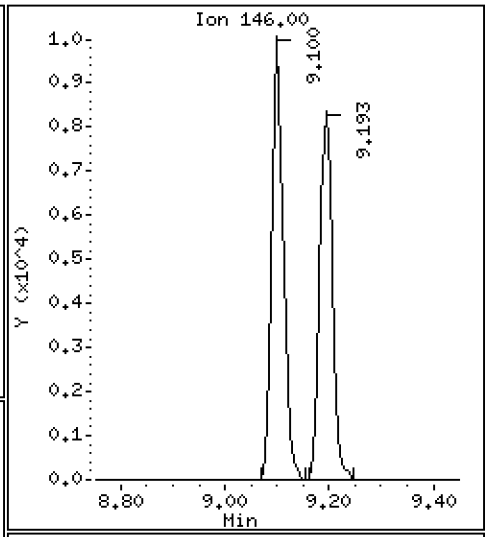
Concentration: 0.2161 ug/mL

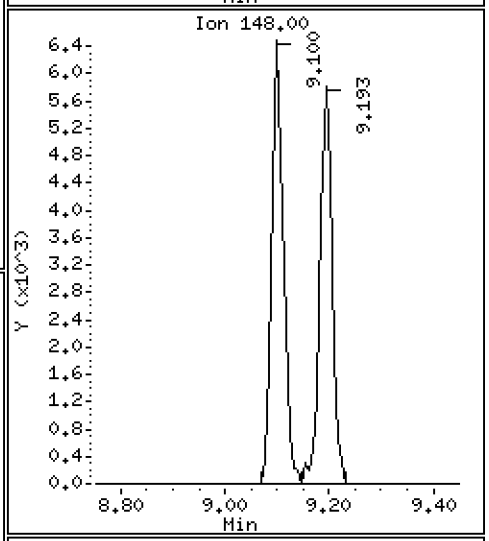


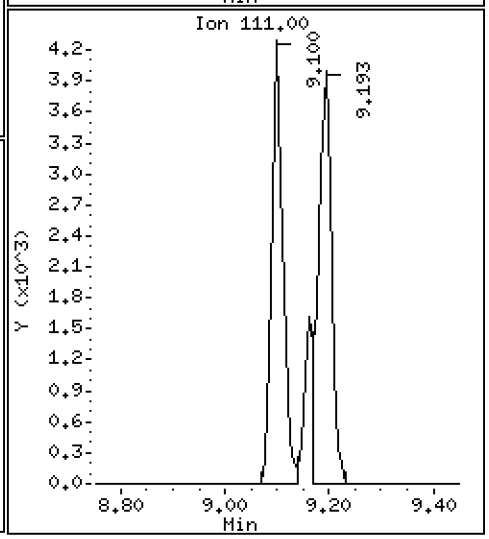












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

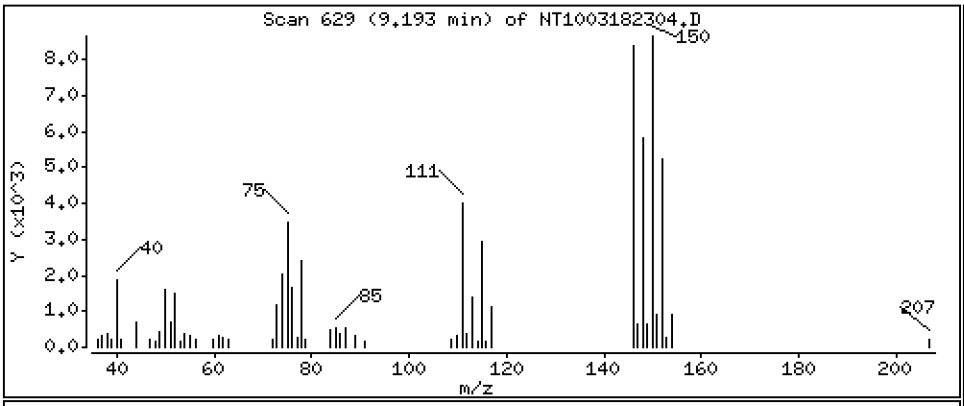
Operator: VTS

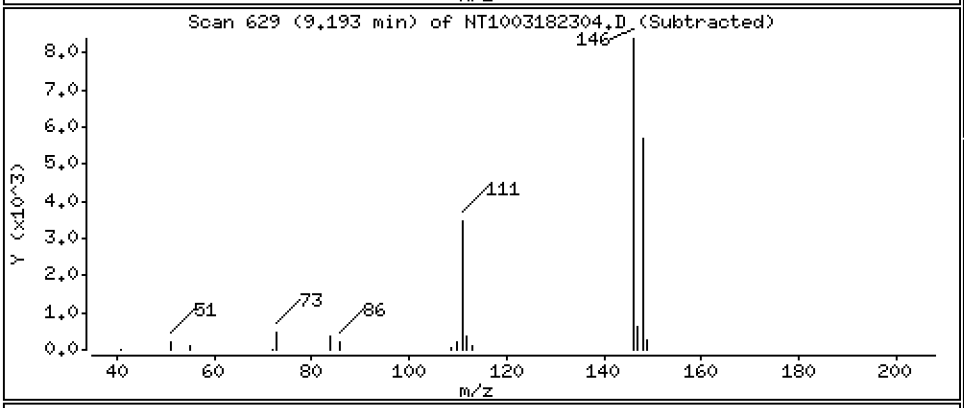
Column phase: ZB-5msi

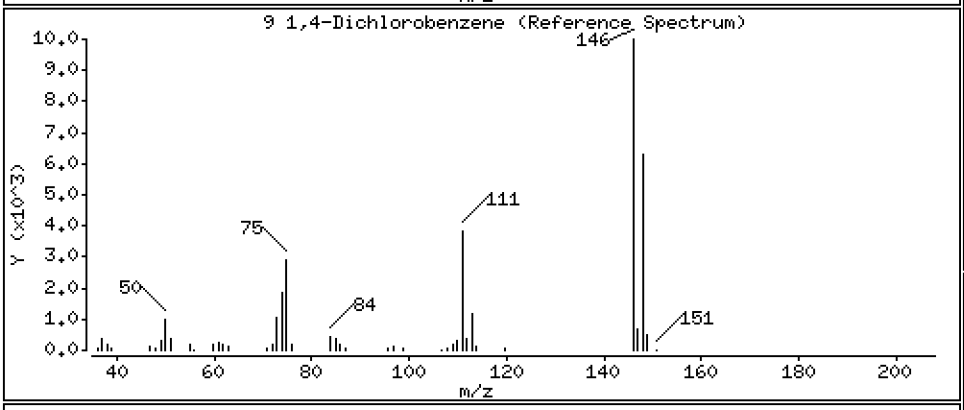
Column diameter: 0.25

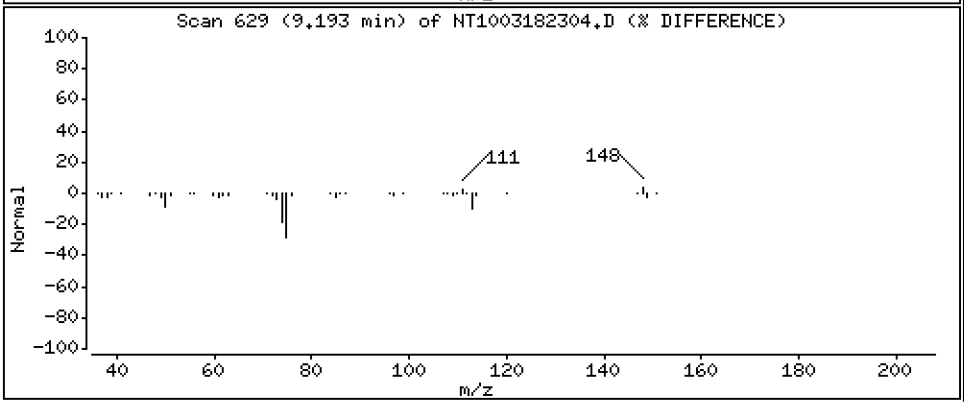
9 1,4-Dichlorobenzene

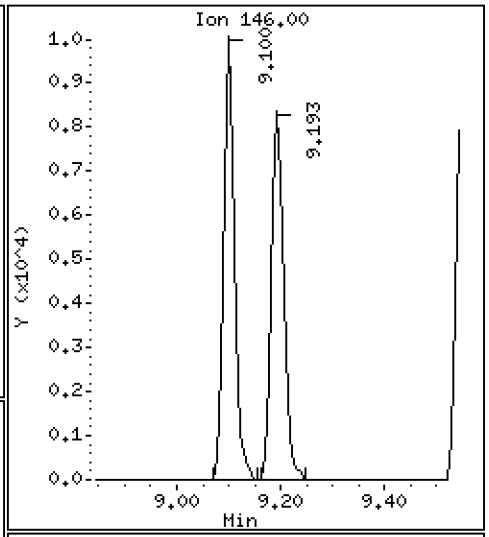
Concentration: 0.2017 ug/mL

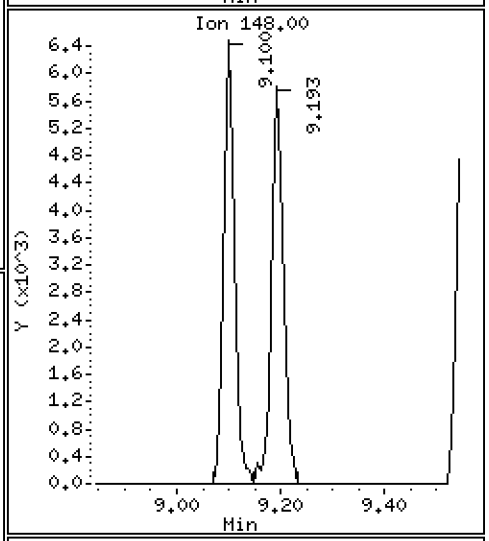


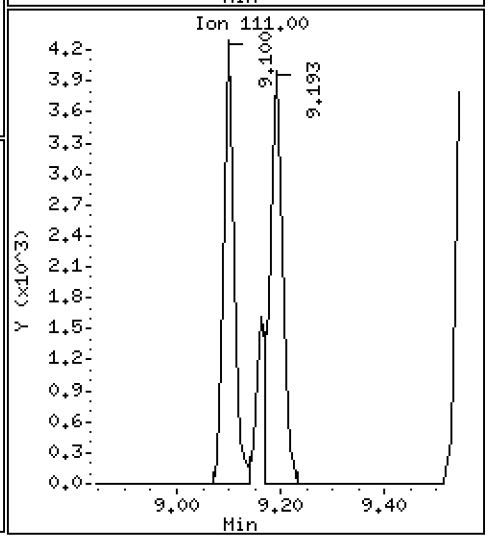












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

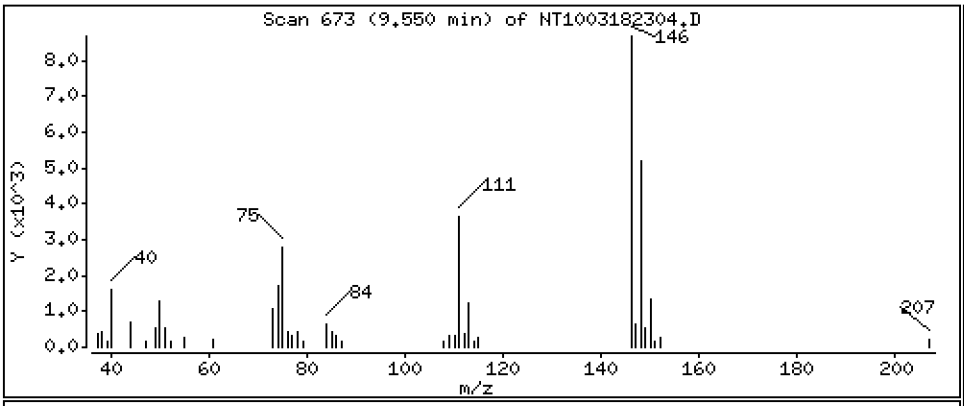
Operator: VTS

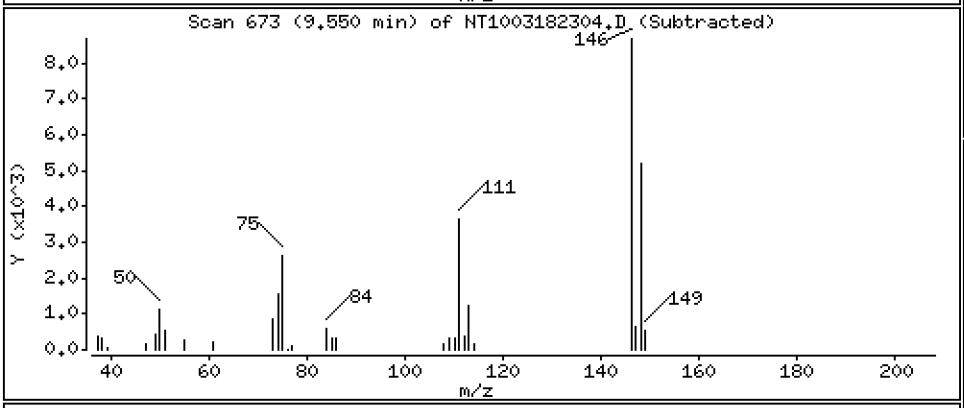
Column phase: ZB-5msi

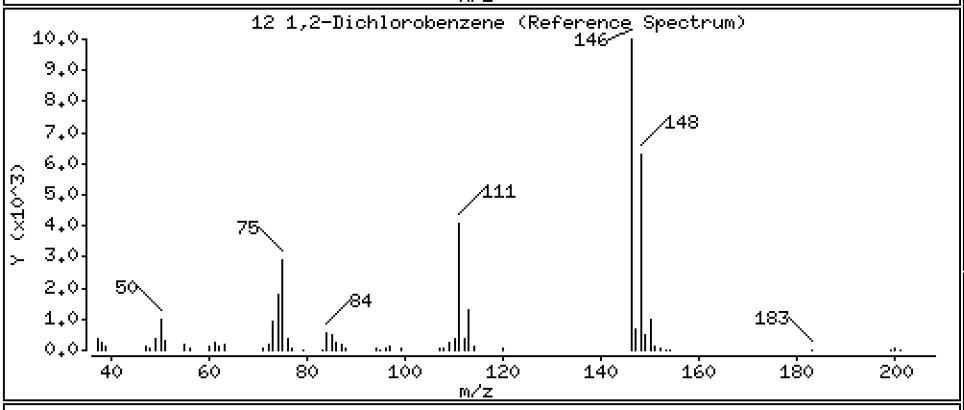
Column diameter: 0.25

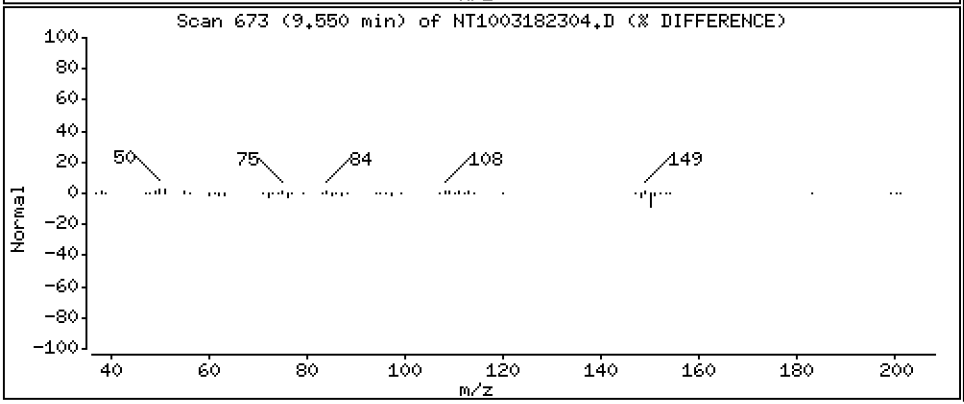
12 1,2-Dichlorobenzene

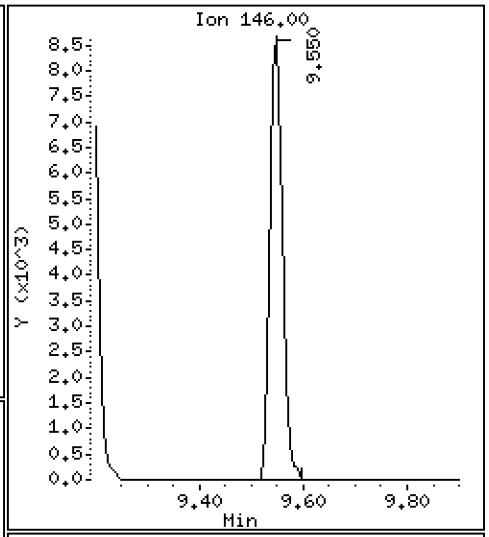
Concentration: 0.2096 ug/mL

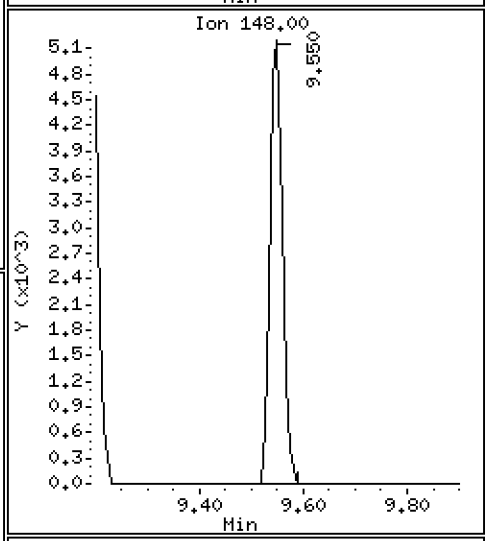


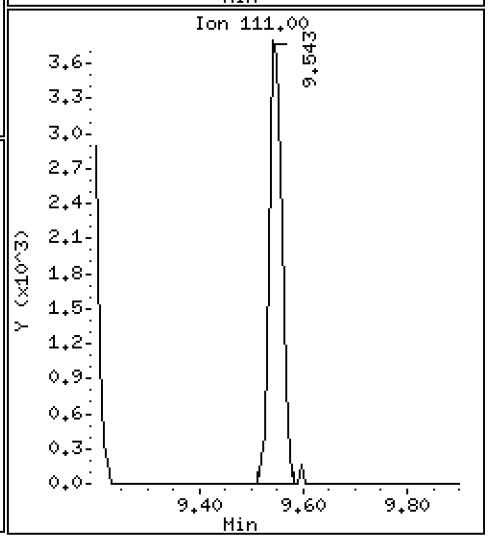












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

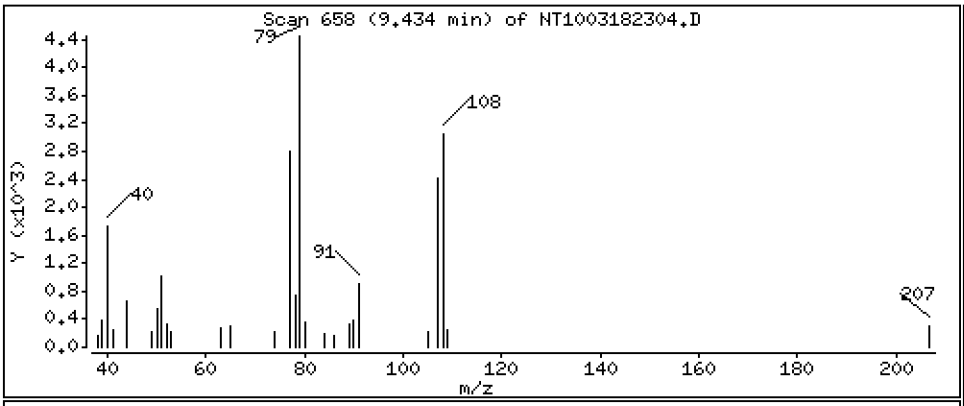
Operator: VTS

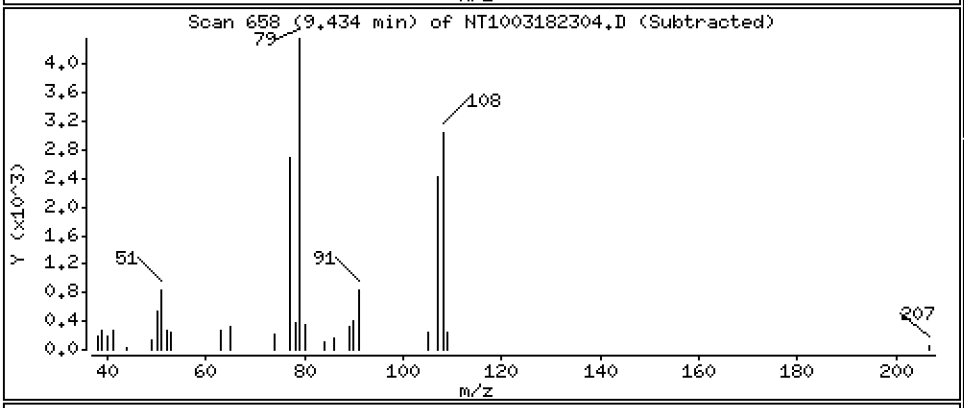
Column phase: ZB-5msi

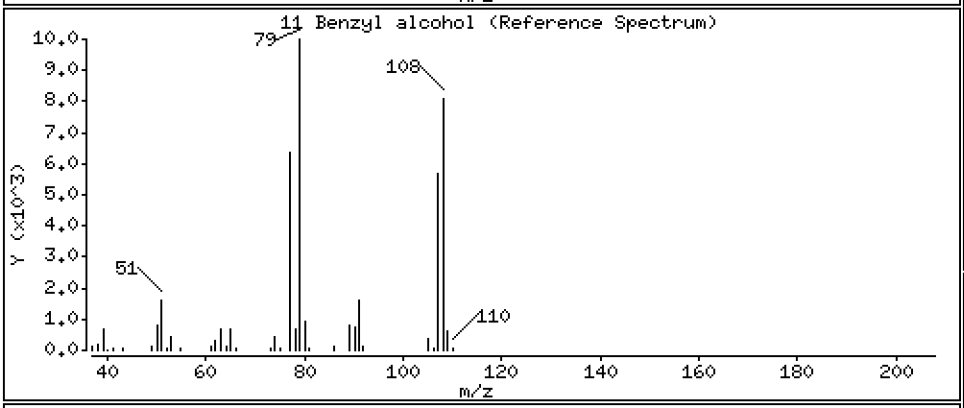
Column diameter: 0.25

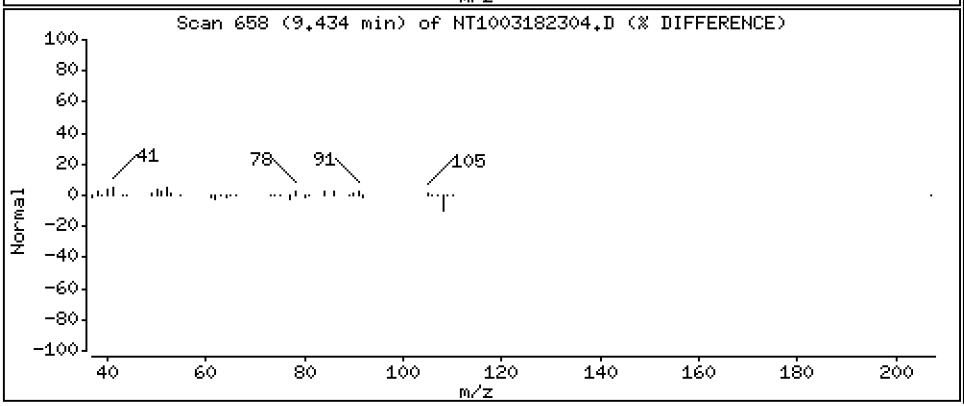
11 Benzyl alcohol

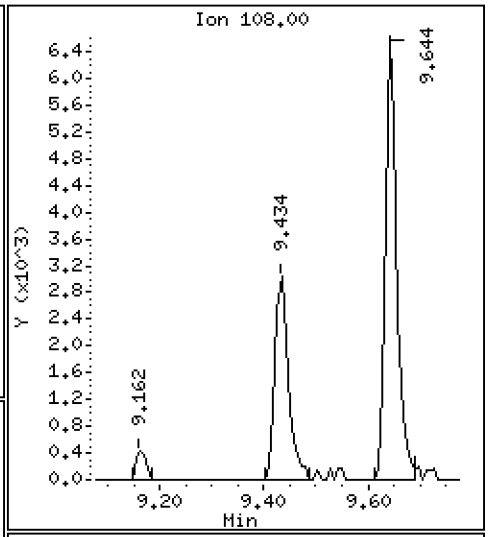
Concentration: 0.1462 ug/mL

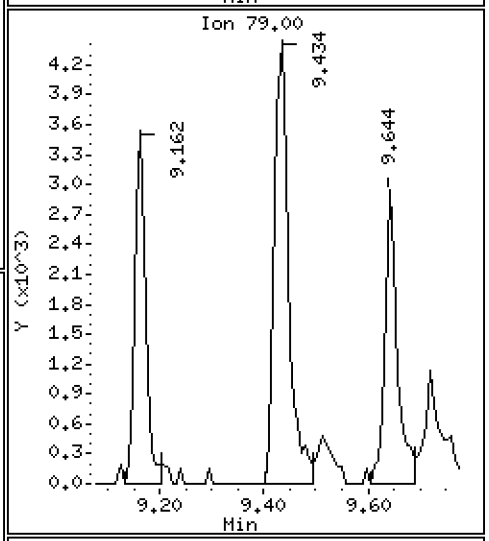


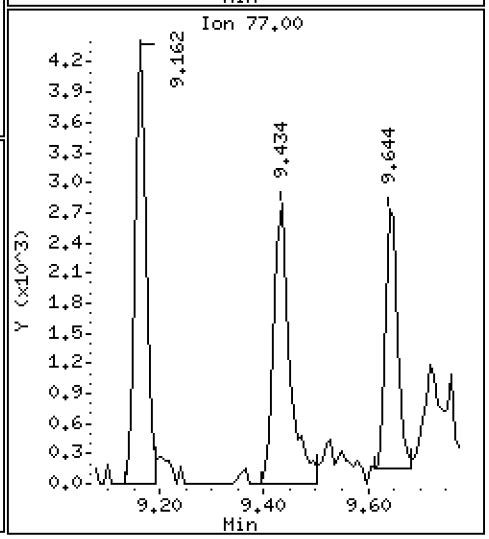












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

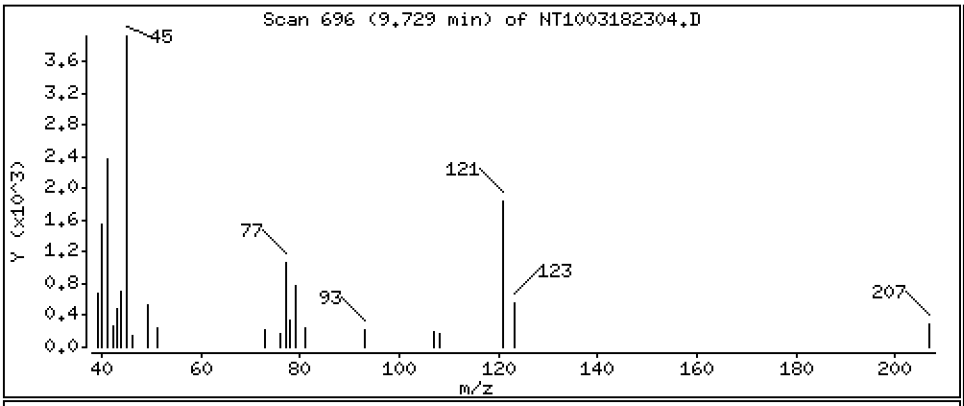
Operator: VTS

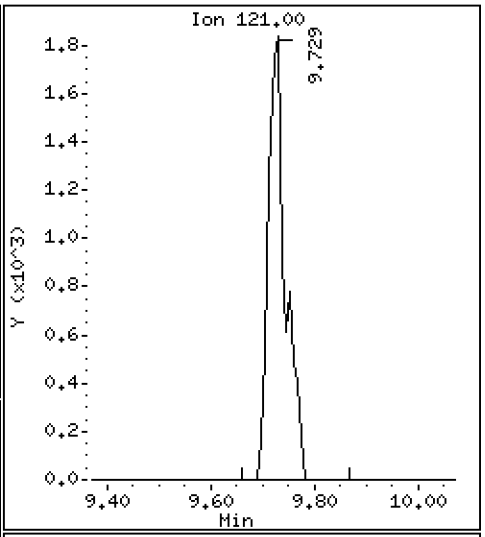
Column phase: ZB-5msi

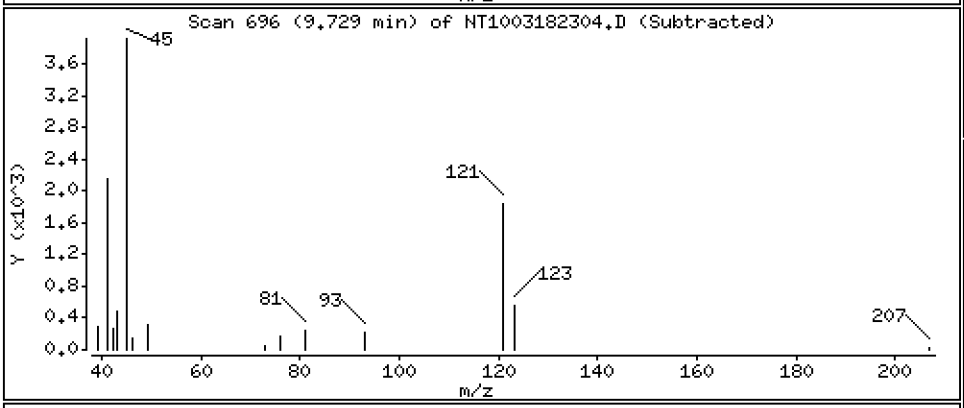
Column diameter: 0.25

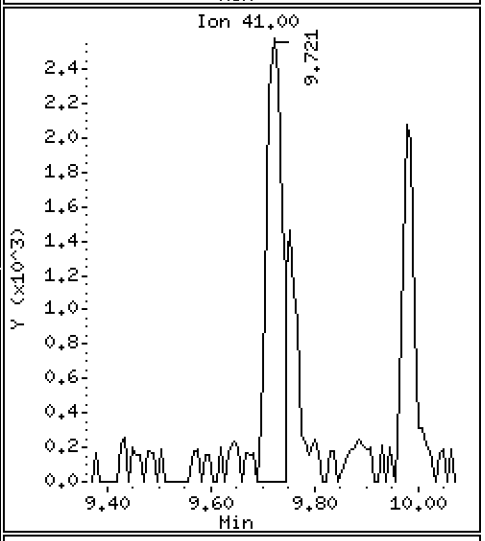
14 2,2'-oxybis(1-Chloropropane)

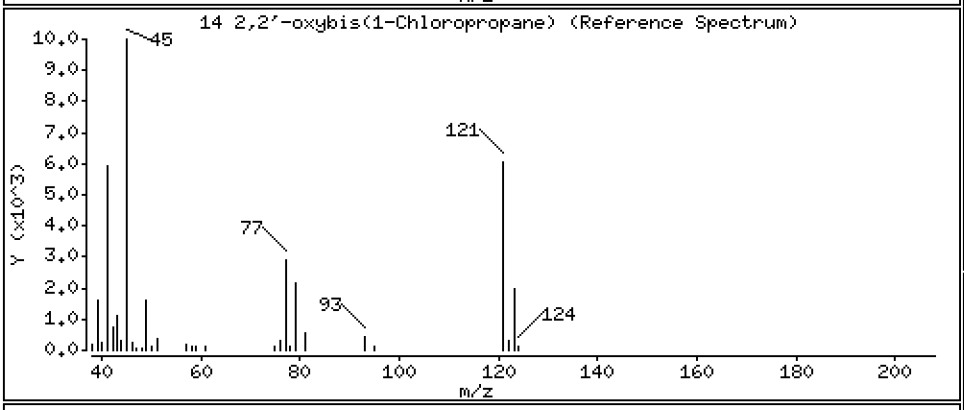
Concentration: 0.2306 ug/mL

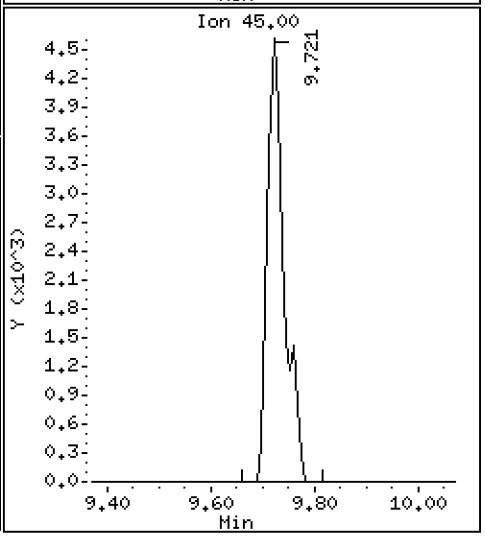


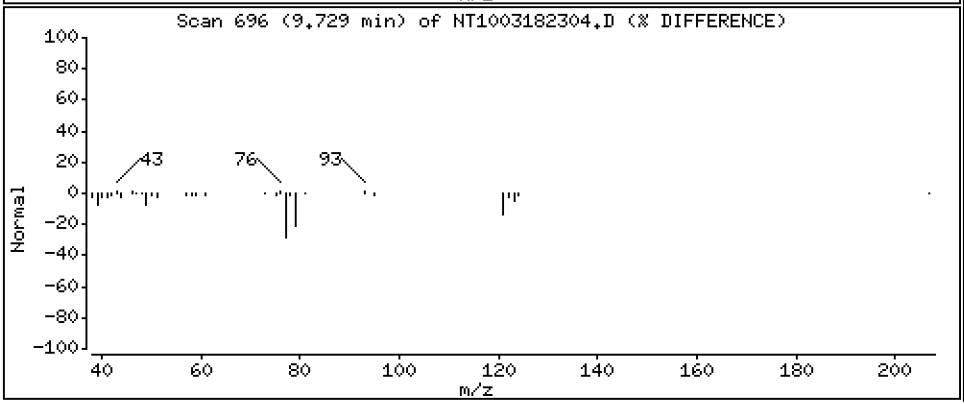












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

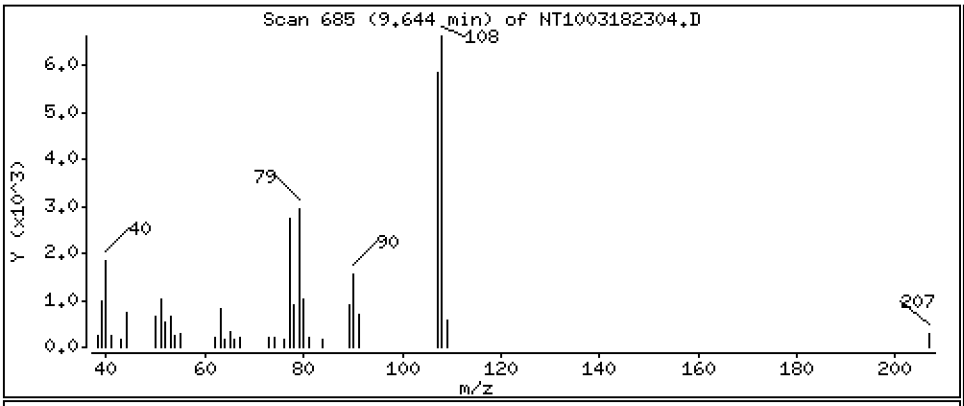
Operator: VTS

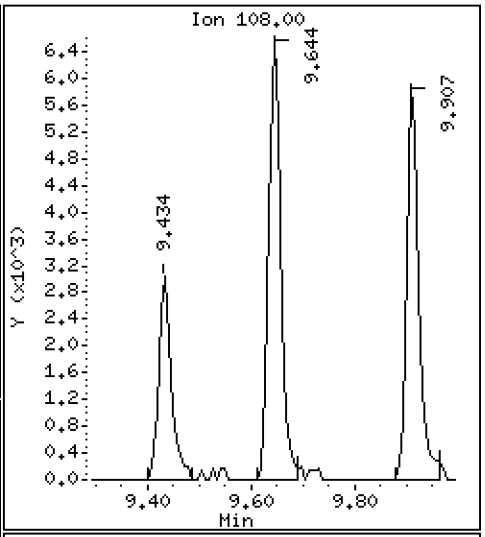
Column phase: ZB-5msi

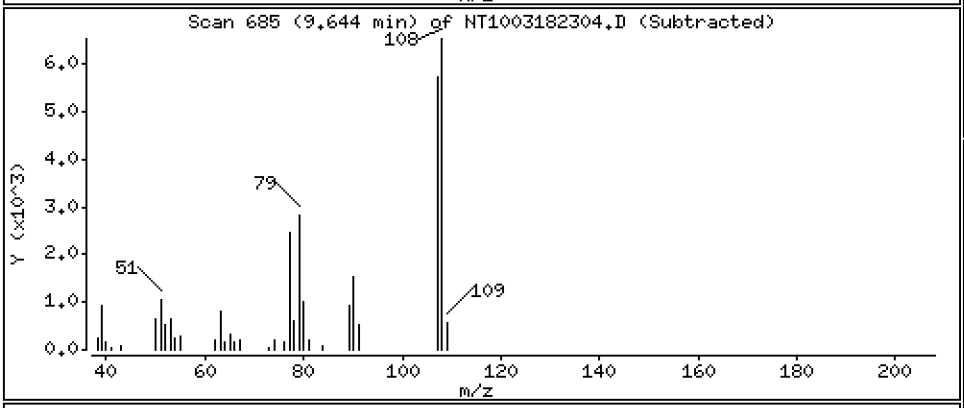
Column diameter: 0.25

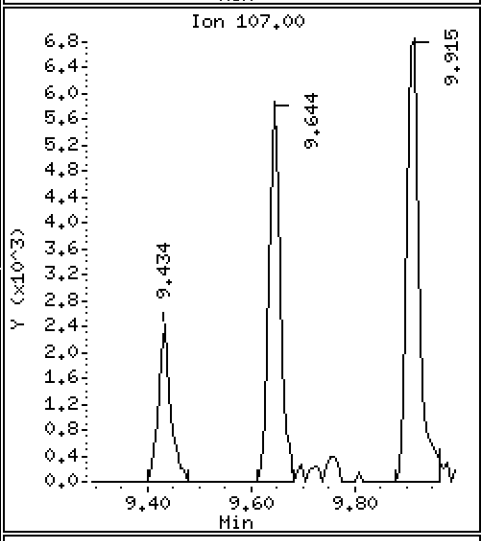
13 2-Methylphenol

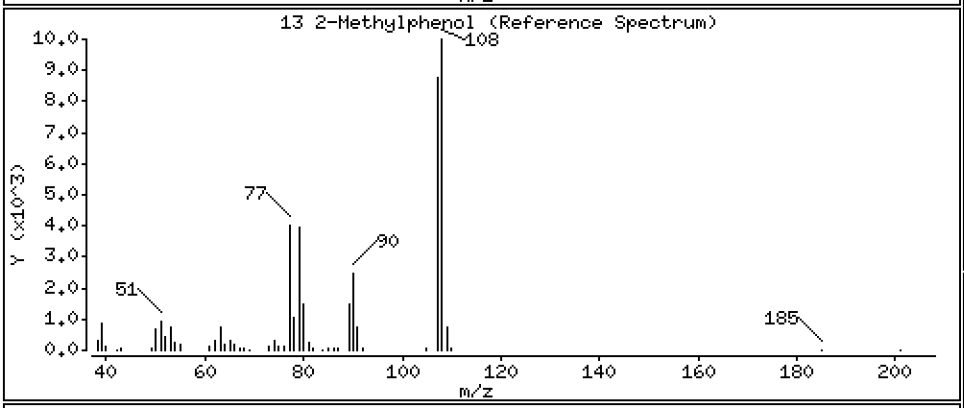
Concentration: 0.1815 ug/mL

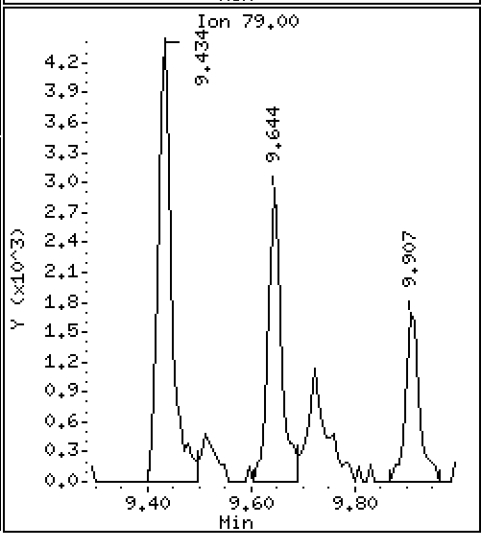


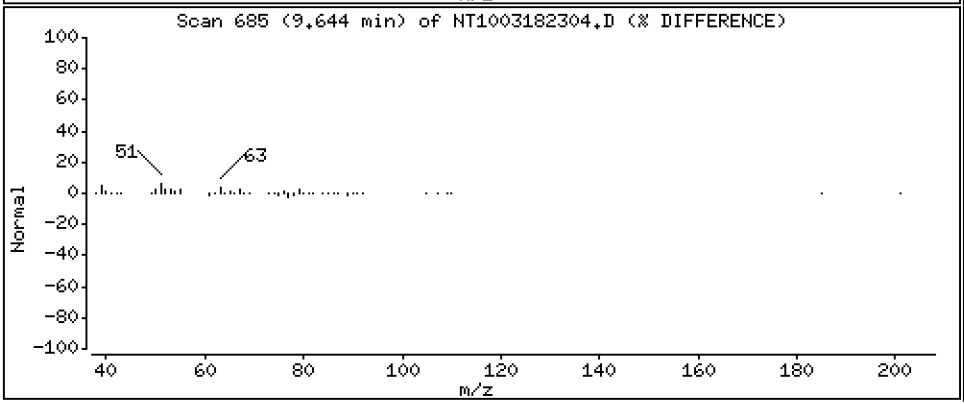












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

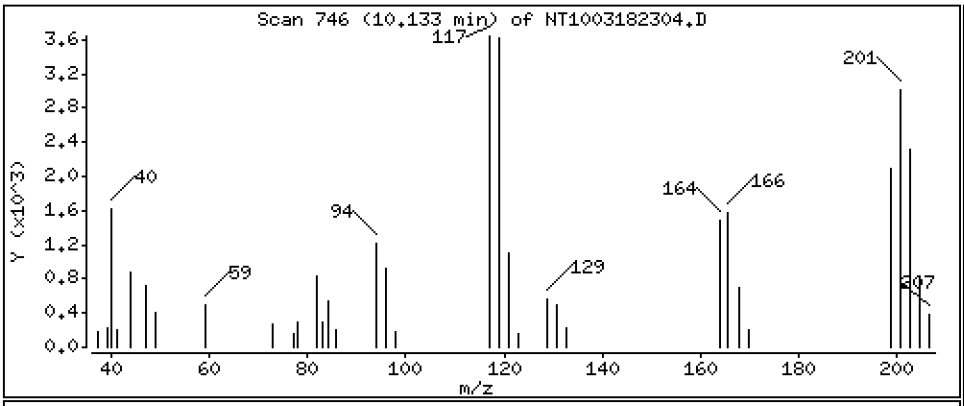
Operator: VTS

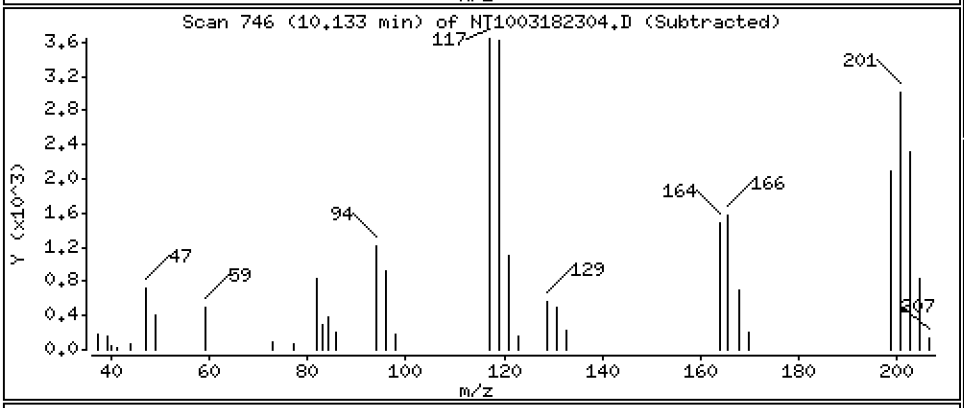
Column phase: ZB-5msi

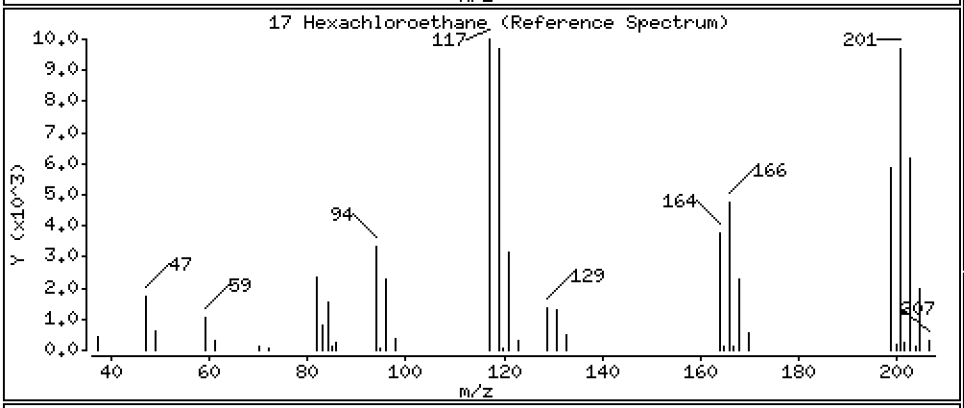
Column diameter: 0.25

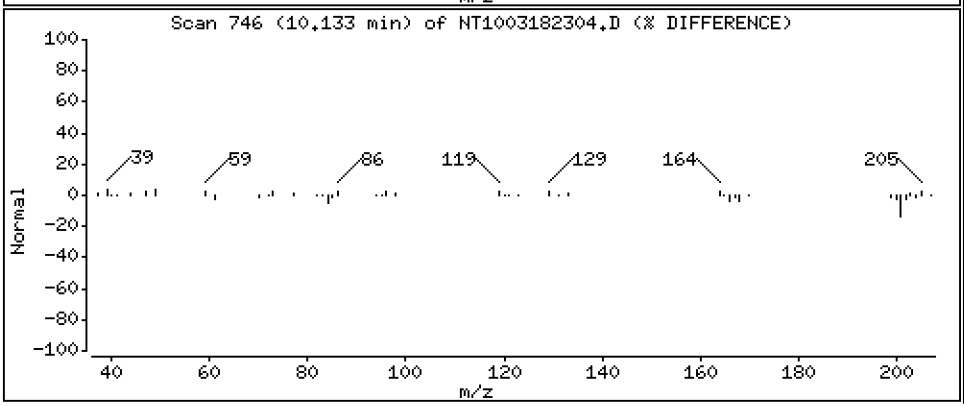
17 Hexachloroethane

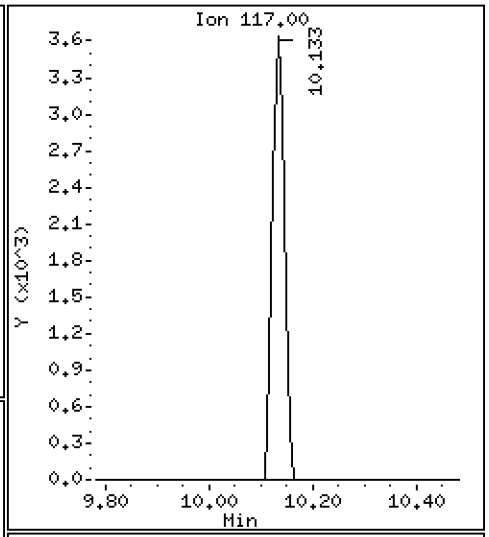
Concentration: 0.2027 ug/mL

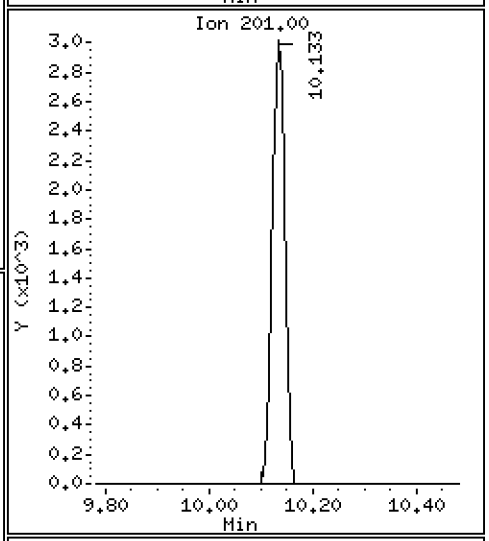


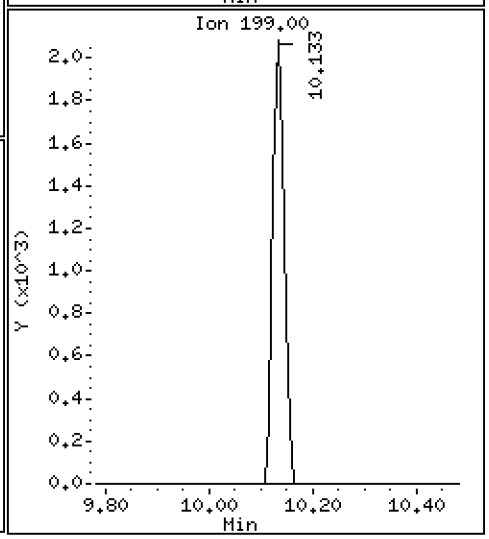












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

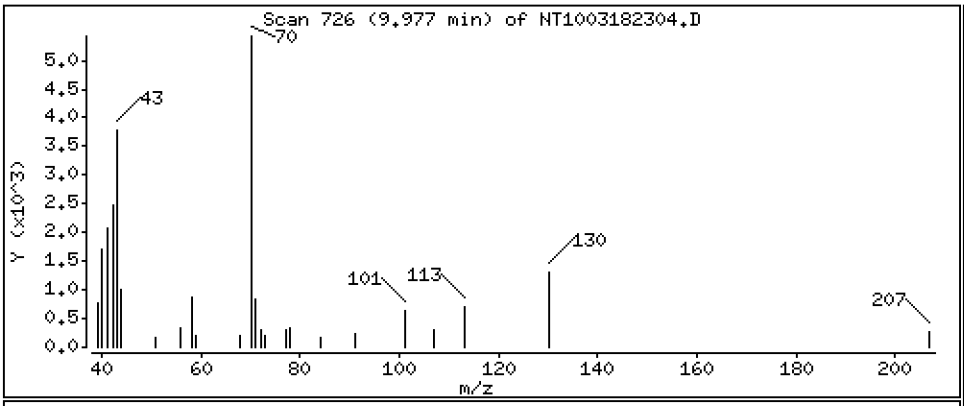
Operator: VTS

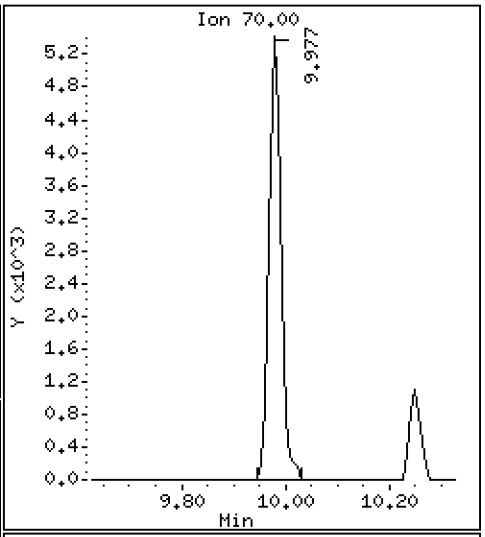
Column phase: ZB-5msi

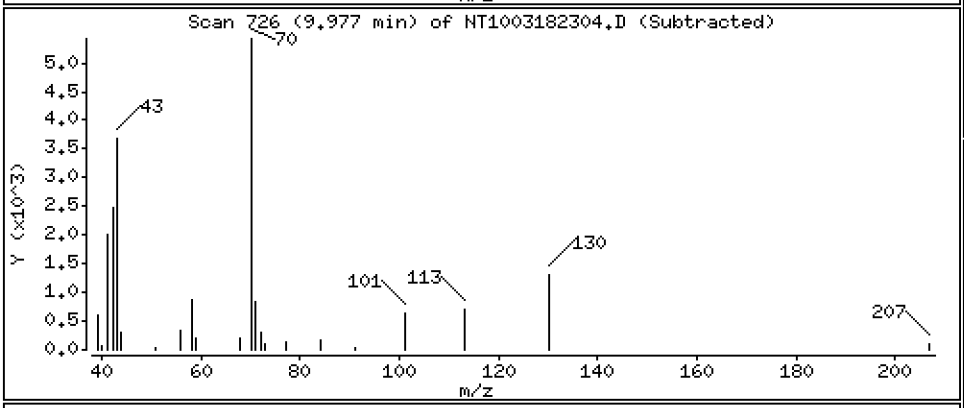
Column diameter: 0.25

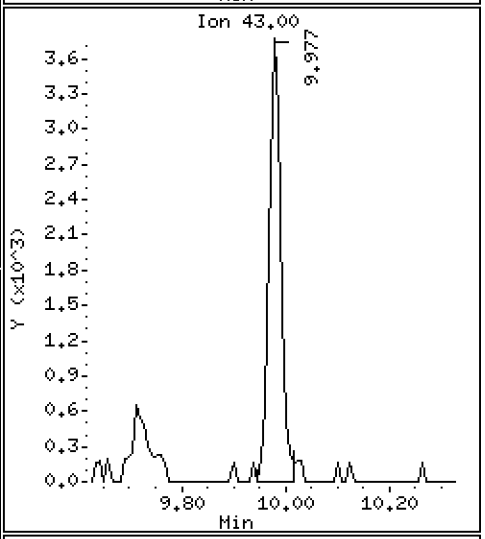
16 N-Nitroso-di-n-propylamine

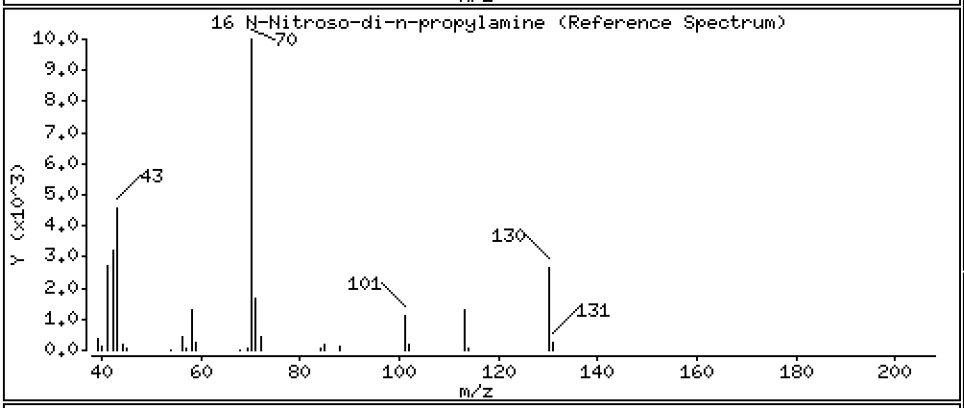
Concentration: 0.1874 ug/mL

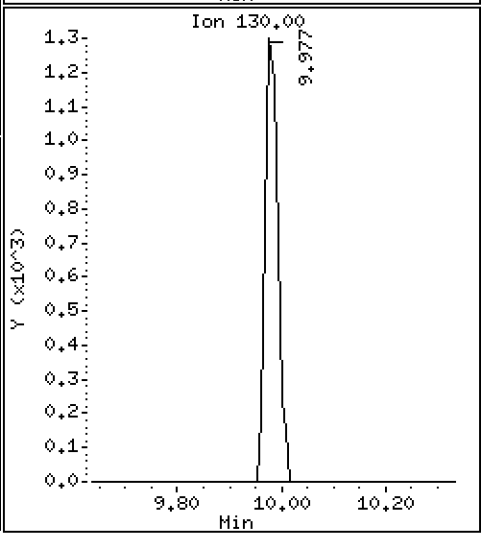


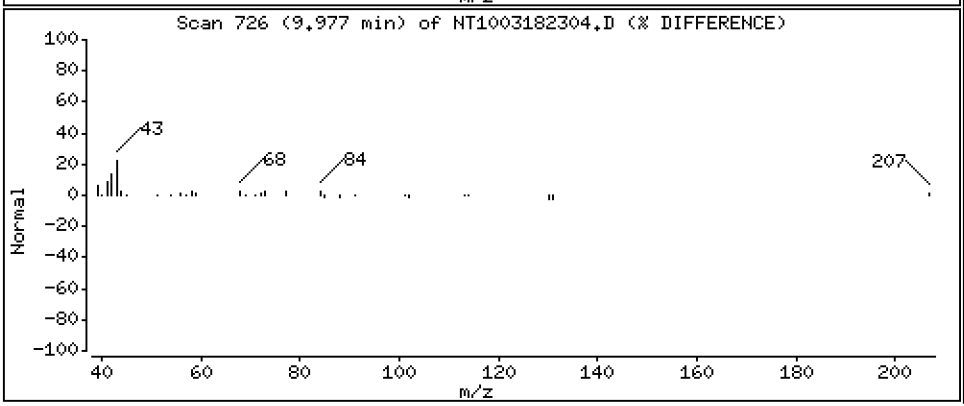












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

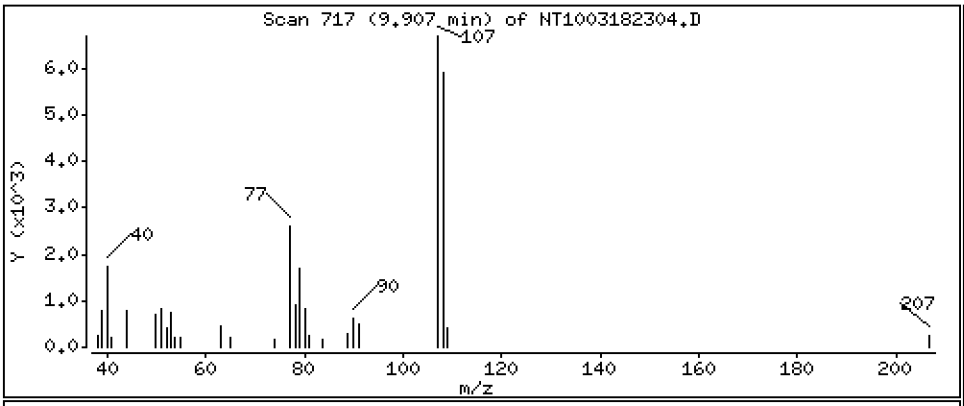
Operator: VTS

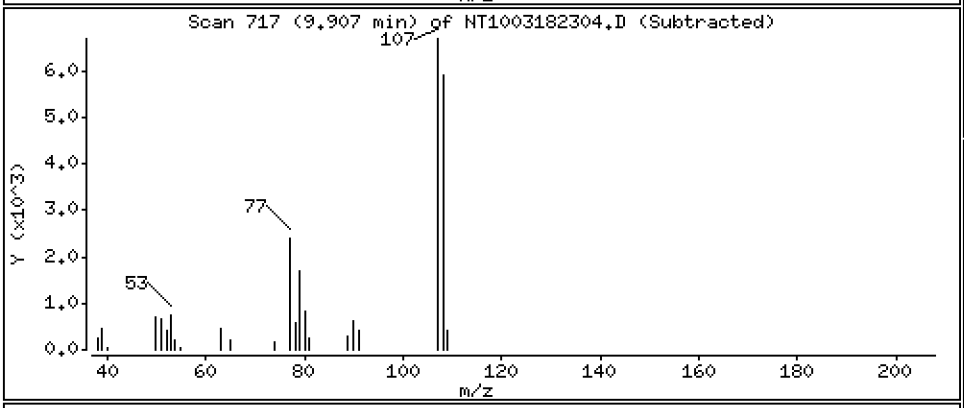
Column phase: ZB-5msi

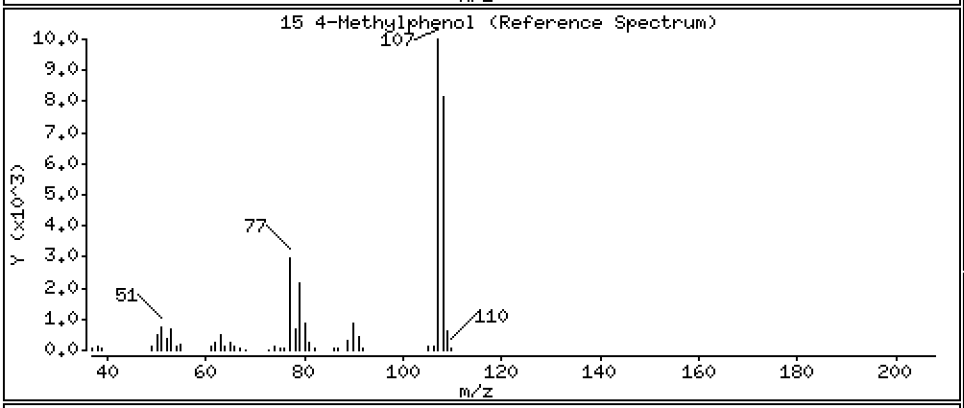
Column diameter: 0.25

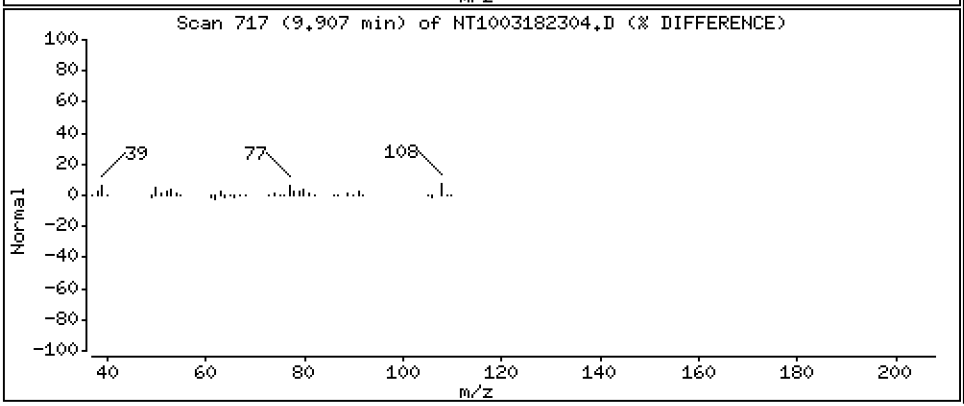
15 4-Methylphenol

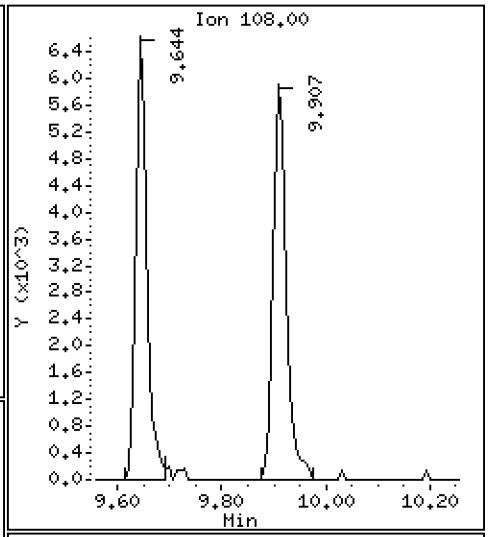
Concentration: 0.1692 ug/mL

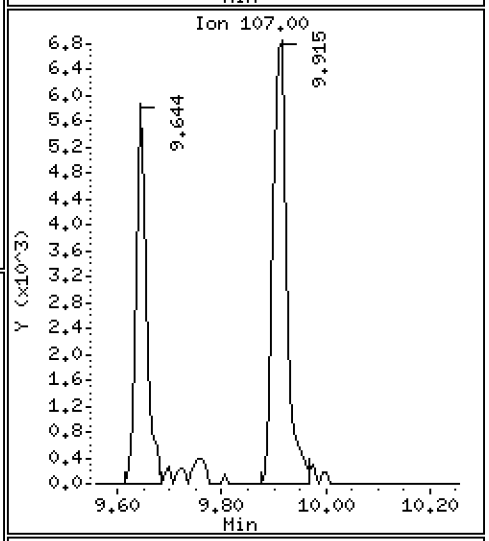


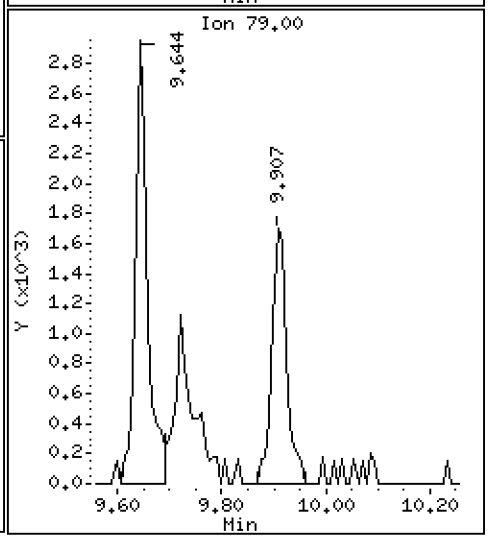












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

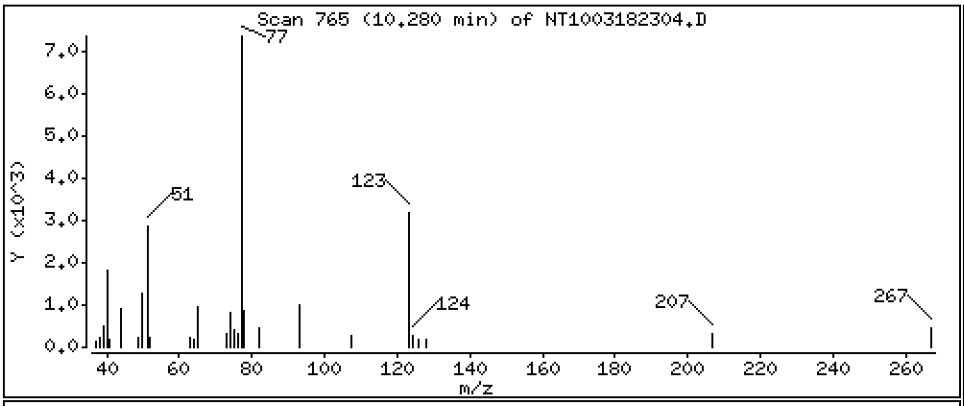
Operator: VTS

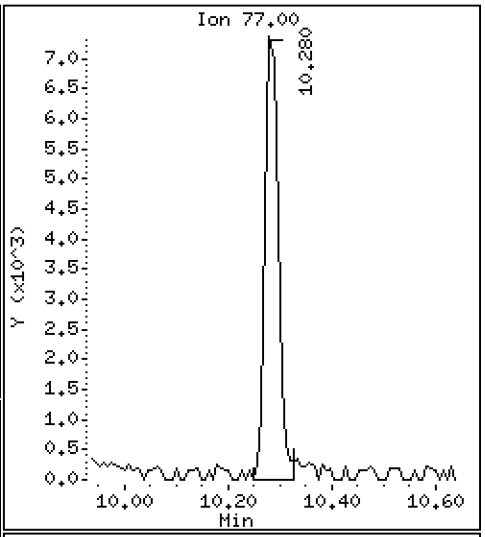
Column phase: ZB-5msi

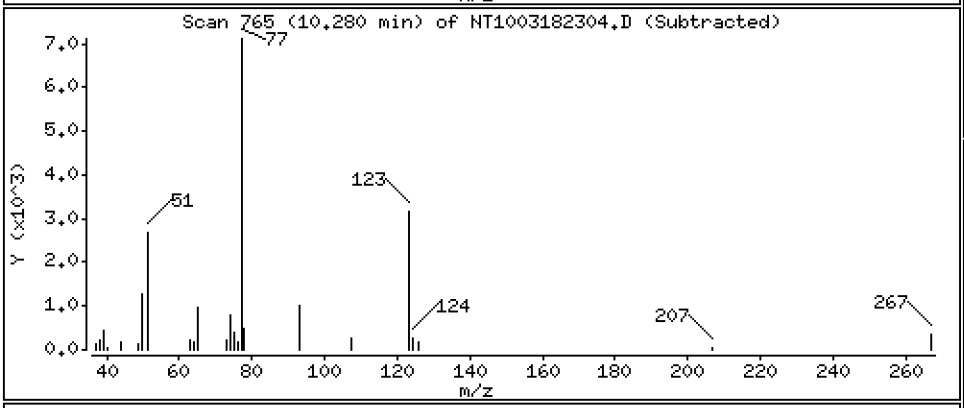
Column diameter: 0.25

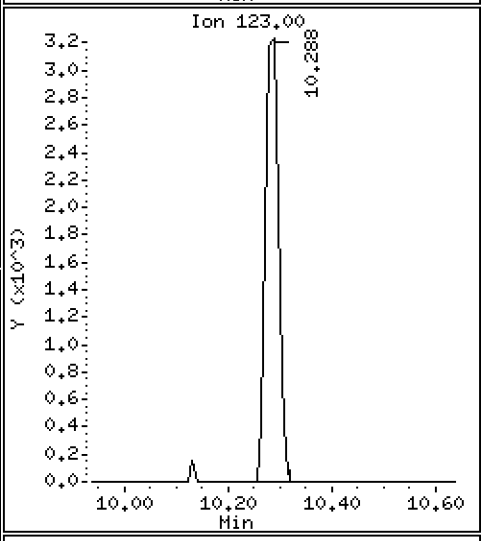
19 Nitrobenzene

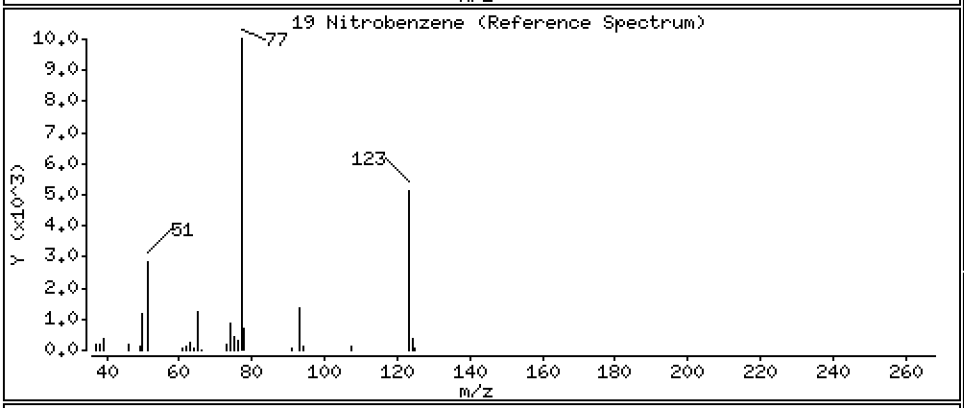
Concentration: 0.1942 ug/mL

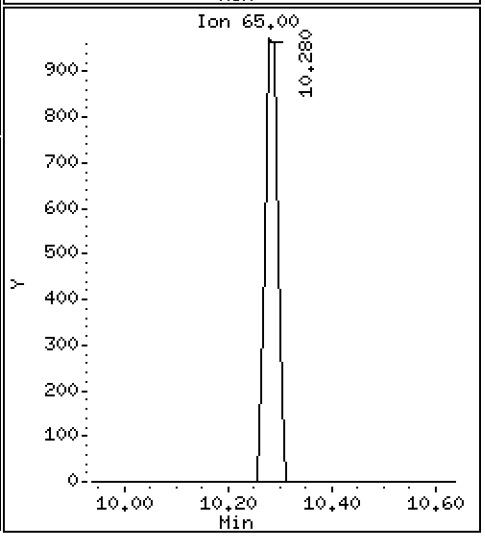


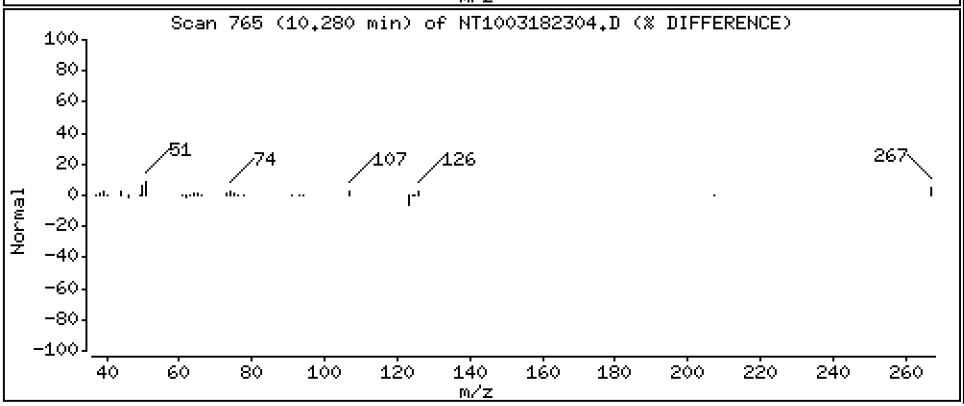












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

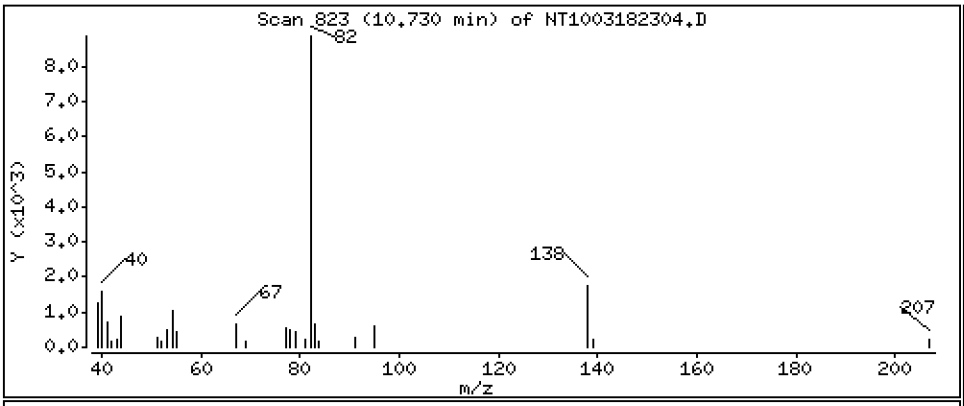
Operator: VTS

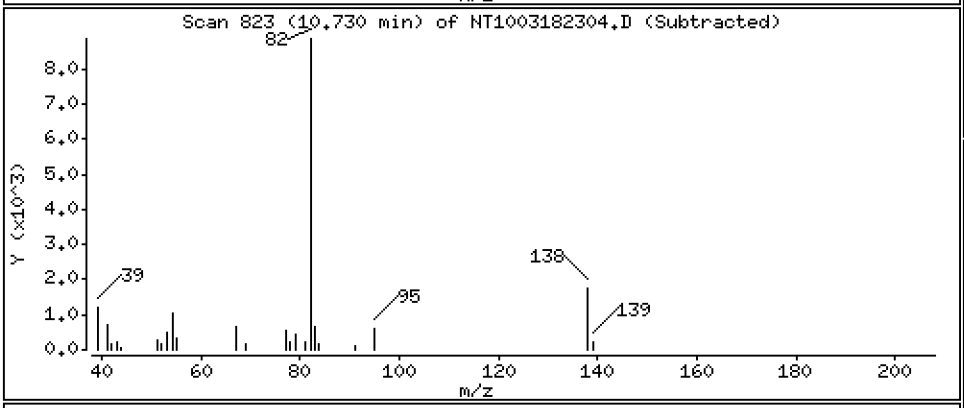
Column phase: ZB-5msi

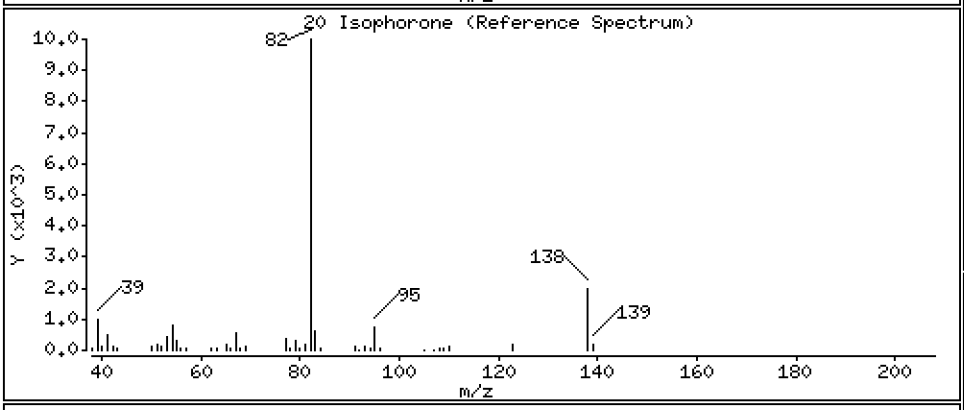
Column diameter: 0.25

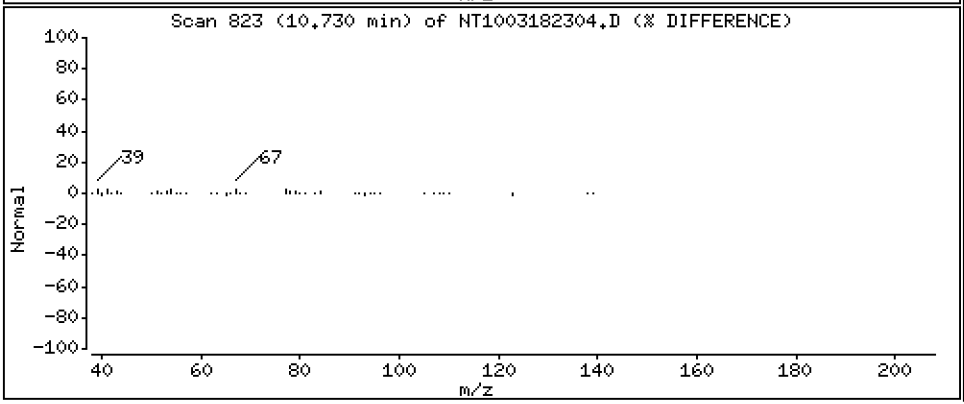
20 Isophorone

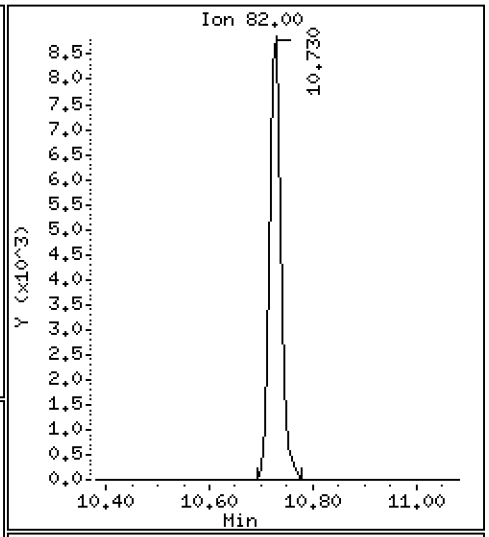
Concentration: 0.1720 ug/mL

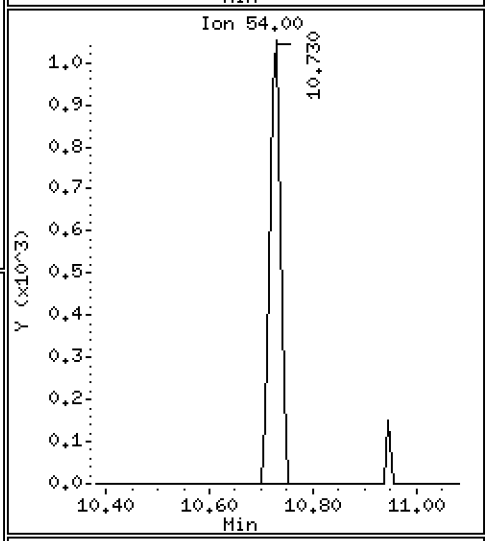


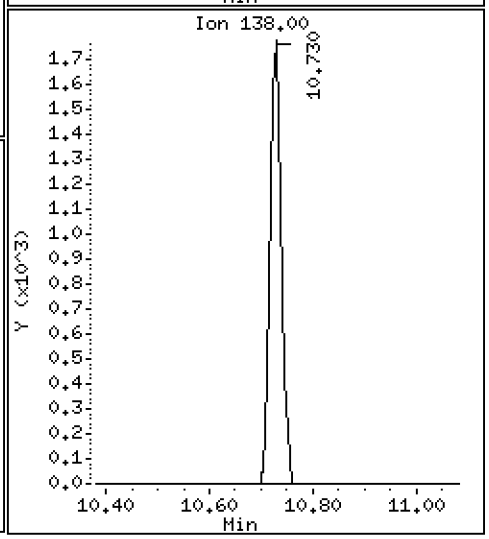












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

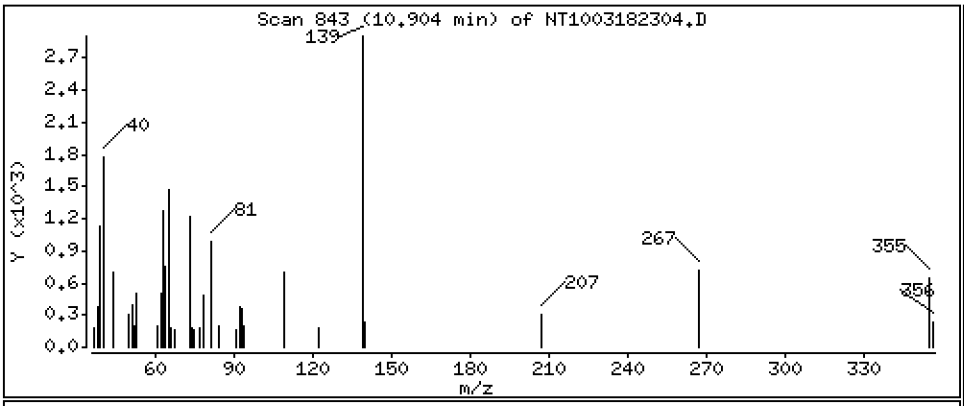
Operator: VTS

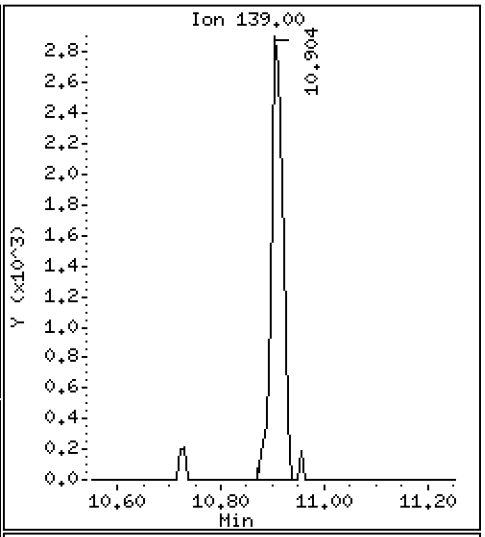
Column phase: ZB-5msi

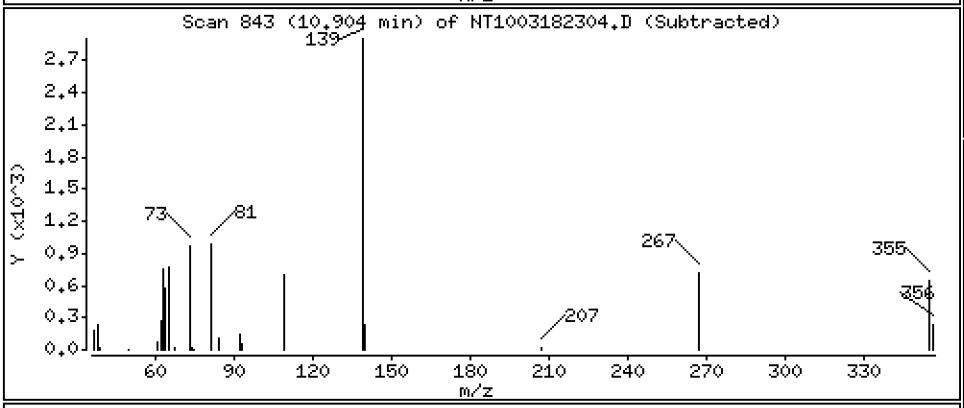
Column diameter: 0.25

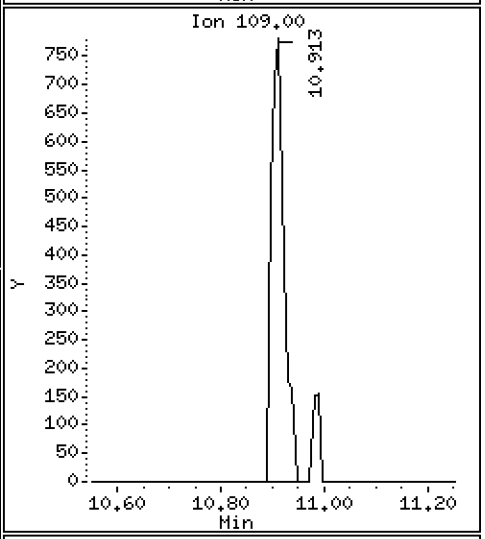
21 2-Nitrophenol

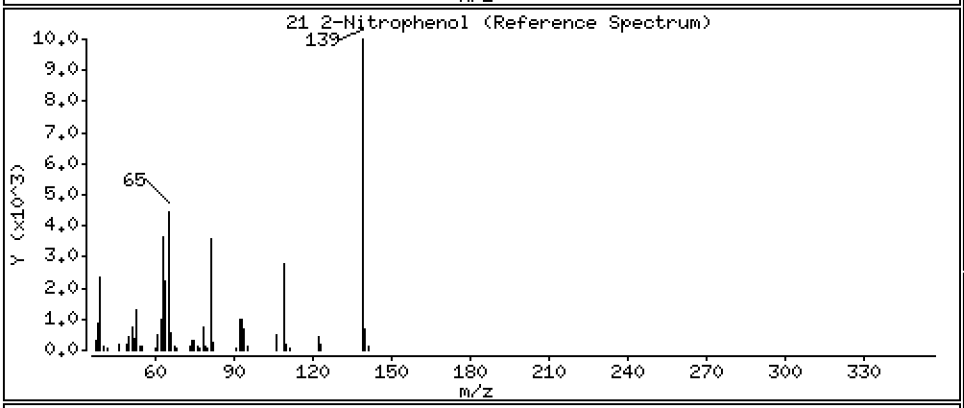
Concentration: 0.1476 ug/mL

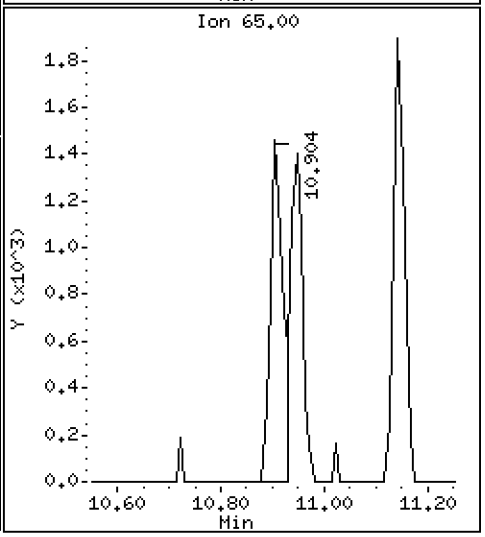


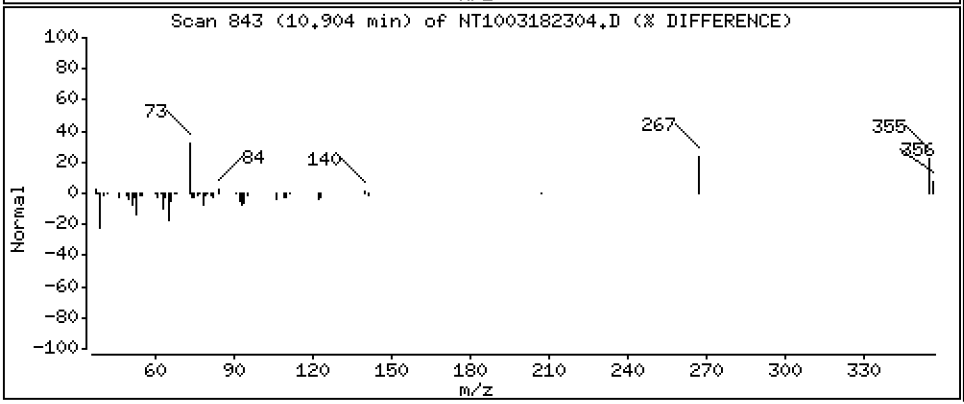












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

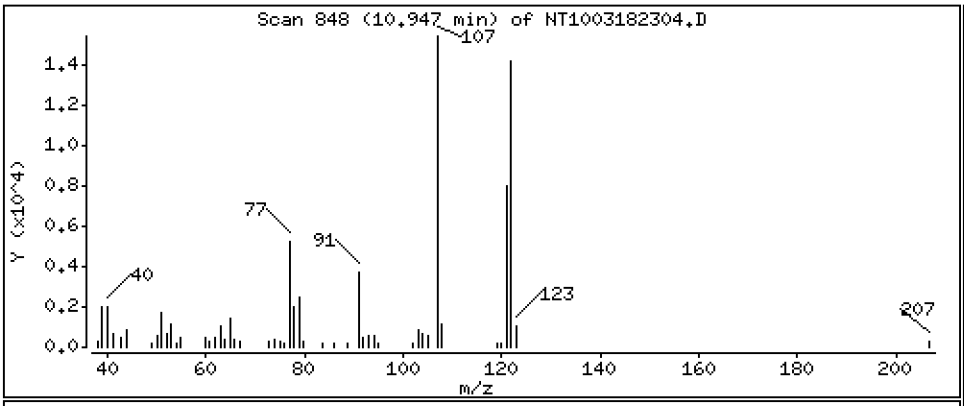
Operator: VTS

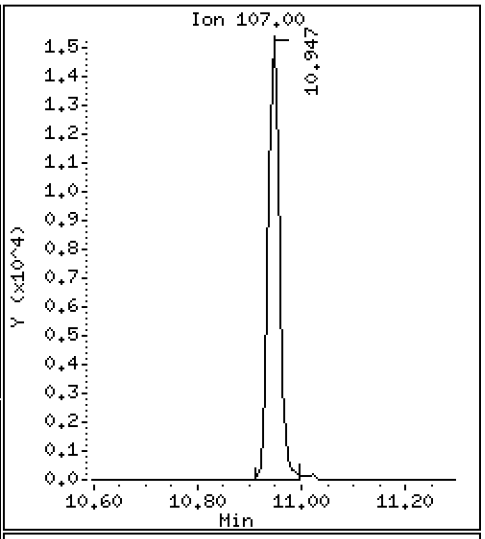
Column phase: ZB-5msi

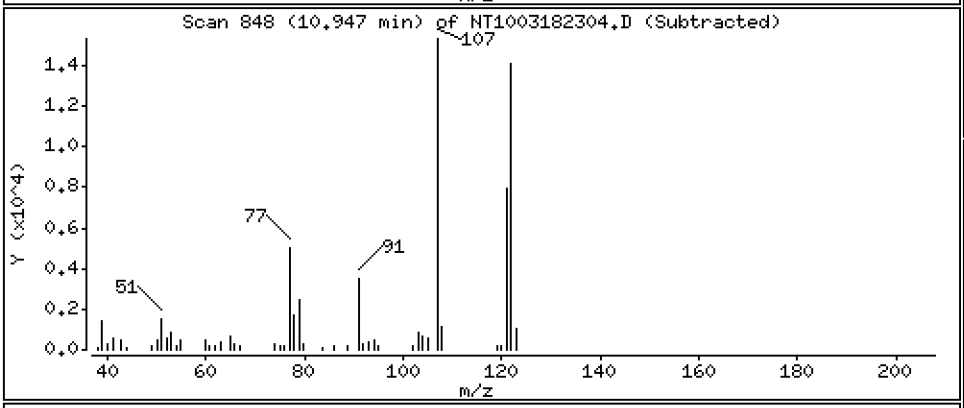
Column diameter: 0.25

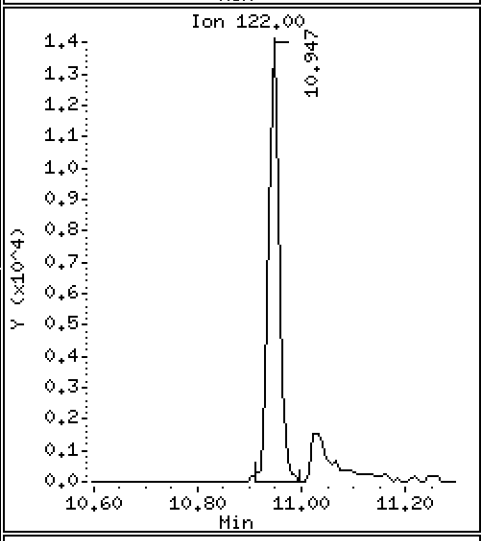
22 2,4-Dimethylphenol

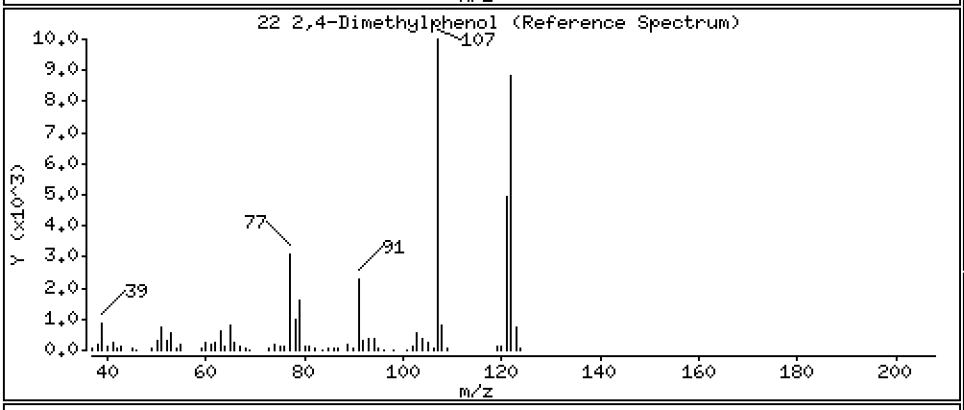
Concentration: 0.3860 ug/mL

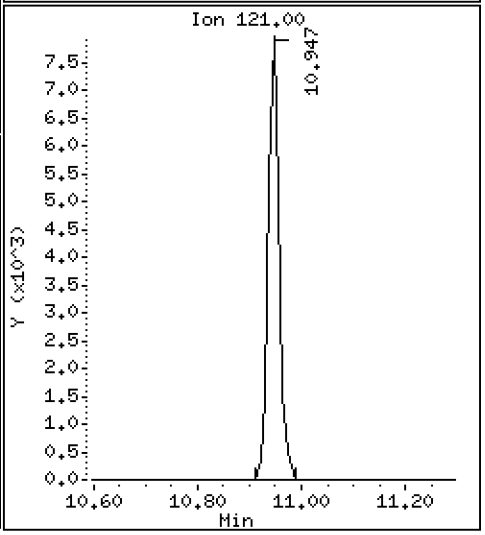


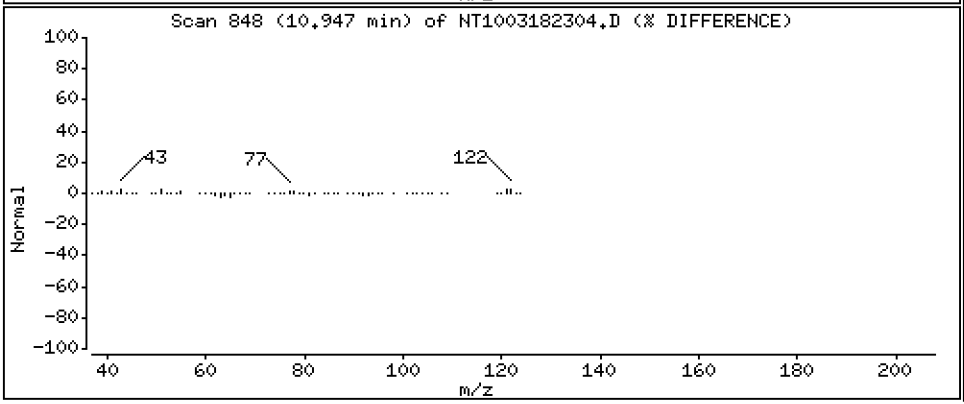












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

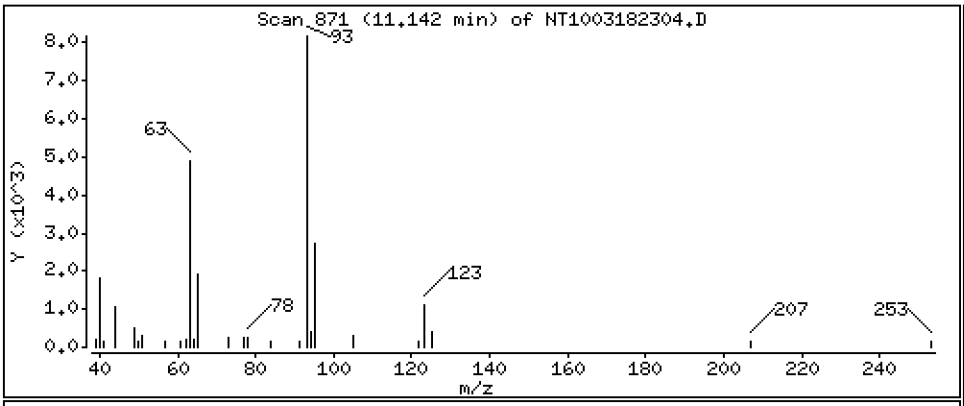
Operator: VTS

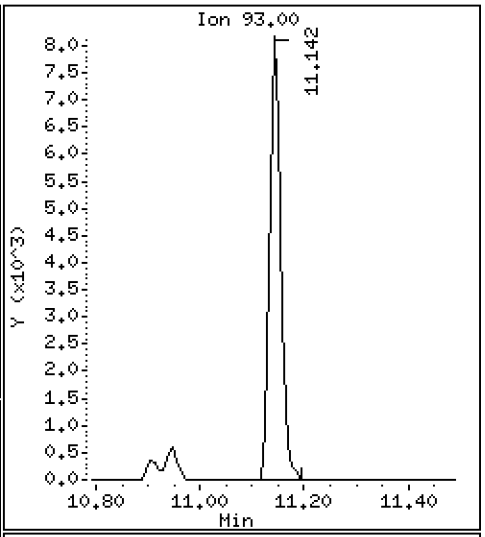
Column phase: ZB-5msi

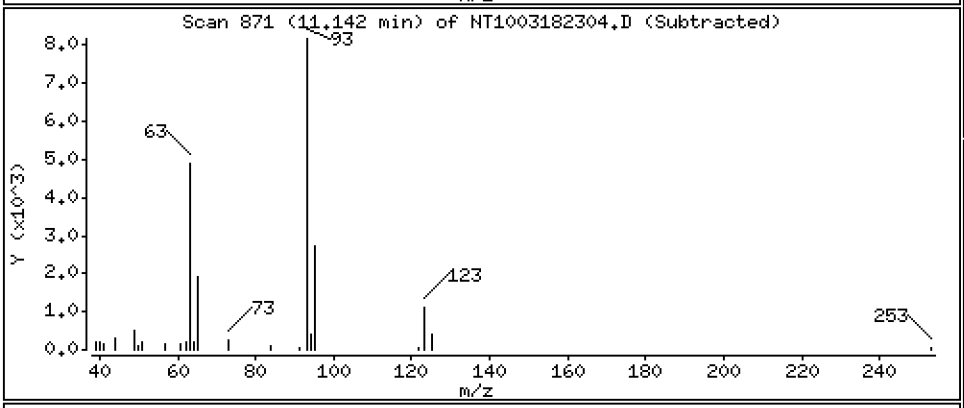
Column diameter: 0.25

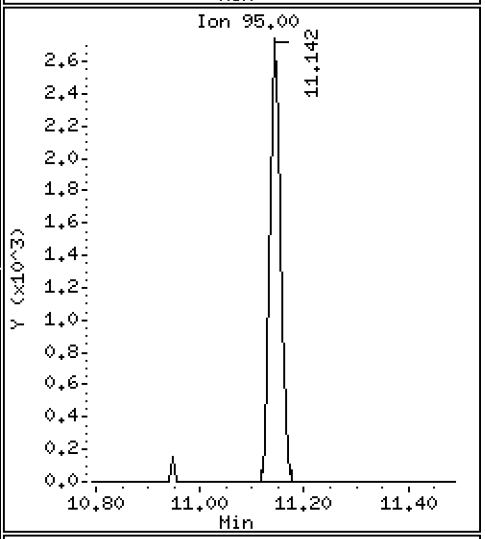
23 Bis(2-Chloroethoxy)methane

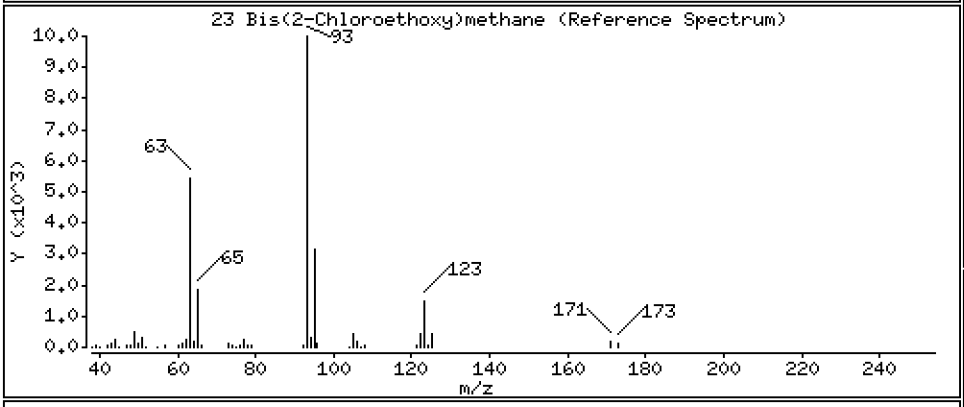
Concentration: 0.2151 ug/mL

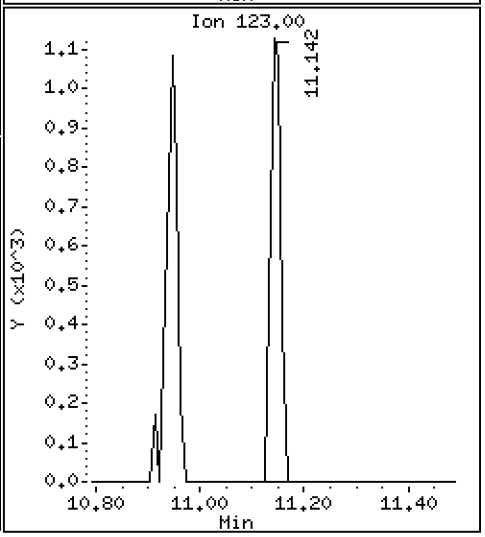


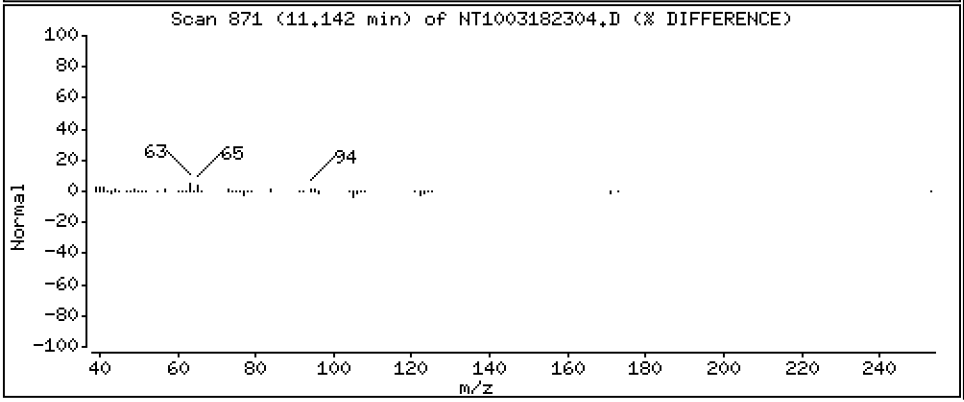












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

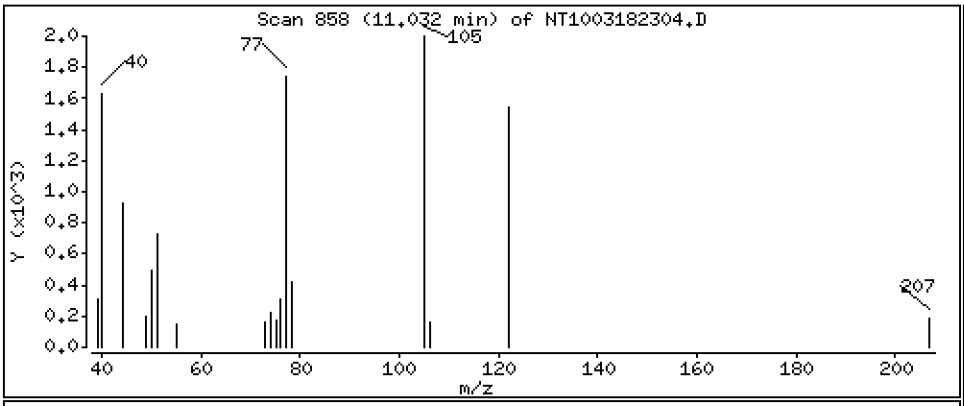
Operator: VTS

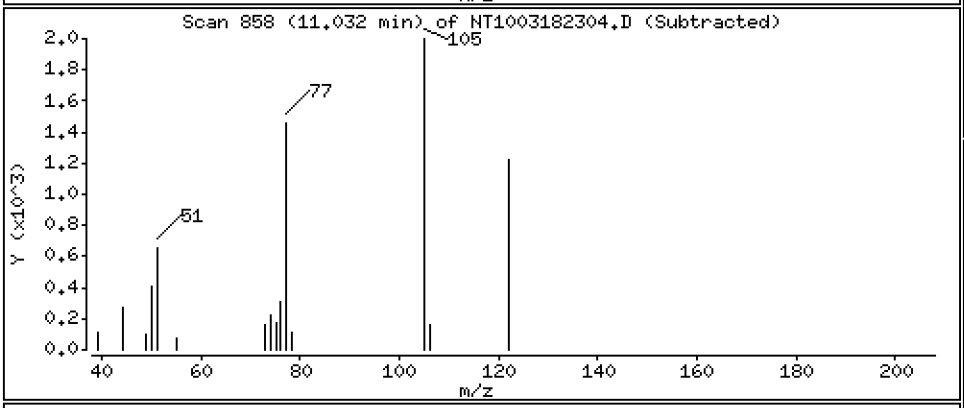
Column phase: ZB-5msi

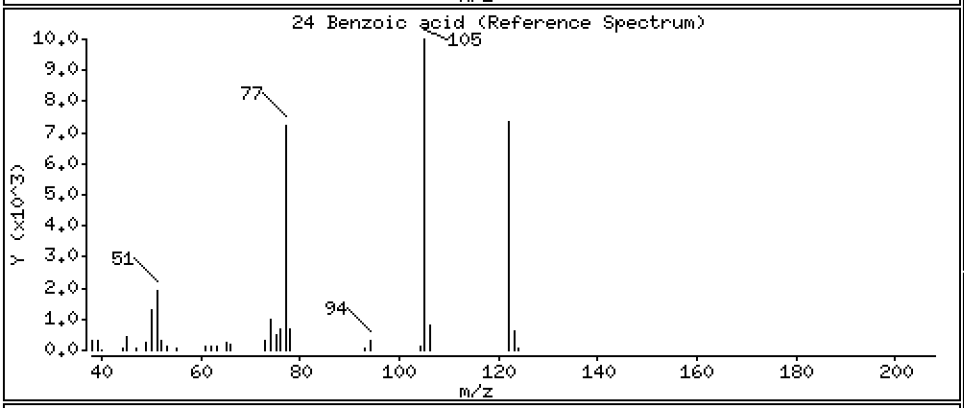
Column diameter: 0.25

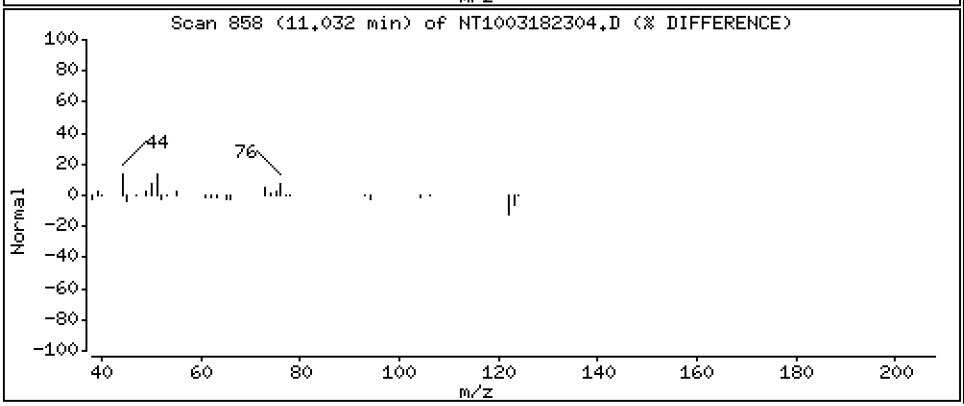
24 Benzoic acid

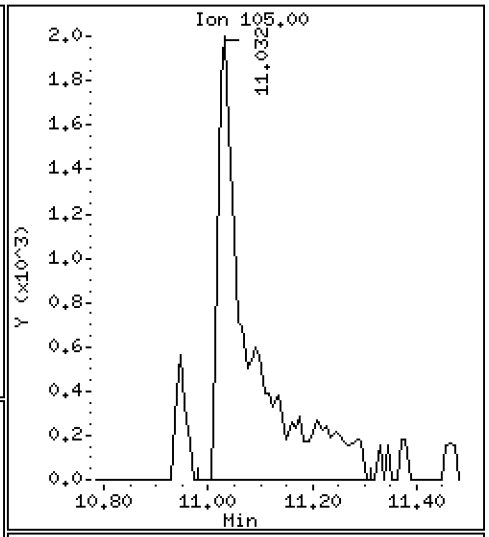
Concentration: 0.2476 ug/mL

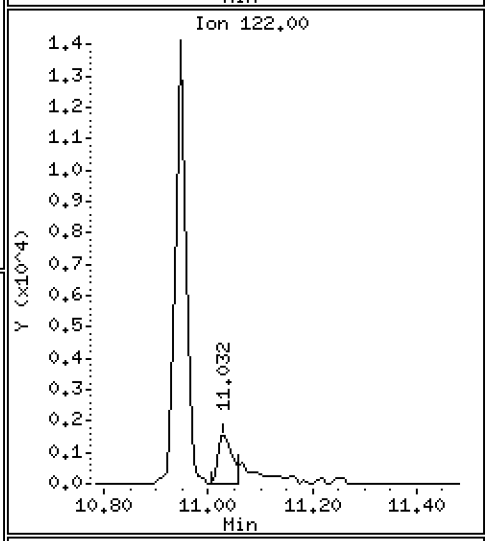


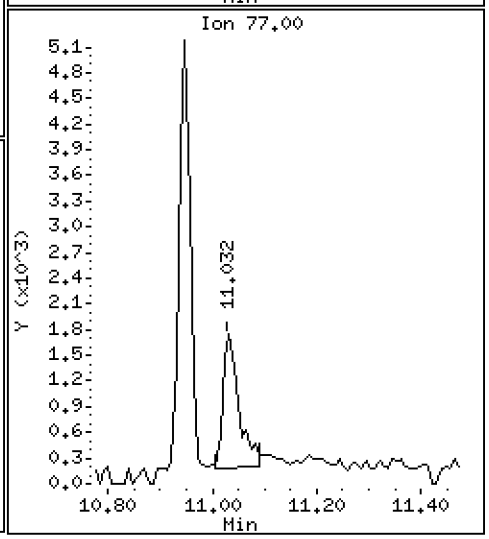












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

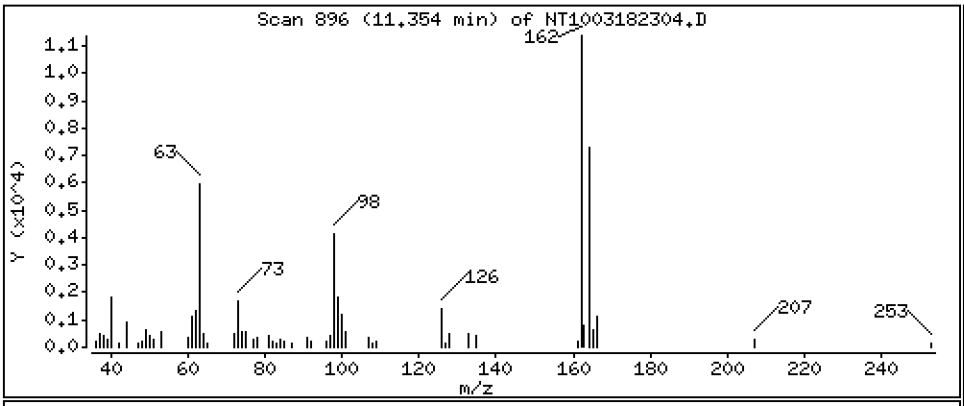
Operator: VTS

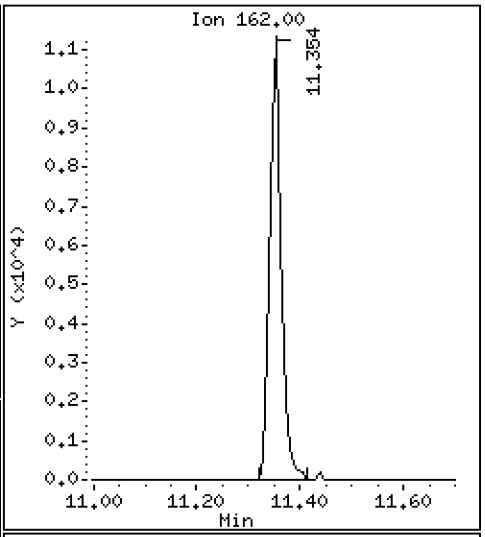
Column phase: ZB-5msi

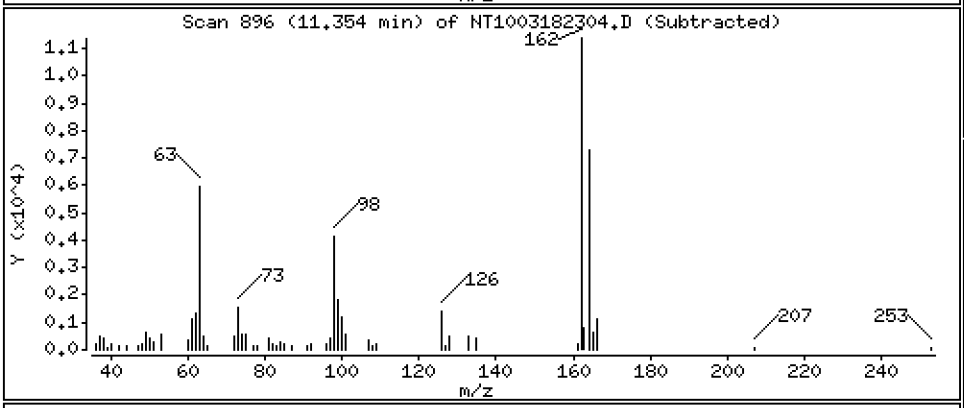
Column diameter: 0.25

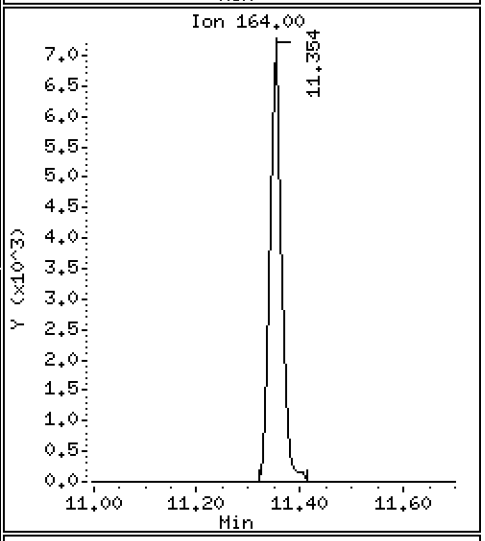
25 2,4-Dichlorophenol

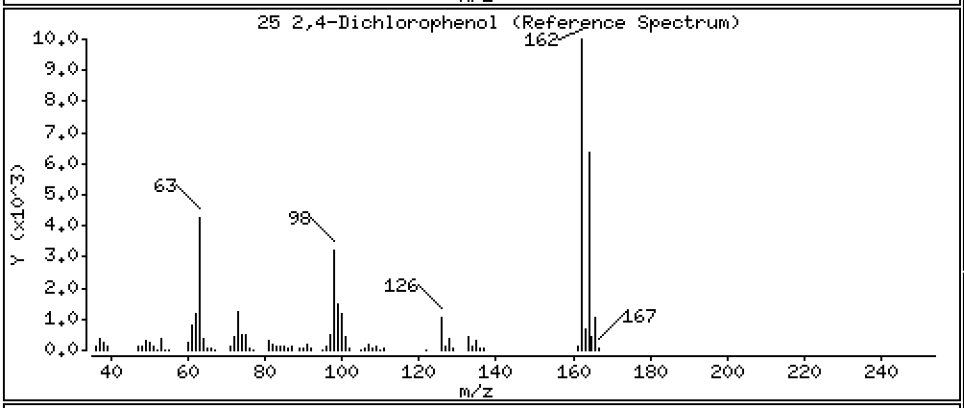
Concentration: 0.3617 ug/mL

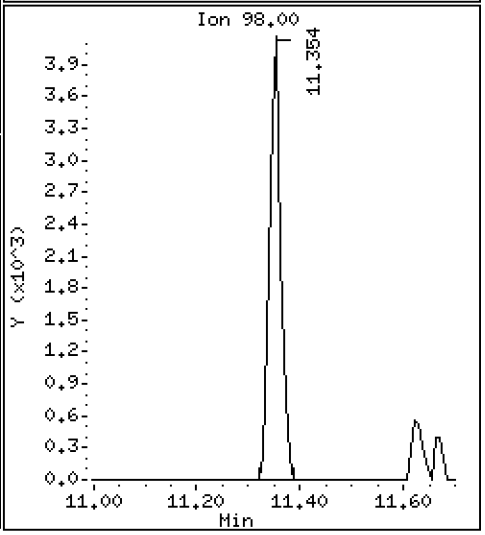


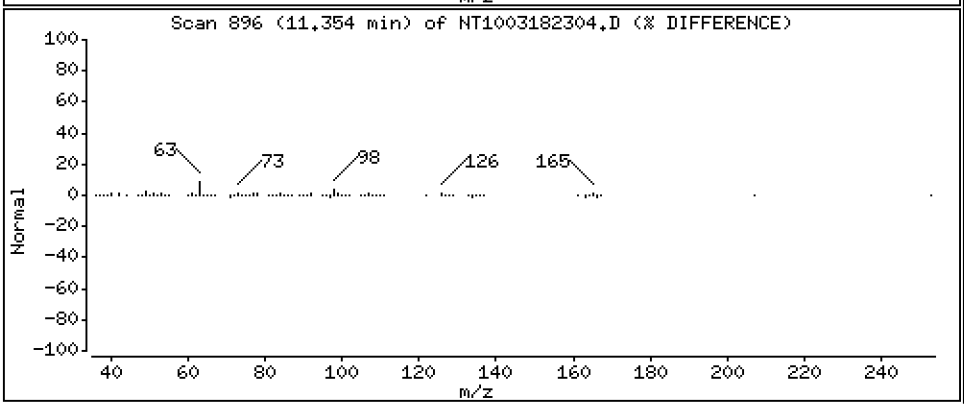












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

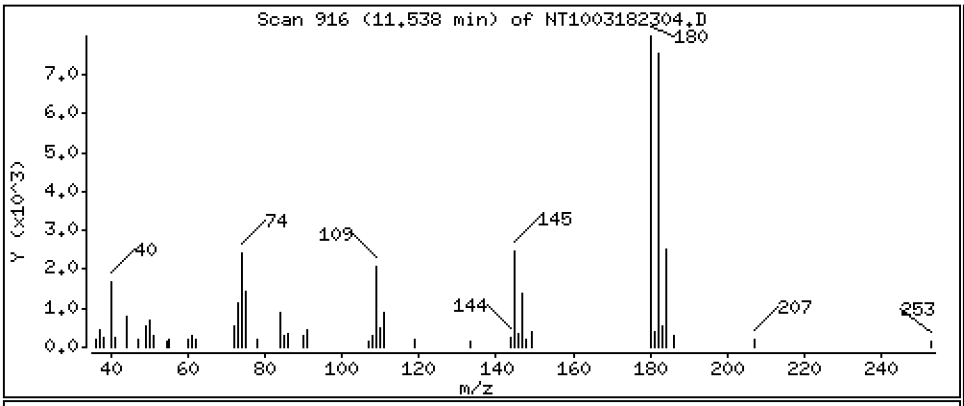
Operator: VTS

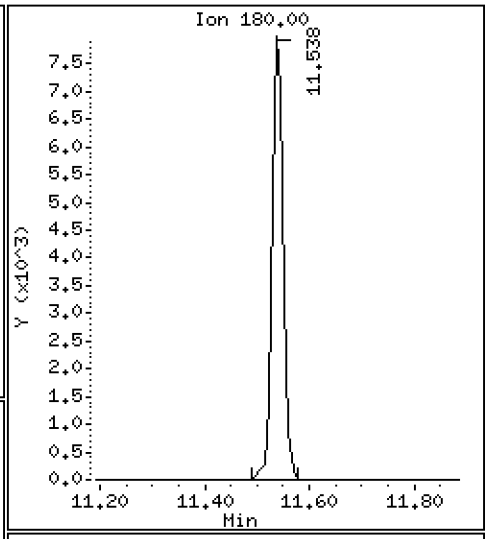
Column phase: ZB-5msi

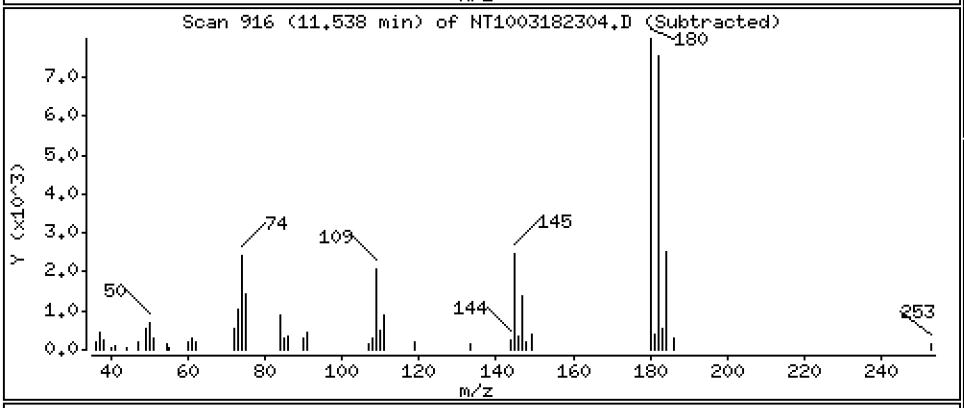
Column diameter: 0.25

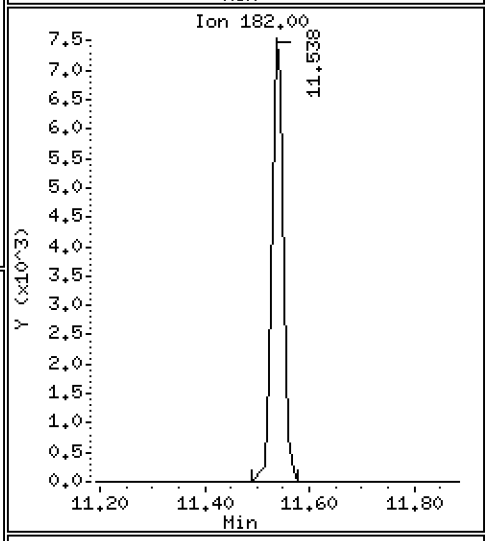
26 1,2,4-Trichlorobenzene

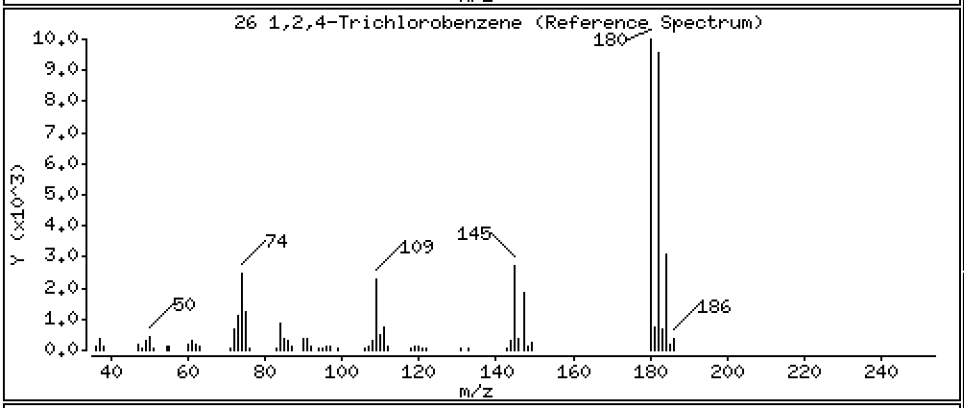
Concentration: 0.2683 ug/mL

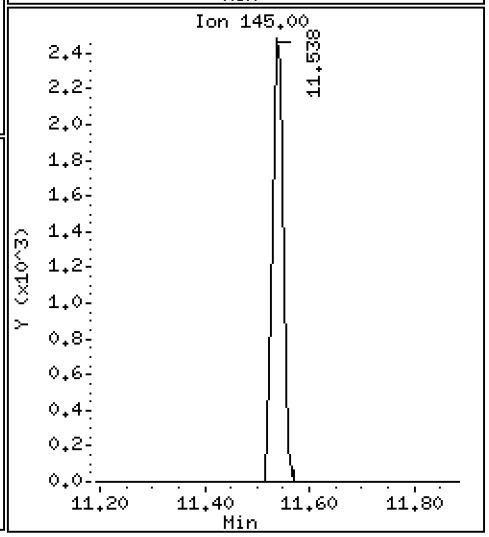


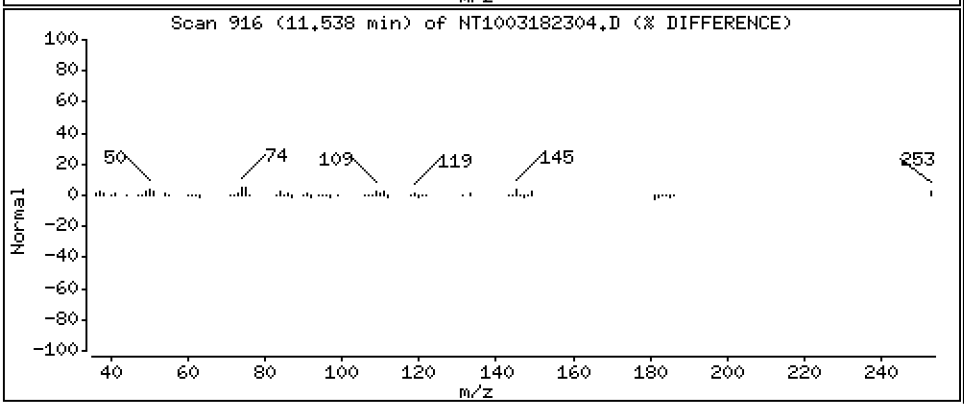












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

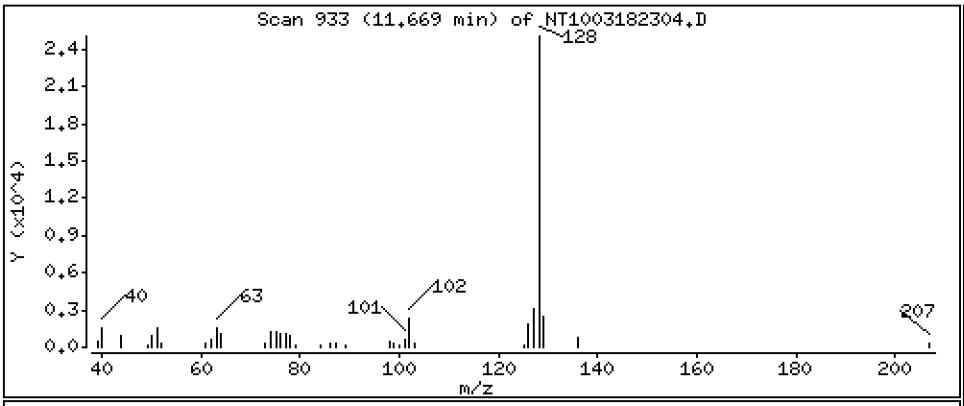
Operator: VTS

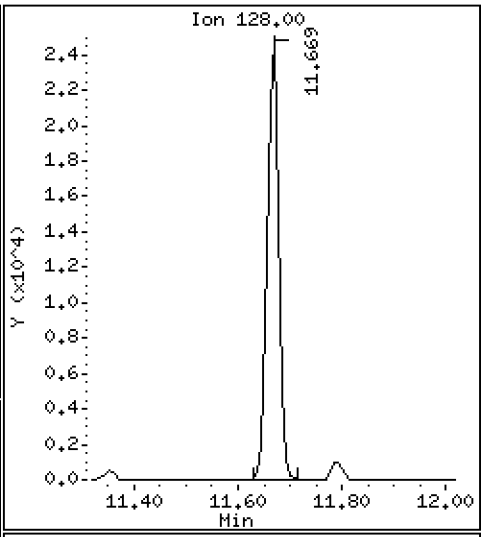
Column phase: ZB-5msi

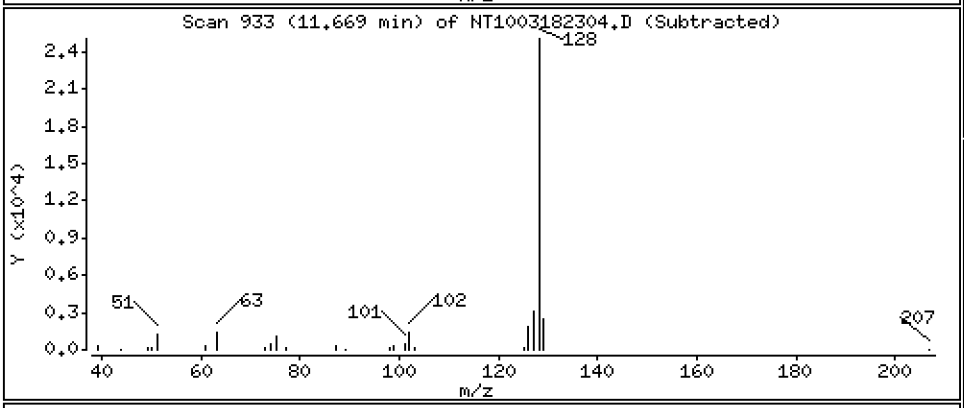
Column diameter: 0.25

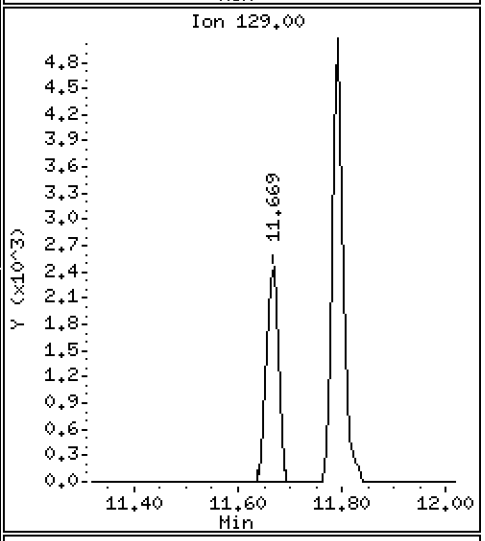
28 Naphthalene

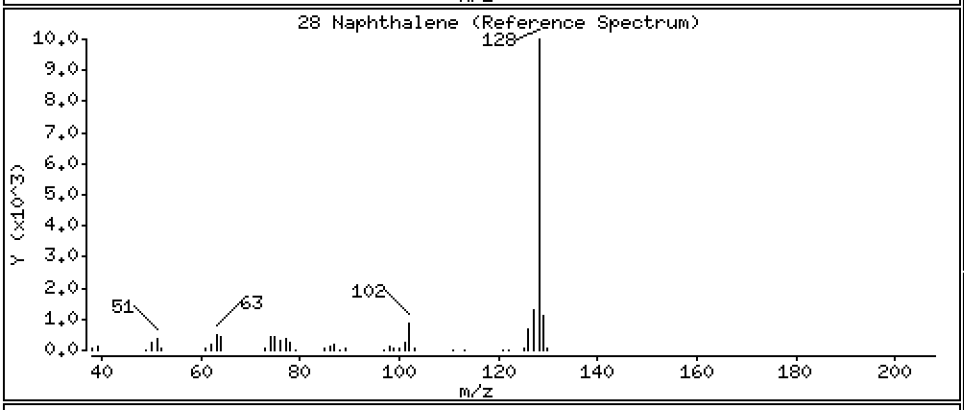
Concentration: 0.2094 ug/mL

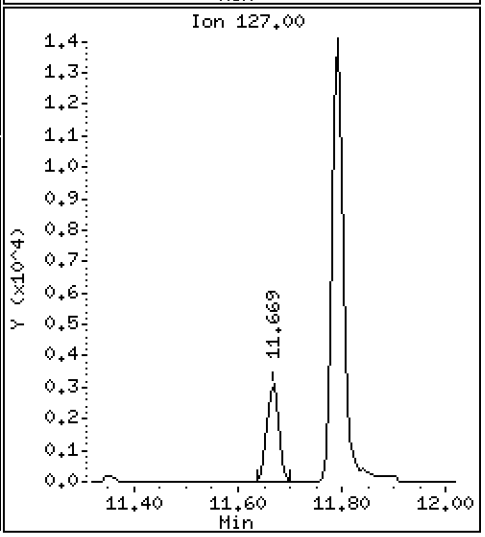


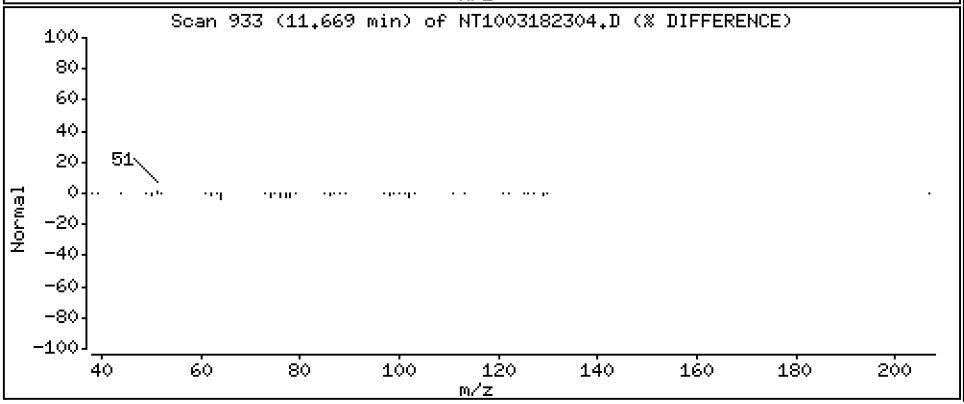












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

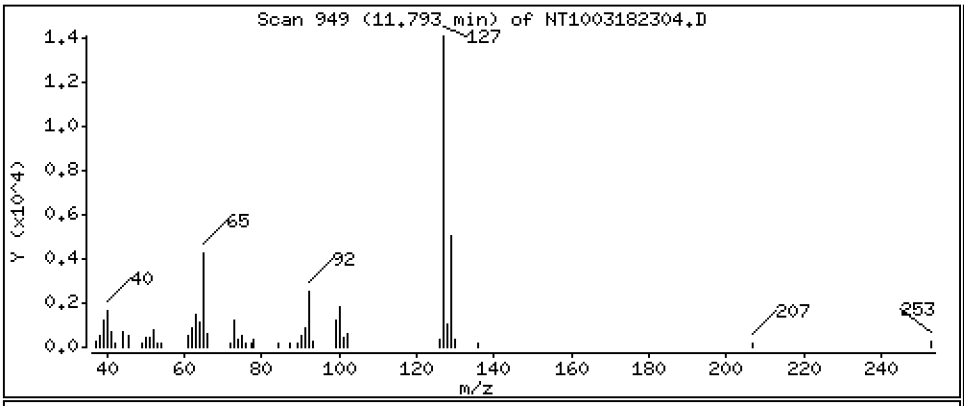
Operator: VTS

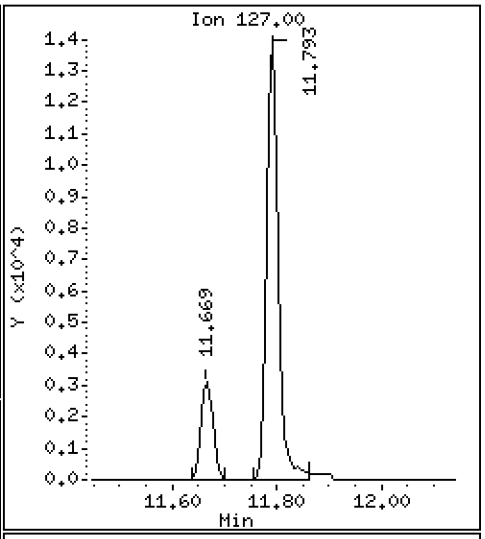
Column phase: ZB-5msi

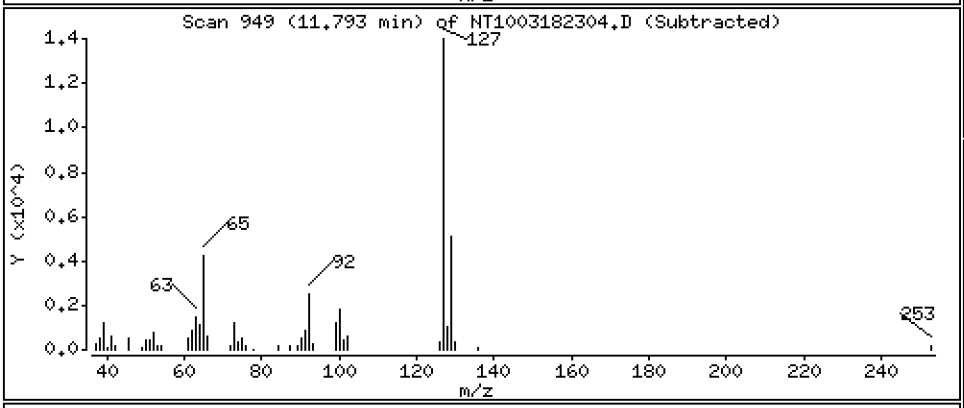
Column diameter: 0.25

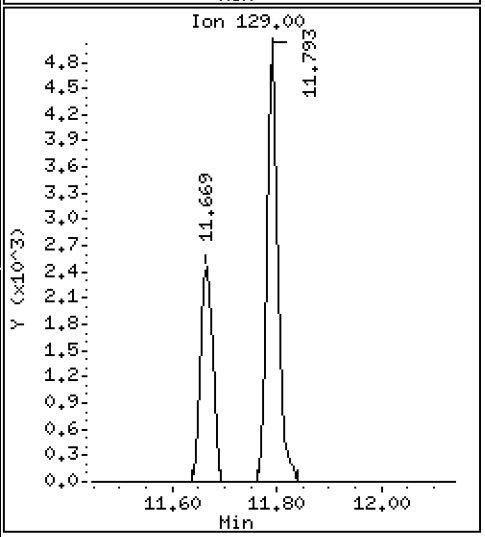
29 4-Chloroaniline

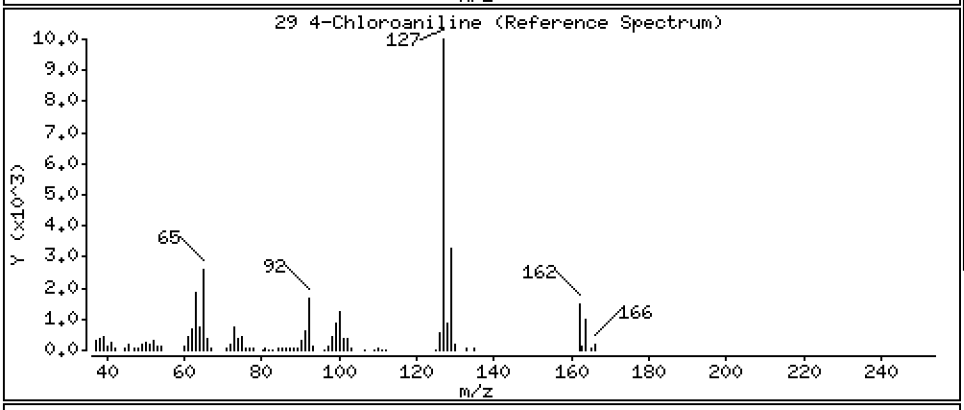
Concentration: 0.3341 ug/mL

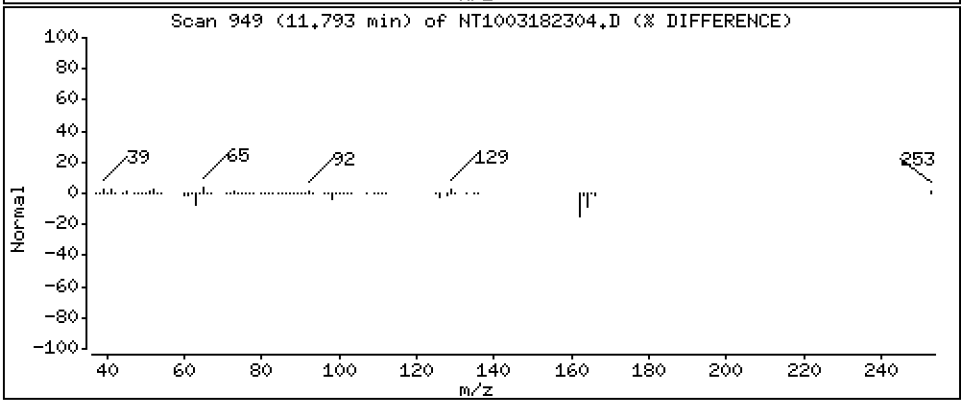












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

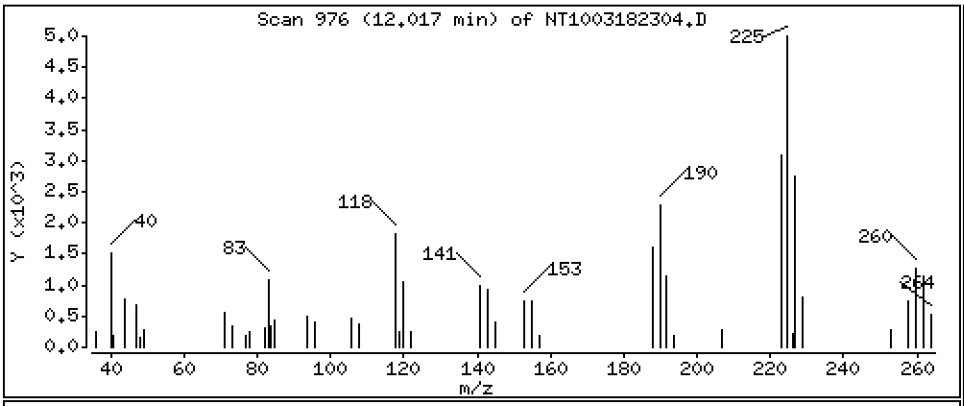
Operator: VTS

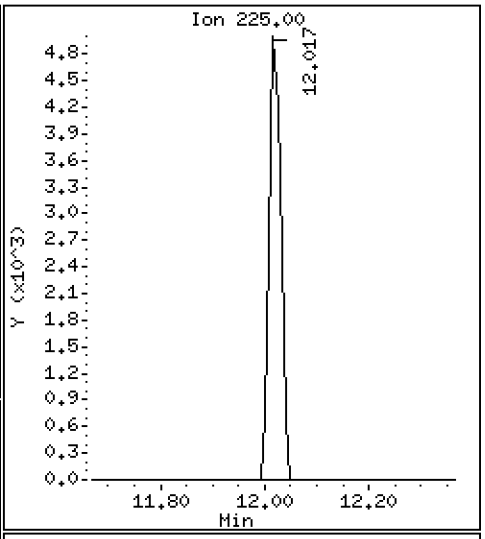
Column phase: ZB-5msi

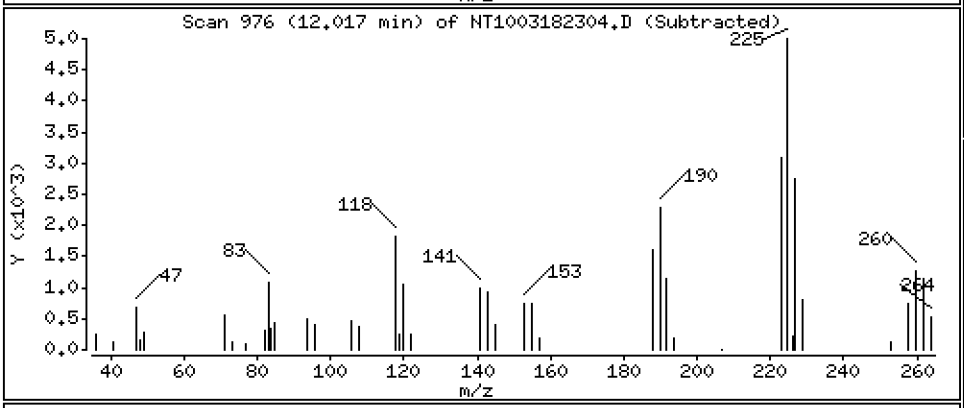
Column diameter: 0.25

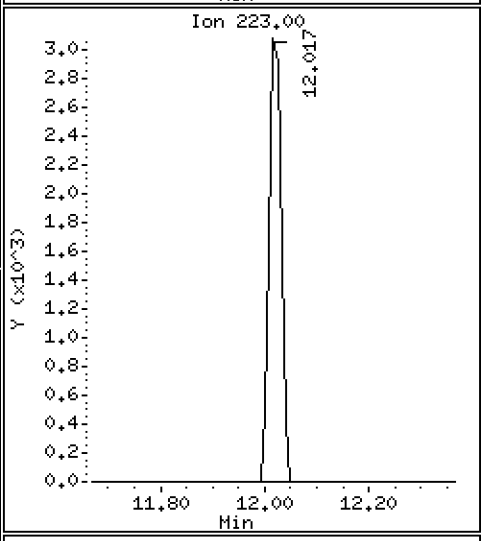
30 Hexachlorobutadiene

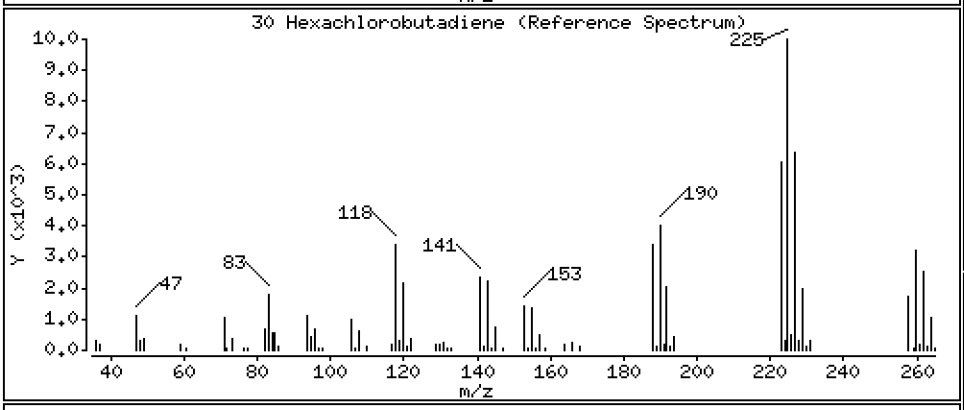
Concentration: 0.2224 ug/mL

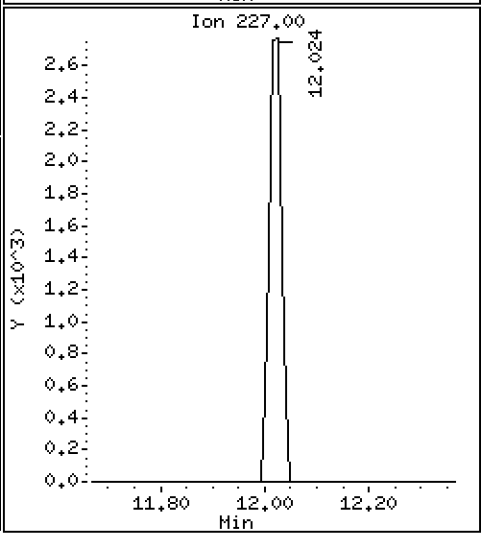


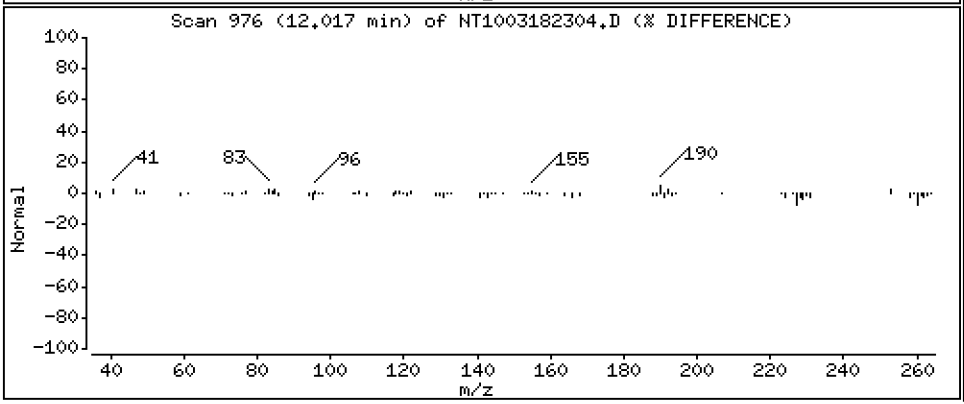












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

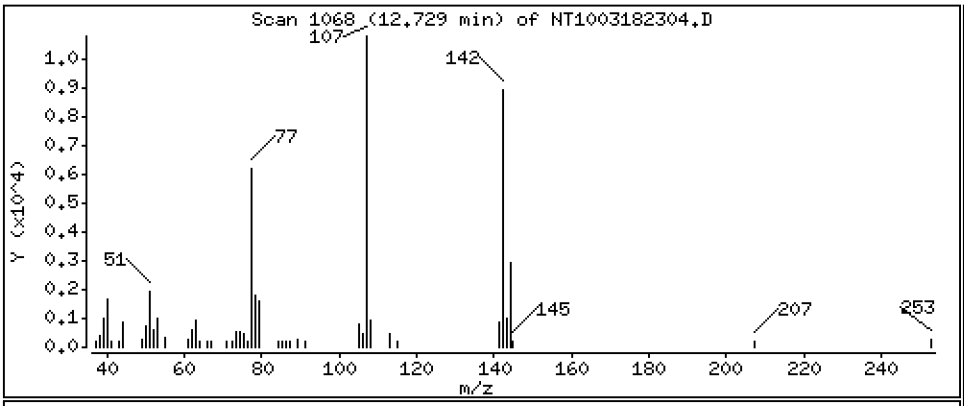
Operator: VTS

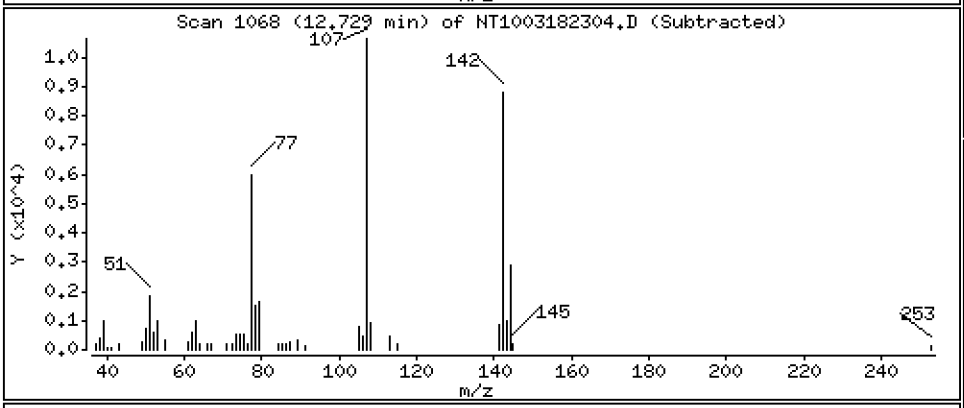
Column phase: ZB-5msi

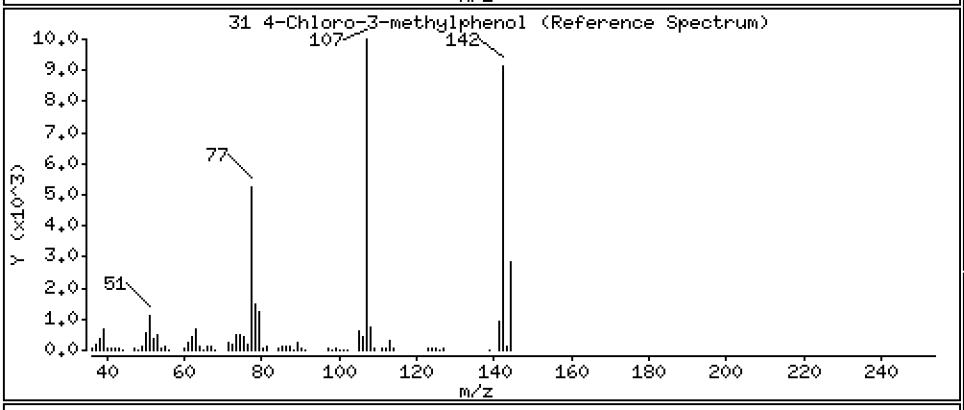
Column diameter: 0.25

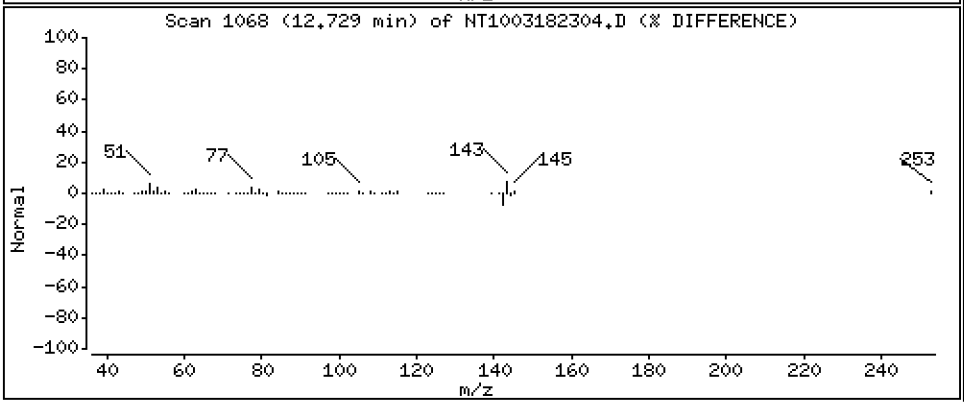
31 4-Chloro-3-methylphenol

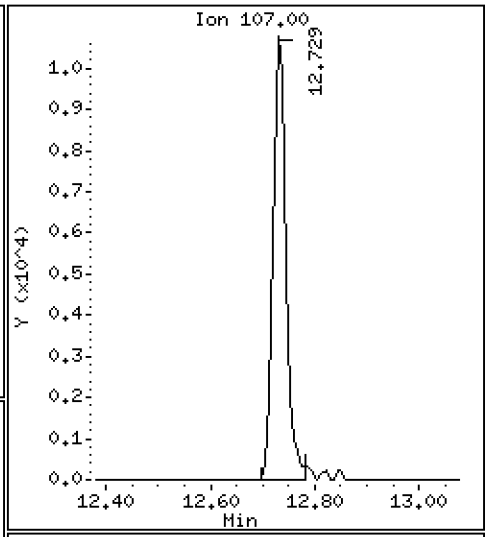
Concentration: 0.3424 ug/mL

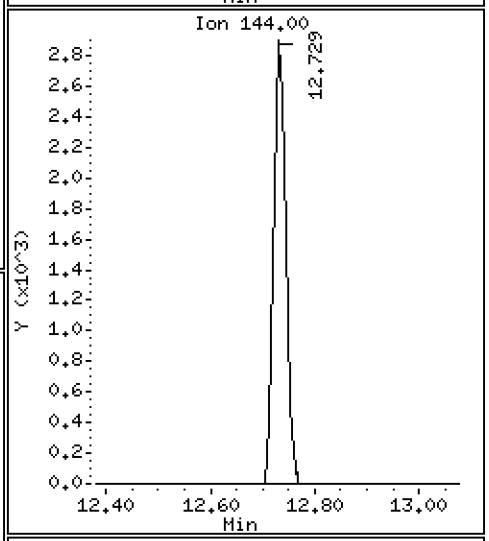


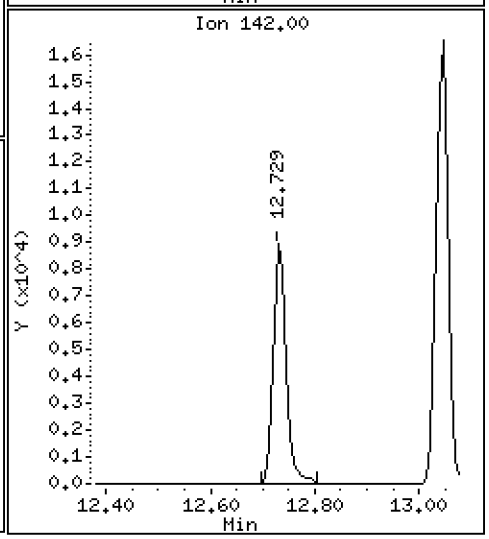












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

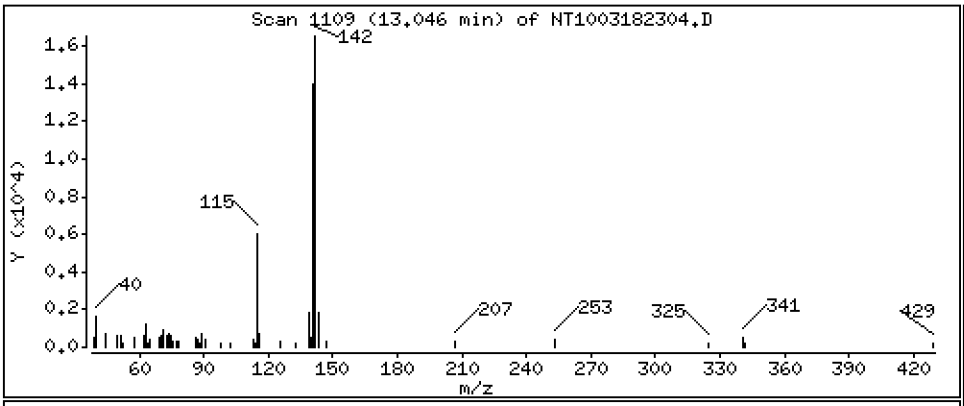
Operator: VTS

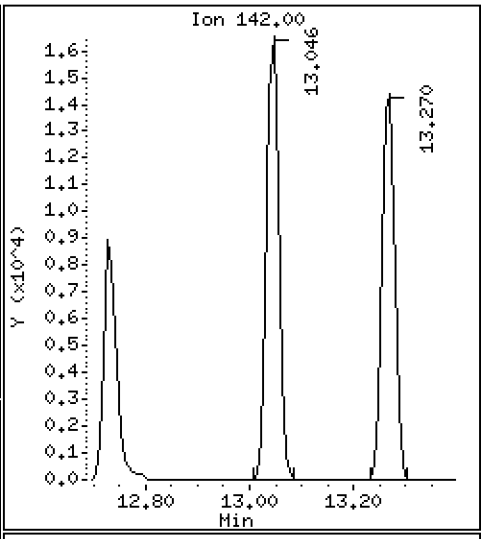
Column phase: ZB-5msi

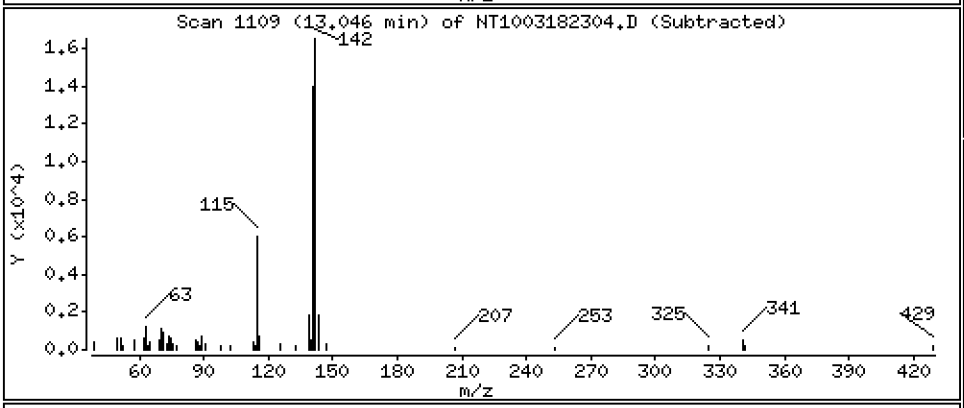
Column diameter: 0.25

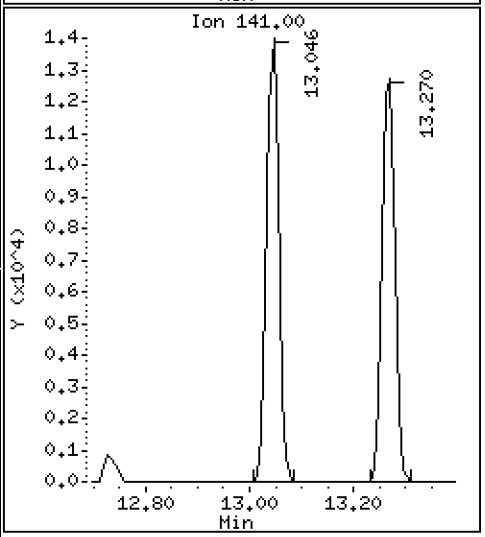
32 2-Methylnaphthalene

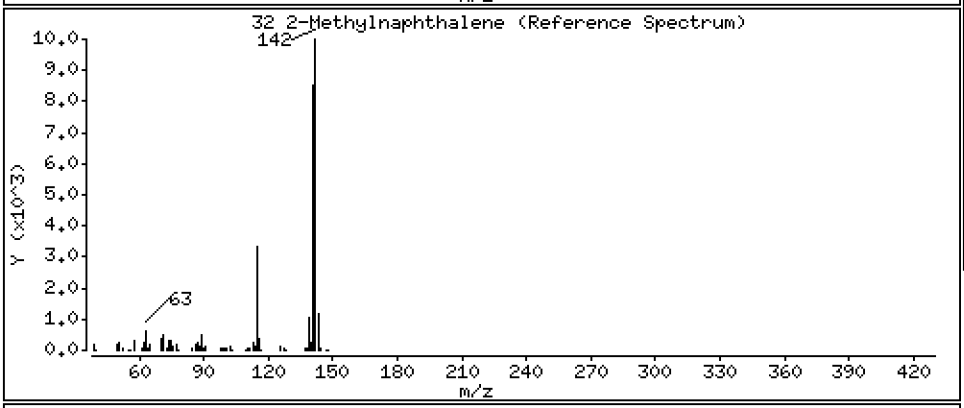
Concentration: 0.2040 ug/mL

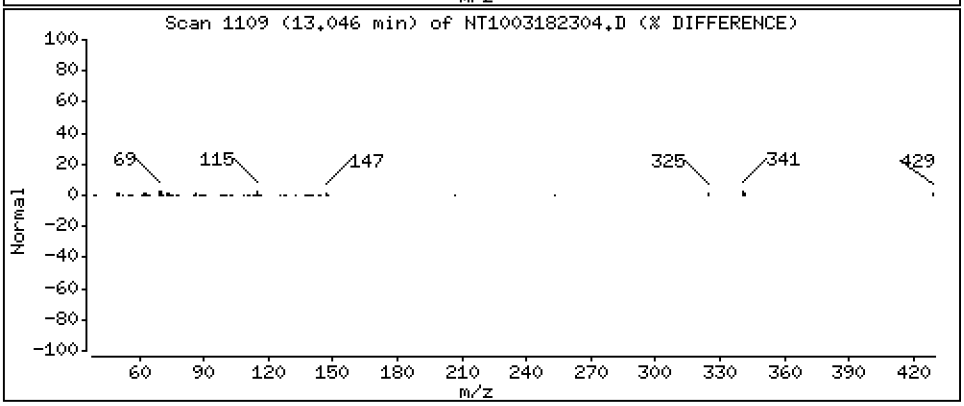












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

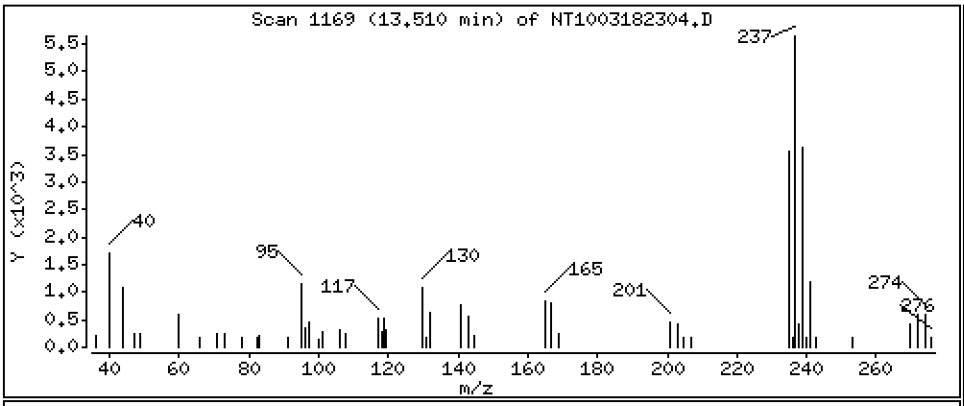
Operator: VTS

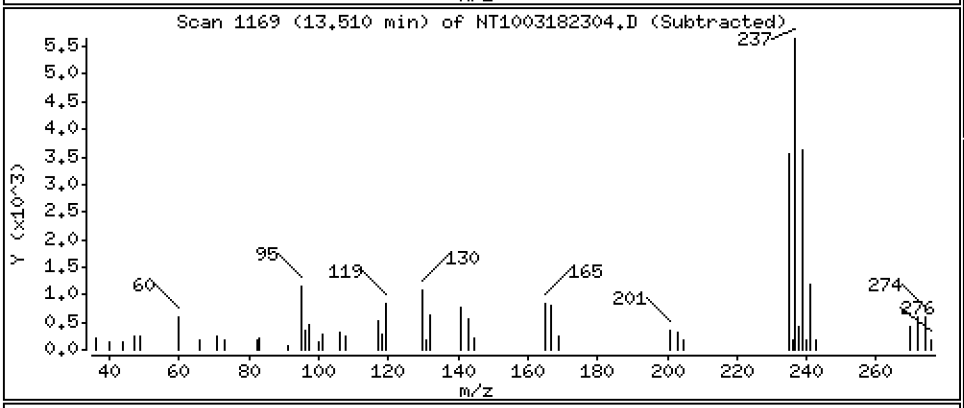
Column phase: ZB-5msi

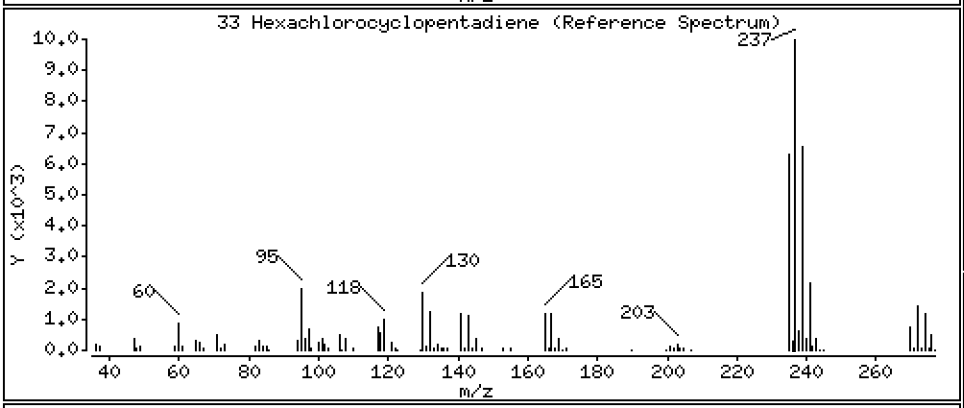
Column diameter: 0.25

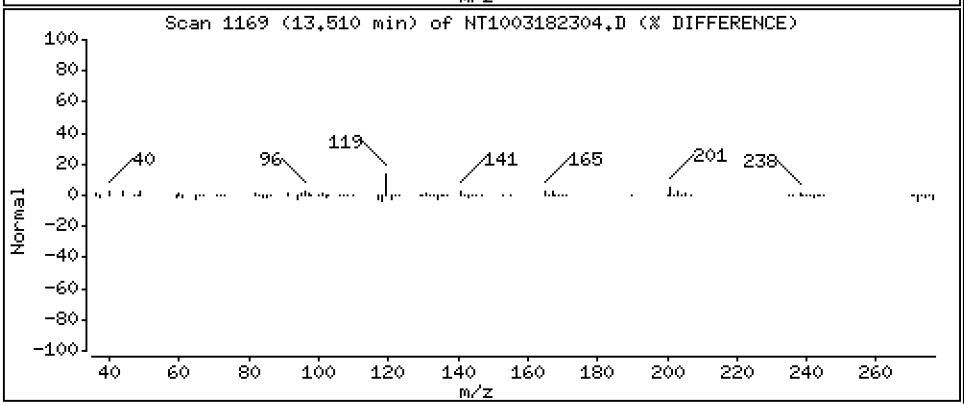
33 Hexachlorocyclopentadiene

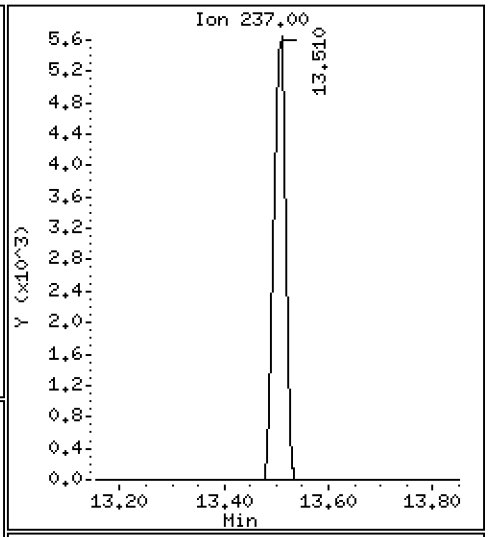
Concentration: 0.2645 ug/mL

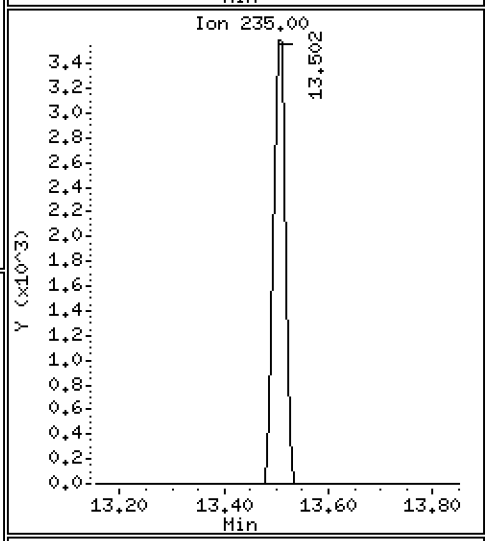


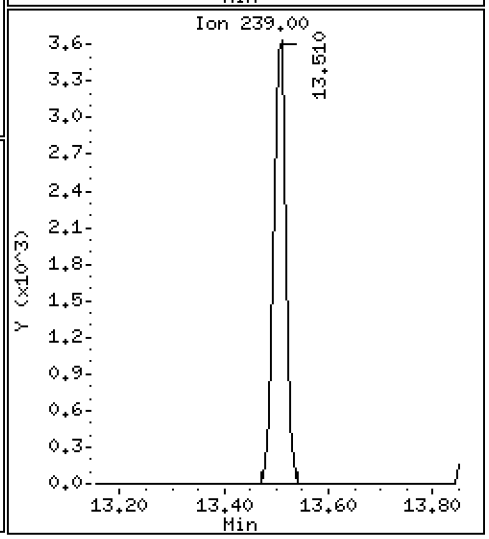












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

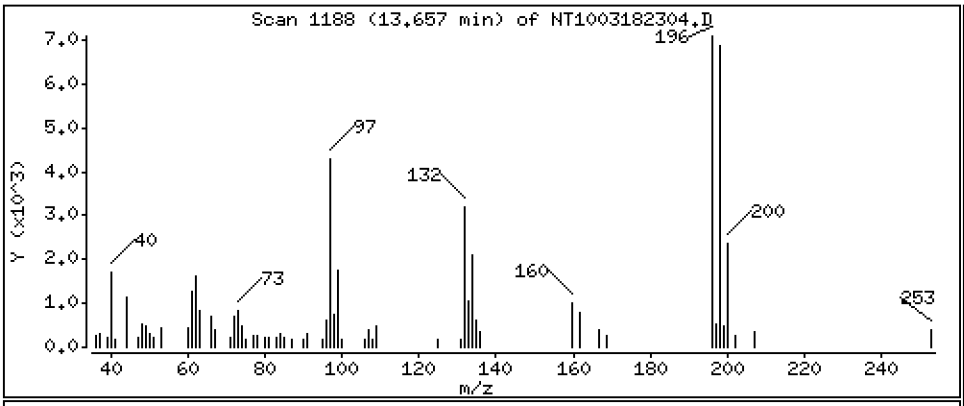
Operator: VTS

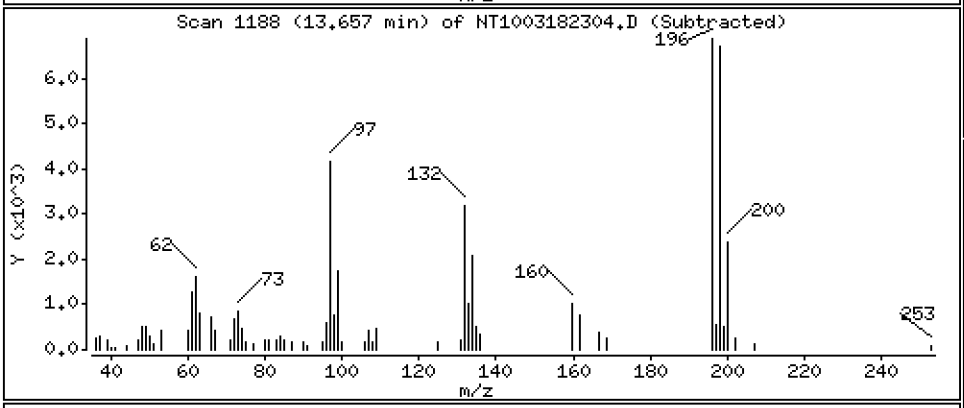
Column phase: ZB-5msi

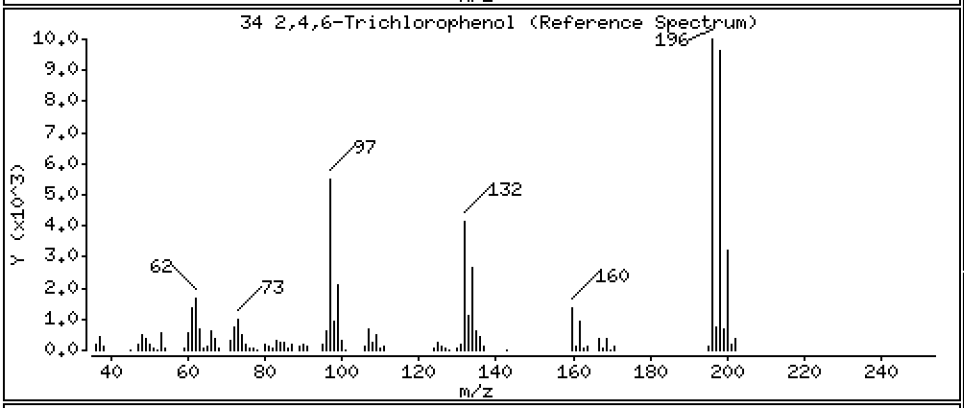
Column diameter: 0.25

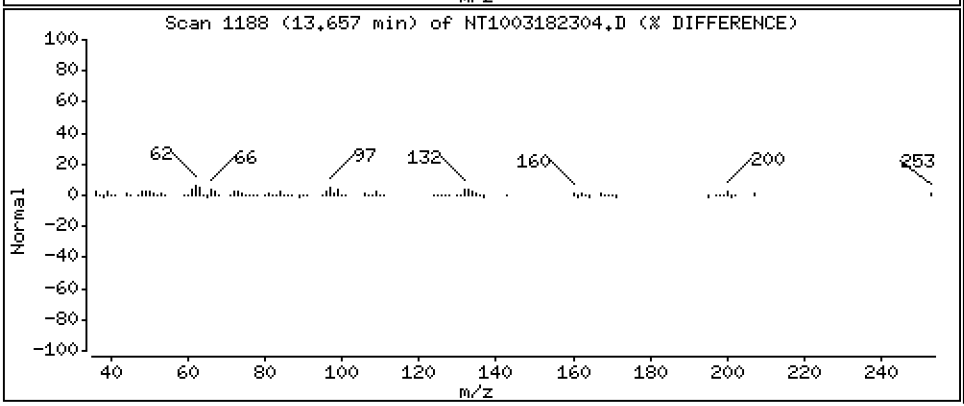
34 2,4,6-Trichlorophenol

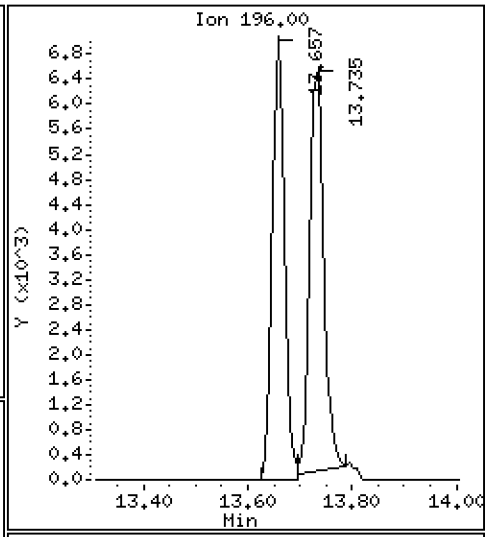
Concentration: 0.3200 ug/mL

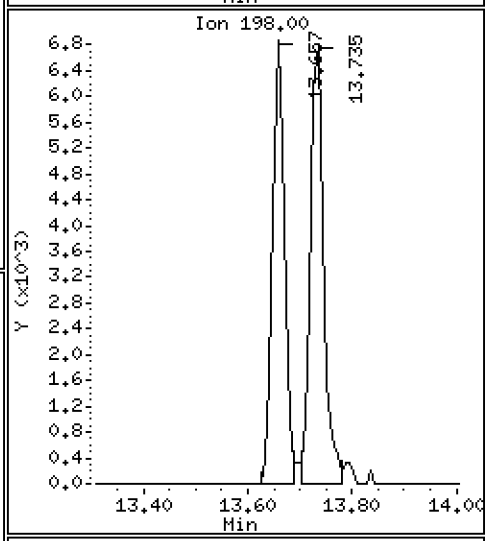


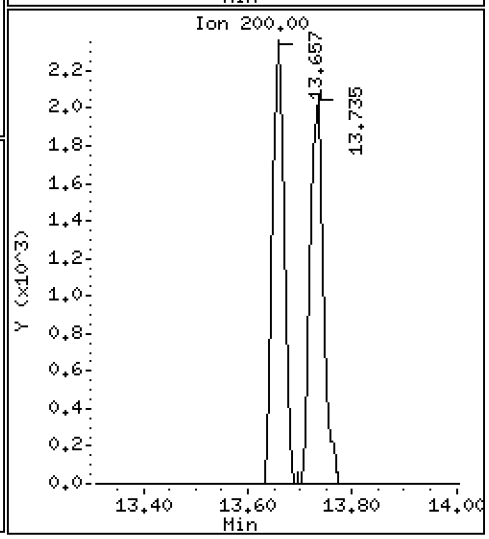












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

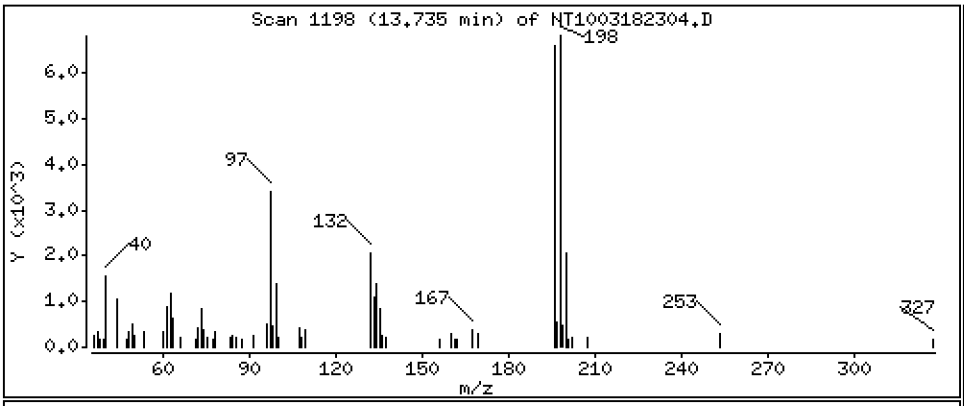
Operator: VTS

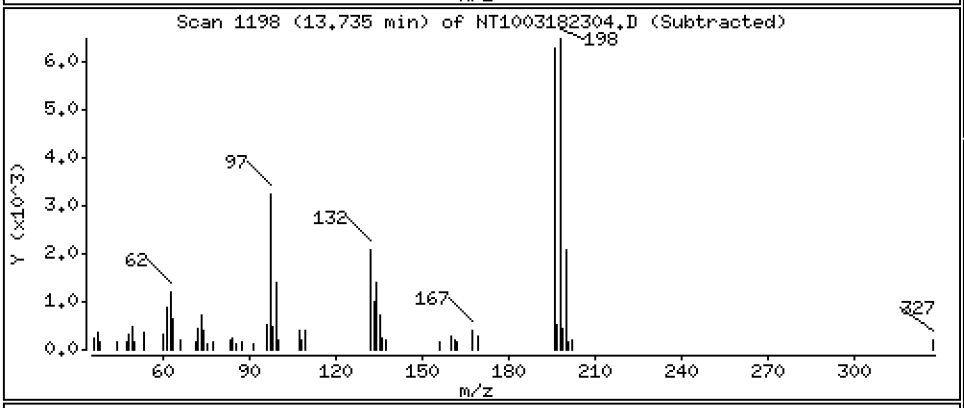
Column phase: ZB-5msi

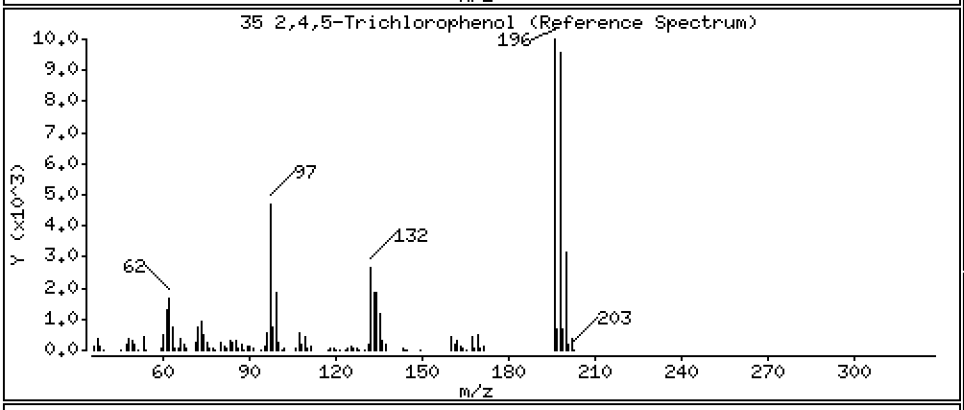
Column diameter: 0.25

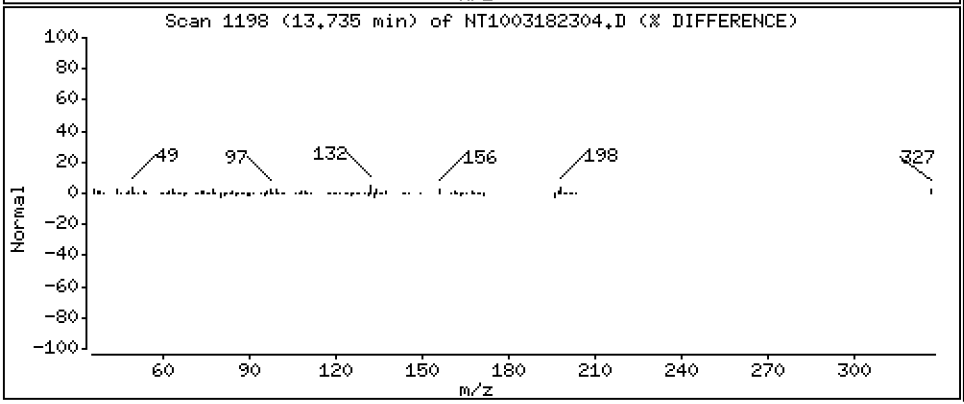
35 2,4,5-Trichlorophenol

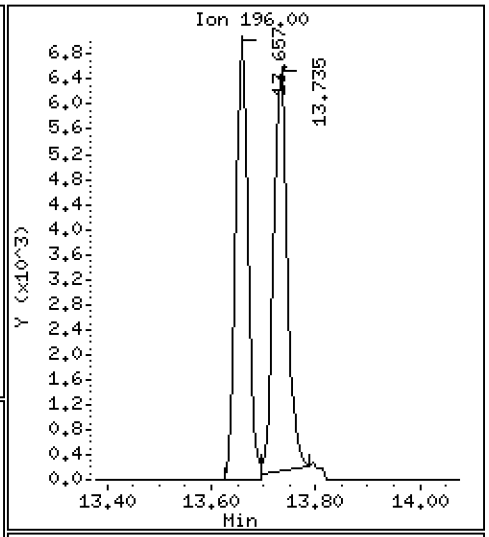
Concentration: 0.2993 ug/mL

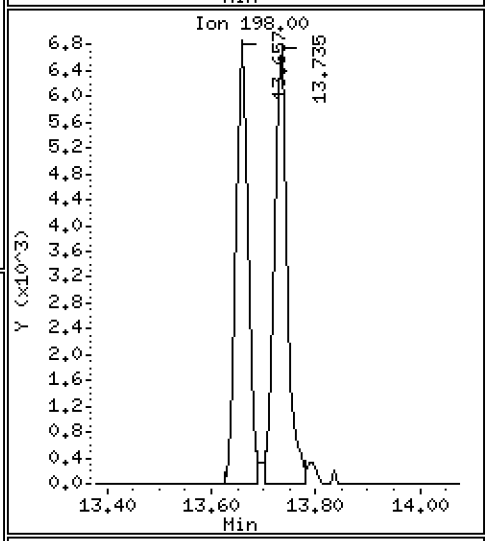


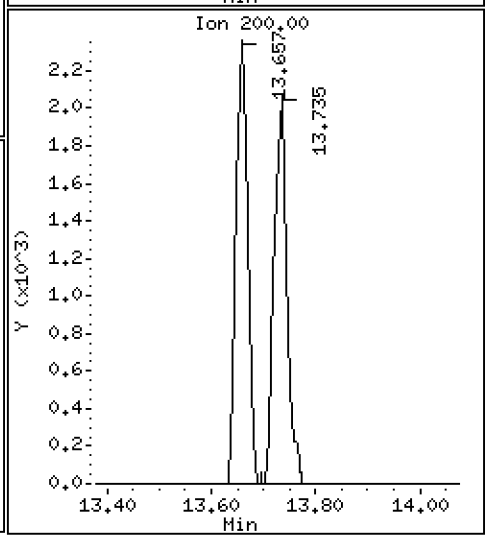












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

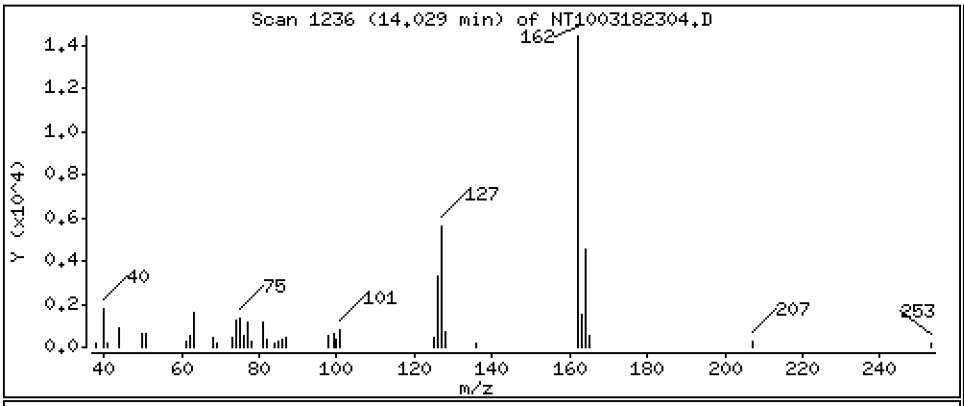
Operator: VTS

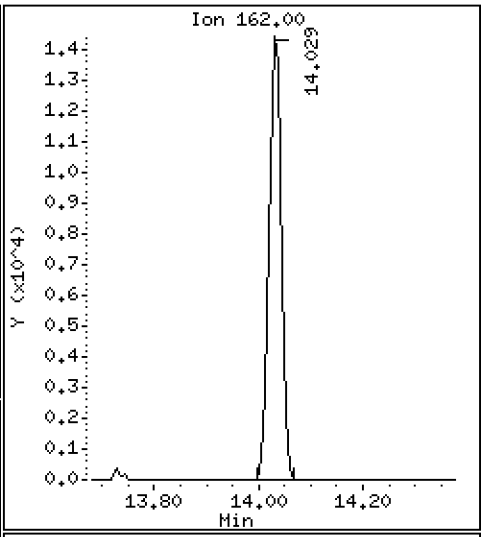
Column phase: ZB-5msi

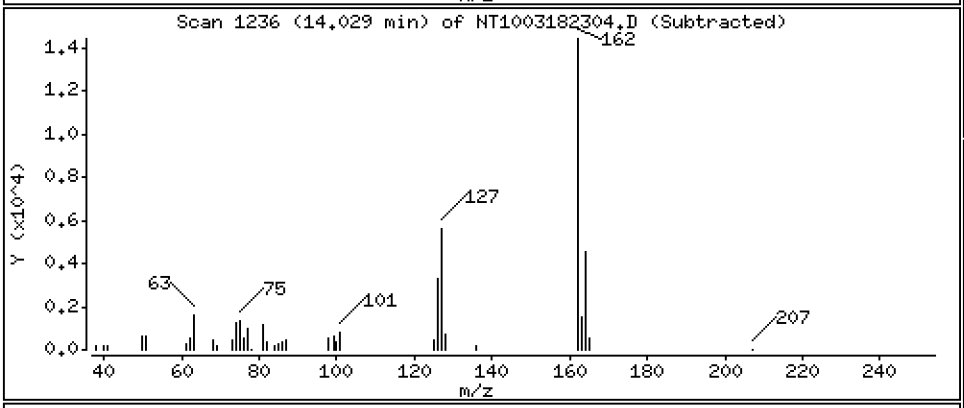
Column diameter: 0.25

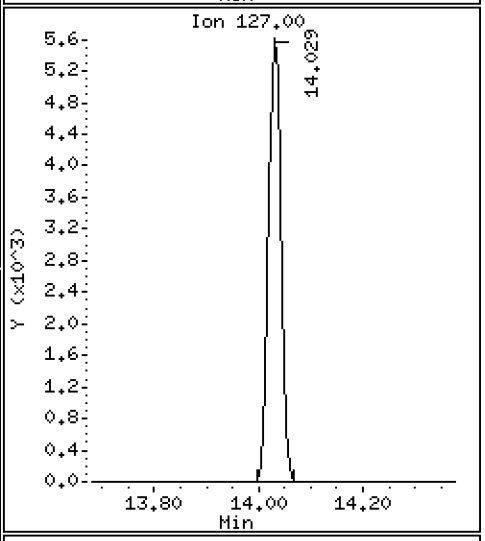
37 2-Chloronaphthalene

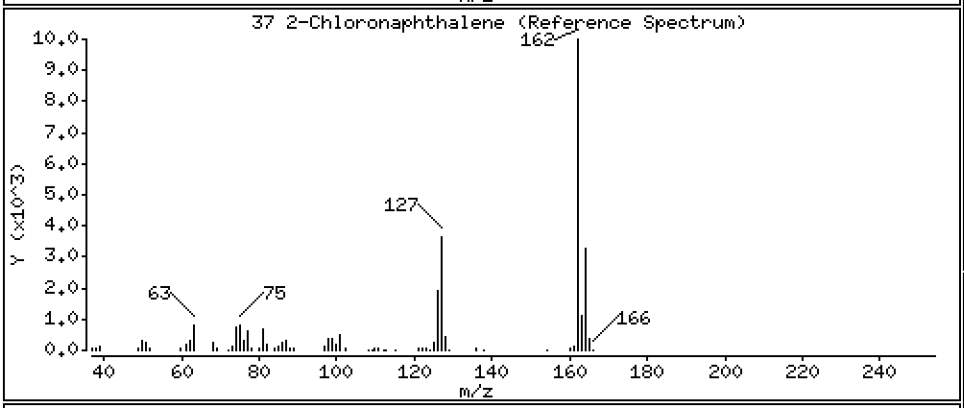
Concentration: 0.2026 ug/mL

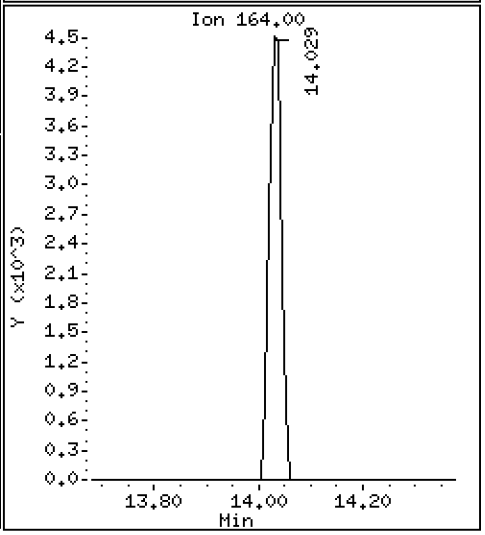


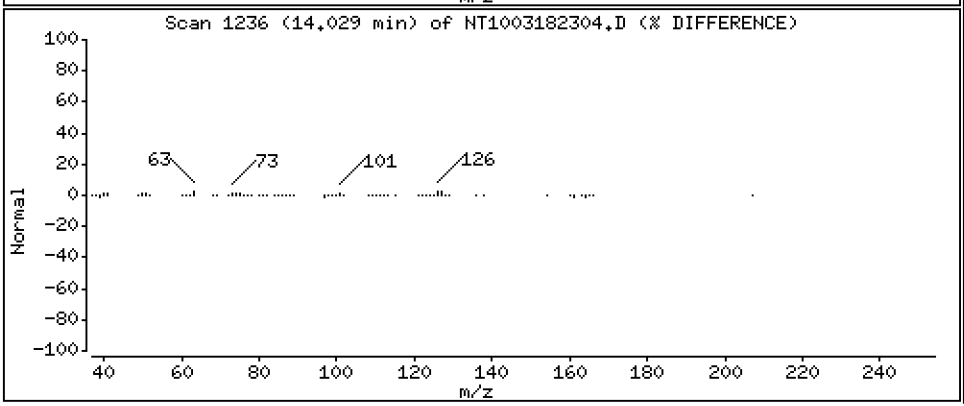












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

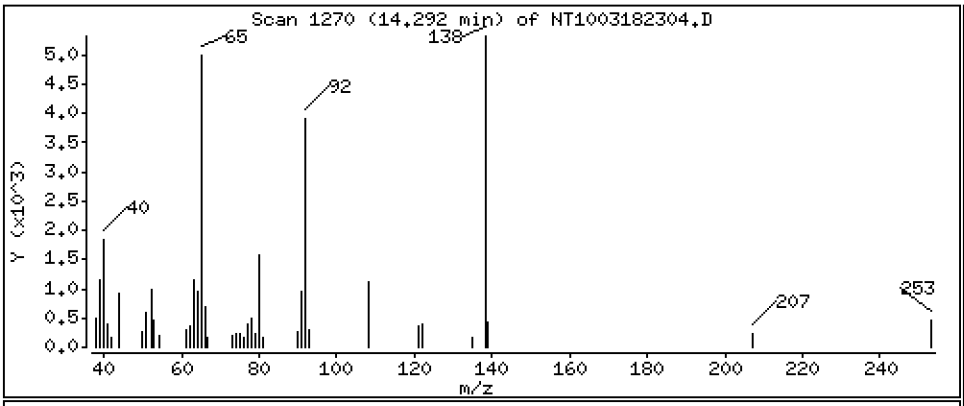
Operator: VTS

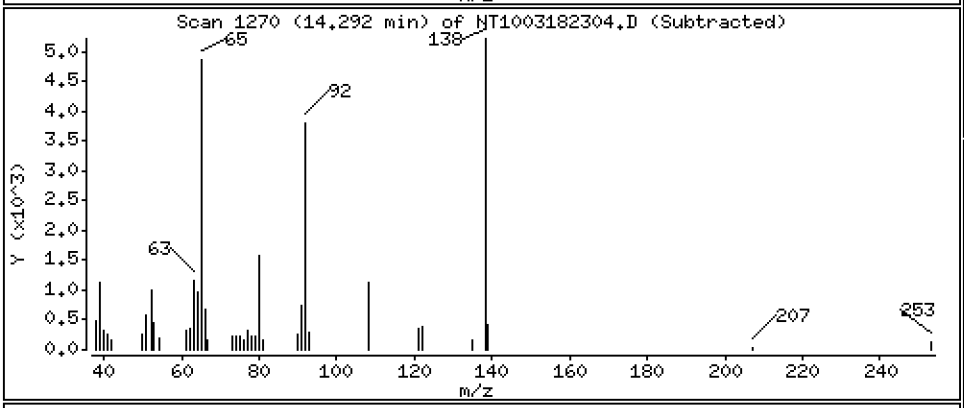
Column phase: ZB-5msi

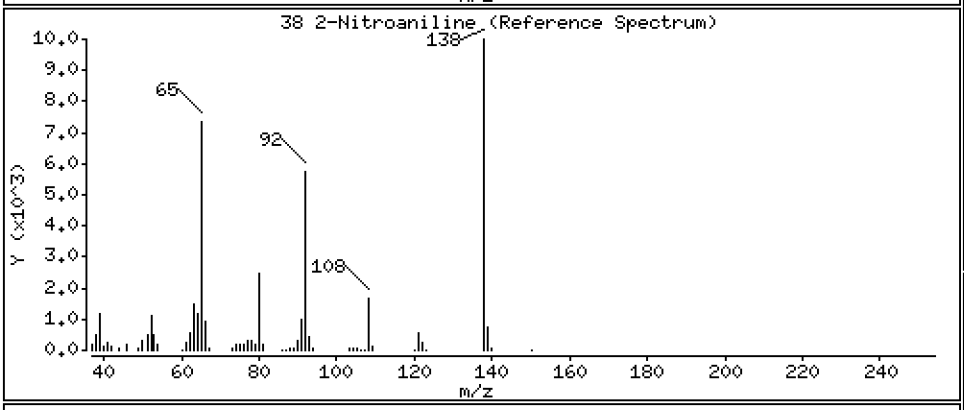
Column diameter: 0.25

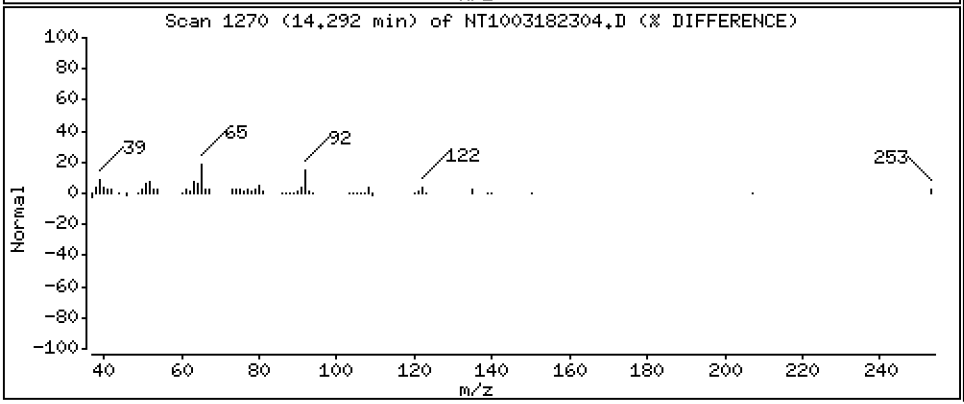
38 2-Nitroaniline

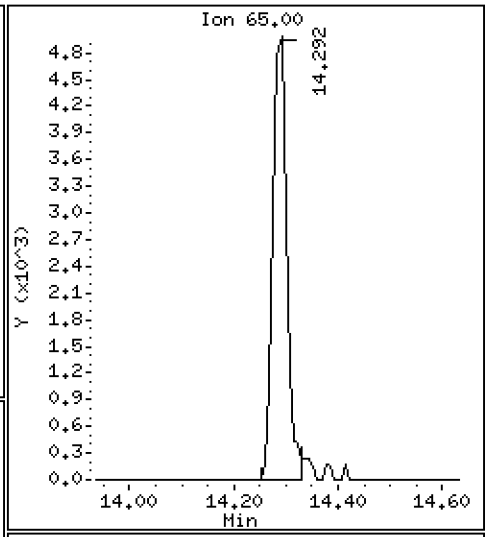
Concentration: 0.2848 ug/mL

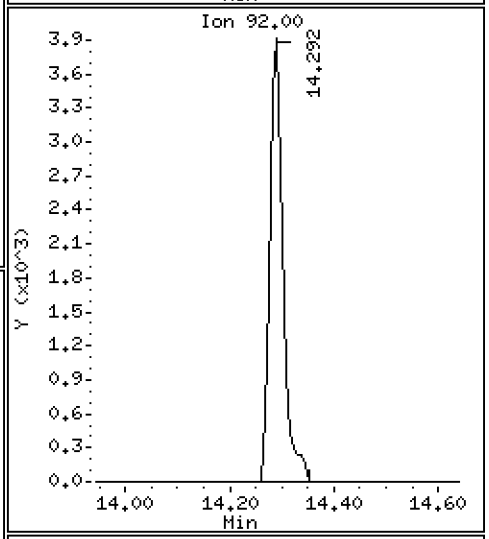


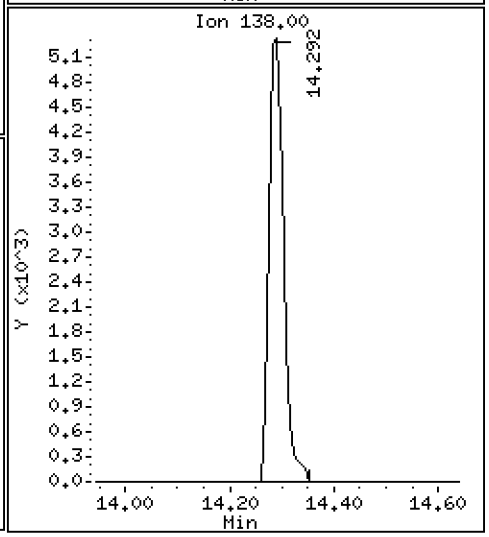












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

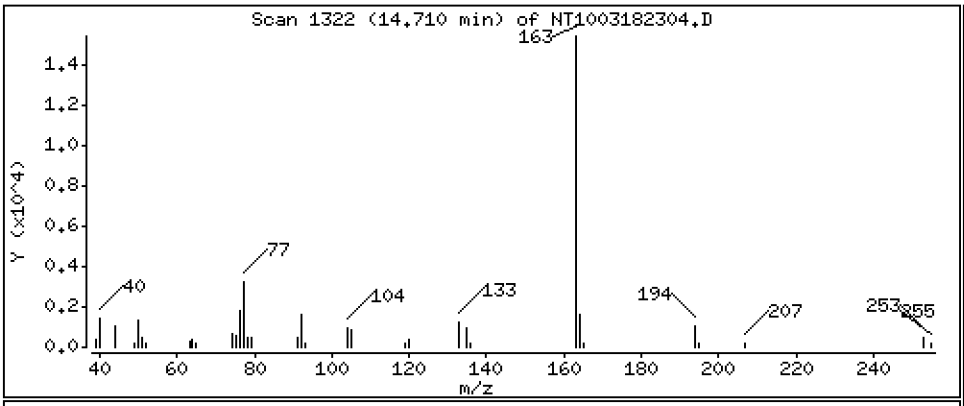
Operator: VTS

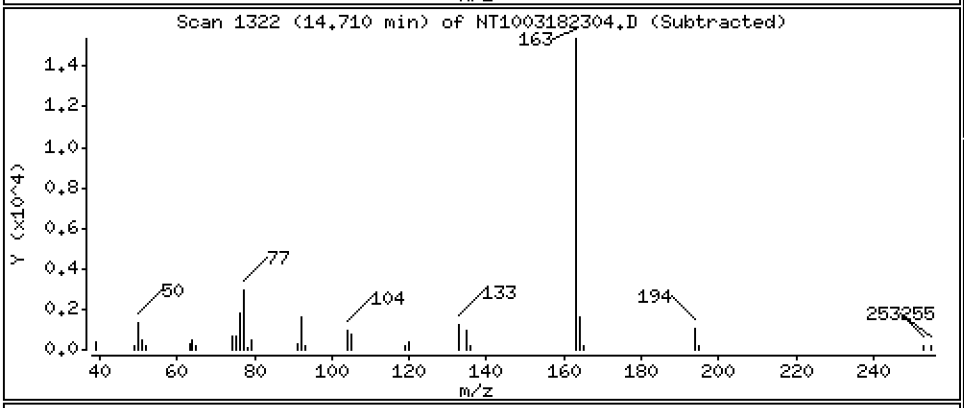
Column phase: ZB-5msi

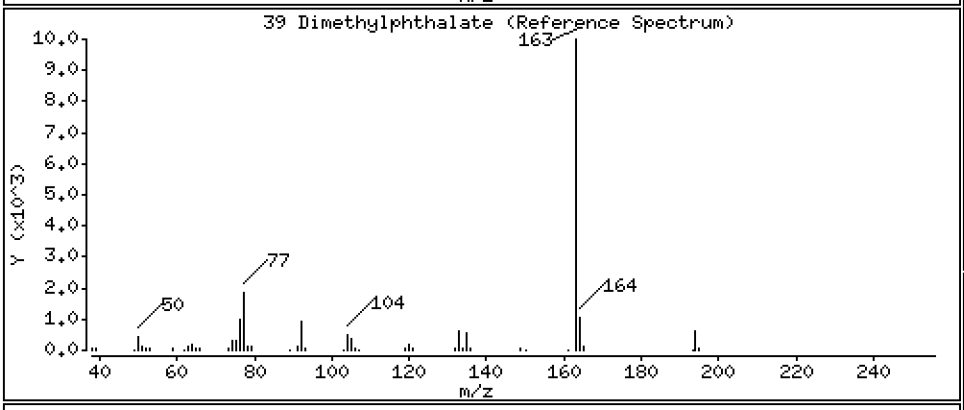
Column diameter: 0.25

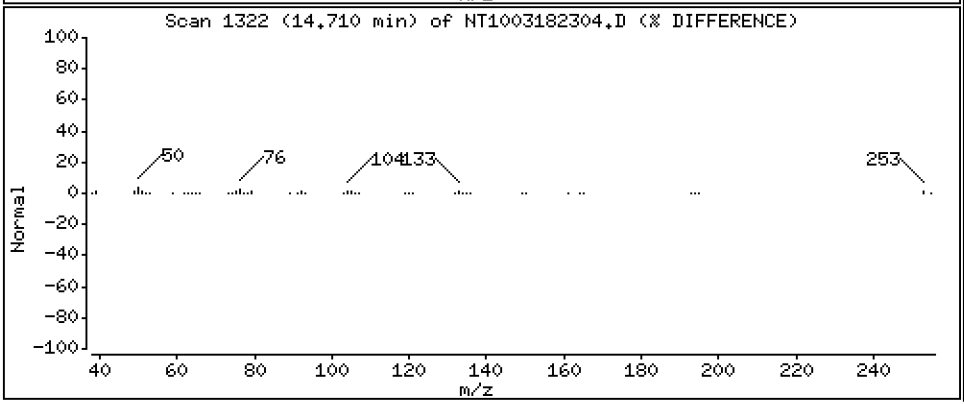
39 Dimethylphthalate

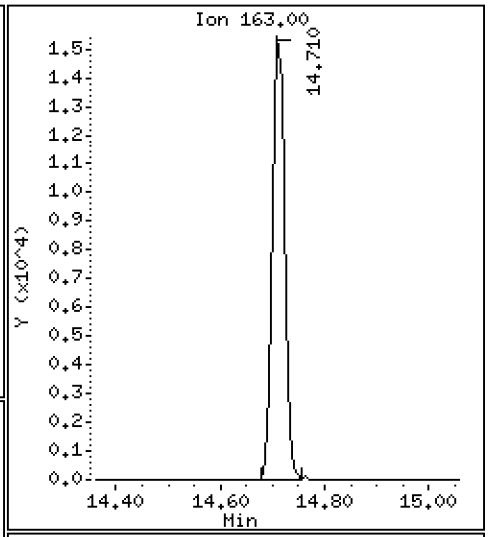
Concentration: 0.2095 ug/mL

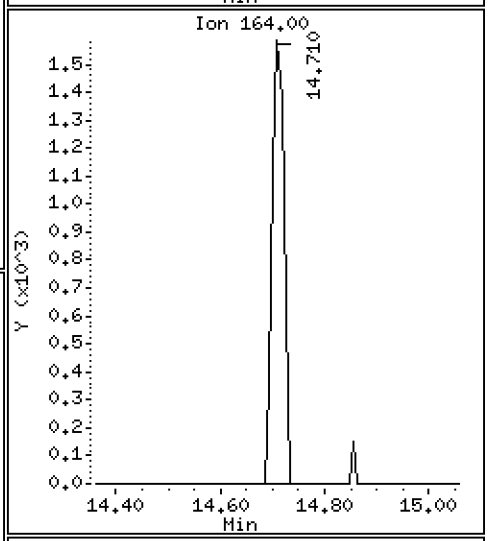


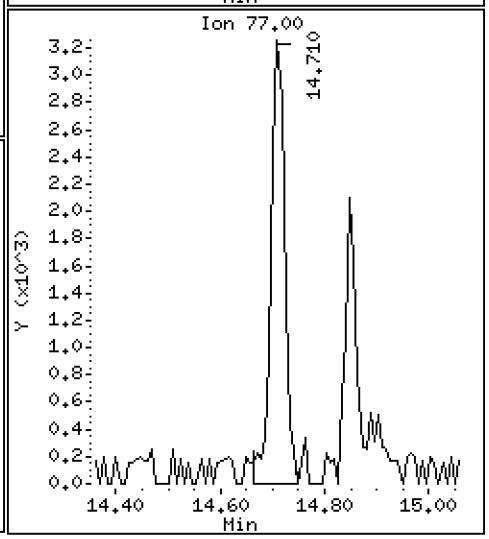












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

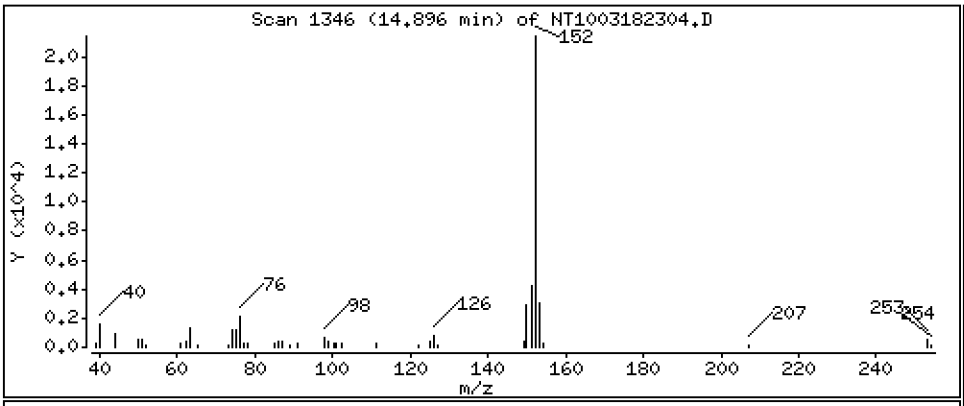
Operator: VTS

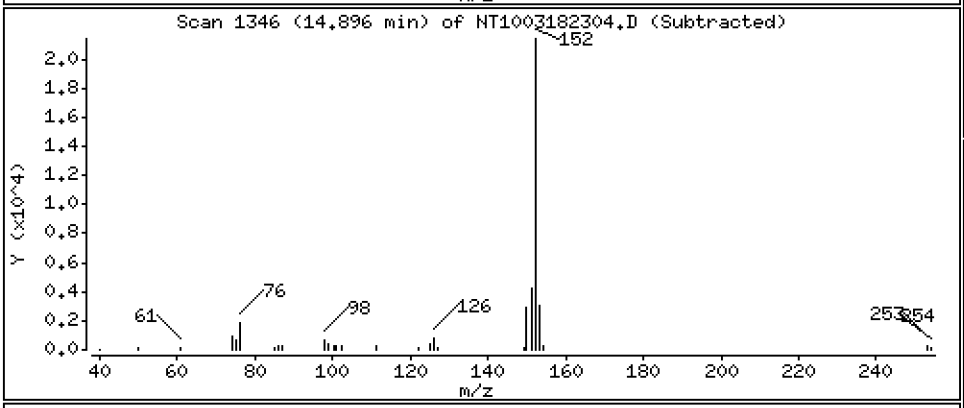
Column phase: ZB-5msi

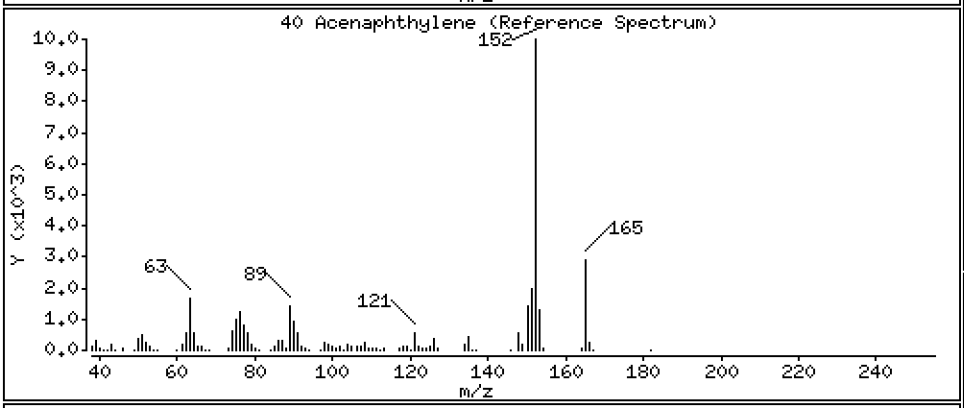
Column diameter: 0.25

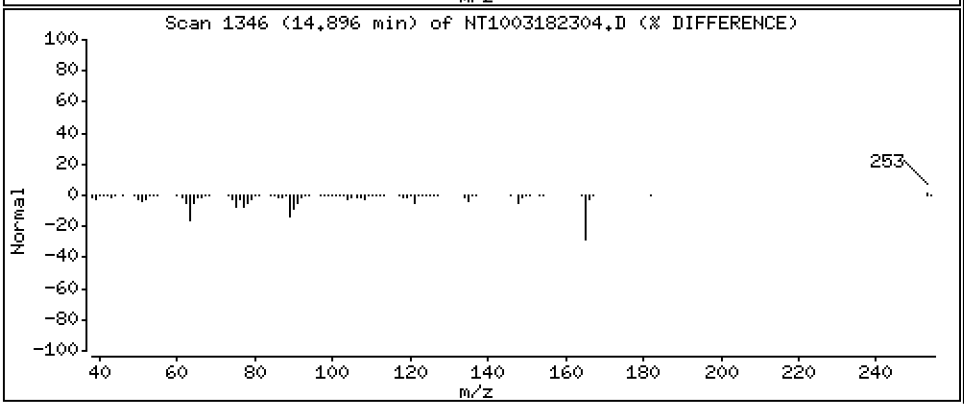
40 Acenaphthylene

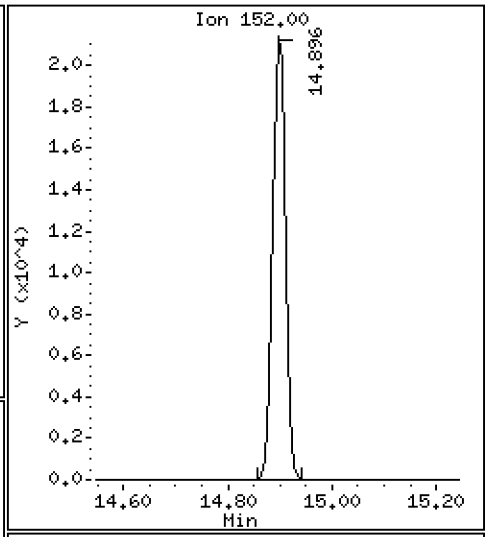
Concentration: 0.2000 ug/mL

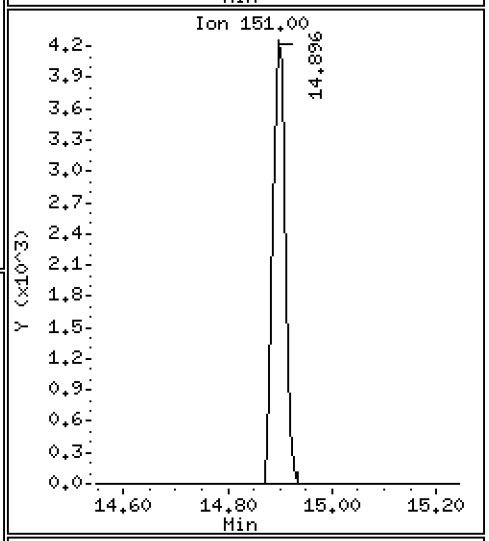


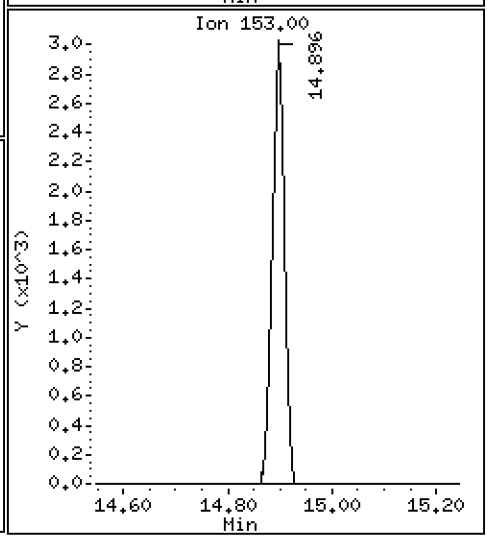












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

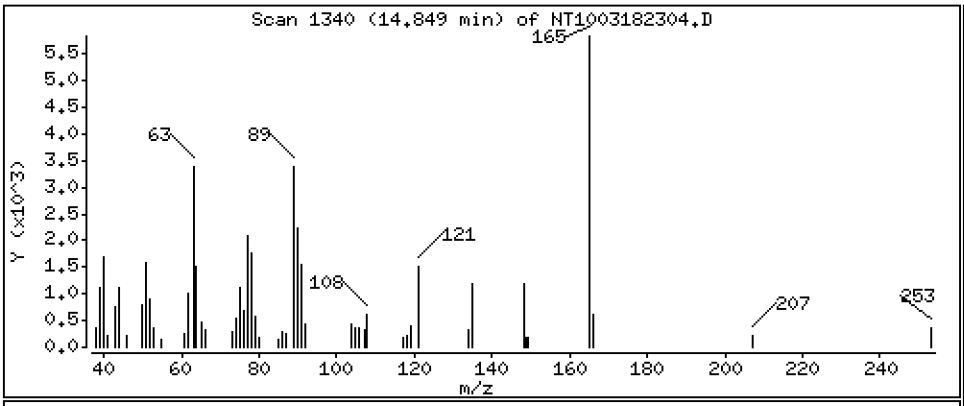
Operator: VTS

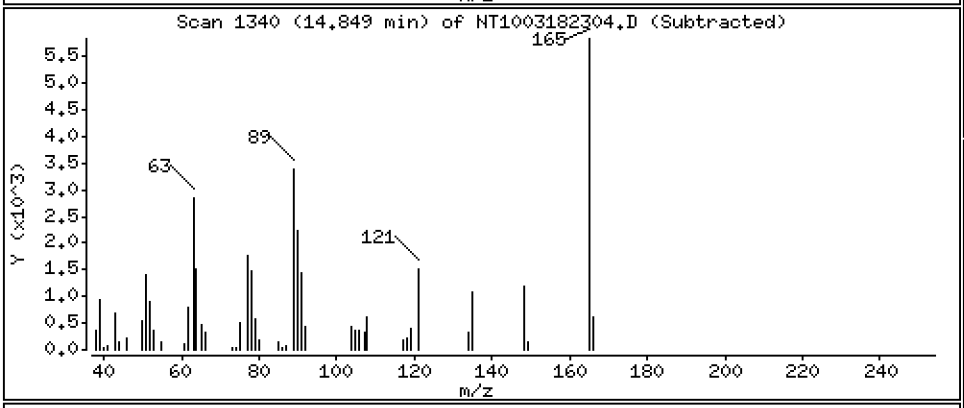
Column phase: ZB-5msi

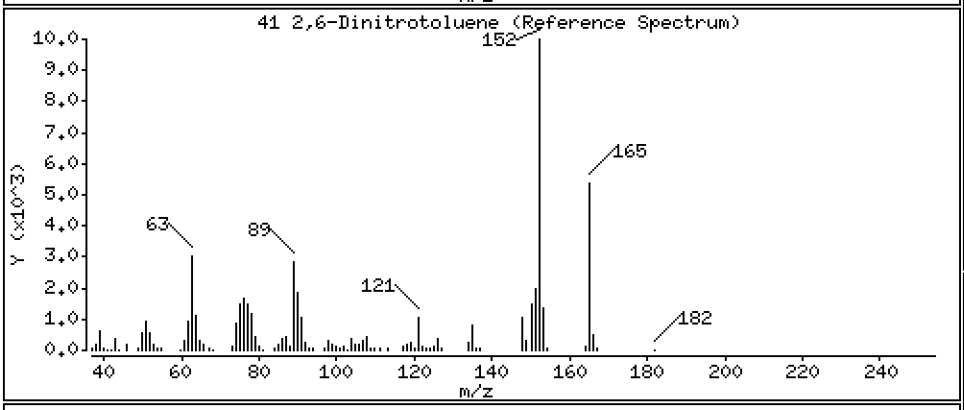
Column diameter: 0.25

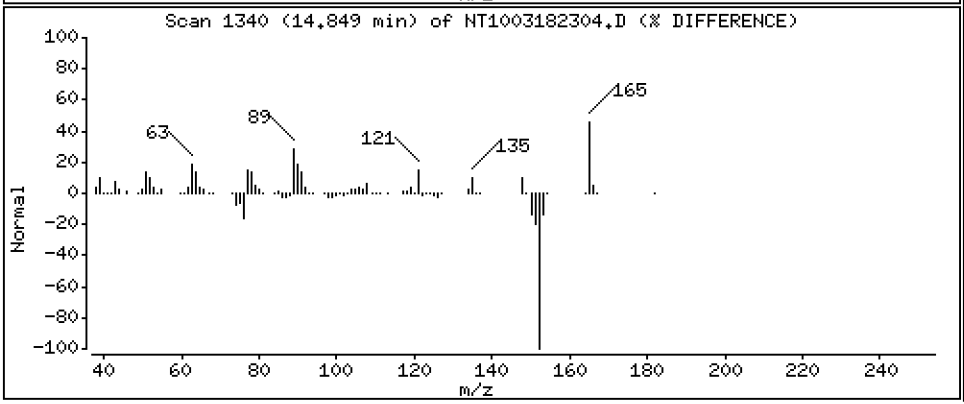
41 2,6-Dinitrotoluene

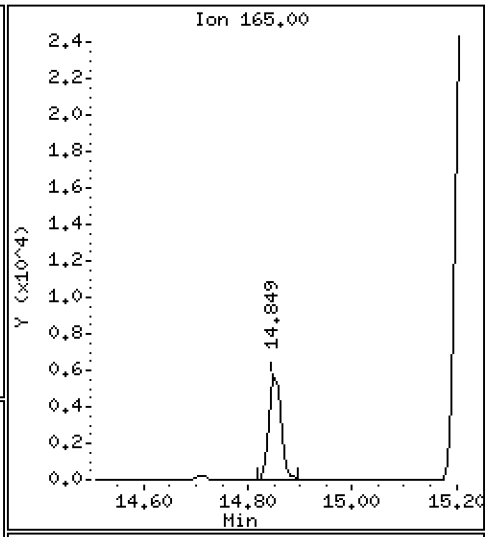
Concentration: 0.3576 ug/mL

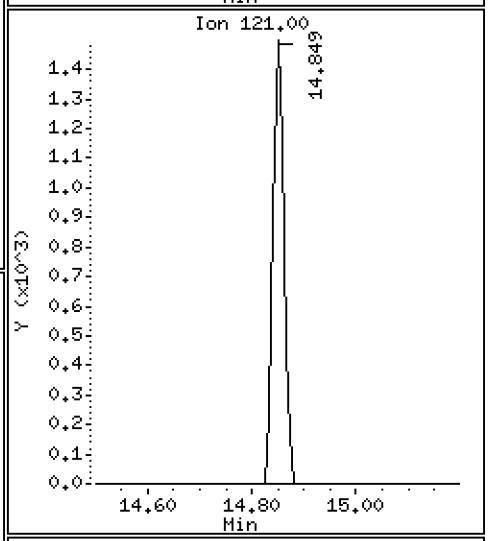


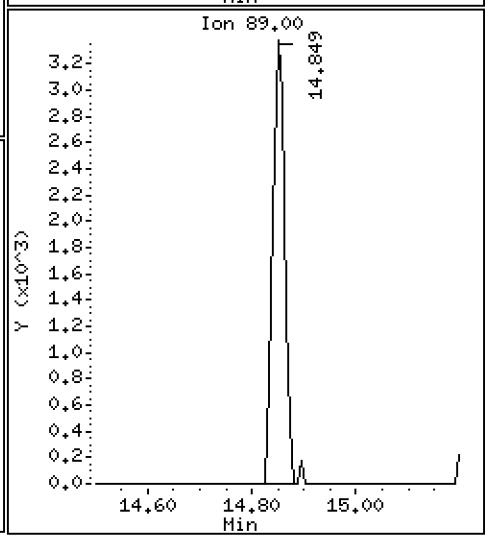












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

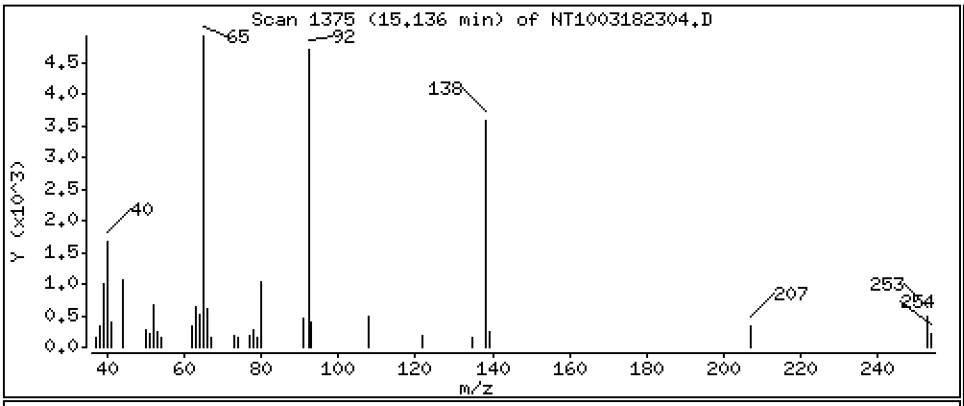
Operator: VTS

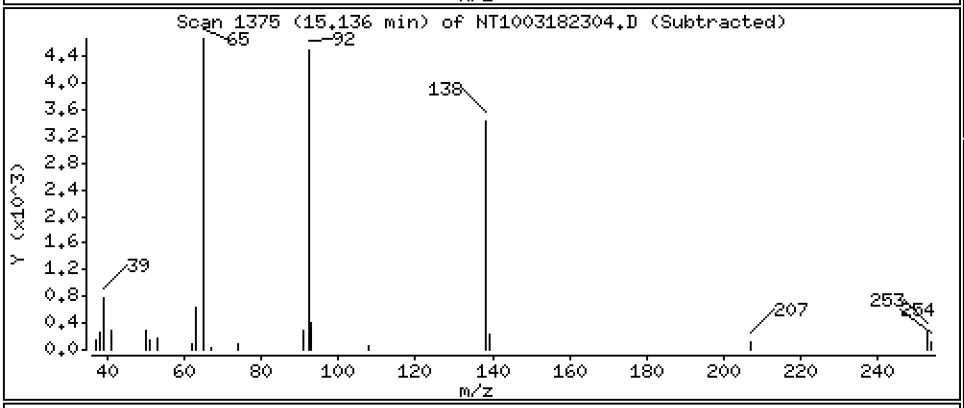
Column phase: ZB-5msi

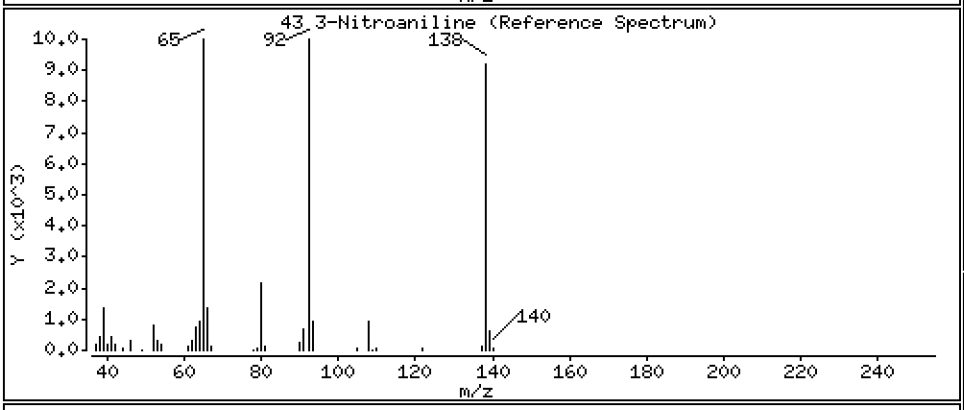
Column diameter: 0.25

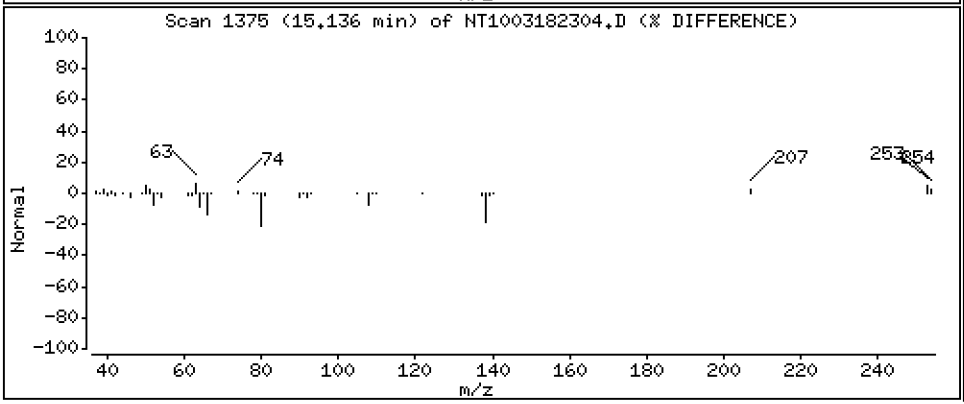
43 3-Nitroaniline

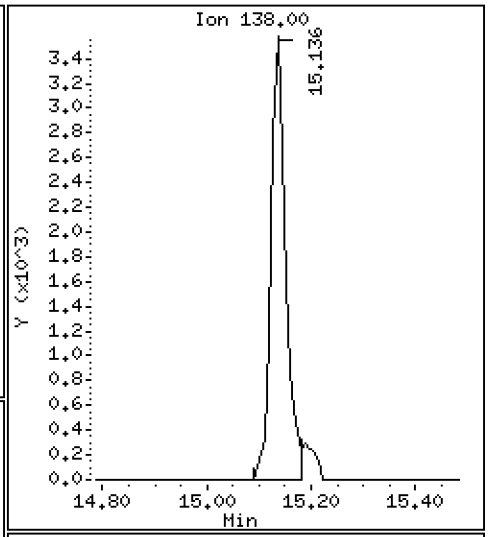
Concentration: 0.2862 ug/mL

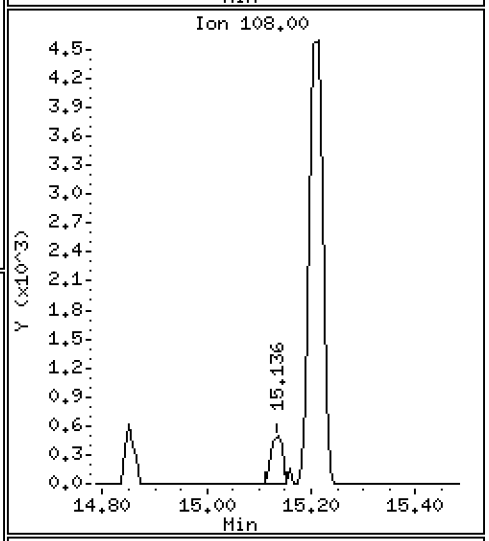


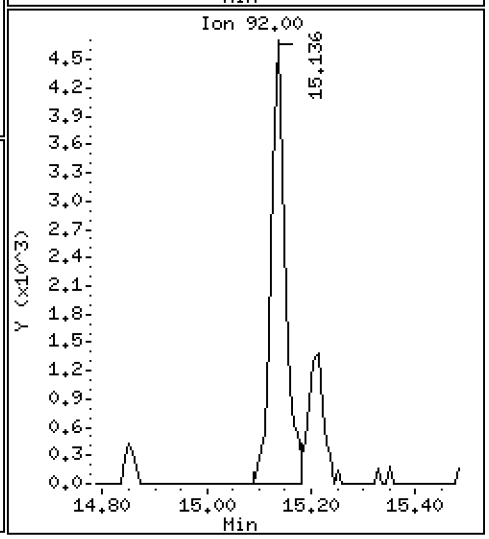












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

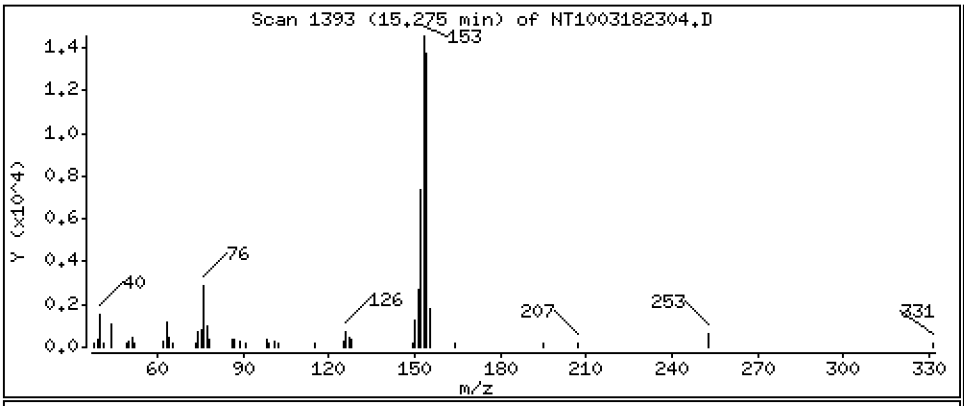
Operator: VTS

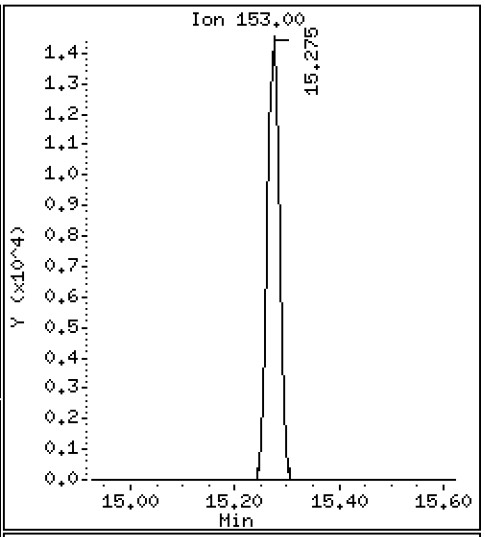
Column phase: ZB-5msi

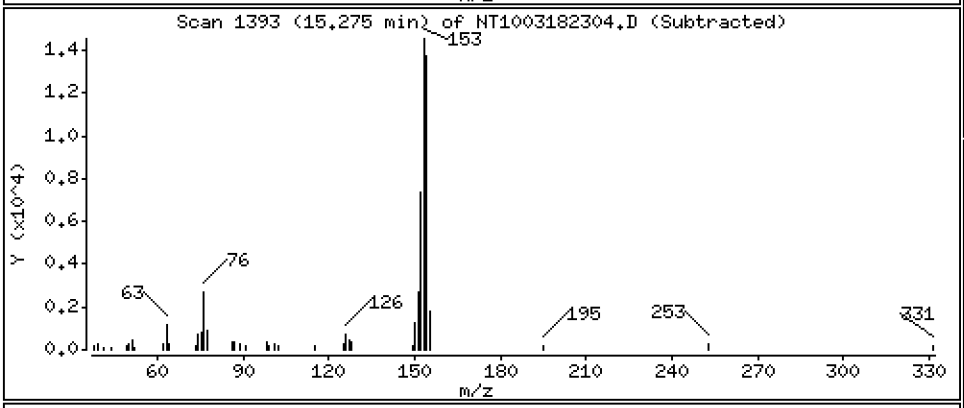
Column diameter: 0.25

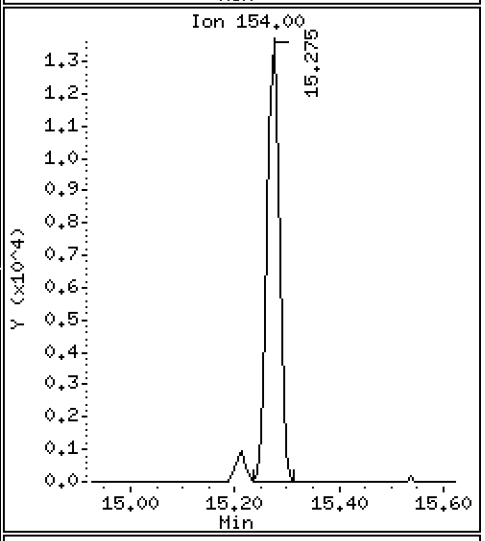
44 Acenaphthene

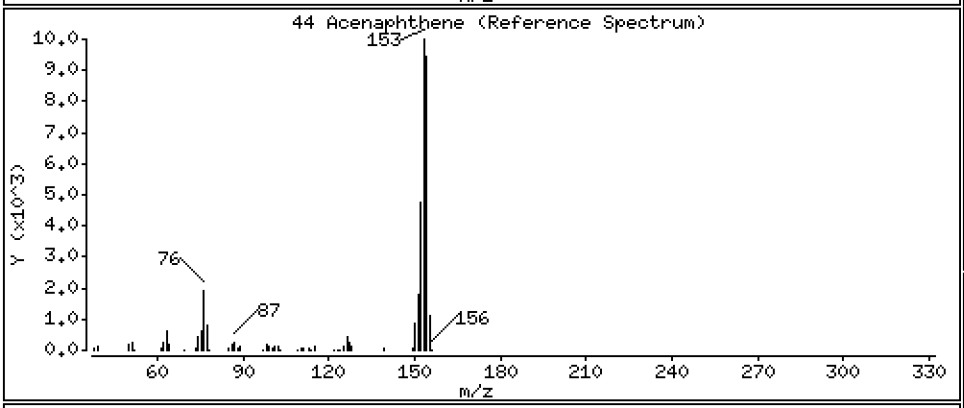
Concentration: 0.2065 ug/mL

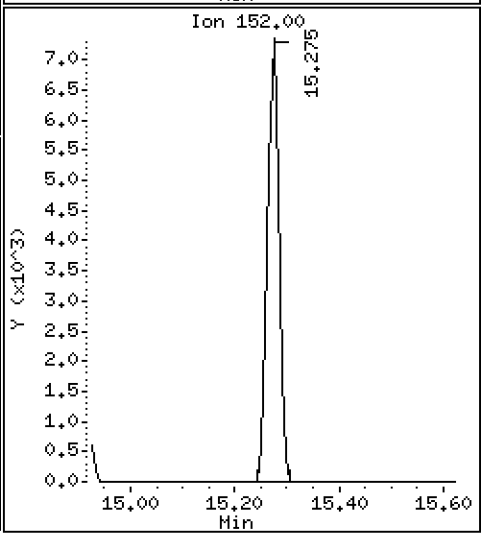


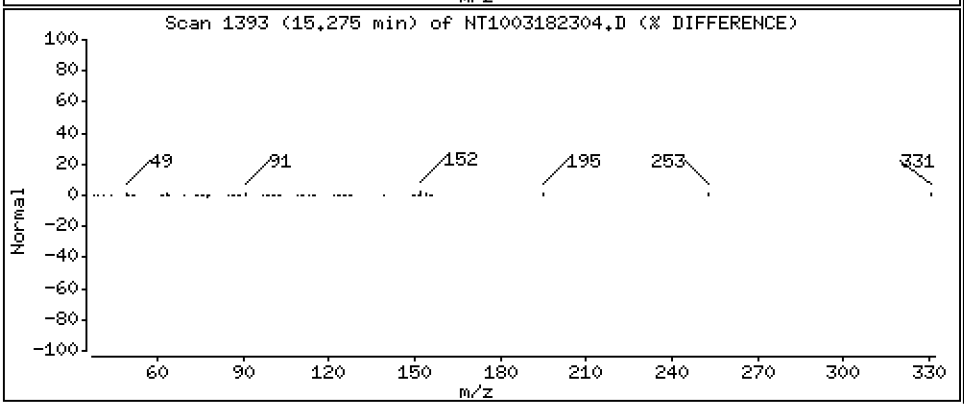












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

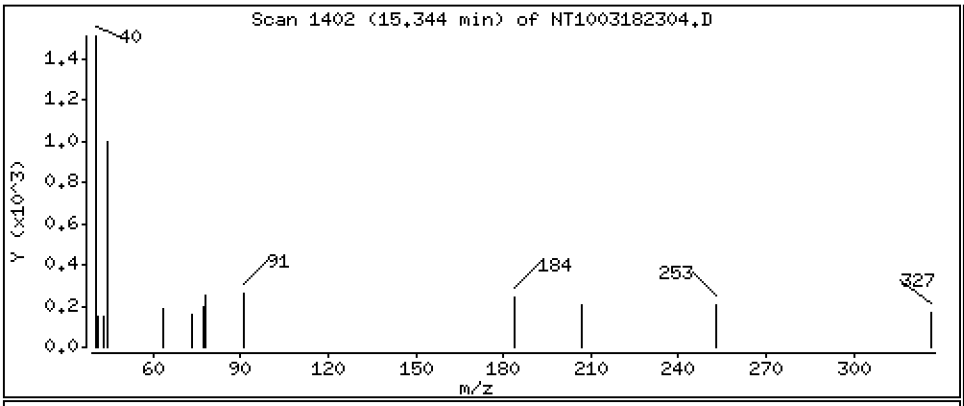
Operator: VTS

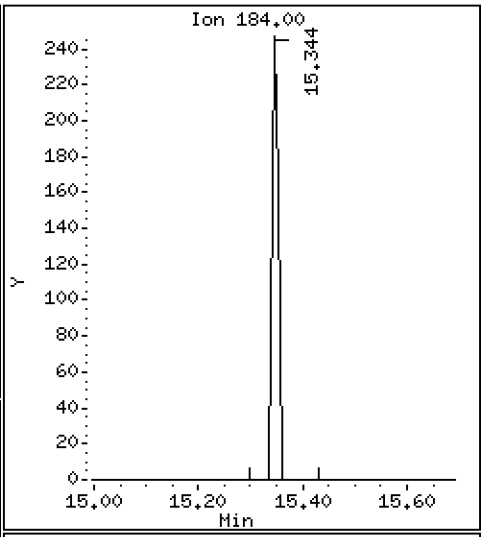
Column phase: ZB-5msi

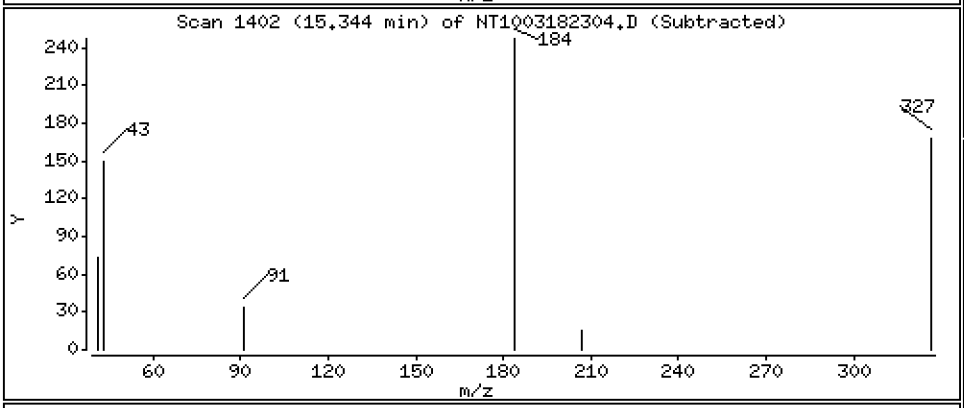
Column diameter: 0.25

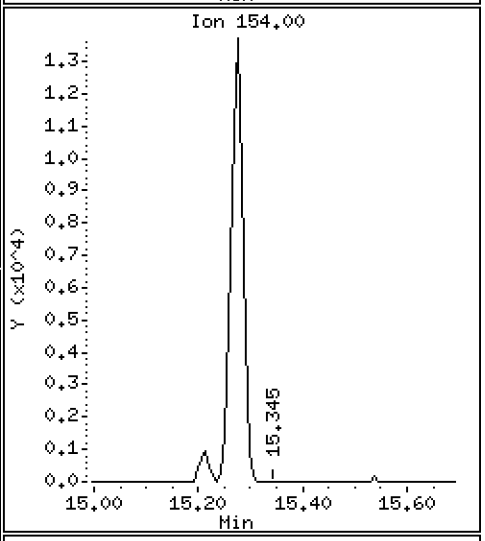
45 2,4-Dinitrophenol

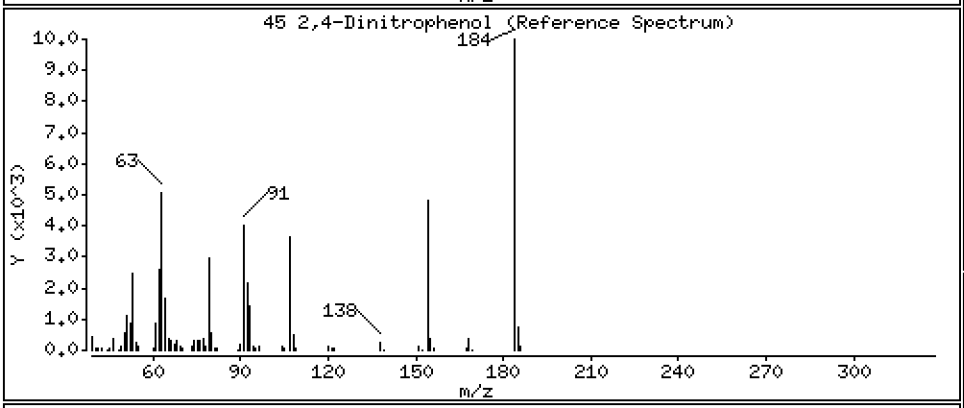
Concentration: 0.01292 ug/mL

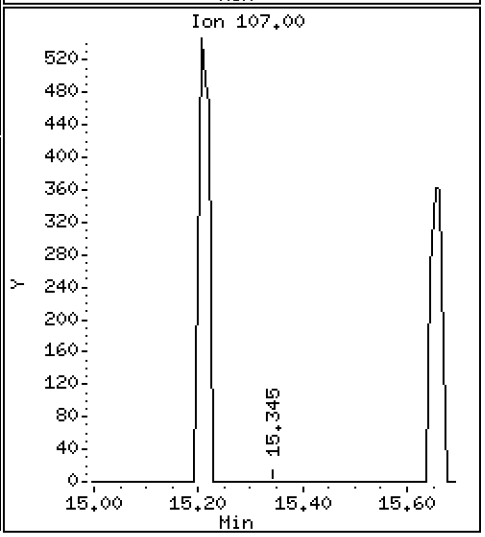


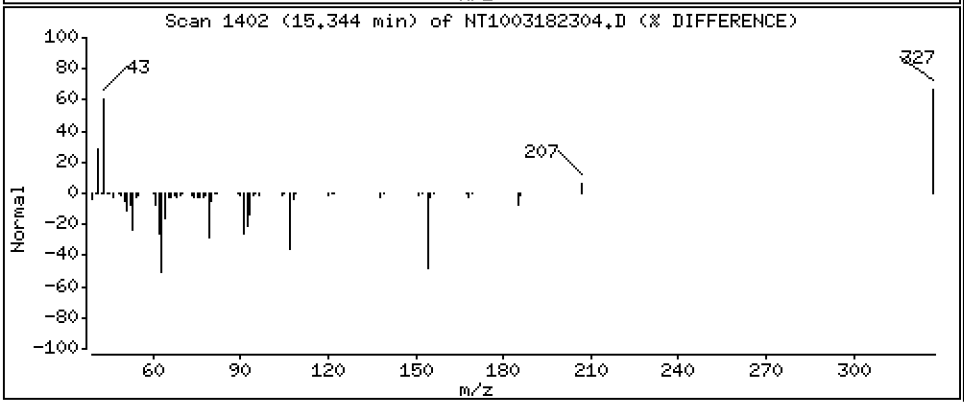












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

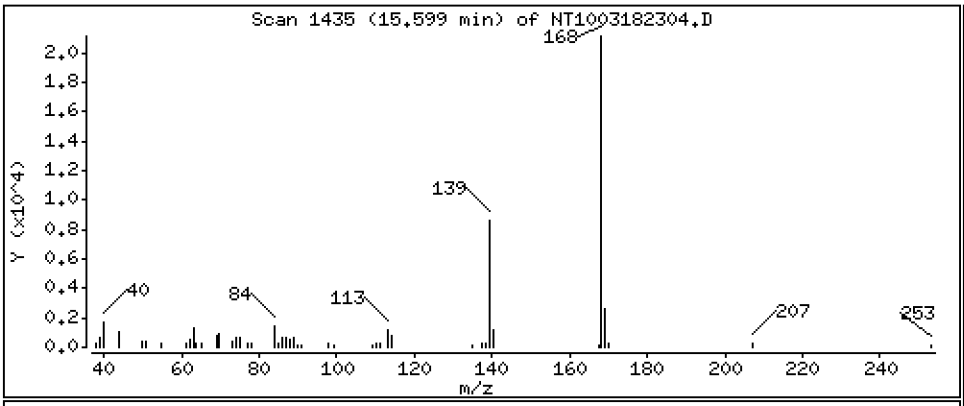
Operator: VTS

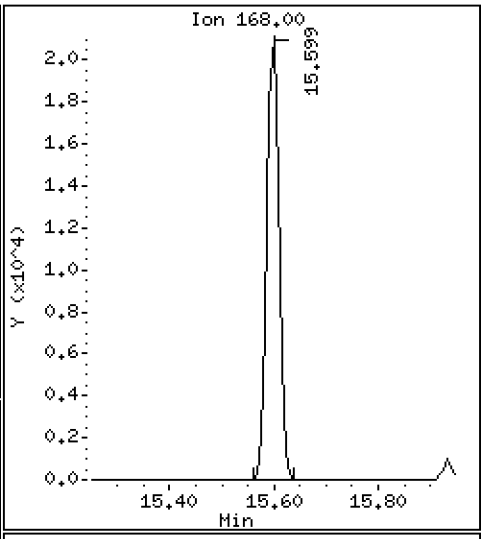
Column phase: ZB-5msi

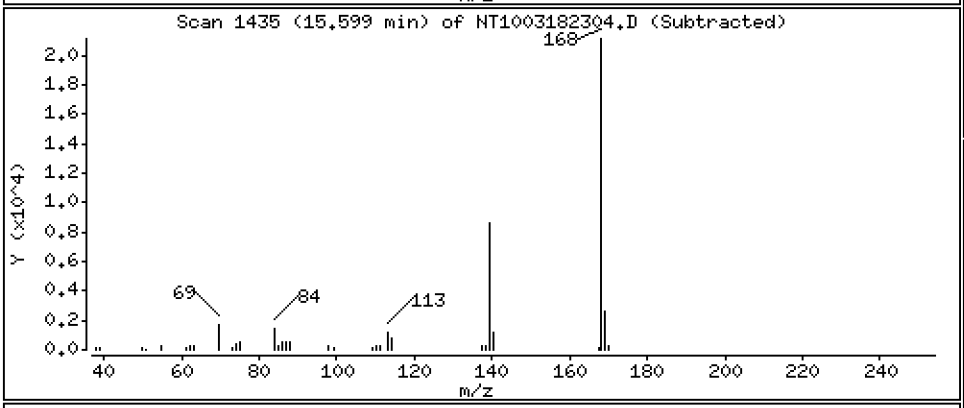
Column diameter: 0.25

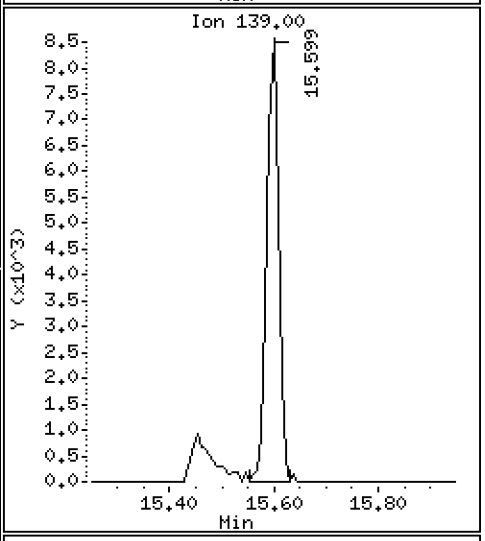
46 Dibenzofuran

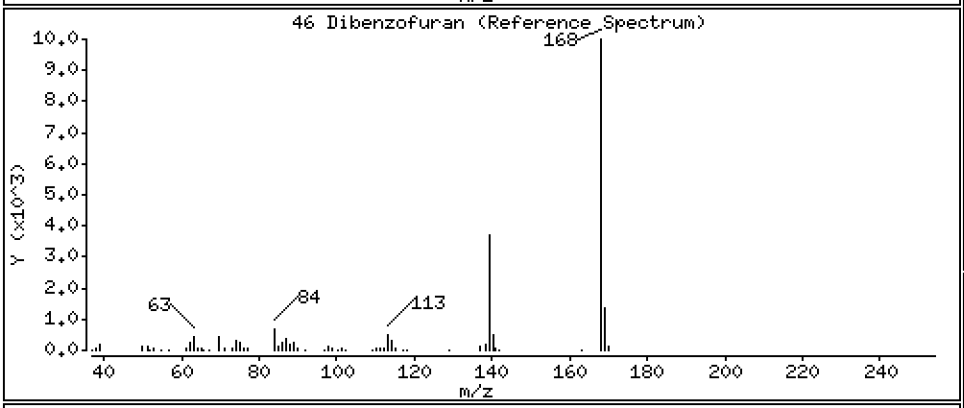
Concentration: 0.2055 ug/mL

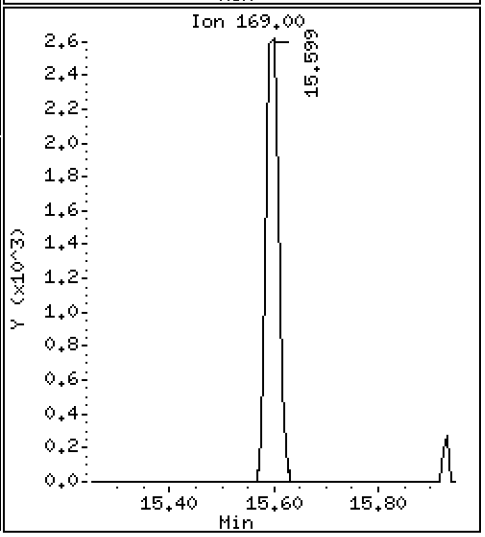


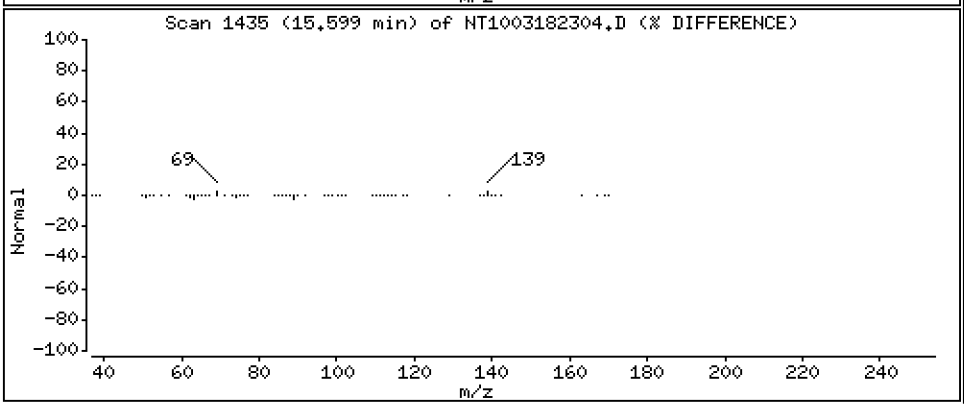












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

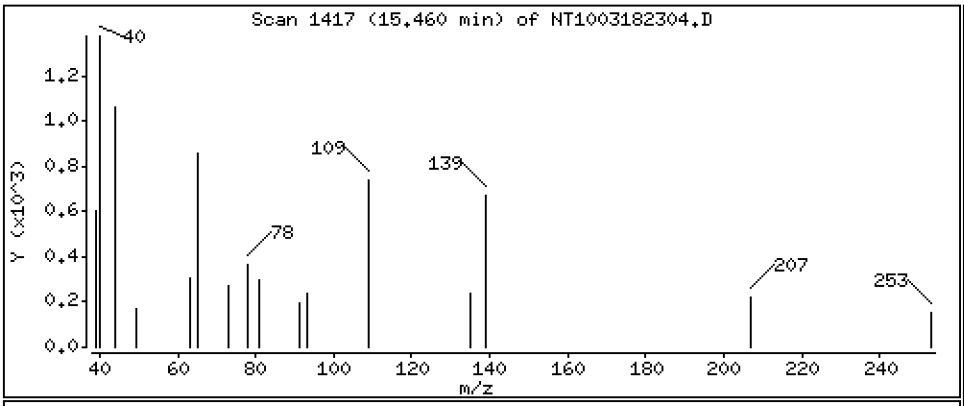
Operator: VTS

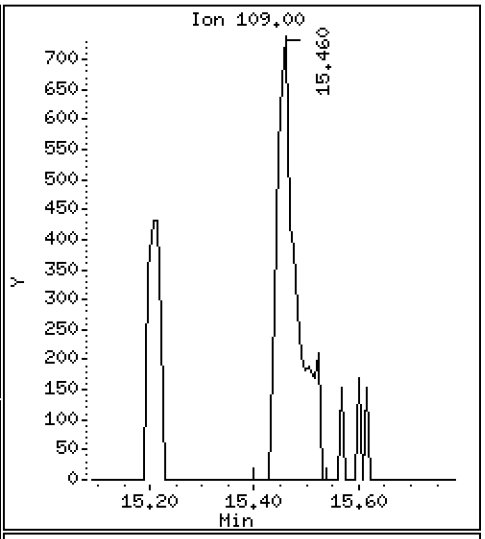
Column phase: ZB-5msi

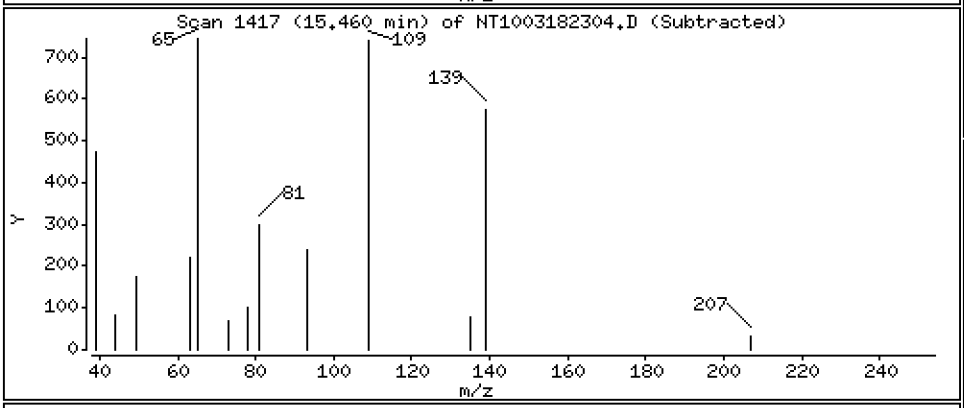
Column diameter: 0.25

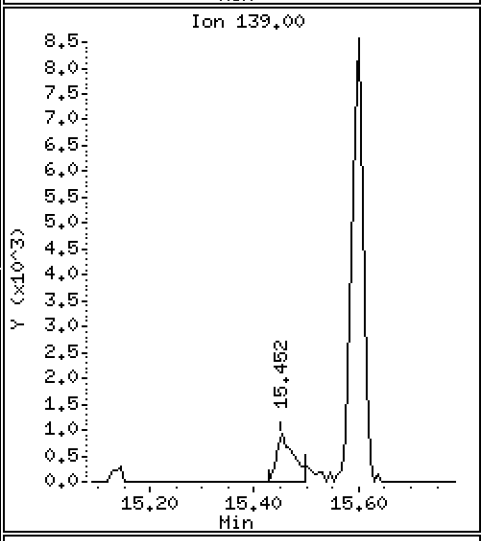
47 4-Nitrophenol

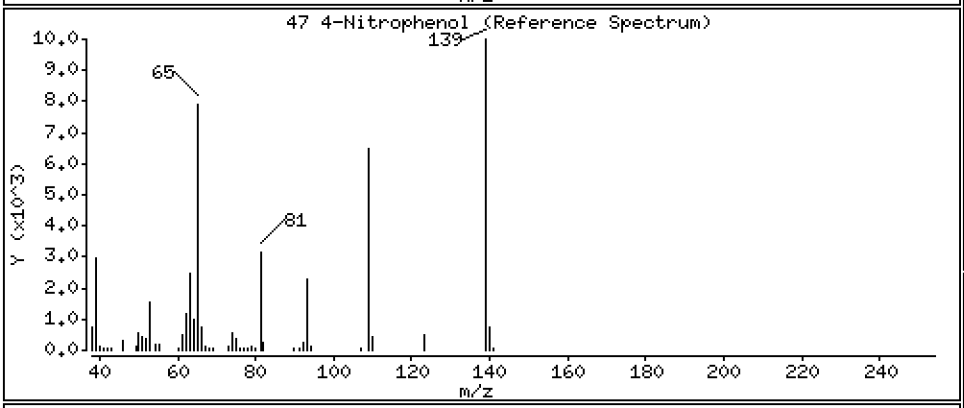
Concentration: 0.1152 ug/mL

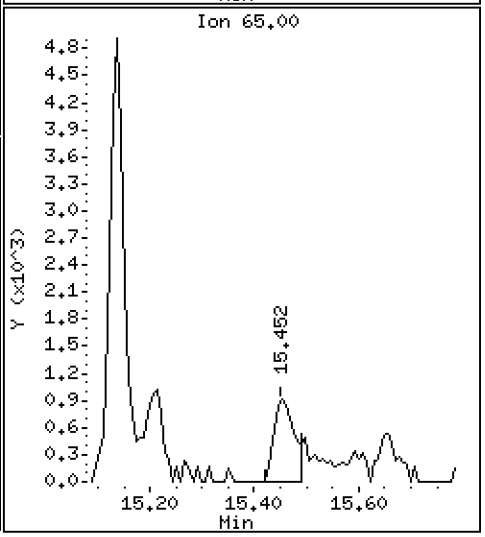


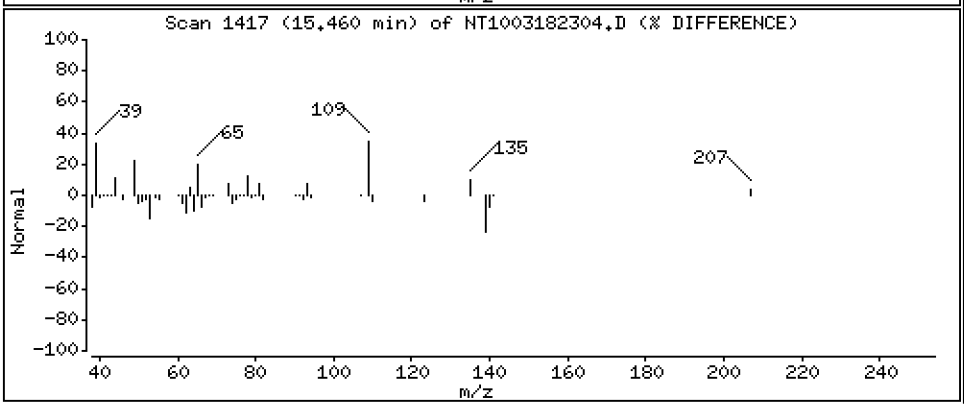












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

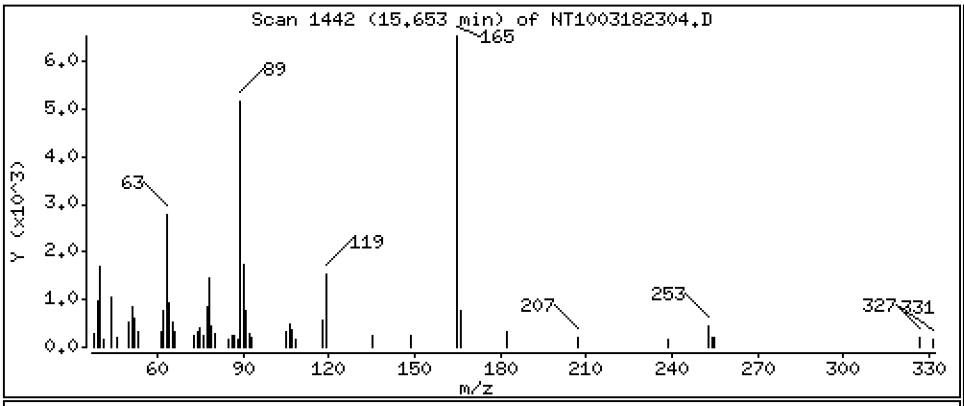
Operator: VTS

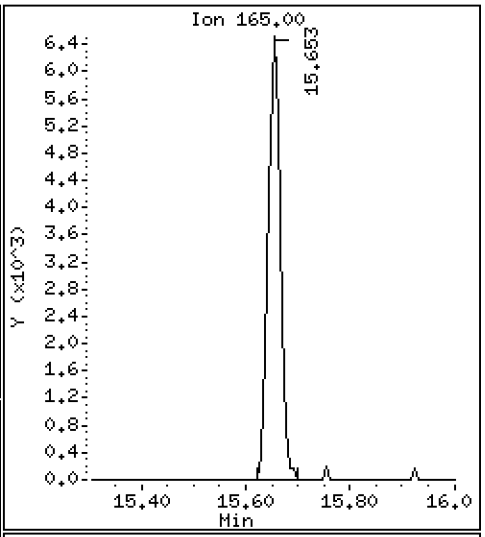
Column phase: ZB-5msi

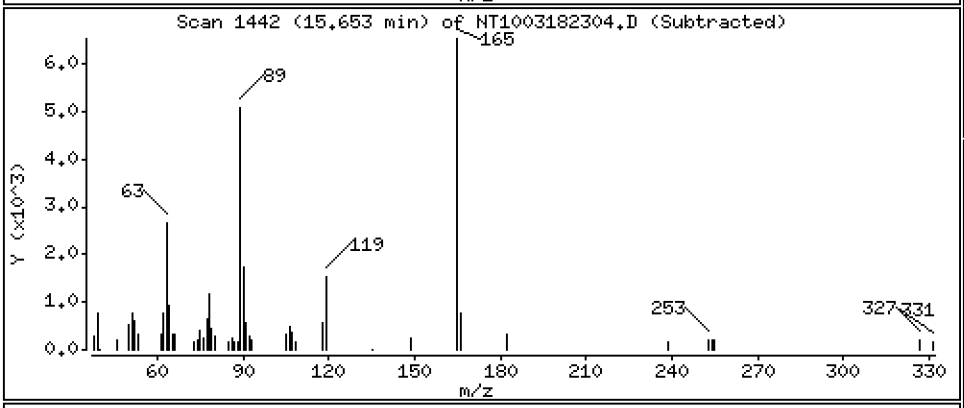
Column diameter: 0.25

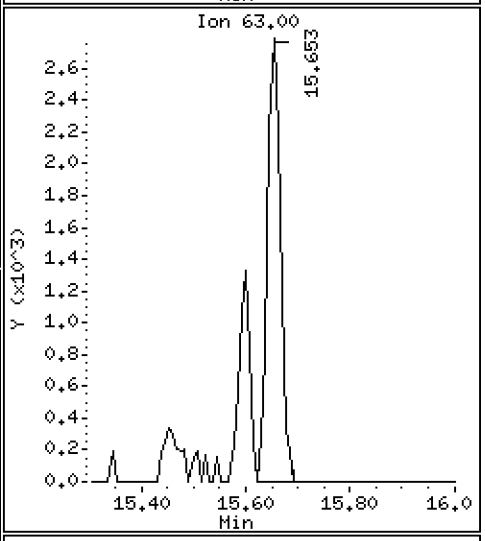
48 2,4-Dinitrotoluene

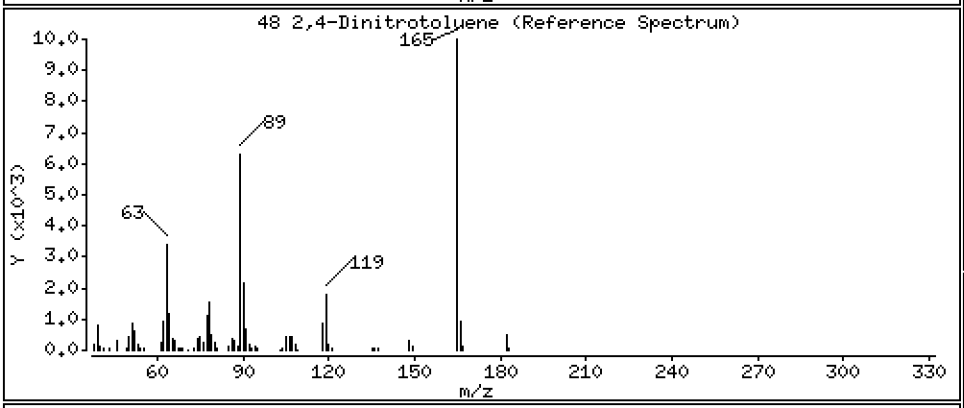
Concentration: 0.2732 ug/mL

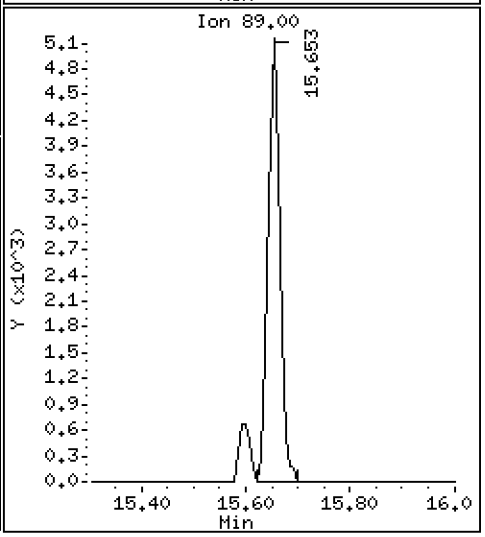


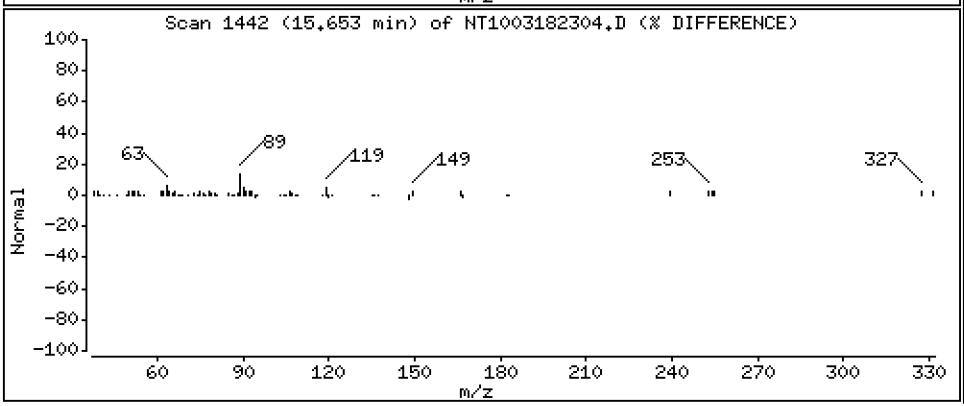












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

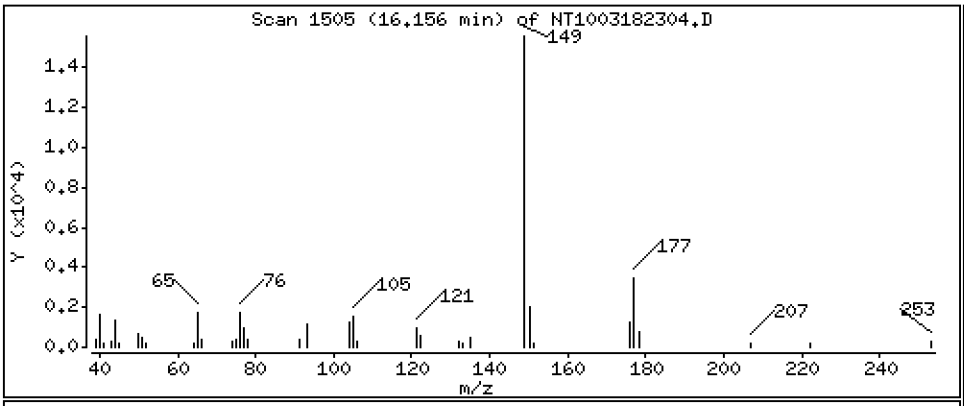
Operator: VTS

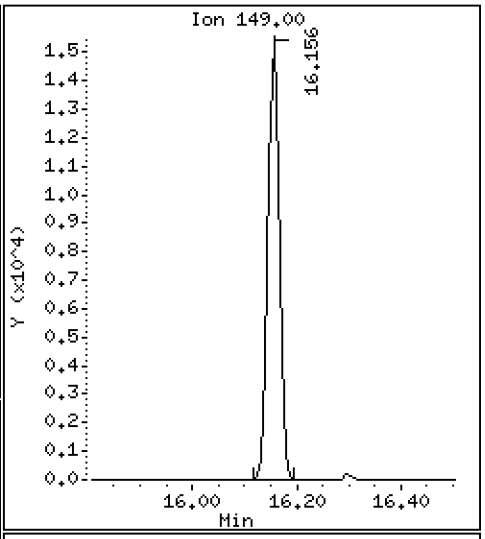
Column phase: ZB-5msi

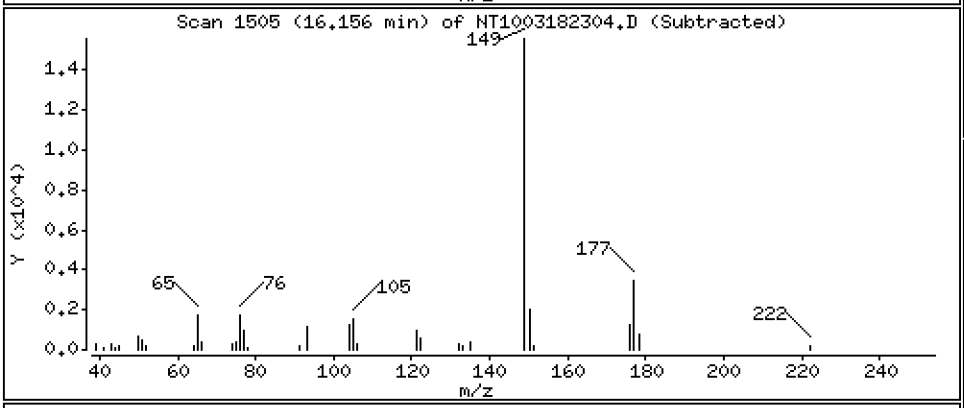
Column diameter: 0.25

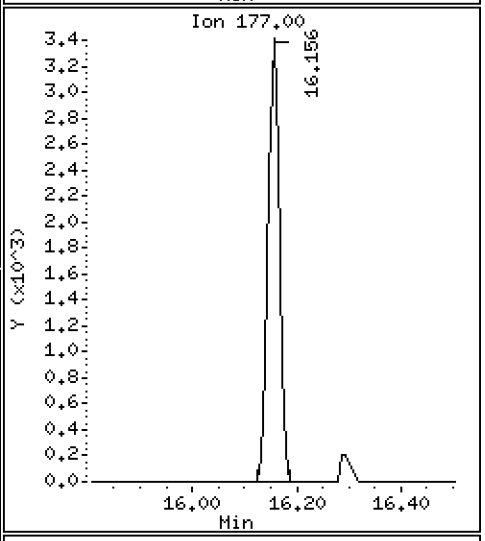
50 Diethylphthalate

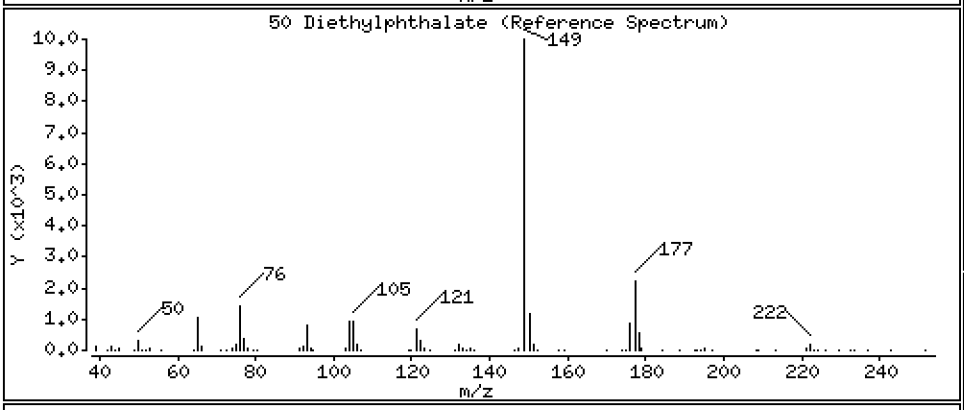
Concentration: 0.1998 ug/mL

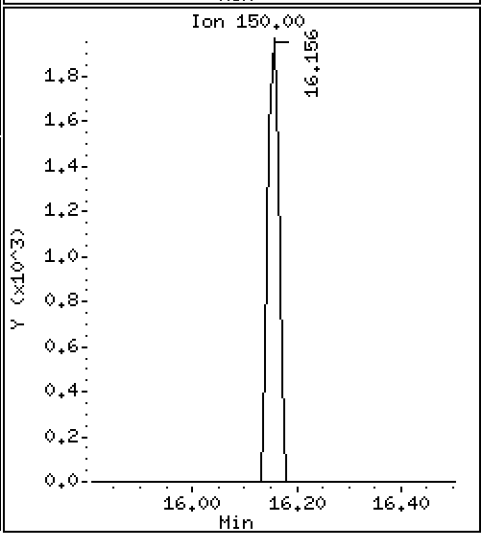


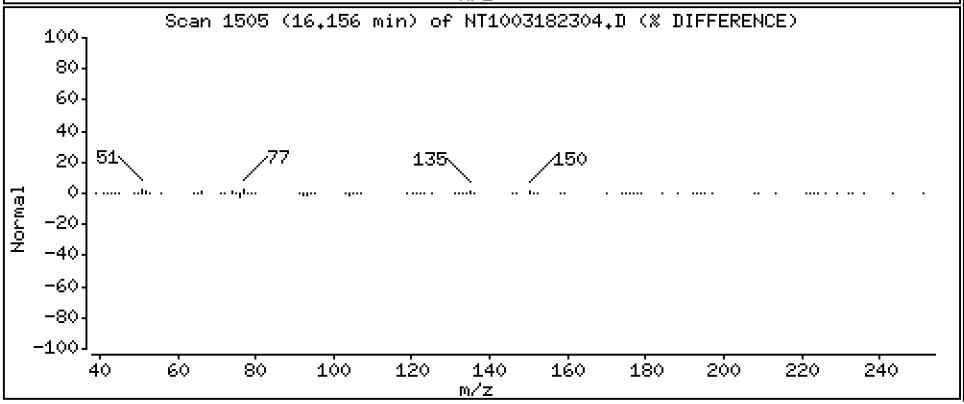












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

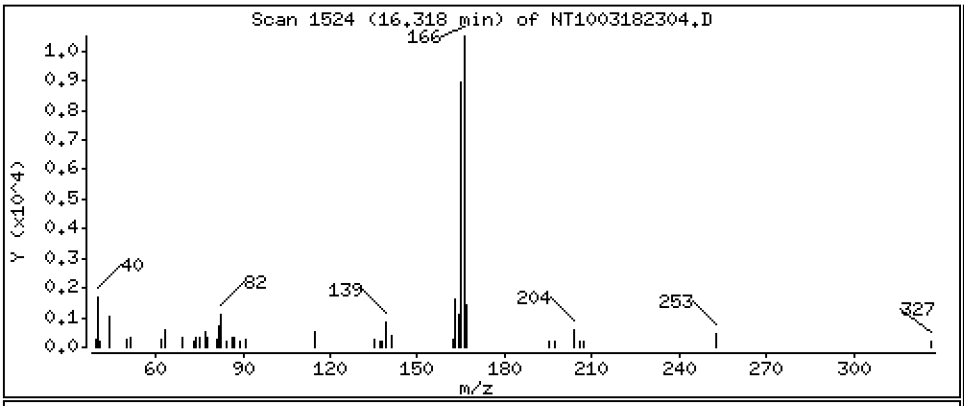
Operator: VTS

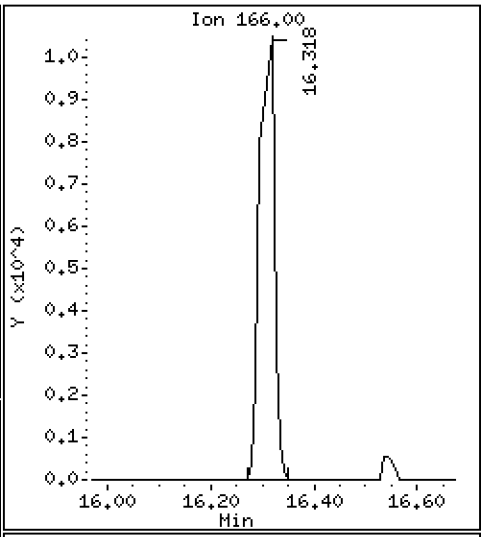
Column phase: ZB-5msi

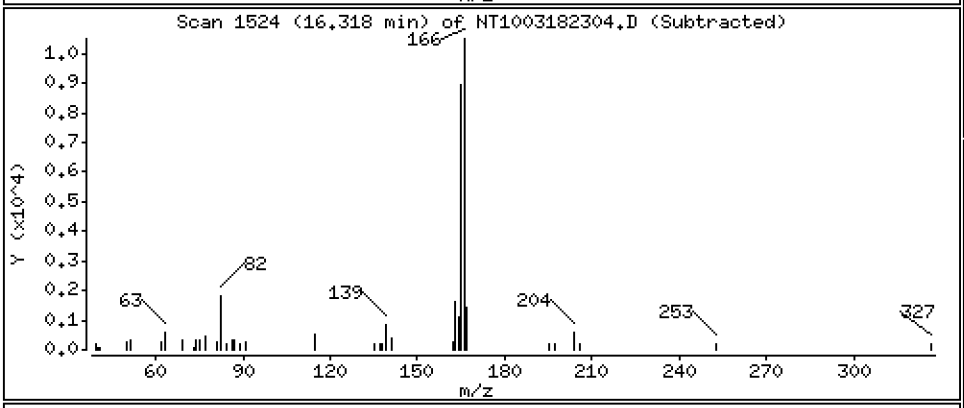
Column diameter: 0.25

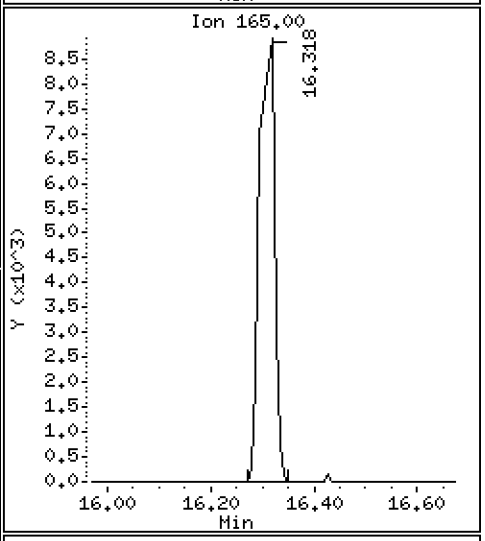
49 Fluorene

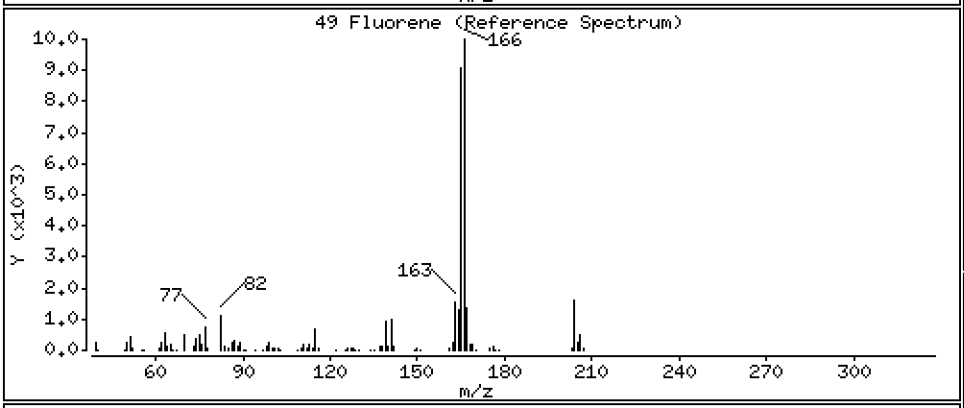
Concentration: 0.1173 ug/mL

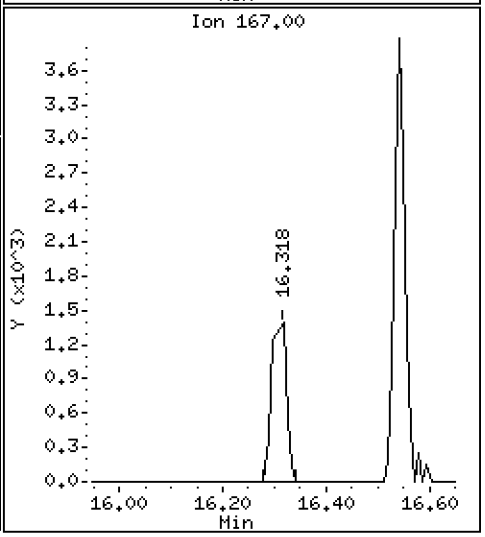


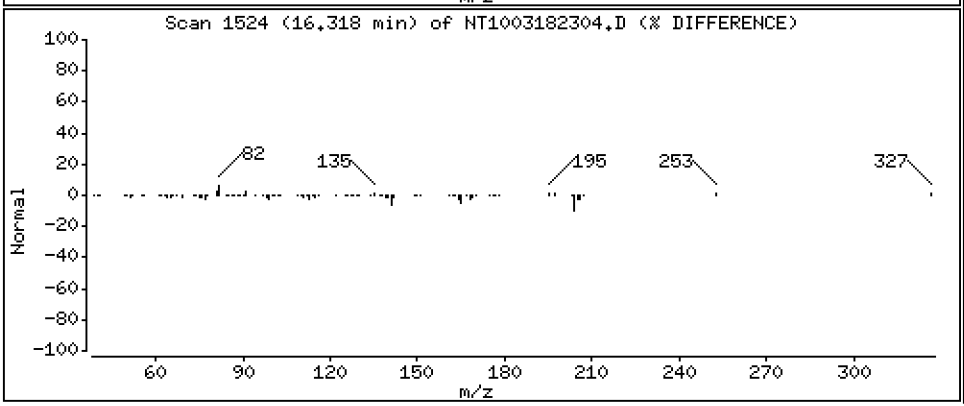












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

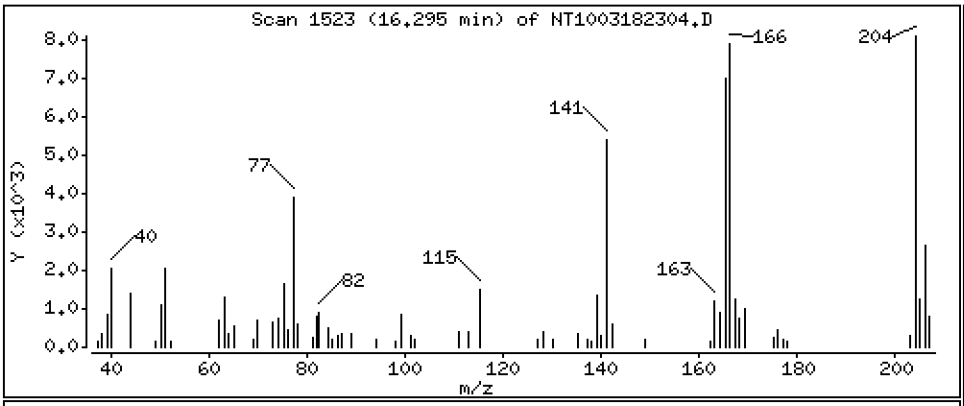
Operator: VTS

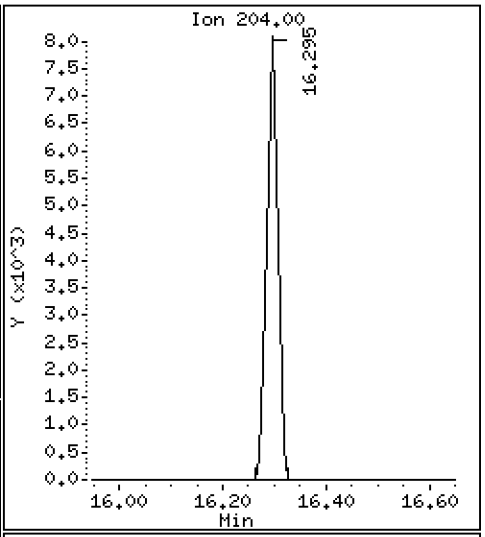
Column phase: ZB-5msi

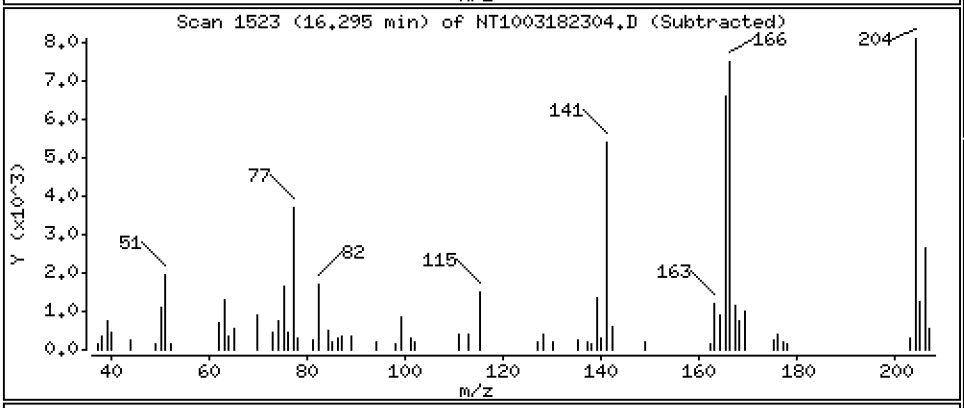
Column diameter: 0.25

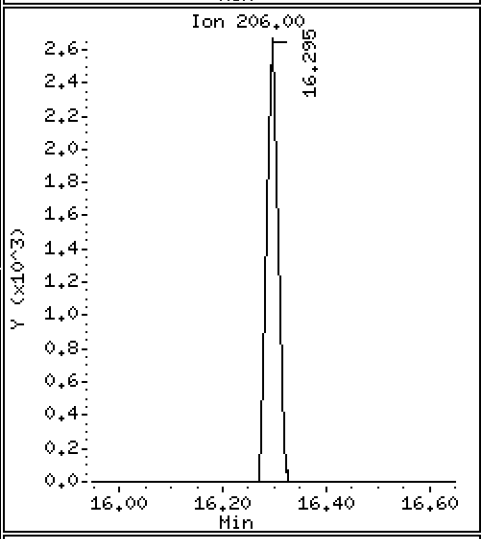
51 4-Chlorophenyl-phenylether

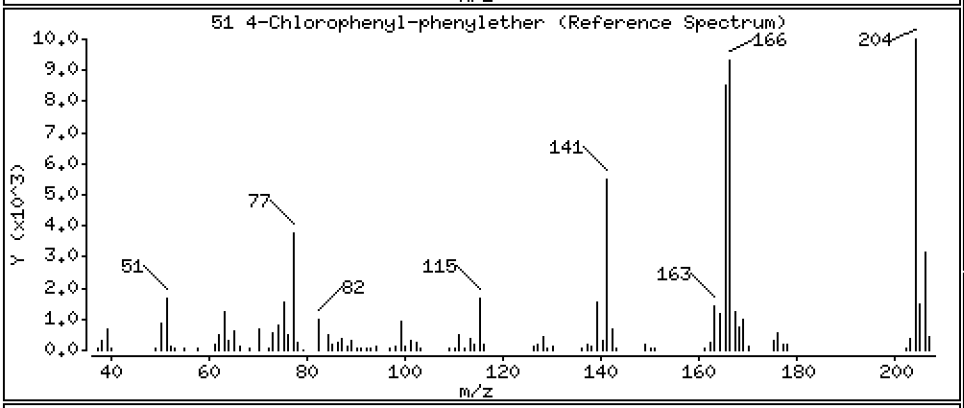
Concentration: 0.1752 ug/mL

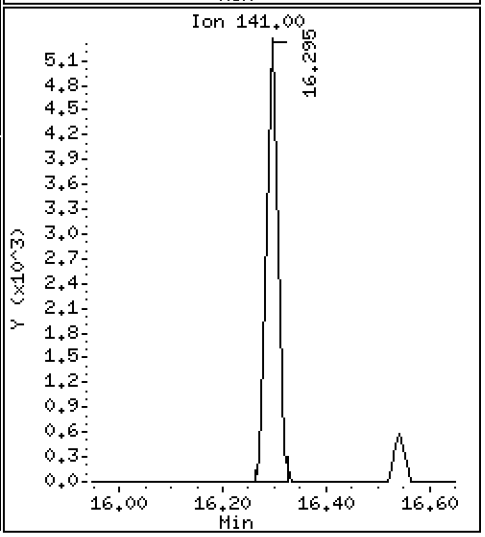


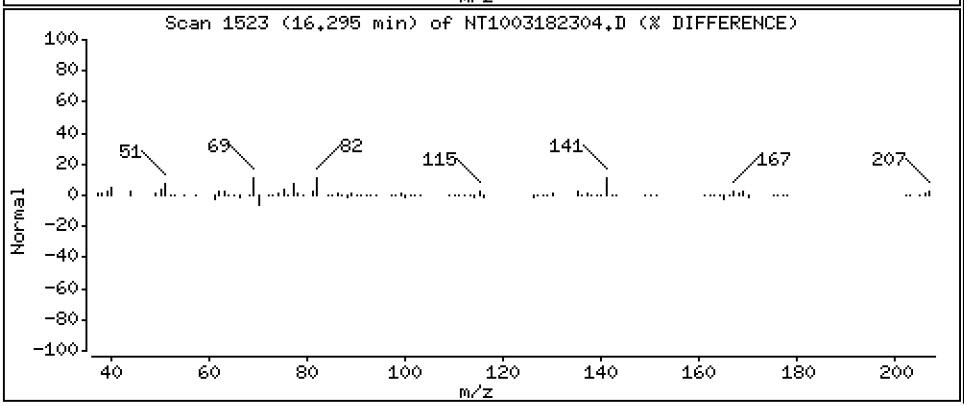












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

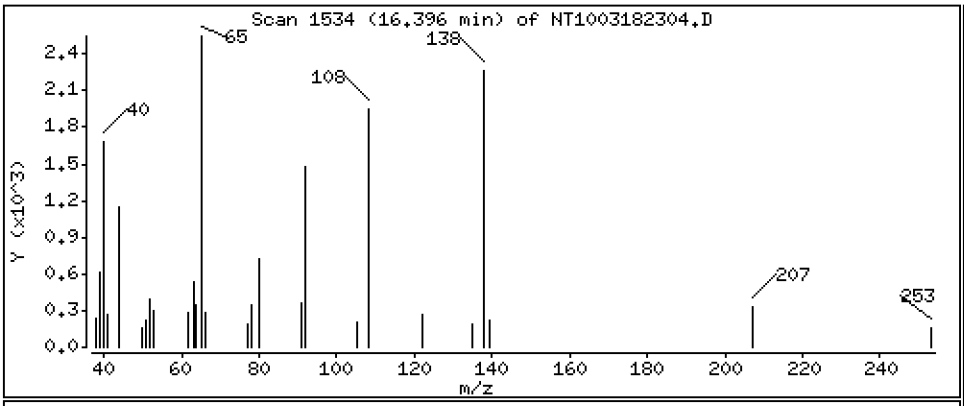
Operator: VTS

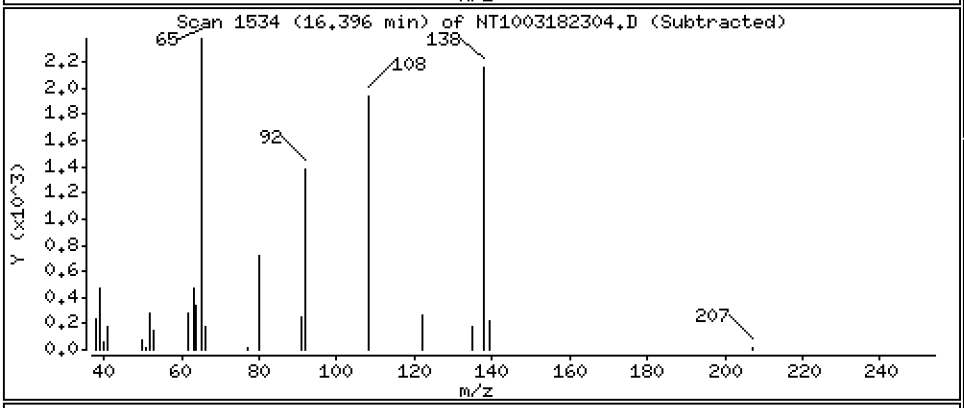
Column phase: ZB-5msi

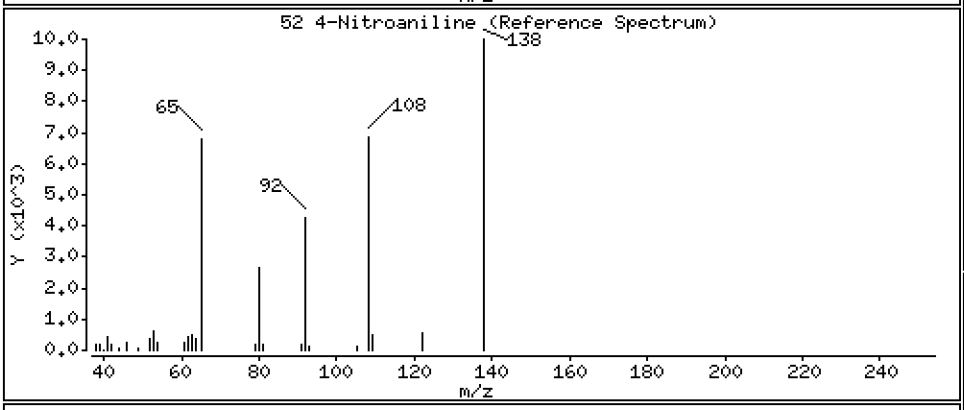
Column diameter: 0.25

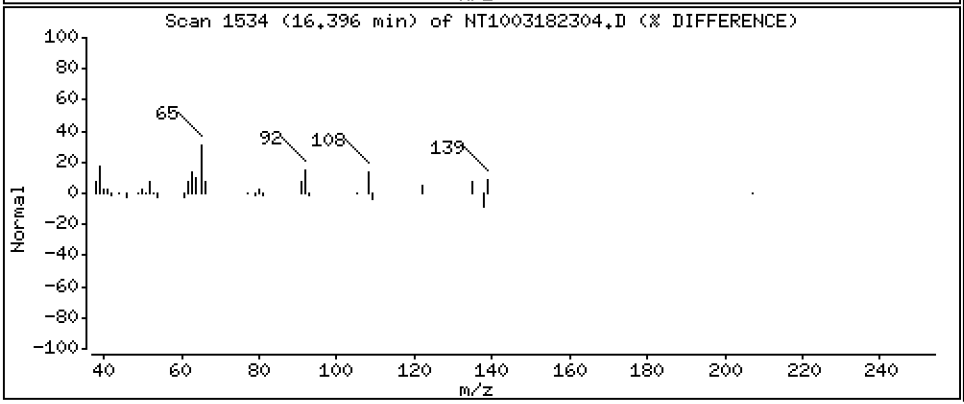
52 4-Nitroaniline

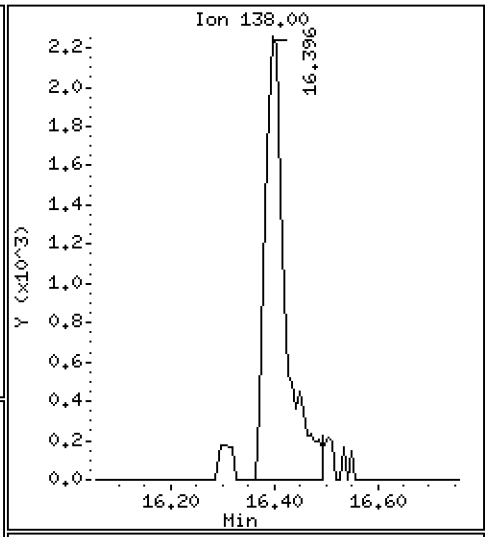
Concentration: 0.2462 ug/mL

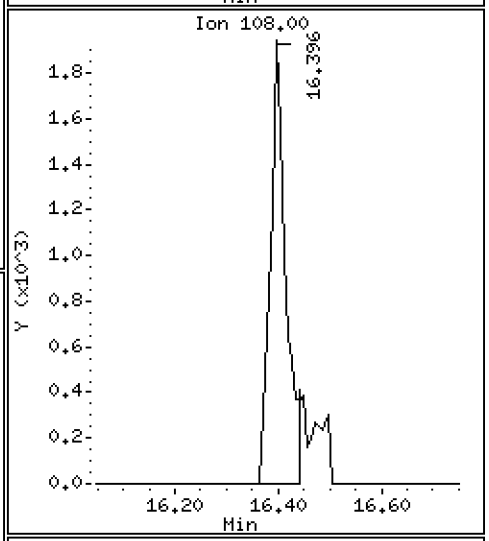


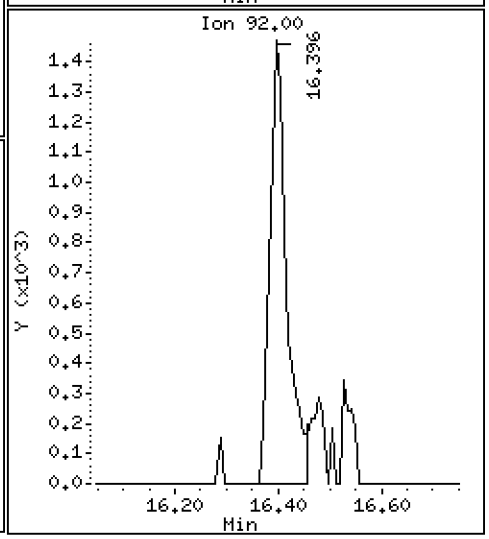












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

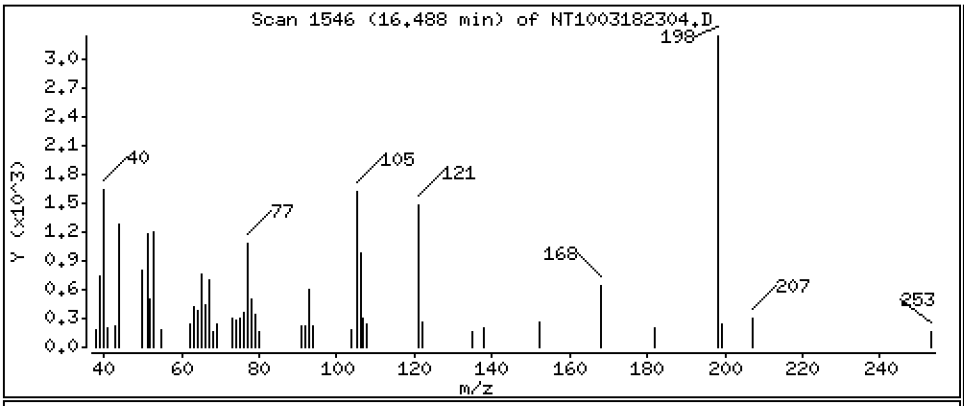
Operator: VTS

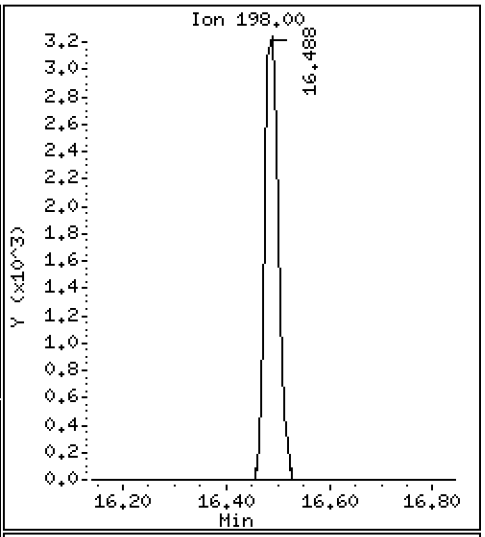
Column phase: ZB-5msi

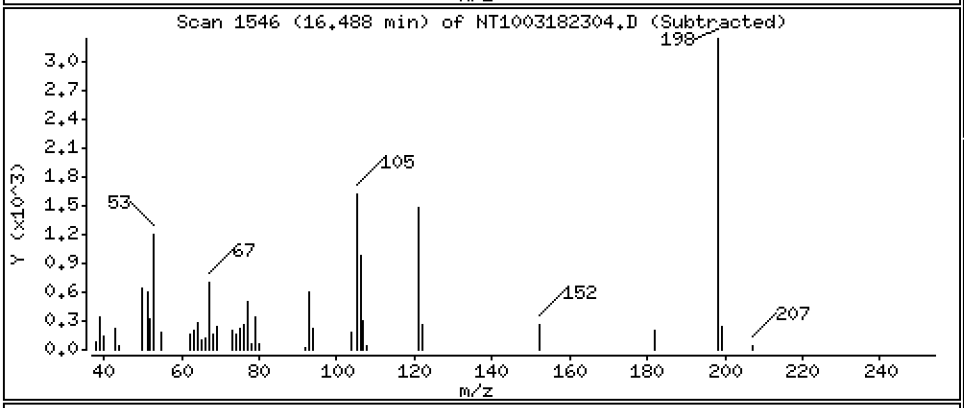
Column diameter: 0.25

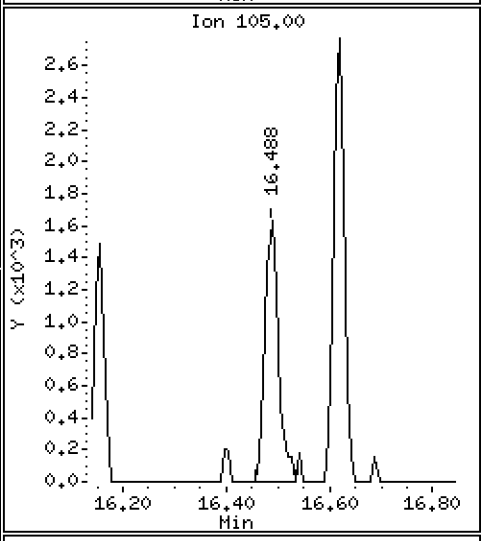
53 4,6-Dinitro-2-methylphenol

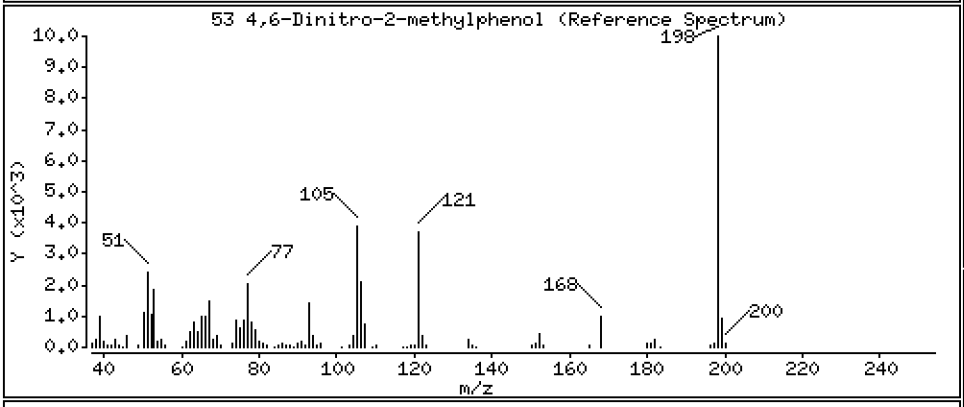
Concentration: 0.3047 ug/mL

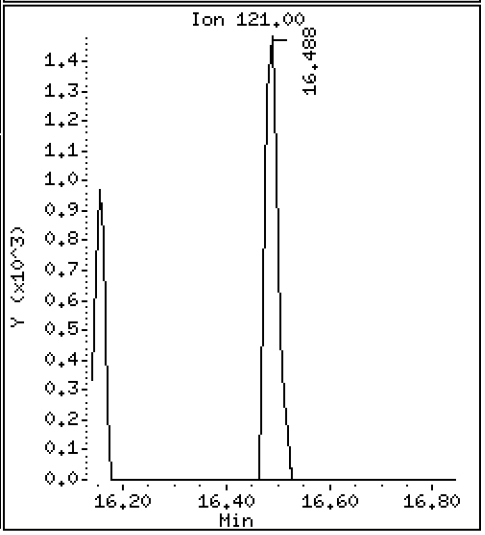


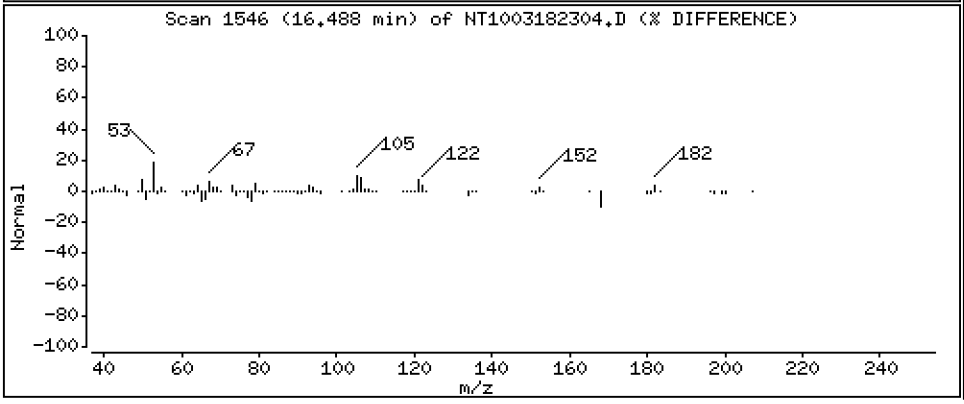












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

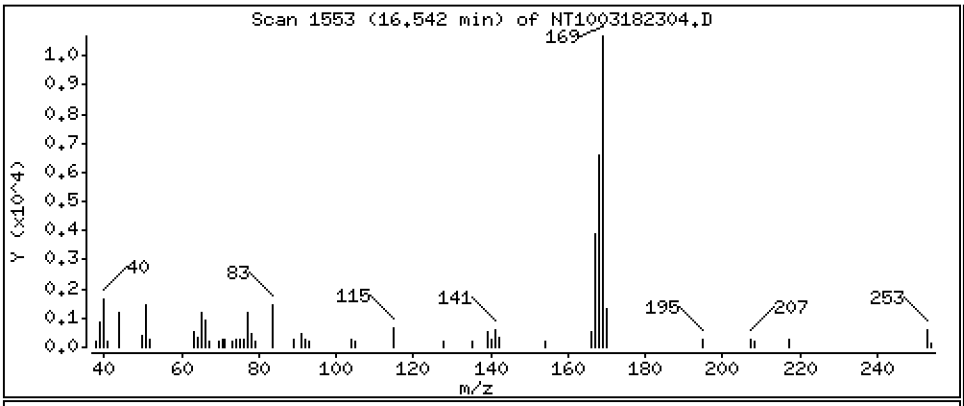
Operator: VTS

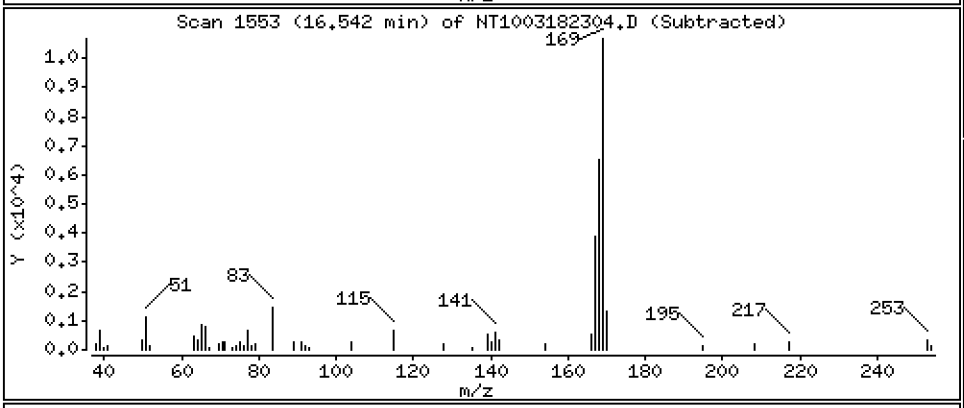
Column phase: ZB-5msi

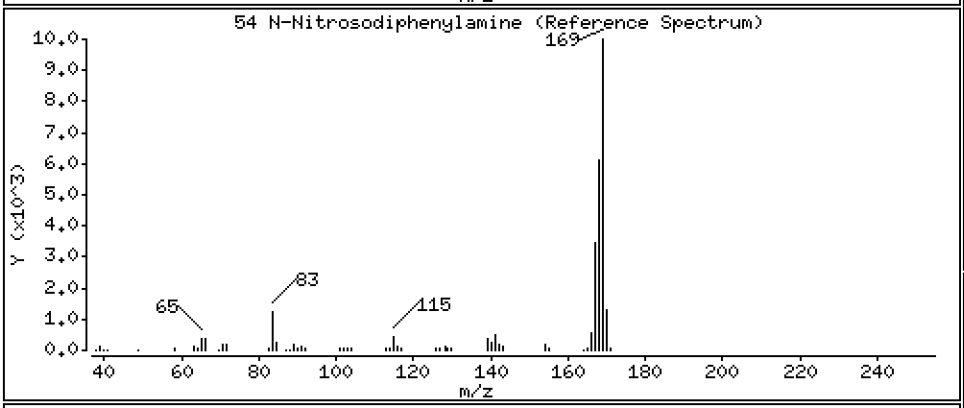
Column diameter: 0.25

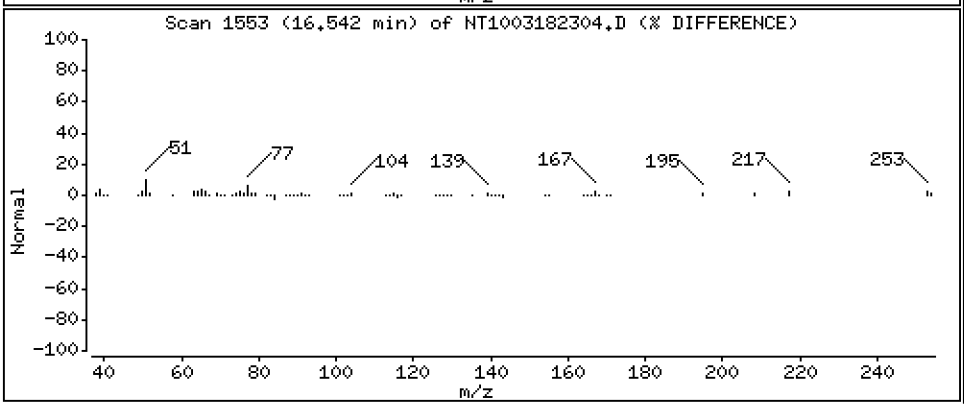
54 N-Nitrosodiphenylamine

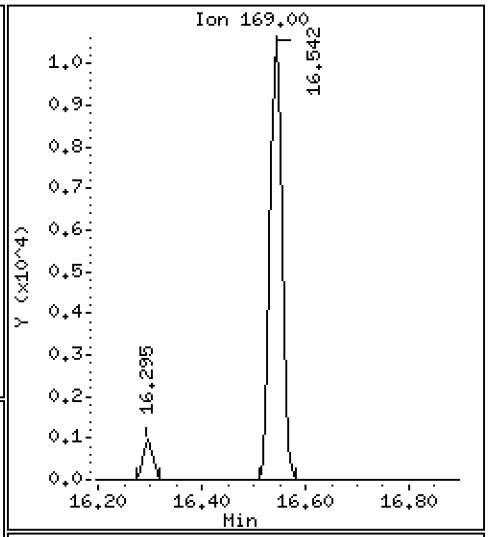
Concentration: 0.1961 ug/mL

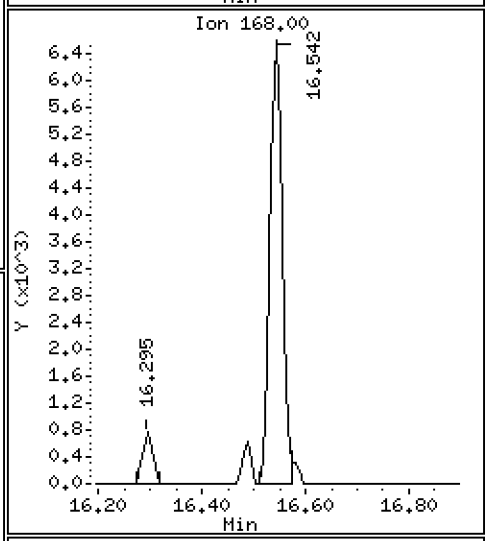


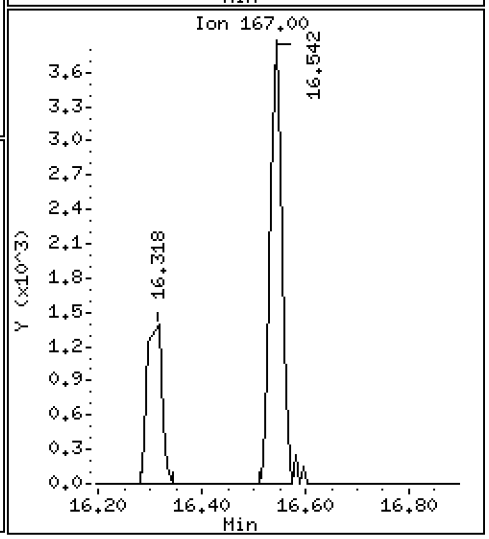












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

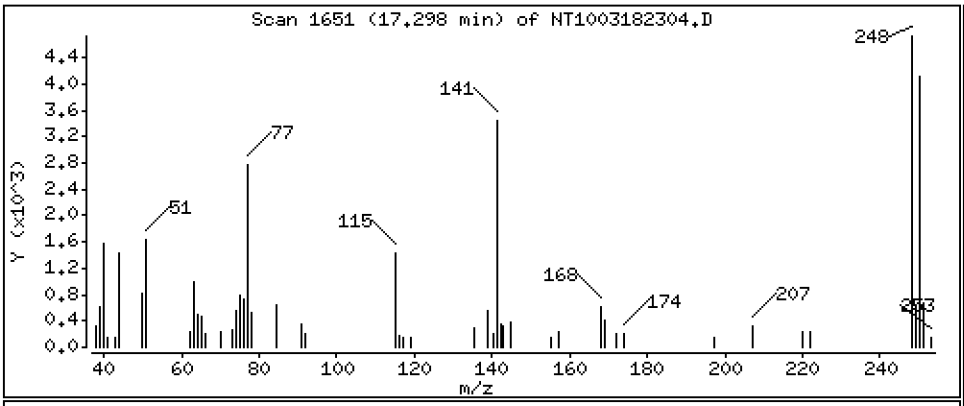
Operator: VTS

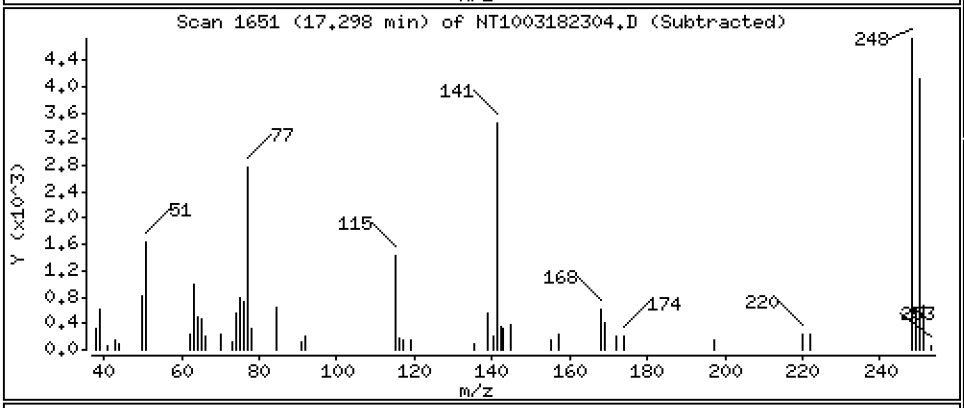
Column phase: ZB-5msi

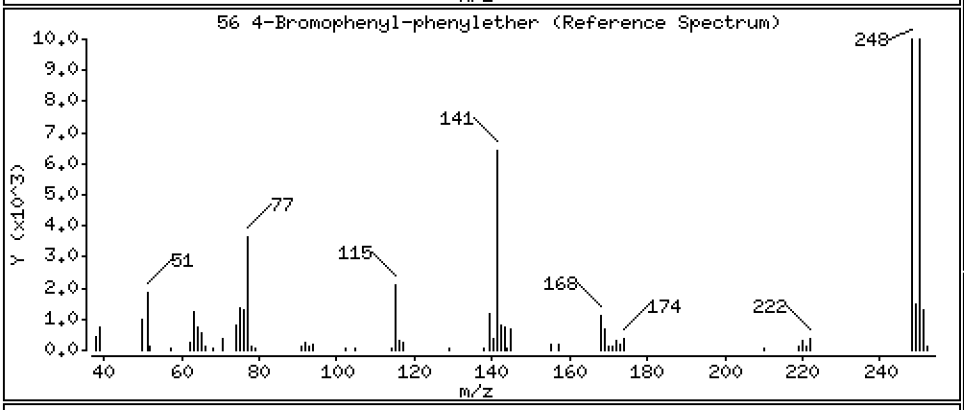
Column diameter: 0.25

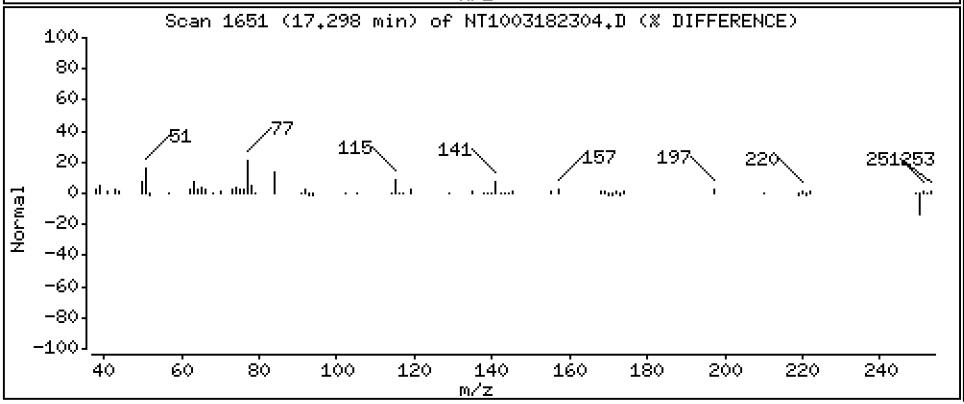
56 4-Bromophenyl-phenylether

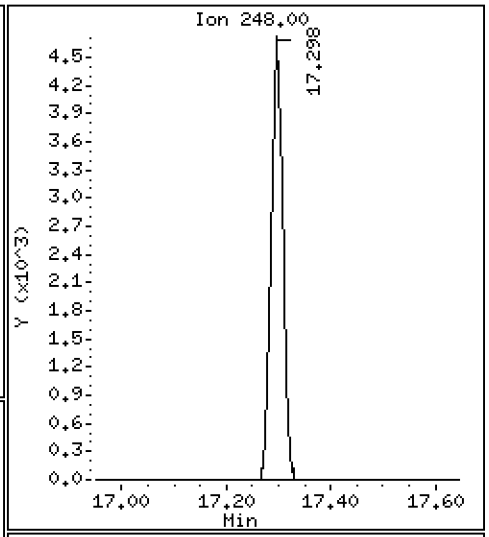
Concentration: 0.1977 ug/mL

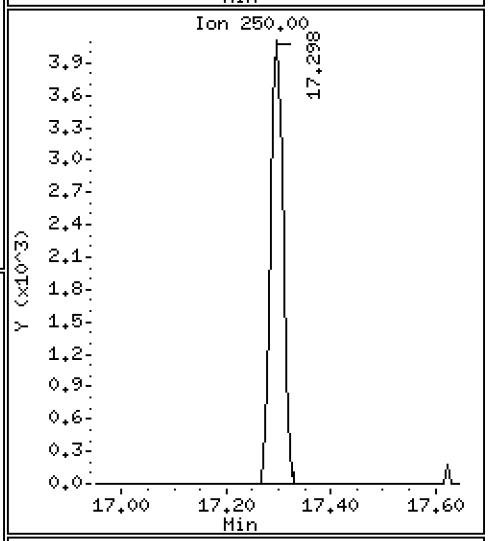


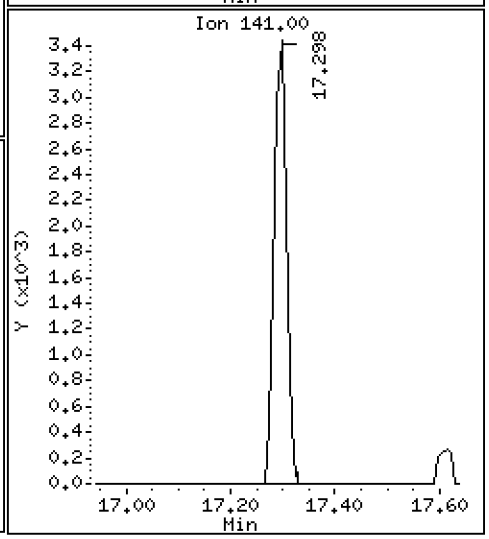












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

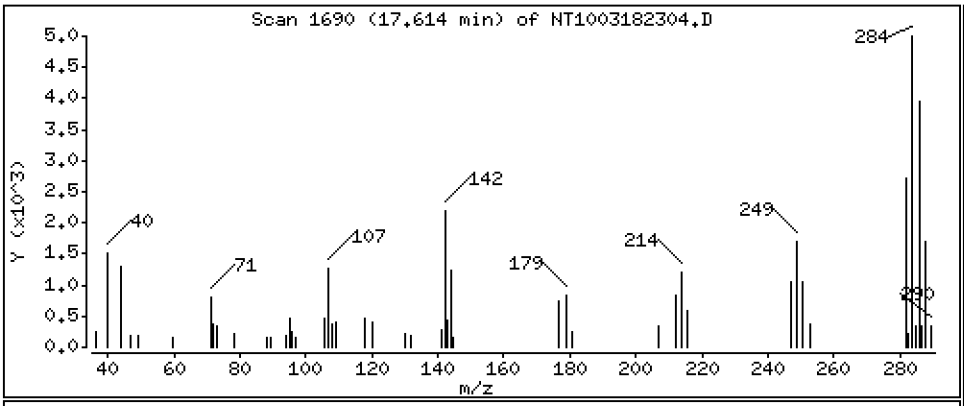
Operator: VTS

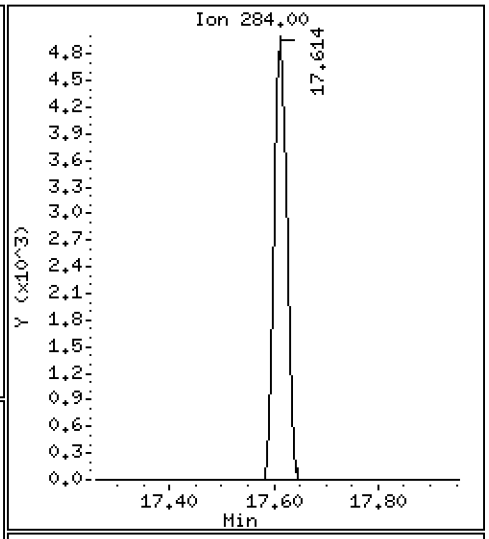
Column phase: ZB-5msi

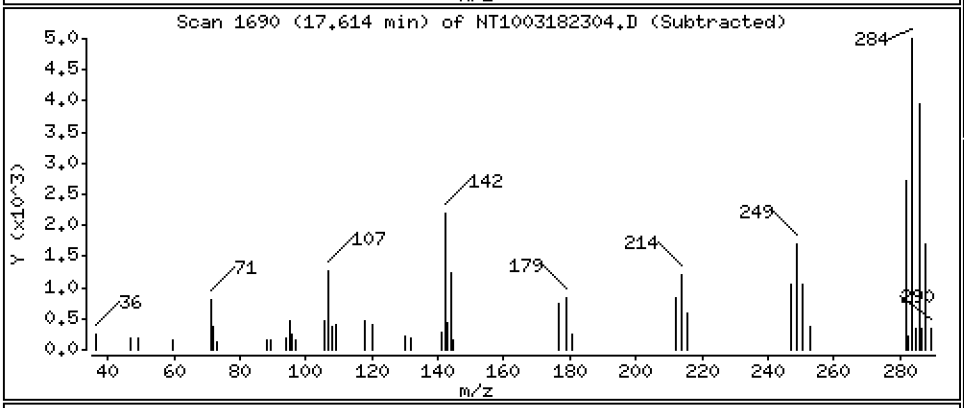
Column diameter: 0.25

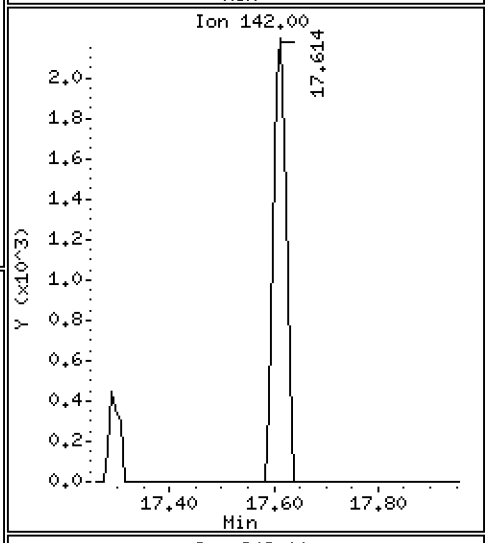
57 Hexachlorobenzene

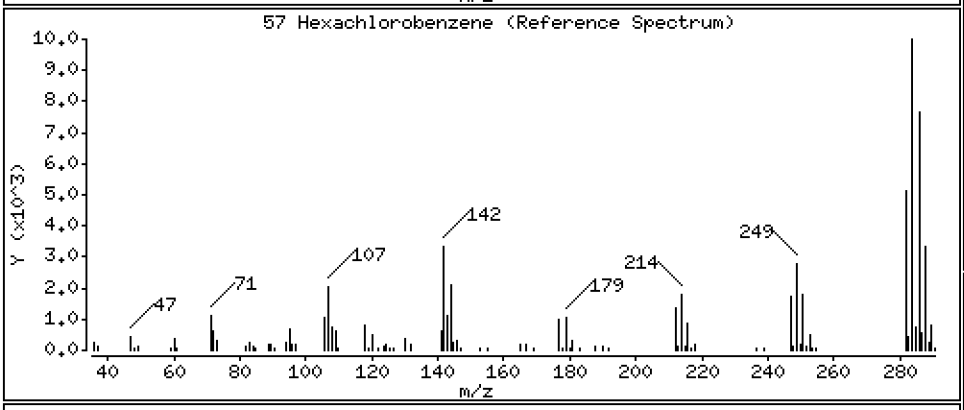
Concentration: 0.2238 ug/mL

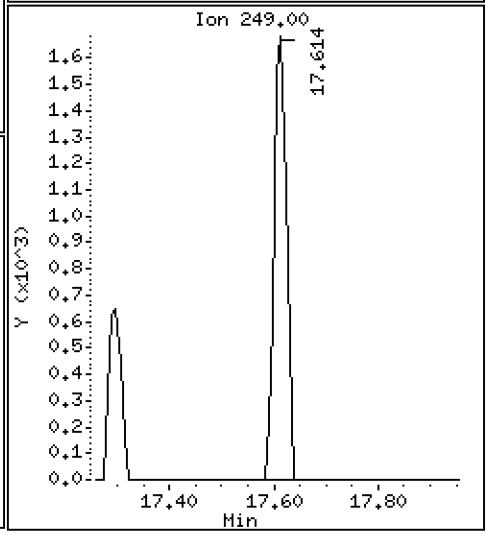


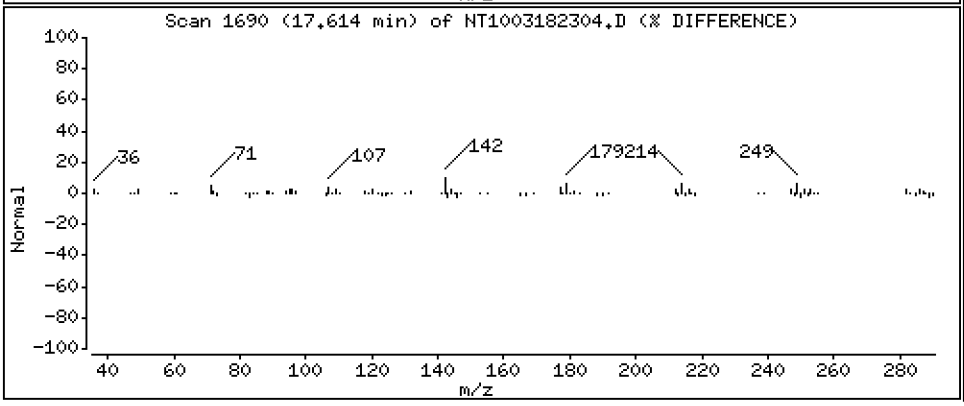












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

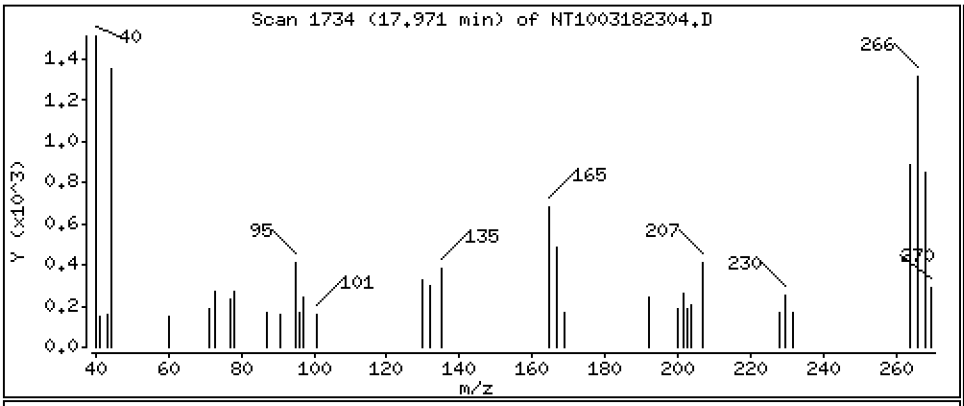
Operator: VTS

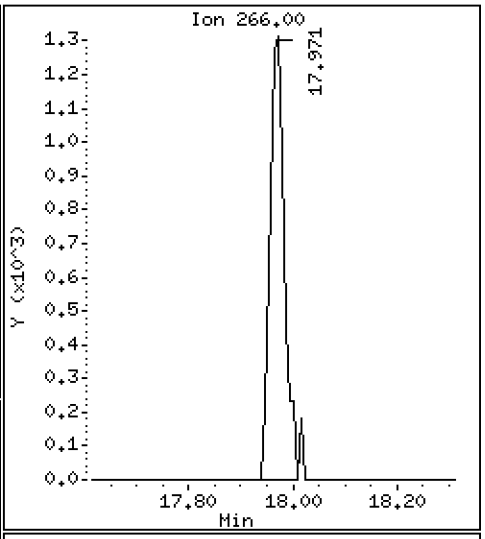
Column phase: ZB-5msi

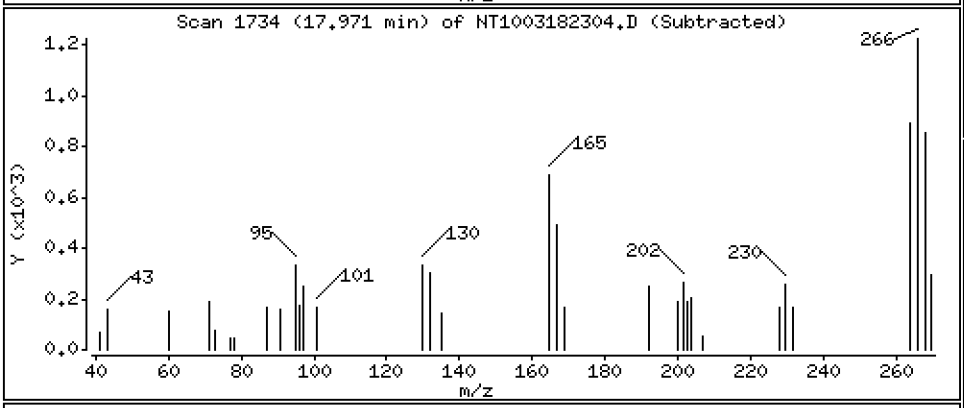
Column diameter: 0.25

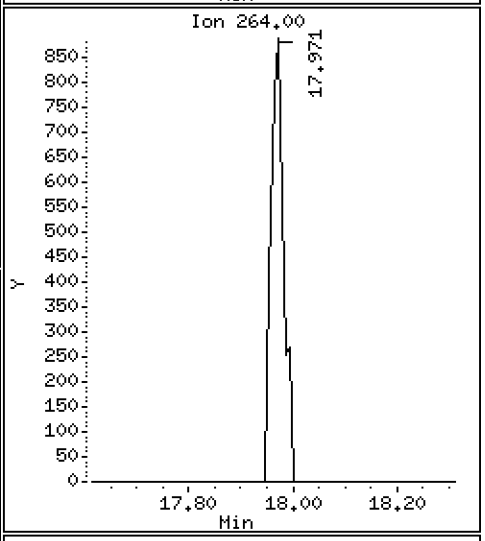
58 Pentachlorophenol

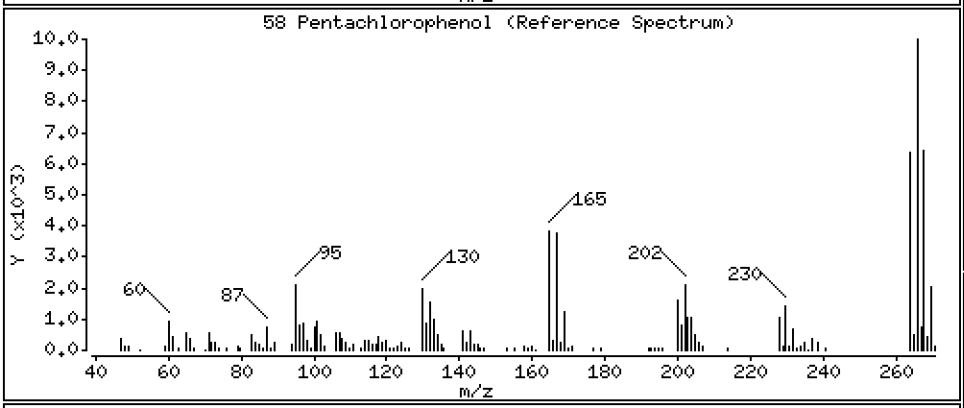
Concentration: 0.1160 ug/mL

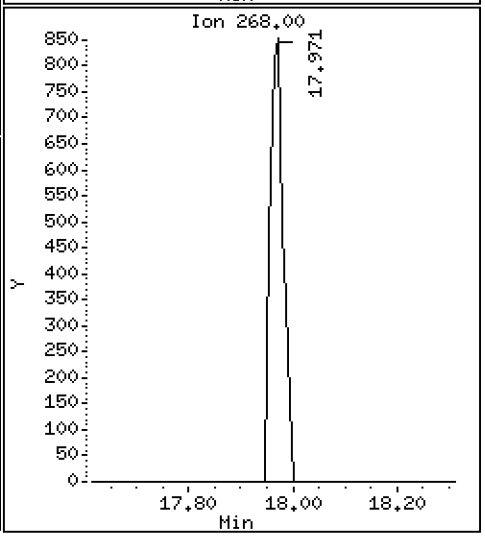


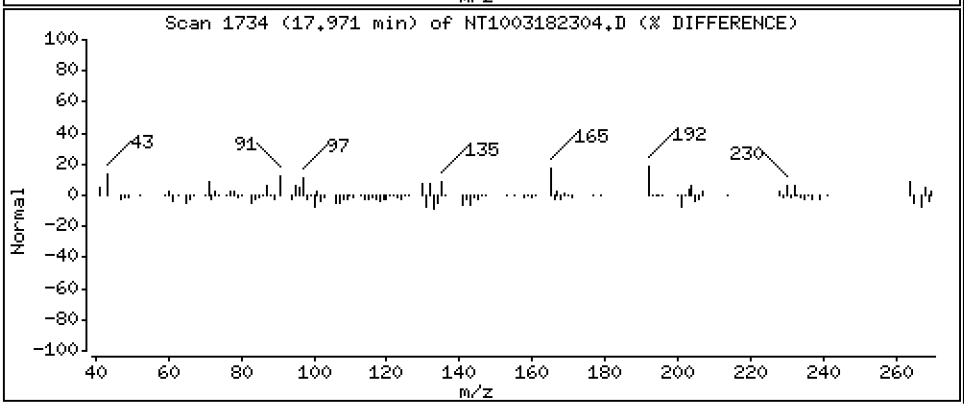












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

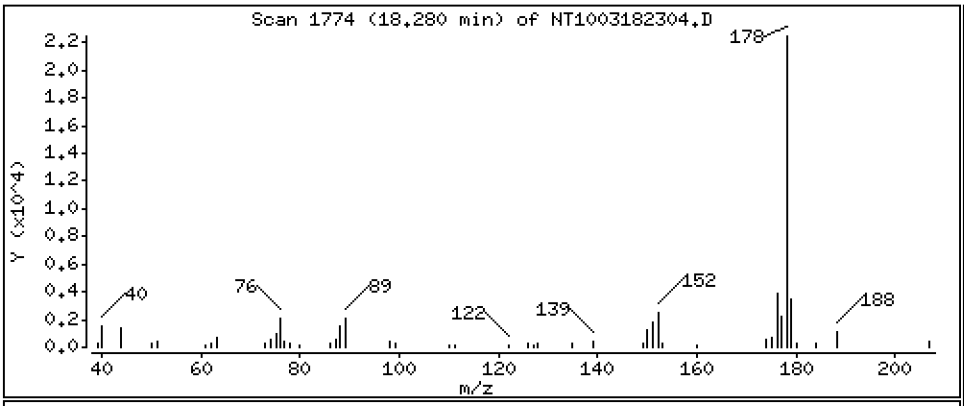
Operator: VTS

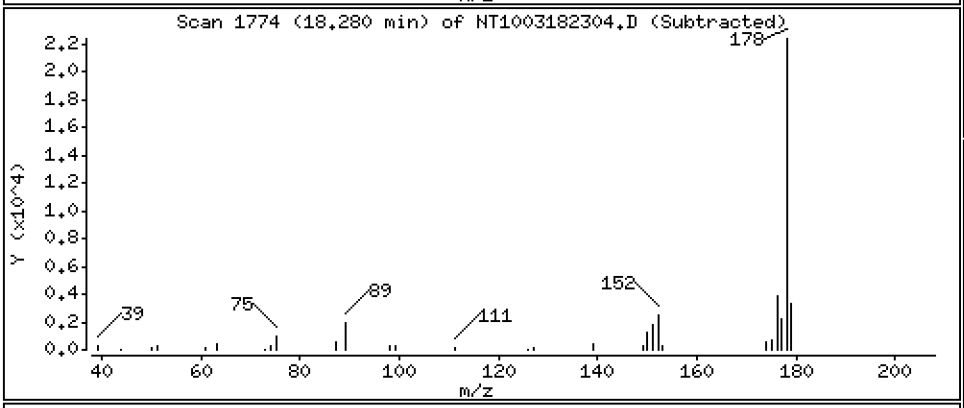
Column phase: ZB-5msi

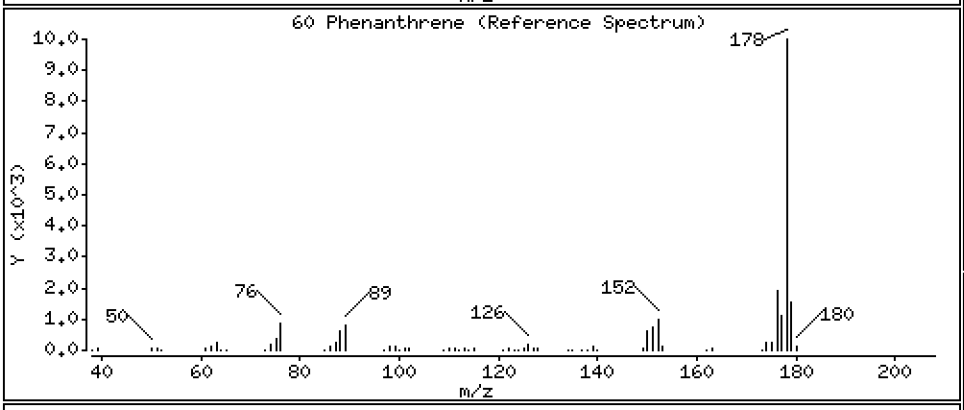
Column diameter: 0.25

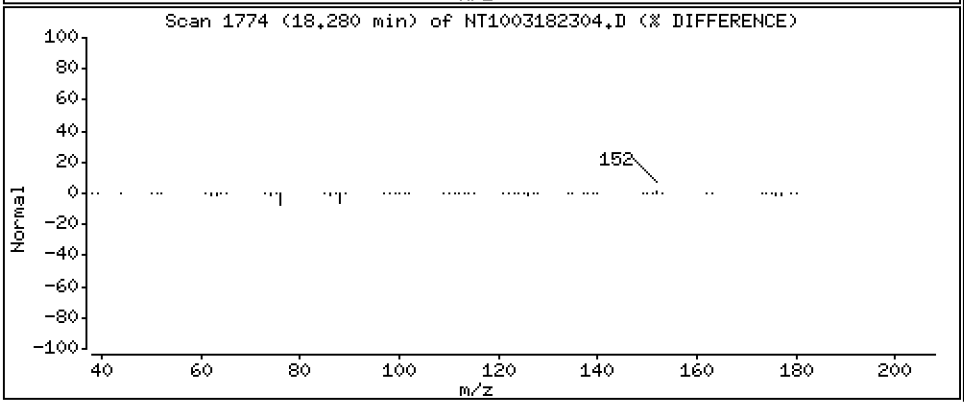
60 Phenanthrene

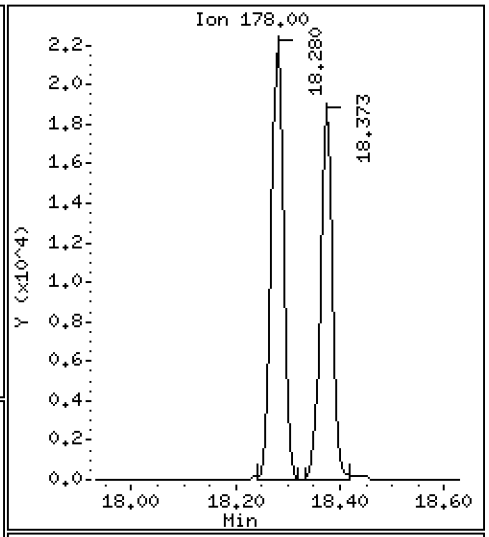
Concentration: 0.2059 ug/mL

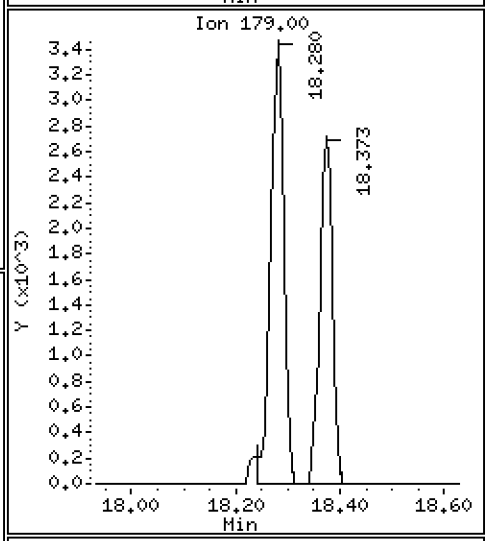


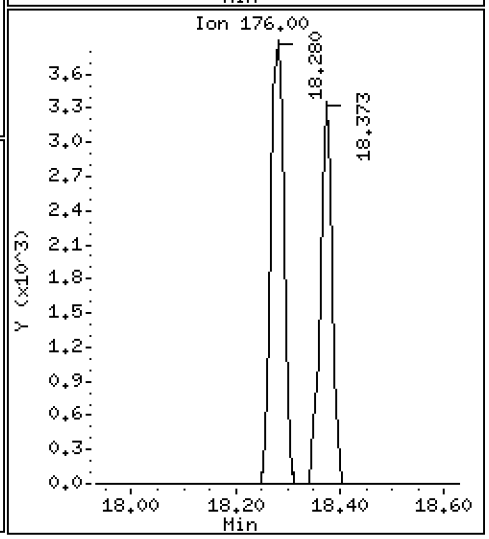












Date : 18-MAR-2023 19:37

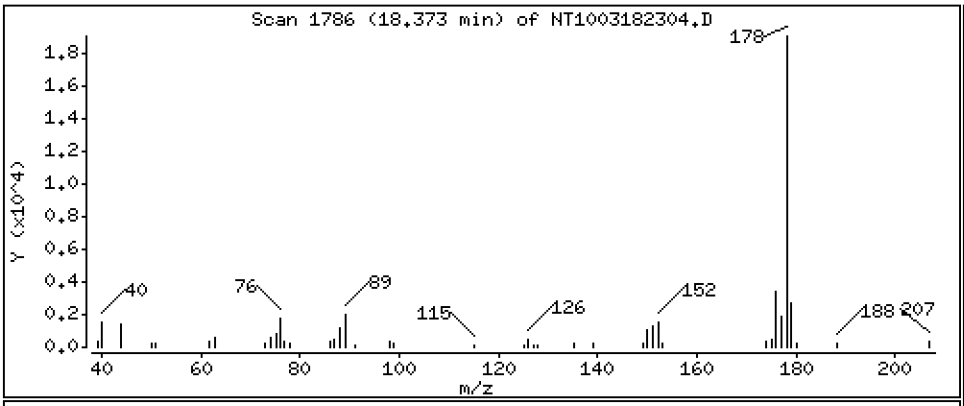
Client ID: Instrument: nt10.i

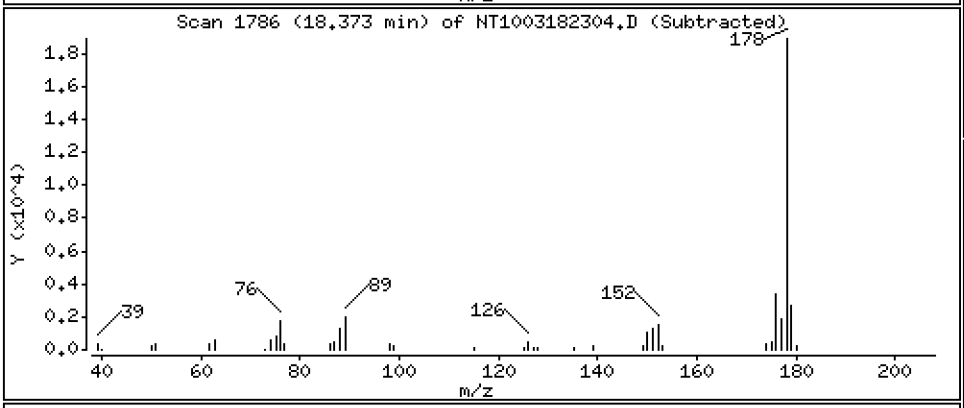
Sample Info: SLC0504-LCV1

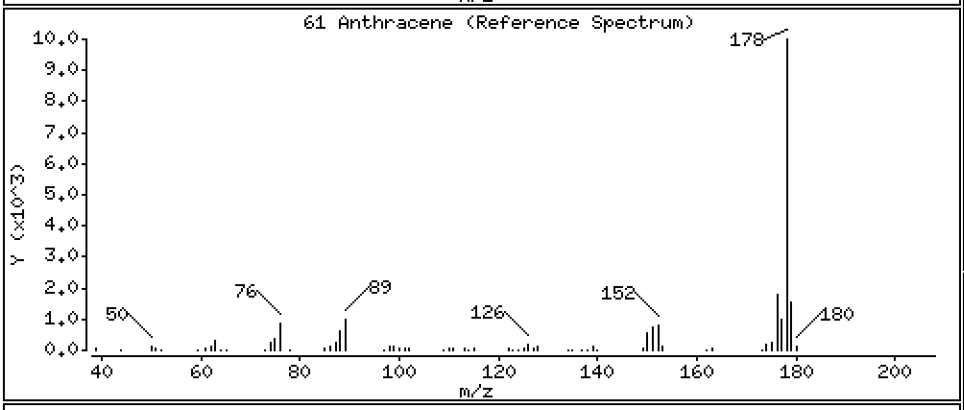
Operator: VTS

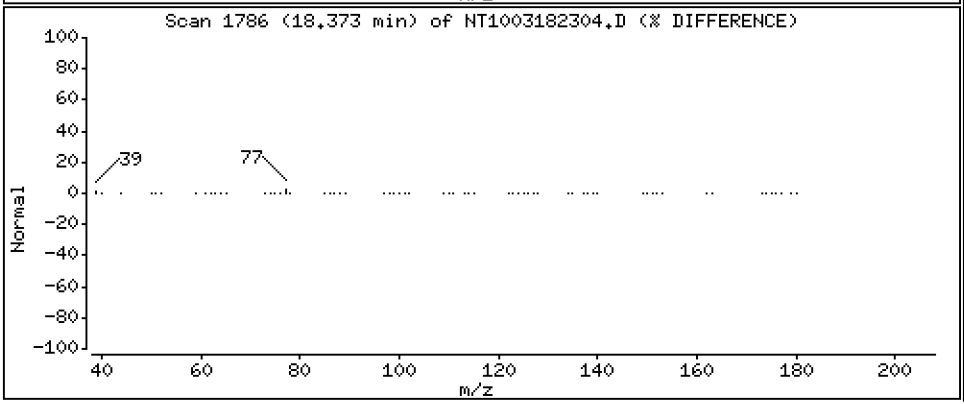
Column phase: ZB-5msi Column diameter: 0.25

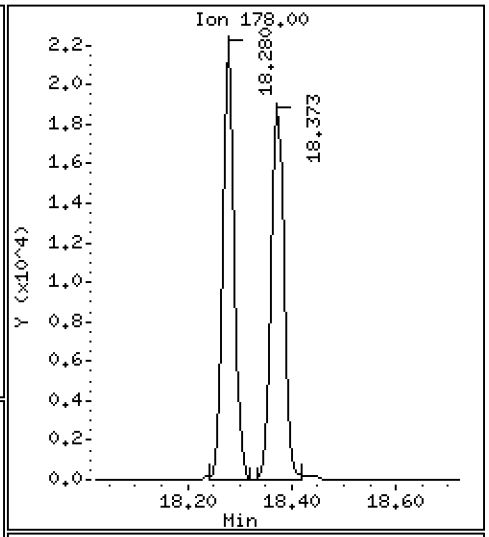
61 Anthracene Concentration: 0.1925 ug/mL

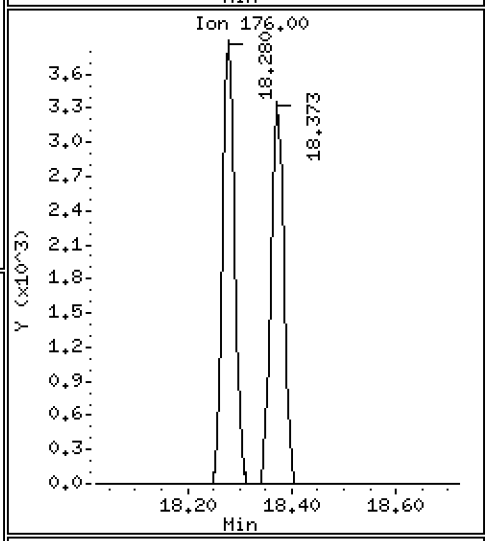


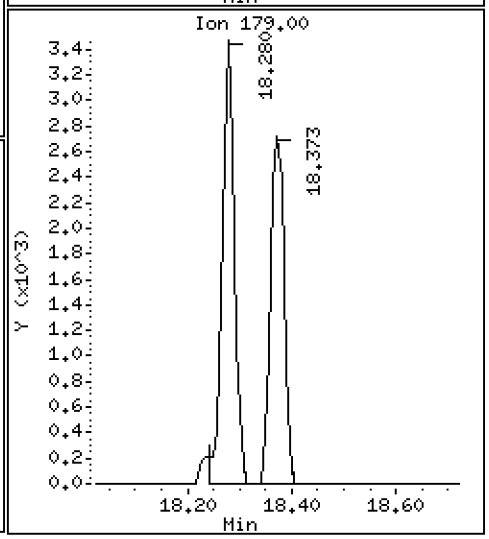












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

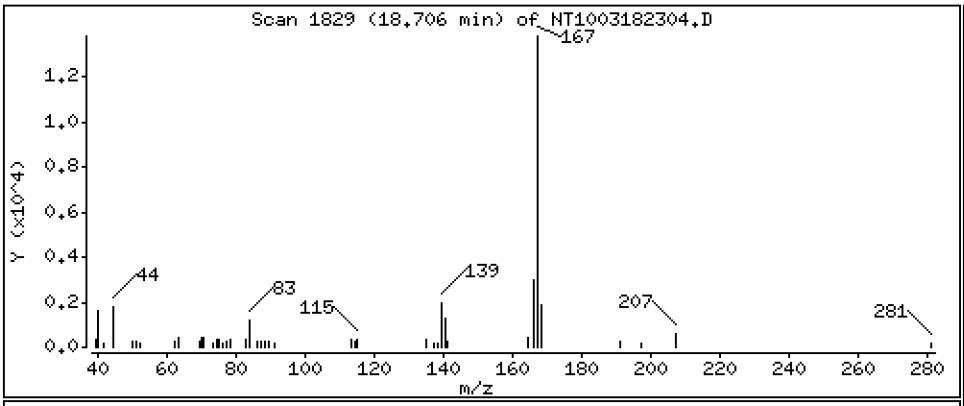
Operator: VTS

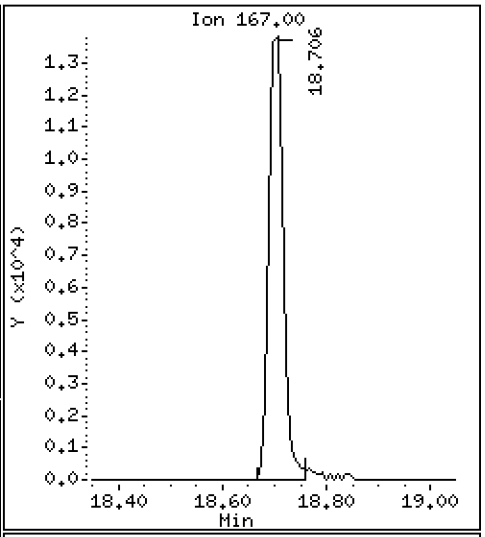
Column phase: ZB-5msi

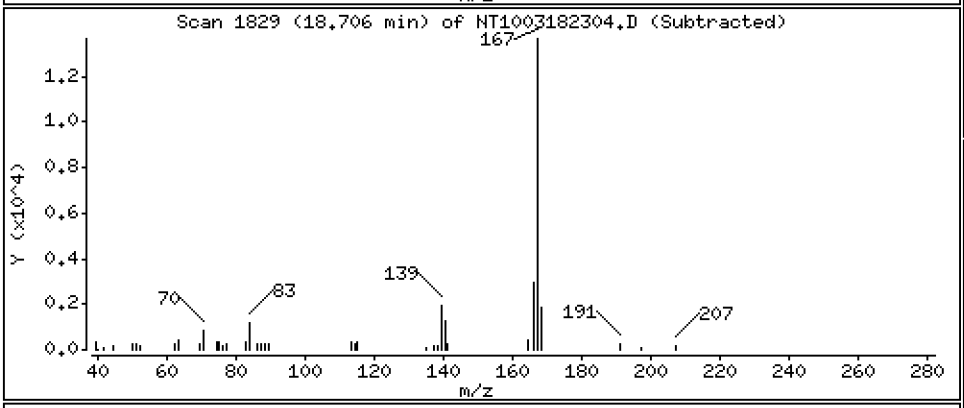
Column diameter: 0.25

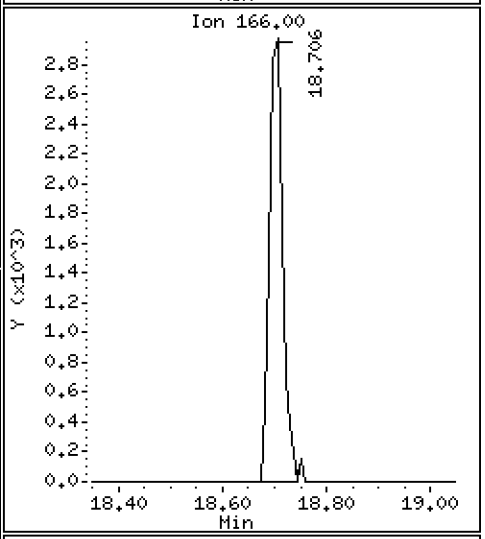
62 Carbazole

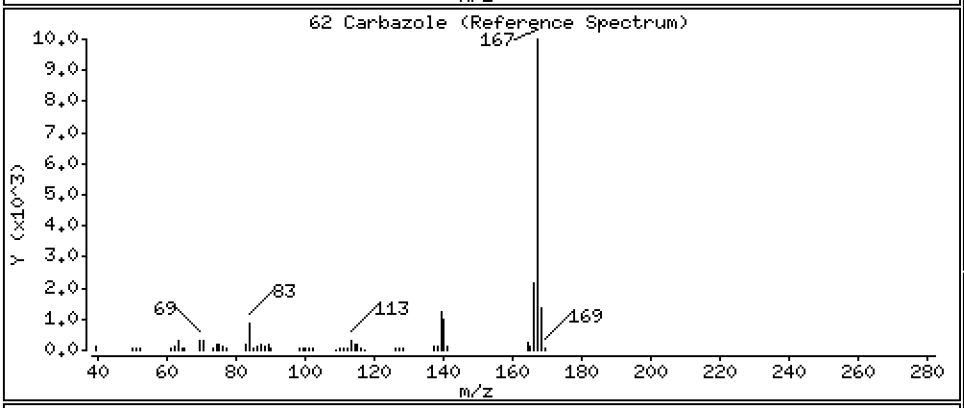
Concentration: 0.1785 ug/mL

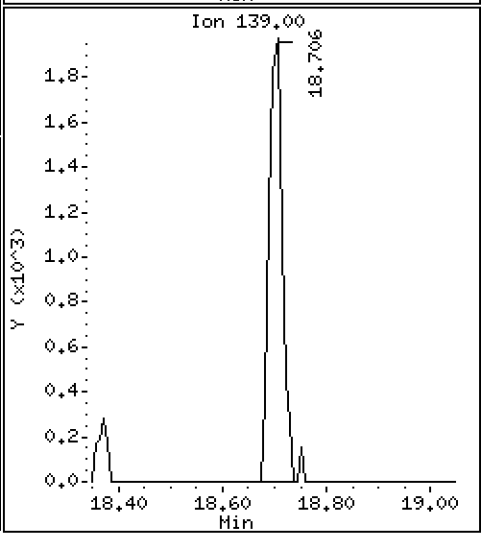


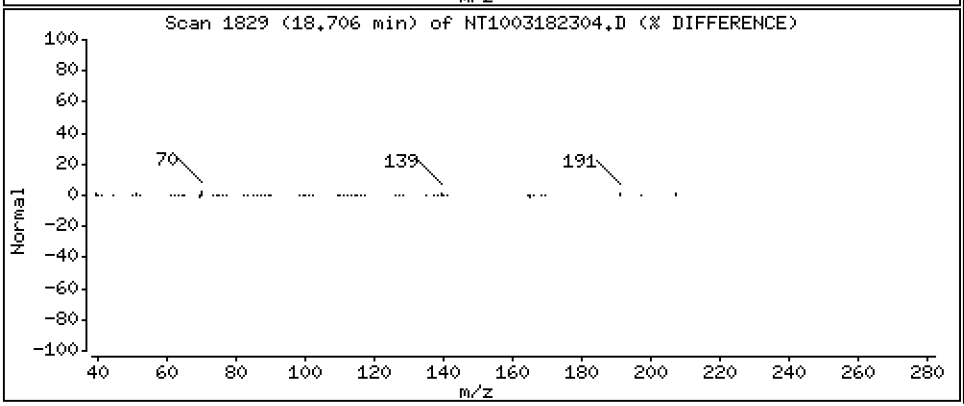












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

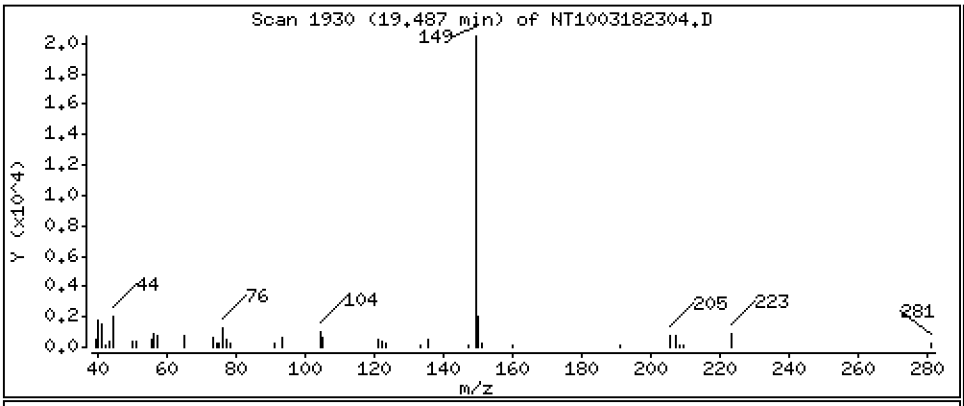
Operator: VTS

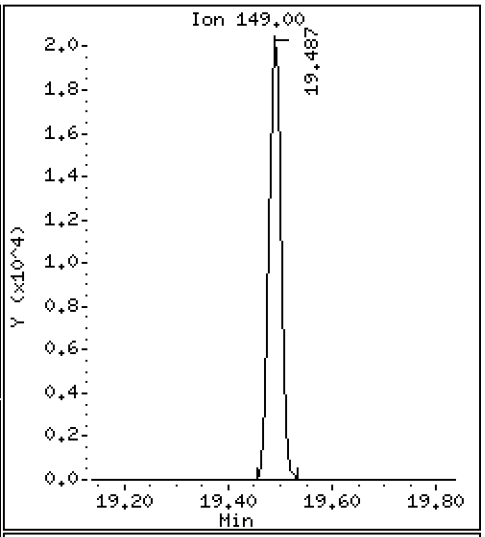
Column phase: ZB-5msi

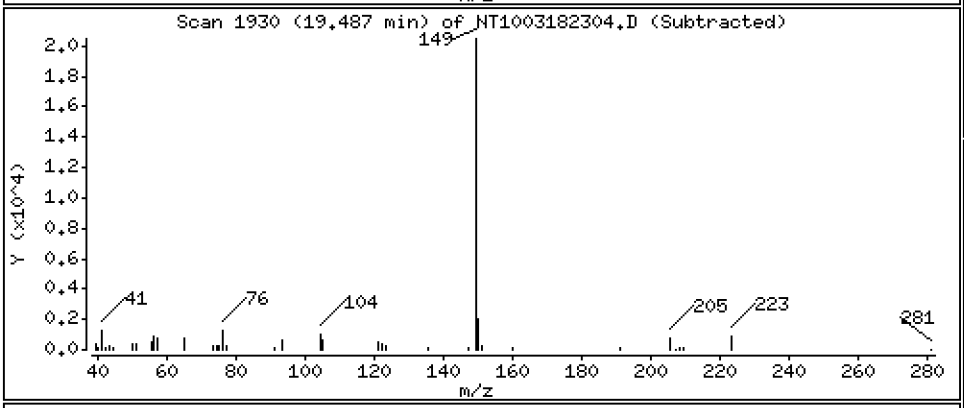
Column diameter: 0.25

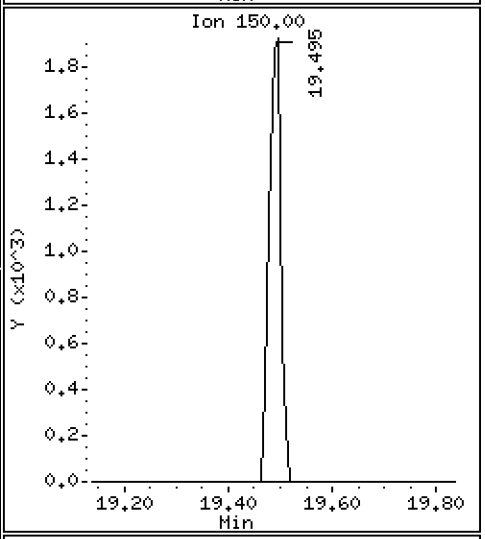
63 Di-n-butylphthalate

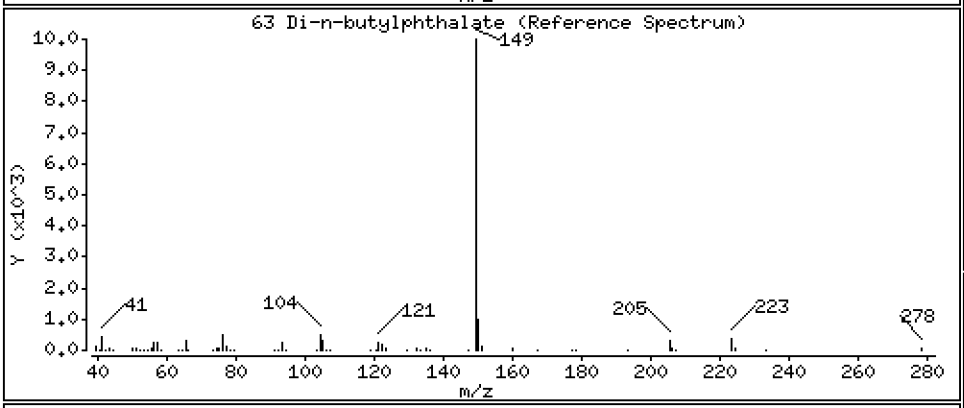
Concentration: 0.1604 ug/mL

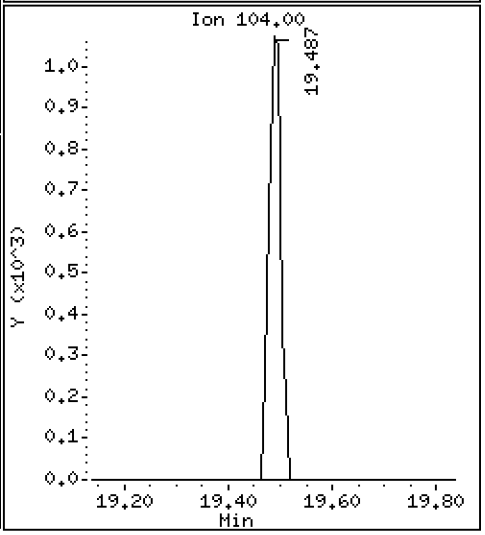


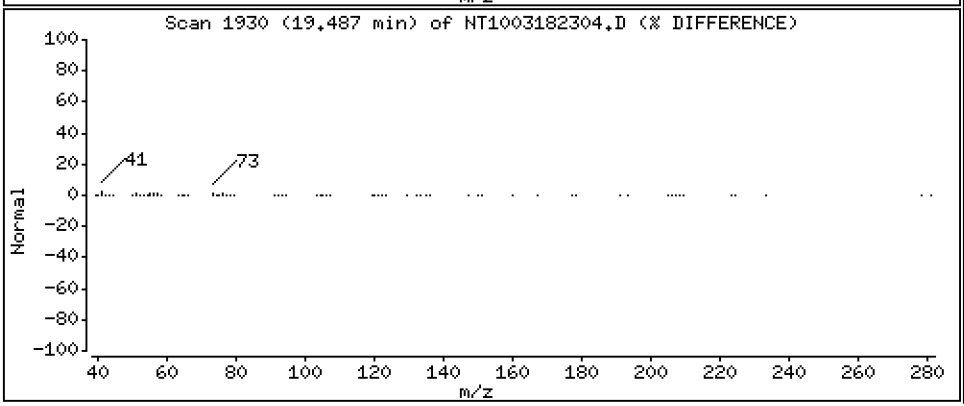












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

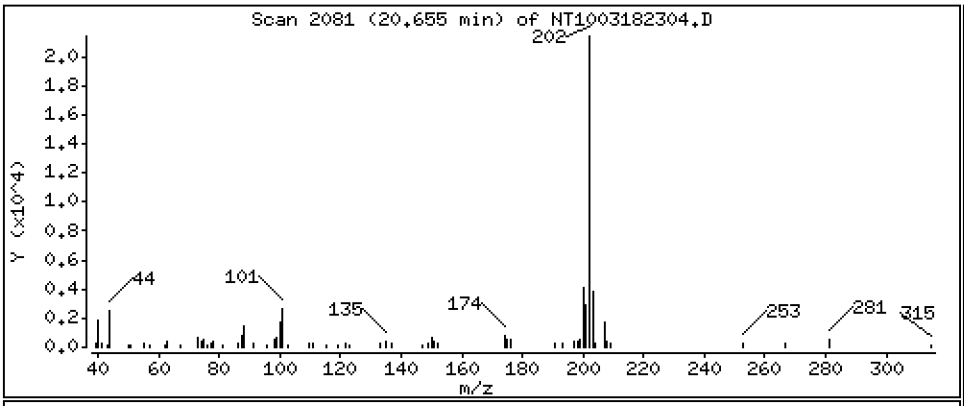
Operator: VTS

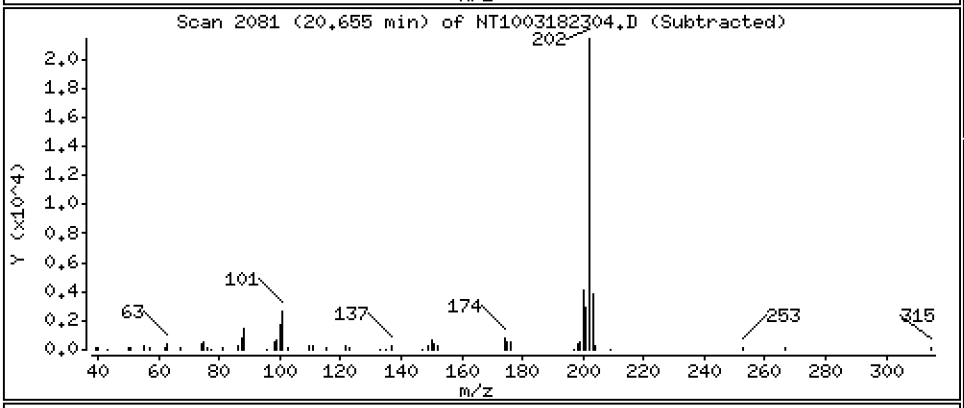
Column phase: ZB-5msi

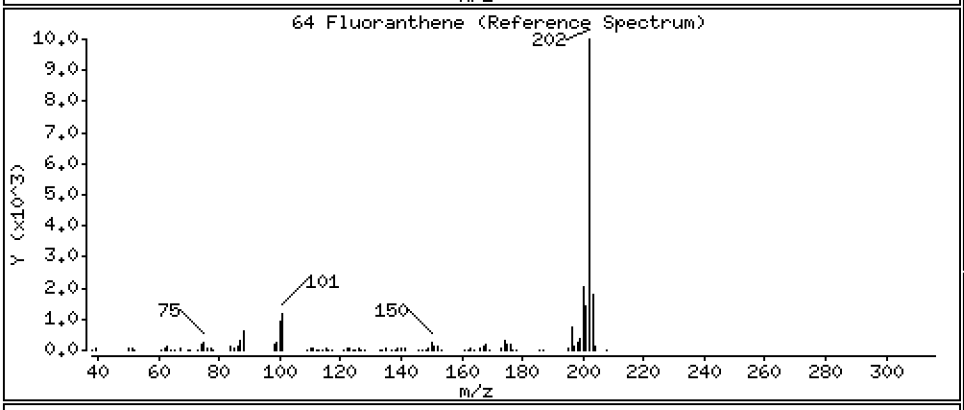
Column diameter: 0.25

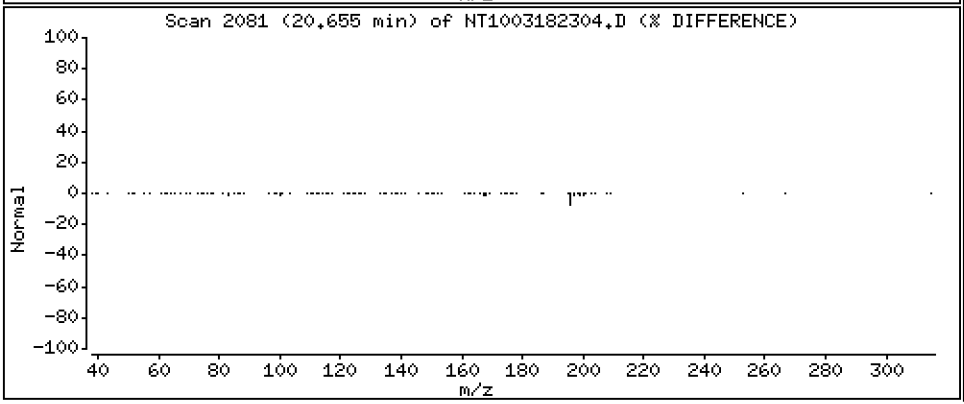
64 Fluoranthene

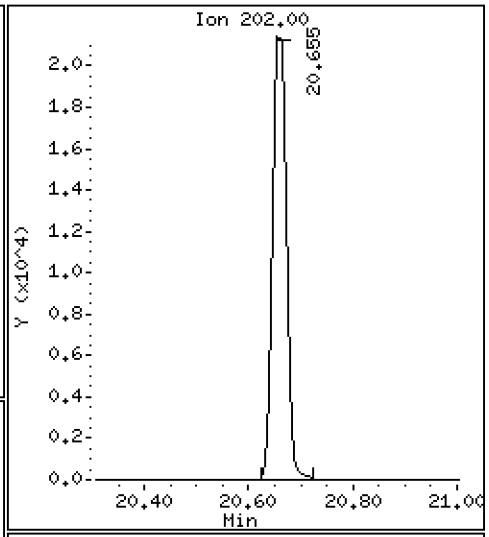
Concentration: 0.1914 ug/mL

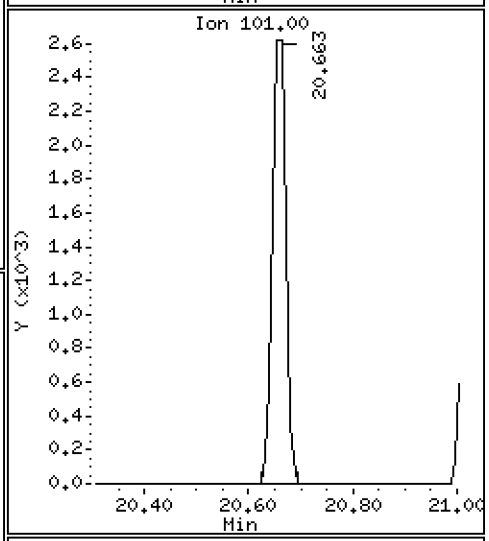


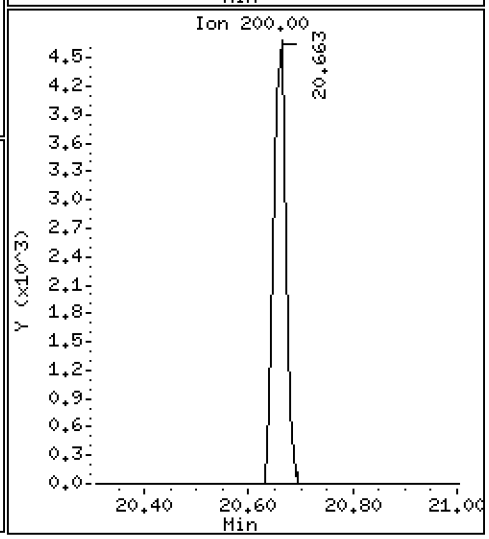












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

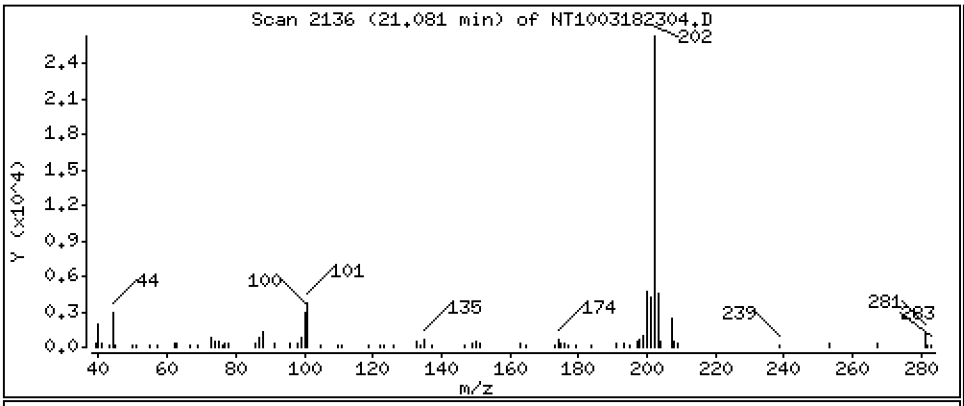
Operator: VTS

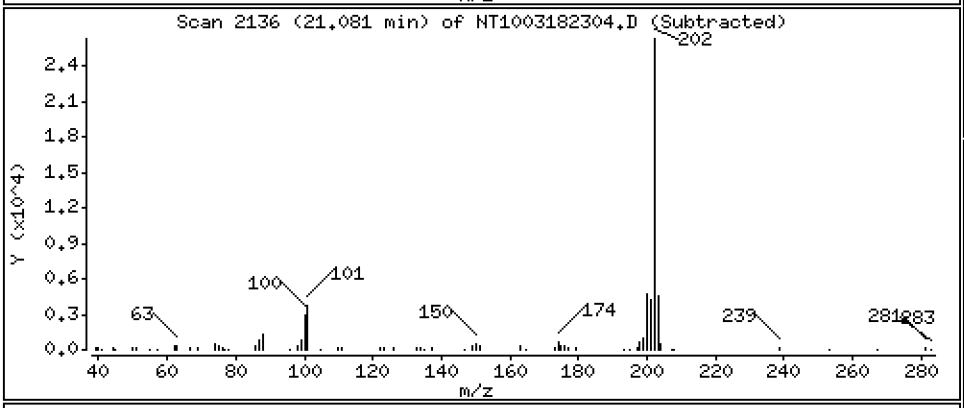
Column phase: ZB-5msi

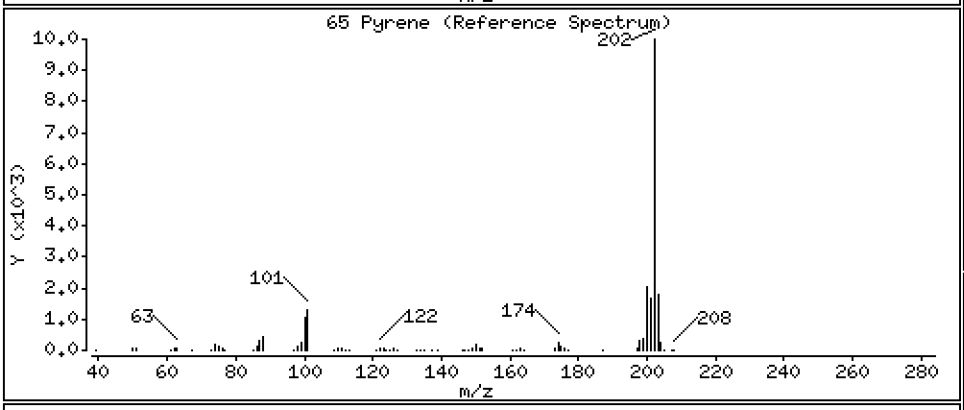
Column diameter: 0.25

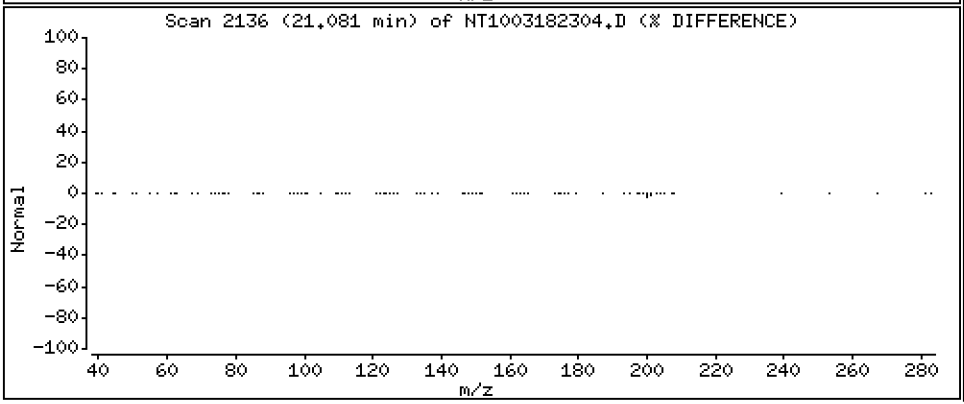
65 Pyrene

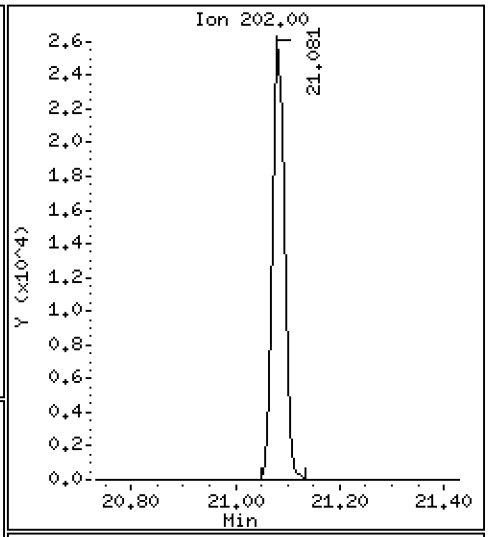
Concentration: 0.1950 ug/mL

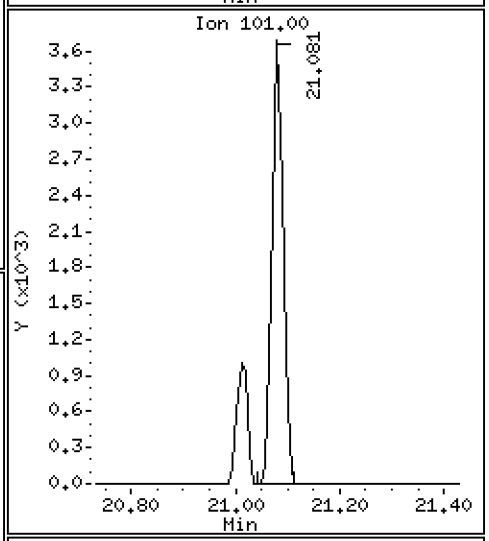


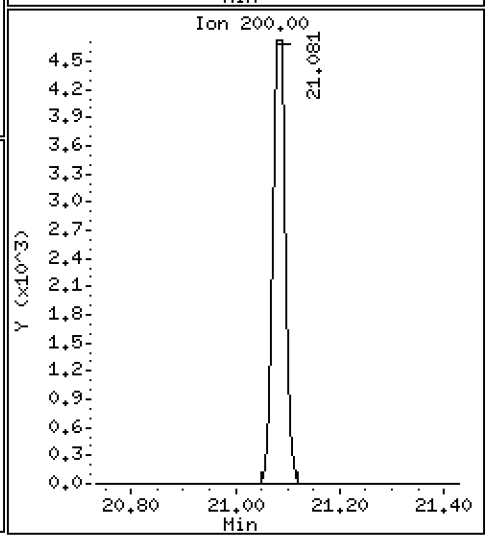












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

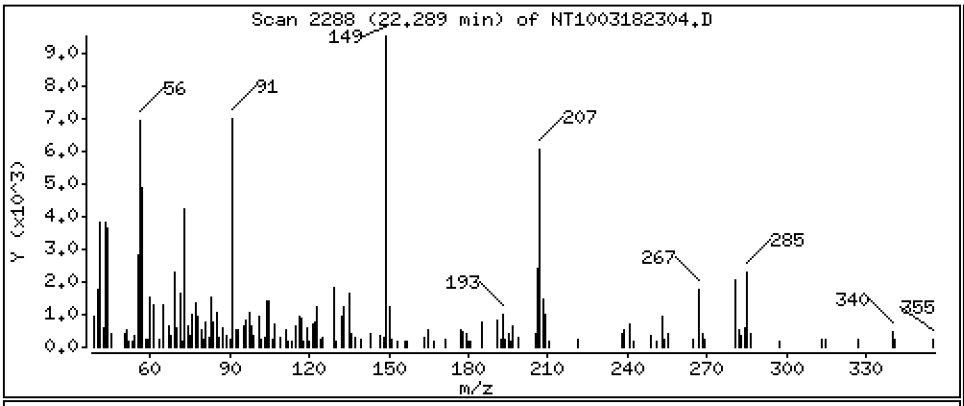
Operator: VTS

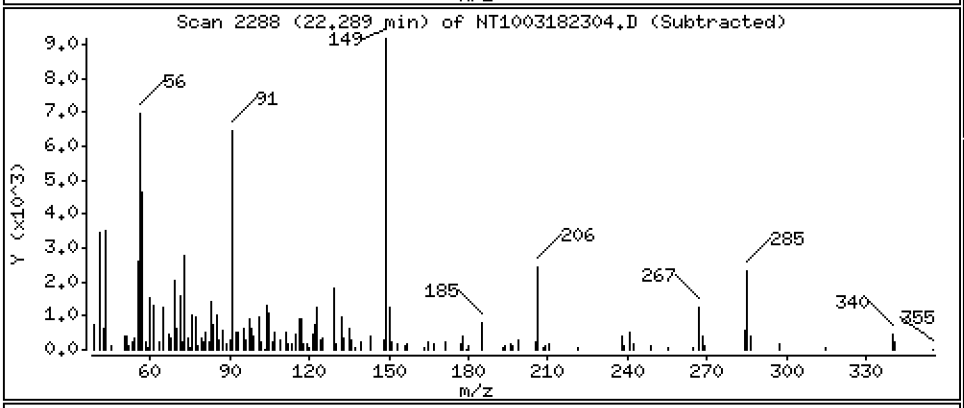
Column phase: ZB-5msi

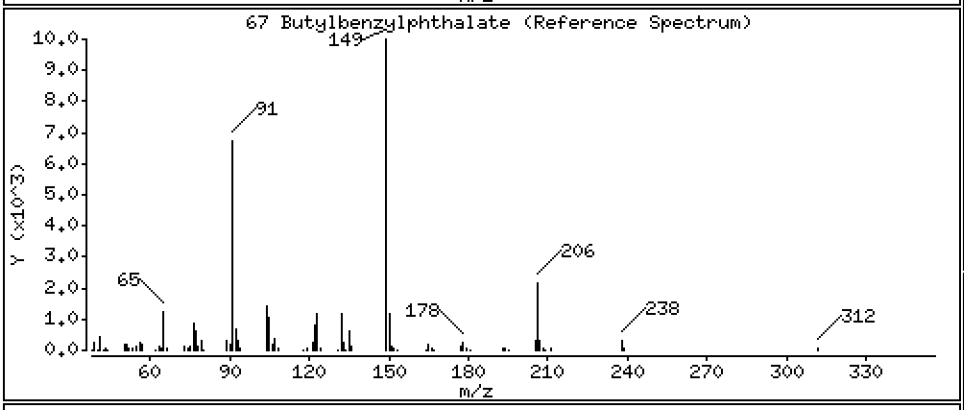
Column diameter: 0.25

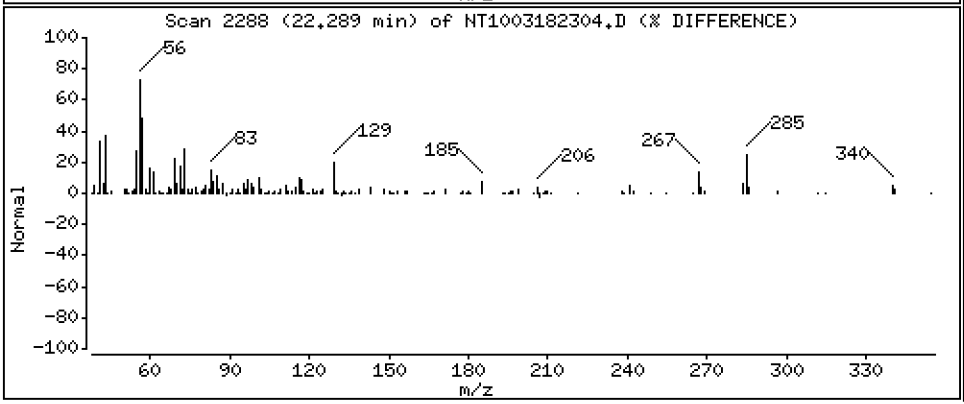
67 Butylbenzylphthalate

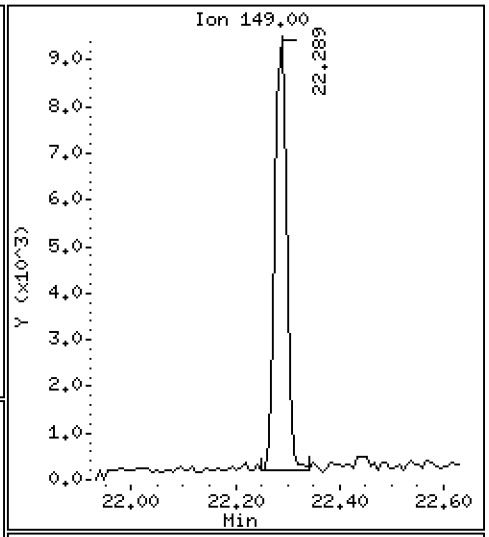
Concentration: 0.1936 ug/mL

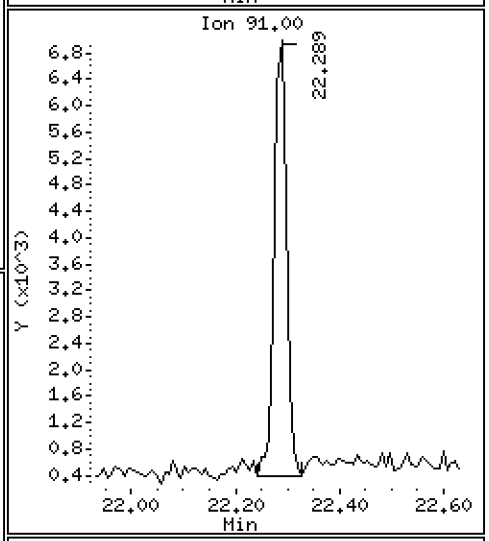


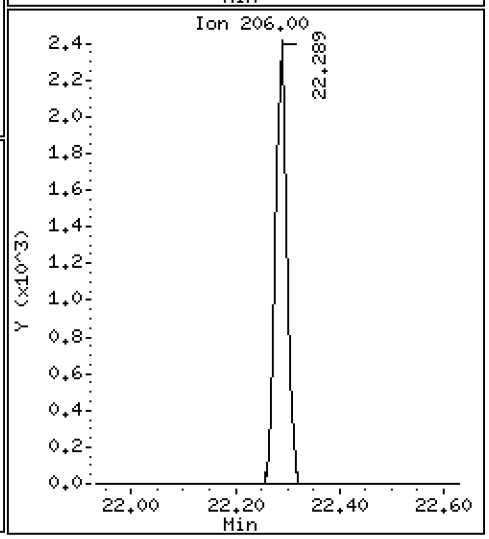












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

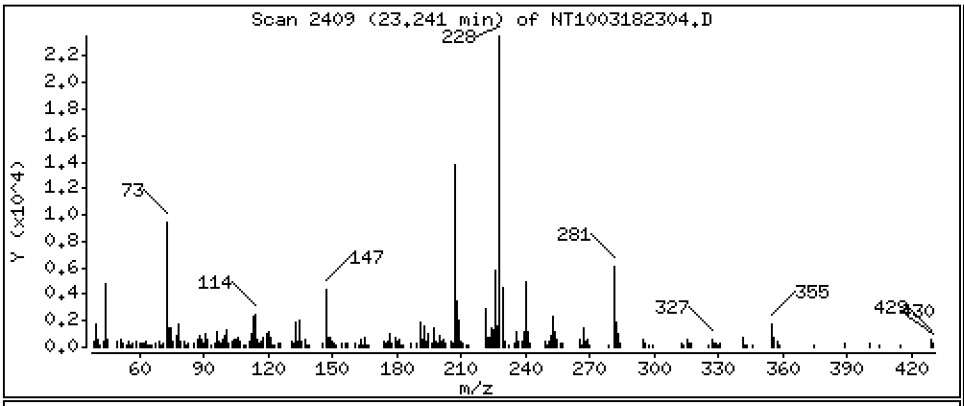
Operator: VTS

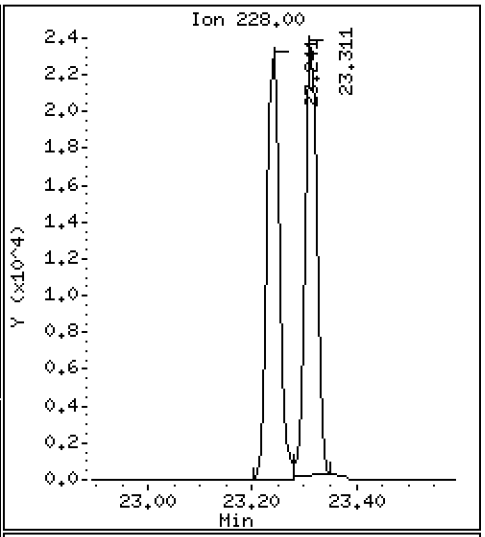
Column phase: ZB-5msi

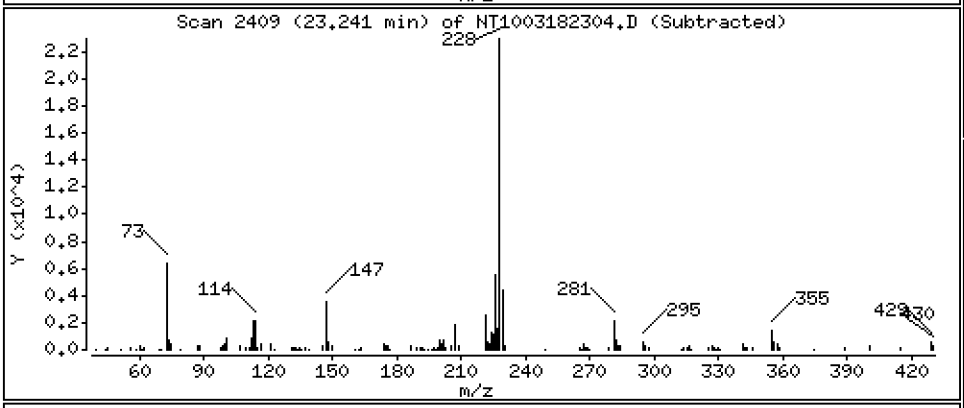
Column diameter: 0.25

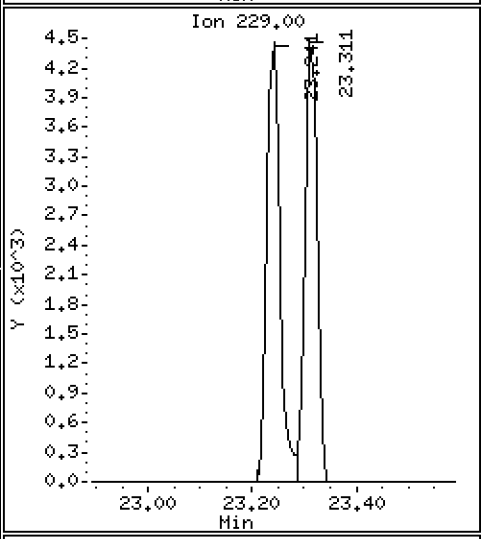
68 Benzo(a)anthracene

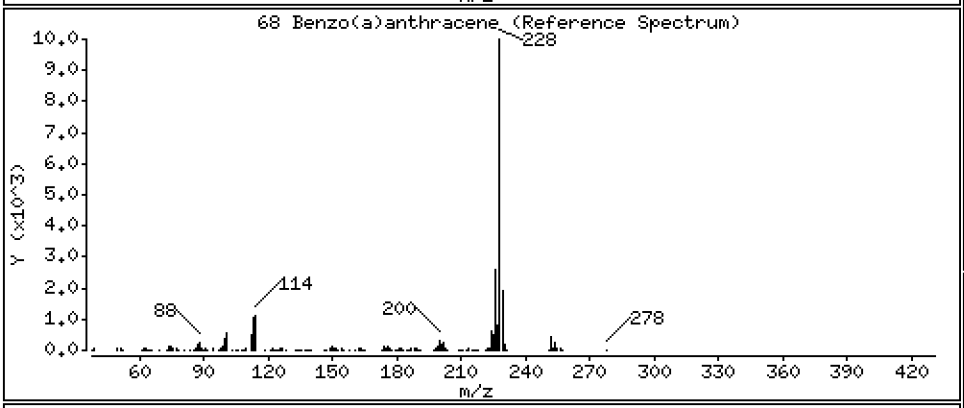
Concentration: 0.2141 ug/mL

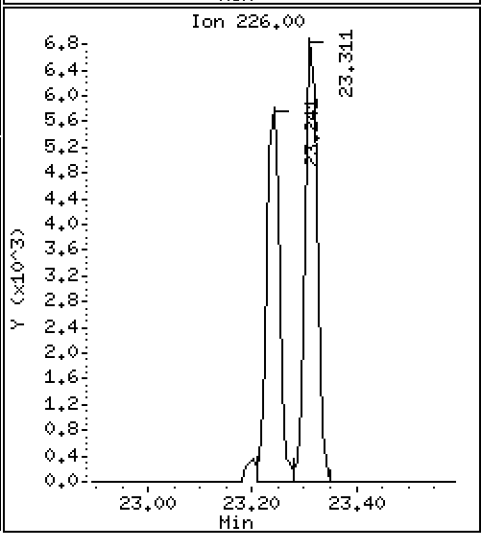


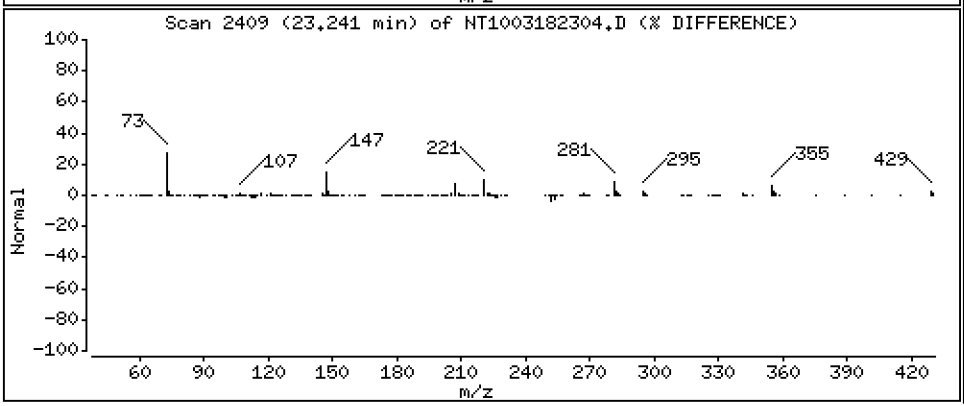












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

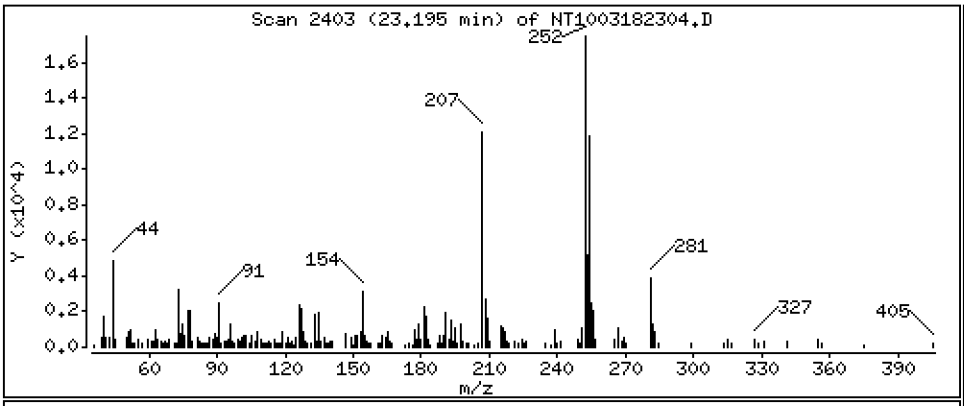
Operator: VTS

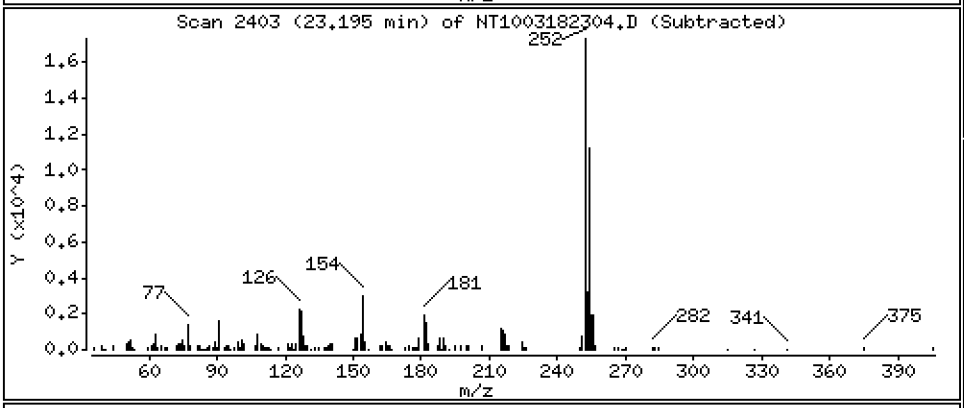
Column phase: ZB-5msi

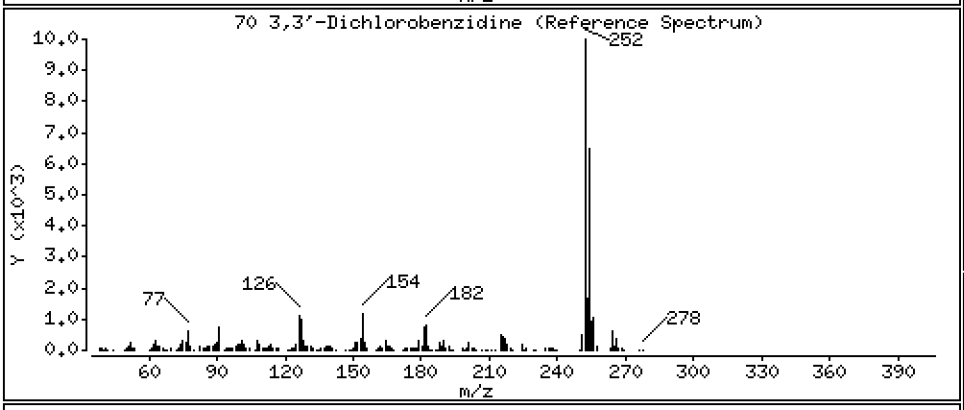
Column diameter: 0.25

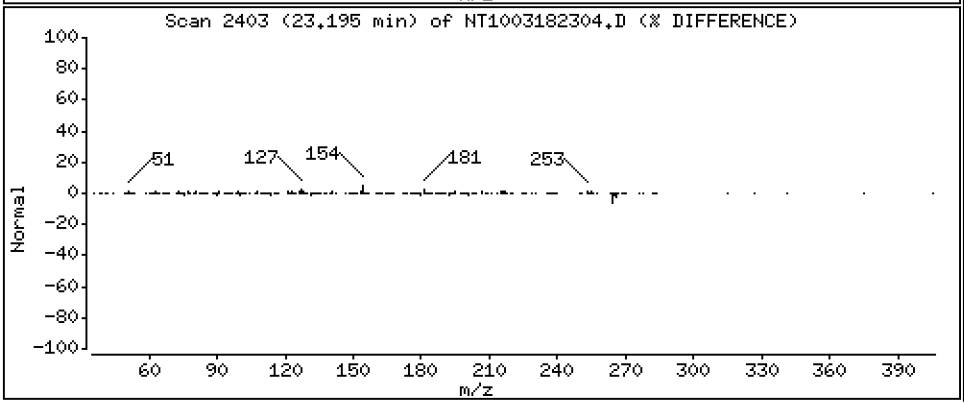
70 3,3'-Dichlorobenzidine

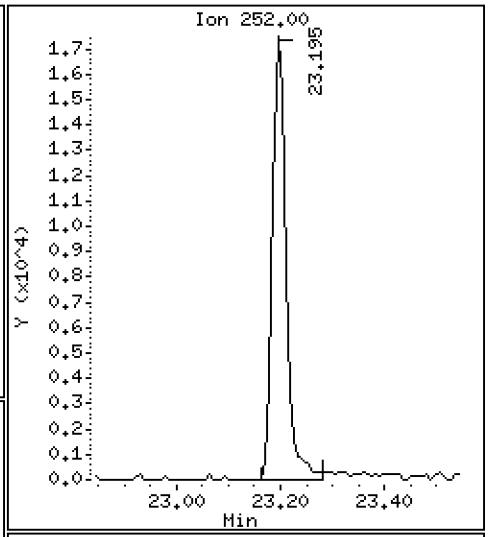
Concentration: 0.5561 ug/mL

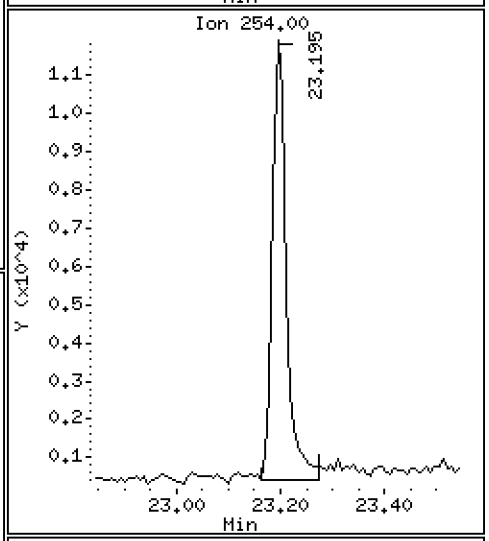


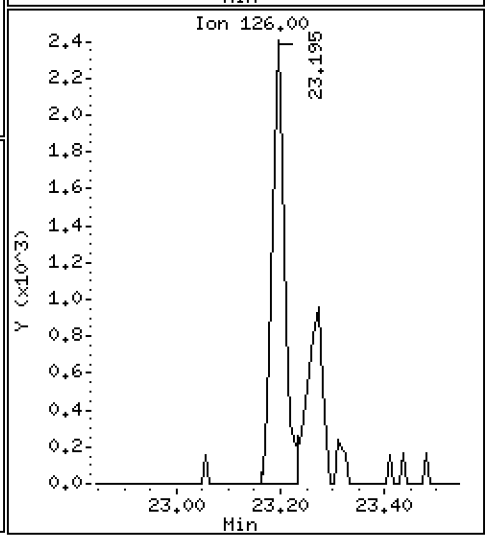












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

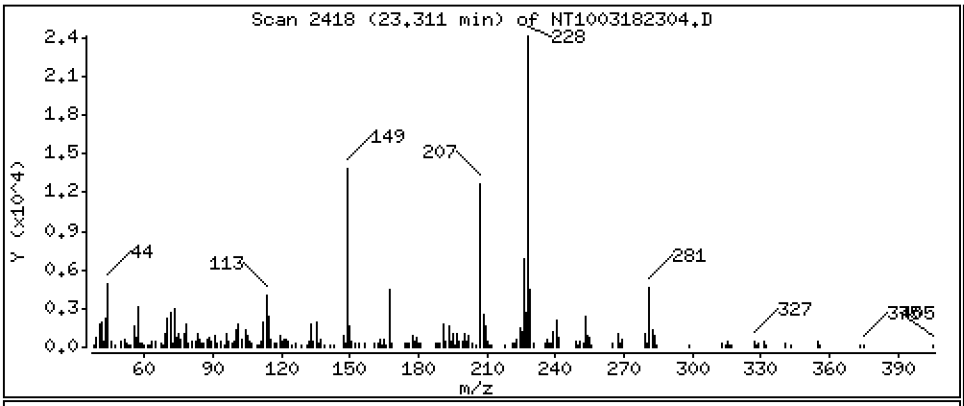
Operator: VTS

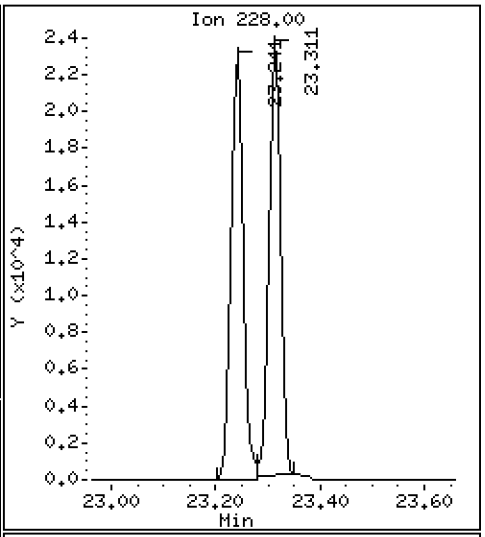
Column phase: ZB-5msi

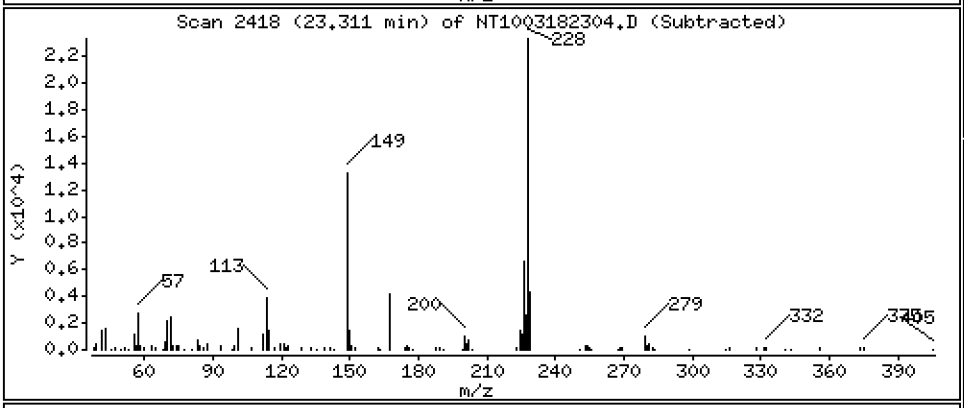
Column diameter: 0.25

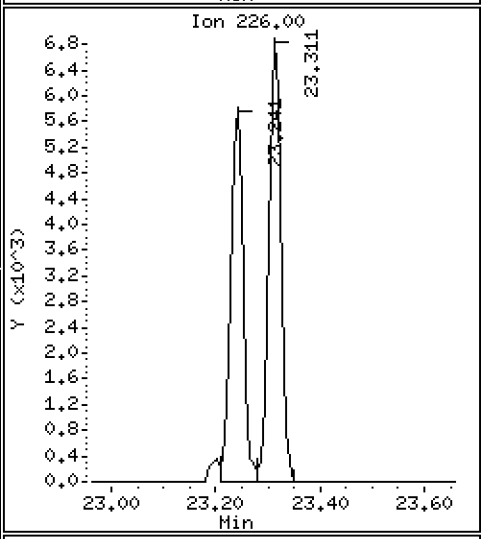
71 Chrysene

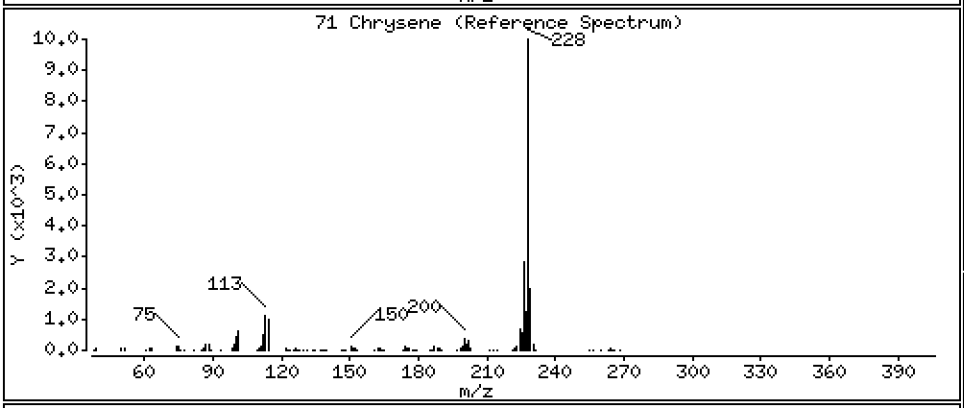
Concentration: 0.2033 ug/mL

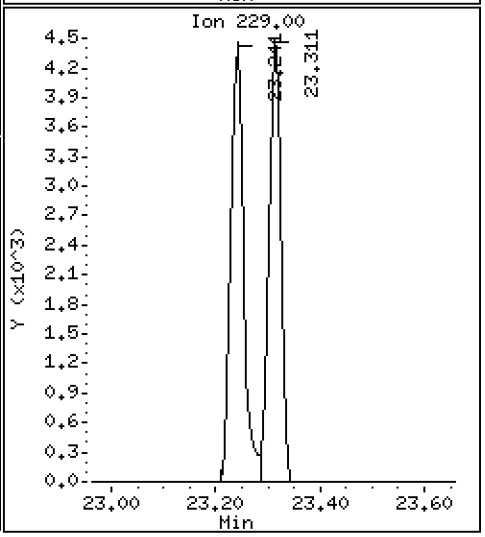


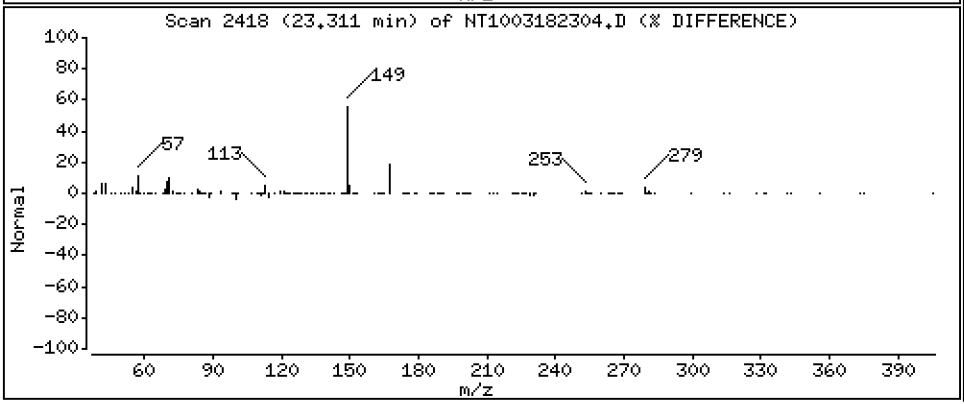












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

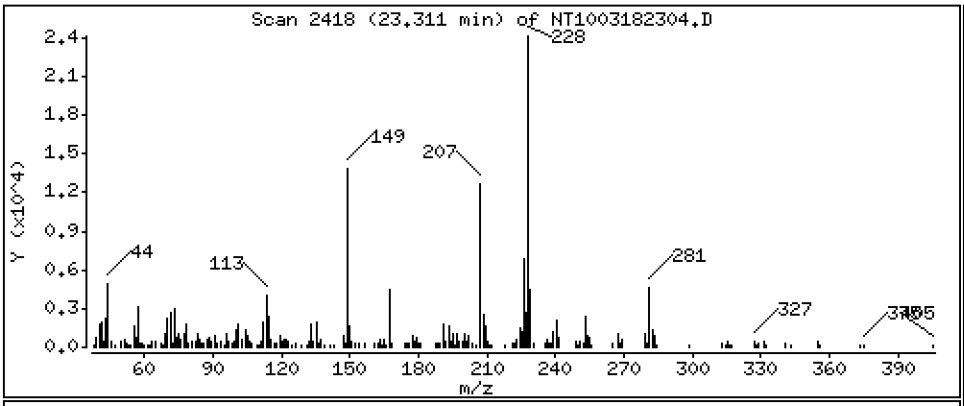
Operator: VTS

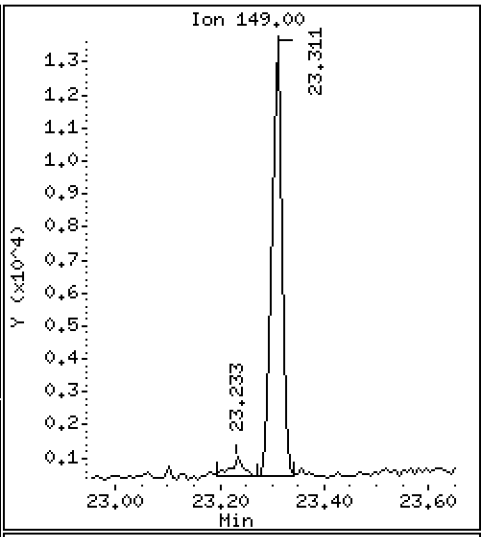
Column phase: ZB-5msi

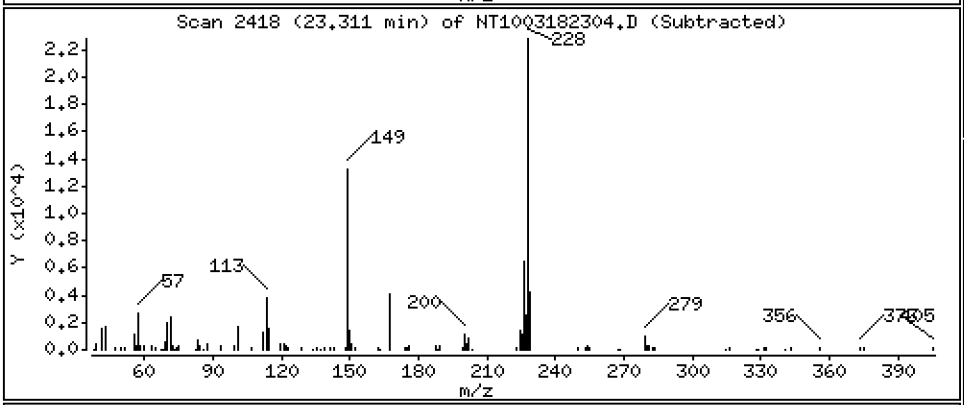
Column diameter: 0.25

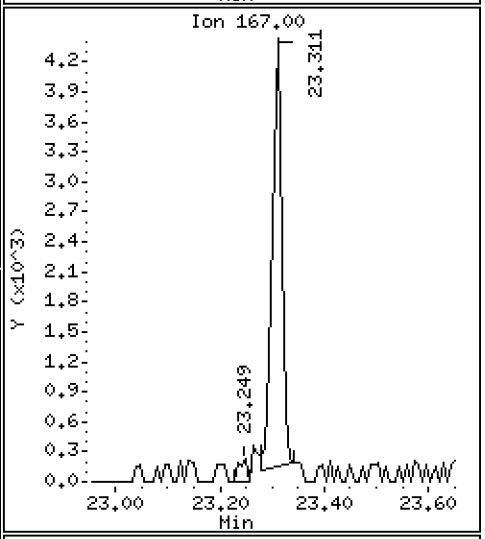
72 bis(2-Ethylhexyl)phthalate

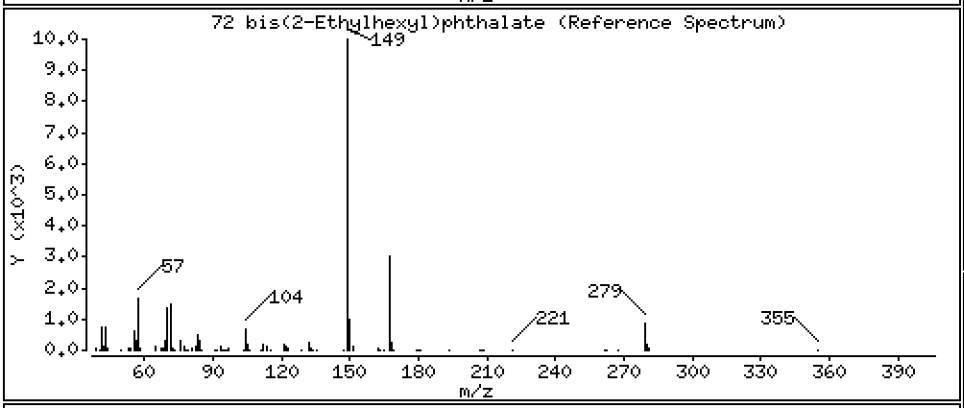
Concentration: 0.1531 ug/mL

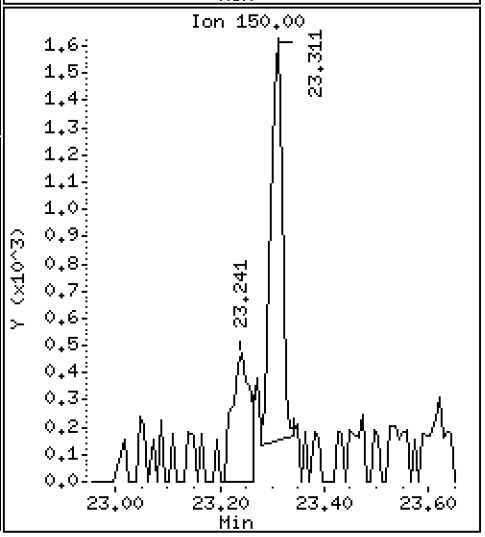


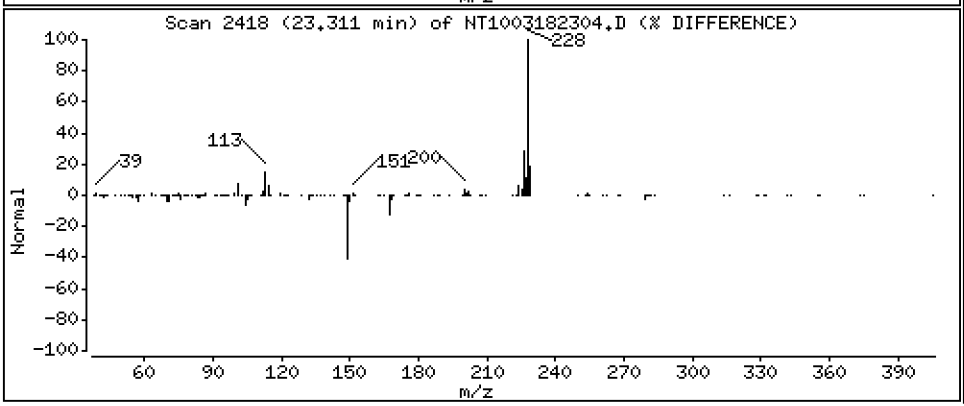












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

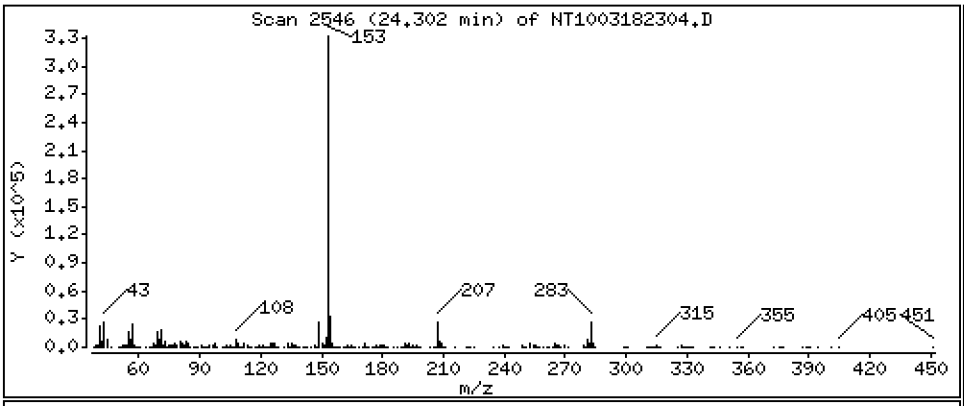
Operator: VTS

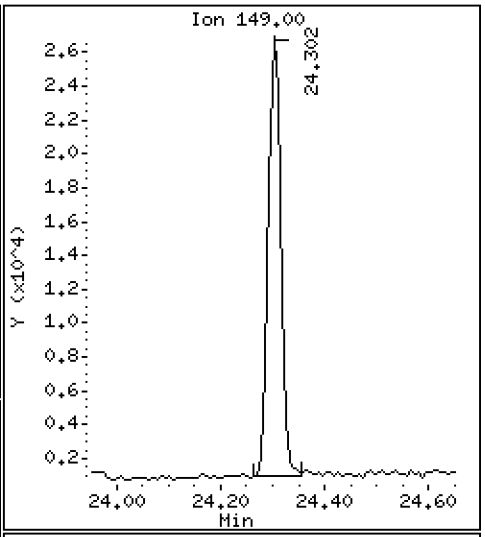
Column phase: ZB-5msi

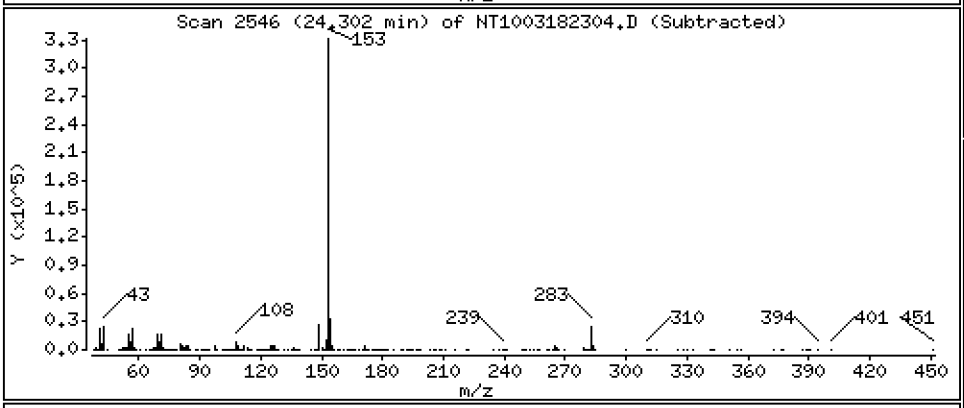
Column diameter: 0.25

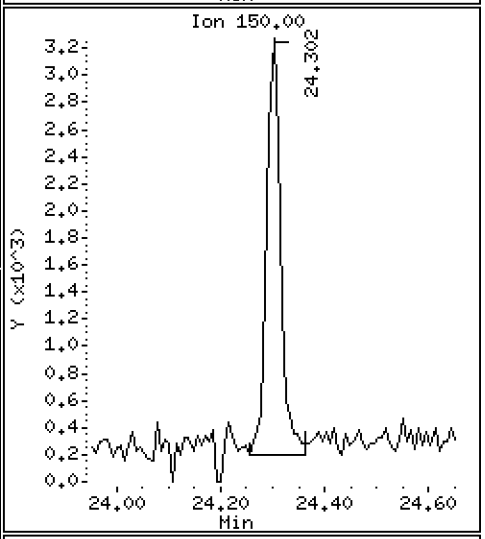
73 Di-n-octylphthalate

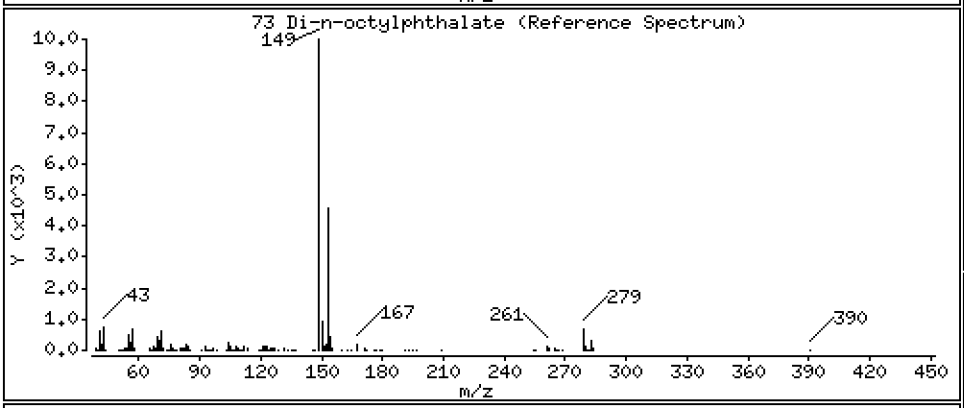
Concentration: 0.2056 ug/mL

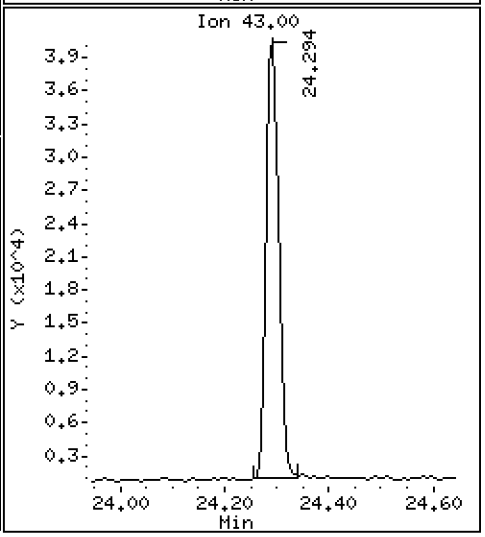


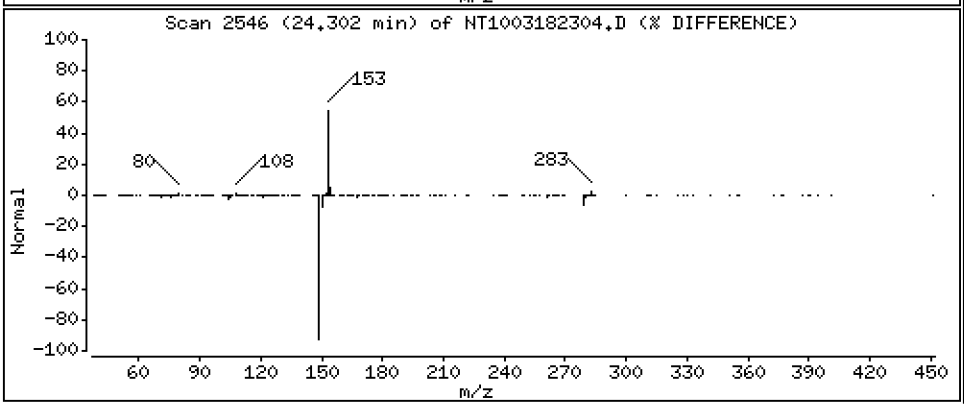












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

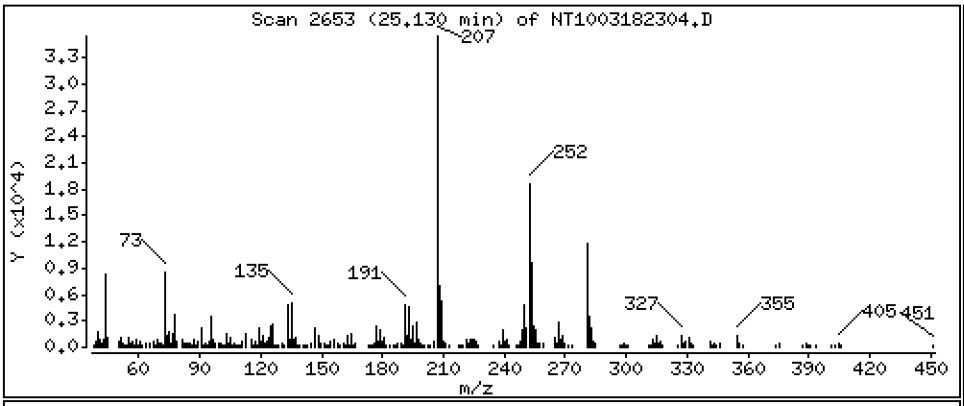
Operator: VTS

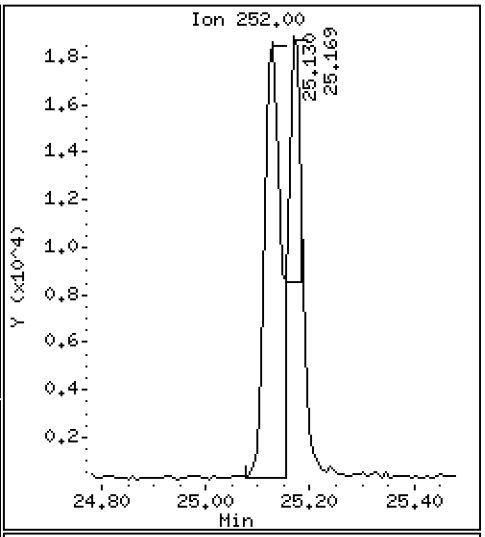
Column phase: ZB-5msi

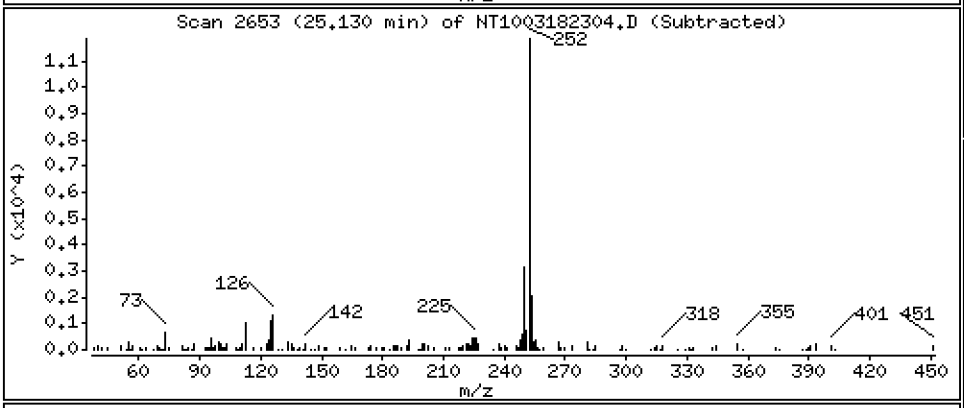
Column diameter: 0.25

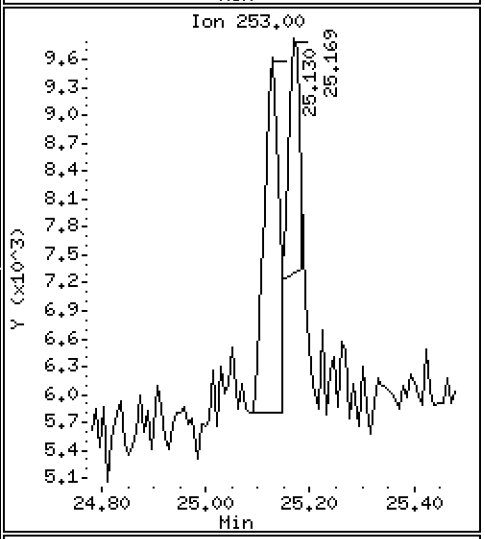
74 Benzo(b)fluoranthene

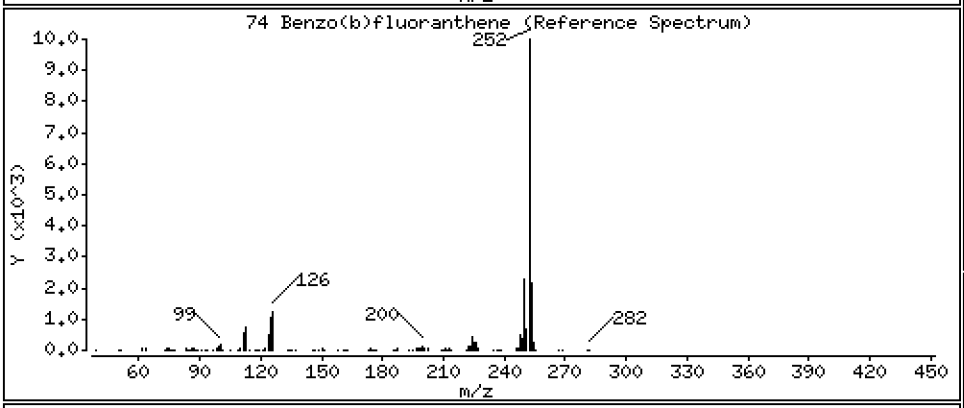
Concentration: 0.2180 ug/mL

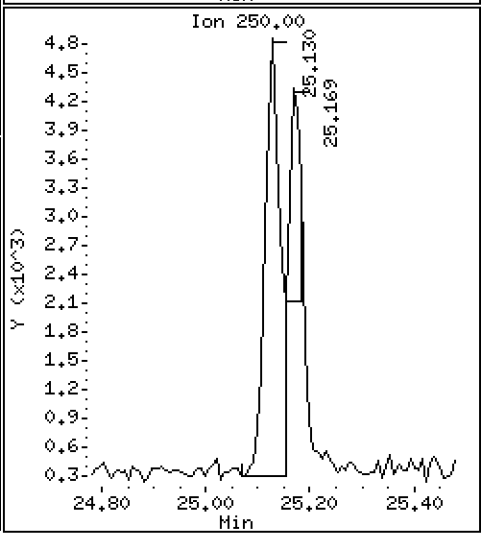


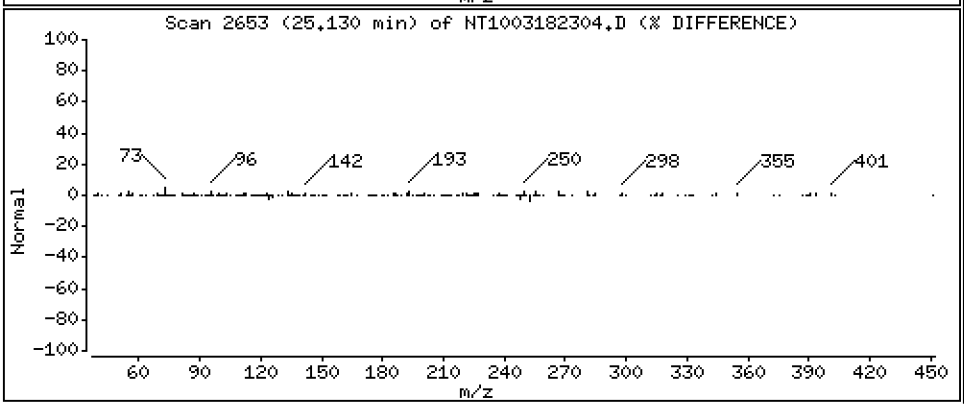












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

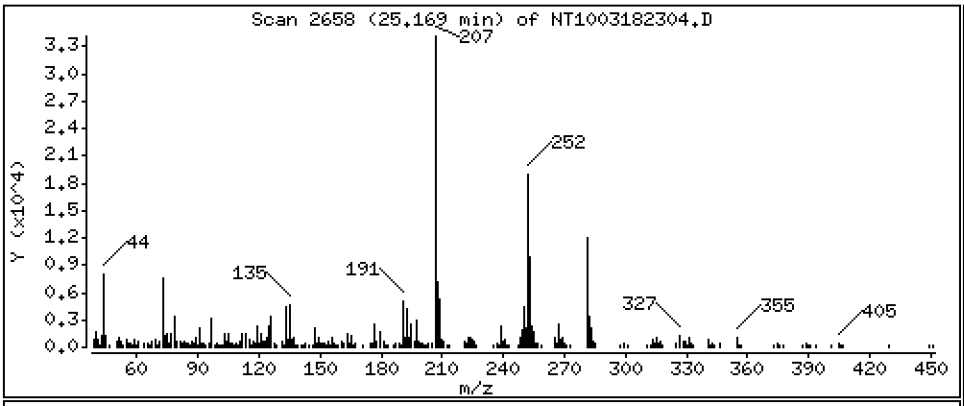
Operator: VTS

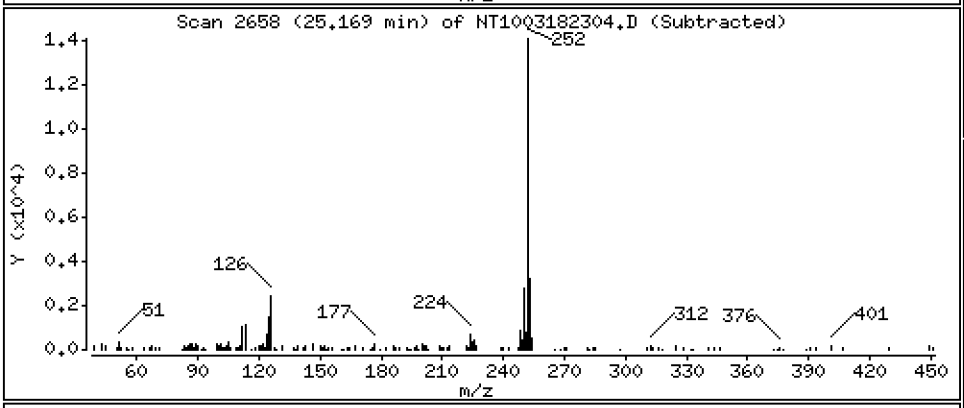
Column phase: ZB-5msi

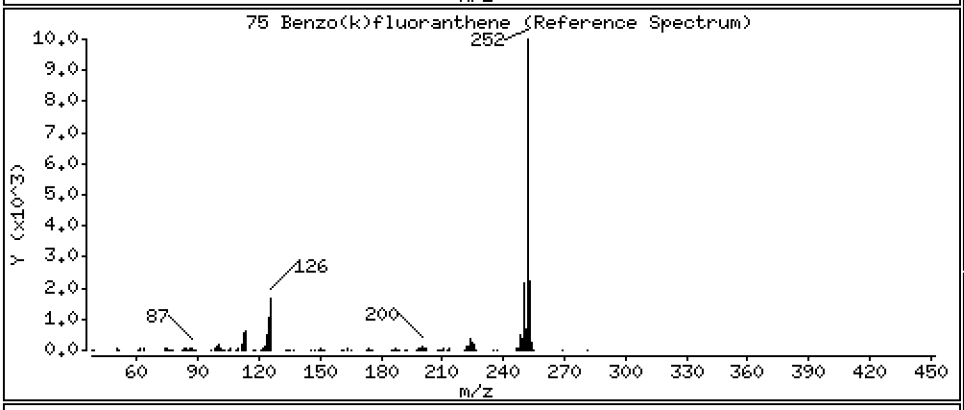
Column diameter: 0.25

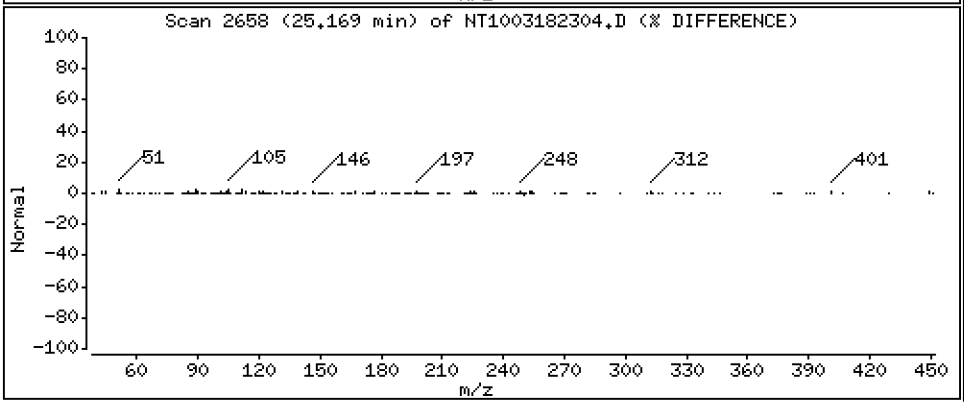
75 Benzo(k)fluoranthene

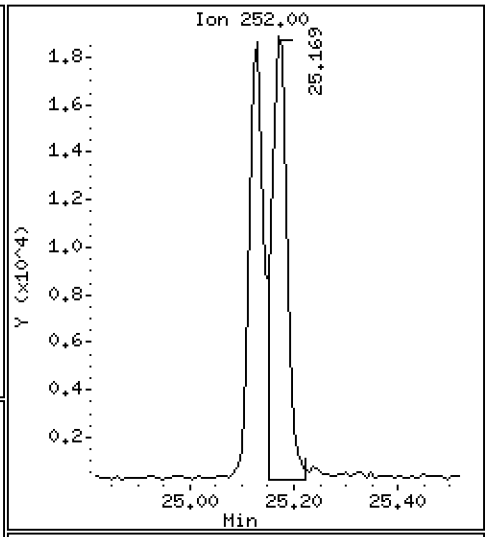
Concentration: 0.2047 ug/mL

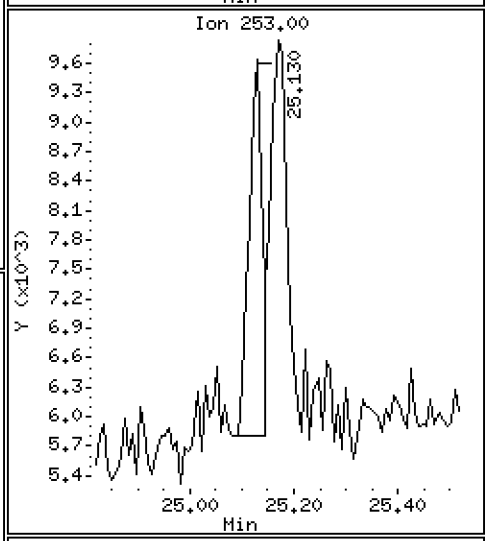


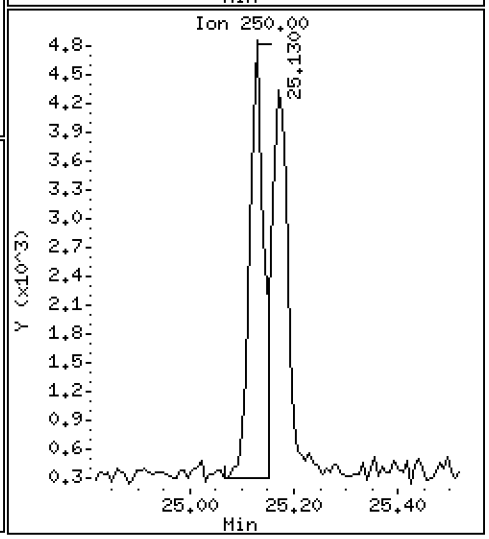












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

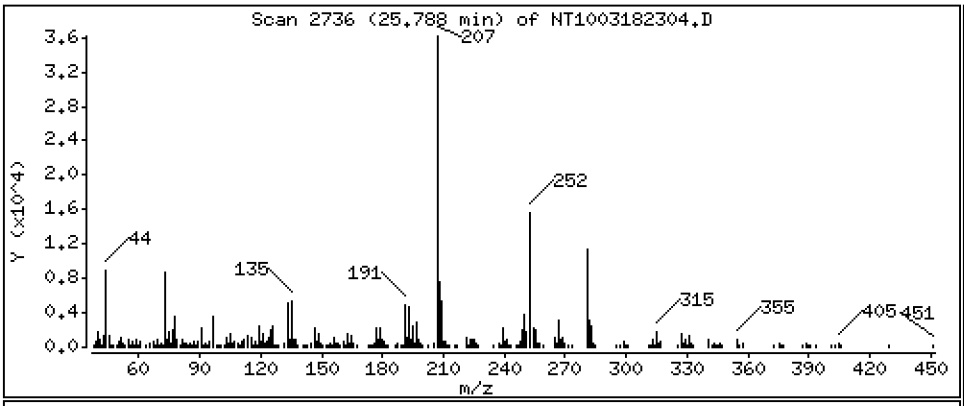
Operator: VTS

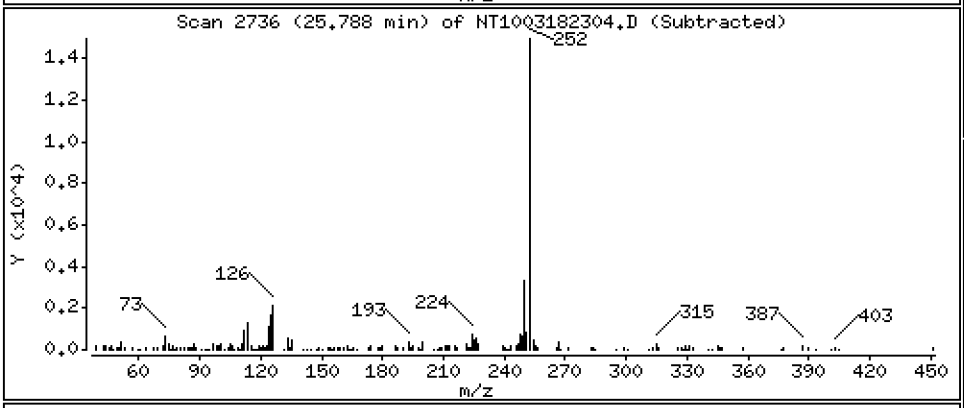
Column phase: ZB-5msi

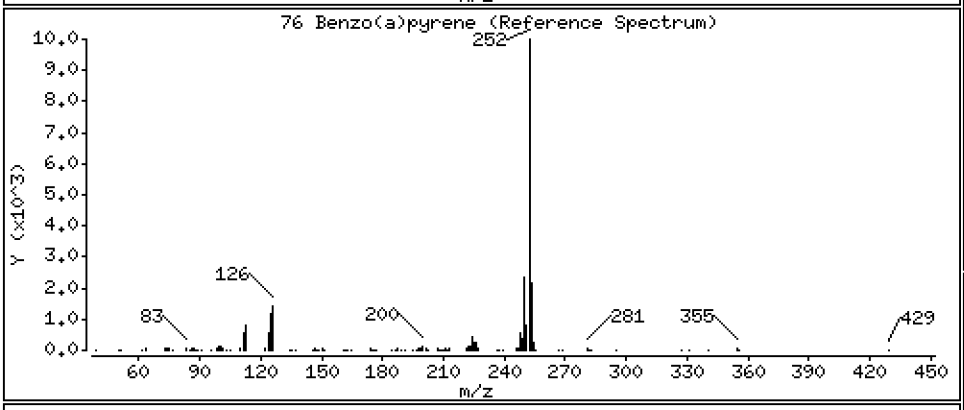
Column diameter: 0.25

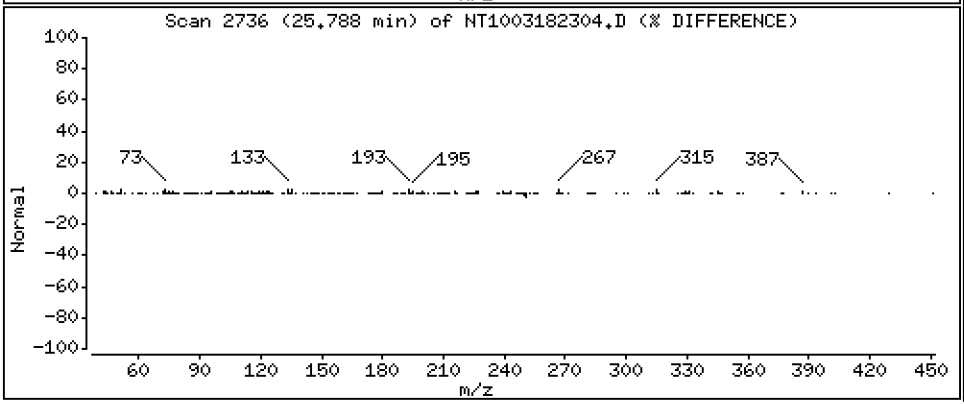
76 Benzo(a)pyrene

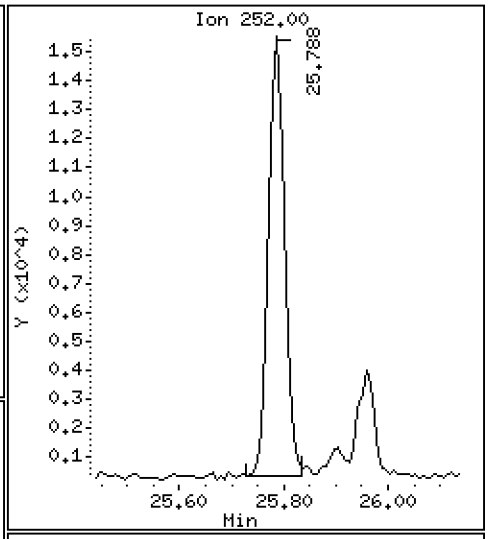
Concentration: 0.1999 ug/mL

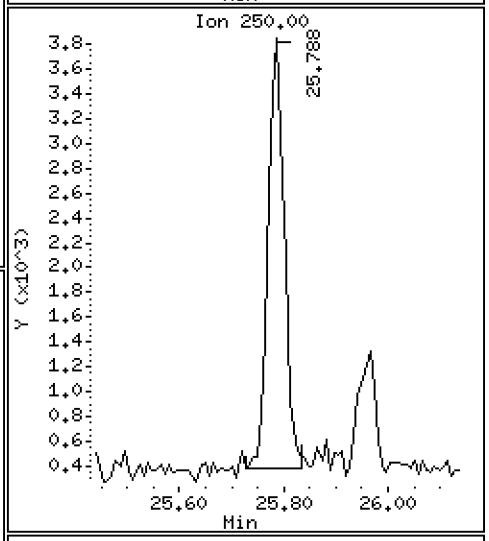


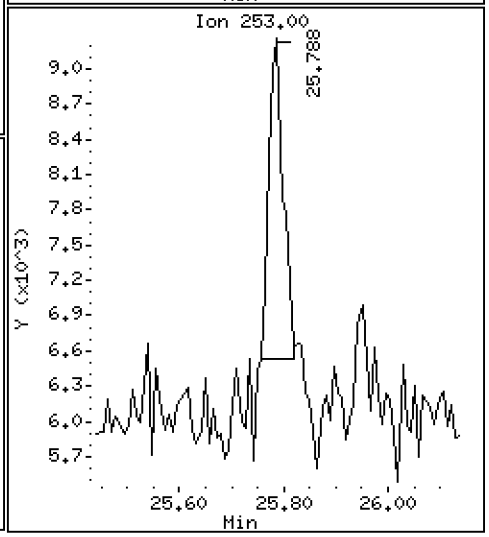












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

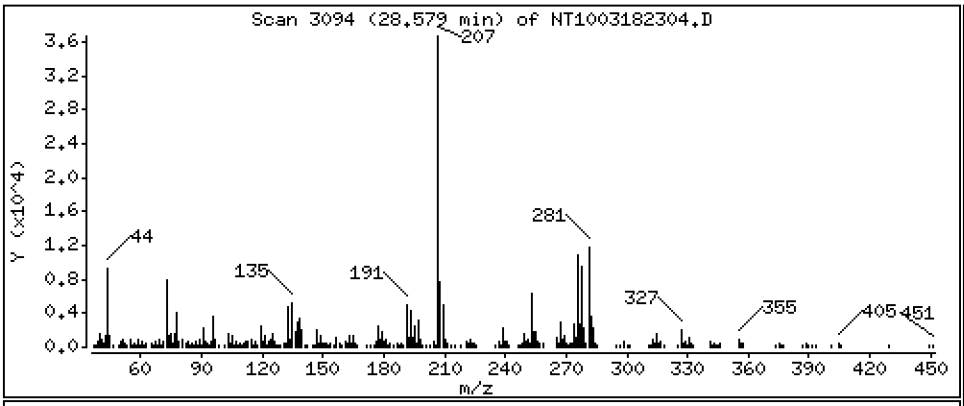
Operator: VTS

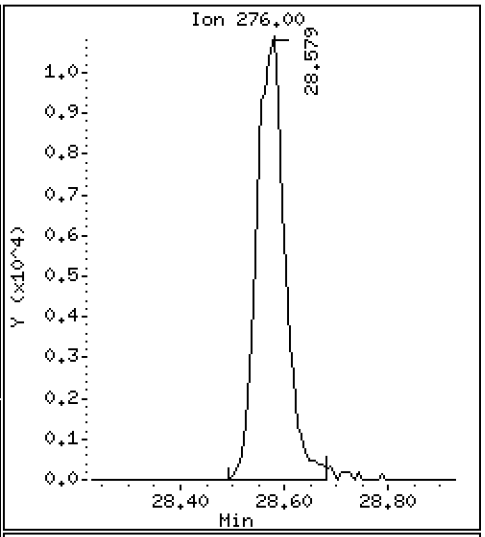
Column phase: ZB-5msi

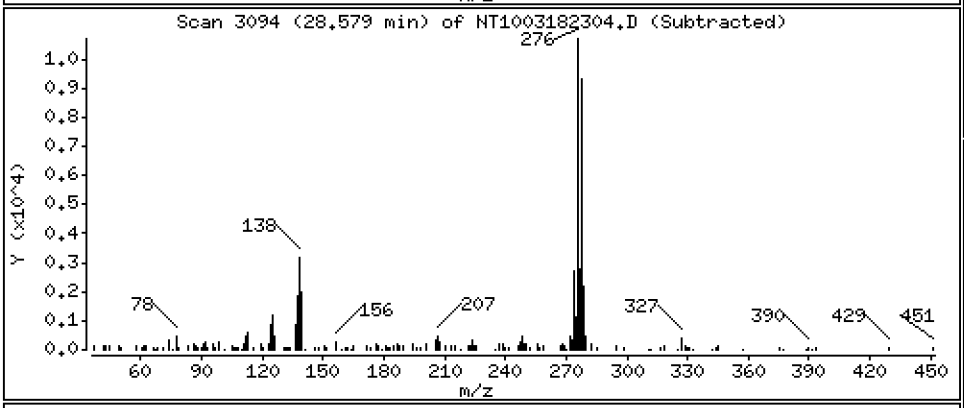
Column diameter: 0.25

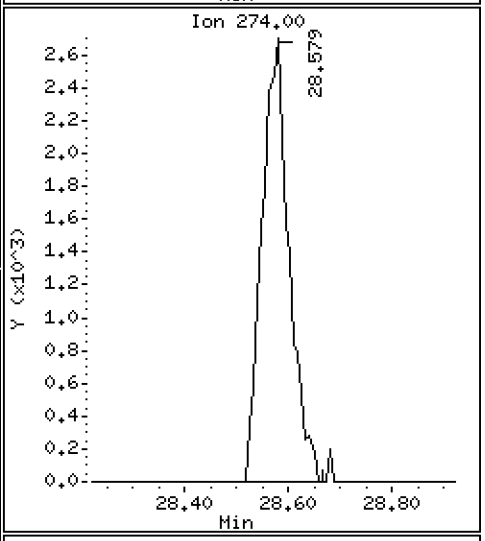
78 Indeno(1,2,3-cd)pyrene

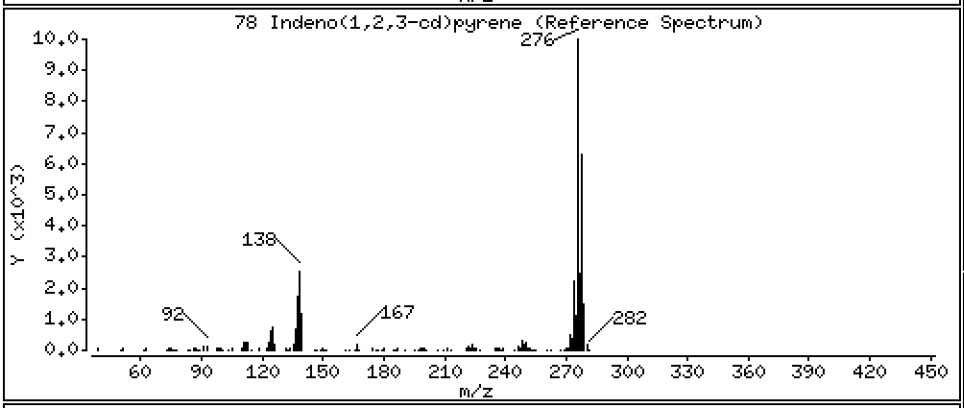
Concentration: 0.2038 ug/mL

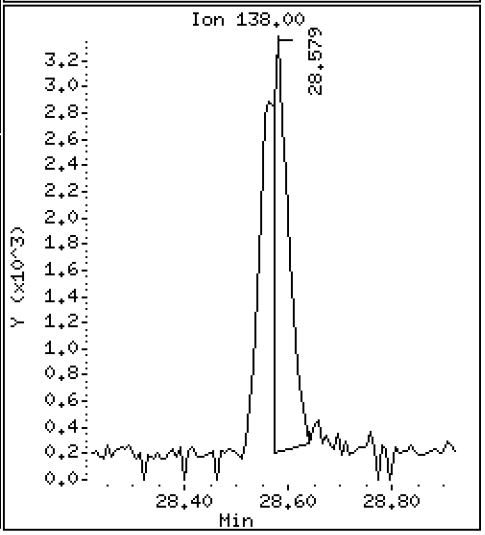


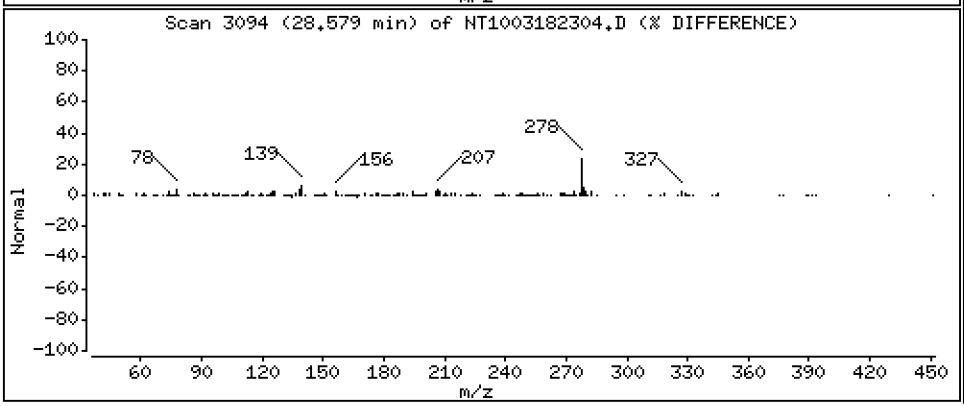












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

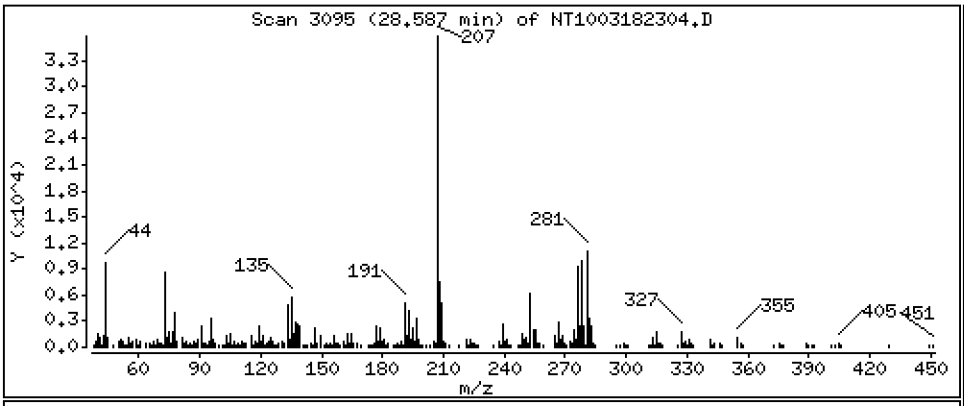
Operator: VTS

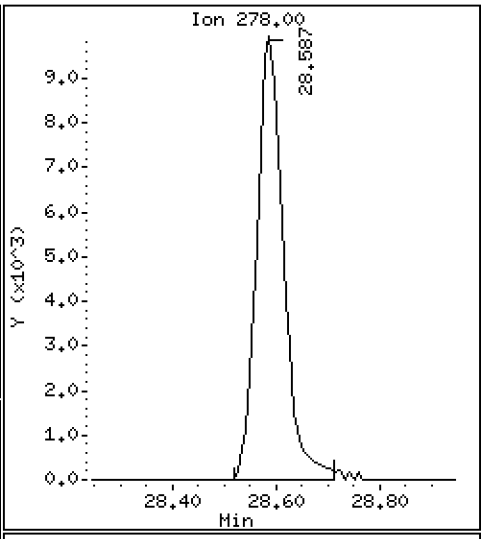
Column phase: ZB-5msi

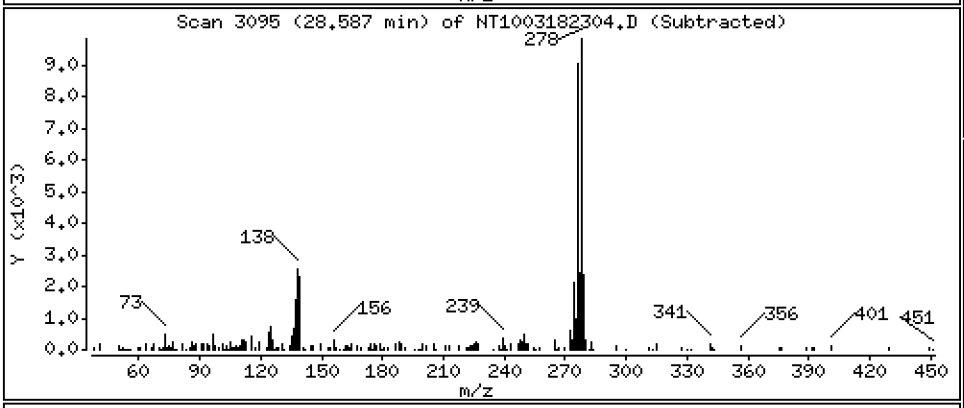
Column diameter: 0.25

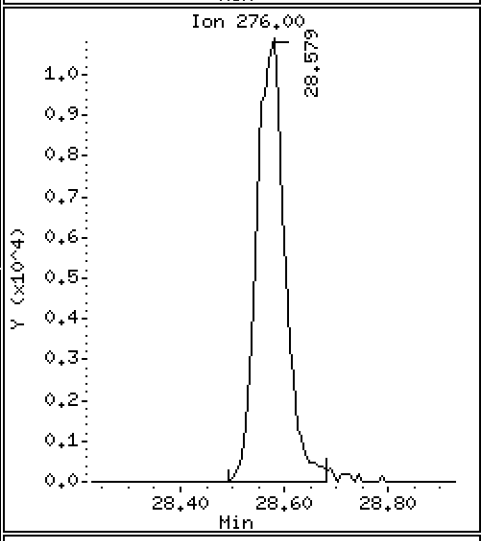
79 Dibenzo(a,h)anthracene

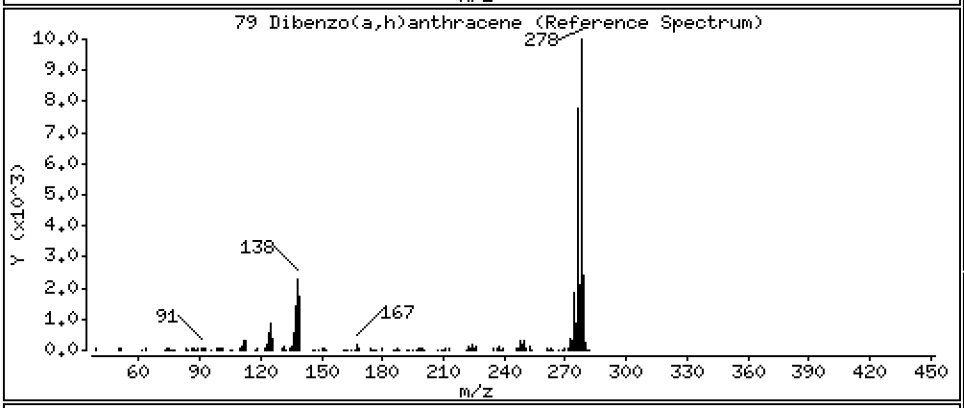
Concentration: 0.2101 ug/mL

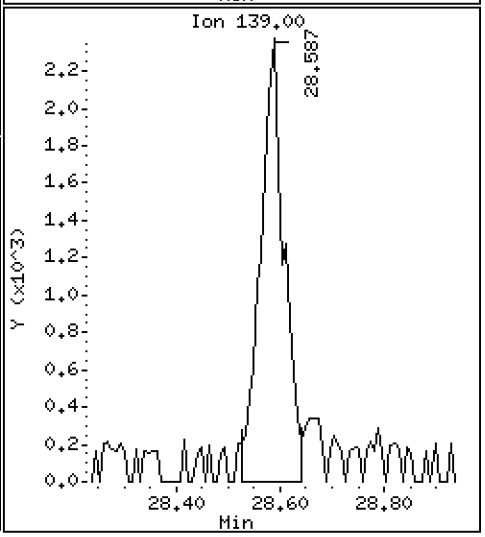


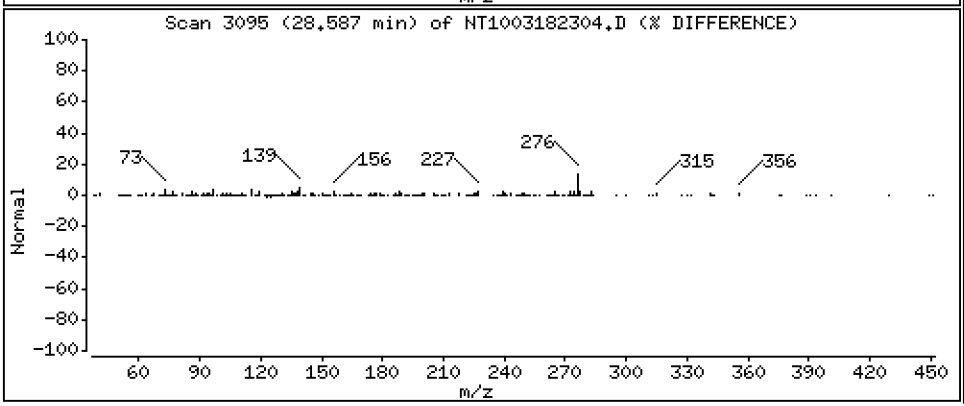












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

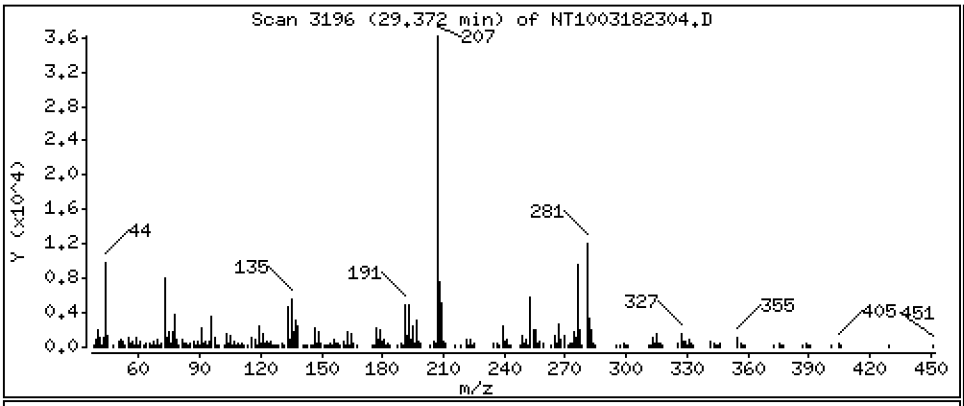
Operator: VTS

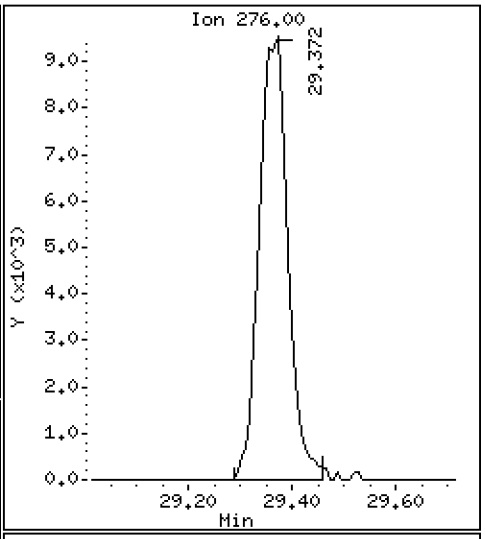
Column phase: ZB-5msi

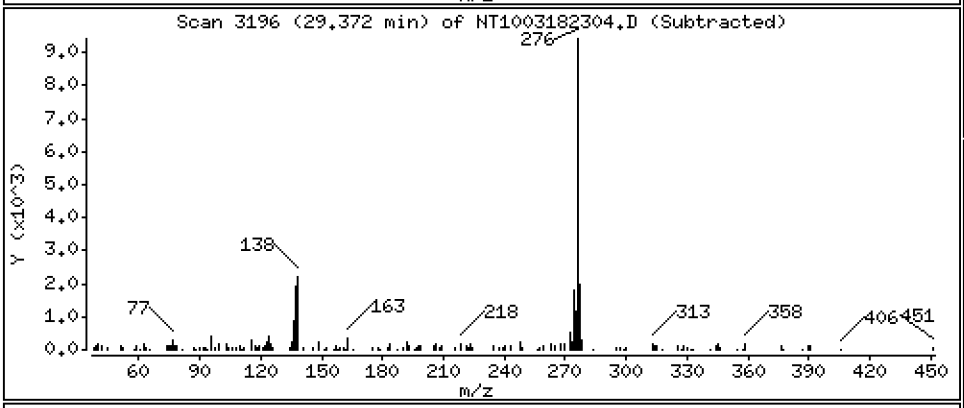
Column diameter: 0.25

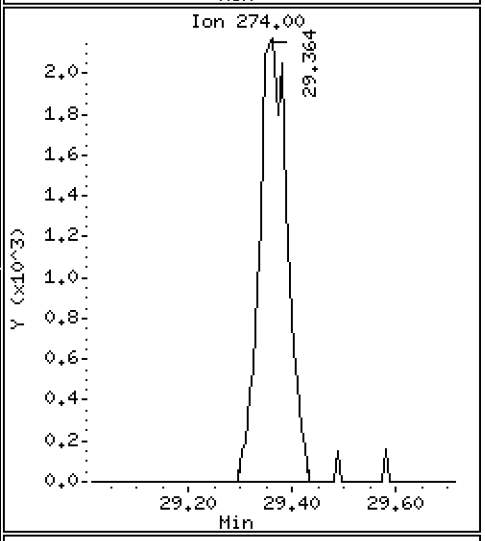
80 Benzo(g,h,i)perylene

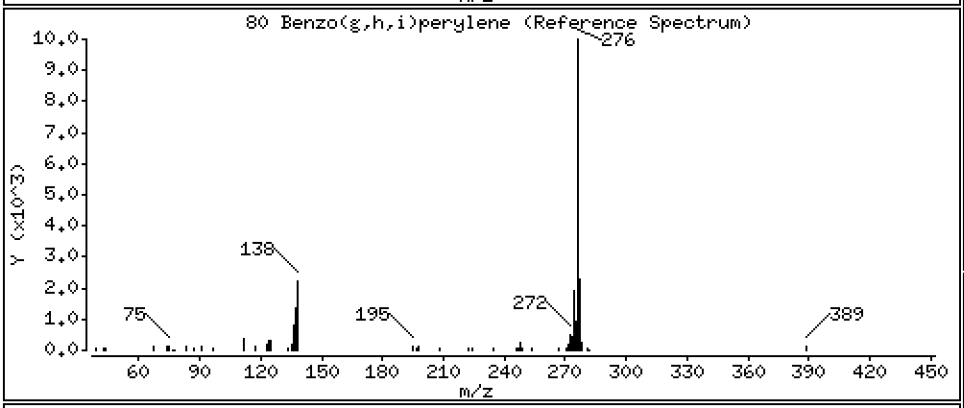
Concentration: 0.2085 ug/mL

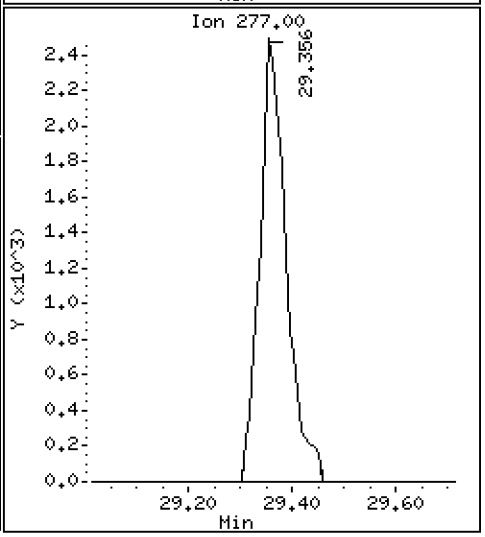


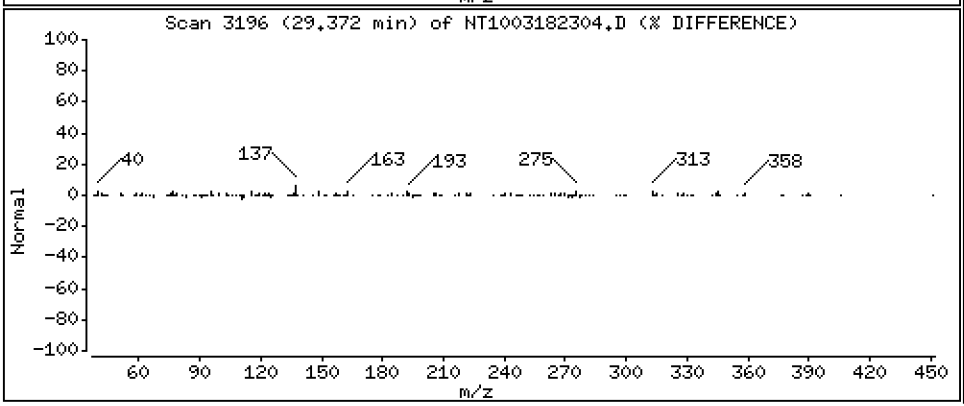












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

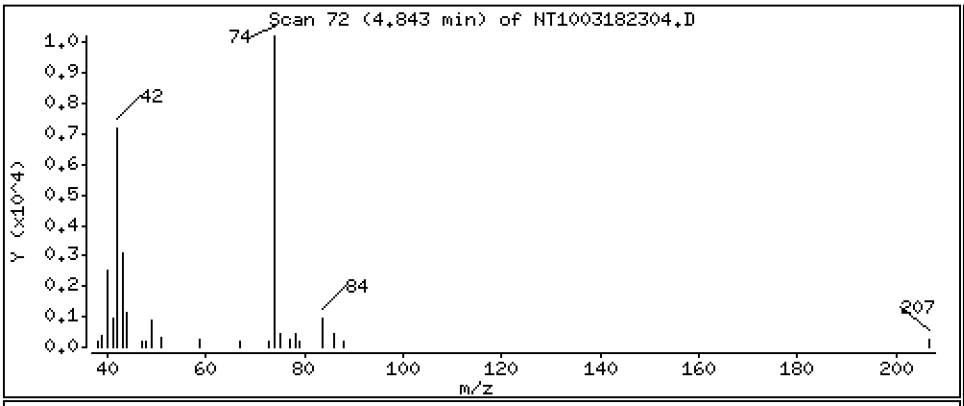
Operator: VTS

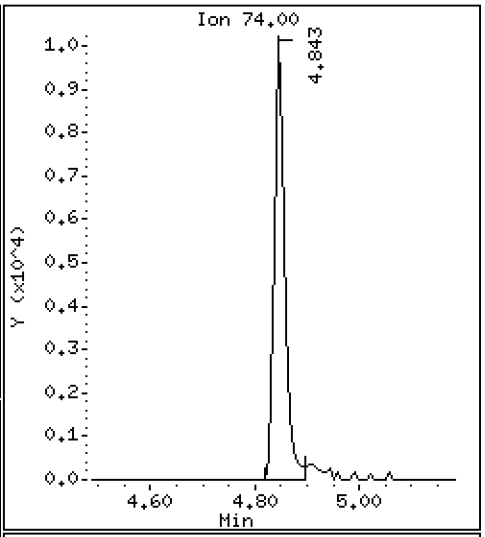
Column phase: ZB-5msi

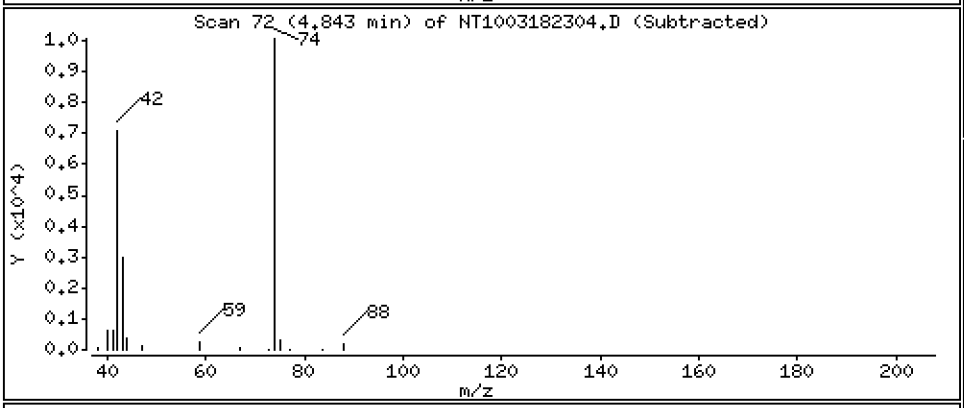
Column diameter: 0.25

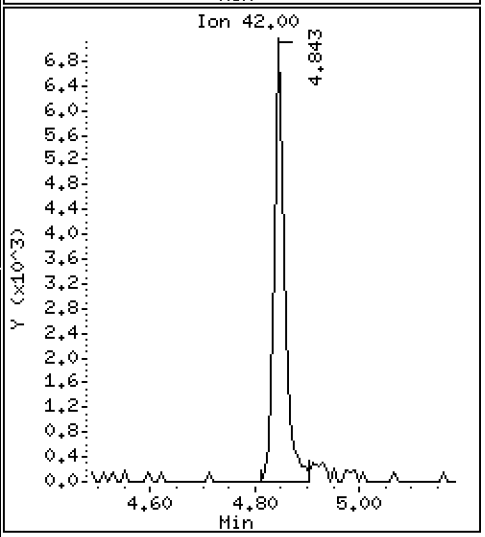
90 N-Nitrosodimethylamine

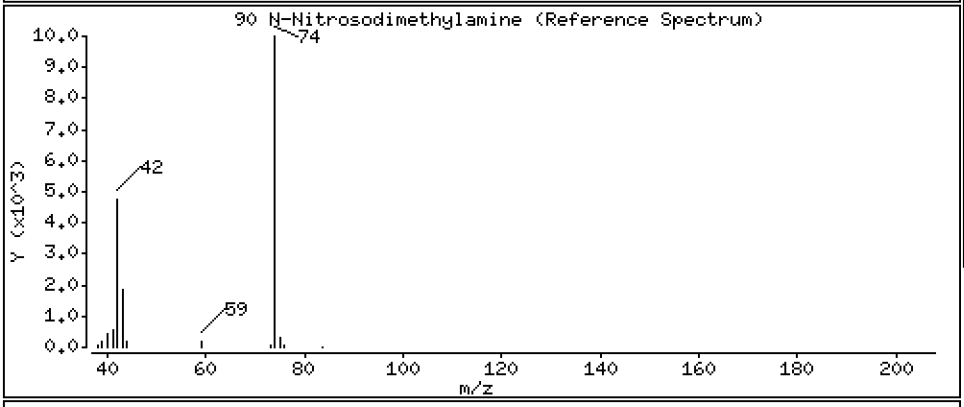
Concentration: 0.3936 ug/mL

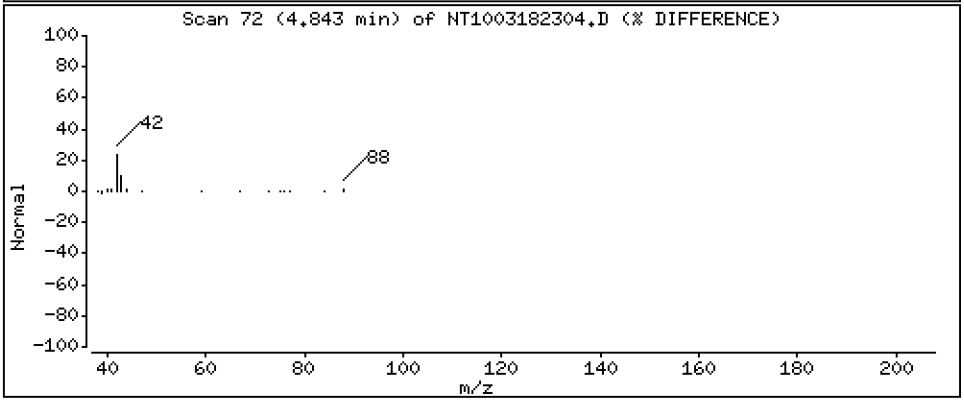












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

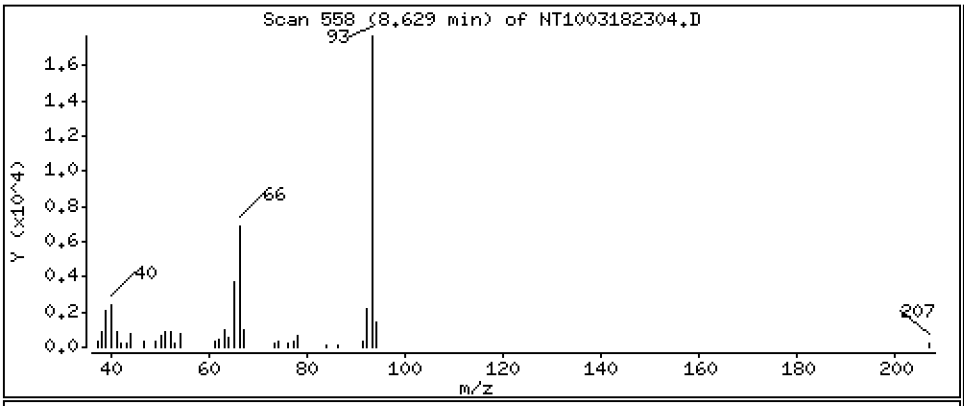
Operator: VTS

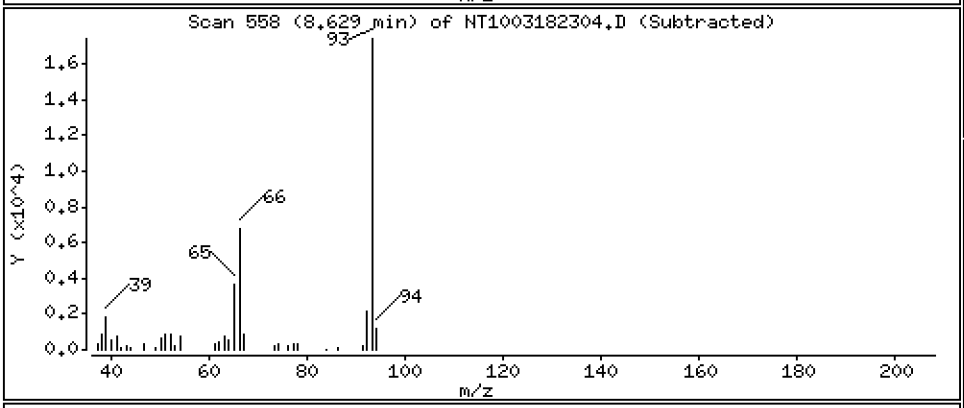
Column phase: ZB-5msi

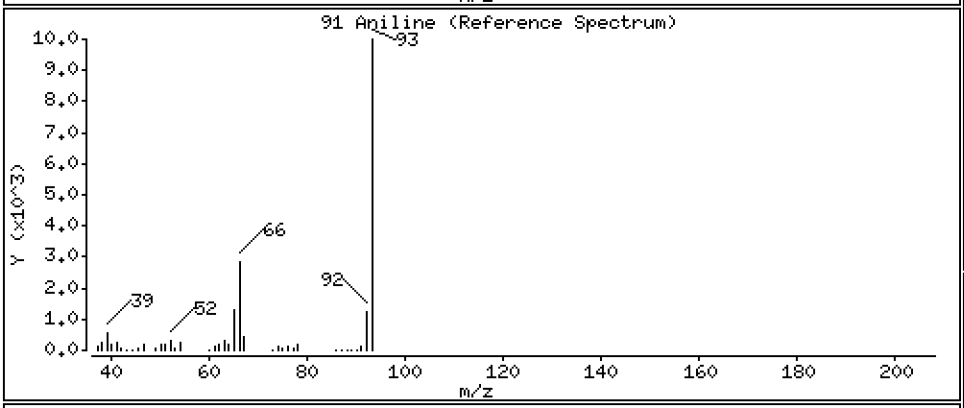
Column diameter: 0.25

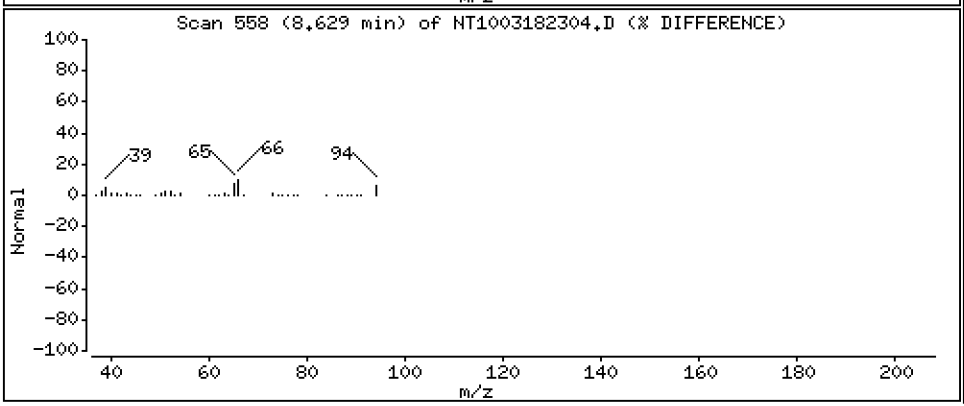
91 Aniline

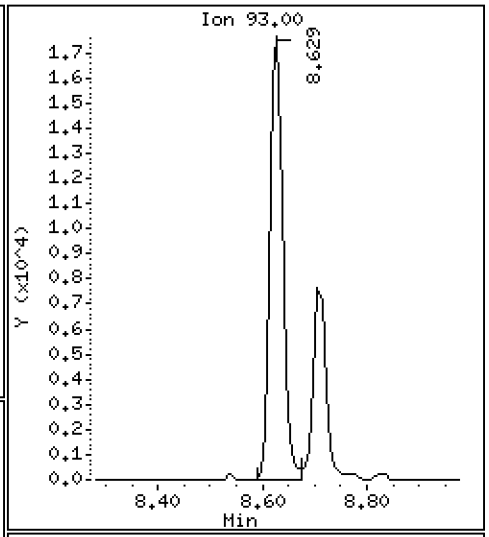
Concentration: 0.3674 ug/mL

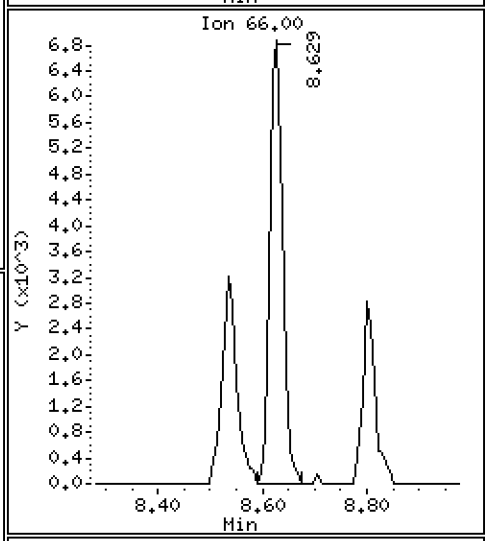


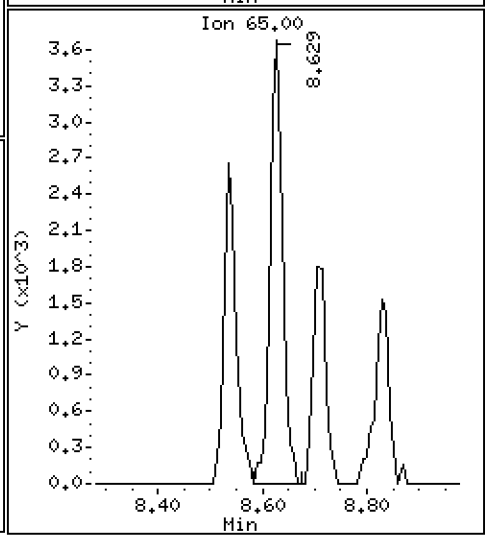












Date : 18-MAR-2023 19:37

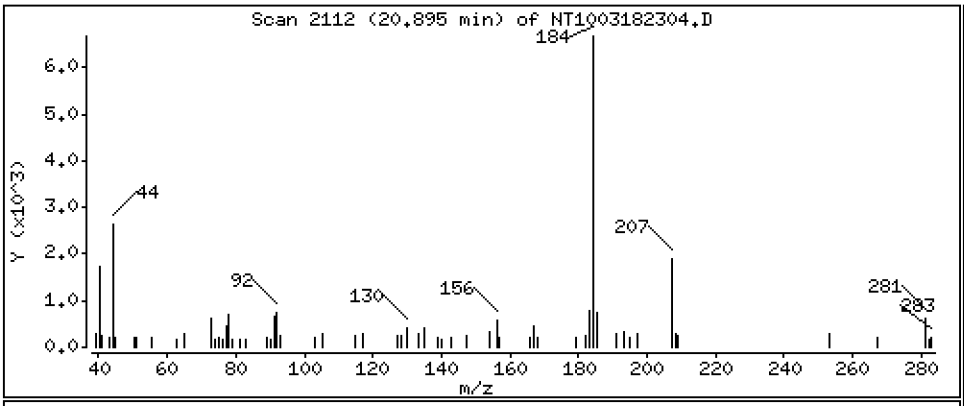
Client ID: Instrument: nt10.i

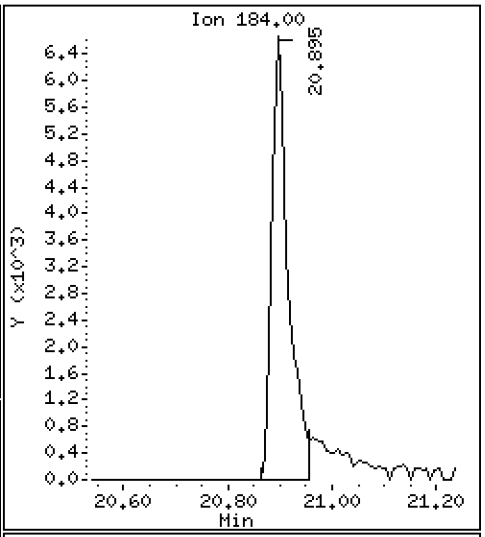
Sample Info: SLC0504-LCV1

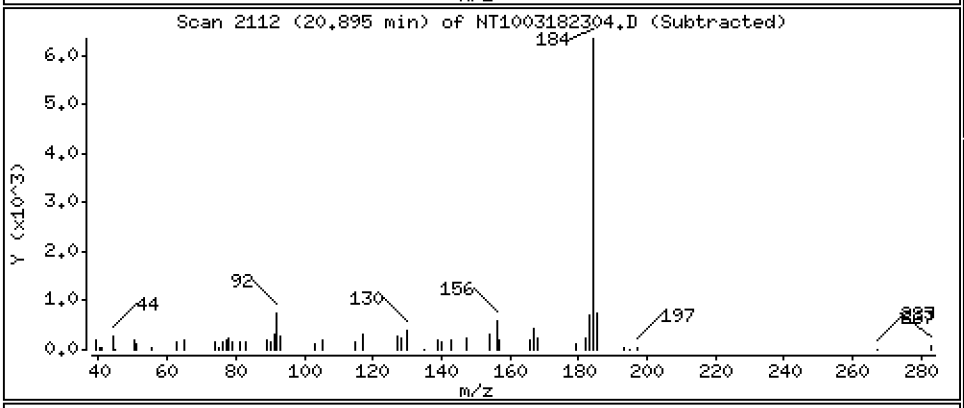
Operator: VTS

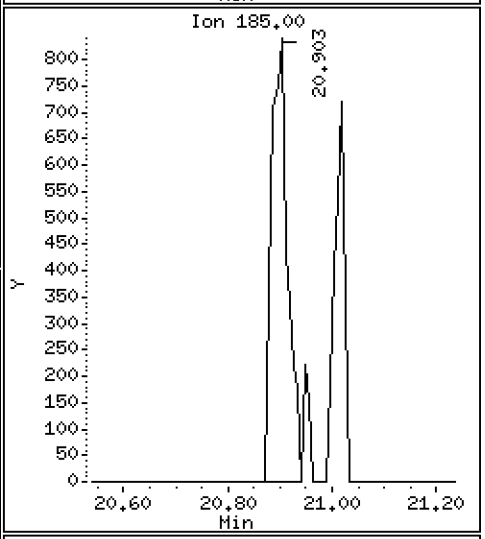
Column phase: ZB-5msi Column diameter: 0.25

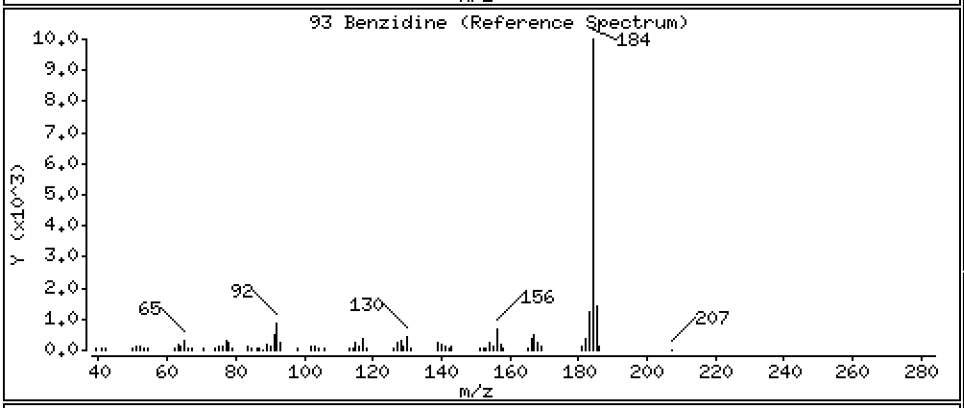
93 Benzidine Concentration: 0.1791 ug/mL

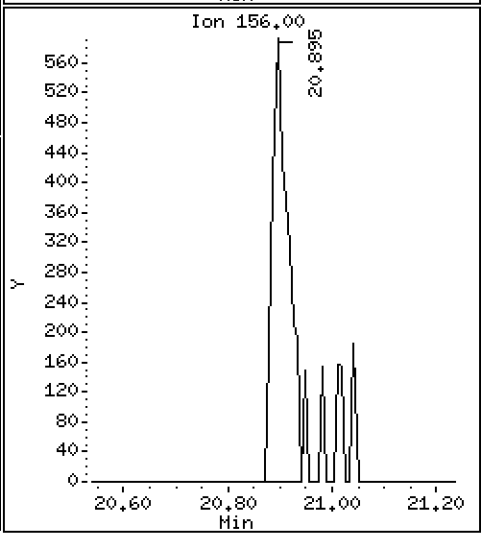


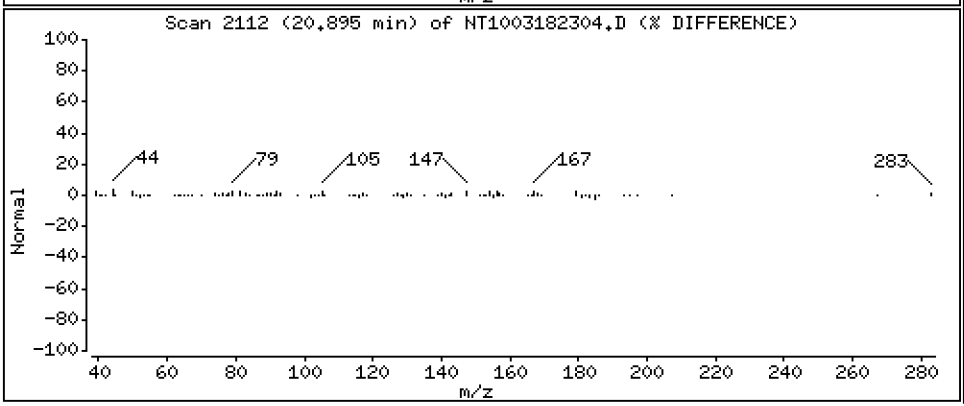












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

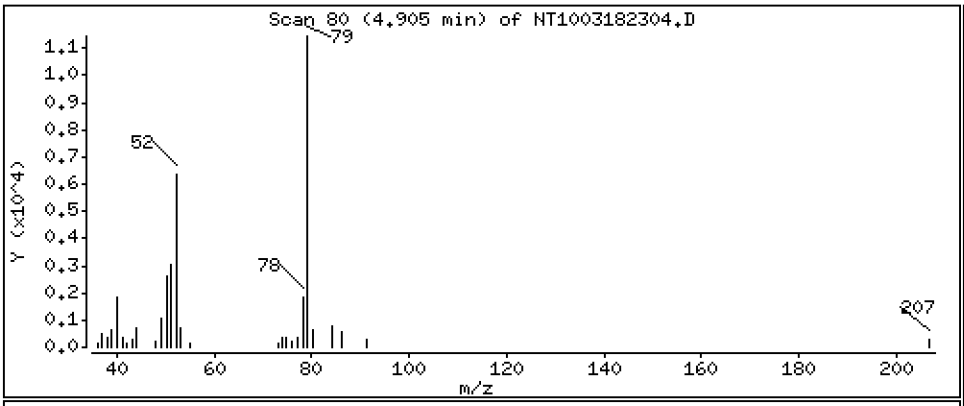
Operator: VTS

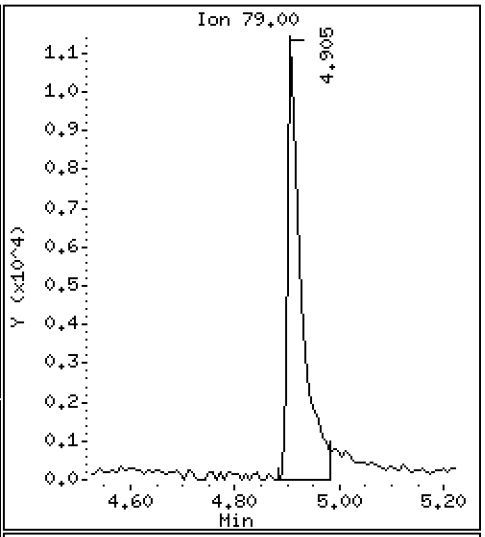
Column phase: ZB-5msi

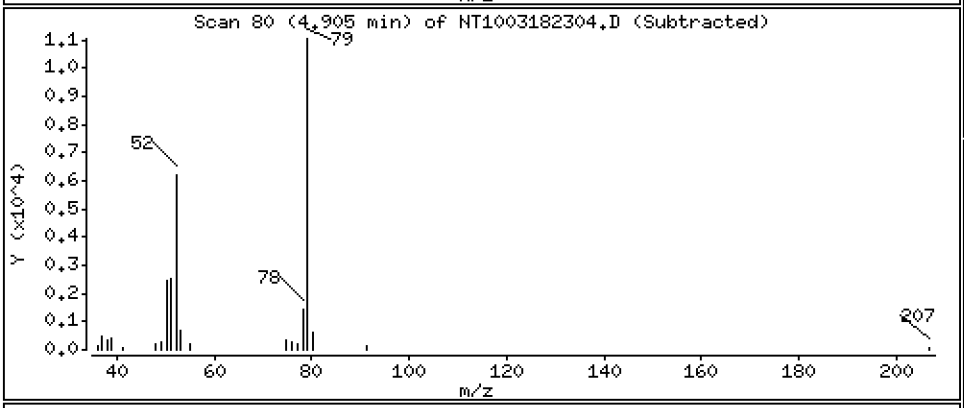
Column diameter: 0.25

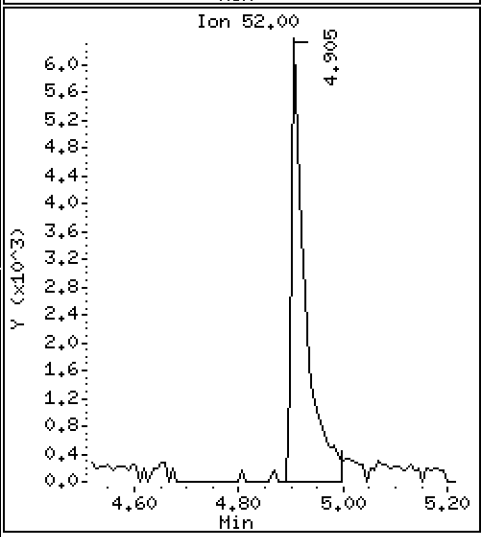
103 Pyridine

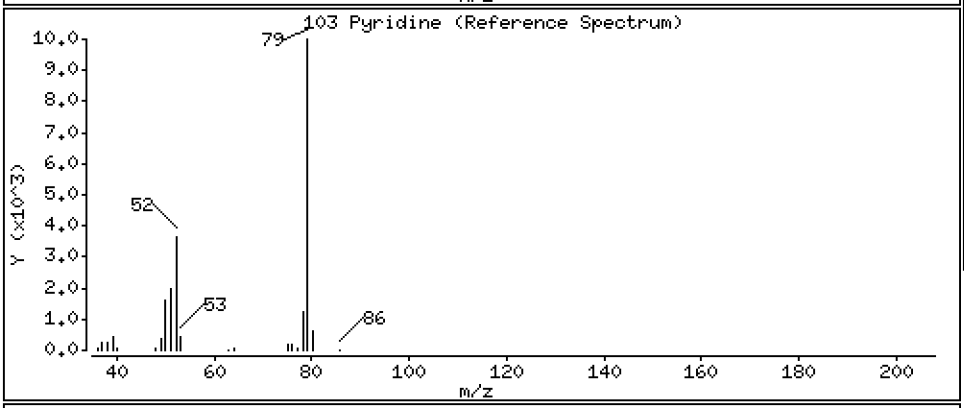
Concentration: 0.3912 ug/mL

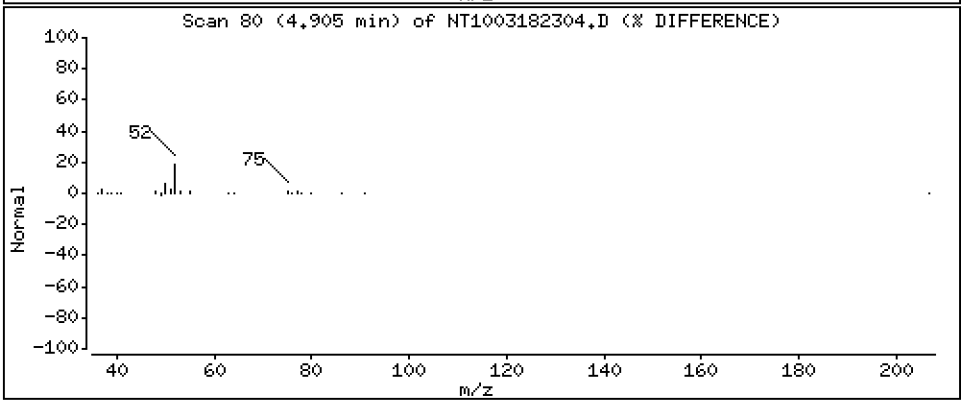












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

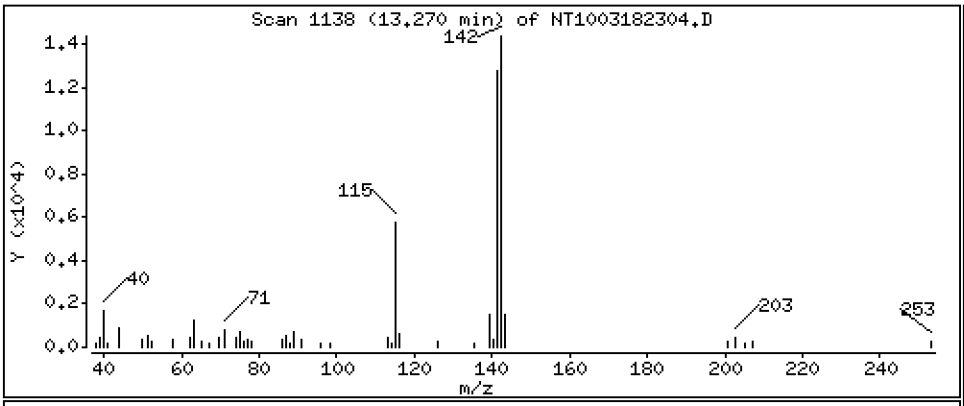
Operator: VTS

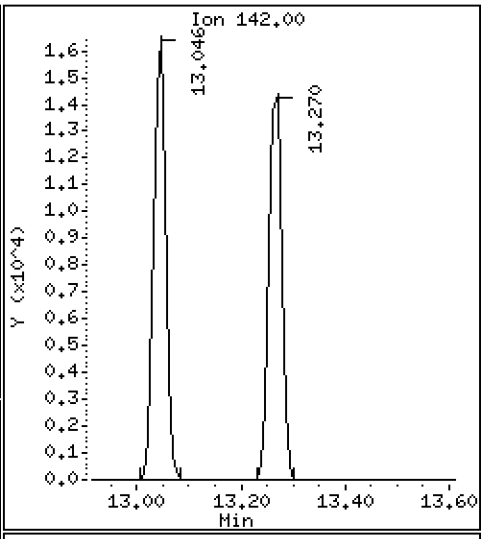
Column phase: ZB-5msi

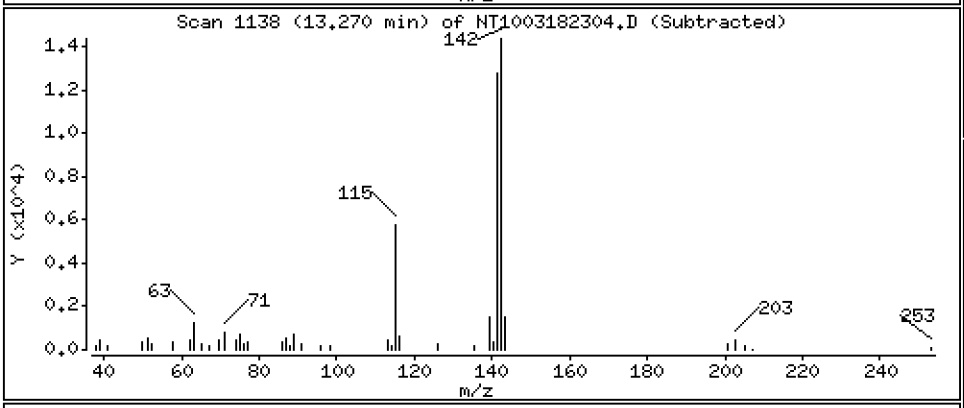
Column diameter: 0.25

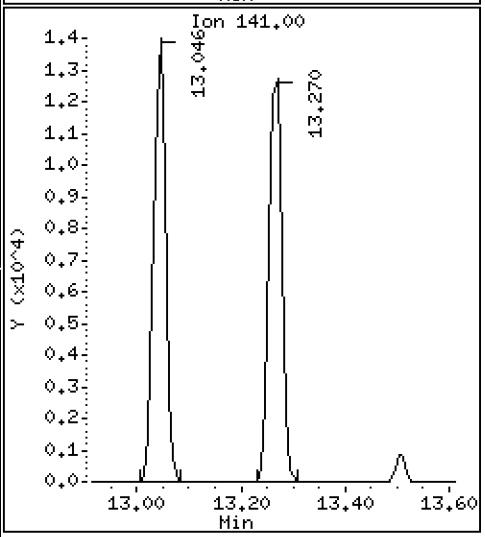
105 1-methylnaphthalene

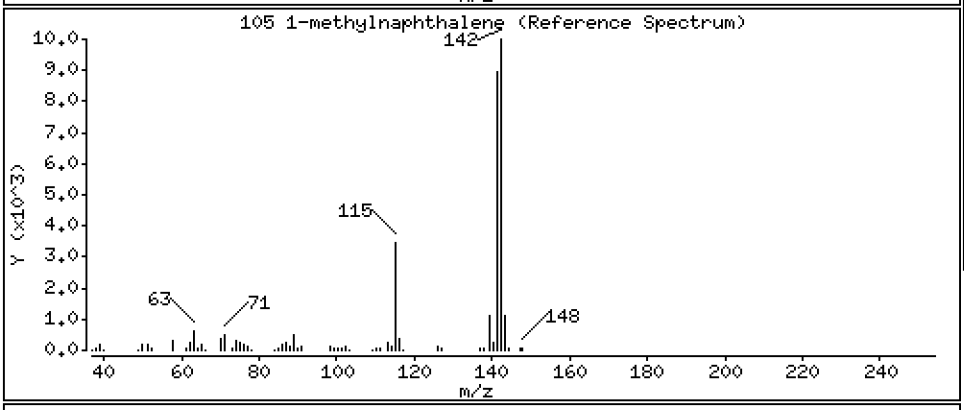
Concentration: 0.2053 ug/mL

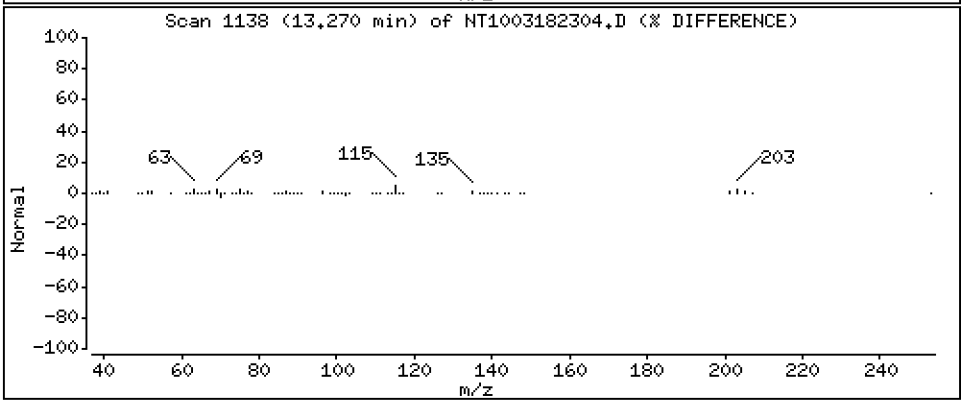












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

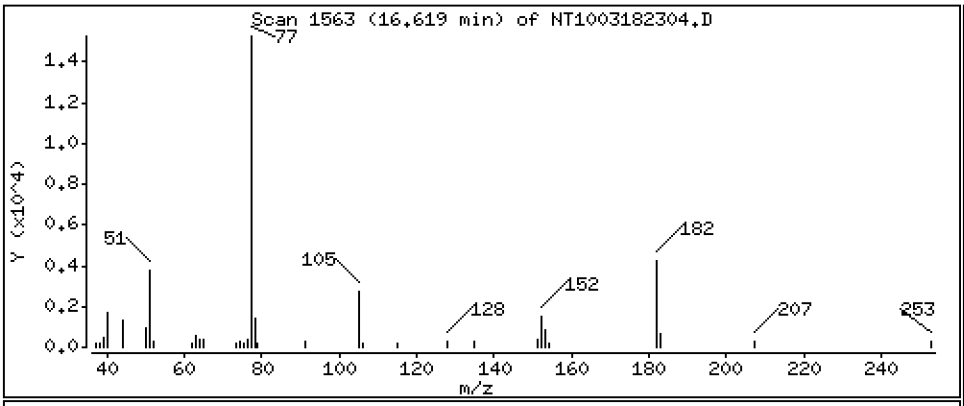
Operator: VTS

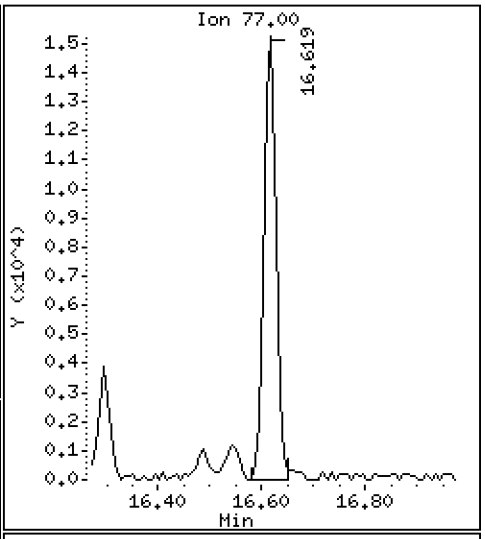
Column phase: ZB-5msi

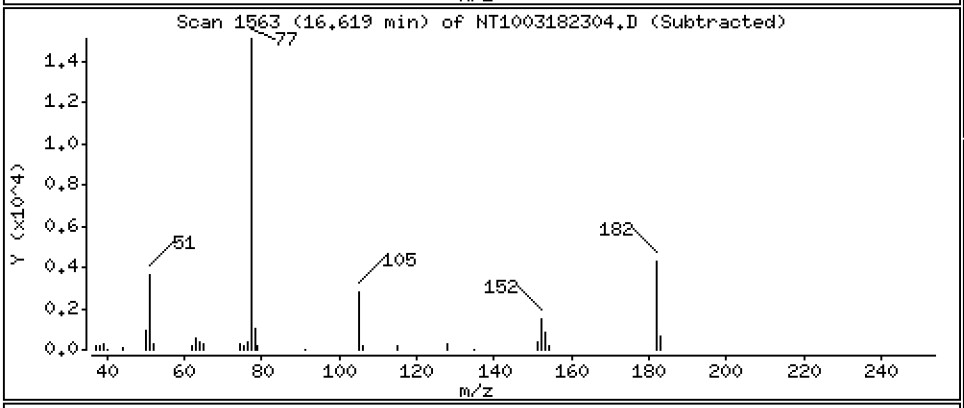
Column diameter: 0.25

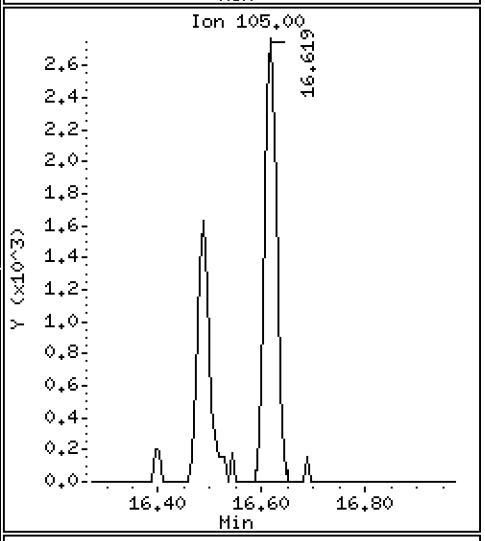
111 Azobenzene (1,2-DP-Hydrazine)

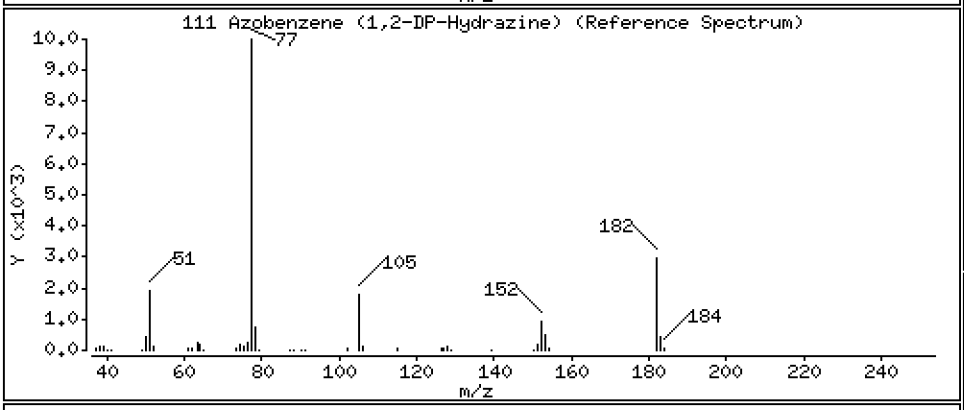
Concentration: 0.1886 ug/mL

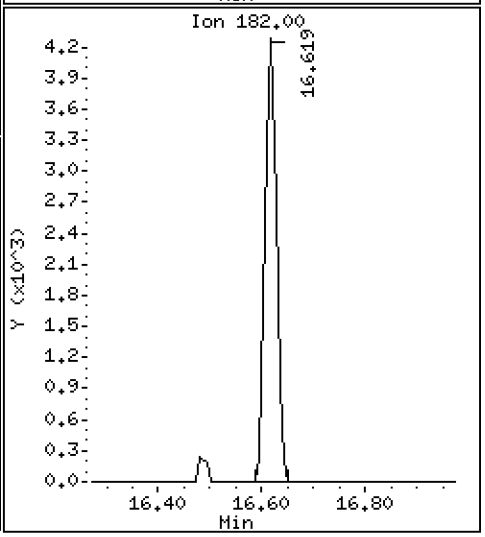


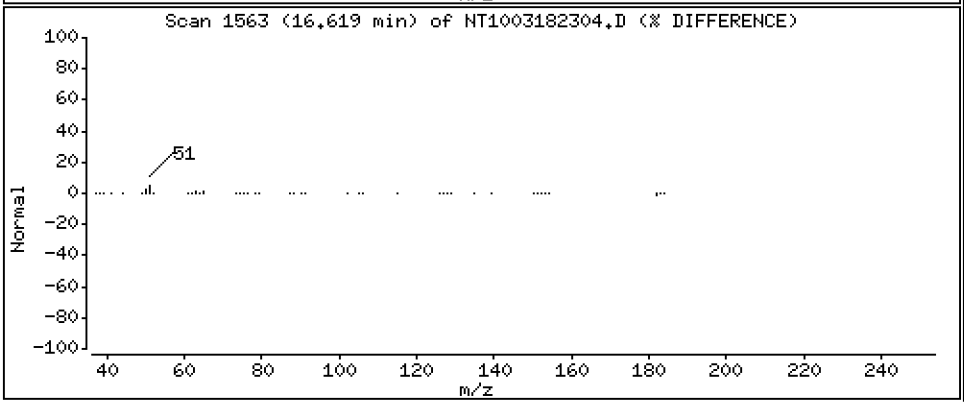












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

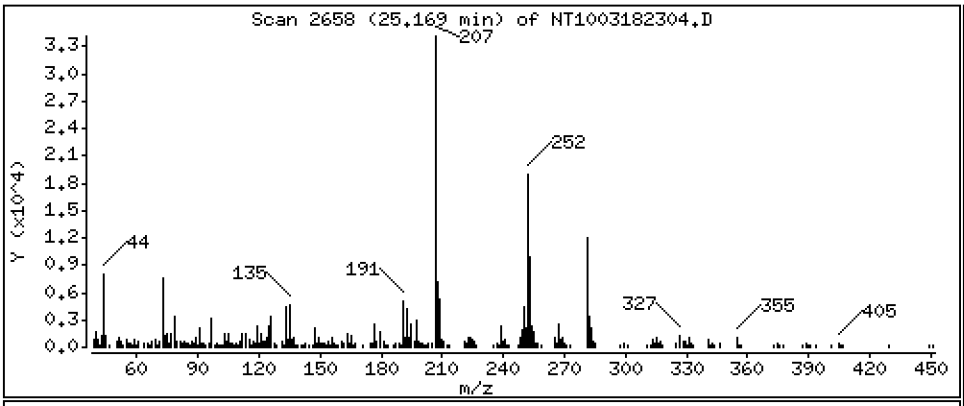
Operator: VTS

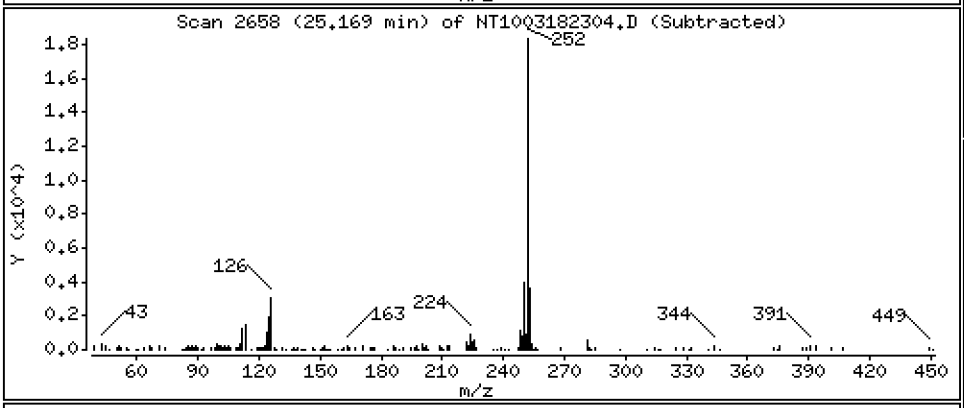
Column phase: ZB-5msi

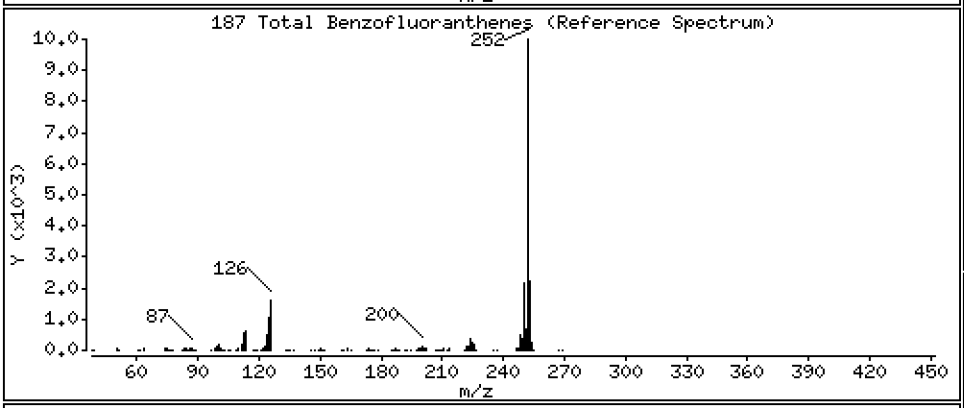
Column diameter: 0.25

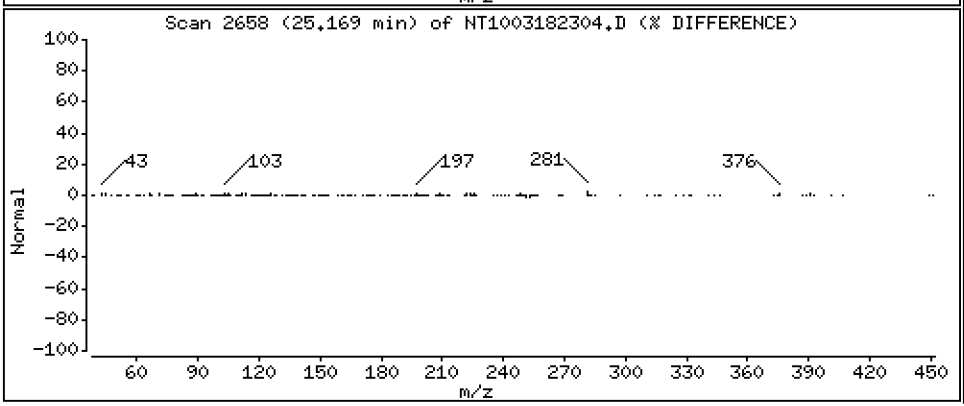
187 Total Benzofluoranthenes

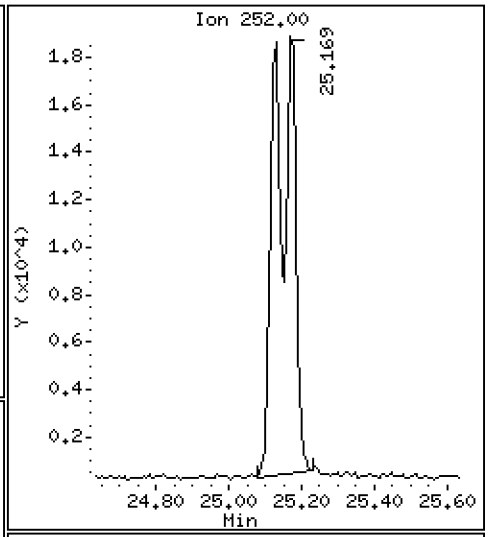
Concentration: 0.4105 ug/mL

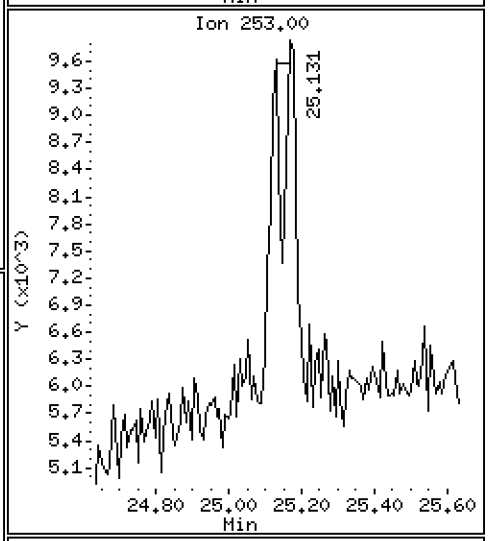


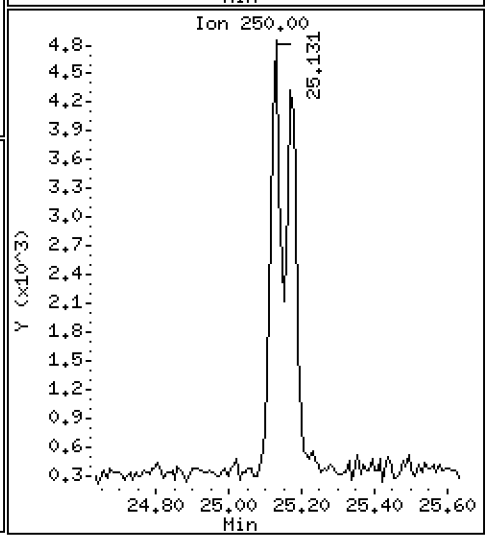












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

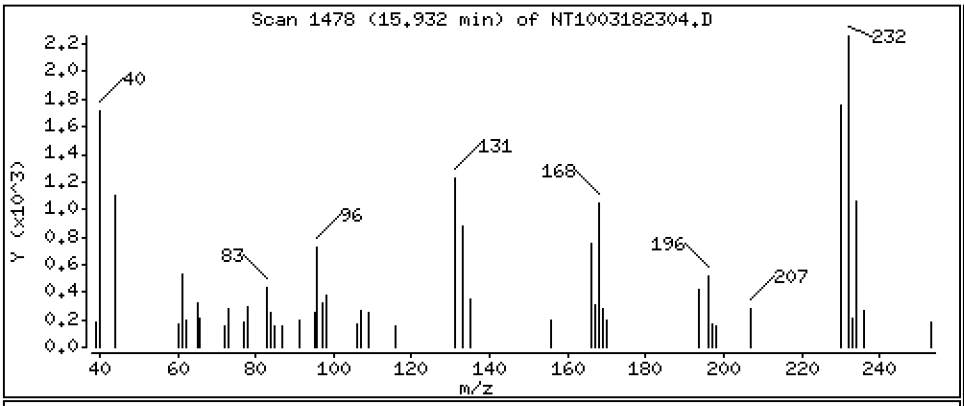
Operator: VTS

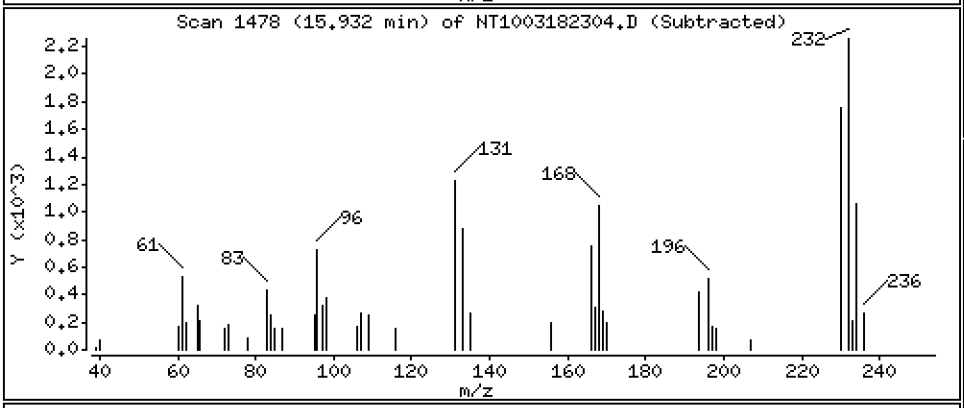
Column phase: ZB-5msi

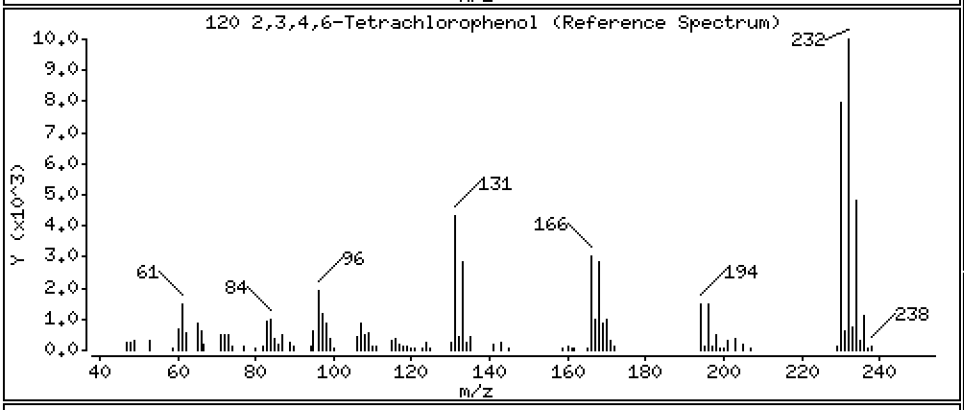
Column diameter: 0.25

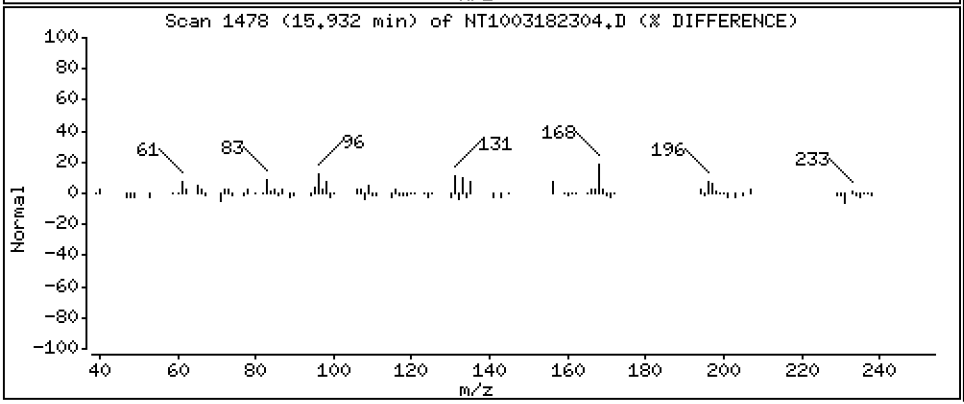
120 2,3,4,6-Tetrachlorophenol

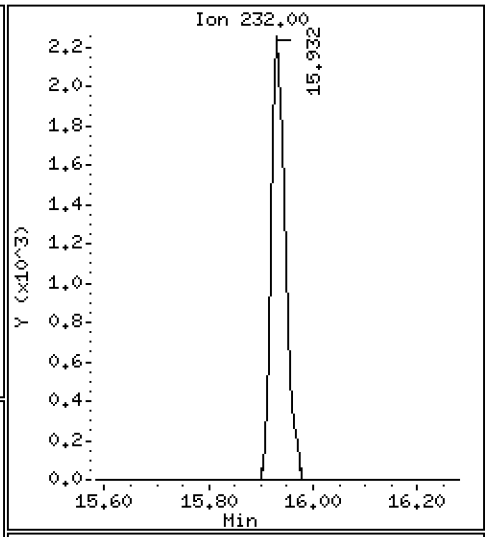
Concentration: 0.1156 ug/mL

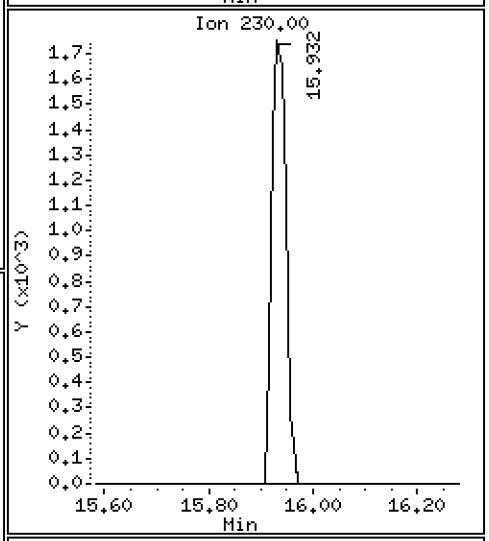


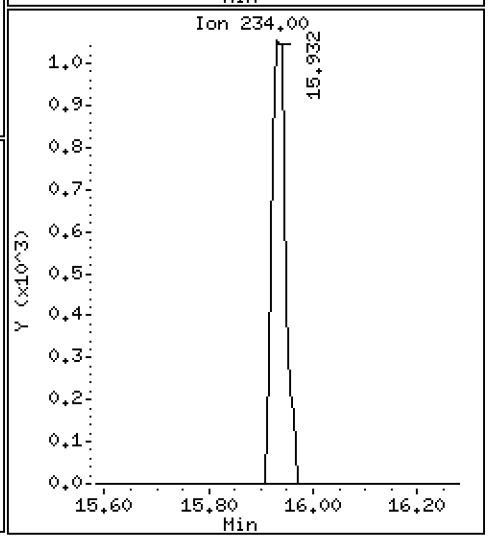












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D
Lab Smp Id: SLC0504-LCV1
Inj Date : 18-MAR-2023 19:37
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.959	6.952	(0.760)	16517	0.29302	0.2930
$	2 Phenol-d5	99	8.512	8.520	(0.929)	19560	0.26451	0.2645
	3 Phenol	94	8.543	8.536	(0.932)	14314	0.18628	0.1863
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	17710	0.28046	0.2805
	4 Bis(2-Chloroethyl)ether	93	8.705	8.713	(0.950)	11580	0.20318	0.2032
	6 2-Chlorophenol	128	8.829	8.829	(0.964)	12373	0.18813	0.1881
	7 1,3-Dichlorobenzene	146	9.100	9.100	(0.993)	15025	0.21610	0.2161
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	186398	4.00000	
	9 1,4-Dichlorobenzene	146	9.193	9.193	(1.003)	13547	0.20169	0.2017
$	10 1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	9687	0.21361	0.2136
	12 1,2-Dichlorobenzene	146	9.550	9.550	(1.042)	13853	0.20957	0.2096
	11 Benzyl alcohol	108	9.433	9.426	(1.030)	5274	0.14622	0.1462
	14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.721	(1.062)	4477	0.23063	0.2306(M)
	13 2-Methylphenol	108	9.643	9.643	(1.053)	10169	0.18154	0.1815
	17 Hexachloroethane	117	10.132	10.132	(1.106)	5585	0.20267	0.2027
	16 N-Nitroso-di-n-propylamine	70	9.977	9.977	(1.089)	8289	0.18740	0.1874
	15 4-Methylphenol	108	9.907	9.907	(1.081)	9986	0.16919	0.1692
$	18 Nitrobenzene-d5	82	10.248	10.249	(0.881)	12861	0.19359	0.1936
	19 Nitrobenzene	77	10.279	10.287	(0.884)	12664	0.19424	0.1942
	20 Isophorone	82	10.730	10.730	(0.923)	14349	0.17204	0.1720
	21 2-Nitrophenol	139	10.904	10.905	(0.938)	4680	0.14763	0.1476
	22 2,4-Dimethylphenol	107	10.946	10.947	(0.941)	23116	0.38601	0.3860
	23 Bis(2-Chloroethoxy)methane	93	11.142	11.142	(0.958)	11983	0.21509	0.2151
	24 Benzoic acid	105	11.031	11.134	(0.949)	8236	0.24762	0.2476(MH)
	25 2,4-Dichlorophenol	162	11.354	11.346	(0.976)	17331	0.36165	0.3617
	26 1,2,4-Trichlorobenzene	180	11.537	11.538	(0.992)	15093	0.26831	0.2683
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	658189	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	36508	0.20938	0.2094
	29 4-Chloroaniline	127	11.792	11.793	(1.014)	22724	0.33407	0.3341
	30 Hexachlorobutadiene	225	12.016	12.017	(1.033)	7330	0.22239	0.2224
	31 4-Chloro-3-methylphenol	107	12.728	12.729	(1.094)	17764	0.34242	0.3424
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	25672	0.20402	0.2040
	33 Hexachlorocyclopentadiene	237	13.510	13.503	(0.888)	8499	0.26453	0.2645

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
Compounds								
34	2,4,6-Trichlorophenol	196	13.657	13.658	(0.898)	10978	0.31995	0.3200
35	2,4,5-Trichlorophenol	196	13.734	13.727	(0.903)	11410	0.29928	0.2993
$ 36	2-Fluorobiphenyl	172	13.819	13.820	(0.908)	28680	0.20885	0.2088
37	2-Chloronaphthalene	162	14.028	14.029	(0.922)	22528	0.20260	0.2026
38	2-Nitroaniline	65	14.291	14.285	(0.939)	8894	0.28475	0.2848
39	Dimethylphthalate	163	14.709	14.710	(0.967)	23629	0.20952	0.2095
40	Acenaphthylene	152	14.895	14.896	(0.979)	34649	0.19998	0.2000
41	2,6-Dinitrotoluene	165	14.849	14.857	(0.976)	8711	0.35756	0.3576
* 42	Acenaphthene-d10	164	15.212	15.213	(1.000)	347153	4.00000	
43	3-Nitroaniline	138	15.135	15.136	(0.995)	7871	0.28624	0.2862
44	Acenaphthene	153	15.274	15.275	(1.004)	22105	0.20651	0.2065
45	2,4-Dinitrophenol	184	15.344	15.345	(1.009)	190	0.01292	0.01292(M)
46	Dibenzofuran	168	15.599	15.600	(1.025)	32445	0.20555	0.2055
47	4-Nitrophenol	109	15.460	15.437	(1.016)	1993	0.11523	0.1152(M)
48	2,4-Dinitrotoluene	165	15.653	15.654	(1.029)	10067	0.27318	0.2732
50	Diethylphthalate	149	16.155	16.156	(1.062)	22107	0.19979	0.1998
49	Fluorene	166	16.318	16.319	(1.073)	14568	0.11731	0.1173
51	4-Chlorophenyl-phenylether	204	16.295	16.296	(1.071)	10345	0.17518	0.1752
52	4-Nitroaniline	138	16.395	16.404	(1.078)	6101	0.24620	0.2462
53	4,6-Dinitro-2-methylphenol	198	16.488	16.489	(0.904)	5619	0.30470	0.3047
54	N-Nitrosodiphenylamine	169	16.542	16.542	(0.907)	15997	0.19610	0.1961
$ 55	2,4,6-Tribromophenol	330	16.842	16.843	(1.107)	3109	0.19033	0.1903
56	4-Bromophenyl-phenylether	248	17.297	17.298	(0.949)	6747	0.19771	0.1977
57	Hexachlorobenzene	284	17.614	17.607	(0.966)	8008	0.22382	0.2238
58	Pentachlorophenol	266	17.970	17.963	(0.986)	2456	0.11604	0.1160
* 59	Phenanthrene-d10	188	18.233	18.234	(1.000)	610141	4.00000	
60	Phenanthrene	178	18.280	18.281	(1.003)	34252	0.20588	0.2059
61	Anthracene	178	18.373	18.373	(1.008)	30716	0.19246	0.1925
62	Carbazole	167	18.705	18.698	(1.026)	25528	0.17850	0.1785
63	Di-n-butylphthalate	149	19.487	19.488	(1.069)	30846	0.16042	0.1604
64	Fluoranthene	202	20.655	20.656	(0.888)	37449	0.19137	0.1914
65	Pyrene	202	21.080	21.081	(0.906)	39146	0.19501	0.1950
$ 66	Terphenyl-d14	244	21.367	21.360	(0.918)	30040	0.19927	0.1993
67	Butylbenzylphthalate	149	22.288	22.281	(0.958)	13646	0.19357	0.1936
68	Benzo(a)anthracene	228	23.241	23.241	(0.999)	36811	0.21414	0.2141
* 69	Chrysene-d12	240	23.272	23.272	(1.000)	487006	4.00000	
70	3,3'-Dichlorobenzidine	252	23.194	23.195	(0.997)	30620	0.55611	0.5561
71	Chrysene	228	23.310	23.311	(1.002)	34149	0.20334	0.2033
72	bis(2-Ethylhexyl)phthalate	149	23.310	23.303	(0.960)	17244	0.15307	0.1531
* 134	Di-n-octylphthalate-d4	153	24.293	24.294	(1.000)	770279	4.00000	
73	Di-n-octylphthalate	149	24.301	24.302	(1.000)	41452	0.20564	0.2056
74	Benzo(b)fluoranthene	252	25.130	25.130	(0.970)	38730	0.21796	0.2180
75	Benzo(k)fluoranthene	252	25.168	25.169	(0.972)	36927	0.20466	0.2047(M)
76	Benzo(a)pyrene	252	25.788	25.789	(0.996)	31760	0.19991	0.1999
* 77	Perylene-d12	264	25.904	25.897	(1.000)	548181	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.579	28.580	(1.103)	41191	0.20380	0.2038
79	Dibenzo(a,h)anthracene	278	28.587	28.595	(1.104)	35251	0.21007	0.2101
80	Benzo(g,h,i)perylene	276	29.371	29.364	(1.134)	36477	0.20854	0.2085
90	N-Nitrosodimethylamine	74	4.843	4.835	(0.529)	14156	0.39364	0.3936
91	Aniline	93	8.628	8.628	(0.942)	28930	0.36742	0.3674
93	Benzidine	184	20.895	20.888	(0.898)	14397	0.17911	0.1791
103	Pyridine	79	4.905	4.874	(0.535)	21607	0.39122	0.3912
105	1-methylnaphthalene	142	13.270	13.263	(1.141)	23674	0.20535	0.2053
111	Azobenzene (1,2-DP-Hydrazine)	77	16.619	16.620	(1.092)	23317	0.18864	0.1886

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.168	25.130	(0.972)	70429	0.41050	0.4105(M)
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.932	(1.047)	4038	0.11557	0.1156

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182304.D
Lab Smp Id: SLC0504-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	186398	-0.01
27 Naphthalene-d8	688740	344370	1377480	658189	-4.44
42 Acenaphthene-d10	373663	186832	747326	347153	-7.09
59 Phenanthrene-d10	652323	326162	1304646	610141	-6.47
69 Chrysene-d12	537141	268571	1074282	487006	-9.33
134 Di-n-octylphthala	947608	473804	1895216	770279	-18.71
77 Perylene-d12	602550	301275	1205100	548181	-9.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	-0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	-0.01
69 Chrysene-d12	23.27	22.77	23.77	23.27	-0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	-0.00
77 Perylene-d12	25.90	25.40	26.40	25.90	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182304.D

Lab ID: SLC0504-LCV1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 19:37

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0094	Benzoic acid

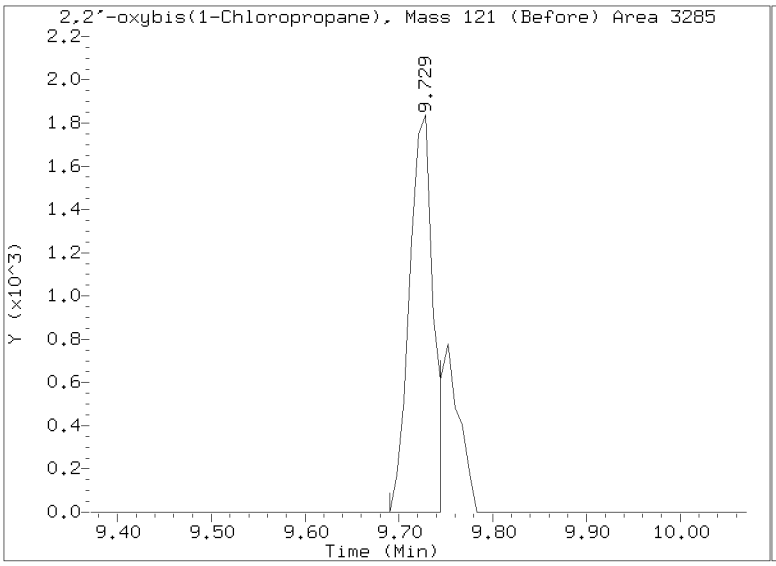
RRT check based on Ccal File: NT1003182302.D

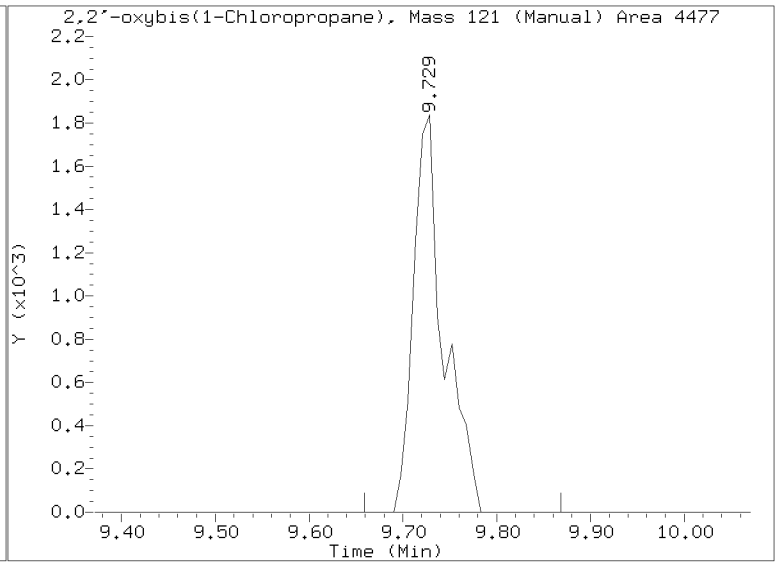
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

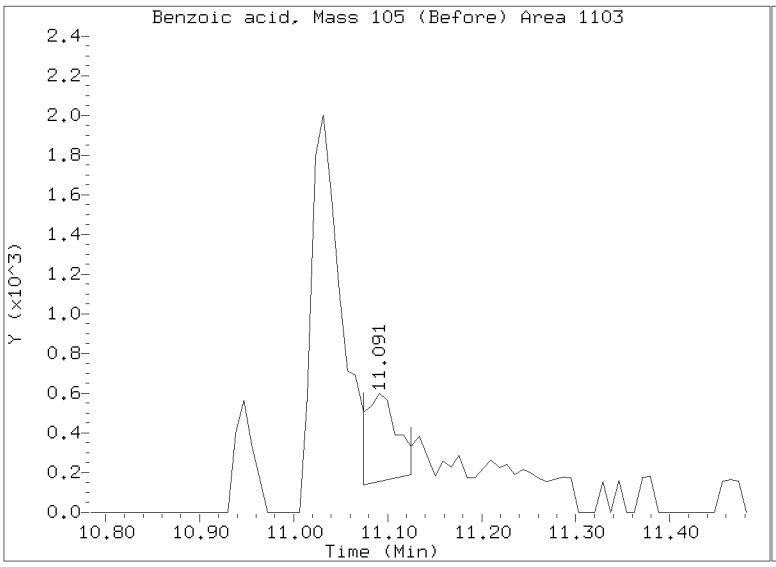
* Only compounds listed in the work order have been verified by the analyst *

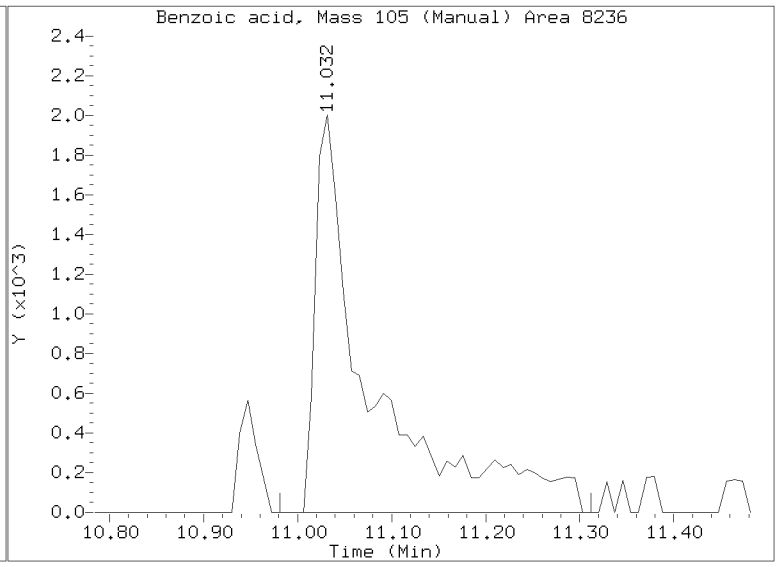
Quant Ion Manual Peak Adjustment Report

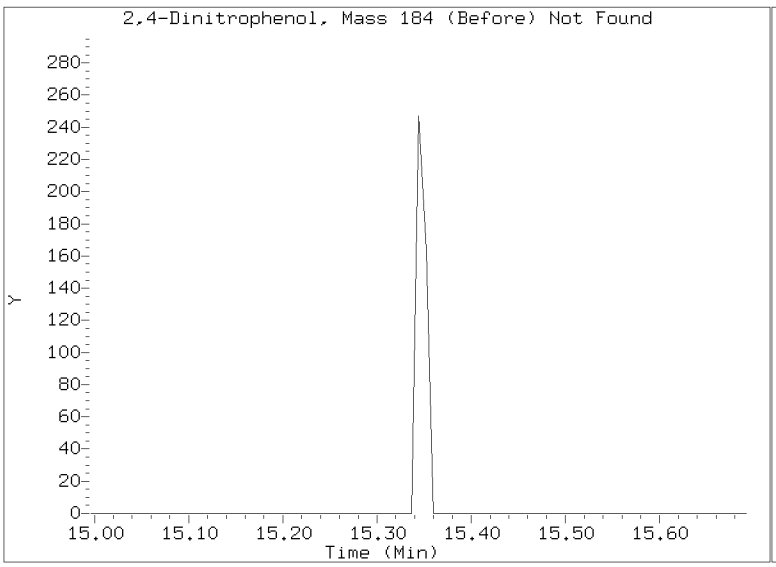
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182304.D
Injection Date: 18-MAR-2023 19:37
Lab ID:SLC0504-LCV1 Client ID:
Report Date: 04/04/2023 08:56

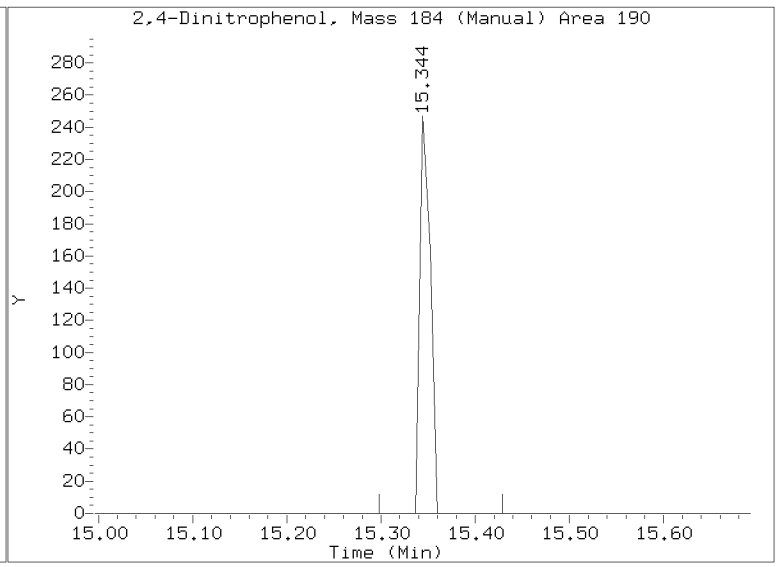












Quant Ion Manual Peak Adjustment Report

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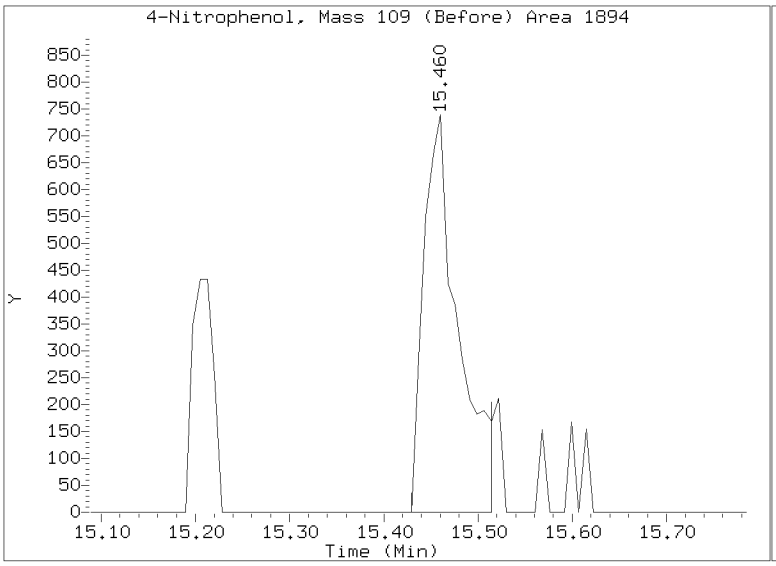
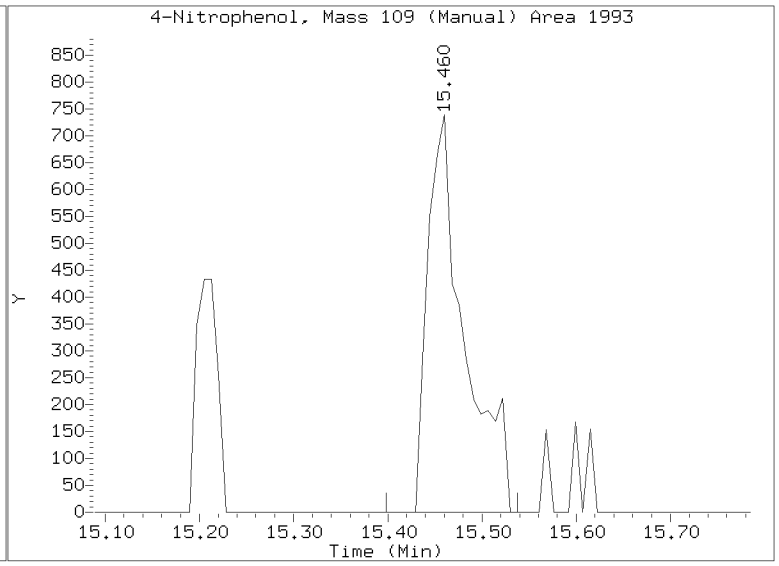
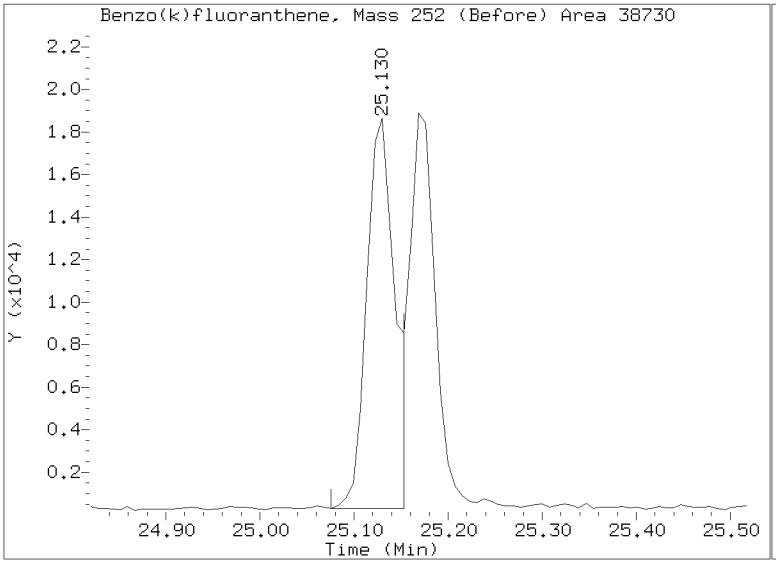
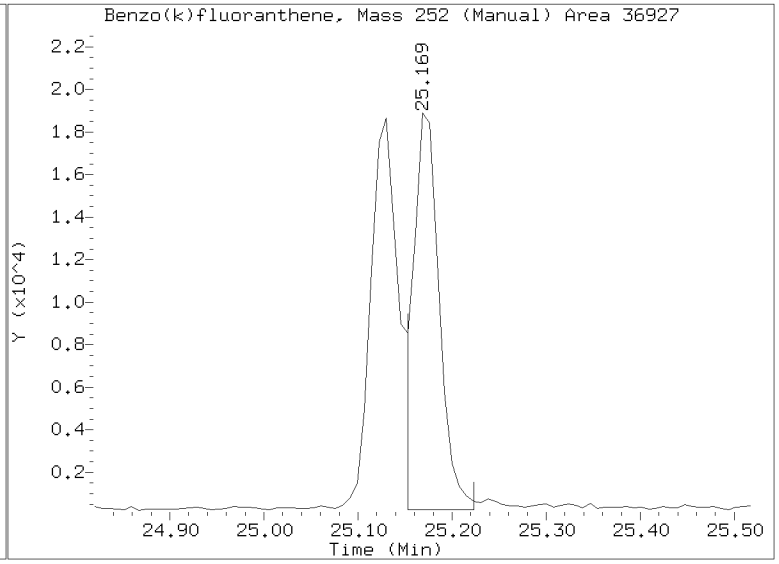
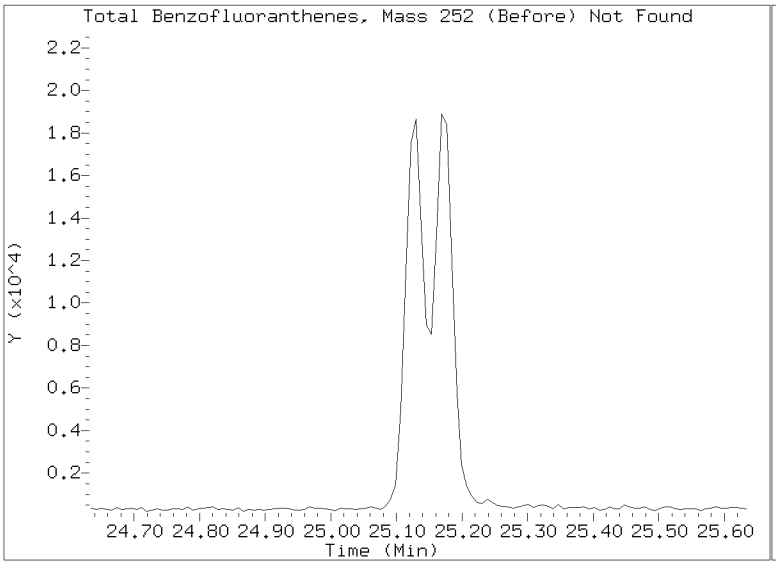
Injection Date: 18-MAR-2023 19:37
Lab ID:SLC0504-LCV1 Client ID:
Report Date: 04/04/2023 08:56

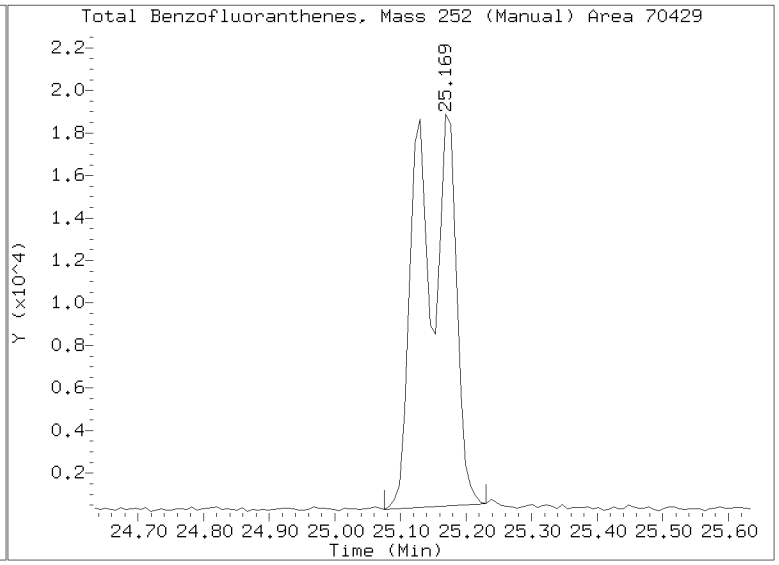












LOW-CONCENTRATION CALIBRATION VERIFICATION

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0504-LCV2
Sequence: SLC0504
Standard ID: K011105

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Phenol	0.20000	0.2	3.2	50.00
4-Methylphenol	0.20000	0.2	4.0	50.00
Naphthalene	0.20000	0.2	5.1	50.00
2-Methylnaphthalene	0.20000	0.2	7.1	50.00
Acenaphthylene	0.20000	0.2	8.6	50.00
Dimethylphthalate	0.20000	0.2	12.1	50.00
Acenaphthene	0.20000	0.2	1.2	50.00
Dibenzofuran	0.20000	0.2	3.4	50.00
Fluorene	0.20000	0.2	-19.1	50.00
Phenanthrene	0.20000	0.2	2.6	50.00
Anthracene	0.20000	0.2	8.1	50.00
Fluoranthene	0.20000	0.2	-2.7	50.00
Pyrene	0.20000	0.2	-2.8	50.00
Butylbenzylphthalate	0.20000	0.2	23.2	50.00
Benzo(a)anthracene	0.20000	0.2	14.0	50.00
Chrysene	0.20000	0.2	5.2	50.00
bis(2-Ethylhexyl)phthalate	0.20000	0.2	-0.3	50.00
Benzofluoranthenes, Total	0.40000	0.4	9.4	50.00
Benzo(a)pyrene	0.20000	0.2	12.0	50.00
Indeno(1,2,3-cd)pyrene	0.20000	0.2	-1.0	50.00
Dibenzo(a,h)anthracene	0.20000	0.2	-0.7	50.00
Benzo(g,h,i)perylene	0.20000	0.2	-2.2	50.00
2-Fluorophenol	0.30000	0.329	9.7	50.00
Phenol-d5	0.30000	0.293	-2.5	50.00
2-Chlorophenol-d4	0.30000	0.304	1.5	50.00
1,2-Dichlorobenzene-d4	0.20000	0.218	9.0	50.00
Nitrobenzene-d5	0.20000	0.211	5.4	50.00
2-Fluorobiphenyl	0.20000	0.214	6.8	50.00
2,4,6-Tribromophenol	0.30000	0.261	-13.1	50.00

LOW-CONCENTRATION CALIBRATION VERIFICATION
EPA 8270E

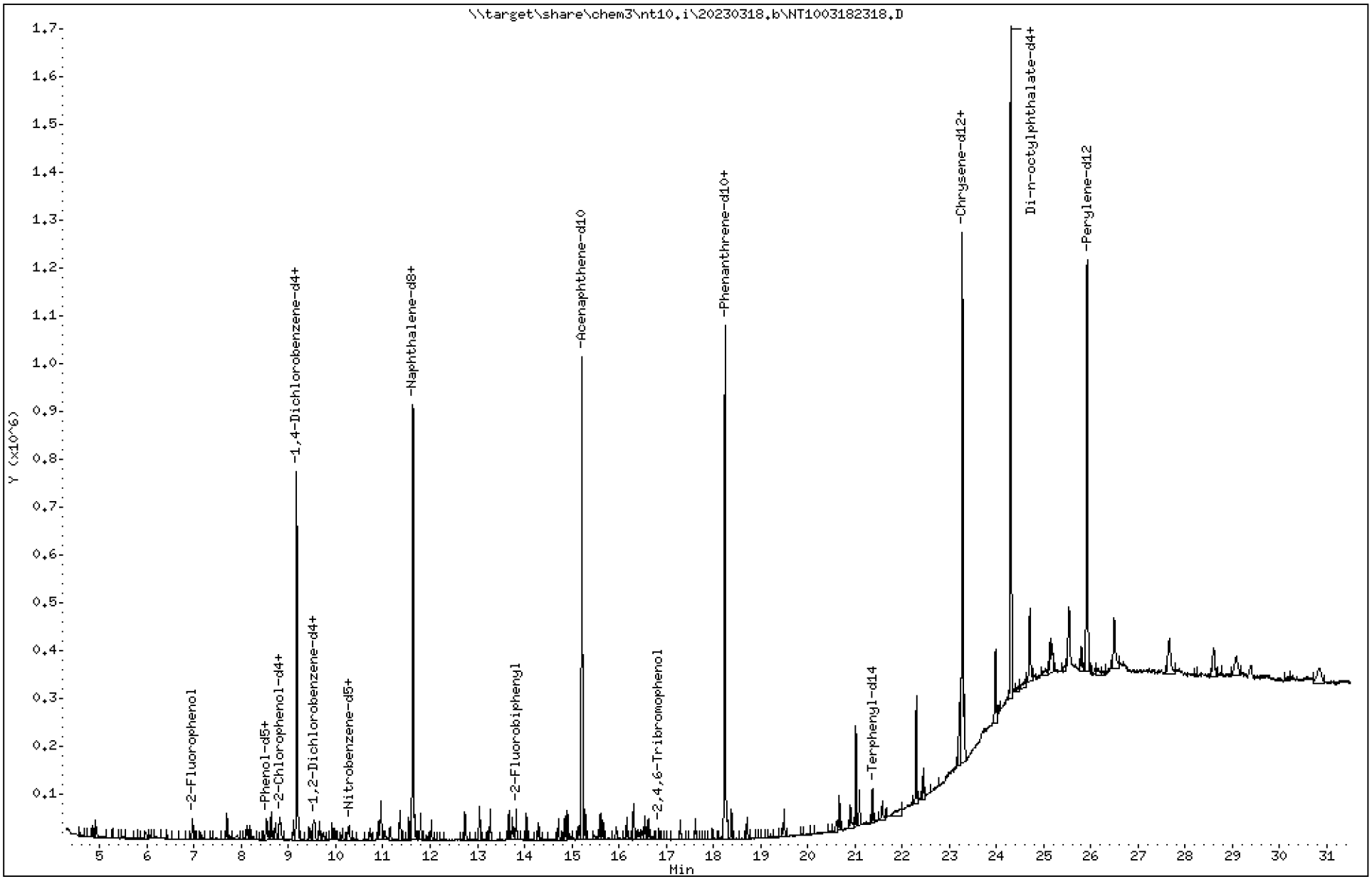
Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00046
Laboratory ID: SLC0504-LCV2
Sequence: SLC0504
Standard ID: K011105

p-Terphenyl-d14	0.20000	0.209	4.3	50.00

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D
Date : 19-MAR-2023 04:35
Client ID:
Sample Info: SLC0504-LCV2

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

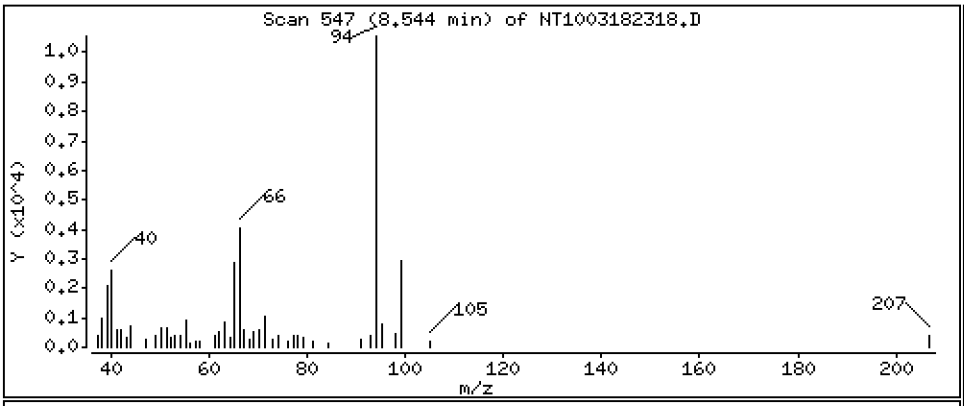
Operator: VTS

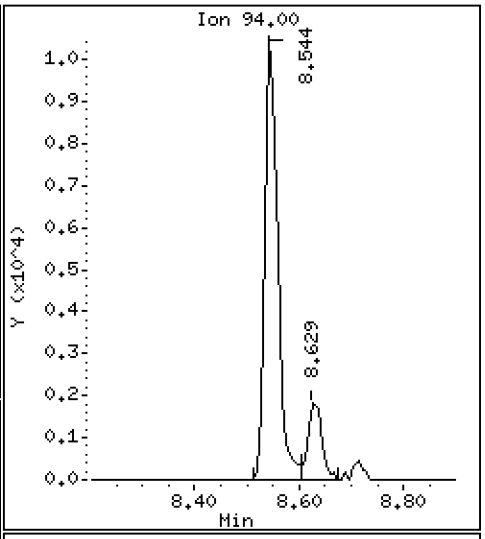
Column phase: ZB-5msi

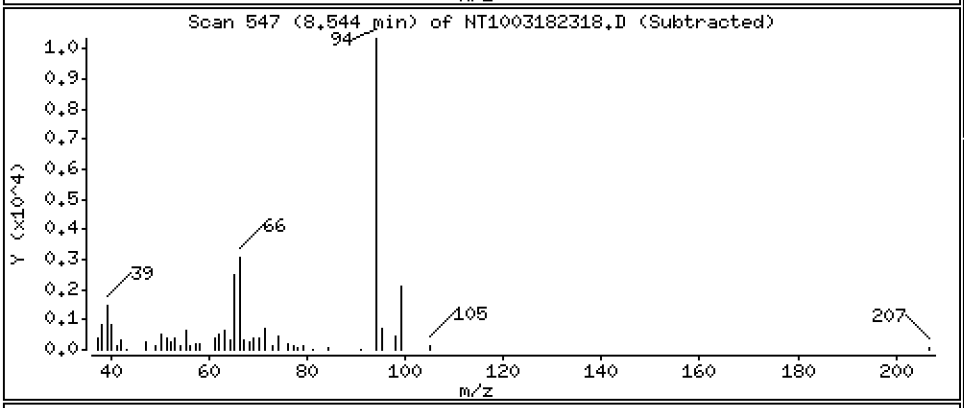
Column diameter: 0.25

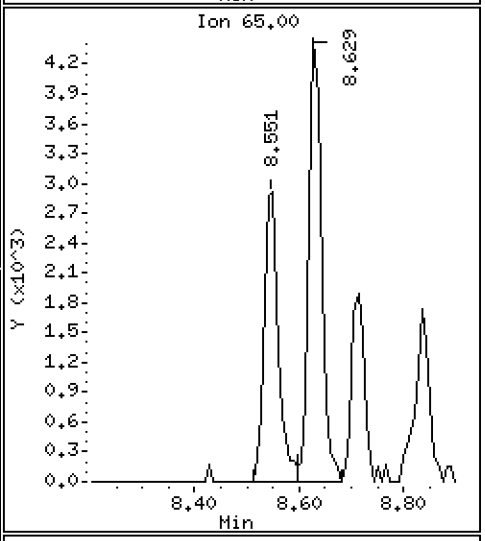
3 Phenol

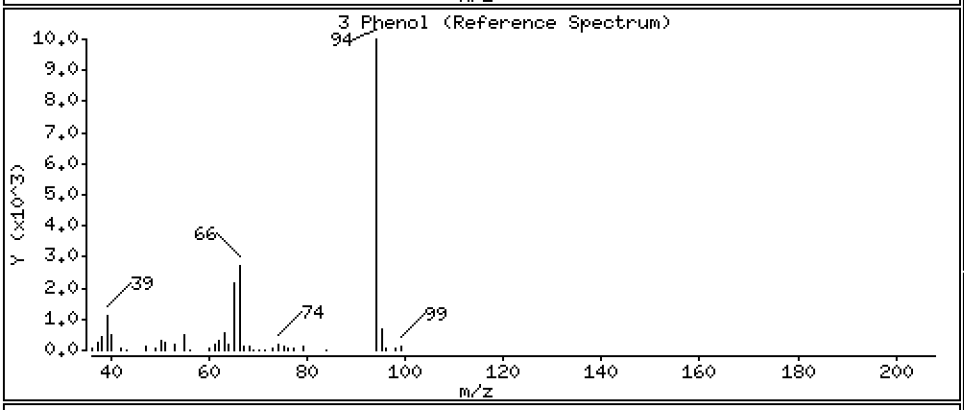
Concentration: 0.2064 ug/mL

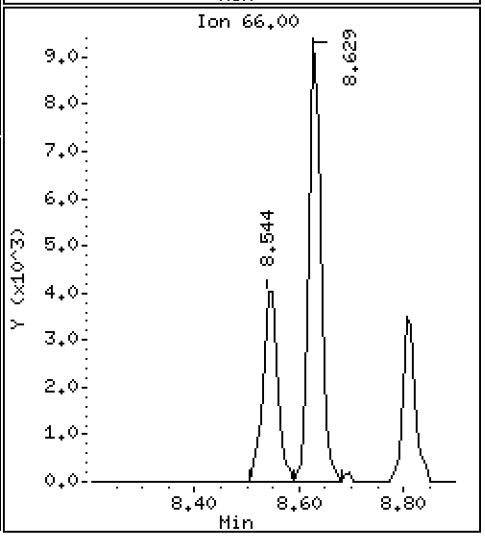


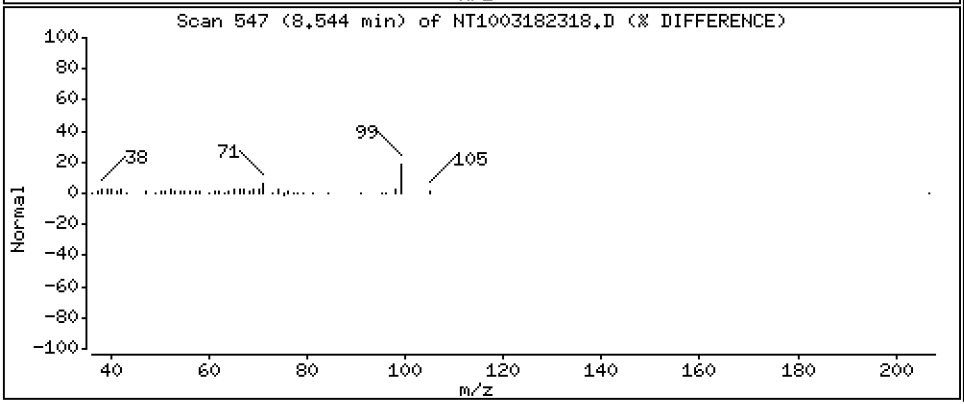












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

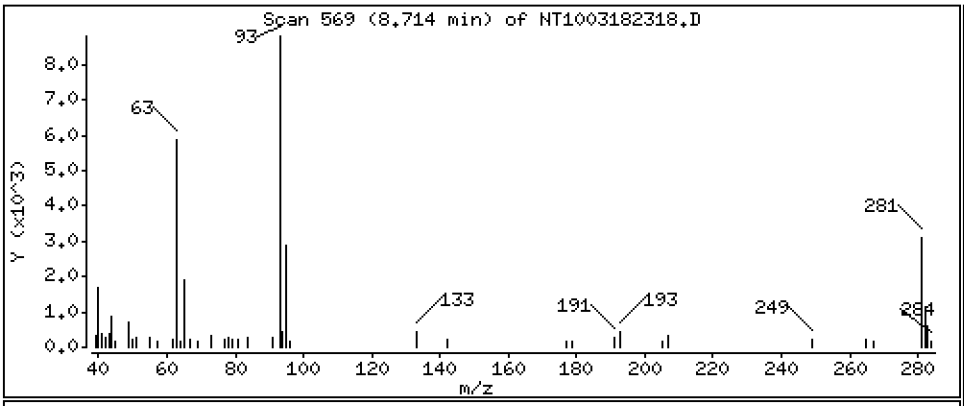
Operator: VTS

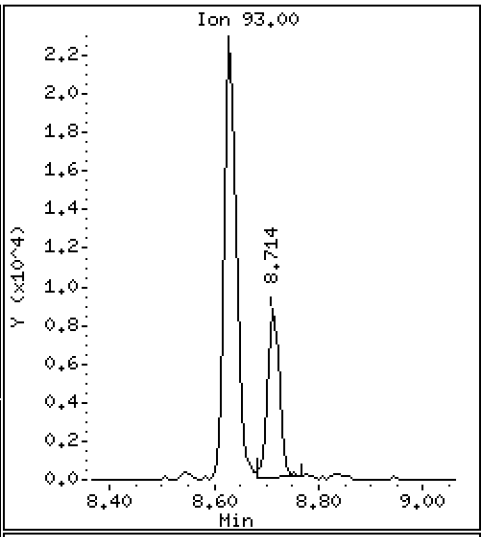
Column phase: ZB-5msi

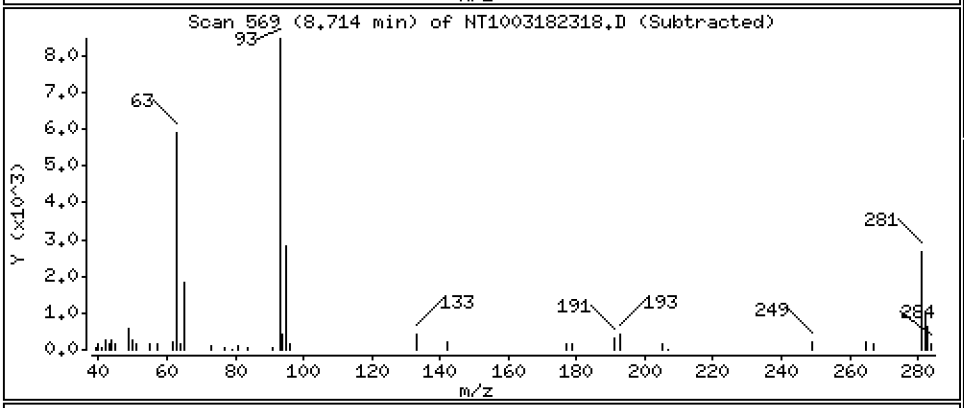
Column diameter: 0.25

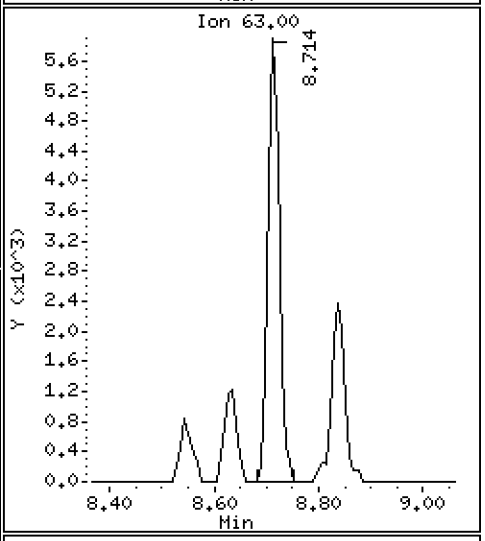
4 Bis(2-Chloroethyl)ether

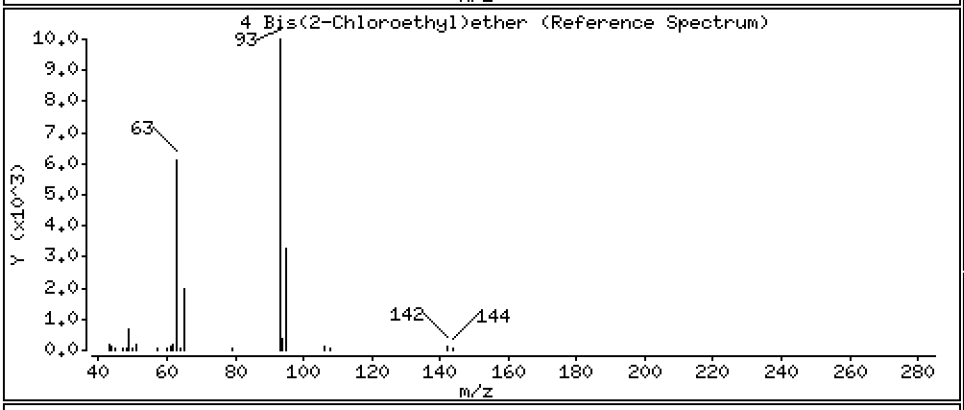
Concentration: 0.2052 ug/mL

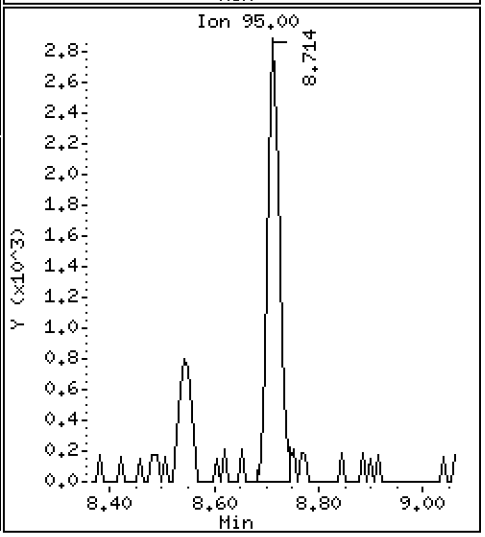


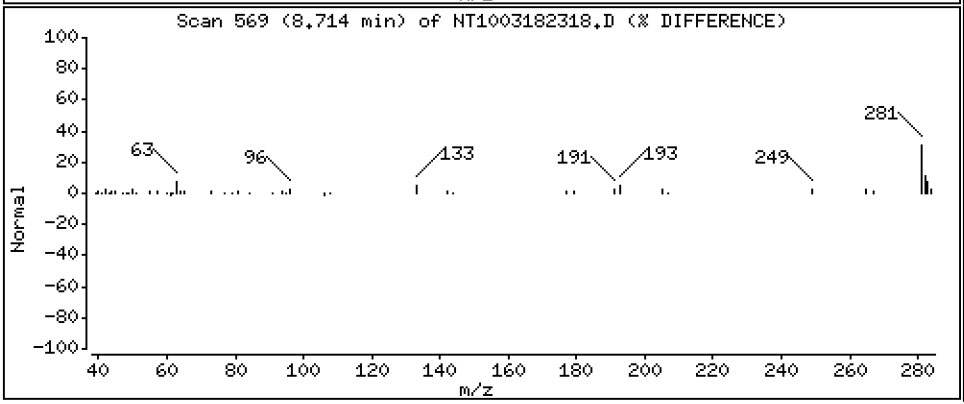












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

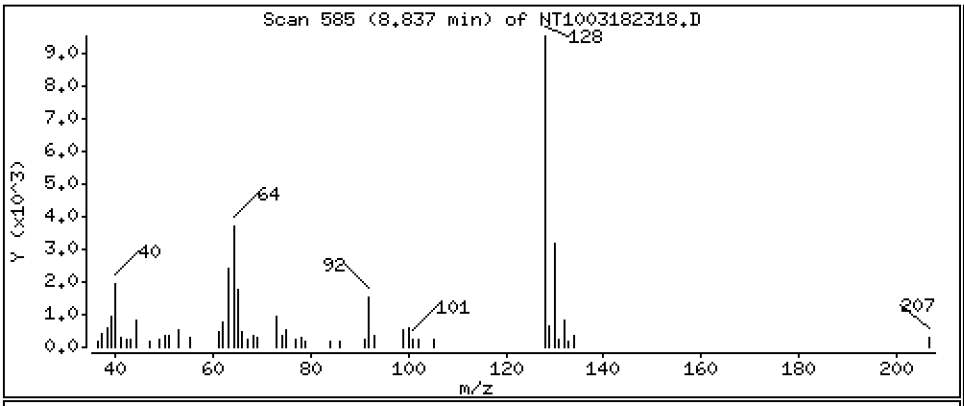
Operator: VTS

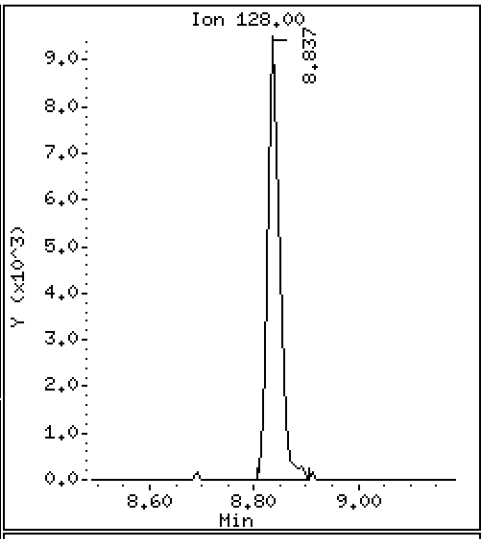
Column phase: ZB-5msi

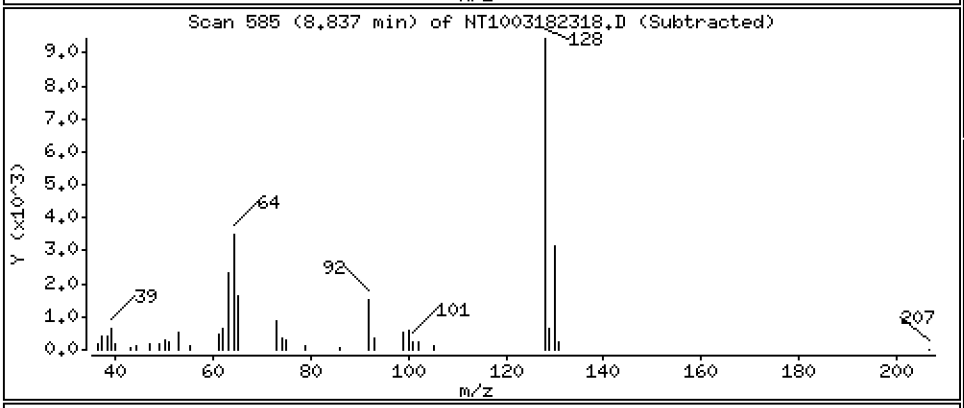
Column diameter: 0.25

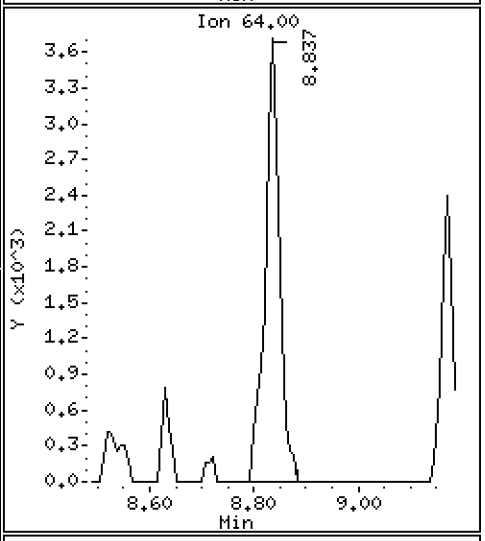
6 2-Chlorophenol

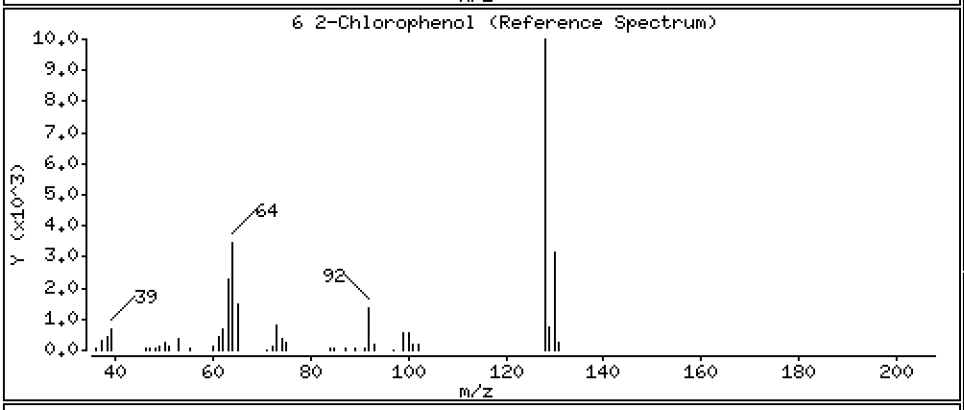
Concentration: 0.2055 ug/mL

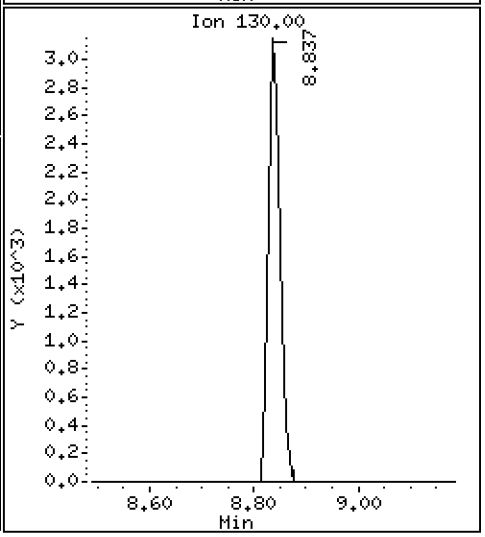


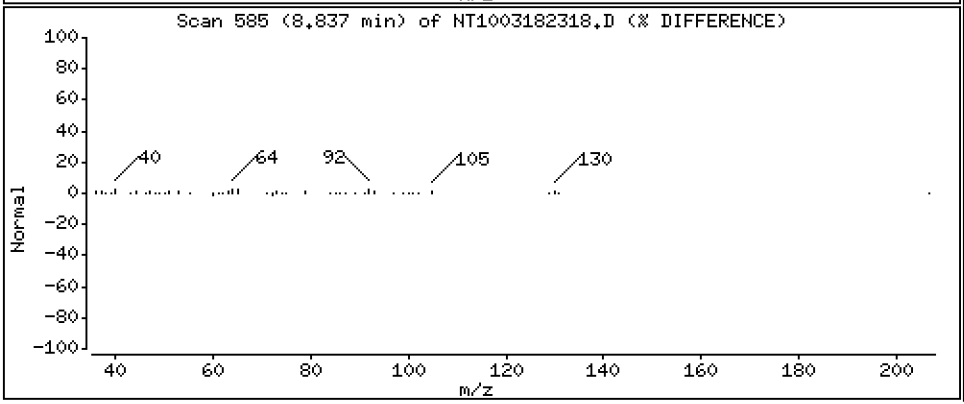












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

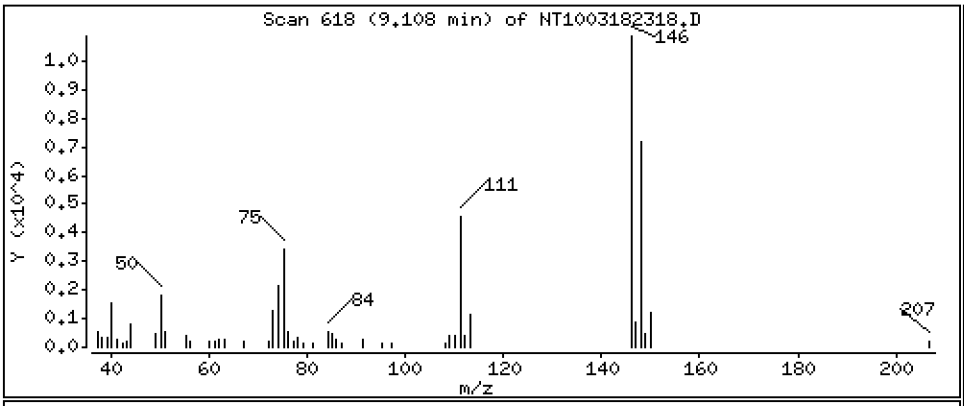
Operator: VTS

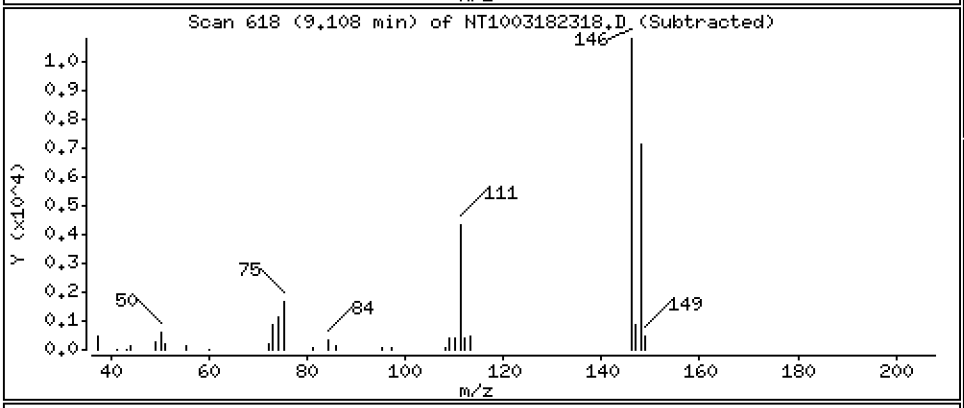
Column phase: ZB-5msi

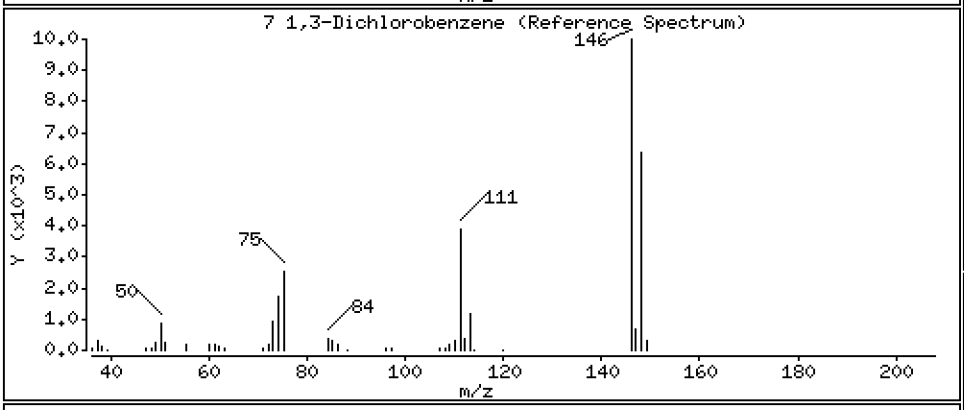
Column diameter: 0.25

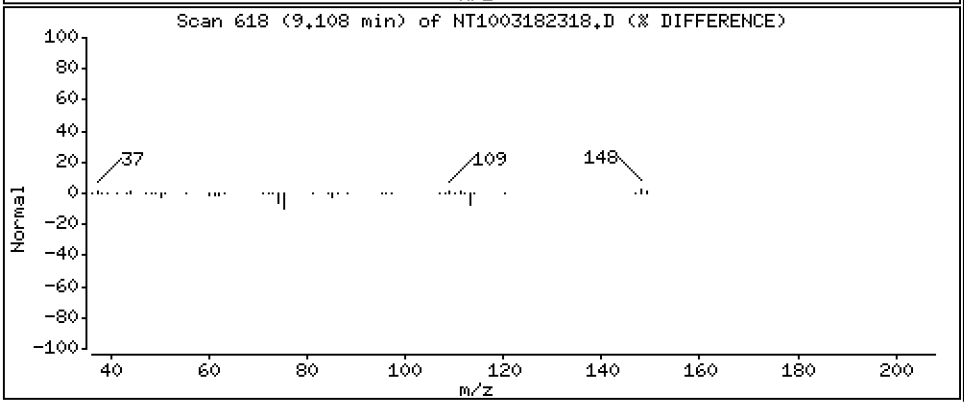
7 1,3-Dichlorobenzene

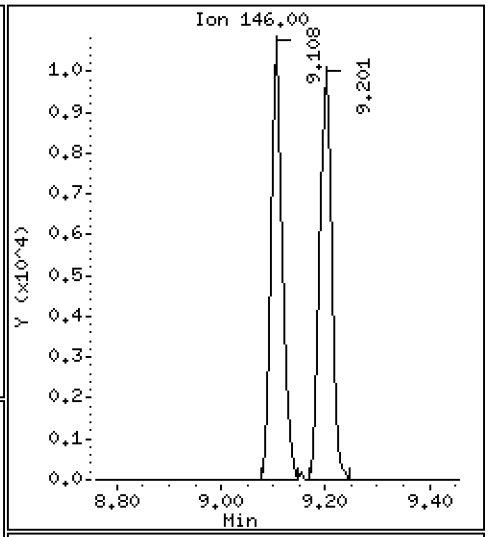
Concentration: 0.2079 ug/mL

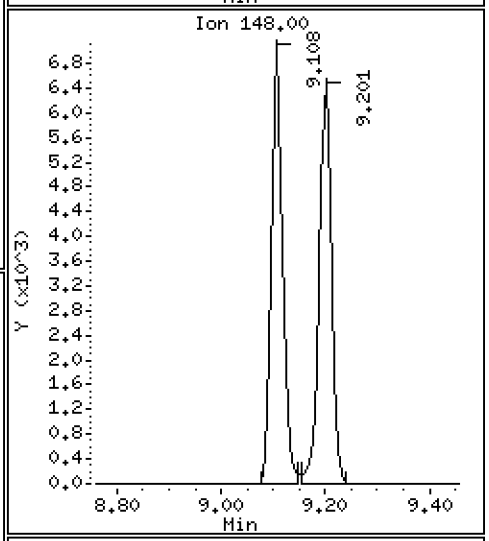


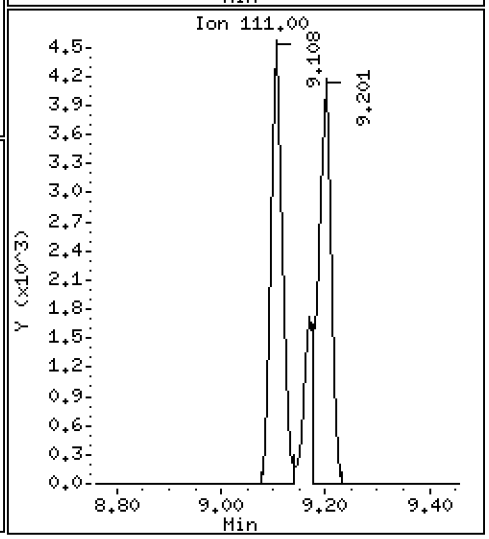












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

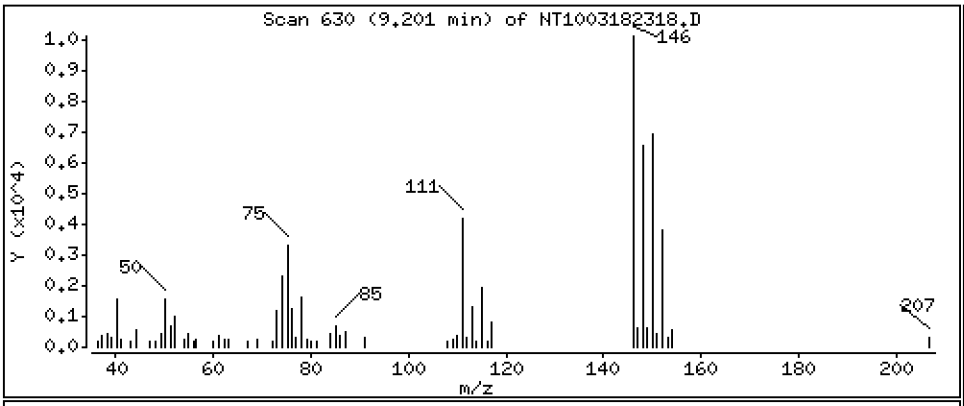
Operator: VTS

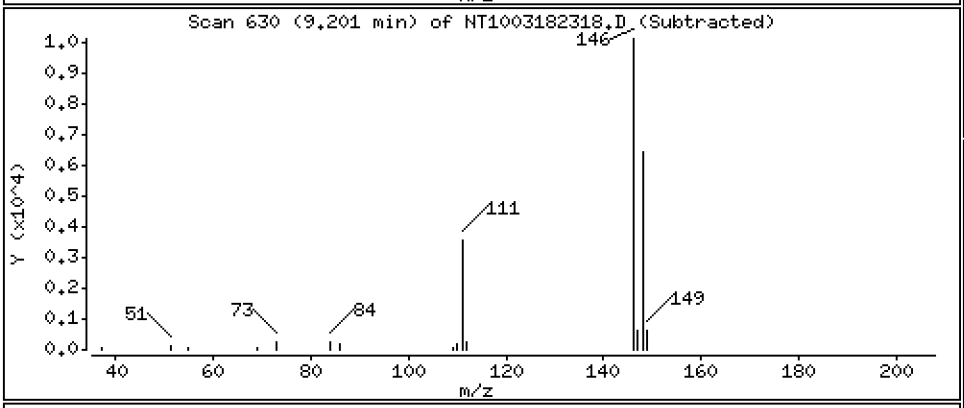
Column phase: ZB-5msi

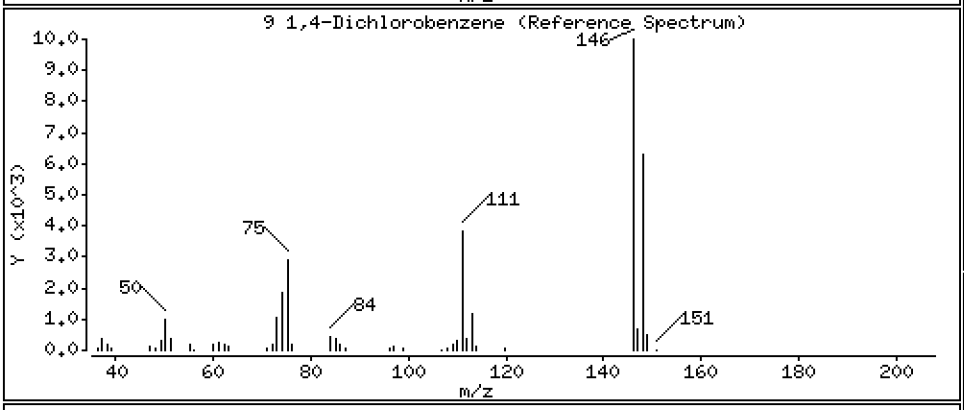
Column diameter: 0.25

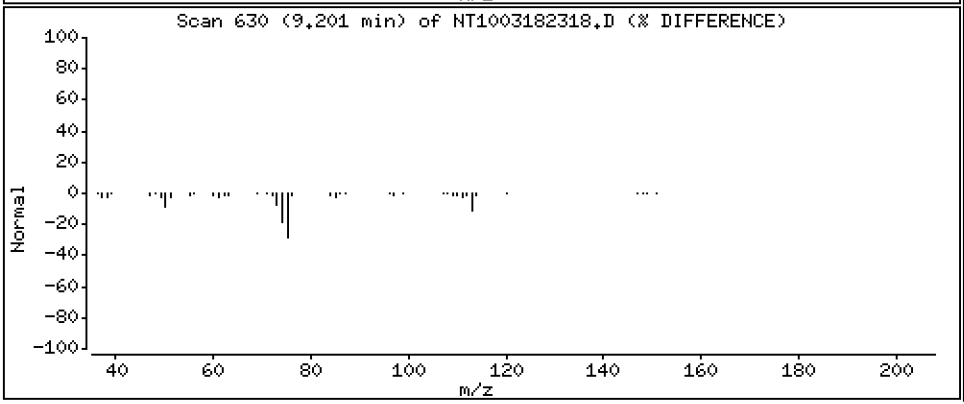
9 1,4-Dichlorobenzene

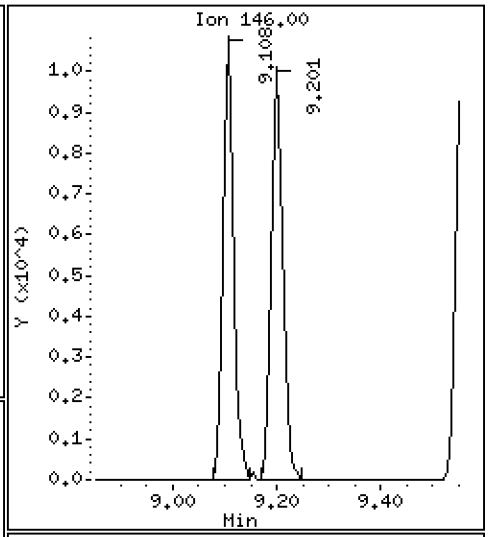
Concentration: 0.2064 ug/mL

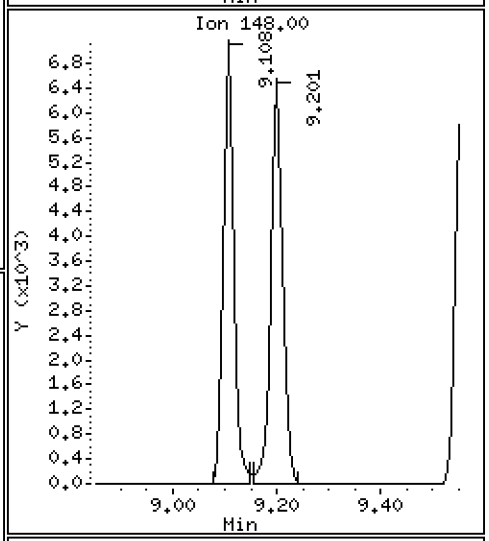


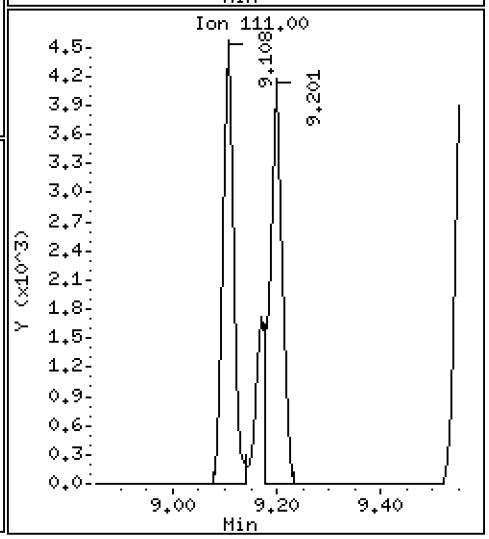












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

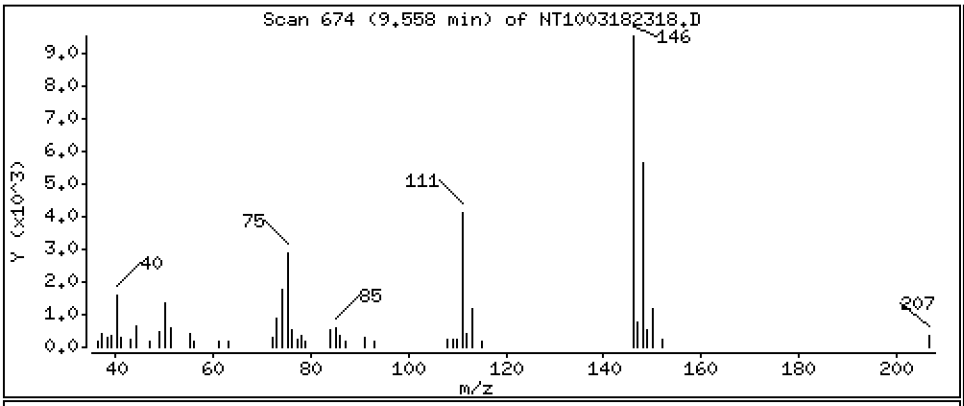
Operator: VTS

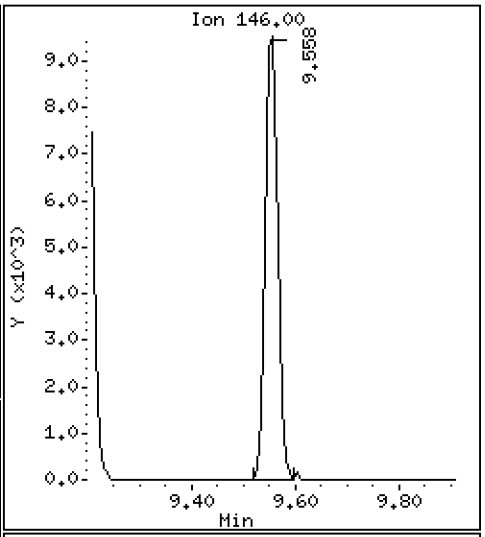
Column phase: ZB-5msi

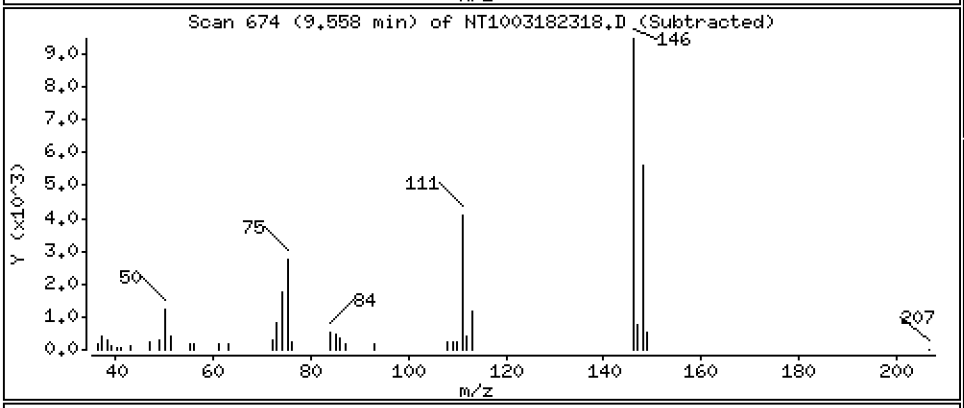
Column diameter: 0.25

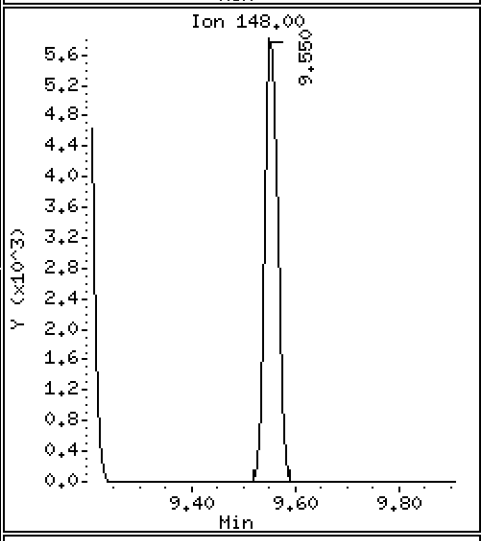
12 1,2-Dichlorobenzene

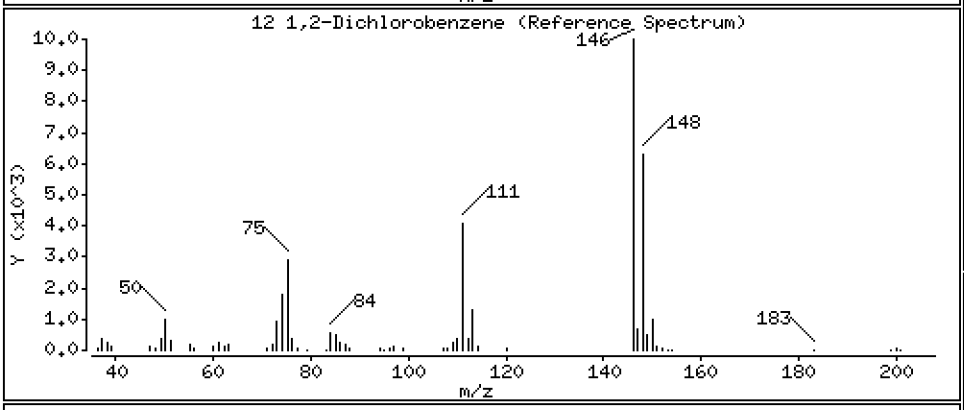
Concentration: 0.2110 ug/mL

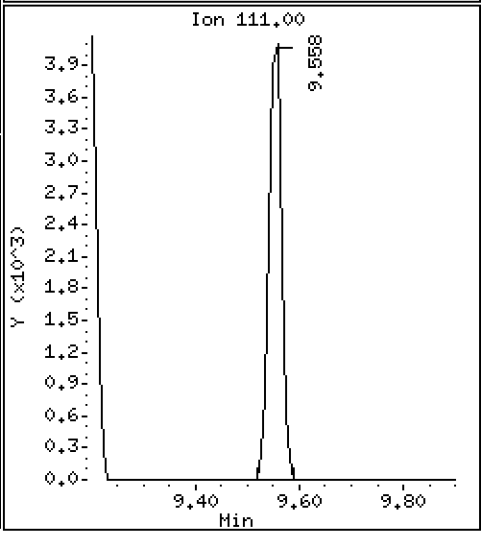


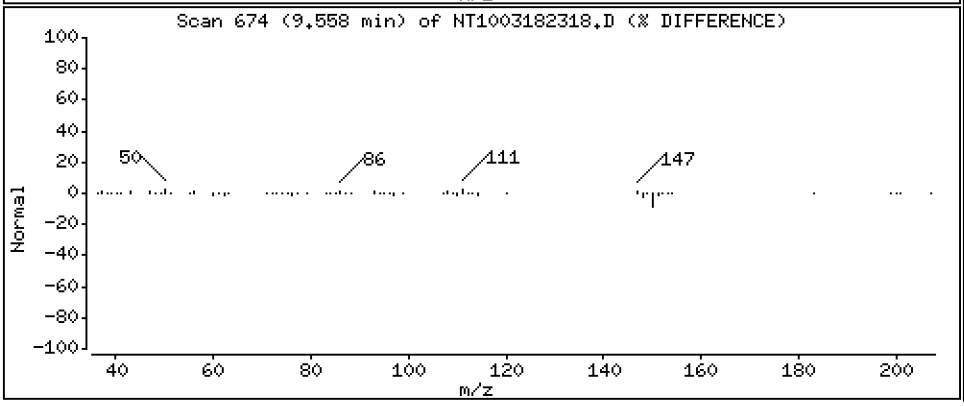












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

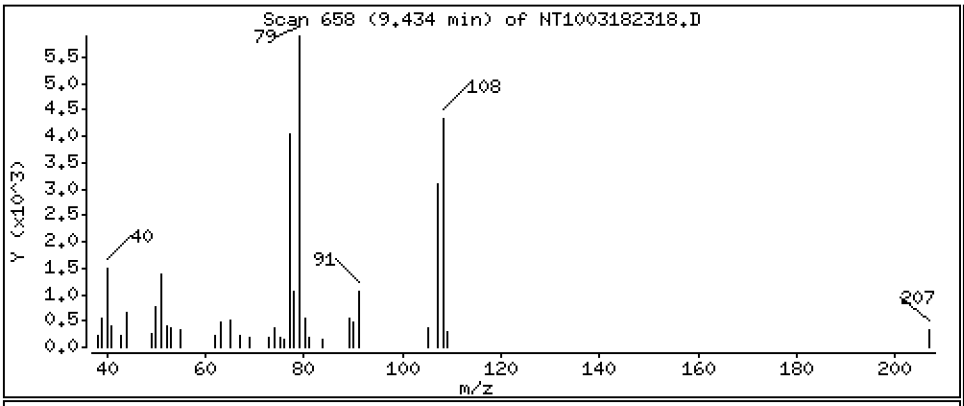
Operator: VTS

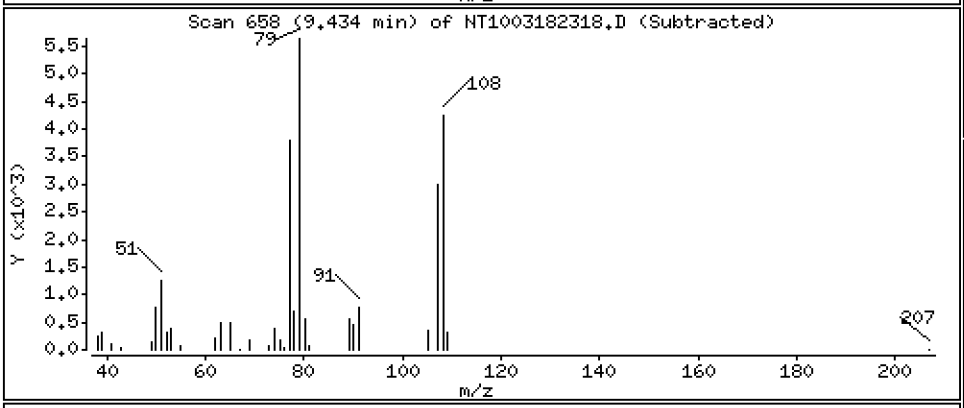
Column phase: ZB-5msi

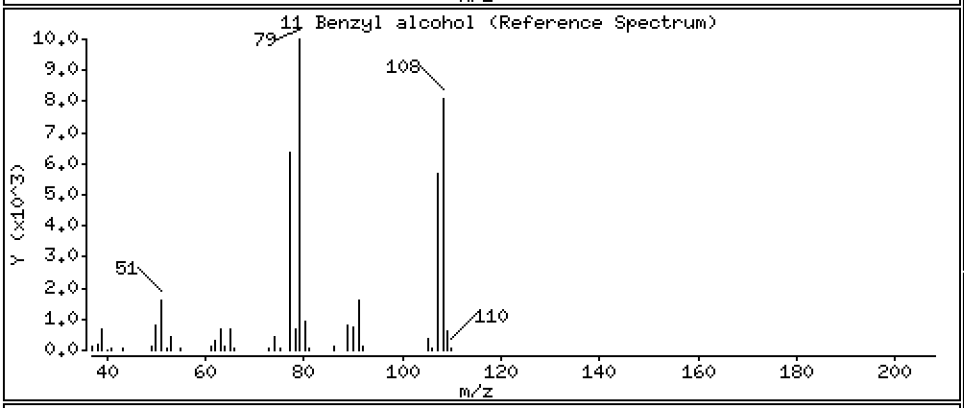
Column diameter: 0.25

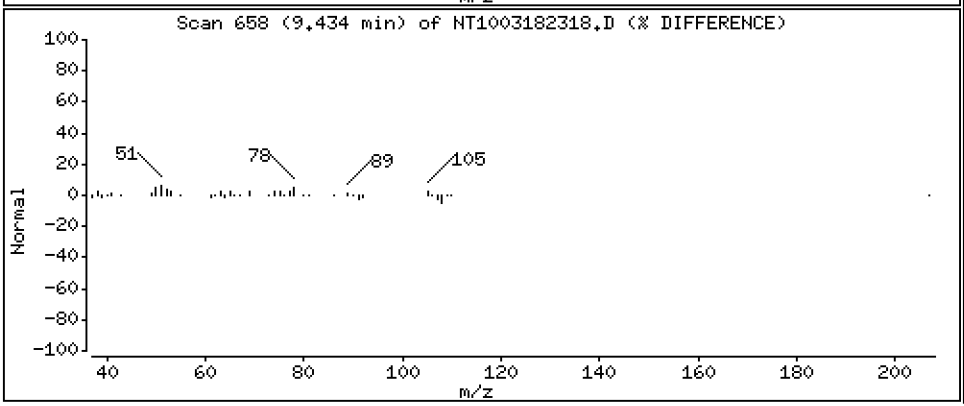
11 Benzyl alcohol

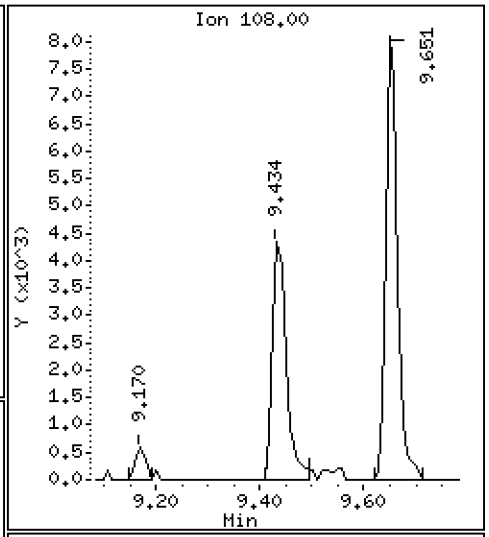
Concentration: 0.1964 ug/mL

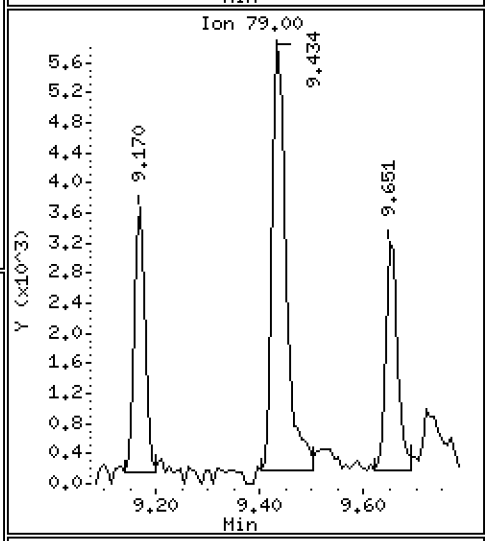


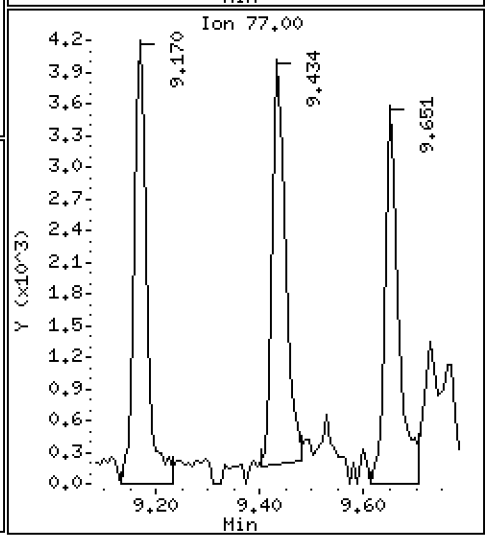












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

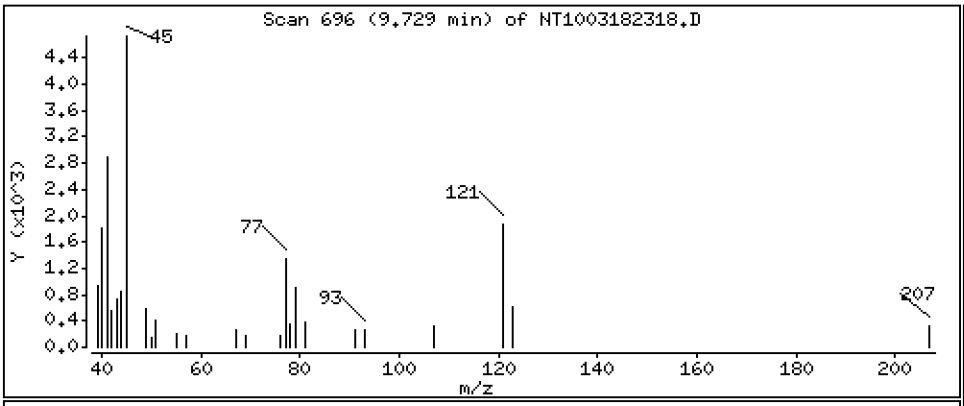
Operator: VTS

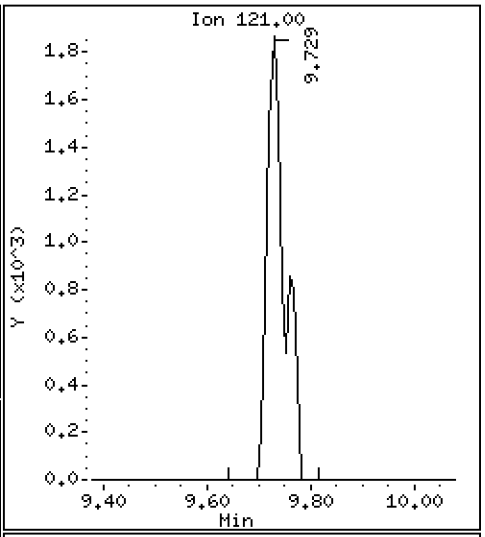
Column phase: ZB-5msi

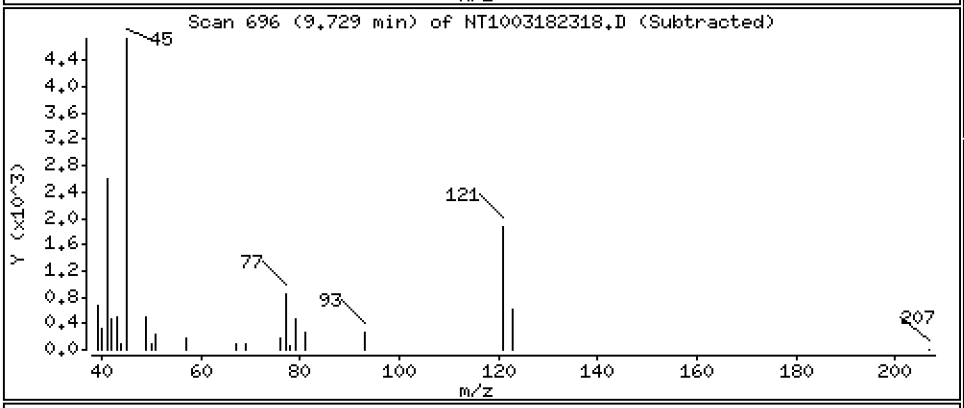
Column diameter: 0.25

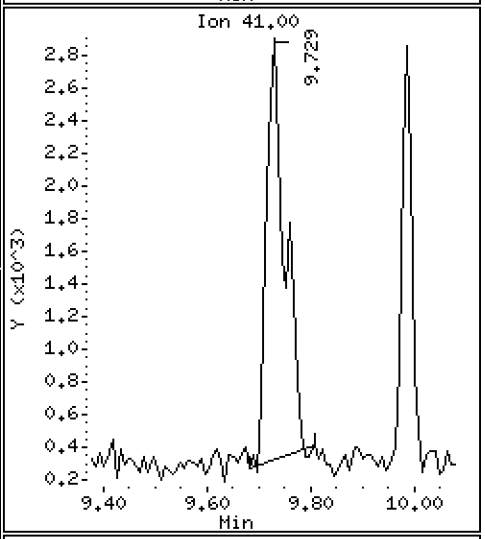
14 2,2'-oxybis(1-Chloropropane)

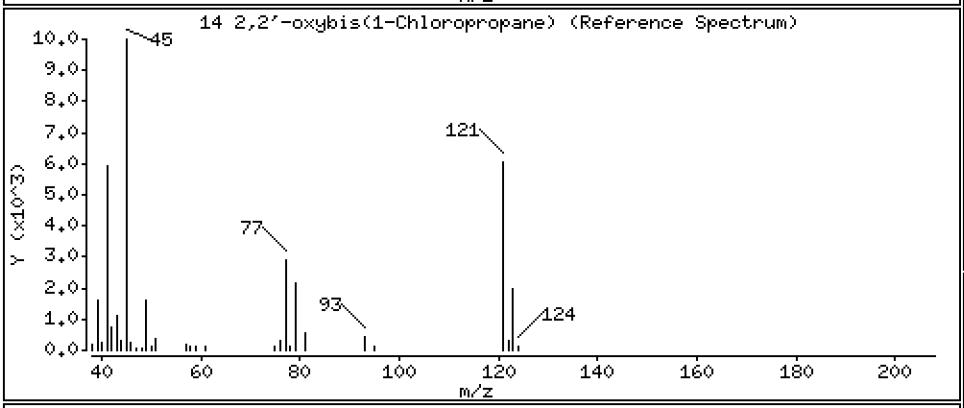
Concentration: 0.2022 ug/mL

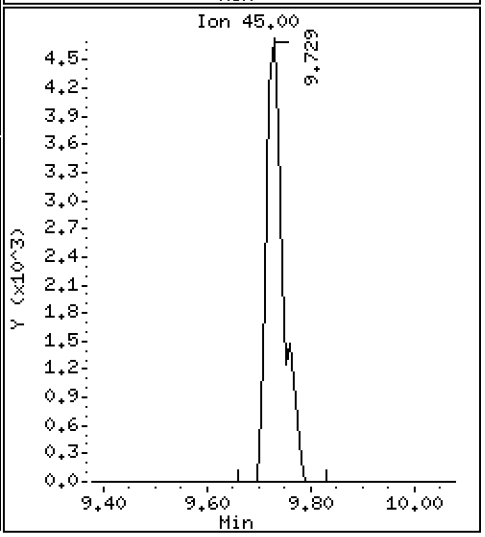


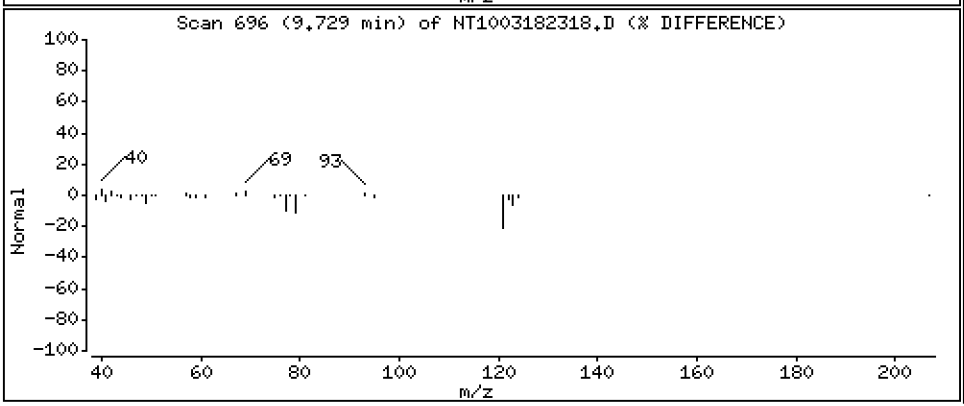












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

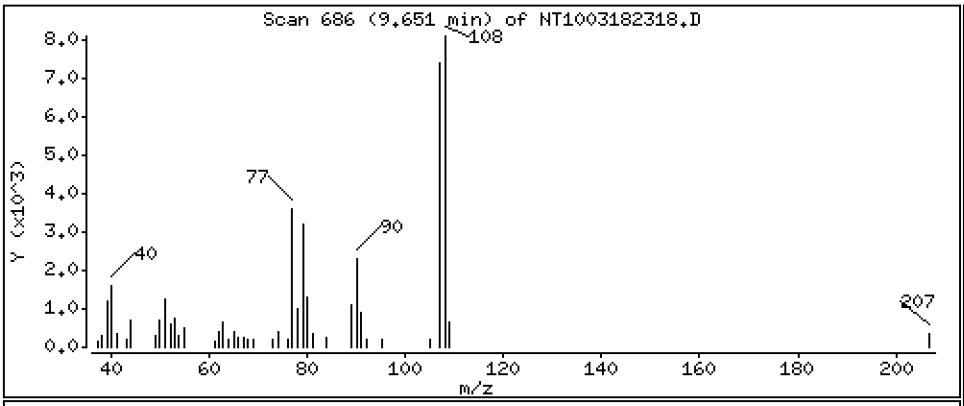
Operator: VTS

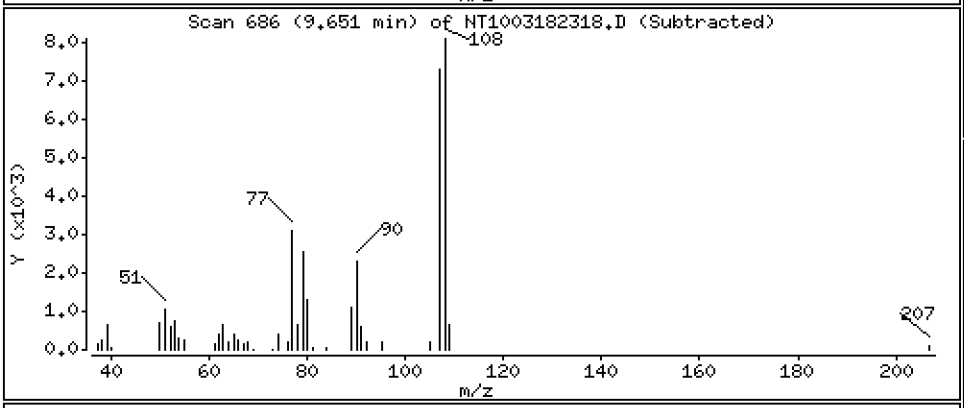
Column phase: ZB-5msi

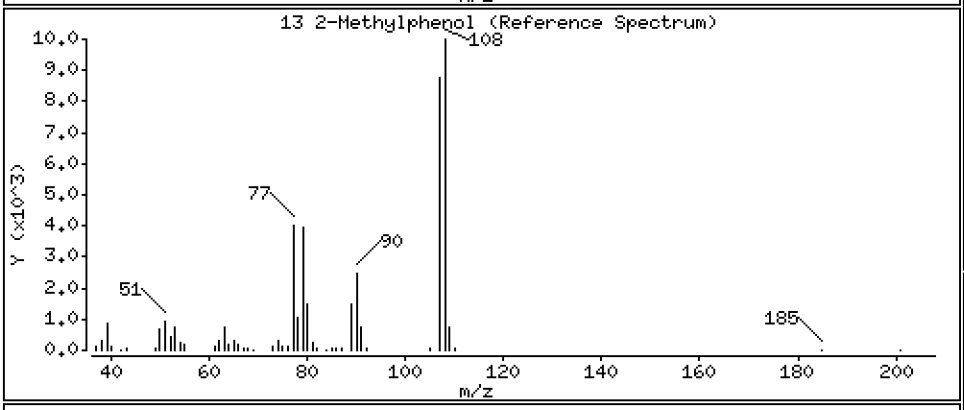
Column diameter: 0.25

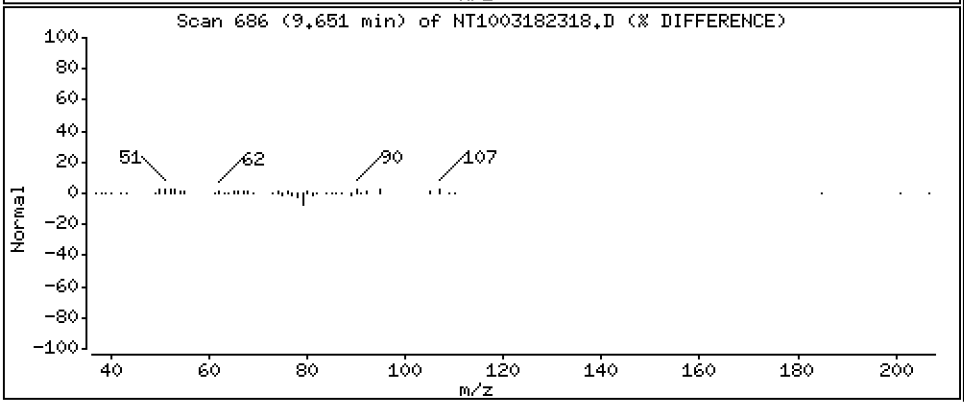
13 2-Methylphenol

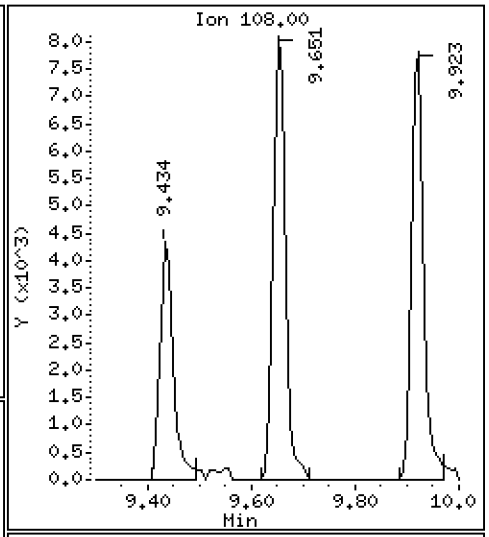
Concentration: 0.2056 ug/mL

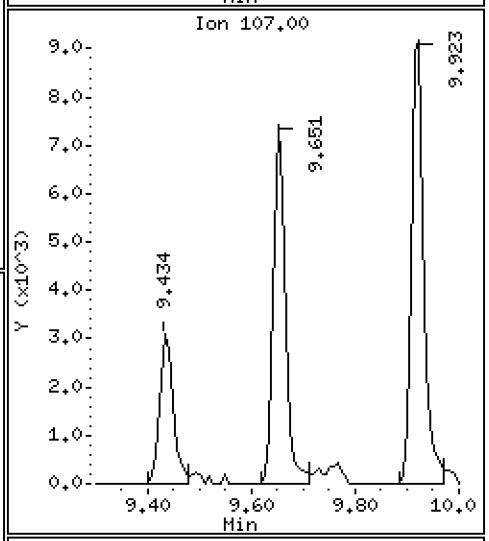


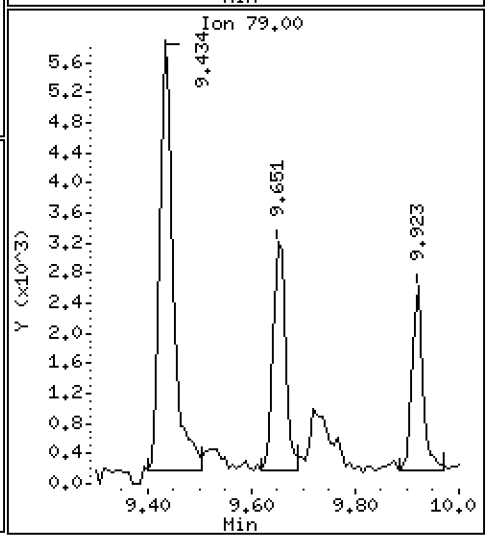












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

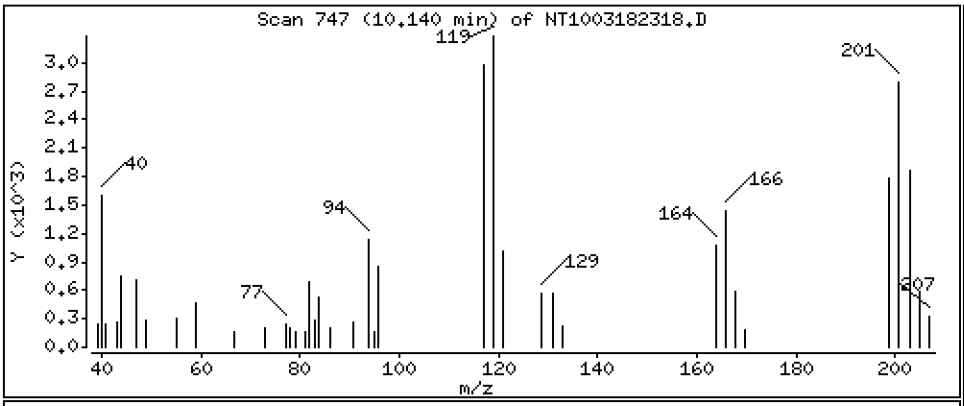
Operator: VTS

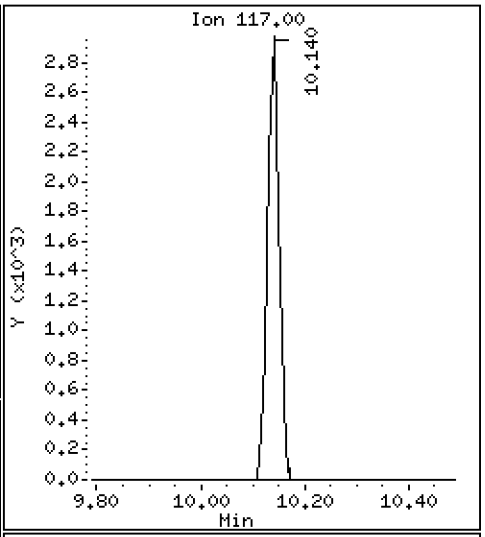
Column phase: ZB-5msi

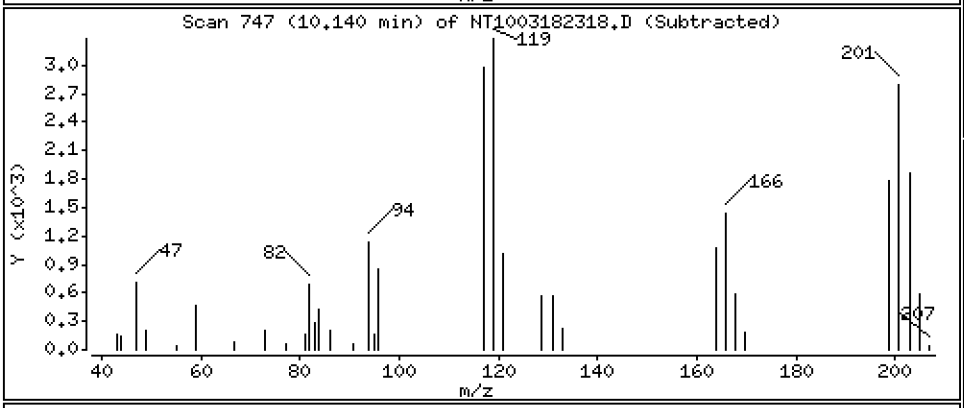
Column diameter: 0.25

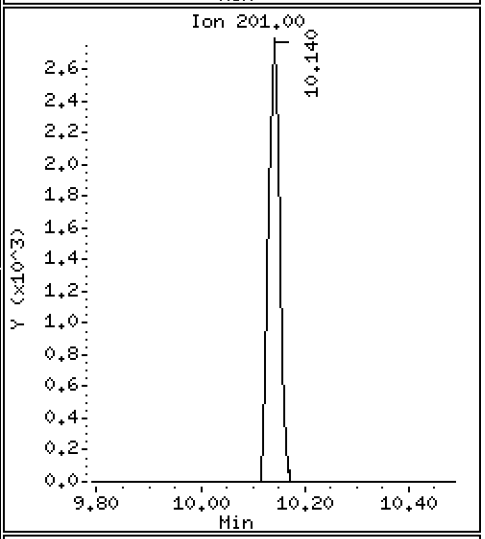
17 Hexachloroethane

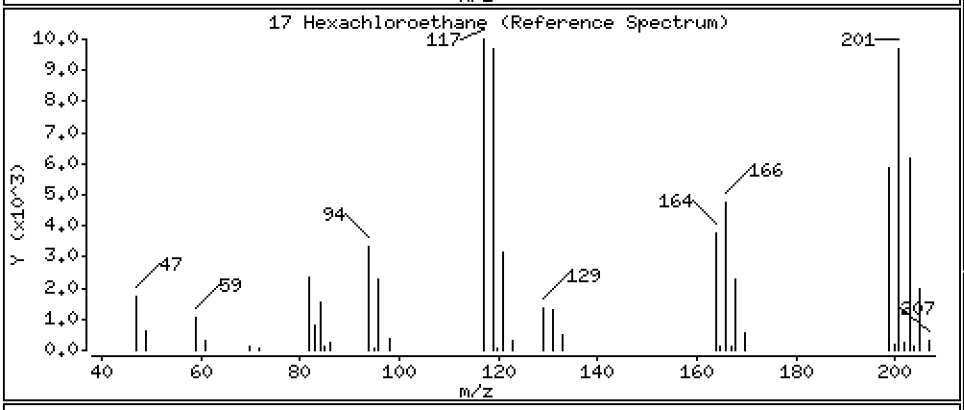
Concentration: 0.1414 ug/mL

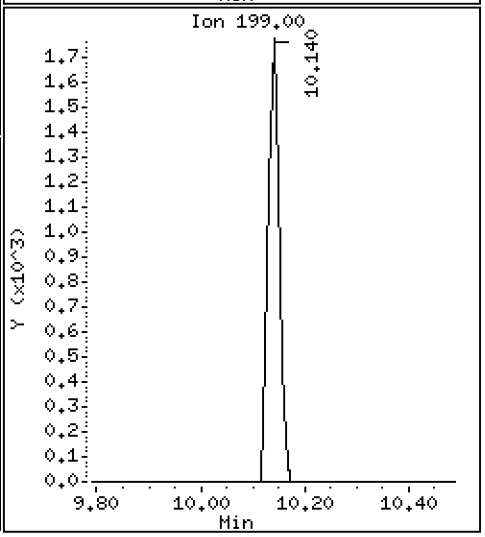


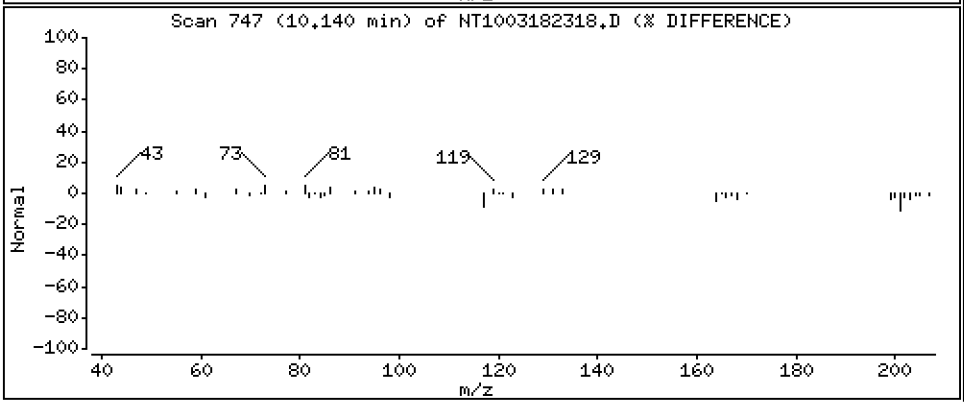












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

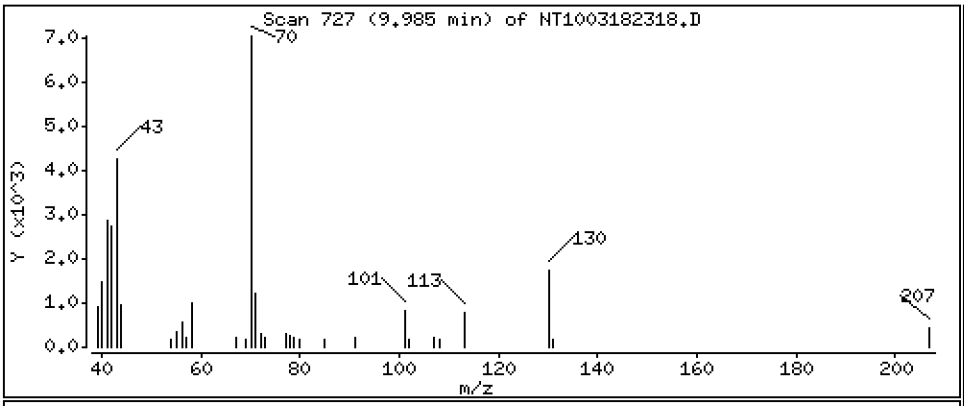
Operator: VTS

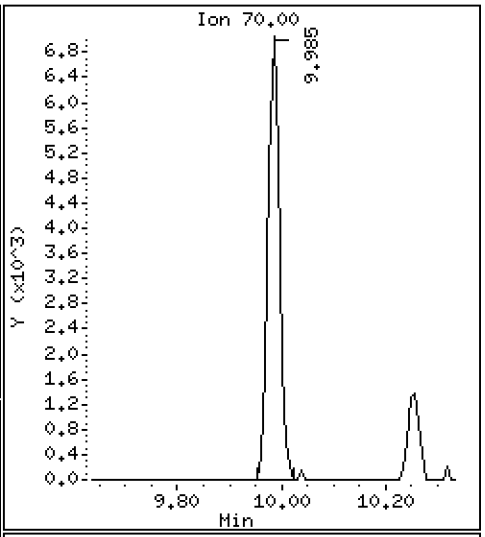
Column phase: ZB-5msi

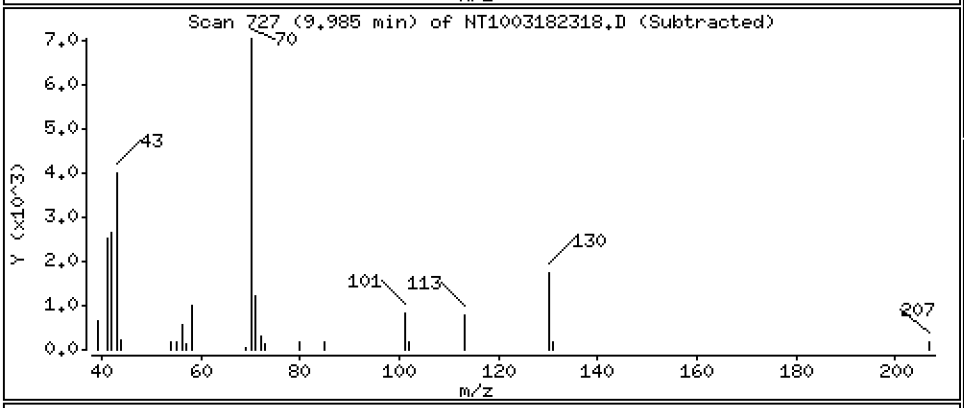
Column diameter: 0.25

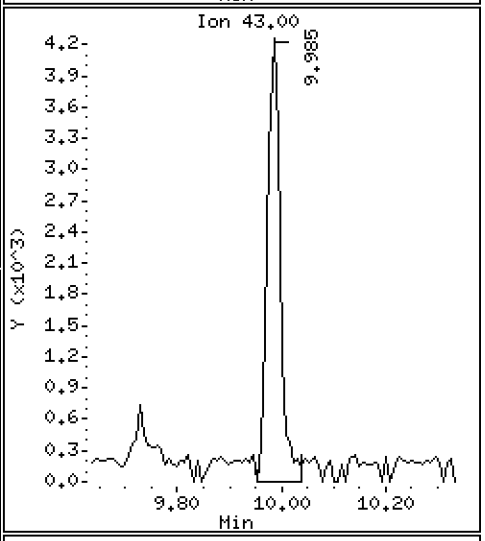
16 N-Nitroso-di-n-propylamine

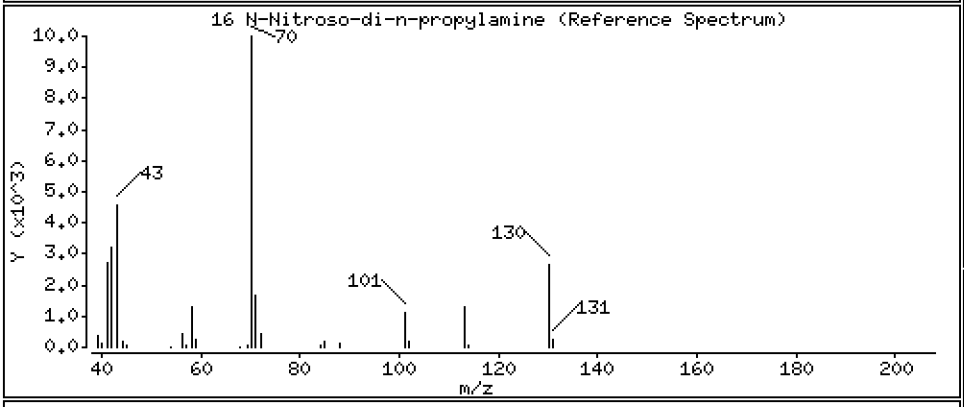
Concentration: 0.2105 ug/mL

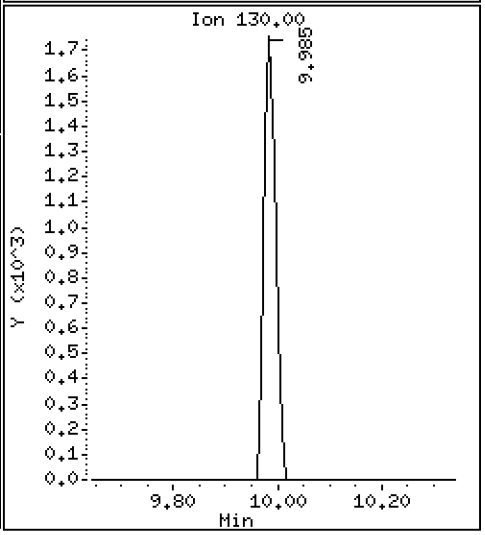


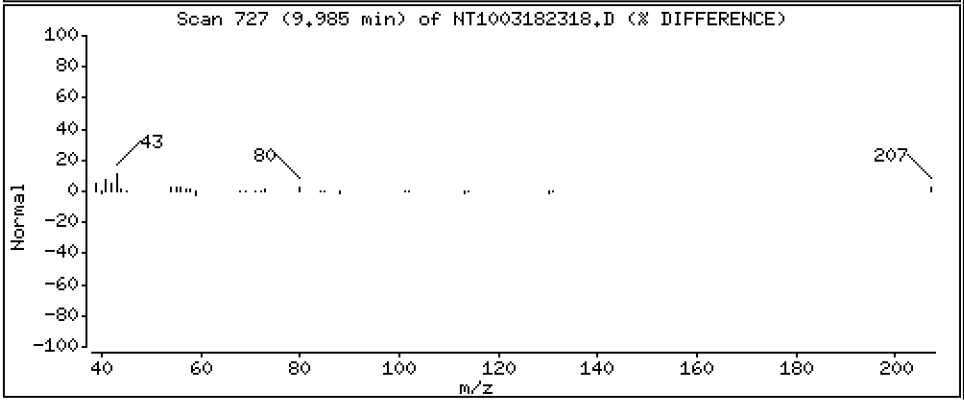












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

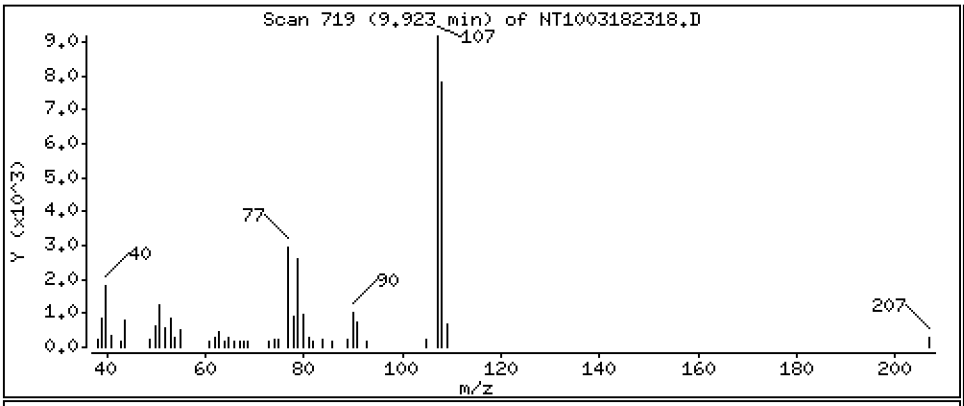
Operator: VTS

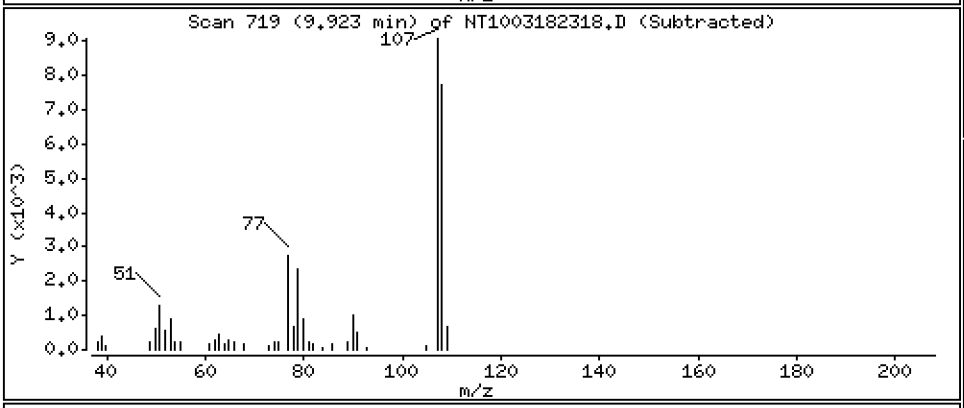
Column phase: ZB-5msi

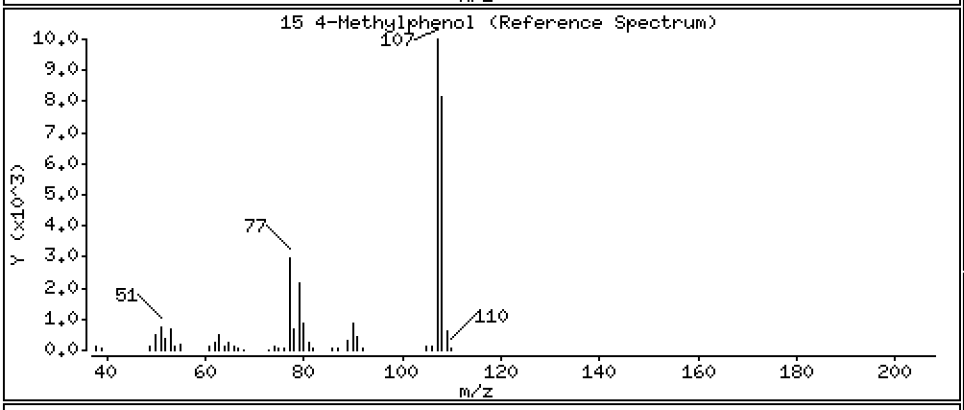
Column diameter: 0.25

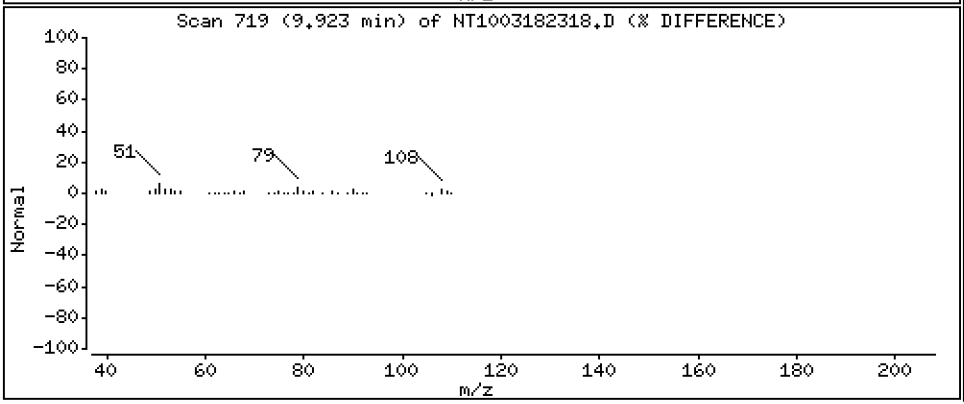
15 4-Methylphenol

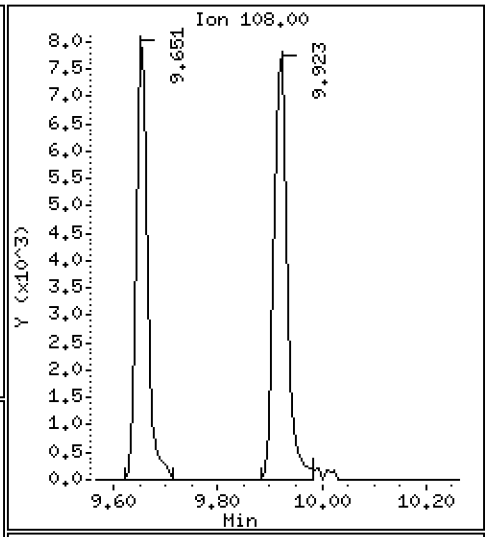
Concentration: 0.2079 ug/mL

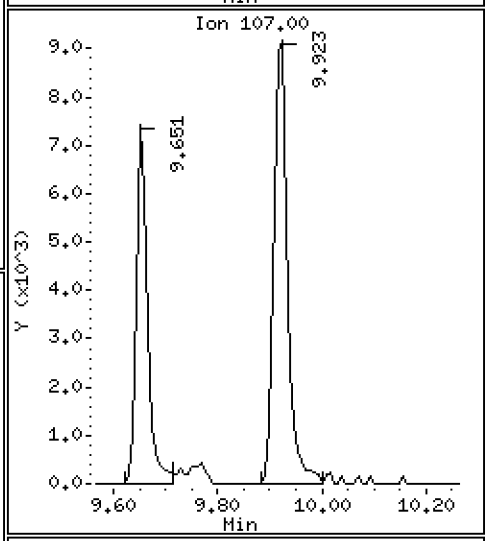


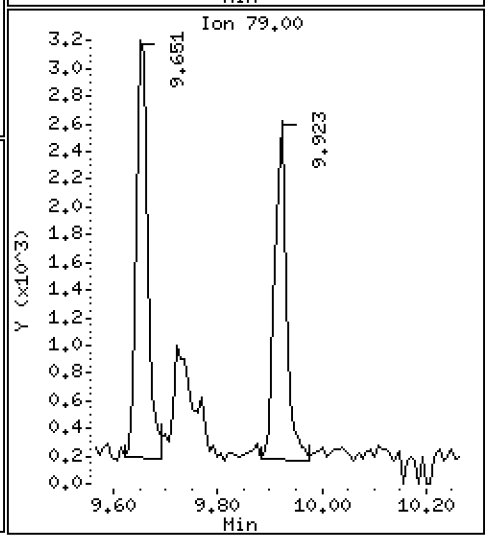












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

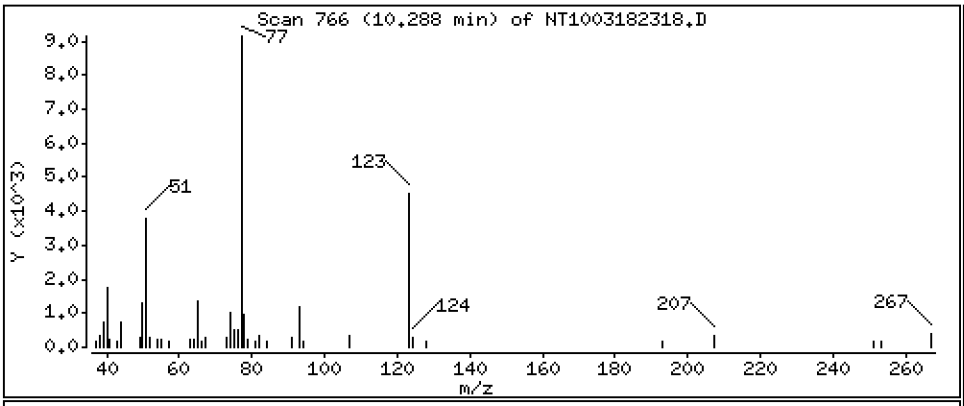
Operator: VTS

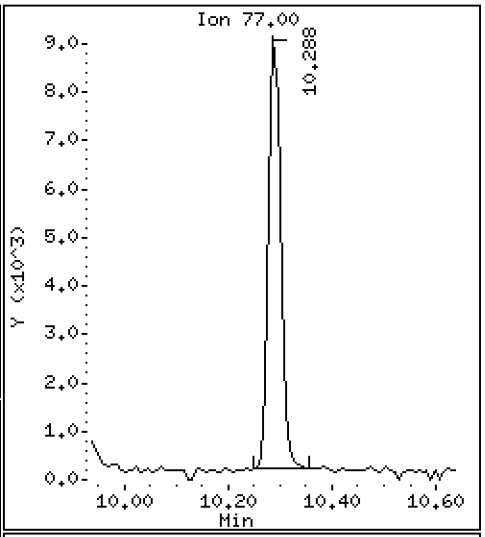
Column phase: ZB-5msi

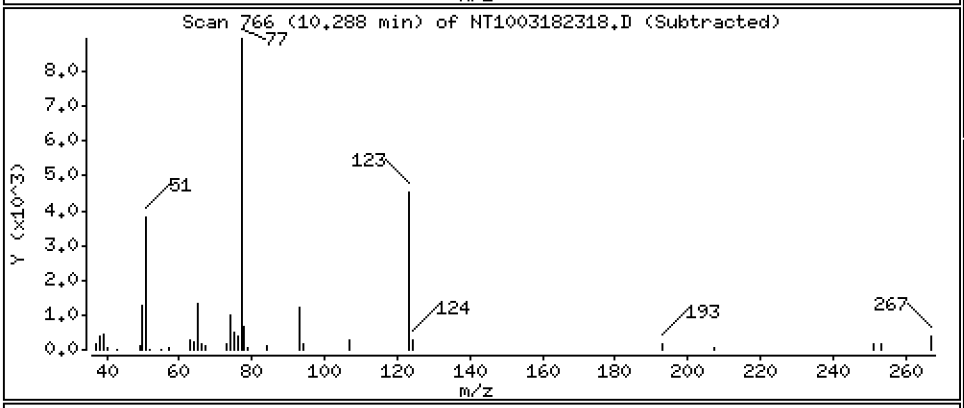
Column diameter: 0.25

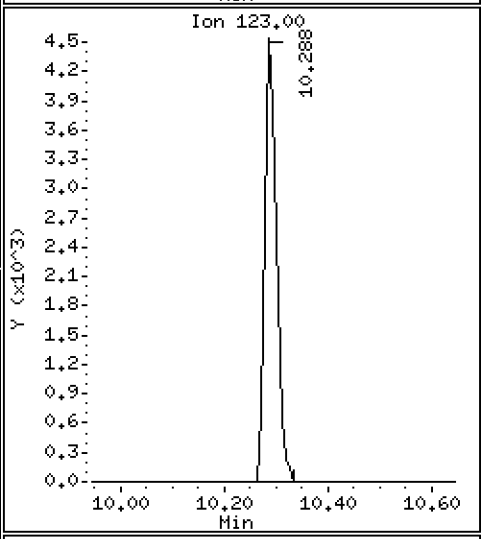
19 Nitrobenzene

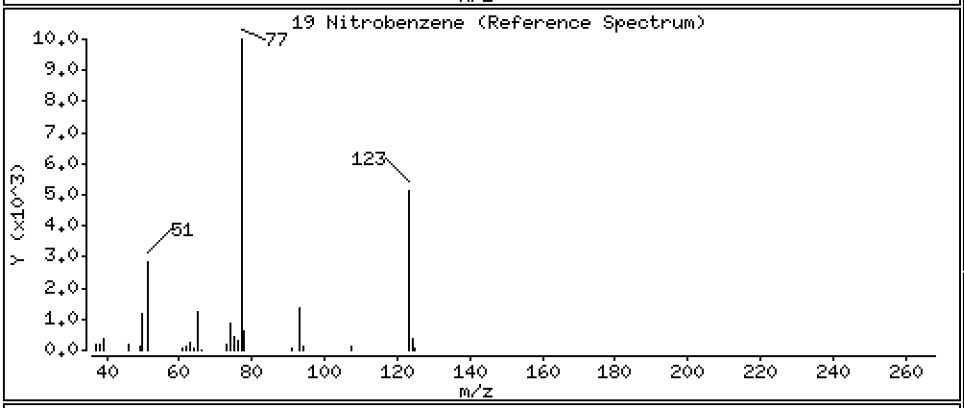
Concentration: 0.1922 ug/mL

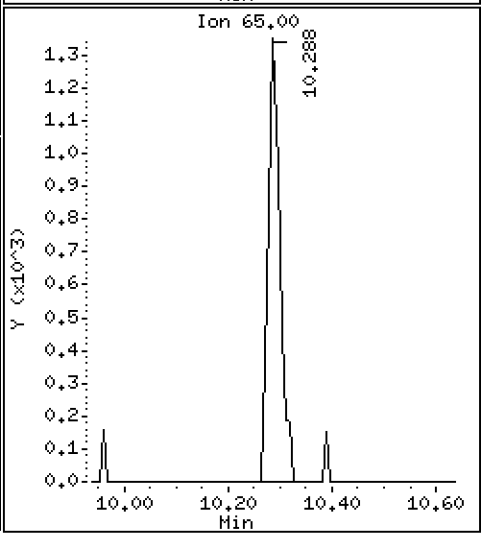


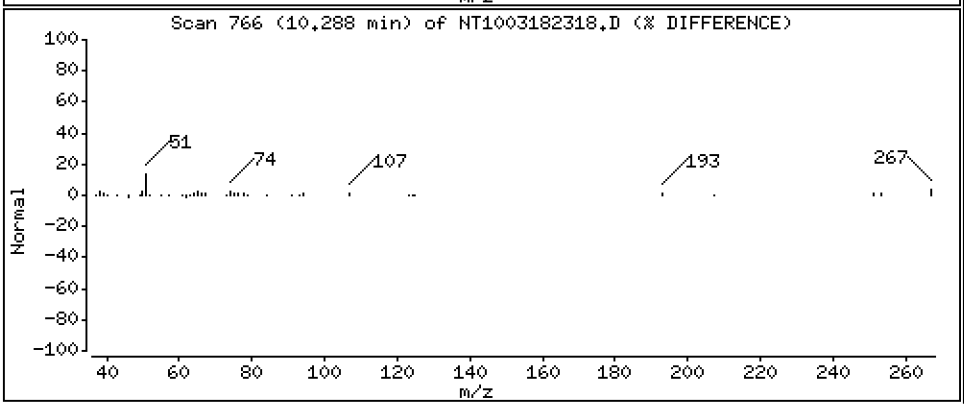












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

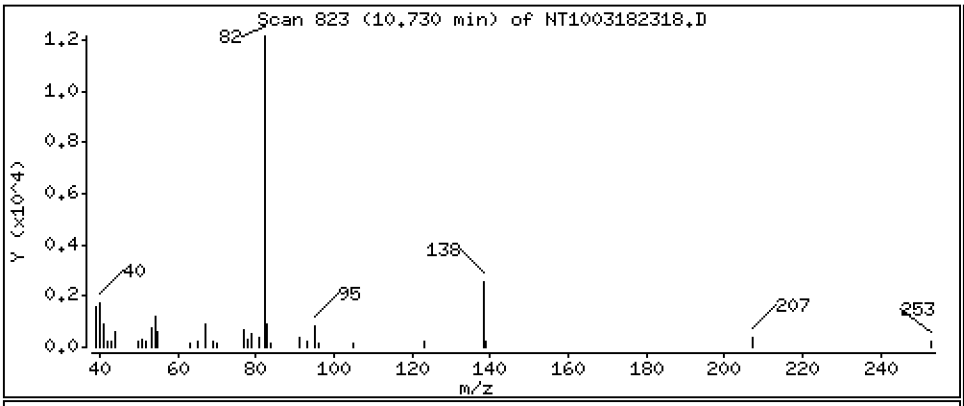
Operator: VTS

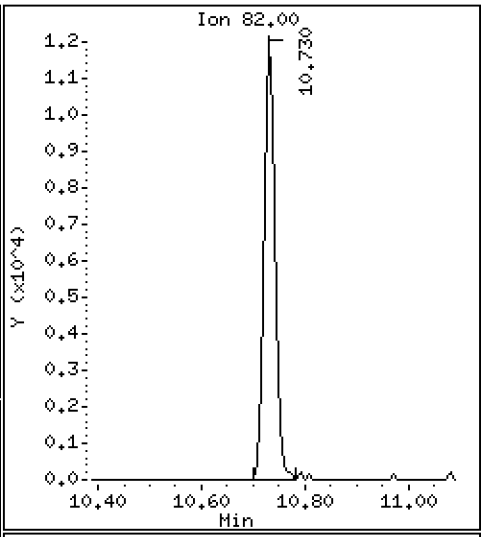
Column phase: ZB-5msi

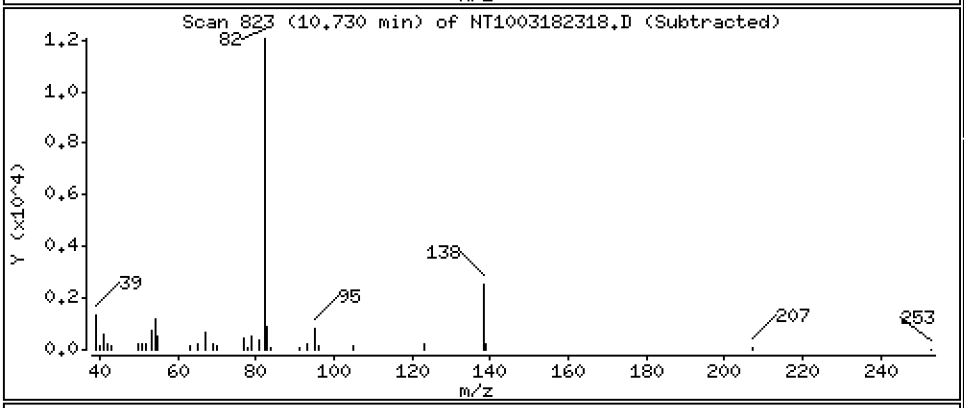
Column diameter: 0.25

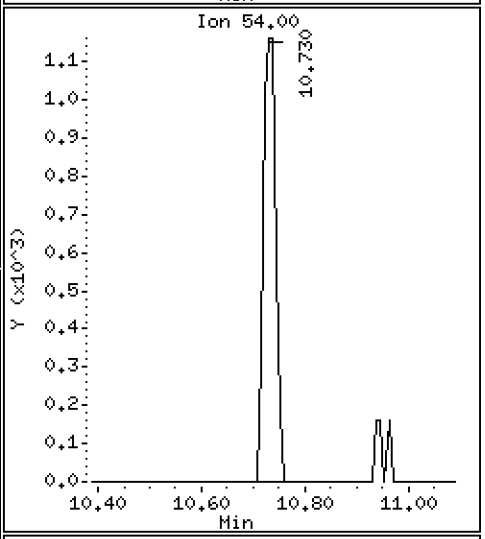
20 Isophorone

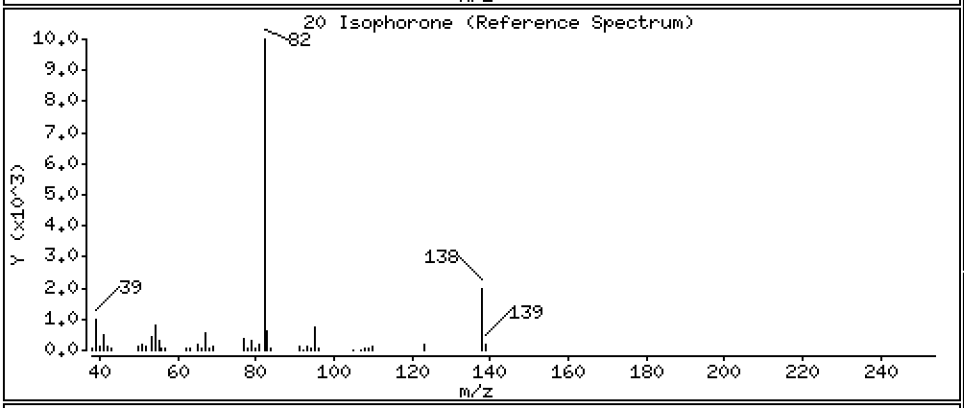
Concentration: 0.2011 ug/mL

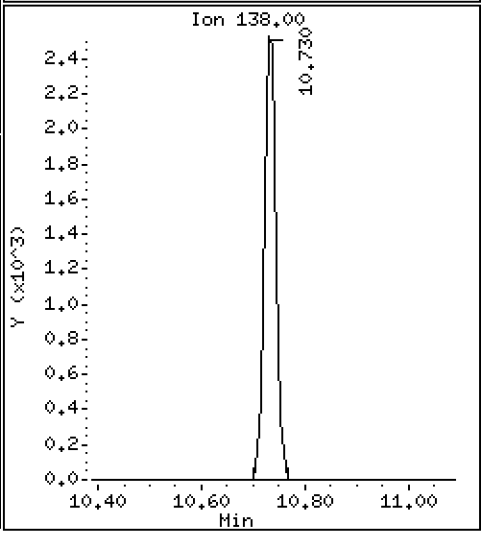


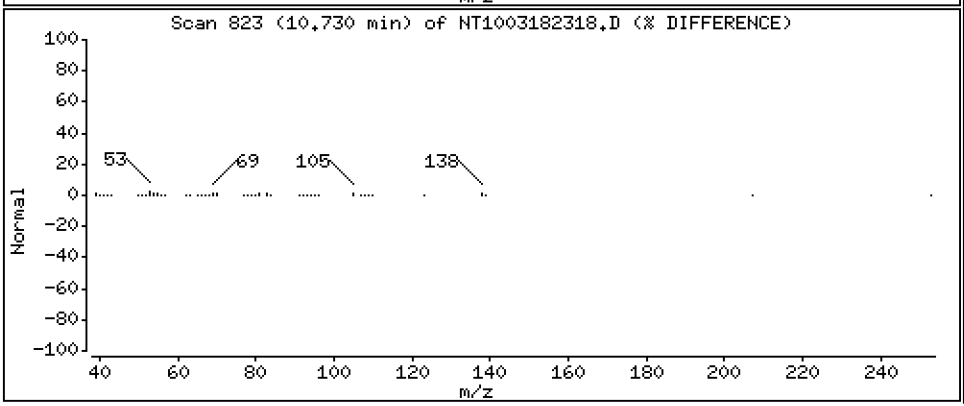












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

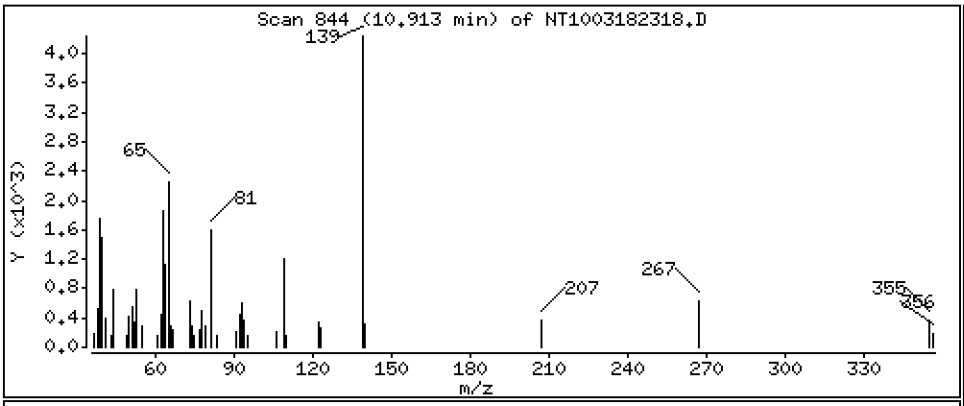
Operator: VTS

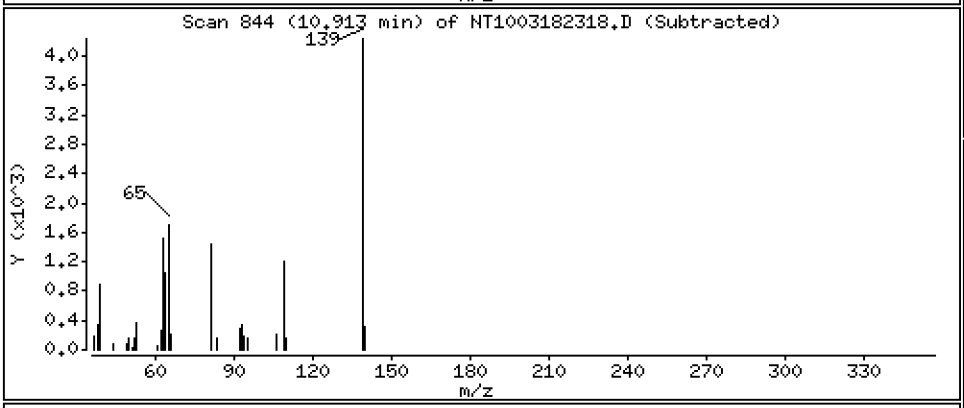
Column phase: ZB-5msi

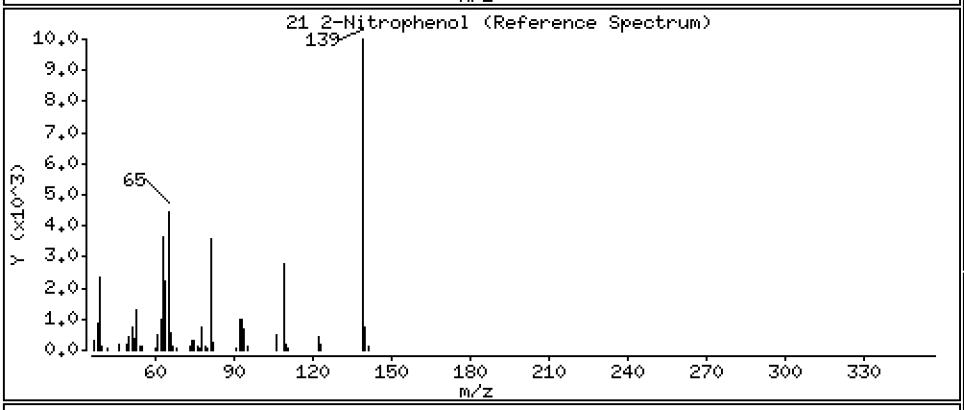
Column diameter: 0.25

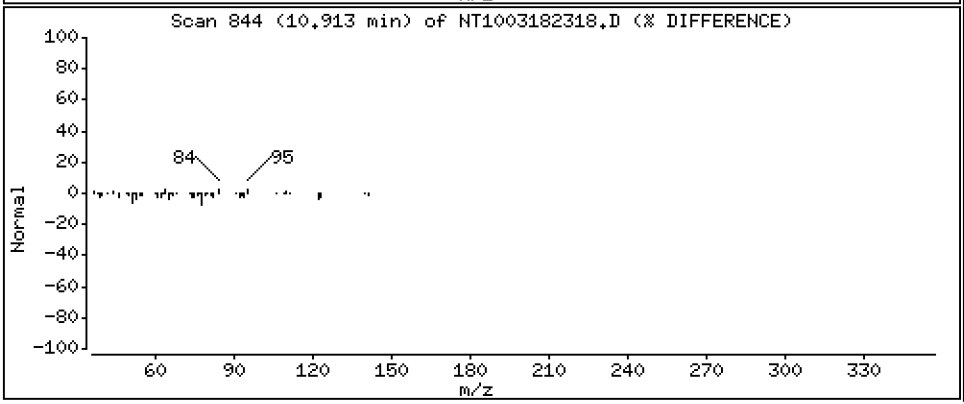
21 2-Nitrophenol

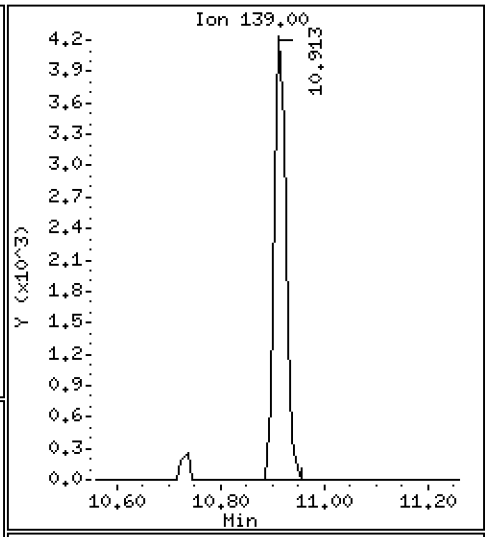
Concentration: 0.1902 ug/mL

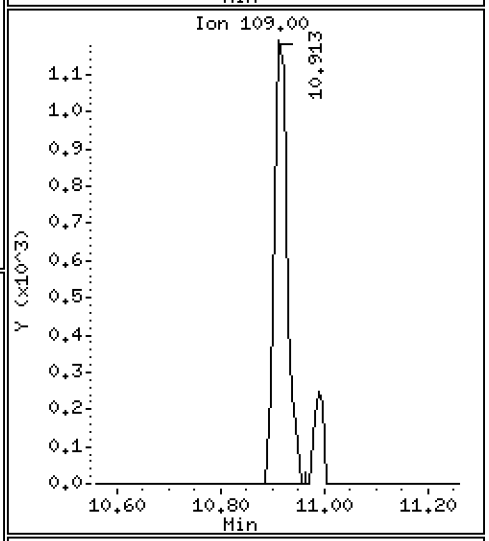


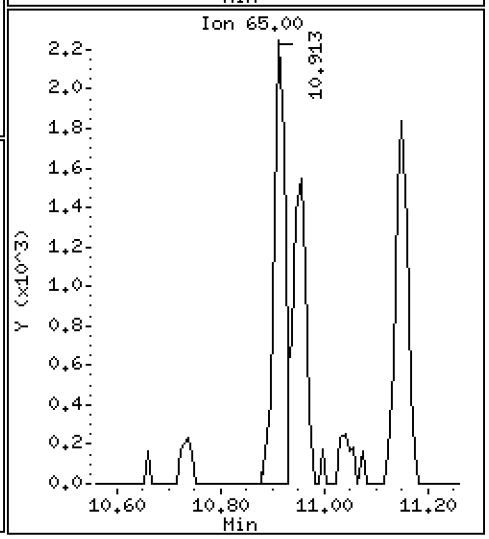












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

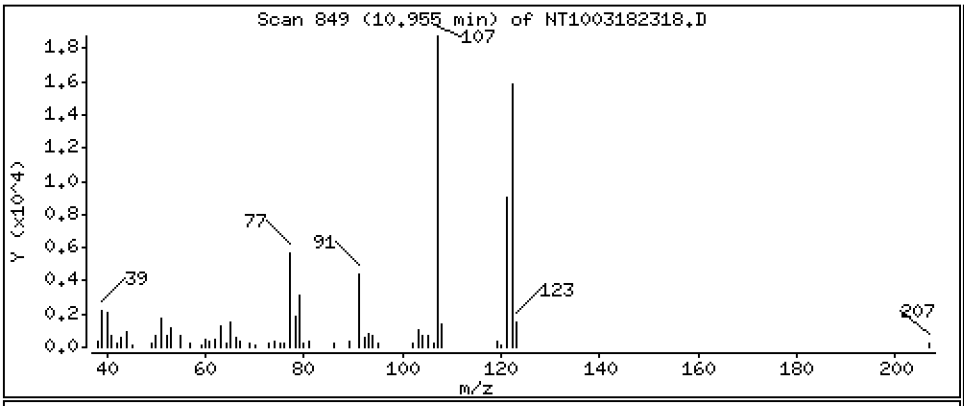
Operator: VTS

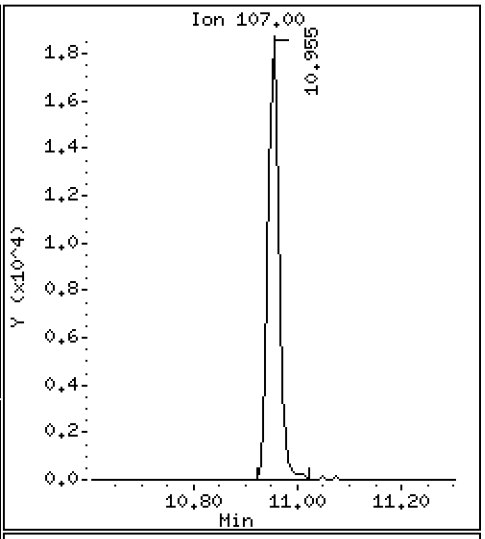
Column phase: ZB-5msi

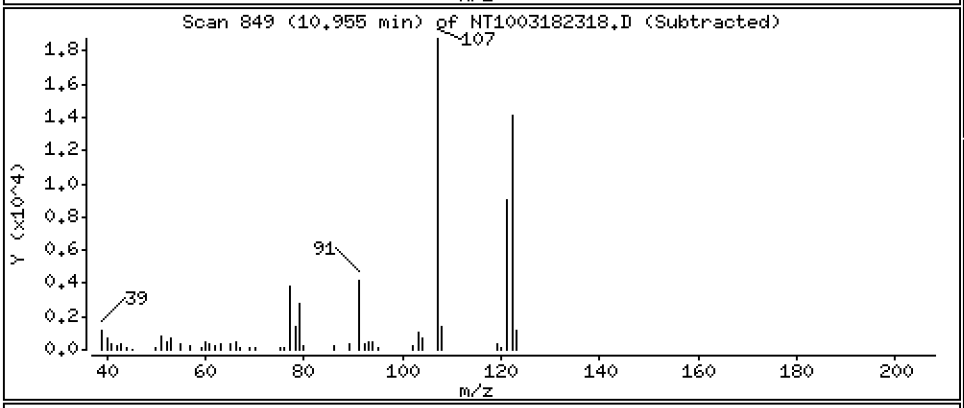
Column diameter: 0.25

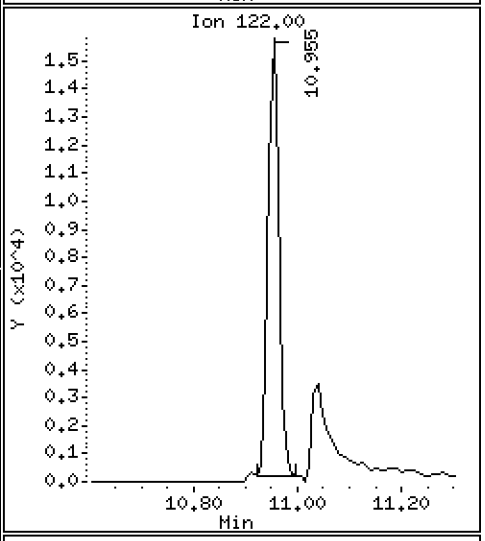
22 2,4-Dimethylphenol

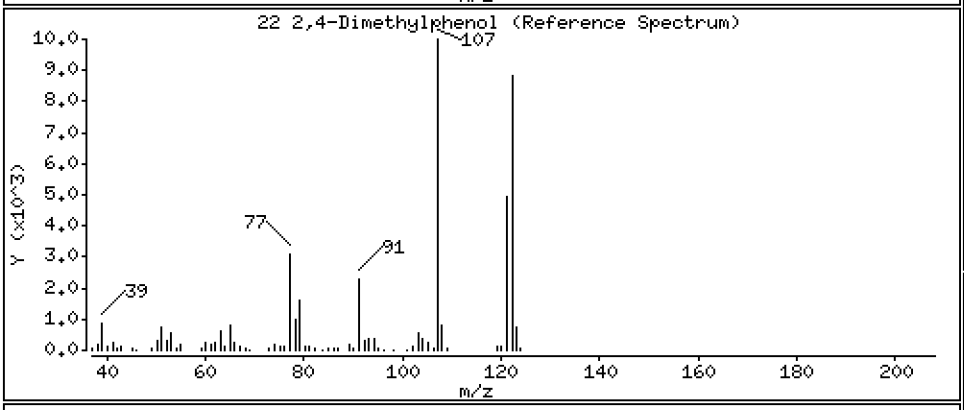
Concentration: 0.4158 ug/mL

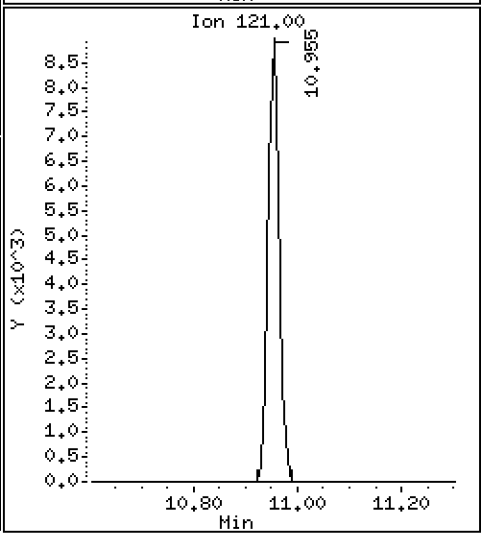


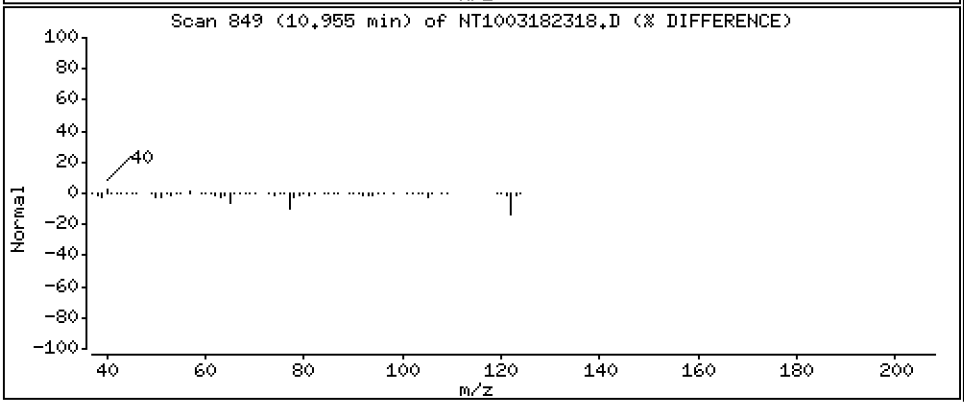












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

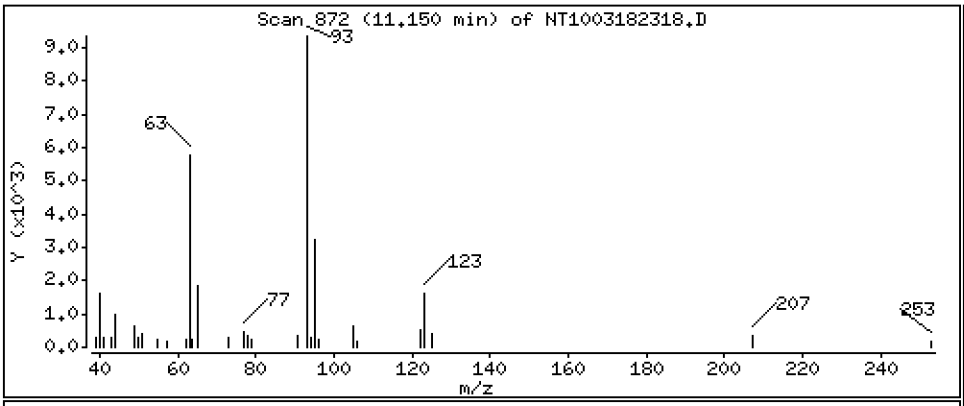
Operator: VTS

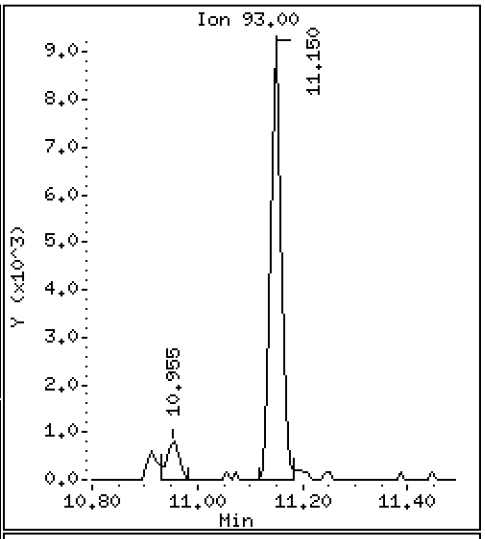
Column phase: ZB-5msi

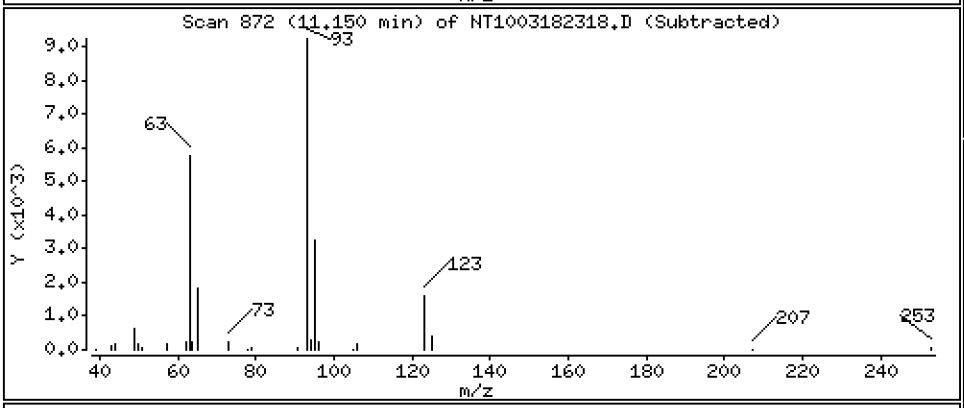
Column diameter: 0.25

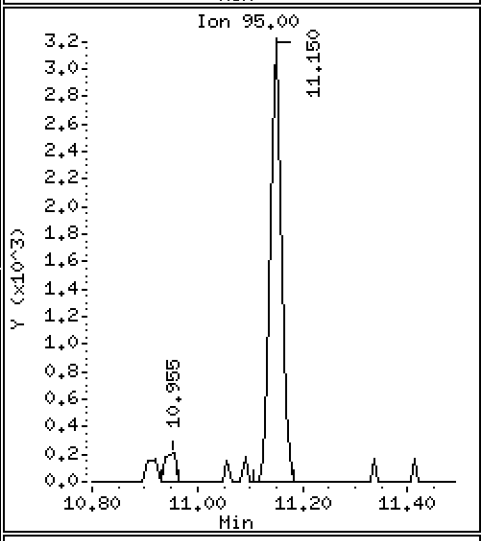
23 Bis(2-Chloroethoxy)methane

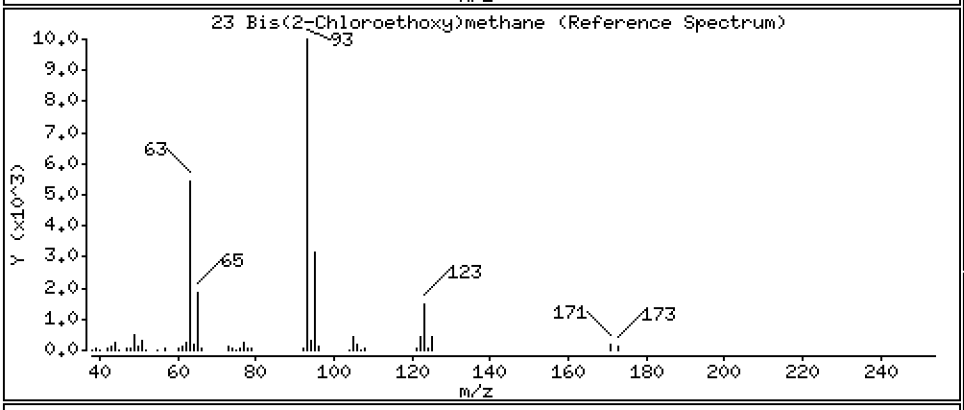
Concentration: 0.2127 ug/mL

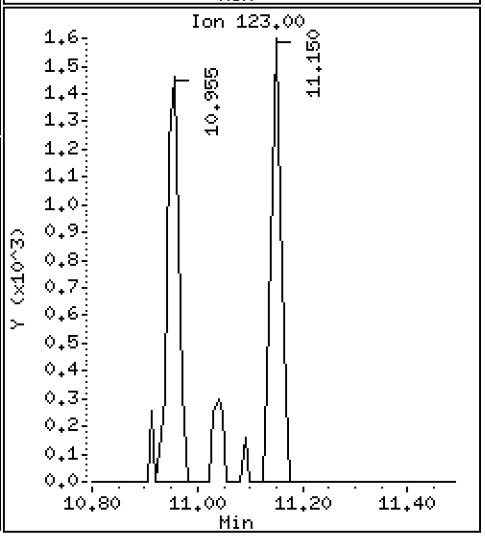


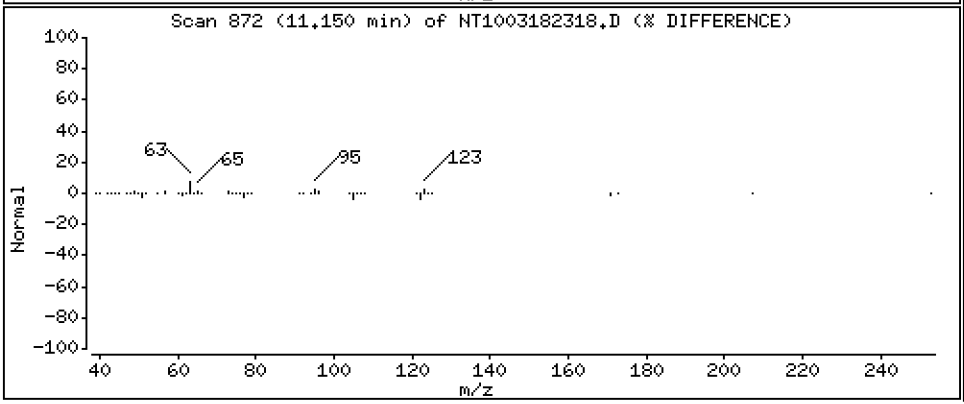












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

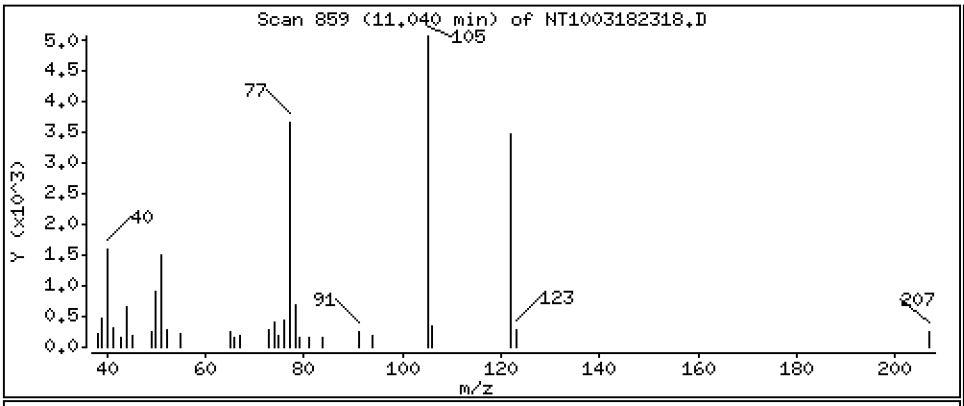
Operator: VTS

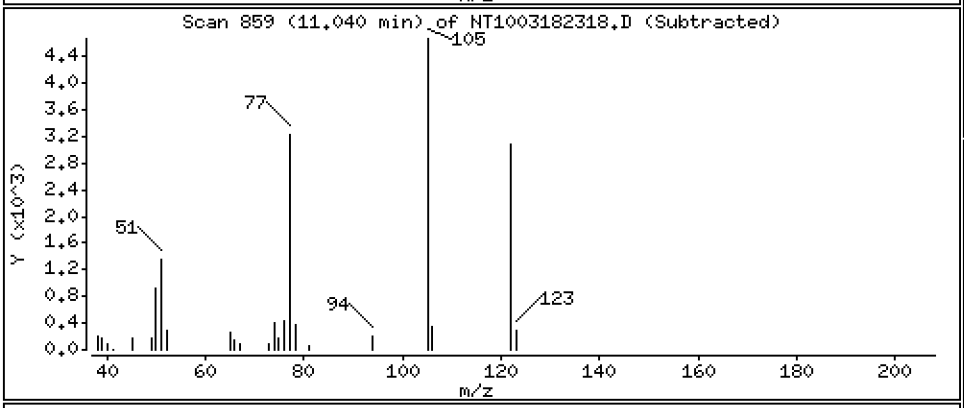
Column phase: ZB-5msi

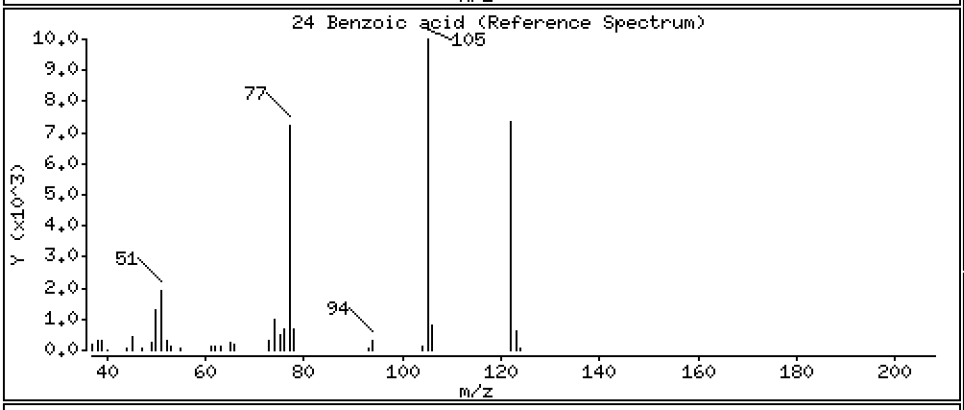
Column diameter: 0.25

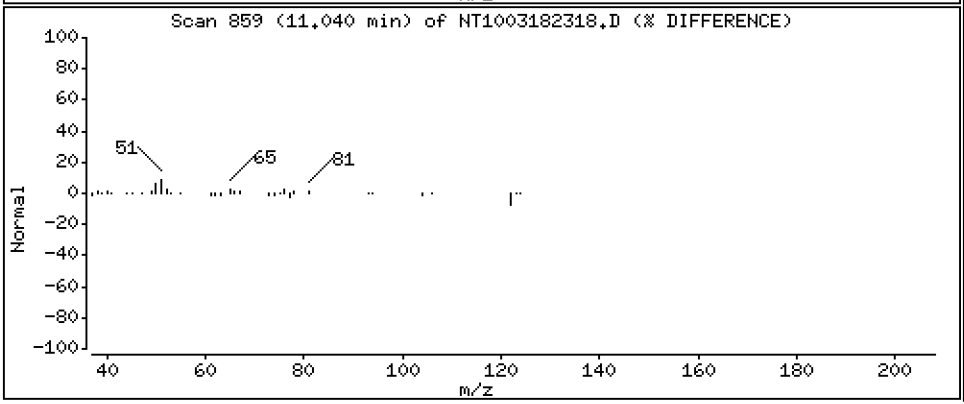
24 Benzoic acid

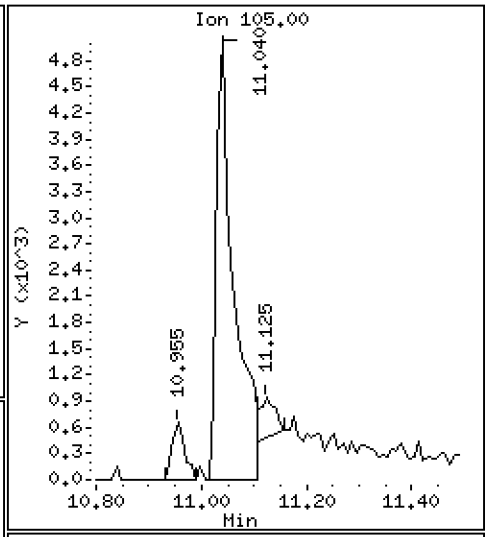
Concentration: 0.3232 ug/mL

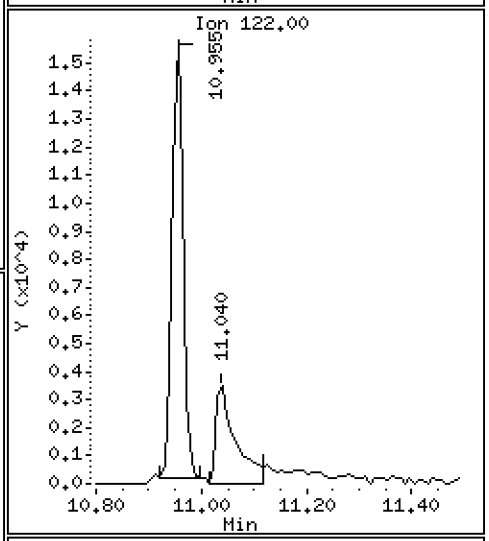


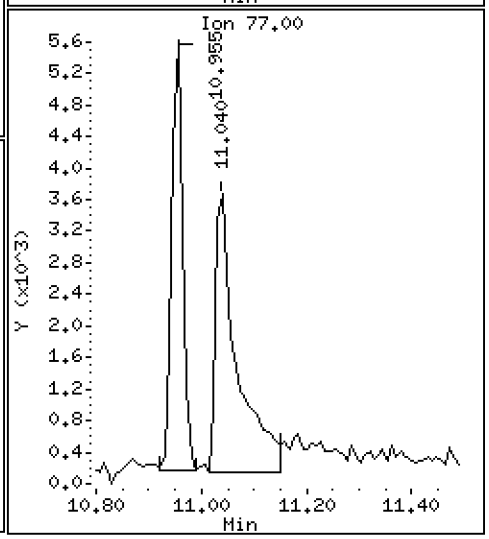












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

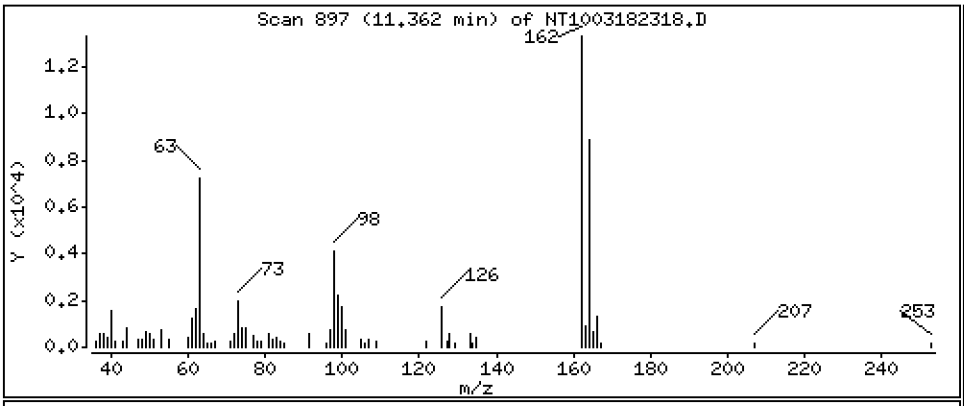
Operator: VTS

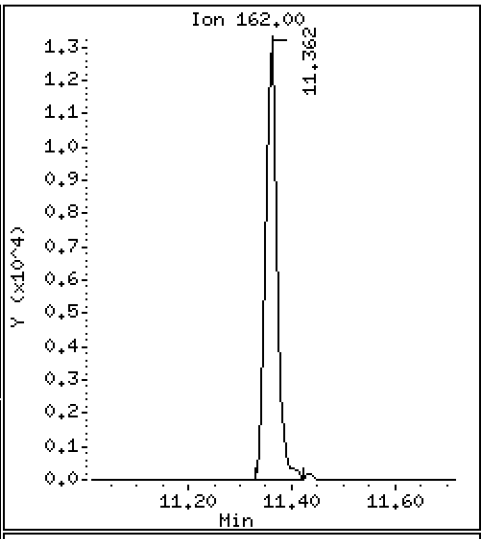
Column phase: ZB-5msi

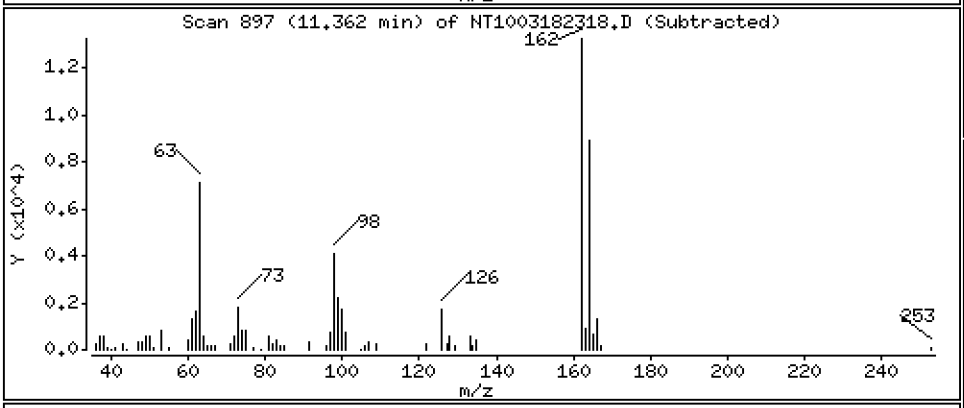
Column diameter: 0.25

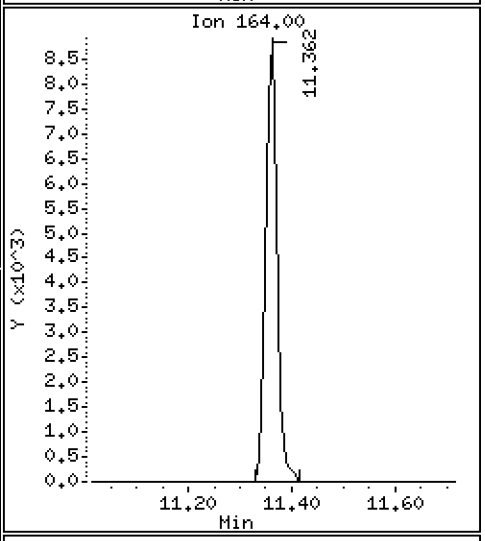
25 2,4-Dichlorophenol

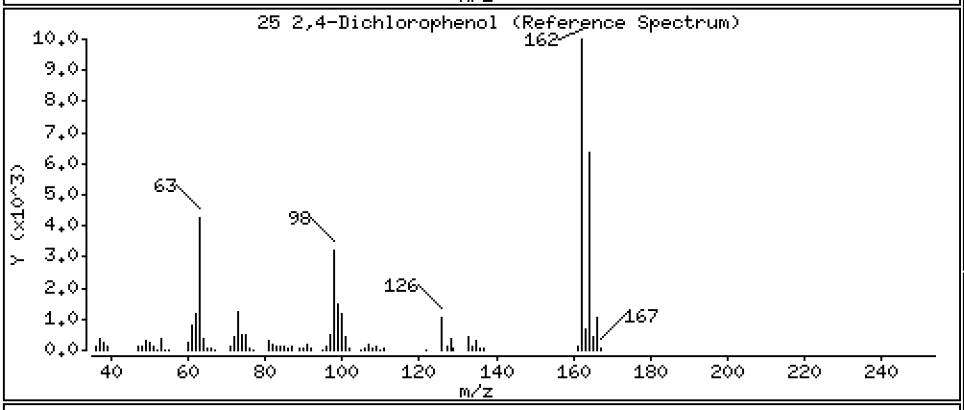
Concentration: 0.3982 ug/mL

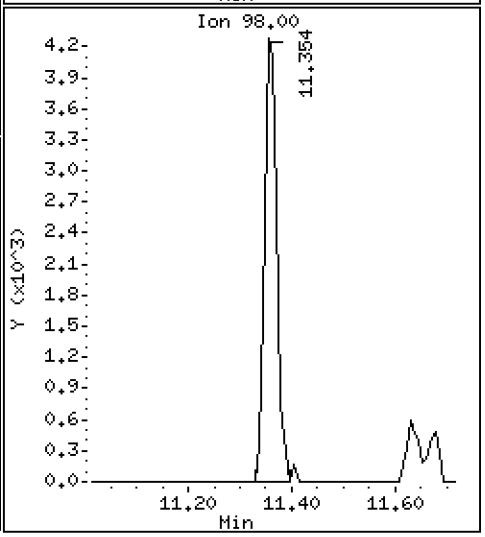


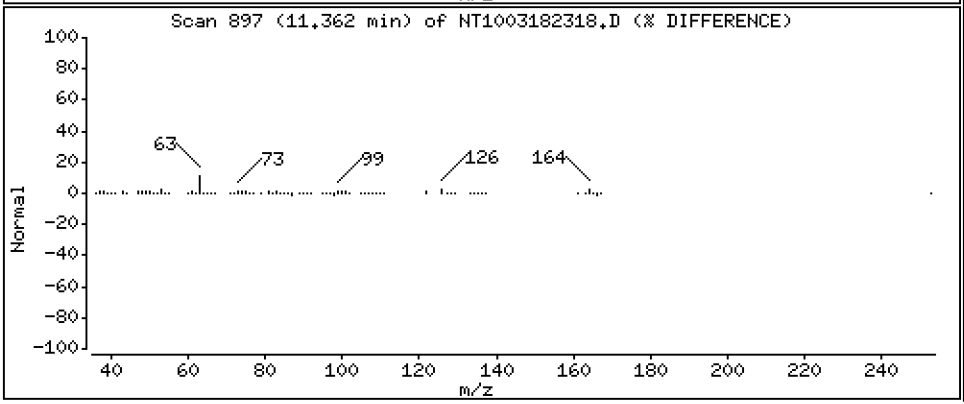












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

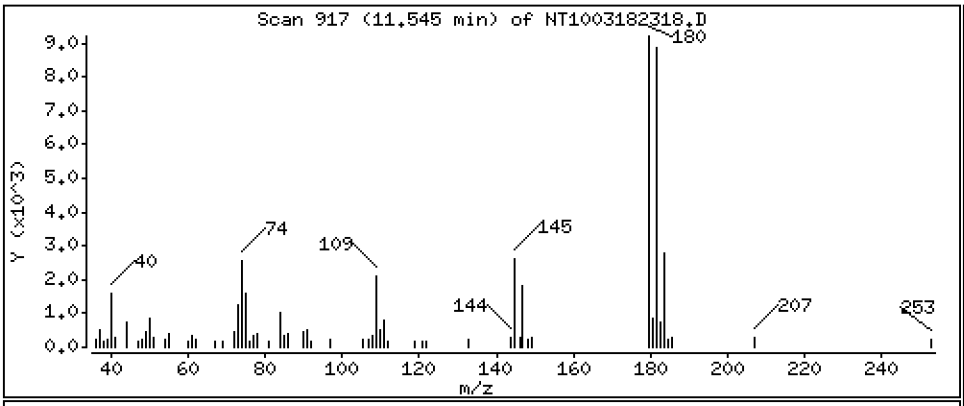
Operator: VTS

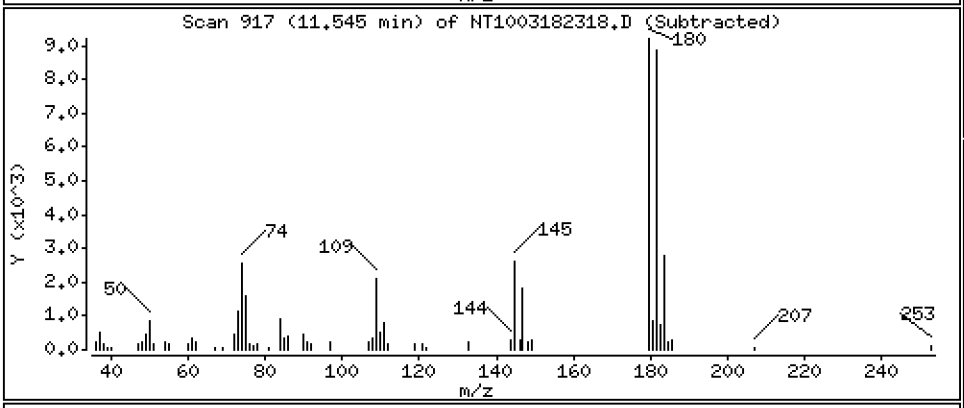
Column phase: ZB-5msi

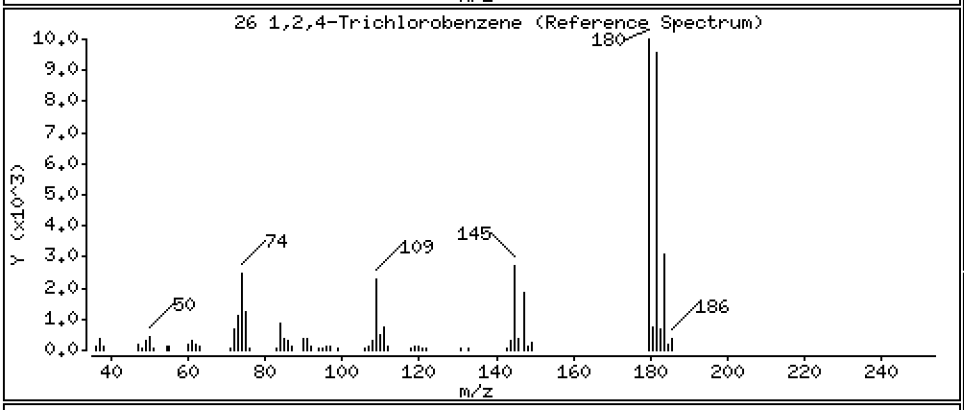
Column diameter: 0.25

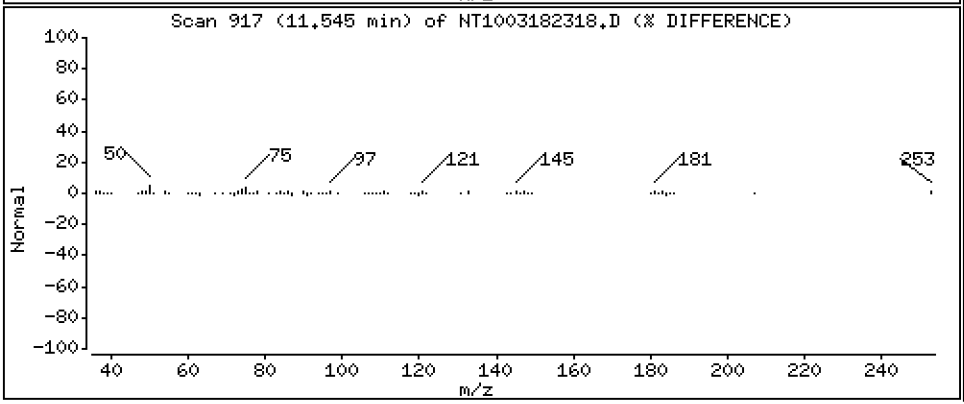
26 1,2,4-Trichlorobenzene

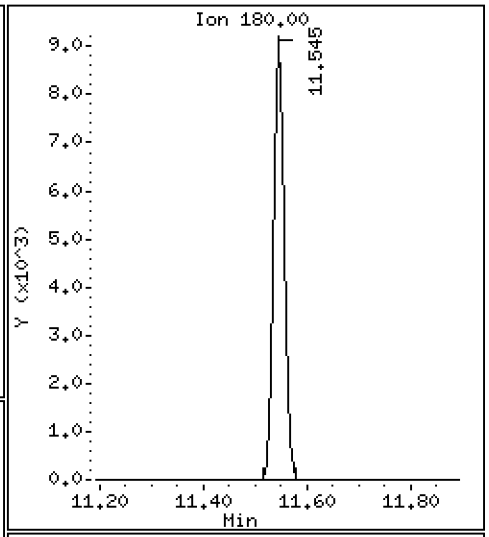
Concentration: 0.2182 ug/mL

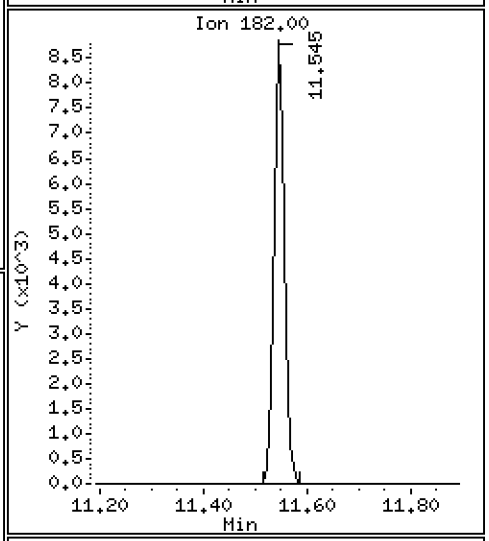


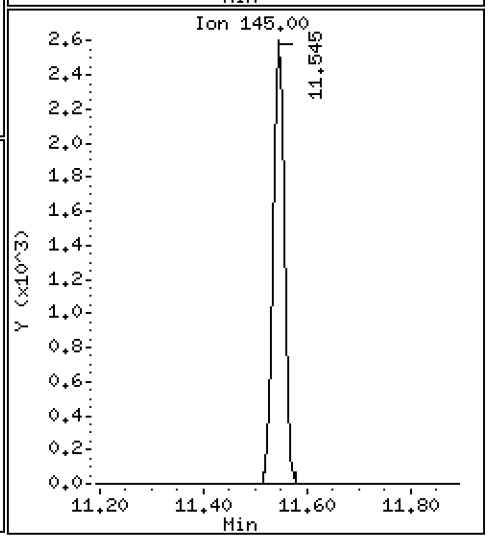












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

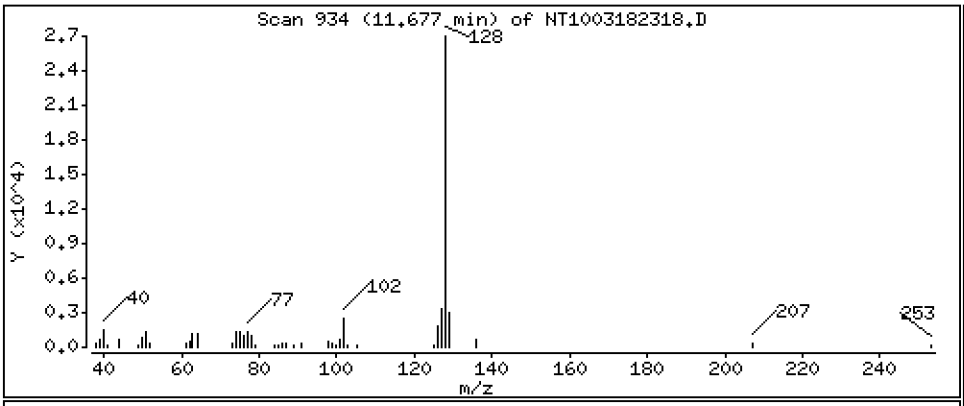
Operator: VTS

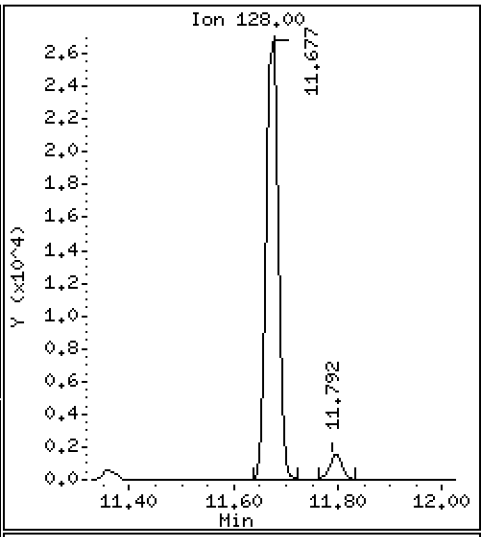
Column phase: ZB-5msi

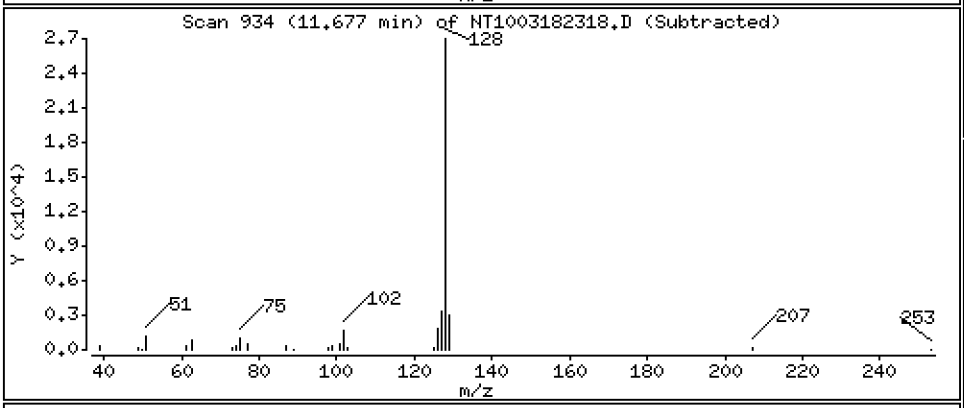
Column diameter: 0.25

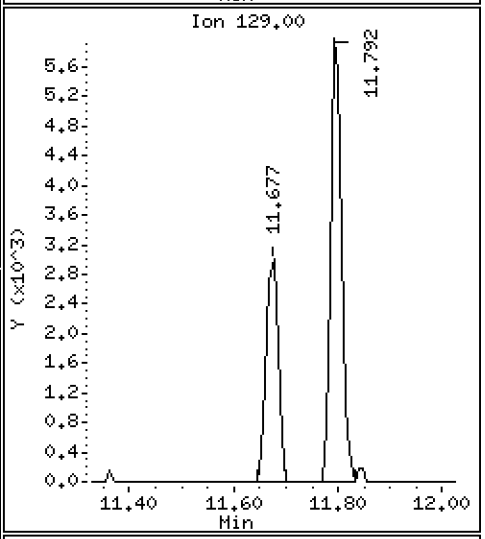
28 Naphthalene

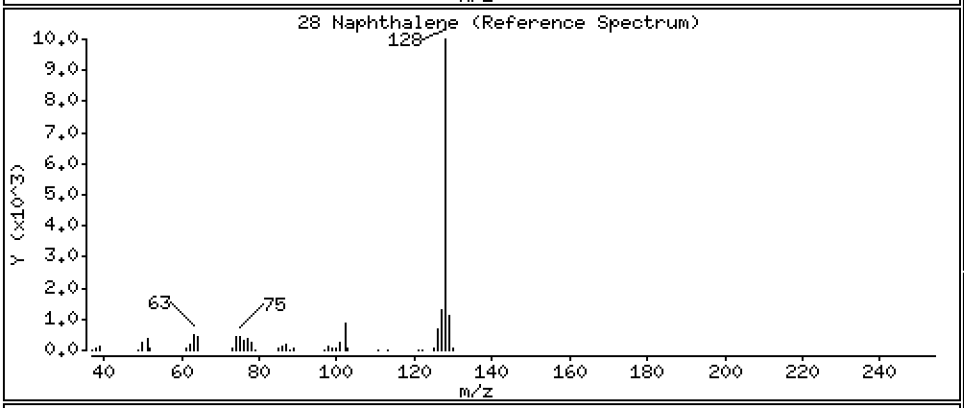
Concentration: 0.2102 ug/mL

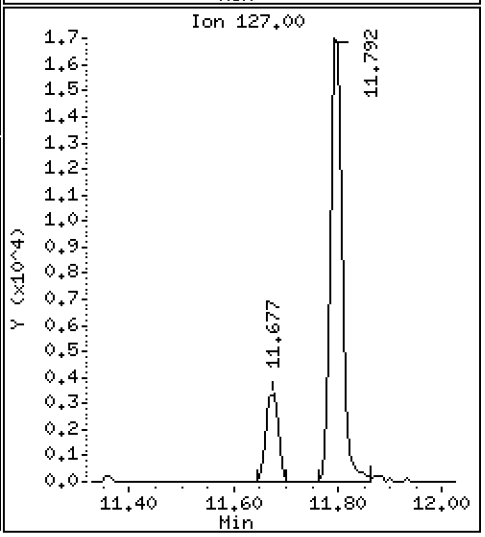


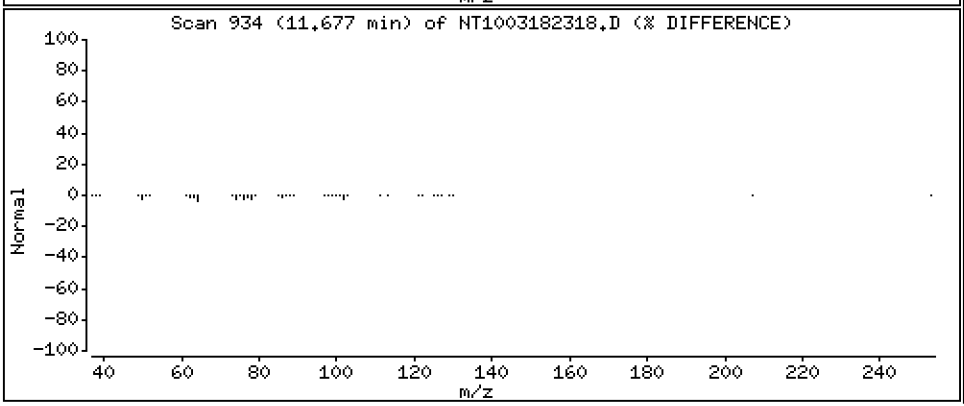












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

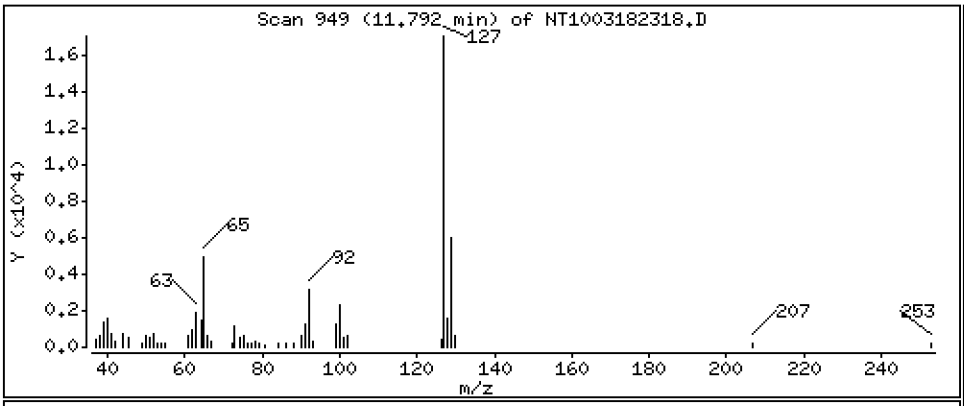
Operator: VTS

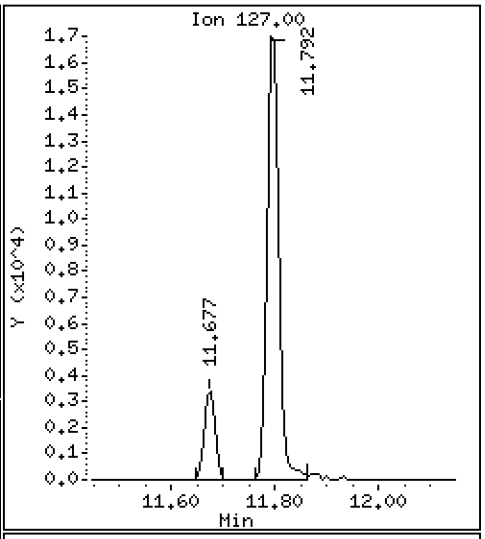
Column phase: ZB-5msi

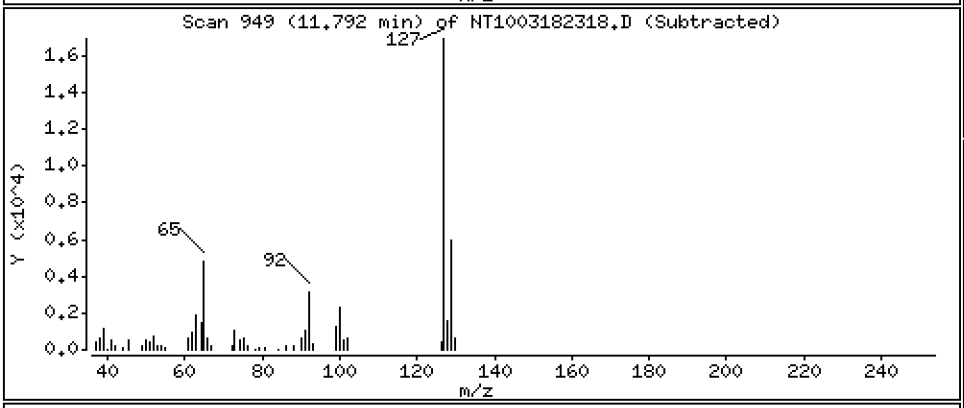
Column diameter: 0.25

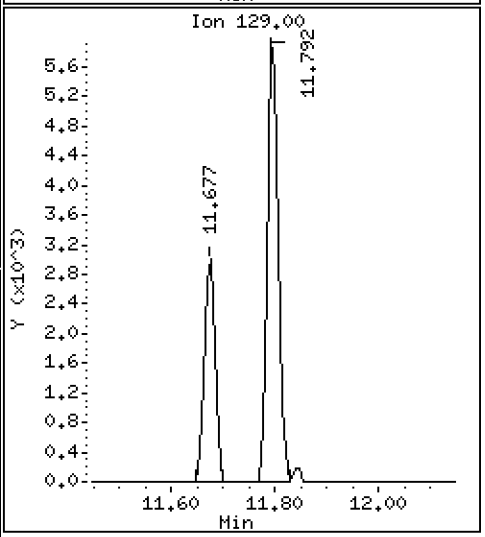
29 4-Chloroaniline

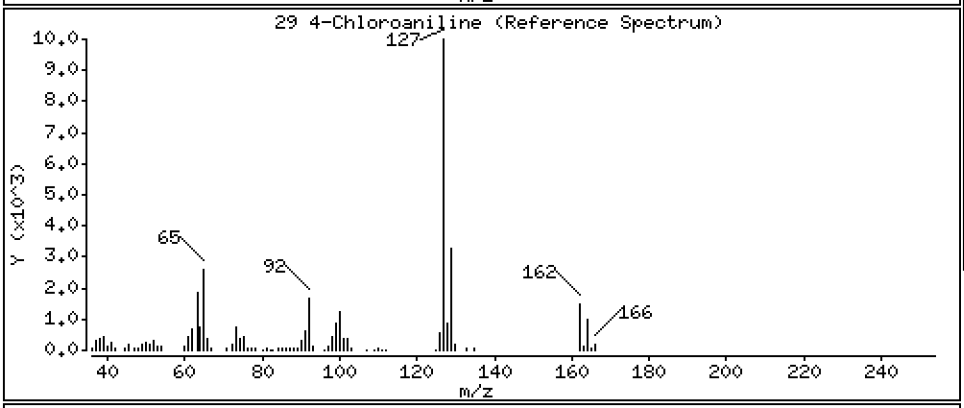
Concentration: 0.3768 ug/mL

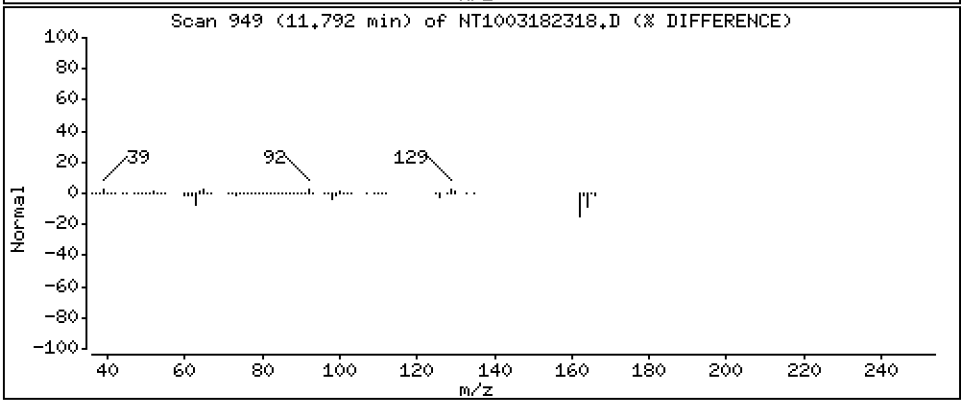












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

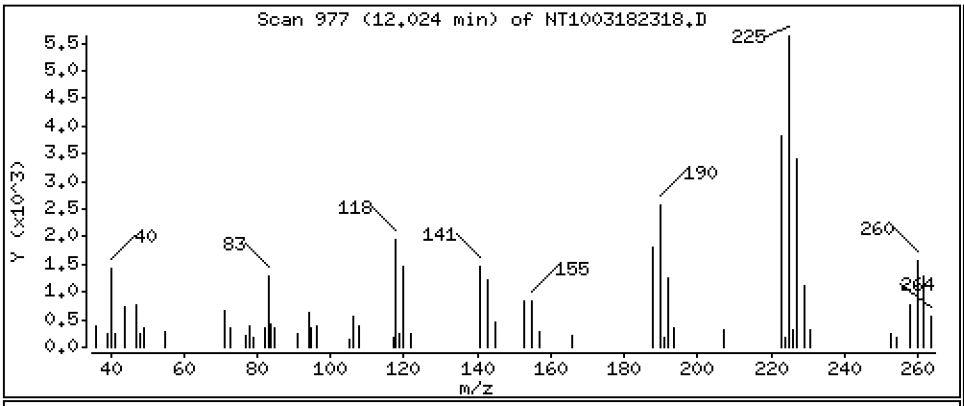
Operator: VTS

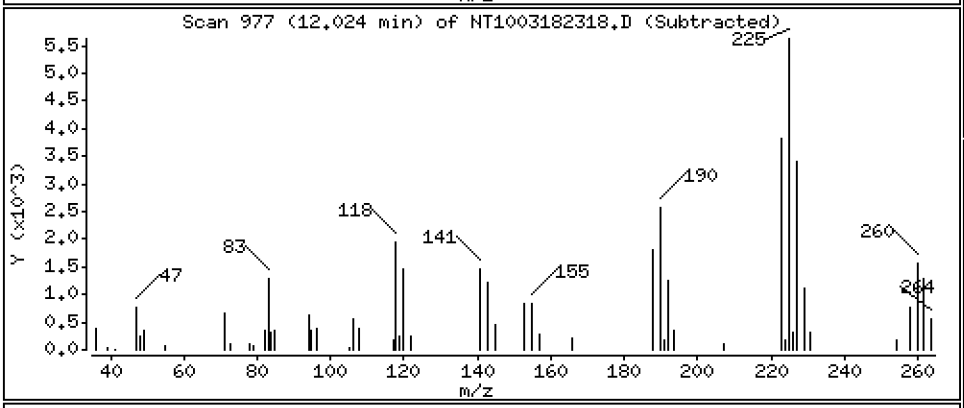
Column phase: ZB-5msi

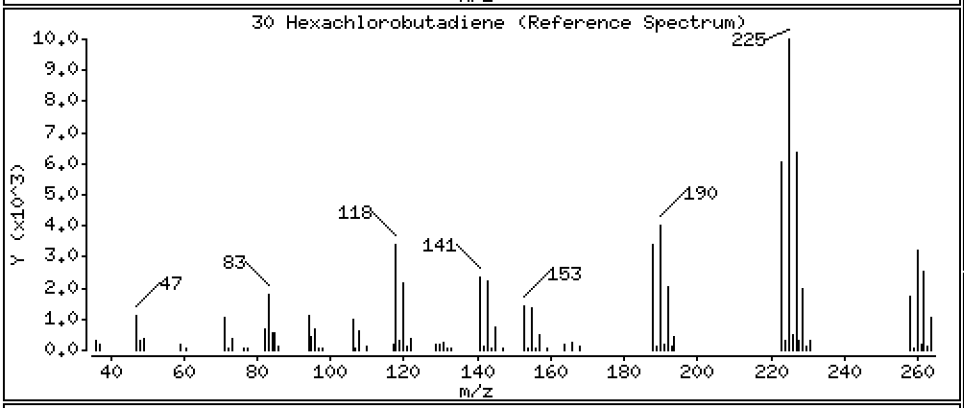
Column diameter: 0.25

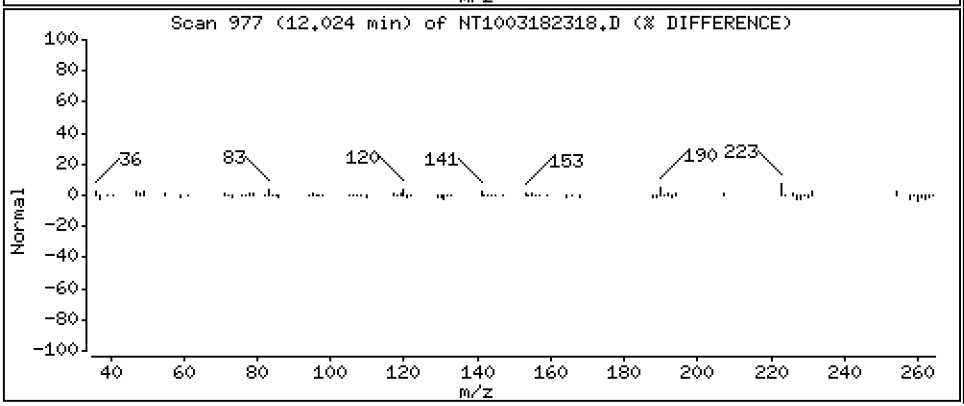
30 Hexachlorobutadiene

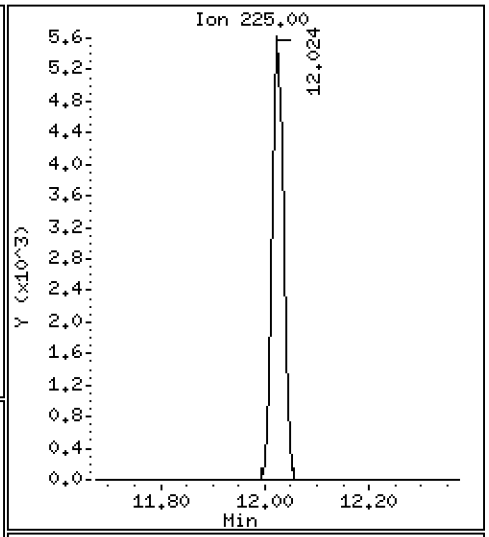
Concentration: 0.2180 ug/mL

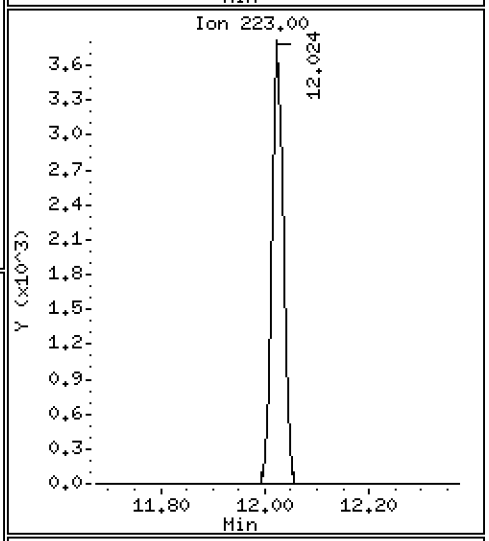


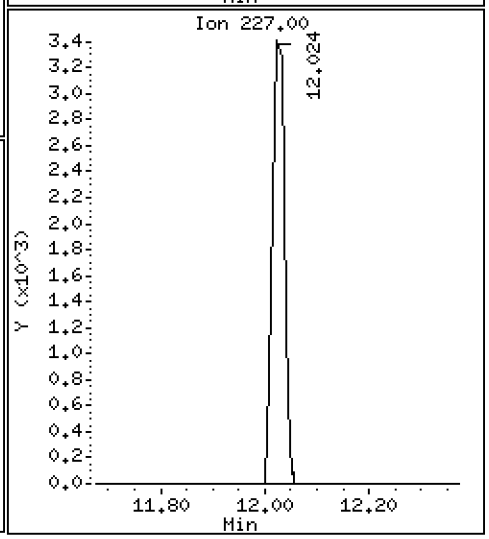












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

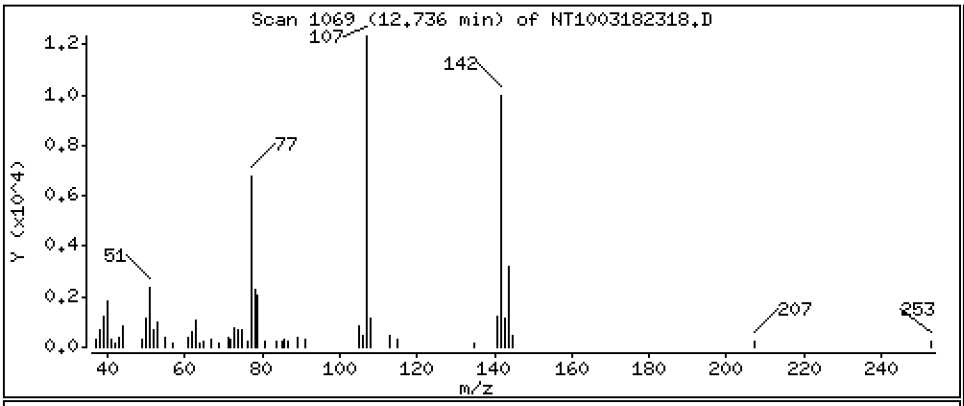
Operator: VTS

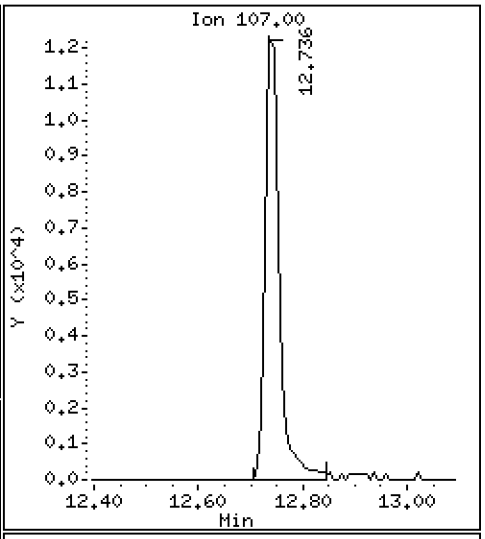
Column phase: ZB-5msi

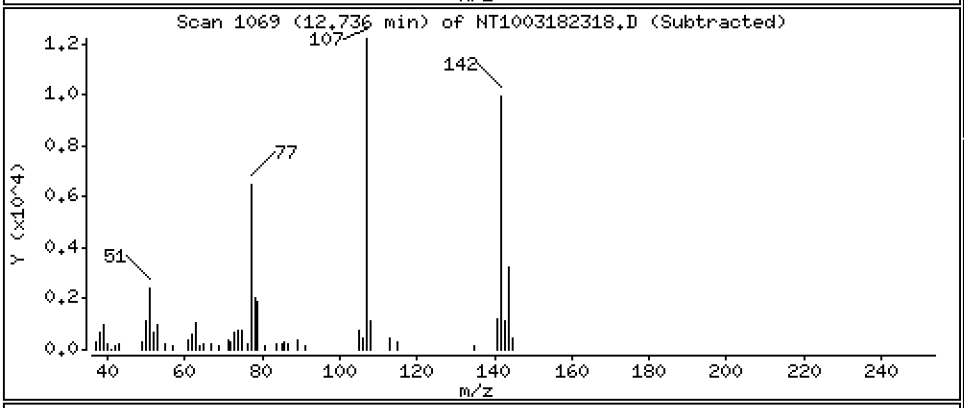
Column diameter: 0.25

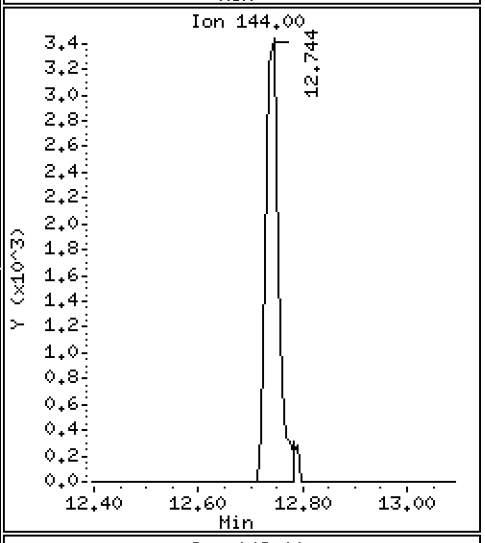
31 4-Chloro-3-methylphenol

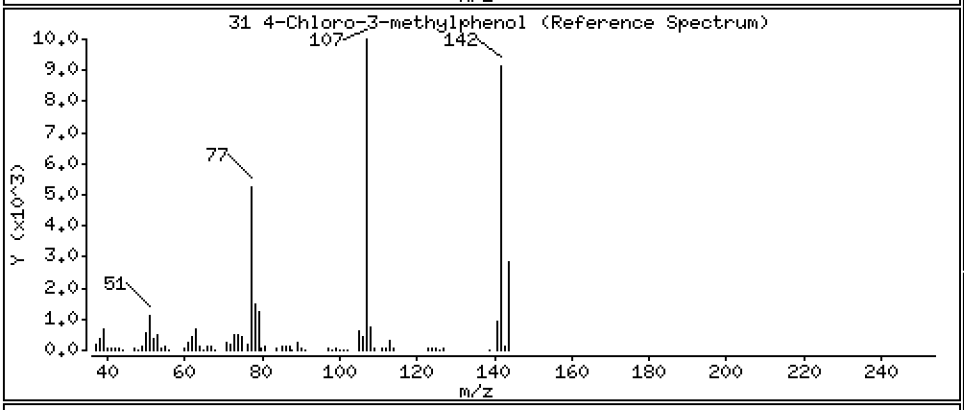
Concentration: 0.3874 ug/mL

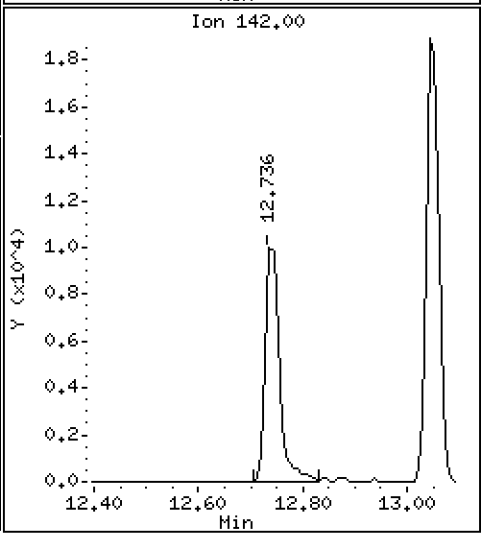


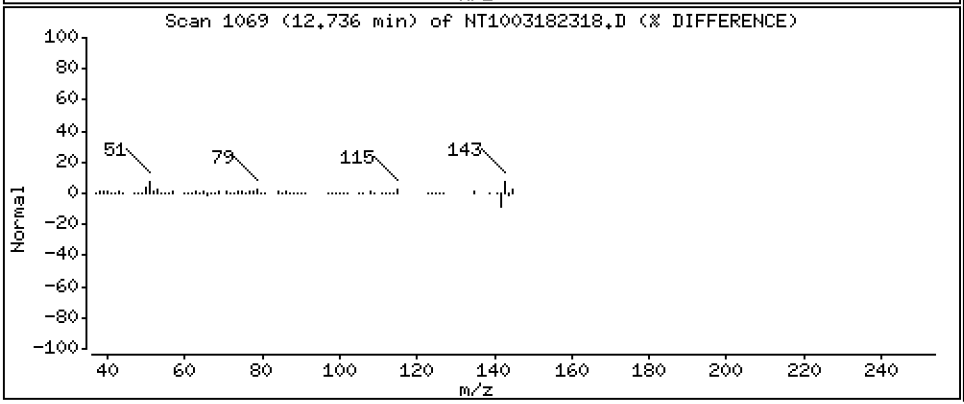












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

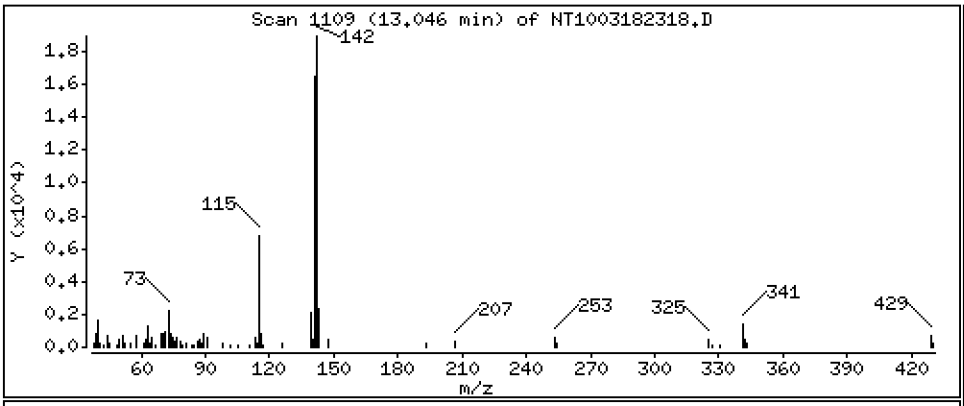
Operator: VTS

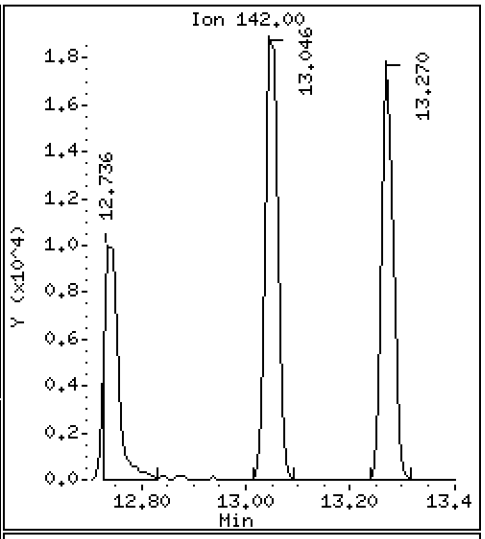
Column phase: ZB-5msi

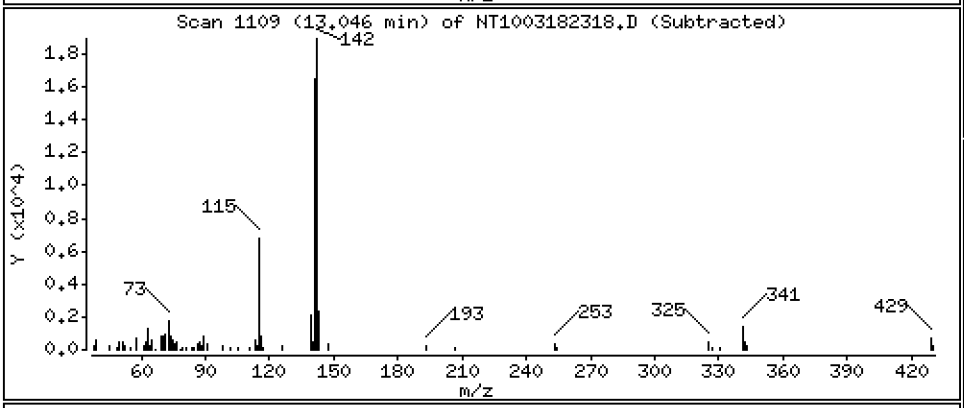
Column diameter: 0.25

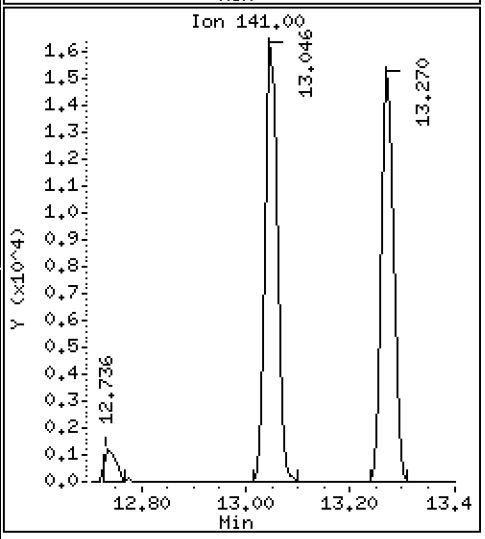
32 2-Methylnaphthalene

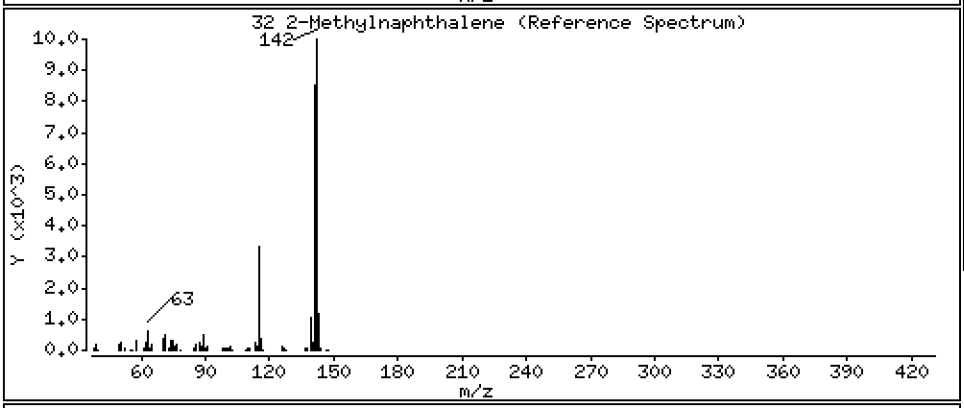
Concentration: 0.2143 ug/mL

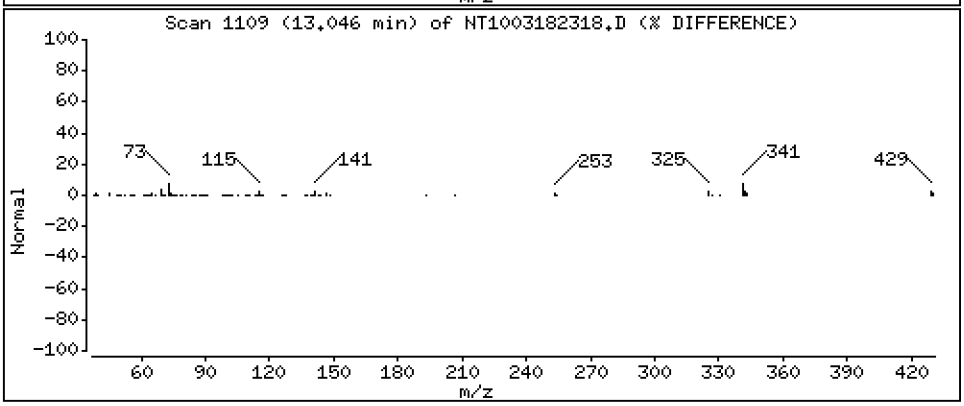












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

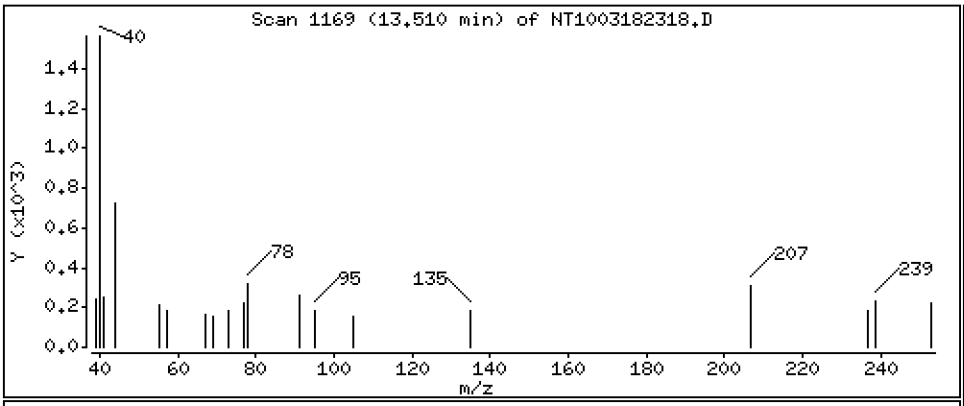
Operator: VTS

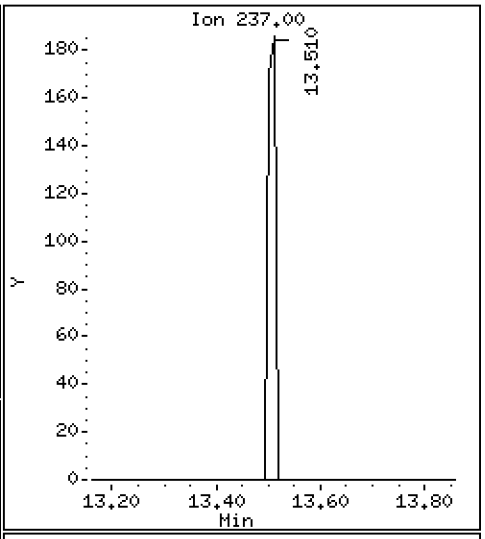
Column phase: ZB-5msi

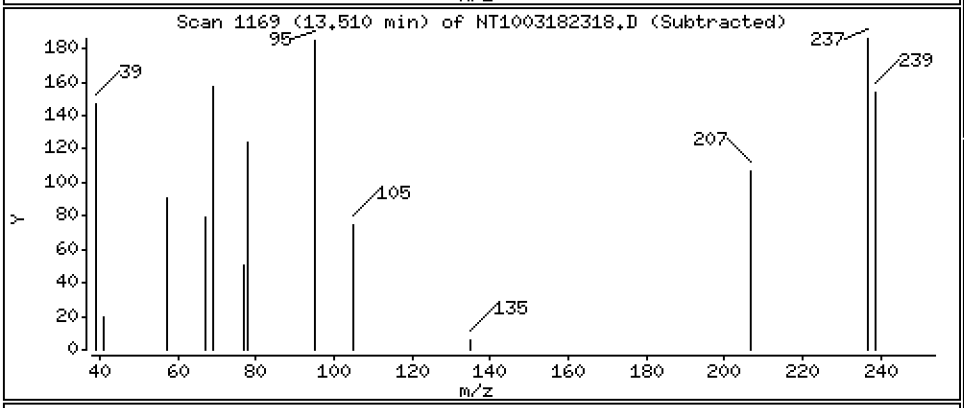
Column diameter: 0.25

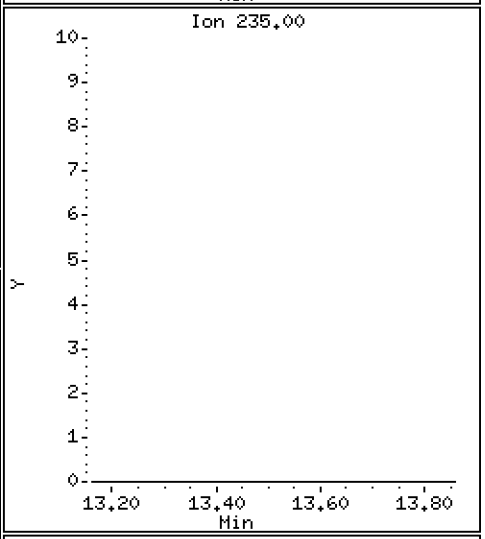
33 Hexachlorocyclopentadiene

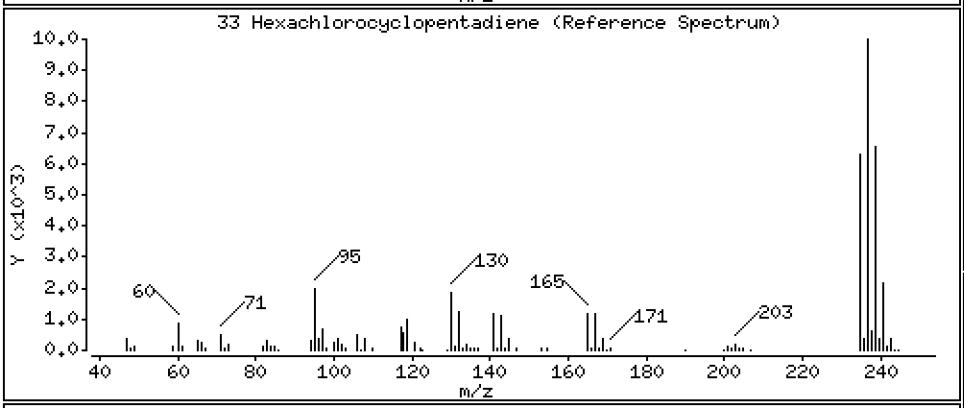
Concentration: 0.004534 ug/mL

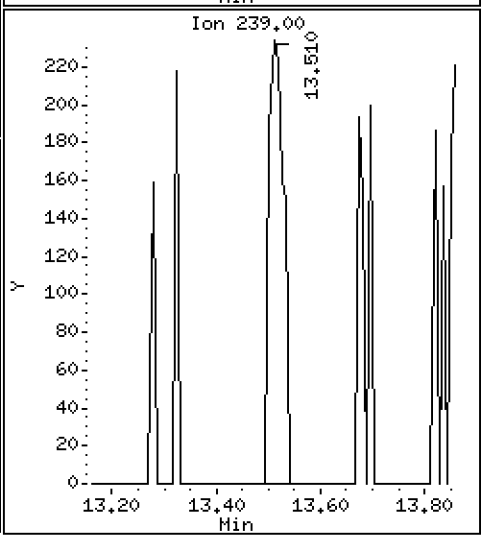


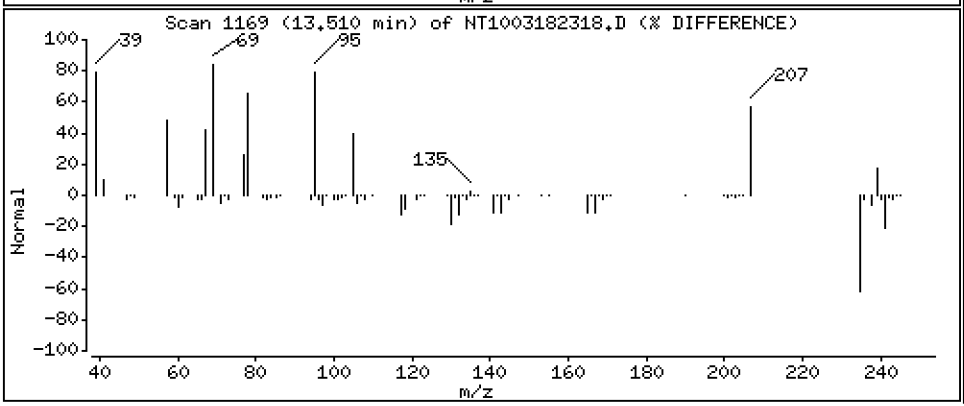












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

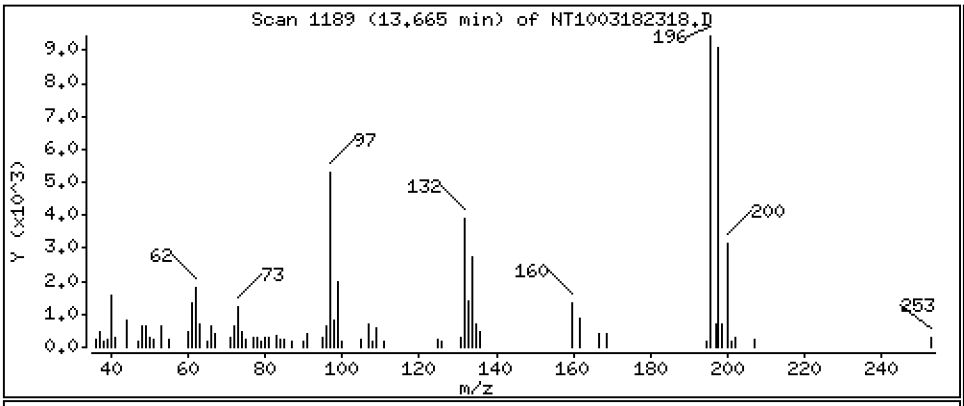
Operator: VTS

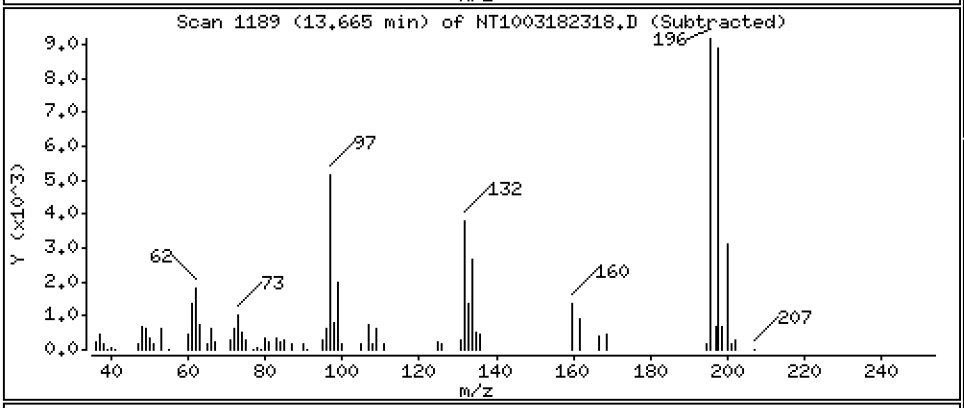
Column phase: ZB-5msi

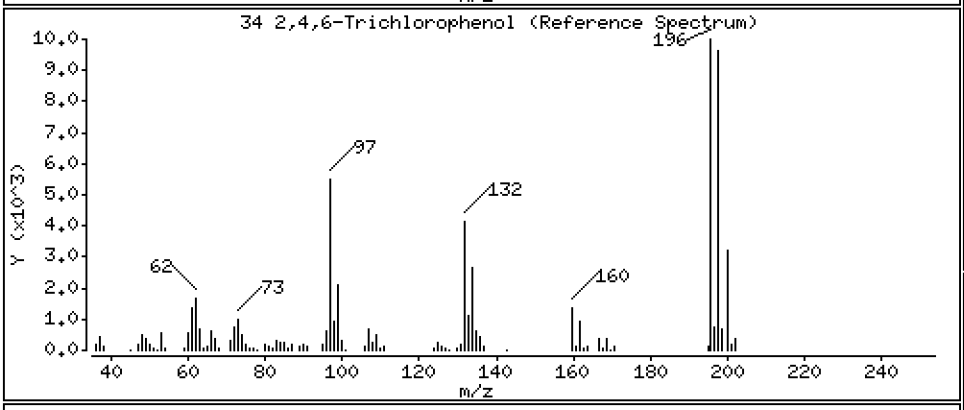
Column diameter: 0.25

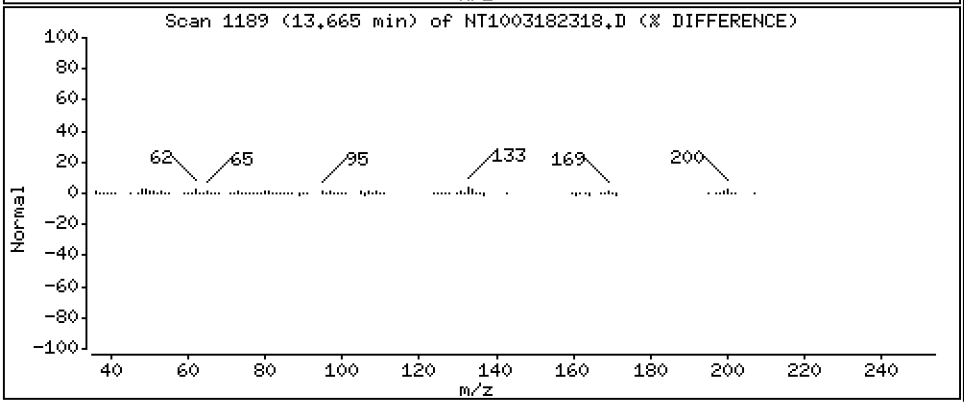
34 2,4,6-Trichlorophenol

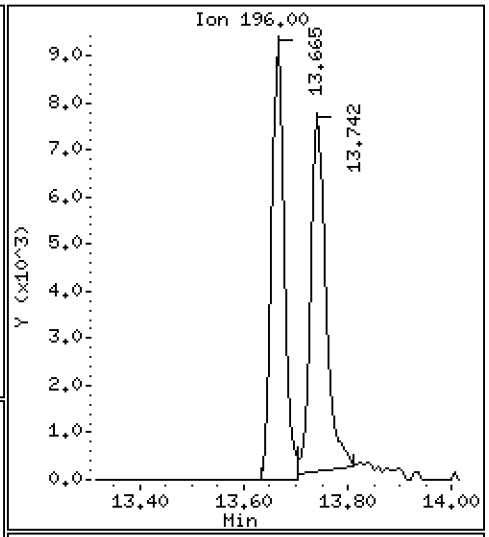
Concentration: 0.3825 ug/mL

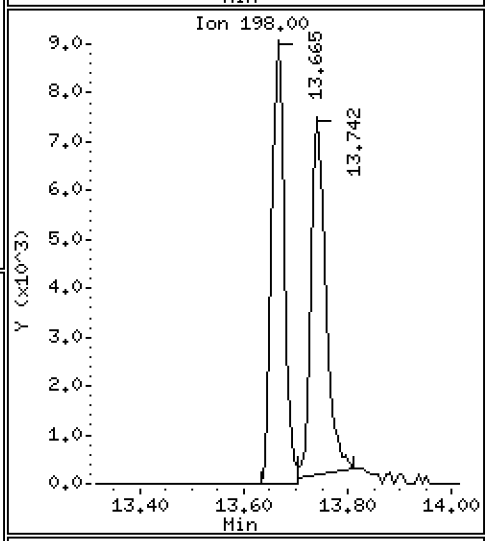


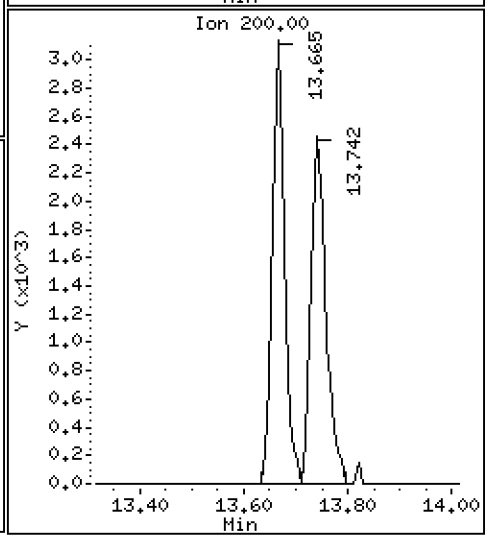












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

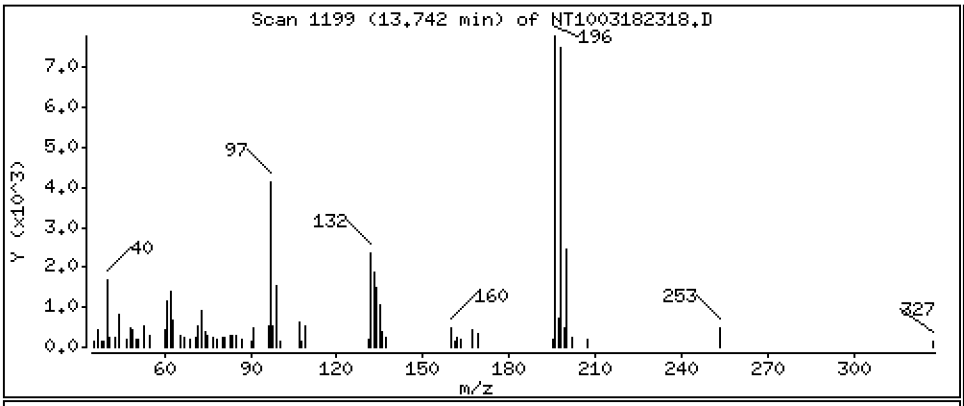
Operator: VTS

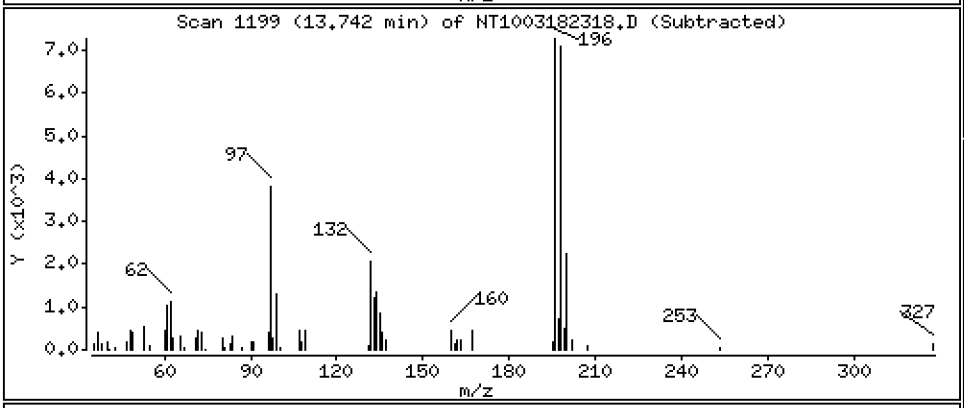
Column phase: ZB-5msi

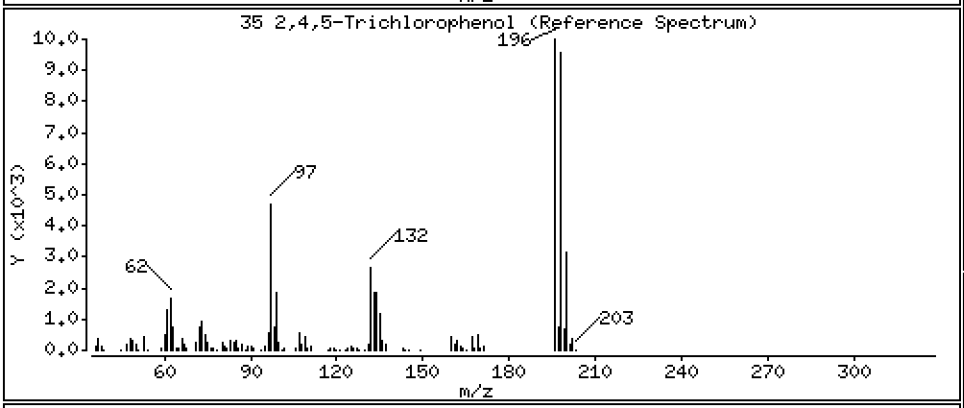
Column diameter: 0.25

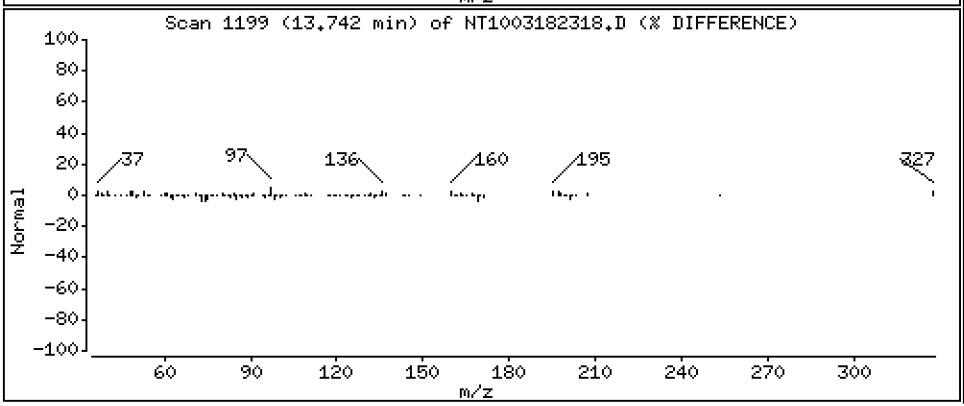
35 2,4,5-Trichlorophenol

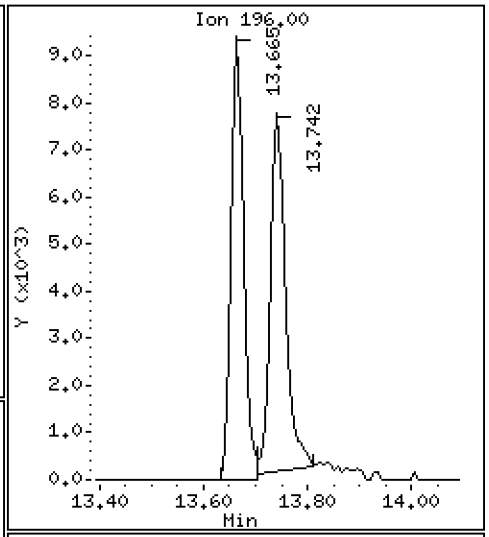
Concentration: 0.3416 ug/mL

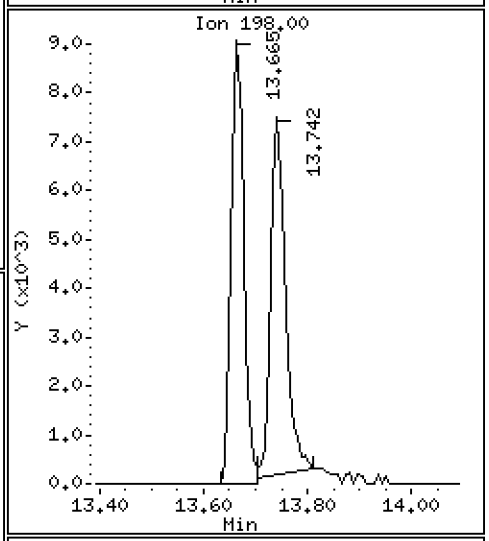


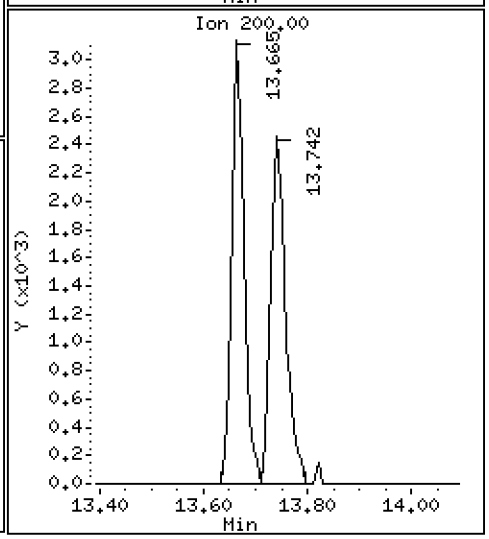












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

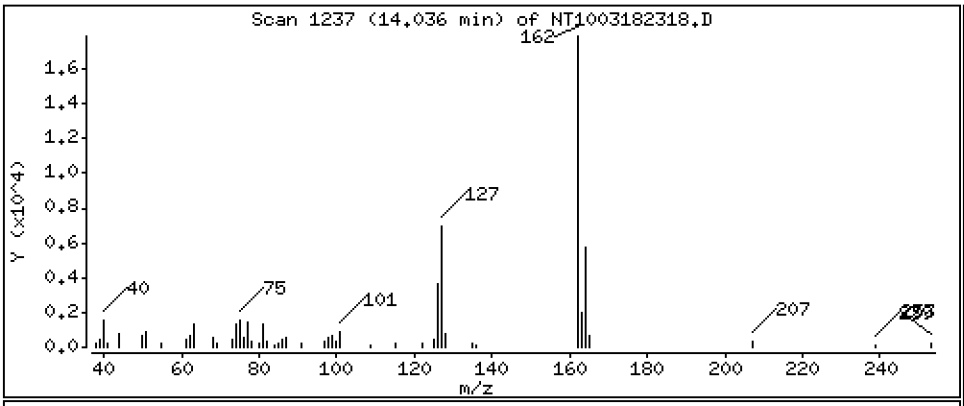
Operator: VTS

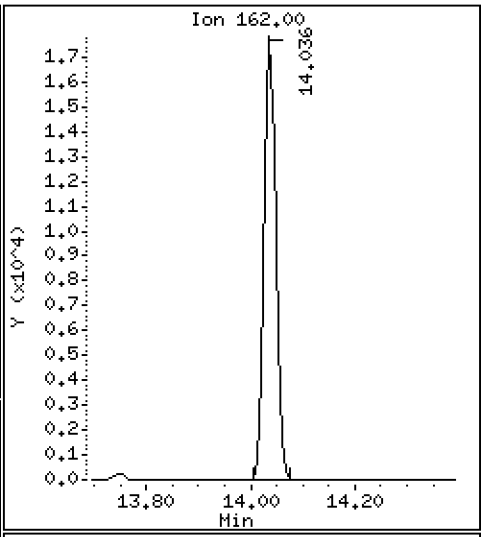
Column phase: ZB-5msi

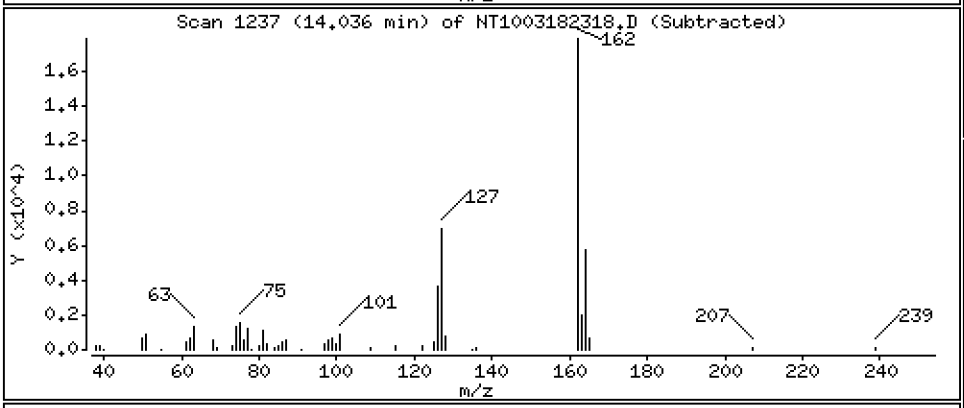
Column diameter: 0.25

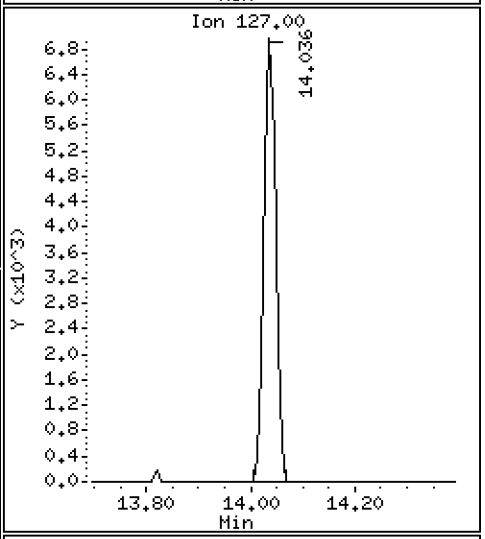
37 2-Chloronaphthalene

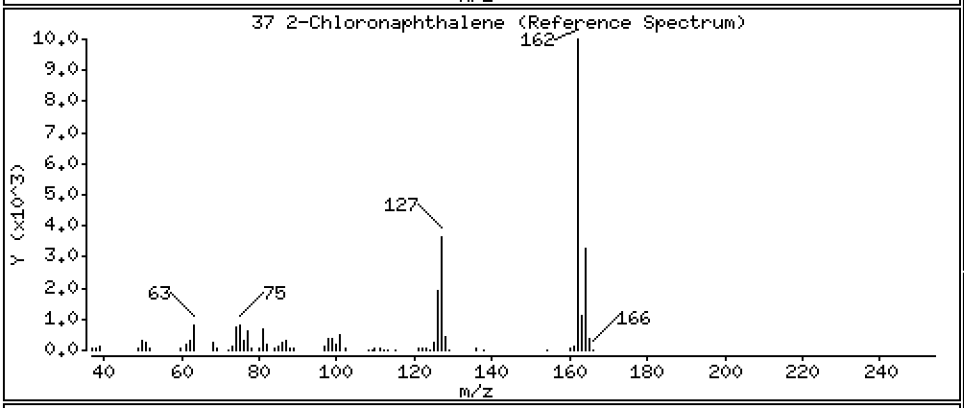
Concentration: 0.2078 ug/mL

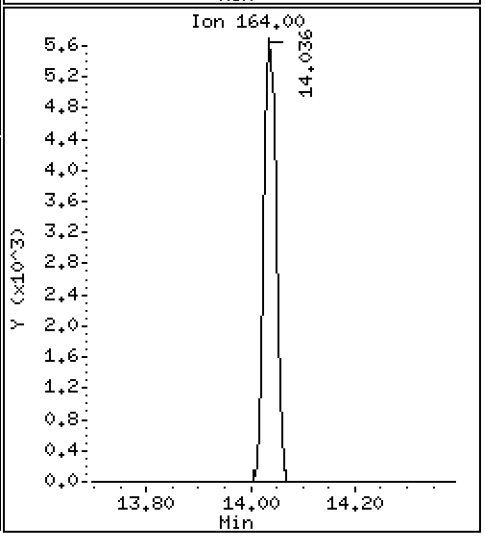


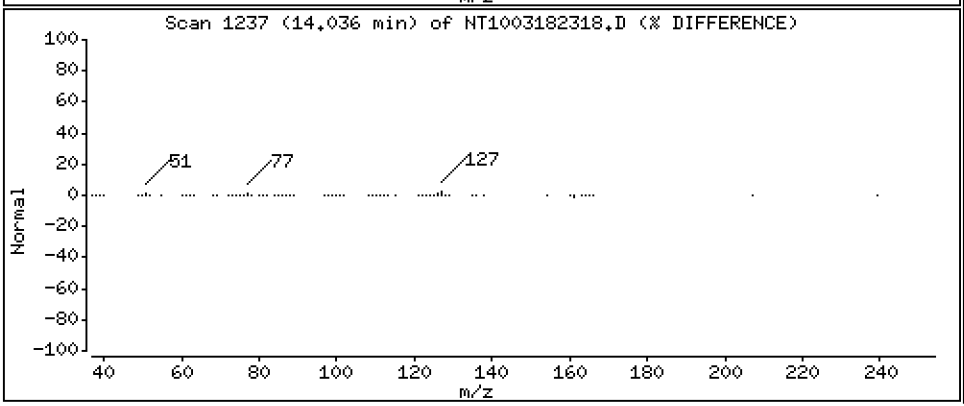












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

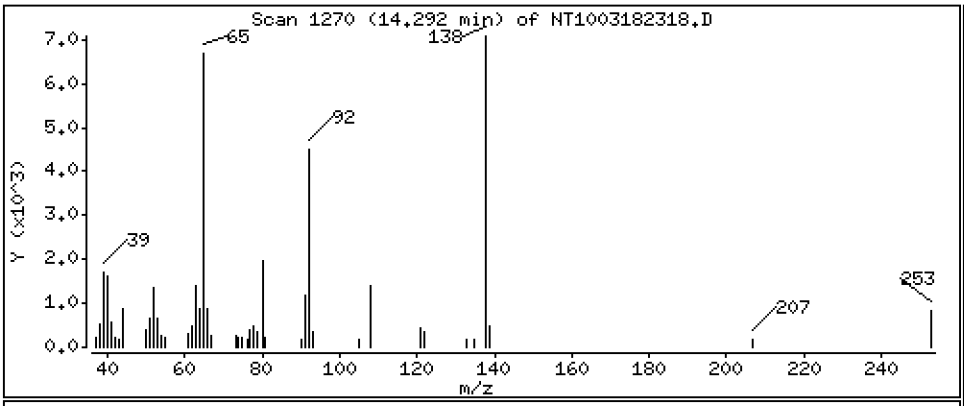
Operator: VTS

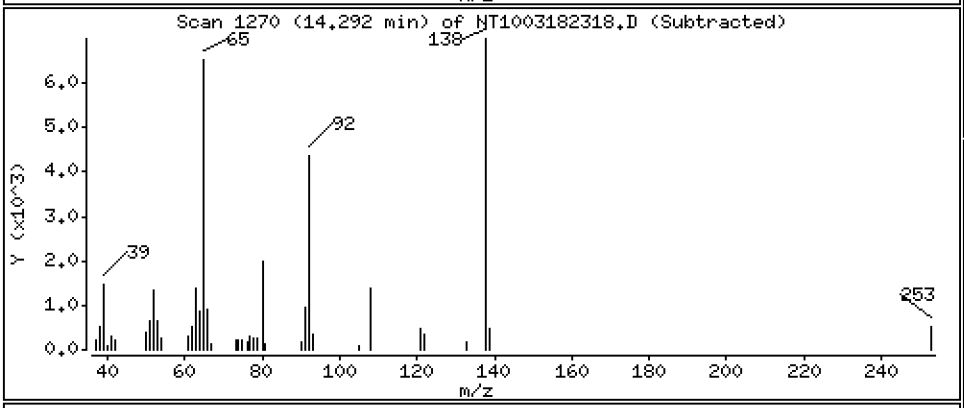
Column phase: ZB-5msi

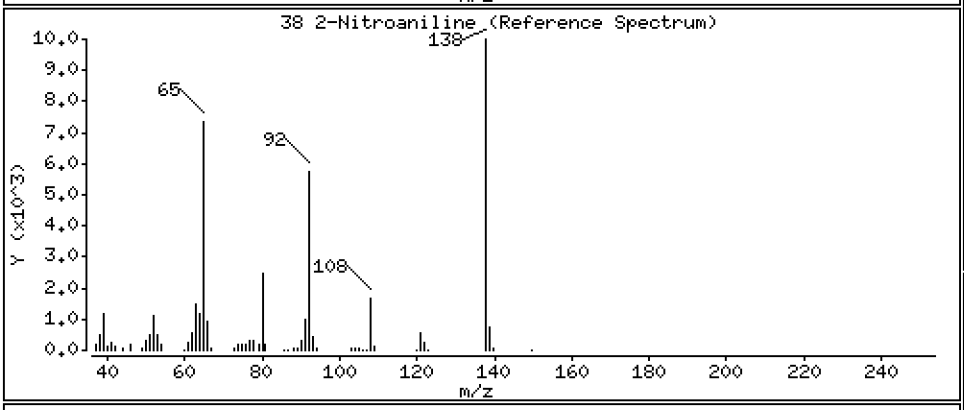
Column diameter: 0.25

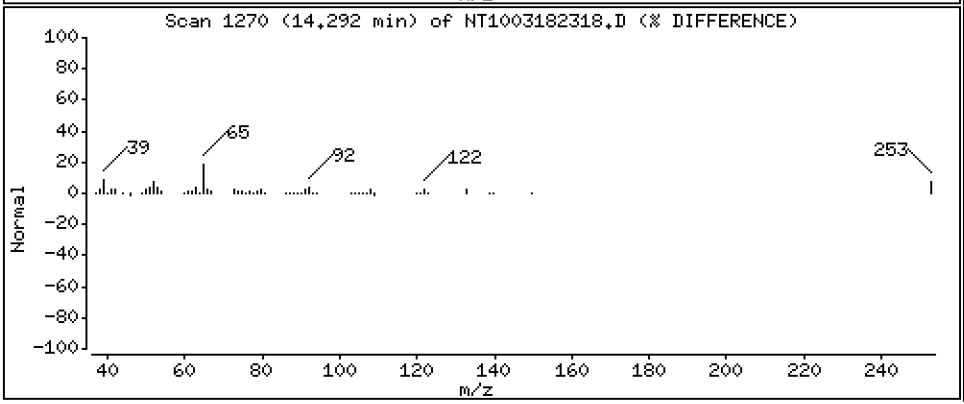
38 2-Nitroaniline

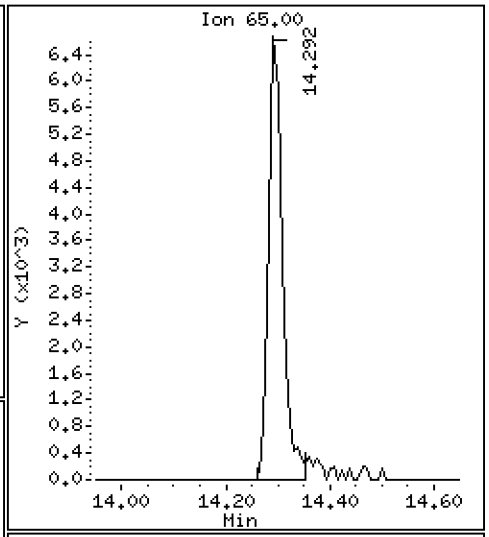
Concentration: 0.3371 ug/mL

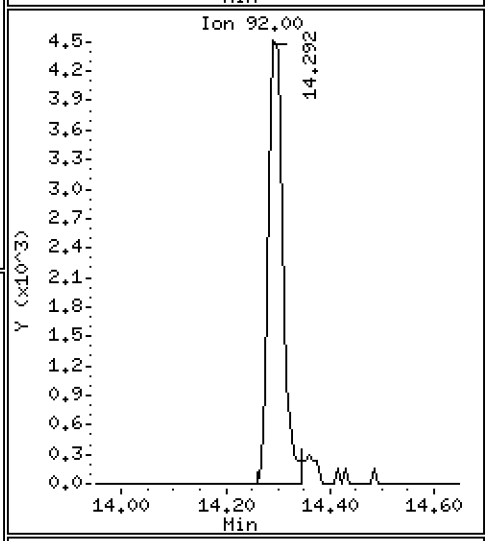


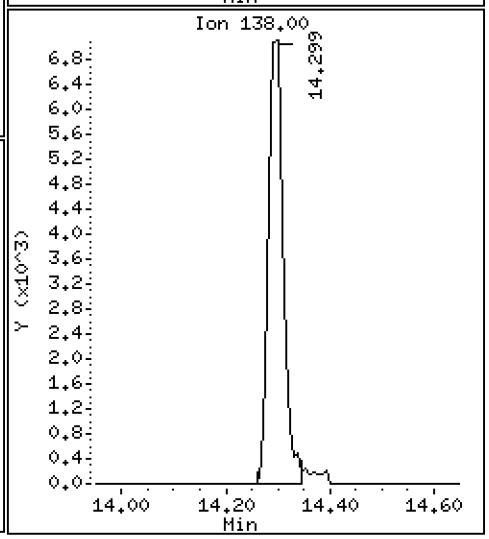












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

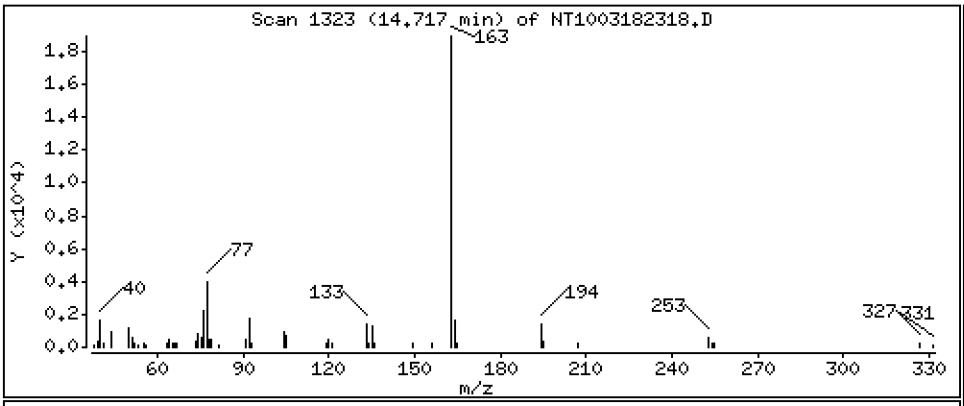
Operator: VTS

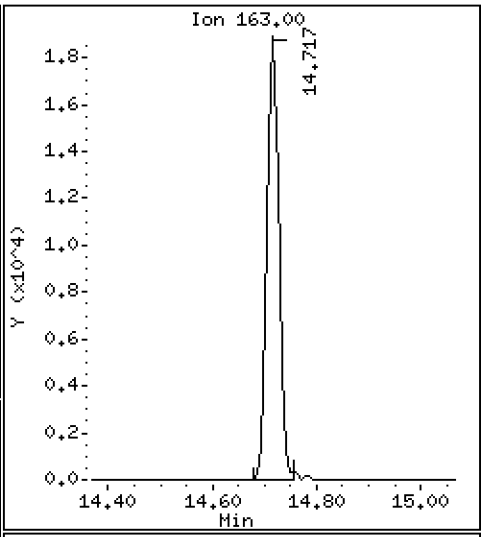
Column phase: ZB-5msi

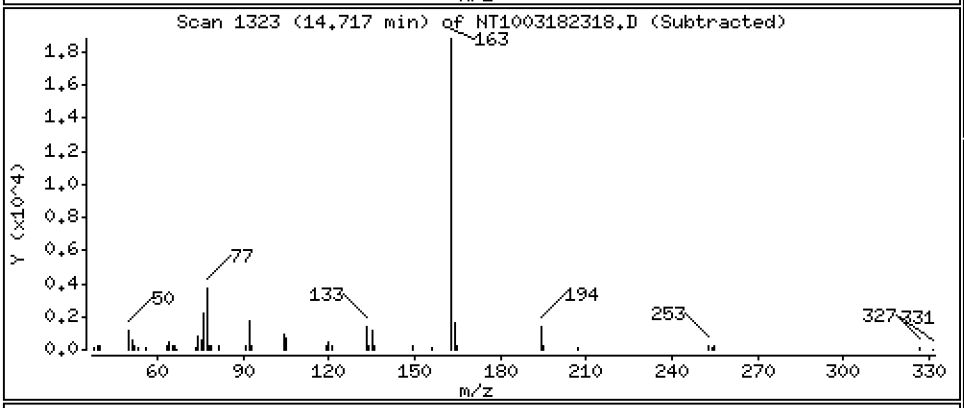
Column diameter: 0.25

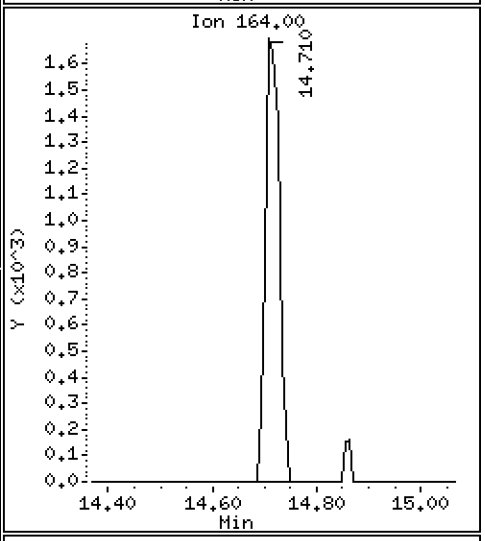
39 Dimethylphthalate

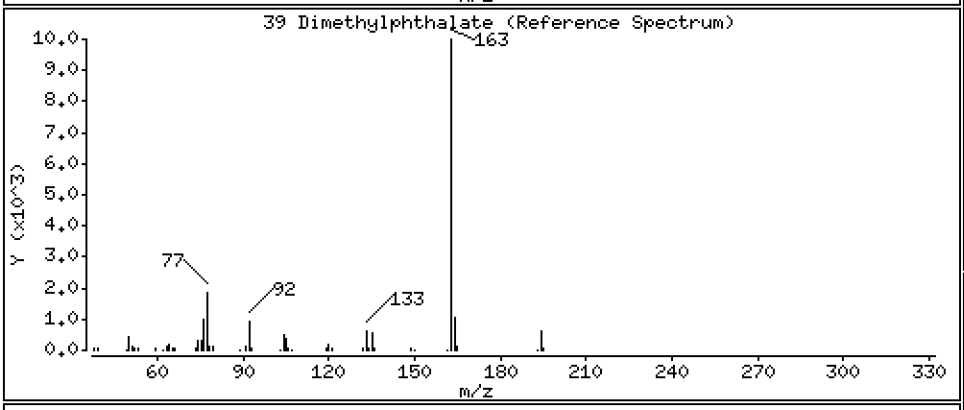
Concentration: 0.2241 ug/mL

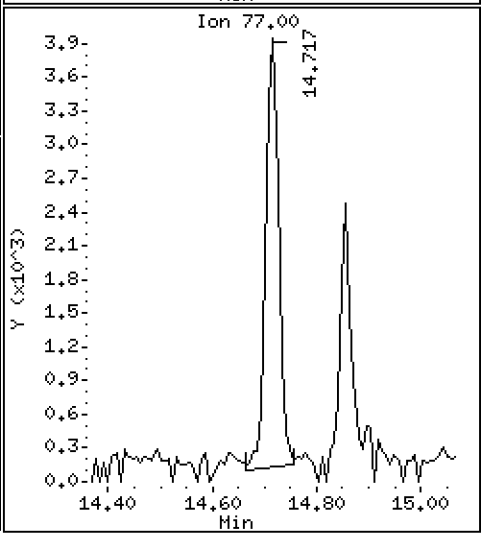


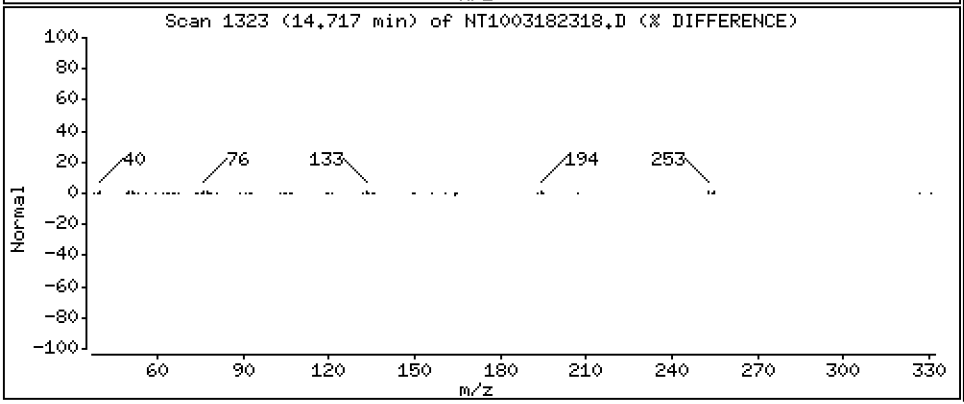












Date : 19-MAR-2023 04:35

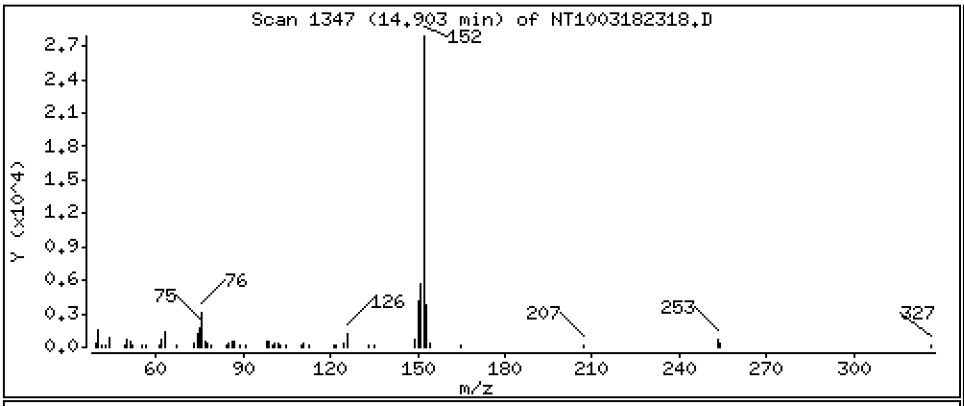
Client ID: Instrument: nt10.i

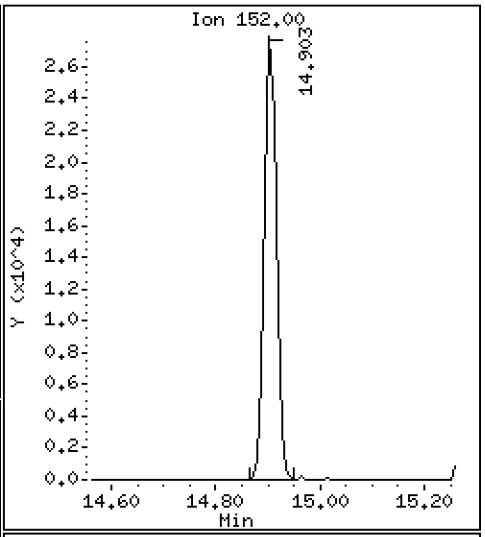
Sample Info: SLC0504-LCV2

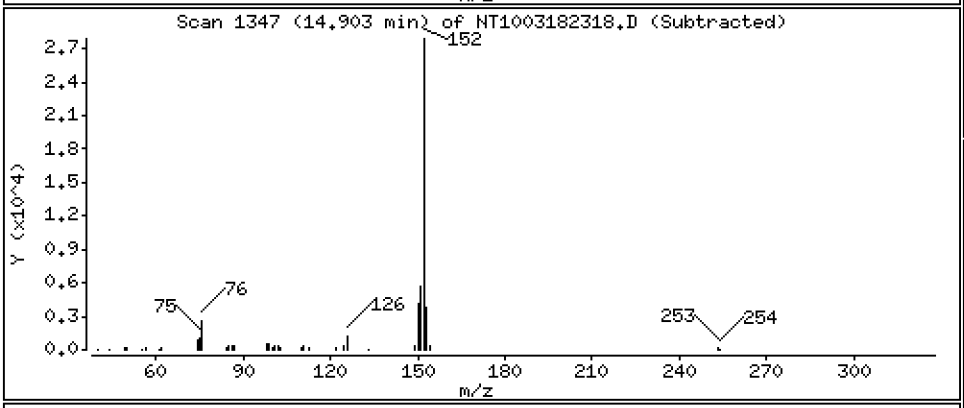
Operator: VTS

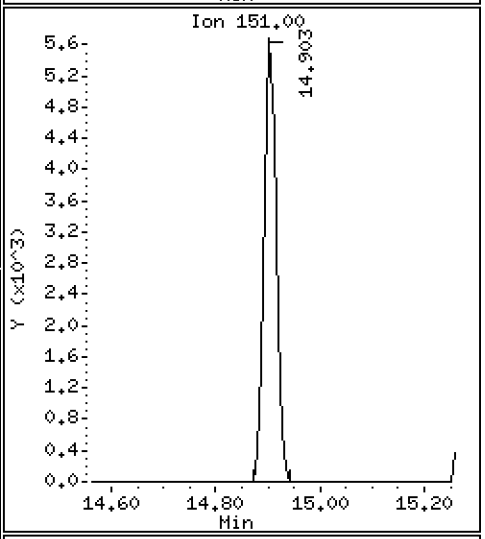
Column phase: ZB-5msi Column diameter: 0.25

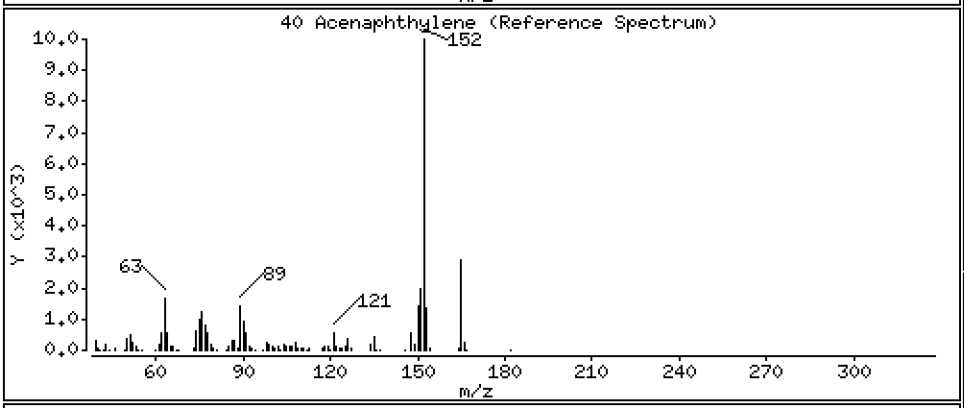
40 Acenaphthylene Concentration: 0.2172 ug/mL

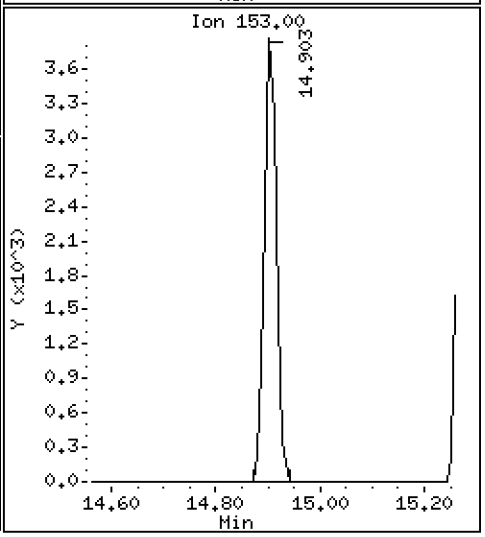


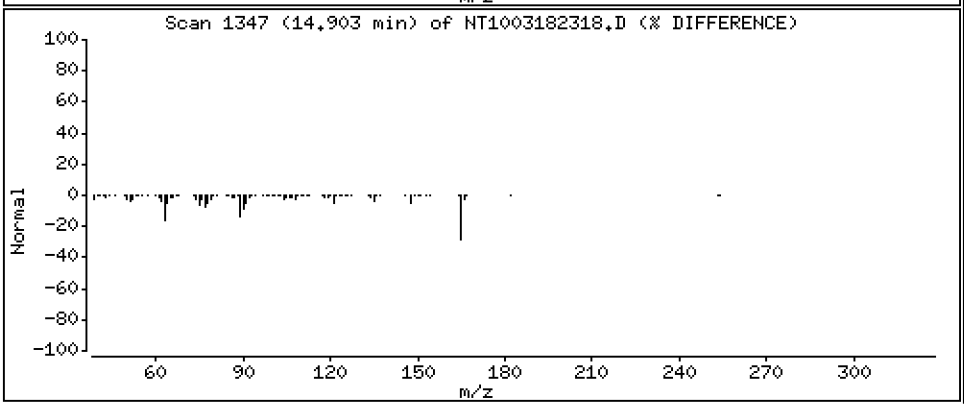












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

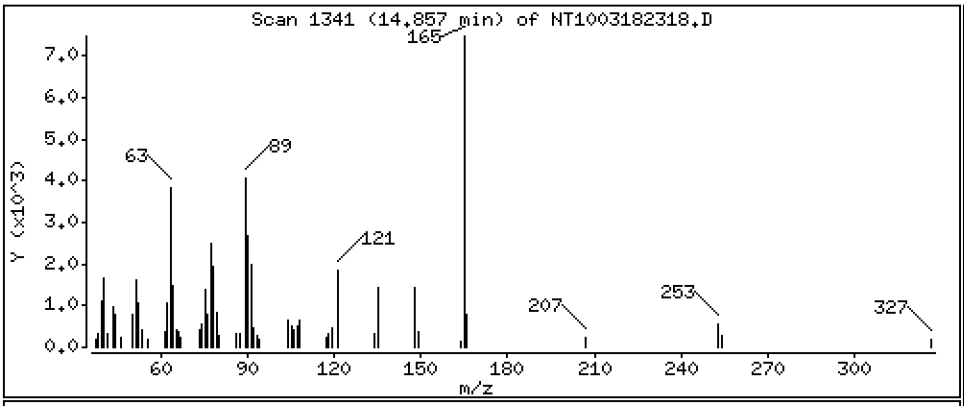
Operator: VTS

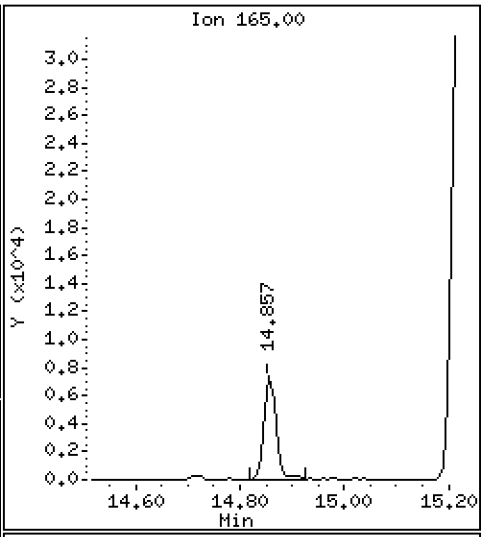
Column phase: ZB-5msi

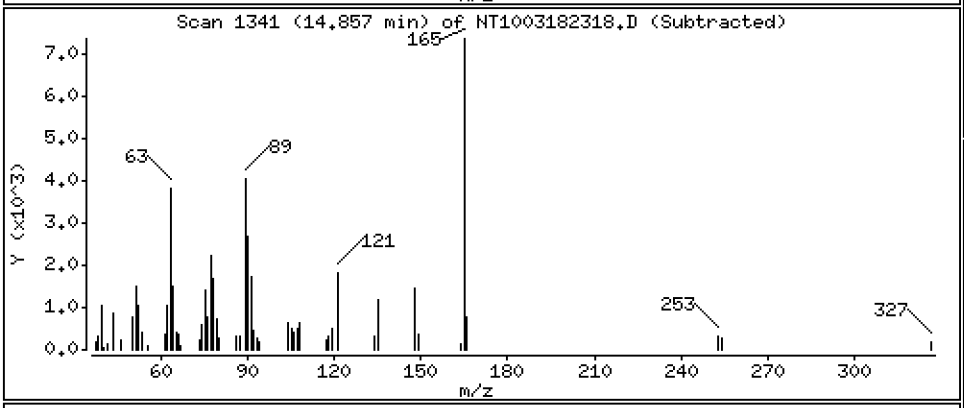
Column diameter: 0.25

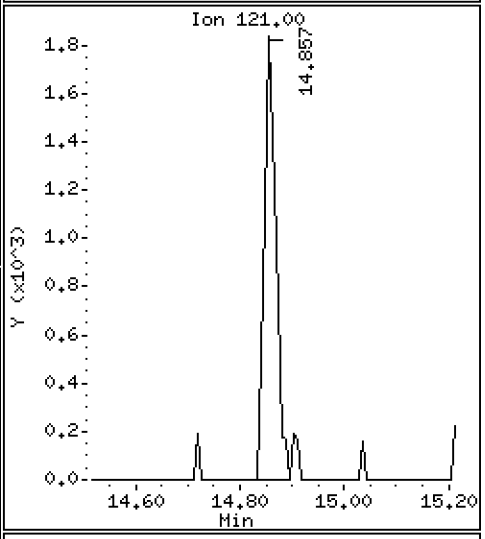
41 2,6-Dinitrotoluene

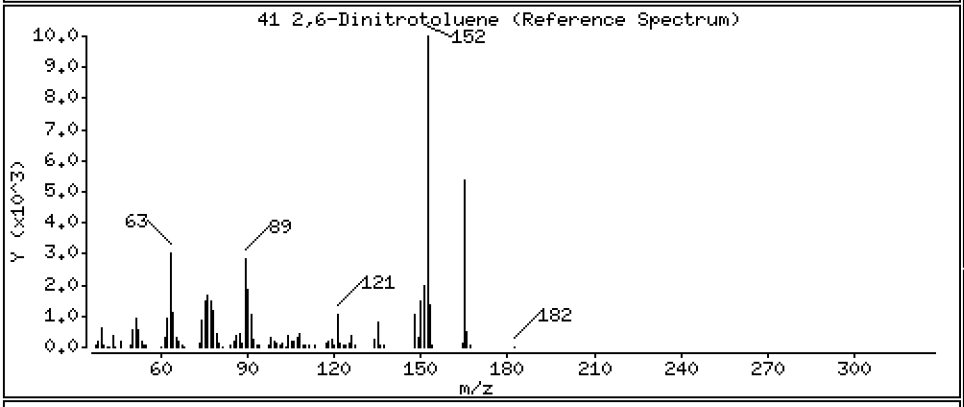
Concentration: 0.4107 ug/mL

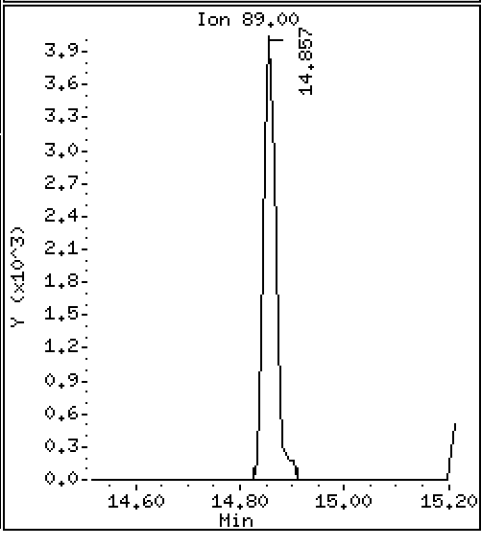


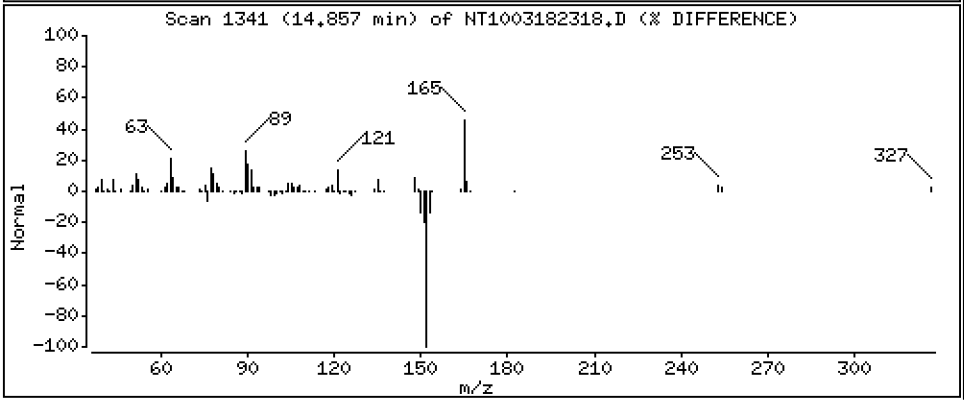












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

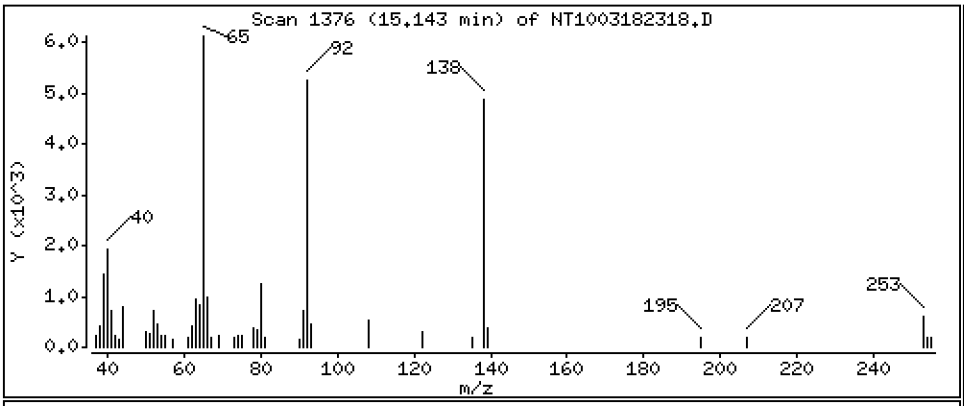
Operator: VTS

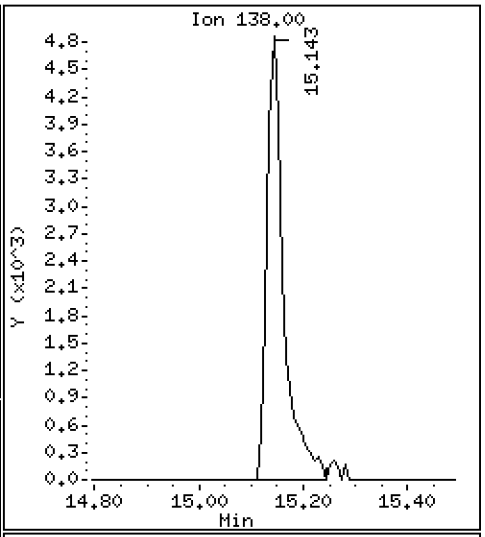
Column phase: ZB-5msi

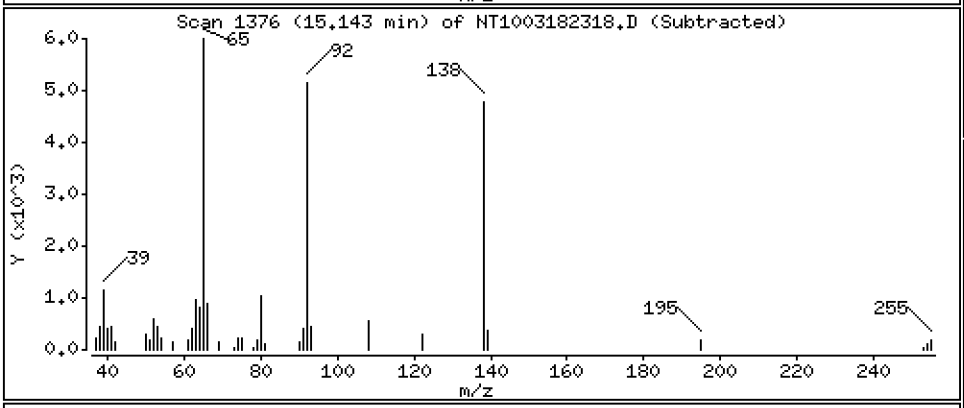
Column diameter: 0.25

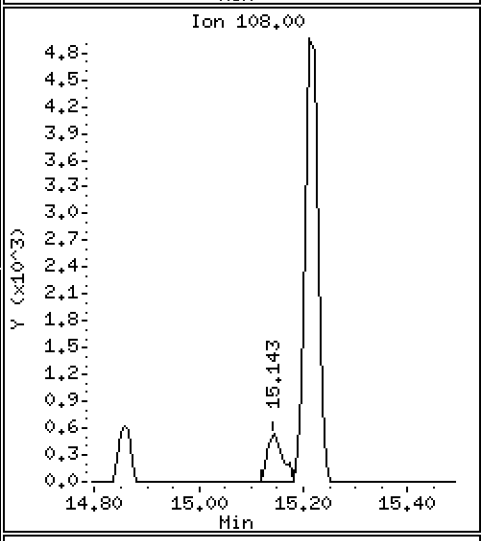
43 3-Nitroaniline

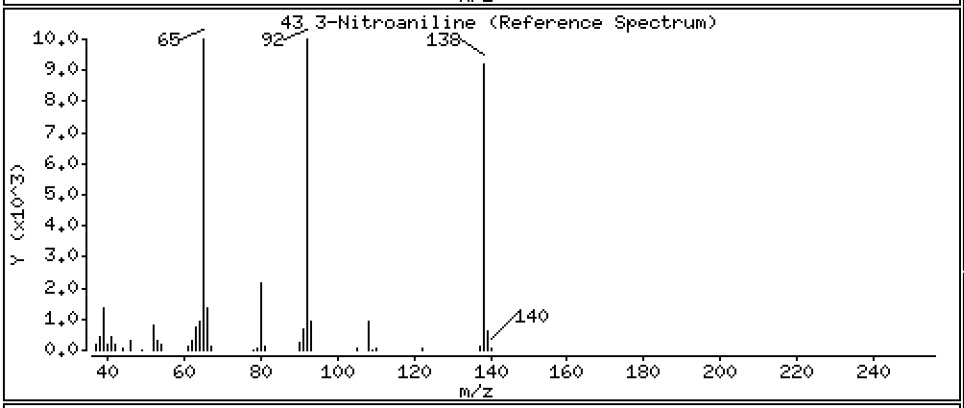
Concentration: 0.3380 ug/mL

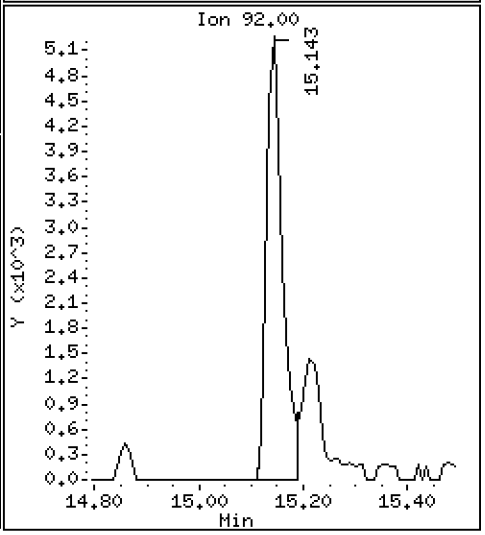


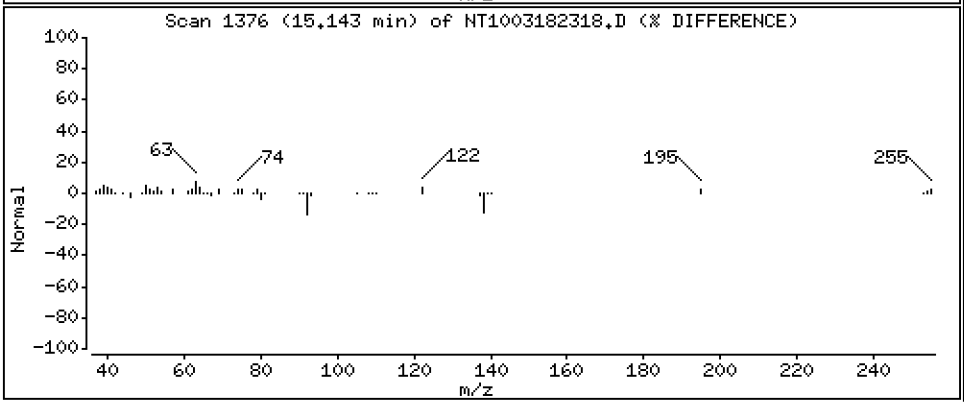












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

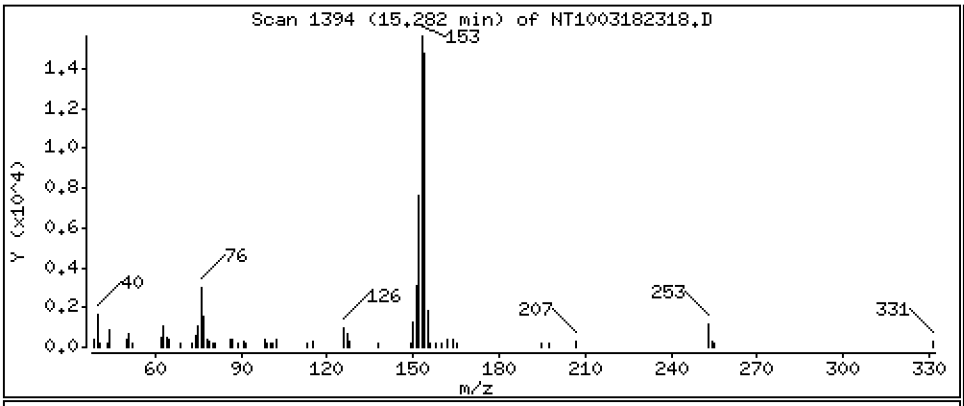
Operator: VTS

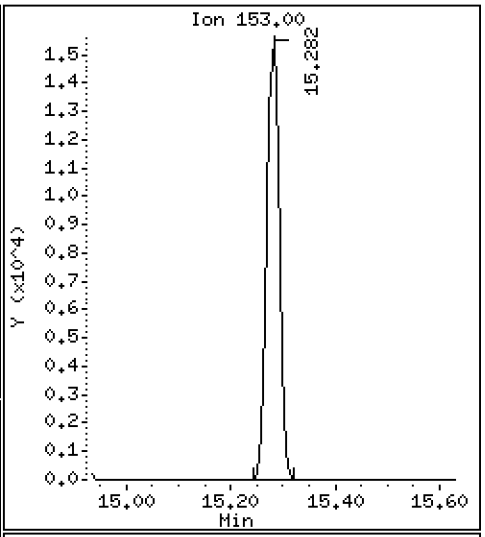
Column phase: ZB-5msi

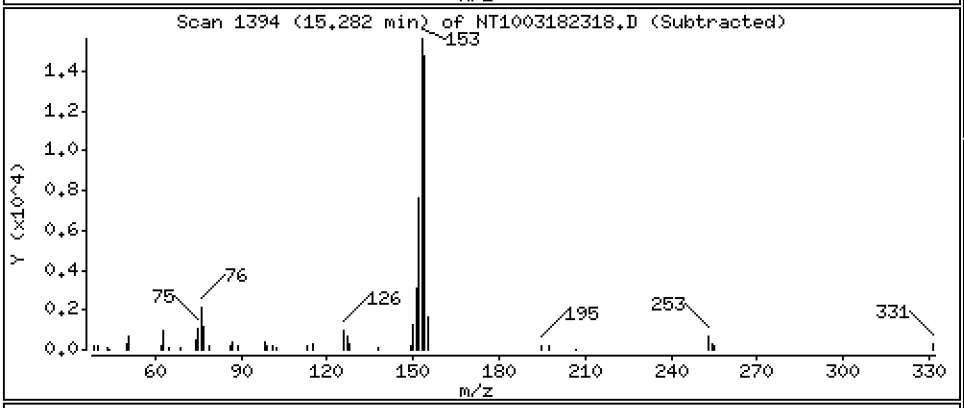
Column diameter: 0.25

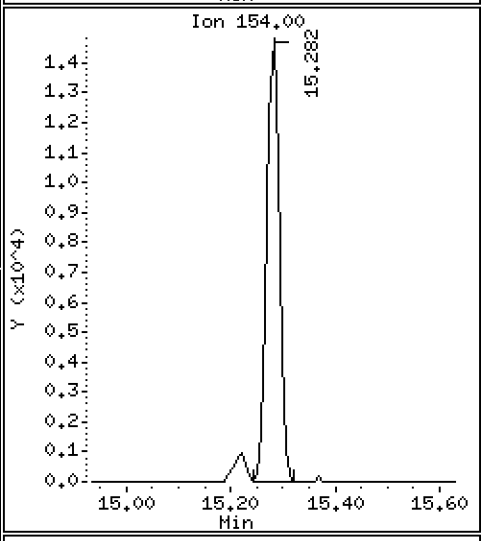
44 Acenaphthene

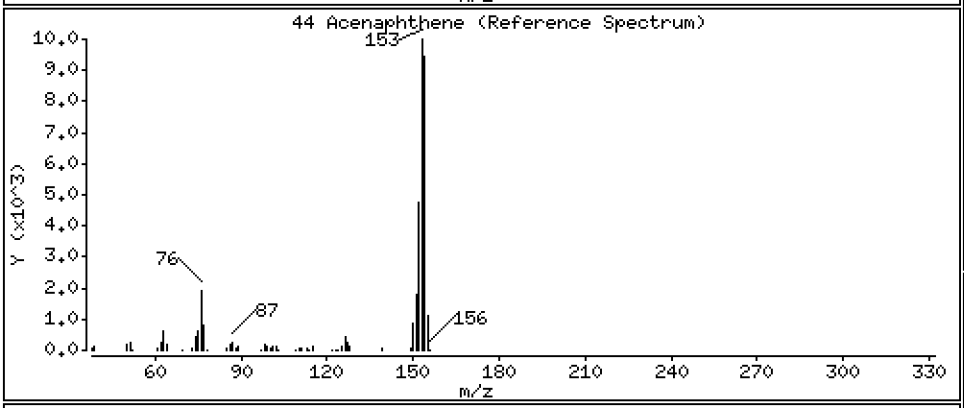
Concentration: 0.2023 ug/mL

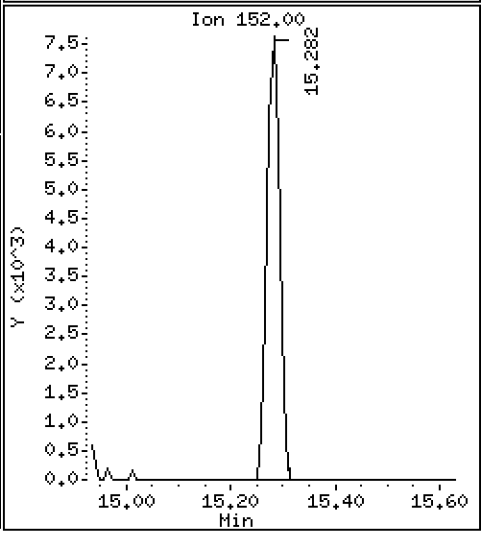


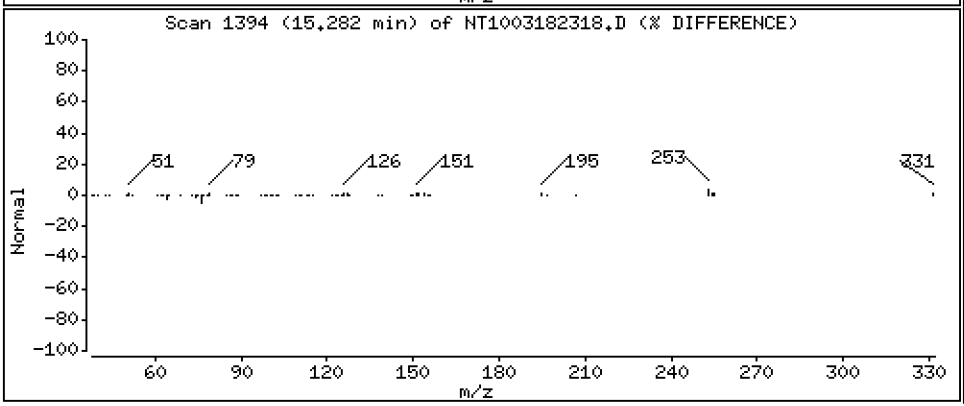












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

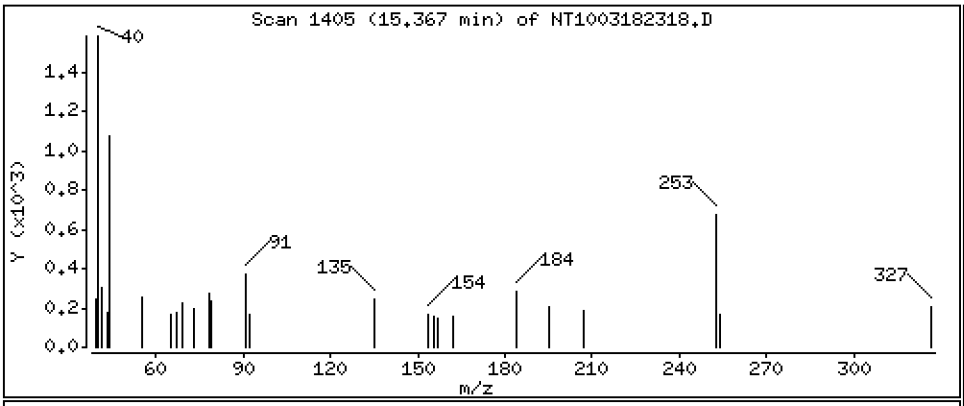
Operator: VTS

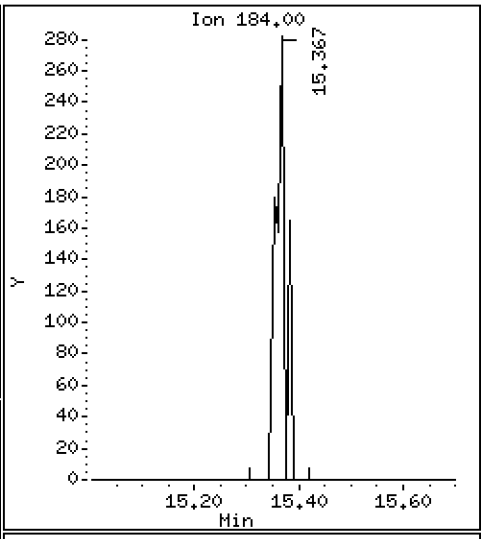
Column phase: ZB-5msi

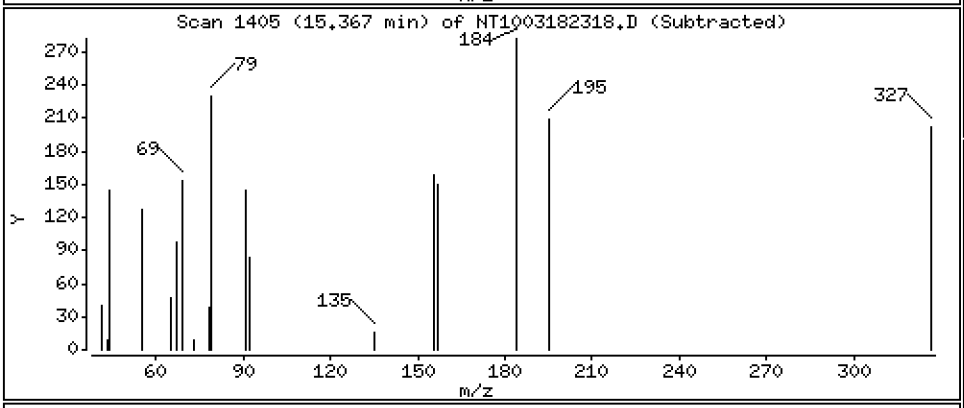
Column diameter: 0.25

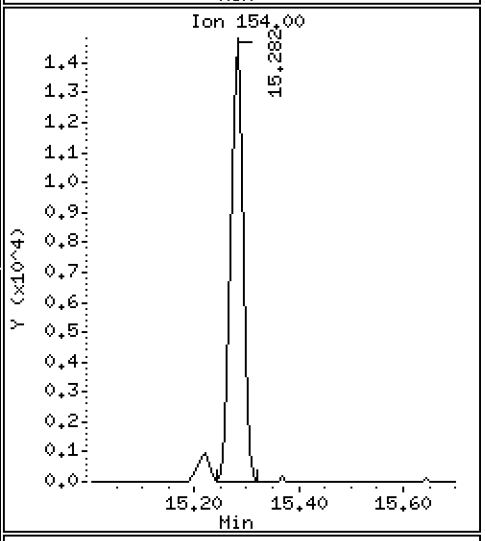
45 2,4-Dinitrophenol

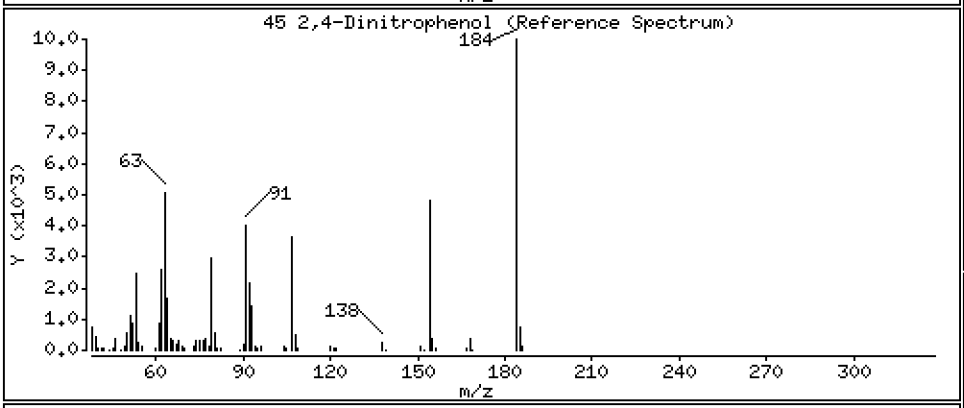
Concentration: 0.02186 ug/mL

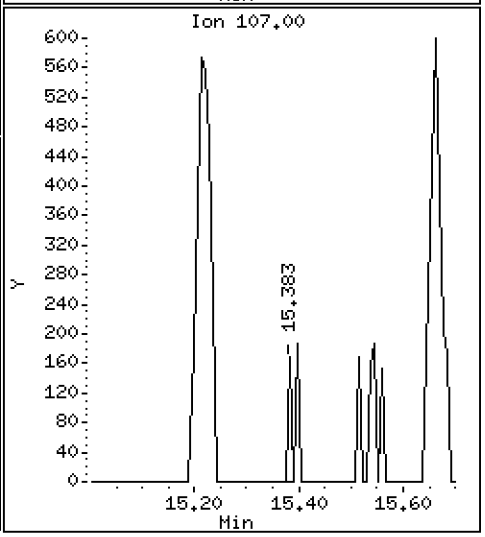


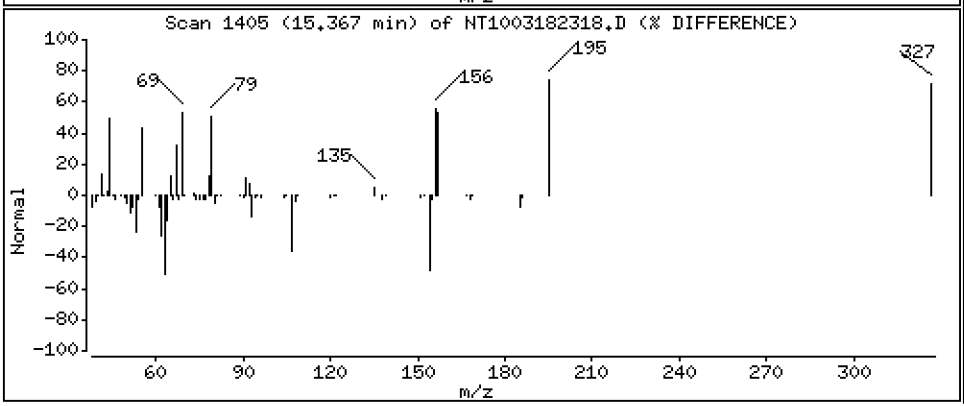












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

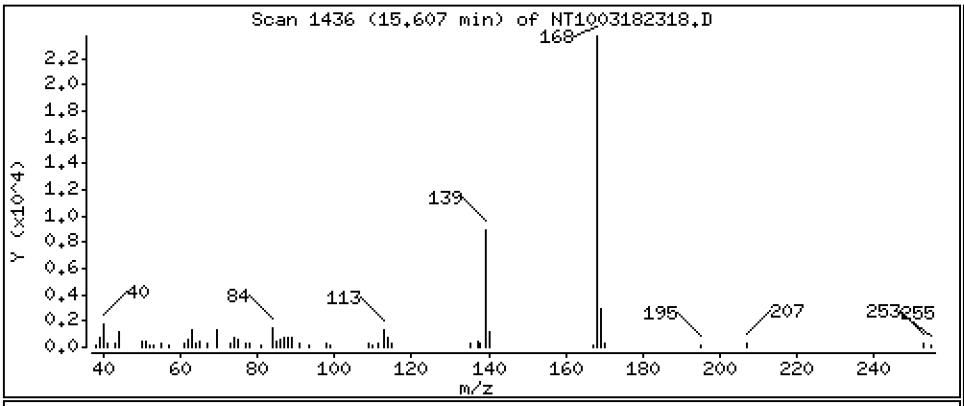
Operator: VTS

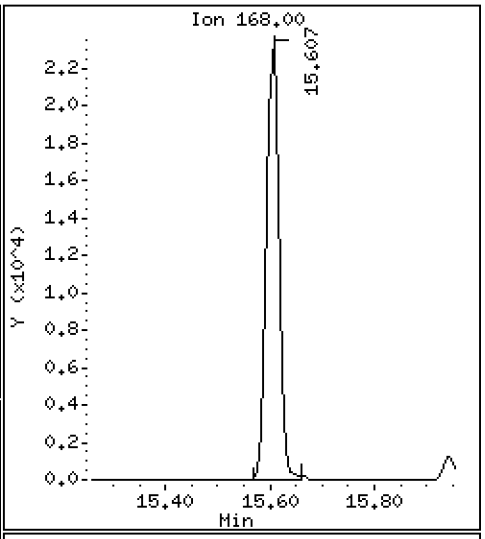
Column phase: ZB-5msi

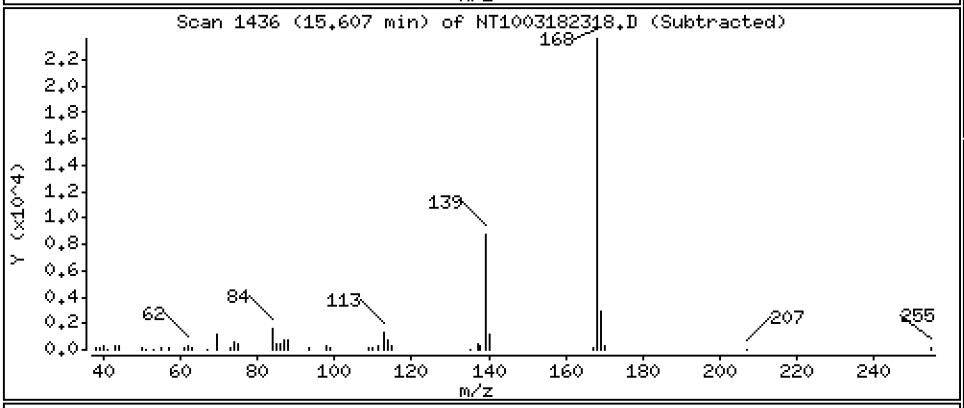
Column diameter: 0.25

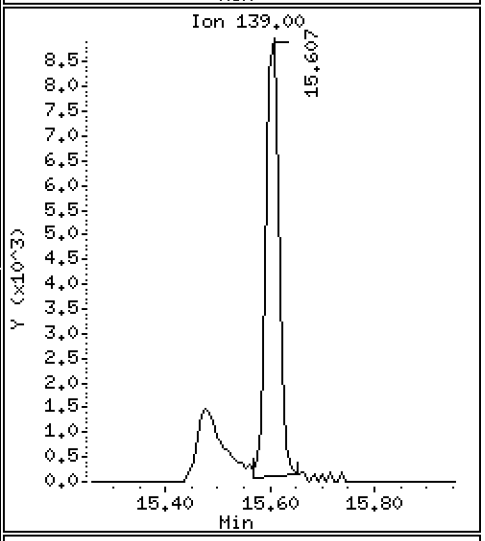
46 Dibenzofuran

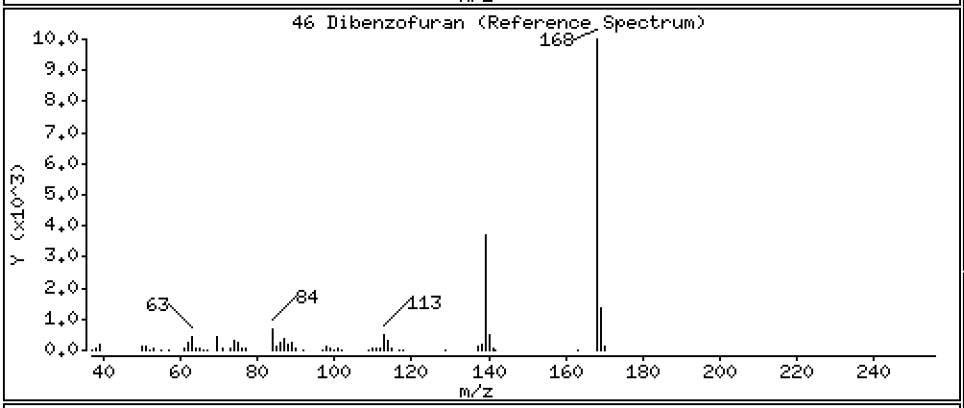
Concentration: 0.2068 ug/mL

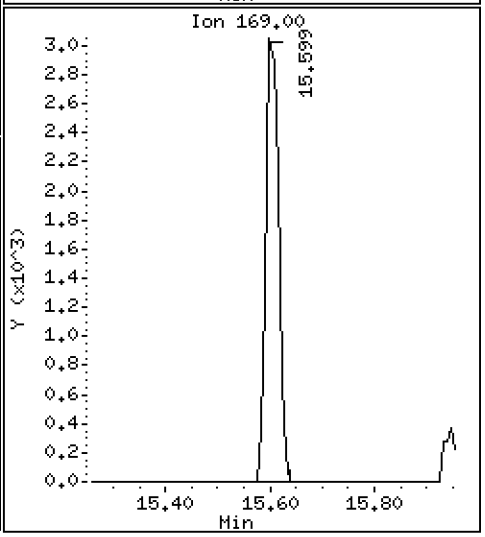


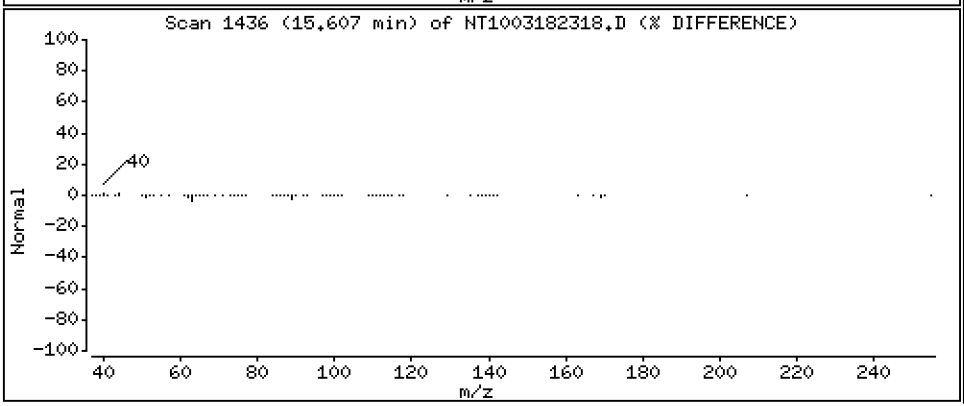












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

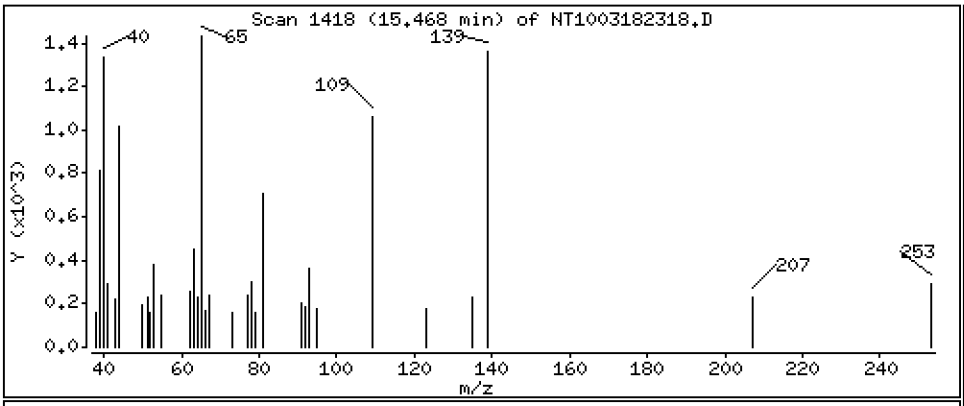
Operator: VTS

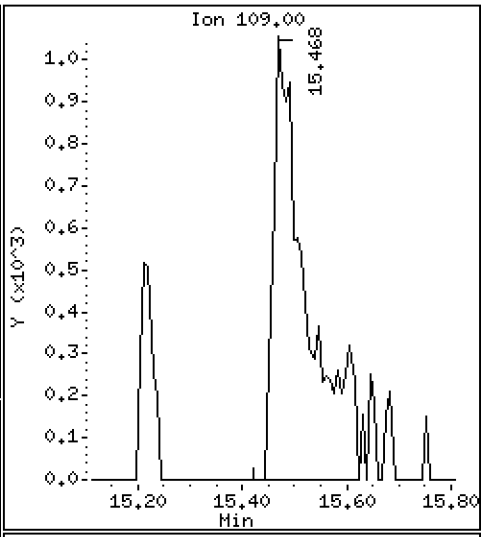
Column phase: ZB-5msi

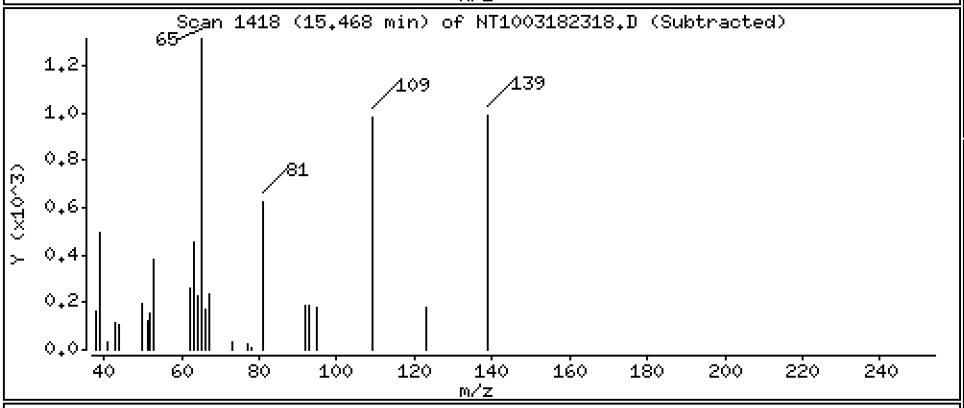
Column diameter: 0.25

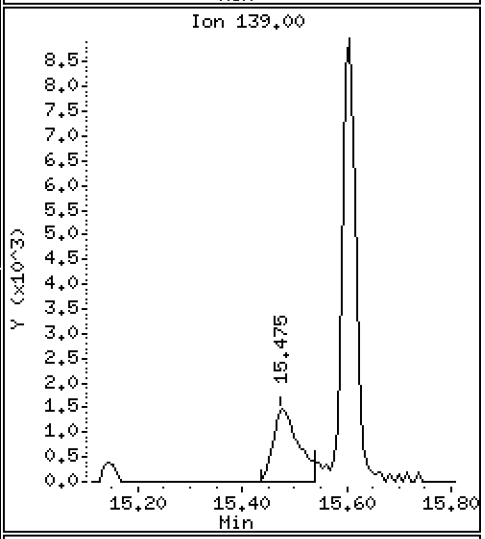
47 4-Nitrophenol

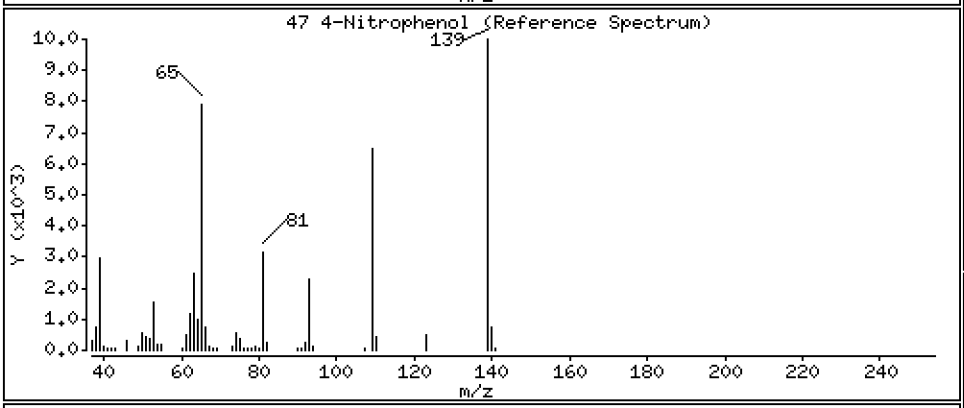
Concentration: 0.2378 ug/mL

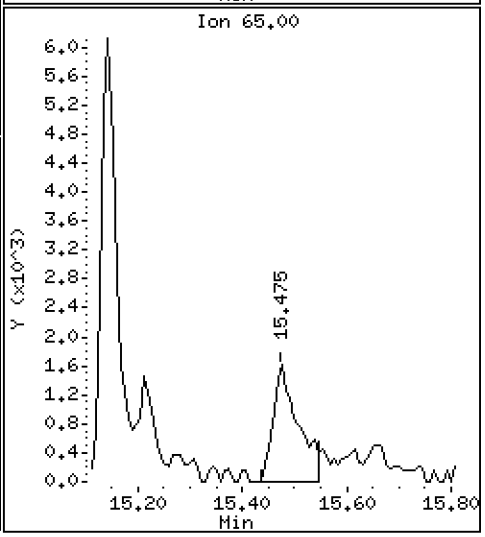


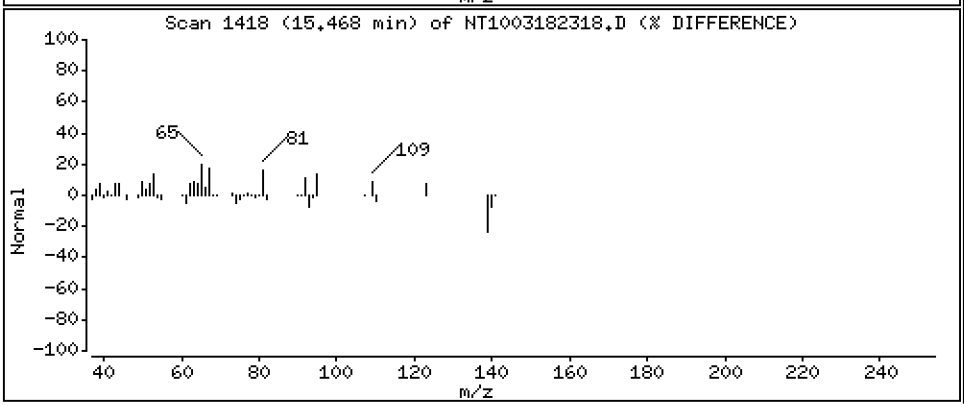












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

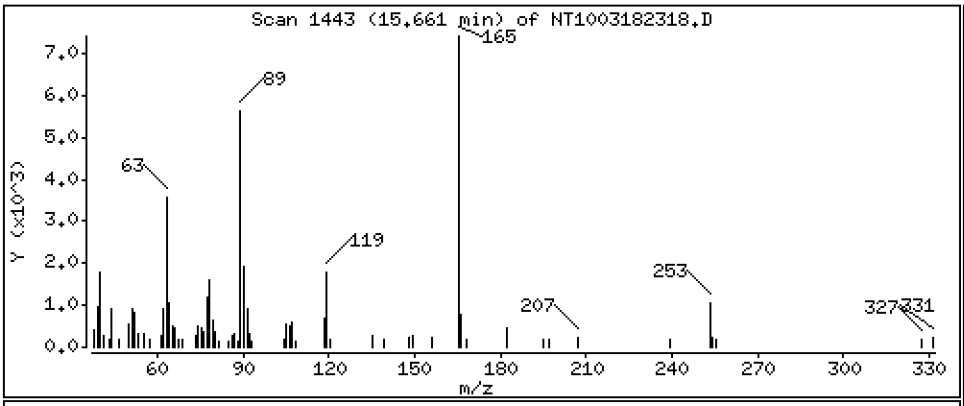
Operator: VTS

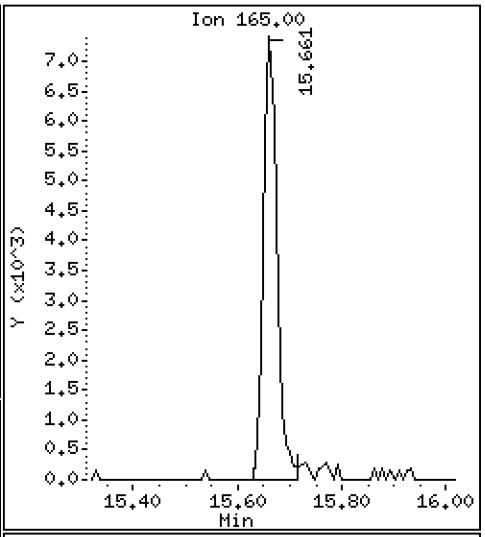
Column phase: ZB-5msi

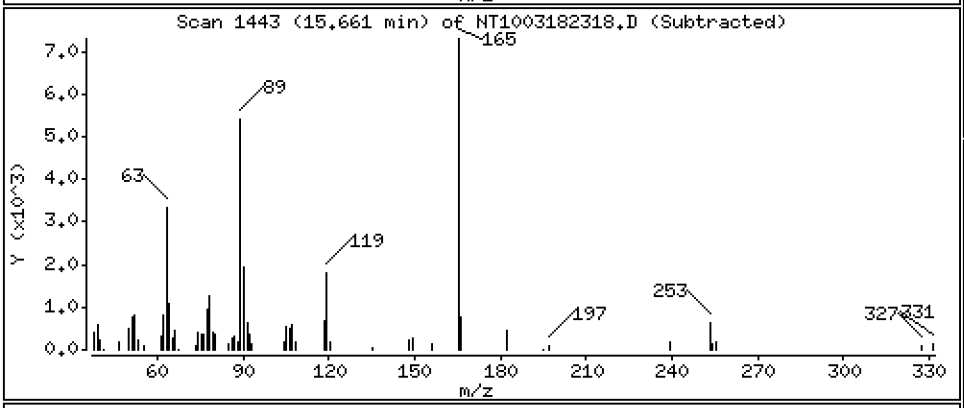
Column diameter: 0.25

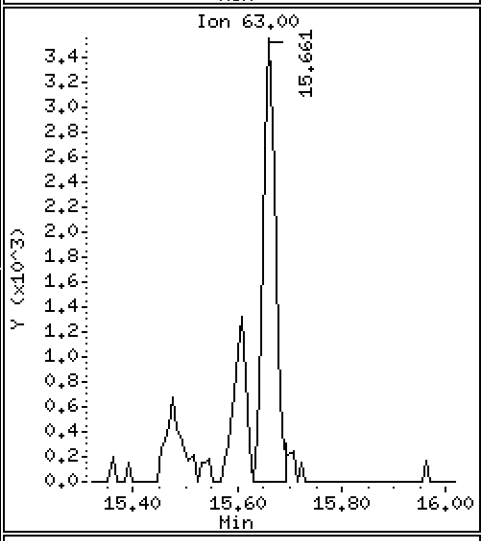
48 2,4-Dinitrotoluene

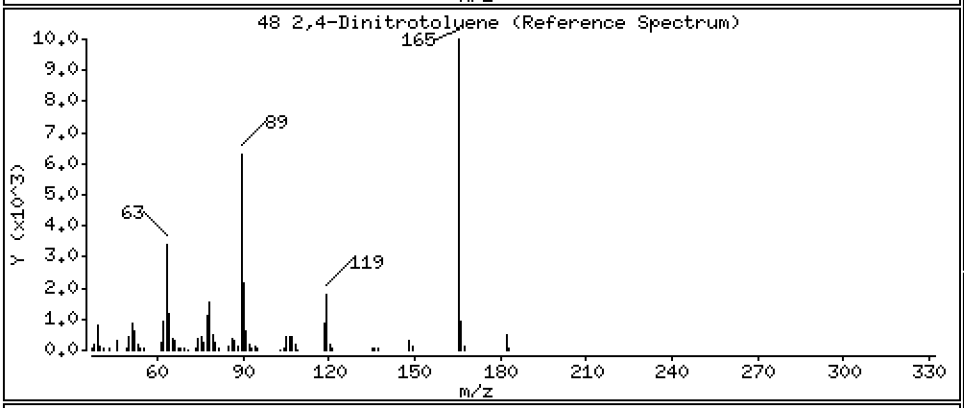
Concentration: 0.3071 ug/mL

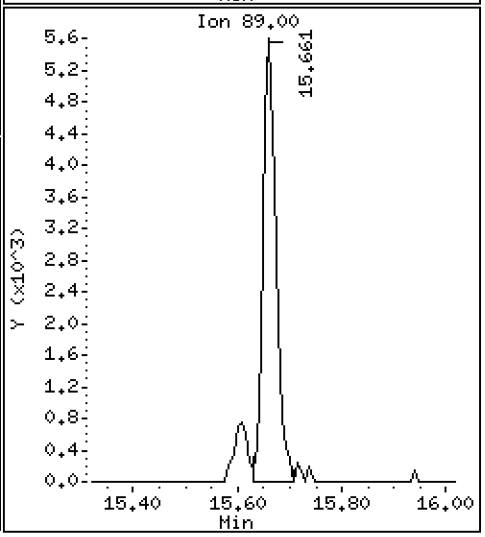


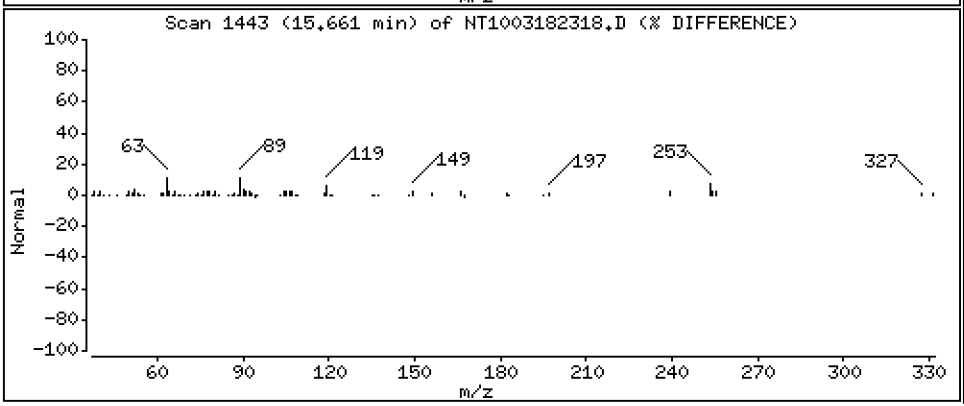












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

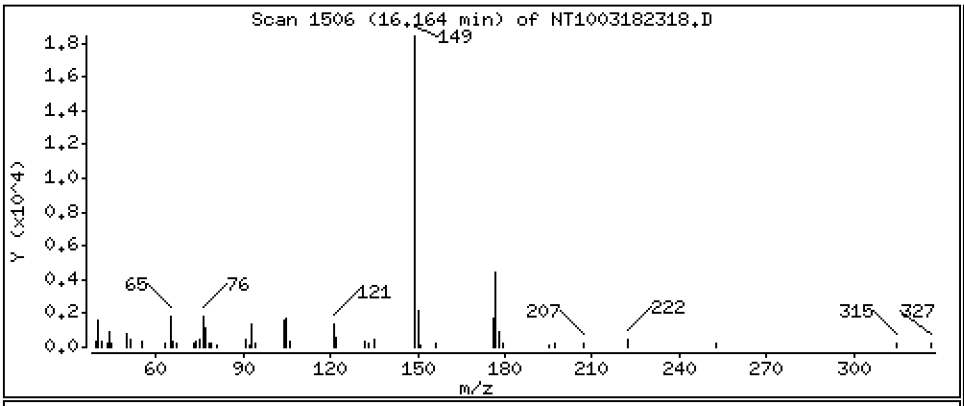
Operator: VTS

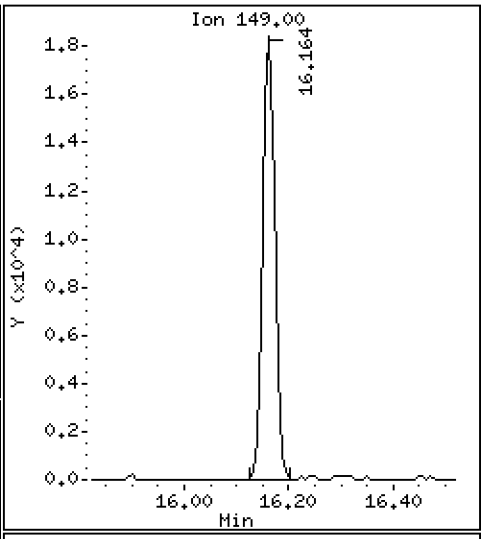
Column phase: ZB-5msi

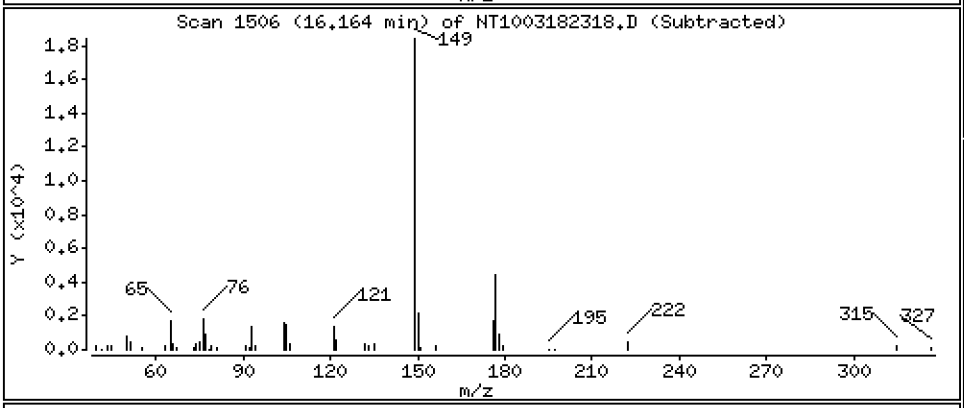
Column diameter: 0.25

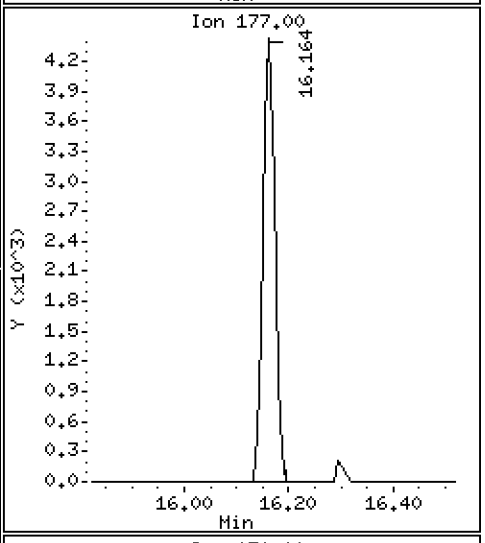
50 Diethylphthalate

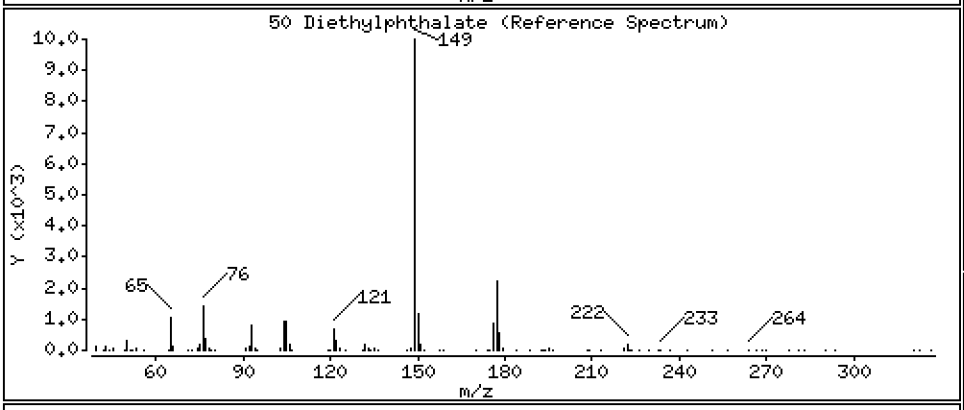
Concentration: 0.2253 ug/mL

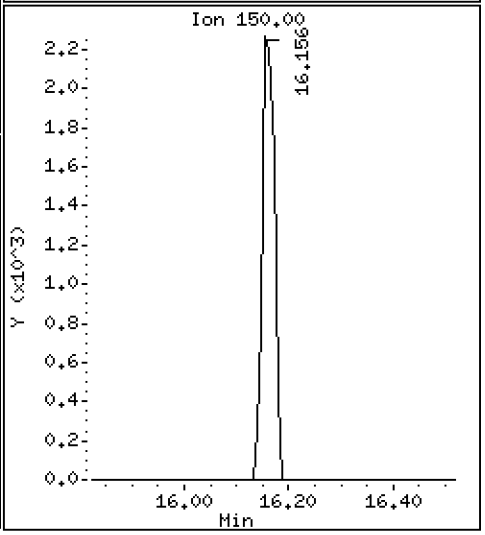


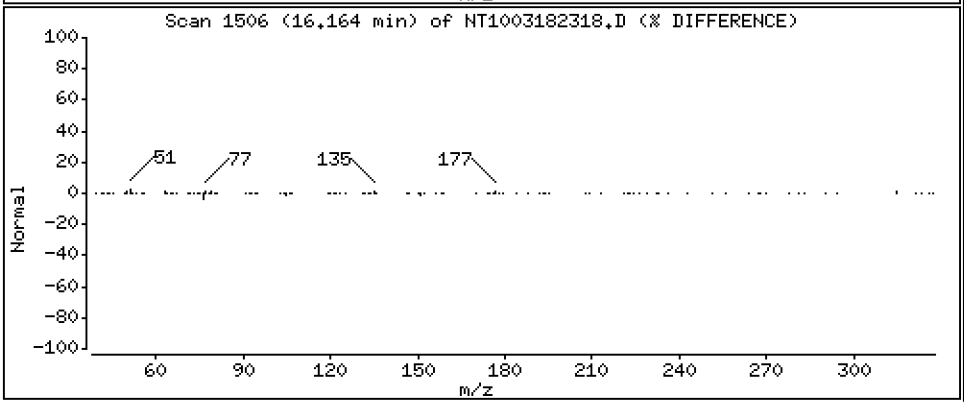












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

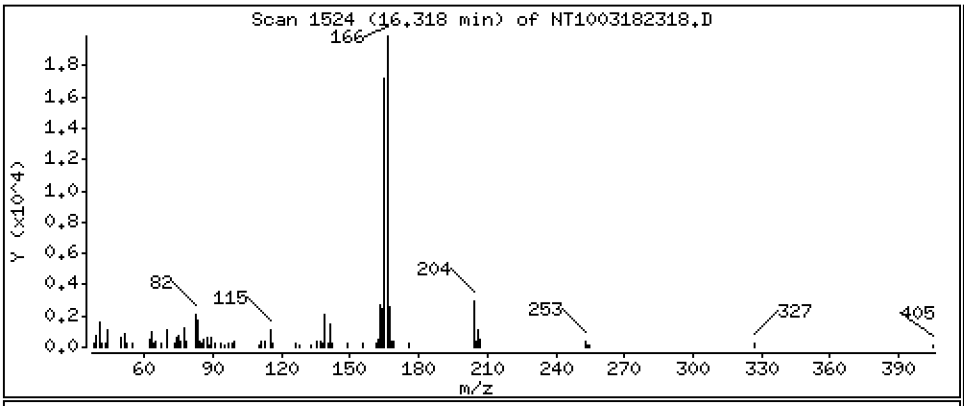
Operator: VTS

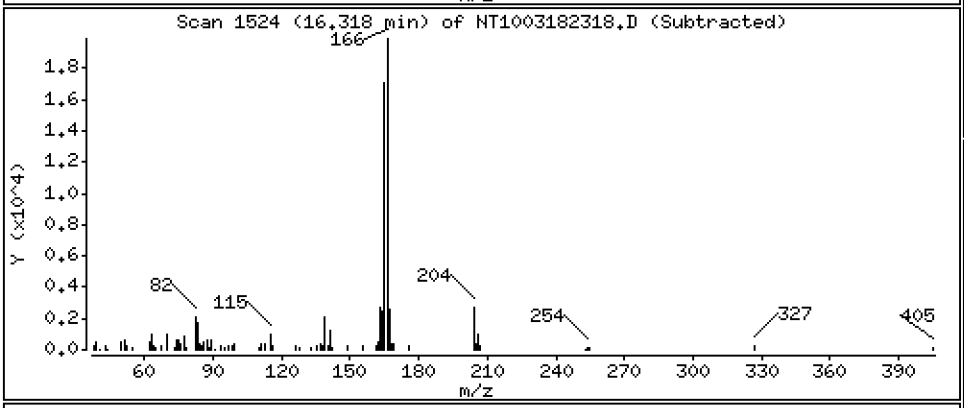
Column phase: ZB-5msi

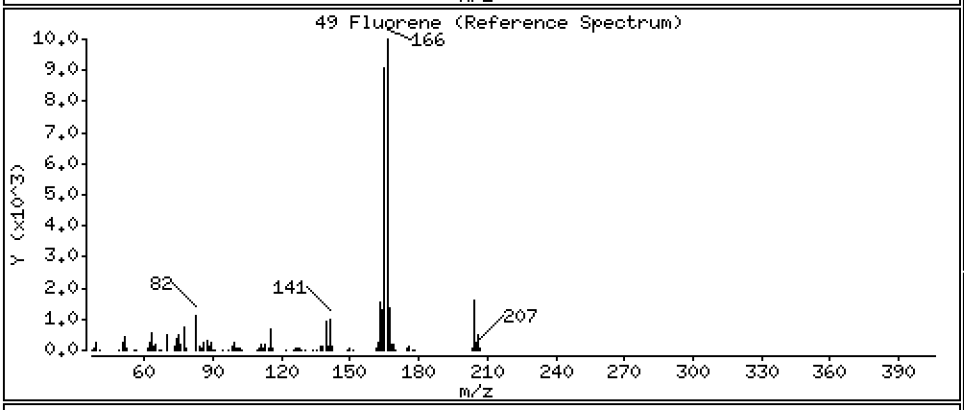
Column diameter: 0.25

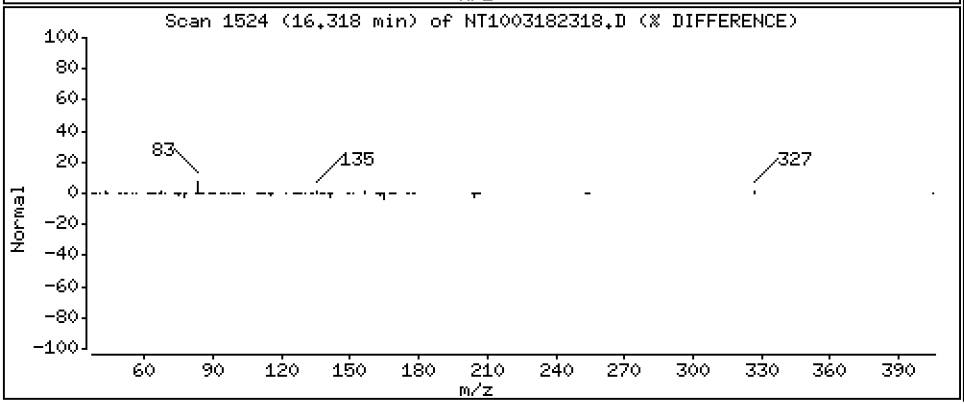
49 Fluorene

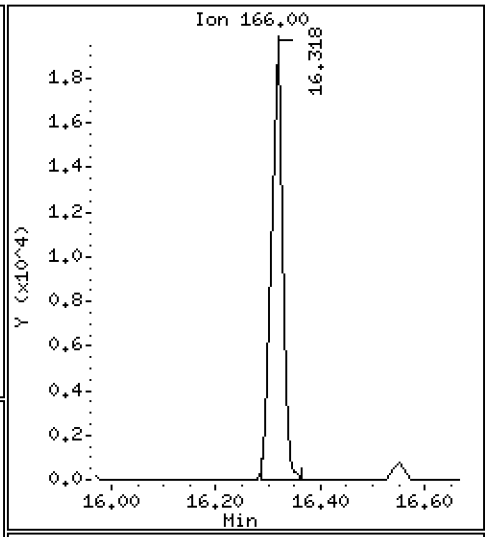
Concentration: 0.1618 ug/mL

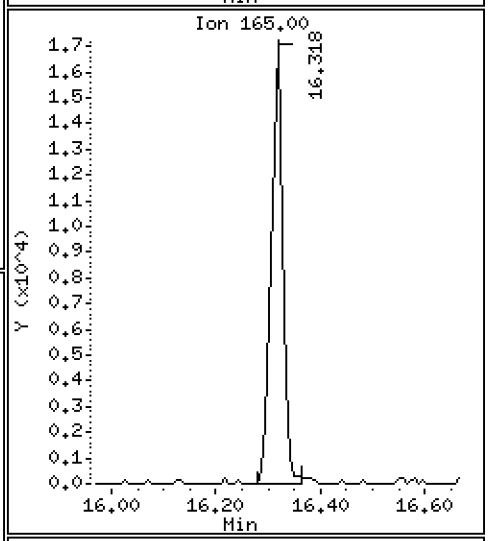


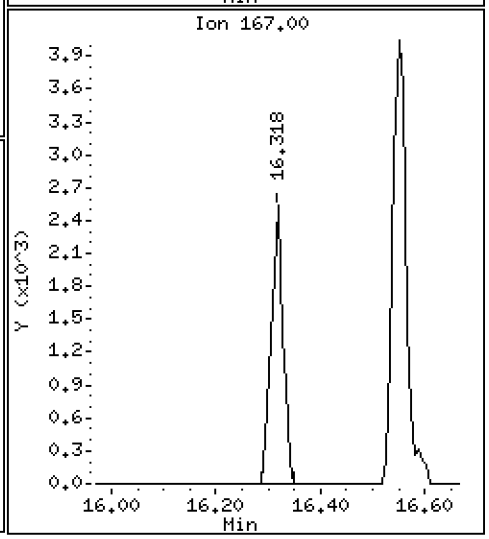












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

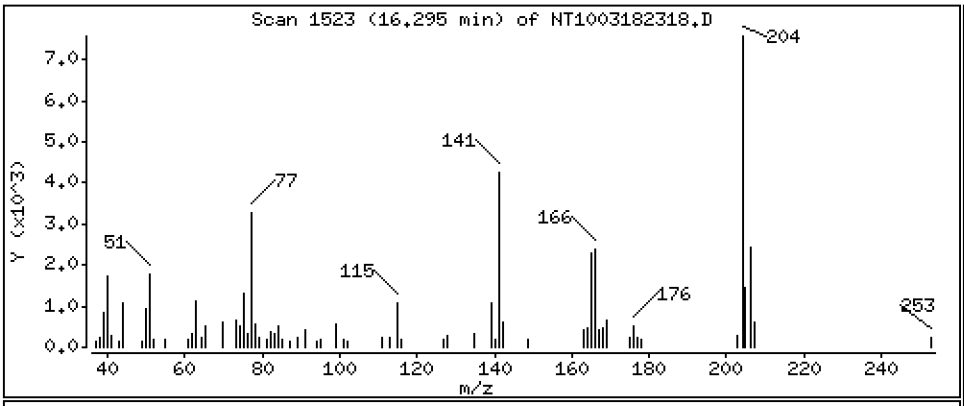
Operator: VTS

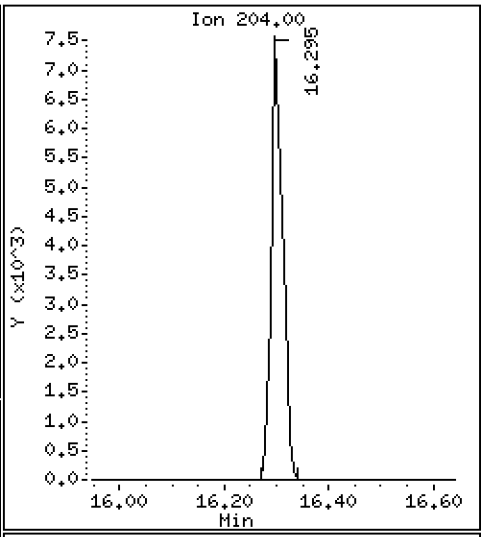
Column phase: ZB-5msi

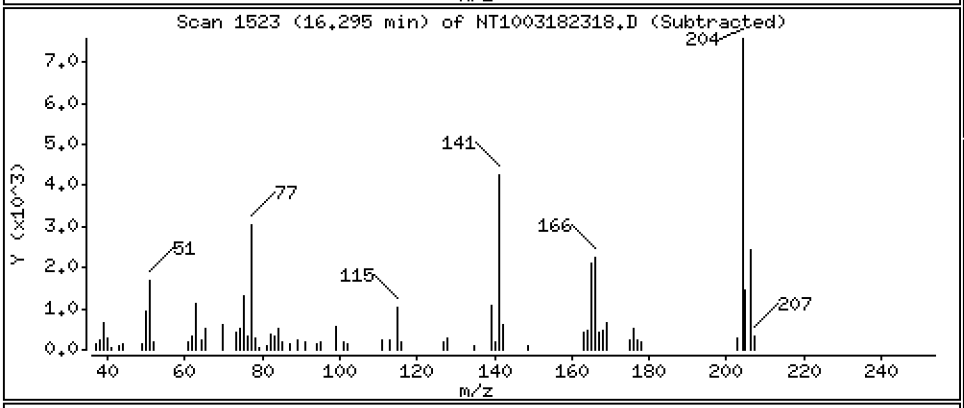
Column diameter: 0.25

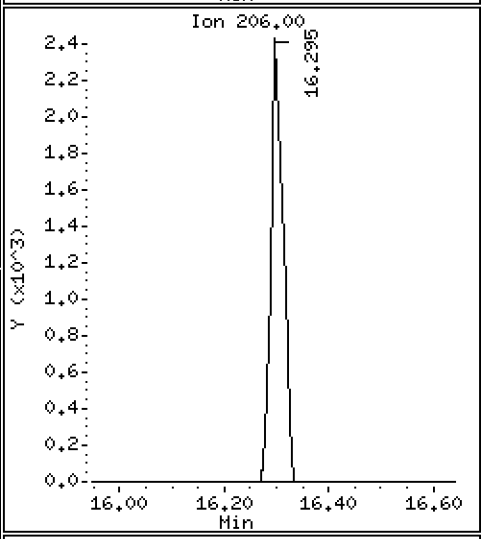
51 4-Chlorophenyl-phenylether

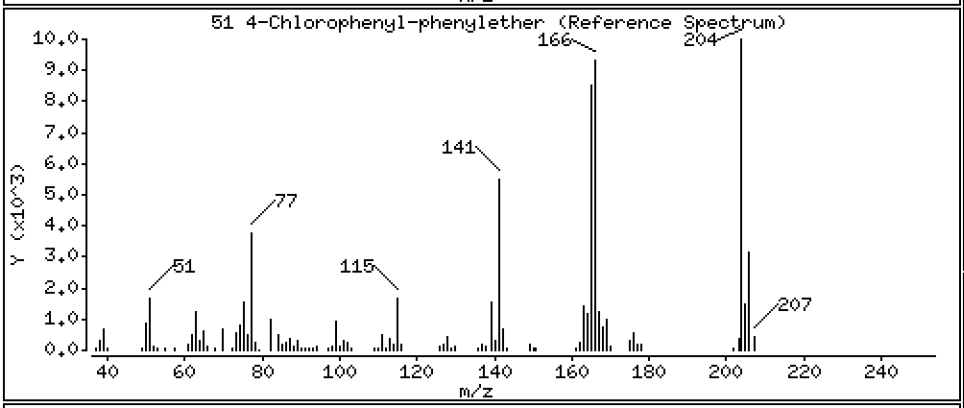
Concentration: 0.1315 ug/mL

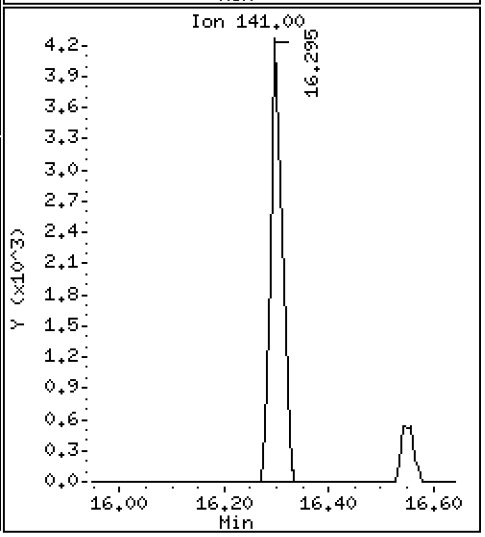


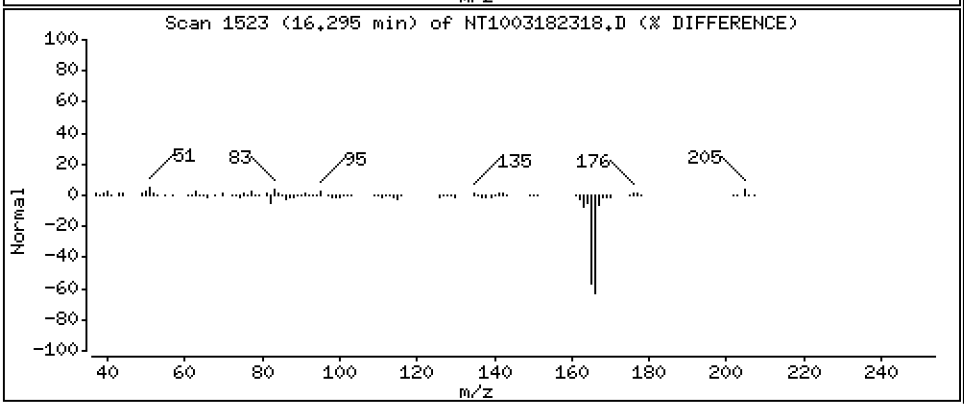












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

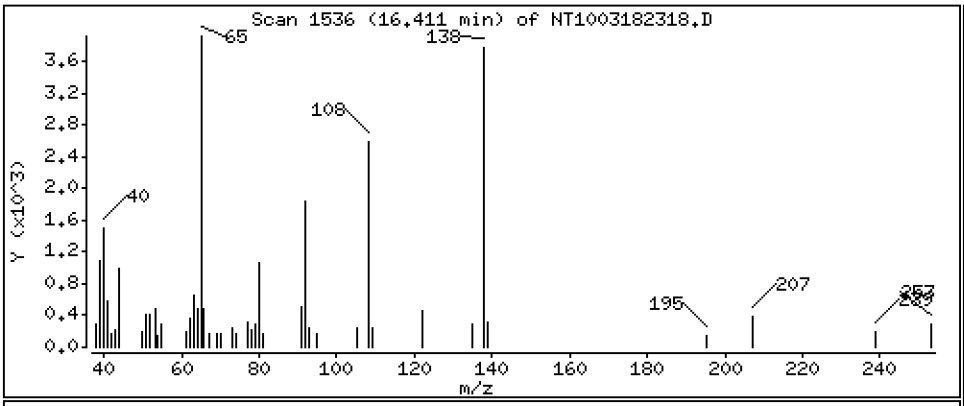
Operator: VTS

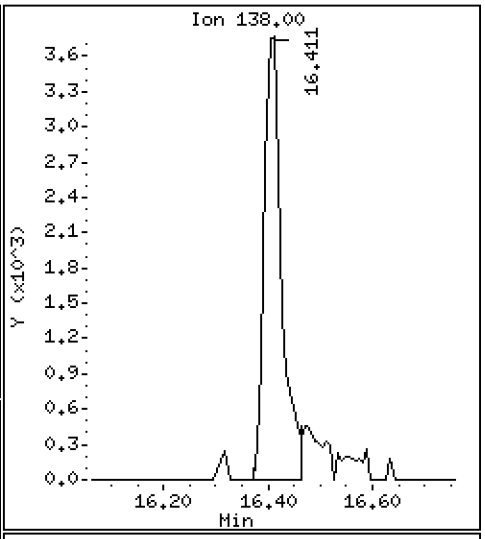
Column phase: ZB-5msi

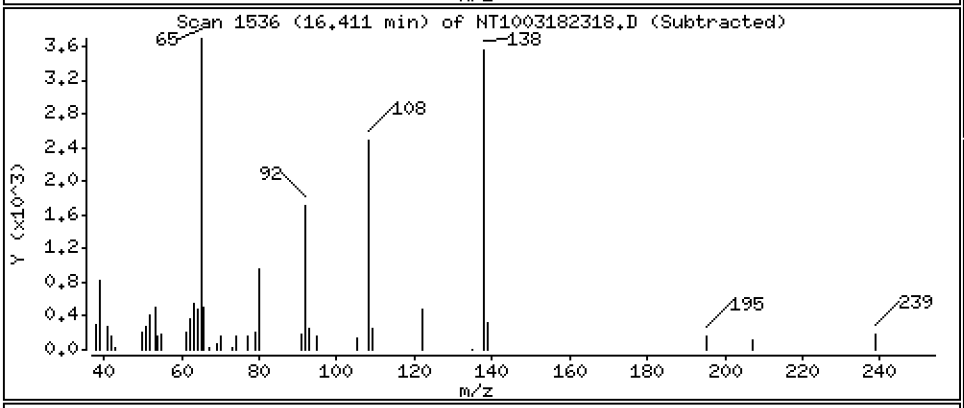
Column diameter: 0.25

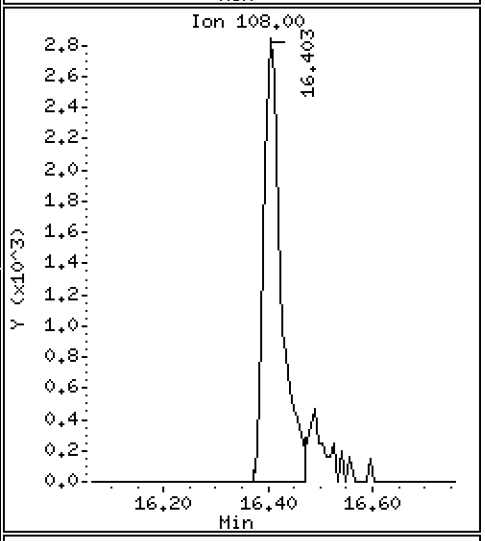
52 4-Nitroaniline

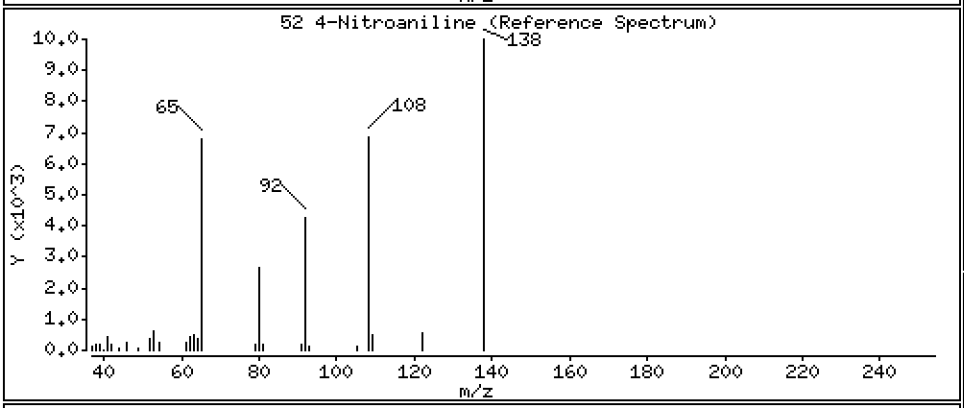
Concentration: 0.3068 ug/mL

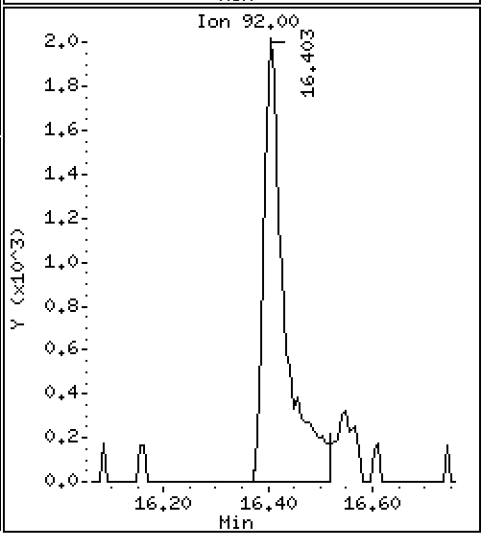


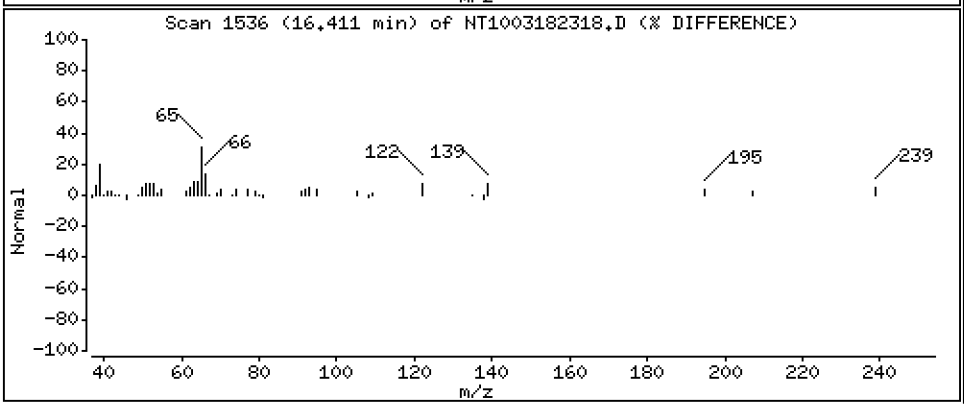












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

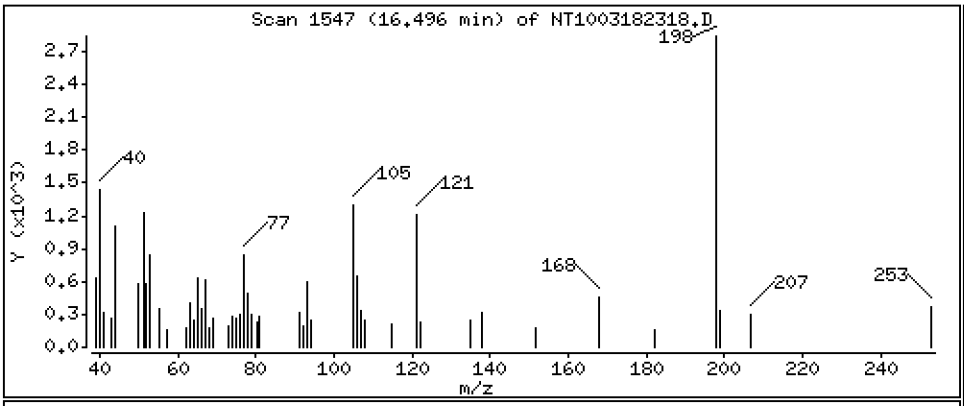
Operator: VTS

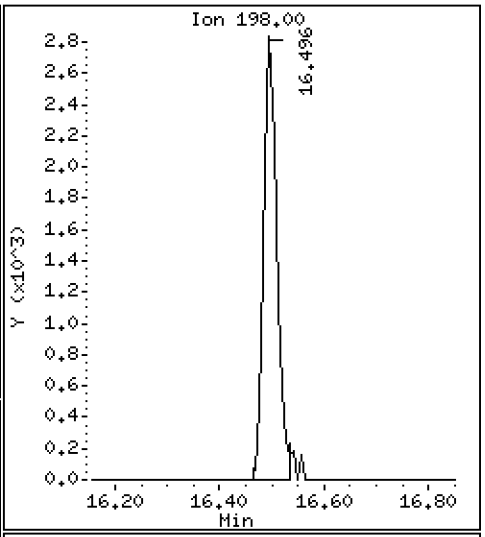
Column phase: ZB-5msi

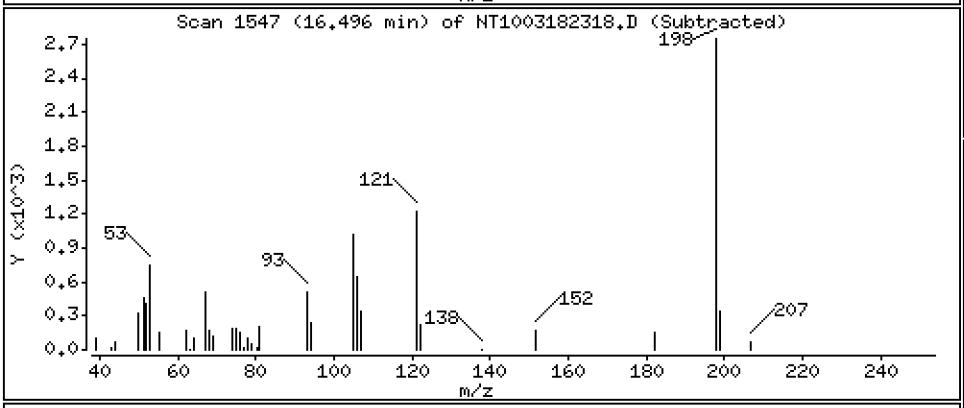
Column diameter: 0.25

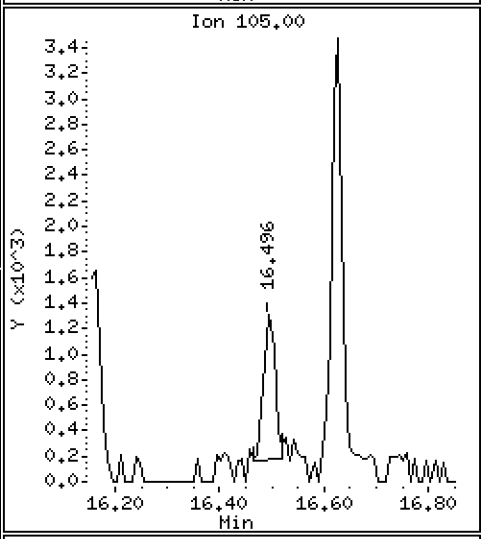
53 4,6-Dinitro-2-methylphenol

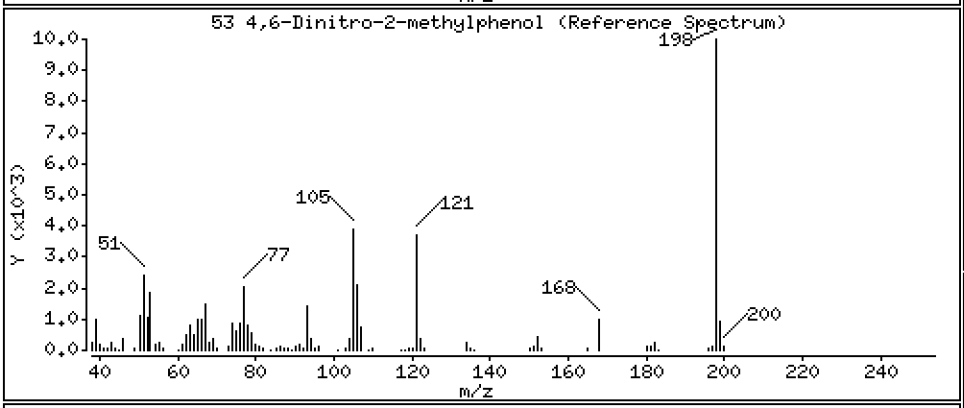
Concentration: 0.2188 ug/mL

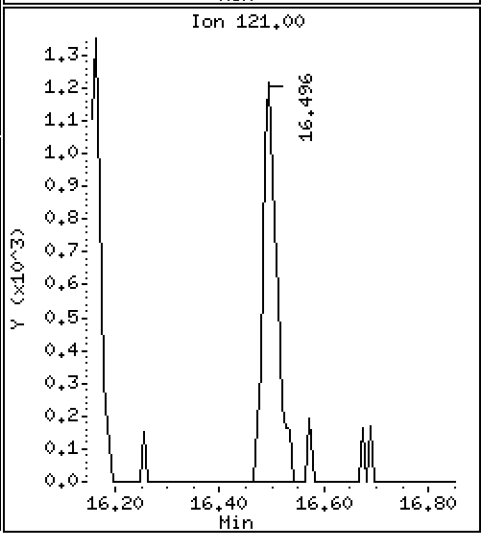


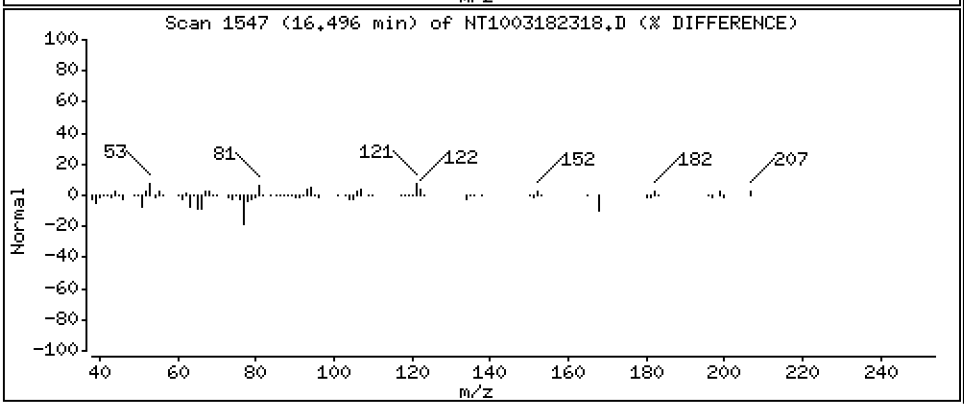












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

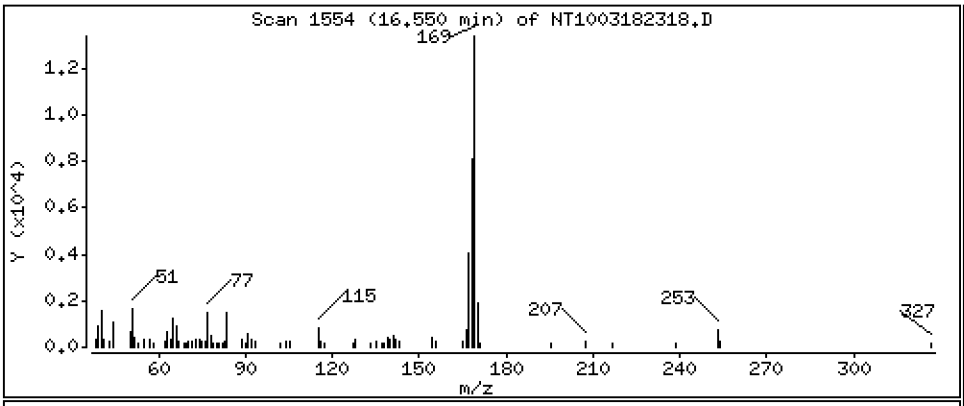
Operator: VTS

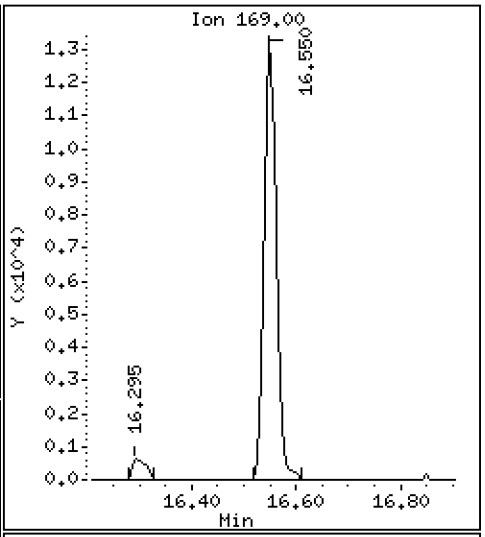
Column phase: ZB-5msi

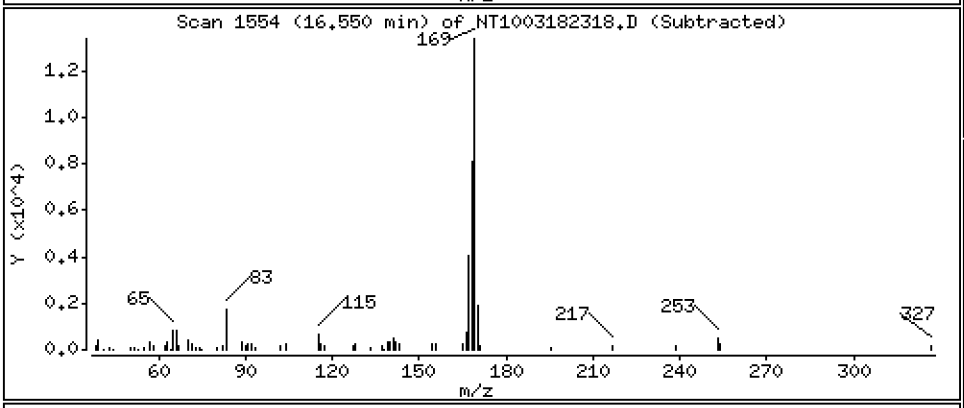
Column diameter: 0.25

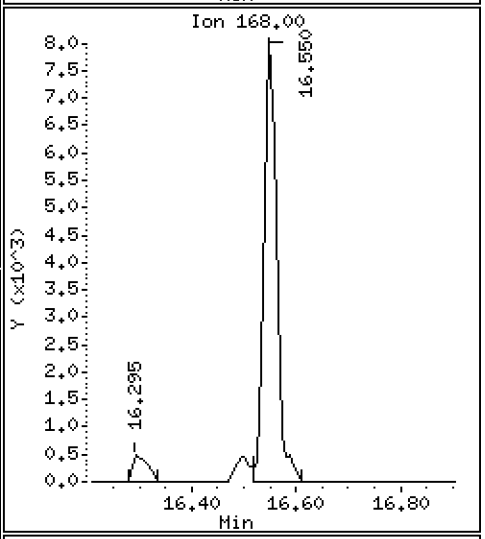
54 N-Nitrosodiphenylamine

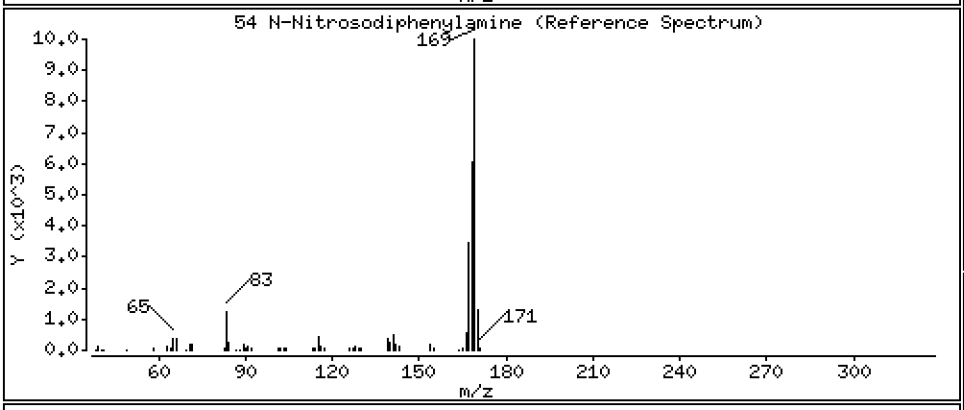
Concentration: 0.2105 ug/mL

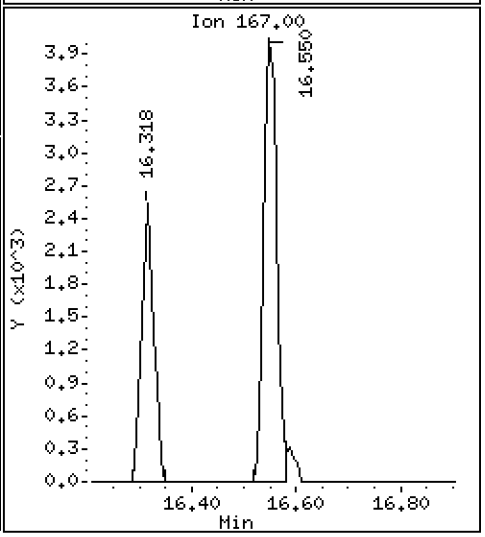


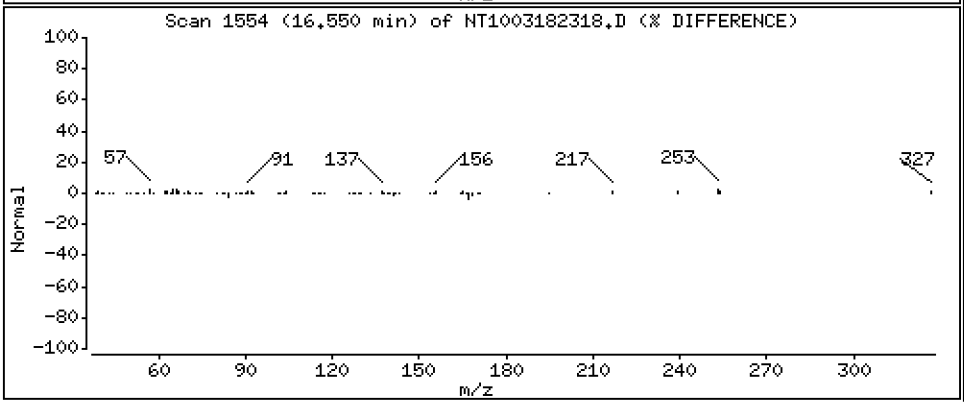












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

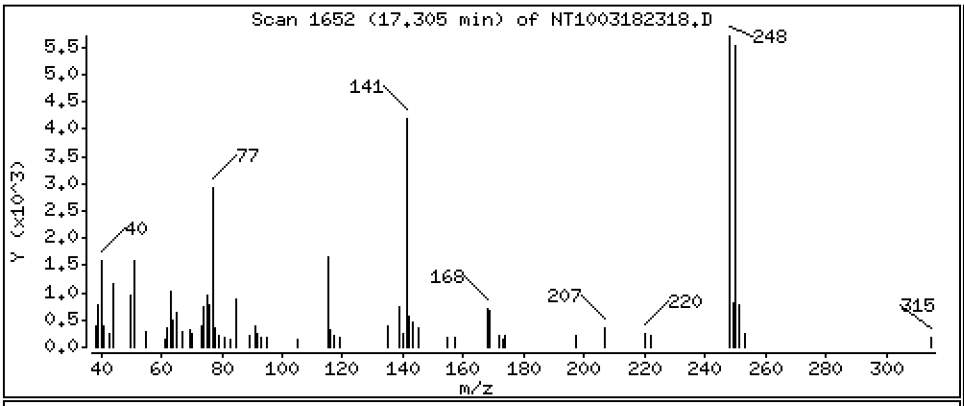
Operator: VTS

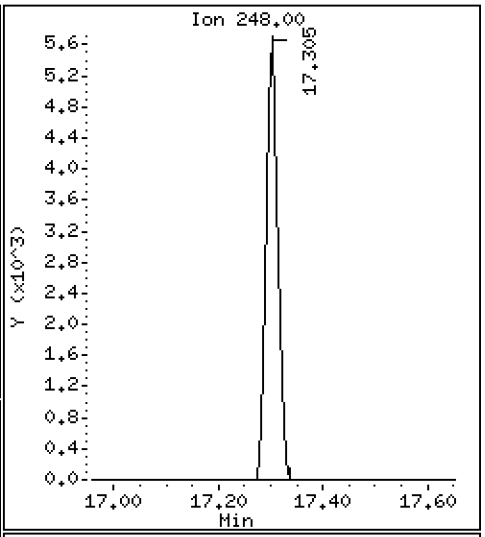
Column phase: ZB-5msi

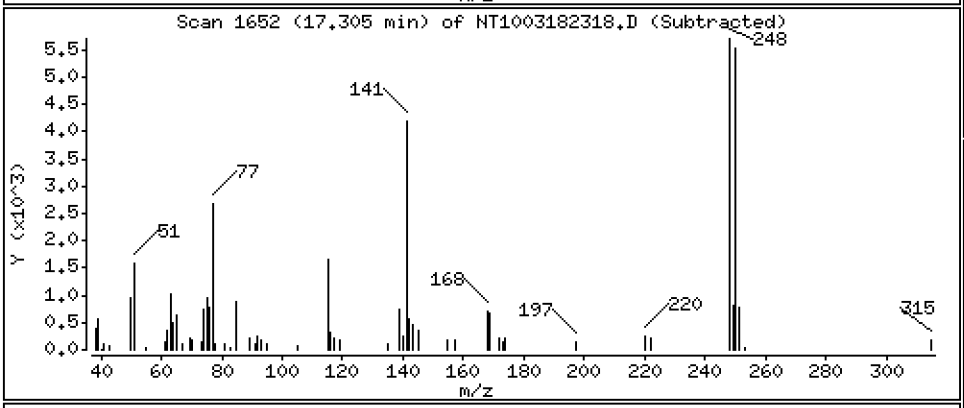
Column diameter: 0.25

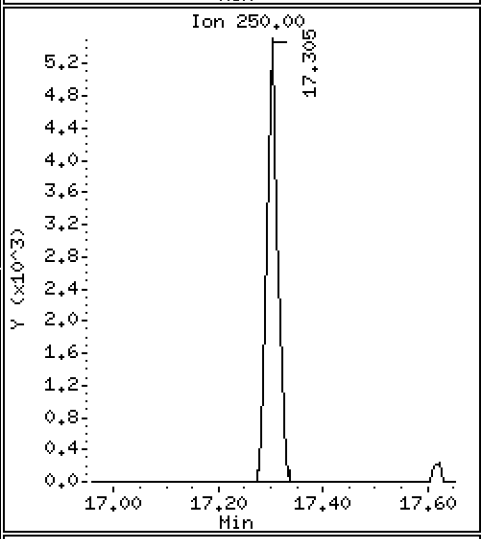
56 4-Bromophenyl-phenylether

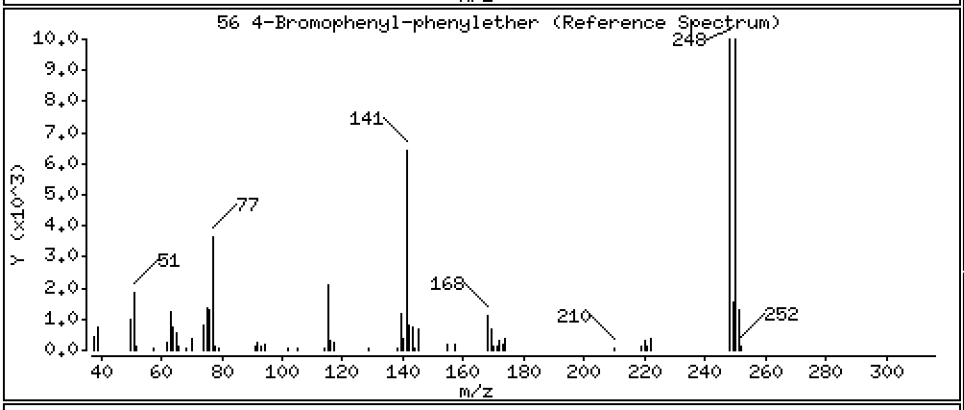
Concentration: 0.2174 ug/mL

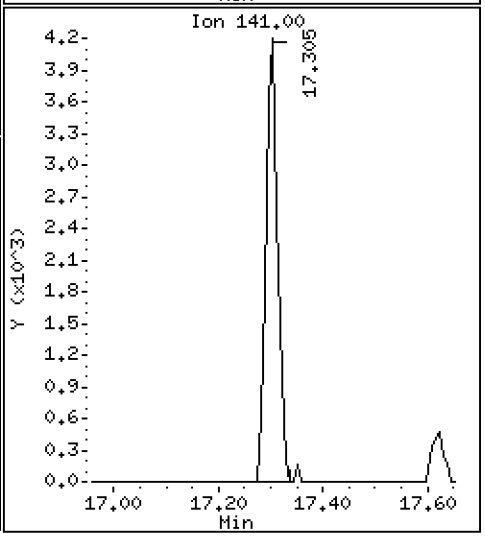


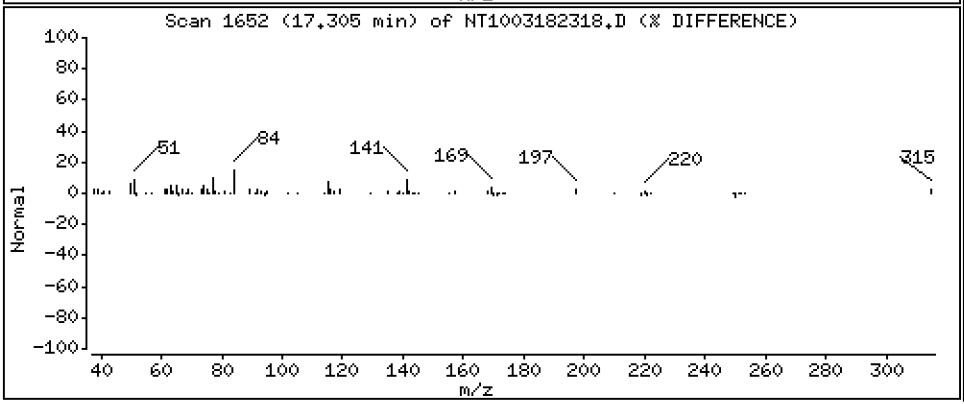












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

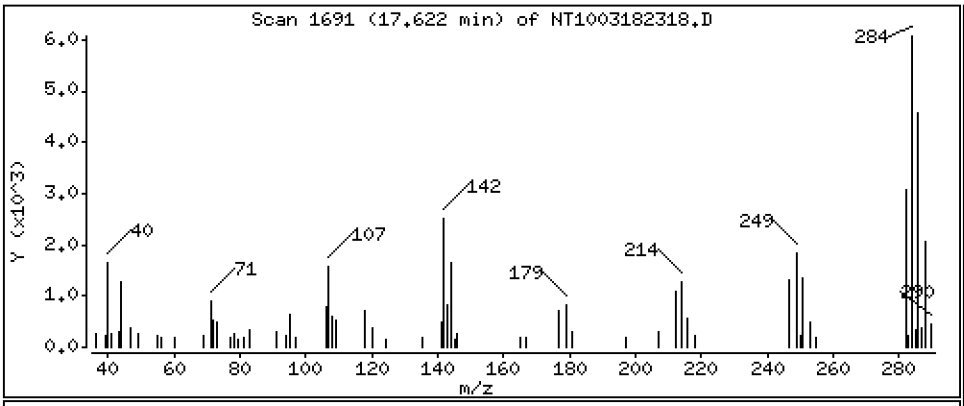
Operator: VTS

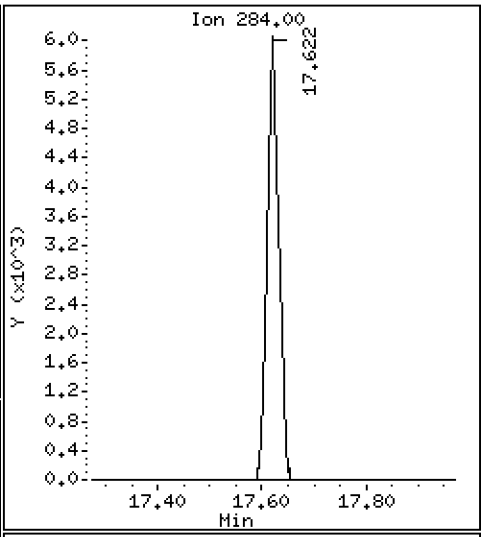
Column phase: ZB-5msi

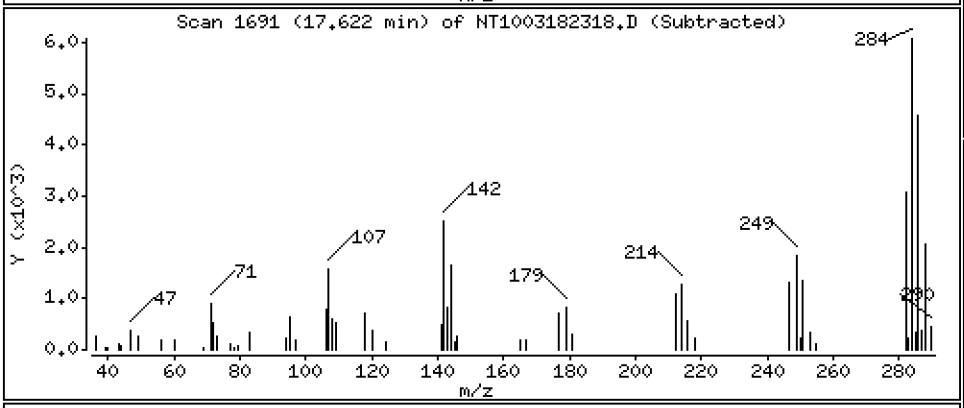
Column diameter: 0.25

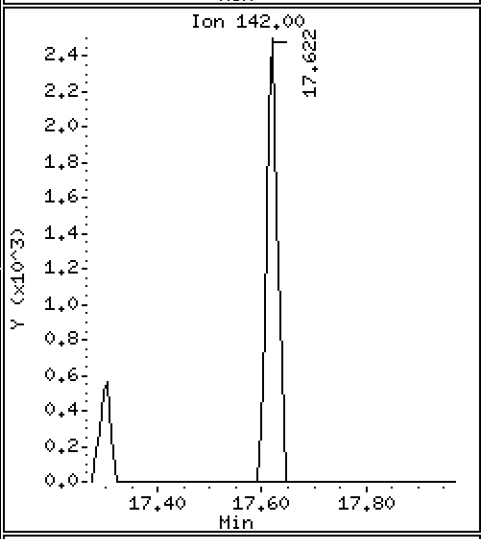
57 Hexachlorobenzene

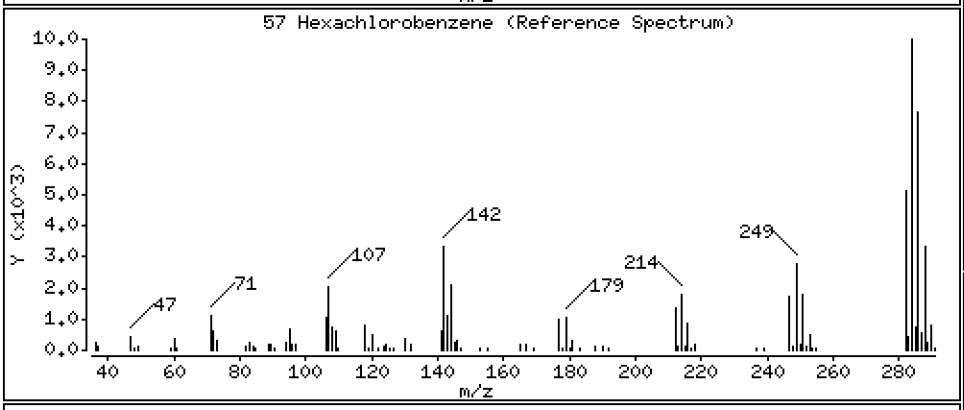
Concentration: 0.2168 ug/mL

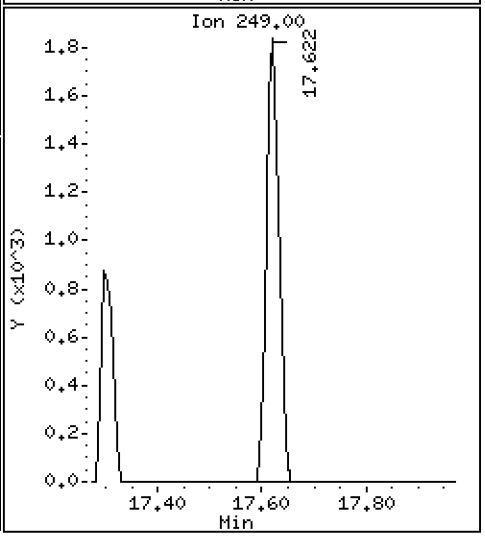


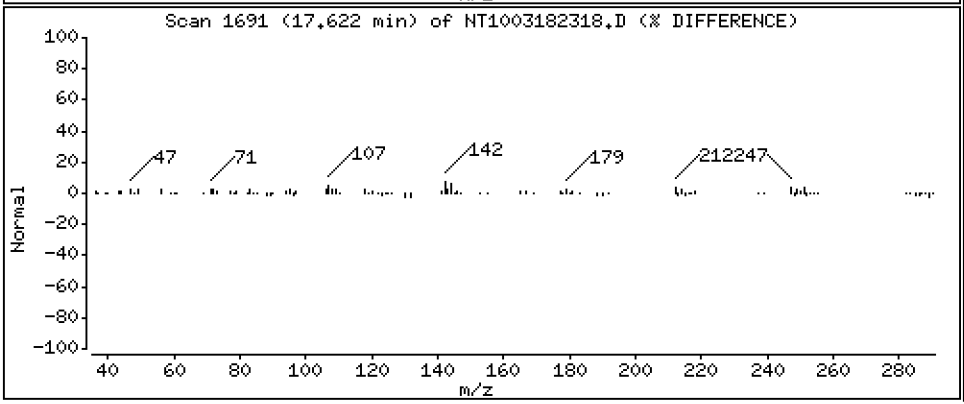












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

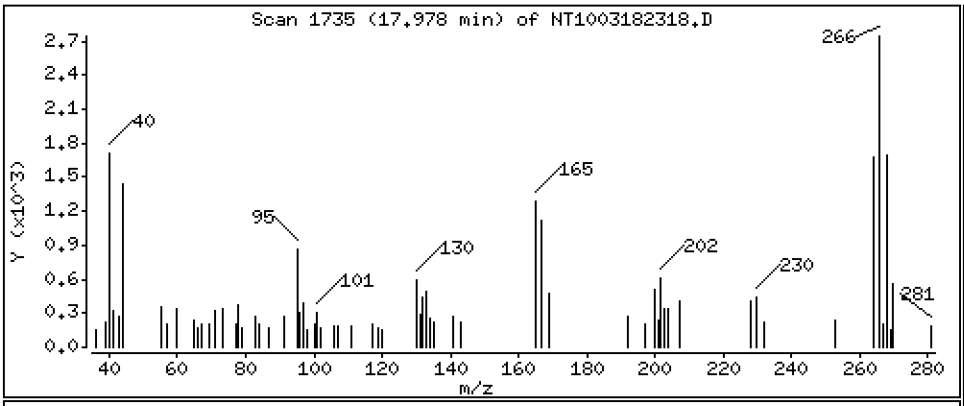
Operator: VTS

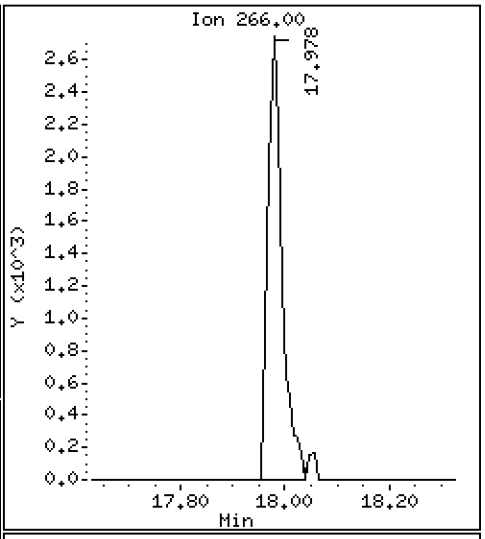
Column phase: ZB-5msi

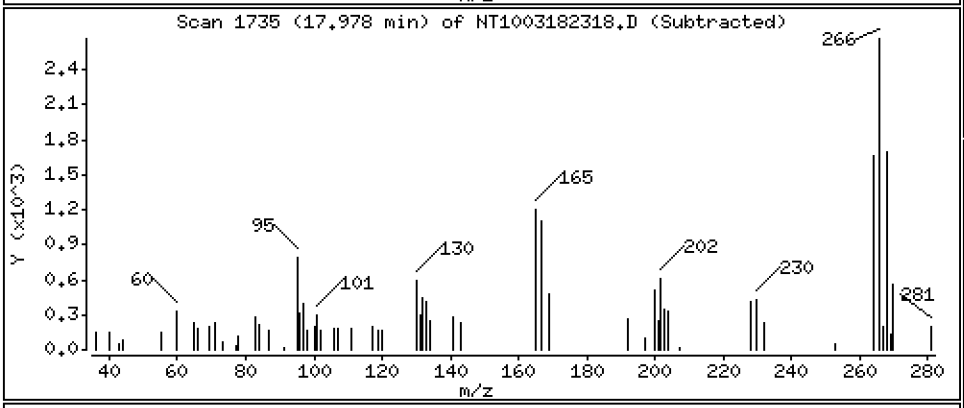
Column diameter: 0.25

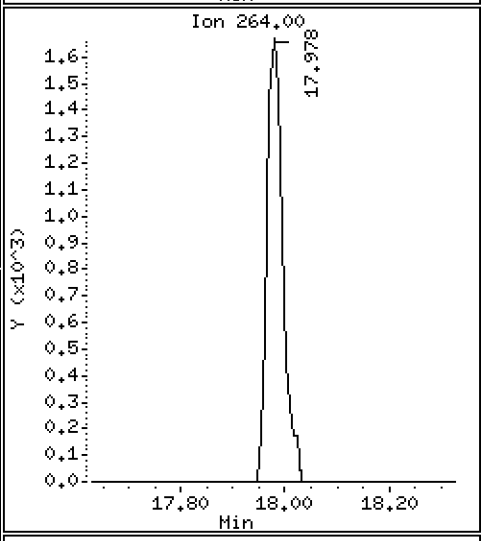
58 Pentachlorophenol

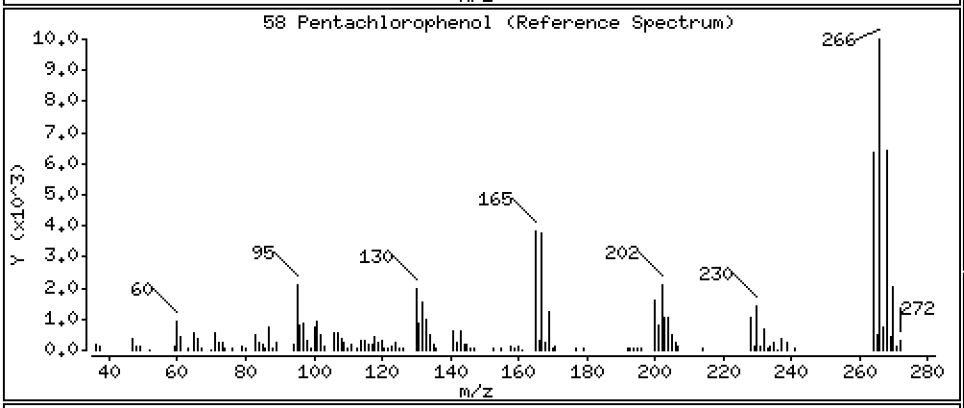
Concentration: 0.2025 ug/mL

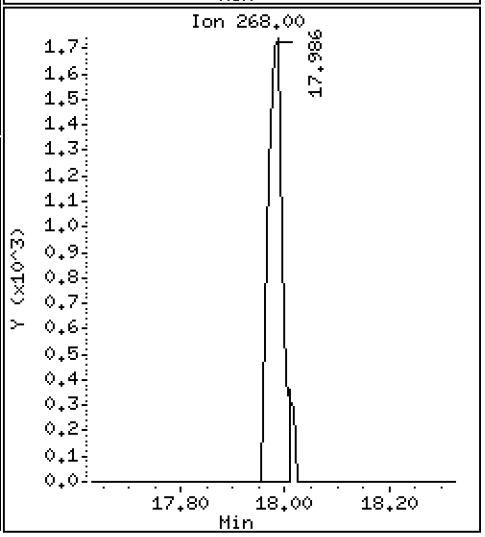


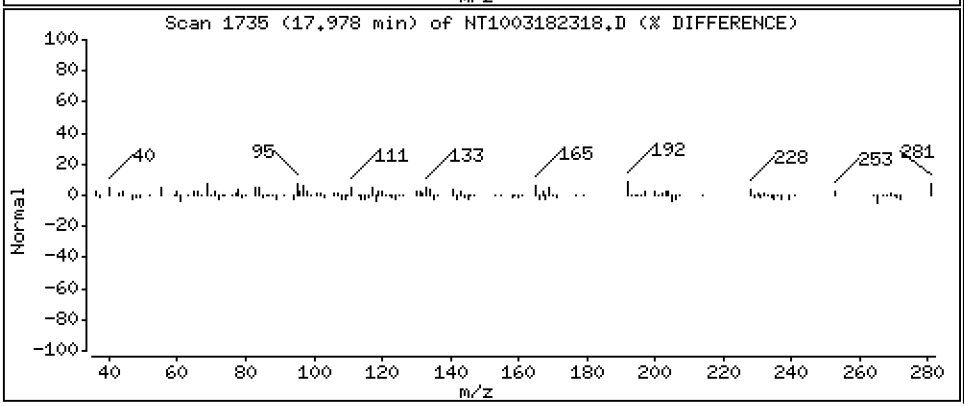












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

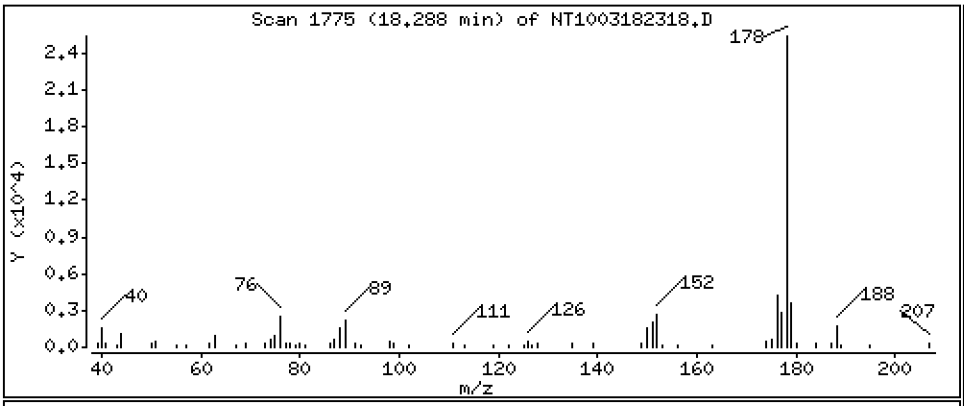
Operator: VTS

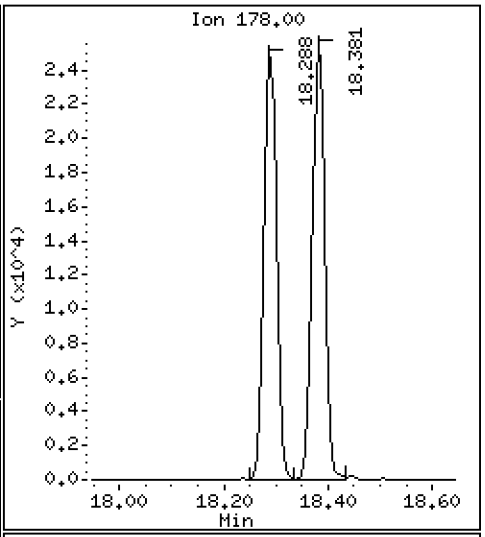
Column phase: ZB-5msi

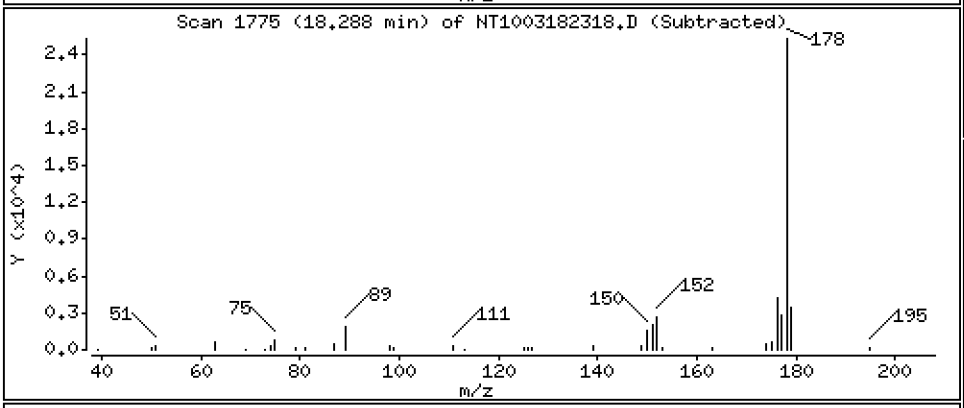
Column diameter: 0.25

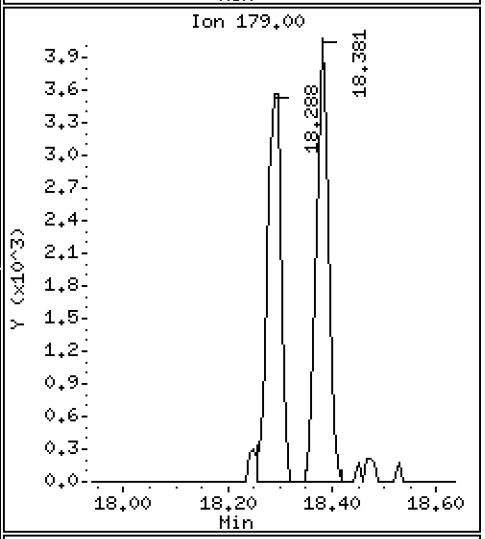
60 Phenanthrene

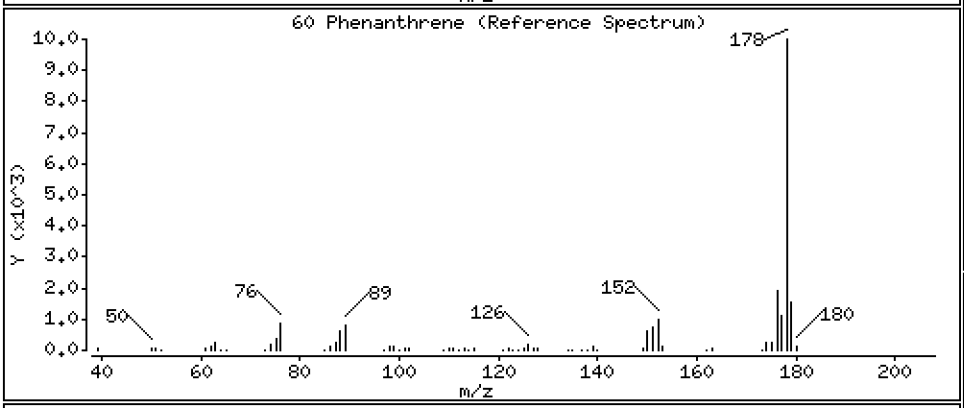
Concentration: 0.2052 ug/mL

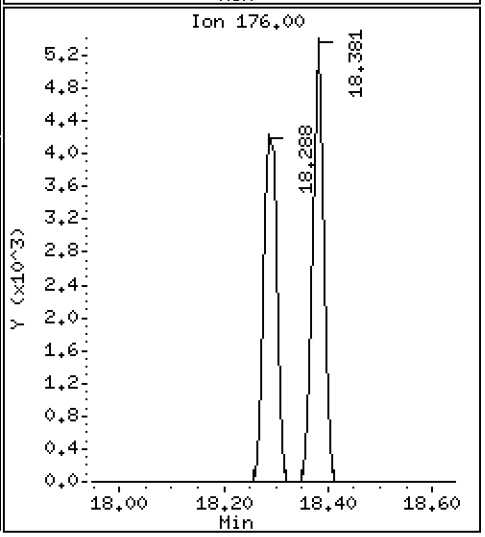


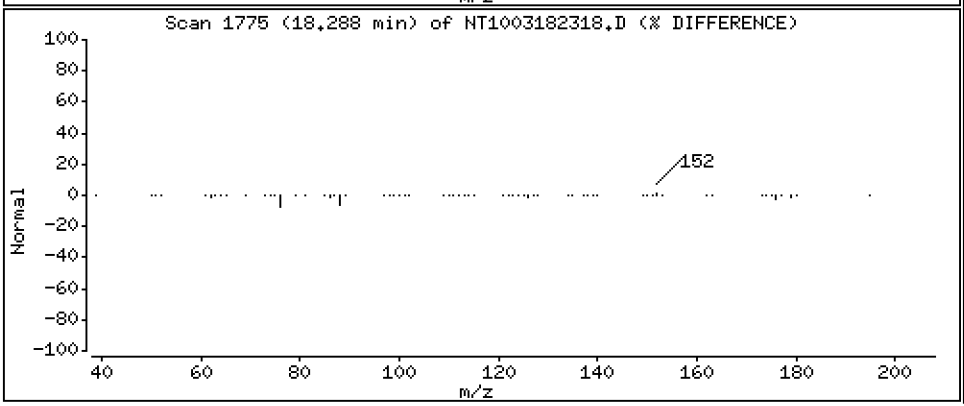












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

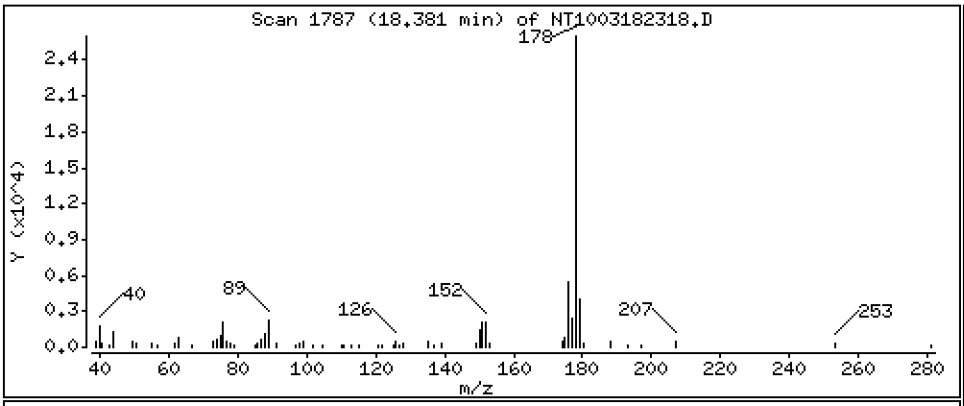
Operator: VTS

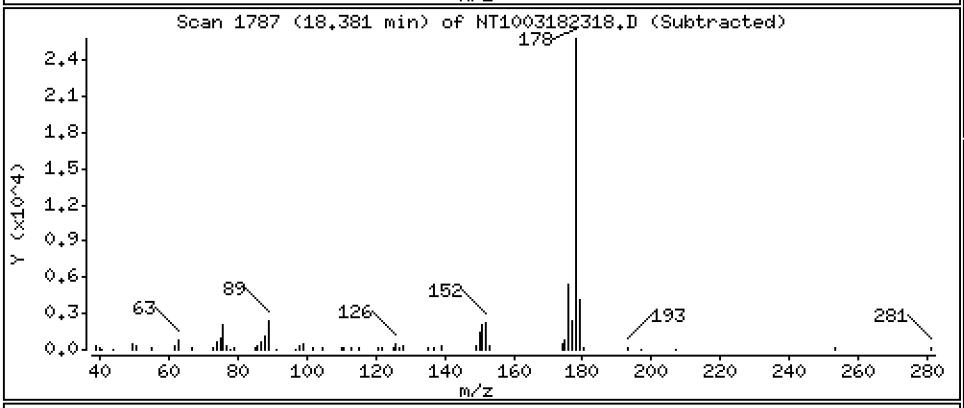
Column phase: ZB-5msi

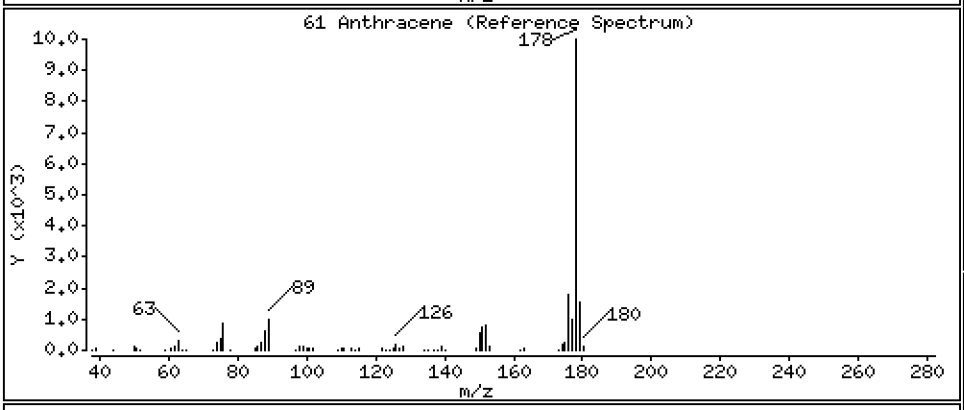
Column diameter: 0.25

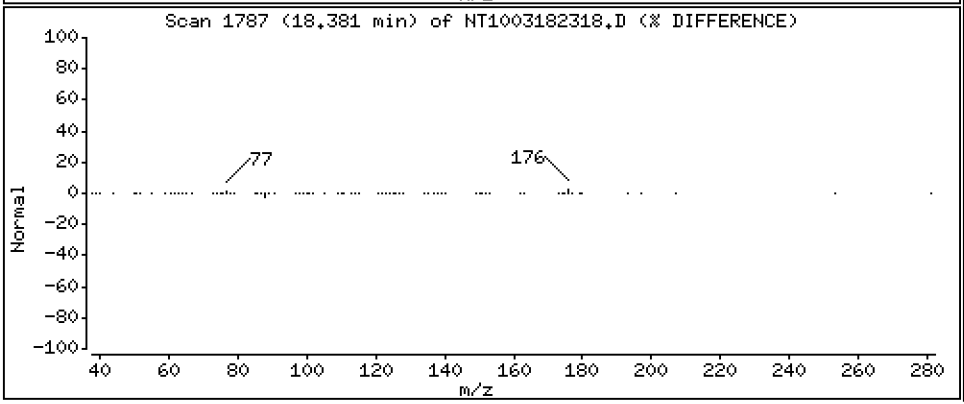
61 Anthracene

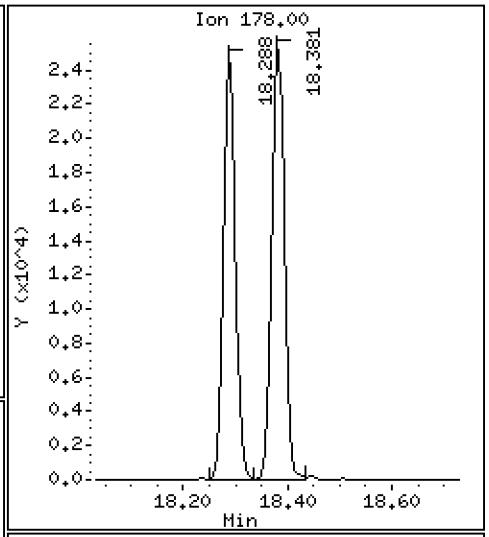
Concentration: 0.2162 ug/mL

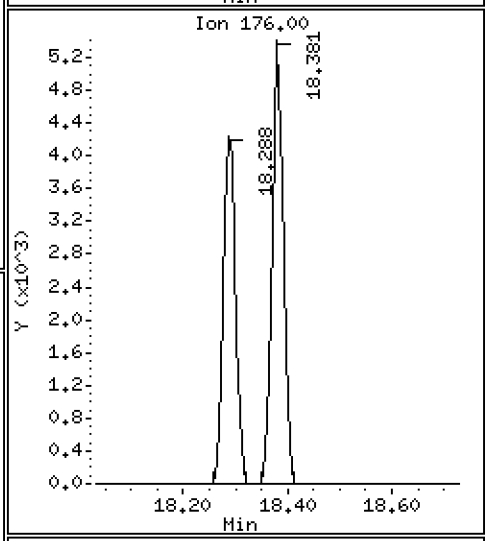


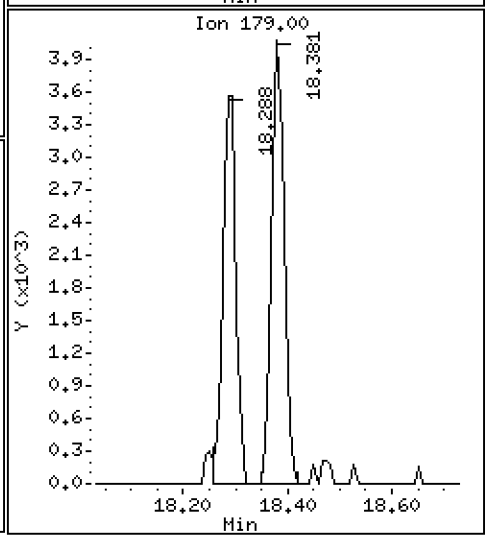












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

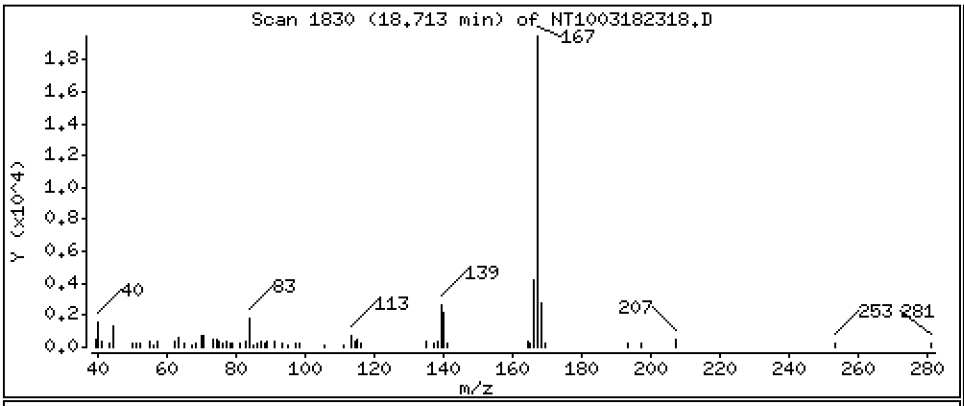
Operator: VTS

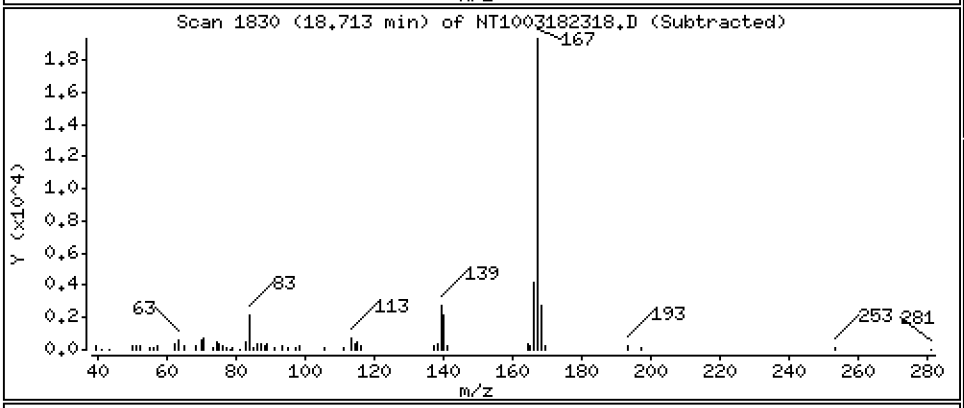
Column phase: ZB-5msi

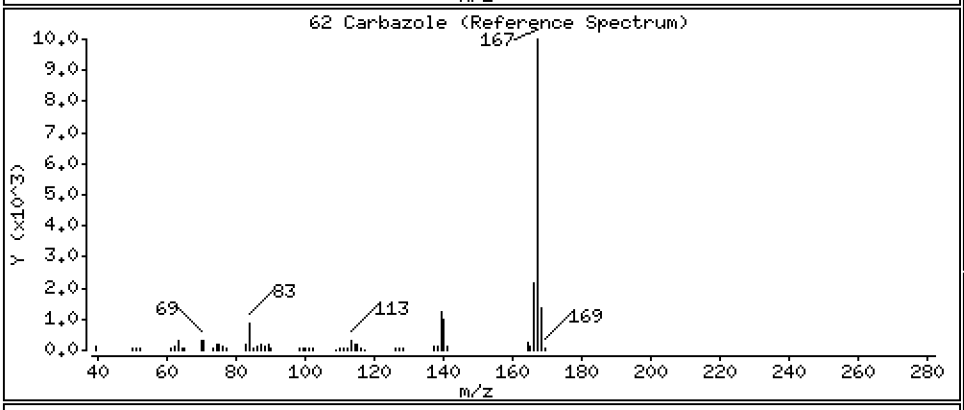
Column diameter: 0.25

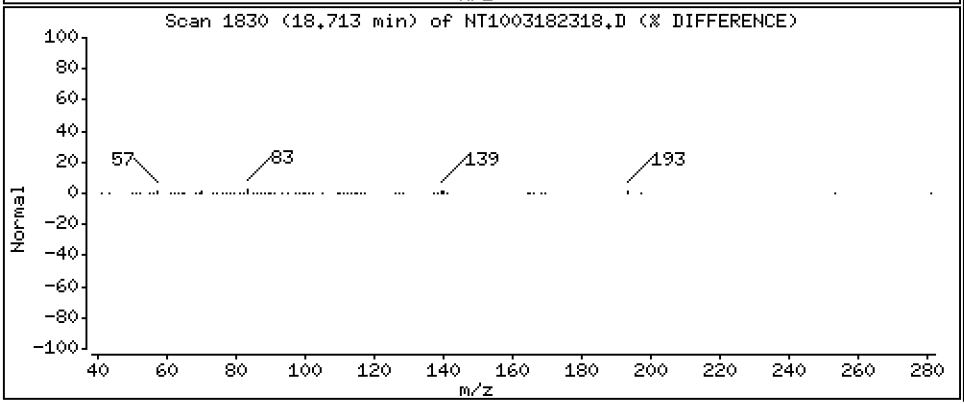
62 Carbazole

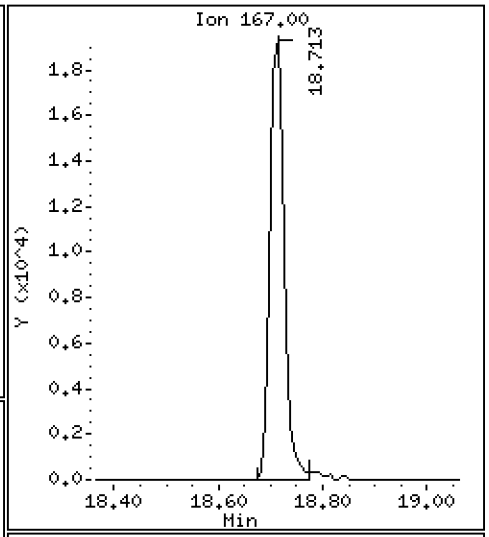
Concentration: 0.2088 ug/mL

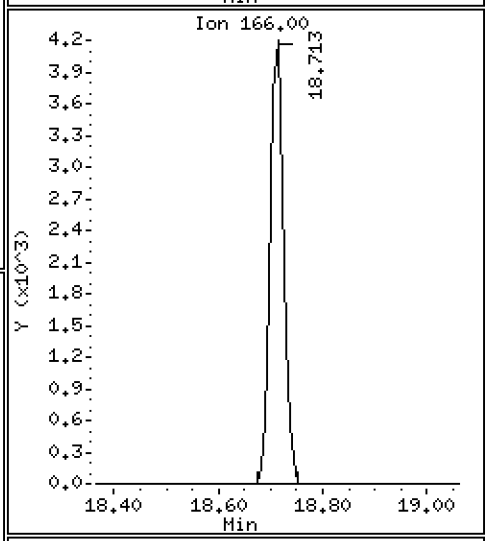


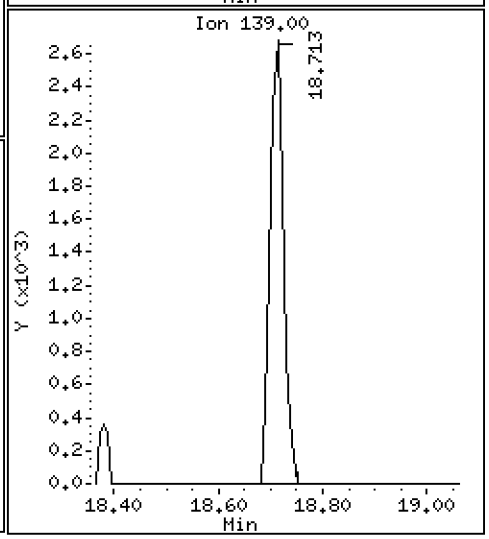












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

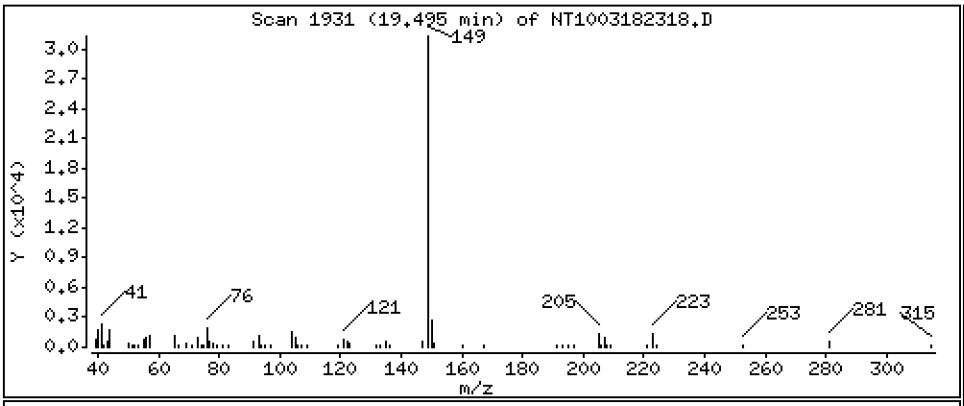
Operator: VTS

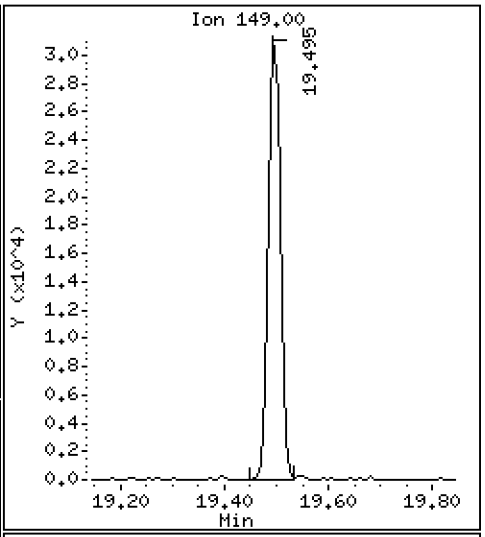
Column phase: ZB-5msi

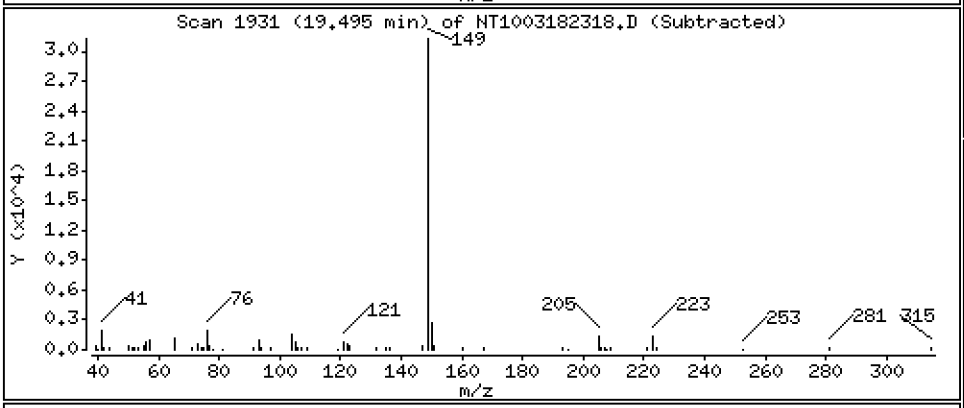
Column diameter: 0.25

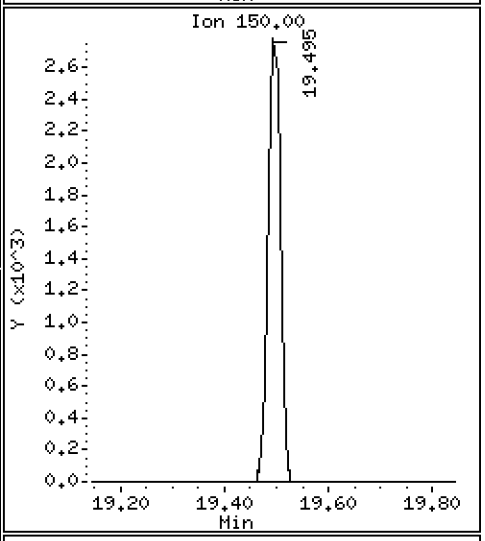
63 Di-n-butylphthalate

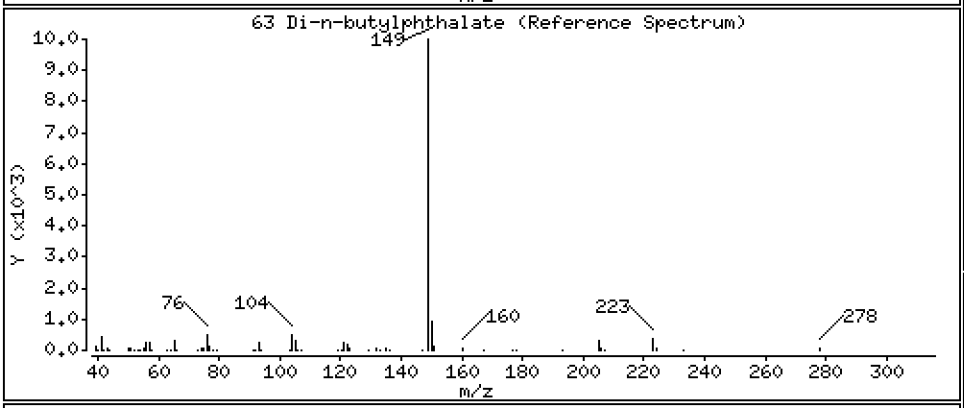
Concentration: 0.2103 ug/mL

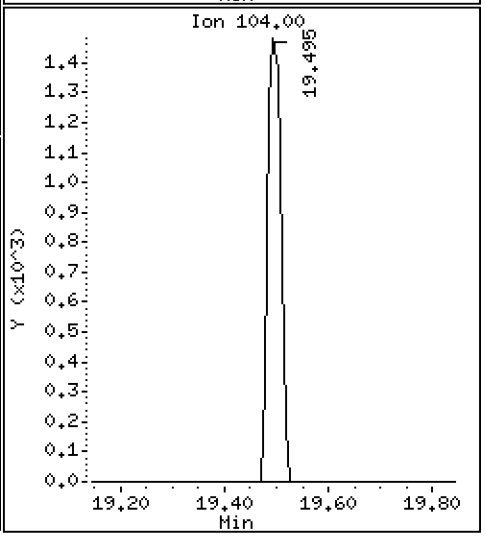


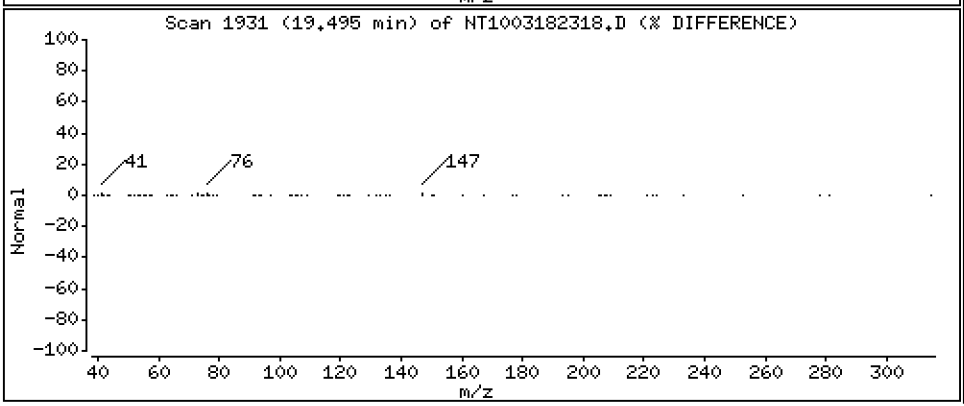












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

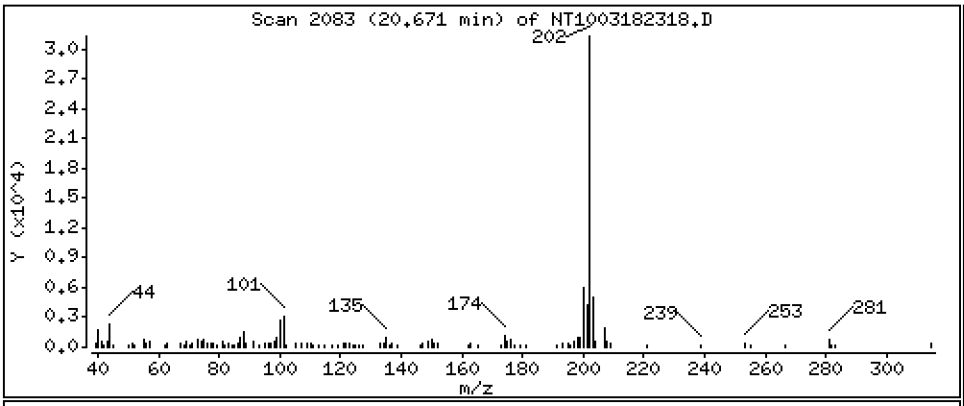
Operator: VTS

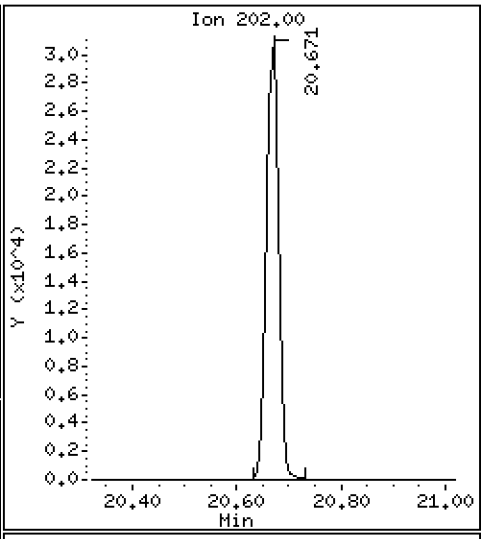
Column phase: ZB-5msi

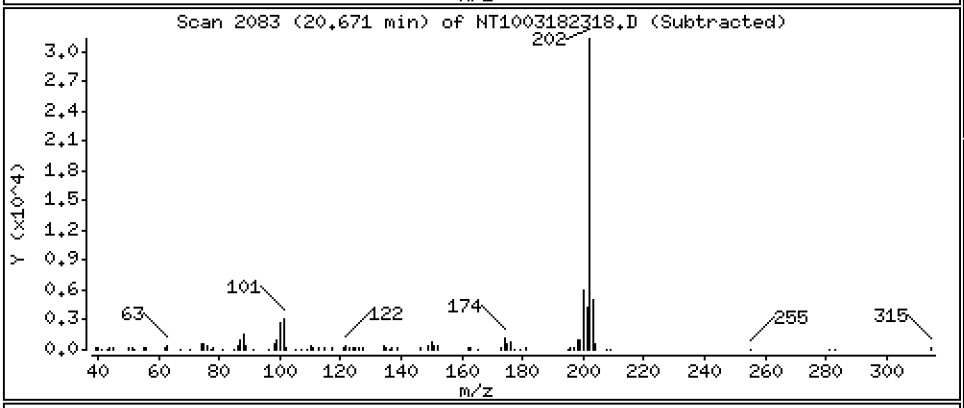
Column diameter: 0.25

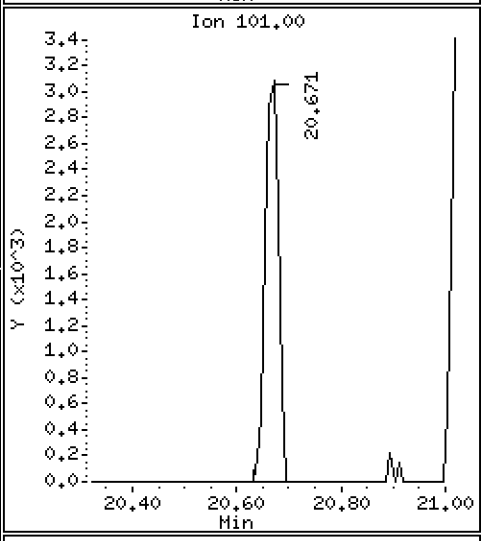
64 Fluoranthene

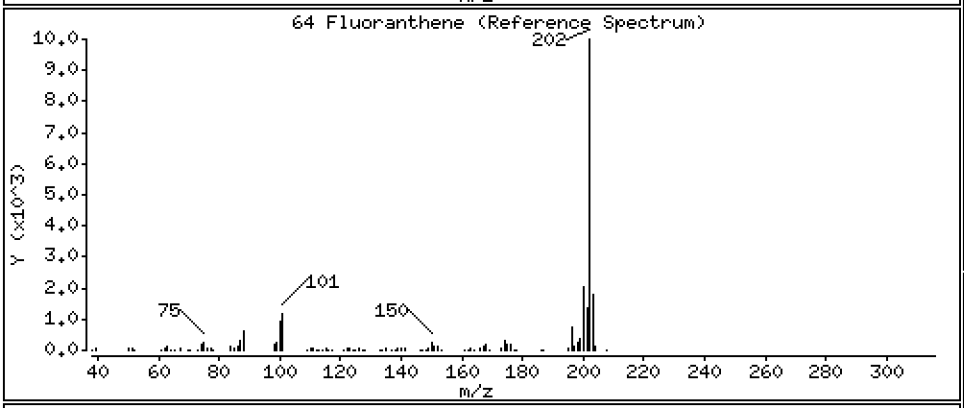
Concentration: 0.1946 ug/mL

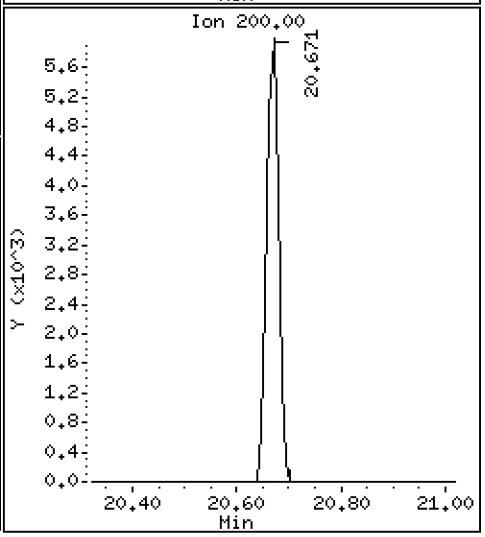


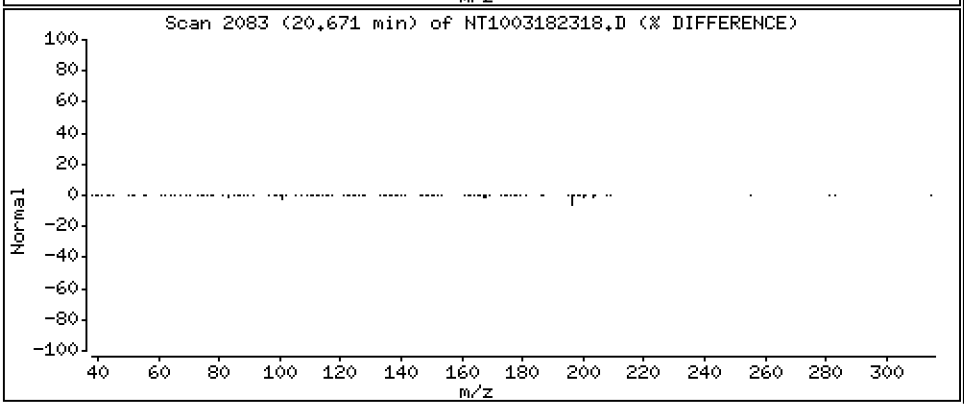












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

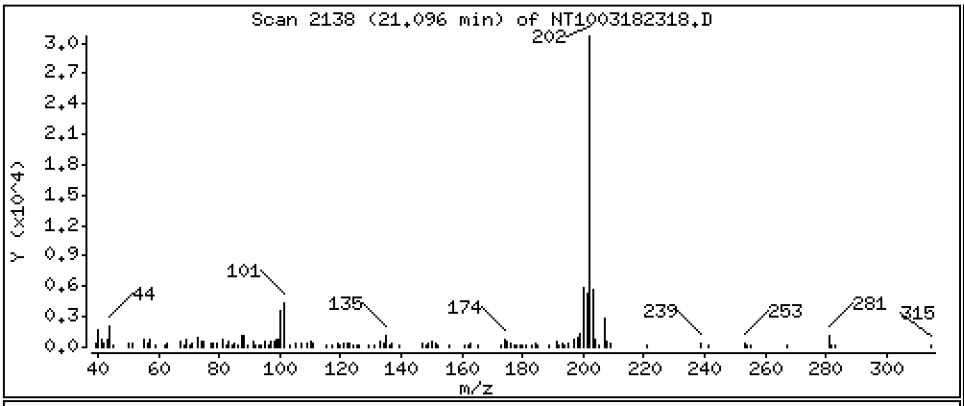
Operator: VTS

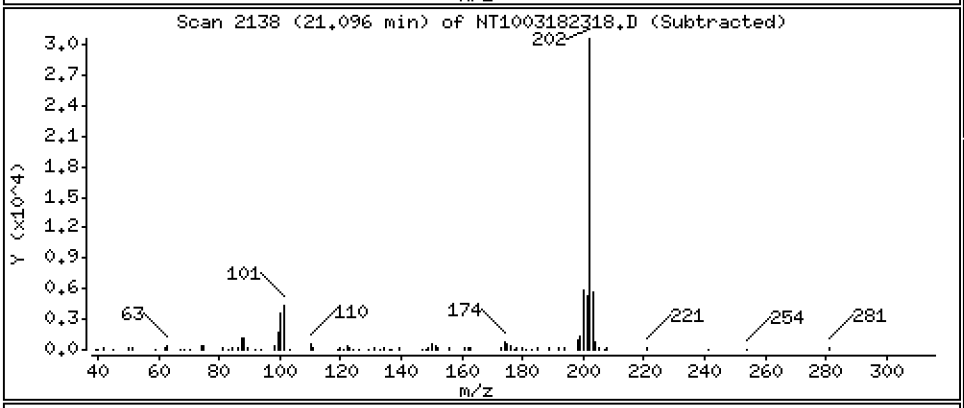
Column phase: ZB-5msi

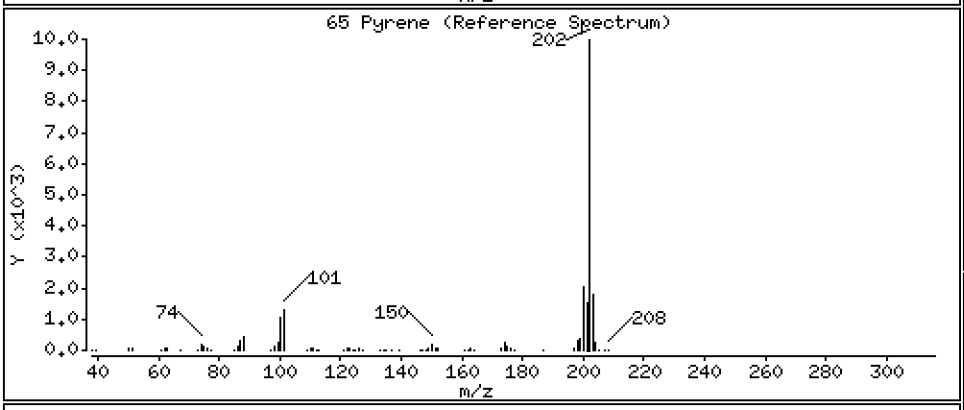
Column diameter: 0.25

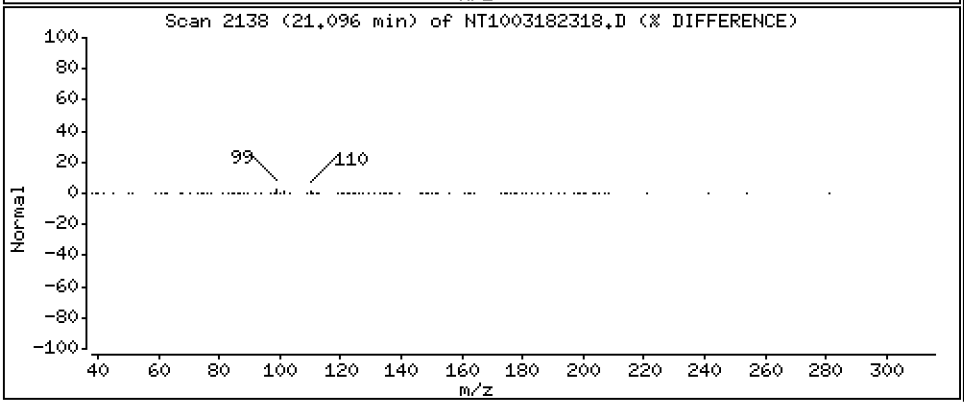
65 Pyrene

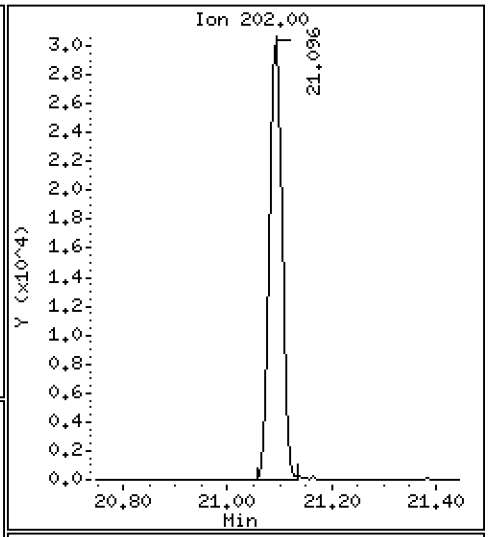
Concentration: 0.1945 ug/mL

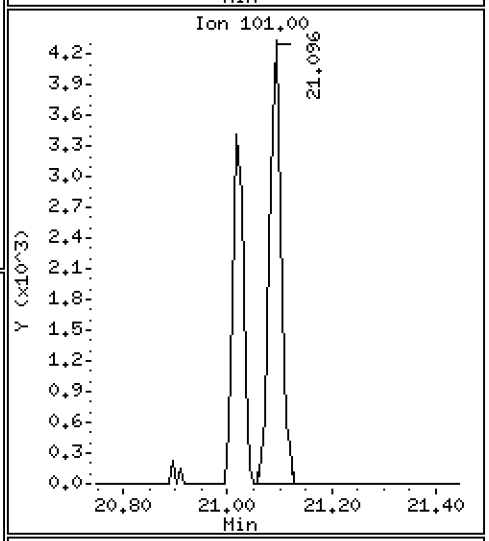


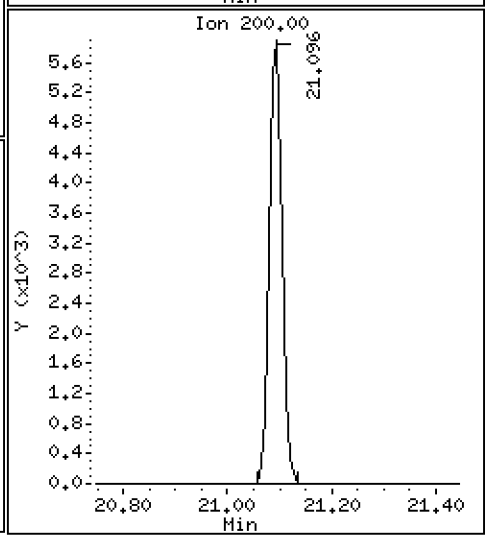












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

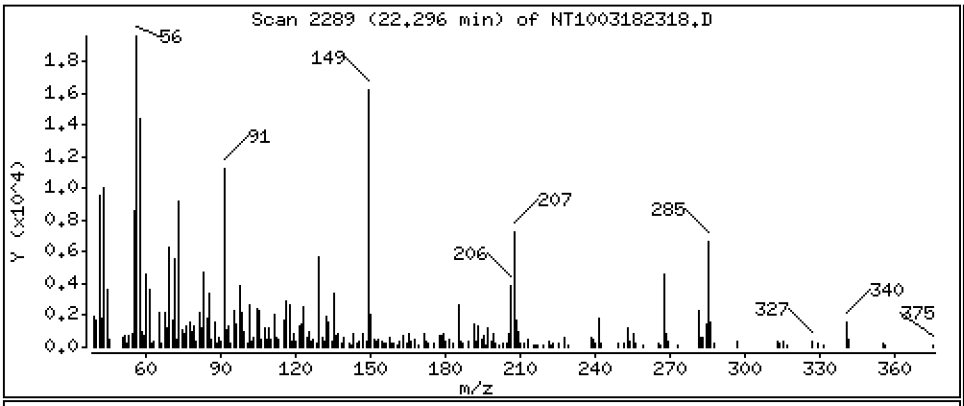
Operator: VTS

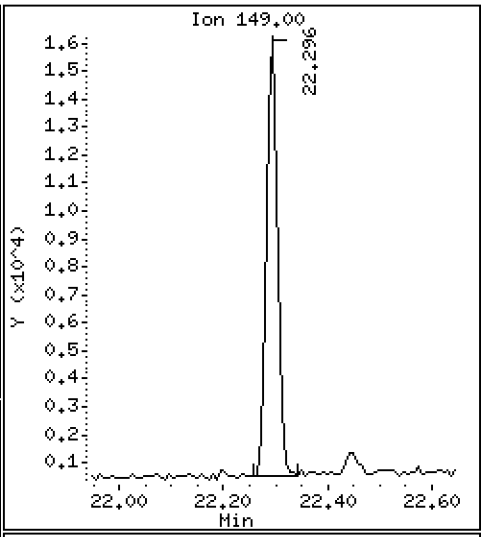
Column phase: ZB-5msi

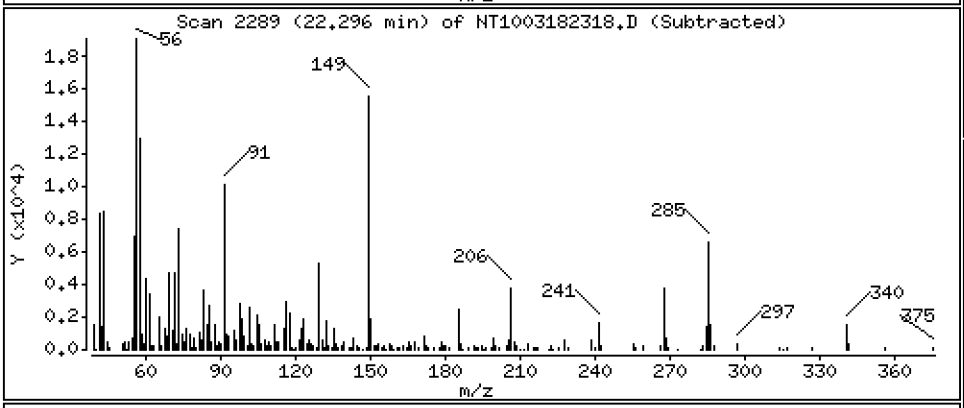
Column diameter: 0.25

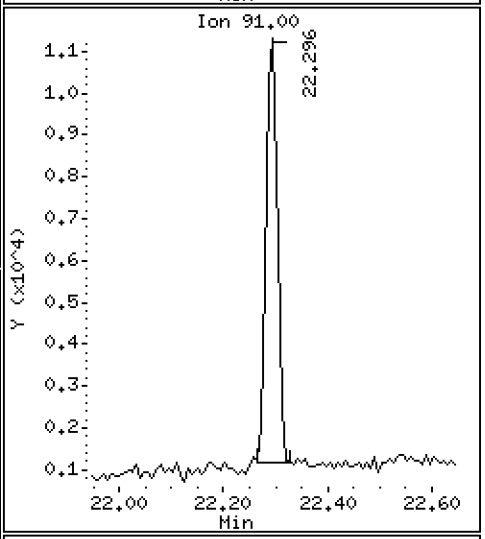
67 Butylbenzylphthalate

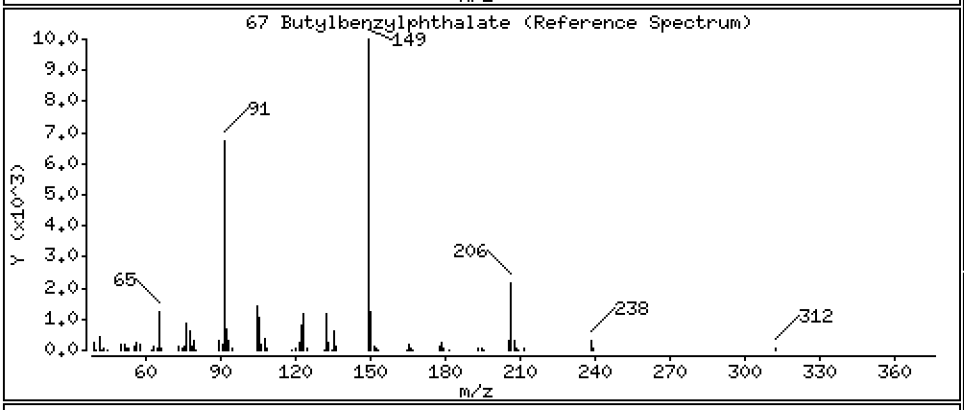
Concentration: 0.2463 ug/mL

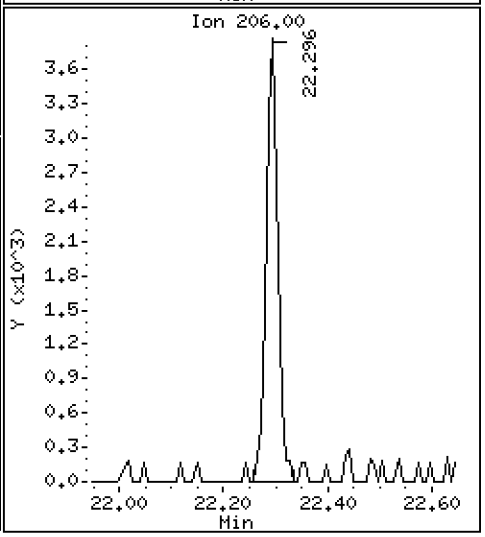


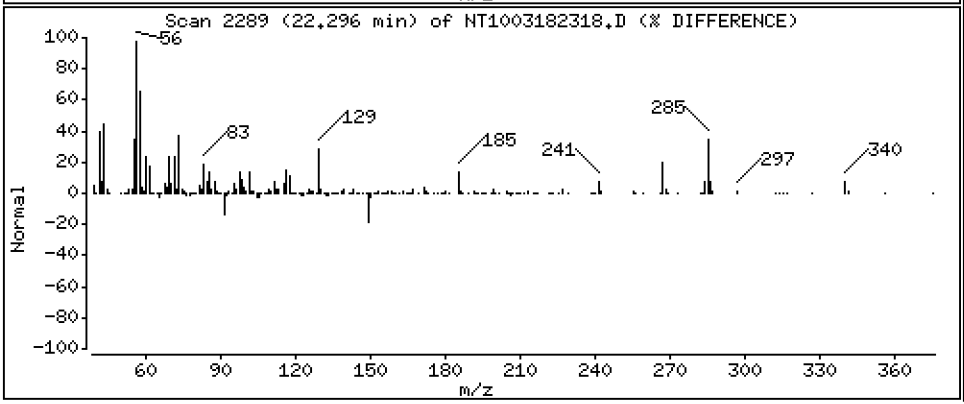












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

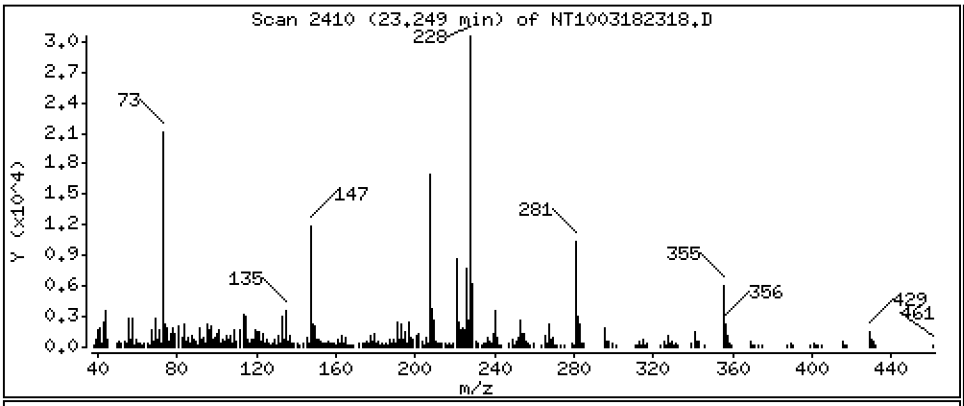
Operator: VTS

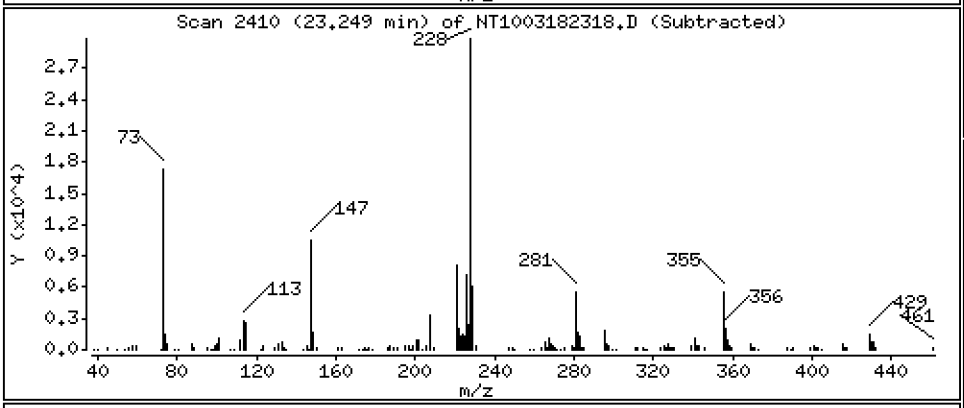
Column phase: ZB-5msi

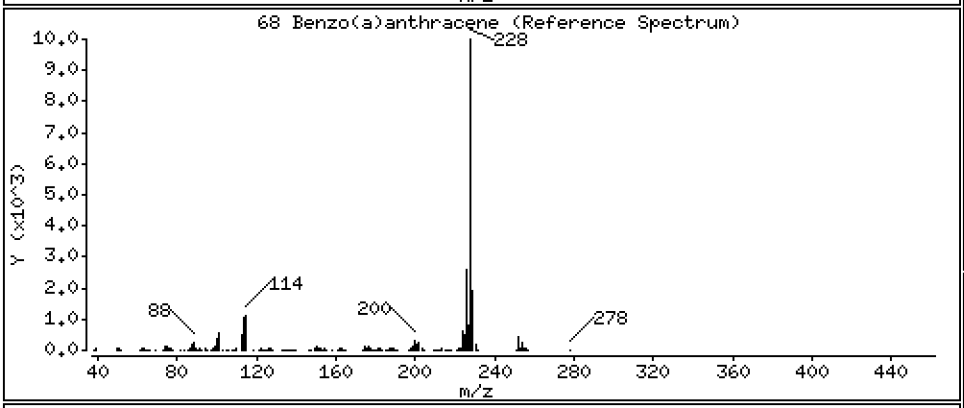
Column diameter: 0.25

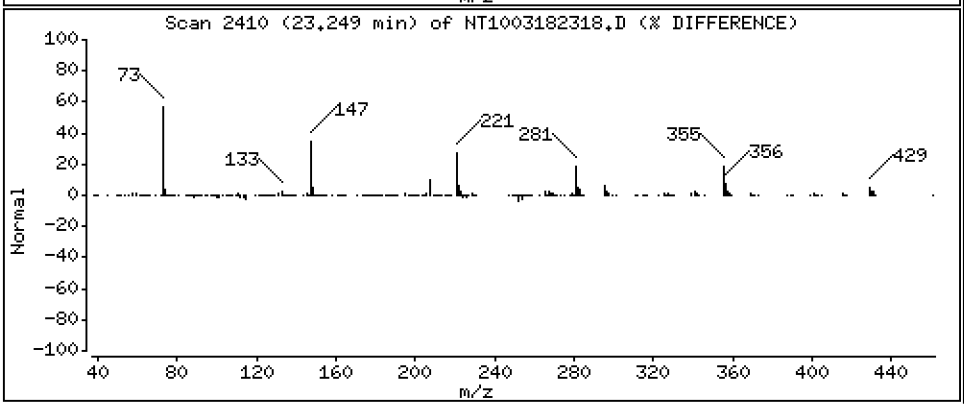
68 Benzo(a)anthracene

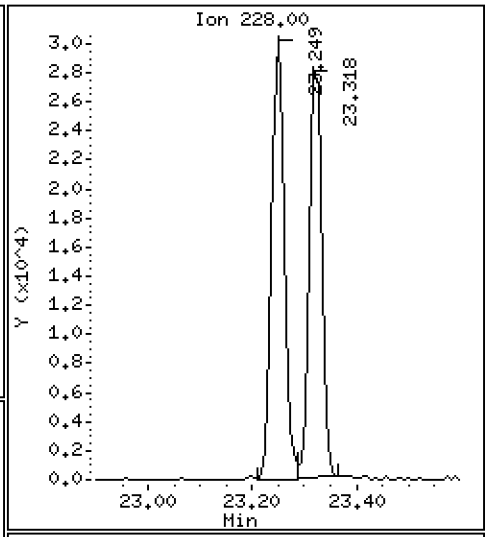
Concentration: 0.2280 ug/mL

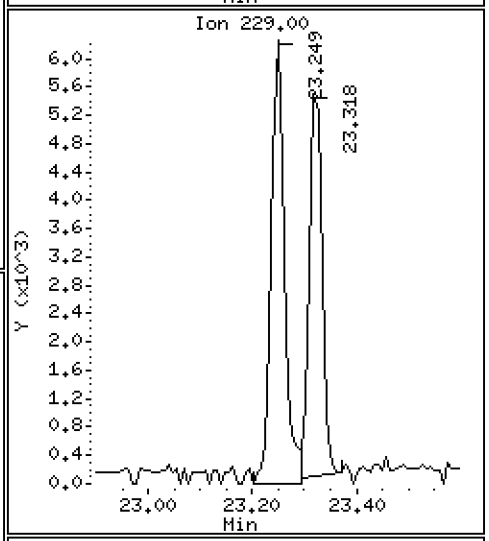


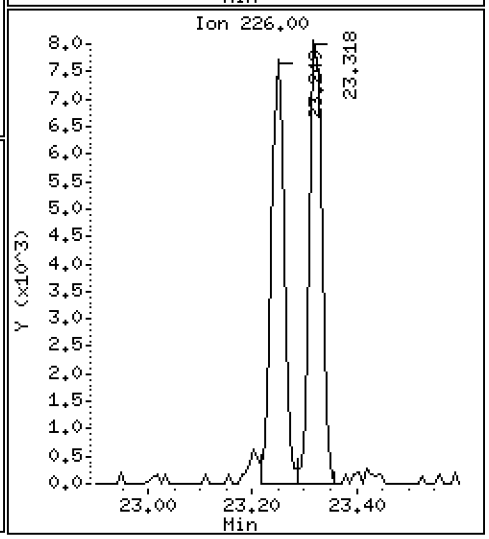












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

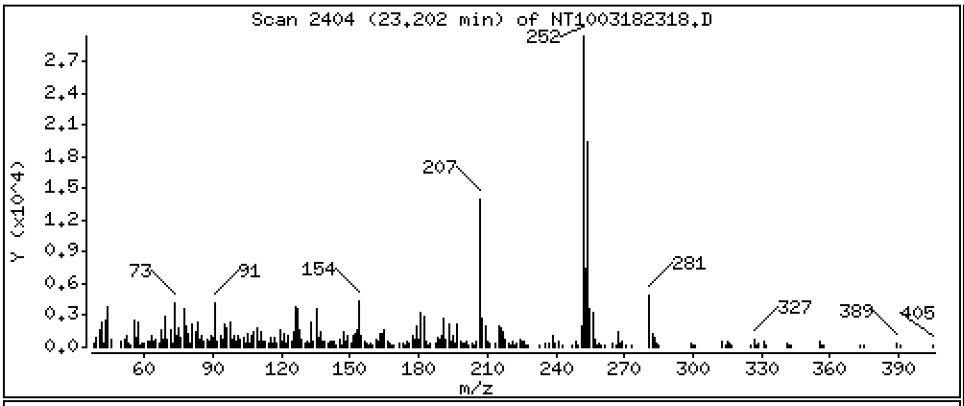
Operator: VTS

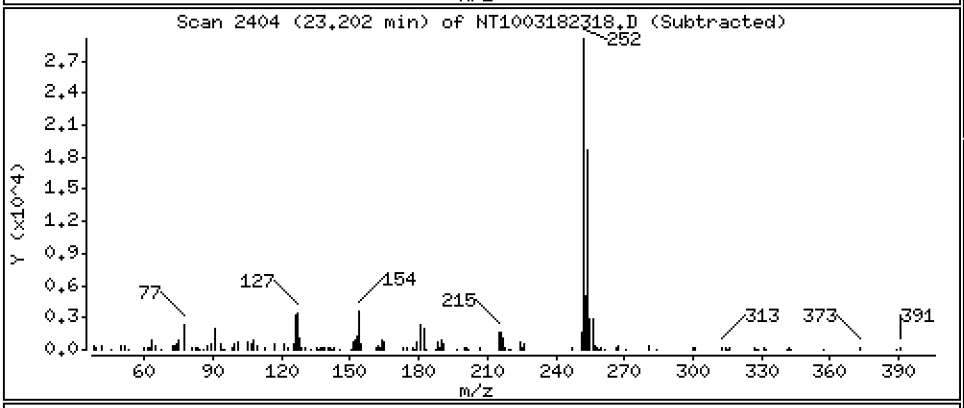
Column phase: ZB-5msi

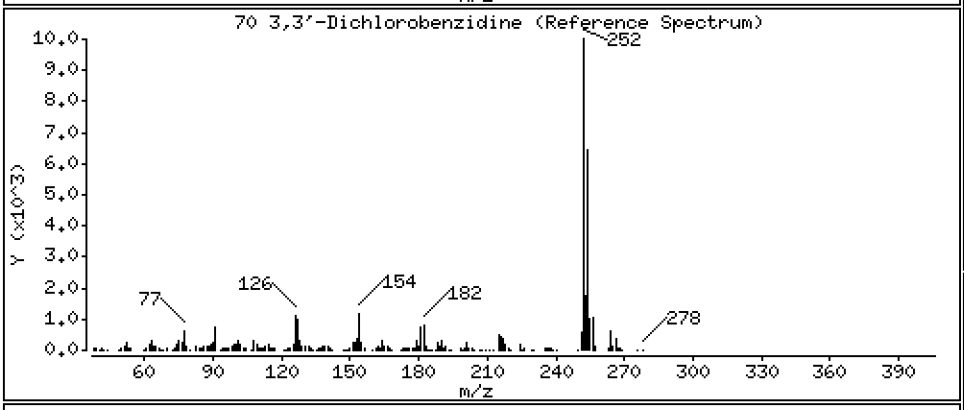
Column diameter: 0.25

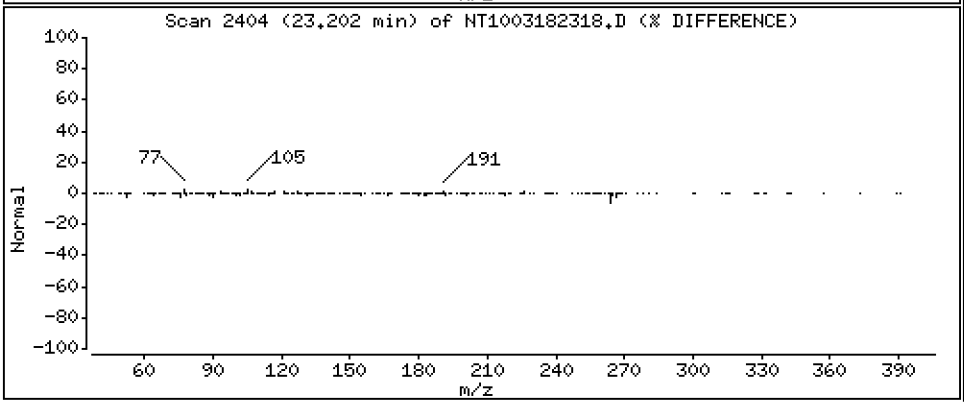
70 3,3'-Dichlorobenzidine

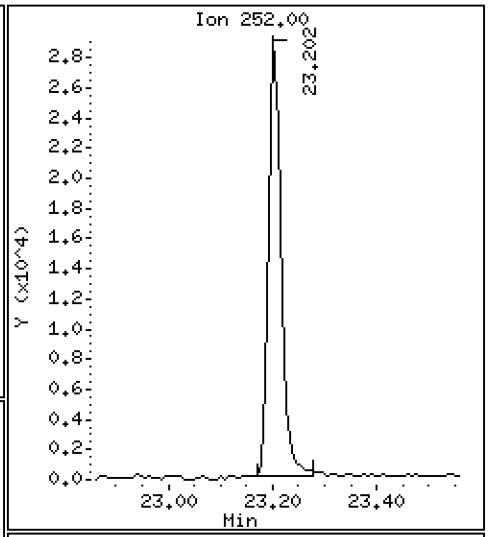
Concentration: 0.6614 ug/mL

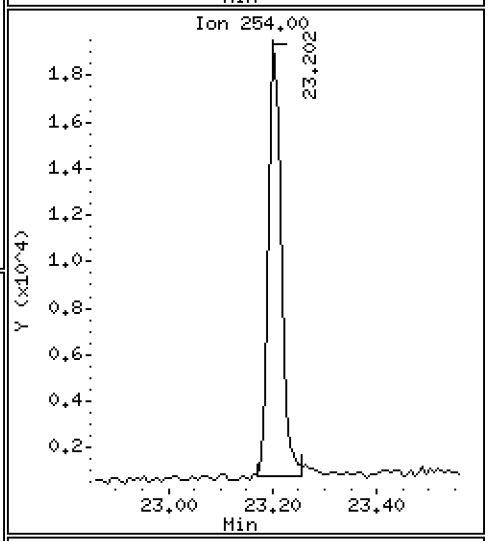


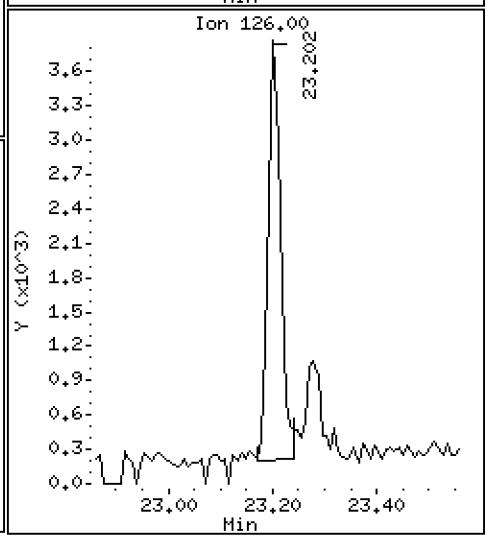












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

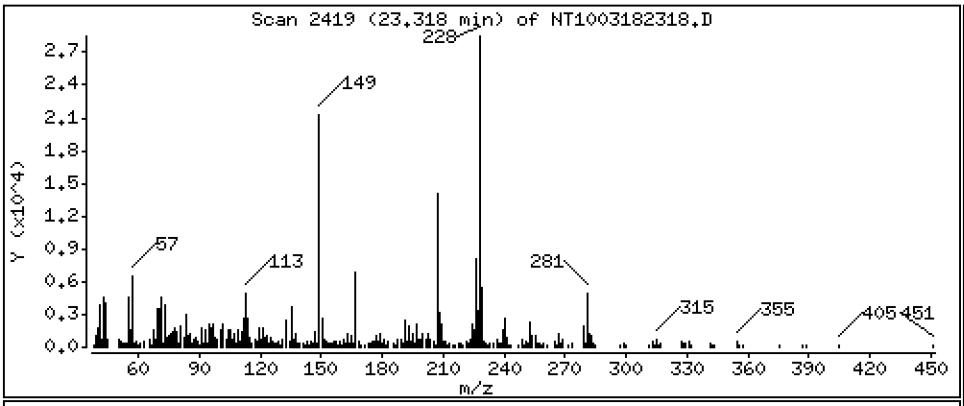
Operator: VTS

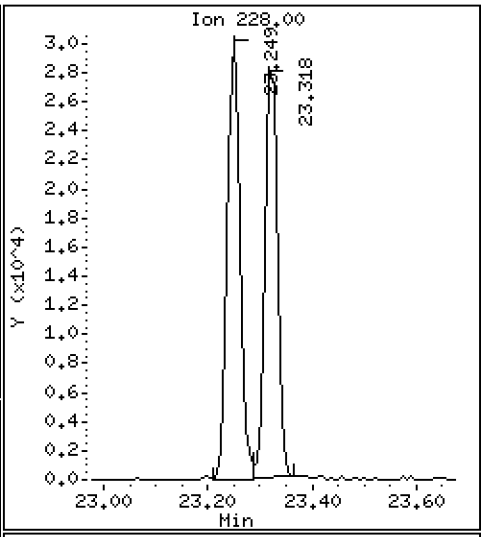
Column phase: ZB-5msi

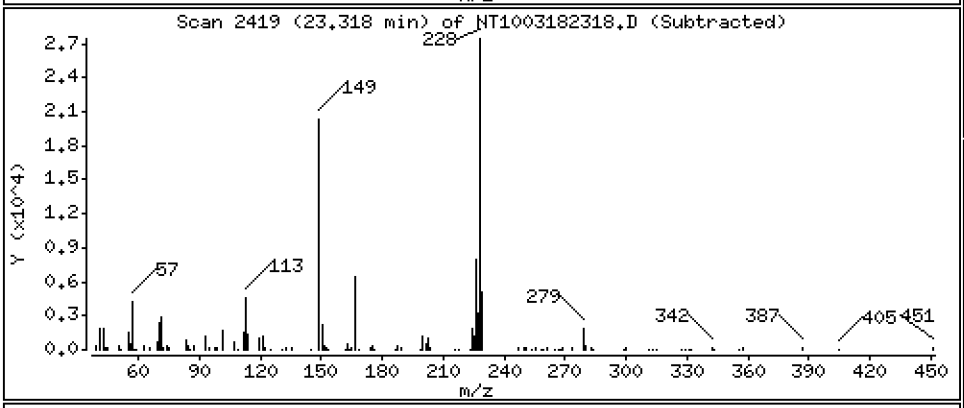
Column diameter: 0.25

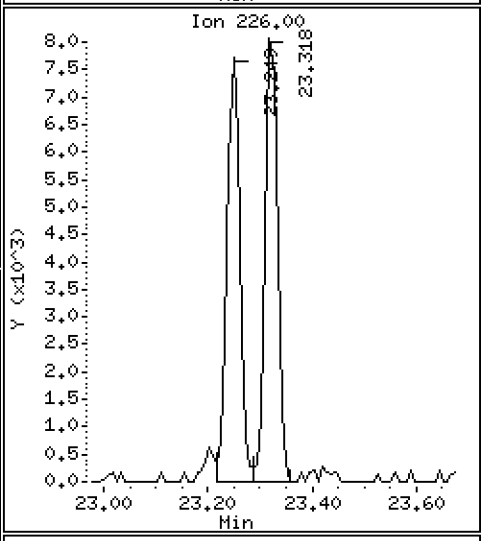
71 Chrysene

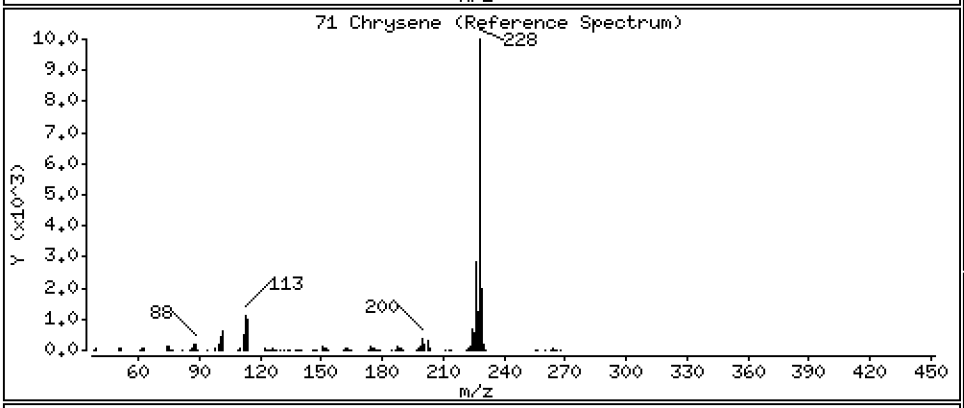
Concentration: 0.2105 ug/mL

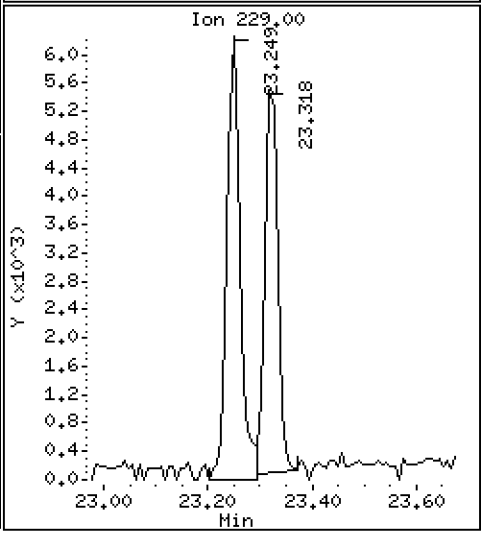


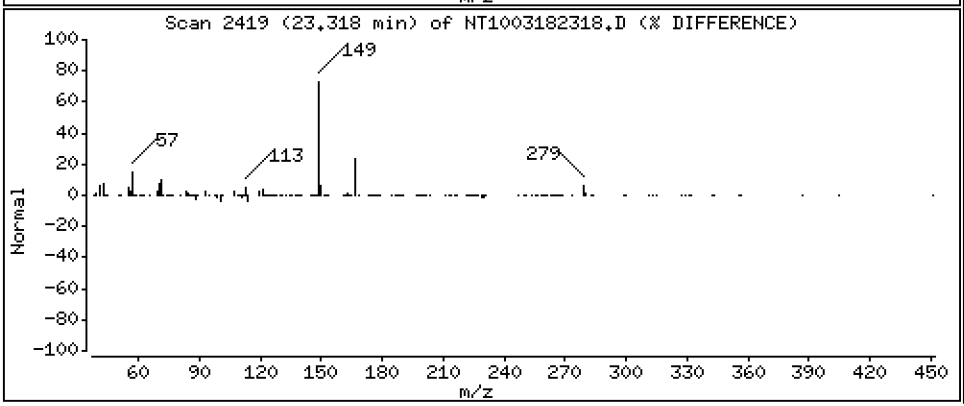












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

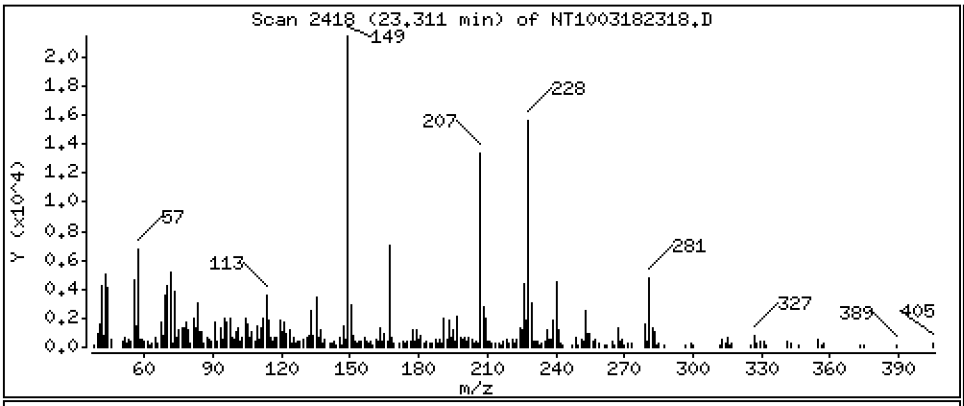
Operator: VTS

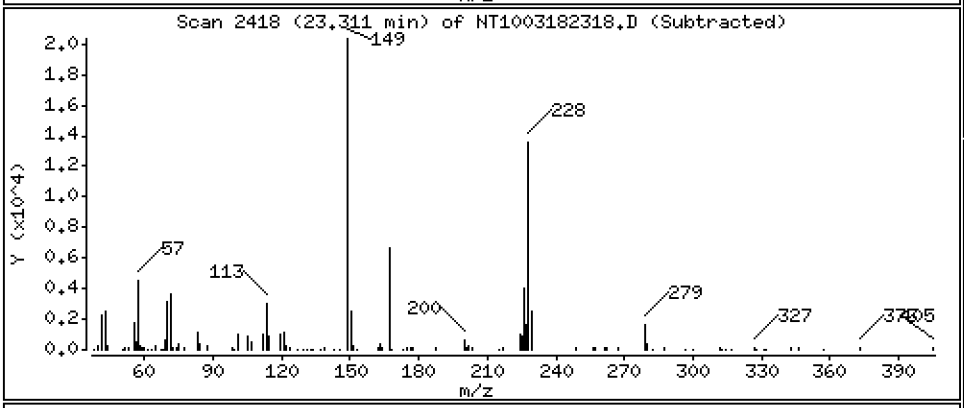
Column phase: ZB-5msi

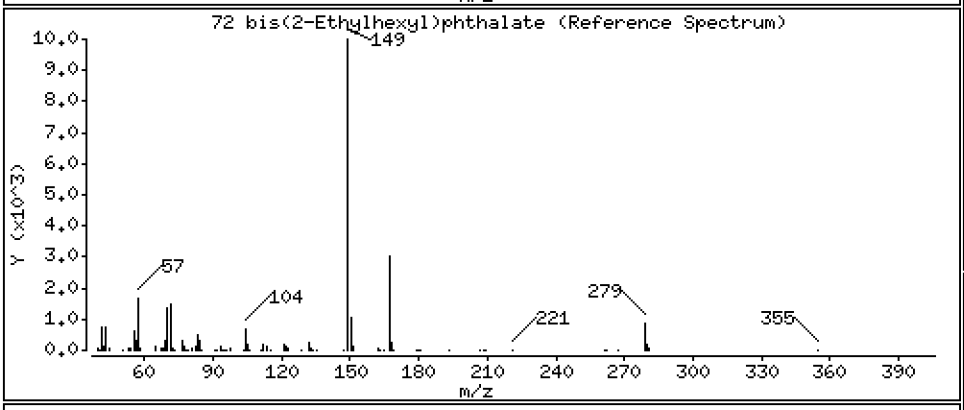
Column diameter: 0.25

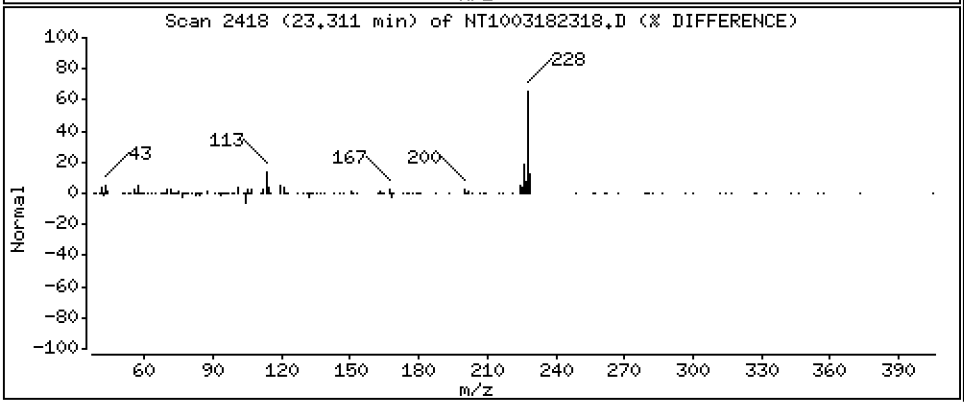
72 bis(2-Ethylhexyl)phthalate

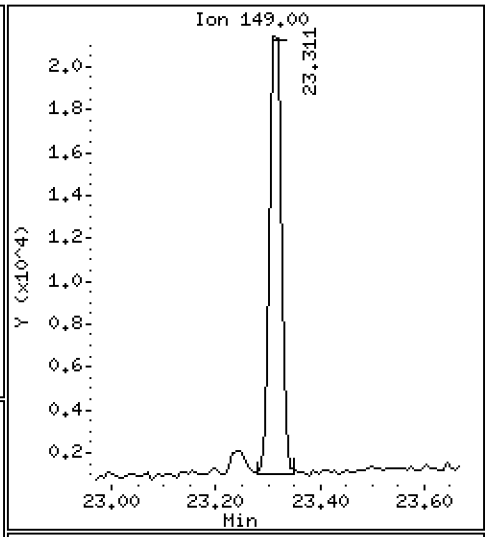
Concentration: 0.1994 ug/mL

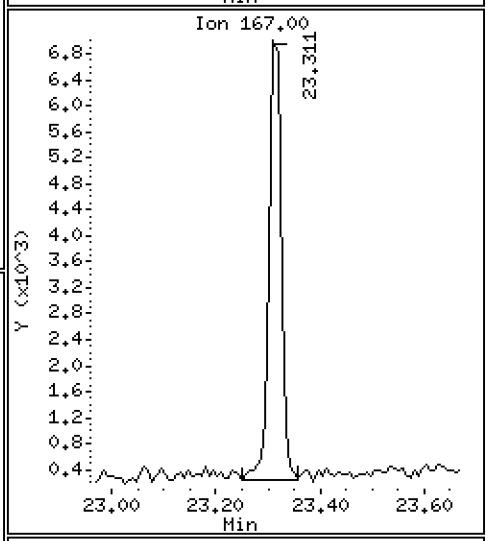


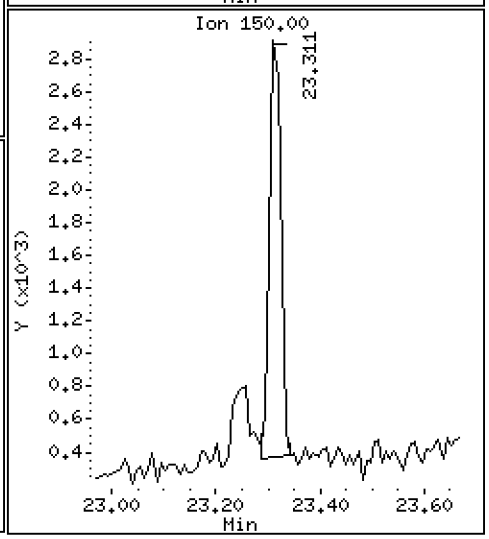












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

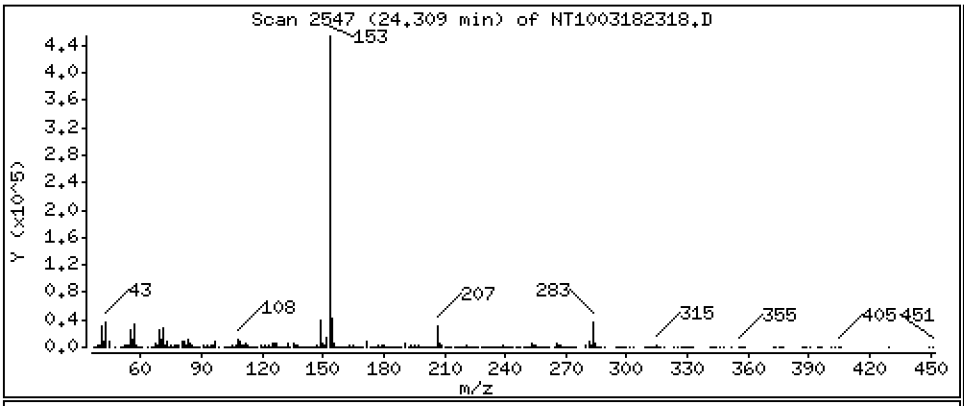
Operator: VTS

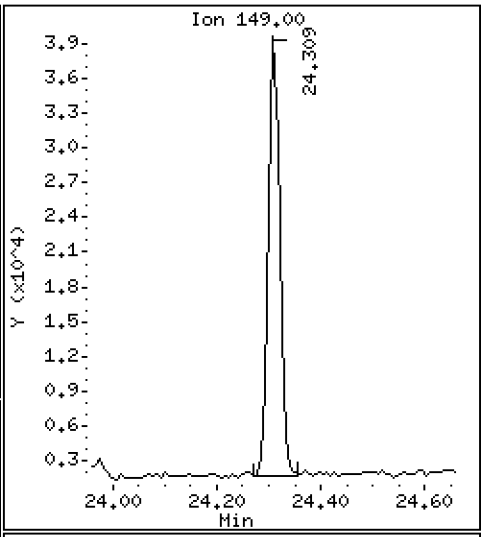
Column phase: ZB-5msi

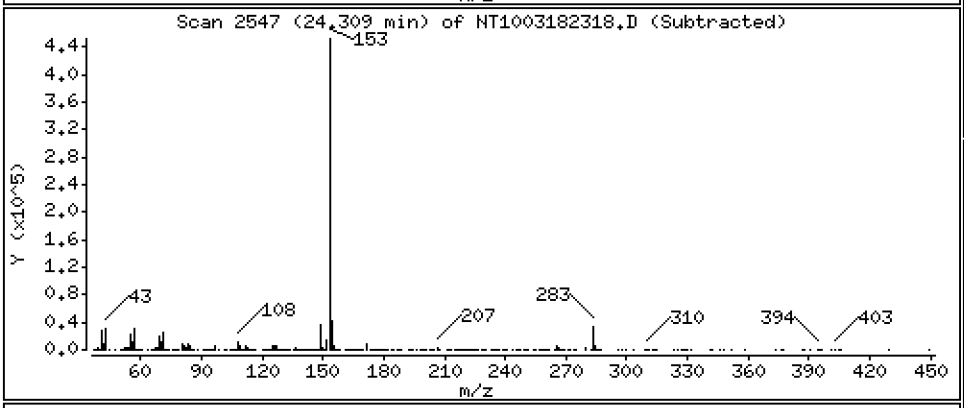
Column diameter: 0.25

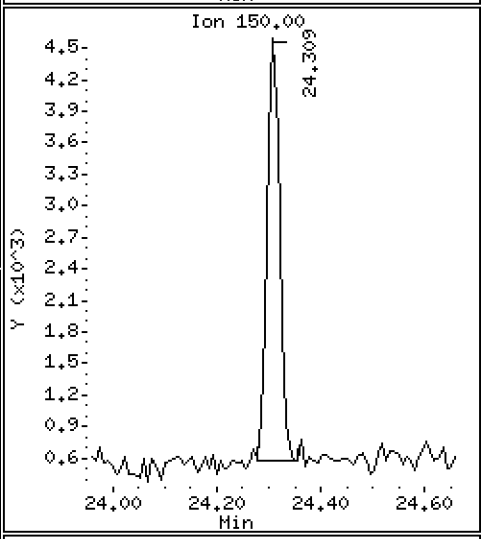
73 Di-n-octylphthalate

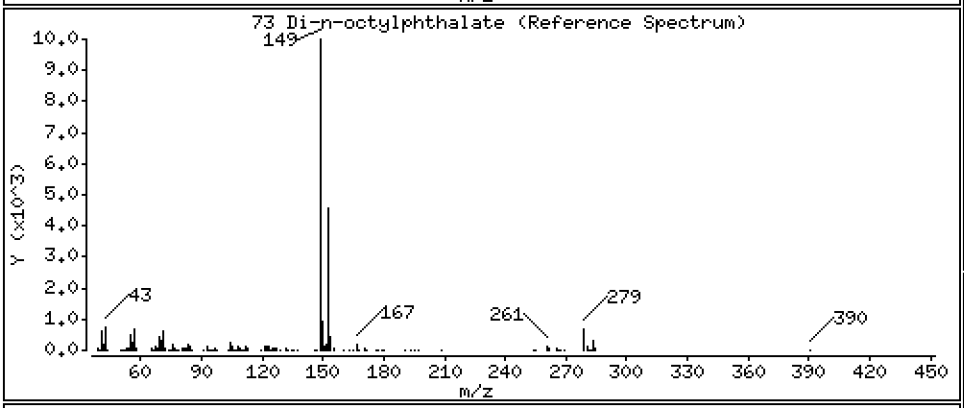
Concentration: 0.2004 ug/mL

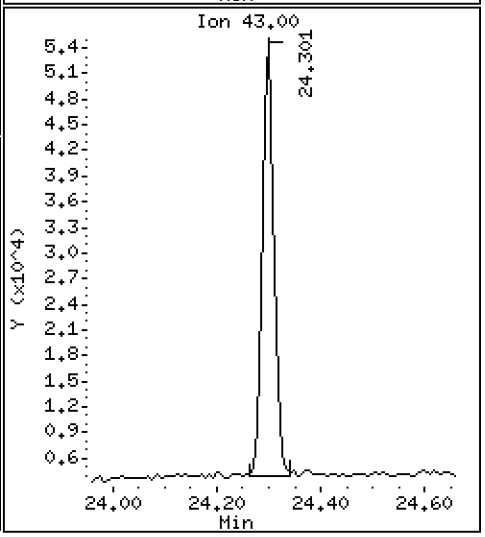


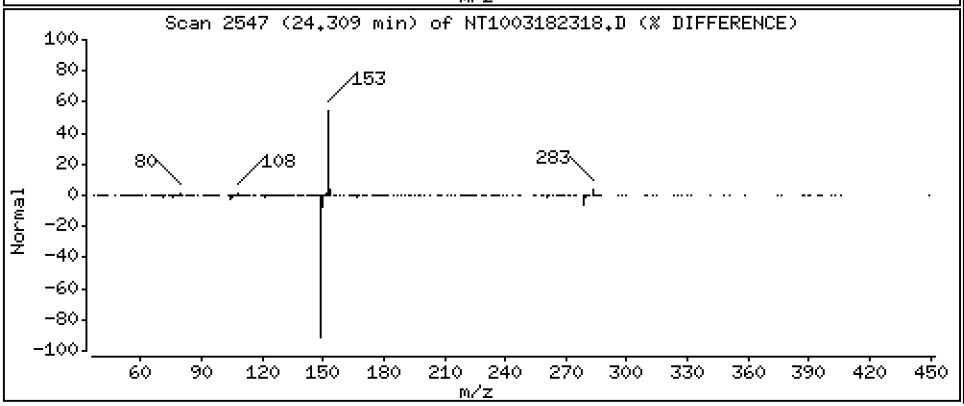












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

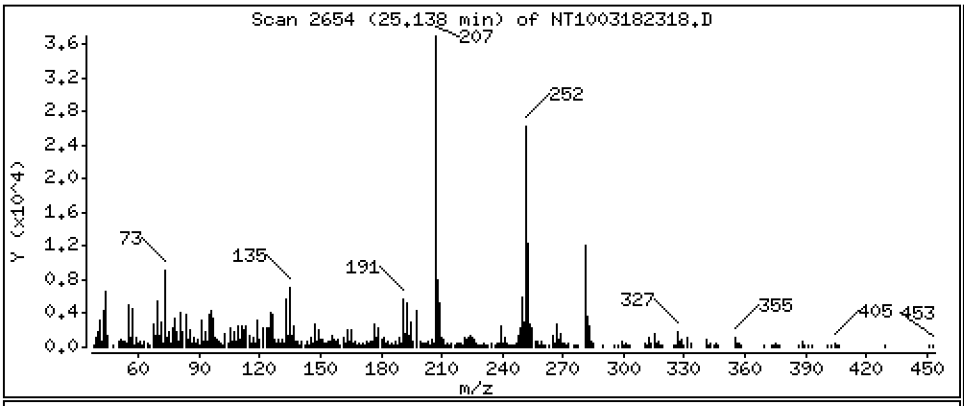
Operator: VTS

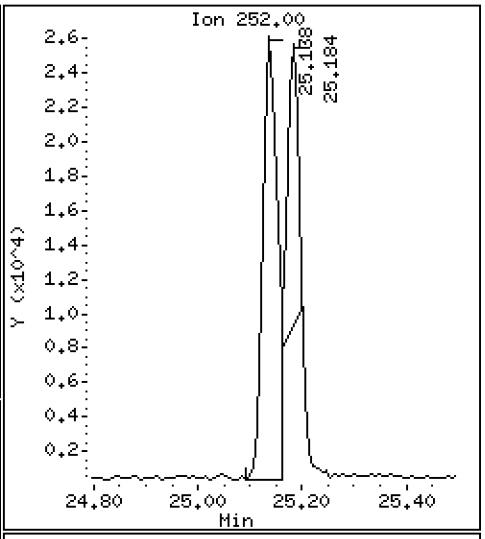
Column phase: ZB-5msi

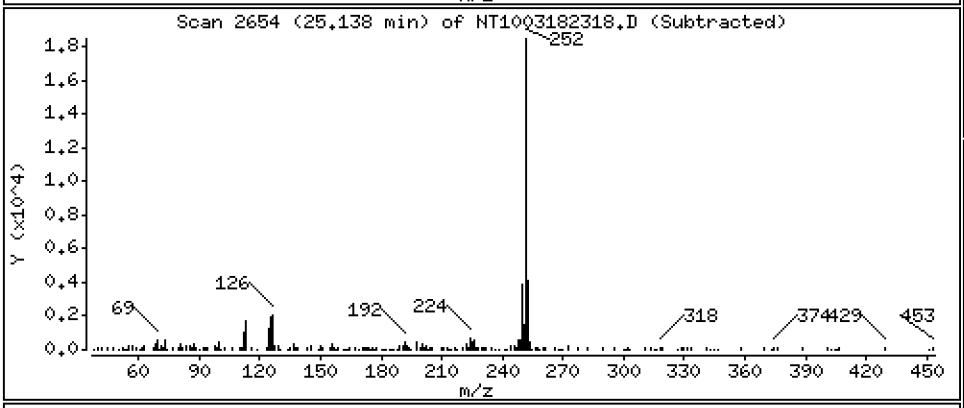
Column diameter: 0.25

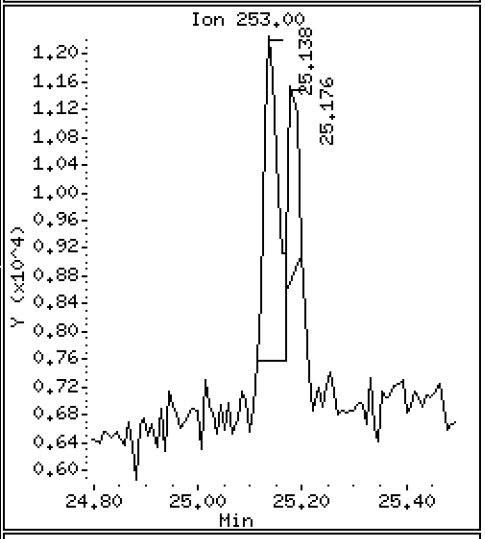
74 Benzo(b)fluoranthene

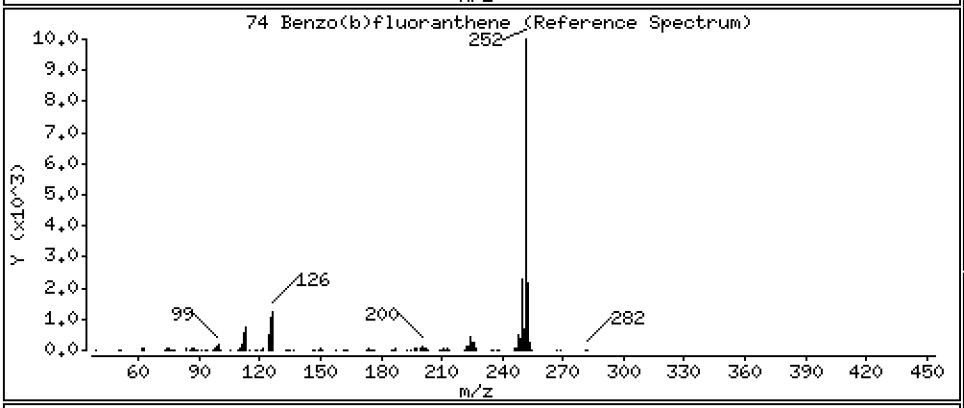
Concentration: 0.2176 ug/mL

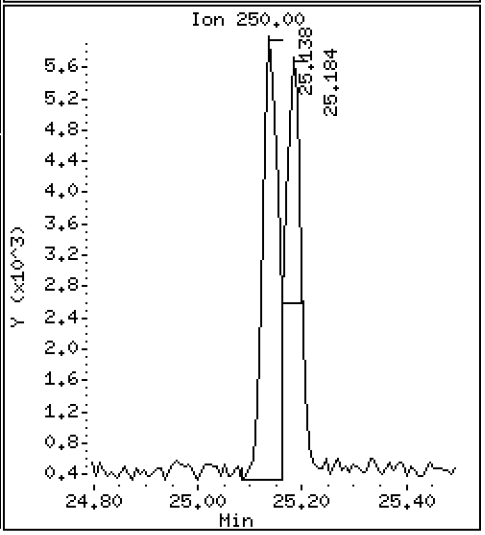


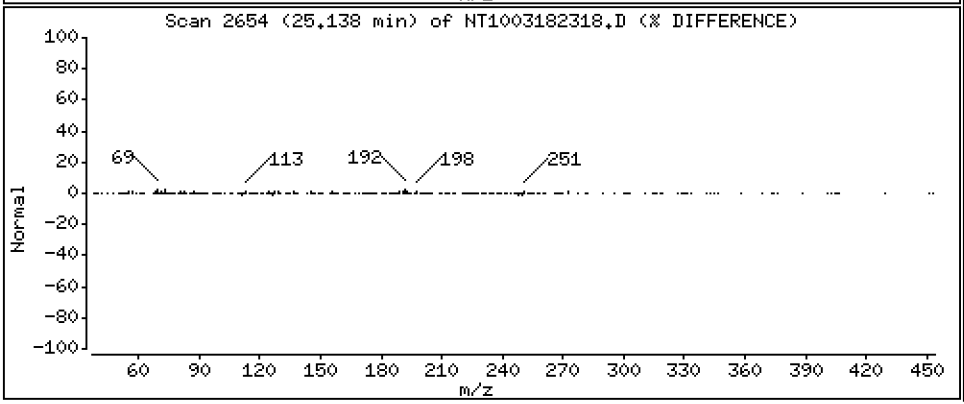












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

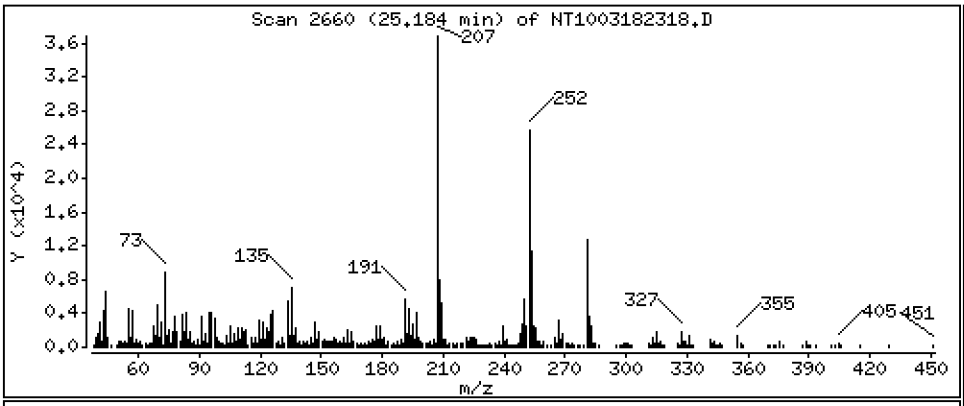
Operator: VTS

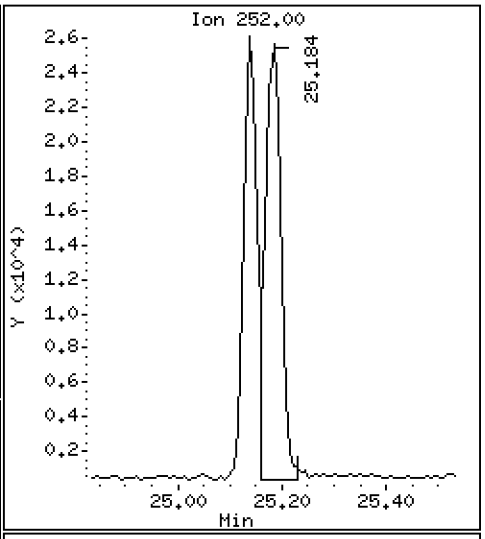
Column phase: ZB-5msi

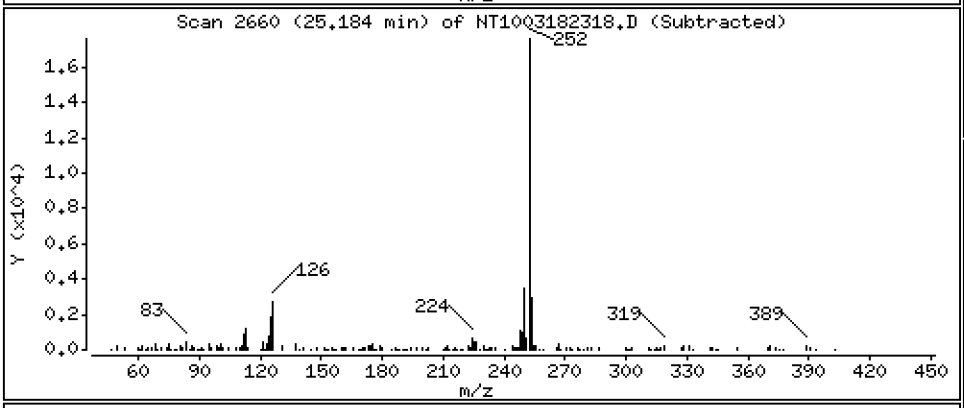
Column diameter: 0.25

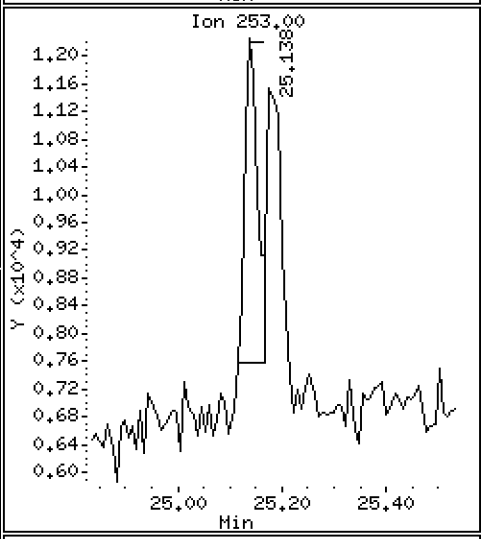
75 Benzo(k)fluoranthene

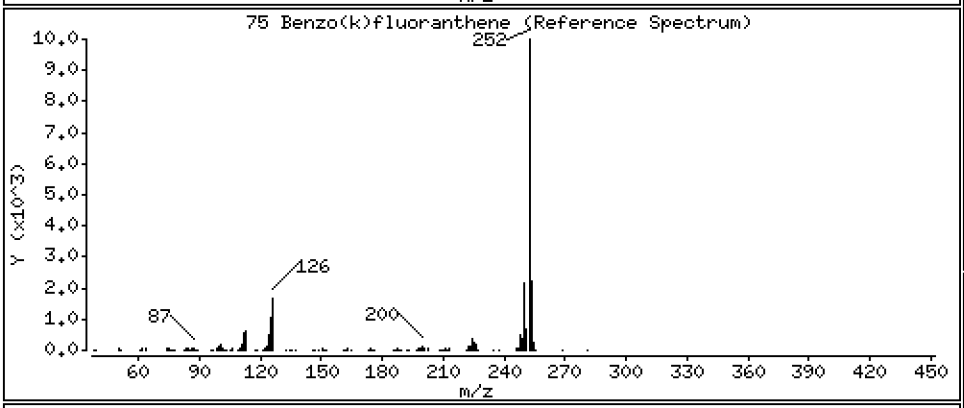
Concentration: 0.2273 ug/mL

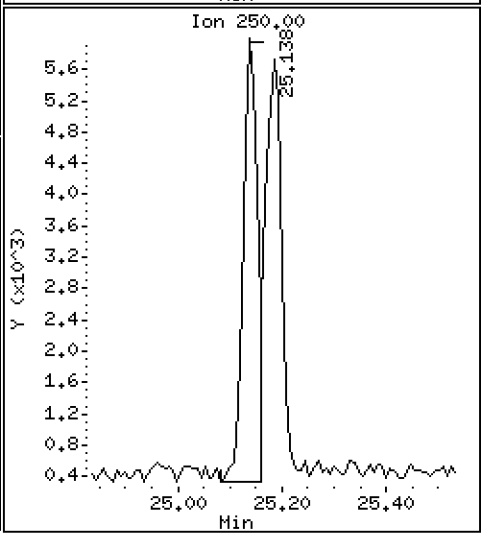


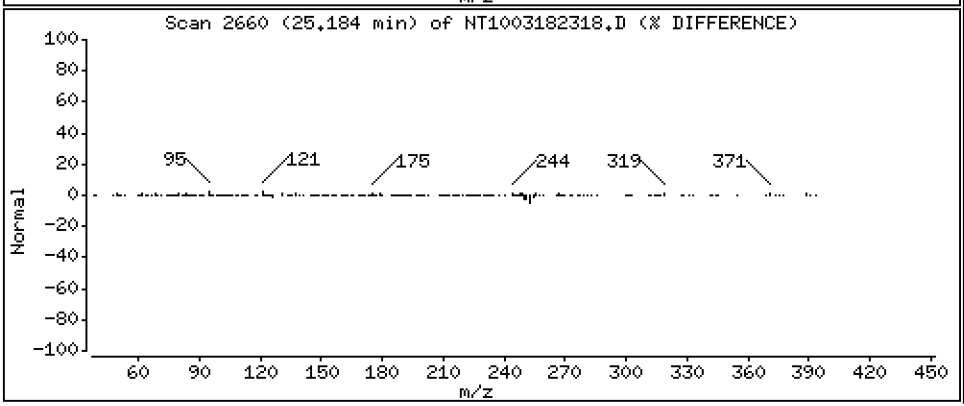












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

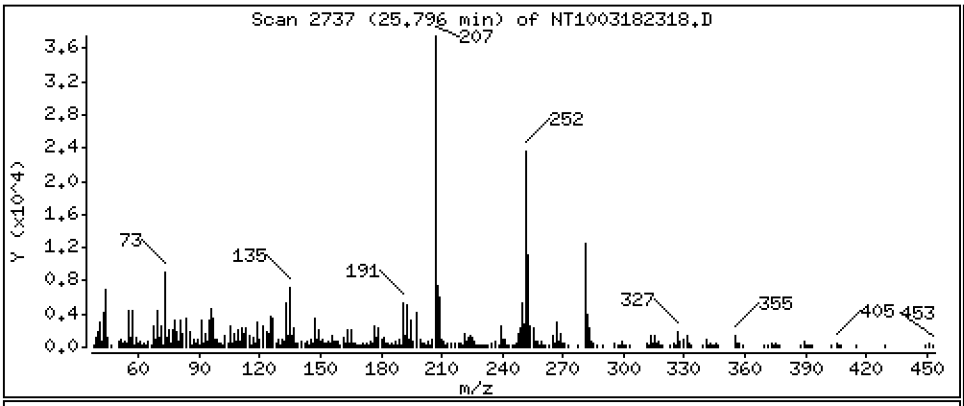
Operator: VTS

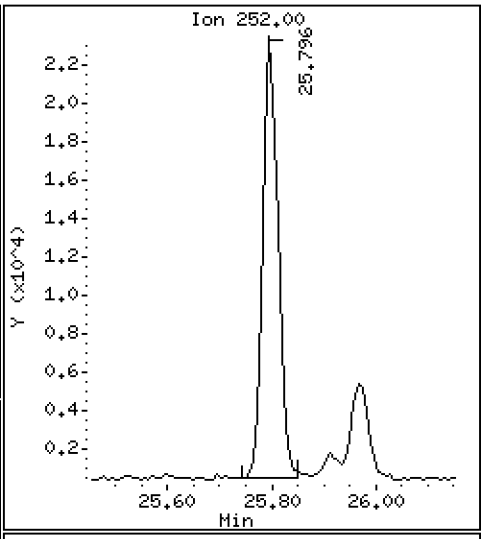
Column phase: ZB-5msi

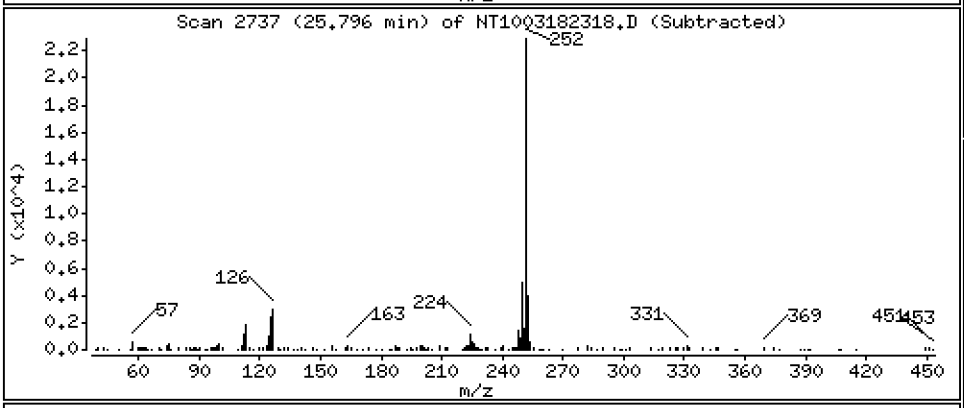
Column diameter: 0.25

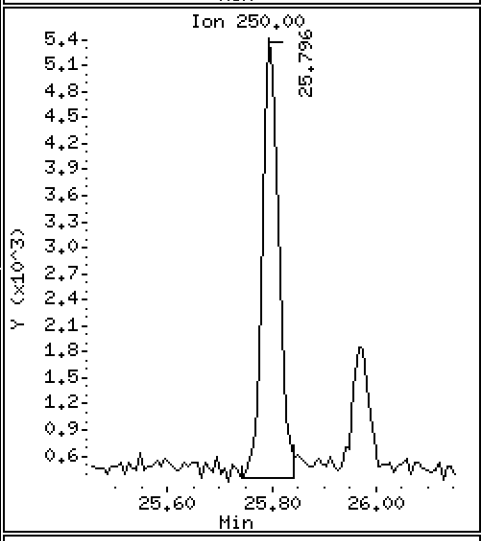
76 Benzo(a)pyrene

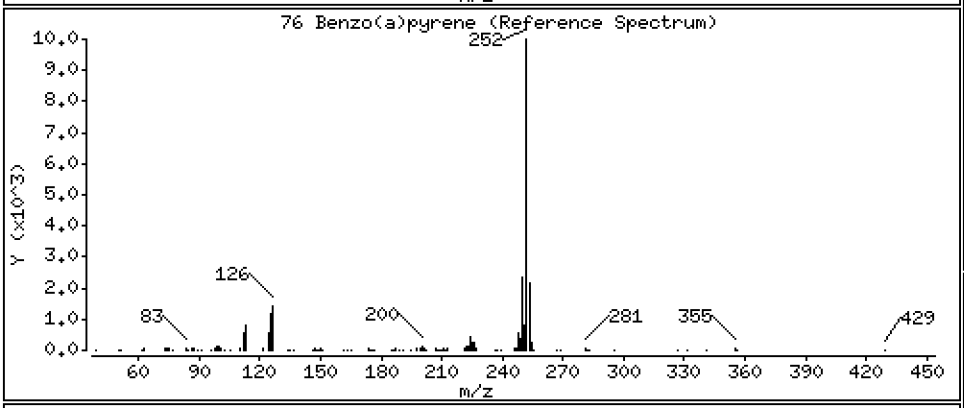
Concentration: 0.2241 ug/mL

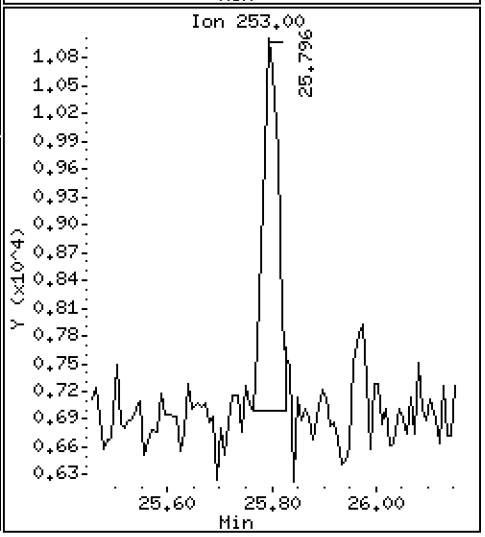


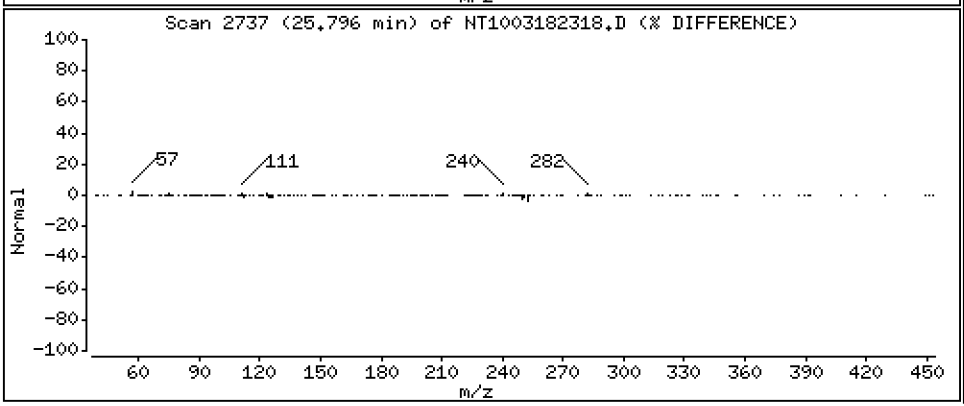












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

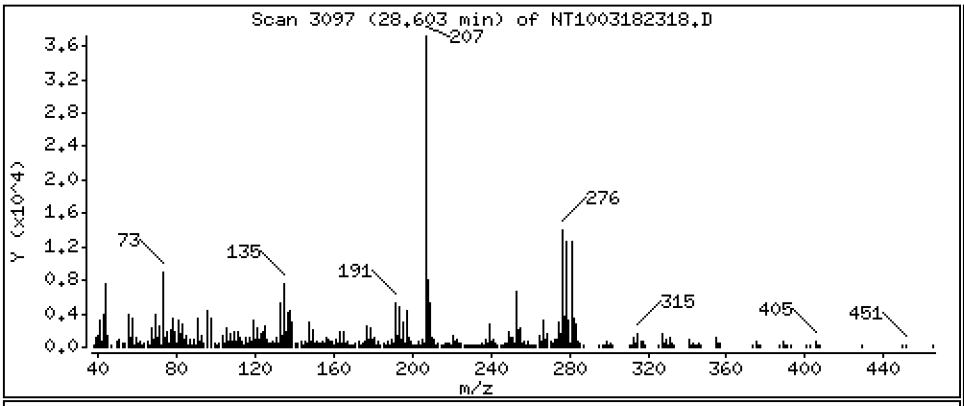
Operator: VTS

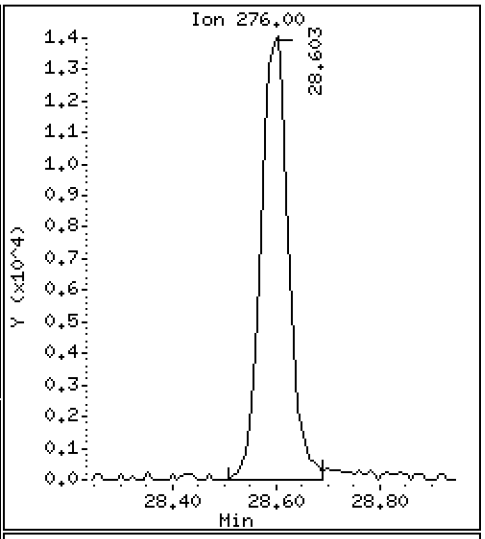
Column phase: ZB-5msi

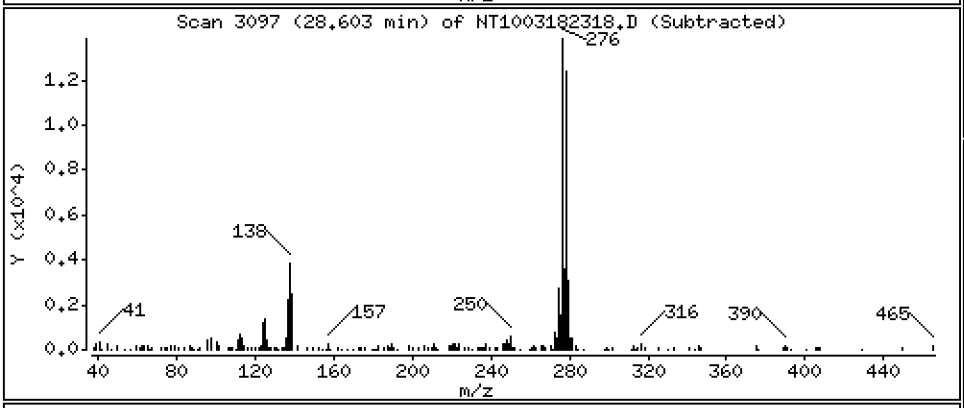
Column diameter: 0.25

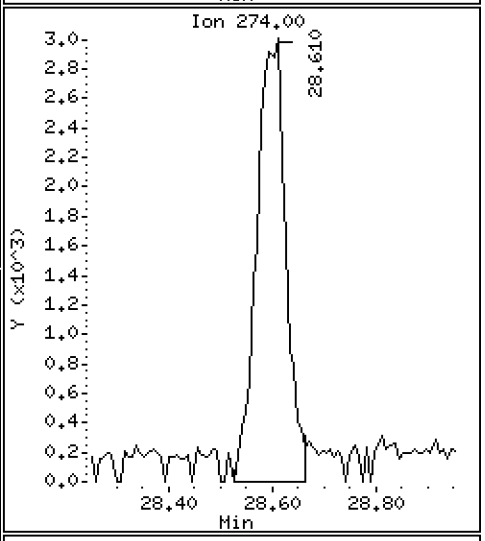
78 Indeno(1,2,3-cd)pyrene

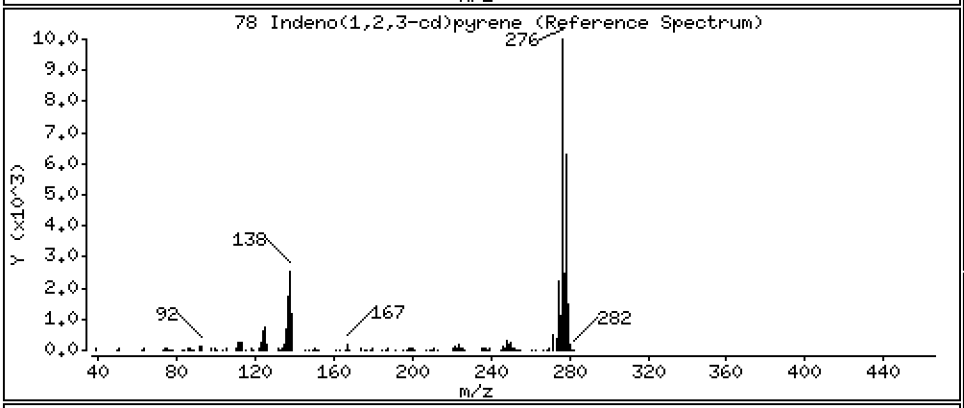
Concentration: 0.1980 ug/mL

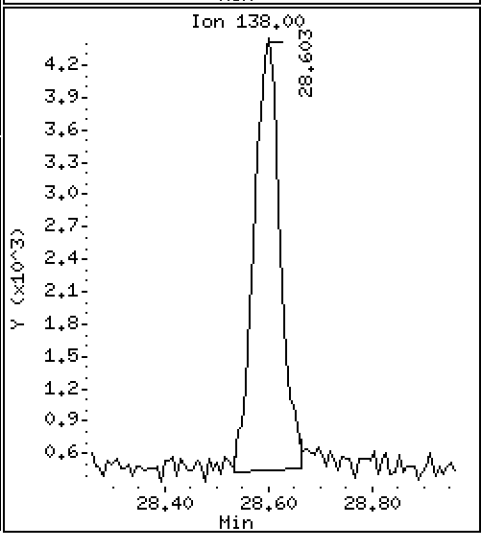


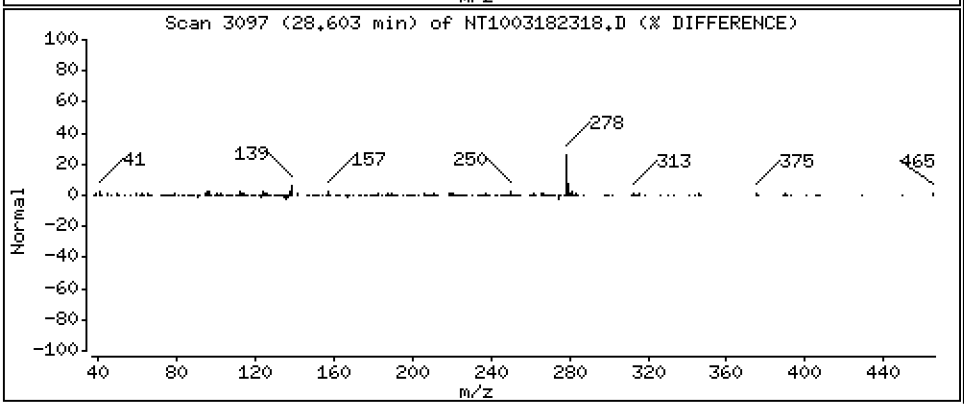












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

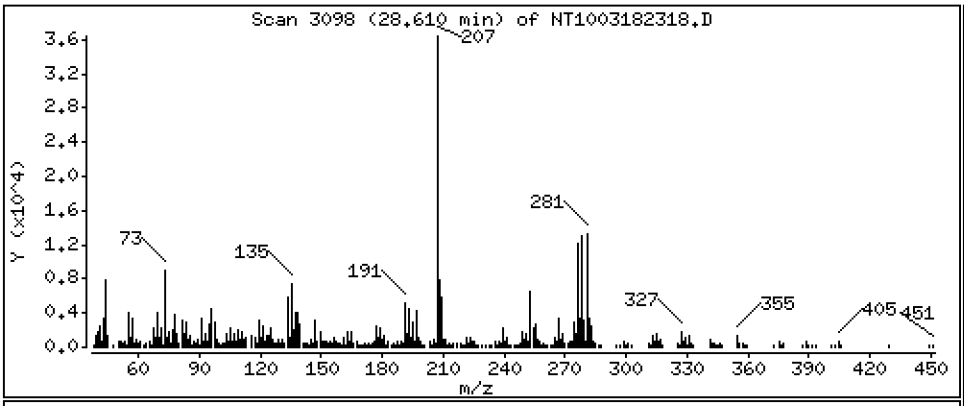
Operator: VTS

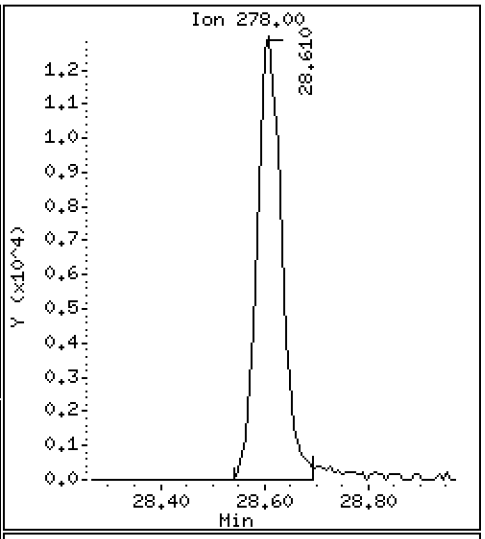
Column phase: ZB-5msi

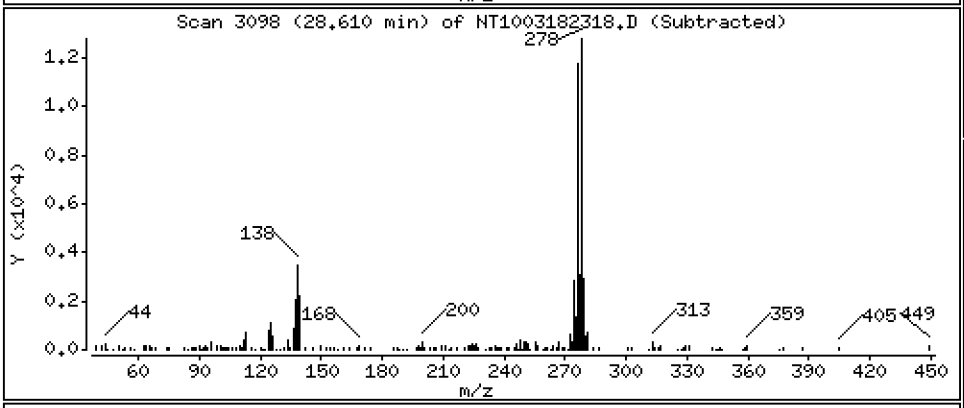
Column diameter: 0.25

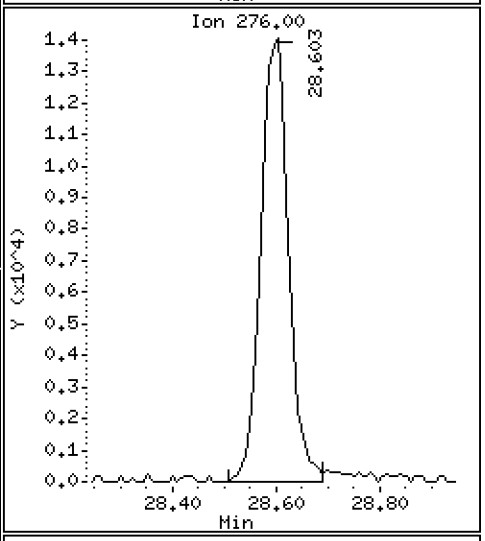
79 Dibenzo(a,h)anthracene

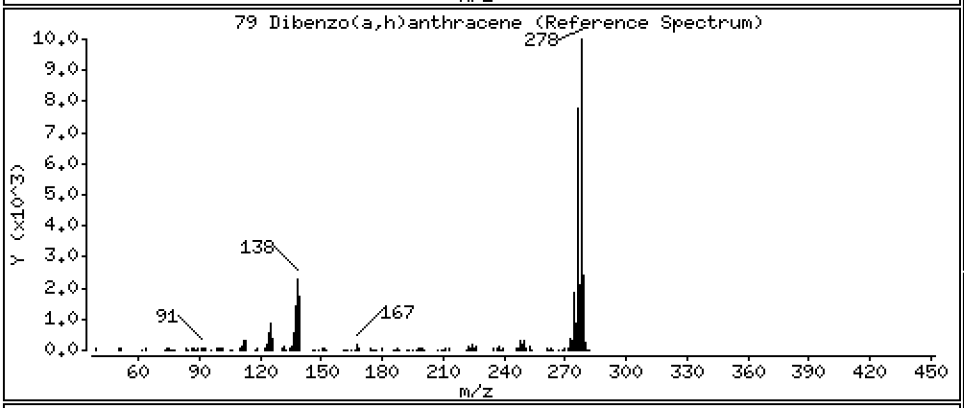
Concentration: 0.1986 ug/mL

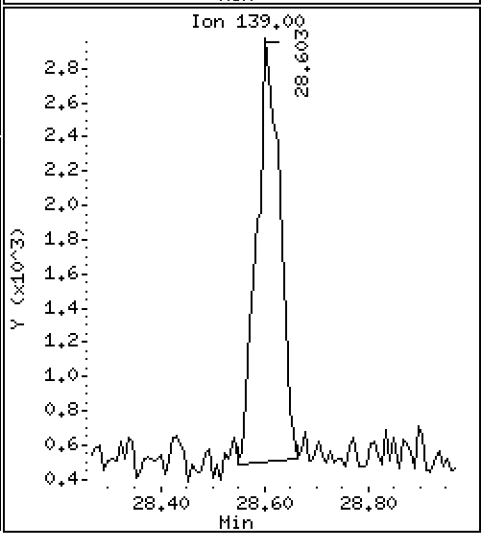


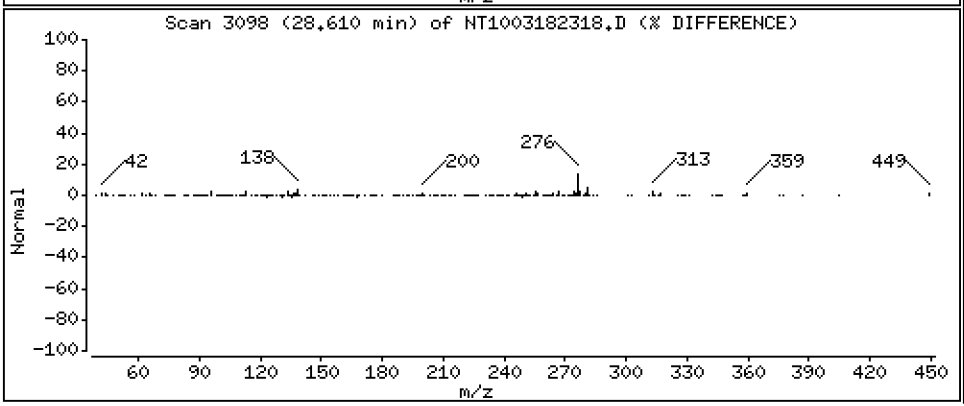












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

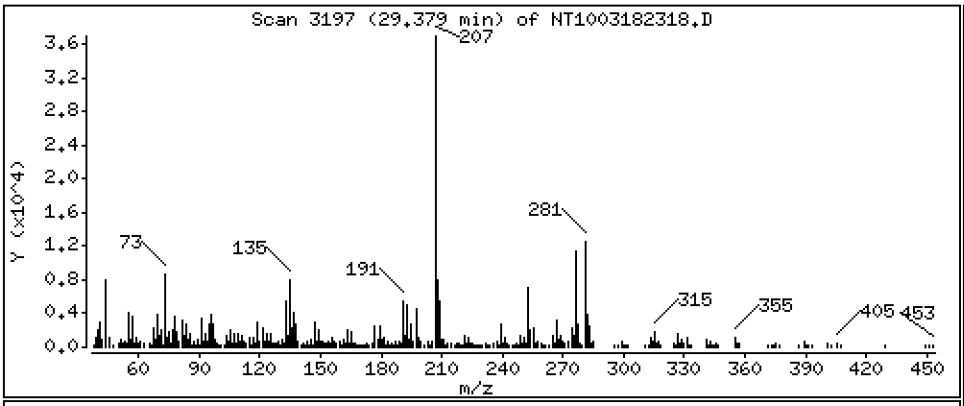
Operator: VTS

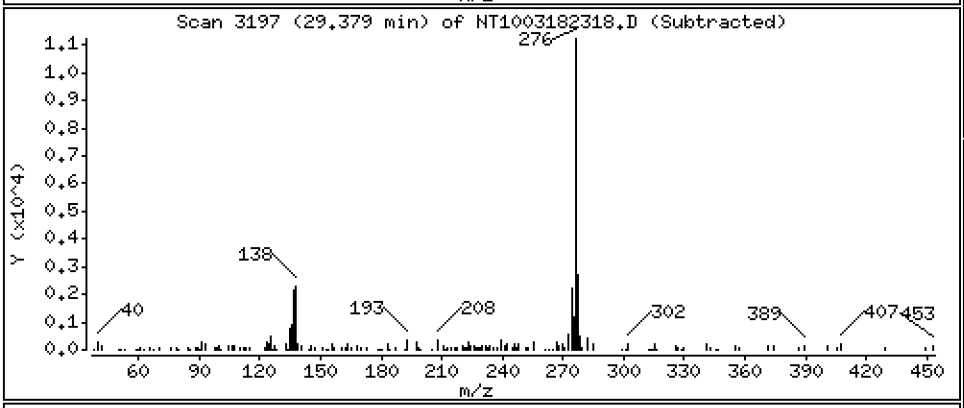
Column phase: ZB-5msi

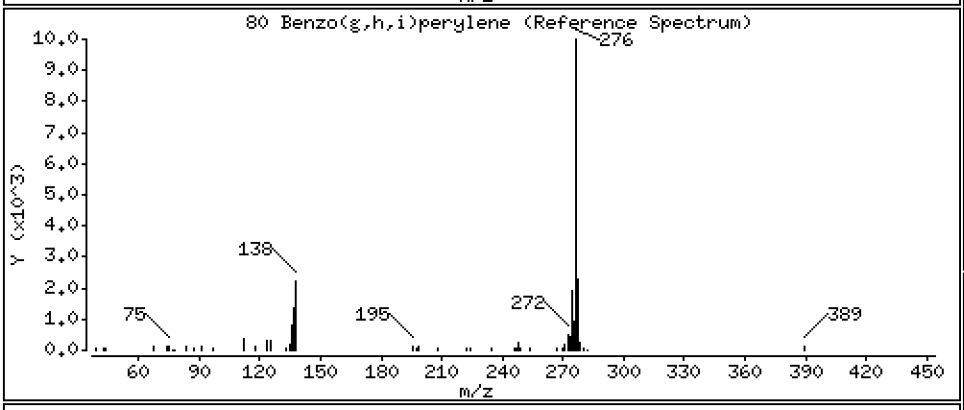
Column diameter: 0.25

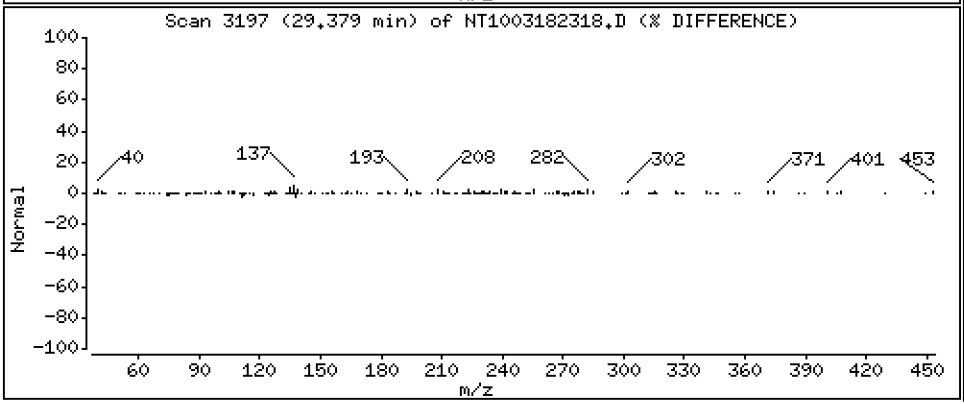
80 Benzo(g,h,i)perylene

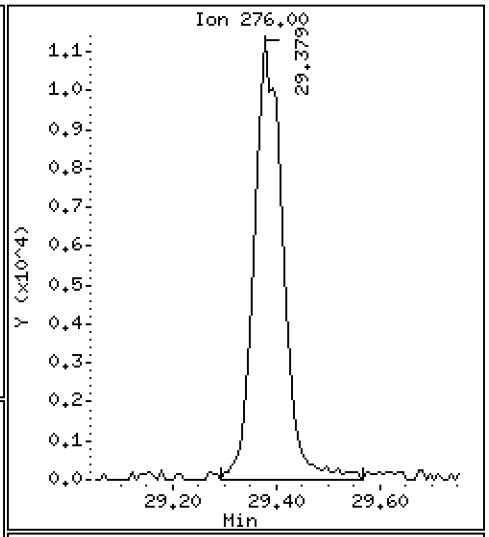
Concentration: 0.1955 ug/mL

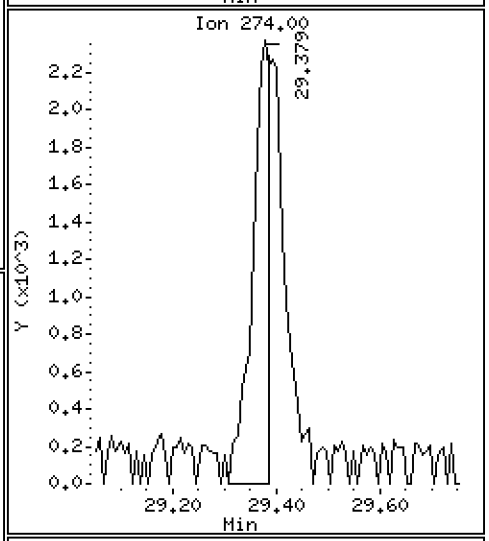


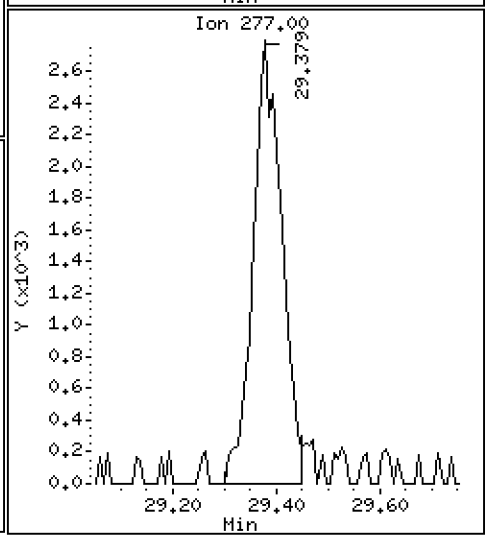












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

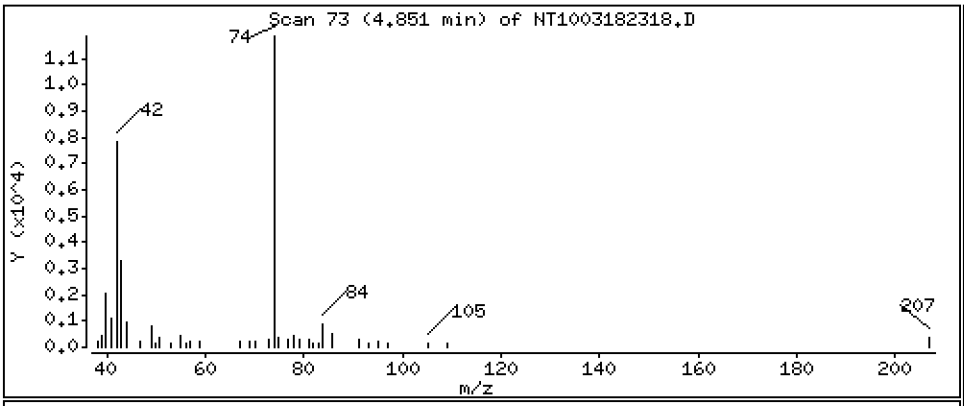
Operator: VTS

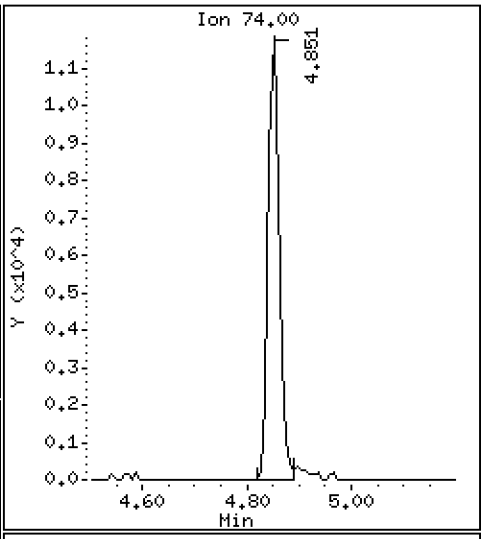
Column phase: ZB-5msi

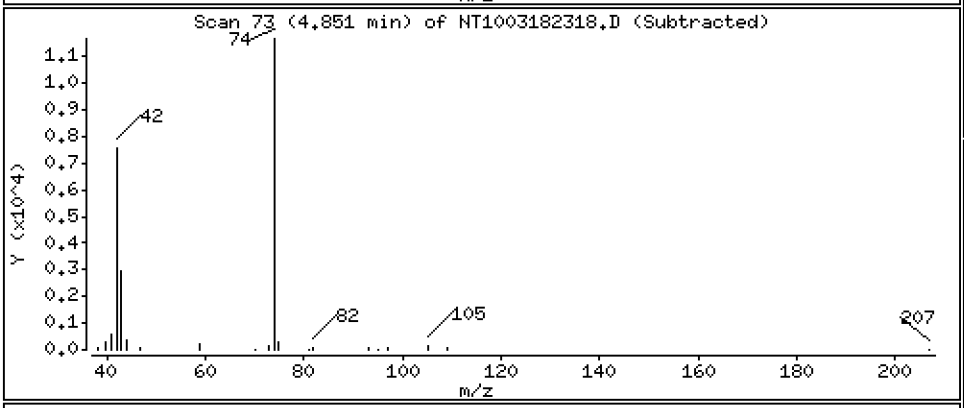
Column diameter: 0.25

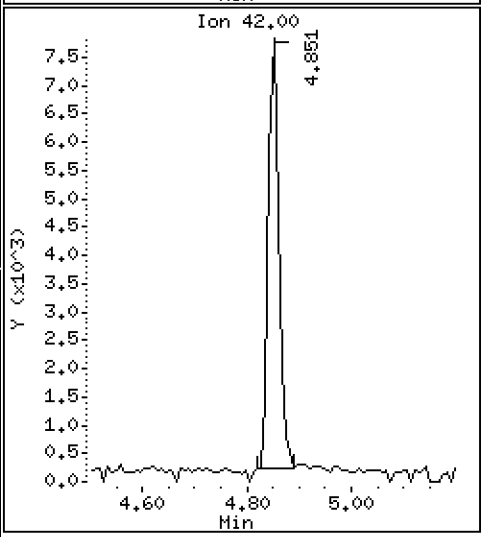
90 N-Nitrosodimethylamine

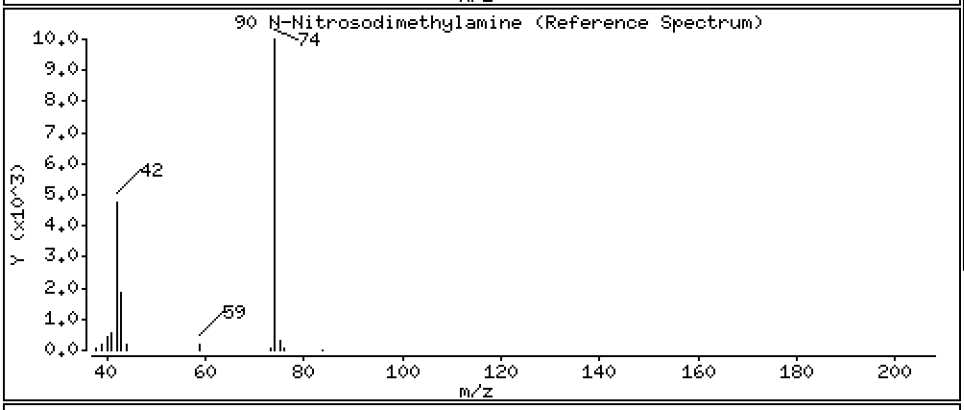
Concentration: 0.4176 ug/mL

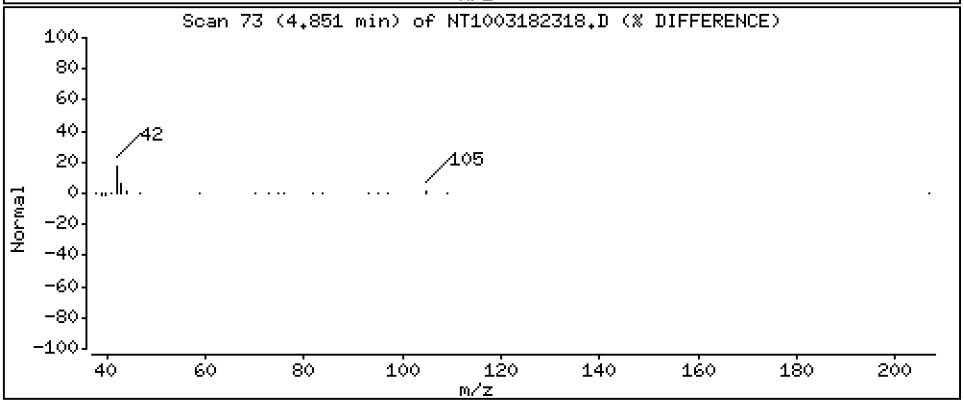












Date : 19-MAR-2023 04:35

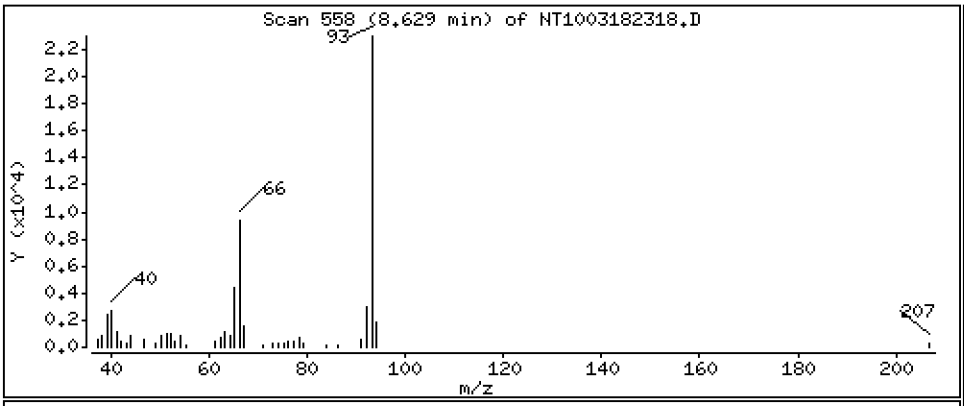
Client ID: Instrument: nt10.i

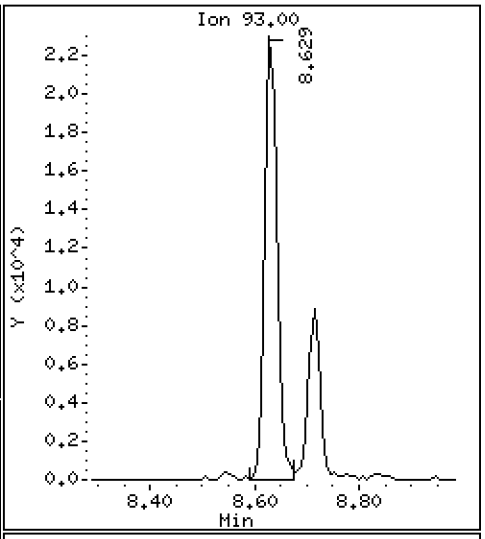
Sample Info: SLC0504-LCV2

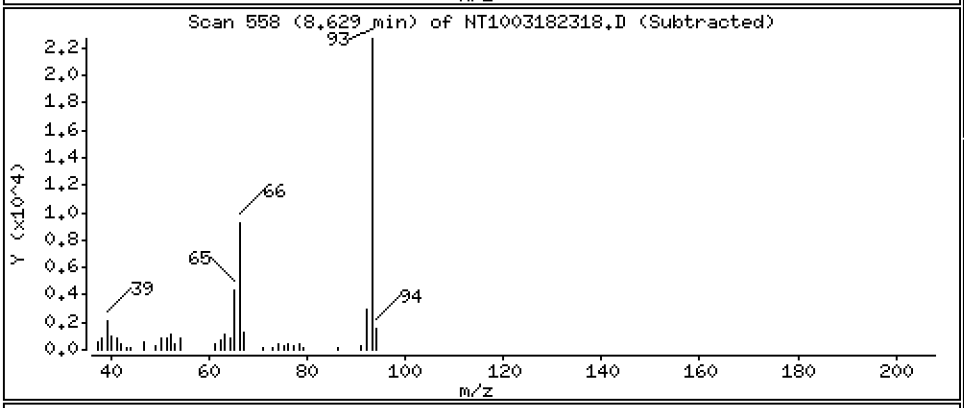
Operator: VTS

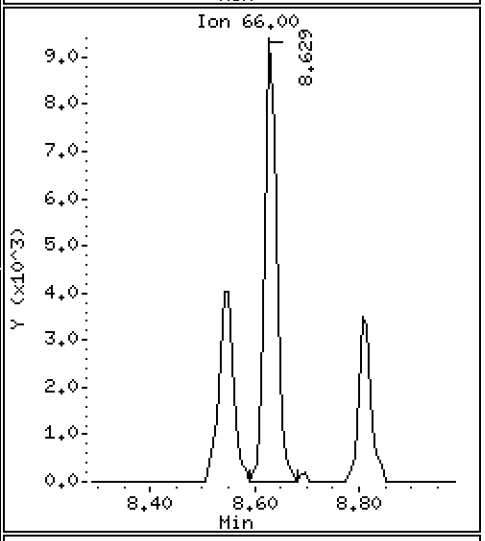
Column phase: ZB-5msi Column diameter: 0.25

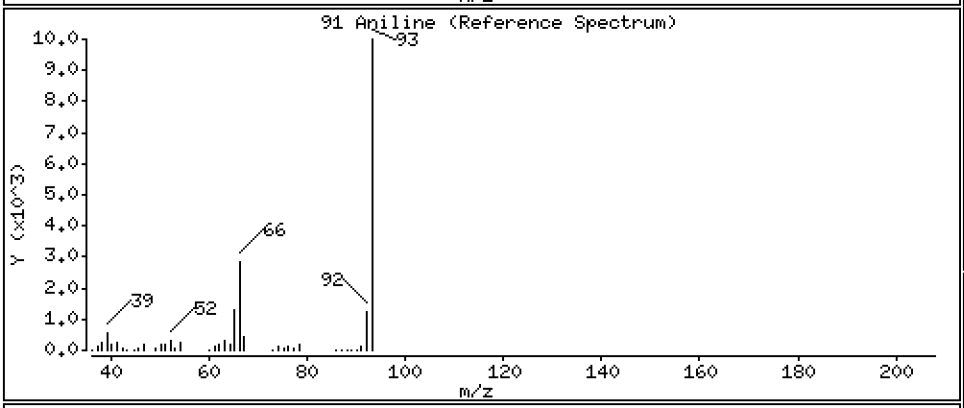
91 Aniline Concentration: 0.4153 ug/mL

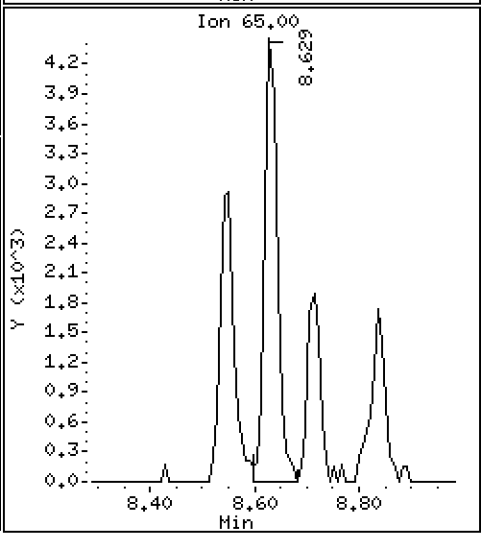


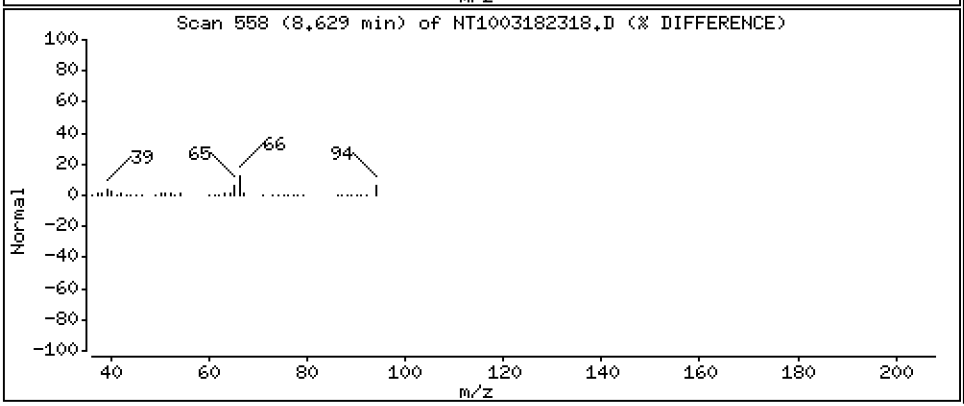












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

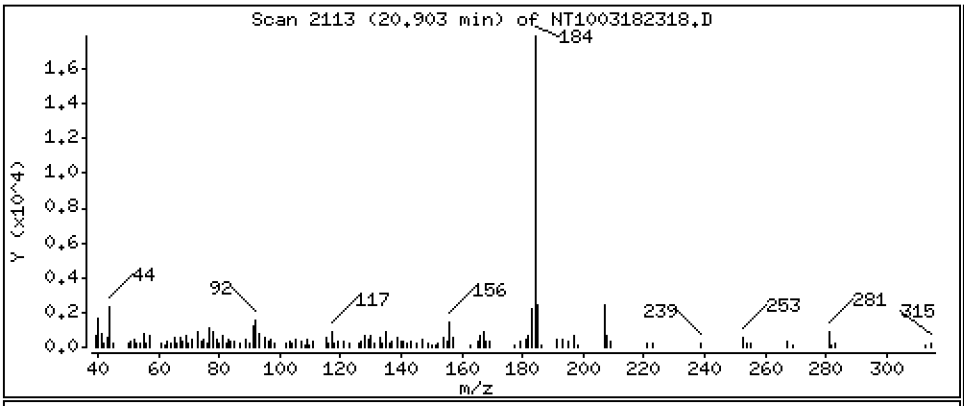
Operator: VTS

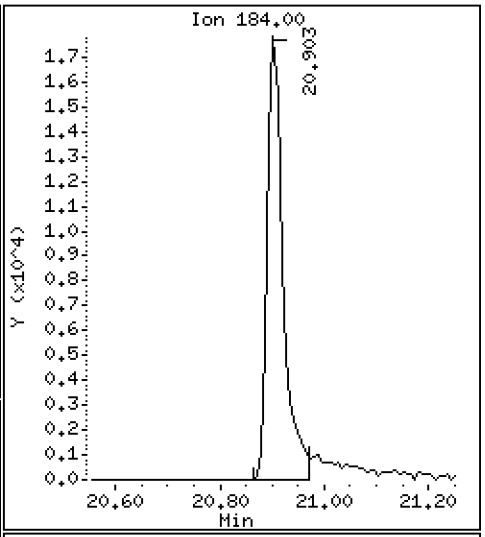
Column phase: ZB-5msi

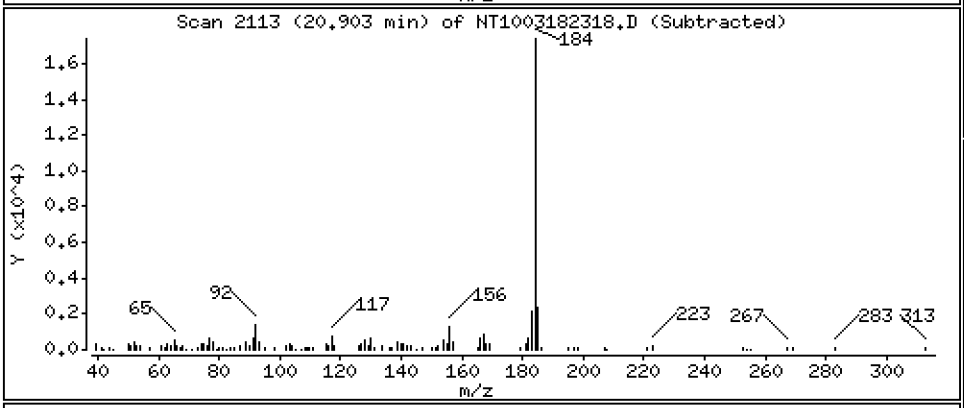
Column diameter: 0.25

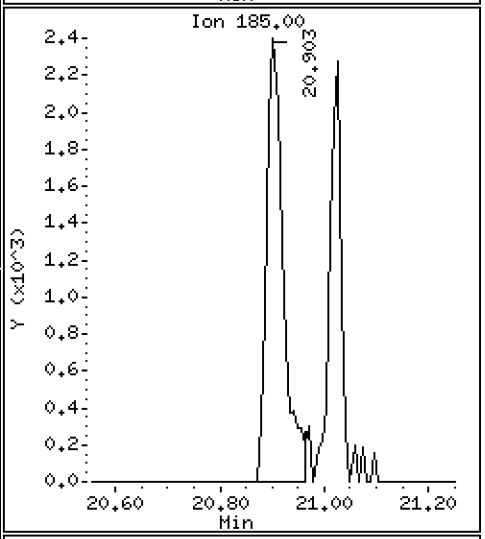
93 Benzidine

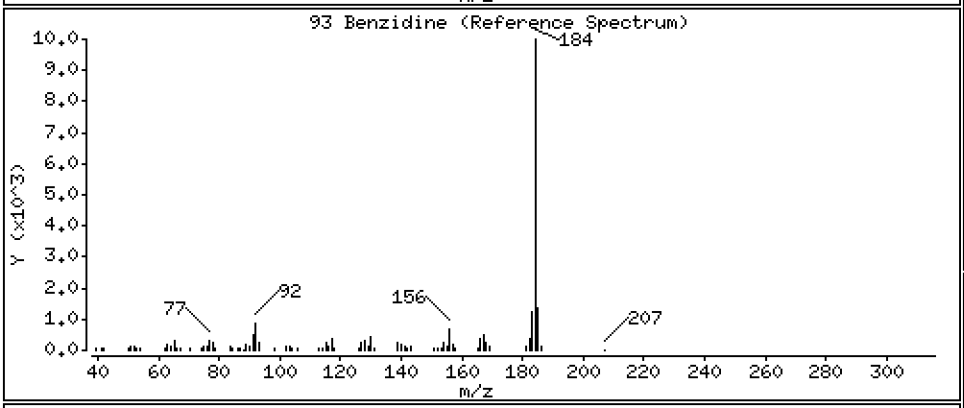
Concentration: 0.3622 ug/mL

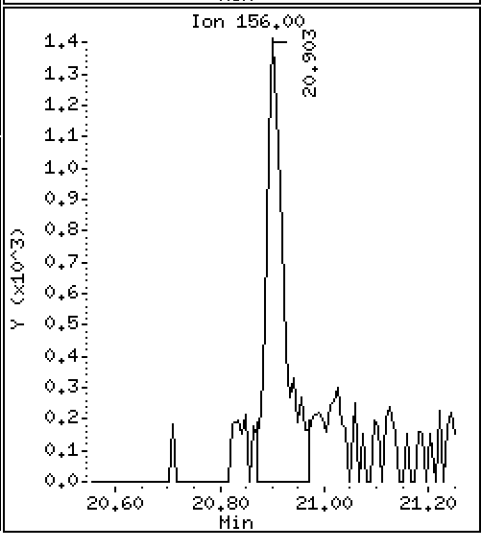


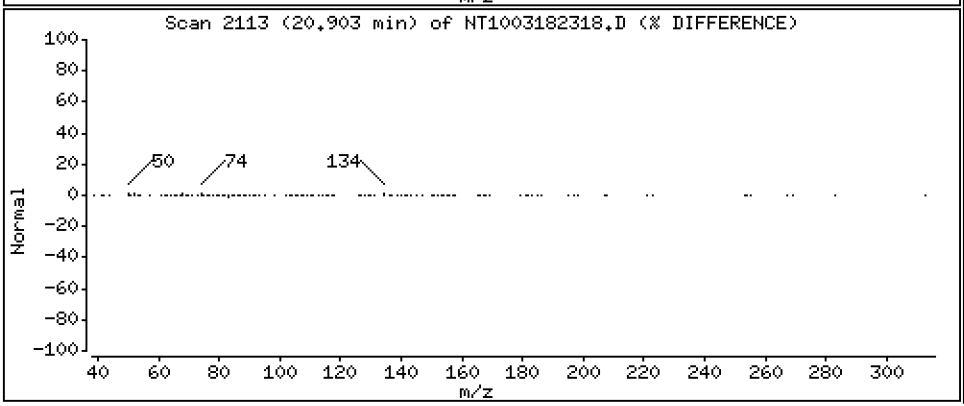












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

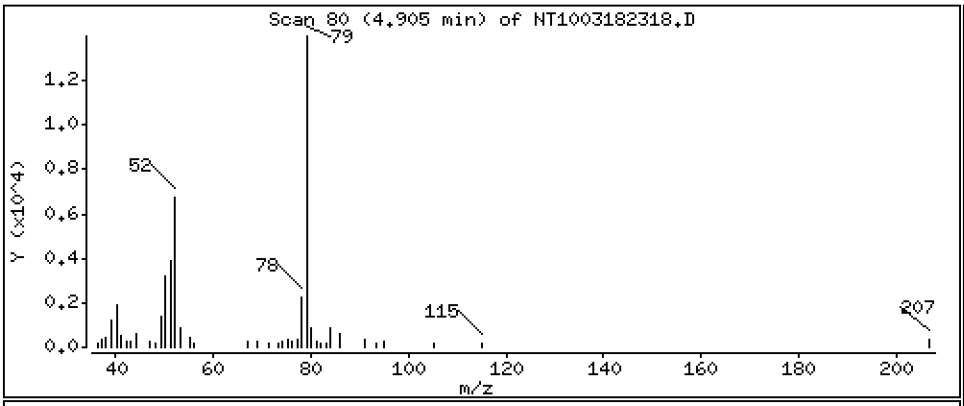
Operator: VTS

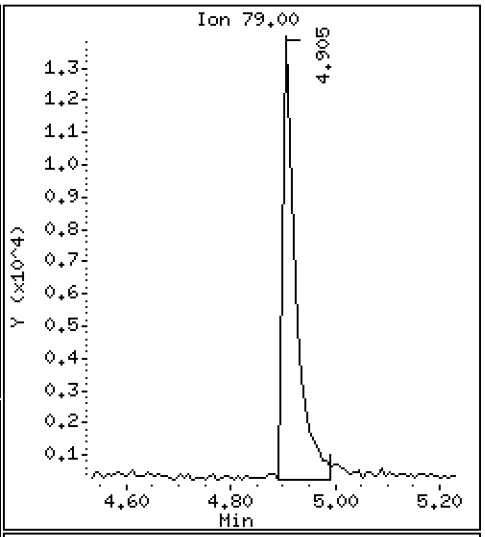
Column phase: ZB-5msi

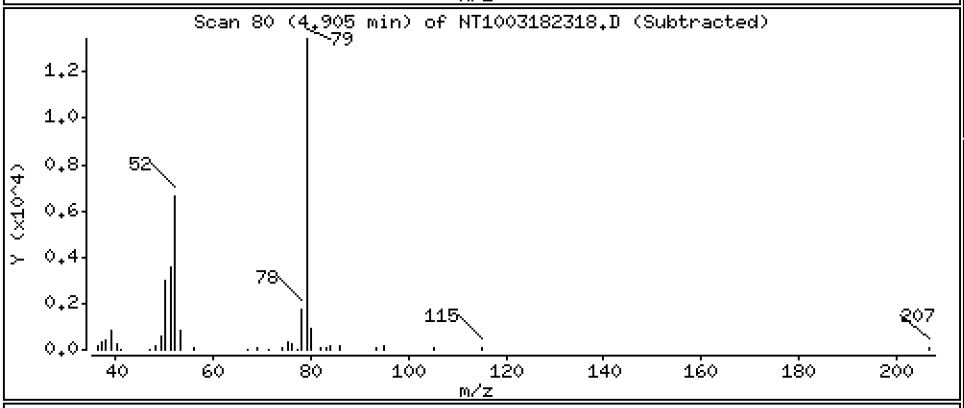
Column diameter: 0.25

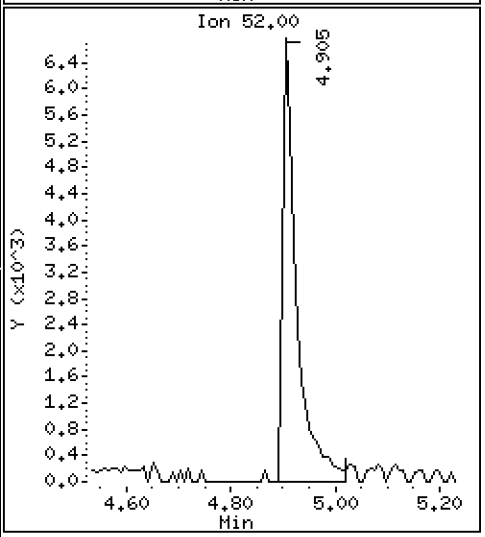
103 Pyridine

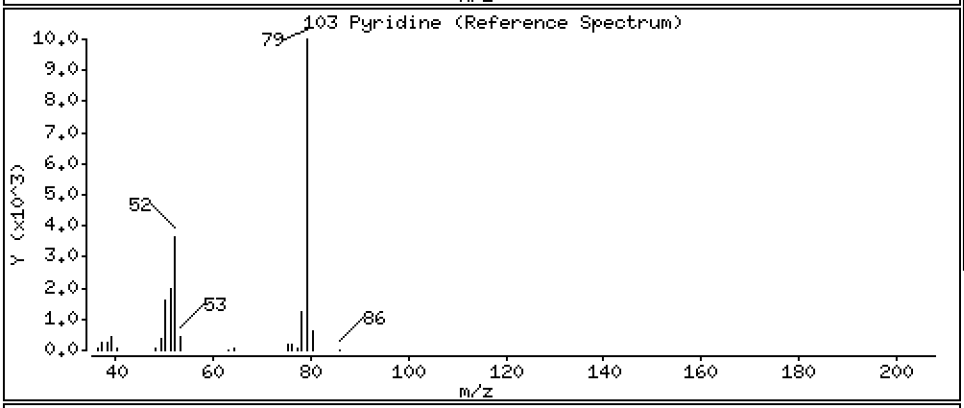
Concentration: 0.4118 ug/mL

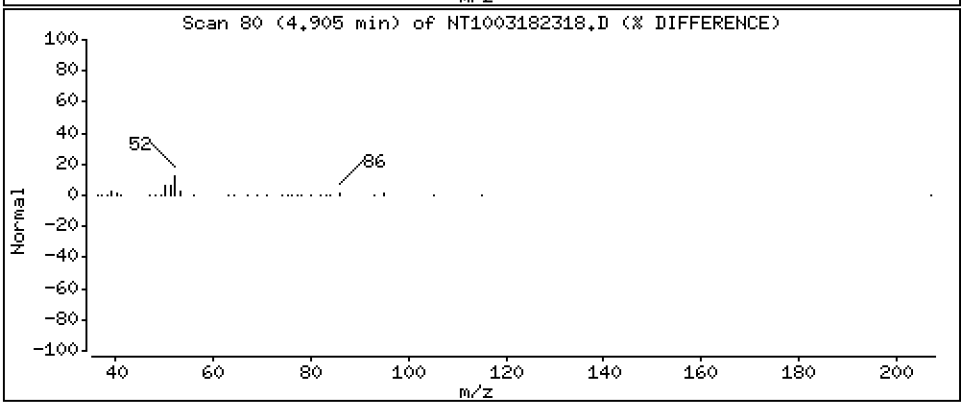












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

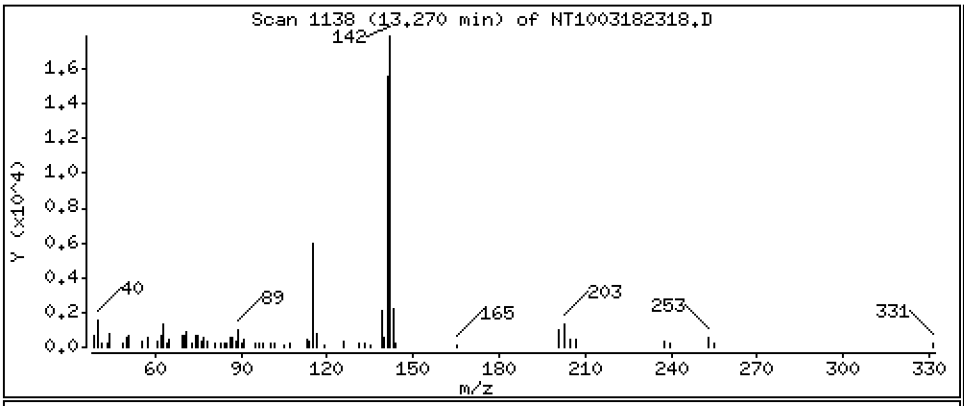
Operator: VTS

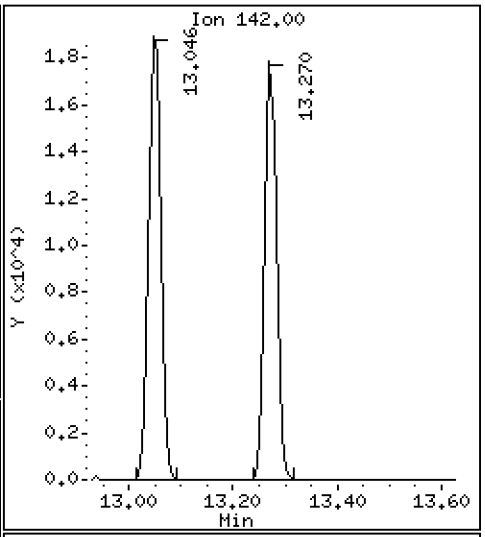
Column phase: ZB-5msi

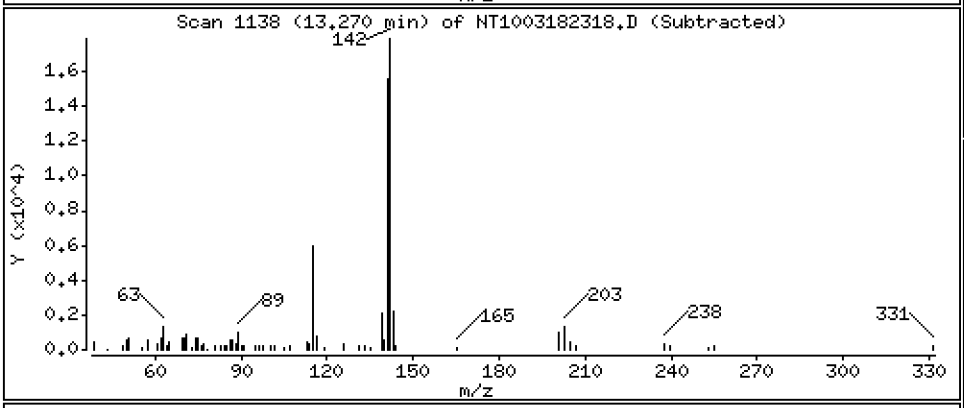
Column diameter: 0.25

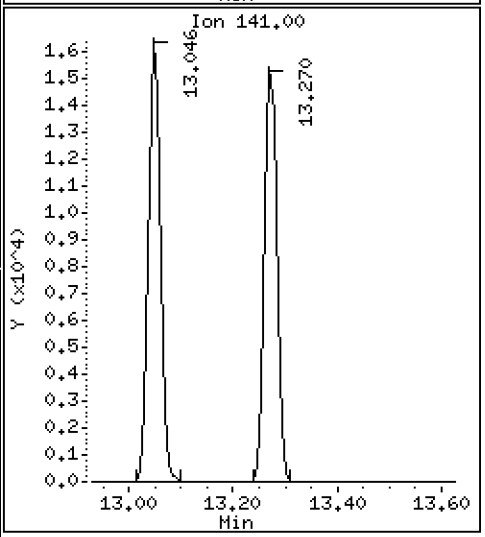
105 1-methylnaphthalene

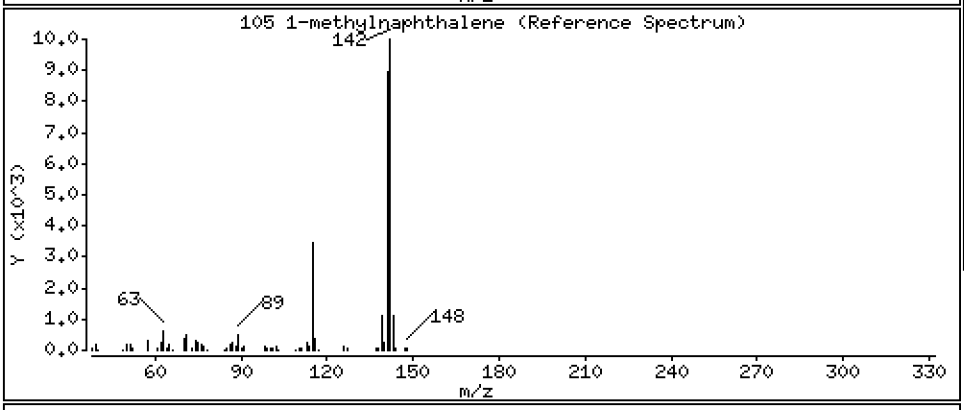
Concentration: 0.2098 ug/mL

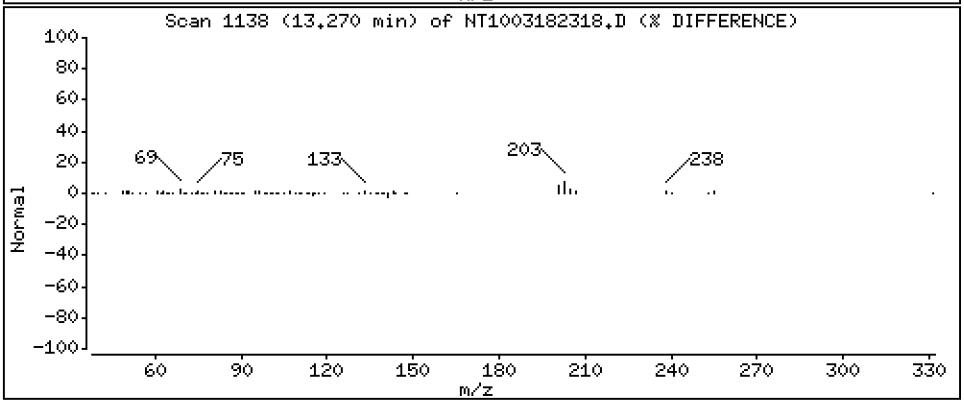












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

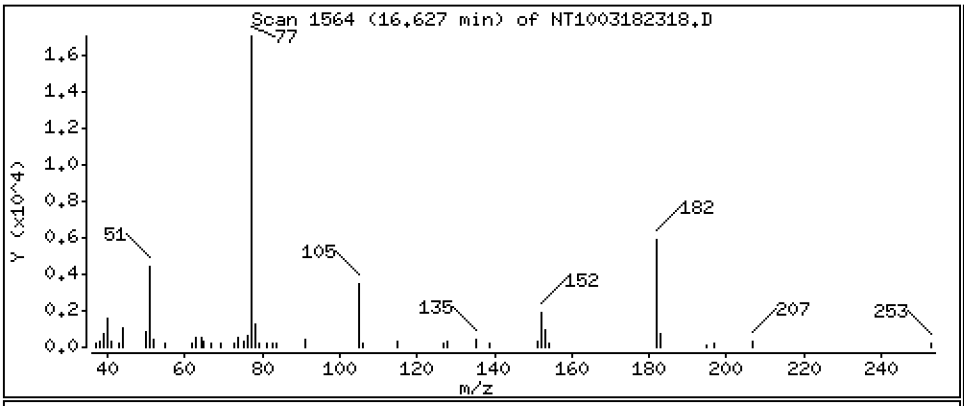
Operator: VTS

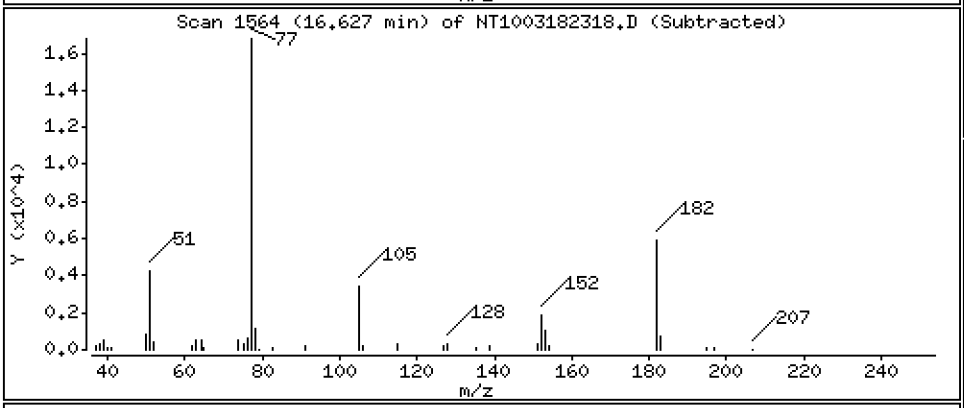
Column phase: ZB-5msi

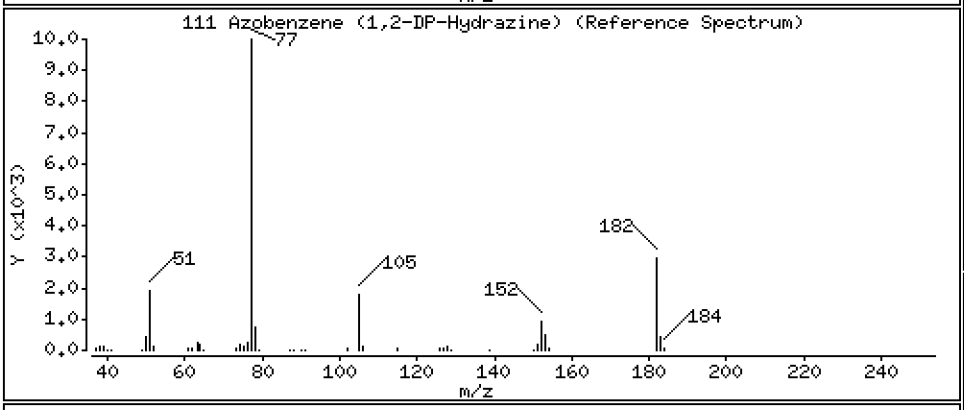
Column diameter: 0.25

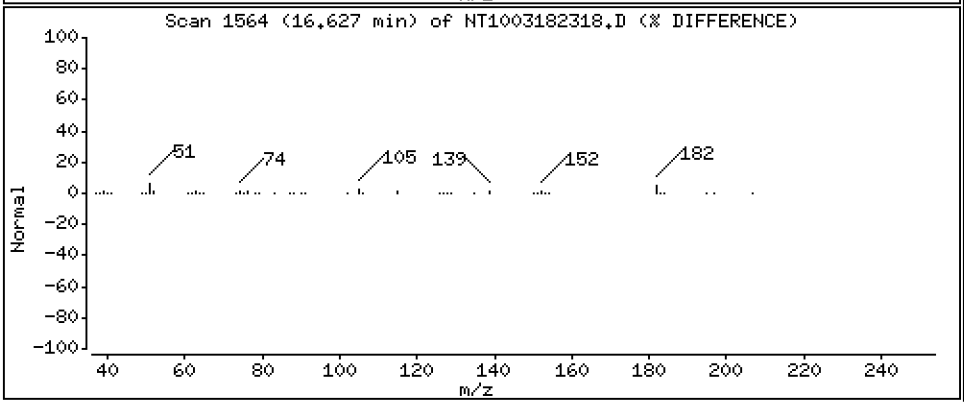
111 Azobenzene (1,2-DP-Hydrazine)

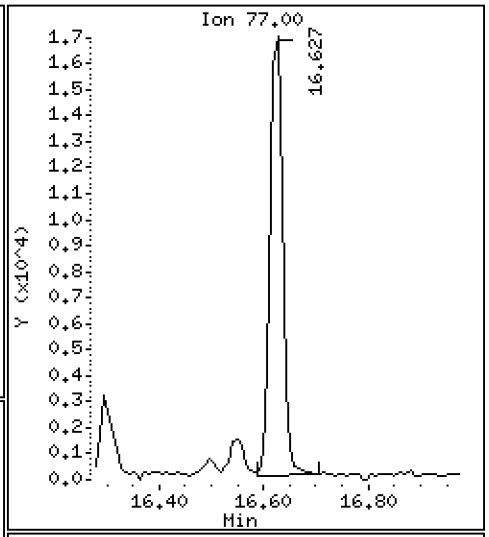
Concentration: 0.1929 ug/mL

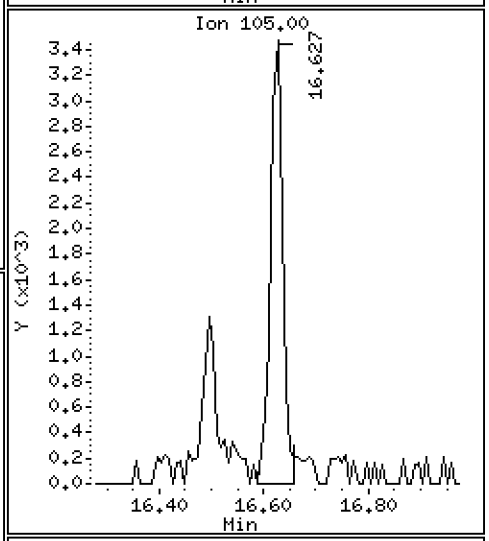


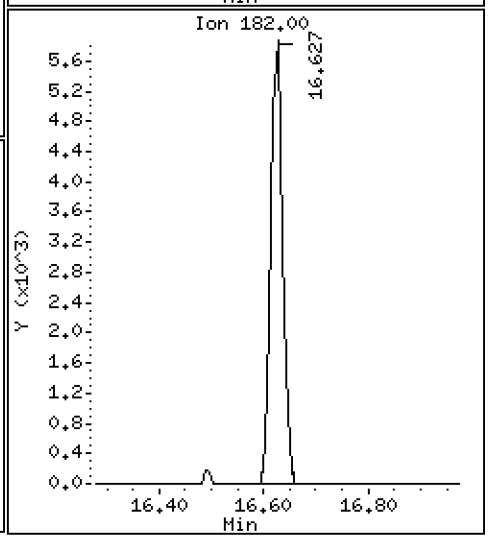












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

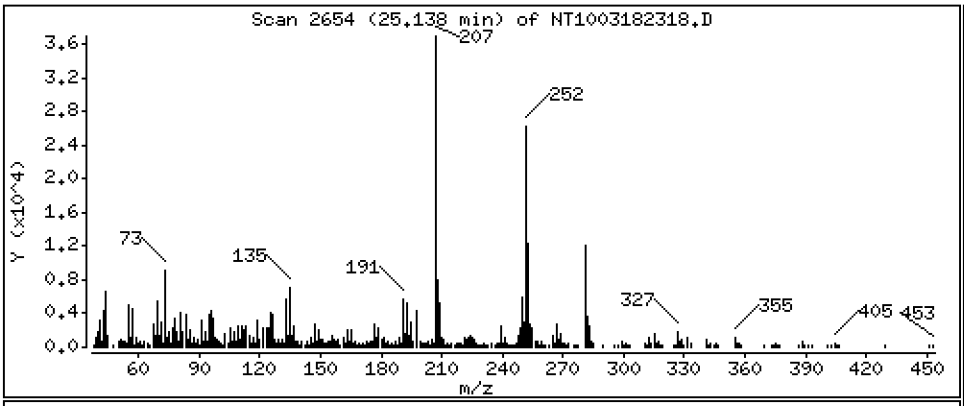
Operator: VTS

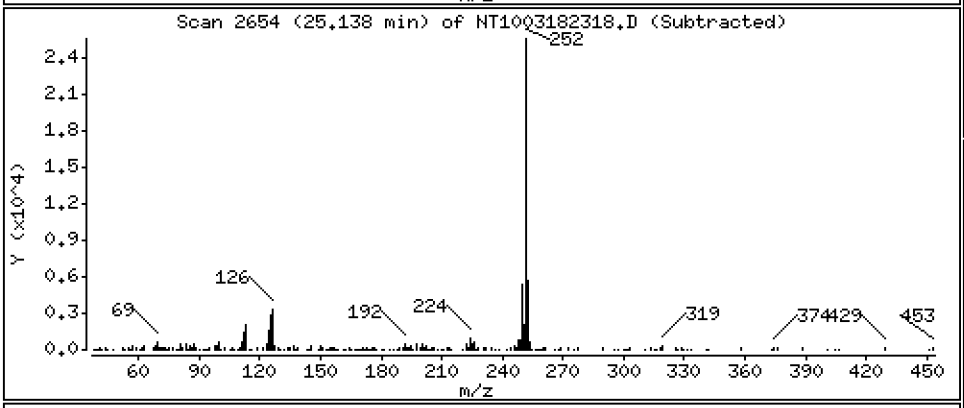
Column phase: ZB-5msi

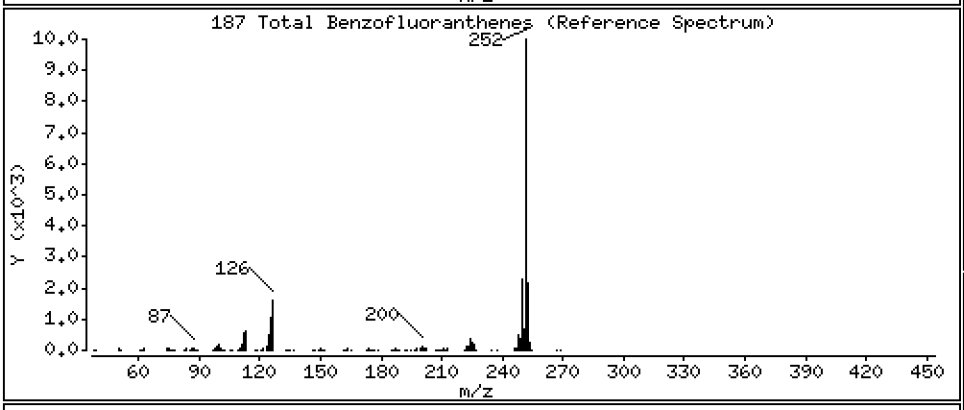
Column diameter: 0.25

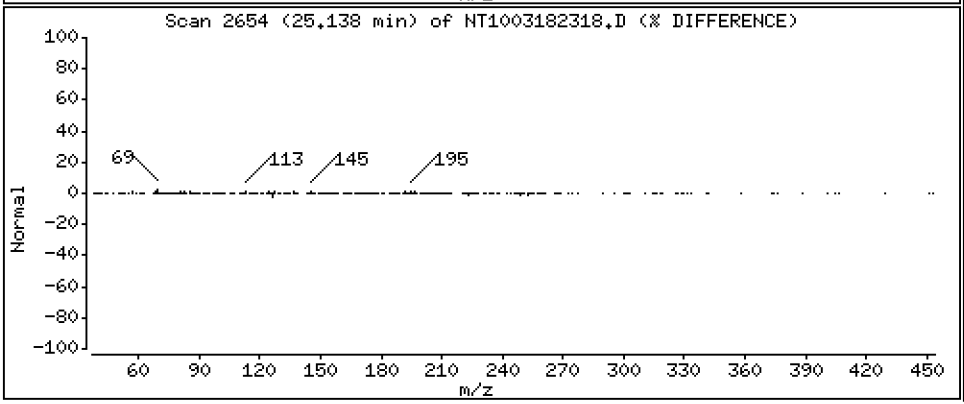
187 Total Benzofluoranthenes

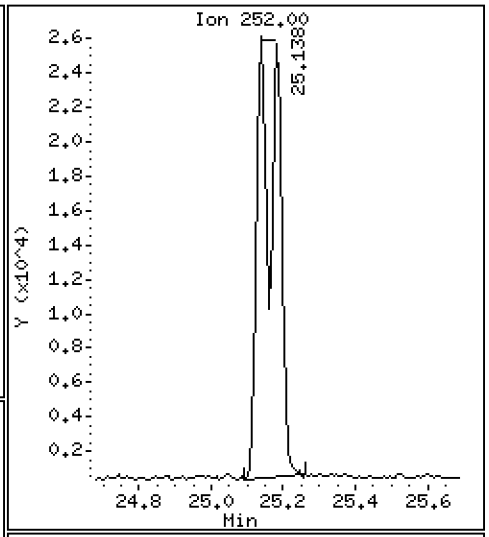
Concentration: 0.4377 ug/mL

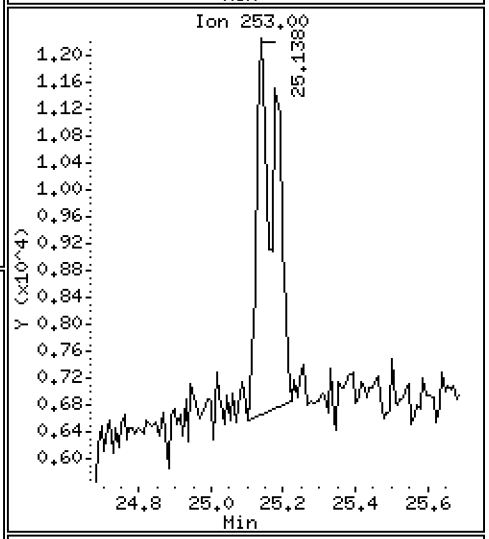


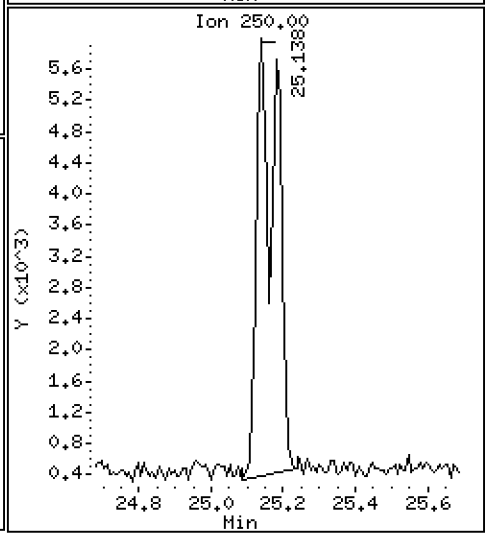












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

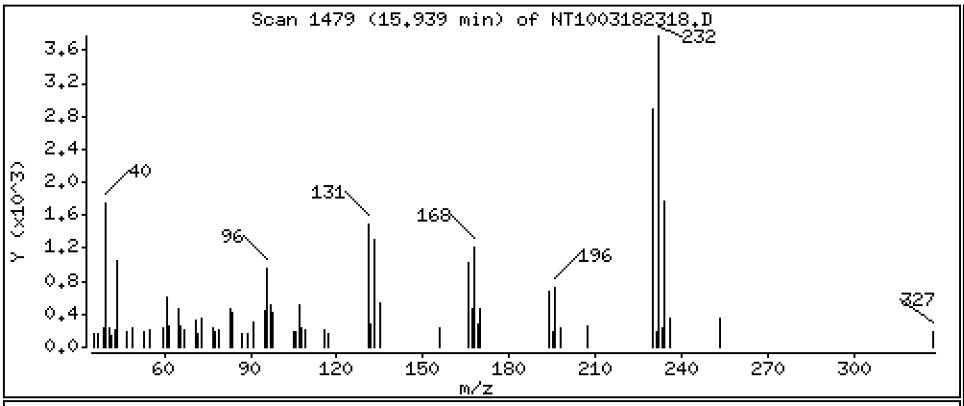
Operator: VTS

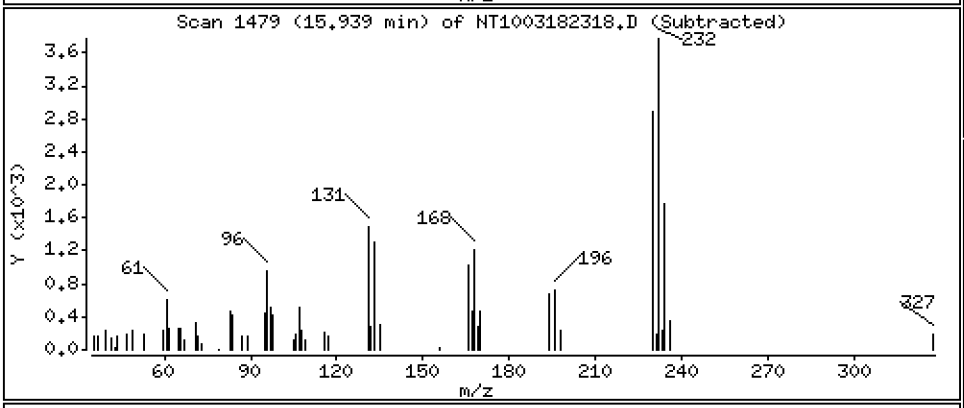
Column phase: ZB-5msi

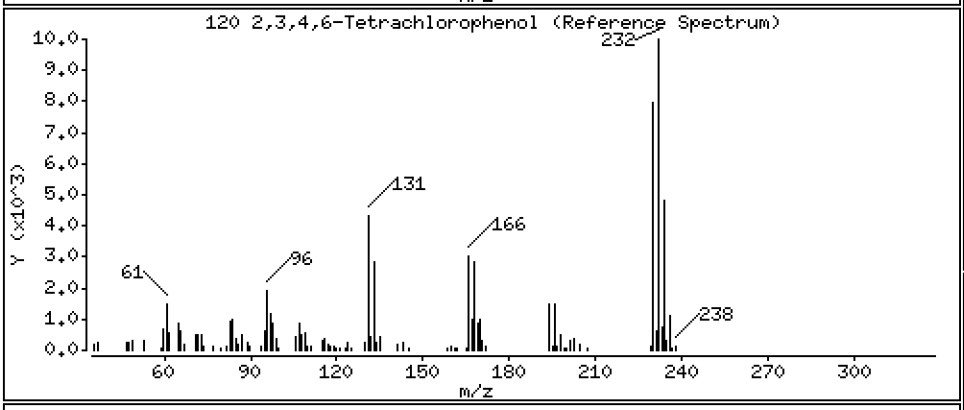
Column diameter: 0.25

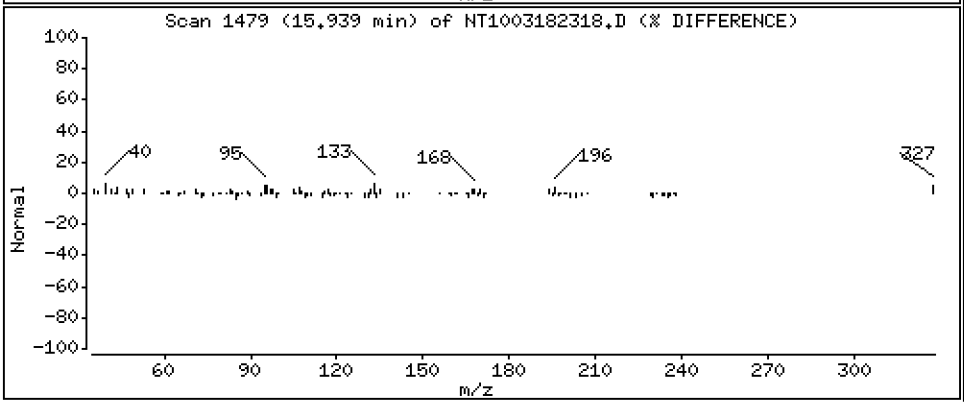
120 2,3,4,6-Tetrachlorophenol

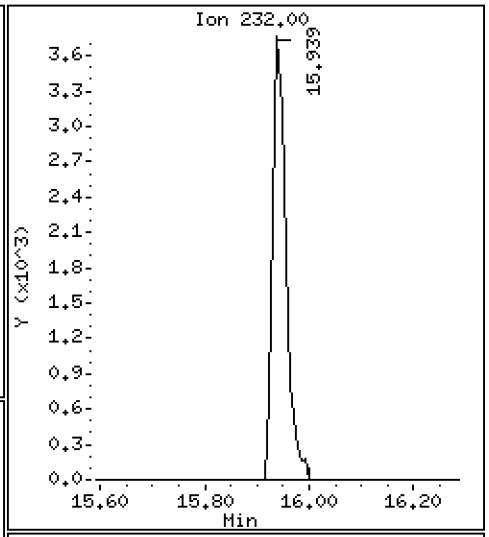
Concentration: 0.1608 ug/mL

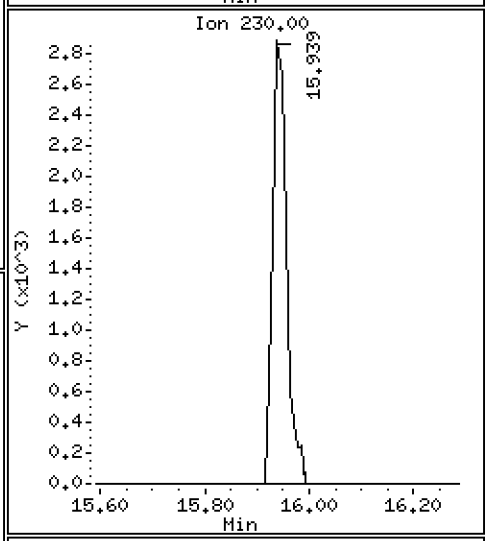


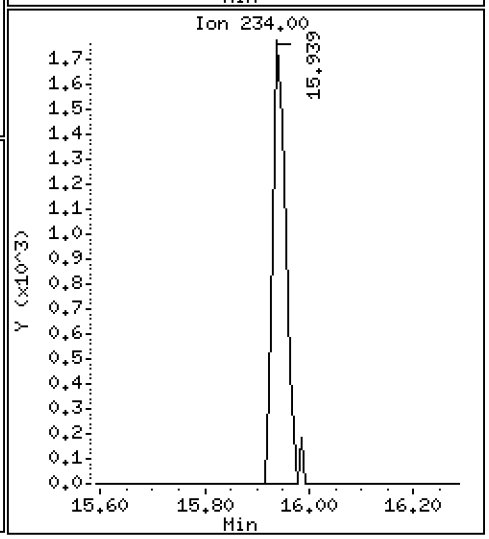












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D
Lab Smp Id: SLC0504-LCV2
Inj Date : 19-MAR-2023 04:35
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.959	6.967	(0.759)	20354	0.32901	0.3290
$	2 Phenol-d5	99	8.528	8.528	(0.930)	23740	0.29252	0.2925
	3 Phenol	94	8.543	8.551	(0.932)	17405	0.20638	0.2064
$	5 2-Chlorophenol-d4	132	8.813	8.813	(0.961)	21099	0.30445	0.3045
	4 Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	12834	0.20518	0.2052
	6 2-Chlorophenol	128	8.837	8.837	(0.964)	14832	0.20549	0.2055
	7 1,3-Dichlorobenzene	146	9.107	9.107	(0.993)	15866	0.20792	0.2079
*	8 1,4-Dichlorobenzene-d4	152	9.169	9.169	(1.000)	204568	4.00000	
	9 1,4-Dichlorobenzene	146	9.200	9.200	(1.003)	15212	0.20636	0.2064
$	10 1,2-Dichlorobenzene-d4	152	9.526	9.526	(1.039)	10847	0.21795	0.2179
	12 1,2-Dichlorobenzene	146	9.557	9.557	(1.042)	15310	0.21104	0.2110
	11 Benzyl alcohol	108	9.433	9.433	(1.029)	7773	0.19637	0.1964
	14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.728	(1.061)	4308	0.20221	0.2022(M)
	13 2-Methylphenol	108	9.651	9.651	(1.052)	12638	0.20557	0.2056
	17 Hexachloroethane	117	10.140	10.140	(1.106)	4278	0.14145	0.1414
	16 N-Nitroso-di-n-propylamine	70	9.984	9.984	(1.089)	10220	0.21054	0.2105
	15 4-Methylphenol	108	9.922	9.915	(1.082)	13467	0.20790	0.2079
$	18 Nitrobenzene-d5	82	10.256	10.256	(0.881)	15498	0.21076	0.2108
	19 Nitrobenzene	77	10.287	10.287	(0.884)	13872	0.19223	0.1922
	20 Isophorone	82	10.729	10.737	(0.922)	18563	0.20108	0.2011
	21 2-Nitrophenol	139	10.912	10.912	(0.938)	6674	0.19019	0.1902
	22 2,4-Dimethylphenol	107	10.955	10.955	(0.941)	27561	0.41580	0.4158
	23 Bis(2-Chloroethoxy)methane	93	11.150	11.150	(0.958)	13118	0.21273	0.2127
	24 Benzoic acid	105	11.040	11.150	(0.949)	11900	0.32318	0.3232(H)
	25 2,4-Dichlorophenol	162	11.362	11.362	(0.976)	21121	0.39819	0.3982
	26 1,2,4-Trichlorobenzene	180	11.545	11.545	(0.992)	13584	0.21817	0.2182
*	27 Naphthalene-d8	136	11.637	11.638	(1.000)	728529	4.00000	
	28 Naphthalene	128	11.676	11.676	(1.003)	40562	0.21017	0.2102
	29 4-Chloroaniline	127	11.792	11.800	(1.013)	28370	0.37680	0.3768
	30 Hexachlorobutadiene	225	12.024	12.024	(1.033)	7952	0.21796	0.2180
	31 4-Chloro-3-methylphenol	107	12.736	12.743	(1.094)	22248	0.38745	0.3874
	32 2-Methylnaphthalene	142	13.045	13.053	(1.121)	29845	0.21428	0.2143
	33 Hexachlorocyclopentadiene	237	13.510	13.510	(0.888)	165	0.00453	0.004534

		QUANT SIG					CONCENTRATIONS ON-COLUMN	FINAL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
34	2,4,6-Trichlorophenol	196	13.664	13.664	(0.898)	14868	0.38252	0.3825
35	2,4,5-Trichlorophenol	196	13.742	13.742	(0.903)	14754	0.34162	0.3416
$ 36	2-Fluorobiphenyl	172	13.819	13.827	(0.908)	33213	0.21350	0.2135
37	2-Chloronaphthalene	162	14.036	14.044	(0.922)	26178	0.20783	0.2078
38	2-Nitroaniline	65	14.291	14.299	(0.939)	11926	0.33706	0.3371
39	Dimethylphthalate	163	14.717	14.717	(0.967)	28633	0.22413	0.2241
40	Acenaphthylene	152	14.903	14.910	(0.979)	42635	0.21722	0.2172
41	2,6-Dinitrotoluene	165	14.856	14.864	(0.976)	11334	0.41069	0.4107
* 42	Acenaphthene-d10	164	15.220	15.220	(1.000)	393259	4.00000	
43	3-Nitroaniline	138	15.143	15.143	(0.995)	10529	0.33801	0.3380
44	Acenaphthene	153	15.282	15.282	(1.004)	24532	0.20232	0.2023
45	2,4-Dinitrophenol	184	15.367	15.351	(1.010)	364	0.02186	0.02186(M)
46	Dibenzofuran	168	15.606	15.606	(1.025)	36985	0.20684	0.2068
47	4-Nitrophenol	109	15.467	15.460	(1.016)	4659	0.23780	0.2378(M)
48	2,4-Dinitrotoluene	165	15.661	15.668	(1.029)	12819	0.30709	0.3071
50	Diethylphthalate	149	16.163	16.171	(1.062)	28239	0.22529	0.2253
49	Fluorene	166	16.318	16.318	(1.072)	22759	0.16178	0.1618
51	4-Chlorophenyl-phenylether	204	16.295	16.295	(1.071)	8794	0.13146	0.1315
52	4-Nitroaniline	138	16.410	16.410	(1.078)	8611	0.30675	0.3068
53	4,6-Dinitro-2-methylphenol	198	16.495	16.503	(0.904)	4726	0.21885	0.2188
54	N-Nitrosodiphenylamine	169	16.549	16.557	(0.907)	20108	0.21048	0.2105
$ 55	2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	4823	0.26067	0.2607
56	4-Bromophenyl-phenylether	248	17.305	17.305	(0.949)	8690	0.21744	0.2174
57	Hexachlorobenzene	284	17.621	17.621	(0.966)	9083	0.21677	0.2168
58	Pentachlorophenol	266	17.978	17.978	(0.986)	5020	0.20250	0.2025
* 59	Phenanthrene-d10	188	18.241	18.241	(1.000)	714551	4.00000	
60	Phenanthrene	178	18.287	18.295	(1.003)	39981	0.20520	0.2052
61	Anthracene	178	18.380	18.380	(1.008)	40405	0.21618	0.2162
62	Carbazole	167	18.713	18.713	(1.026)	34976	0.20883	0.2088
63	Di-n-butylphthalate	149	19.494	19.494	(1.069)	47344	0.21025	0.2103
64	Fluoranthene	202	20.670	20.670	(0.888)	47653	0.19455	0.1946
65	Pyrene	202	21.096	21.096	(0.906)	48865	0.19448	0.1945
$ 66	Terphenyl-d14	244	21.374	21.374	(0.918)	39365	0.20862	0.2086
67	Butylbenzylphthalate	149	22.296	22.296	(0.958)	21741	0.24631	0.2463
68	Benzo(a)anthracene	228	23.248	23.248	(0.999)	49059	0.22801	0.2280
* 69	Chrysene-d12	240	23.279	23.279	(1.000)	609569	4.00000	
70	3,3'-Dichlorobenzidine	252	23.202	23.209	(0.997)	45584	0.66142	0.6614
71	Chrysene	228	23.318	23.326	(1.002)	44238	0.21045	0.2105
72	bis(2-Ethylhexyl)phthalate	149	23.310	23.318	(0.959)	29996	0.19942	0.1994
* 134	Di-n-octylphthalate-d4	153	24.301	24.301	(1.000)	1028437	4.00000	
73	Di-n-octylphthalate	149	24.309	24.309	(1.000)	53924	0.20036	0.2004
74	Benzo(b)fluoranthene	252	25.137	25.145	(0.970)	49865	0.21758	0.2176
75	Benzo(k)fluoranthene	252	25.184	25.184	(0.972)	52894	0.22729	0.2273(M)
76	Benzo(a)pyrene	252	25.795	25.803	(0.995)	45910	0.22406	0.2241
* 77	Perylene-d12	264	25.919	25.919	(1.000)	707008	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.602	28.594	(1.104)	51606	0.19797	0.1980
79	Dibenzo(a,h)anthracene	278	28.610	28.618	(1.104)	42991	0.19865	0.1986
80	Benzo(g,h,i)perylene	276	29.379	29.402	(1.133)	44111	0.19553	0.1955(M)
90	N-Nitrosodimethylamine	74	4.850	4.850	(0.529)	16481	0.41758	0.4176
91	Aniline	93	8.628	8.636	(0.941)	35887	0.41530	0.4153
93	Benzidine	184	20.902	20.902	(0.898)	36439	0.36218	0.3622
103	Pyridine	79	4.904	4.881	(0.535)	24960	0.41178	0.4118
105	1-methylnaphthalene	142	13.270	13.277	(1.140)	26768	0.20977	0.2098
111	Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.626	(1.092)	27015	0.19294	0.1929

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.137	25.184	(0.970)	96856	0.43772	0.4377(M)
120 2,3,4,6-Tetrachlorophenol	232	15.939	15.939	(1.047)	6366	0.16079	0.1608

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182318.D
Lab Smp Id: SLC0504-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	204568	-2.37
27 Naphthalene-d8	795859	397930	1591718	728529	-8.46
42 Acenaphthene-d10	432510	216255	865020	393259	-9.08
59 Phenanthrene-d10	808891	404446	1617782	714551	-11.66
69 Chrysene-d12	657926	328963	1315852	609569	-7.35
134 Di-n-octylphthala	1187734	593867	2375468	1028437	-13.41
77 Perylene-d12	770107	385054	1540214	707008	-8.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	-0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	-0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	-0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	-0.00
69 Chrysene-d12	23.28	22.78	23.78	23.28	-0.00
134 Di-n-octylphthala	24.30	23.80	24.80	24.30	-0.00
77 Perylene-d12	25.92	25.42	26.42	25.92	-0.00

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

REVIEW SUMMARY FOR FILE - NT1003182318.D

Lab ID: SLC0504-LCV2
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 04:35

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0095	Benzoic acid

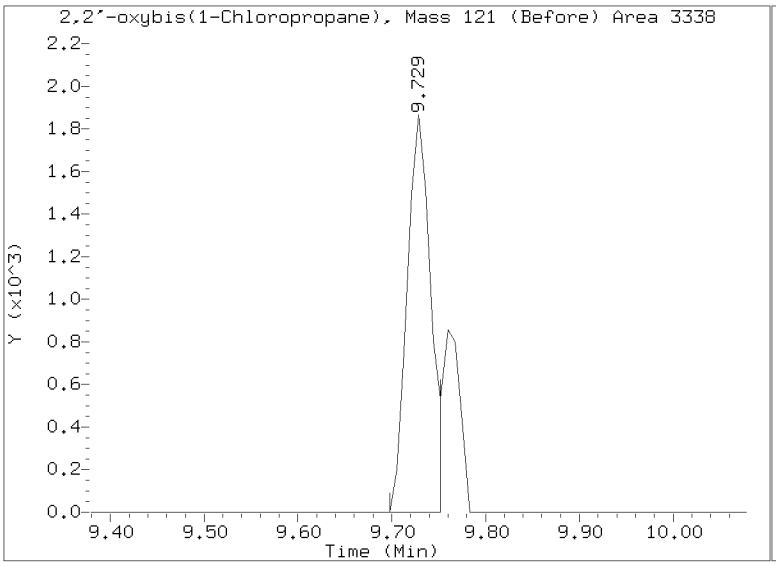
RRT check based on Ccal File: NT1003182316.D

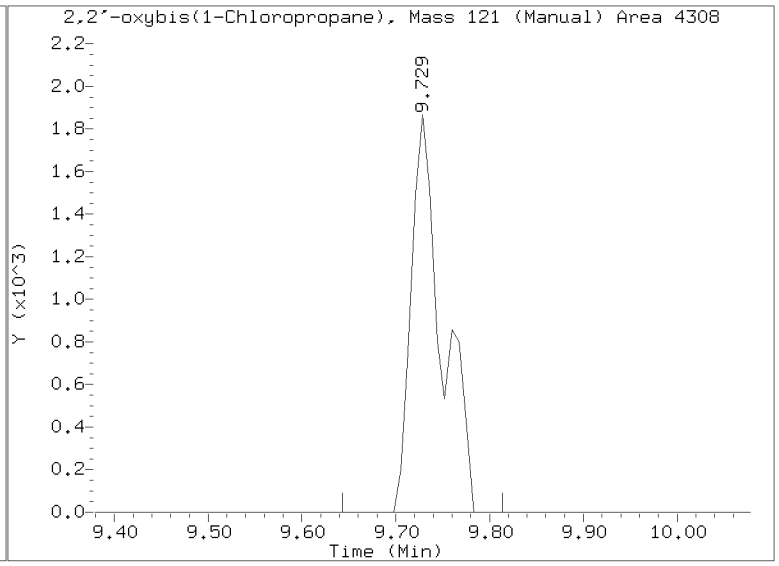
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

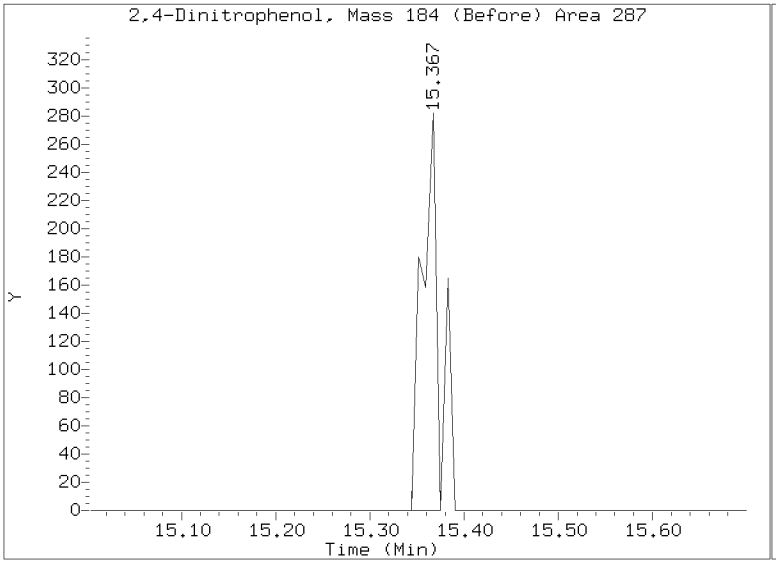
* Only compounds listed in the work order have been verified by the analyst *

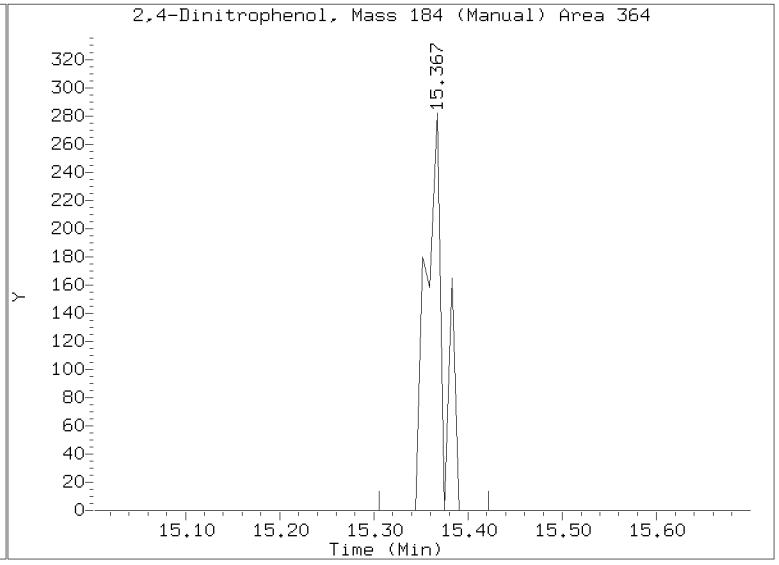
Quant Ion Manual Peak Adjustment Report

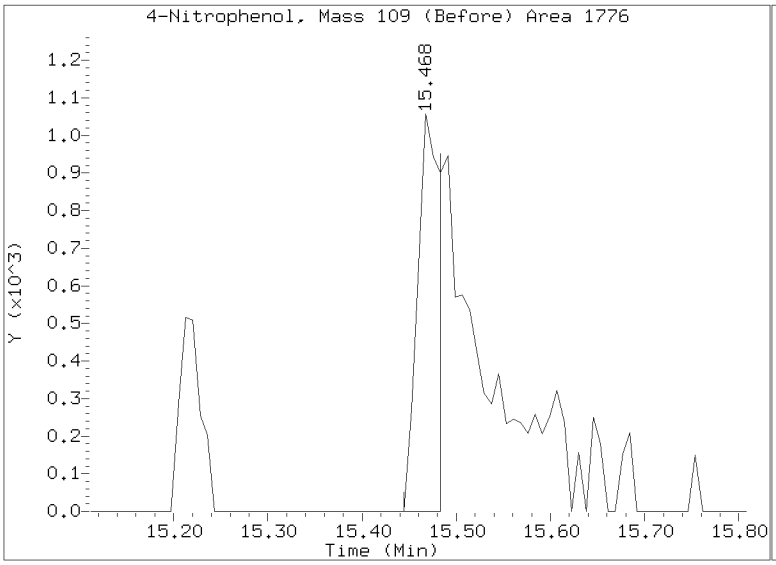
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182318.D
Injection Date: 19-MAR-2023 04:35
Lab ID:SLC0504-LCV2 Client ID:
Report Date: 04/04/2023 10:37

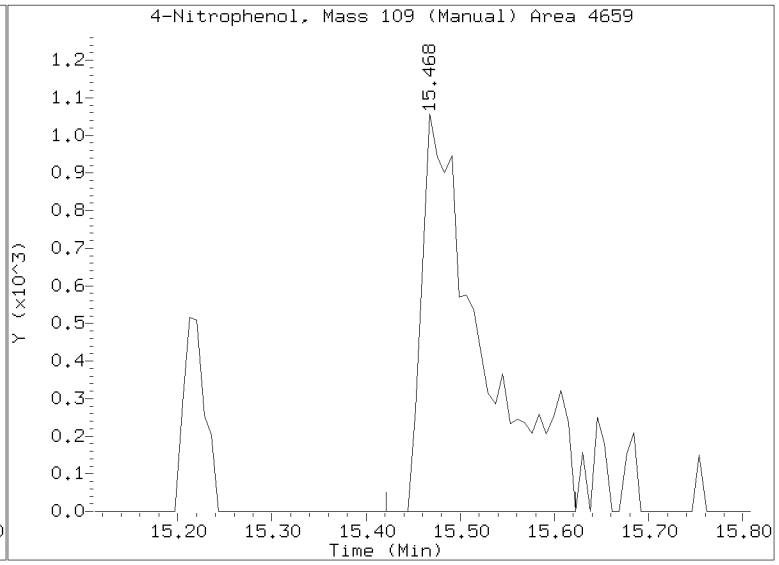






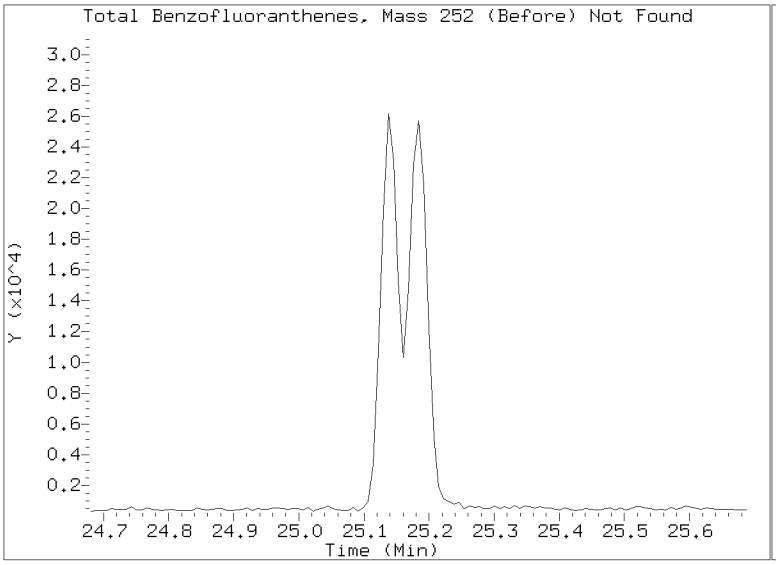


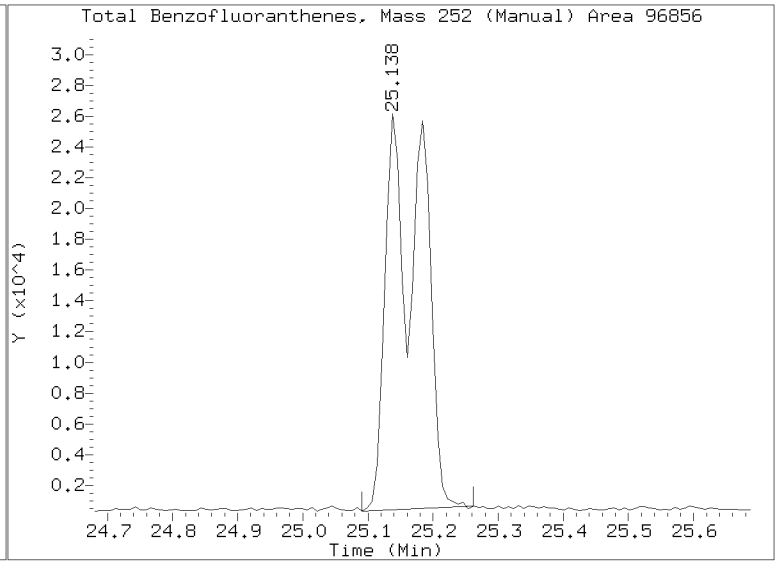


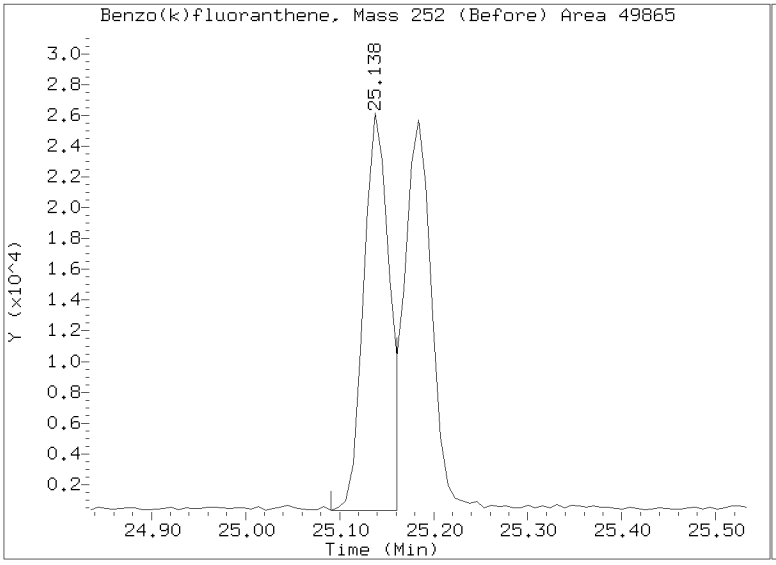


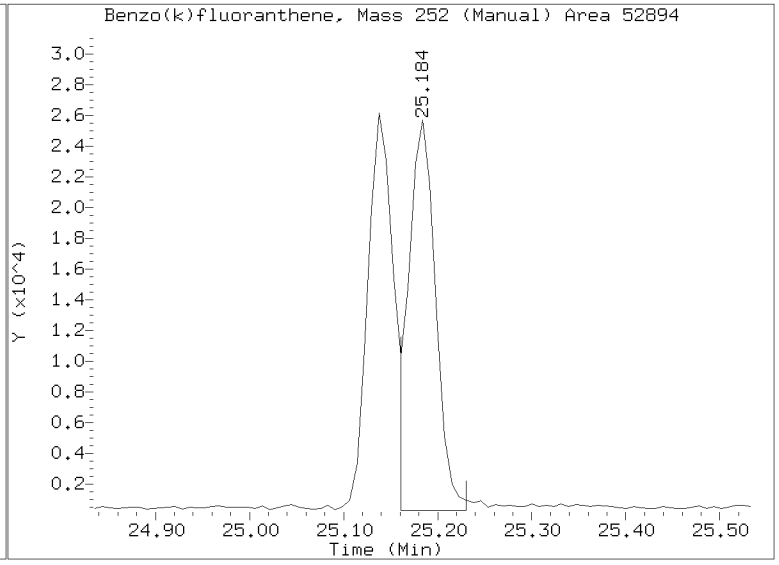
Quant Ion Manual Peak Adjustment Report

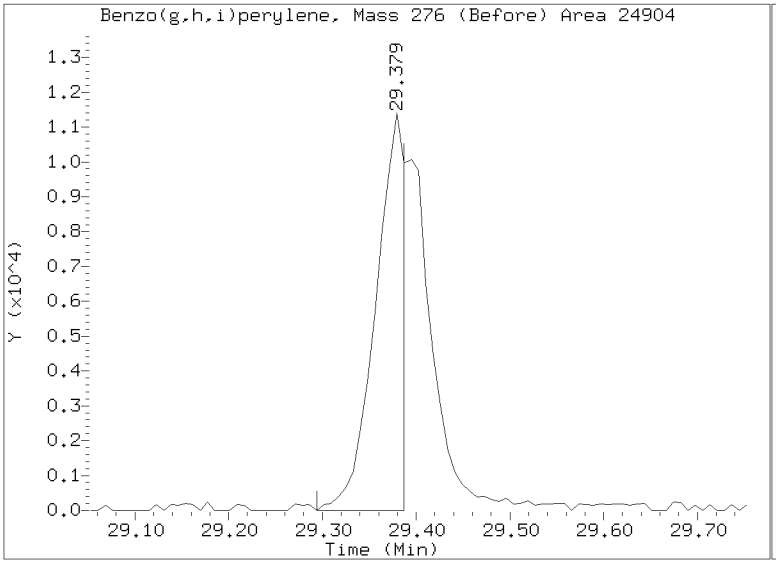
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182318.D
Injection Date: 19-MAR-2023 04:35
Lab ID:SLC0504-LCV2 Client ID:
Report Date: 04/04/2023 10:37

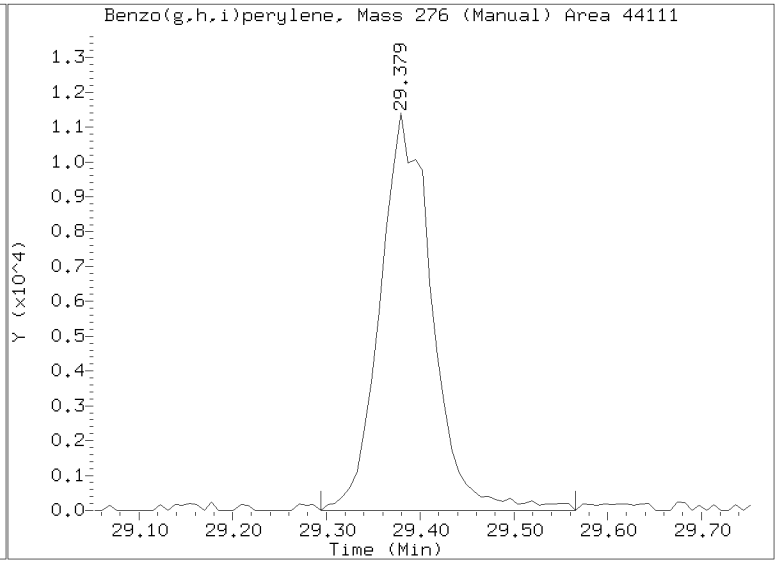












Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182302.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/18/23
Lab Sample ID:	SLC0504-ICV1	Injection Time:	18:19
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Phenol	A	5.0000	4.8	1.6490140	1.5867220		-3.8	+/-20	
4-Methylphenol	A	5.0000	5.1	1.2665770	1.2865760		1.6	+/-20	
Naphthalene	A	5.0000	4.9	1.0596590	1.0333840		-2.5	+/-20	
2-Methylnaphthalene	A	5.0000	5.0	0.7647129	0.7649528		0.04	+/-20	
Acenaphthylene	A	5.0000	4.9	1.9964080	1.9501440		-2.3	+/-20	
Dimethylphthalate	A	5.0000	5.0	1.2994310	1.2915380		-0.6	+/-20	
Acenaphthene	A	5.0000	5.0	1.2333460	1.2209550		-1.0	+/-20	
Dibenzofuran	A	5.0000	4.9	1.8187540	1.7754690		-2.4	+/-20	
Fluorene	A	5.0000	2.7	1.4308680	0.7645006		-46.6	+/-20	*
Phenanthrene	A	5.0000	5.0	1.0907130	1.0840780		-0.6	+/-20	
Anthracene	A	5.0000	5.2	1.0462760	1.0871170		3.9	+/-20	
Fluoranthene	A	5.0000	4.6	1.6072690	1.4910270		-7.2	+/-20	
Pyrene	A	5.0000	4.7	1.6487720	1.5455930		-6.3	+/-20	
Butylbenzylphthalate	A	5.0000	5.5	0.5292894	0.6565293		9.5	+/-20	
Benzo(a)anthracene	A	5.0000	4.9	1.4118770	1.3925070		-1.4	+/-20	
Chrysene	A	5.0000	4.9	1.3793780	1.3575250		-1.6	+/-20	
bis(2-Ethylhexyl)phthalate	A	5.0000	4.6	0.5248968	0.5380866		-8.3	+/-20	
Benzofluoranthenes, Total	A	10.000	10.1	1.2519020	1.2656720		1.1	+/-20	
Benzo(a)pyrene	A	5.0000	5.2	1.1592370	1.1951380		3.1	+/-20	
Indeno(1,2,3-cd)pyrene	A	5.0000	5.0	1.4748270	1.4781620		0.2	+/-20	
Dibenzo(a,h)anthracene	A	5.0000	5.0	1.2244340	1.2357760		0.9	+/-20	
Benzo(g,h,i)perylene	A	5.0000	5.0	1.2763410	1.2876400		0.9	+/-20	
2-Fluorophenol	A	7.5000	7.38	1.2096460	1.1908040		-1.6	+/-20	
Phenol-d5	A	7.5000	7.44	1.5868760	1.5730540		-0.9	+/-20	
2-Chlorophenol-d4	A	7.5000	7.49	1.3550800	1.3538850		-0.09	+/-20	
1,2-Dichlorobenzene-d4	A	5.0000	4.93	0.9731556	0.9595554		-1.4	+/-20	
Nitrobenzene-d5	A	5.0000	5.04	0.4037447	0.4067741		0.8	+/-20	
2-Fluorobiphenyl	A	5.0000	4.87	1.5822890	1.5416220		-2.6	+/-20	
2,4,6-Tribromophenol	A	7.5000	7.45	0.1585901	0.1850709		-0.7	+/-20	
p-Terphenyl-d14	A	5.0000	4.71	1.2381950	1.1671130		-5.7	+/-20	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182302.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/18/23
Lab Sample ID:	SLC0504-ICV1	Injection Time:	18:19
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	42885.5000	1.0000			
Naphthalene-d8	A	4.0000	4.0	156116.5000	1.0000			
Acenaphthene-d10	A	4.0000	4.0	84306.5000	1.0000			
Phenanthrene-d10	A	4.0000	4.0	143212.3000	1.0000			
Chrysene-d12	A	4.0000	4.0	86767.0000	1.0000			
Di-n-Octylphthalate-d4	A	4.0000	4.0	125079.3000	1.0000			
Perylene-d12	A	4.0000	4.0	105387.3000	1.0000			

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182302.D

Page 1

Date : 18-MAR-2023 18:19

Client ID:

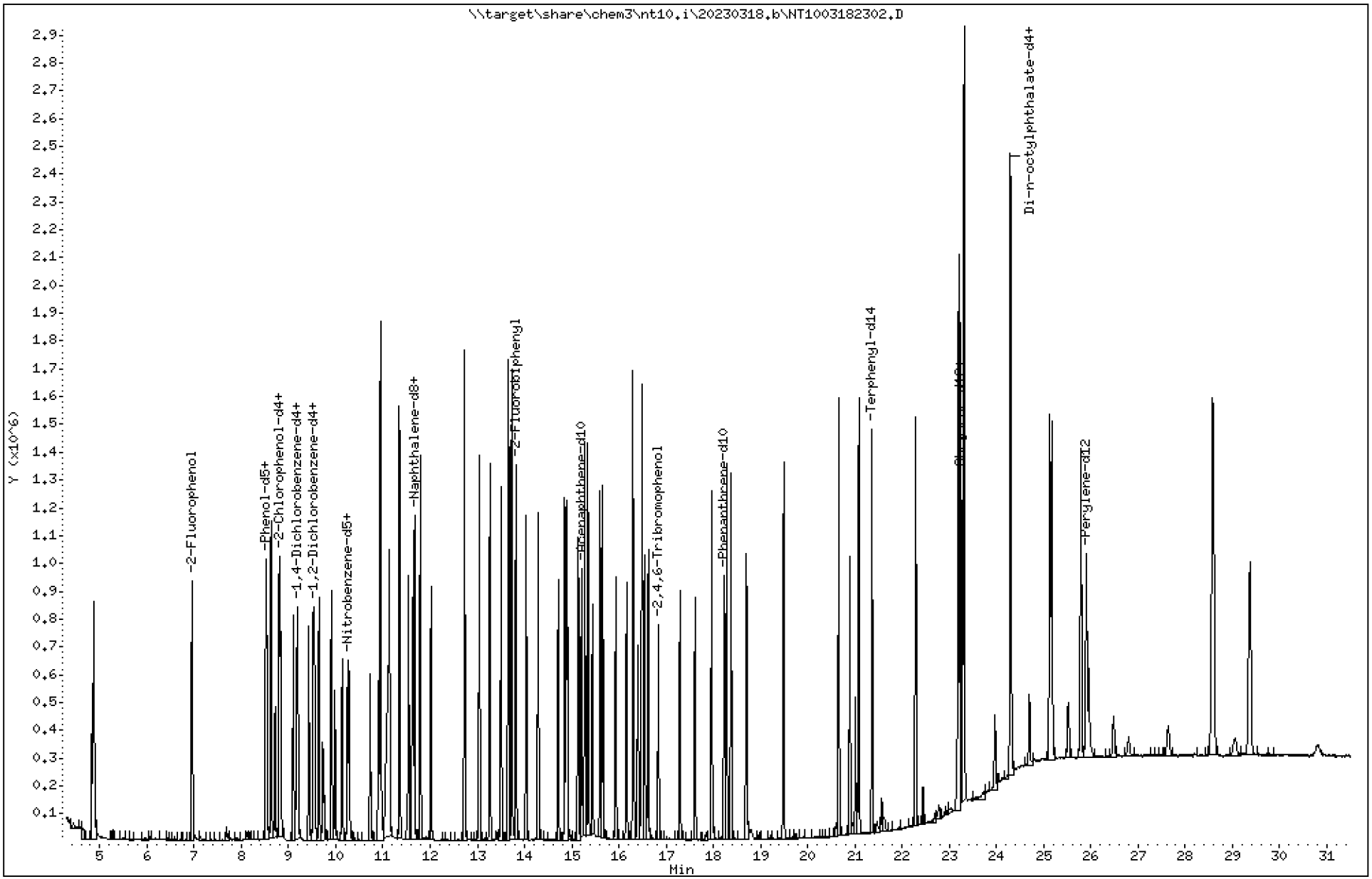
Instrument: nt10.i

Sample Info: SLC0504-ICV1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182302.D
Lab Smp Id: SLC0504-ICV1
Inj Date : 18-MAR-2023 18:19
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-ICV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.952	6.952	(0.759)	416204	7.50000	7.383
$	2 Phenol-d5	99	8.520	8.520	(0.930)	549806	7.50000	7.435
	3 Phenol	94	8.536	8.536	(0.932)	369722	5.00000	4.811
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	473203	7.50000	7.493
	4 Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.951)	273010	5.00000	4.790
	6 2-Chlorophenol	128	8.829	8.829	(0.964)	316526	5.00000	4.813
	7 1,3-Dichlorobenzene	146	9.100	9.100	(0.993)	334642	5.00000	4.813
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	186408	4.00000	
	9 1,4-Dichlorobenzene	146	9.193	9.193	(1.003)	328586	5.00000	4.892
$	10 1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	223586	5.00000	4.930
	12 1,2-Dichlorobenzene	146	9.550	9.550	(1.042)	321612	5.00000	4.865
	11 Benzyl alcohol	108	9.426	9.426	(1.029)	189984	5.00000	5.267
	14 2,2'-oxybis(1-Chloropropane)	121	9.721	9.721	(1.061)	92247	5.00000	4.752(M)
	13 2-Methylphenol	108	9.643	9.643	(1.053)	280885	5.00000	5.014
	17 Hexachloroethane	117	10.132	10.132	(1.106)	134960	5.00000	4.897
	16 N-Nitroso-di-n-propylamine	70	9.977	9.977	(1.089)	219253	5.00000	4.957
	15 4-Methylphenol	108	9.907	9.907	(1.081)	299785	5.00000	5.079
$	18 Nitrobenzene-d5	82	10.249	10.249	(0.882)	350202	5.00000	5.038
	19 Nitrobenzene	77	10.287	10.287	(0.885)	334763	5.00000	4.907
	20 Isophorone	82	10.730	10.730	(0.923)	428500	5.00000	4.910
	21 2-Nitrophenol	139	10.905	10.905	(0.938)	200665	5.00000	6.010
	22 2,4-Dimethylphenol	107	10.947	10.947	(0.942)	580710	10.0000	9.267
	23 Bis(2-Chloroethoxy)methane	93	11.142	11.142	(0.959)	279600	5.00000	4.796
	24 Benzoic acid	105	11.134	11.134	(0.958)	788754	20.0000	21.53
	25 2,4-Dichlorophenol	162	11.346	11.346	(0.976)	513611	10.0000	10.24
	26 1,2,4-Trichlorobenzene	180	11.538	11.538	(0.993)	342040	5.00000	5.811
*	27 Naphthalene-d8	136	11.623	11.623	(1.000)	688740	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.004)	889666	5.00000	4.876
	29 4-Chloroaniline	127	11.793	11.793	(1.015)	670457	10.0000	9.419
	30 Hexachlorobutadiene	225	12.017	12.017	(1.034)	170548	5.00000	4.945
	31 4-Chloro-3-methylphenol	107	12.729	12.729	(1.095)	551876	10.0000	10.17
	32 2-Methylnaphthalene	142	13.046	13.046	(1.122)	658567	5.00000	5.002
	33 Hexachlorocyclopentadiene	237	13.503	13.503	(0.888)	339715	10.0000	9.823

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.658	13.658	(0.898)	391851	10.0000	10.61
	35	2,4,5-Trichlorophenol	196	13.727	13.727	(0.902)	413053	10.0000	10.07
$	36	2-Fluorobiphenyl	172	13.820	13.820	(0.908)	720059	5.00000	4.871
	37	2-Chloronaphthalene	162	14.029	14.029	(0.922)	576447	5.00000	4.816
	38	2-Nitroaniline	65	14.285	14.285	(0.939)	348796	10.0000	10.37
	39	Dimethylphthalate	163	14.710	14.710	(0.967)	603250	5.00000	4.970
	40	Acenaphthylene	152	14.896	14.896	(0.979)	910871	5.00000	4.884
	41	2,6-Dinitrotoluene	165	14.857	14.857	(0.977)	279639	10.0000	10.66
*	42	Acenaphthene-d10	164	15.213	15.213	(1.000)	373663	4.00000	
	43	3-Nitroaniline	138	15.136	15.136	(0.995)	329814	10.0000	11.14
	44	Acenaphthene	153	15.275	15.275	(1.004)	570282	5.00000	4.950
	45	2,4-Dinitrophenol	184	15.345	15.345	(1.009)	333195	20.0000	20.21
	46	Dibenzofuran	168	15.600	15.600	(1.025)	829284	5.00000	4.881
	47	4-Nitrophenol	109	15.437	15.437	(1.015)	165168	10.0000	8.922
	48	2,4-Dinitrotoluene	165	15.654	15.654	(1.029)	394511	10.0000	10.11
	50	Diethylphthalate	149	16.156	16.156	(1.062)	602380	5.00000	5.058
	49	Fluorene	166	16.319	16.319	(1.073)	357082	5.00000	2.671
	51	4-Chlorophenyl-phenylether	204	16.296	16.296	(1.071)	286820	5.00000	4.512
	52	4-Nitroaniline	138	16.404	16.404	(1.078)	280504	10.0000	10.52
	53	4,6-Dinitro-2-methylphenol	198	16.489	16.489	(0.904)	427220	20.0000	21.18
	54	N-Nitrosodiphenylamine	169	16.542	16.542	(0.907)	420966	5.00000	4.827
$	55	2,4,6-Tribromophenol	330	16.843	16.843	(1.107)	129664	7.50000	7.448
	56	4-Bromophenyl-phenylether	248	17.298	17.298	(0.949)	188924	5.00000	5.178
	57	Hexachlorobenzene	284	17.607	17.607	(0.966)	190839	5.00000	4.989
	58	Pentachlorophenol	266	17.963	17.963	(0.985)	226231	10.0000	9.810
*	59	Phenanthrene-d10	188	18.234	18.234	(1.000)	652323	4.00000	
	60	Phenanthrene	178	18.281	18.281	(1.003)	883961	5.00000	4.970
	61	Anthracene	178	18.373	18.373	(1.008)	886439	5.00000	5.195
	62	Carbazole	167	18.698	18.698	(1.025)	786107	5.00000	5.141
	63	Di-n-butylphthalate	149	19.488	19.488	(1.069)	1089867	5.00000	5.332
	64	Fluoranthene	202	20.656	20.656	(0.888)	1001115	5.00000	4.638
	65	Pyrene	202	21.081	21.081	(0.906)	1037752	5.00000	4.687
$	66	Terphenyl-d14	244	21.360	21.360	(0.918)	783630	5.00000	4.713
	67	Butylbenzylphthalate	149	22.281	22.281	(0.957)	440811	5.00000	5.476
	68	Benzo(a)anthracene	228	23.241	23.241	(0.999)	934966	5.00000	4.931
*	69	Chrysene-d12	240	23.272	23.272	(1.000)	537141	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.195	23.195	(0.997)	711699	15.0000	11.72
	71	Chrysene	228	23.311	23.311	(1.002)	911478	5.00000	4.921
	72	bis(2-Ethylhexyl)phthalate	149	23.303	23.303	(0.959)	637369	5.00000	4.585
*	134	Di-n-octylphthalate-d4	153	24.294	24.294	(1.000)	947608	4.00000	
	73	Di-n-octylphthalate	149	24.302	24.302	(1.000)	1153390	5.00000	4.651
	74	Benzo(b)fluoranthene	252	25.130	25.130	(0.970)	1032531	5.00000	5.286
	75	Benzo(k)fluoranthene	252	25.169	25.169	(0.972)	963206	5.00000	4.857(H)
	76	Benzo(a)pyrene	252	25.789	25.789	(0.996)	900163	5.00000	5.155
*	77	Perylene-d12	264	25.897	25.897	(1.000)	602550	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.580	28.580	(1.104)	1113333	5.00000	5.011
	79	Dibenzo(a,h)anthracene	278	28.595	28.595	(1.104)	930771	5.00000	5.046
	80	Benzo(g,h,i)perylene	276	29.364	29.364	(1.134)	969834	5.00000	5.044
	90	N-Nitrosodimethylamine	74	4.835	4.835	(0.528)	351280	10.0000	9.768
	91	Aniline	93	8.628	8.628	(0.942)	750858	10.0000	9.536
	93	Benzidine	184	20.888	20.888	(0.898)	675178	10.0000	7.616
	103	Pyridine	79	4.874	4.874	(0.532)	550976	10.0000	9.975
	105	1-methylnaphthalene	142	13.263	13.263	(1.141)	597505	5.00000	4.953
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.620	16.620	(1.092)	639344	5.00000	4.806

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.130	25.130	(0.970)	1906577	10.0000	10.11
120 2,3,4,6-Tetrachlorophenol	232	15.932	15.932	(1.047)	203308	5.00000	5.225

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182302.D
Lab Smp Id: SLC0504-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	186408	0.00
27 Naphthalene-d8	688740	344370	1377480	688740	0.00
42 Acenaphthene-d10	373663	186832	747326	373663	0.00
59 Phenanthrene-d10	652323	326162	1304646	652323	0.00
69 Chrysene-d12	537141	268571	1074282	537141	0.00
134 Di-n-octylphthala	947608	473804	1895216	947608	0.00
77 Perylene-d12	602550	301275	1205100	602550	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.62	0.00
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	0.00
77 Perylene-d12	25.90	25.40	26.40	25.90	0.00

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

REVIEW SUMMARY FOR FILE - NT1003182302.D

Lab ID: SLC0504-ICV1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 18:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

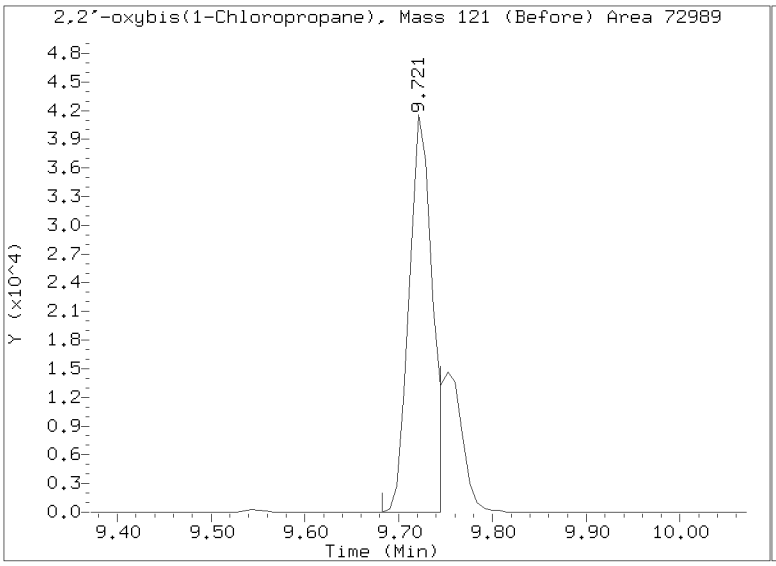
No RRT check. Ccal file.

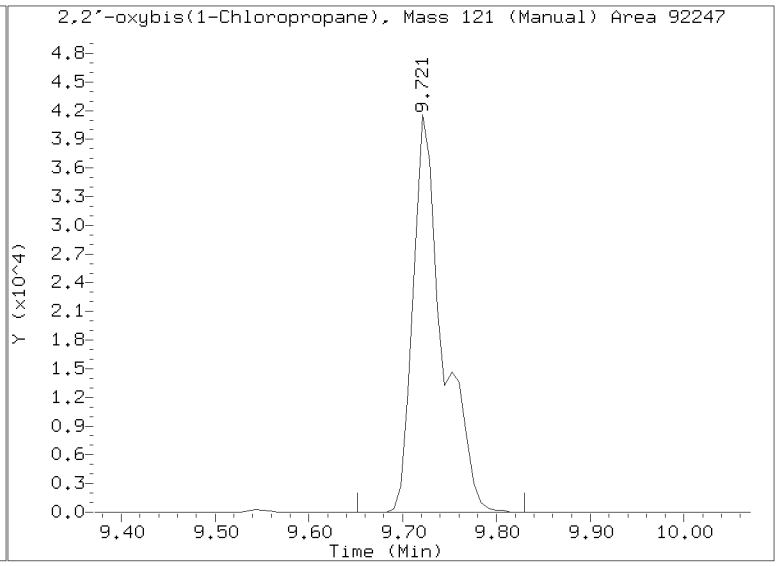
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182302.D
Injection Date: 18-MAR-2023 18:19
Lab ID:SLC0504-ICV1 Client ID:
Report Date: 04/04/2023 08:56





Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b

Instrument: nt10.i Date: 18-MAR-2023 Method: 20230318.b\ABN.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1003182302.D 18-MAR-2023 18:19

Compound	%D
Fluorene	-46.6
3,3′-Dichlorobenzidine	-21.9
Benzidine	-23.8

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182316.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/19/23
Lab Sample ID:	SLC0504-ICV2	Injection Time:	03:19
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Phenol	A	5.0000	5.0	1.6490140	1.6608240		0.7	+/-20
4-Methylphenol	A	5.0000	5.3	1.2665770	1.3376500		5.6	+/-20
Naphthalene	A	5.0000	4.8	1.0596590	1.0143190		-4.3	+/-20
2-Methylnaphthalene	A	5.0000	5.0	0.7647129	0.7618736		-0.4	+/-20
Acenaphthylene	A	5.0000	5.0	1.9964080	1.9785830		-0.9	+/-20
Dimethylphthalate	A	5.0000	5.1	1.2994310	1.3374530		2.9	+/-20
Acenaphthene	A	5.0000	4.9	1.2333460	1.2157590		-1.4	+/-20
Dibenzofuran	A	5.0000	5.0	1.8187540	1.8142820		-0.2	+/-20
Fluorene	A	5.0000	4.1	1.4308680	1.1681820		-18.4	+/-20
Phenanthrene	A	5.0000	4.7	1.0907130	1.0319110		-5.4	+/-20
Anthracene	A	5.0000	5.2	1.0462760	1.0979580		4.9	+/-20
Fluoranthene	A	5.0000	4.7	1.6072690	1.5109260		-6.0	+/-20
Pyrene	A	5.0000	4.6	1.6487720	1.5293710		-7.2	+/-20
Butylbenzylphthalate	A	5.0000	5.6	0.5292894	0.6691172		11.5	+/-20
Benzo(a)anthracene	A	5.0000	5.1	1.4118770	1.4372780		1.8	+/-20
Chrysene	A	5.0000	5.0	1.3793780	1.3779010		-0.1	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.6	0.5248968	0.5398178		-8.0	+/-20
Benzofluoranthenes, Total	A	10.000	10.0	1.2519020	1.2503170		-0.1	+/-20
Benzo(a)pyrene	A	5.0000	5.1	1.1592370	1.1844920		2.2	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.5	1.4748270	1.3186980		-10.6	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.5	1.2244340	1.1123250		-9.2	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.3	1.2763410	1.0877460		-14.8	+/-20
2-Fluorophenol	A	7.5000	7.78	1.2096460	1.2540160		3.7	+/-20
Phenol-d5	A	7.5000	7.87	1.5868760	1.6646940		4.9	+/-20
2-Chlorophenol-d4	A	7.5000	8.08	1.3550800	1.4595960		7.7	+/-20
1,2-Dichlorobenzene-d4	A	5.0000	5.08	0.9731556	0.9889347		1.6	+/-20
Nitrobenzene-d5	A	5.0000	4.98	0.4037447	0.4024783		-0.3	+/-20
2-Fluorobiphenyl	A	5.0000	4.88	1.5822890	1.5439090		-2.4	+/-20
2,4,6-Tribromophenol	A	7.5000	7.54	0.1585901	0.1873233		0.5	+/-20
p-Terphenyl-d14	A	5.0000	4.75	1.2381950	1.1750250		-5.1	+/-20

* Values outside of QC limits

INITIAL CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182316.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/19/23
Lab Sample ID:	SLC0504-ICV2	Injection Time:	03:19
Sequence Name:	ABN 5		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene-d4	A	4.0000	4.0	42885.5000	1.0000			
Naphthalene-d8	A	4.0000	4.0	156116.5000	1.0000			
Acenaphthene-d10	A	4.0000	4.0	84306.5000	1.0000			
Phenanthrene-d10	A	4.0000	4.0	143212.3000	1.0000			
Chrysene-d12	A	4.0000	4.0	86767.0000	1.0000			
Di-n-Octylphthalate-d4	A	4.0000	4.0	125079.3000	1.0000			
Perylene-d12	A	4.0000	4.0	105387.3000	1.0000			

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182316.D

Page 1

Date : 19-MAR-2023 03:19

Client ID:

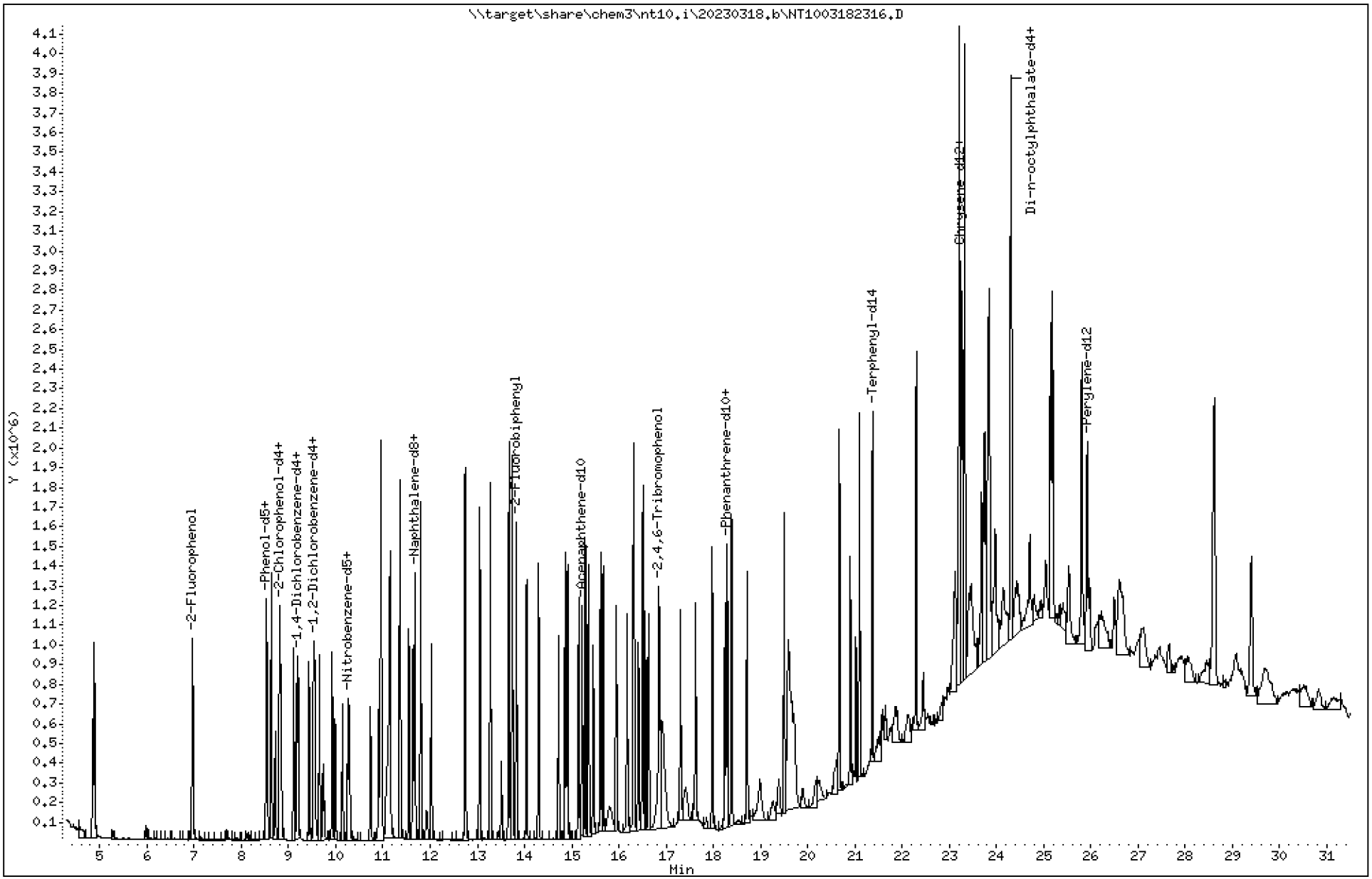
Instrument: nt10.i

Sample Info: SLC0504-ICV2

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182316.D
Lab Smp Id: SLC0504-ICV2
Inj Date : 19-MAR-2023 03:19
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-ICV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							AMOUNTS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.967	6.967	(0.760)	492680	7.50000	7.775
$	2 Phenol-d5	99	8.528	8.528	(0.930)	654028	7.50000	7.868
	3 Phenol	94	8.551	8.551	(0.933)	435005	5.00000	5.036
$	5 2-Chlorophenol-d4	132	8.813	8.813	(0.961)	573449	7.50000	8.078
	4 Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	321968	5.00000	5.025
	6 2-Chlorophenol	128	8.837	8.837	(0.964)	378056	5.00000	5.114
	7 1,3-Dichlorobenzene	146	9.107	9.107	(0.993)	383222	5.00000	4.903
*	8 1,4-Dichlorobenzene-d4	152	9.169	9.169	(1.000)	209537	4.00000	
	9 1,4-Dichlorobenzene	146	9.200	9.200	(1.003)	369948	5.00000	4.900
$	10 1,2-Dichlorobenzene-d4	152	9.526	9.526	(1.039)	259023	5.00000	5.081
	12 1,2-Dichlorobenzene	146	9.557	9.557	(1.042)	363521	5.00000	4.892
	11 Benzyl alcohol	108	9.433	9.433	(1.029)	226159	5.00000	5.578
	14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.728	(1.061)	106586	5.00000	4.884(M)
	13 2-Methylphenol	108	9.651	9.651	(1.052)	325438	5.00000	5.168
	17 Hexachloroethane	117	10.140	10.140	(1.106)	134904	5.00000	4.355
	16 N-Nitroso-di-n-propylamine	70	9.984	9.984	(1.089)	250466	5.00000	5.037
	15 4-Methylphenol	108	9.915	9.915	(1.081)	350359	5.00000	5.281
$	18 Nitrobenzene-d5	82	10.256	10.256	(0.881)	400395	5.00000	4.984
	19 Nitrobenzene	77	10.287	10.287	(0.884)	370986	5.00000	4.706
	20 Isophorone	82	10.737	10.737	(0.923)	500602	5.00000	4.964
	21 2-Nitrophenol	139	10.912	10.912	(0.938)	212080	5.00000	5.500
	22 2,4-Dimethylphenol	107	10.955	10.955	(0.941)	654292	10.0000	9.036
	23 Bis(2-Chloroethoxy)methane	93	11.150	11.150	(0.958)	323162	5.00000	4.797
	24 Benzoic acid	105	11.150	11.150	(0.958)	930162	20.0000	21.95
	25 2,4-Dichlorophenol	162	11.362	11.362	(0.976)	596952	10.0000	10.30
	26 1,2,4-Trichlorobenzene	180	11.545	11.545	(0.992)	395010	5.00000	5.807
*	27 Naphthalene-d8	136	11.638	11.638	(1.000)	795859	4.00000	
	28 Naphthalene	128	11.676	11.676	(1.003)	1009069	5.00000	4.786
	29 4-Chloroaniline	127	11.800	11.800	(1.014)	817911	10.0000	9.944
	30 Hexachlorobutadiene	225	12.024	12.024	(1.033)	198435	5.00000	4.979
	31 4-Chloro-3-methylphenol	107	12.743	12.743	(1.095)	642418	10.0000	10.24
	32 2-Methylnaphthalene	142	13.053	13.053	(1.122)	757930	5.00000	4.981
	33 Hexachlorocyclopentadiene	237	13.510	13.510	(0.888)	107768	10.0000	2.692

		QUANT SIG					AMOUNTS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
	34 2,4,6-Trichlorophenol	196	13.664	13.664	(0.898)	477457	10.0000	11.17
	35 2,4,5-Trichlorophenol	196	13.742	13.742	(0.903)	510387	10.0000	10.75
$	36 2-Fluorobiphenyl	172	13.827	13.827	(0.908)	834695	5.00000	4.879
	37 2-Chloronaphthalene	162	14.044	14.044	(0.923)	685715	5.00000	4.950
	38 2-Nitroaniline	65	14.299	14.299	(0.939)	394940	10.0000	10.15
	39 Dimethylphthalate	163	14.717	14.717	(0.967)	723077	5.00000	5.146
	40 Acenaphthylene	152	14.910	14.910	(0.980)	1069696	5.00000	4.955
	41 2,6-Dinitrotoluene	165	14.864	14.864	(0.977)	340804	10.0000	11.23
*	42 Acenaphthene-d10	164	15.220	15.220	(1.000)	432510	4.00000	
	43 3-Nitroaniline	138	15.143	15.143	(0.995)	412800	10.0000	12.05
	44 Acenaphthene	153	15.282	15.282	(1.004)	657285	5.00000	4.929
	45 2,4-Dinitrophenol	184	15.351	15.351	(1.009)	371263	20.0000	19.48
	46 Dibenzofuran	168	15.606	15.606	(1.025)	980869	5.00000	4.988
	47 4-Nitrophenol	109	15.460	15.460	(1.016)	194591	10.0000	9.082
	48 2,4-Dinitrotoluene	165	15.668	15.668	(1.029)	461149	10.0000	10.21
	50 Diethylphthalate	149	16.171	16.171	(1.062)	702212	5.00000	5.094
	49 Fluorene	166	16.318	16.318	(1.072)	631563	5.00000	4.082
	51 4-Chlorophenyl-phenylether	204	16.295	16.295	(1.071)	191630	5.00000	2.605
	52 4-Nitroaniline	138	16.410	16.410	(1.078)	349804	10.0000	11.33
	53 4,6-Dinitro-2-methylphenol	198	16.503	16.503	(0.905)	484476	20.0000	19.41
	54 N-Nitrosodiphenylamine	169	16.557	16.557	(0.908)	514468	5.00000	4.757
$	55 2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	151911	7.50000	7.539
	56 4-Bromophenyl-phenylether	248	17.305	17.305	(0.949)	224937	5.00000	4.972
	57 Hexachlorobenzene	284	17.621	17.621	(0.966)	219927	5.00000	4.637
	58 Pentachlorophenol	266	17.978	17.978	(0.986)	286766	10.0000	10.02
*	59 Phenanthrene-d10	188	18.241	18.241	(1.000)	808891	4.00000	
	60 Phenanthrene	178	18.295	18.295	(1.003)	1043379	5.00000	4.730
	61 Anthracene	178	18.380	18.380	(1.008)	1110160	5.00000	5.247
	62 Carbazole	167	18.713	18.713	(1.026)	939765	5.00000	4.957
	63 Di-n-butylphthalate	149	19.494	19.494	(1.069)	1304688	5.00000	5.146
	64 Fluoranthene	202	20.670	20.670	(0.888)	1242597	5.00000	4.700
	65 Pyrene	202	21.096	21.096	(0.906)	1257766	5.00000	4.638
$	66 Terphenyl-d14	244	21.374	21.374	(0.918)	966349	5.00000	4.745
	67 Butylbenzylphthalate	149	22.296	22.296	(0.958)	550287	5.00000	5.577
	68 Benzo(a)anthracene	228	23.248	23.248	(0.999)	1182028	5.00000	5.090
*	69 Chrysene-d12	240	23.279	23.279	(1.000)	657926	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.209	23.209	(0.997)	1147292	15.0000	15.42
	71 Chrysene	228	23.326	23.326	(1.002)	1133196	5.00000	4.995
	72 bis(2-Ethylhexyl)phthalate	149	23.318	23.318	(0.960)	801450	5.00000	4.600
*	134 Di-n-octylphthalate-d4	153	24.301	24.301	(1.000)	1187734	4.00000	
	73 Di-n-octylphthalate	149	24.309	24.309	(1.000)	1439327	5.00000	4.631
	74 Benzo(b)fluoranthene	252	25.145	25.145	(0.970)	1300471	5.00000	5.210
	75 Benzo(k)fluoranthene	252	25.184	25.184	(0.972)	1235875	5.00000	4.876(MH)
	76 Benzo(a)pyrene	252	25.803	25.803	(0.996)	1140232	5.00000	5.109
*	77 Perylene-d12	264	25.919	25.919	(1.000)	770107	4.00000	
	78 Indeno(1,2,3-cd)pyrene	276	28.594	28.594	(1.103)	1269423	5.00000	4.471
	79 Dibenzo(a,h)anthracene	278	28.618	28.618	(1.104)	1070762	5.00000	4.542
	80 Benzo(g,h,i)perylene	276	29.402	29.402	(1.134)	1047101	5.00000	4.261
	90 N-Nitrosodimethylamine	74	4.850	4.850	(0.529)	397652	10.0000	9.836
	91 Aniline	93	8.636	8.636	(0.942)	879787	10.0000	9.940
	93 Benzidine	184	20.902	20.902	(0.898)	755538	10.0000	6.958
	103 Pyridine	79	4.881	4.881	(0.532)	618511	10.0000	9.962
	105 1-methylnaphthalene	142	13.277	13.277	(1.141)	696780	5.00000	4.998
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.626	(1.092)	723645	5.00000	4.699

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
187 Total Benzofluoranthenes	252	25.184	25.184	(0.972)	2407195	10.0000	9.987(M)
120 2,3,4,6-Tetrachlorophenol	232	15.939	15.939	(1.047)	244683	5.00000	5.425

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182316.D
Lab Smp Id: SLC0504-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	209537	0.00
27 Naphthalene-d8	795859	397930	1591718	795859	0.00
42 Acenaphthene-d10	432510	216255	865020	432510	0.00
59 Phenanthrene-d10	808891	404446	1617782	808891	0.00
69 Chrysene-d12	657926	328963	1315852	657926	0.00
134 Di-n-octylphthala	1187734	593867	2375468	1187734	0.00
77 Perylene-d12	770107	385054	1540214	770107	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	0.00
69 Chrysene-d12	23.28	22.78	23.78	23.28	0.00
134 Di-n-octylphthala	24.30	23.80	24.80	24.30	0.00
77 Perylene-d12	25.92	25.42	26.42	25.92	0.00

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

REVIEW SUMMARY FOR FILE - NT1003182316.D

Lab ID: SLC0504-ICV2
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 03:19

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

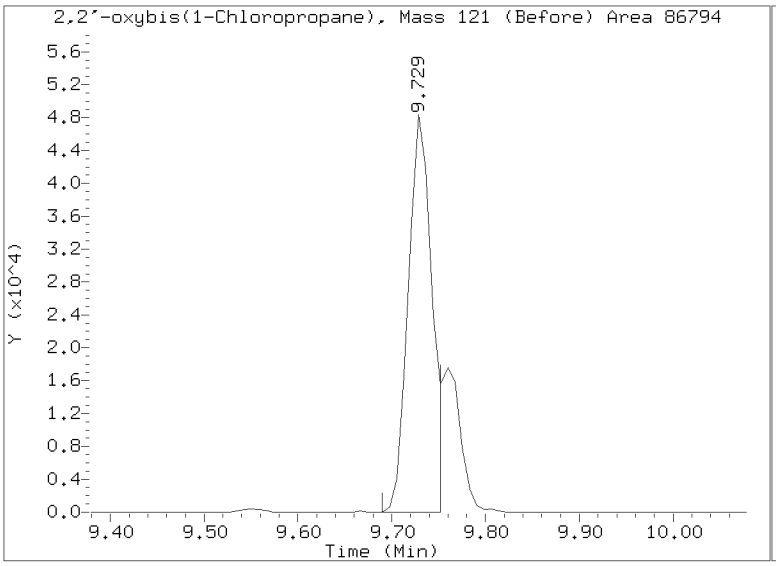
No RRT check. Ccal file.

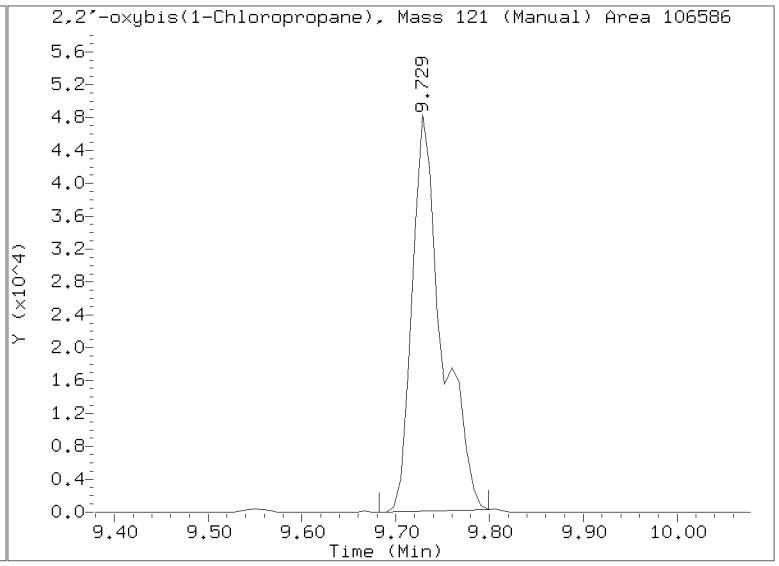
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

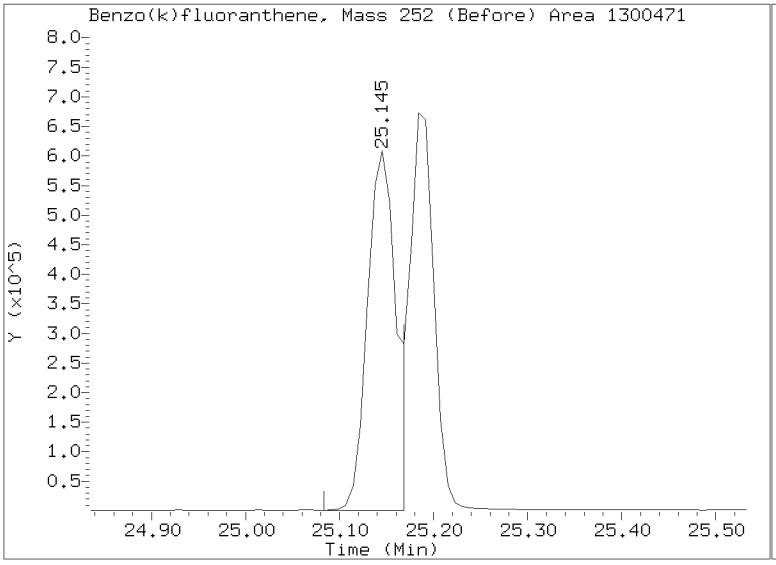
* Only compounds listed in the work order have been verified by the analyst *

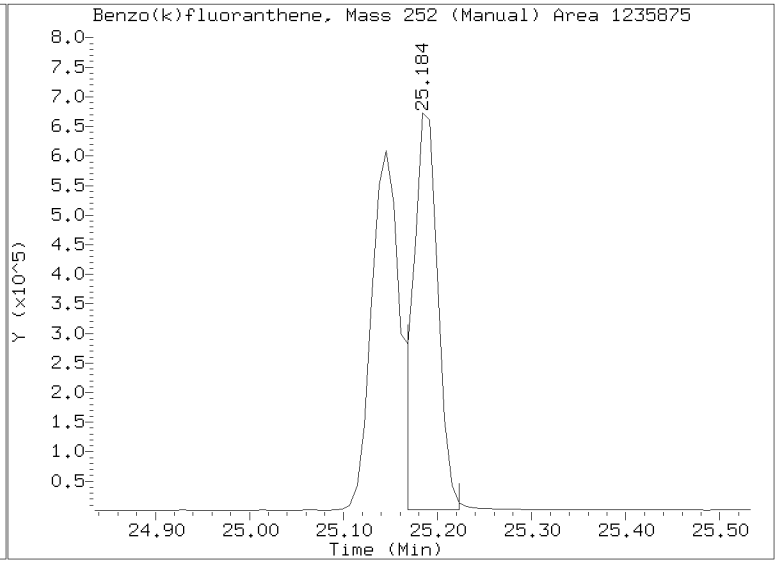
Quant Ion Manual Peak Adjustment Report

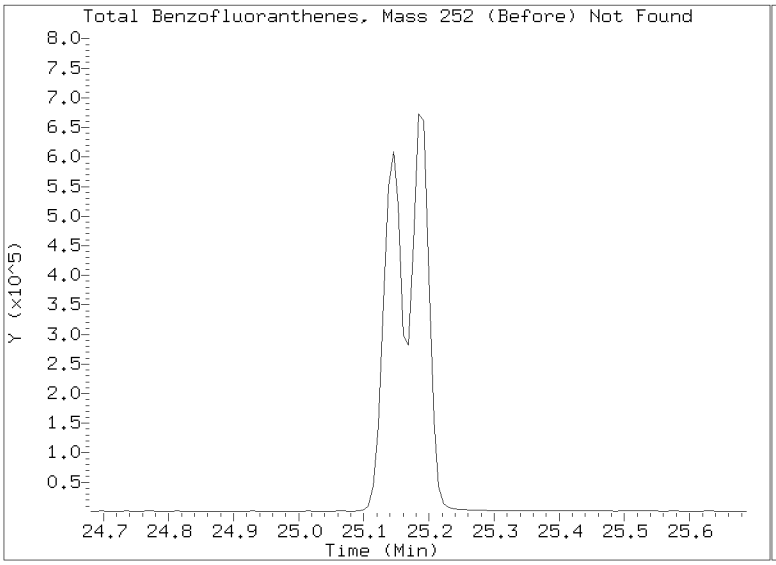
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182316.D
Injection Date: 19-MAR-2023 03:19
Lab ID:SLC0504-ICV2 Client ID:
Report Date: 04/04/2023 10:36

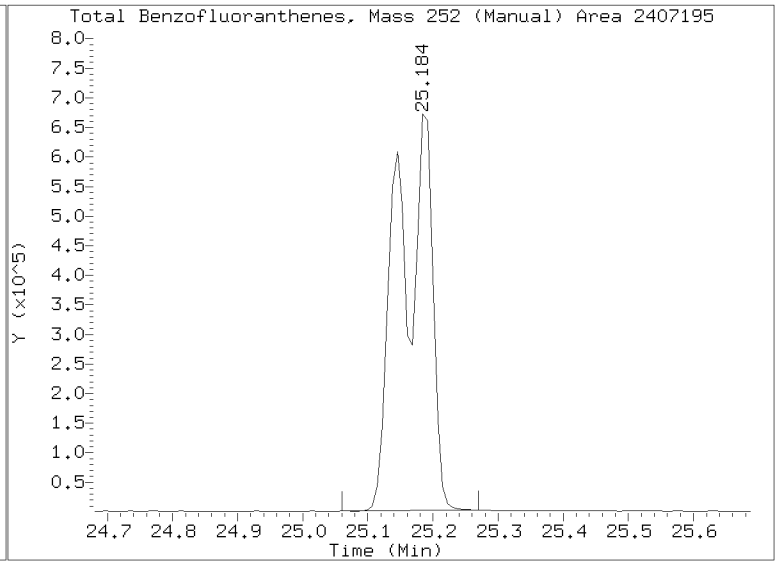












Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b

Instrument: nt10.i Date: 19-MAR-2023 Method: 20230318.b\ABN.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1003182316.D 19-MAR-2023 03:19

Compound	%D
Hexachlorocyclopentadiene	-73.1
3-Nitroaniline	20.5
4-Chlorophenyl-phenylether	-47.9
Benzidine	-30.4

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT10031511.D	Calibration Date:	03/15/2023
Sequence:	SLC0228	Injection Date:	03/16/23
Lab Sample ID:	SLC0228-SCV1	Injection Time:	02:16
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	4.4	1.6490140	1.4552130		-11.8	+/-20
4-Methylphenol	A	5.0000	4.4	1.2665770	1.1056260		-12.7	+/-20
Naphthalene	A	5.0000	4.7	1.0596590	0.9996013		-5.7	+/-20
2-Methylnaphthalene	A	5.0000	4.6	0.7647129	0.7029502		-8.1	+/-20
Acenaphthylene	A	5.0000	4.8	1.9964080	1.9185840		-3.9	+/-20
Dimethylphthalate	A	5.0000	4.9	1.2994310	1.2831790		-1.3	+/-20
Acenaphthene	A	5.0000	4.8	1.2333460	1.1780660		-4.5	+/-20
Dibenzofuran	A	5.0000	4.6	1.8187540	1.6906760		-7.0	+/-20
Fluorene	A	5.0000	4.7	1.4308680	1.3472940		-5.8	+/-20
Phenanthrene	A	5.0000	4.6	1.0907130	1.0038520		-8.0	+/-20
Anthracene	A	5.0000	4.2	1.0462760	0.8719973		-16.7	+/-20
Fluoranthene	A	5.0000	4.5	1.6072690	1.4376960		-10.6	+/-20
Pyrene	A	5.0000	4.3	1.6487720	1.4307800		-13.2	+/-20
Butylbenzylphthalate	A	5.0000	4.8	0.5292894	0.5769788		-3.3	+/-20
Benzo(a)anthracene	A	5.0000	4.6	1.4118770	1.3122590		-7.1	+/-20
Chrysene	A	5.0000	4.5	1.3793780	1.2442450		-9.8	+/-20
bis(2-Ethylhexyl)phthalate	A	5.0000	4.7	0.5248968	0.5492136		-6.4	+/-20
Benzofluoranthenes, Total	A	10.000	9.5	1.2519020	1.1872400		-5.2	+/-20
Benzo(a)pyrene	A	5.0000	4.9	1.1592370	1.1298800		-2.5	+/-20
Indeno(1,2,3-cd)pyrene	A	5.0000	4.6	1.4748270	1.3499250		-8.5	+/-20
Dibenzo(a,h)anthracene	A	5.0000	4.5	1.2244340	1.1134110		-9.1	+/-20
Benzo(g,h,i)perylene	A	5.0000	4.6	1.2763410	1.1716820		-8.2	+/-20
2-Fluorophenol	A		0.00	1.2096460				+/-20
Phenol-d5	A		0.00	1.5868760				+/-20
2-Chlorophenol-d4	A		0.00	1.3550800				+/-20
1,2-Dichlorobenzene-d4	A		0.00	0.9731556				+/-20
Nitrobenzene-d5	A		0.00	0.4037447				+/-20
2-Fluorobiphenyl	A		0.00	1.5822890				+/-20
2,4,6-Tribromophenol	A		0.00	0.1585901				+/-20
p-Terphenyl-d14	A		0.00	1.2381950				+/-20

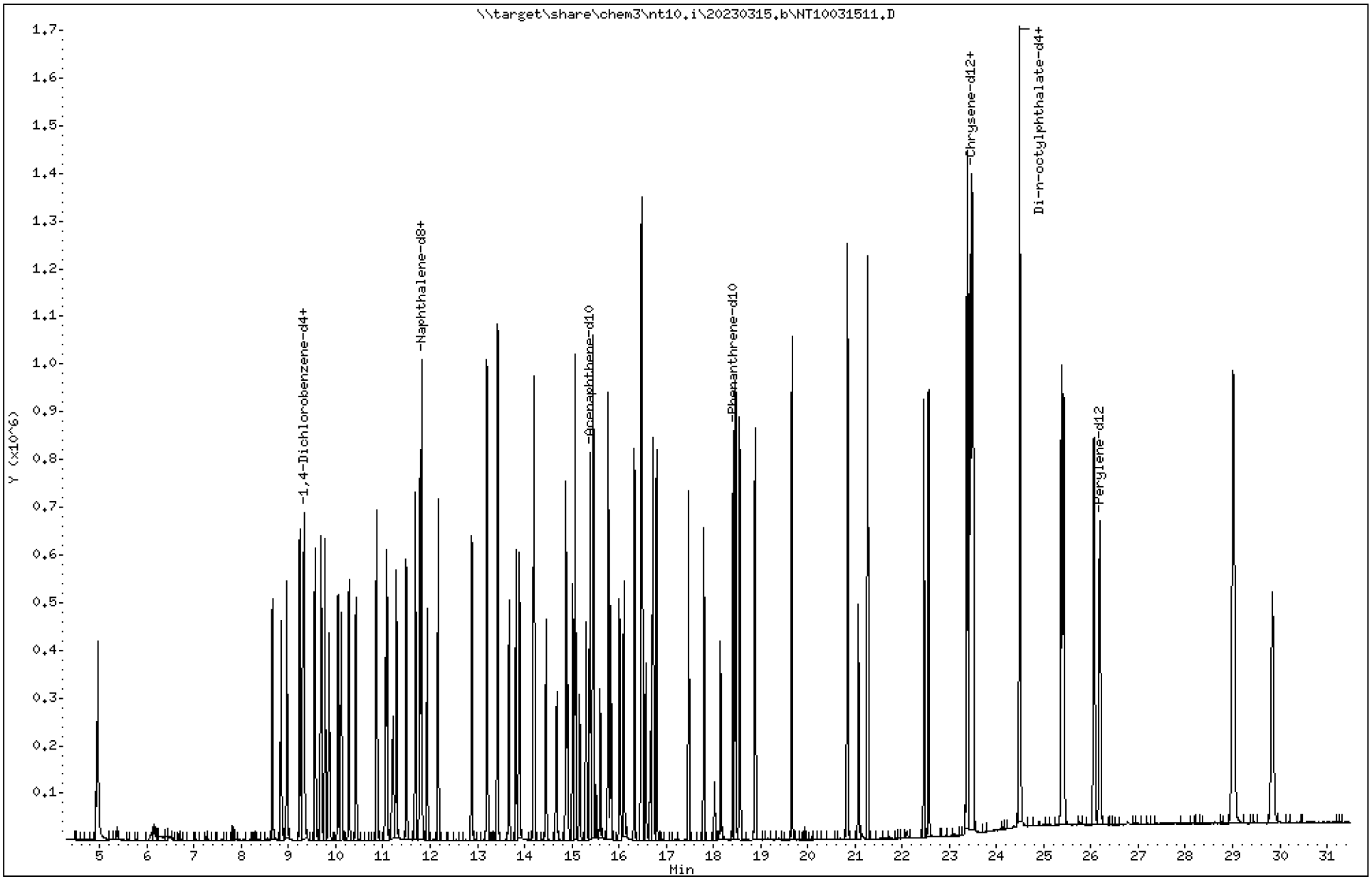
* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Date : 16-MAR-2023 02:16
Client ID:
Sample Info: SLC0228-SCV1

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS
Column diameter: 0.25



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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

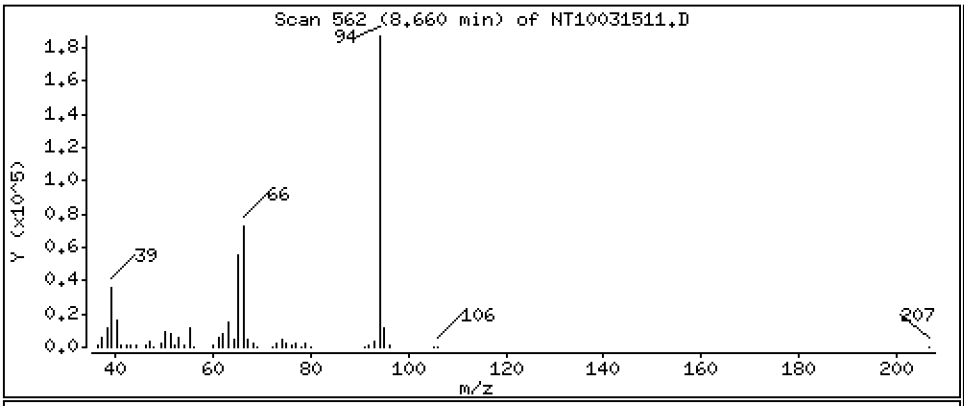
Operator: VTS

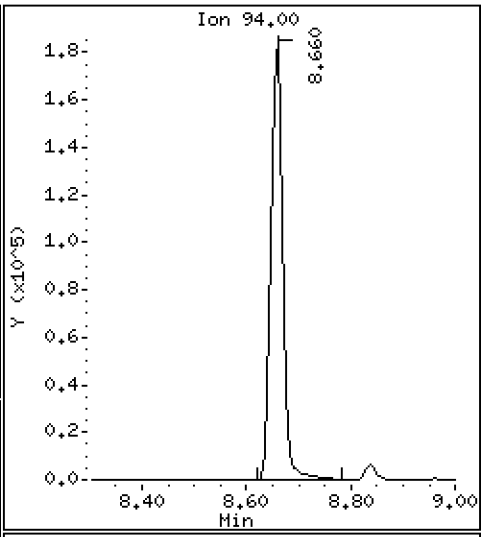
Column phase: ZB-5msi

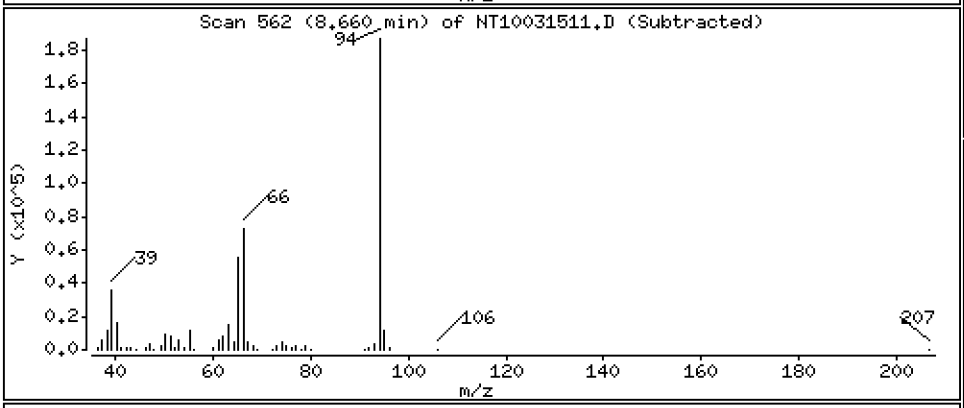
Column diameter: 0.25

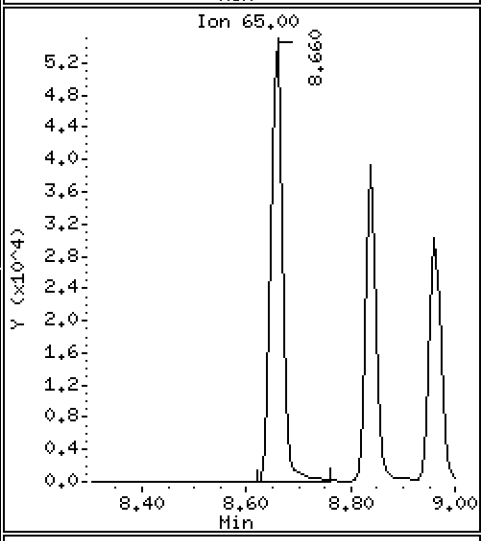
3 Phenol

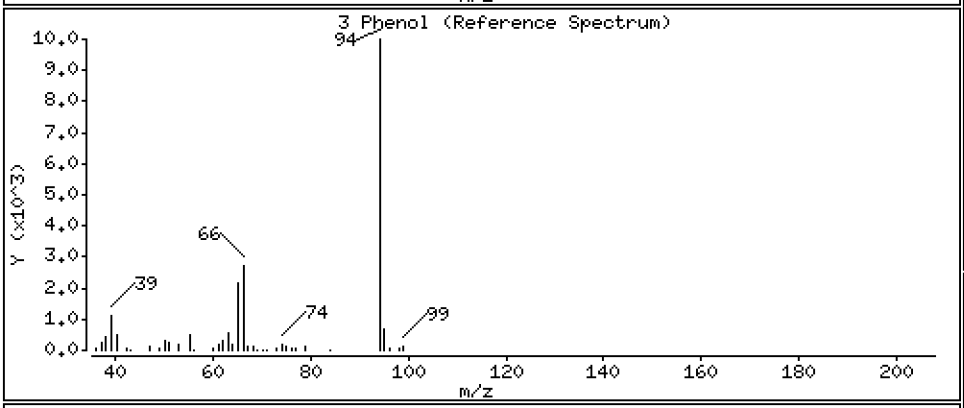
Concentration: 4.412 ug/mL

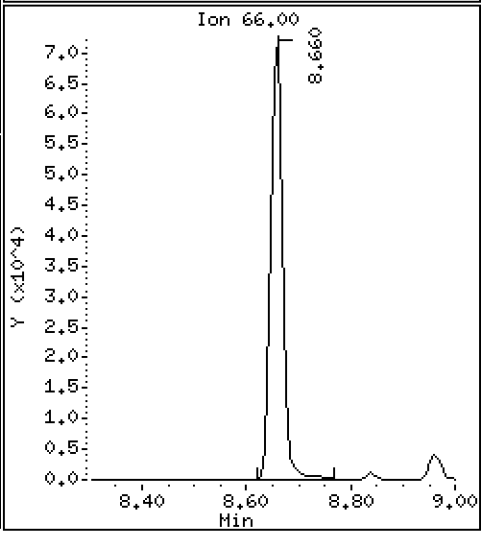


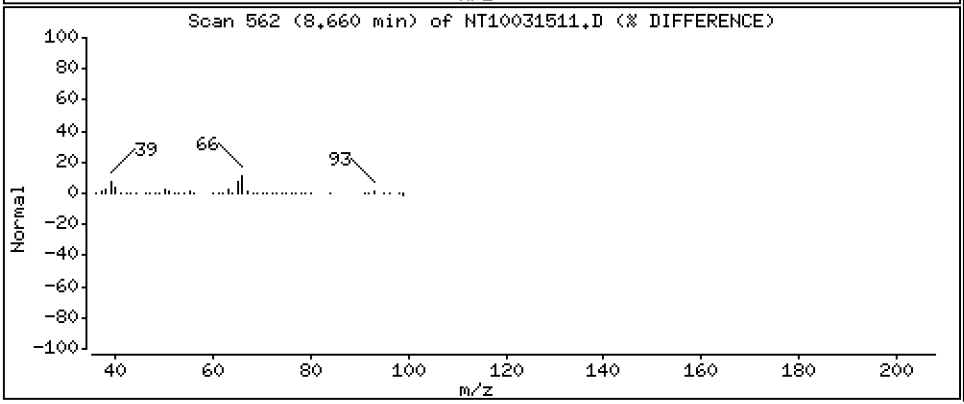












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

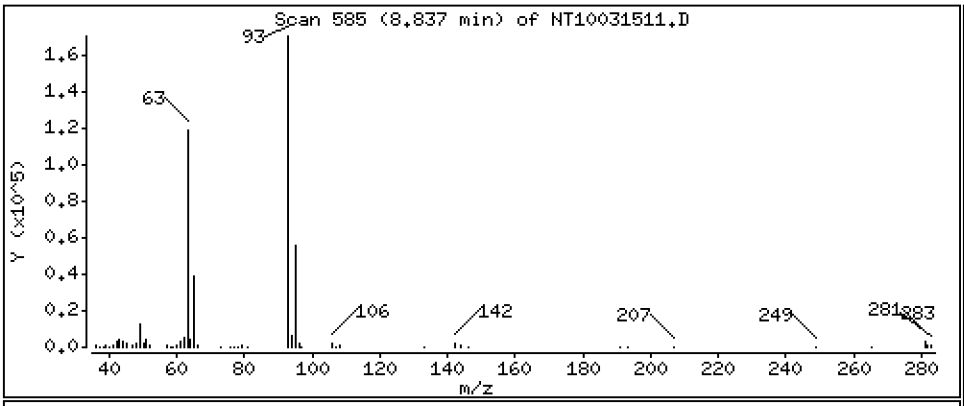
Operator: VTS

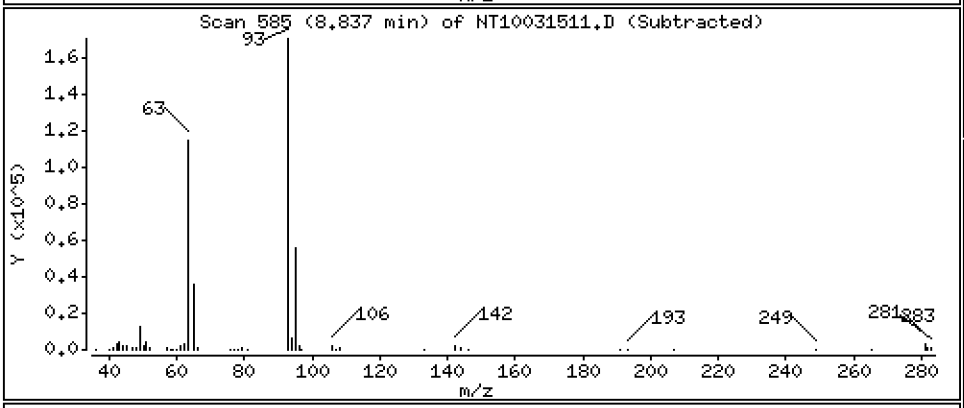
Column phase: ZB-5msi

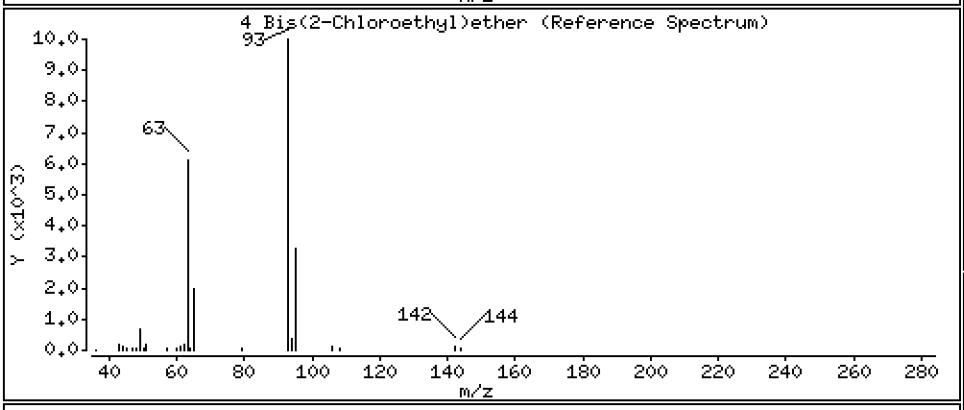
Column diameter: 0.25

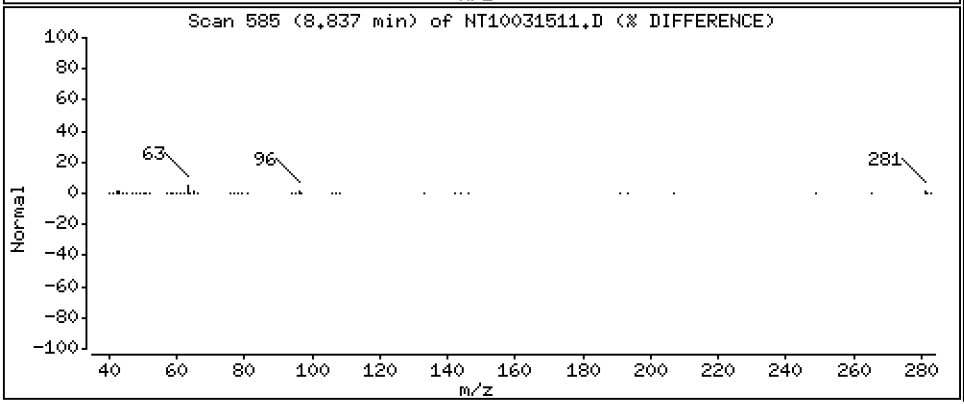
4 Bis(2-Chloroethyl)ether

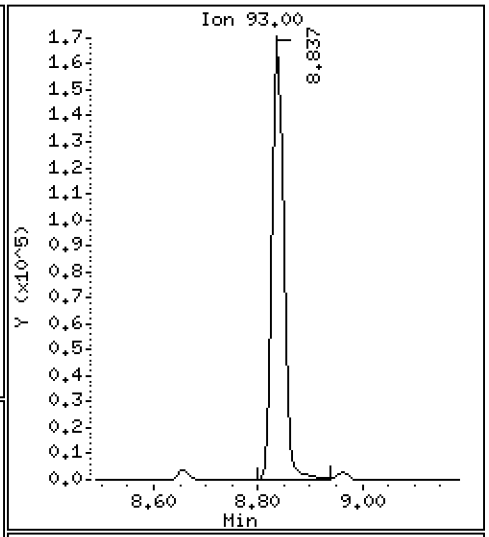
Concentration: 5.258 ug/mL

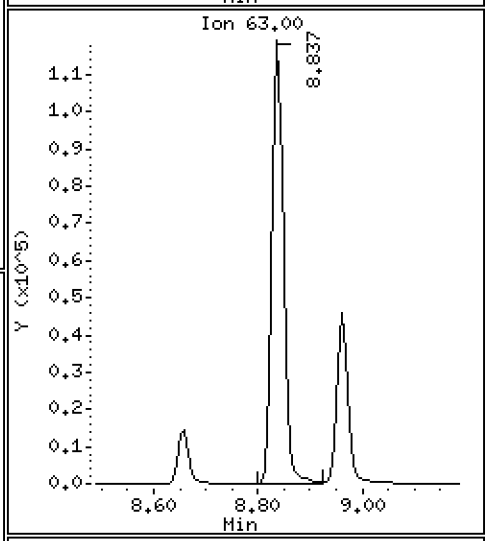


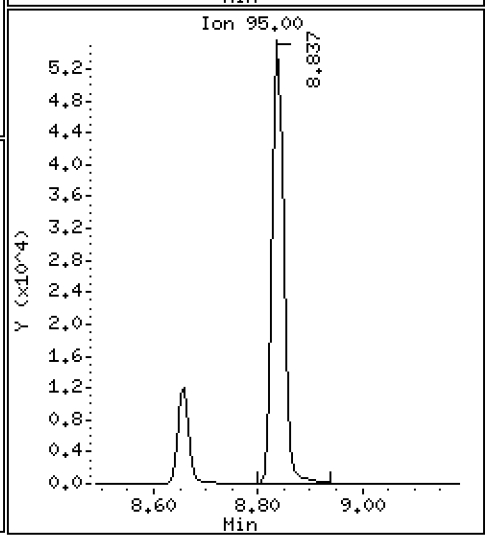












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

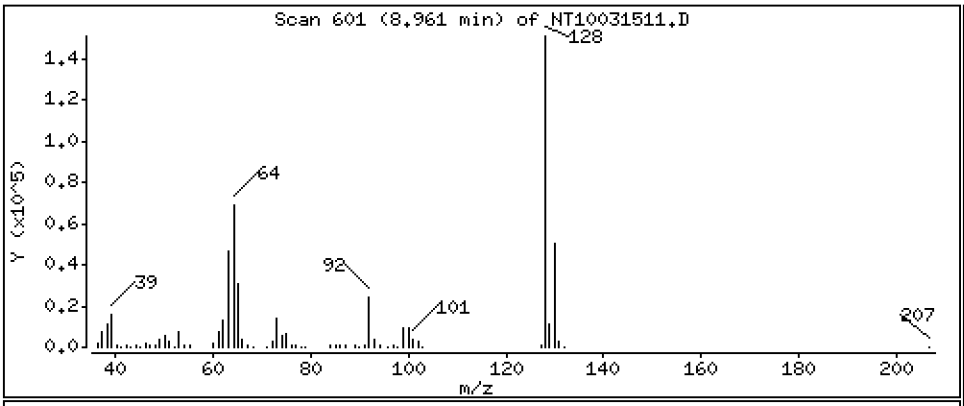
Operator: VTS

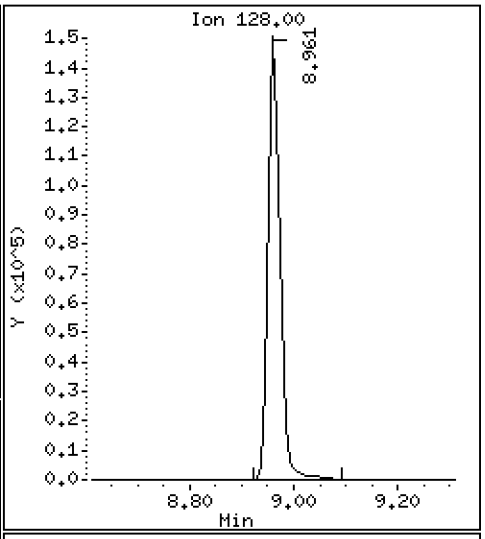
Column phase: ZB-5msi

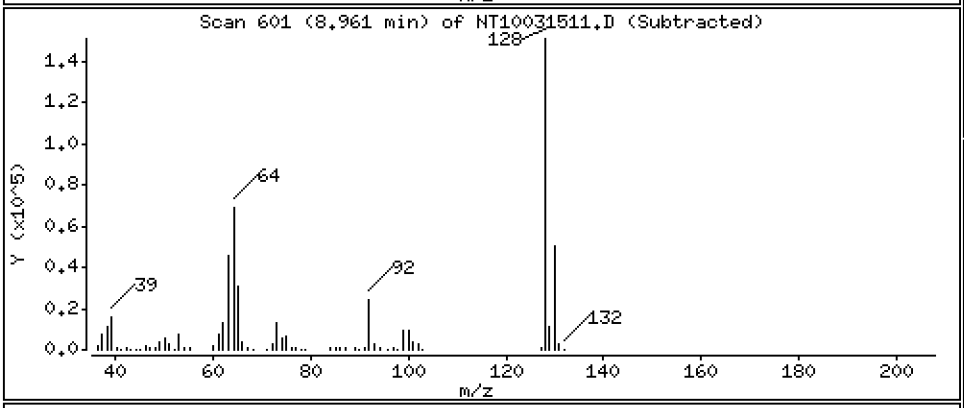
Column diameter: 0.25

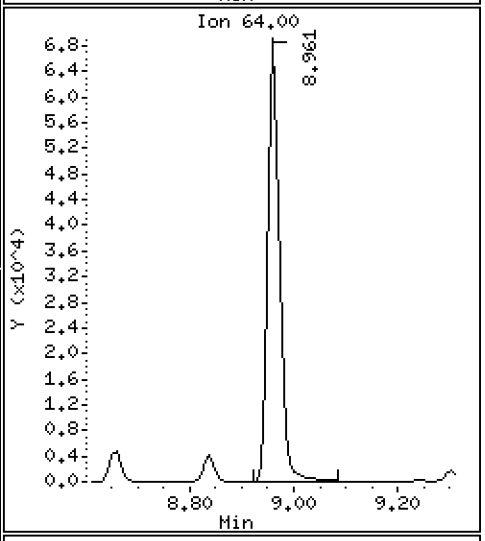
6 2-Chlorophenol

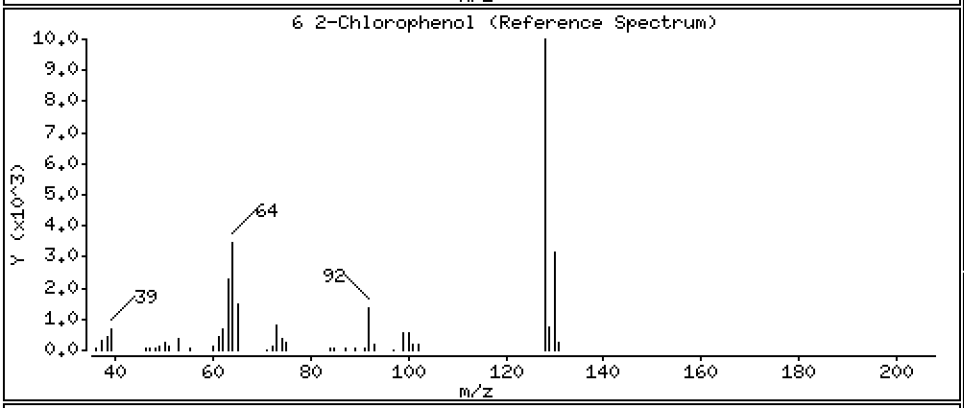
Concentration: 4.277 ug/mL

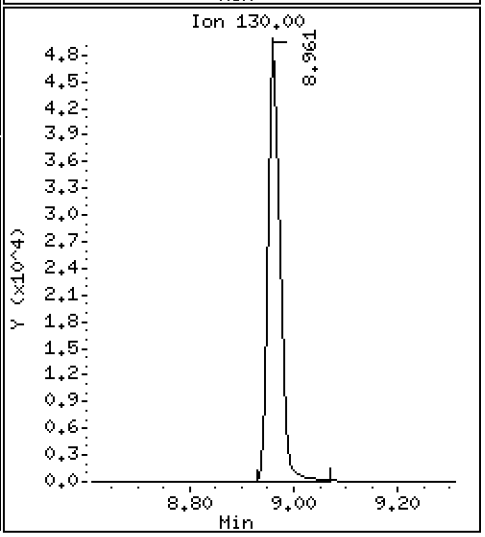


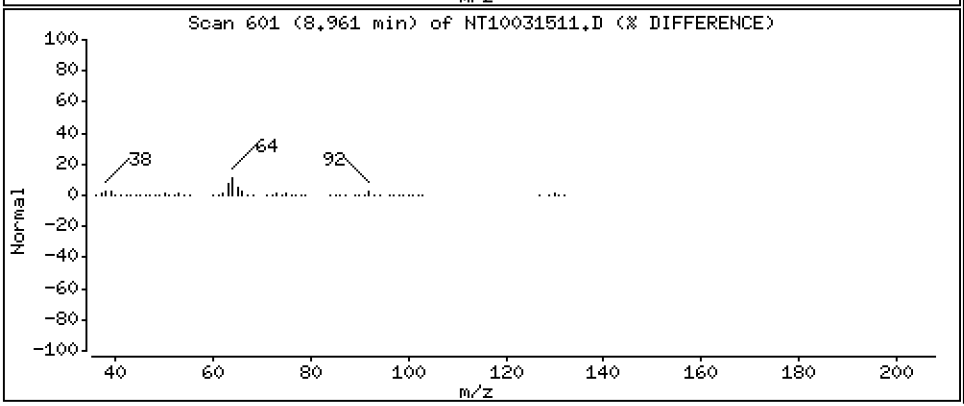












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

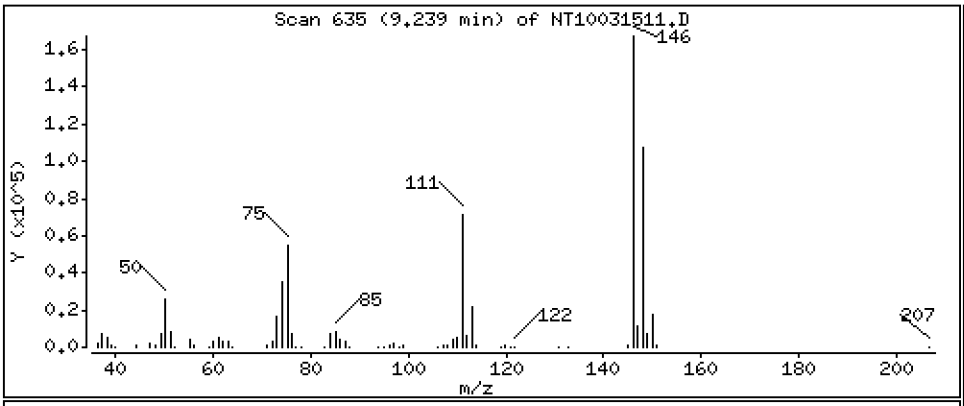
Operator: VTS

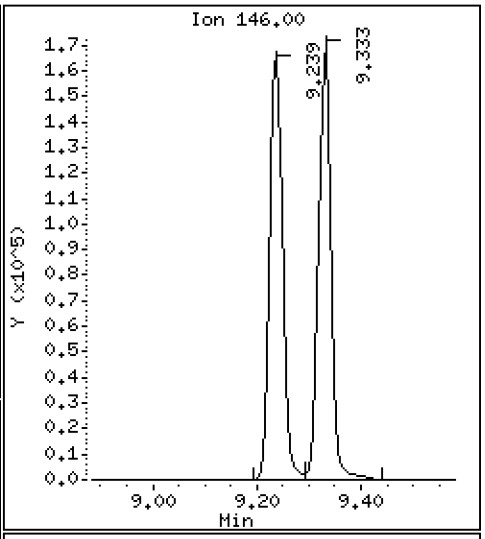
Column phase: ZB-5msi

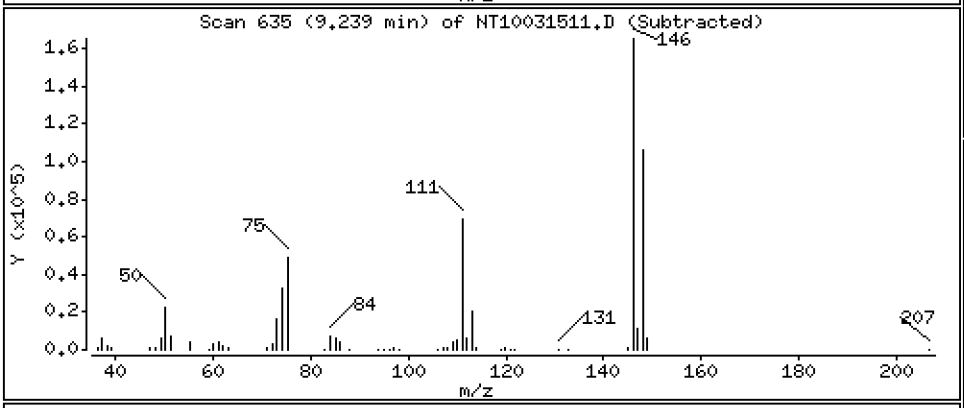
Column diameter: 0.25

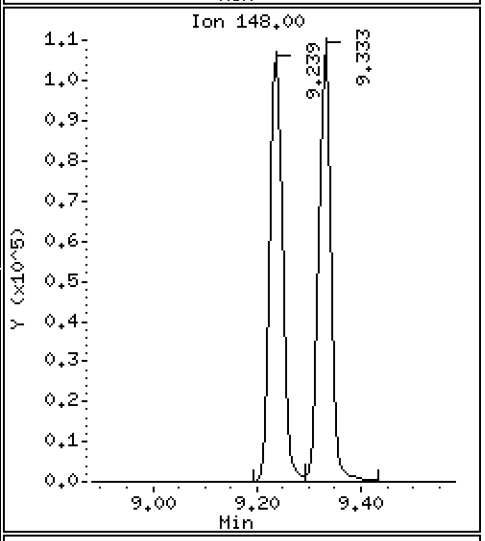
7 1,3-Dichlorobenzene

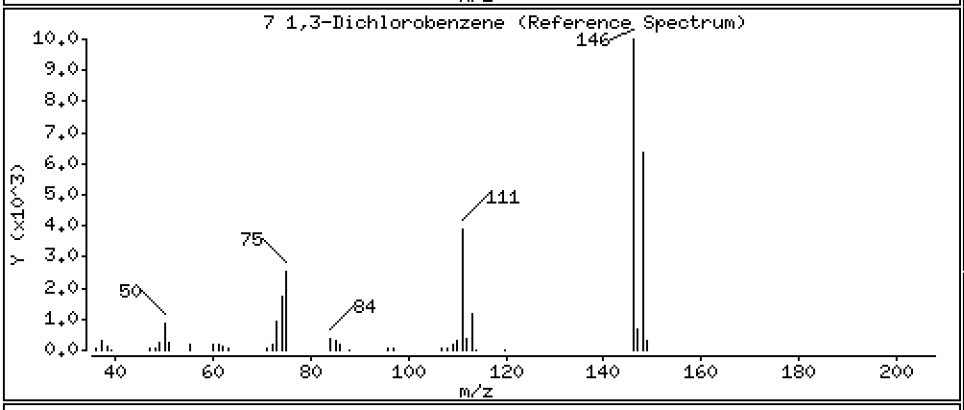
Concentration: 4.772 ug/mL

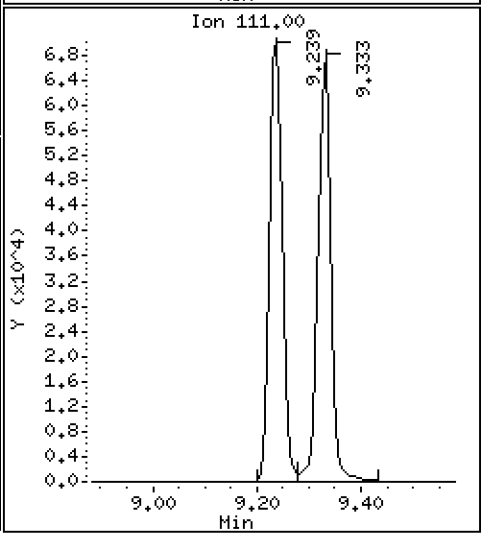


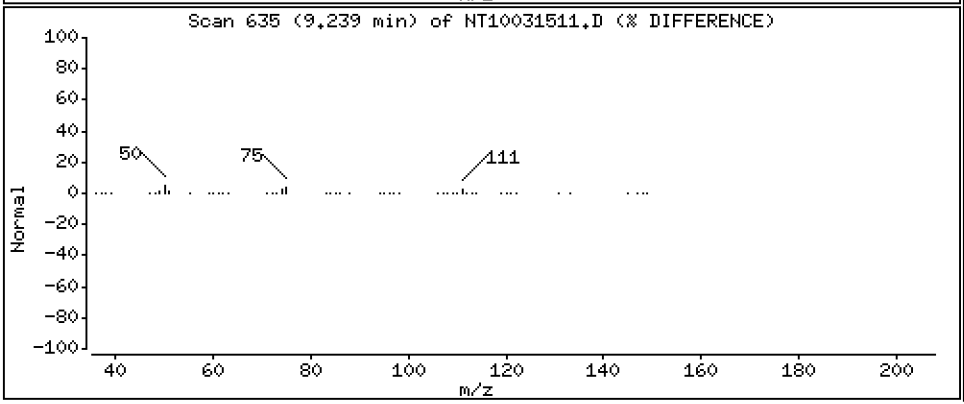












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

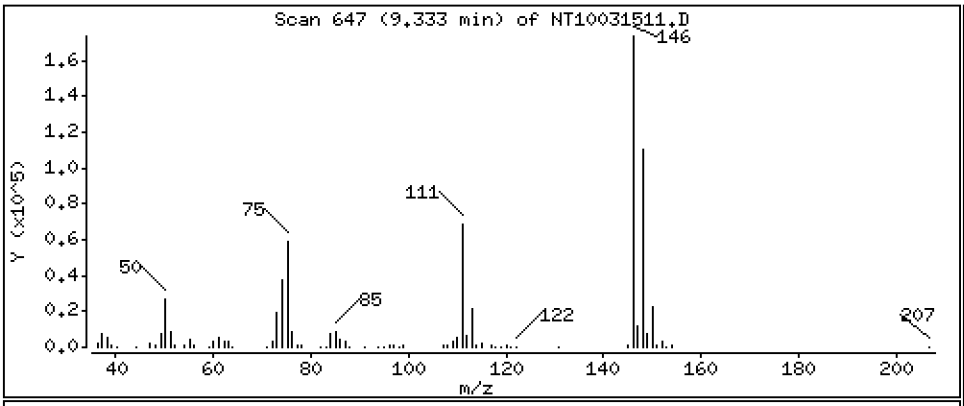
Operator: VTS

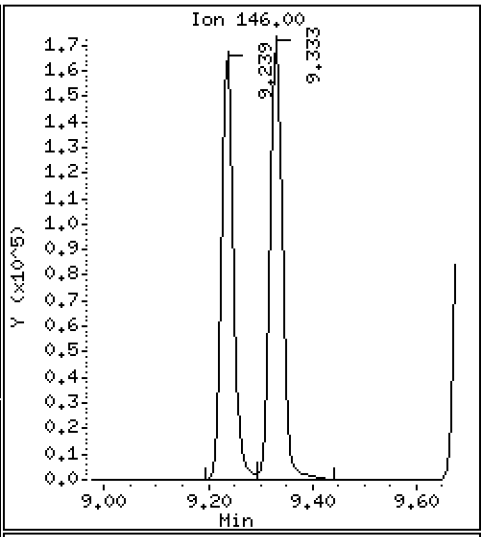
Column phase: ZB-5msi

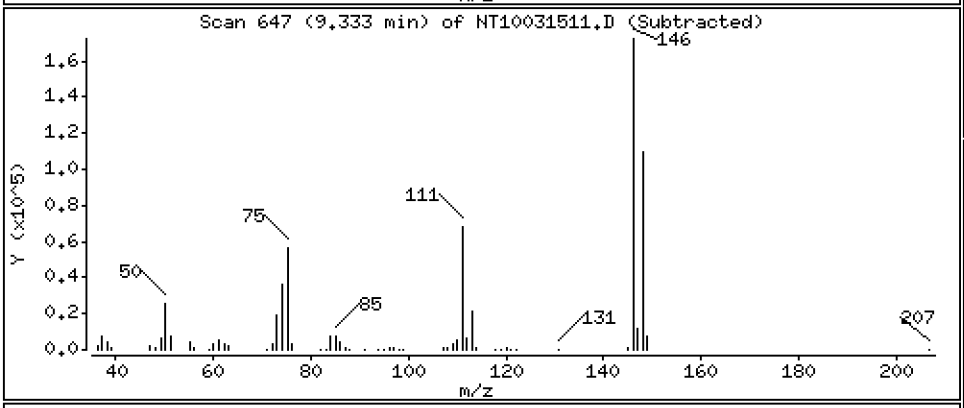
Column diameter: 0.25

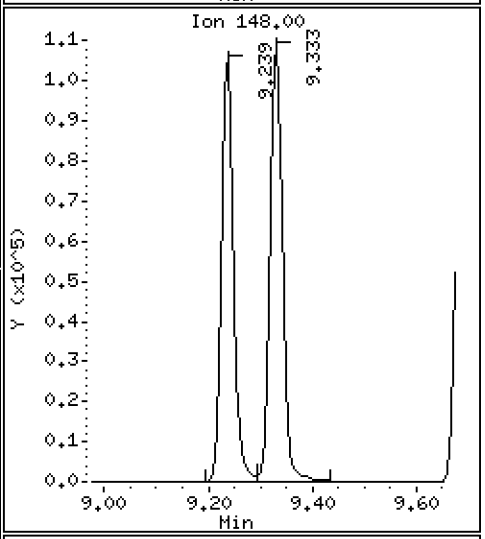
9 1,4-Dichlorobenzene

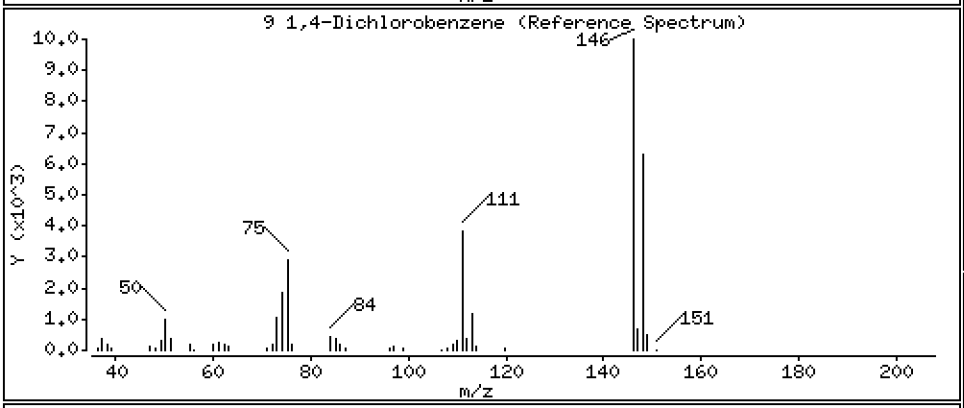
Concentration: 4.913 ug/mL

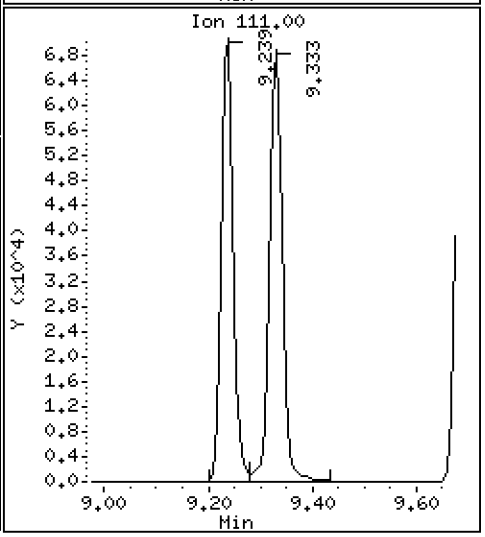


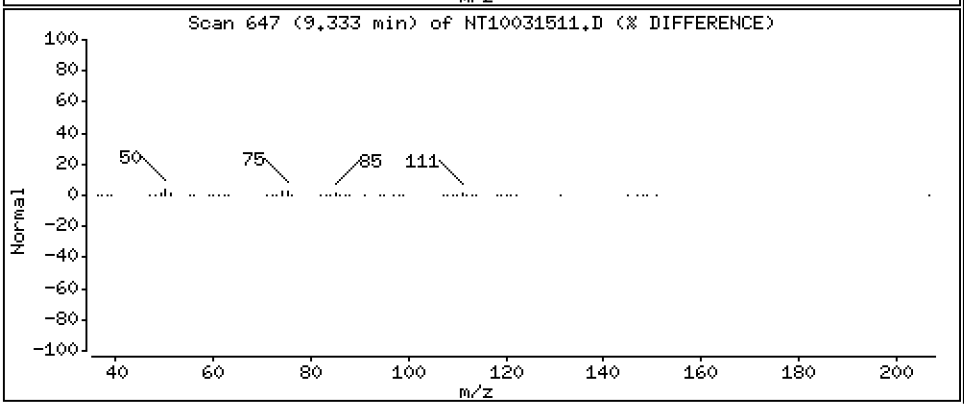












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

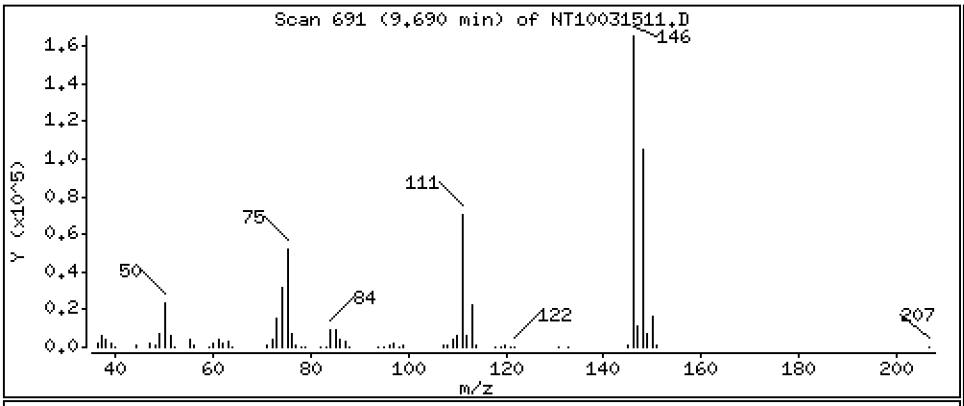
Operator: VTS

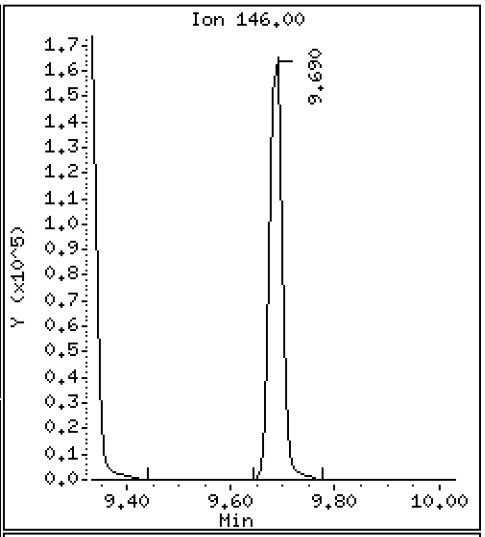
Column phase: ZB-5msi

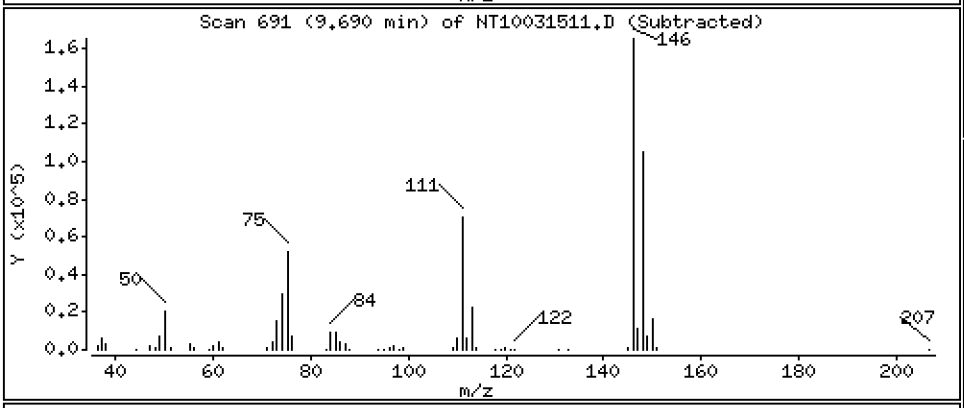
Column diameter: 0.25

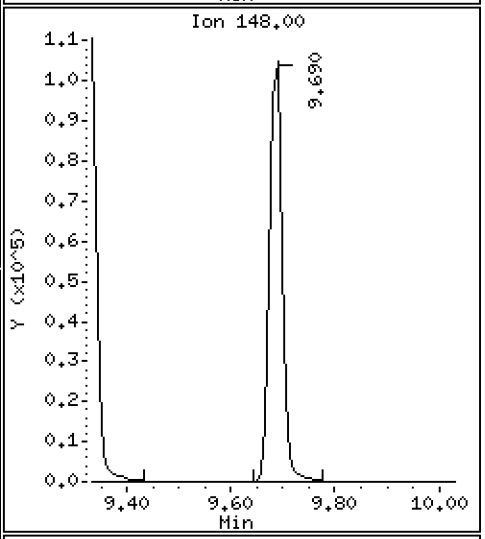
12 1,2-Dichlorobenzene

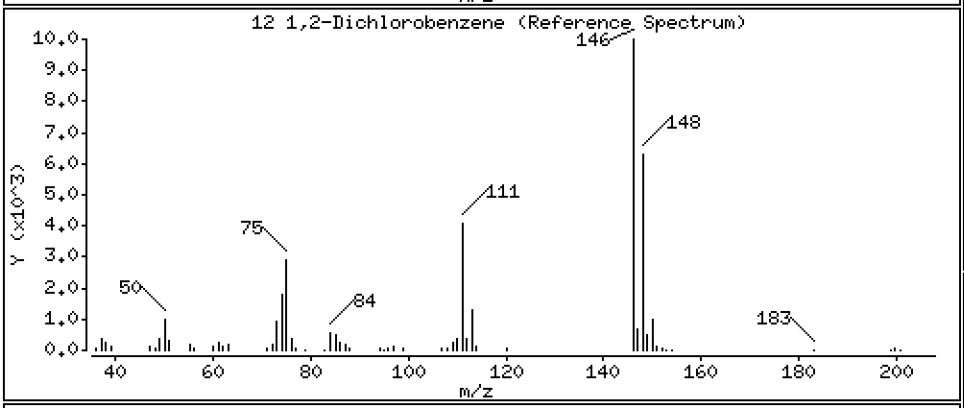
Concentration: 4.882 ug/mL

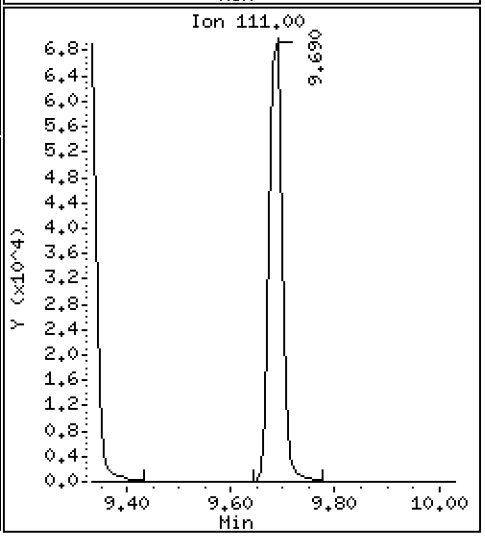


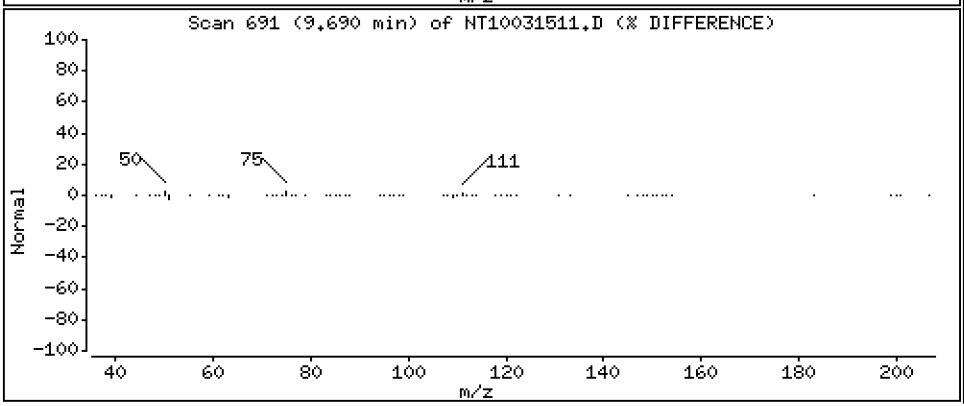












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

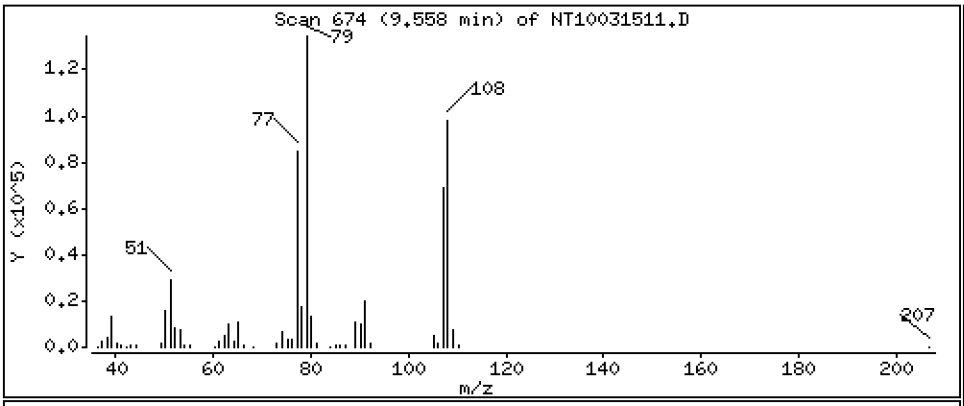
Operator: VTS

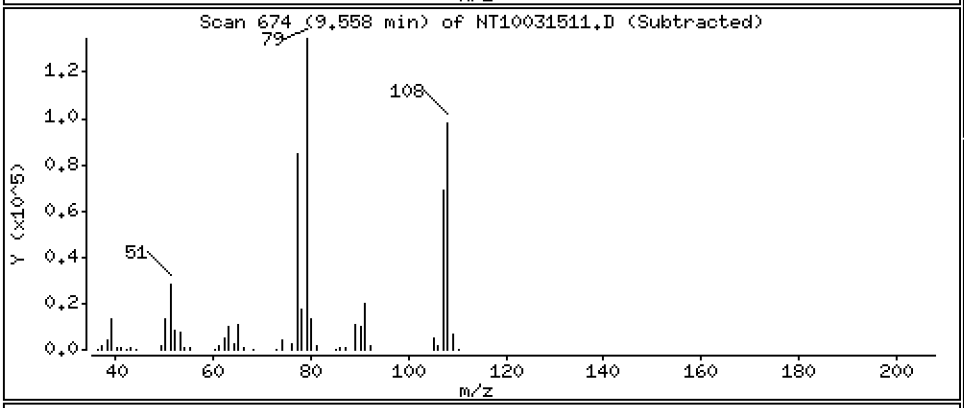
Column phase: ZB-5msi

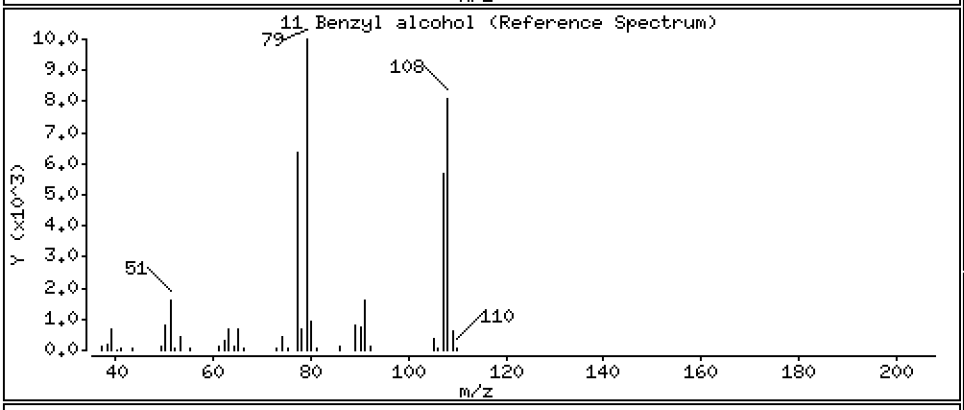
Column diameter: 0.25

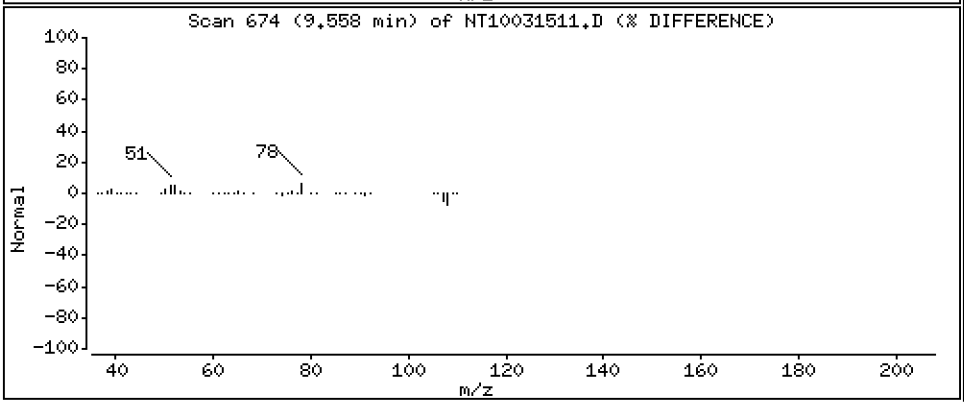
11 Benzyl alcohol

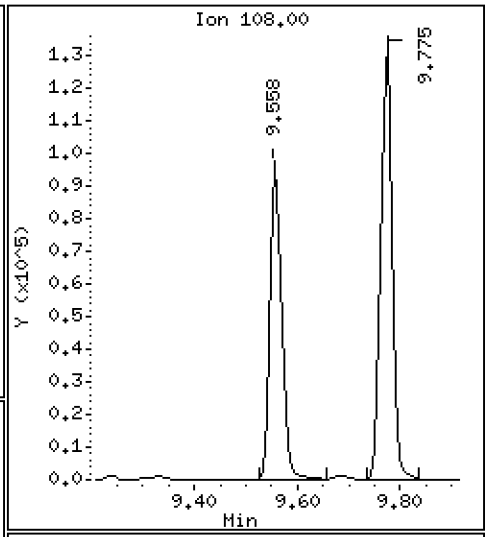
Concentration: 4.927 ug/mL

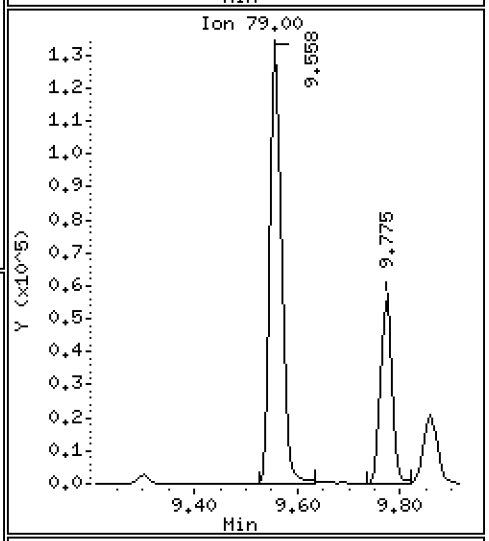


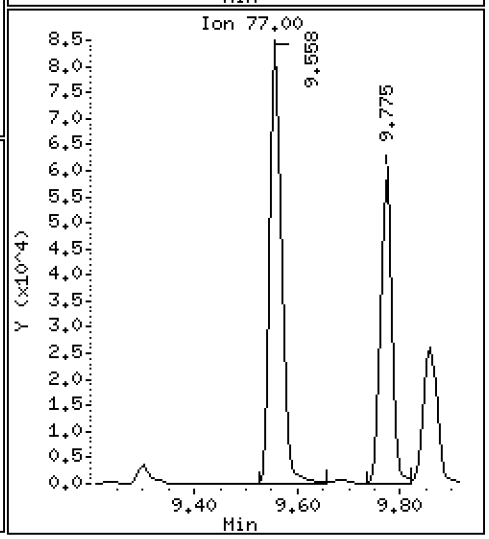












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

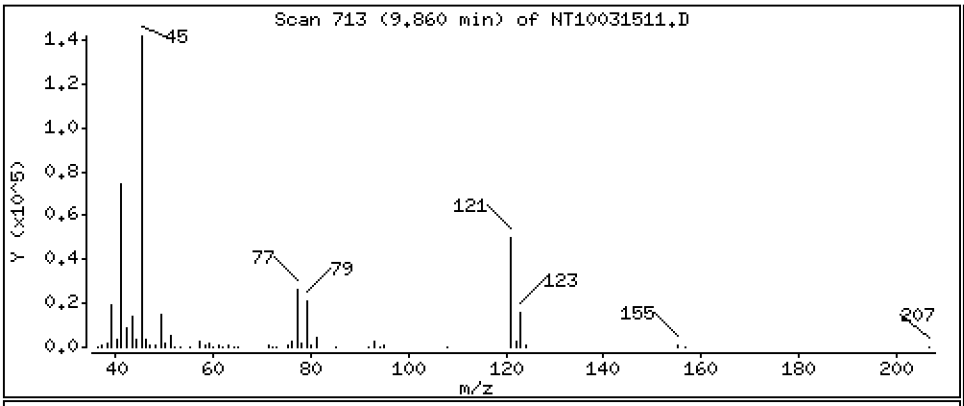
Operator: VTS

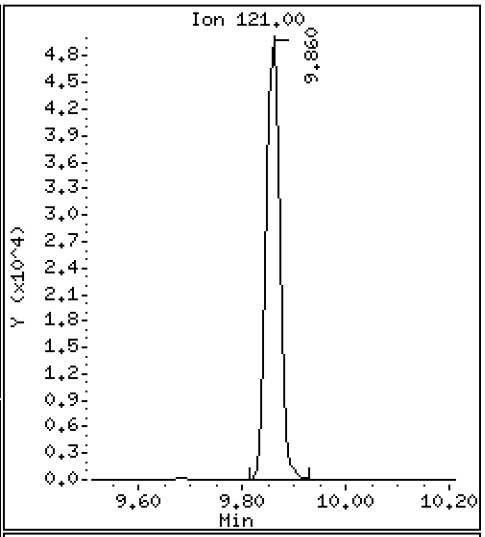
Column phase: ZB-5msi

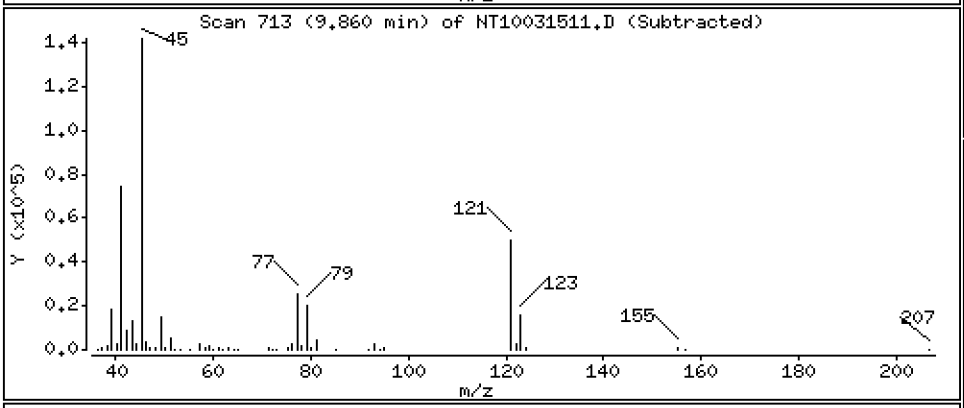
Column diameter: 0.25

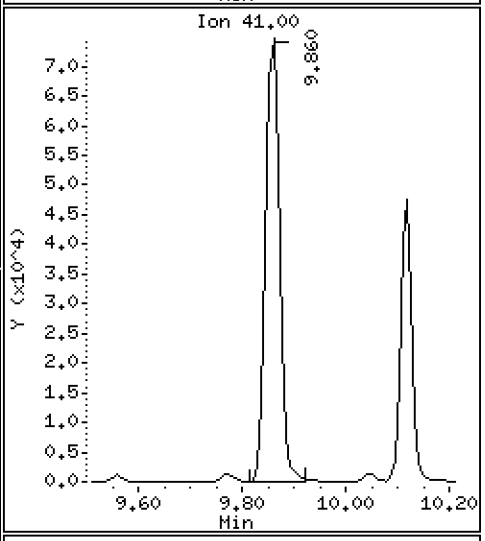
14 2,2'-oxybis(1-Chloropropane)

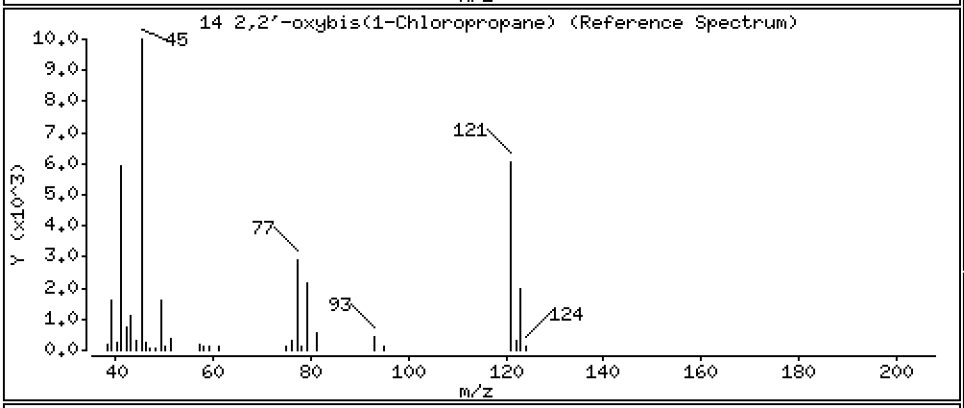
Concentration: 6.214 ug/mL

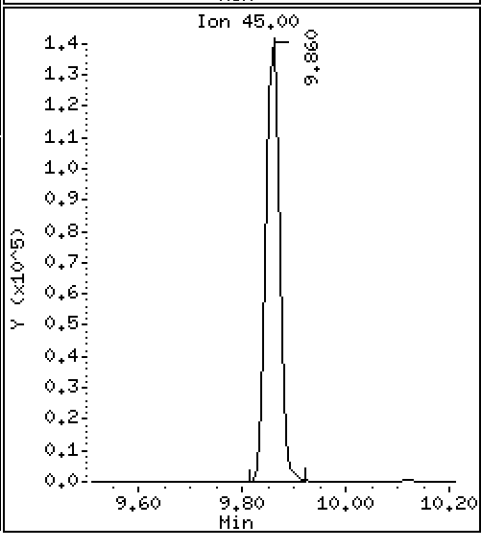


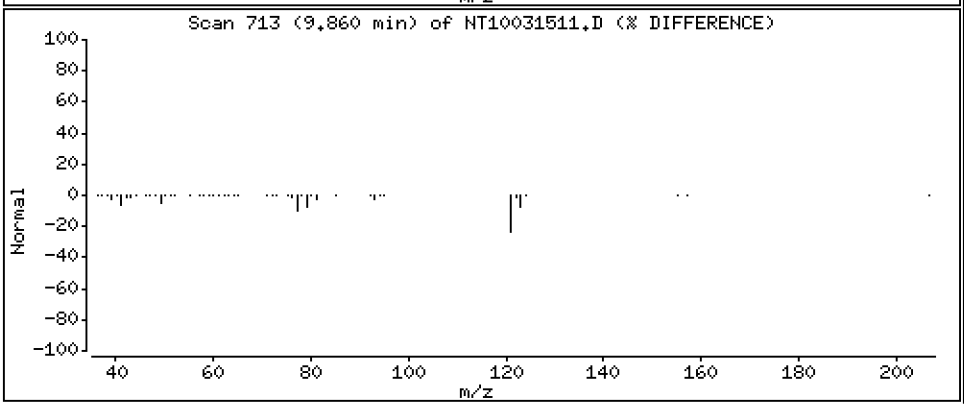












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

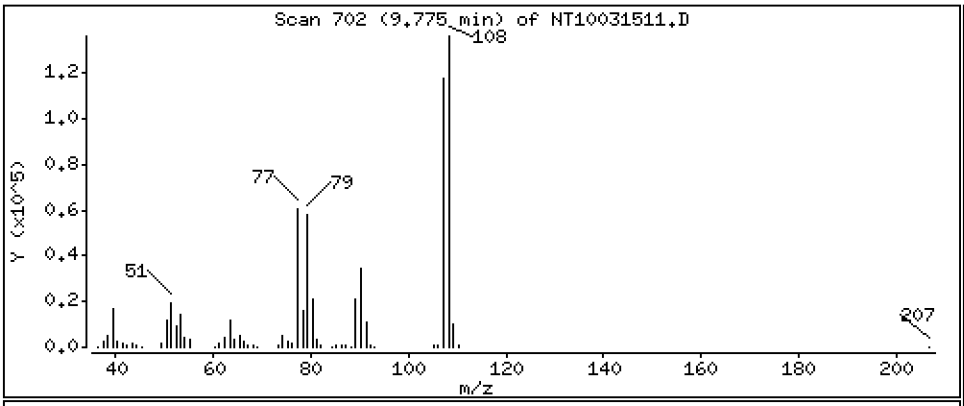
Operator: VTS

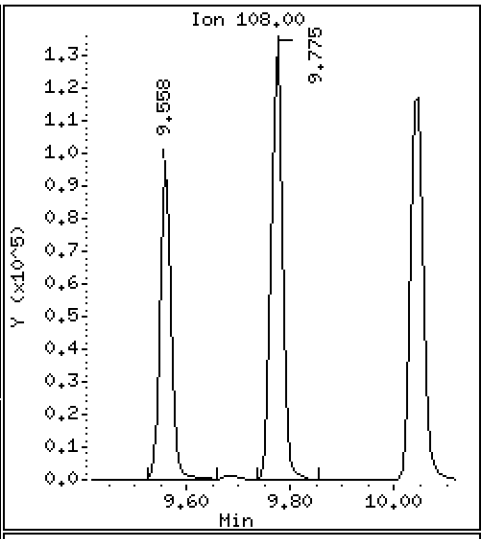
Column phase: ZB-5msi

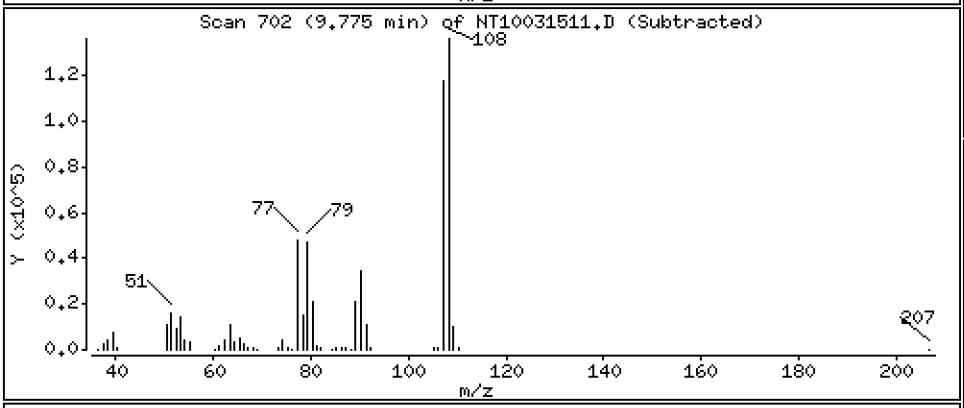
Column diameter: 0.25

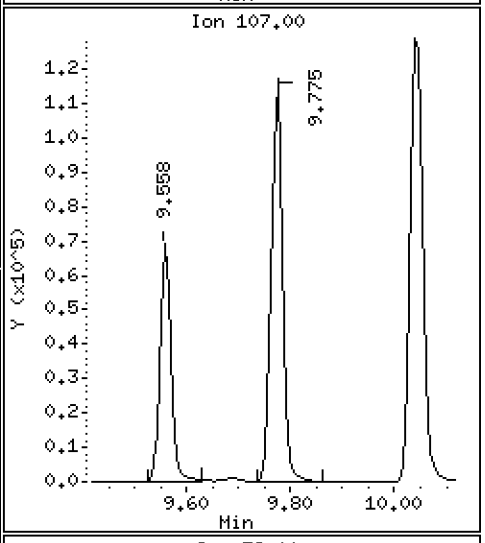
13 2-Methylphenol

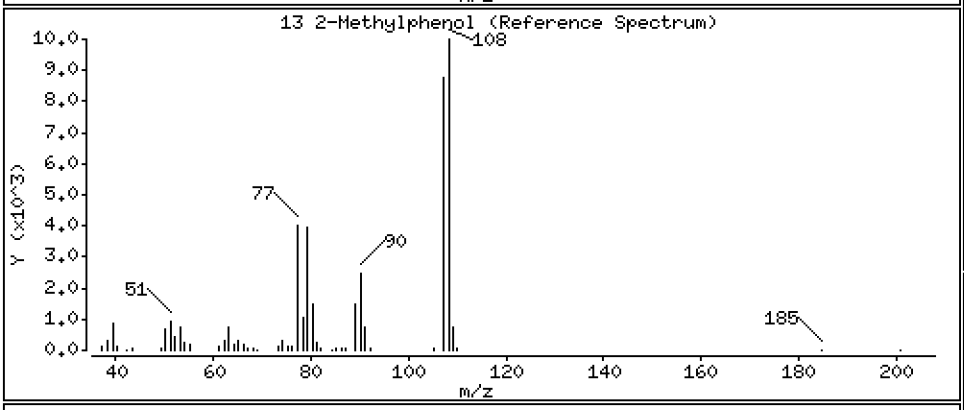
Concentration: 4.215 ug/mL

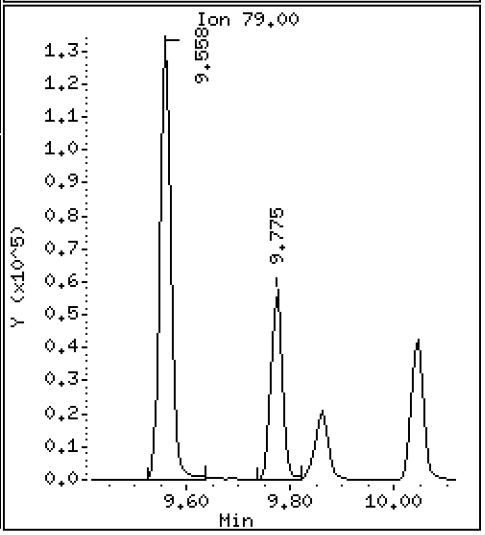


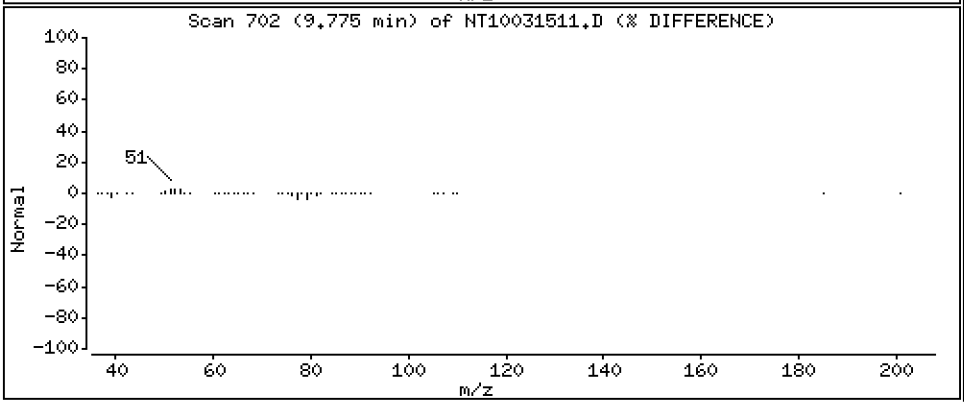












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

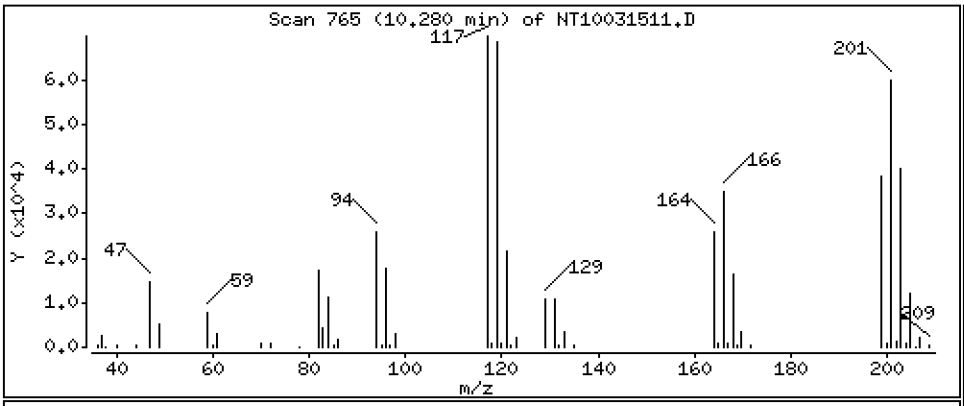
Operator: VTS

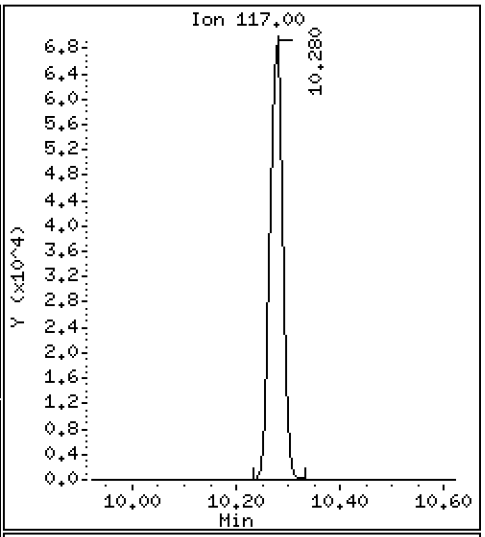
Column phase: ZB-5msi

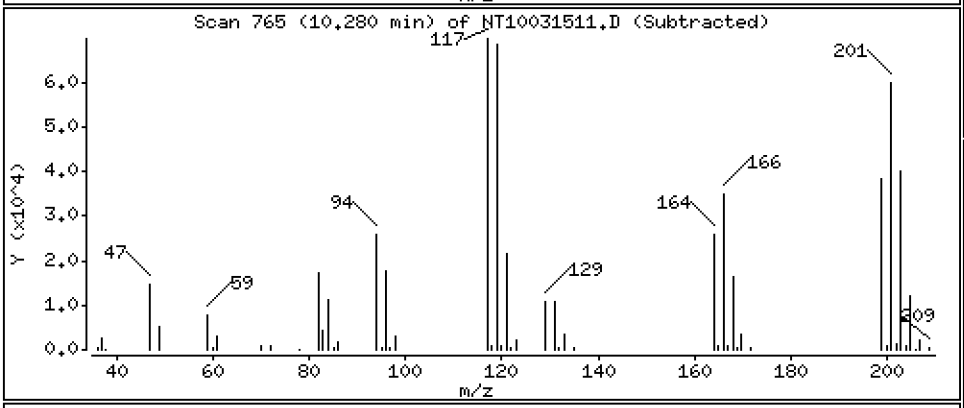
Column diameter: 0.25

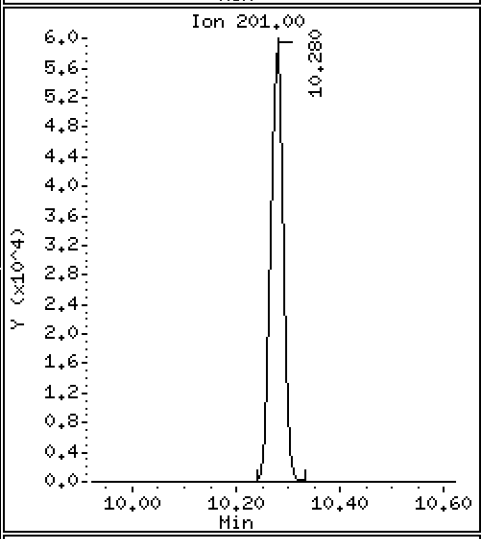
17 Hexachloroethane

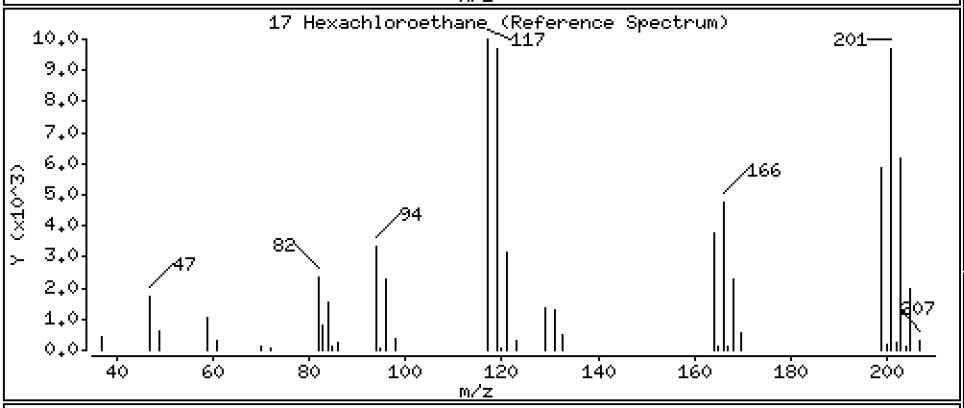
Concentration: 5.003 ug/mL

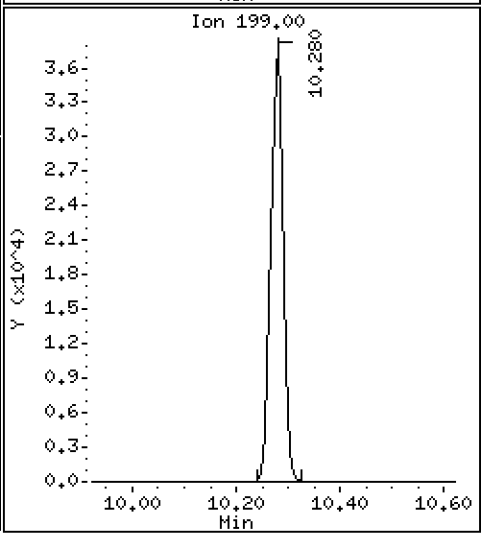


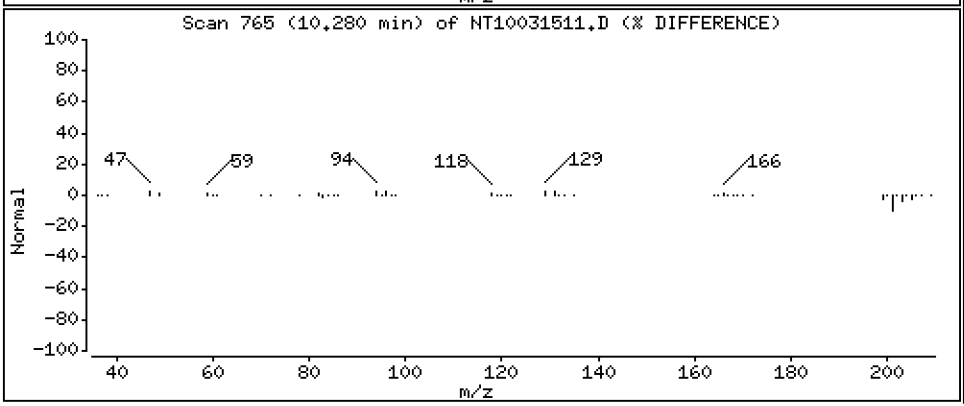












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

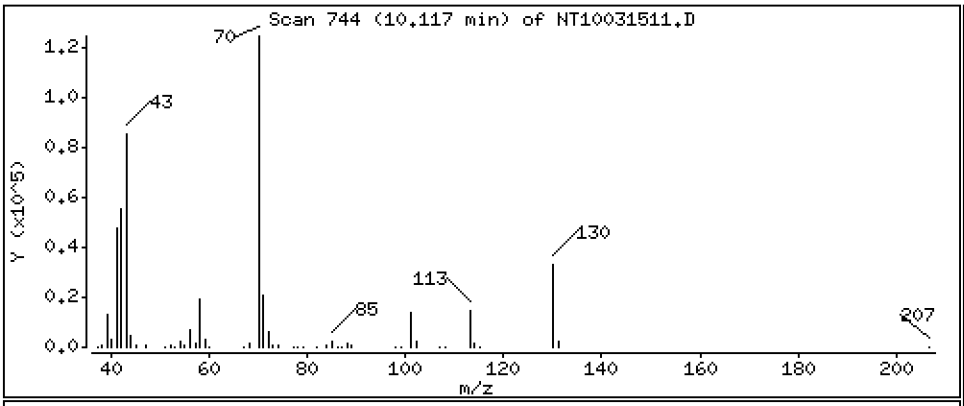
Operator: VTS

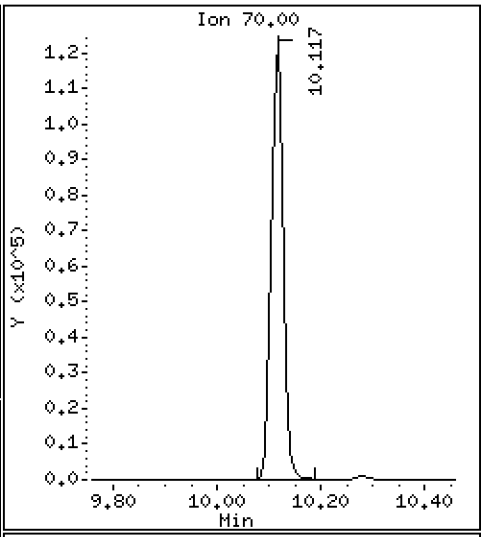
Column phase: ZB-5msi

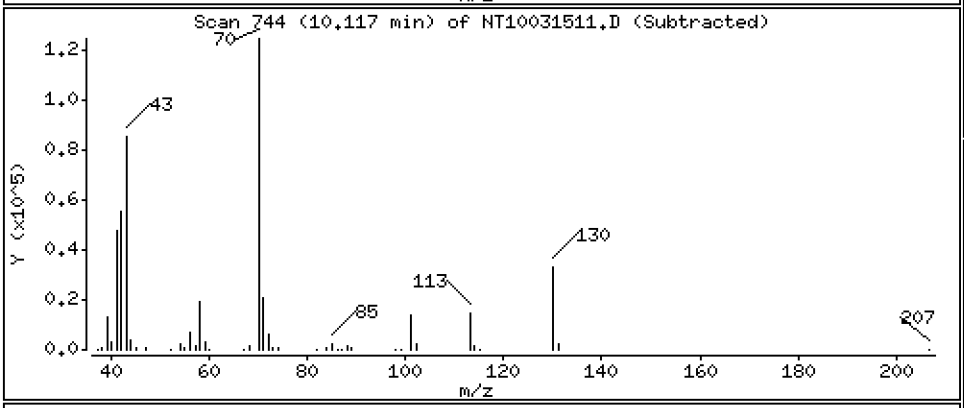
Column diameter: 0.25

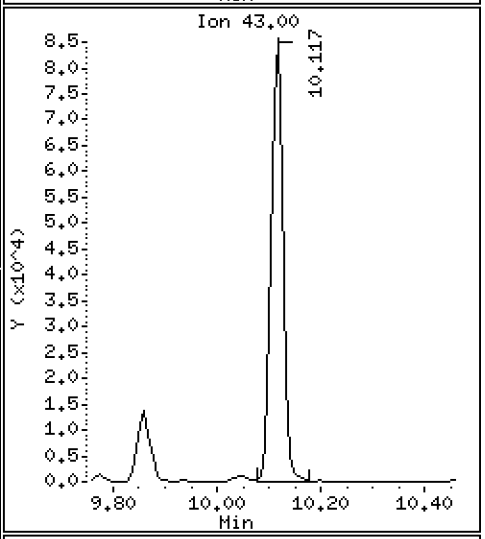
16 N-Nitroso-di-n-propylamine

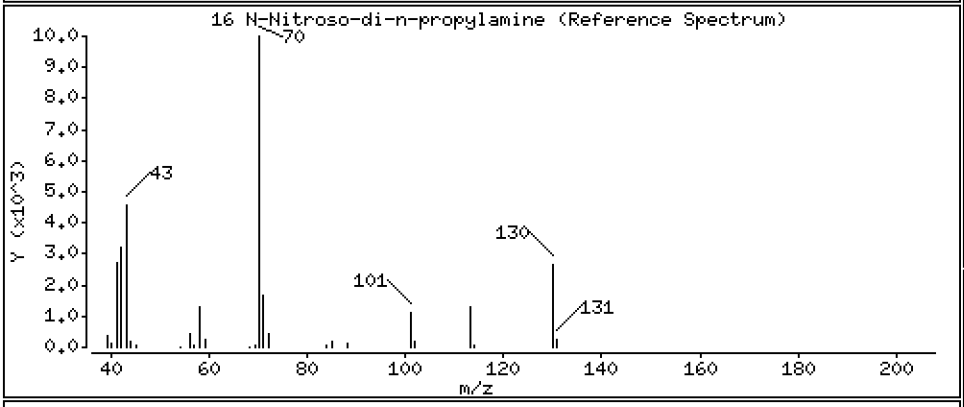
Concentration: 5.179 ug/mL

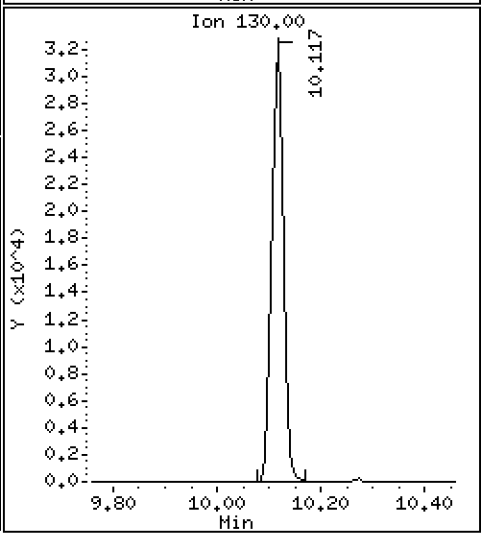


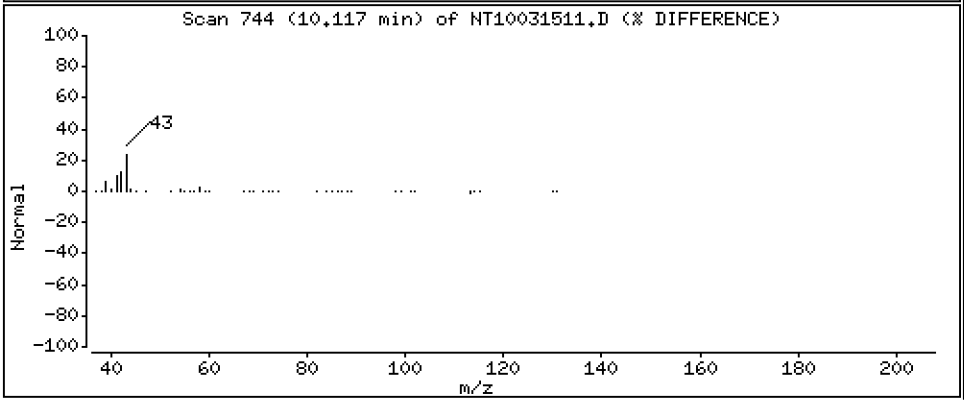












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

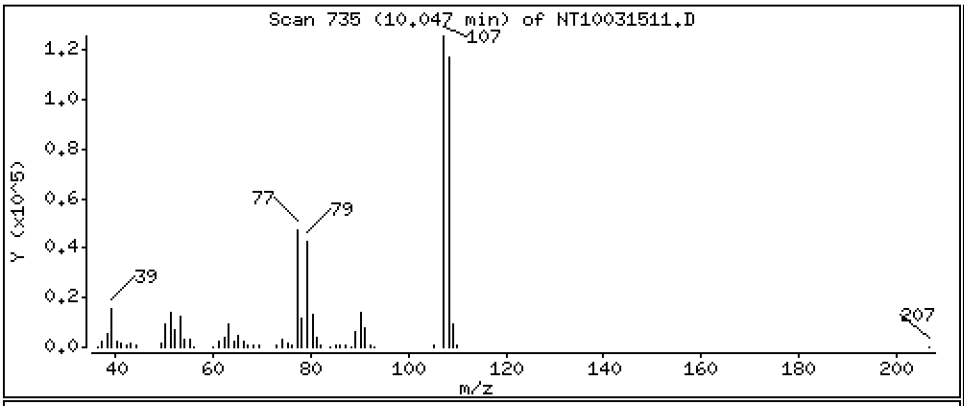
Operator: VTS

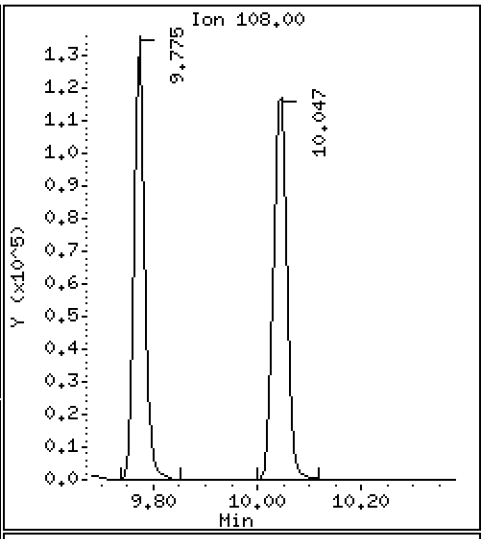
Column phase: ZB-5msi

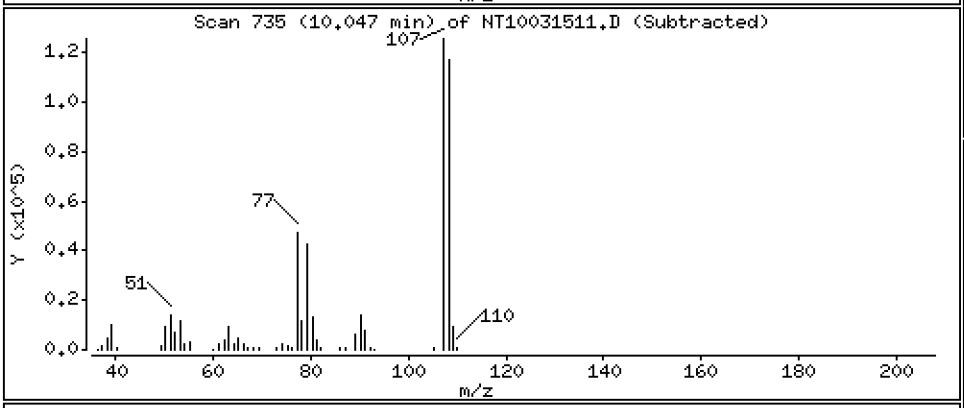
Column diameter: 0.25

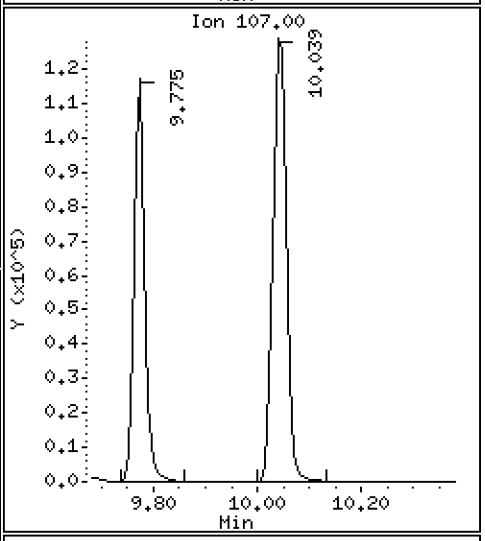
15 4-Methylphenol

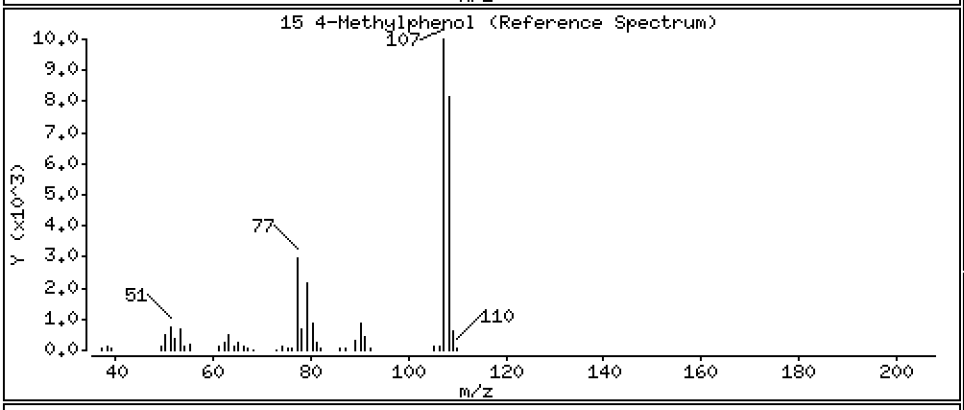
Concentration: 4.365 ug/mL

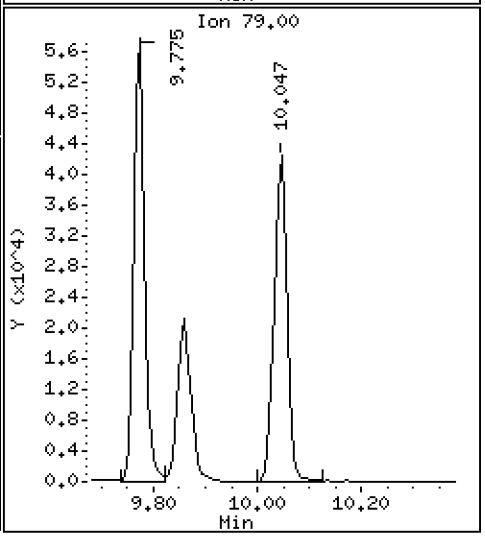


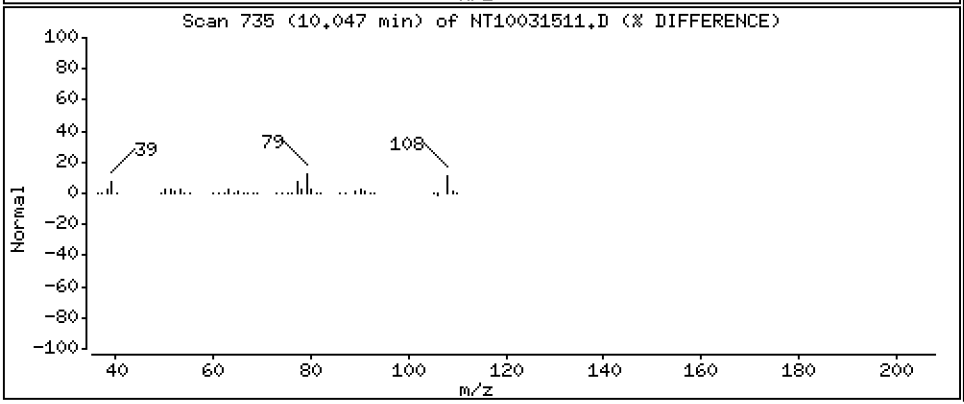












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

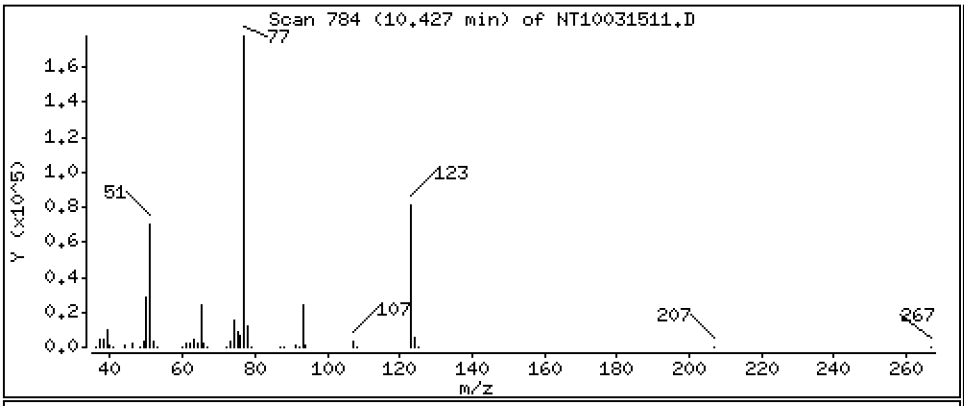
Operator: VTS

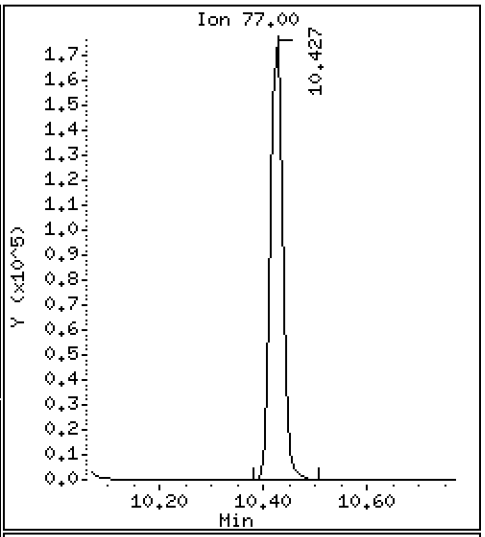
Column phase: ZB-5msi

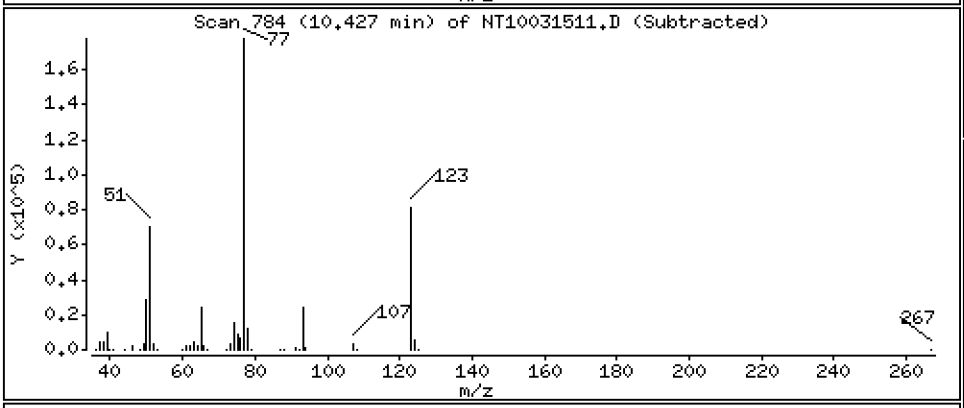
Column diameter: 0.25

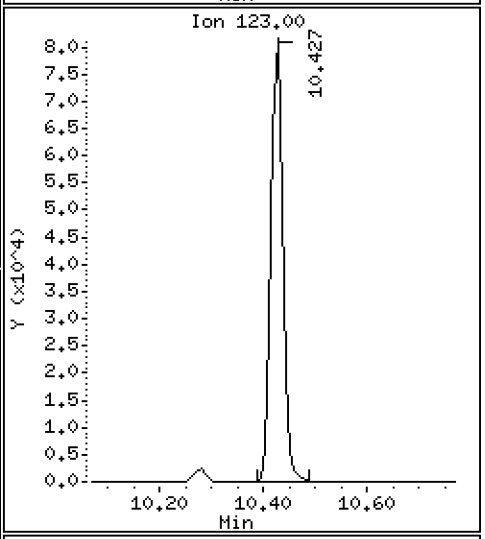
19 Nitrobenzene

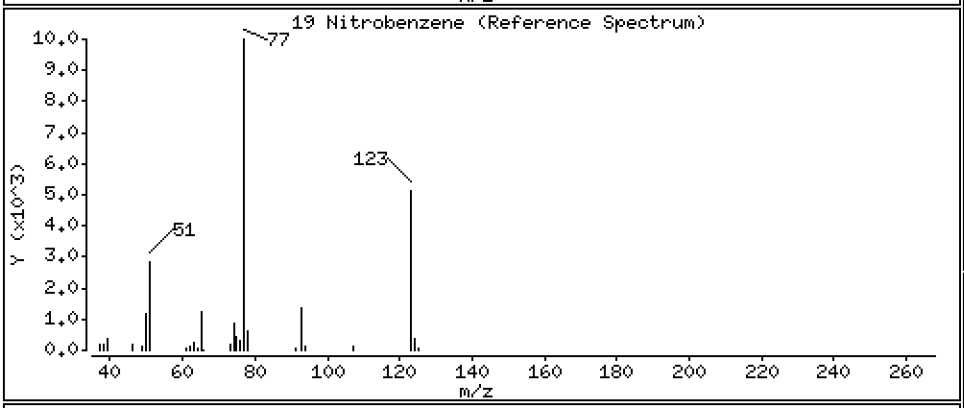
Concentration: 4.858 ug/mL

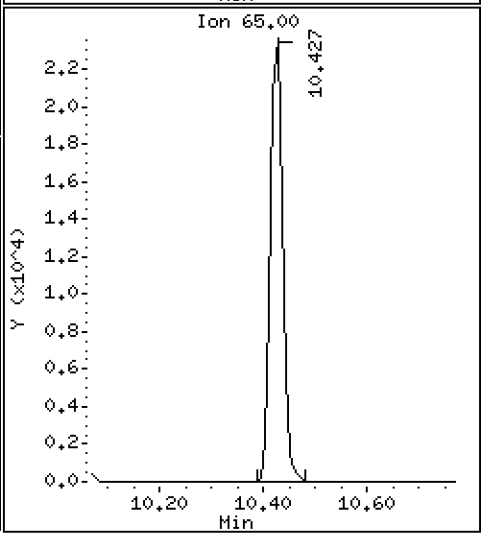


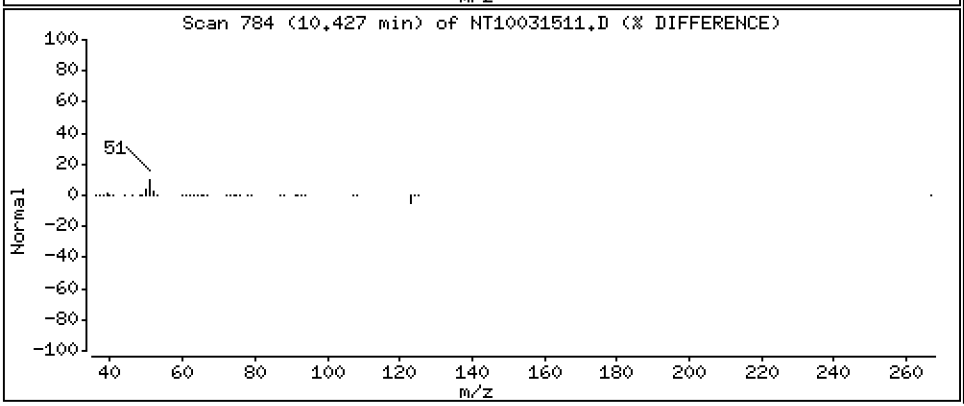












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

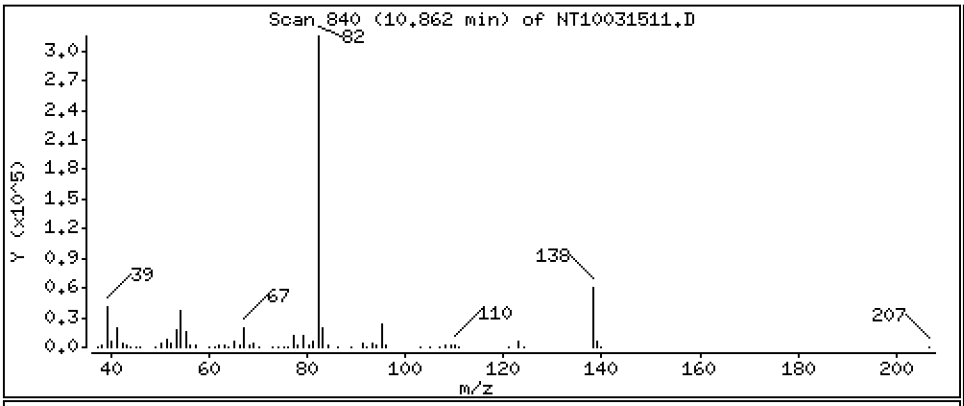
Operator: VTS

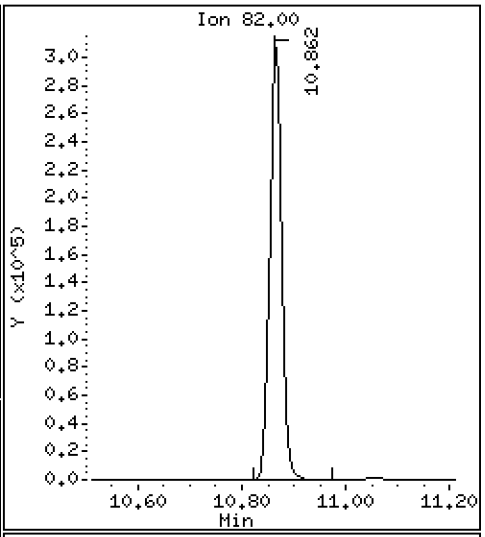
Column phase: ZB-5msi

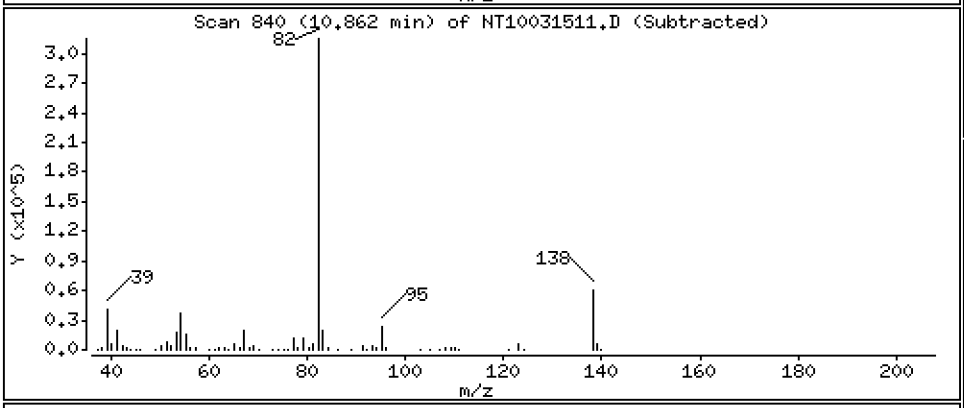
Column diameter: 0.25

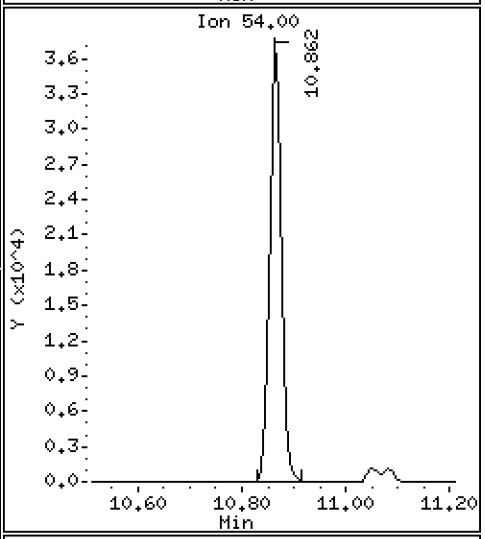
20 Isophorone

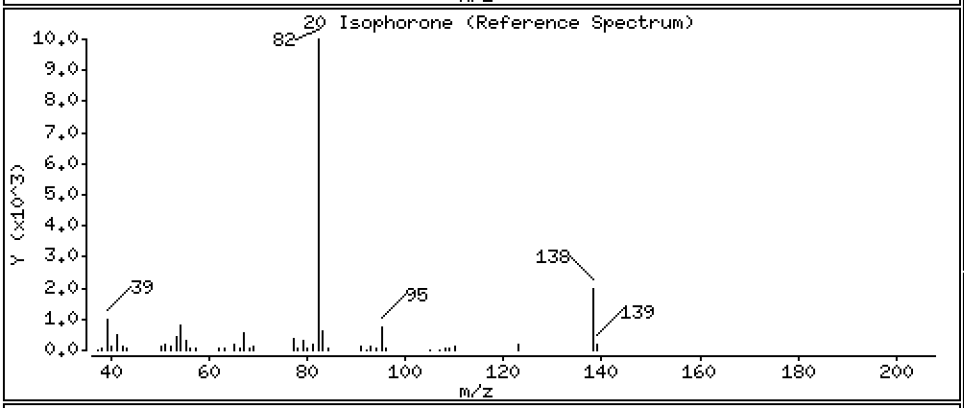
Concentration: 7.696 ug/mL

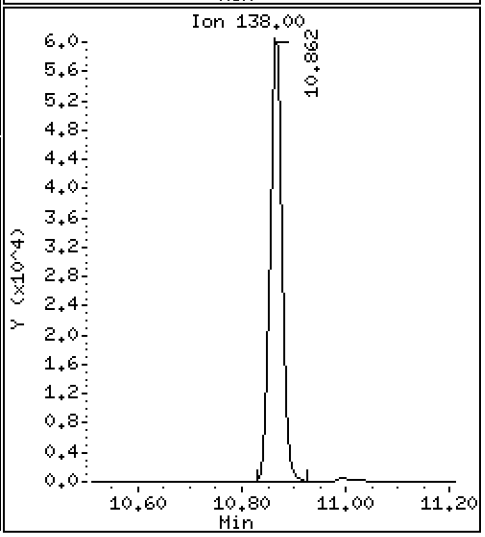


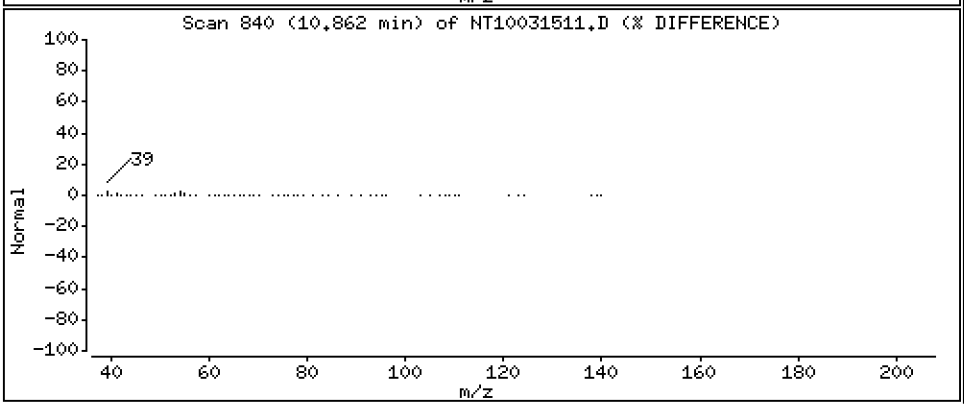












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

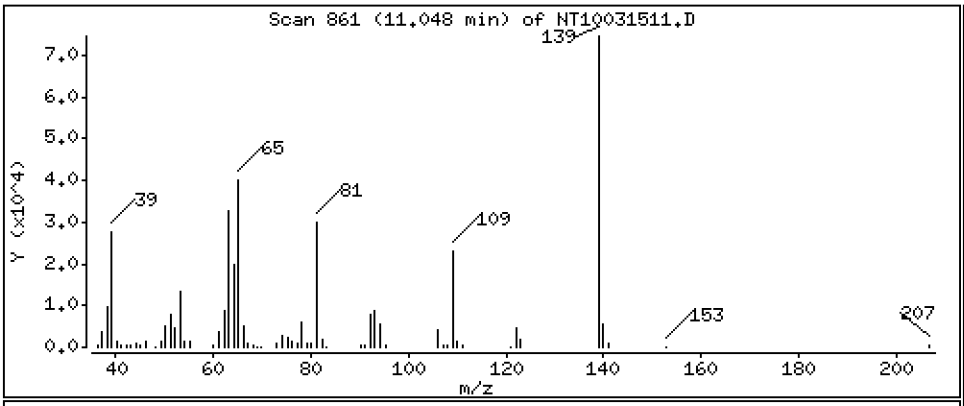
Operator: VTS

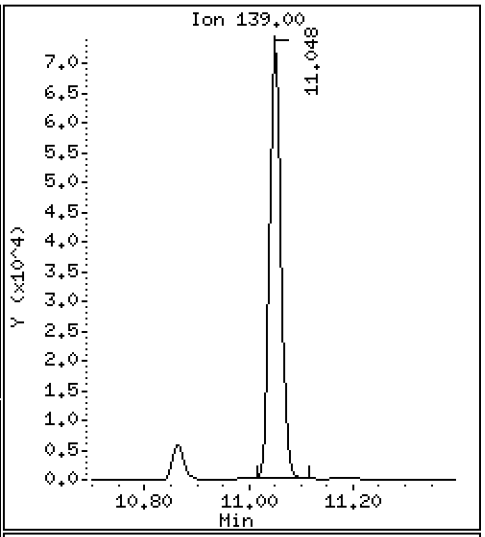
Column phase: ZB-5msi

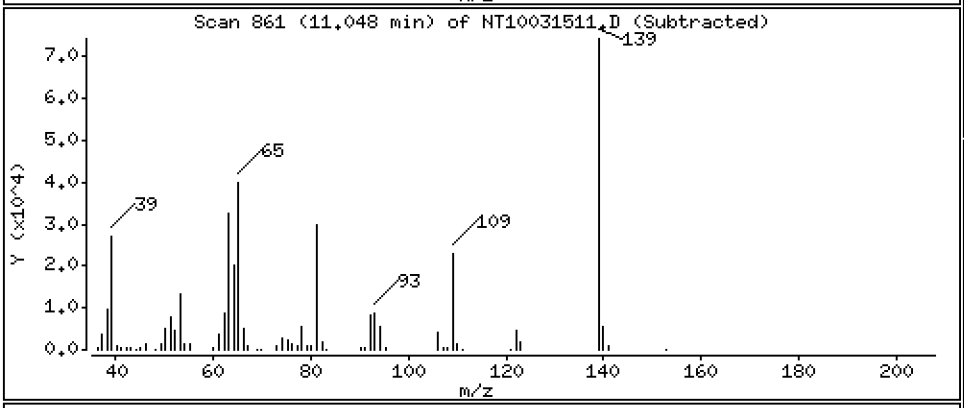
Column diameter: 0.25

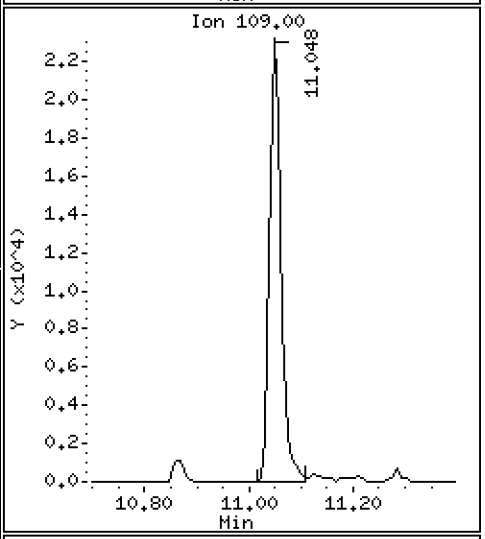
21 2-Nitrophenol

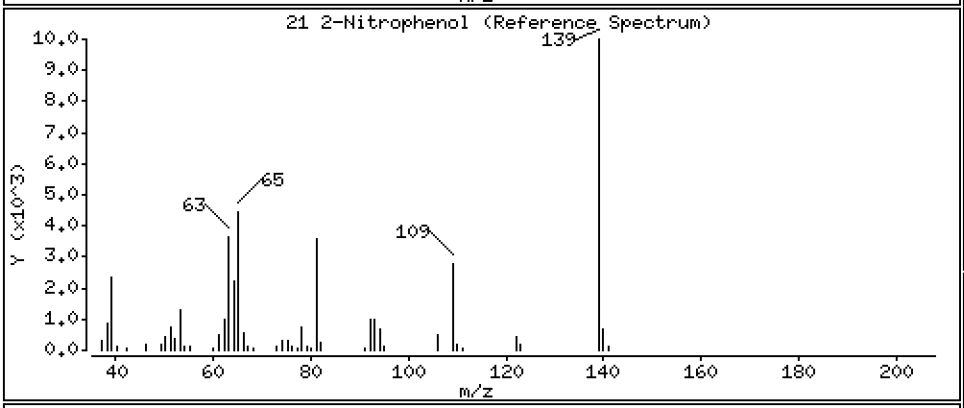
Concentration: 3.995 ug/mL

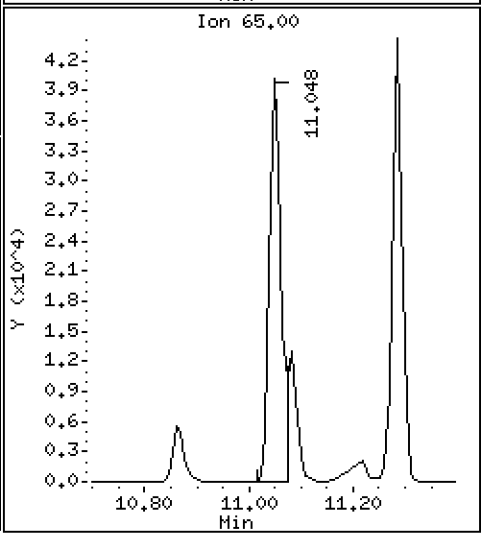


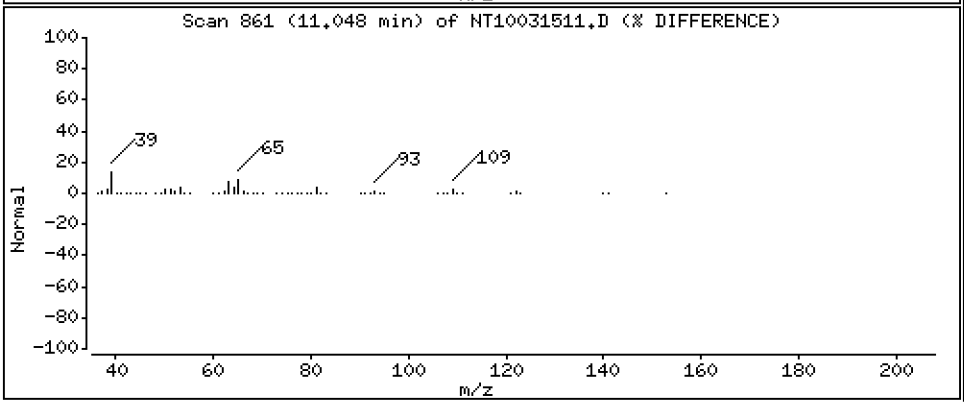












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

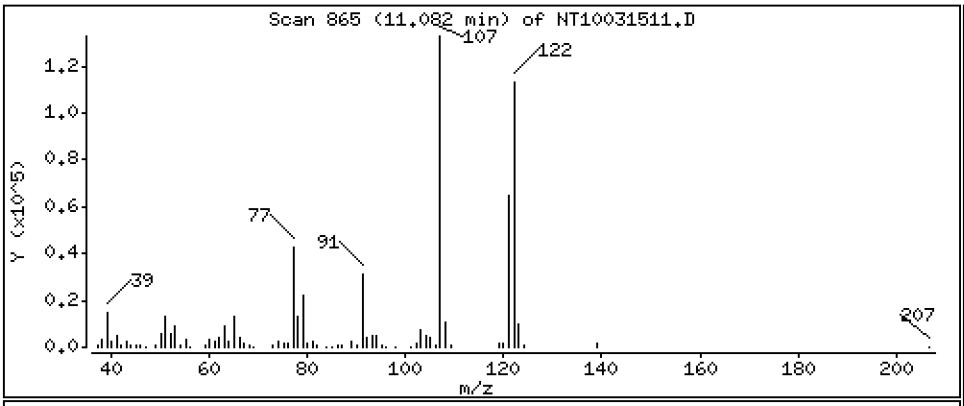
Operator: VTS

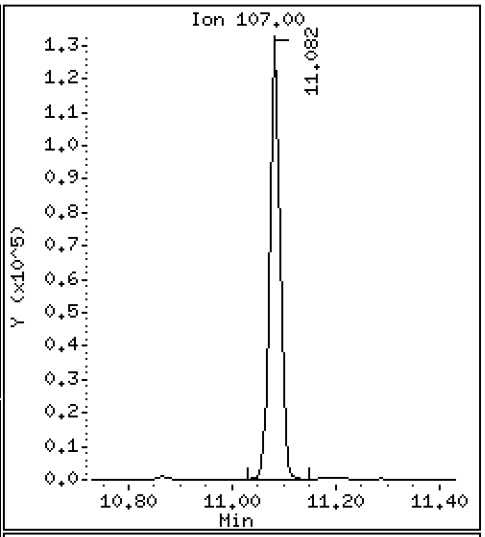
Column phase: ZB-5msi

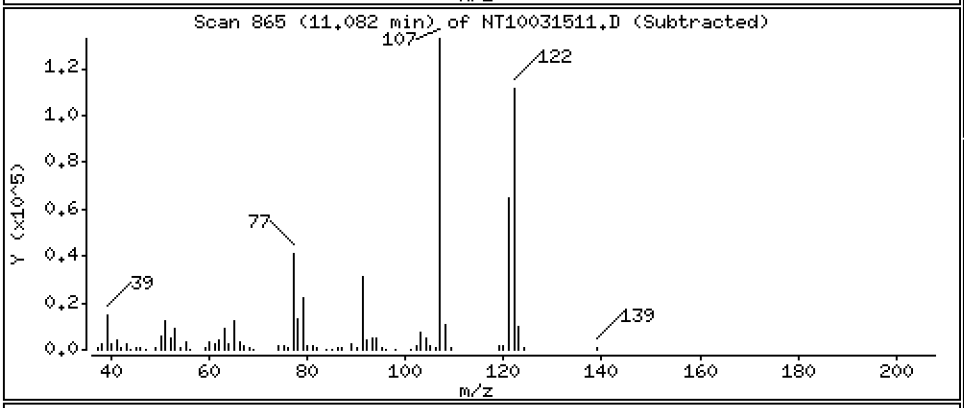
Column diameter: 0.25

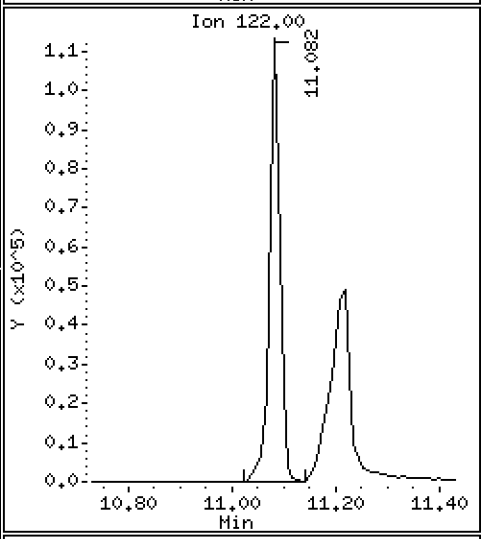
22 2,4-Dimethylphenol

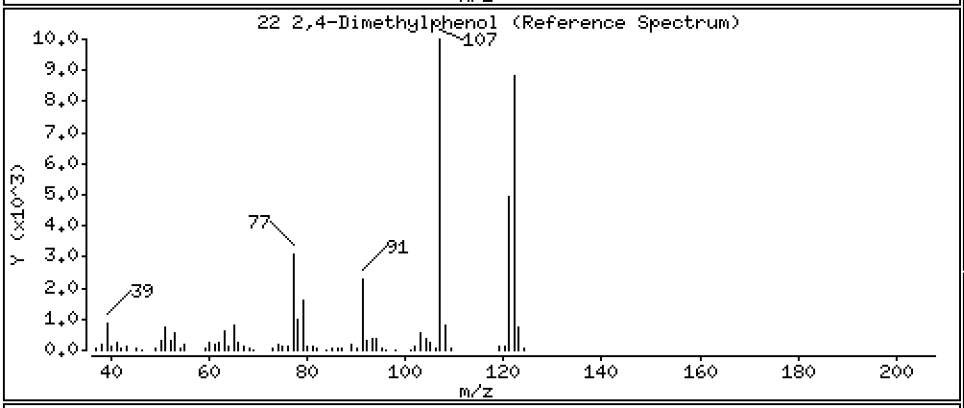
Concentration: 3.632 ug/mL

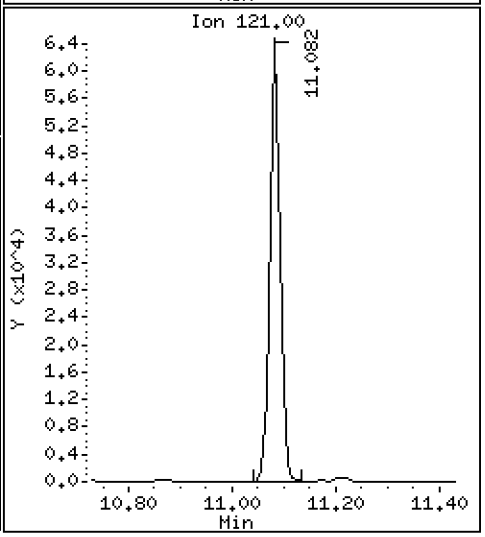


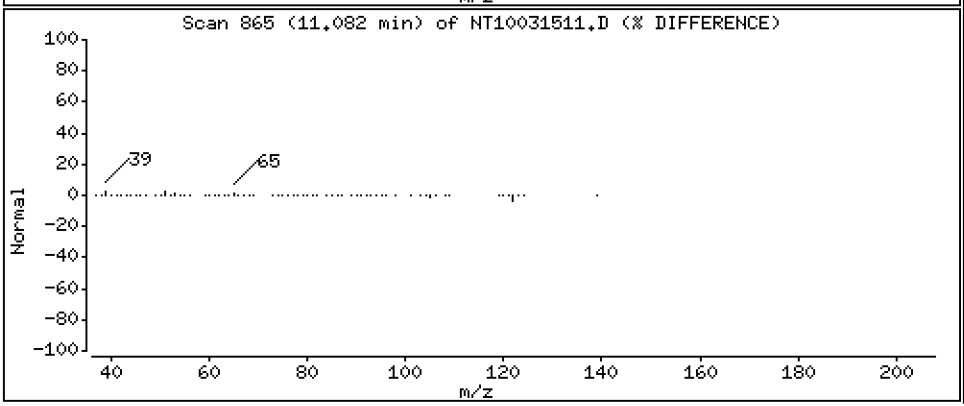












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

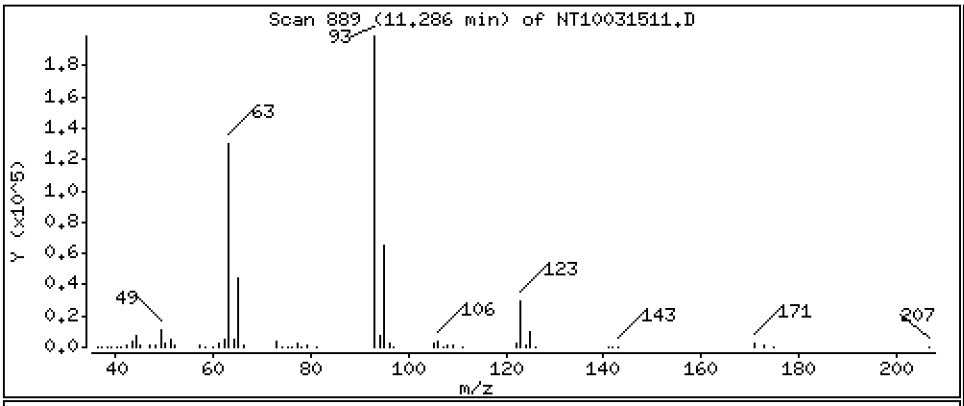
Operator: VTS

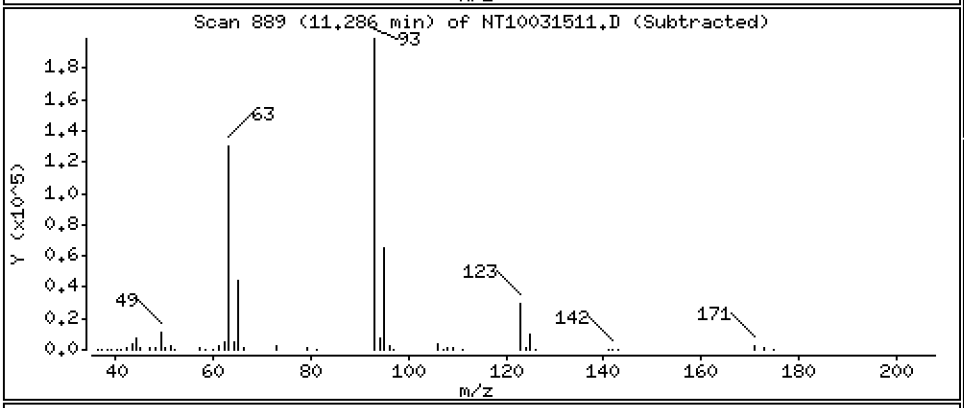
Column phase: ZB-5msi

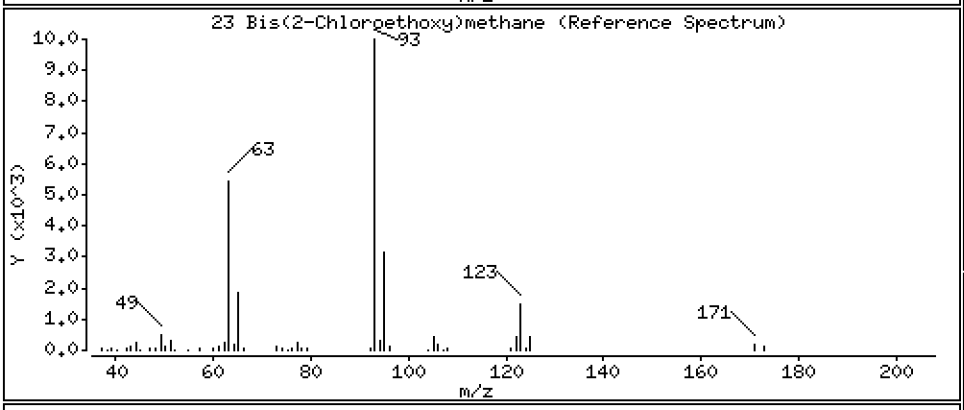
Column diameter: 0.25

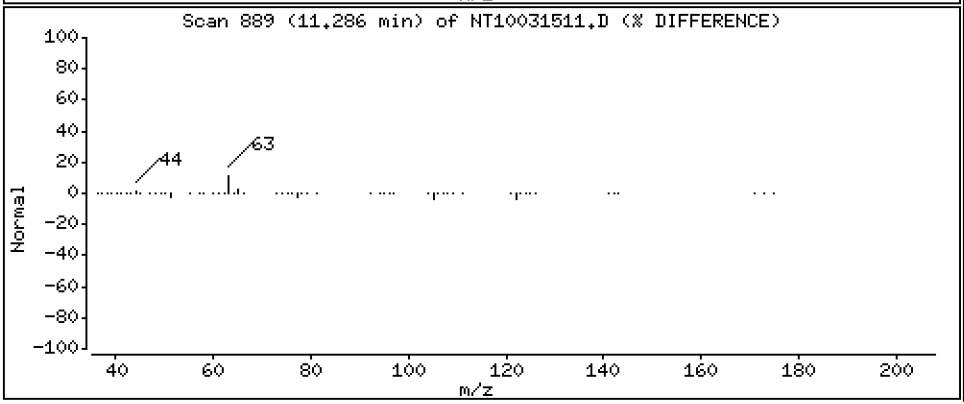
23 Bis(2-Chloroethoxy)methane

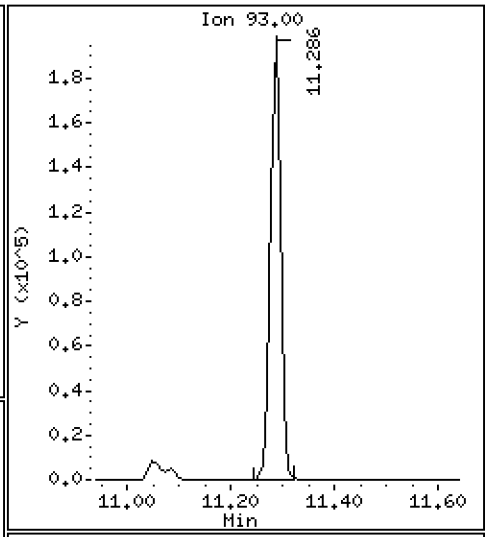
Concentration: 5.654 ug/mL

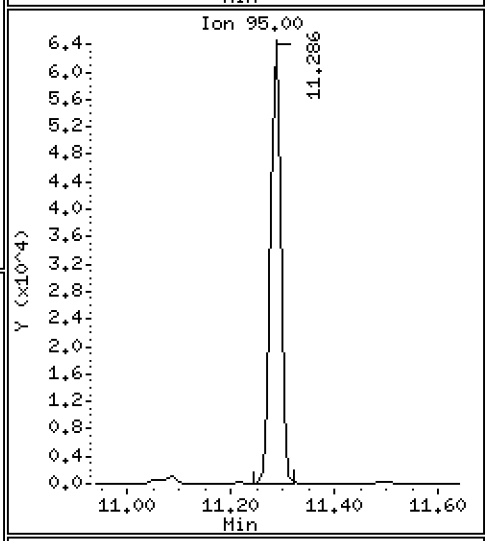


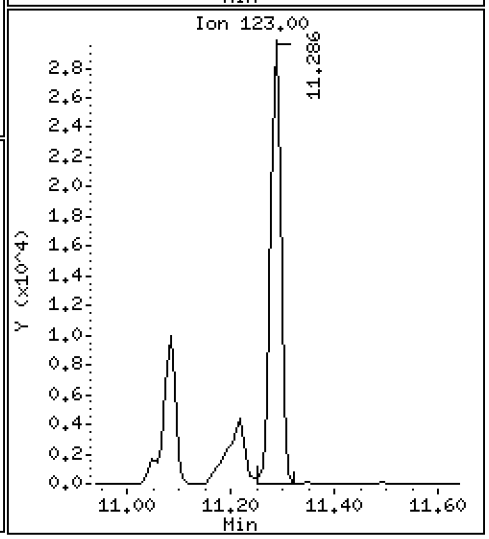












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

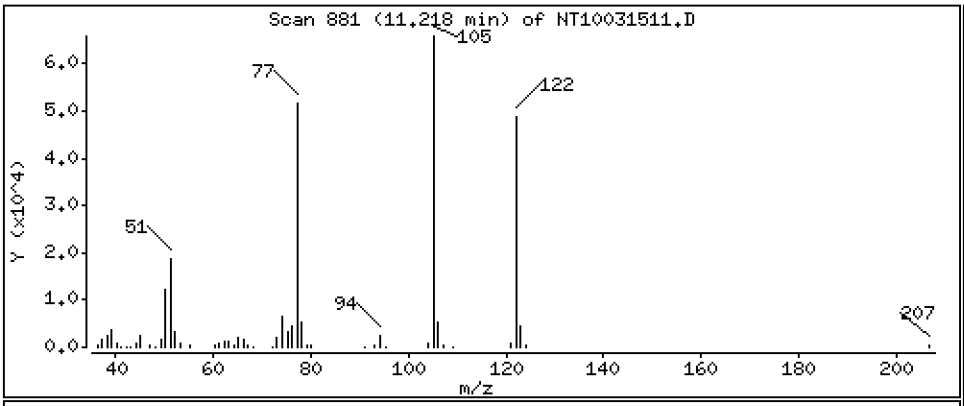
Operator: VTS

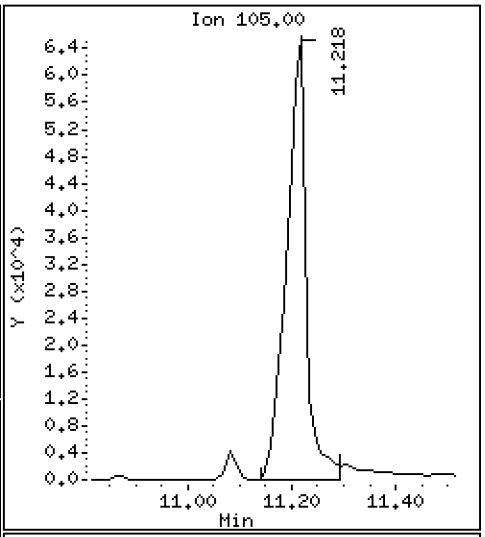
Column phase: ZB-5msi

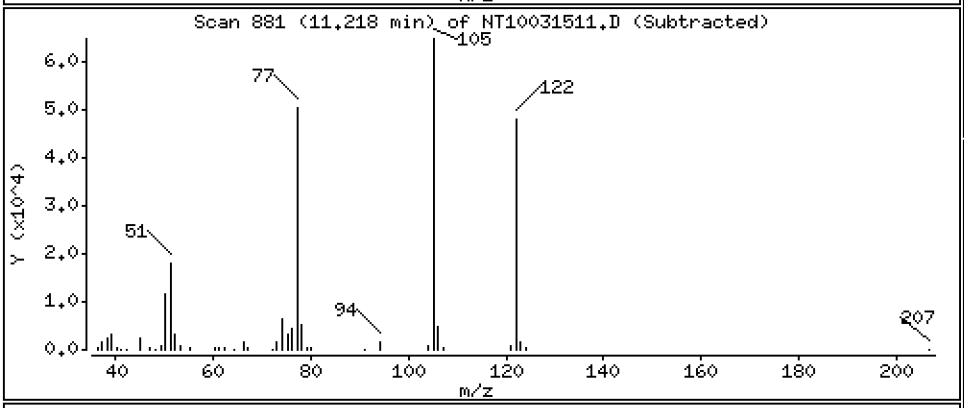
Column diameter: 0.25

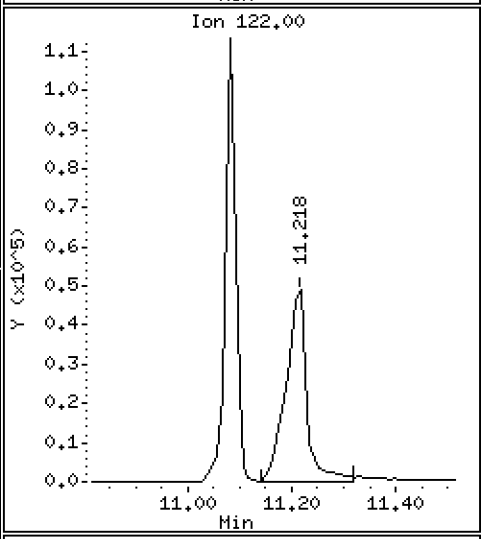
24 Benzoic acid

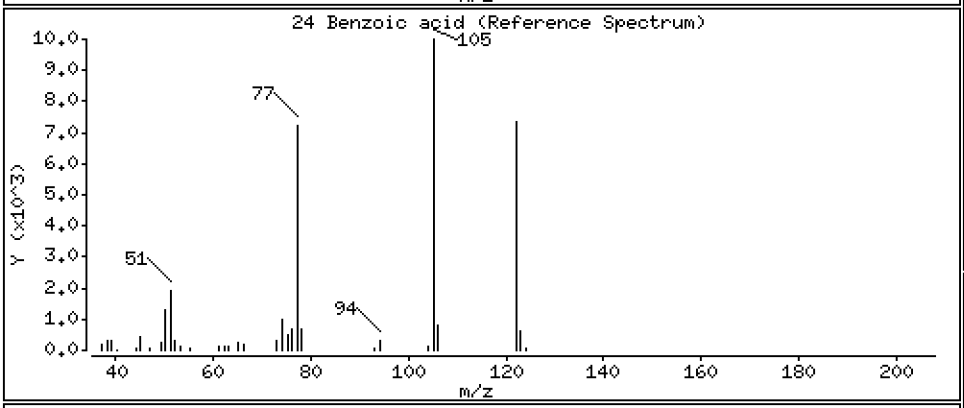
Concentration: 5.952 ug/mL

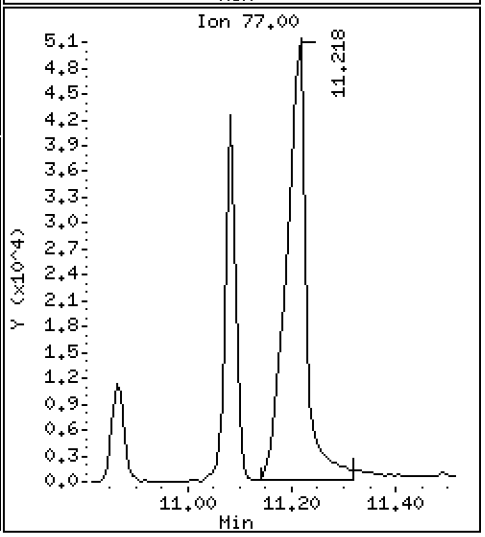


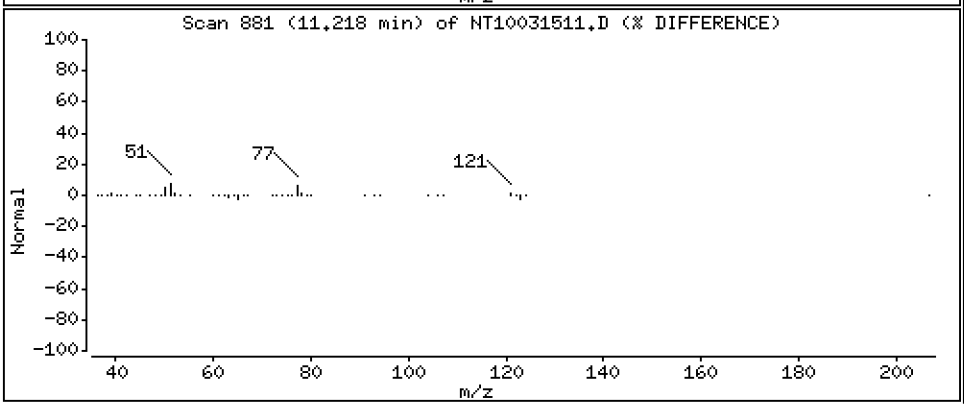












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

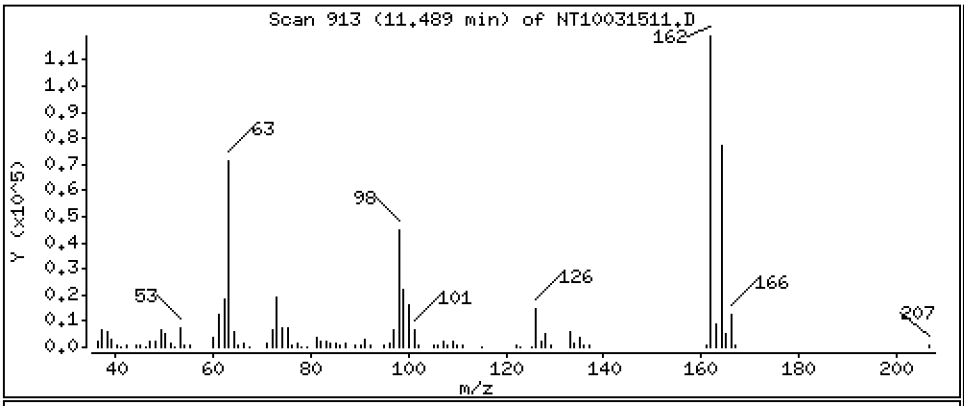
Operator: VTS

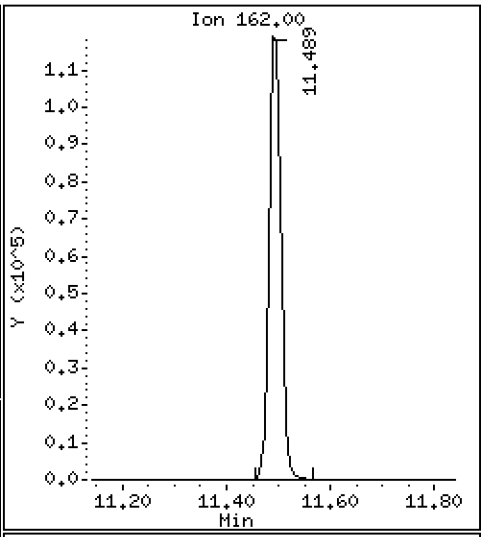
Column phase: ZB-5msi

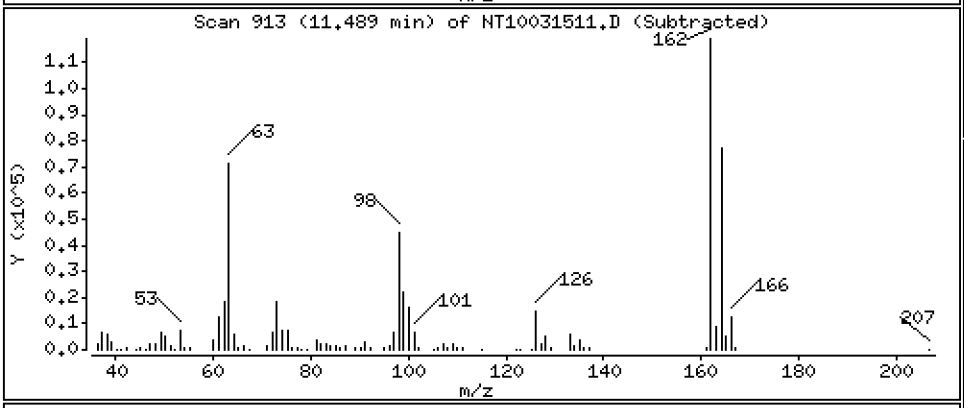
Column diameter: 0.25

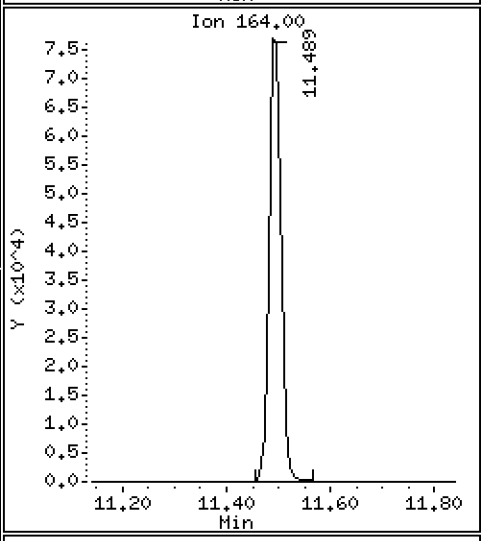
25 2,4-Dichlorophenol

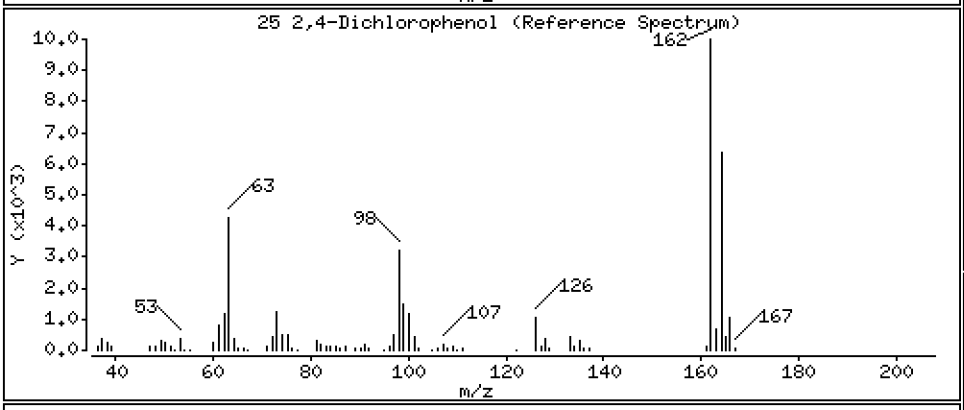
Concentration: 4.703 ug/mL

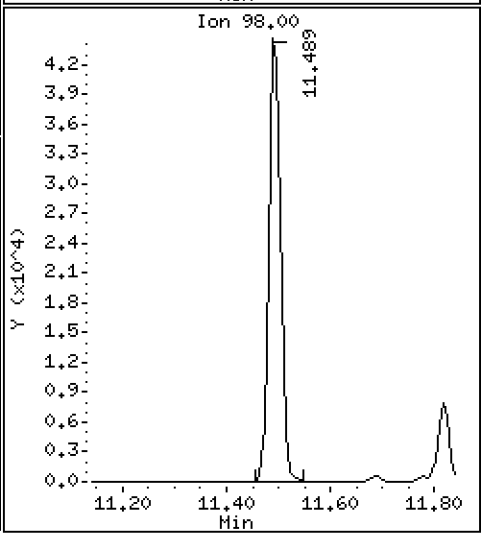


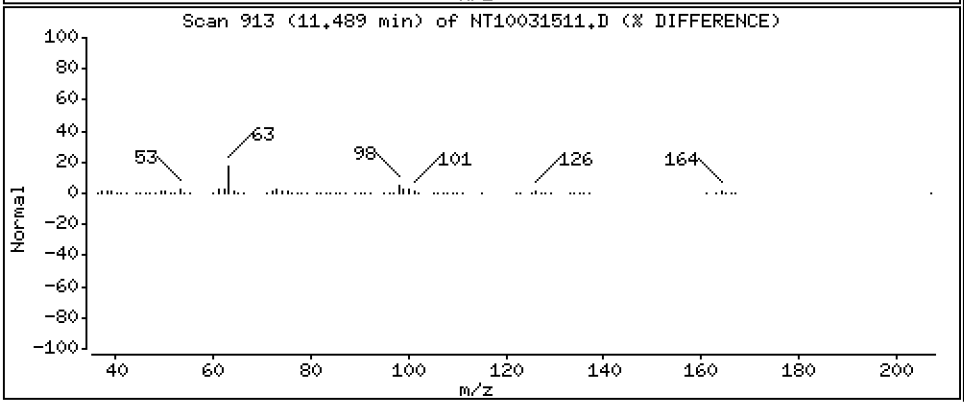












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

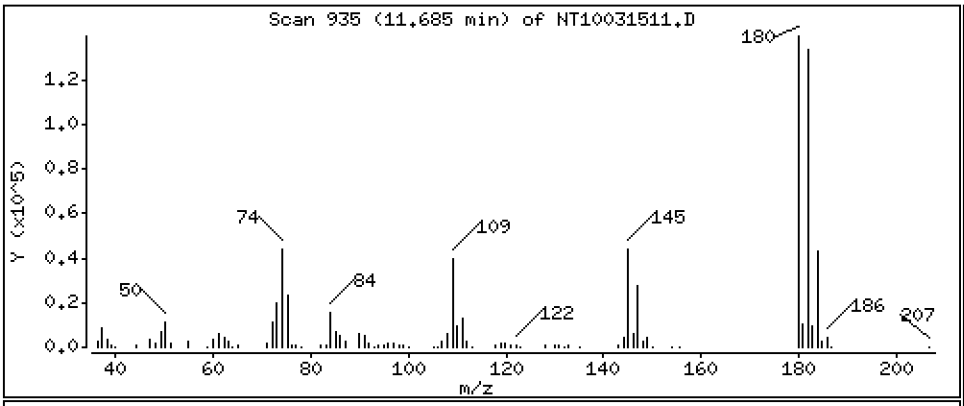
Operator: VTS

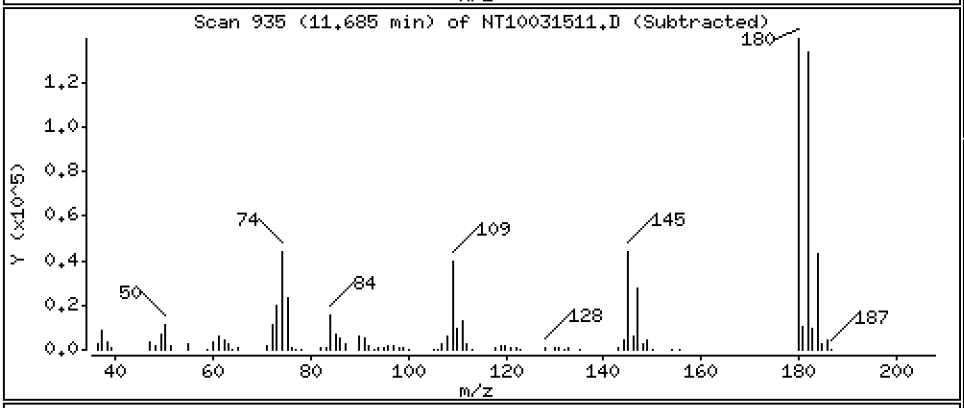
Column phase: ZB-5msi

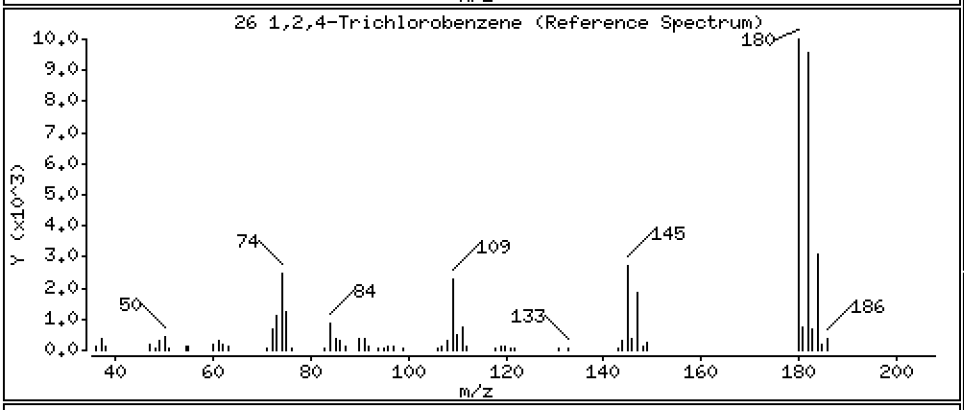
Column diameter: 0.25

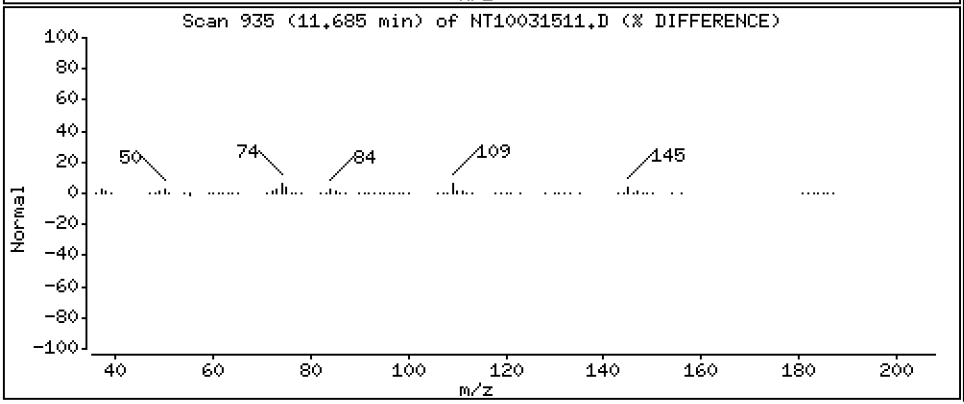
26 1,2,4-Trichlorobenzene

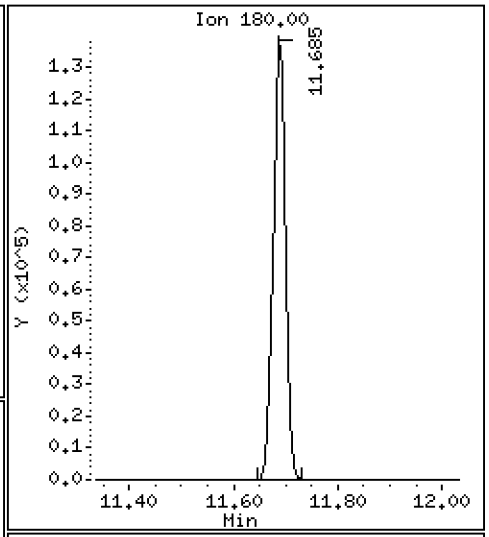
Concentration: 4.554 ug/mL

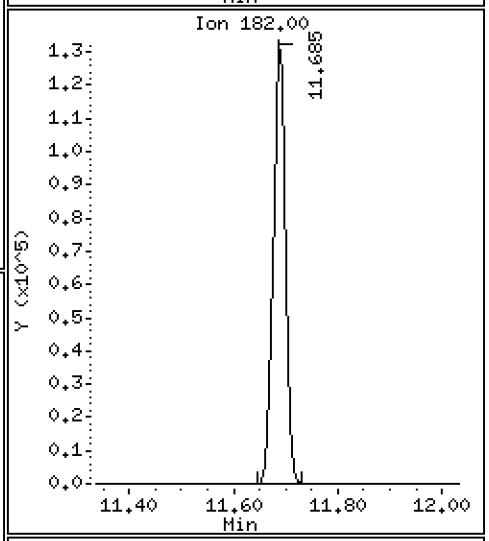


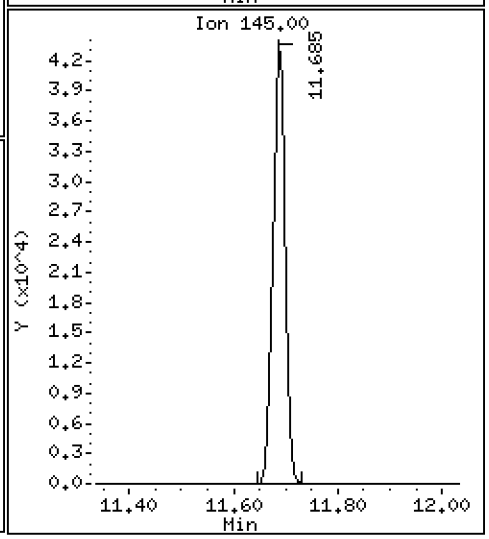












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

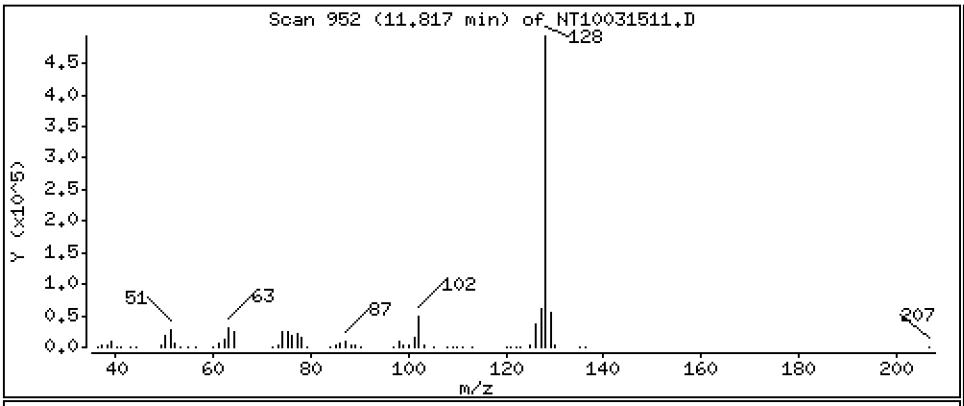
Operator: VTS

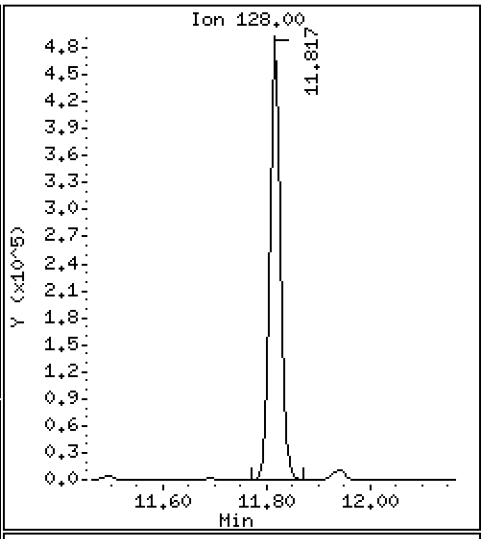
Column phase: ZB-5msi

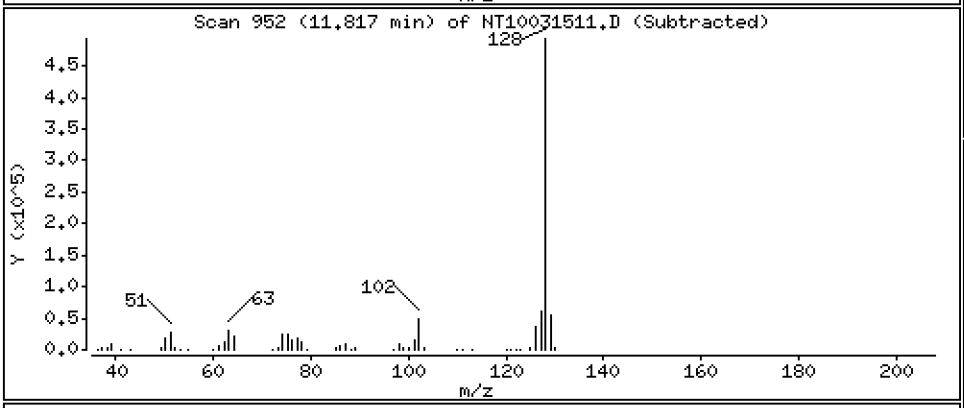
Column diameter: 0.25

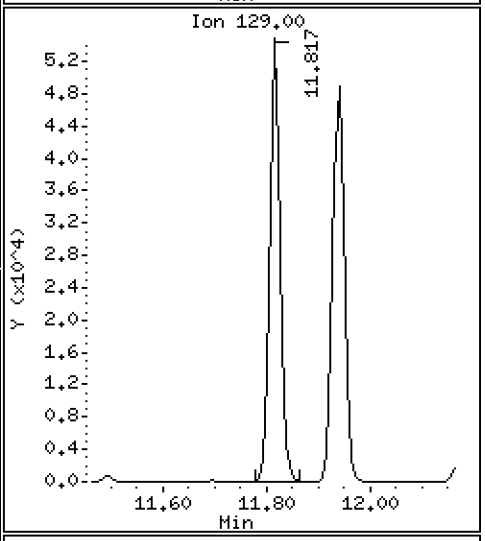
28 Naphthalene

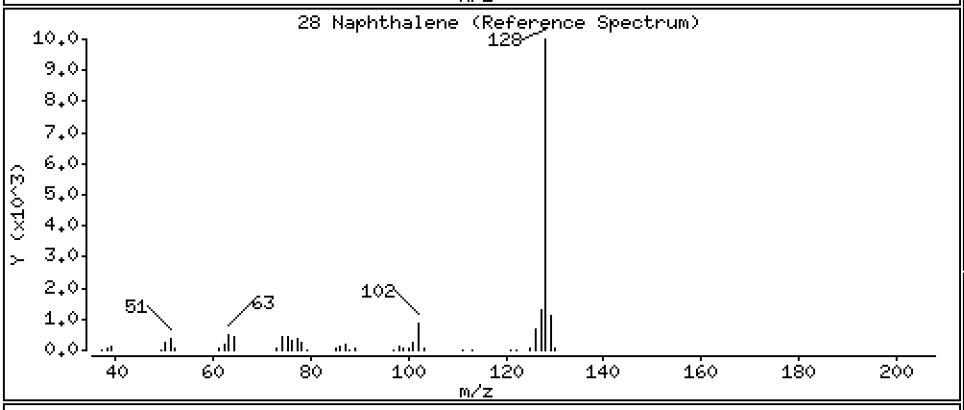
Concentration: 4.717 ug/mL

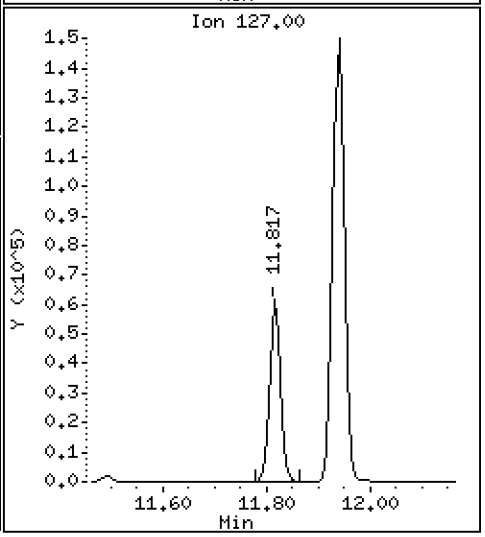


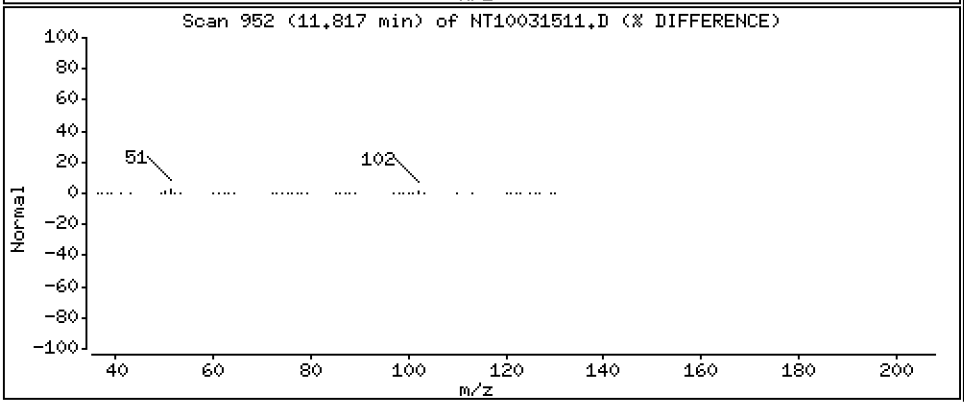












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

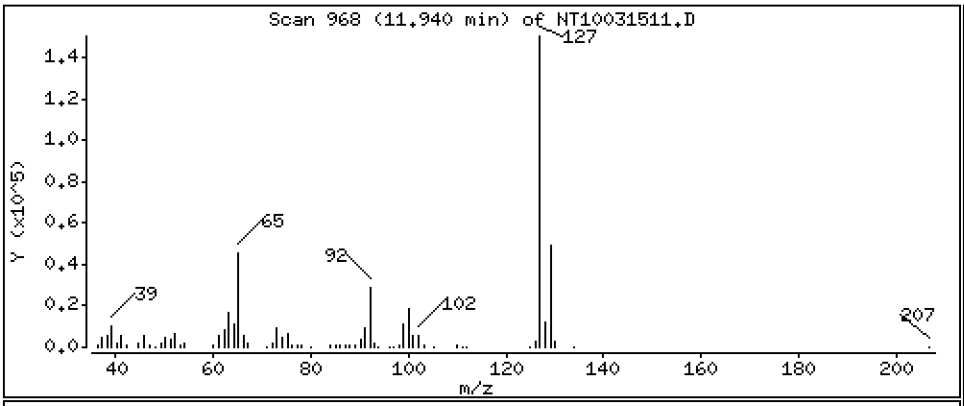
Operator: VTS

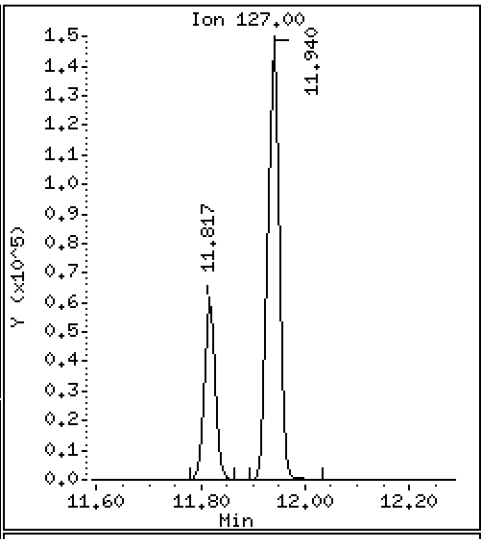
Column phase: ZB-5msi

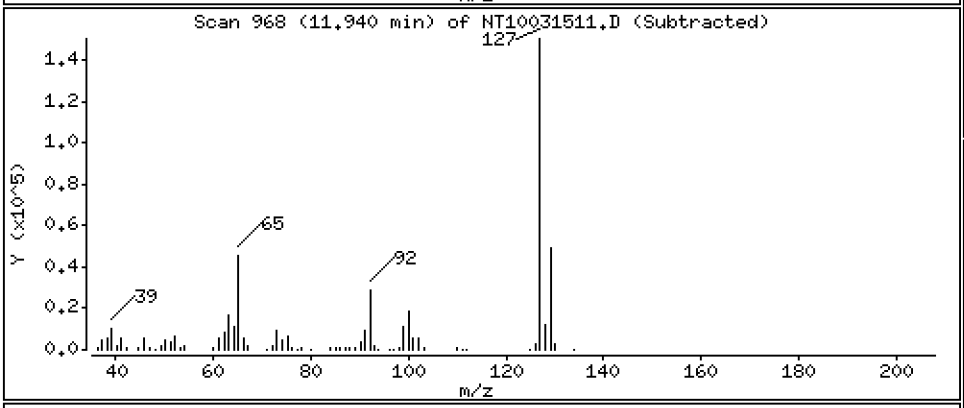
Column diameter: 0.25

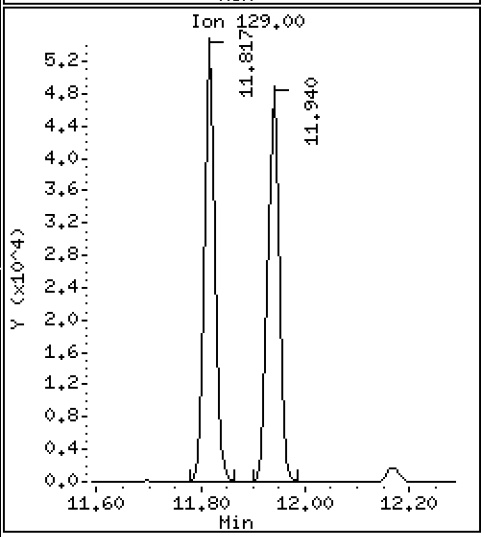
29 4-Chloroaniline

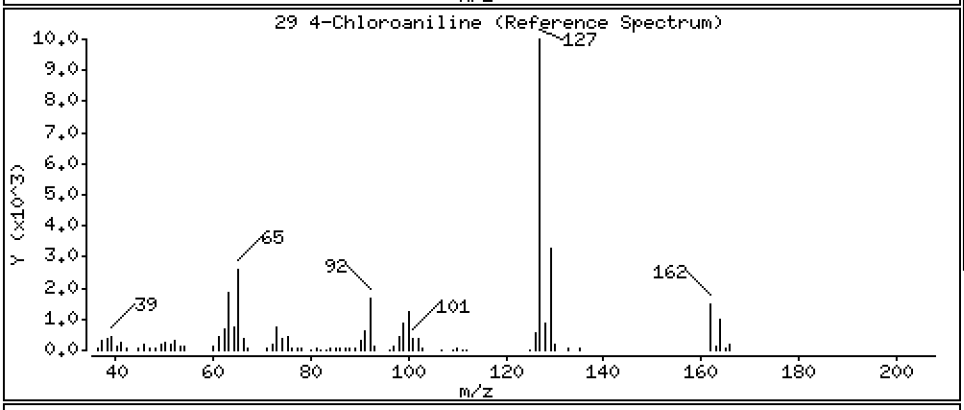
Concentration: 3.787 ug/mL

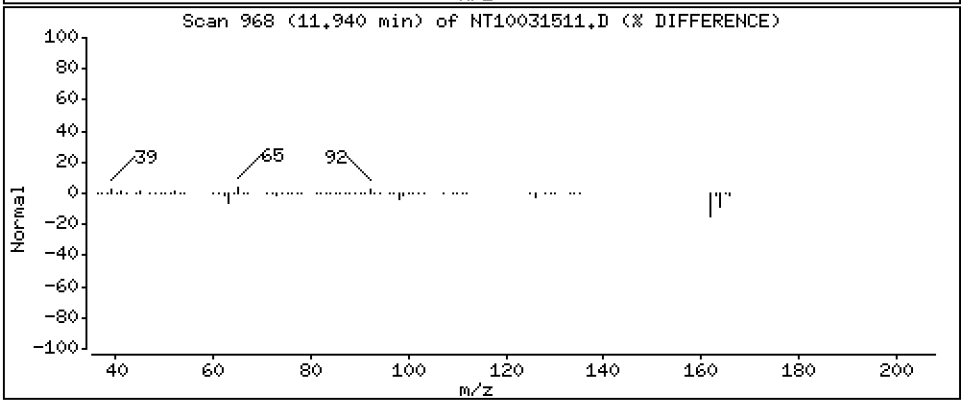












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

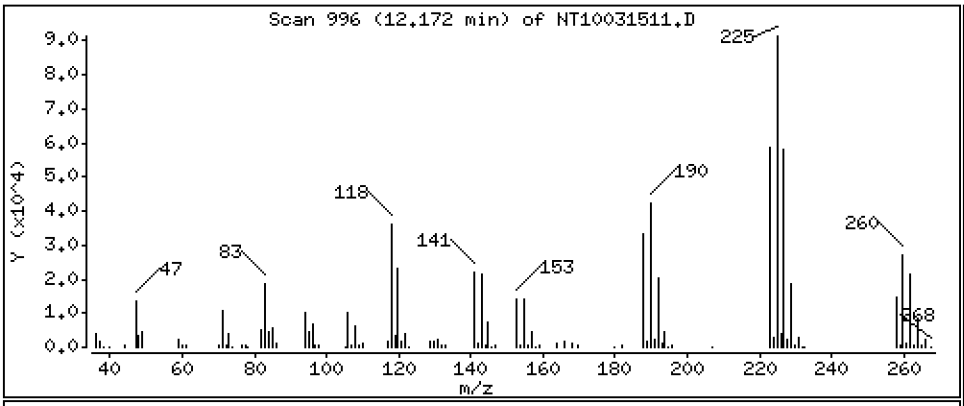
Operator: VTS

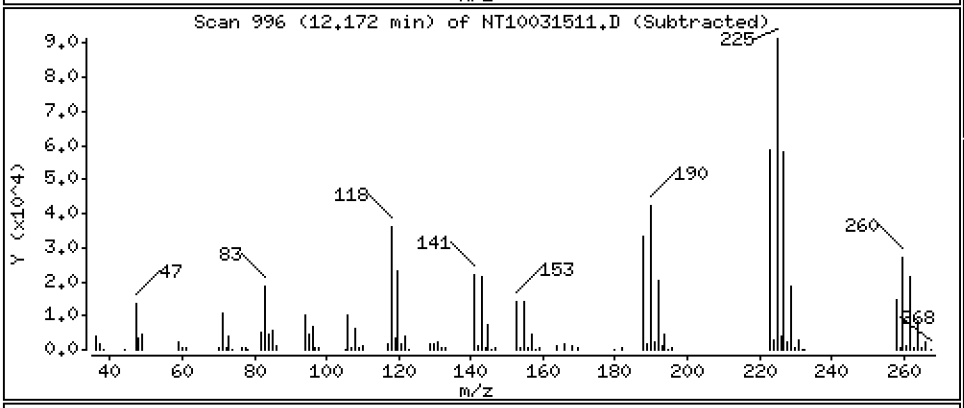
Column phase: ZB-5msi

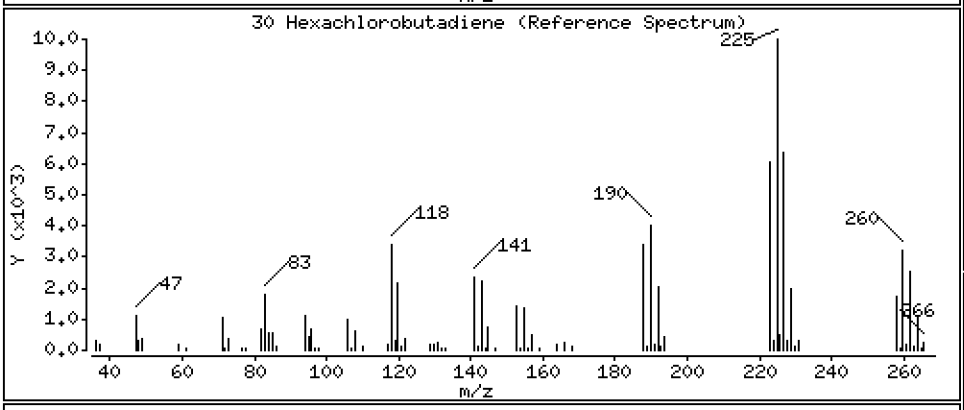
Column diameter: 0.25

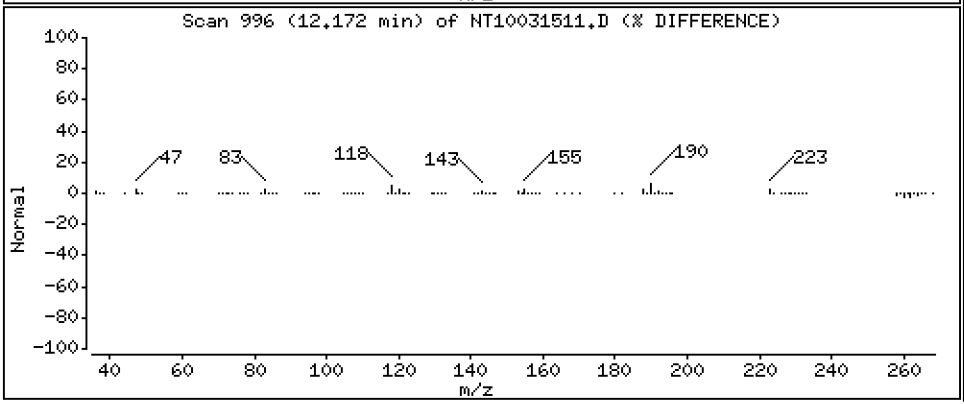
30 Hexachlorobutadiene

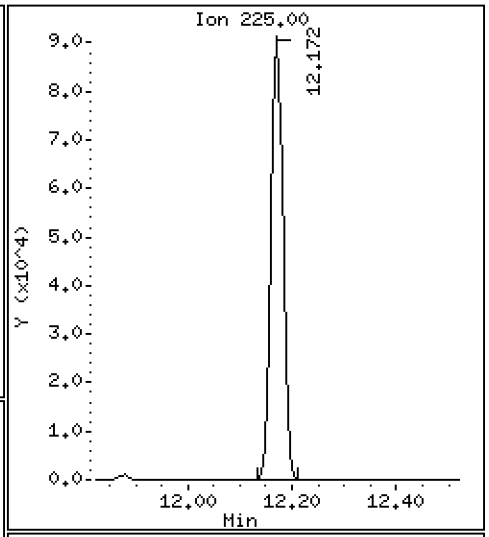
Concentration: 4.834 ug/mL

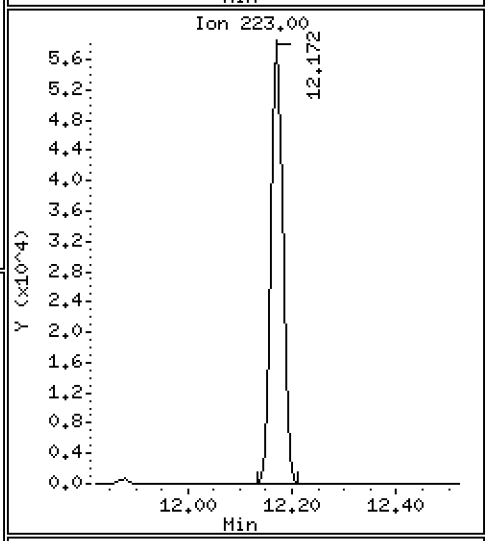


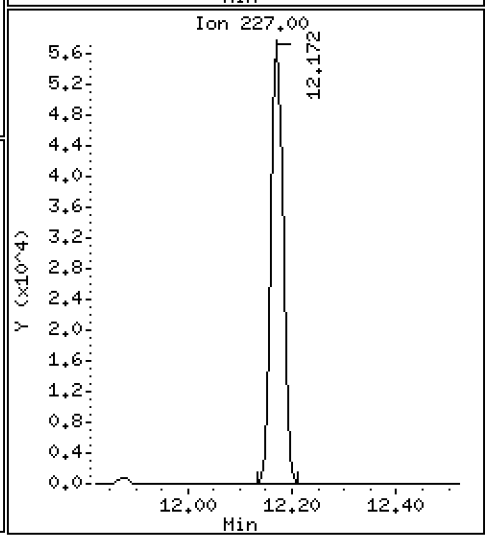












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

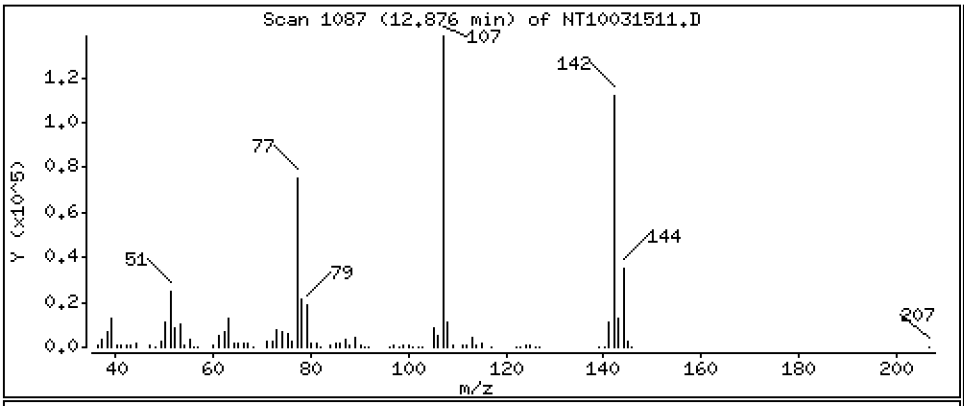
Operator: VTS

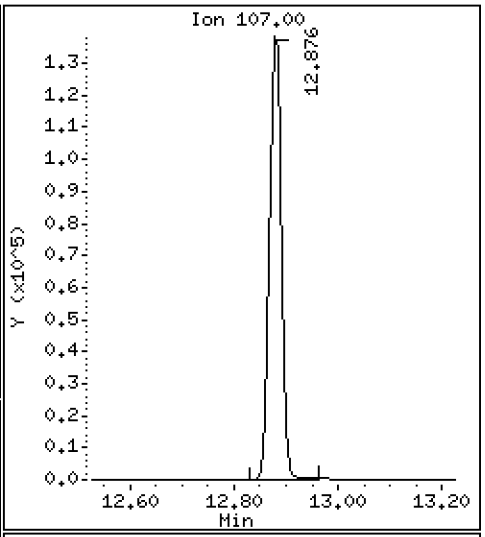
Column phase: ZB-5msi

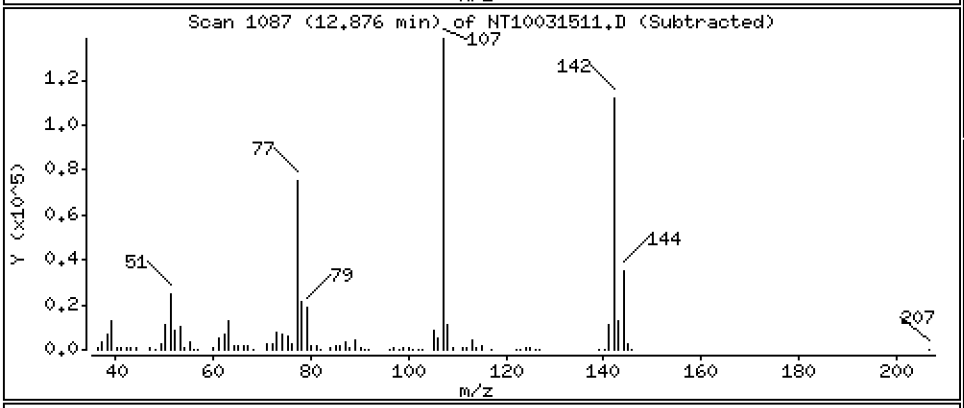
Column diameter: 0.25

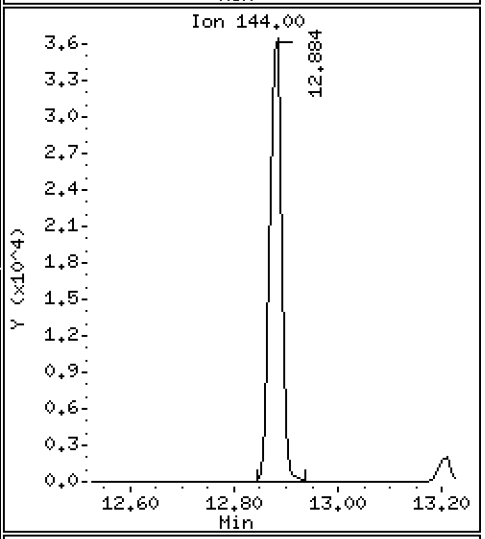
31 4-Chloro-3-methylphenol

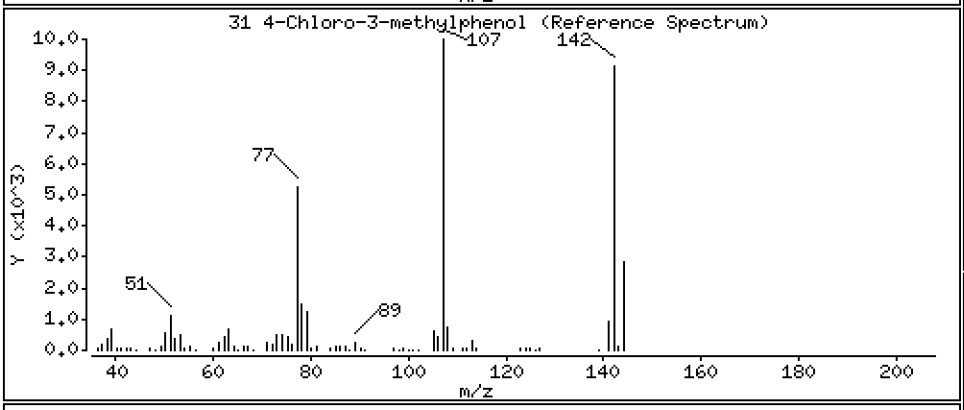
Concentration: 4.640 ug/mL

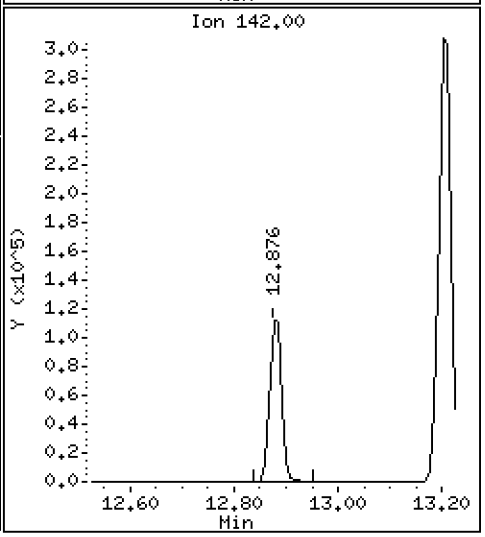


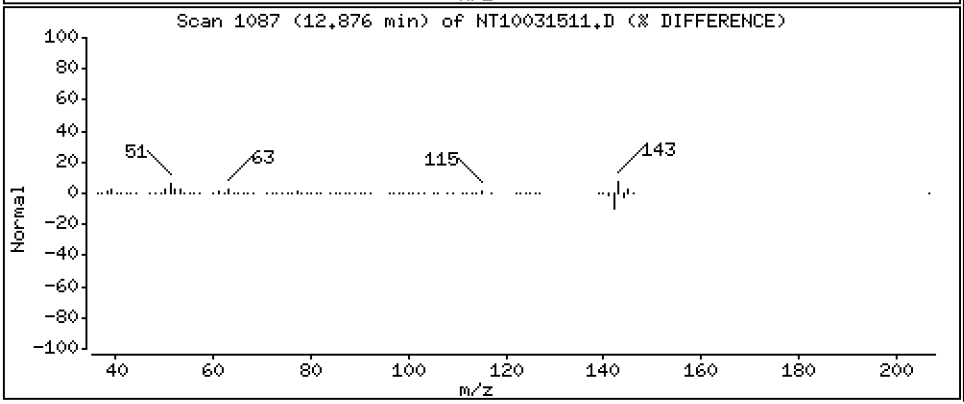












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

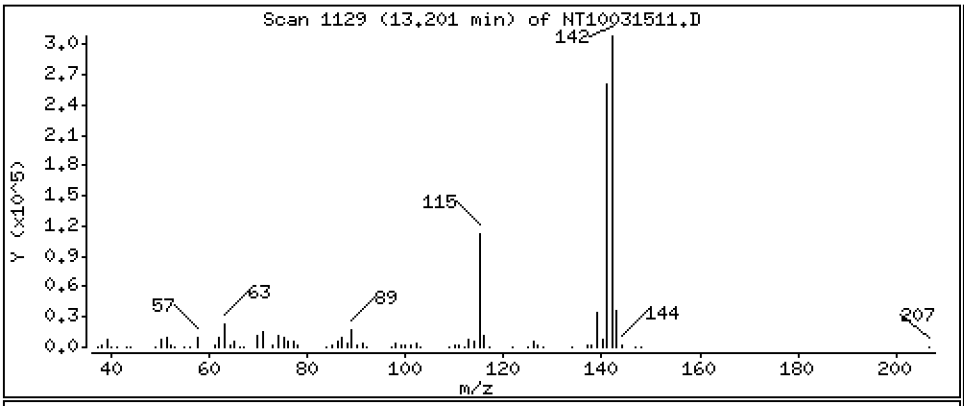
Operator: VTS

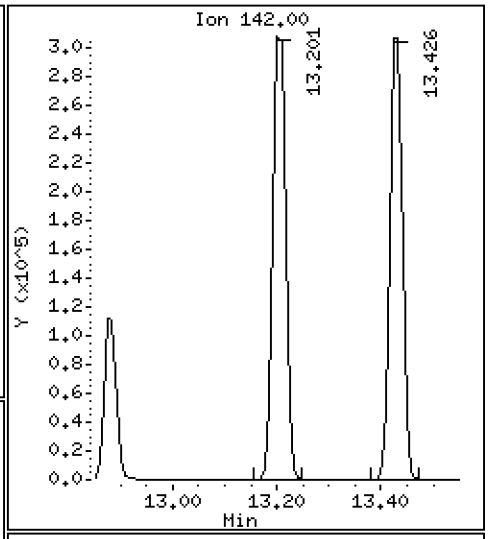
Column phase: ZB-5msi

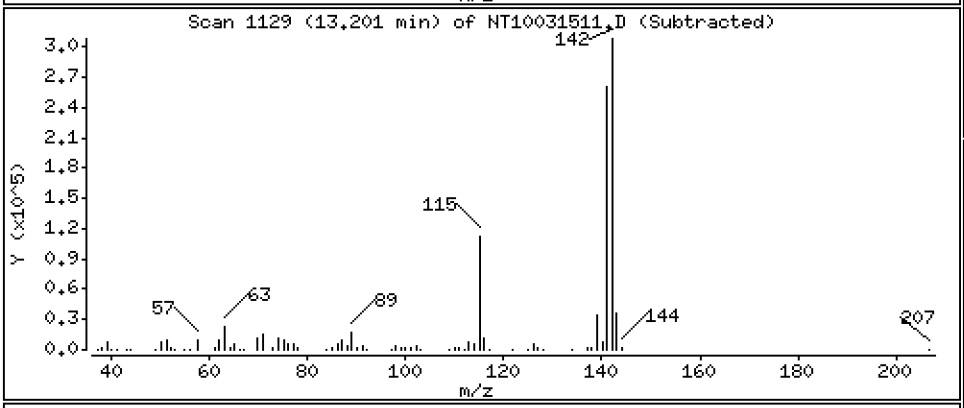
Column diameter: 0.25

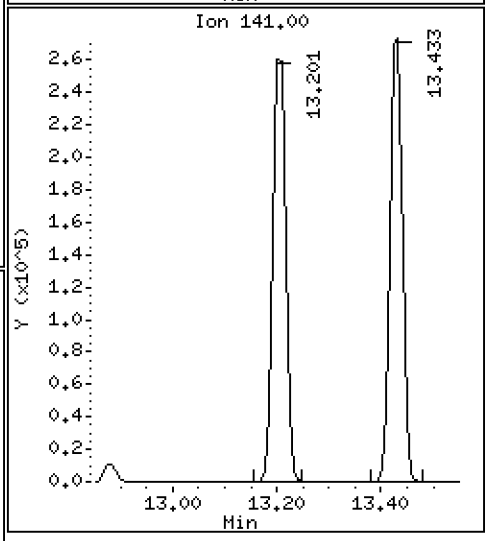
32 2-Methylnaphthalene

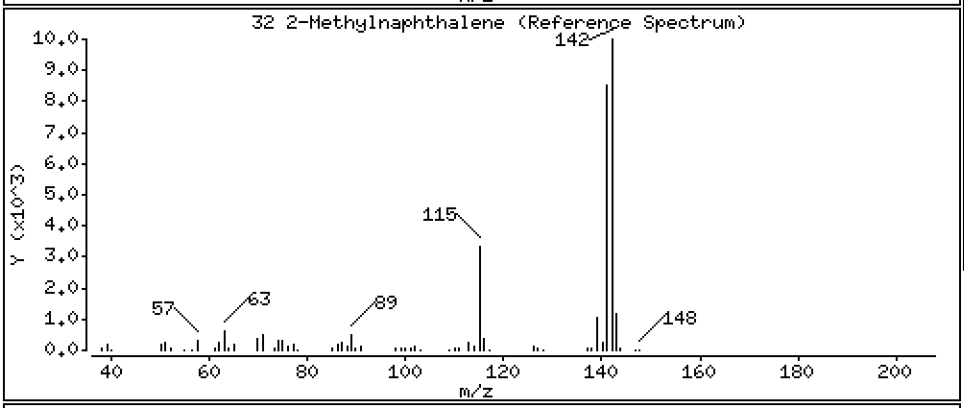
Concentration: 4.596 ug/mL

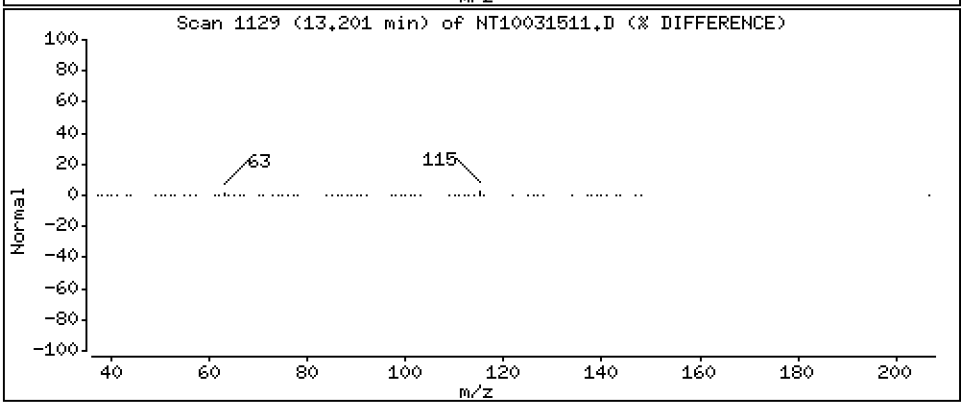












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

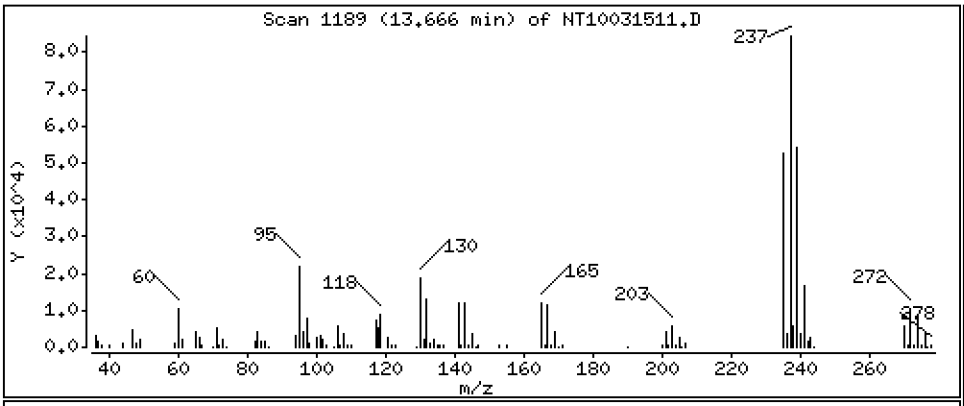
Operator: VTS

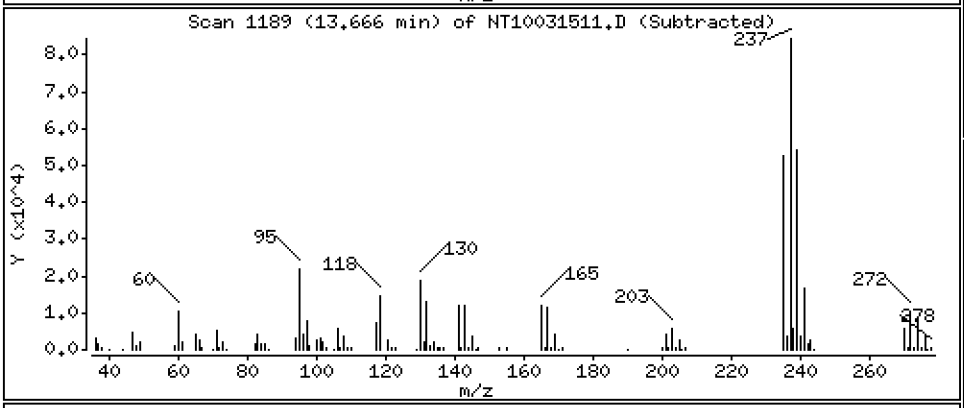
Column phase: ZB-5msi

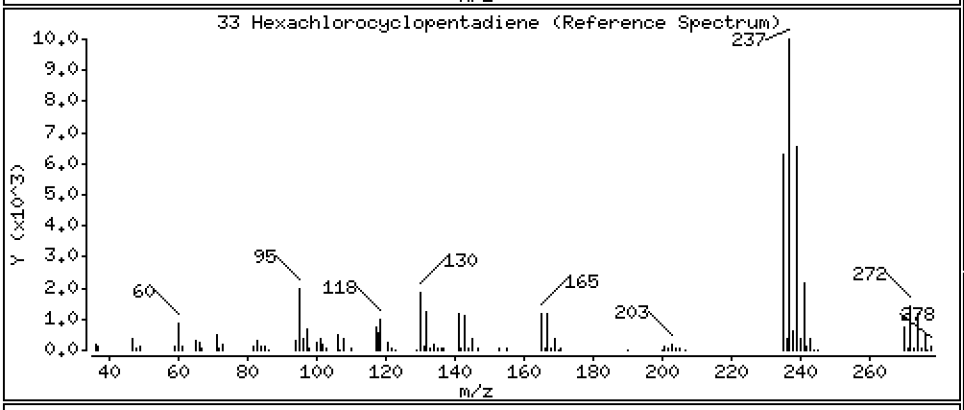
Column diameter: 0.25

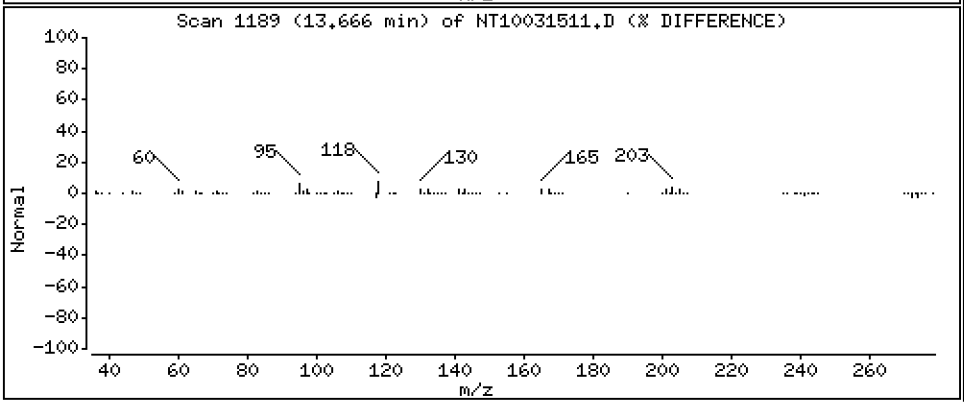
33 Hexachlorocyclopentadiene

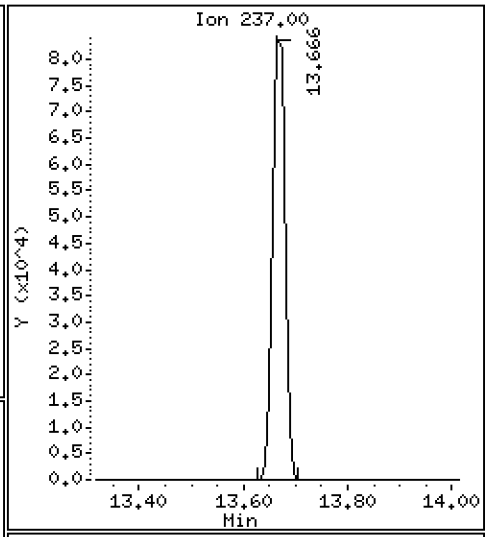
Concentration: 4.729 ug/mL

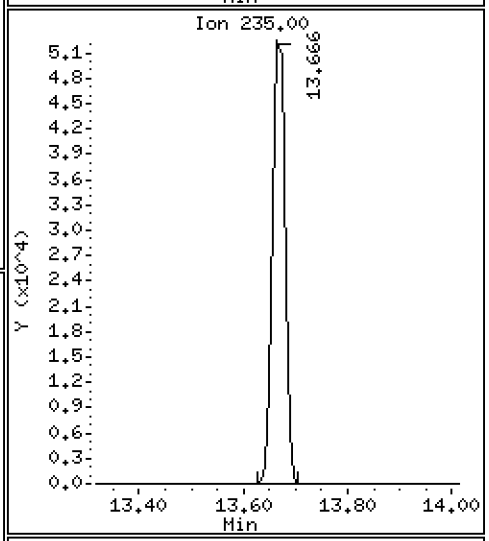


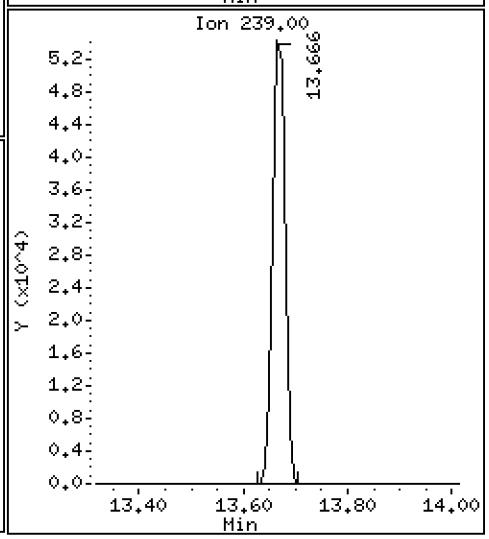












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

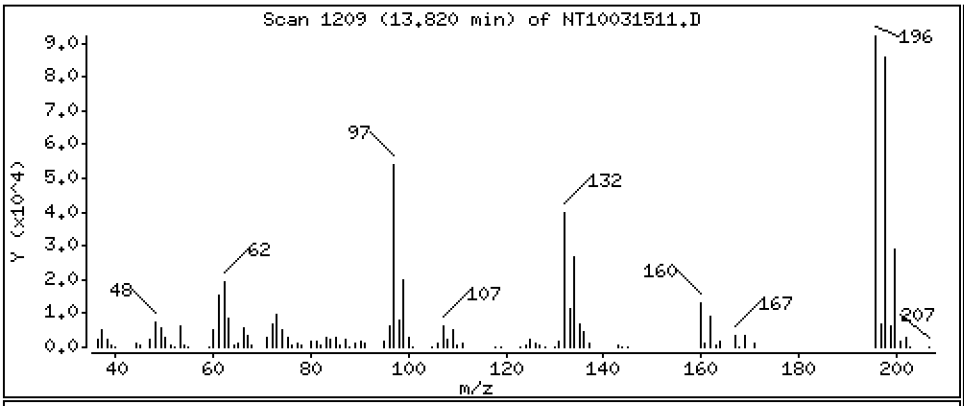
Operator: VTS

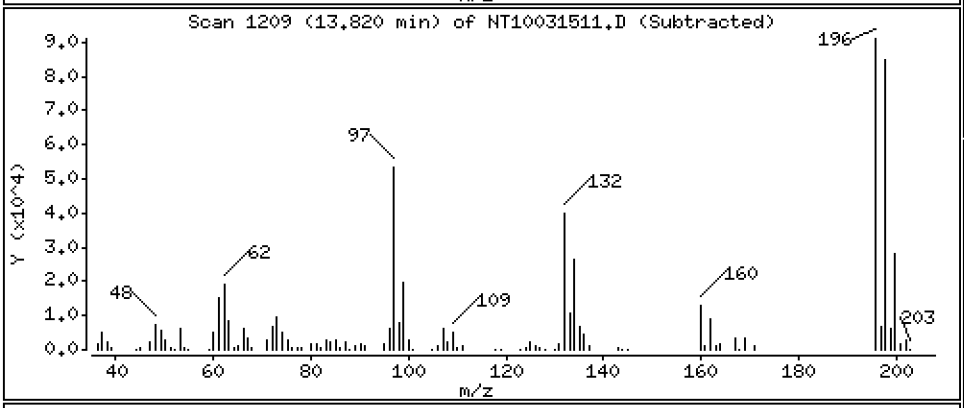
Column phase: ZB-5msi

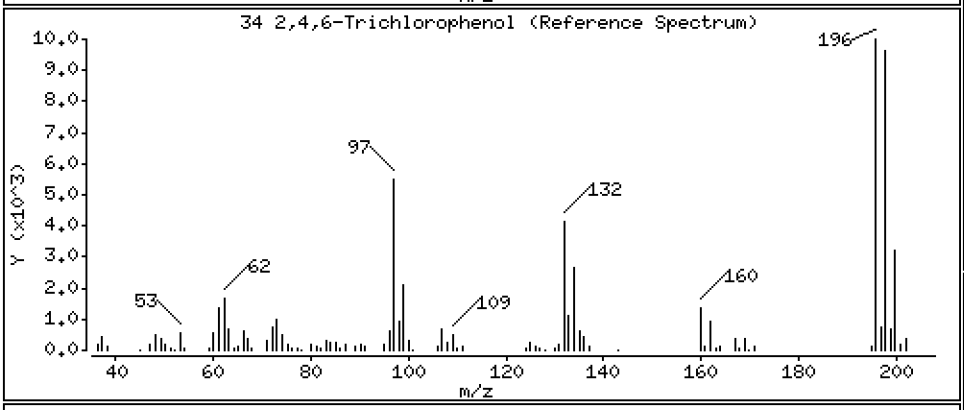
Column diameter: 0.25

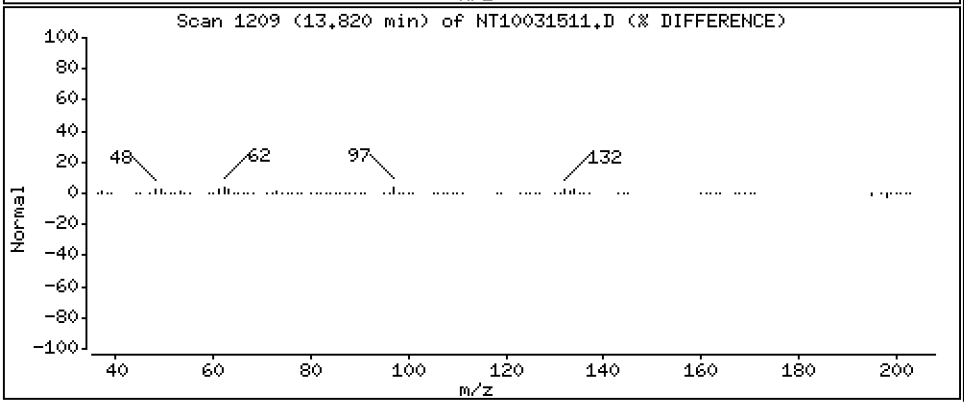
34 2,4,6-Trichlorophenol

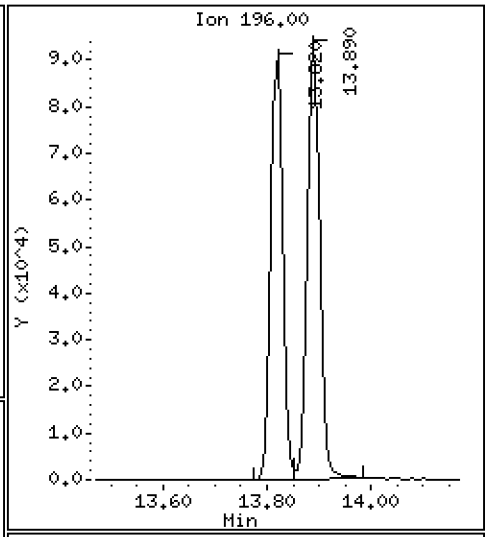
Concentration: 4.596 ug/mL

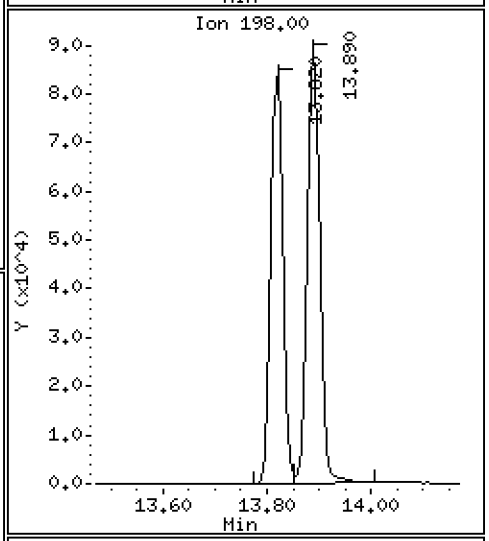


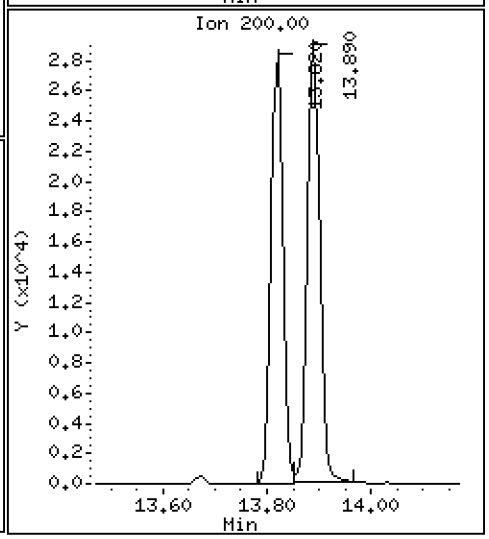












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

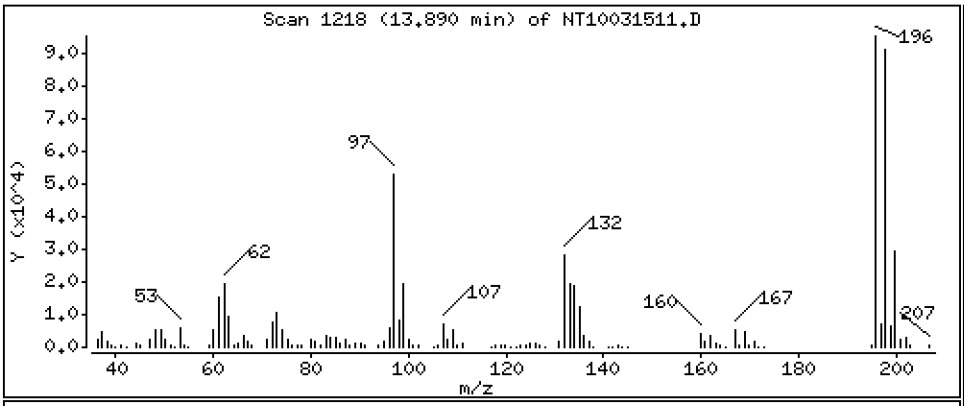
Operator: VTS

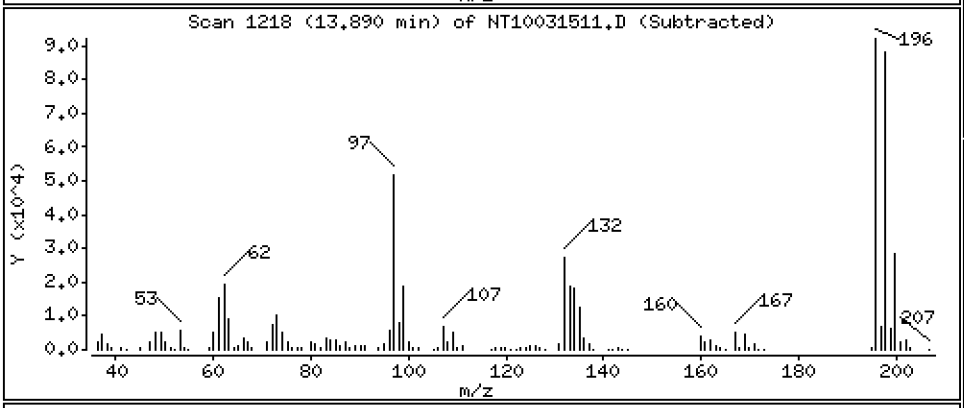
Column phase: ZB-5msi

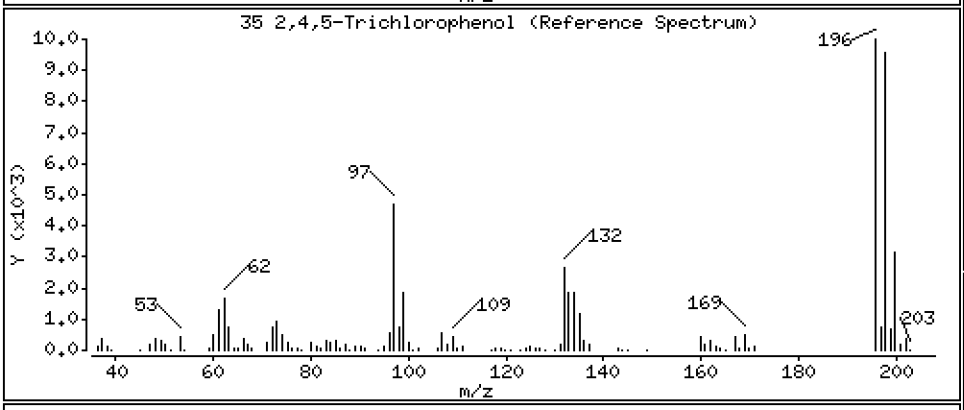
Column diameter: 0.25

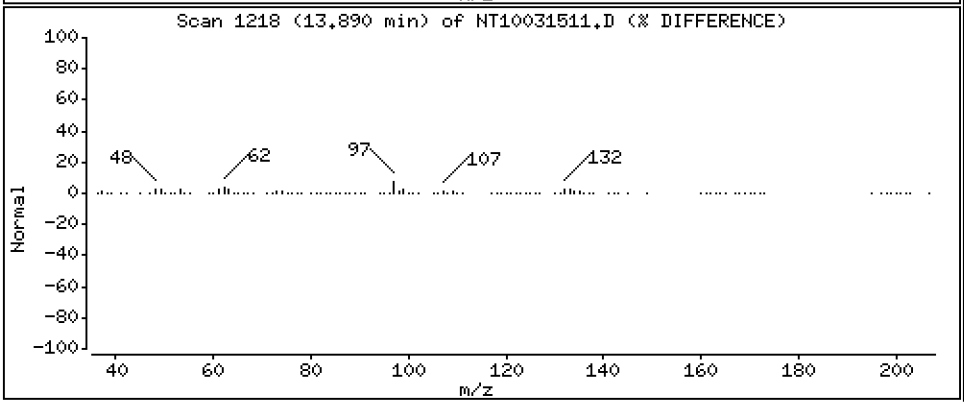
35 2,4,5-Trichlorophenol

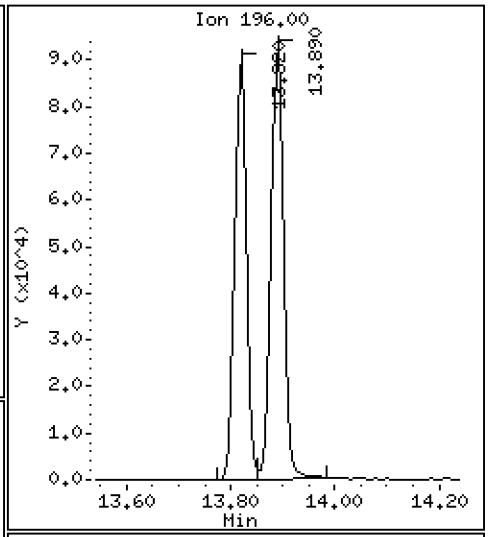
Concentration: 4.409 ug/mL

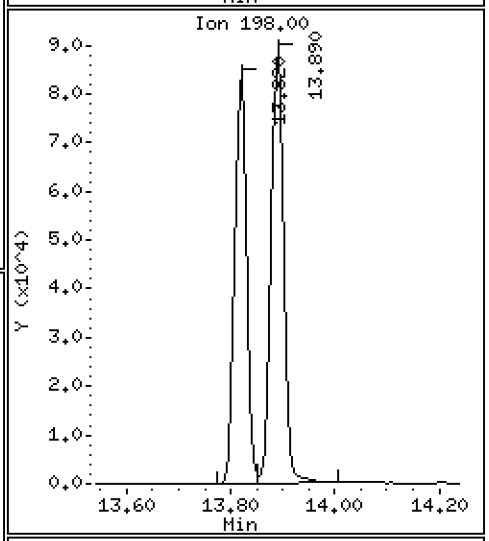


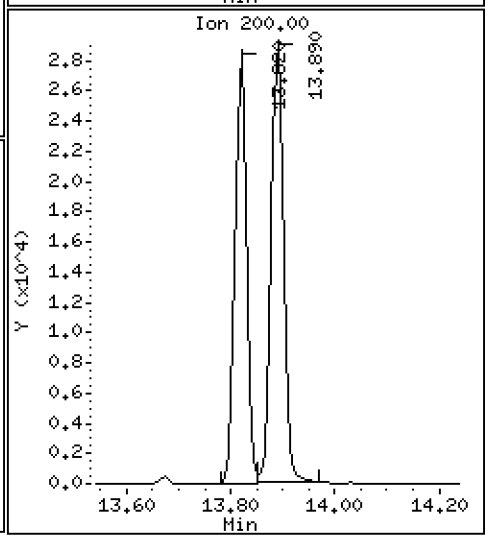












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

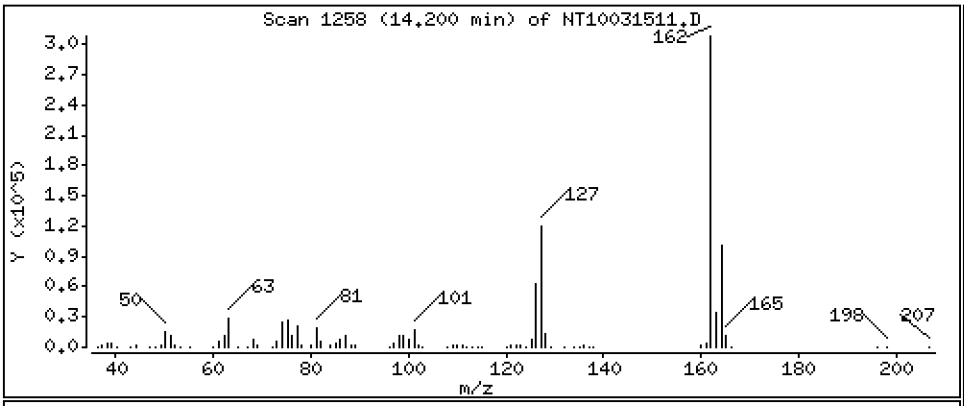
Operator: VTS

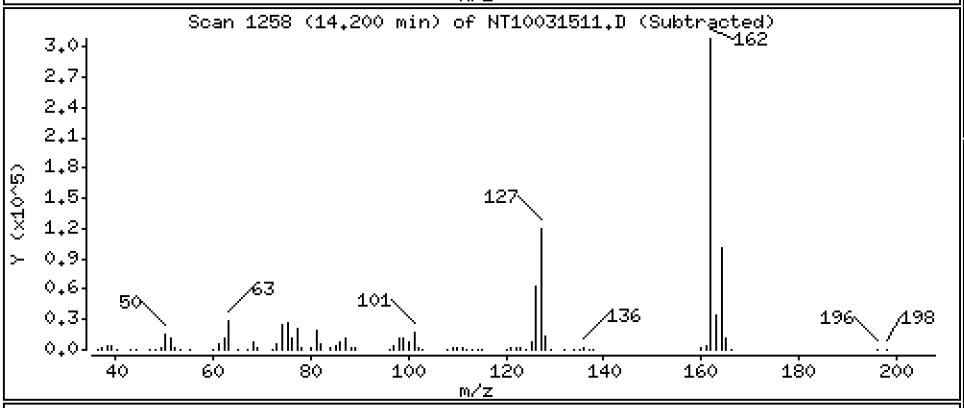
Column phase: ZB-5msi

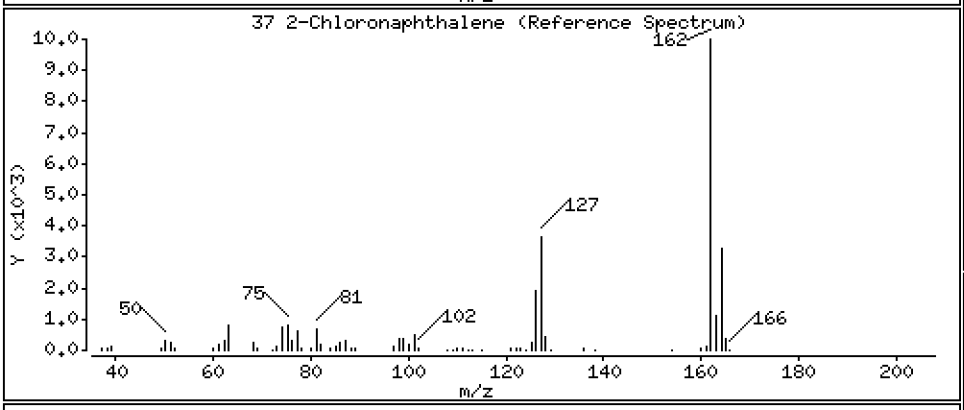
Column diameter: 0.25

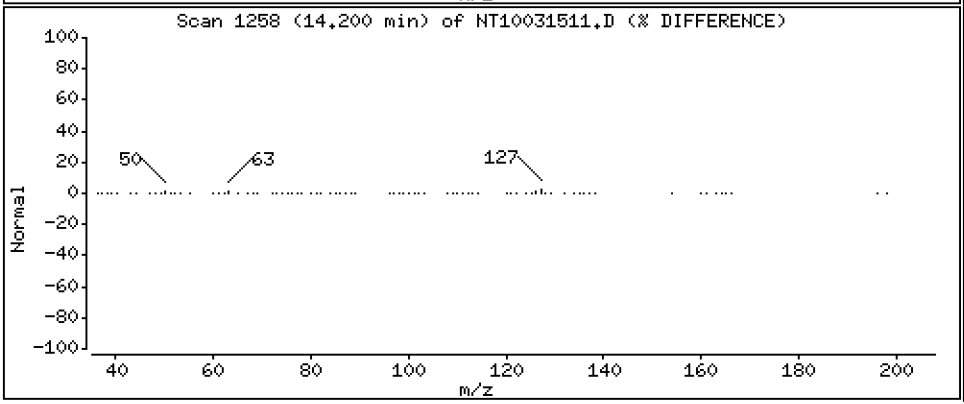
37 2-Chloronaphthalene

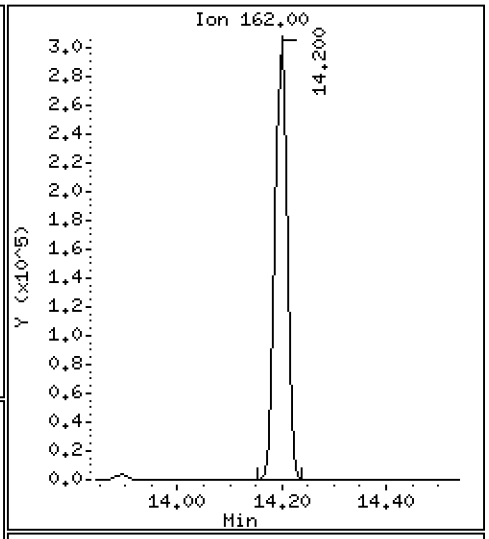
Concentration: 4.796 ug/mL

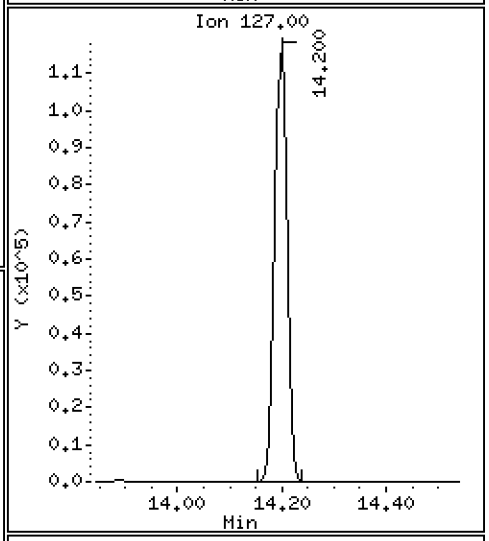


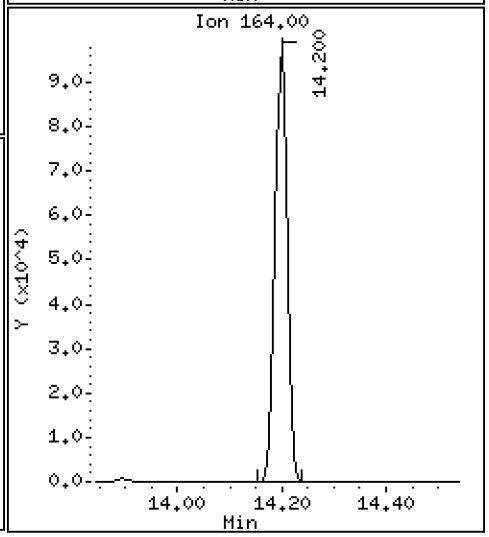












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

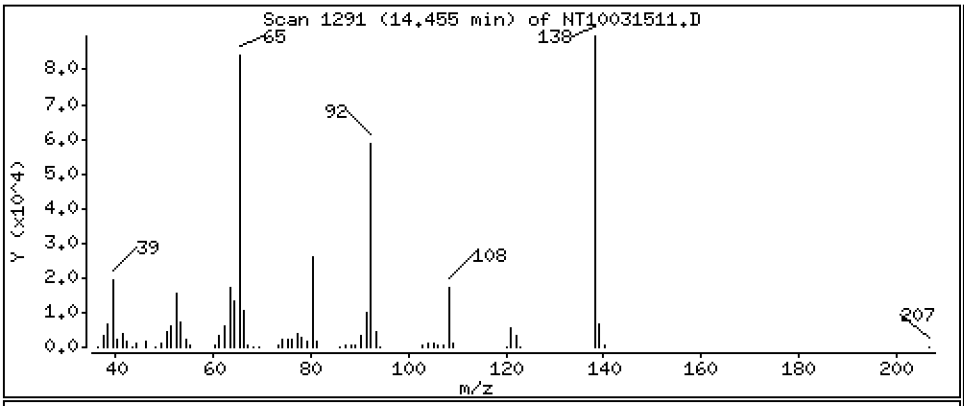
Operator: VTS

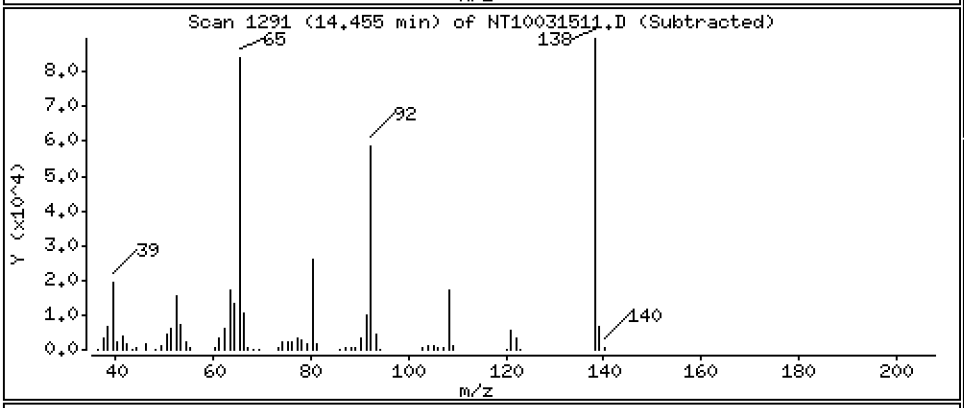
Column phase: ZB-5msi

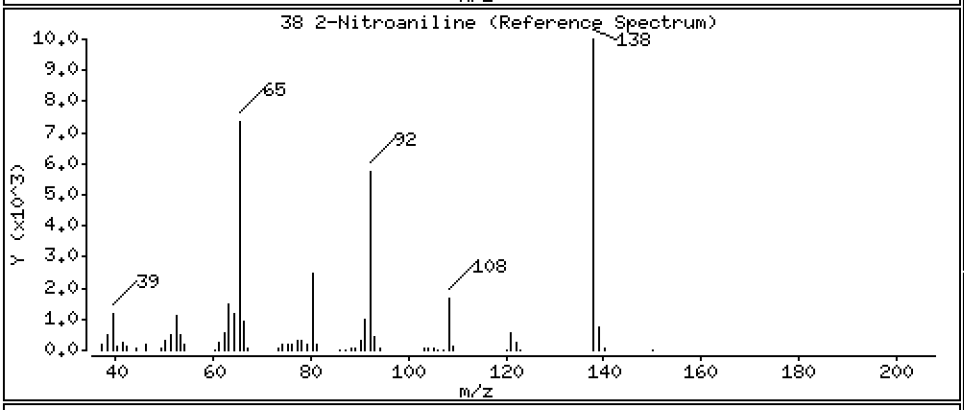
Column diameter: 0.25

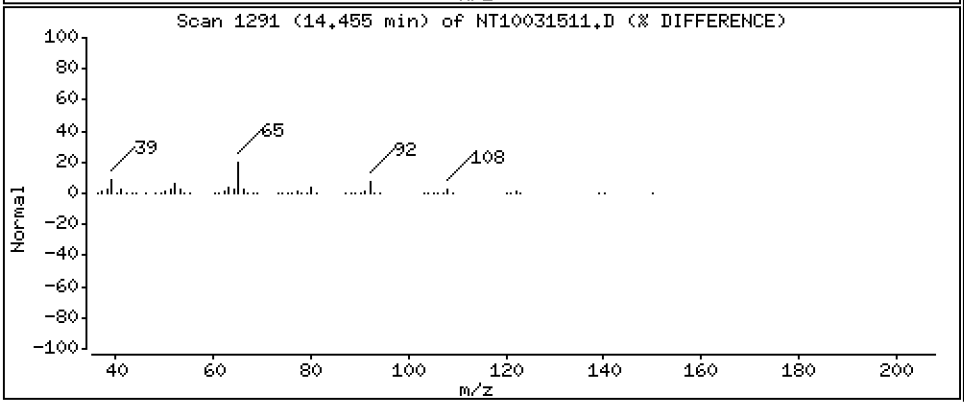
38 2-Nitroaniline

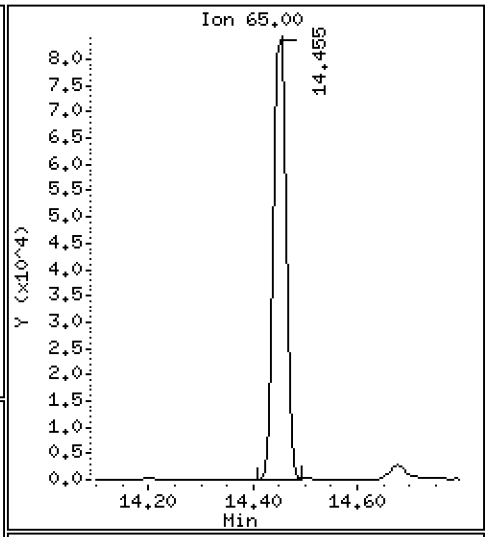
Concentration: 4.911 ug/mL

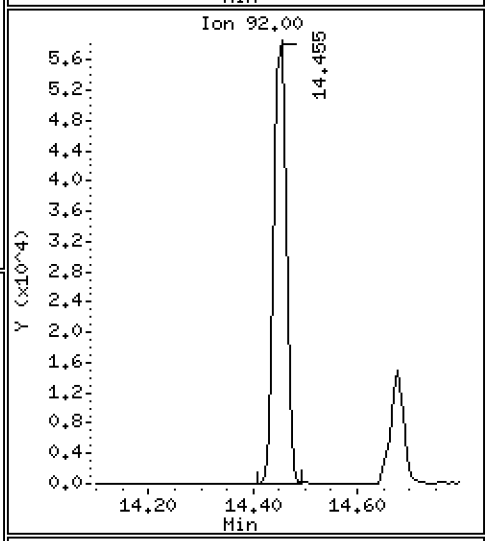


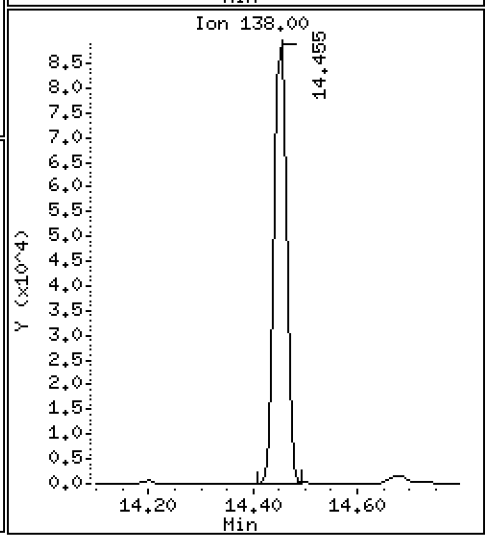












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

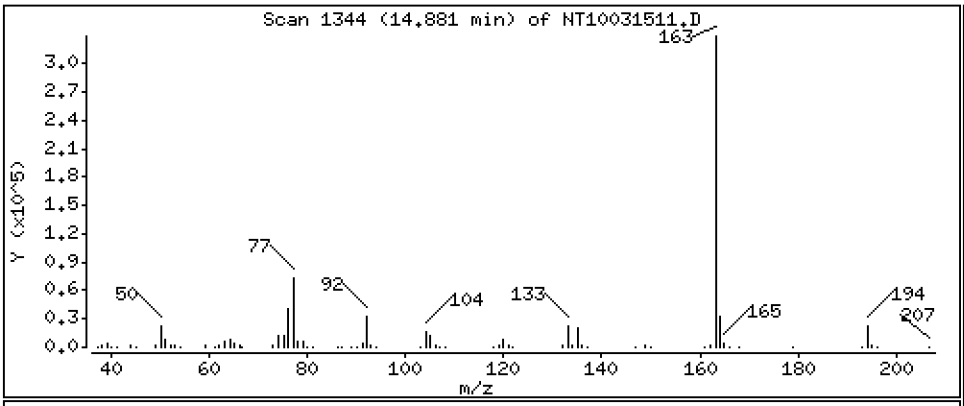
Operator: VTS

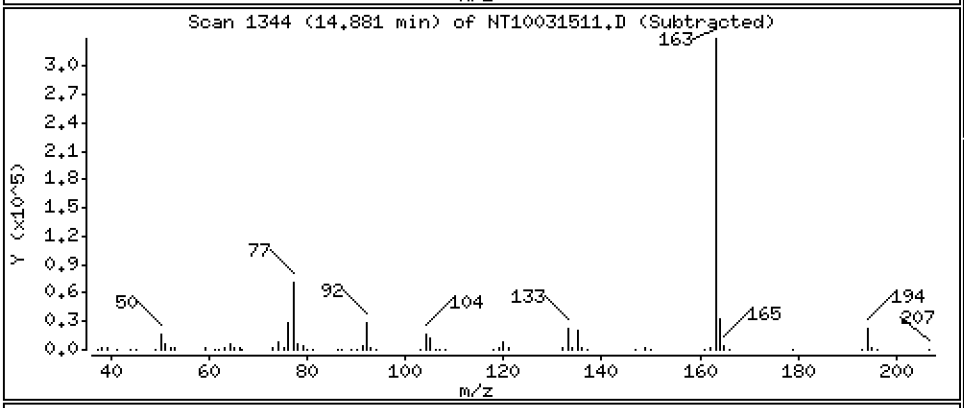
Column phase: ZB-5msi

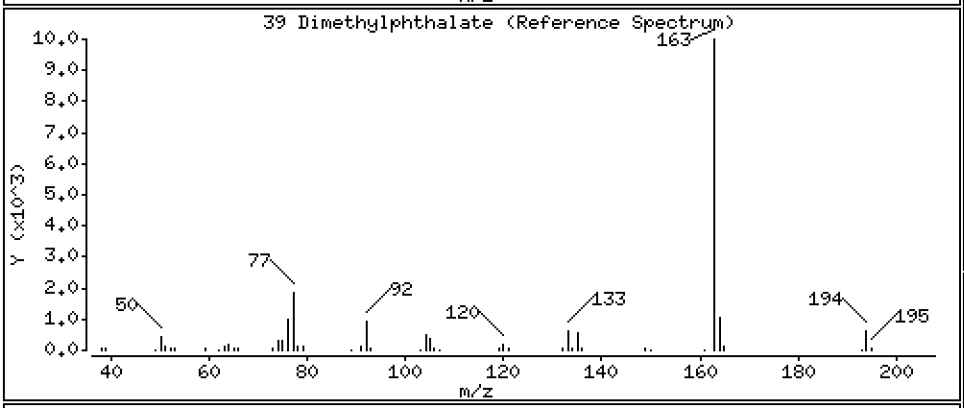
Column diameter: 0.25

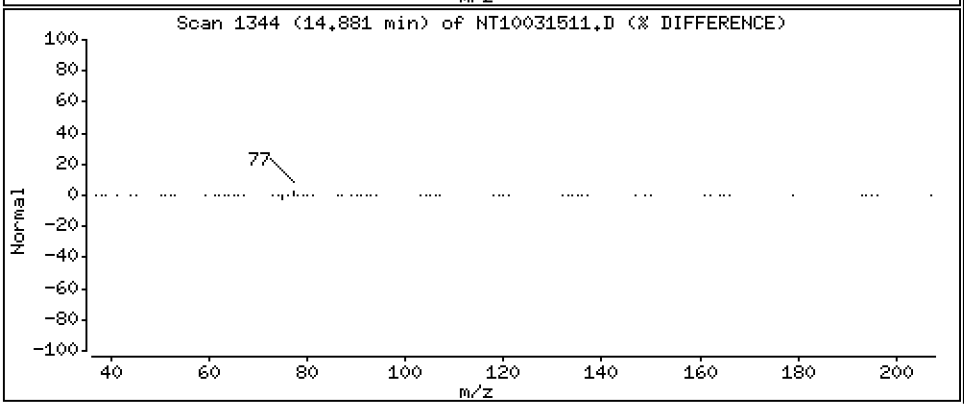
39 Dimethylphthalate

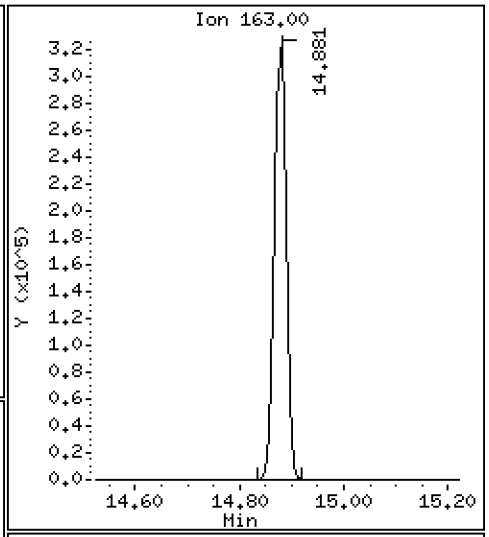
Concentration: 4.937 ug/mL

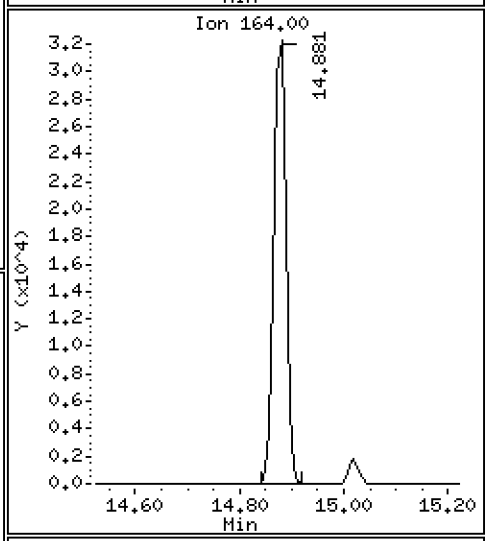


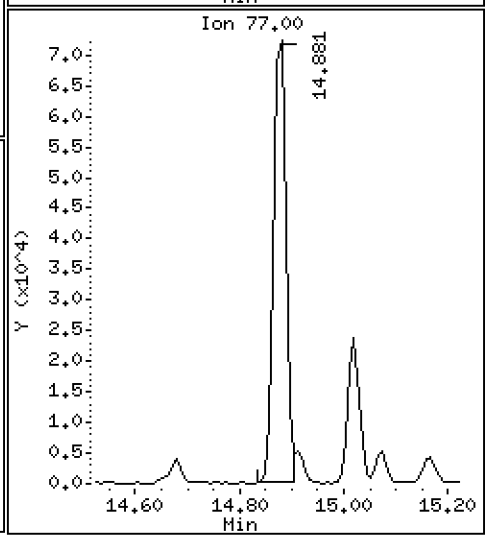












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

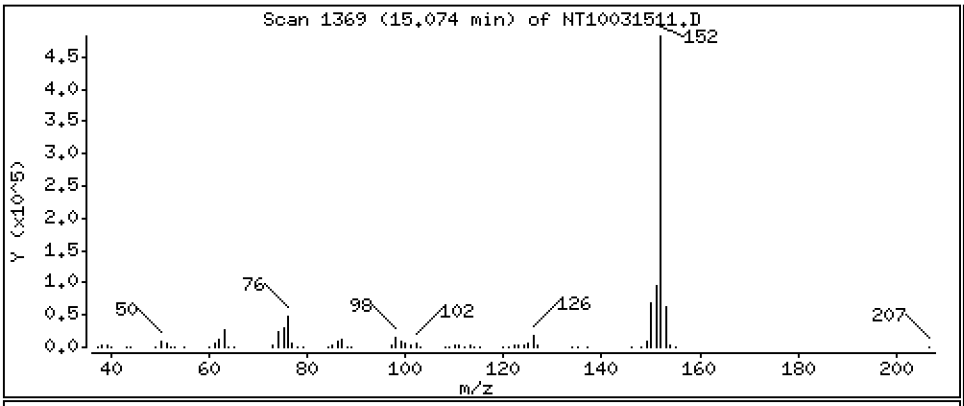
Operator: VTS

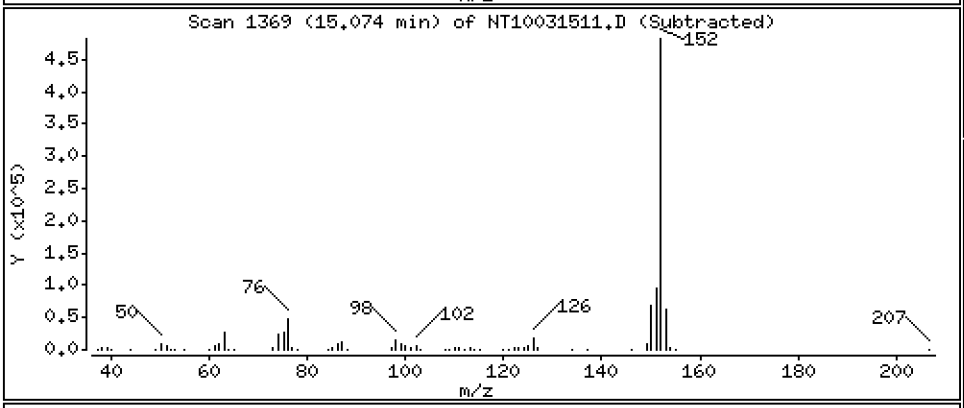
Column phase: ZB-5msi

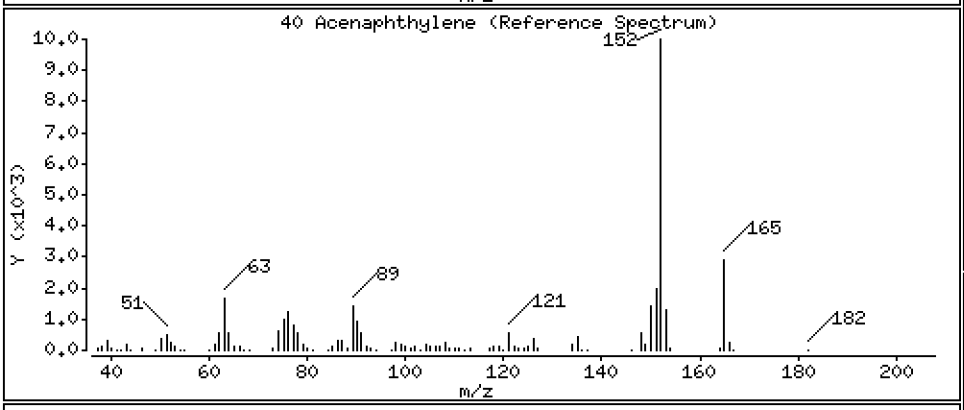
Column diameter: 0.25

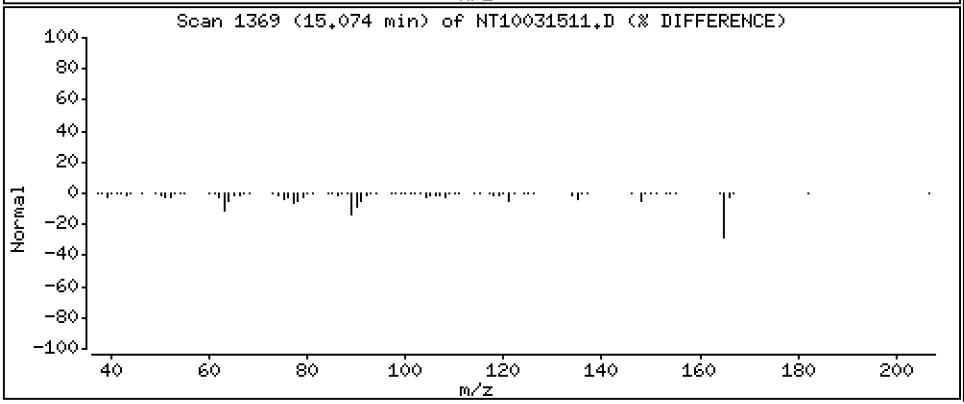
40 Acenaphthylene

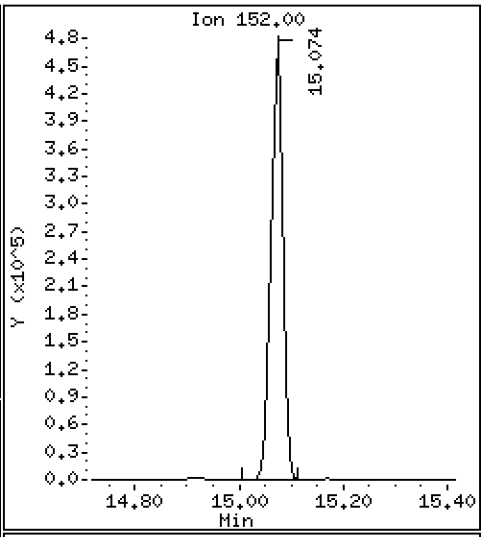
Concentration: 4.805 ug/mL

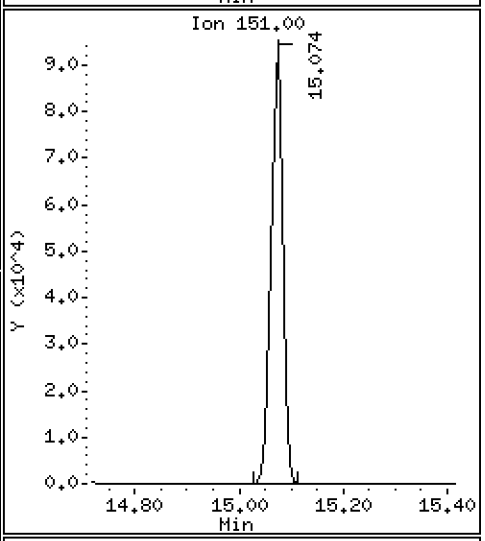


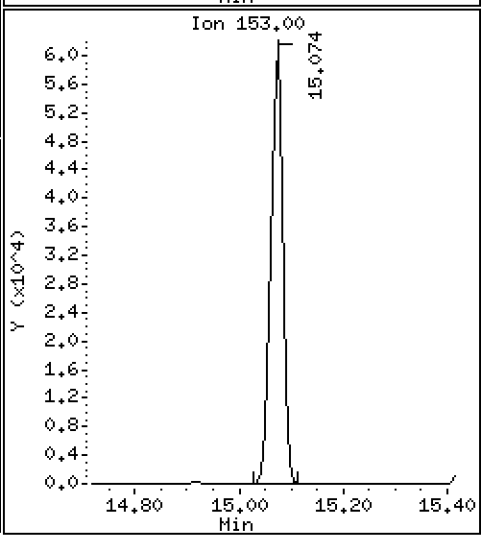












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

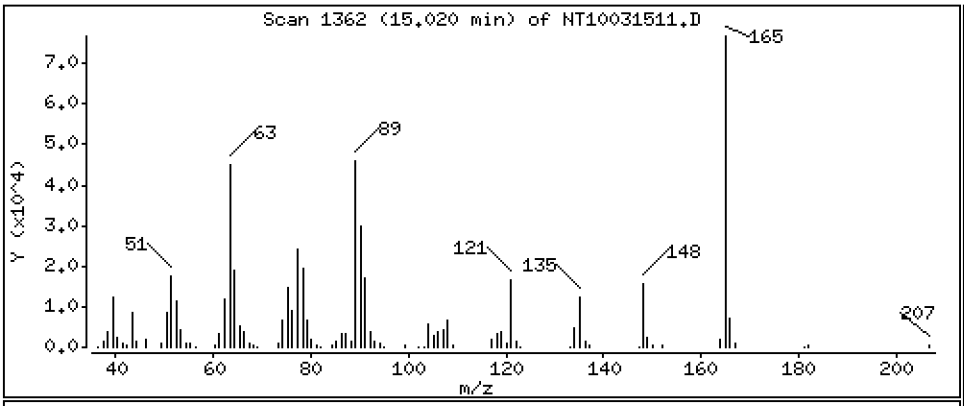
Operator: VTS

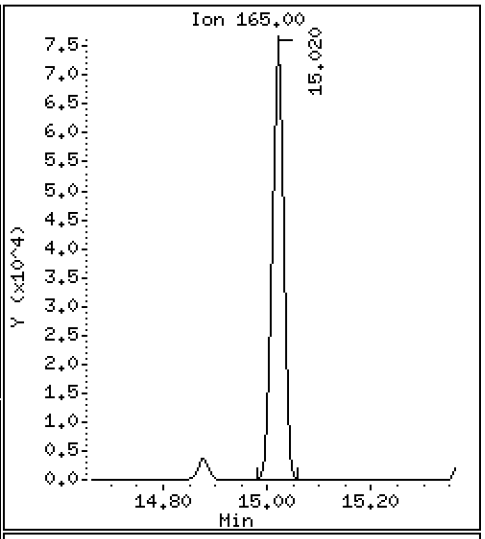
Column phase: ZB-5msi

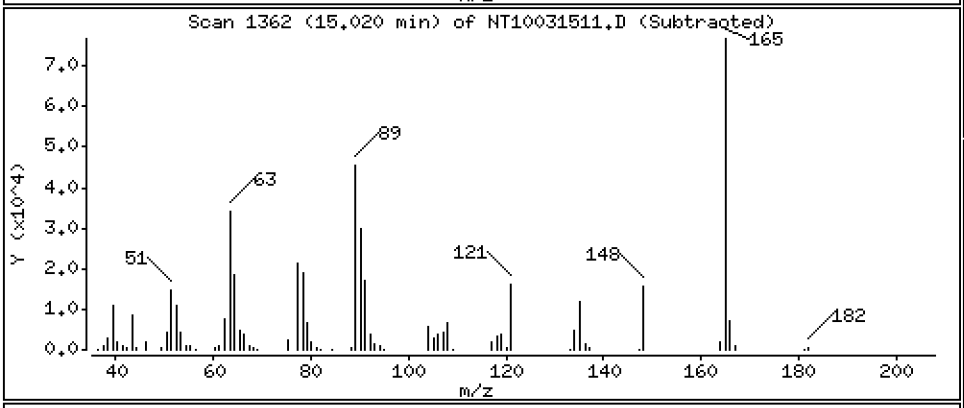
Column diameter: 0.25

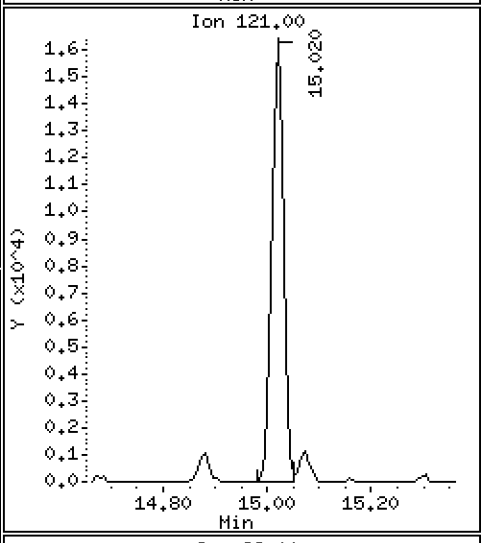
41 2,6-Dinitrotoluene

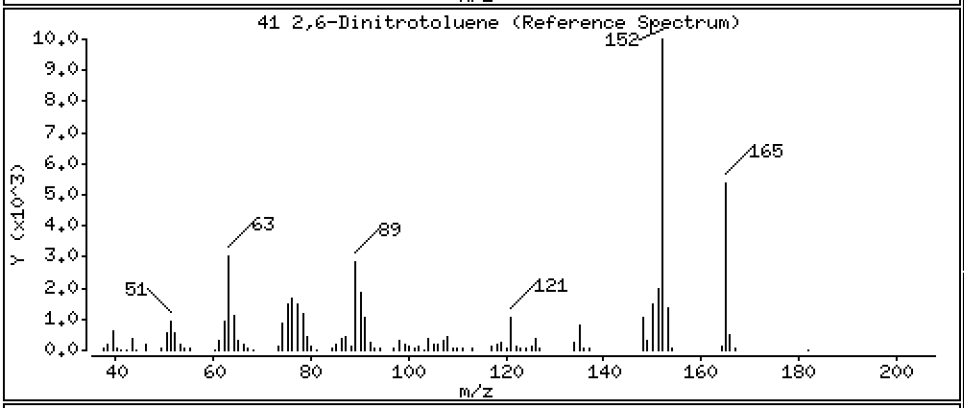
Concentration: 5.298 ug/mL

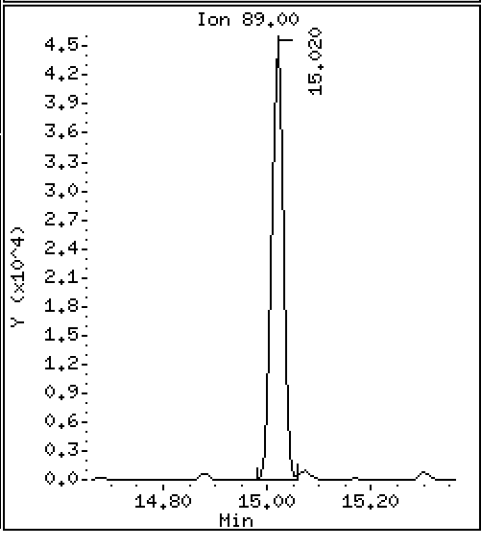


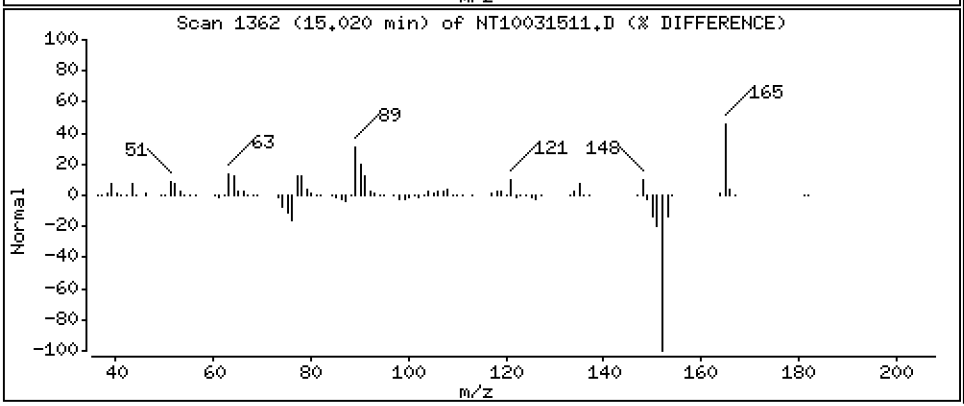












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

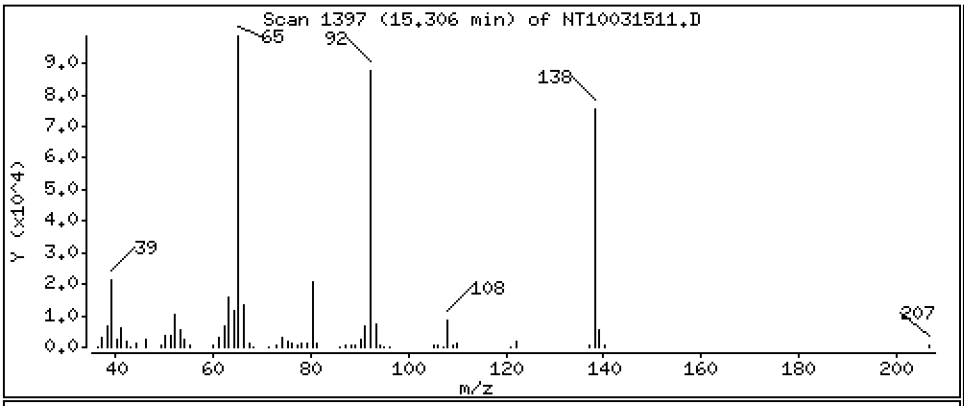
Operator: VTS

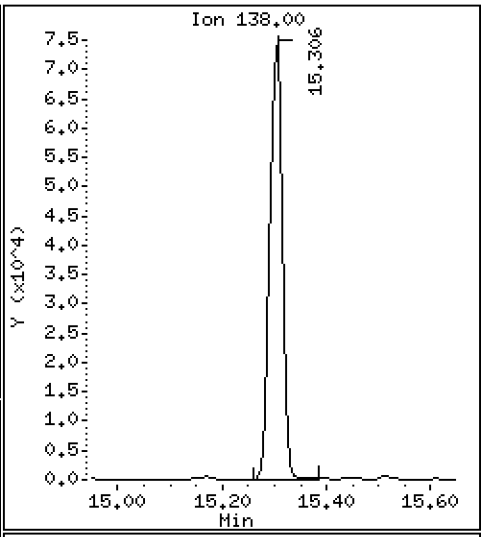
Column phase: ZB-5msi

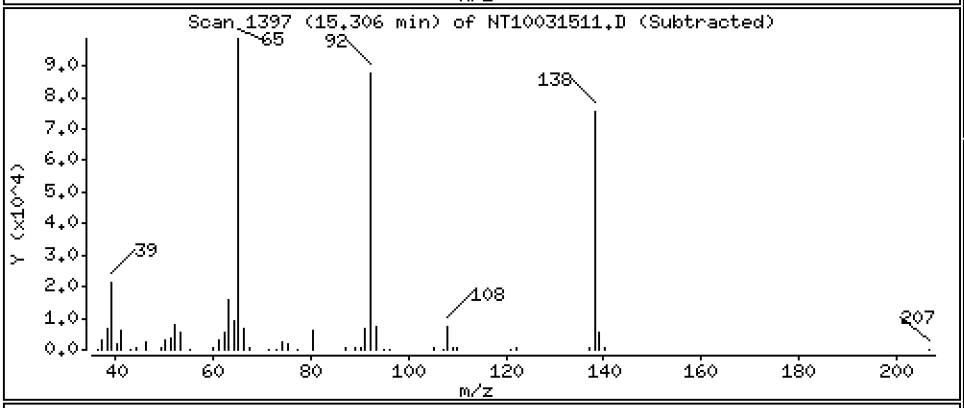
Column diameter: 0.25

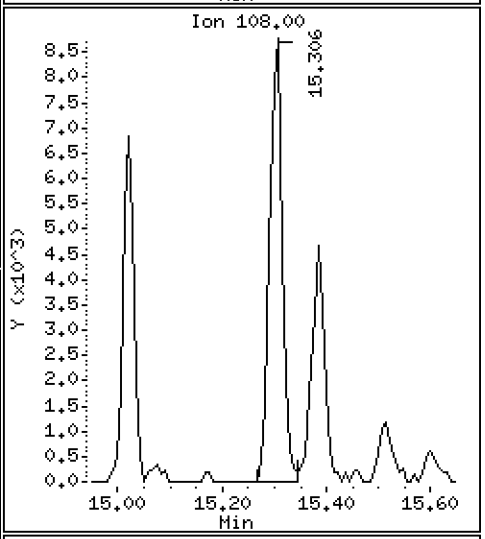
43 3-Nitroaniline

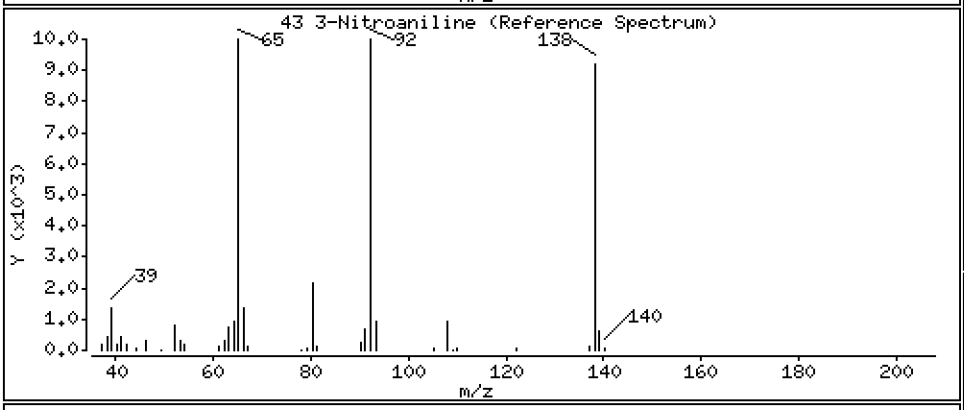
Concentration: 5.014 ug/mL

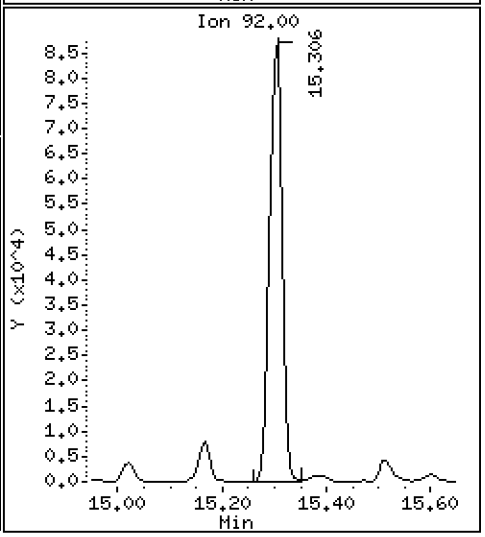


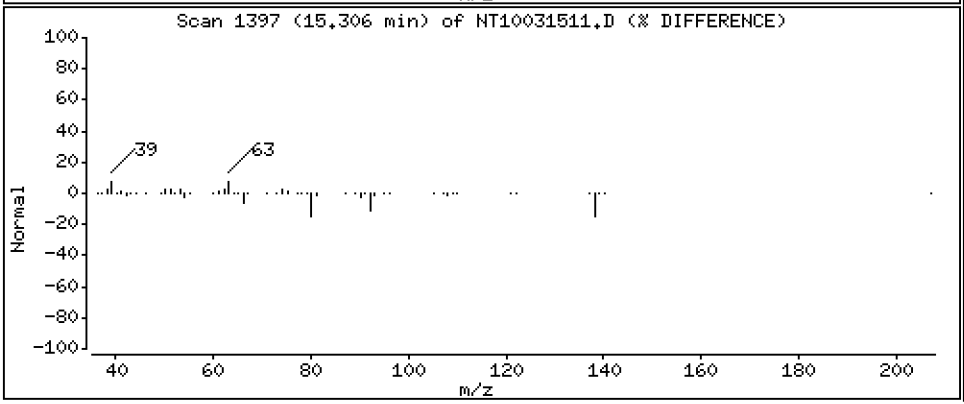












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

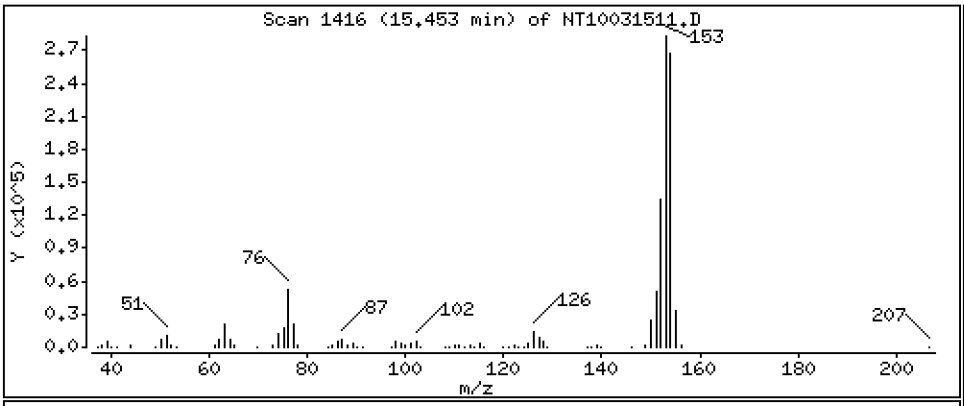
Operator: VTS

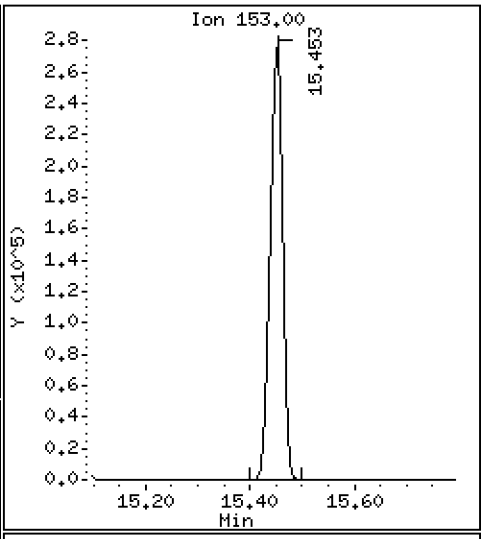
Column phase: ZB-5msi

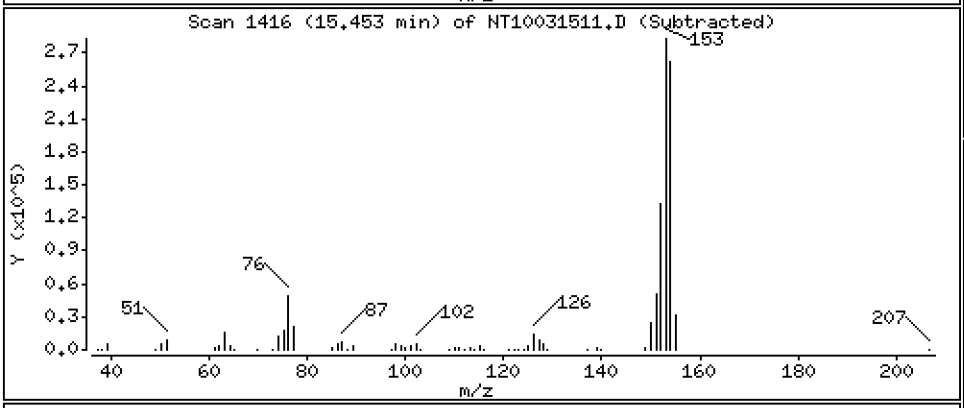
Column diameter: 0.25

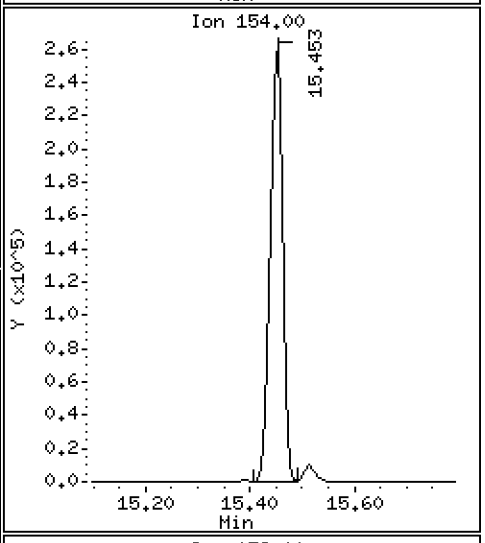
44 Acenaphthene

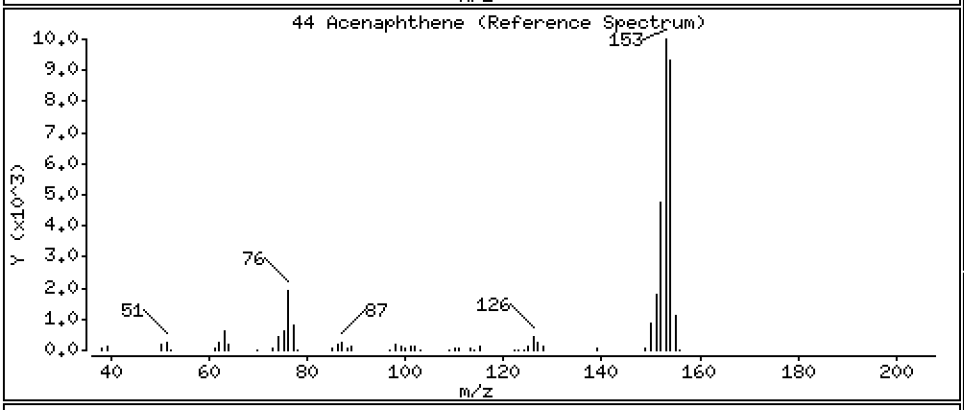
Concentration: 4.776 ug/mL

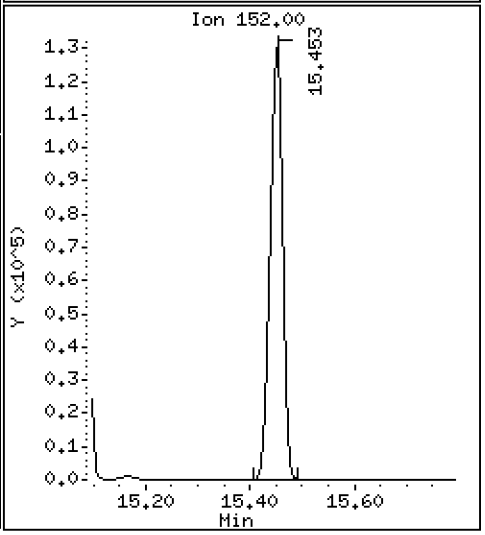


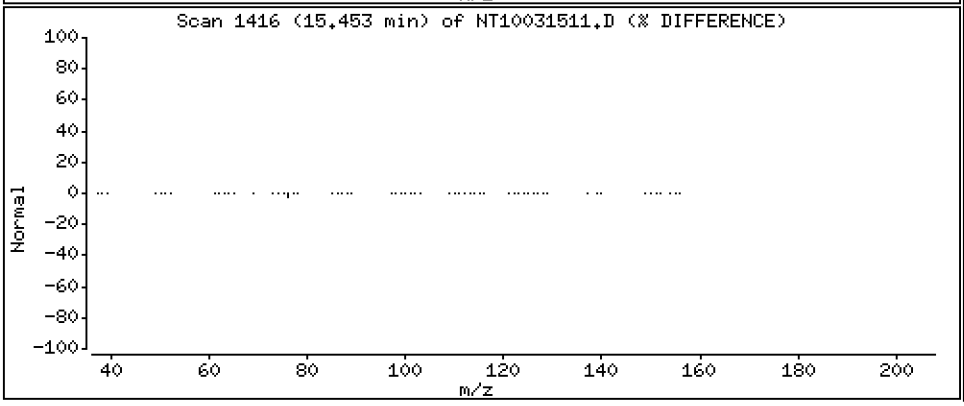












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

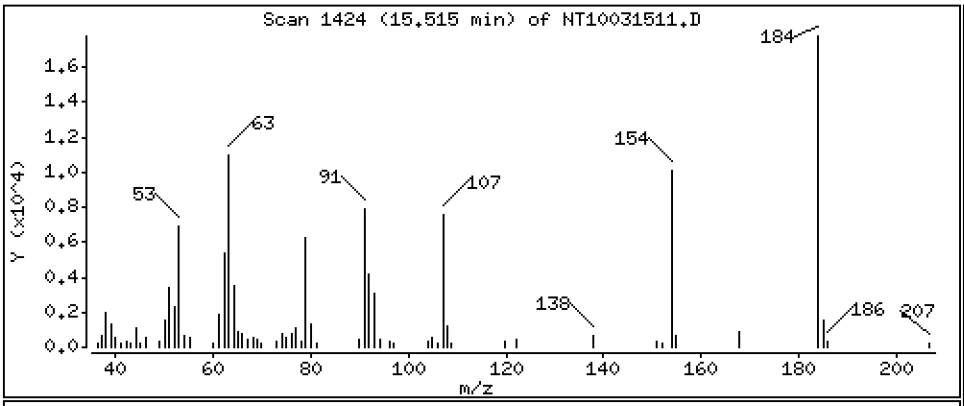
Operator: VTS

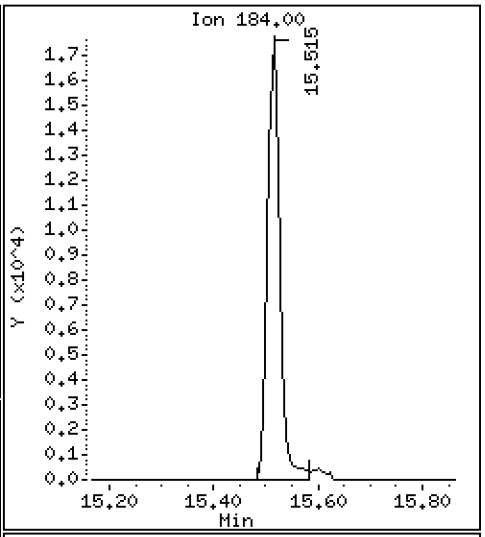
Column phase: ZB-5msi

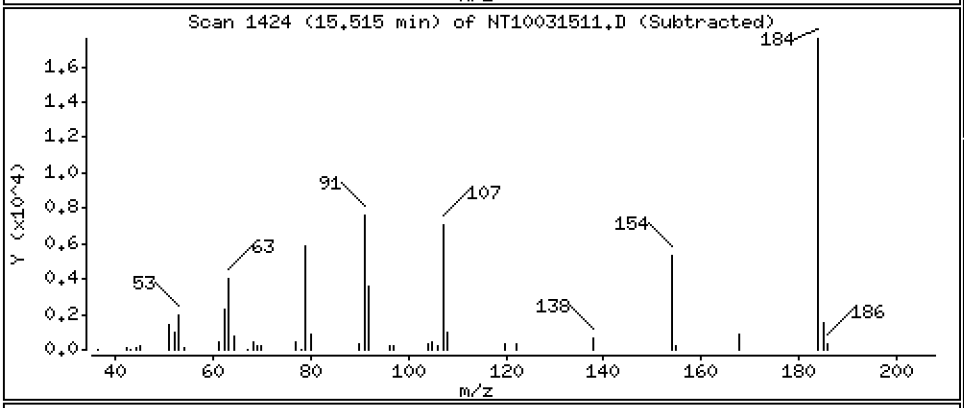
Column diameter: 0.25

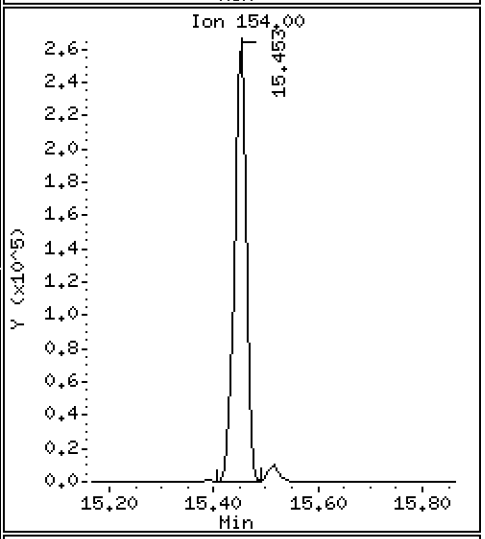
45 2,4-Dinitrophenol

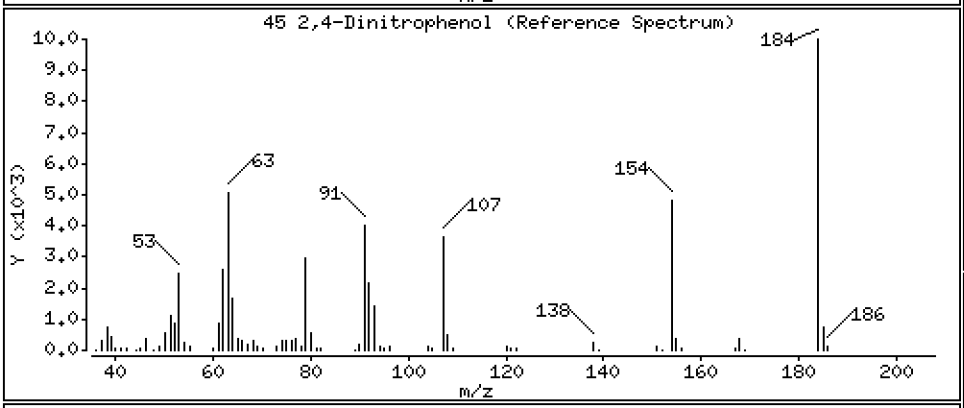
Concentration: 2.124 ug/mL

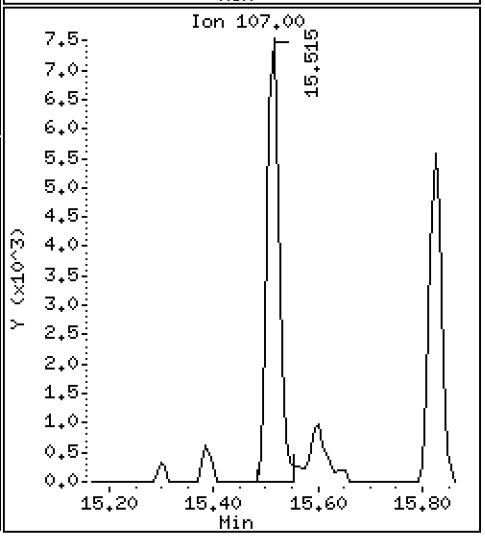


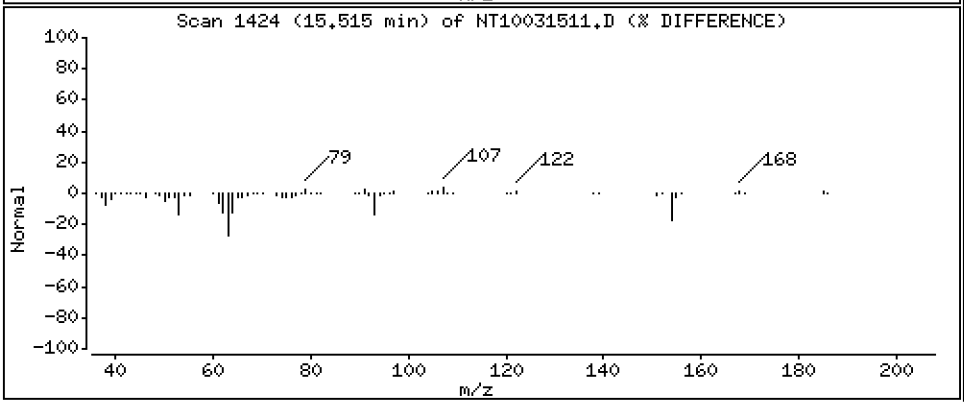












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

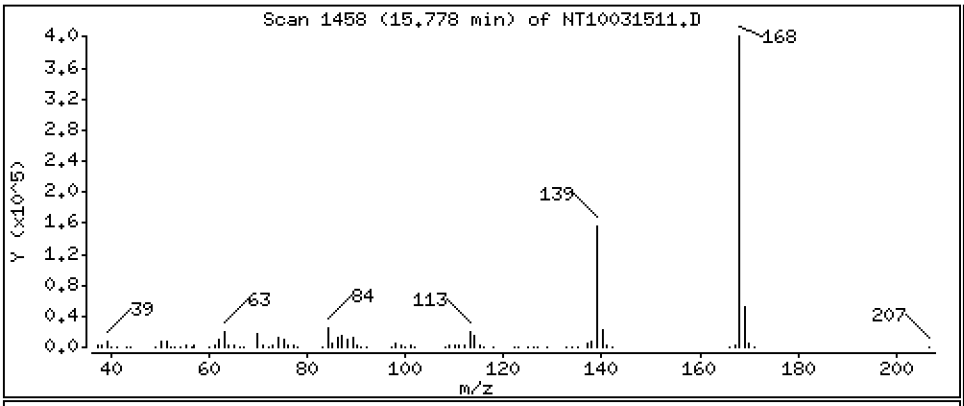
Operator: VTS

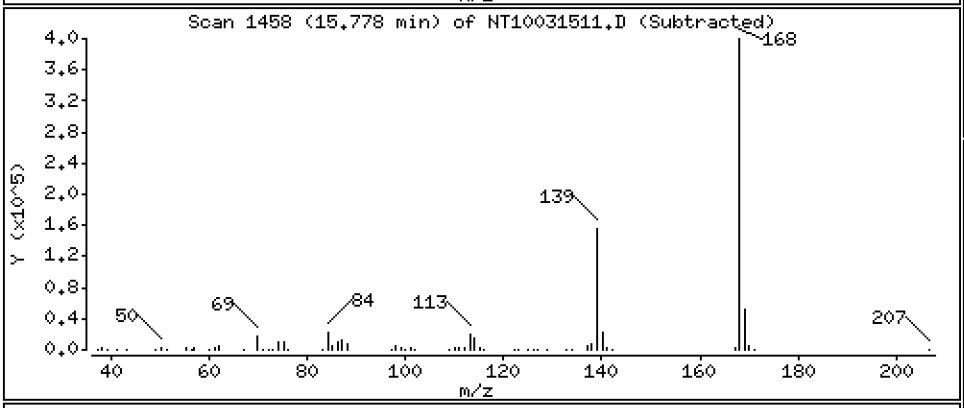
Column phase: ZB-5msi

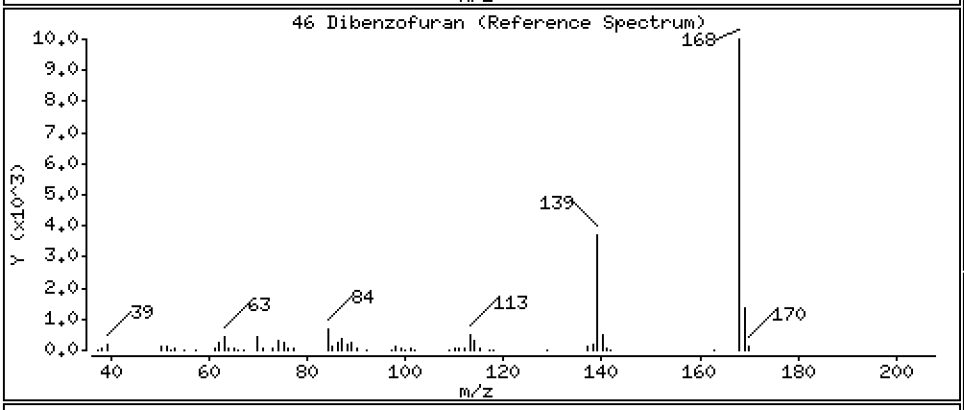
Column diameter: 0.25

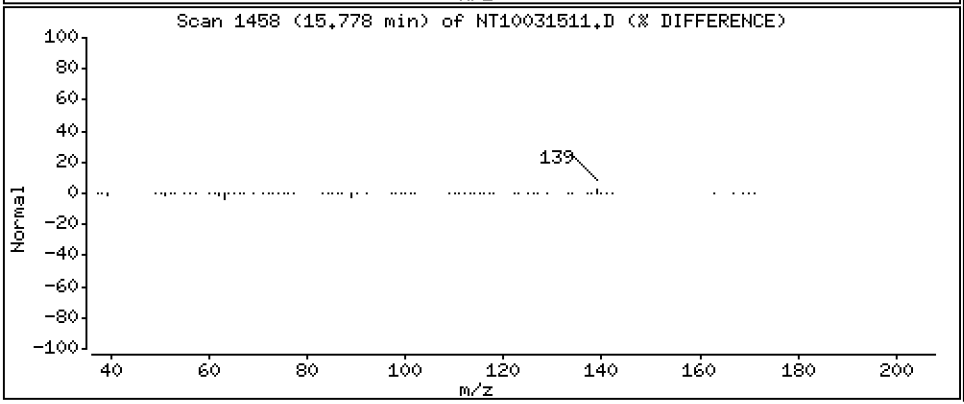
46 Dibenzofuran

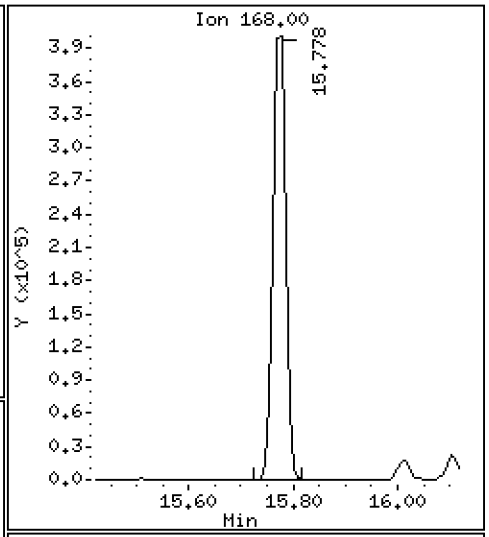
Concentration: 4.648 ug/mL

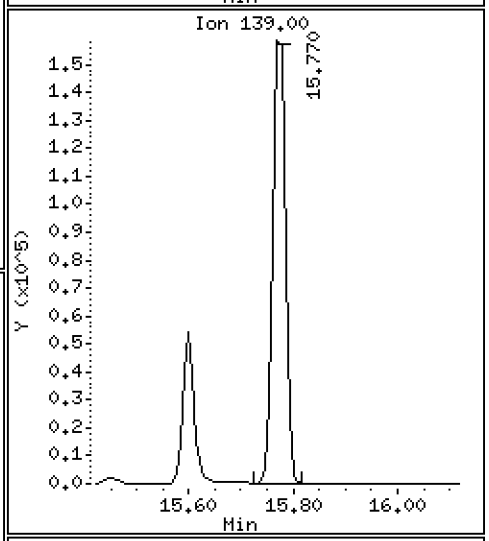


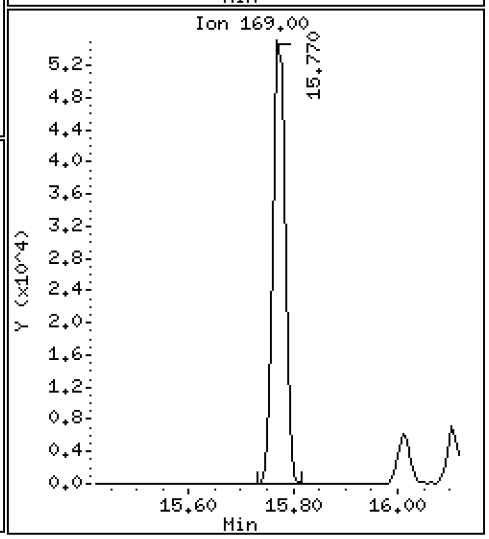












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

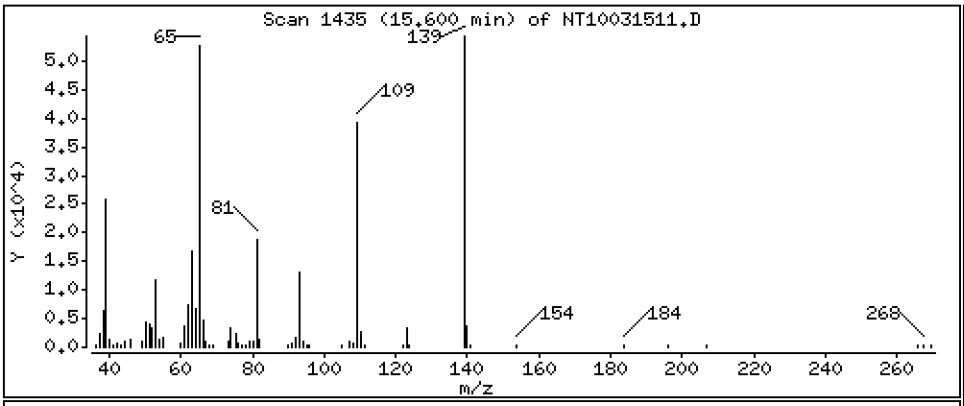
Operator: VTS

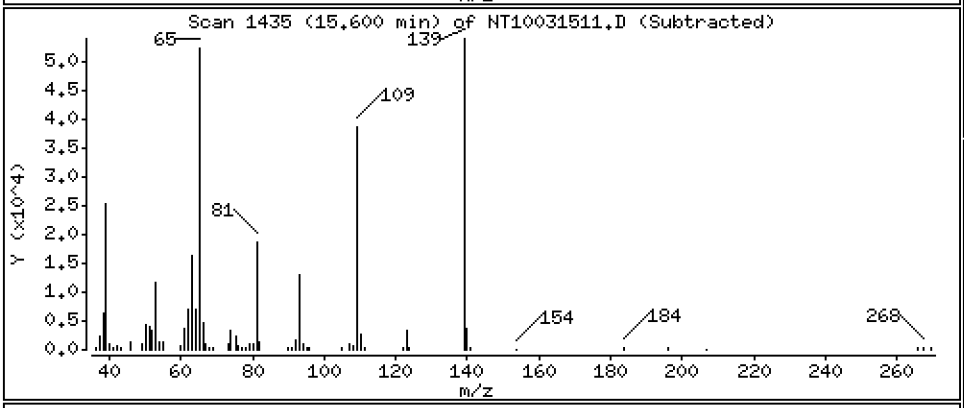
Column phase: ZB-5msi

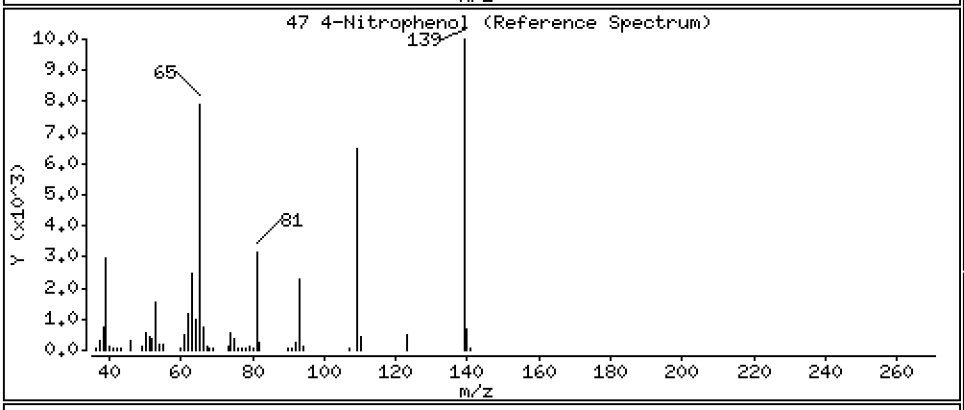
Column diameter: 0.25

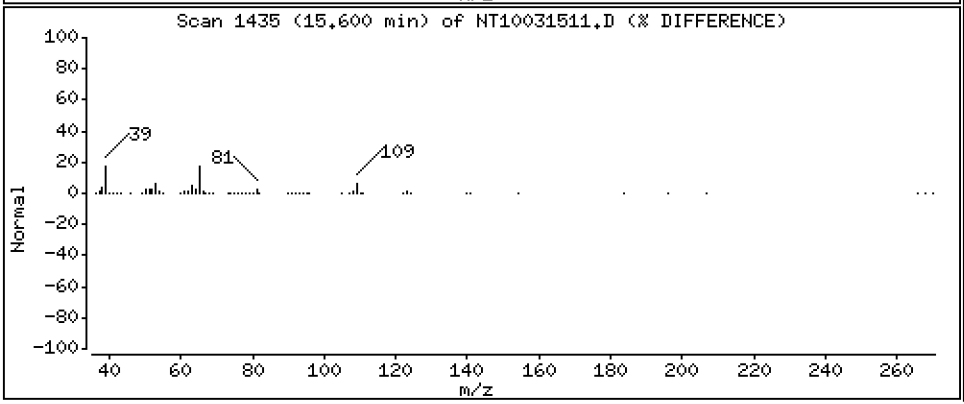
47 4-Nitrophenol

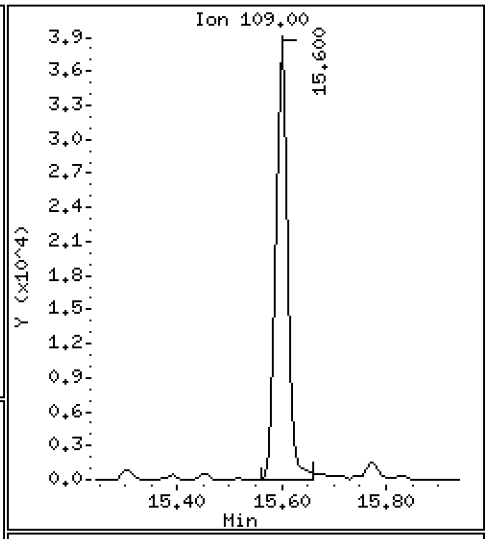
Concentration: 3.966 ug/mL

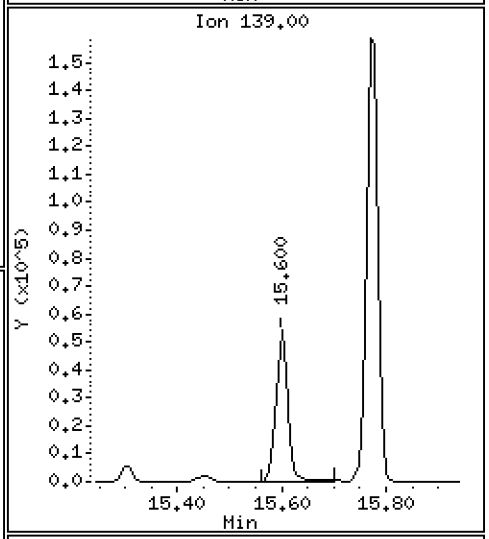


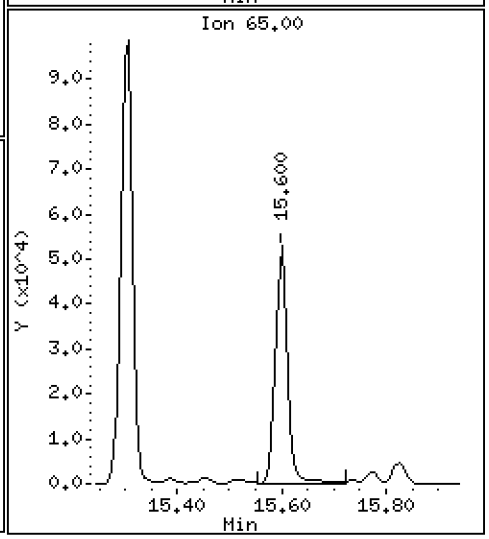












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

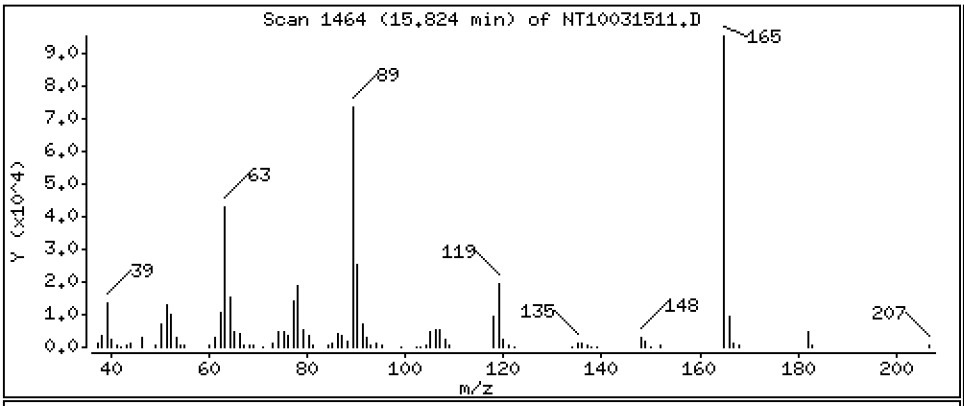
Operator: VTS

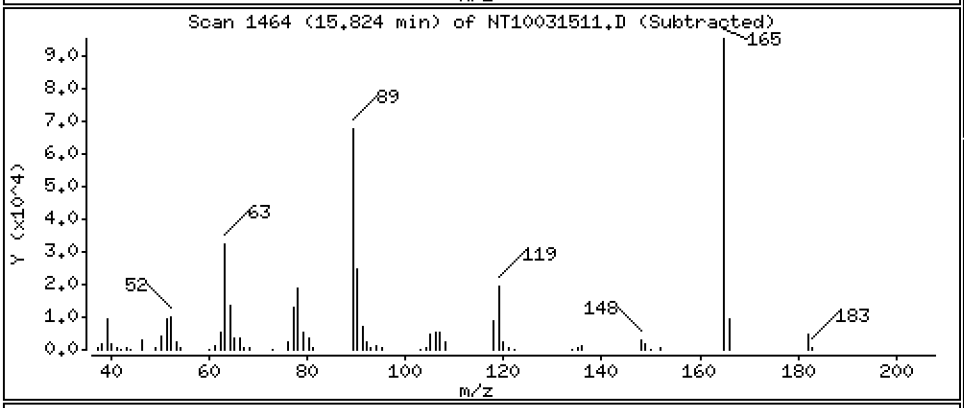
Column phase: ZB-5msi

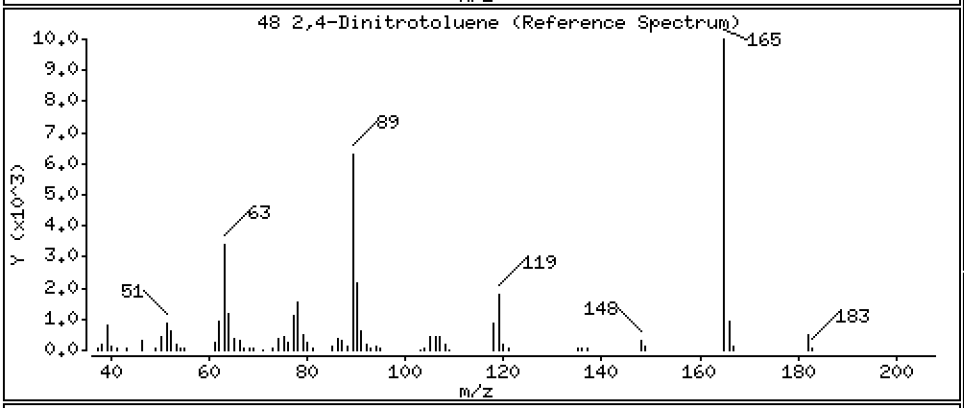
Column diameter: 0.25

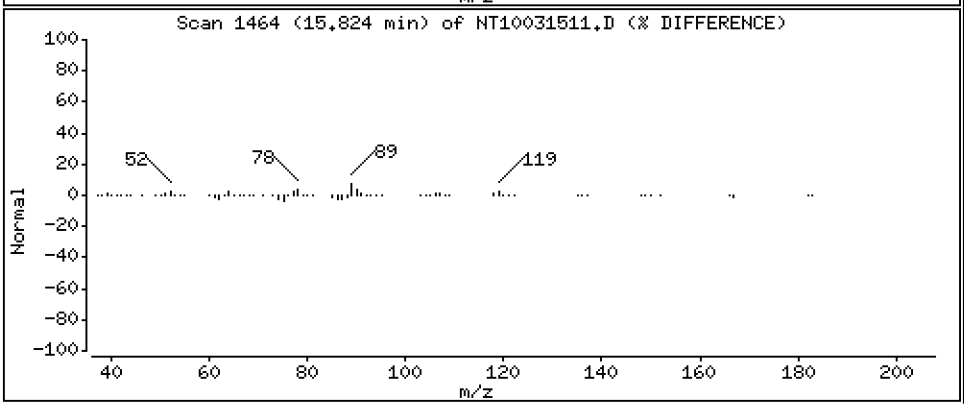
48 2,4-Dinitrotoluene

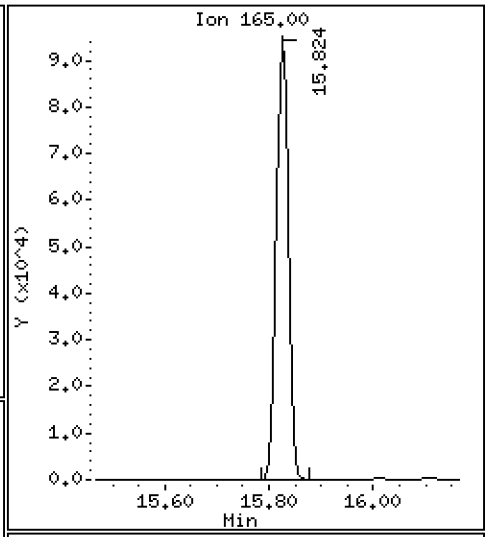
Concentration: 4.510 ug/mL

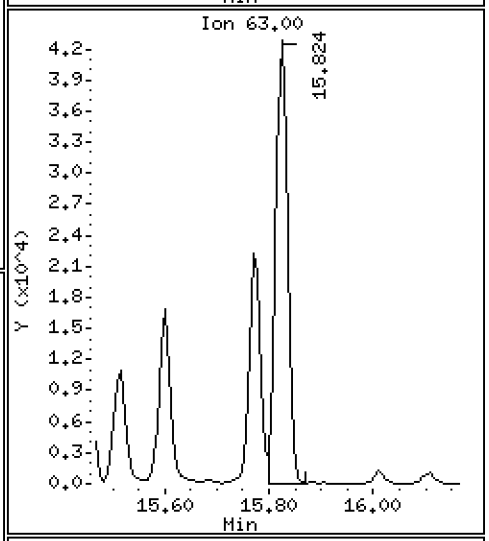


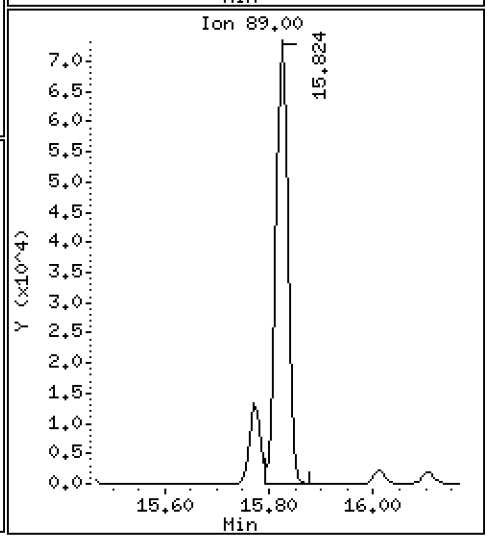












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

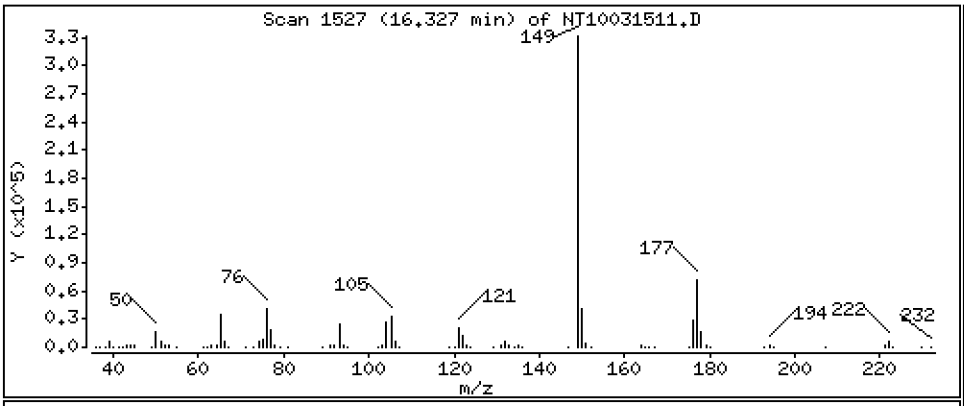
Operator: VTS

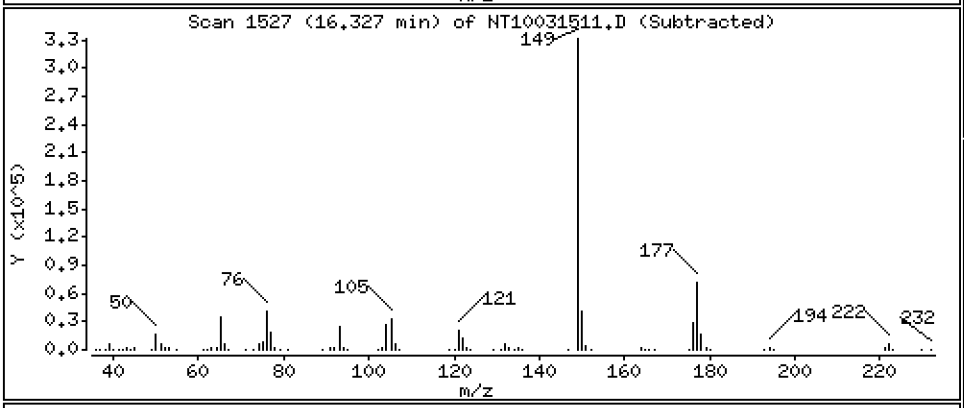
Column phase: ZB-5msi

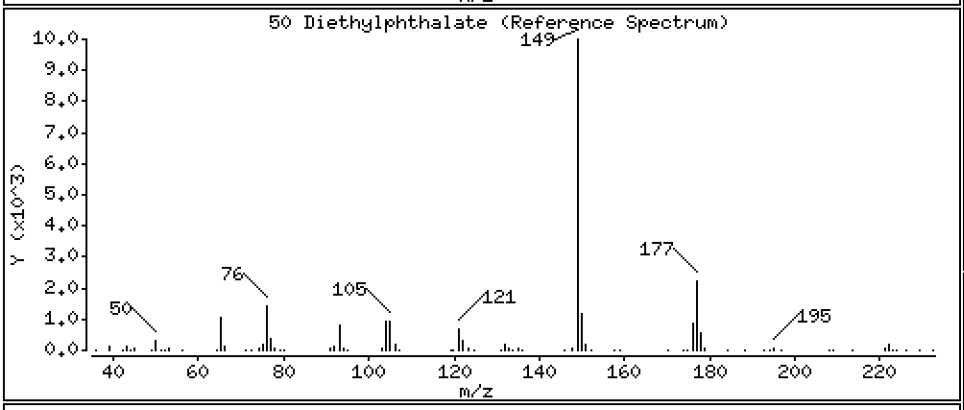
Column diameter: 0.25

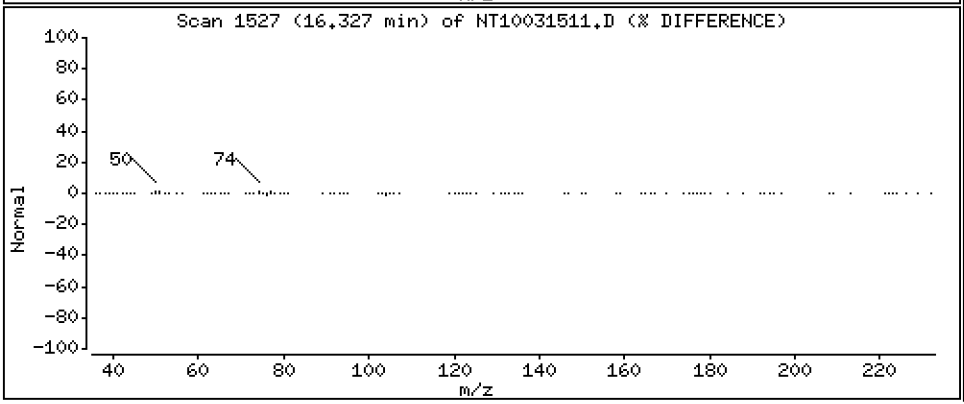
50 Diethylphthalate

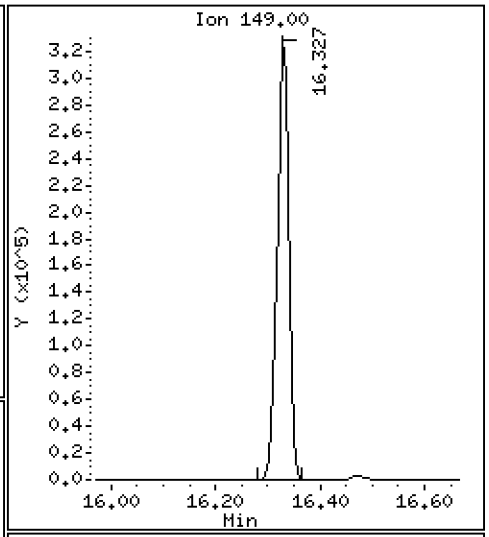
Concentration: 5.209 ug/mL

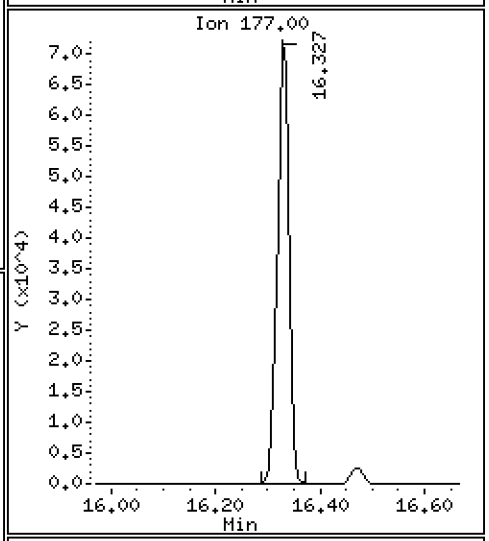


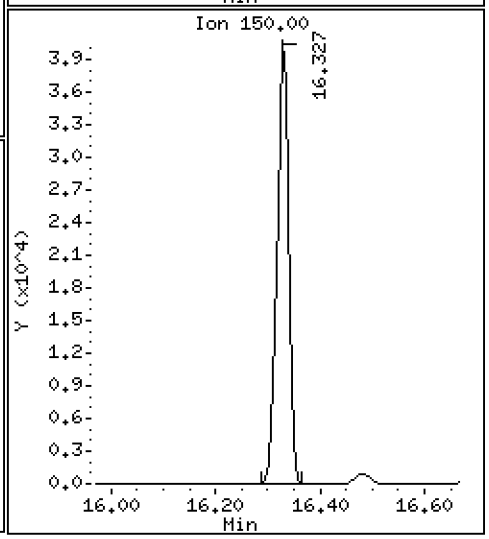












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

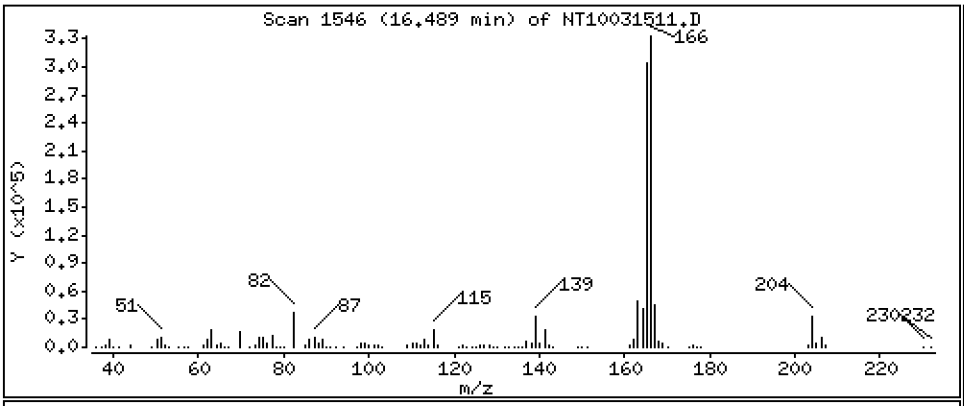
Operator: VTS

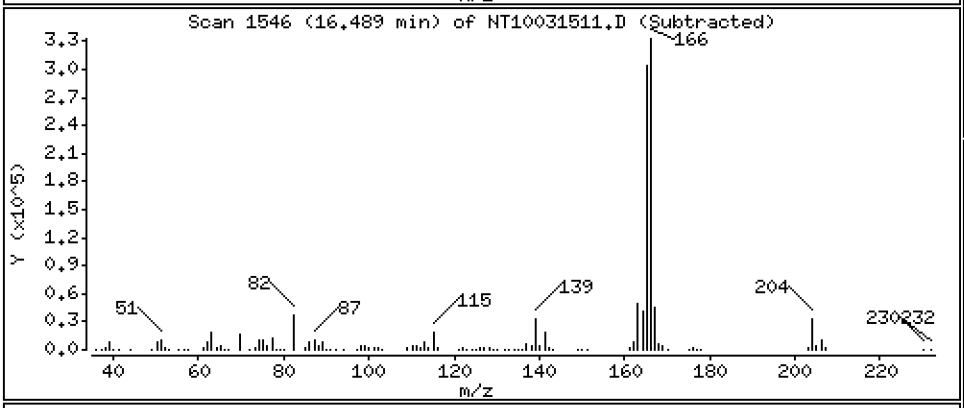
Column phase: ZB-5msi

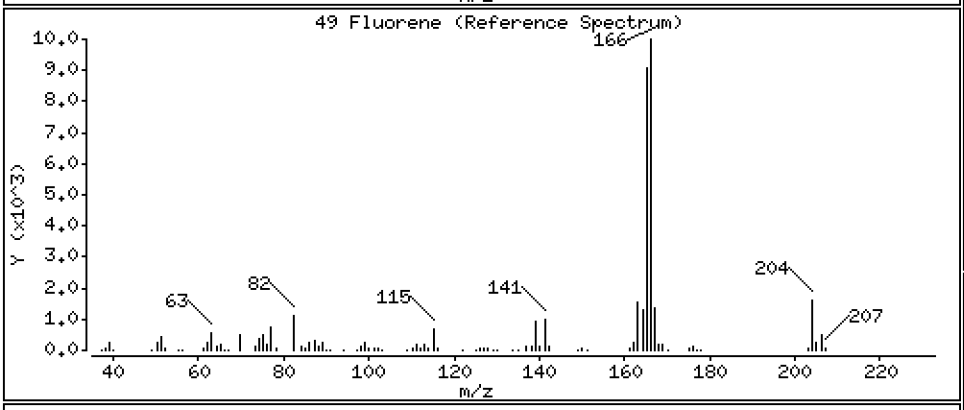
Column diameter: 0.25

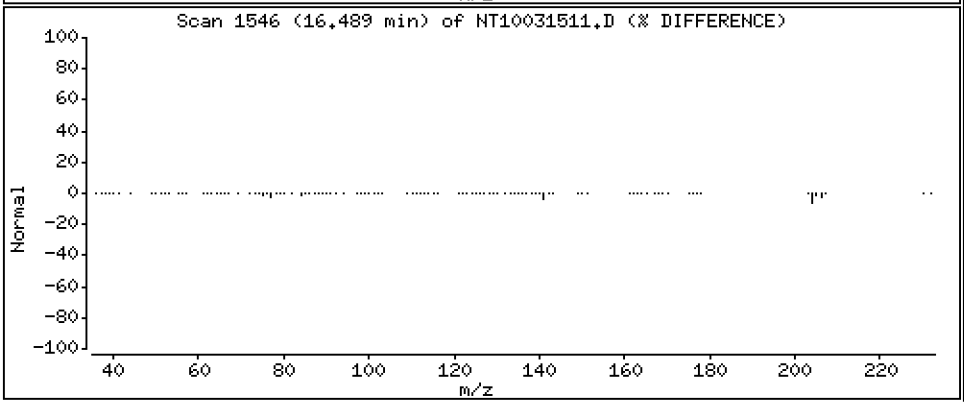
49 Fluorene

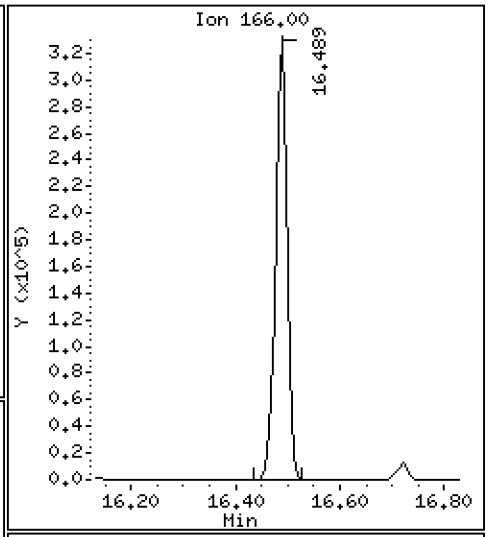
Concentration: 4.708 ug/mL

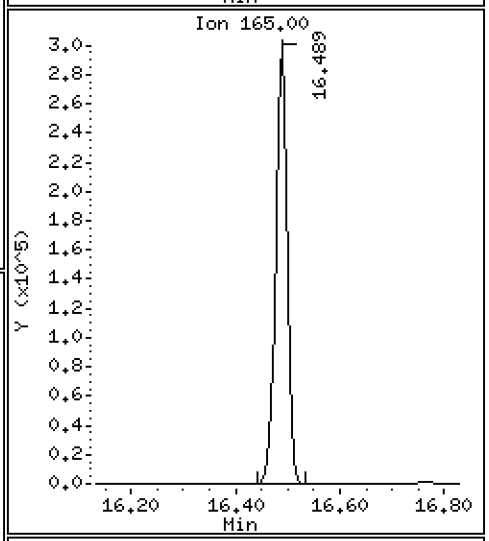


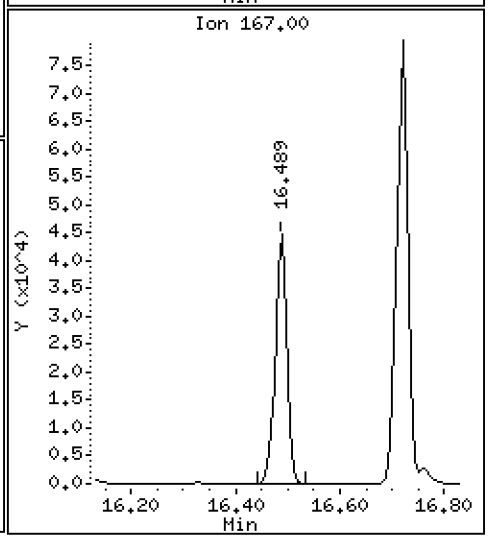












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

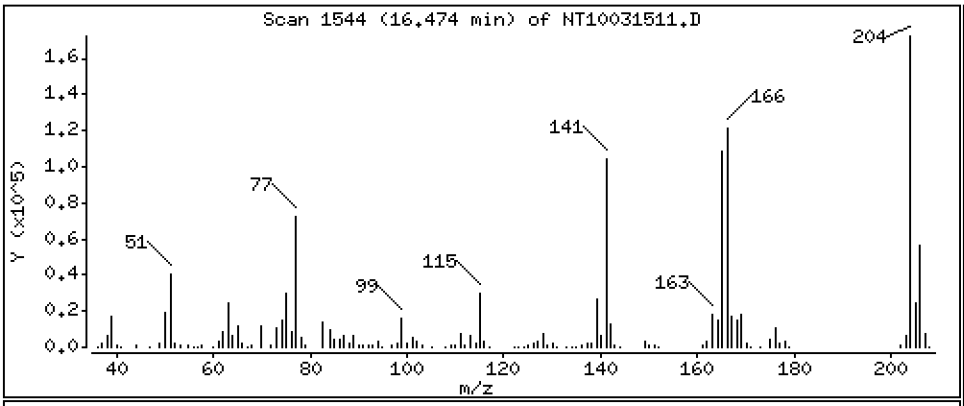
Operator: VTS

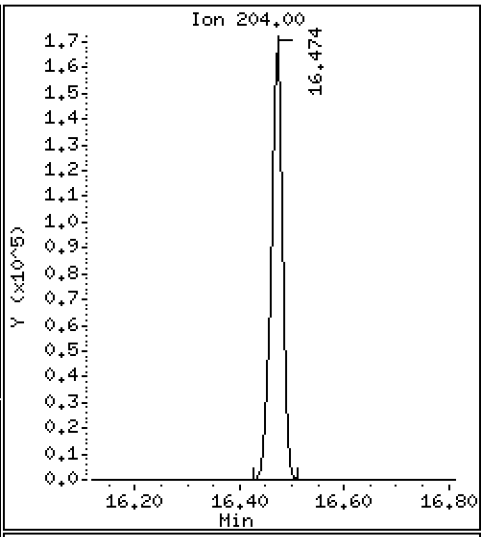
Column phase: ZB-5msi

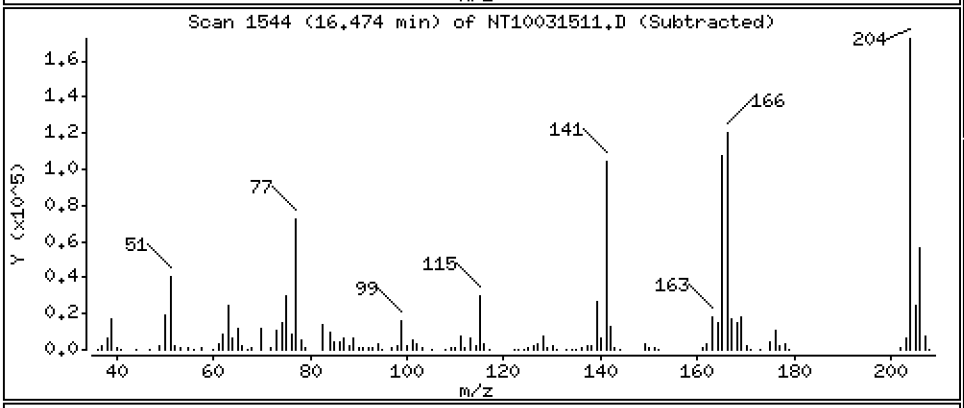
Column diameter: 0.25

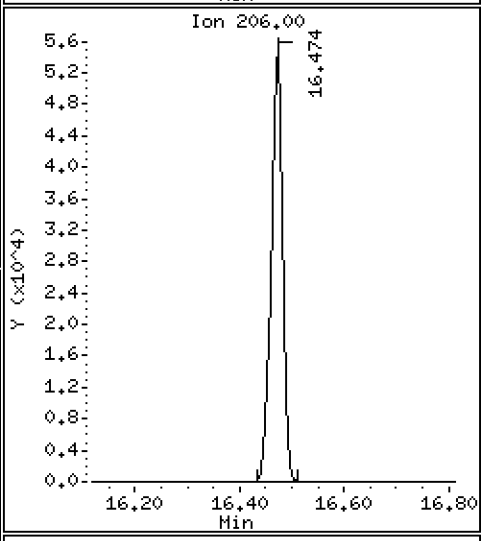
51 4-Chlorophenyl-phenylether

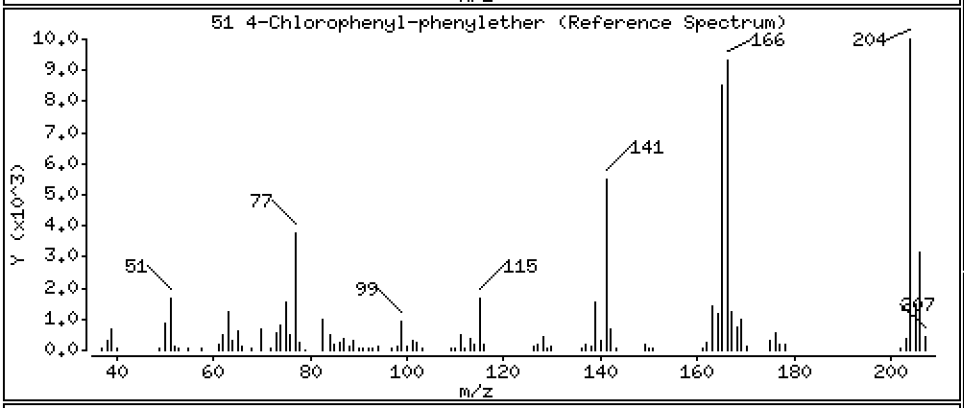
Concentration: 4.993 ug/mL

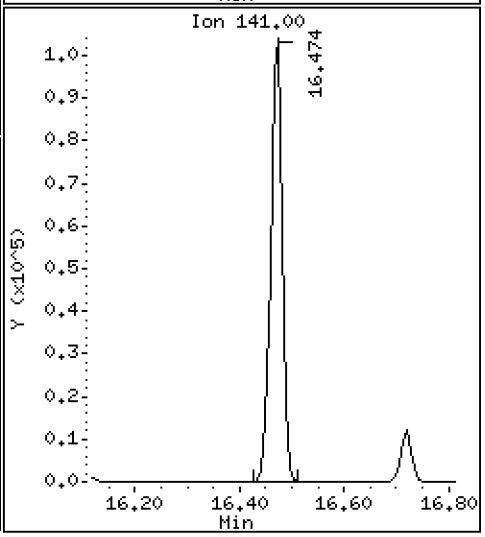


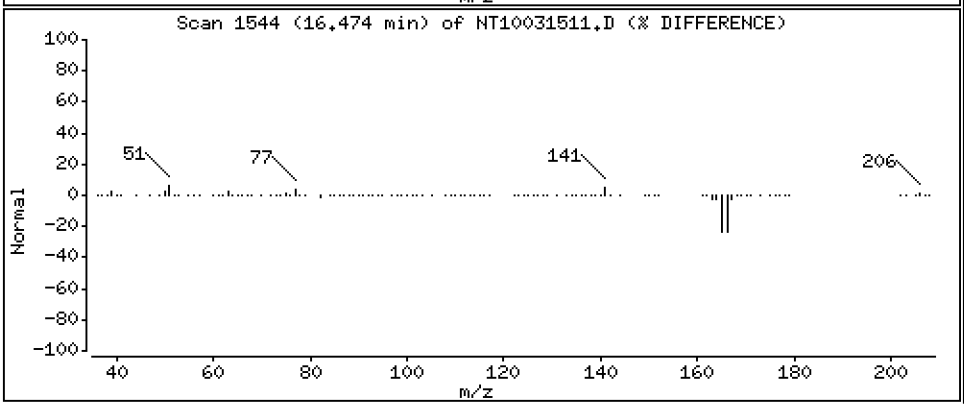












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

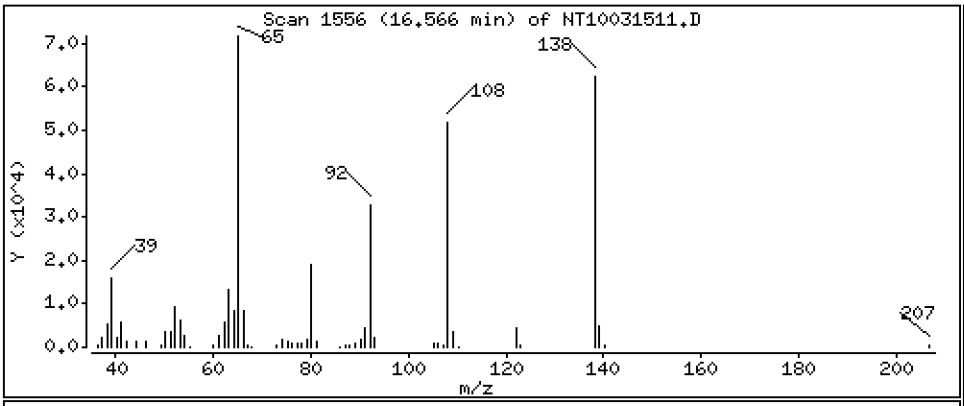
Operator: VTS

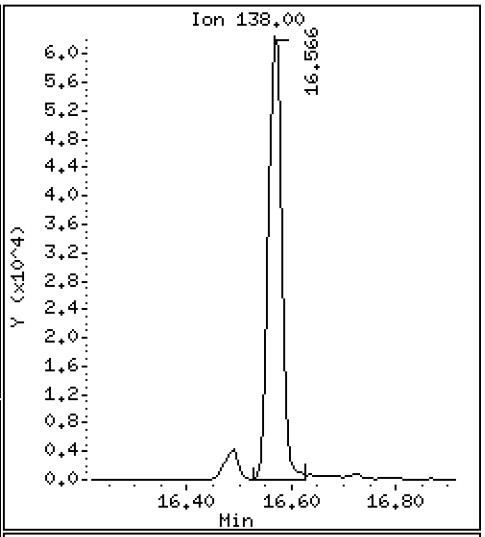
Column phase: ZB-5msi

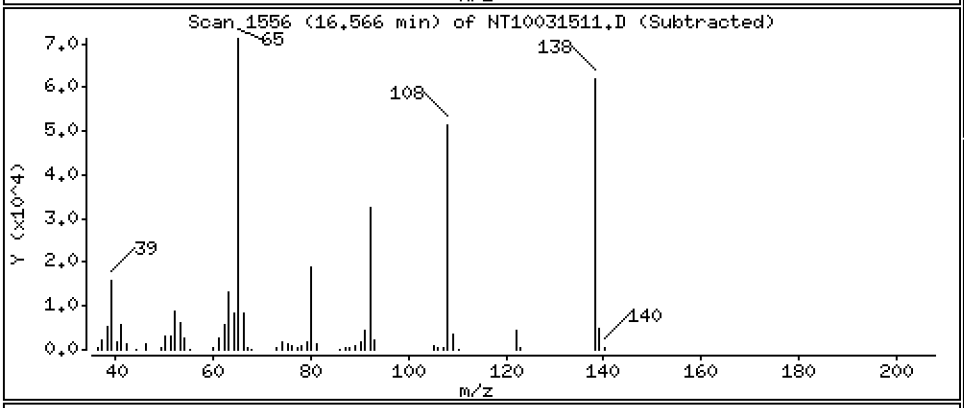
Column diameter: 0.25

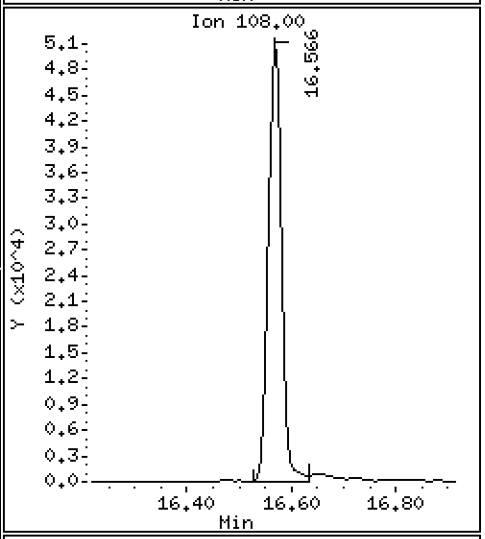
52 4-Nitroaniline

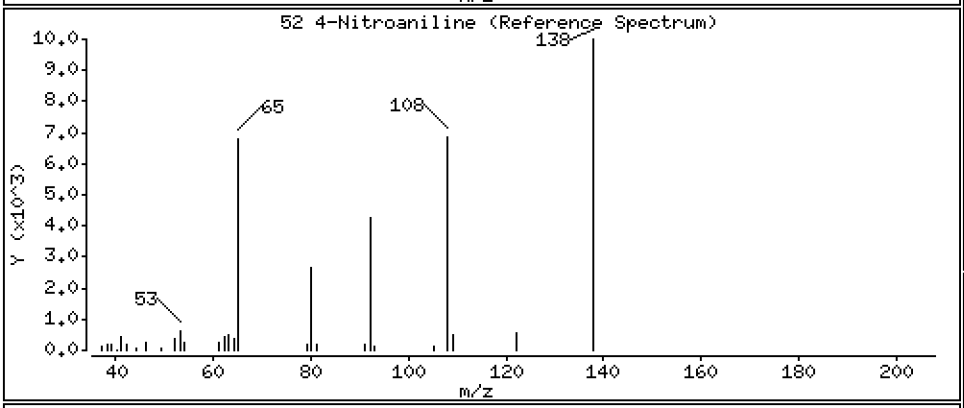
Concentration: 4.925 ug/mL

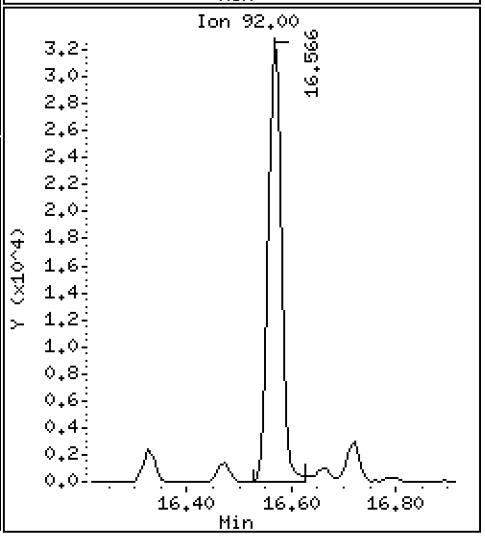


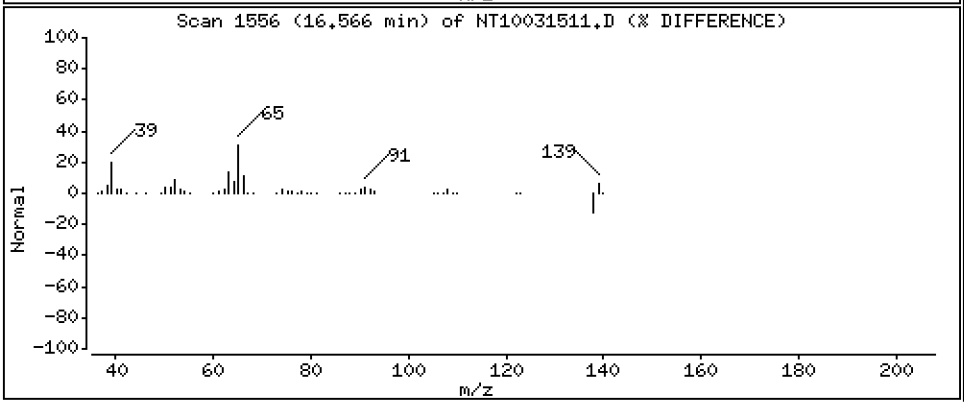












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

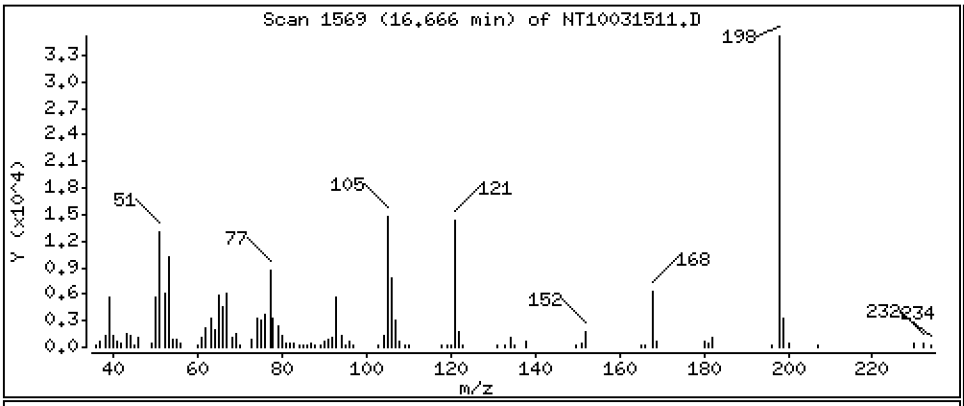
Operator: VTS

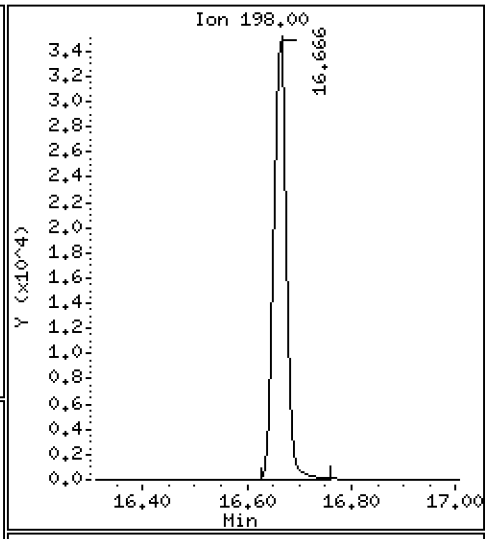
Column phase: ZB-5msi

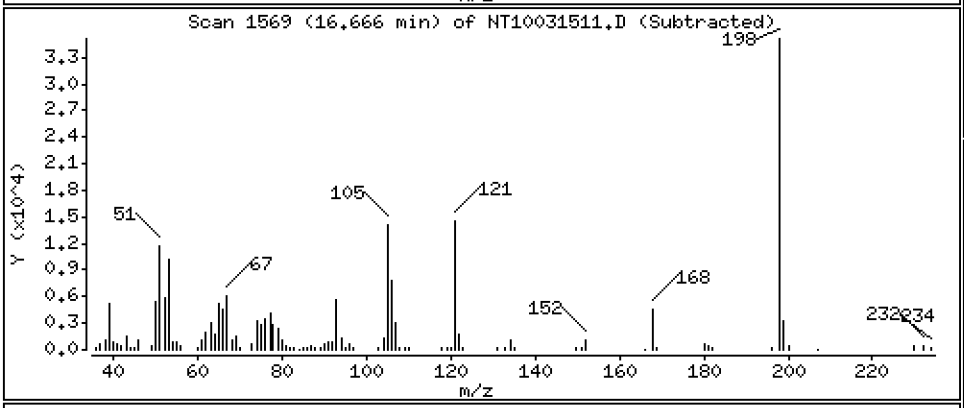
Column diameter: 0.25

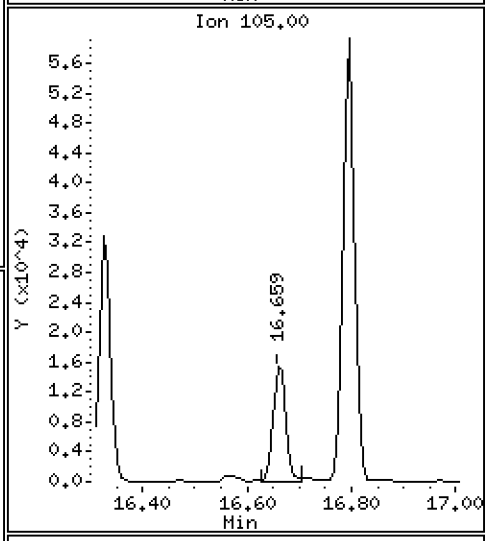
53 4,6-Dinitro-2-methylphenol

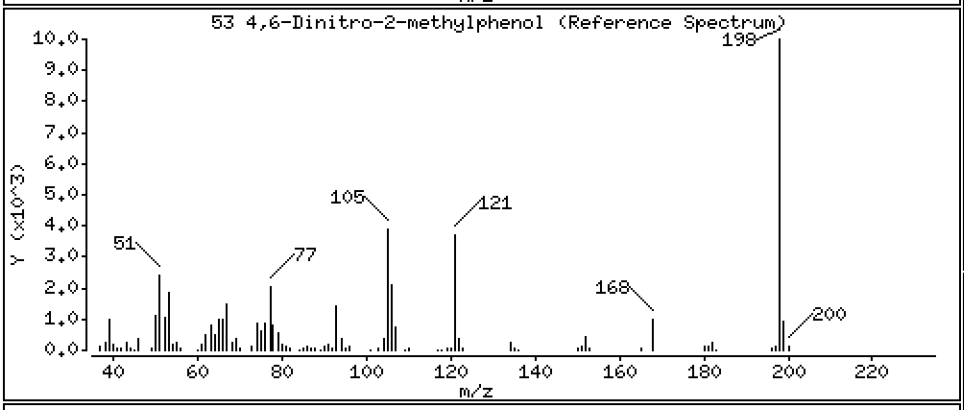
Concentration: 3.515 ug/mL

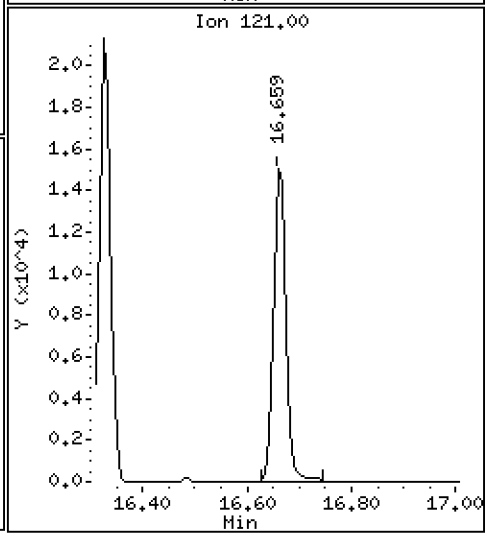


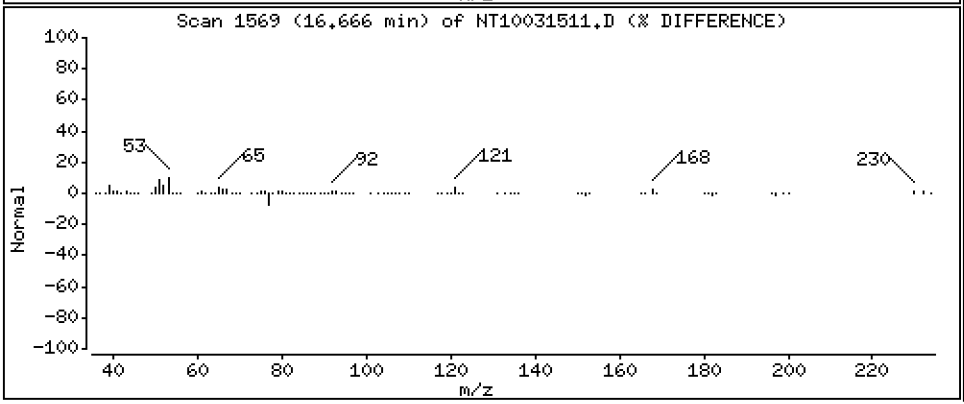












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

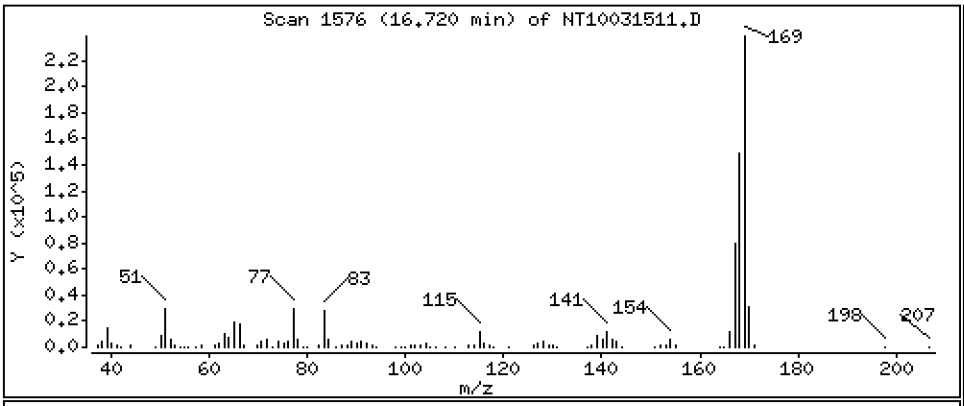
Operator: VTS

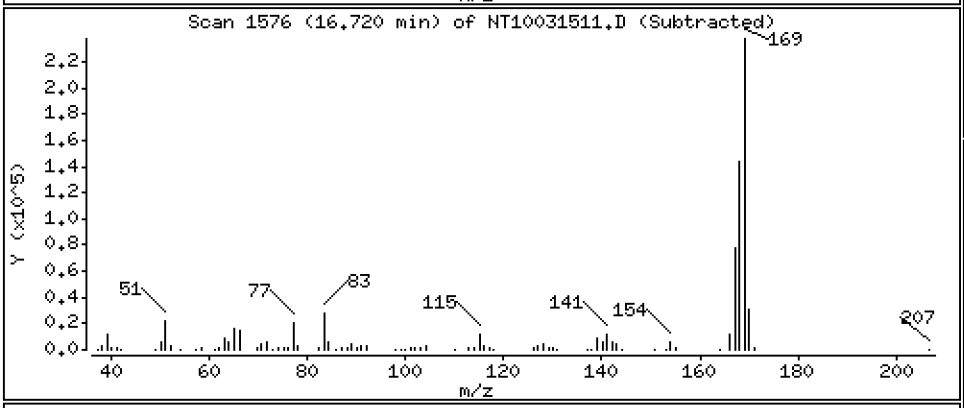
Column phase: ZB-5msi

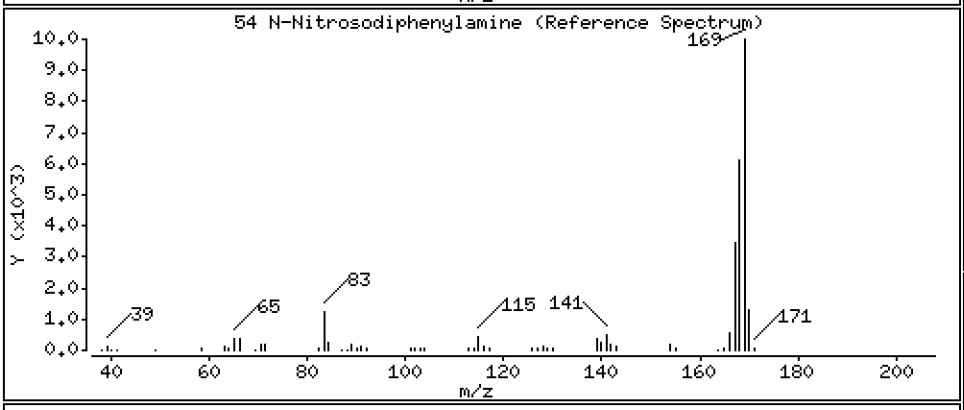
Column diameter: 0.25

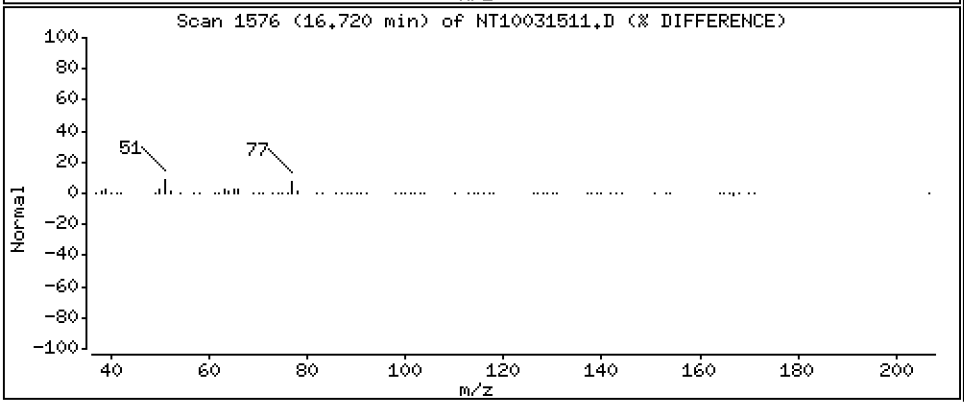
54 N-Nitrosodiphenylamine

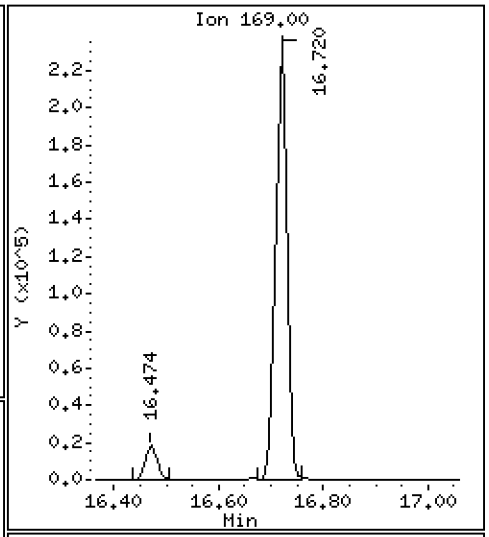
Concentration: 4.802 ug/mL

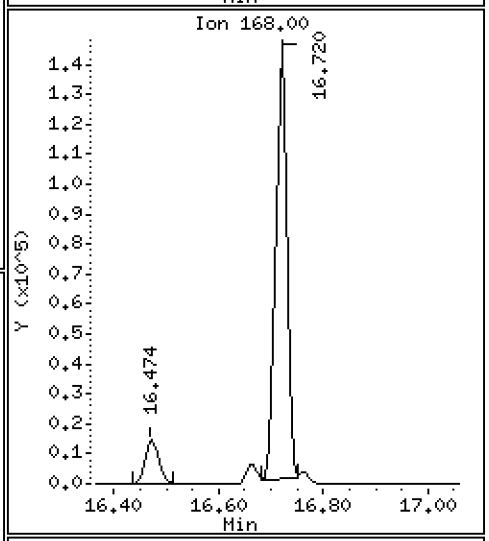


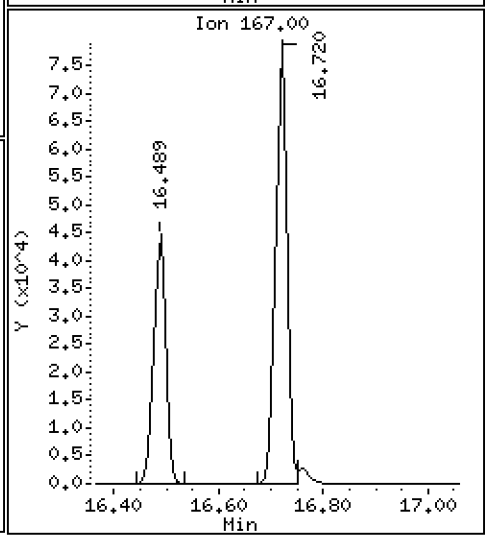












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

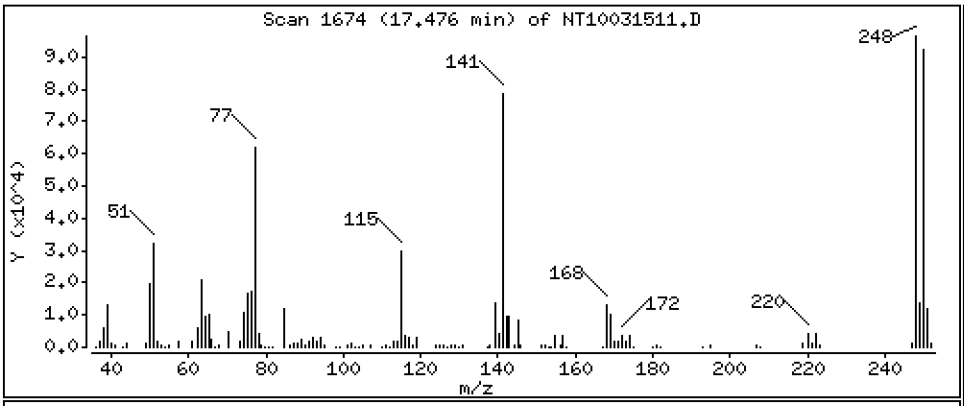
Operator: VTS

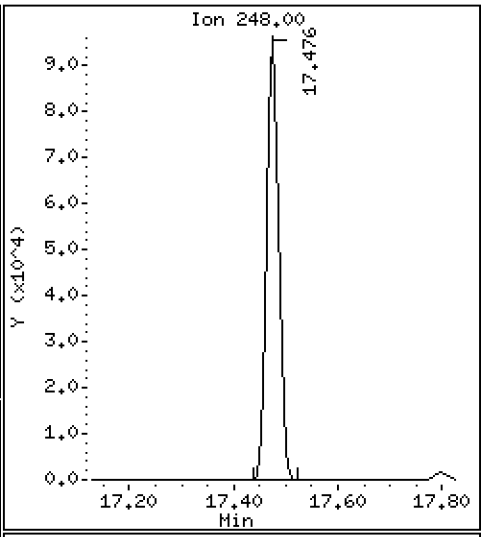
Column phase: ZB-5msi

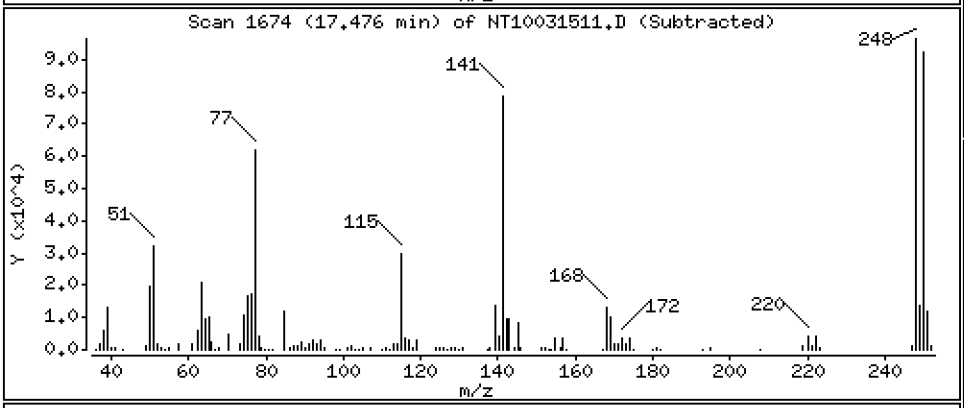
Column diameter: 0.25

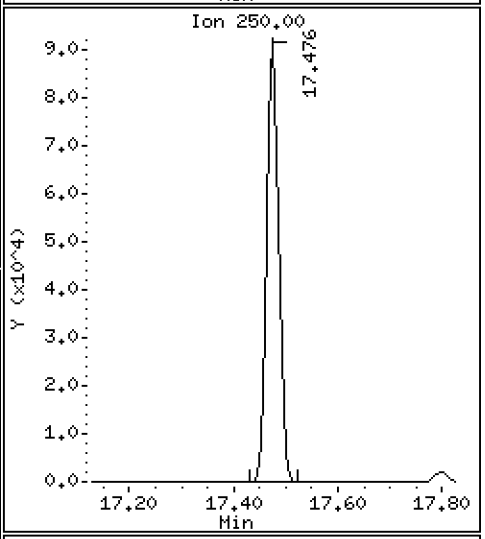
56 4-Bromophenyl-phenylether

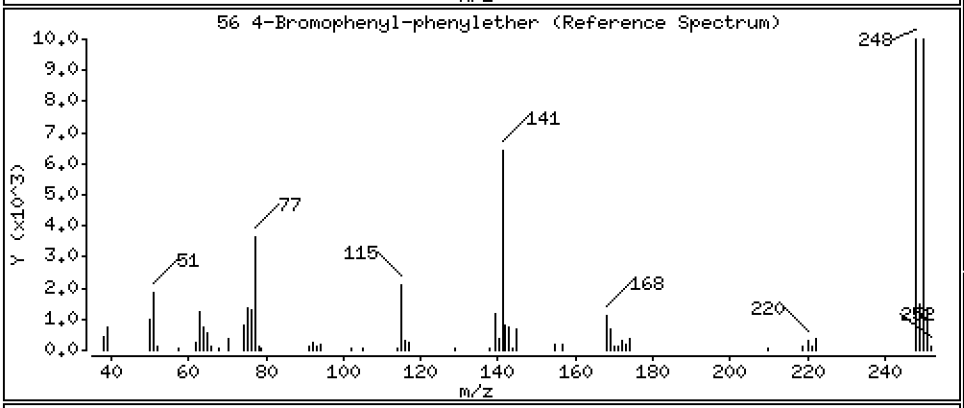
Concentration: 5.060 ug/mL

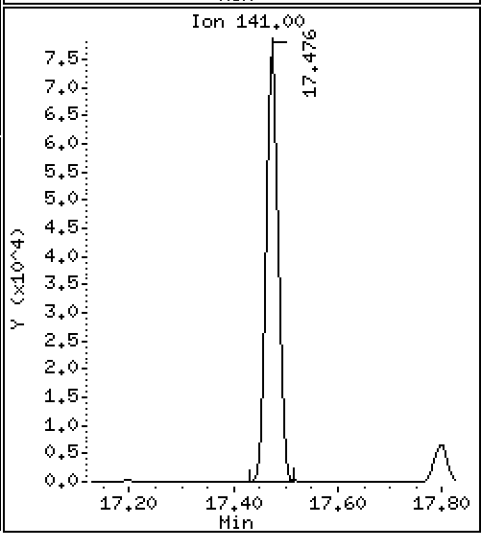


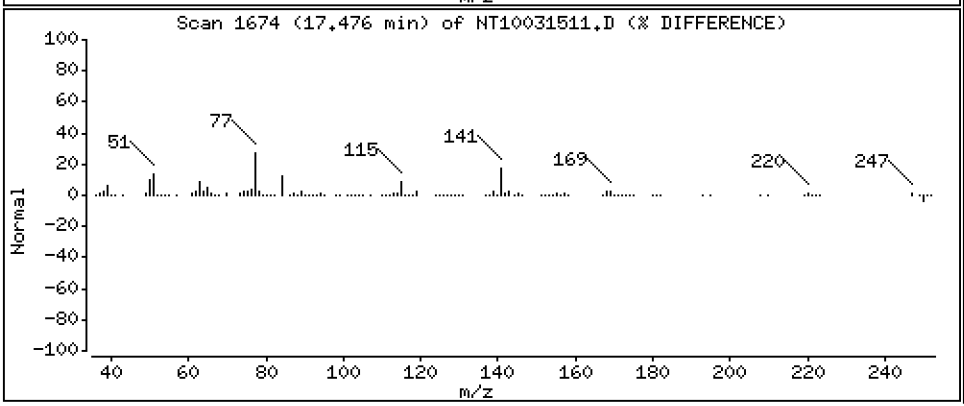












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

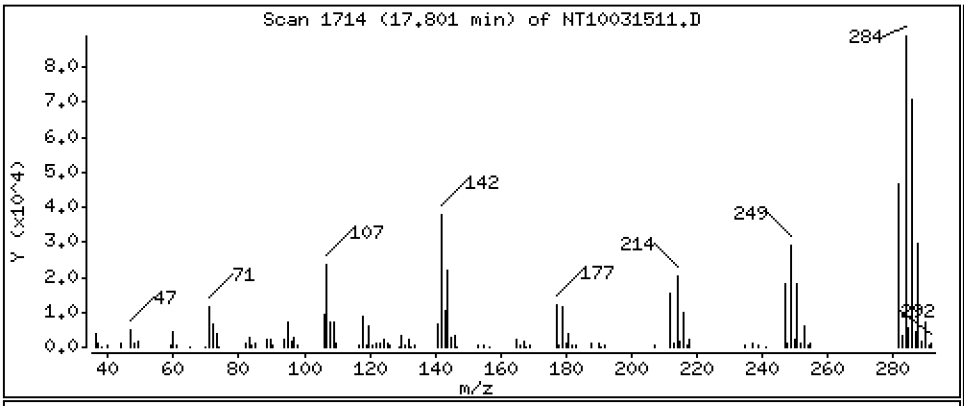
Operator: VTS

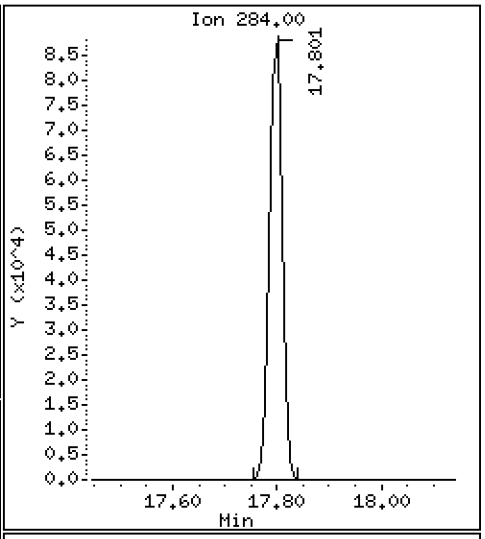
Column phase: ZB-5msi

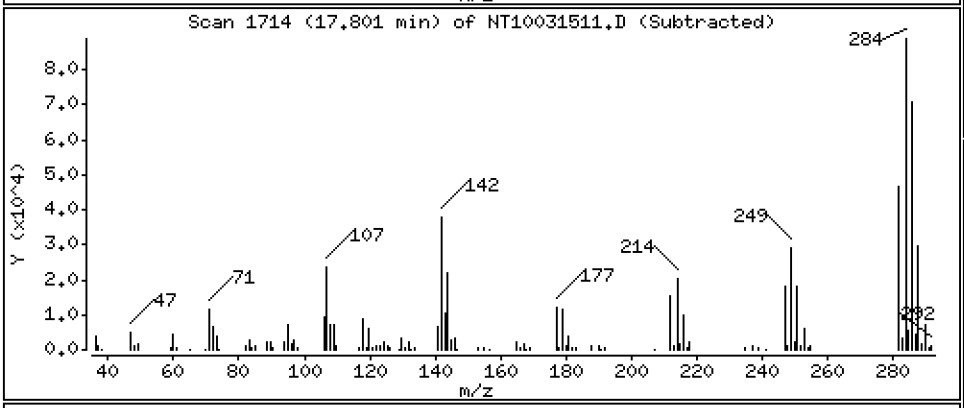
Column diameter: 0.25

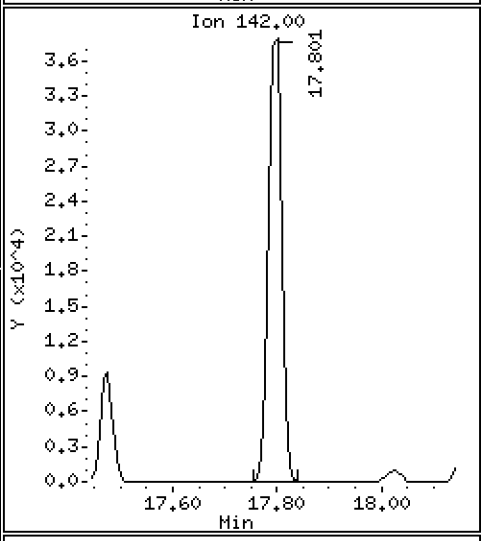
57 Hexachlorobenzene

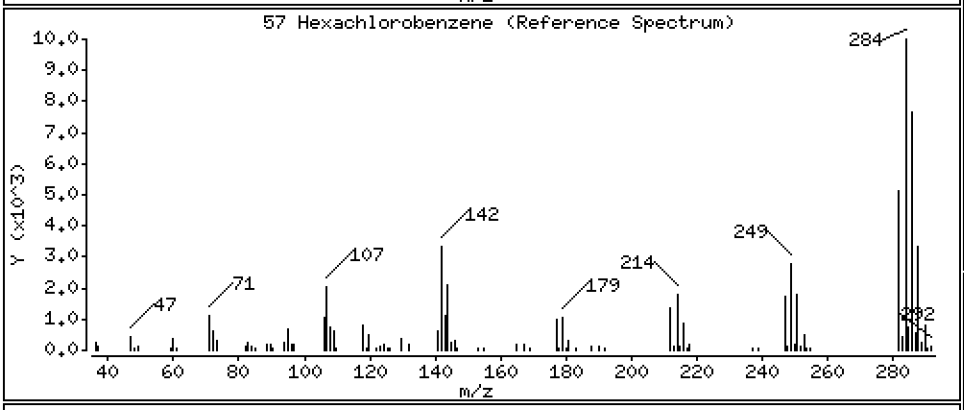
Concentration: 4.596 ug/mL

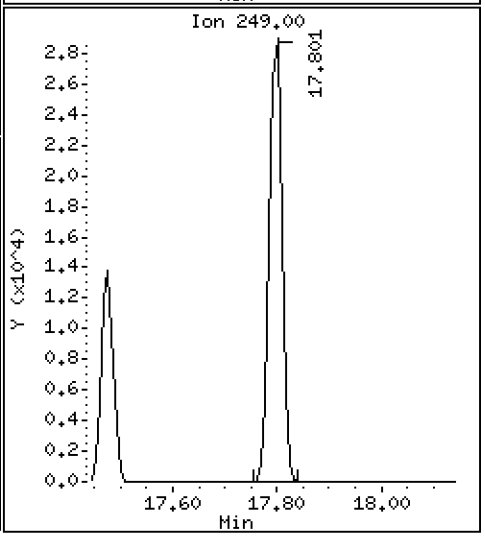


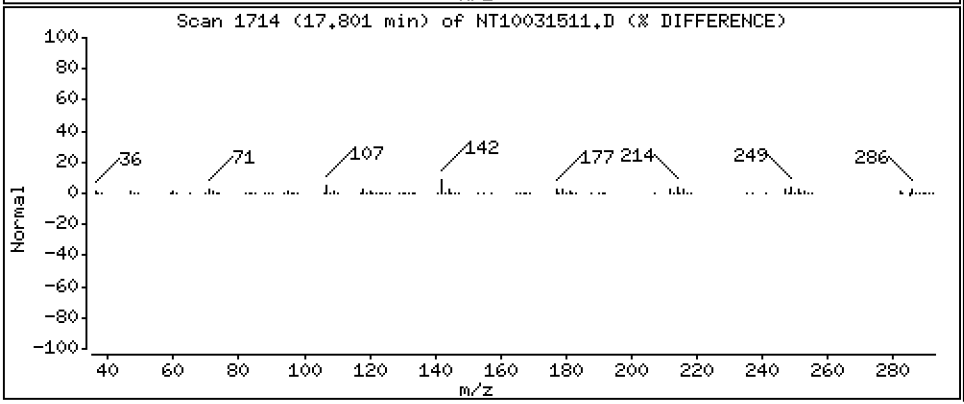












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

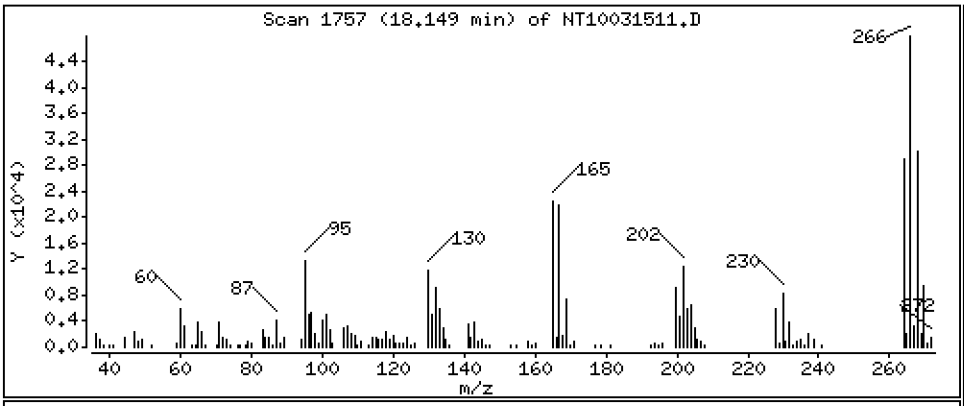
Operator: VTS

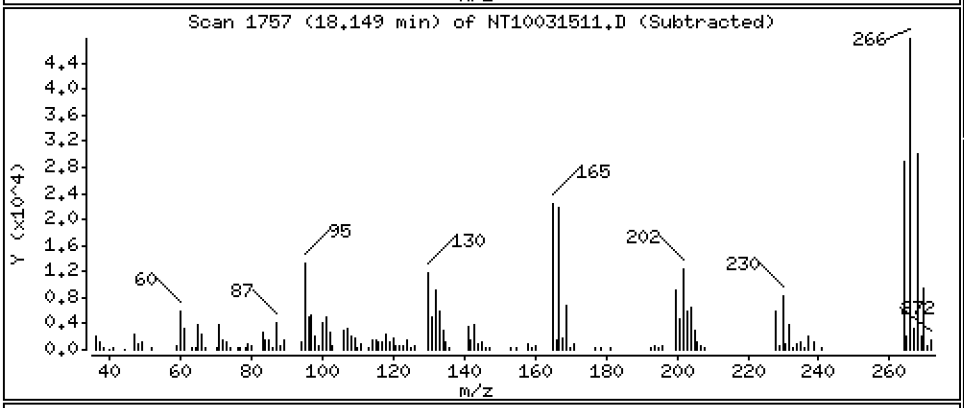
Column phase: ZB-5msi

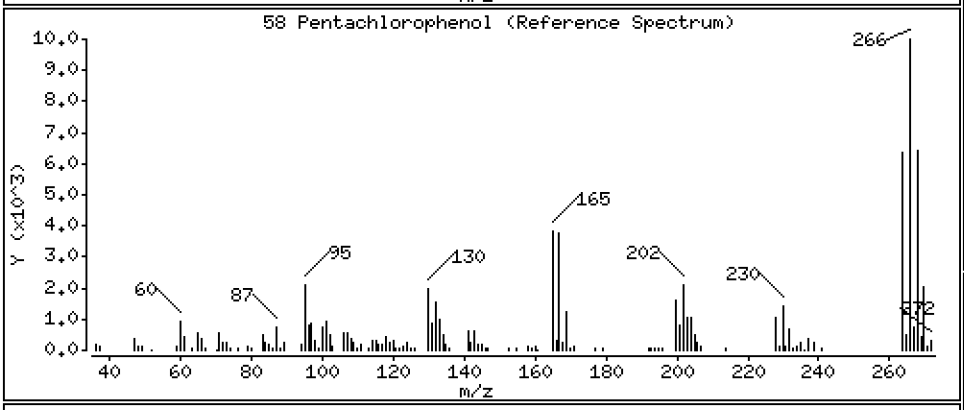
Column diameter: 0.25

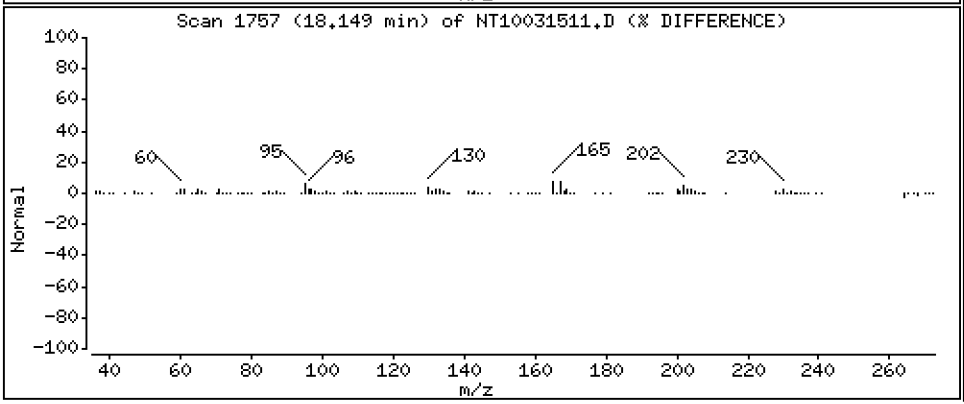
58 Pentachlorophenol

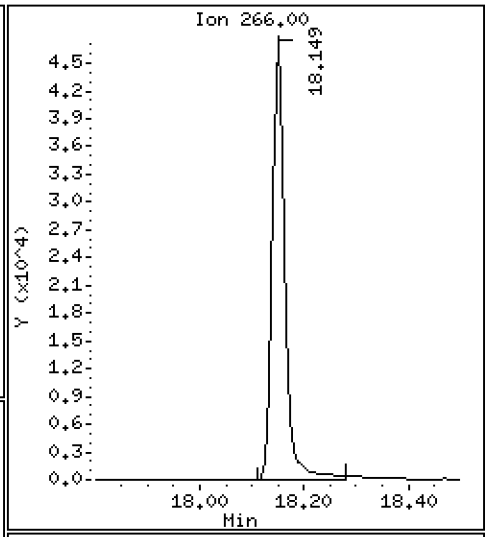
Concentration: 4.057 ug/mL

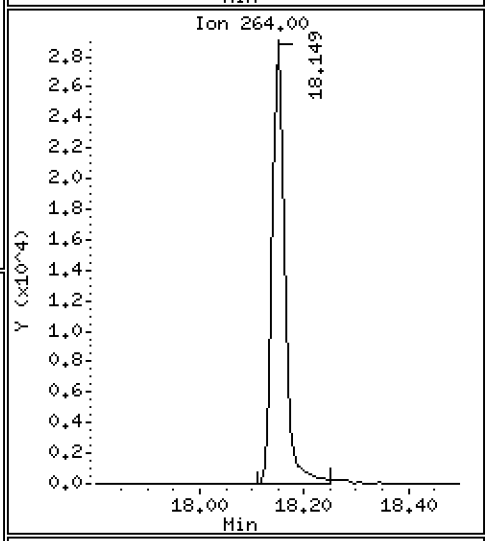


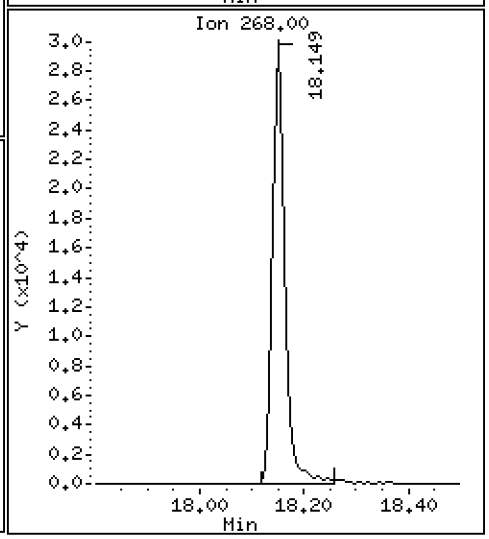












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

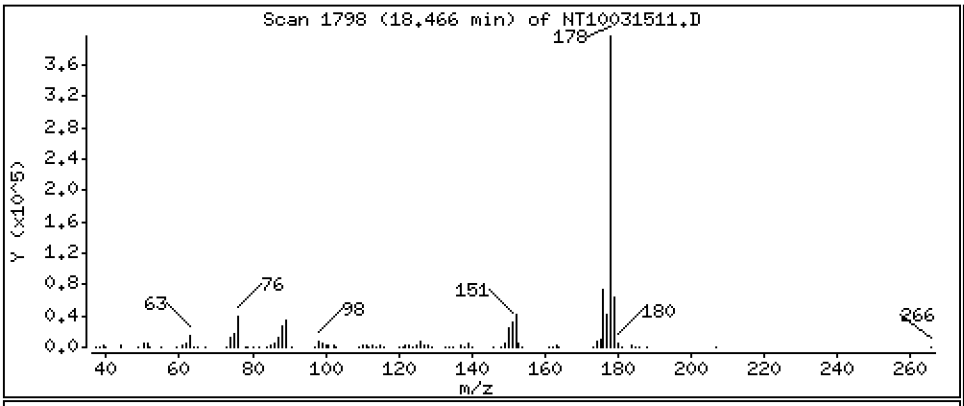
Operator: VTS

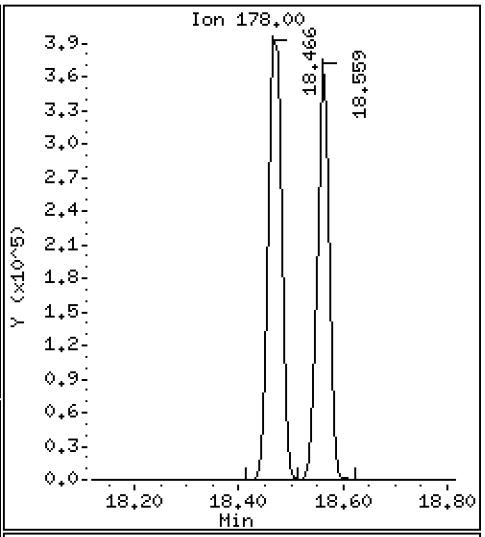
Column phase: ZB-5msi

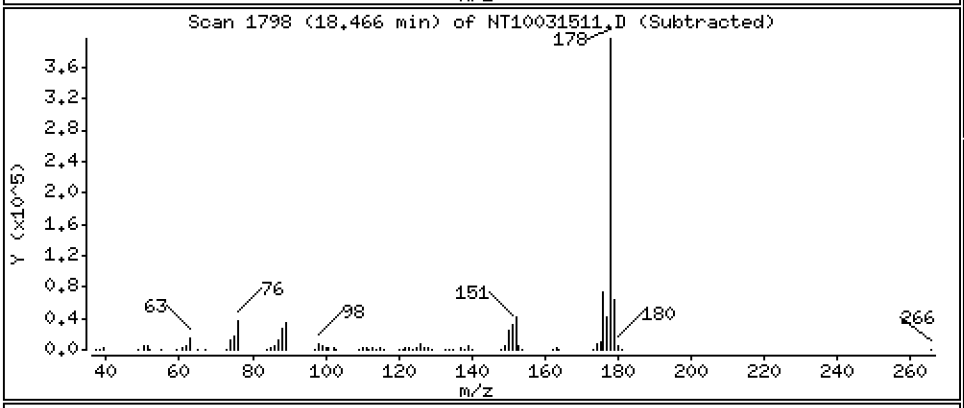
Column diameter: 0.25

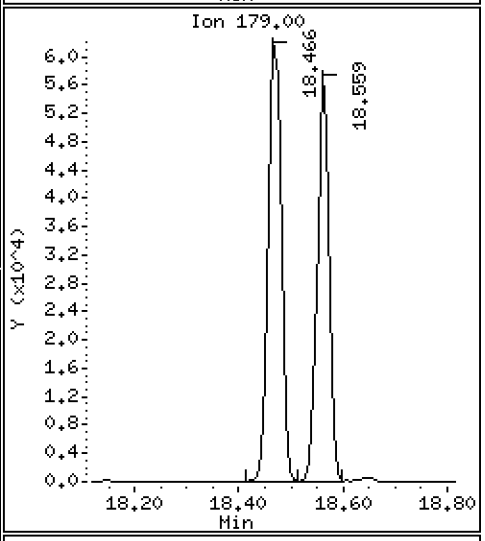
60 Phenanthrene

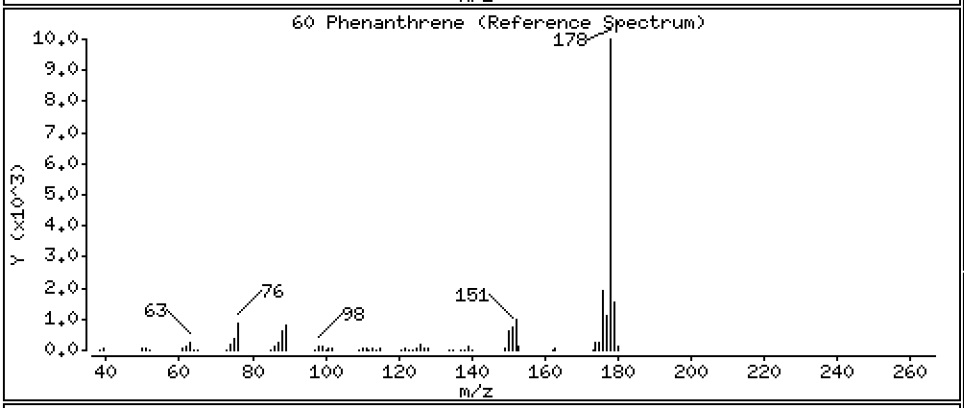
Concentration: 4.602 ug/mL

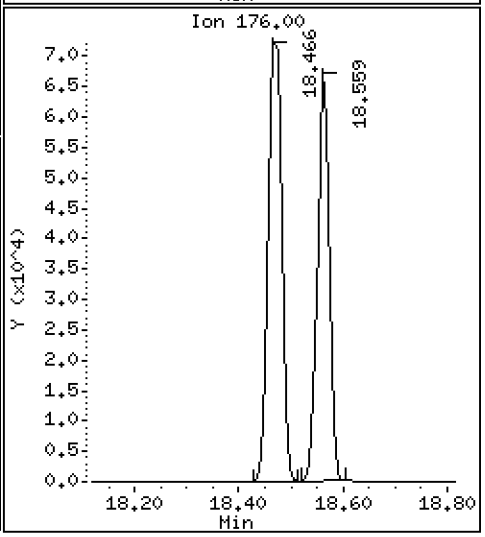


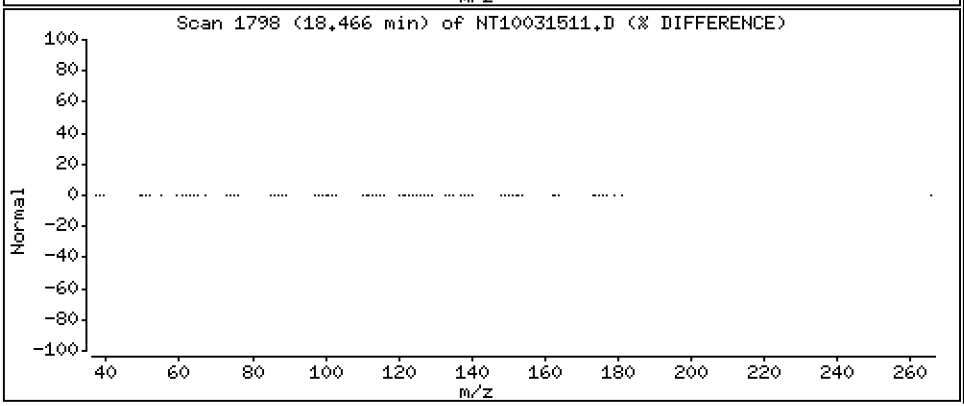












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

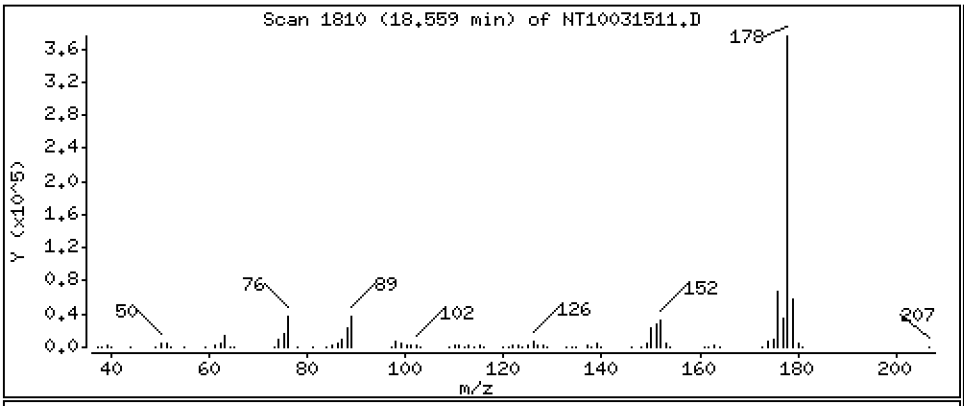
Operator: VTS

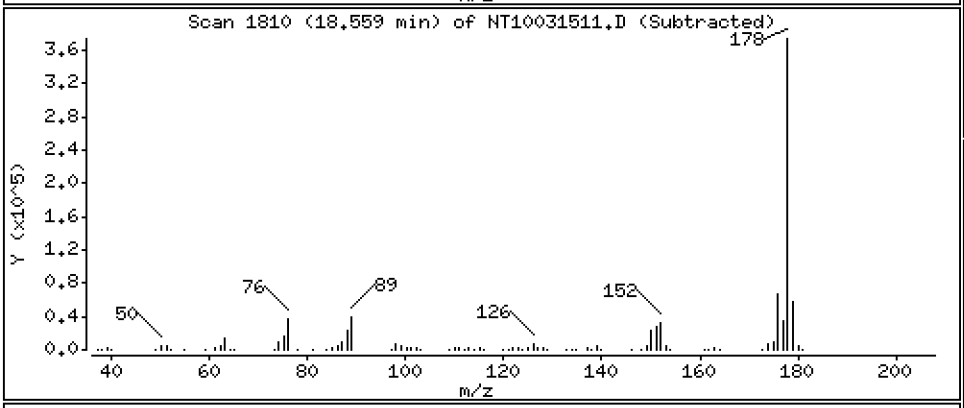
Column phase: ZB-5msi

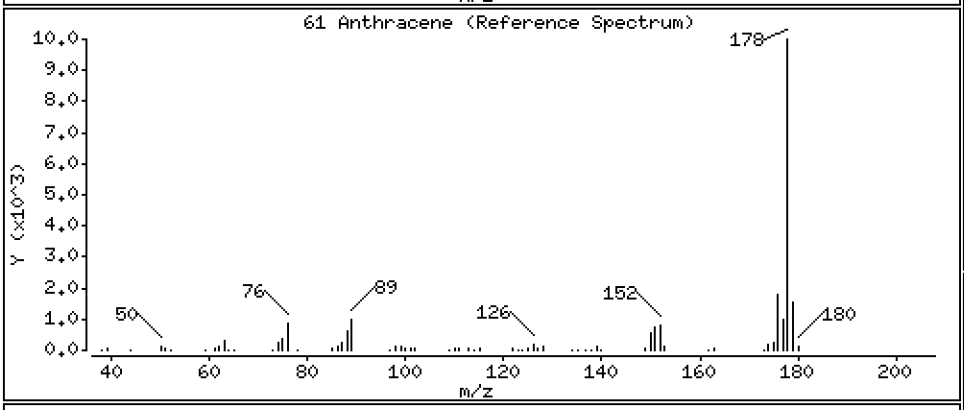
Column diameter: 0.25

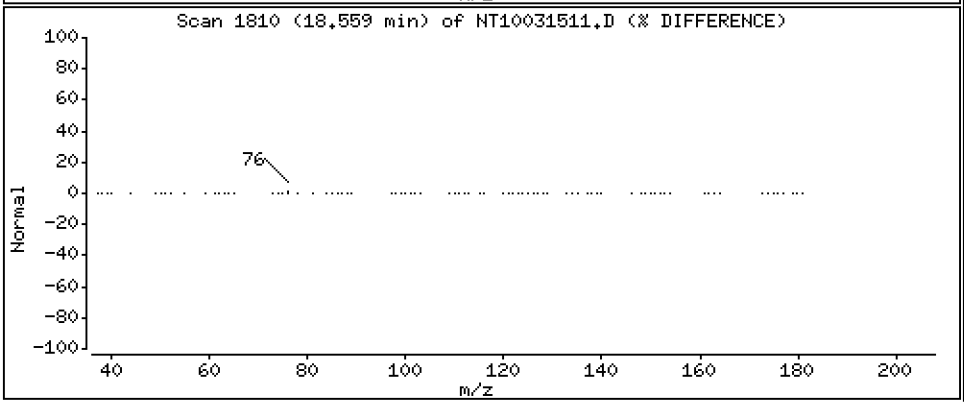
61 Anthracene

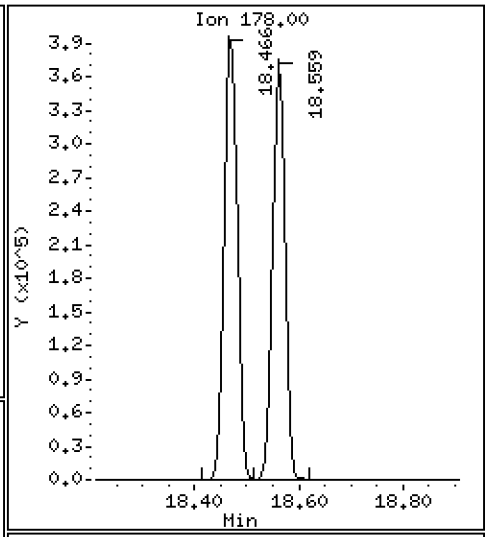
Concentration: 4.167 ug/mL

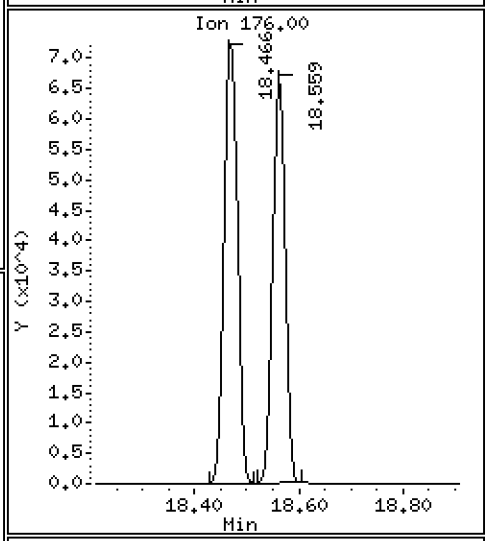


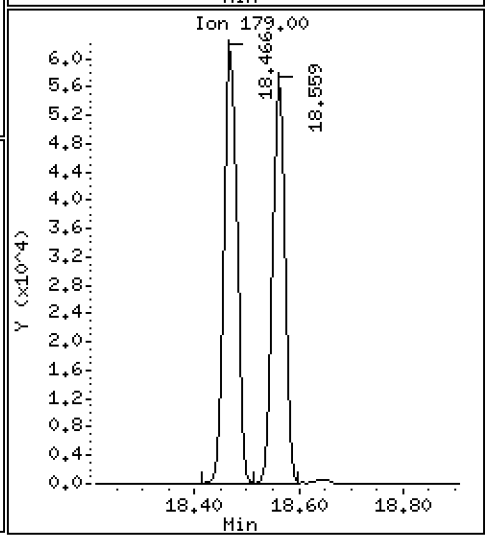












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

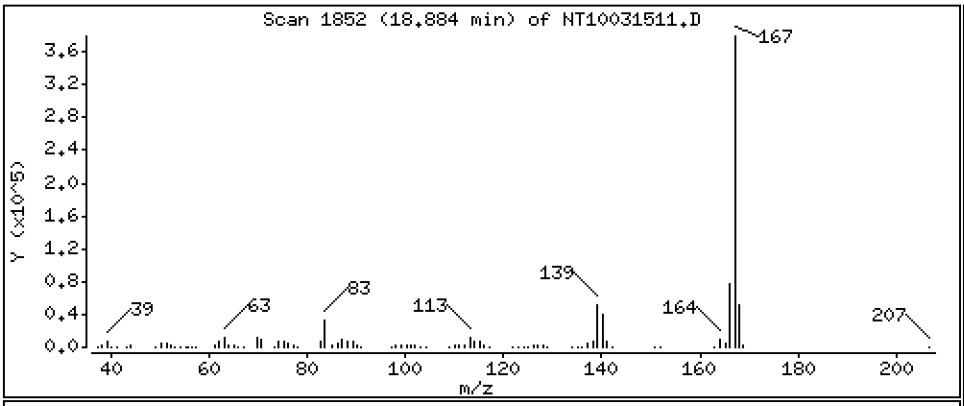
Operator: VTS

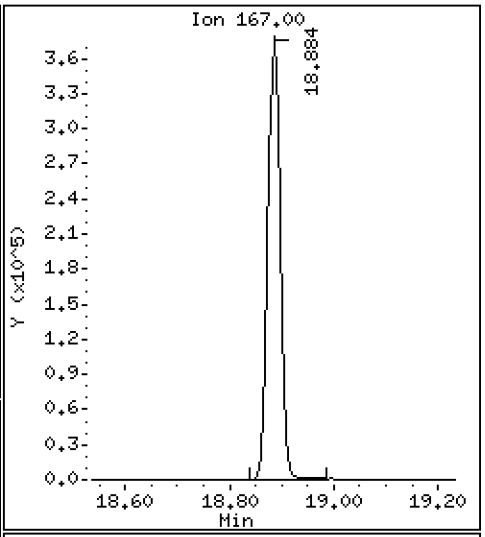
Column phase: ZB-5msi

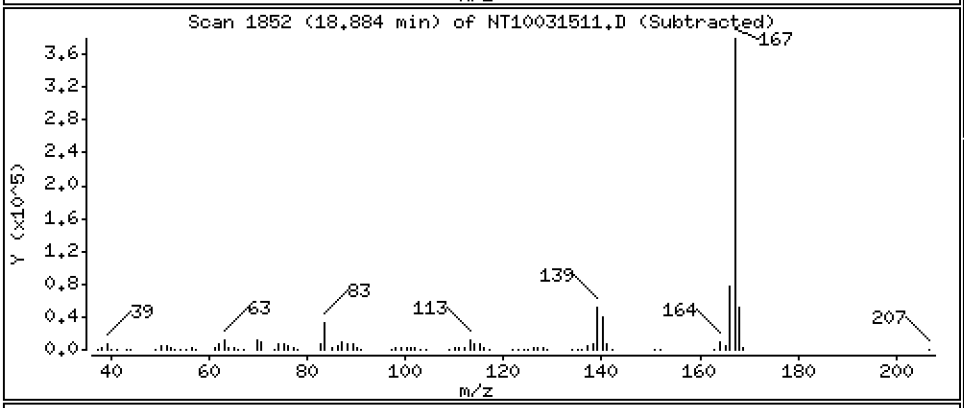
Column diameter: 0.25

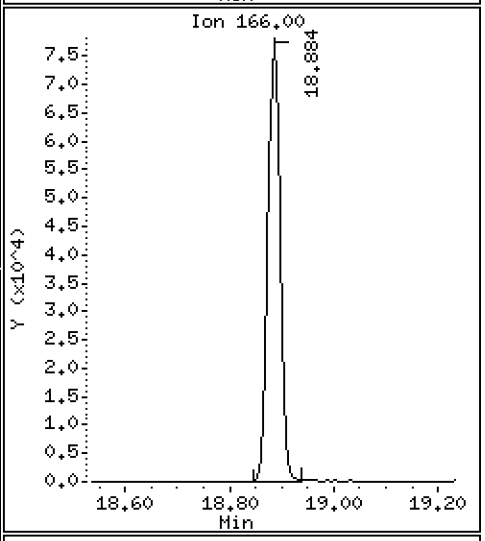
62 Carbazole

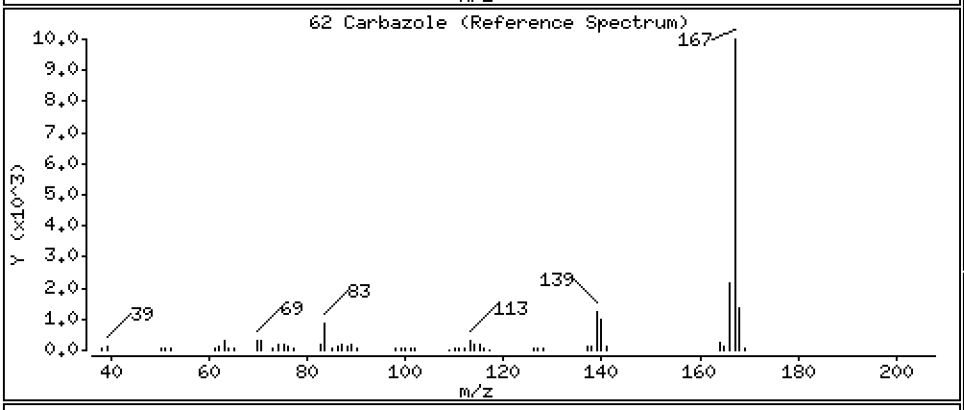
Concentration: 4.730 ug/mL

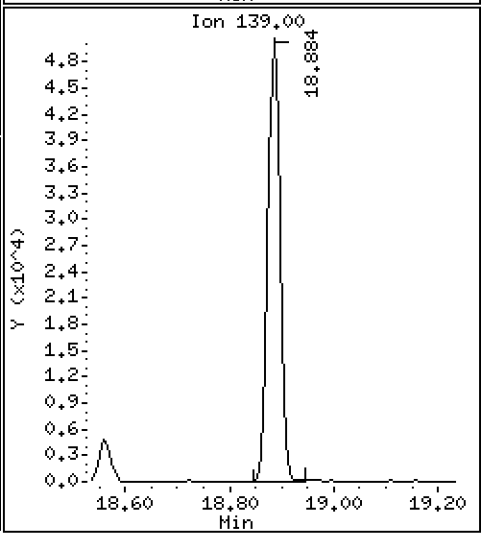


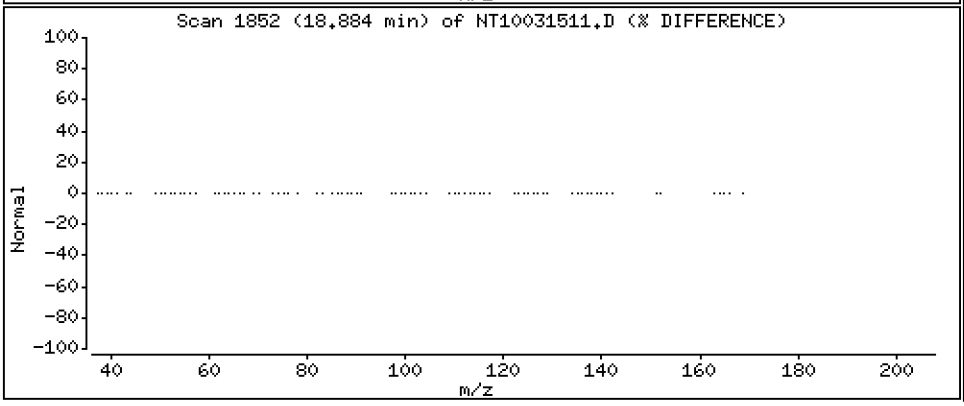












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

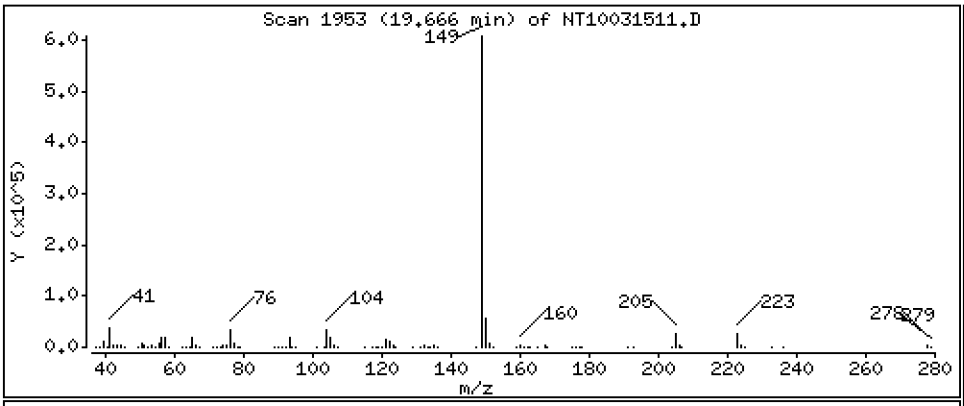
Operator: VTS

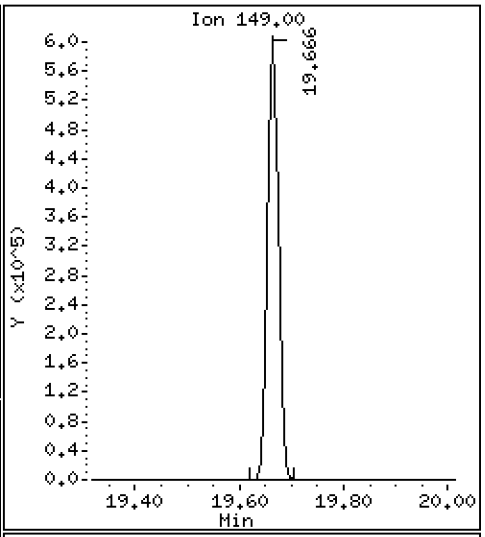
Column phase: ZB-5msi

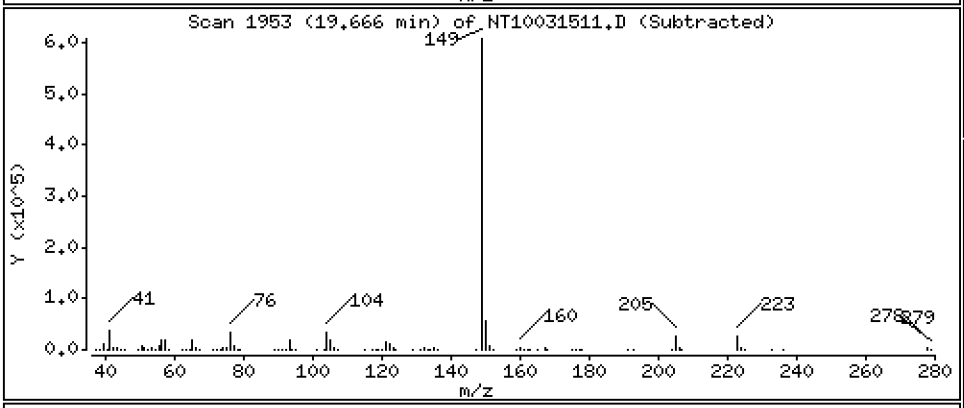
Column diameter: 0.25

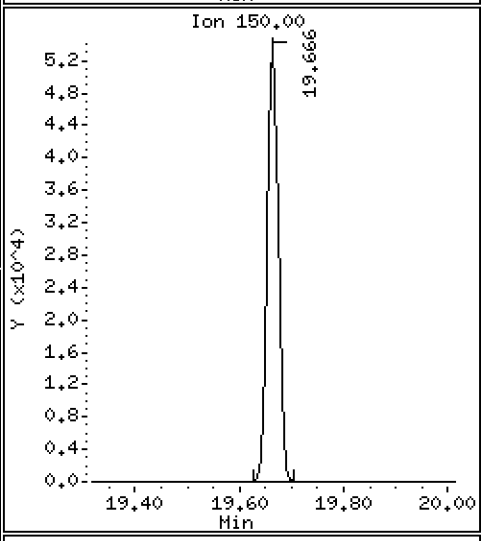
63 Di-n-butylphthalate

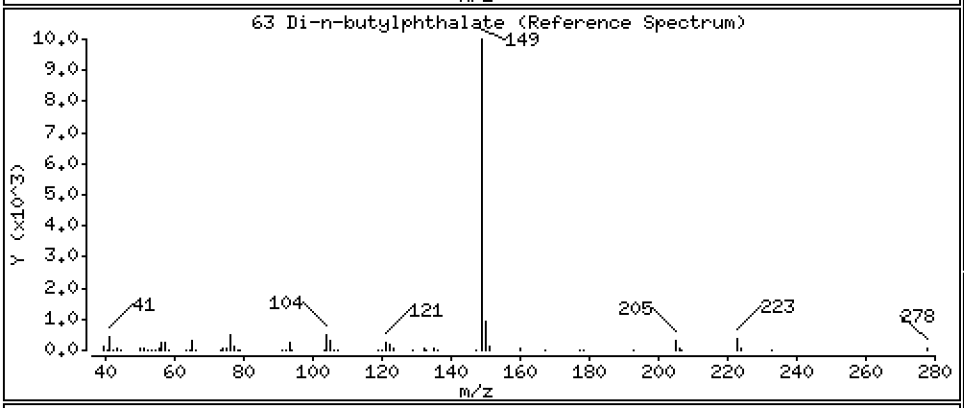
Concentration: 4.967 ug/mL

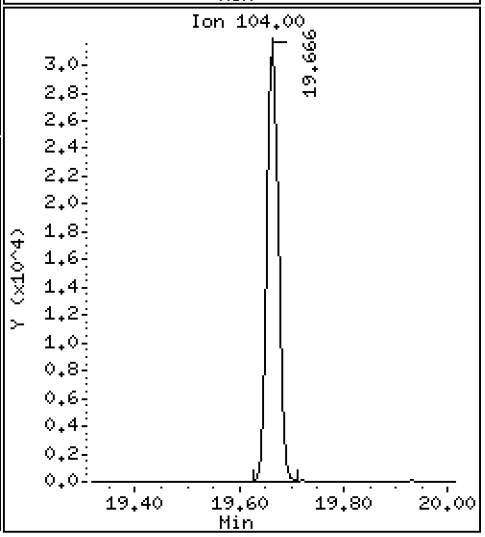


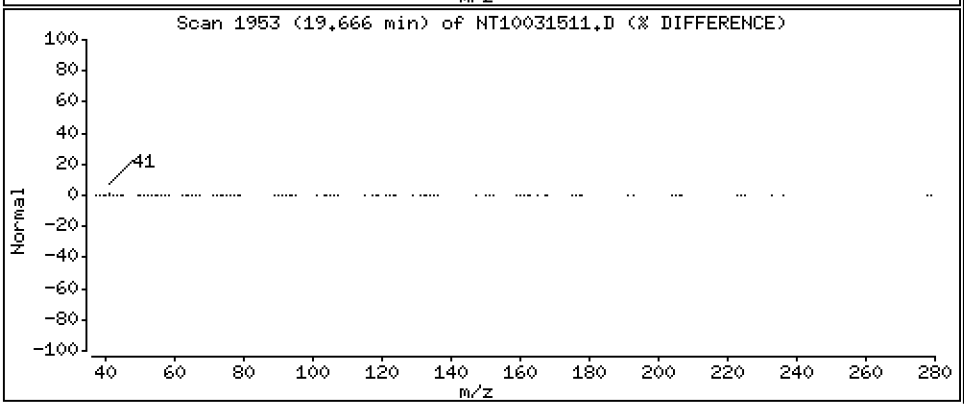












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

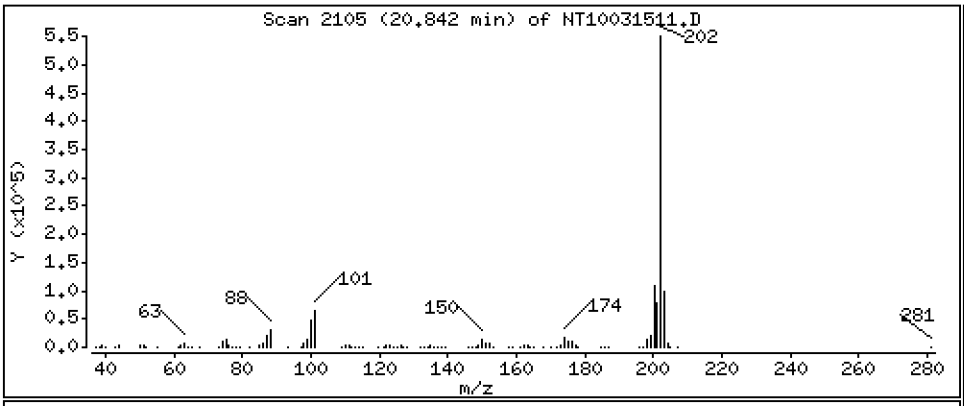
Operator: VTS

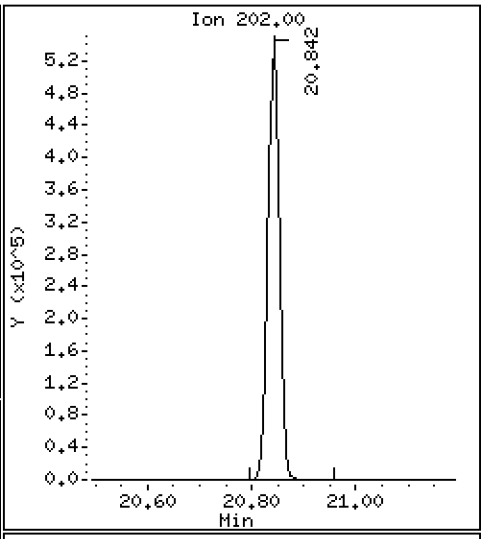
Column phase: ZB-5msi

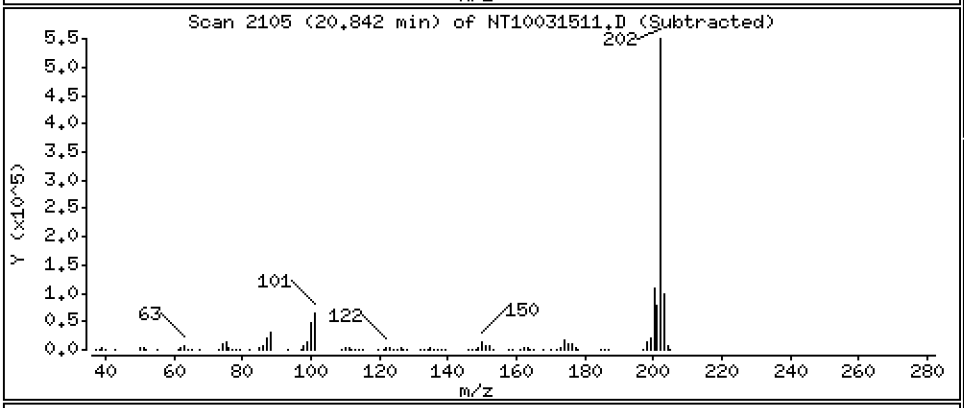
Column diameter: 0.25

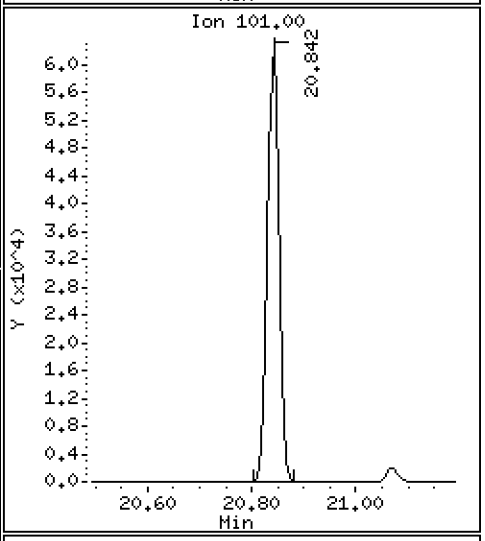
64 Fluoranthene

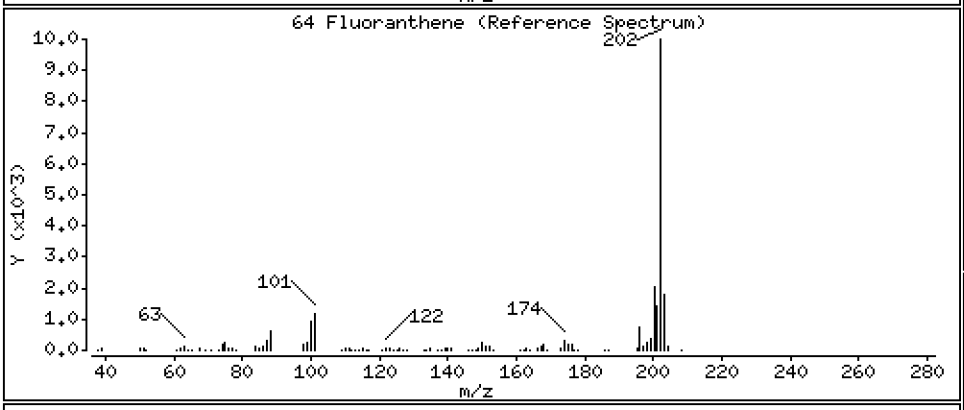
Concentration: 4.472 ug/mL

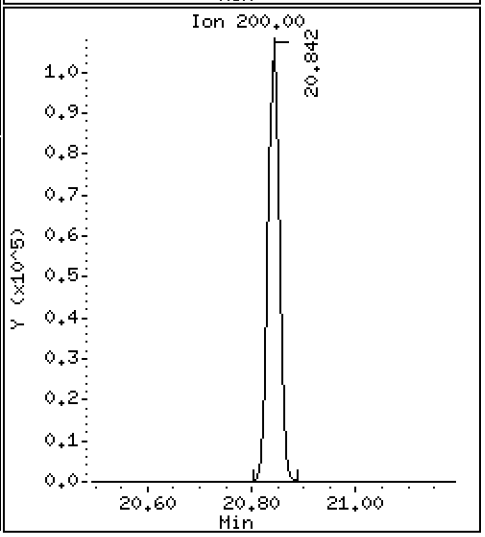


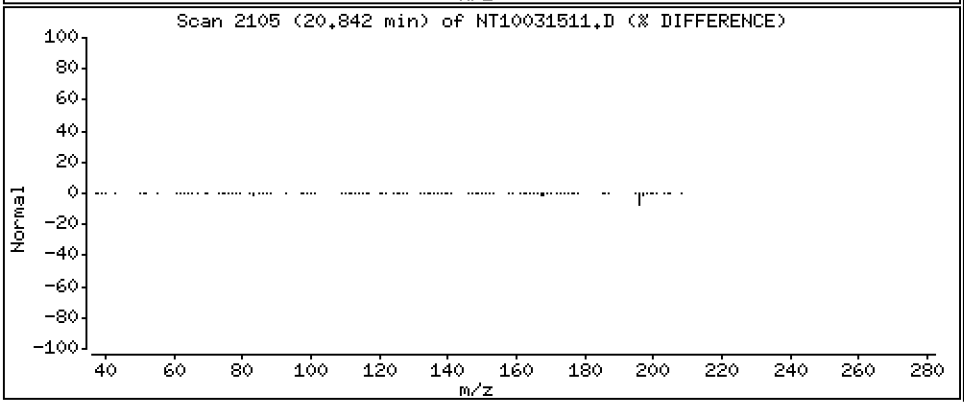












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

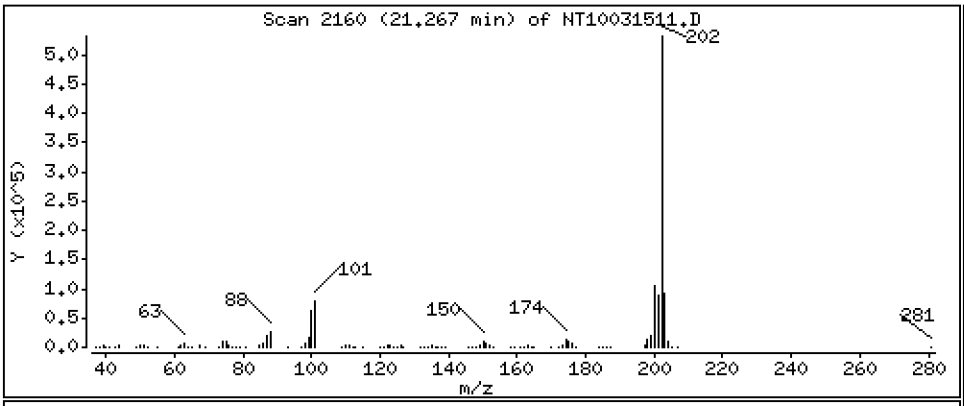
Operator: VTS

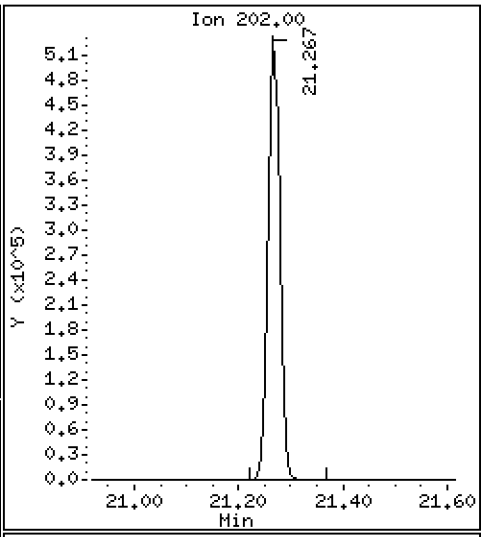
Column phase: ZB-5msi

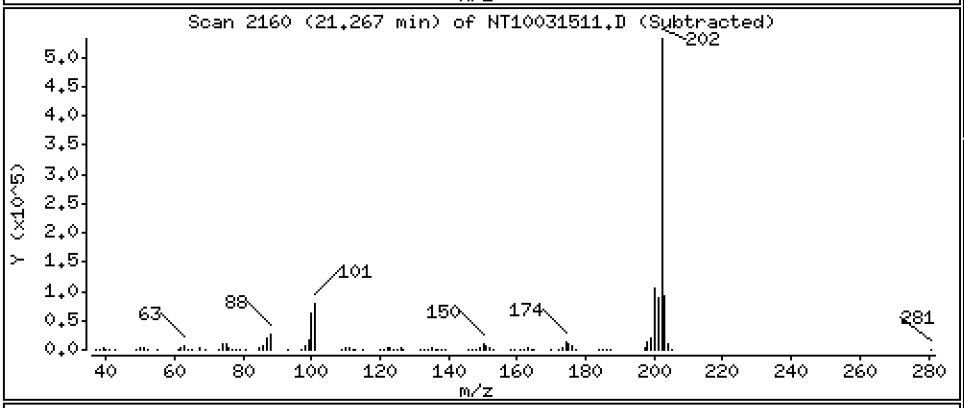
Column diameter: 0.25

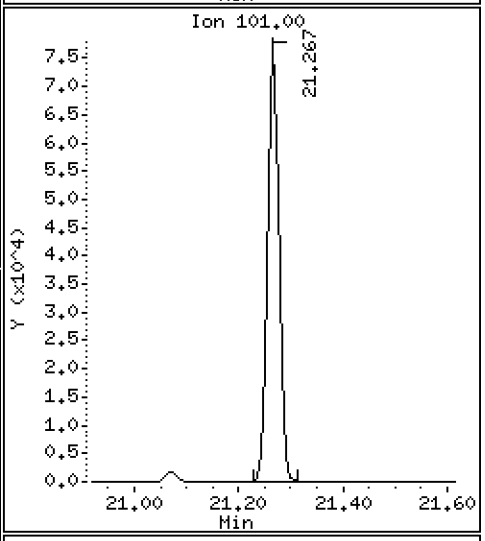
65 Pyrene

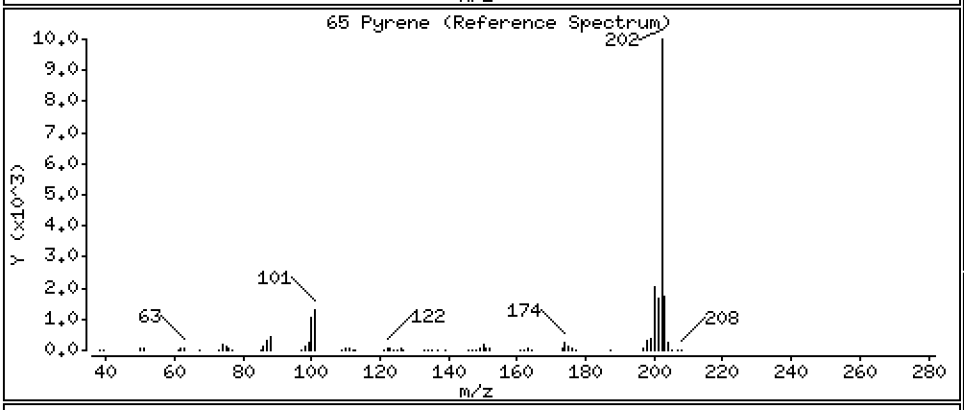
Concentration: 4.339 ug/mL

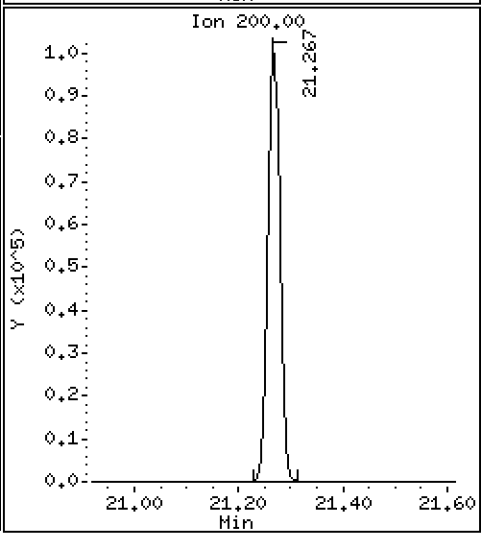


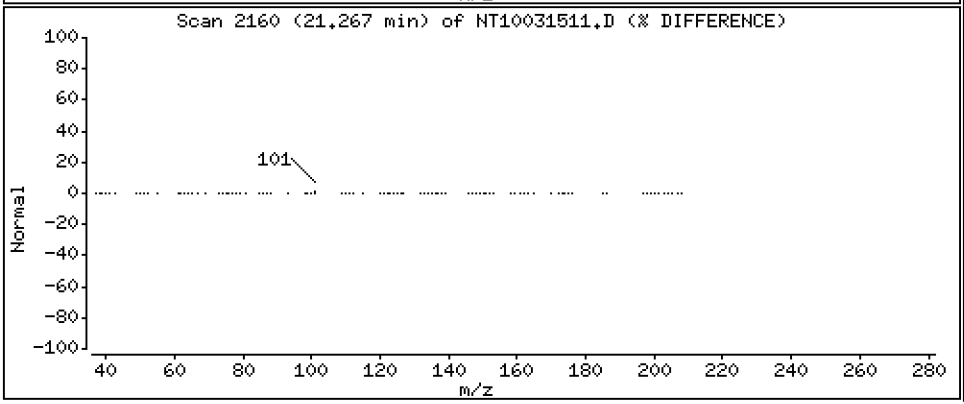












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

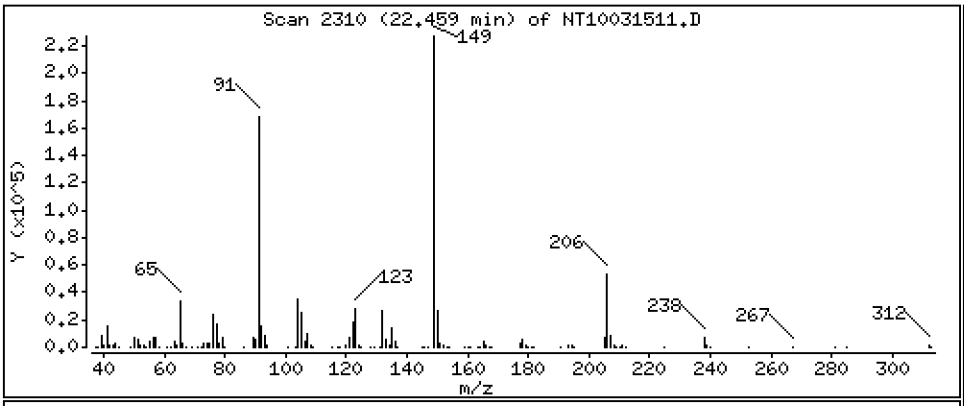
Operator: VTS

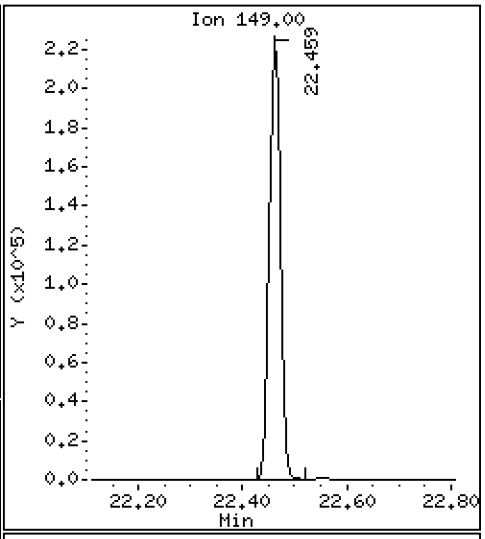
Column phase: ZB-5msi

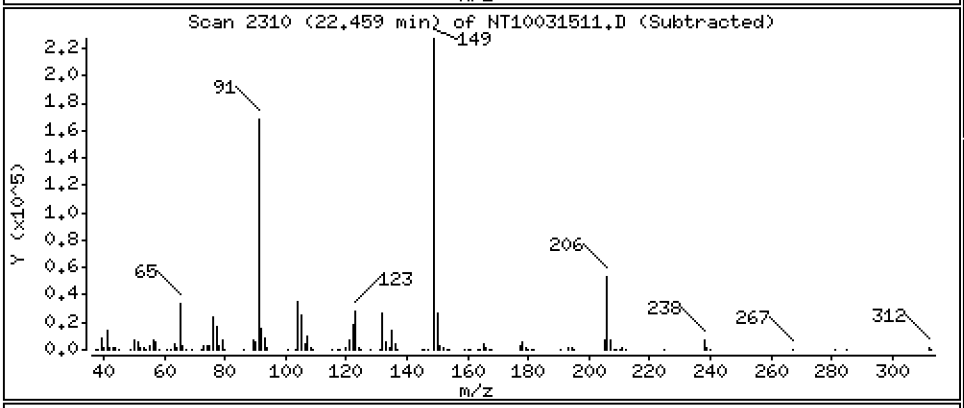
Column diameter: 0.25

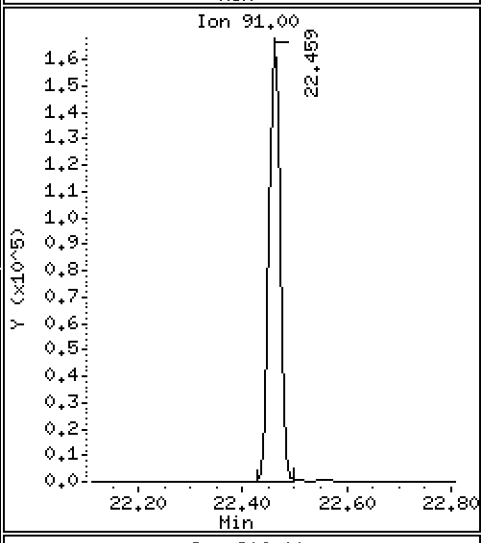
67 Butylbenzylphthalate

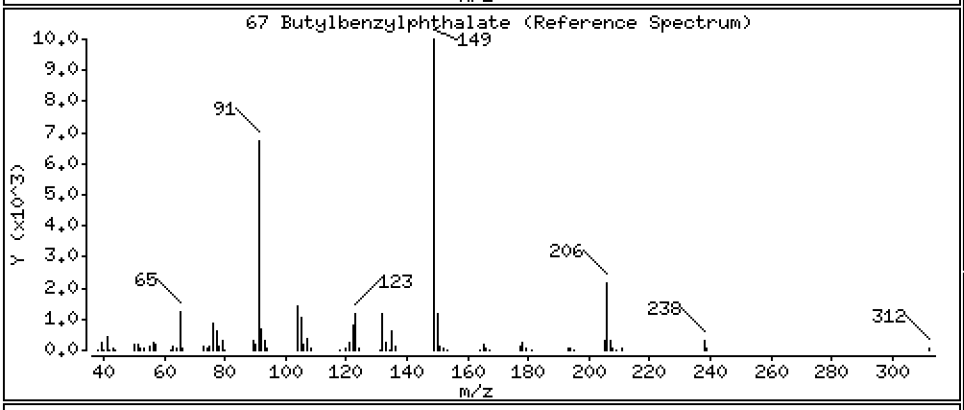
Concentration: 4.834 ug/mL

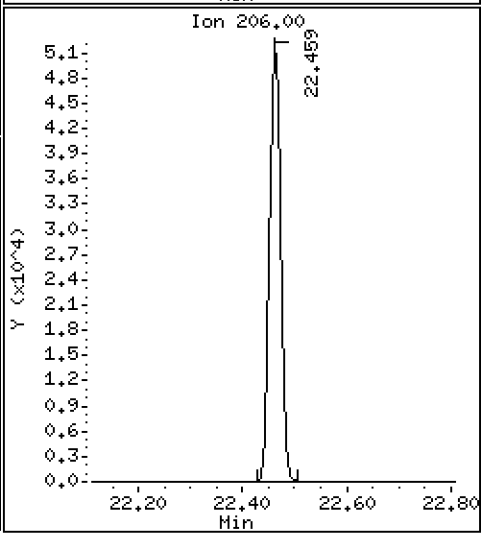


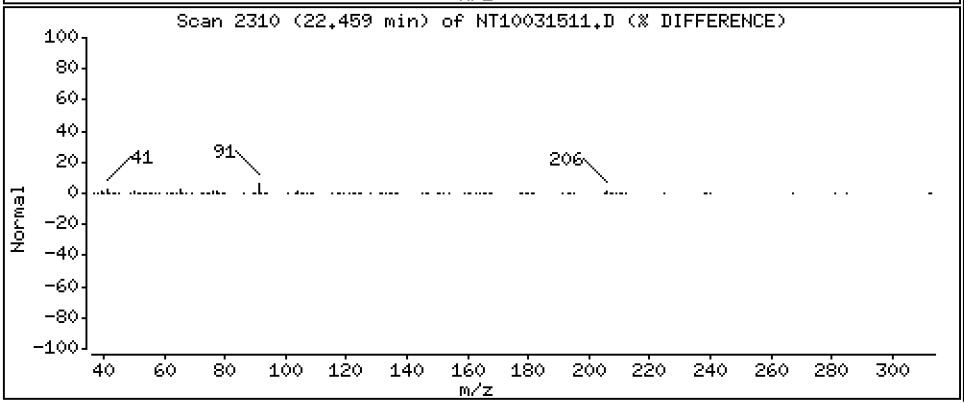












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

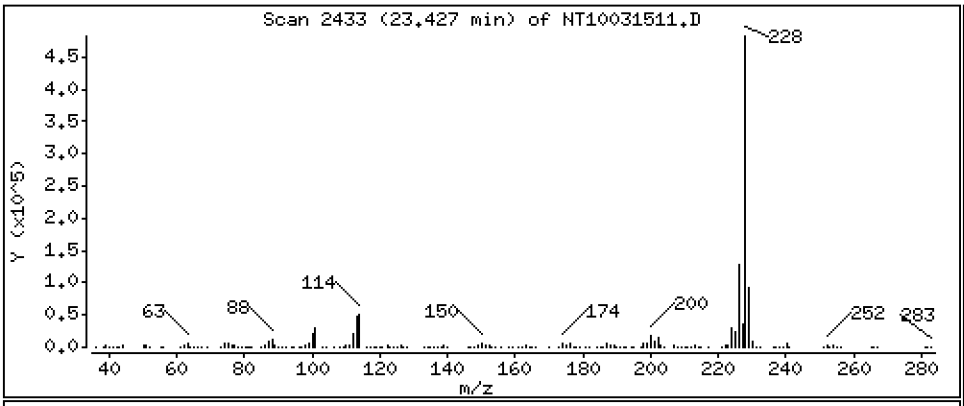
Operator: VTS

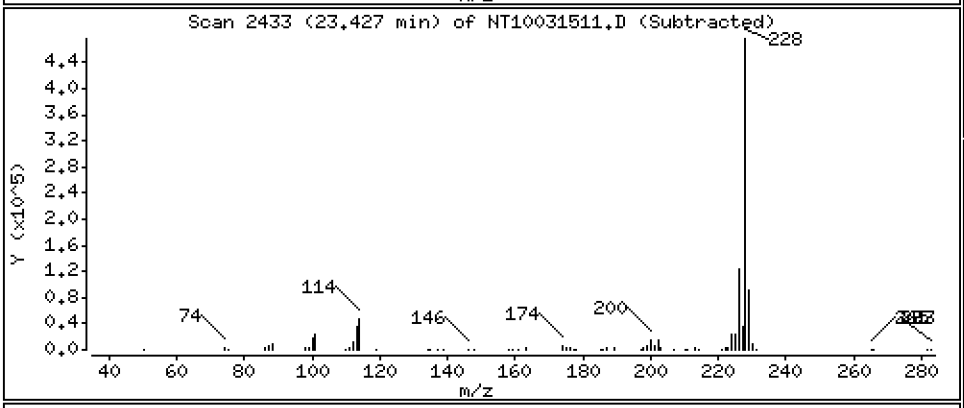
Column phase: ZB-5msi

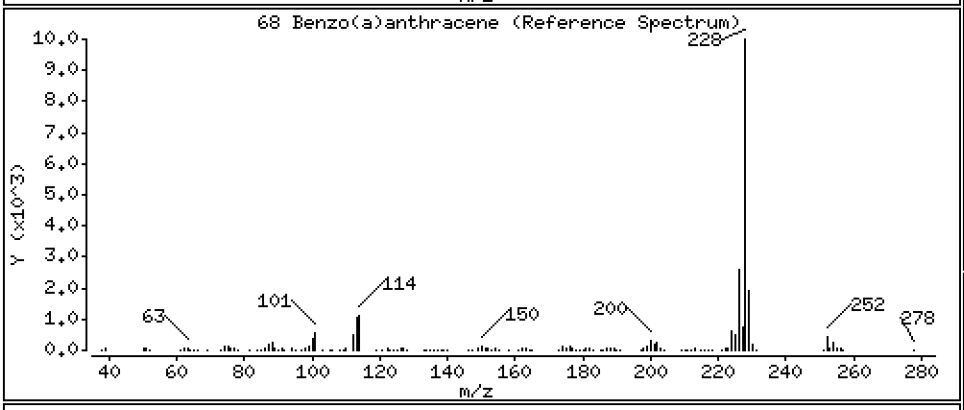
Column diameter: 0.25

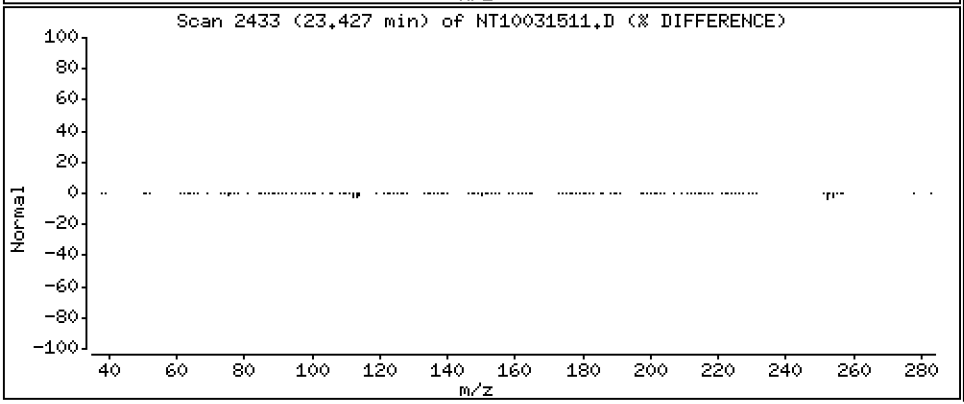
68 Benzo(a)anthracene

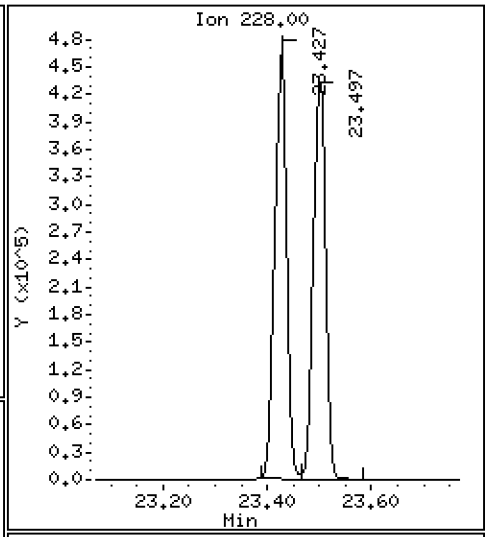
Concentration: 4.647 ug/mL

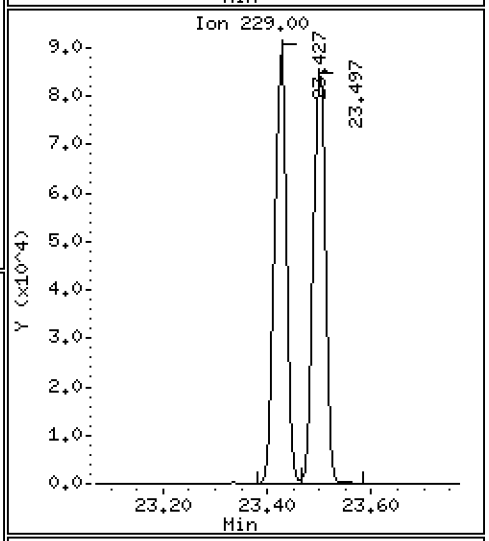


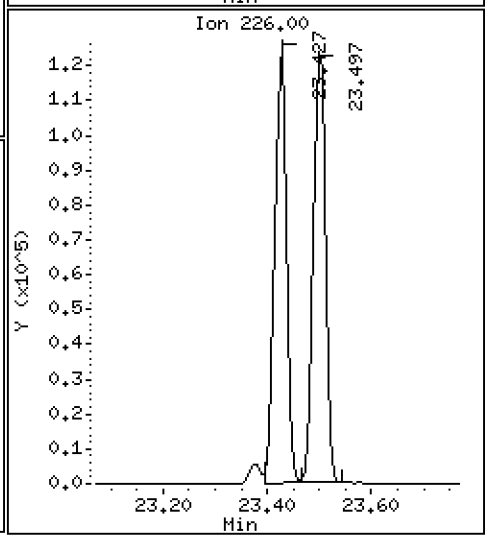












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

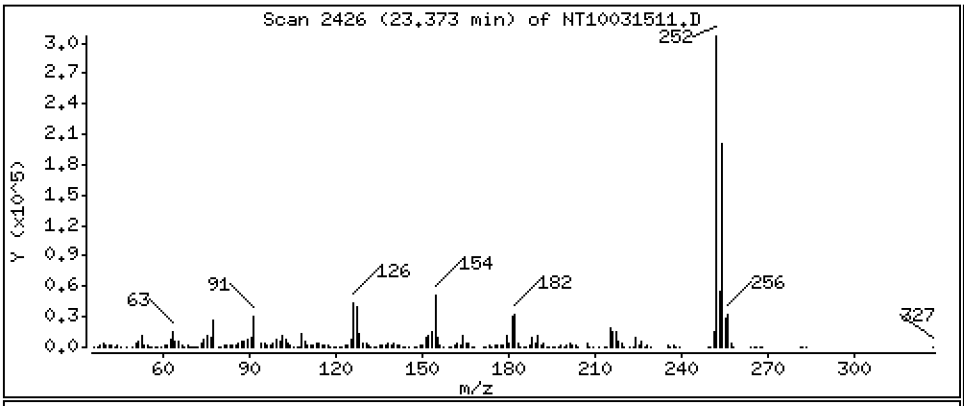
Operator: VTS

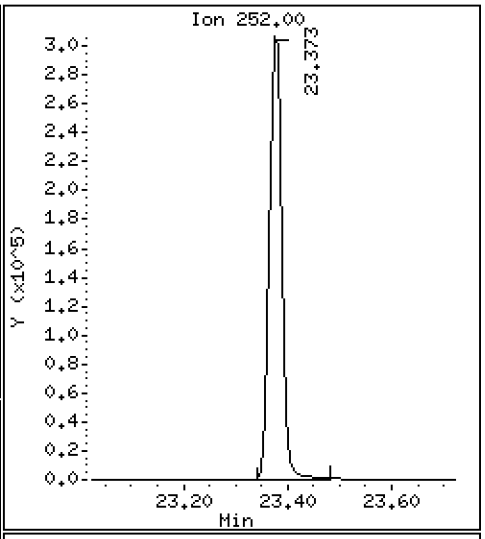
Column phase: ZB-5msi

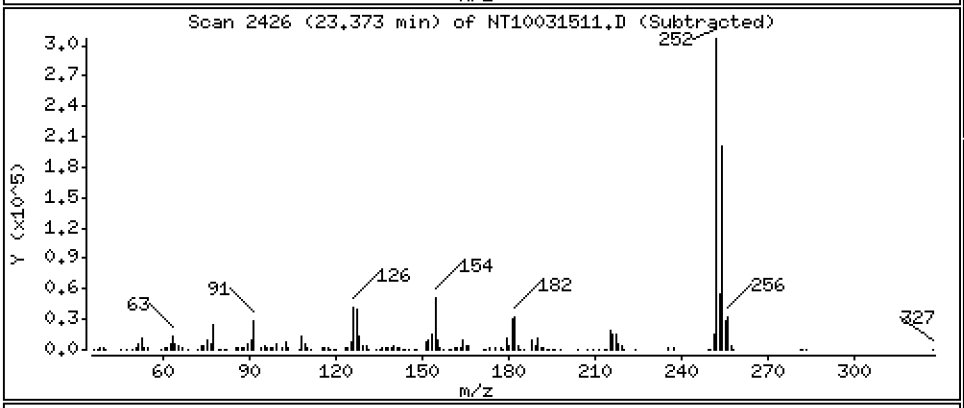
Column diameter: 0.25

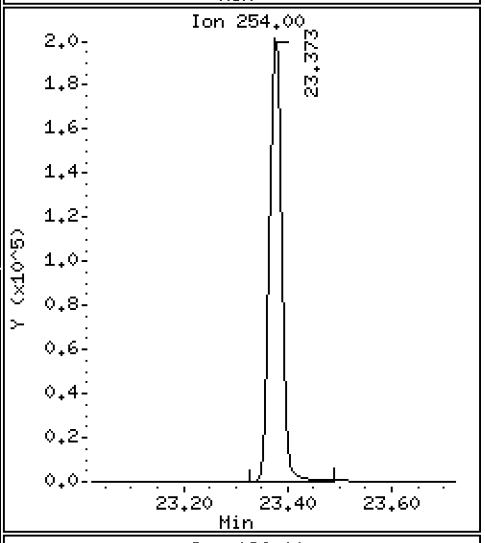
70 3,3'-Dichlorobenzidine

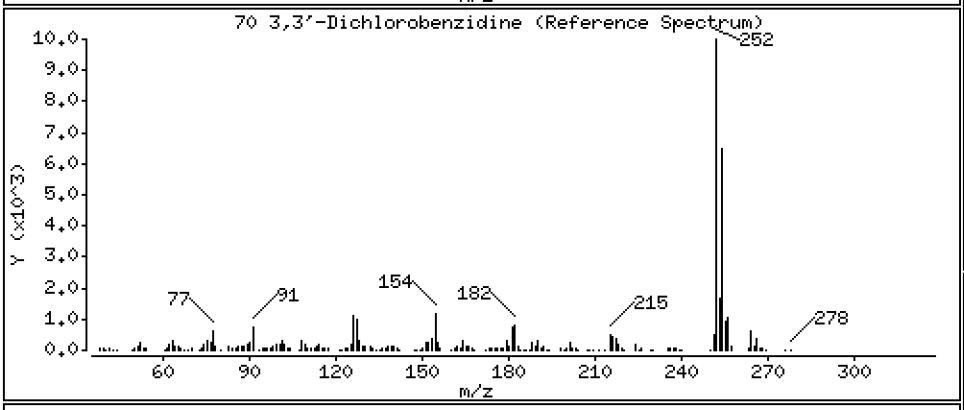
Concentration: 9.817 ug/mL

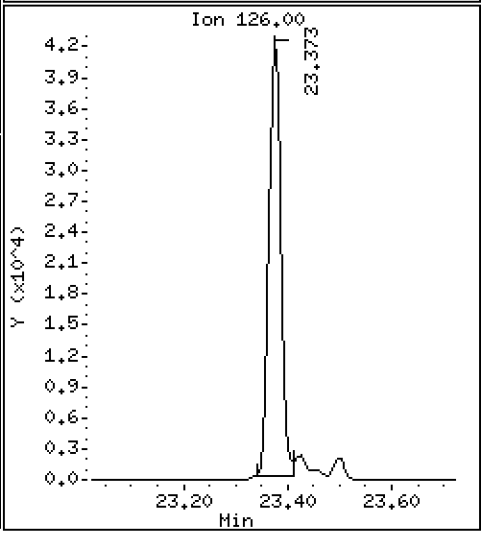


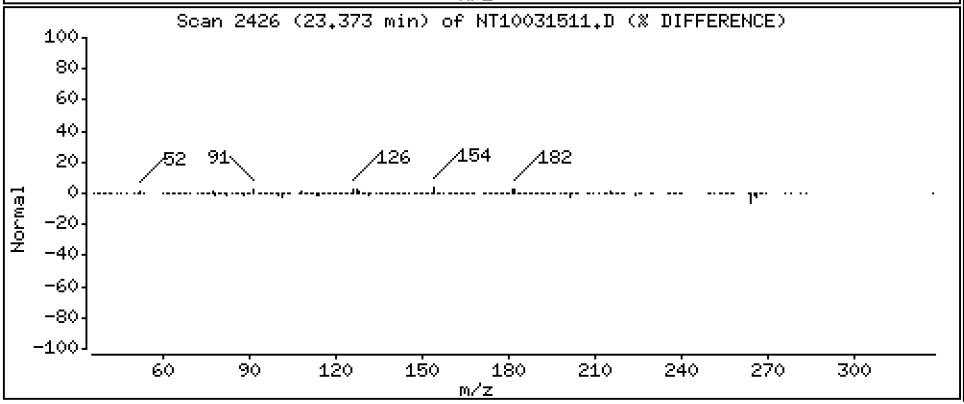












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

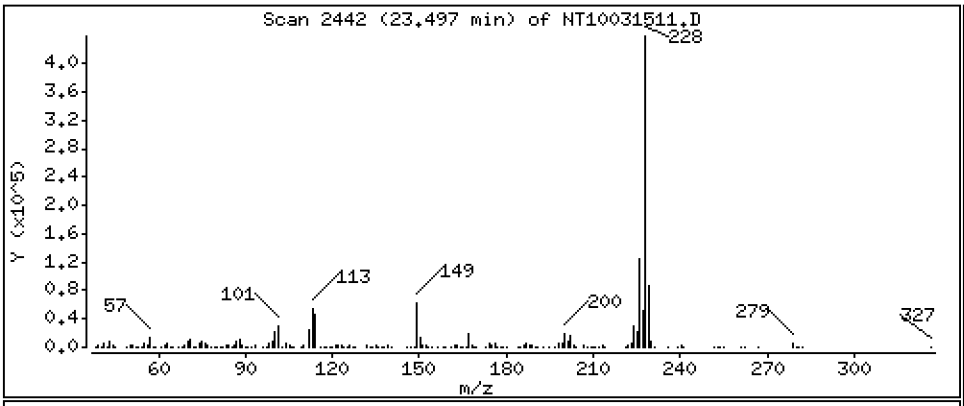
Operator: VTS

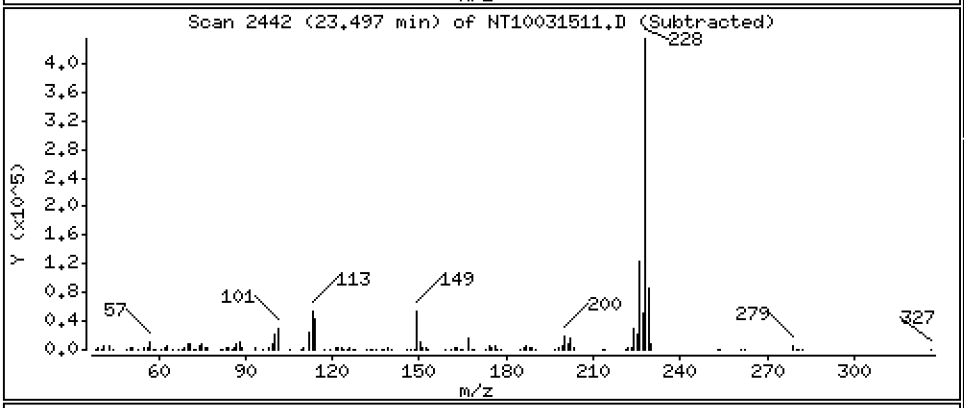
Column phase: ZB-5msi

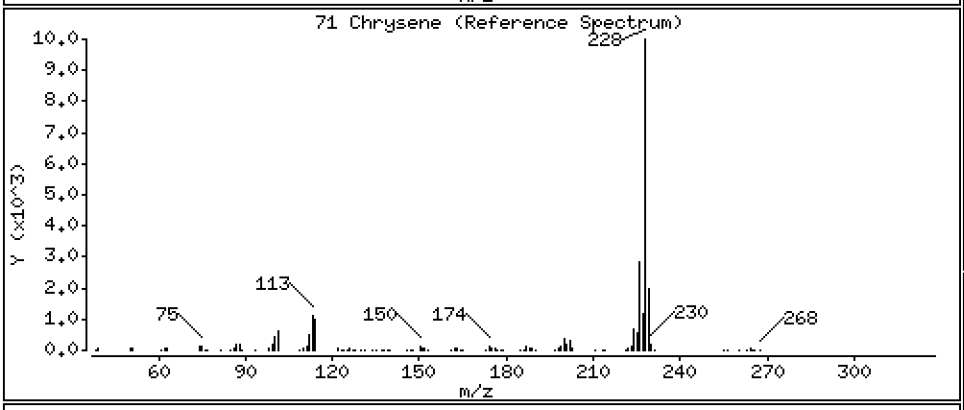
Column diameter: 0.25

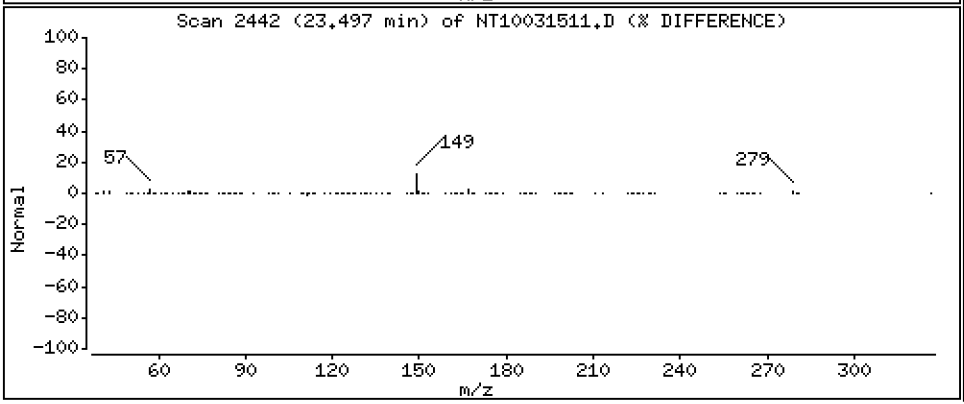
71 Chrysene

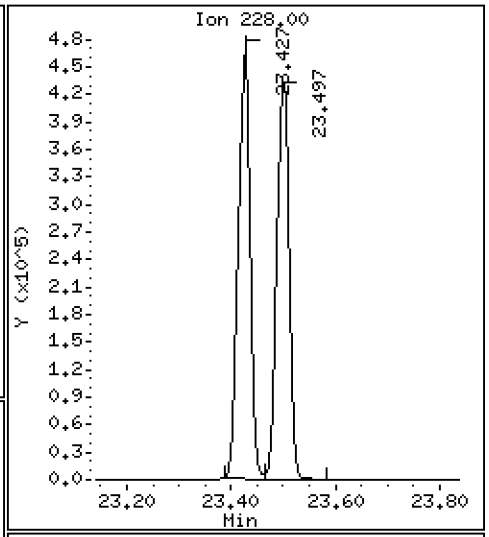
Concentration: 4.510 ug/mL

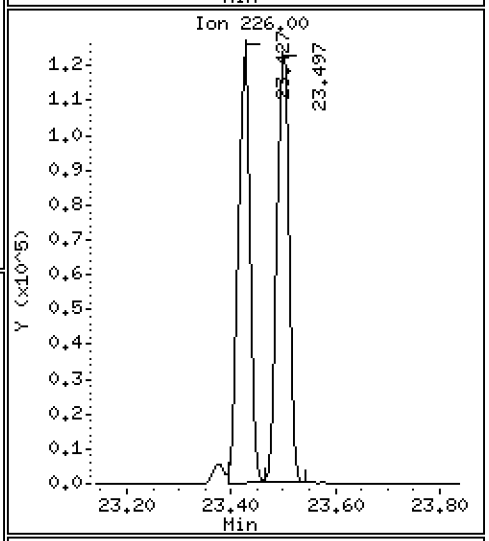


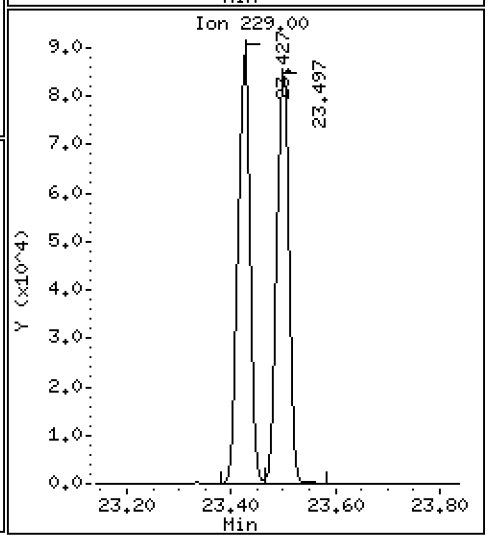












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

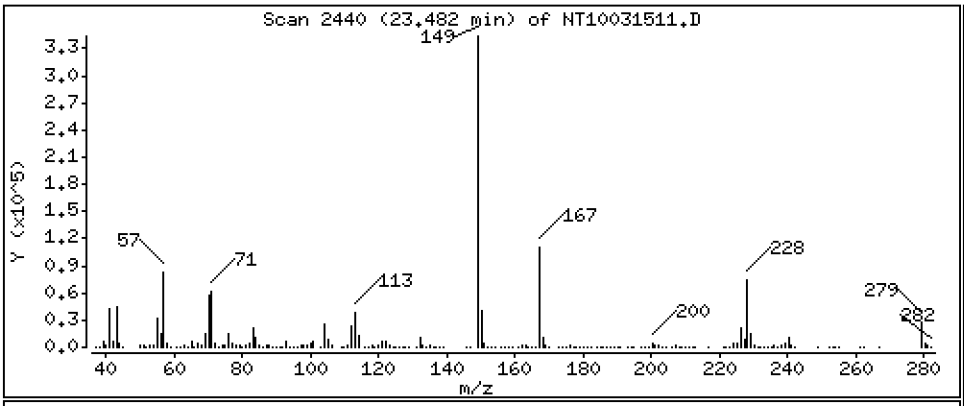
Operator: VTS

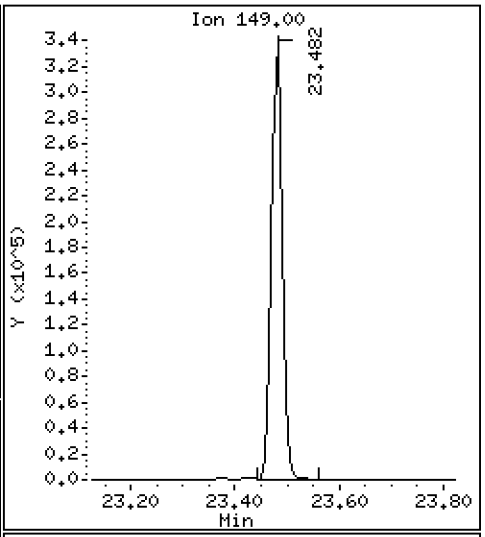
Column phase: ZB-5msi

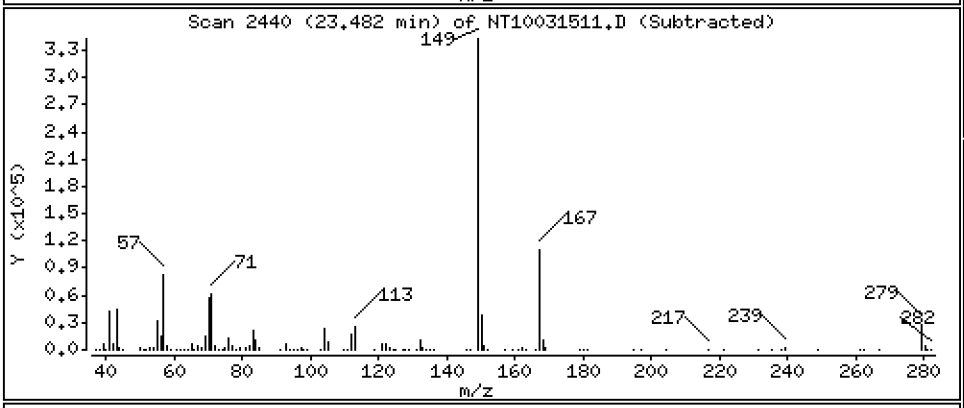
Column diameter: 0.25

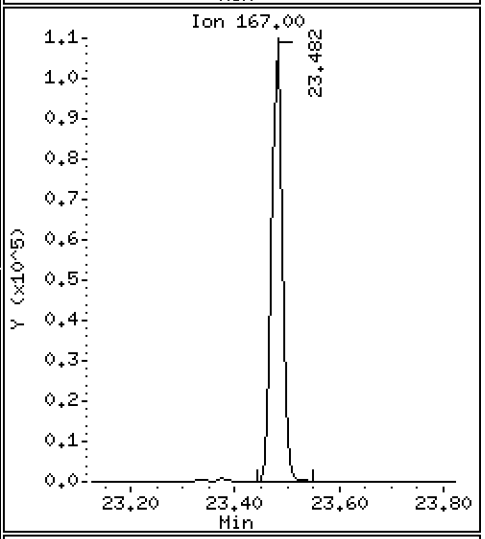
72 bis(2-Ethylhexyl)phthalate

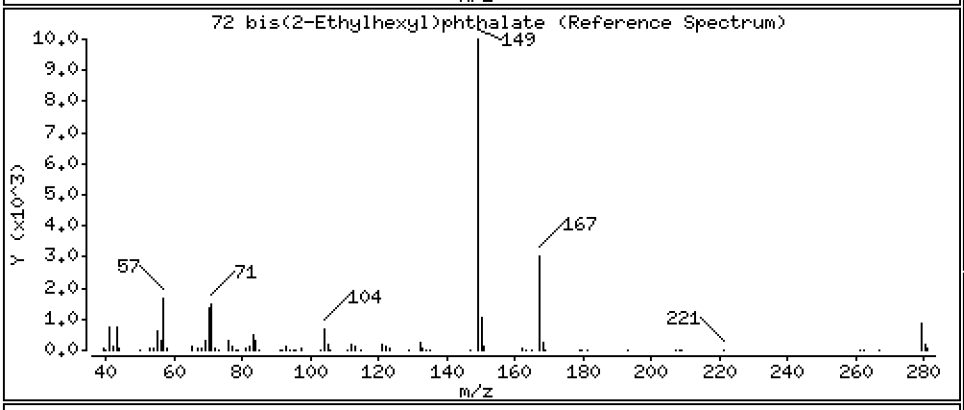
Concentration: 4.680 ug/mL

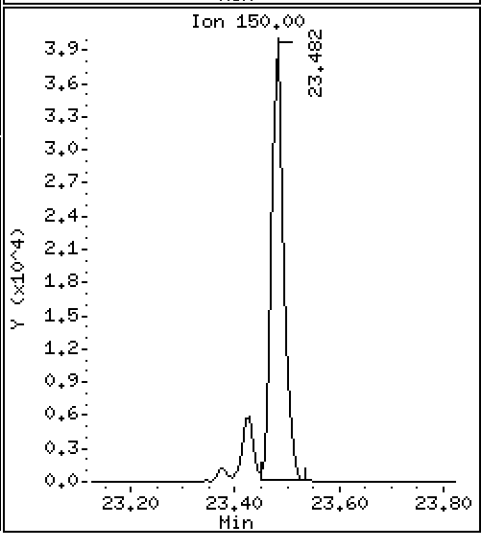


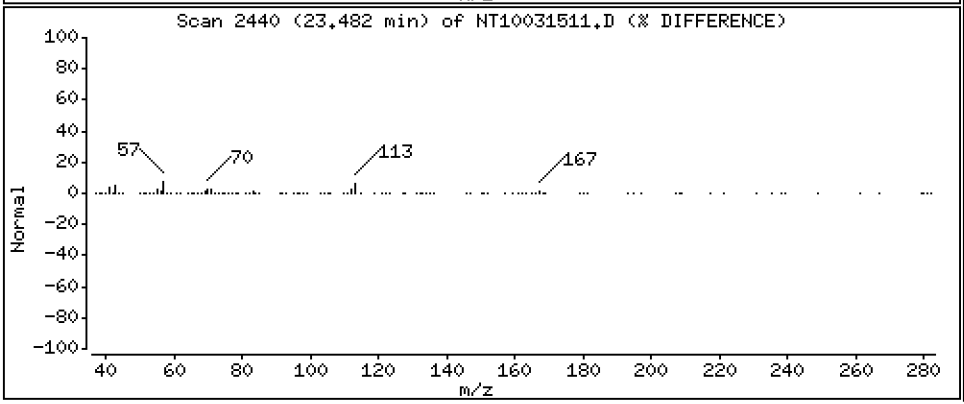












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

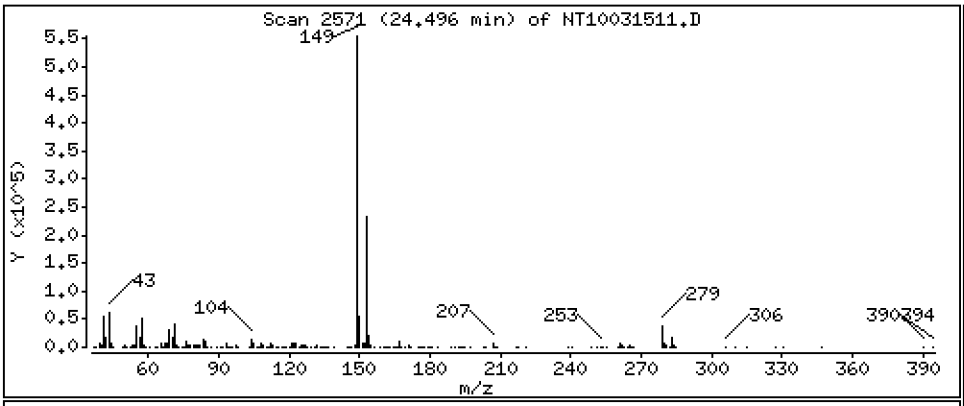
Operator: VTS

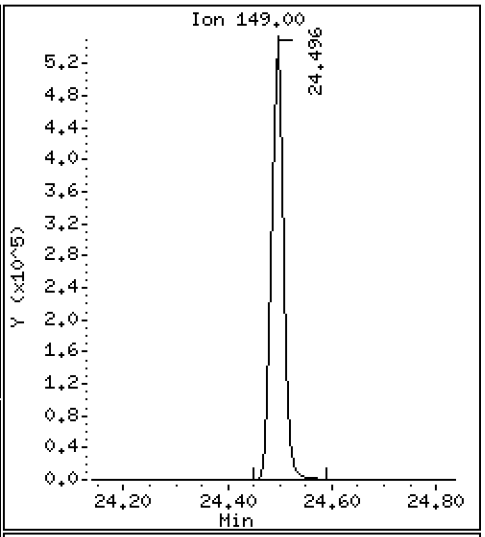
Column phase: ZB-5msi

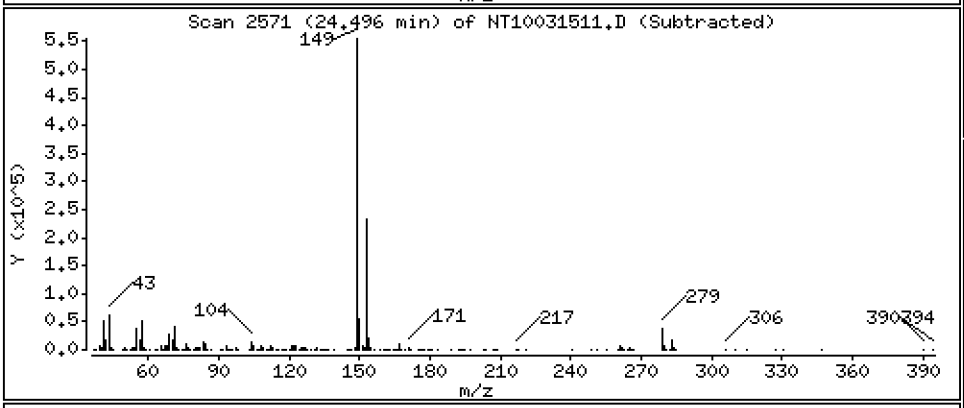
Column diameter: 0.25

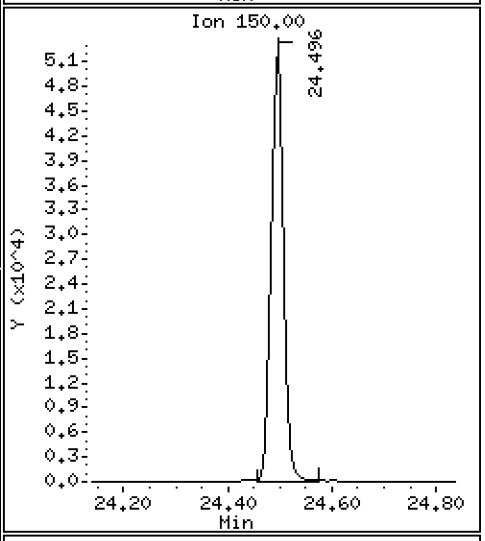
73 Di-n-octylphthalate

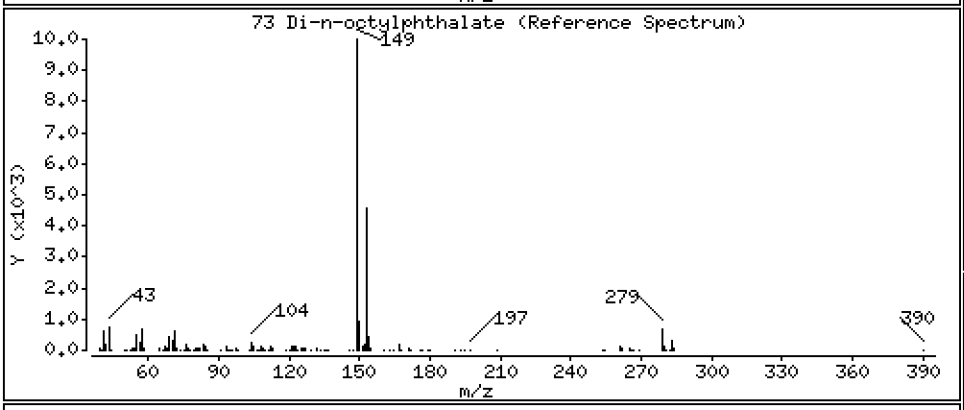
Concentration: 4.947 ug/mL

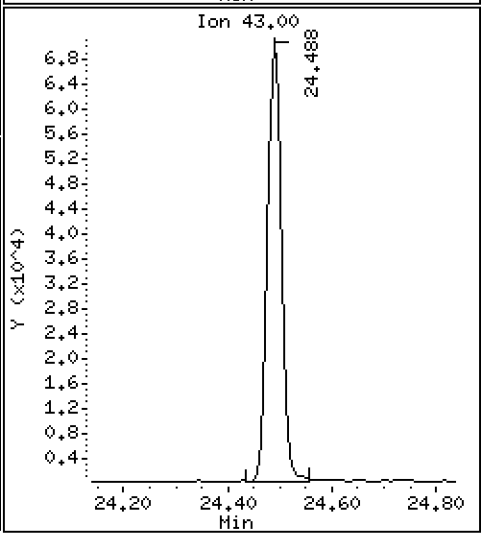


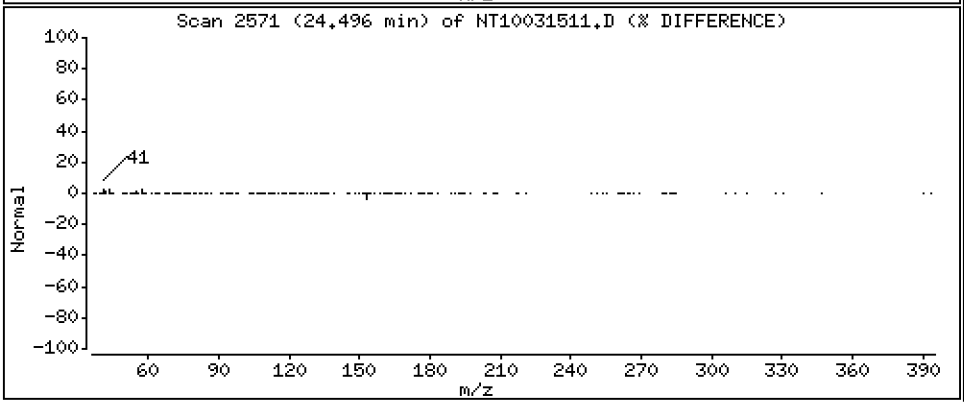












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

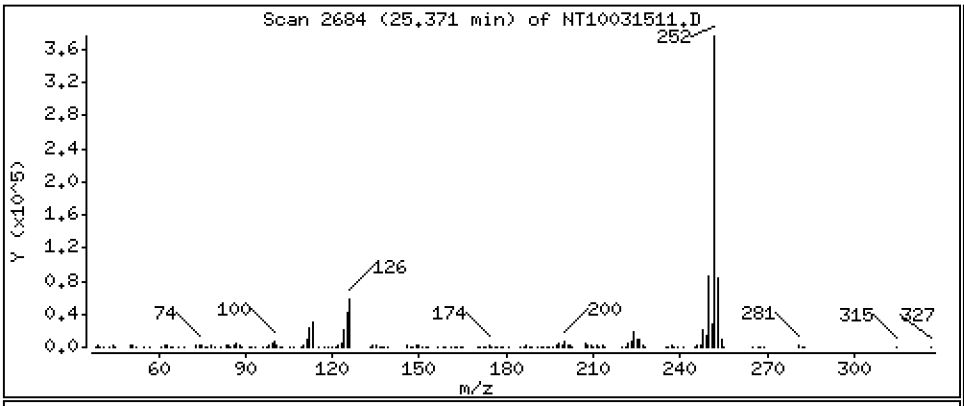
Operator: VTS

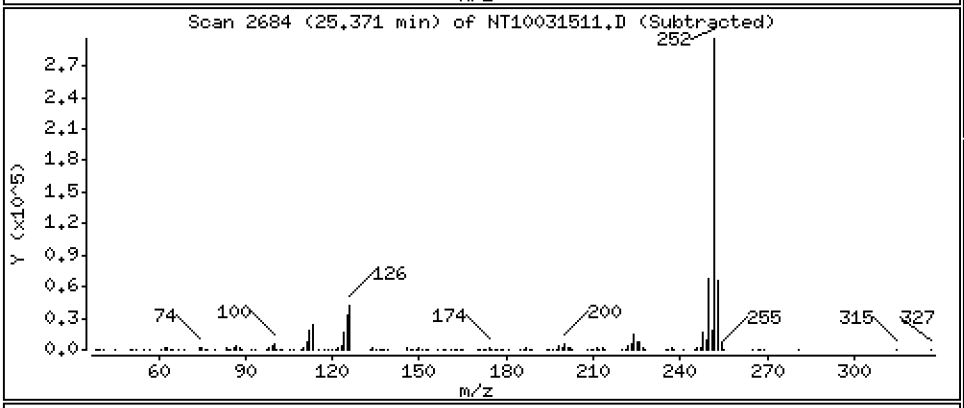
Column phase: ZB-5msi

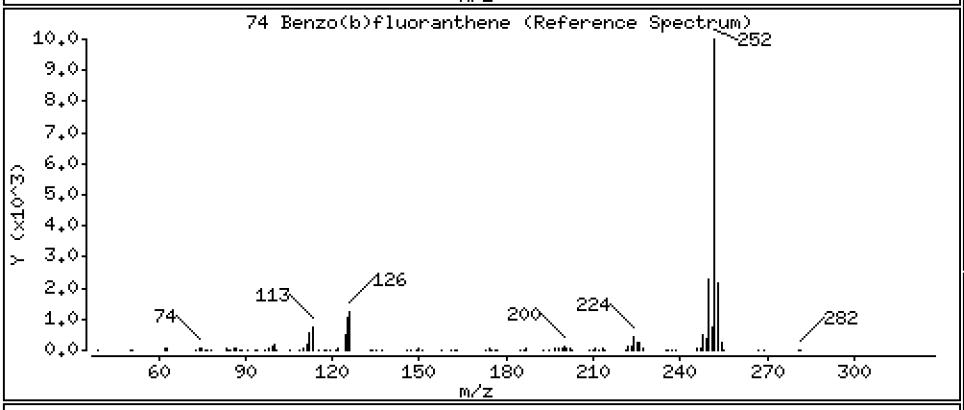
Column diameter: 0.25

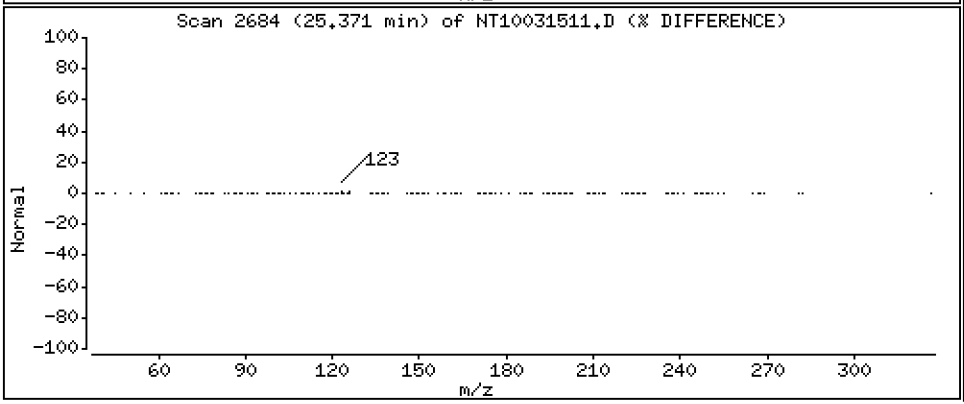
74 Benzo(b)fluoranthene

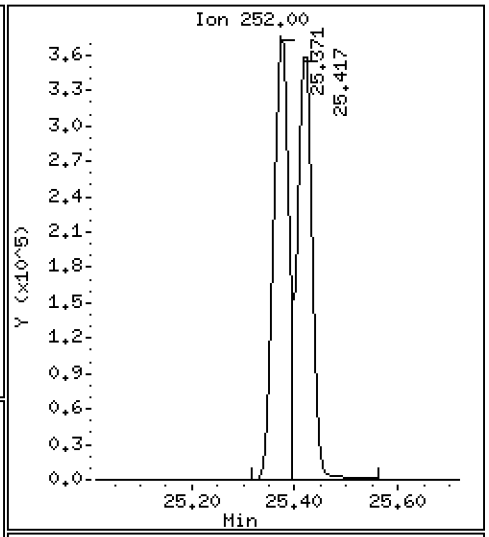
Concentration: 4.602 ug/mL

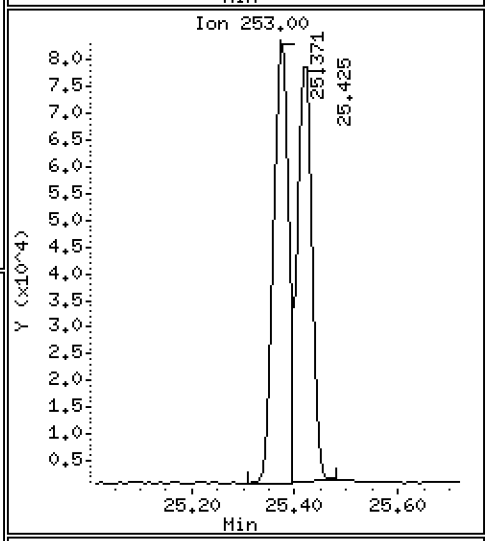


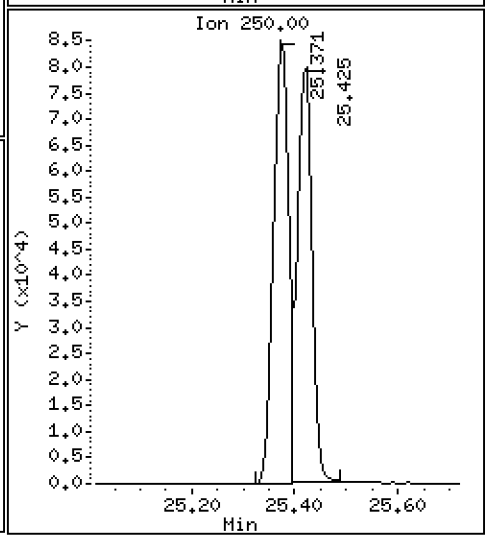












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

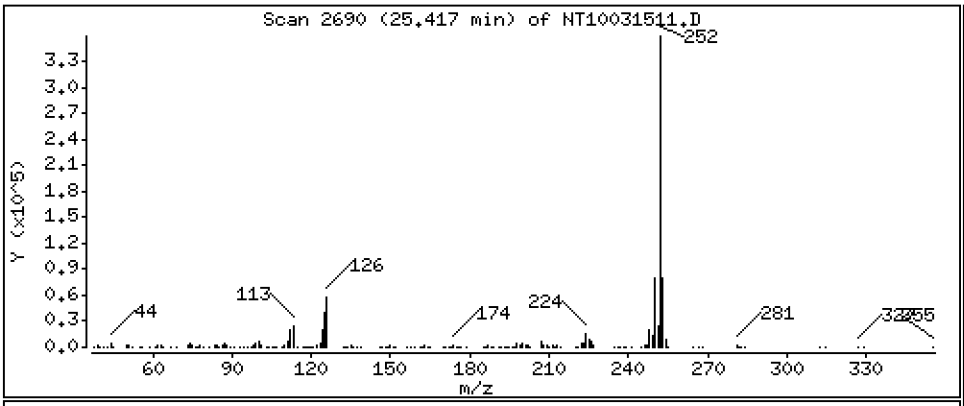
Operator: VTS

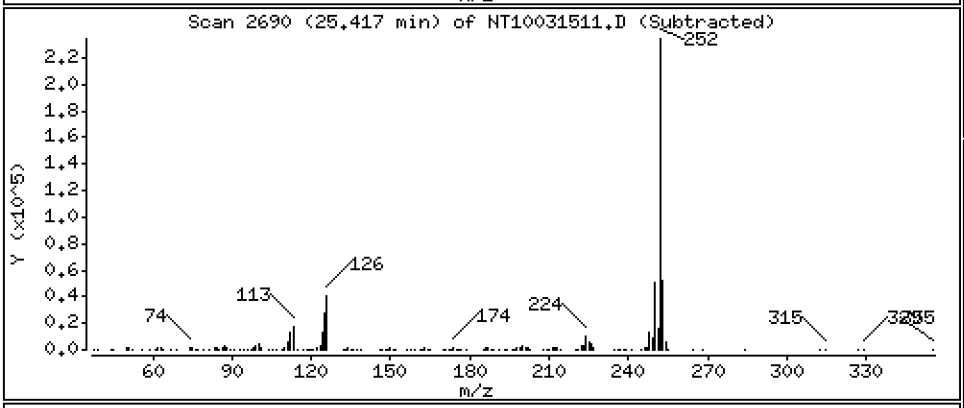
Column phase: ZB-5msi

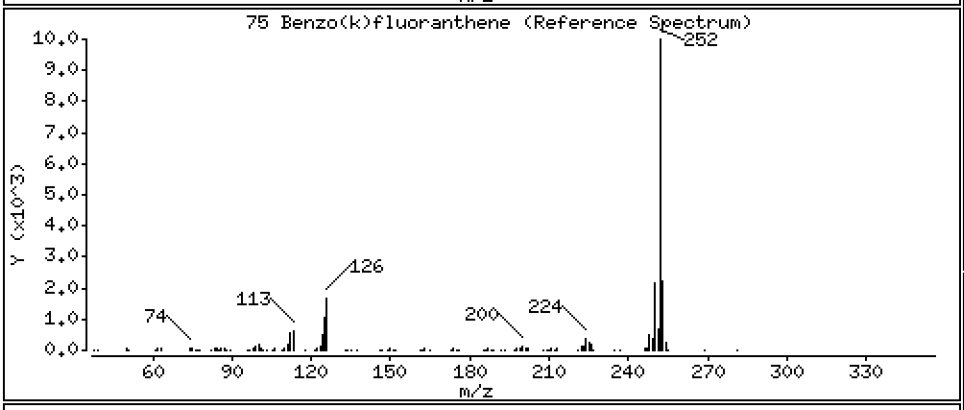
Column diameter: 0.25

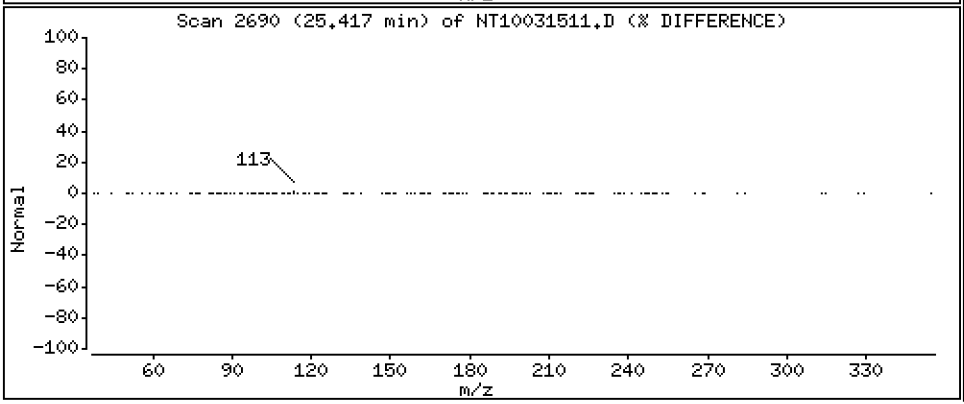
75 Benzo(k)fluoranthene

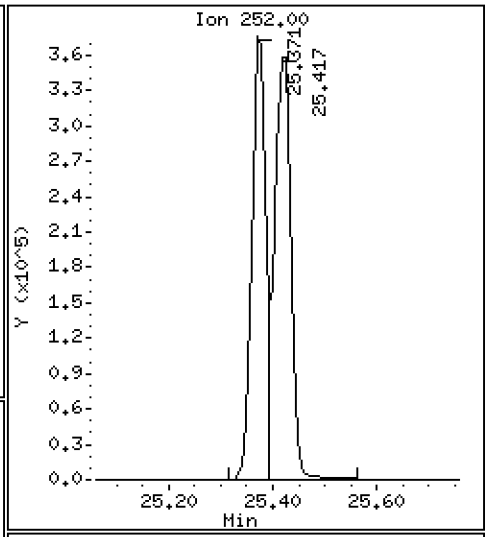
Concentration: 4.898 ug/mL

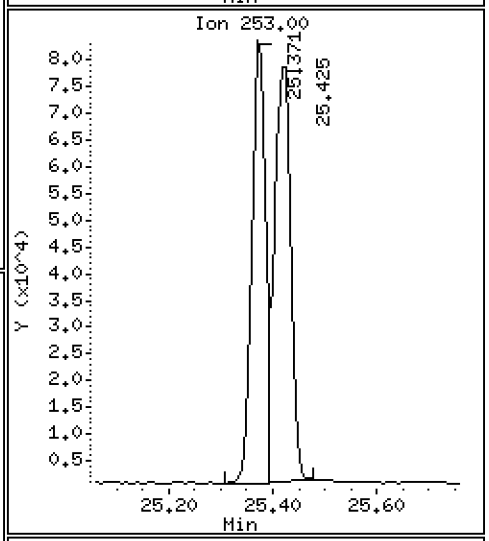


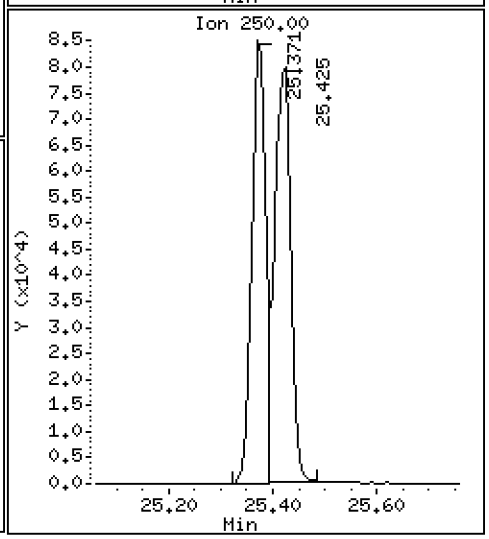












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

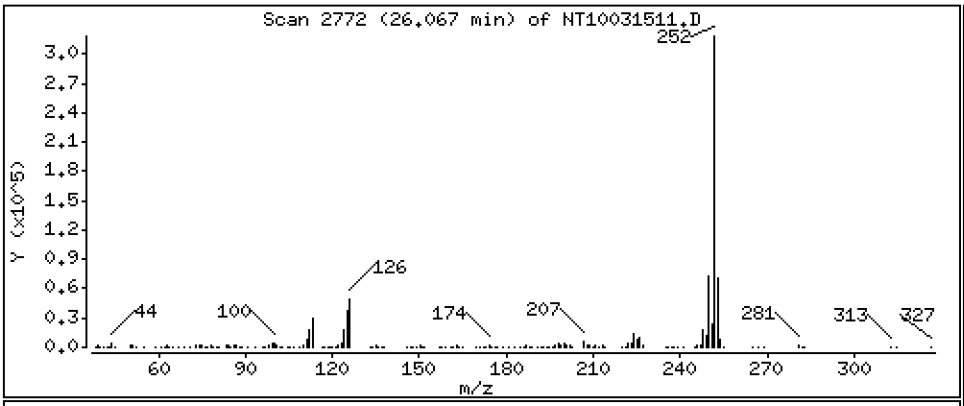
Operator: VTS

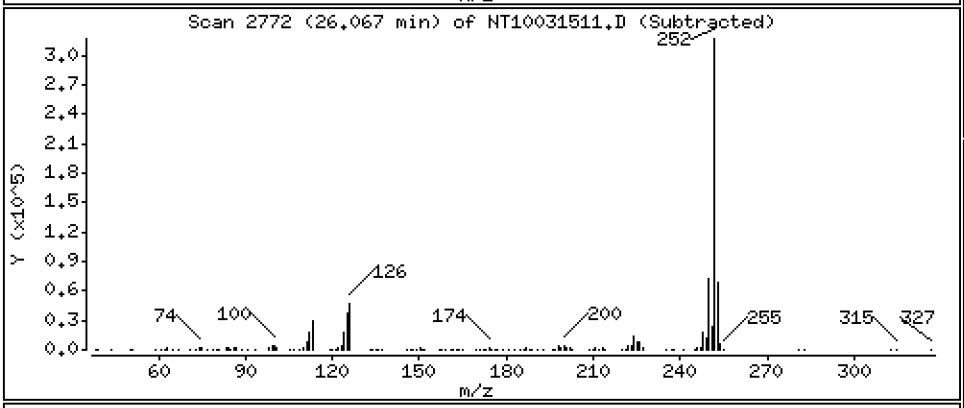
Column phase: ZB-5msi

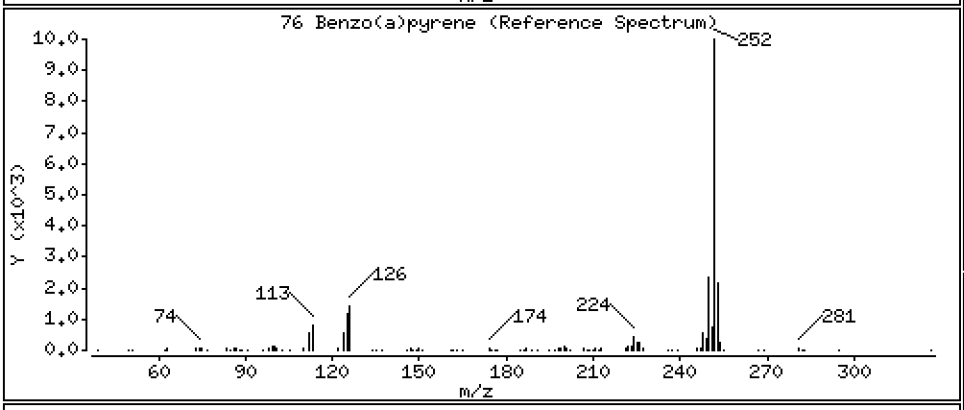
Column diameter: 0.25

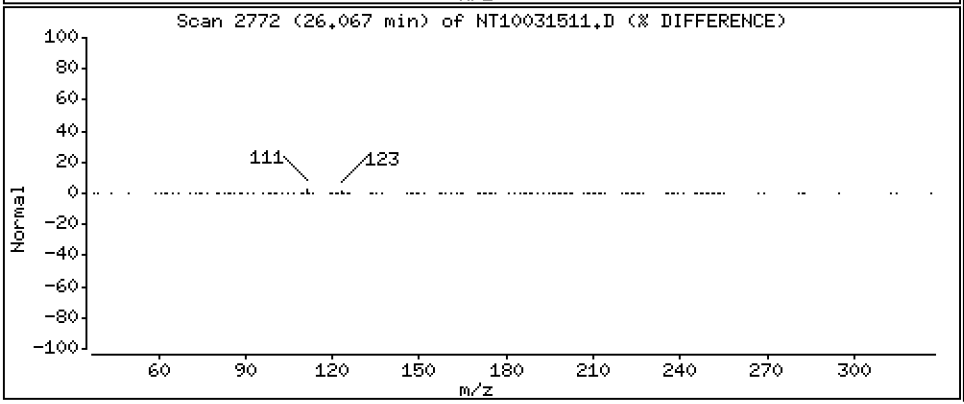
76 Benzo(a)pyrene

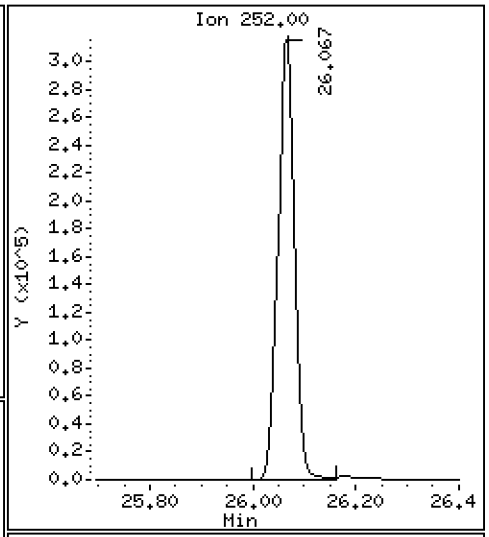
Concentration: 4.873 ug/mL

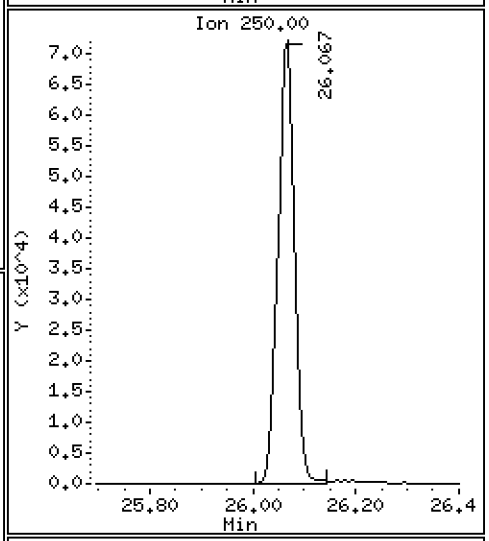


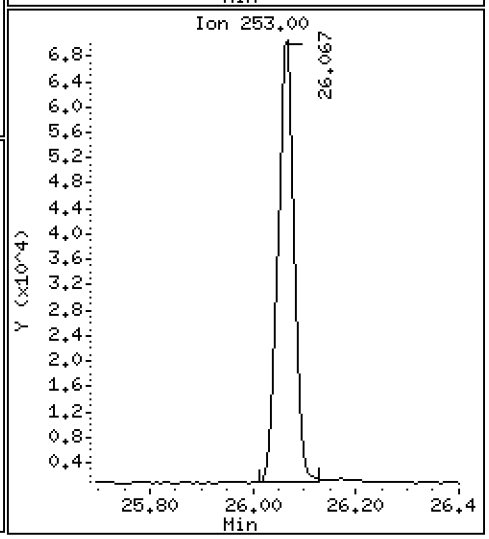












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

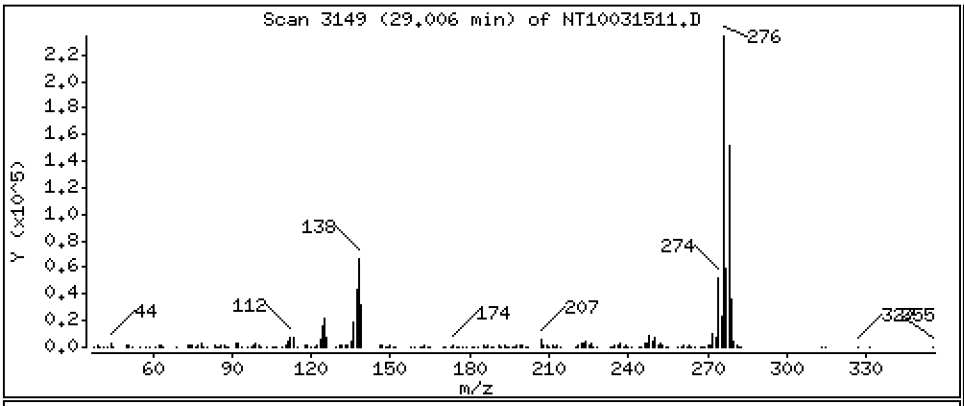
Operator: VTS

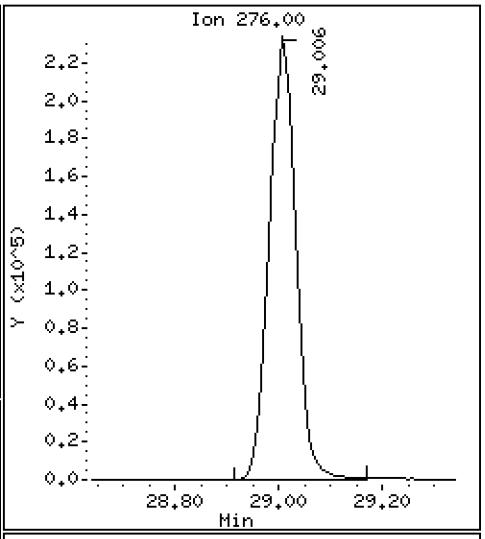
Column phase: ZB-5msi

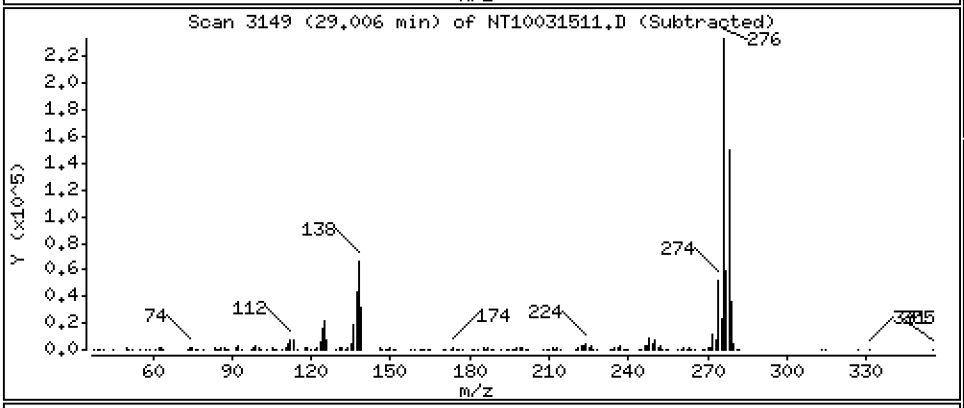
Column diameter: 0.25

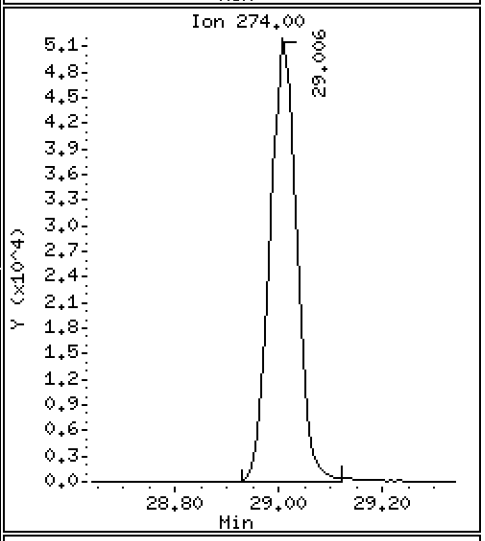
78 Indeno(1,2,3-cd)pyrene

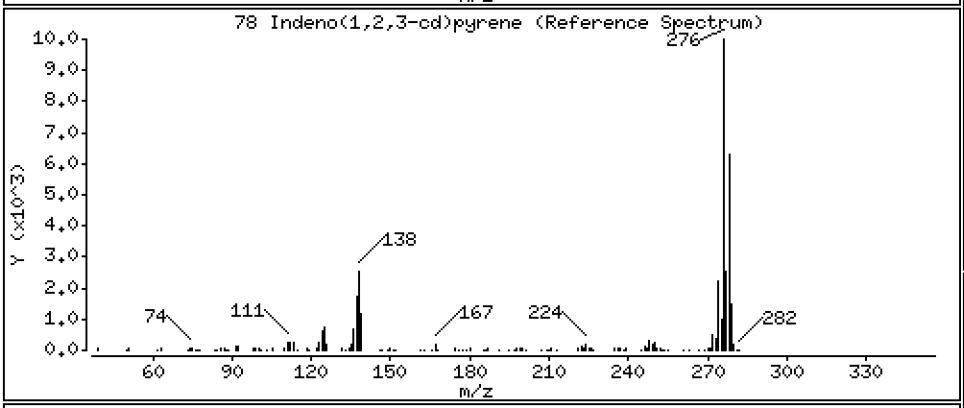
Concentration: 4.577 ug/mL

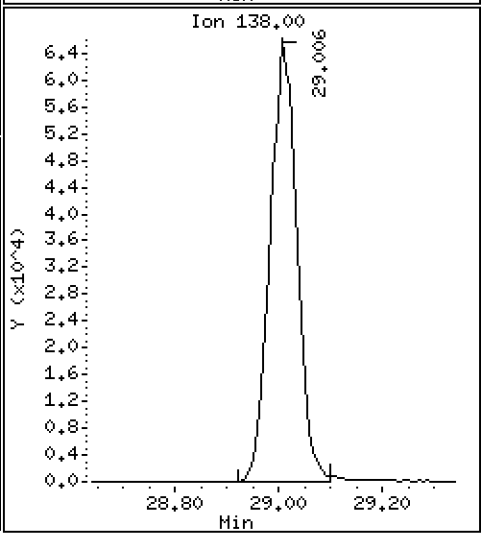


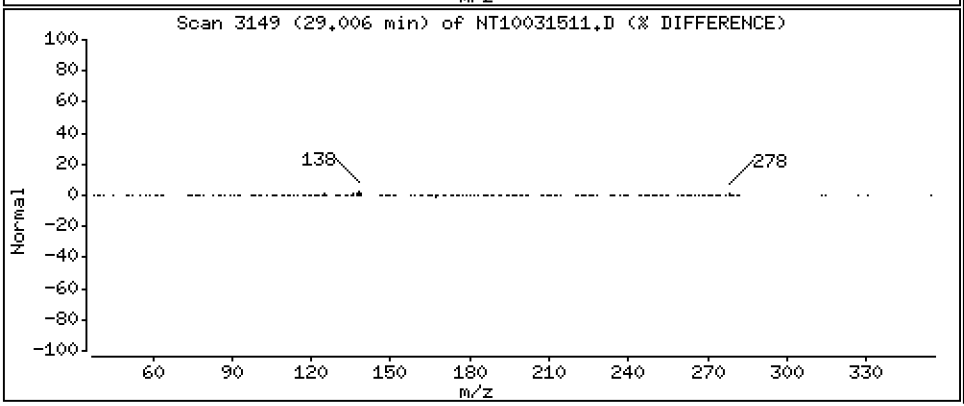












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

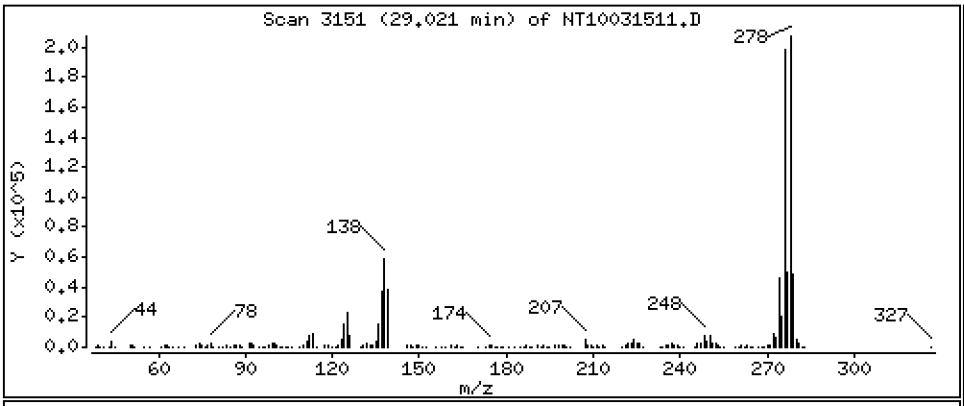
Operator: VTS

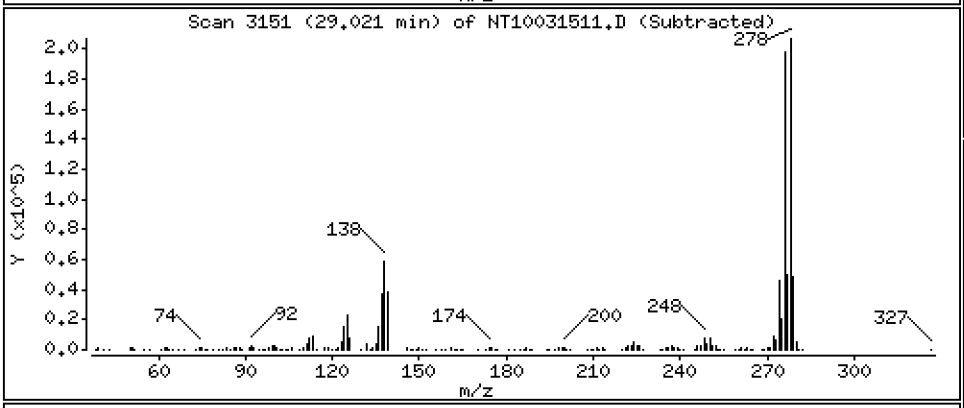
Column phase: ZB-5msi

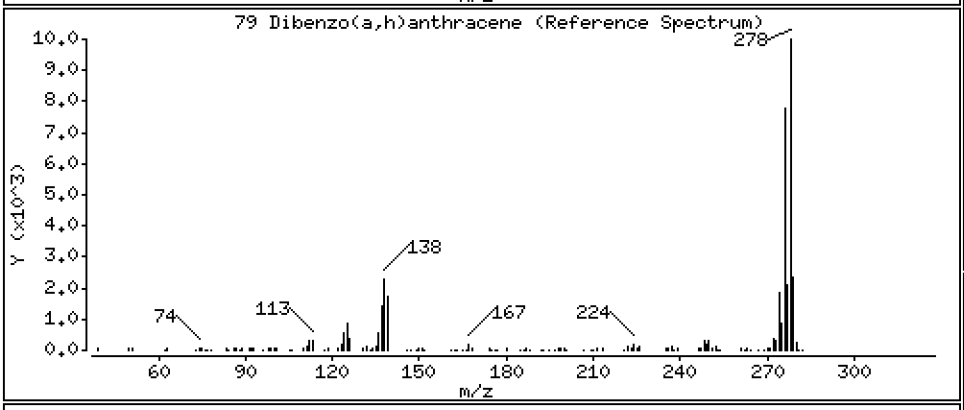
Column diameter: 0.25

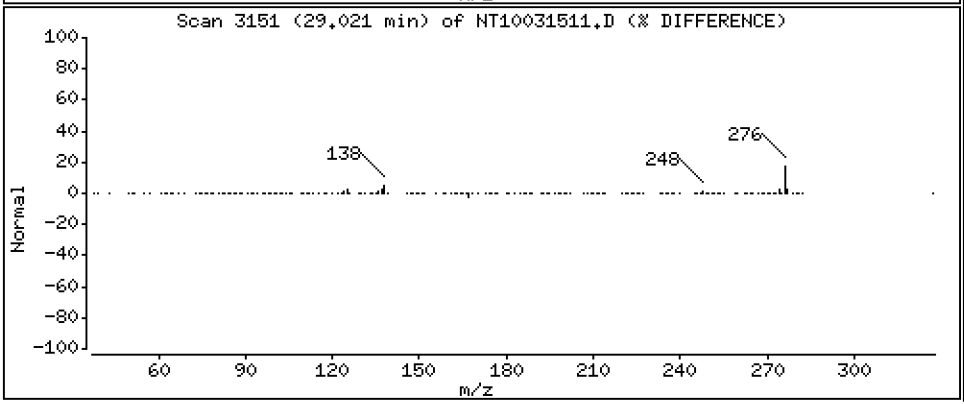
79 Dibenzo(a,h)anthracene

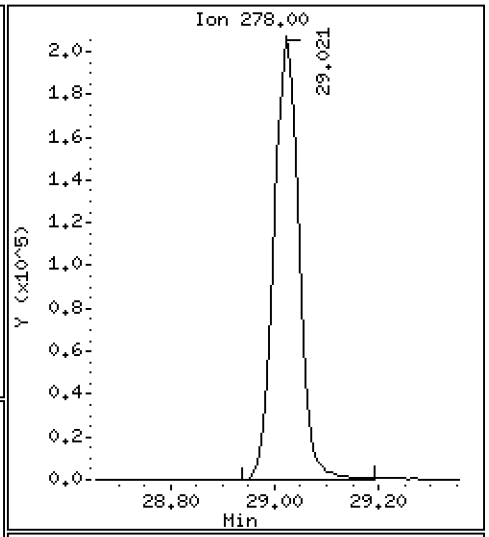
Concentration: 4.547 ug/mL

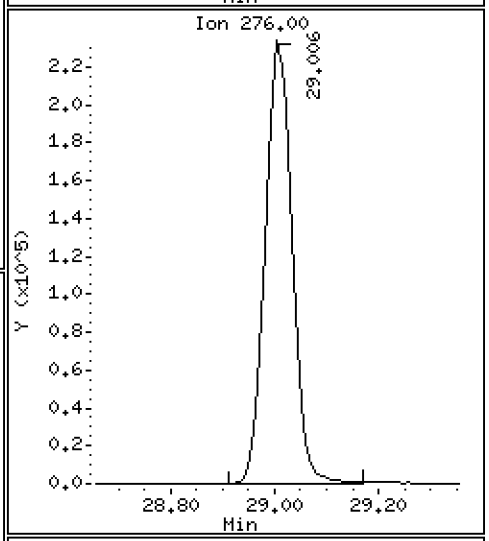


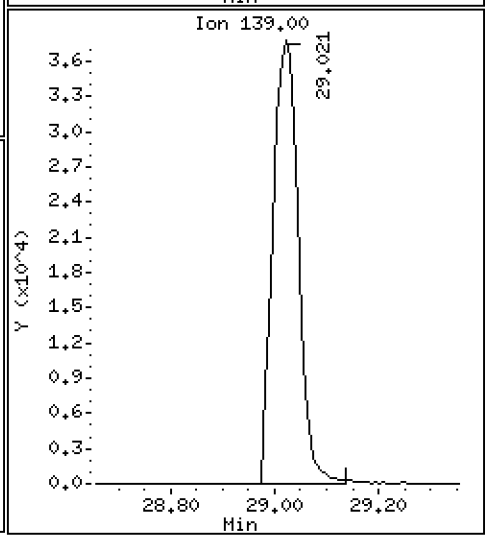












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

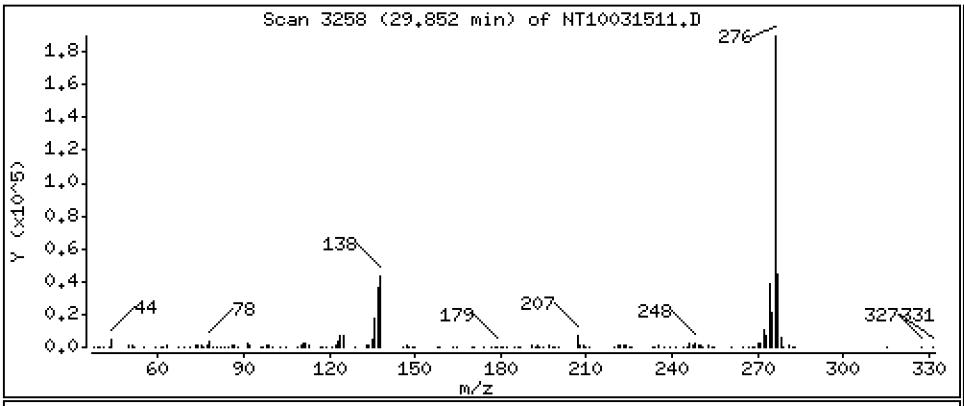
Operator: VTS

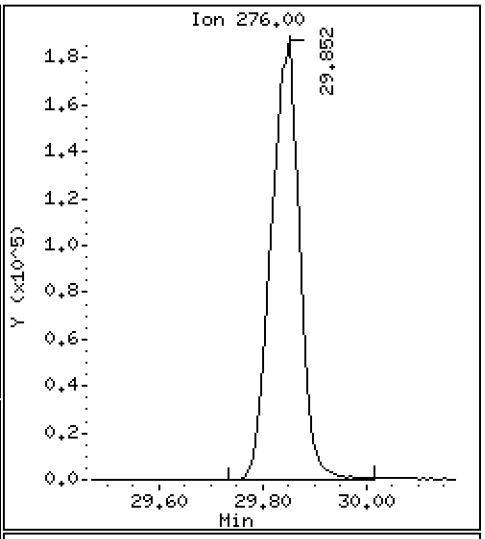
Column phase: ZB-5msi

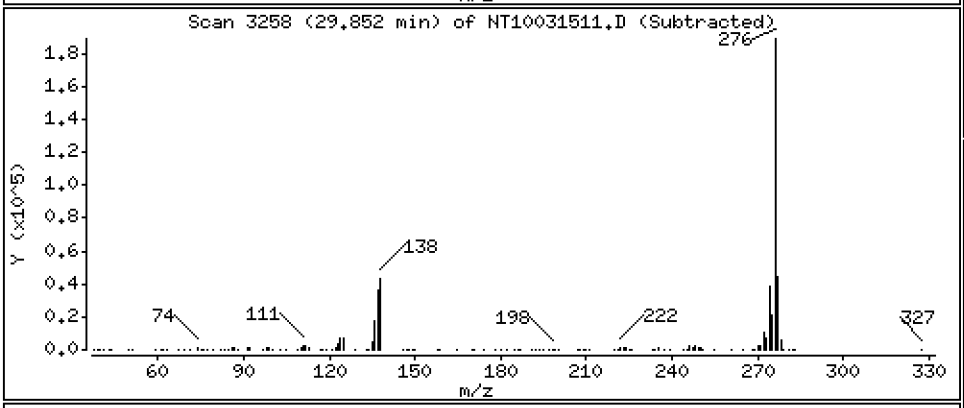
Column diameter: 0.25

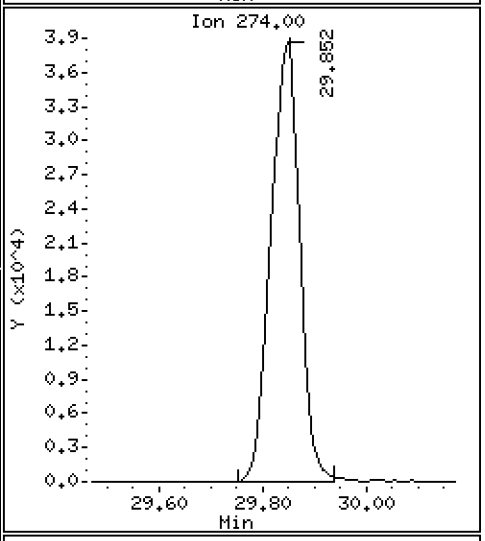
80 Benzo(g,h,i)perylene

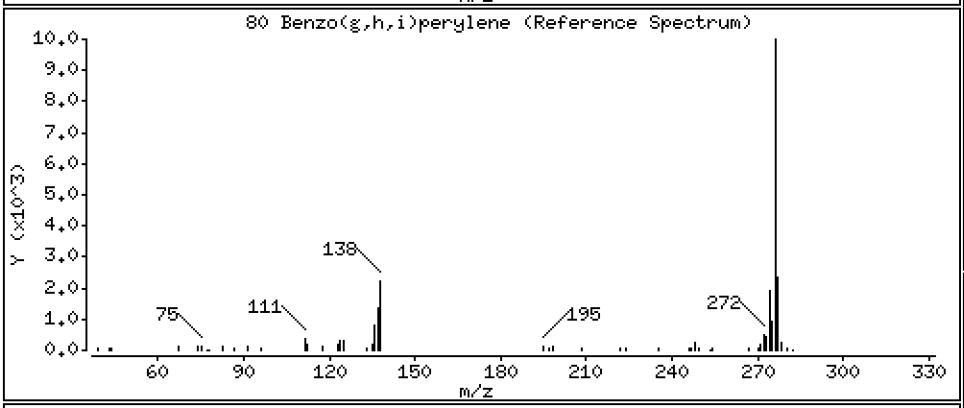
Concentration: 4.590 ug/mL

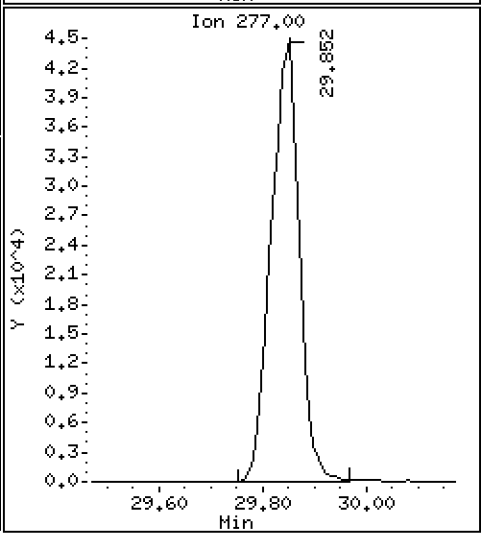


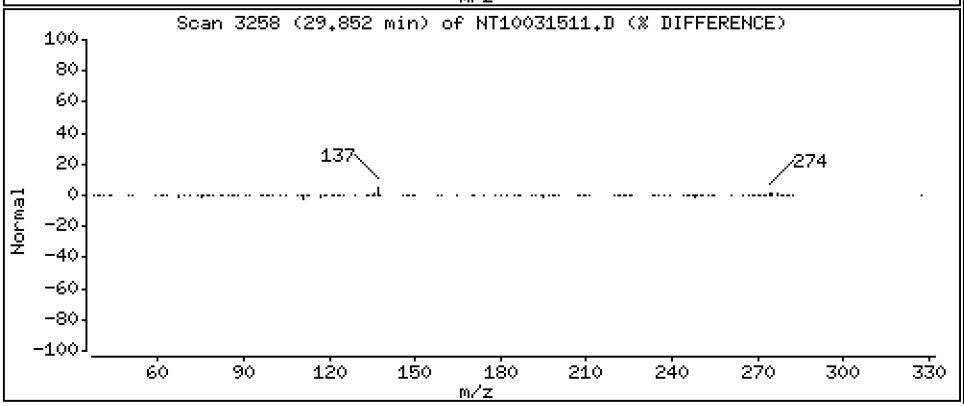












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

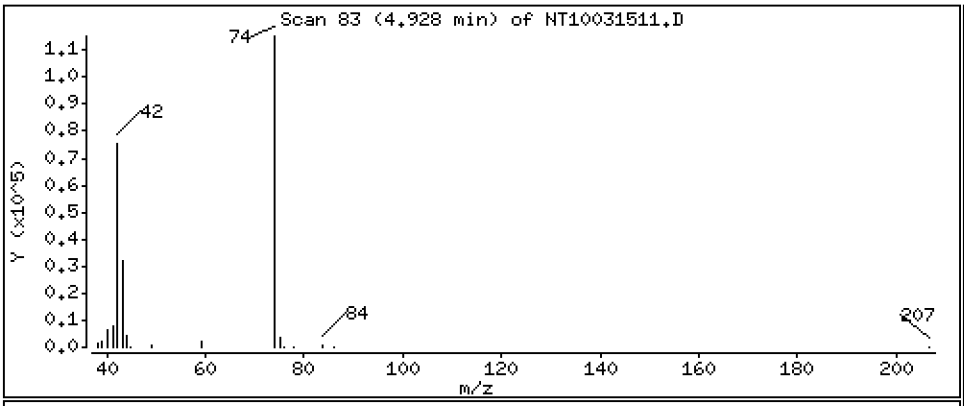
Operator: VTS

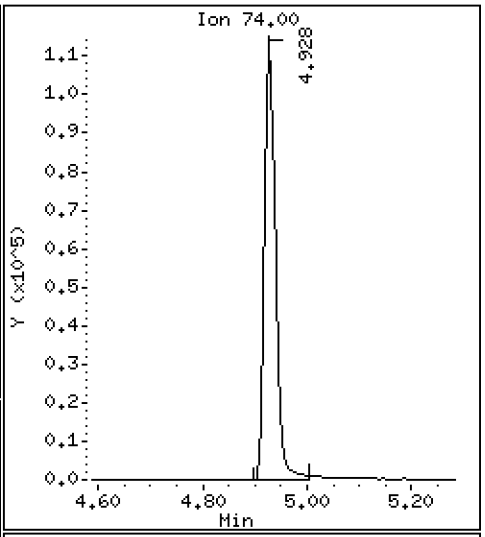
Column phase: ZB-5msi

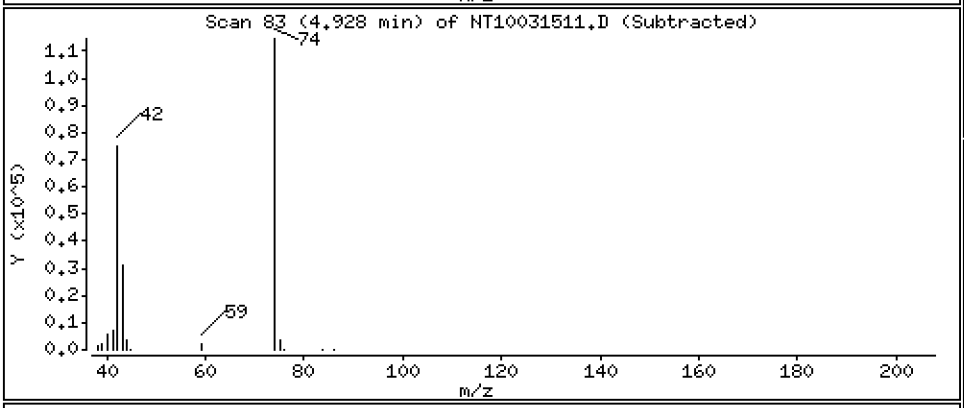
Column diameter: 0.25

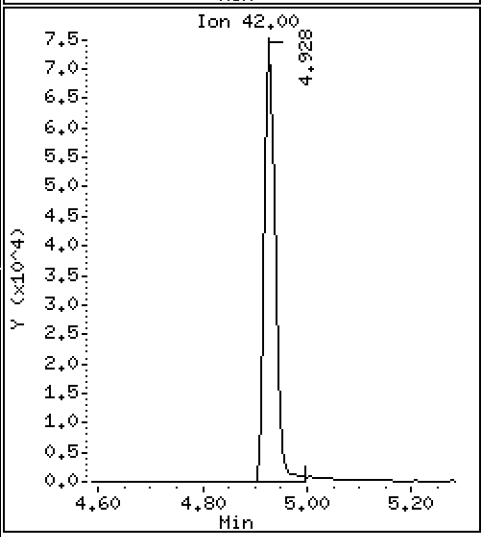
90 N-Nitrosodimethylamine

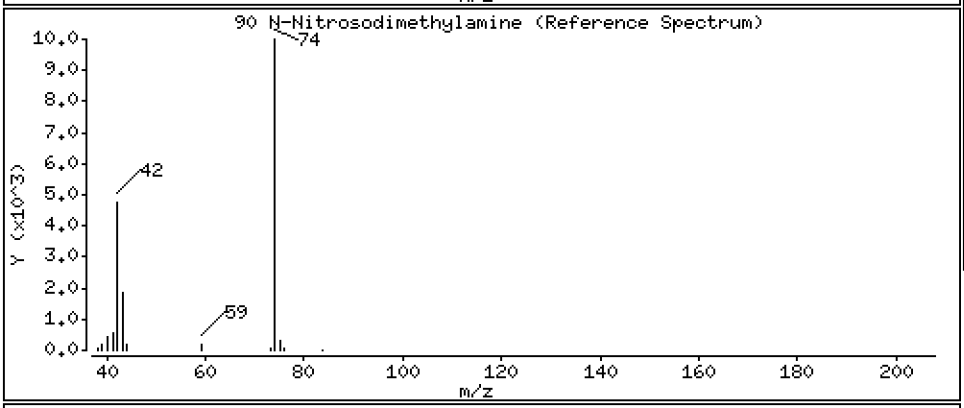
Concentration: 5.194 ug/mL

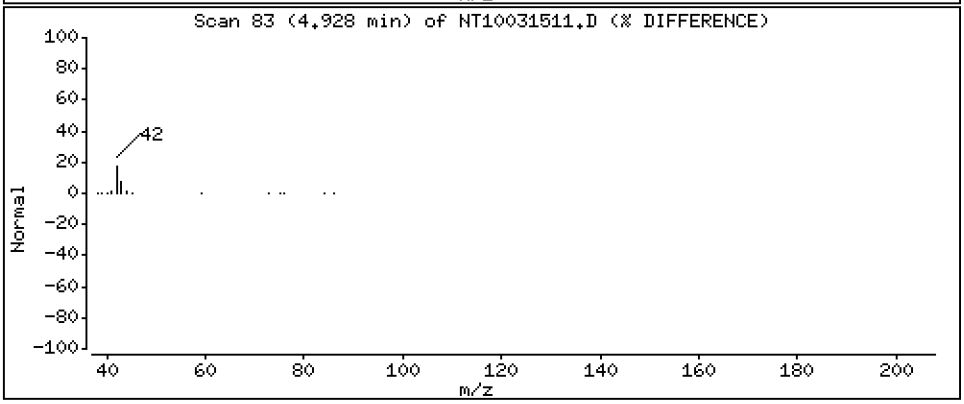












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

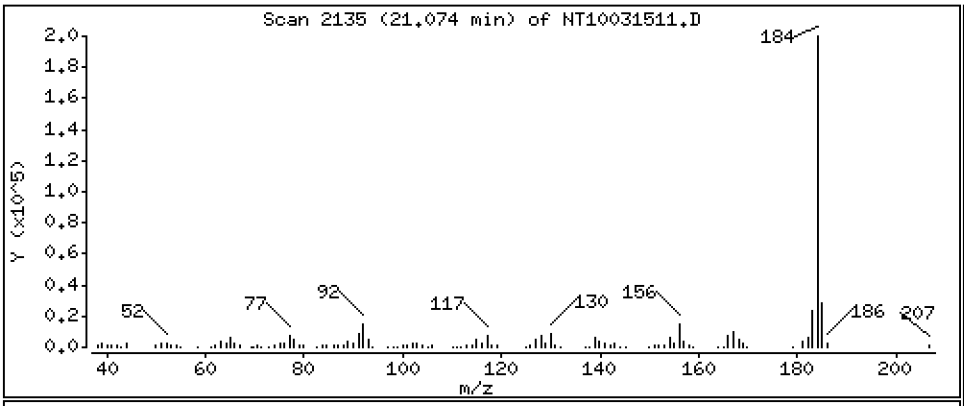
Operator: VTS

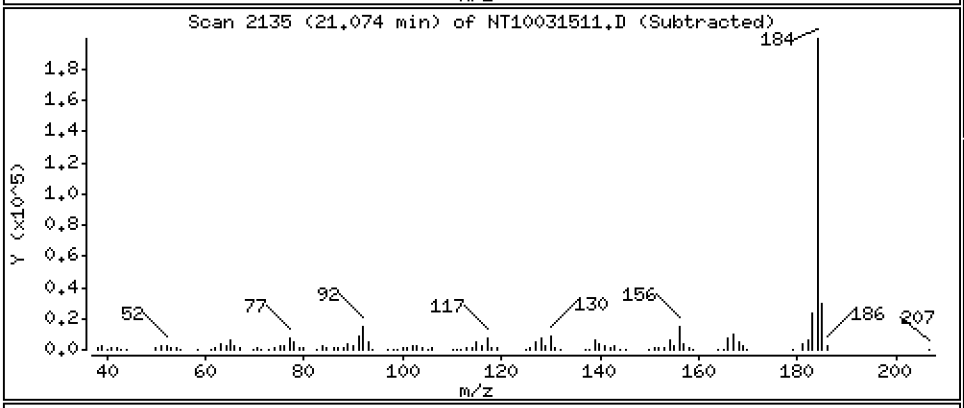
Column phase: ZB-5msi

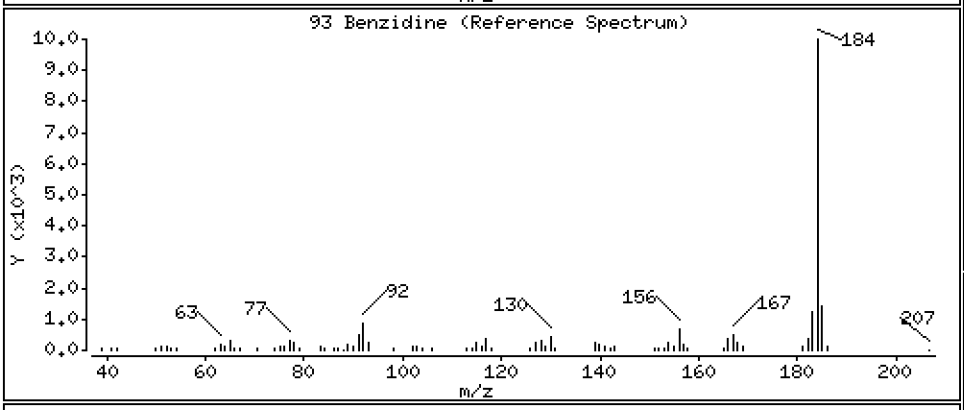
Column diameter: 0.25

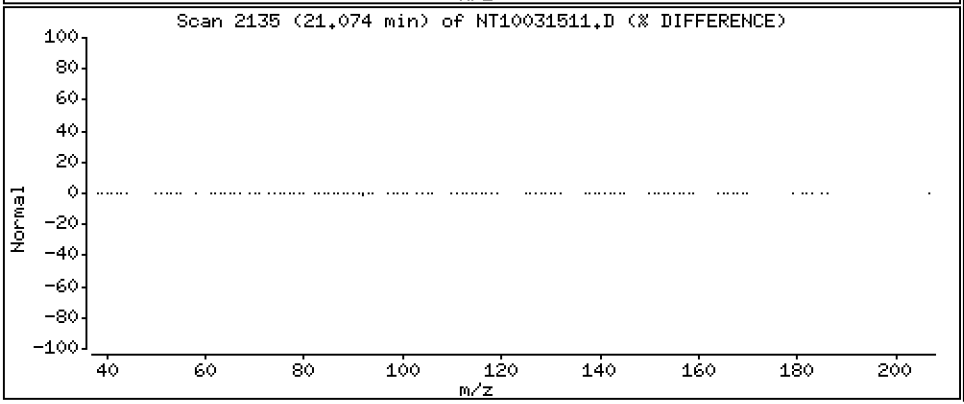
93 Benzidine

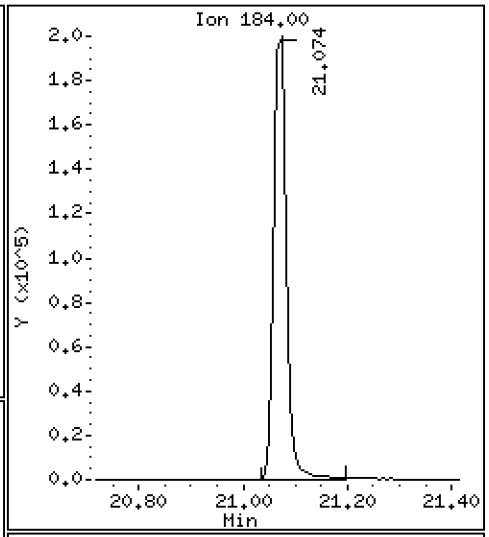
Concentration: 4.380 ug/mL

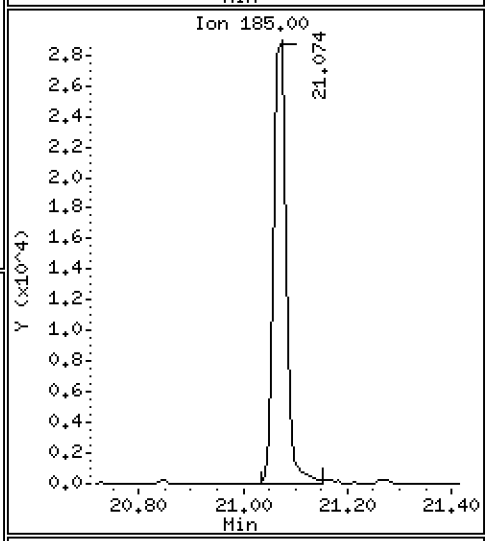


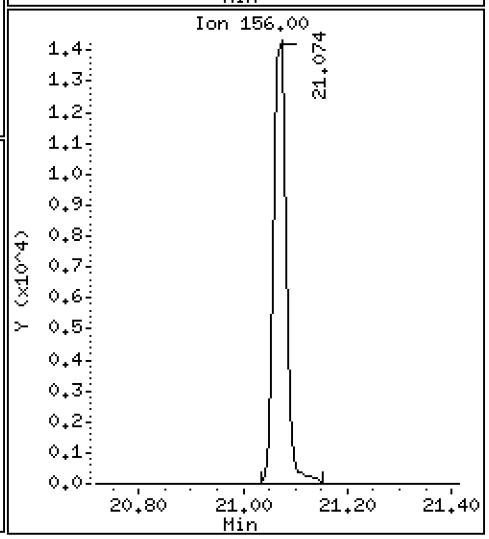












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

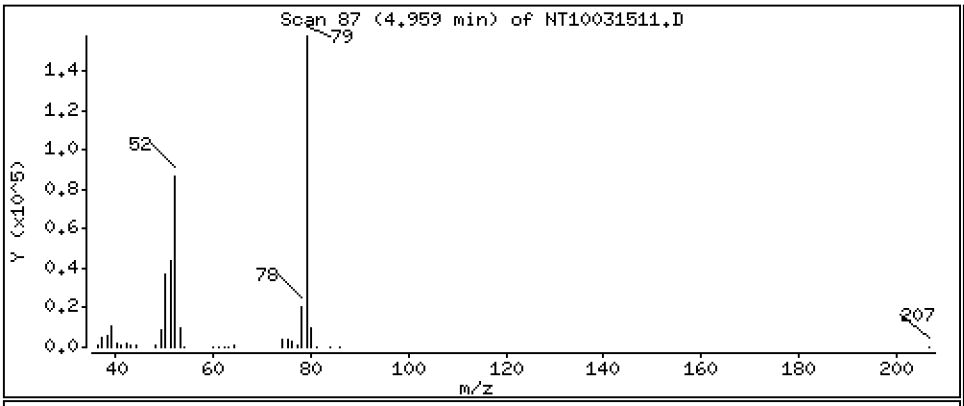
Operator: VTS

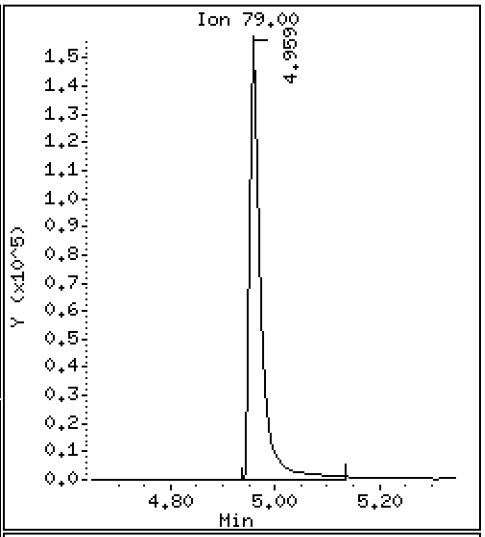
Column phase: ZB-5msi

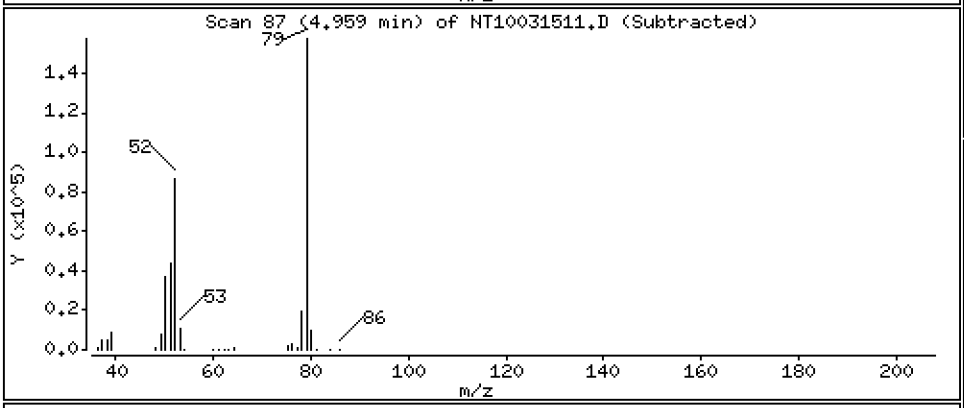
Column diameter: 0.25

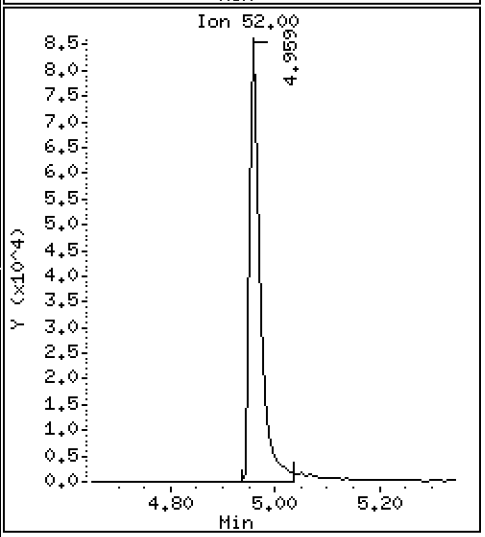
103 Pyridine

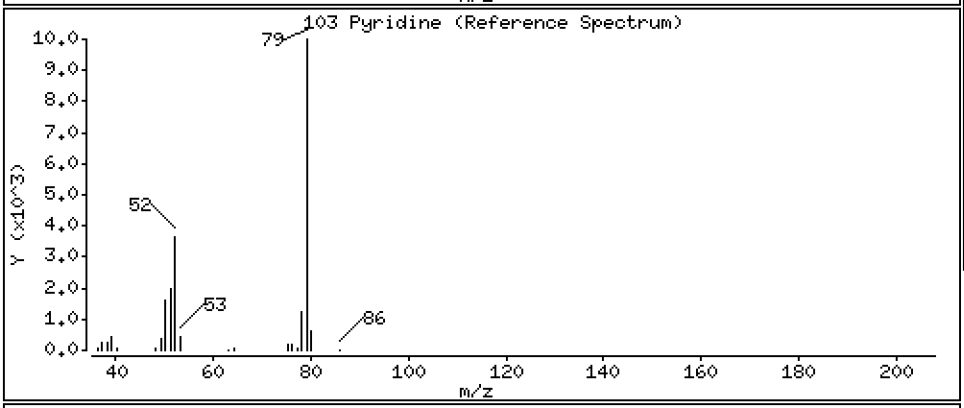
Concentration: 5.337 ug/mL

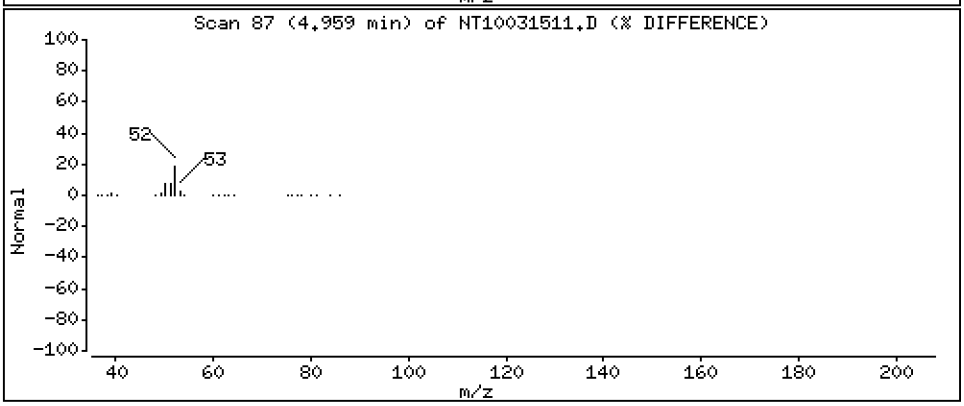












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

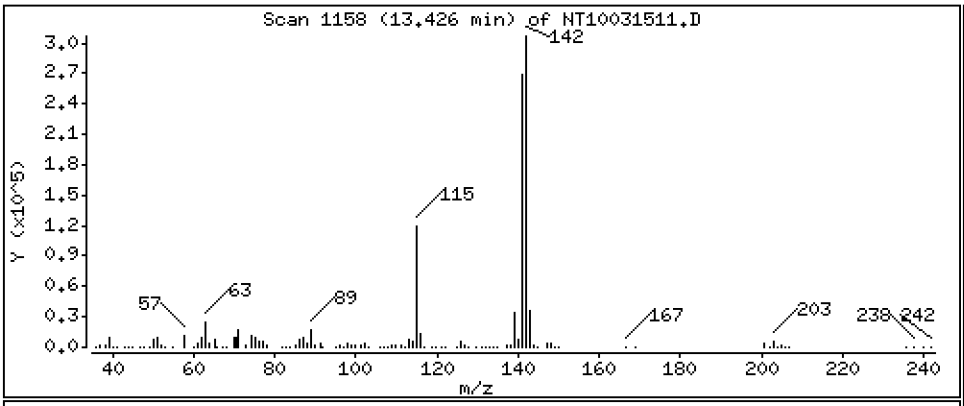
Operator: VTS

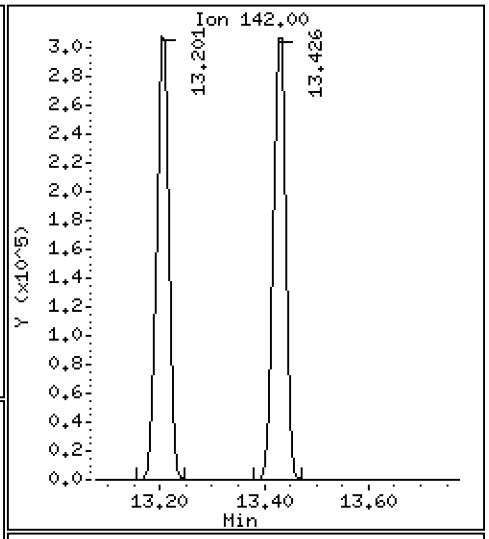
Column phase: ZB-5msi

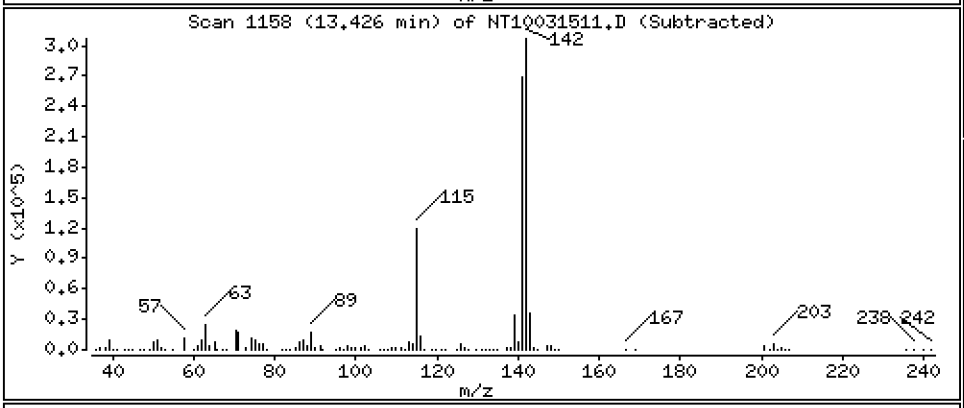
Column diameter: 0.25

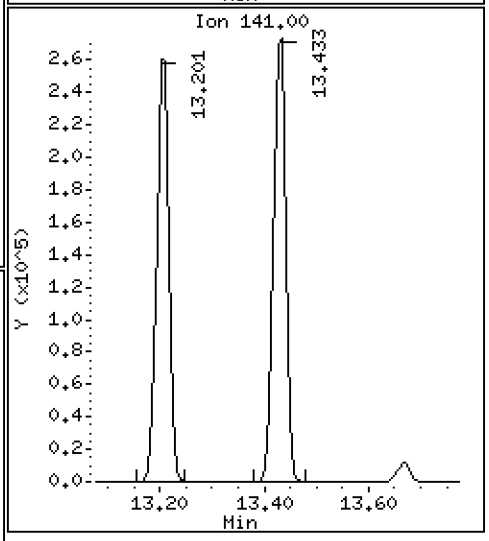
105 1-methylnaphthalene

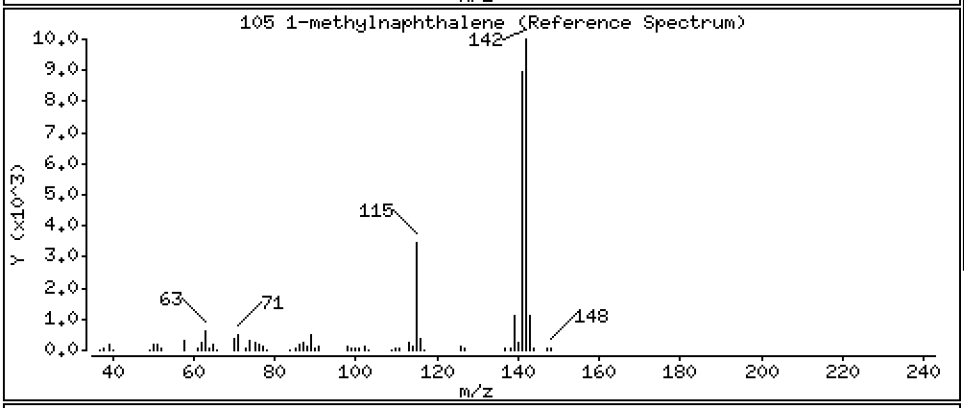
Concentration: 4.875 ug/mL

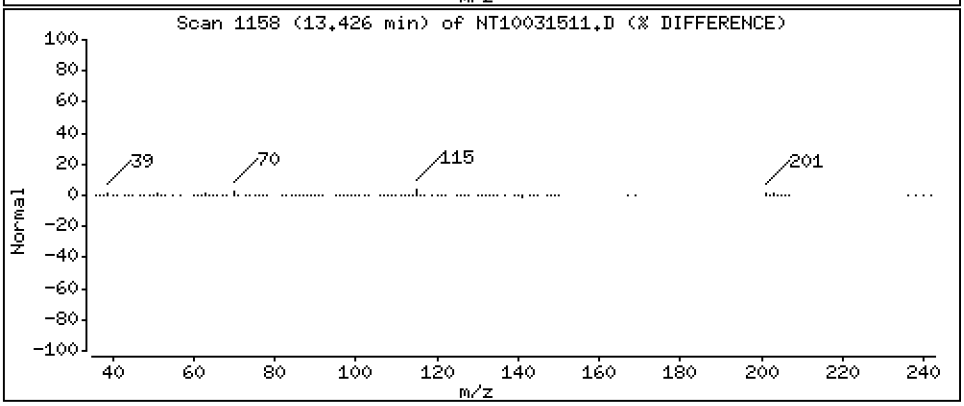












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

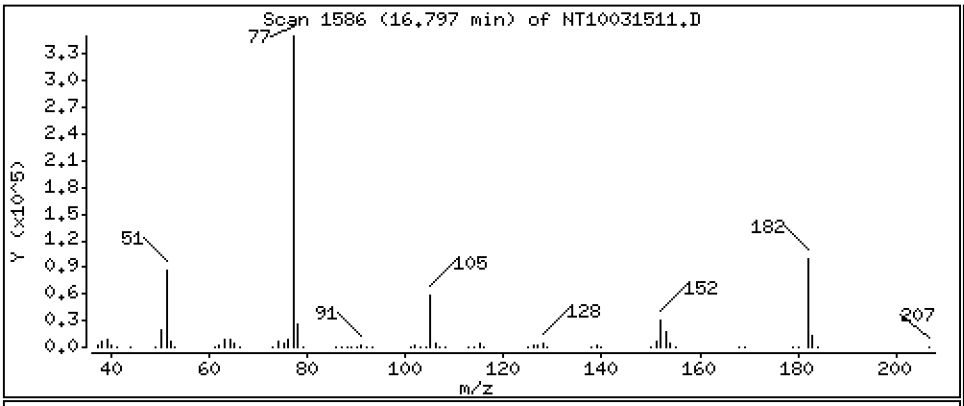
Operator: VTS

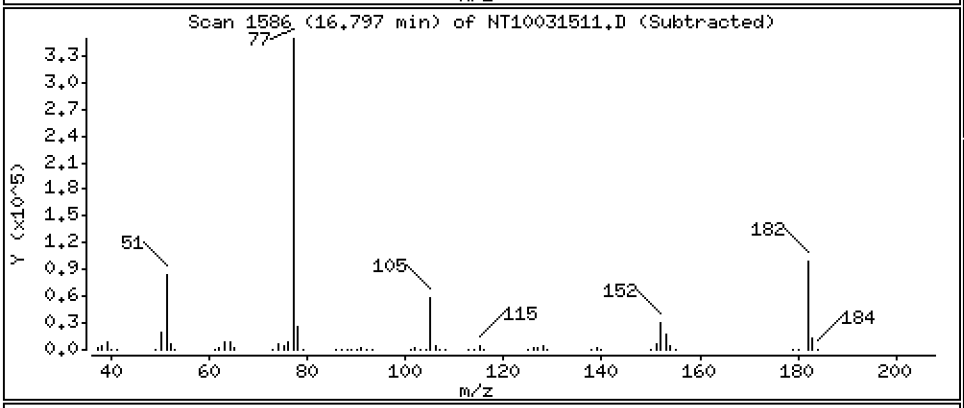
Column phase: ZB-5msi

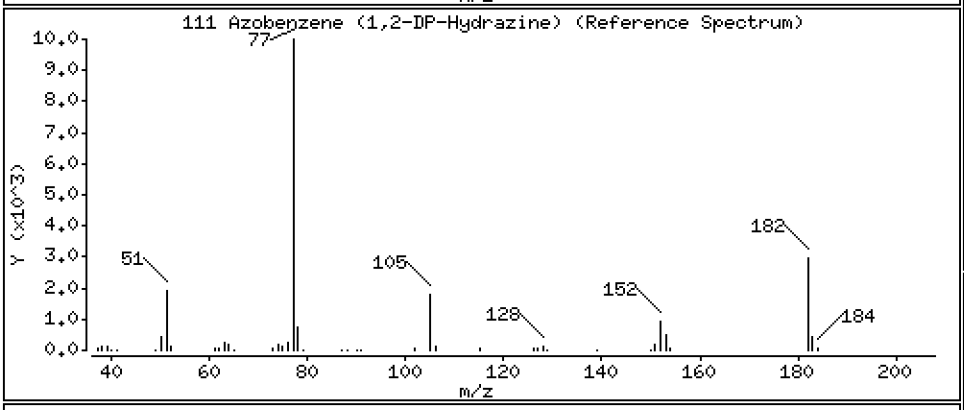
Column diameter: 0.25

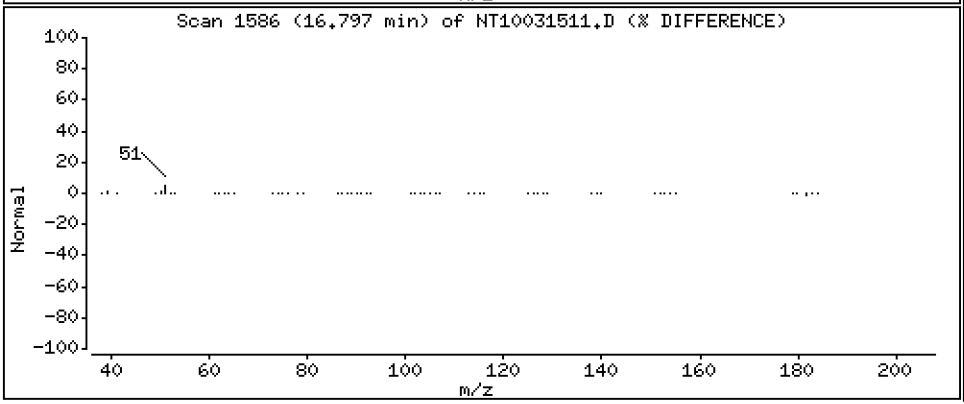
111 Azobenzene (1,2-DP-Hydrazine)

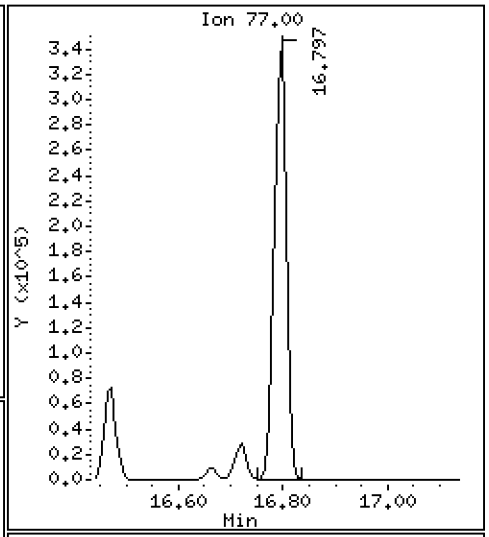
Concentration: 4.937 ug/mL

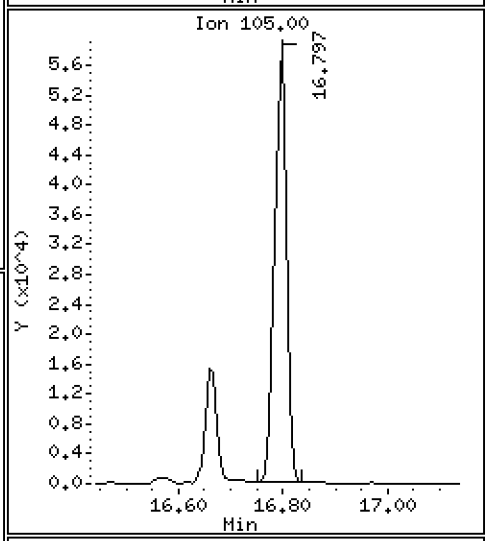


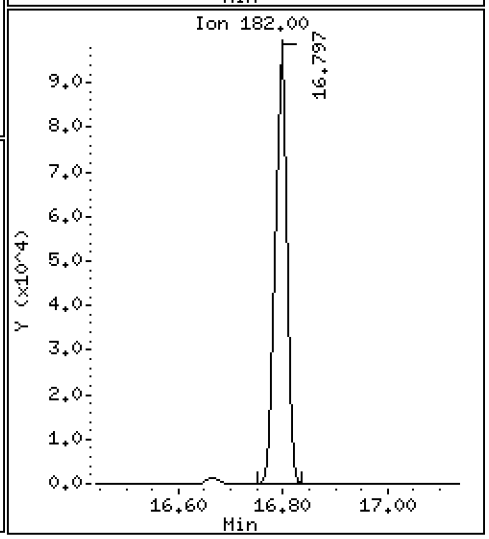












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

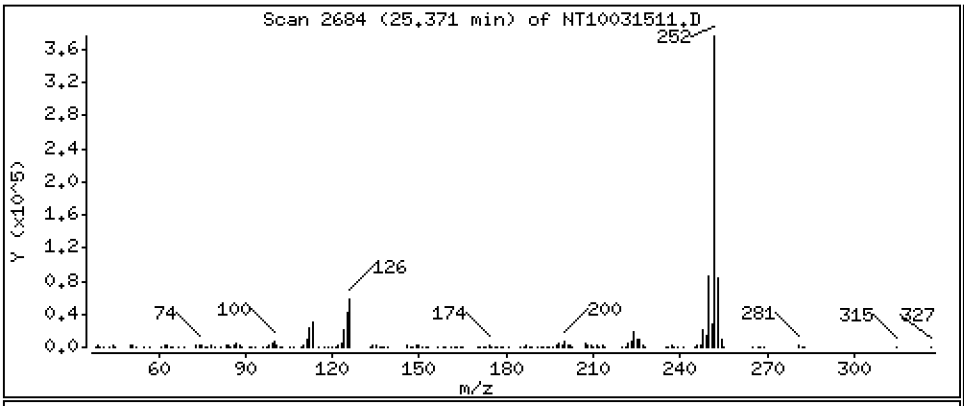
Operator: VTS

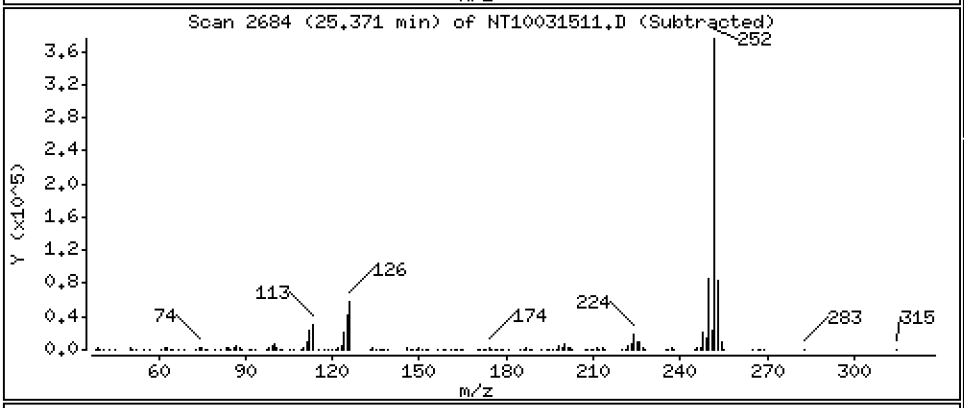
Column phase: ZB-5msi

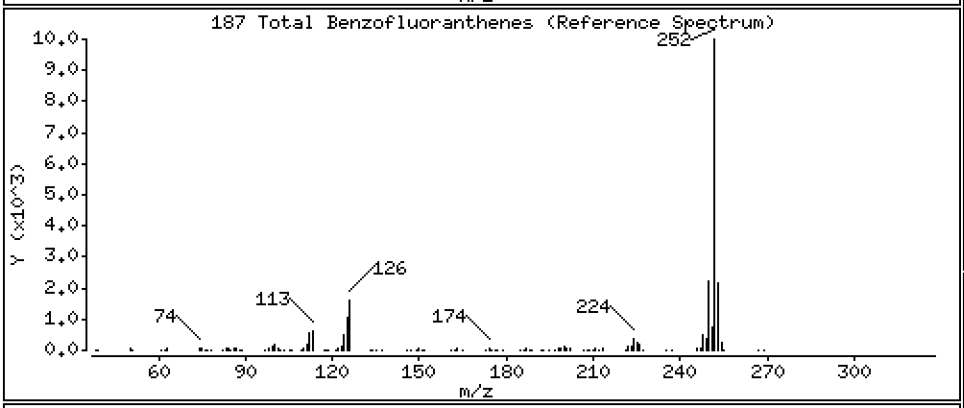
Column diameter: 0.25

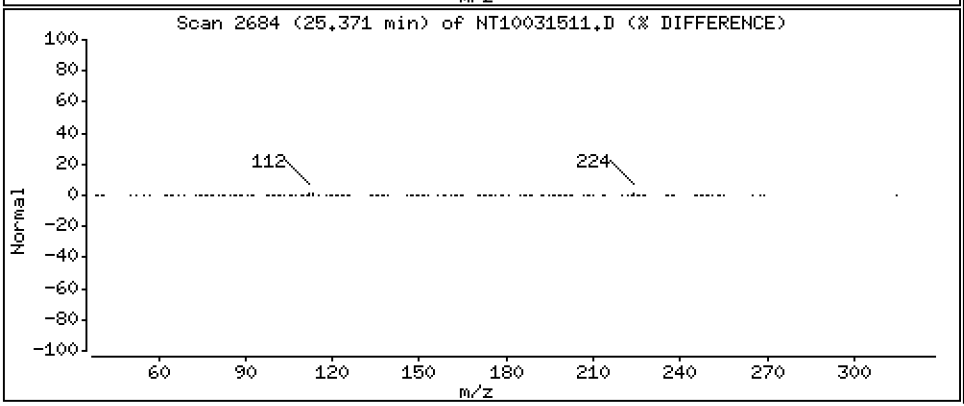
187 Total Benzofluoranthenes

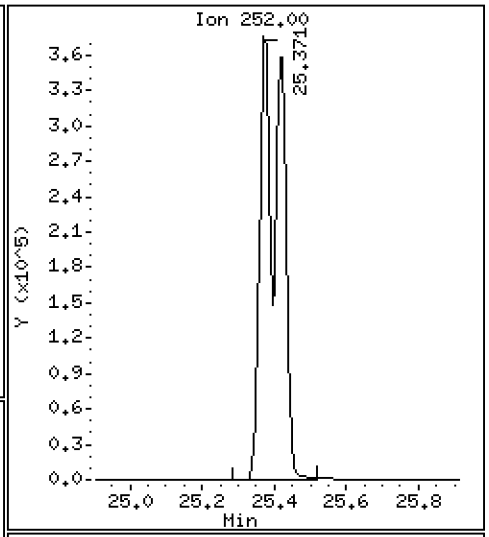
Concentration: 9.483 ug/mL

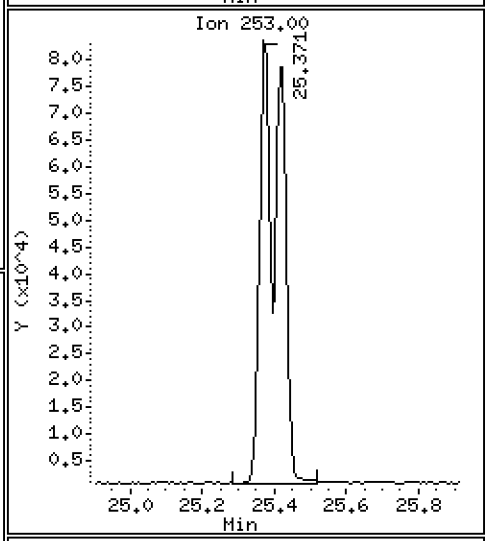


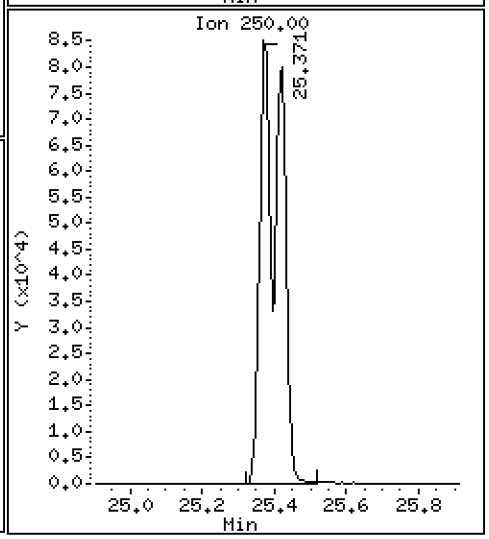












Data File: \\target\share\chem3\nt10.i\20230315.b\NT10031511.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0228-SCV1

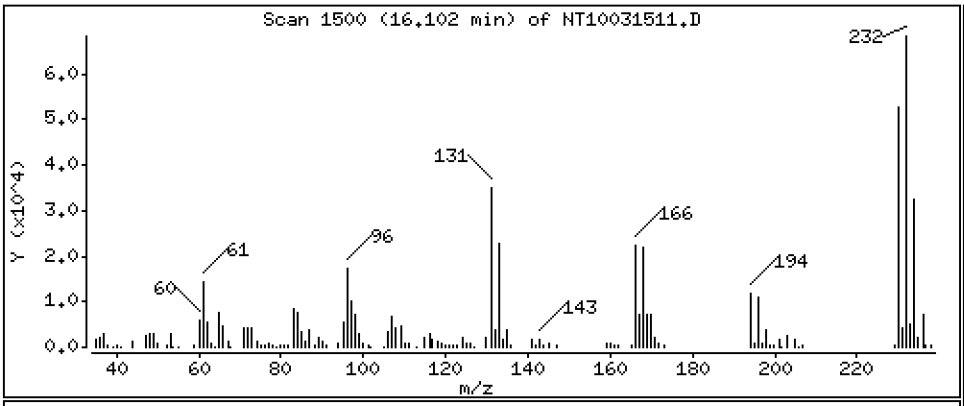
Operator: VTS

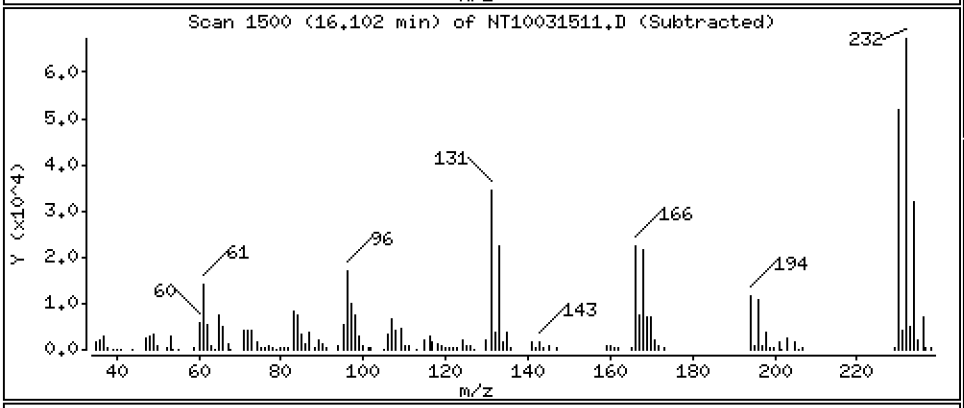
Column phase: ZB-5msi

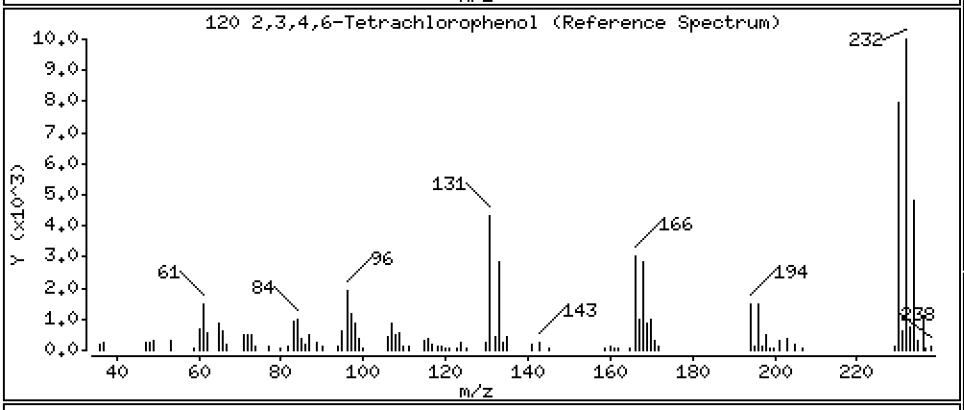
Column diameter: 0.25

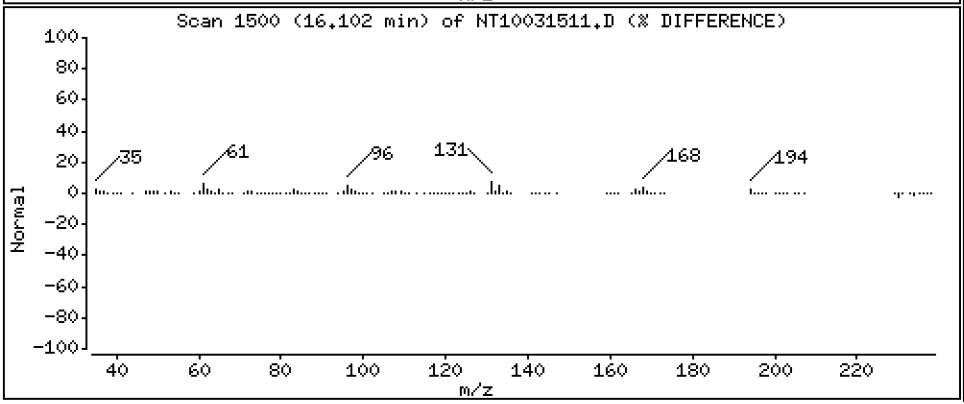
120 2,3,4,6-Tetrachlorophenol

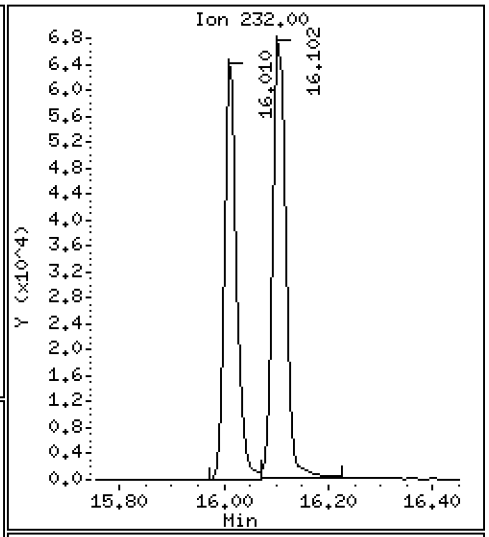
Concentration: 3.980 ug/mL

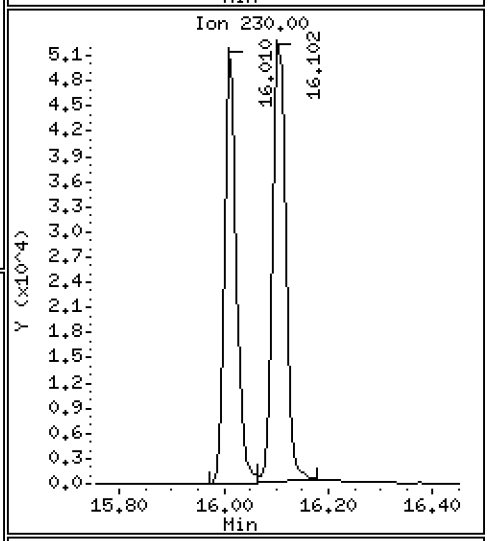


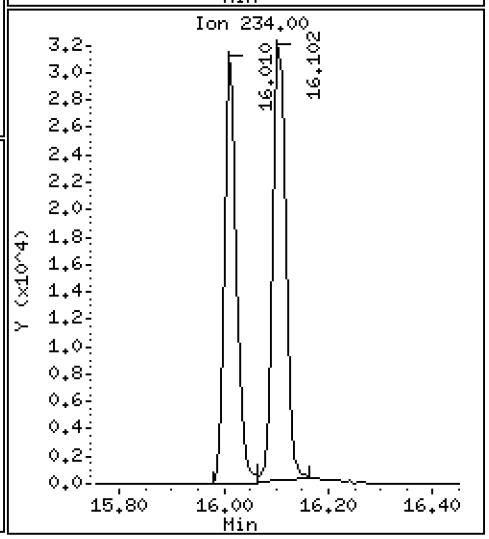












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230315.b\NT10031511.D
Lab Smp Id: SLC0228-SCV1
Inj Date : 16-MAR-2023 02:16
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0228-SCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230315.b\ABN.m
Meth Date : 16-Mar-2023 12:06 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
$ 2	Phenol-d5	99	Compound Not Detected.					
3	Phenol	94	8.659	8.652	(0.931)	281600	4.41237	4.412
$ 5	2-Chlorophenol-d4	132	Compound Not Detected.					
4	Bis(2-Chloroethyl)ether	93	8.837	8.837	(0.950)	248892	5.25818	5.258
6	2-Chlorophenol	128	8.960	8.961	(0.963)	233608	4.27685	4.277
7	1,3-Dichlorobenzene	146	9.239	9.231	(0.993)	275540	4.77157	4.772
* 8	1,4-Dichlorobenzene-d4	152	9.301	9.293	(1.000)	154809	4.00000	
9	1,4-Dichlorobenzene	146	9.332	9.325	(1.003)	274051	4.91272	4.913
$ 10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	9.689	9.682	(1.042)	268028	4.88215	4.882
11	Benzyl alcohol	108	9.557	9.557	(1.028)	147597	4.92722	4.927
14	2,2'-oxybis(1-Chloropropane)	121	9.860	9.860	(1.060)	100179	6.21363	6.214
13	2-Methylphenol	108	9.775	9.767	(1.051)	196115	4.21542	4.215
17	Hexachloroethane	117	10.279	10.271	(1.105)	114513	5.00332	5.003
16	N-Nitroso-di-n-propylamine	70	10.116	10.108	(1.088)	190250	5.17896	5.179
15	4-Methylphenol	108	10.046	10.031	(1.080)	213951	4.36462	4.365
$ 18	Nitrobenzene-d5	82	Compound Not Detected.					
19	Nitrobenzene	77	10.426	10.419	(0.885)	274714	4.85798	4.858
20	Isophorone	82	10.861	10.861	(0.922)	556741	7.69604	7.696
21	2-Nitrophenol	139	11.047	11.048	(0.938)	110302	3.99452	3.995
22	2,4-Dimethylphenol	107	11.081	11.082	(0.941)	188638	3.63181	3.632
23	Bis(2-Chloroethoxy)methane	93	11.285	11.285	(0.958)	273219	5.65409	5.654
24	Benzoic acid	105	11.217	11.166	(0.952)	173961	5.95241	5.952
25	2,4-Dichlorophenol	162	11.489	11.489	(0.975)	195480	4.70301	4.703
26	1,2,4-Trichlorobenzene	180	11.685	11.685	(0.992)	222176	4.55366	4.554
* 27	Naphthalene-d8	136	11.777	11.770	(1.000)	570882	4.00000	
28	Naphthalene	128	11.816	11.816	(1.003)	713318	4.71662	4.717
29	4-Chloroaniline	127	11.940	11.940	(1.014)	223402	3.78650	3.787
30	Hexachlorobutadiene	225	12.171	12.172	(1.033)	138198	4.83404	4.834
31	4-Chloro-3-methylphenol	107	12.876	12.876	(1.093)	208794	4.64027	4.640
32	2-Methylnaphthalene	142	13.201	13.201	(1.121)	501627	4.59617	4.596
33	Hexachlorocyclopentadiene	237	13.665	13.665	(0.888)	132827	4.72902	4.729

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.820	13.820	(0.898)	137849	4.59559	4.596
35	2,4,5-Trichlorophenol	196	13.889	13.890	(0.903)	146935	4.40855	4.409
$ 36	2-Fluorobiphenyl	172	Compound Not Detected.					
37	2-Chloronaphthalene	162	14.199	14.191	(0.923)	466196	4.79589	4.796
38	2-Nitroaniline	65	14.454	14.447	(0.940)	134108	4.91137	4.911
39	Dimethylphthalate	163	14.880	14.873	(0.967)	486790	4.93747	4.937
40	Acenaphthylene	152	15.074	15.066	(0.980)	727839	4.80509	4.805
41	2,6-Dinitrotoluene	165	15.020	15.012	(0.976)	112840	5.29815	5.298
* 42	Acenaphthene-d10	164	15.383	15.383	(1.000)	303490	4.00000	
43	3-Nitroaniline	138	15.306	15.298	(0.995)	120530	5.01393	5.014
44	Acenaphthene	153	15.453	15.445	(1.005)	446914	4.77589	4.776
45	2,4-Dinitrophenol	184	15.515	15.515	(1.009)	27409	2.12395	2.124
46	Dibenzofuran	168	15.777	15.770	(1.026)	641379	4.64790	4.648
47	4-Nitrophenol	109	15.600	15.592	(1.014)	59816	3.96568	3.966
48	2,4-Dinitrotoluene	165	15.824	15.817	(1.029)	144262	4.51019	4.510
50	Diethylphthalate	149	16.326	16.319	(1.061)	503887	5.20905	5.209
49	Fluorene	166	16.489	16.481	(1.072)	511113	4.70796	4.708
51	4-Chlorophenyl-phenylether	204	16.473	16.466	(1.071)	257762	4.99294	4.993
52	4-Nitroaniline	138	16.566	16.566	(1.077)	106701	4.92532	4.925
53	4,6-Dinitro-2-methylphenol	198	16.666	16.658	(0.905)	56867	3.51509	3.515
54	N-Nitrosodiphenylamine	169	16.720	16.712	(0.908)	342454	4.80180	4.802
$ 55	2,4,6-Tribromophenol	330	Compound Not Detected.					
56	4-Bromophenyl-phenylether	248	17.475	17.476	(0.949)	150956	5.05964	5.060
57	Hexachlorobenzene	284	17.800	17.793	(0.966)	143751	4.59553	4.596
58	Pentachlorophenol	266	18.149	18.149	(0.985)	75635	4.05676	4.057
* 59	Phenanthrene-d10	188	18.420	18.420	(1.000)	533431	4.00000	
60	Phenanthrene	178	18.466	18.466	(1.003)	669357	4.60181	4.602
61	Anthracene	178	18.559	18.559	(1.008)	581438	4.16715	4.167
62	Carbazole	167	18.884	18.884	(1.025)	591382	4.72989	4.730
63	Di-n-butylphthalate	149	19.665	19.666	(1.068)	830680	4.96738	4.967
64	Fluoranthene	202	20.841	20.841	(0.888)	782432	4.47248	4.472
65	Pyrene	202	21.267	21.267	(0.907)	778668	4.33892	4.339
$ 66	Terphenyl-d14	244	Compound Not Detected.					
67	Butylbenzylphthalate	149	22.459	22.460	(0.957)	314007	4.83397	4.834
68	Benzo(a)anthracene	228	23.427	23.419	(0.999)	714166	4.64722	4.647
* 69	Chrysene-d12	240	23.458	23.450	(1.000)	435381	4.00000	
70	3,3'-Dichlorobenzidine	252	23.373	23.373	(0.996)	483256	9.81738	9.817
71	Chrysene	228	23.497	23.489	(1.002)	677151	4.51017	4.510
72	bis(2-Ethylhexyl)phthalate	149	23.481	23.474	(0.959)	453669	4.67998	4.680
* 134	Di-n-octylphthalate-d4	153	24.487	24.480	(1.000)	660827	4.00000	
73	Di-n-octylphthalate	149	24.495	24.488	(1.000)	855562	4.94734	4.947
74	Benzo(b)fluoranthene	252	25.370	25.362	(0.969)	737887	4.60200	4.602(H)
75	Benzo(k)fluoranthene	252	25.416	25.409	(0.970)	797521	4.89839	4.898
76	Benzo(a)pyrene	252	26.067	26.052	(0.995)	698616	4.87338	4.873
* 77	Perylene-d12	264	26.191	26.183	(1.000)	494648	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.005	28.990	(1.107)	834672	4.57655	4.577
79	Dibenzo(a,h)anthracene	278	29.021	29.005	(1.108)	688433	4.54663	4.547
80	Benzo(g,h,i)perylene	276	29.852	29.821	(1.140)	724463	4.59000	4.590
90	N-Nitrosodimethylamine	74	4.928	4.936	(0.530)	155126	5.19378	5.194
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	21.073	21.066	(0.898)	314737	4.37985	4.380
103	Pyridine	79	4.959	4.997	(0.533)	244801	5.33678	5.337
105	1-methylnaphthalene	142	13.425	13.425	(1.140)	487498	4.87520	4.875
111	Azobenzene (1,2-DP-Hydrazine)	77	16.797	16.789	(1.092)	533524	4.93744	4.937

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.370	25.409	(0.969)	1468165	9.48349	9.483
120 2,3,4,6-Tetrachlorophenol	232	16.102	16.103	(1.047)	124685	3.97959	3.980

QC Flag Legend

H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511.D
Lab Smp Id: SLC0228-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230315.b\ABN.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 21:50
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	171542	85771	343084	154809	-9.75
27 Naphthalene-d8	624466	312233	1248932	570882	-8.58
42 Acenaphthene-d10	337226	168613	674452	303490	-10.00
59 Phenanthrene-d10	572849	286425	1145698	533431	-6.88
69 Chrysene-d12	347068	173534	694136	435381	25.45
134 Di-n-octylphthala	500317	250159	1000634	660827	32.08
77 Perylene-d12	421549	210775	843098	494648	17.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	-0.00
27 Naphthalene-d8	11.78	11.28	12.28	11.78	0.01
42 Acenaphthene-d10	15.38	14.88	15.88	15.38	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.04
134 Di-n-octylphthala	24.48	23.98	24.98	24.49	0.03
77 Perylene-d12	26.18	25.68	26.68	26.19	0.03

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

REVIEW SUMMARY FOR FILE - NT10031511.D

Lab ID: SLC0228-SCV1
nt10.i, 20230315.b\ABN.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

** FIRST SURROGATE NOT FOUND. ICAL Check not performed **

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: NT10031508.D

On Column LOD for nt10.i, 20230315.b\ABN.m, ICAL.sub = 0.0000

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

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182325.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/19/23
Lab Sample ID:	SLC0504-CCV1	Injection Time:	09:03
Sequence Name:	ABN 5		

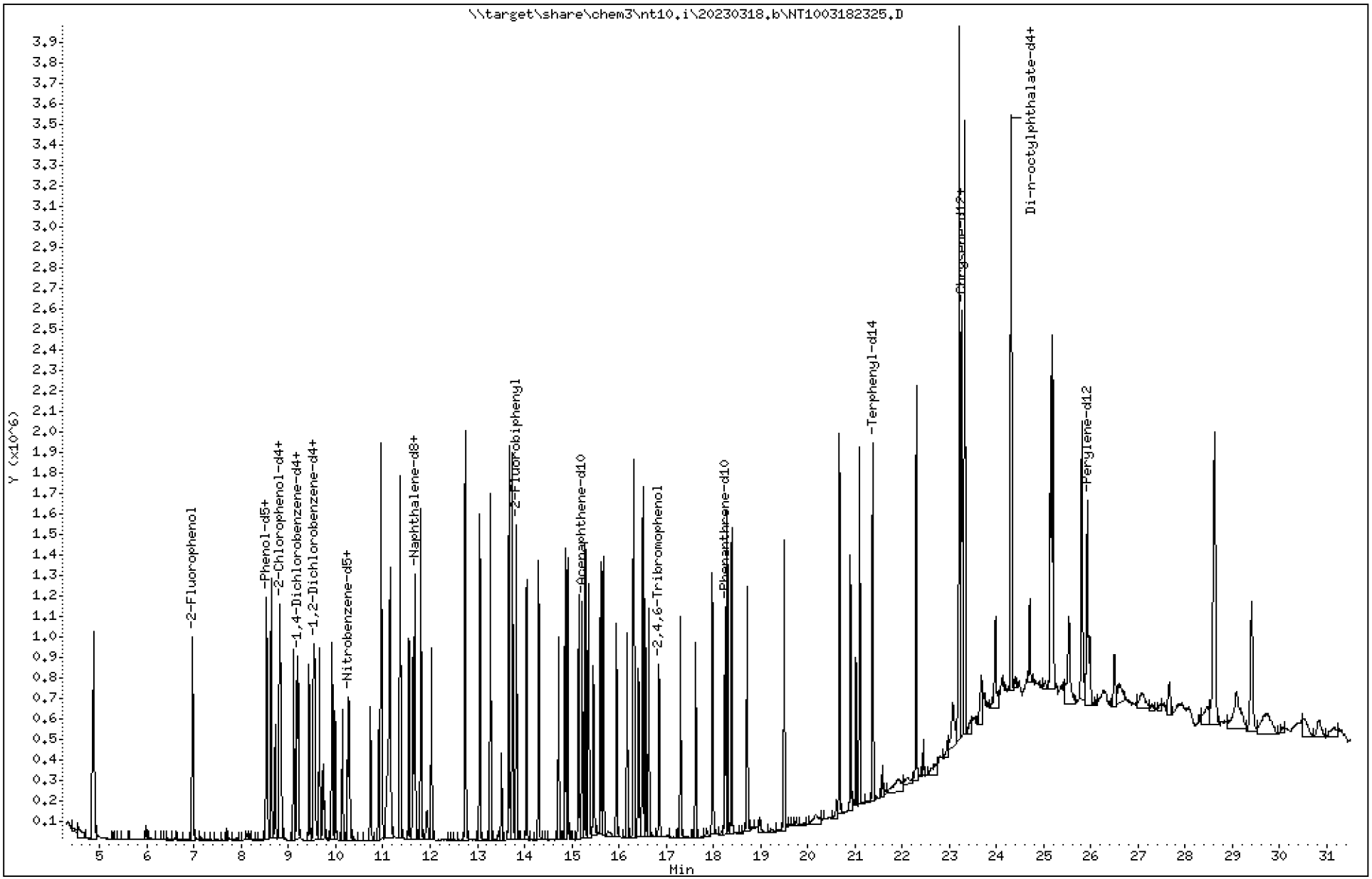
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	5.0000	5.0	1.6490140	1.6388530		-0.6	+/-50
4-Methylphenol	A	5.0000	5.2	1.2665770	1.3208000		4.3	+/-50
Naphthalene	A	5.0000	4.8	1.0596590	1.0216040		-3.6	+/-50
2-Methylnaphthalene	A	5.0000	5.0	0.7647129	0.7582777		-0.8	+/-50
Acenaphthylene	A	5.0000	5.0	1.9964080	1.9826430		-0.7	+/-50
Dimethylphthalate	A	5.0000	5.1	1.2994310	1.3182810		1.5	+/-50
Acenaphthene	A	5.0000	4.9	1.2333460	1.2078920		-2.1	+/-50
Dibenzofuran	A	5.0000	4.9	1.8187540	1.7776080		-2.3	+/-50
Fluorene	A	5.0000	4.2	1.4308680	1.2106380		-15.4	+/-50
Phenanthrene	A	5.0000	4.9	1.0907130	1.0665230		-2.2	+/-50
Anthracene	A	5.0000	5.1	1.0462760	1.0713640		2.4	+/-50
Fluoranthene	A	5.0000	4.5	1.6072690	1.4483820		-9.9	+/-50
Pyrene	A	5.0000	4.5	1.6487720	1.4876770		-9.8	+/-50
Butylbenzylphthalate	A	5.0000	5.3	0.5292894	0.6406074		7.0	+/-50
Benzo(a)anthracene	A	5.0000	5.1	1.4118770	1.4364190		1.7	+/-50
Chrysene	A	5.0000	5.0	1.3793780	1.3810090		0.1	+/-50
bis(2-Ethylhexyl)phthalate	A	5.0000	4.6	0.5248968	0.5373834		-8.4	+/-50
Benzofluoranthenes, Total	A	10.000	10.1	1.2519020	1.2697280		1.4	+/-50
Benzo(a)pyrene	A	5.0000	5.2	1.1592370	1.2034530		3.8	+/-50
Indeno(1,2,3-cd)pyrene	A	5.0000	4.3	1.4748270	1.2548510		-14.9	+/-50
Dibenzo(a,h)anthracene	A	5.0000	4.4	1.2244340	1.0893740		-11.0	+/-50
Benzo(g,h,i)perylene	A	5.0000	3.8	1.2763410	0.9754493		-23.6	+/-50
2-Fluorophenol	A	7.5000	7.74	1.2096460	1.2489270		3.2	+/-50
Phenol-d5	A	7.5000	7.74	1.5868760	1.6373330		3.2	+/-50
2-Chlorophenol-d4	A	7.5000	7.91	1.3550800	1.4293320		5.5	+/-50
1,2-Dichlorobenzene-d4	A	5.0000	4.97	0.9731556	0.9674619		-0.6	+/-50
Nitrobenzene-d5	A	5.0000	5.08	0.4037447	0.4101772		1.6	+/-50
2-Fluorobiphenyl	A	5.0000	4.78	1.5822890	1.5131630		-4.4	+/-50
2,4,6-Tribromophenol	A	7.5000	7.37	0.1585901	0.1831625		-1.7	+/-50
p-Terphenyl-d14	A	5.0000	4.54	1.2381950	1.1242410		-9.2	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D
Date : 19-MAR-2023 09:03
Client ID:
Sample Info: SLC0504-CCV1

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

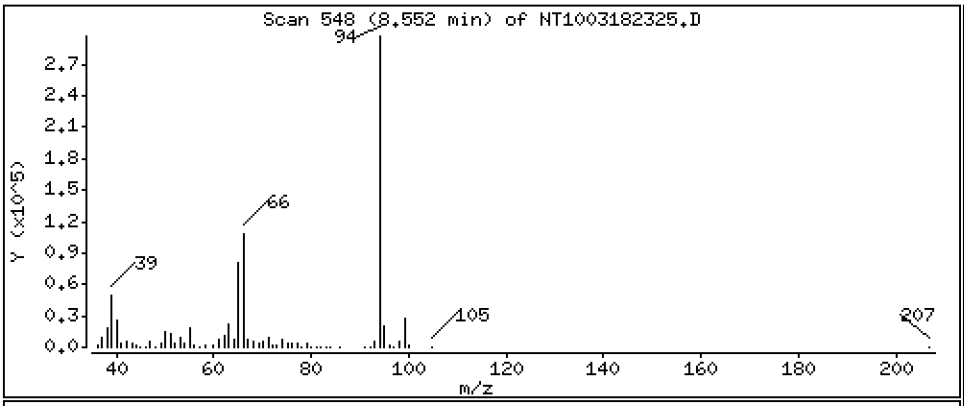
Operator: VTS

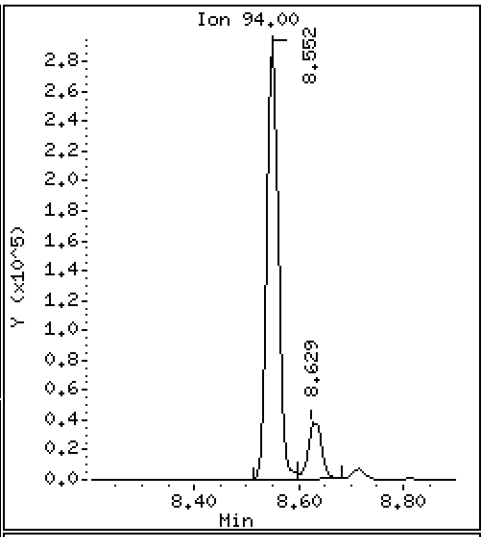
Column phase: ZB-5msi

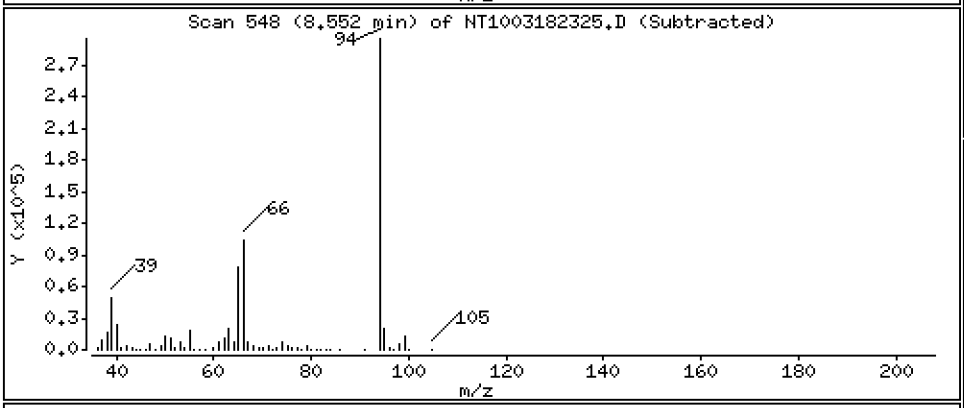
Column diameter: 0.25

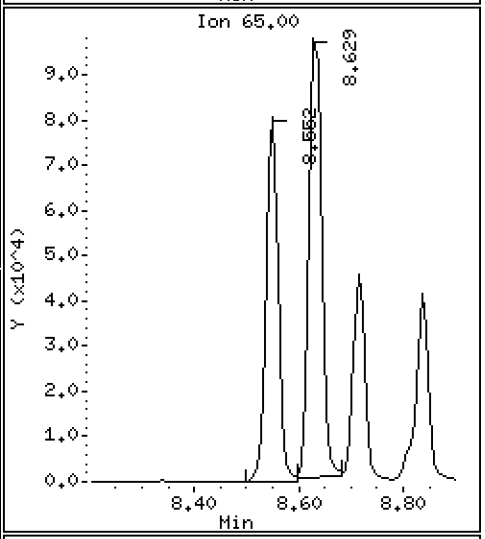
3 Phenol

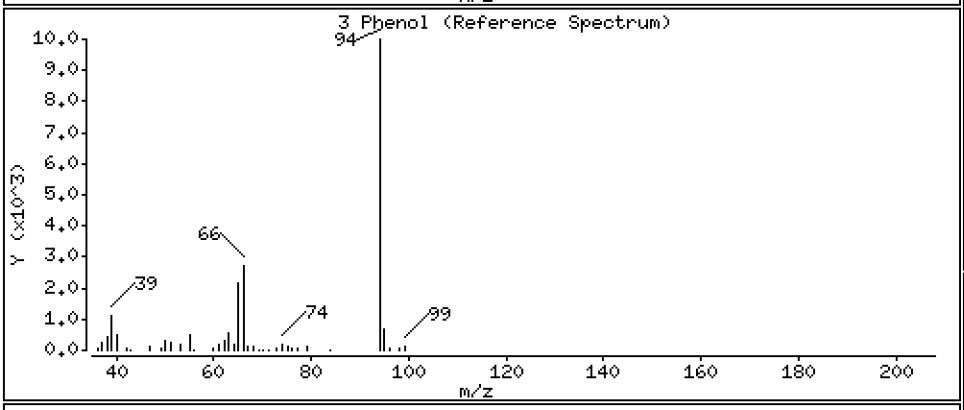
Concentration: 4.969 ug/mL

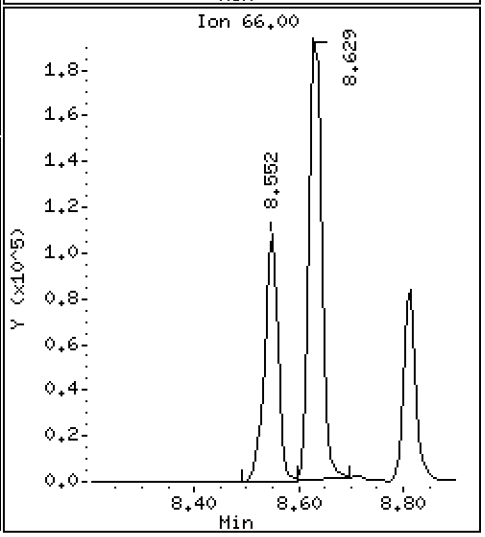


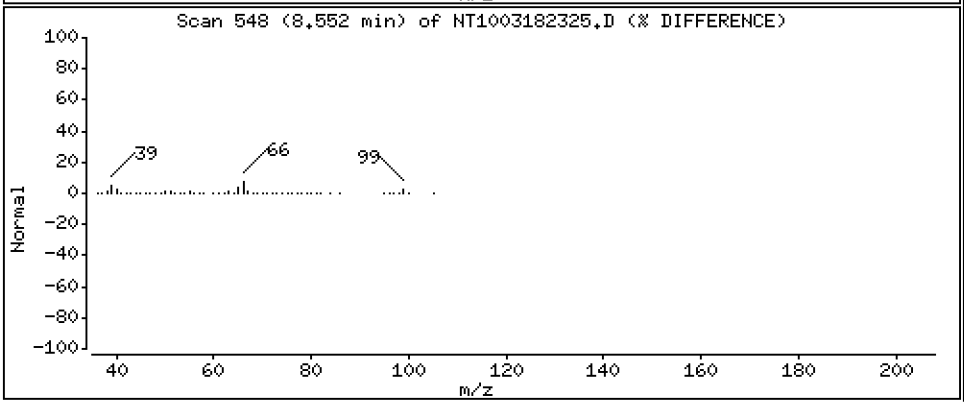












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

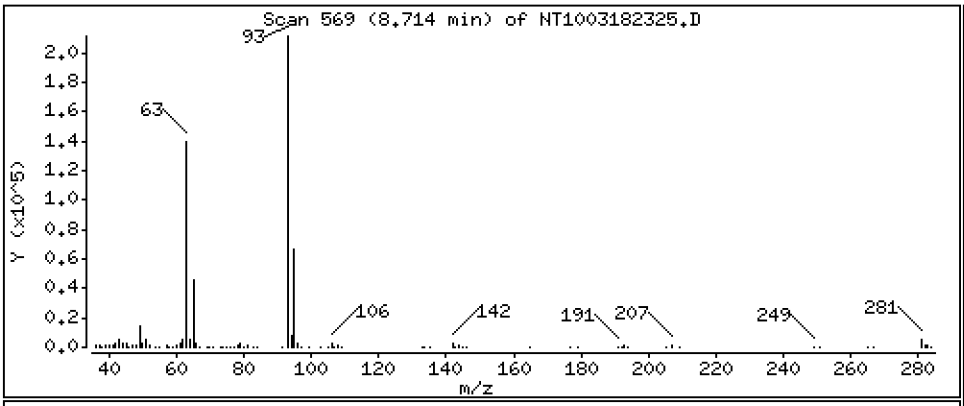
Operator: VTS

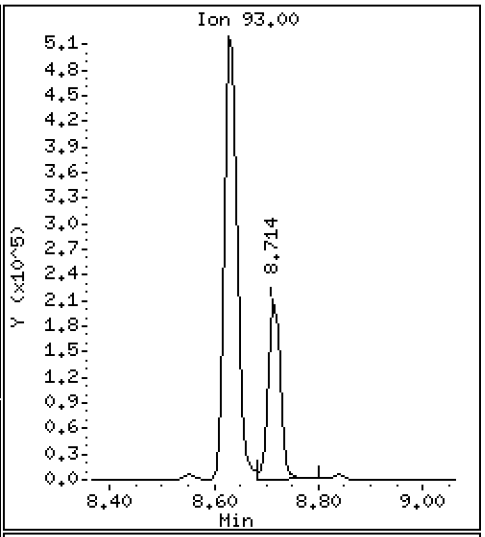
Column phase: ZB-5msi

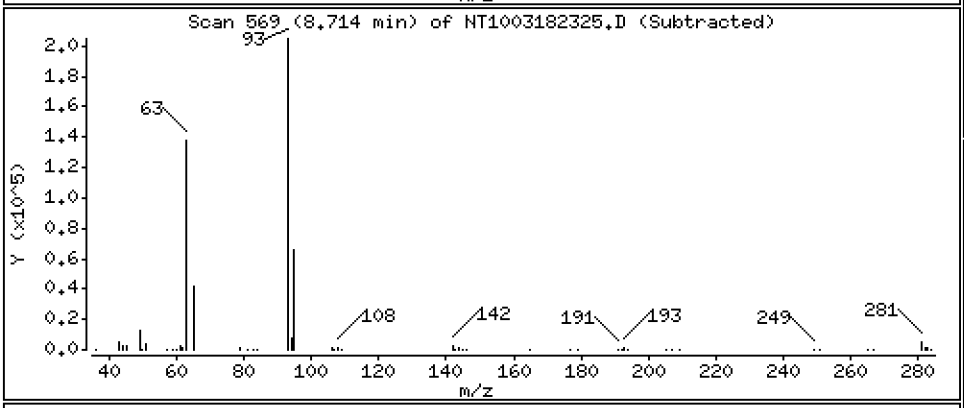
Column diameter: 0.25

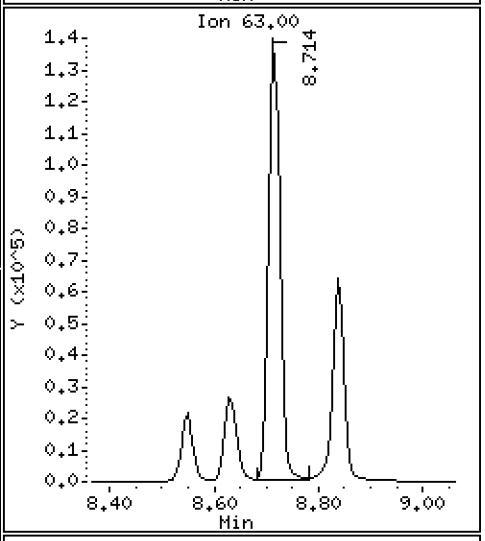
4 Bis(2-Chloroethyl)ether

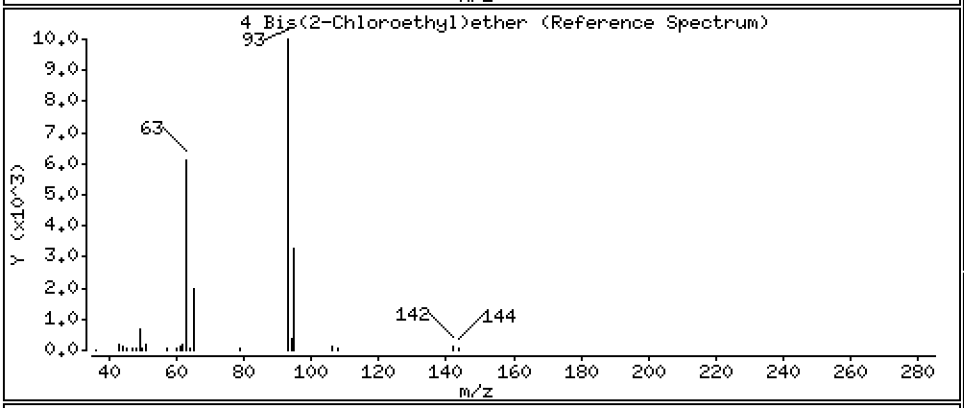
Concentration: 5.000 ug/mL

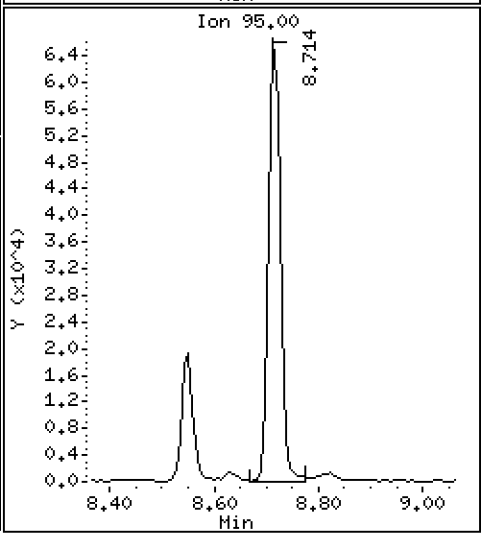


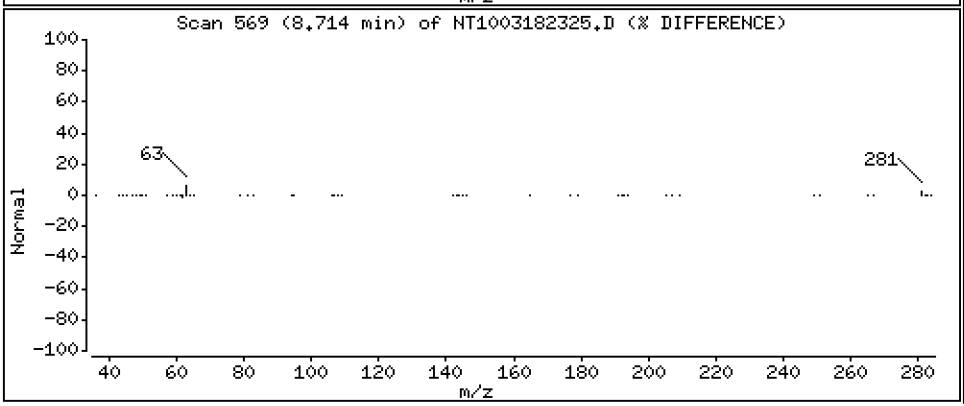












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

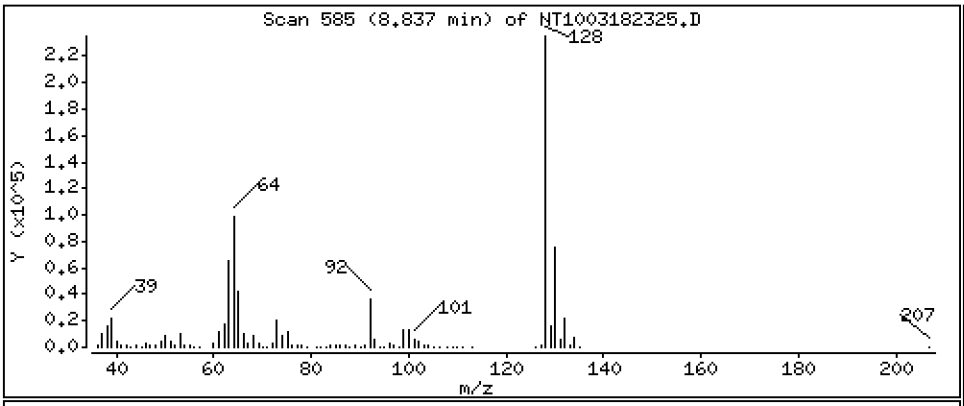
Operator: VTS

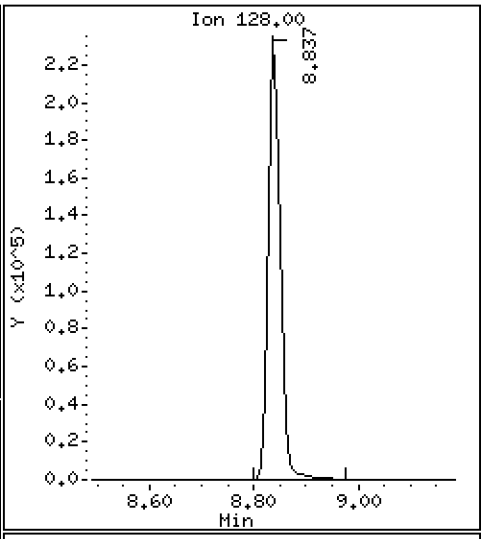
Column phase: ZB-5msi

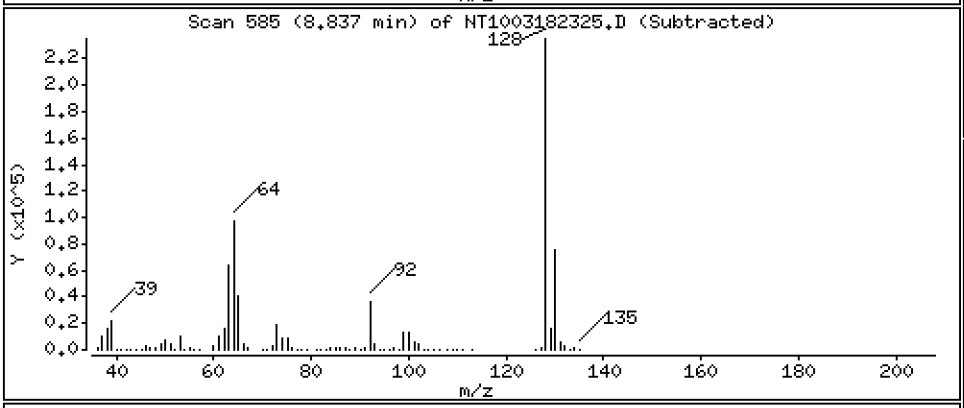
Column diameter: 0.25

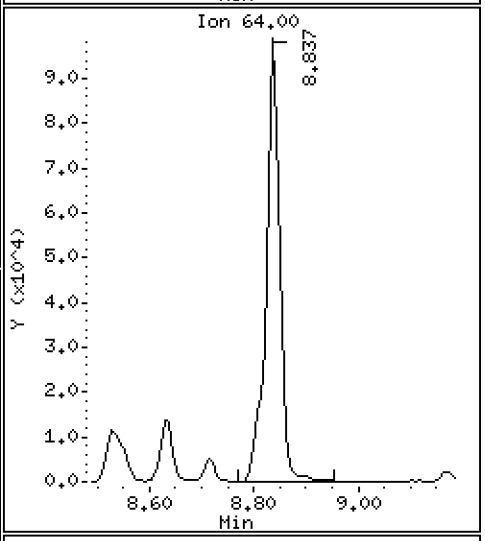
6 2-Chlorophenol

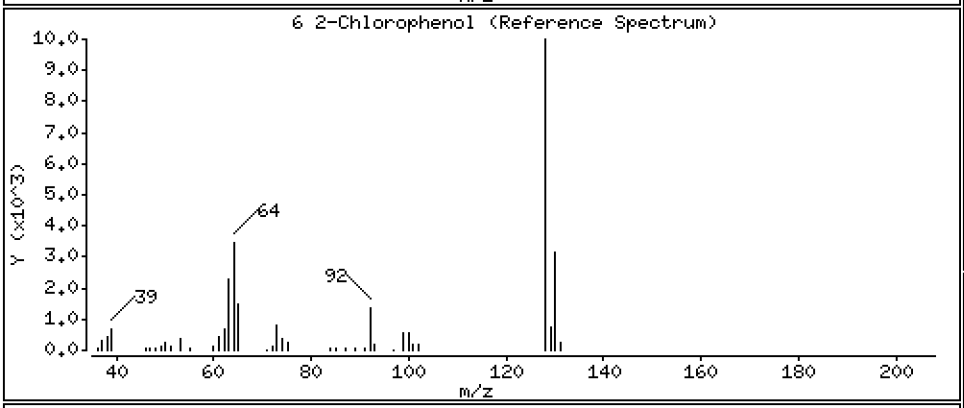
Concentration: 4.982 ug/mL

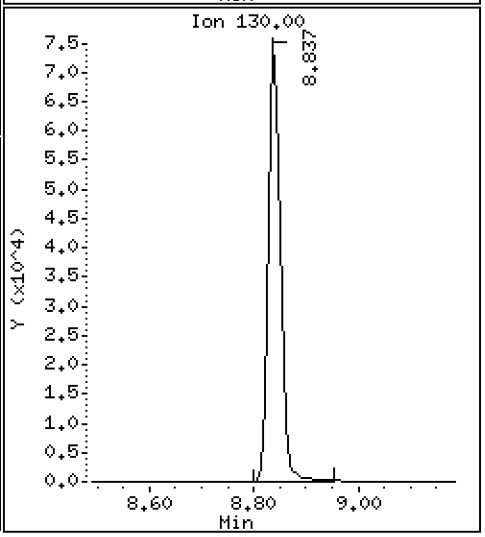


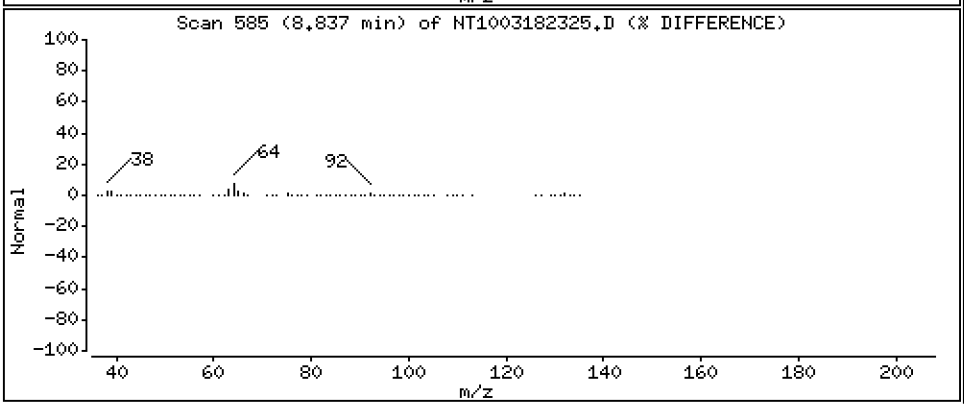












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

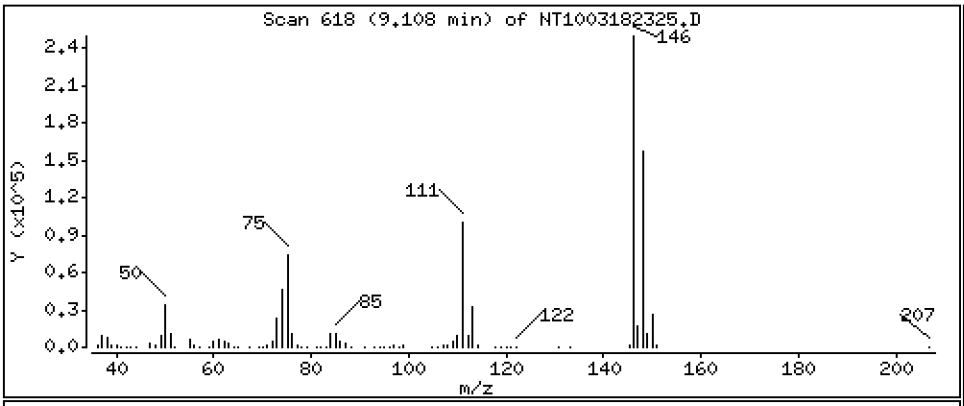
Operator: VTS

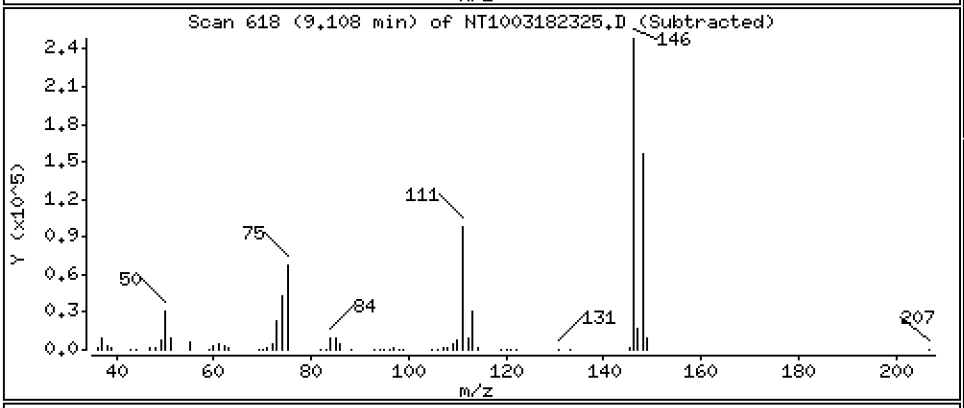
Column phase: ZB-5msi

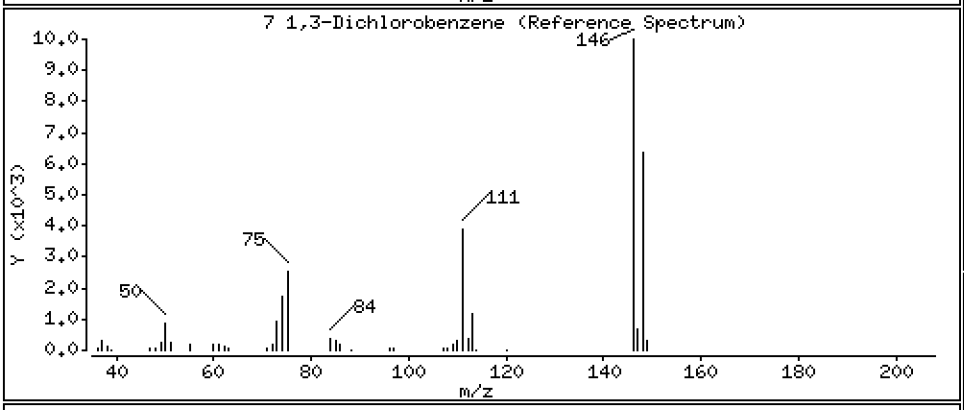
Column diameter: 0.25

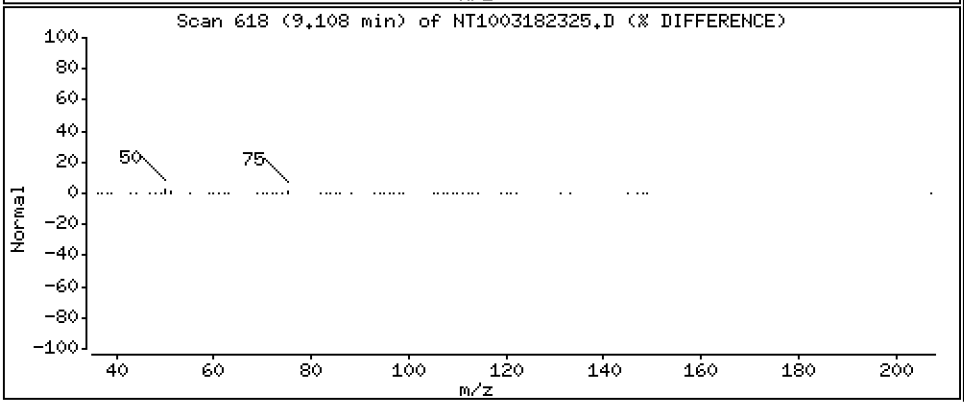
7 1,3-Dichlorobenzene

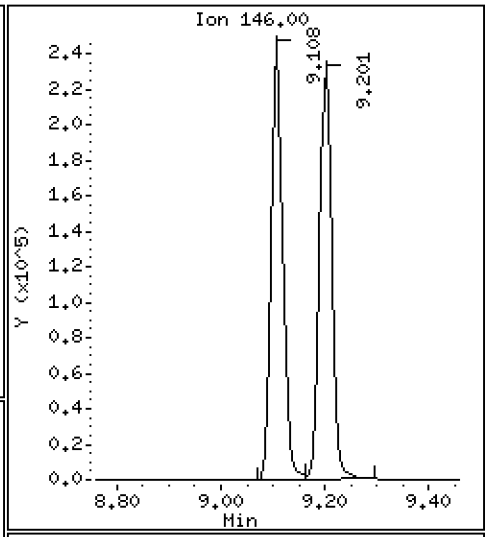
Concentration: 4.864 ug/mL

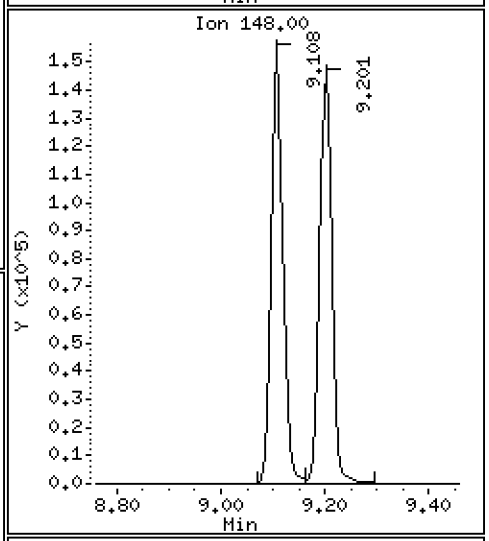


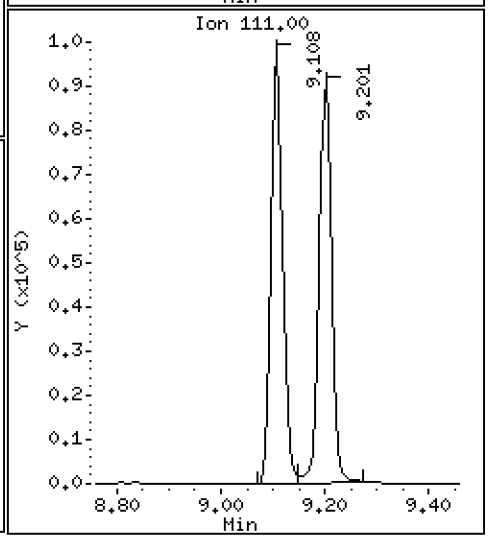












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

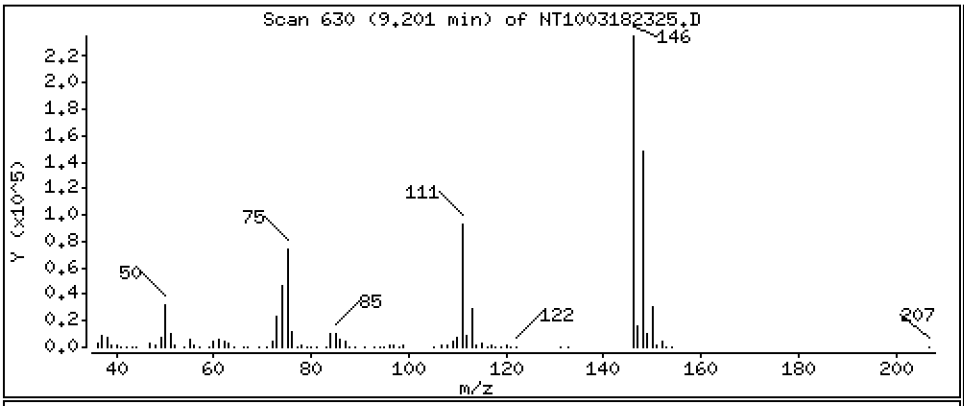
Operator: VTS

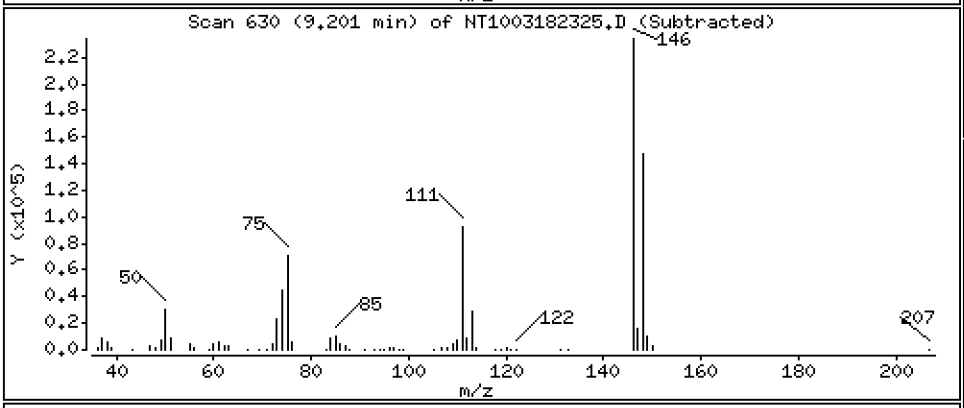
Column phase: ZB-5msi

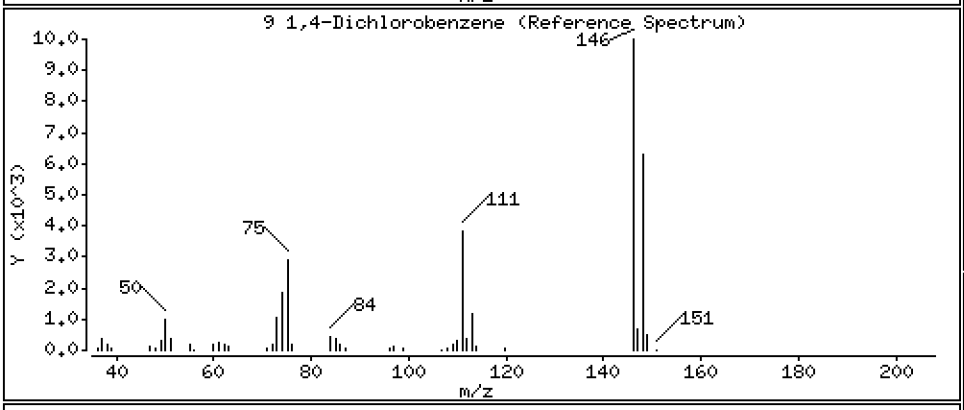
Column diameter: 0.25

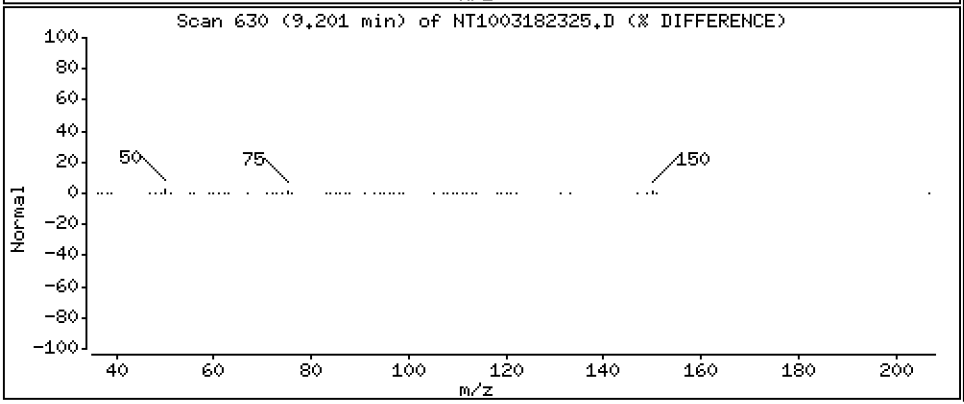
9 1,4-Dichlorobenzene

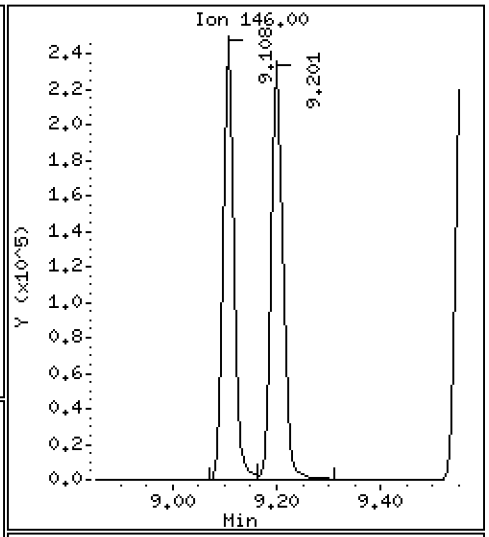
Concentration: 4.915 ug/mL

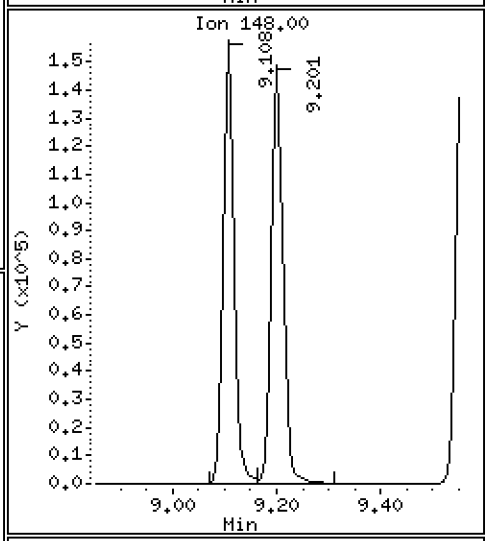


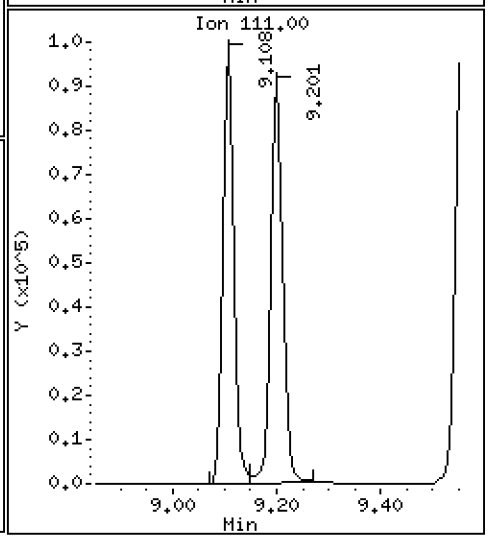












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

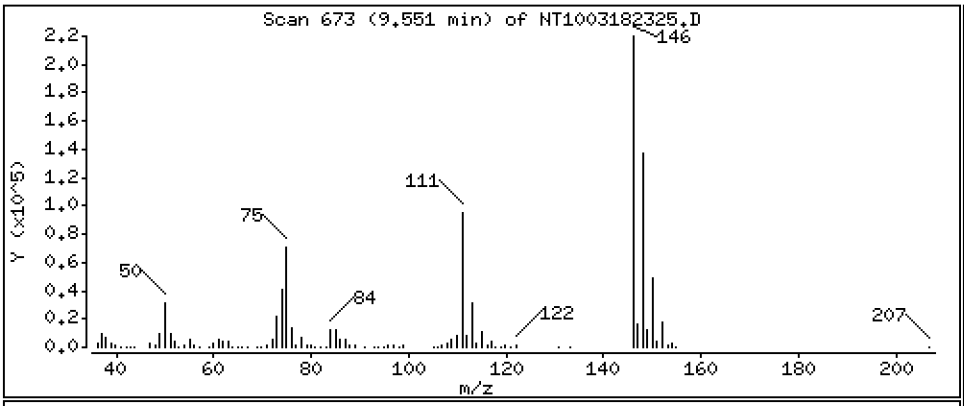
Operator: VTS

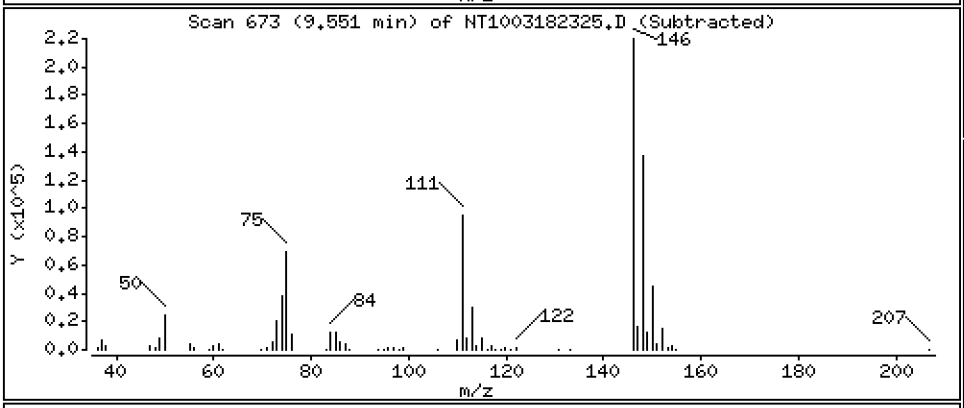
Column phase: ZB-5msi

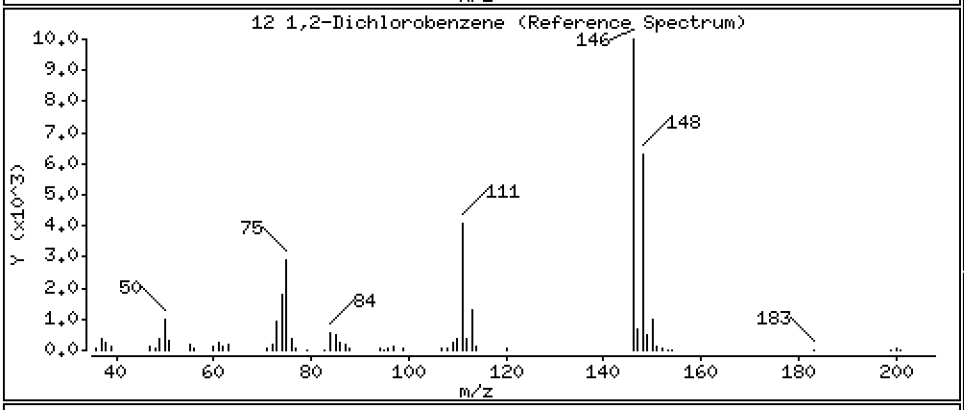
Column diameter: 0.25

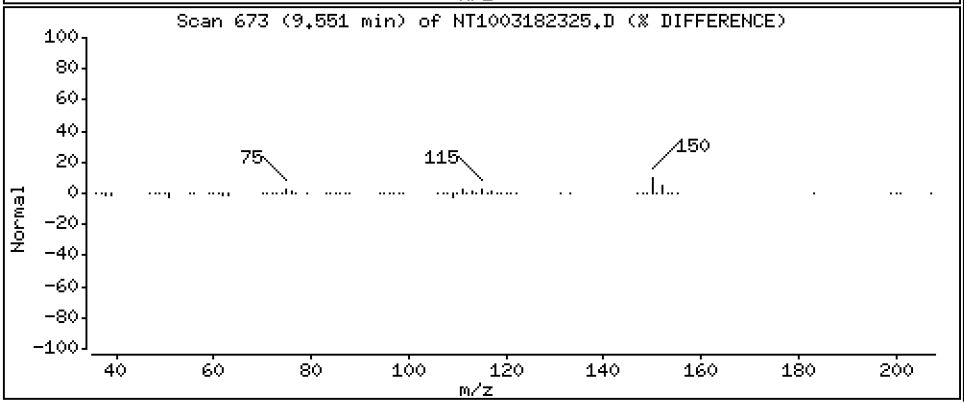
12 1,2-Dichlorobenzene

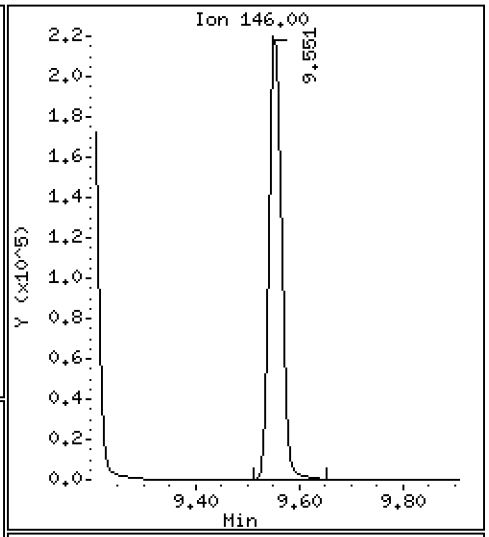
Concentration: 4.858 ug/mL

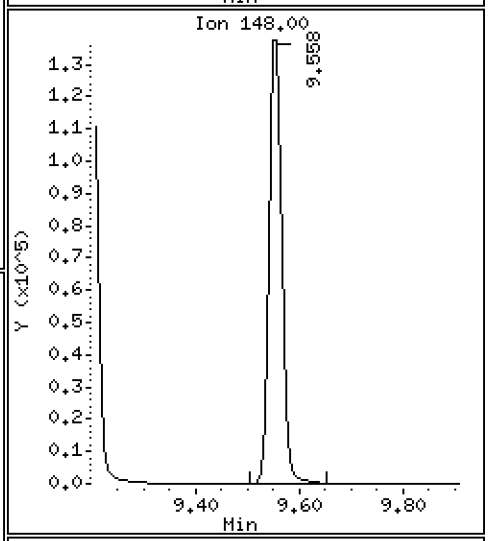


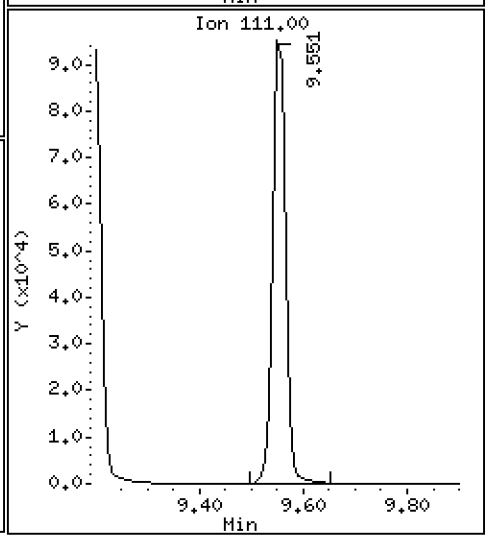












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

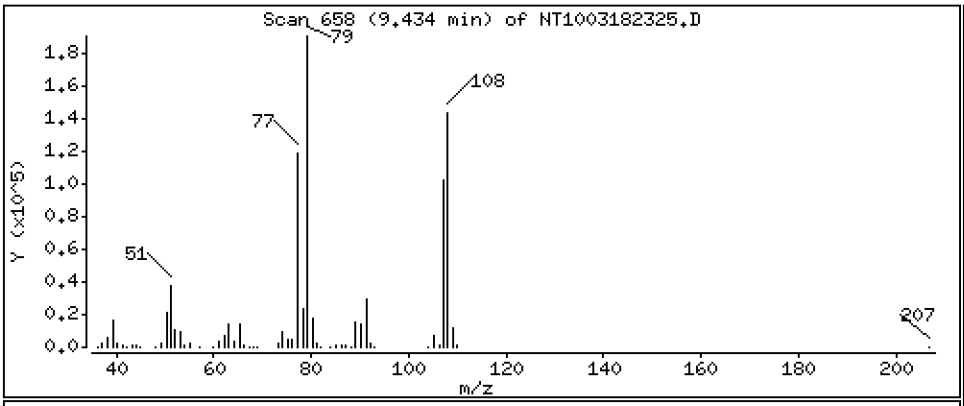
Operator: VTS

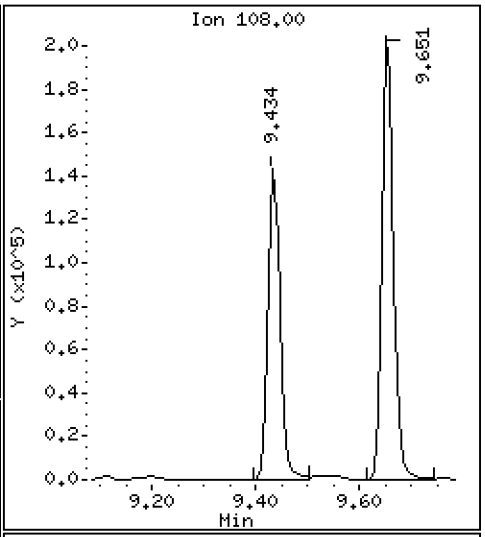
Column phase: ZB-5msi

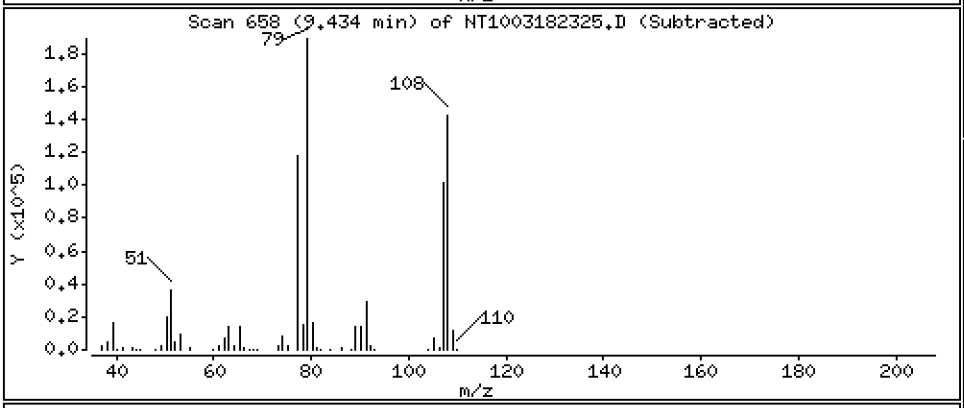
Column diameter: 0.25

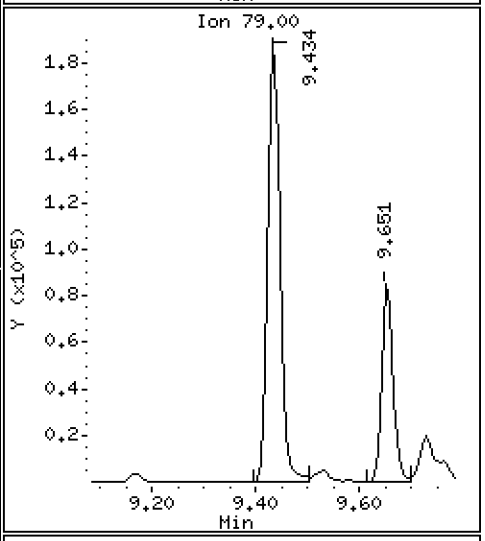
11 Benzyl alcohol

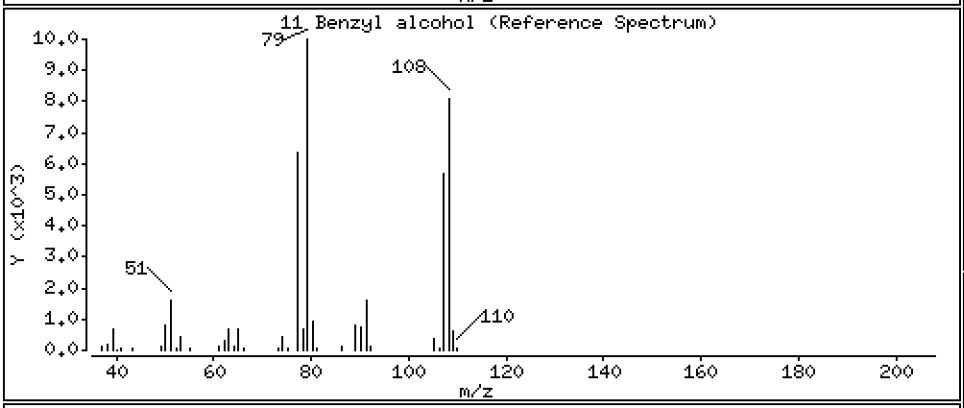
Concentration: 5.504 ug/mL

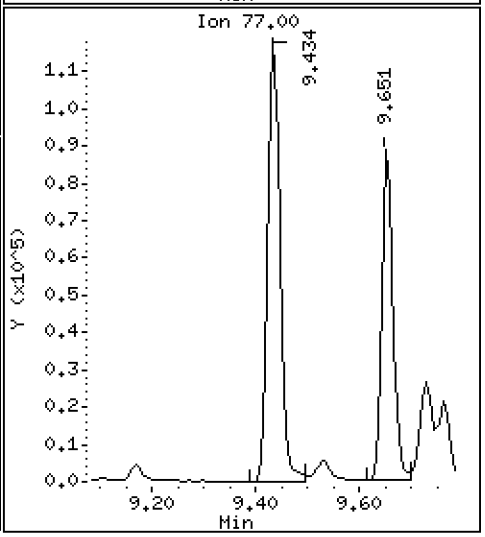


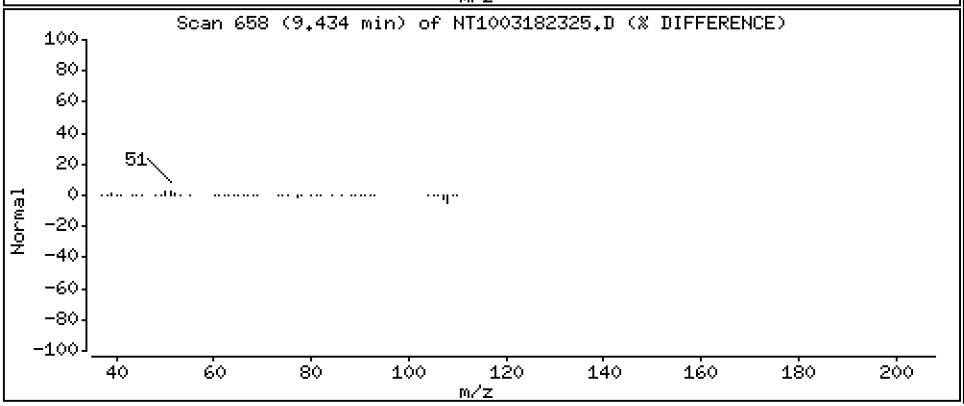












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

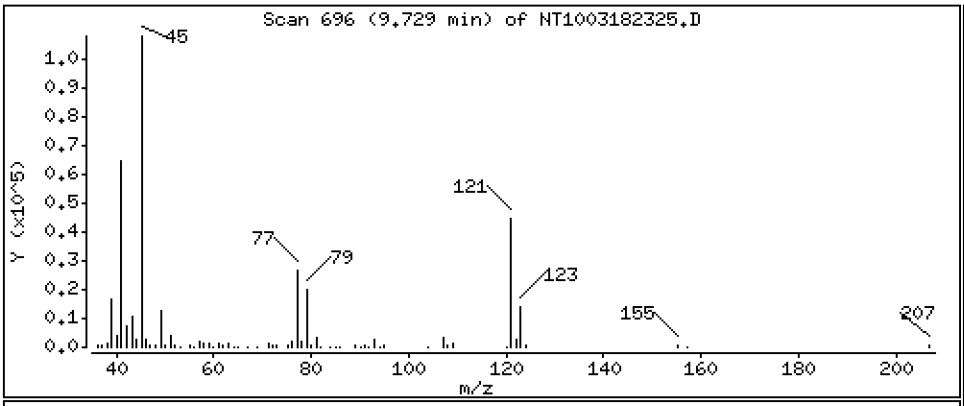
Operator: VTS

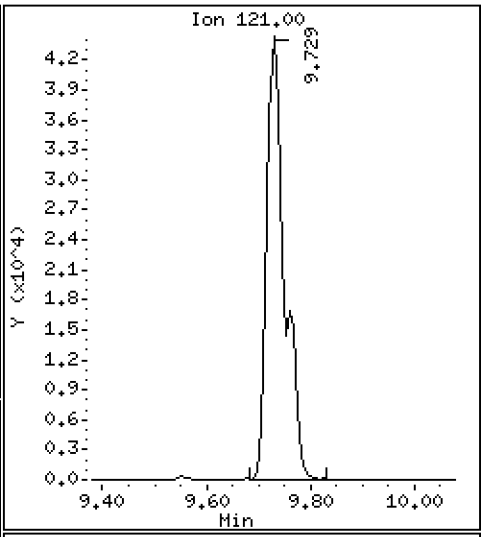
Column phase: ZB-5msi

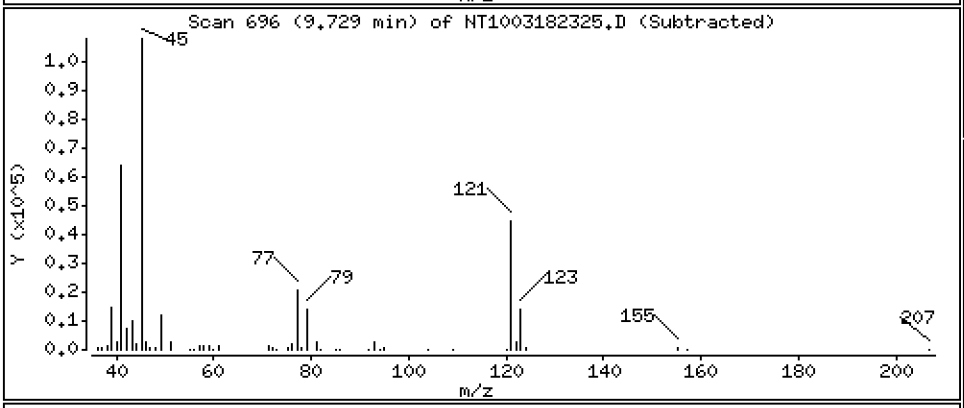
Column diameter: 0.25

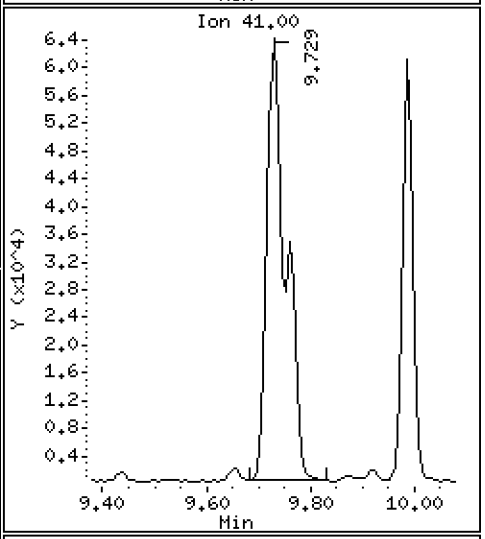
14 2,2'-oxybis(1-Chloropropane)

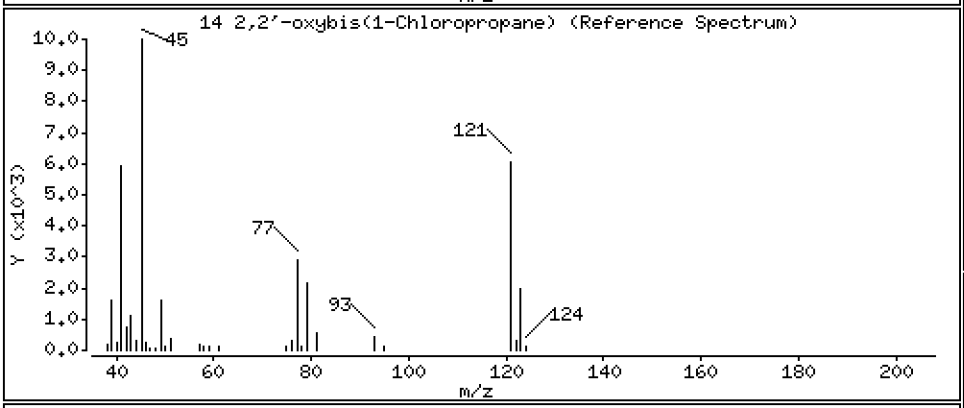
Concentration: 4.819 ug/mL

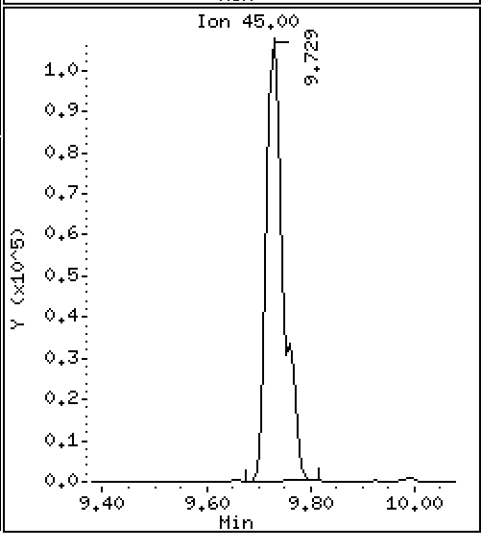


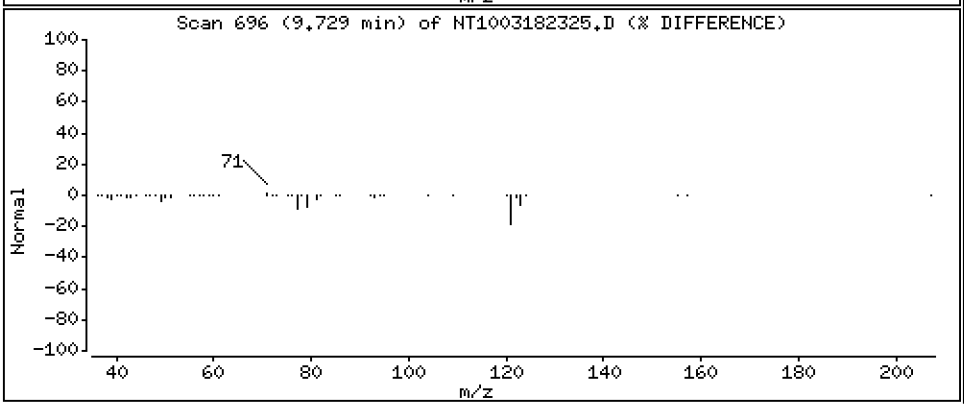












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

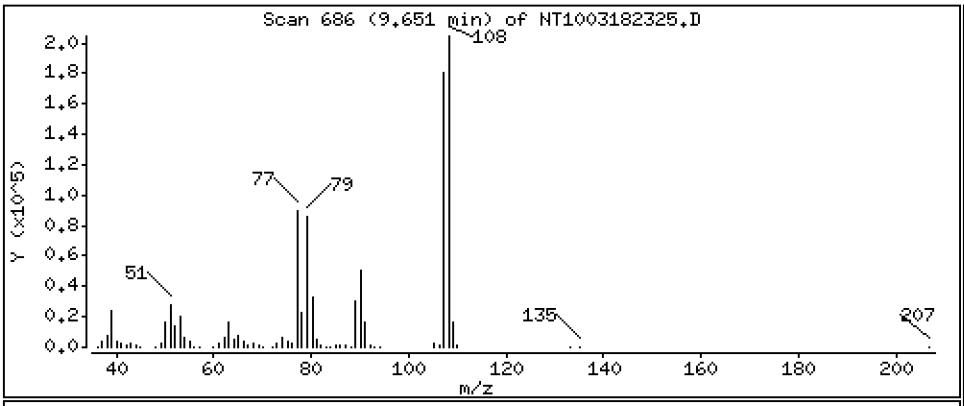
Operator: VTS

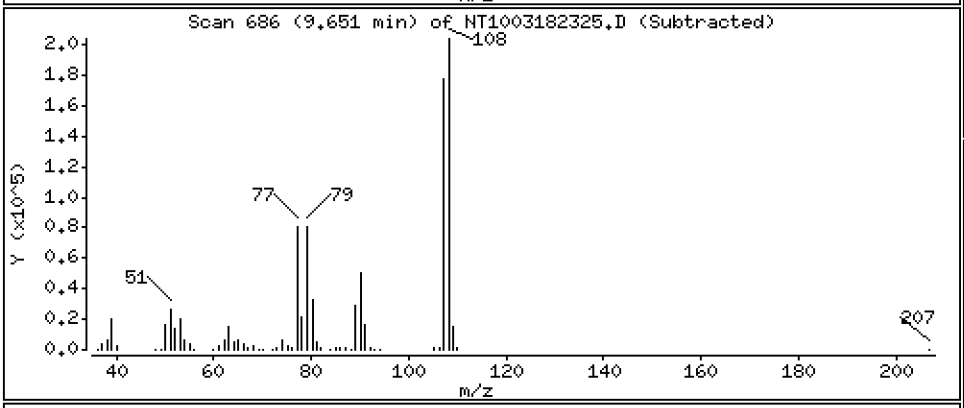
Column phase: ZB-5msi

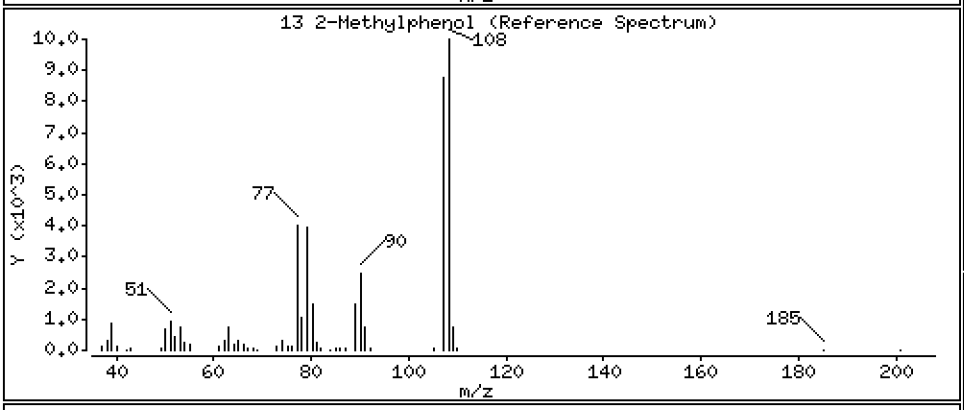
Column diameter: 0.25

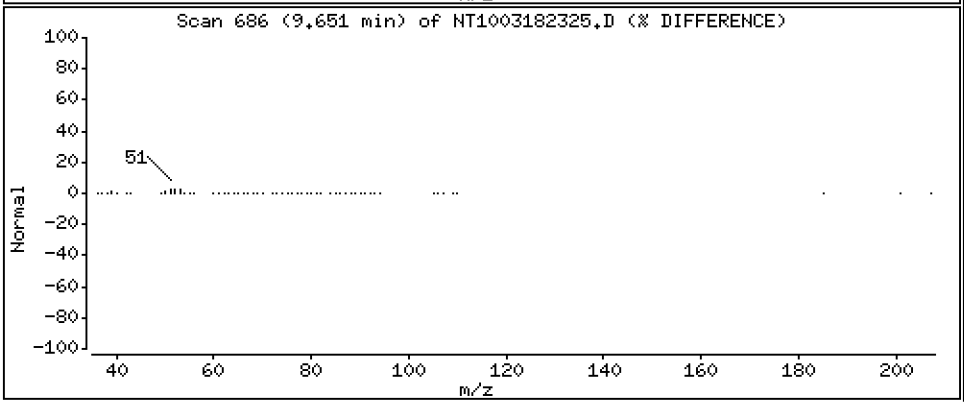
13 2-Methylphenol

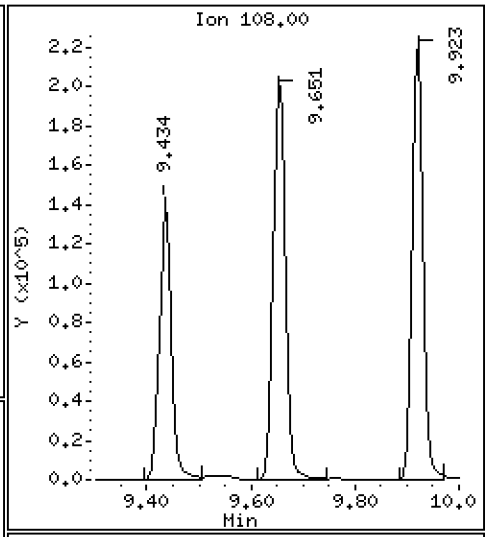
Concentration: 5.036 ug/mL

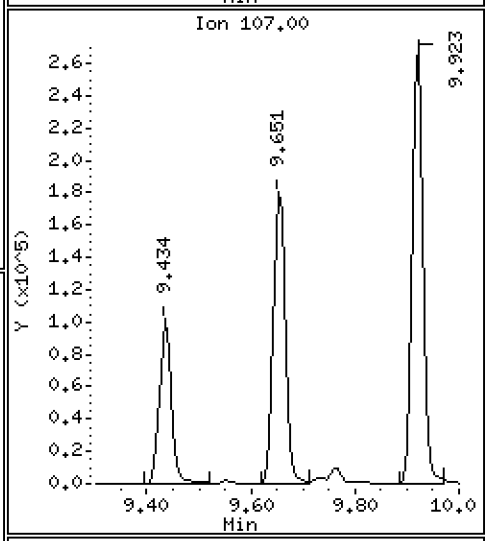


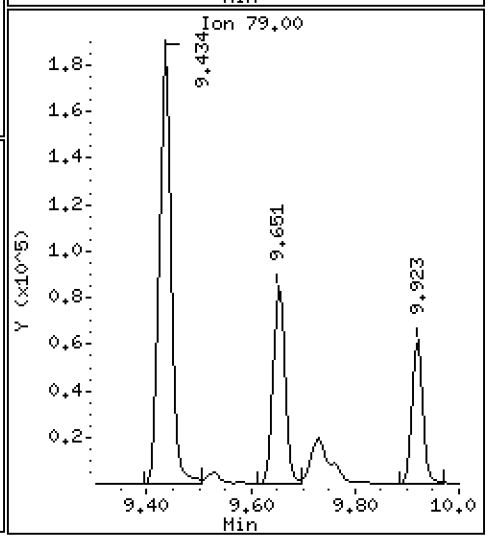












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

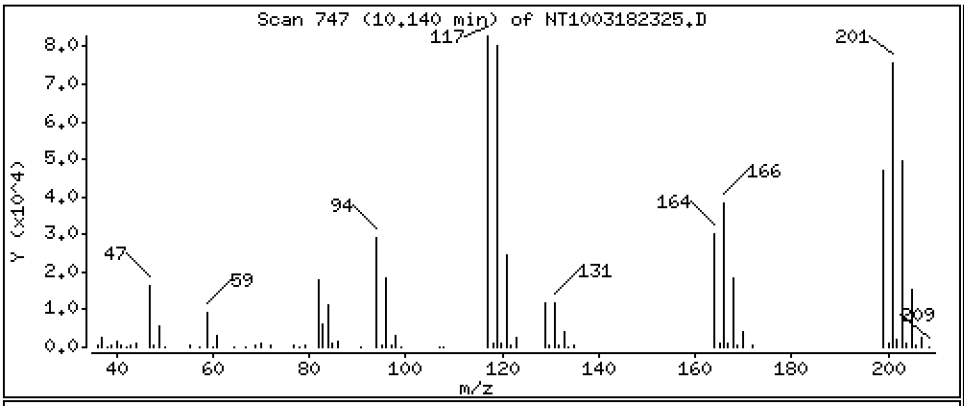
Operator: VTS

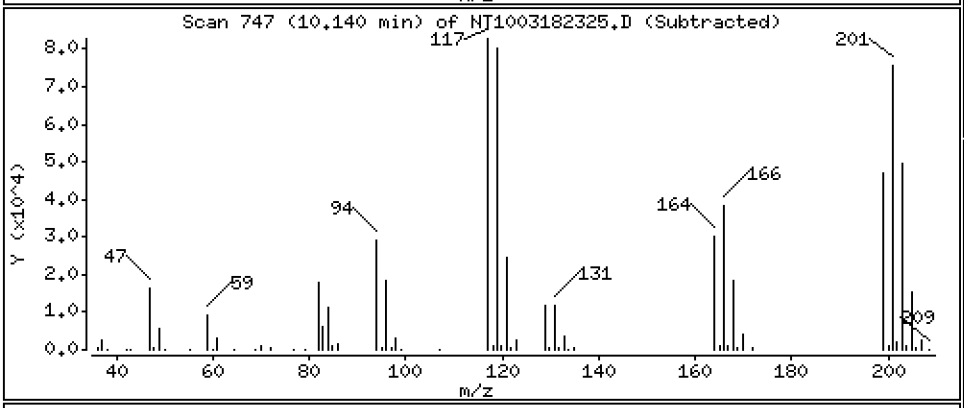
Column phase: ZB-5msi

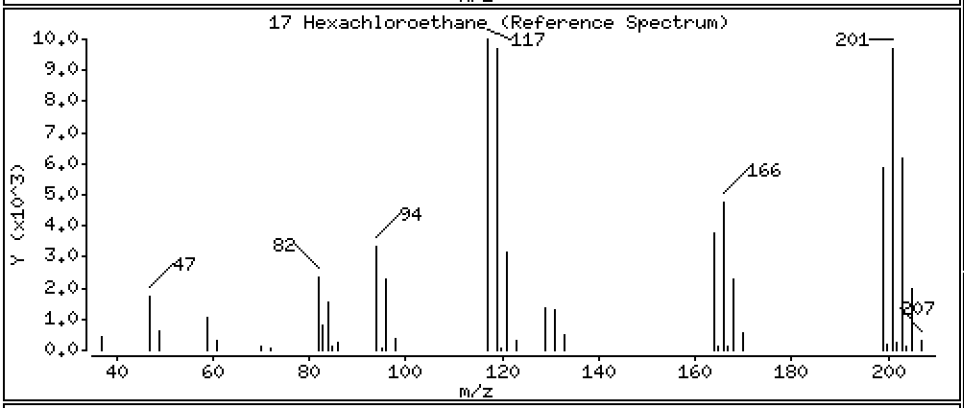
Column diameter: 0.25

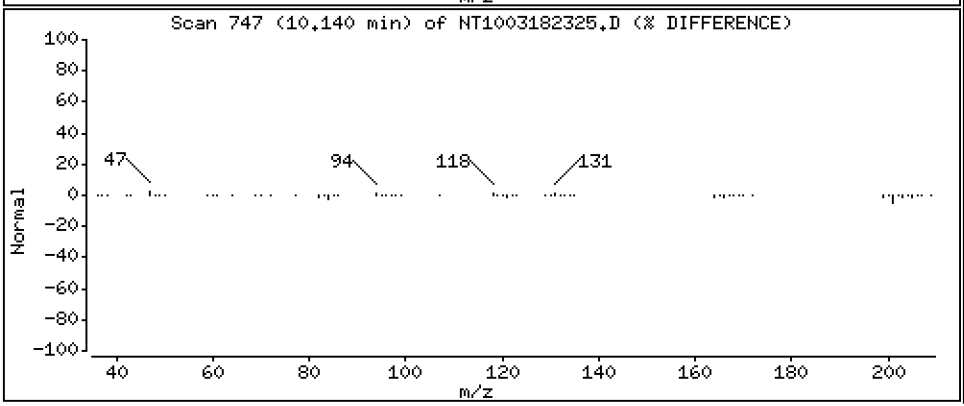
17 Hexachloroethane

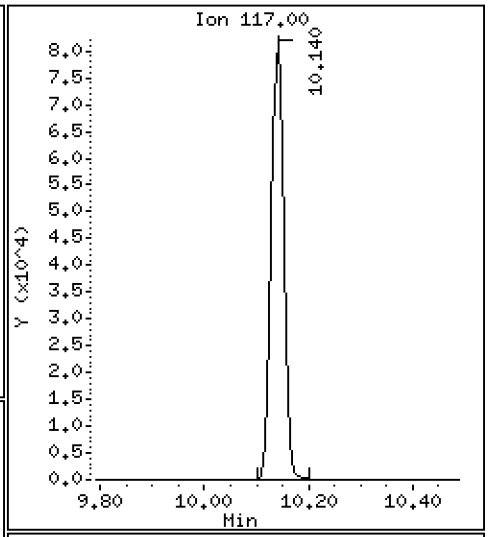
Concentration: 4.289 ug/mL

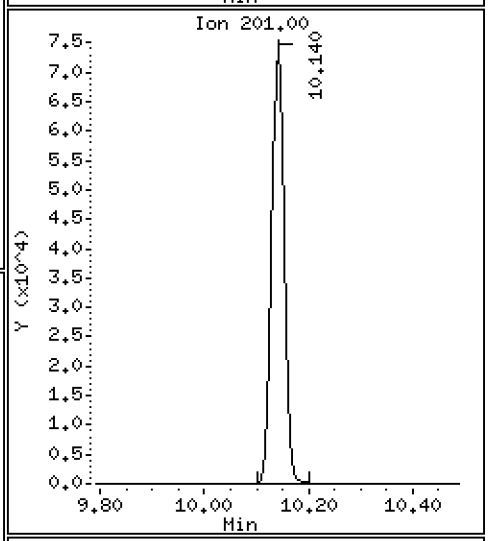


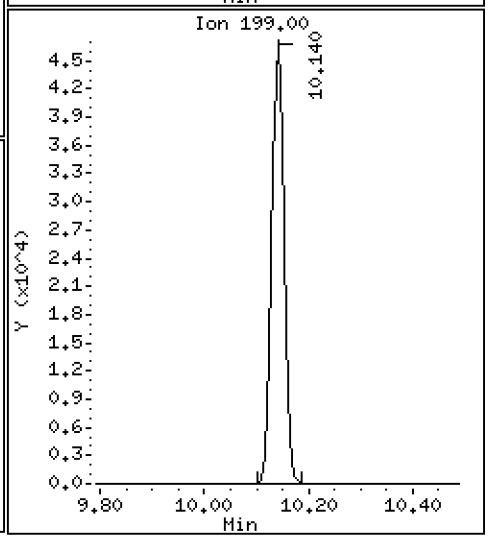












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

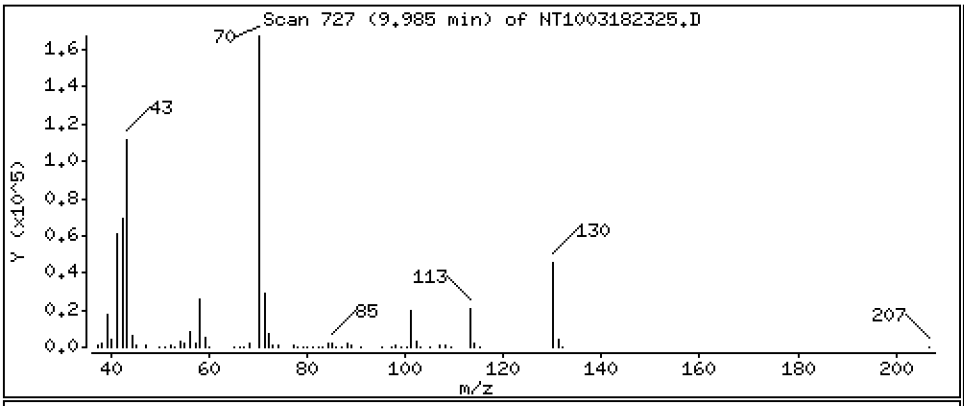
Operator: VTS

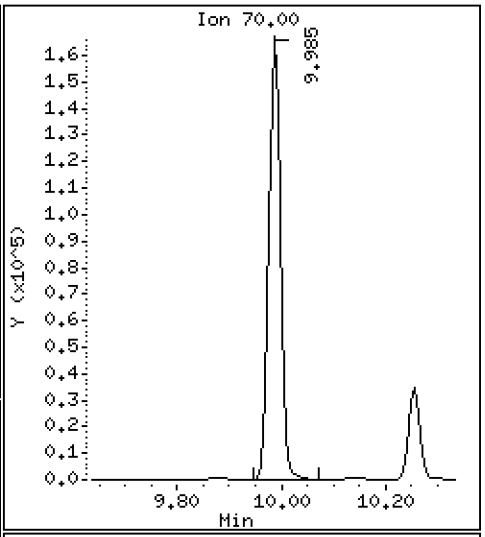
Column phase: ZB-5msi

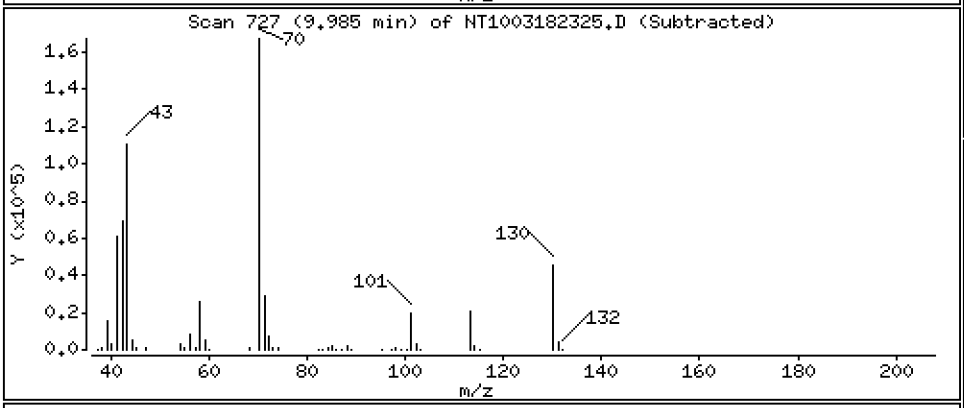
Column diameter: 0.25

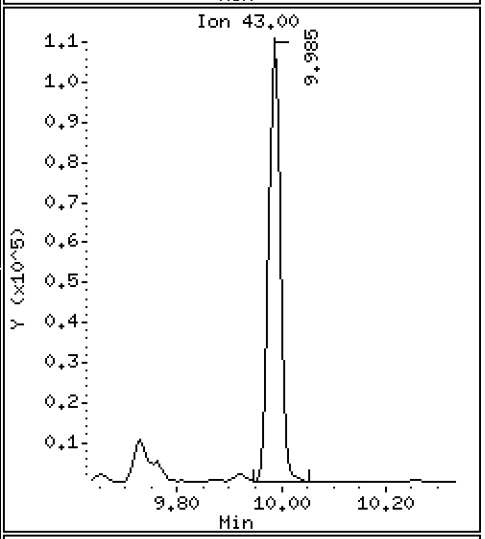
16 N-Nitroso-di-n-propylamine

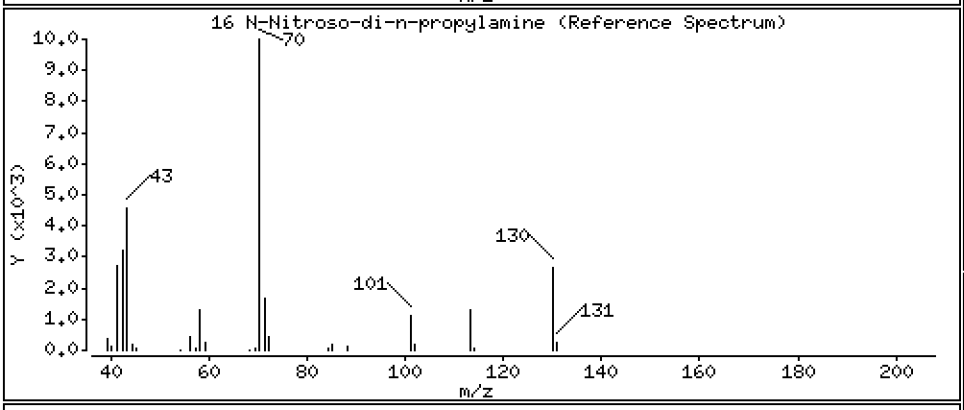
Concentration: 5.015 ug/mL

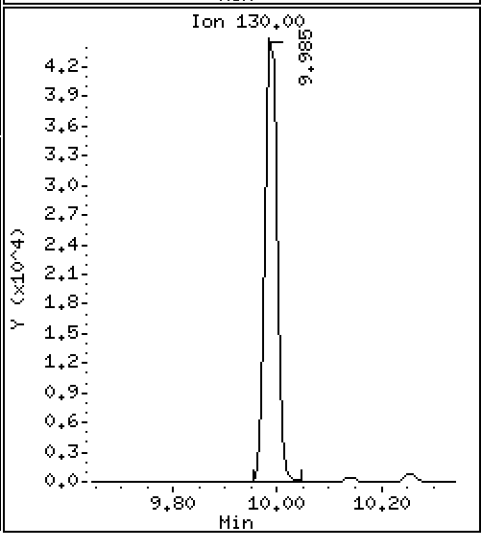


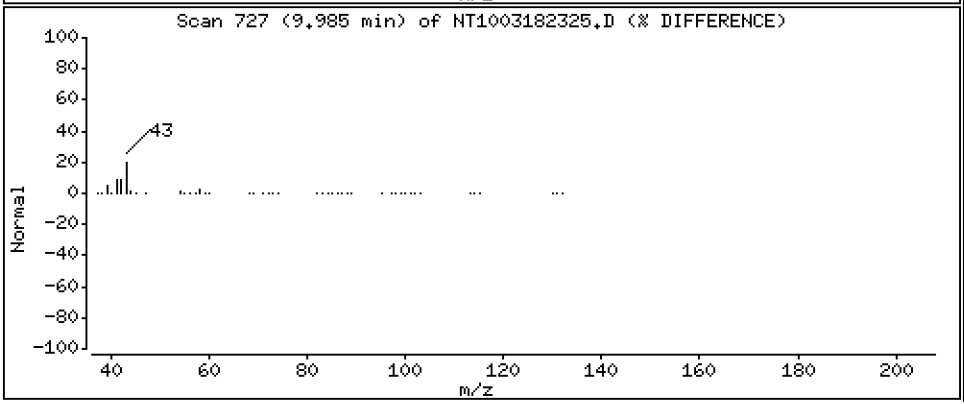












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

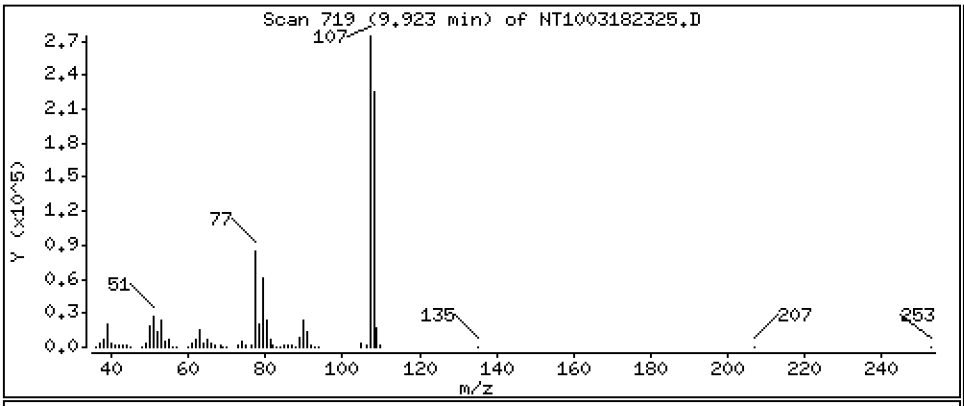
Operator: VTS

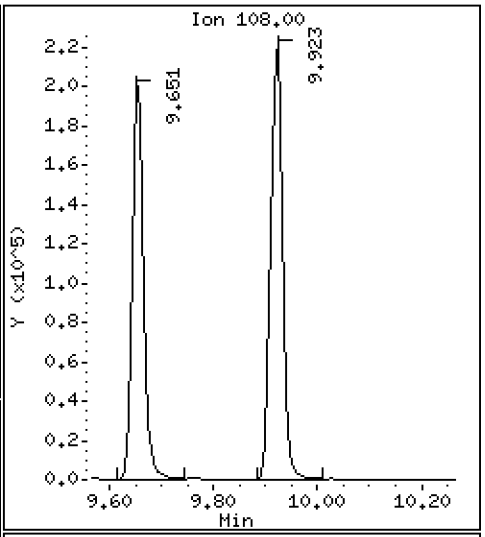
Column phase: ZB-5msi

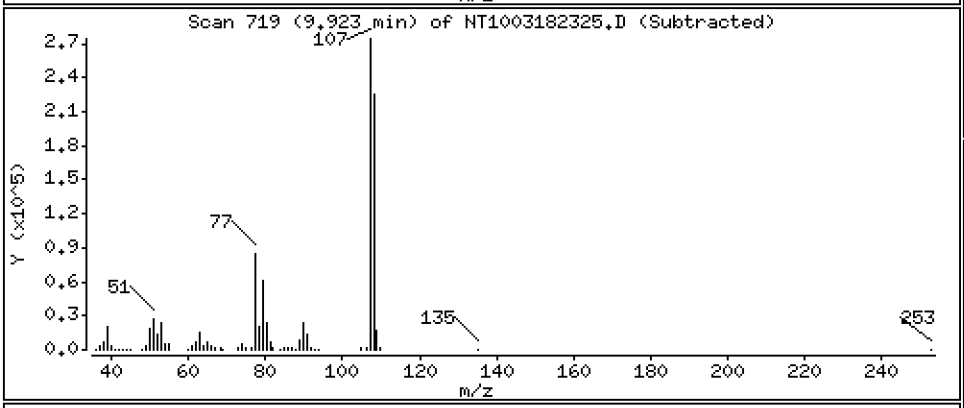
Column diameter: 0.25

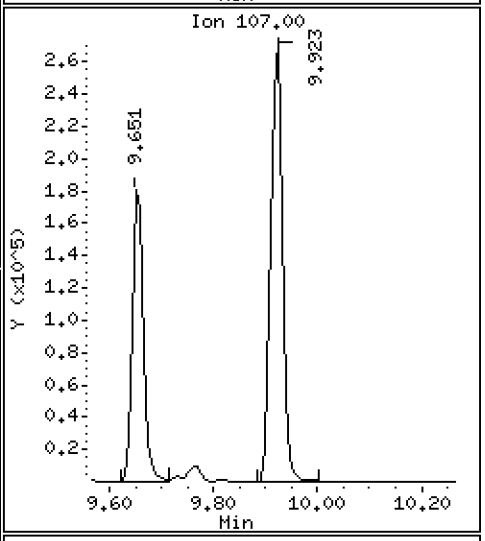
15 4-Methylphenol

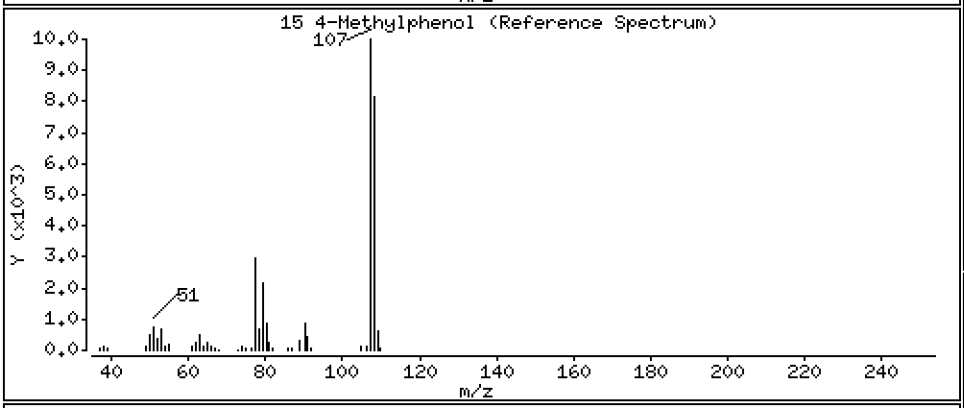
Concentration: 5.214 ug/mL

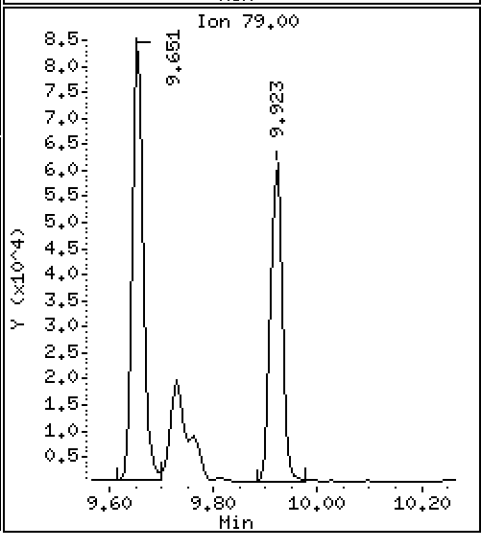


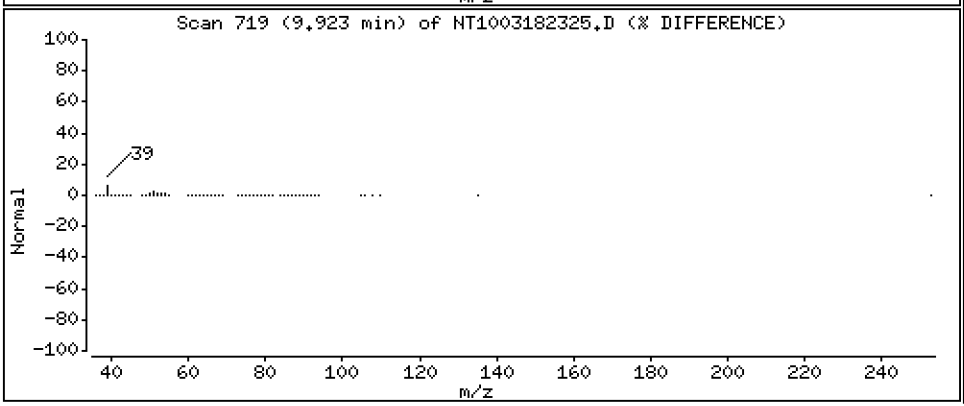












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

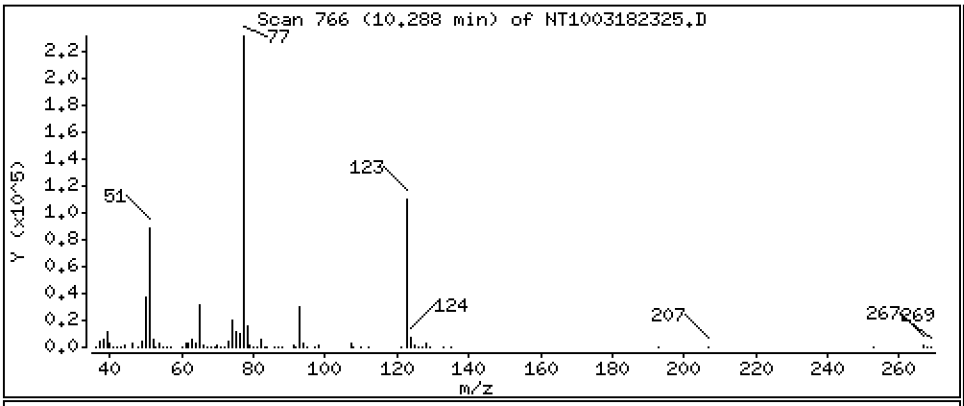
Operator: VTS

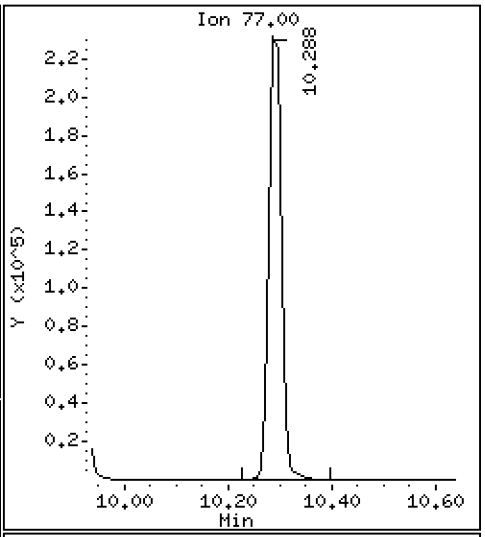
Column phase: ZB-5msi

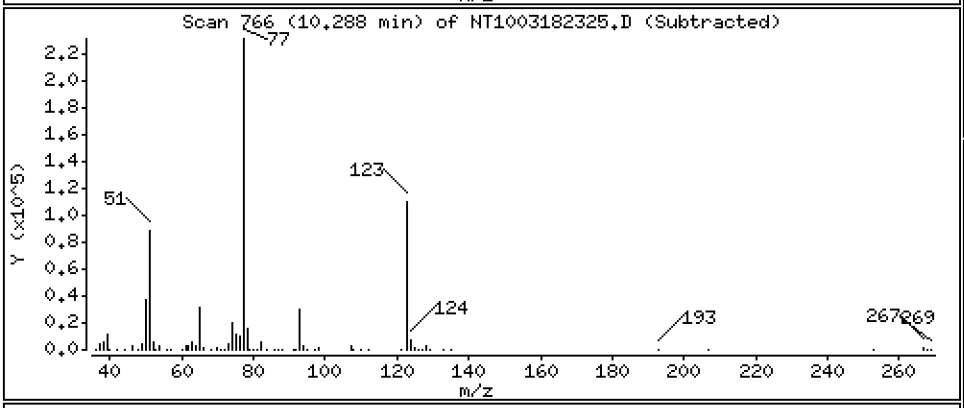
Column diameter: 0.25

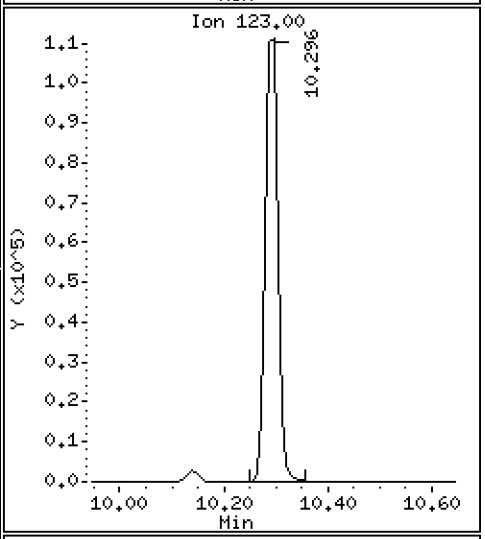
19 Nitrobenzene

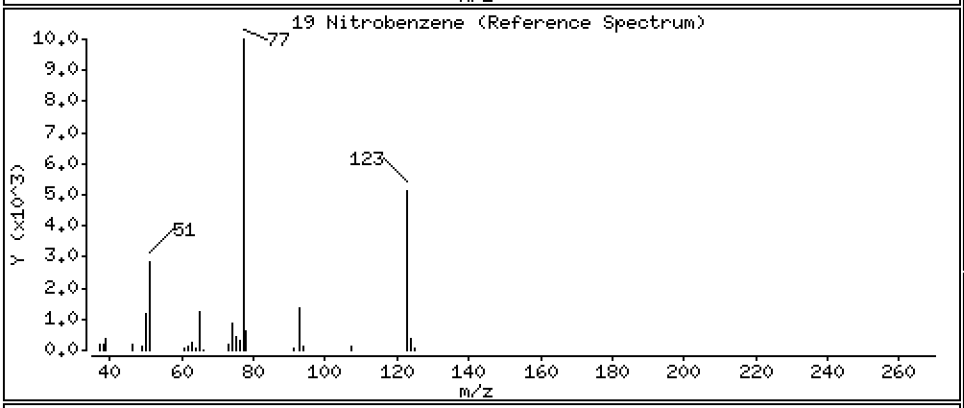
Concentration: 4.870 ug/mL

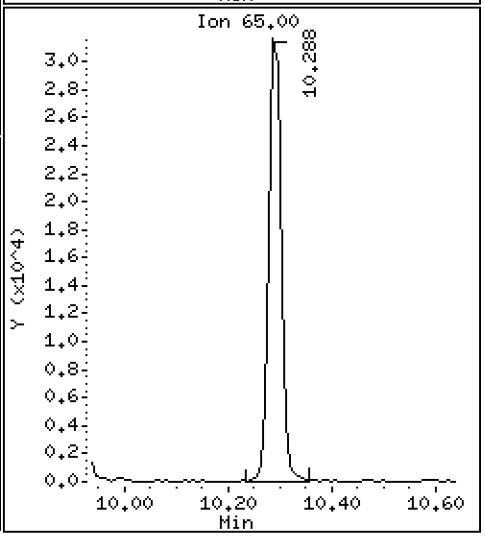


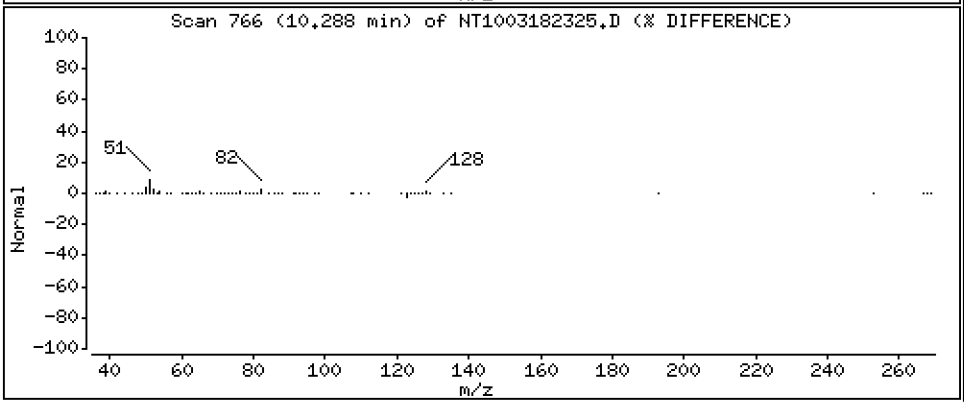












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

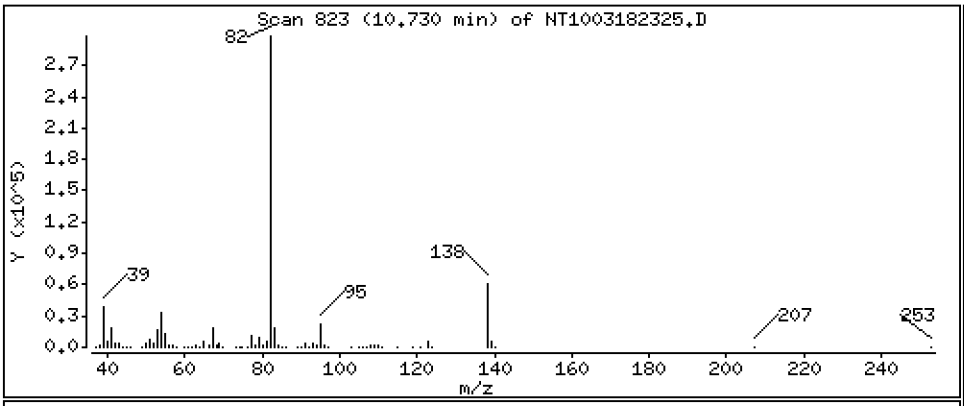
Operator: VTS

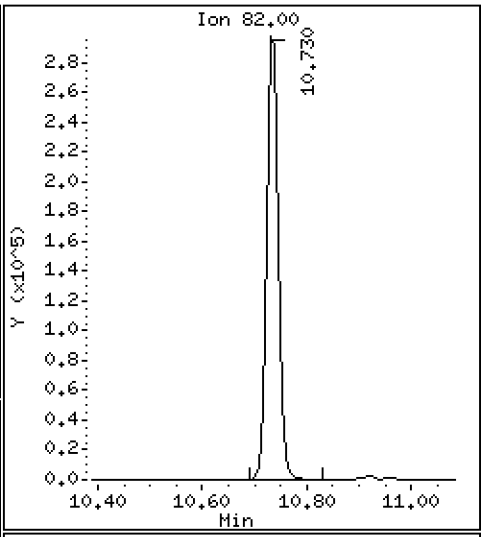
Column phase: ZB-5msi

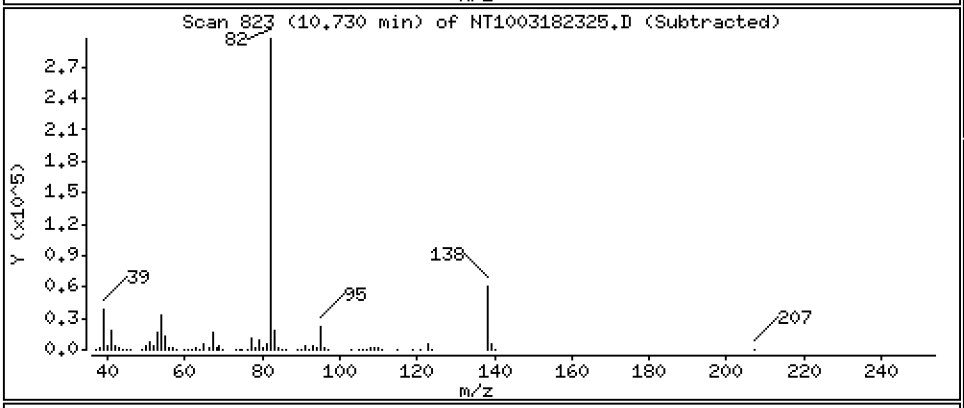
Column diameter: 0.25

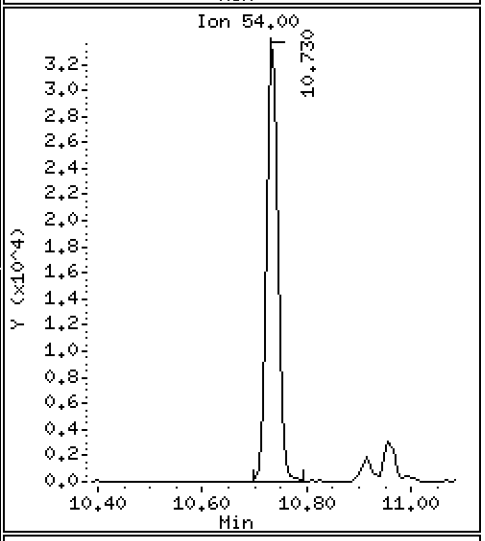
20 Isophorone

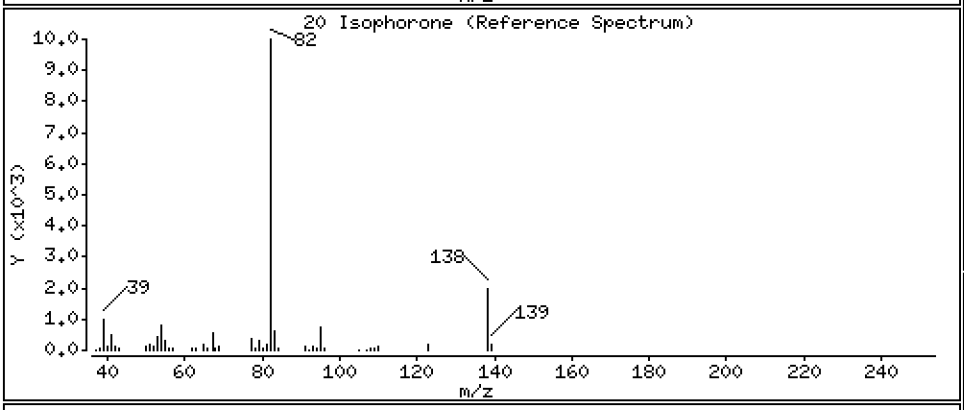
Concentration: 5.068 ug/mL

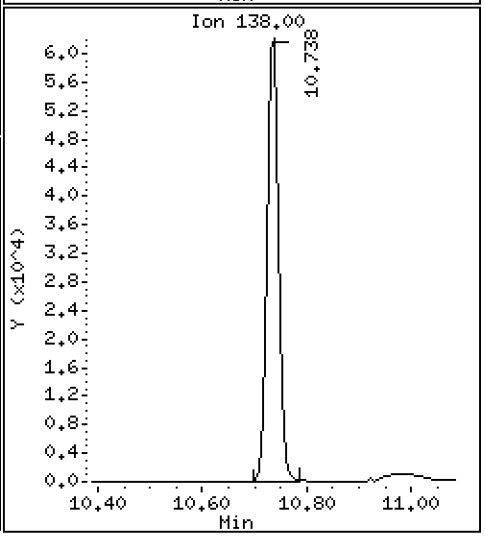


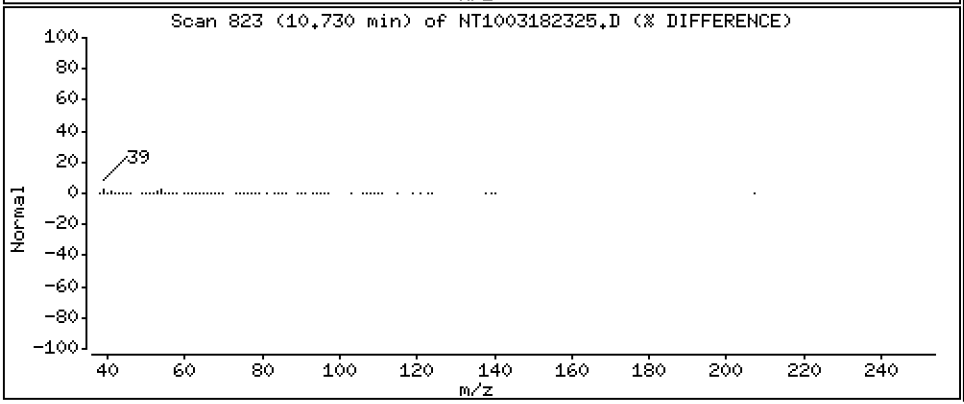












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

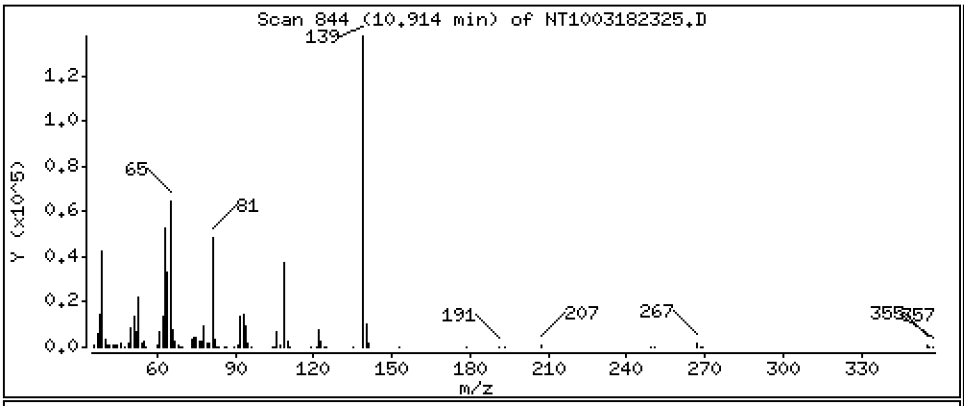
Operator: VTS

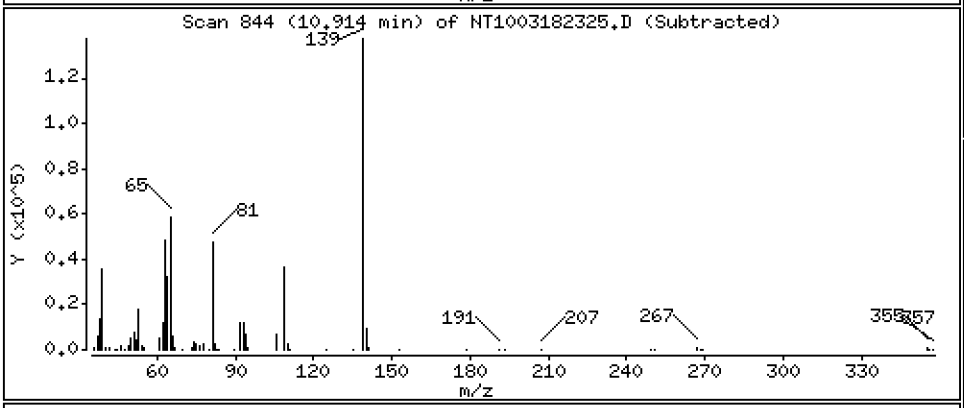
Column phase: ZB-5msi

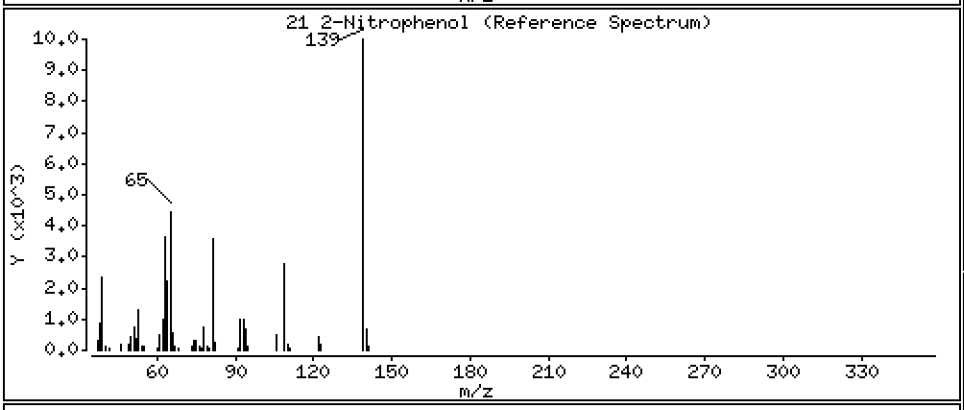
Column diameter: 0.25

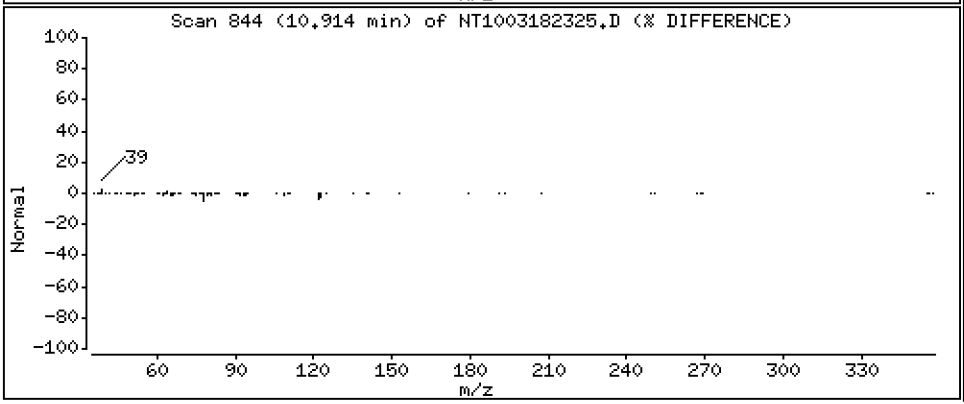
21 2-Nitrophenol

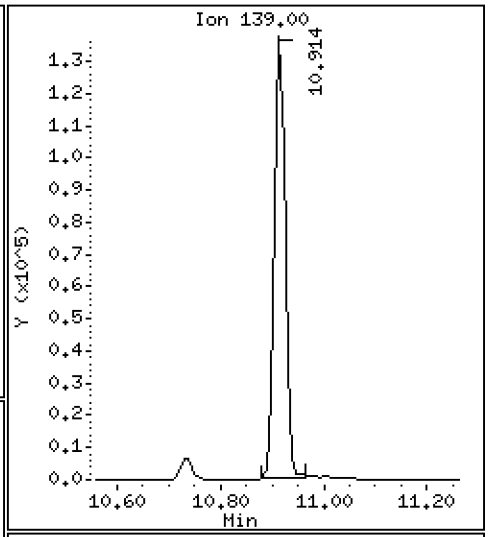
Concentration: 5.491 ug/mL

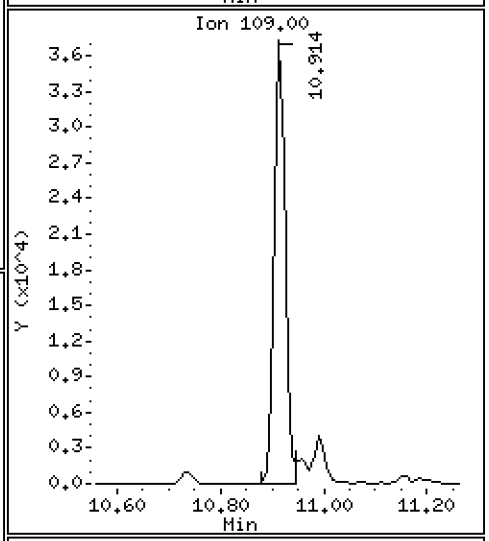


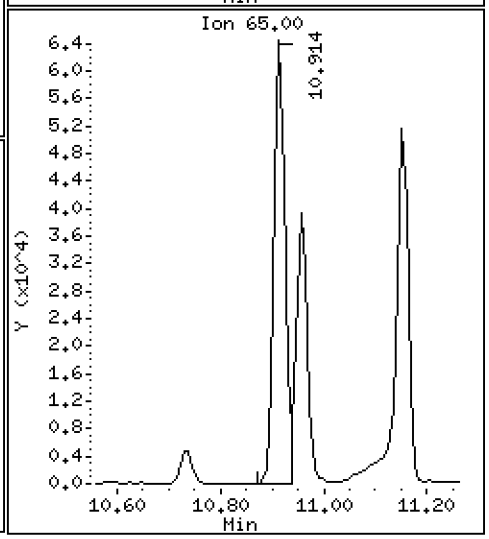












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

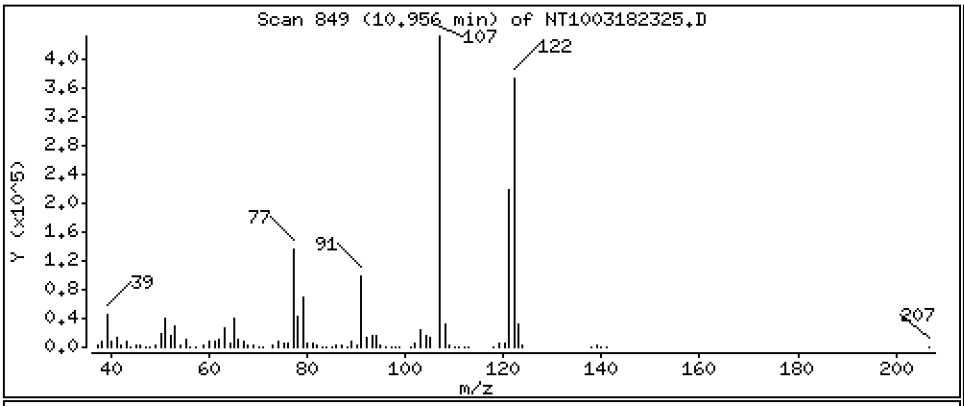
Operator: VTS

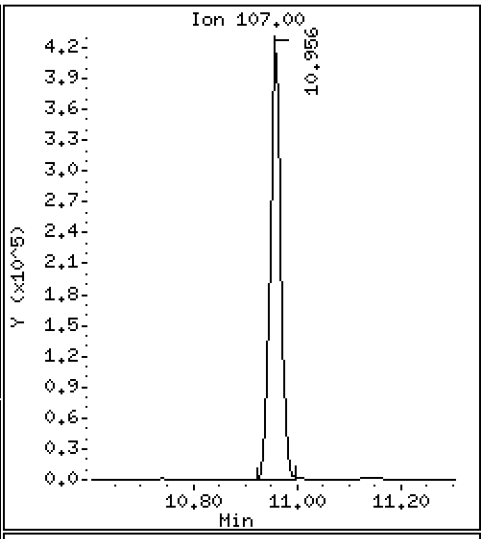
Column phase: ZB-5msi

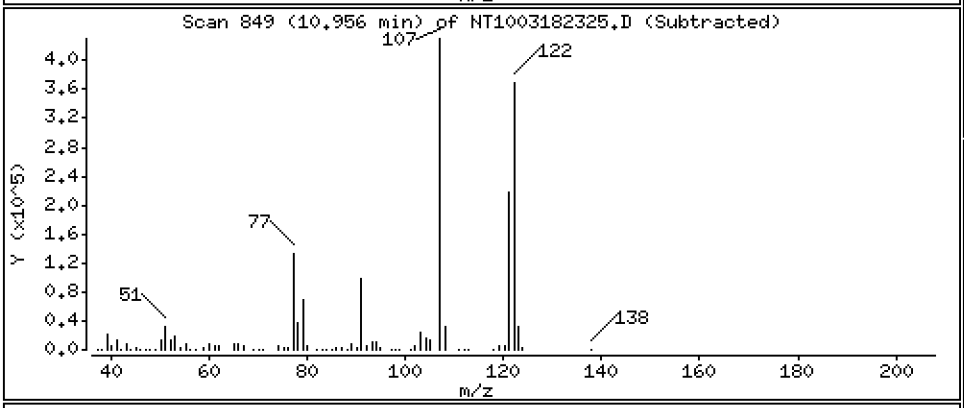
Column diameter: 0.25

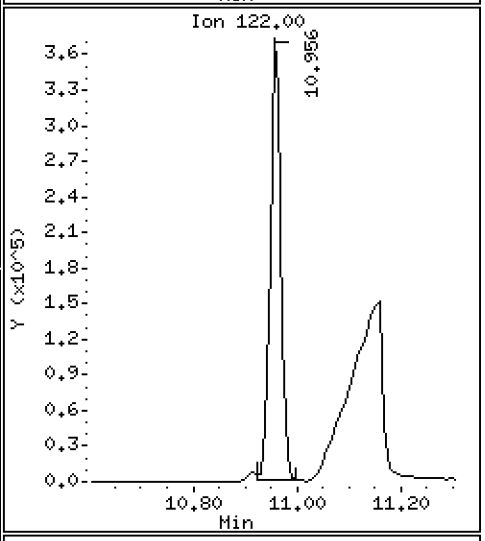
22 2,4-Dimethylphenol

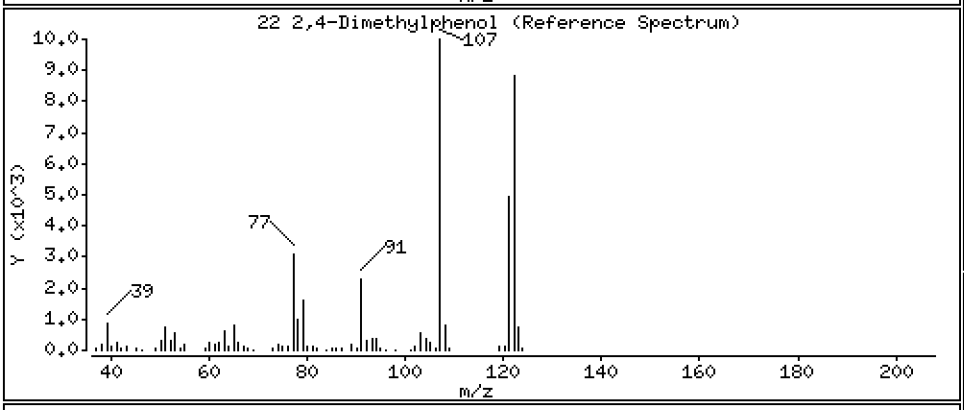
Concentration: 9.112 ug/mL

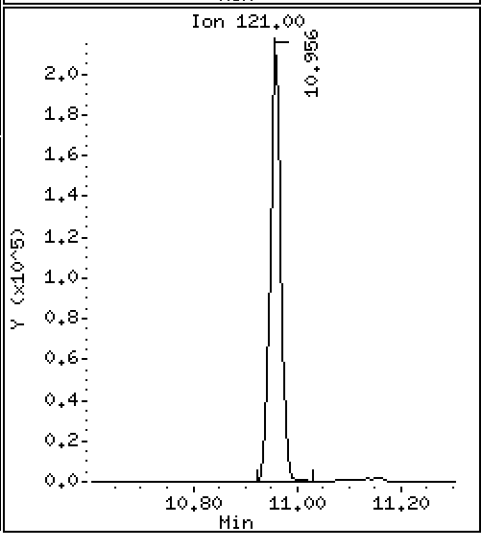


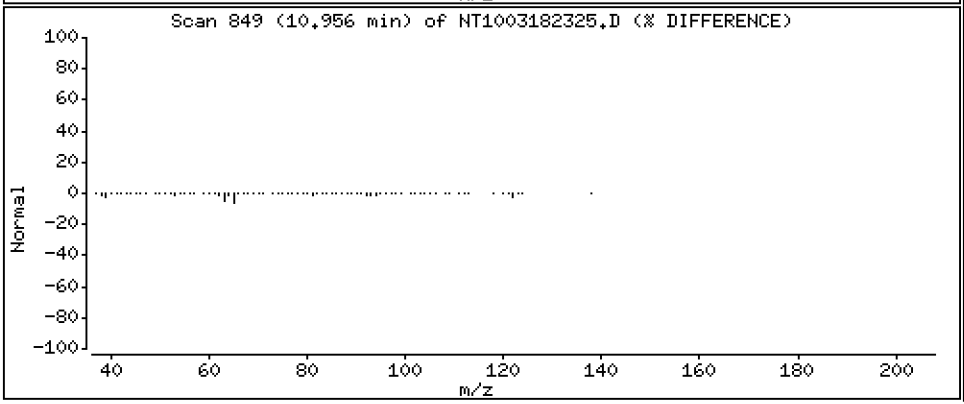












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

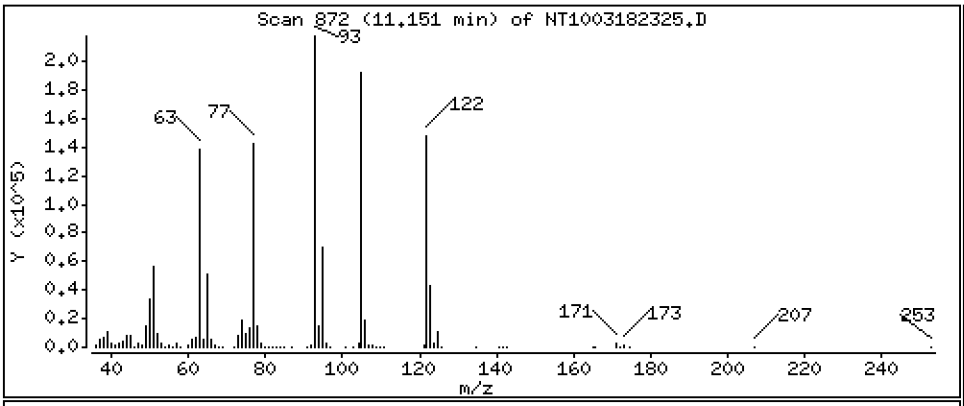
Operator: VTS

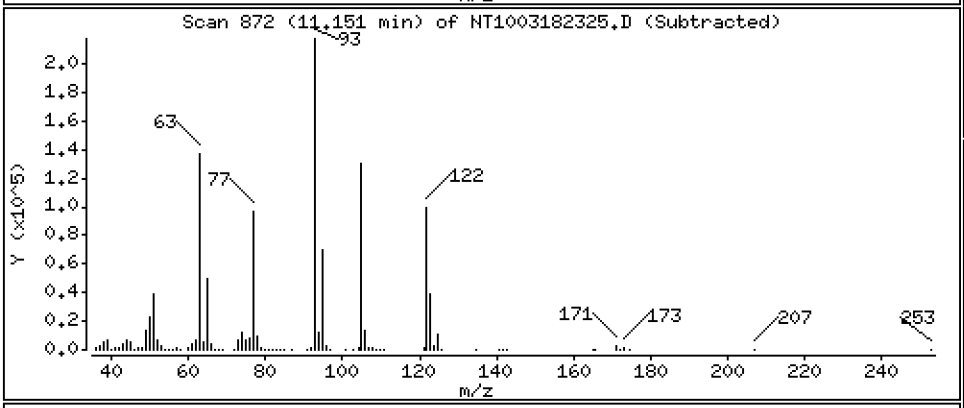
Column phase: ZB-5msi

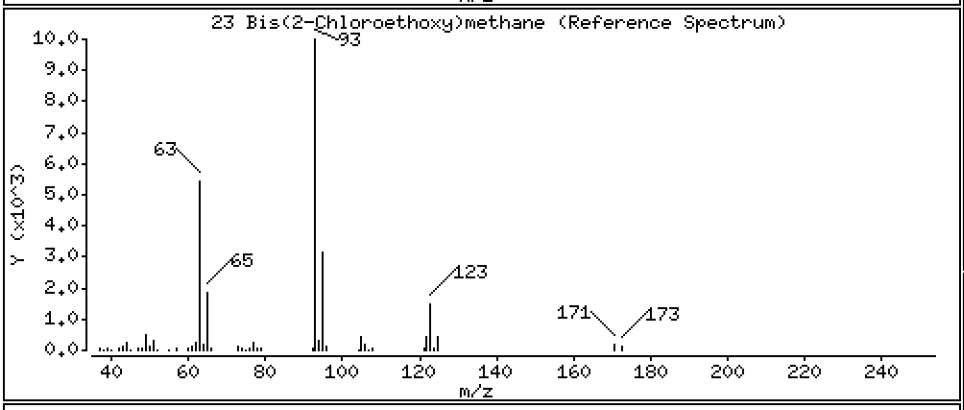
Column diameter: 0.25

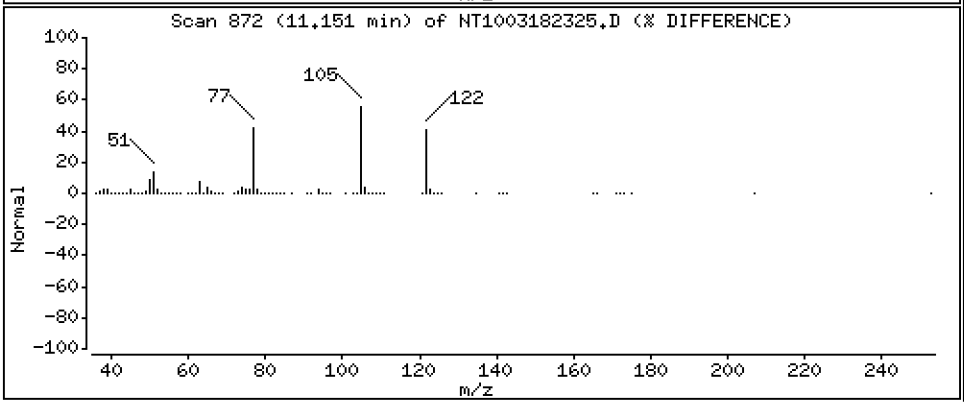
23 Bis(2-Chloroethoxy)methane

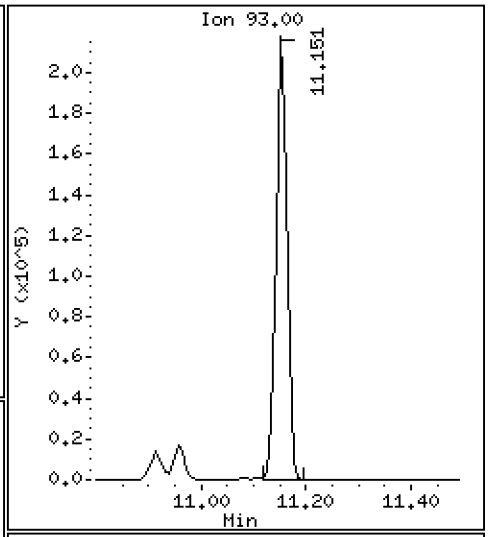
Concentration: 4.874 ug/mL

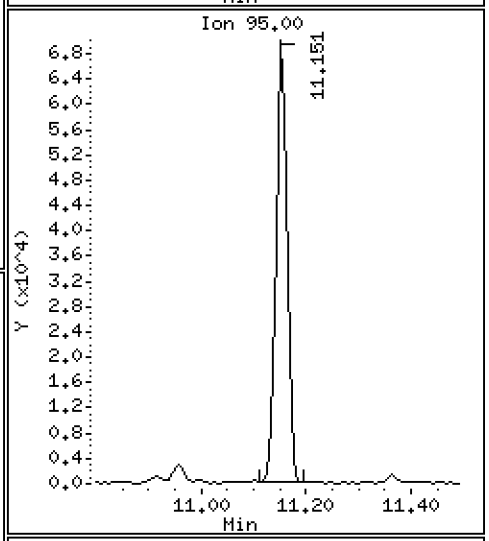


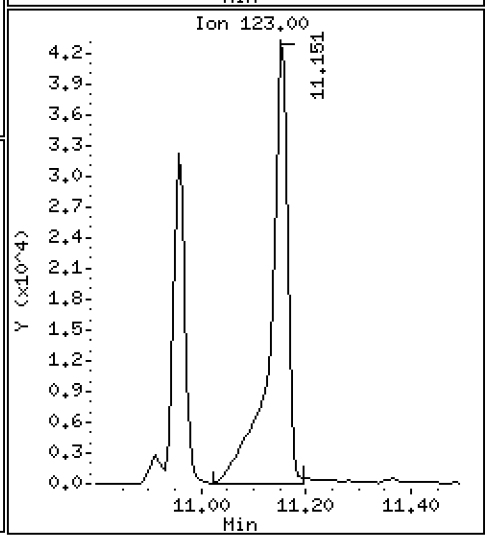












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

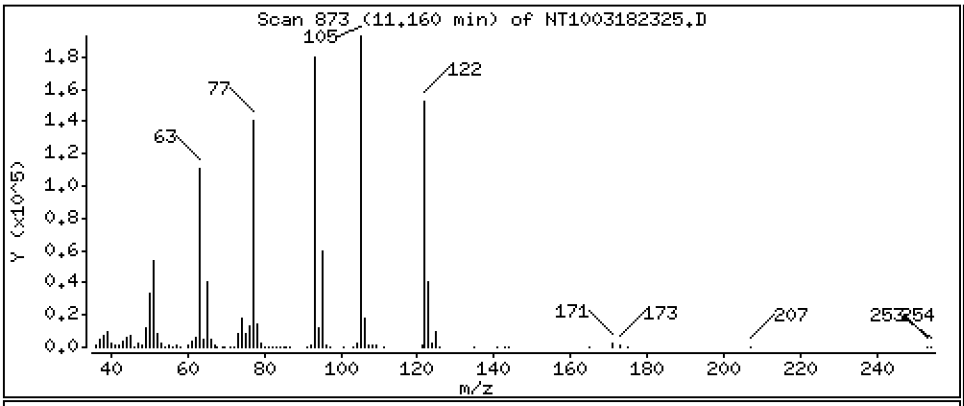
Operator: VTS

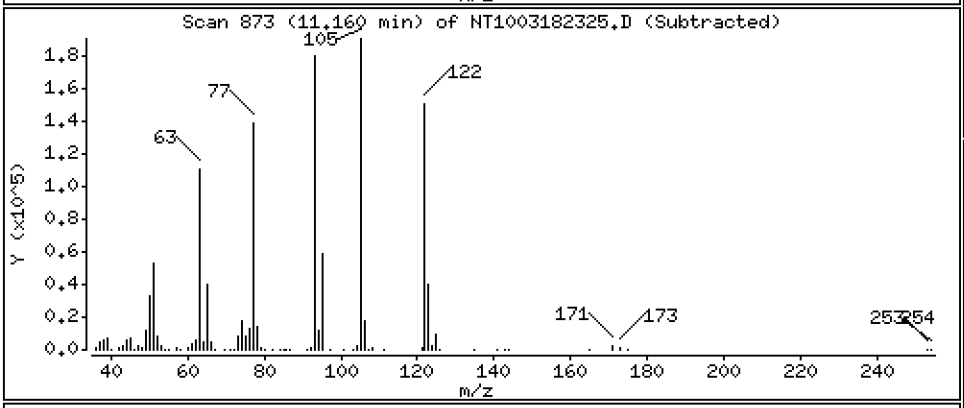
Column phase: ZB-5msi

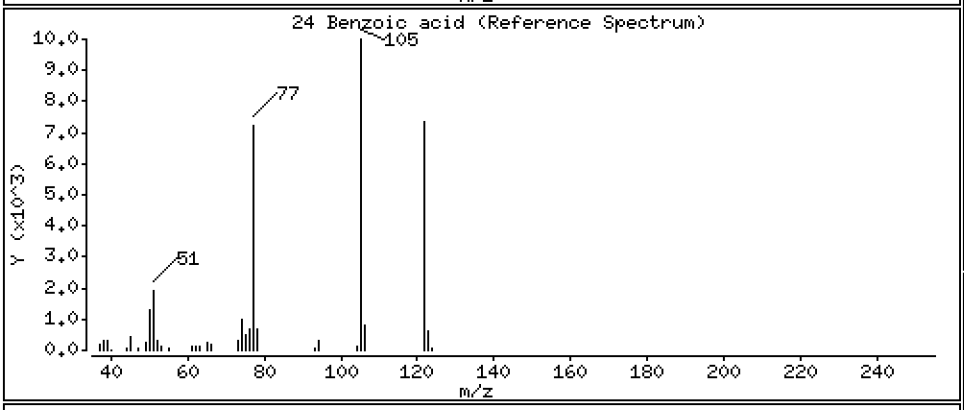
Column diameter: 0.25

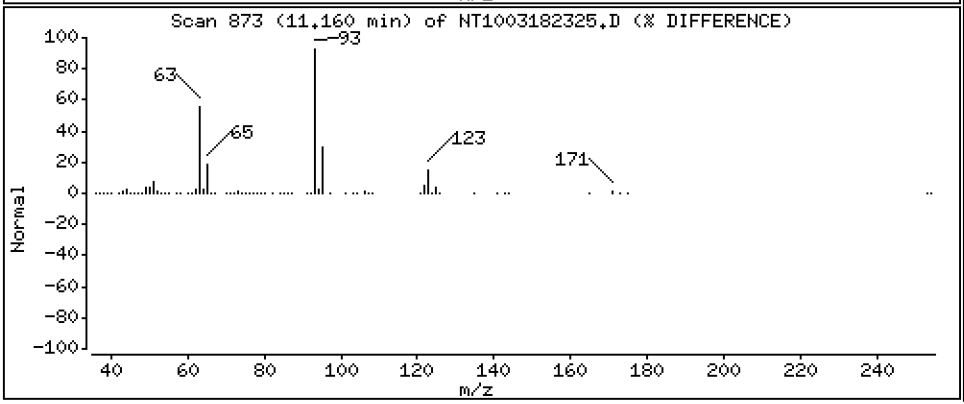
24 Benzoic acid

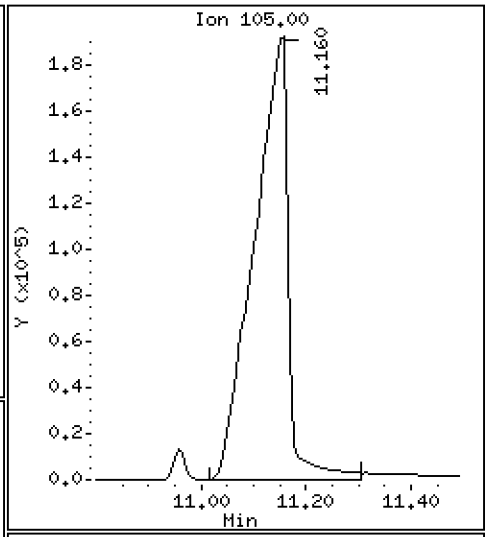
Concentration: 21.67 ug/mL

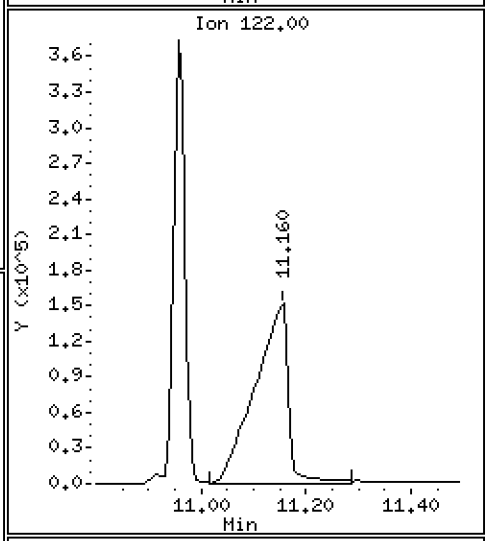


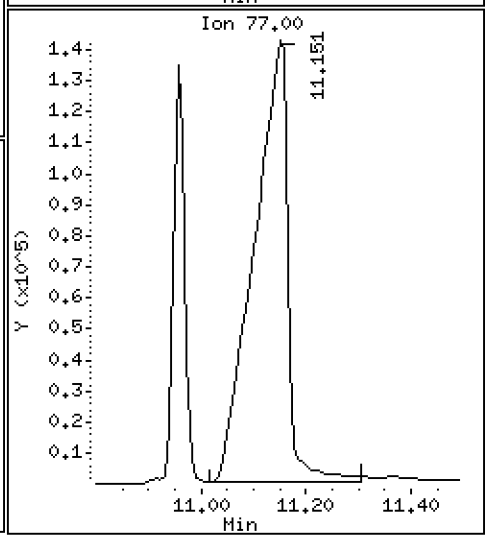












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

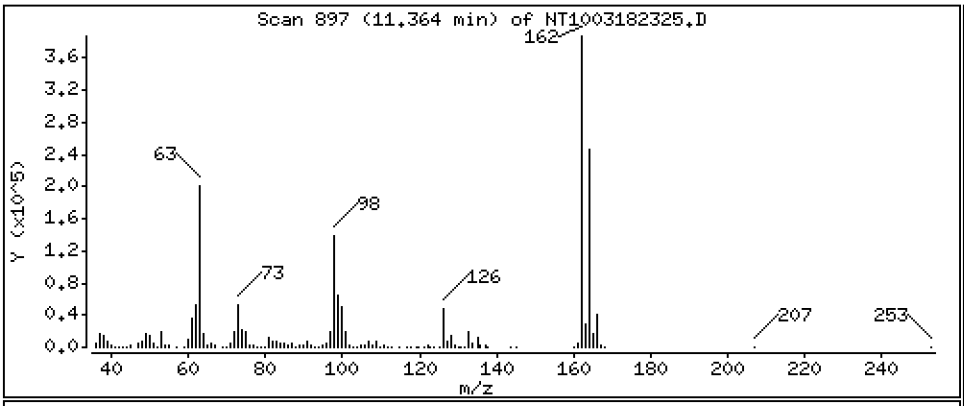
Operator: VTS

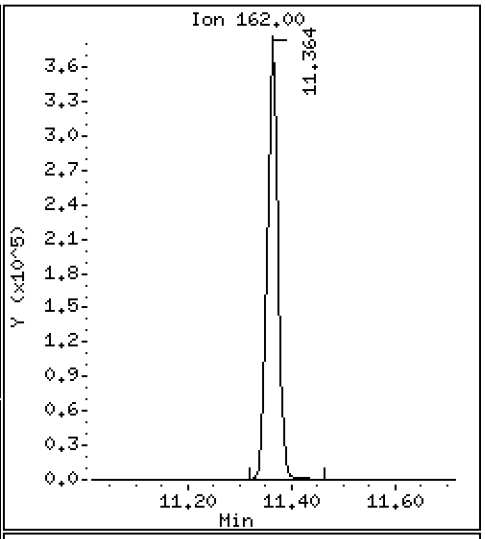
Column phase: ZB-5msi

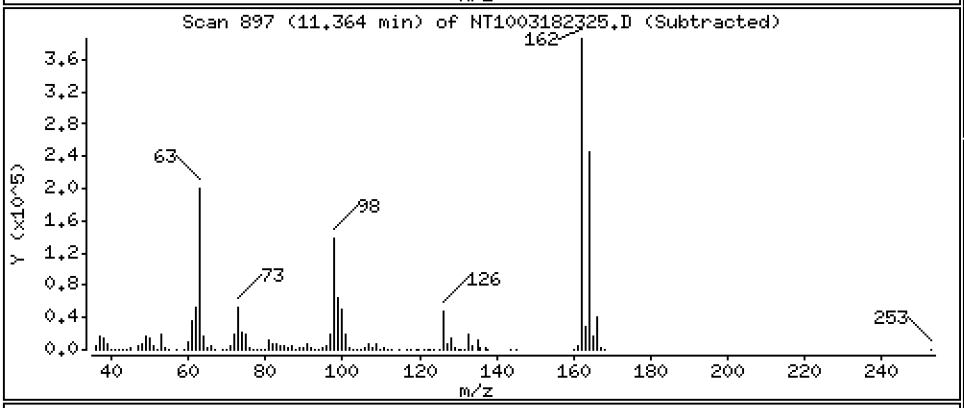
Column diameter: 0.25

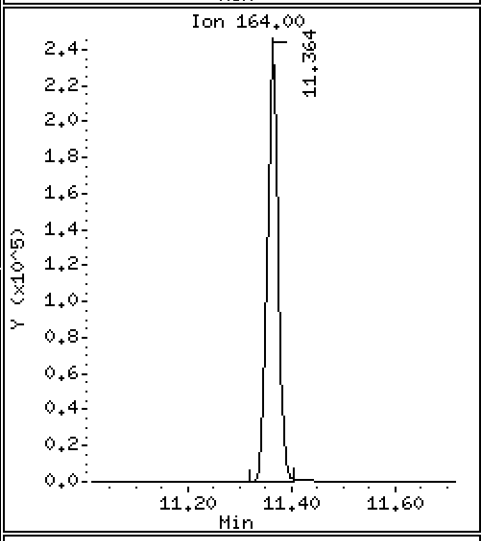
25 2,4-Dichlorophenol

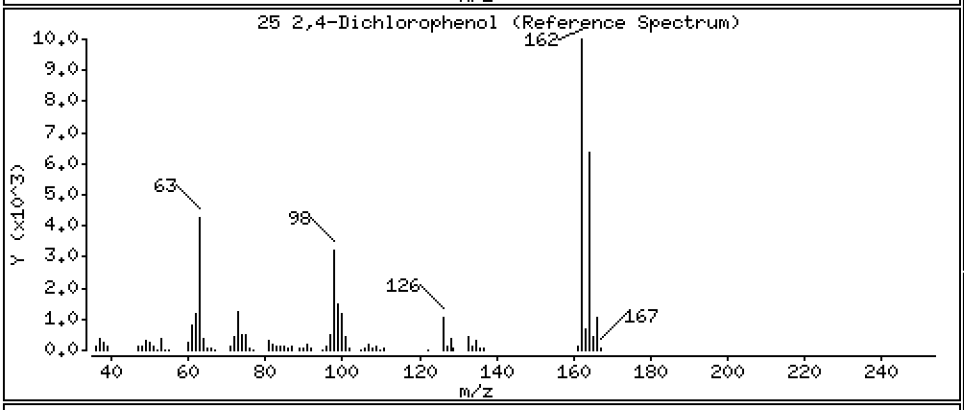
Concentration: 10.47 ug/mL

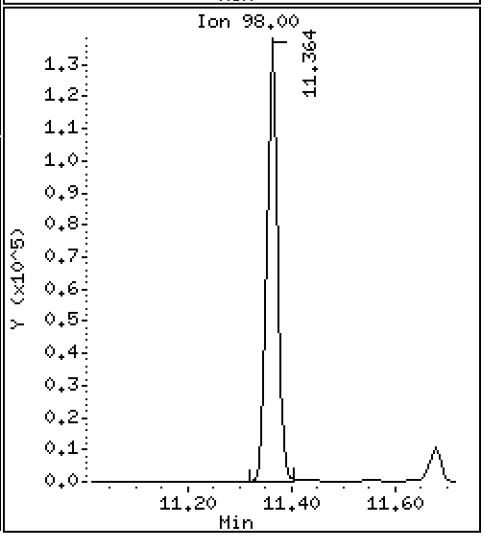


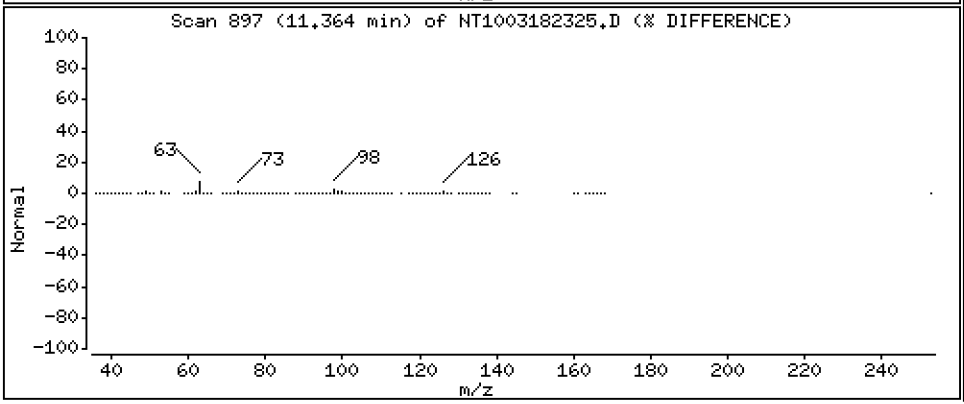












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

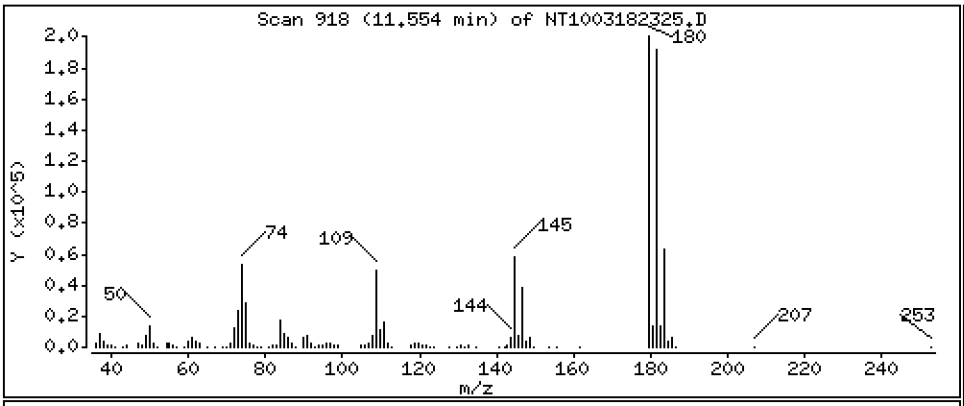
Operator: VTS

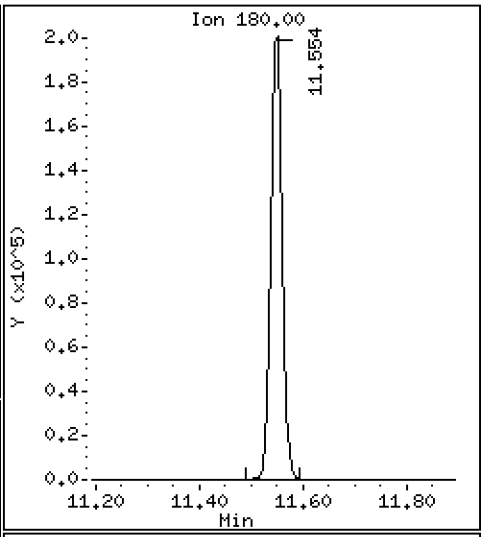
Column phase: ZB-5msi

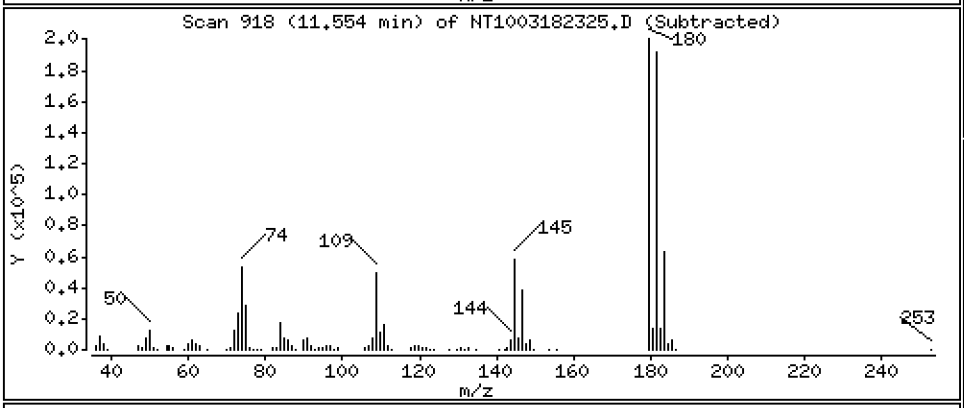
Column diameter: 0.25

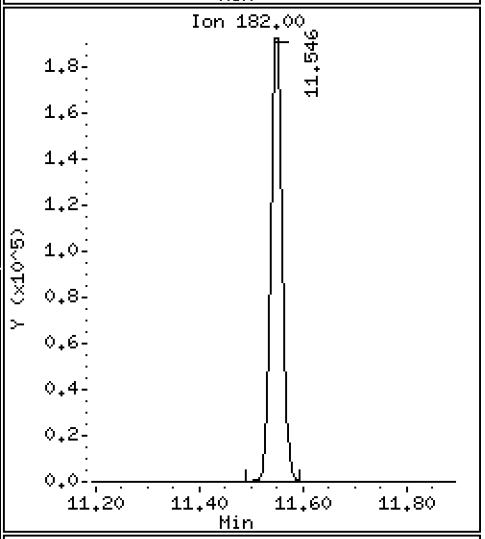
26 1,2,4-Trichlorobenzene

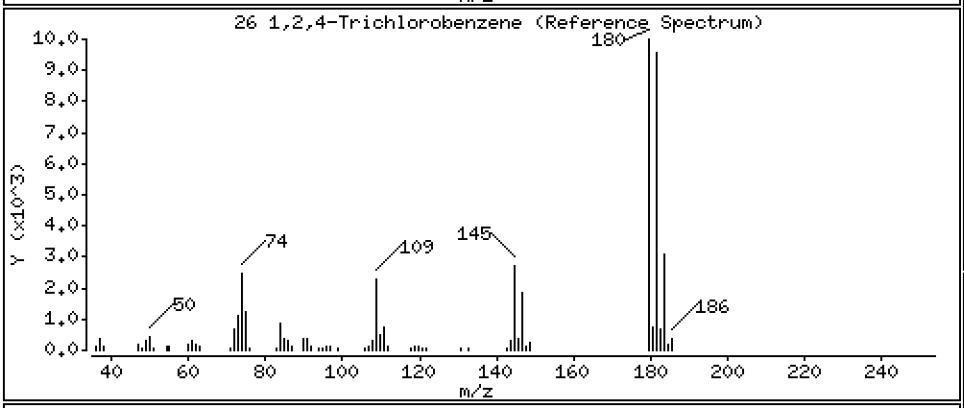
Concentration: 5.840 ug/mL

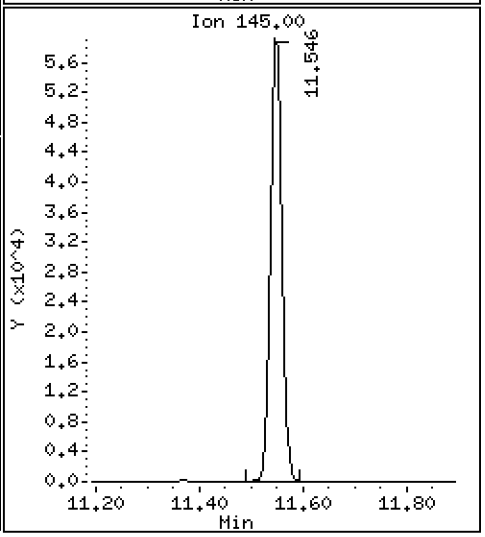


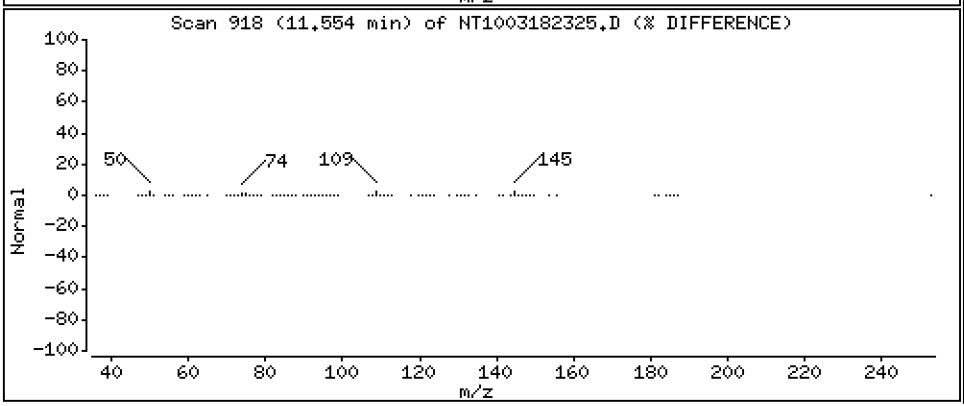












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

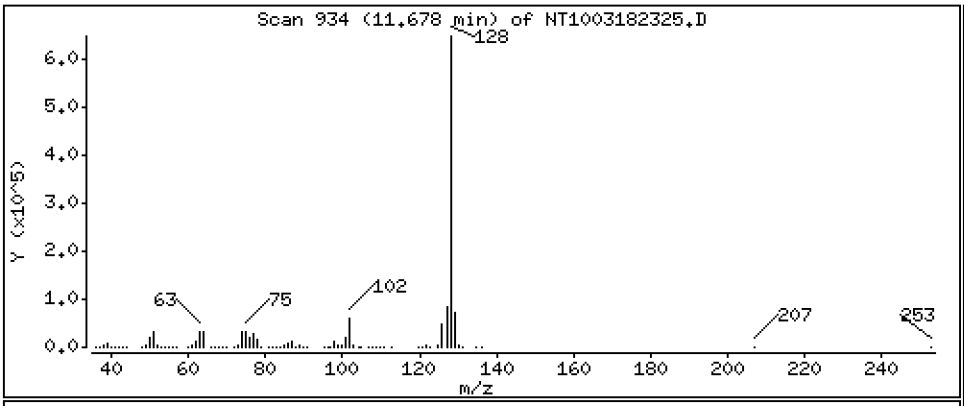
Operator: VTS

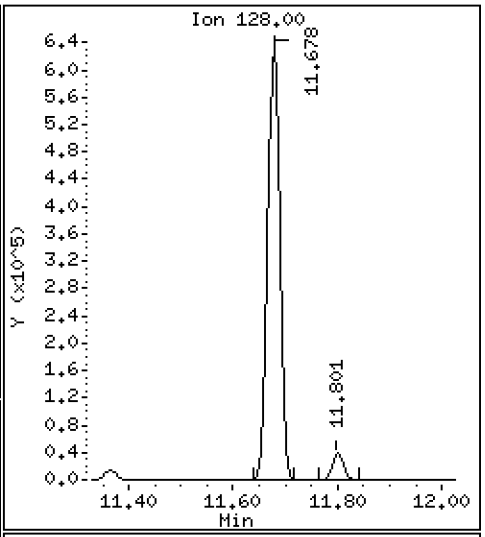
Column phase: ZB-5msi

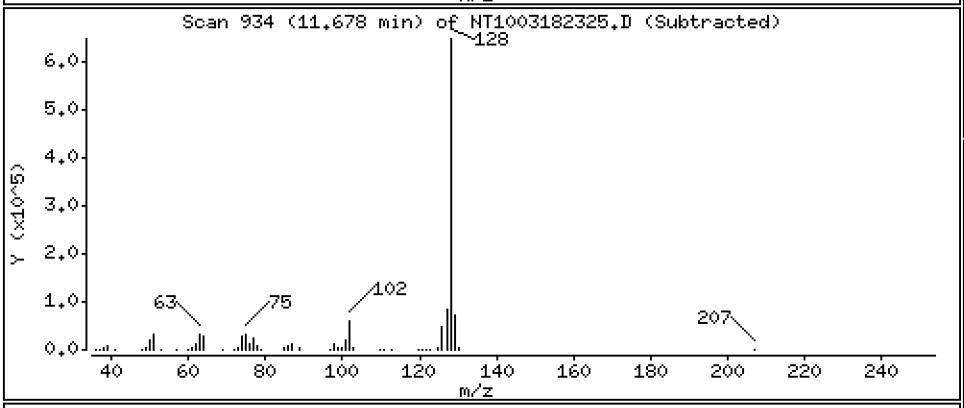
Column diameter: 0.25

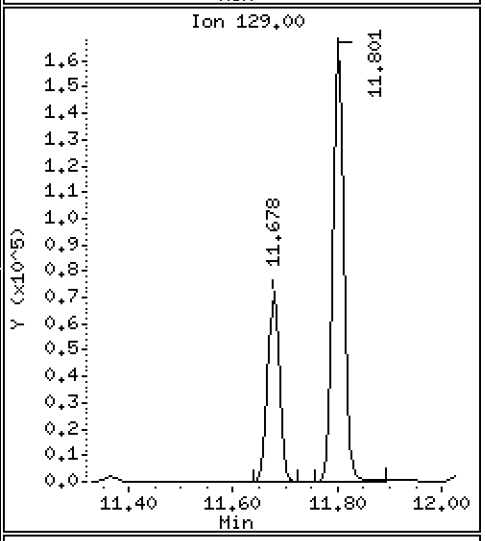
28 Naphthalene

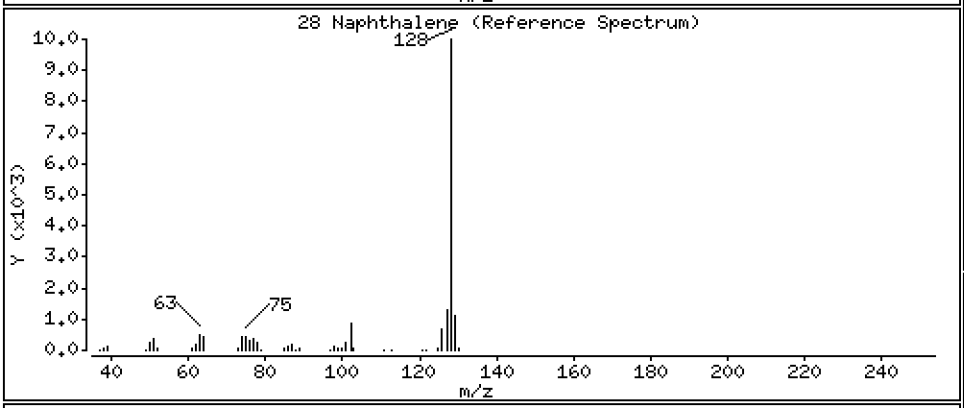
Concentration: 4.820 ug/mL

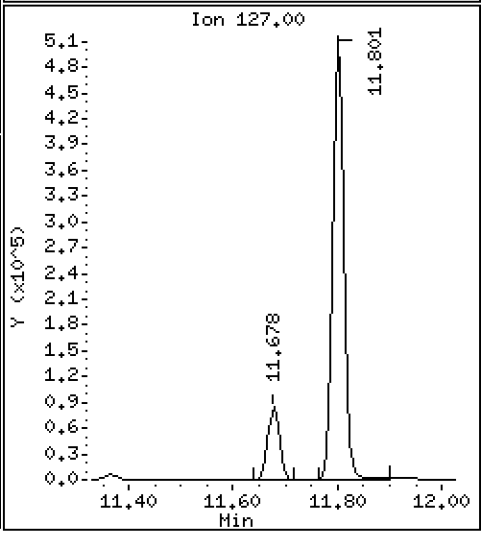


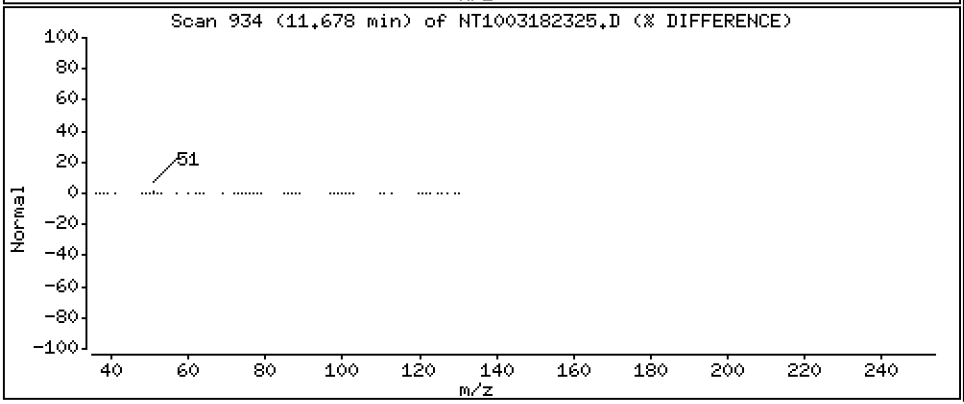












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

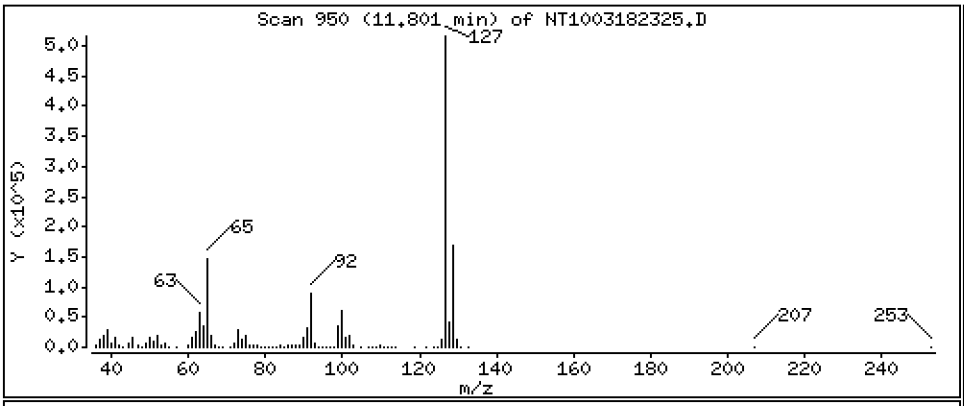
Operator: VTS

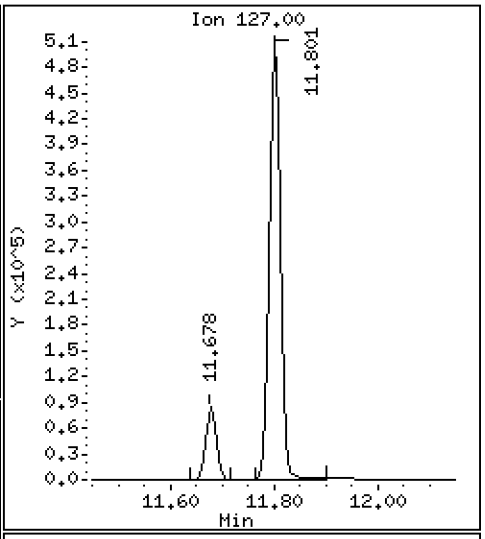
Column phase: ZB-5msi

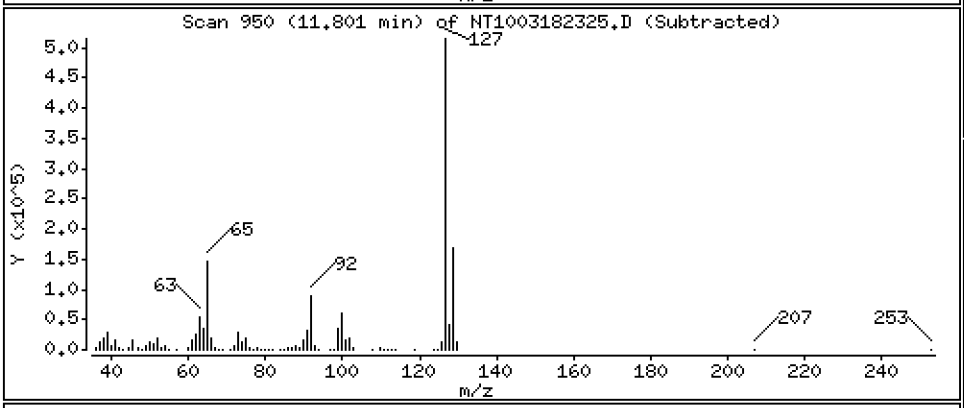
Column diameter: 0.25

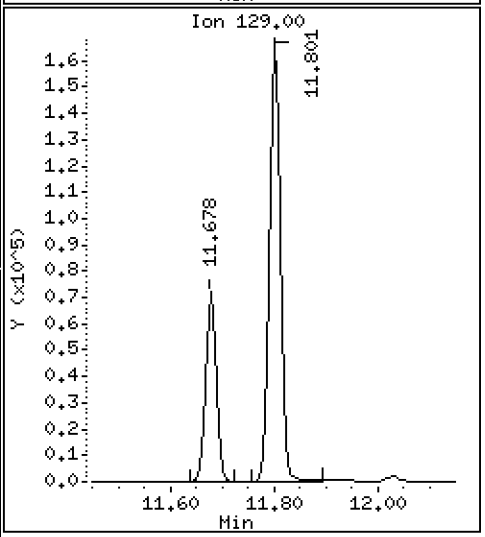
29 4-Chloroaniline

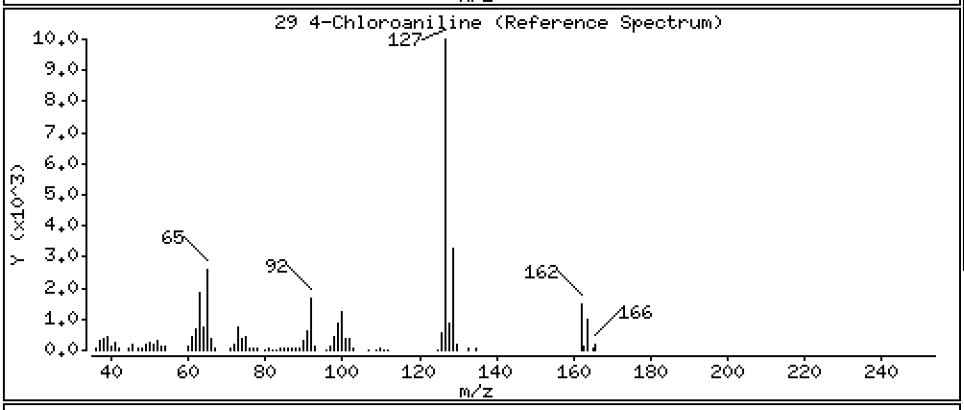
Concentration: 10.07 ug/mL

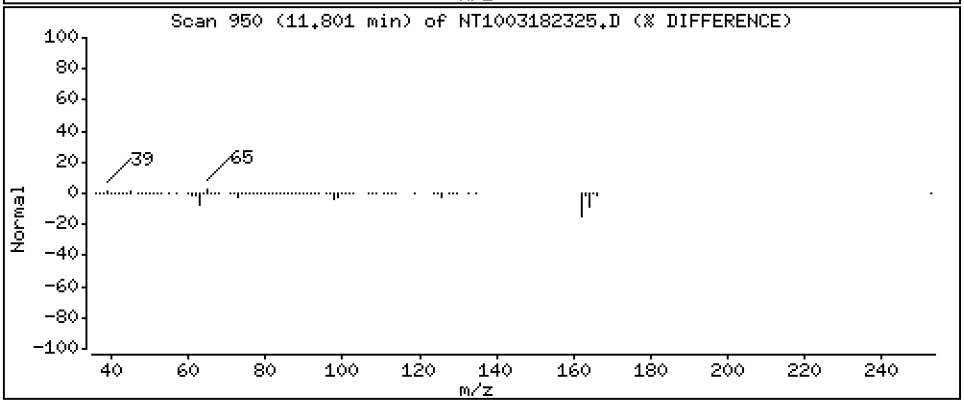












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

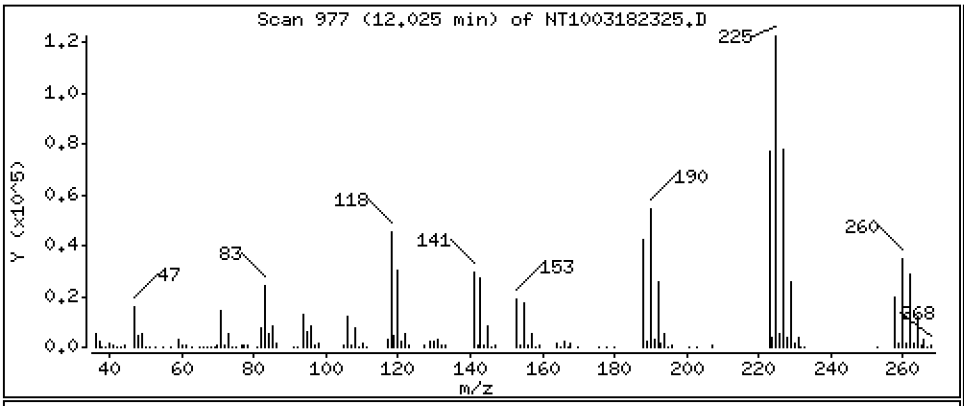
Operator: VTS

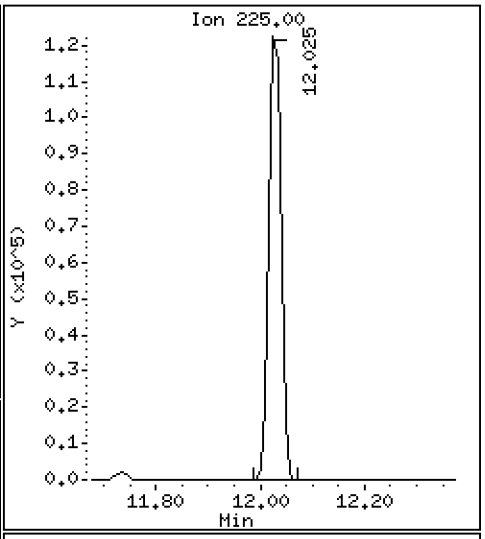
Column phase: ZB-5msi

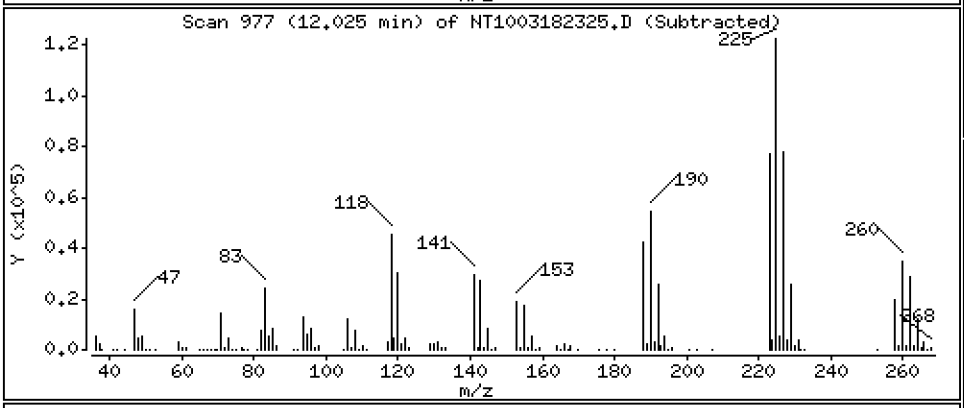
Column diameter: 0.25

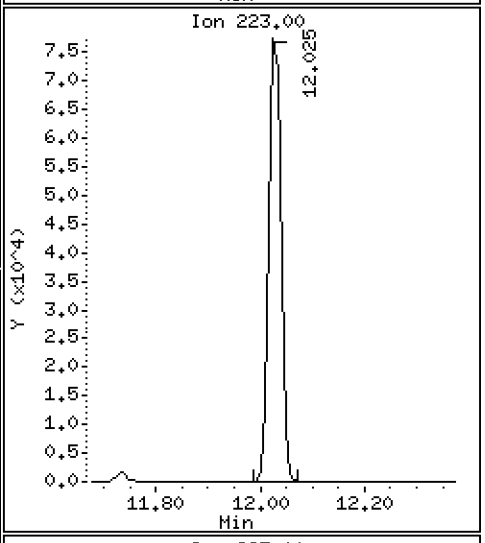
30 Hexachlorobutadiene

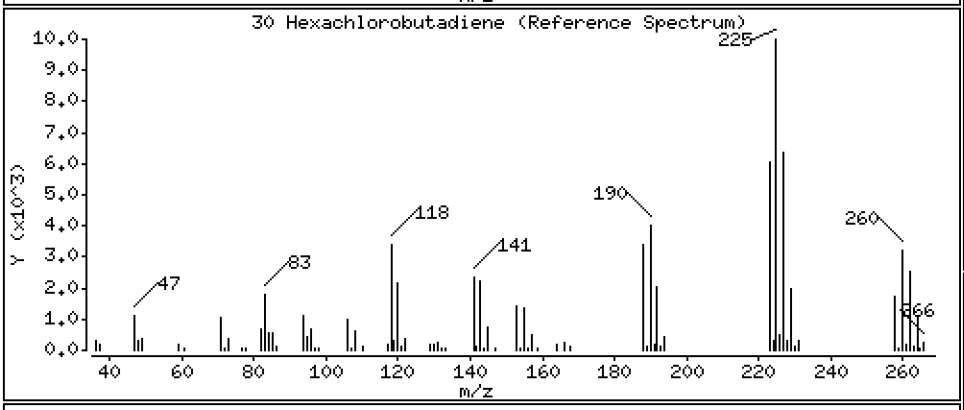
Concentration: 4.987 ug/mL

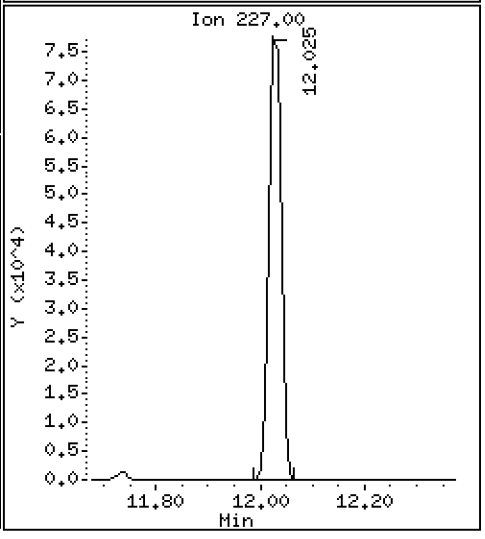


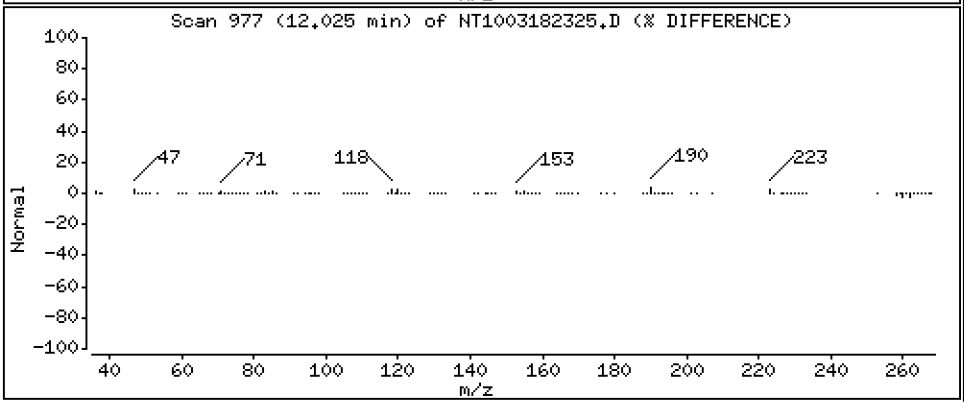












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

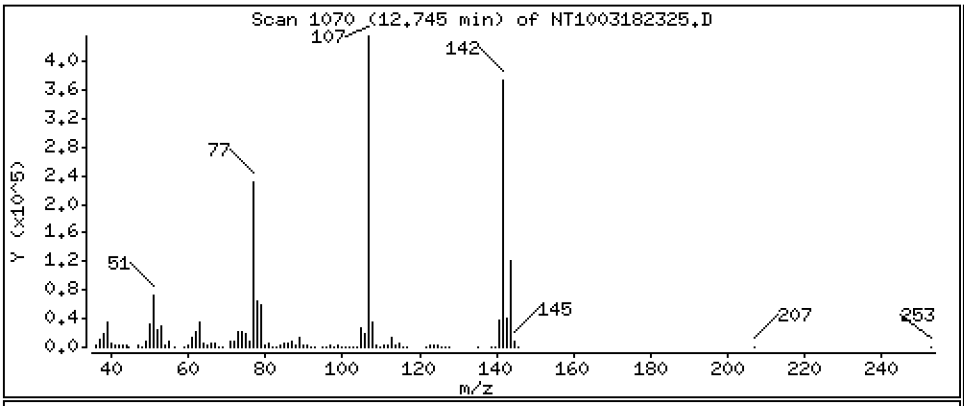
Operator: VTS

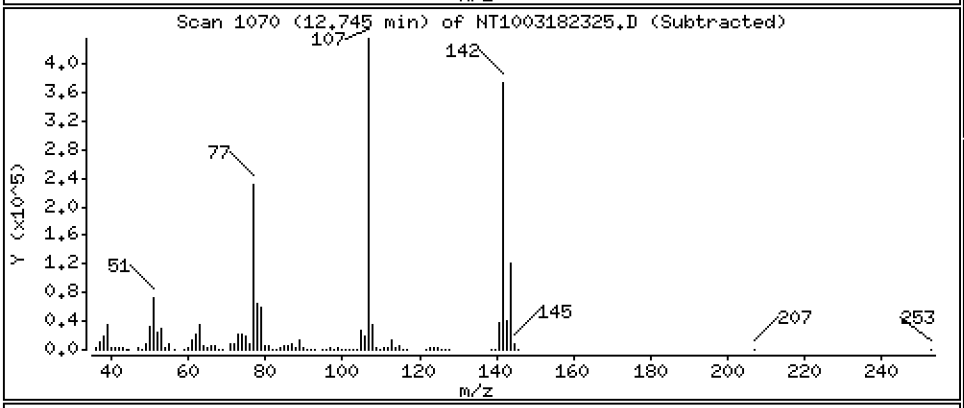
Column phase: ZB-5msi

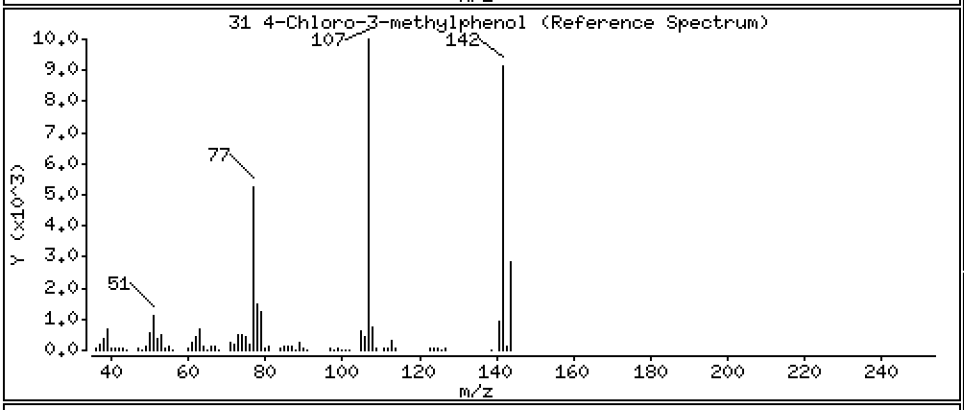
Column diameter: 0.25

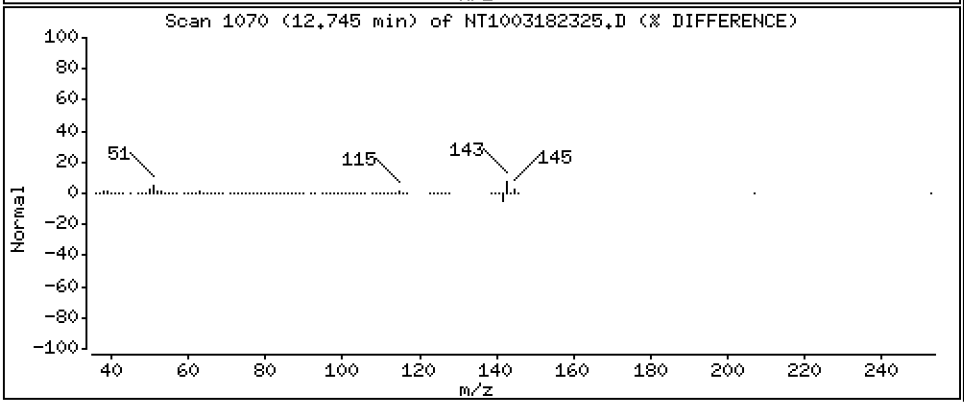
31 4-Chloro-3-methylphenol

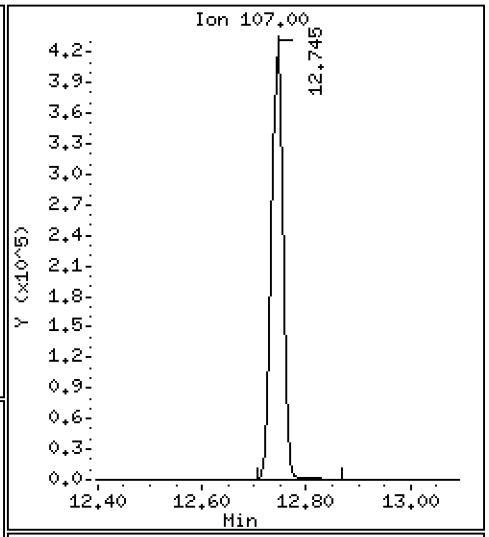
Concentration: 10.32 ug/mL

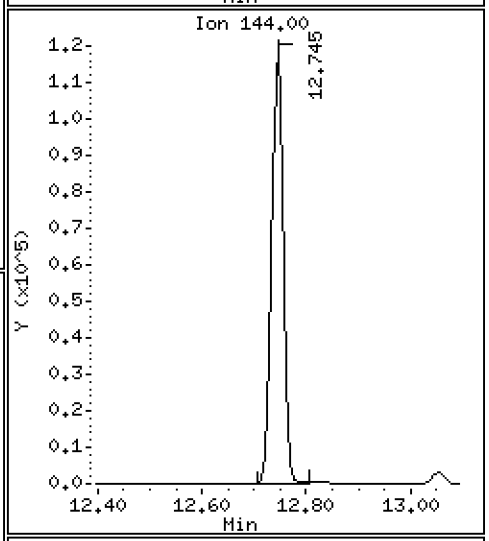


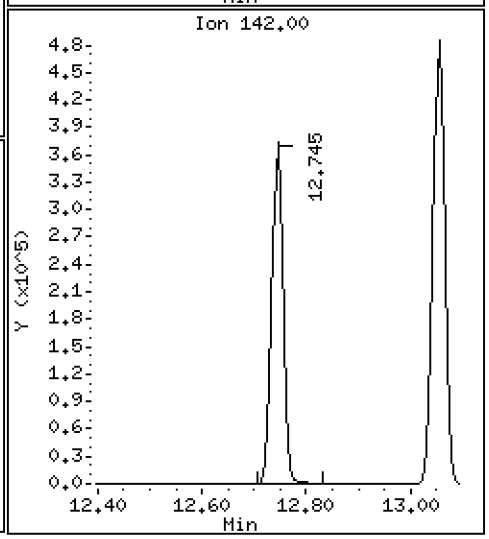












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

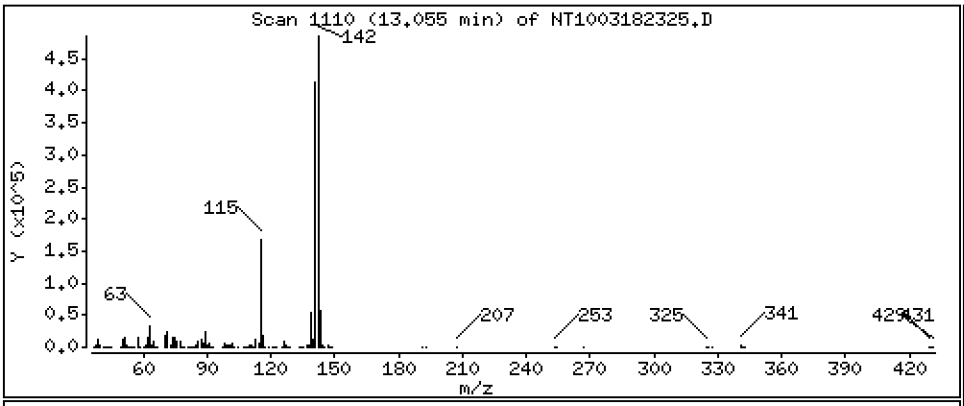
Operator: VTS

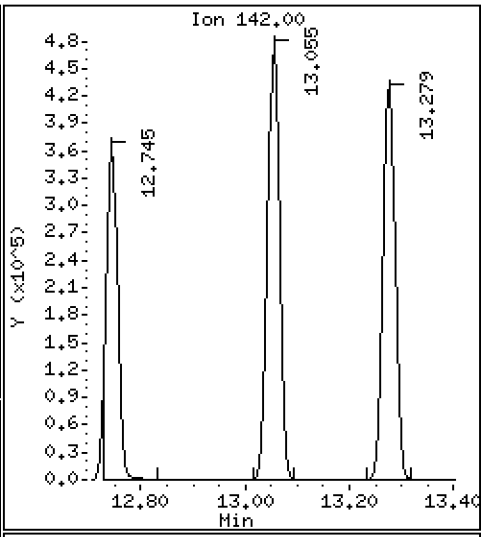
Column phase: ZB-5msi

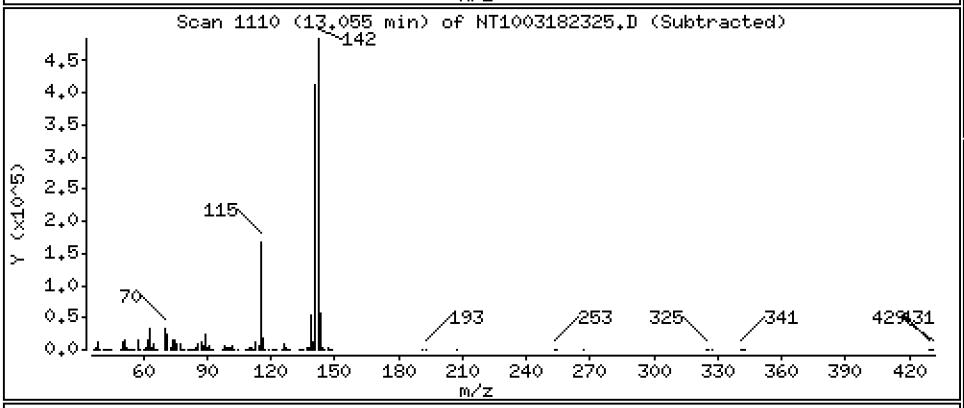
Column diameter: 0.25

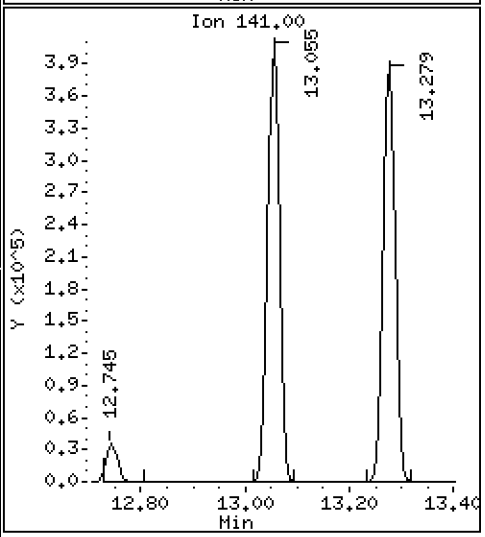
32 2-Methylnaphthalene

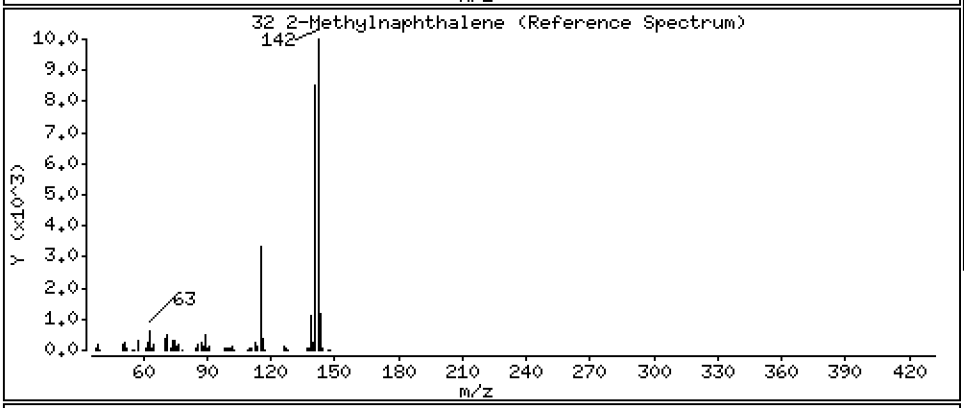
Concentration: 4.958 ug/mL

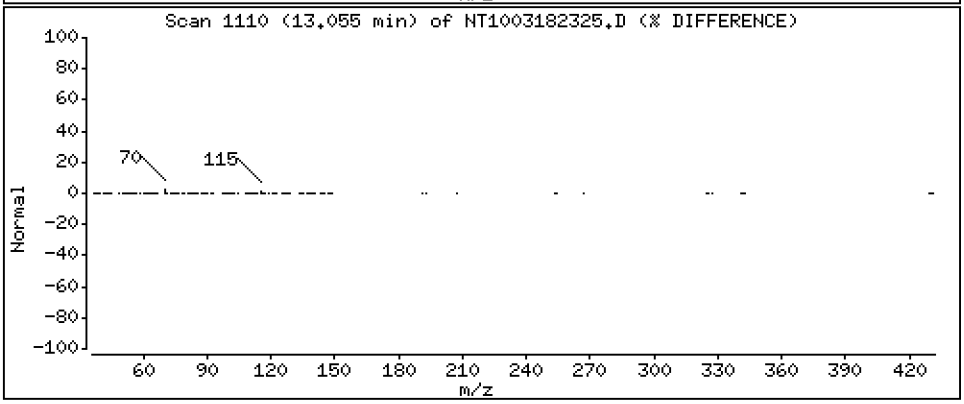












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

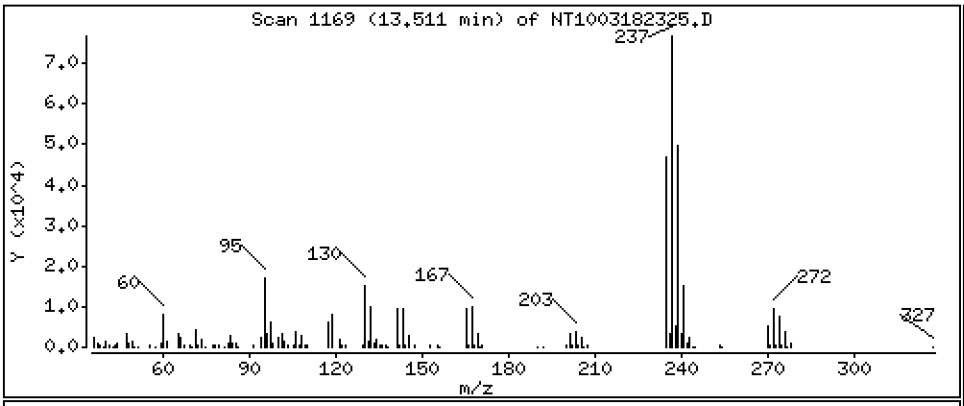
Operator: VTS

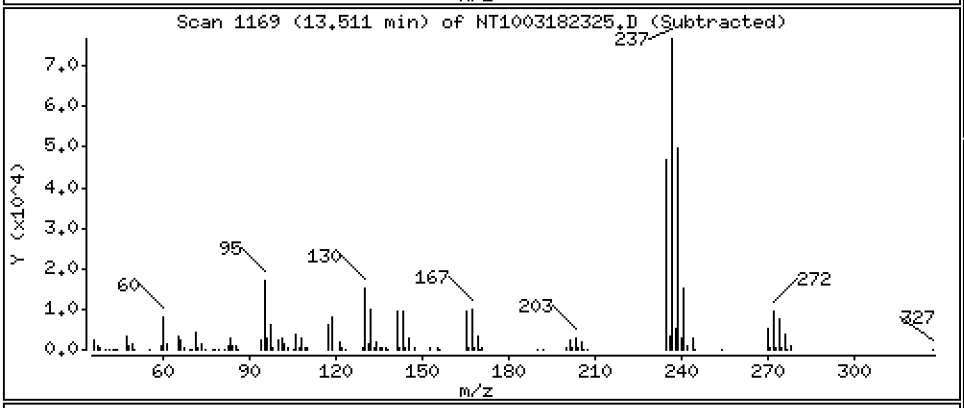
Column phase: ZB-5msi

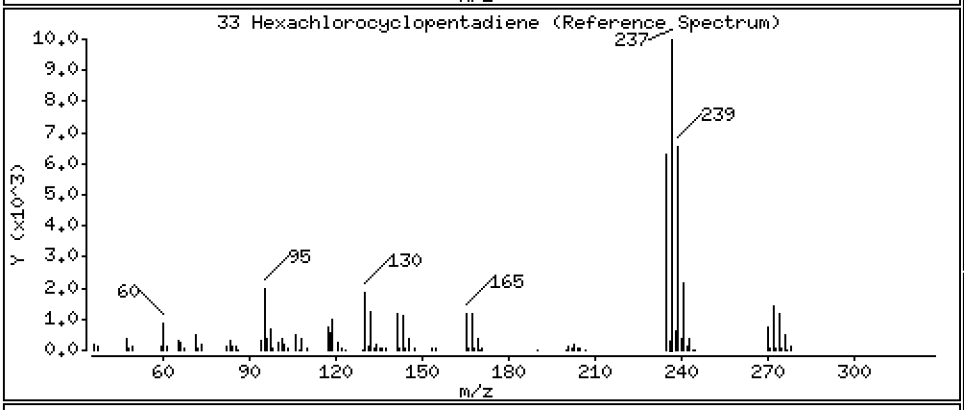
Column diameter: 0.25

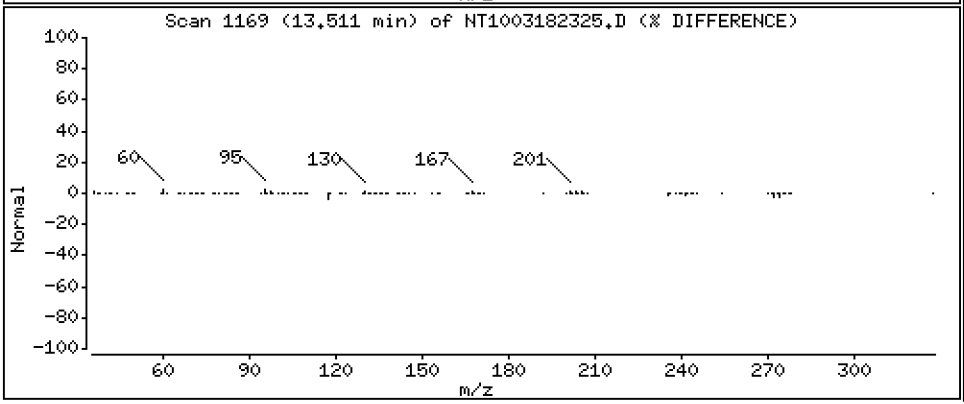
33 Hexachlorocyclopentadiene

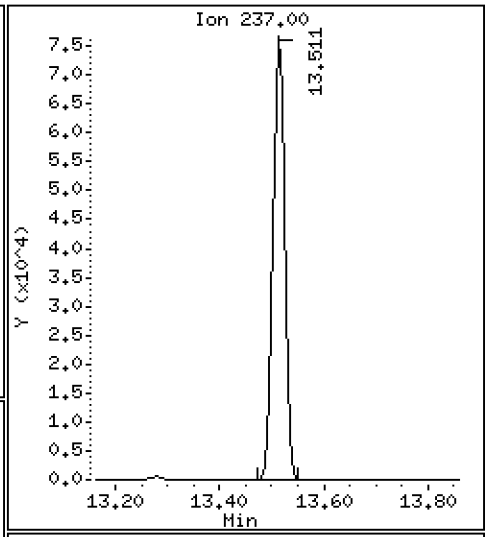
Concentration: 2.909 ug/mL

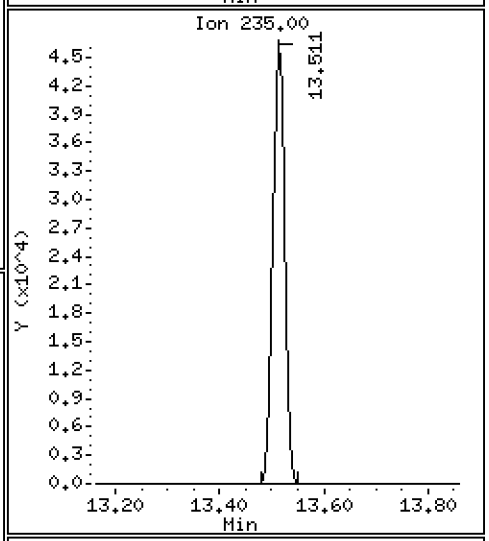


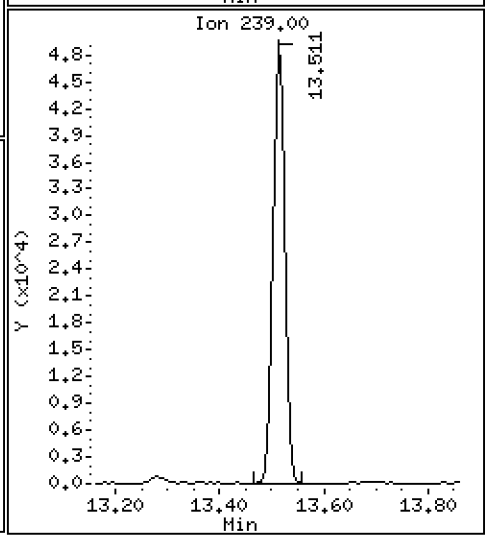












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

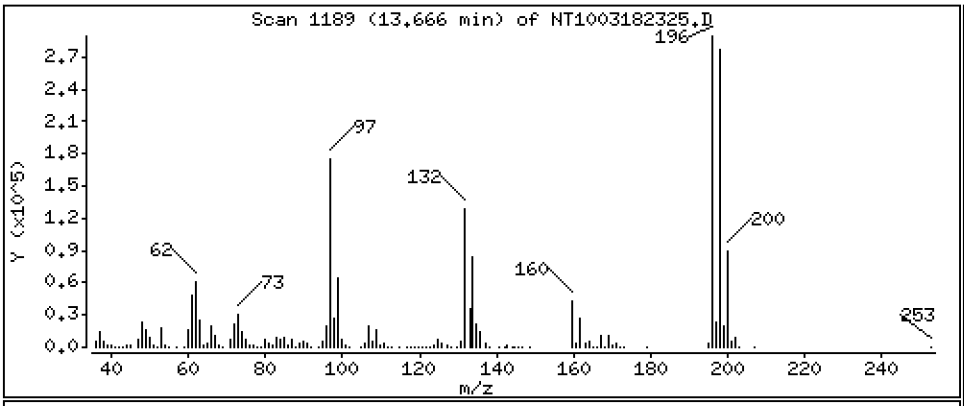
Operator: VTS

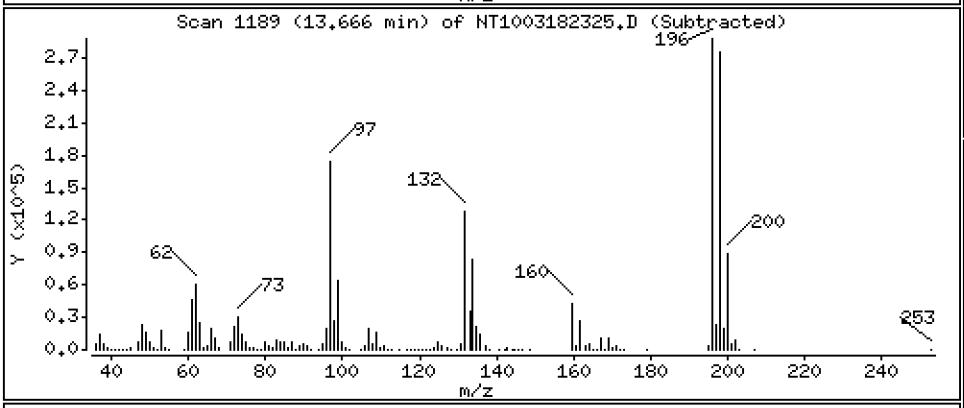
Column phase: ZB-5msi

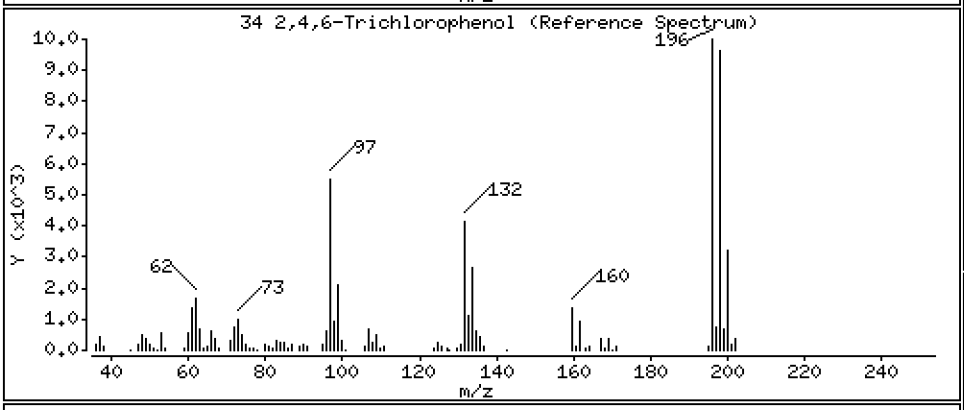
Column diameter: 0.25

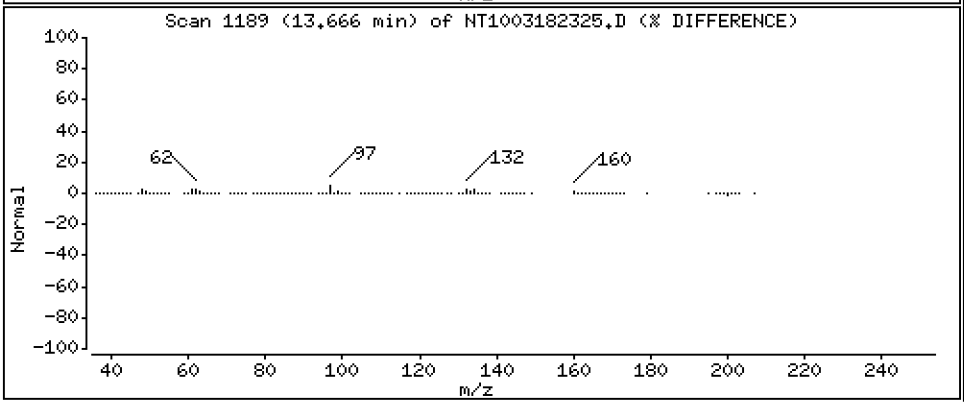
34 2,4,6-Trichlorophenol

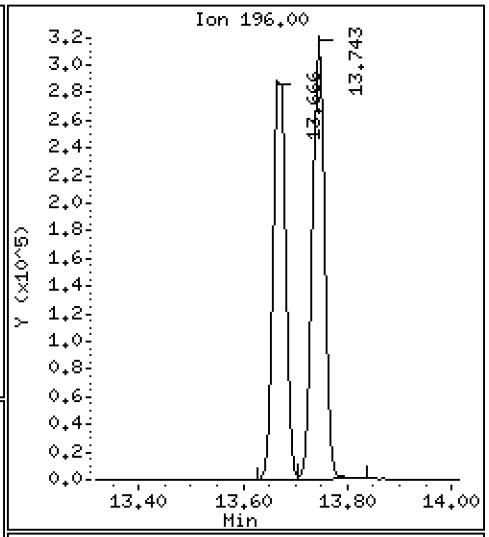
Concentration: 10.95 ug/mL

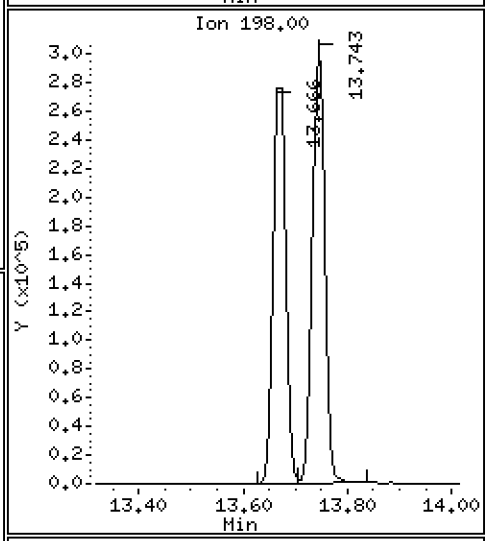


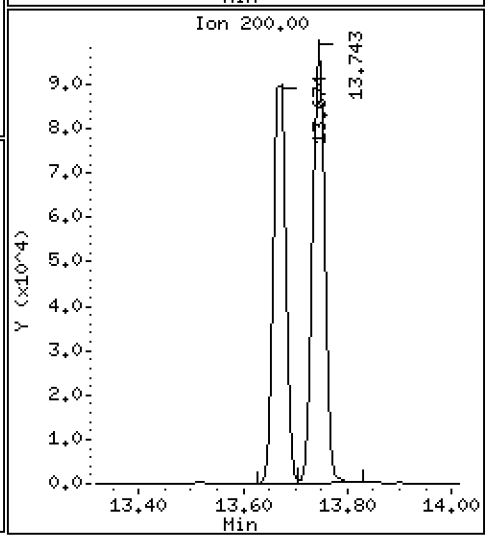












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

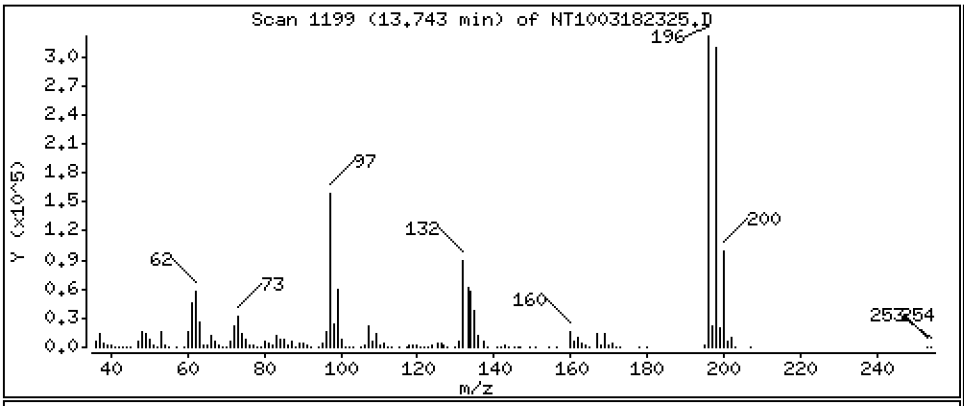
Operator: VTS

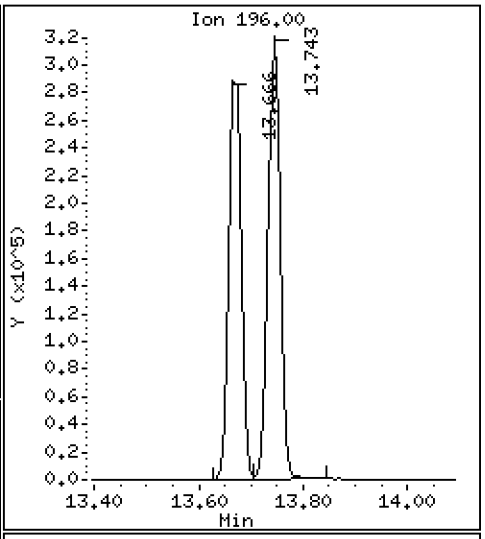
Column phase: ZB-5msi

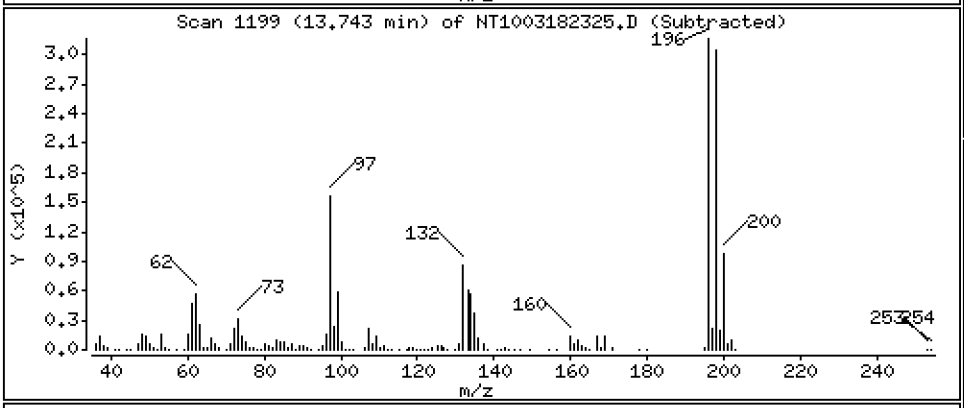
Column diameter: 0.25

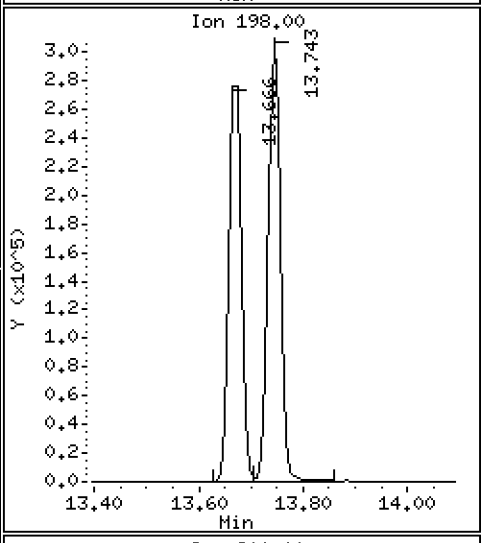
35 2,4,5-Trichlorophenol

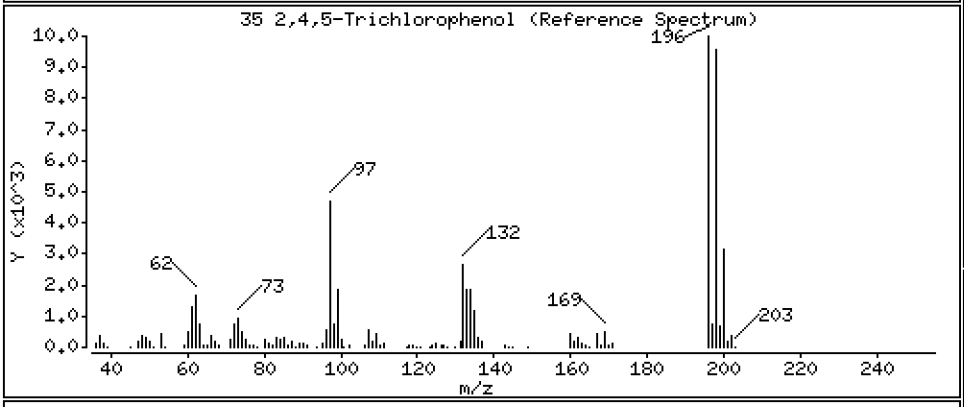
Concentration: 10.63 ug/mL

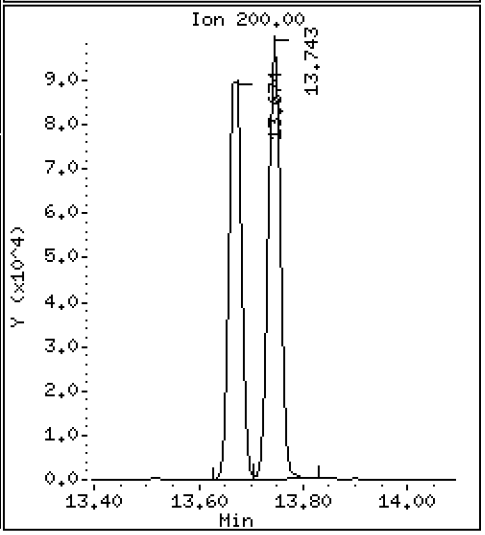


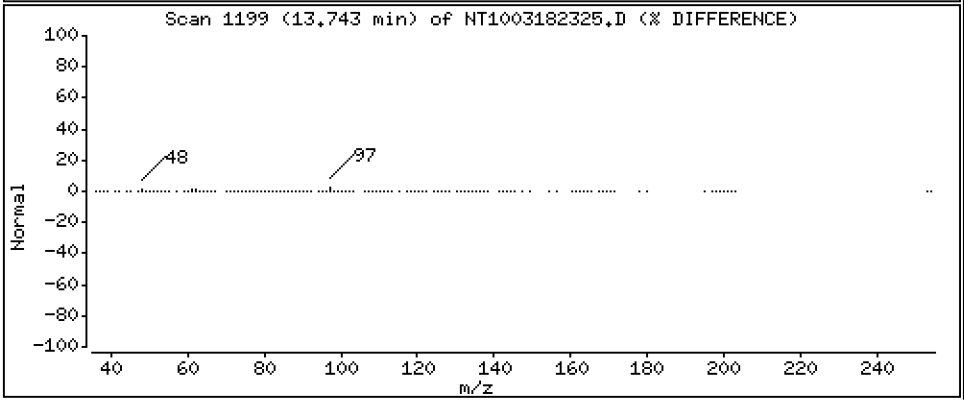












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

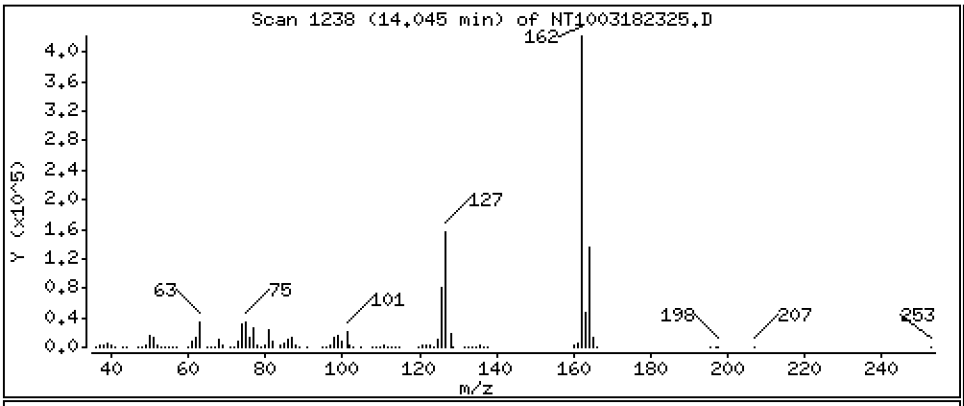
Operator: VTS

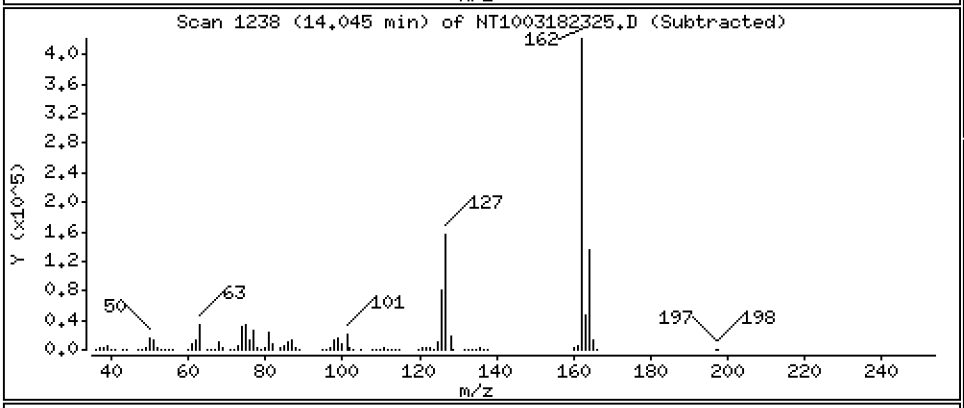
Column phase: ZB-5msi

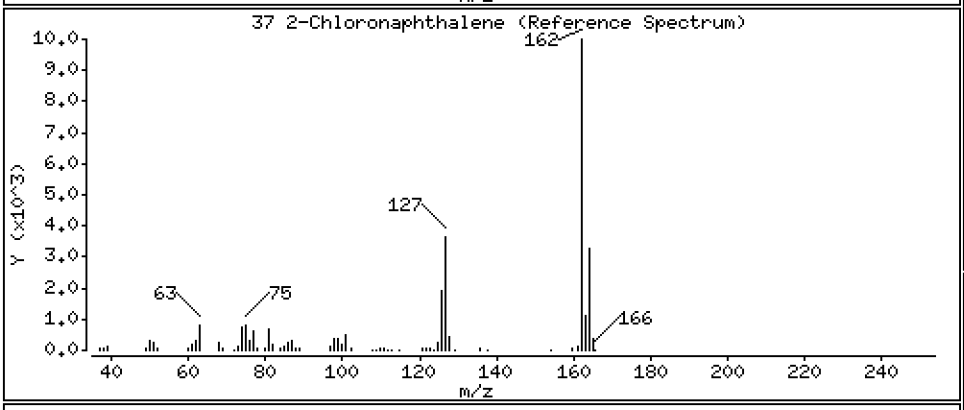
Column diameter: 0.25

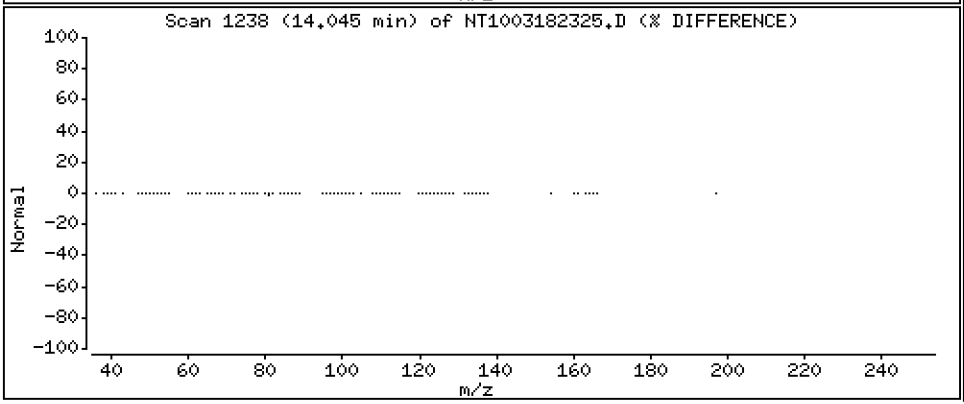
37 2-Chloronaphthalene

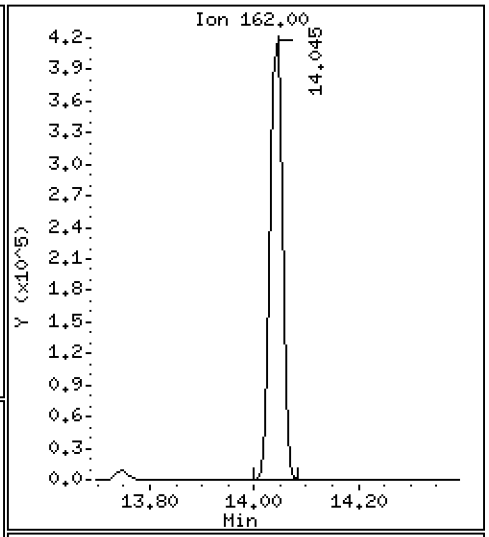
Concentration: 4.904 ug/mL

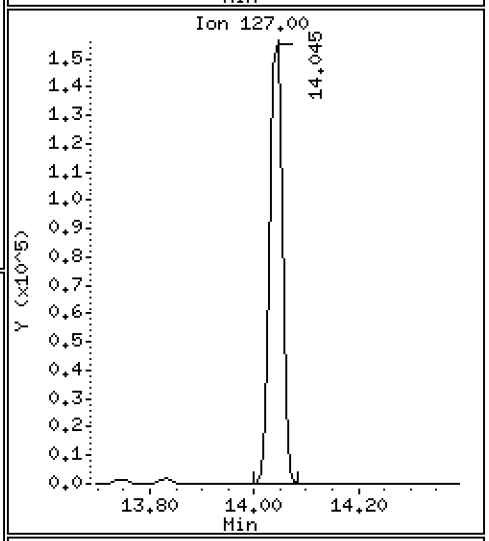


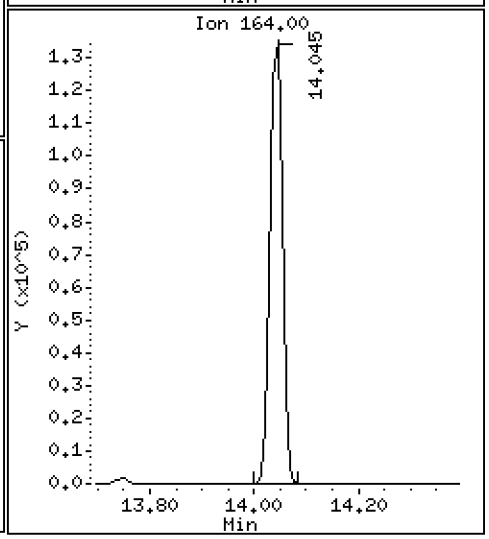












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

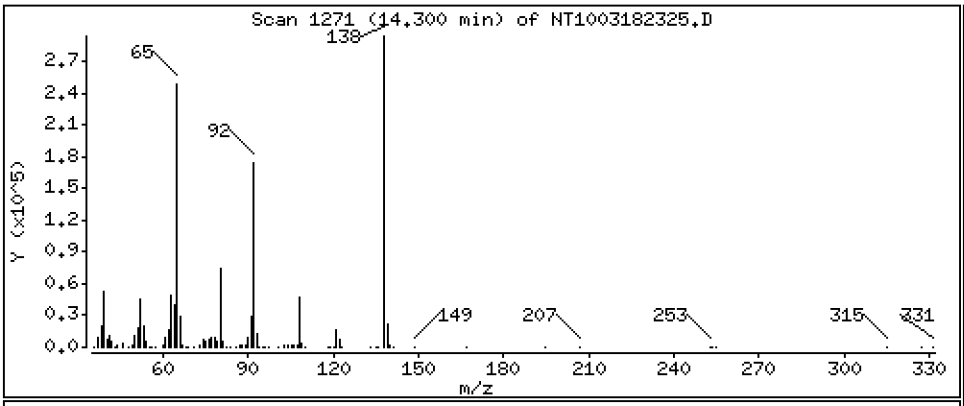
Operator: VTS

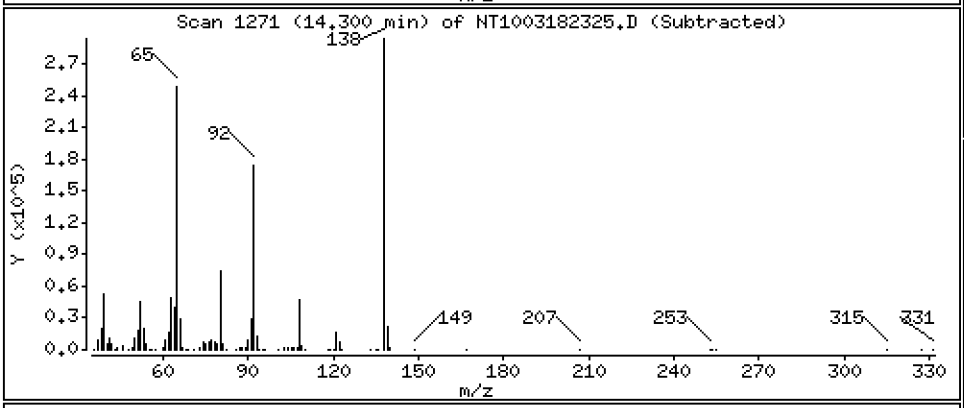
Column phase: ZB-5msi

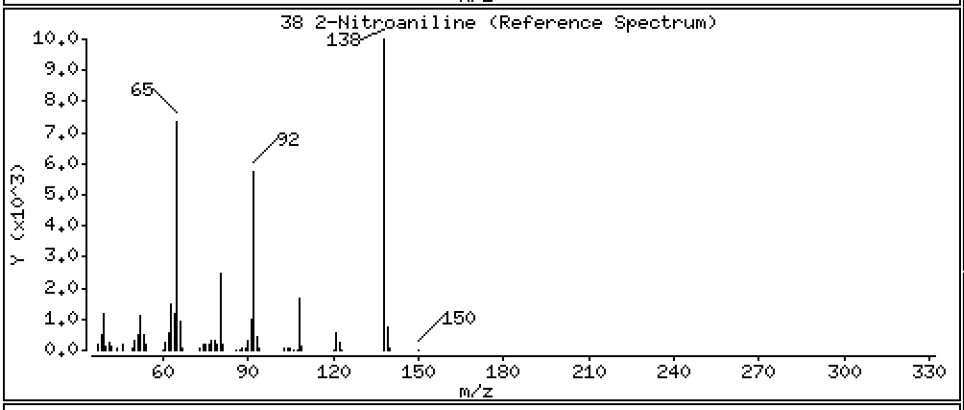
Column diameter: 0.25

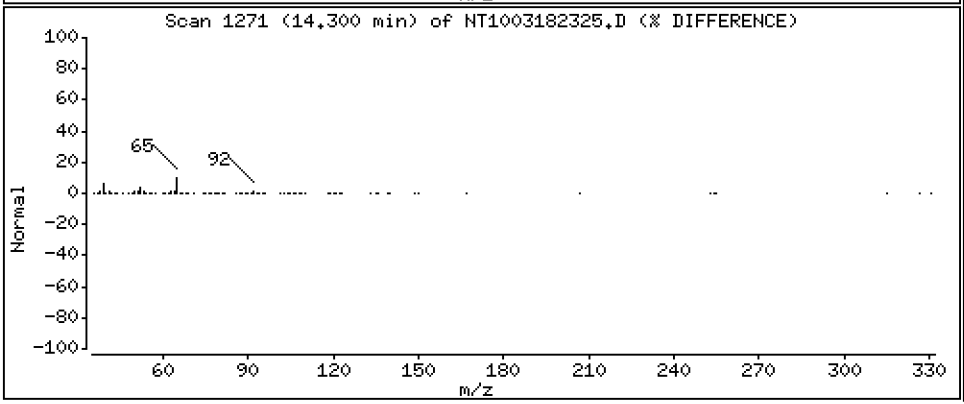
38 2-Nitroaniline

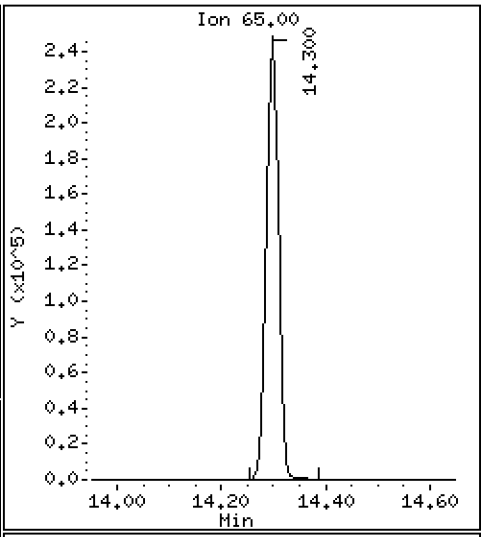
Concentration: 10.15 ug/mL

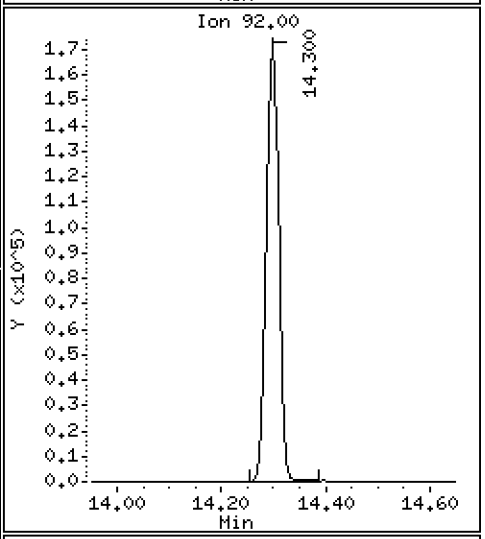


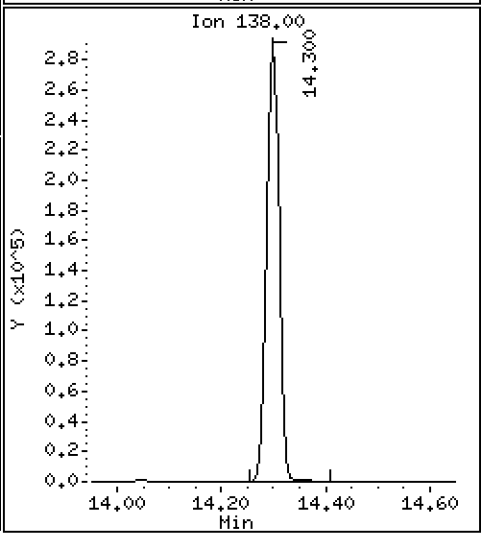












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

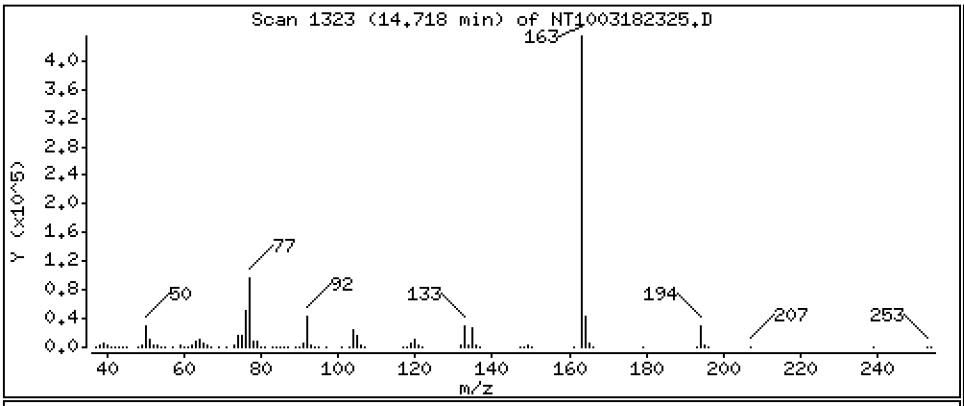
Operator: VTS

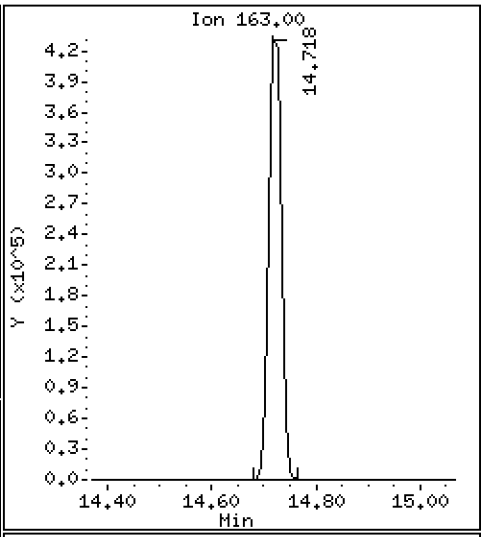
Column phase: ZB-5msi

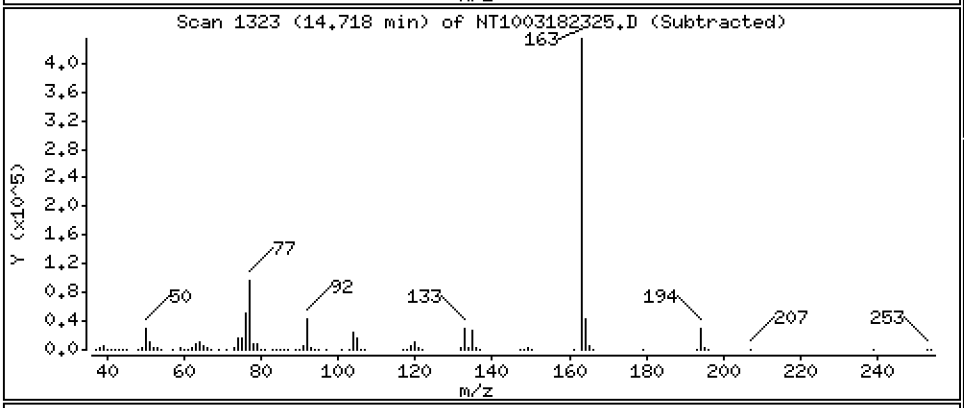
Column diameter: 0.25

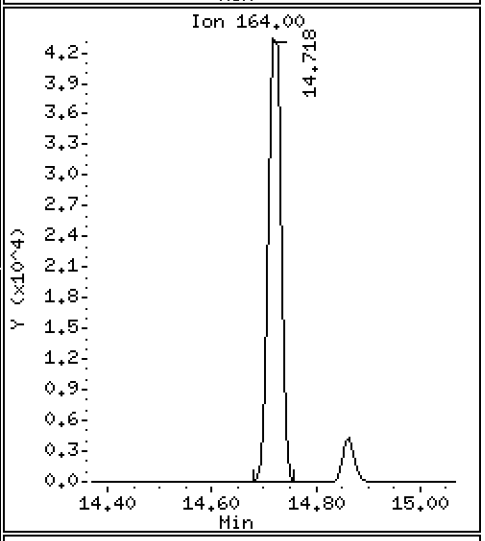
39 Dimethylphthalate

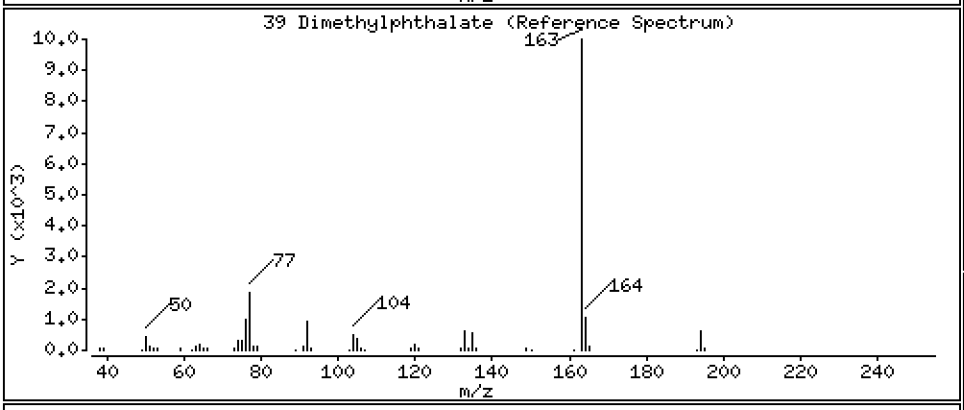
Concentration: 5.073 ug/mL

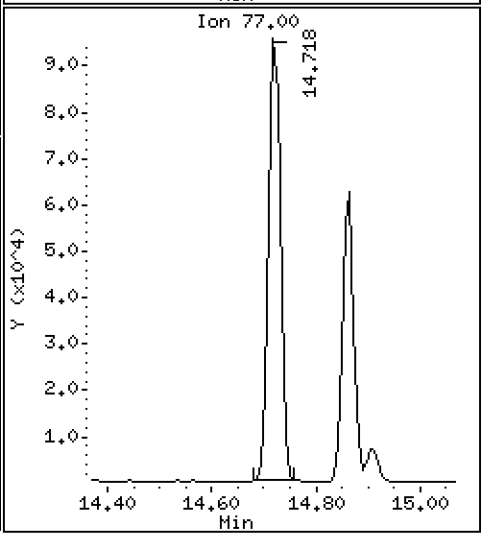


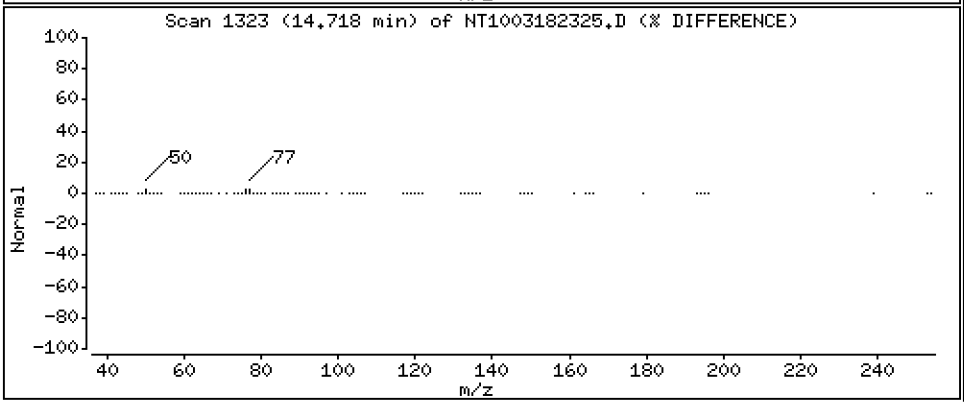












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

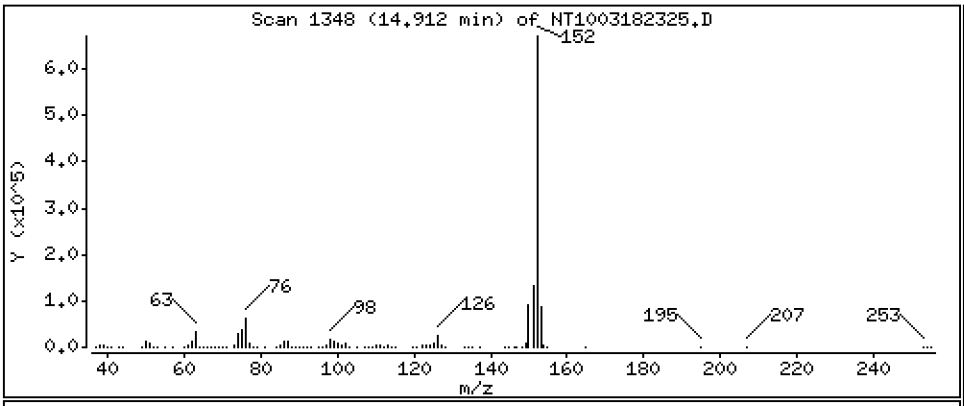
Operator: VTS

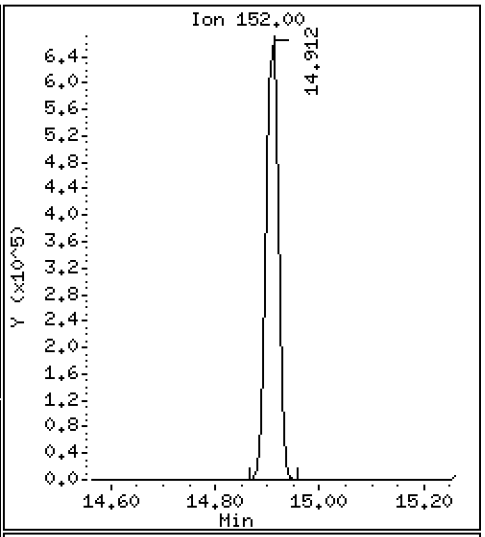
Column phase: ZB-5msi

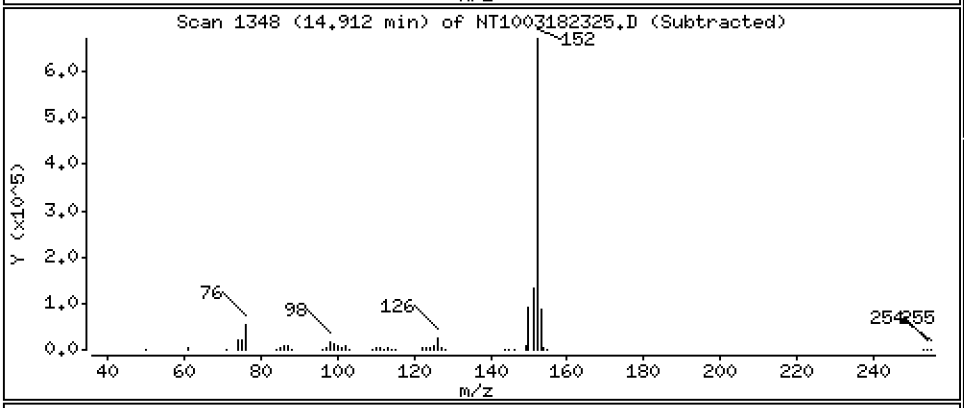
Column diameter: 0.25

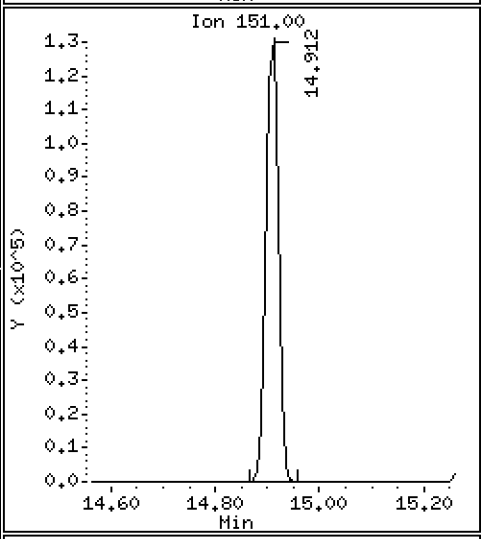
40 Acenaphthylene

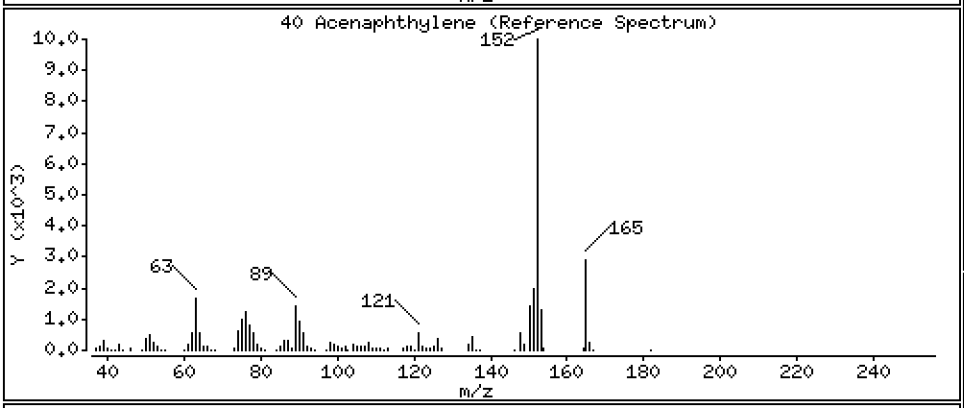
Concentration: 4.966 ug/mL

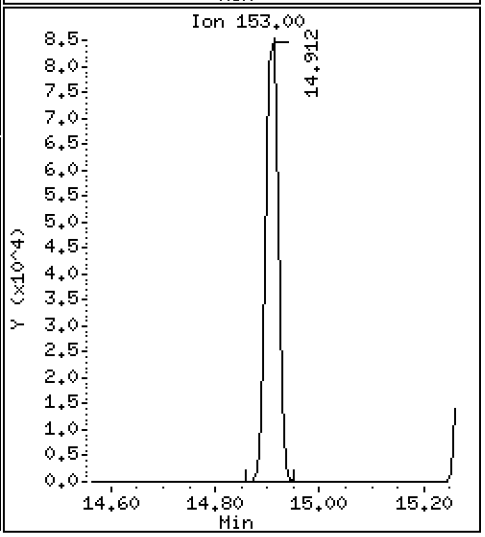


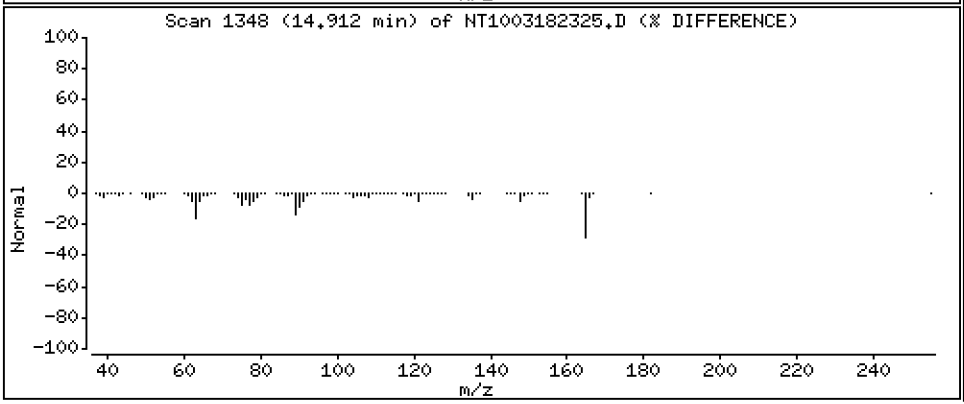












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

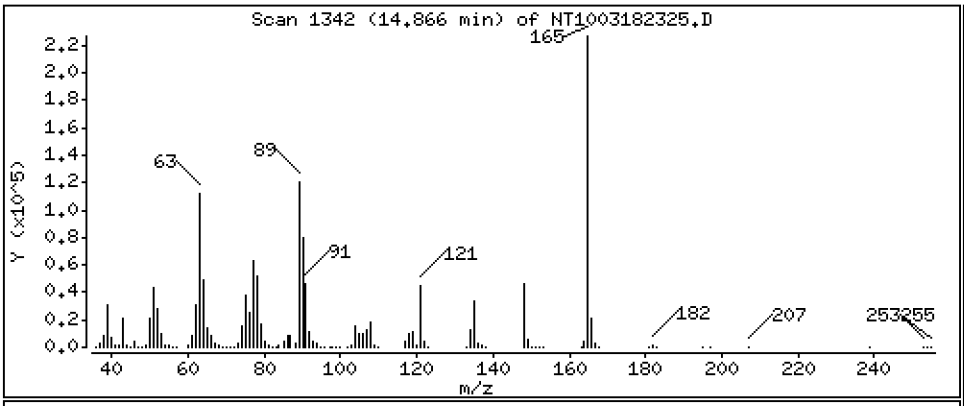
Operator: VTS

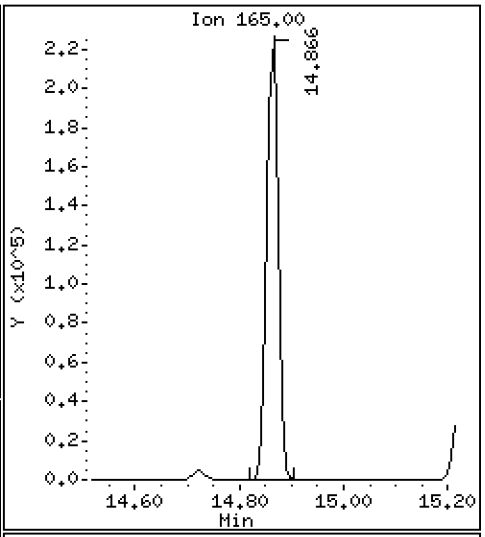
Column phase: ZB-5msi

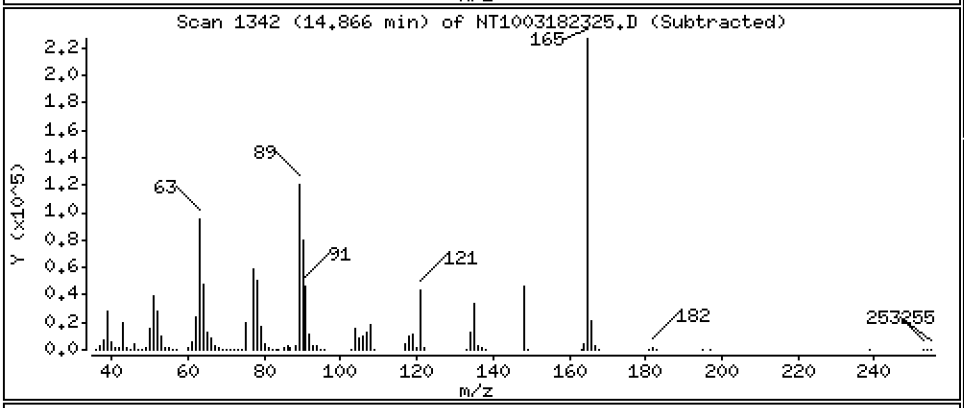
Column diameter: 0.25

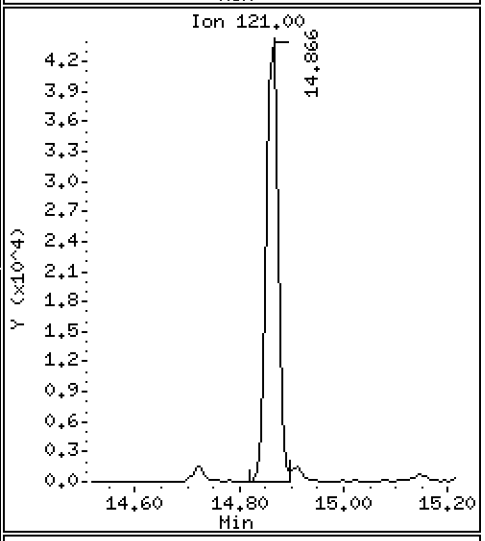
41 2,6-Dinitrotoluene

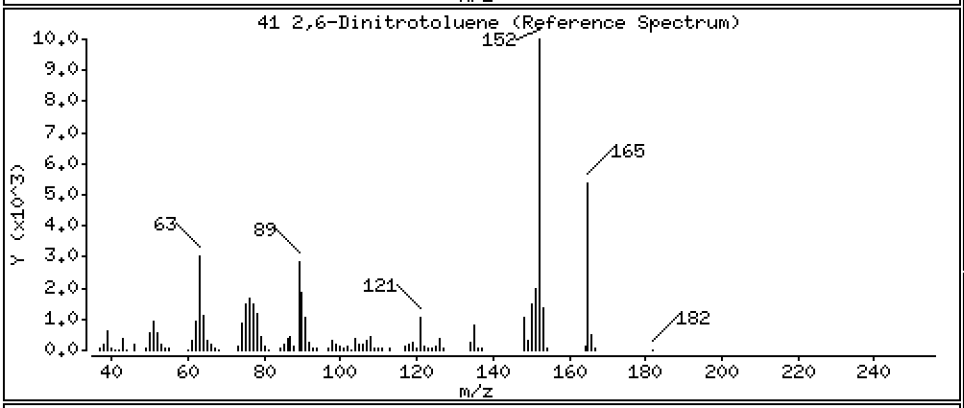
Concentration: 11.10 ug/mL

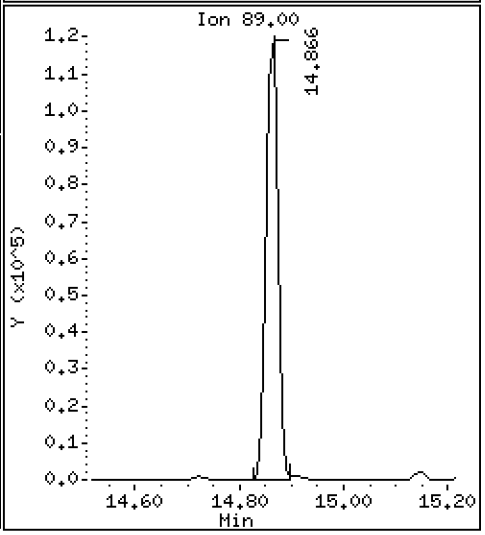


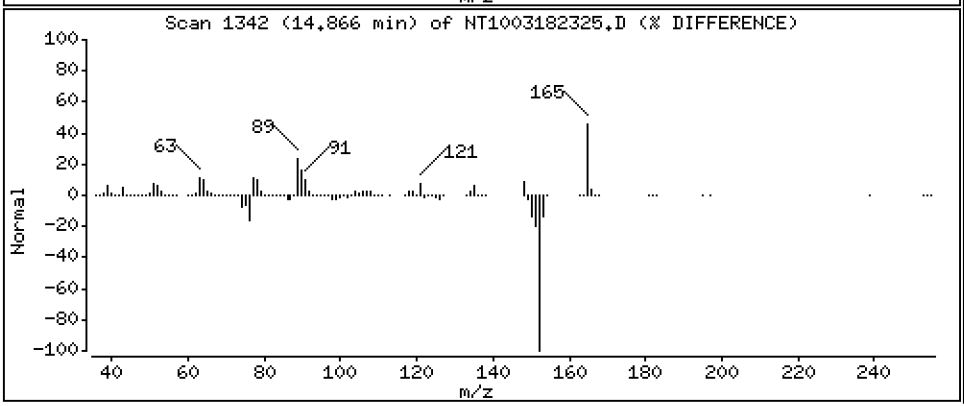












Date : 19-MAR-2023 09:03

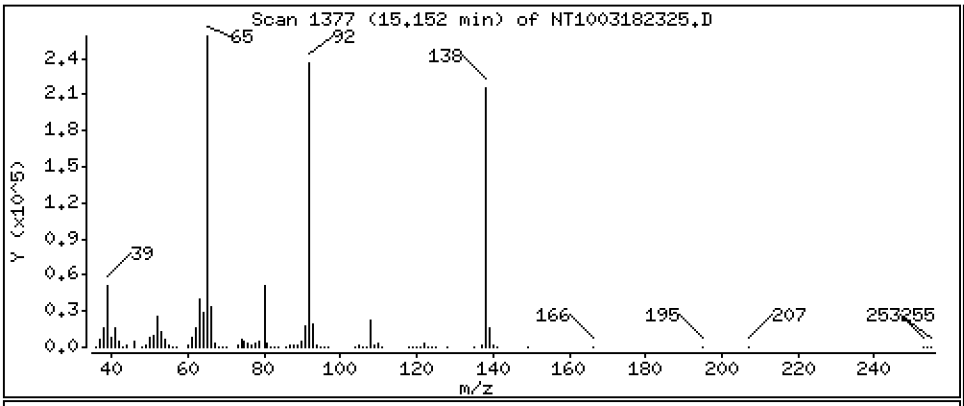
Client ID: Instrument: nt10.i

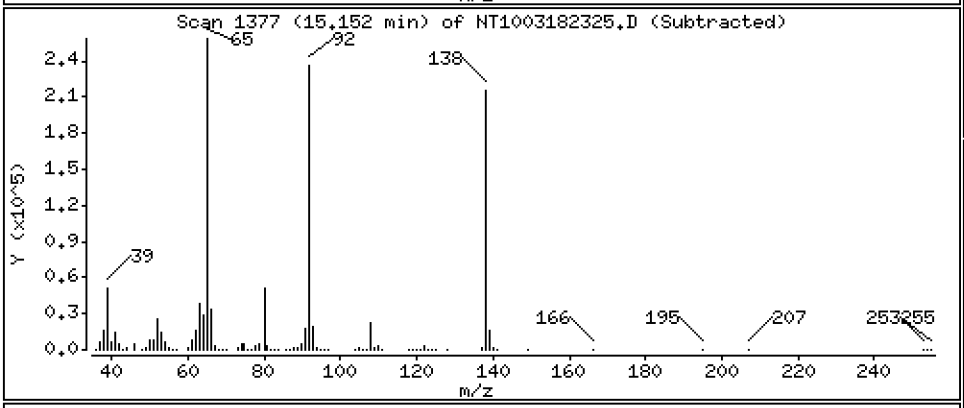
Sample Info: SLC0504-CCV1

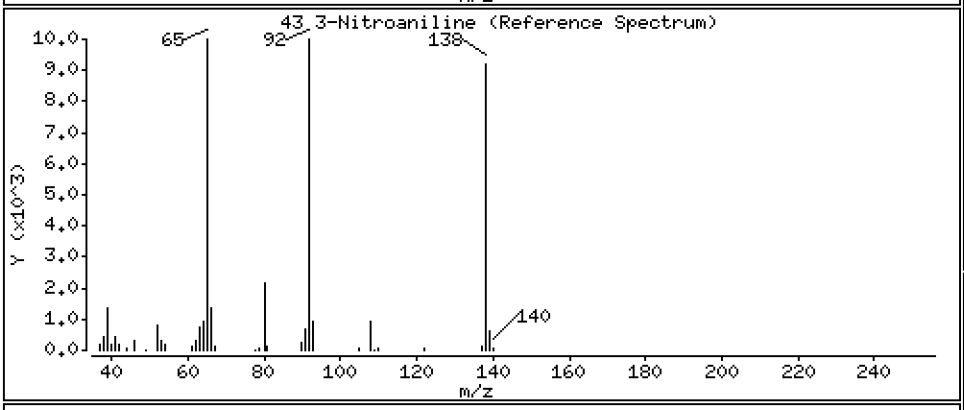
Operator: VTS

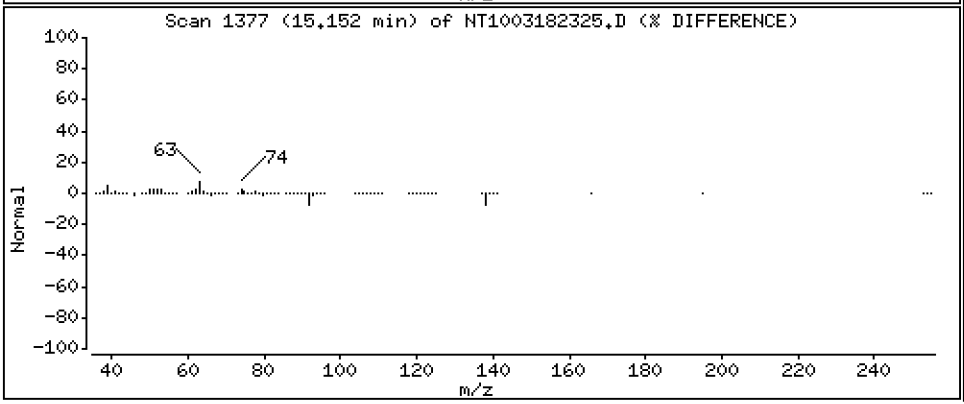
Column phase: ZB-5msi Column diameter: 0.25

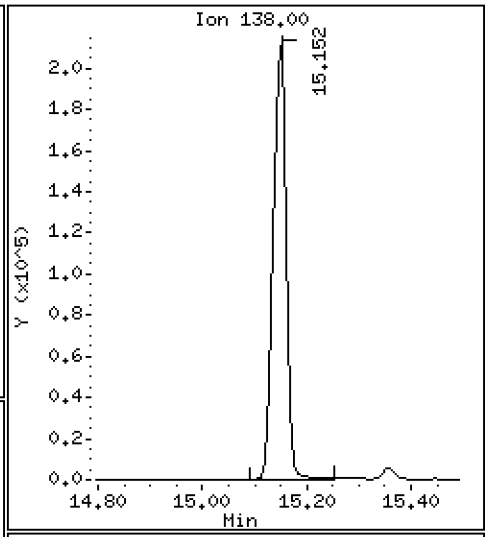
43 3-Nitroaniline Concentration: 11.76 ug/mL

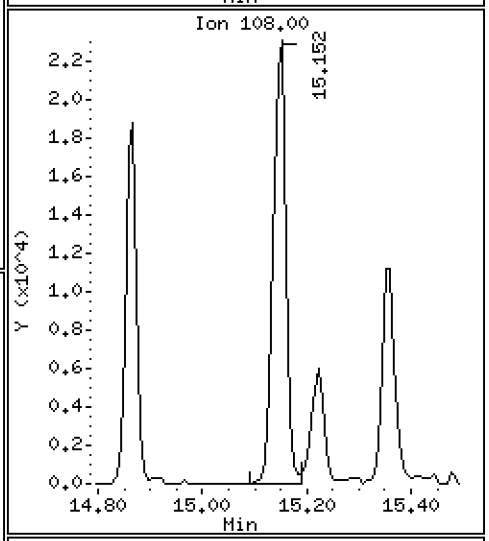


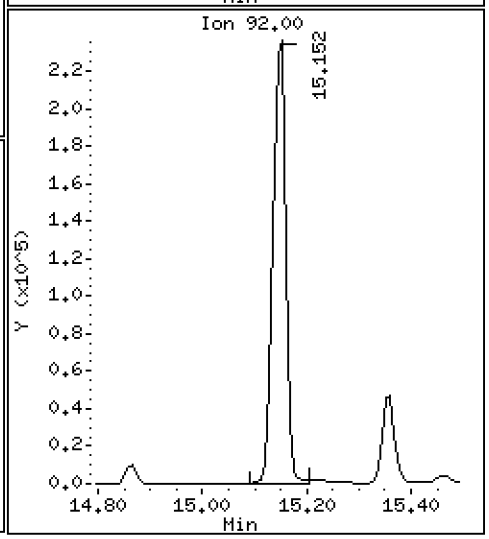












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

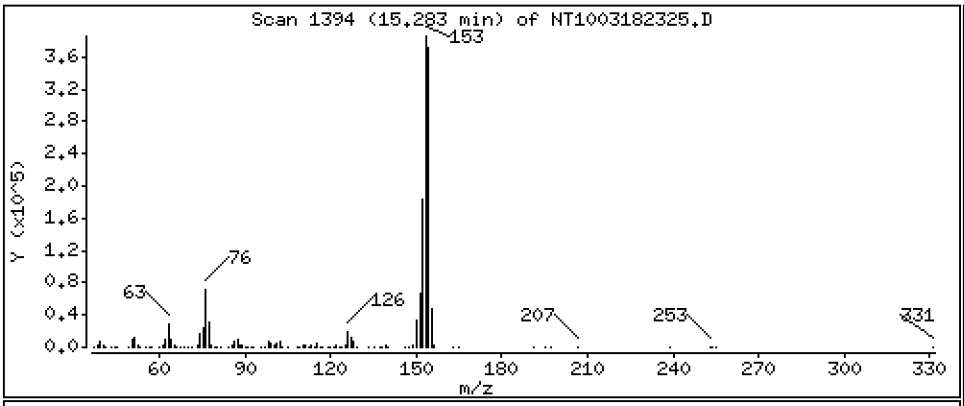
Operator: VTS

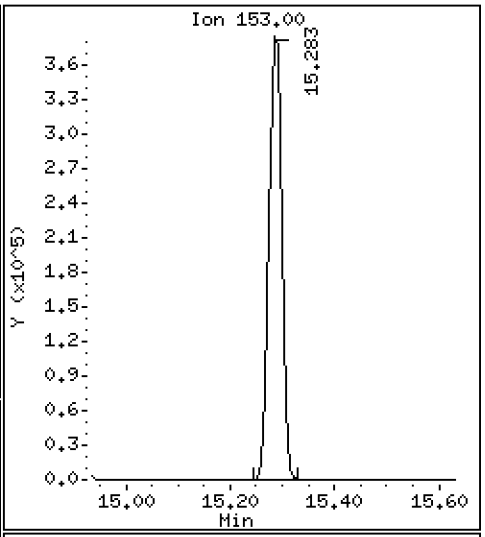
Column phase: ZB-5msi

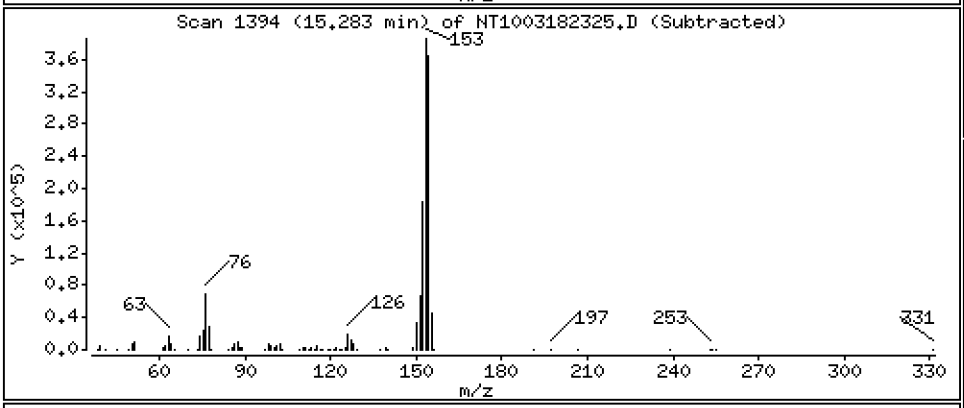
Column diameter: 0.25

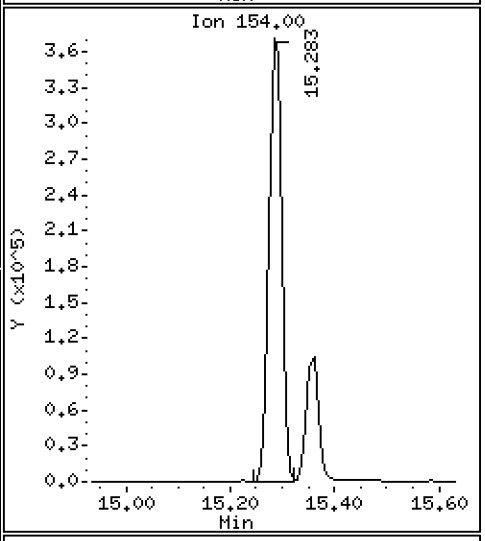
44 Acenaphthene

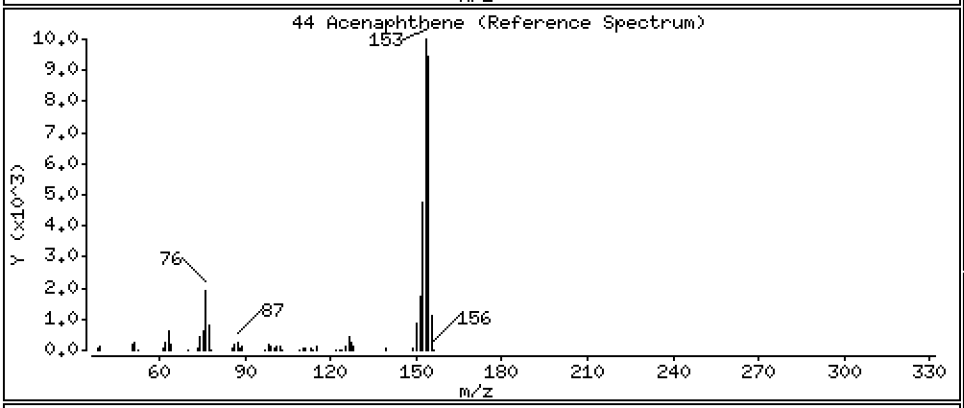
Concentration: 4.897 ug/mL

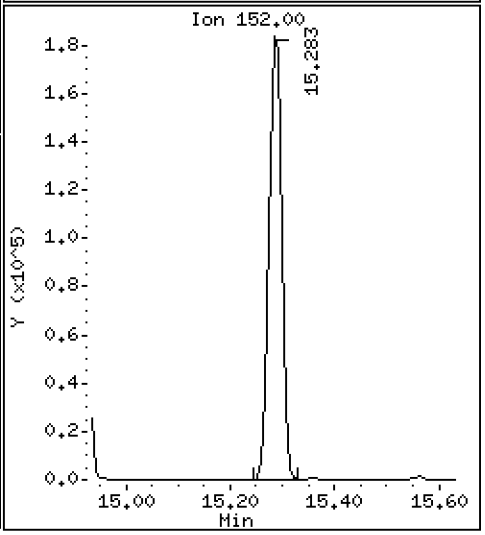


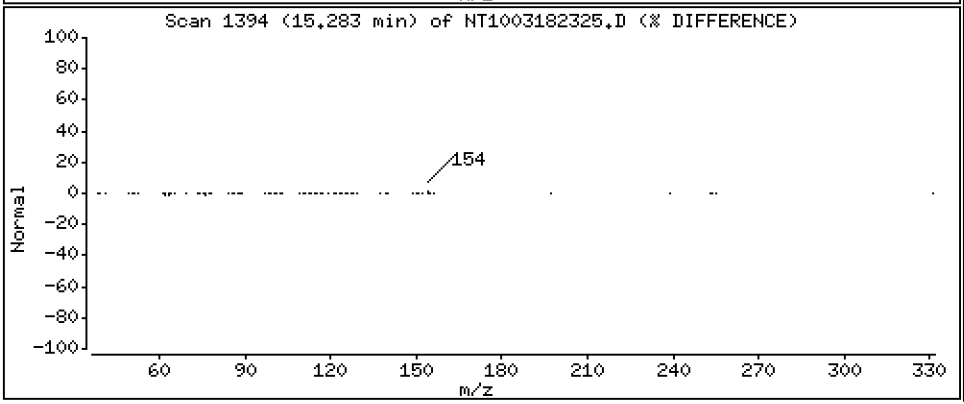












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

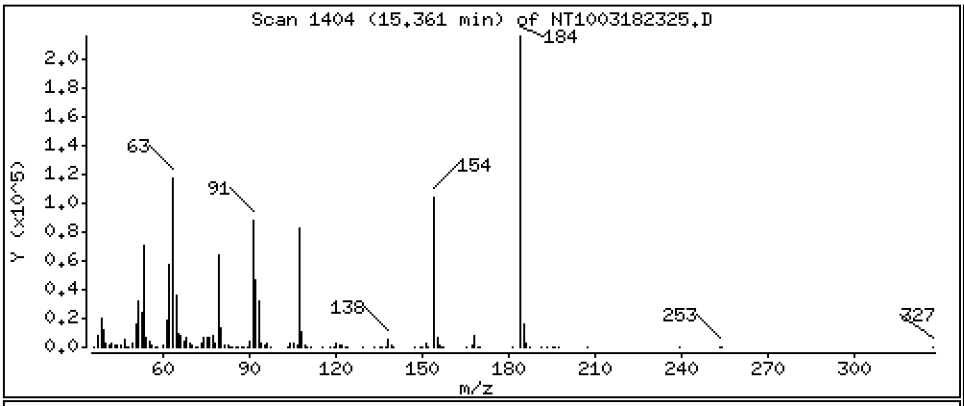
Operator: VTS

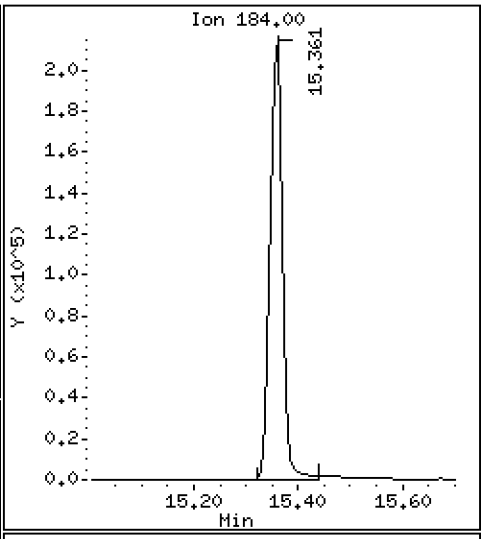
Column phase: ZB-5msi

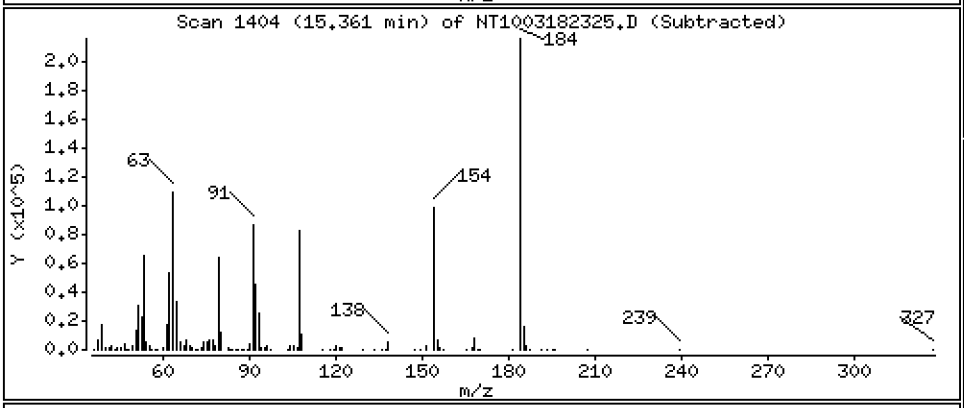
Column diameter: 0.25

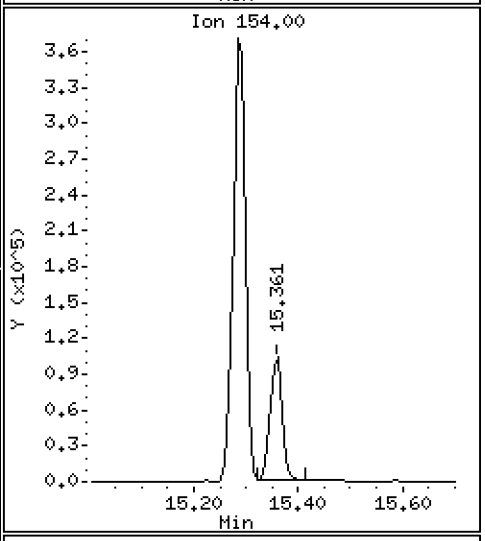
45 2,4-Dinitrophenol

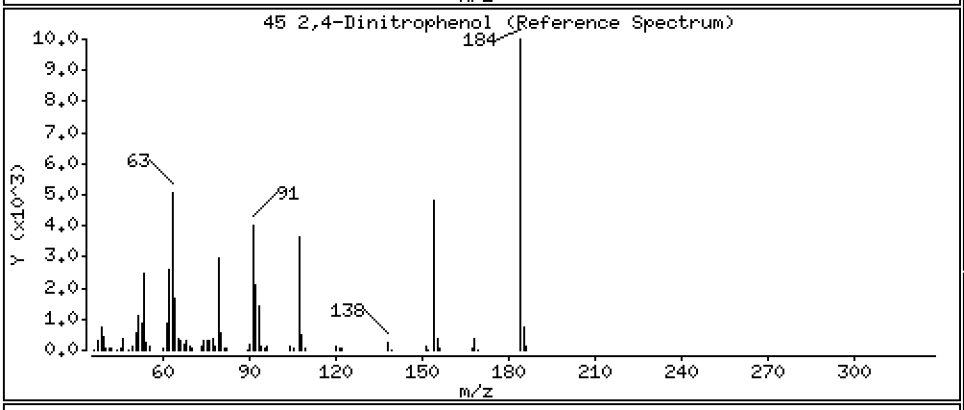
Concentration: 18.48 ug/mL

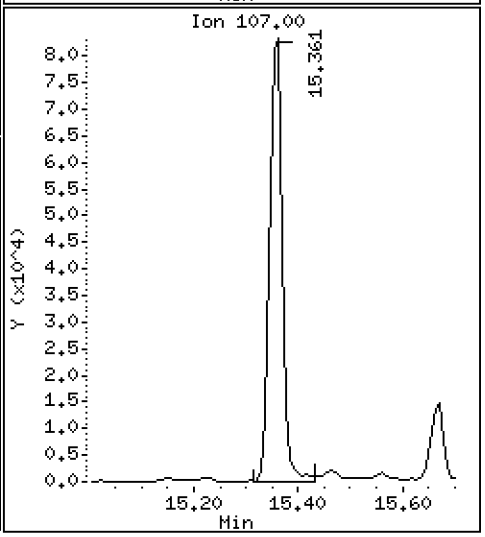


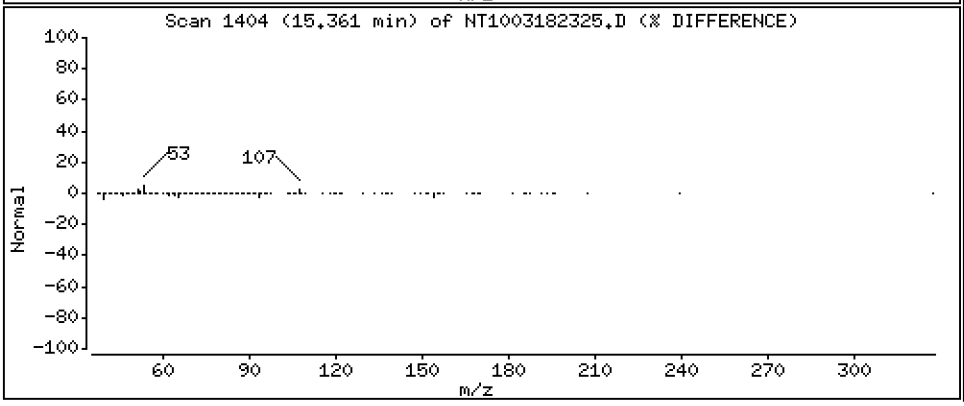












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

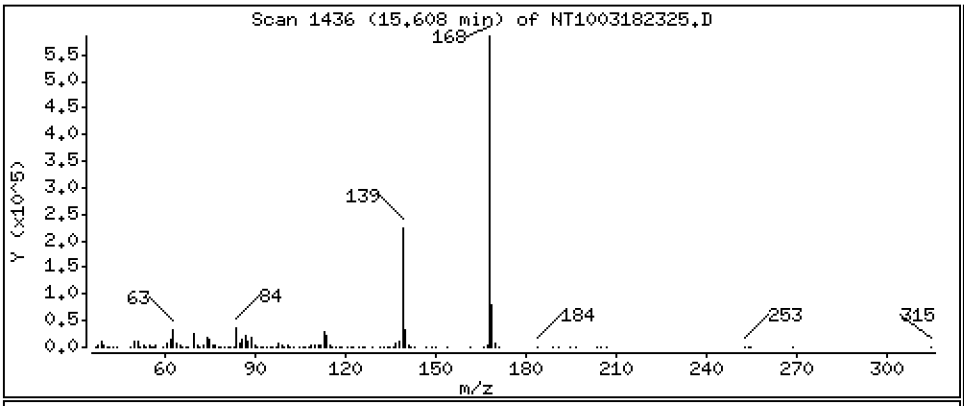
Operator: VTS

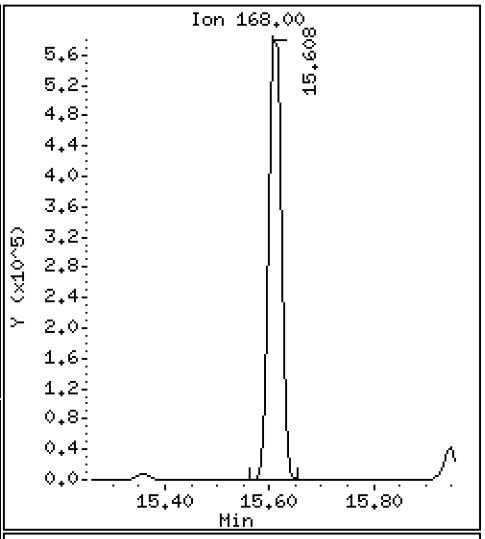
Column phase: ZB-5msi

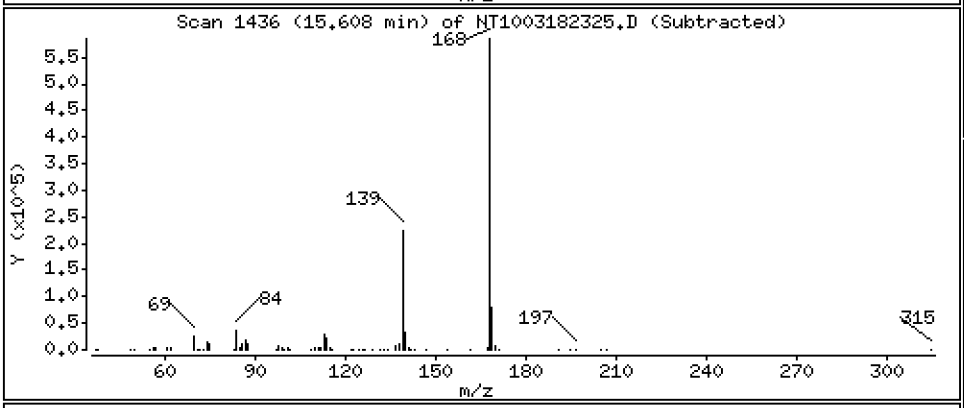
Column diameter: 0.25

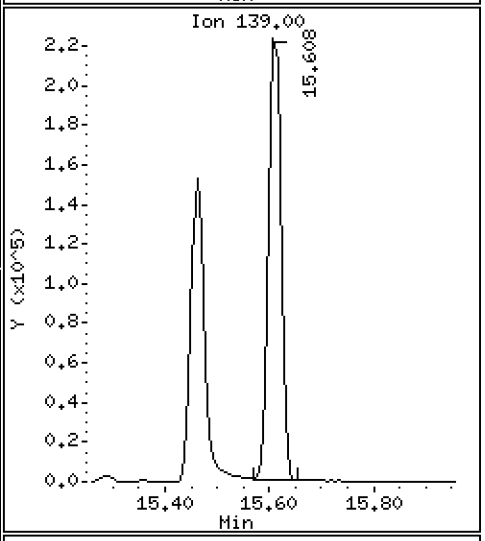
46 Dibenzofuran

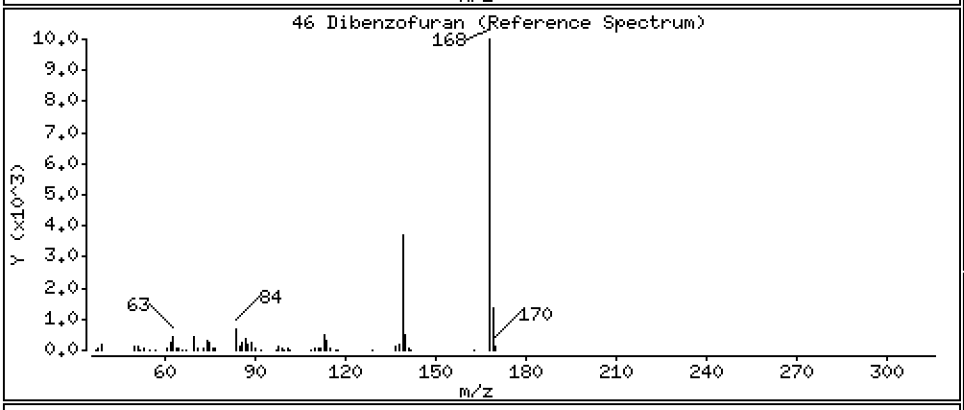
Concentration: 4.887 ug/mL

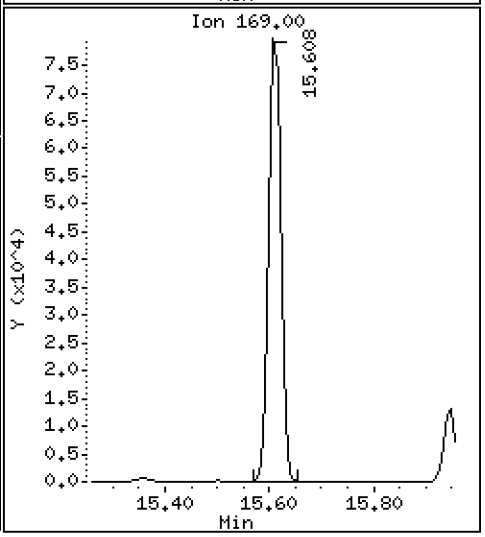


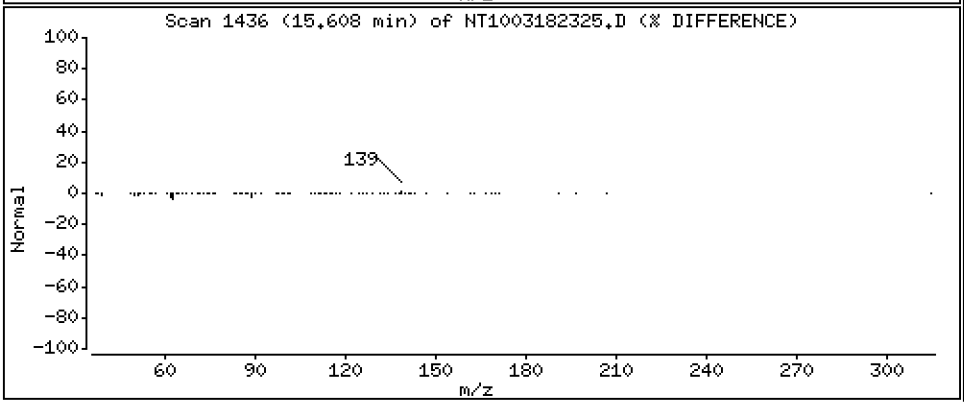












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

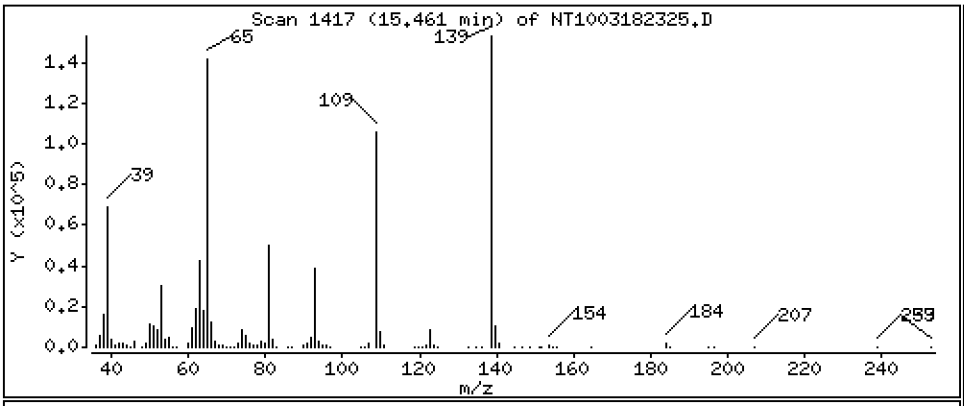
Operator: VTS

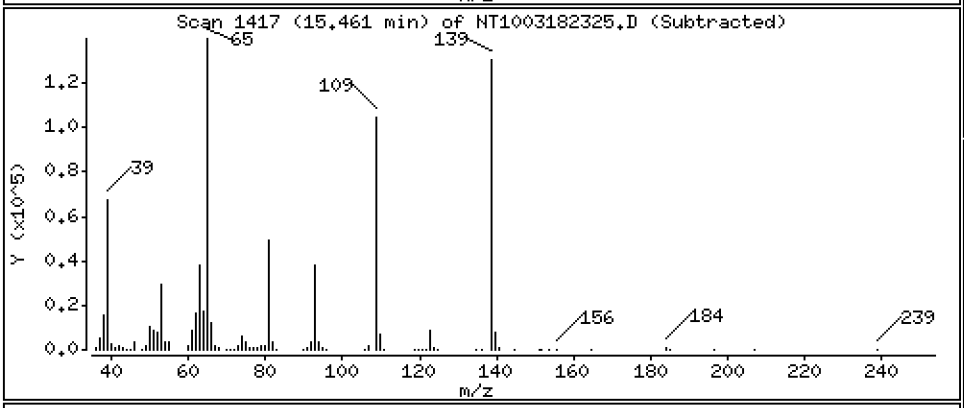
Column phase: ZB-5msi

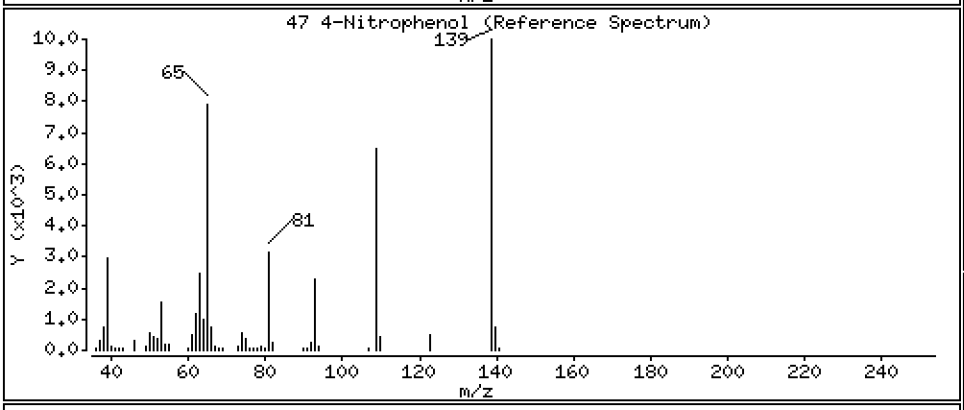
Column diameter: 0.25

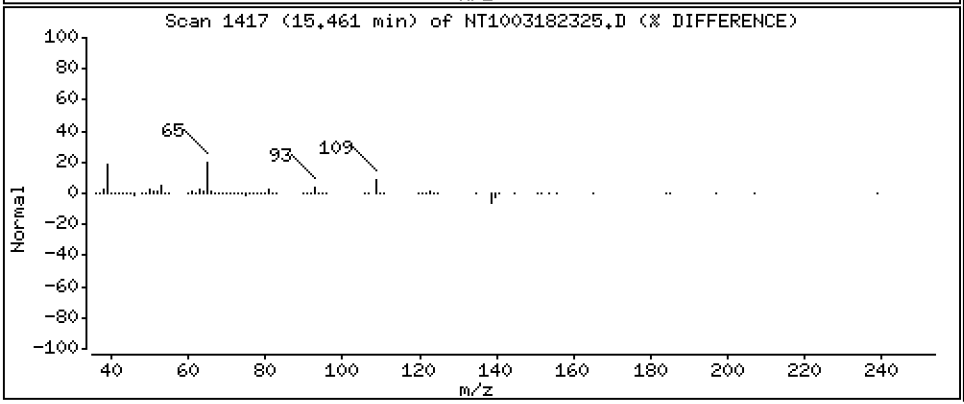
47 4-Nitrophenol

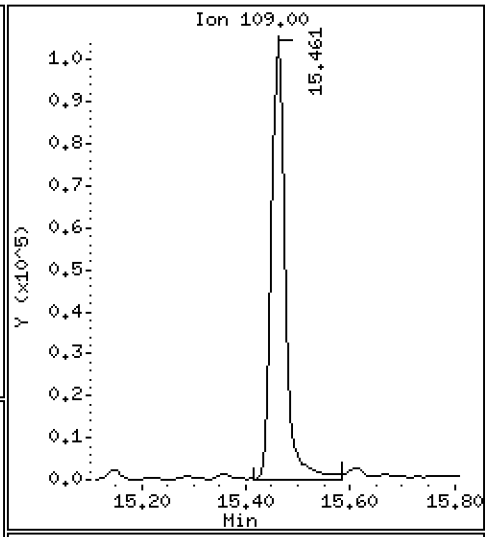
Concentration: 8.869 ug/mL

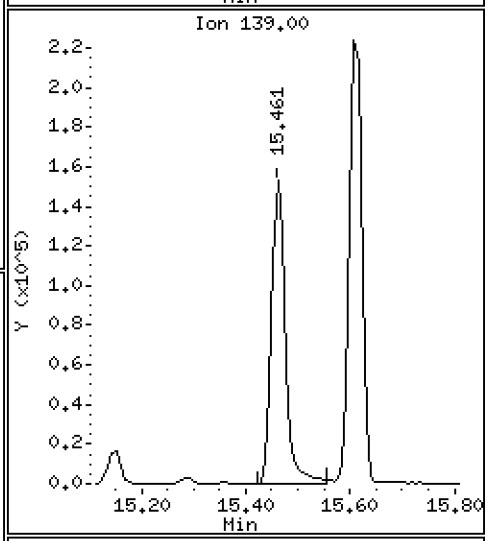


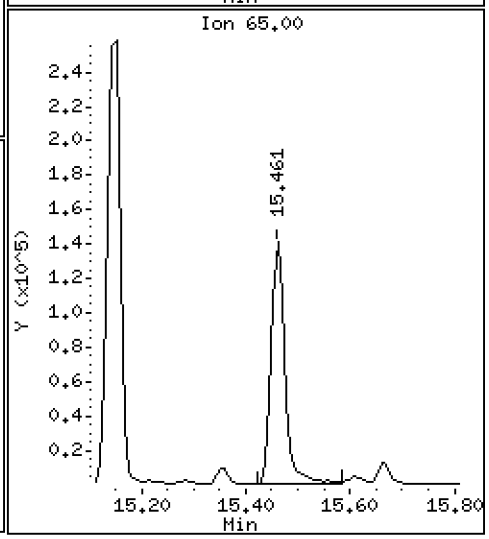












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

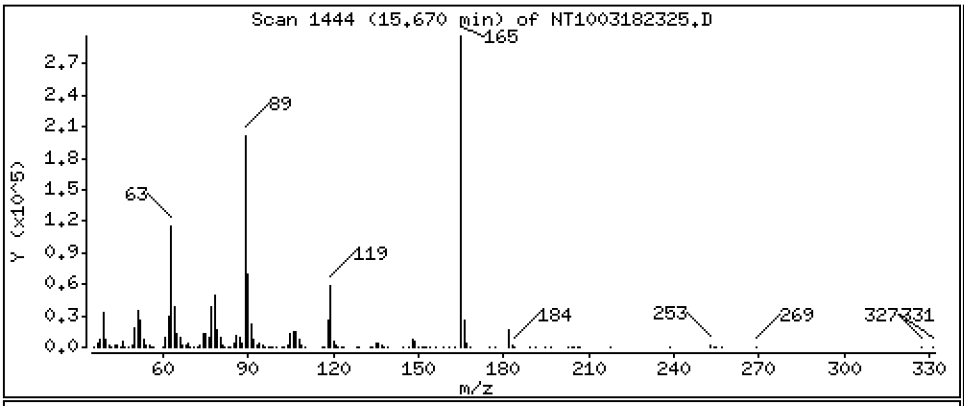
Operator: VTS

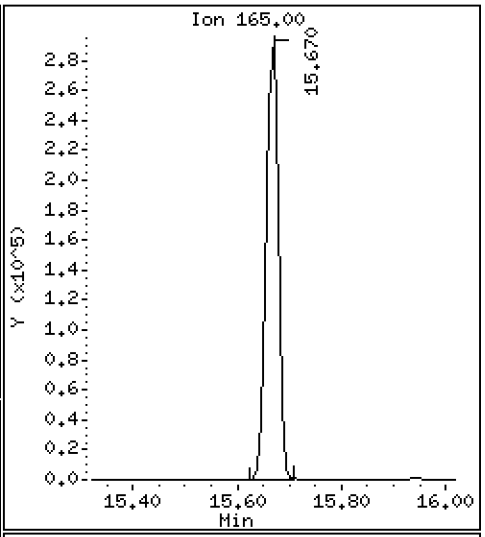
Column phase: ZB-5msi

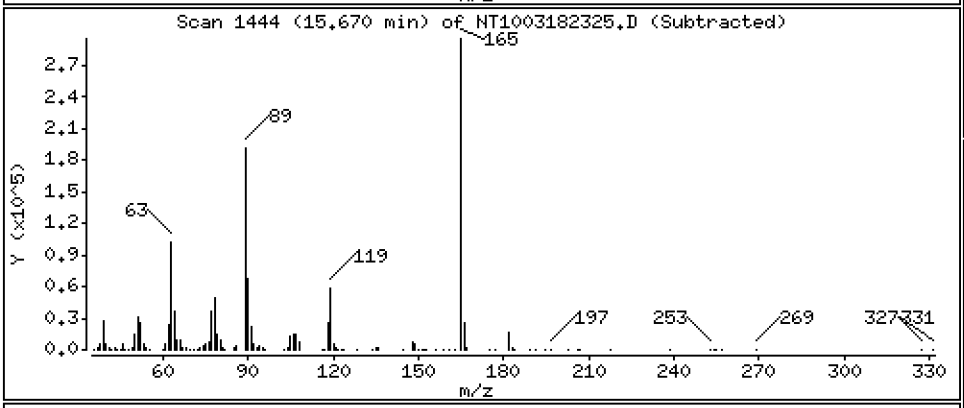
Column diameter: 0.25

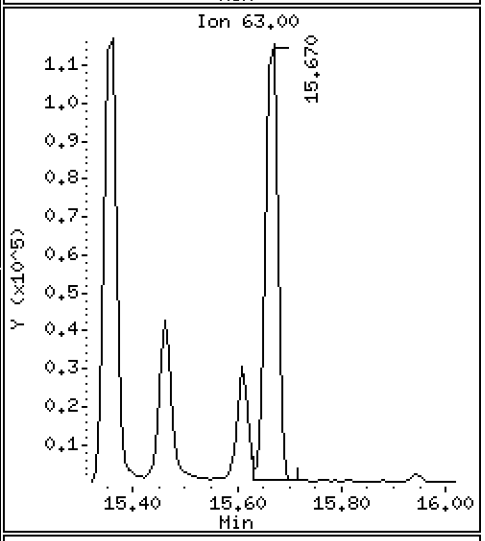
48 2,4-Dinitrotoluene

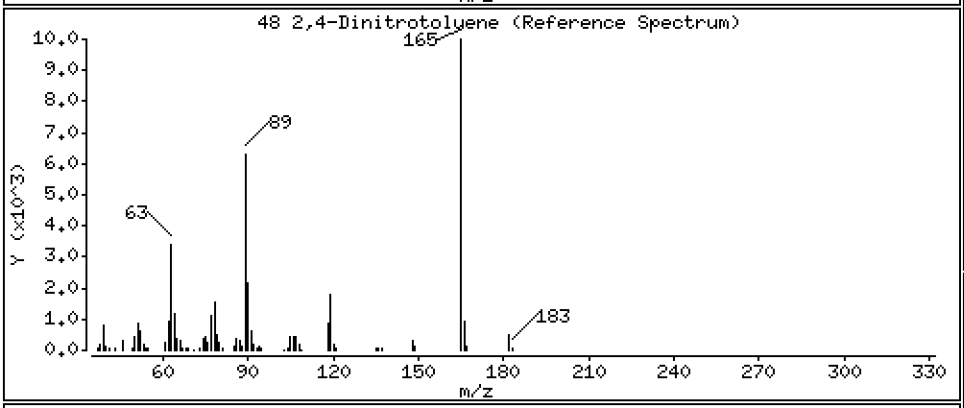
Concentration: 10.21 ug/mL

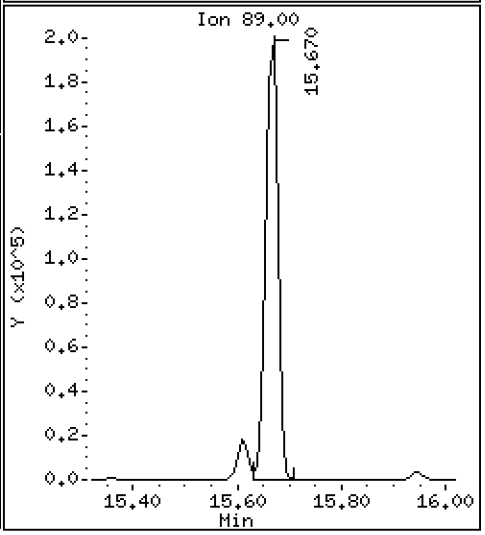


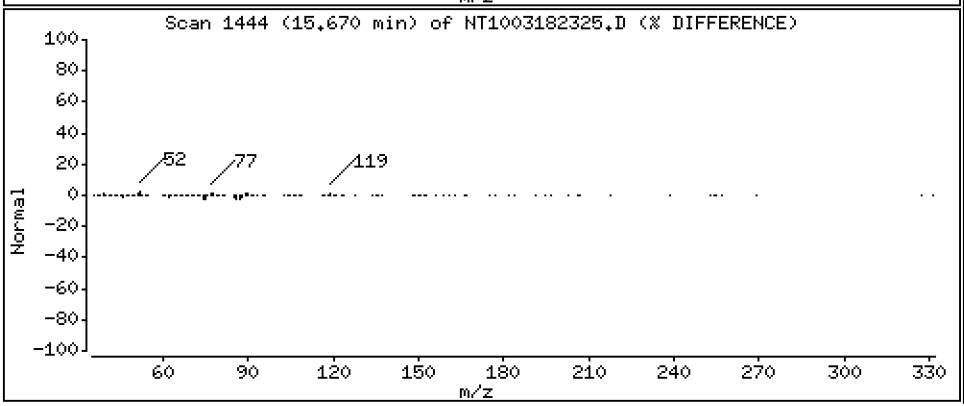












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

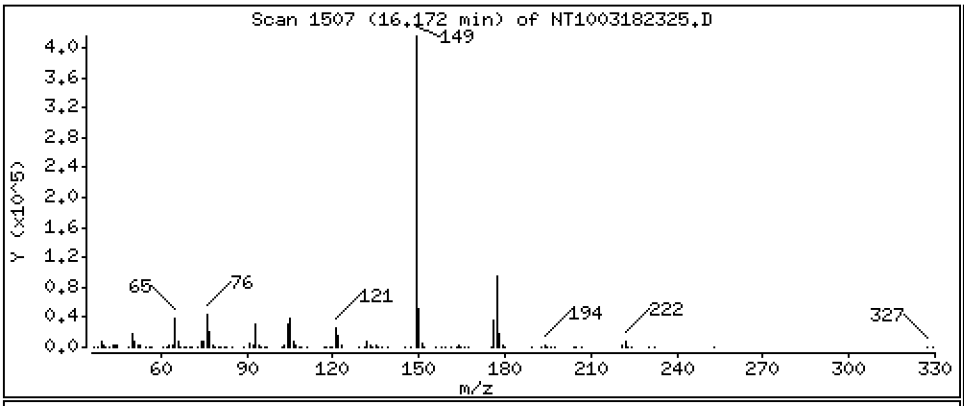
Operator: VTS

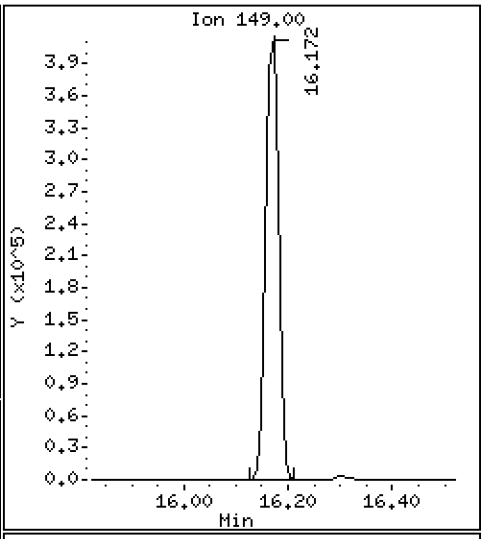
Column phase: ZB-5msi

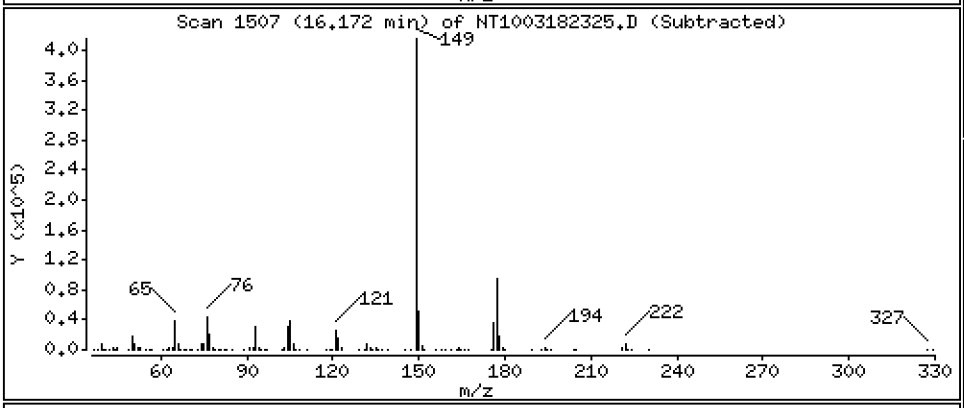
Column diameter: 0.25

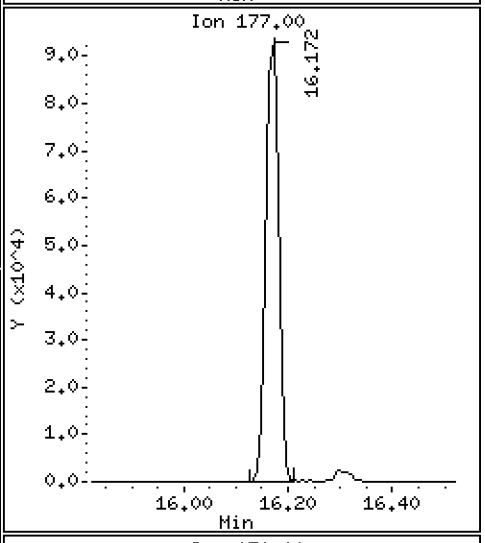
50 Diethylphthalate

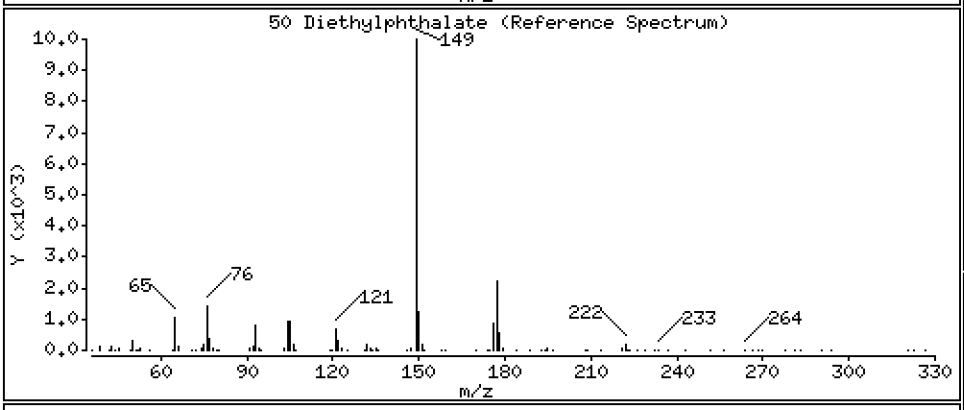
Concentration: 5.107 ug/mL

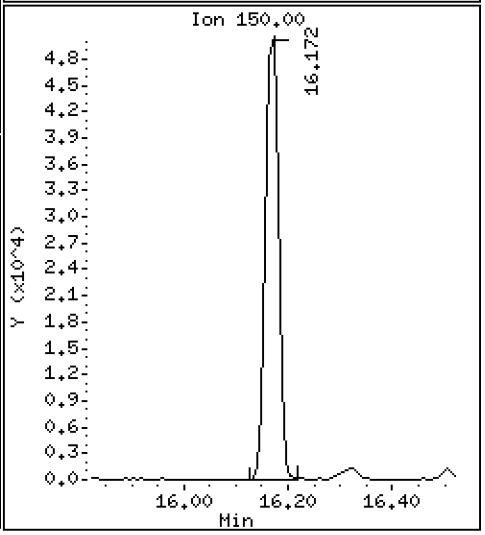


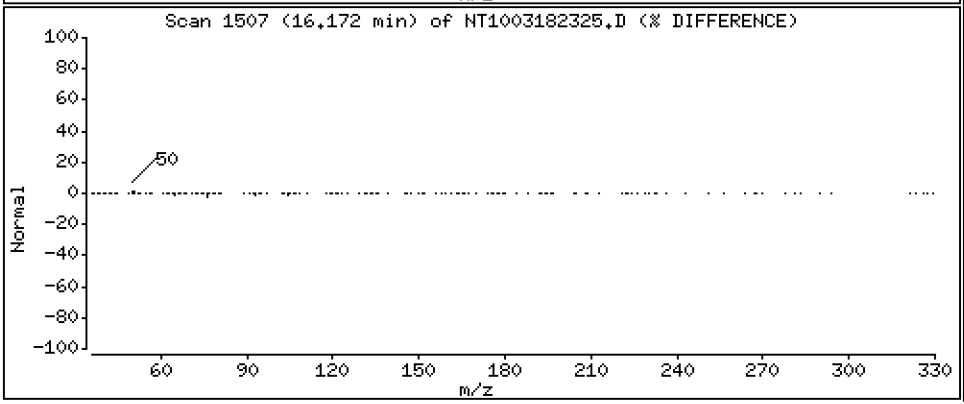












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

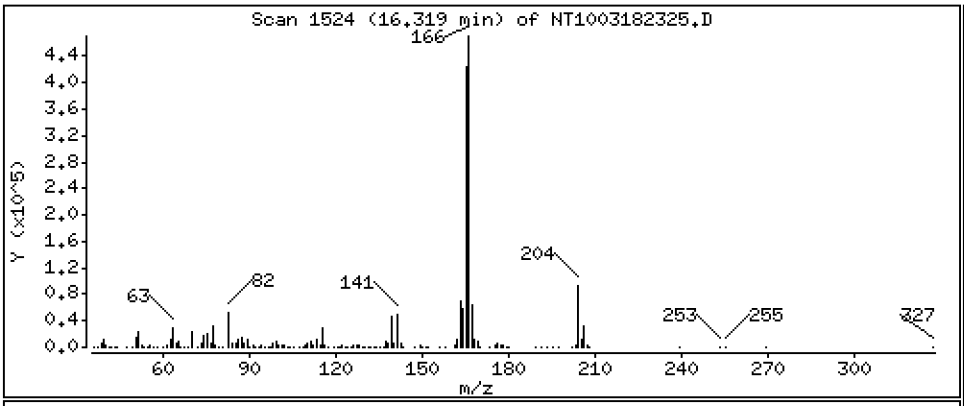
Operator: VTS

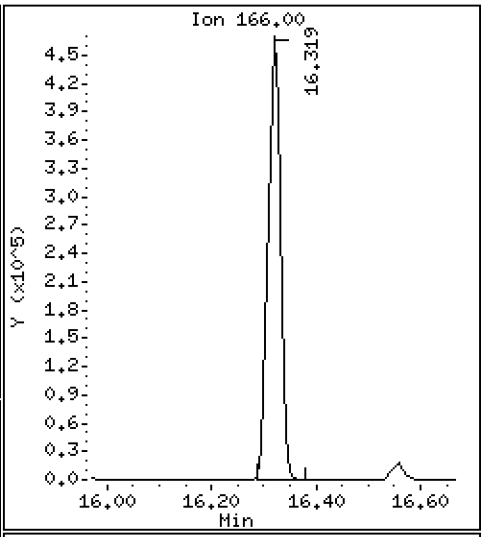
Column phase: ZB-5msi

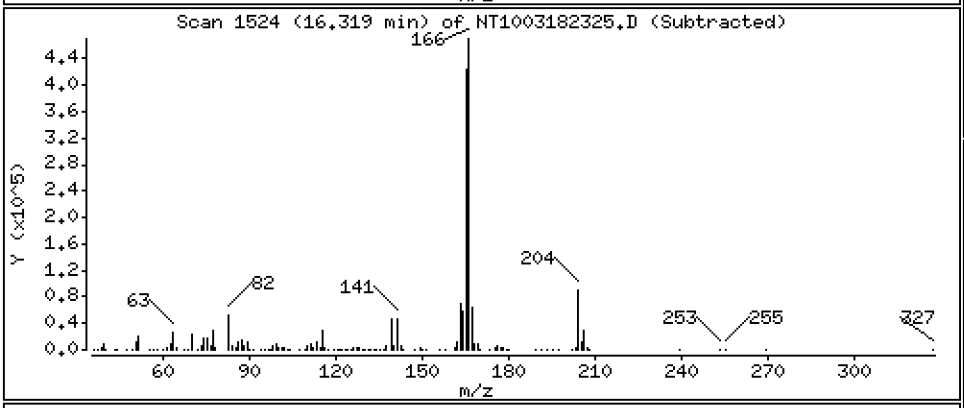
Column diameter: 0.25

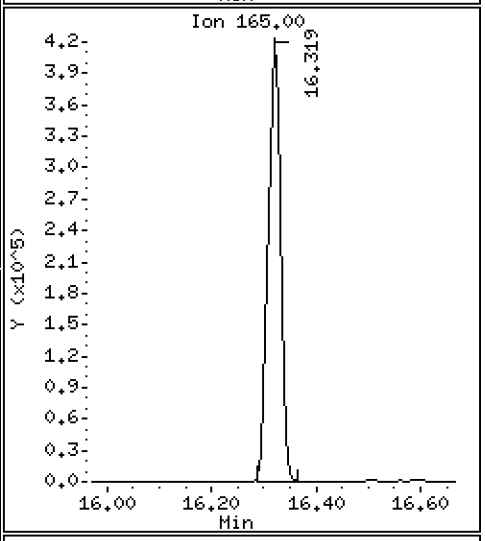
49 Fluorene

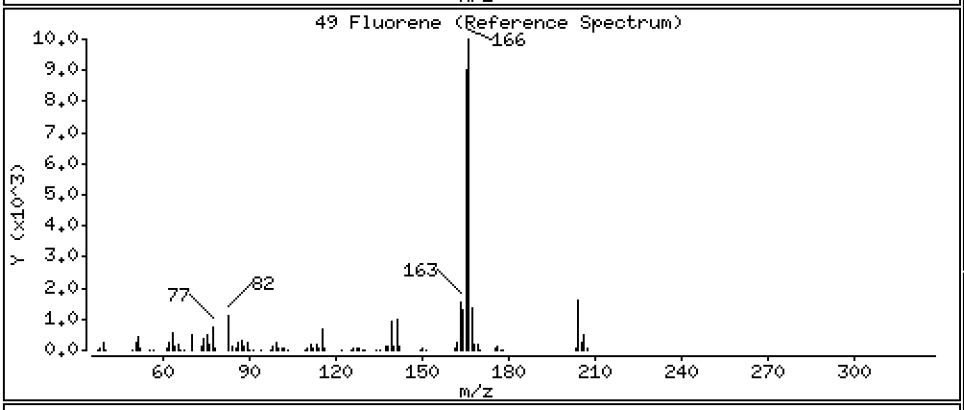
Concentration: 4.230 ug/mL

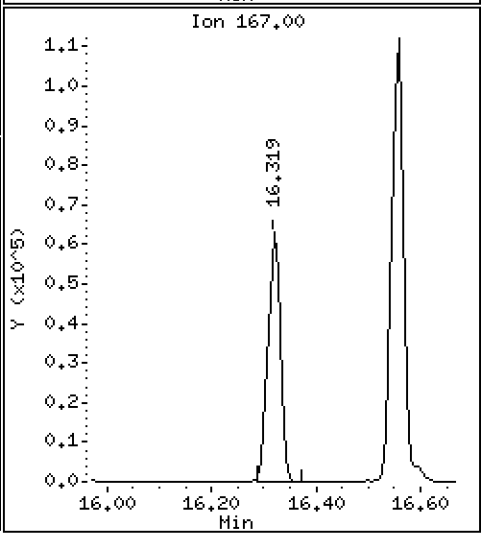


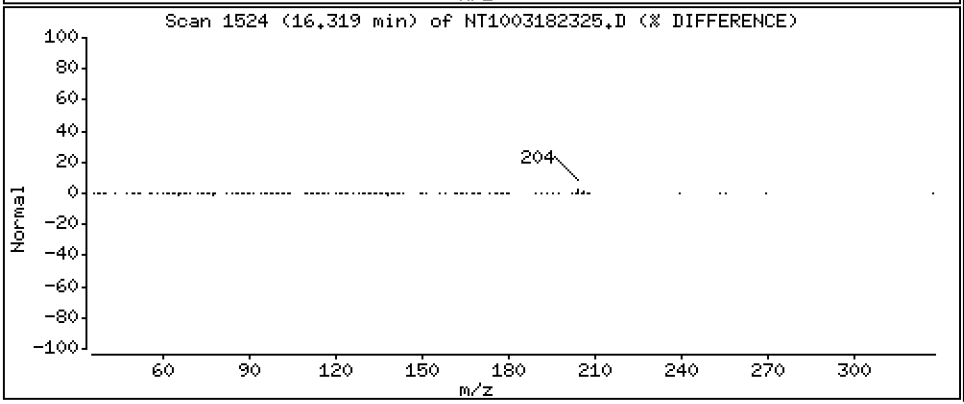












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

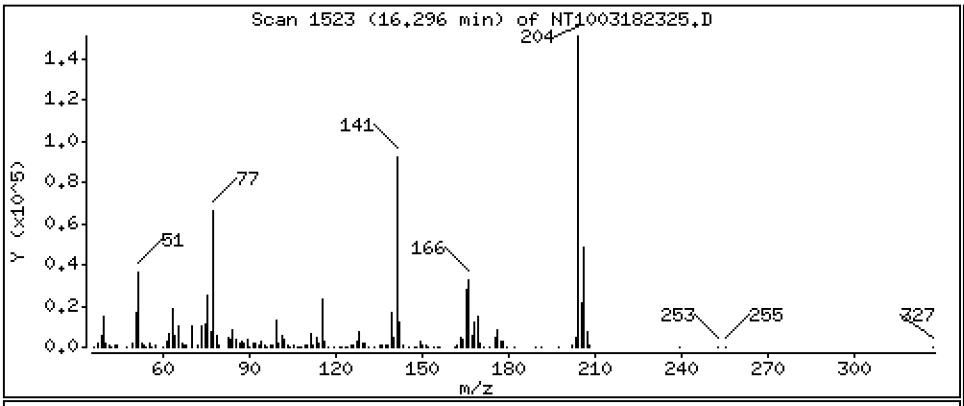
Operator: VTS

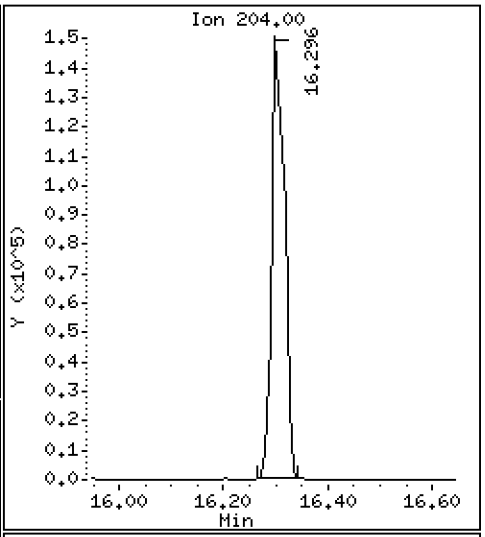
Column phase: ZB-5msi

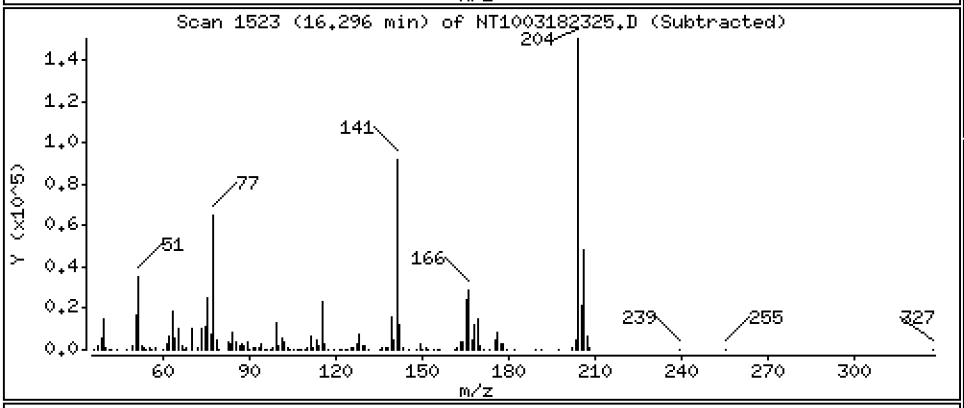
Column diameter: 0.25

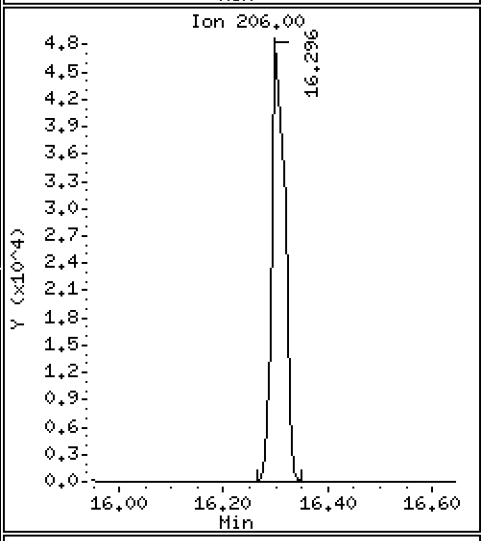
51 4-Chlorophenyl-phenylether

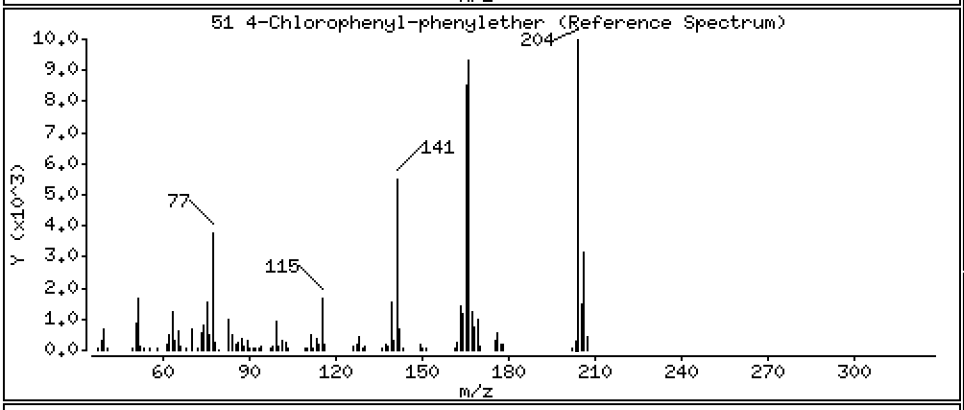
Concentration: 2.658 ug/mL

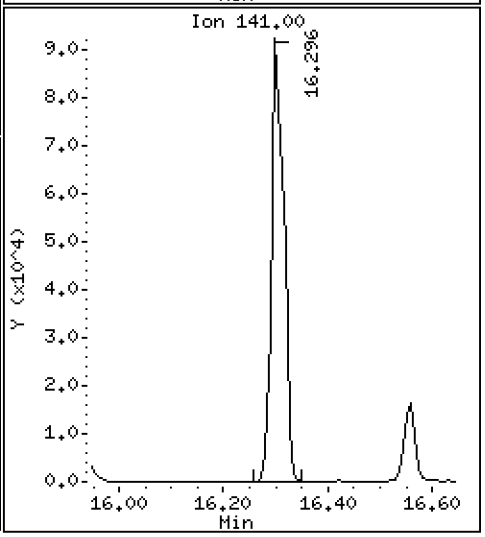


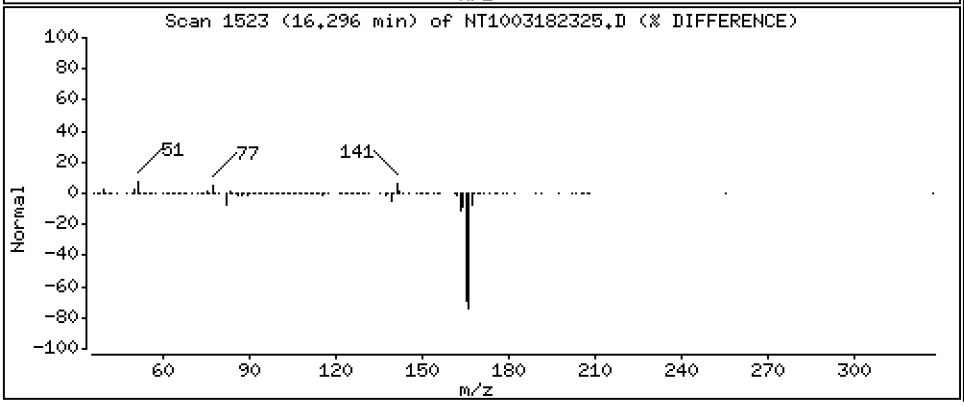












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

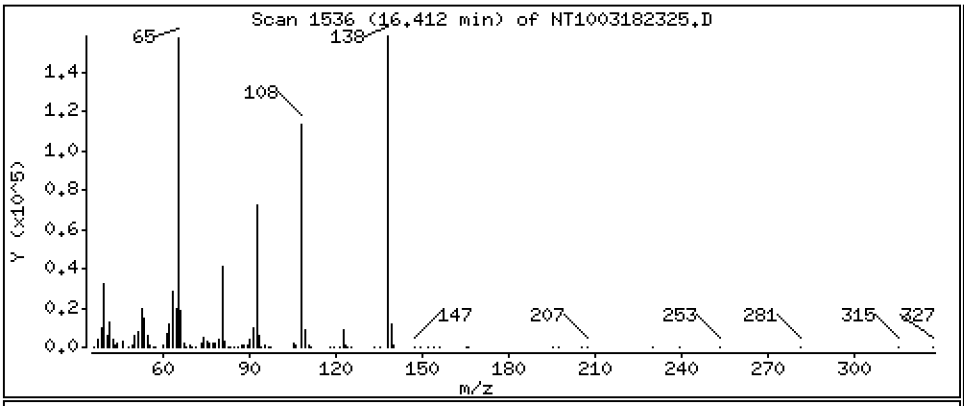
Operator: VTS

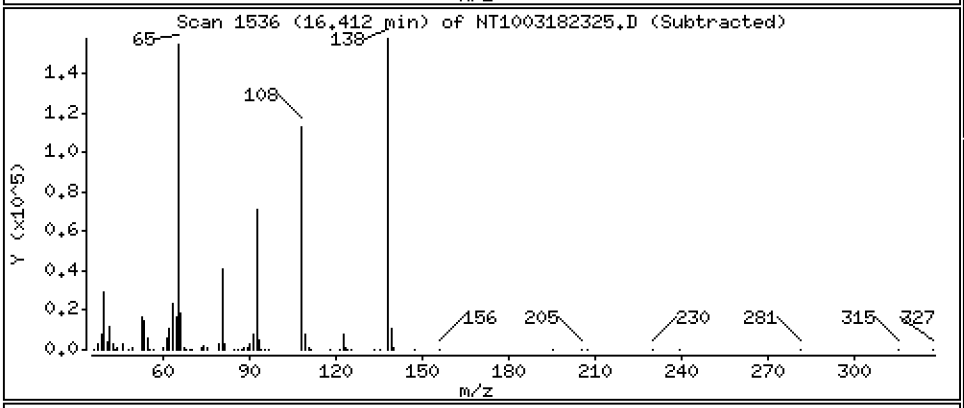
Column phase: ZB-5msi

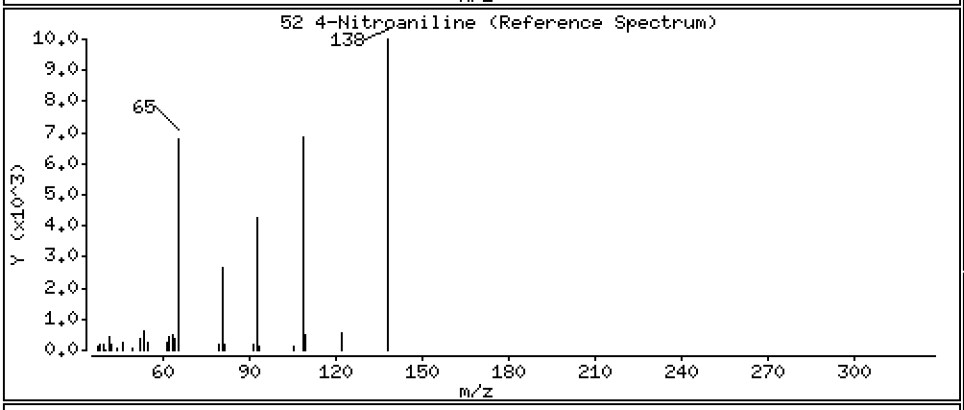
Column diameter: 0.25

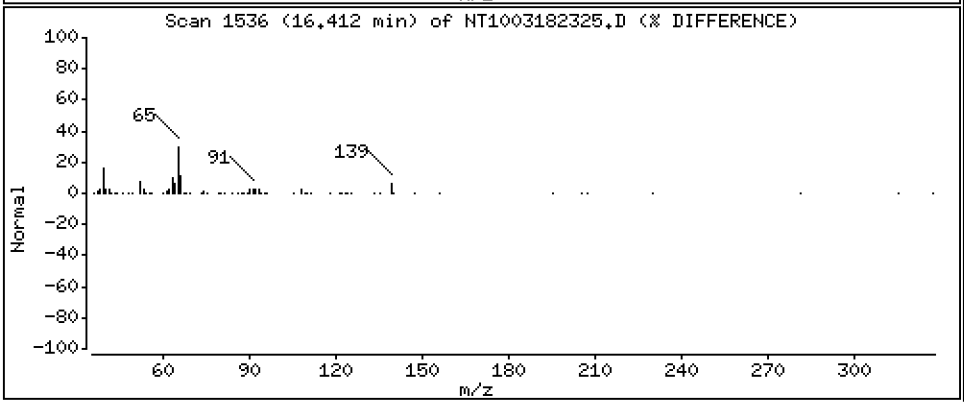
52 4-Nitroaniline

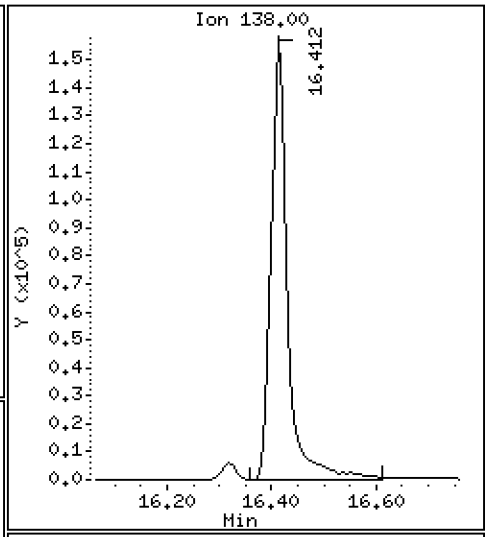
Concentration: 11.25 ug/mL

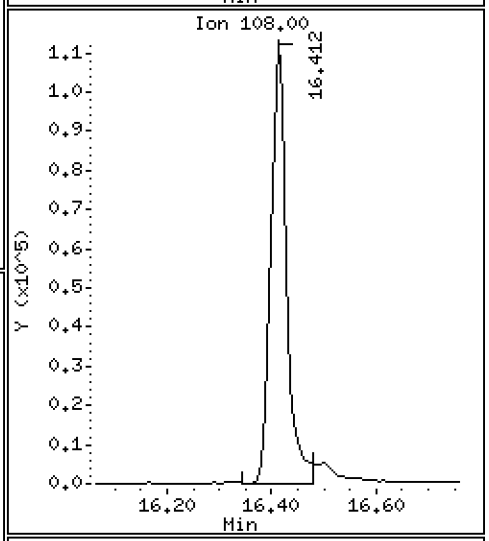


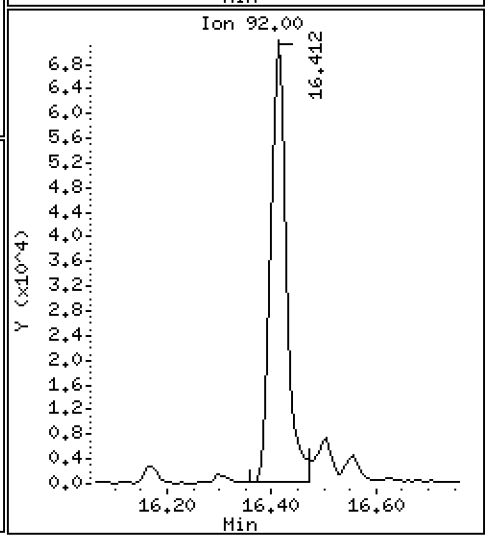












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

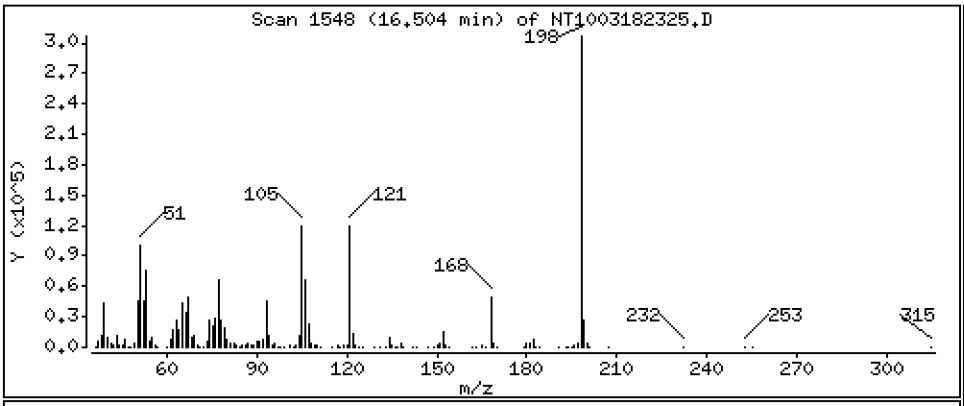
Operator: VTS

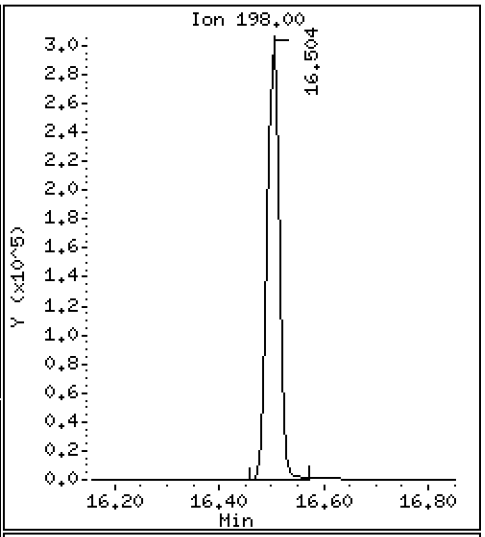
Column phase: ZB-5msi

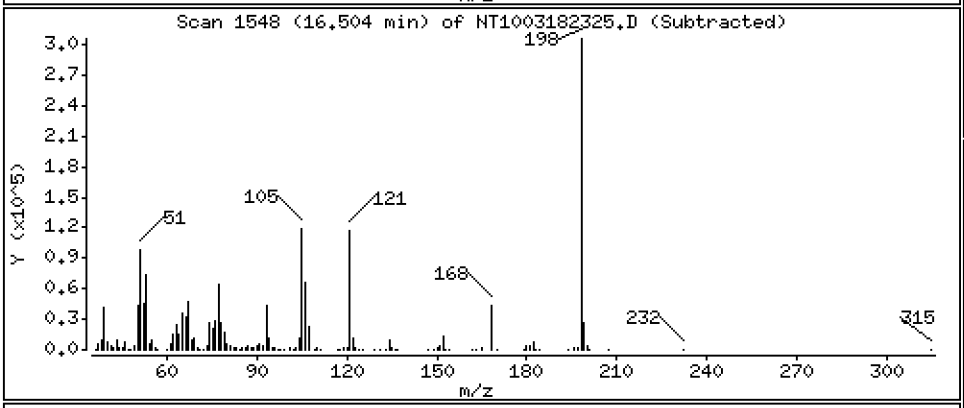
Column diameter: 0.25

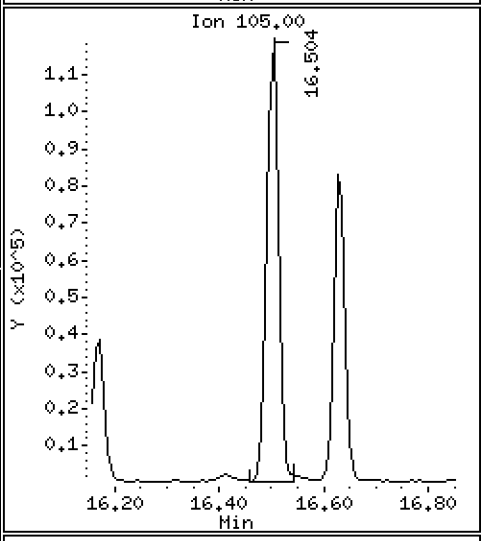
53 4,6-Dinitro-2-methylphenol

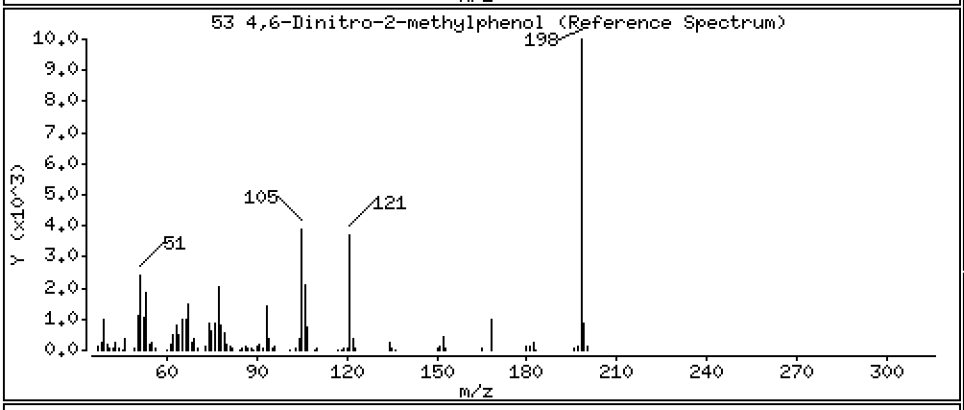
Concentration: 19.36 ug/mL

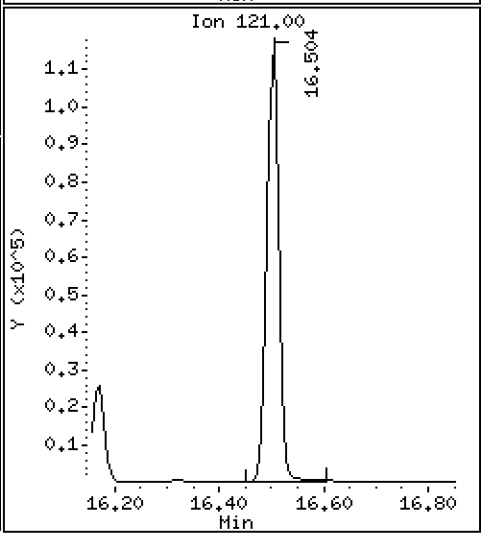


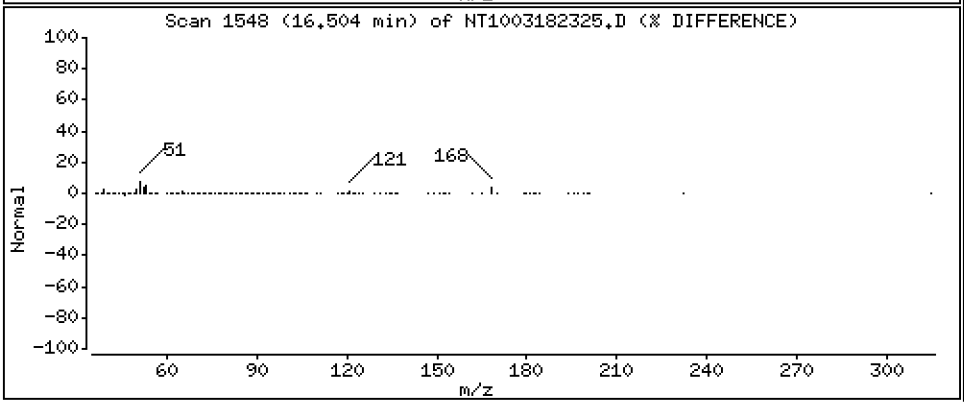












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

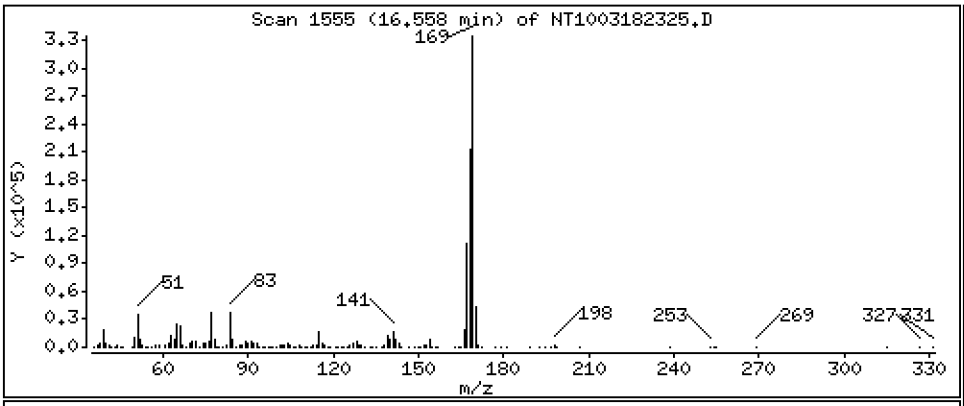
Operator: VTS

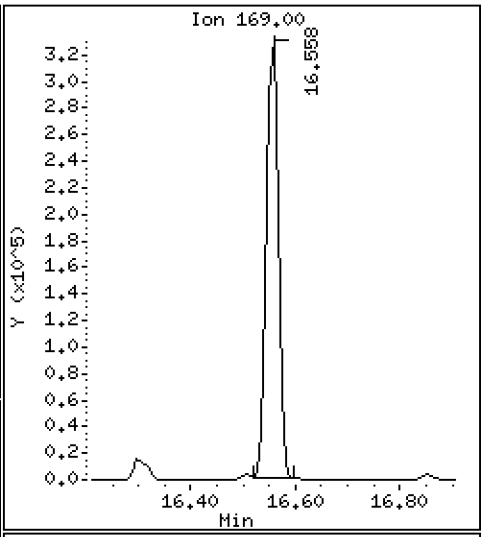
Column phase: ZB-5msi

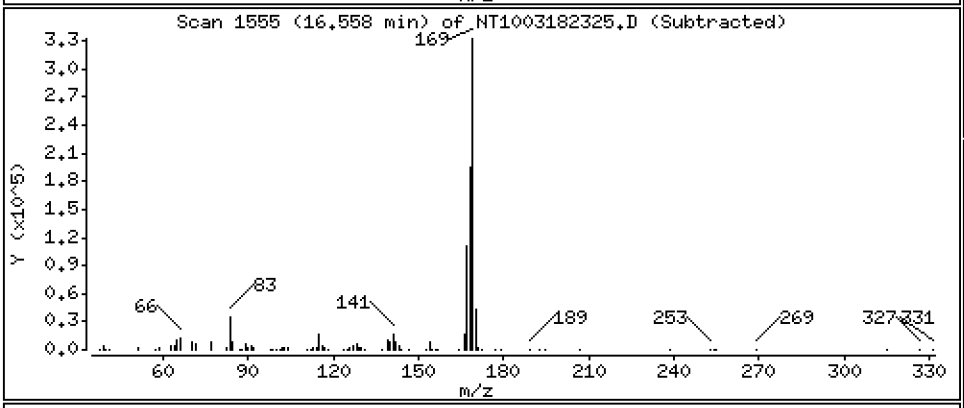
Column diameter: 0.25

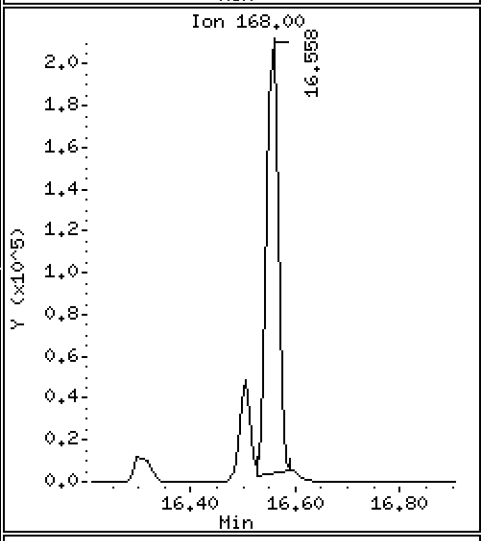
54 N-Nitrosodiphenylamine

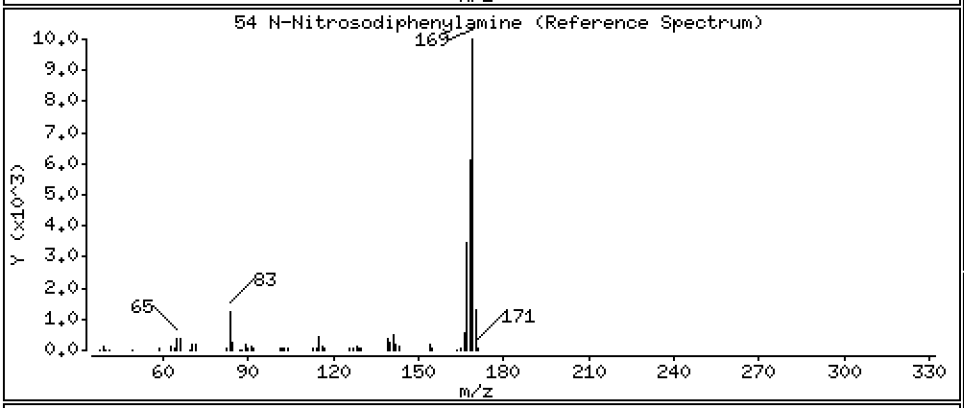
Concentration: 4.822 ug/mL

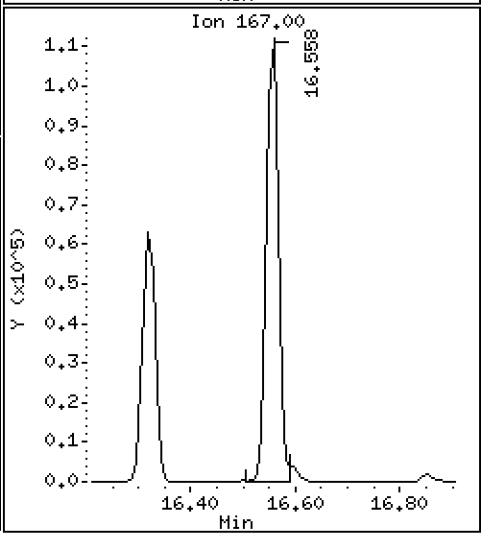


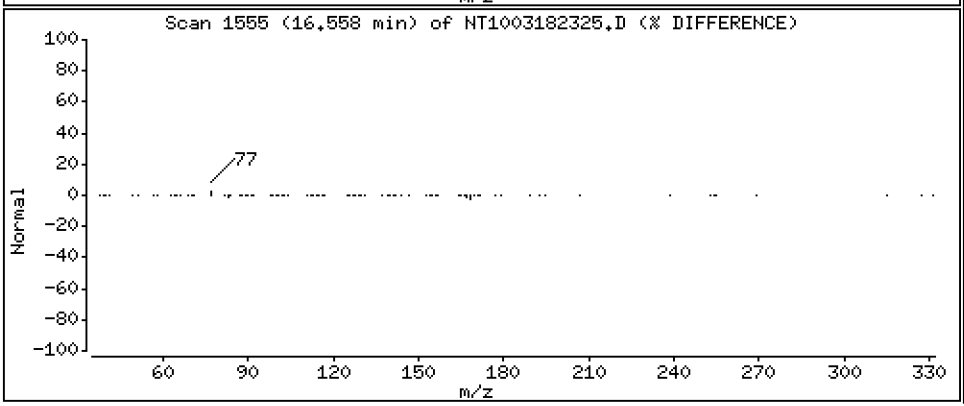












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

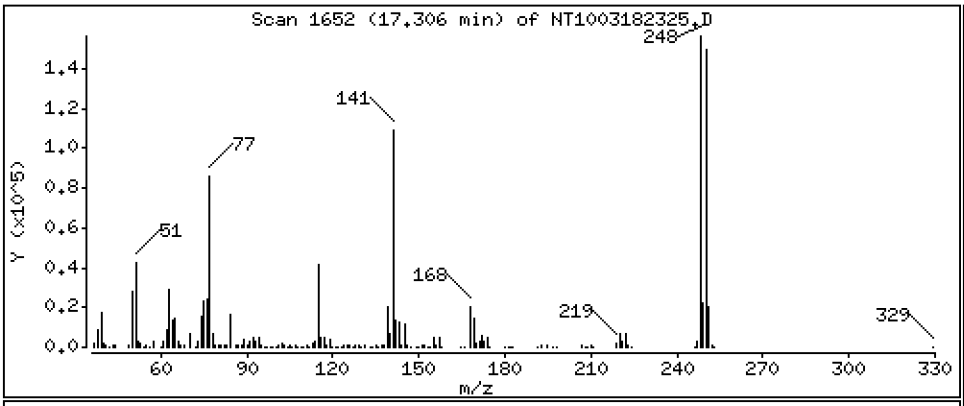
Operator: VTS

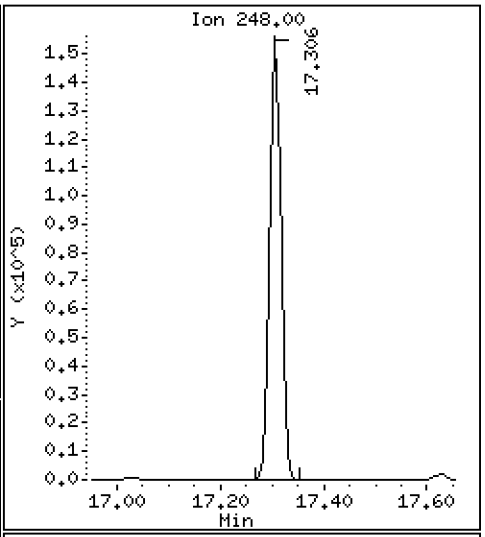
Column phase: ZB-5msi

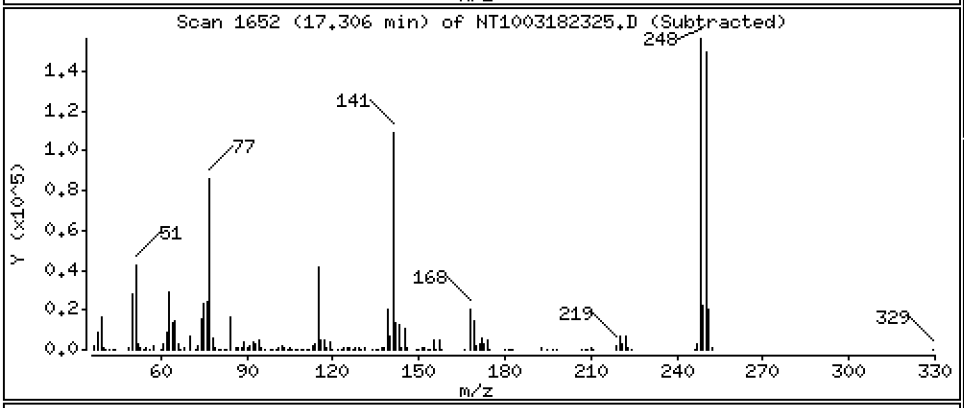
Column diameter: 0.25

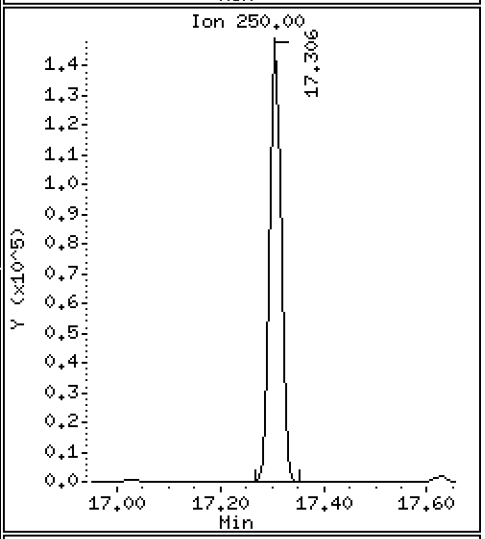
56 4-Bromophenyl-phenylether

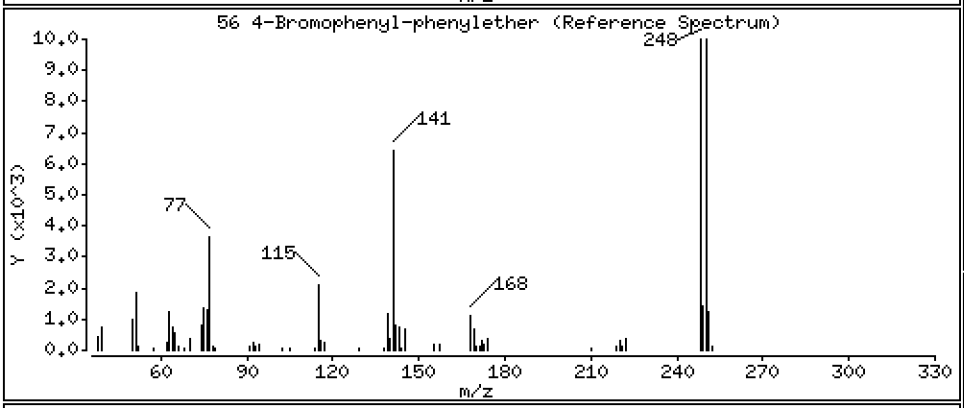
Concentration: 5.092 ug/mL

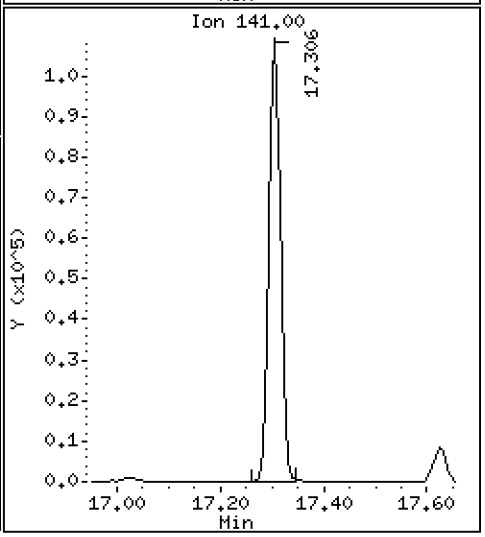


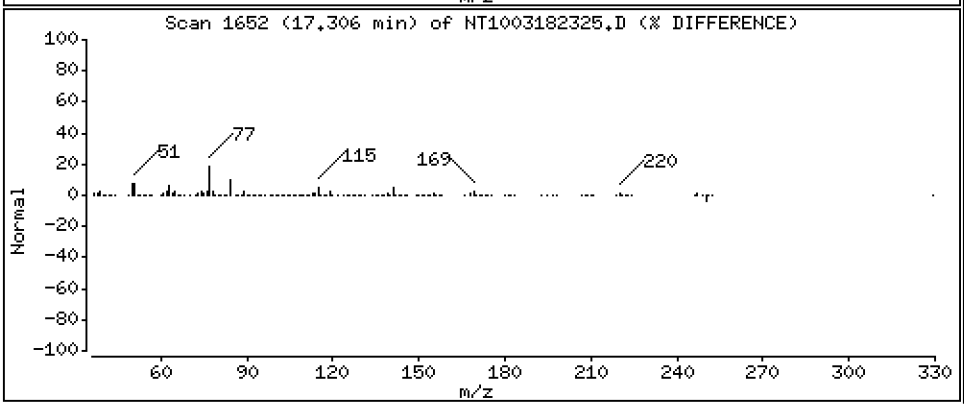












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

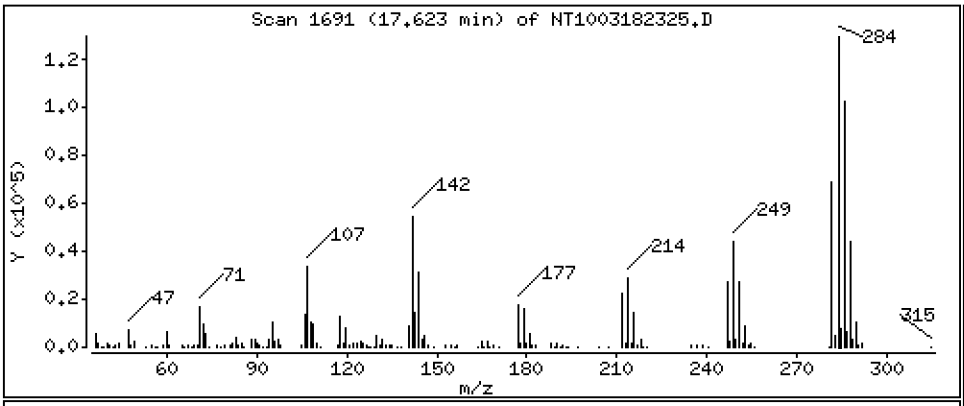
Operator: VTS

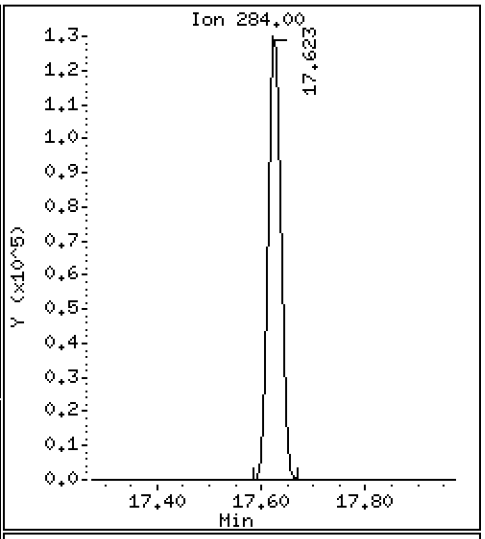
Column phase: ZB-5msi

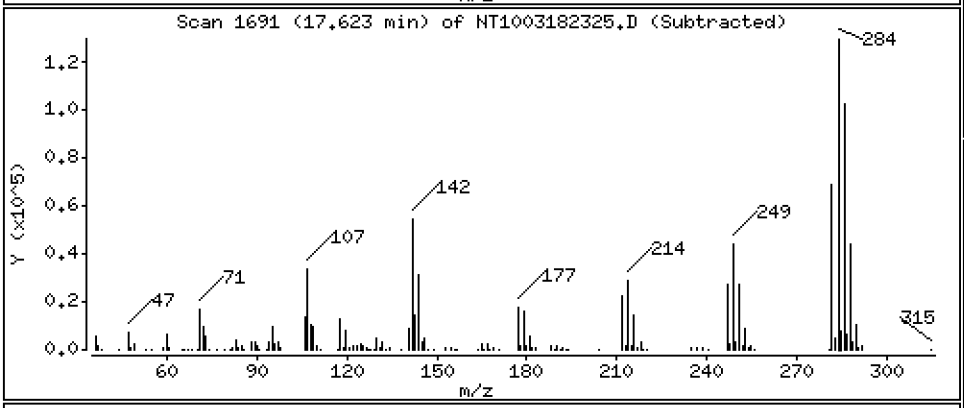
Column diameter: 0.25

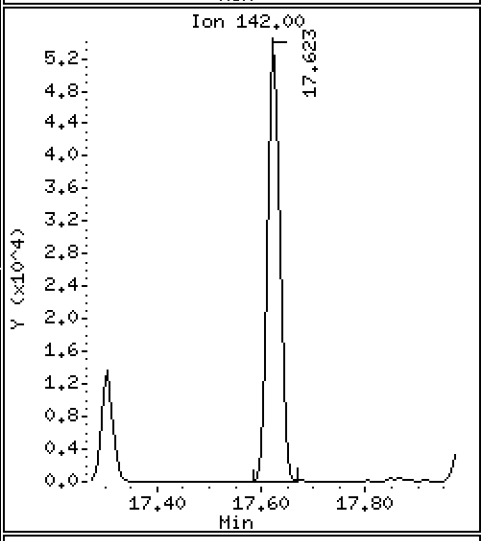
57 Hexachlorobenzene

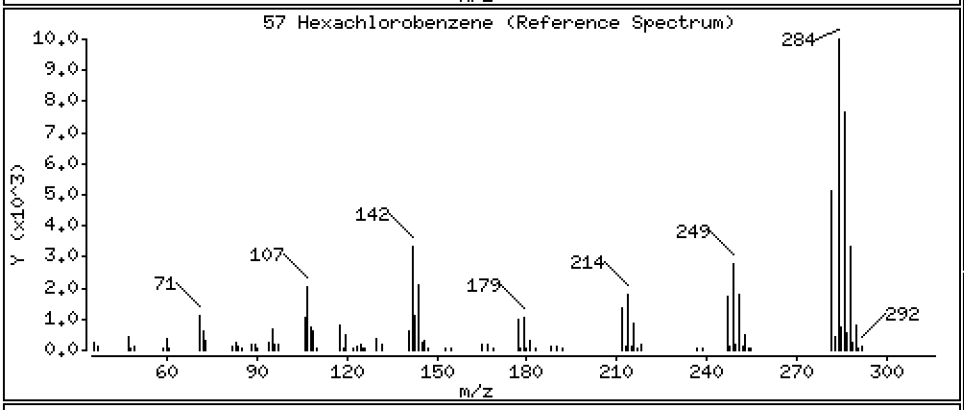
Concentration: 4.735 ug/mL

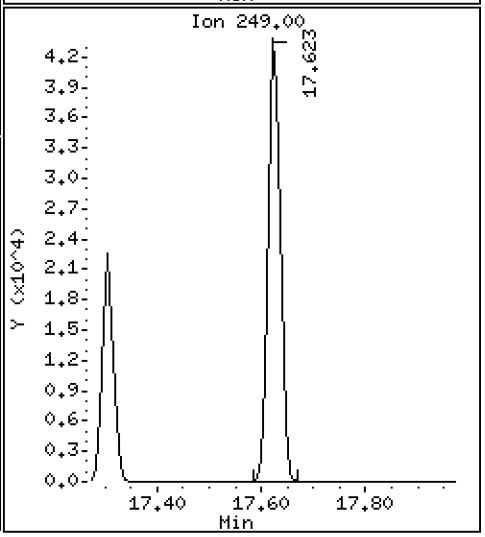


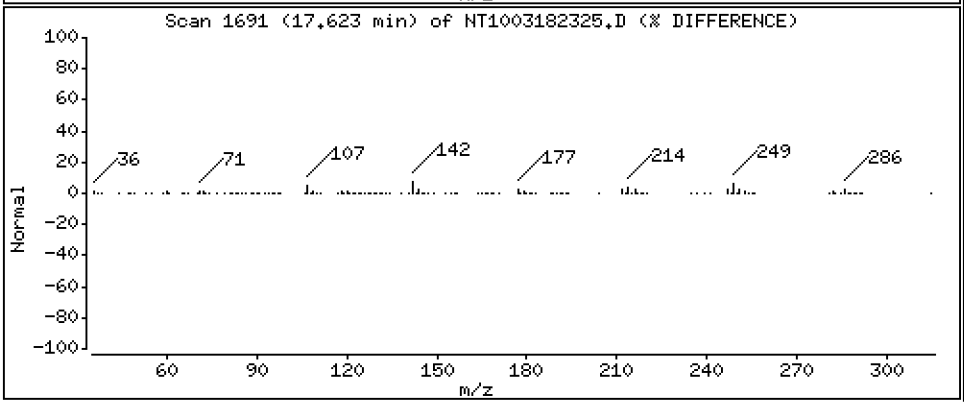












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

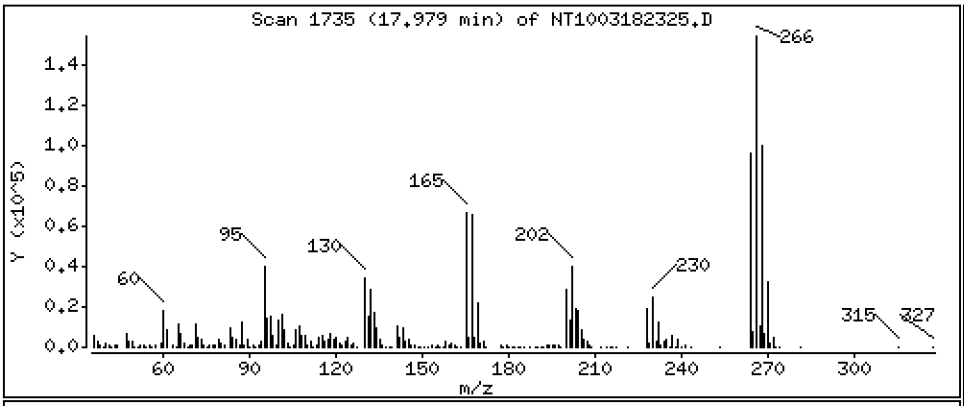
Operator: VTS

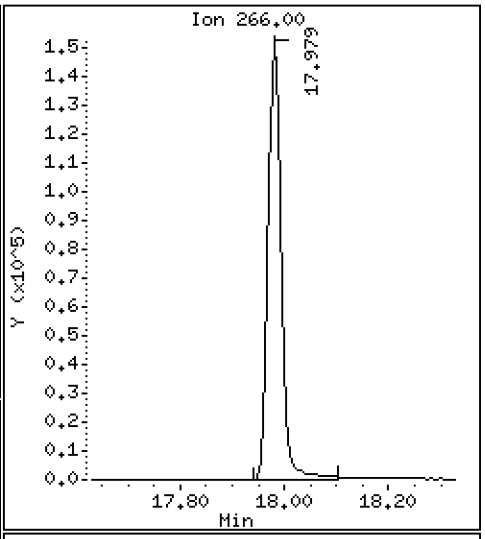
Column phase: ZB-5msi

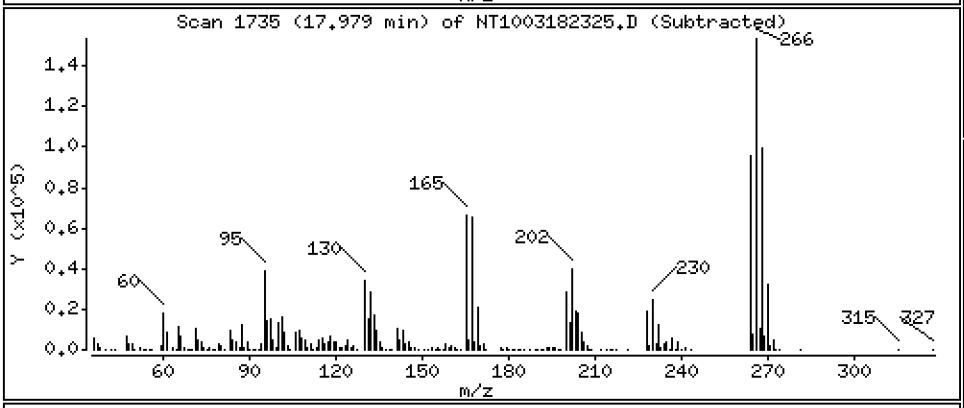
Column diameter: 0.25

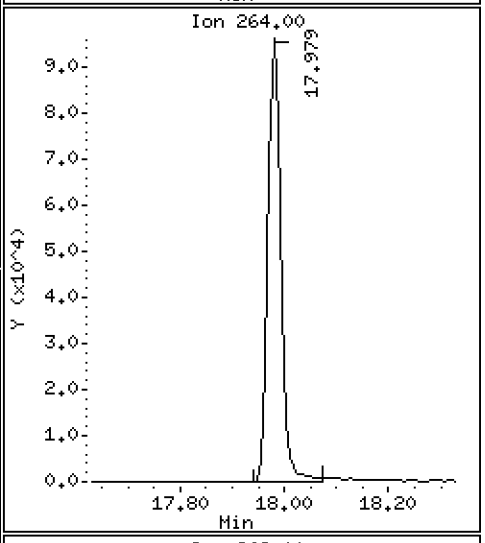
58 Pentachlorophenol

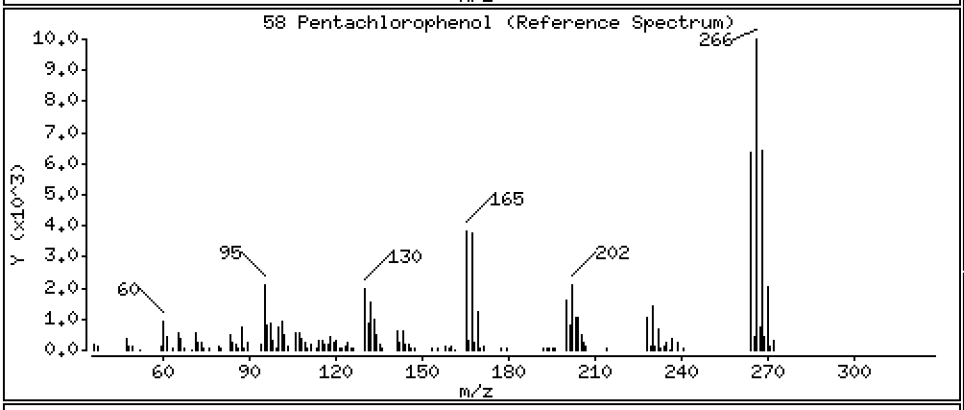
Concentration: 9.360 ug/mL

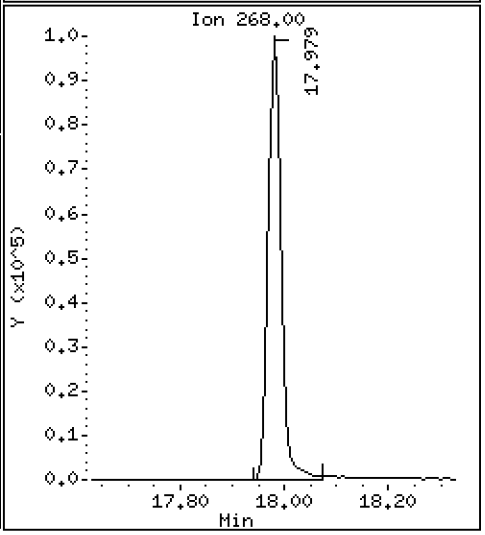


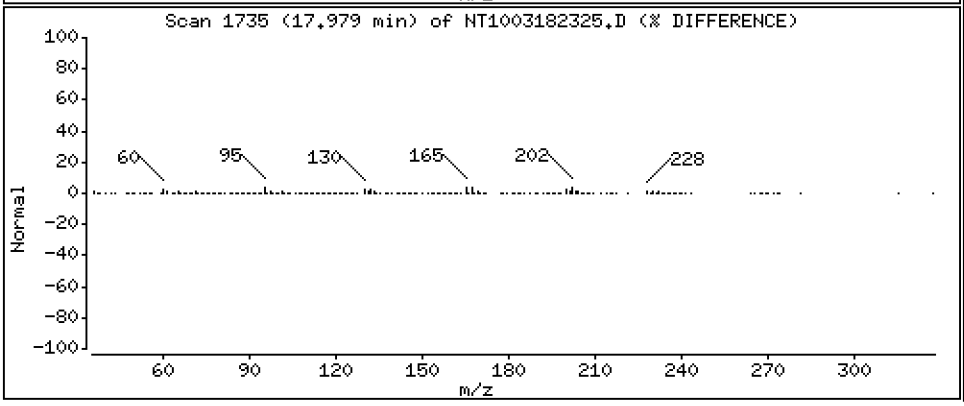












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

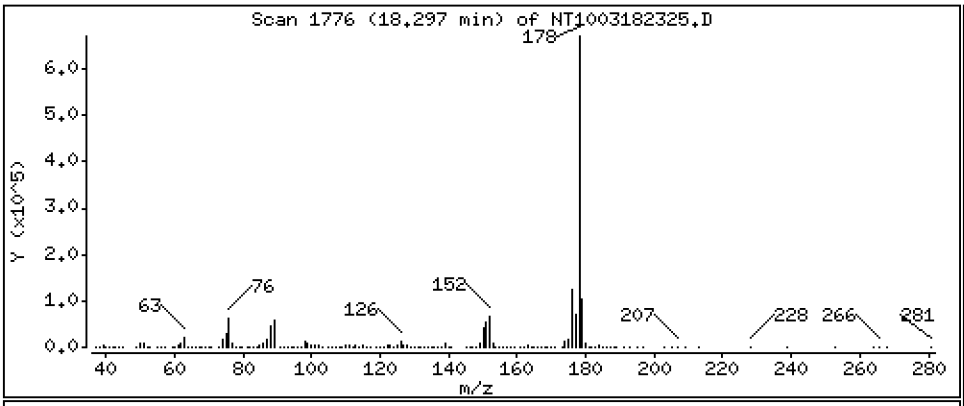
Operator: VTS

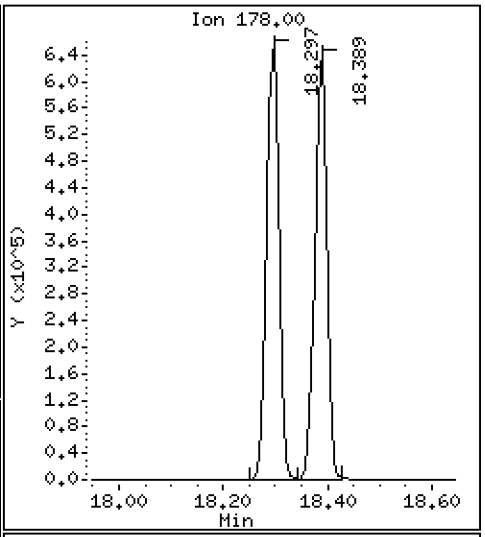
Column phase: ZB-5msi

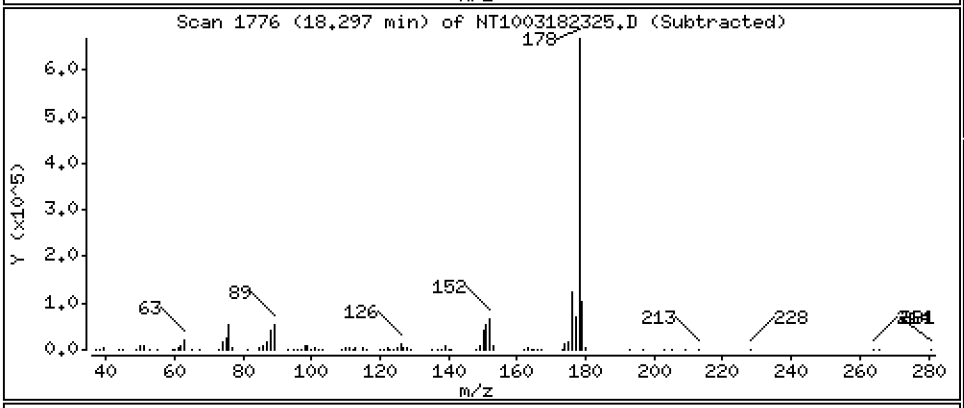
Column diameter: 0.25

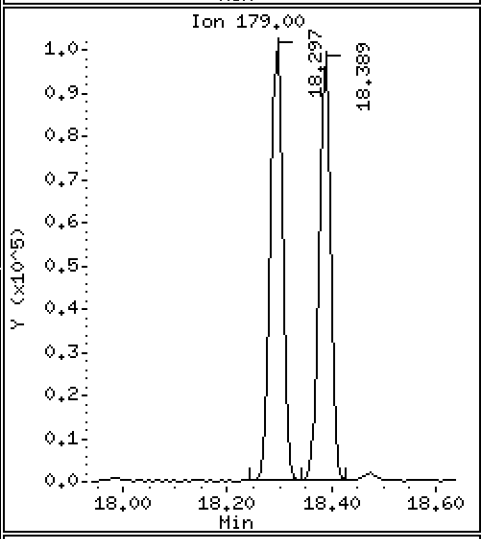
60 Phenanthrene

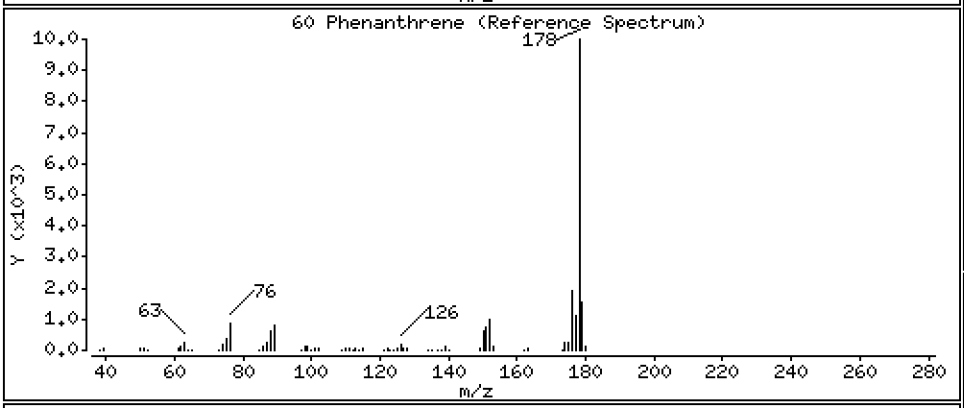
Concentration: 4.889 ug/mL

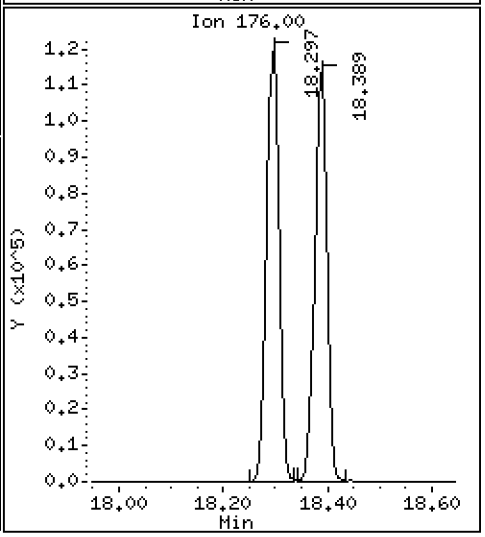


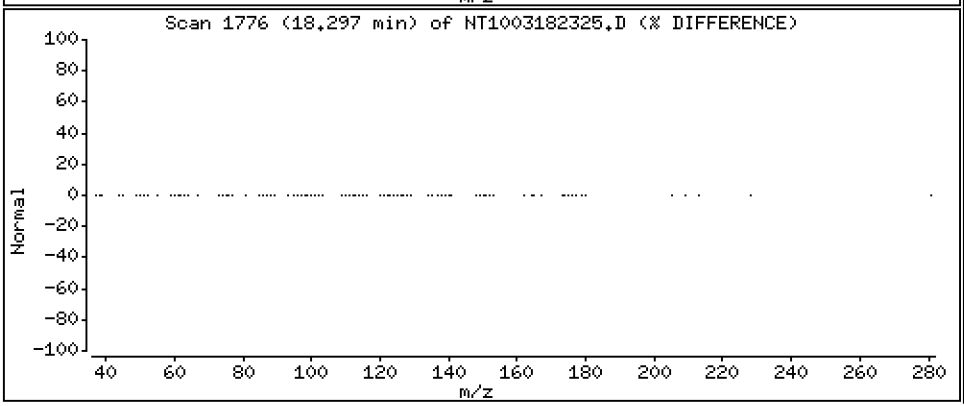












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

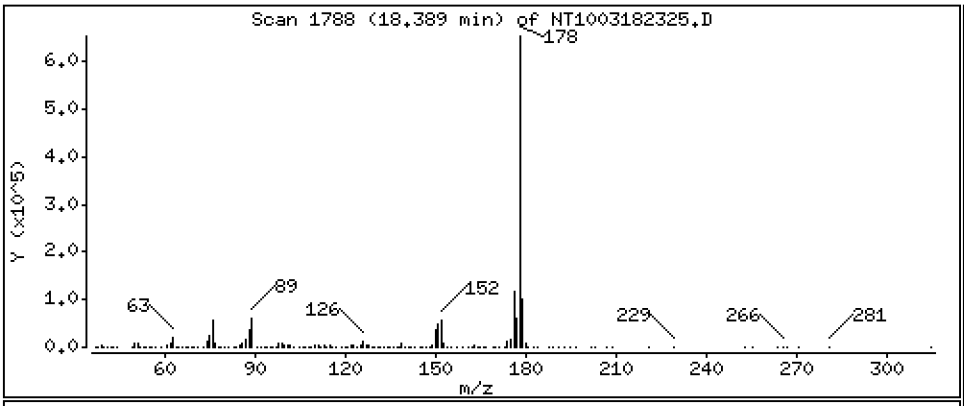
Operator: VTS

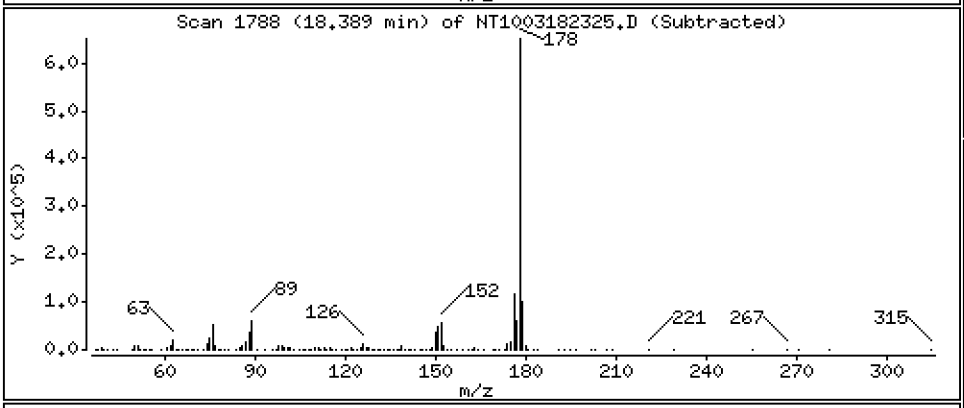
Column phase: ZB-5msi

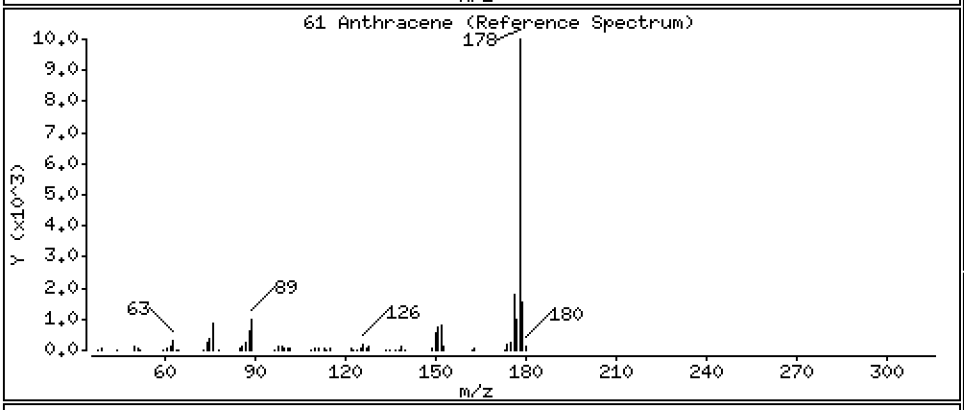
Column diameter: 0.25

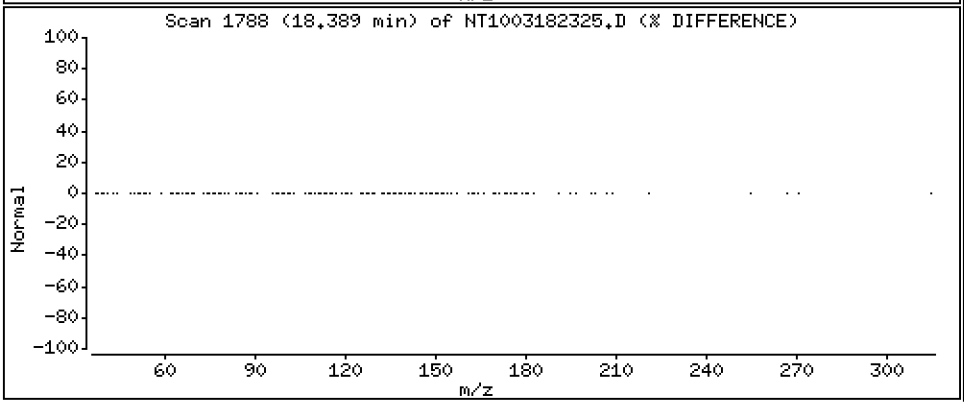
61 Anthracene

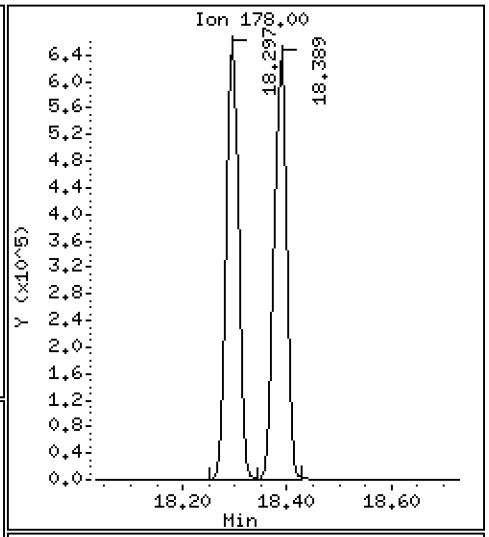
Concentration: 5.120 ug/mL

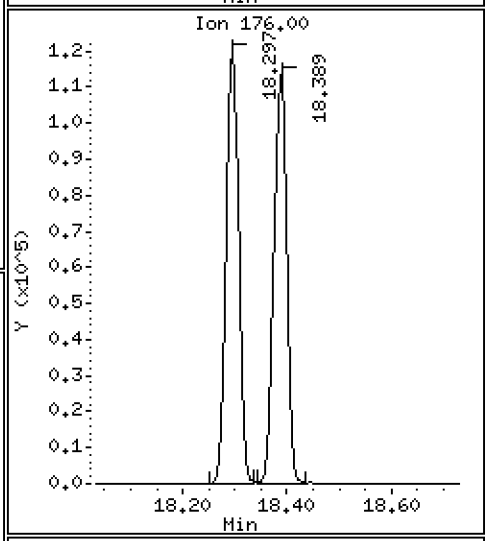


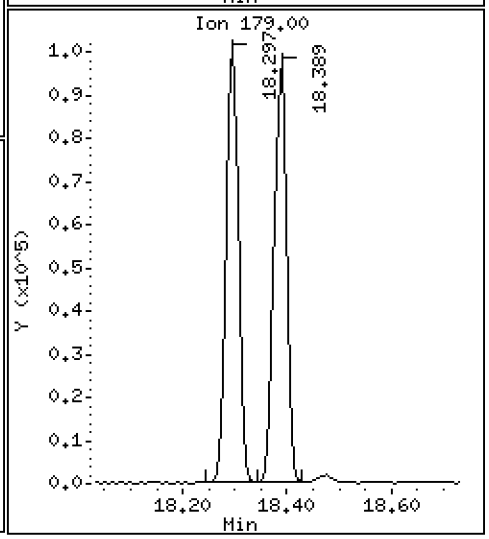












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

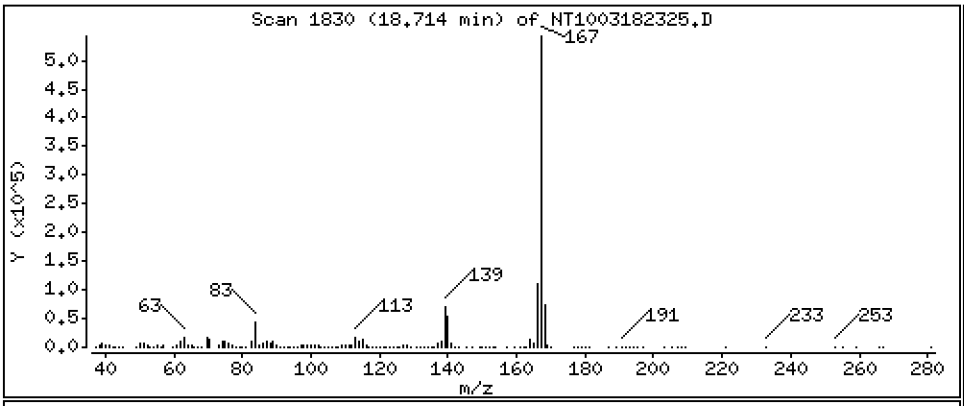
Operator: VTS

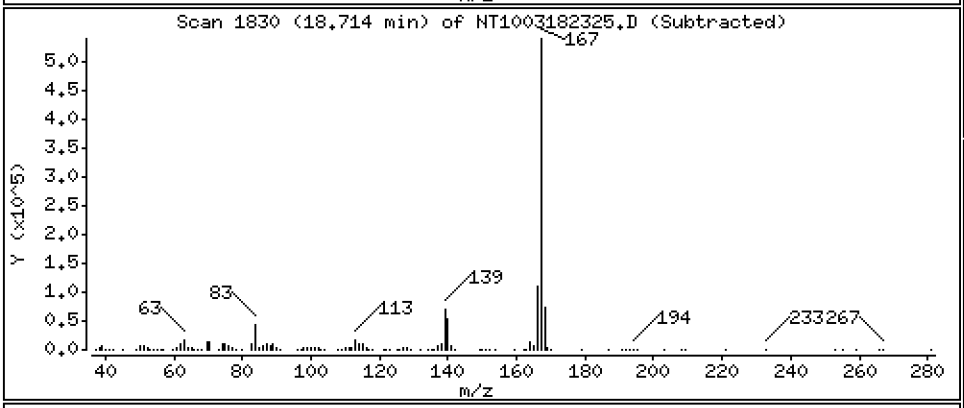
Column phase: ZB-5msi

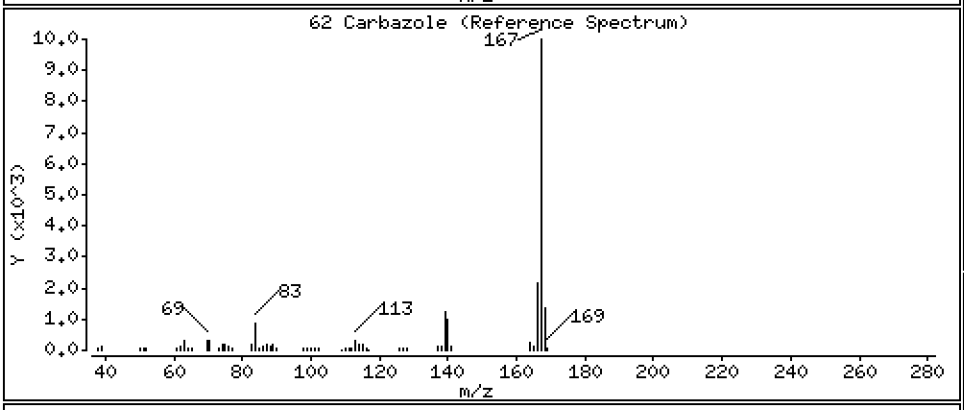
Column diameter: 0.25

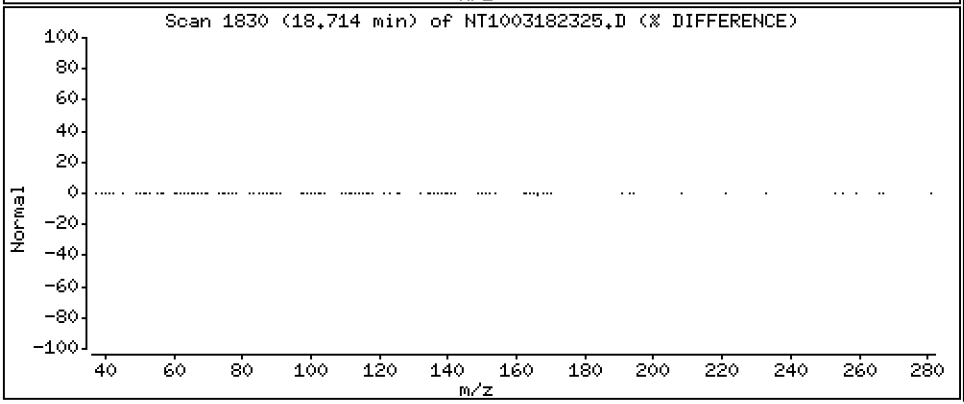
62 Carbazole

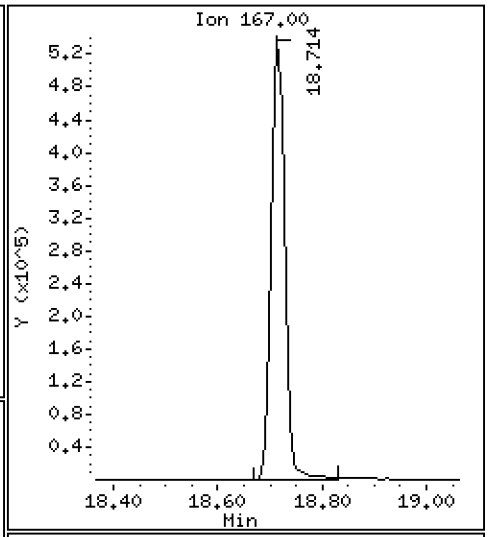
Concentration: 5.111 ug/mL

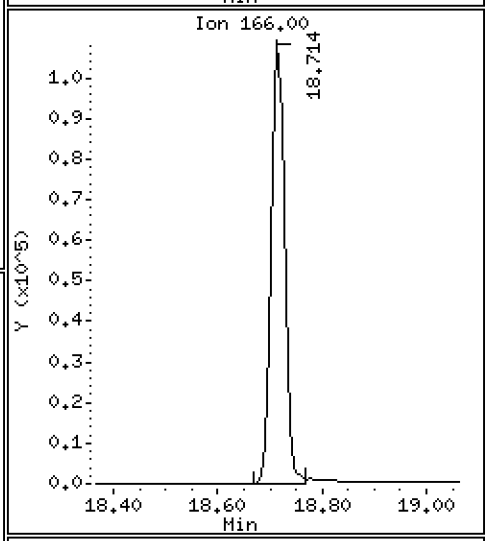


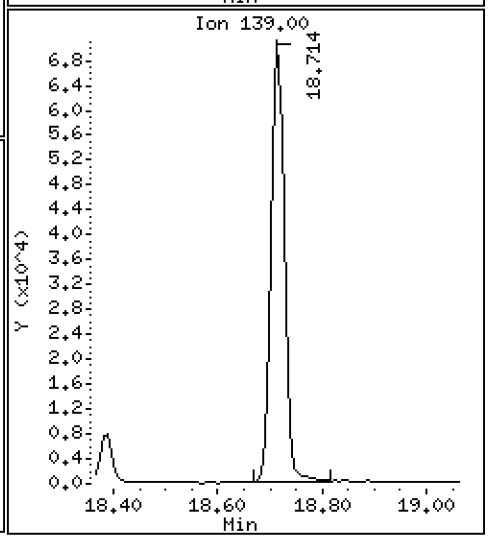












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

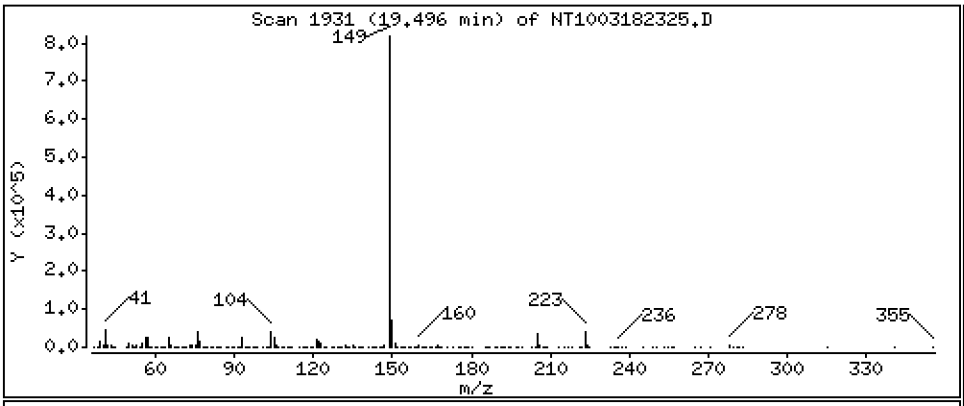
Operator: VTS

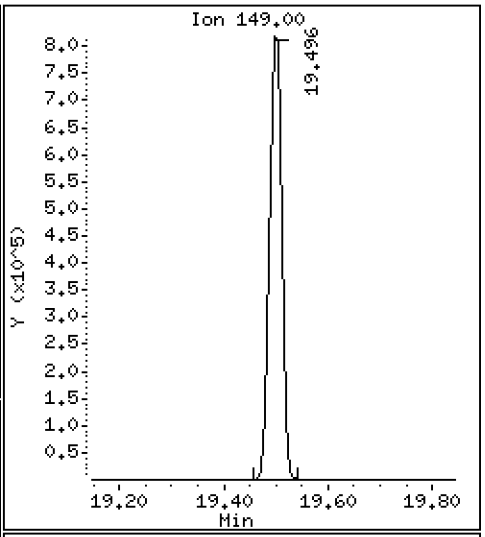
Column phase: ZB-5msi

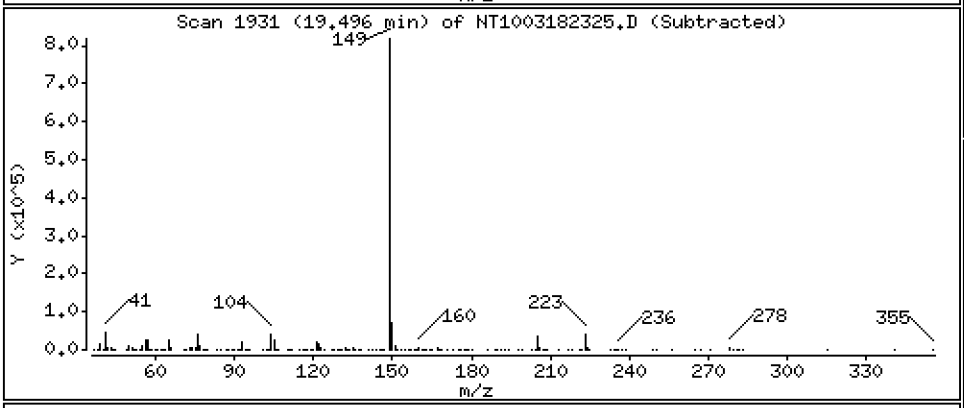
Column diameter: 0.25

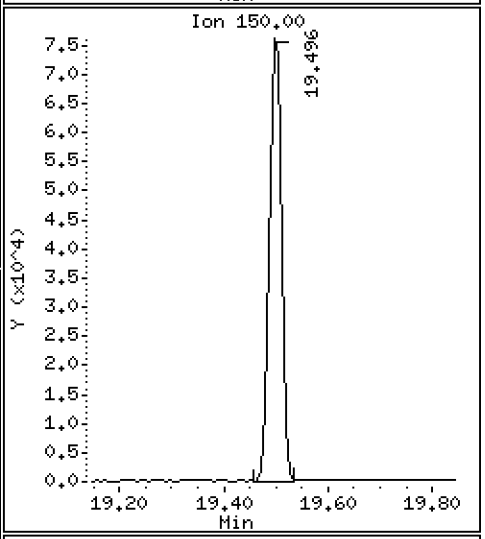
63 Di-n-butylphthalate

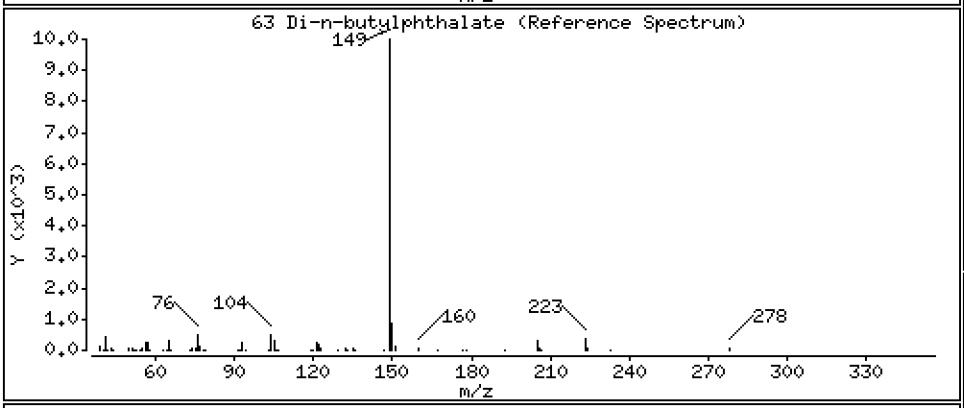
Concentration: 5.303 ug/mL

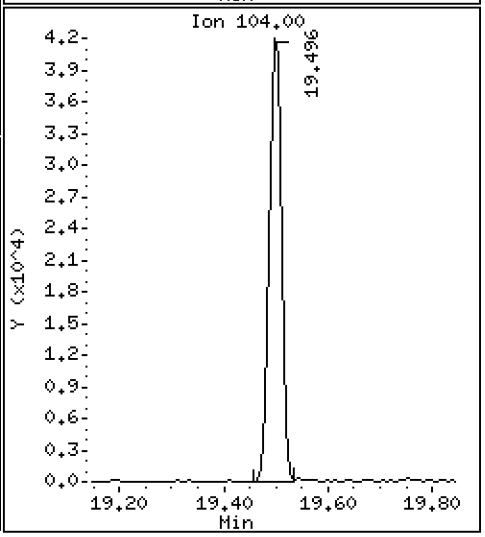


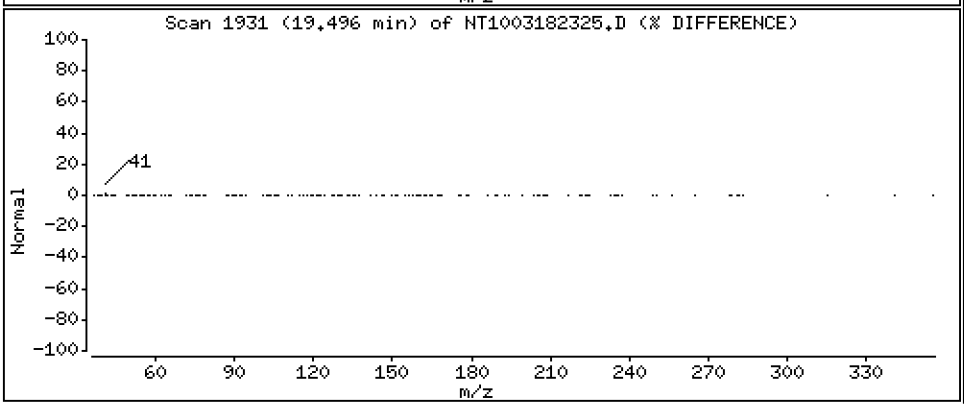












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

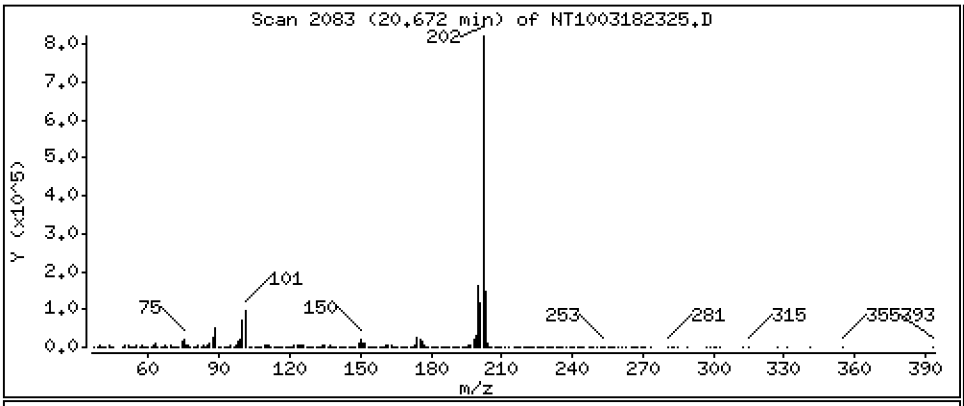
Operator: VTS

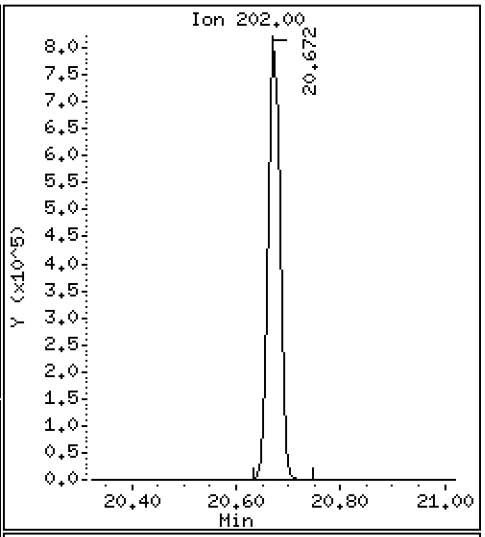
Column phase: ZB-5msi

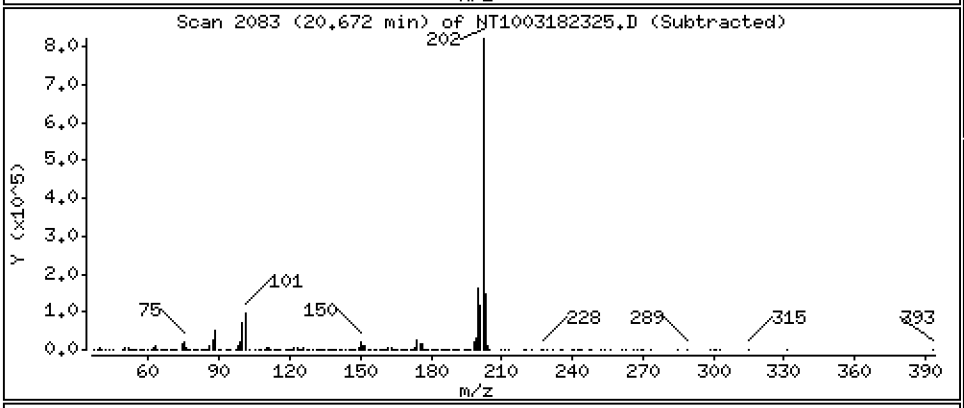
Column diameter: 0.25

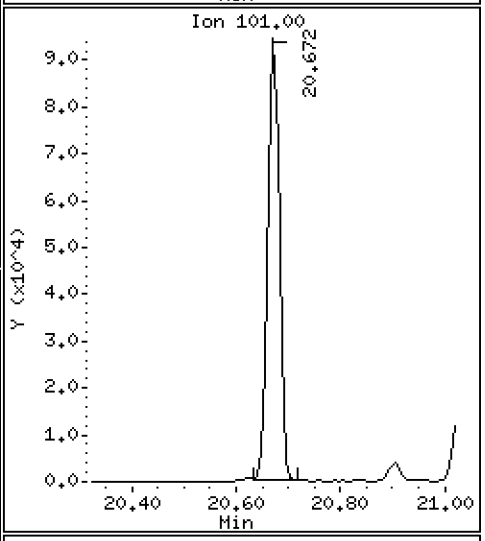
64 Fluoranthene

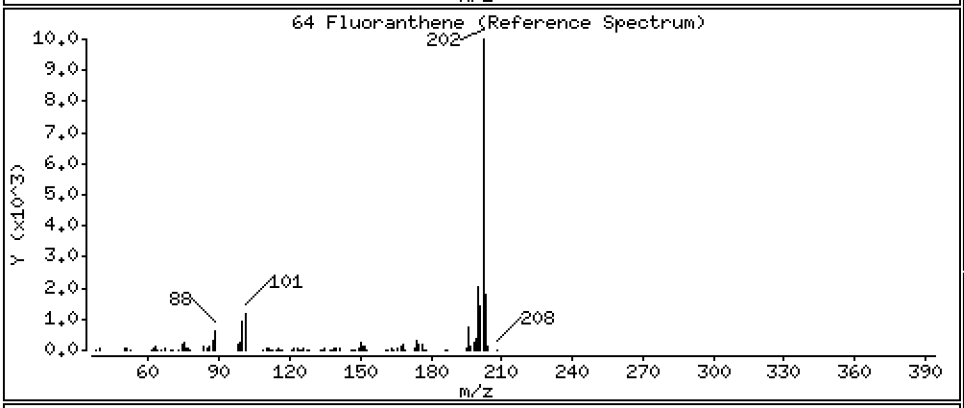
Concentration: 4.506 ug/mL

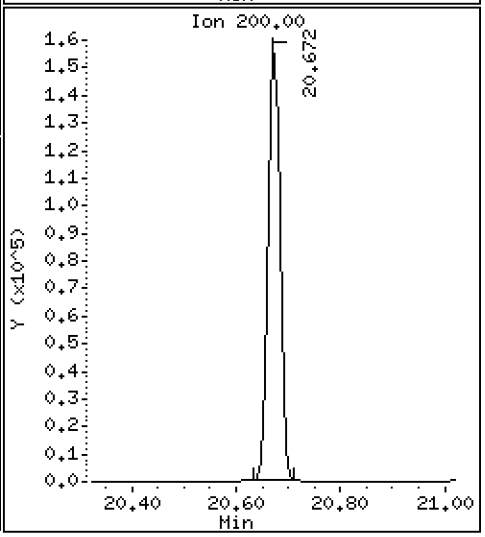


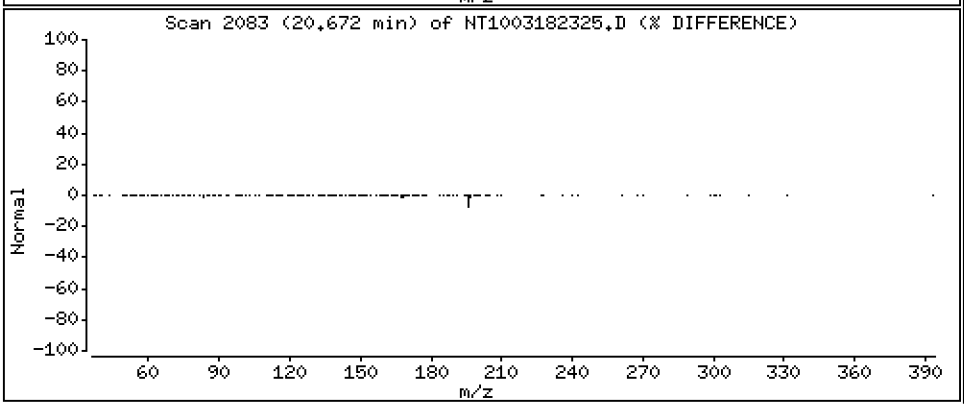












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

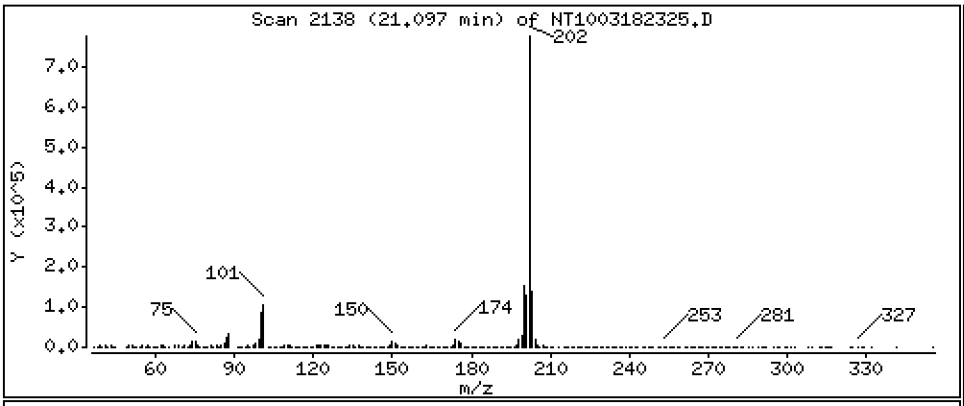
Operator: VTS

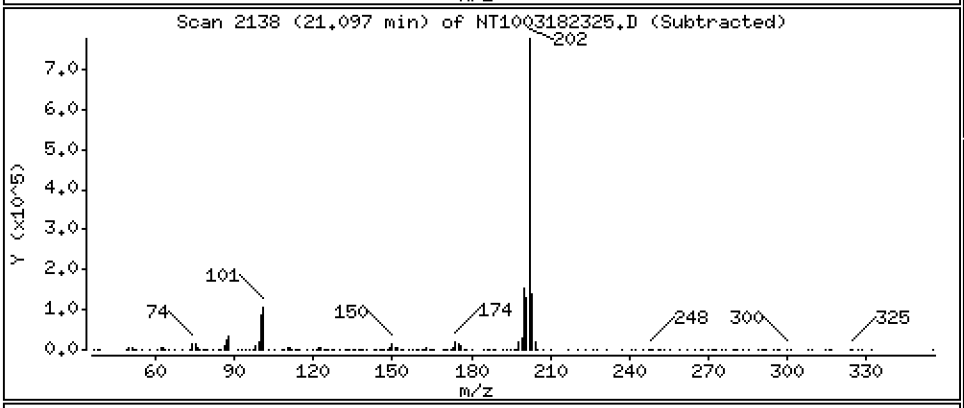
Column phase: ZB-5msi

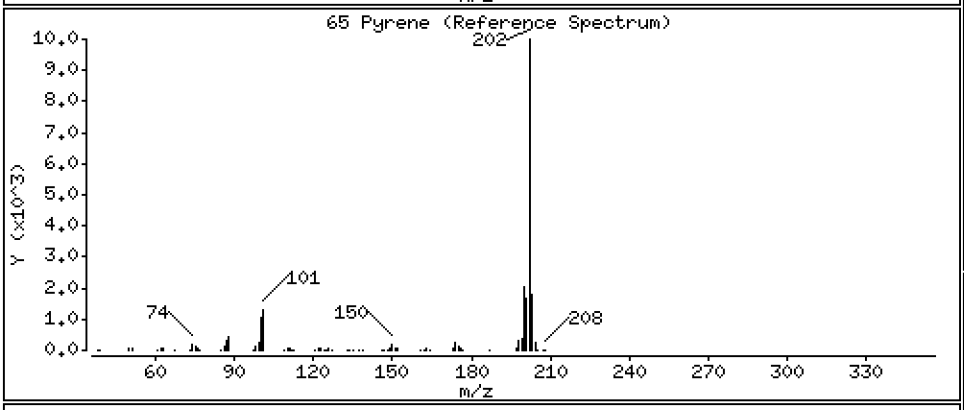
Column diameter: 0.25

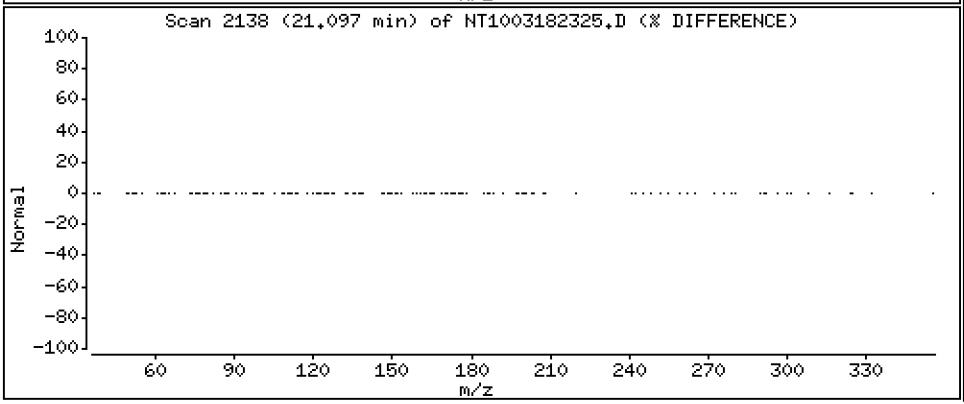
65 Pyrene

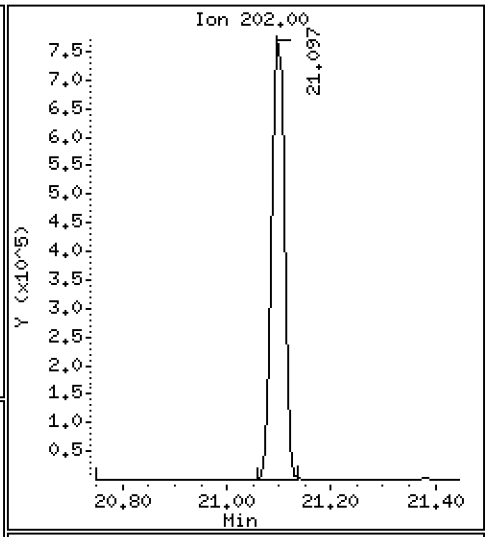
Concentration: 4.511 ug/mL

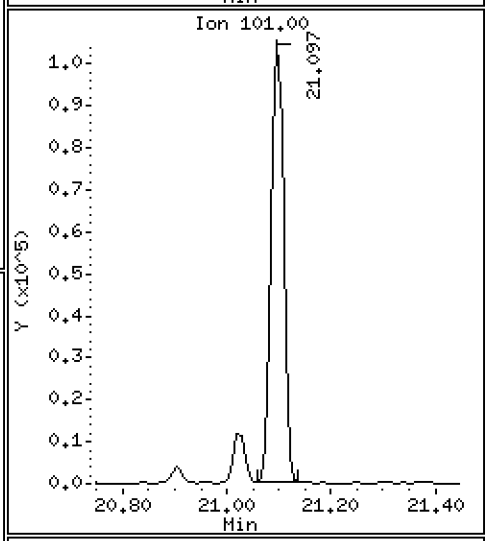


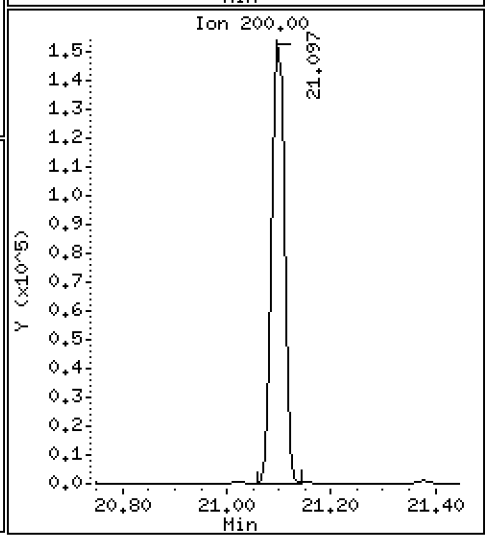












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

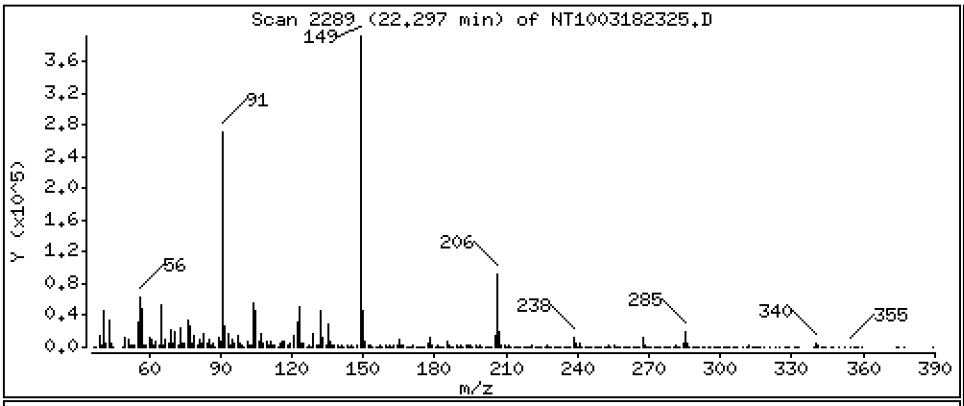
Operator: VTS

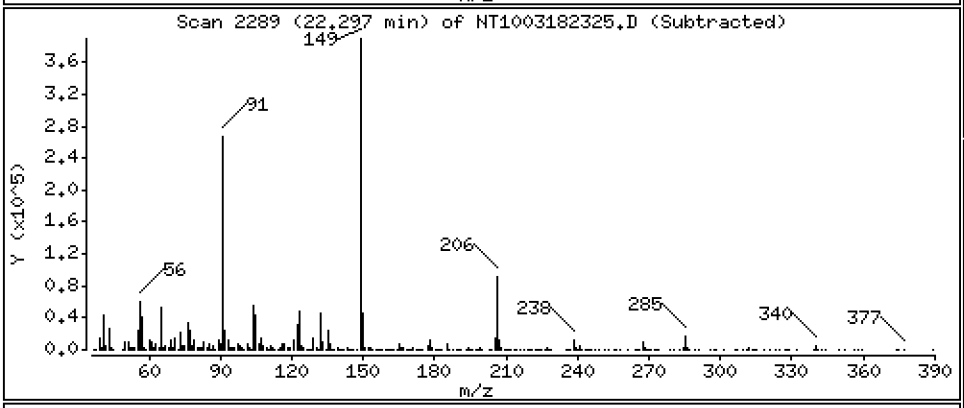
Column phase: ZB-5msi

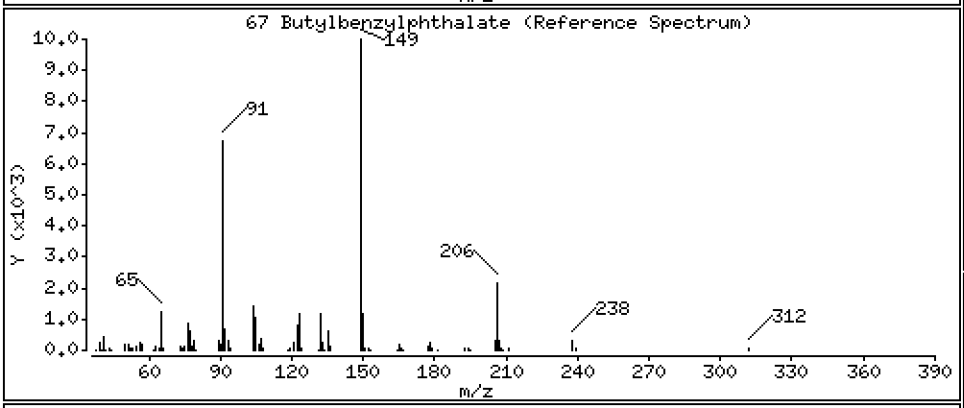
Column diameter: 0.25

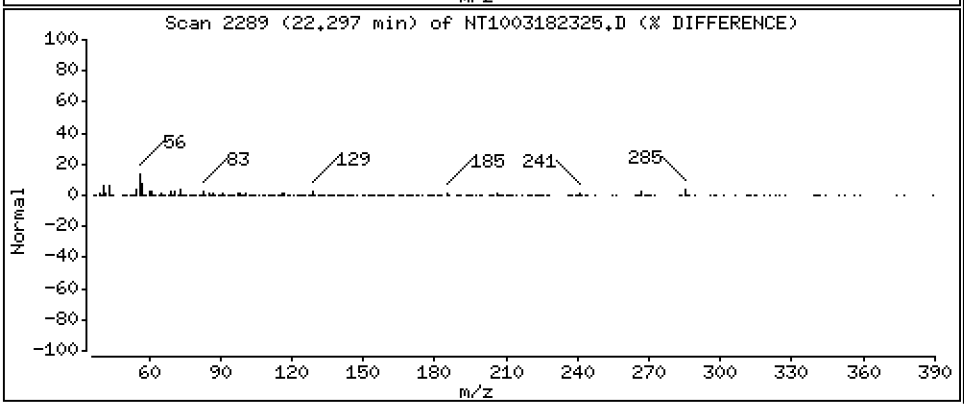
67 Butylbenzylphthalate

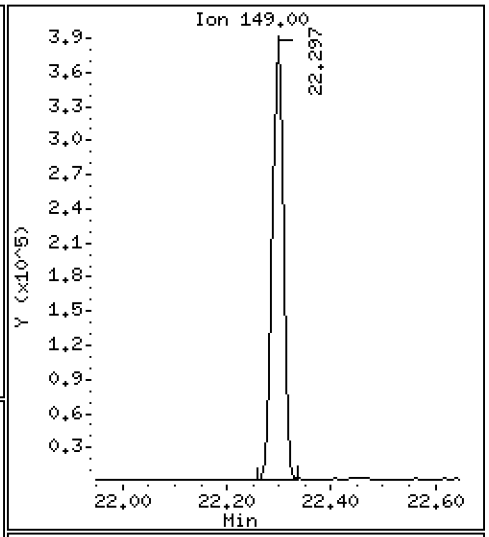
Concentration: 5.348 ug/mL

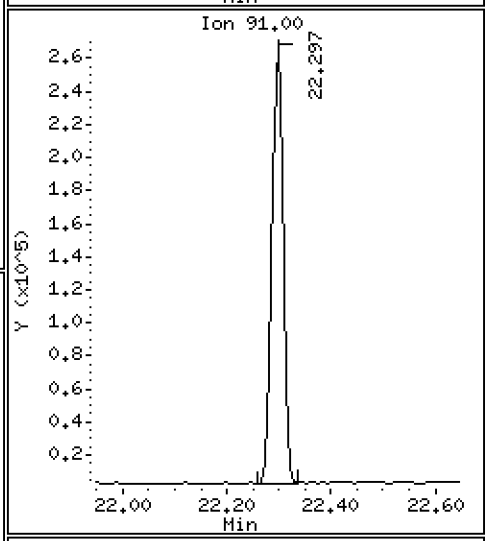


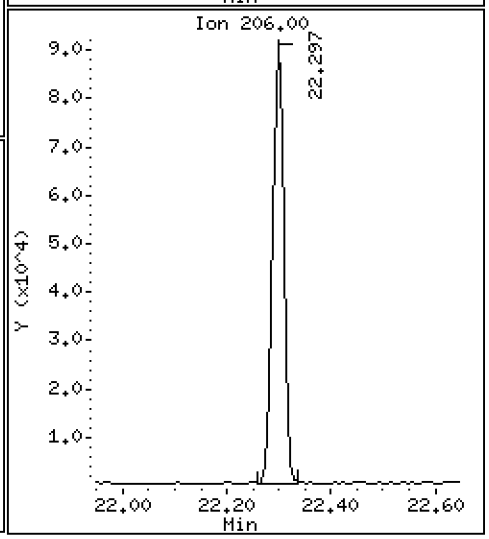












Date : 19-MAR-2023 09:03

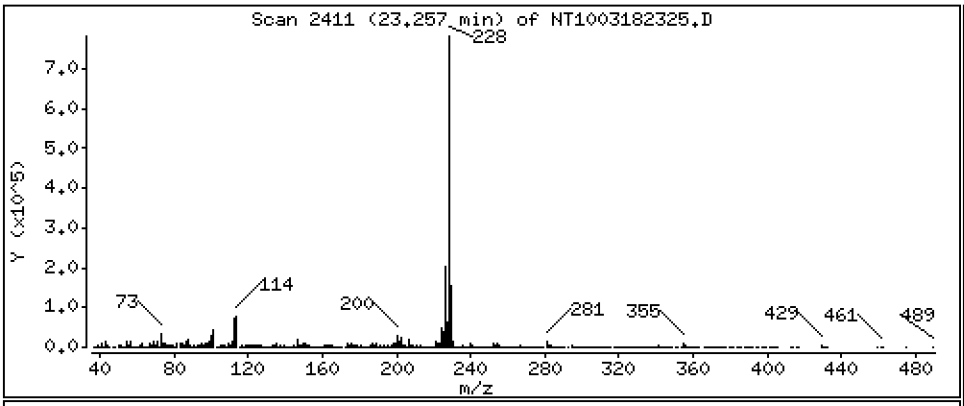
Client ID: Instrument: nt10.i

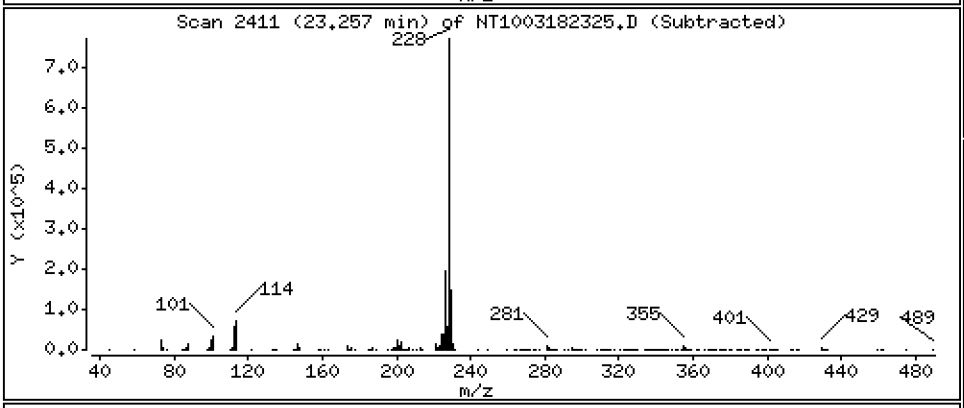
Sample Info: SLC0504-CCV1

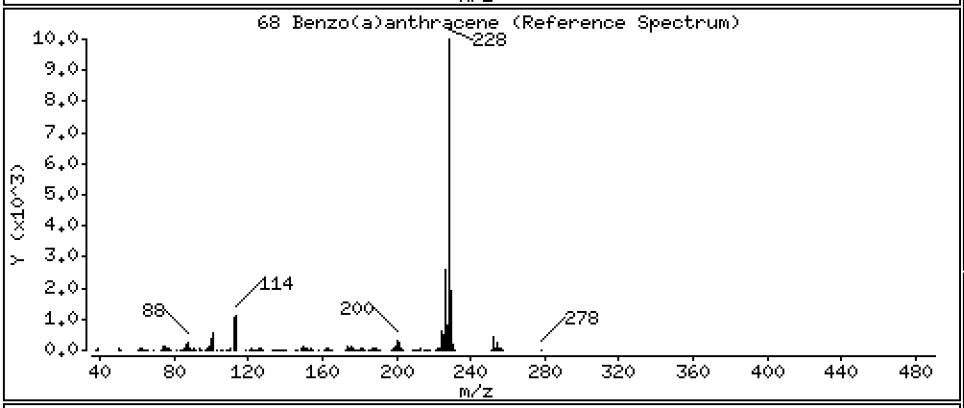
Operator: VTS

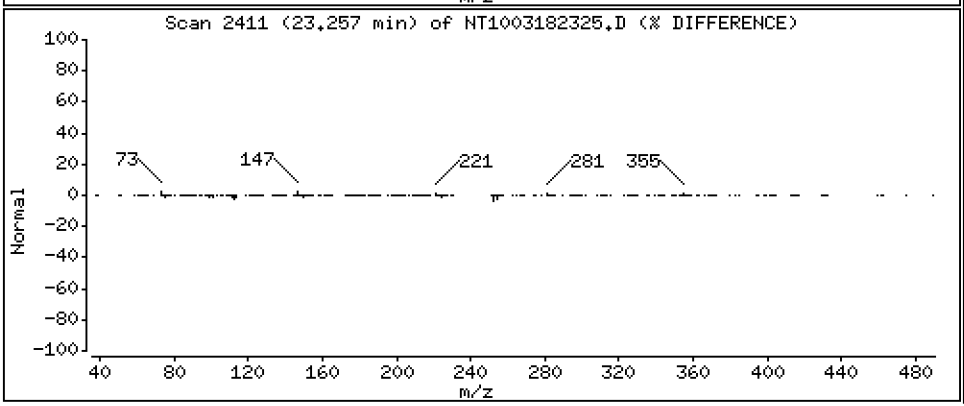
Column phase: ZB-5msi Column diameter: 0.25

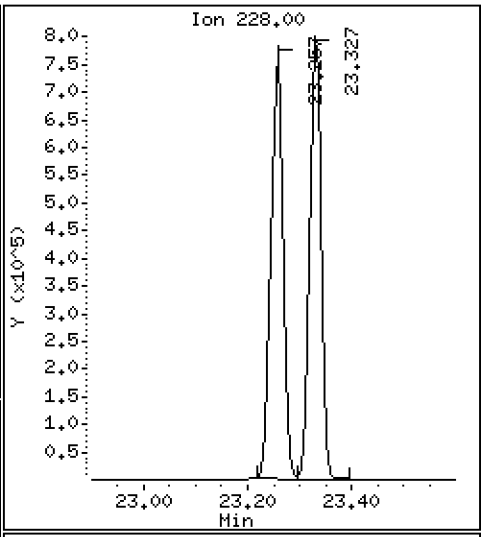
68 Benzo(a)anthracene Concentration: 5.087 ug/mL

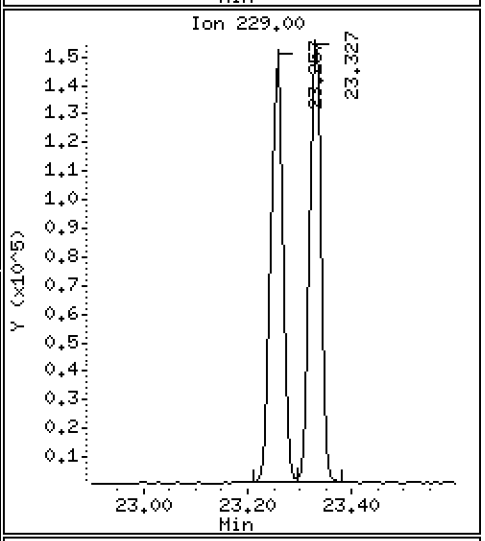


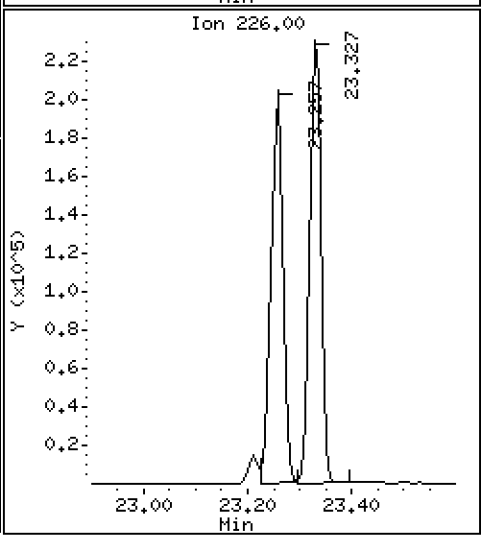












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

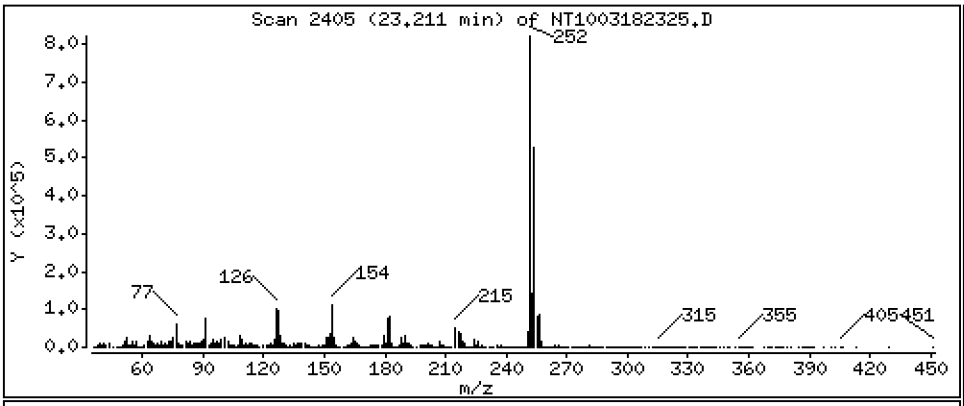
Operator: VTS

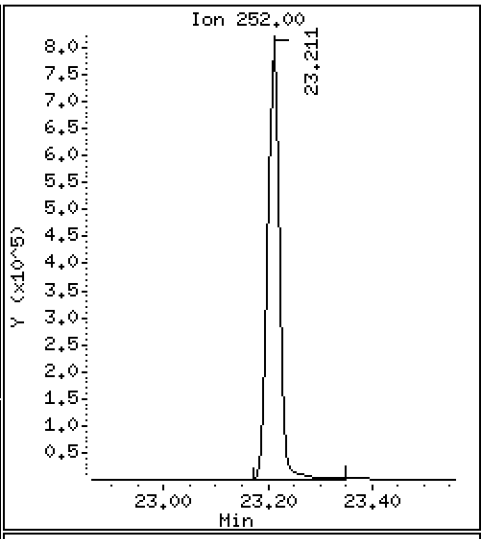
Column phase: ZB-5msi

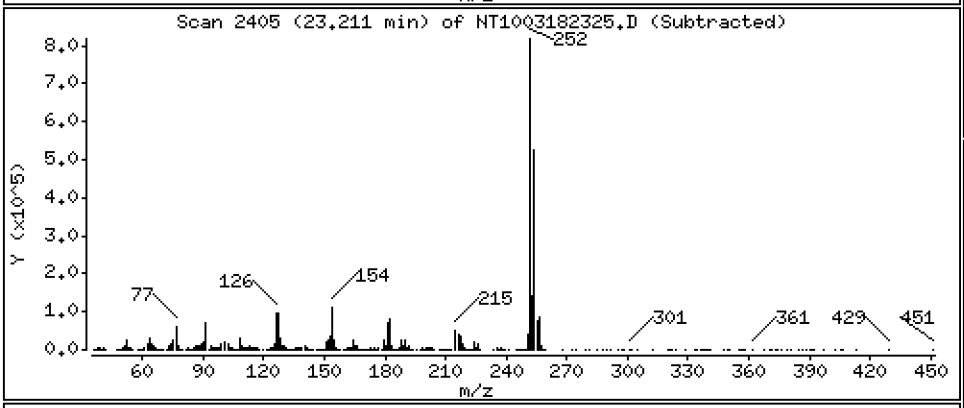
Column diameter: 0.25

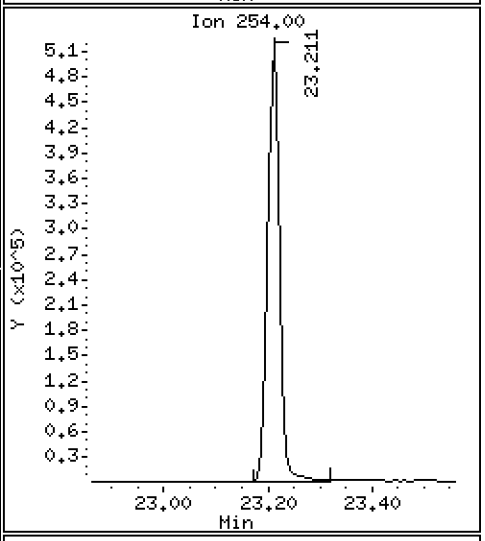
70 3,3'-Dichlorobenzidine

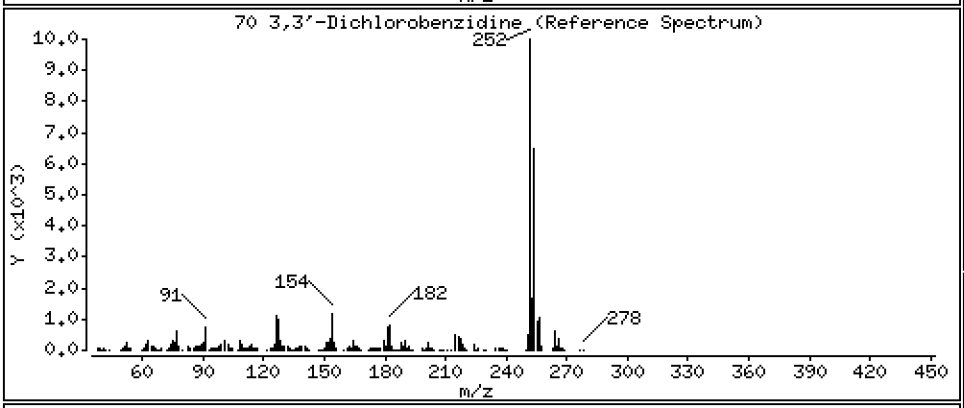
Concentration: 15.72 ug/mL

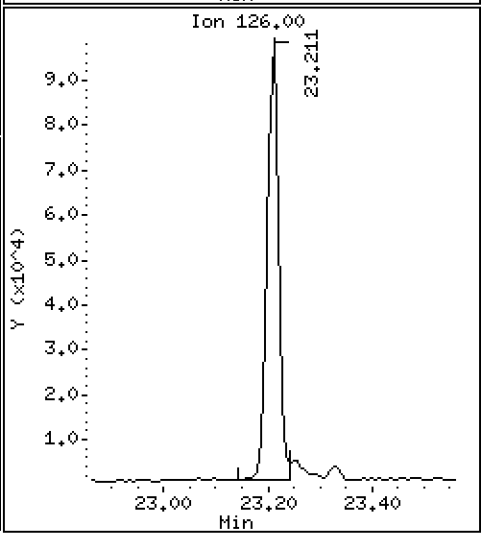


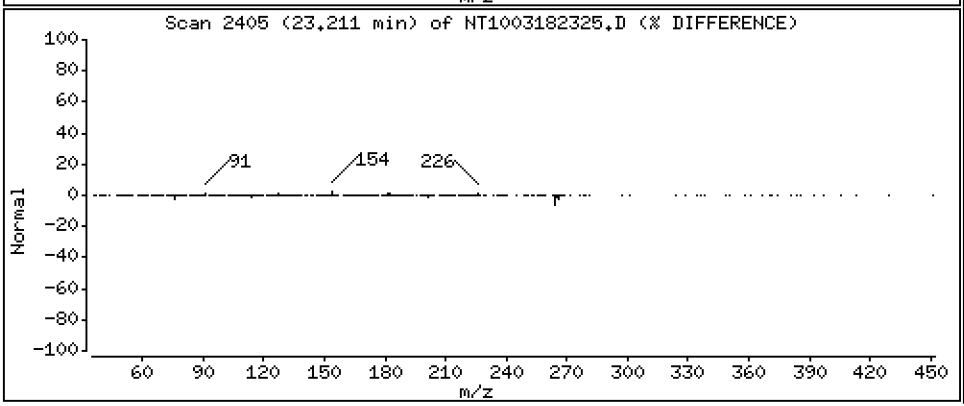












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

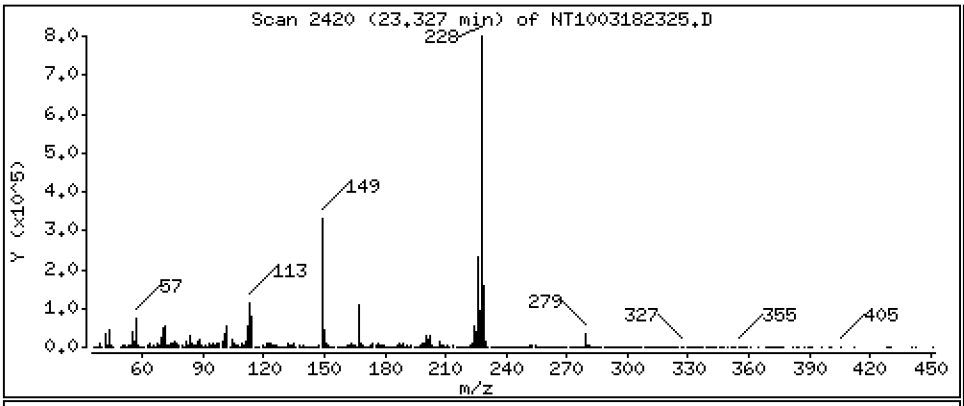
Operator: VTS

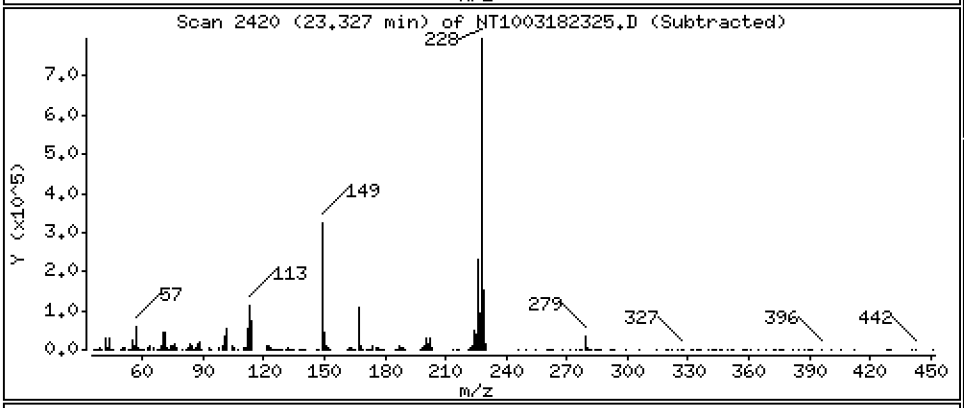
Column phase: ZB-5msi

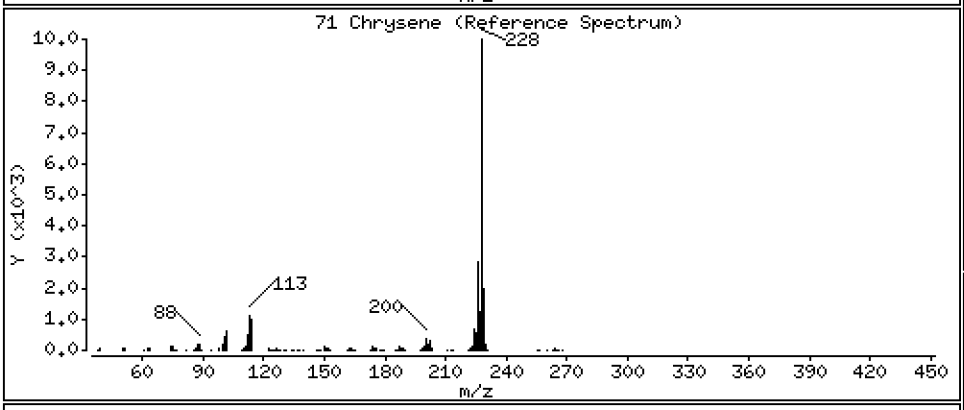
Column diameter: 0.25

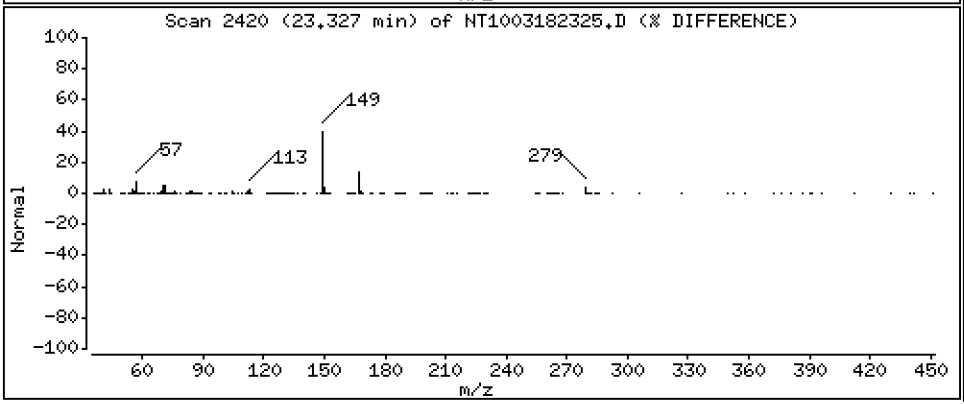
71 Chrysene

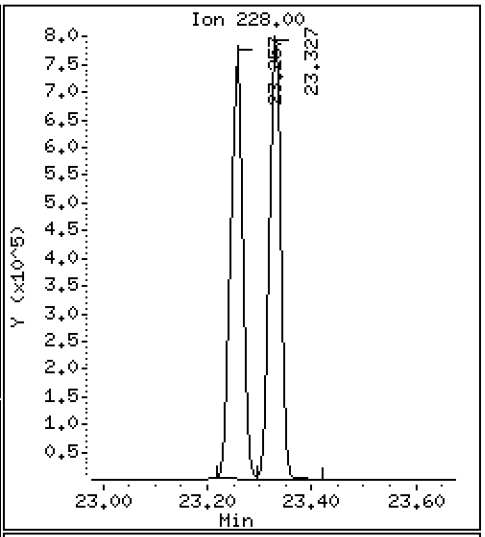
Concentration: 5.006 ug/mL

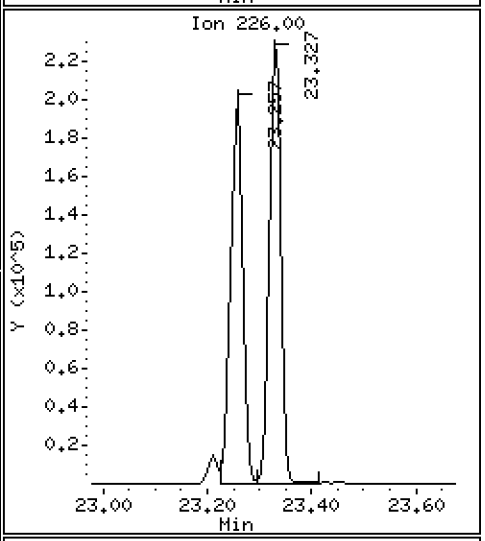


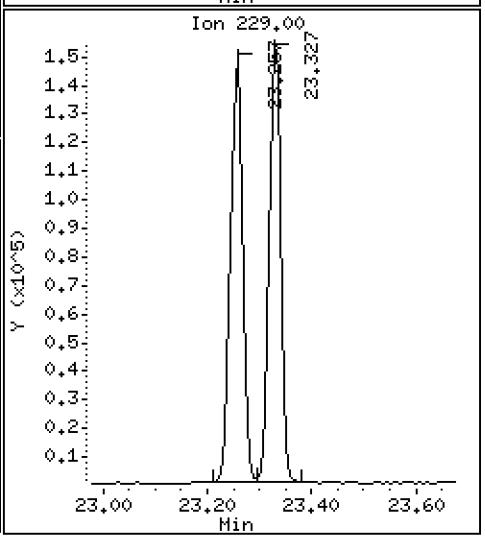












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

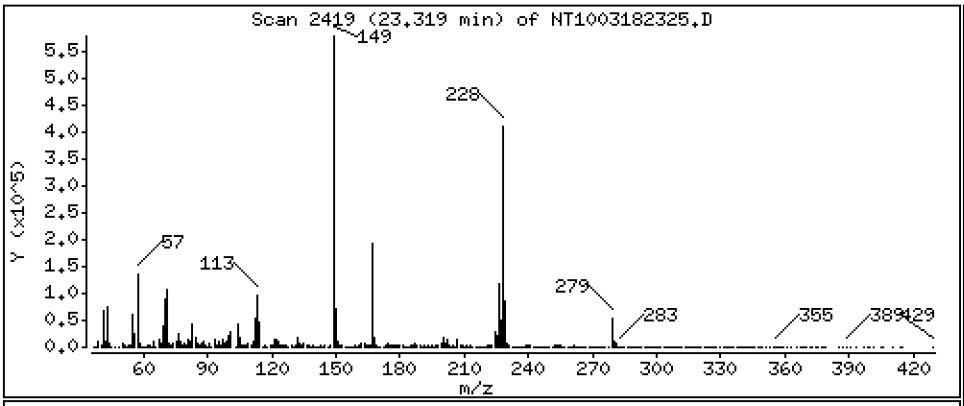
Operator: VTS

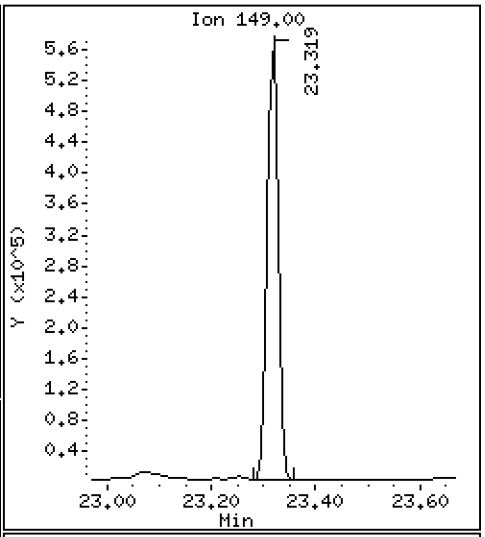
Column phase: ZB-5msi

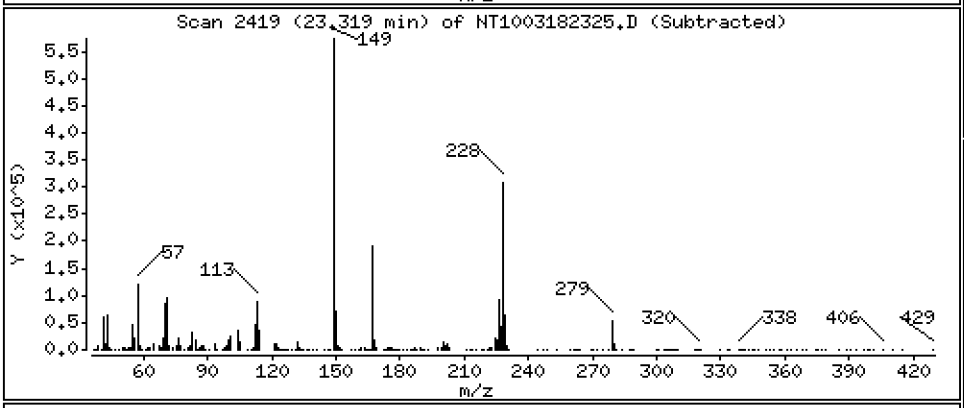
Column diameter: 0.25

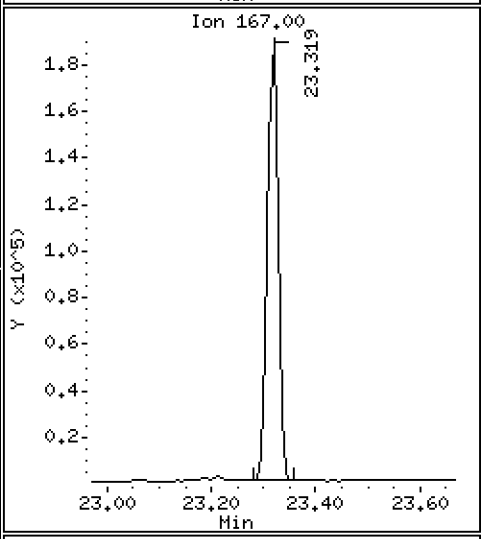
72 bis(2-Ethylhexyl)phthalate

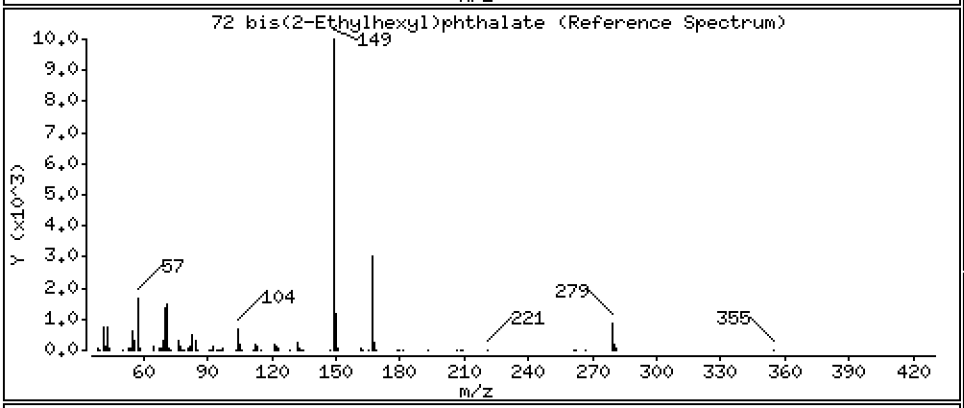
Concentration: 4.579 ug/mL

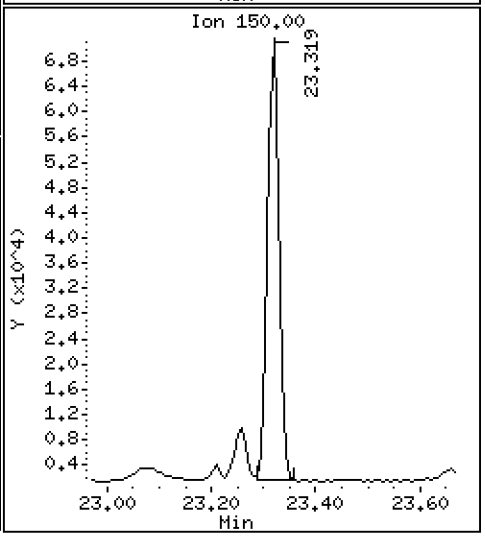


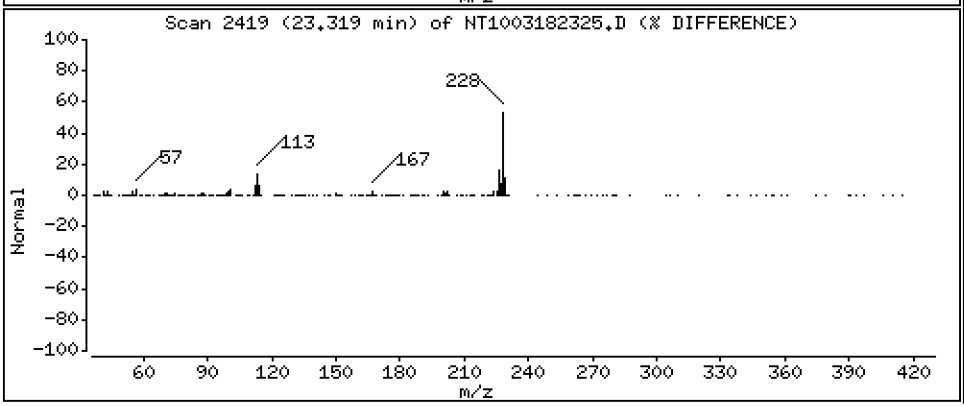












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

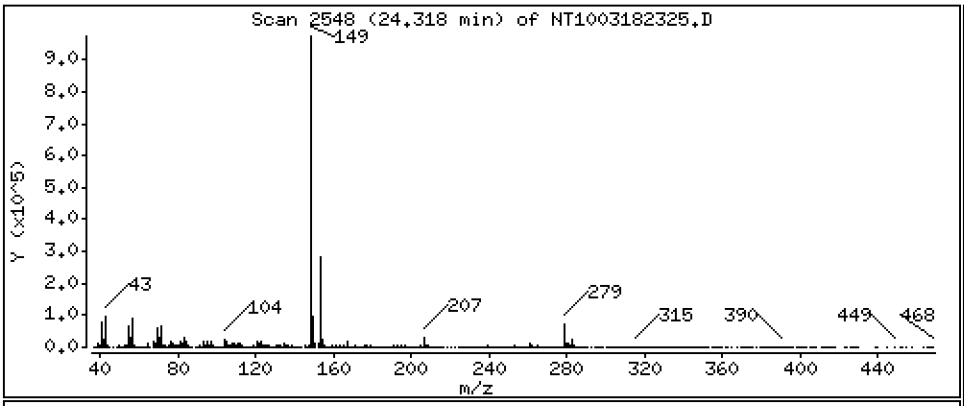
Operator: VTS

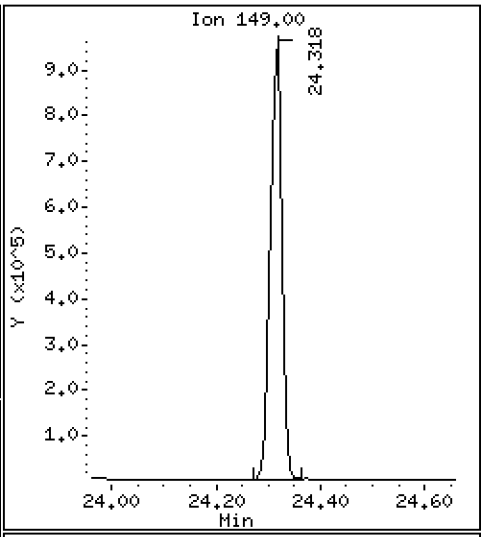
Column phase: ZB-5msi

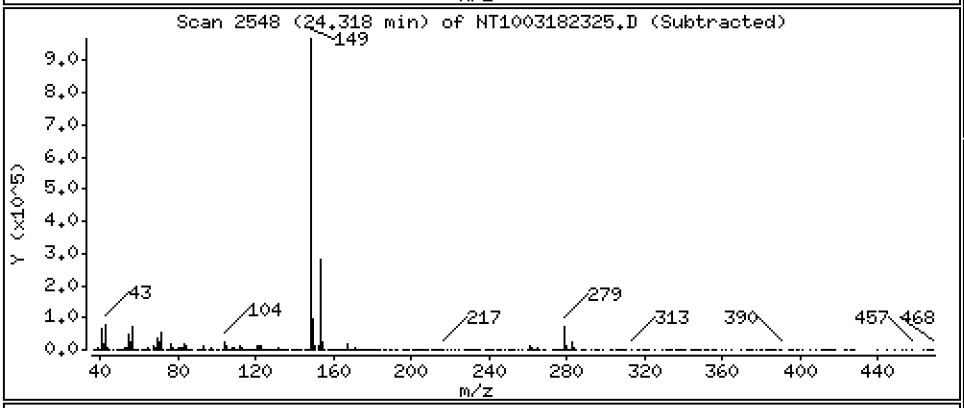
Column diameter: 0.25

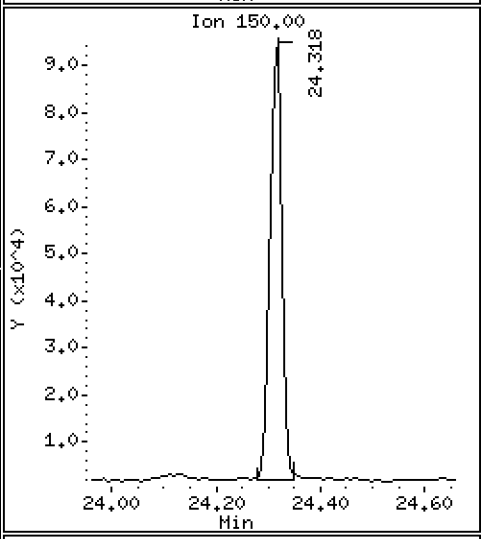
73 Di-n-octylphthalate

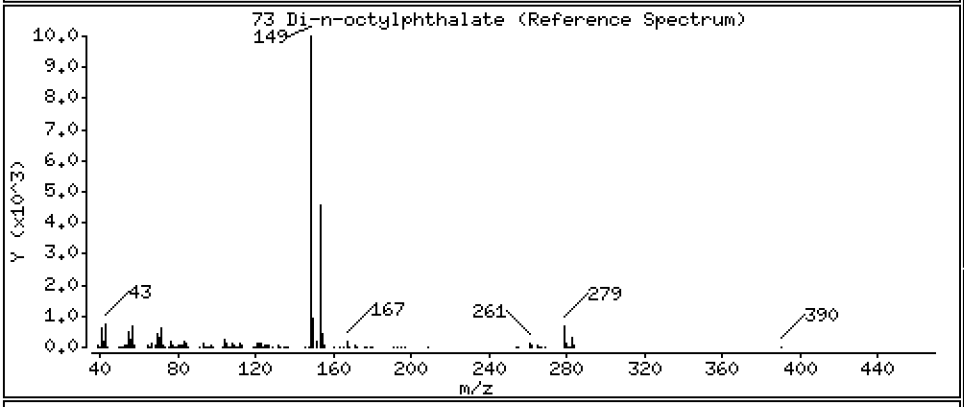
Concentration: 4.689 ug/mL

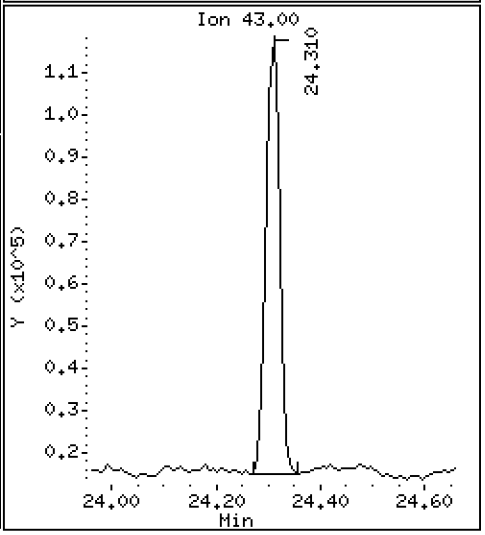


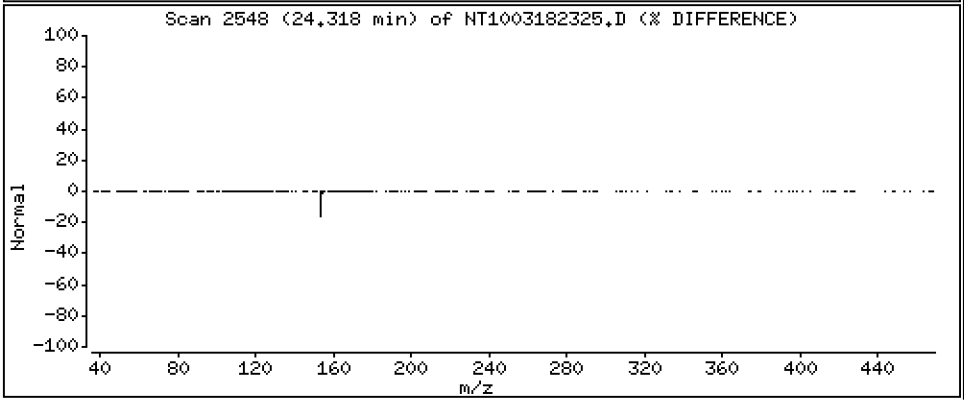












Date : 19-MAR-2023 09:03

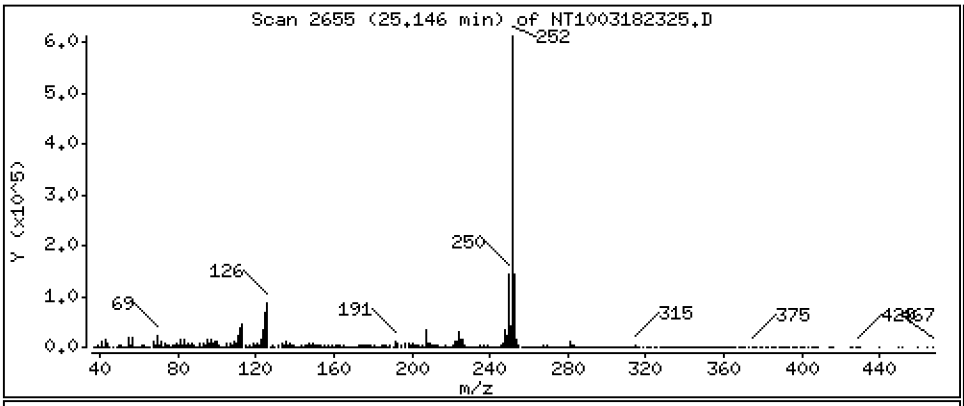
Client ID: Instrument: nt10.i

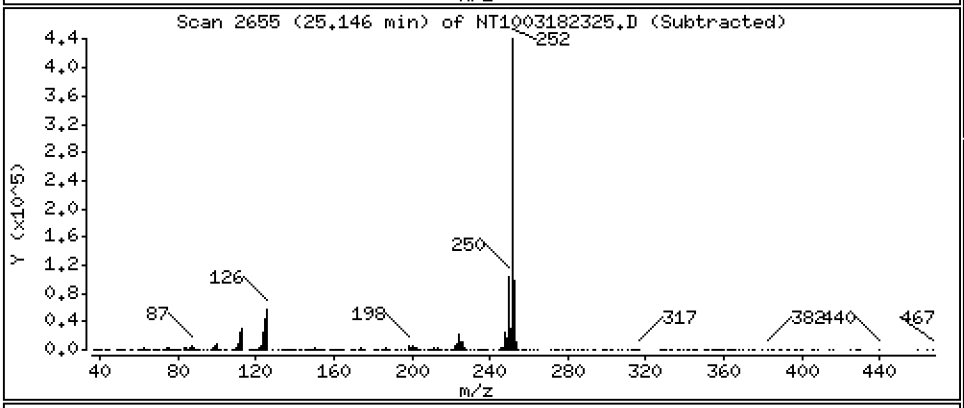
Sample Info: SLC0504-CCV1

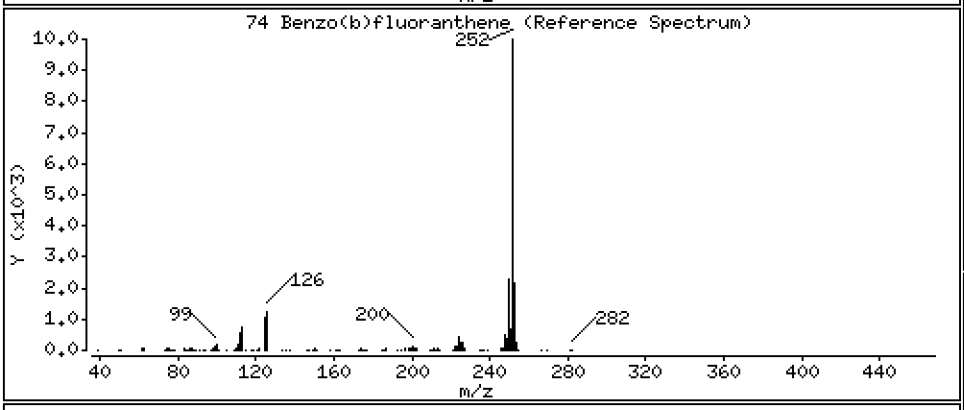
Operator: VTS

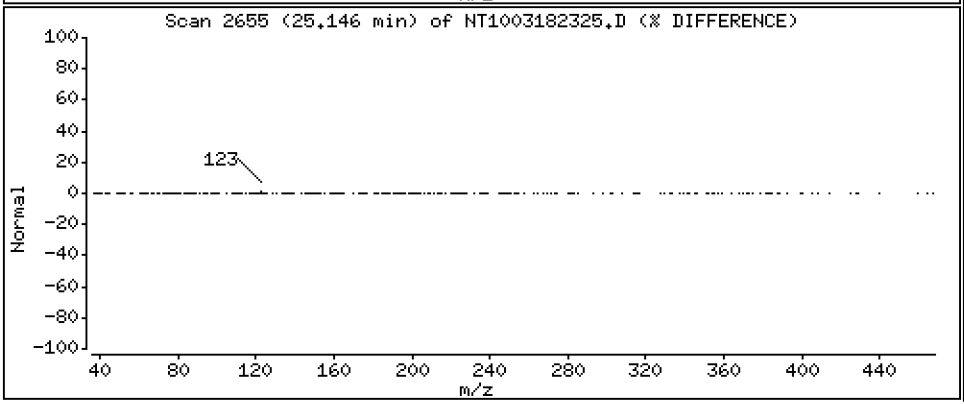
Column phase: ZB-5msi Column diameter: 0.25

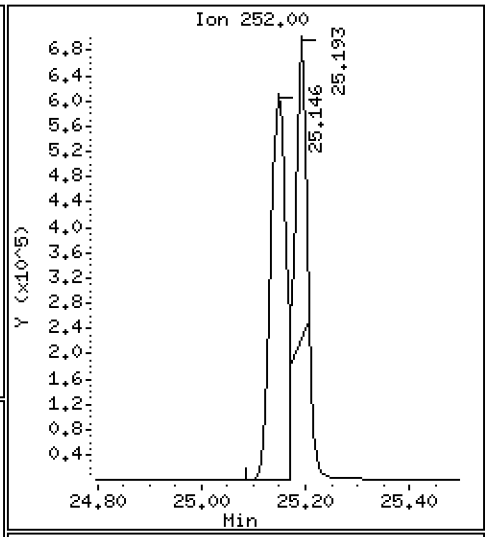
74 Benzo(b)fluoranthene Concentration: 5.067 ug/mL

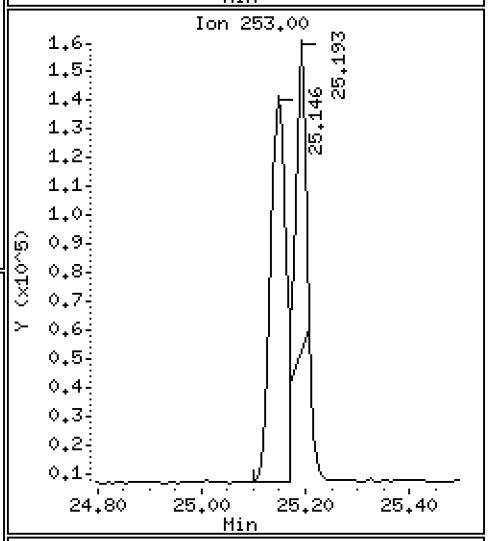


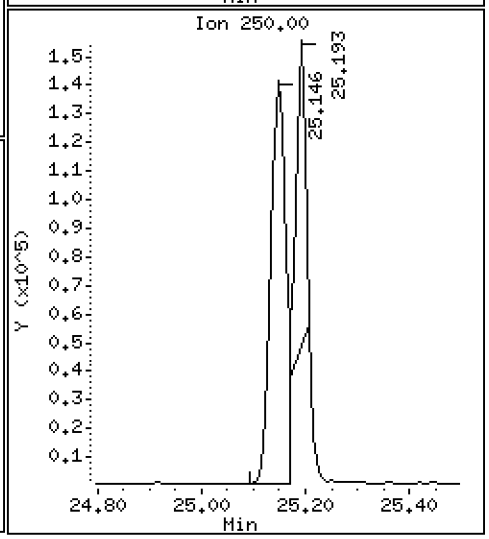












Date : 19-MAR-2023 09:03

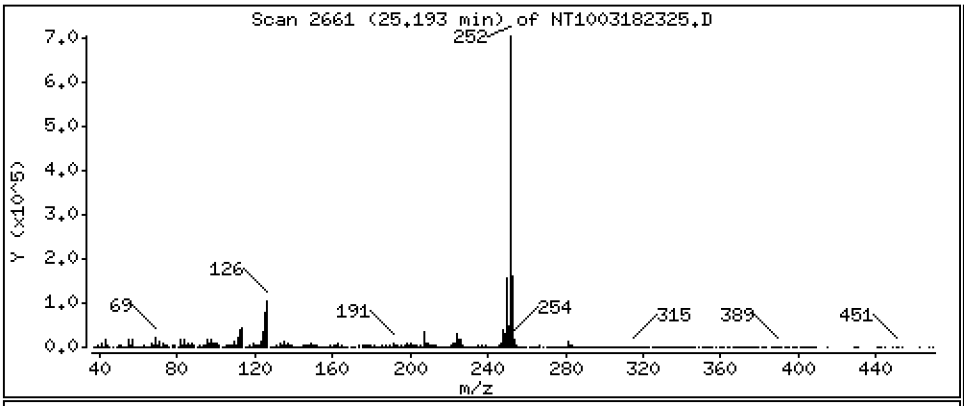
Client ID: Instrument: nt10.i

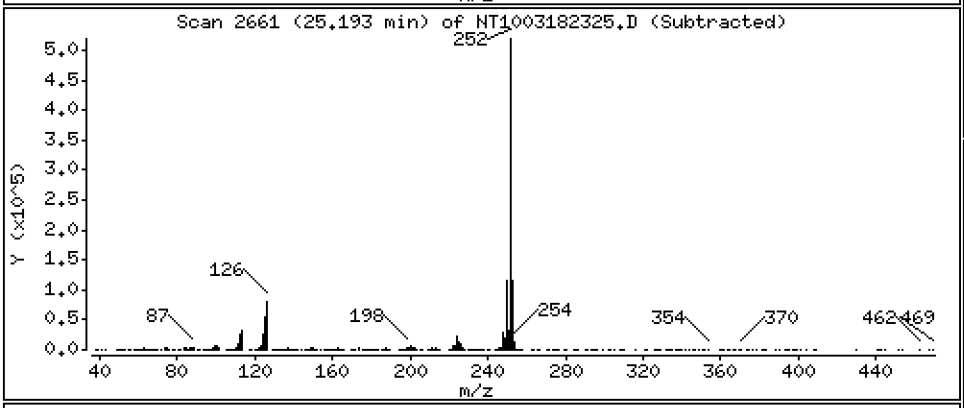
Sample Info: SLC0504-CCV1

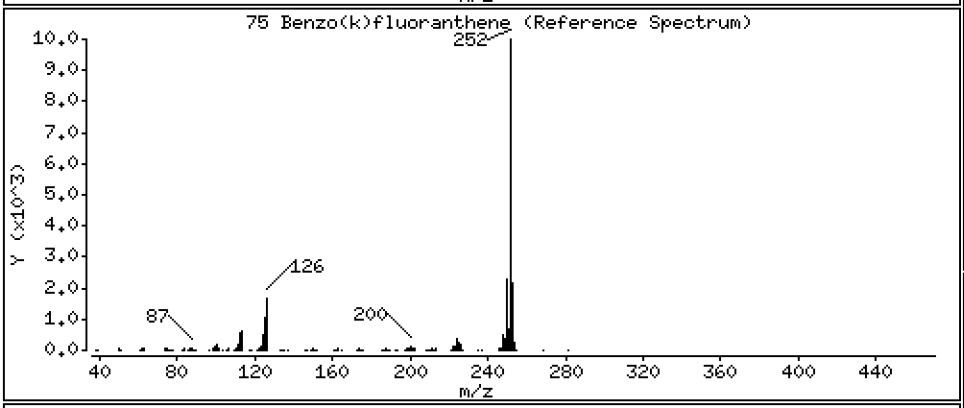
Operator: VTS

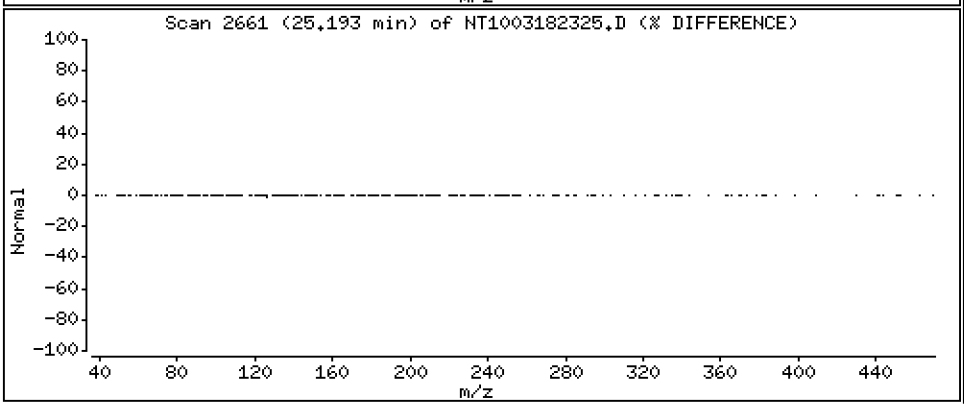
Column phase: ZB-5msi Column diameter: 0.25

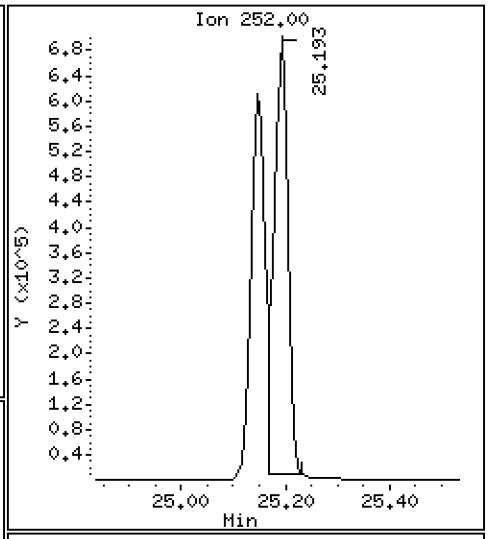
75 Benzo(k)fluoranthene Concentration: 4.999 ug/mL

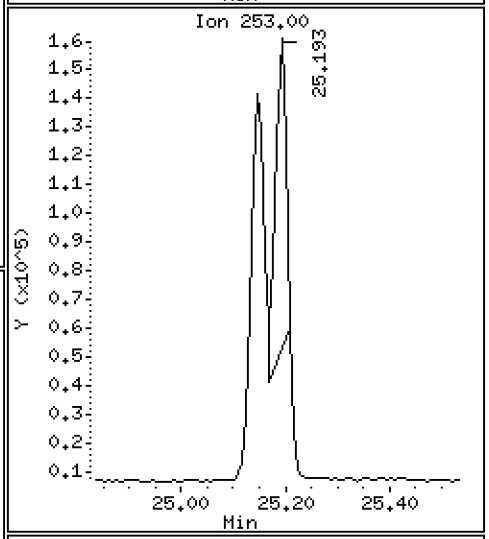


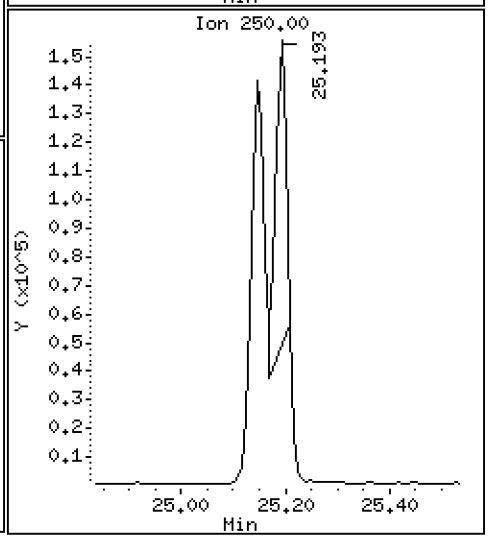












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

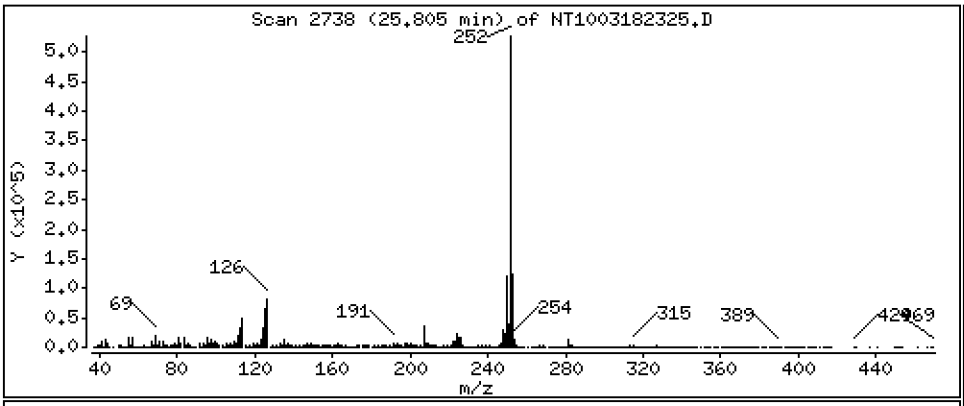
Operator: VTS

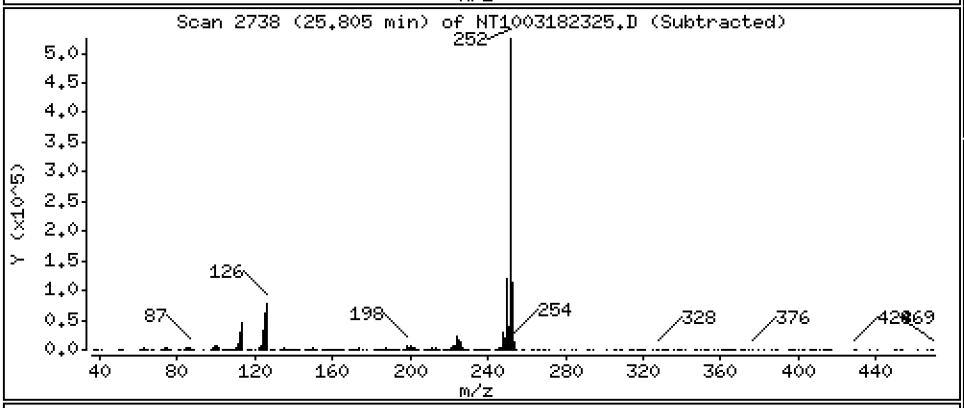
Column phase: ZB-5msi

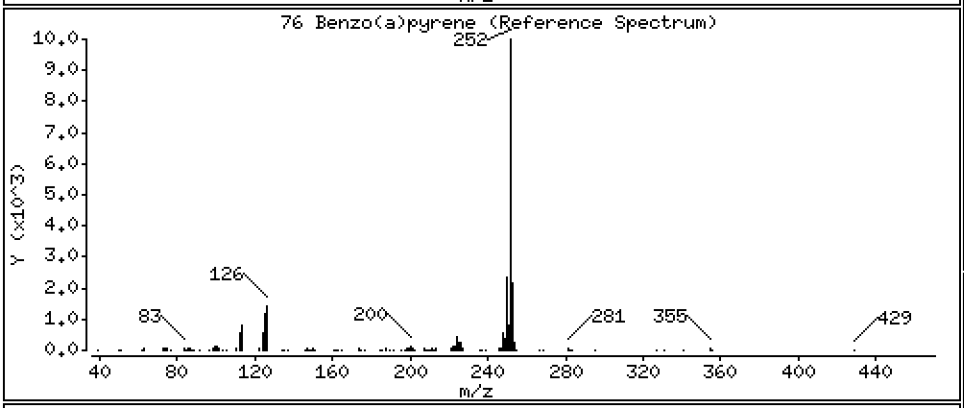
Column diameter: 0.25

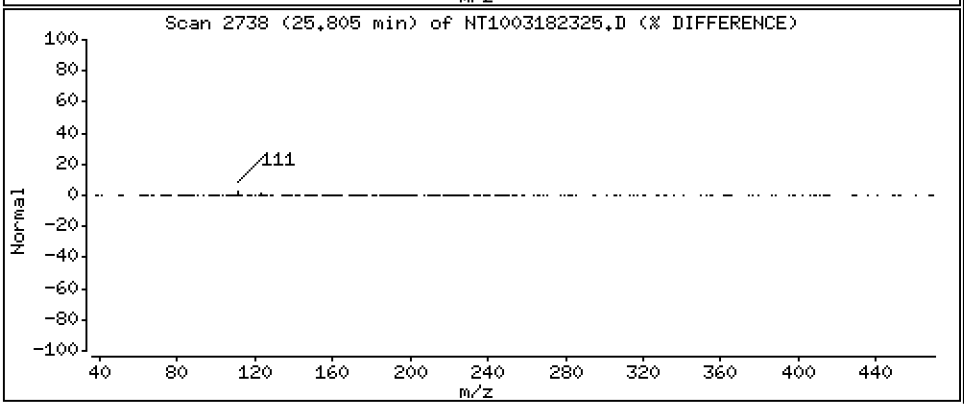
76 Benzo(a)pyrene

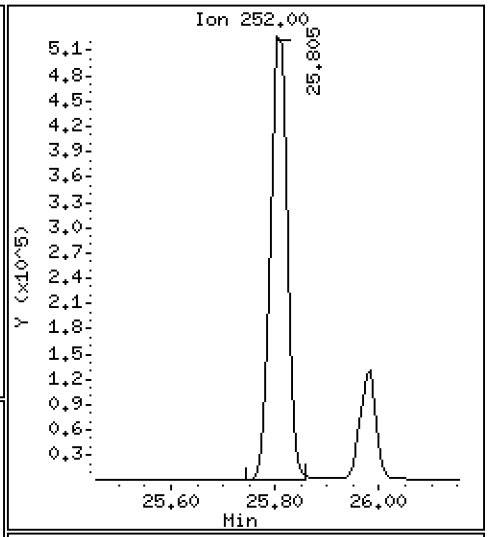
Concentration: 5.191 ug/mL

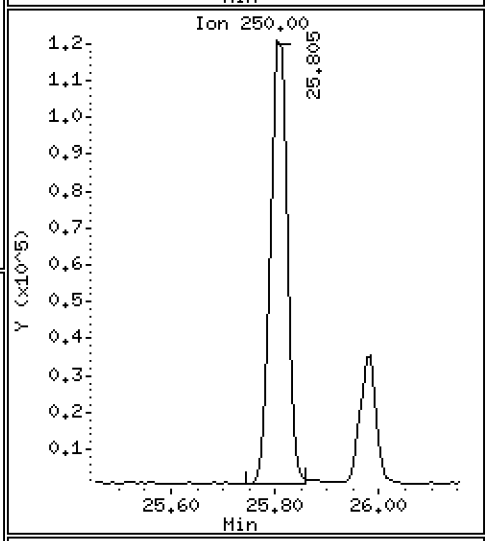


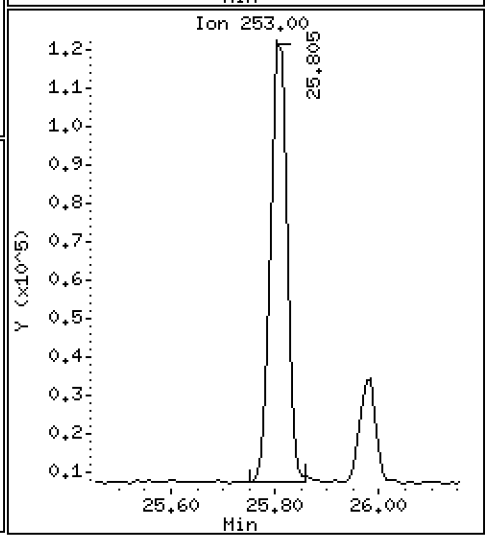












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

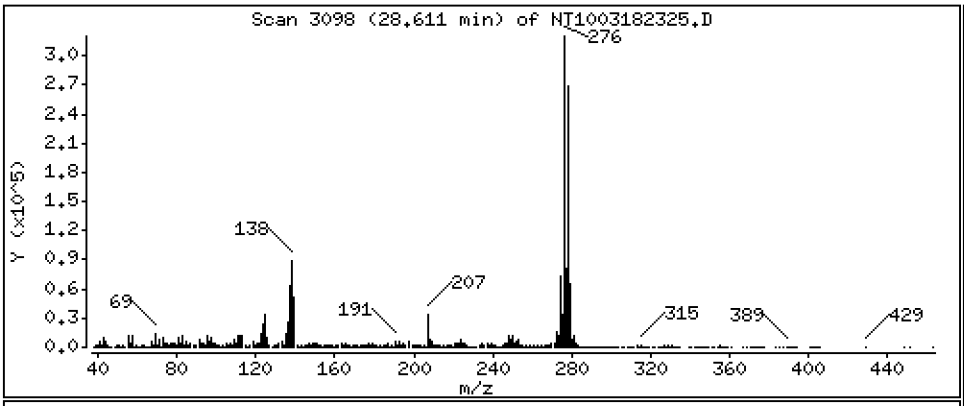
Operator: VTS

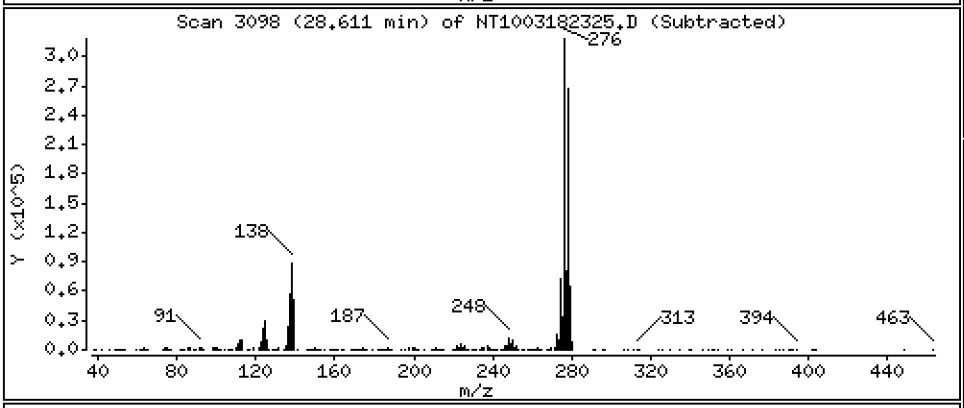
Column phase: ZB-5msi

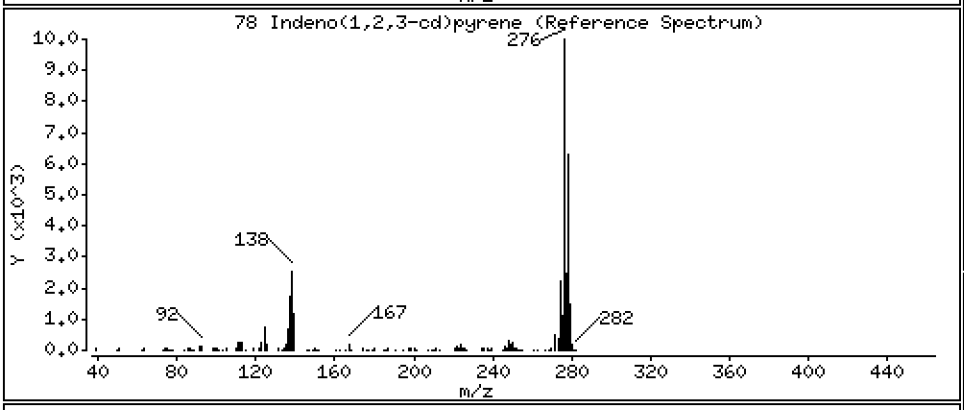
Column diameter: 0.25

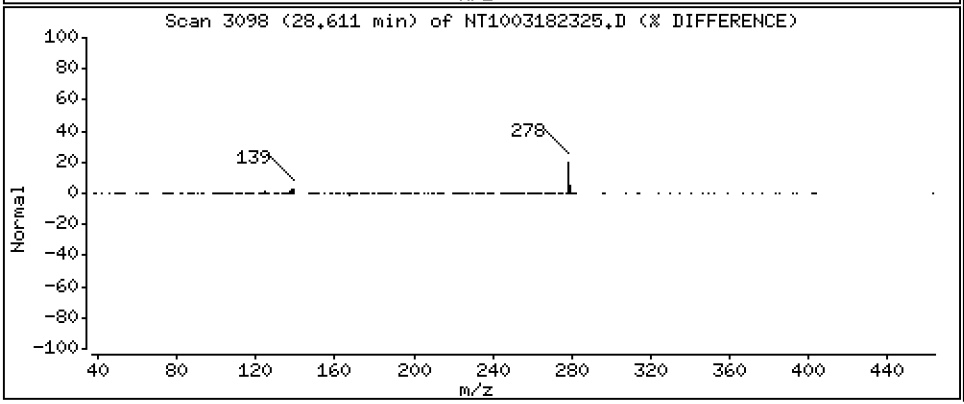
78 Indeno(1,2,3-cd)pyrene

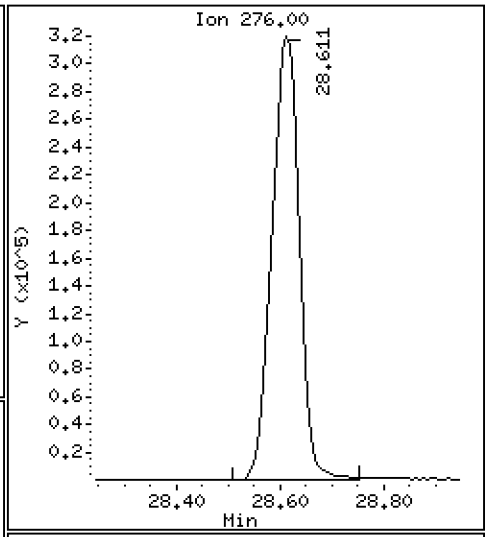
Concentration: 4.254 ug/mL

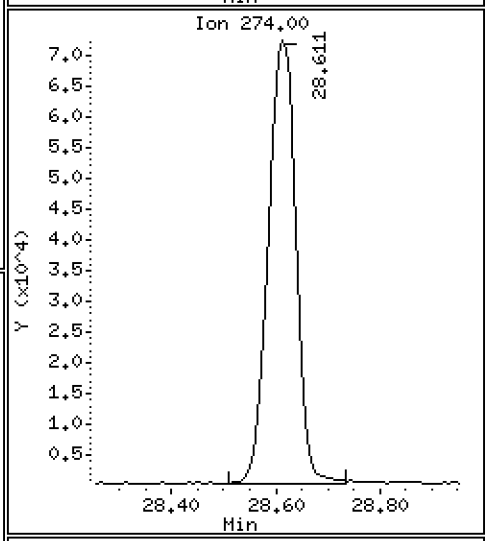


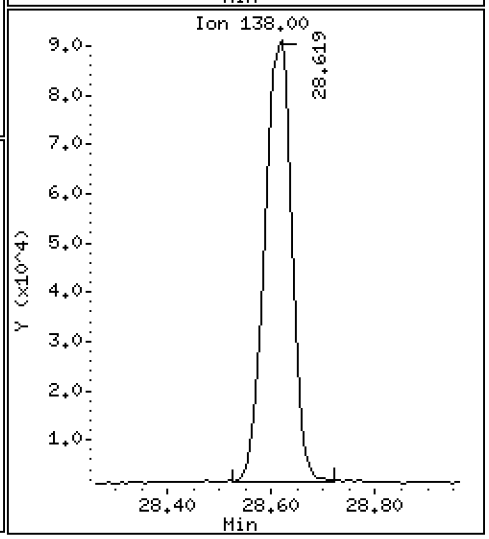












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

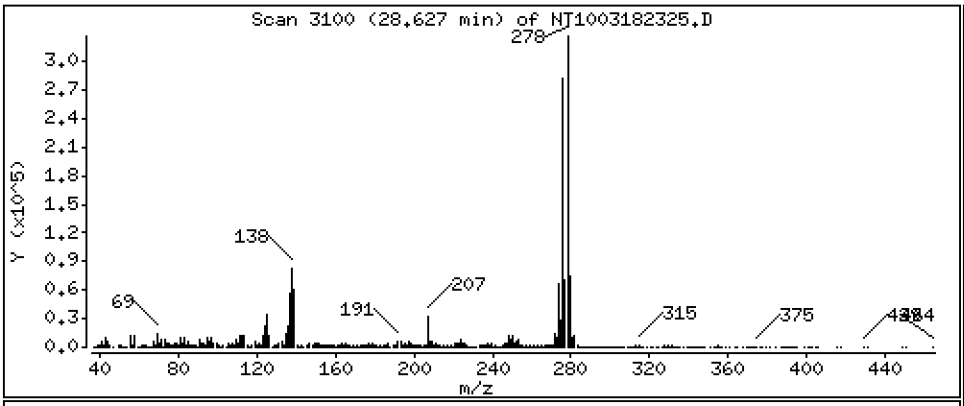
Operator: VTS

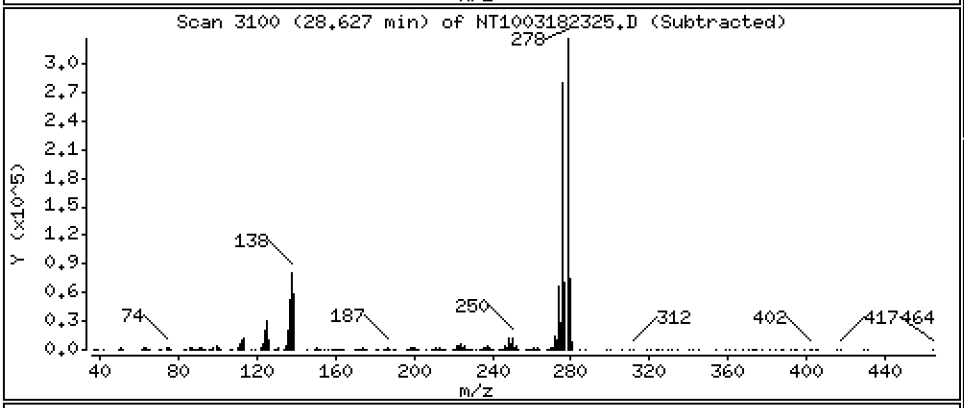
Column phase: ZB-5msi

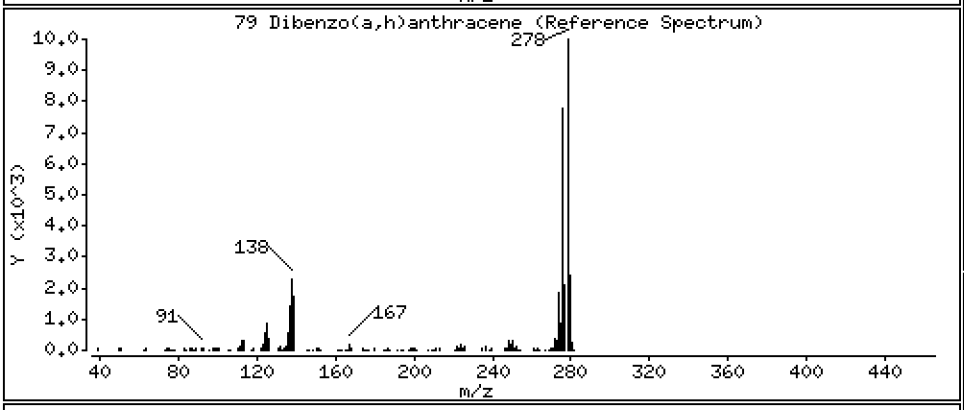
Column diameter: 0.25

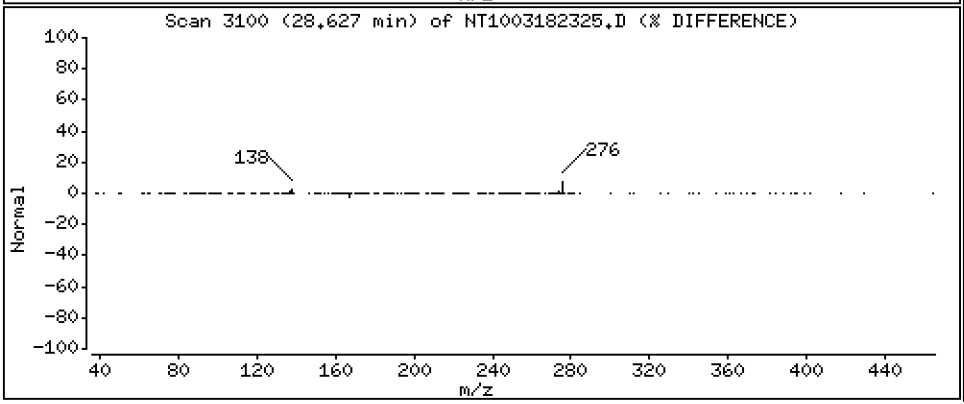
79 Dibenzo(a,h)anthracene

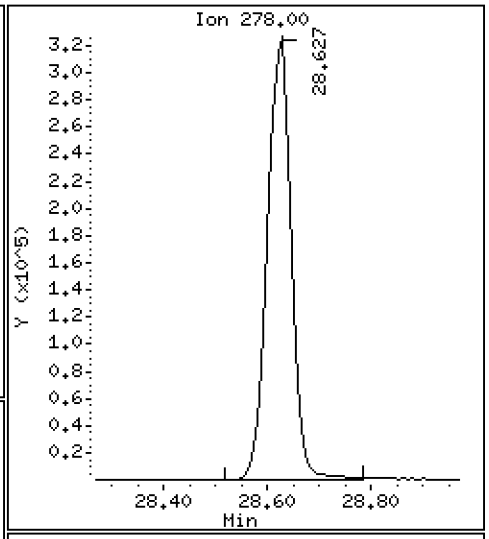
Concentration: 4.448 ug/mL

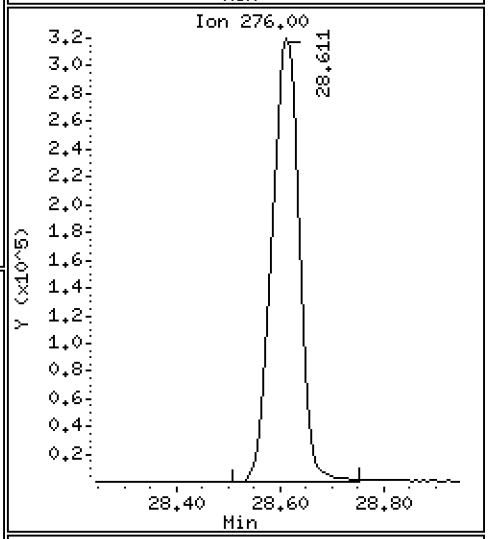


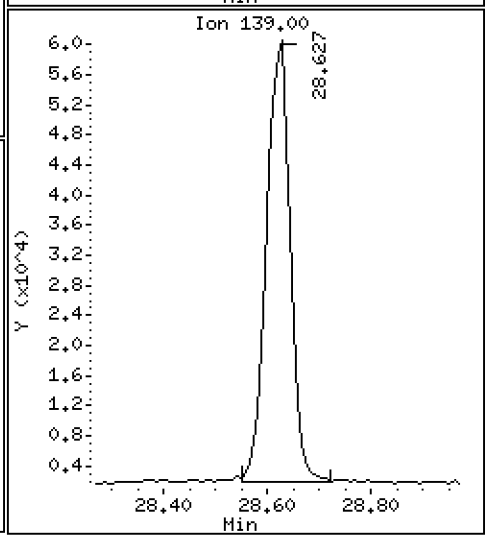












Date : 19-MAR-2023 09:03

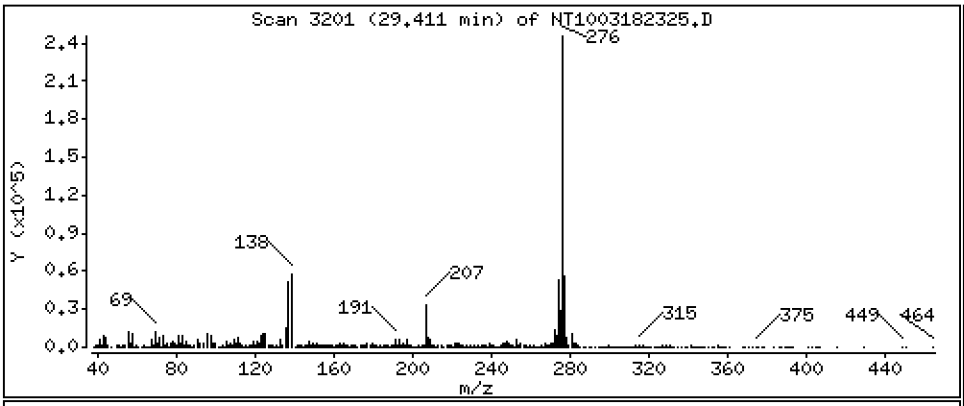
Client ID: Instrument: nt10.i

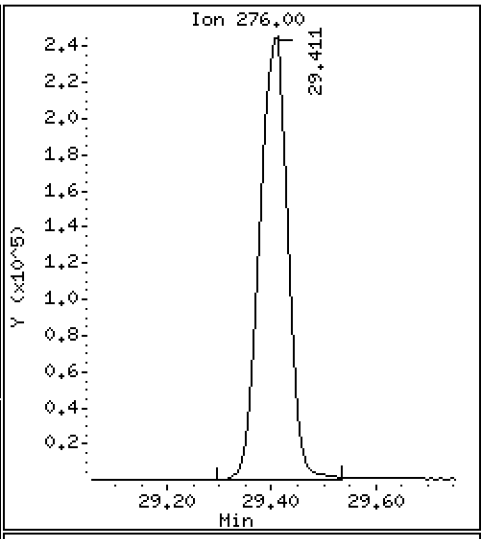
Sample Info: SLC0504-CCV1

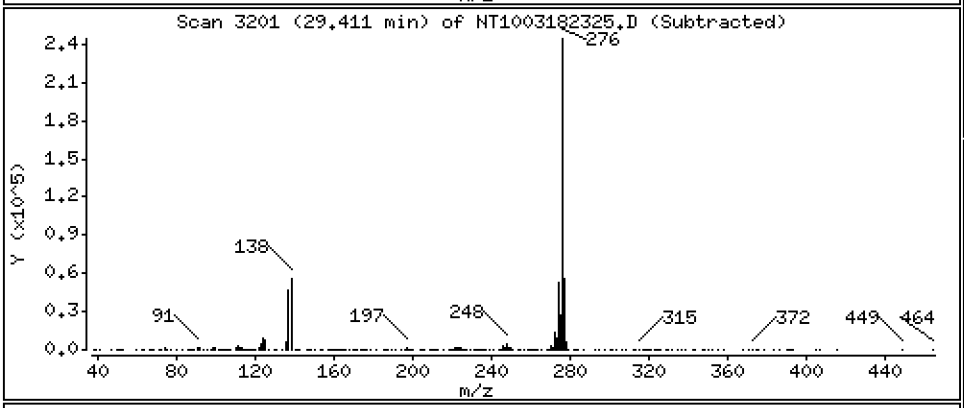
Operator: VTS

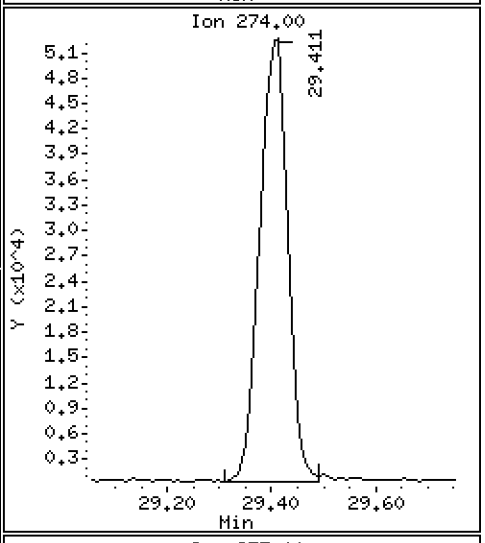
Column phase: ZB-5msi Column diameter: 0.25

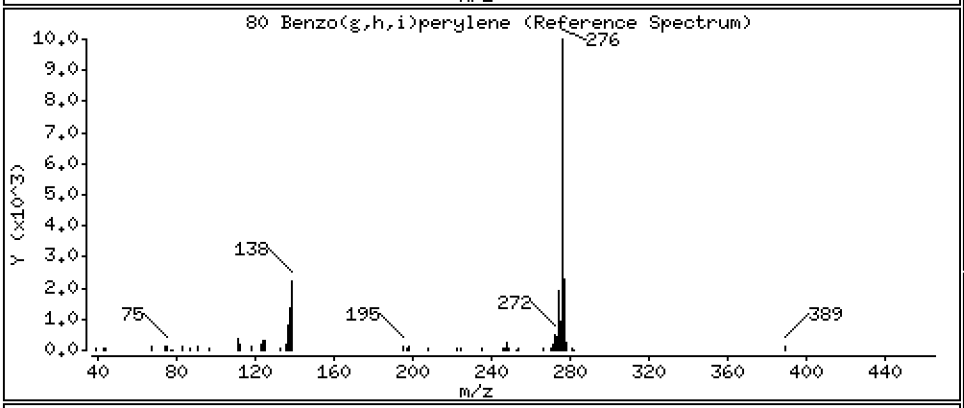
80 Benzo(g,h,i)perylene Concentration: 3.821 ug/mL

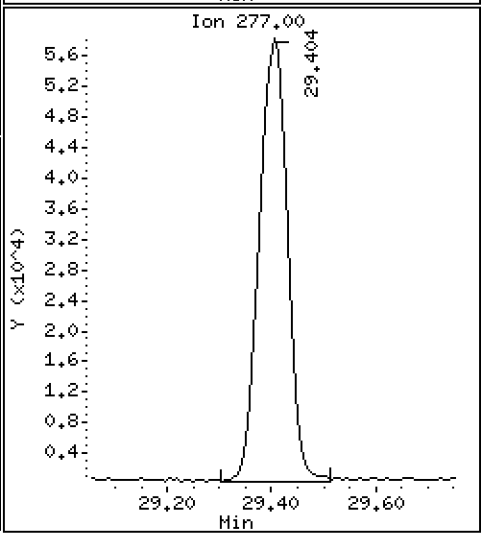


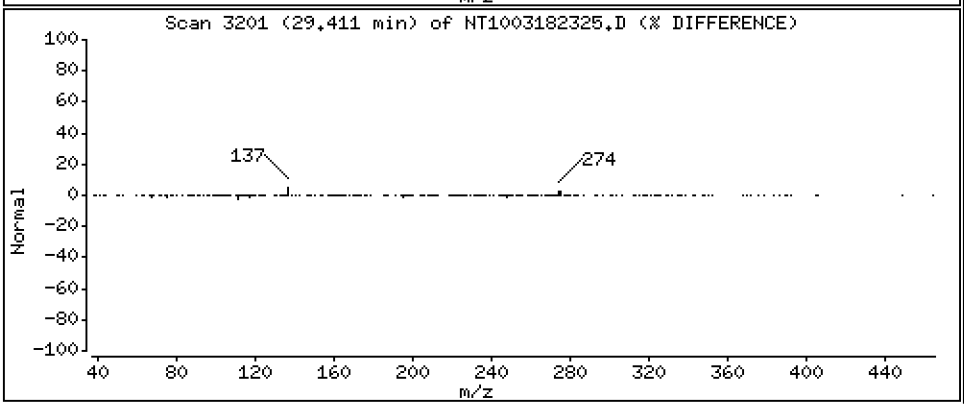












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

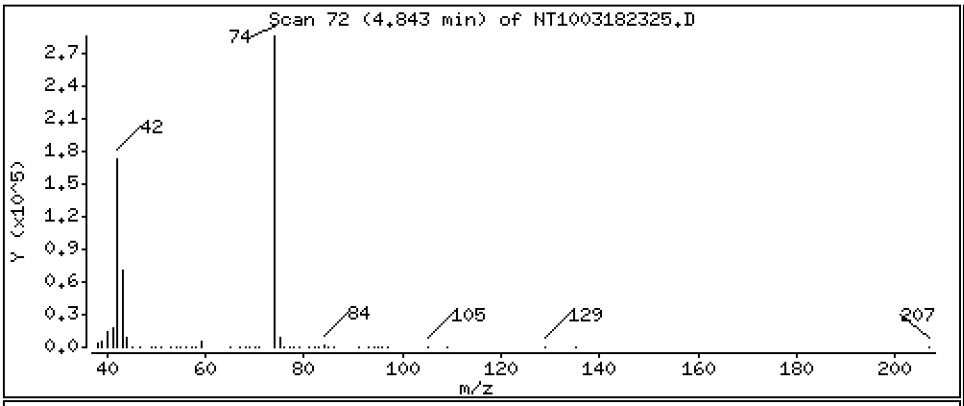
Operator: VTS

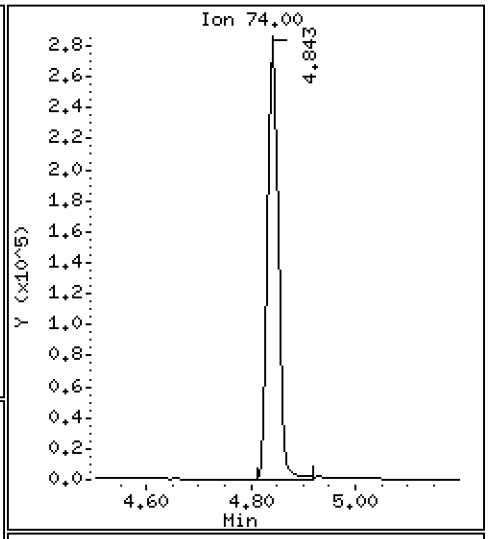
Column phase: ZB-5msi

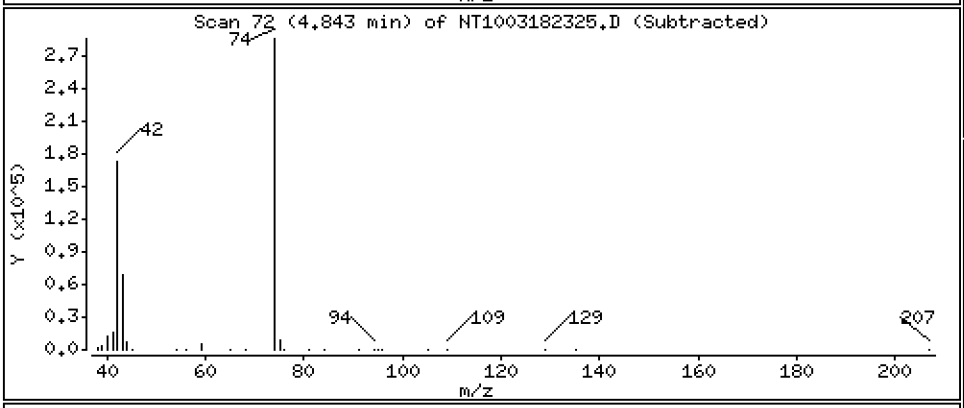
Column diameter: 0.25

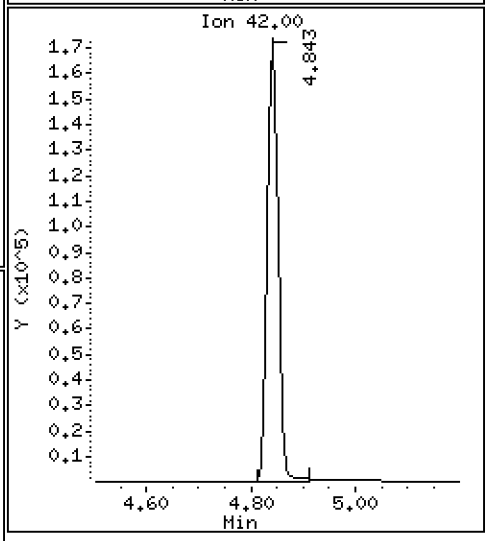
90 N-Nitrosodimethylamine

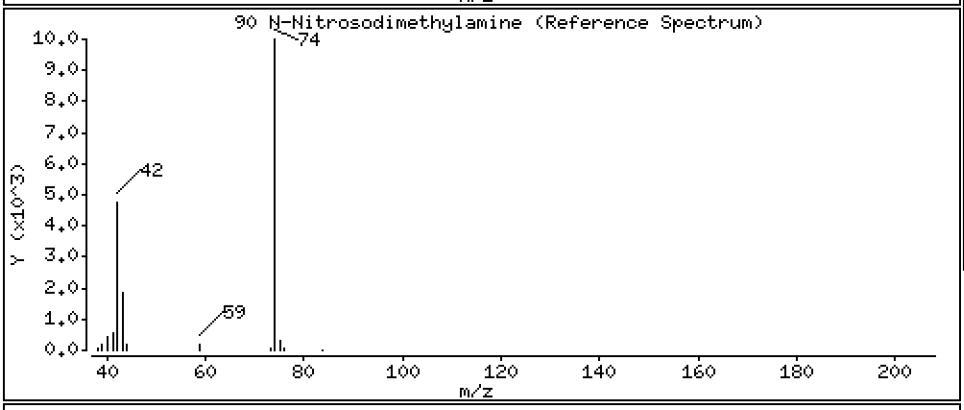
Concentration: 9.661 ug/mL

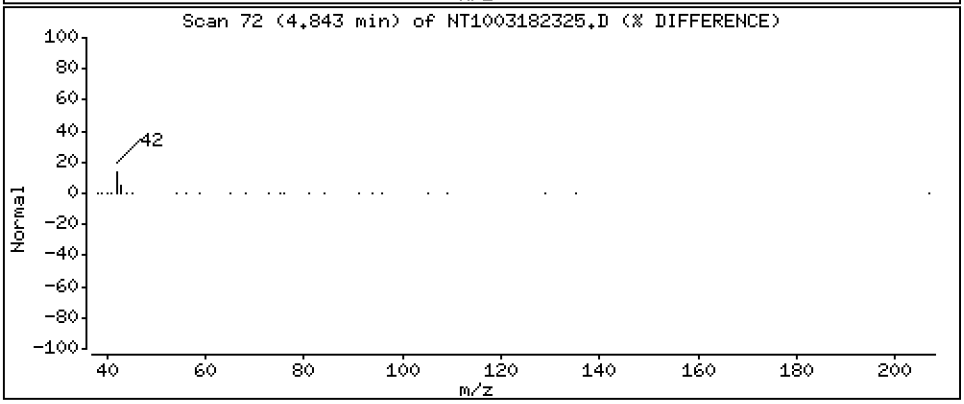












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

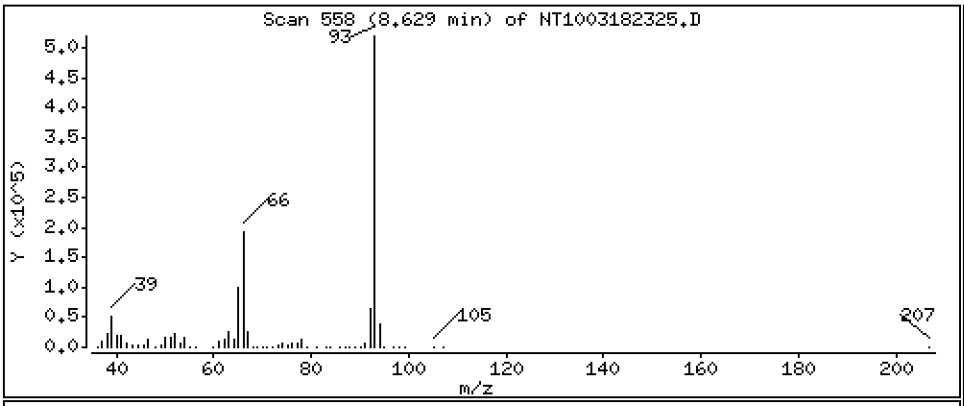
Operator: VTS

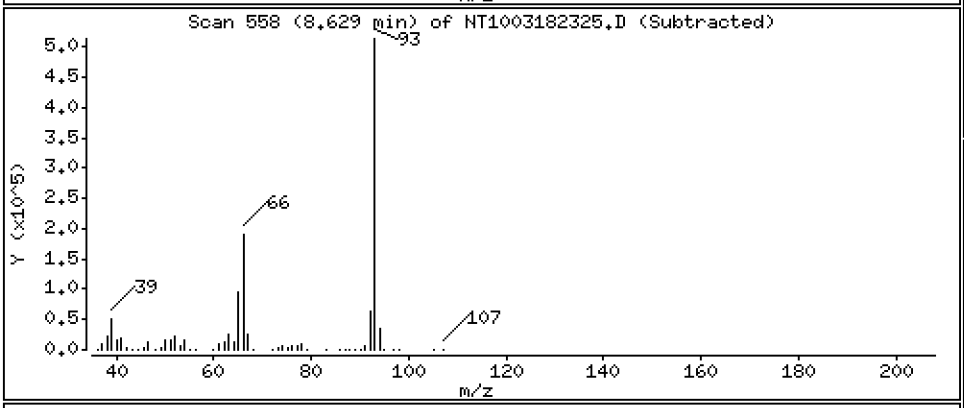
Column phase: ZB-5msi

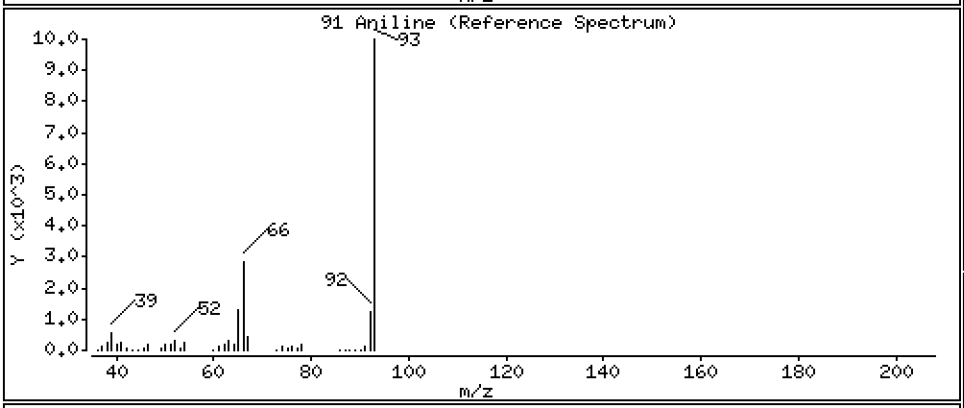
Column diameter: 0.25

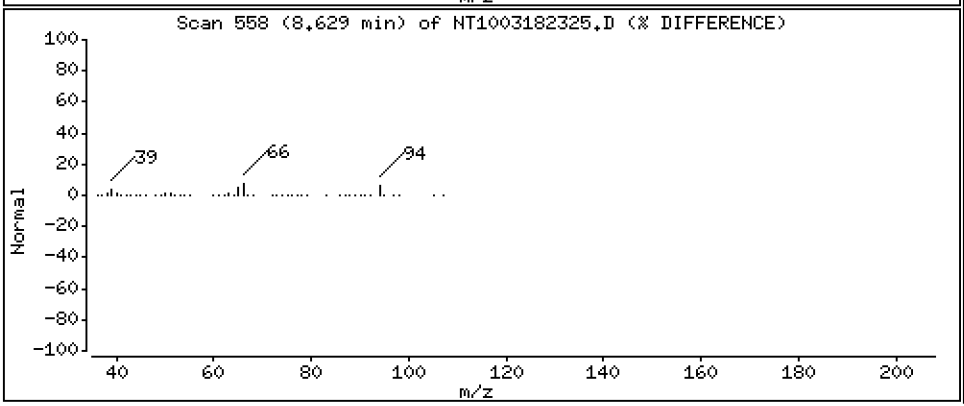
91 Aniline

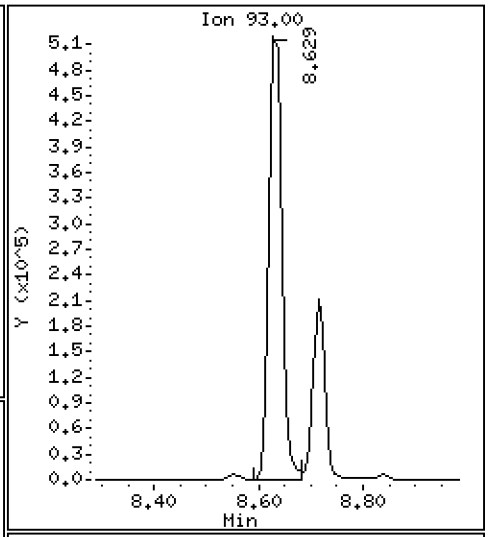
Concentration: 9.826 ug/mL

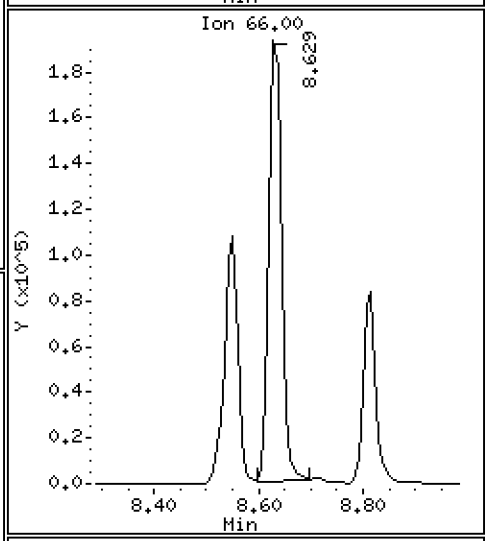


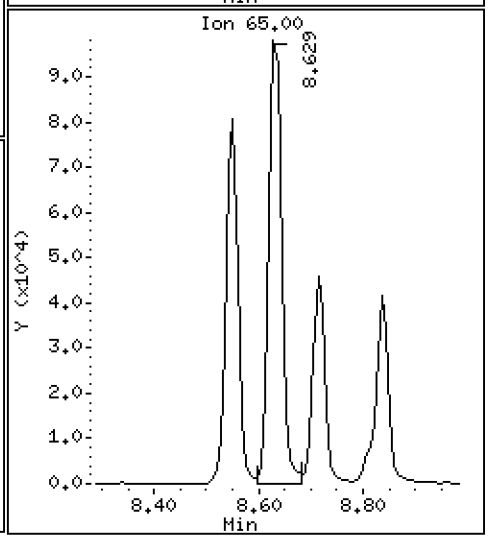












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D

Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

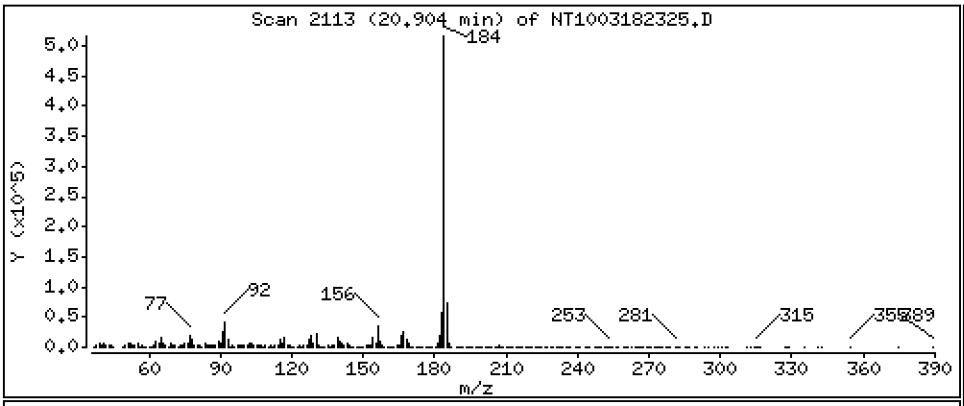
Operator: VTS

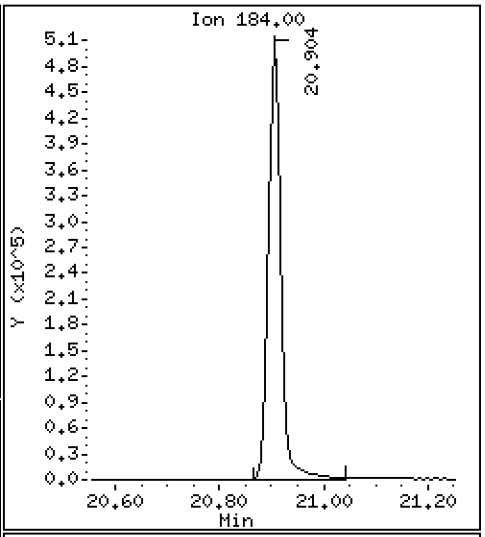
Column phase: ZB-5msi

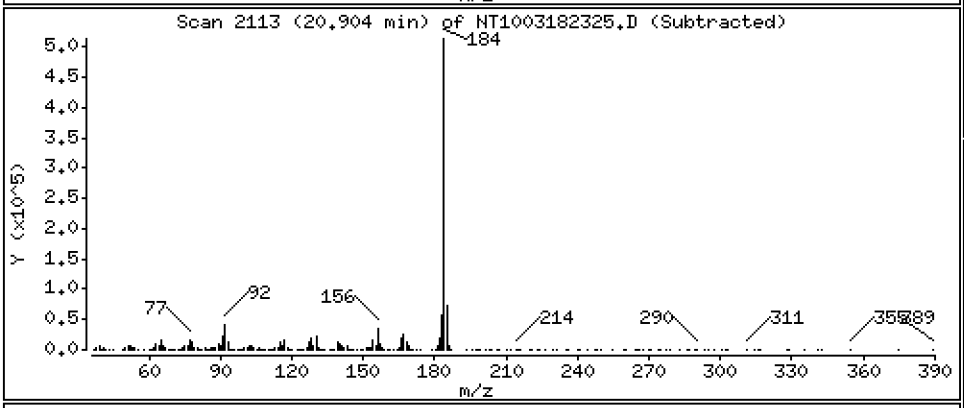
Column diameter: 0.25

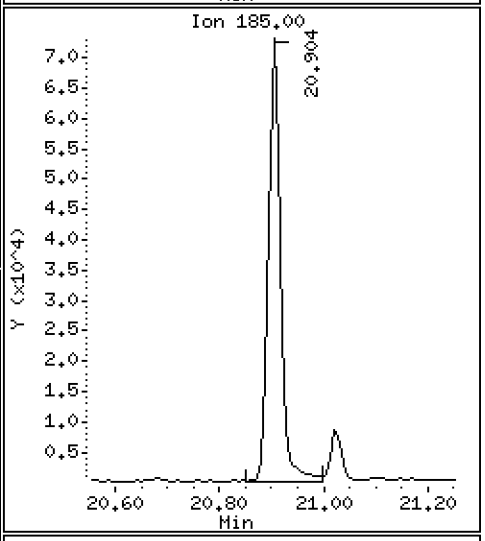
93 Benzidine

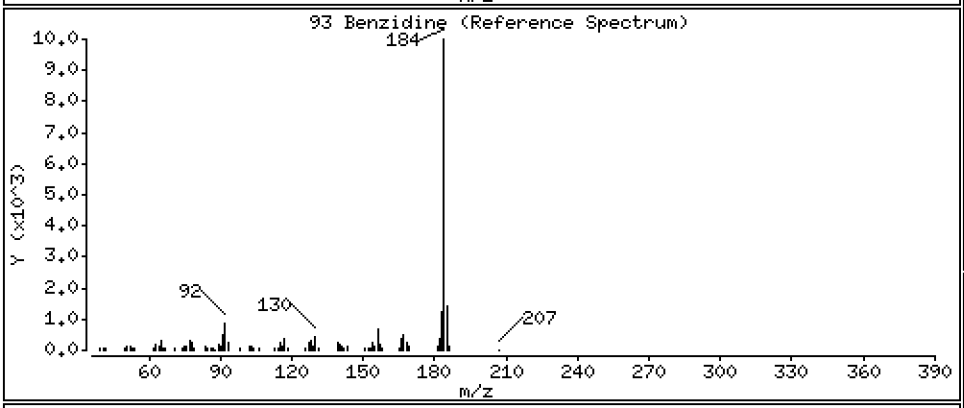
Concentration: 7.227 ug/mL

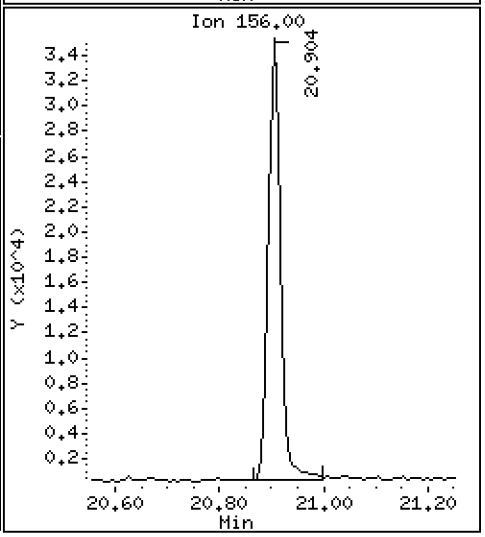


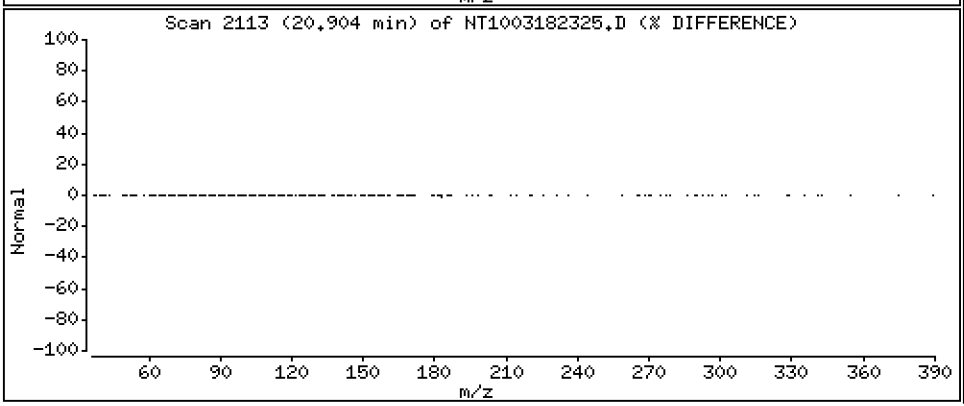












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

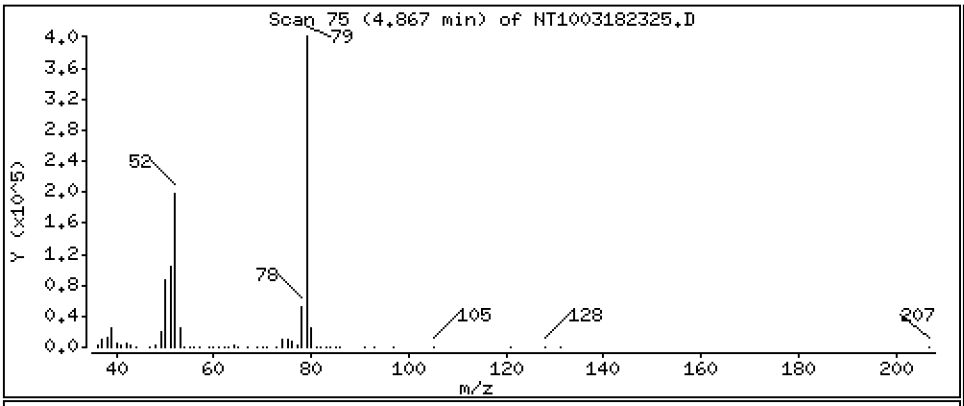
Operator: VTS

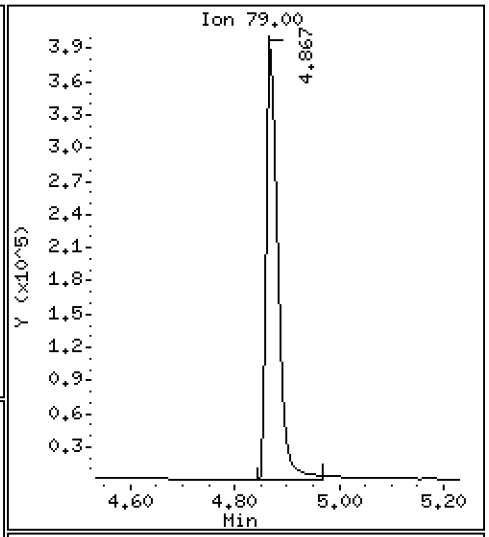
Column phase: ZB-5msi

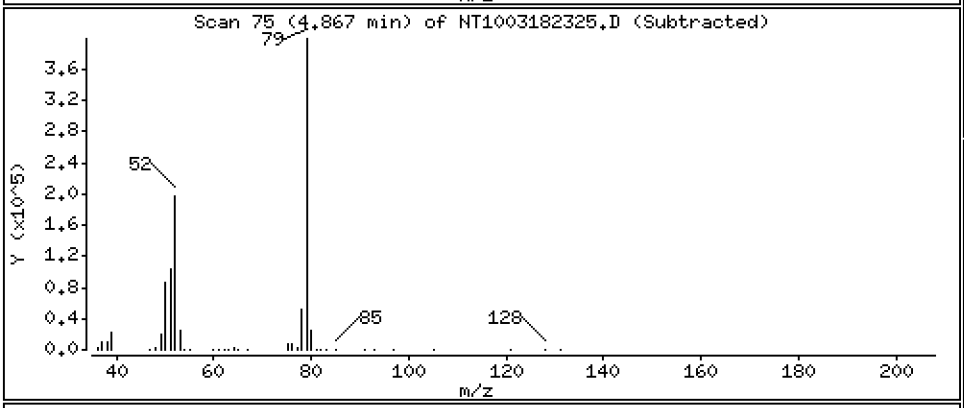
Column diameter: 0.25

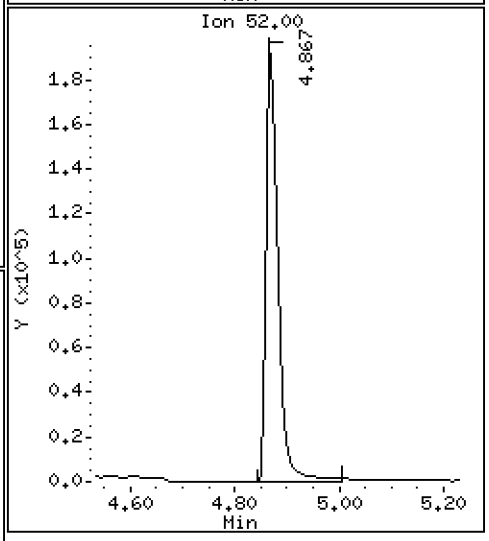
103 Pyridine

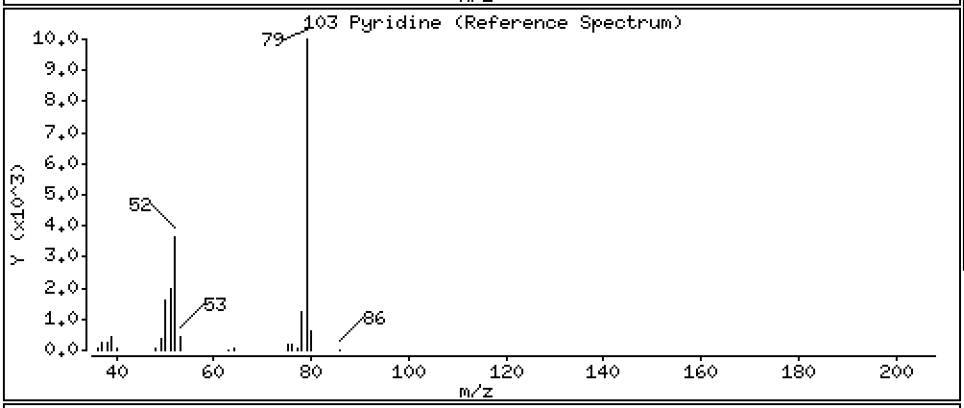
Concentration: 9.644 ug/mL

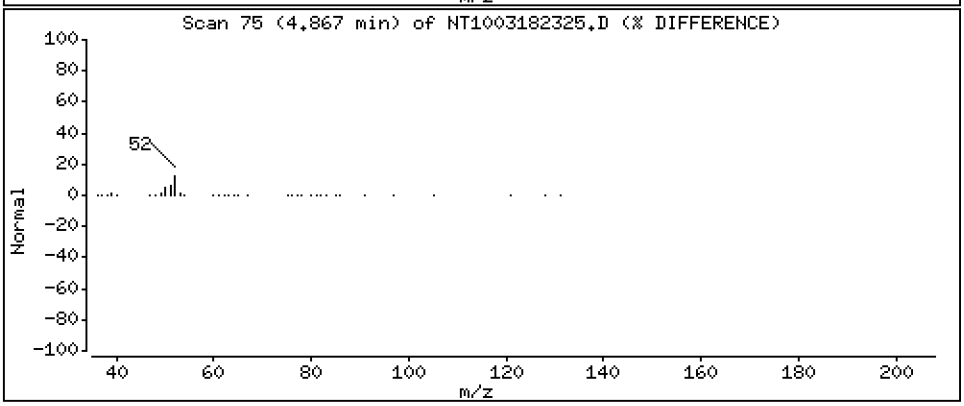












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

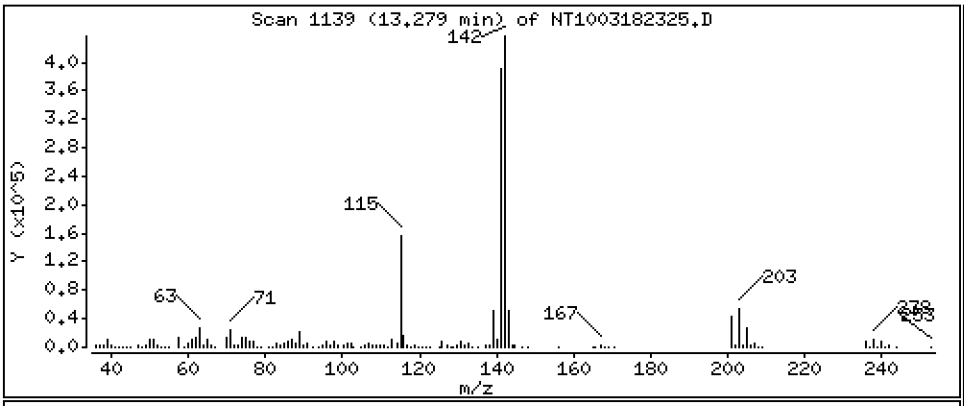
Operator: VTS

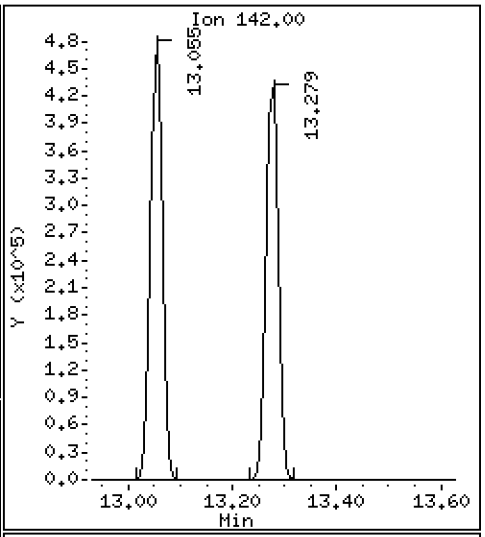
Column phase: ZB-5msi

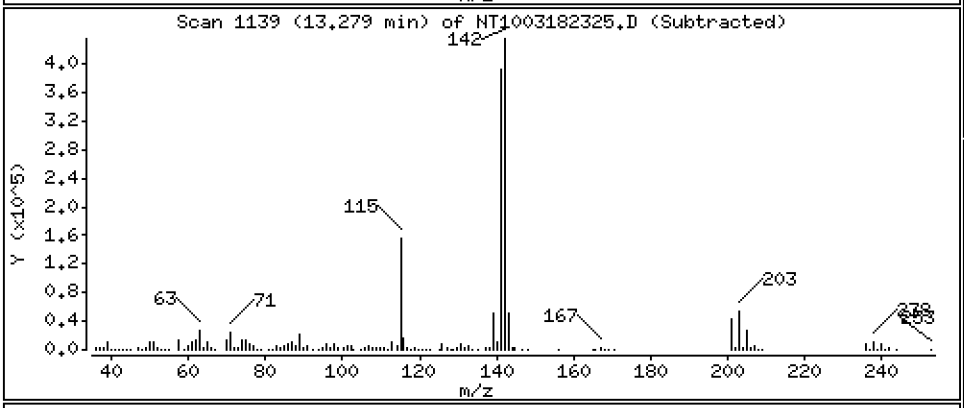
Column diameter: 0.25

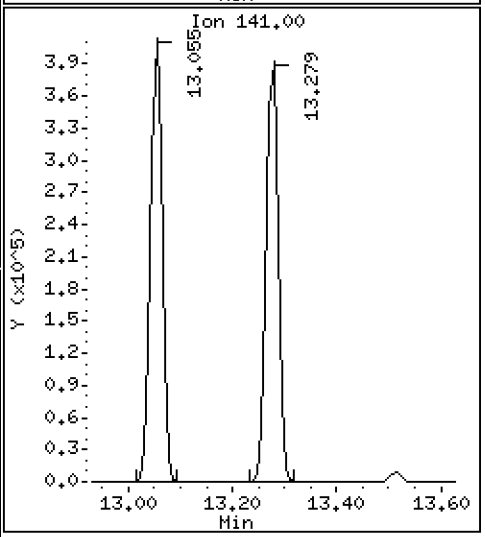
105 1-methylnaphthalene

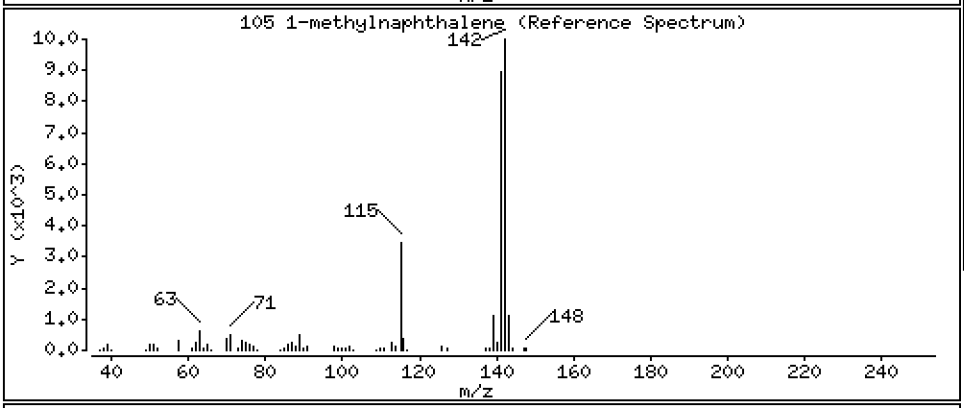
Concentration: 5.039 ug/mL

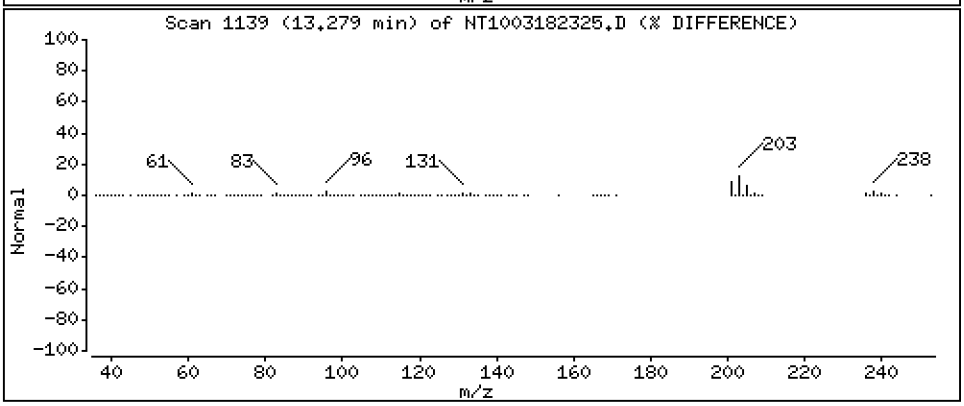












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Date : 19-MAR-2023 09:03

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-CCV1

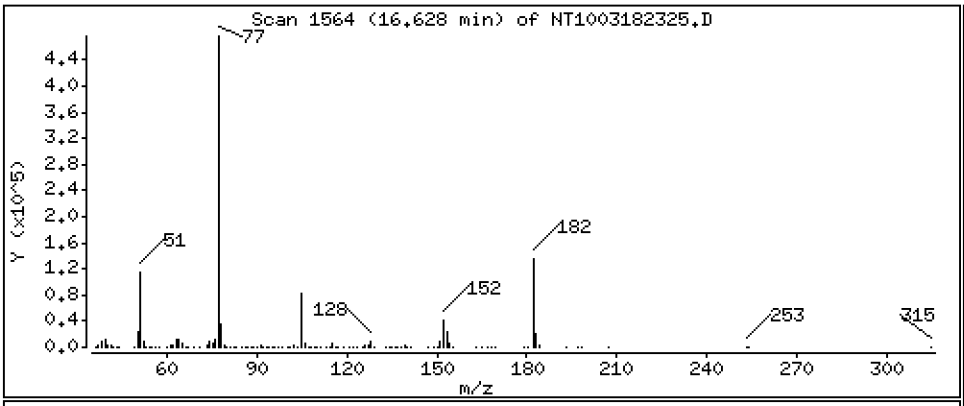
Operator: VTS

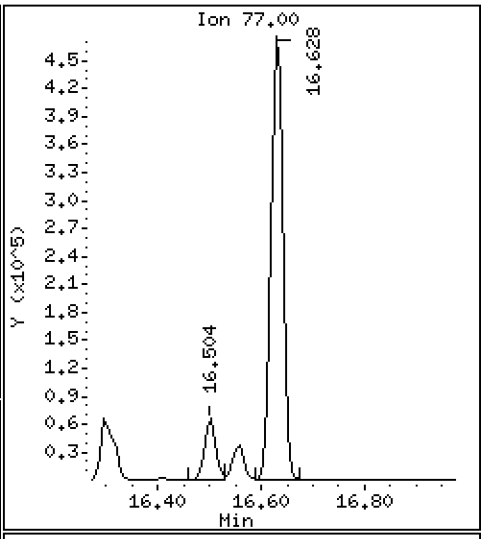
Column phase: ZB-5msi

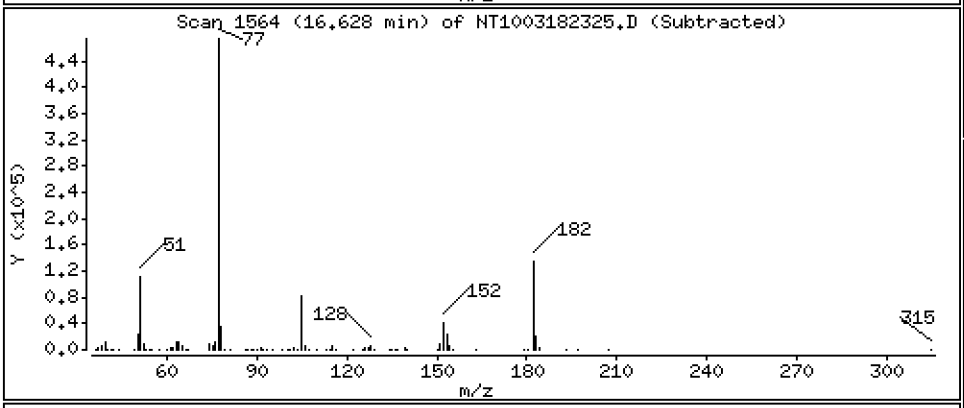
Column diameter: 0.25

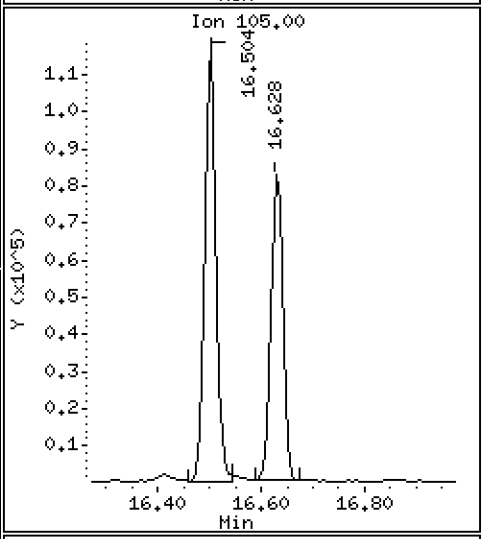
111 Azobenzene (1,2-DP-Hydrazine)

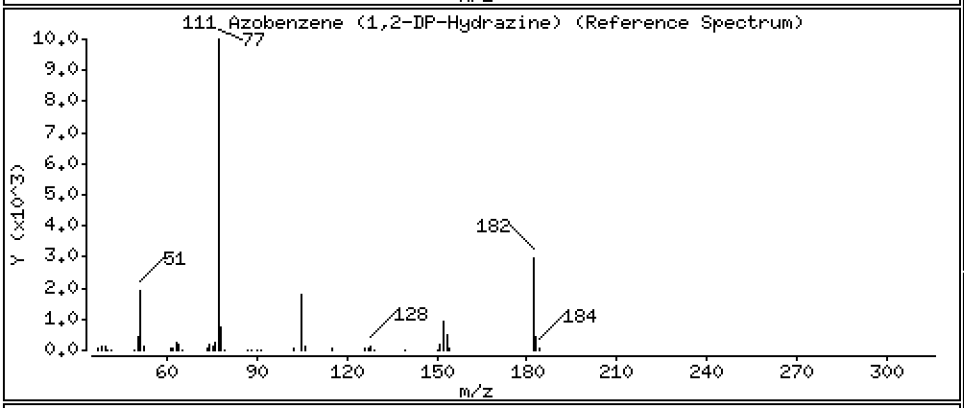
Concentration: 4.759 ug/mL

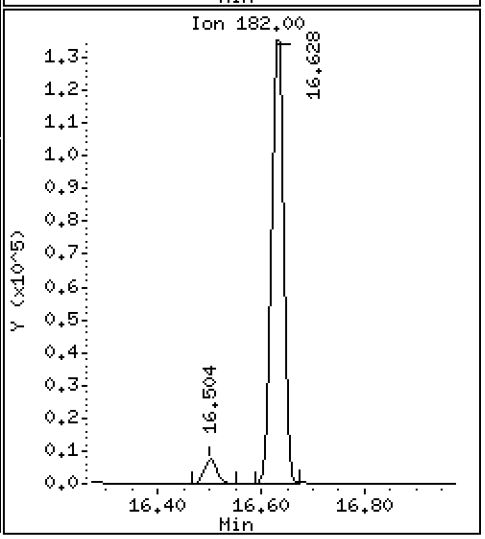


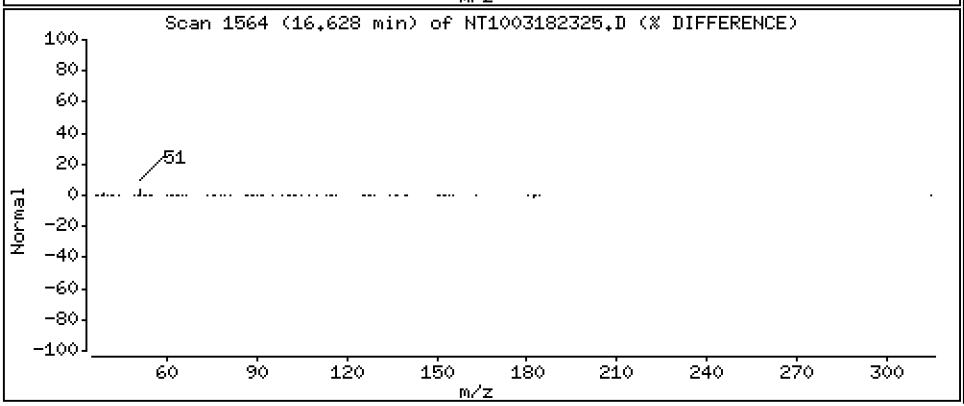












Date : 19-MAR-2023 09:03

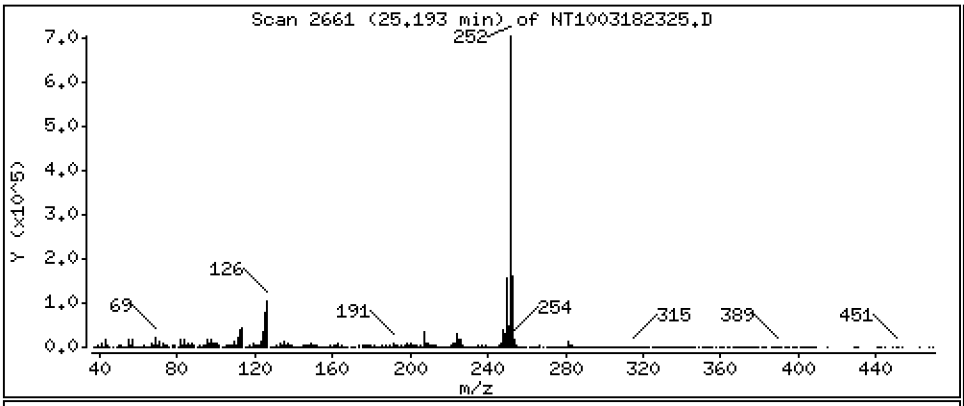
Client ID: Instrument: nt10.i

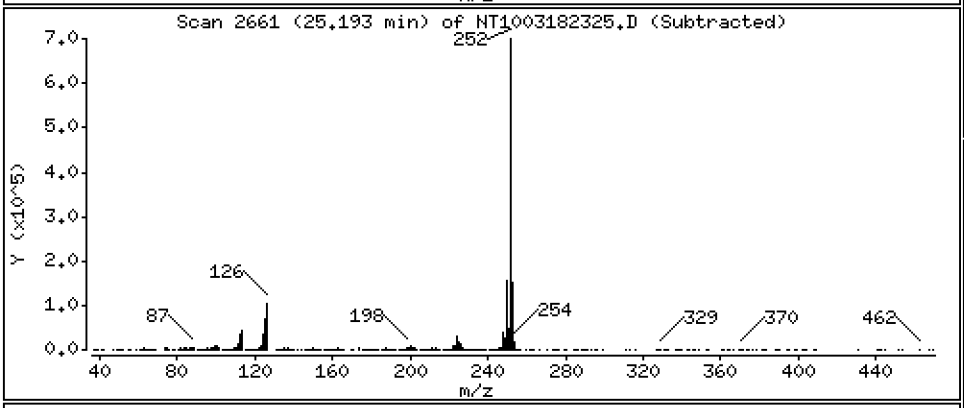
Sample Info: SLC0504-CCV1

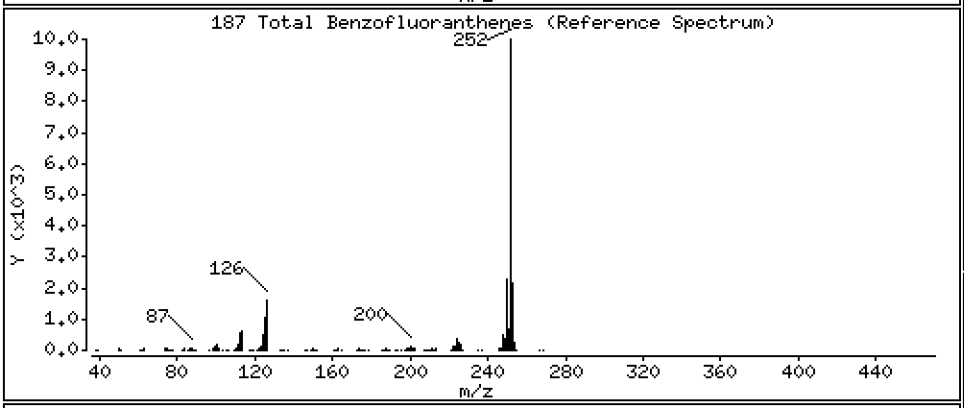
Operator: VTS

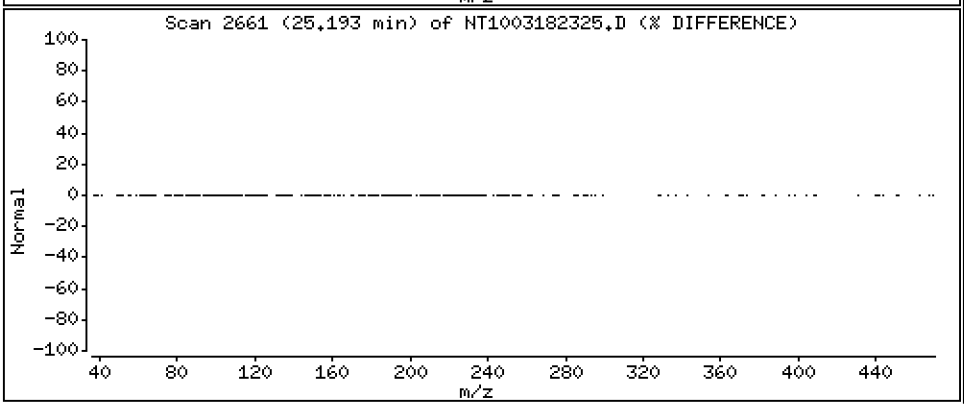
Column phase: ZB-5msi Column diameter: 0.25

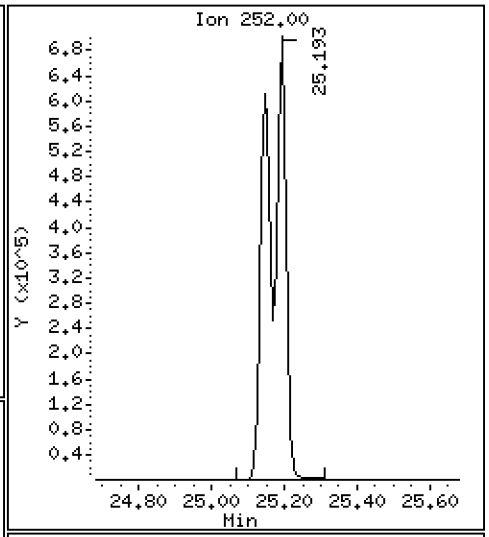
187 Total Benzofluoranthenes Concentration: 10.14 ug/mL

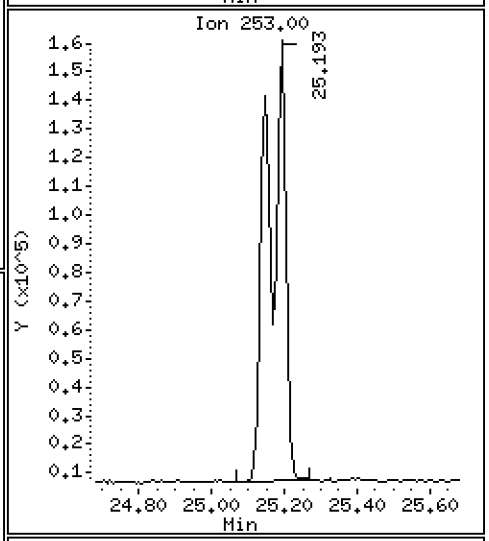


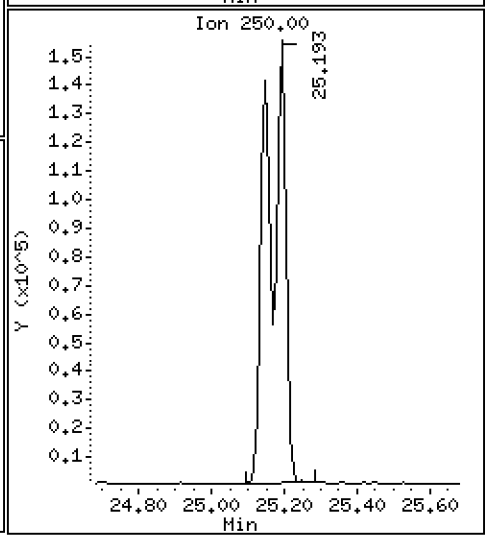












Date : 19-MAR-2023 09:03

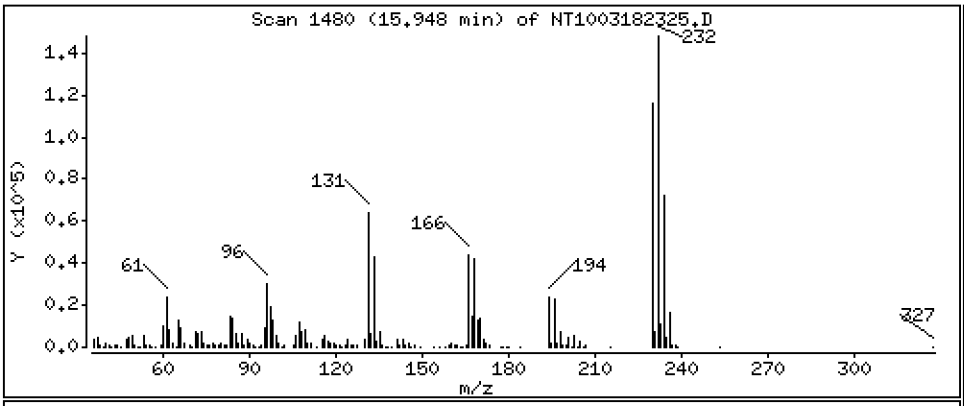
Client ID: Instrument: nt10.i

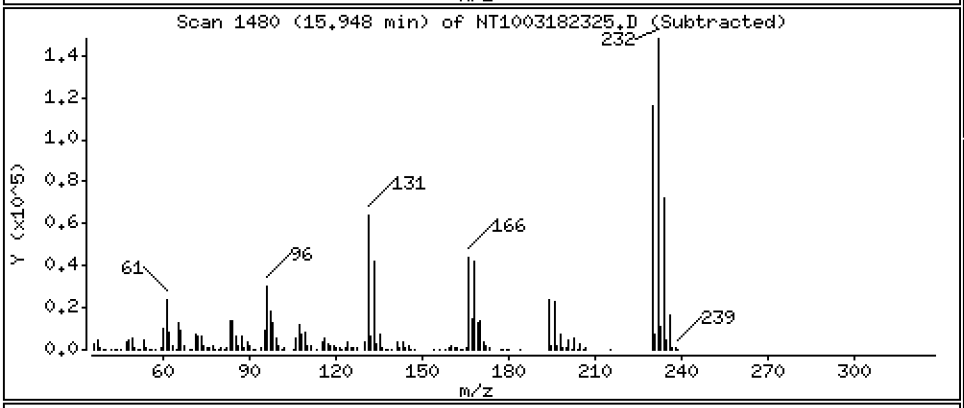
Sample Info: SLC0504-CCV1

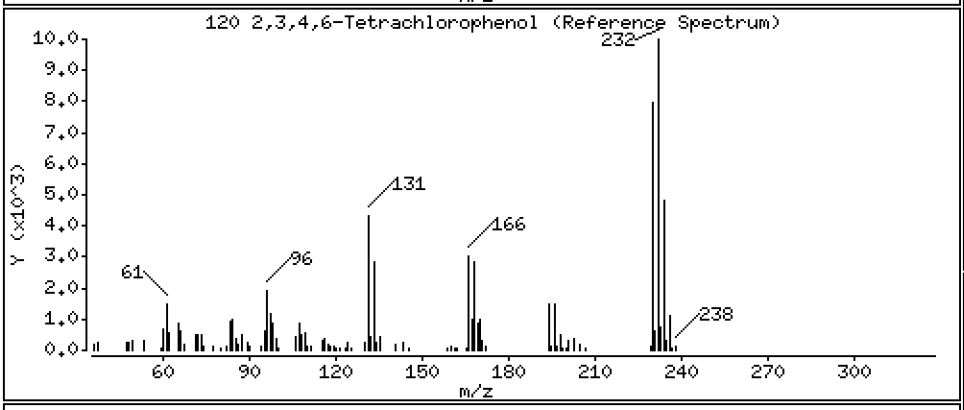
Operator: VTS

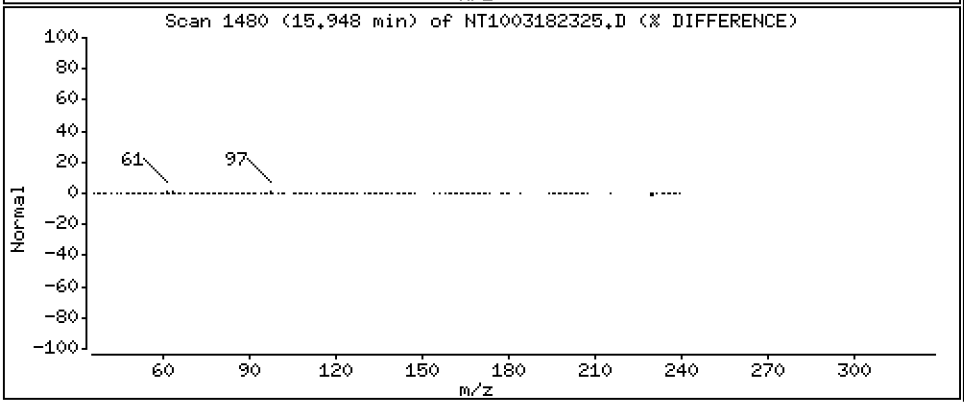
Column phase: ZB-5msi Column diameter: 0.25

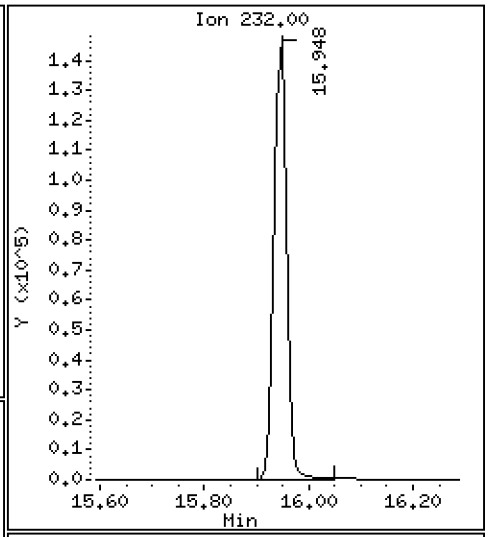
120 2,3,4,6-Tetrachlorophenol Concentration: 5.355 ug/mL

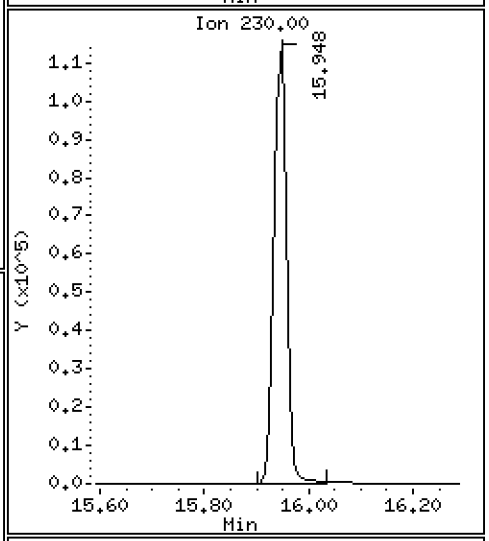


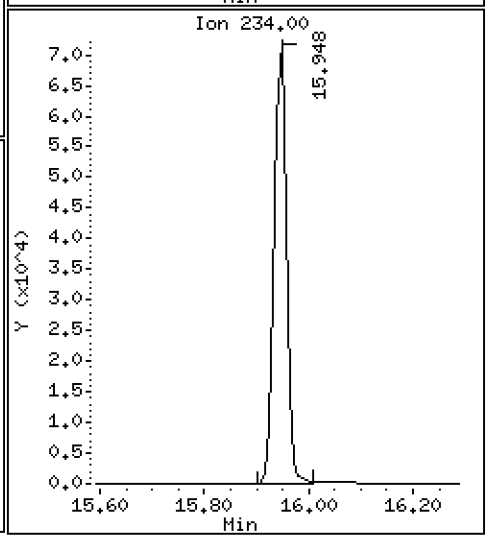












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182325.D
Lab Smp Id: SLC0504-CCV1
Inj Date : 19-MAR-2023 09:03
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-CCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1	2-Fluorophenol	112	6.967	6.967	(0.760)	482035	7.74355	7.744
$	2	Phenol-d5	99	8.528	8.528	(0.930)	631944	7.73847	7.738
	3	Phenol	94	8.551	8.551	(0.933)	421687	4.96919	4.969
$	5	2-Chlorophenol-d4	132	8.814	8.813	(0.961)	551664	7.91096	7.911
	4	Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	314683	4.99981	5.000
	6	2-Chlorophenol	128	8.837	8.837	(0.964)	361852	4.98222	4.982
	7	1,3-Dichlorobenzene	146	9.108	9.107	(0.993)	373484	4.86413	4.864
*	8	1,4-Dichlorobenzene-d4	152	9.170	9.169	(1.000)	205845	4.00000	
	9	1,4-Dichlorobenzene	146	9.201	9.200	(1.003)	364563	4.91495	4.915
$	10	1,2-Dichlorobenzene-d4	152	9.527	9.526	(1.039)	248934	4.97075	4.971
	12	1,2-Dichlorobenzene	146	9.550	9.557	(1.041)	354625	4.85799	4.858
	11	Benzyl alcohol	108	9.434	9.433	(1.029)	219247	5.50445	5.504
	14	2,2'-oxybis(1-Chloropropane)	121	9.729	9.728	(1.061)	103318	4.81948	4.819(M)
	13	2-Methylphenol	108	9.651	9.651	(1.052)	311512	5.03571	5.036
	17	Hexachloroethane	117	10.140	10.140	(1.106)	130515	4.28864	4.289
	16	N-Nitroso-di-n-propylamine	70	9.985	9.984	(1.089)	244952	5.01481	5.015
	15	4-Methylphenol	108	9.923	9.915	(1.082)	339850	5.21405	5.214
$	18	Nitrobenzene-d5	82	10.256	10.256	(0.881)	389735	5.07966	5.080
	19	Nitrobenzene	77	10.287	10.287	(0.884)	366665	4.86970	4.870
	20	Isophorone	82	10.730	10.737	(0.922)	488127	5.06763	5.068
	21	2-Nitrophenol	139	10.913	10.912	(0.938)	202225	5.49100	5.491
	22	2,4-Dimethylphenol	107	10.956	10.955	(0.941)	630180	9.11206	9.112
	23	Bis(2-Chloroethoxy)methane	93	11.151	11.150	(0.958)	313618	4.87429	4.874
	24	Benzoic acid	105	11.159	11.150	(0.959)	876246	21.6656	21.67
	25	2,4-Dichlorophenol	162	11.363	11.362	(0.976)	579626	10.4732	10.47
	26	1,2,4-Trichlorobenzene	180	11.554	11.545	(0.993)	379398	5.84005	5.840
*	27	Naphthalene-d8	136	11.639	11.638	(1.000)	760130	4.00000	
	28	Naphthalene	128	11.677	11.676	(1.003)	970690	4.82044	4.820
	29	4-Chloroaniline	127	11.801	11.800	(1.014)	791045	10.0696	10.07
	30	Hexachlorobutadiene	225	12.025	12.024	(1.033)	189829	4.98688	4.987
	31	4-Chloro-3-methylphenol	107	12.744	12.743	(1.095)	618576	10.3247	10.32
	32	2-Methylnaphthalene	142	13.054	13.053	(1.122)	720487	4.95792	4.958
	33	Hexachlorocyclopentadiene	237	13.511	13.510	(0.888)	112797	2.90905	2.909

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
34	2,4,6-Trichlorophenol	196	13.665	13.664	(0.898)	453264	10.9461	10.95
35	2,4,5-Trichlorophenol	196	13.743	13.742	(0.903)	489201	10.6323	10.63
$ 36	2-Fluorobiphenyl	172	13.828	13.827	(0.908)	792447	4.78156	4.782
37	2-Chloronaphthalene	162	14.045	14.044	(0.923)	658107	4.90419	4.904
38	2-Nitroaniline	65	14.300	14.299	(0.939)	382601	10.1499	10.15
39	Dimethylphthalate	163	14.718	14.717	(0.967)	690387	5.07253	5.073
40	Acenaphthylene	152	14.911	14.910	(0.980)	1038315	4.96553	4.966
41	2,6-Dinitrotoluene	165	14.865	14.864	(0.977)	326210	11.0950	11.10
* 42	Acenaphthene-d10	164	15.221	15.220	(1.000)	418962	4.00000	
43	3-Nitroaniline	138	15.151	15.143	(0.995)	390146	11.7565	11.76
44	Acenaphthene	153	15.283	15.282	(1.004)	632576	4.89681	4.897
45	2,4-Dinitrophenol	184	15.360	15.351	(1.009)	340341	18.4764	18.48
46	Dibenzofuran	168	15.607	15.606	(1.025)	930938	4.88689	4.887
47	4-Nitrophenol	109	15.461	15.460	(1.016)	184103	8.86928	8.869
48	2,4-Dinitrotoluene	165	15.669	15.668	(1.029)	446809	10.2148	10.21
50	Diethylphthalate	149	16.172	16.171	(1.062)	681959	5.10686	5.107
49	Fluorene	166	16.319	16.318	(1.072)	634014	4.23043	4.230
51	4-Chlorophenyl-phenylether	204	16.296	16.295	(1.071)	189429	2.65799	2.658
52	4-Nitroaniline	138	16.411	16.410	(1.078)	336594	11.2549	11.25
53	4,6-Dinitro-2-methylphenol	198	16.504	16.503	(0.904)	461050	19.3642	19.36
54	N-Nitrosodiphenylamine	169	16.558	16.557	(0.907)	497411	4.82228	4.822
$ 55	2,4,6-Tribromophenol	330	16.851	16.850	(1.107)	143884	7.37036	7.370
56	4-Bromophenyl-phenylether	248	17.306	17.305	(0.948)	219722	5.09189	5.092
57	Hexachlorobenzene	284	17.623	17.621	(0.966)	214205	4.73467	4.735
58	Pentachlorophenol	266	17.979	17.978	(0.985)	255052	9.35992	9.360
* 59	Phenanthrene-d10	188	18.250	18.241	(1.000)	771512	4.00000	
60	Phenanthrene	178	18.296	18.295	(1.003)	1028544	4.88911	4.889
61	Anthracene	178	18.389	18.380	(1.008)	1033213	5.11989	5.120
62	Carbazole	167	18.714	18.713	(1.025)	924222	5.11087	5.111
63	Di-n-butylphthalate	149	19.495	19.494	(1.068)	1282239	5.30343	5.303
64	Fluoranthene	202	20.671	20.670	(0.888)	1206084	4.50572	4.506
65	Pyrene	202	21.097	21.096	(0.906)	1238805	4.51147	4.511
$ 66	Terphenyl-d14	244	21.375	21.374	(0.918)	936168	4.53984	4.540
67	Butylbenzylphthalate	149	22.297	22.296	(0.957)	533441	5.34814	5.348
68	Benzo(a)anthracene	228	23.257	23.248	(0.999)	1196122	5.08691	5.087
* 69	Chrysene-d12	240	23.288	23.279	(1.000)	666169	4.00000	
70	3,3'-Dichlorobenzidine	252	23.210	23.209	(0.997)	1184146	15.7220	15.72
71	Chrysene	228	23.327	23.326	(1.002)	1149982	5.00591	5.006
72	bis(2-Ethylhexyl)phthalate	149	23.319	23.318	(0.960)	776337	4.57948	4.579
* 134	Di-n-octylphthalate-d4	153	24.302	24.301	(1.000)	1155729	4.00000	
73	Di-n-octylphthalate	149	24.318	24.309	(1.001)	1418249	4.68926	4.689
74	Benzo(b)fluoranthene	252	25.146	25.145	(0.970)	1238689	5.06716	5.067
75	Benzo(k)fluoranthene	252	25.192	25.184	(0.972)	1240974	4.99942	4.999(MH)
76	Benzo(a)pyrene	252	25.804	25.803	(0.995)	1134461	5.19071	5.191
* 77	Perylene-d12	264	25.928	25.919	(1.000)	754137	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.611	28.594	(1.103)	1182912	4.25423	4.254
79	Dibenzo(a,h)anthracene	278	28.626	28.618	(1.104)	1026922	4.44848	4.448
80	Benzo(g,h,i)perylene	276	29.411	29.402	(1.134)	919528	3.82127	3.821
90	N-Nitrosodimethylamine	74	4.843	4.850	(0.528)	383681	9.66107	9.661
91	Aniline	93	8.628	8.636	(0.941)	854415	9.82627	9.826
93	Benzidine	184	20.903	20.902	(0.898)	794639	7.22714	7.227
103	Pyridine	79	4.866	4.881	(0.531)	588199	9.64376	9.644
105	1-methylnaphthalene	142	13.278	13.277	(1.141)	670882	5.03877	5.039
111	Azobenzene (1,2-DP-Hydrazine)	77	16.627	16.626	(1.092)	709912	4.75907	4.759

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.192	25.184	(0.972)	2393872	10.1424	10.14(M)
120 2,3,4,6-Tetrachlorophenol	232	15.948	15.939	(1.048)	233842	5.35518	5.355

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182325.D
Lab Smp Id: SLC0504-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	205845	-1.76
27 Naphthalene-d8	795859	397930	1591718	760130	-4.49
42 Acenaphthene-d10	432510	216255	865020	418962	-3.13
59 Phenanthrene-d10	808891	404446	1617782	771512	-4.62
69 Chrysene-d12	657926	328963	1315852	666169	1.25
134 Di-n-octylphthala	1187734	593867	2375468	1155729	-2.69
77 Perylene-d12	770107	385054	1540214	754137	-2.07

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.01
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.01
59 Phenanthrene-d10	18.24	17.74	18.74	18.25	0.05
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.04
134 Di-n-octylphthala	24.30	23.80	24.80	24.30	0.00
77 Perylene-d12	25.92	25.42	26.42	25.93	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182325.D

Lab ID: SLC0504-CCV1
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 09:03

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

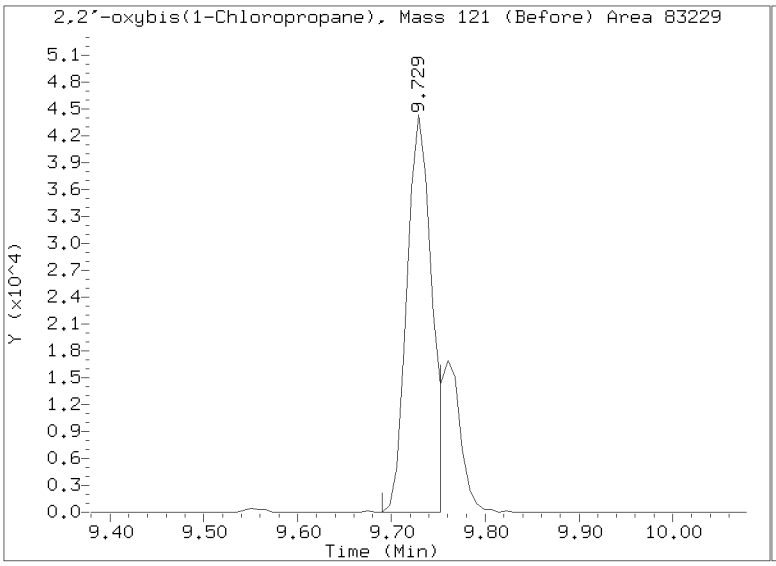
RRT check based on Ccal File: NT1003182316.D

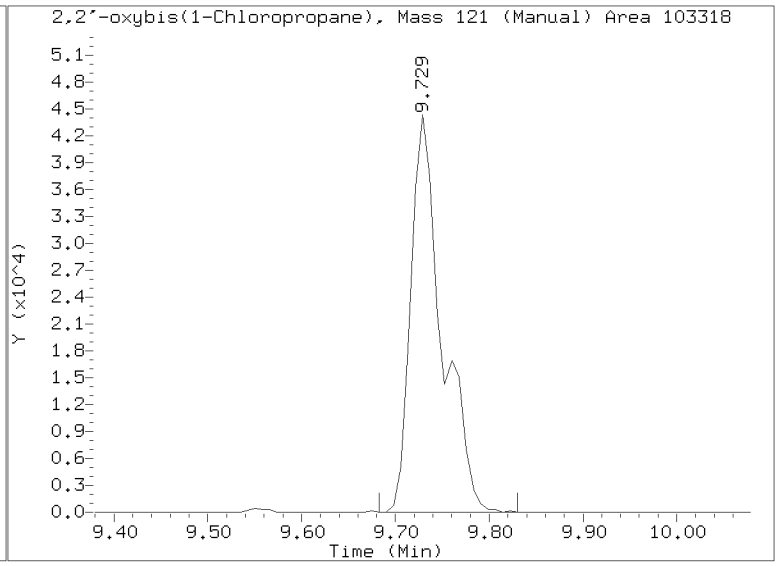
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

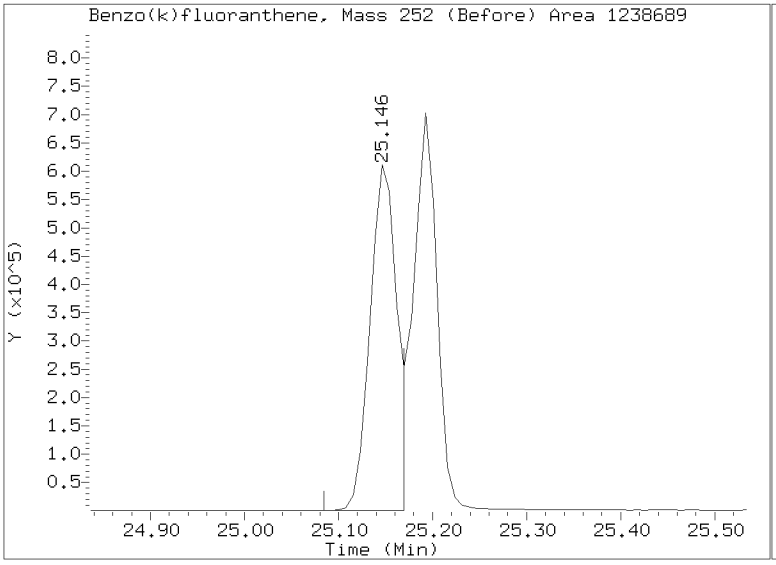
* Only compounds listed in the work order have been verified by the analyst *

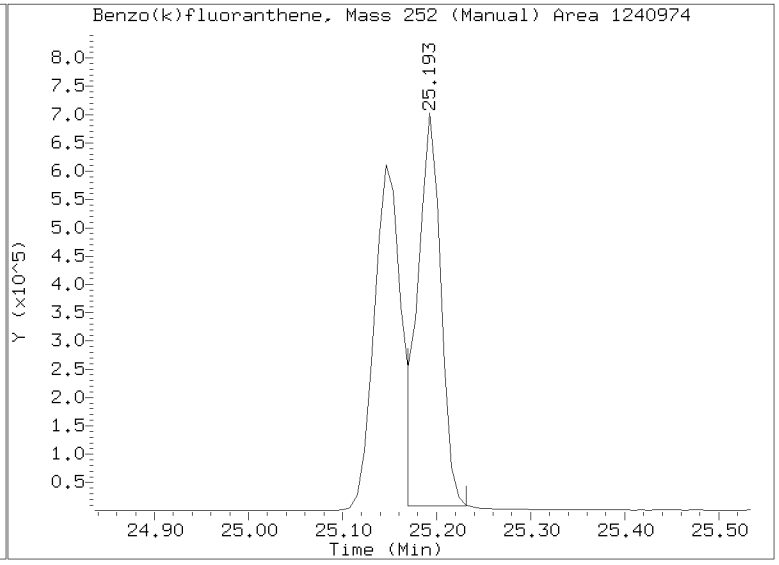
Quant Ion Manual Peak Adjustment Report

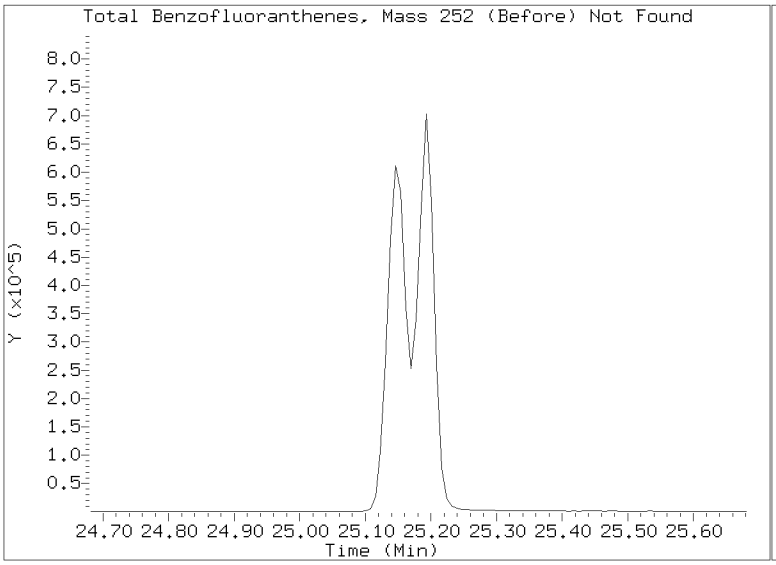
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182325.D
Injection Date: 19-MAR-2023 09:03
Lab ID:SLC0504-CCV1 Client ID:
Report Date: 04/04/2023 10:38

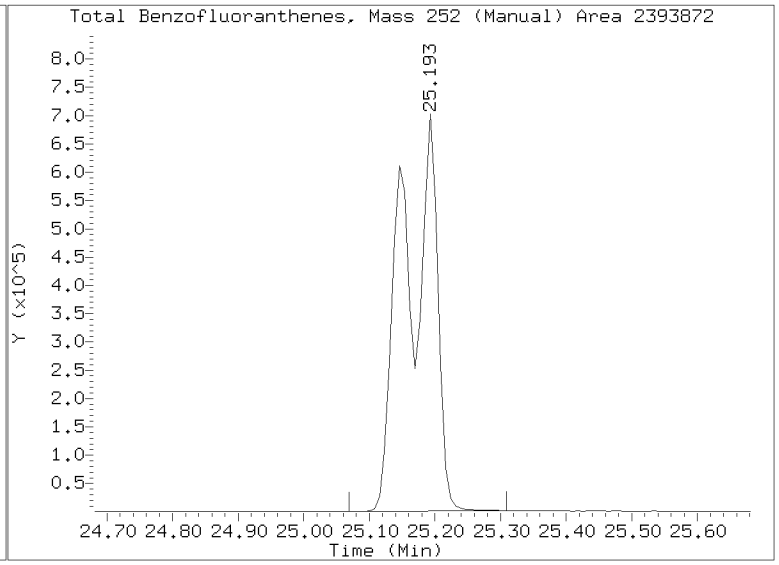












Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182304.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/18/23
Lab Sample ID:	SLC0504-LCV1	Injection Time:	19:37
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.6490140	1.5358530		-6.9	+/-50
4-Methylphenol	A	0.20000	0.2	1.2665770	1.0714710		-15.4	+/-50
Naphthalene	A	0.20000	0.2	1.0596590	1.1093470		4.7	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7647129	0.7800799		2.0	+/-50
Acenaphthylene	A	0.20000	0.2	1.9964080	1.9961800		-0.01	+/-50
Dimethylphthalate	A	0.20000	0.2	1.2994310	1.3613020		4.8	+/-50
Acenaphthene	A	0.20000	0.2	1.2333460	1.2735020		3.3	+/-50
Dibenzofuran	A	0.20000	0.2	1.8187540	1.8692050		2.8	+/-50
Fluorene	A	0.20000	0.1	1.4308680	0.8392841		-41.3	+/-50
Phenanthrene	A	0.20000	0.2	1.0907130	1.1227570		2.9	+/-50
Anthracene	A	0.20000	0.2	1.0462760	1.0068490		-3.8	+/-50
Fluoranthene	A	0.20000	0.2	1.6072690	1.5379280		-4.3	+/-50
Pyrene	A	0.20000	0.2	1.6487720	1.6076190		-2.5	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.5292894	0.5604038		-3.2	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4118770	1.5117270		7.1	+/-50
Chrysene	A	0.20000	0.2	1.3793780	1.4024060		1.7	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5248968	0.4477339		-23.5	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.2519020	1.2847760		2.6	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.1592370	1.1587410		-0.05	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.2	1.4748270	1.5028250		1.9	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.2	1.2244340	1.2861080		5.0	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.2	1.2763410	1.3308380		4.3	+/-50
2-Fluorophenol	A	0.30000	0.293	1.2096460	1.1814860		-2.3	+/-50
Phenol-d5	A	0.30000	0.265	1.5868760	1.3991570		-11.8	+/-50
2-Chlorophenol-d4	A	0.30000	0.280	1.3550800	1.2668230		-6.5	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.214	0.9731556	1.0393890		6.8	+/-50
Nitrobenzene-d5	A	0.20000	0.194	0.4037447	0.3907996		-3.2	+/-50
2-Fluorobiphenyl	A	0.20000	0.209	1.5822890	1.6522970		4.4	+/-50
2,4,6-Tribromophenol	A	0.30000	0.190	0.1585901	0.1194094		-36.6	+/-50
p-Terphenyl-d14	A	0.20000	0.199	1.2381950	1.2336600		-0.4	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

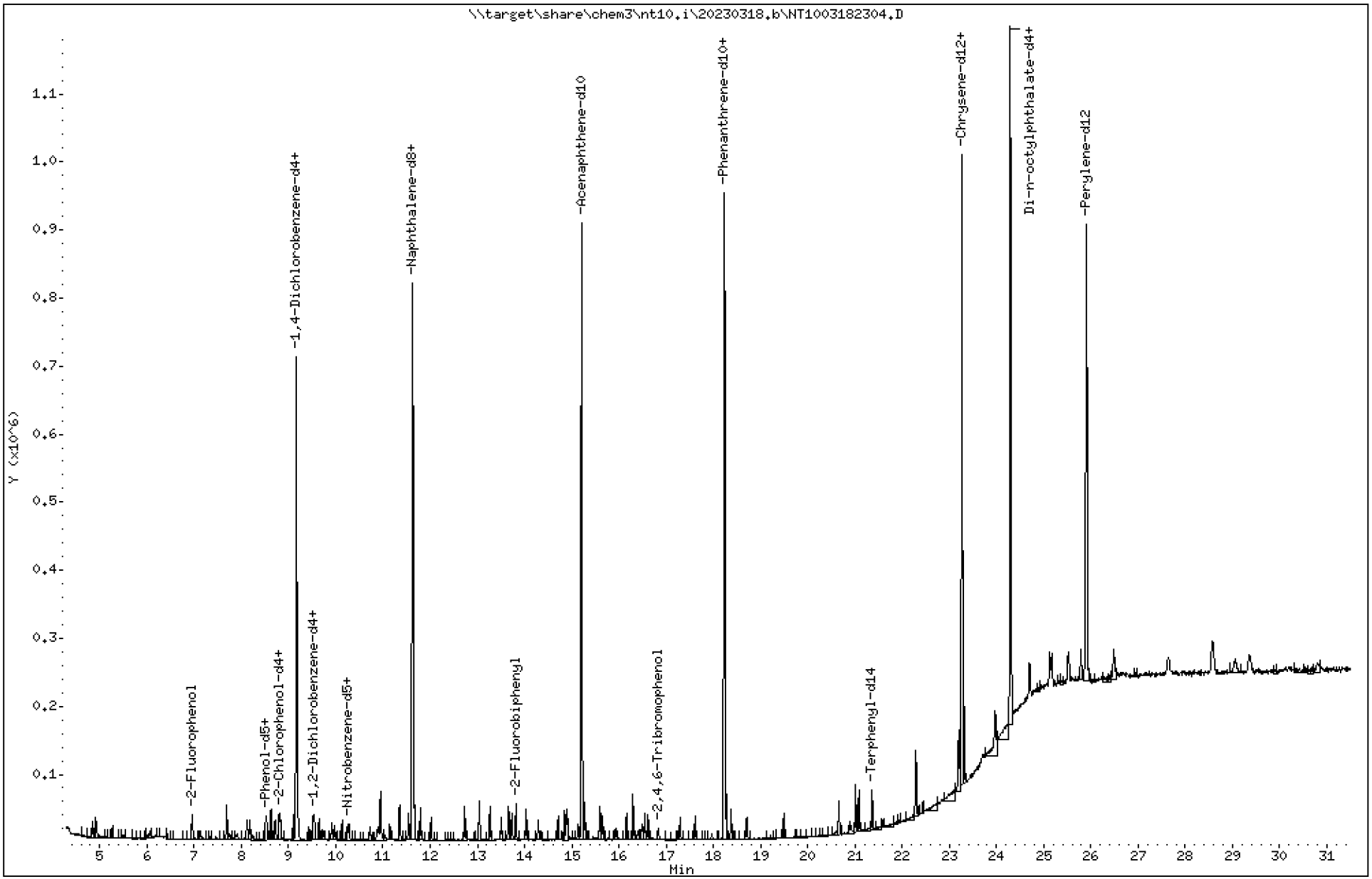
Instrument: nt10.i

Sample Info: SLC0504-LCV1

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

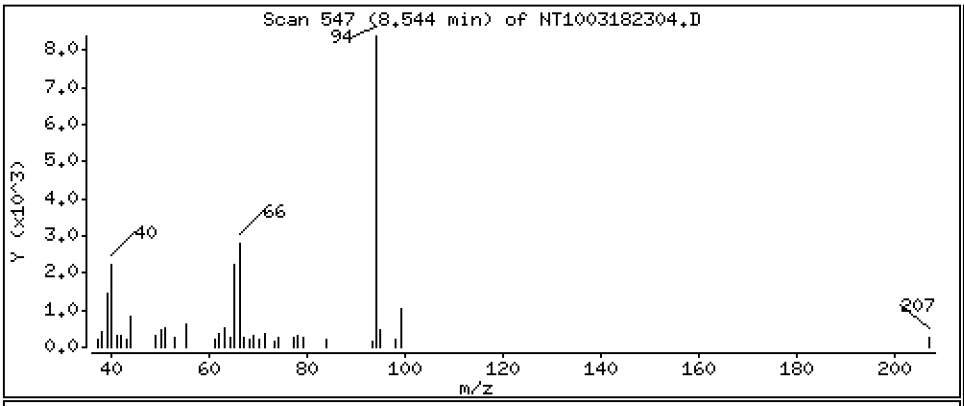
Operator: VTS

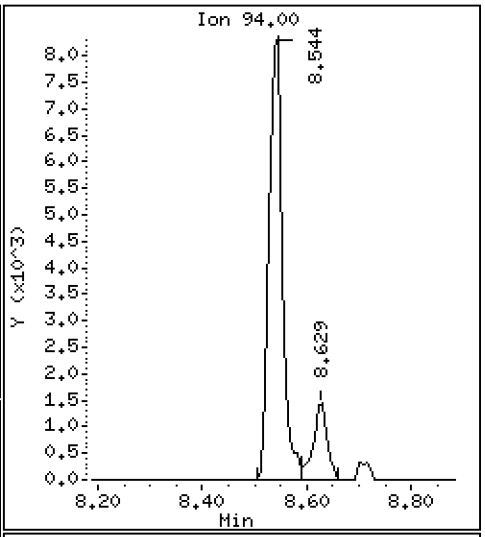
Column phase: ZB-5msi

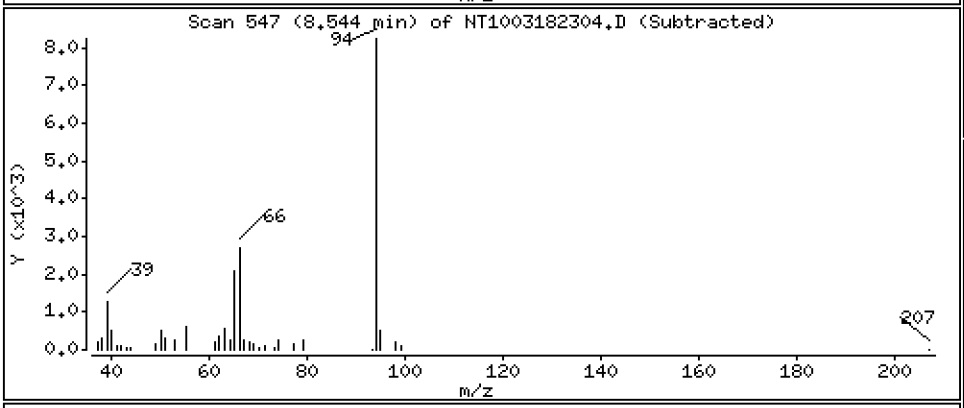
Column diameter: 0.25

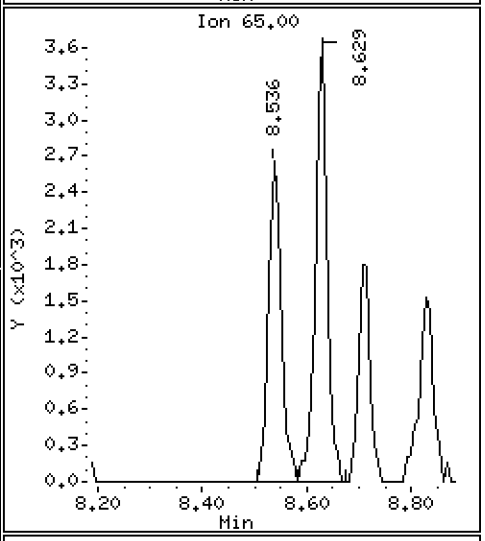
3 Phenol

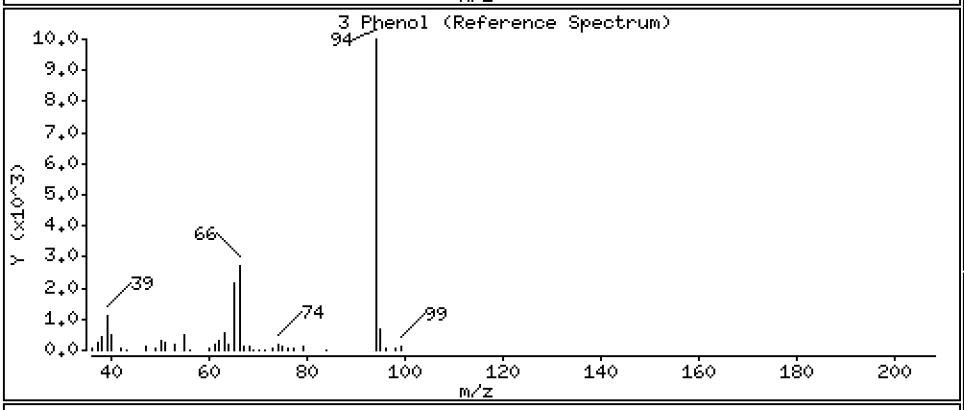
Concentration: 0.1863 ug/mL

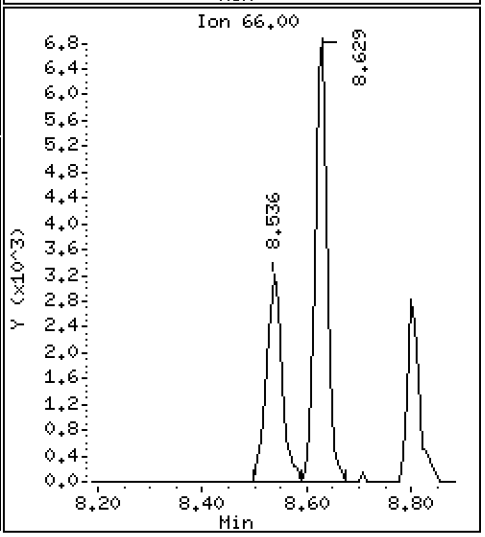


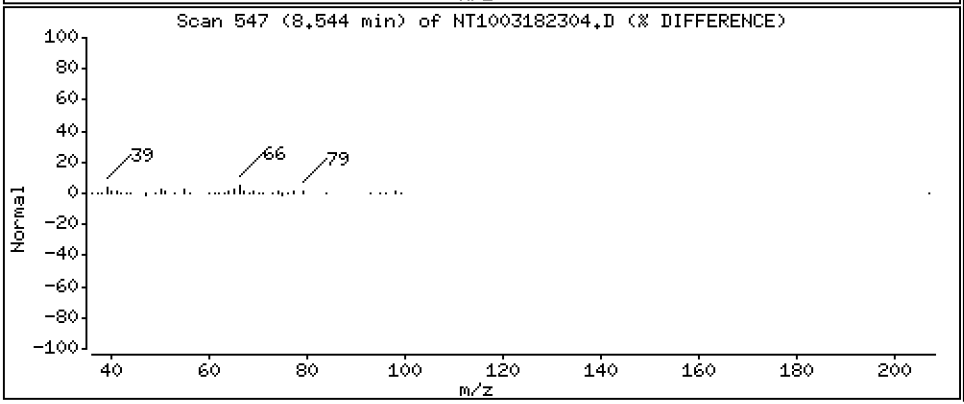












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

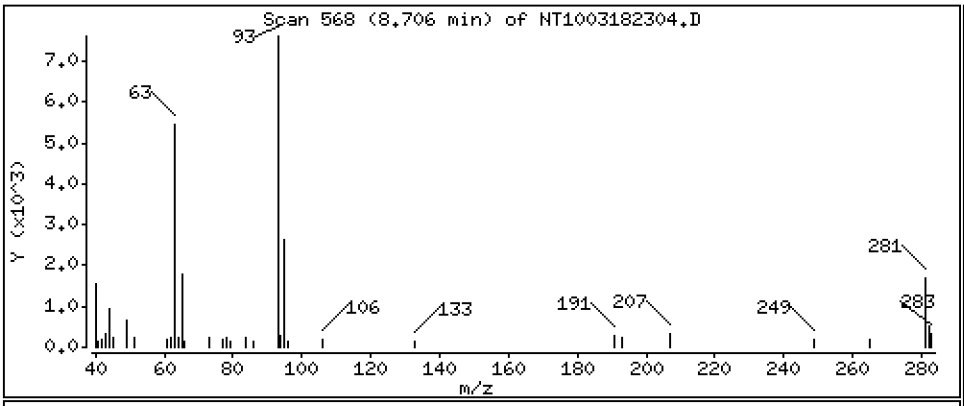
Operator: VTS

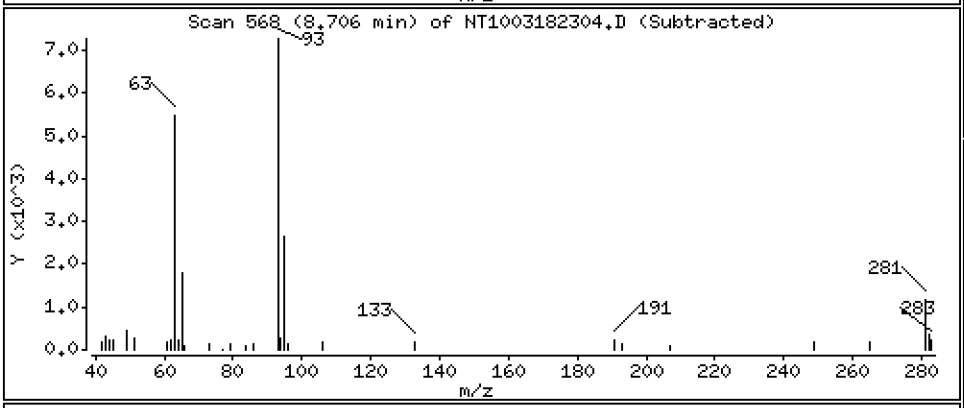
Column phase: ZB-5msi

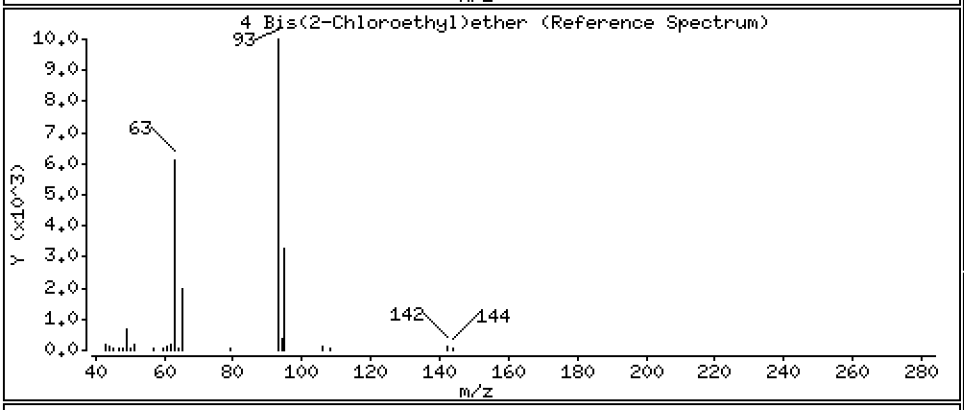
Column diameter: 0.25

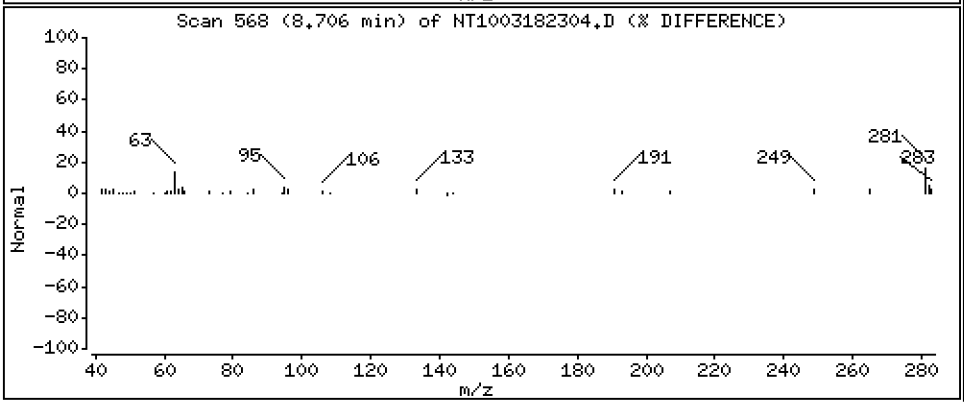
4 Bis(2-Chloroethyl)ether

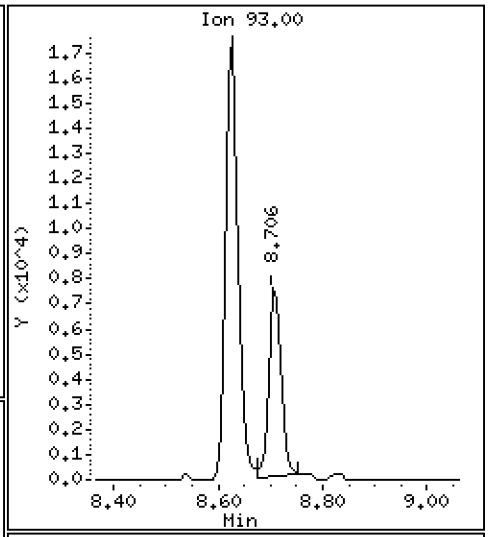
Concentration: 0.2032 ug/mL

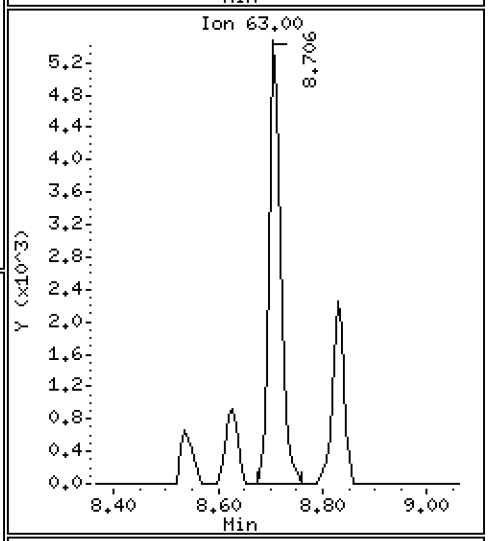


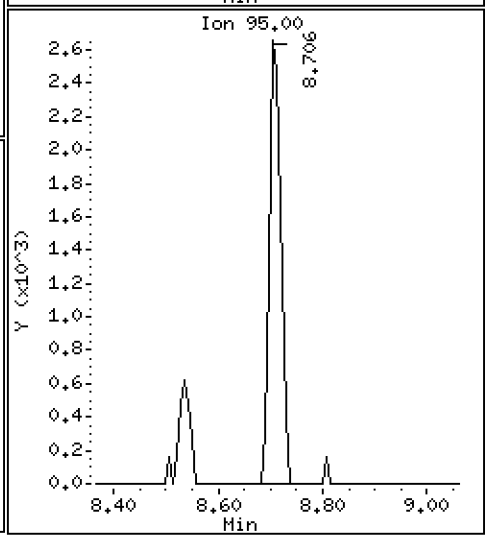












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

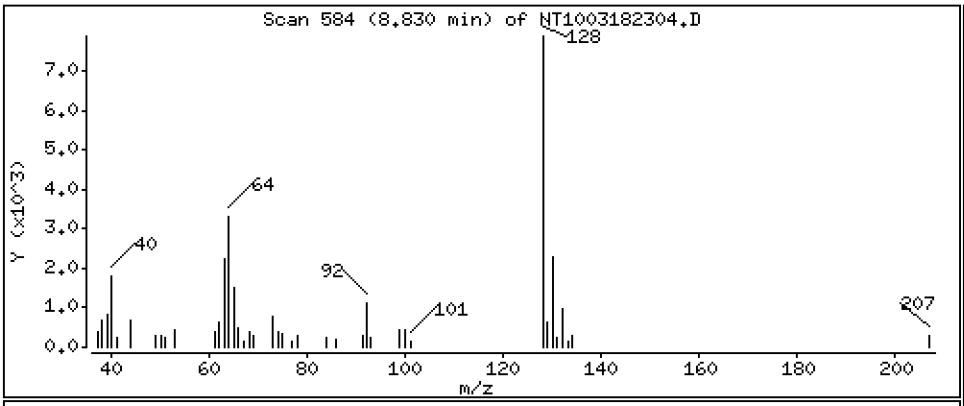
Operator: VTS

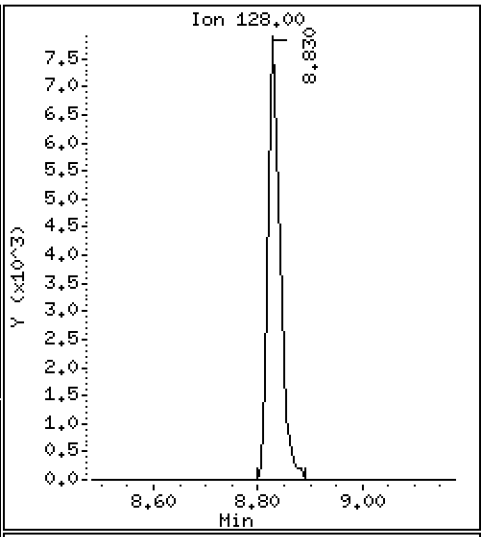
Column phase: ZB-5msi

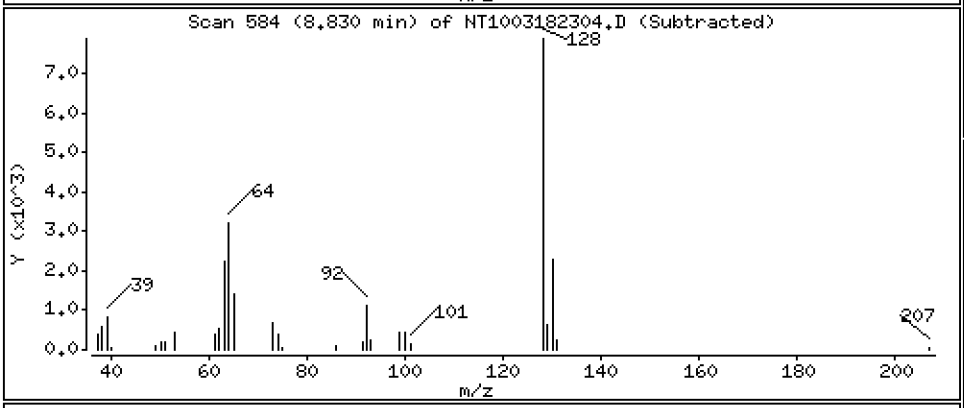
Column diameter: 0.25

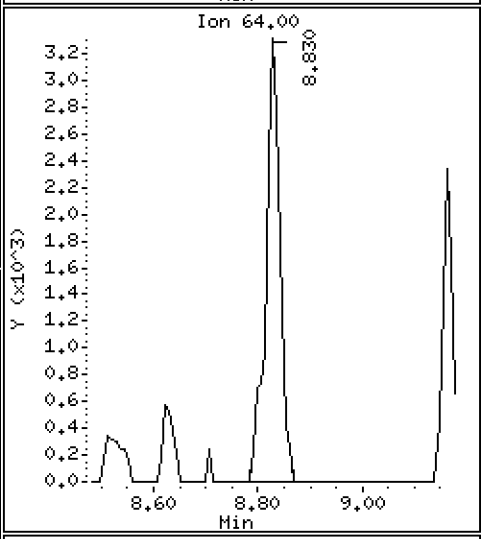
6 2-Chlorophenol

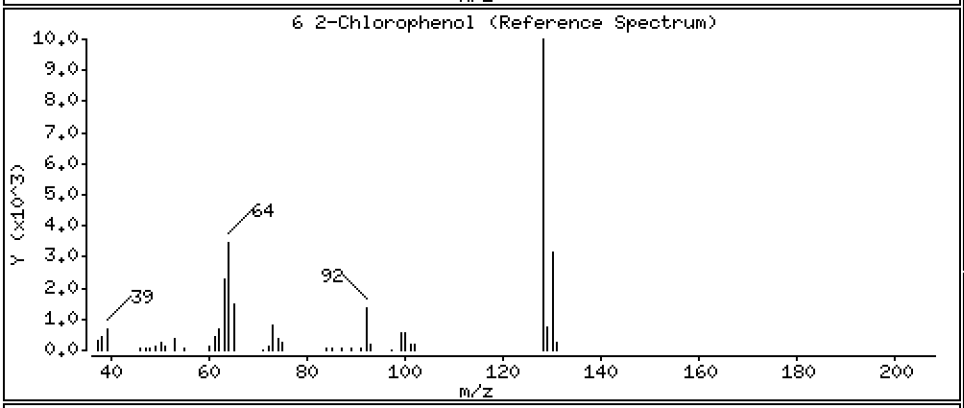
Concentration: 0.1881 ug/mL

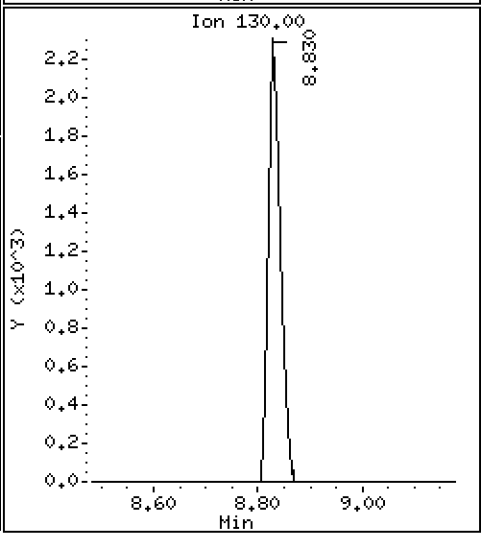


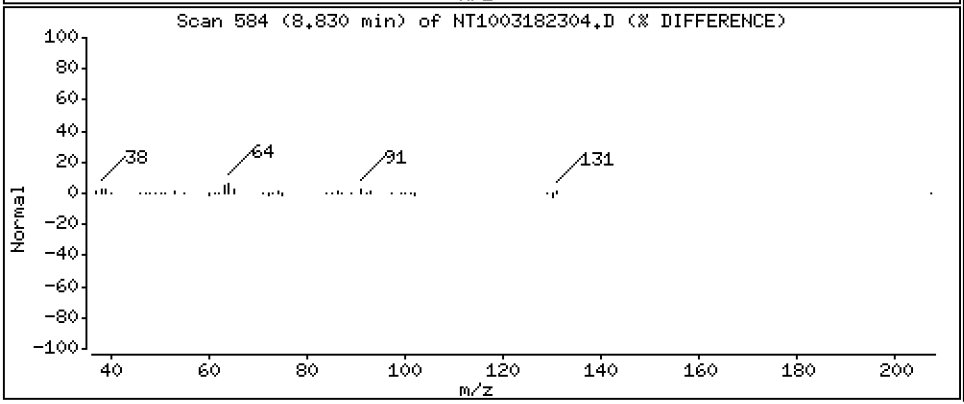












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

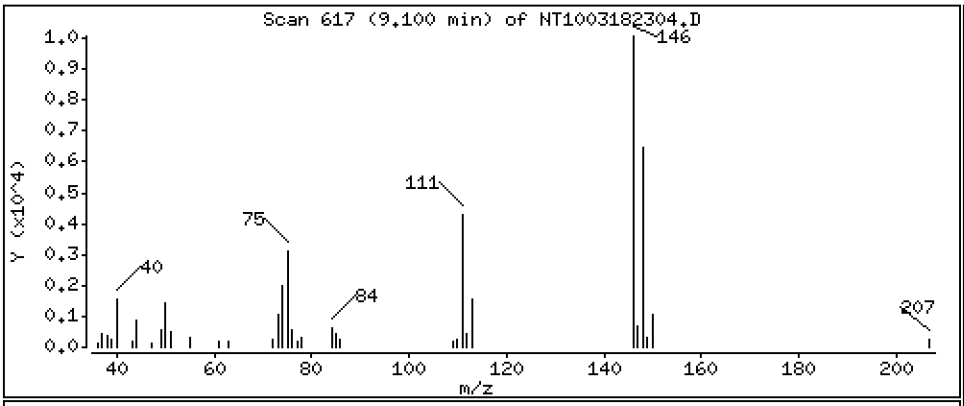
Operator: VTS

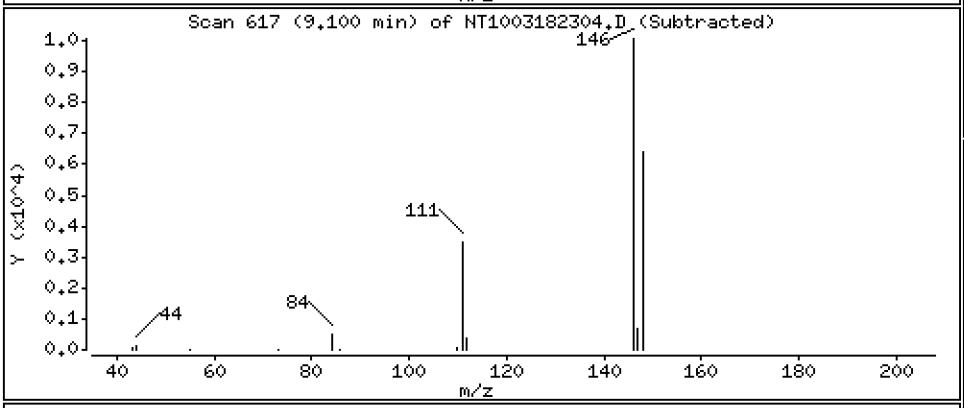
Column phase: ZB-5msi

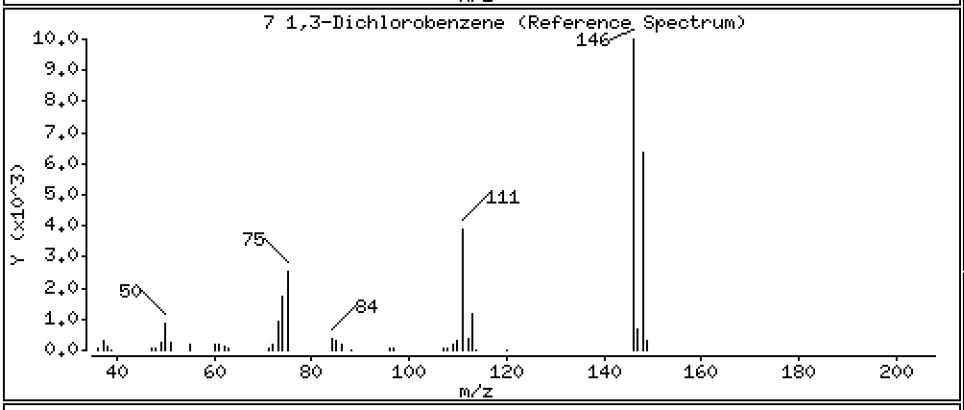
Column diameter: 0.25

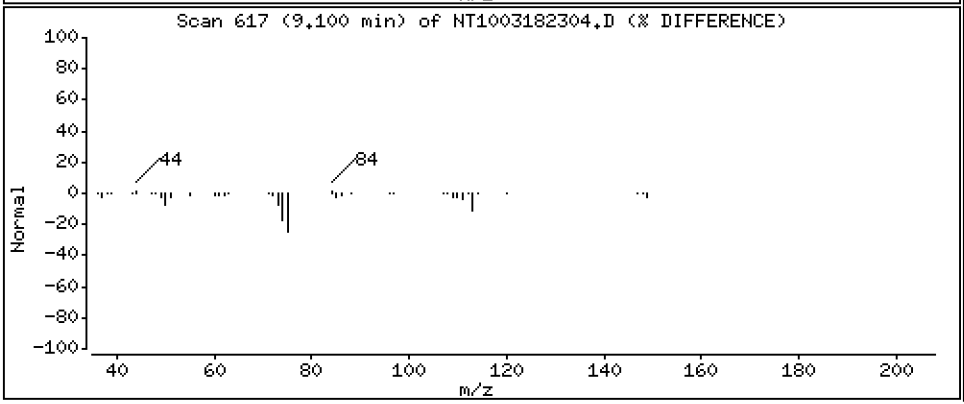
7 1,3-Dichlorobenzene

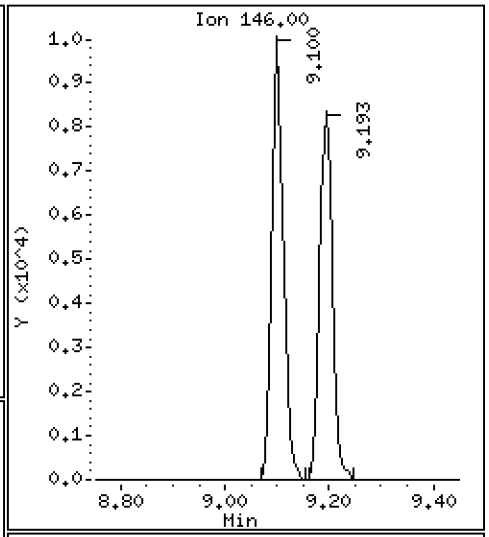
Concentration: 0.2161 ug/mL

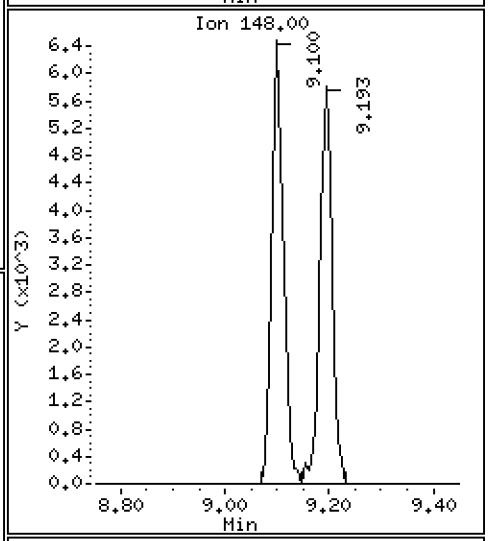


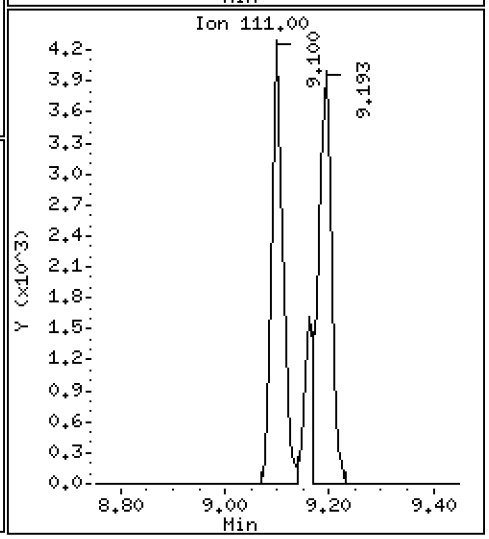












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

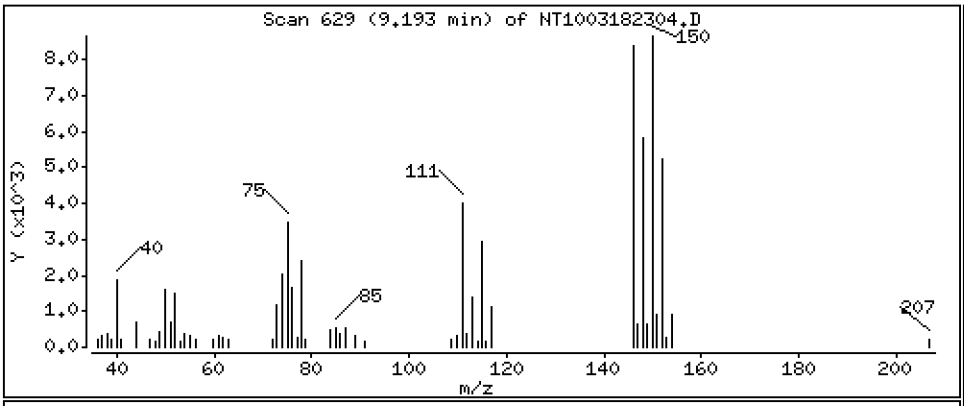
Operator: VTS

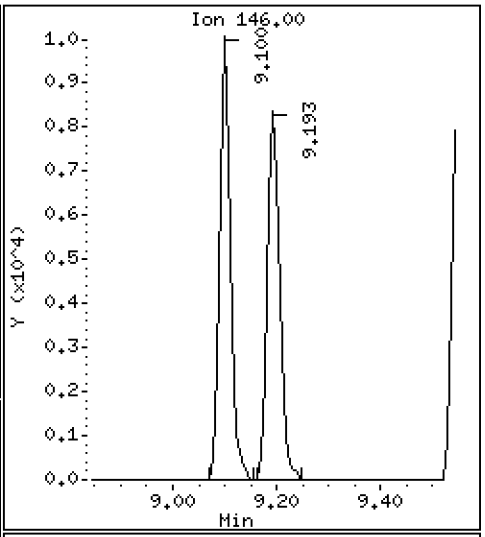
Column phase: ZB-5msi

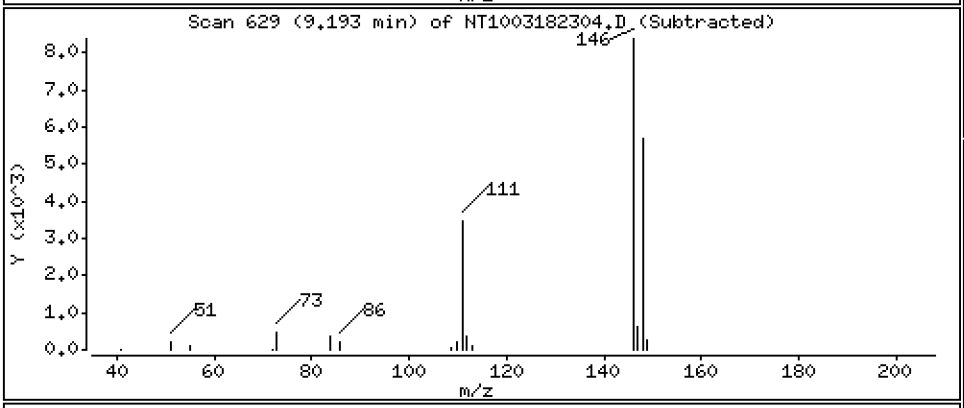
Column diameter: 0.25

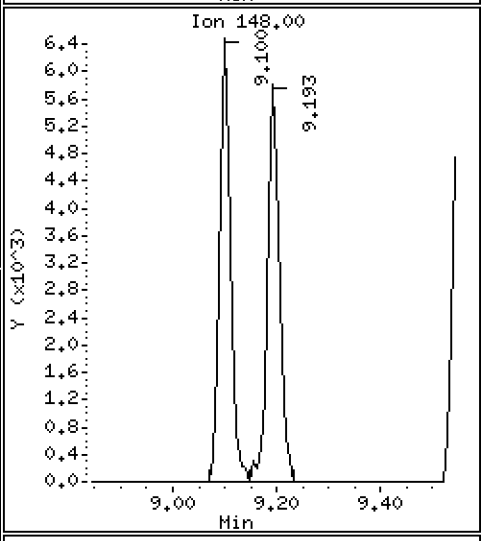
9 1,4-Dichlorobenzene

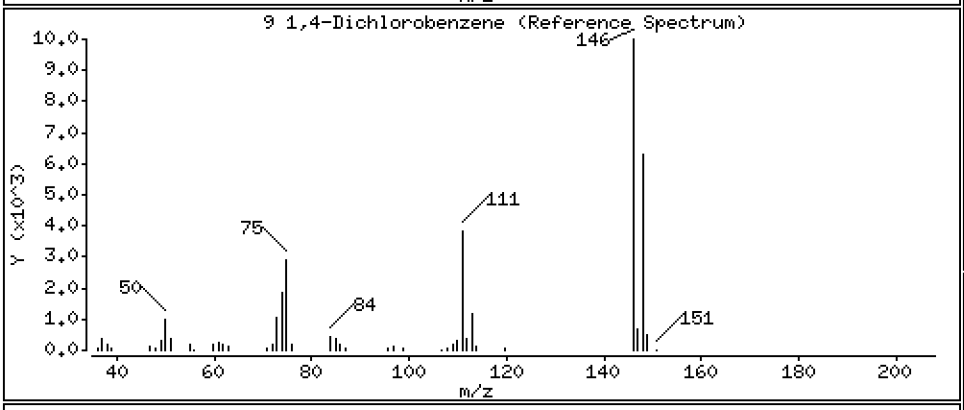
Concentration: 0.2017 ug/mL

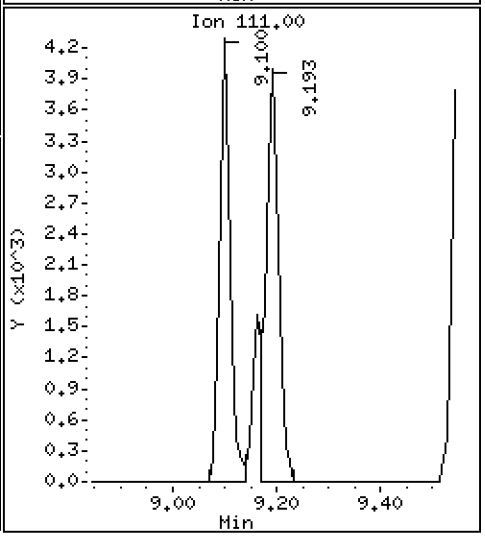


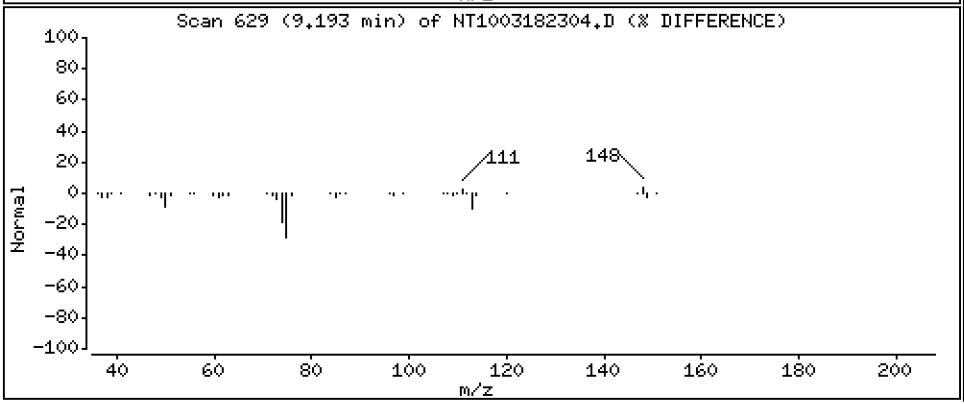












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

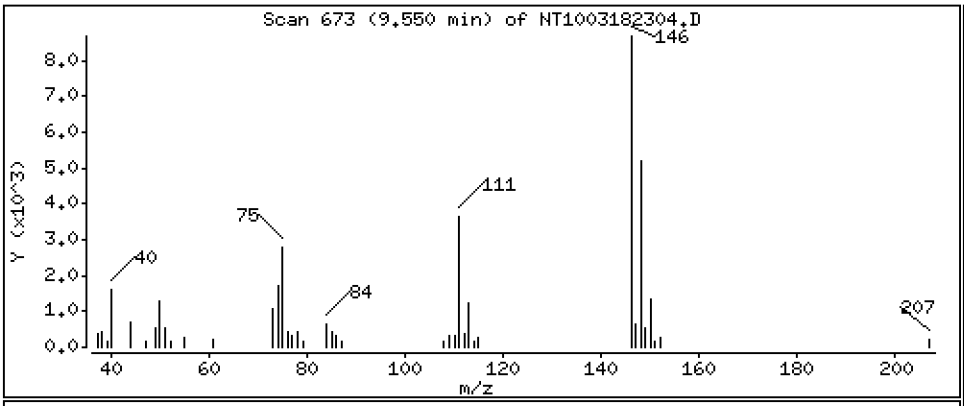
Operator: VTS

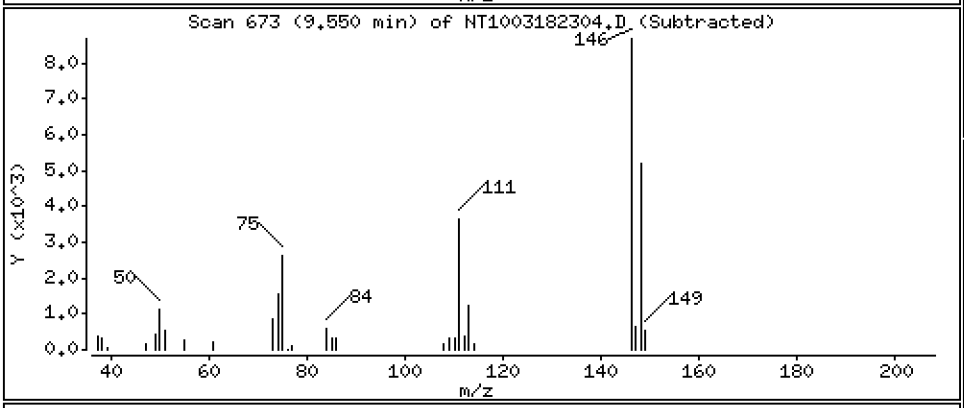
Column phase: ZB-5msi

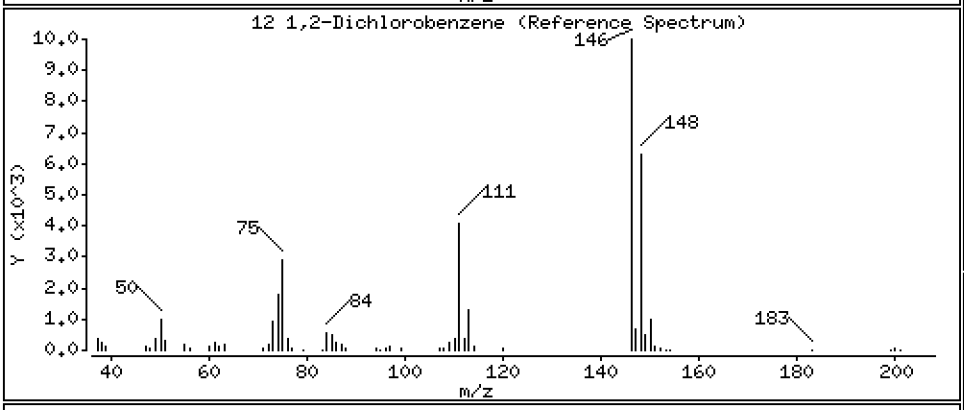
Column diameter: 0.25

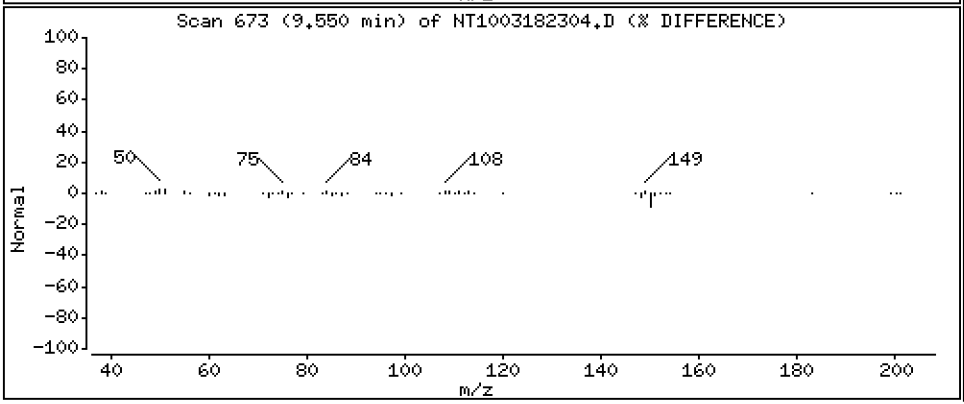
12 1,2-Dichlorobenzene

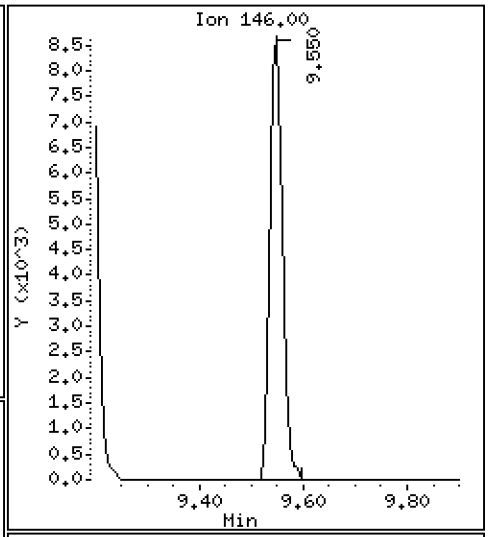
Concentration: 0.2096 ug/mL

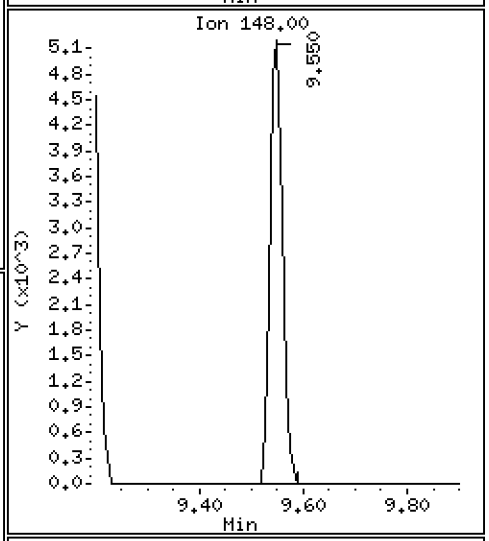


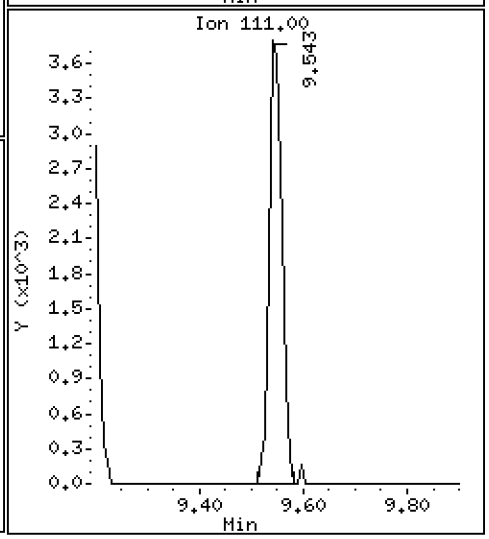












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

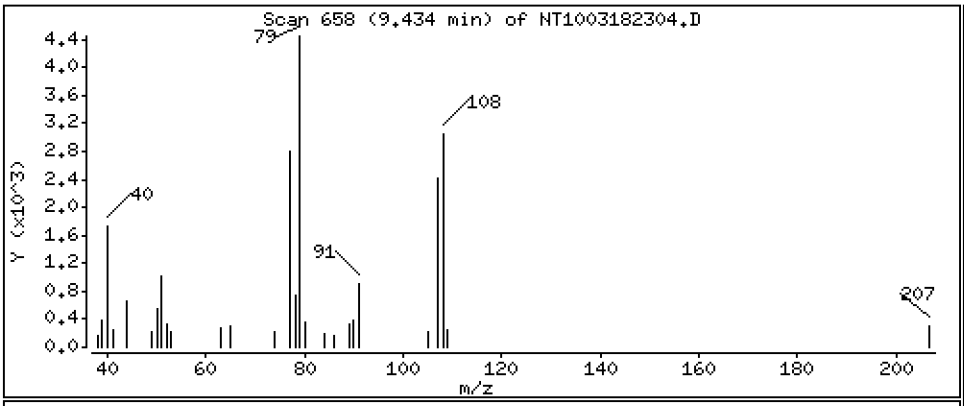
Operator: VTS

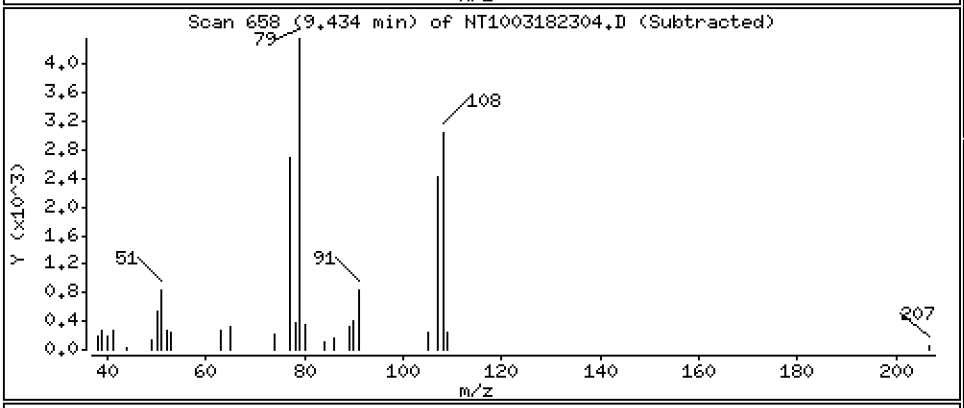
Column phase: ZB-5msi

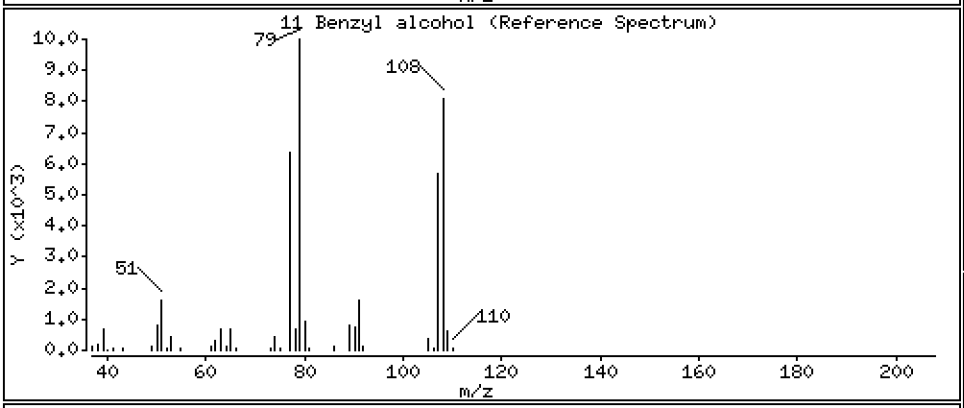
Column diameter: 0.25

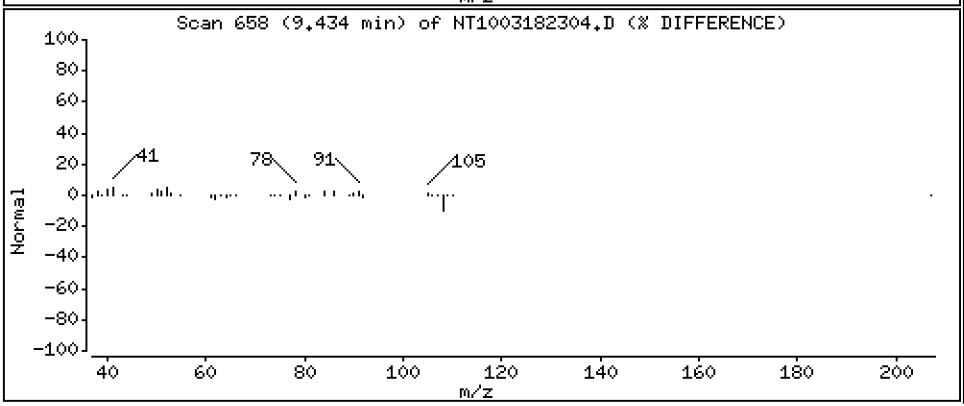
11 Benzyl alcohol

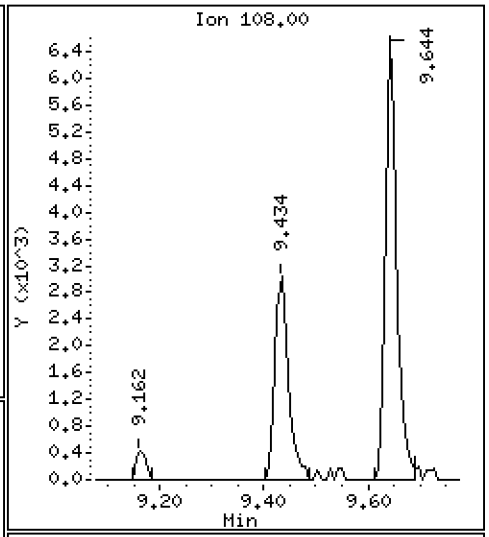
Concentration: 0.1462 ug/mL

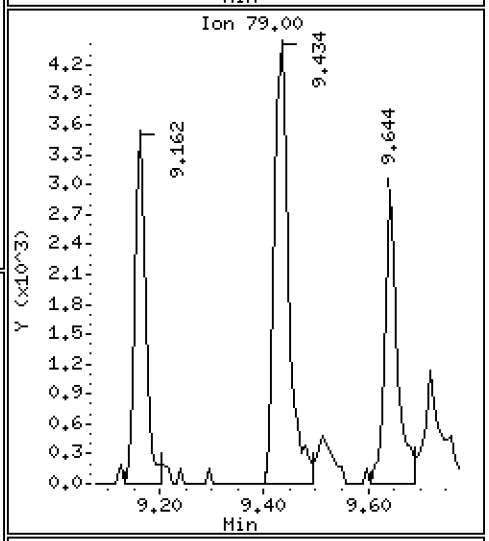


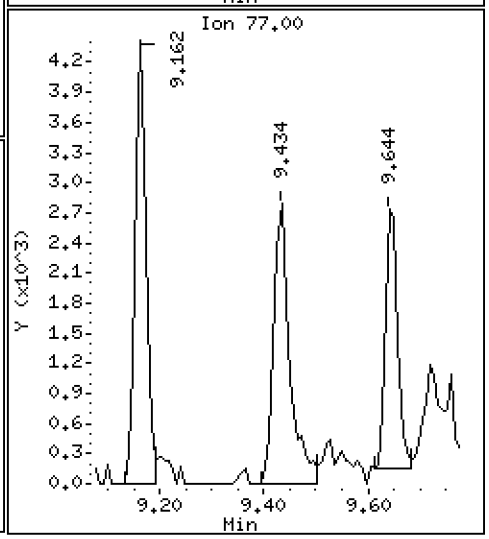












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

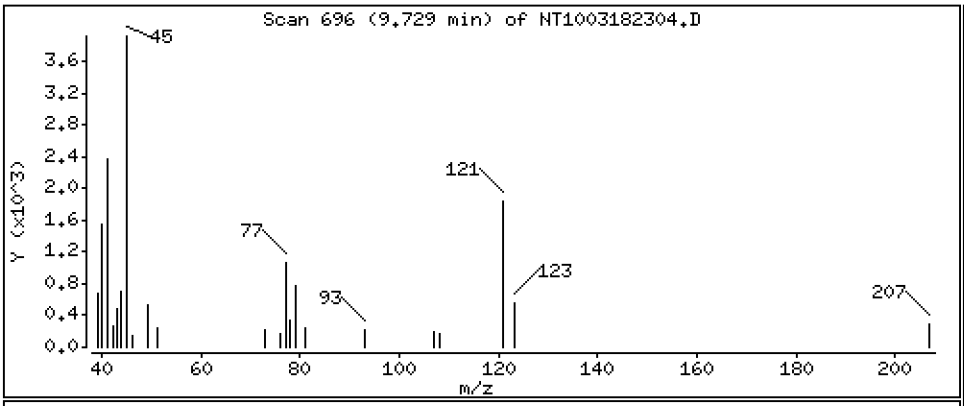
Operator: VTS

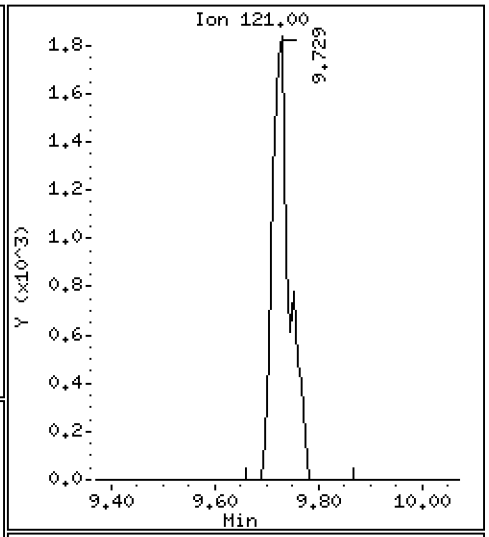
Column phase: ZB-5msi

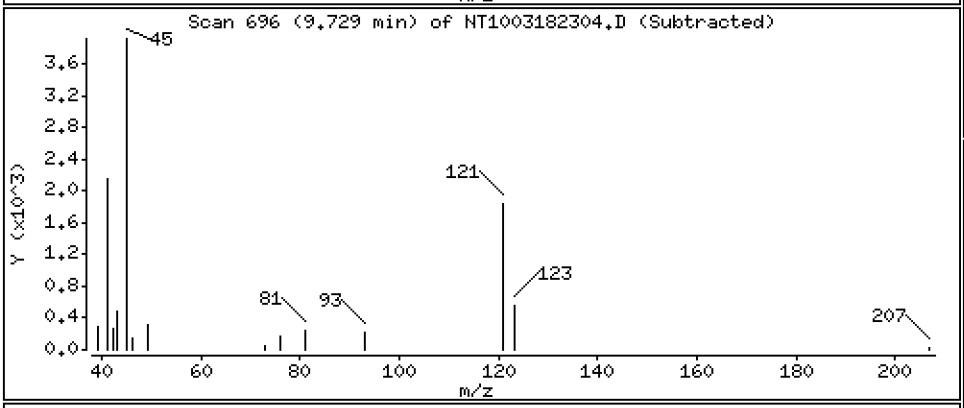
Column diameter: 0.25

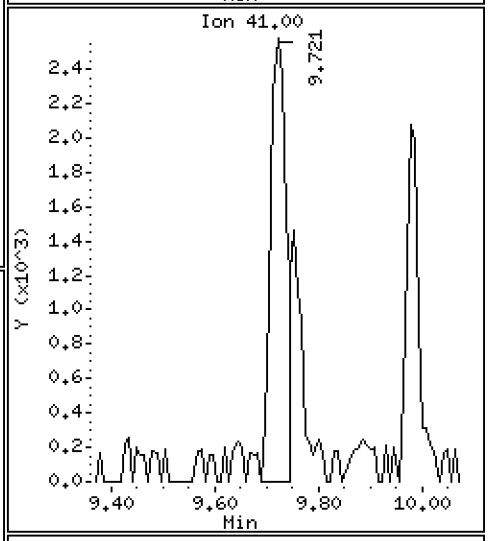
14 2,2'-oxybis(1-Chloropropane)

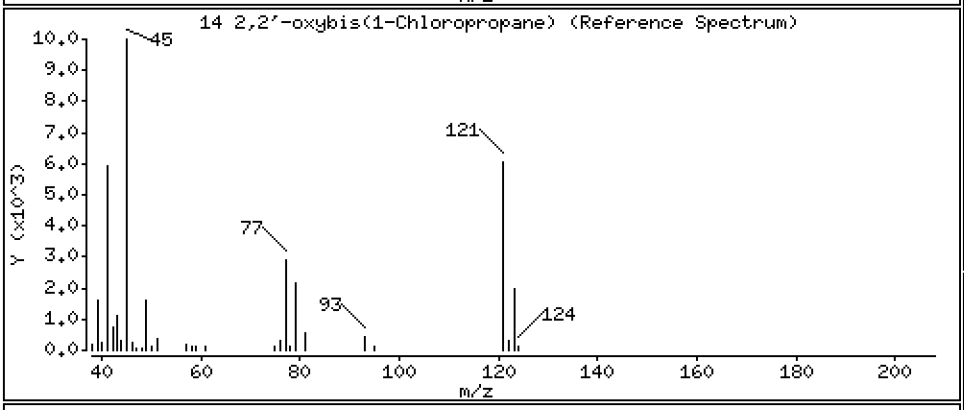
Concentration: 0.2306 ug/mL

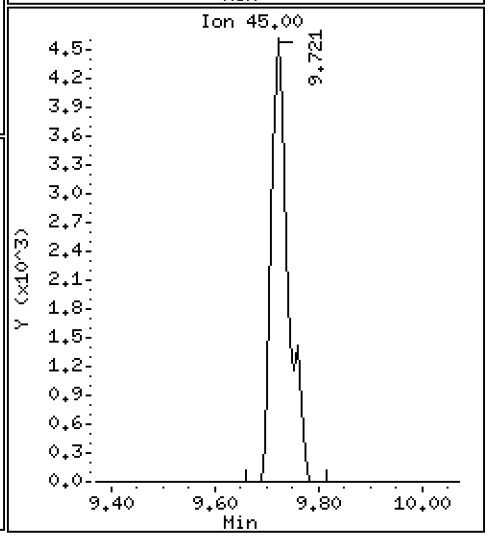


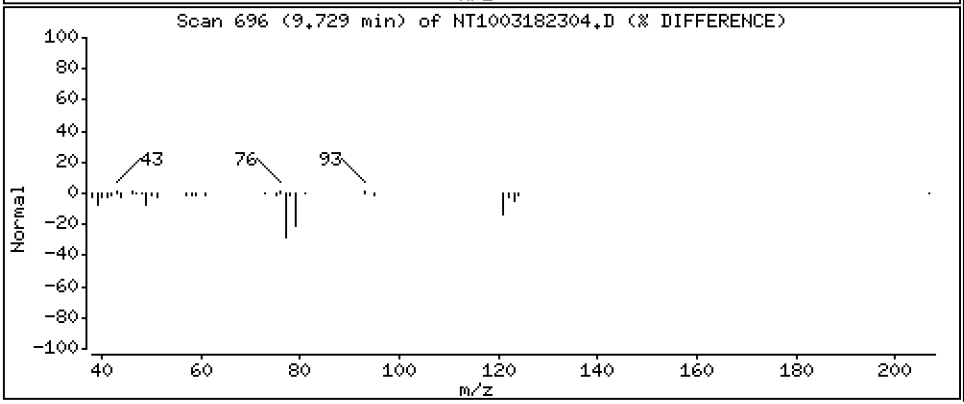












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

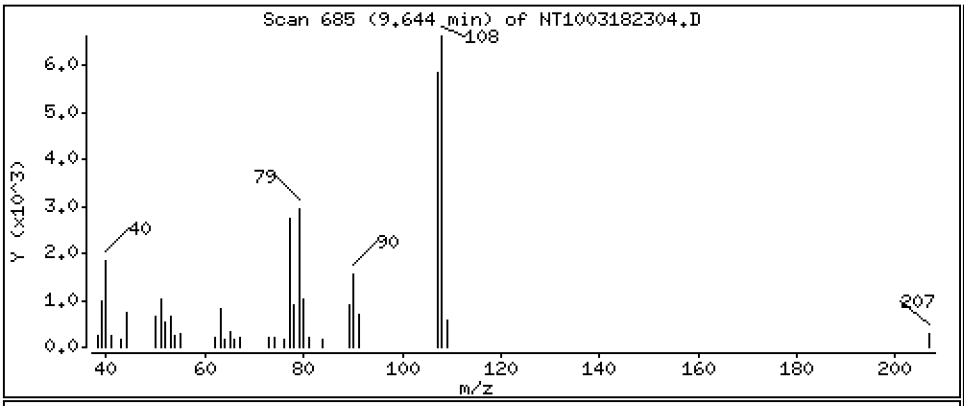
Operator: VTS

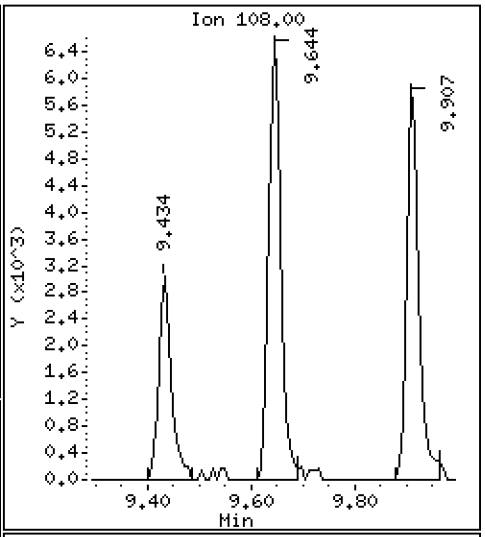
Column phase: ZB-5msi

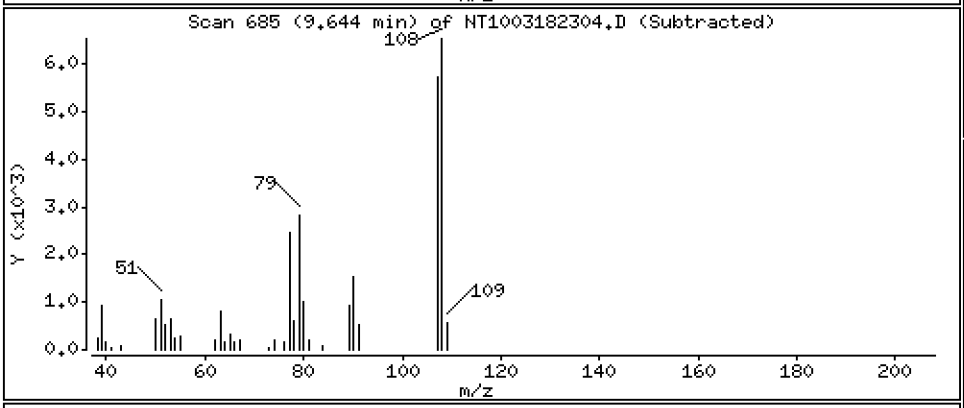
Column diameter: 0.25

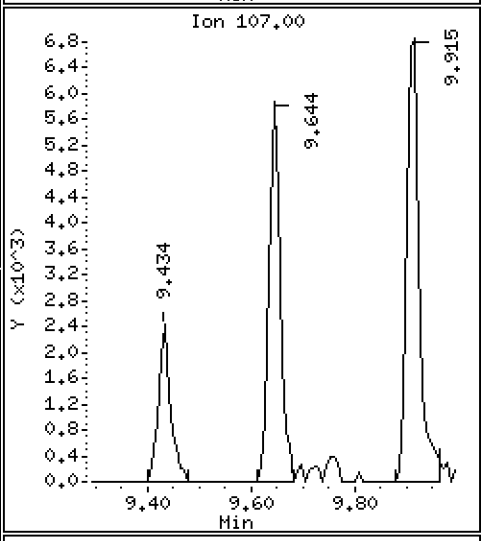
13 2-Methylphenol

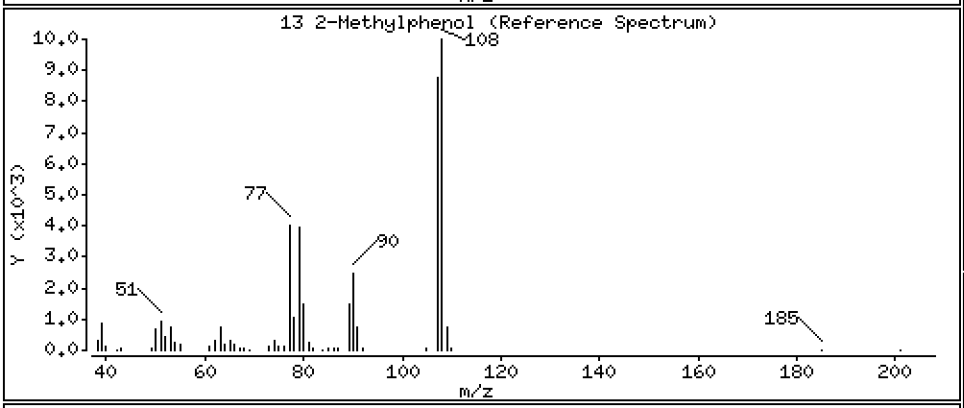
Concentration: 0.1815 ug/mL

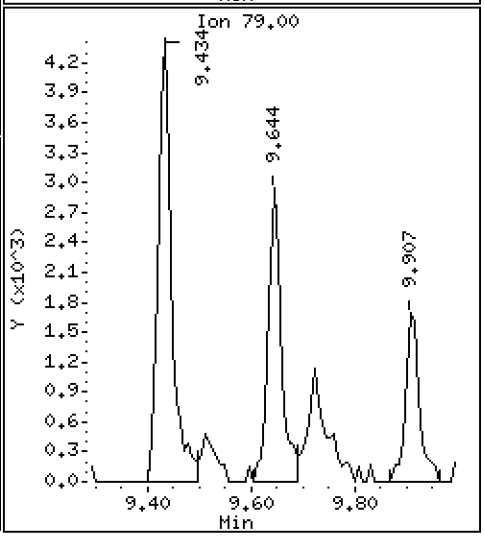


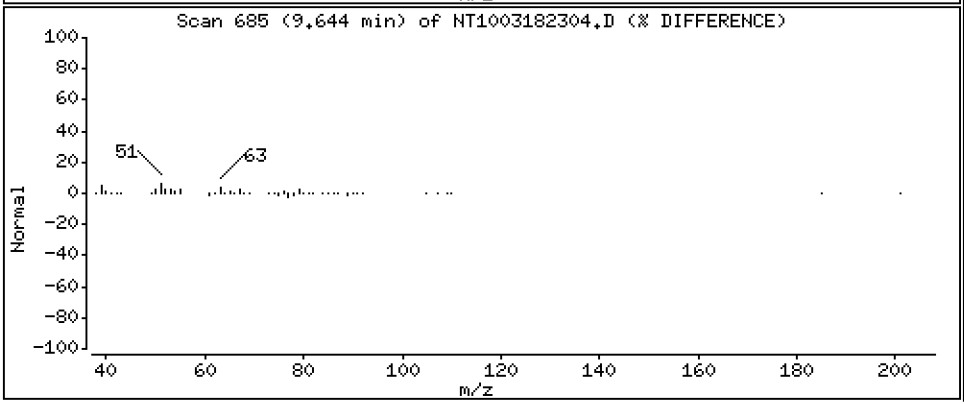












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

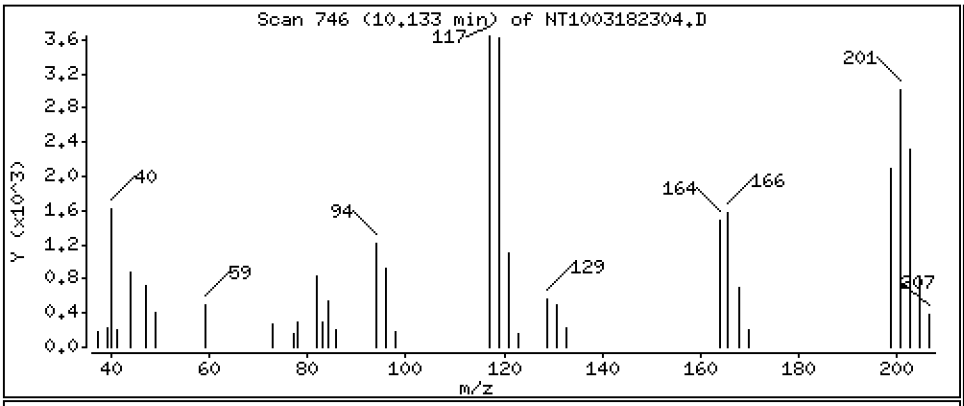
Operator: VTS

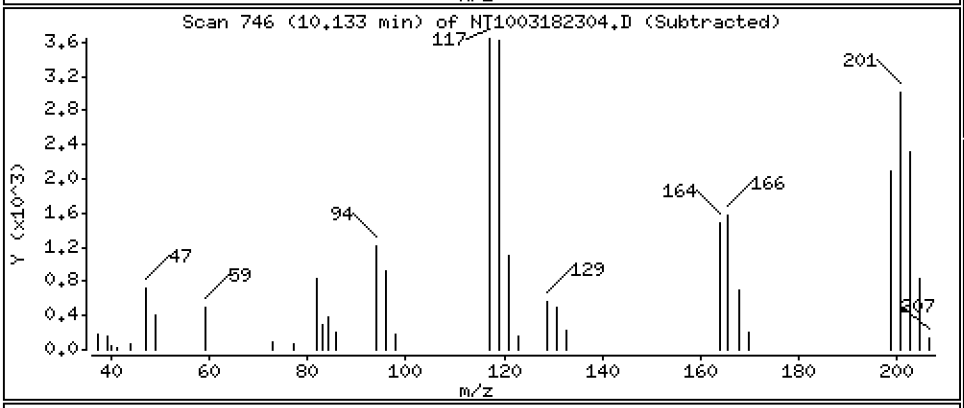
Column phase: ZB-5msi

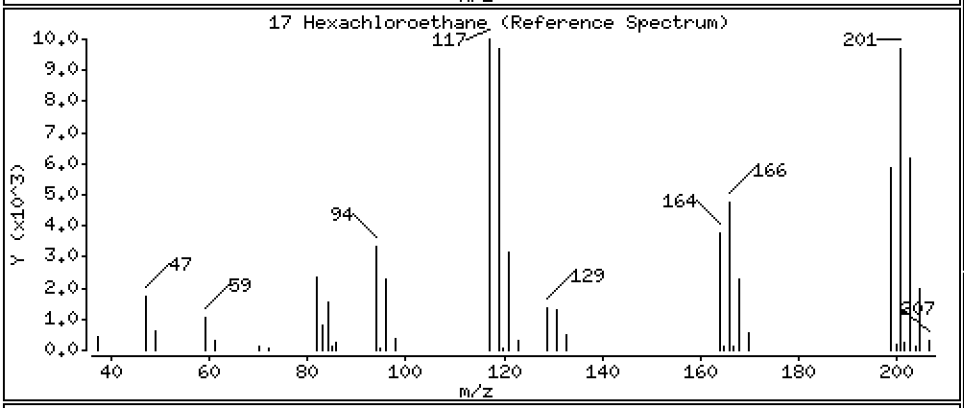
Column diameter: 0.25

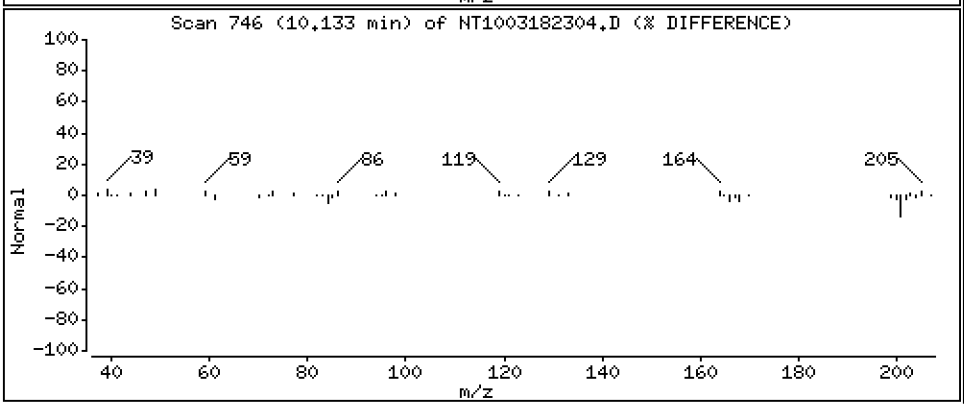
17 Hexachloroethane

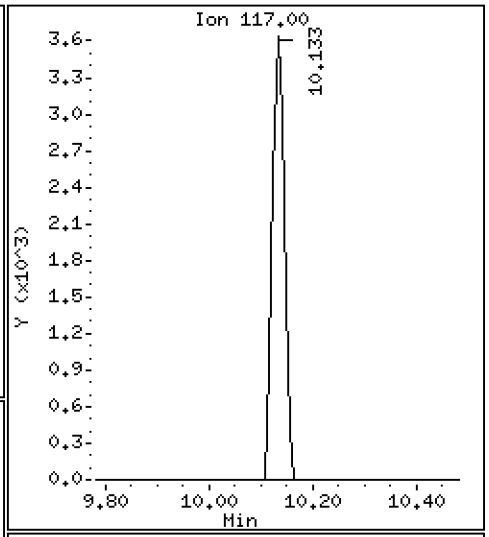
Concentration: 0.2027 ug/mL

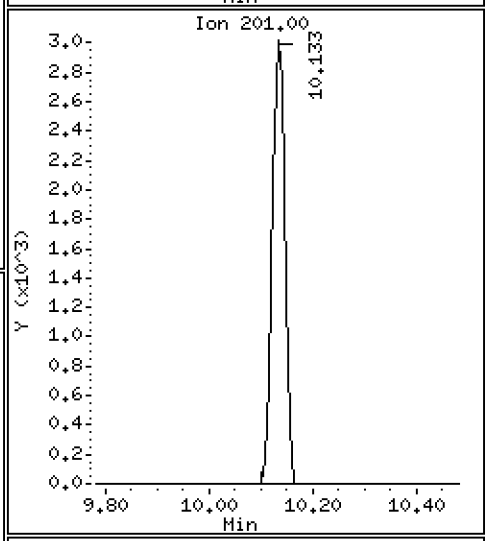


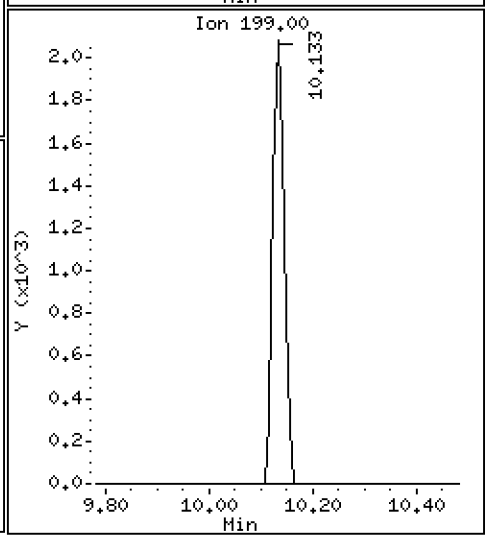












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

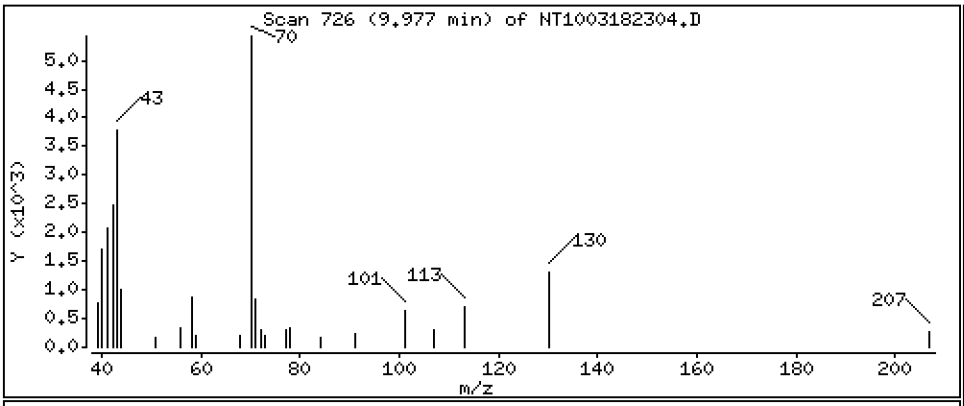
Operator: VTS

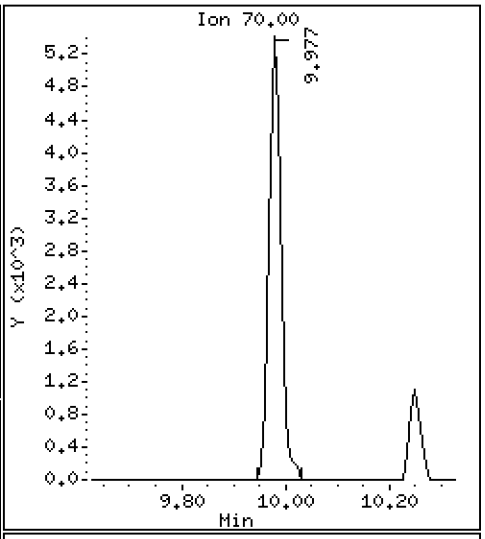
Column phase: ZB-5msi

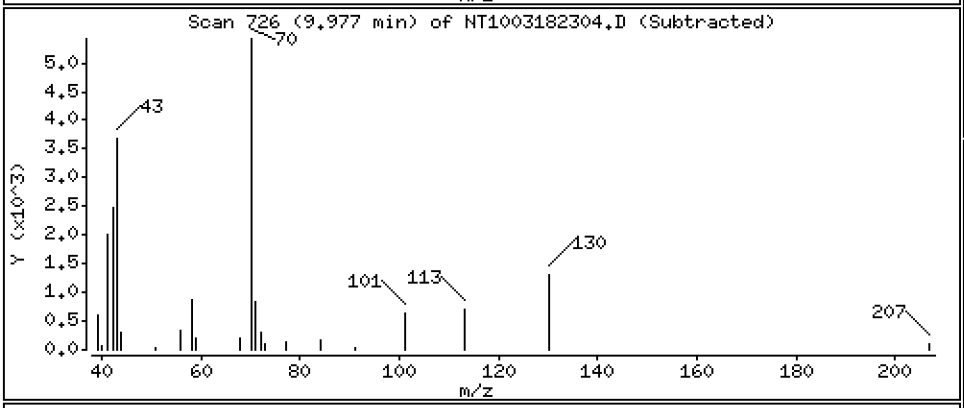
Column diameter: 0.25

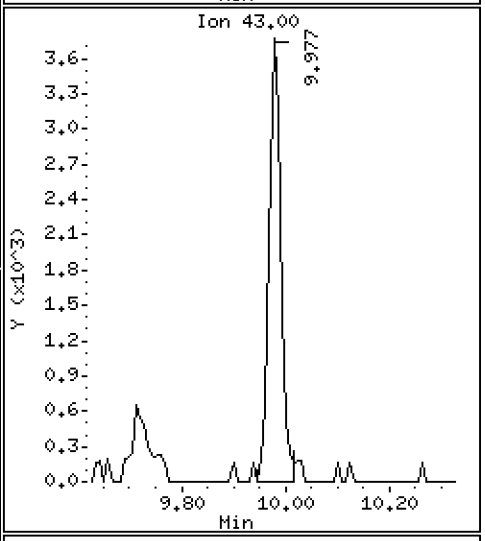
16 N-Nitroso-di-n-propylamine

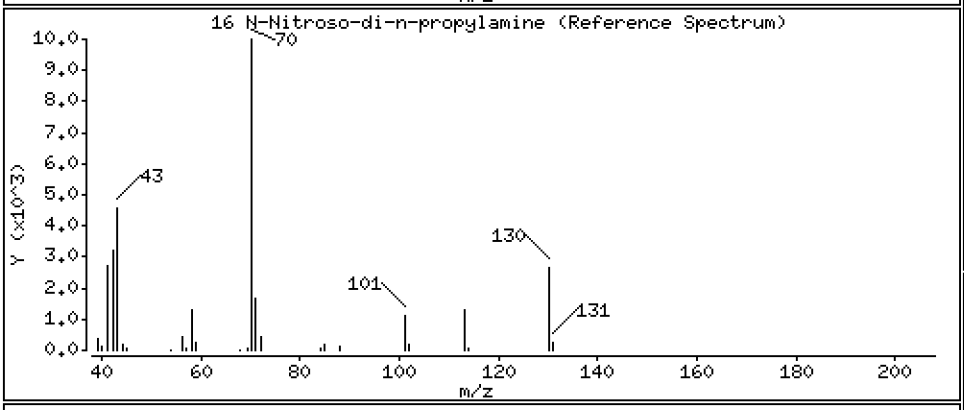
Concentration: 0.1874 ug/mL

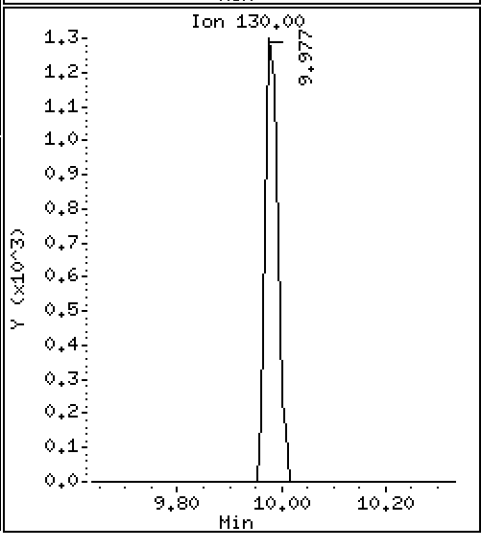


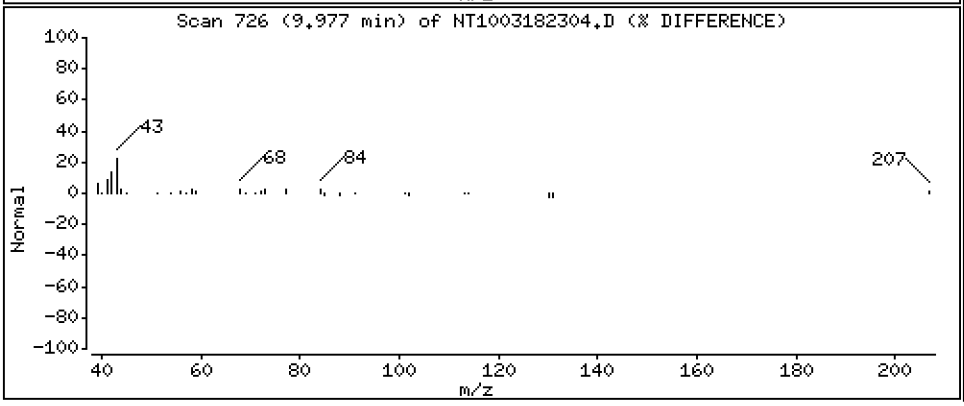












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

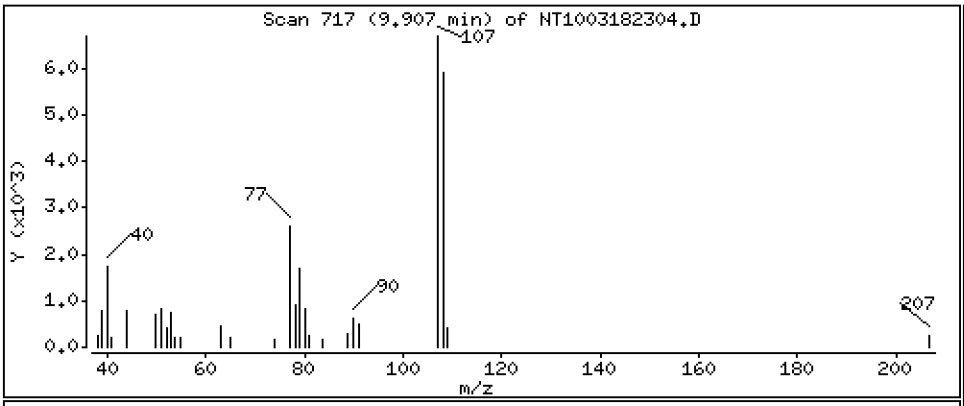
Operator: VTS

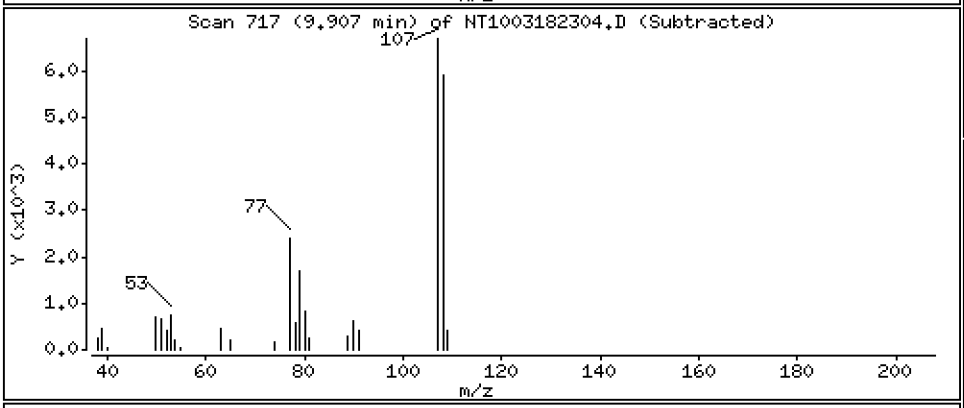
Column phase: ZB-5msi

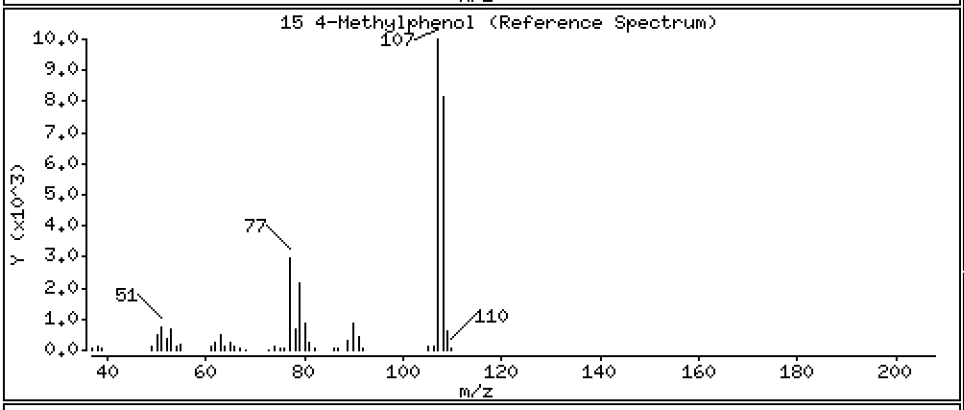
Column diameter: 0.25

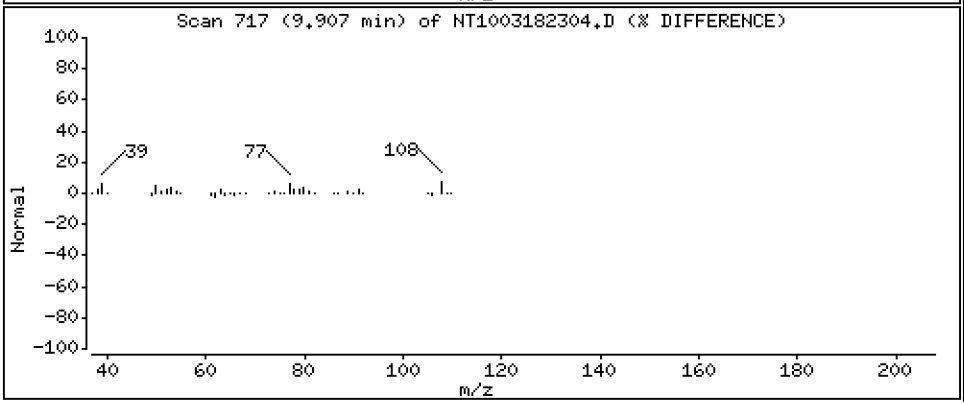
15 4-Methylphenol

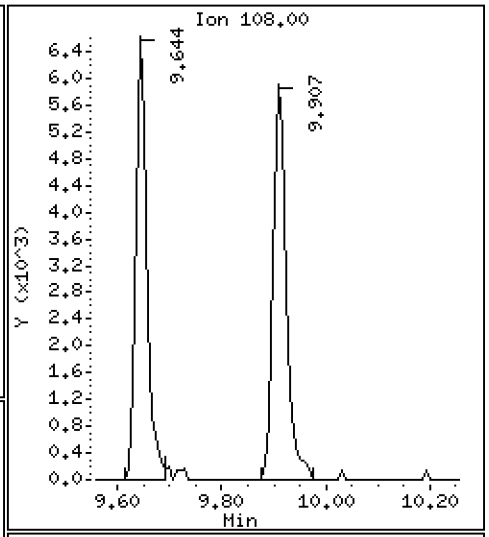
Concentration: 0.1692 ug/mL

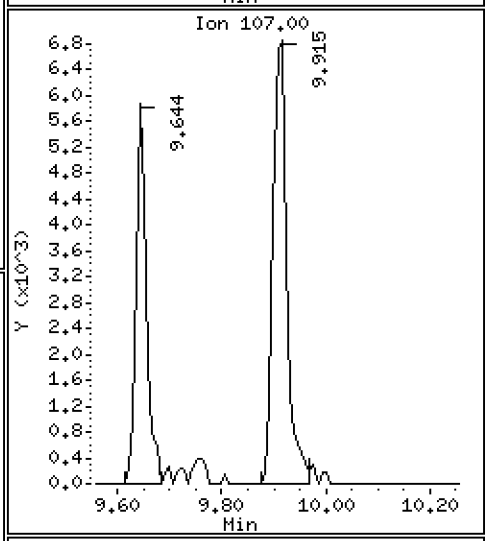


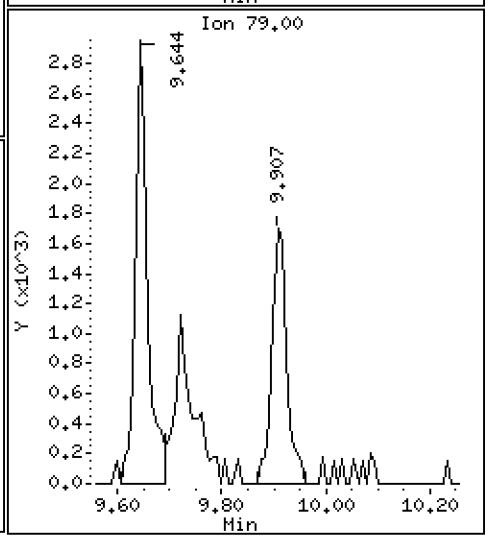












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

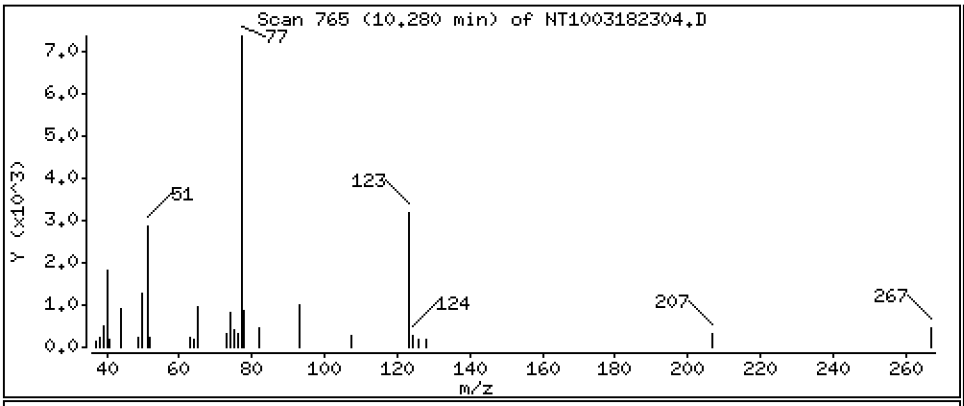
Operator: VTS

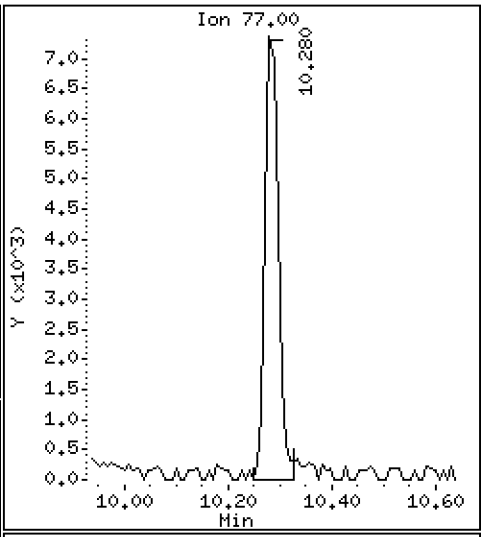
Column phase: ZB-5msi

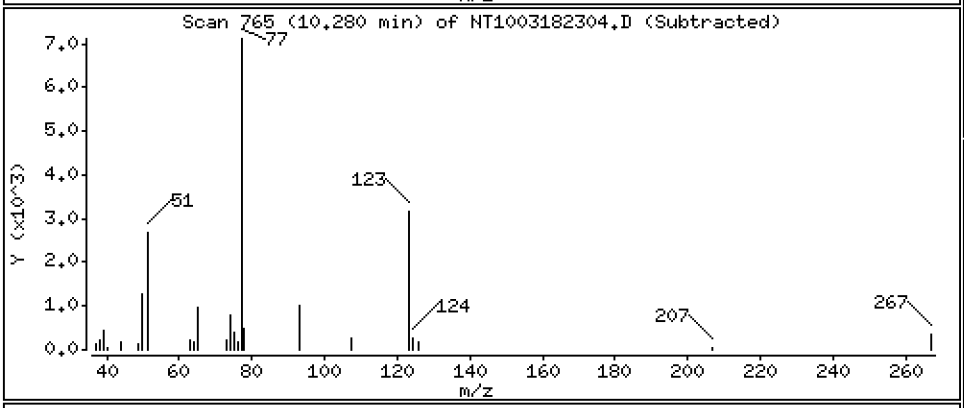
Column diameter: 0.25

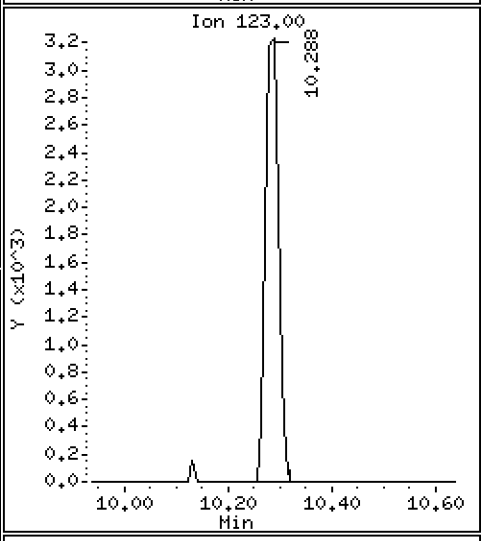
19 Nitrobenzene

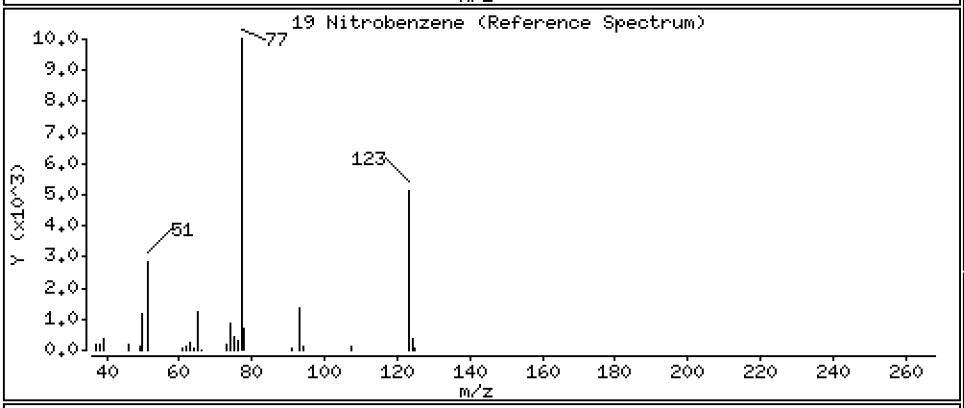
Concentration: 0.1942 ug/mL

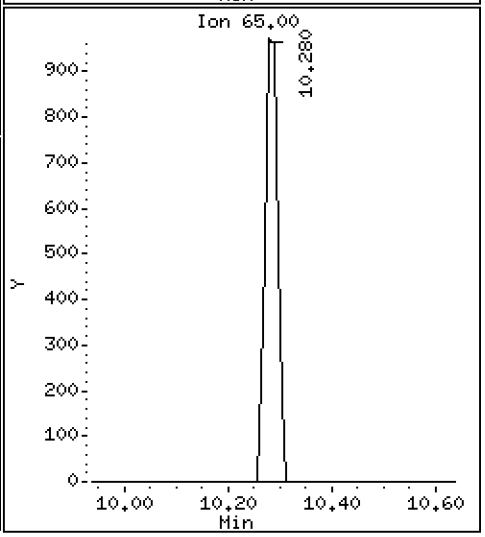


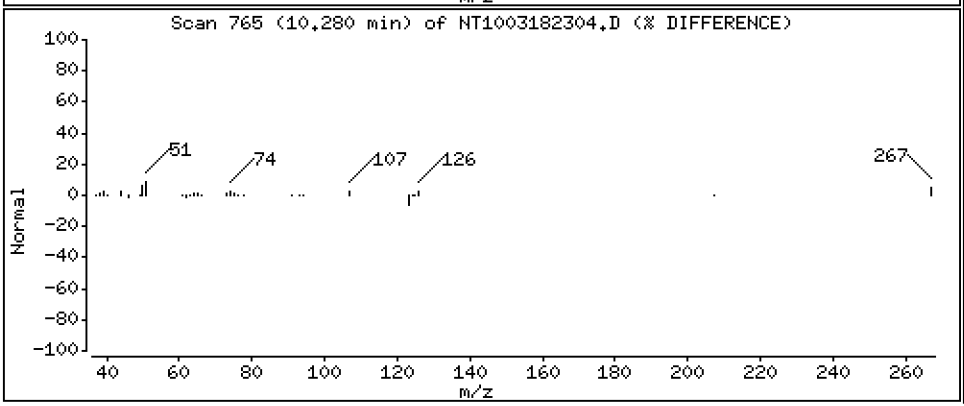












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

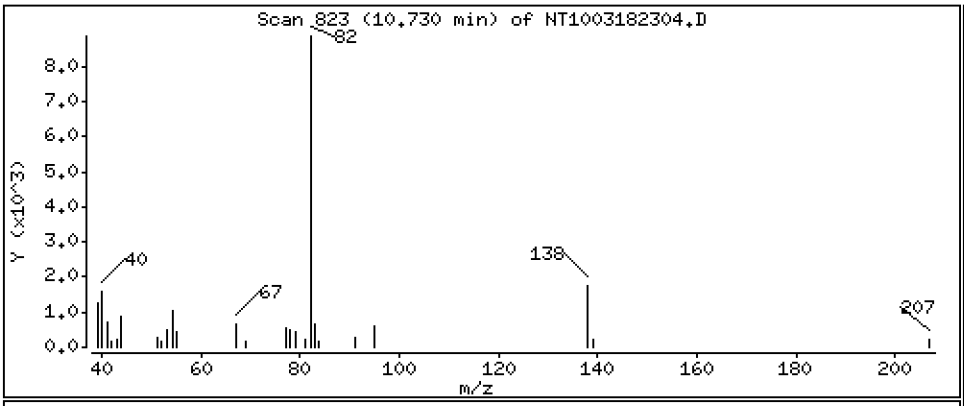
Operator: VTS

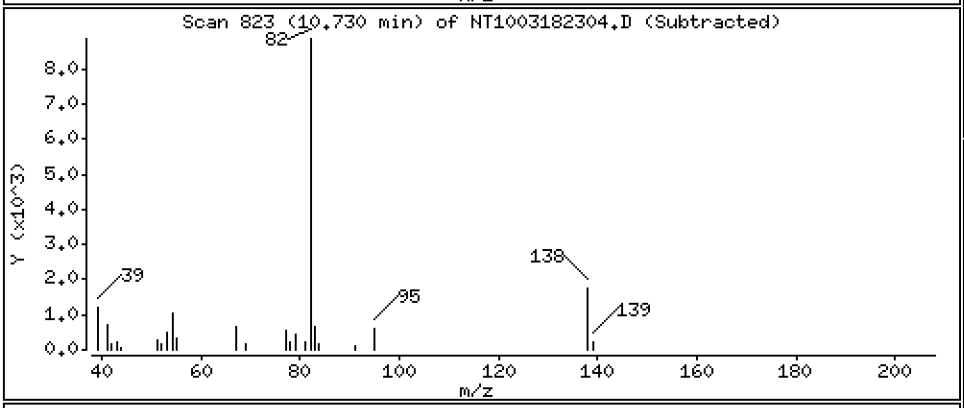
Column phase: ZB-5msi

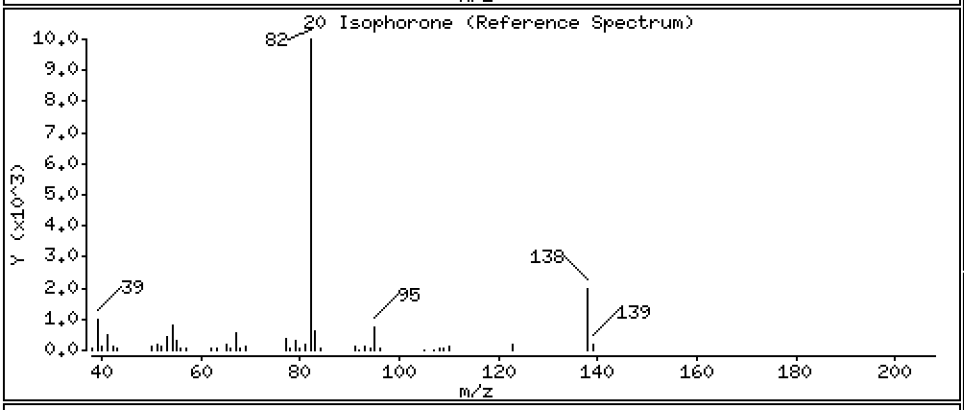
Column diameter: 0.25

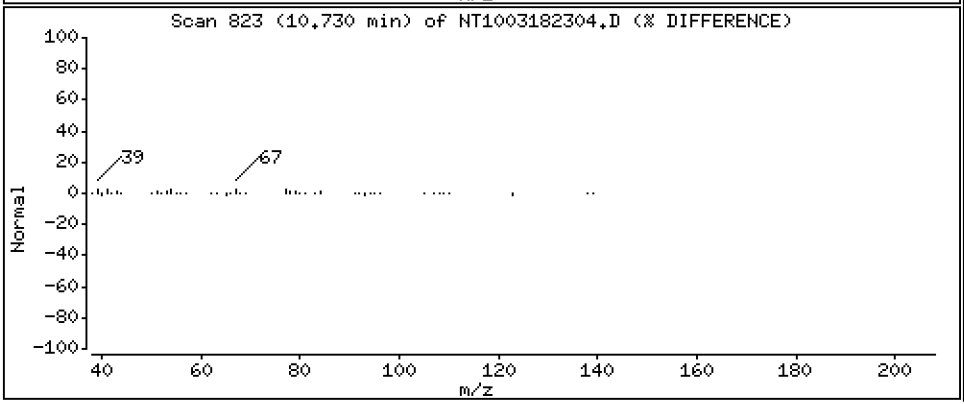
20 Isophorone

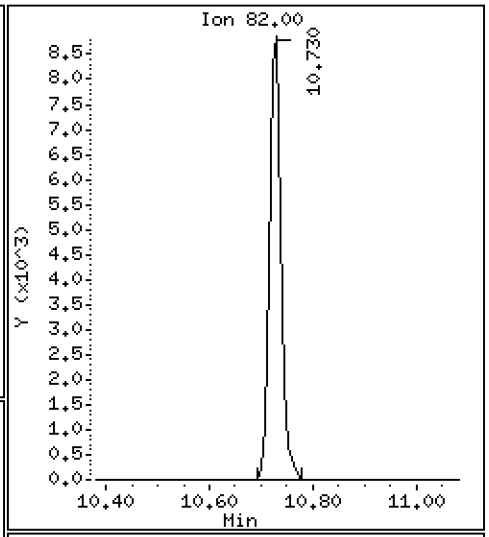
Concentration: 0.1720 ug/mL

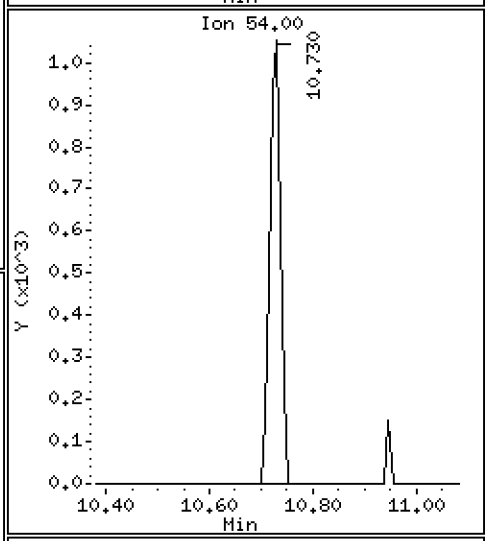


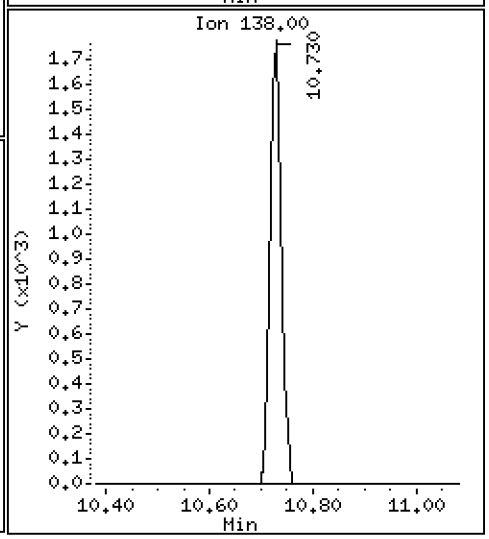












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

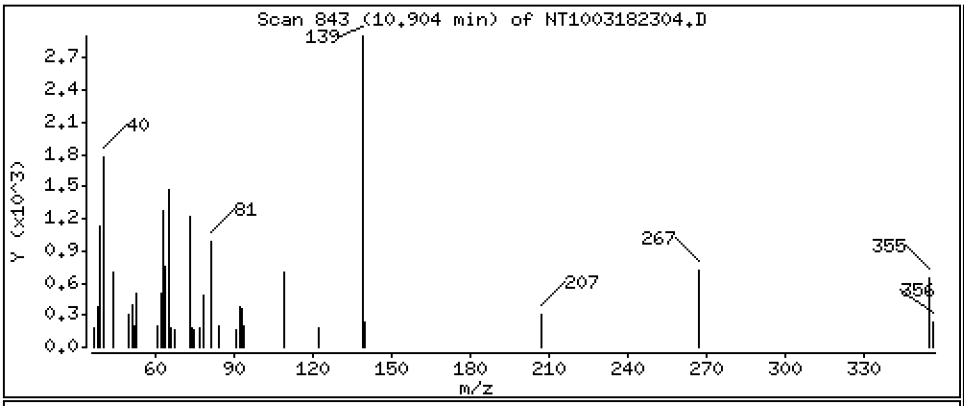
Operator: VTS

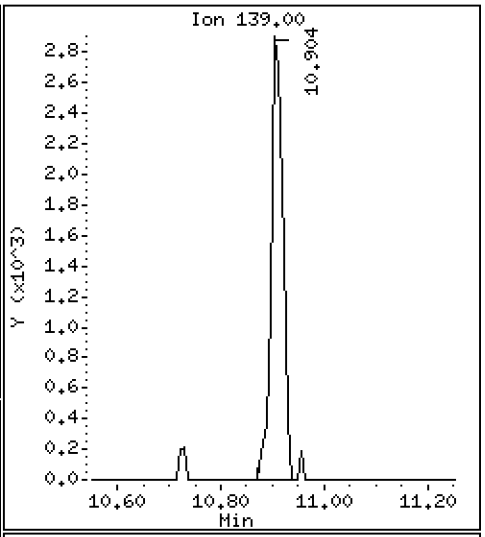
Column phase: ZB-5msi

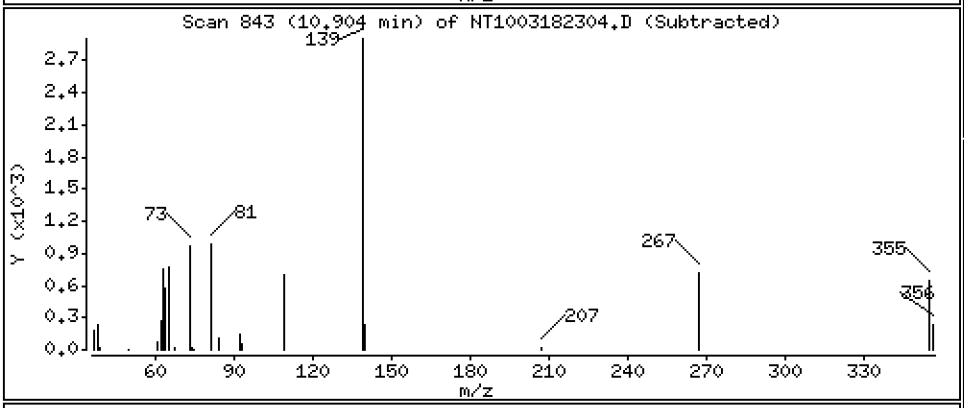
Column diameter: 0.25

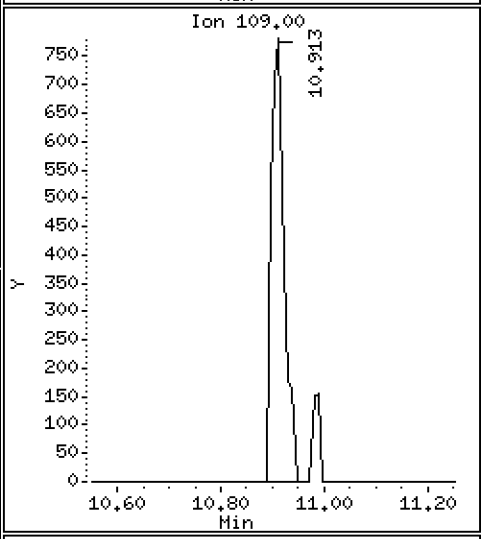
21 2-Nitrophenol

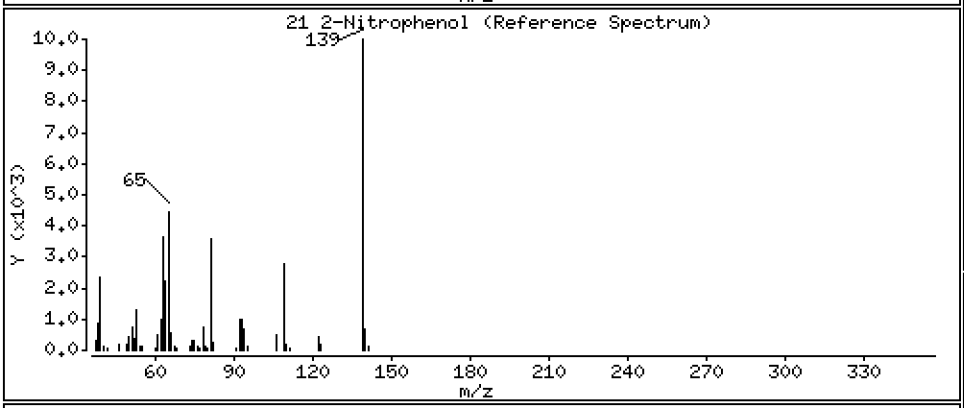
Concentration: 0.1476 ug/mL

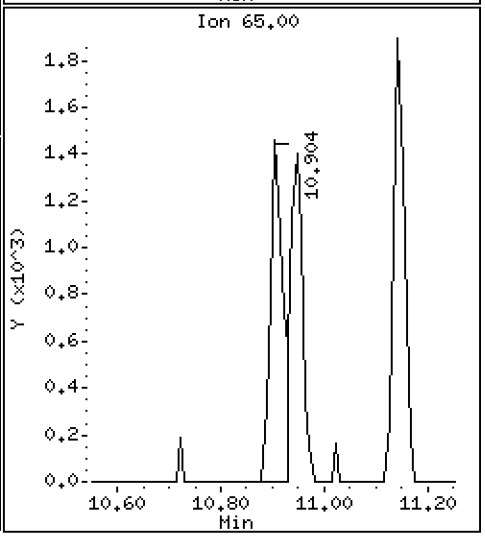


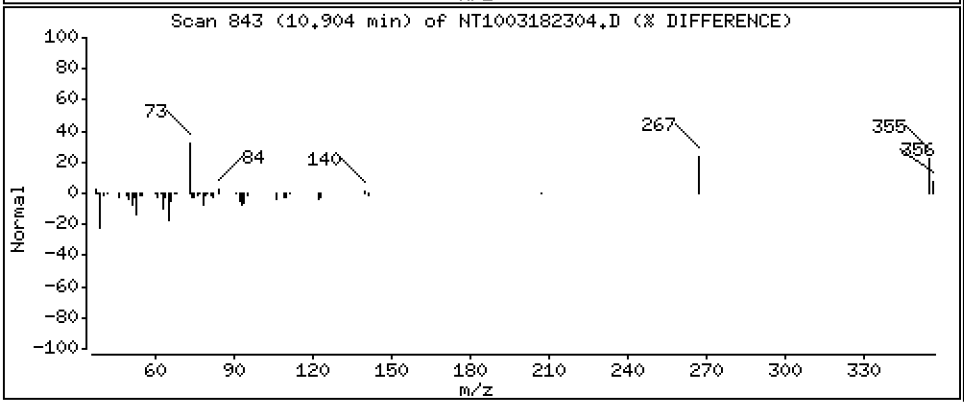












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

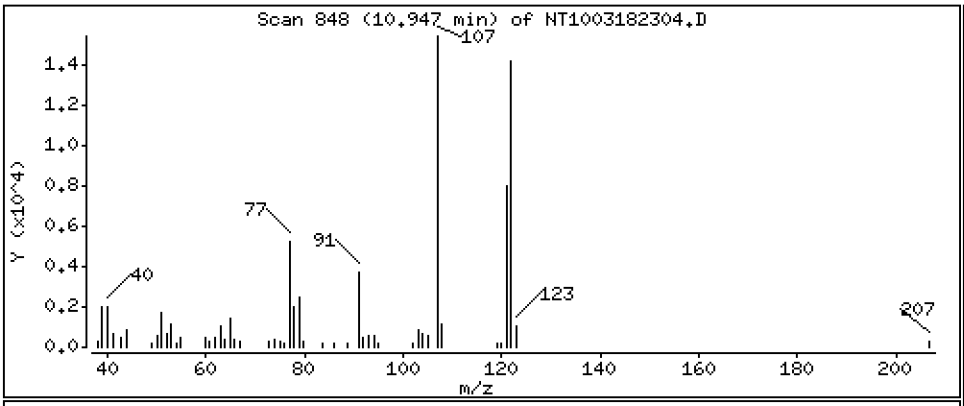
Operator: VTS

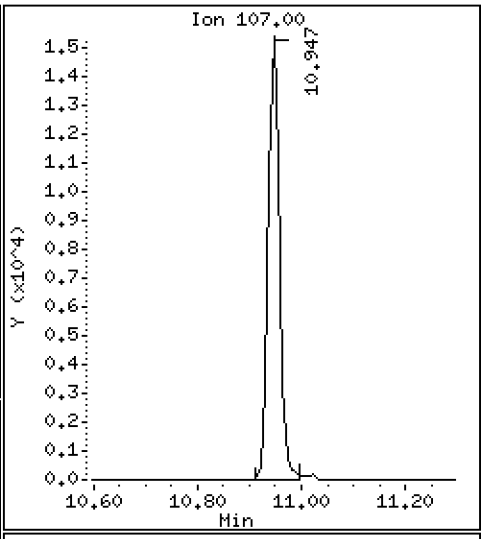
Column phase: ZB-5msi

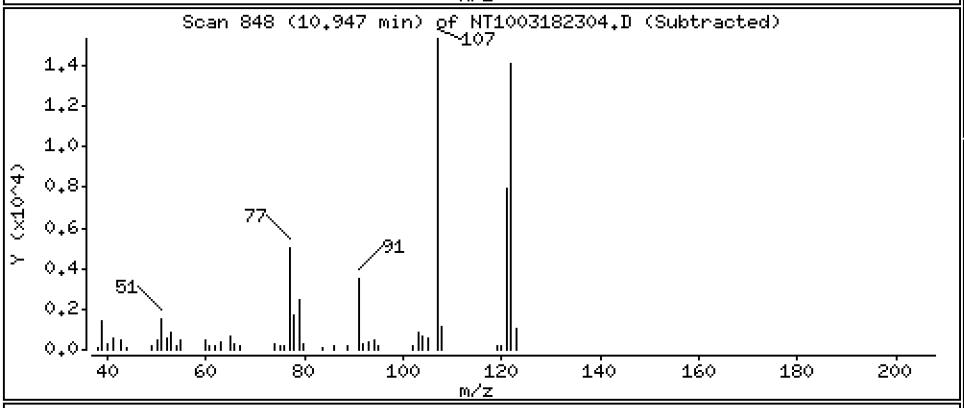
Column diameter: 0.25

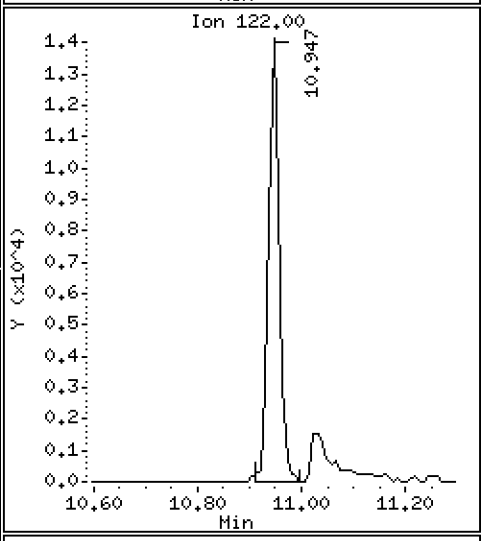
22 2,4-Dimethylphenol

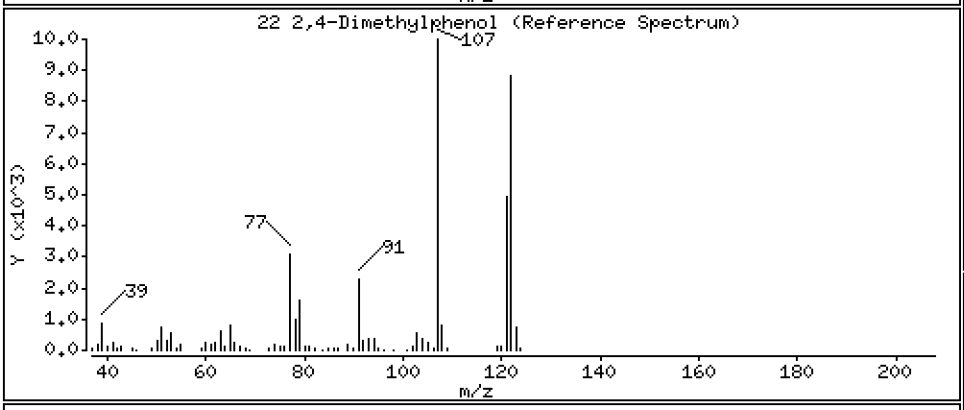
Concentration: 0.3860 ug/mL

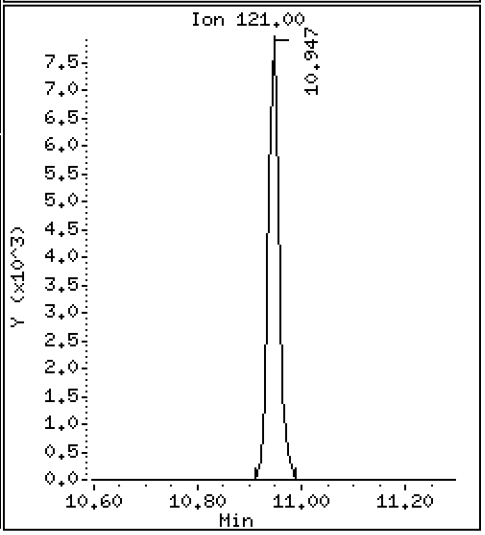


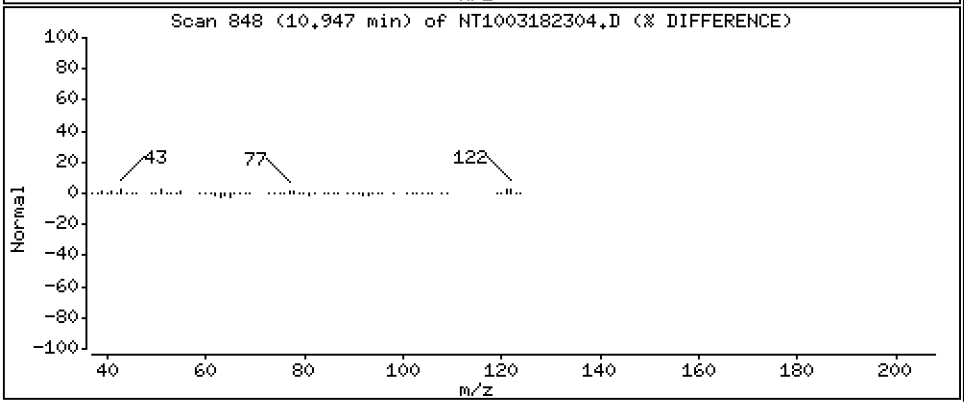












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

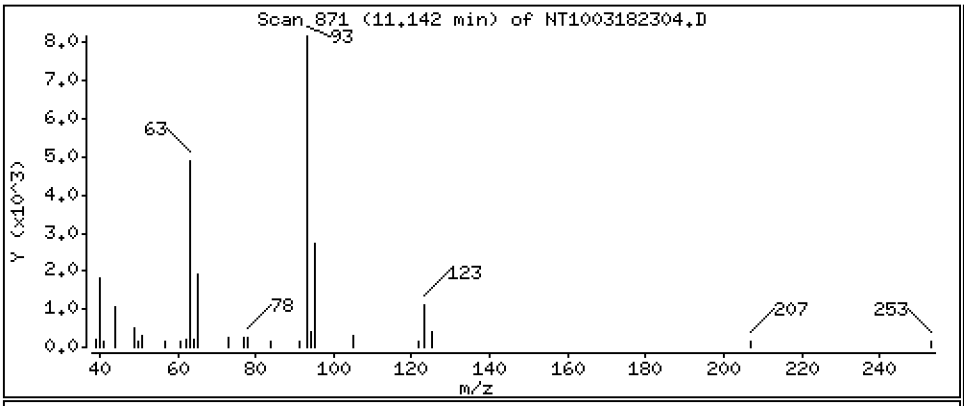
Operator: VTS

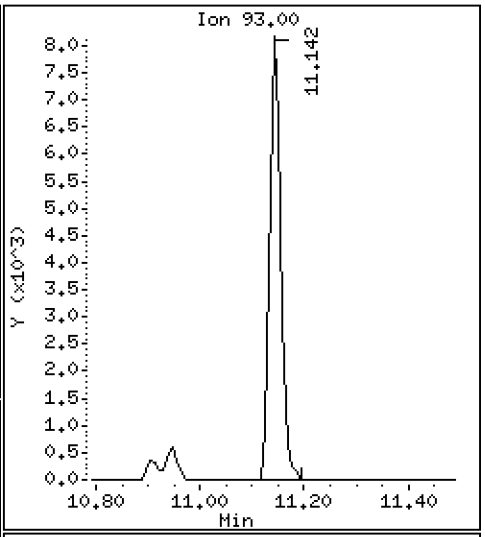
Column phase: ZB-5msi

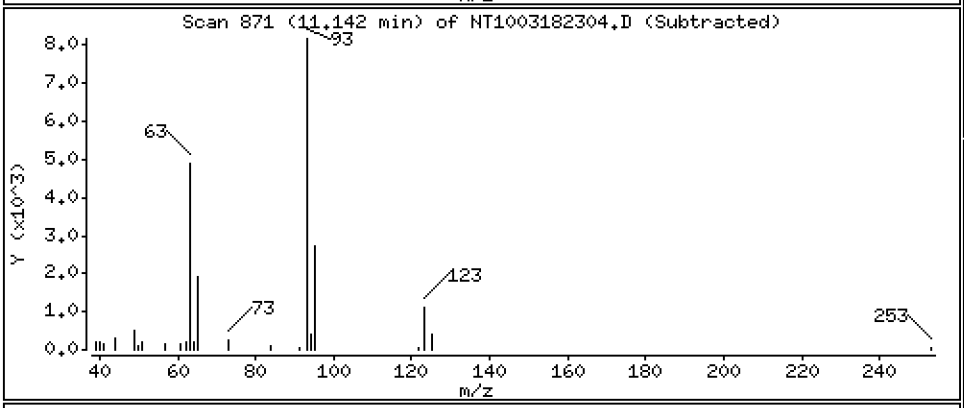
Column diameter: 0.25

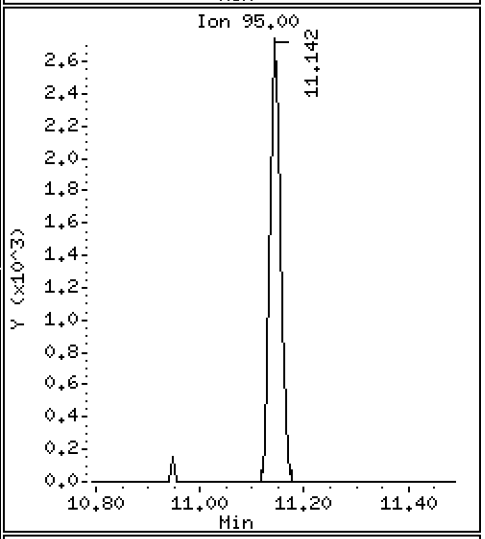
23 Bis(2-Chloroethoxy)methane

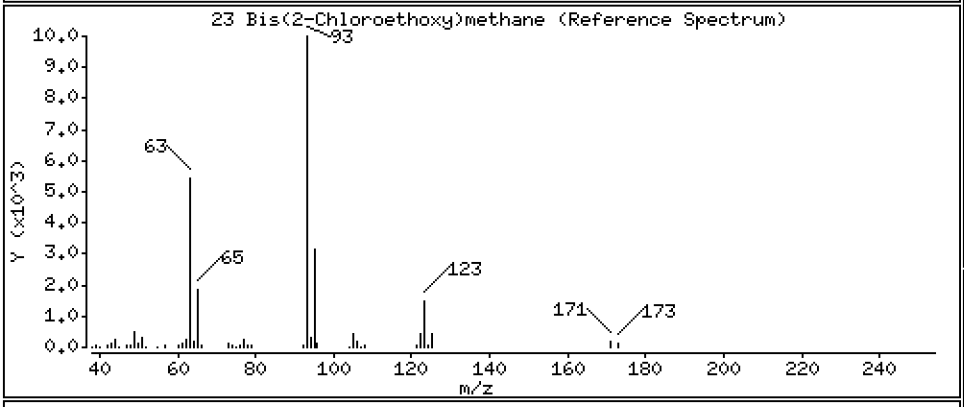
Concentration: 0.2151 ug/mL

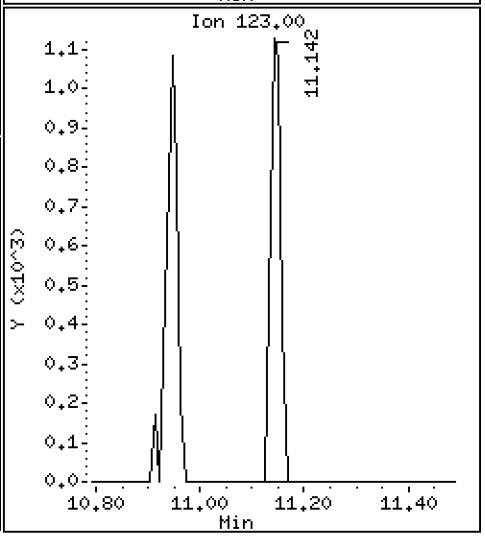


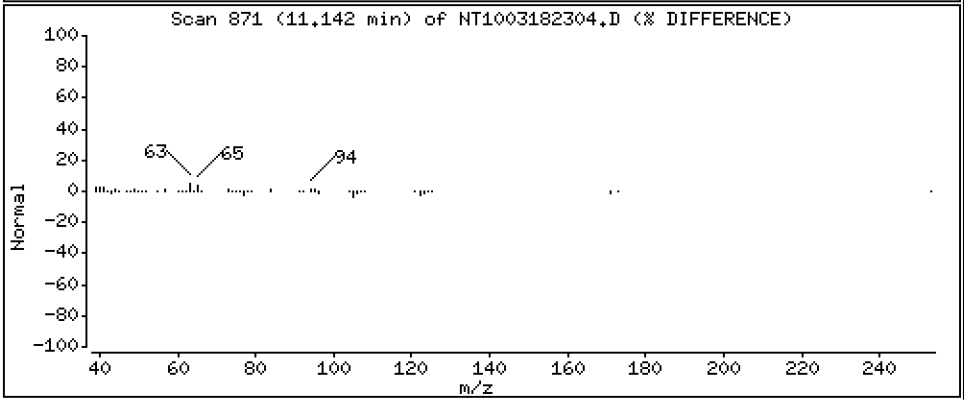












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

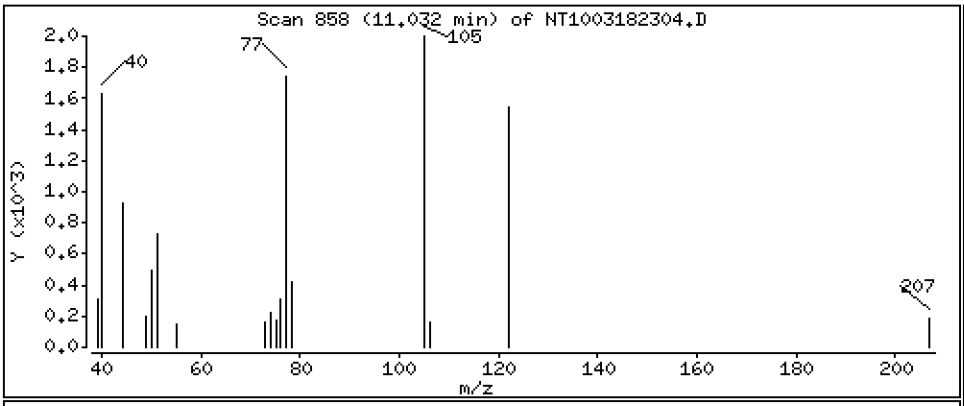
Operator: VTS

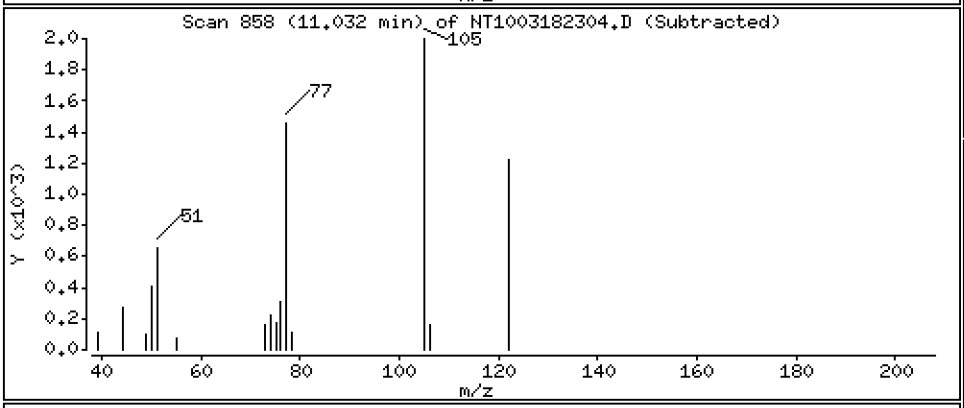
Column phase: ZB-5msi

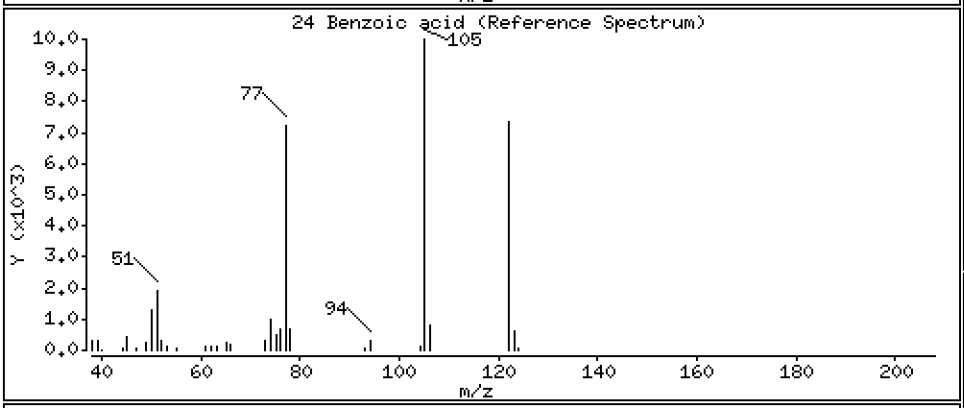
Column diameter: 0.25

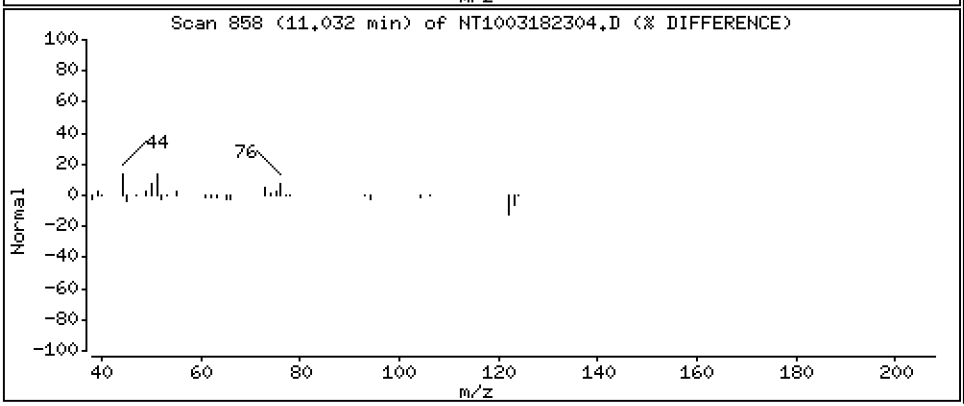
24 Benzoic acid

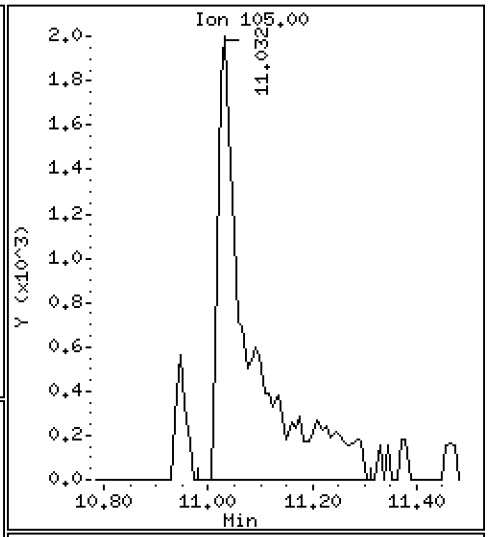
Concentration: 0.2476 ug/mL

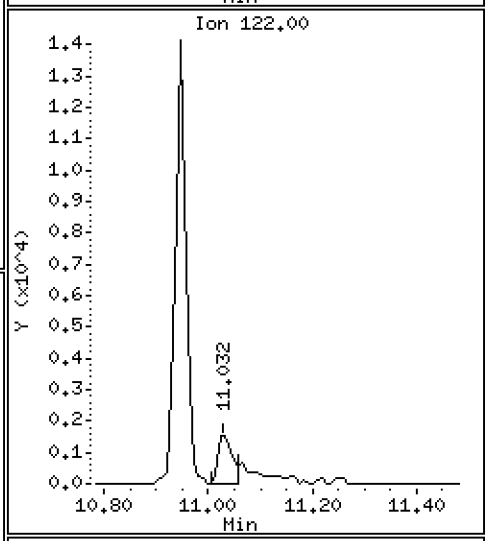


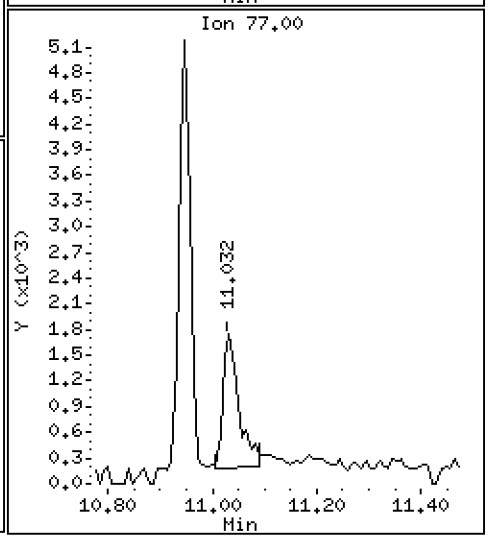












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

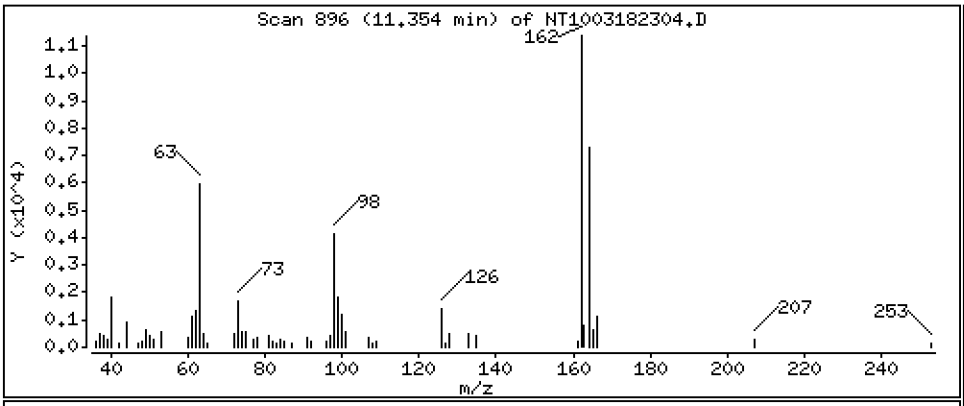
Operator: VTS

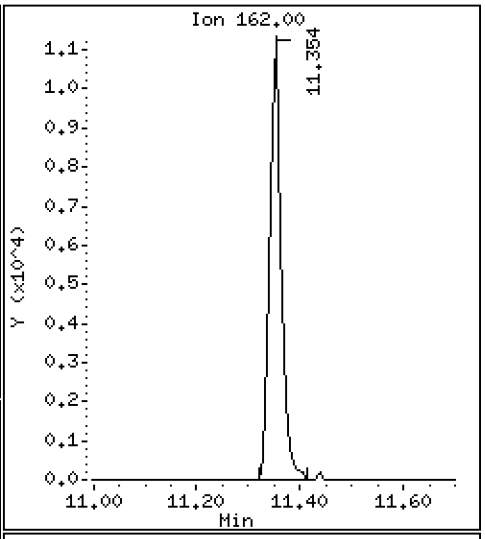
Column phase: ZB-5msi

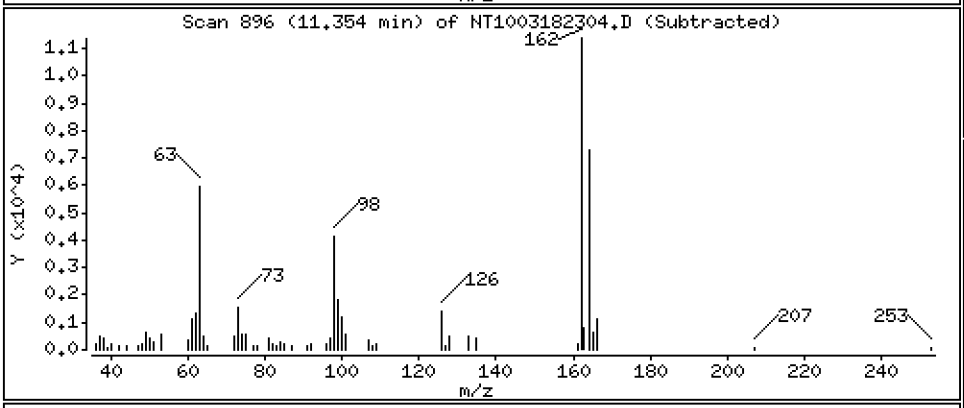
Column diameter: 0.25

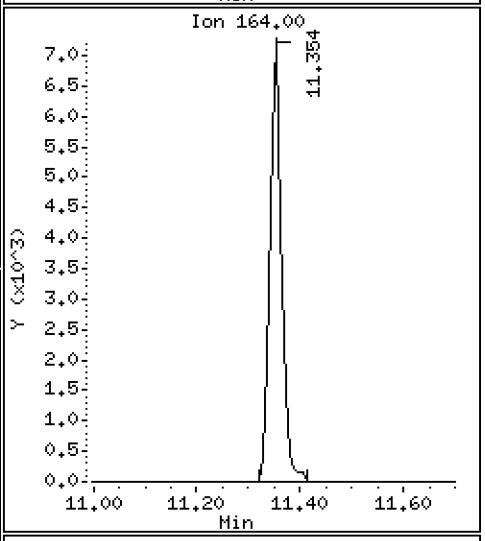
25 2,4-Dichlorophenol

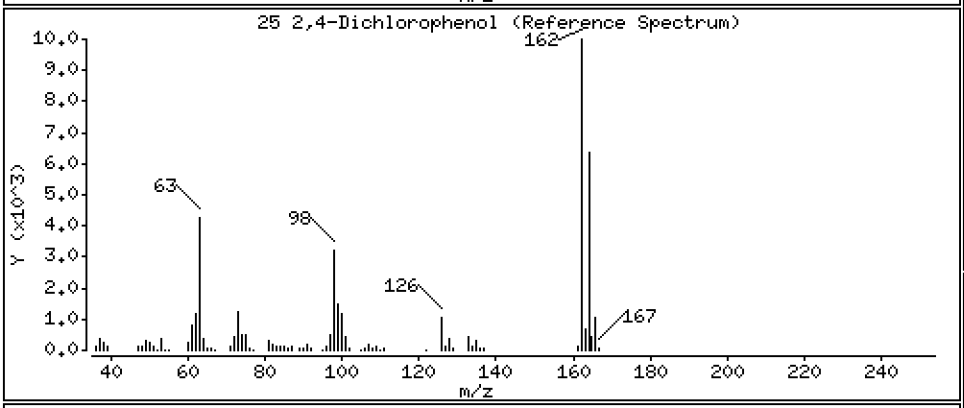
Concentration: 0.3617 ug/mL

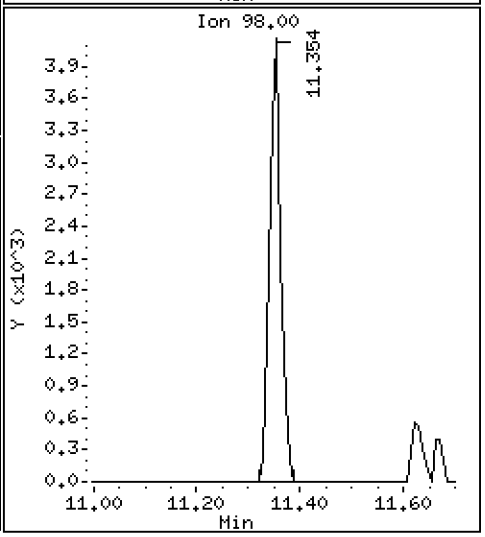


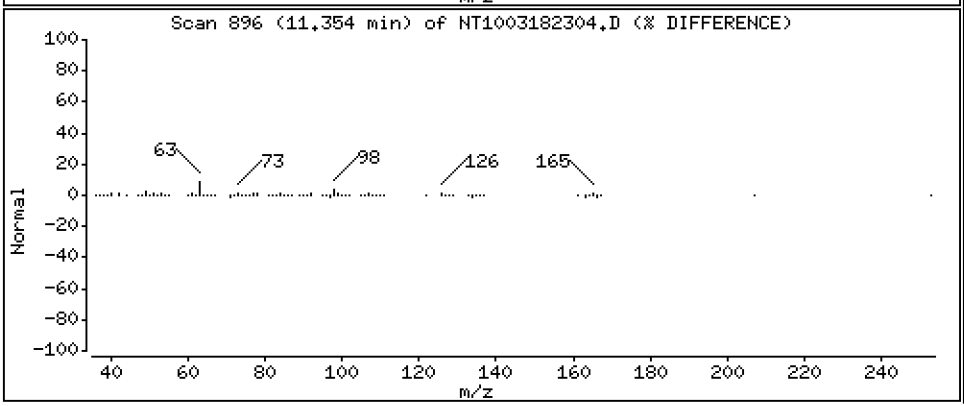












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

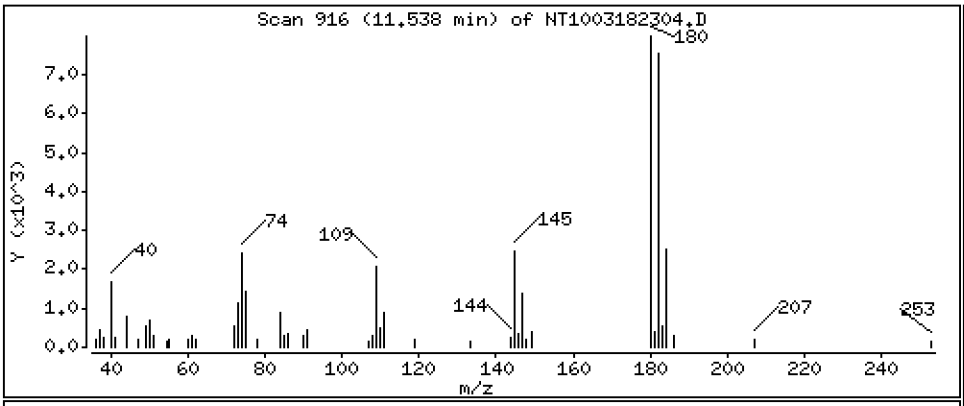
Operator: VTS

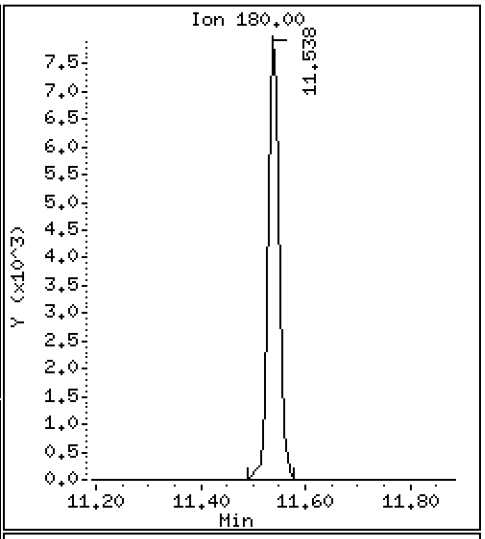
Column phase: ZB-5msi

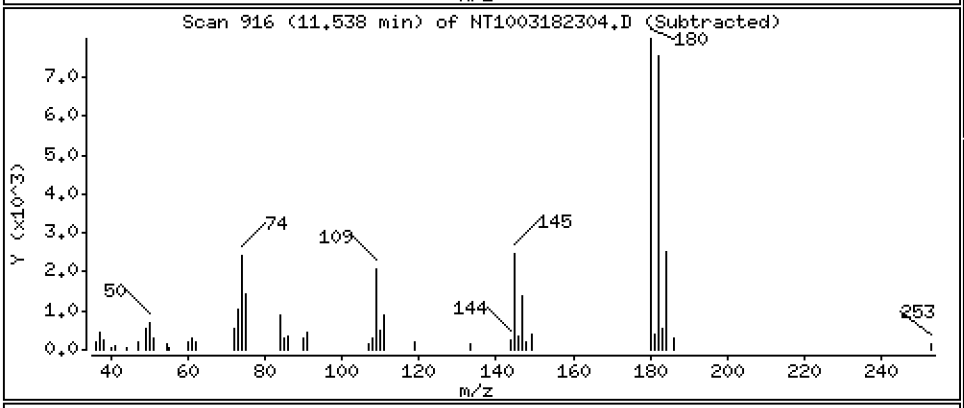
Column diameter: 0.25

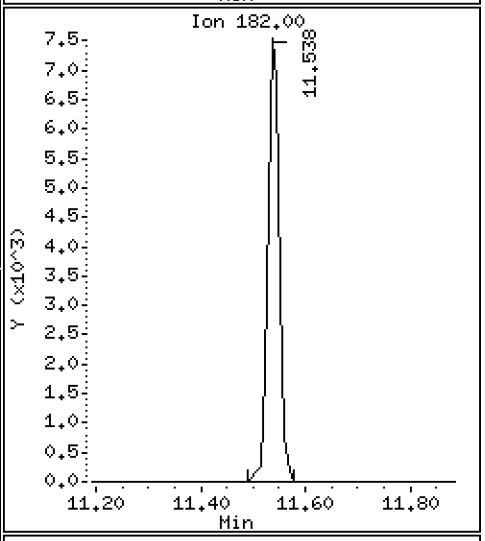
26 1,2,4-Trichlorobenzene

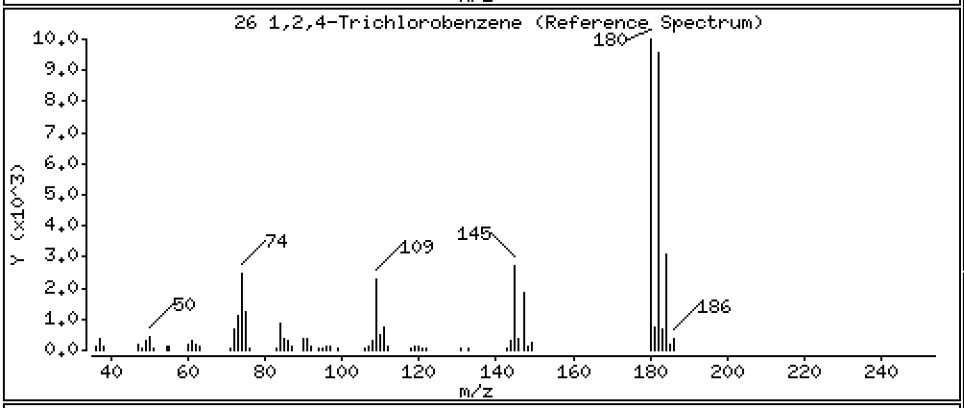
Concentration: 0.2683 ug/mL

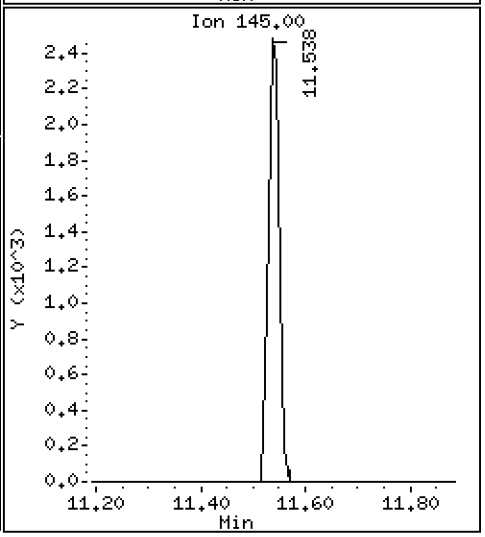


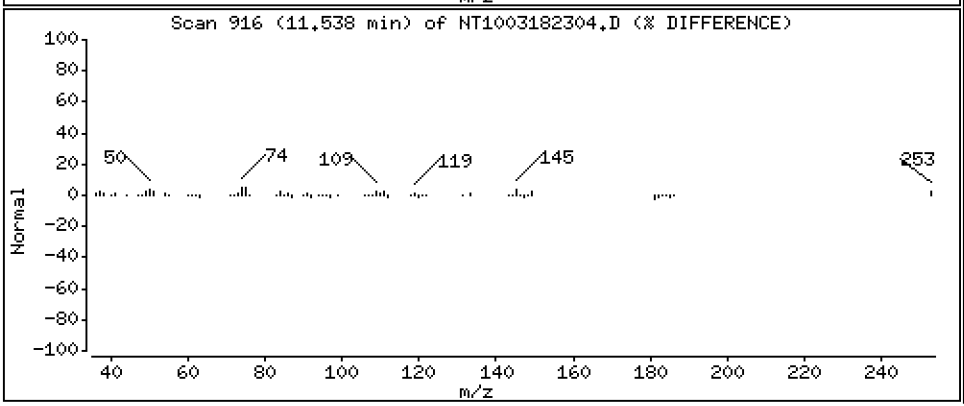












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

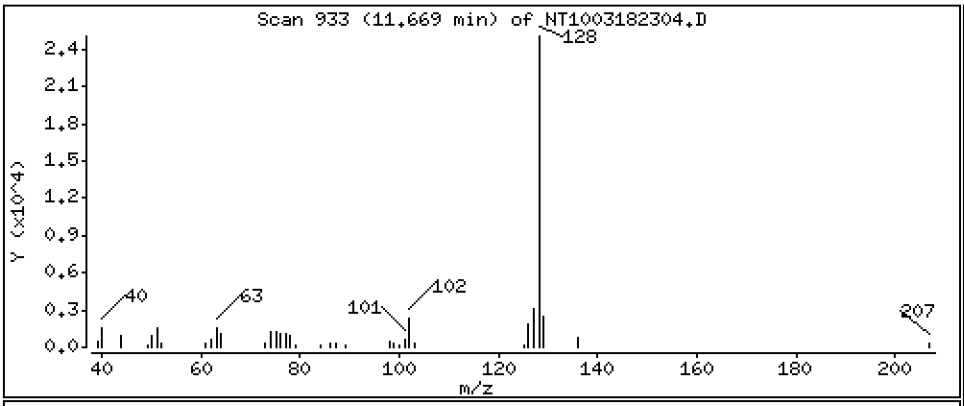
Operator: VTS

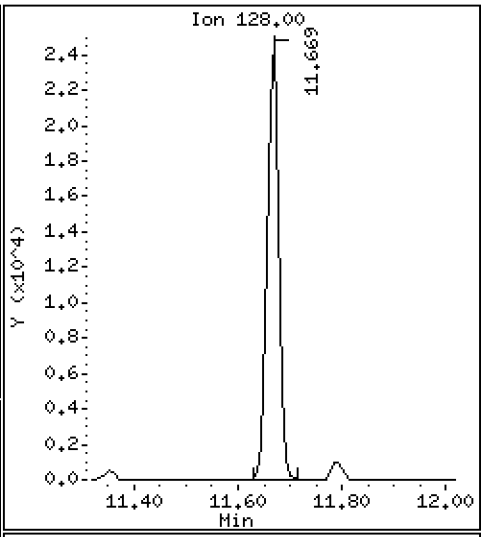
Column phase: ZB-5msi

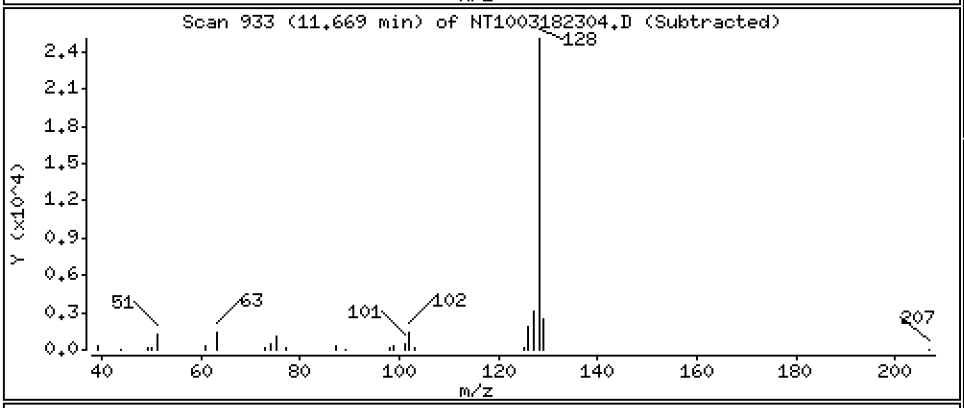
Column diameter: 0.25

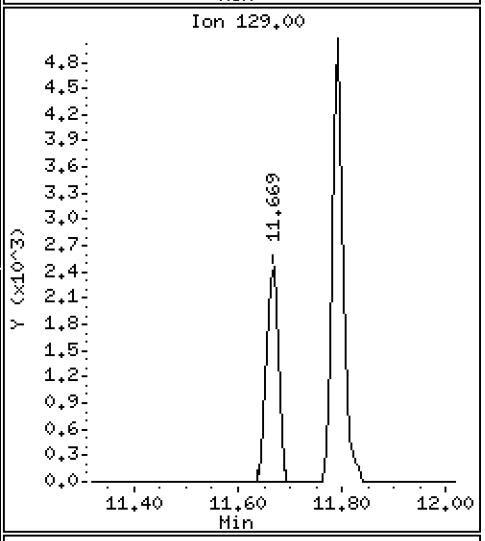
28 Naphthalene

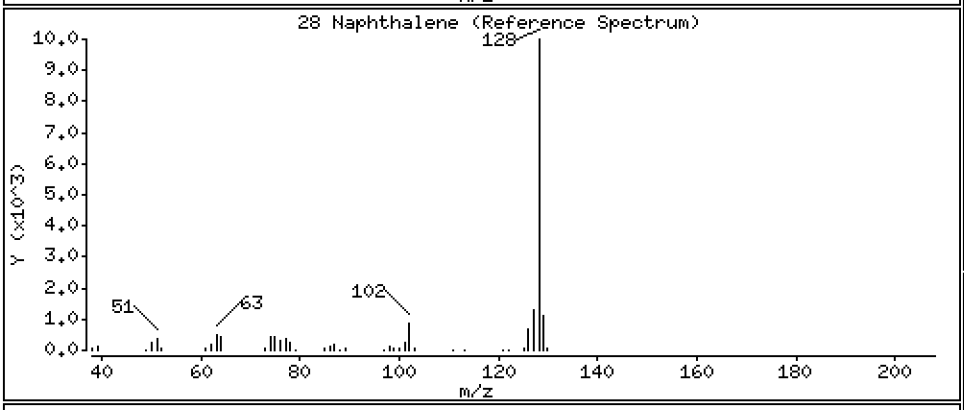
Concentration: 0.2094 ug/mL

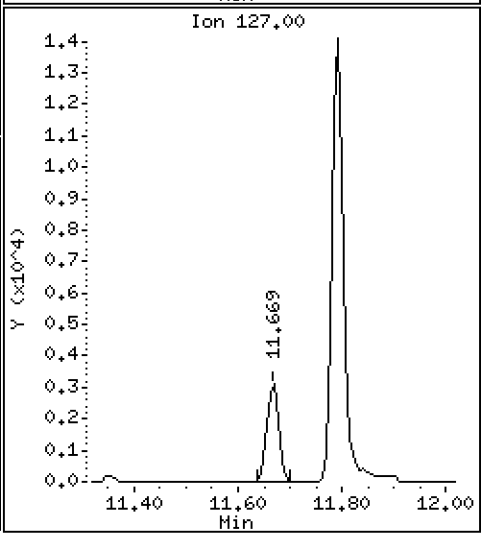


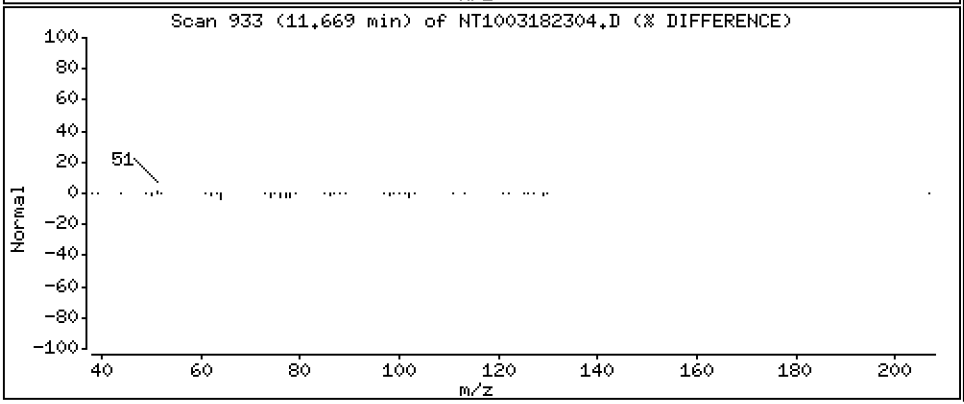












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

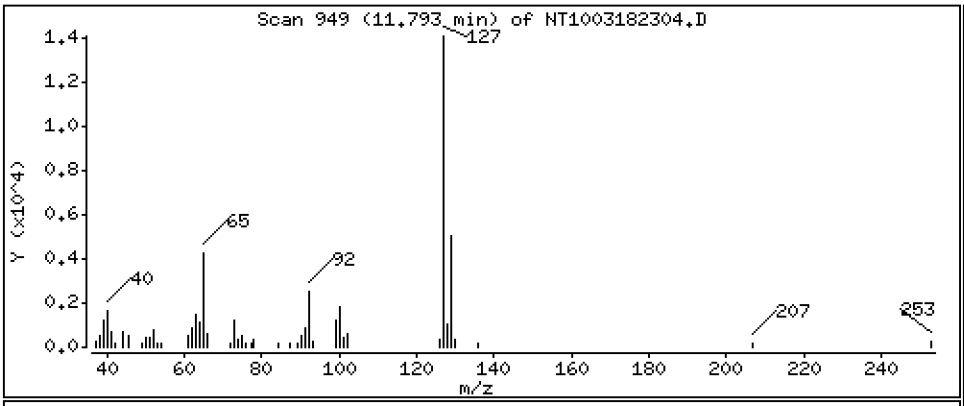
Operator: VTS

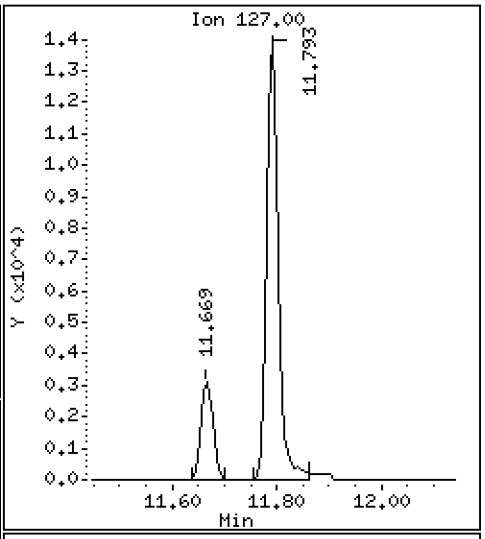
Column phase: ZB-5msi

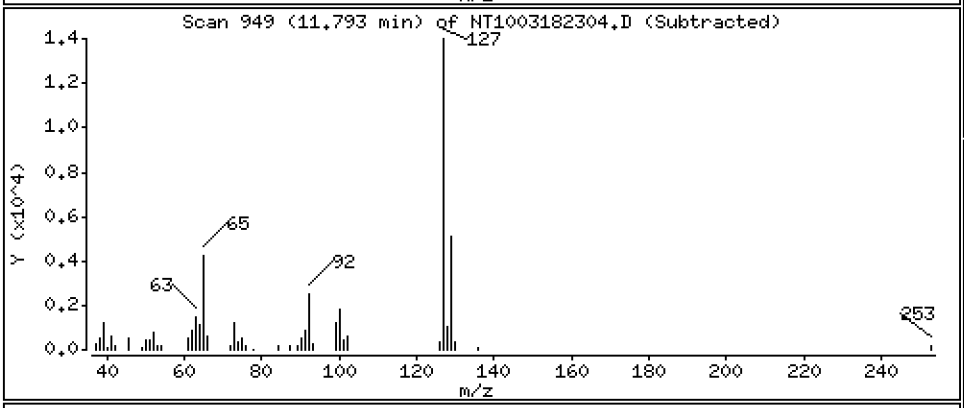
Column diameter: 0.25

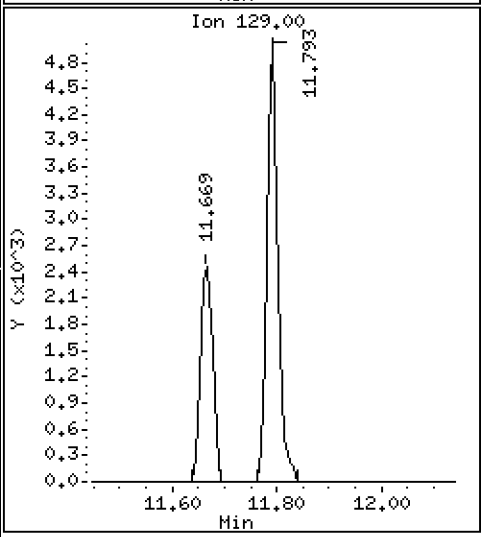
29 4-Chloroaniline

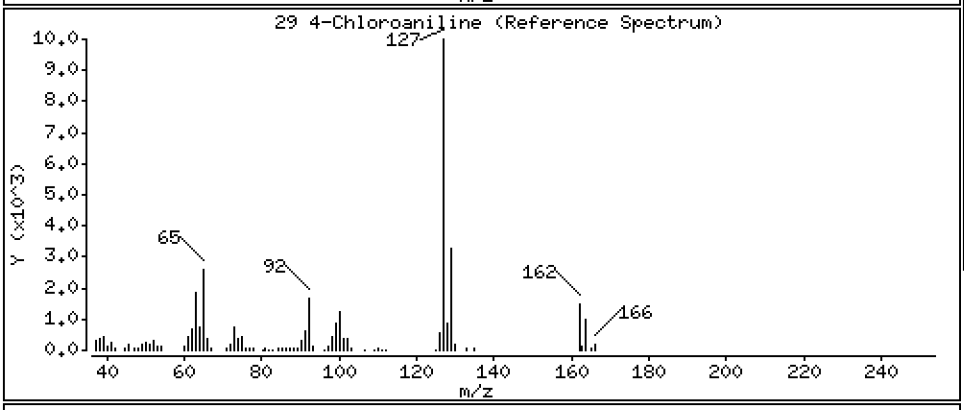
Concentration: 0.3341 ug/mL

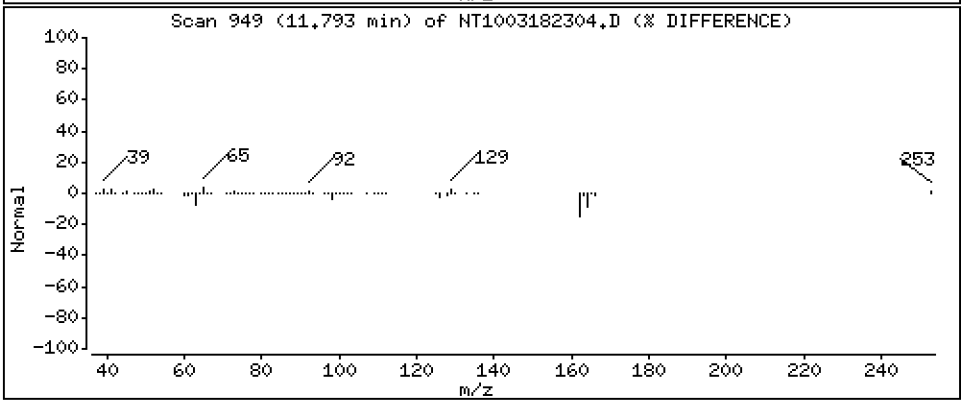












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

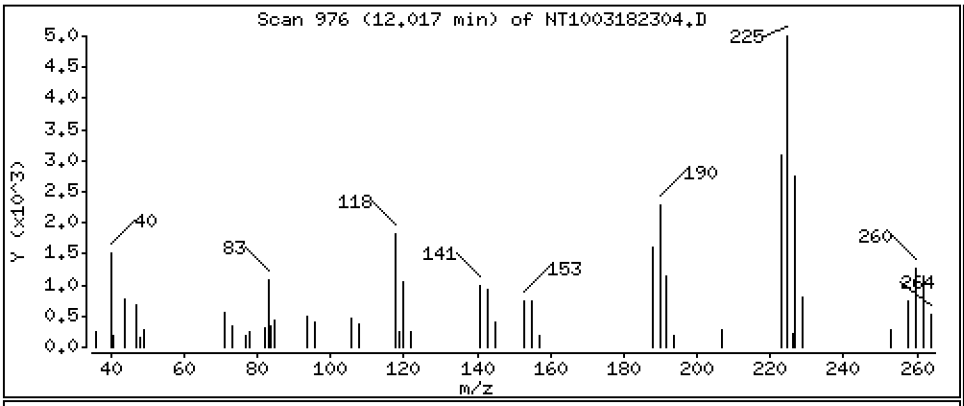
Operator: VTS

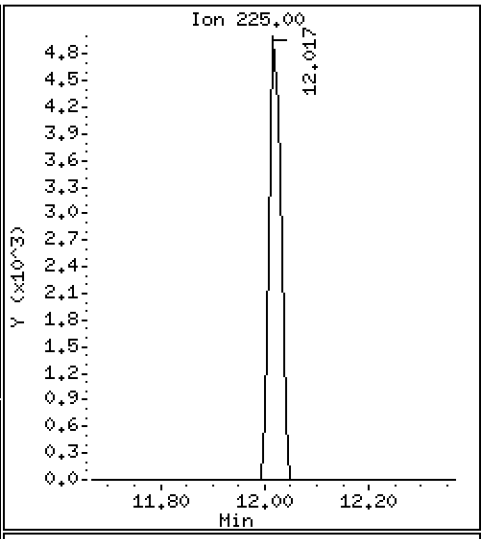
Column phase: ZB-5msi

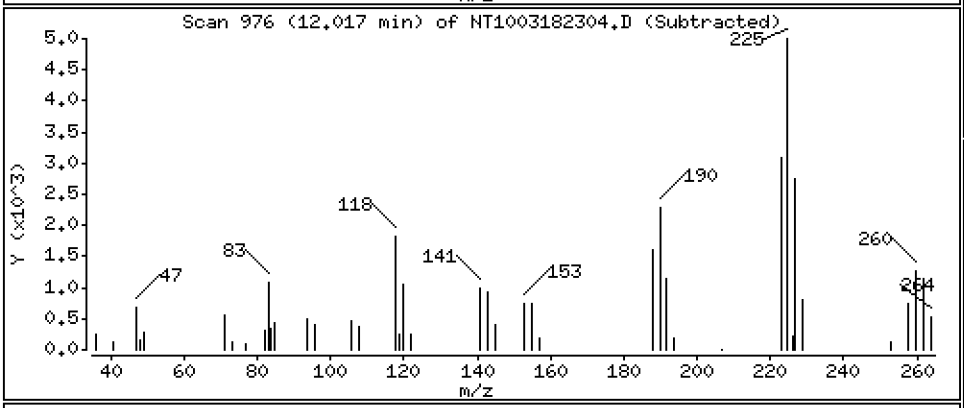
Column diameter: 0.25

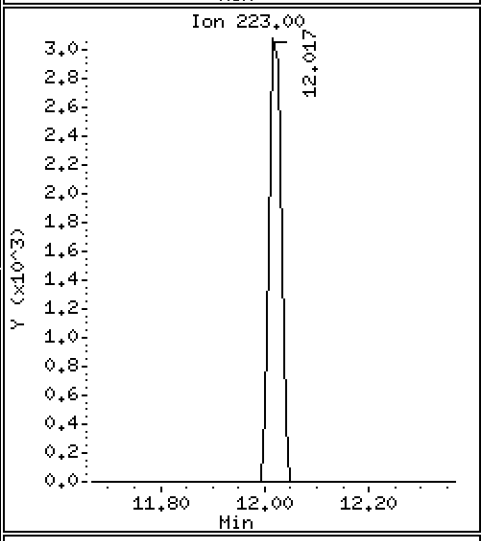
30 Hexachlorobutadiene

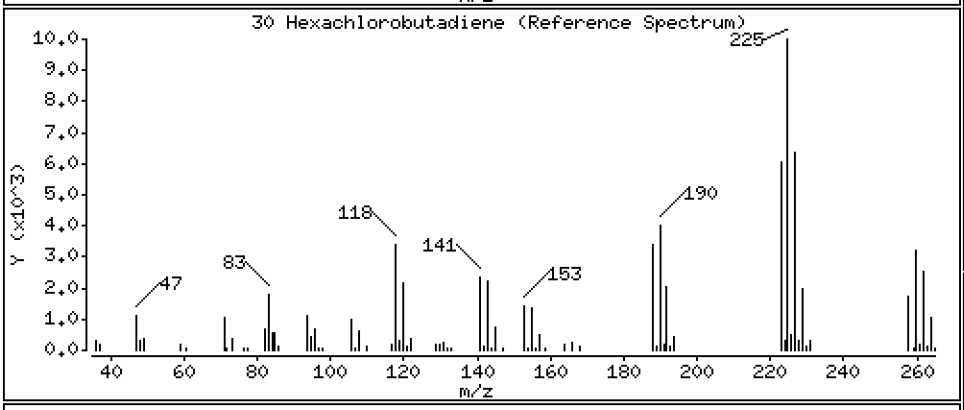
Concentration: 0.2224 ug/mL

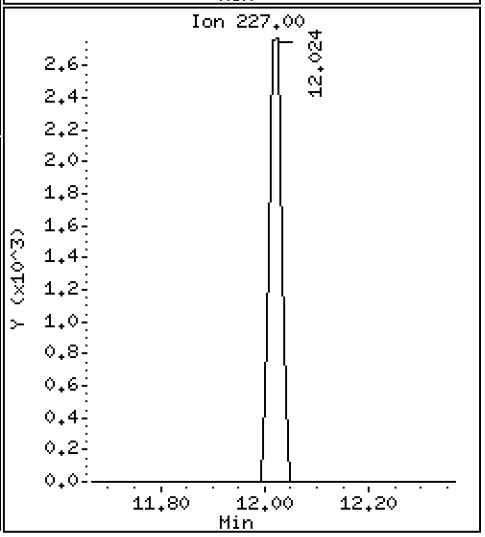


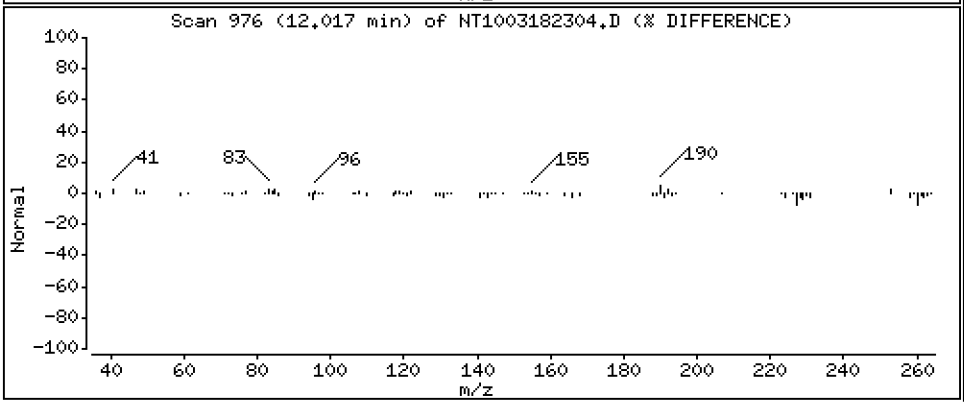












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

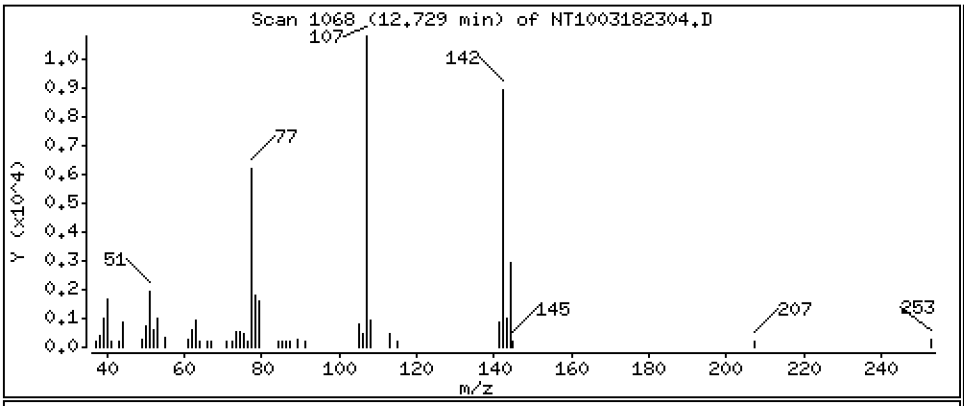
Operator: VTS

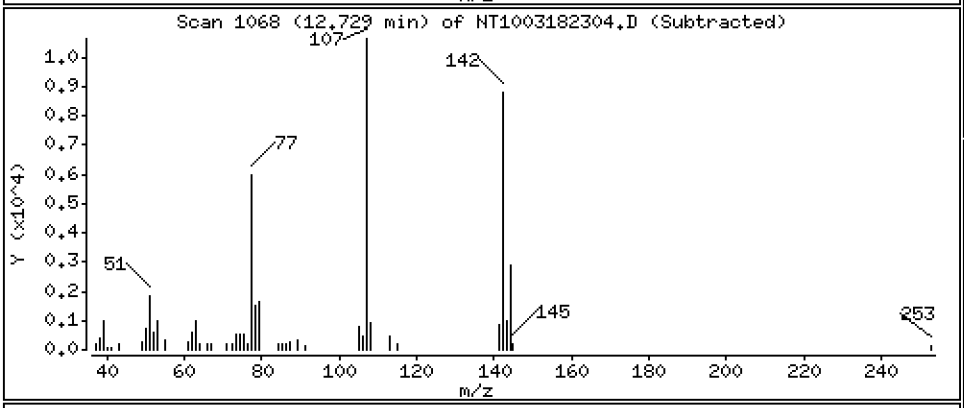
Column phase: ZB-5msi

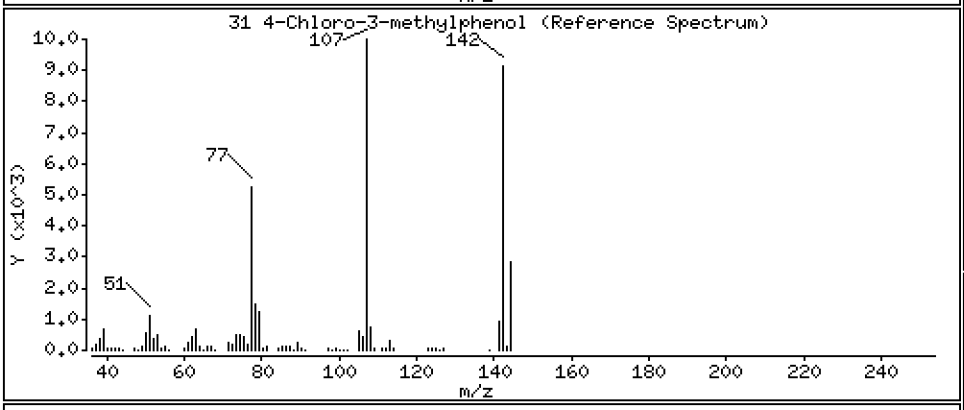
Column diameter: 0.25

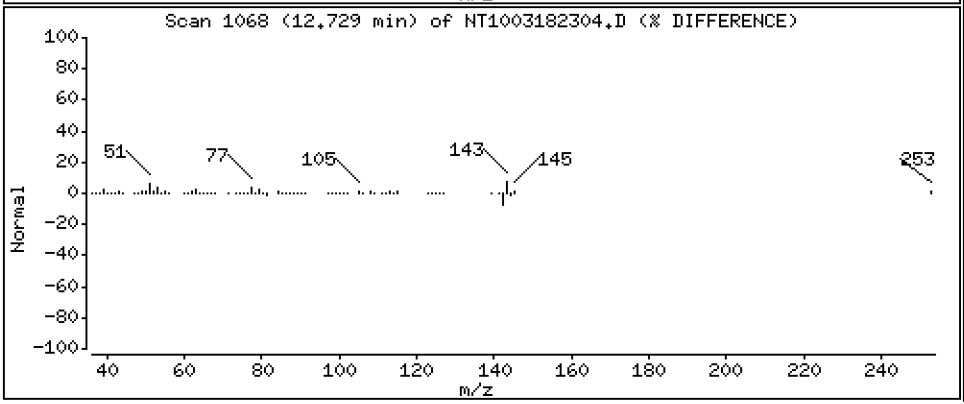
31 4-Chloro-3-methylphenol

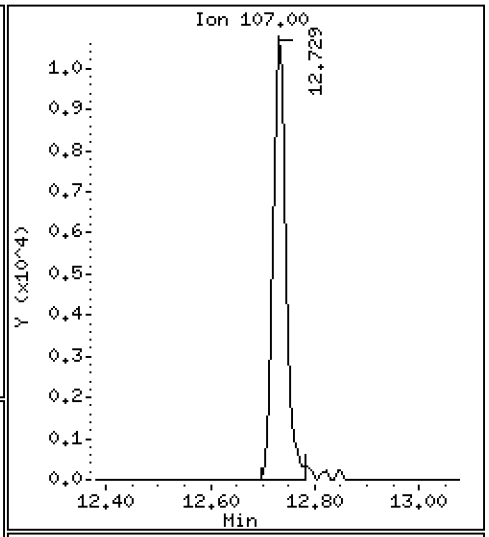
Concentration: 0.3424 ug/mL

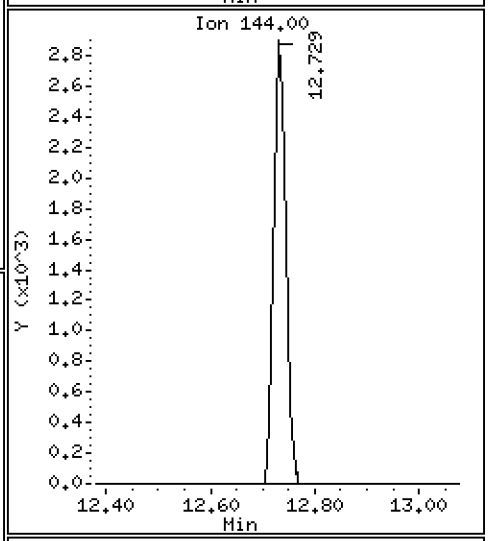


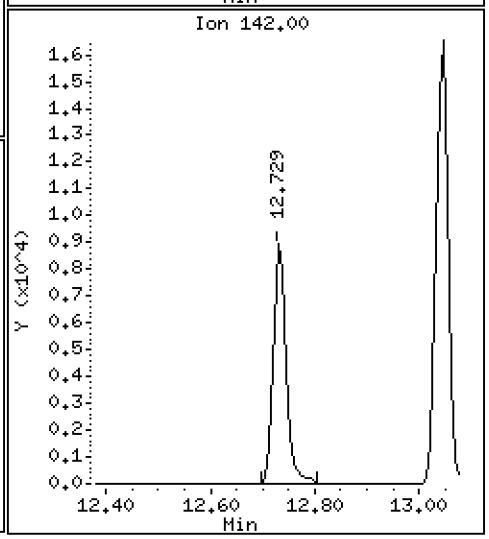












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

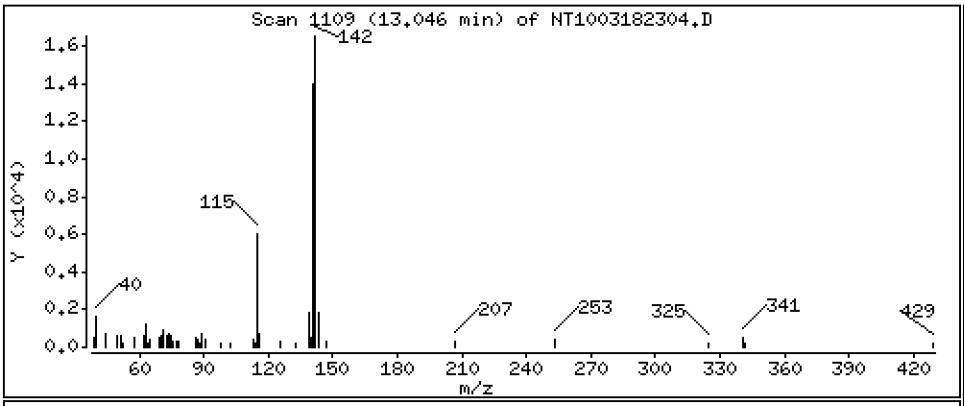
Operator: VTS

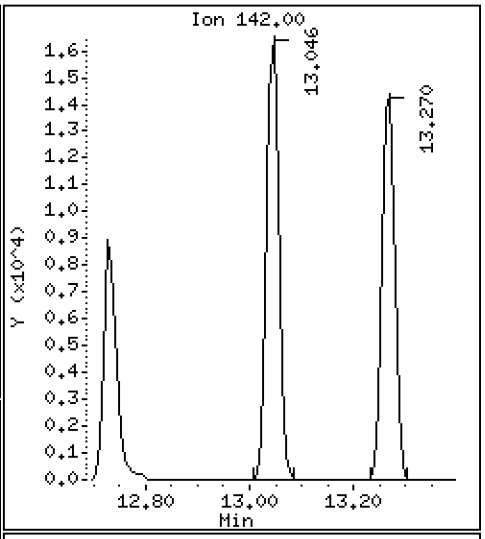
Column phase: ZB-5msi

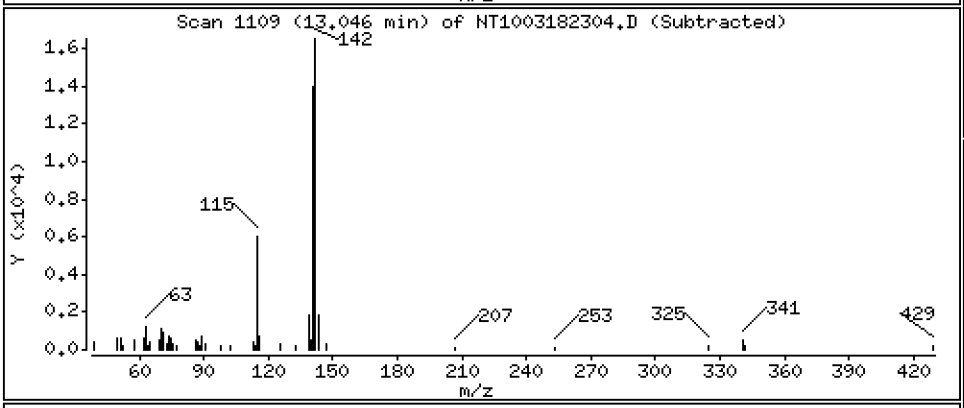
Column diameter: 0.25

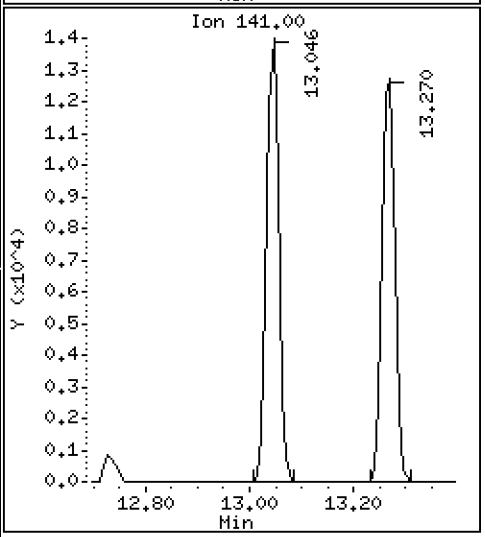
32 2-Methylnaphthalene

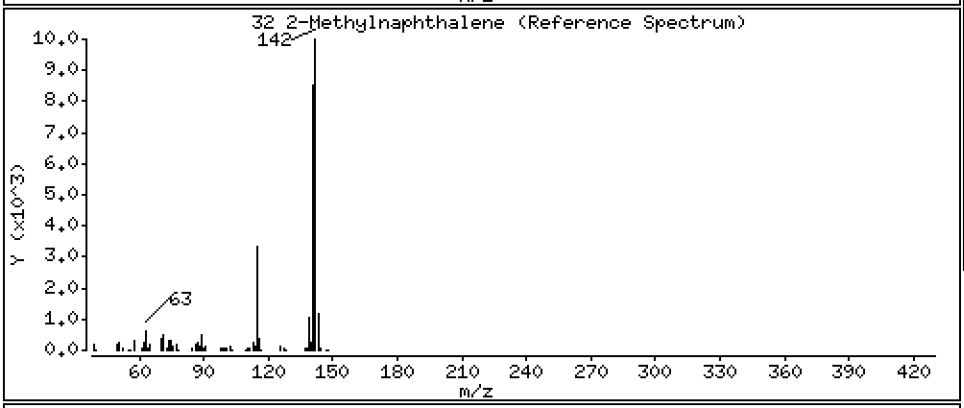
Concentration: 0.2040 ug/mL

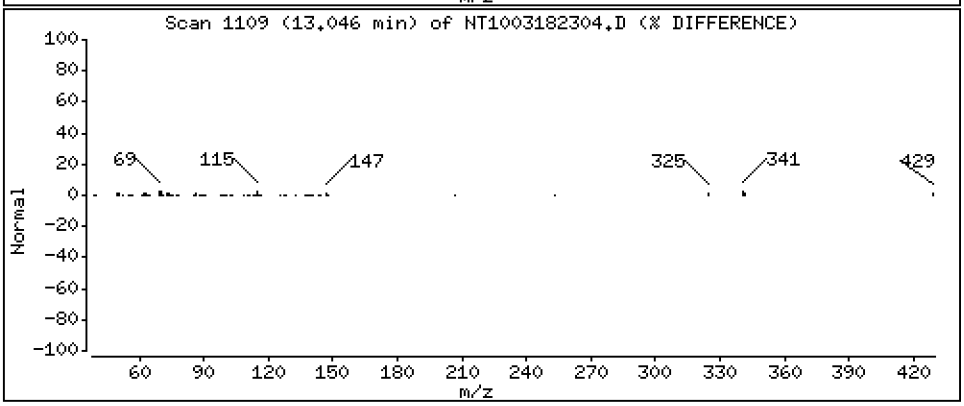












Date : 18-MAR-2023 19:37

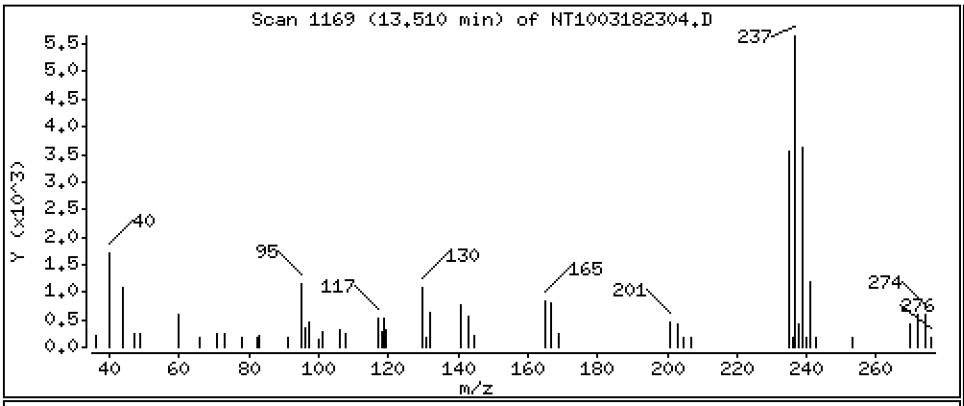
Client ID: Instrument: nt10.i

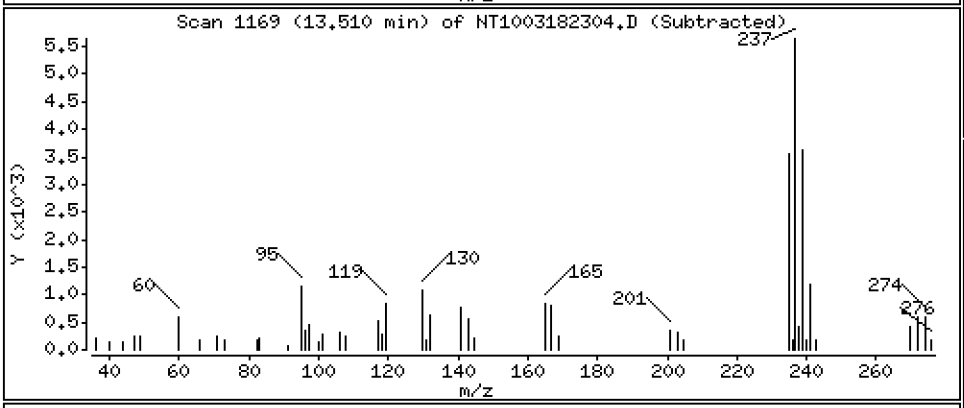
Sample Info: SLC0504-LCV1

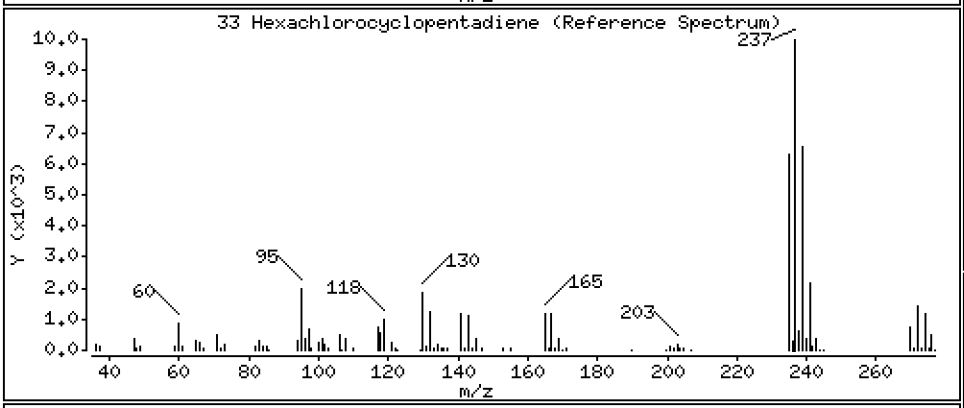
Operator: VTS

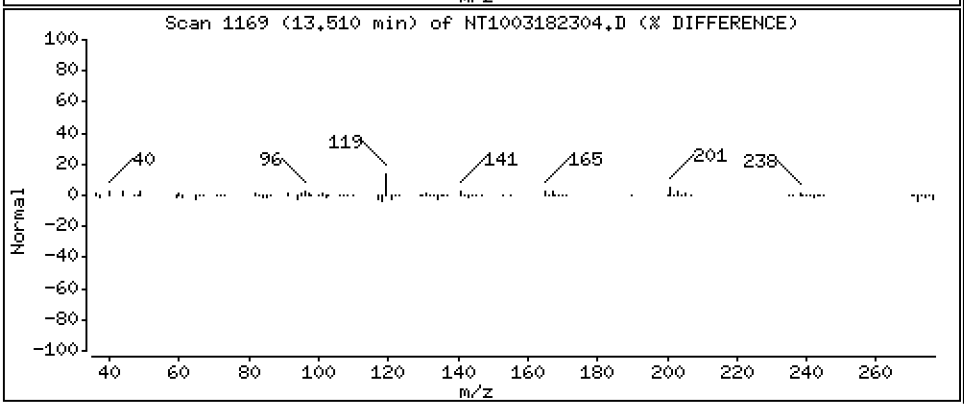
Column phase: ZB-5msi Column diameter: 0.25

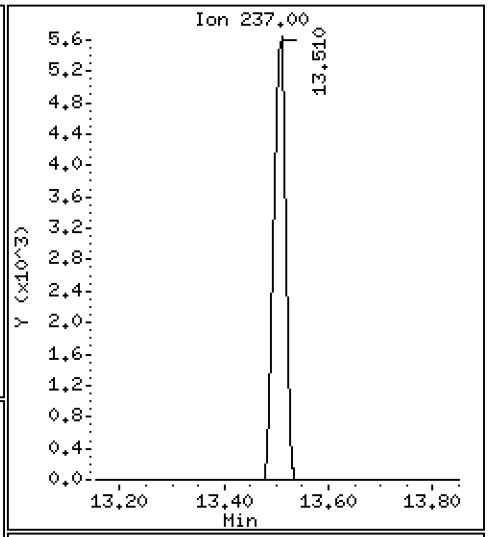
33 Hexachlorocyclopentadiene Concentration: 0.2645 ug/mL

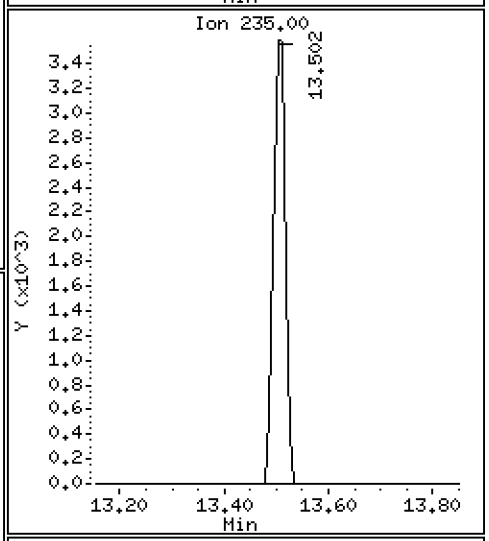


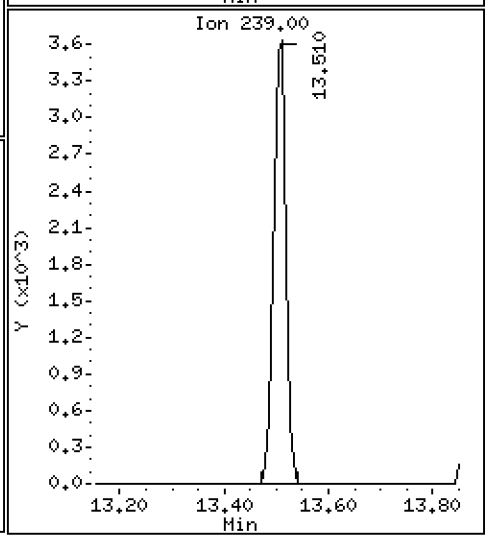












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

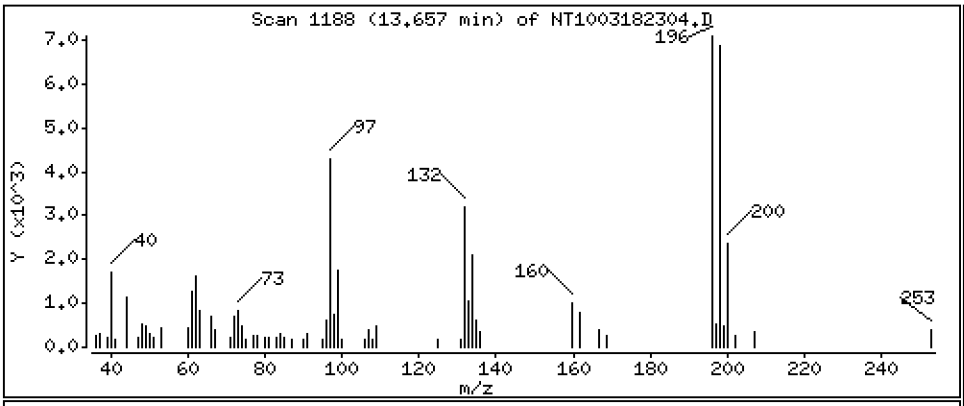
Operator: VTS

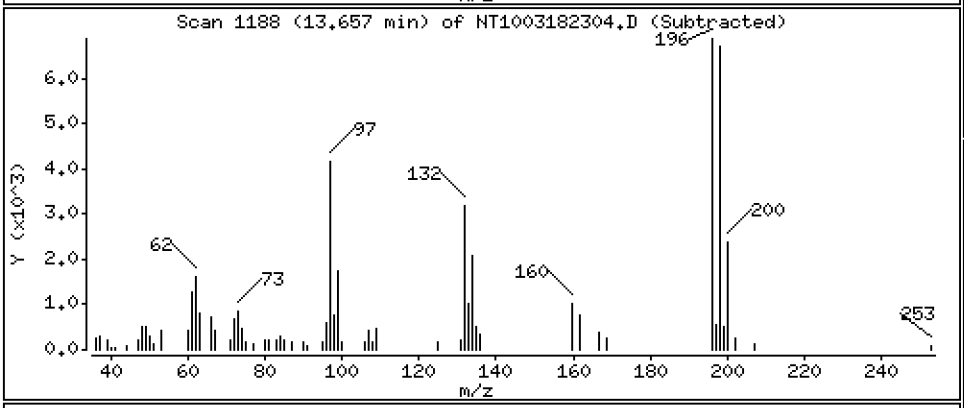
Column phase: ZB-5msi

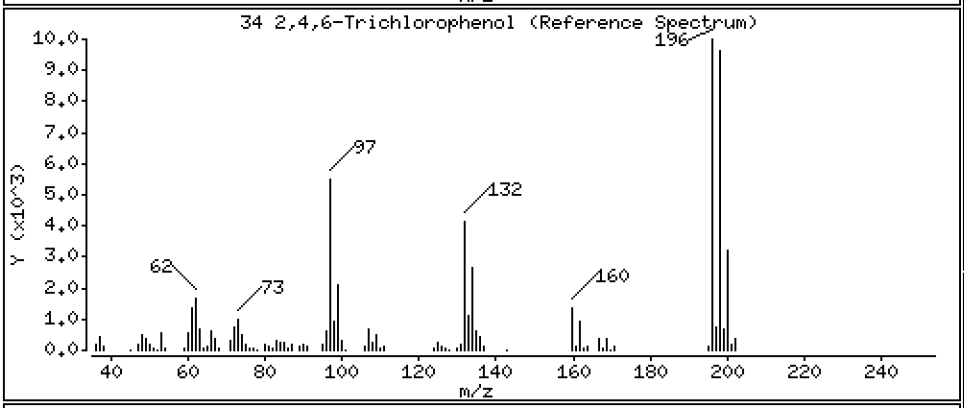
Column diameter: 0.25

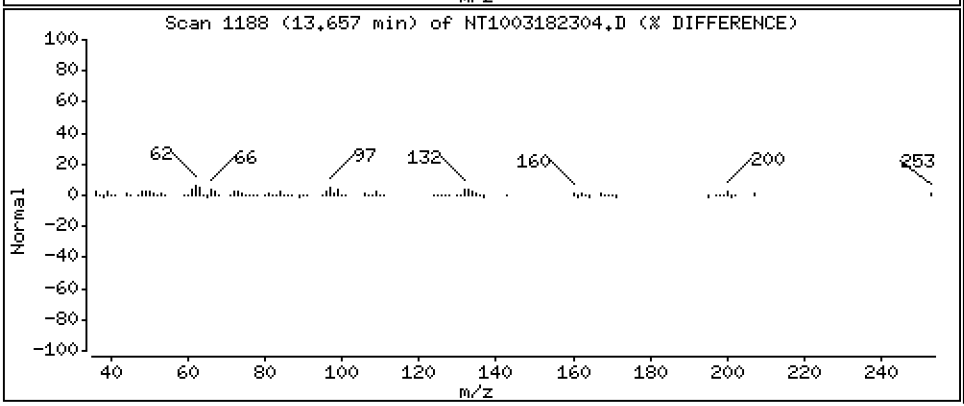
34 2,4,6-Trichlorophenol

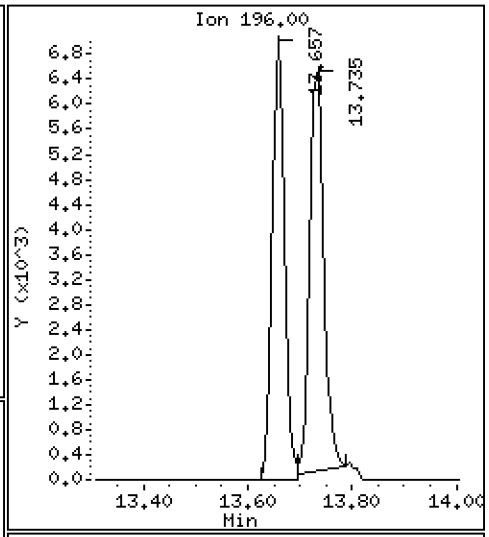
Concentration: 0.3200 ug/mL

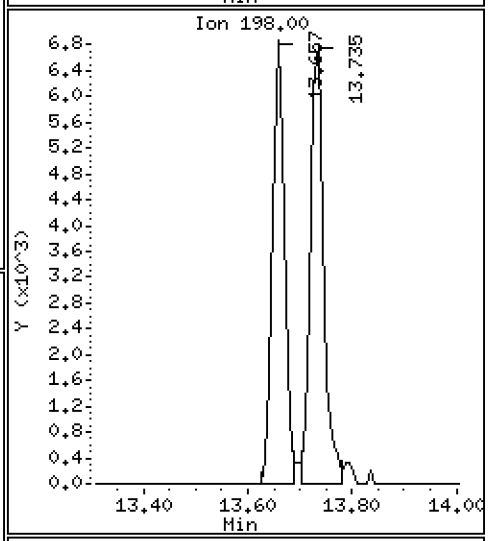


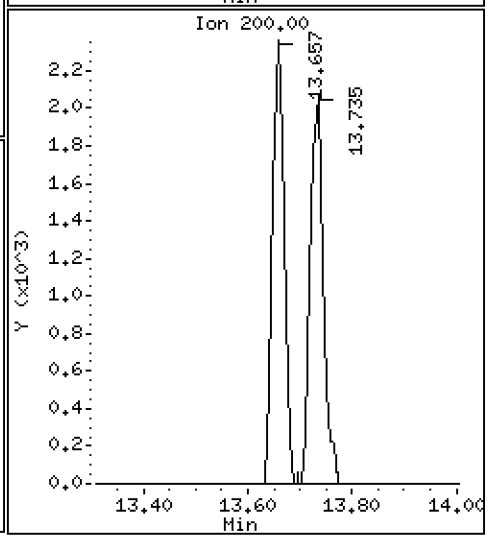












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

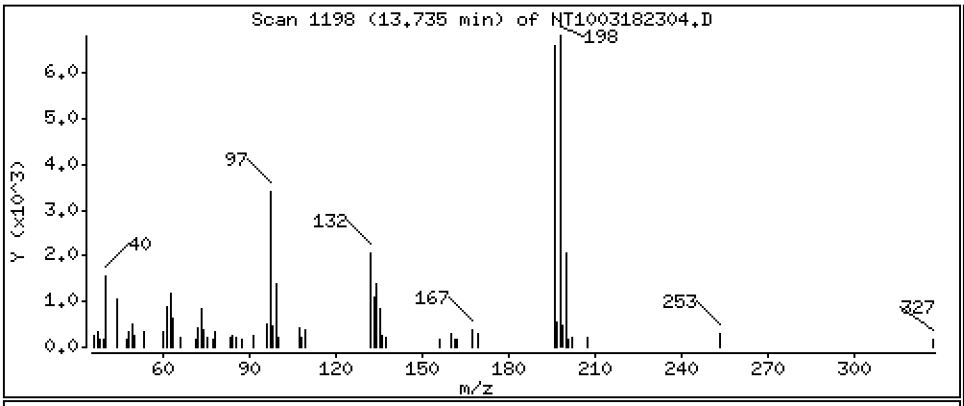
Operator: VTS

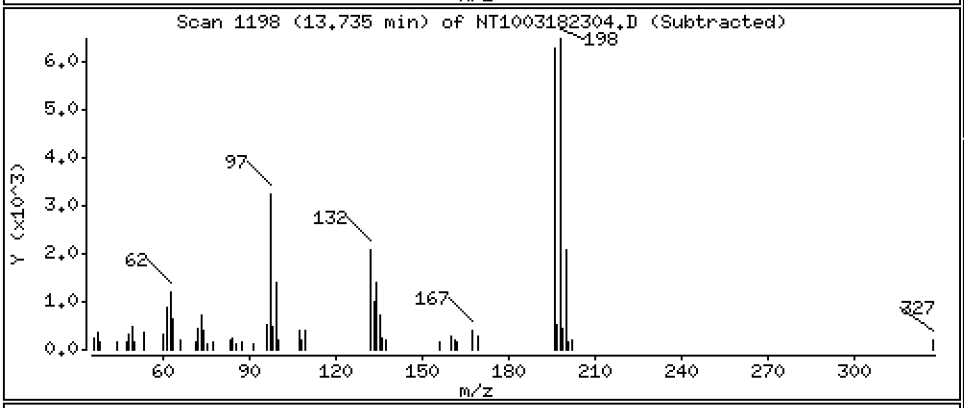
Column phase: ZB-5msi

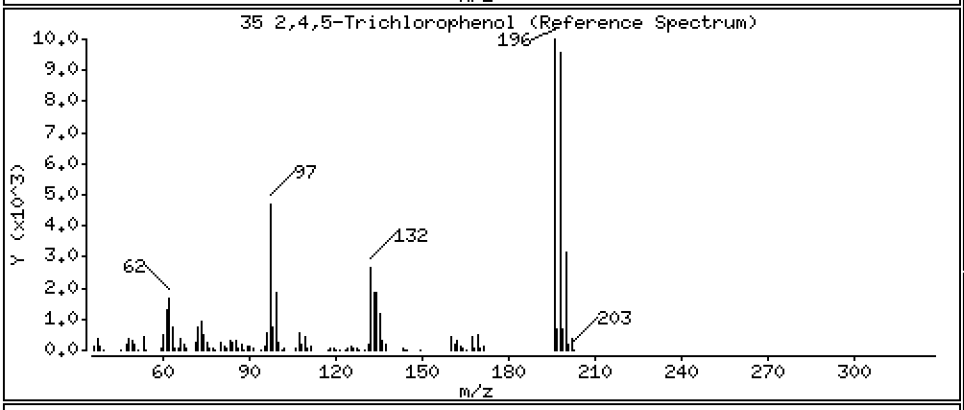
Column diameter: 0.25

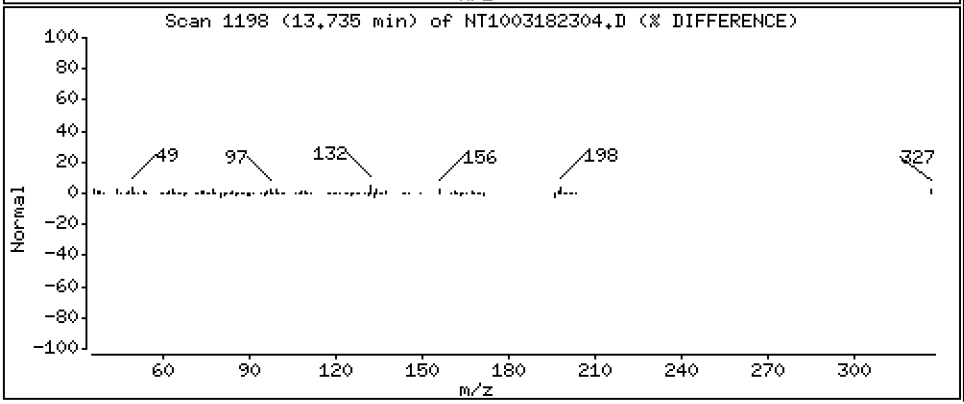
35 2,4,5-Trichlorophenol

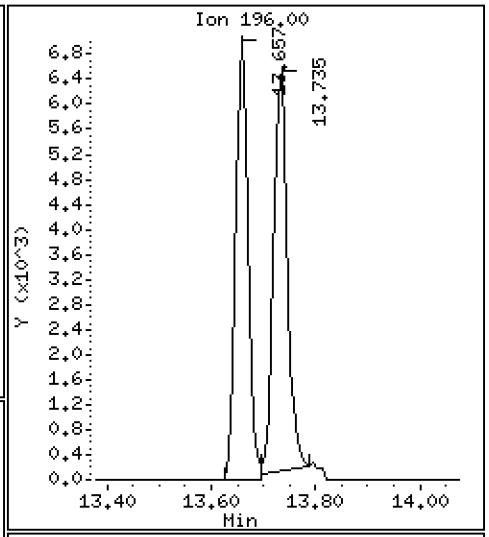
Concentration: 0.2993 ug/mL

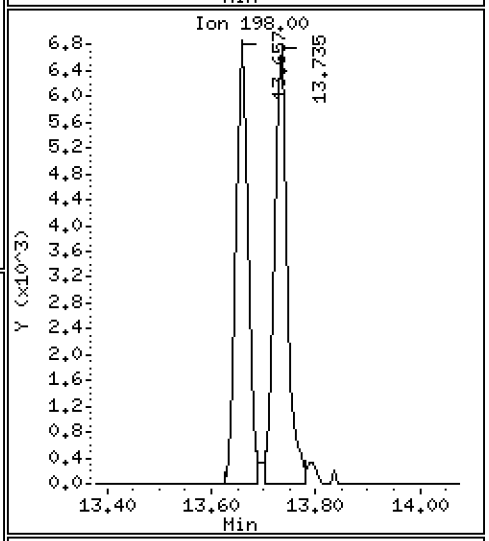


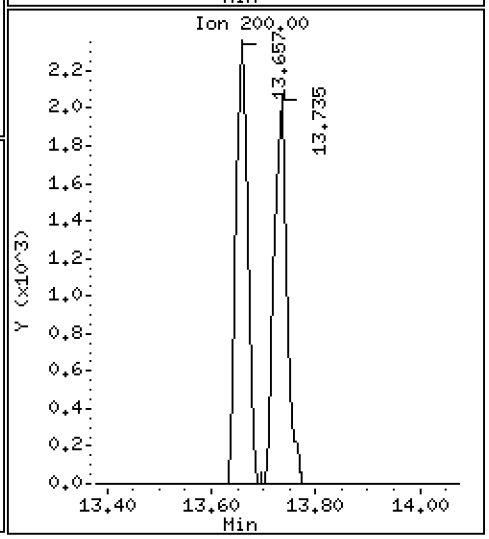












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

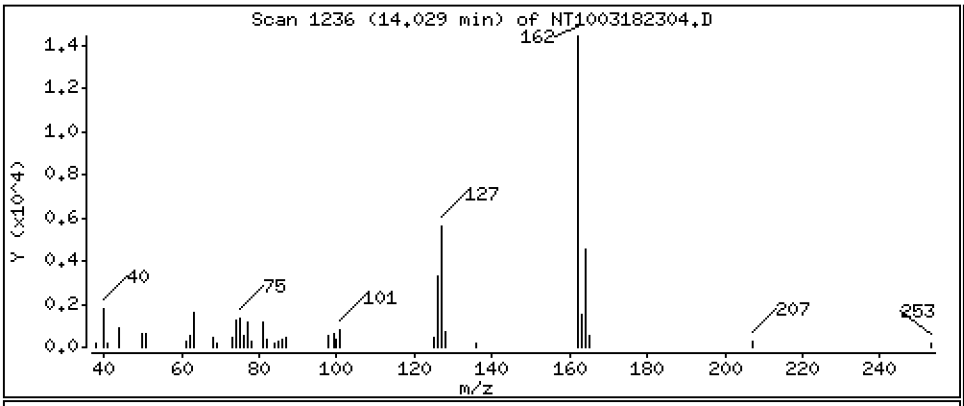
Operator: VTS

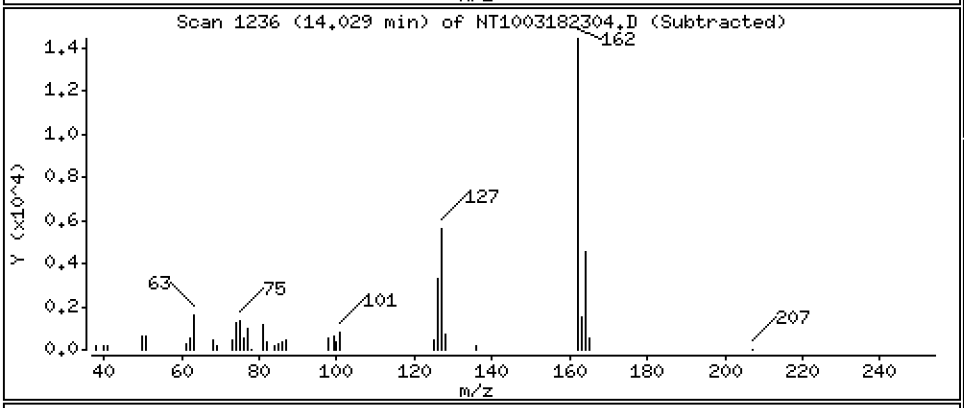
Column phase: ZB-5msi

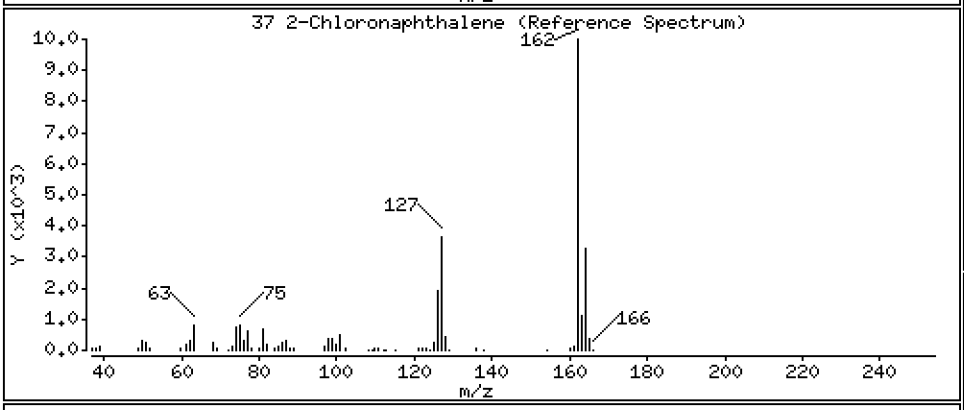
Column diameter: 0.25

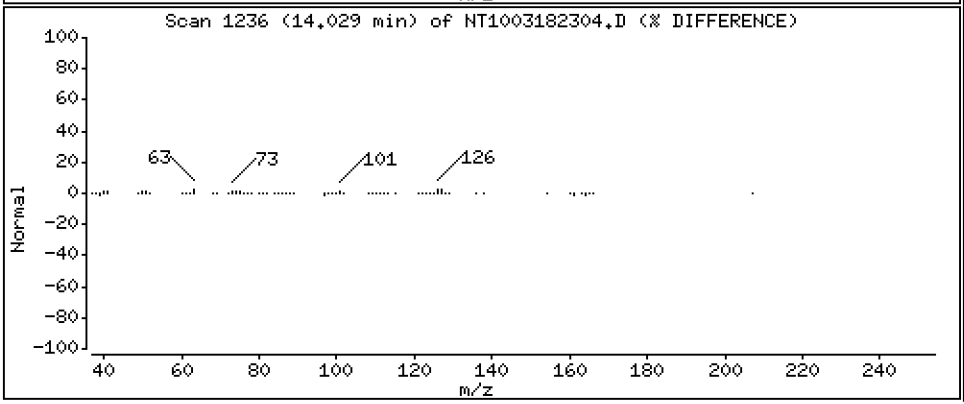
37 2-Chloronaphthalene

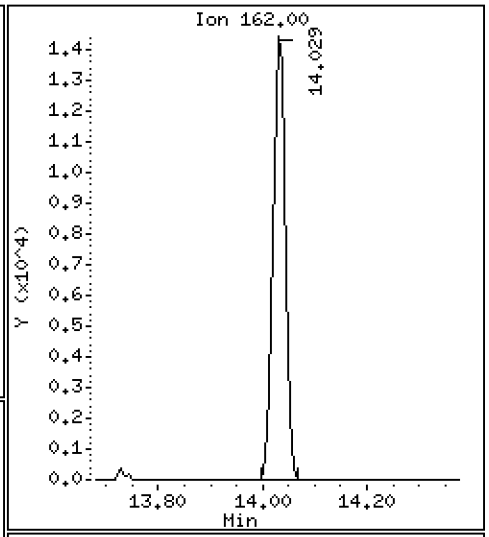
Concentration: 0.2026 ug/mL

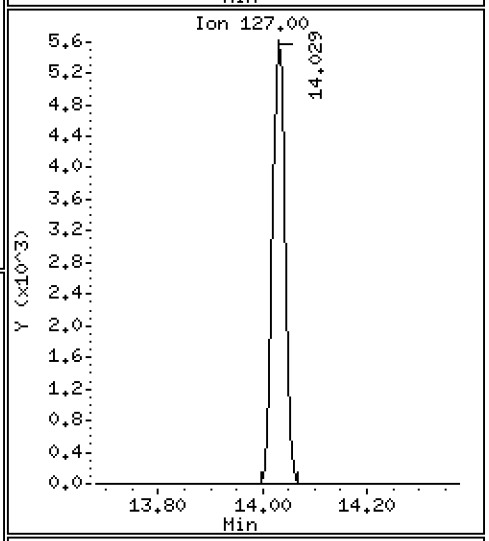


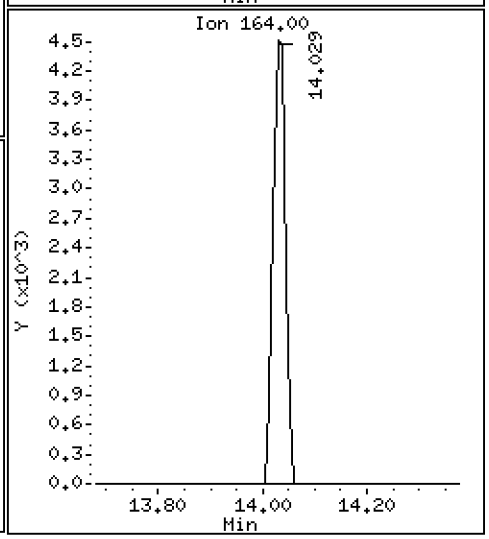












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

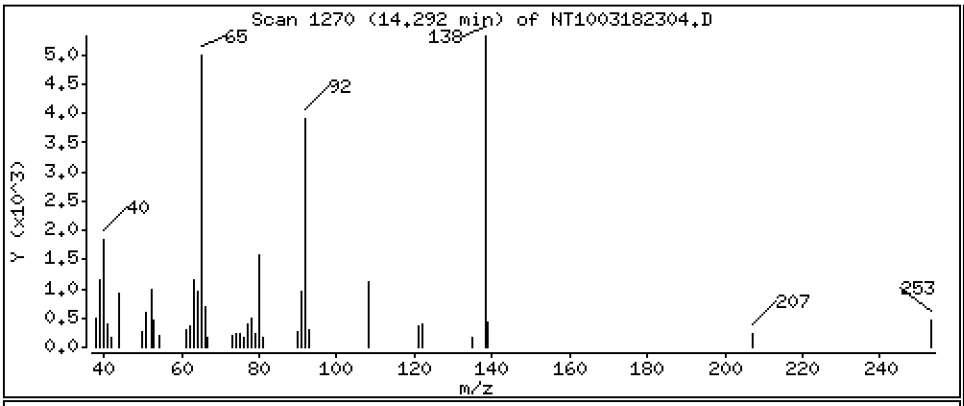
Operator: VTS

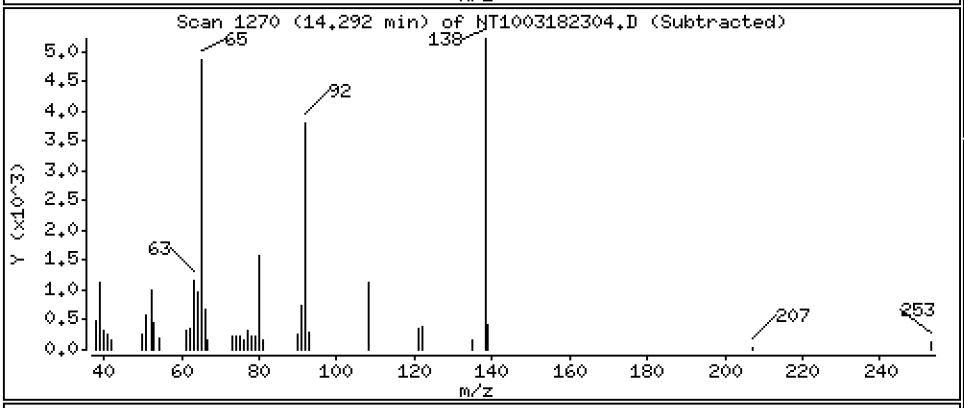
Column phase: ZB-5msi

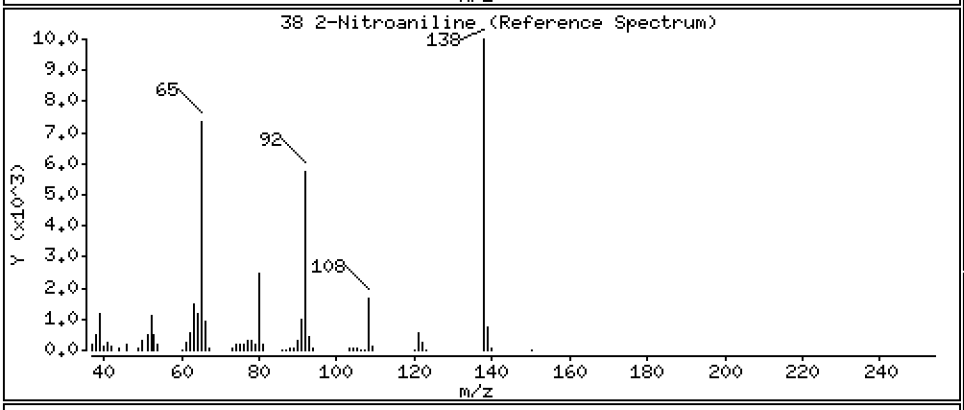
Column diameter: 0.25

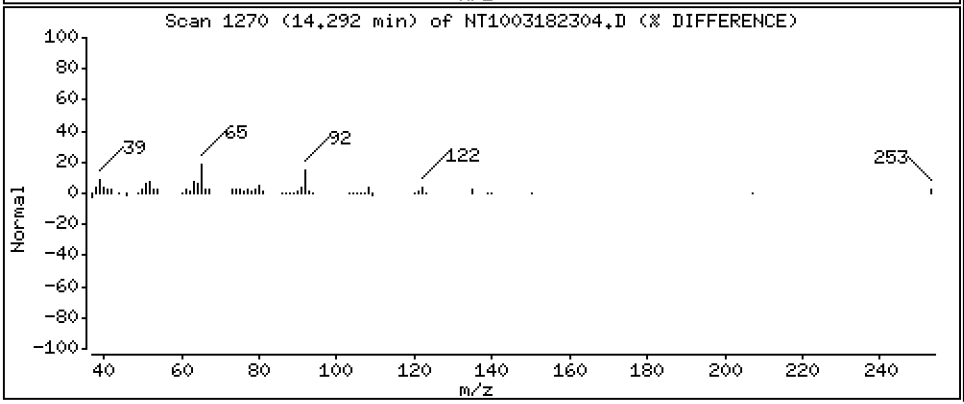
38 2-Nitroaniline

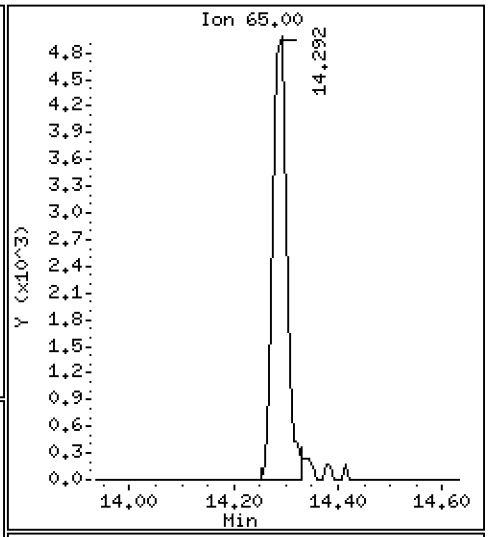
Concentration: 0.2848 ug/mL

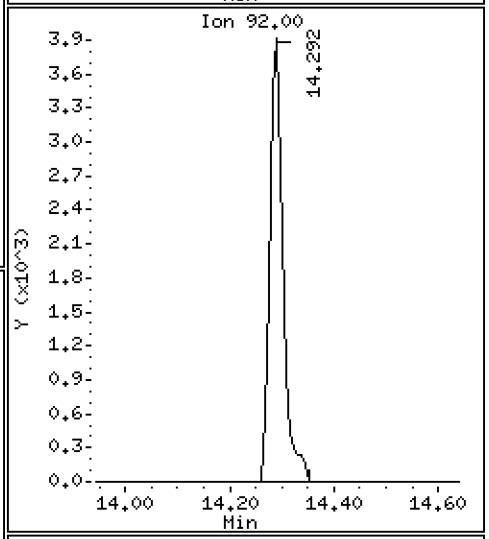


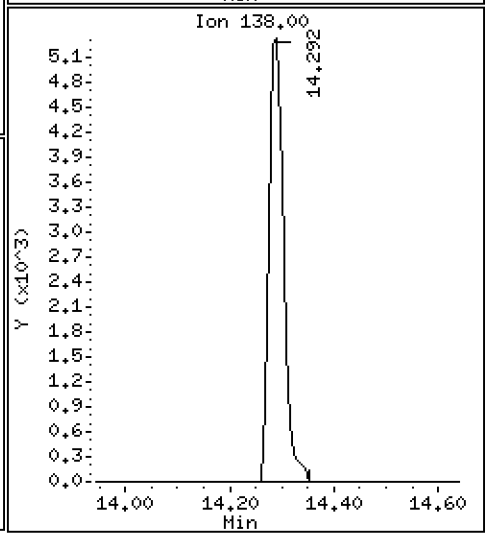












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

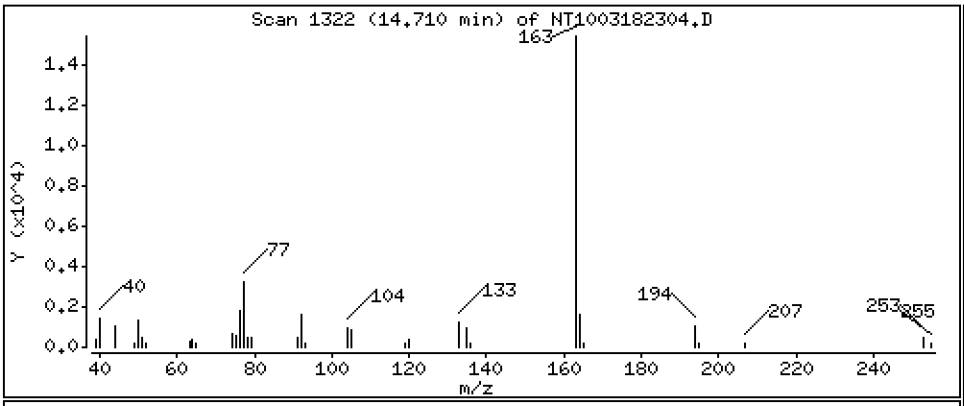
Operator: VTS

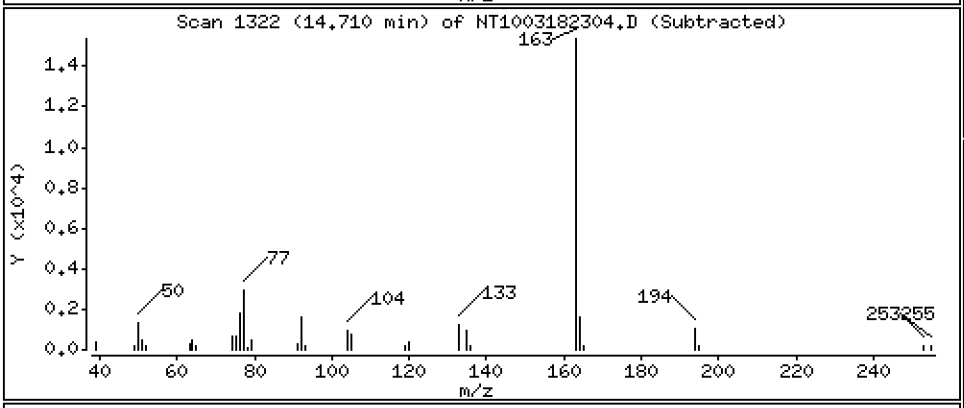
Column phase: ZB-5msi

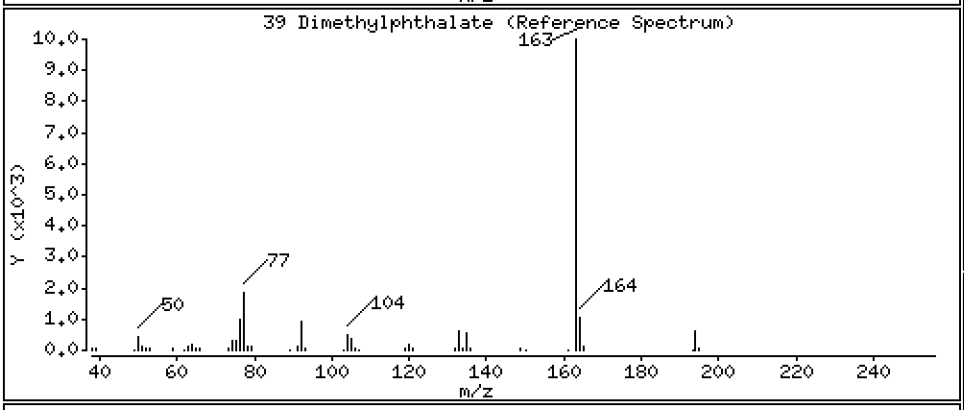
Column diameter: 0.25

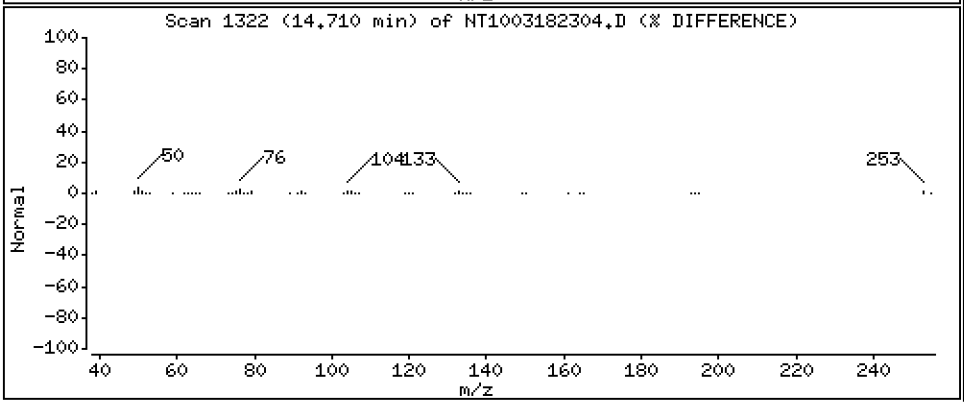
39 Dimethylphthalate

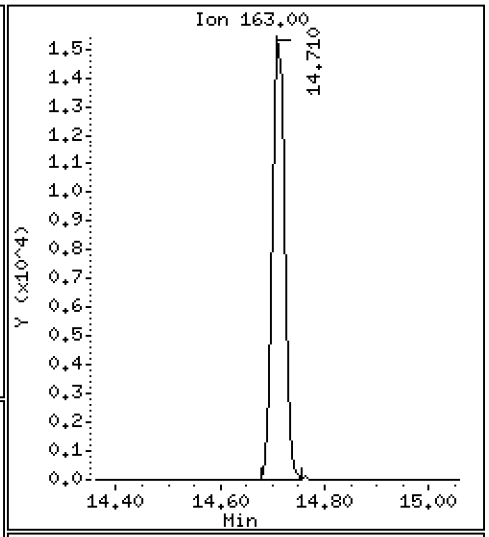
Concentration: 0.2095 ug/mL

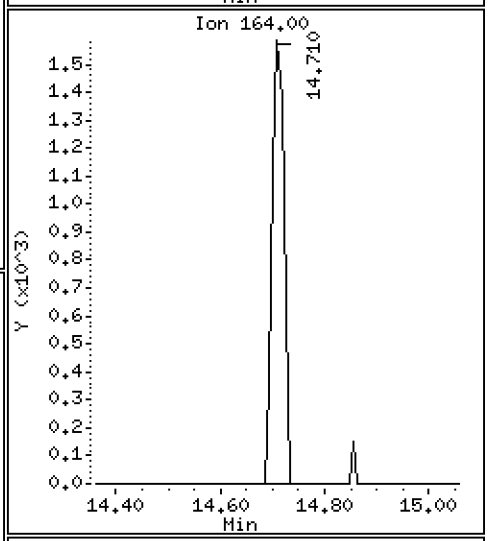


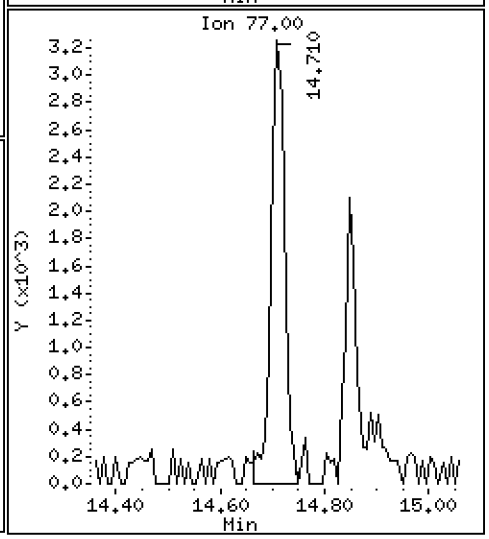












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

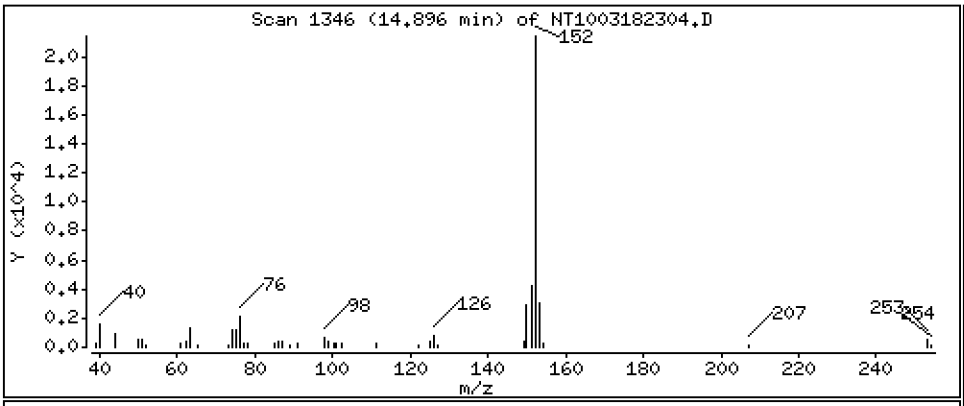
Operator: VTS

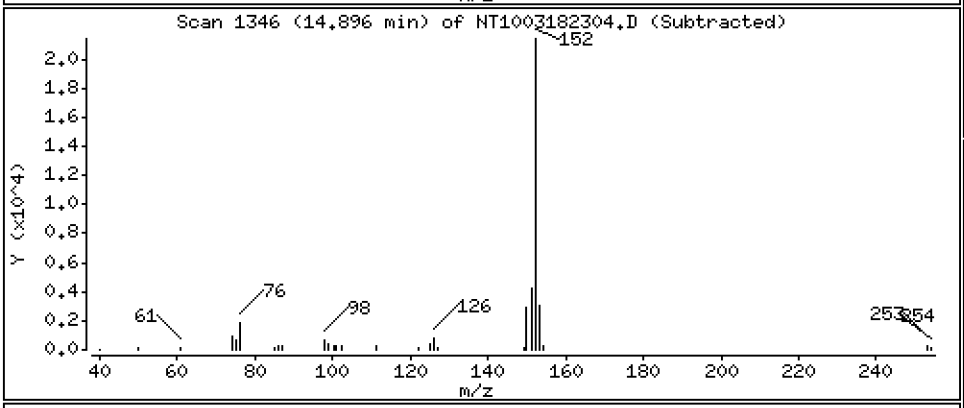
Column phase: ZB-5msi

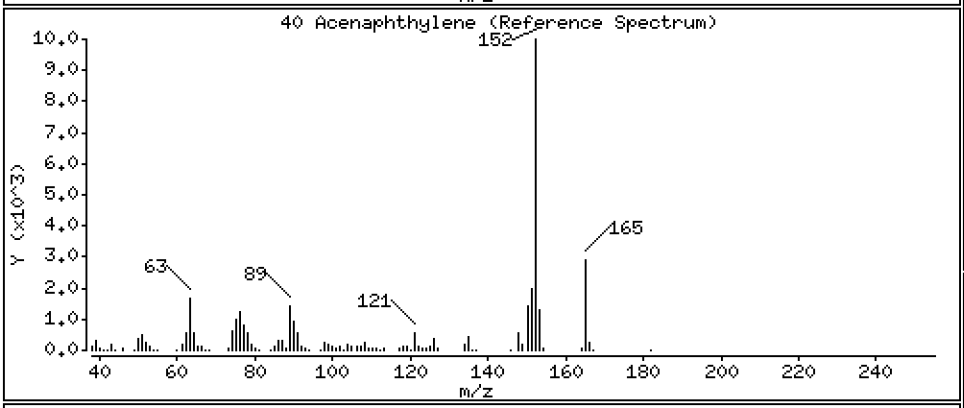
Column diameter: 0.25

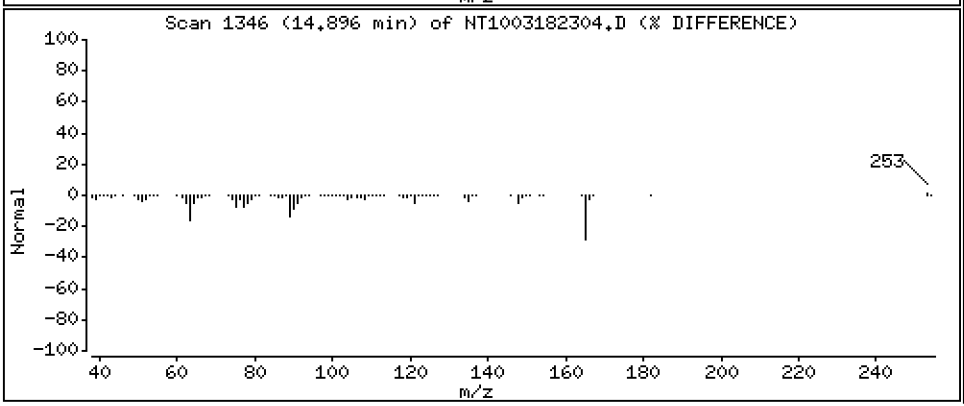
40 Acenaphthylene

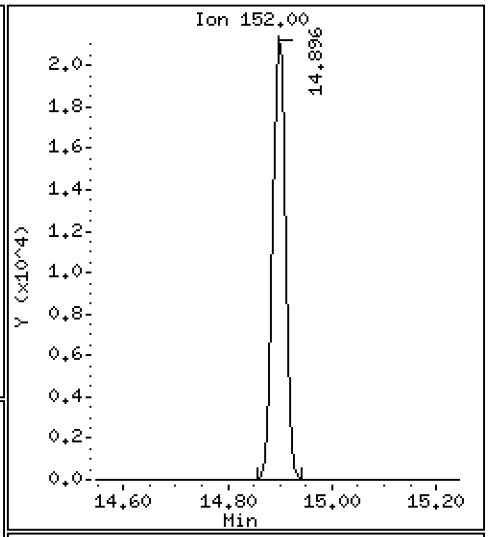
Concentration: 0.2000 ug/mL

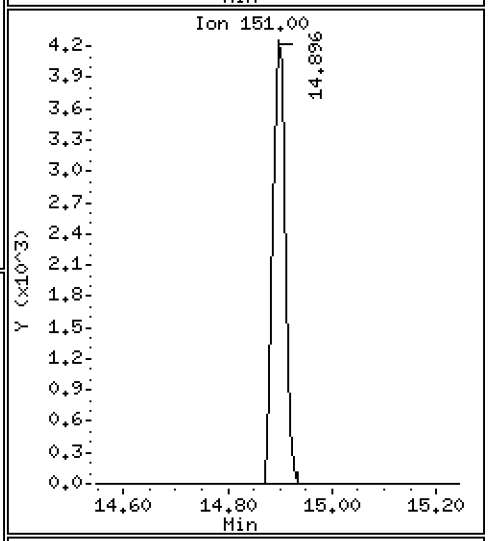


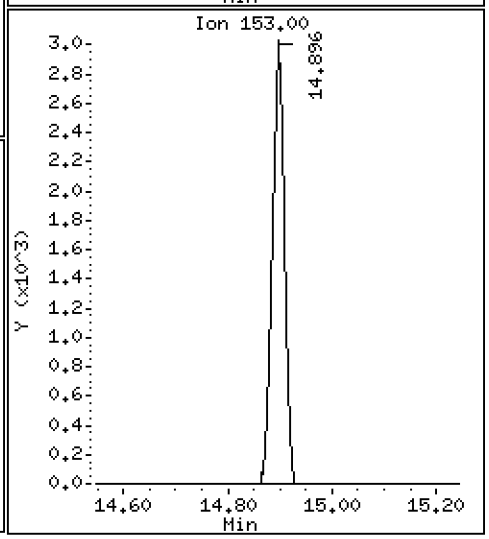












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

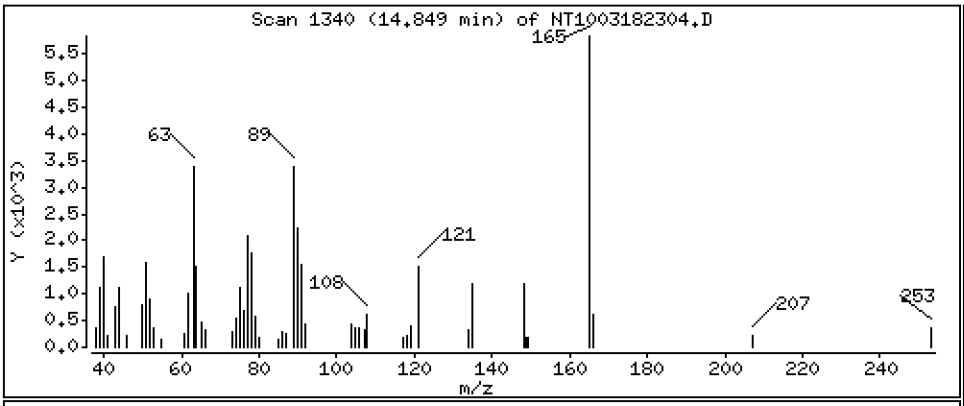
Operator: VTS

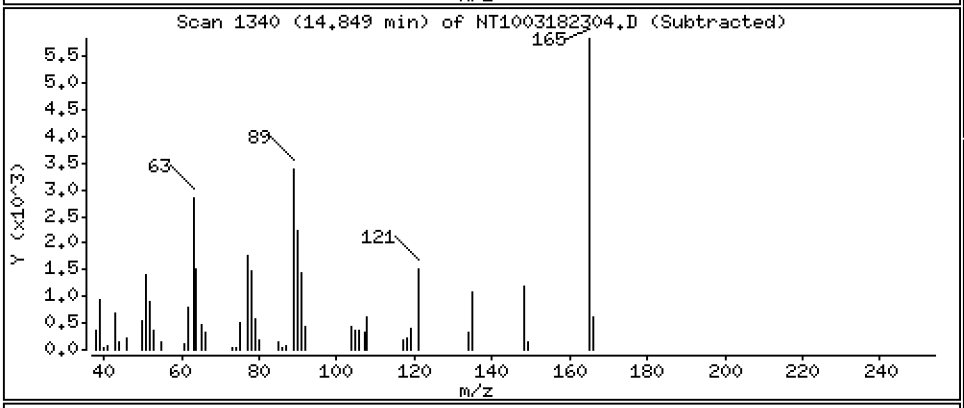
Column phase: ZB-5msi

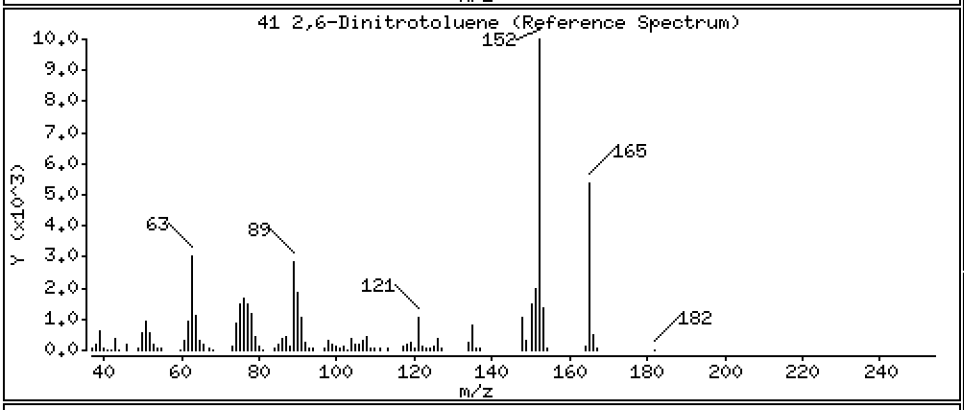
Column diameter: 0.25

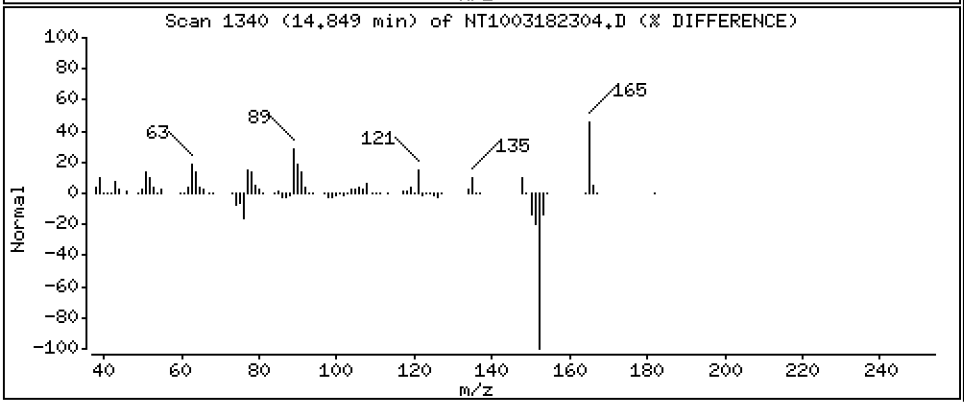
41 2,6-Dinitrotoluene

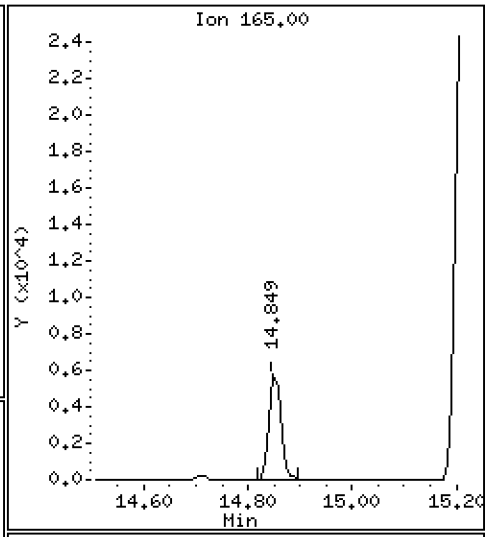
Concentration: 0.3576 ug/mL

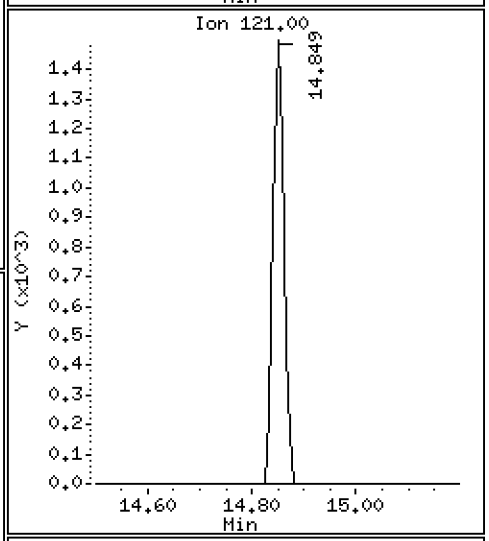


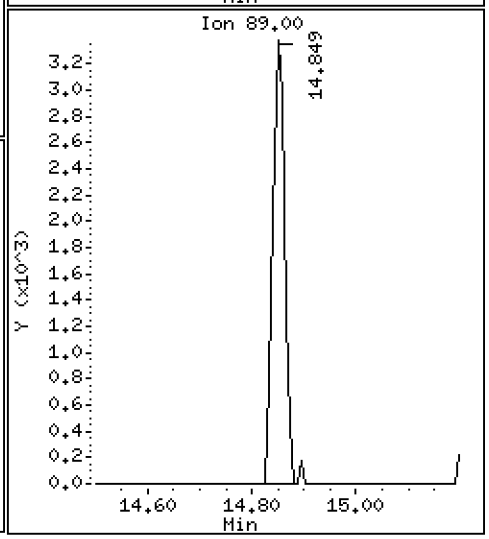












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

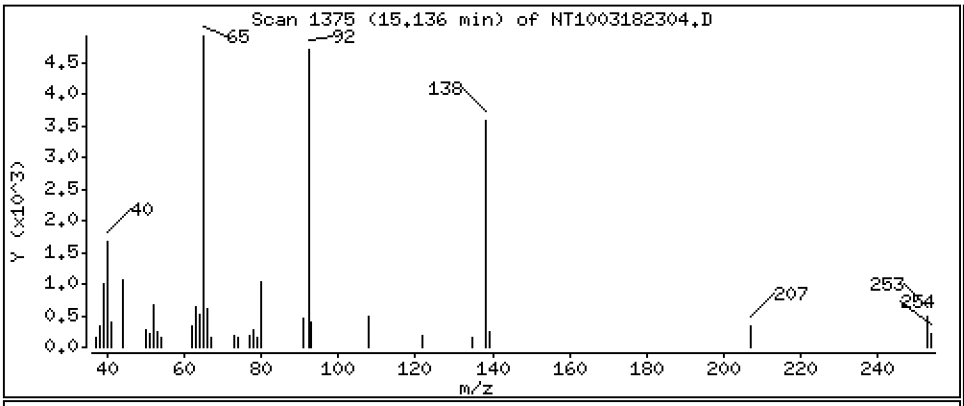
Operator: VTS

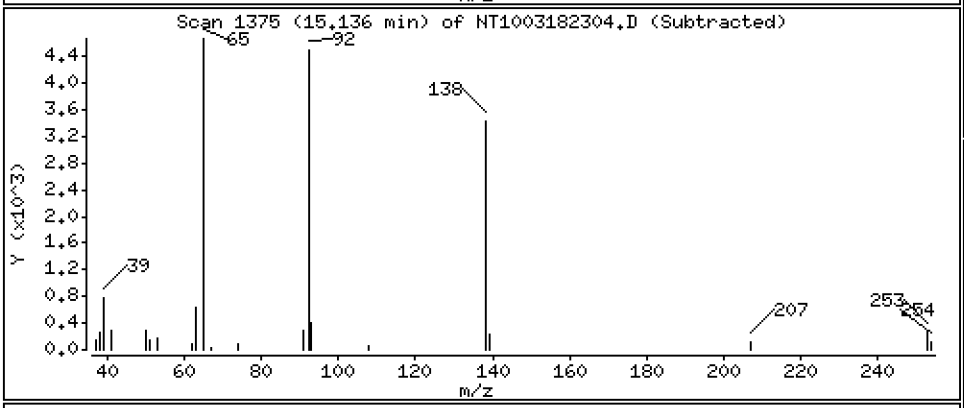
Column phase: ZB-5msi

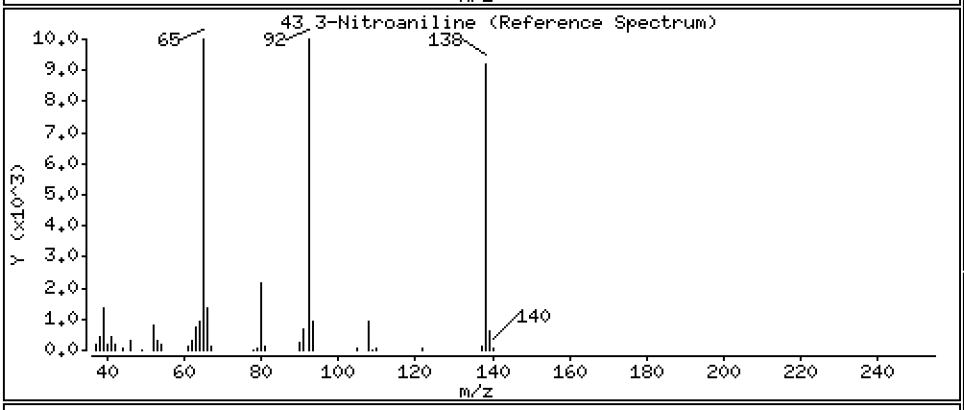
Column diameter: 0.25

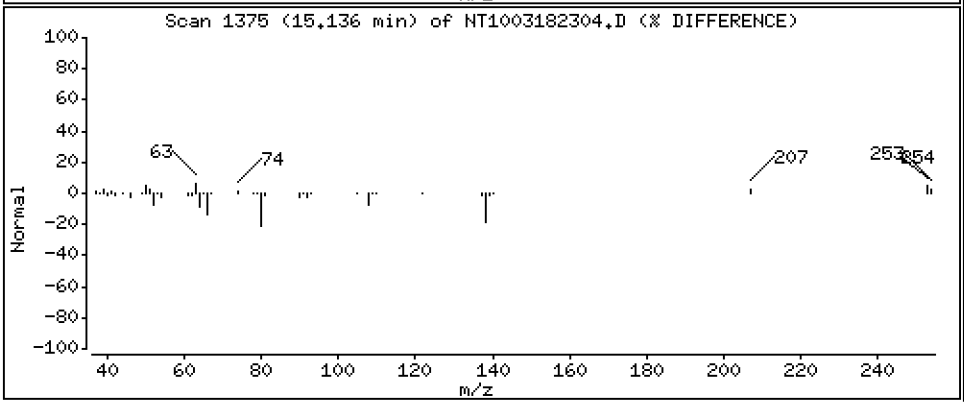
43 3-Nitroaniline

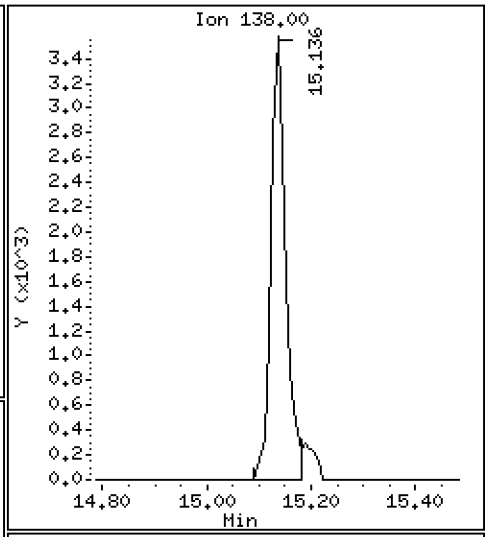
Concentration: 0.2862 ug/mL

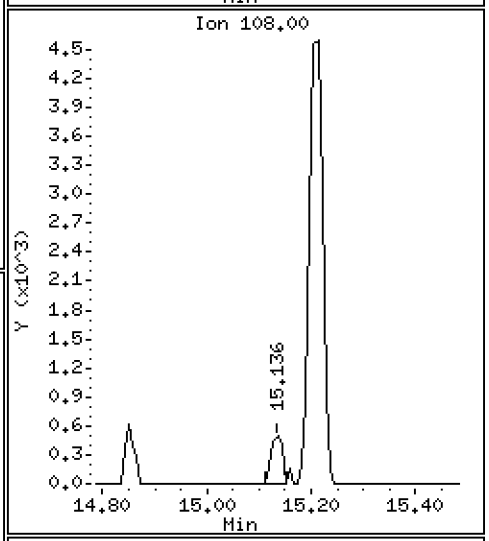


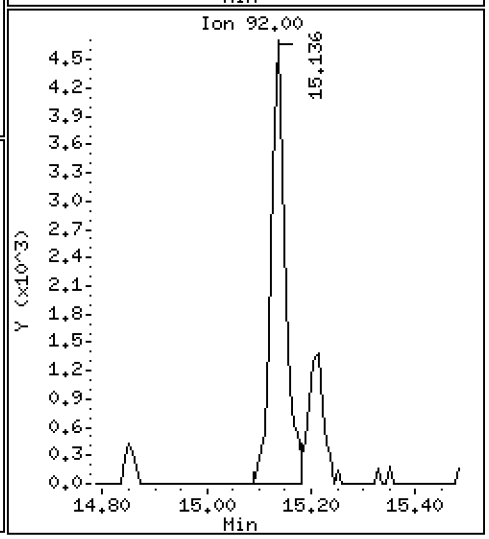












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

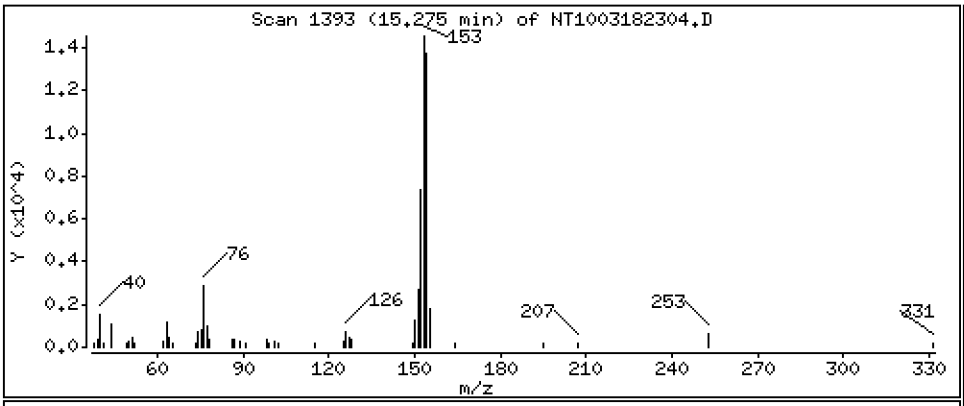
Operator: VTS

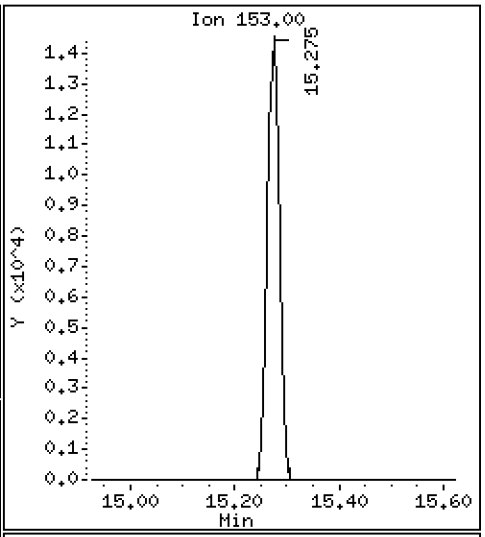
Column phase: ZB-5msi

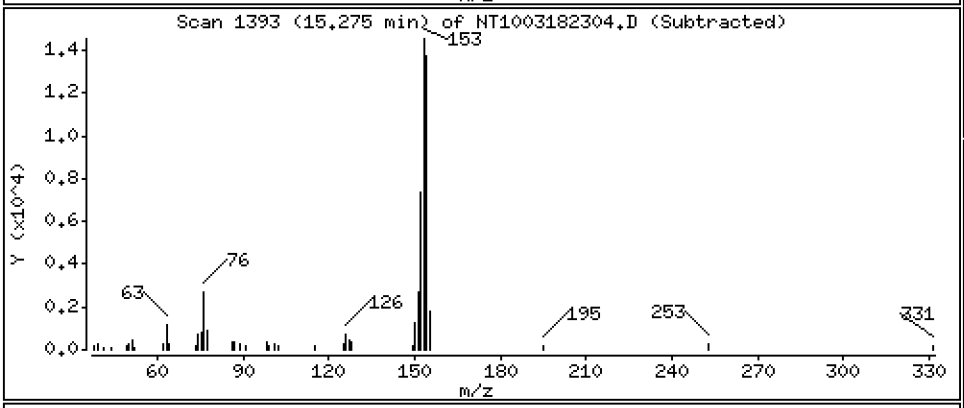
Column diameter: 0.25

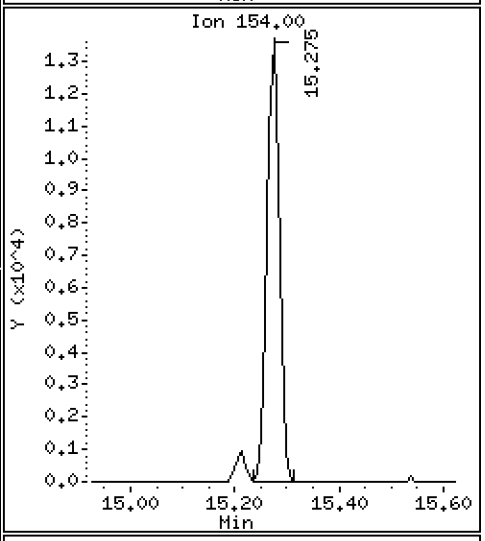
44 Acenaphthene

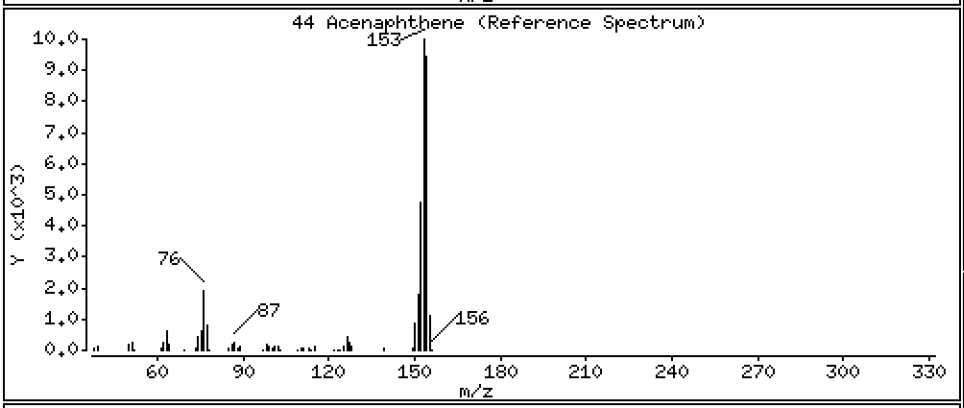
Concentration: 0.2065 ug/mL

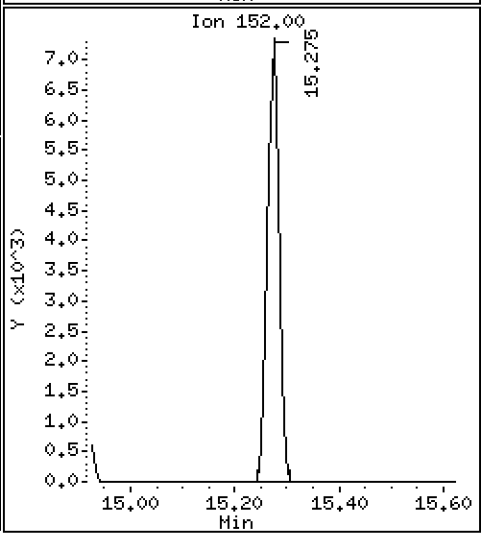


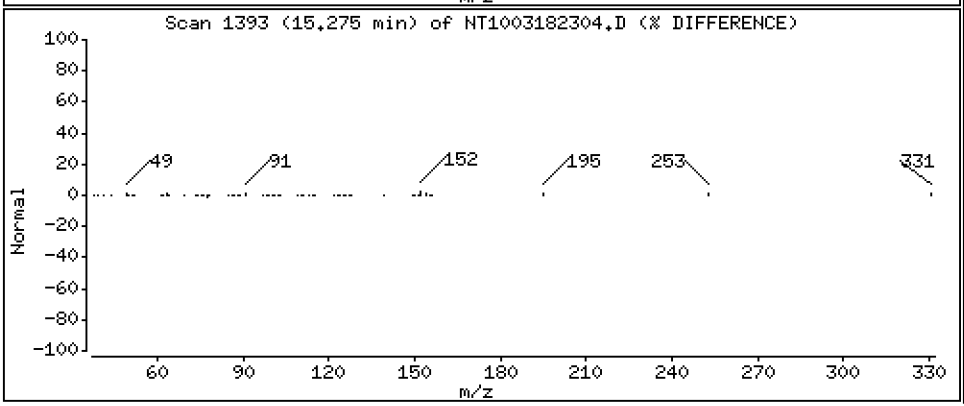












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

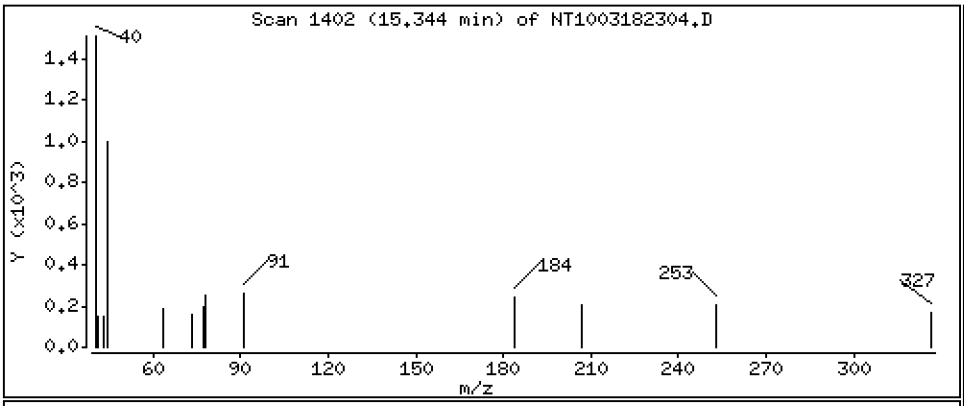
Operator: VTS

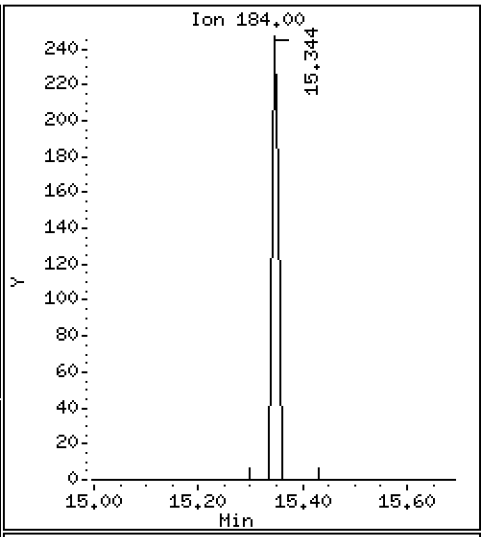
Column phase: ZB-5msi

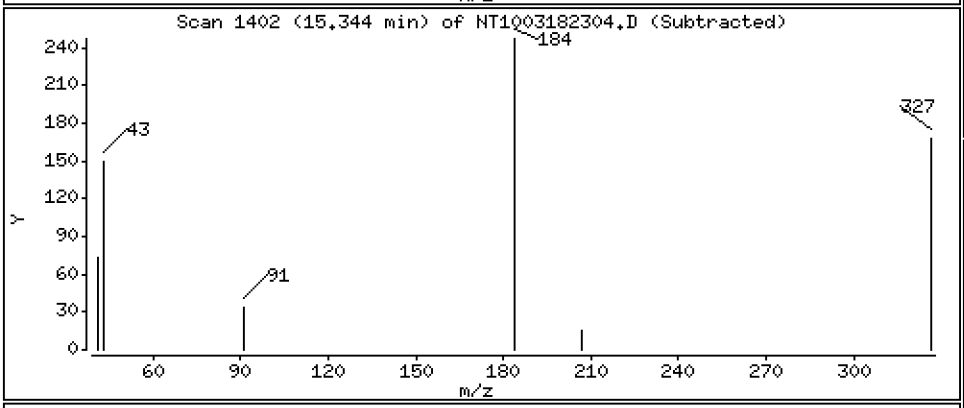
Column diameter: 0.25

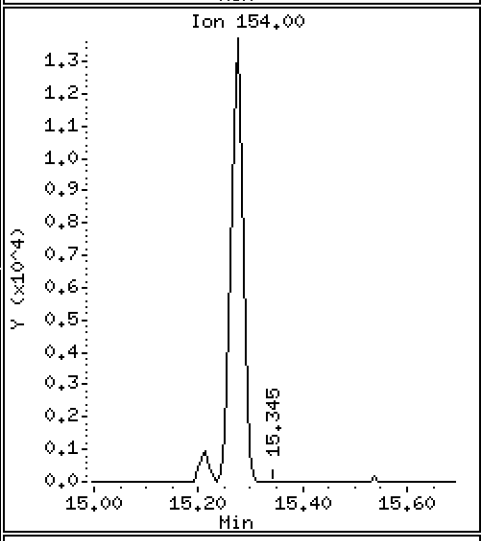
45 2,4-Dinitrophenol

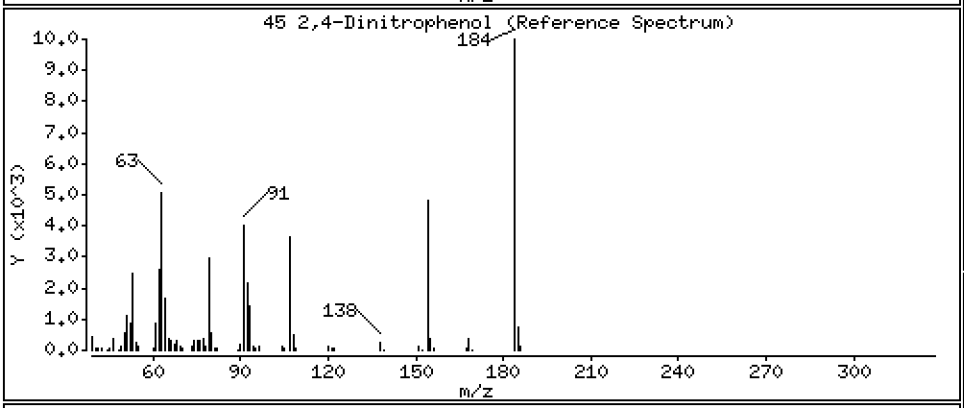
Concentration: 0.01292 ug/mL

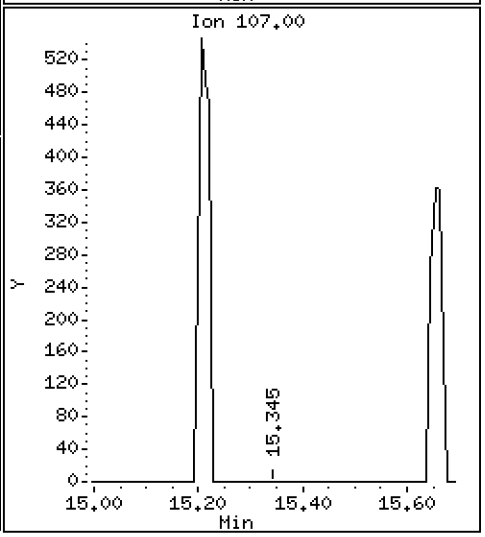


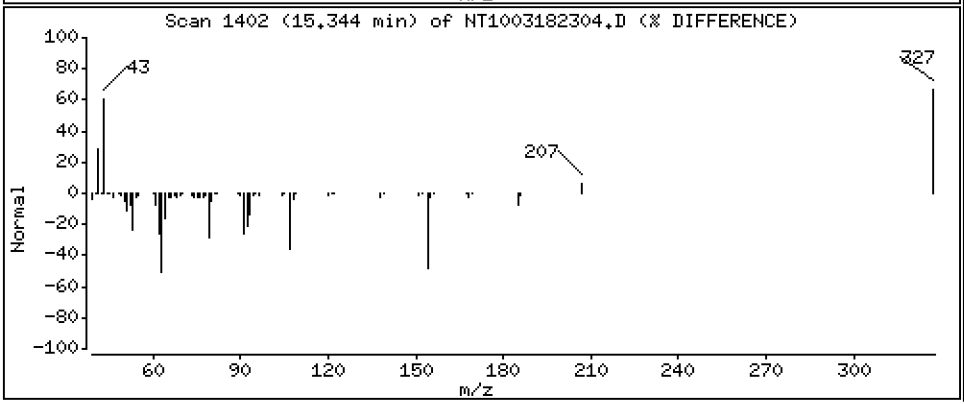












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

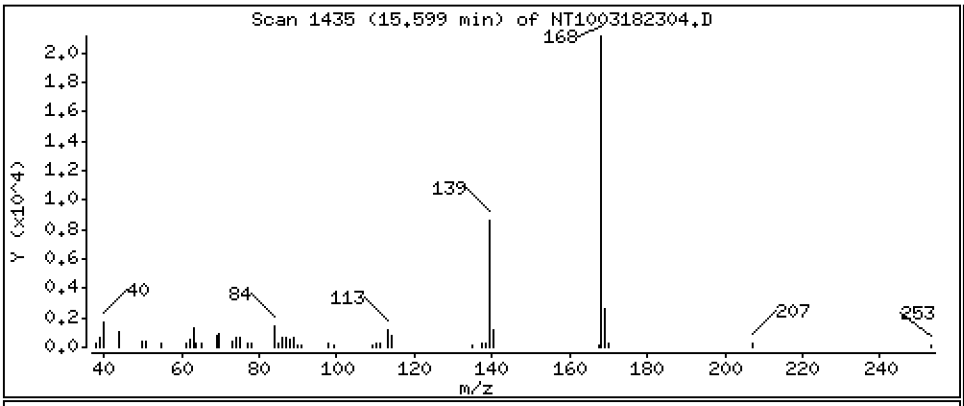
Operator: VTS

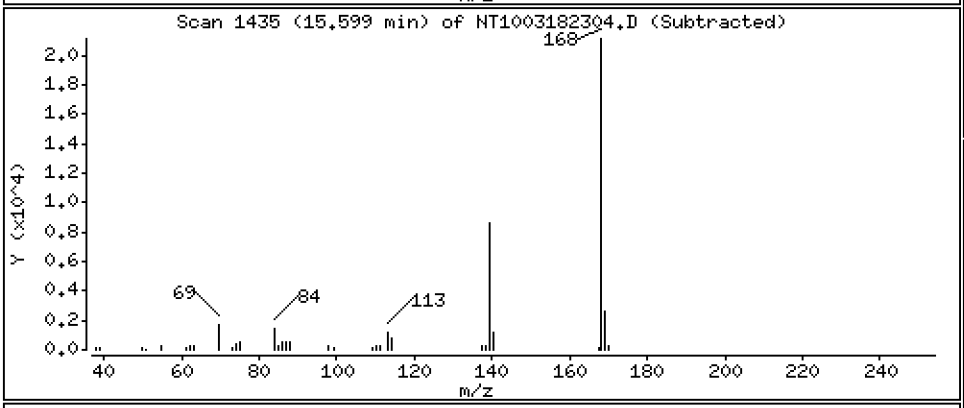
Column phase: ZB-5msi

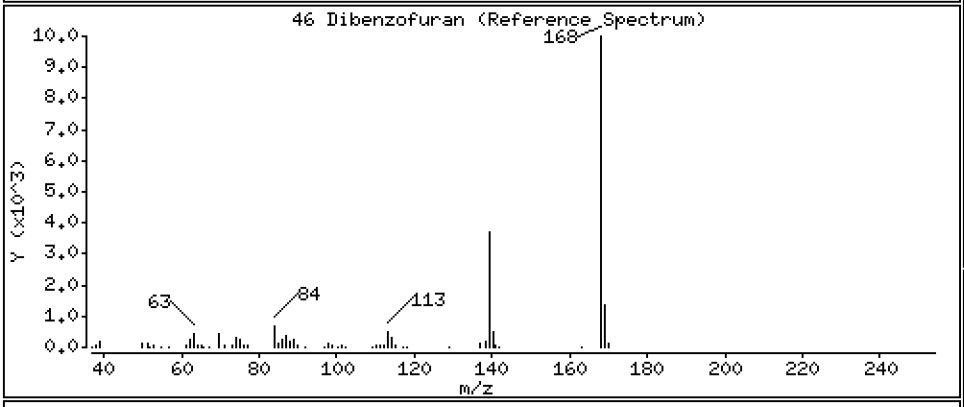
Column diameter: 0.25

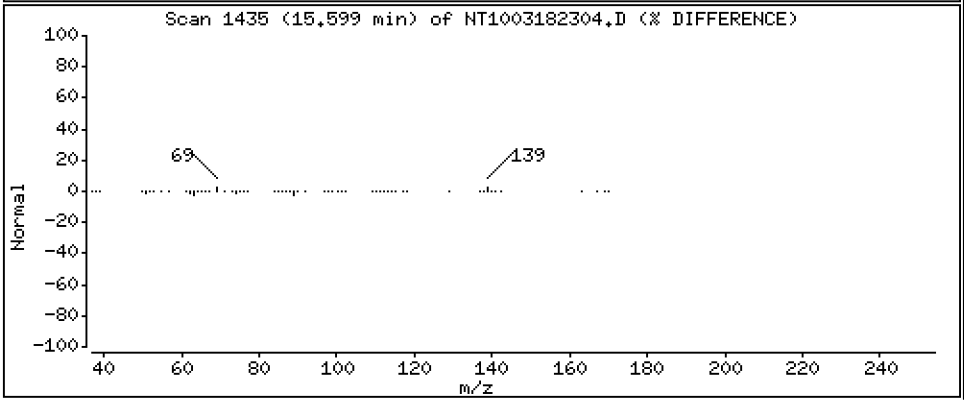
46 Dibenzofuran

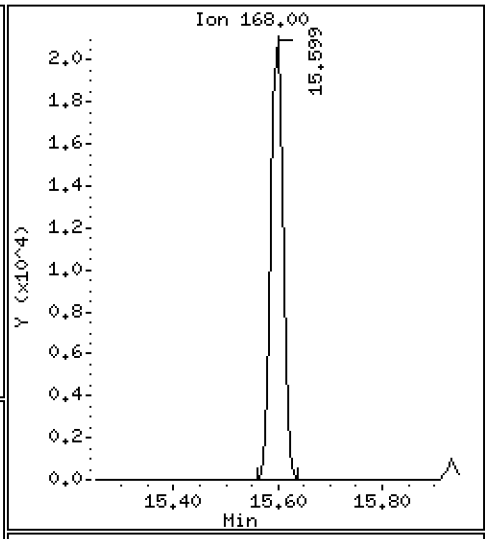
Concentration: 0.2055 ug/mL

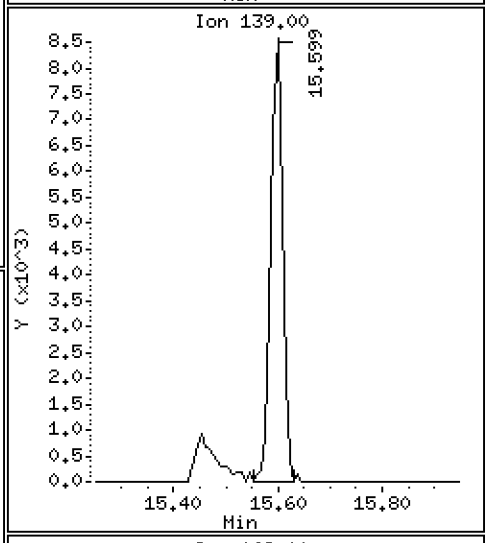


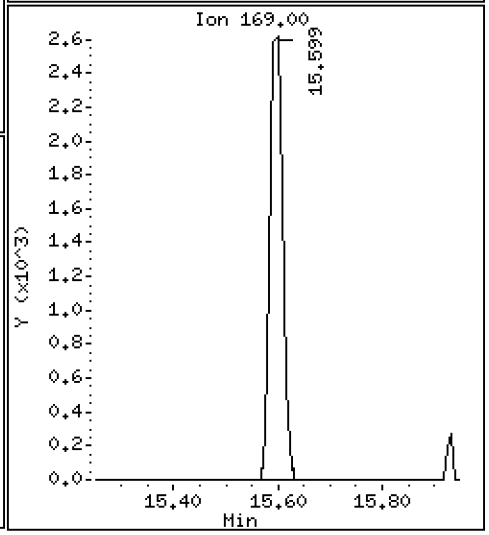












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

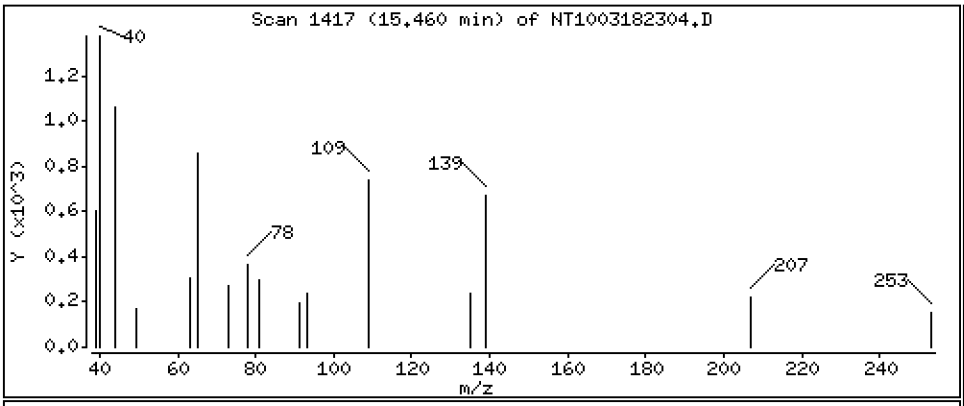
Operator: VTS

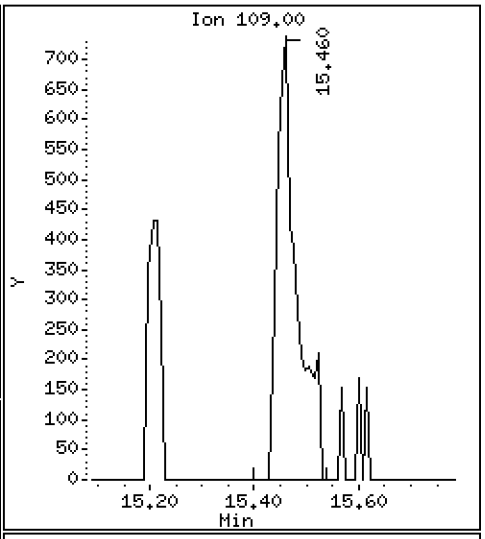
Column phase: ZB-5msi

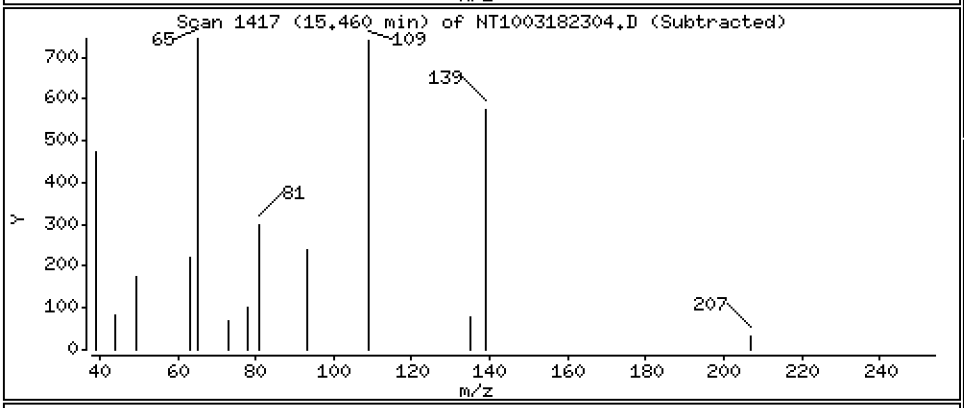
Column diameter: 0.25

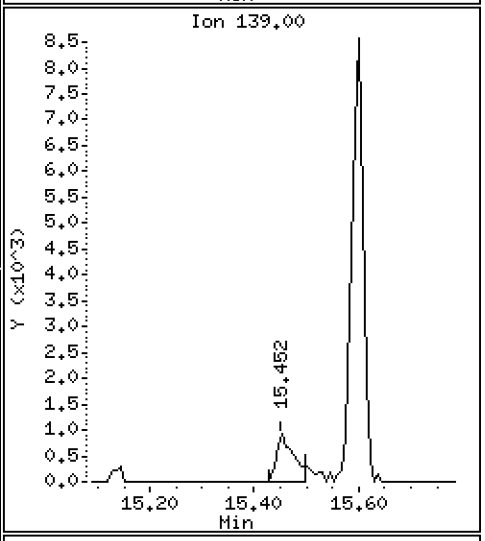
47 4-Nitrophenol

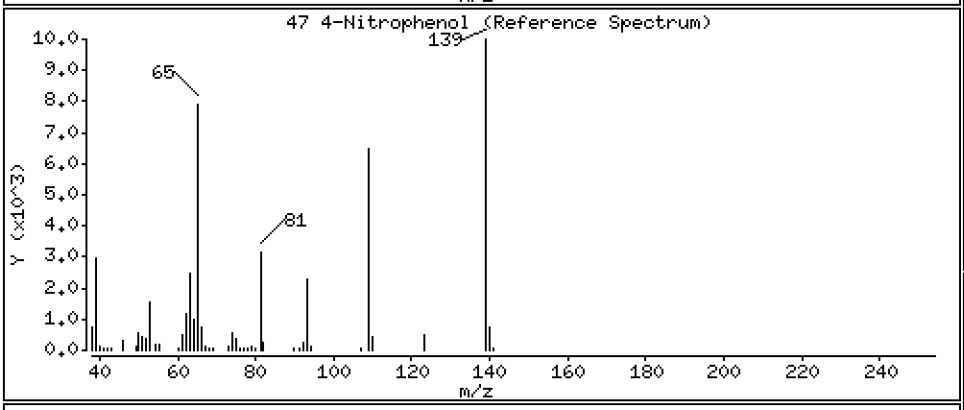
Concentration: 0.1152 ug/mL

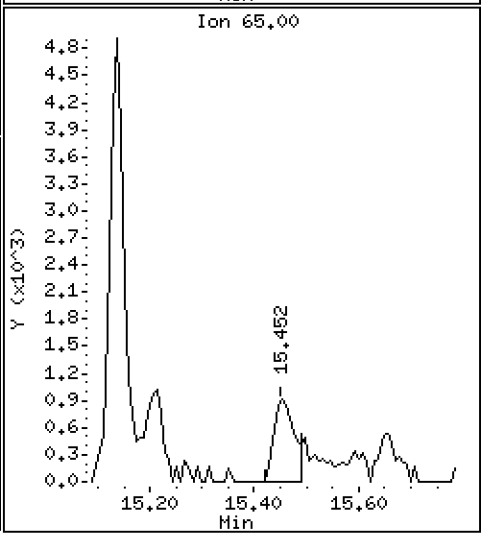


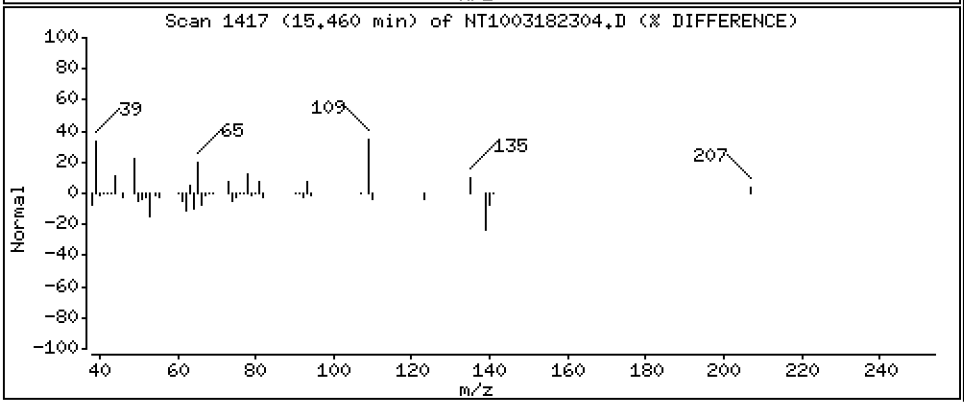












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

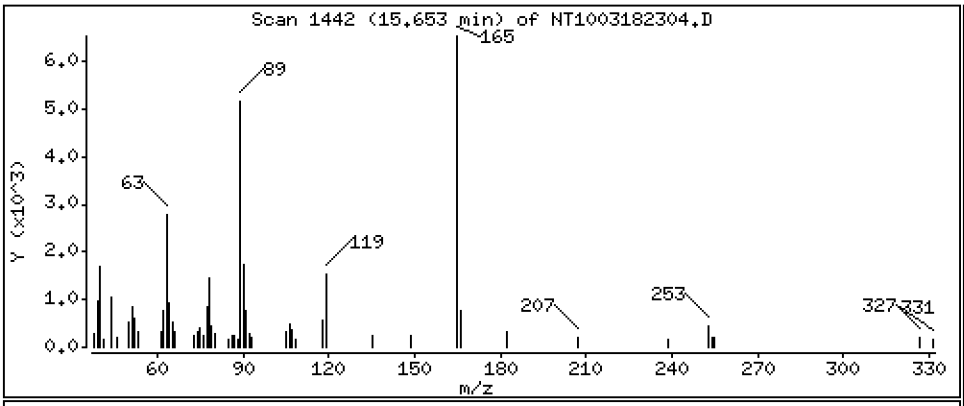
Operator: VTS

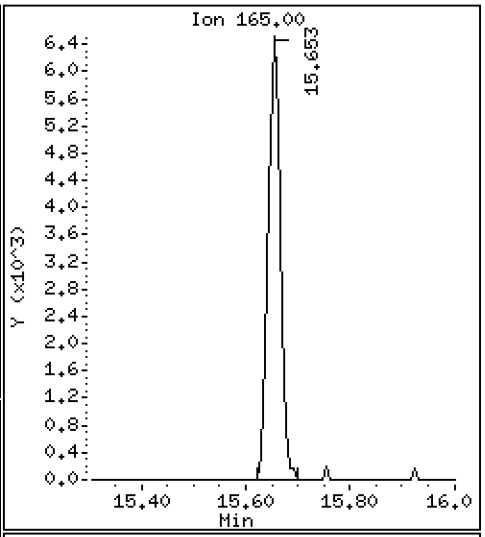
Column phase: ZB-5msi

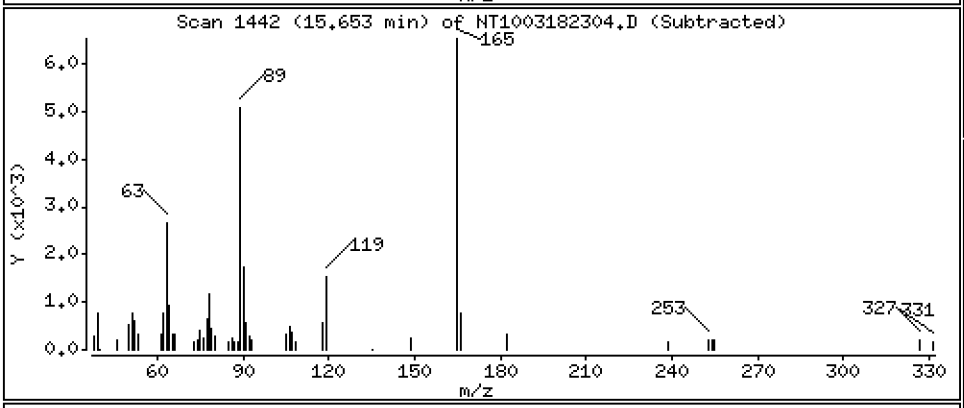
Column diameter: 0.25

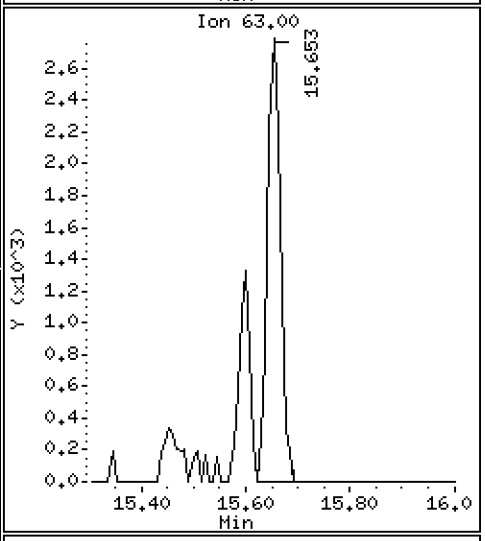
48 2,4-Dinitrotoluene

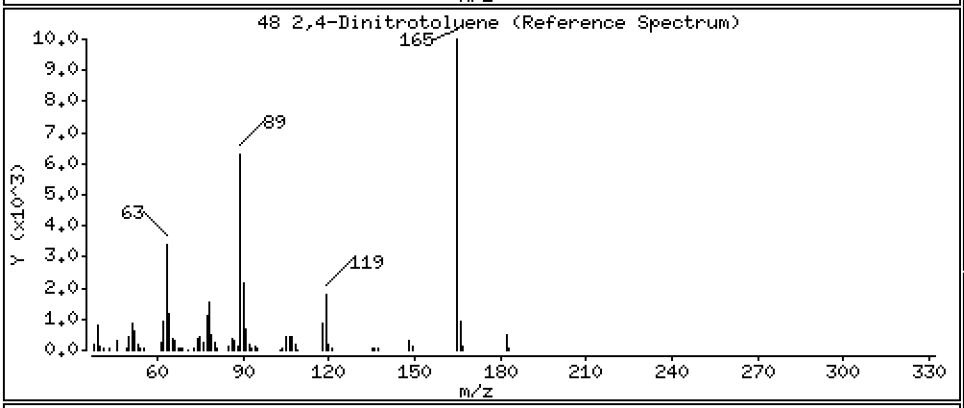
Concentration: 0.2732 ug/mL

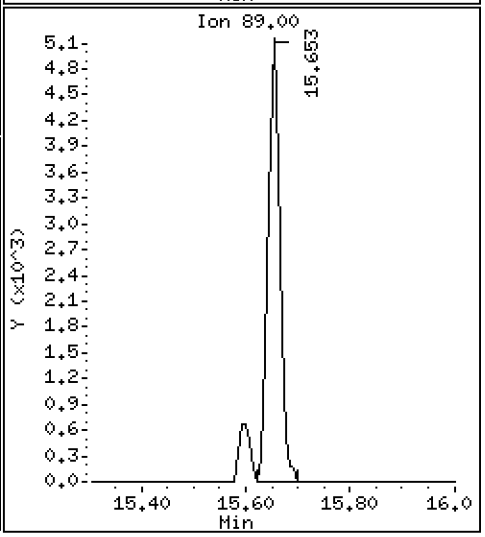


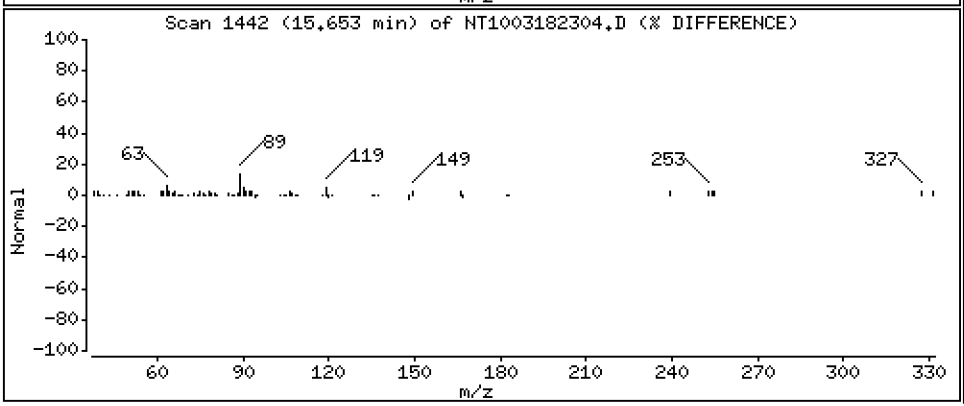












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

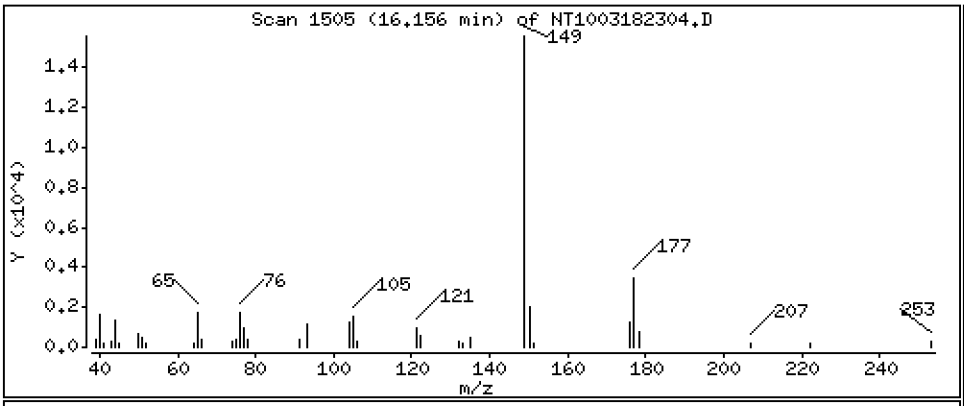
Operator: VTS

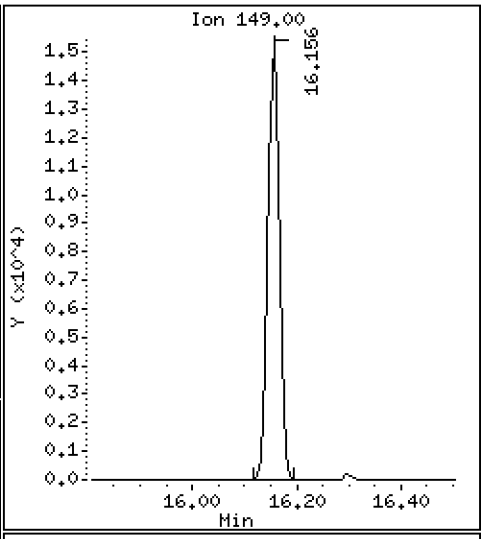
Column phase: ZB-5msi

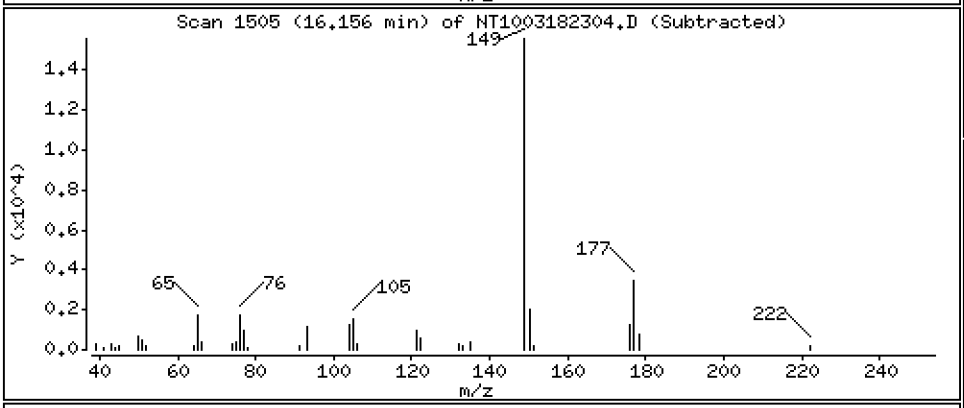
Column diameter: 0.25

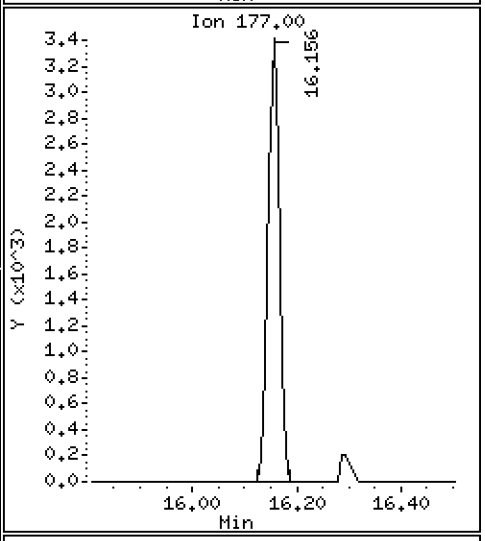
50 Diethylphthalate

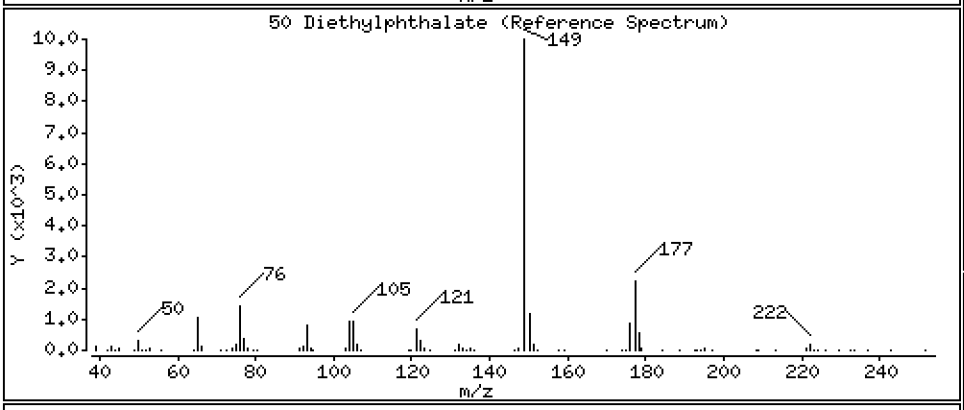
Concentration: 0.1998 ug/mL

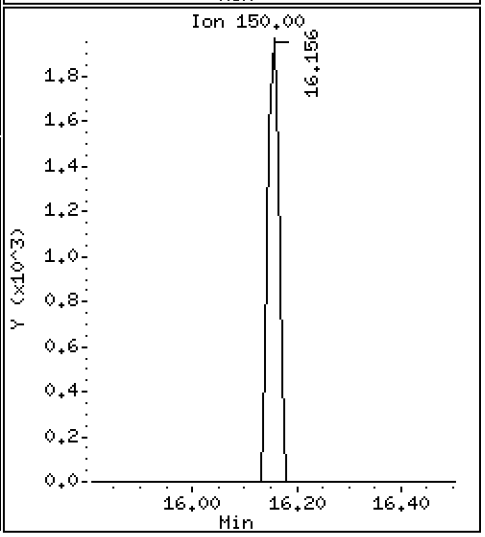


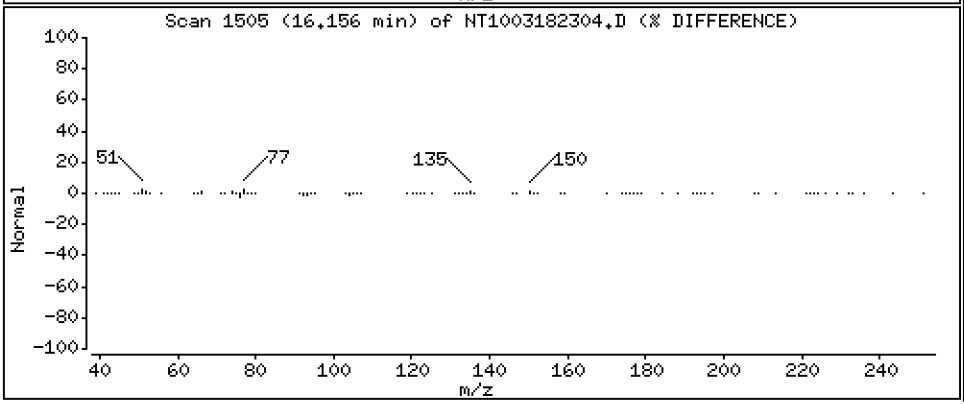












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

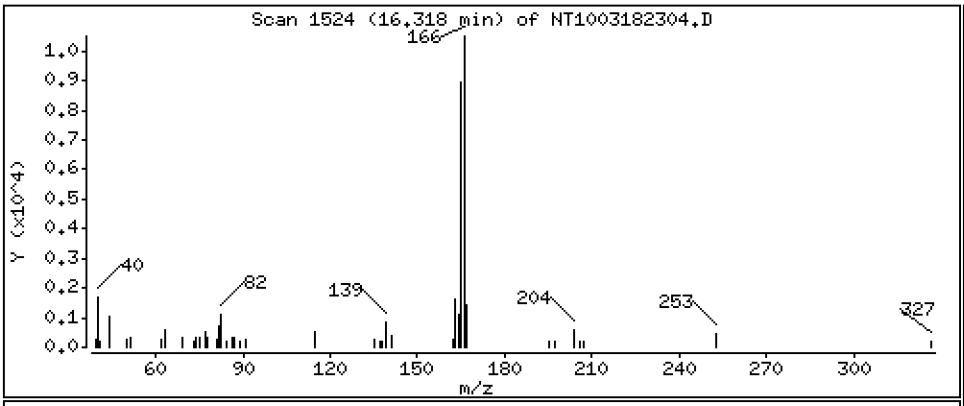
Operator: VTS

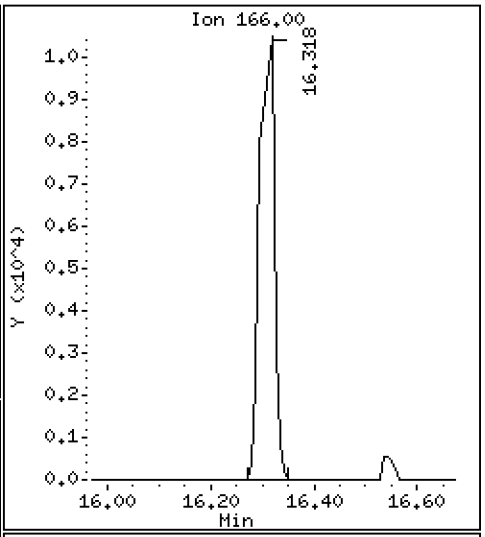
Column phase: ZB-5msi

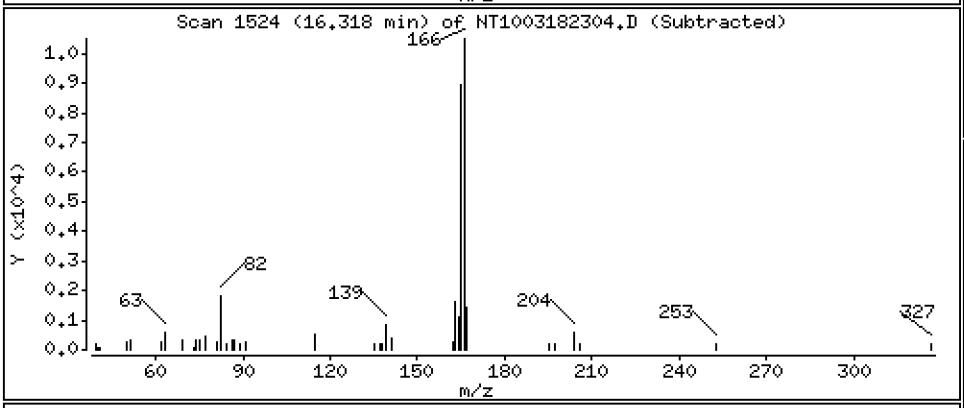
Column diameter: 0.25

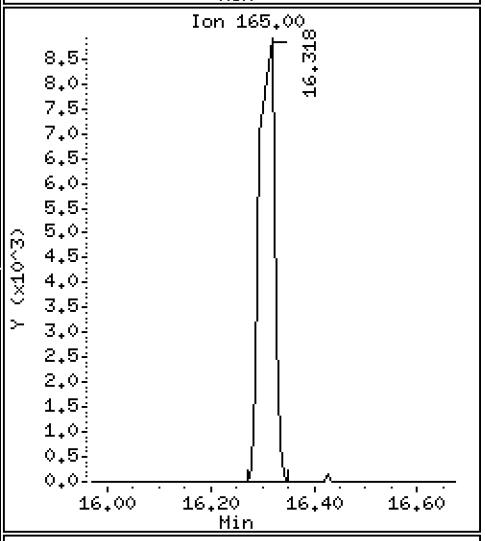
49 Fluorene

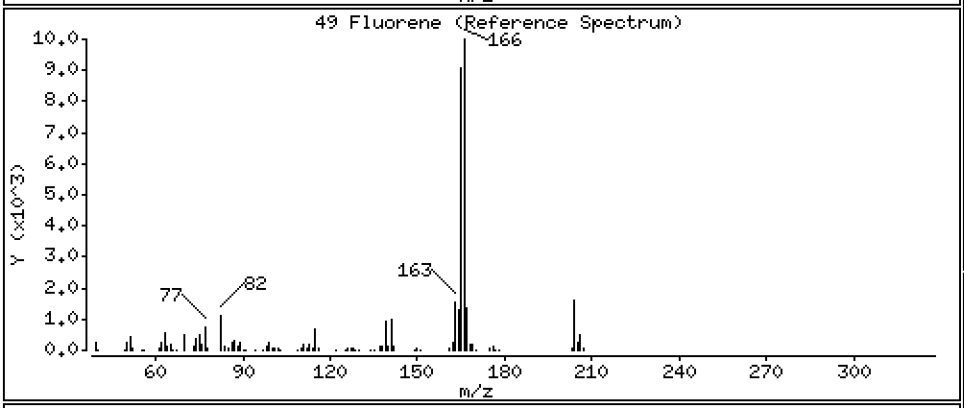
Concentration: 0.1173 ug/mL

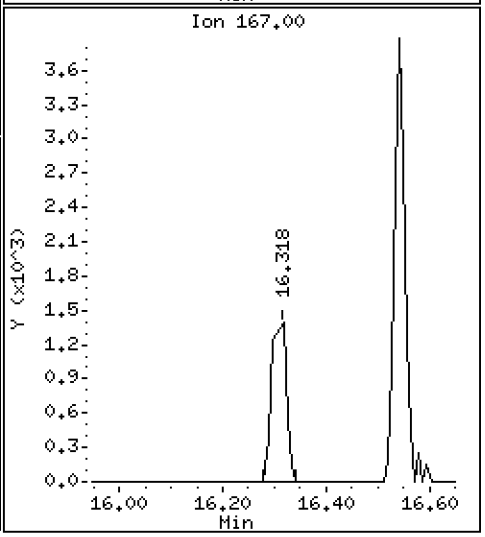


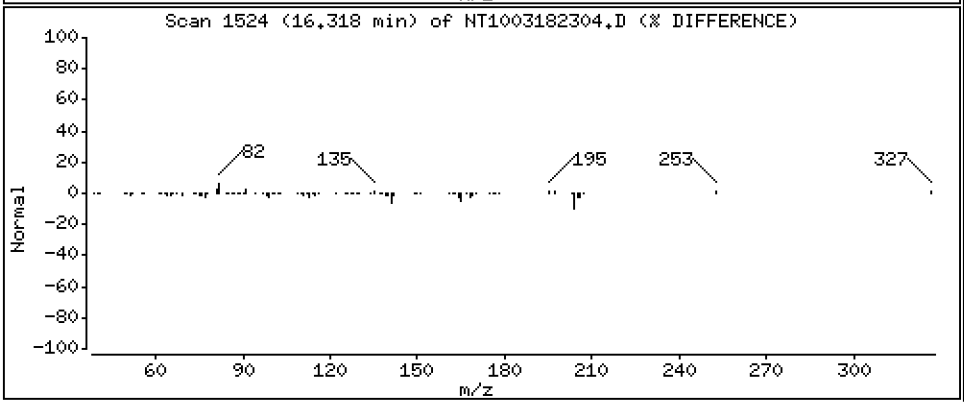












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

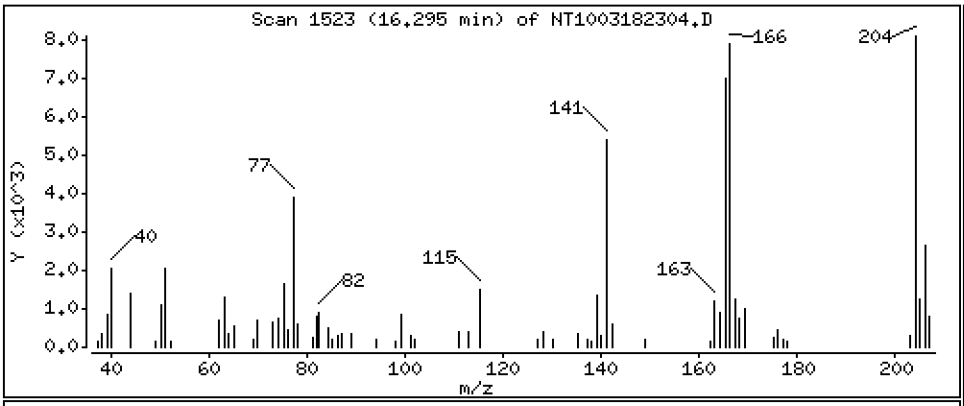
Operator: VTS

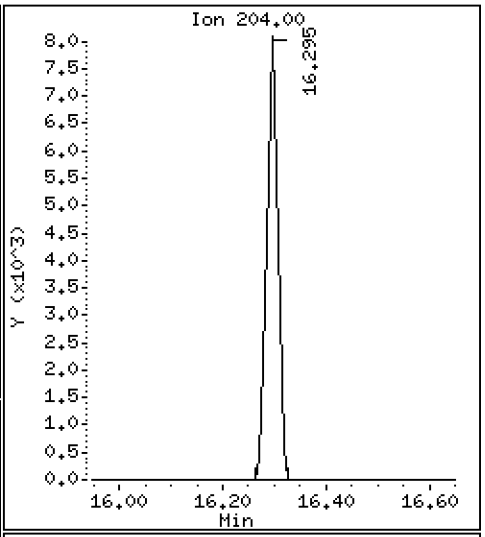
Column phase: ZB-5msi

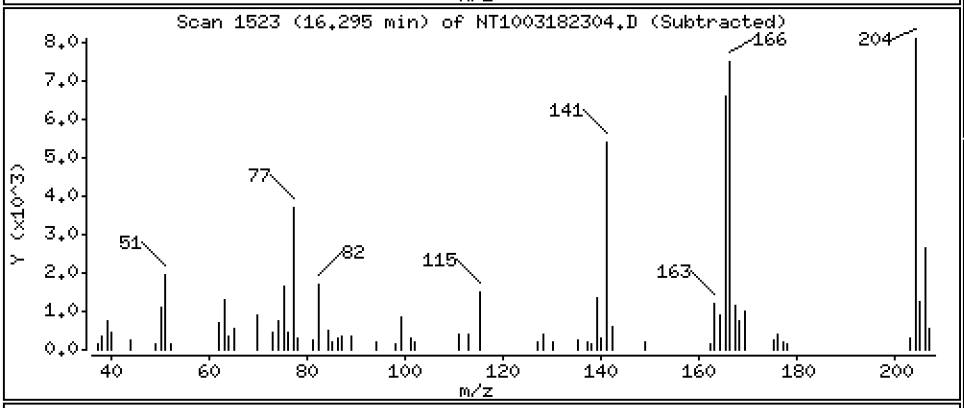
Column diameter: 0.25

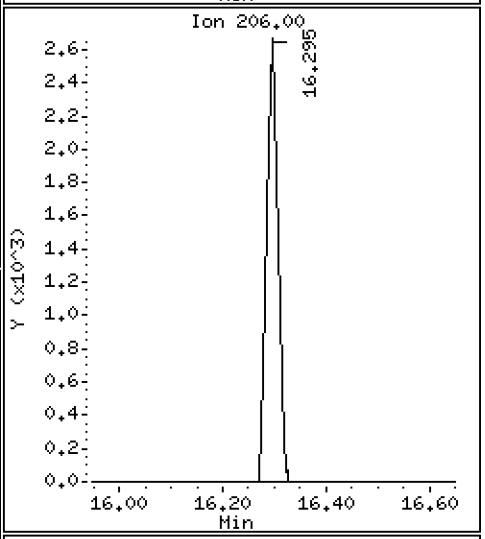
51 4-Chlorophenyl-phenylether

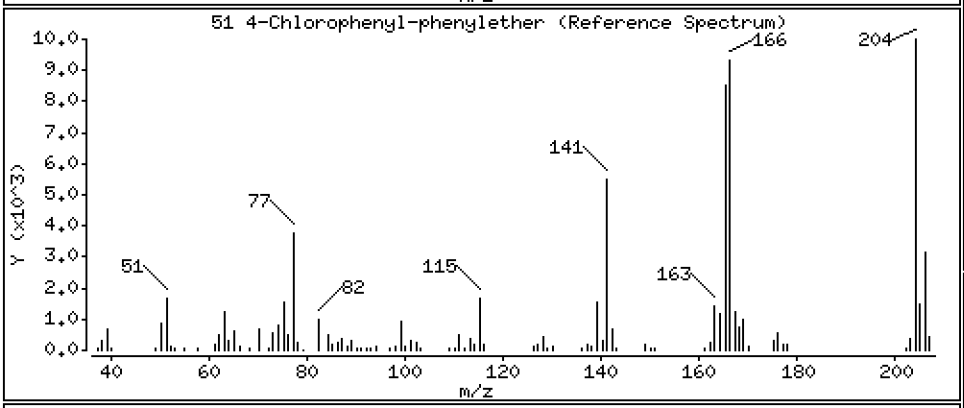
Concentration: 0.1752 ug/mL

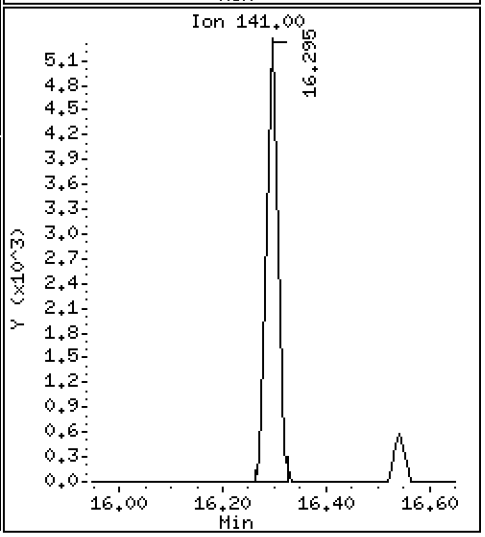


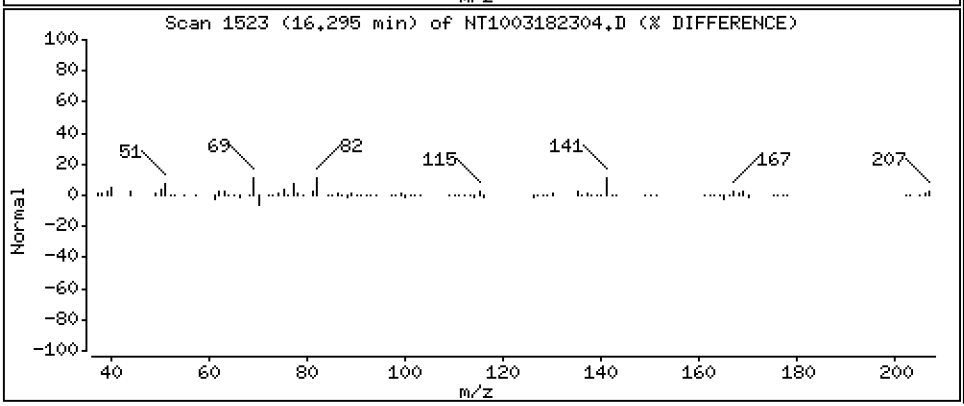












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

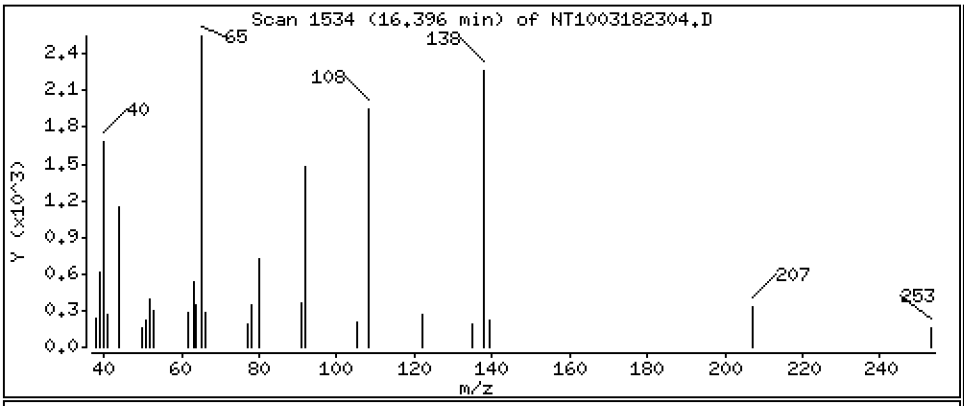
Operator: VTS

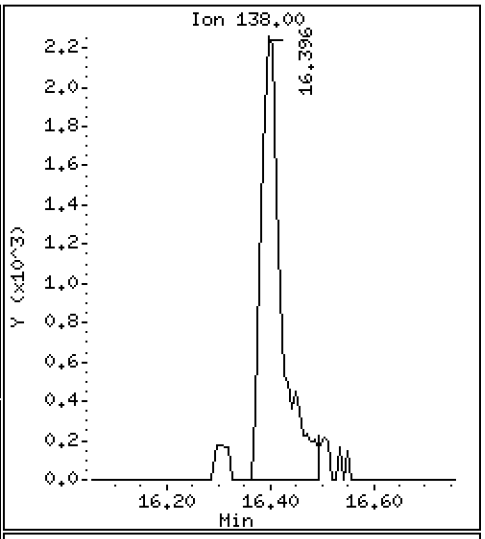
Column phase: ZB-5msi

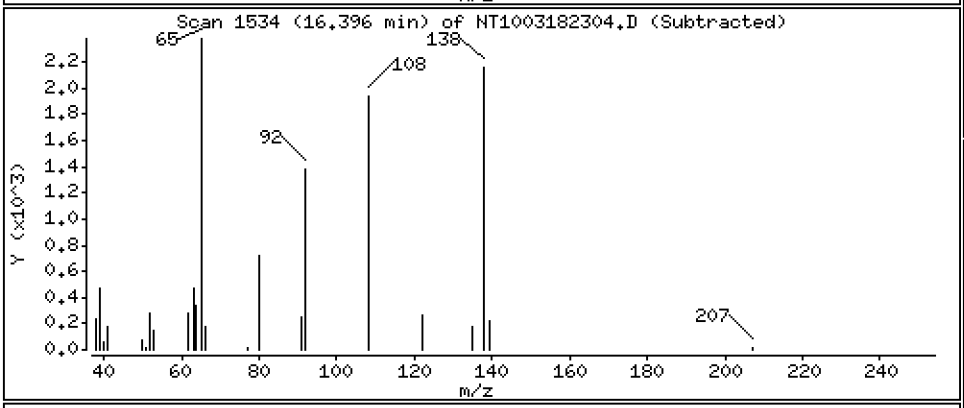
Column diameter: 0.25

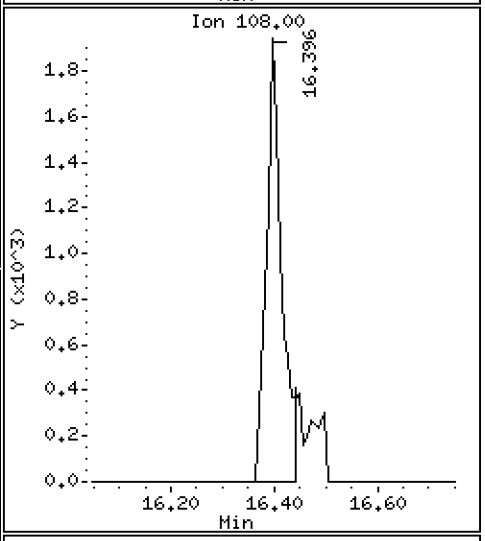
52 4-Nitroaniline

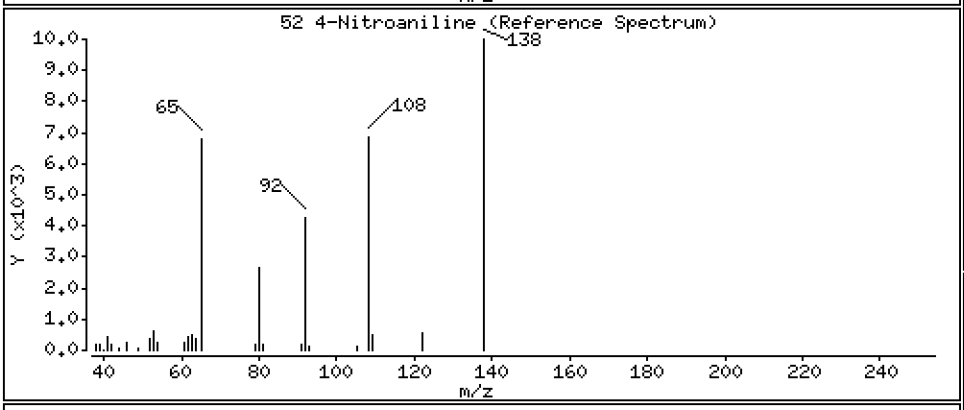
Concentration: 0.2462 ug/mL

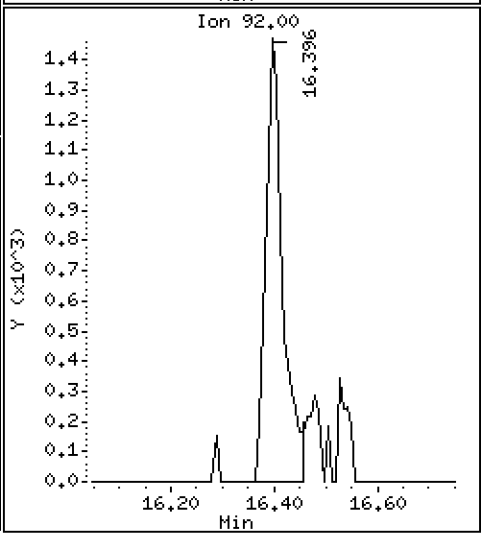


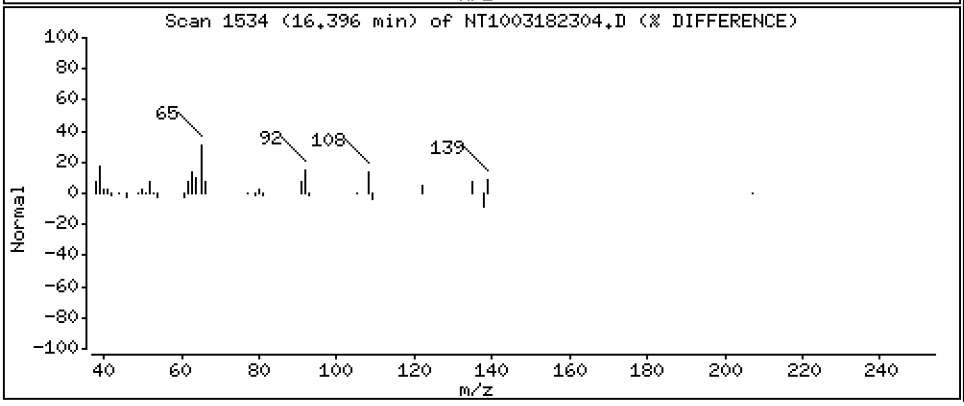












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

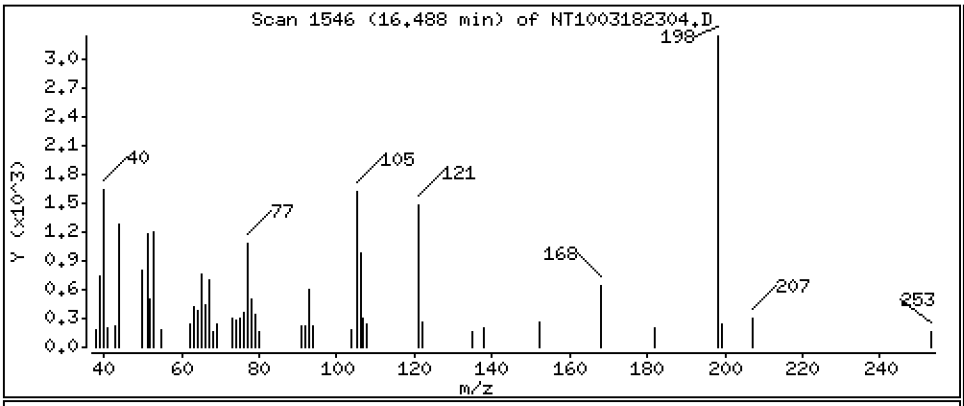
Operator: VTS

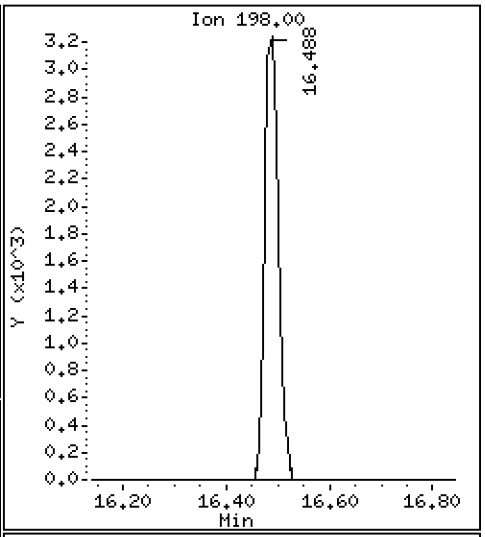
Column phase: ZB-5msi

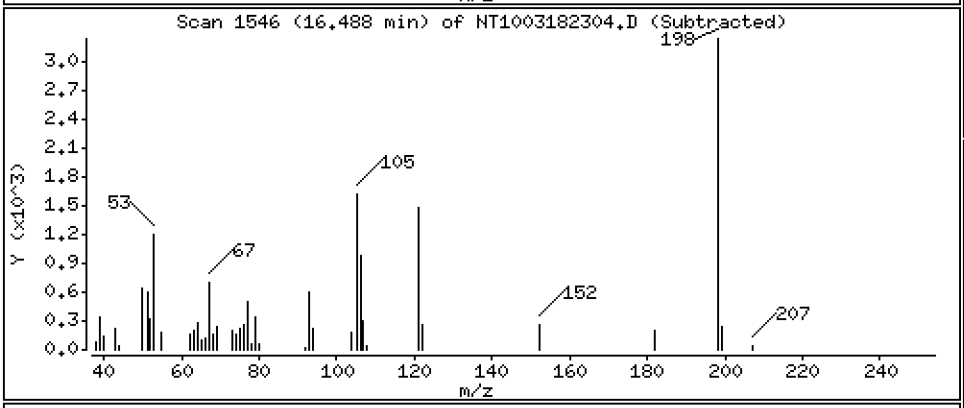
Column diameter: 0.25

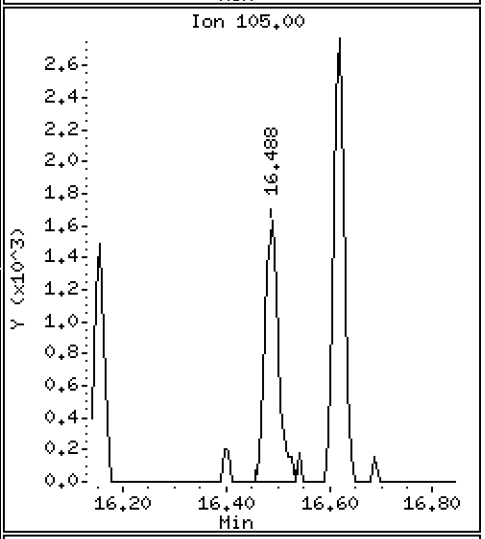
53 4,6-Dinitro-2-methylphenol

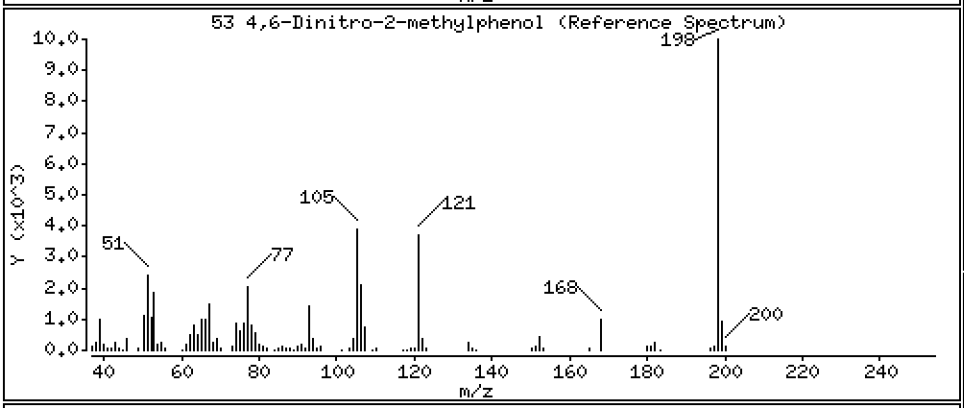
Concentration: 0.3047 ug/mL

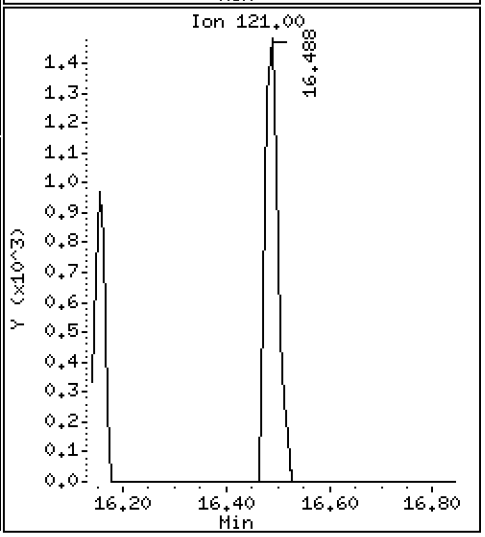


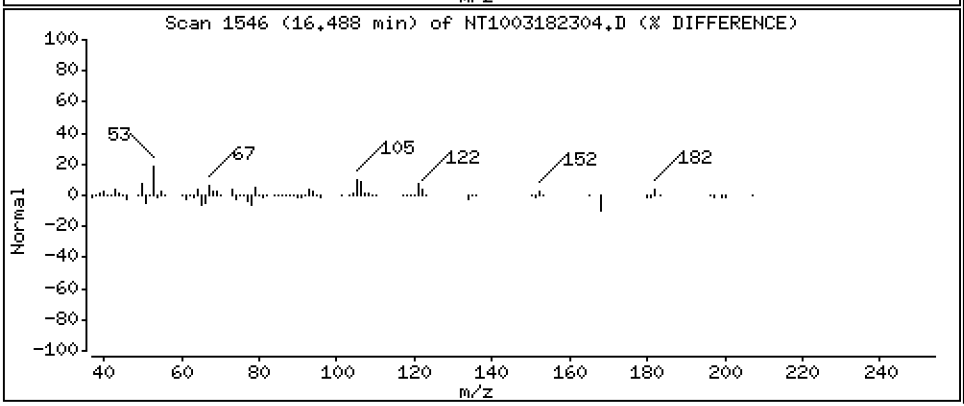












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

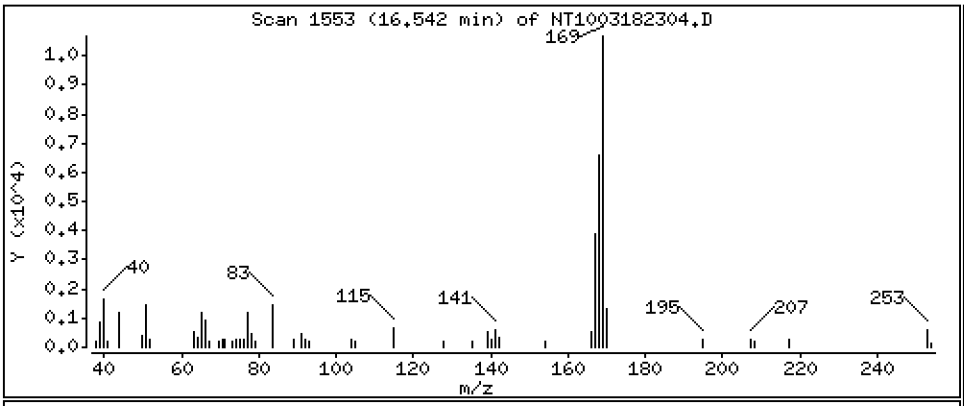
Operator: VTS

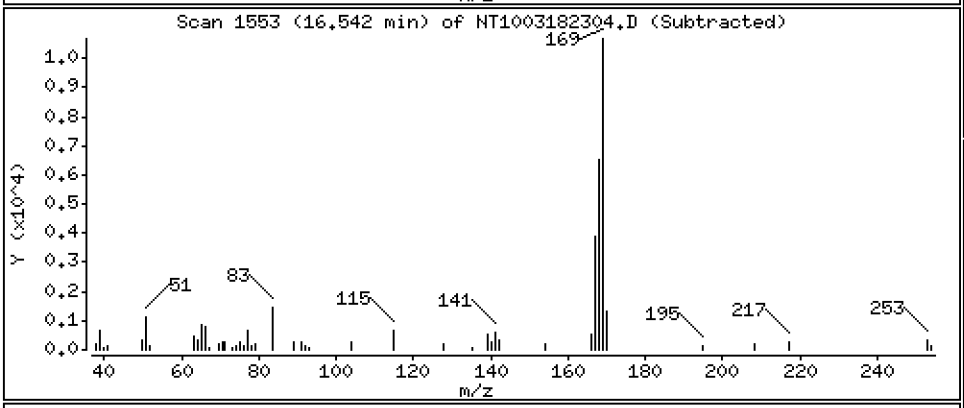
Column phase: ZB-5msi

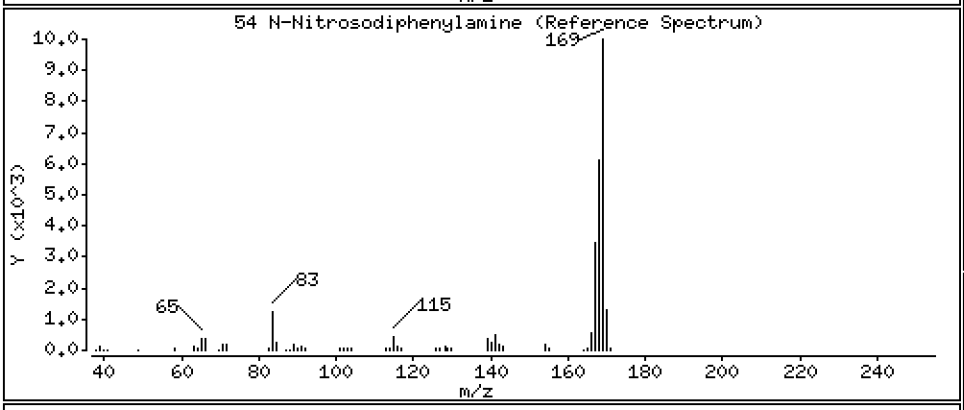
Column diameter: 0.25

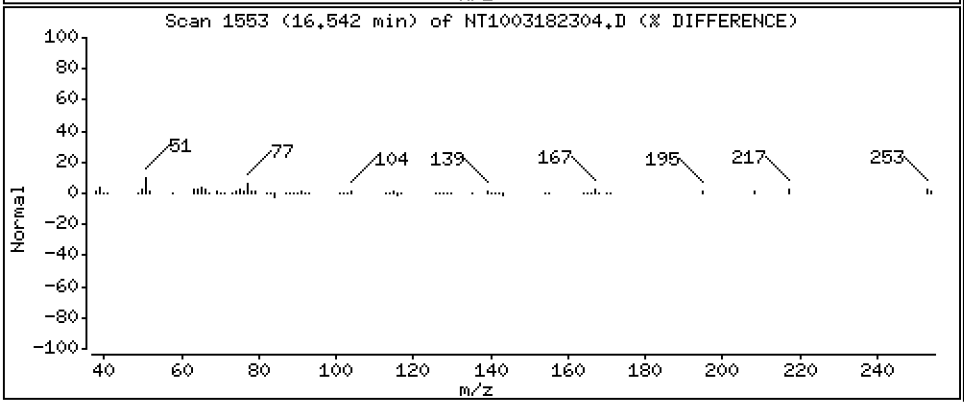
54 N-Nitrosodiphenylamine

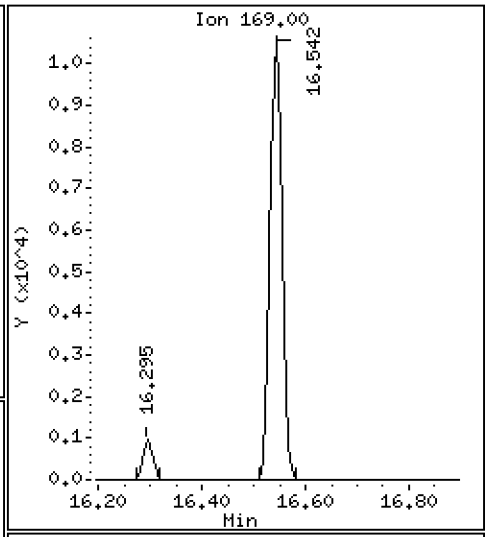
Concentration: 0.1961 ug/mL

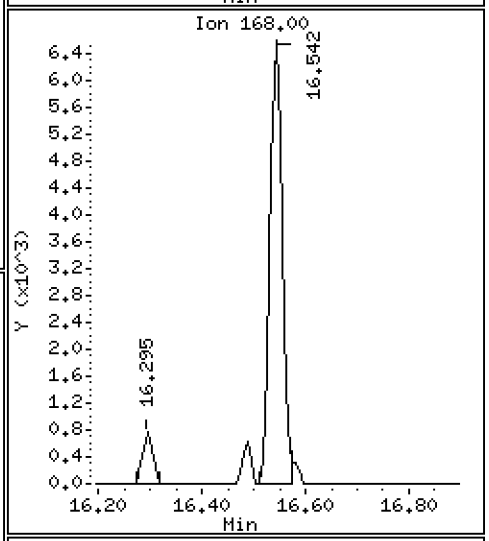


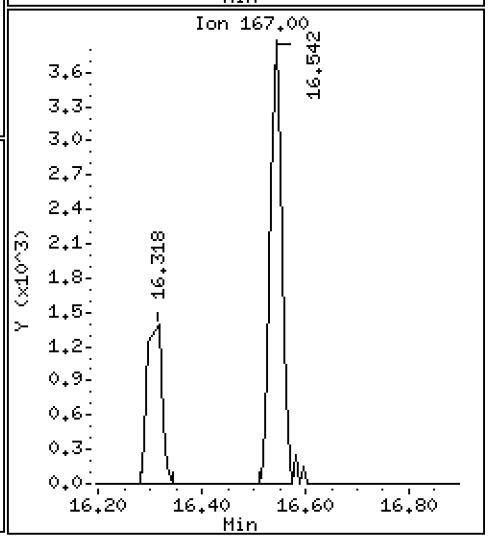












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

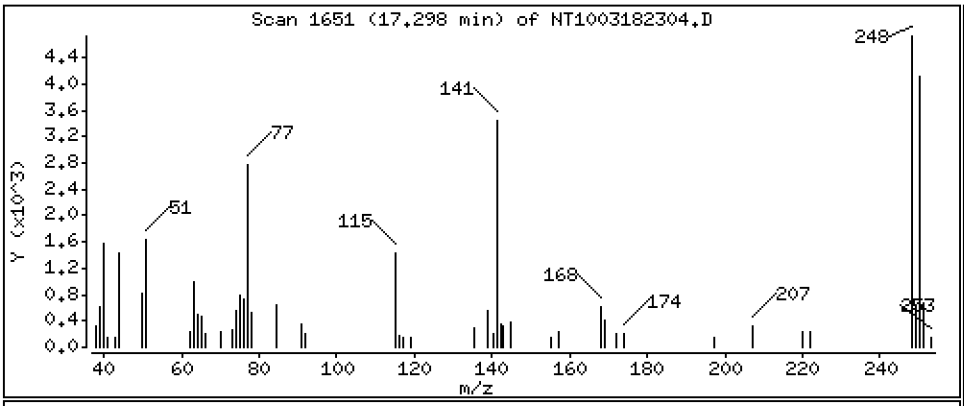
Operator: VTS

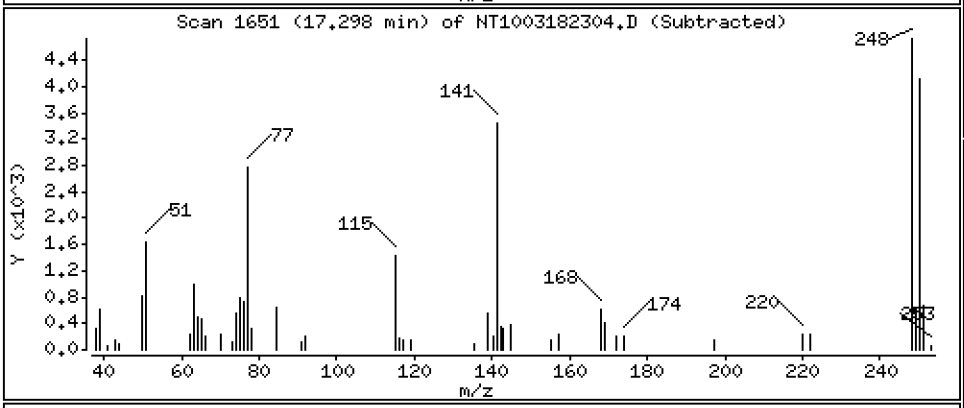
Column phase: ZB-5msi

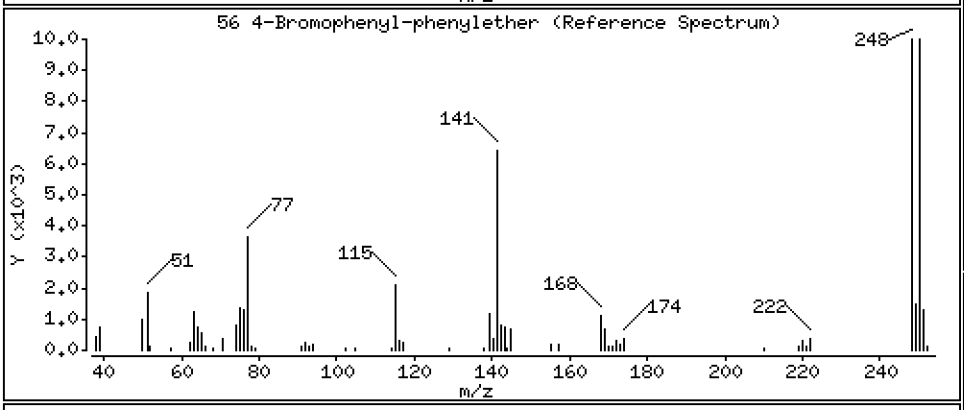
Column diameter: 0.25

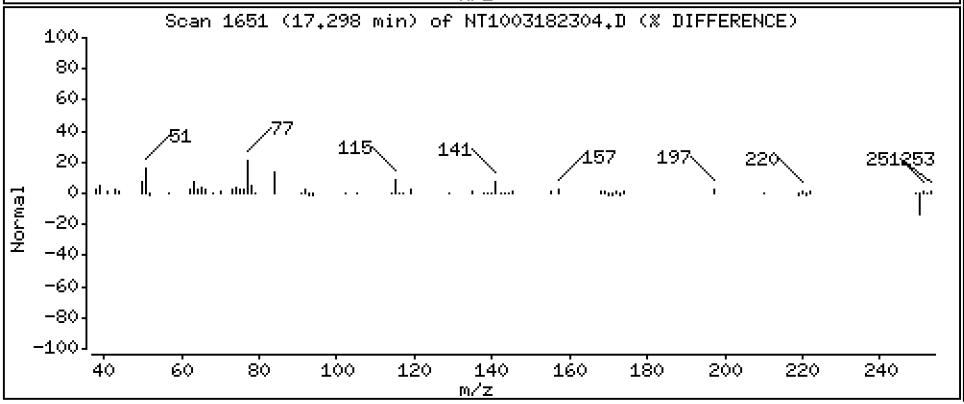
56 4-Bromophenyl-phenylether

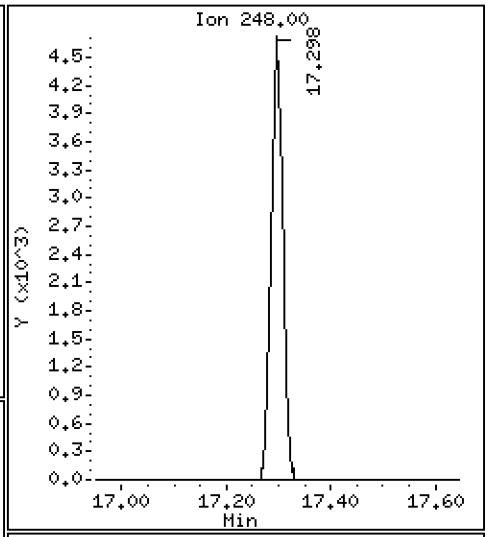
Concentration: 0.1977 ug/mL

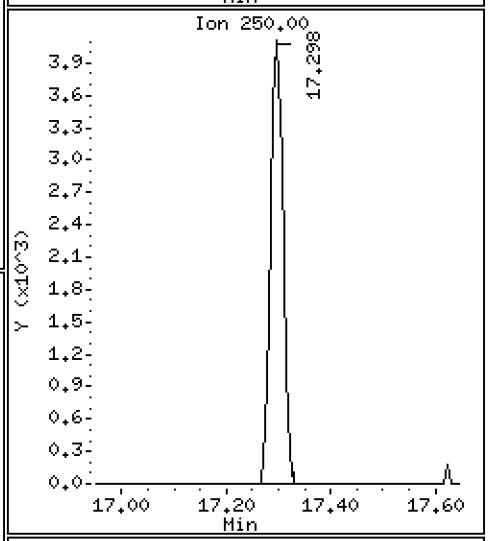


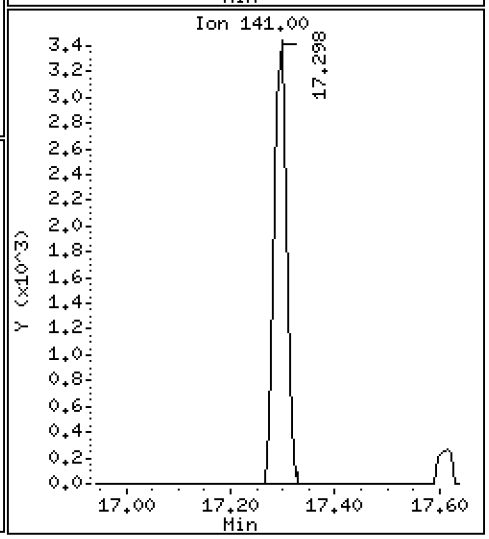












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

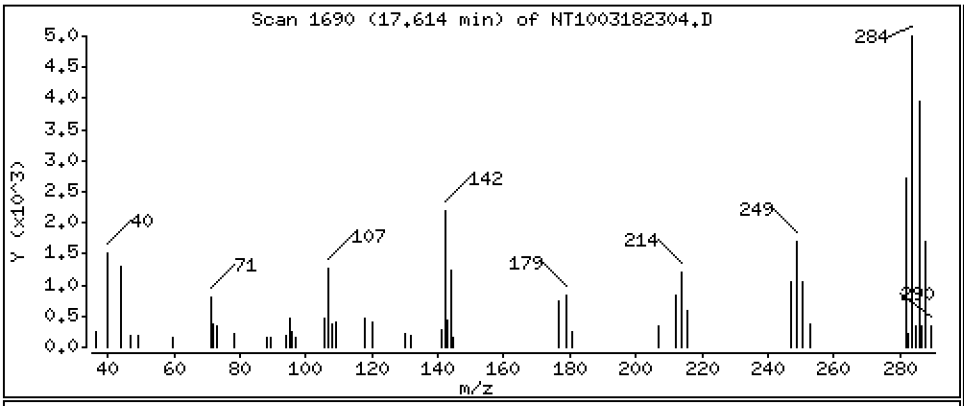
Operator: VTS

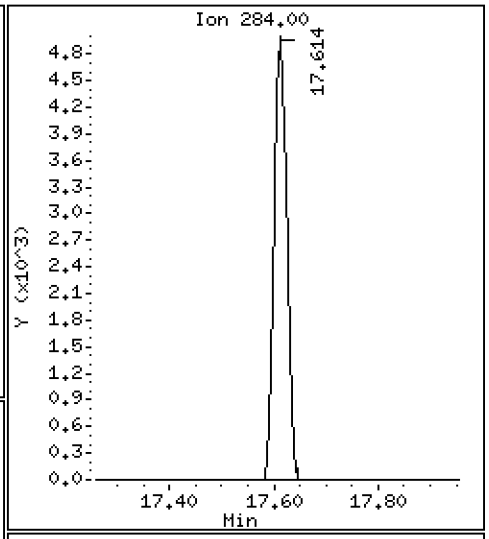
Column phase: ZB-5msi

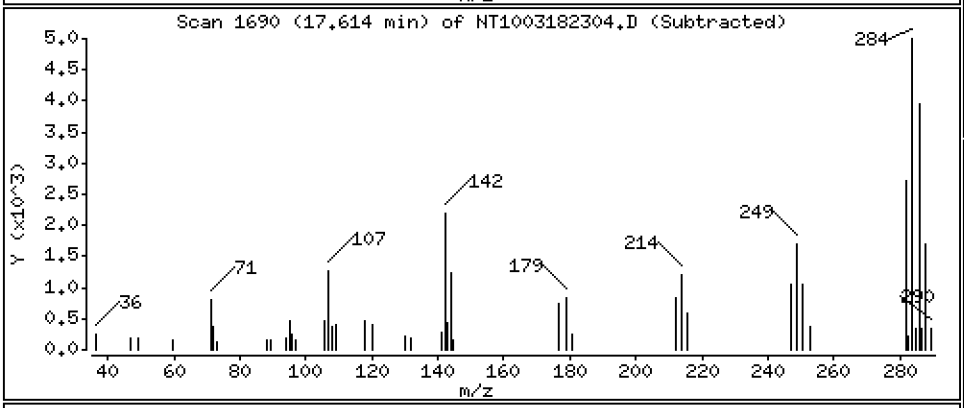
Column diameter: 0.25

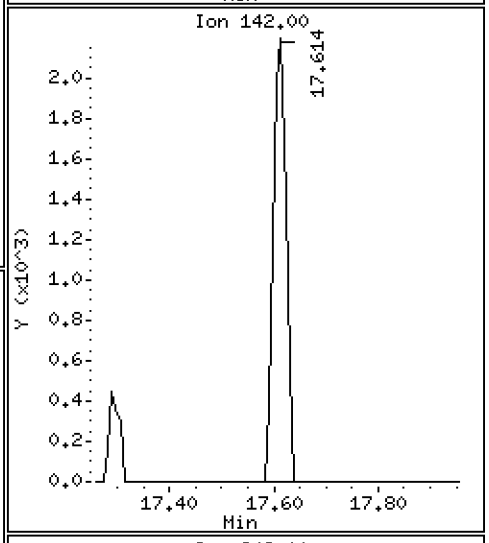
57 Hexachlorobenzene

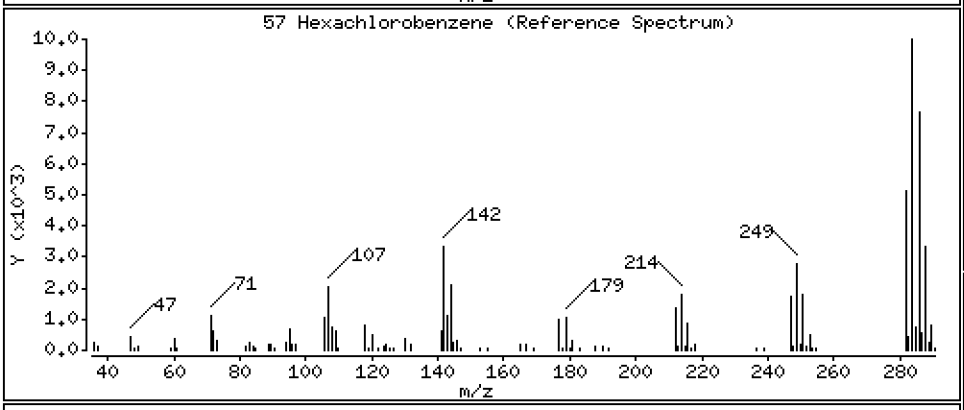
Concentration: 0.2238 ug/mL

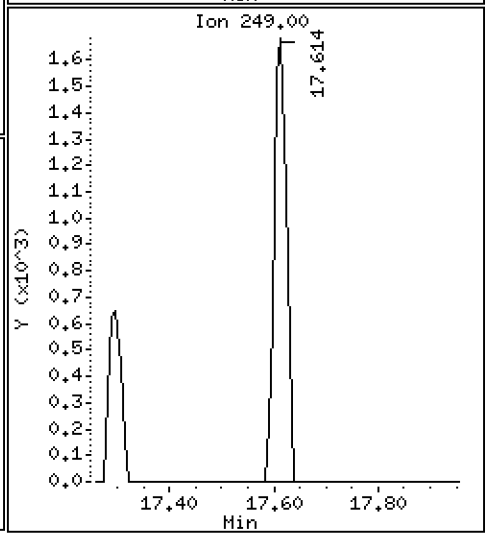


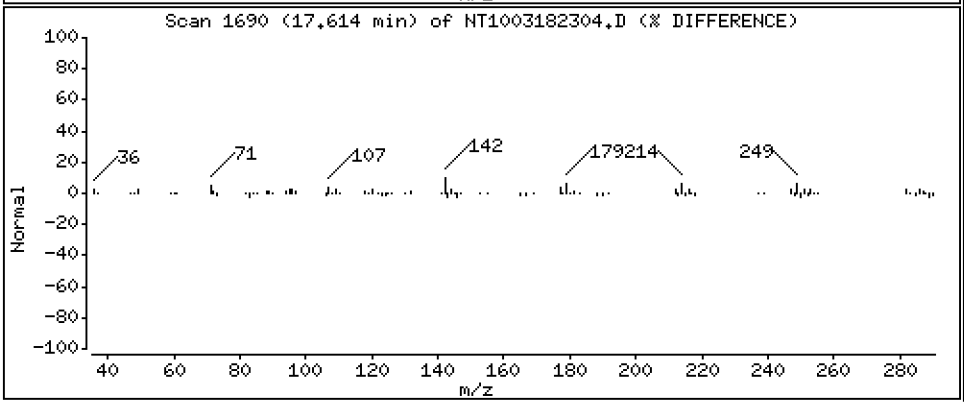












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

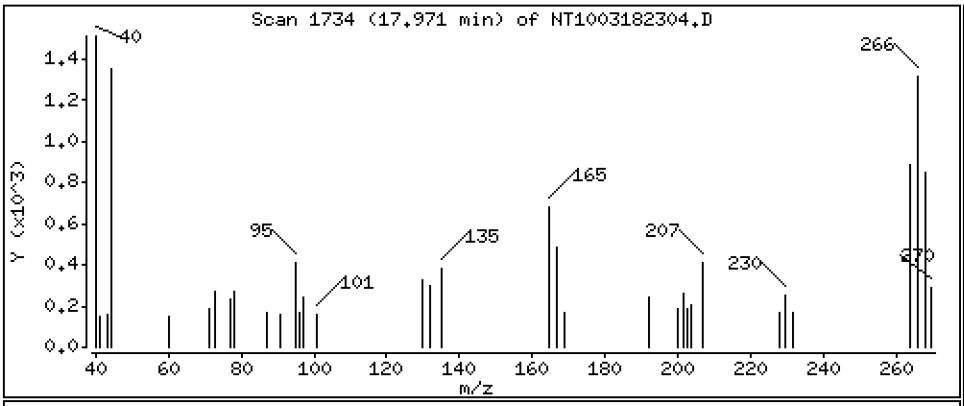
Operator: VTS

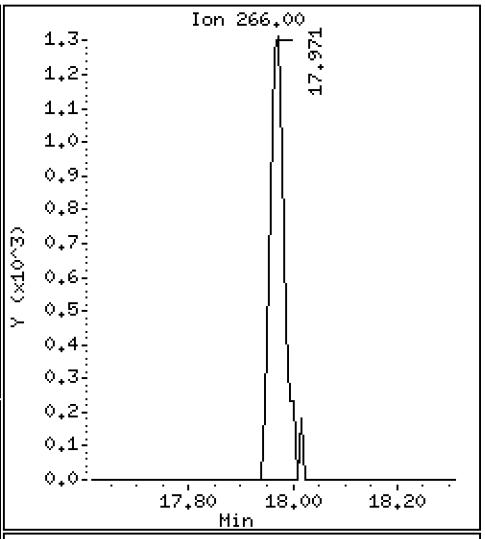
Column phase: ZB-5msi

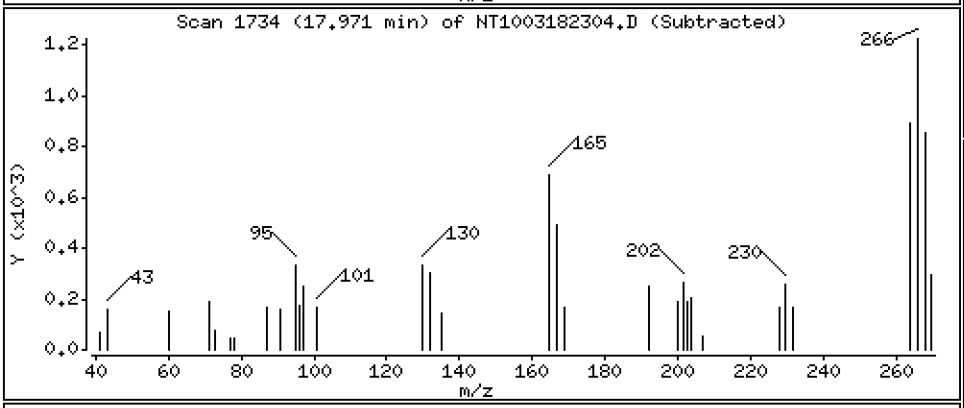
Column diameter: 0.25

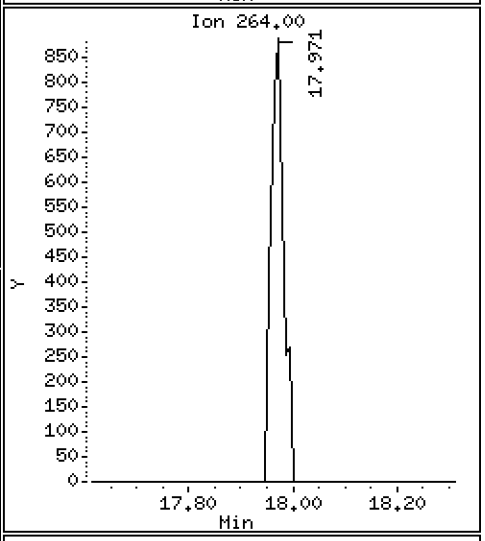
58 Pentachlorophenol

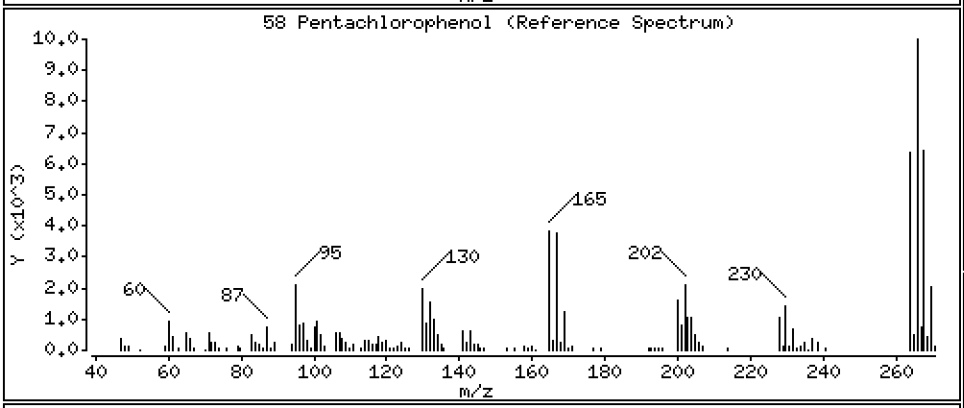
Concentration: 0.1160 ug/mL

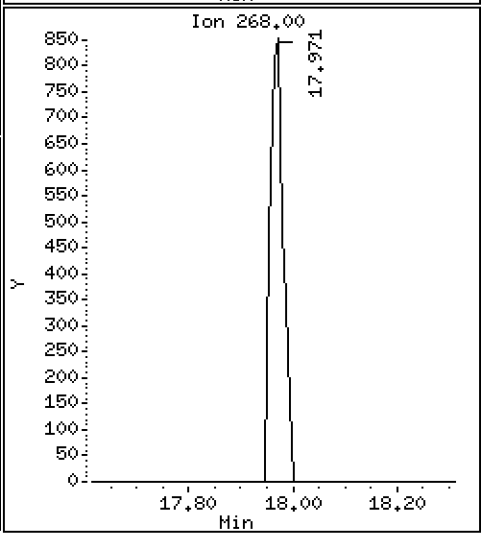


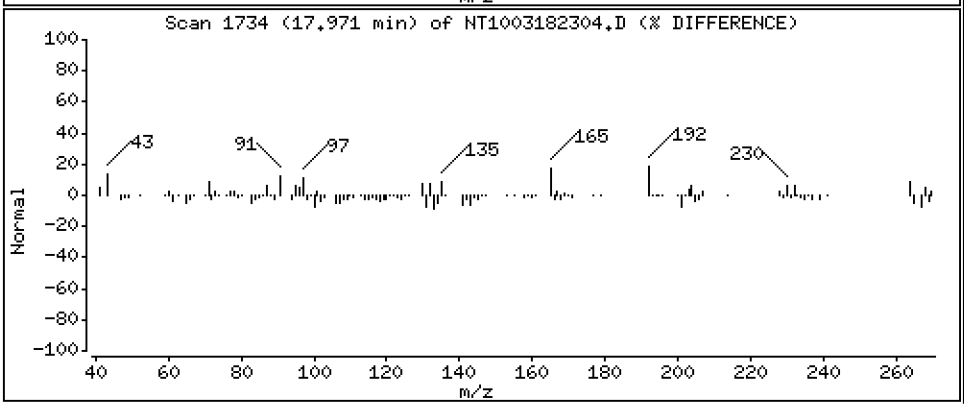












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

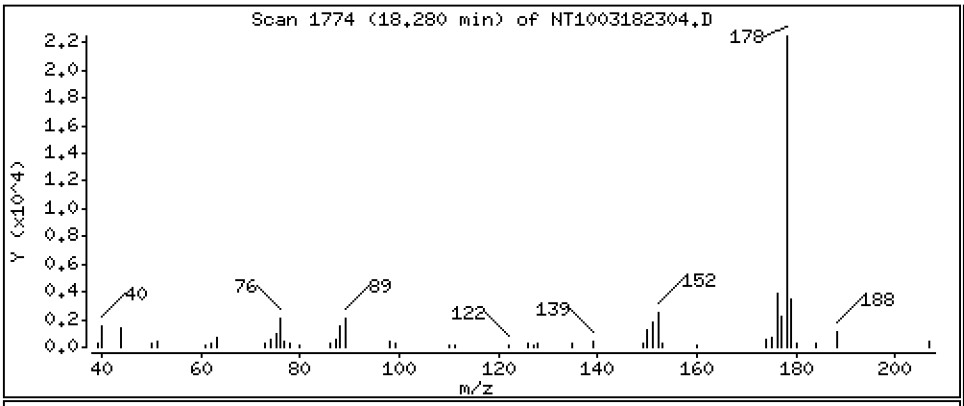
Operator: VTS

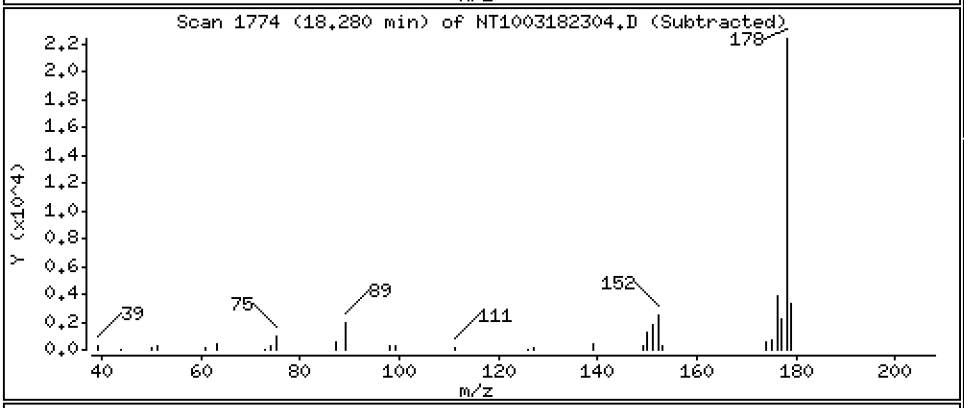
Column phase: ZB-5msi

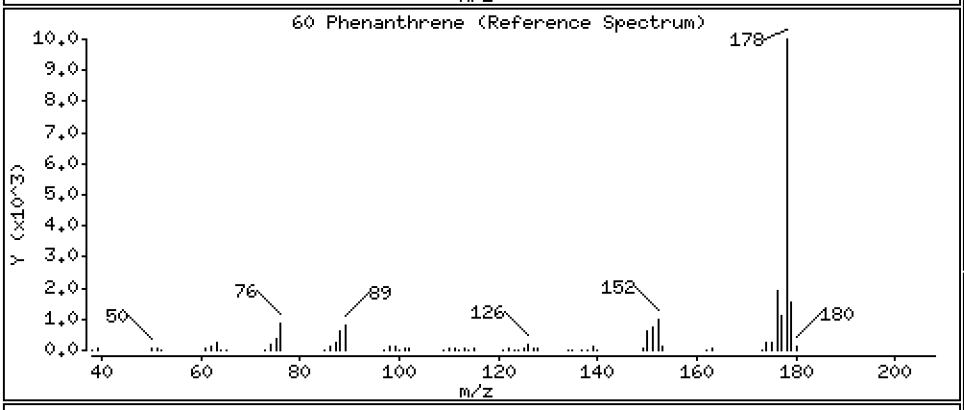
Column diameter: 0.25

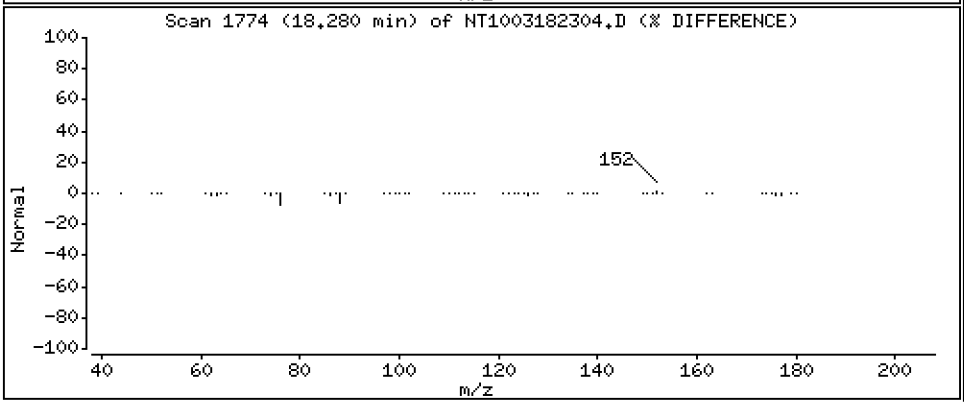
60 Phenanthrene

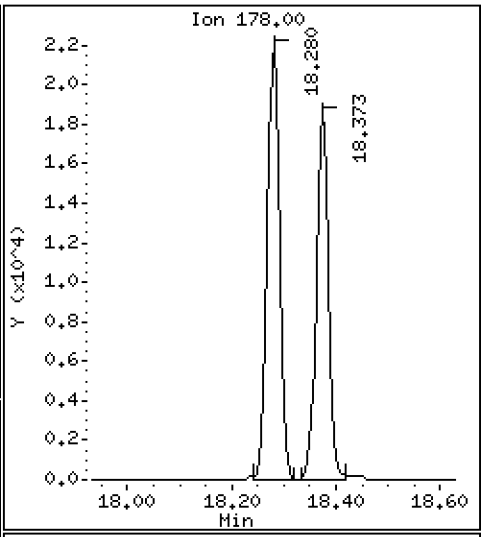
Concentration: 0.2059 ug/mL

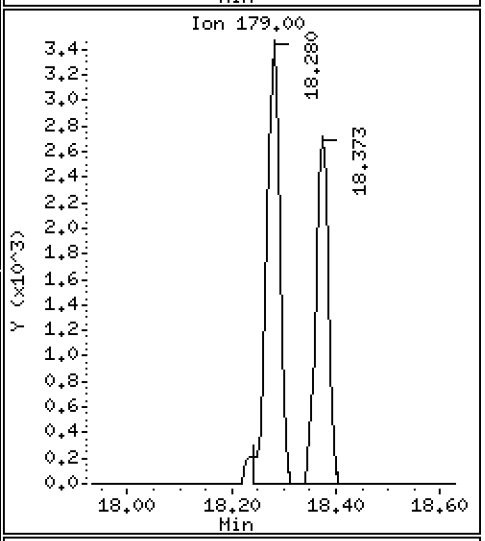


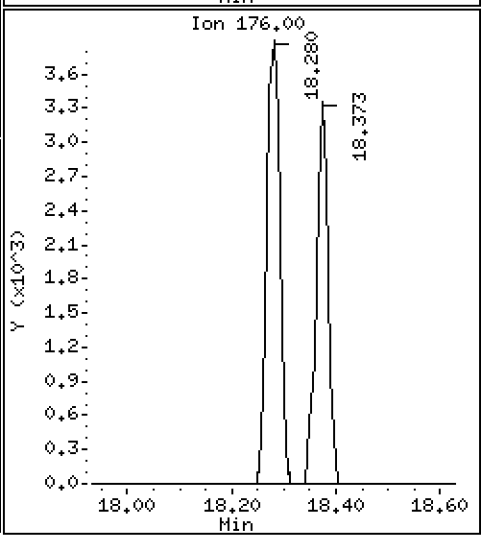












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

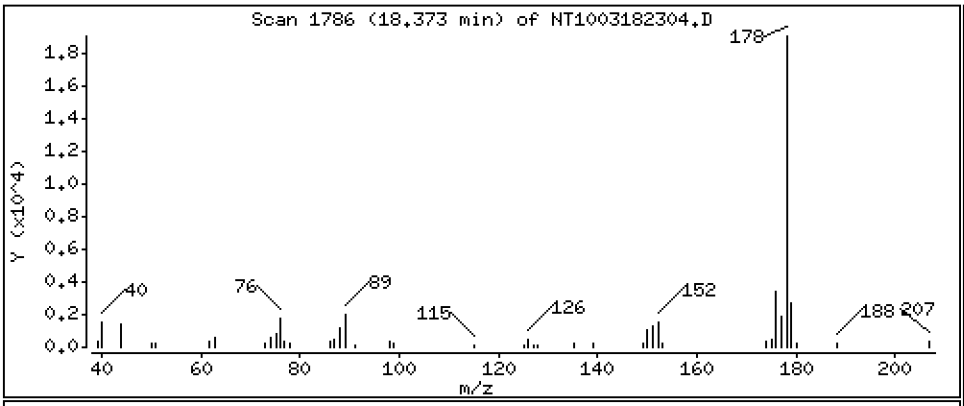
Operator: VTS

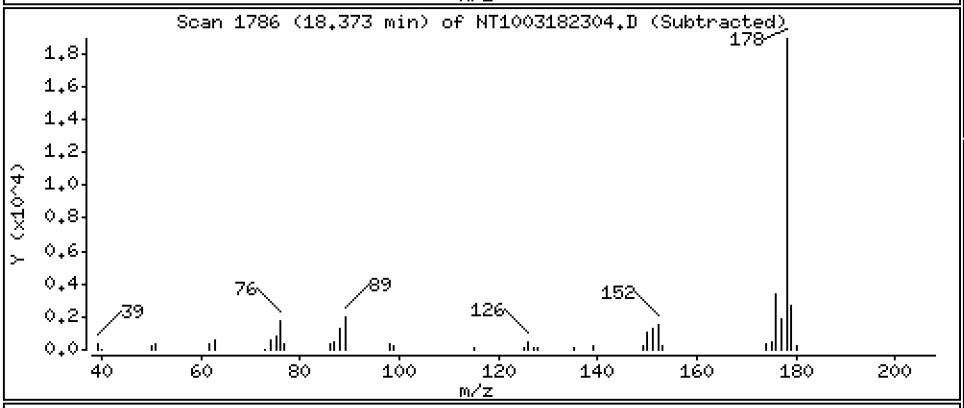
Column phase: ZB-5msi

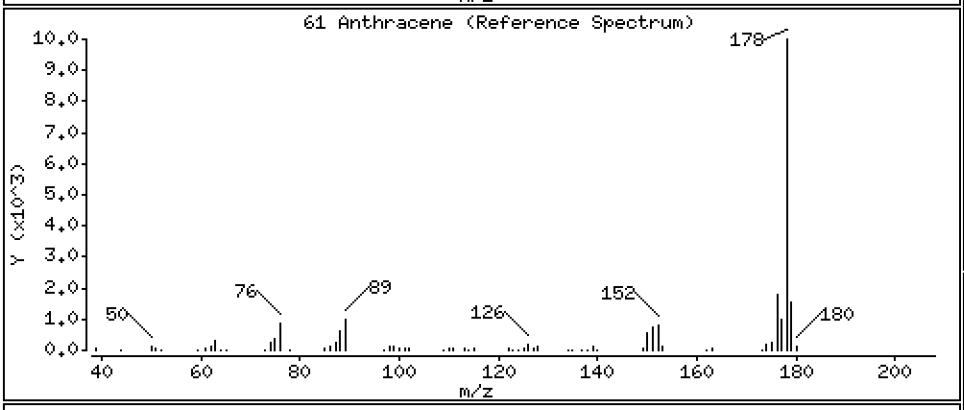
Column diameter: 0.25

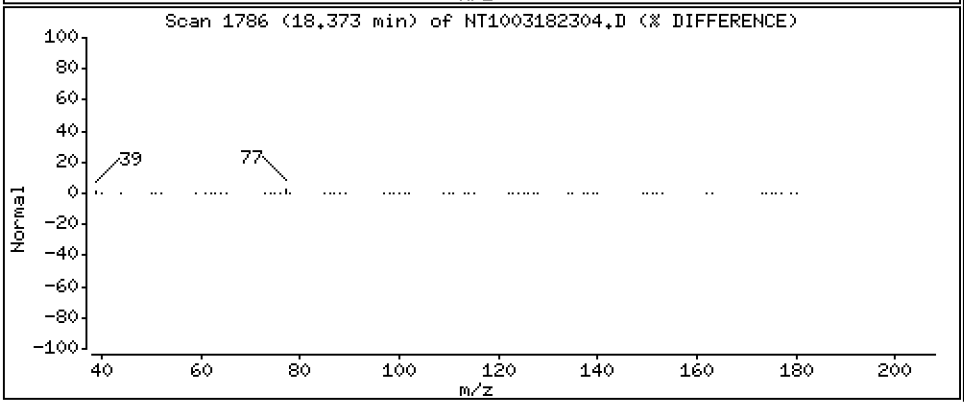
61 Anthracene

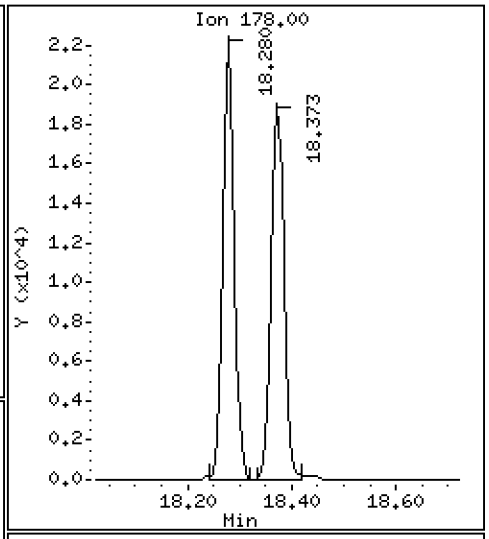
Concentration: 0.1925 ug/mL

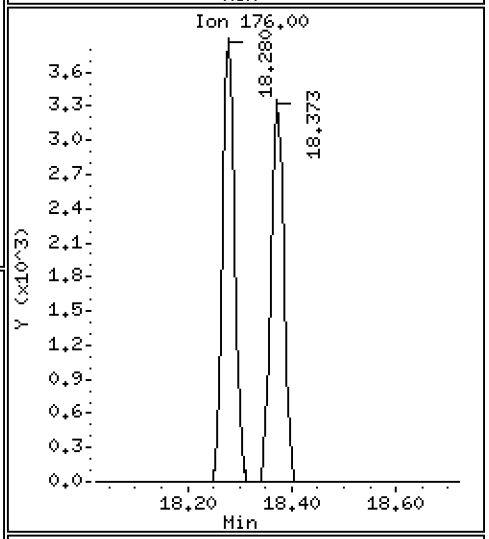


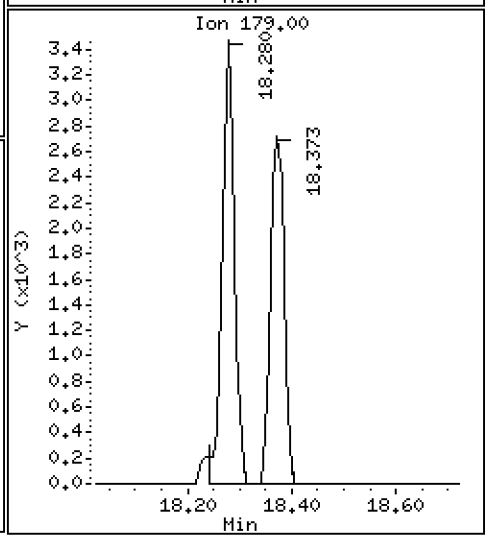












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

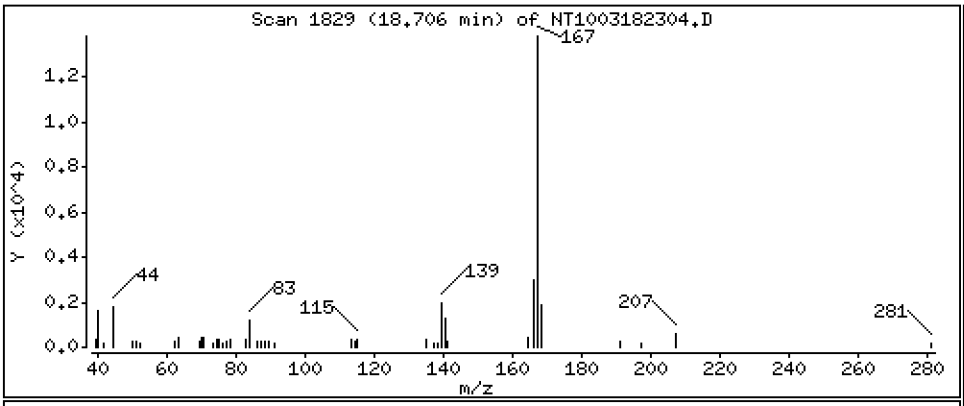
Operator: VTS

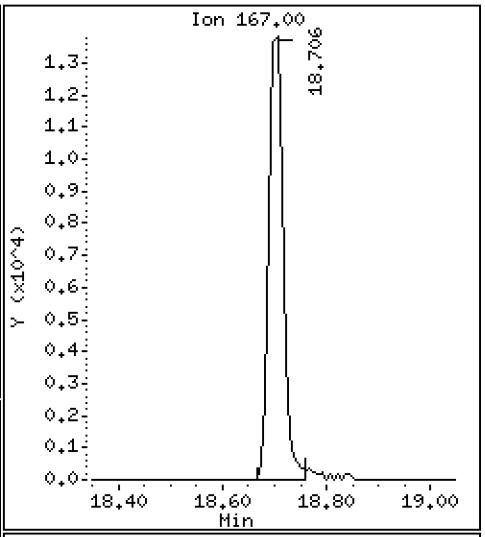
Column phase: ZB-5msi

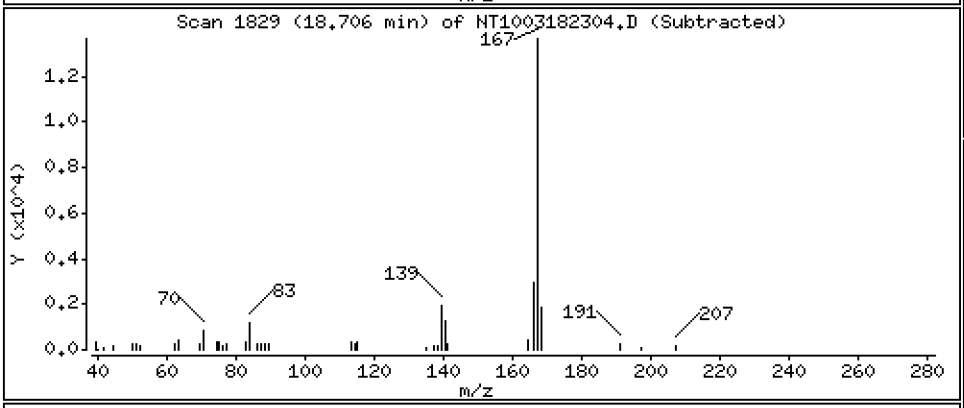
Column diameter: 0.25

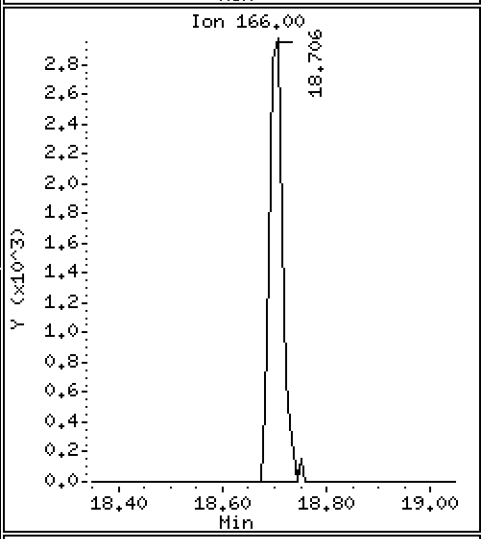
62 Carbazole

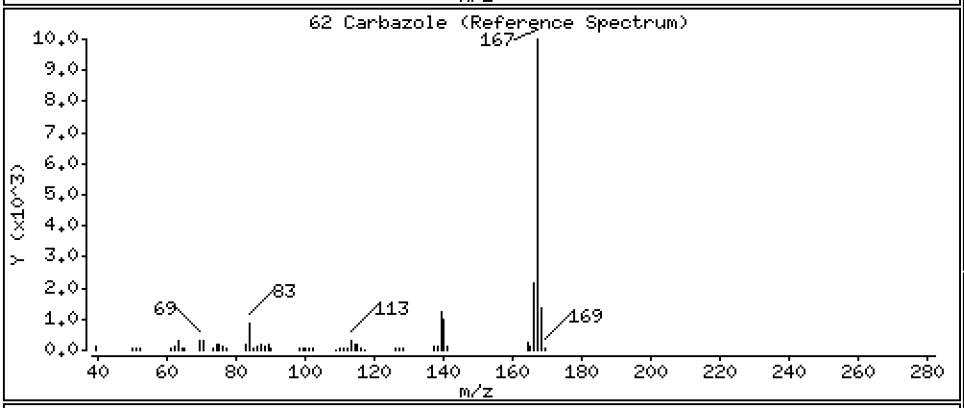
Concentration: 0.1785 ug/mL

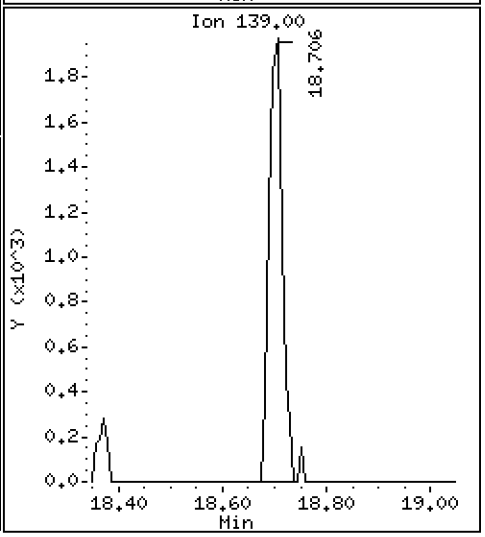


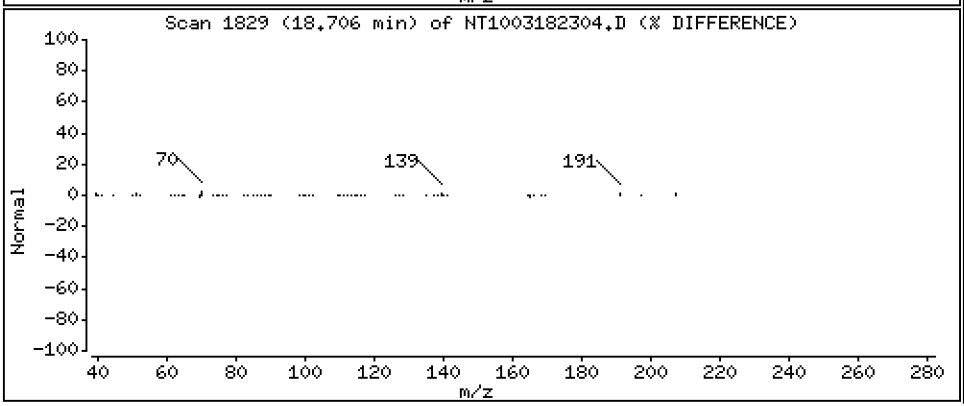












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

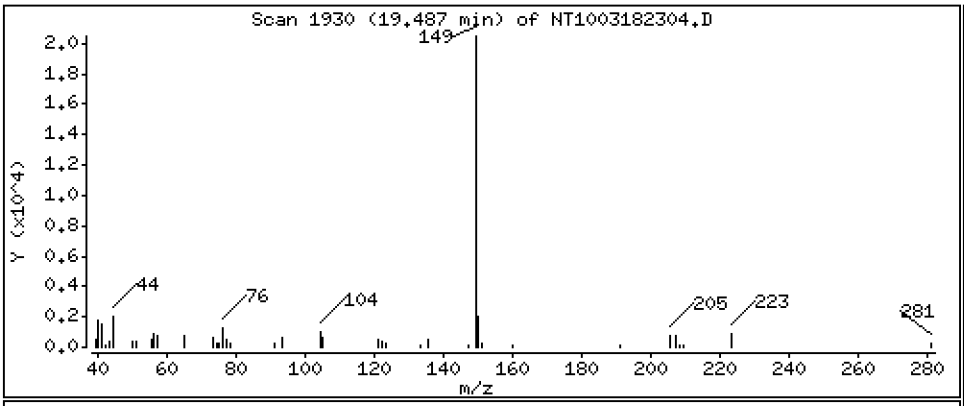
Operator: VTS

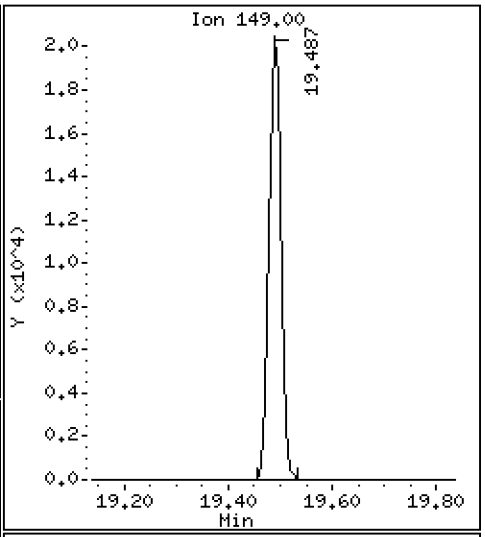
Column phase: ZB-5msi

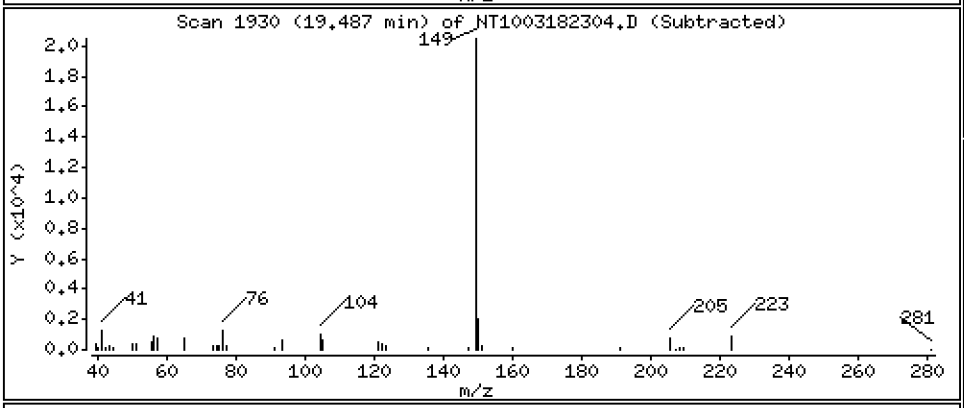
Column diameter: 0.25

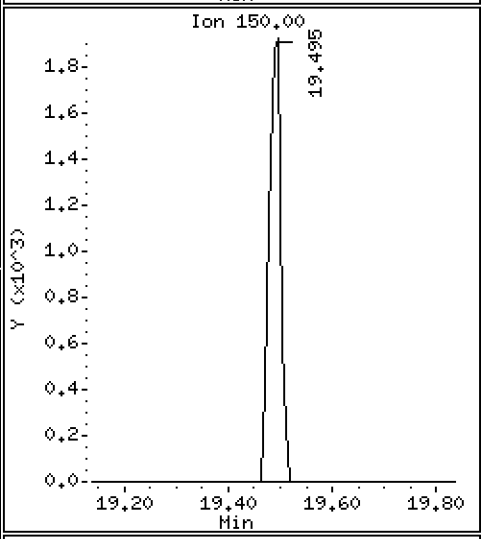
63 Di-n-butylphthalate

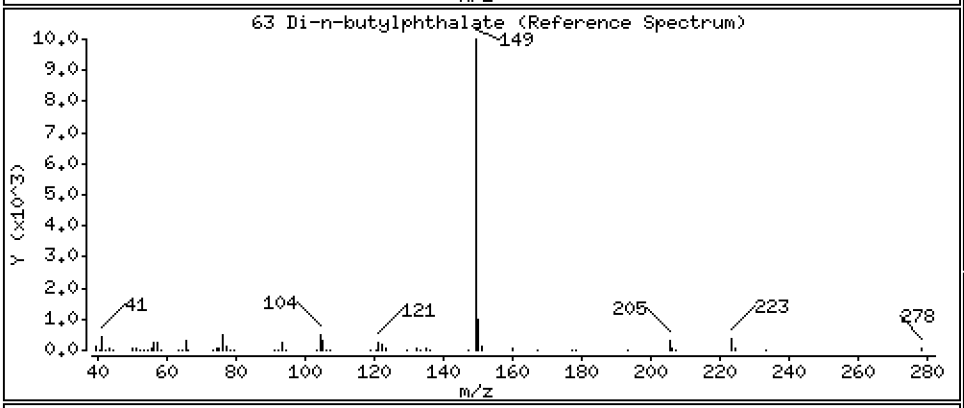
Concentration: 0.1604 ug/mL

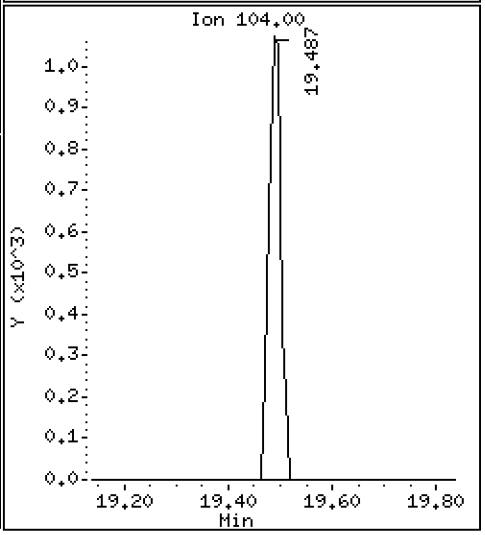


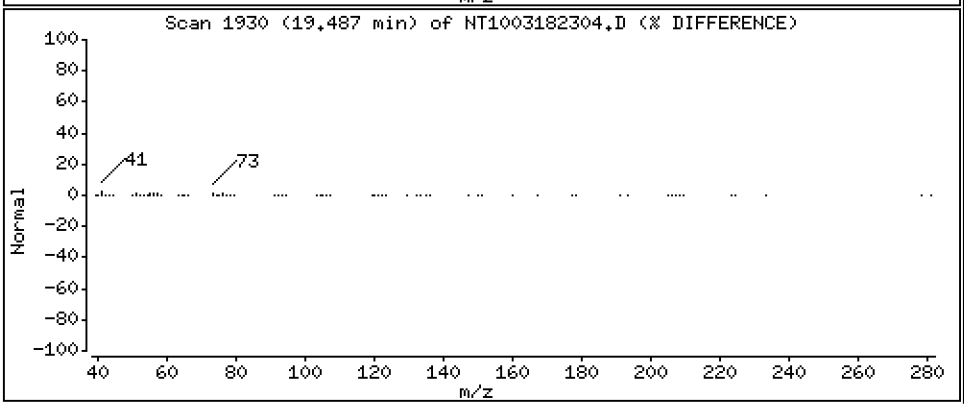












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

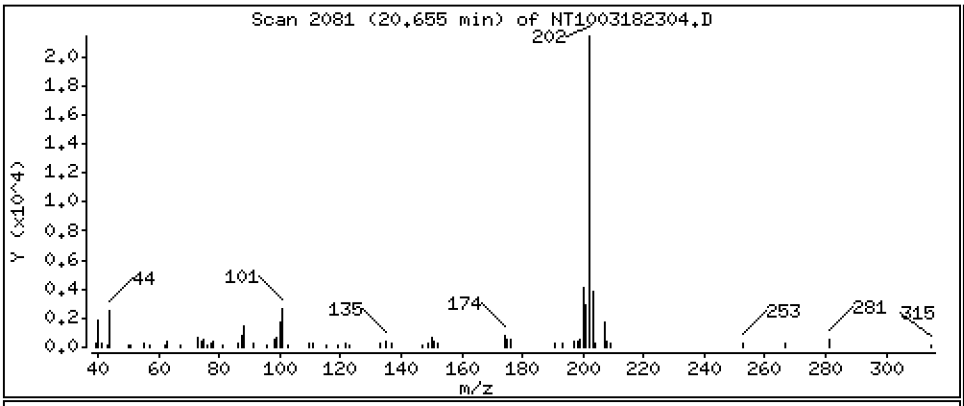
Operator: VTS

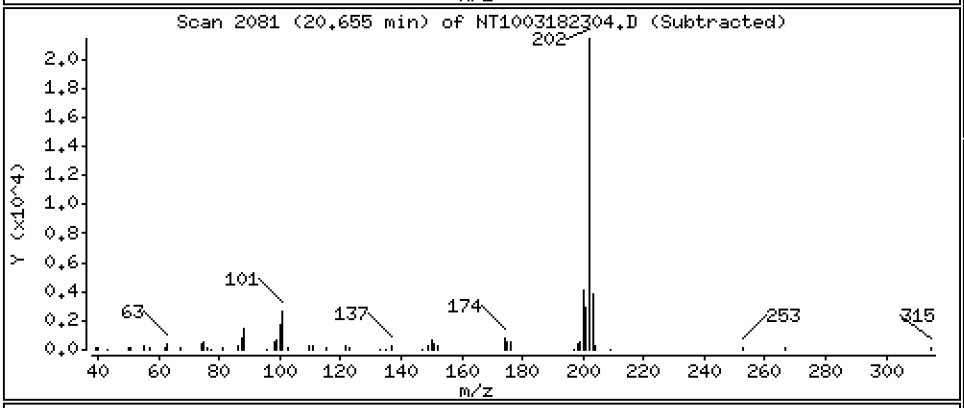
Column phase: ZB-5msi

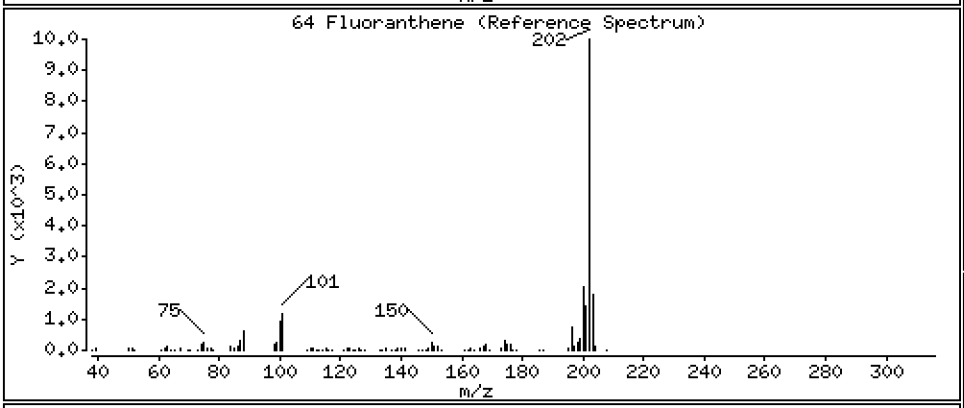
Column diameter: 0.25

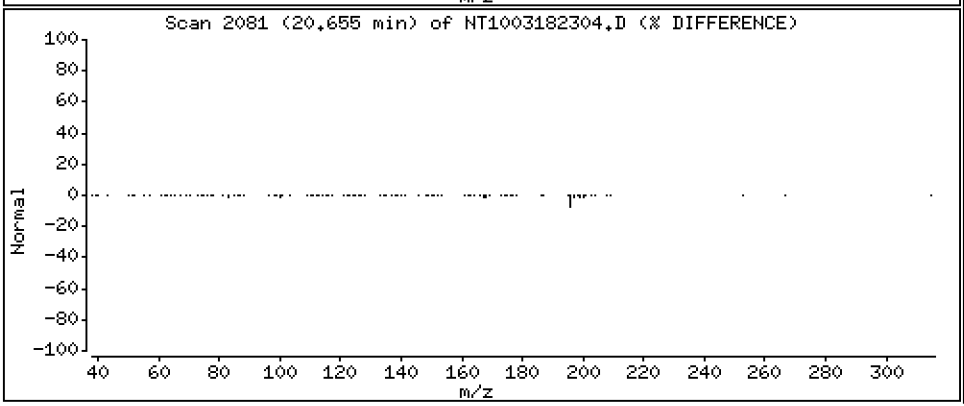
64 Fluoranthene

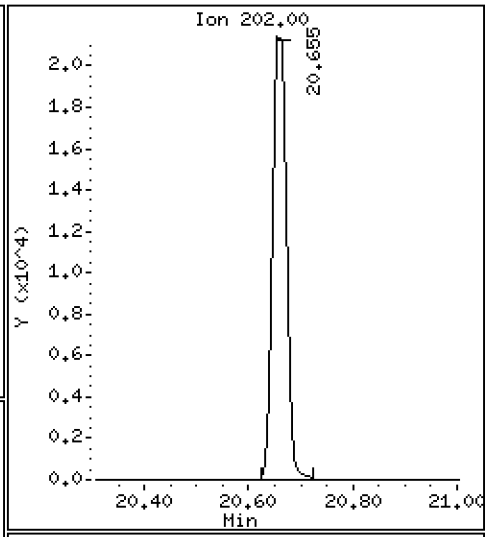
Concentration: 0.1914 ug/mL

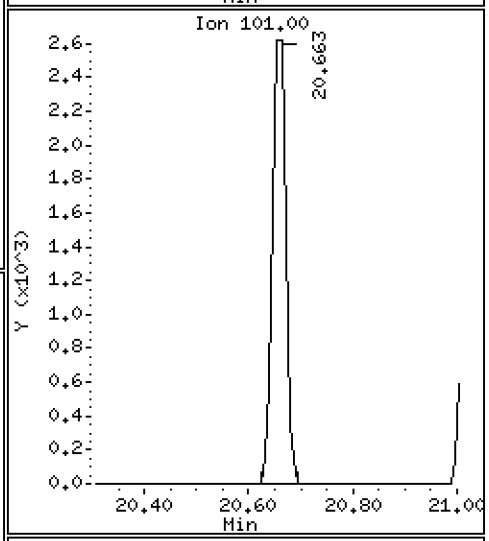


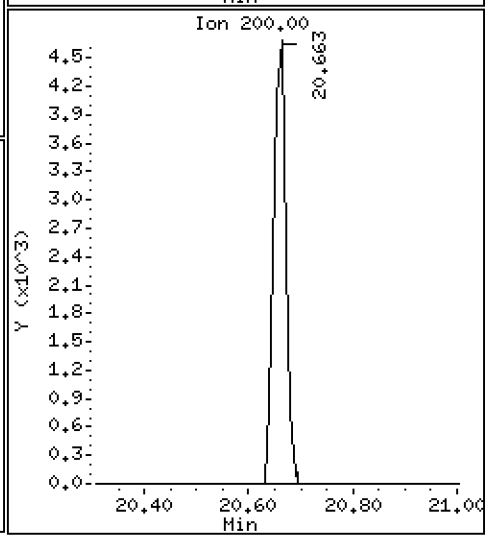












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

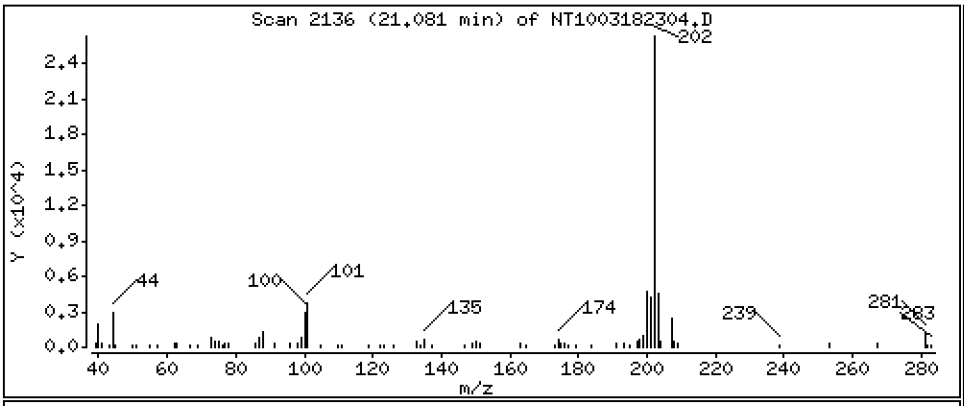
Operator: VTS

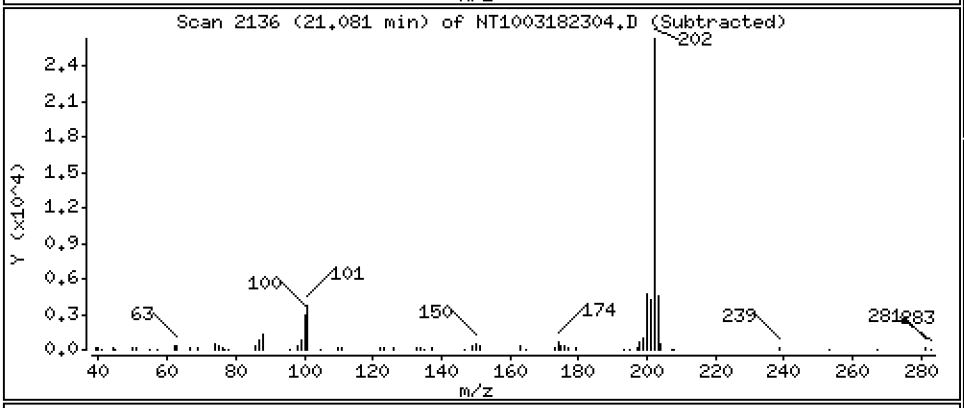
Column phase: ZB-5msi

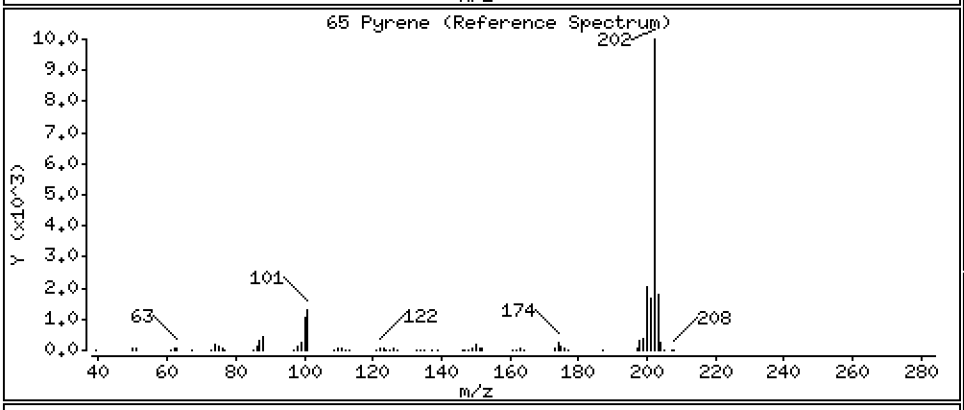
Column diameter: 0.25

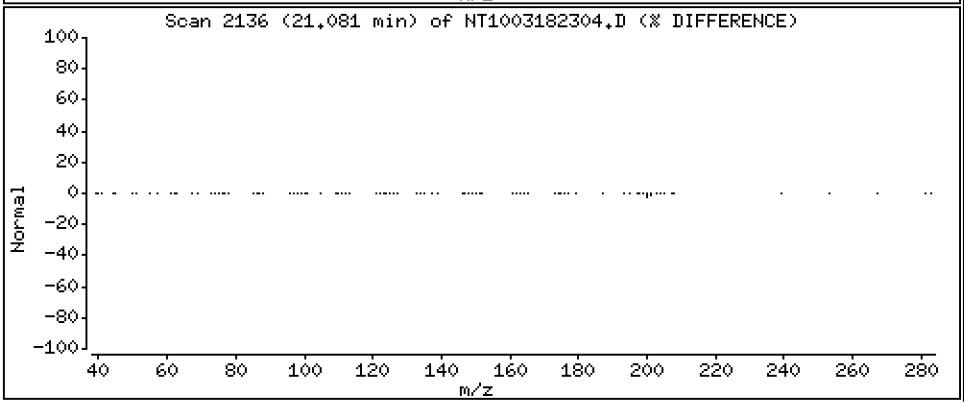
65 Pyrene

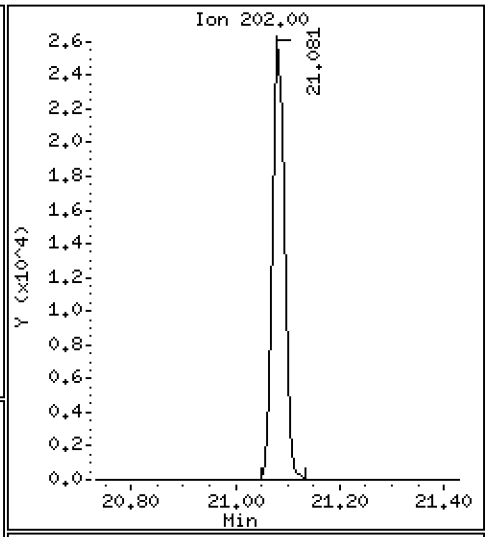
Concentration: 0.1950 ug/mL

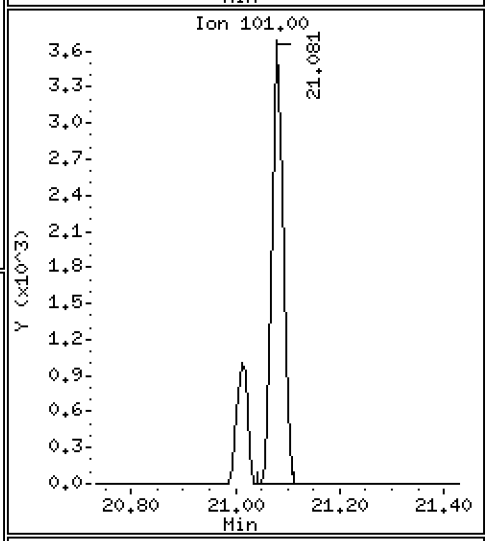


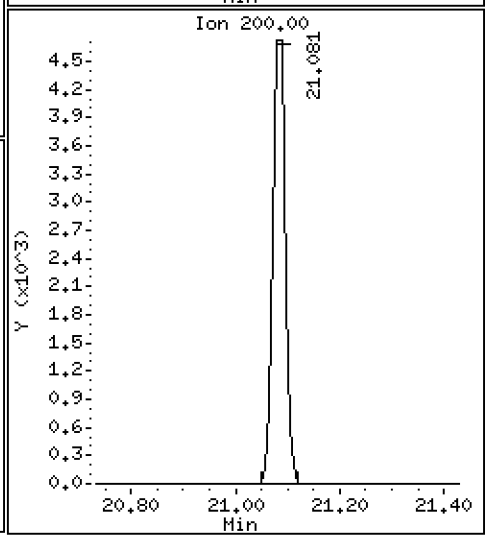












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

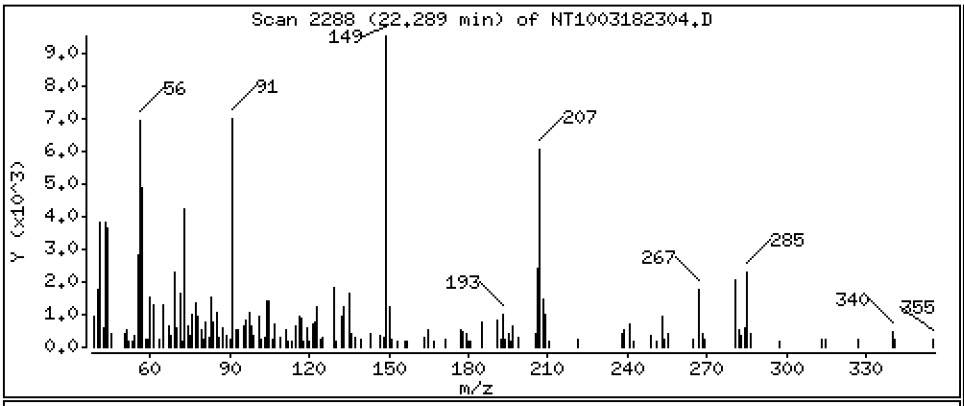
Operator: VTS

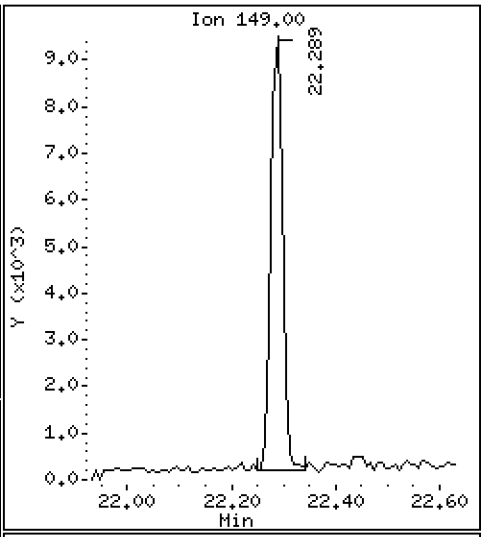
Column phase: ZB-5msi

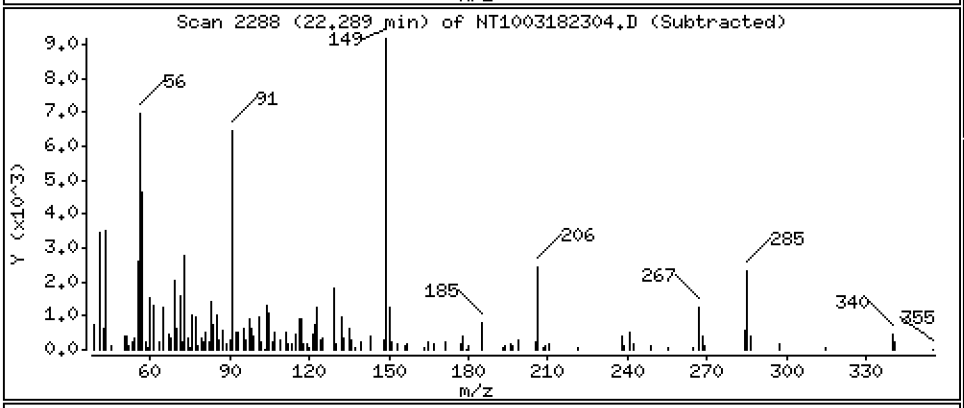
Column diameter: 0.25

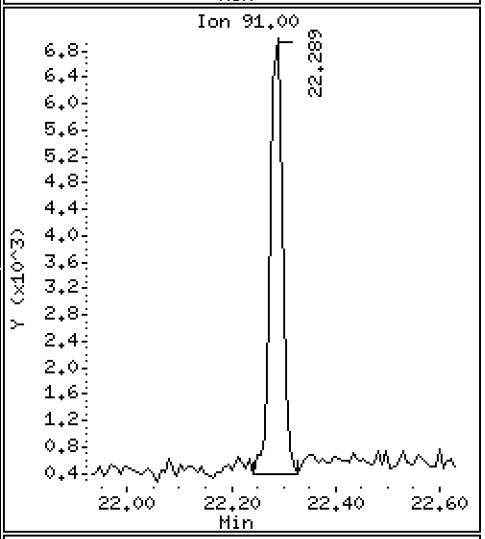
67 Butylbenzylphthalate

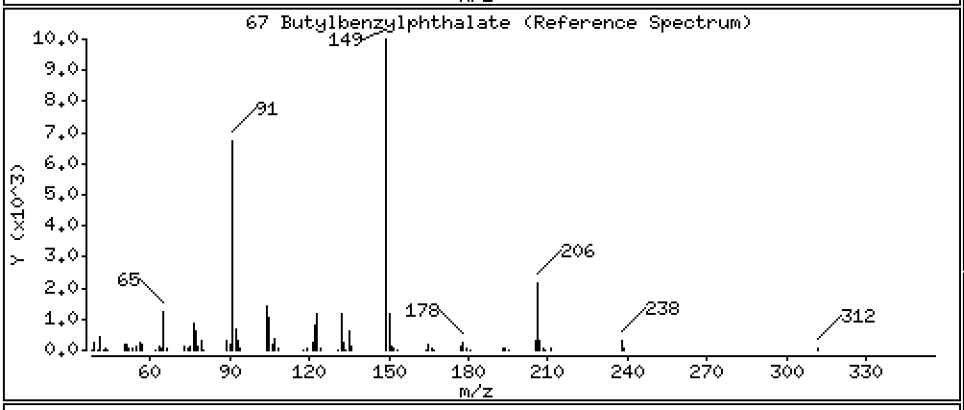
Concentration: 0.1936 ug/mL

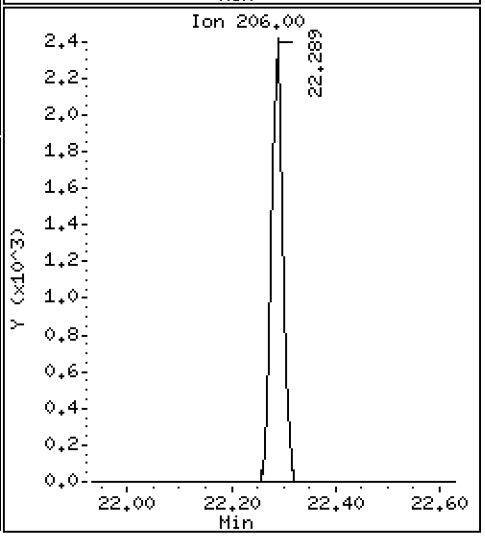


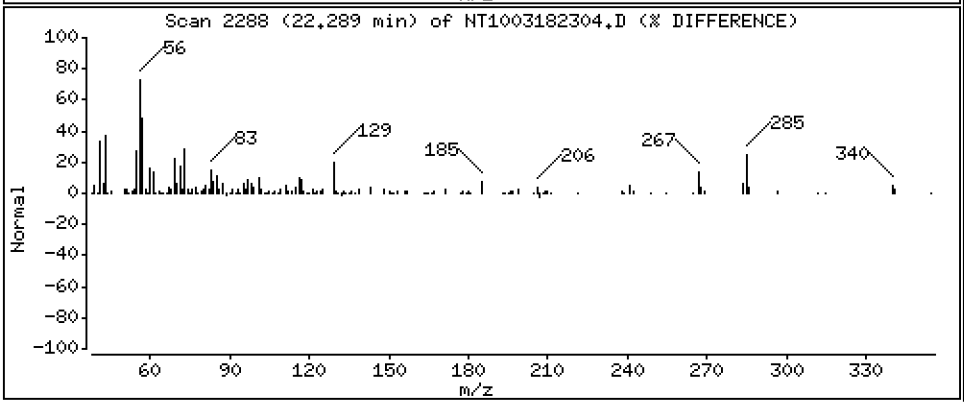












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

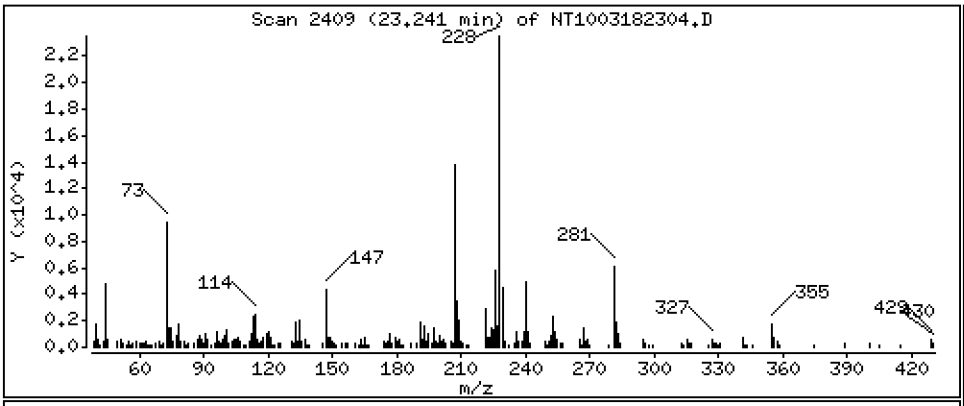
Operator: VTS

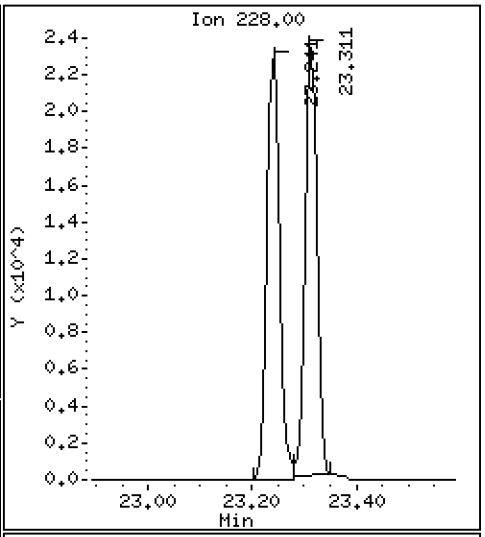
Column phase: ZB-5msi

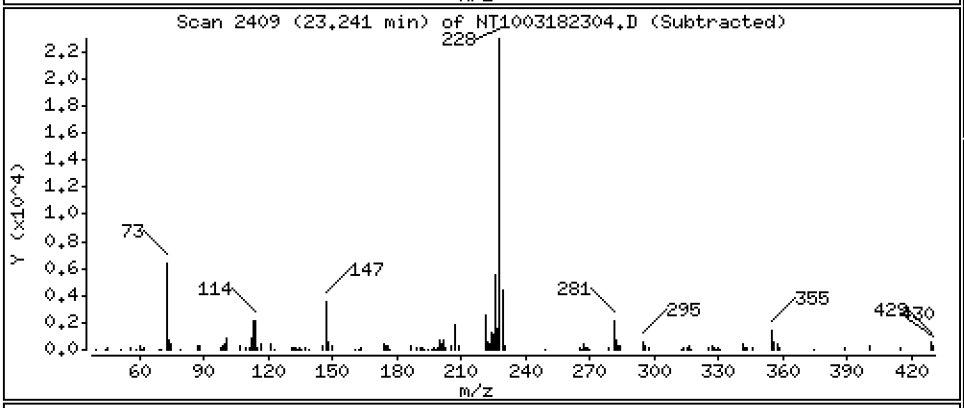
Column diameter: 0.25

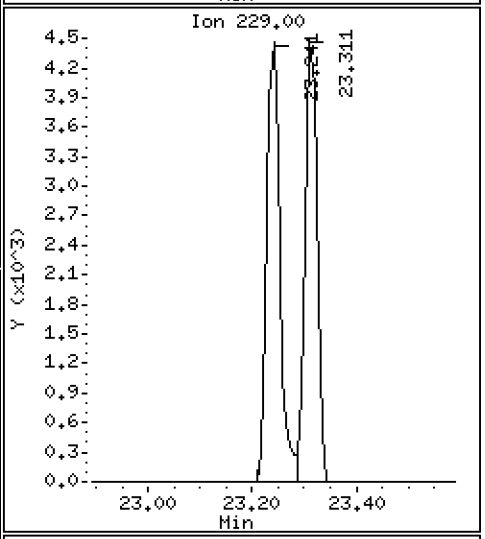
68 Benzo(a)anthracene

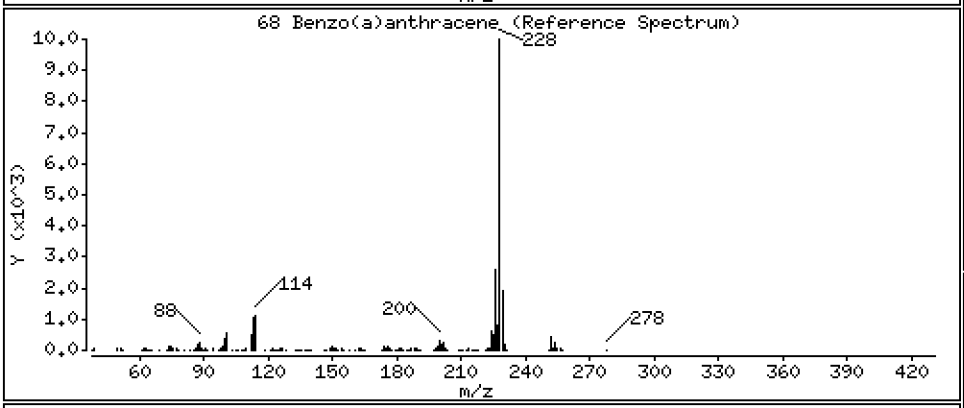
Concentration: 0.2141 ug/mL

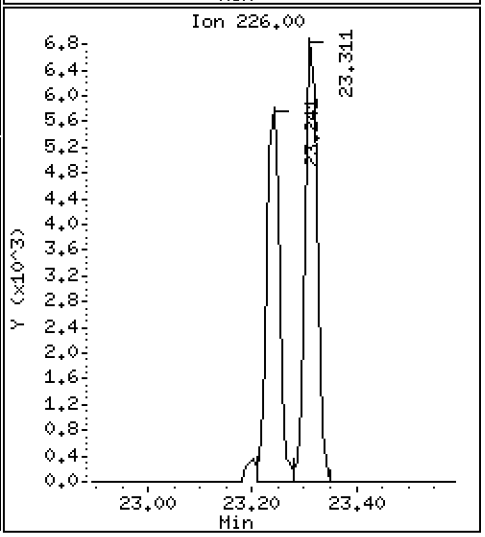


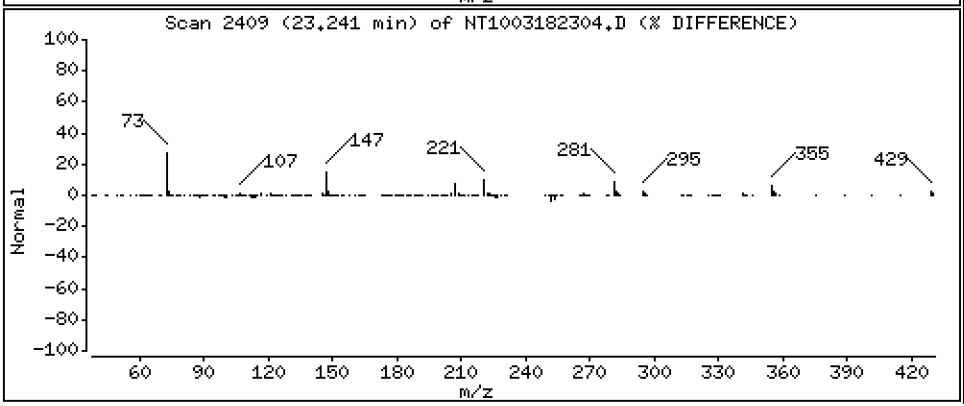












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

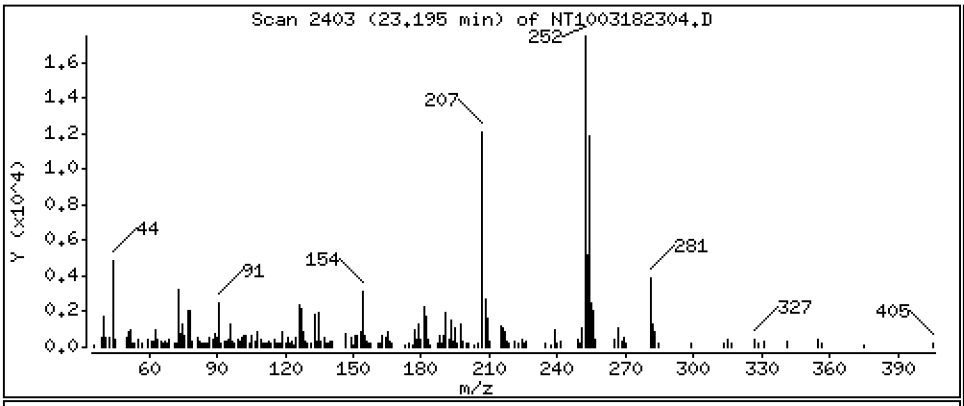
Operator: VTS

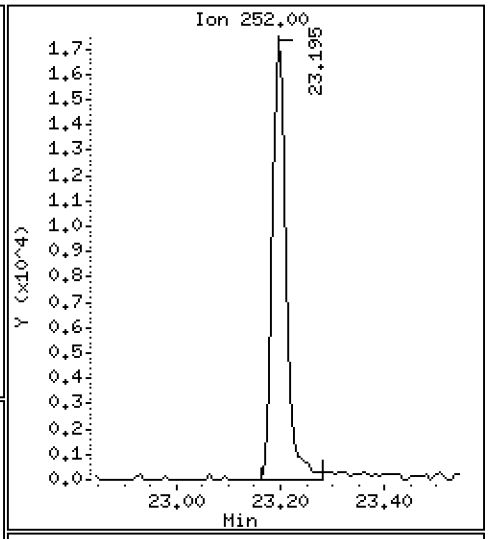
Column phase: ZB-5msi

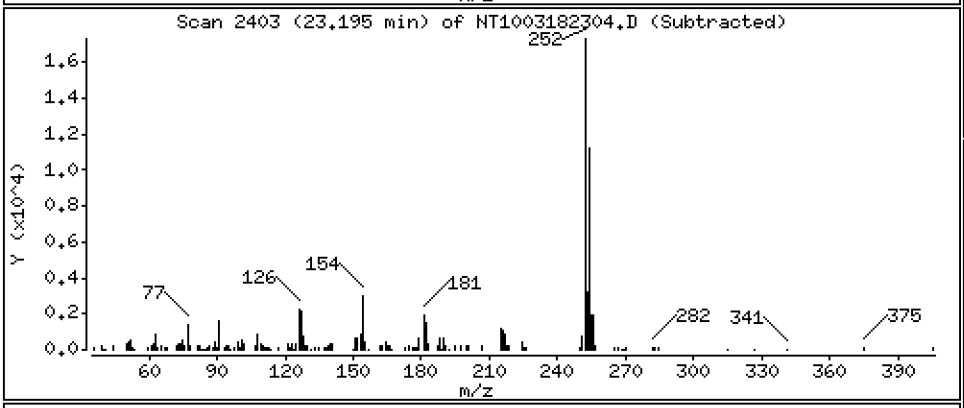
Column diameter: 0.25

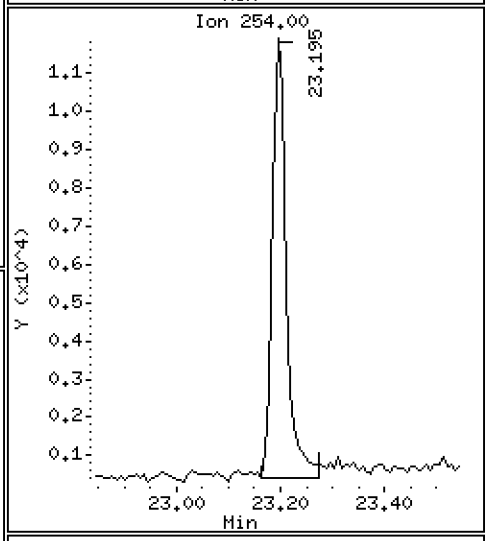
70 3,3'-Dichlorobenzidine

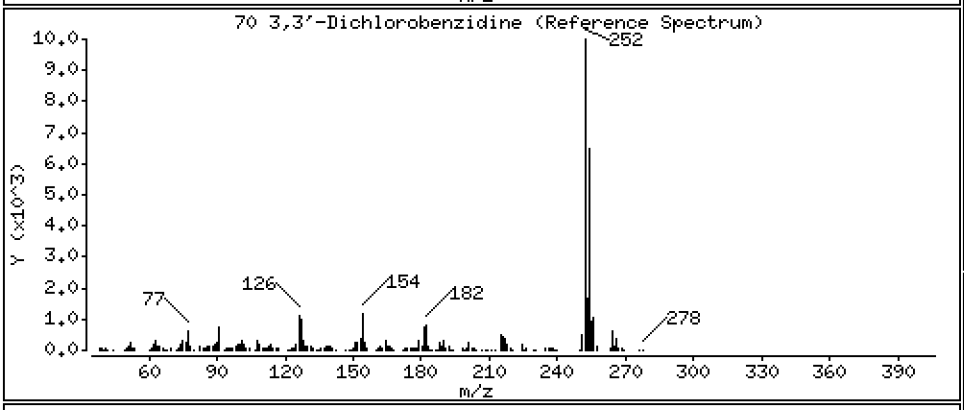
Concentration: 0.5561 ug/mL

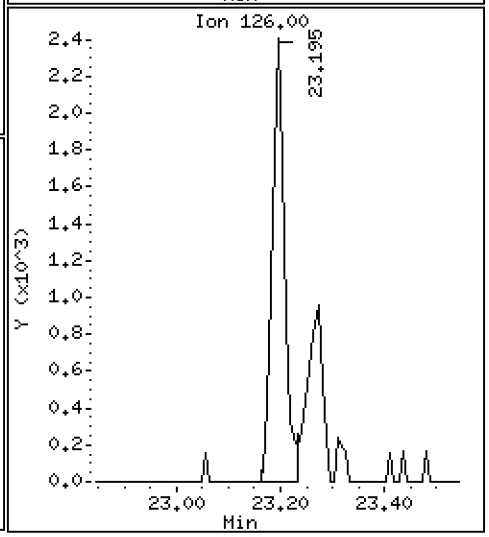


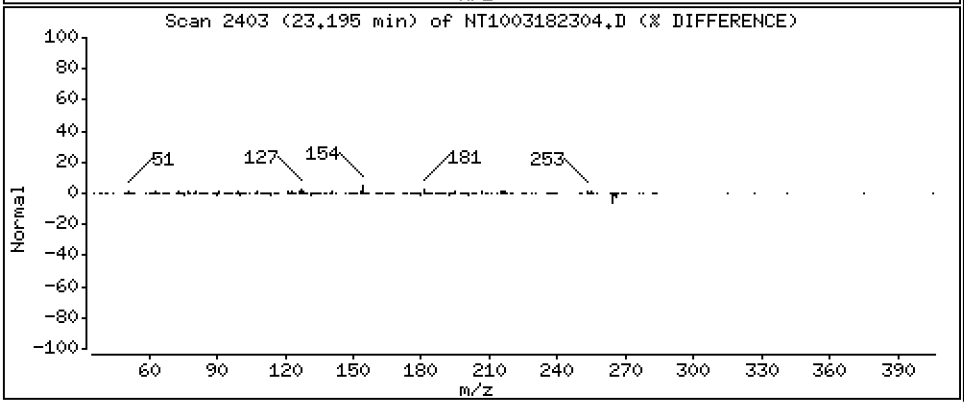












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

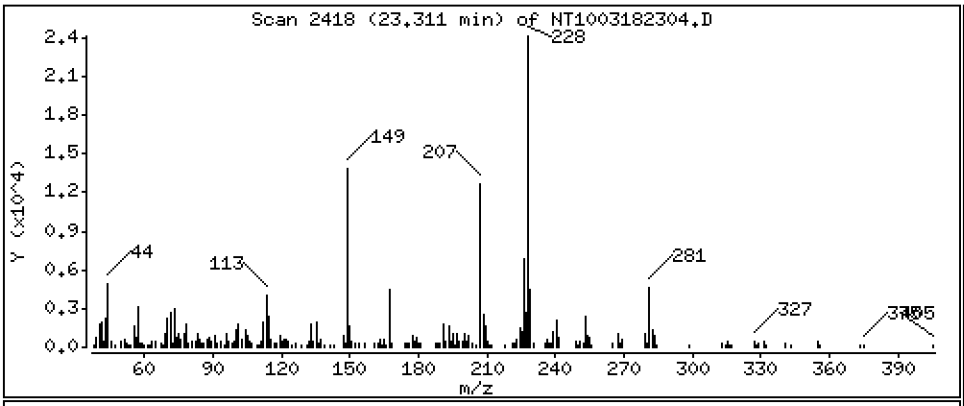
Operator: VTS

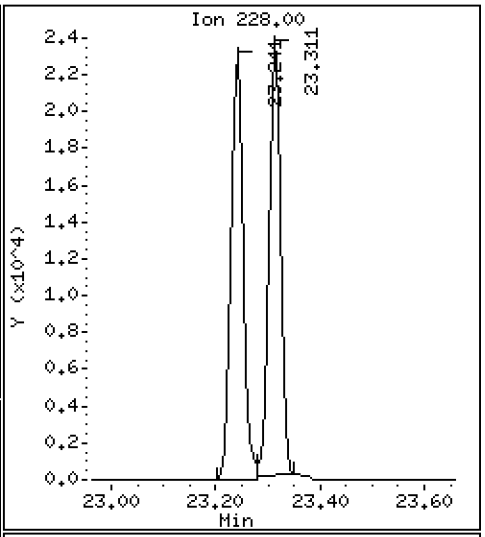
Column phase: ZB-5msi

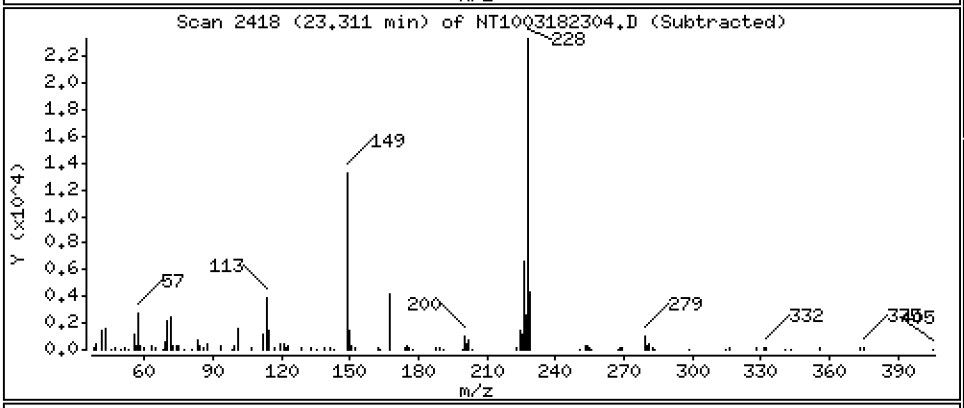
Column diameter: 0.25

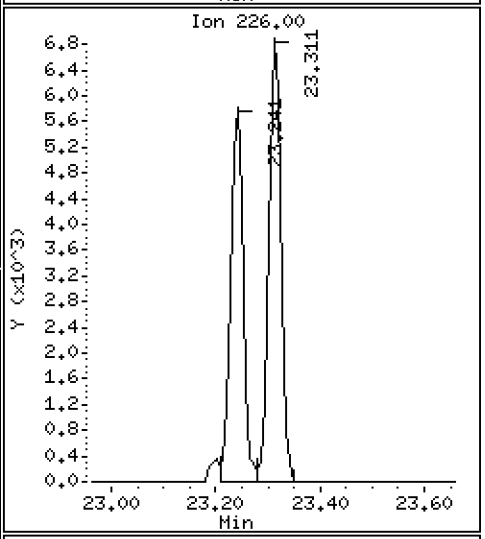
71 Chrysene

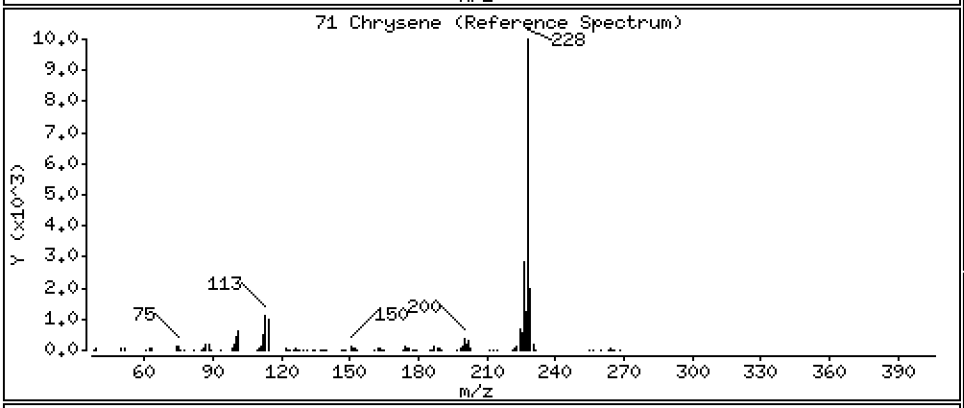
Concentration: 0.2033 ug/mL

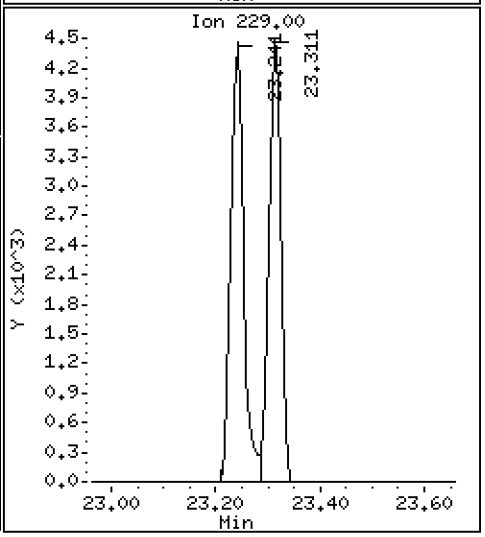


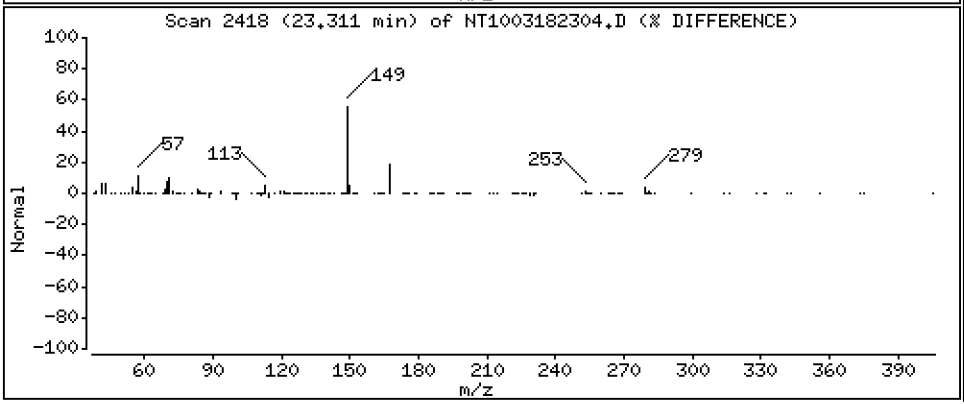












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

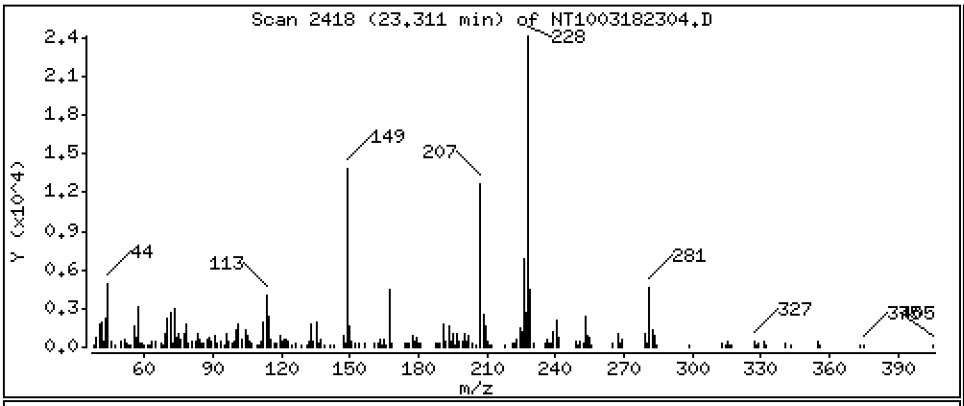
Operator: VTS

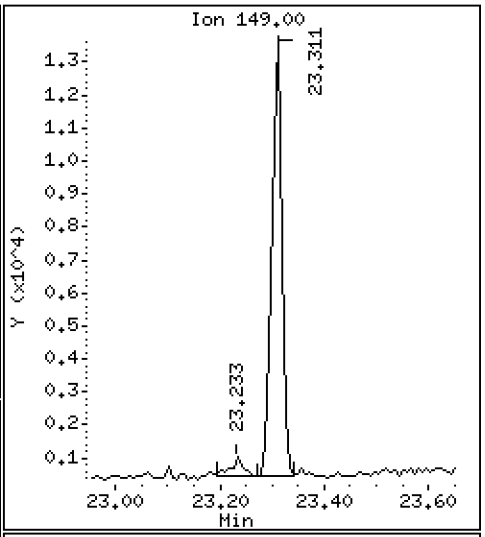
Column phase: ZB-5msi

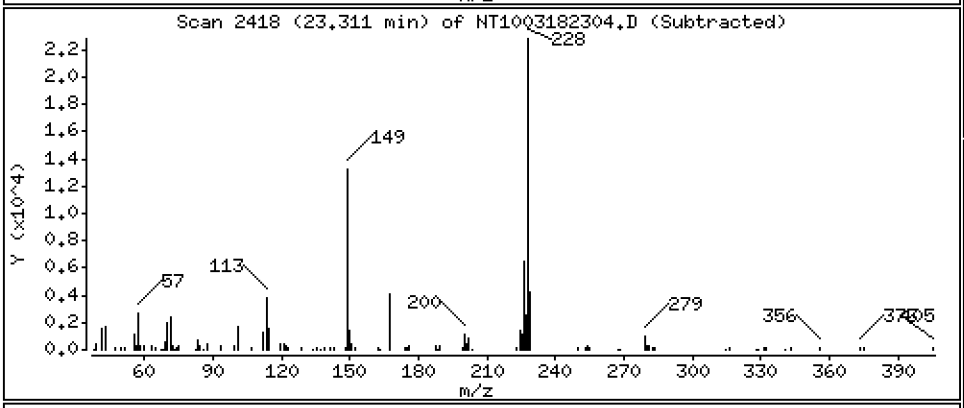
Column diameter: 0.25

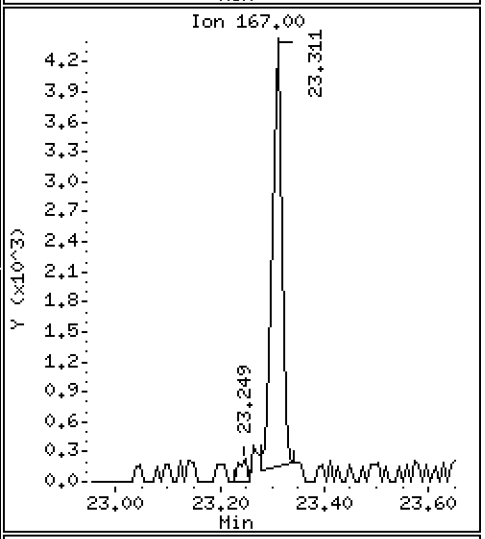
72 bis(2-Ethylhexyl)phthalate

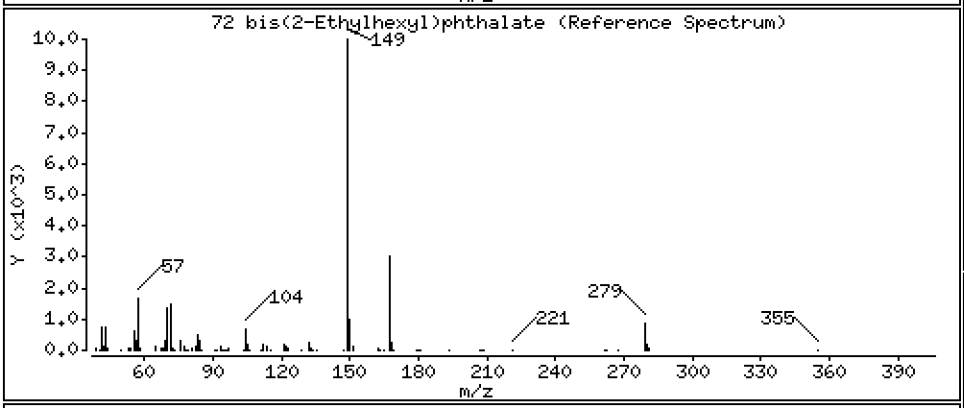
Concentration: 0.1531 ug/mL

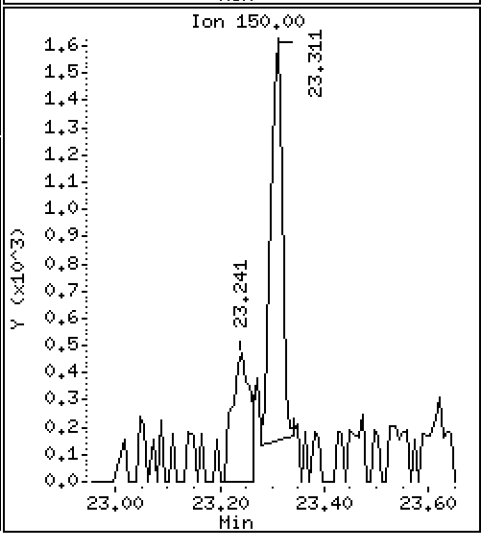


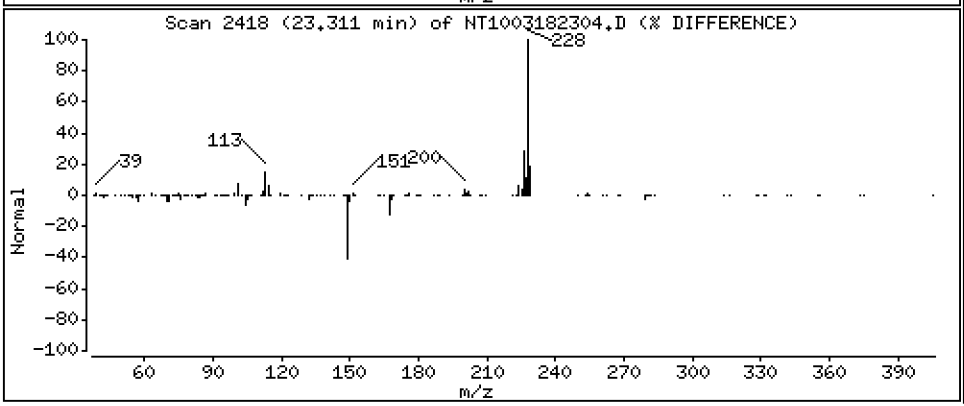












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

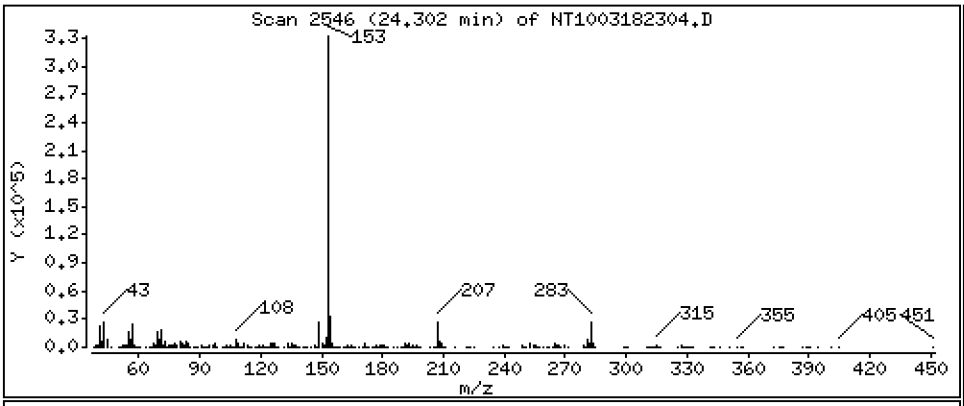
Operator: VTS

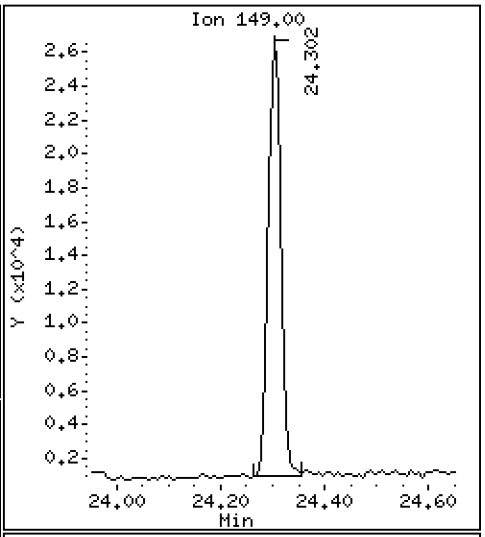
Column phase: ZB-5msi

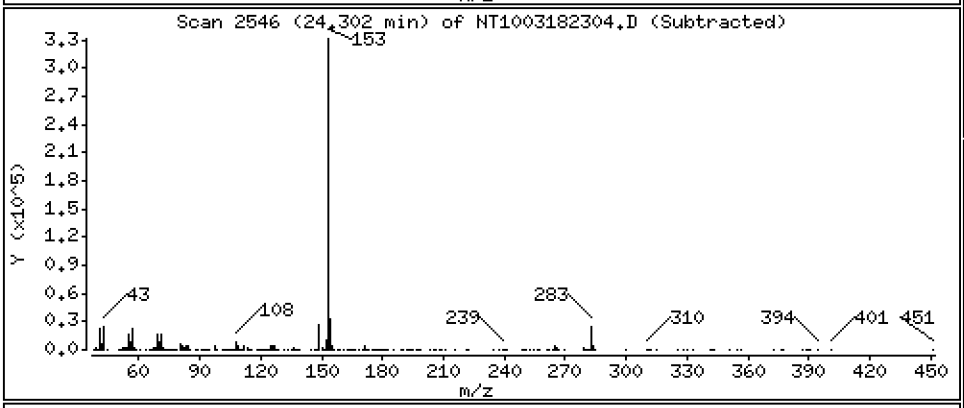
Column diameter: 0.25

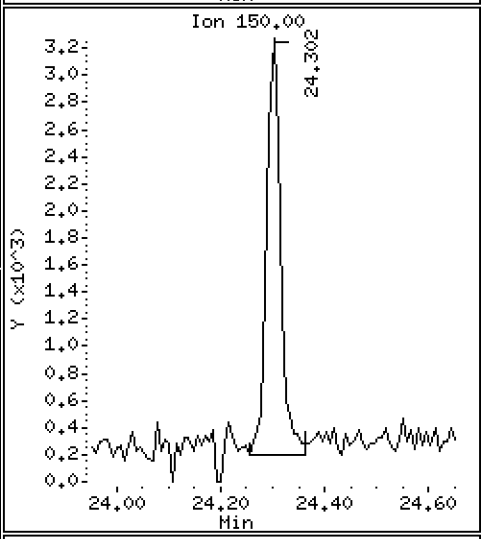
73 Di-n-octylphthalate

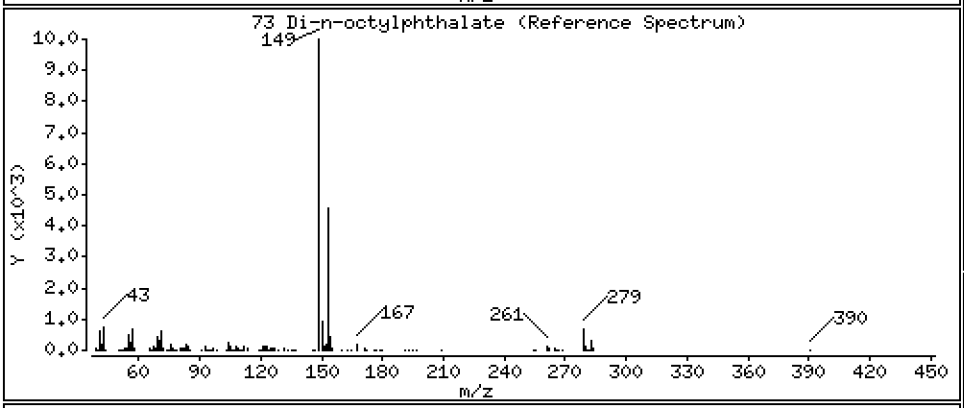
Concentration: 0.2056 ug/mL

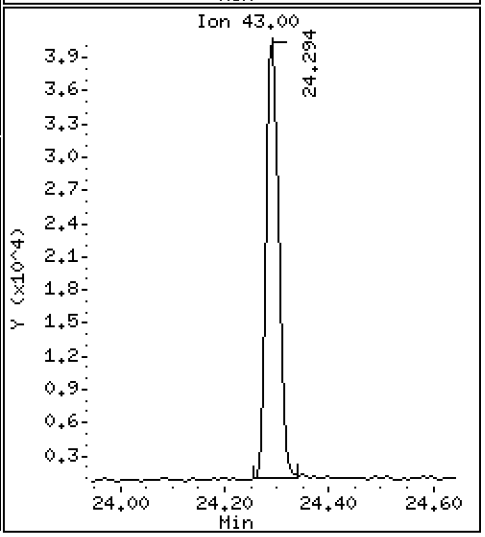


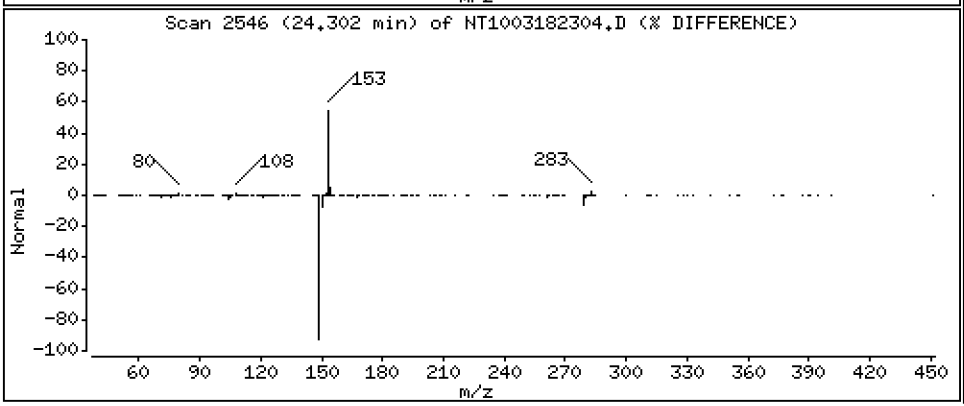












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

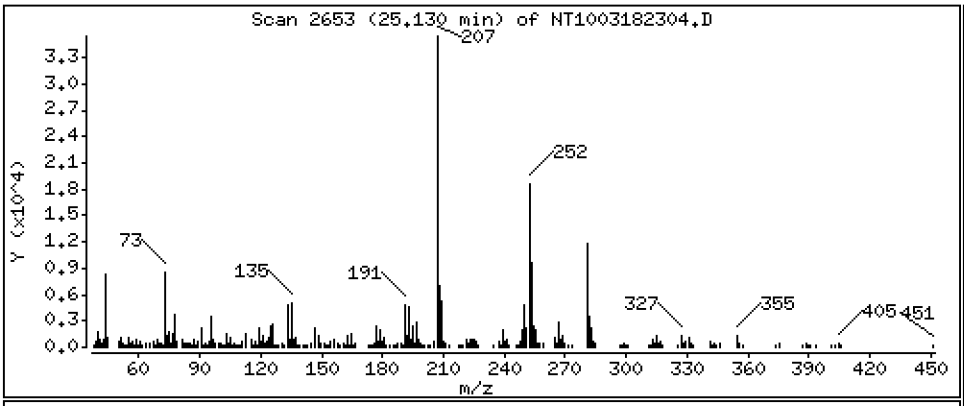
Operator: VTS

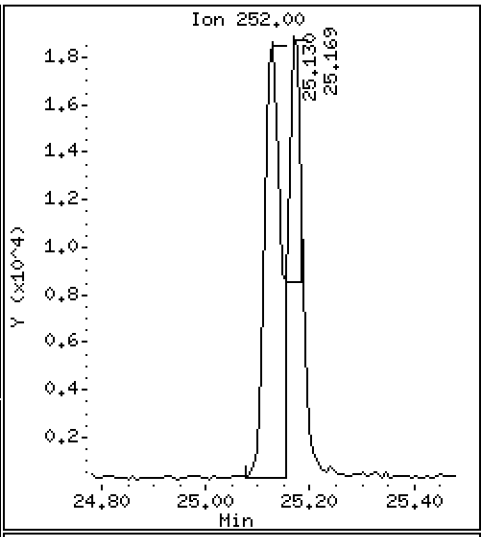
Column phase: ZB-5msi

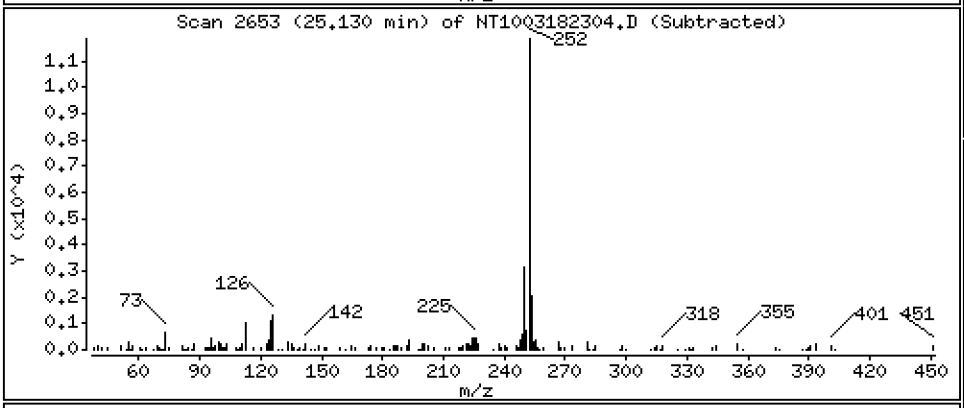
Column diameter: 0.25

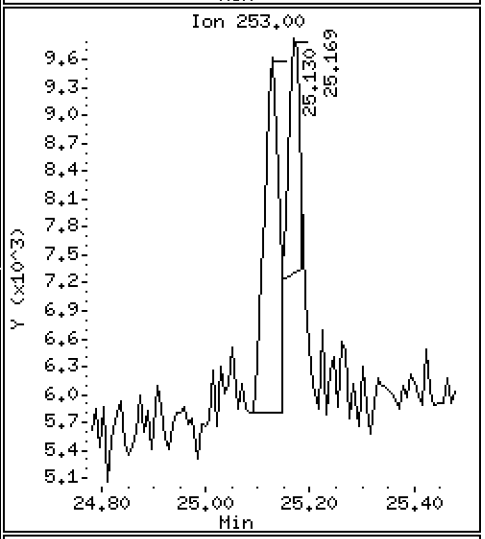
74 Benzo(b)fluoranthene

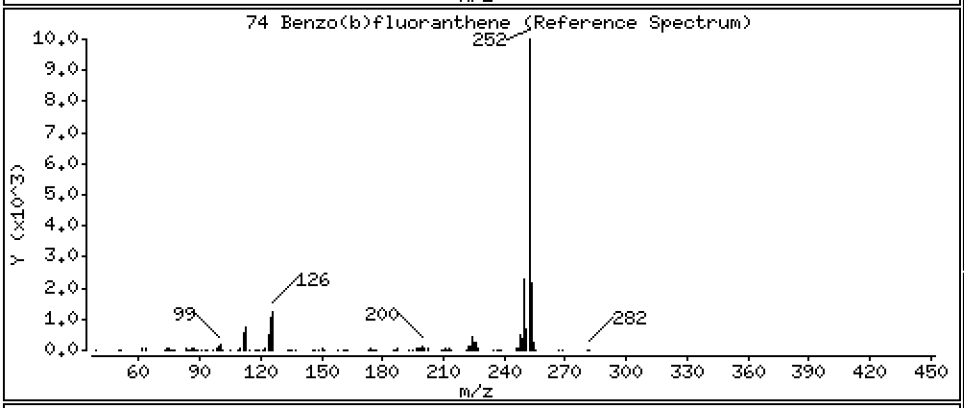
Concentration: 0.2180 ug/mL

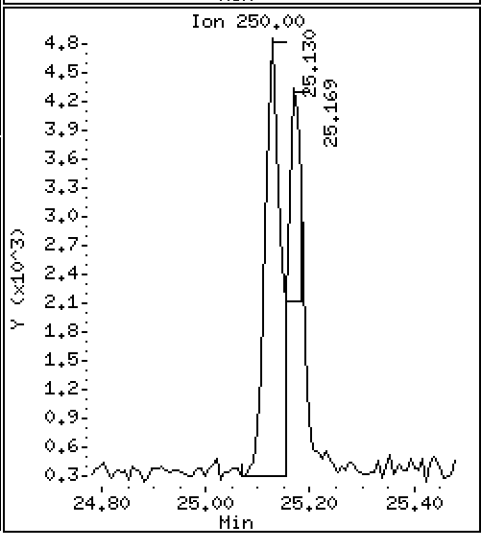


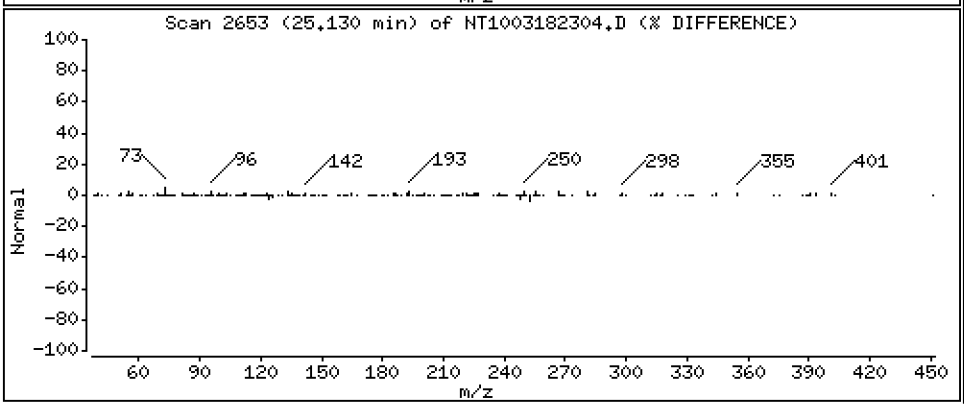












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

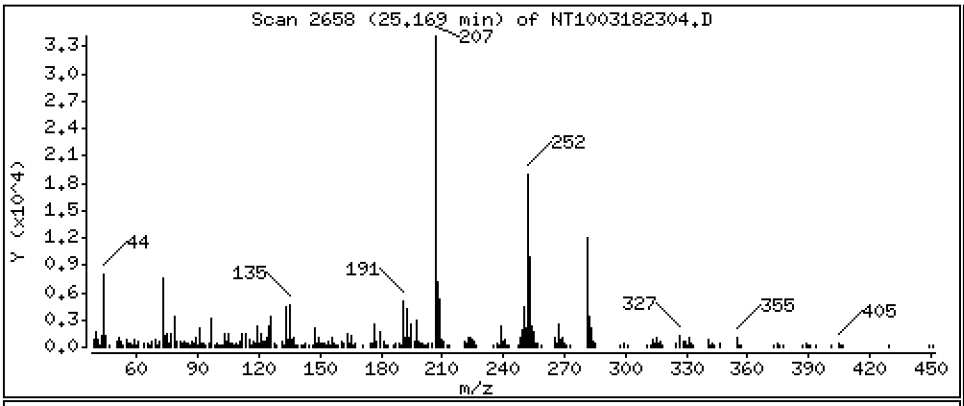
Operator: VTS

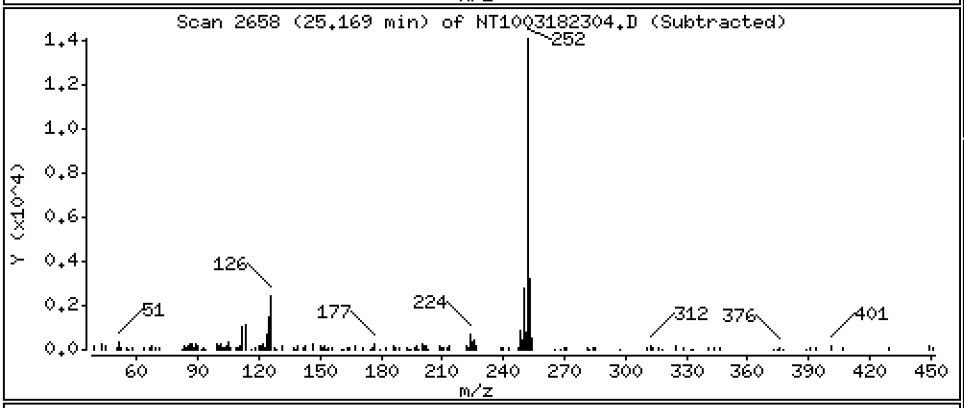
Column phase: ZB-5msi

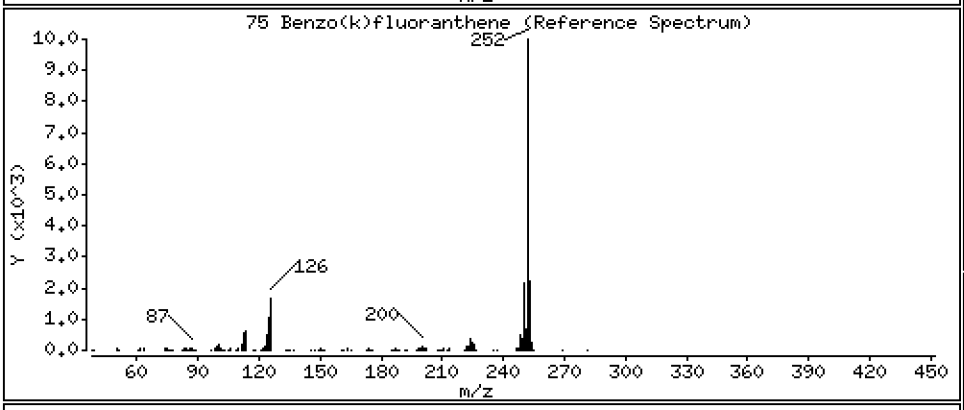
Column diameter: 0.25

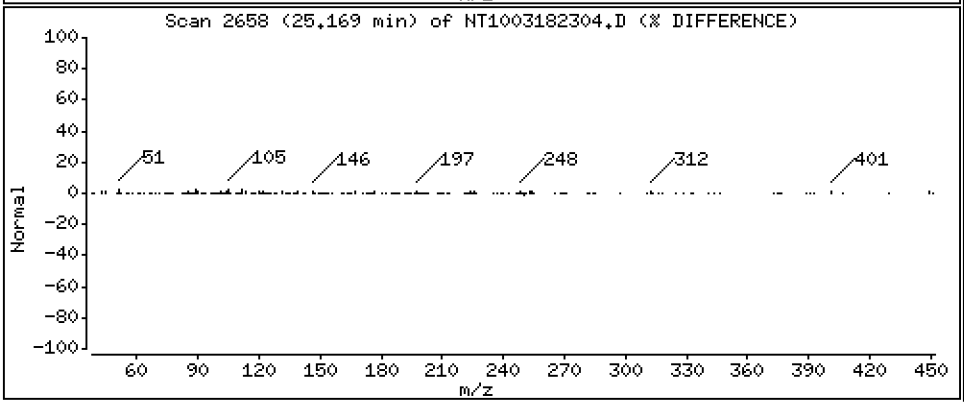
75 Benzo(k)fluoranthene

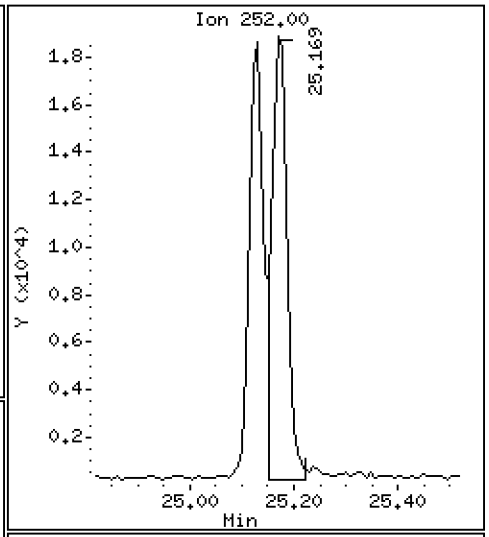
Concentration: 0.2047 ug/mL

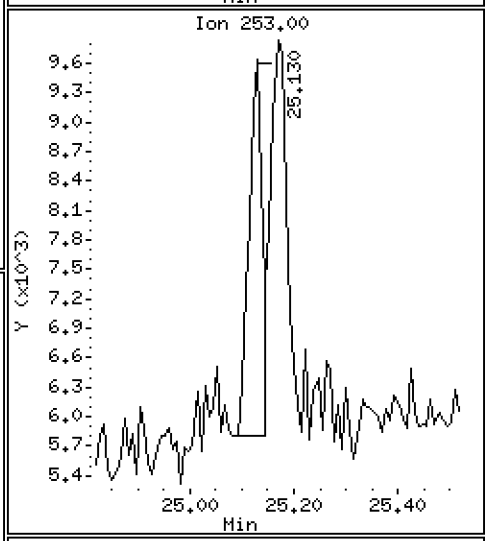


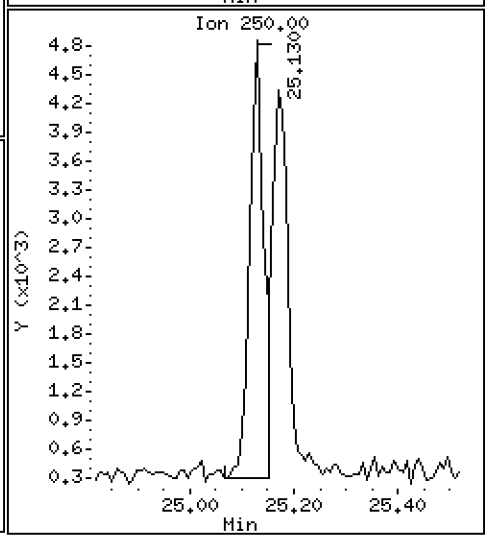












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

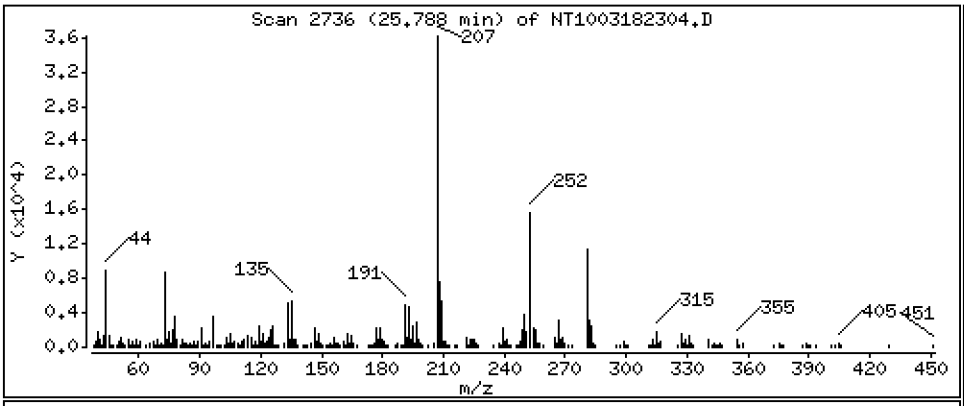
Operator: VTS

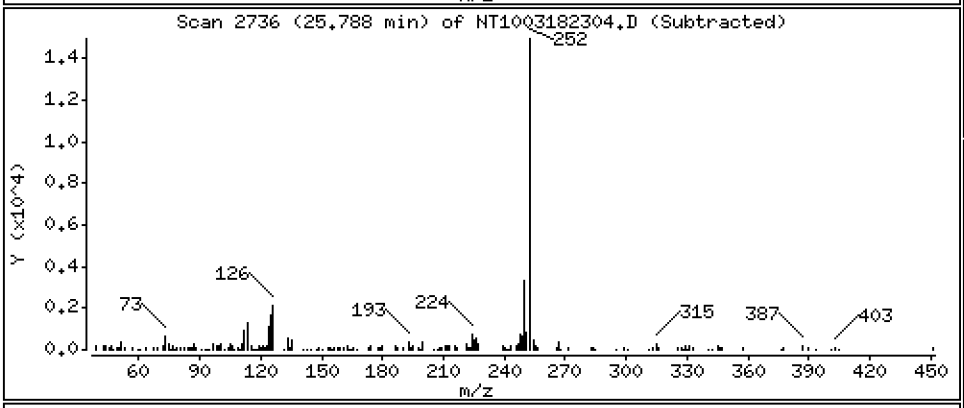
Column phase: ZB-5msi

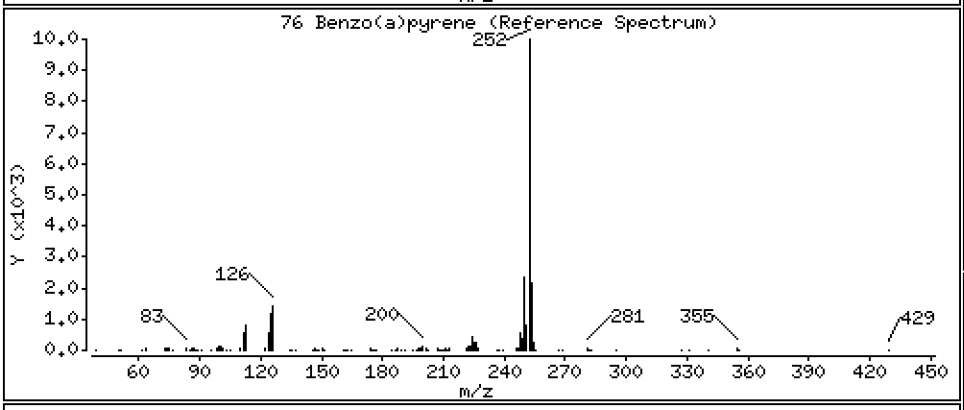
Column diameter: 0.25

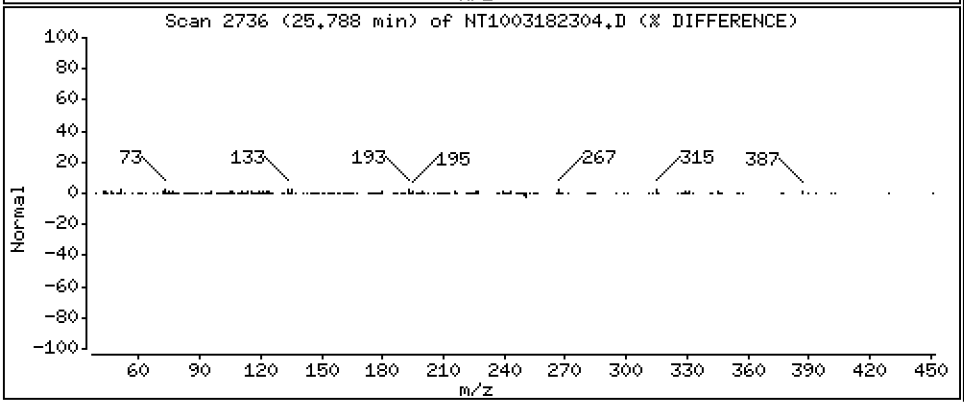
76 Benzo(a)pyrene

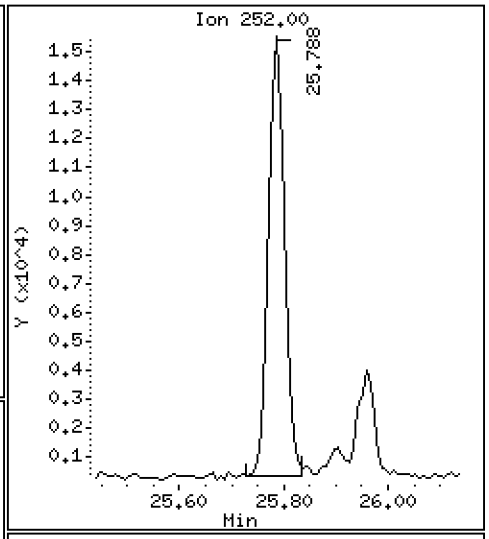
Concentration: 0.1999 ug/mL

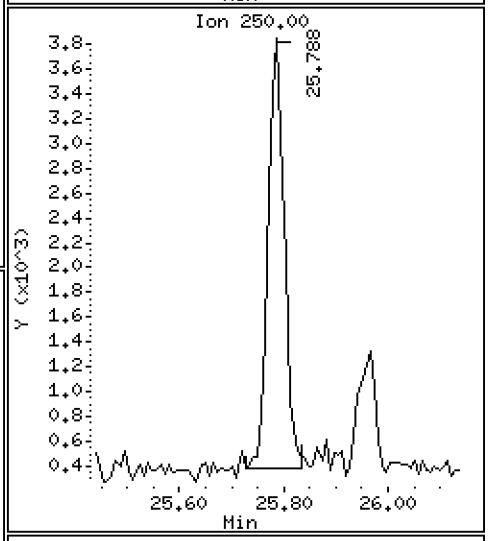


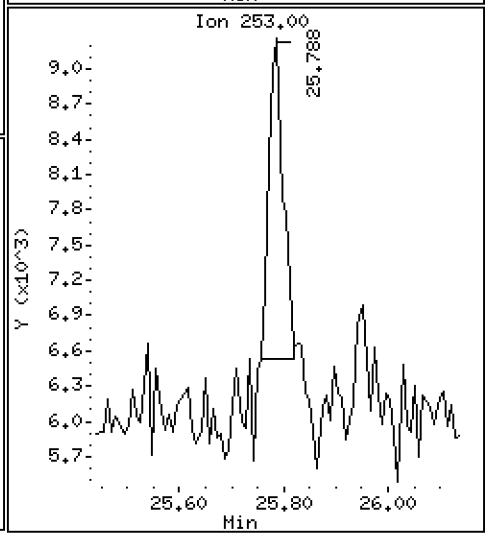












Date : 18-MAR-2023 19:37

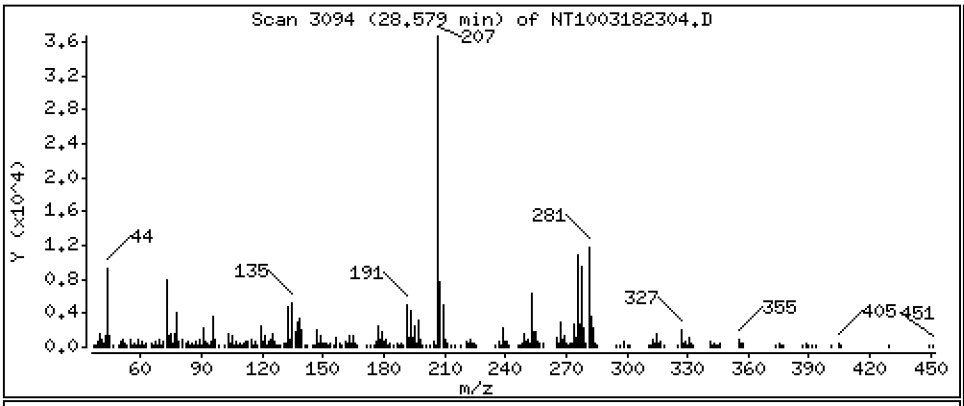
Client ID: Instrument: nt10.i

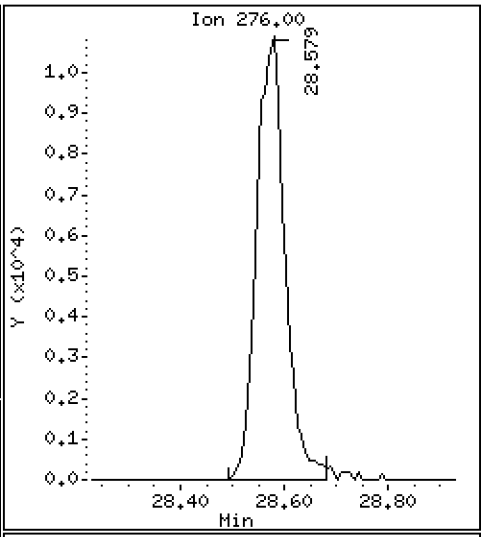
Sample Info: SLC0504-LCV1

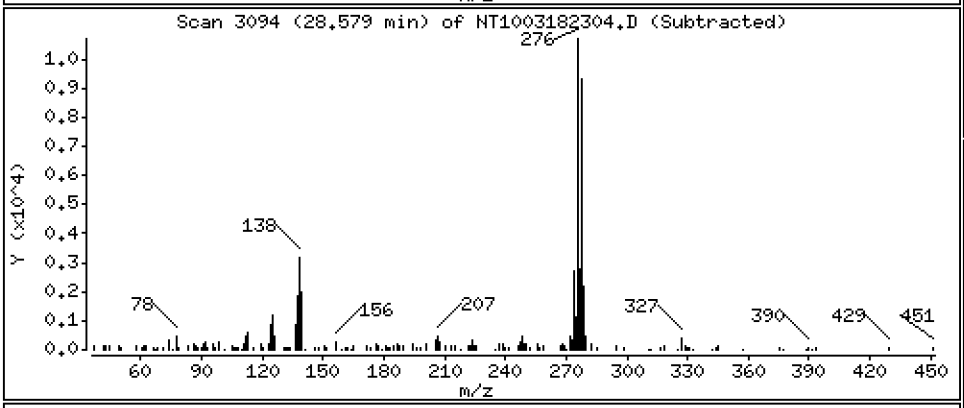
Operator: VTS

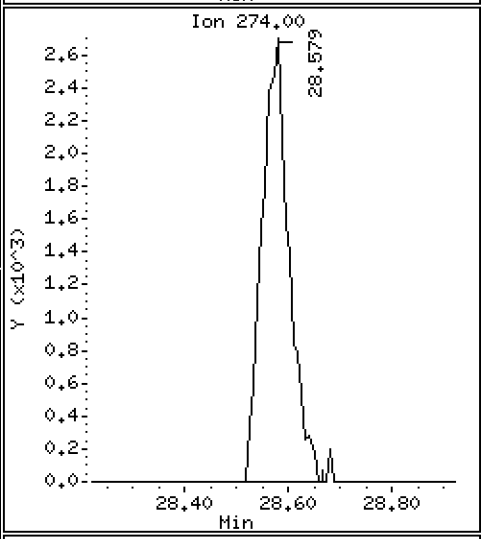
Column phase: ZB-5msi Column diameter: 0.25

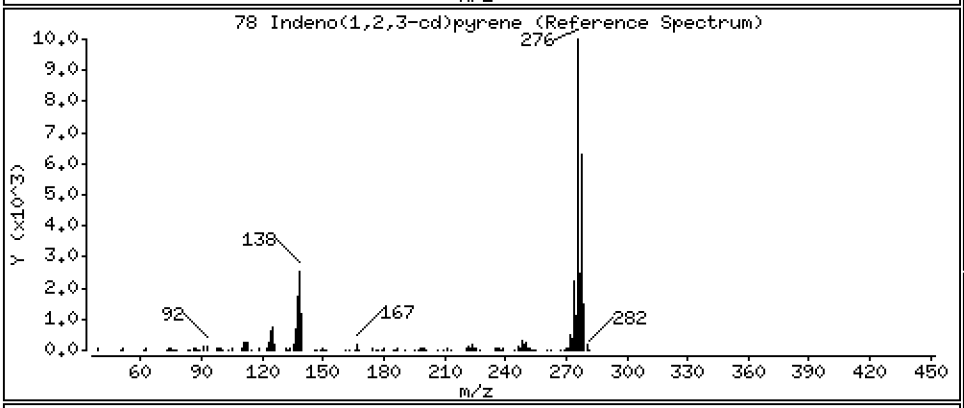
78 Indeno(1,2,3-cd)pyrene Concentration: 0.2038 ug/mL

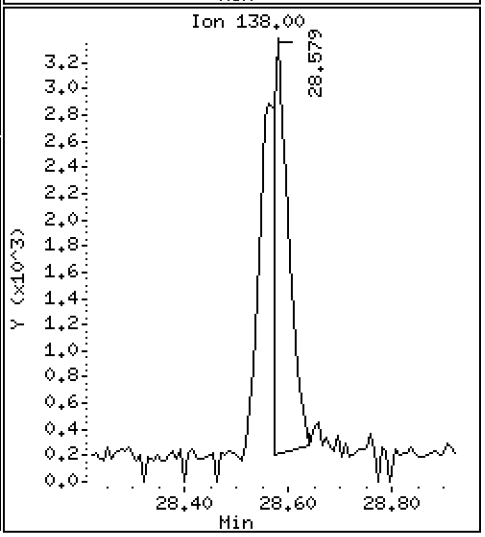


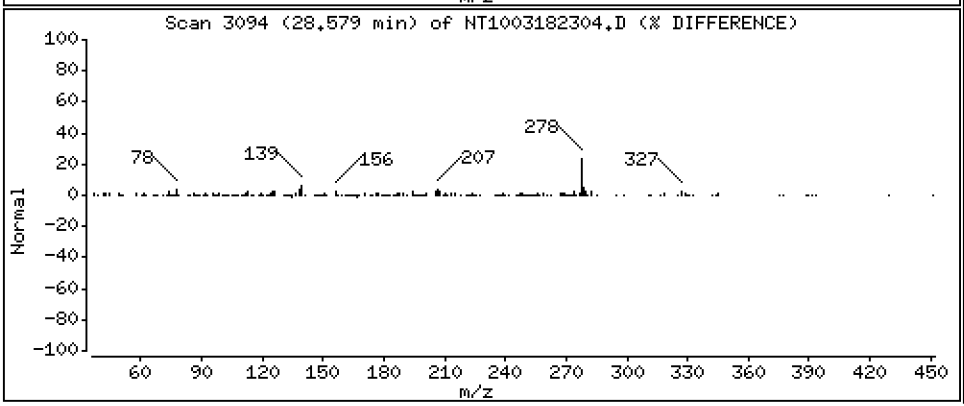












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Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

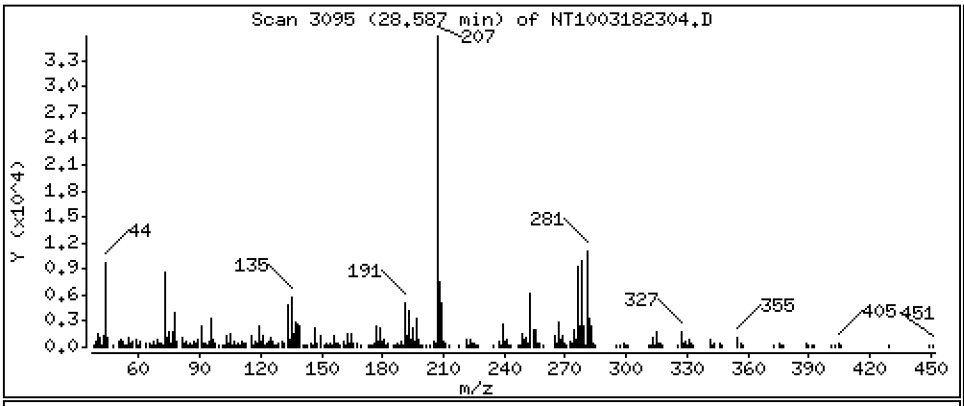
Operator: VTS

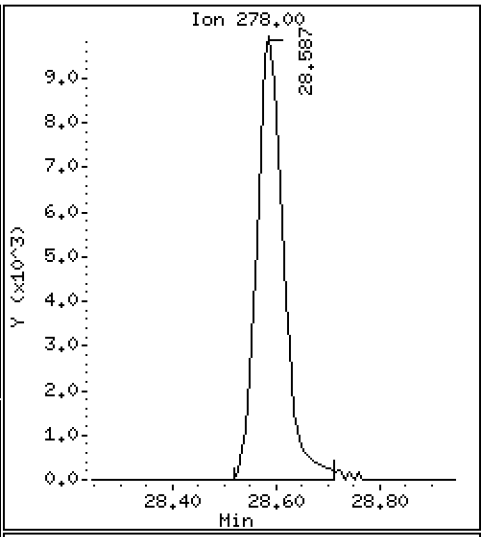
Column phase: ZB-5msi

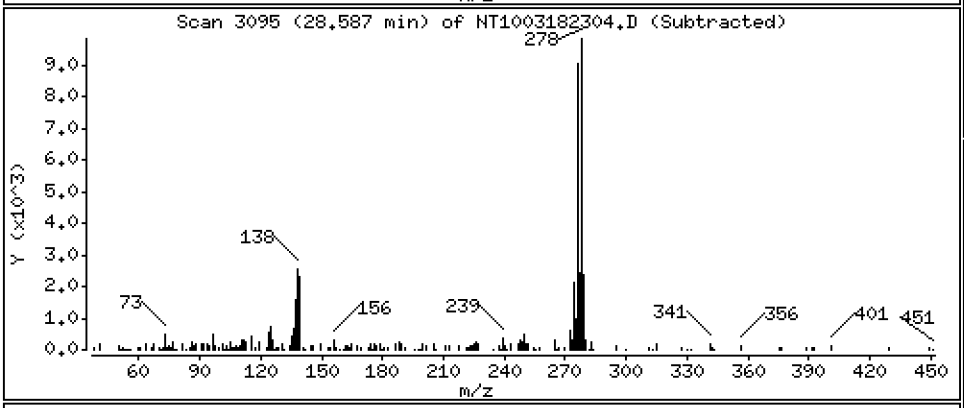
Column diameter: 0.25

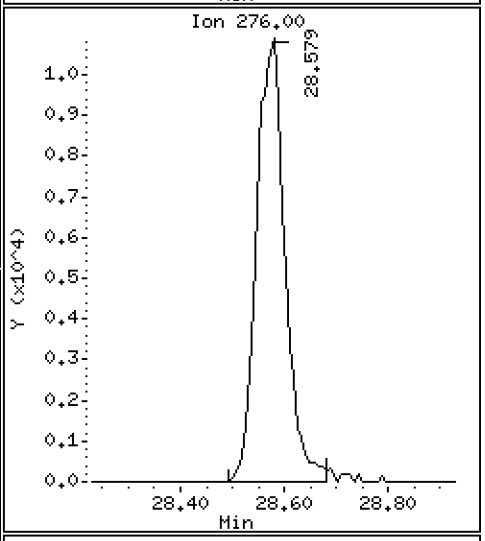
79 Dibenzo(a,h)anthracene

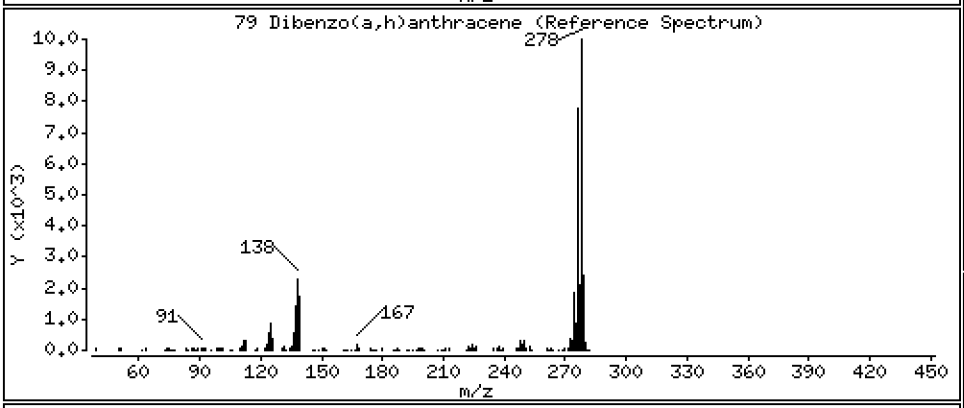
Concentration: 0.2101 ug/mL

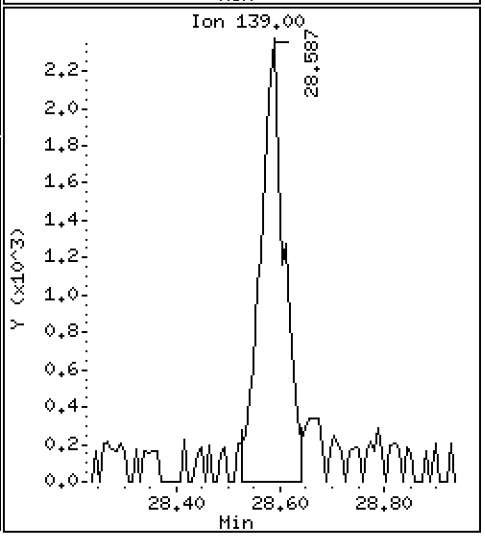


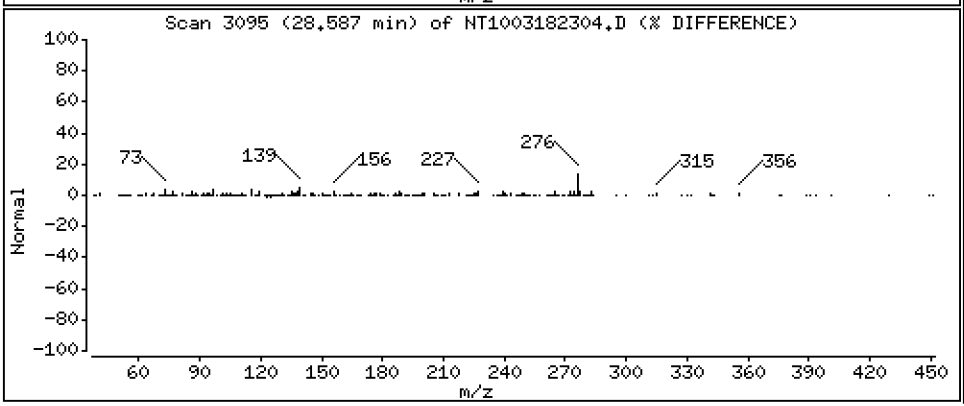












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

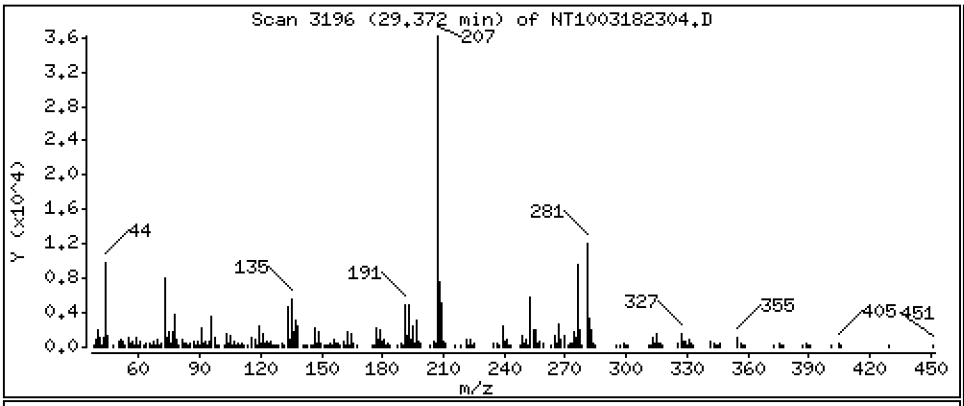
Operator: VTS

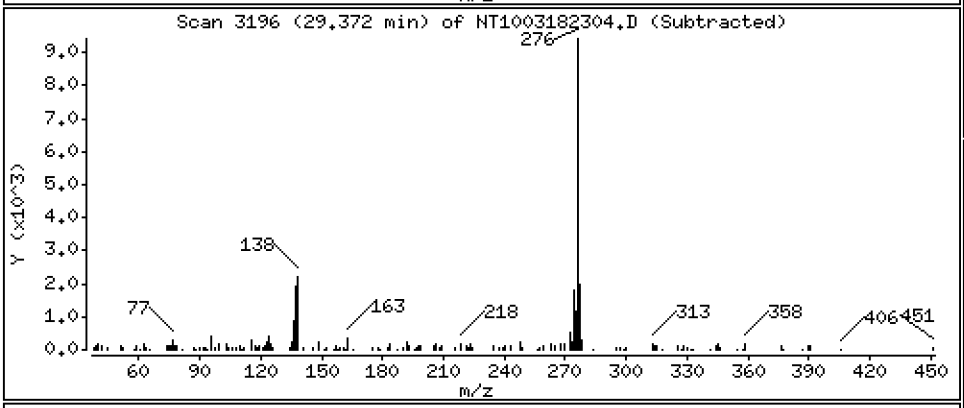
Column phase: ZB-5msi

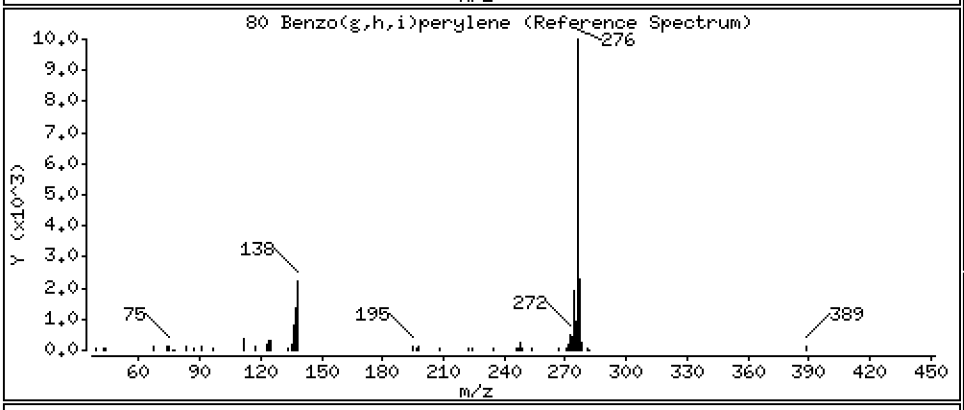
Column diameter: 0.25

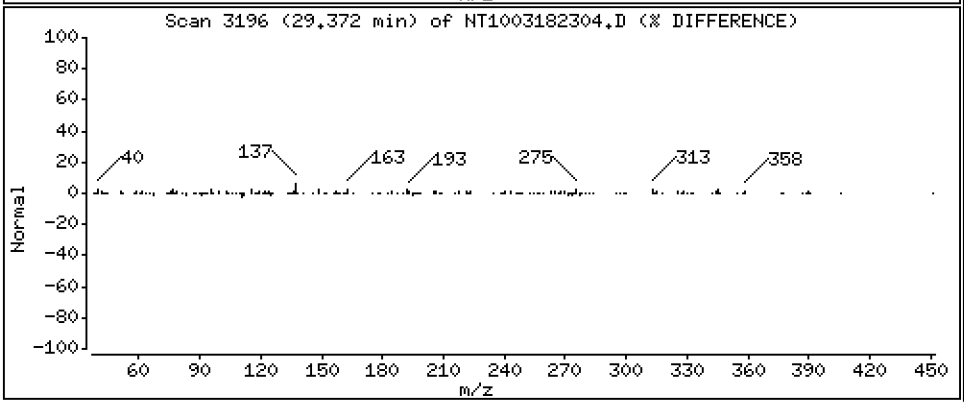
80 Benzo(g,h,i)perylene

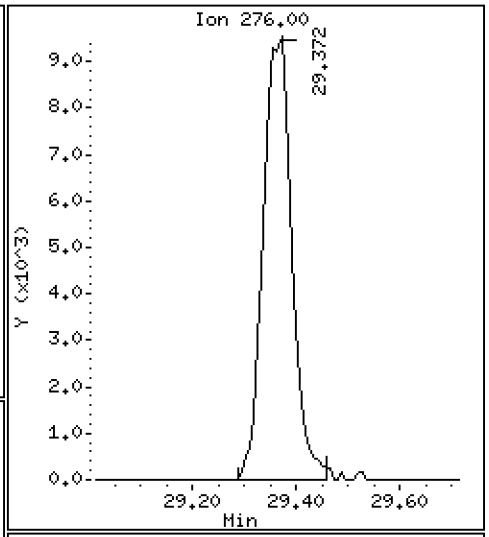
Concentration: 0.2085 ug/mL

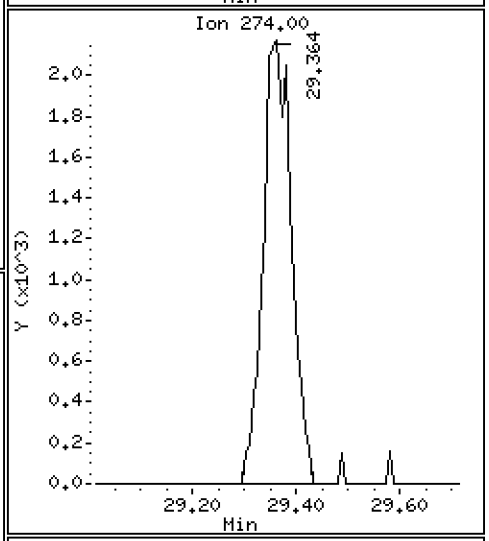


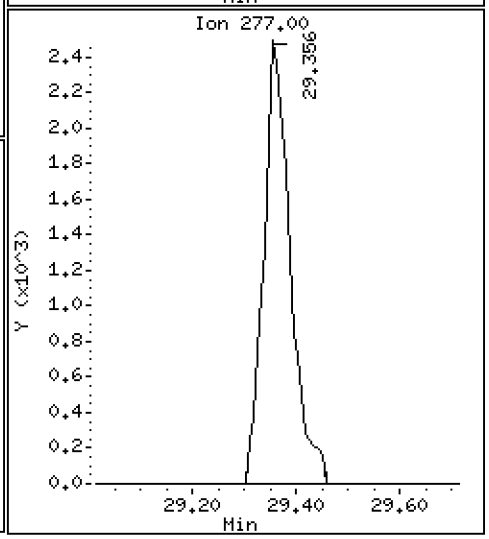












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

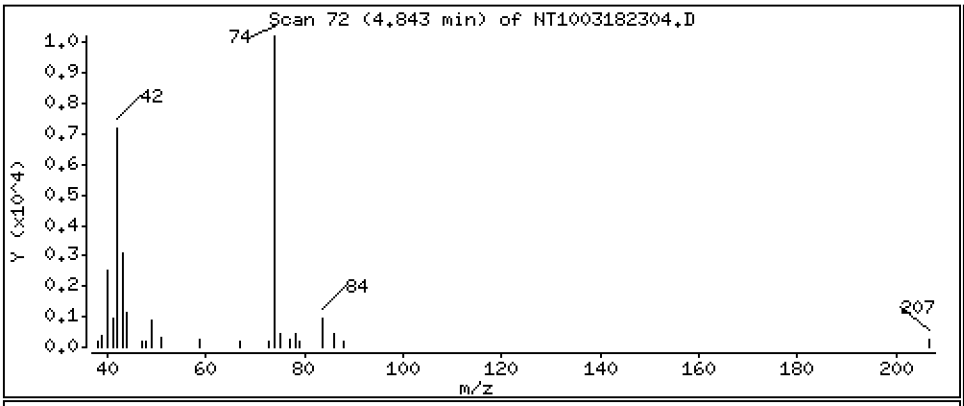
Operator: VTS

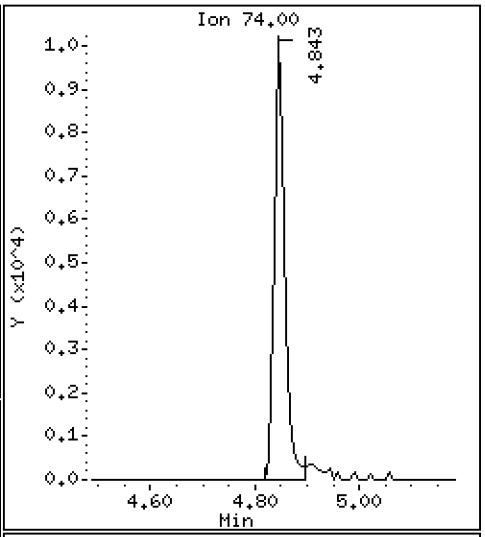
Column phase: ZB-5msi

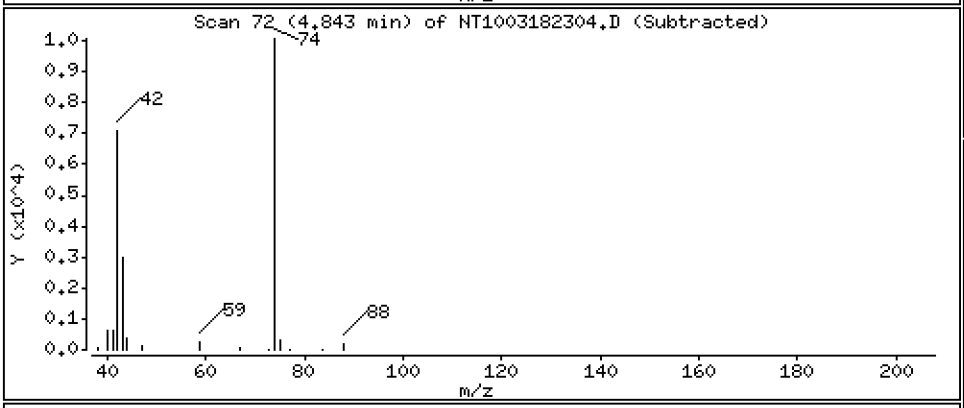
Column diameter: 0.25

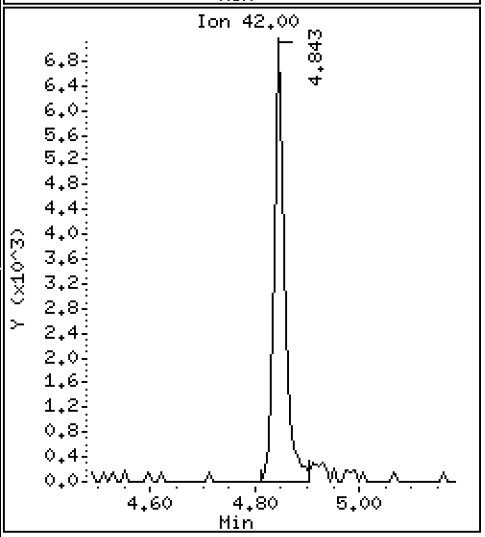
90 N-Nitrosodimethylamine

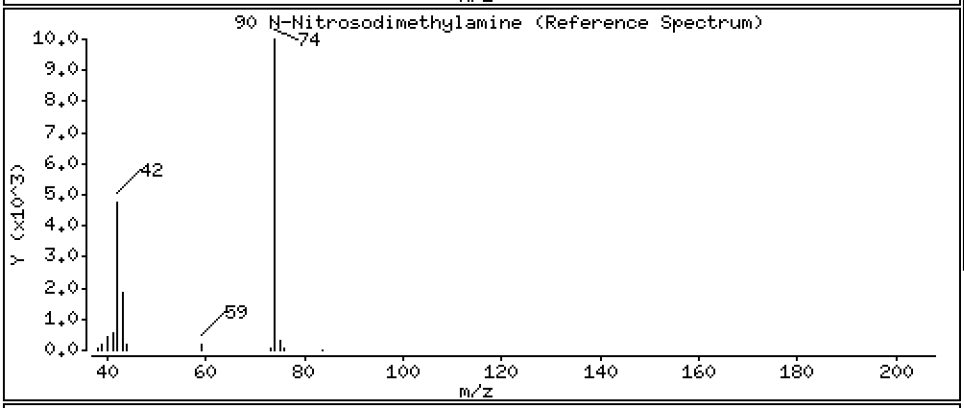
Concentration: 0.3936 ug/mL

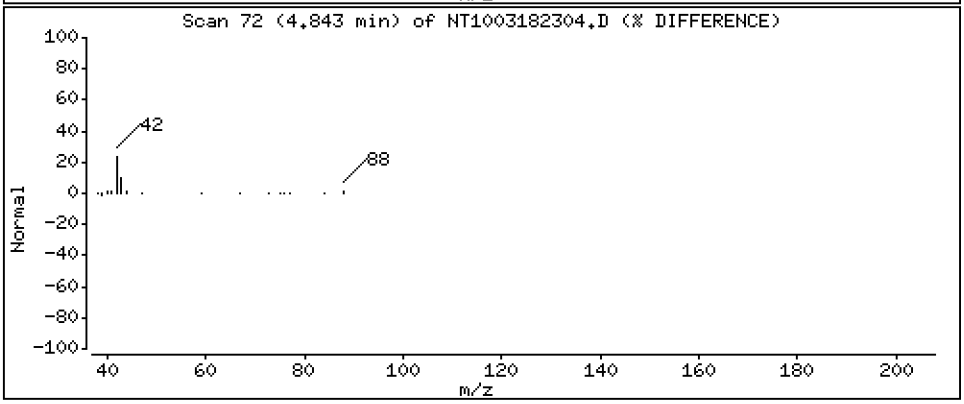












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

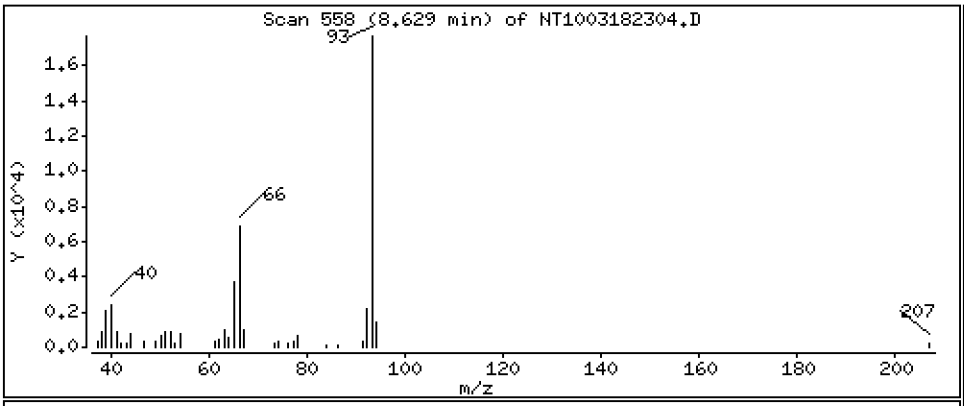
Operator: VTS

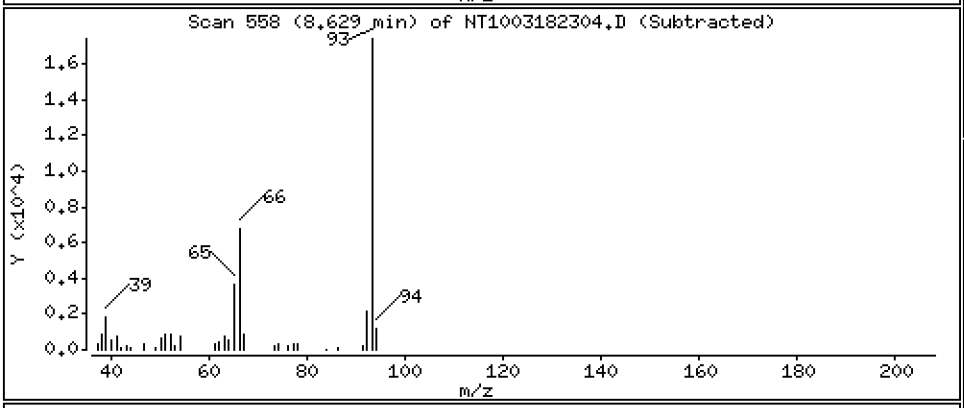
Column phase: ZB-5msi

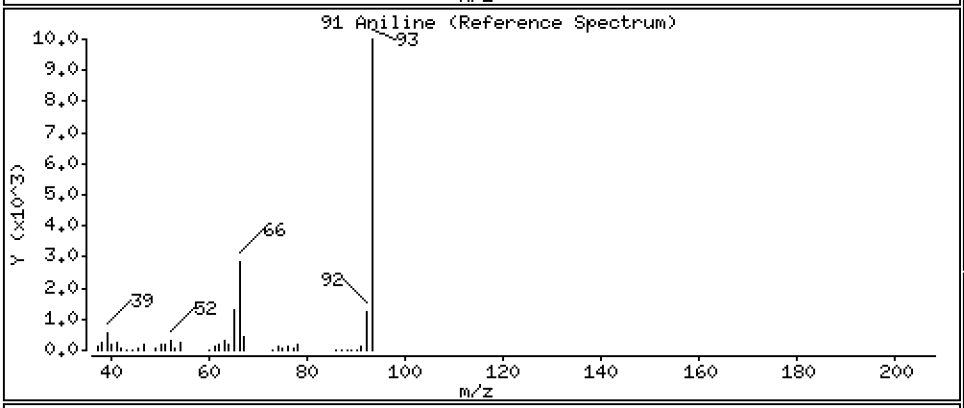
Column diameter: 0.25

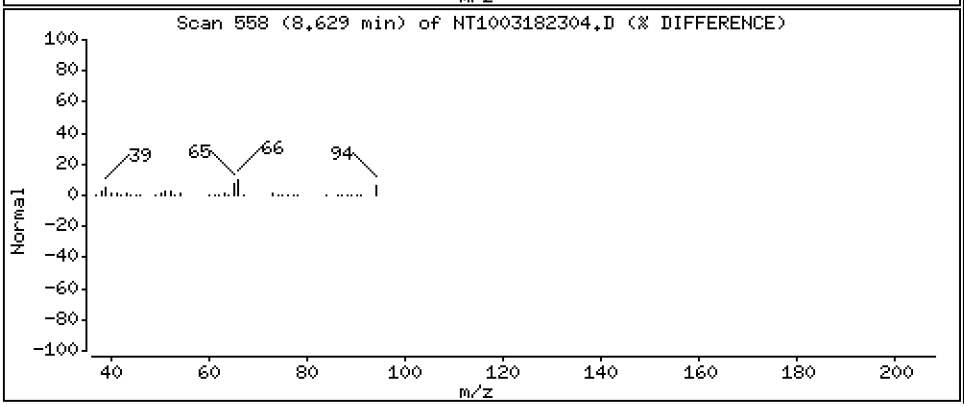
91 Aniline

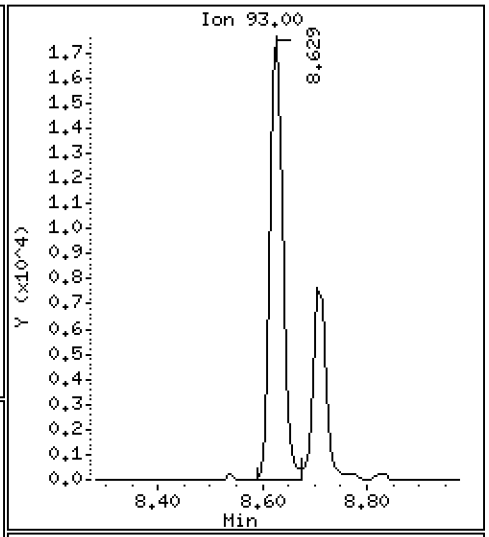
Concentration: 0.3674 ug/mL

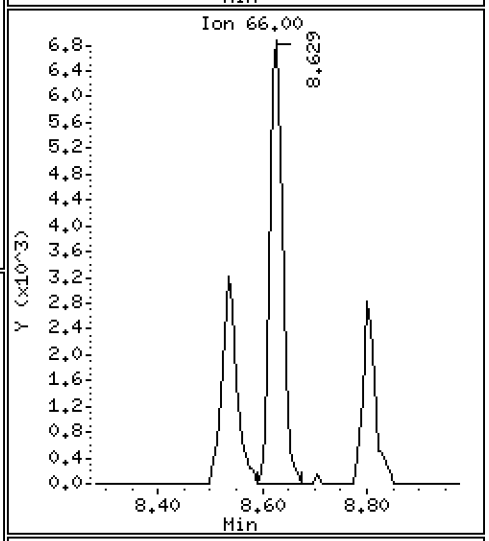


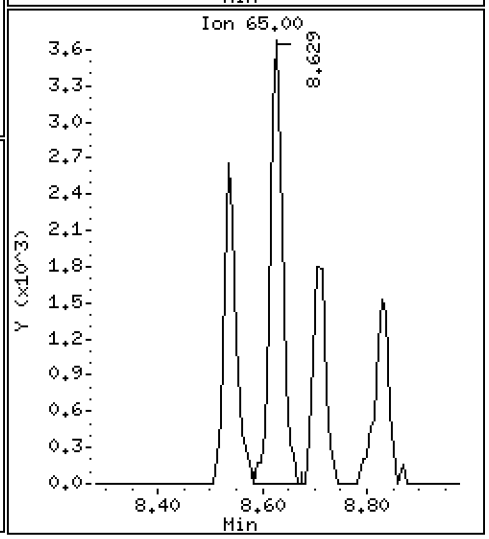












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

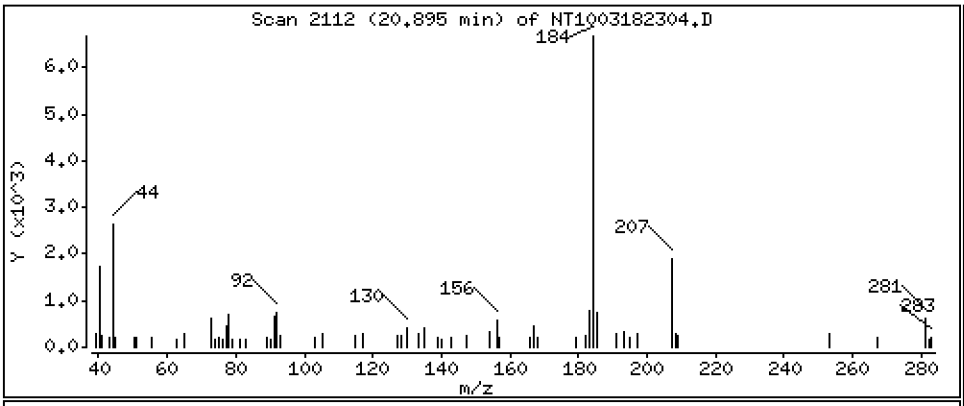
Operator: VTS

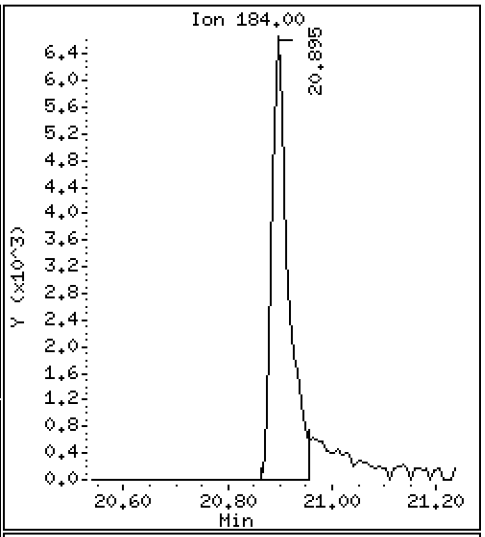
Column phase: ZB-5msi

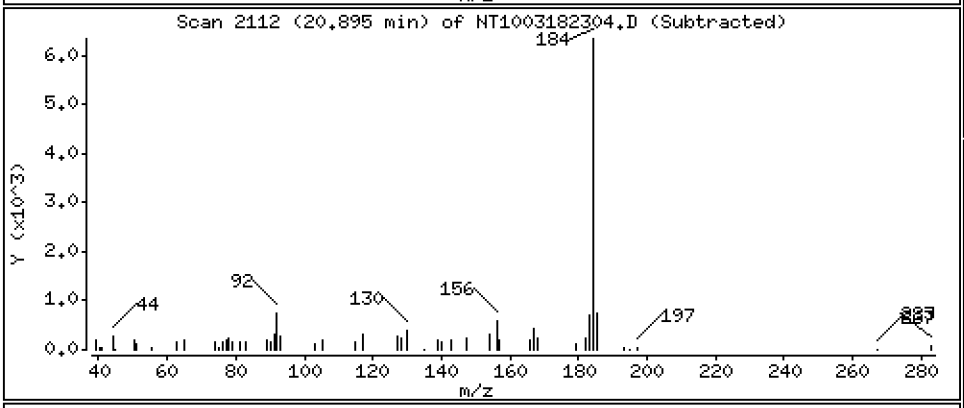
Column diameter: 0.25

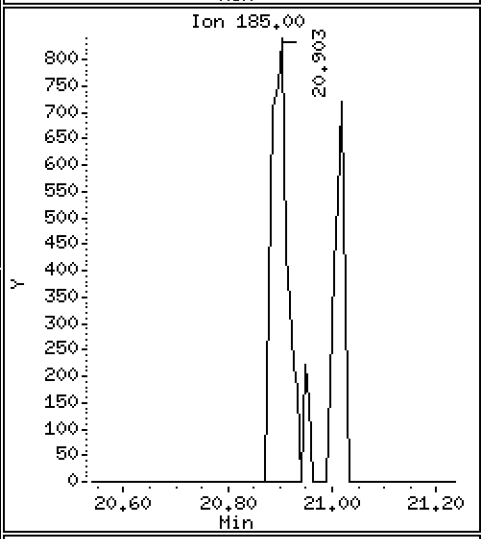
93 Benzidine

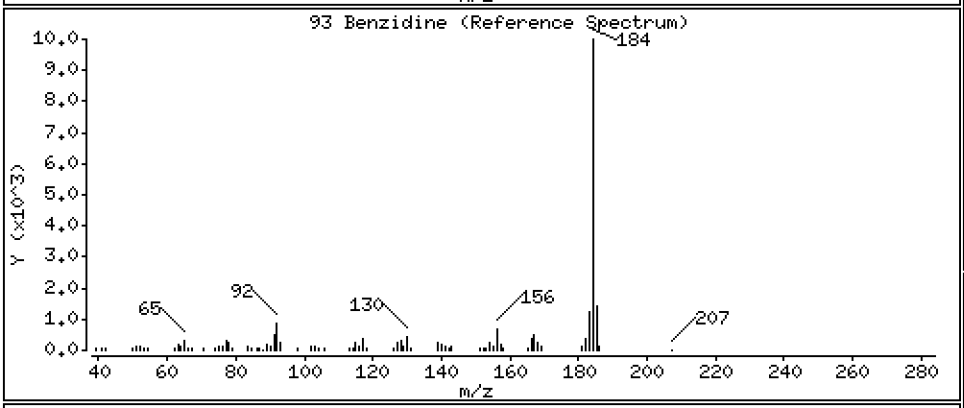
Concentration: 0.1791 ug/mL

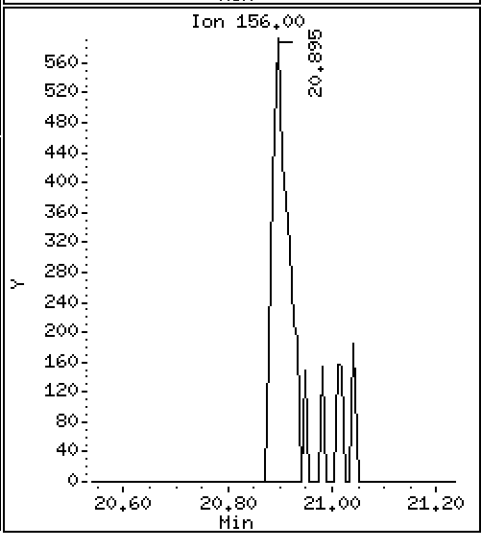


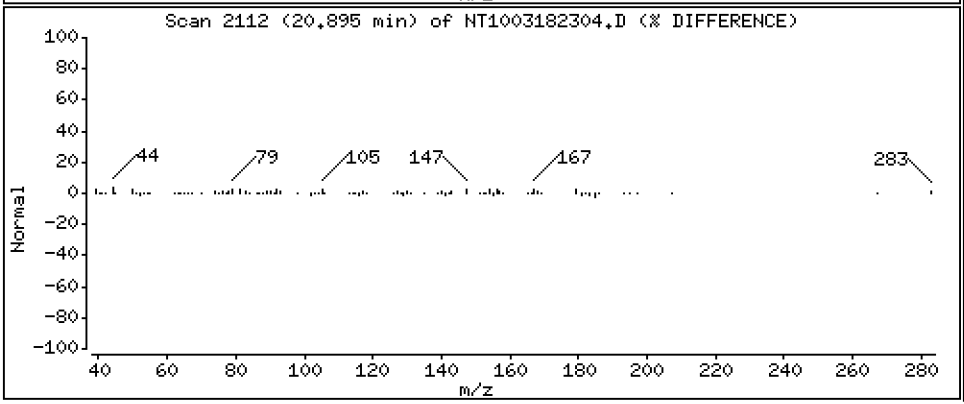












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

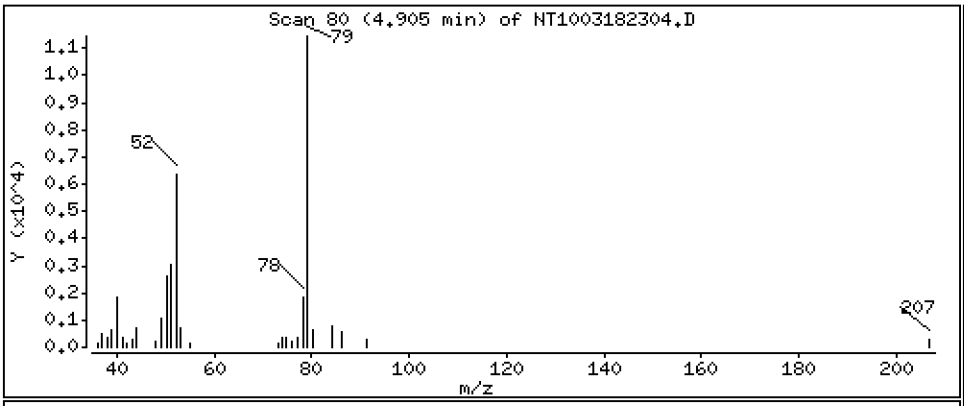
Operator: VTS

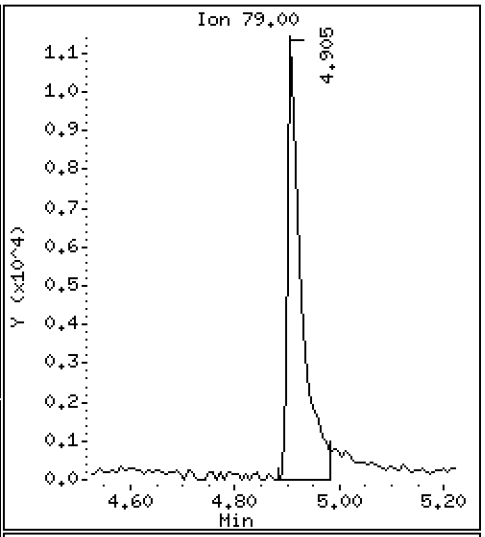
Column phase: ZB-5msi

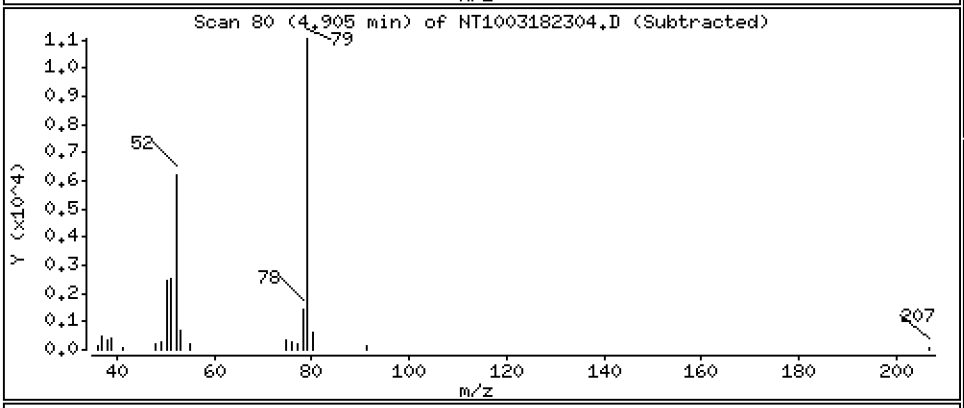
Column diameter: 0.25

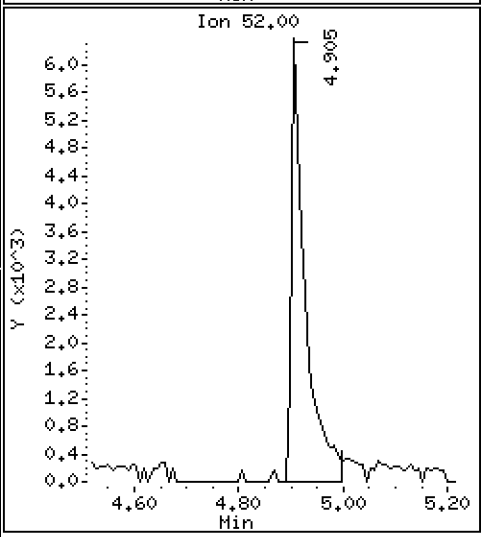
103 Pyridine

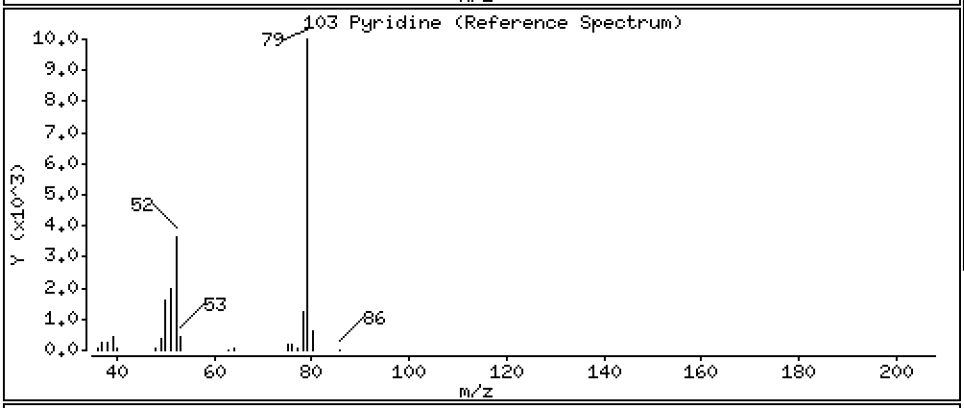
Concentration: 0.3912 ug/mL

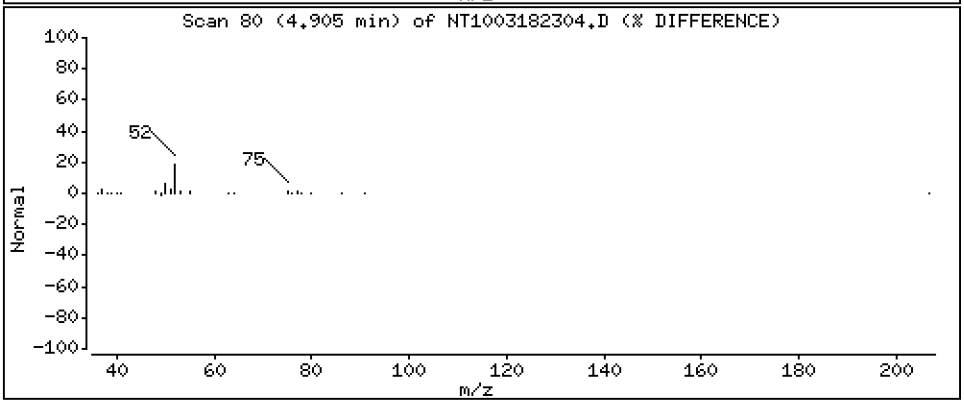












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

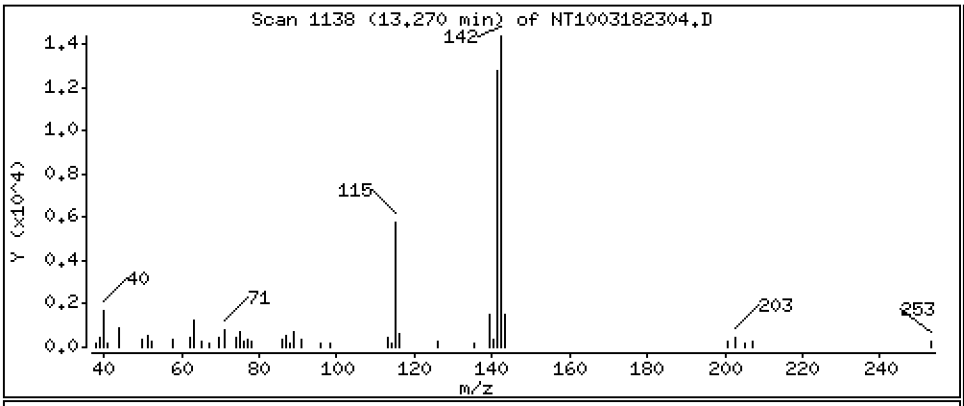
Operator: VTS

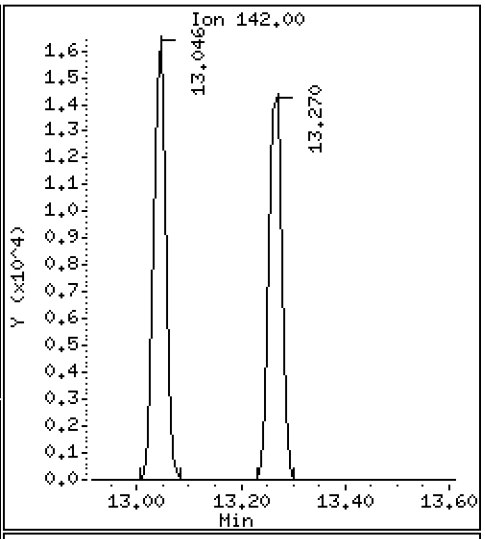
Column phase: ZB-5msi

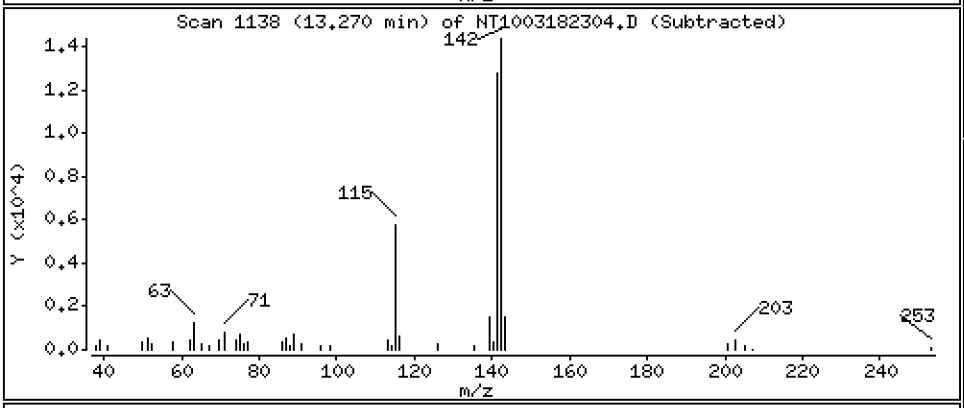
Column diameter: 0.25

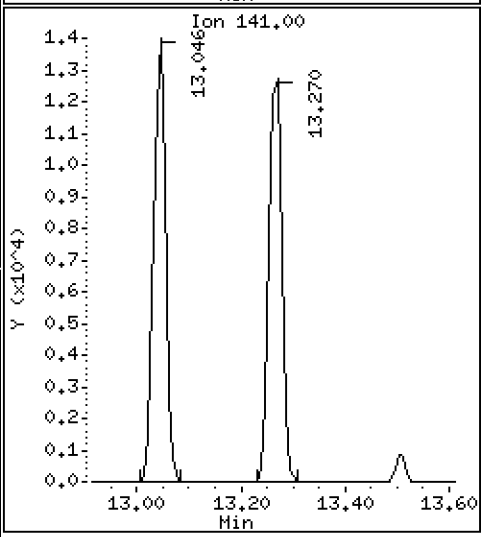
105 1-methylnaphthalene

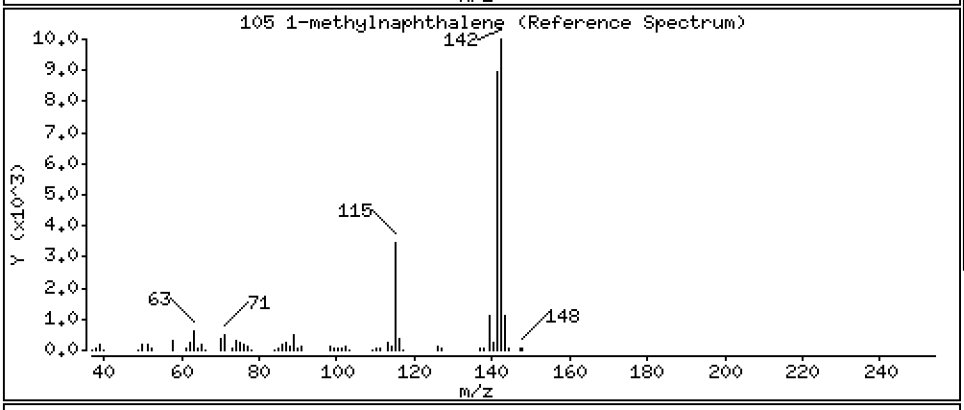
Concentration: 0.2053 ug/mL

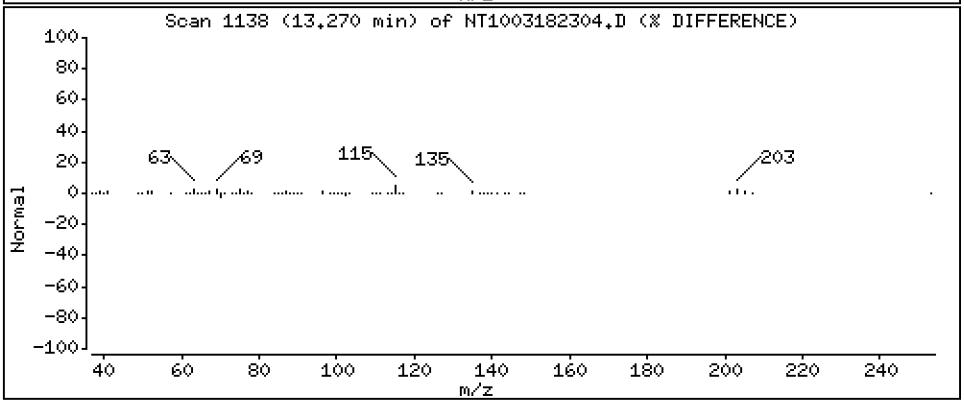












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

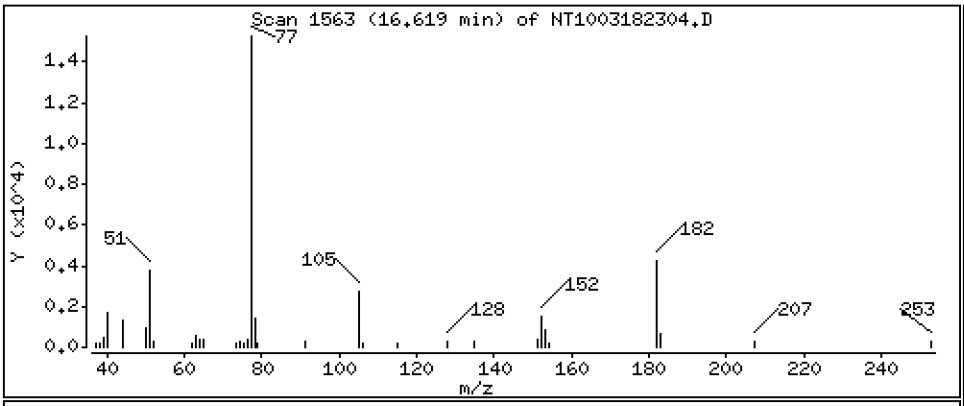
Operator: VTS

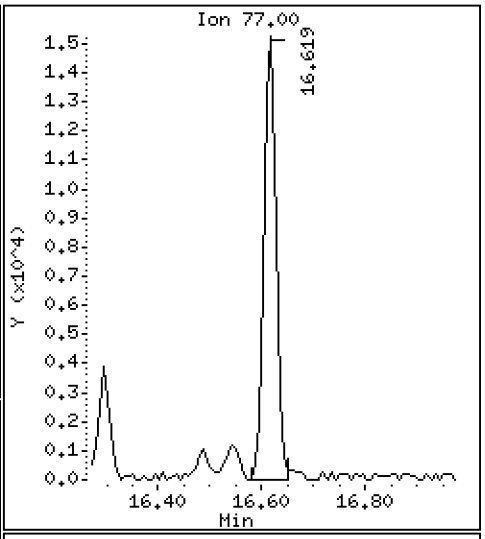
Column phase: ZB-5msi

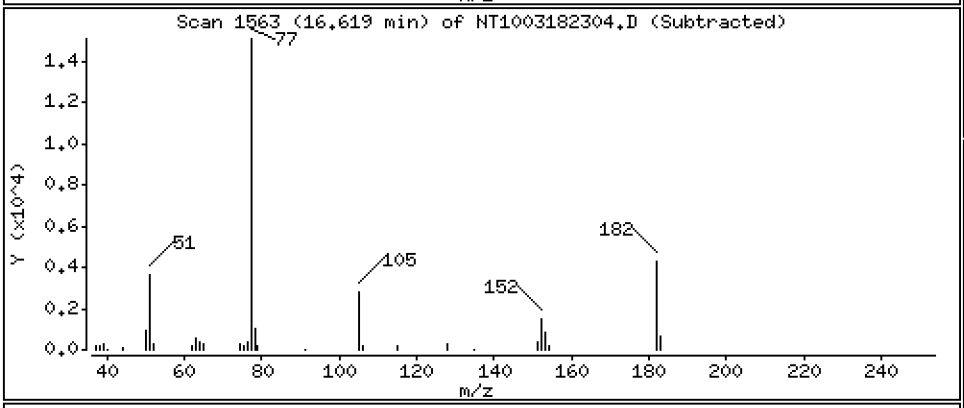
Column diameter: 0.25

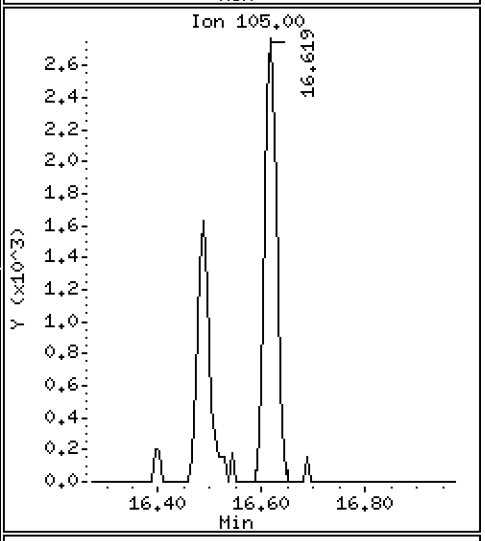
111 Azobenzene (1,2-DP-Hydrazine)

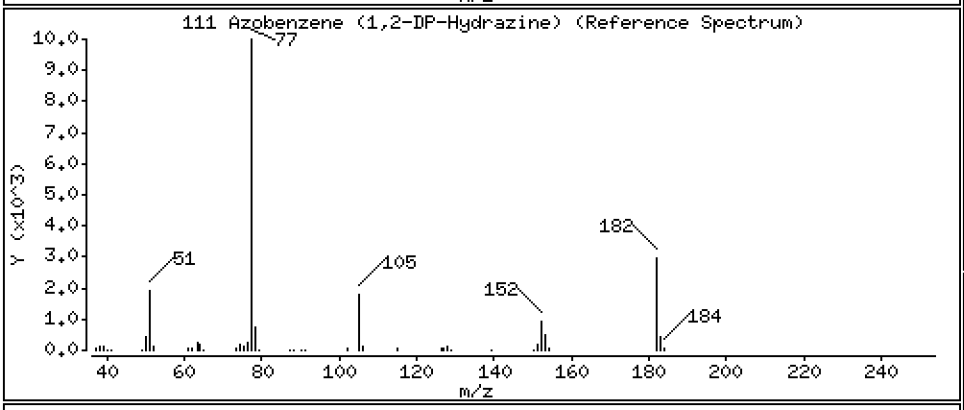
Concentration: 0.1886 ug/mL

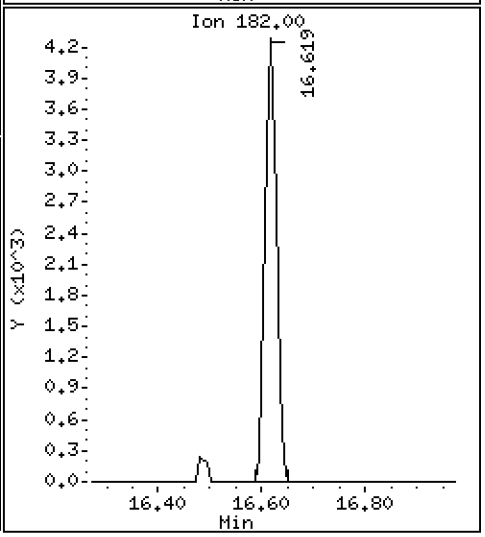


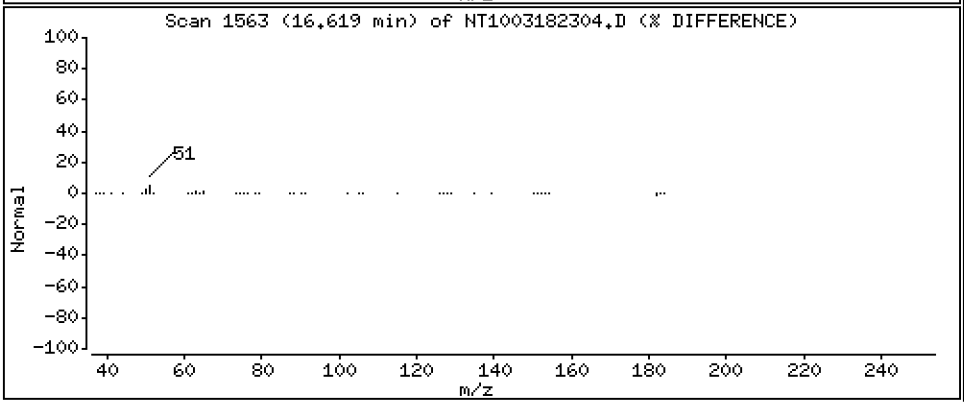












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

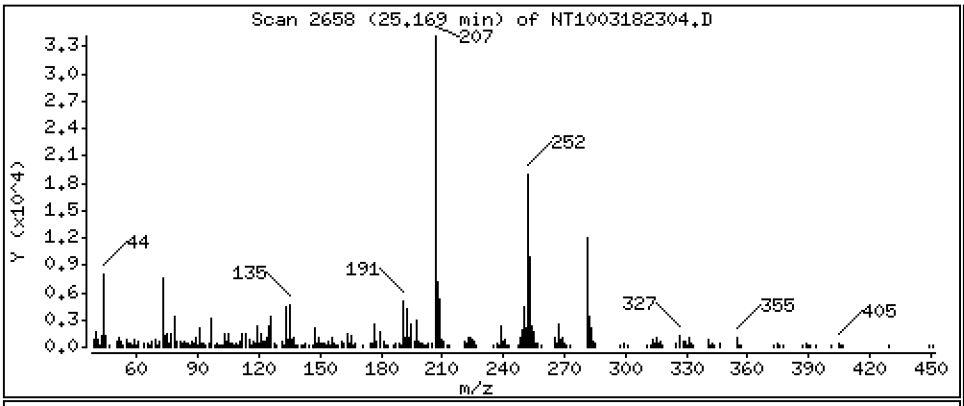
Operator: VTS

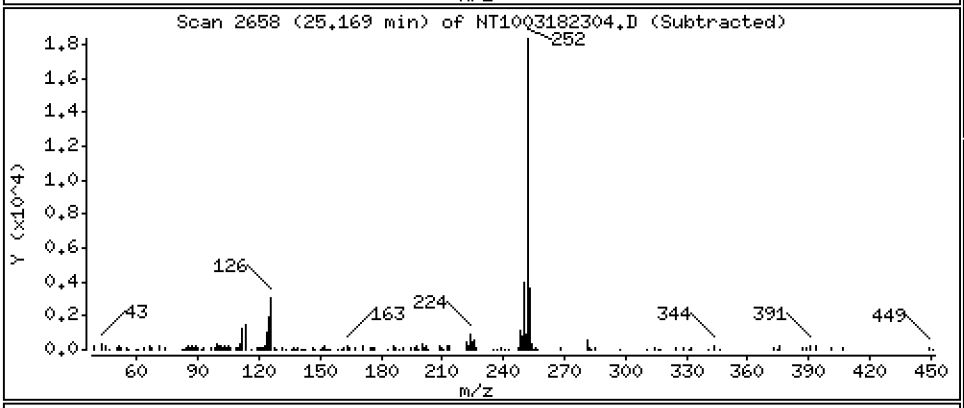
Column phase: ZB-5msi

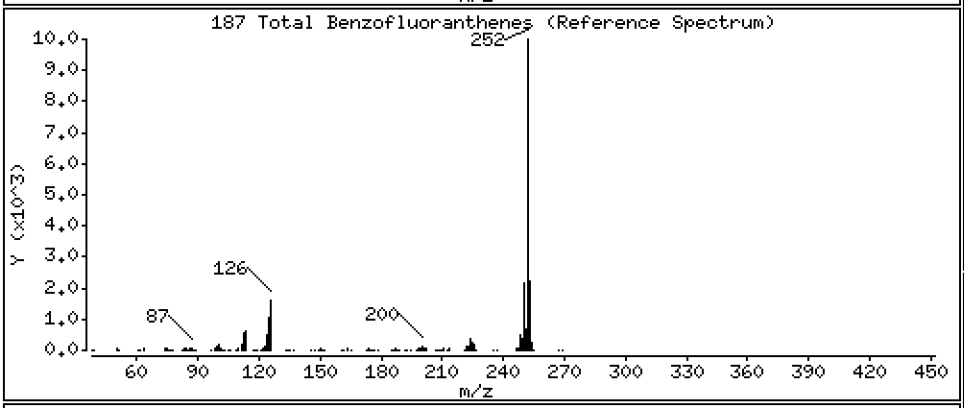
Column diameter: 0.25

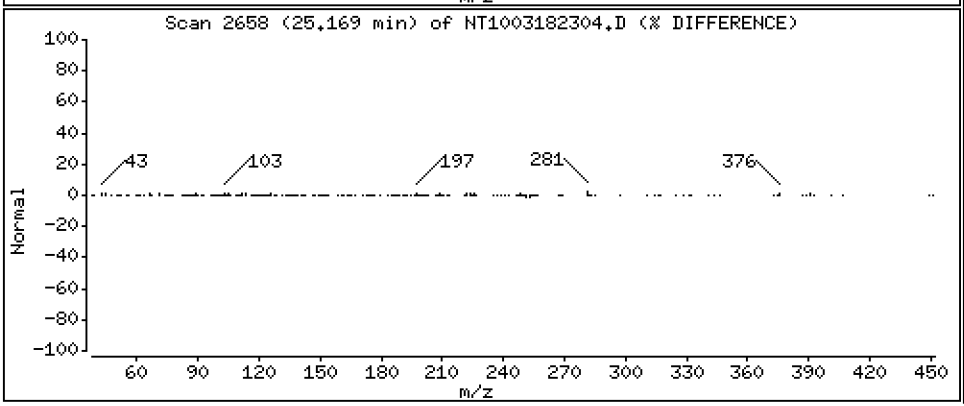
187 Total Benzofluoranthenes

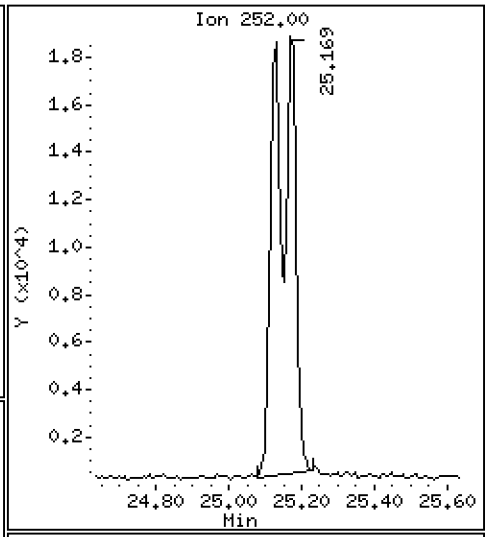
Concentration: 0.4105 ug/mL

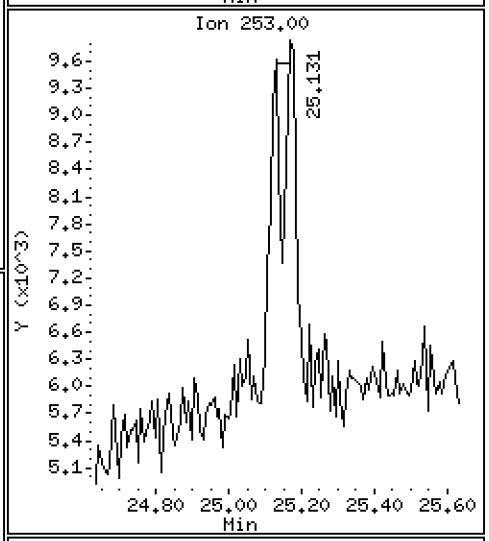


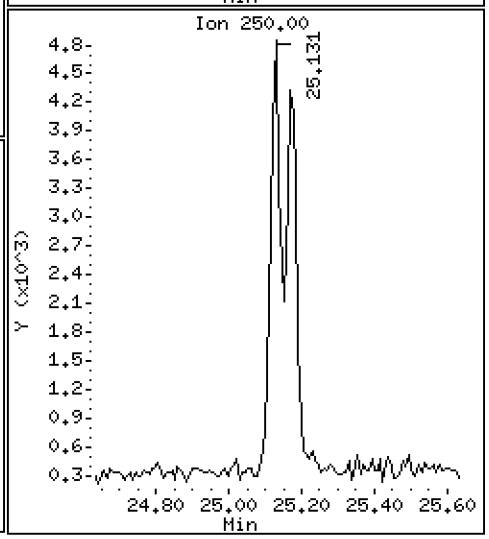












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D

Date : 18-MAR-2023 19:37

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV1

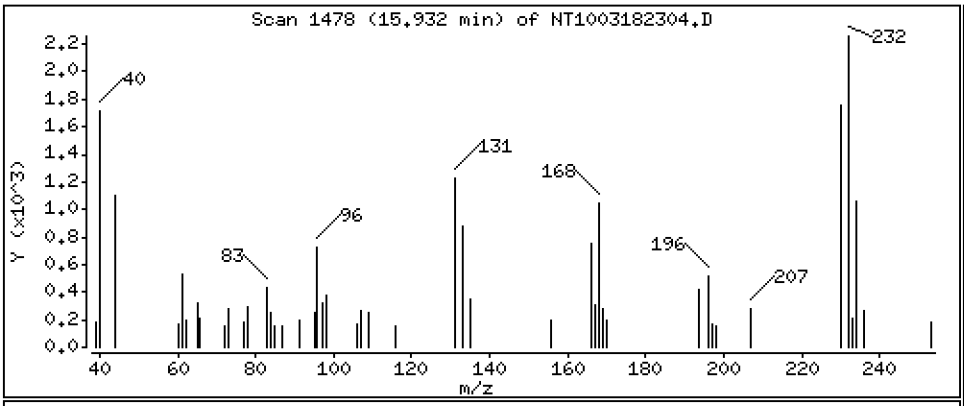
Operator: VTS

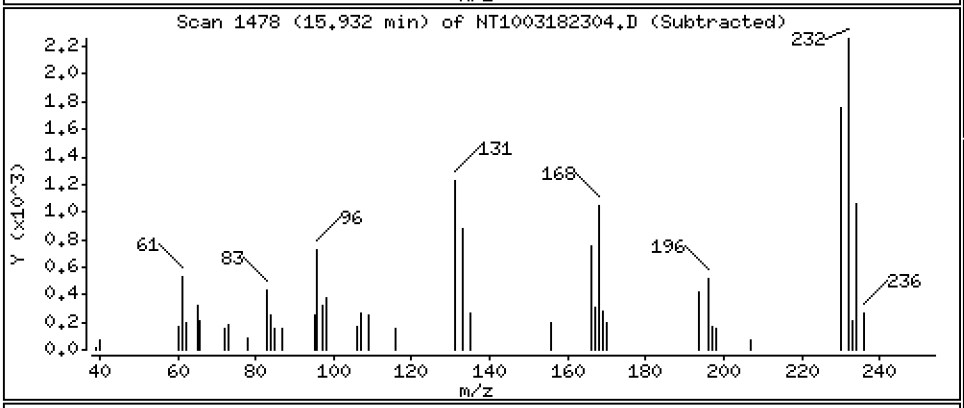
Column phase: ZB-5msi

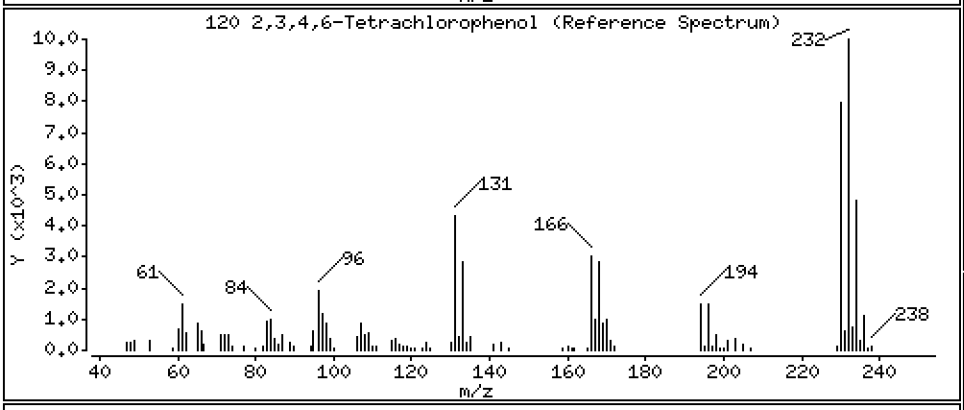
Column diameter: 0.25

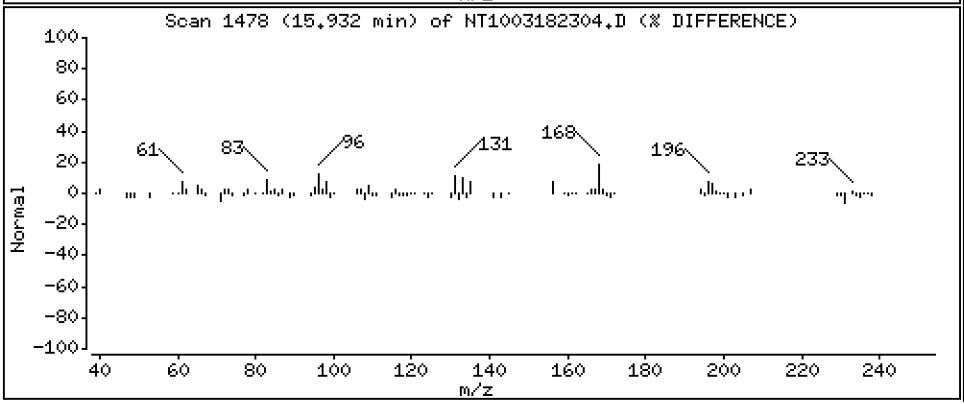
120 2,3,4,6-Tetrachlorophenol

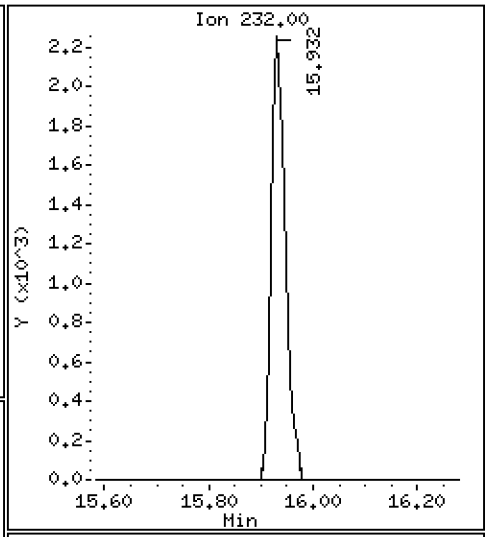
Concentration: 0.1156 ug/mL

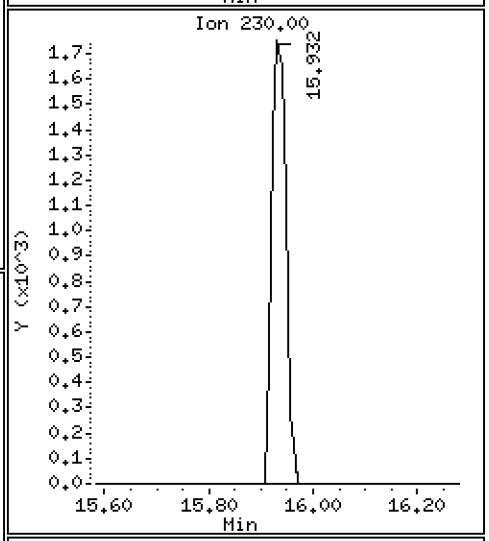


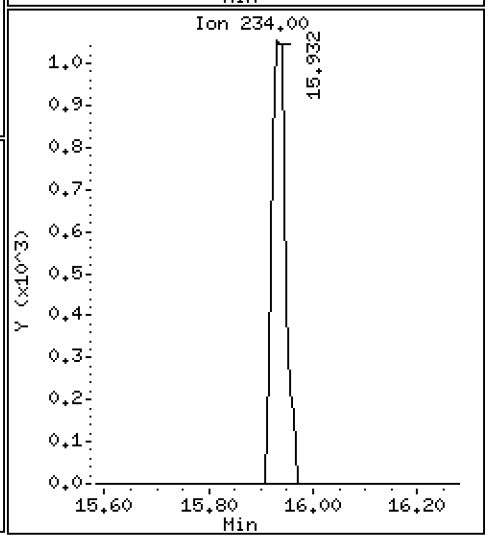












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182304.D
Lab Smp Id: SLC0504-LCV1
Inj Date : 18-MAR-2023 19:37
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-LCV1
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 07:50 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.959	6.952	(0.760)	16517	0.29302	0.2930
$	2 Phenol-d5	99	8.512	8.520	(0.929)	19560	0.26451	0.2645
	3 Phenol	94	8.543	8.536	(0.932)	14314	0.18628	0.1863
$	5 2-Chlorophenol-d4	132	8.806	8.806	(0.961)	17710	0.28046	0.2805
	4 Bis(2-Chloroethyl)ether	93	8.705	8.713	(0.950)	11580	0.20318	0.2032
	6 2-Chlorophenol	128	8.829	8.829	(0.964)	12373	0.18813	0.1881
	7 1,3-Dichlorobenzene	146	9.100	9.100	(0.993)	15025	0.21610	0.2161
*	8 1,4-Dichlorobenzene-d4	152	9.162	9.162	(1.000)	186398	4.00000	
	9 1,4-Dichlorobenzene	146	9.193	9.193	(1.003)	13547	0.20169	0.2017
$	10 1,2-Dichlorobenzene-d4	152	9.519	9.519	(1.039)	9687	0.21361	0.2136
	12 1,2-Dichlorobenzene	146	9.550	9.550	(1.042)	13853	0.20957	0.2096
	11 Benzyl alcohol	108	9.433	9.426	(1.030)	5274	0.14622	0.1462
	14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.721	(1.062)	4477	0.23063	0.2306(M)
	13 2-Methylphenol	108	9.643	9.643	(1.053)	10169	0.18154	0.1815
	17 Hexachloroethane	117	10.132	10.132	(1.106)	5585	0.20267	0.2027
	16 N-Nitroso-di-n-propylamine	70	9.977	9.977	(1.089)	8289	0.18740	0.1874
	15 4-Methylphenol	108	9.907	9.907	(1.081)	9986	0.16919	0.1692
$	18 Nitrobenzene-d5	82	10.248	10.249	(0.881)	12861	0.19359	0.1936
	19 Nitrobenzene	77	10.279	10.287	(0.884)	12664	0.19424	0.1942
	20 Isophorone	82	10.730	10.730	(0.923)	14349	0.17204	0.1720
	21 2-Nitrophenol	139	10.904	10.905	(0.938)	4680	0.14763	0.1476
	22 2,4-Dimethylphenol	107	10.946	10.947	(0.941)	23116	0.38601	0.3860
	23 Bis(2-Chloroethoxy)methane	93	11.142	11.142	(0.958)	11983	0.21509	0.2151
	24 Benzoic acid	105	11.031	11.134	(0.949)	8236	0.24762	0.2476(MH)
	25 2,4-Dichlorophenol	162	11.354	11.346	(0.976)	17331	0.36165	0.3617
	26 1,2,4-Trichlorobenzene	180	11.537	11.538	(0.992)	15093	0.26831	0.2683
*	27 Naphthalene-d8	136	11.630	11.623	(1.000)	658189	4.00000	
	28 Naphthalene	128	11.669	11.669	(1.003)	36508	0.20938	0.2094
	29 4-Chloroaniline	127	11.792	11.793	(1.014)	22724	0.33407	0.3341
	30 Hexachlorobutadiene	225	12.016	12.017	(1.033)	7330	0.22239	0.2224
	31 4-Chloro-3-methylphenol	107	12.728	12.729	(1.094)	17764	0.34242	0.3424
	32 2-Methylnaphthalene	142	13.045	13.046	(1.122)	25672	0.20402	0.2040
	33 Hexachlorocyclopentadiene	237	13.510	13.503	(0.888)	8499	0.26453	0.2645

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.657	13.658	(0.898)	10978	0.31995	0.3200
	35	2,4,5-Trichlorophenol	196	13.734	13.727	(0.903)	11410	0.29928	0.2993
$	36	2-Fluorobiphenyl	172	13.819	13.820	(0.908)	28680	0.20885	0.2088
	37	2-Chloronaphthalene	162	14.028	14.029	(0.922)	22528	0.20260	0.2026
	38	2-Nitroaniline	65	14.291	14.285	(0.939)	8894	0.28475	0.2848
	39	Dimethylphthalate	163	14.709	14.710	(0.967)	23629	0.20952	0.2095
	40	Acenaphthylene	152	14.895	14.896	(0.979)	34649	0.19998	0.2000
	41	2,6-Dinitrotoluene	165	14.849	14.857	(0.976)	8711	0.35756	0.3576
*	42	Acenaphthene-d10	164	15.212	15.213	(1.000)	347153	4.00000	
	43	3-Nitroaniline	138	15.135	15.136	(0.995)	7871	0.28624	0.2862
	44	Acenaphthene	153	15.274	15.275	(1.004)	22105	0.20651	0.2065
	45	2,4-Dinitrophenol	184	15.344	15.345	(1.009)	190	0.01292	0.01292(M)
	46	Dibenzofuran	168	15.599	15.600	(1.025)	32445	0.20555	0.2055
	47	4-Nitrophenol	109	15.460	15.437	(1.016)	1993	0.11523	0.1152(M)
	48	2,4-Dinitrotoluene	165	15.653	15.654	(1.029)	10067	0.27318	0.2732
	50	Diethylphthalate	149	16.155	16.156	(1.062)	22107	0.19979	0.1998
	49	Fluorene	166	16.318	16.319	(1.073)	14568	0.11731	0.1173
	51	4-Chlorophenyl-phenylether	204	16.295	16.296	(1.071)	10345	0.17518	0.1752
	52	4-Nitroaniline	138	16.395	16.404	(1.078)	6101	0.24620	0.2462
	53	4,6-Dinitro-2-methylphenol	198	16.488	16.489	(0.904)	5619	0.30470	0.3047
	54	N-Nitrosodiphenylamine	169	16.542	16.542	(0.907)	15997	0.19610	0.1961
$	55	2,4,6-Tribromophenol	330	16.842	16.843	(1.107)	3109	0.19033	0.1903
	56	4-Bromophenyl-phenylether	248	17.297	17.298	(0.949)	6747	0.19771	0.1977
	57	Hexachlorobenzene	284	17.614	17.607	(0.966)	8008	0.22382	0.2238
	58	Pentachlorophenol	266	17.970	17.963	(0.986)	2456	0.11604	0.1160
*	59	Phenanthrene-d10	188	18.233	18.234	(1.000)	610141	4.00000	
	60	Phenanthrene	178	18.280	18.281	(1.003)	34252	0.20588	0.2059
	61	Anthracene	178	18.373	18.373	(1.008)	30716	0.19246	0.1925
	62	Carbazole	167	18.705	18.698	(1.026)	25528	0.17850	0.1785
	63	Di-n-butylphthalate	149	19.487	19.488	(1.069)	30846	0.16042	0.1604
	64	Fluoranthene	202	20.655	20.656	(0.888)	37449	0.19137	0.1914
	65	Pyrene	202	21.080	21.081	(0.906)	39146	0.19501	0.1950
$	66	Terphenyl-d14	244	21.367	21.360	(0.918)	30040	0.19927	0.1993
	67	Butylbenzylphthalate	149	22.288	22.281	(0.958)	13646	0.19357	0.1936
	68	Benzo(a)anthracene	228	23.241	23.241	(0.999)	36811	0.21414	0.2141
*	69	Chrysene-d12	240	23.272	23.272	(1.000)	487006	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.194	23.195	(0.997)	30620	0.55611	0.5561
	71	Chrysene	228	23.310	23.311	(1.002)	34149	0.20334	0.2033
	72	bis(2-Ethylhexyl)phthalate	149	23.310	23.303	(0.960)	17244	0.15307	0.1531
*	134	Di-n-octylphthalate-d4	153	24.293	24.294	(1.000)	770279	4.00000	
	73	Di-n-octylphthalate	149	24.301	24.302	(1.000)	41452	0.20564	0.2056
	74	Benzo(b)fluoranthene	252	25.130	25.130	(0.970)	38730	0.21796	0.2180
	75	Benzo(k)fluoranthene	252	25.168	25.169	(0.972)	36927	0.20466	0.2047(M)
	76	Benzo(a)pyrene	252	25.788	25.789	(0.996)	31760	0.19991	0.1999
*	77	Perylene-d12	264	25.904	25.897	(1.000)	548181	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.579	28.580	(1.103)	41191	0.20380	0.2038
	79	Dibenzo(a,h)anthracene	278	28.587	28.595	(1.104)	35251	0.21007	0.2101
	80	Benzo(g,h,i)perylene	276	29.371	29.364	(1.134)	36477	0.20854	0.2085
	90	N-Nitrosodimethylamine	74	4.843	4.835	(0.529)	14156	0.39364	0.3936
	91	Aniline	93	8.628	8.628	(0.942)	28930	0.36742	0.3674
	93	Benzidine	184	20.895	20.888	(0.898)	14397	0.17911	0.1791
	103	Pyridine	79	4.905	4.874	(0.535)	21607	0.39122	0.3912
	105	1-methylnaphthalene	142	13.270	13.263	(1.141)	23674	0.20535	0.2053
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.619	16.620	(1.092)	23317	0.18864	0.1886

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.168	25.130	(0.972)	70429	0.41050	0.4105(M)
120 2,3,4,6-Tetrachlorophenol	232	15.931	15.932	(1.047)	4038	0.11557	0.1156

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182304.D
Lab Smp Id: SLC0504-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	186408	93204	372816	186398	-0.01
27 Naphthalene-d8	688740	344370	1377480	658189	-4.44
42 Acenaphthene-d10	373663	186832	747326	347153	-7.09
59 Phenanthrene-d10	652323	326162	1304646	610141	-6.47
69 Chrysene-d12	537141	268571	1074282	487006	-9.33
134 Di-n-octylphthala	947608	473804	1895216	770279	-18.71
77 Perylene-d12	602550	301275	1205100	548181	-9.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.16	8.66	9.66	9.16	-0.00
27 Naphthalene-d8	11.62	11.12	12.12	11.63	0.06
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	-0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	-0.01
69 Chrysene-d12	23.27	22.77	23.77	23.27	-0.00
134 Di-n-octylphthala	24.29	23.79	24.79	24.29	-0.00
77 Perylene-d12	25.90	25.40	26.40	25.90	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182304.D

Lab ID: SLC0504-LCV1
nt10.i, 20230318.b\ABN.m,   18-MAR-2023 19:37

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0094	Benzoic acid

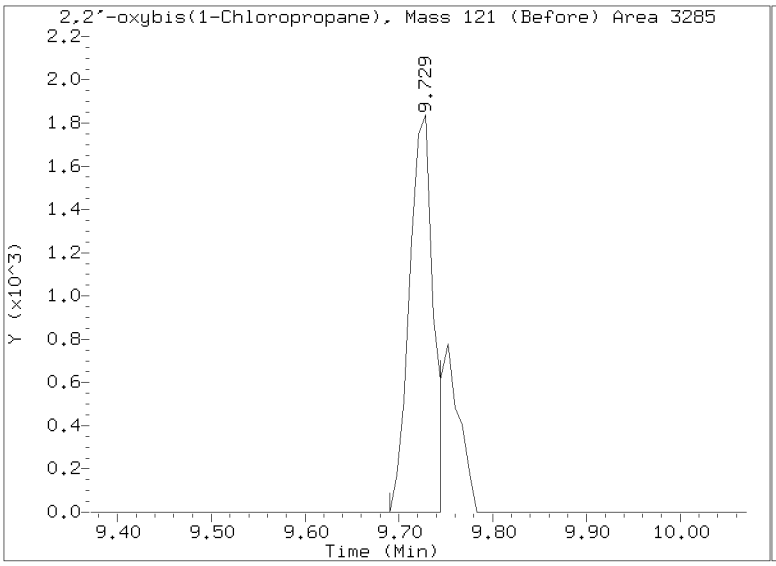
RRT check based on Ccal File: NT1003182302.D

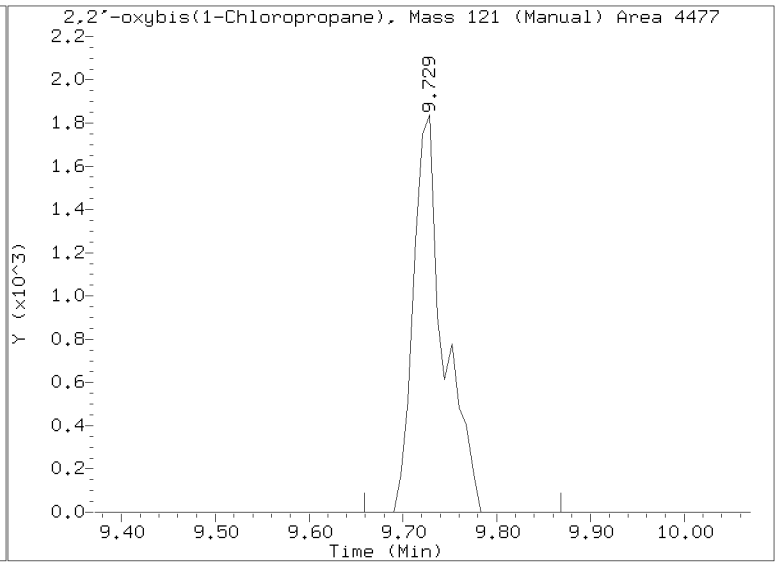
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

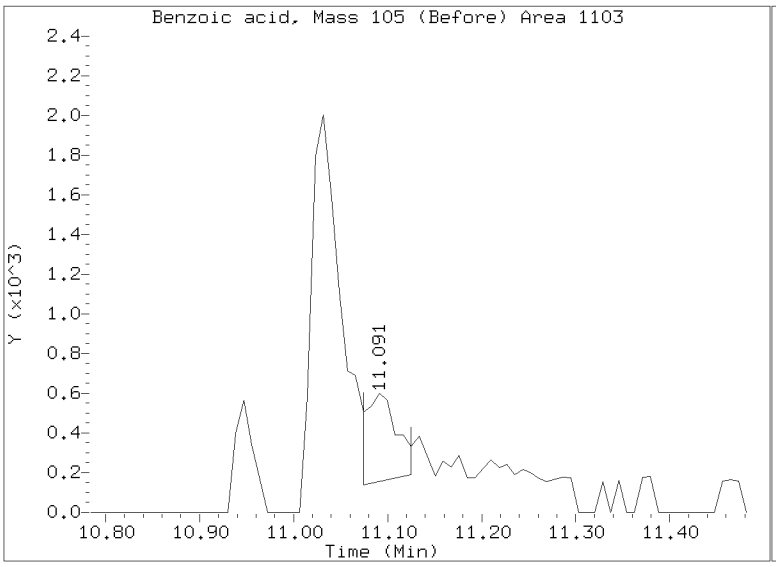
* Only compounds listed in the work order have been verified by the analyst *

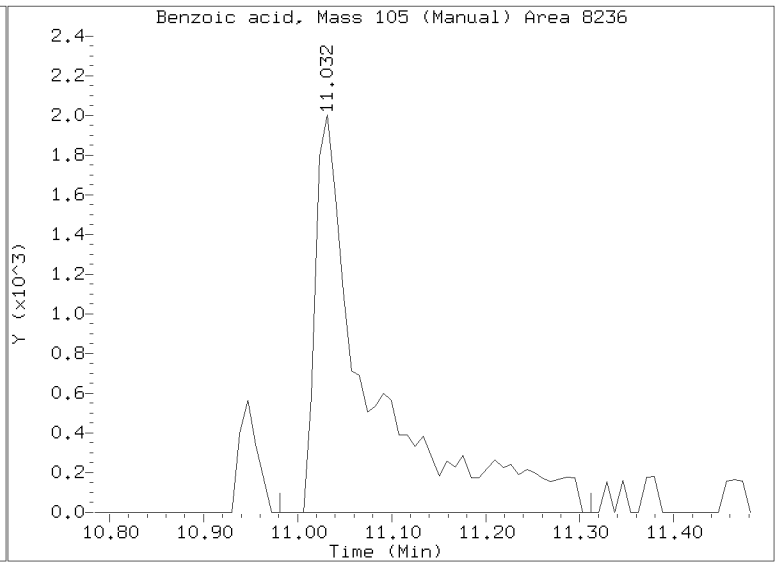
Quant Ion Manual Peak Adjustment Report

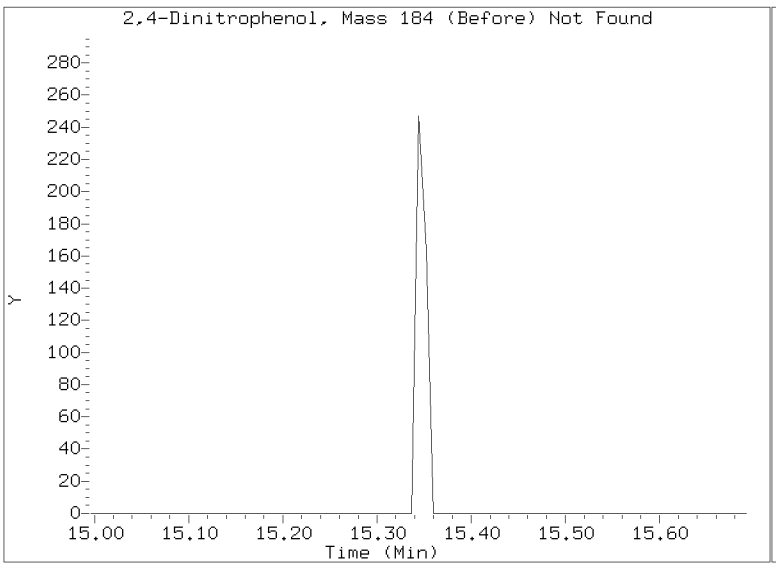
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182304.D
Injection Date: 18-MAR-2023 19:37
Lab ID:SLC0504-LCV1 Client ID:
Report Date: 04/04/2023 08:56

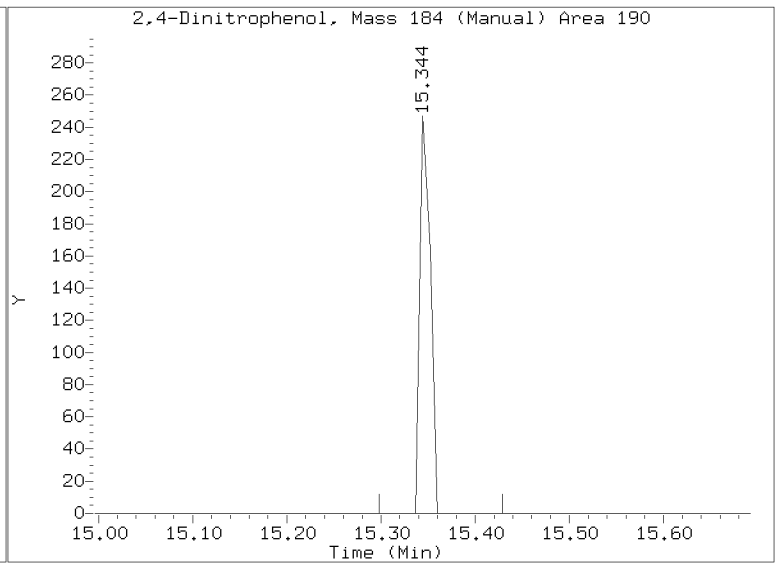












Quant Ion Manual Peak Adjustment Report

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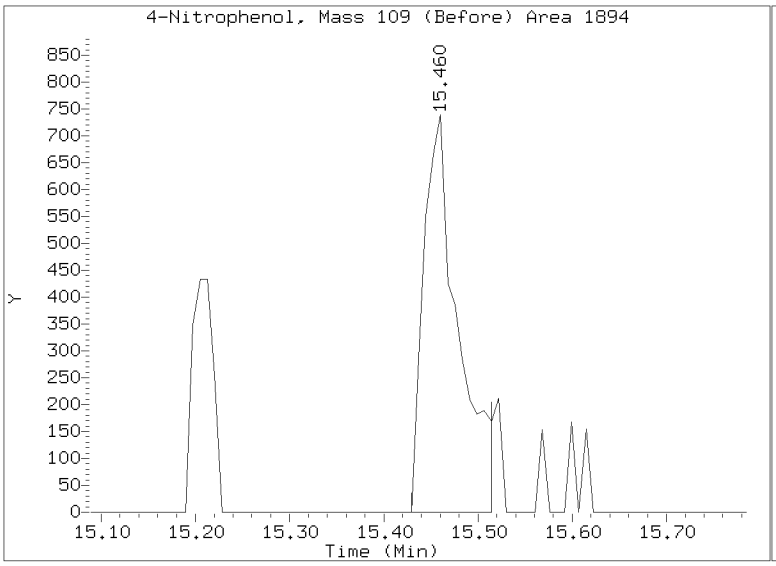
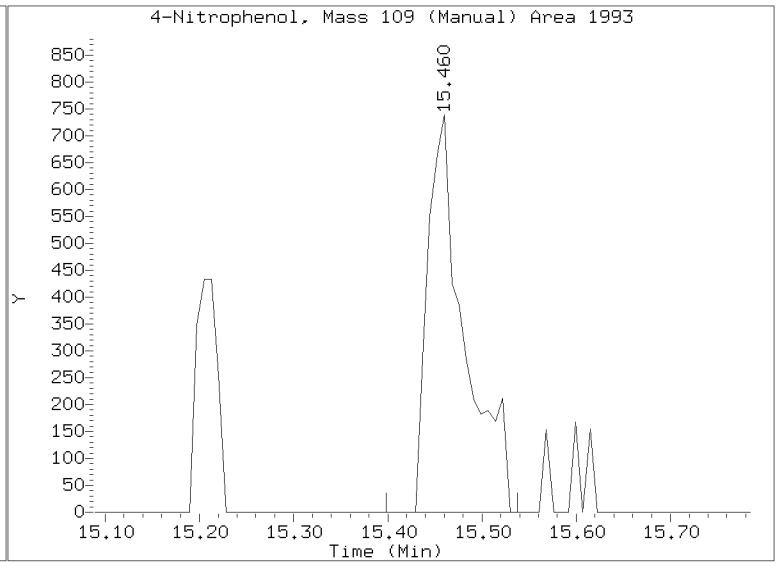
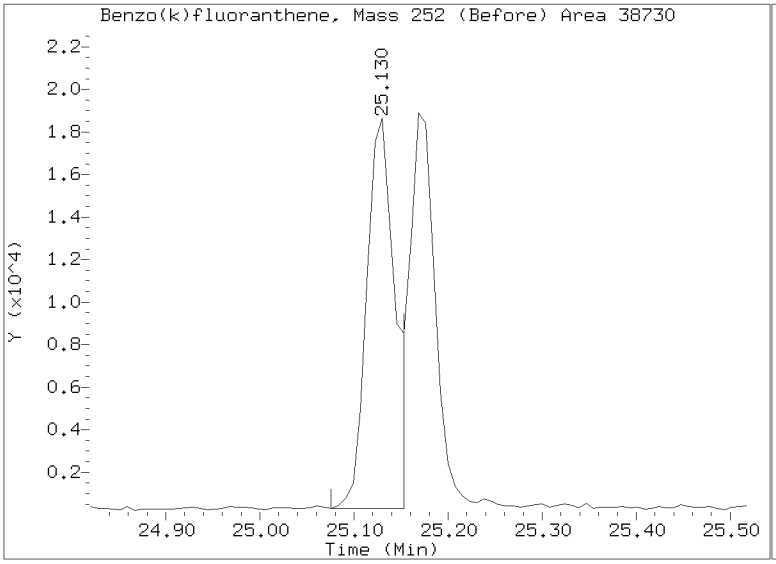
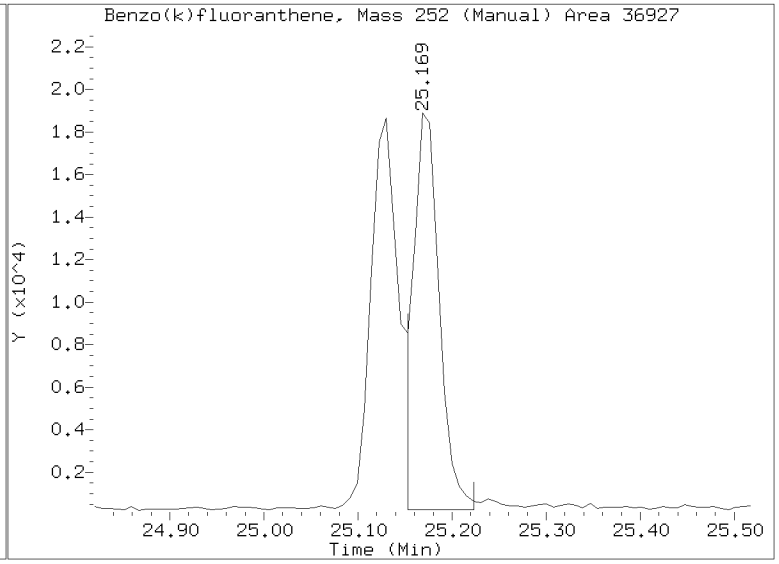
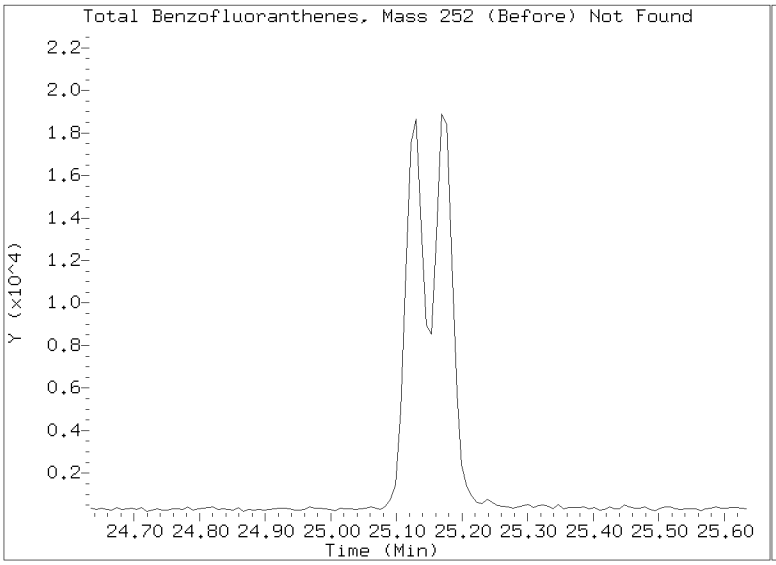
Injection Date: 18-MAR-2023 19:37
Lab ID:SLC0504-LCV1 Client ID:
Report Date: 04/04/2023 08:56

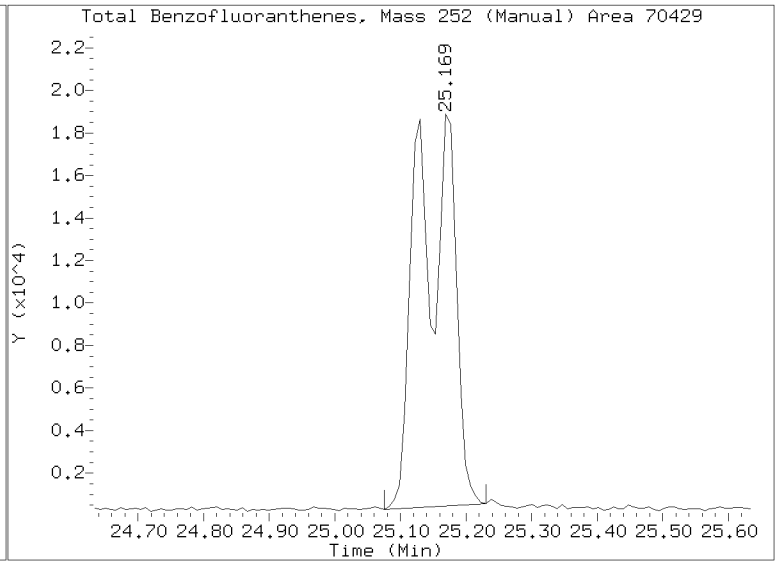












Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION CONTINUING CALIBRATION CHECK

EPA 8270E

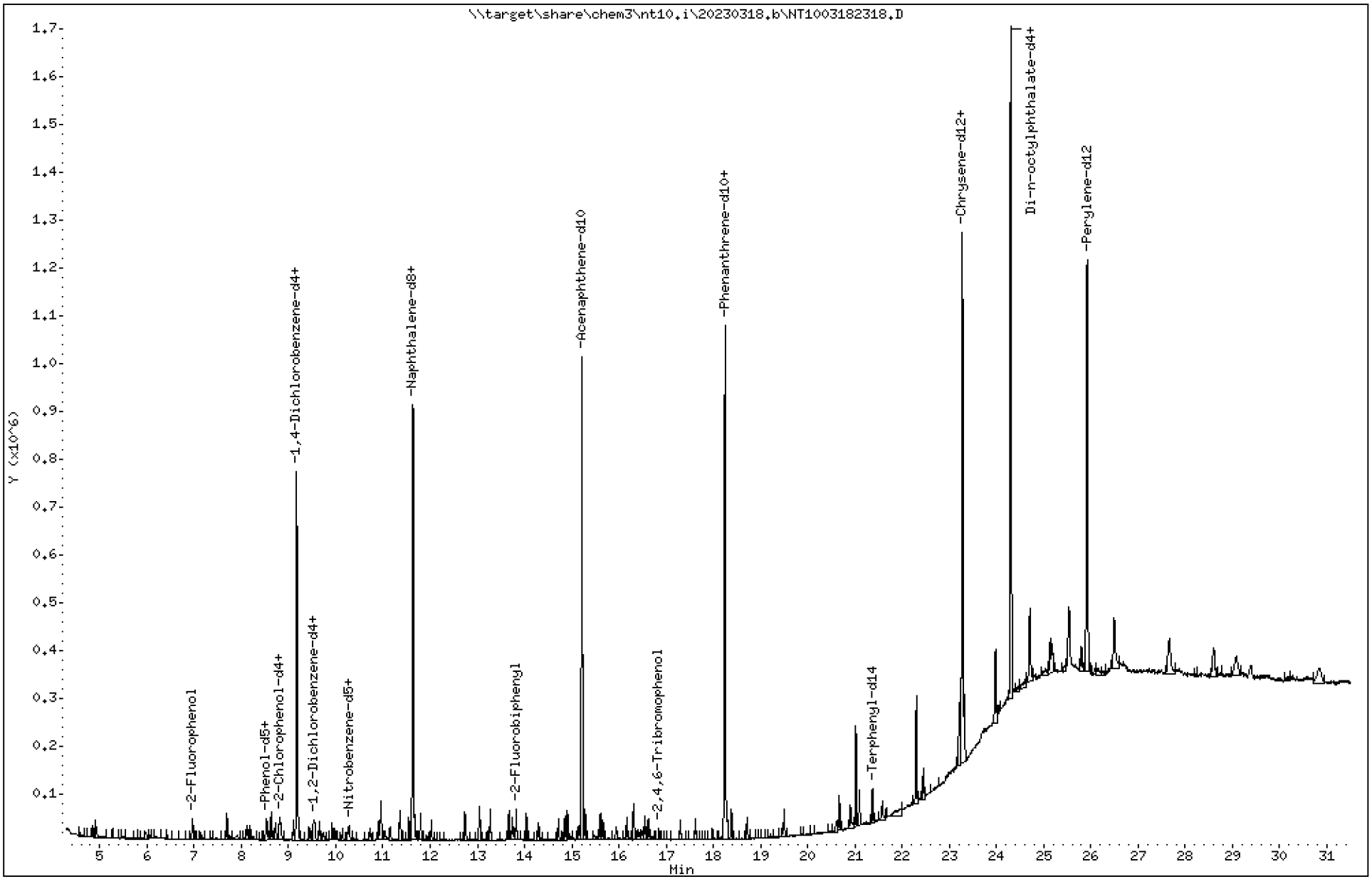
Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00046
Lab File ID:	NT1003182318.D	Calibration Date:	03/15/2023
Sequence:	SLC0504	Injection Date:	03/19/23
Lab Sample ID:	SLC0504-LCV2	Injection Time:	04:35
Sequence Name:	ABN 0.2		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Phenol	A	0.20000	0.2	1.6490140	1.7016350		3.2	+/-50
4-Methylphenol	A	0.20000	0.2	1.2665770	1.3166280		4.0	+/-50
Naphthalene	A	0.20000	0.2	1.0596590	1.1135320		5.1	+/-50
2-Methylnaphthalene	A	0.20000	0.2	0.7647129	0.8193222		7.1	+/-50
Acenaphthylene	A	0.20000	0.2	1.9964080	2.1682910		8.6	+/-50
Dimethylphthalate	A	0.20000	0.2	1.2994310	1.4561900		12.1	+/-50
Acenaphthene	A	0.20000	0.2	1.2333460	1.2476260		1.2	+/-50
Dibenzofuran	A	0.20000	0.2	1.8187540	1.8809490		3.4	+/-50
Fluorene	A	0.20000	0.2	1.4308680	1.1574560		-19.1	+/-50
Phenanthrene	A	0.20000	0.2	1.0907130	1.1190520		2.6	+/-50
Anthracene	A	0.20000	0.2	1.0462760	1.1309200		8.1	+/-50
Fluoranthene	A	0.20000	0.2	1.6072690	1.5634980		-2.7	+/-50
Pyrene	A	0.20000	0.2	1.6487720	1.6032640		-2.8	+/-50
Butylbenzylphthalate	A	0.20000	0.2	0.5292894	0.7133237		23.2	+/-50
Benzo(a)anthracene	A	0.20000	0.2	1.4118770	1.6096290		14.0	+/-50
Chrysene	A	0.20000	0.2	1.3793780	1.4514520		5.2	+/-50
bis(2-Ethylhexyl)phthalate	A	0.20000	0.2	0.5248968	0.5833318		-0.3	+/-50
Benzofluoranthenes, Total	A	0.40000	0.4	1.2519020	1.3699420		9.4	+/-50
Benzo(a)pyrene	A	0.20000	0.2	1.1592370	1.2987120		12.0	+/-50
Indeno(1,2,3-cd)pyrene	A	0.20000	0.2	1.4748270	1.4598420		-1.0	+/-50
Dibenzo(a,h)anthracene	A	0.20000	0.2	1.2244340	1.2161390		-0.7	+/-50
Benzo(g,h,i)perylene	A	0.20000	0.2	1.2763410	1.2478220		-2.2	+/-50
2-Fluorophenol	A	0.30000	0.329	1.2096460	1.3266330		9.7	+/-50
Phenol-d5	A	0.30000	0.293	1.5868760	1.5473260		-2.5	+/-50
2-Chlorophenol-d4	A	0.30000	0.304	1.3550800	1.3751910		1.5	+/-50
1,2-Dichlorobenzene-d4	A	0.20000	0.218	0.9731556	1.0604790		9.0	+/-50
Nitrobenzene-d5	A	0.20000	0.211	0.4037447	0.4254601		5.4	+/-50
2-Fluorobiphenyl	A	0.20000	0.214	1.5822890	1.6891160		6.8	+/-50
2,4,6-Tribromophenol	A	0.30000	0.261	0.1585901	0.1635224		-13.1	+/-50
p-Terphenyl-d14	A	0.20000	0.209	1.2381950	1.2915680		4.3	+/-50

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D
Date : 19-MAR-2023 04:35
Client ID:
Sample Info: SLC0504-LCV2

Instrument: nt10.i
Operator: VTS
Column phase: ZB-5msi
Column diameter: 0.25



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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

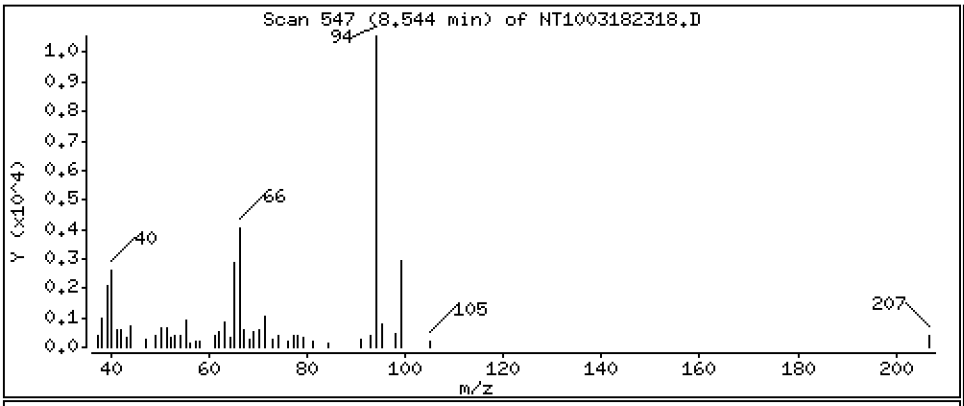
Operator: VTS

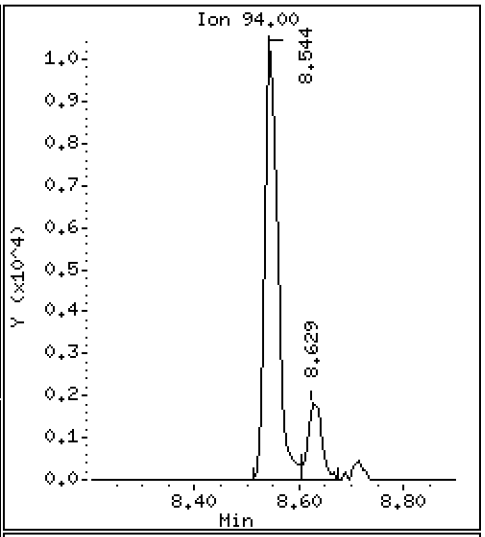
Column phase: ZB-5msi

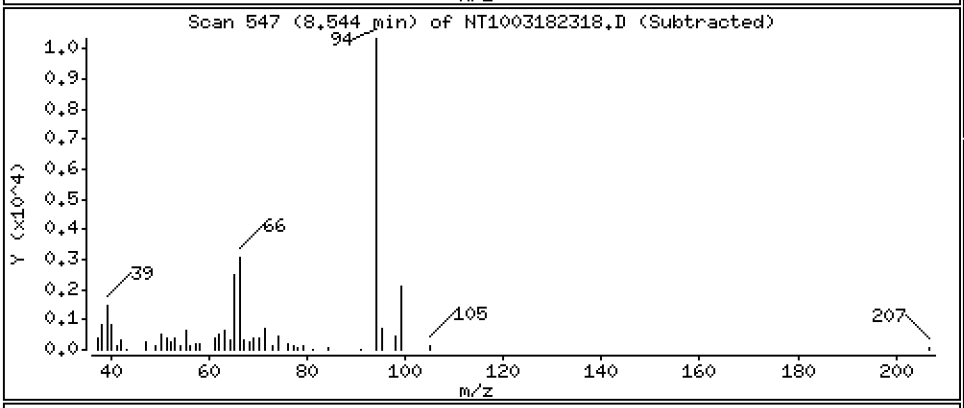
Column diameter: 0.25

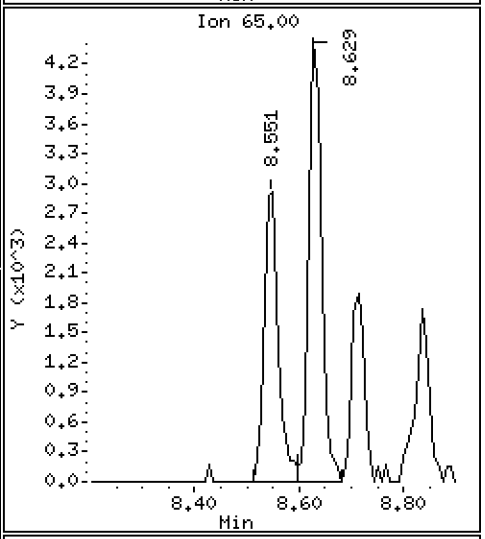
3 Phenol

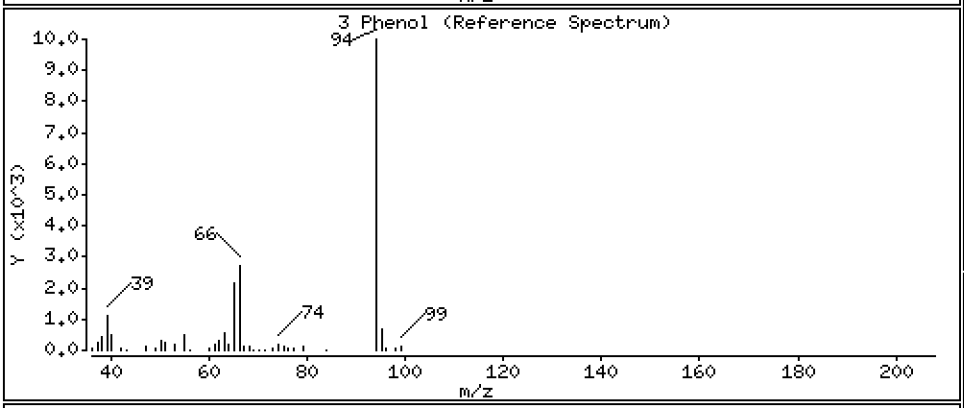
Concentration: 0.2064 ug/mL

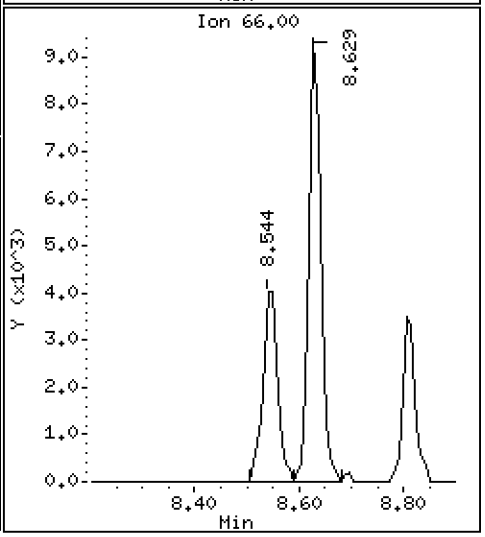


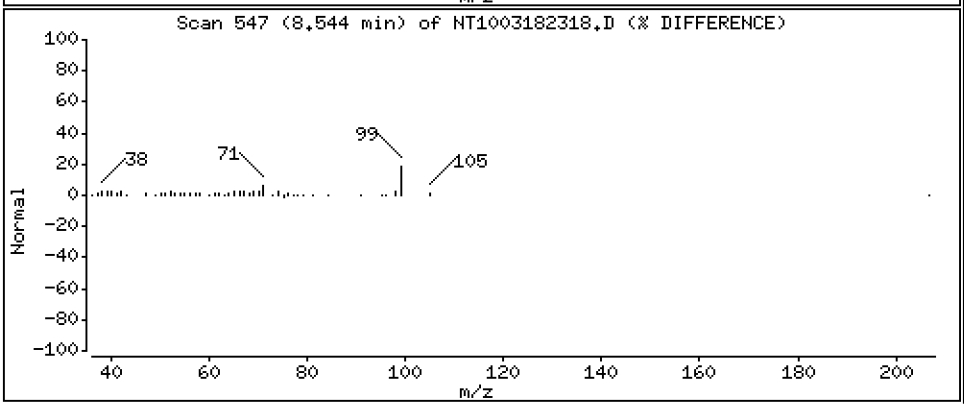












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

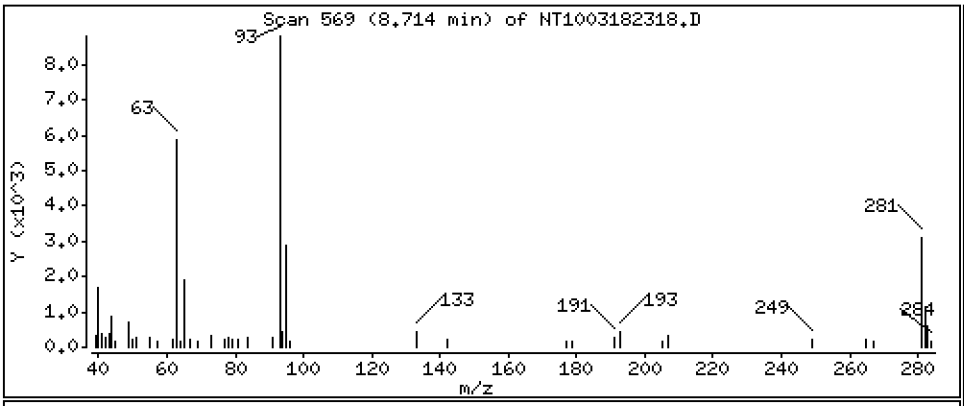
Operator: VTS

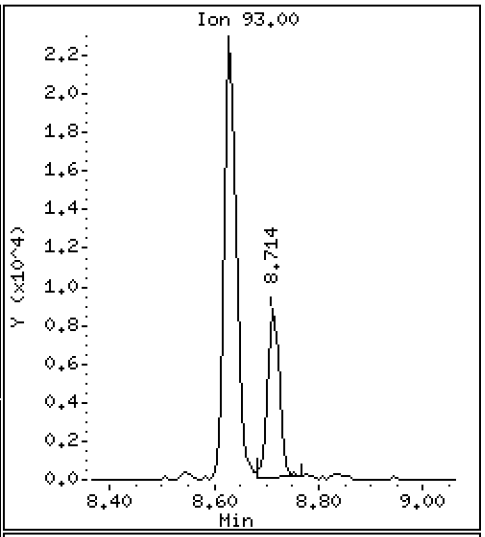
Column phase: ZB-5msi

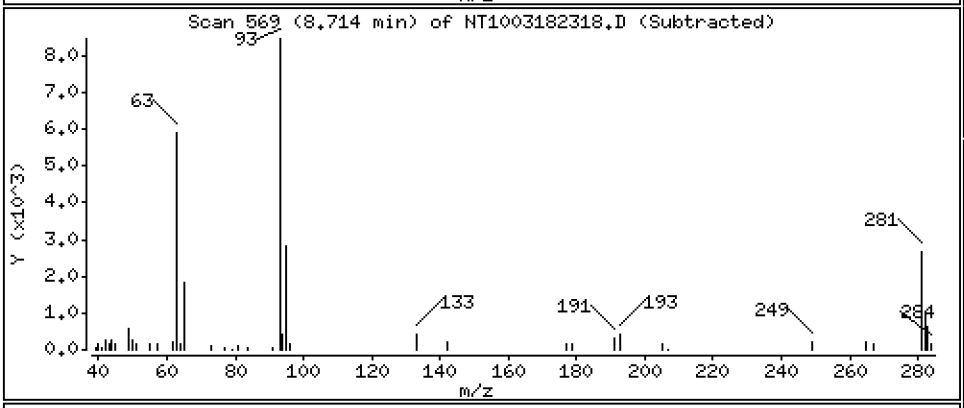
Column diameter: 0.25

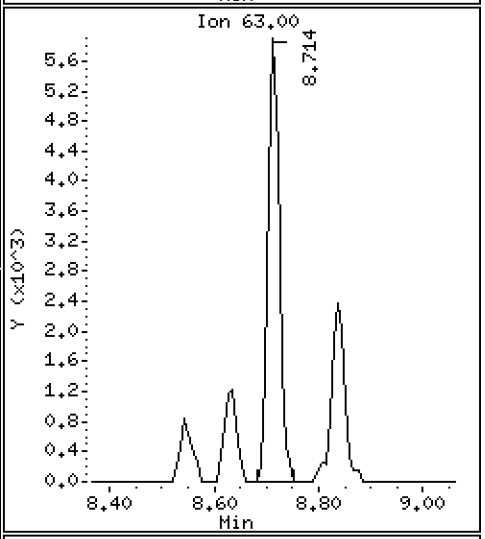
4 Bis(2-Chloroethyl)ether

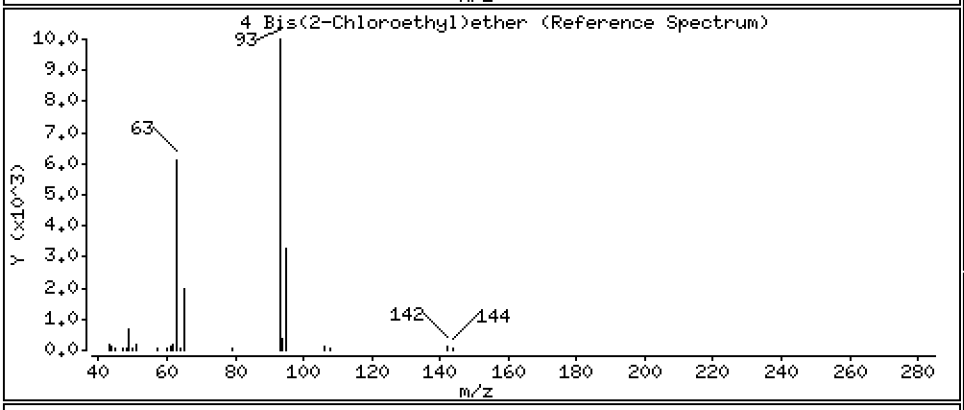
Concentration: 0.2052 ug/mL

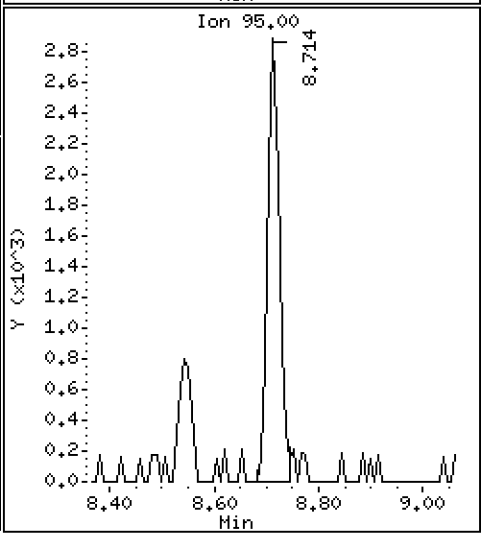


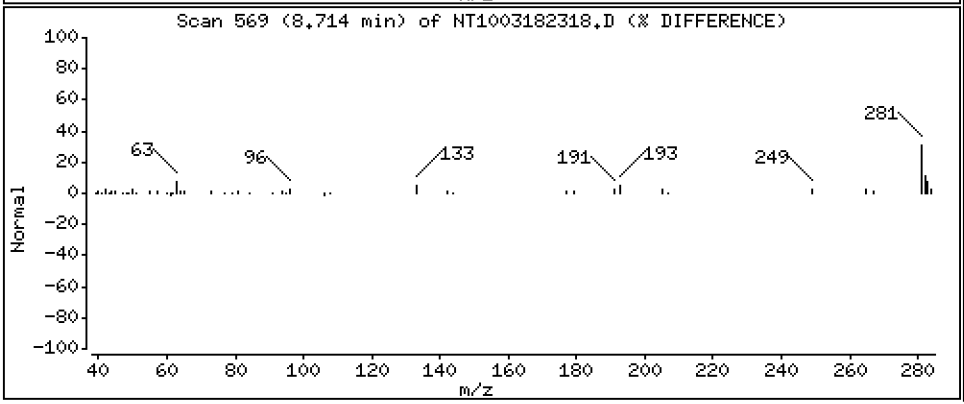












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

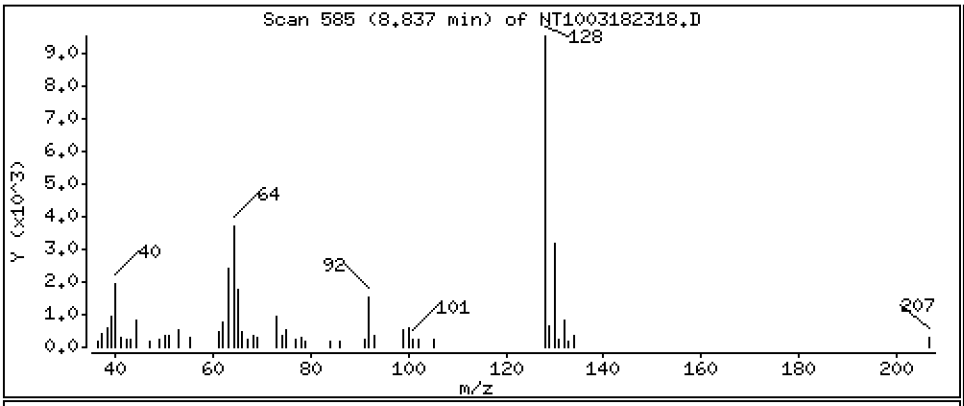
Operator: VTS

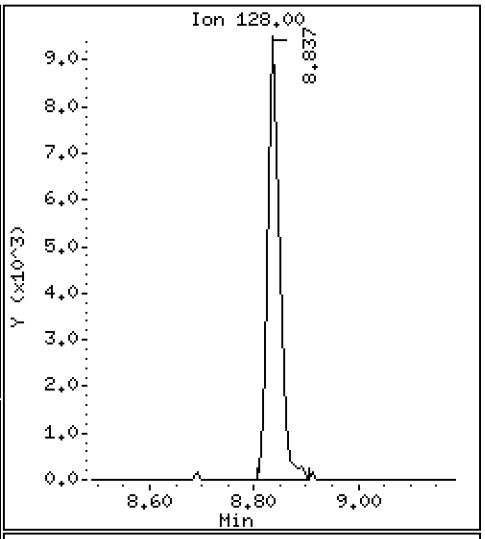
Column phase: ZB-5msi

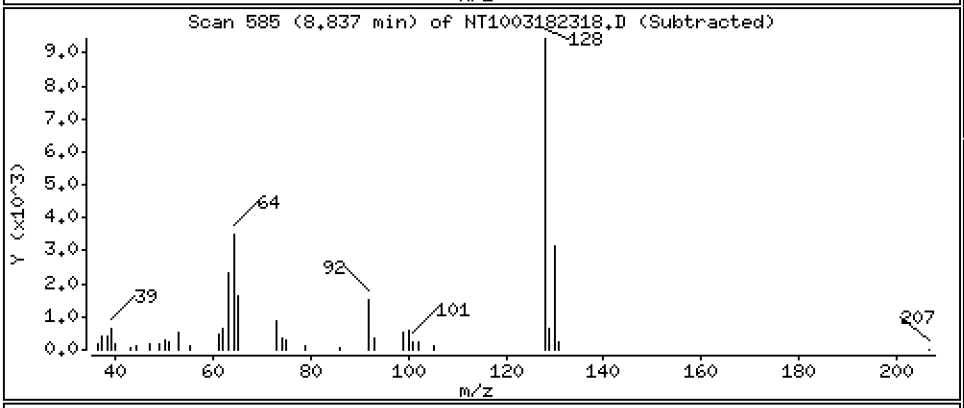
Column diameter: 0.25

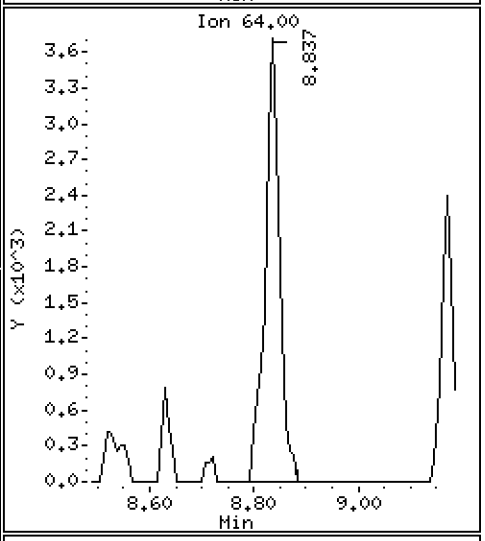
6 2-Chlorophenol

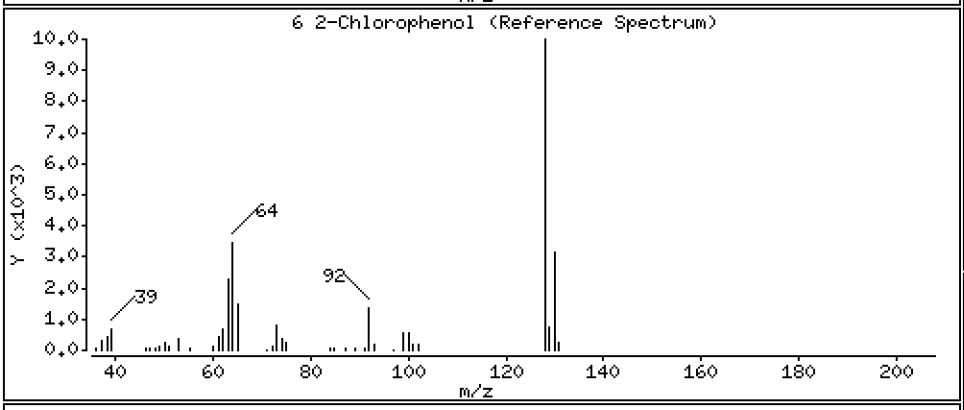
Concentration: 0.2055 ug/mL

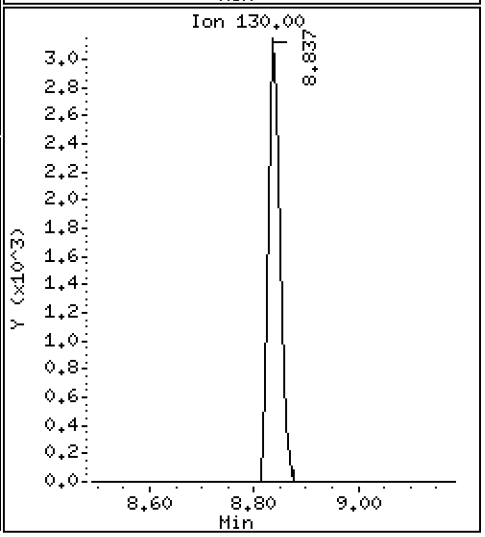


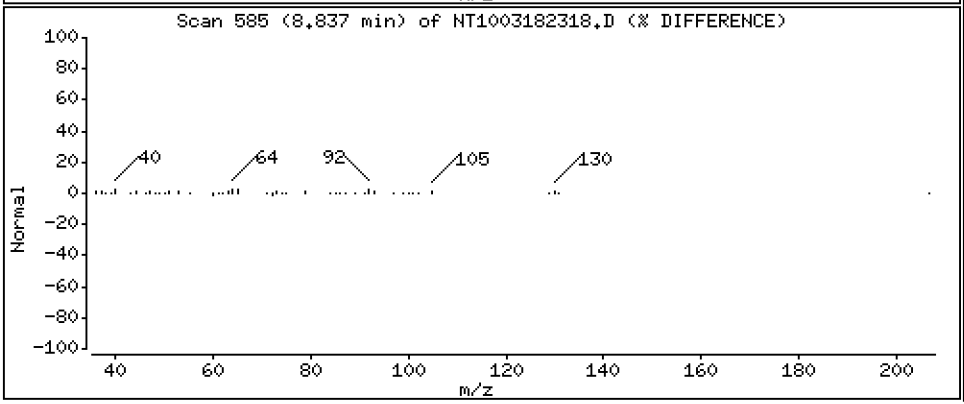












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

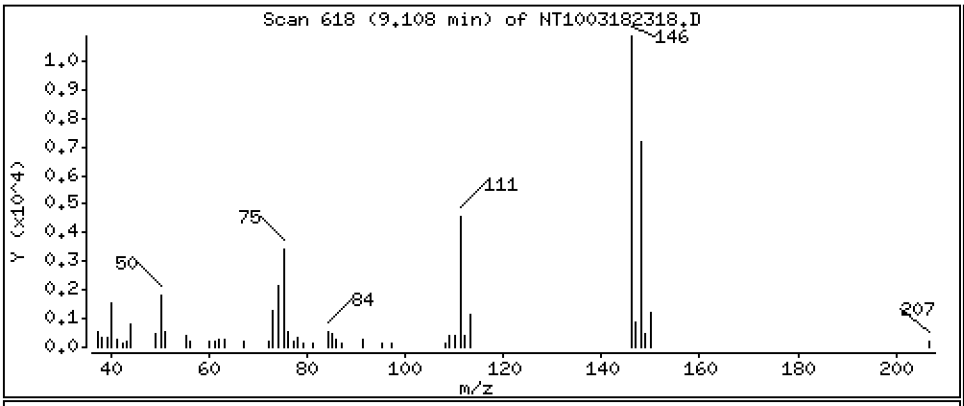
Operator: VTS

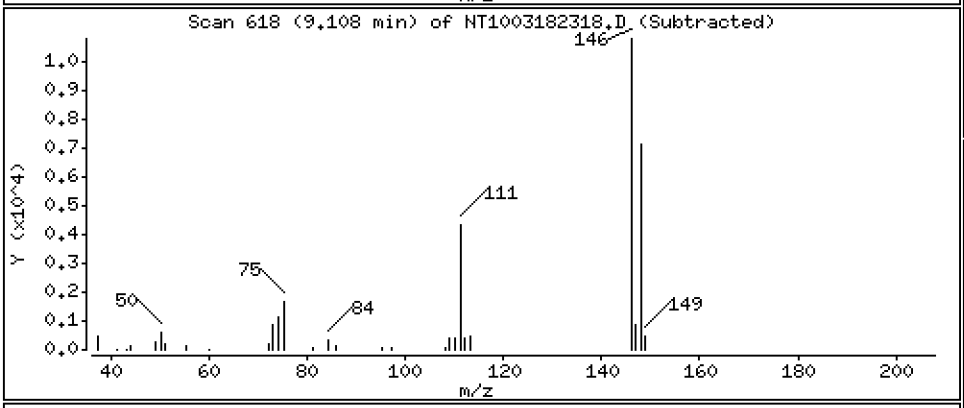
Column phase: ZB-5msi

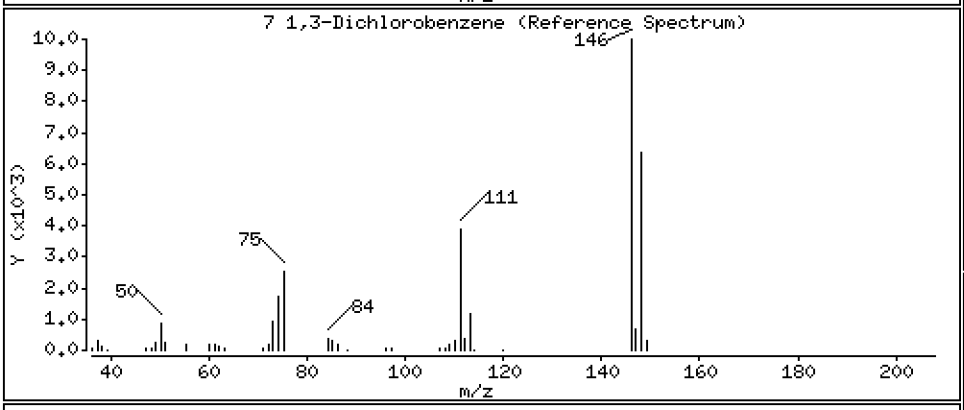
Column diameter: 0.25

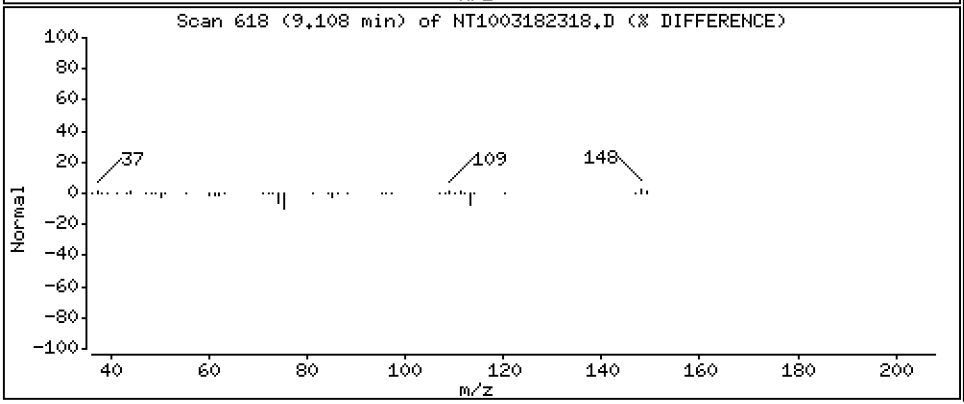
7 1,3-Dichlorobenzene

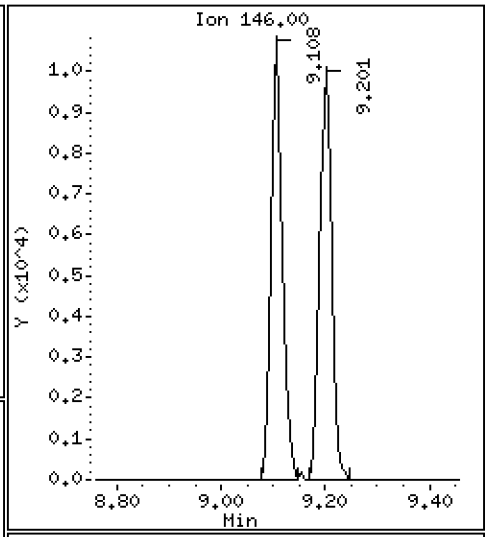
Concentration: 0.2079 ug/mL

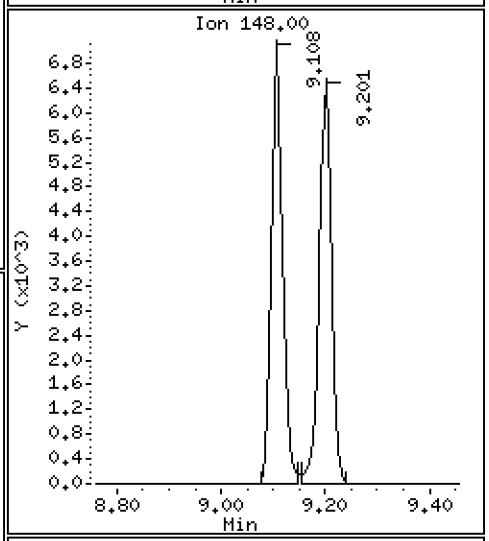


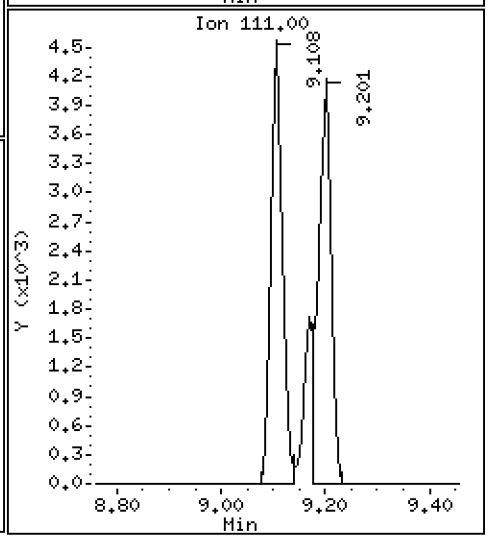












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

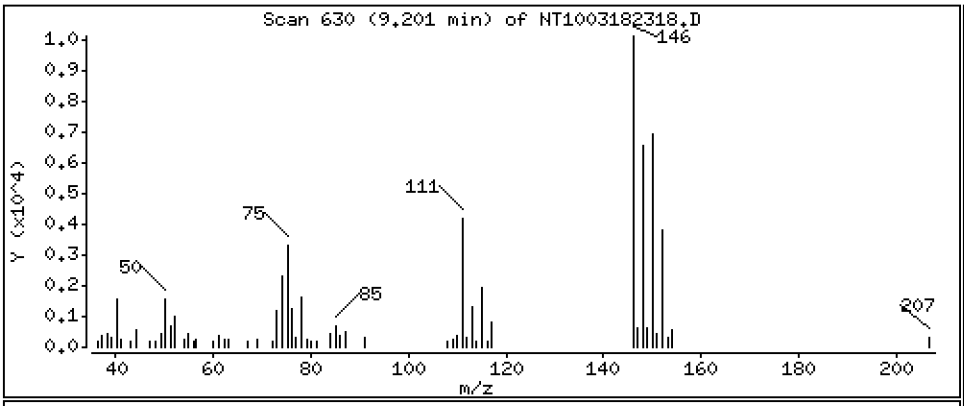
Operator: VTS

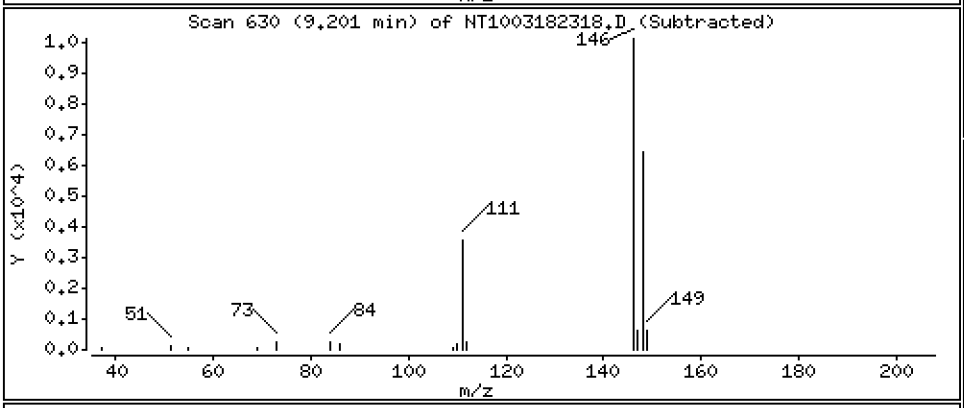
Column phase: ZB-5msi

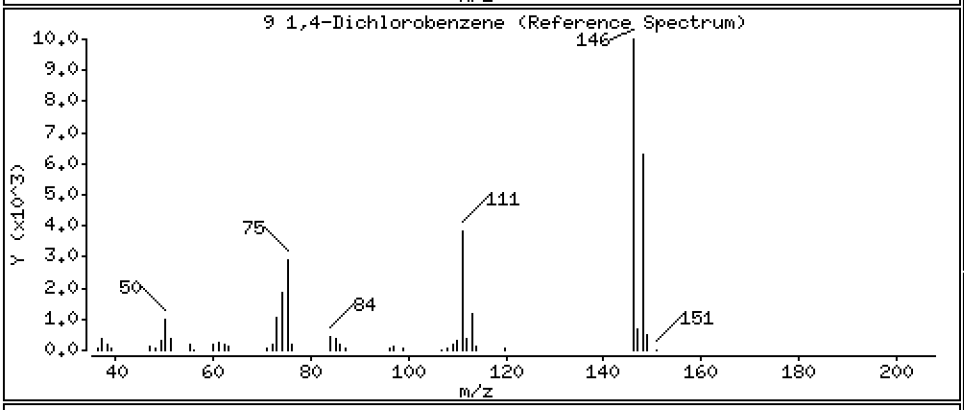
Column diameter: 0.25

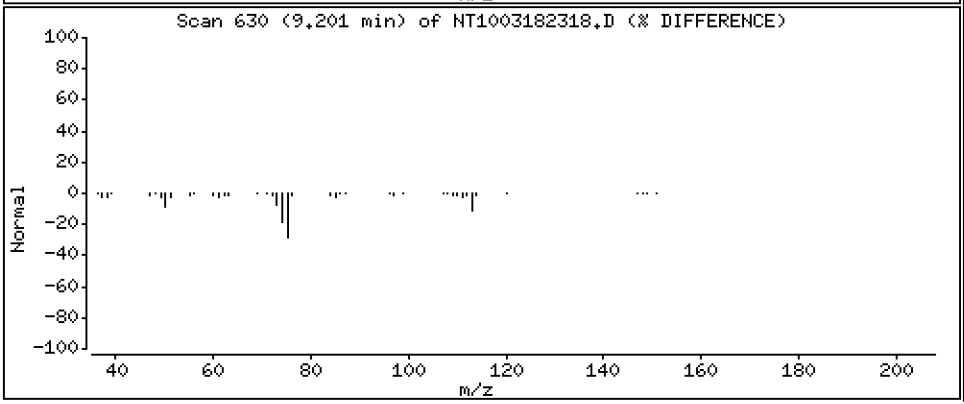
9 1,4-Dichlorobenzene

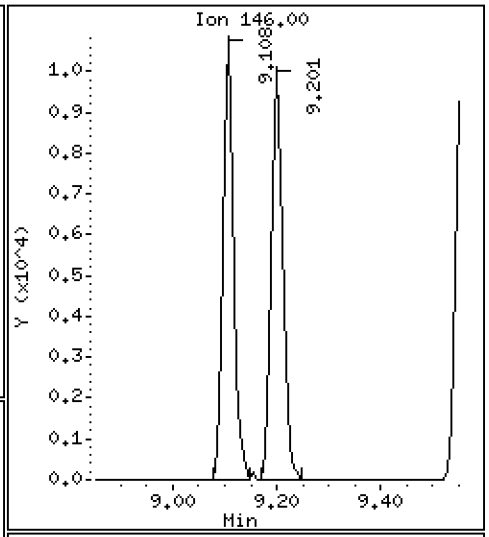
Concentration: 0.2064 ug/mL

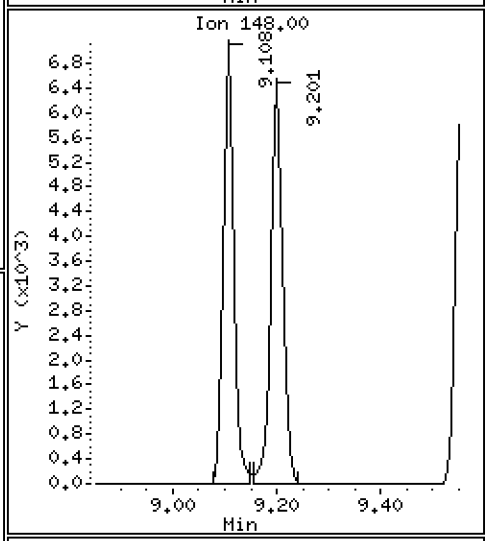


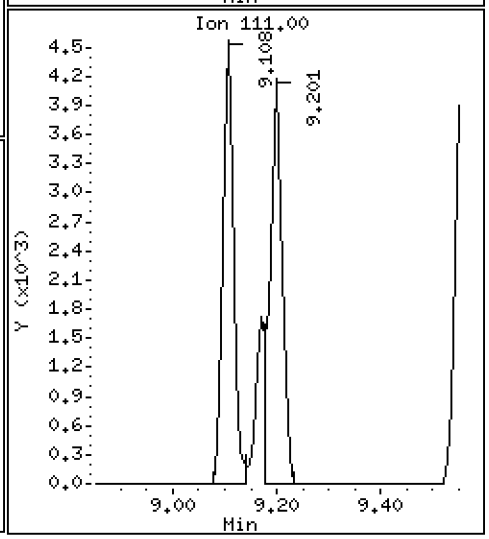












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

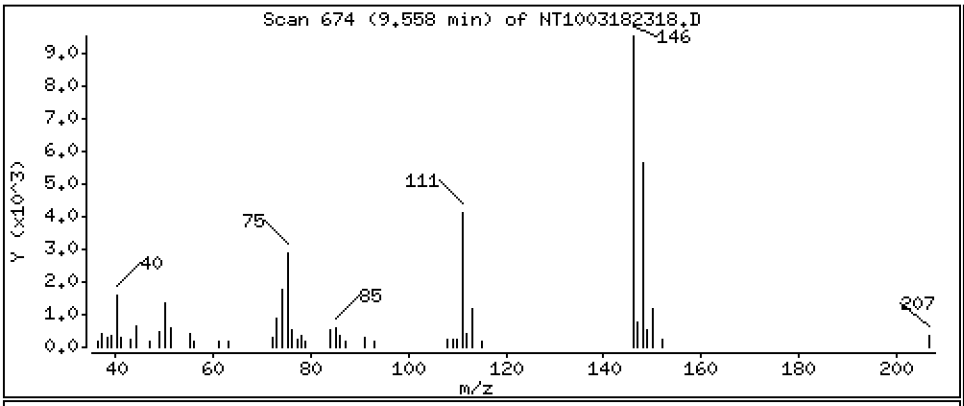
Operator: VTS

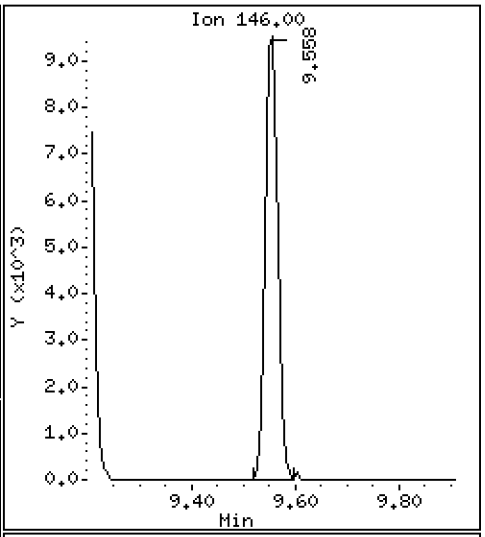
Column phase: ZB-5msi

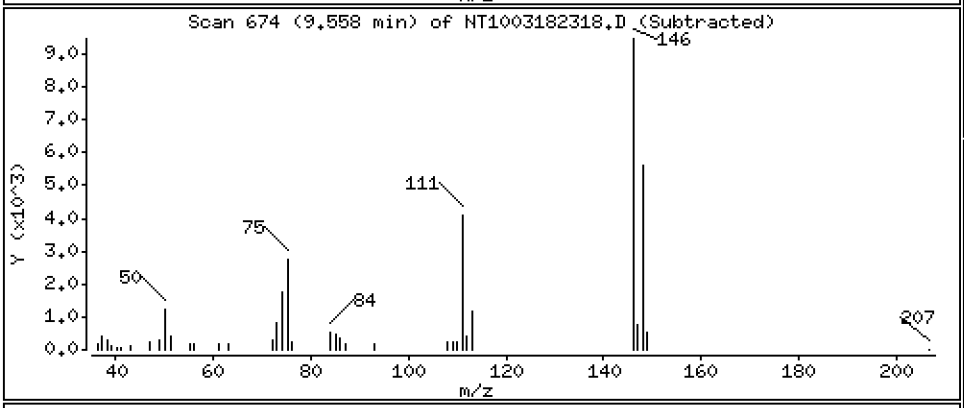
Column diameter: 0.25

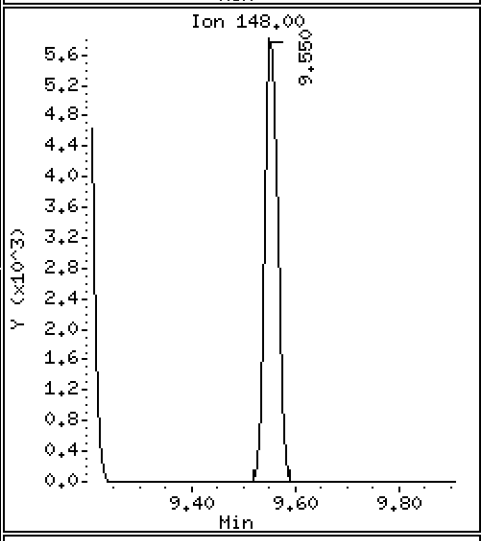
12 1,2-Dichlorobenzene

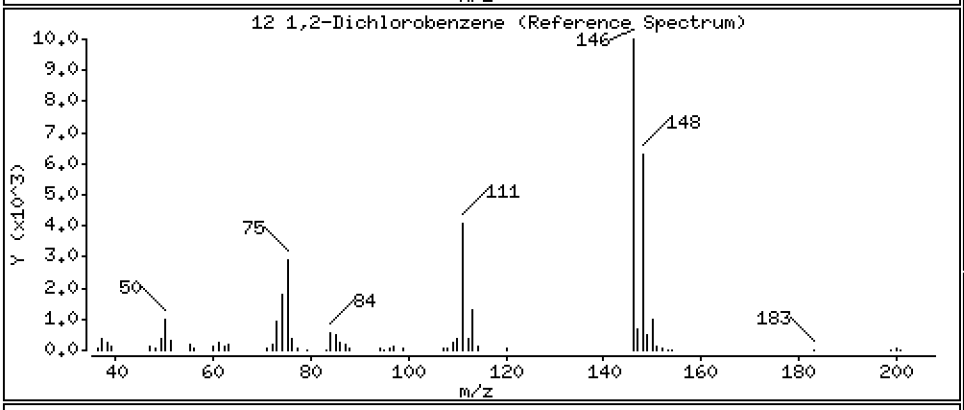
Concentration: 0.2110 ug/mL

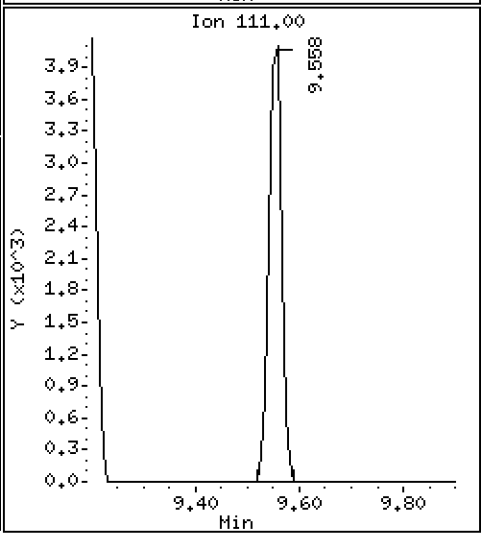


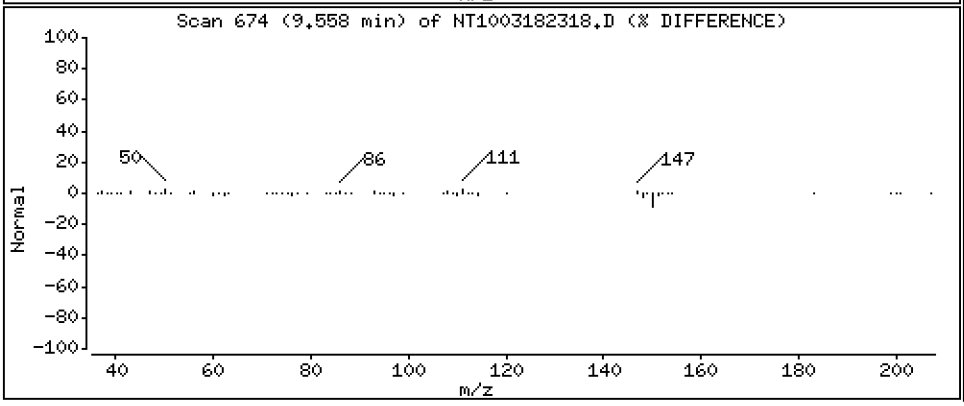












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

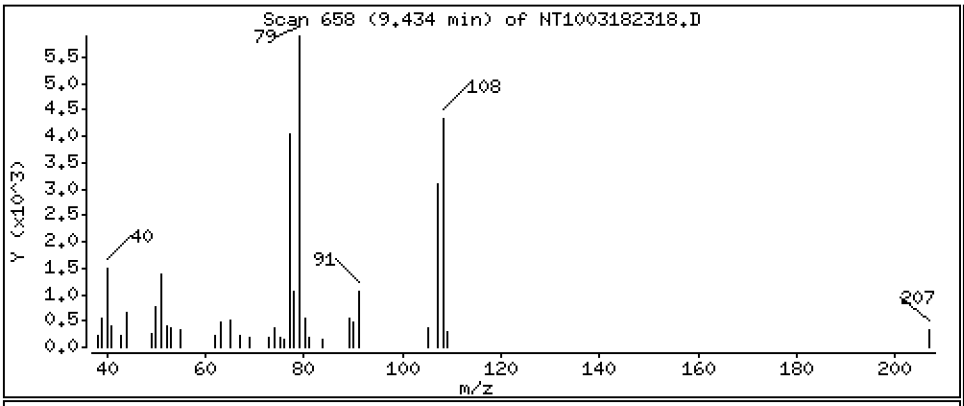
Operator: VTS

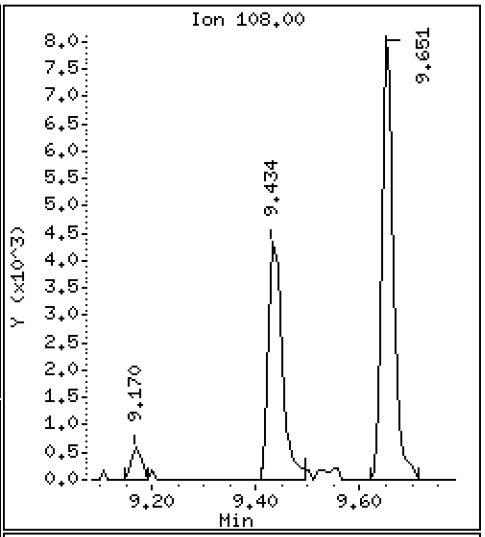
Column phase: ZB-5msi

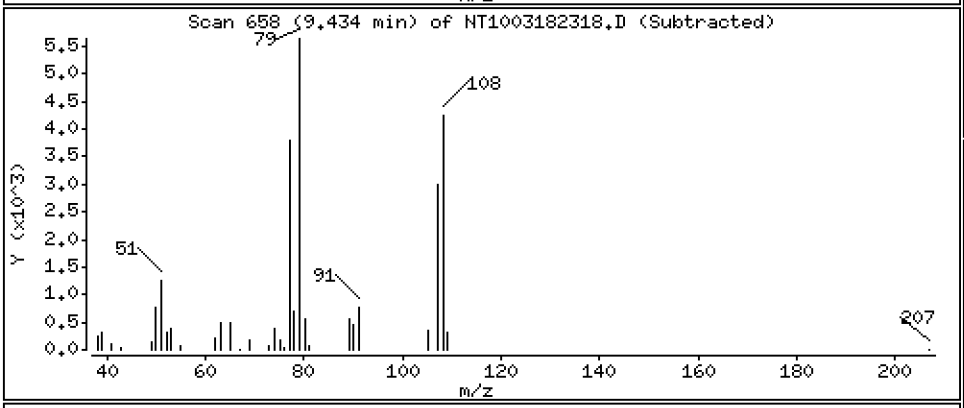
Column diameter: 0.25

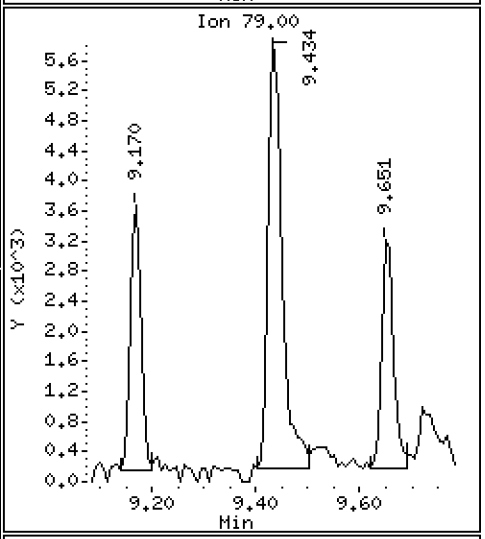
11 Benzyl alcohol

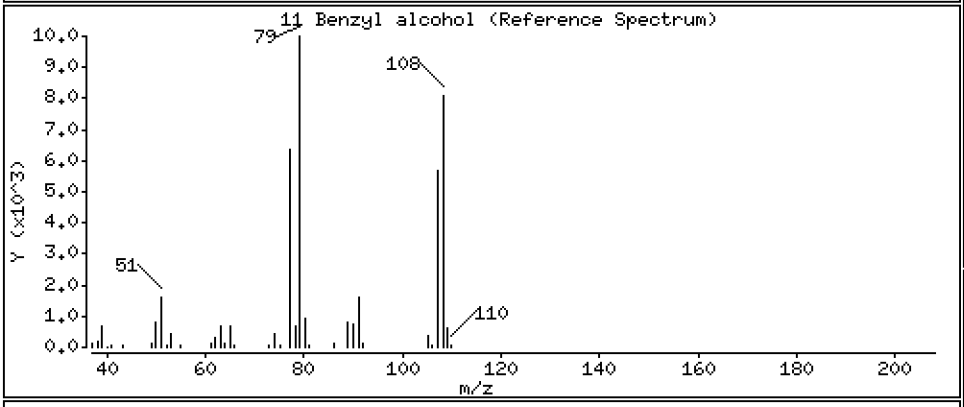
Concentration: 0.1964 ug/mL

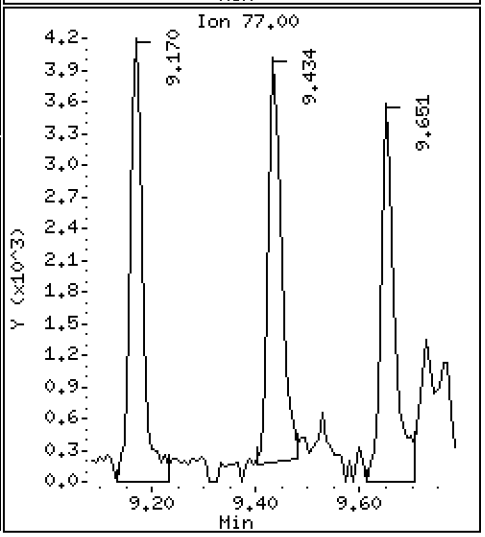


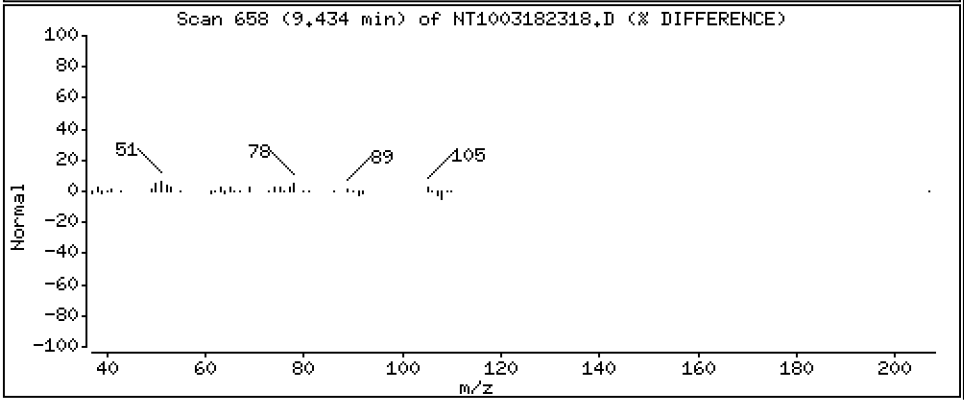












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

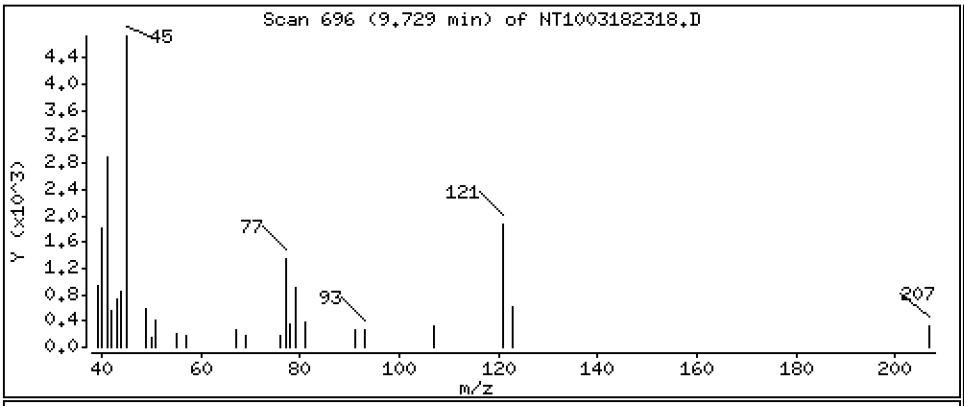
Operator: VTS

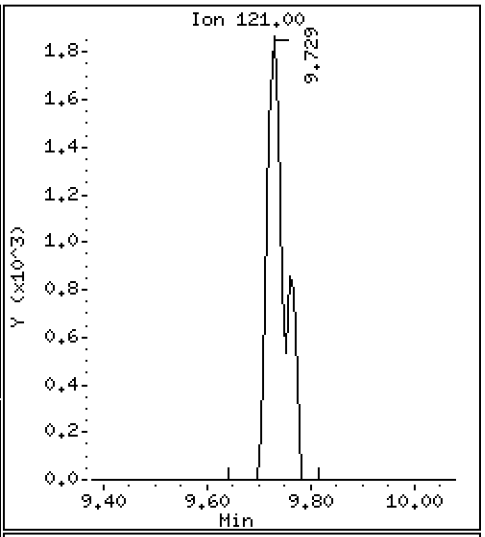
Column phase: ZB-5msi

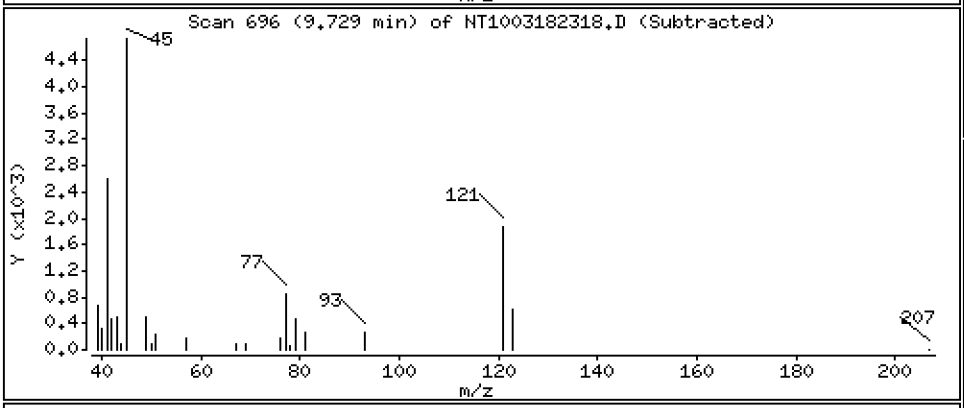
Column diameter: 0.25

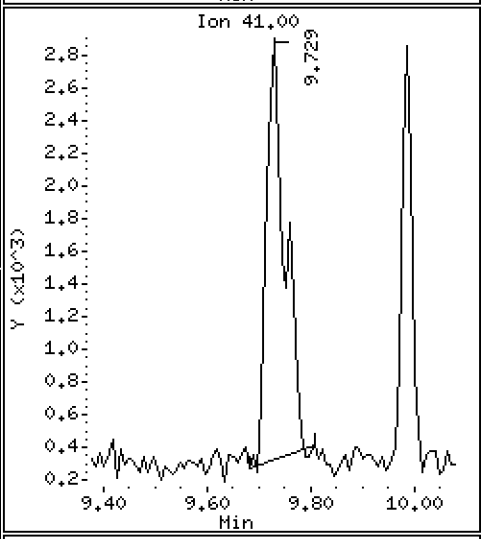
14 2,2'-oxybis(1-Chloropropane)

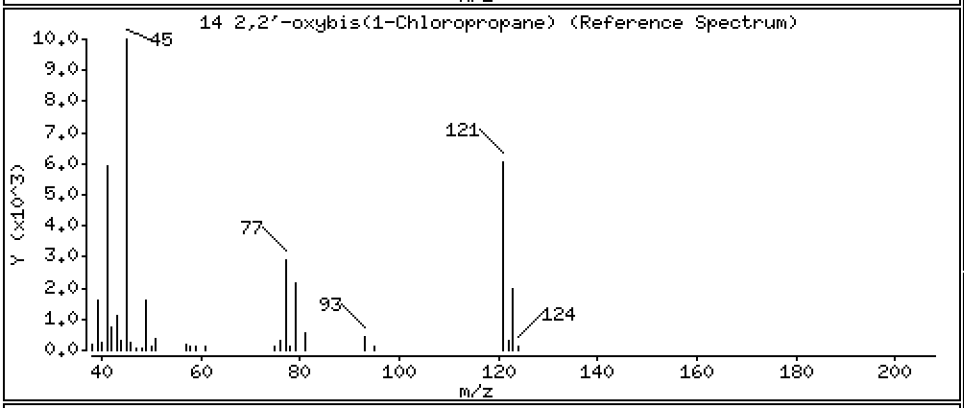
Concentration: 0.2022 ug/mL

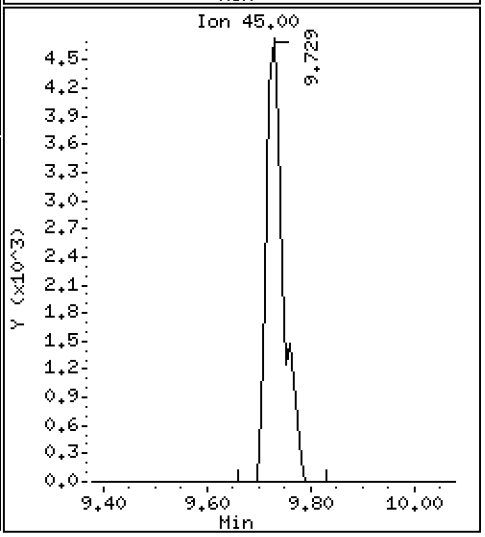


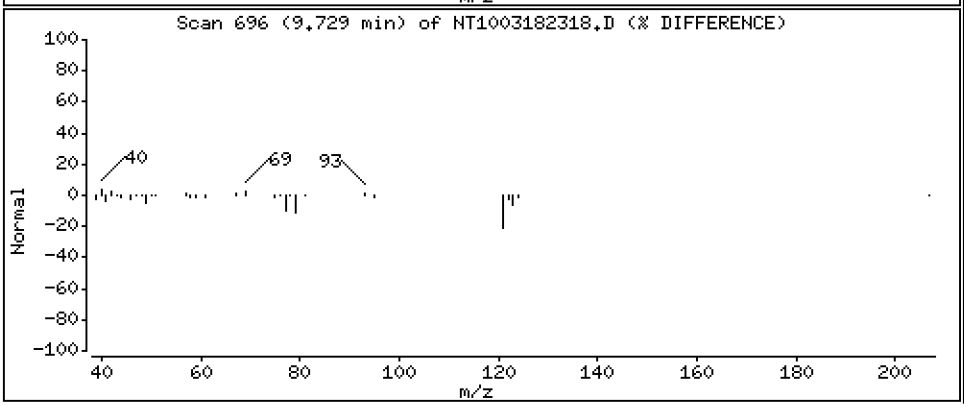












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

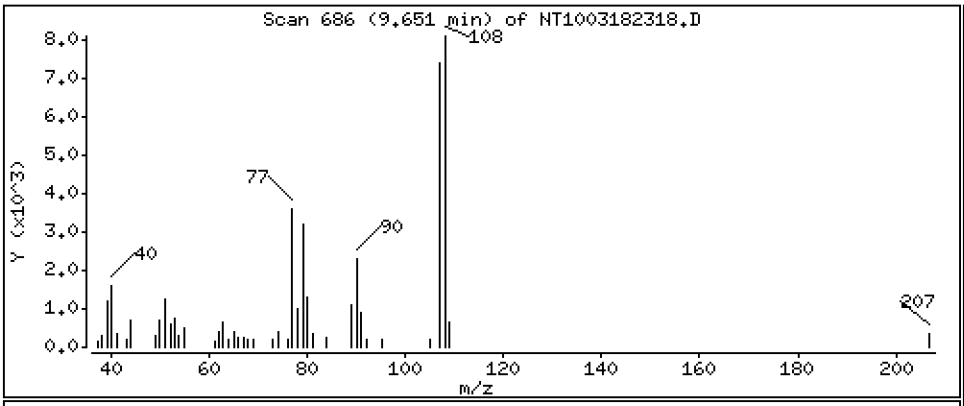
Operator: VTS

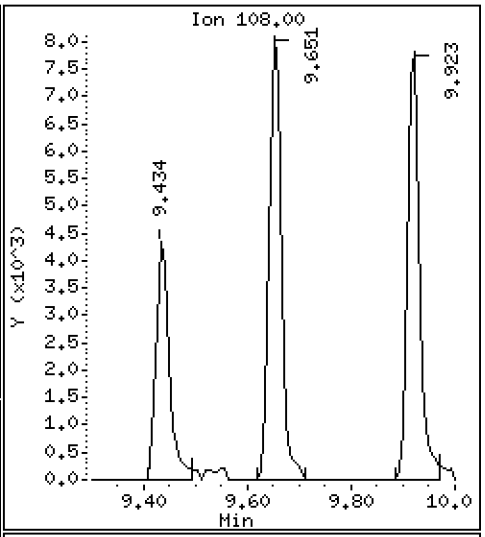
Column phase: ZB-5msi

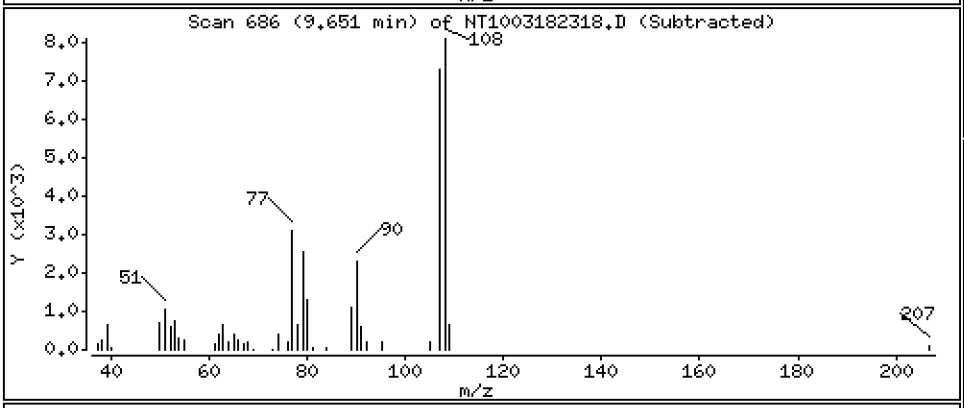
Column diameter: 0.25

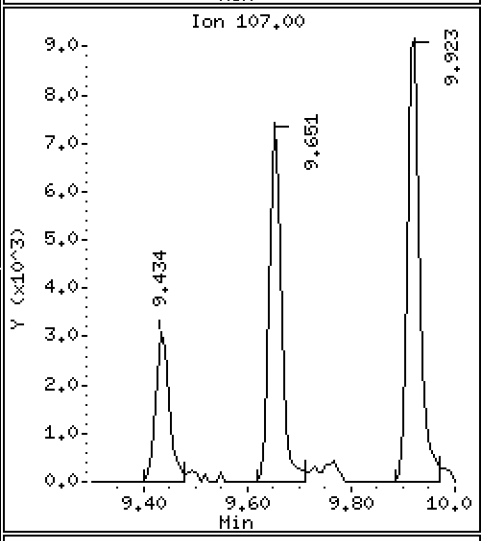
13 2-Methylphenol

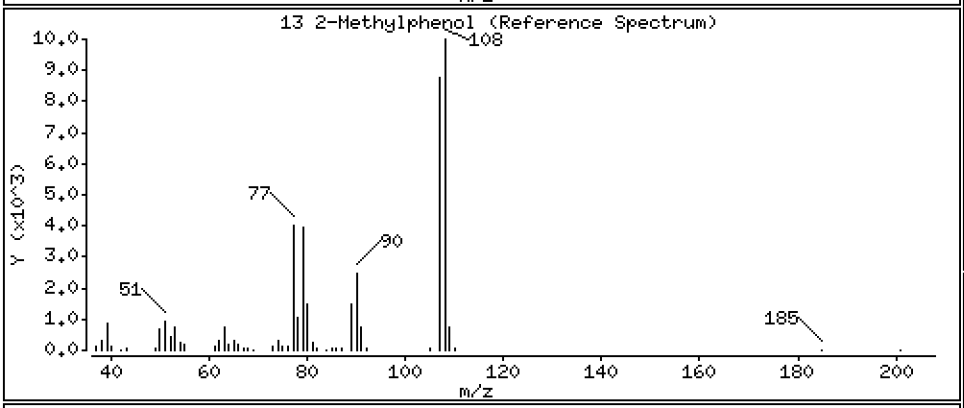
Concentration: 0.2056 ug/mL

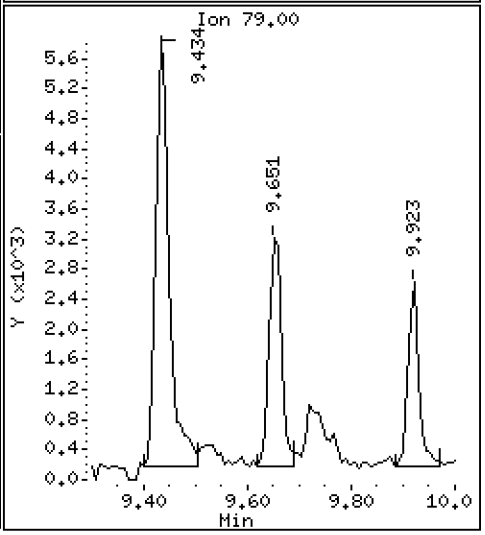


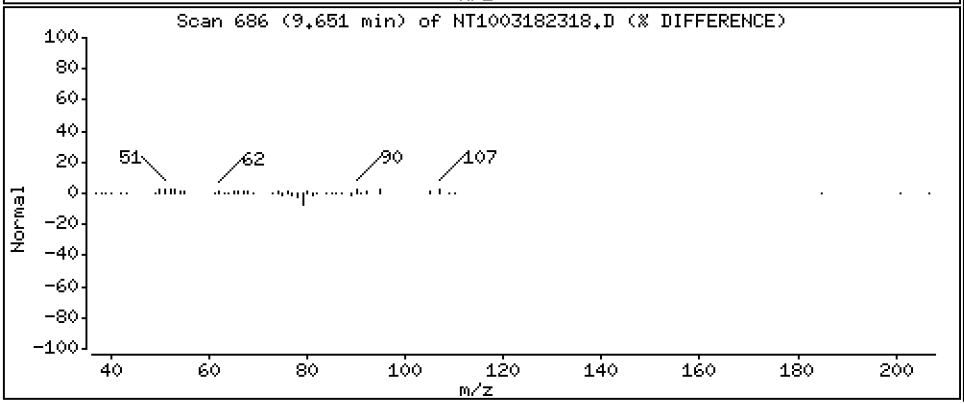












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

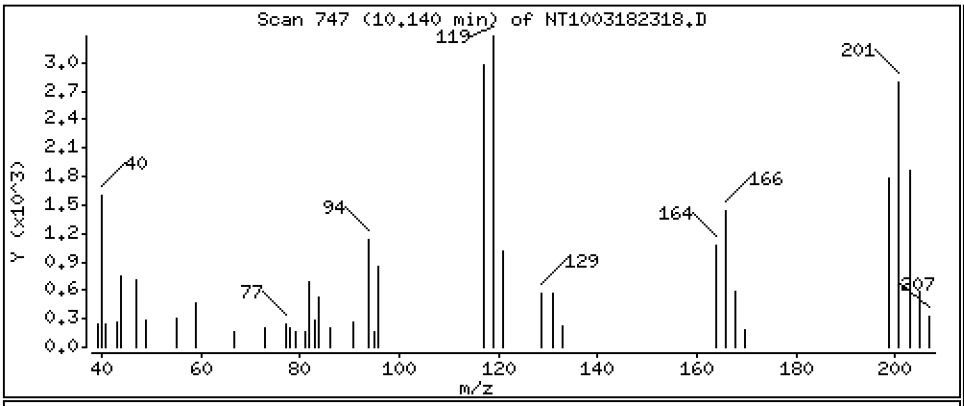
Operator: VTS

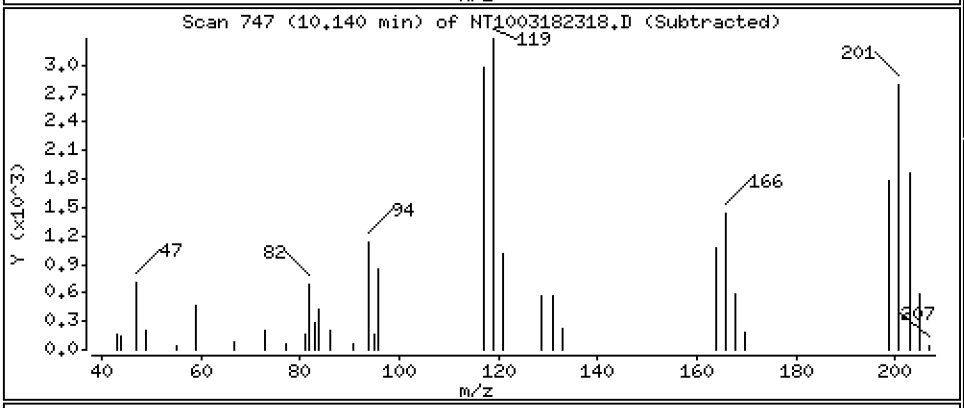
Column phase: ZB-5msi

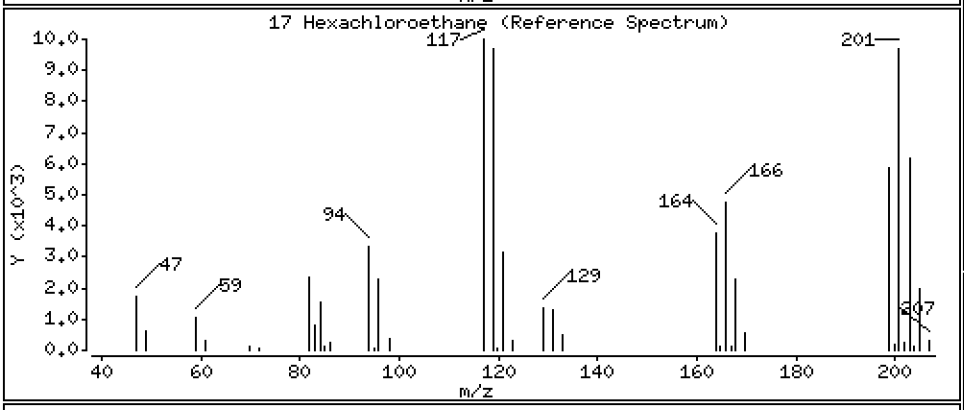
Column diameter: 0.25

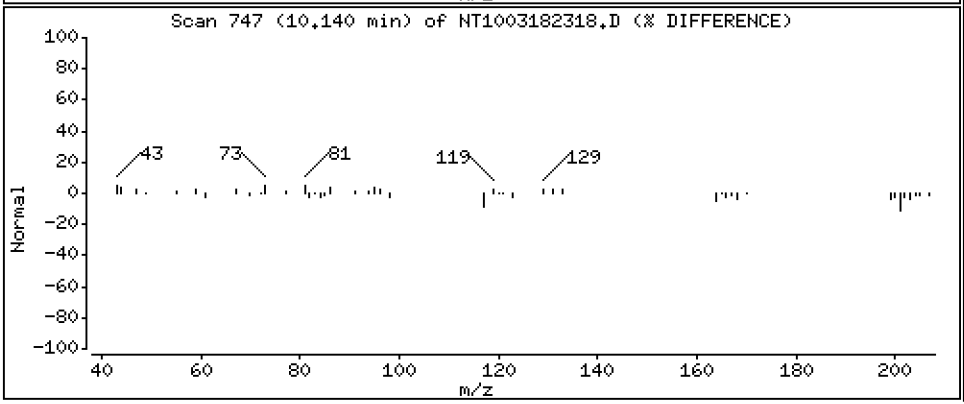
17 Hexachloroethane

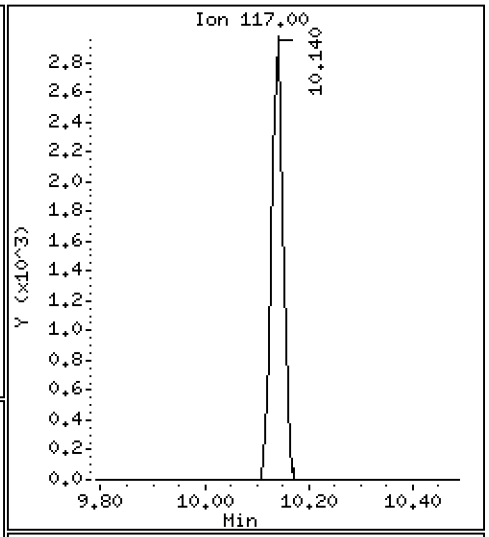
Concentration: 0.1414 ug/mL

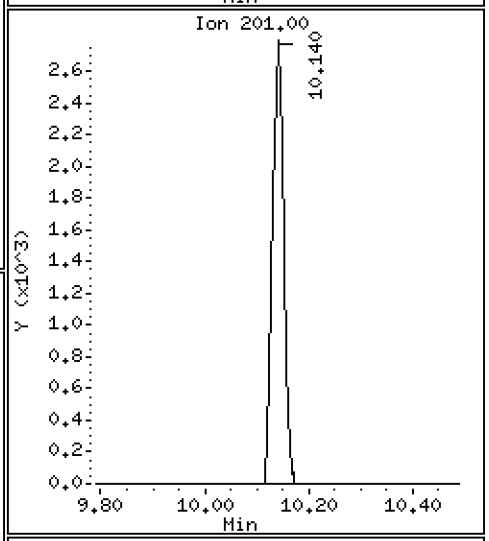


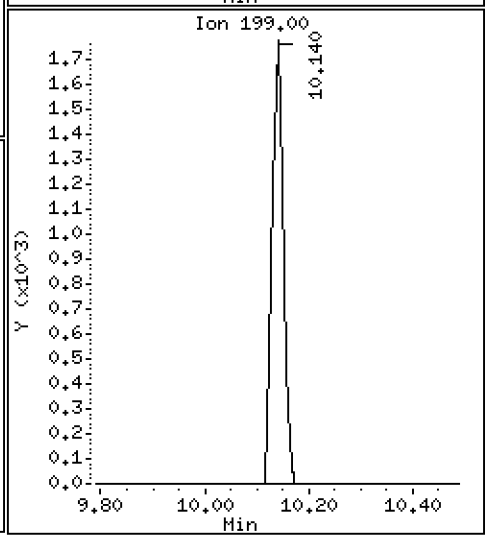












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

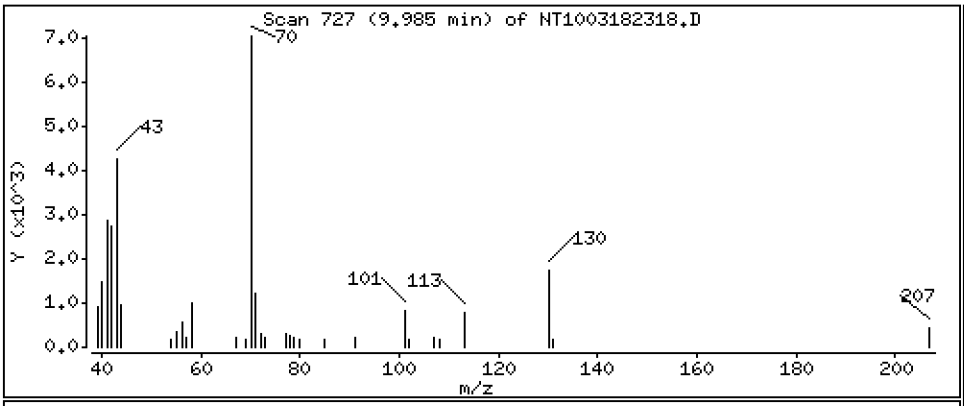
Operator: VTS

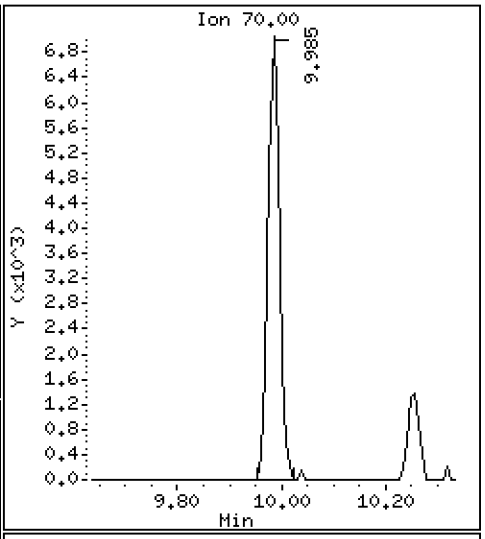
Column phase: ZB-5msi

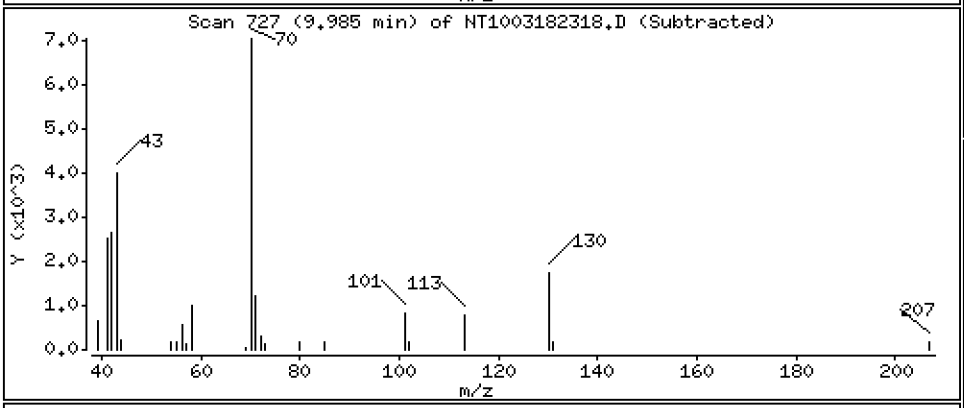
Column diameter: 0.25

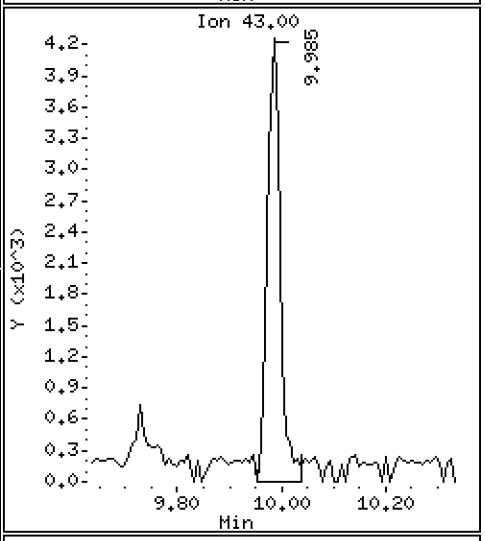
16 N-Nitroso-di-n-propylamine

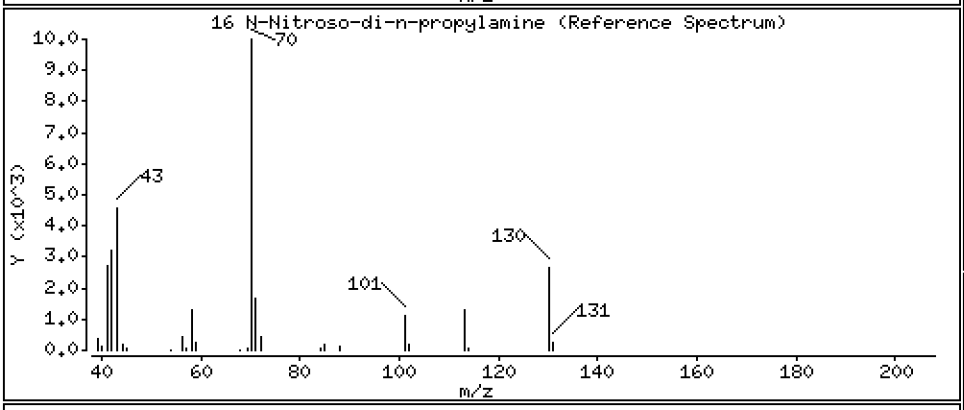
Concentration: 0.2105 ug/mL

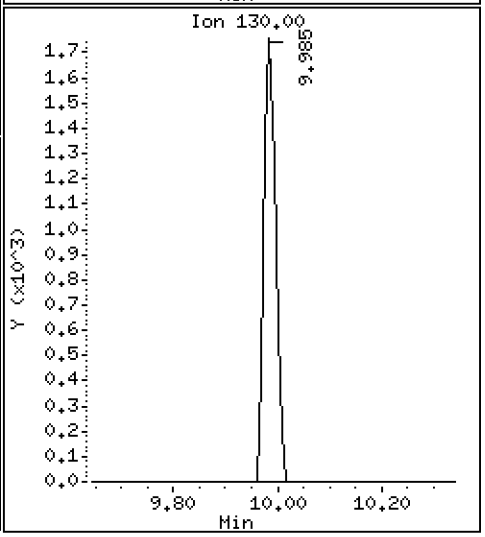


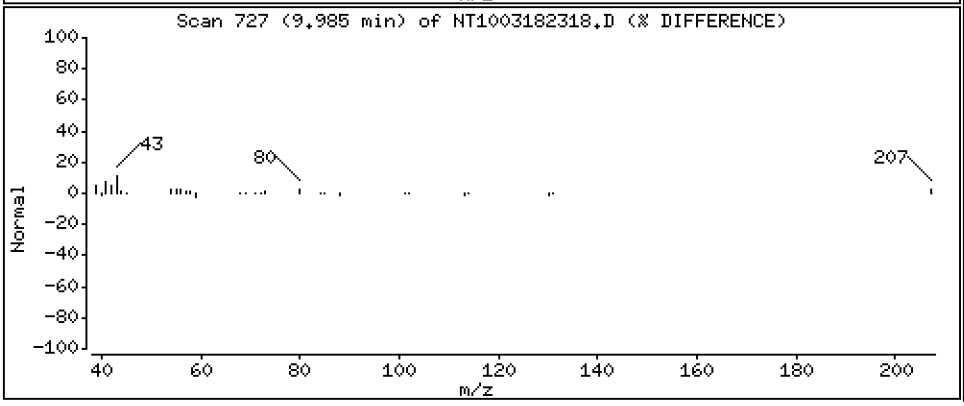












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

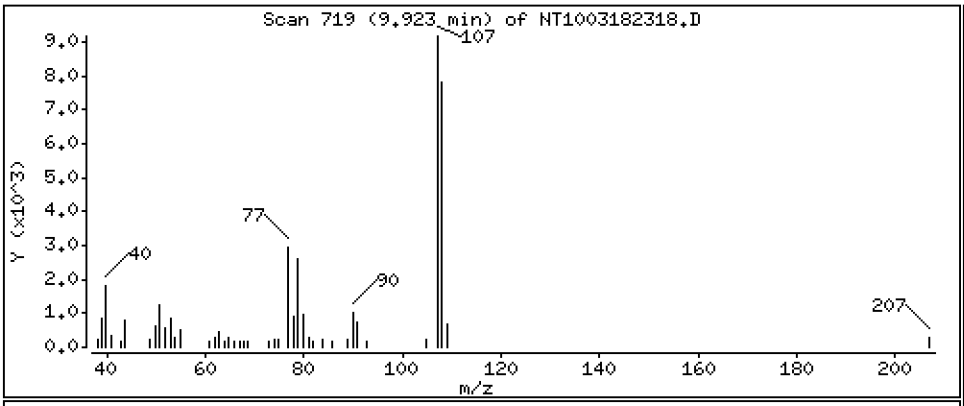
Operator: VTS

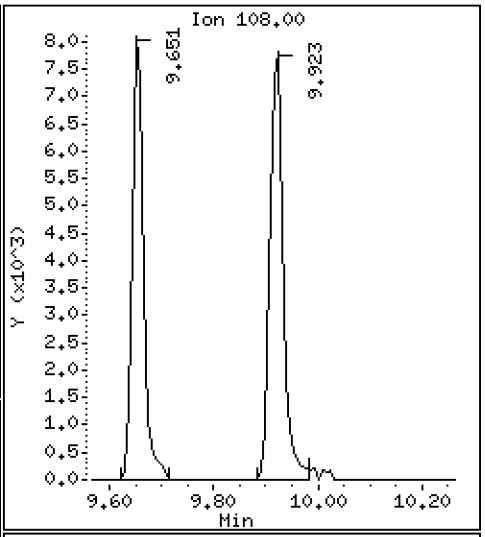
Column phase: ZB-5msi

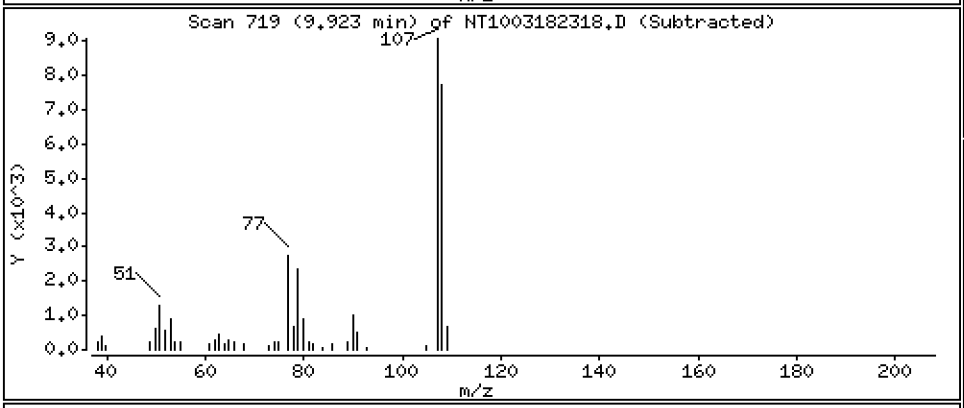
Column diameter: 0.25

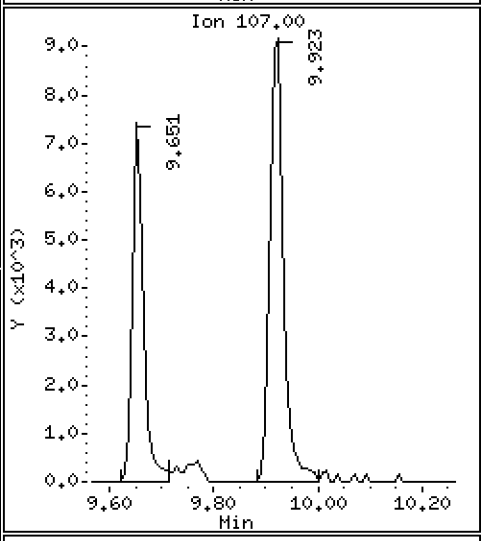
15 4-Methylphenol

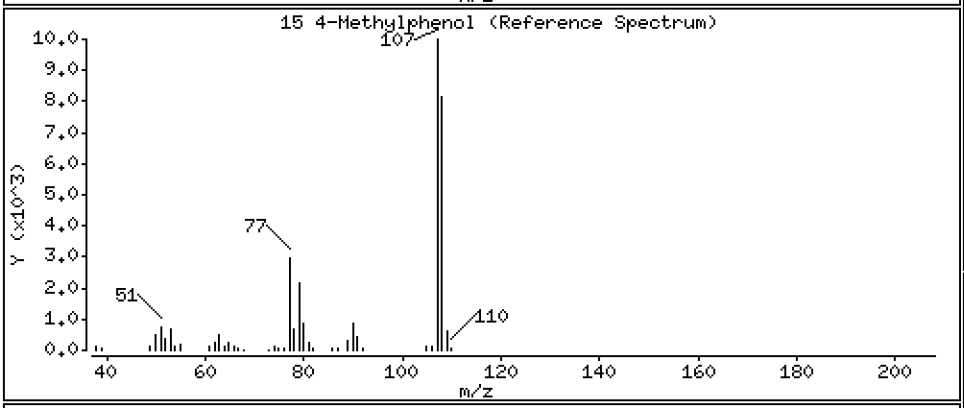
Concentration: 0.2079 ug/mL

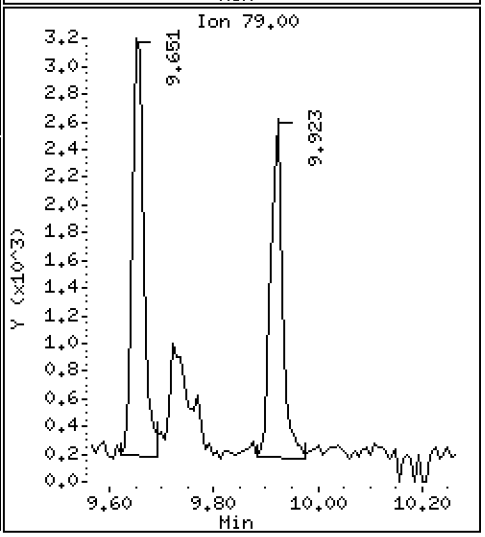


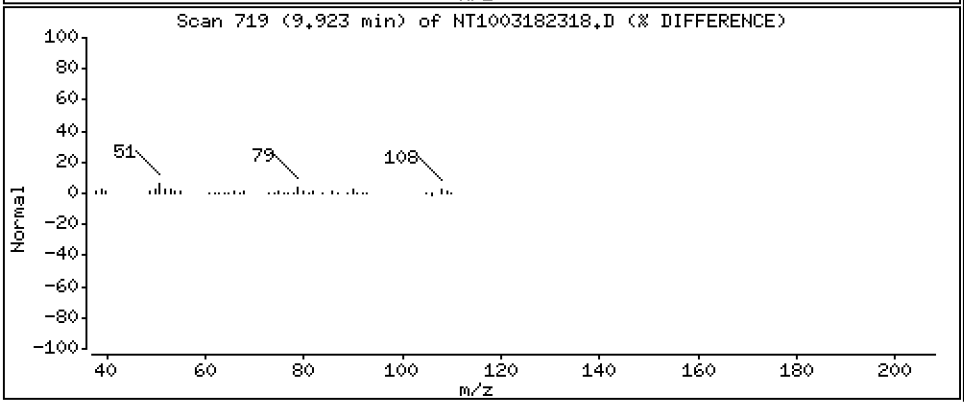












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

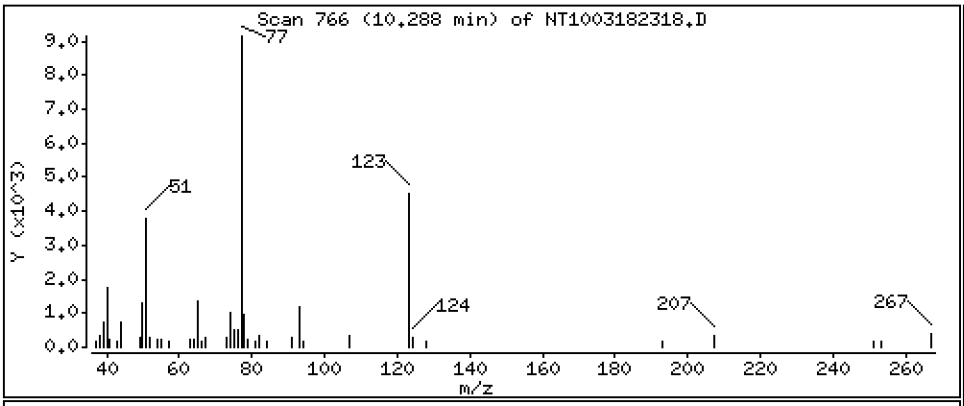
Operator: VTS

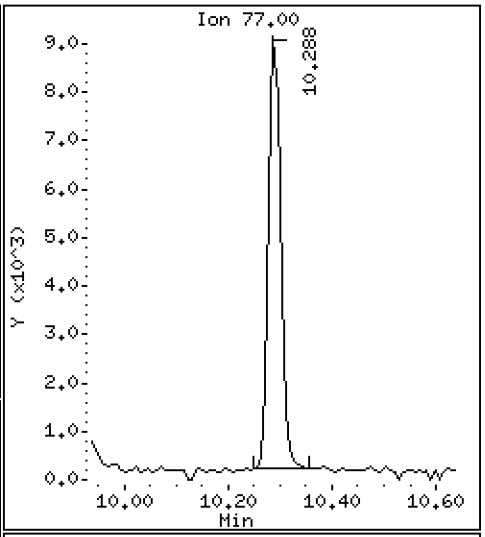
Column phase: ZB-5msi

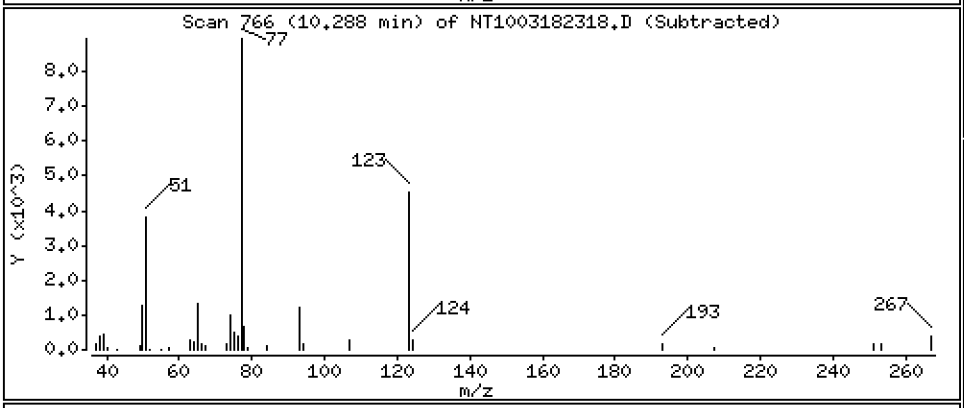
Column diameter: 0.25

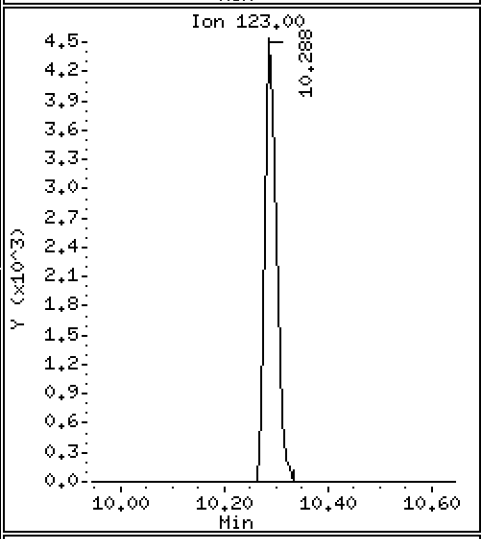
19 Nitrobenzene

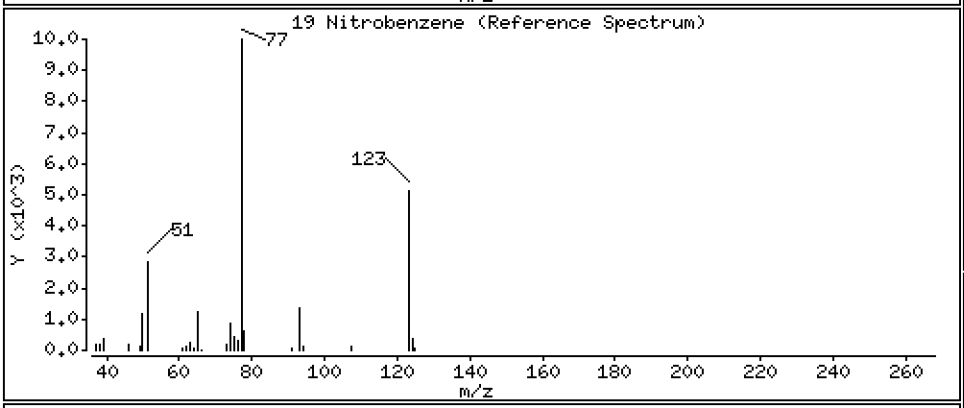
Concentration: 0.1922 ug/mL

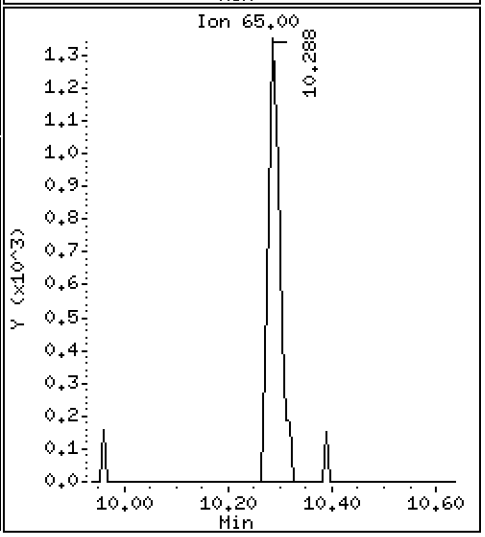


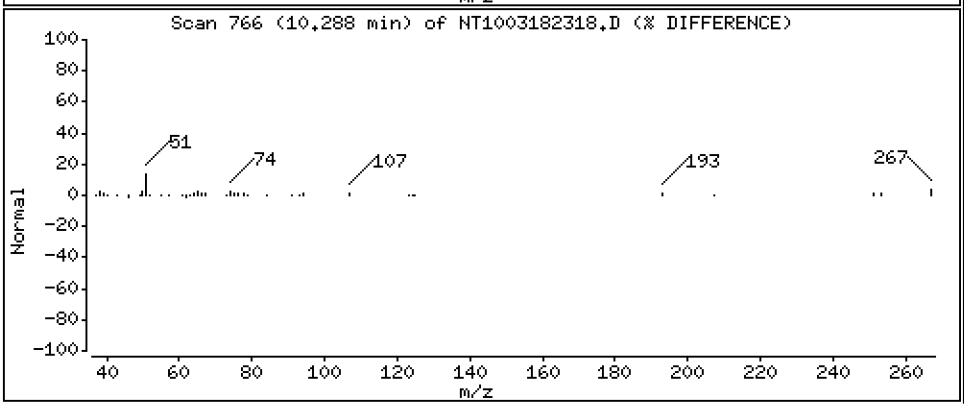












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

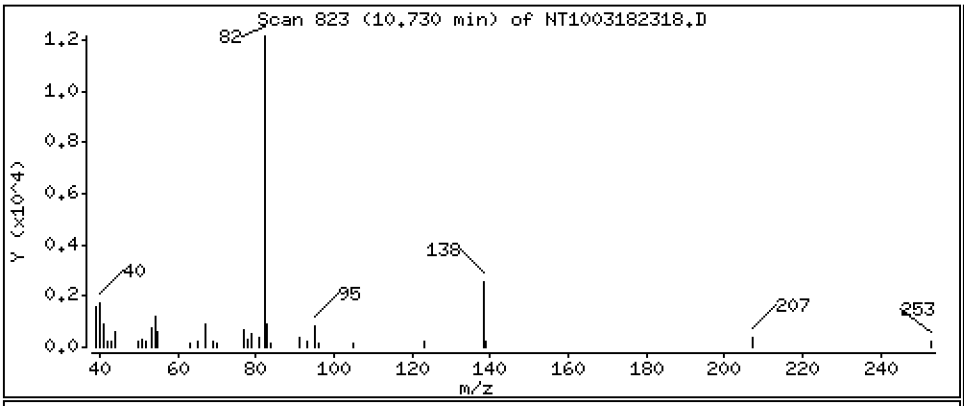
Operator: VTS

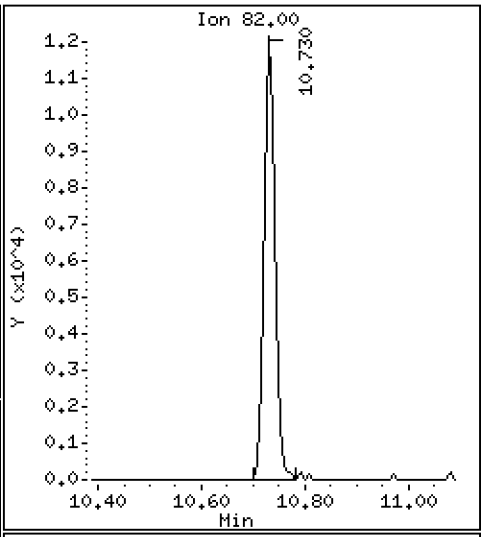
Column phase: ZB-5msi

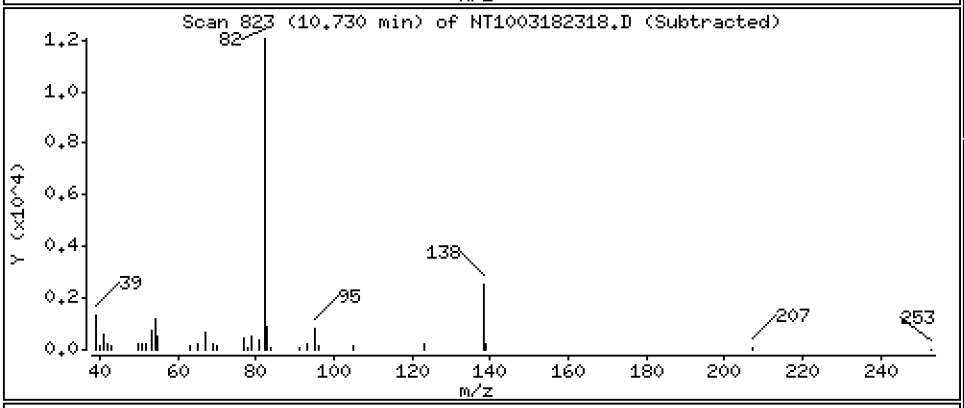
Column diameter: 0.25

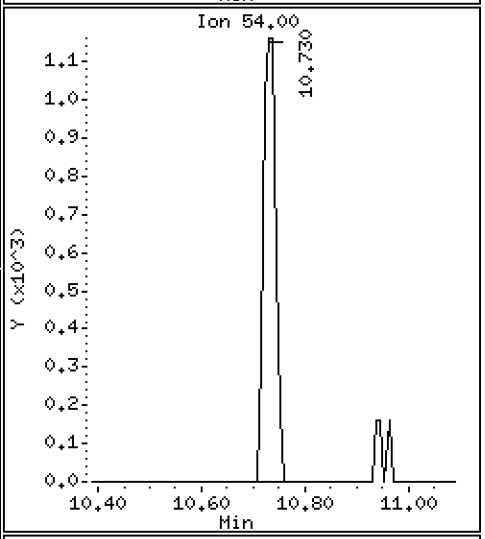
20 Isophorone

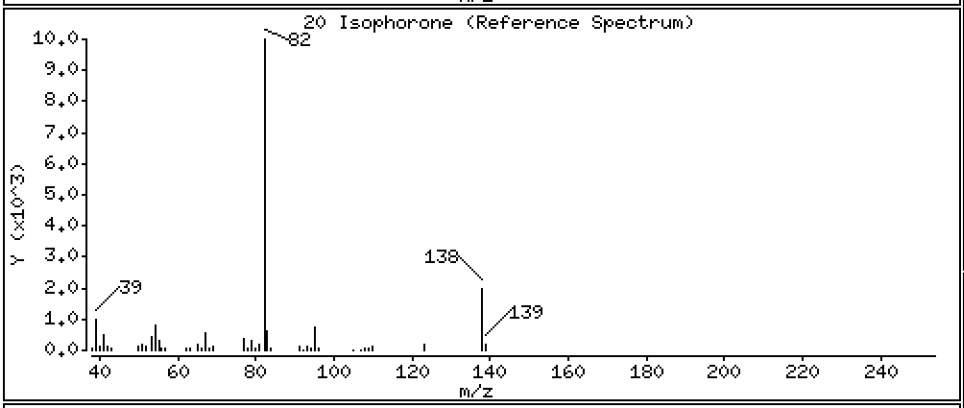
Concentration: 0.2011 ug/mL

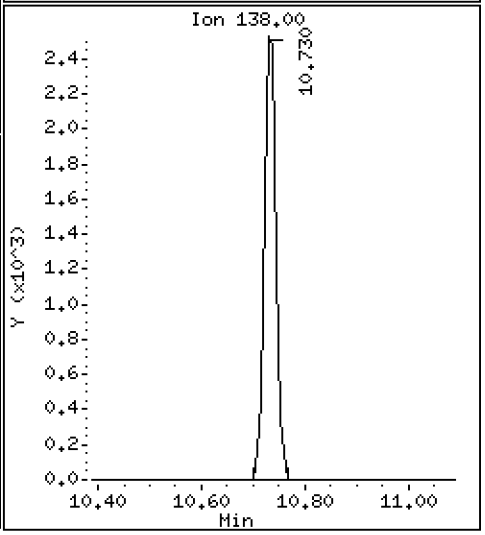


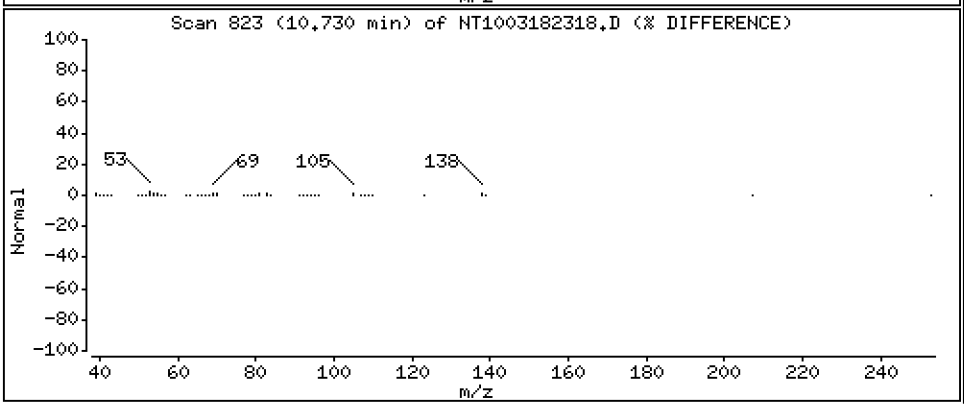












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

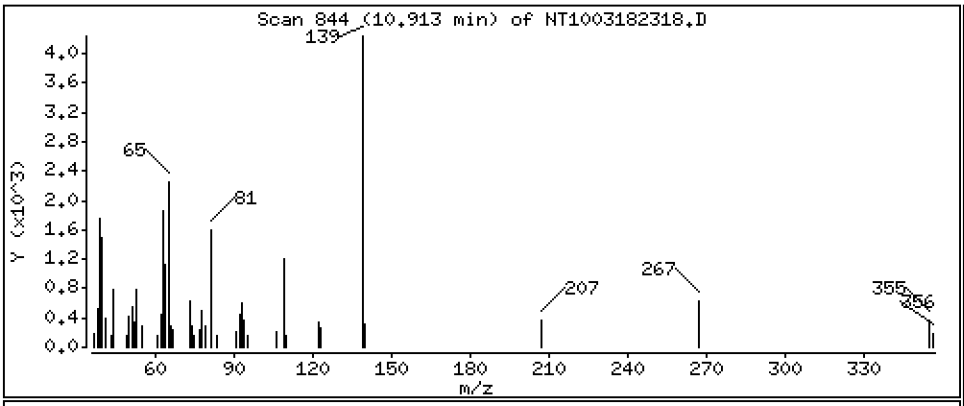
Operator: VTS

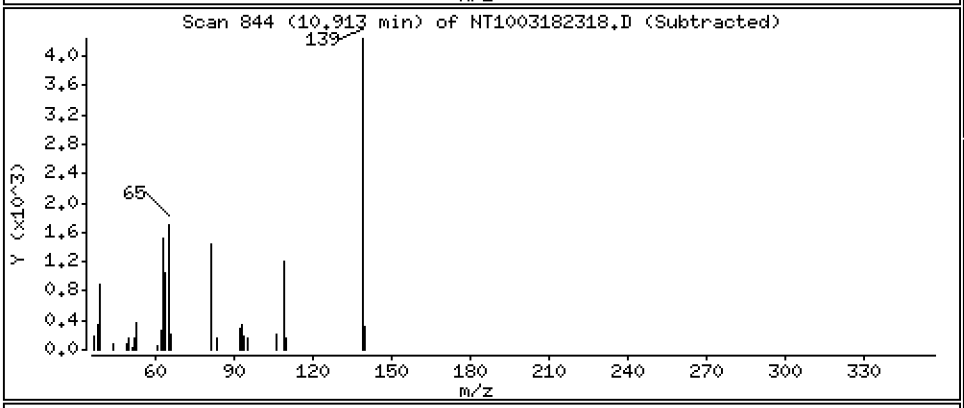
Column phase: ZB-5msi

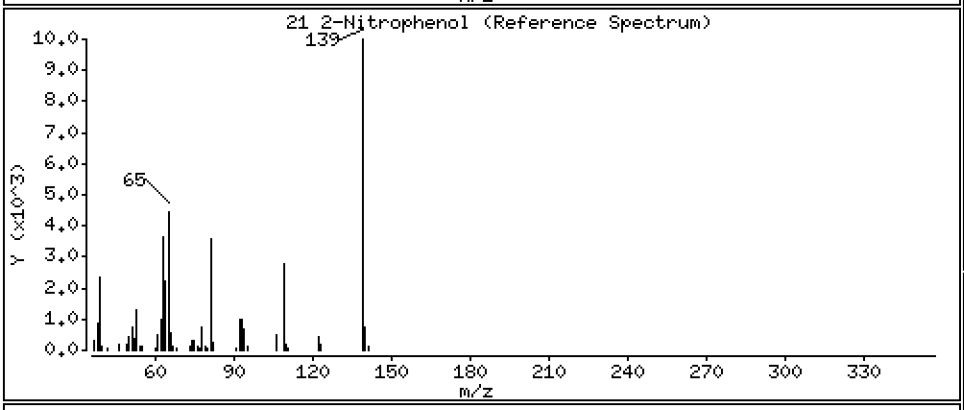
Column diameter: 0.25

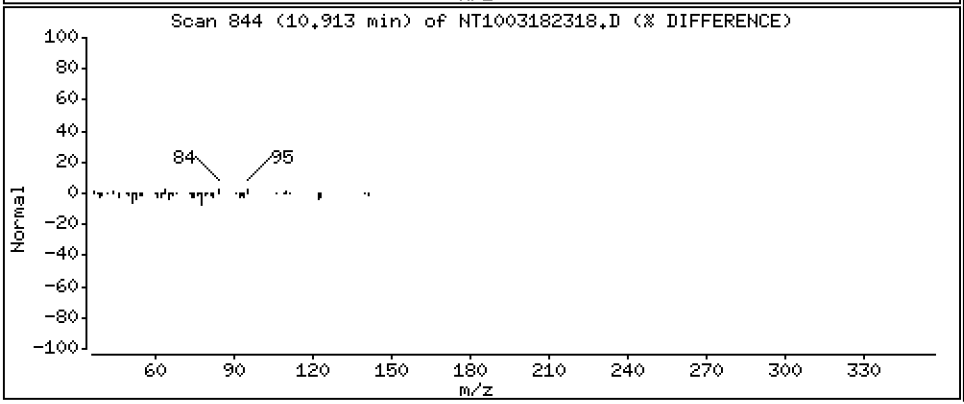
21 2-Nitrophenol

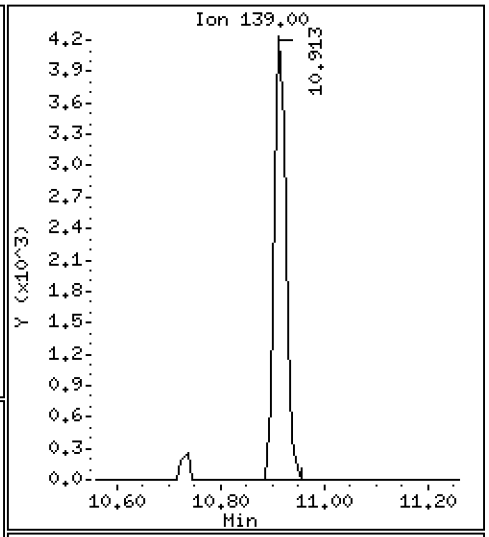
Concentration: 0.1902 ug/mL

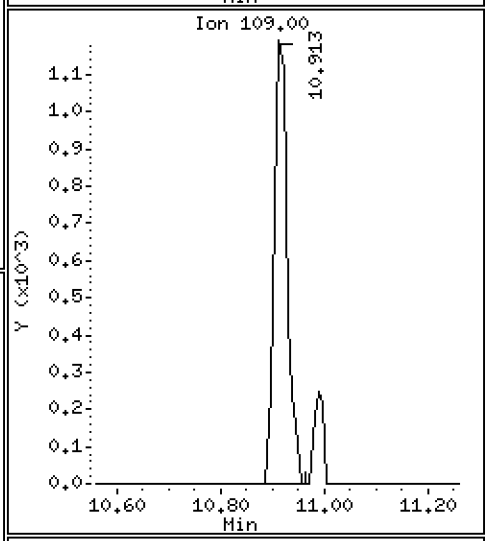


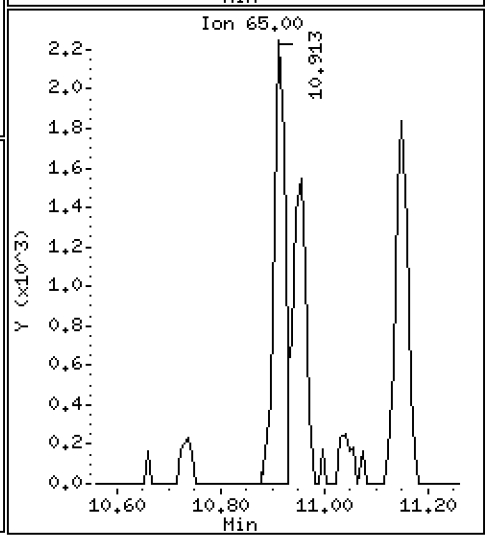












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

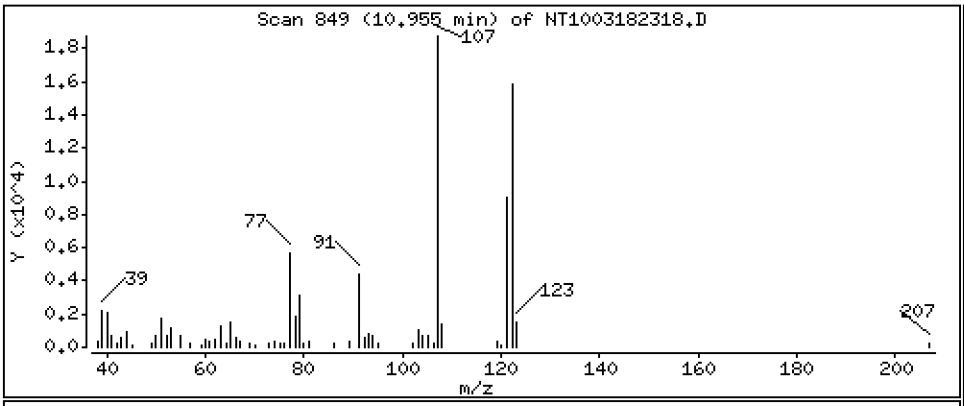
Operator: VTS

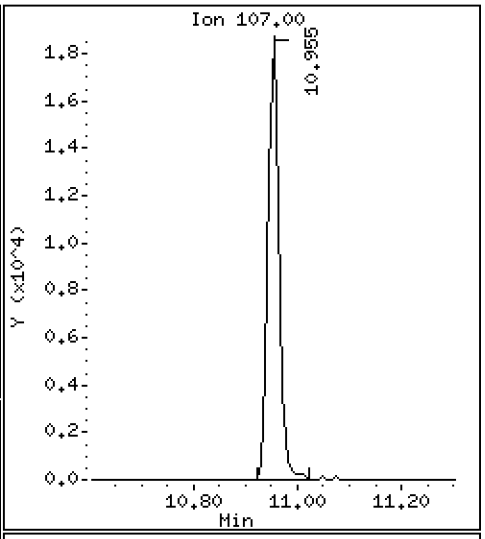
Column phase: ZB-5msi

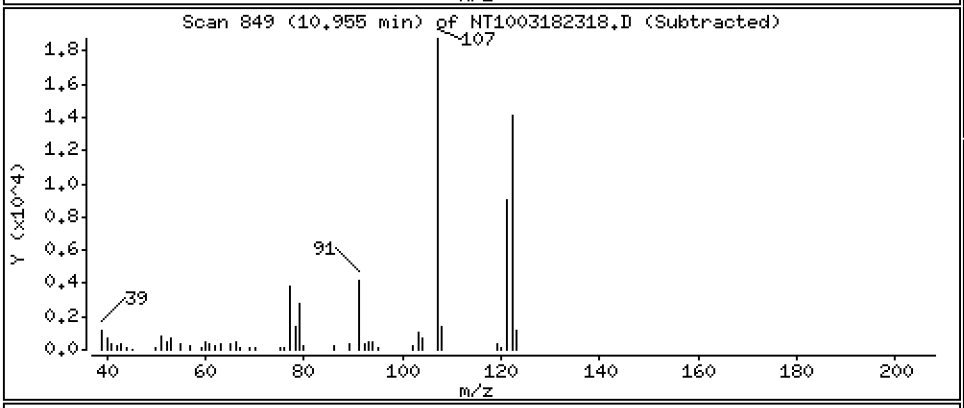
Column diameter: 0.25

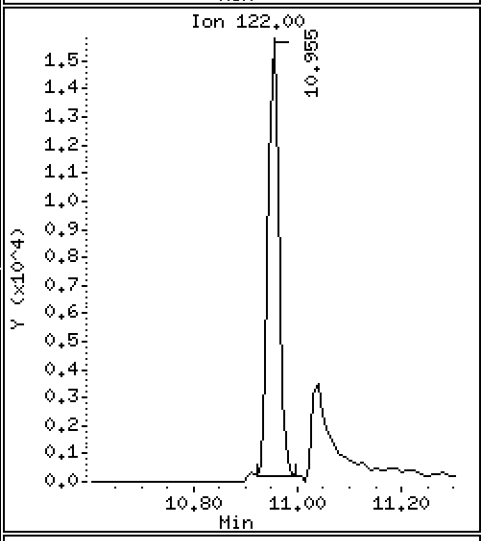
22 2,4-Dimethylphenol

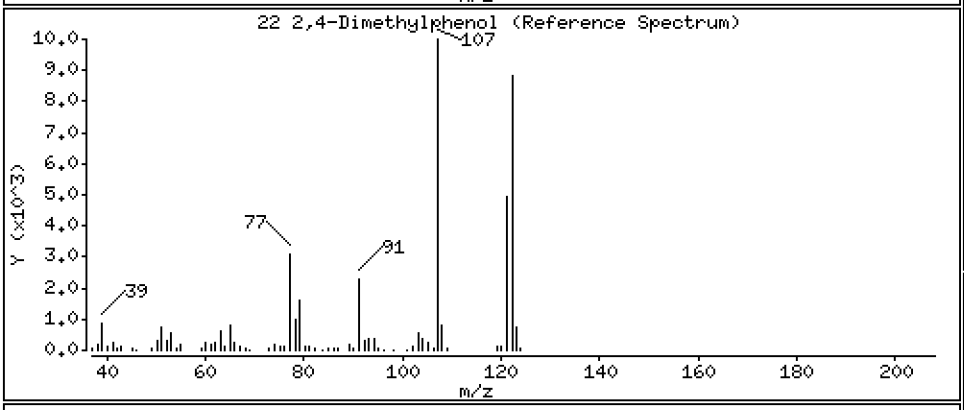
Concentration: 0.4158 ug/mL

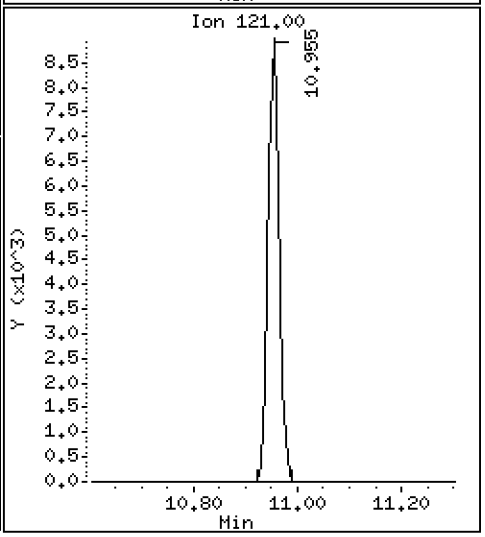


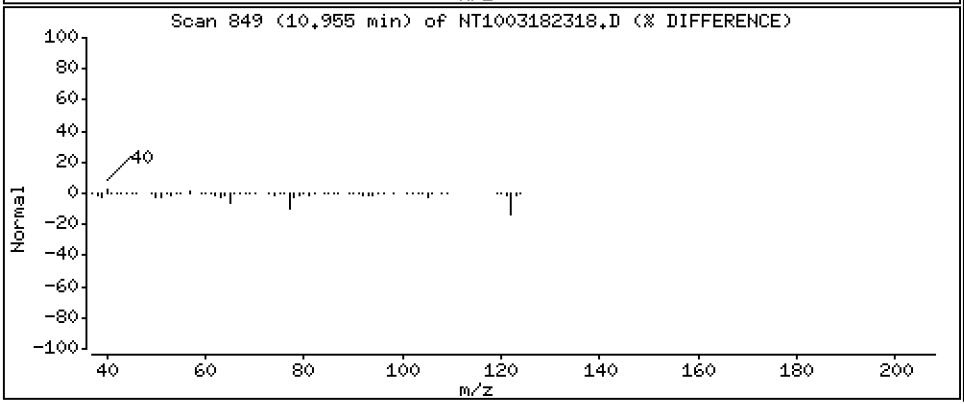












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

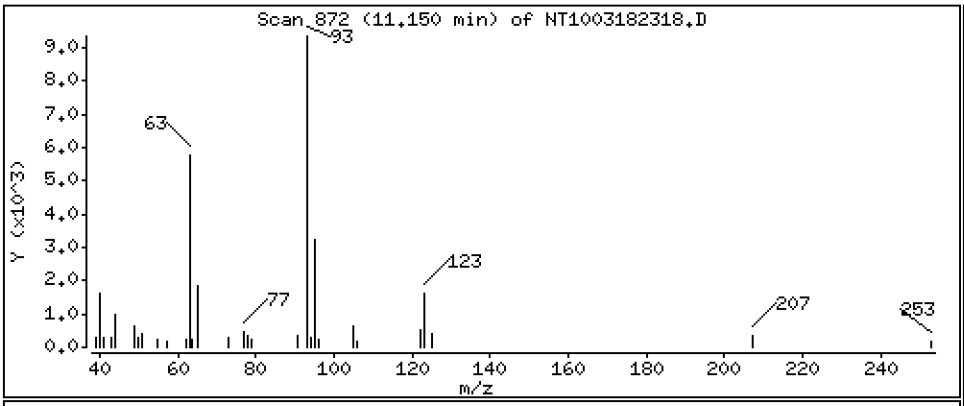
Operator: VTS

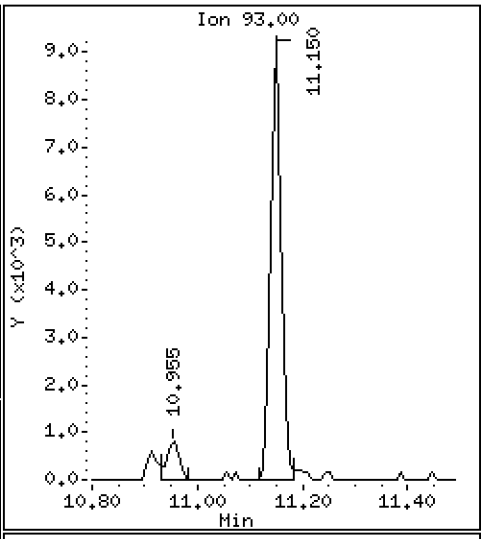
Column phase: ZB-5msi

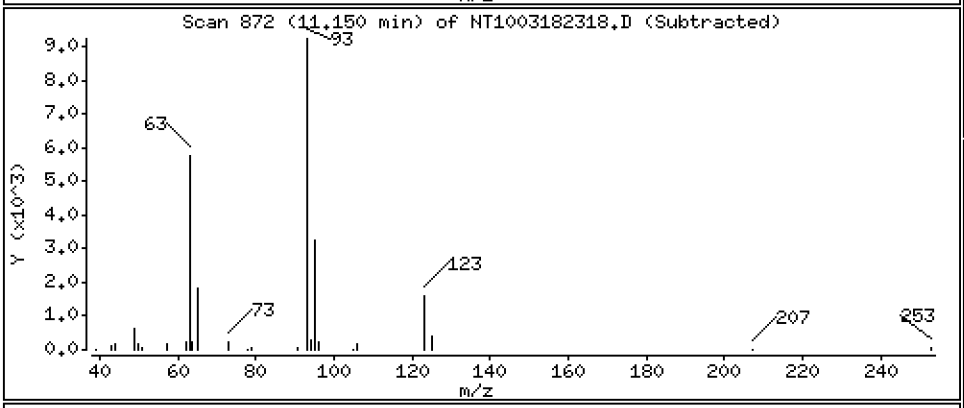
Column diameter: 0.25

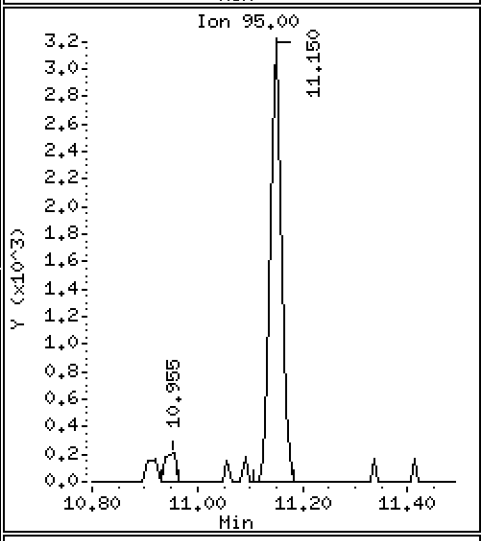
23 Bis(2-Chloroethoxy)methane

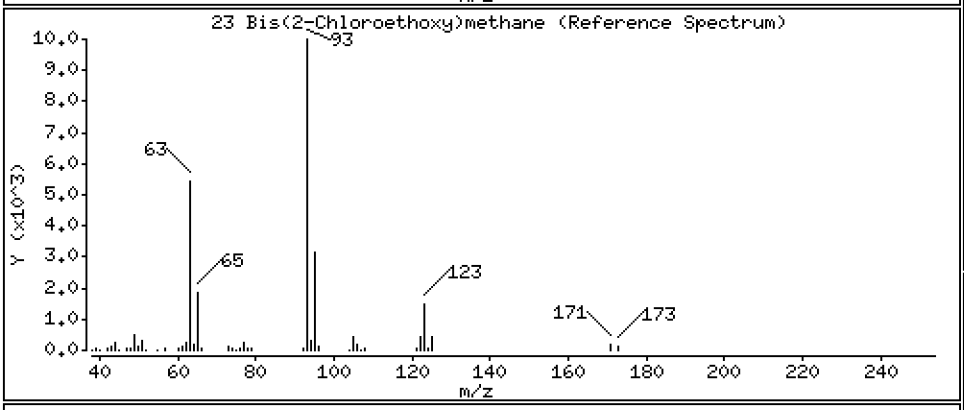
Concentration: 0.2127 ug/mL

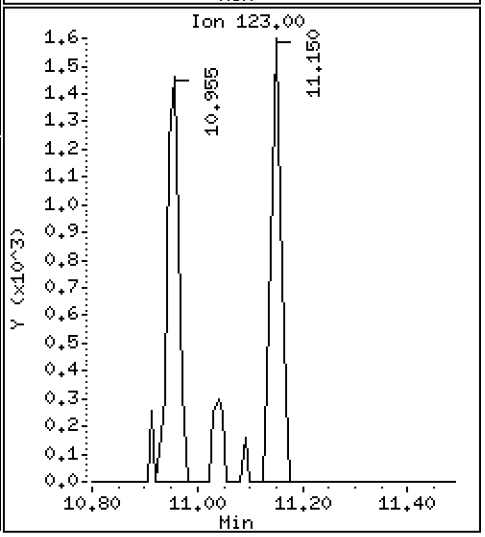


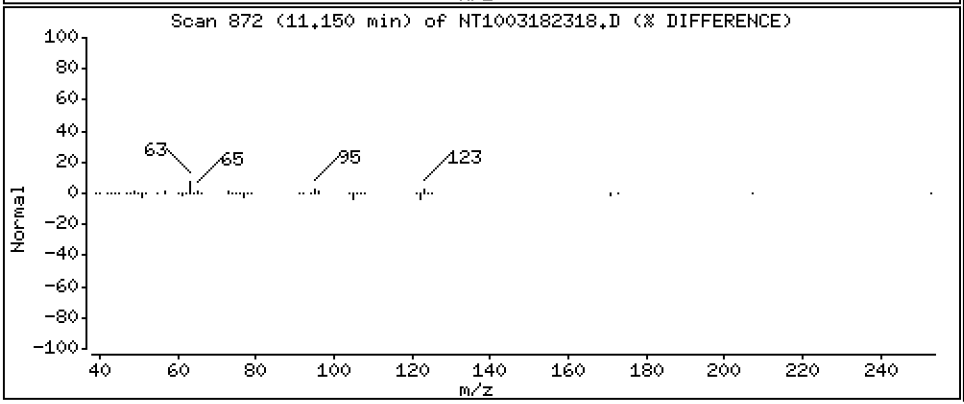












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

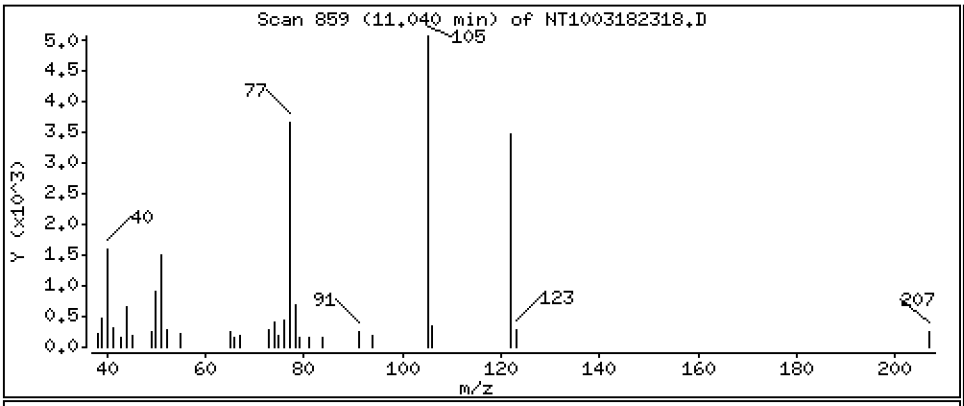
Operator: VTS

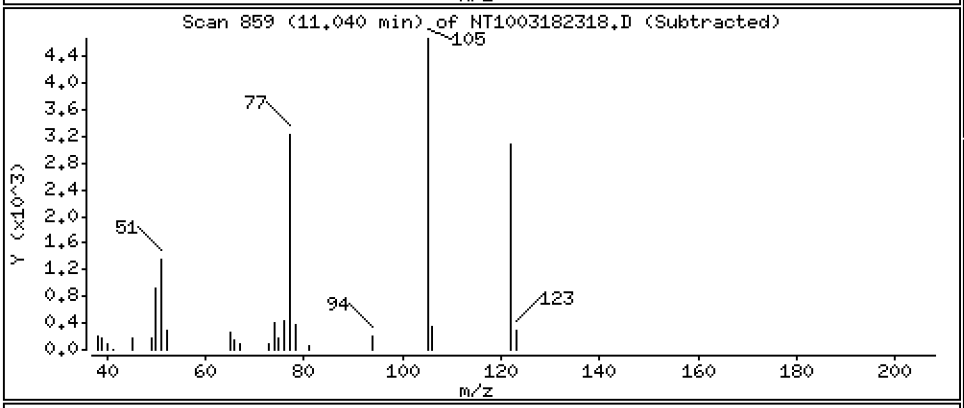
Column phase: ZB-5msi

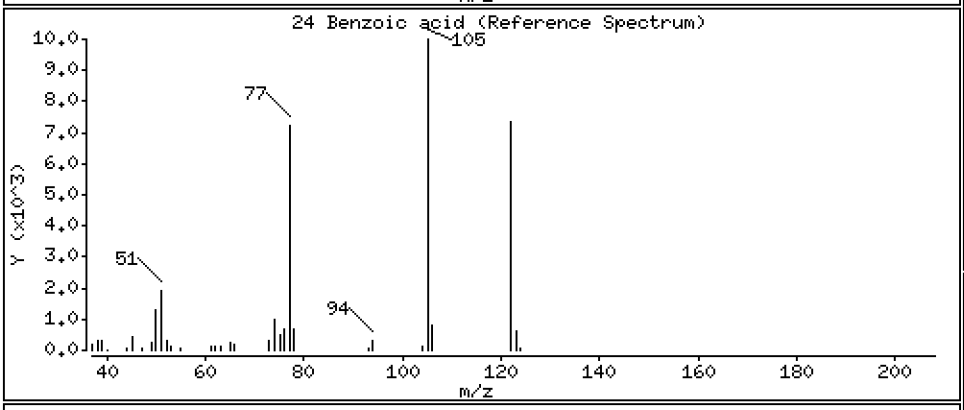
Column diameter: 0.25

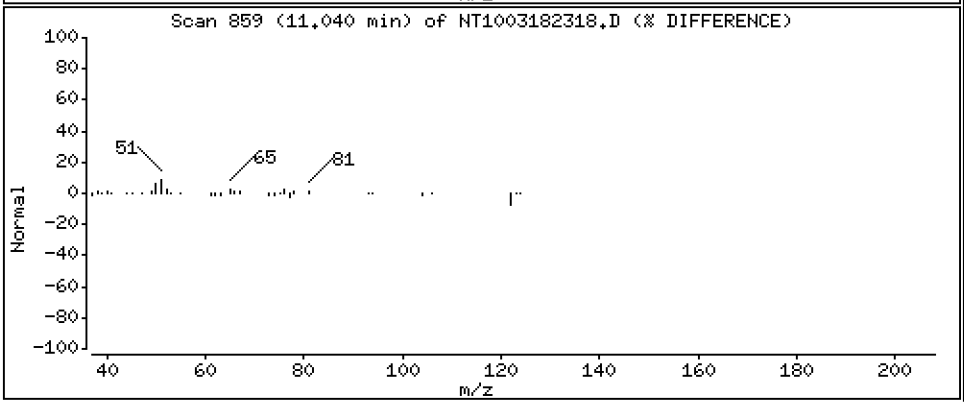
24 Benzoic acid

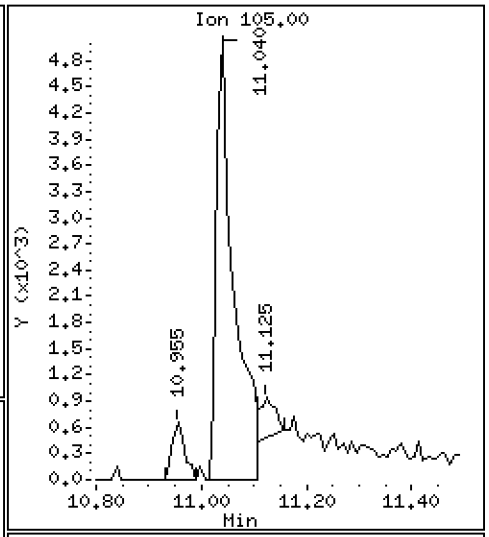
Concentration: 0.3232 ug/mL

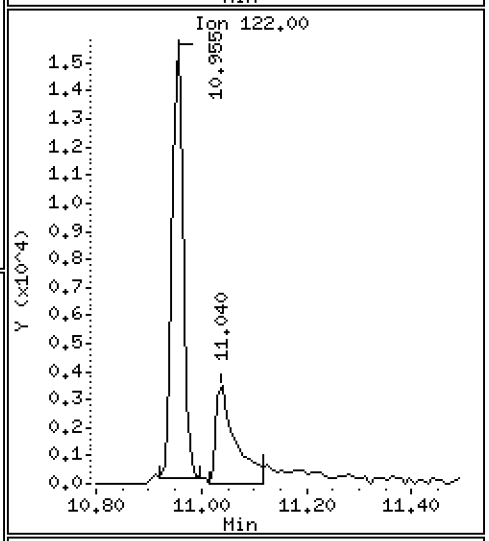


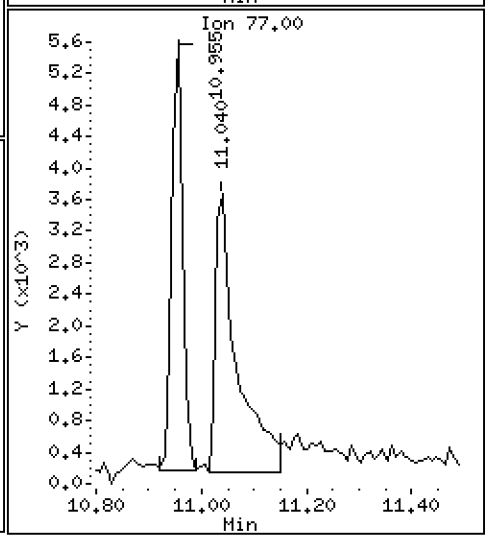












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

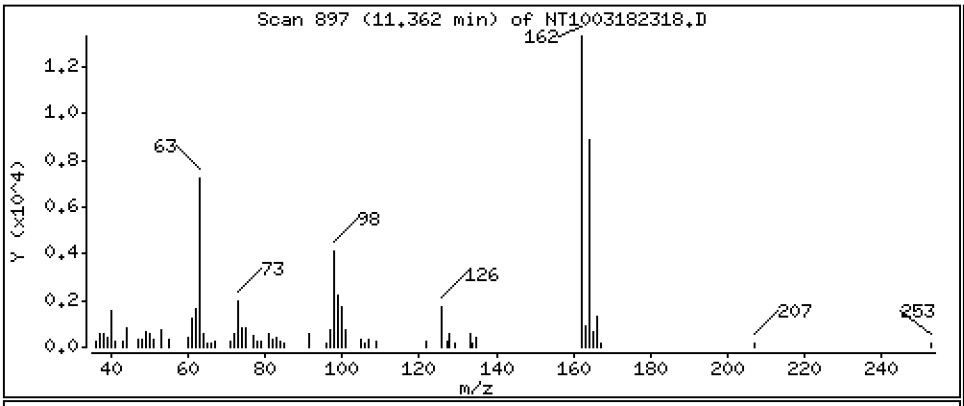
Operator: VTS

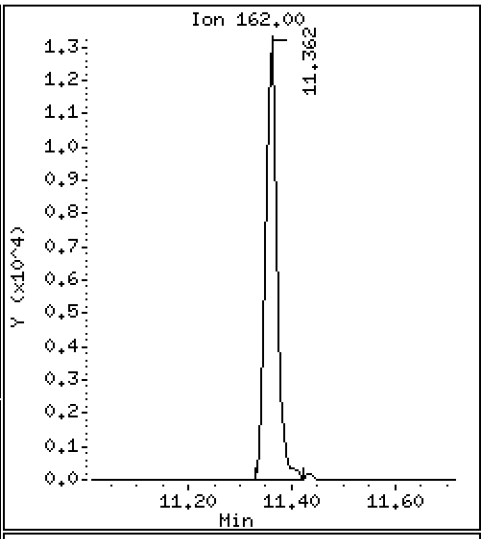
Column phase: ZB-5msi

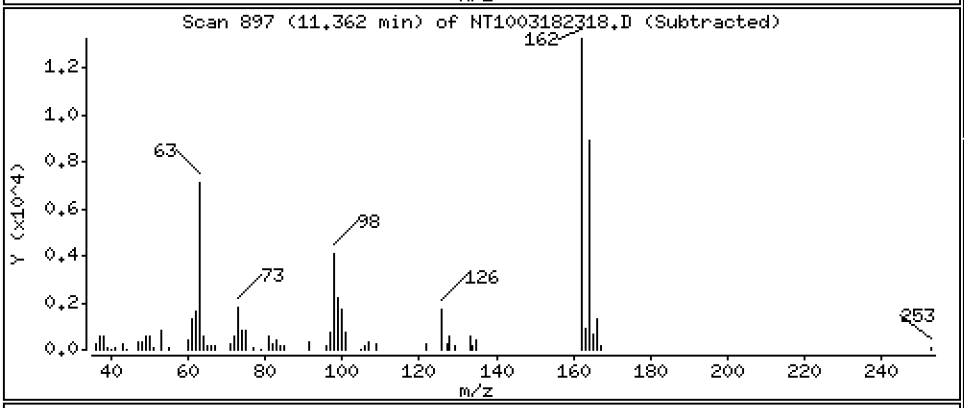
Column diameter: 0.25

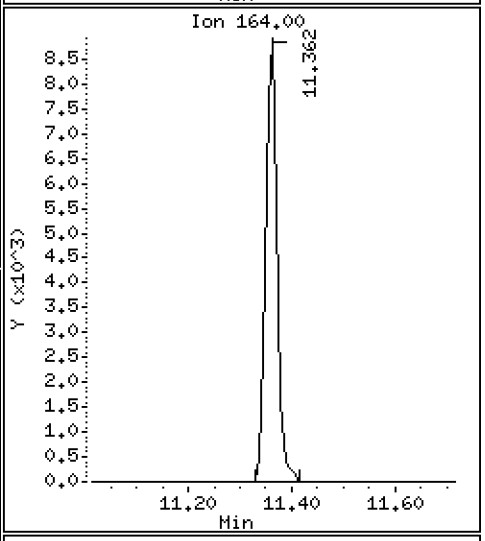
25 2,4-Dichlorophenol

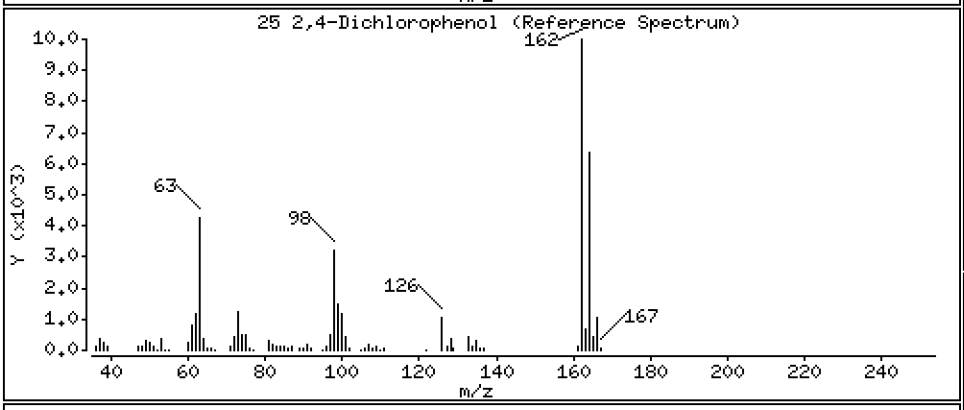
Concentration: 0.3982 ug/mL

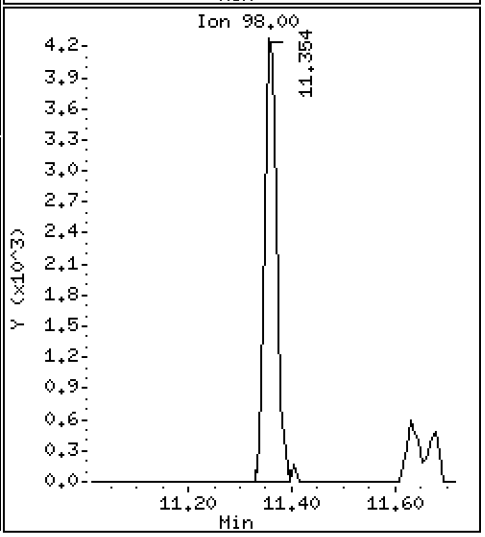


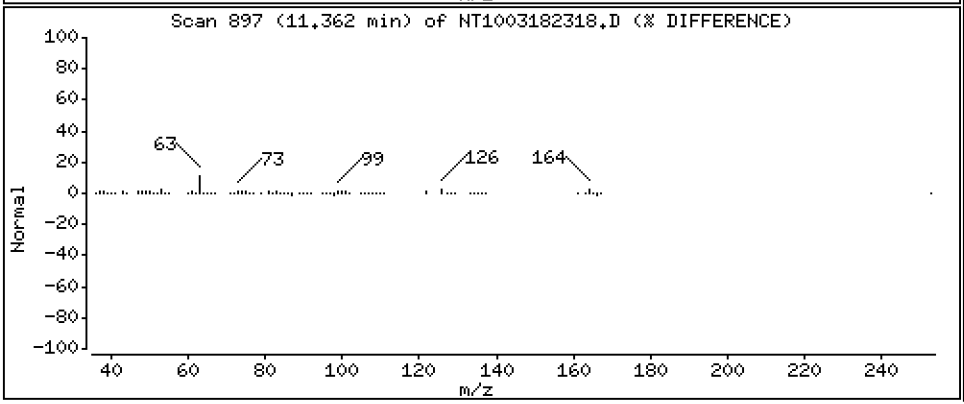












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

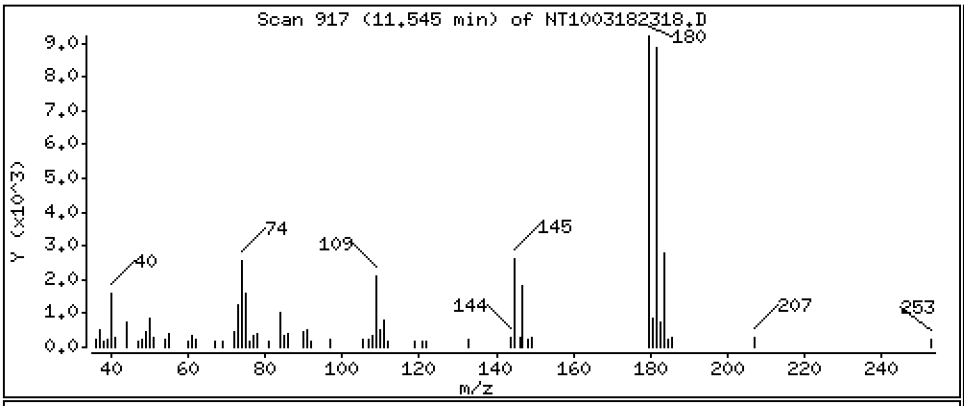
Operator: VTS

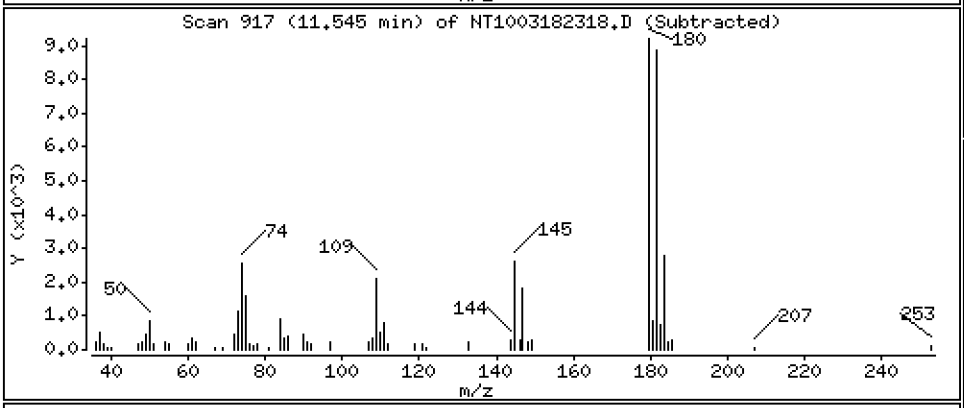
Column phase: ZB-5msi

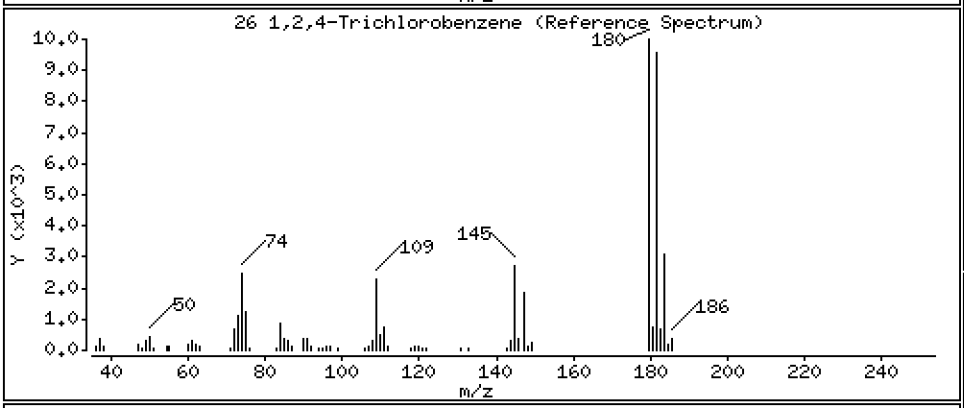
Column diameter: 0.25

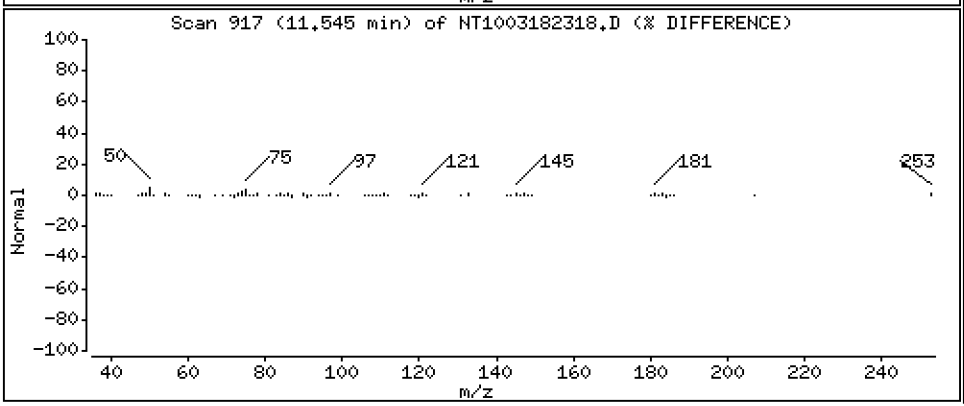
26 1,2,4-Trichlorobenzene

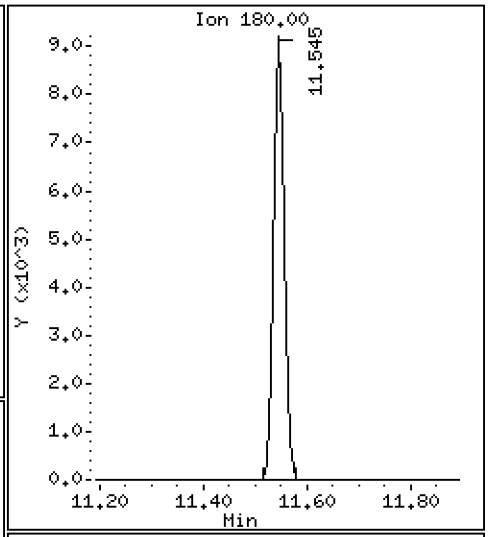
Concentration: 0.2182 ug/mL

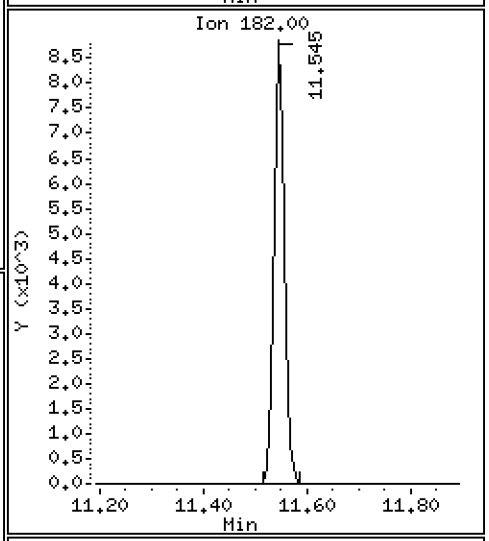


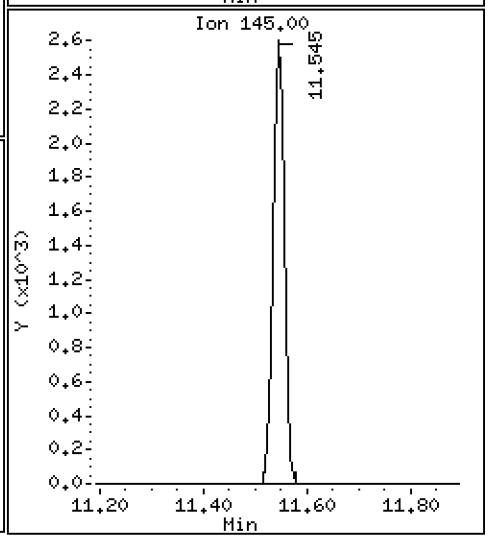












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

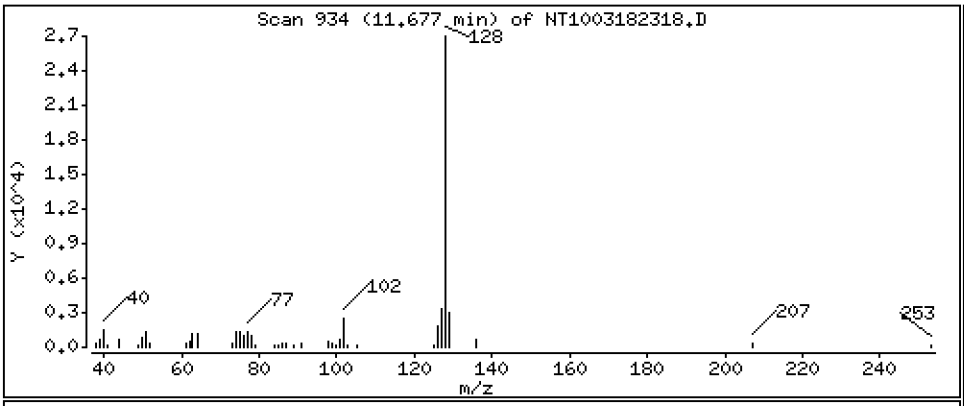
Operator: VTS

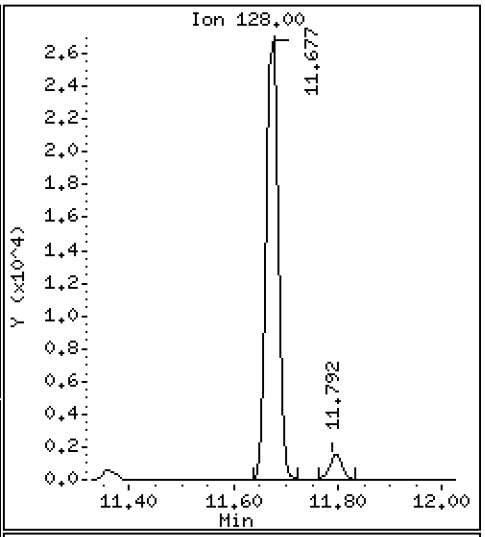
Column phase: ZB-5msi

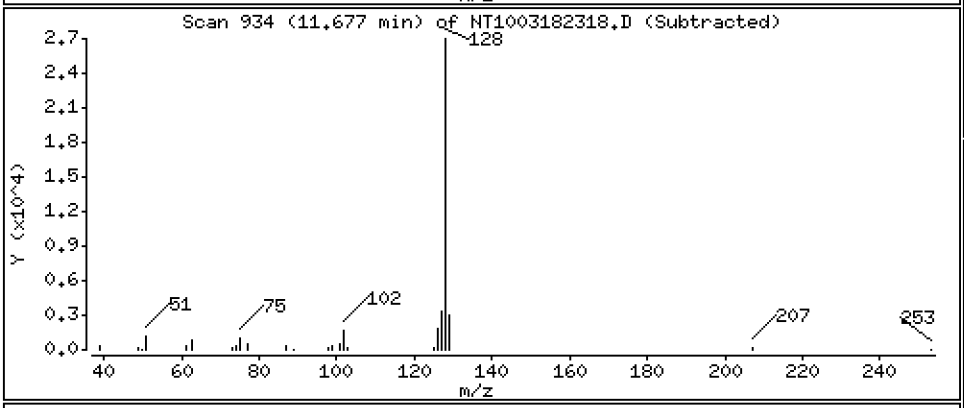
Column diameter: 0.25

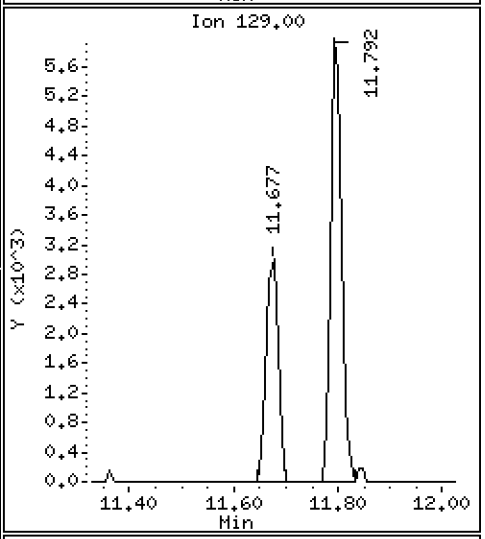
28 Naphthalene

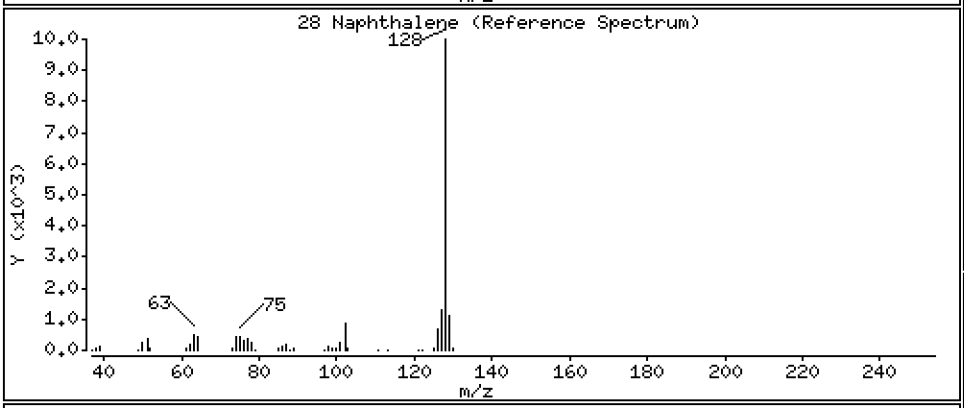
Concentration: 0.2102 ug/mL

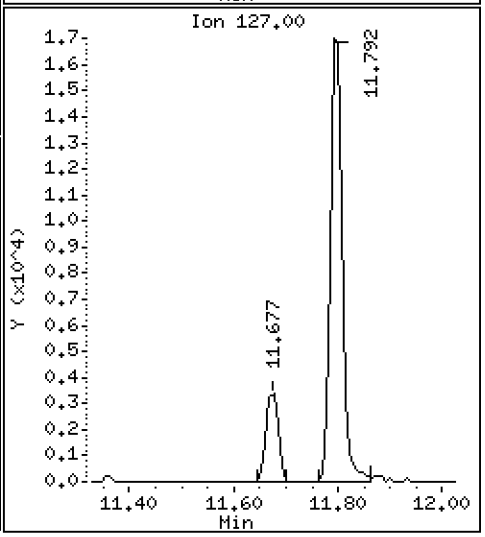


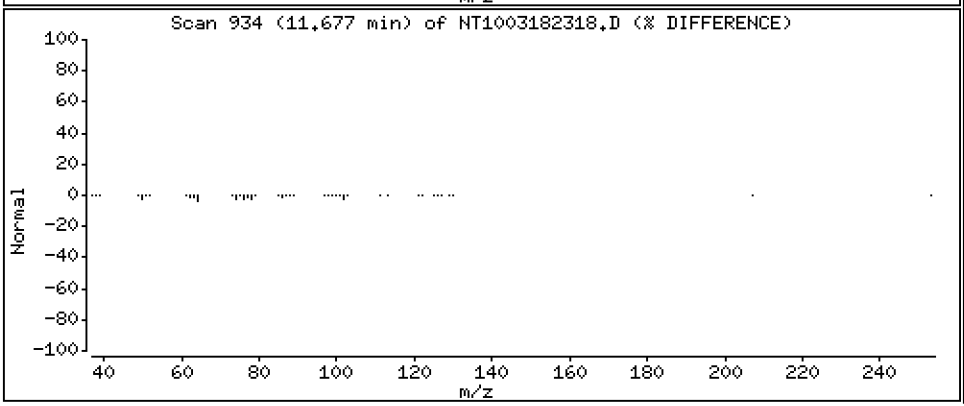












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

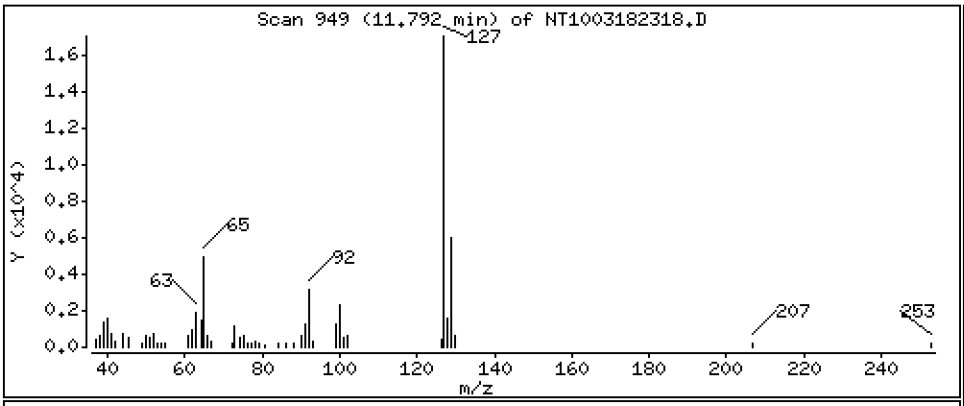
Operator: VTS

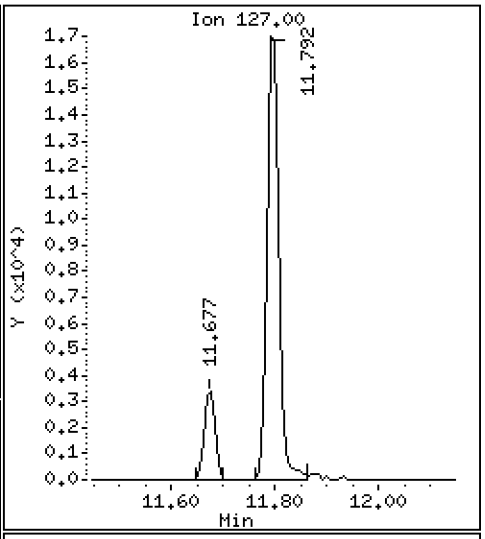
Column phase: ZB-5msi

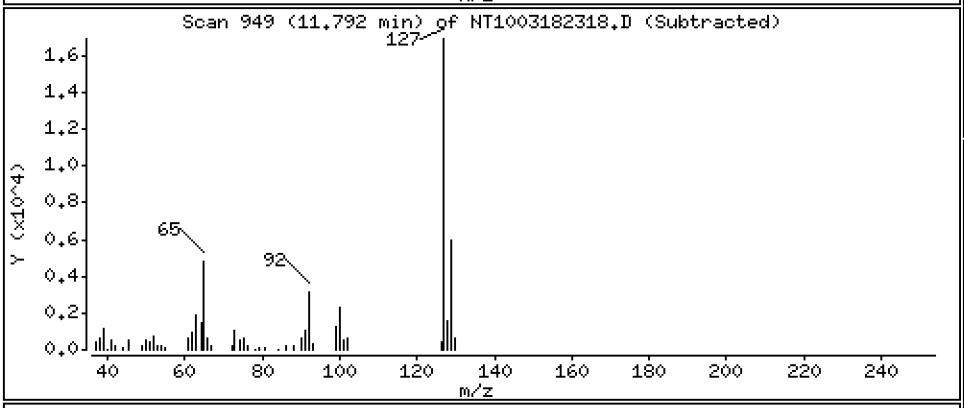
Column diameter: 0.25

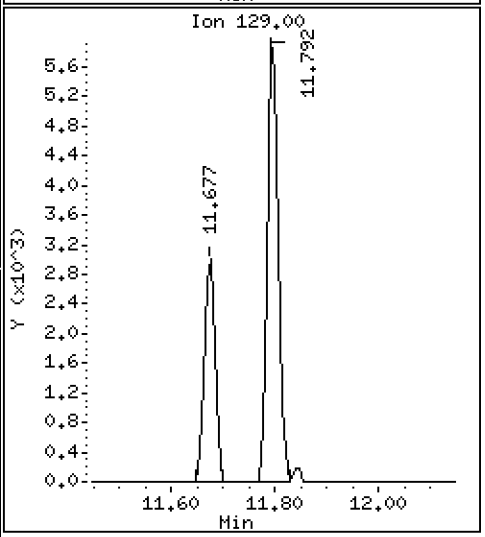
29 4-Chloroaniline

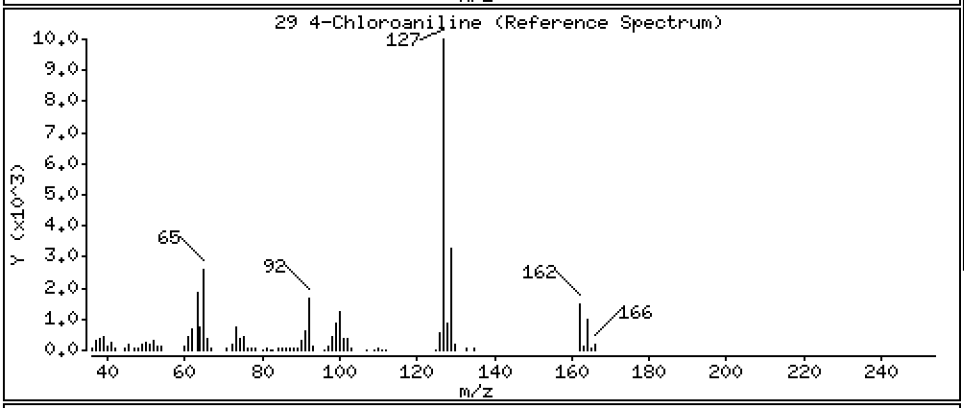
Concentration: 0.3768 ug/mL

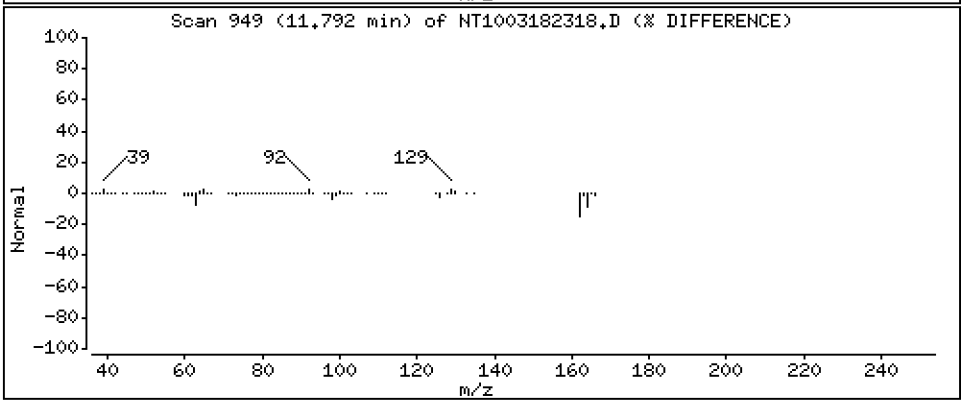












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

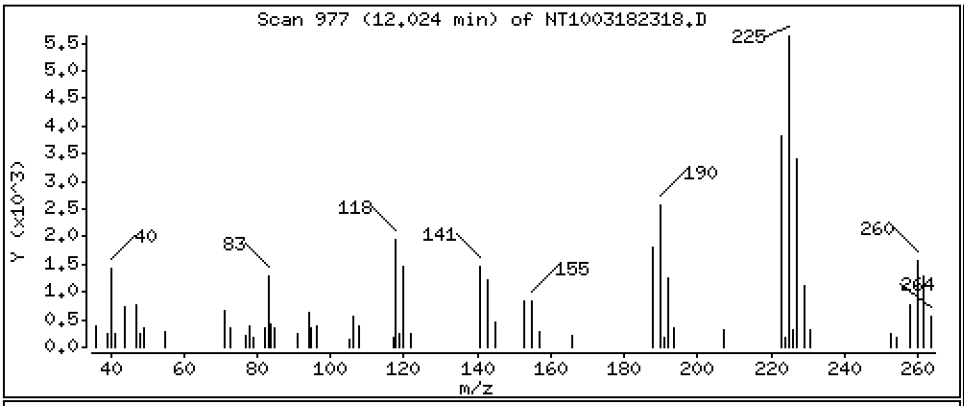
Operator: VTS

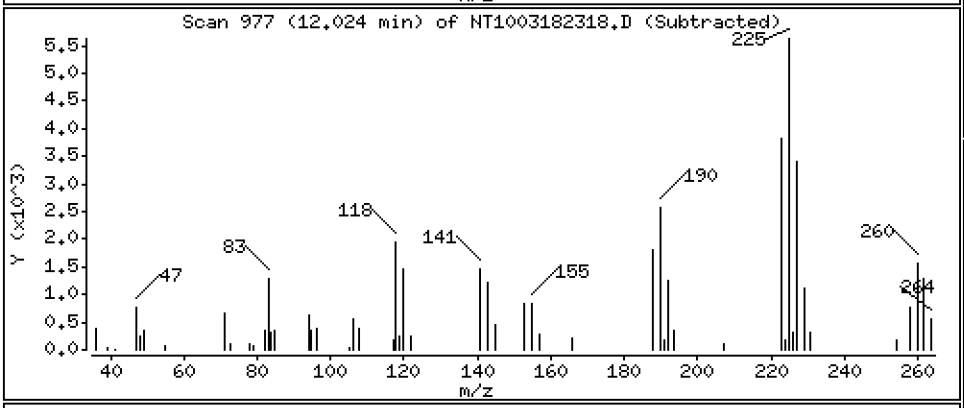
Column phase: ZB-5msi

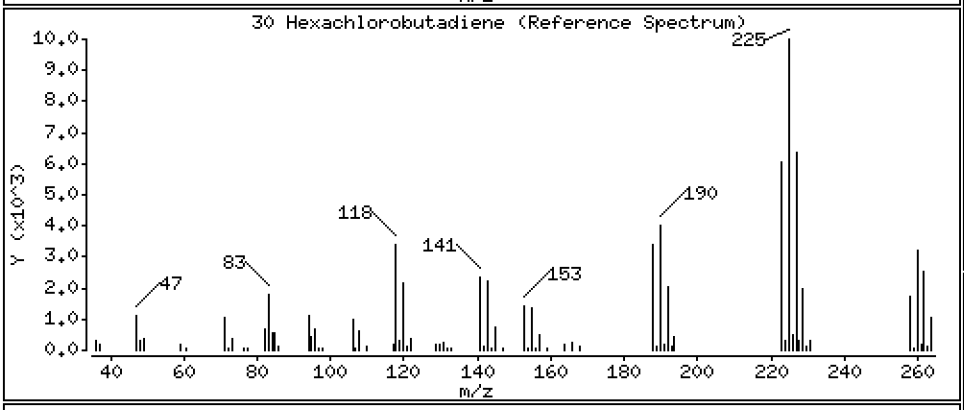
Column diameter: 0.25

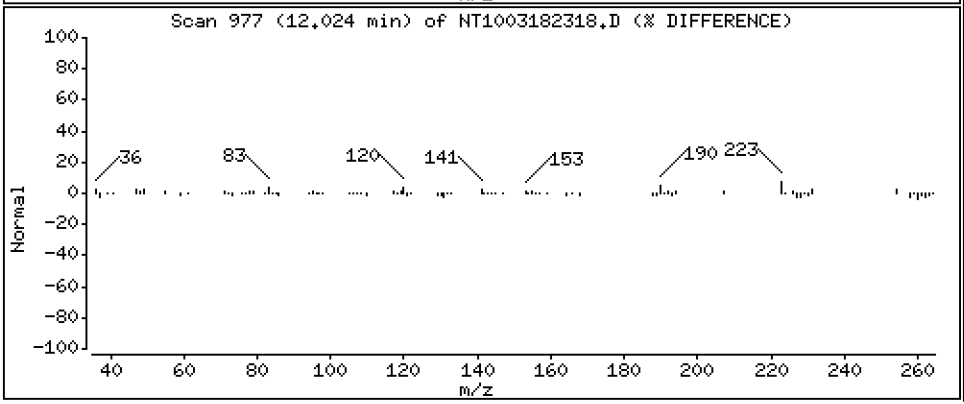
30 Hexachlorobutadiene

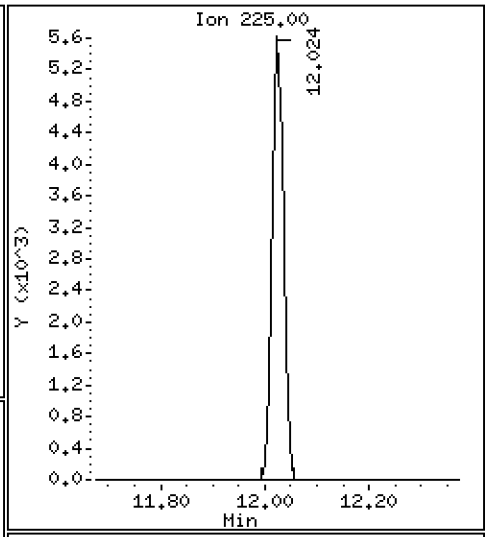
Concentration: 0.2180 ug/mL

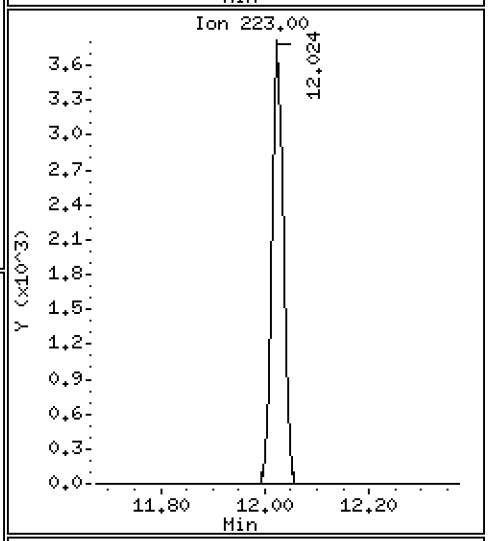


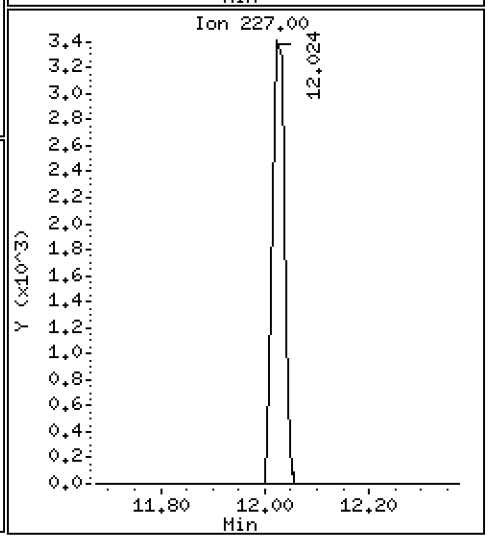












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

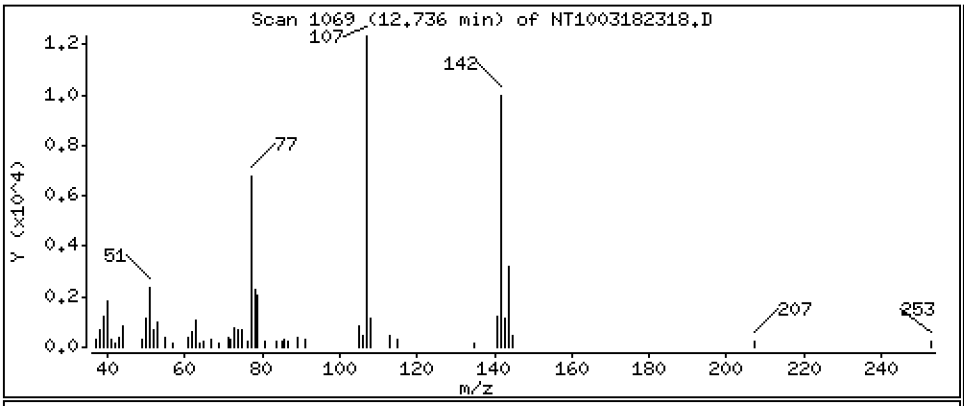
Operator: VTS

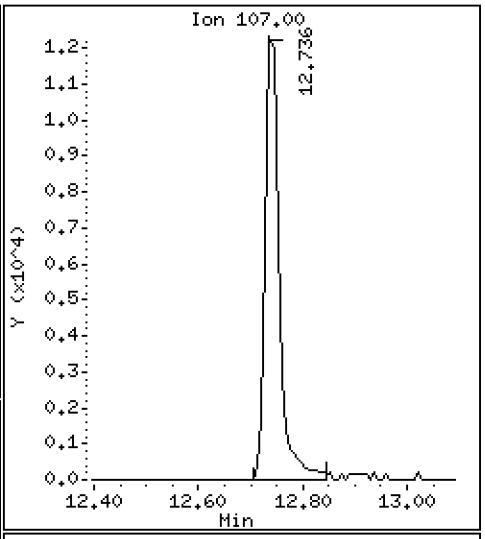
Column phase: ZB-5msi

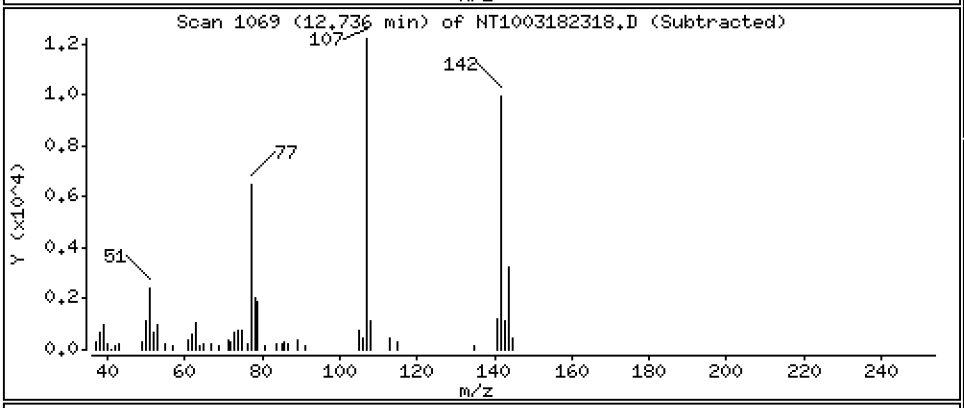
Column diameter: 0.25

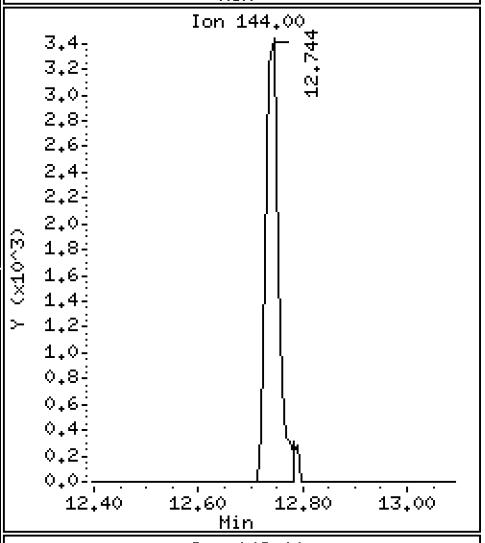
31 4-Chloro-3-methylphenol

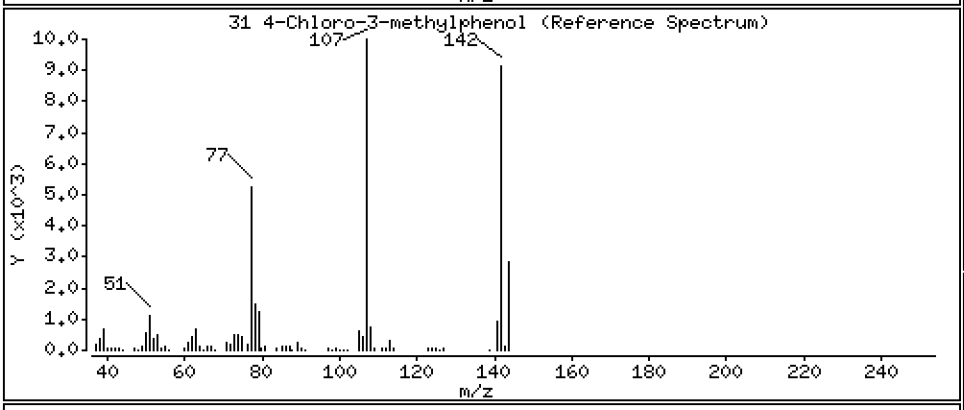
Concentration: 0.3874 ug/mL

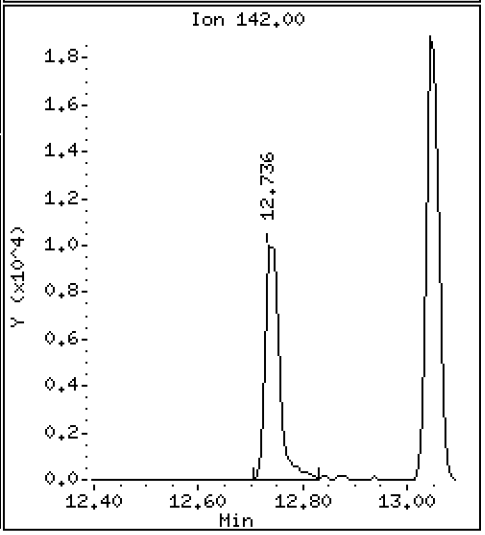


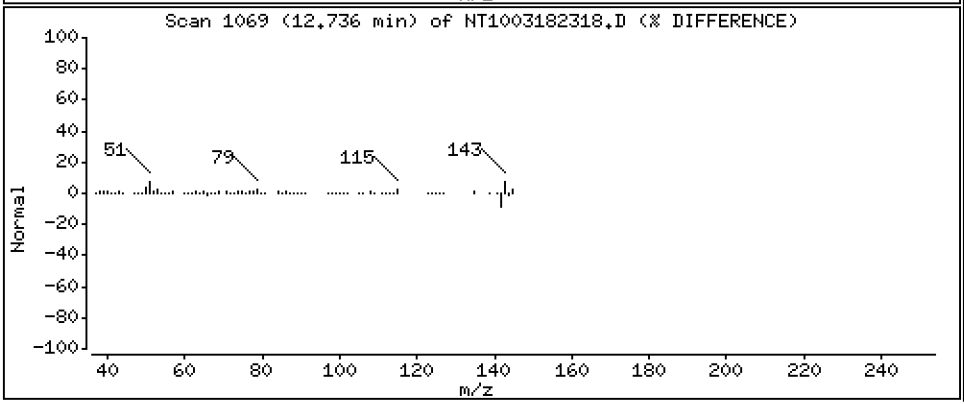












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

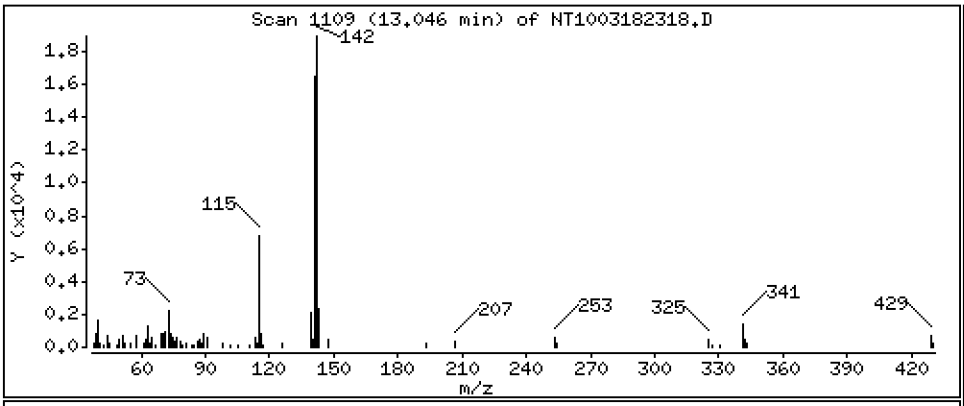
Operator: VTS

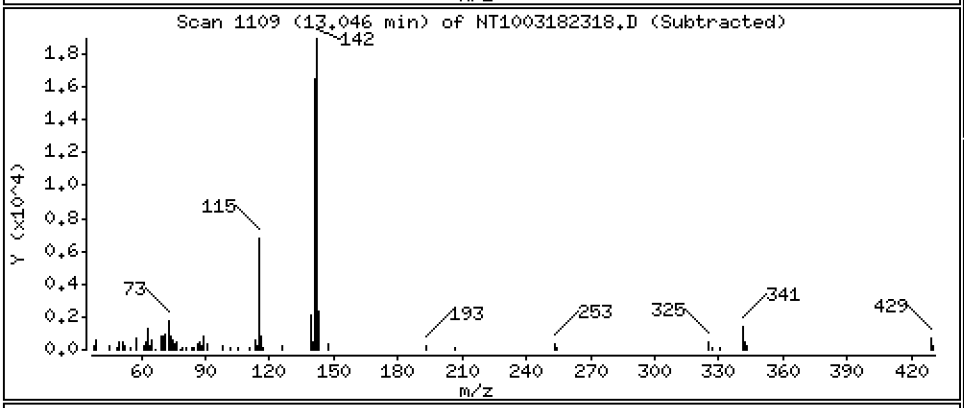
Column phase: ZB-5msi

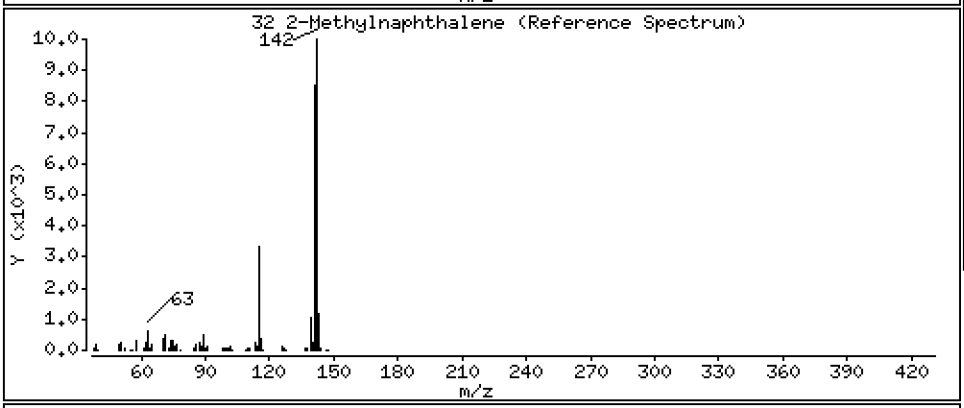
Column diameter: 0.25

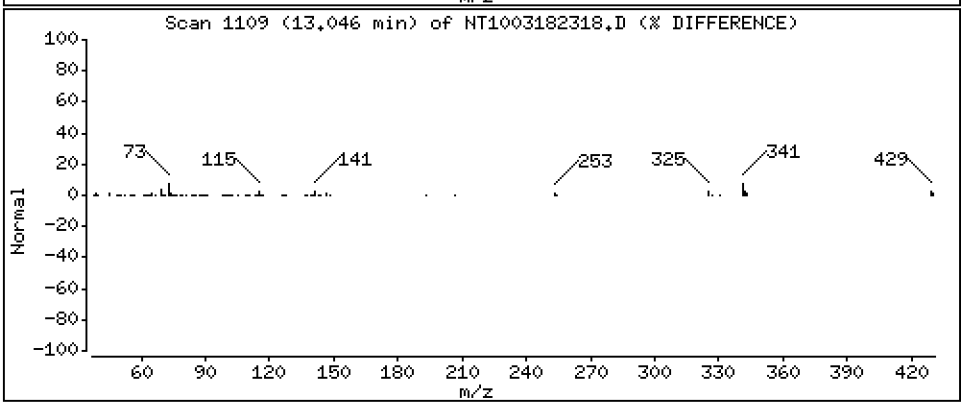
32 2-Methylnaphthalene

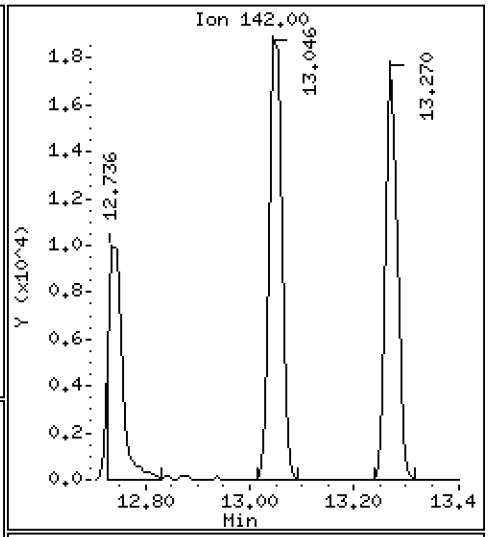
Concentration: 0.2143 ug/mL

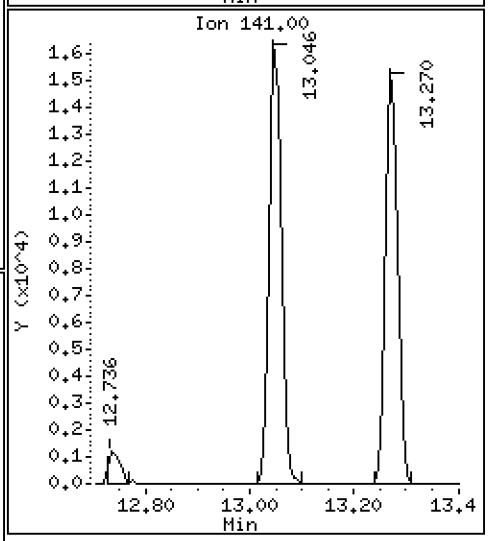












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

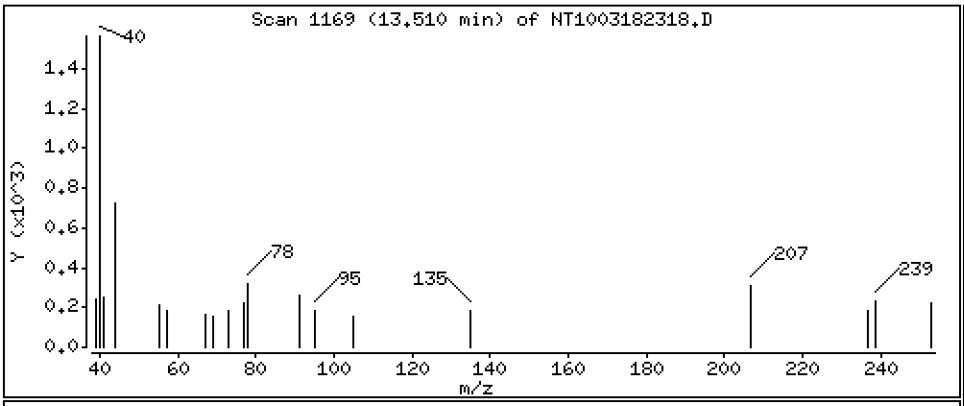
Operator: VTS

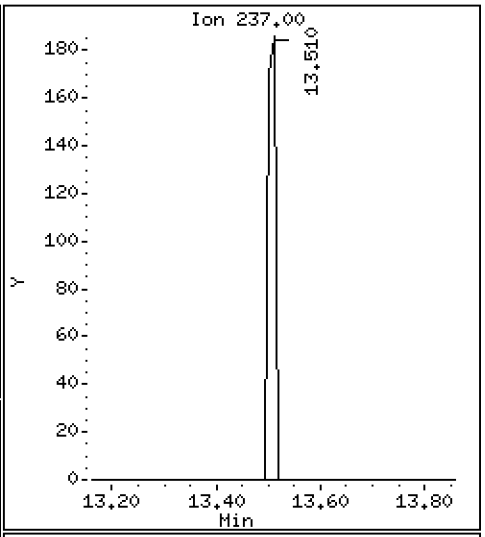
Column phase: ZB-5msi

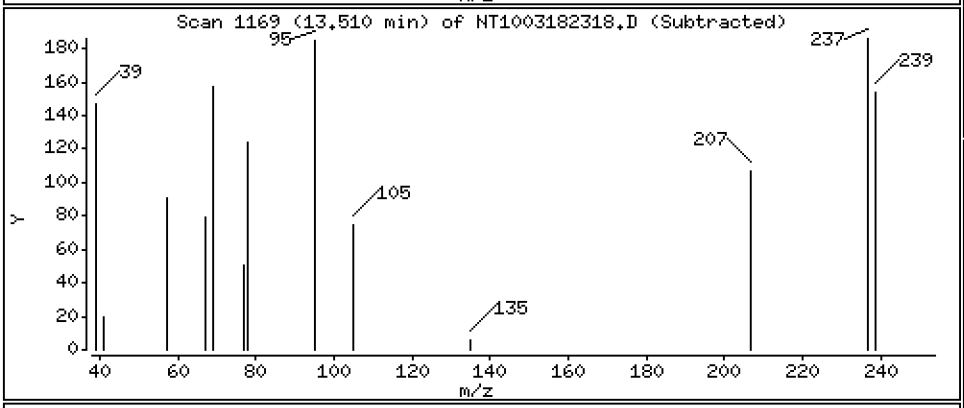
Column diameter: 0.25

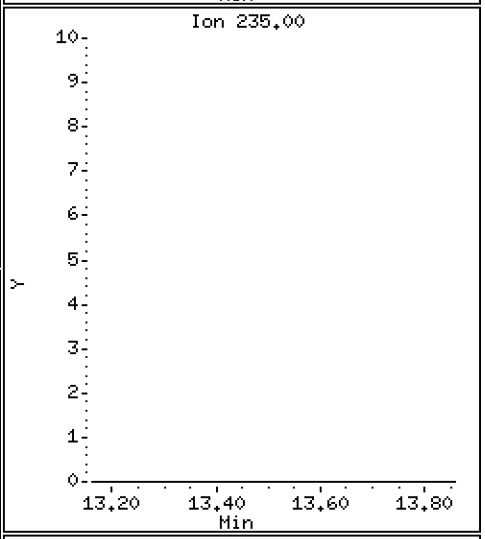
33 Hexachlorocyclopentadiene

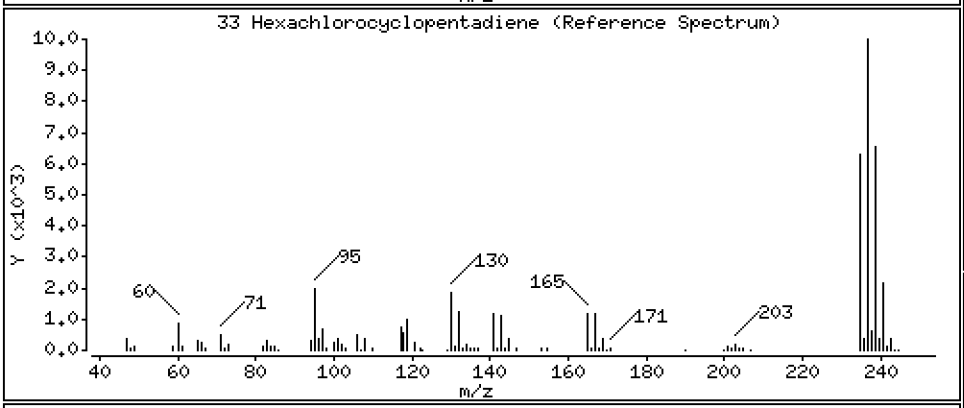
Concentration: 0.004534 ug/mL

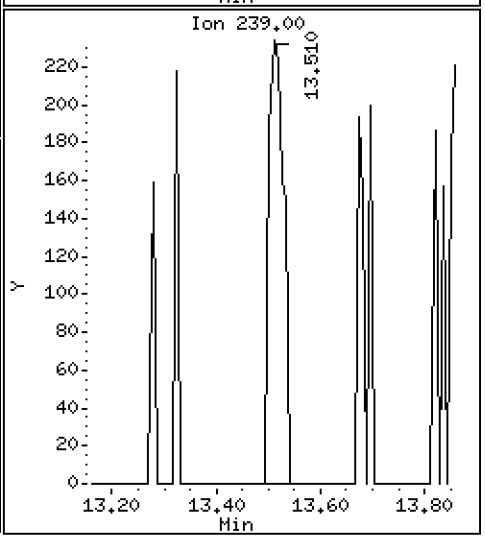


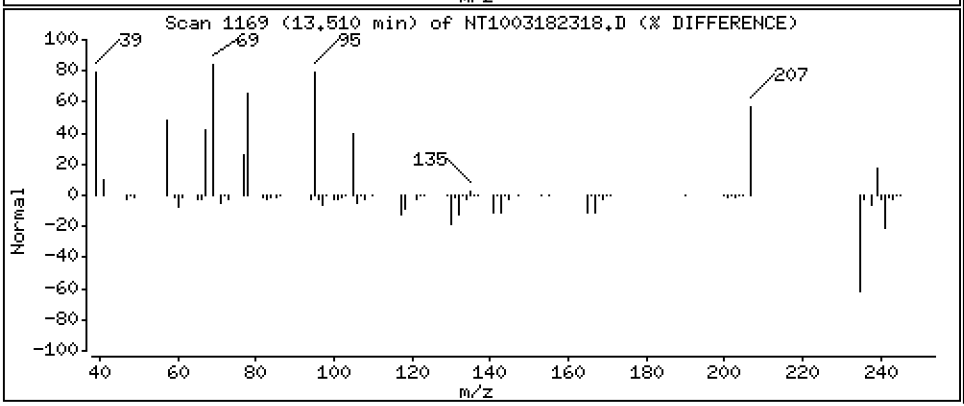












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

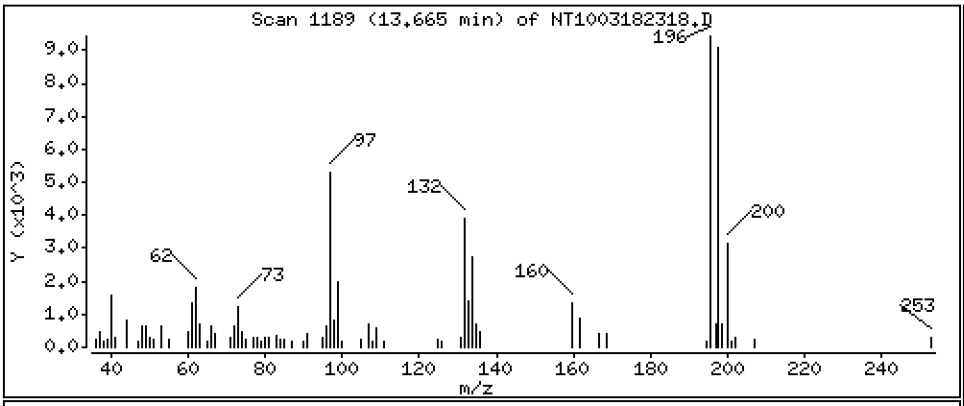
Operator: VTS

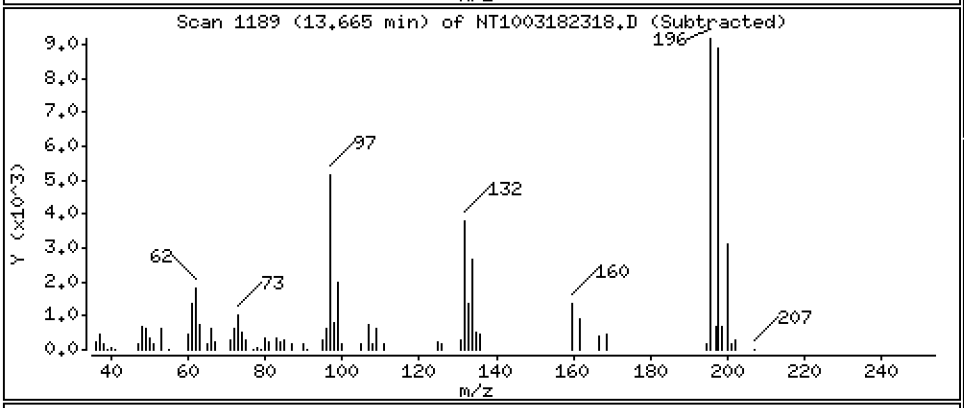
Column phase: ZB-5msi

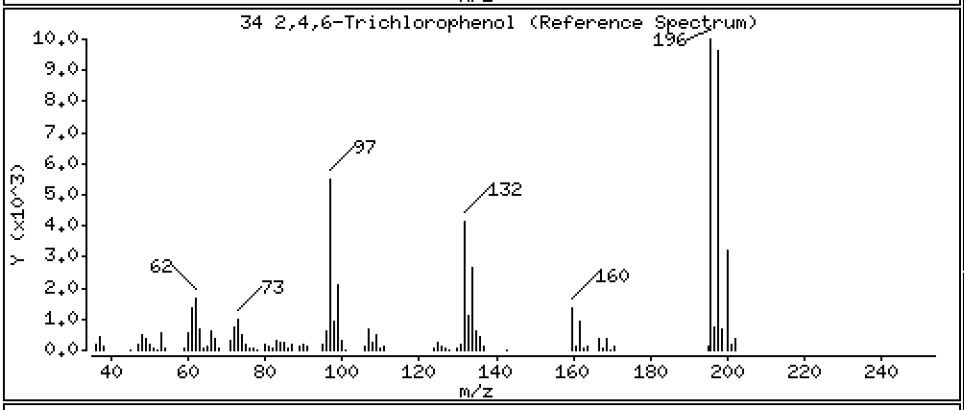
Column diameter: 0.25

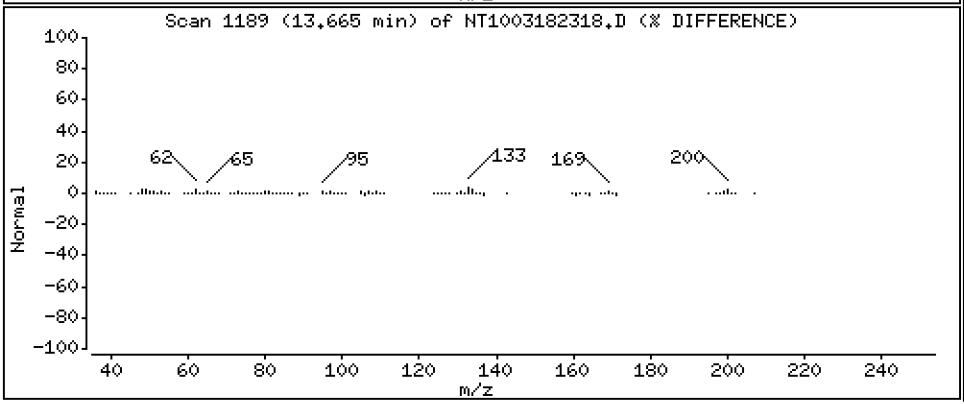
34 2,4,6-Trichlorophenol

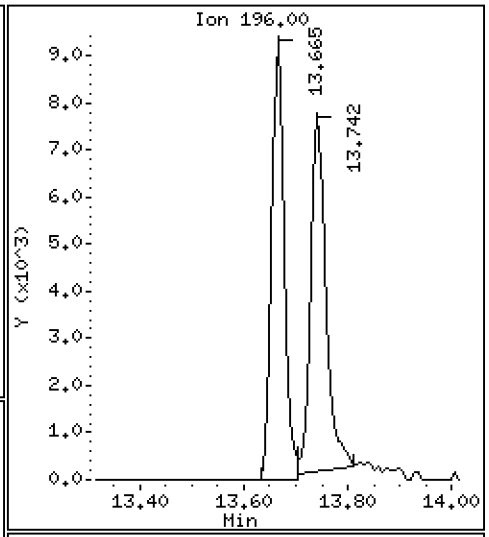
Concentration: 0.3825 ug/mL

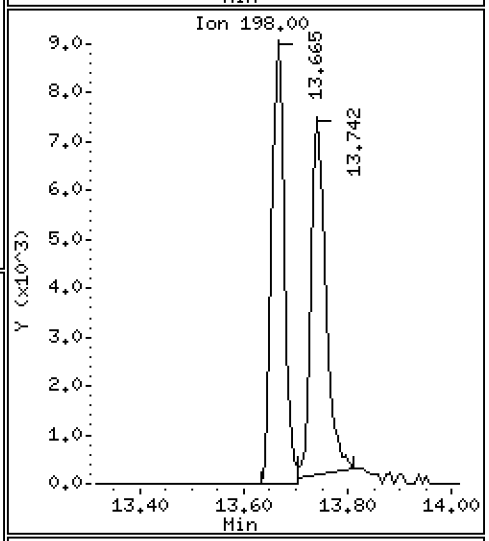


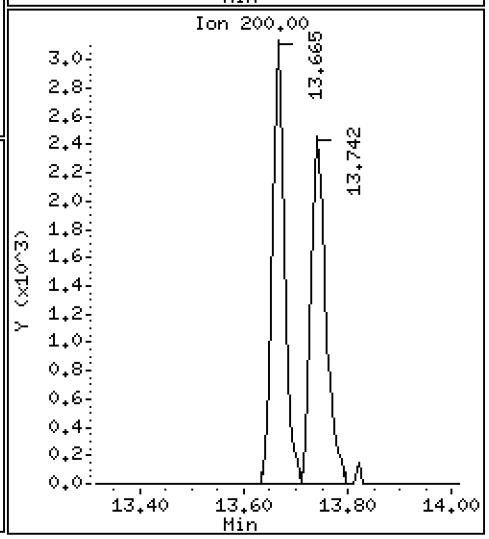












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

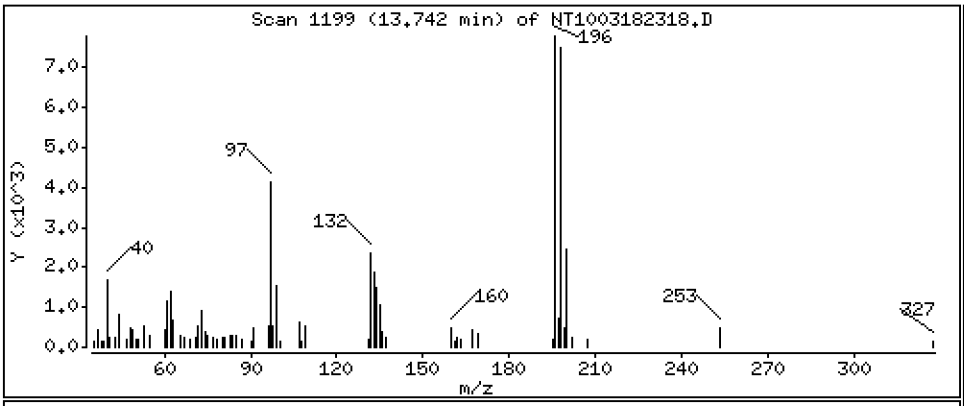
Operator: VTS

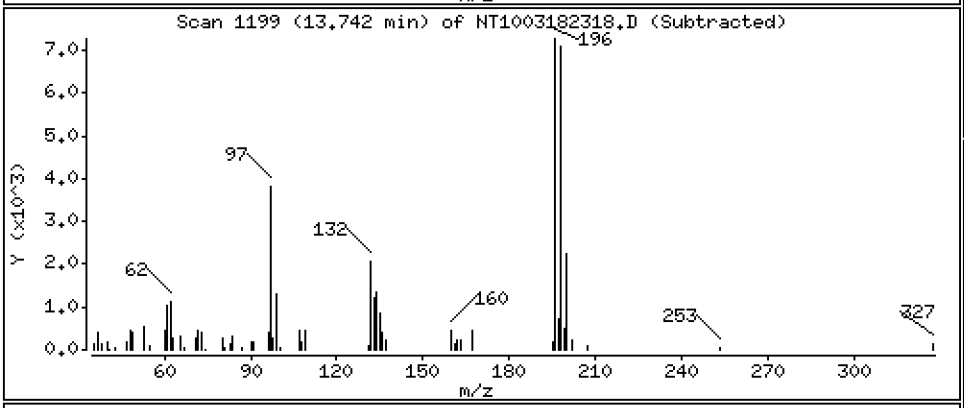
Column phase: ZB-5msi

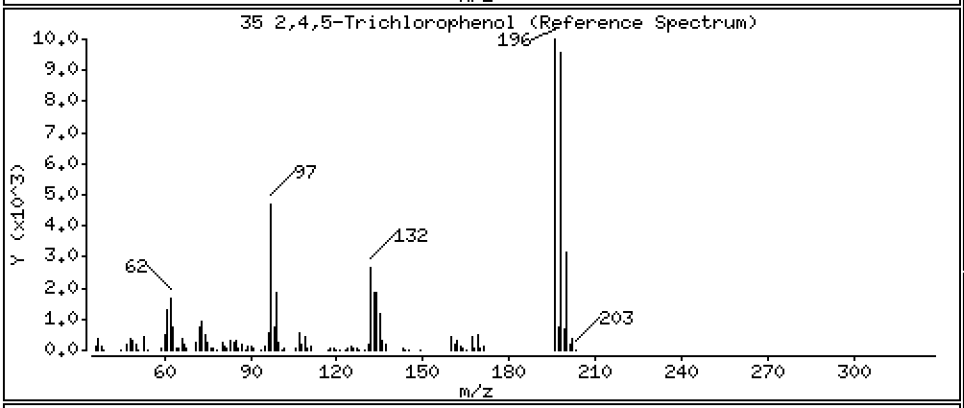
Column diameter: 0.25

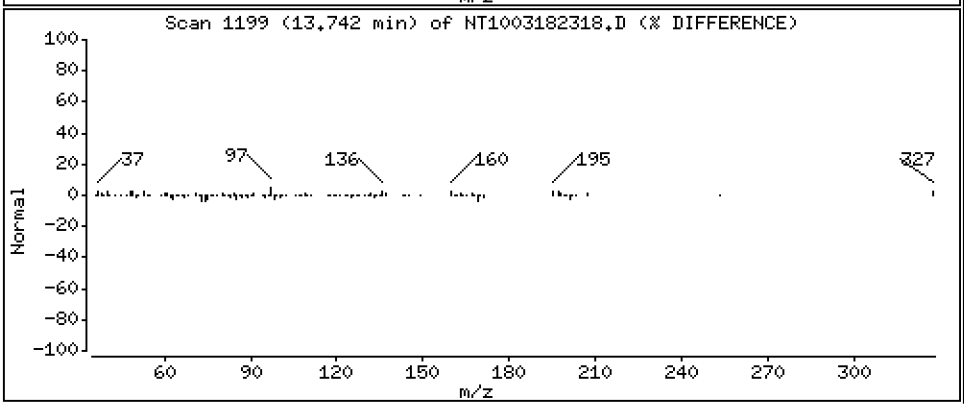
35 2,4,5-Trichlorophenol

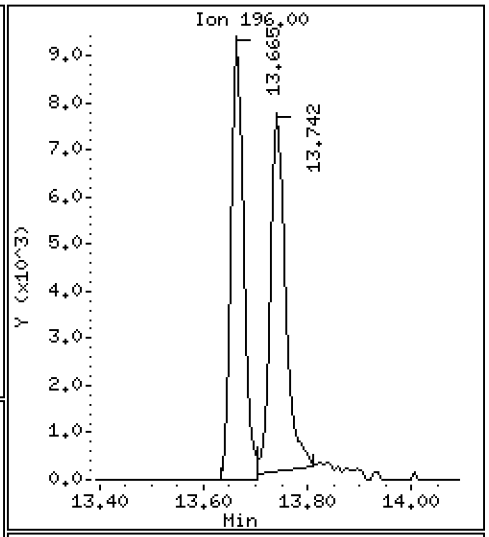
Concentration: 0.3416 ug/mL

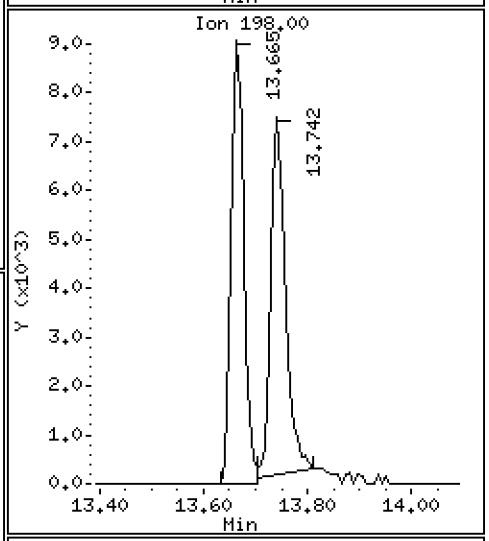


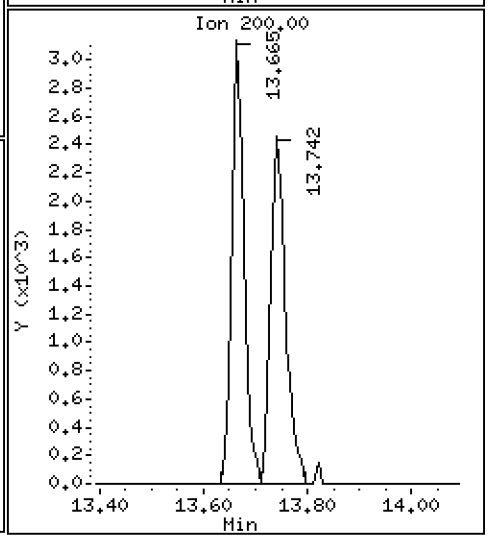












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

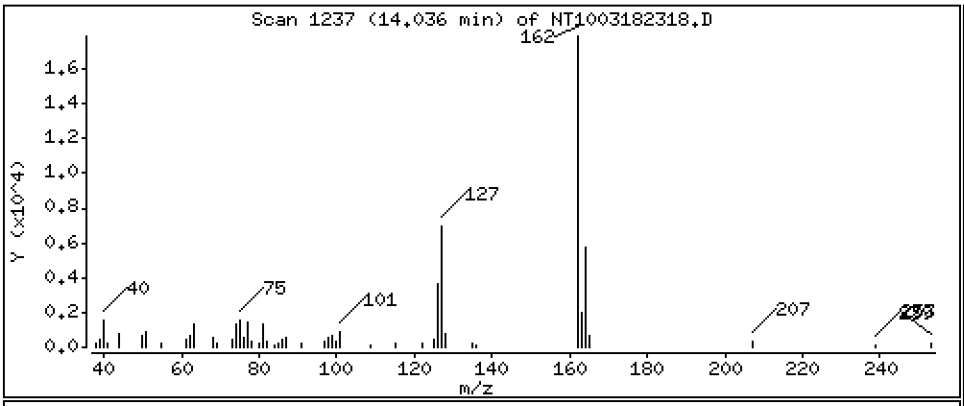
Operator: VTS

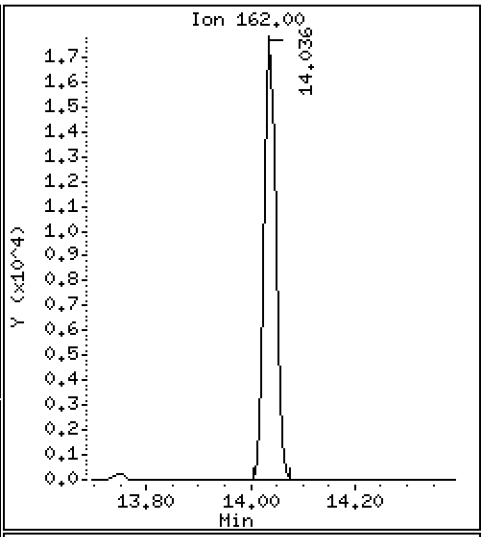
Column phase: ZB-5msi

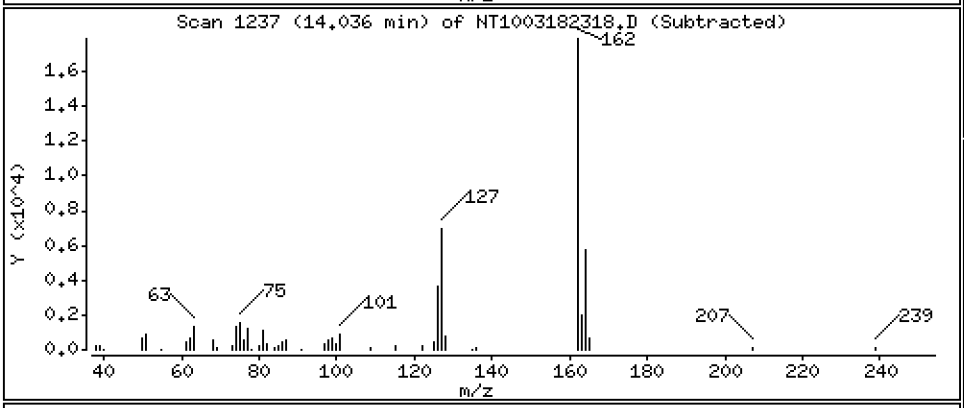
Column diameter: 0.25

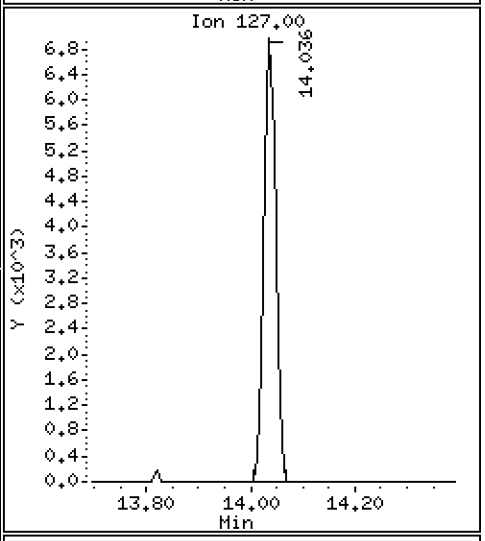
37 2-Chloronaphthalene

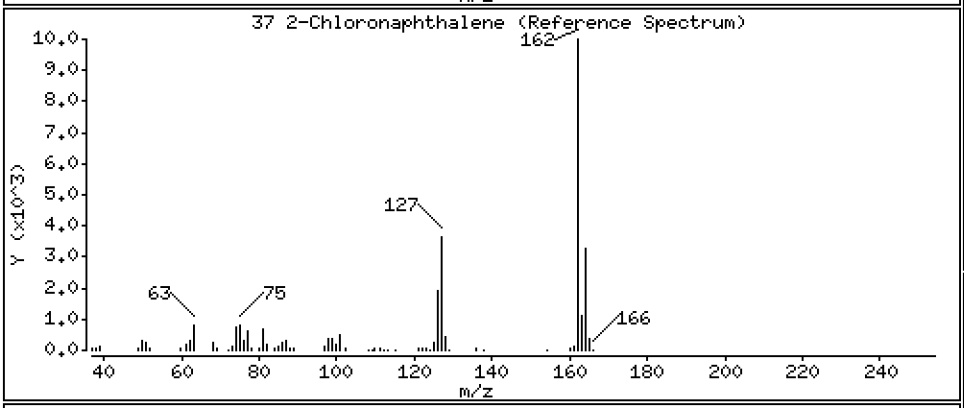
Concentration: 0.2078 ug/mL

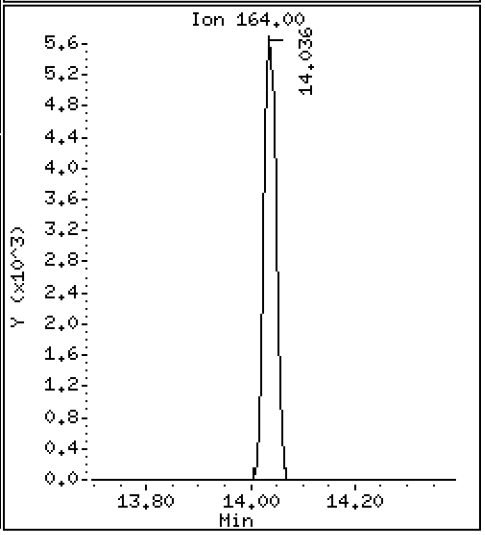


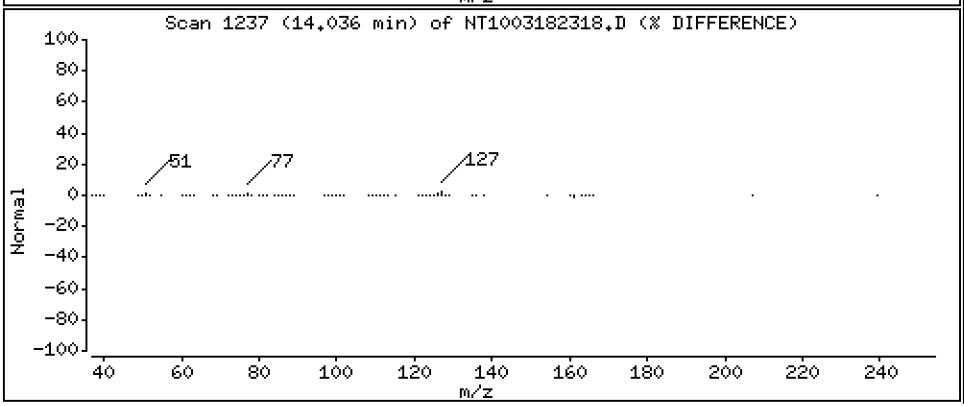












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

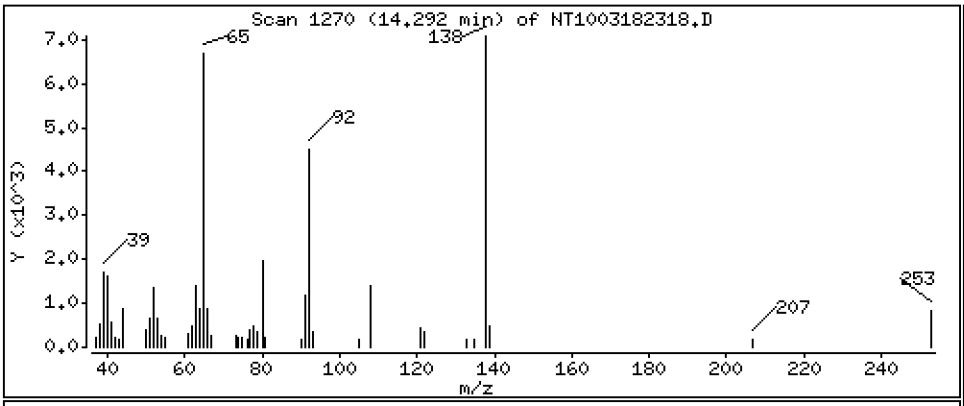
Operator: VTS

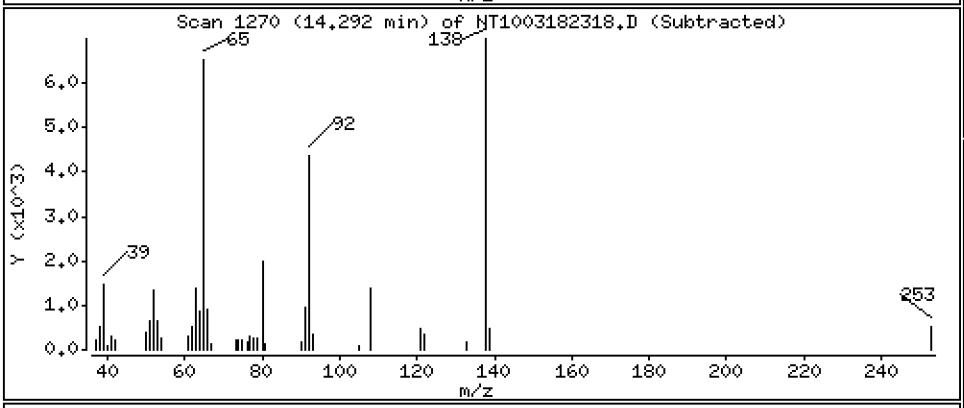
Column phase: ZB-5msi

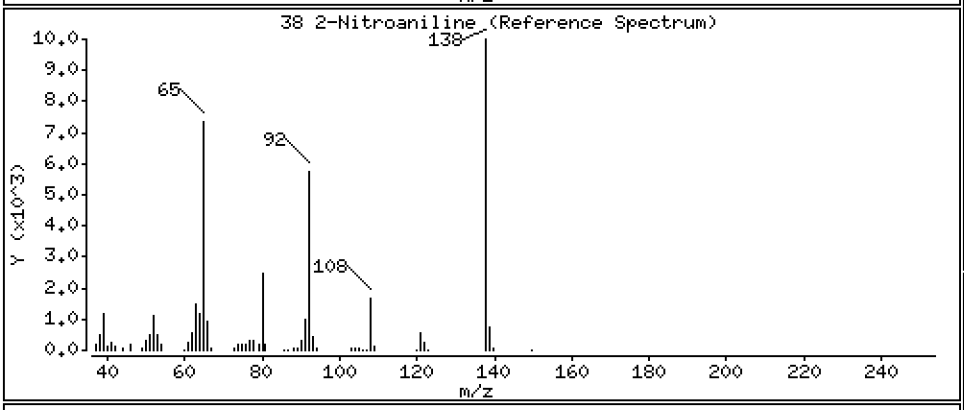
Column diameter: 0.25

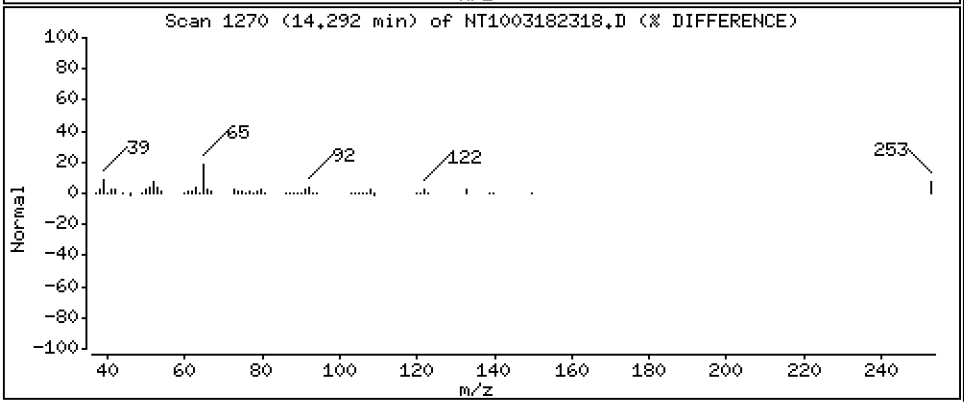
38 2-Nitroaniline

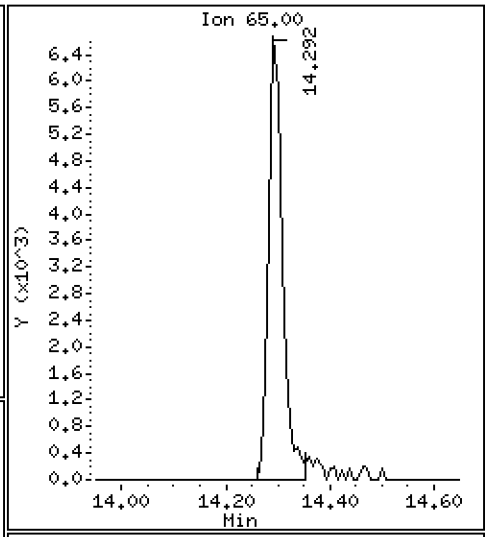
Concentration: 0.3371 ug/mL

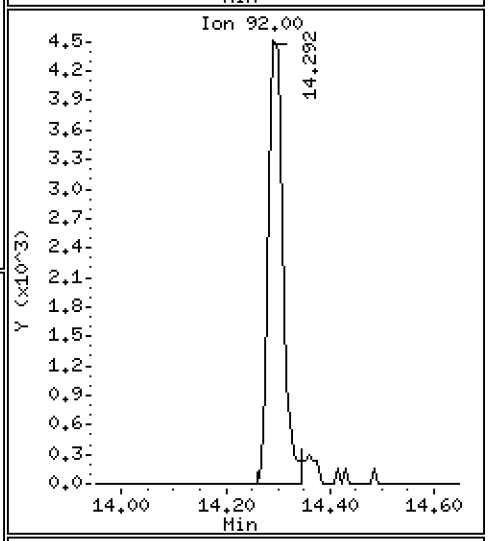


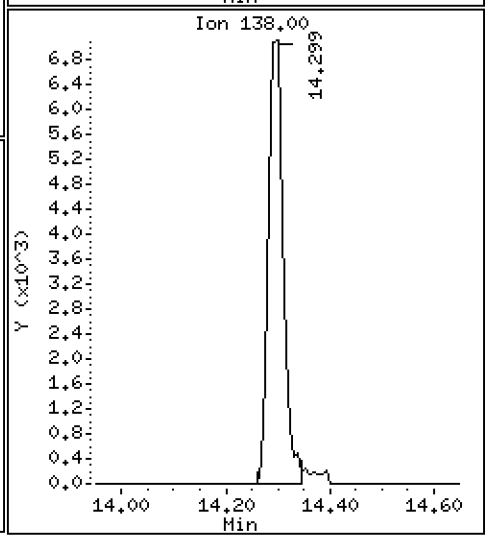












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

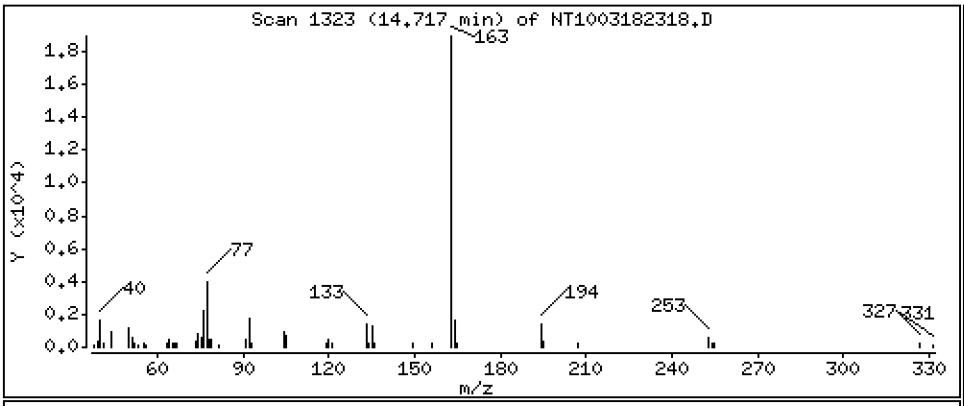
Operator: VTS

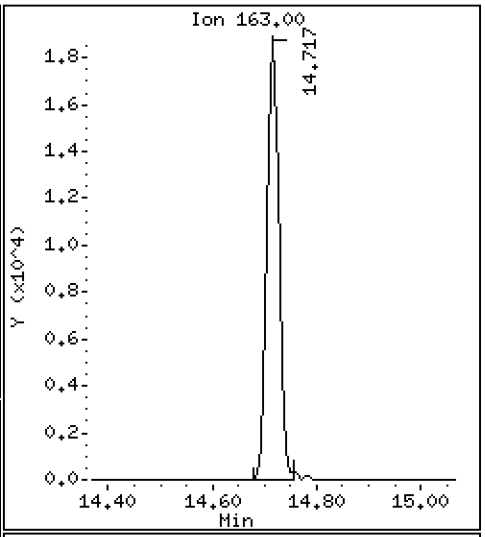
Column phase: ZB-5msi

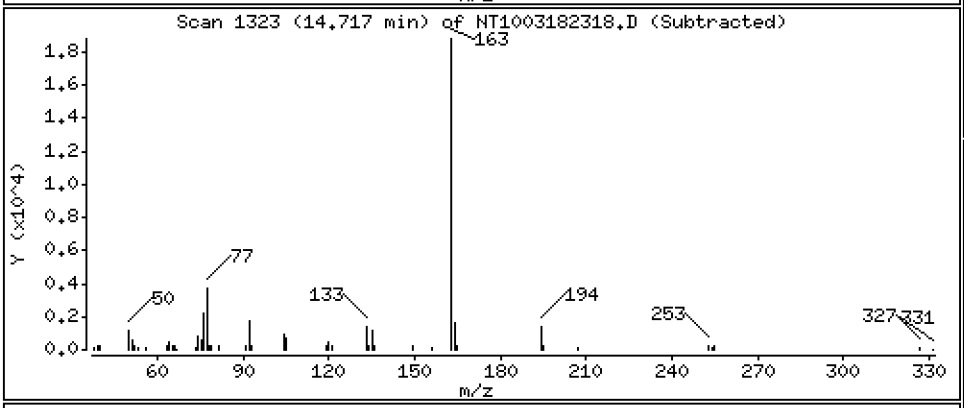
Column diameter: 0.25

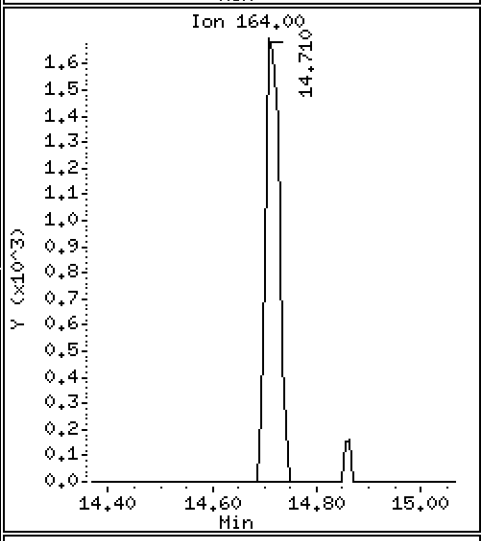
39 Dimethylphthalate

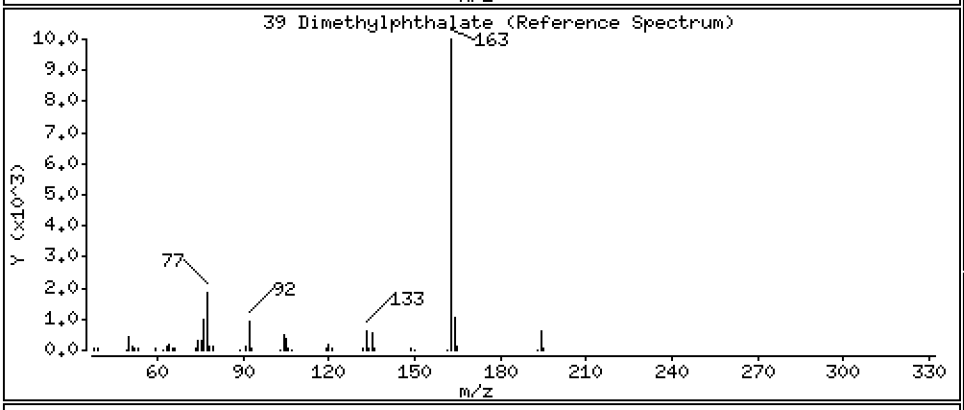
Concentration: 0.2241 ug/mL

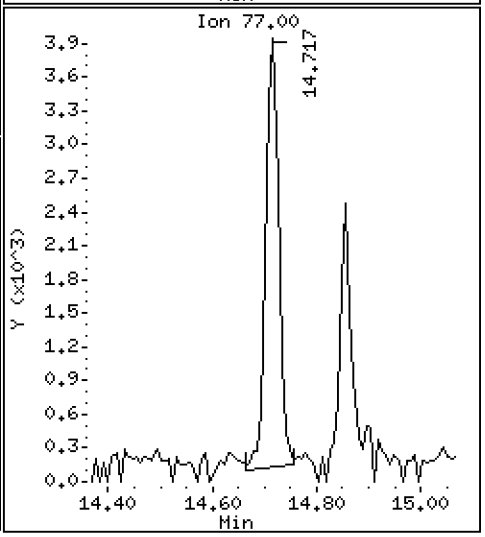


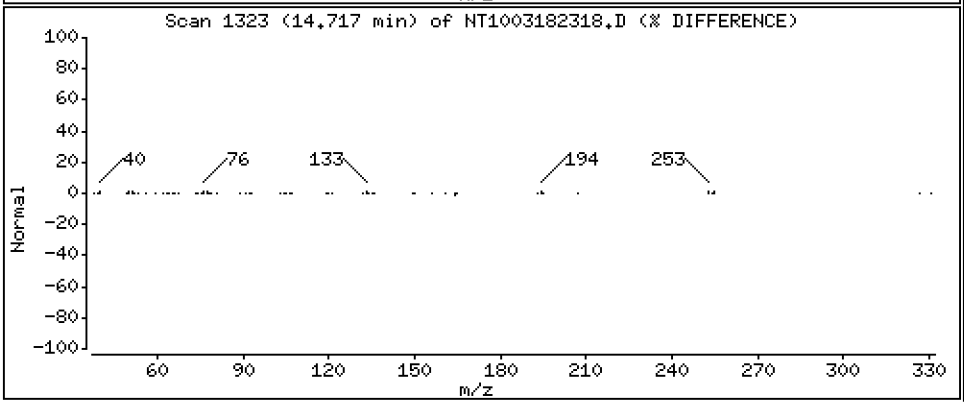












Date : 19-MAR-2023 04:35

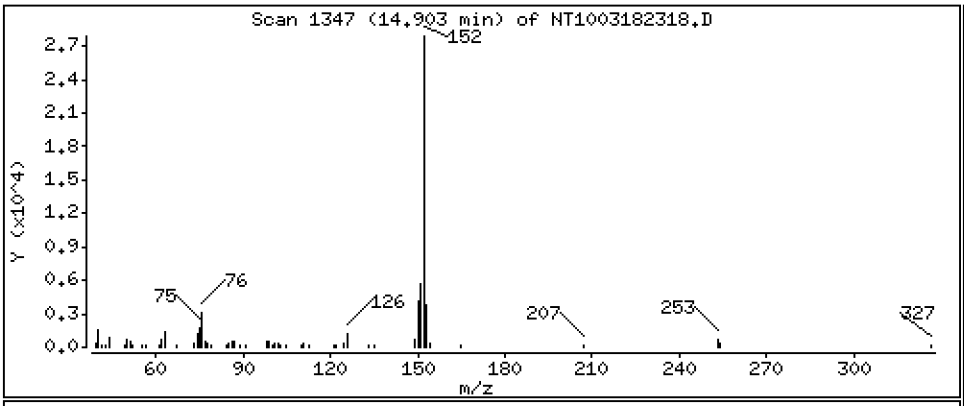
Client ID: Instrument: nt10.i

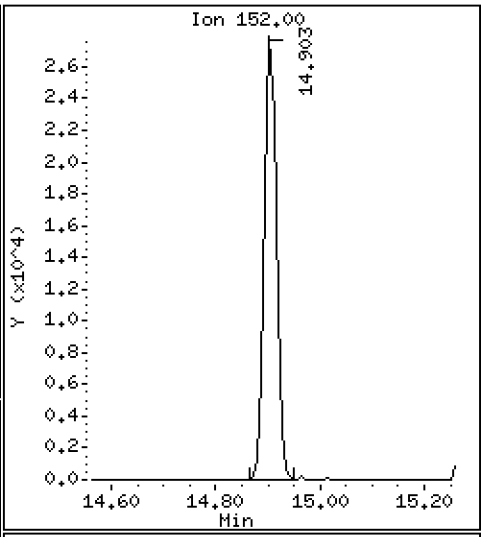
Sample Info: SLC0504-LCV2

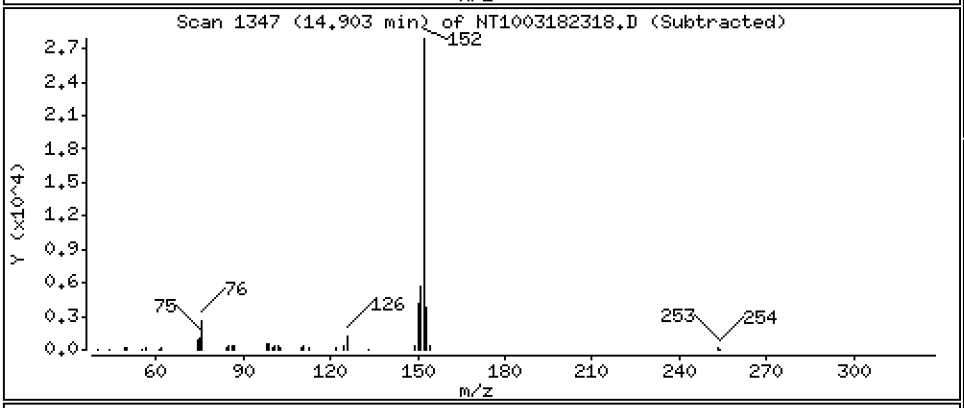
Operator: VTS

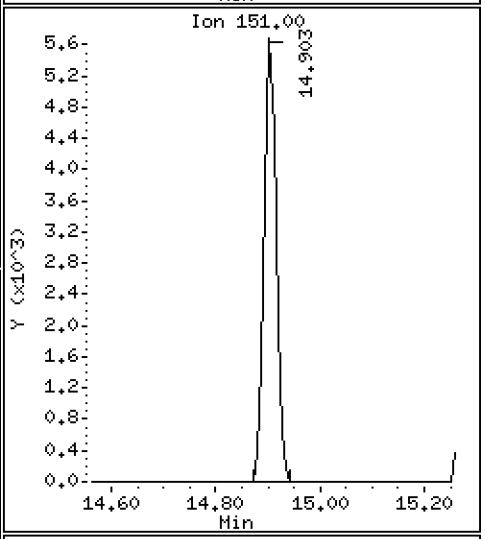
Column phase: ZB-5msi Column diameter: 0.25

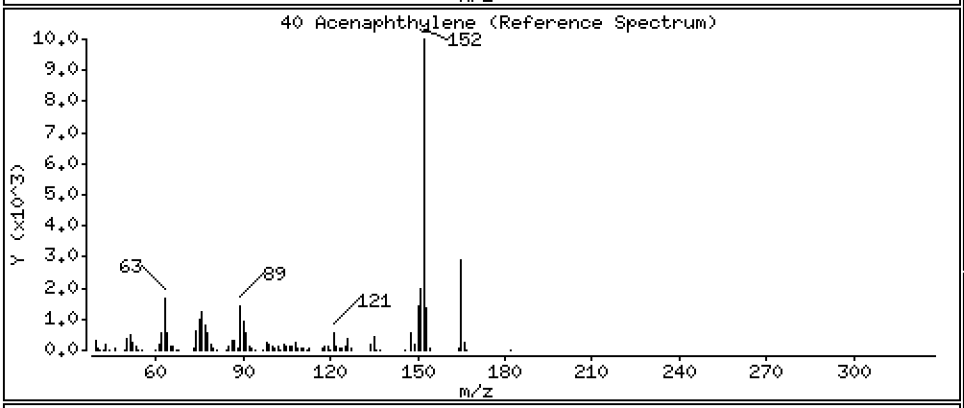
40 Acenaphthylene Concentration: 0.2172 ug/mL

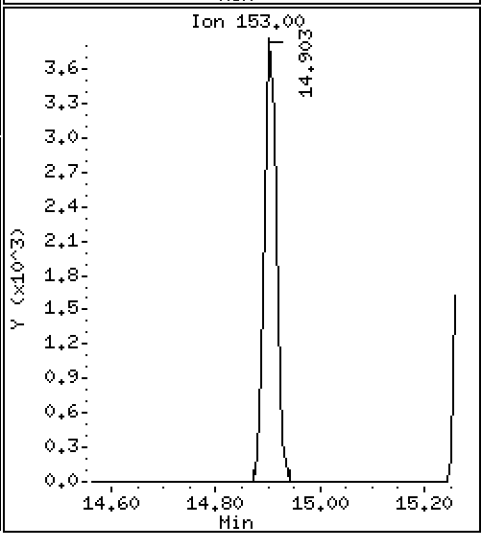


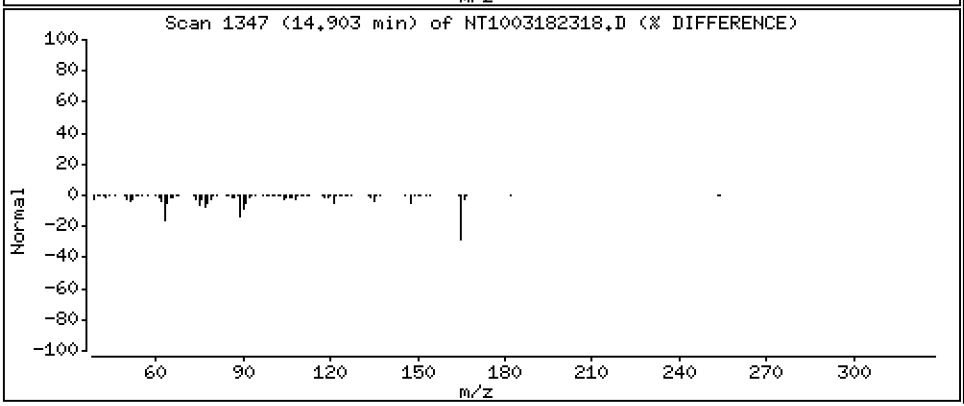












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

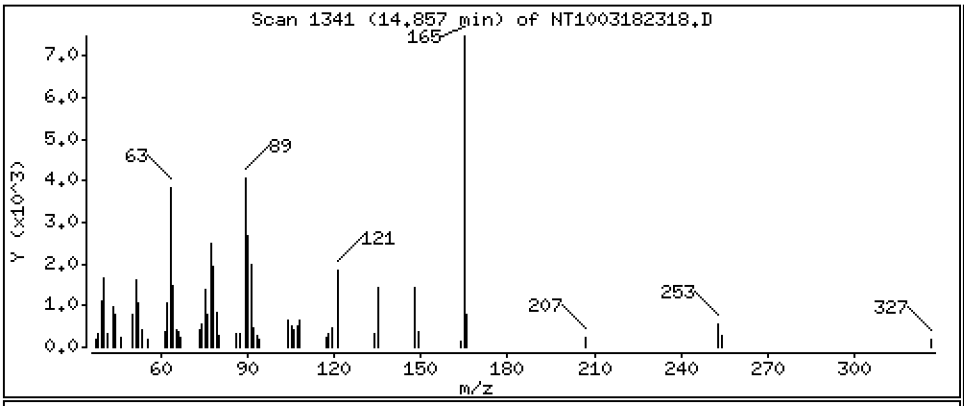
Operator: VTS

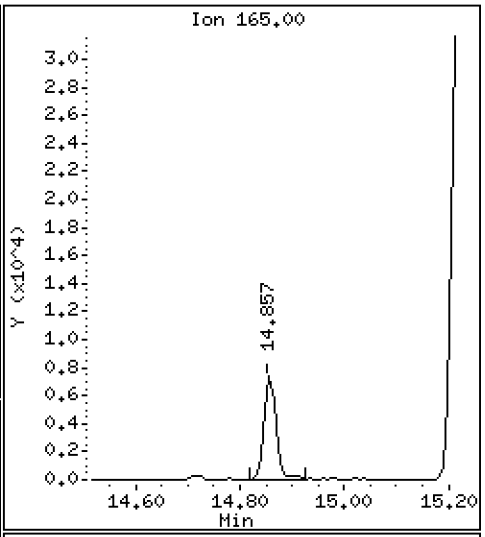
Column phase: ZB-5msi

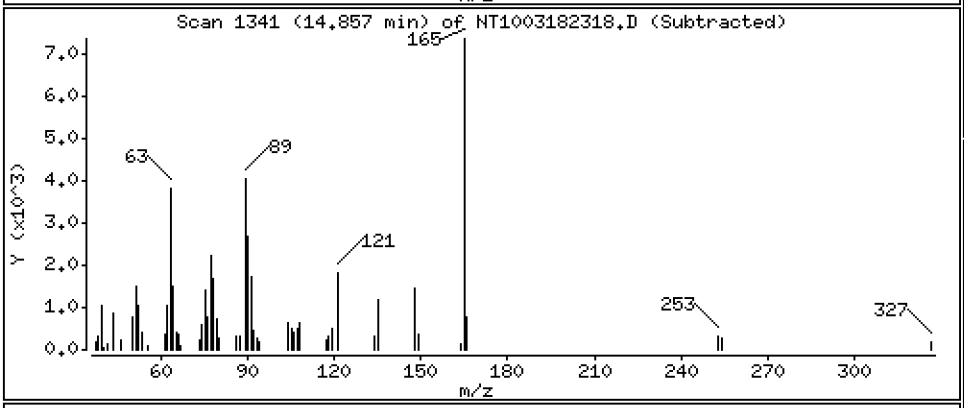
Column diameter: 0.25

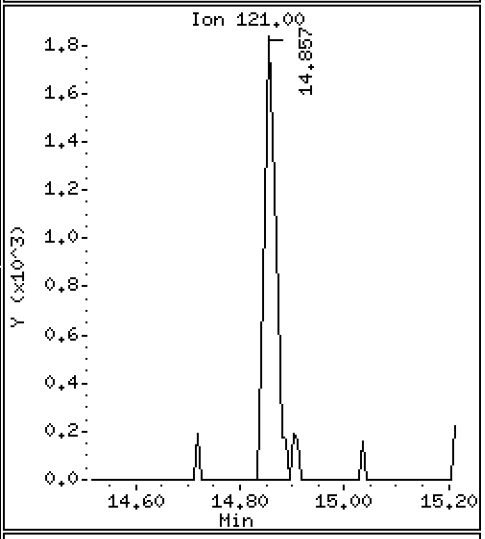
41 2,6-Dinitrotoluene

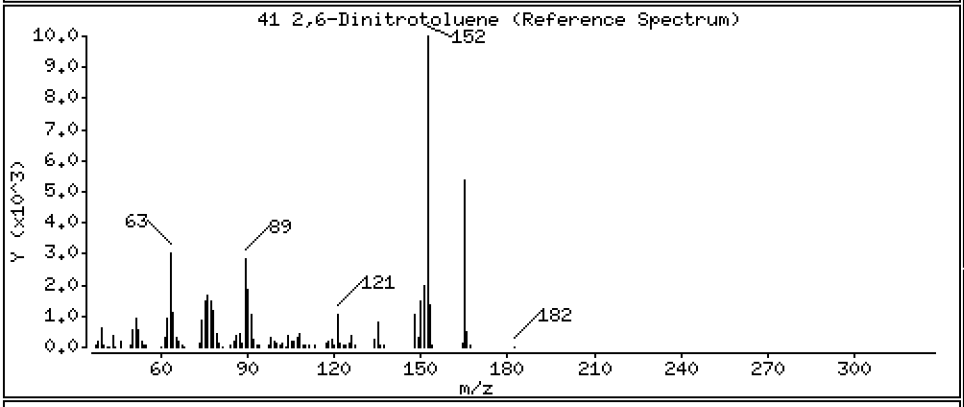
Concentration: 0.4107 ug/mL

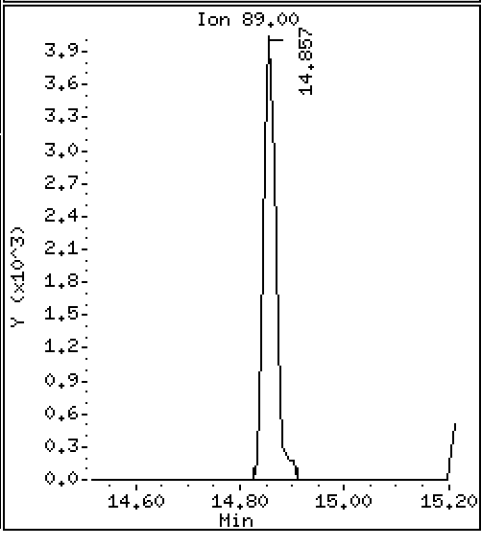


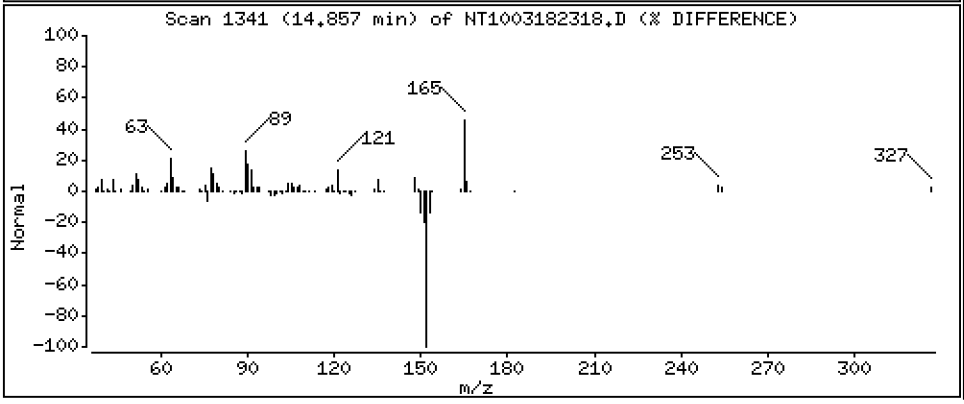












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

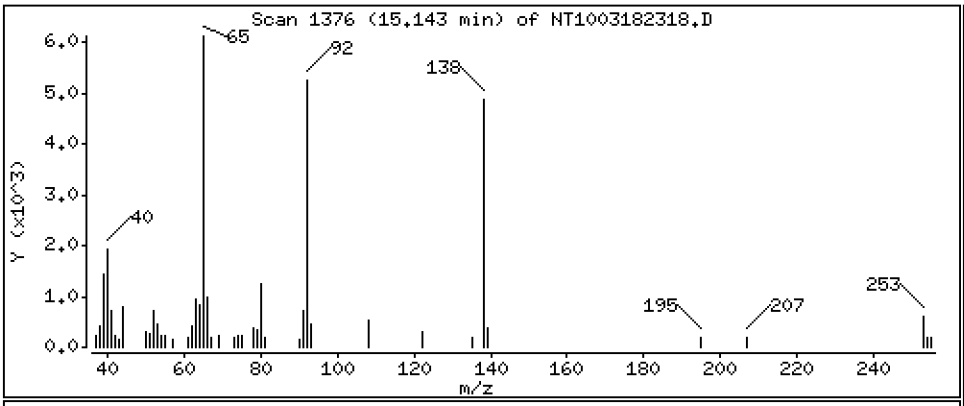
Operator: VTS

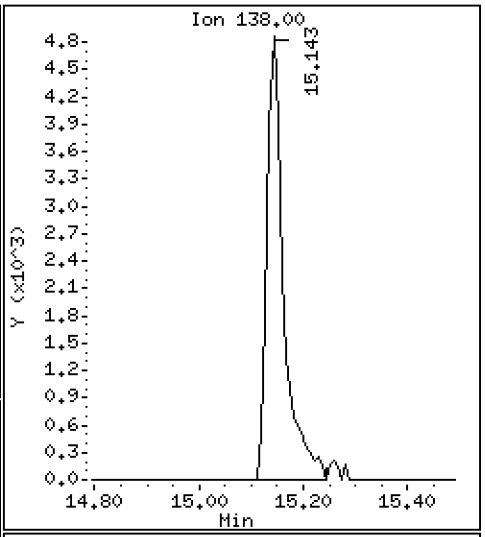
Column phase: ZB-5msi

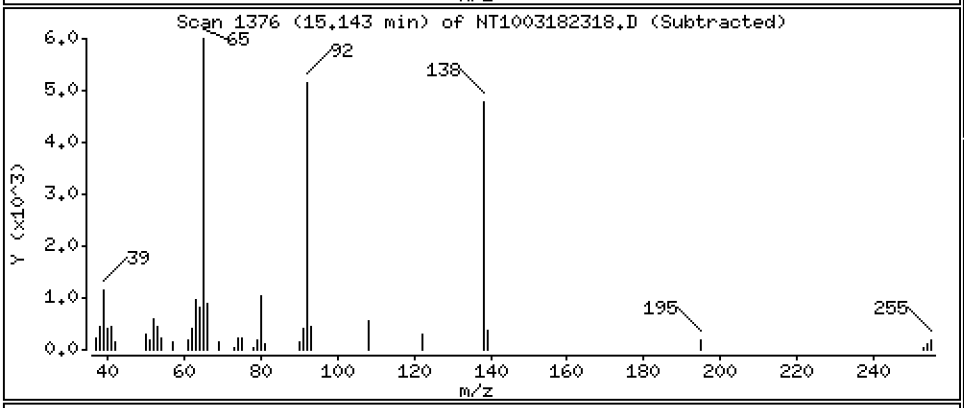
Column diameter: 0.25

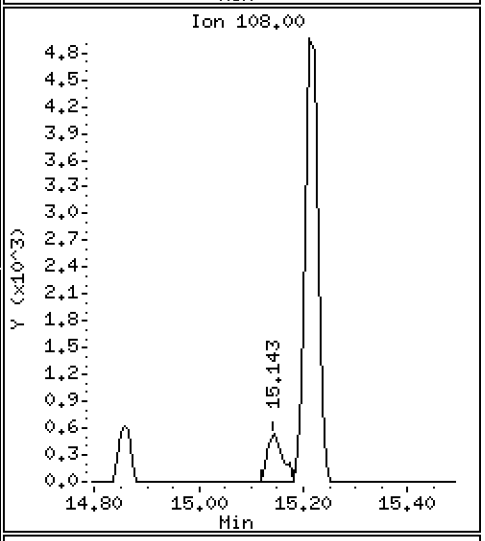
43 3-Nitroaniline

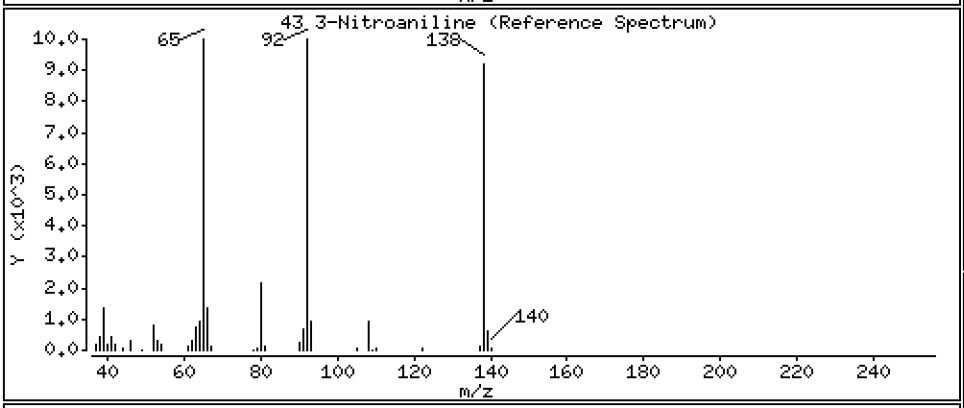
Concentration: 0.3380 ug/mL

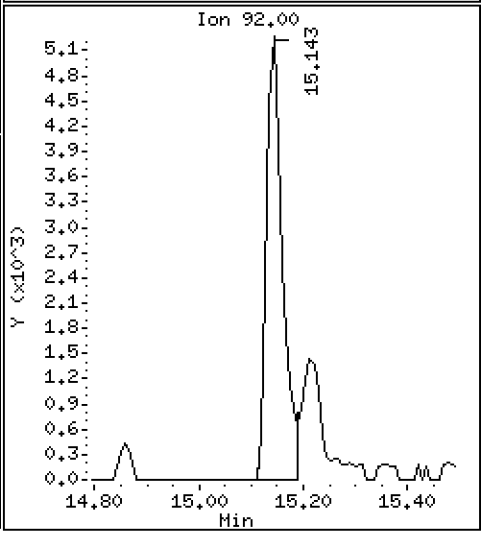


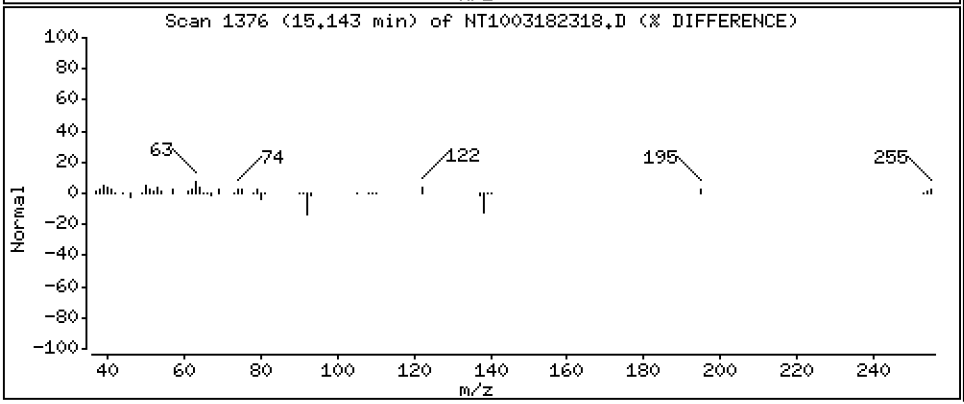












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

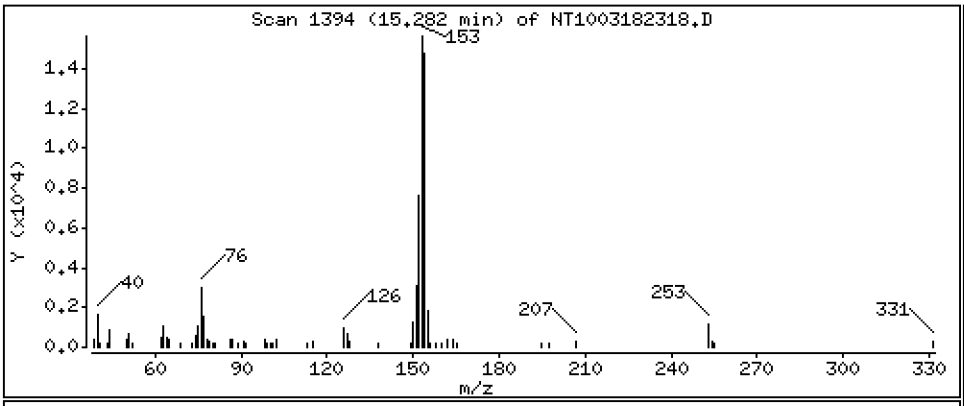
Operator: VTS

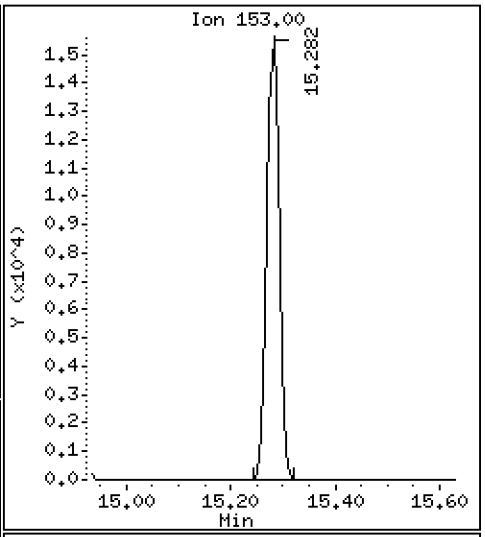
Column phase: ZB-5msi

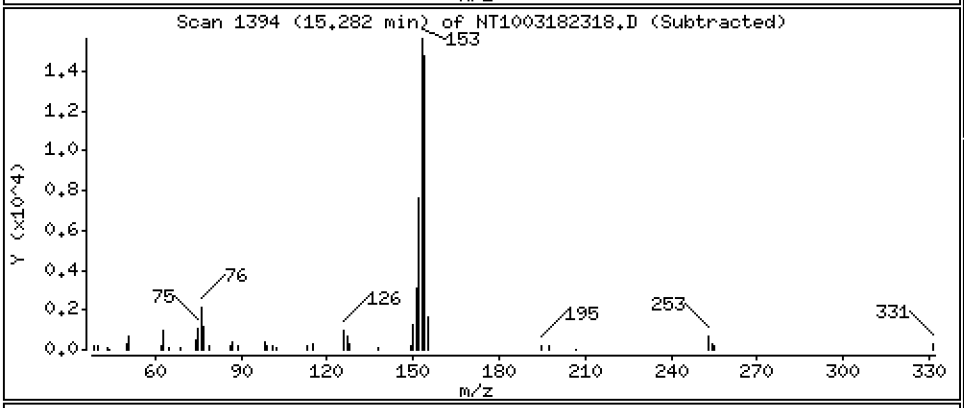
Column diameter: 0.25

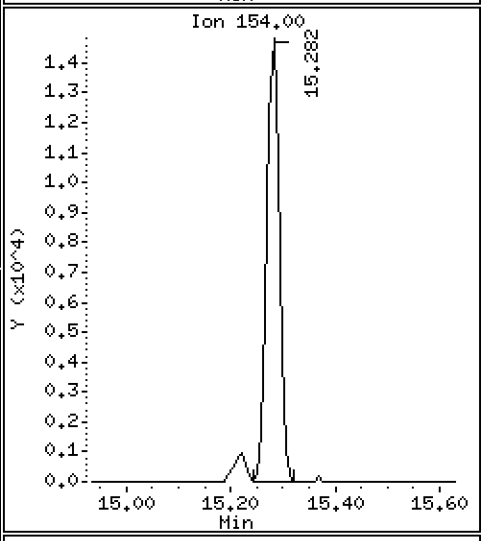
44 Acenaphthene

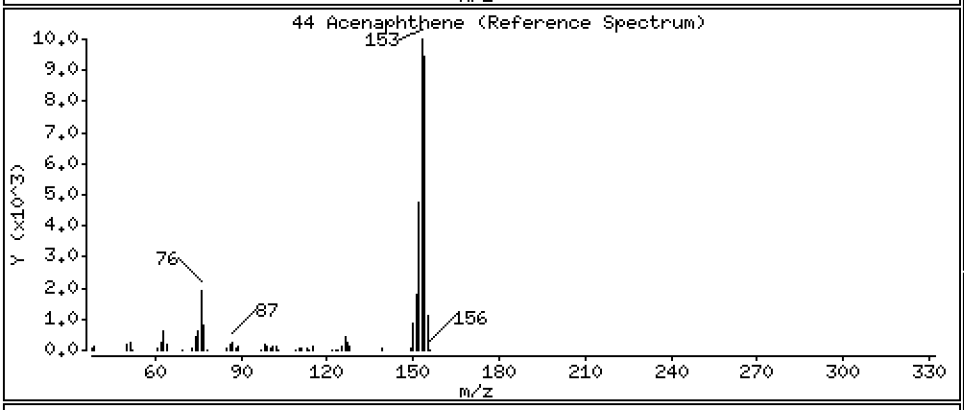
Concentration: 0.2023 ug/mL

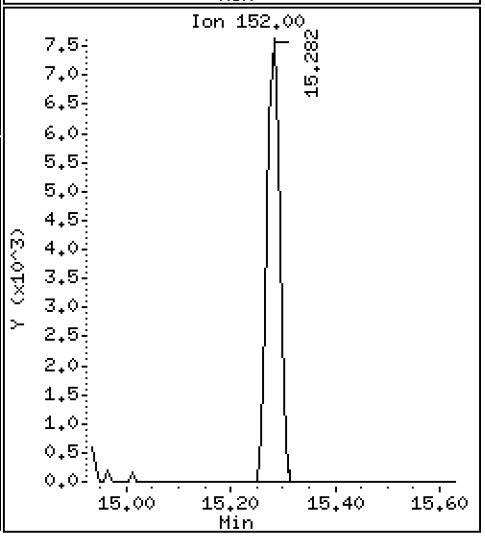


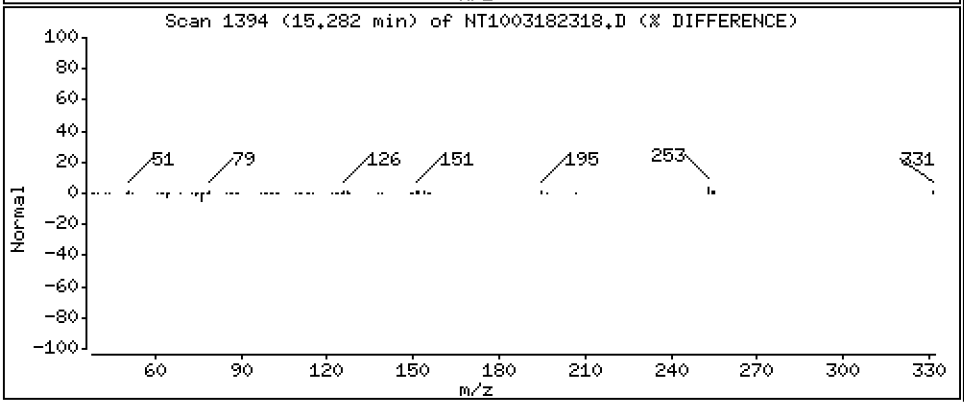












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

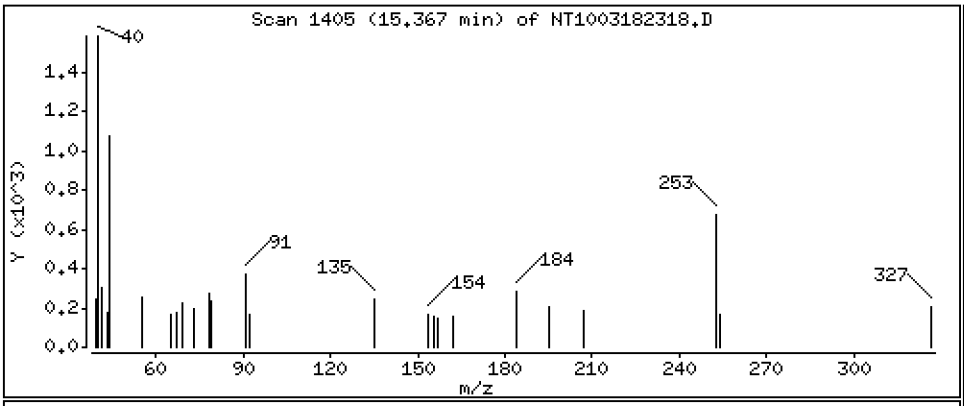
Operator: VTS

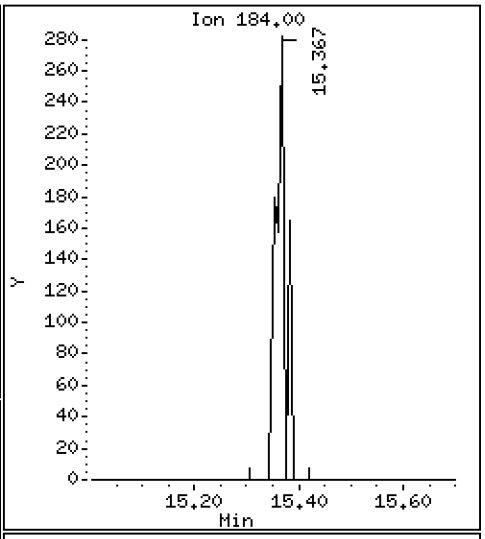
Column phase: ZB-5msi

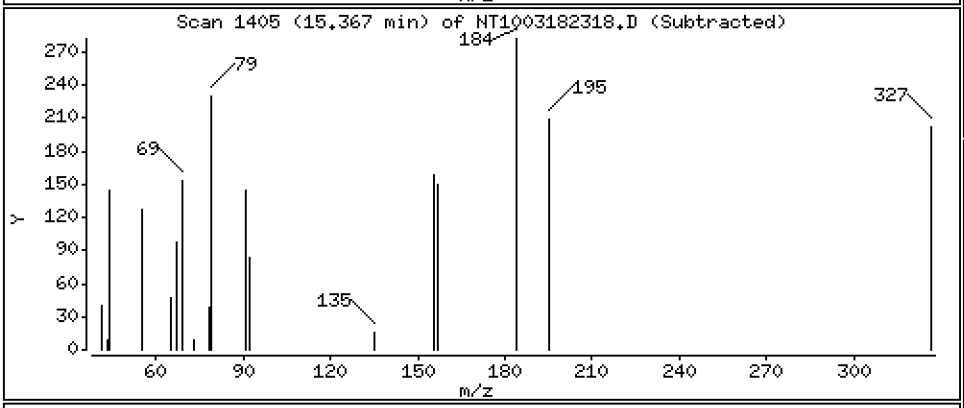
Column diameter: 0.25

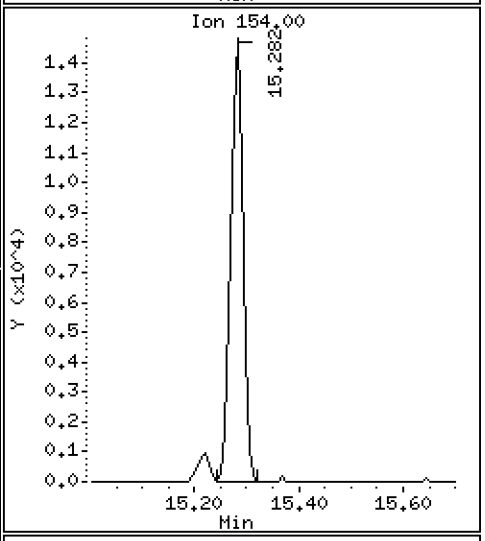
45 2,4-Dinitrophenol

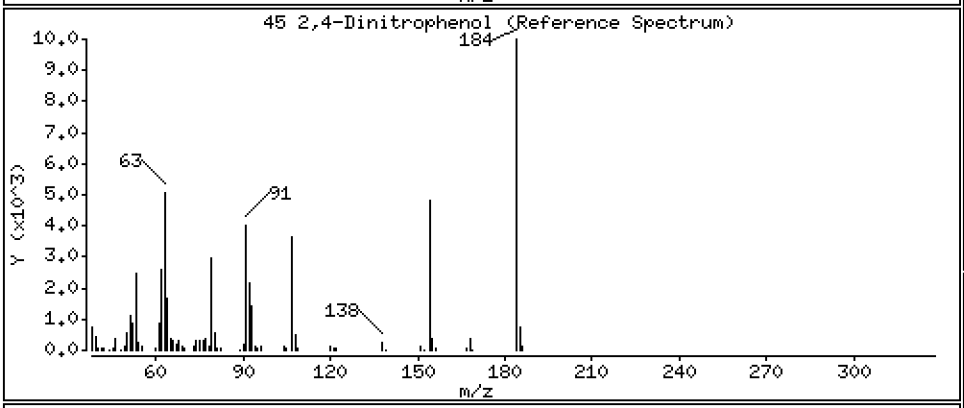
Concentration: 0.02186 ug/mL

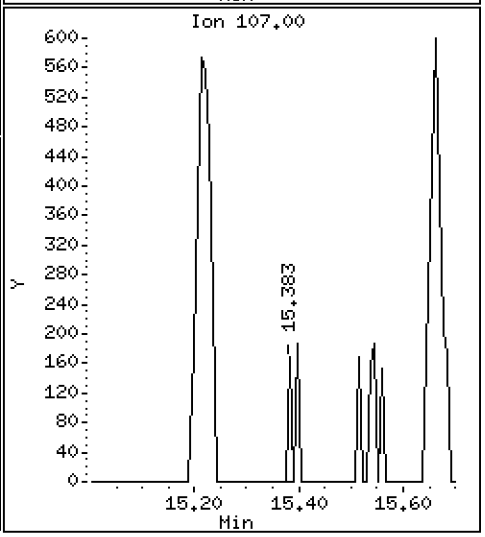


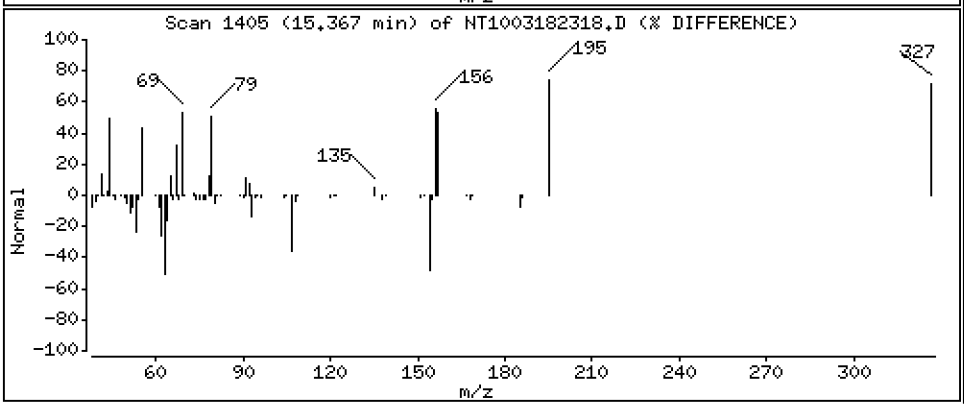












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

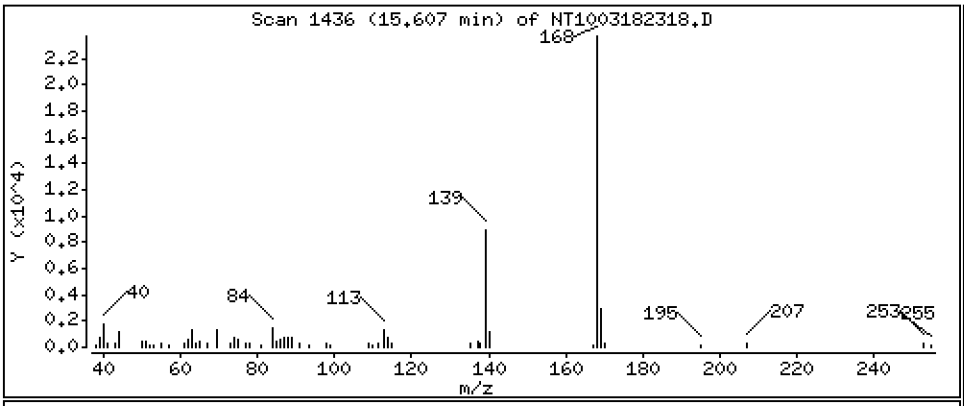
Operator: VTS

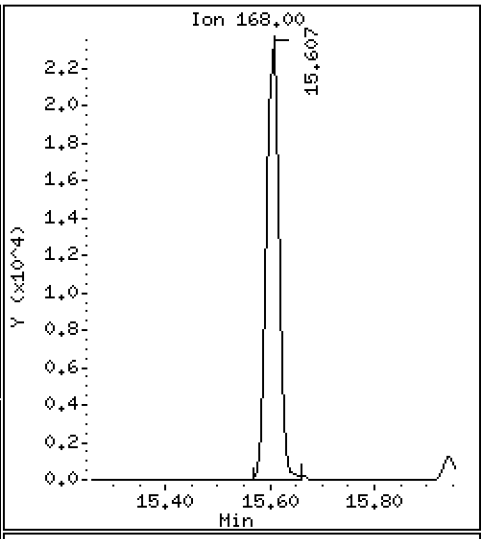
Column phase: ZB-5msi

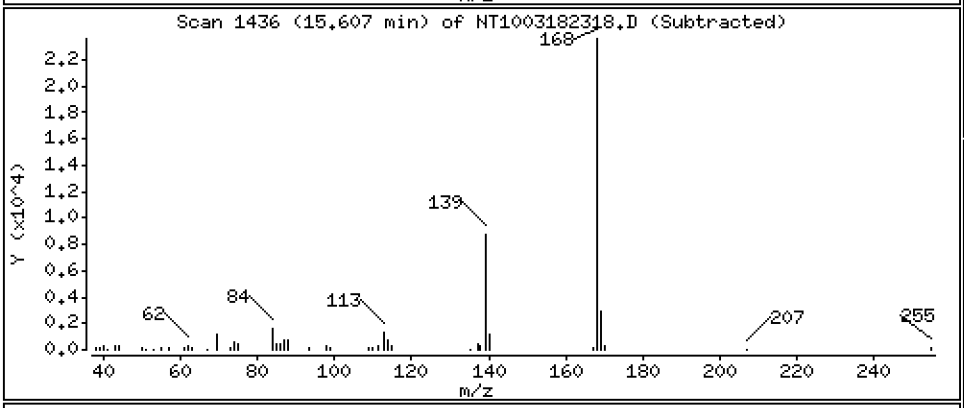
Column diameter: 0.25

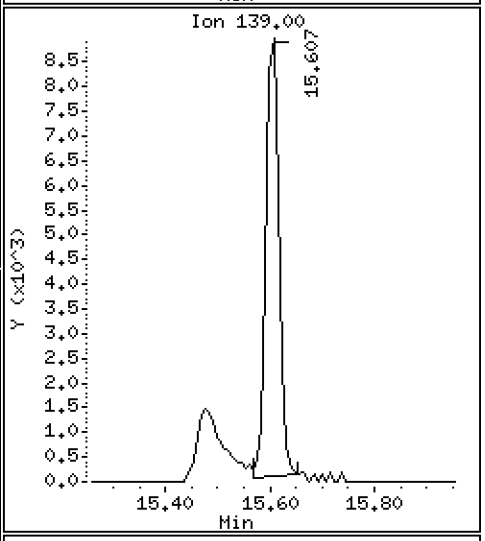
46 Dibenzofuran

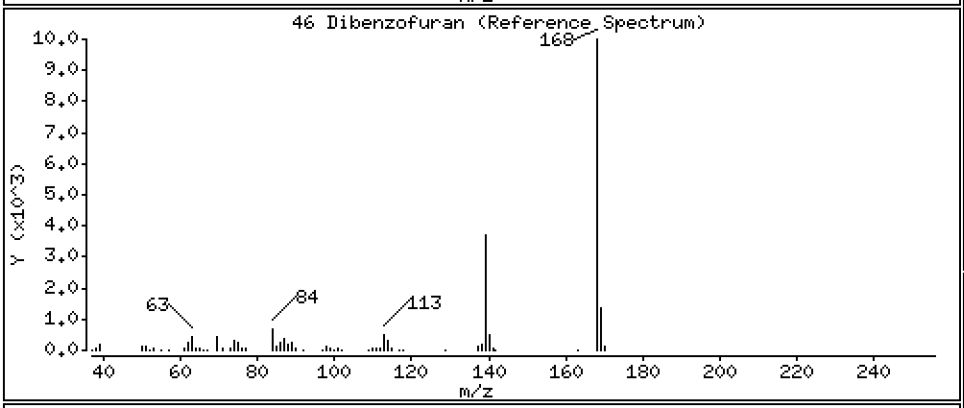
Concentration: 0.2068 ug/mL

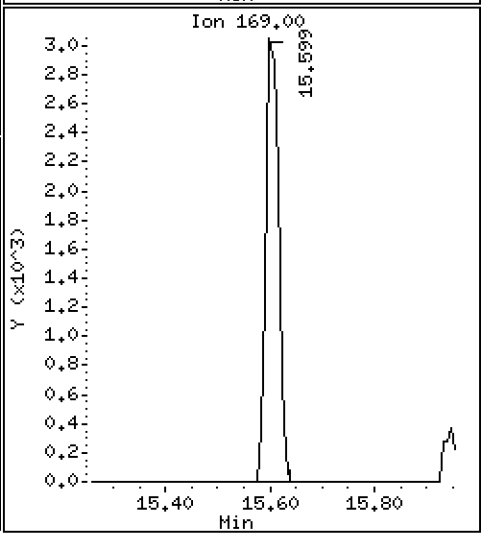


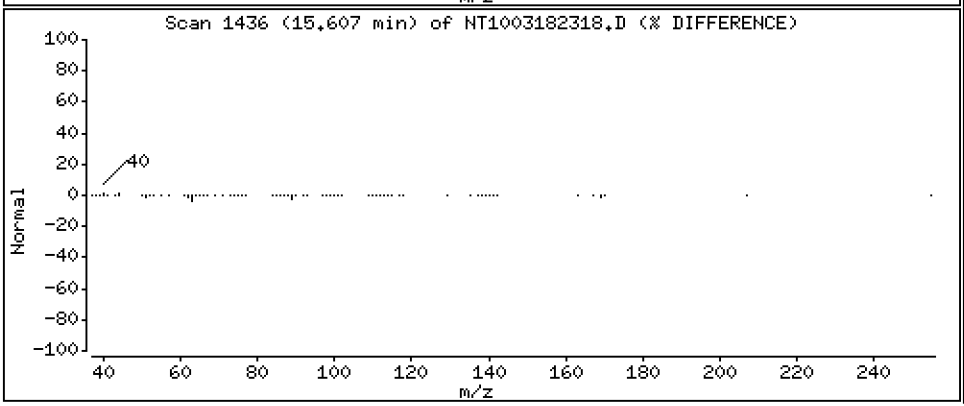












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

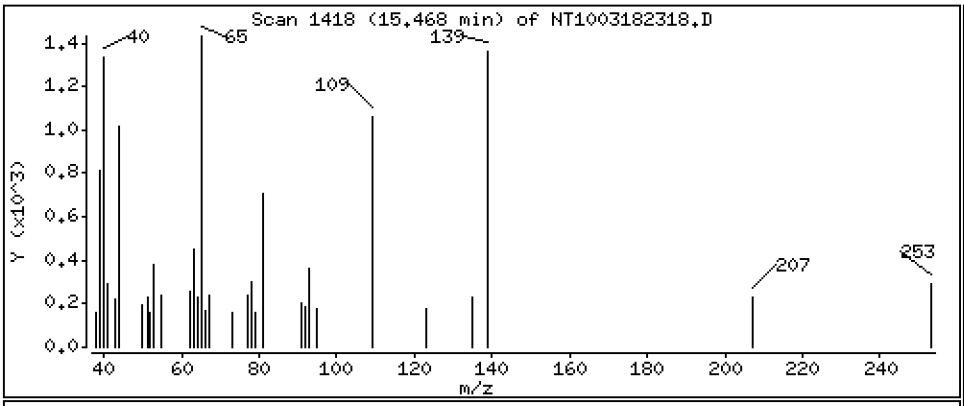
Operator: VTS

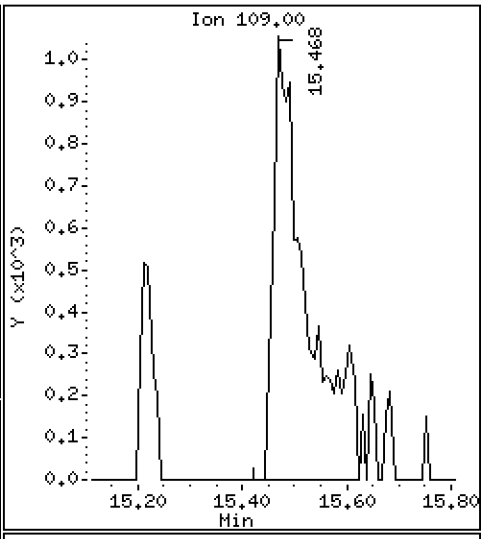
Column phase: ZB-5msi

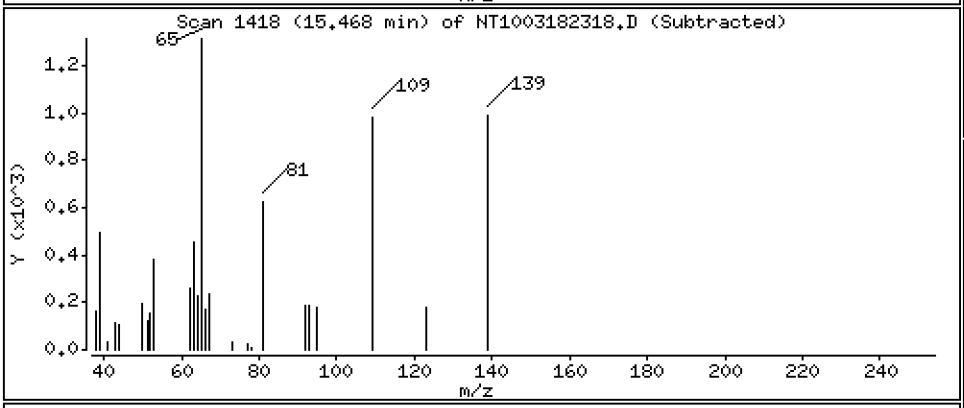
Column diameter: 0.25

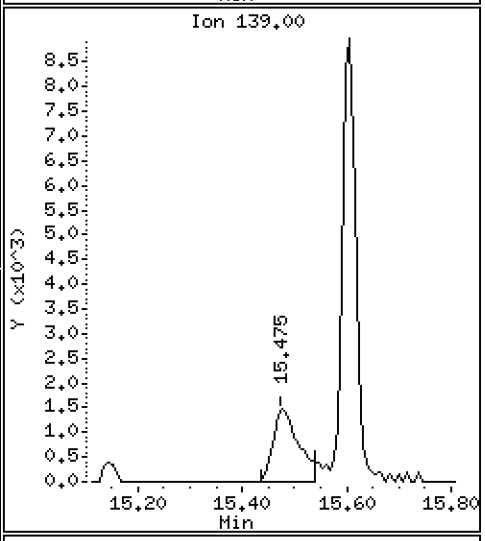
47 4-Nitrophenol

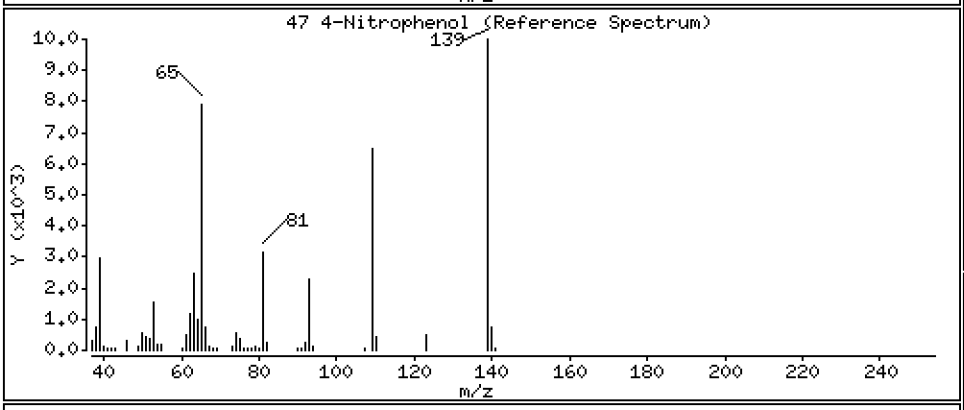
Concentration: 0.2378 ug/mL

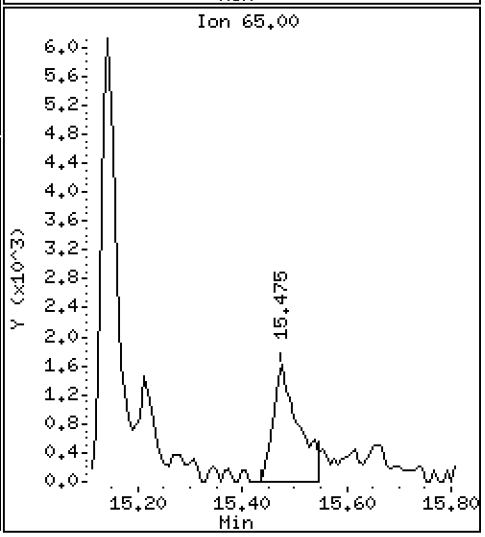


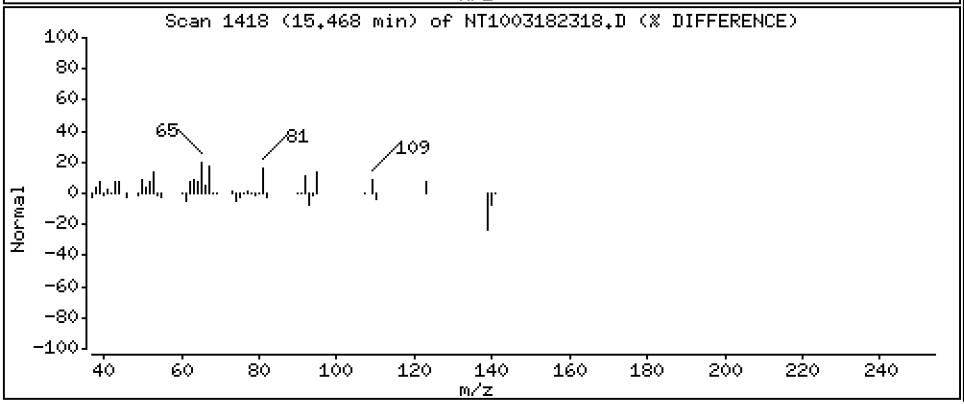












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

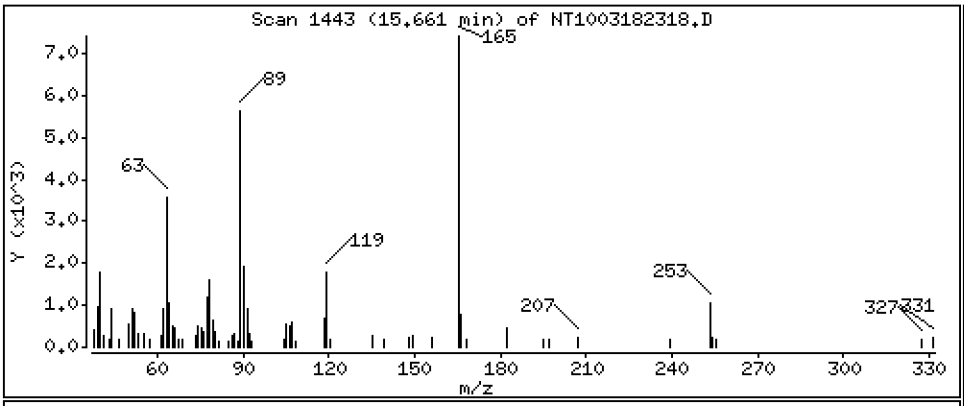
Operator: VTS

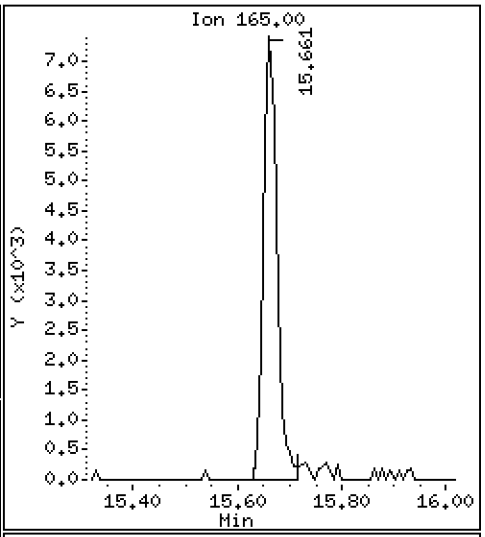
Column phase: ZB-5msi

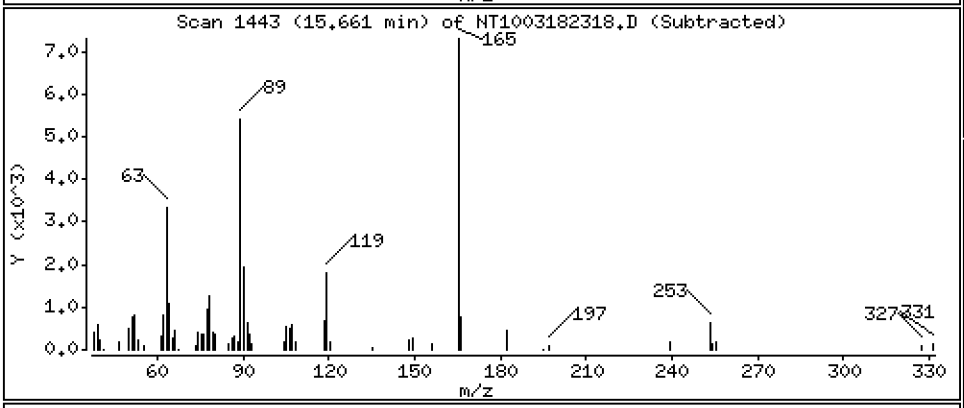
Column diameter: 0.25

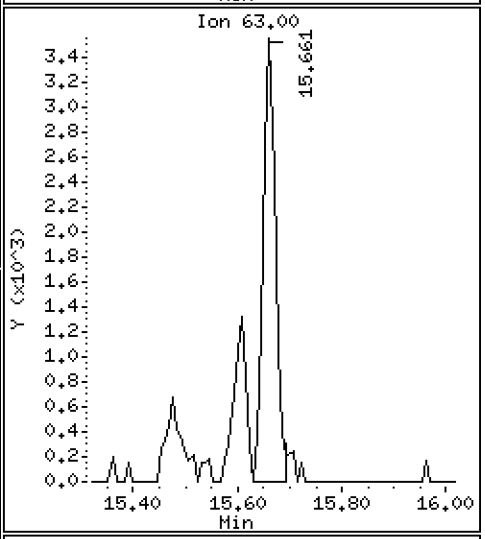
48 2,4-Dinitrotoluene

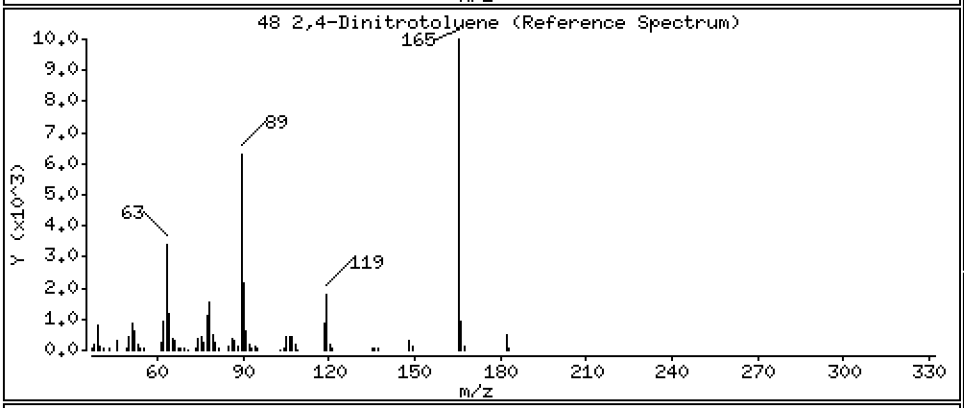
Concentration: 0.3071 ug/mL

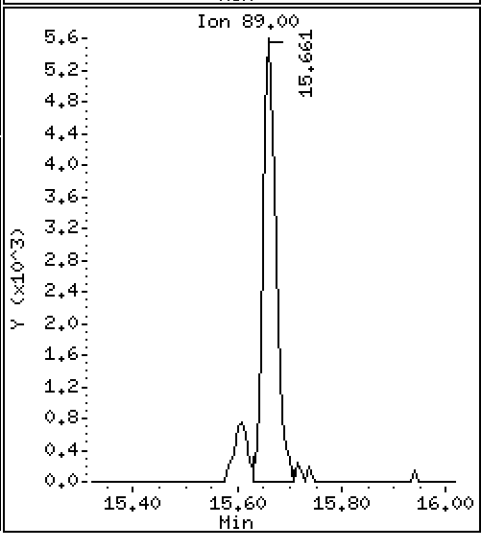


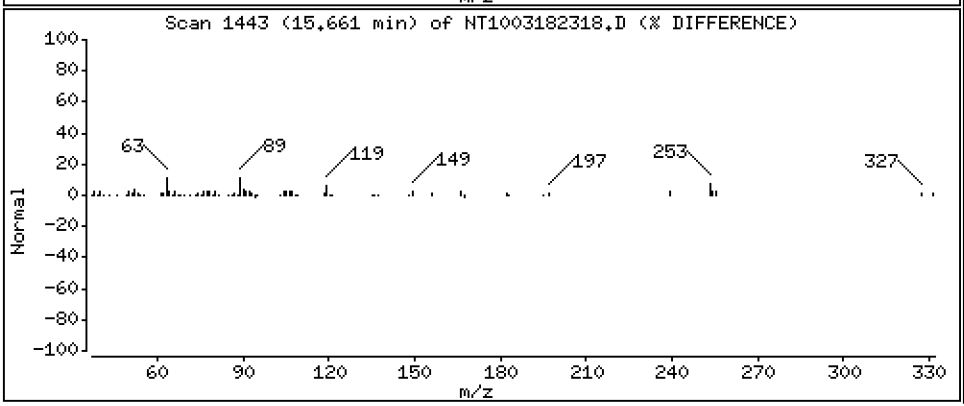












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

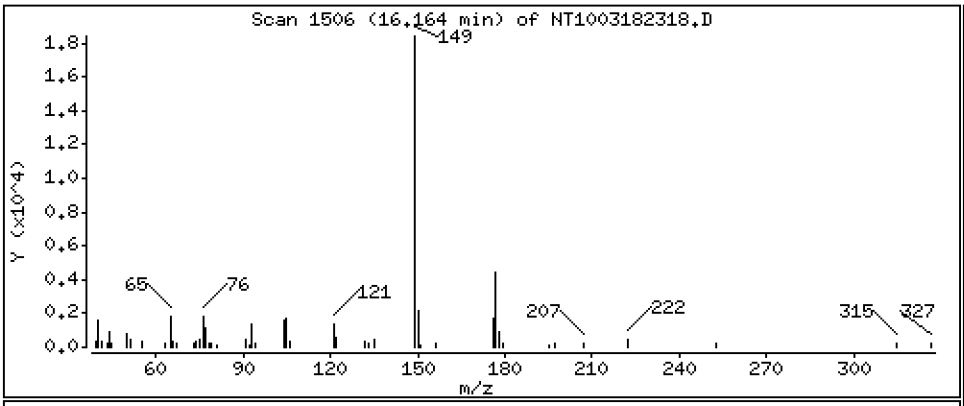
Operator: VTS

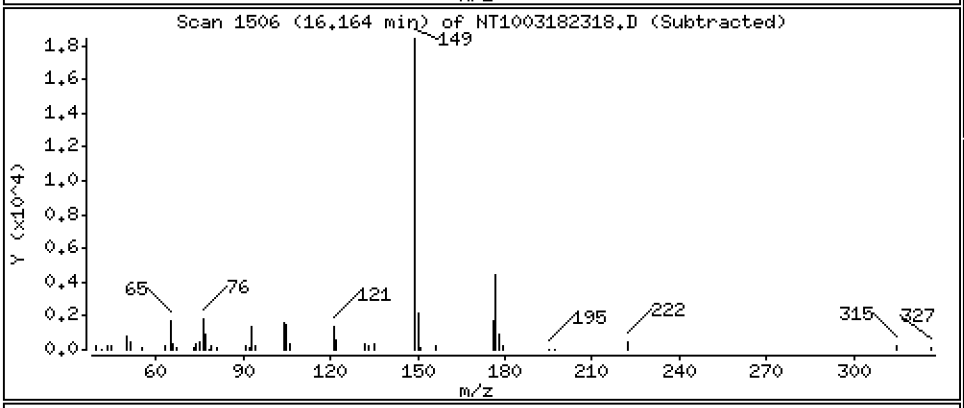
Column phase: ZB-5msi

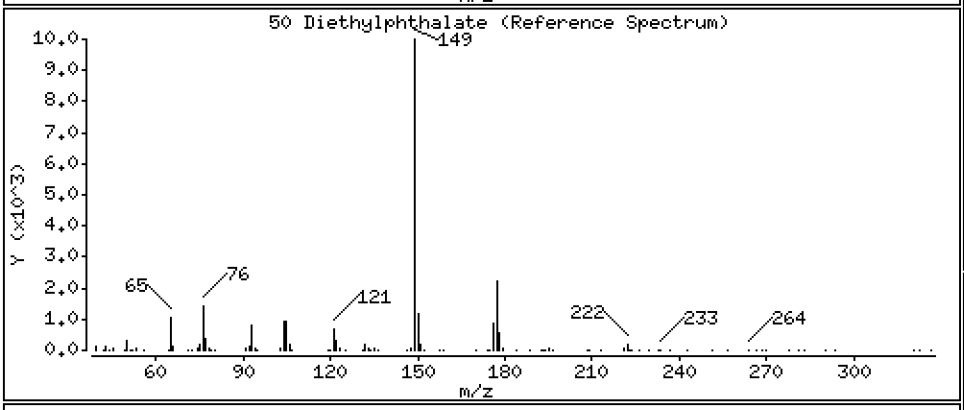
Column diameter: 0.25

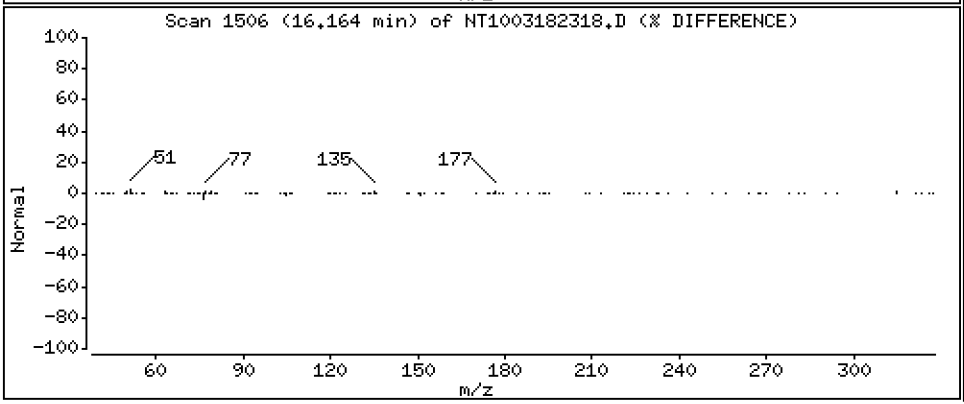
50 Diethylphthalate

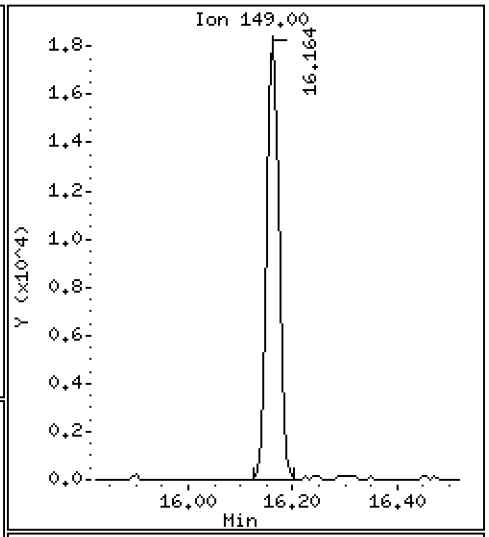
Concentration: 0.2253 ug/mL

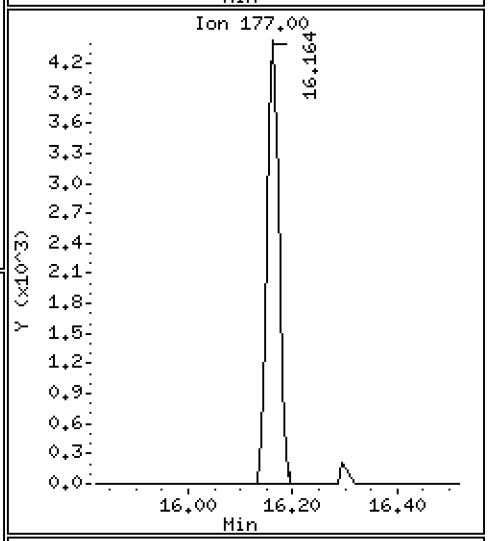


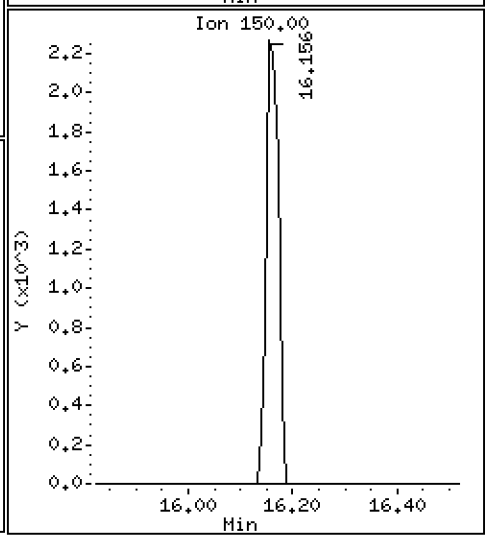












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

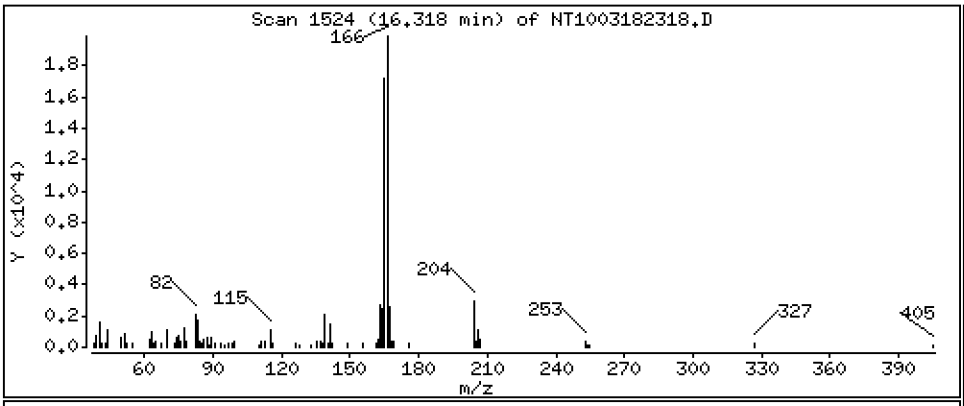
Operator: VTS

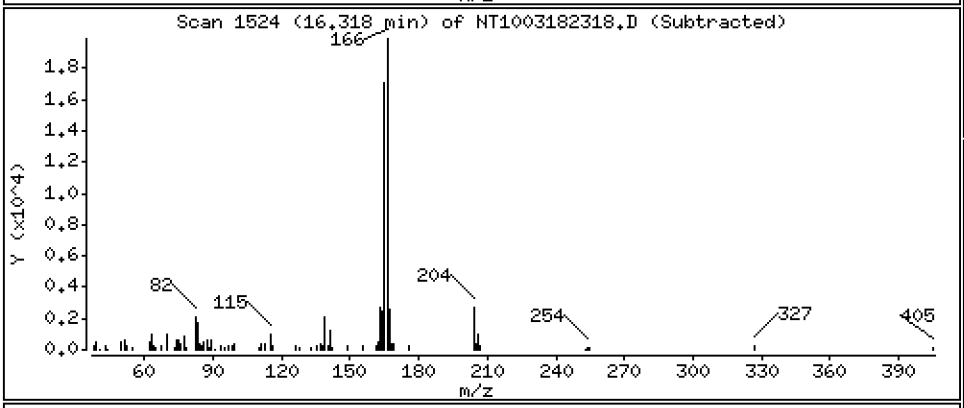
Column phase: ZB-5msi

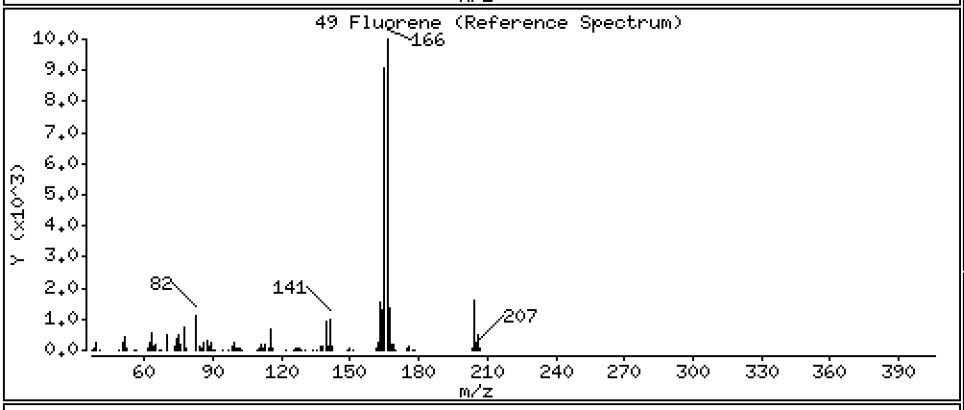
Column diameter: 0.25

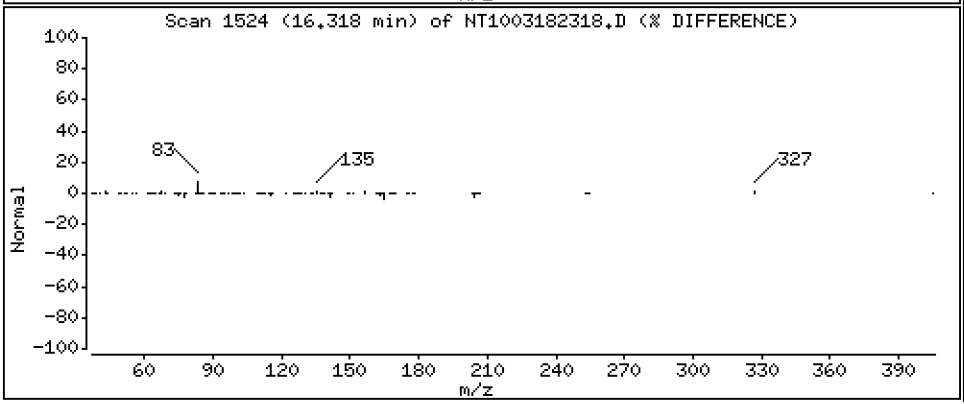
49 Fluorene

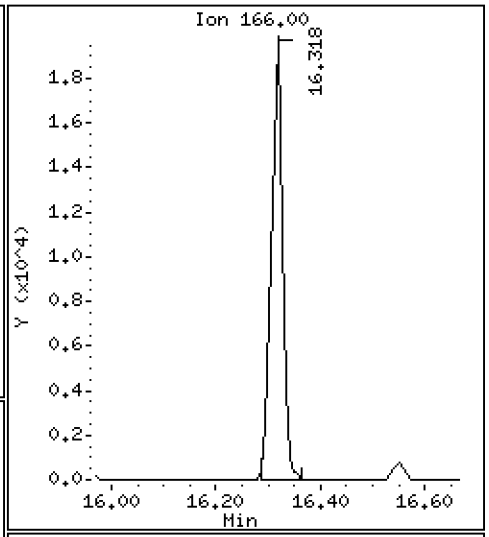
Concentration: 0.1618 ug/mL

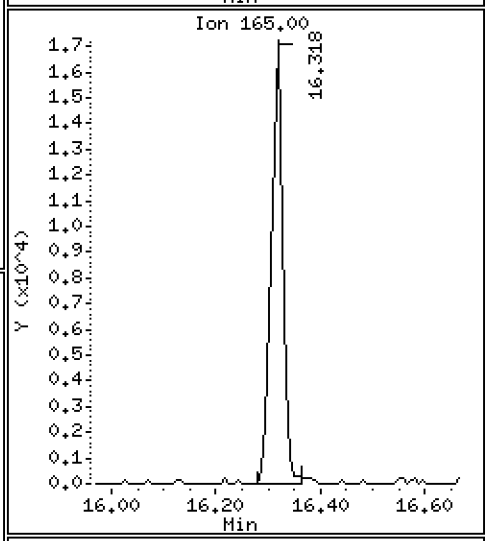


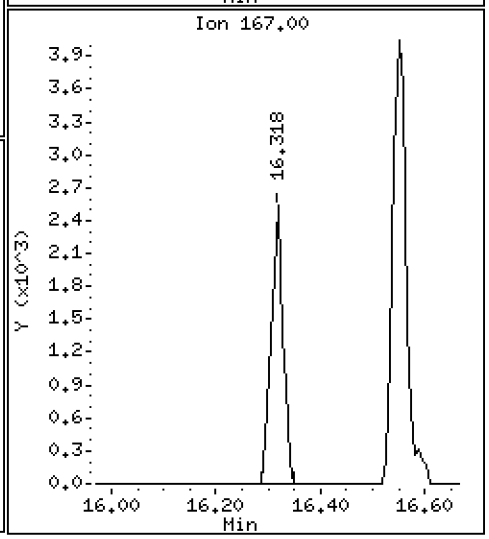












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

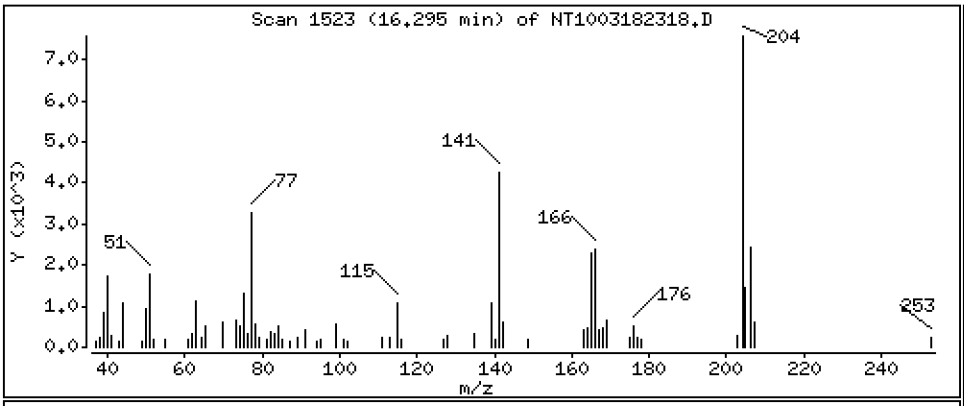
Operator: VTS

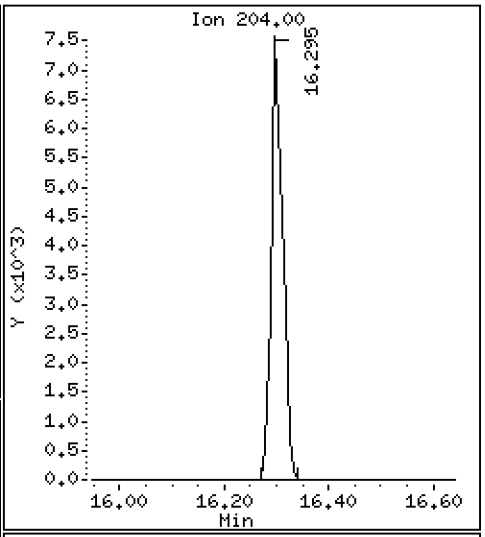
Column phase: ZB-5msi

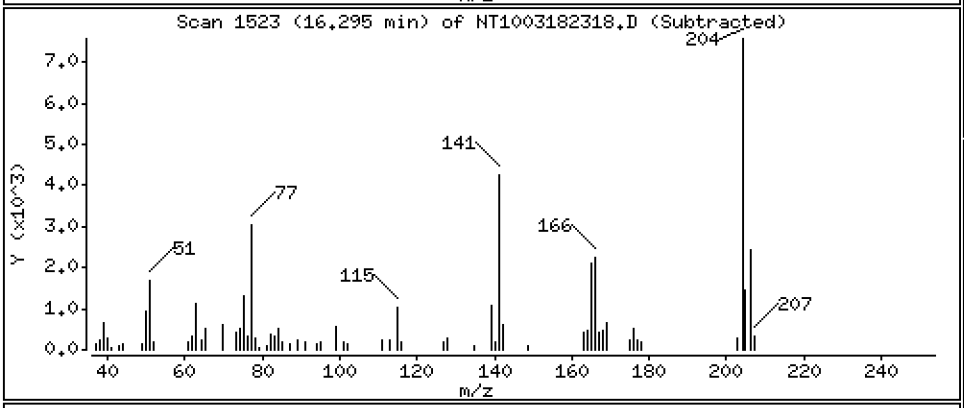
Column diameter: 0.25

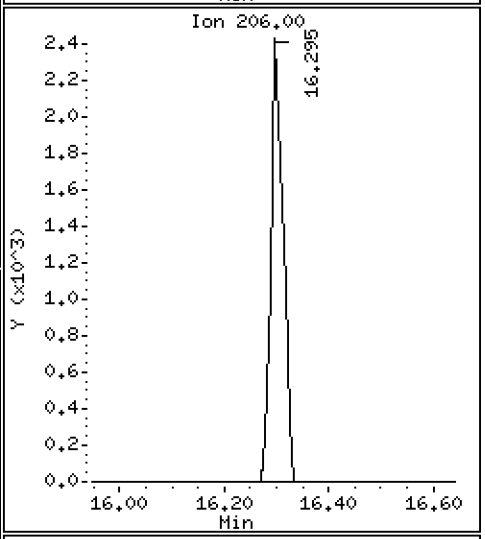
51 4-Chlorophenyl-phenylether

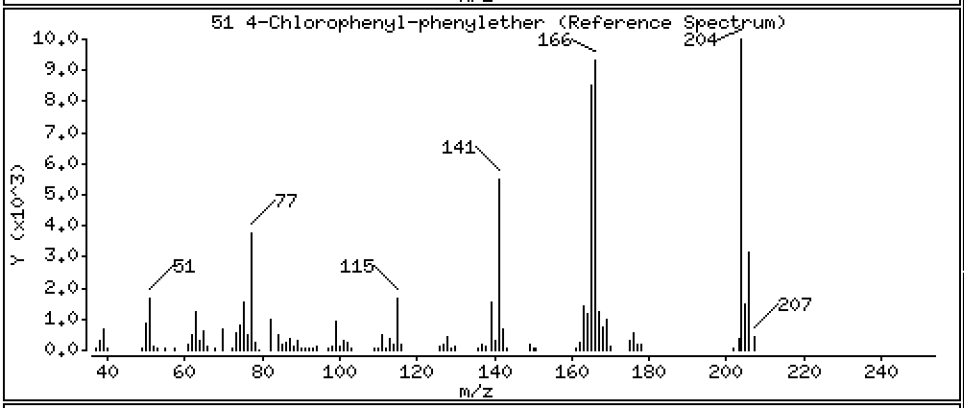
Concentration: 0.1315 ug/mL

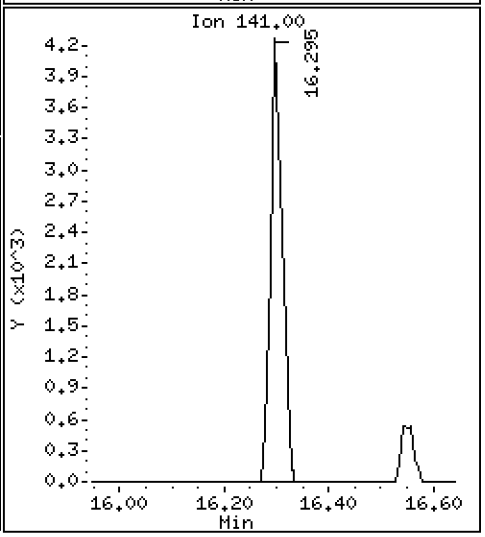


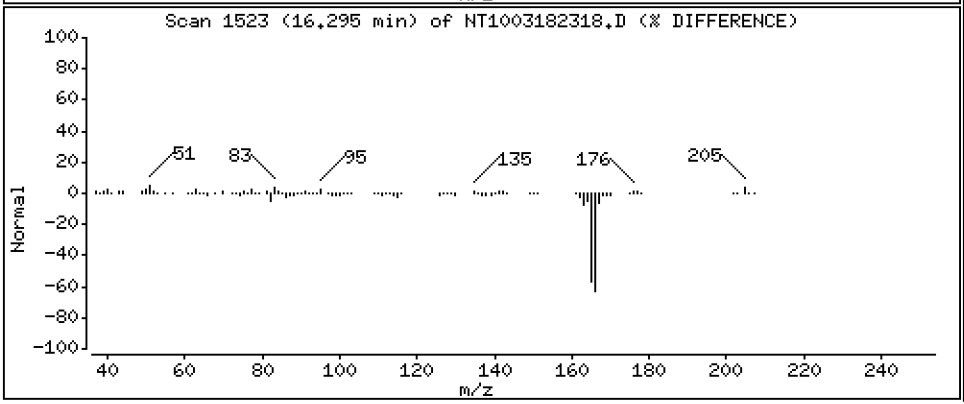












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

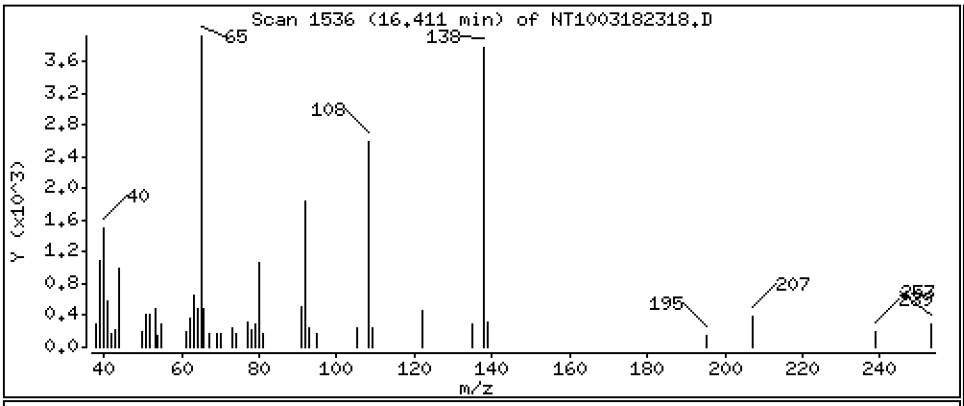
Operator: VTS

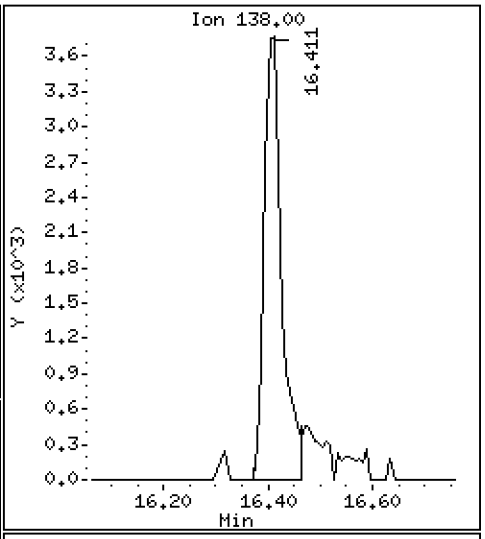
Column phase: ZB-5msi

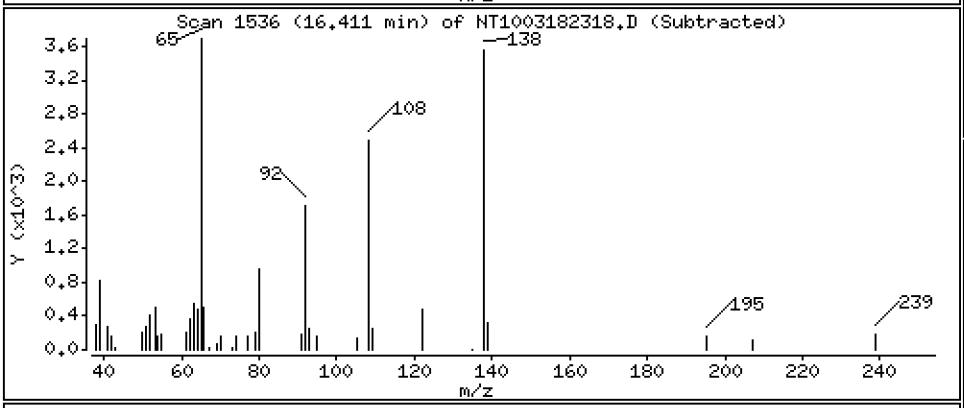
Column diameter: 0.25

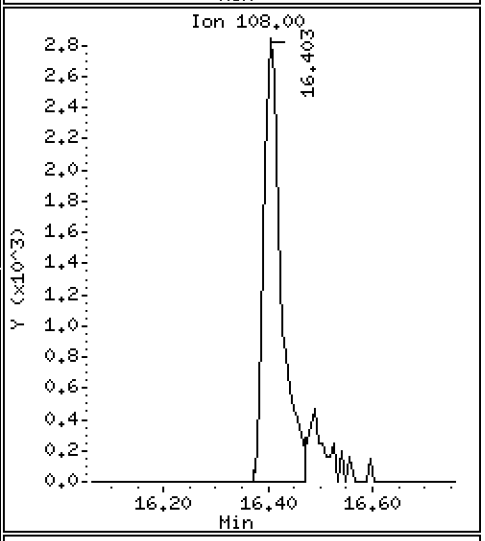
52 4-Nitroaniline

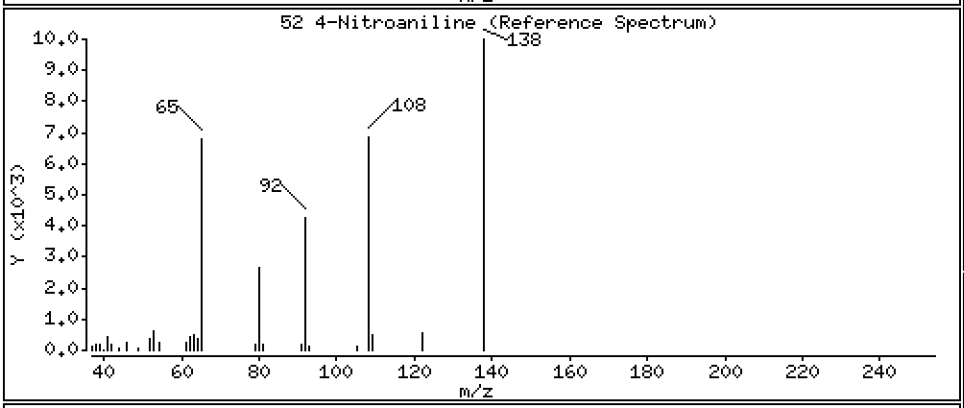
Concentration: 0.3068 ug/mL

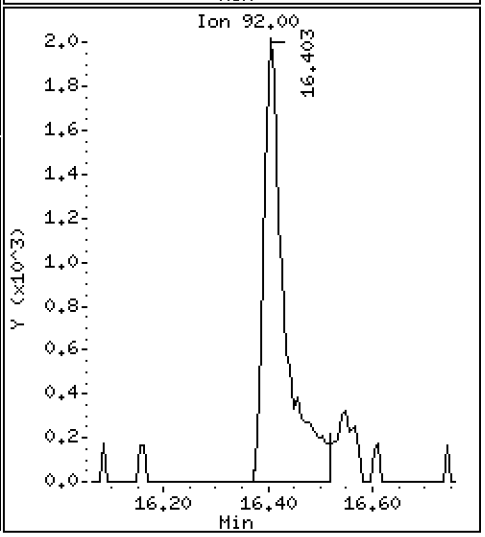


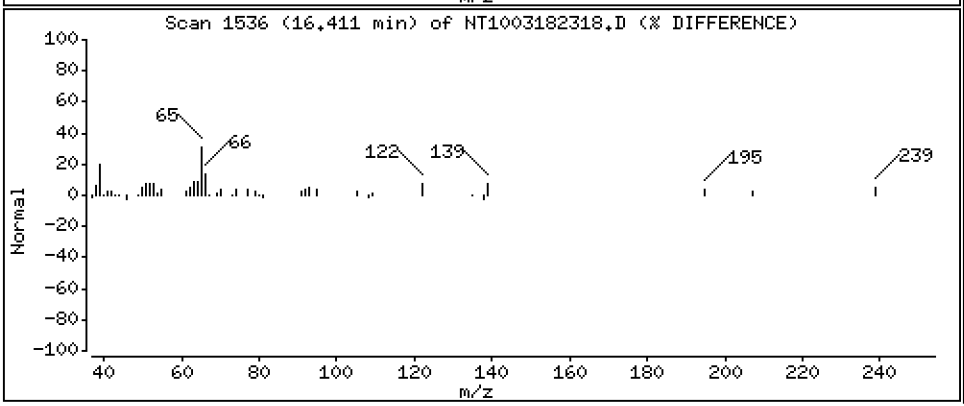












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

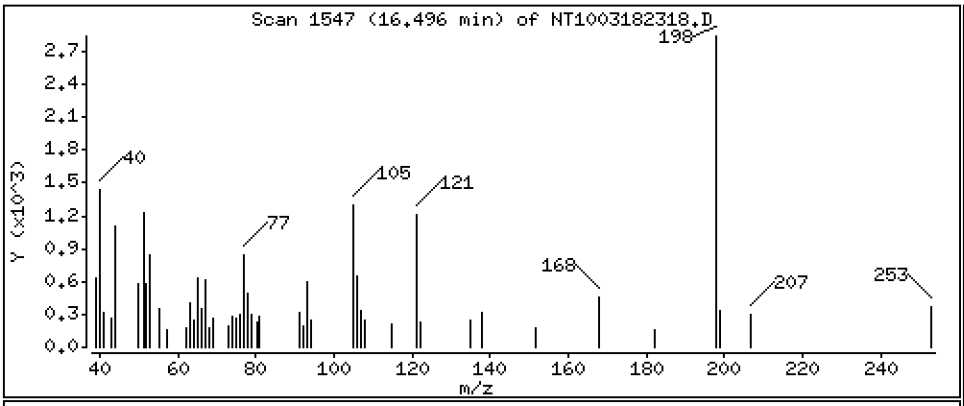
Operator: VTS

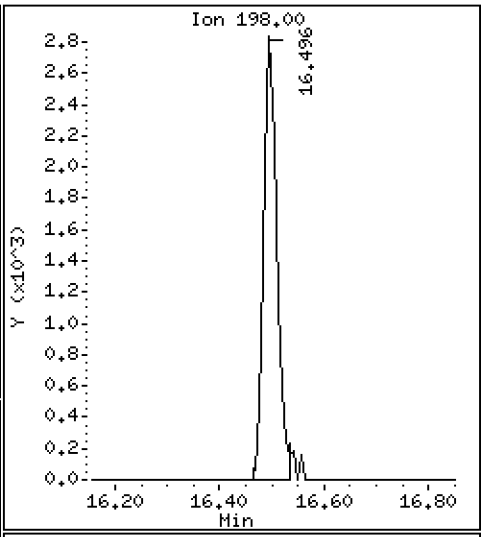
Column phase: ZB-5msi

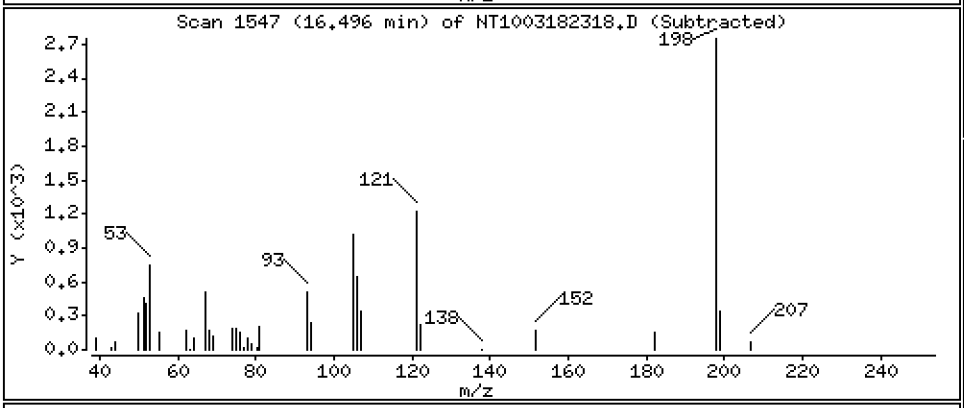
Column diameter: 0.25

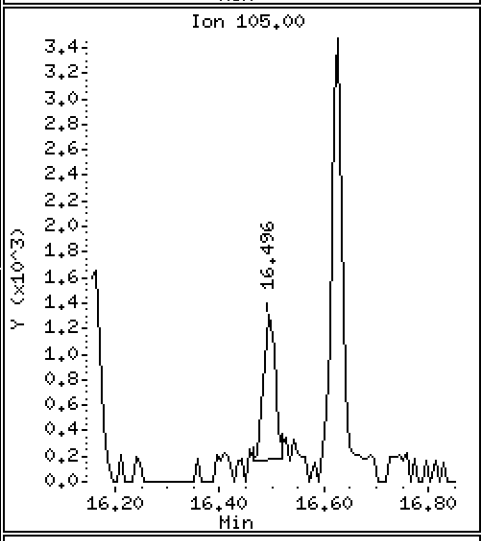
53 4,6-Dinitro-2-methylphenol

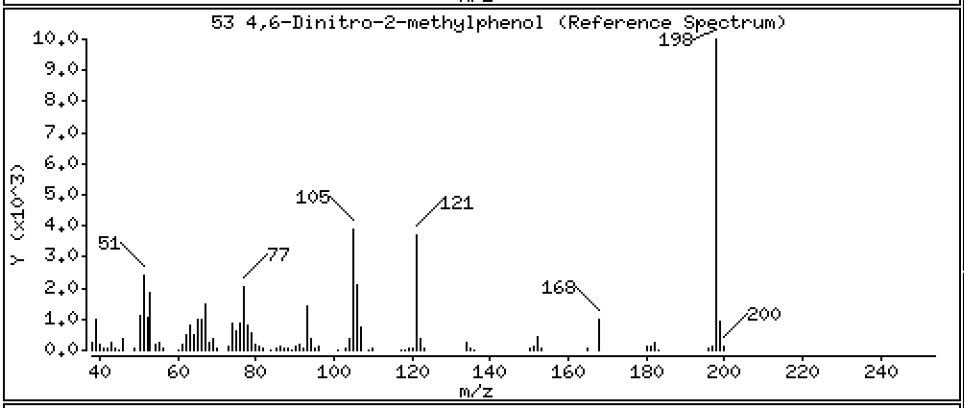
Concentration: 0.2188 ug/mL

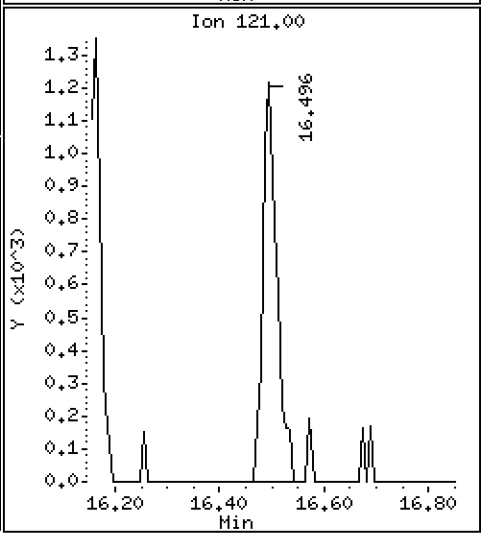


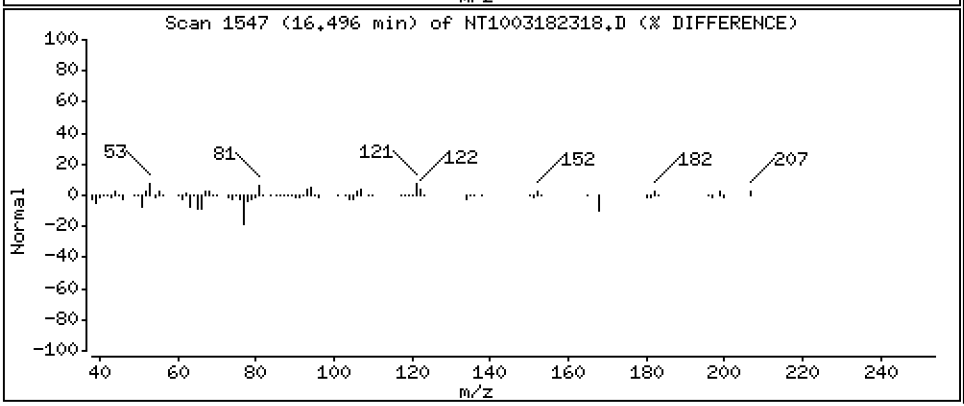












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

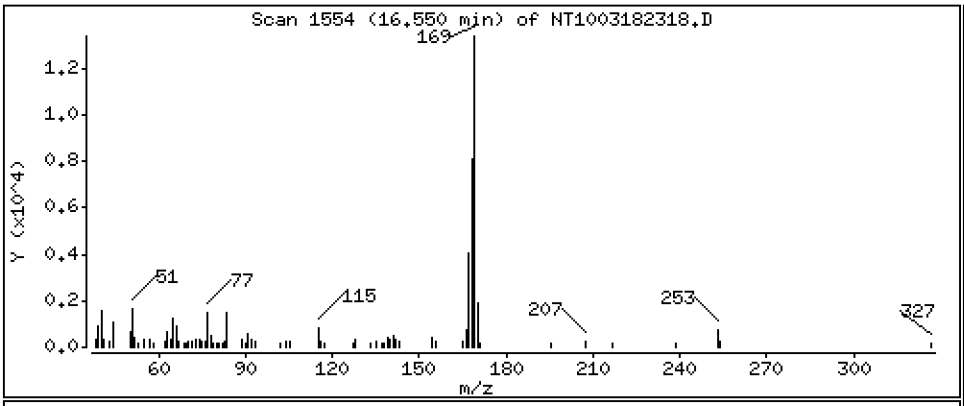
Operator: VTS

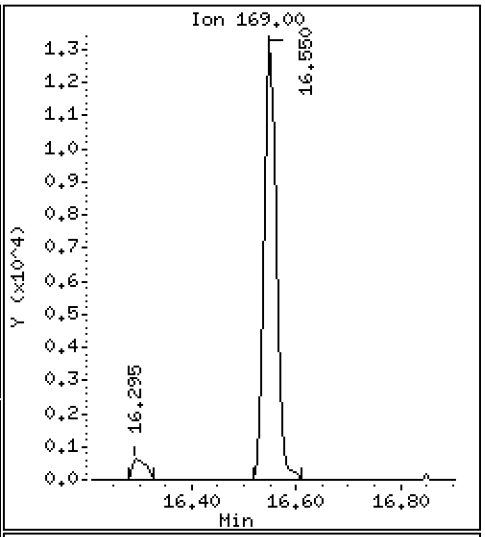
Column phase: ZB-5msi

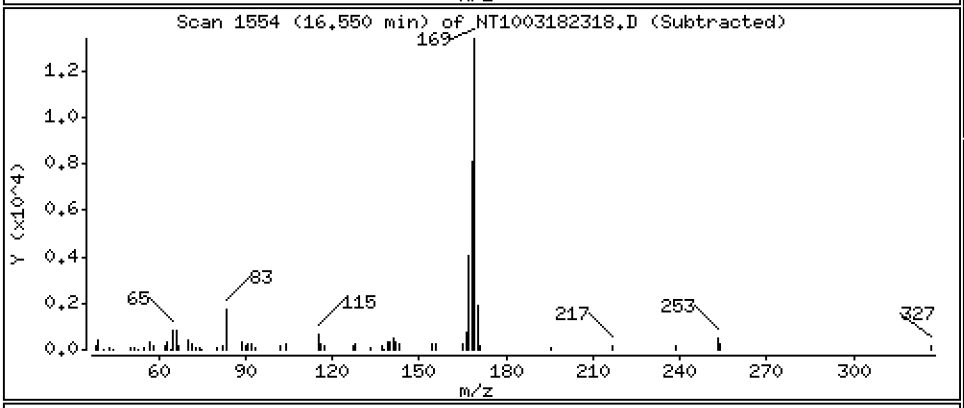
Column diameter: 0.25

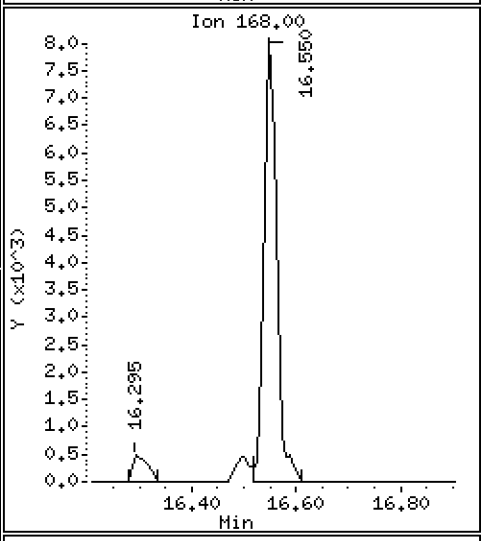
54 N-Nitrosodiphenylamine

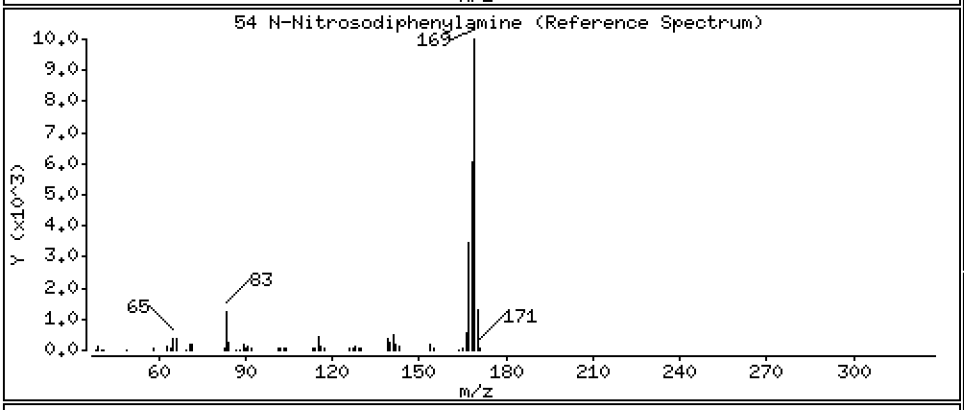
Concentration: 0.2105 ug/mL

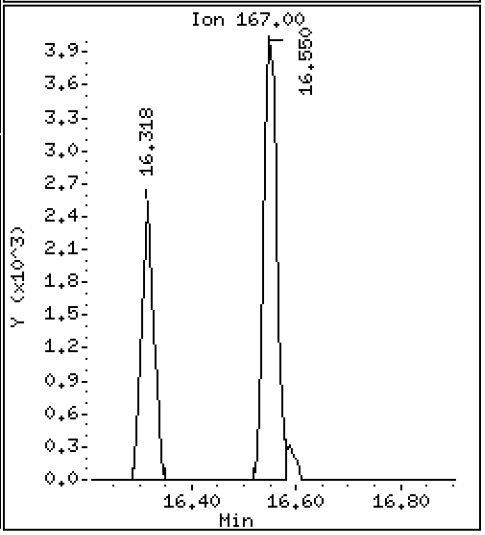


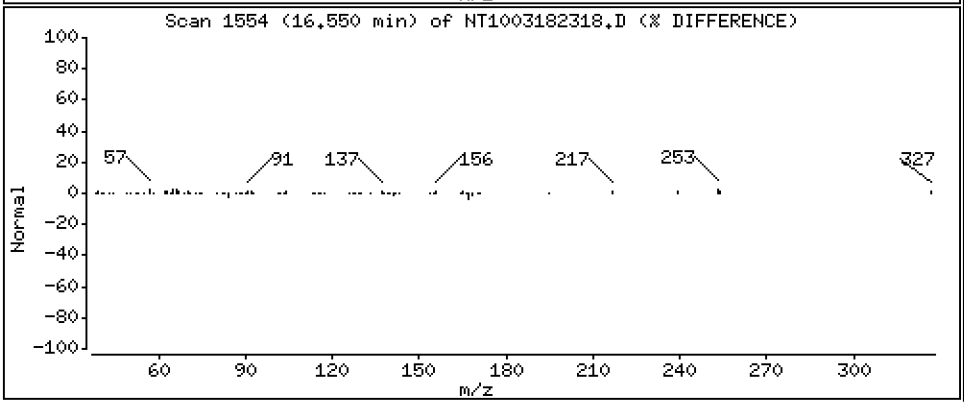












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

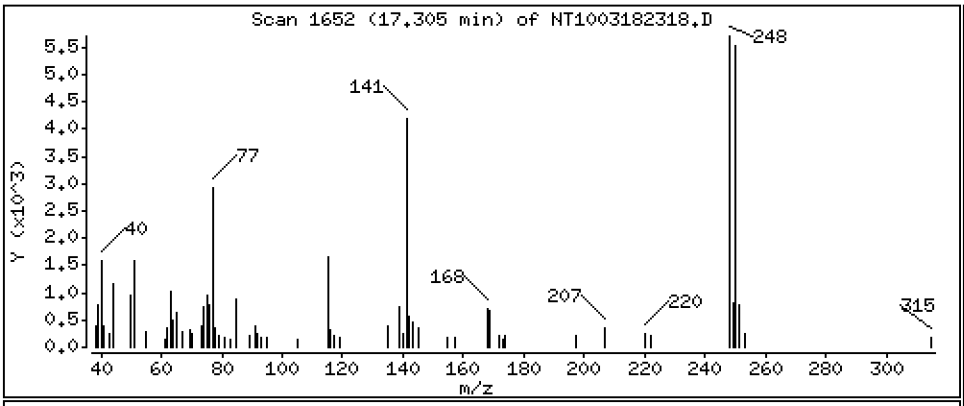
Operator: VTS

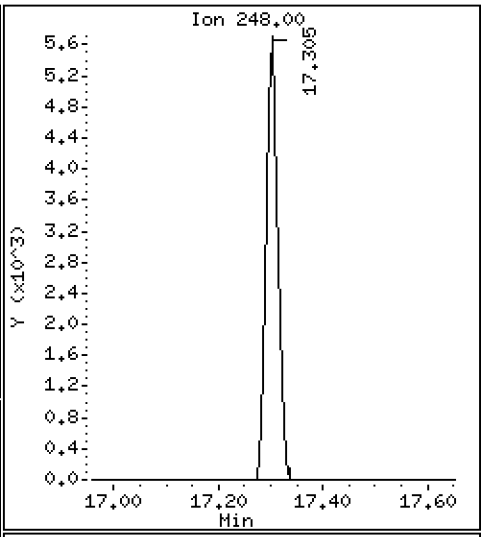
Column phase: ZB-5msi

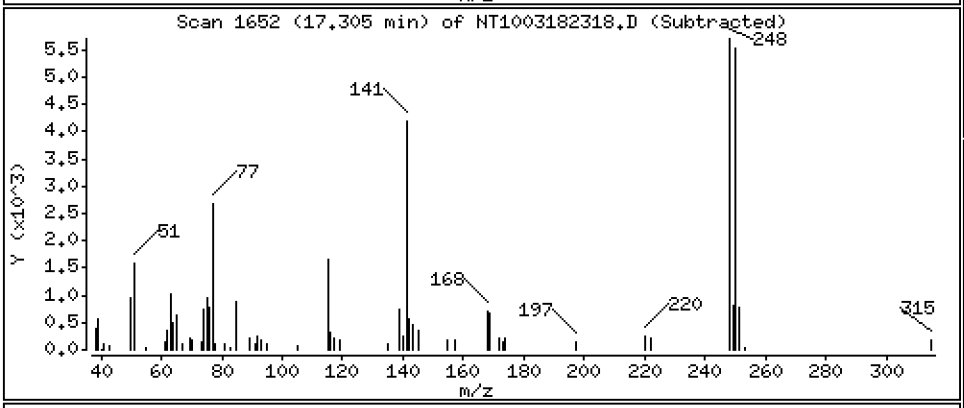
Column diameter: 0.25

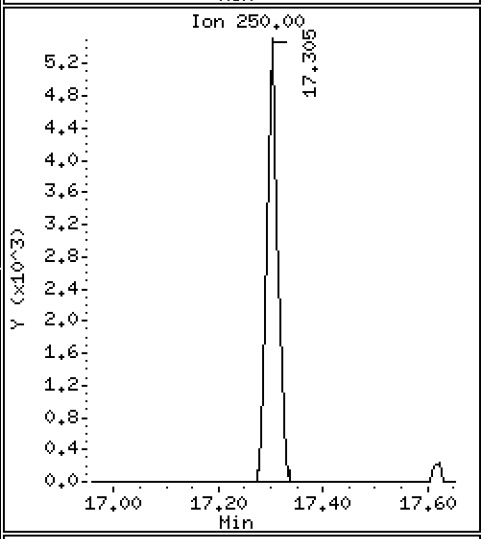
56 4-Bromophenyl-phenylether

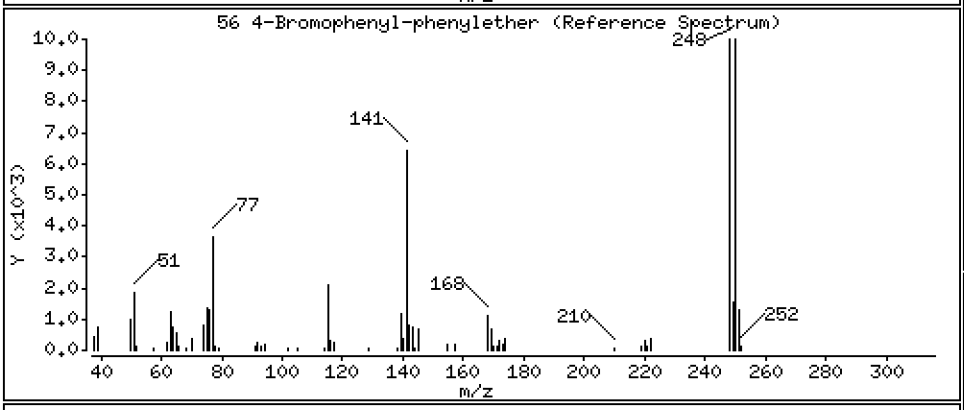
Concentration: 0.2174 ug/mL

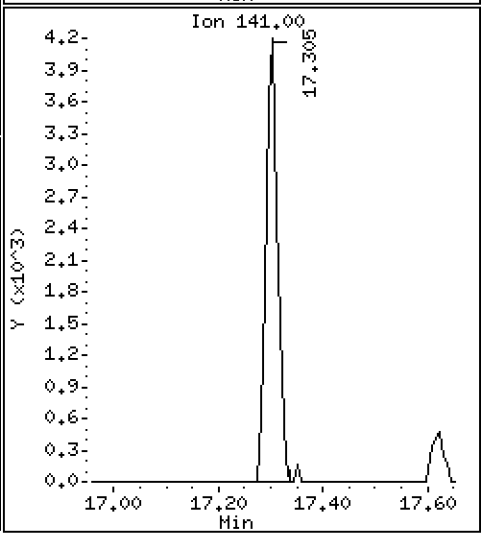


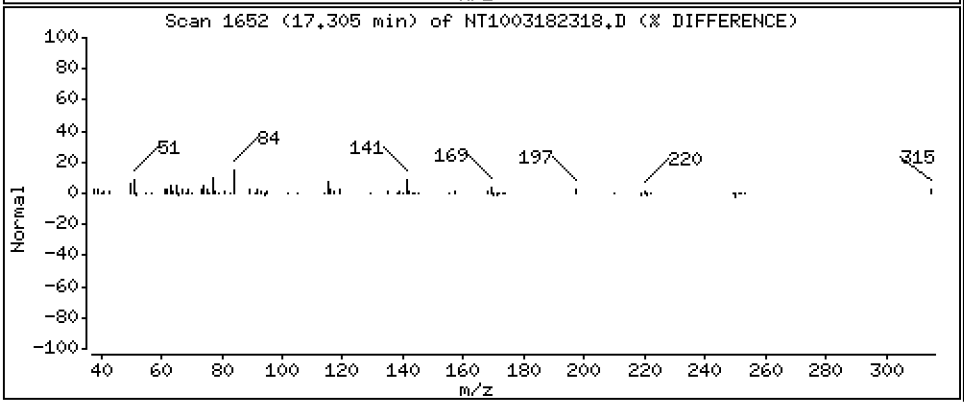












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

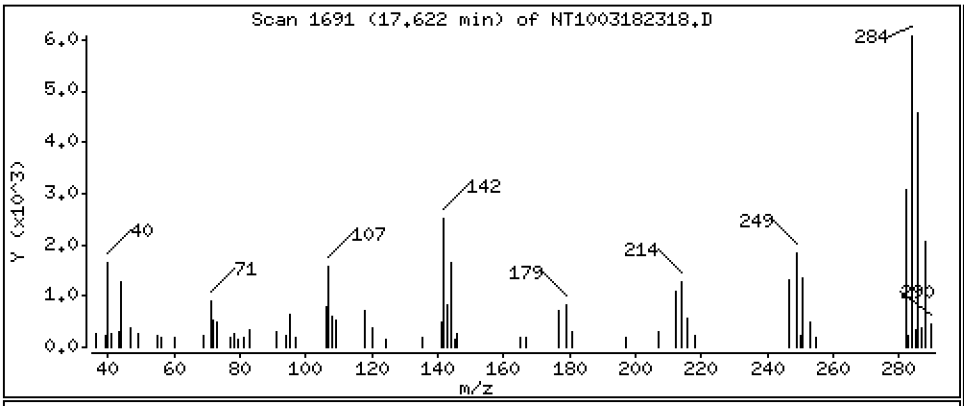
Operator: VTS

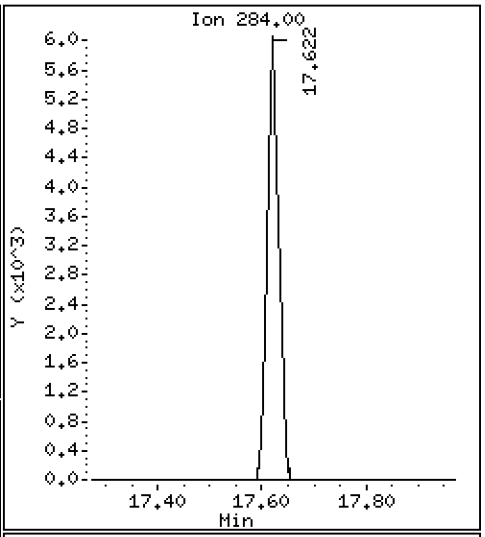
Column phase: ZB-5msi

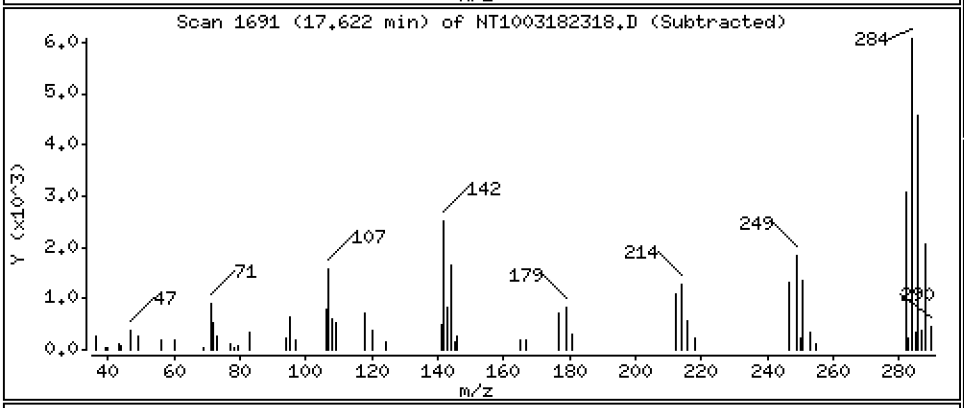
Column diameter: 0.25

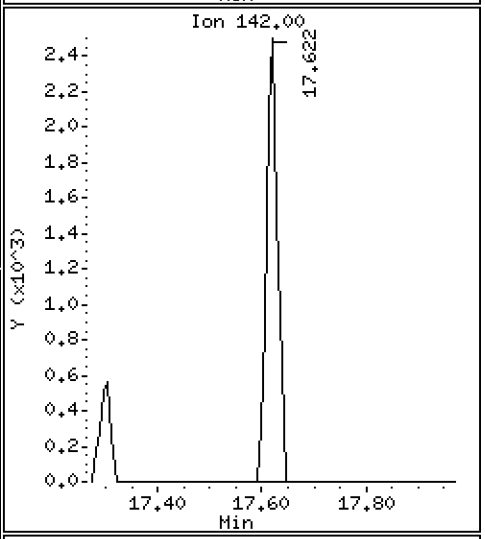
57 Hexachlorobenzene

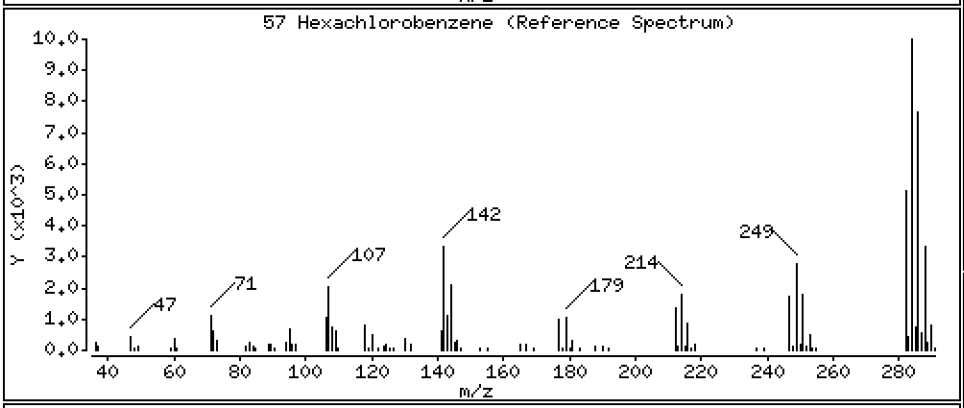
Concentration: 0.2168 ug/mL

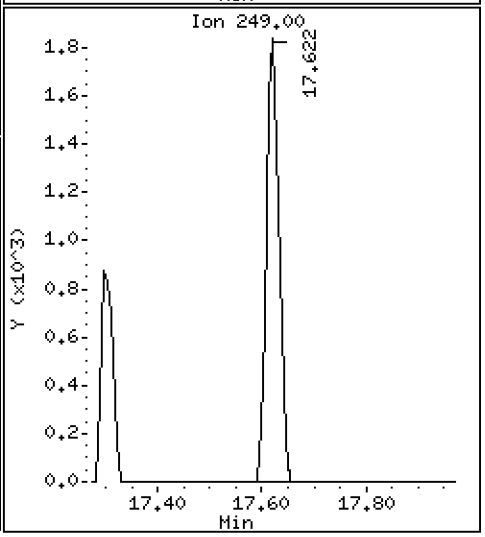


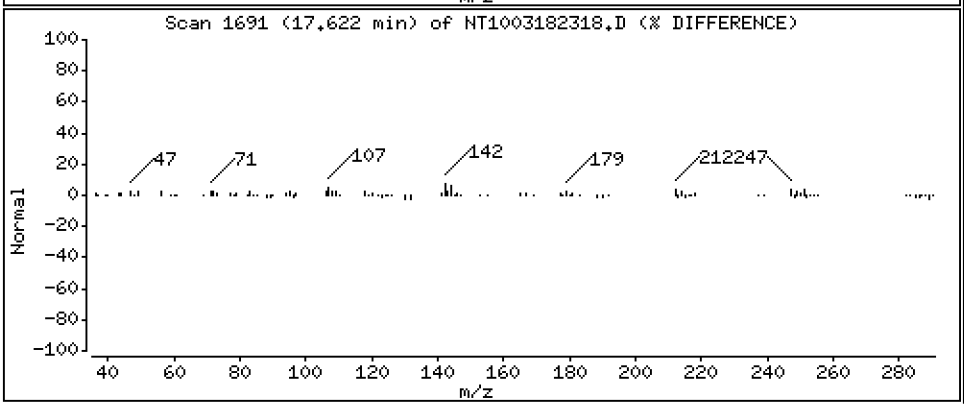












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

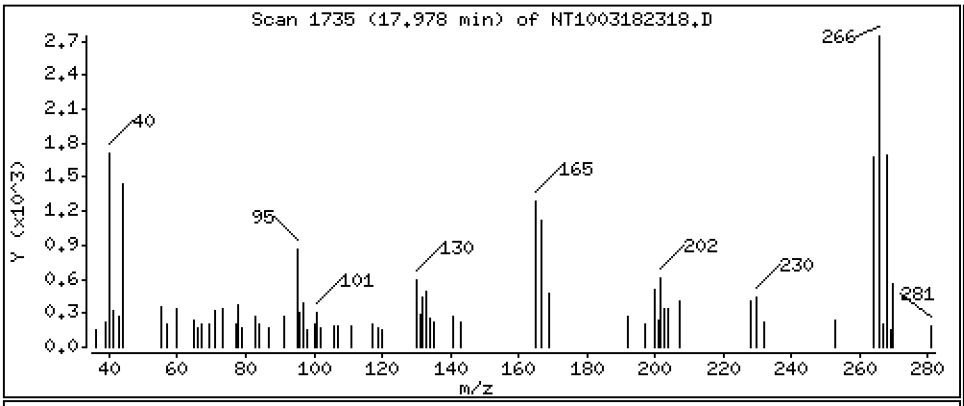
Operator: VTS

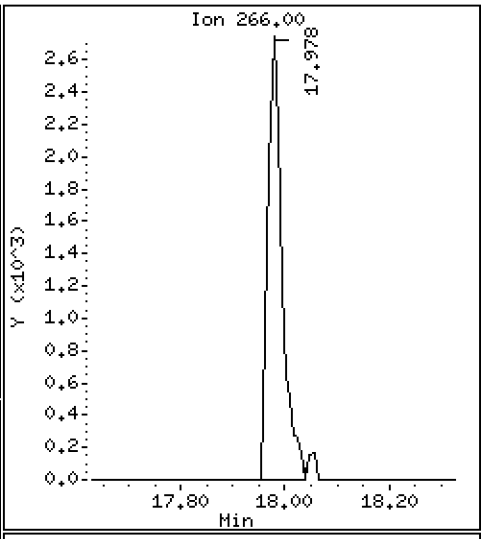
Column phase: ZB-5msi

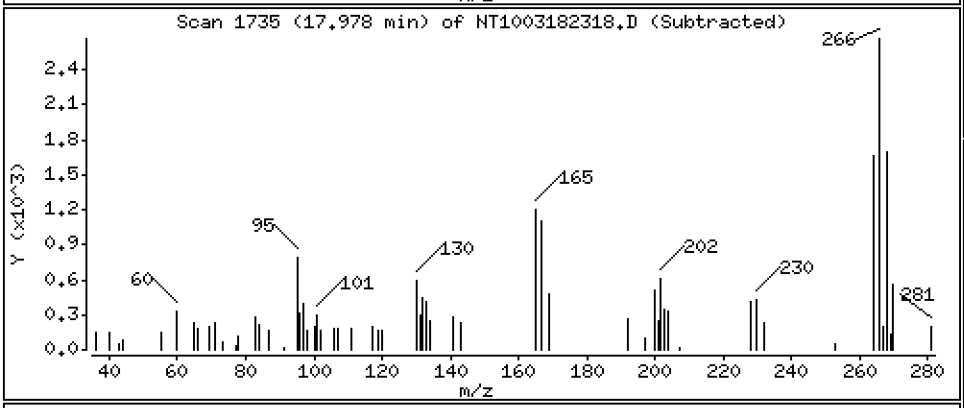
Column diameter: 0.25

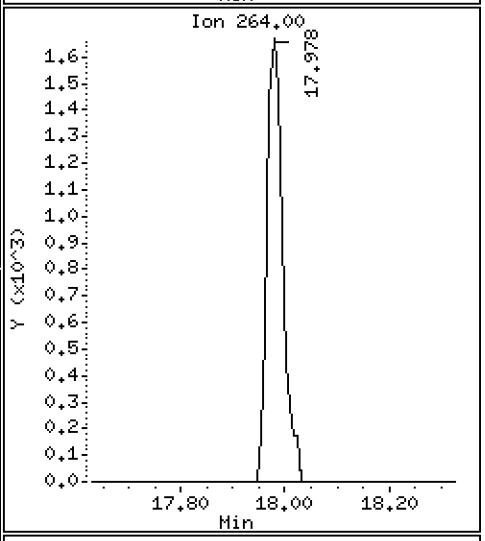
58 Pentachlorophenol

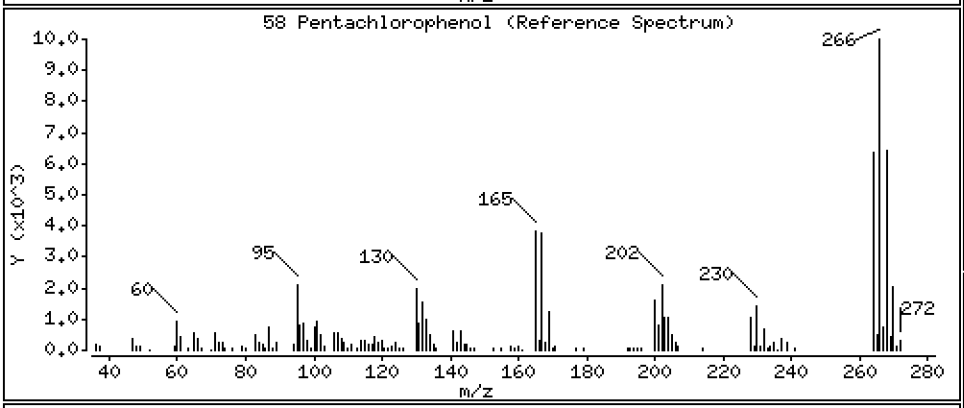
Concentration: 0.2025 ug/mL

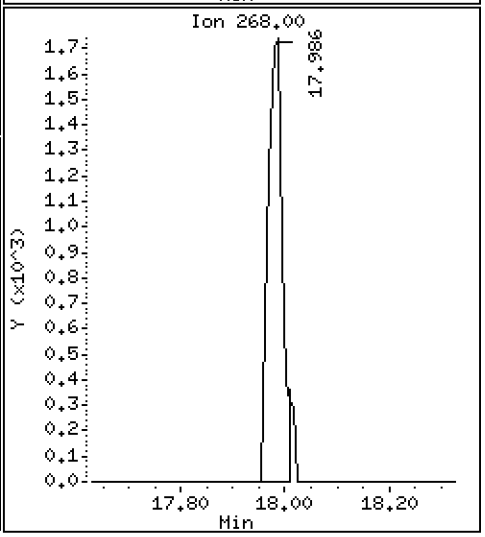


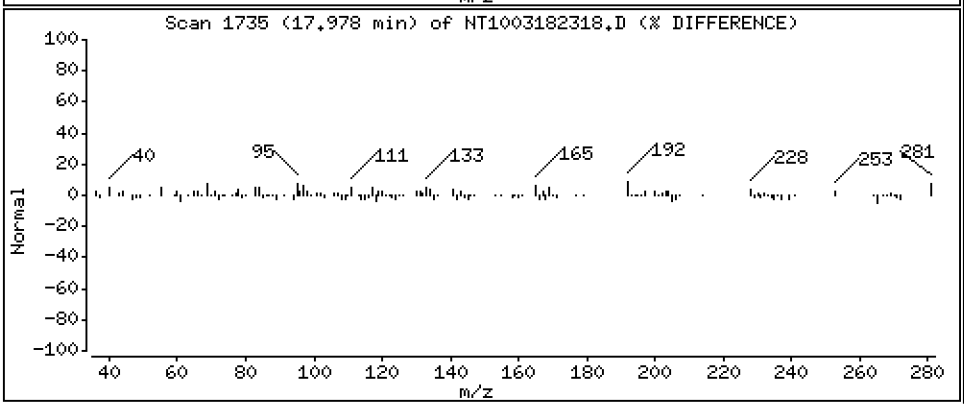












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

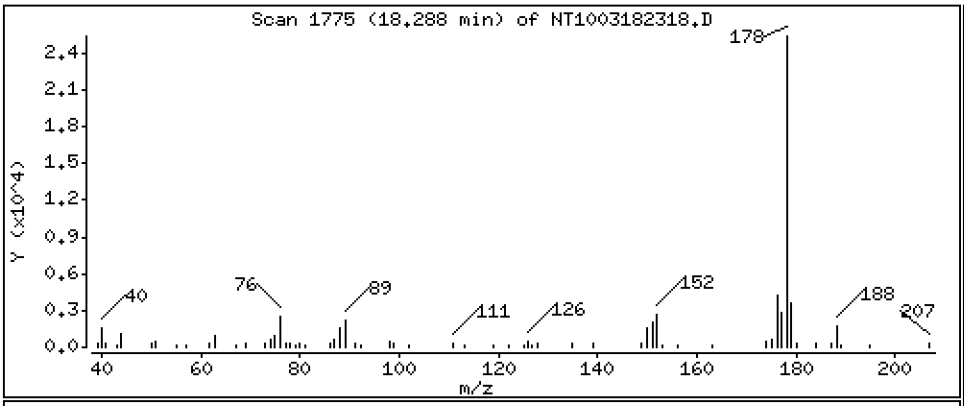
Operator: VTS

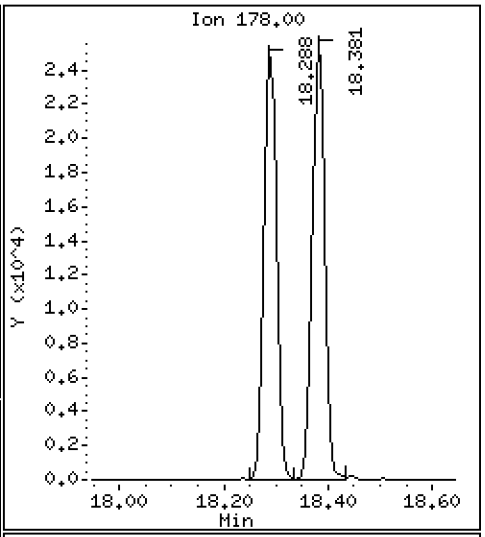
Column phase: ZB-5msi

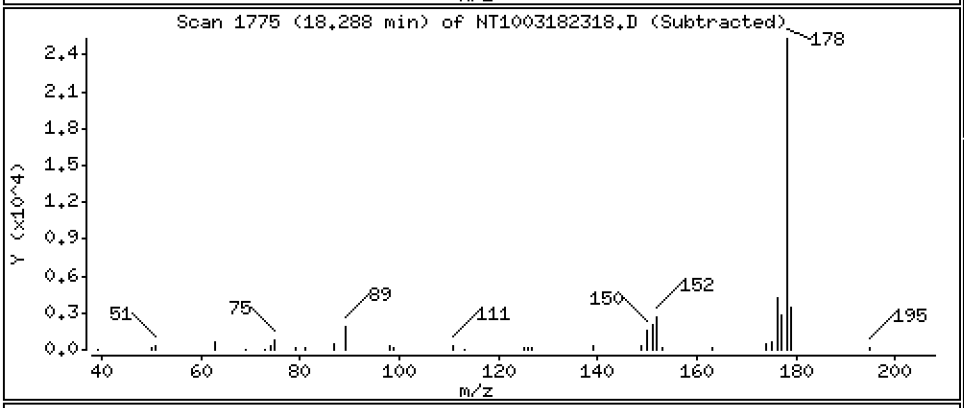
Column diameter: 0.25

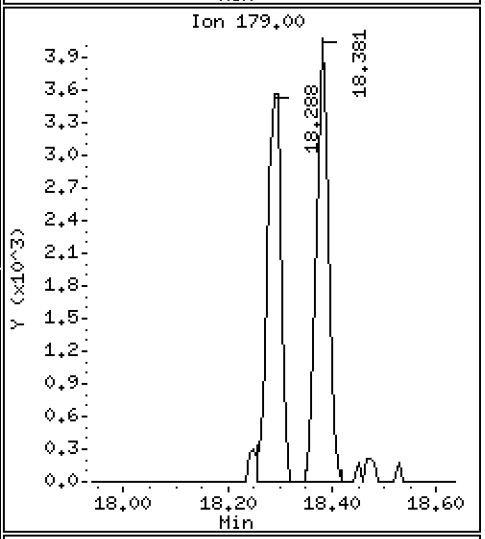
60 Phenanthrene

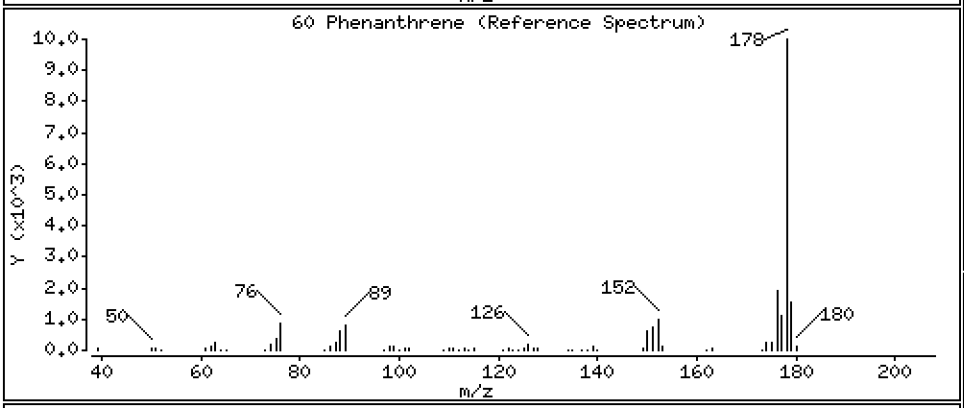
Concentration: 0.2052 ug/mL

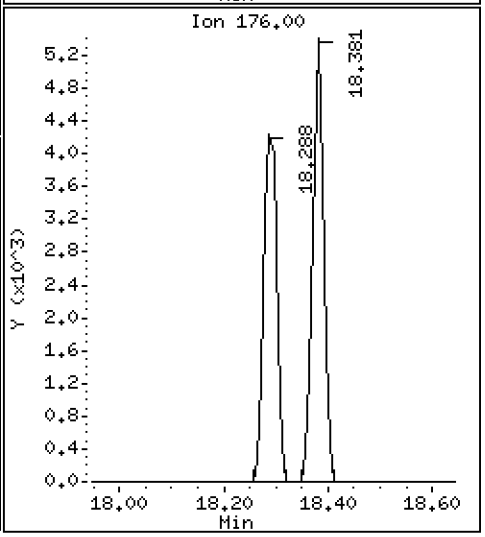


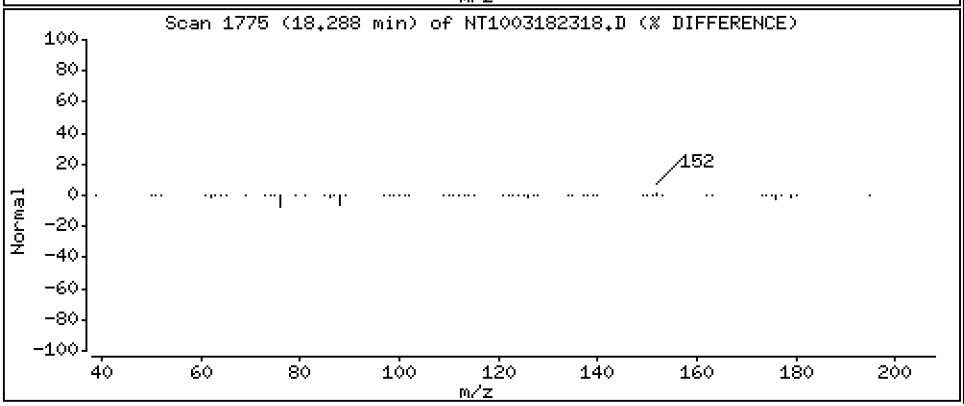












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

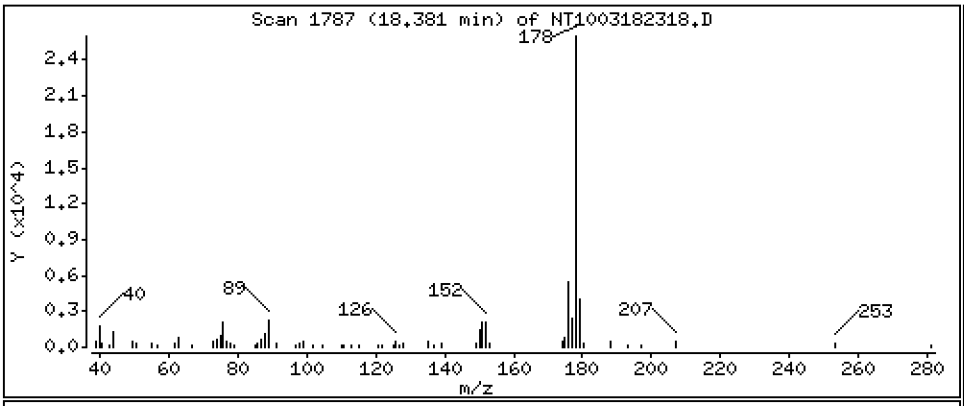
Operator: VTS

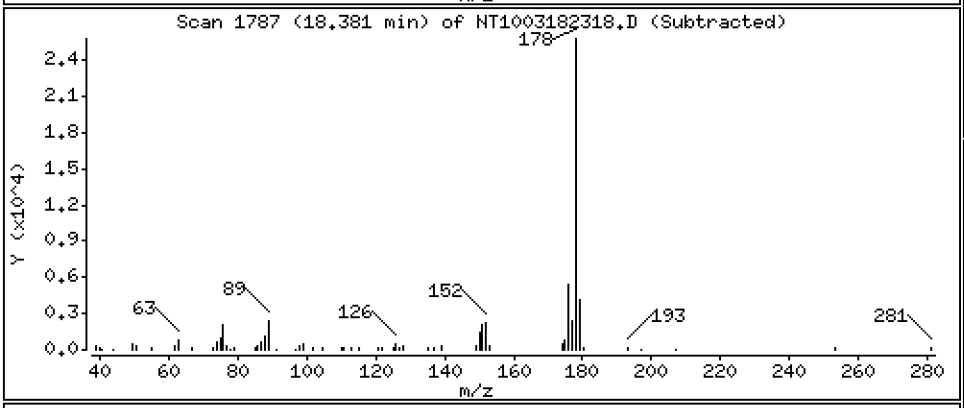
Column phase: ZB-5msi

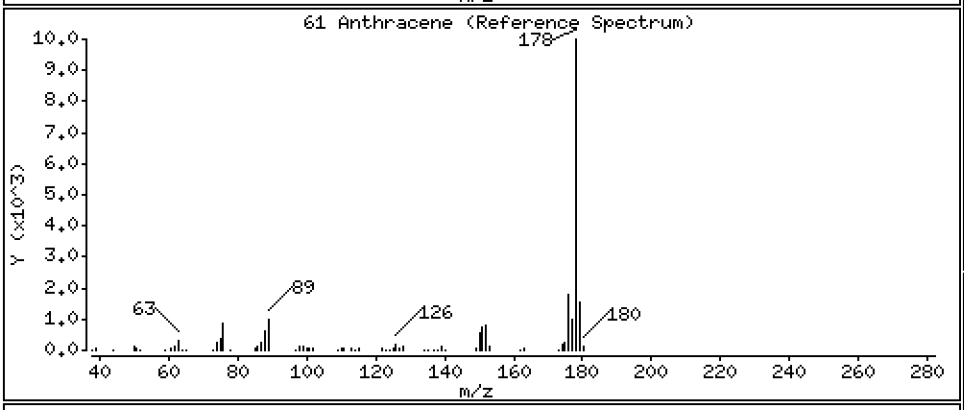
Column diameter: 0.25

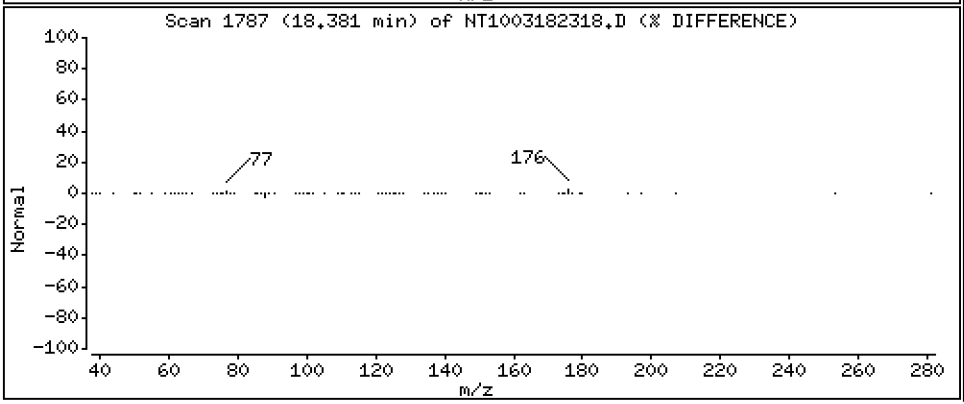
61 Anthracene

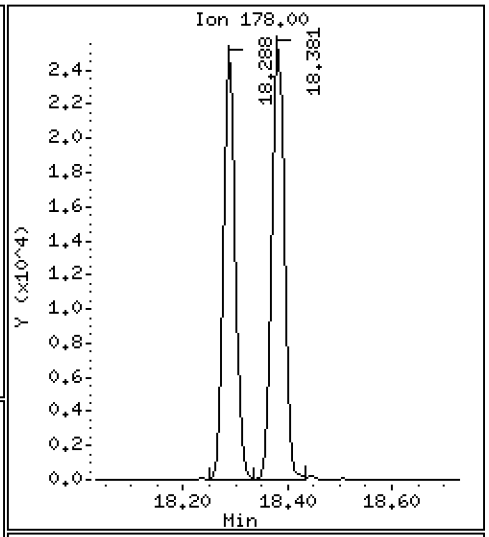
Concentration: 0.2162 ug/mL

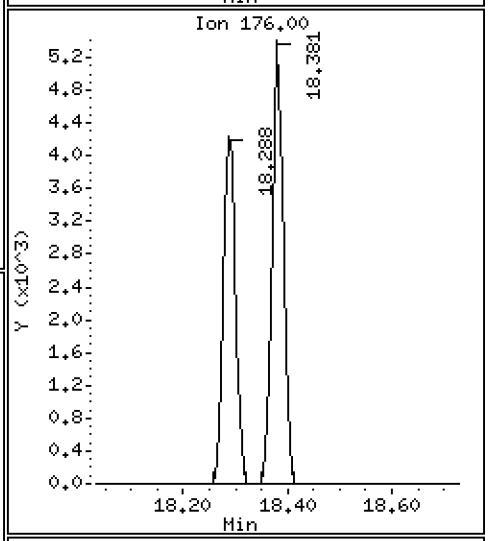


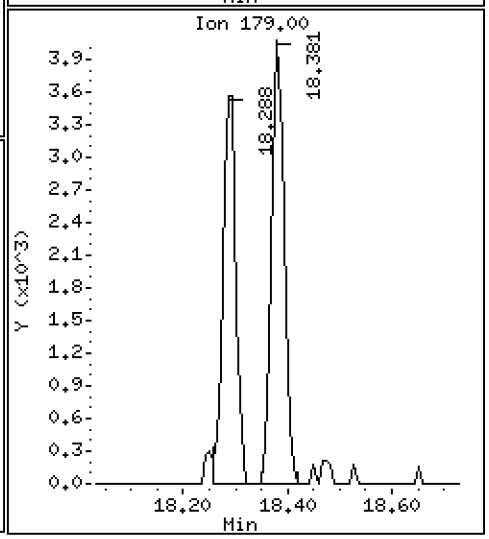












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

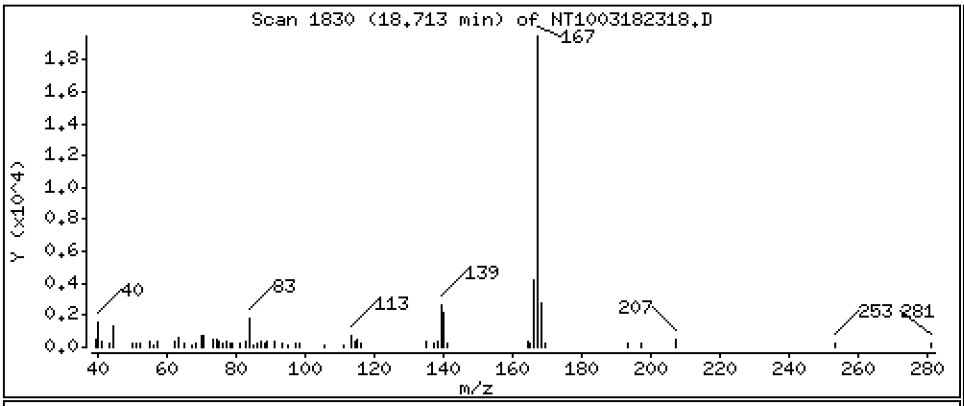
Operator: VTS

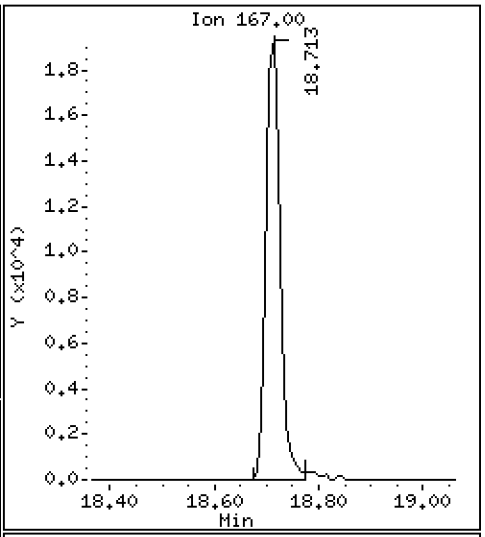
Column phase: ZB-5msi

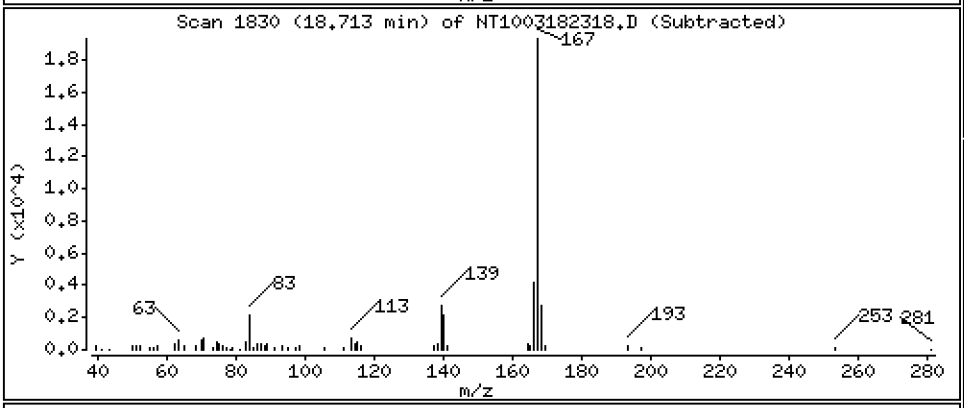
Column diameter: 0.25

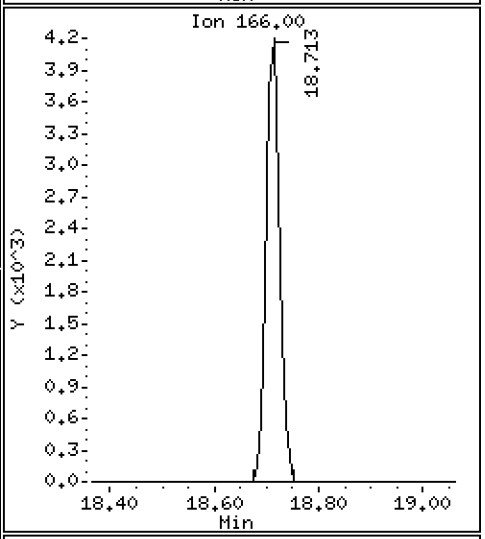
62 Carbazole

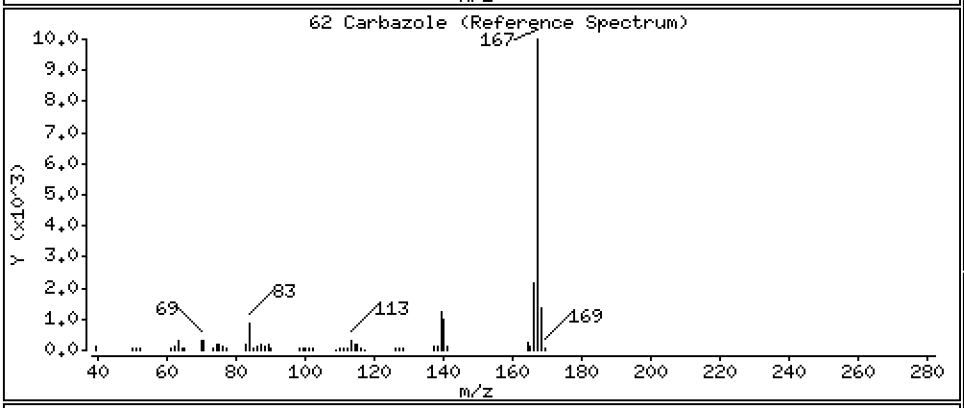
Concentration: 0.2088 ug/mL

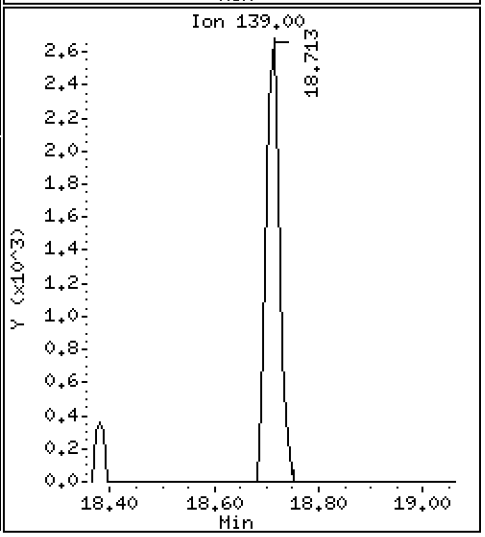


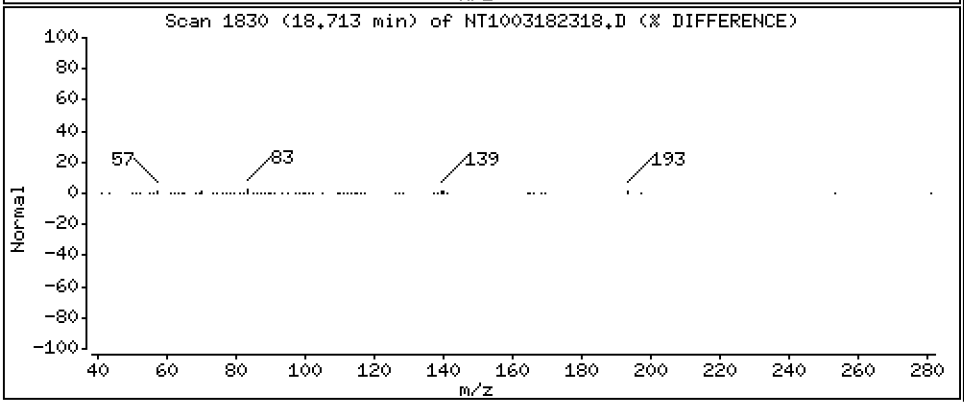












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

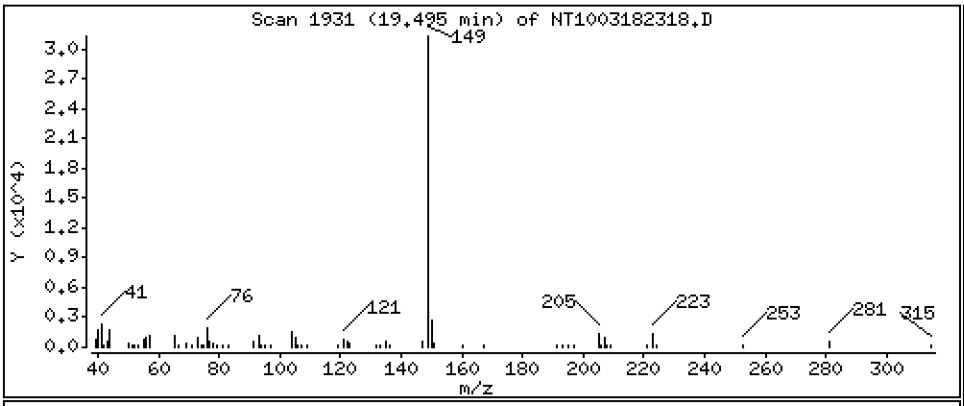
Operator: VTS

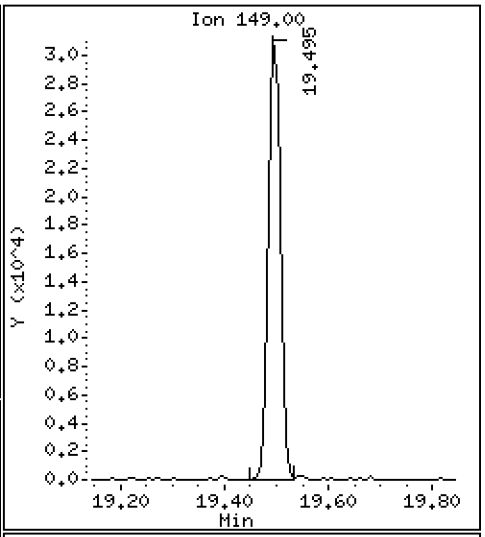
Column phase: ZB-5msi

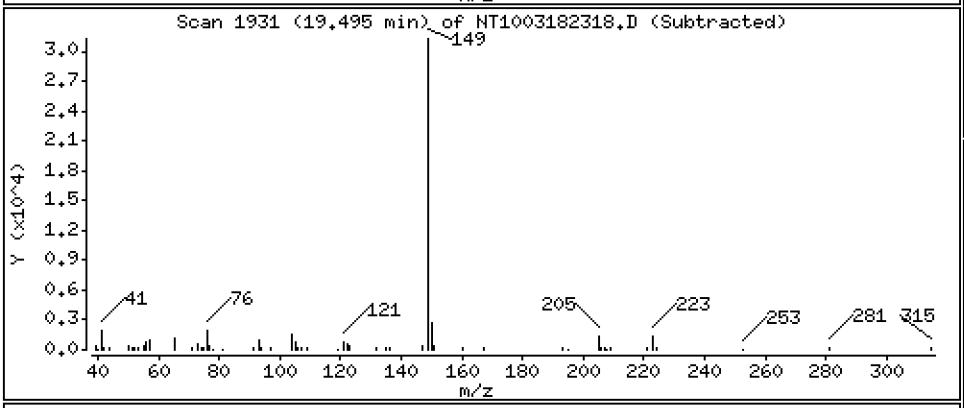
Column diameter: 0.25

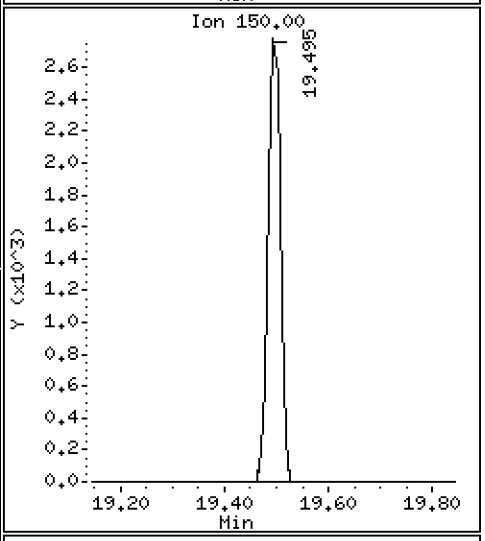
63 Di-n-butylphthalate

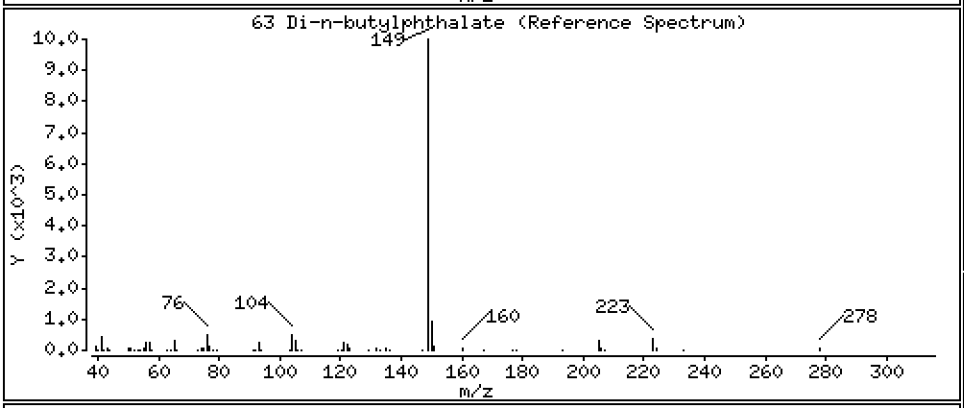
Concentration: 0.2103 ug/mL

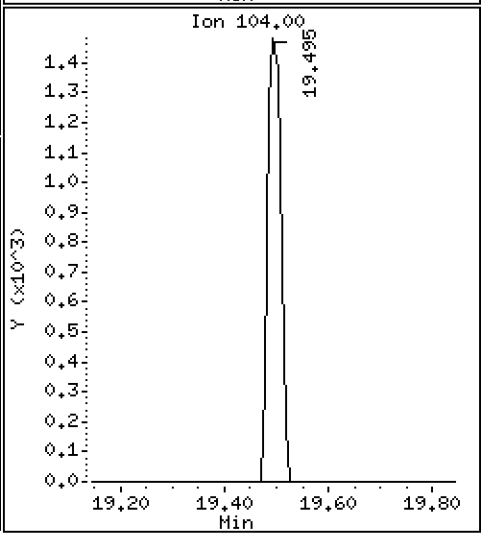


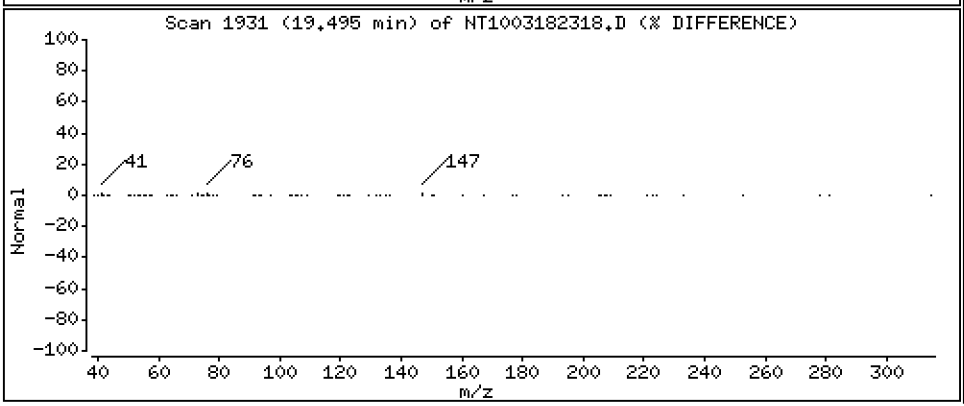












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

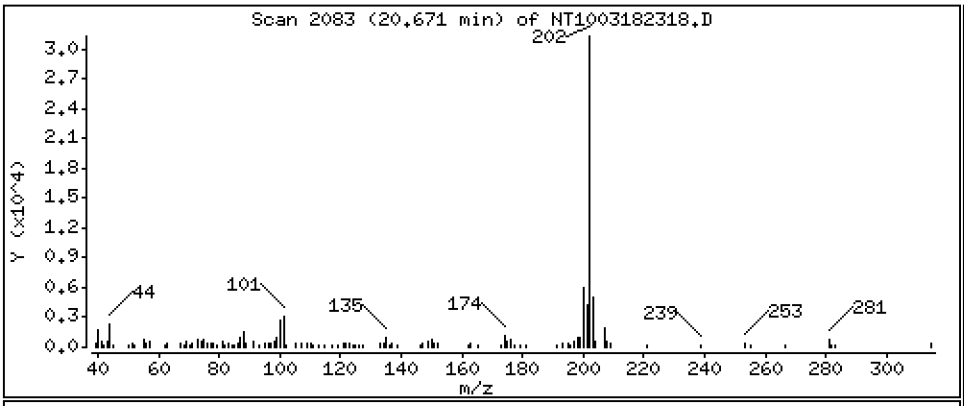
Operator: VTS

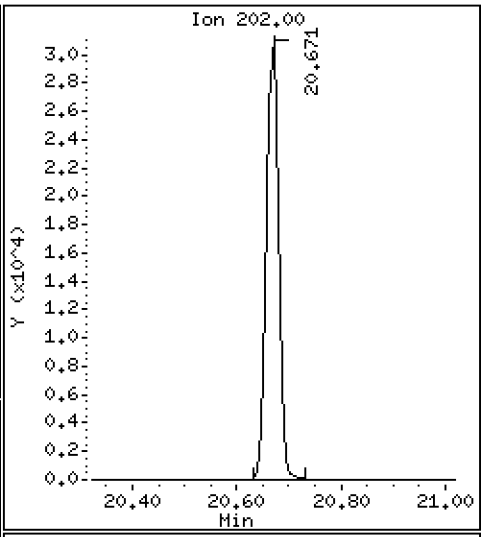
Column phase: ZB-5msi

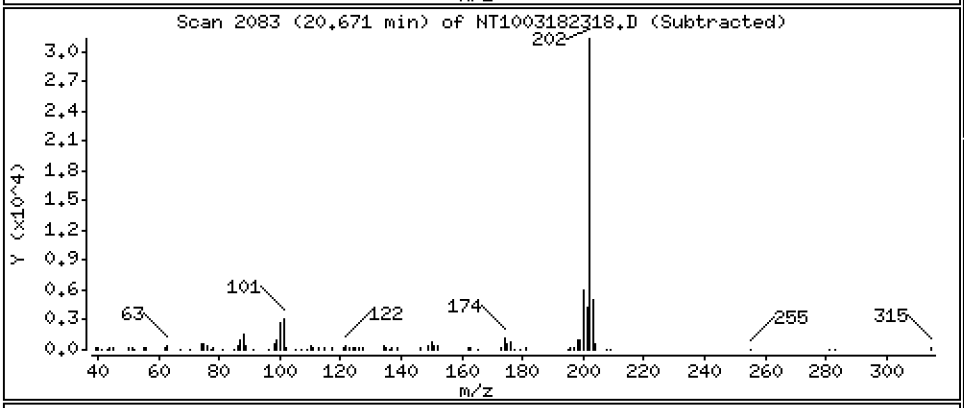
Column diameter: 0.25

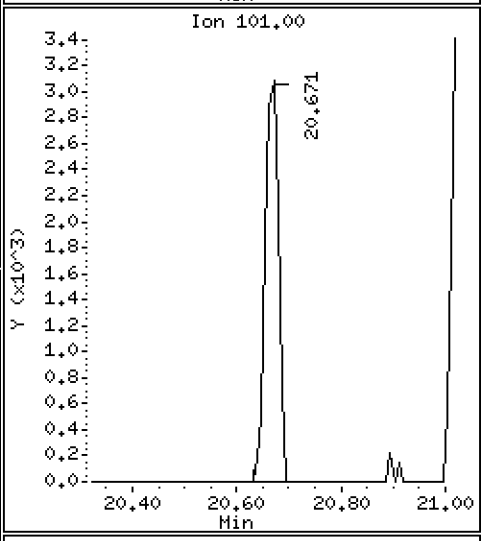
64 Fluoranthene

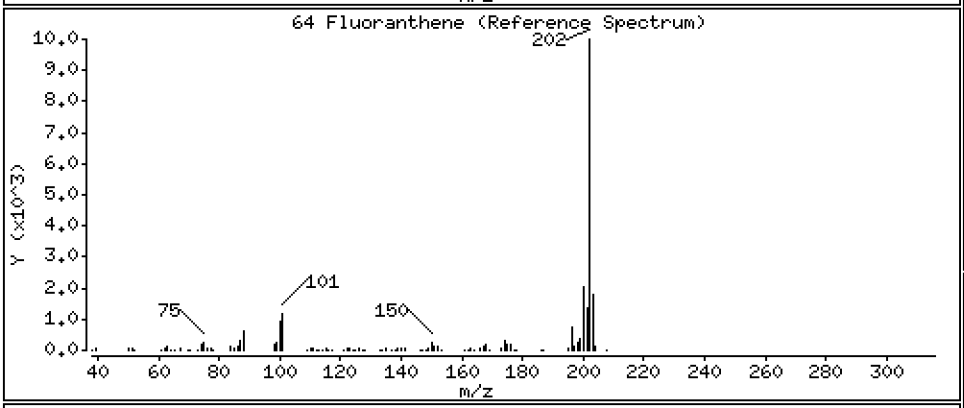
Concentration: 0.1946 ug/mL

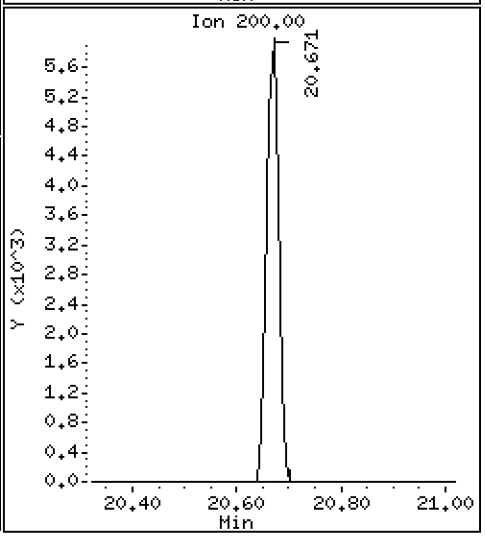


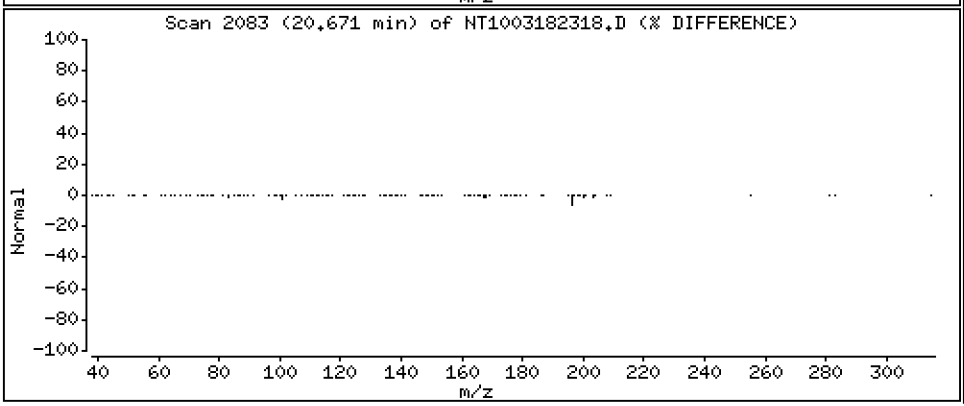












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

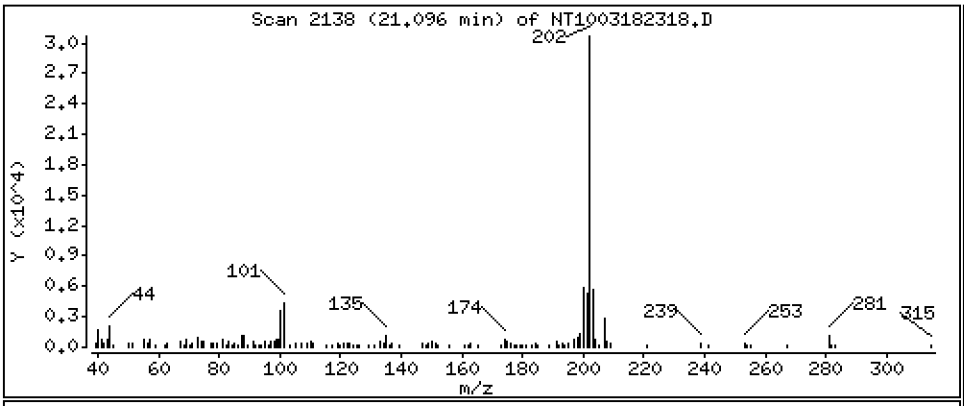
Operator: VTS

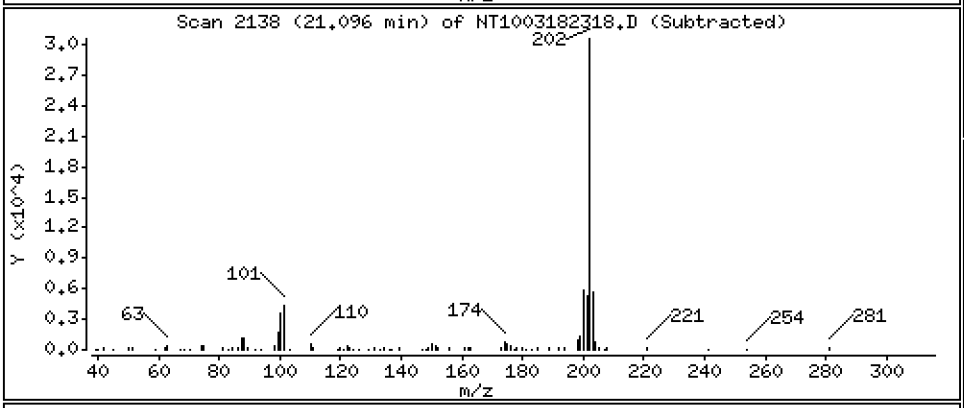
Column phase: ZB-5msi

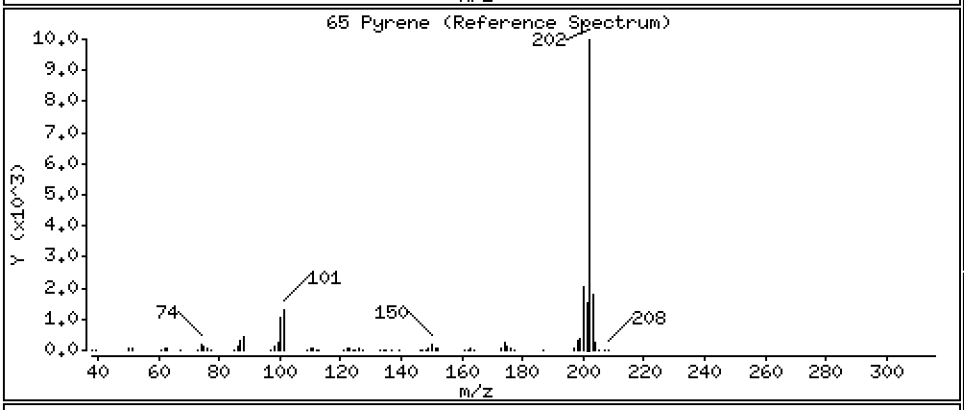
Column diameter: 0.25

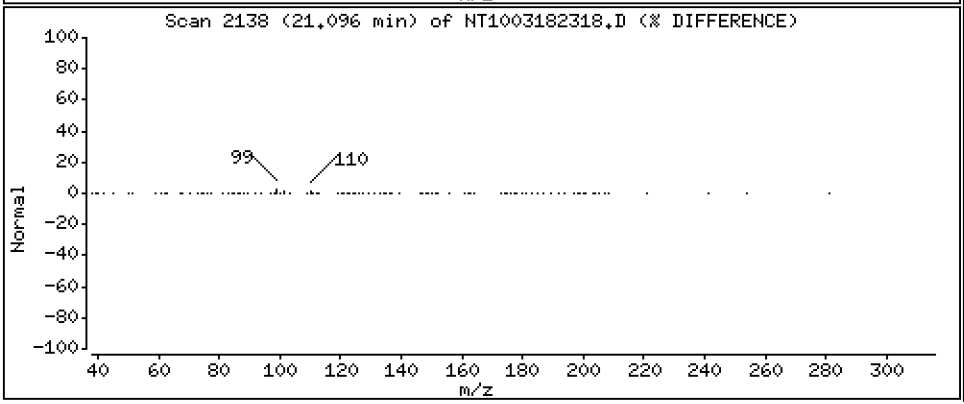
65 Pyrene

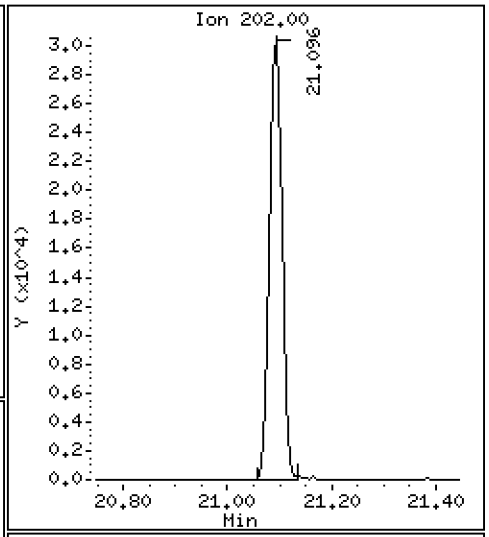
Concentration: 0.1945 ug/mL

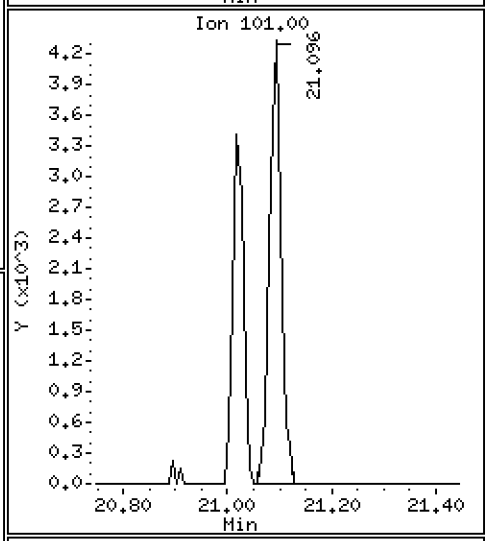


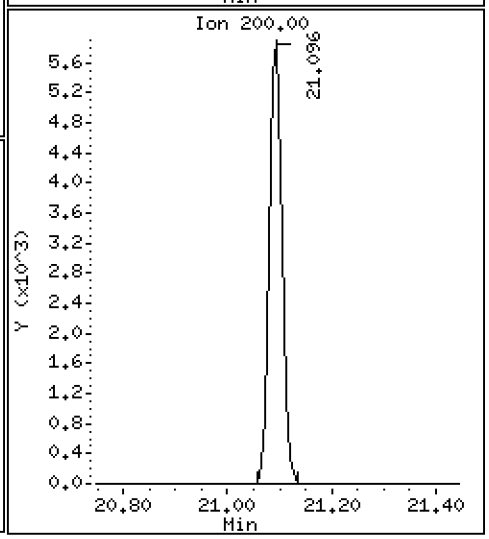












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

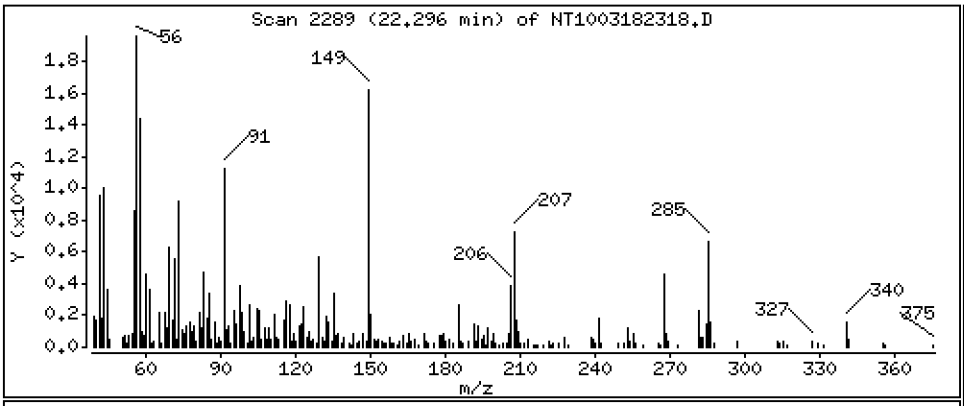
Operator: VTS

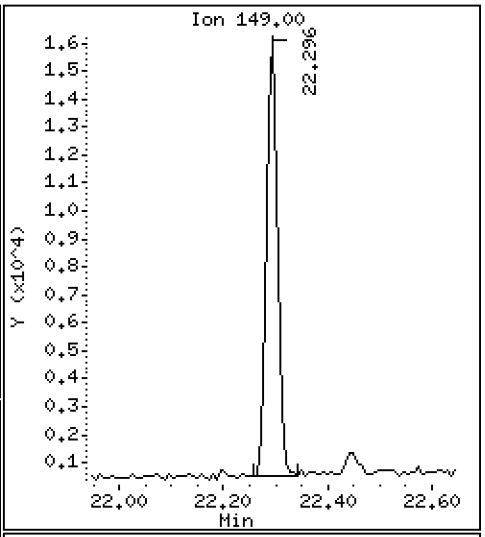
Column phase: ZB-5msi

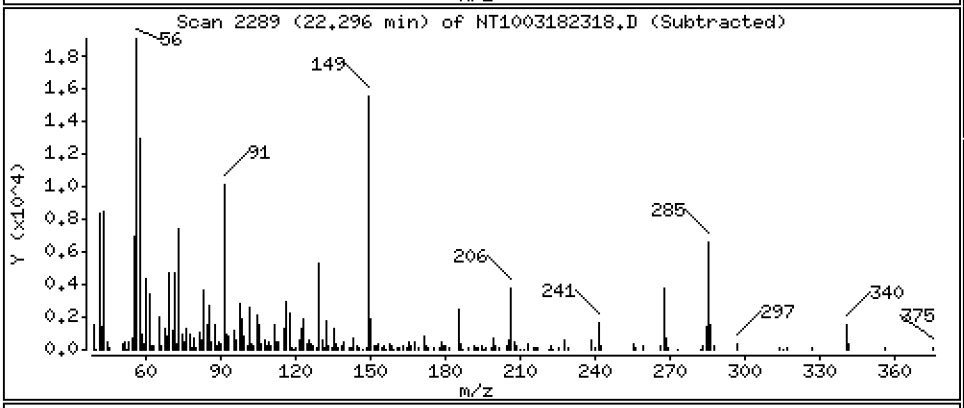
Column diameter: 0.25

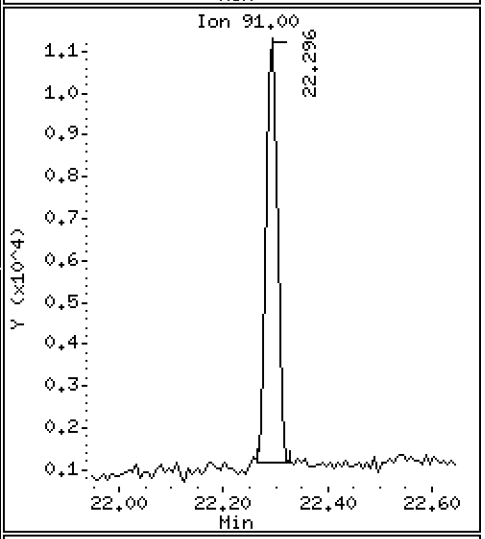
67 Butylbenzylphthalate

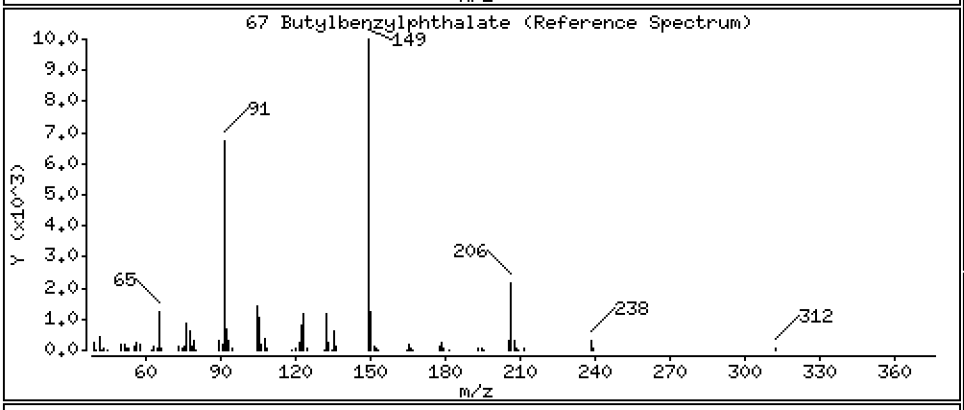
Concentration: 0.2463 ug/mL

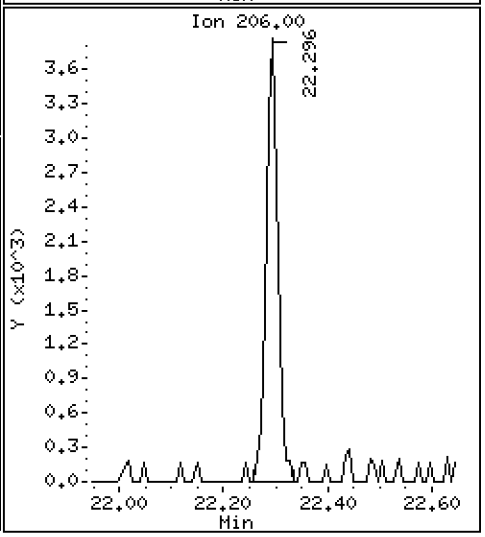


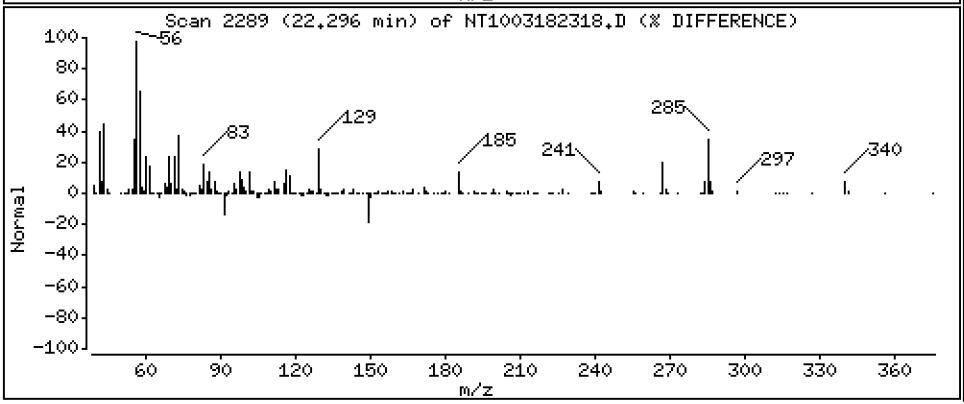












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

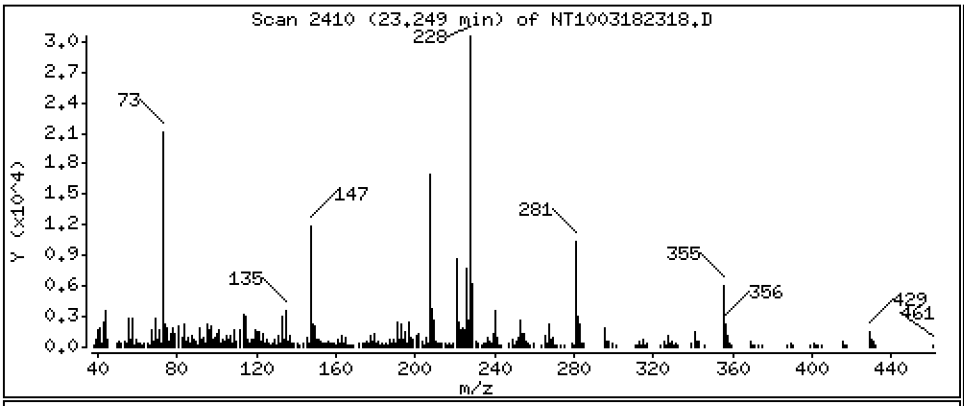
Operator: VTS

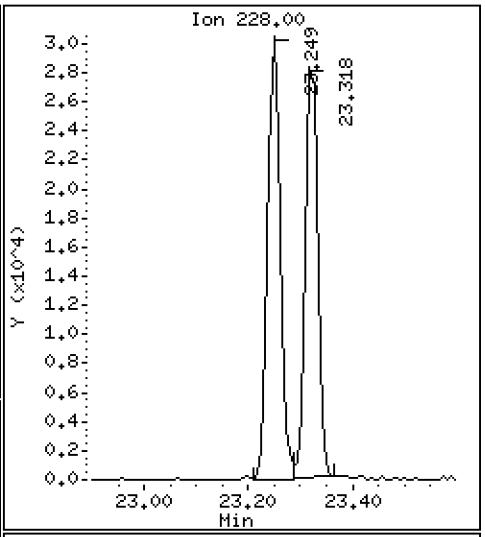
Column phase: ZB-5msi

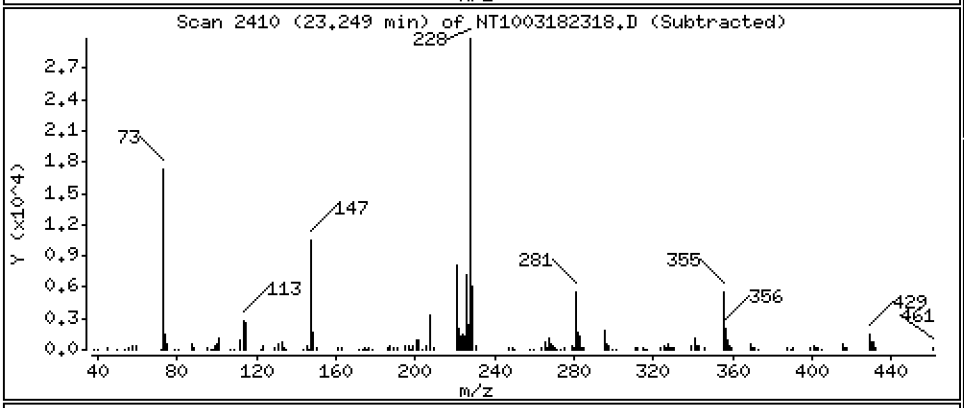
Column diameter: 0.25

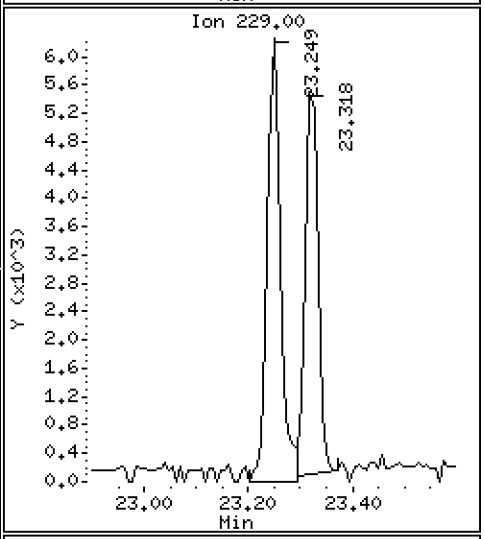
68 Benzo(a)anthracene

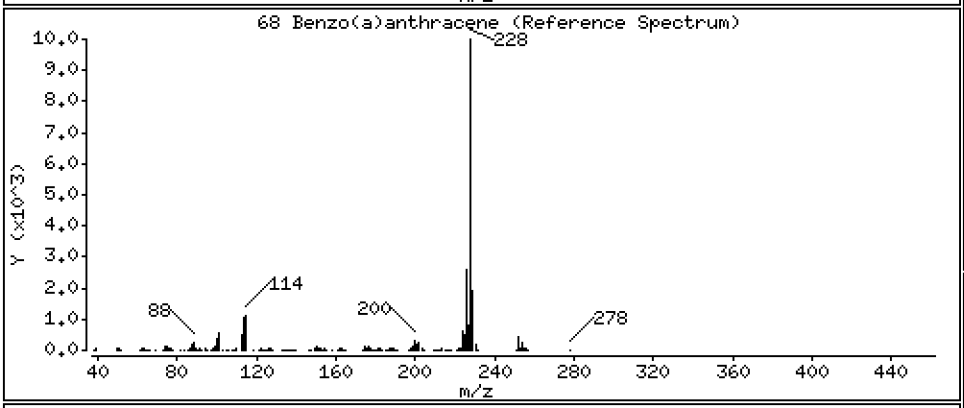
Concentration: 0.2280 ug/mL

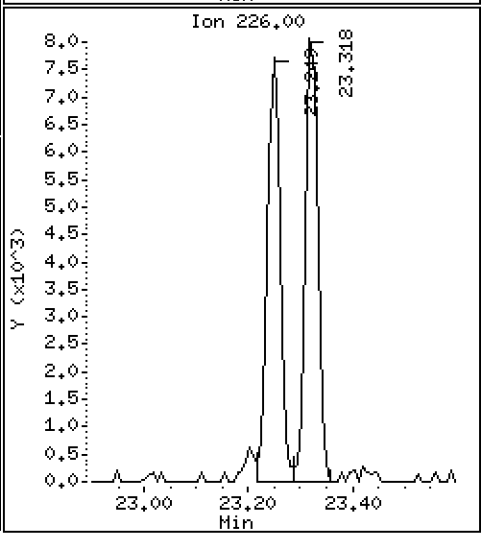


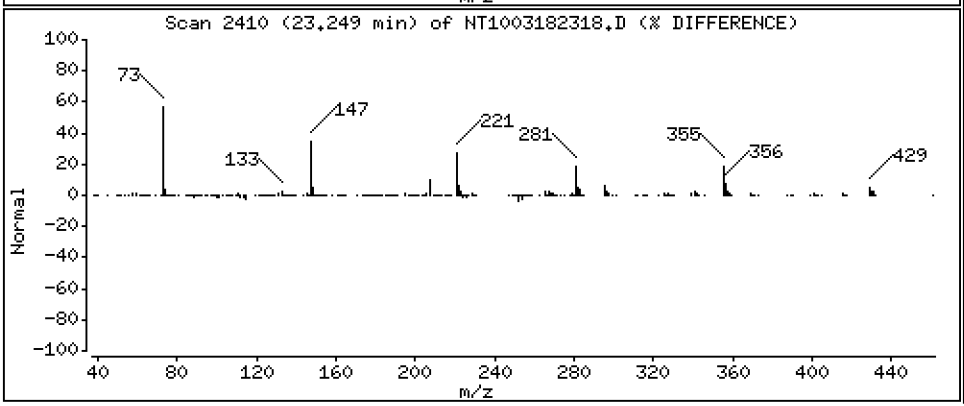












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

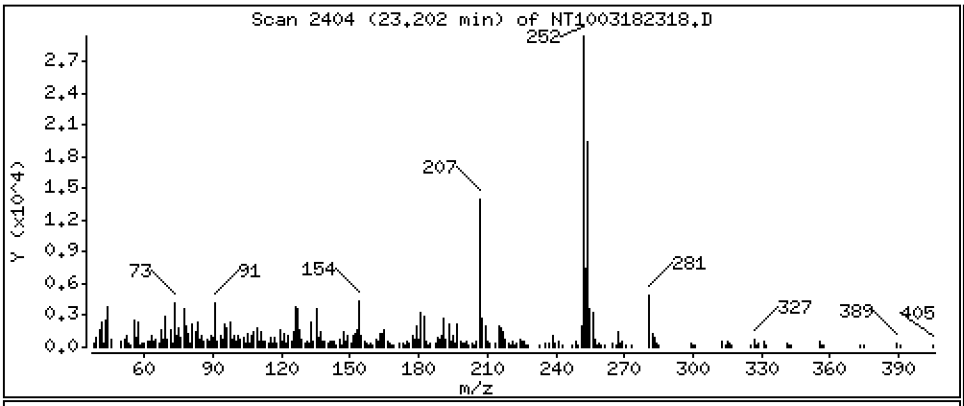
Operator: VTS

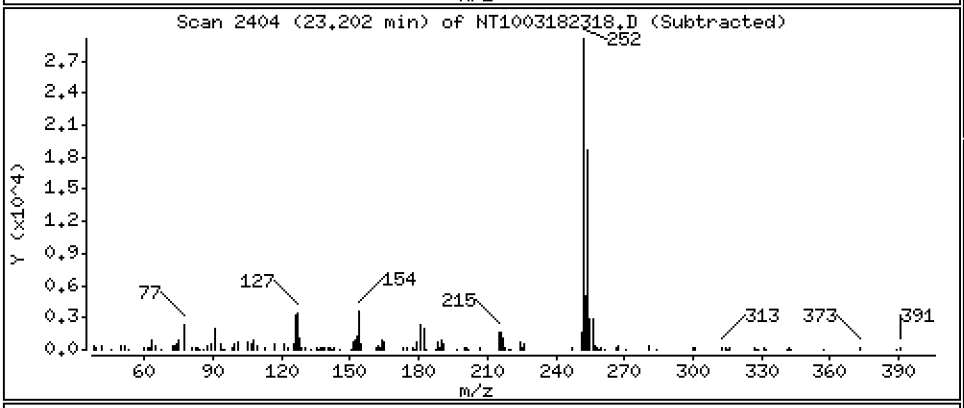
Column phase: ZB-5msi

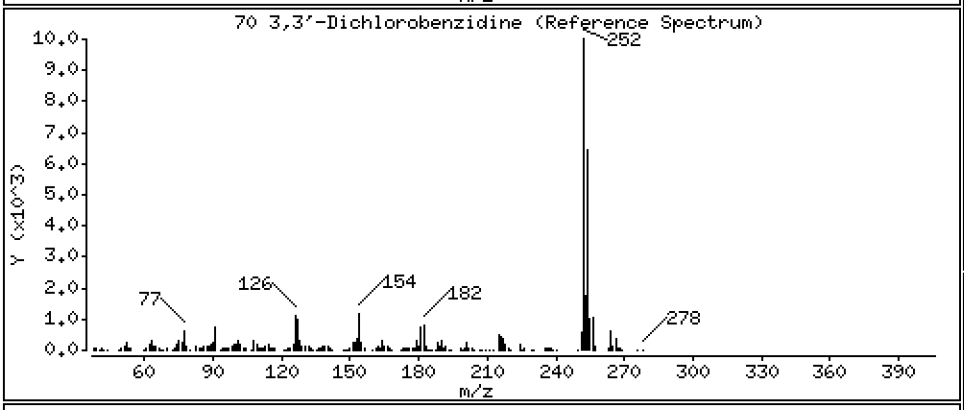
Column diameter: 0.25

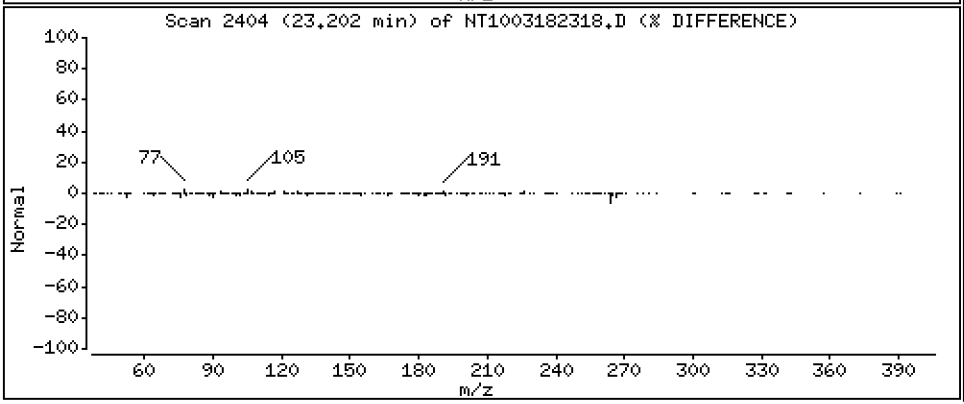
70 3,3'-Dichlorobenzidine

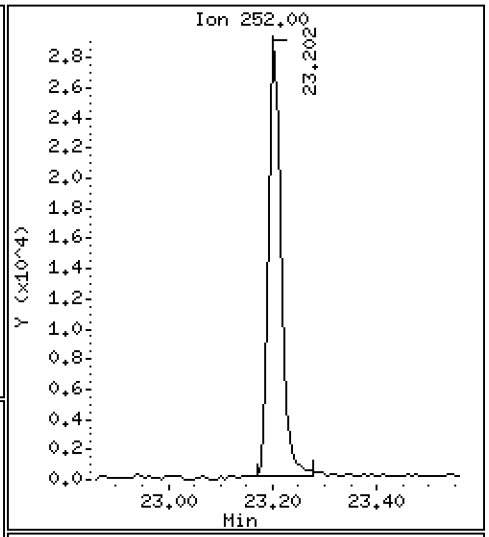
Concentration: 0.6614 ug/mL

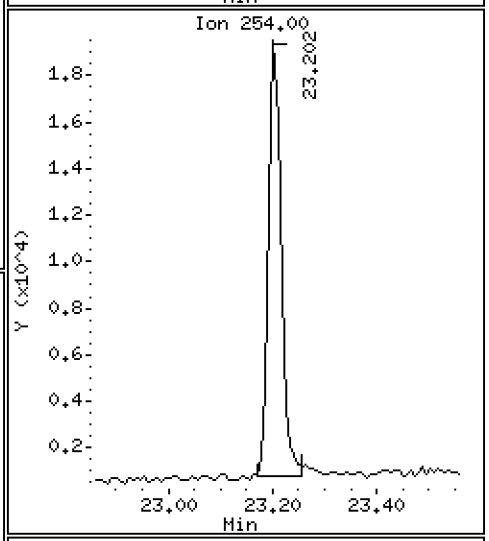


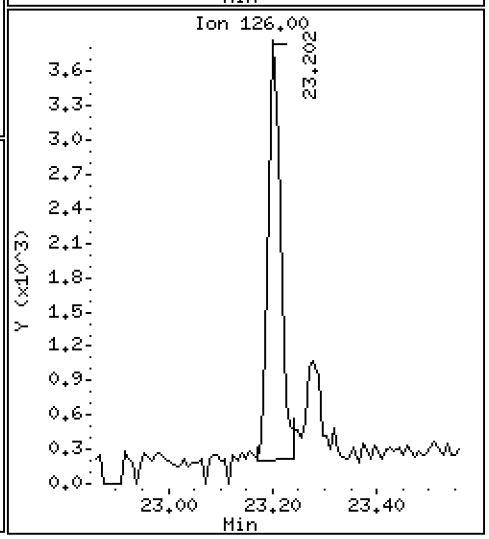












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

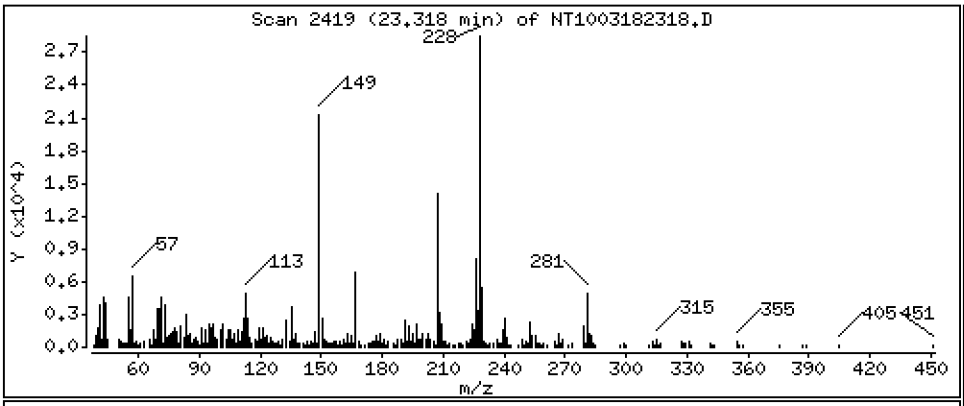
Operator: VTS

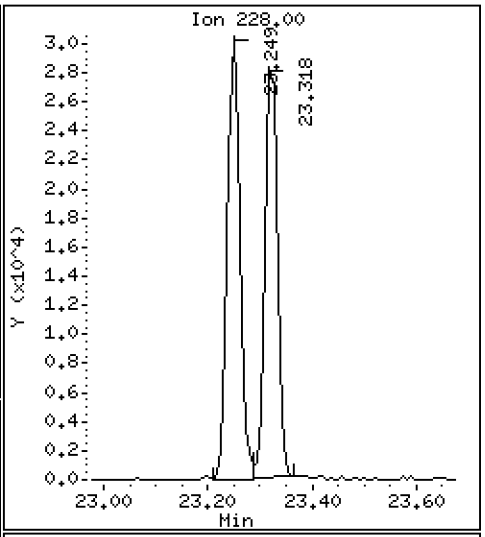
Column phase: ZB-5msi

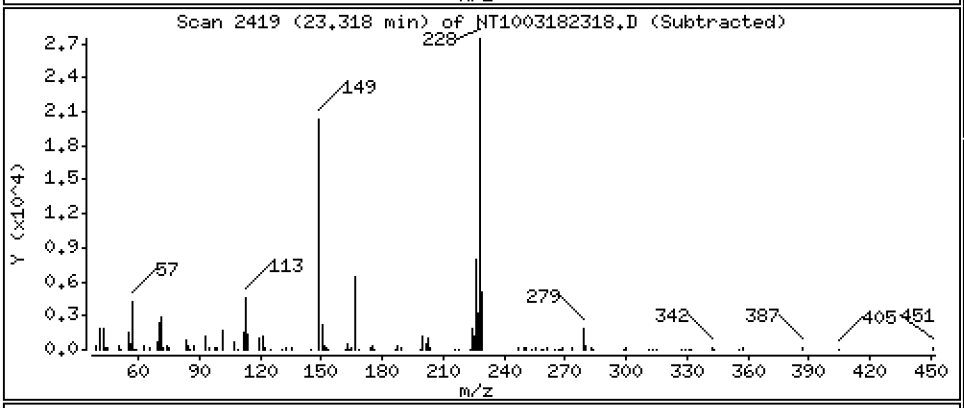
Column diameter: 0.25

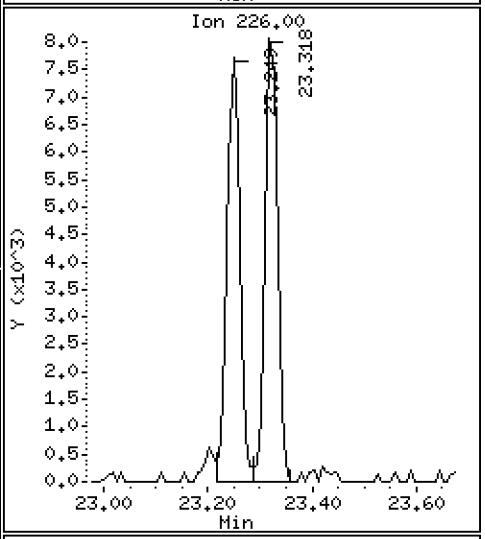
71 Chrysene

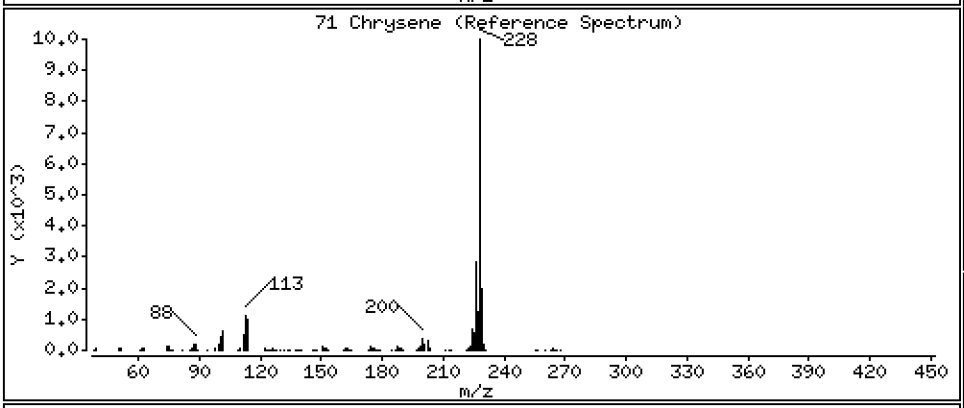
Concentration: 0.2105 ug/mL

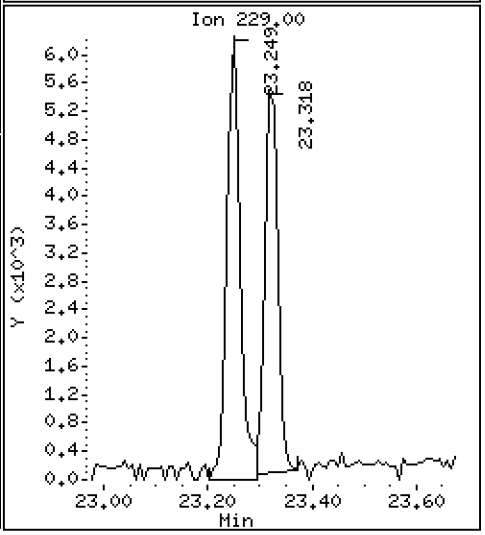


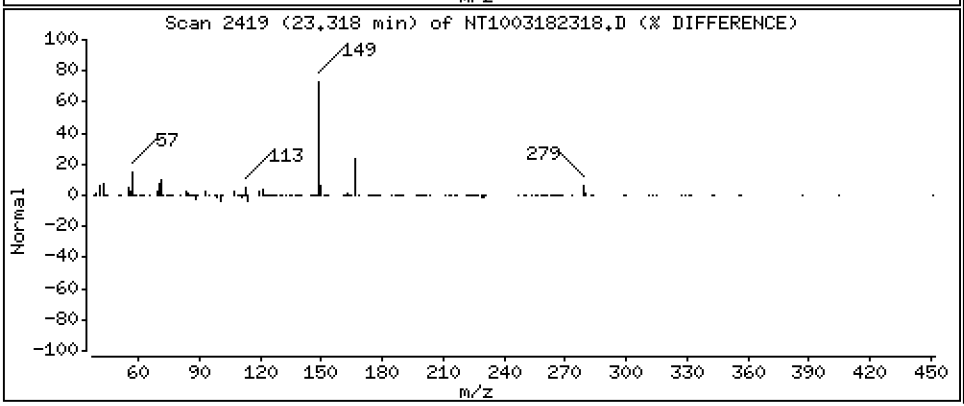












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

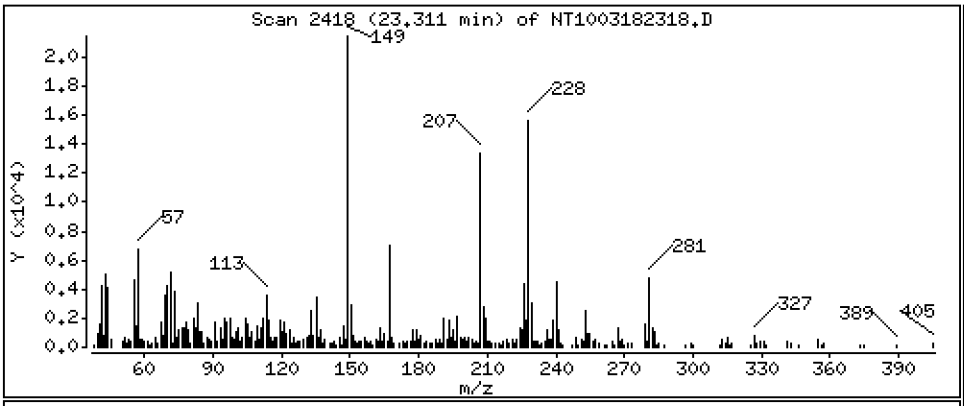
Operator: VTS

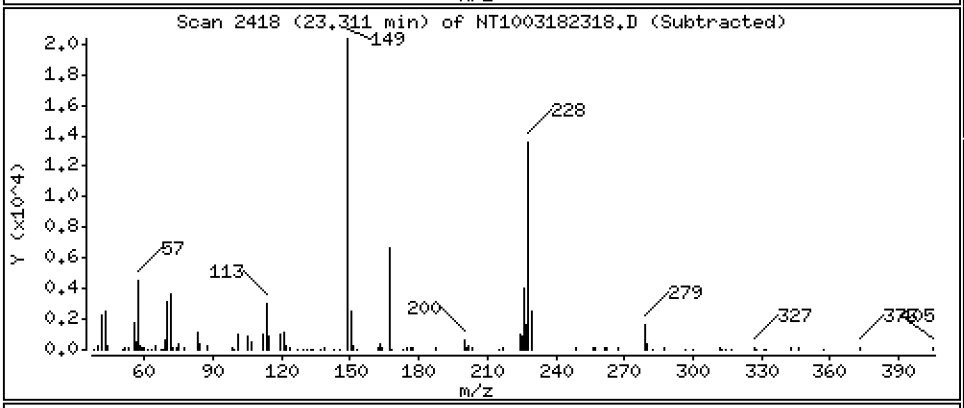
Column phase: ZB-5msi

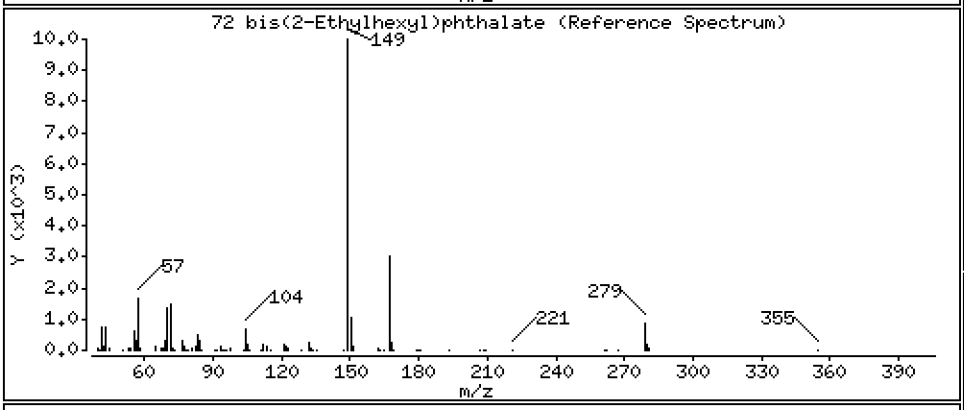
Column diameter: 0.25

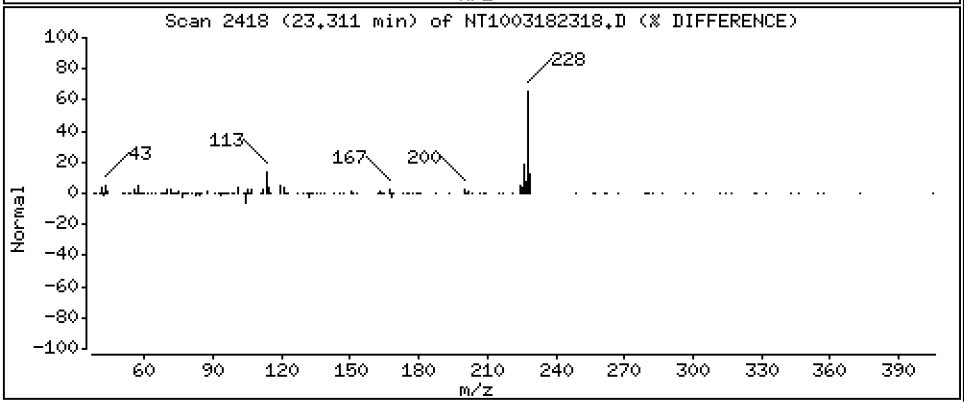
72 bis(2-Ethylhexyl)phthalate

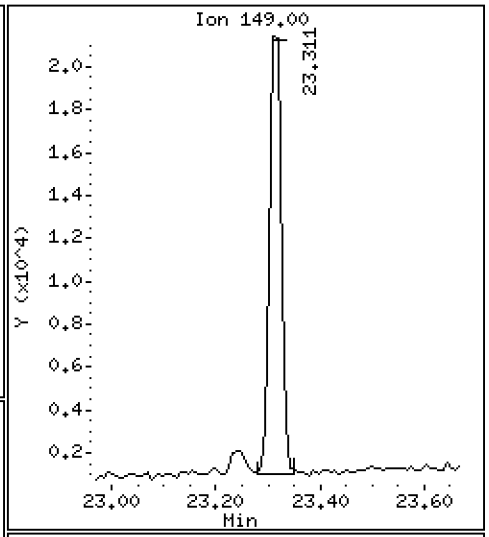
Concentration: 0.1994 ug/mL

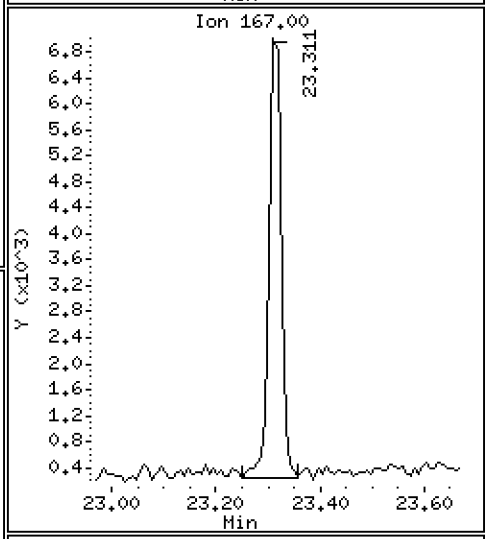


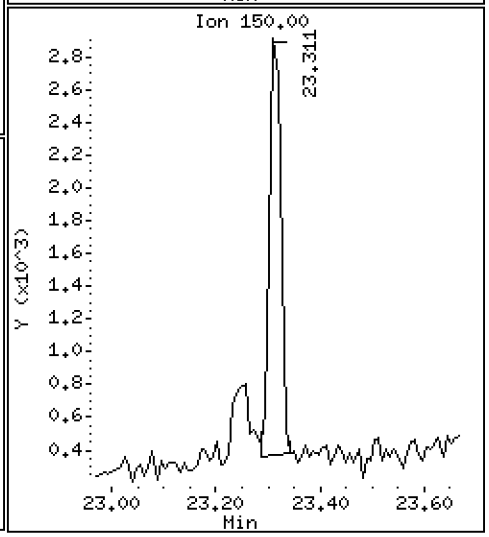












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

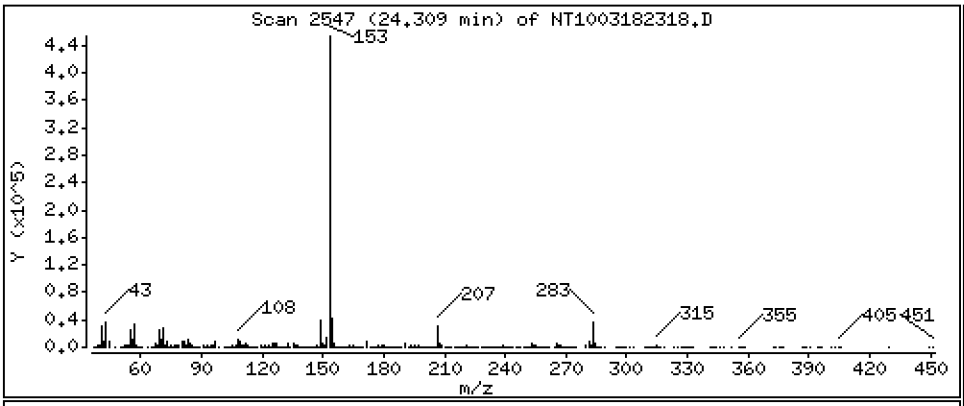
Operator: VTS

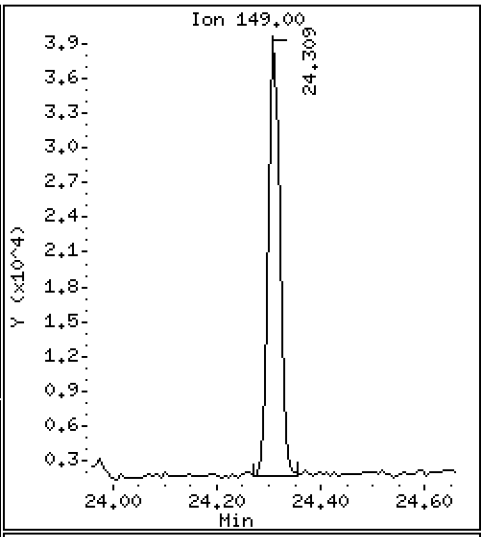
Column phase: ZB-5msi

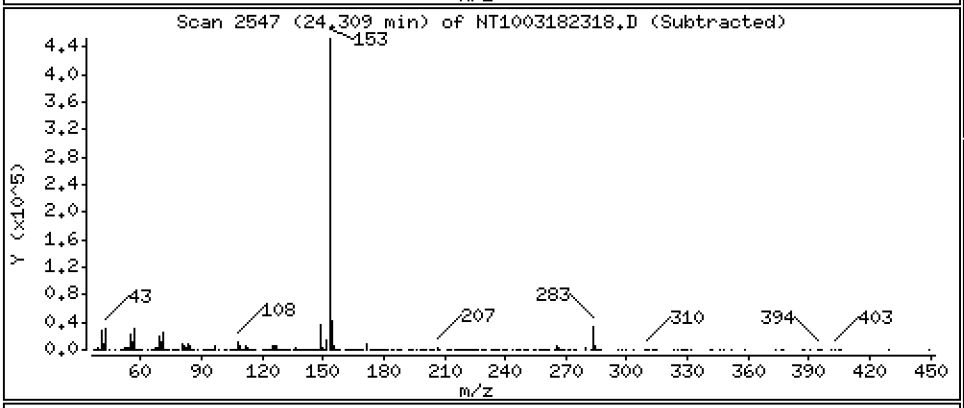
Column diameter: 0.25

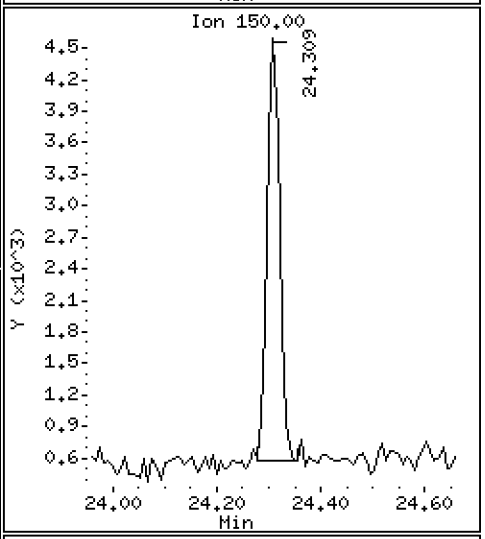
73 Di-n-octylphthalate

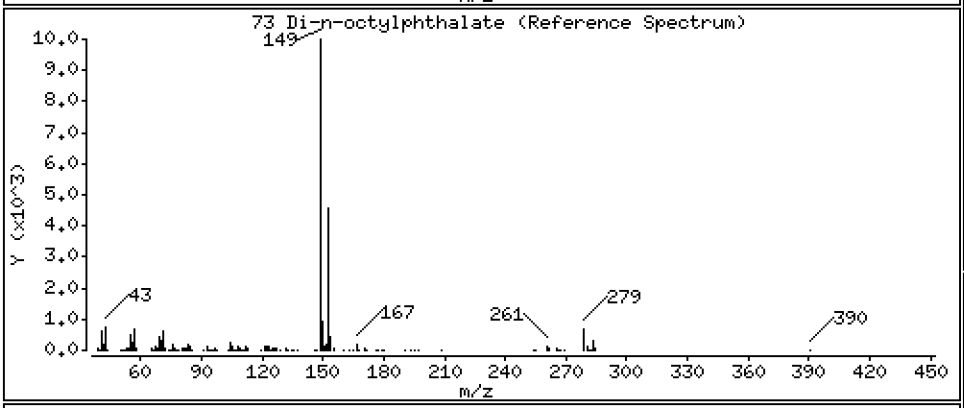
Concentration: 0.2004 ug/mL

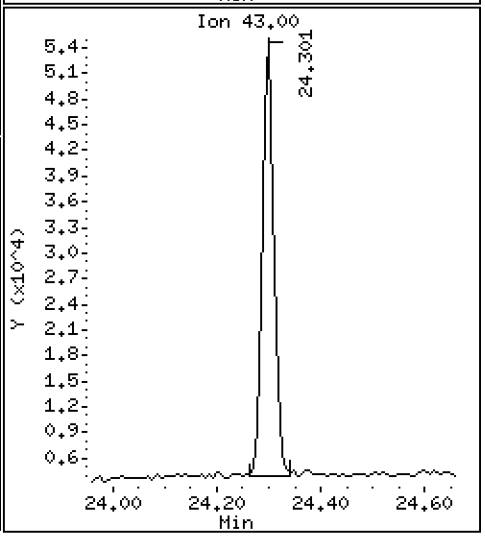


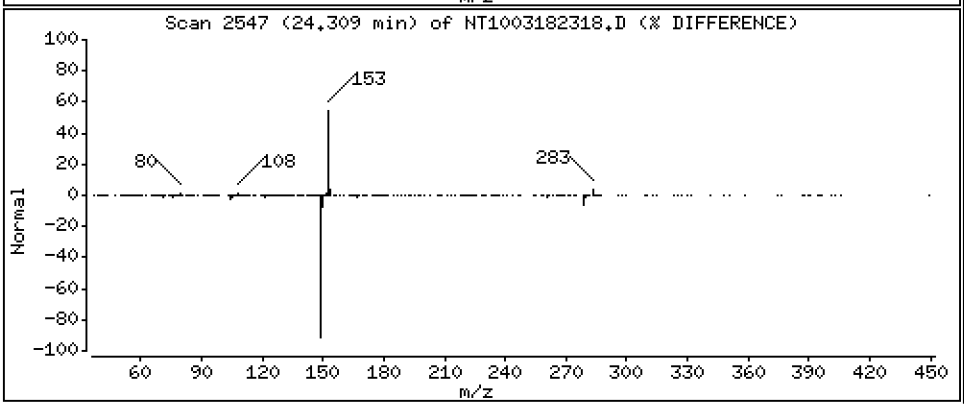












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

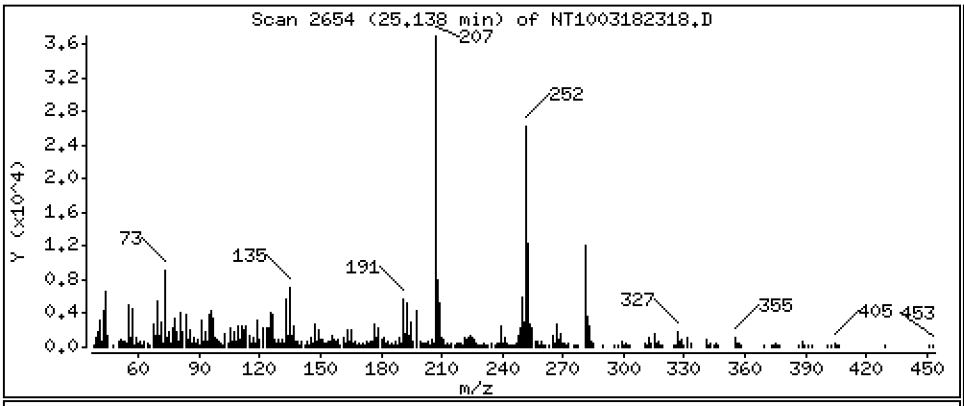
Operator: VTS

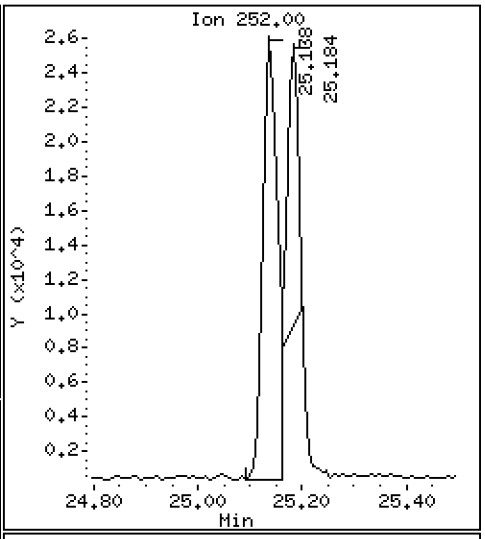
Column phase: ZB-5msi

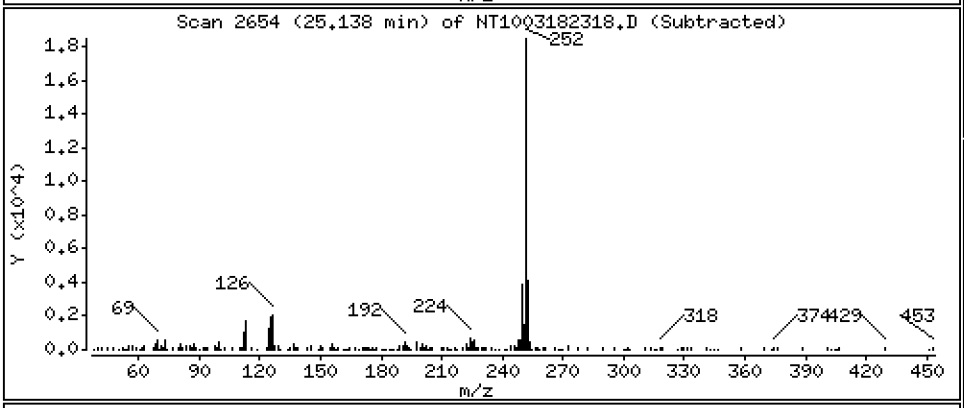
Column diameter: 0.25

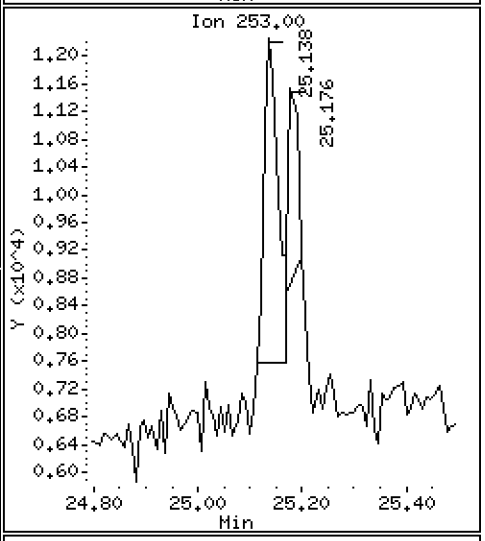
74 Benzo(b)fluoranthene

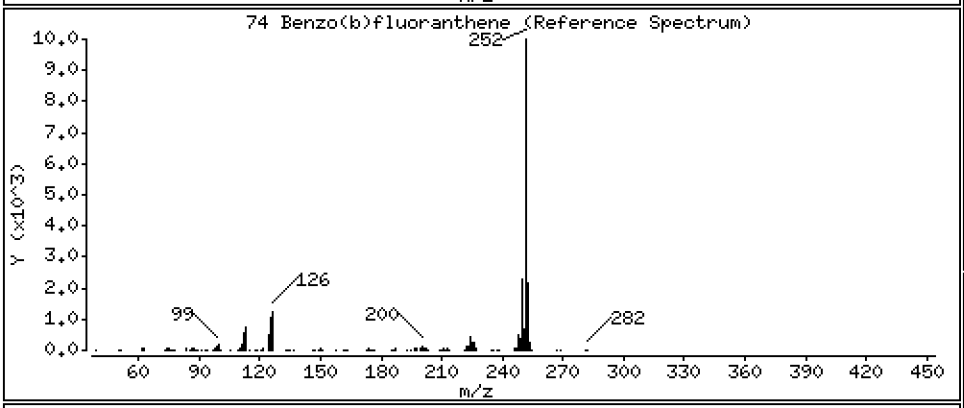
Concentration: 0.2176 ug/mL

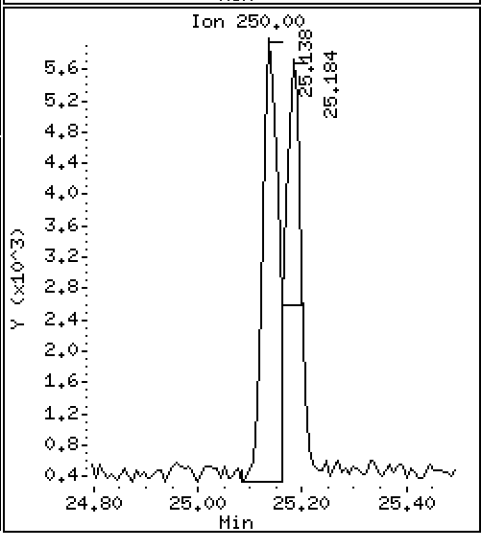


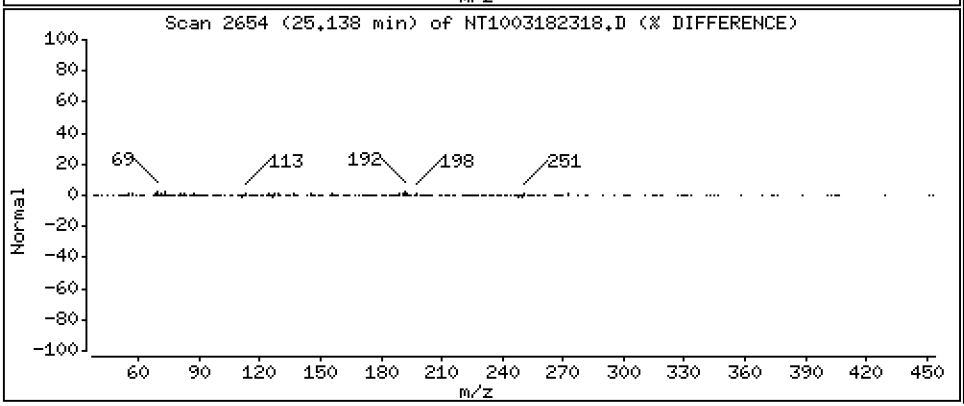












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

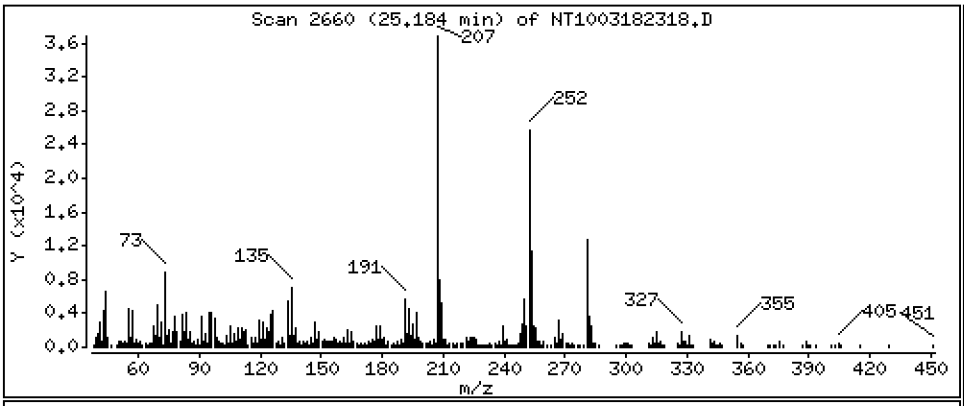
Operator: VTS

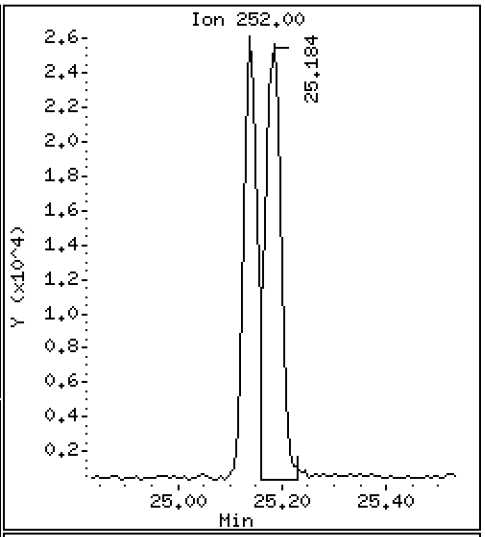
Column phase: ZB-5msi

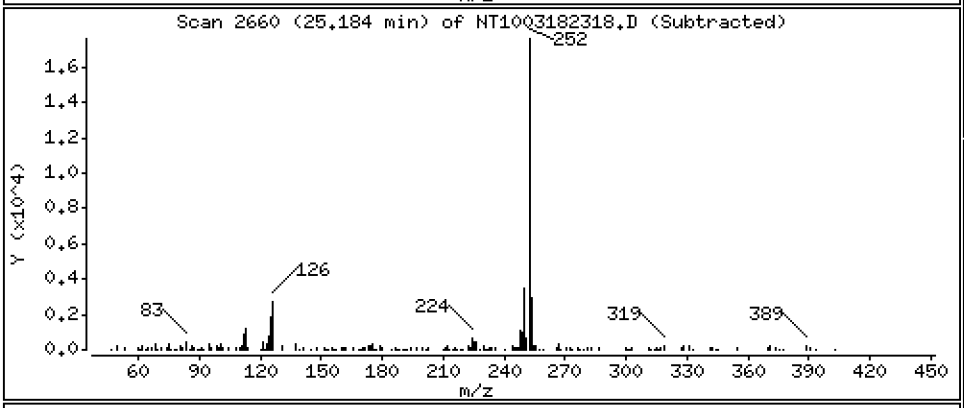
Column diameter: 0.25

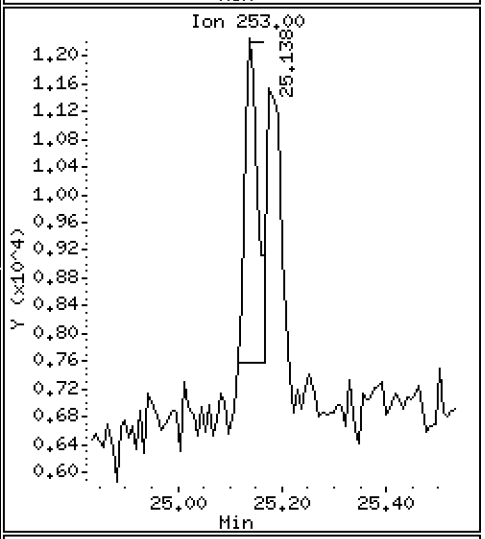
75 Benzo(k)fluoranthene

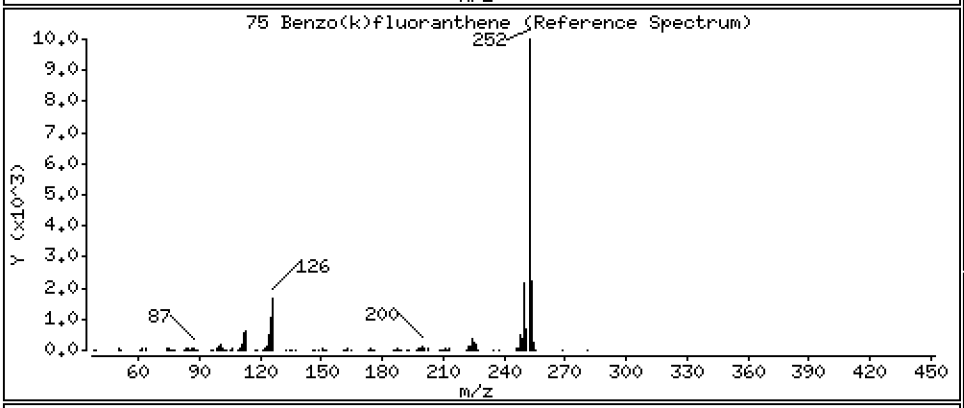
Concentration: 0.2273 ug/mL

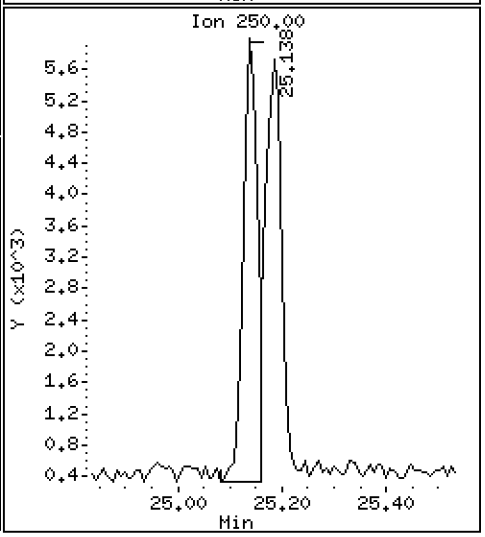


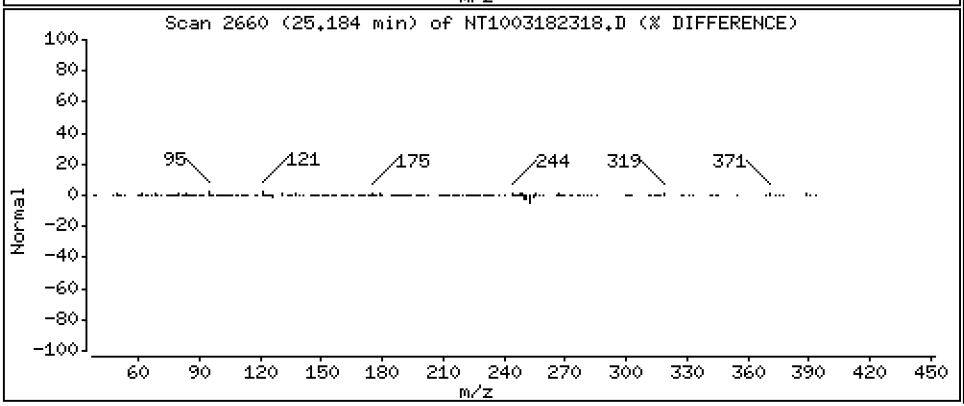












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

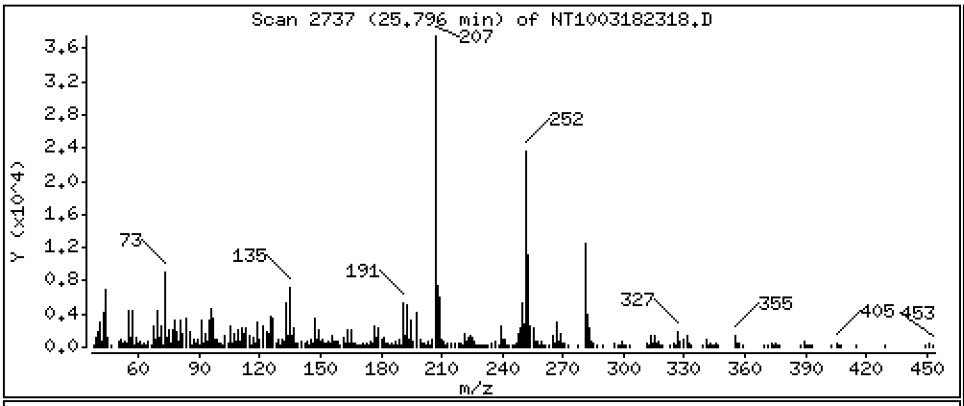
Operator: VTS

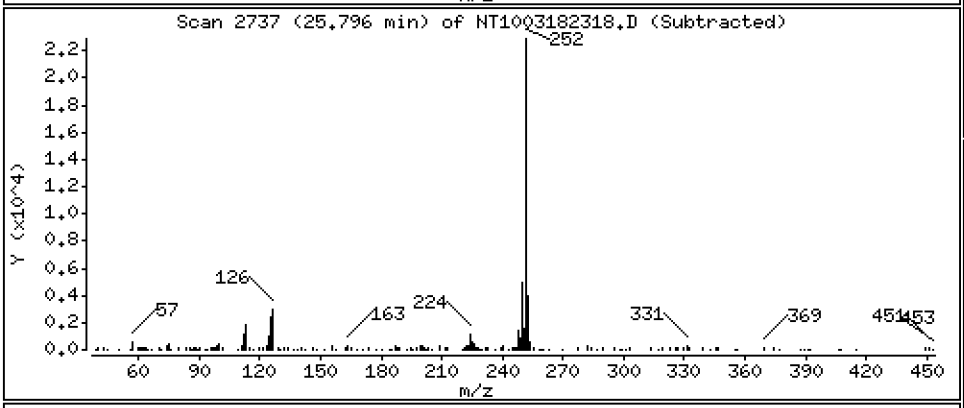
Column phase: ZB-5msi

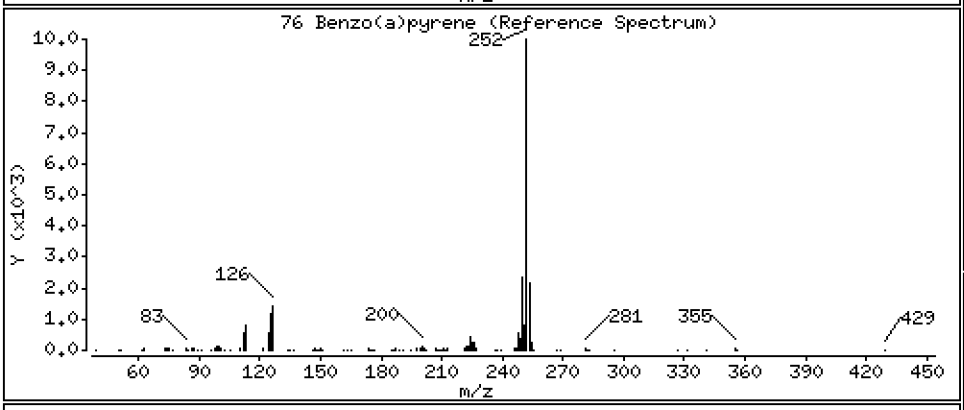
Column diameter: 0.25

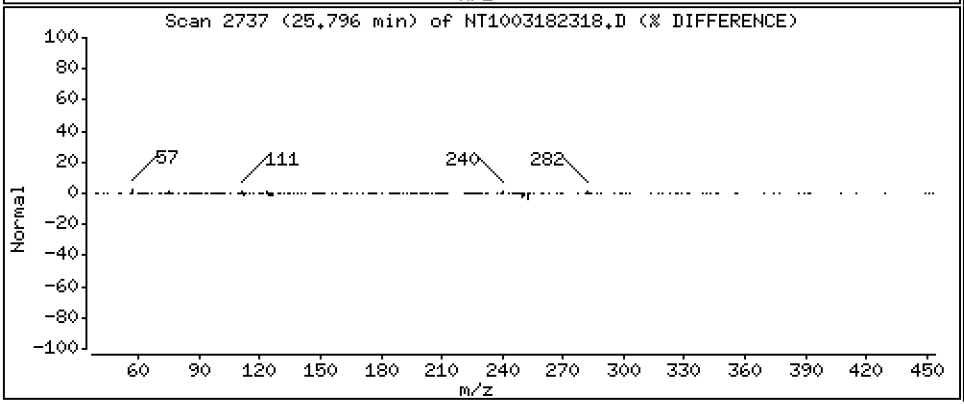
76 Benzo(a)pyrene

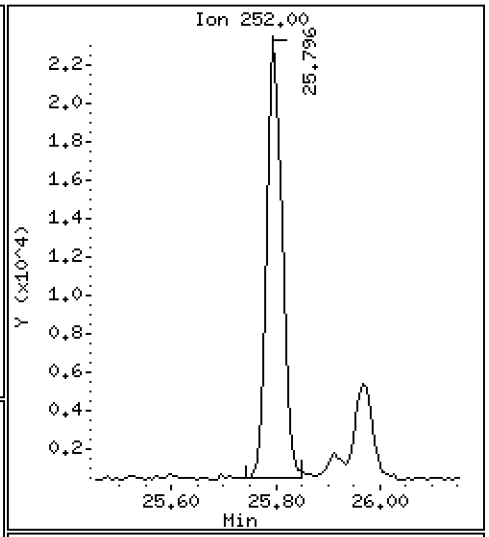
Concentration: 0.2241 ug/mL

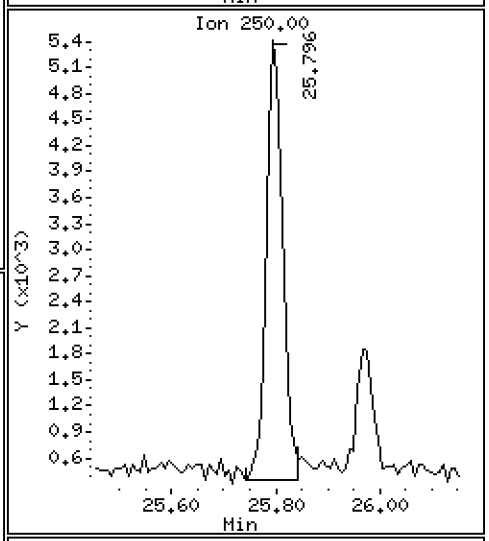


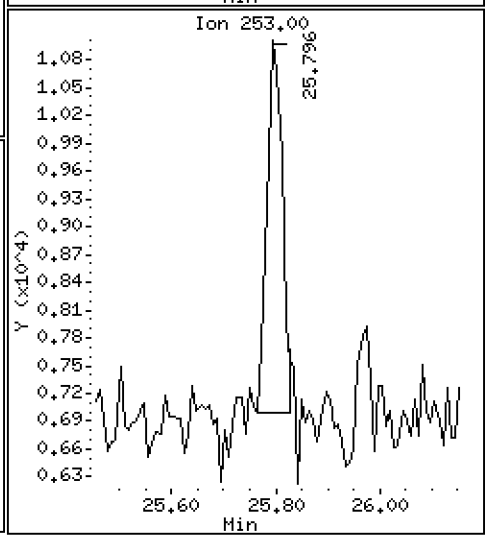












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

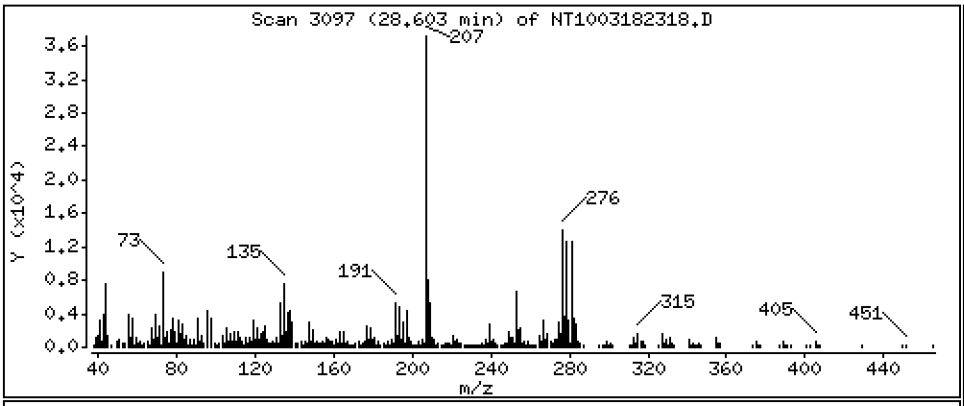
Operator: VTS

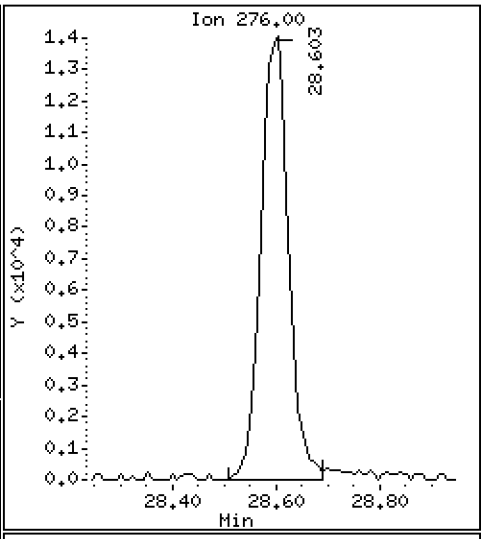
Column phase: ZB-5msi

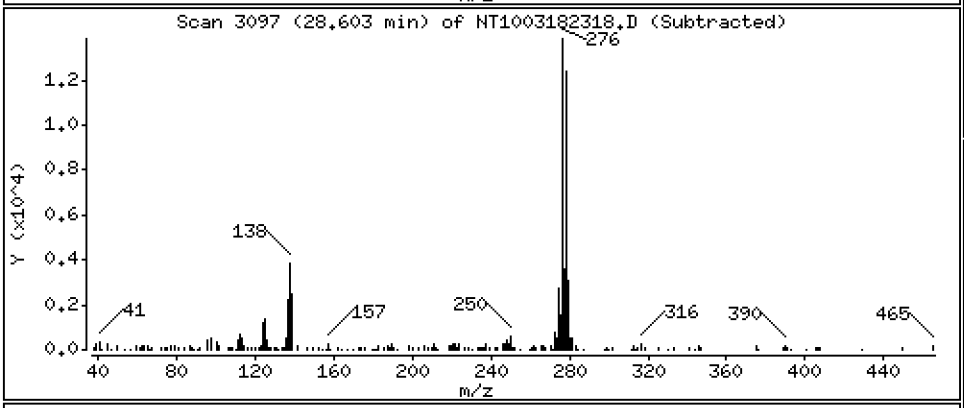
Column diameter: 0.25

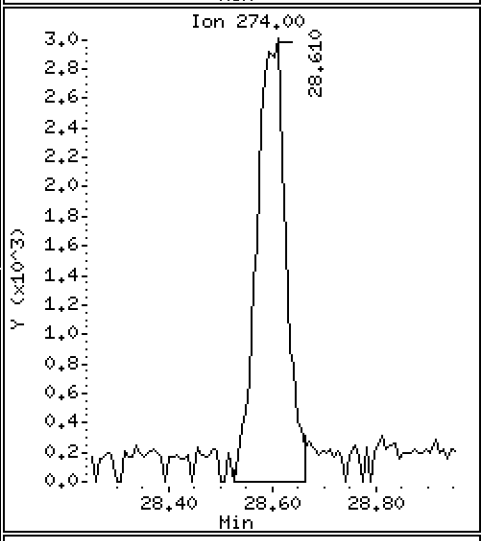
78 Indeno(1,2,3-cd)pyrene

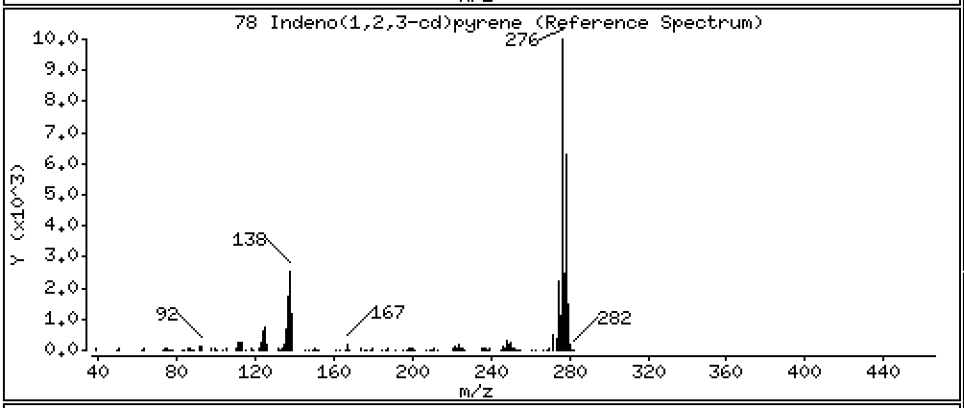
Concentration: 0.1980 ug/mL

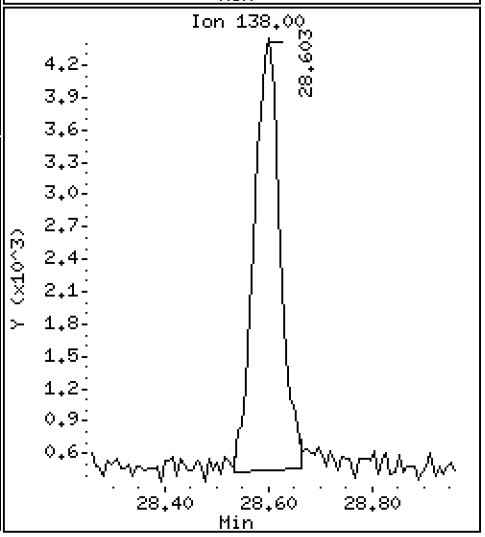


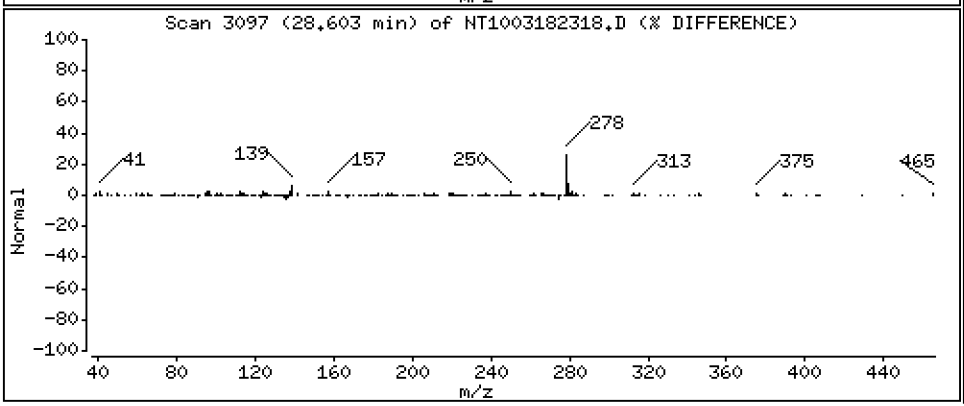












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

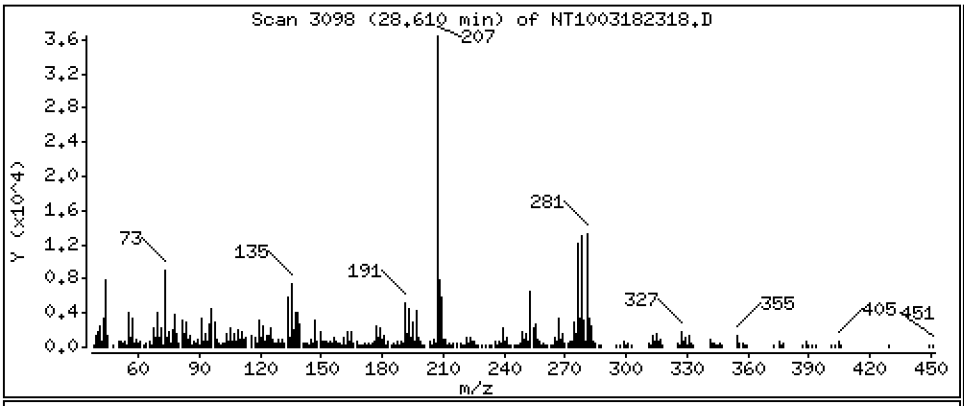
Operator: VTS

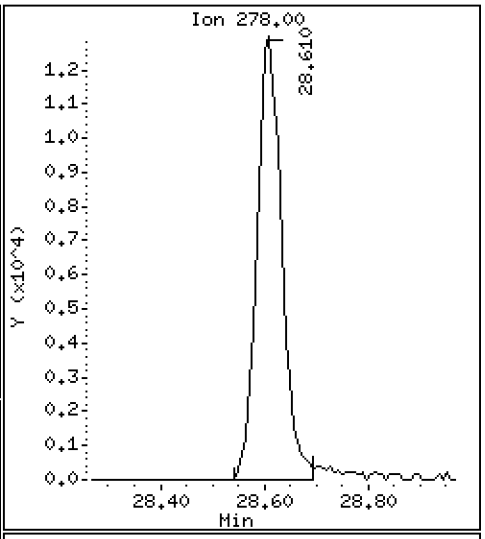
Column phase: ZB-5msi

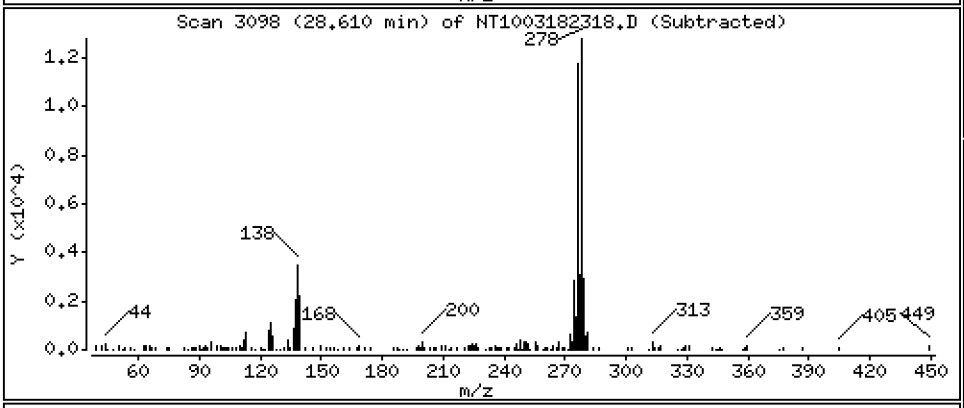
Column diameter: 0.25

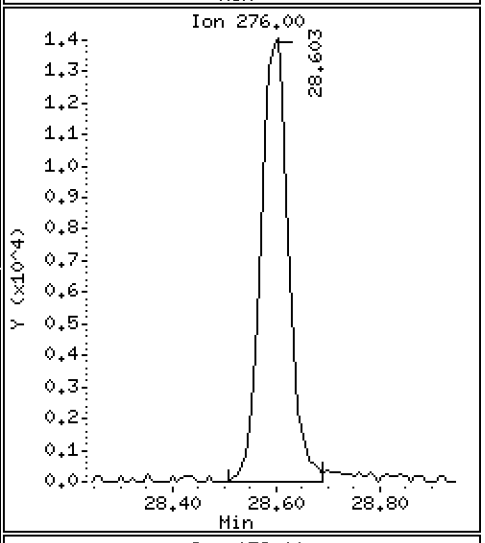
79 Dibenzo(a,h)anthracene

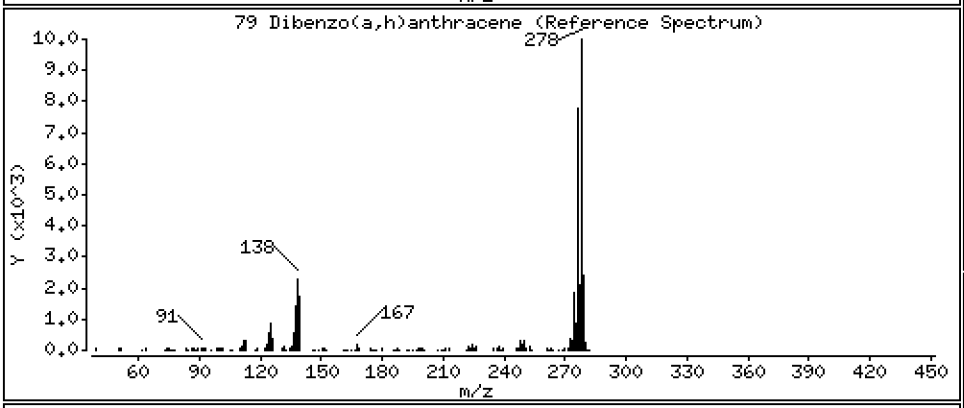
Concentration: 0.1986 ug/mL

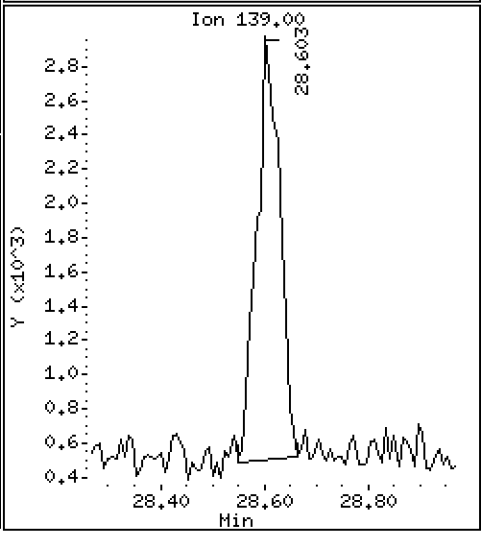


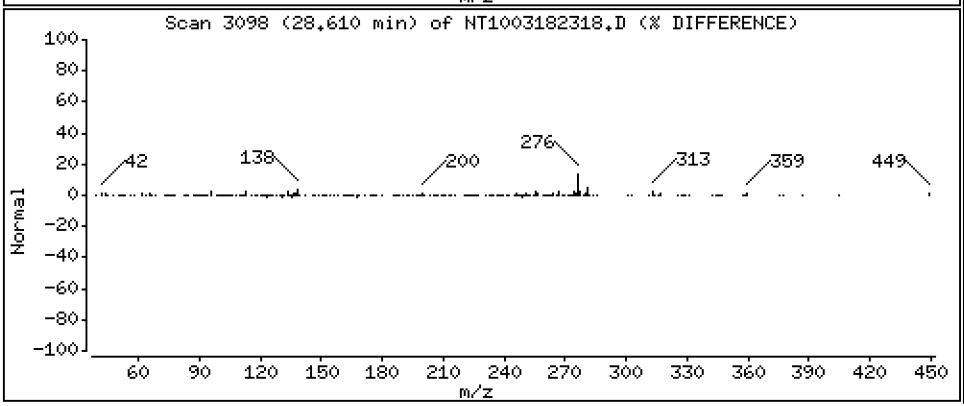












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

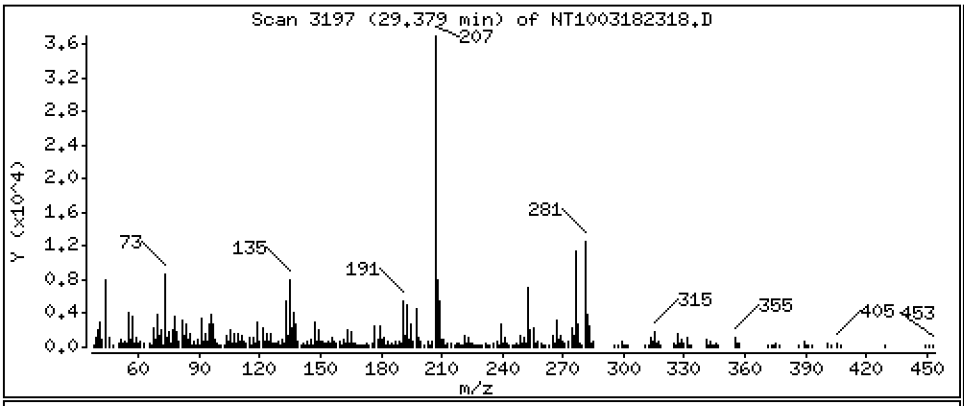
Operator: VTS

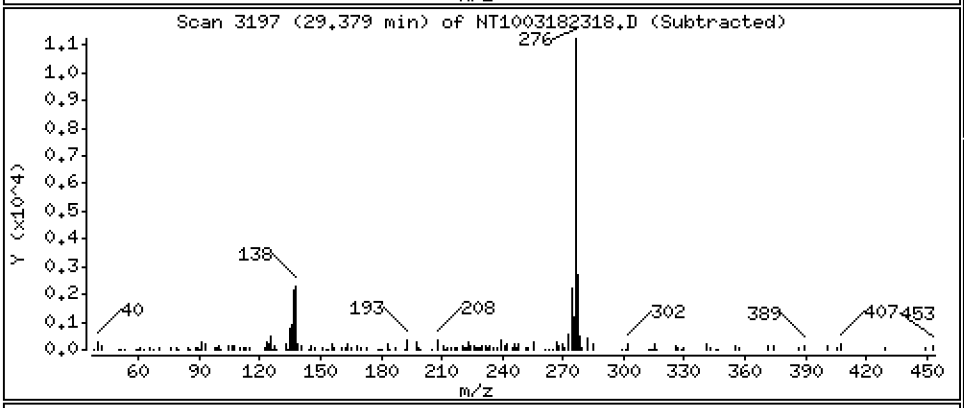
Column phase: ZB-5msi

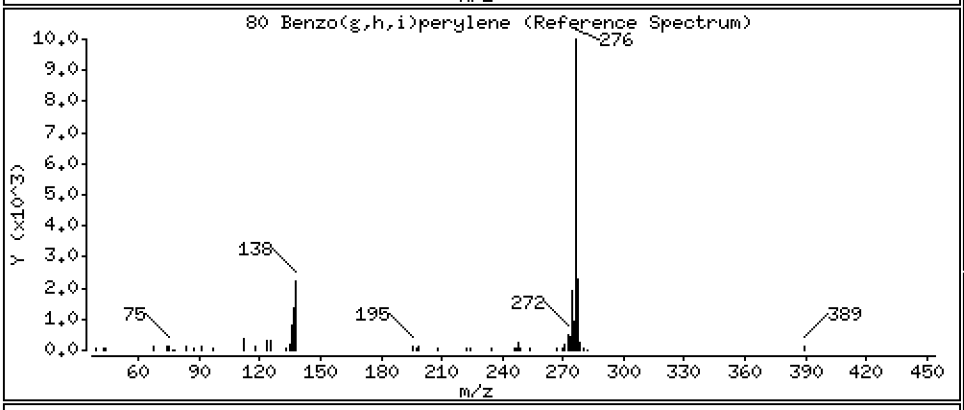
Column diameter: 0.25

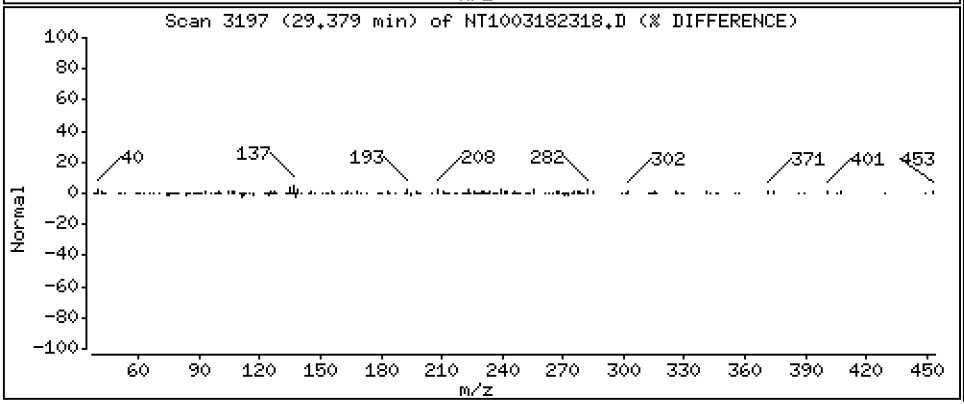
80 Benzo(g,h,i)perylene

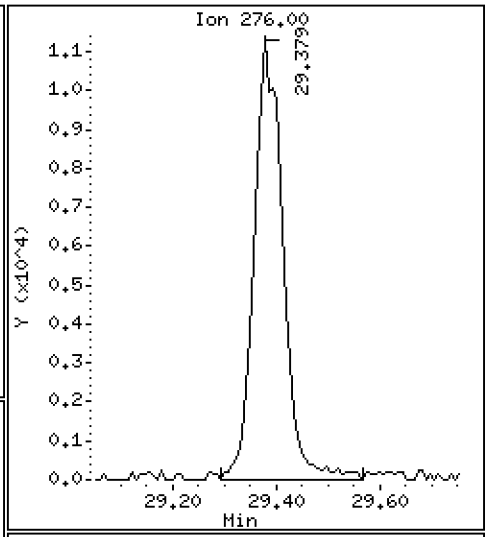
Concentration: 0.1955 ug/mL

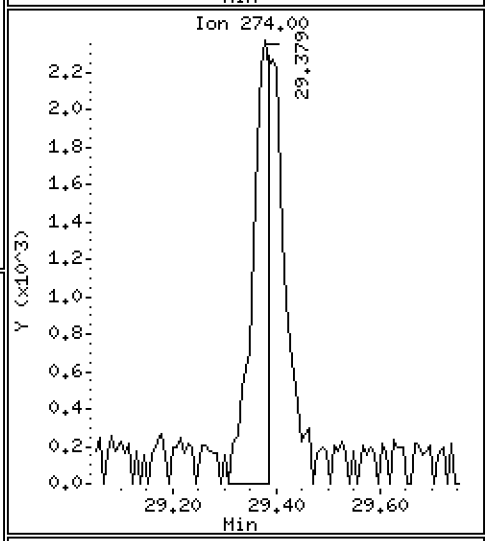


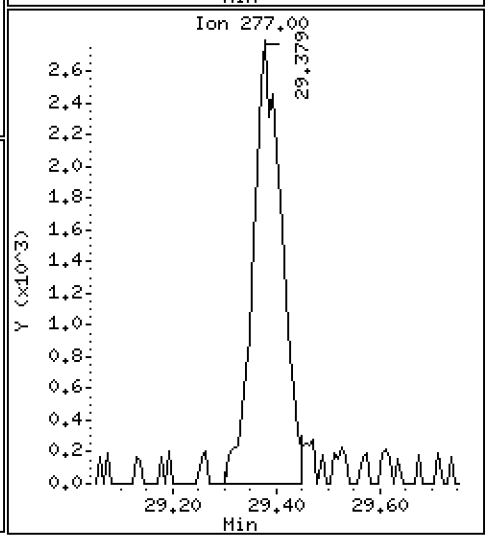












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

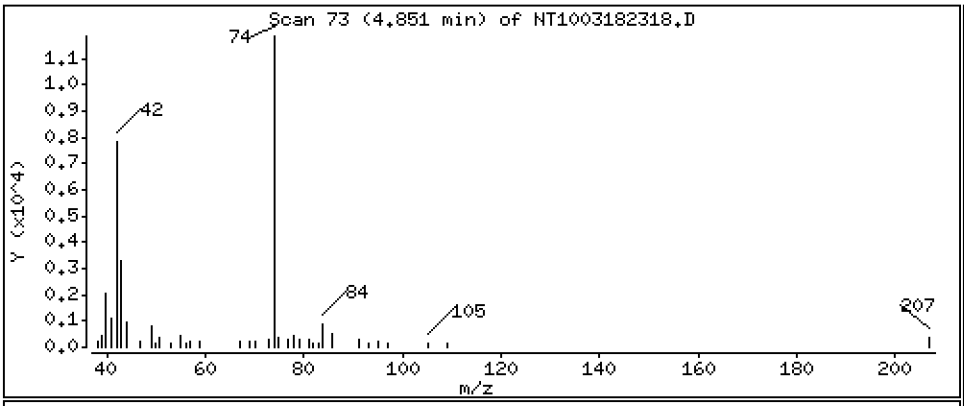
Operator: VTS

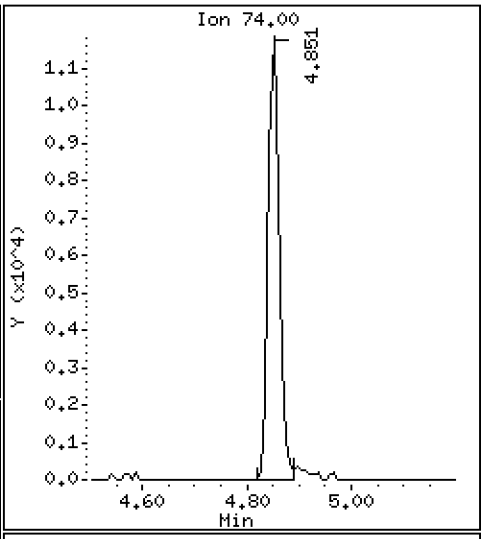
Column phase: ZB-5msi

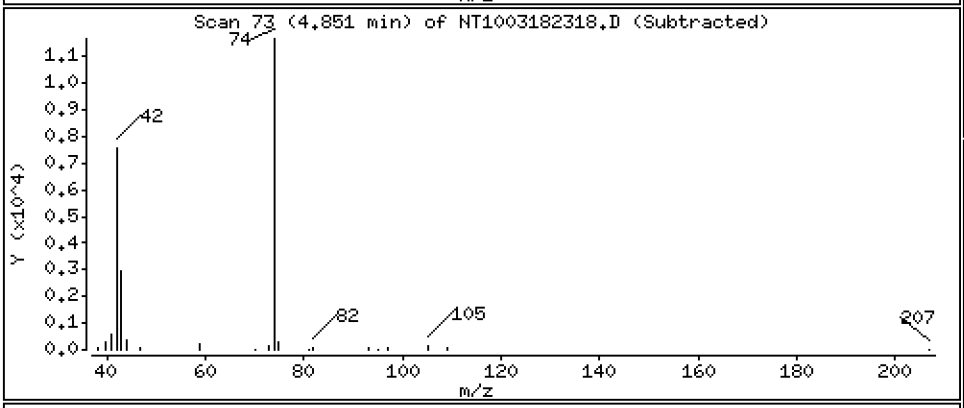
Column diameter: 0.25

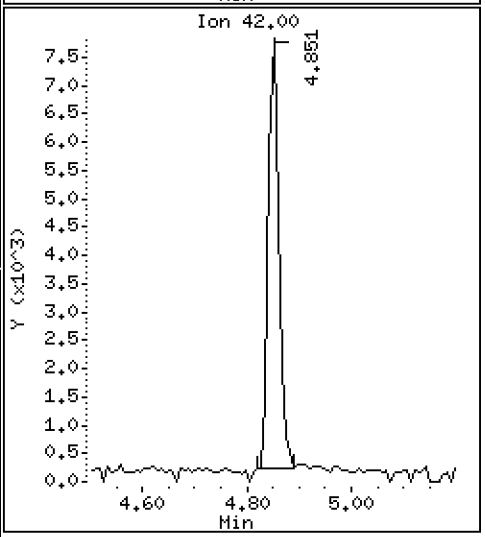
90 N-Nitrosodimethylamine

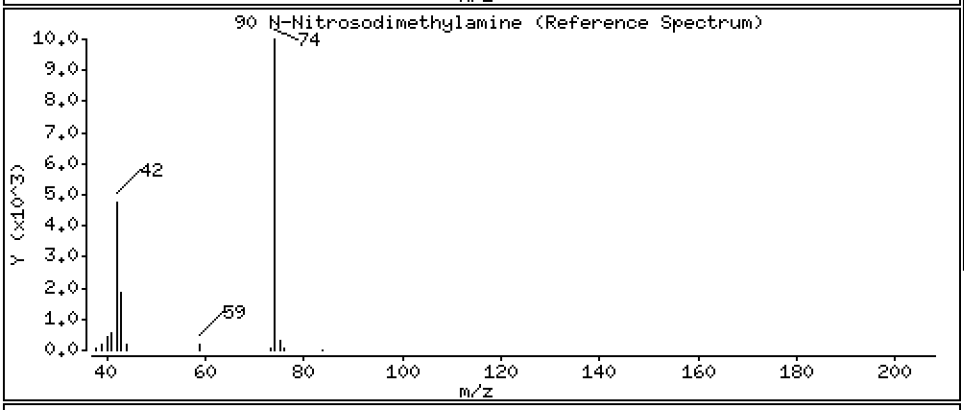
Concentration: 0.4176 ug/mL

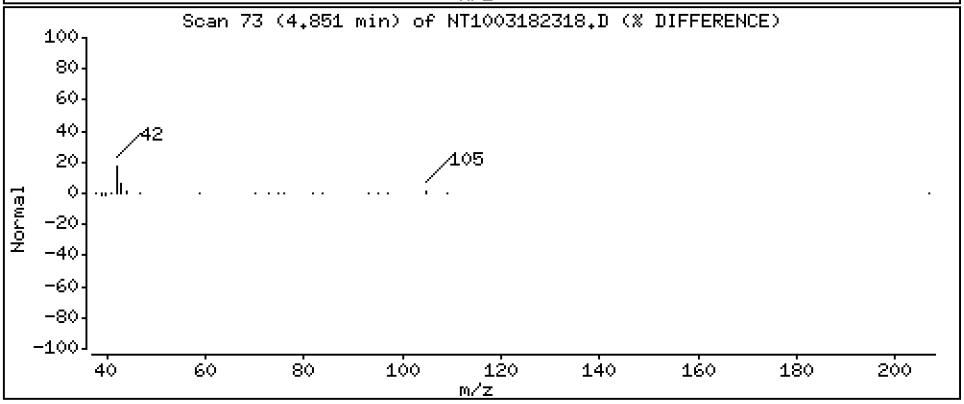












Date : 19-MAR-2023 04:35

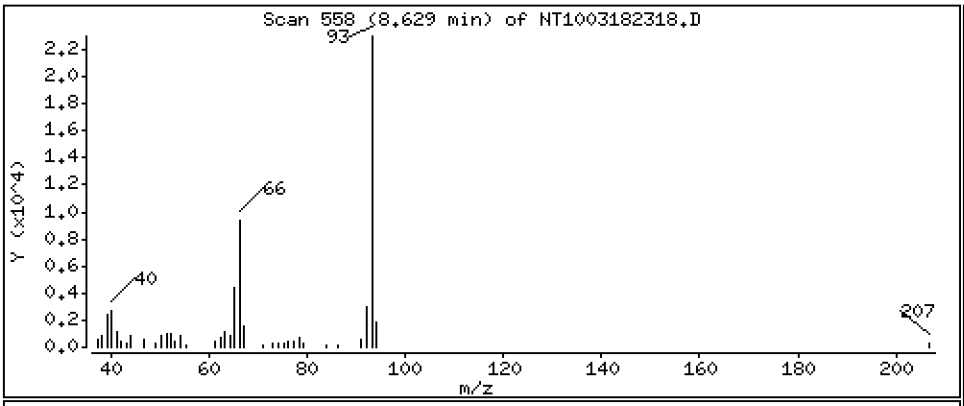
Client ID: Instrument: nt10.i

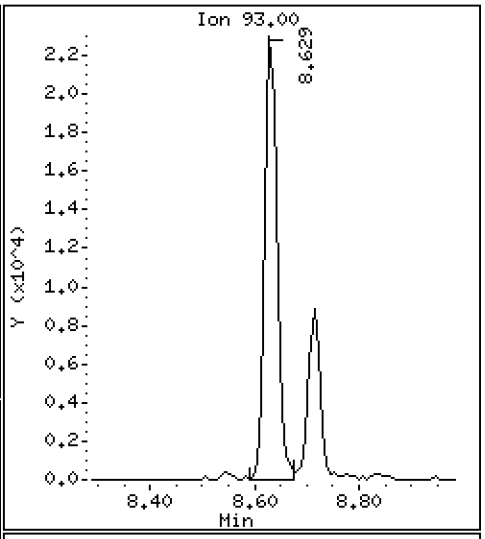
Sample Info: SLC0504-LCV2

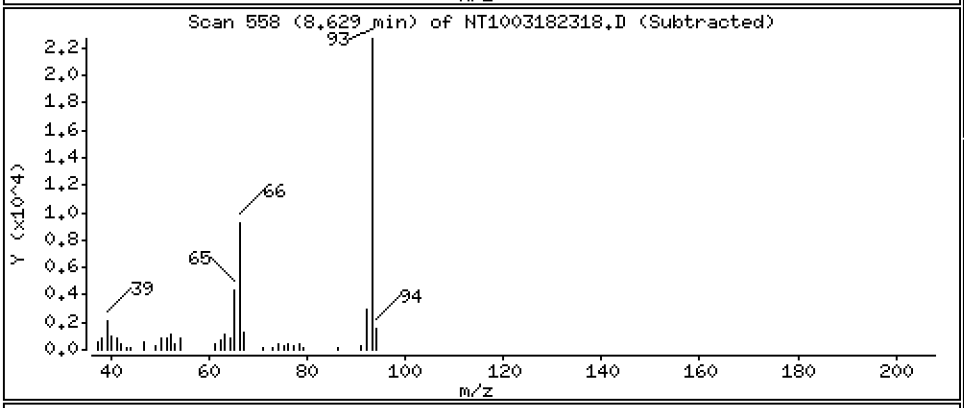
Operator: VTS

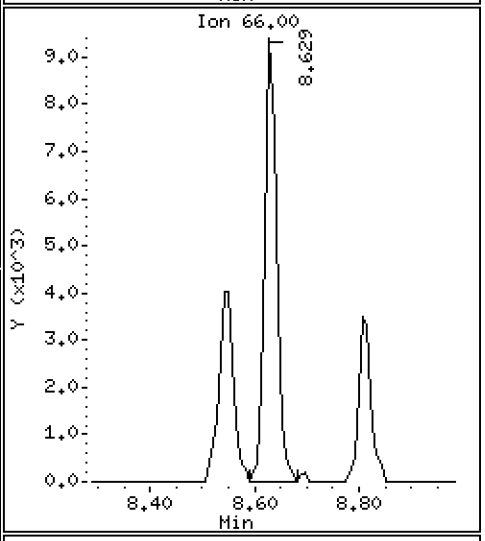
Column phase: ZB-5msi Column diameter: 0.25

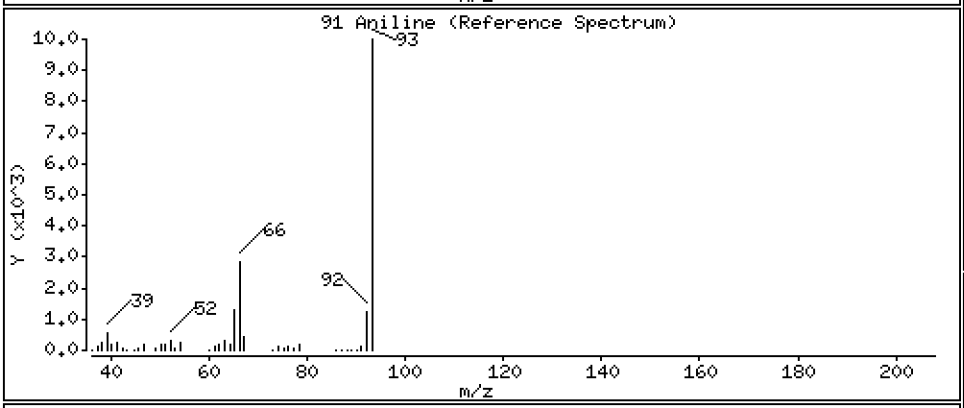
91 Aniline Concentration: 0.4153 ug/mL

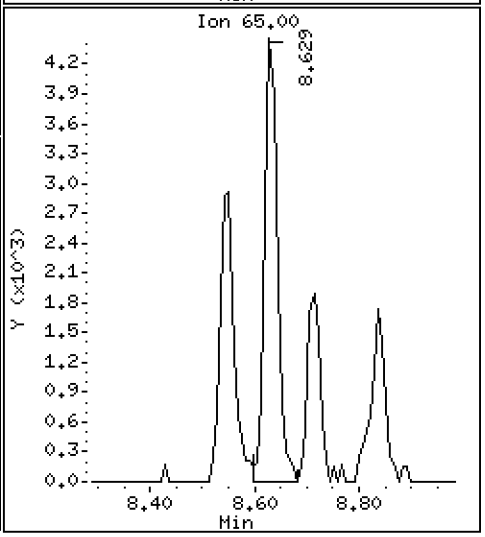


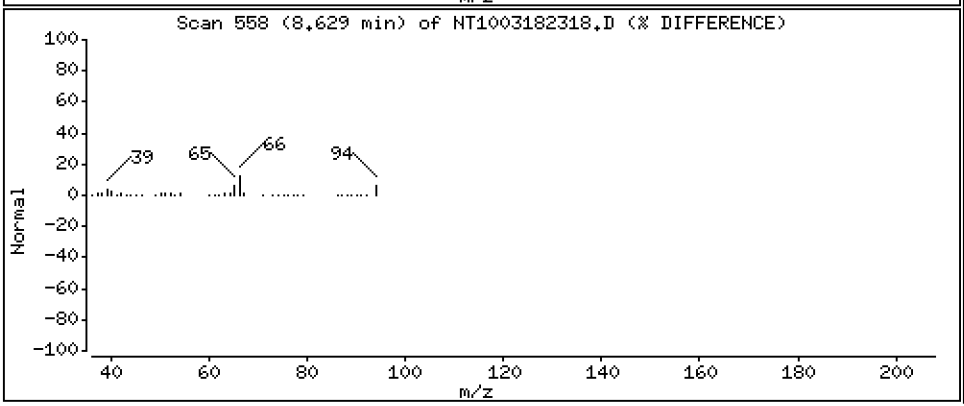












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

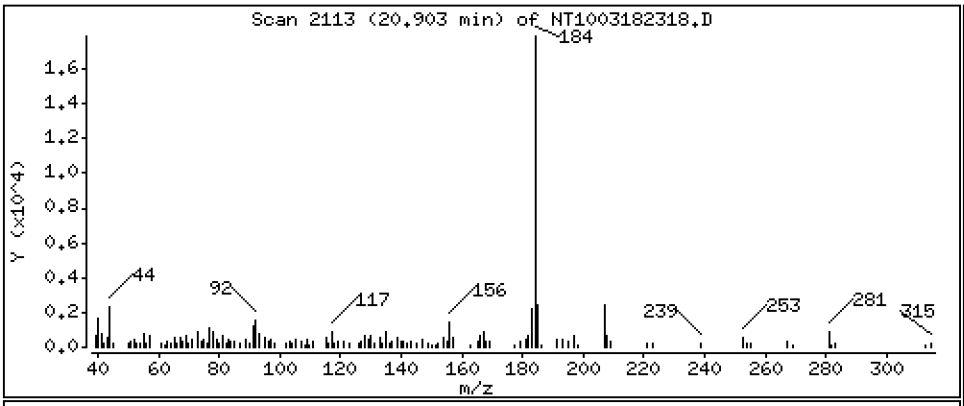
Operator: VTS

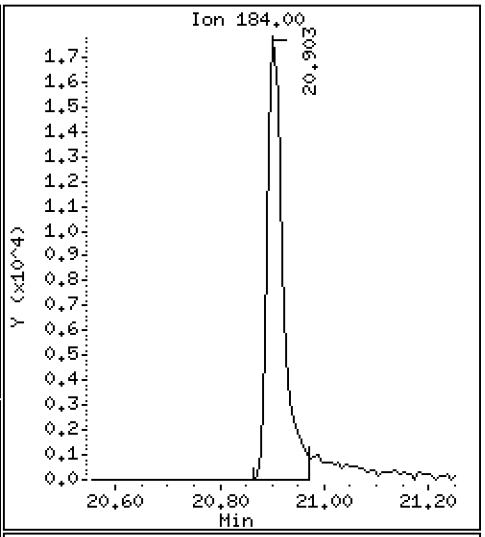
Column phase: ZB-5msi

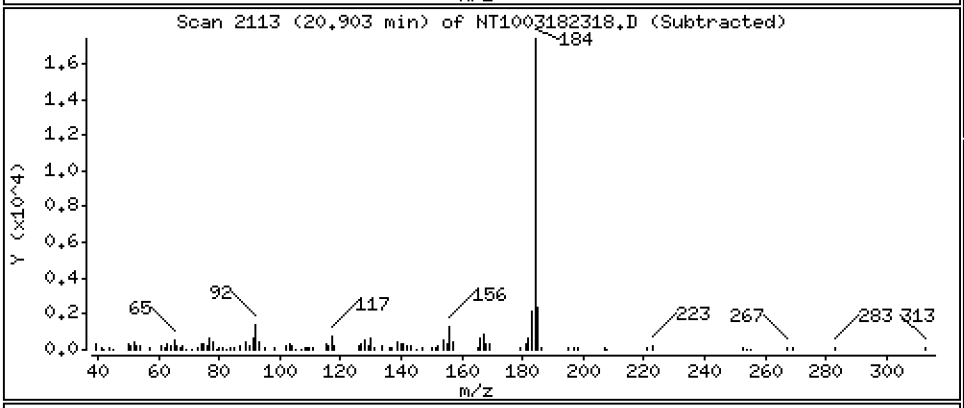
Column diameter: 0.25

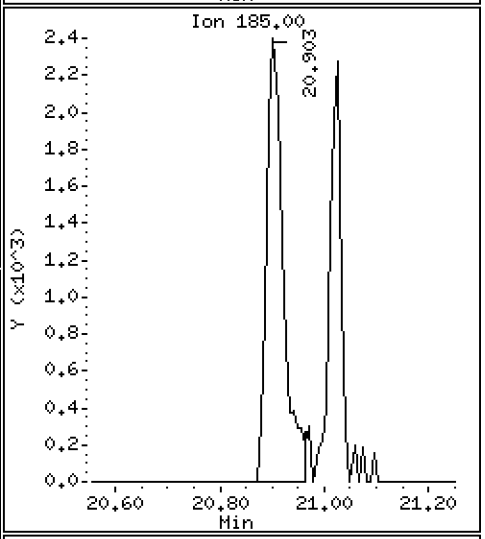
93 Benzidine

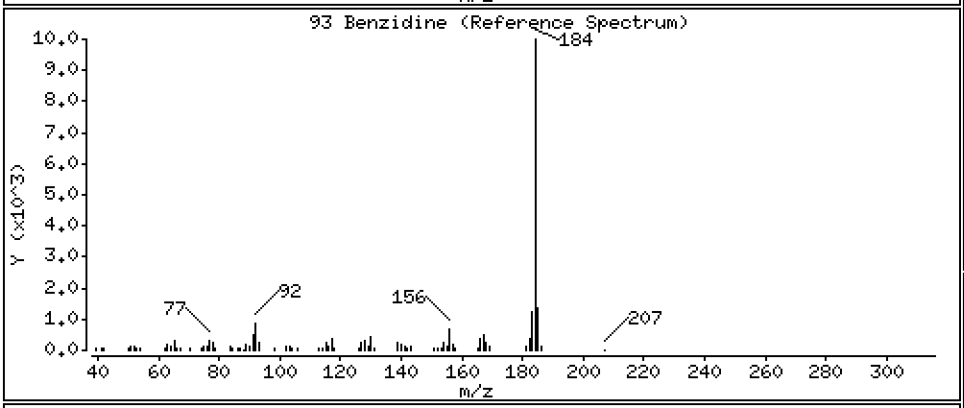
Concentration: 0.3622 ug/mL

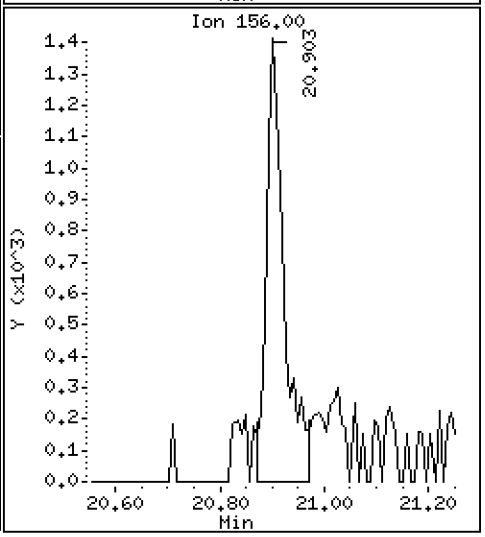


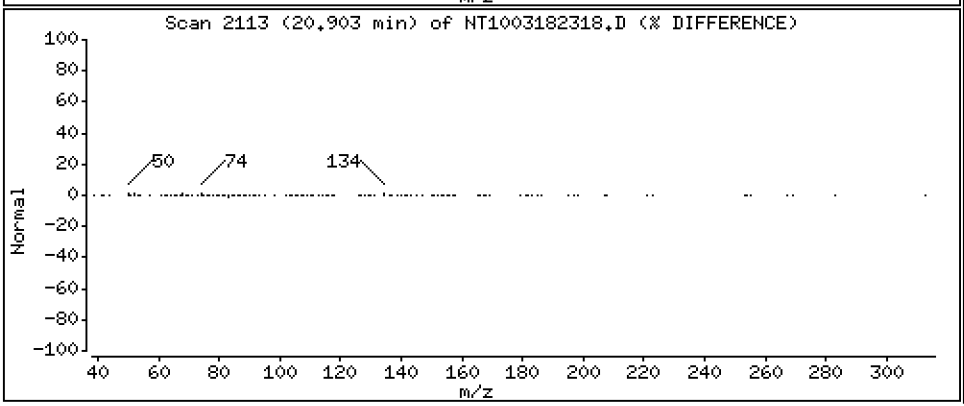












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

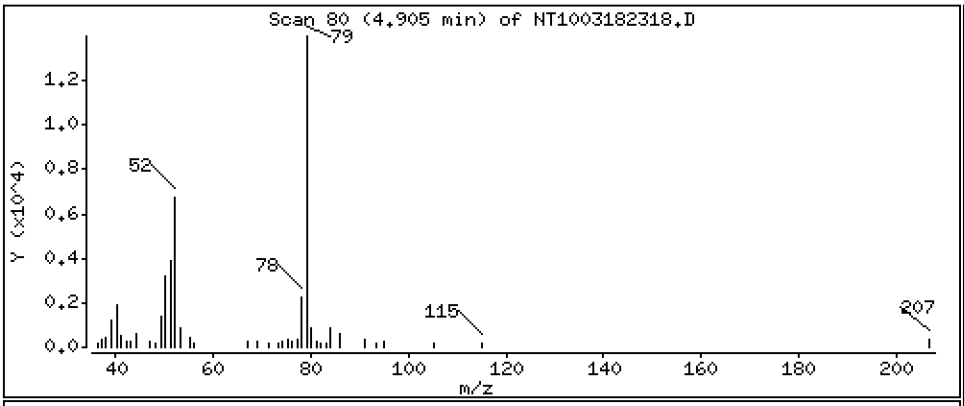
Operator: VTS

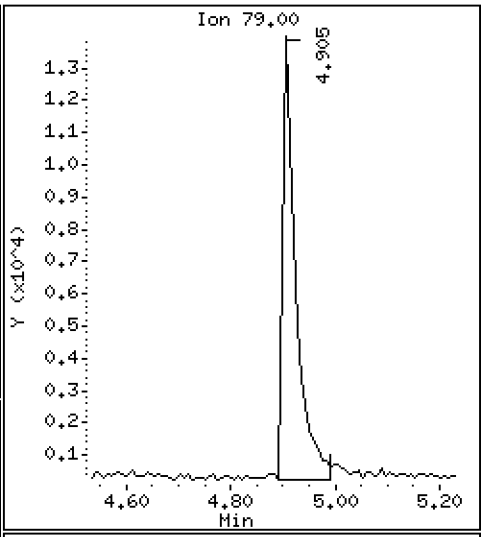
Column phase: ZB-5msi

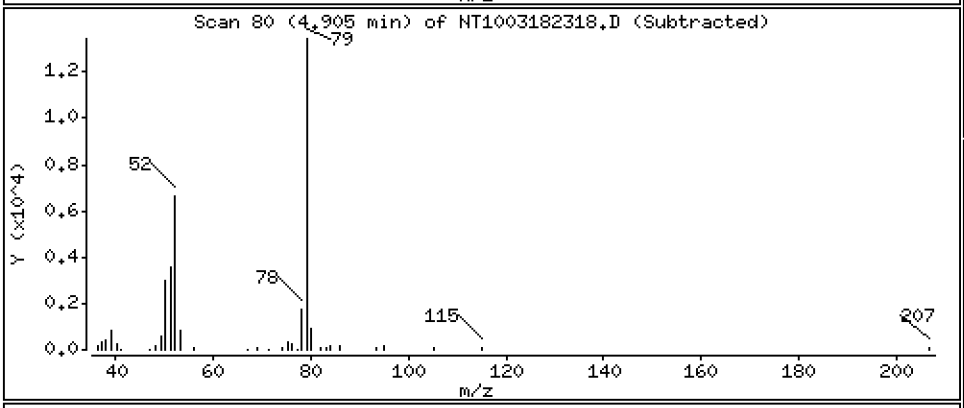
Column diameter: 0.25

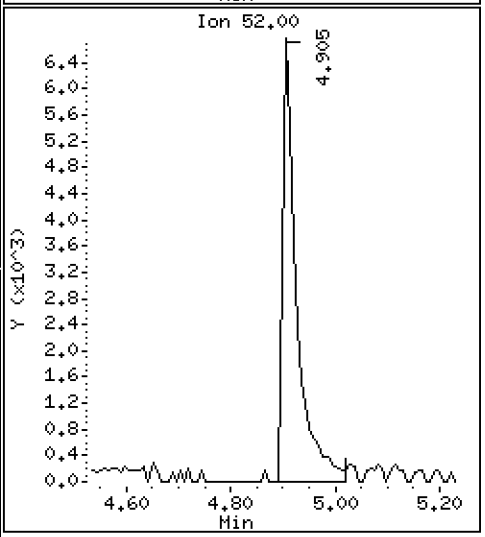
103 Pyridine

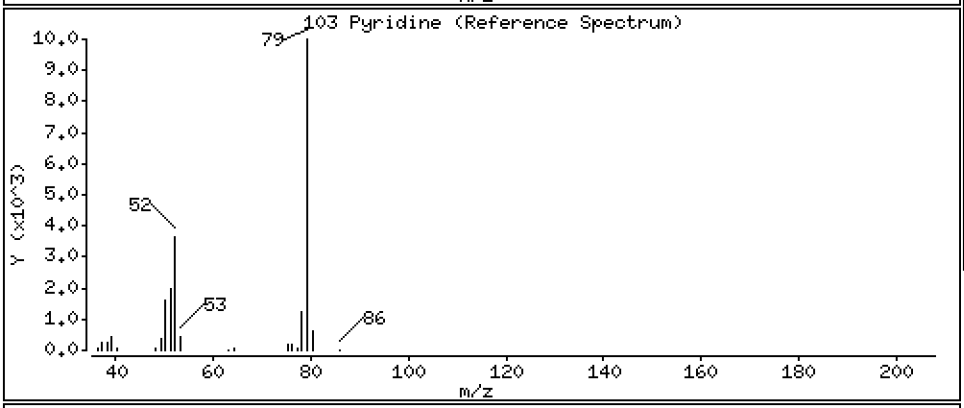
Concentration: 0.4118 ug/mL

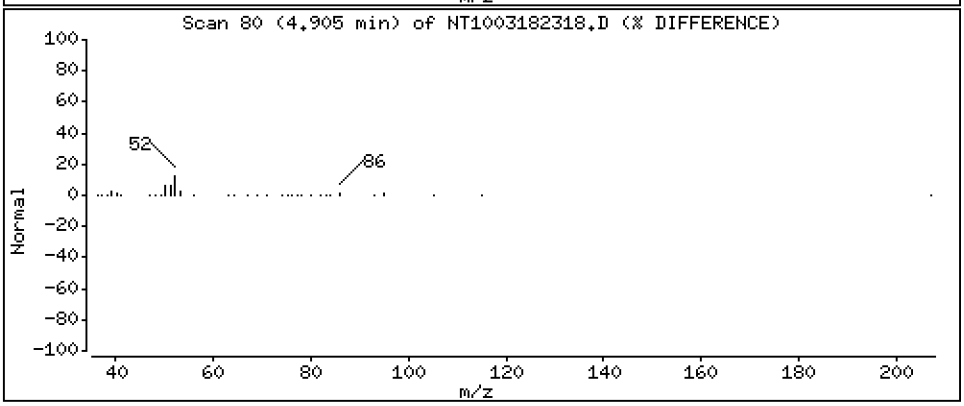












Data File: \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D

Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

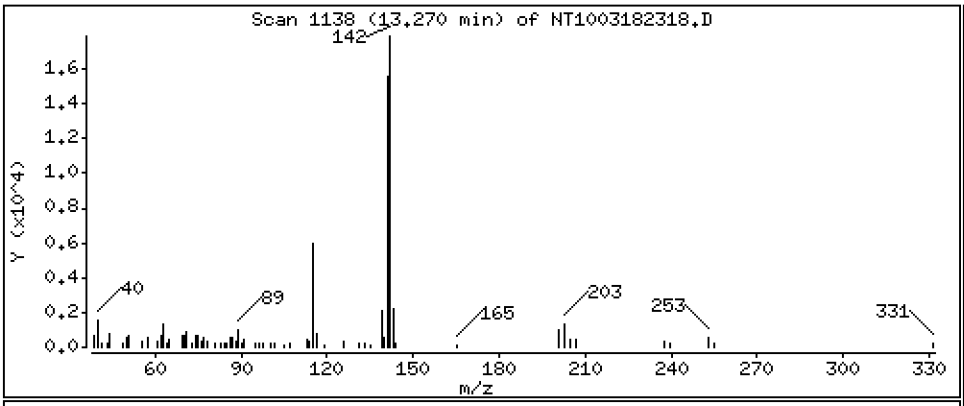
Operator: VTS

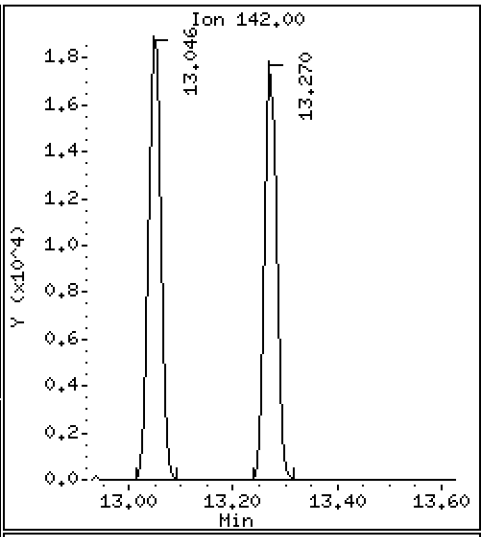
Column phase: ZB-5msi

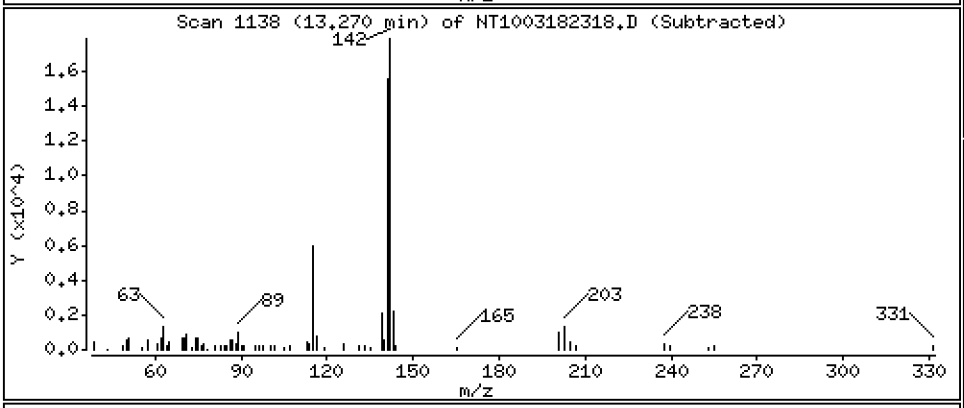
Column diameter: 0.25

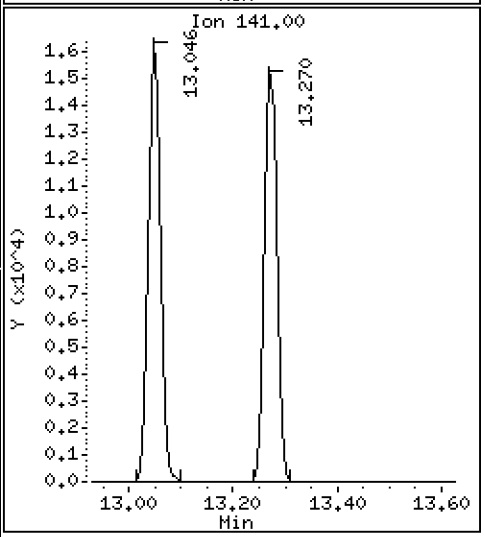
105 1-methylnaphthalene

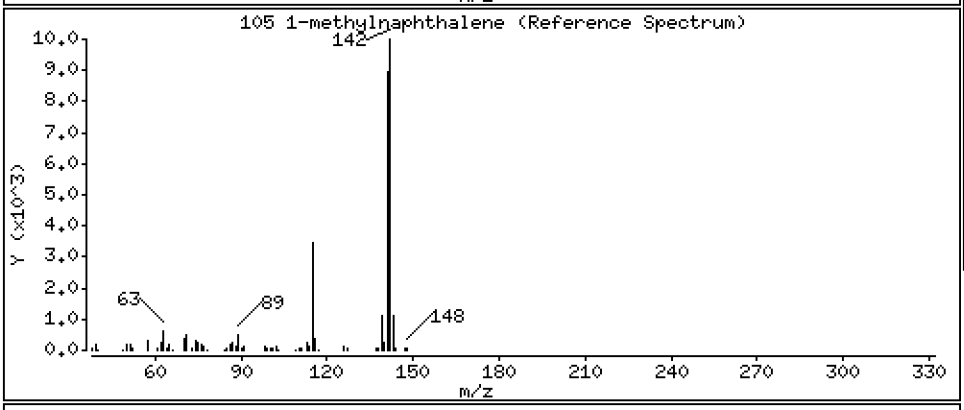
Concentration: 0.2098 ug/mL

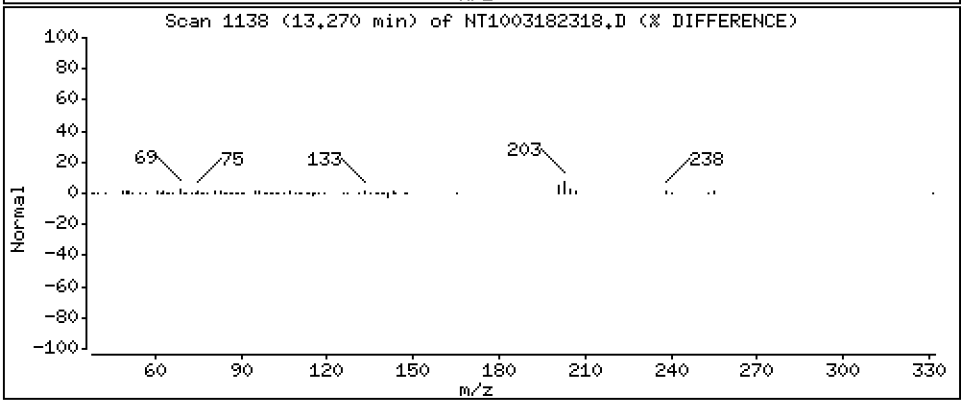












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

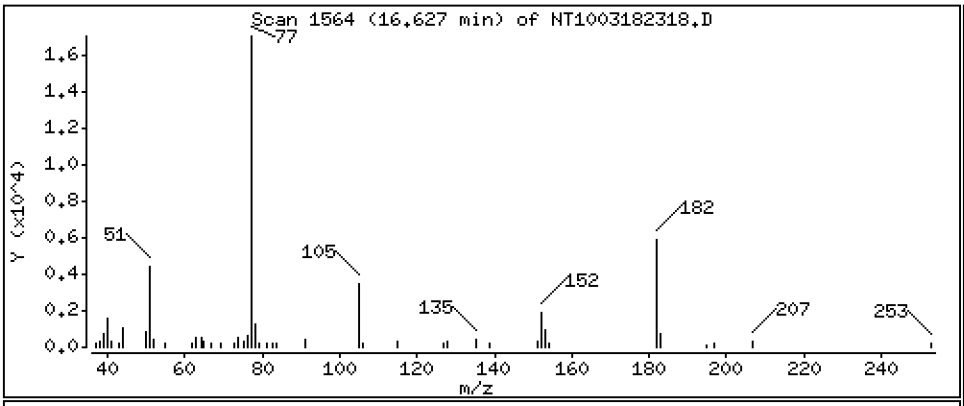
Operator: VTS

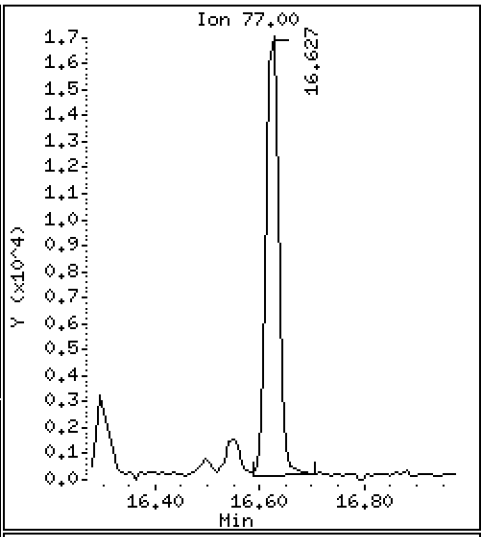
Column phase: ZB-5msi

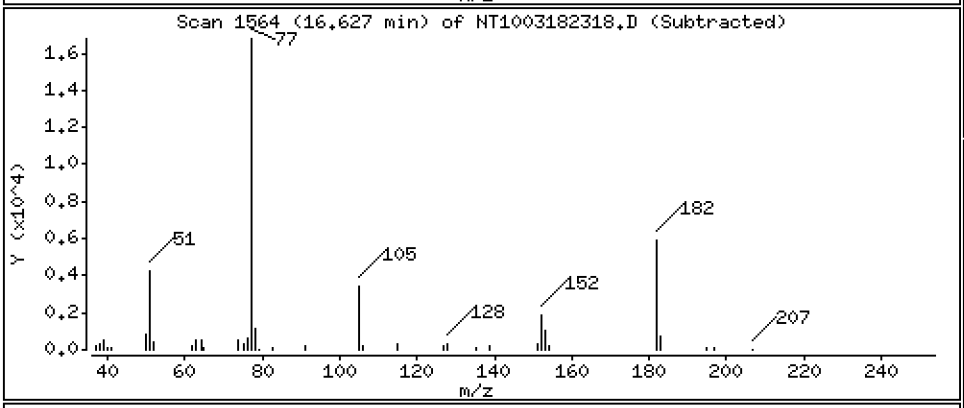
Column diameter: 0.25

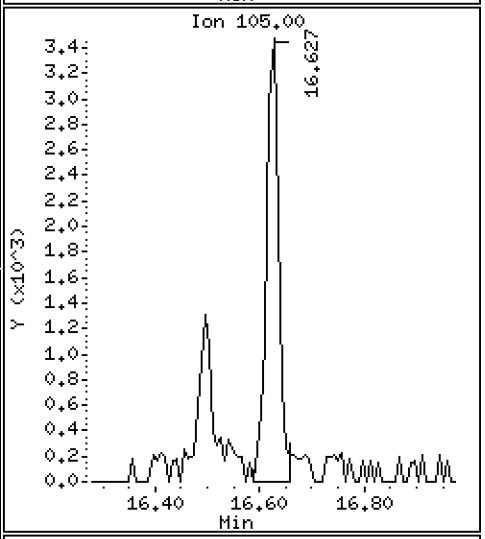
111 Azobenzene (1,2-DP-Hydrazine)

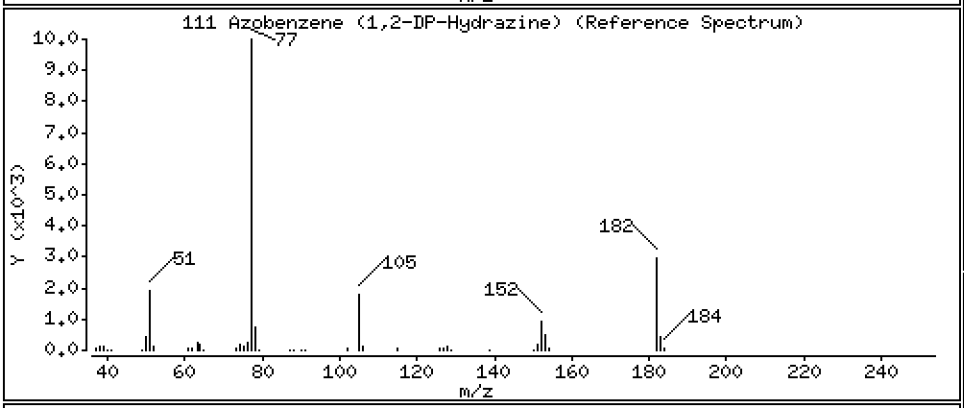
Concentration: 0.1929 ug/mL

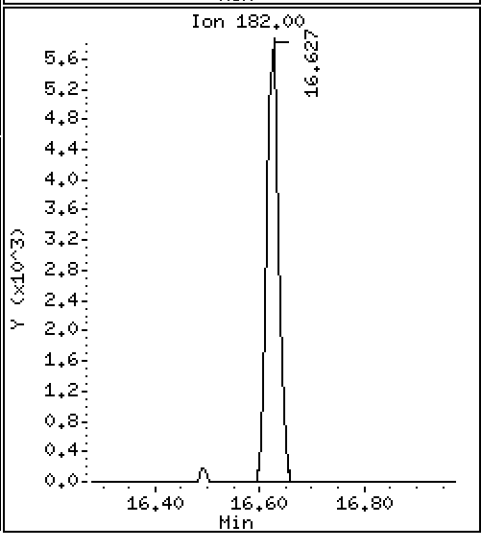


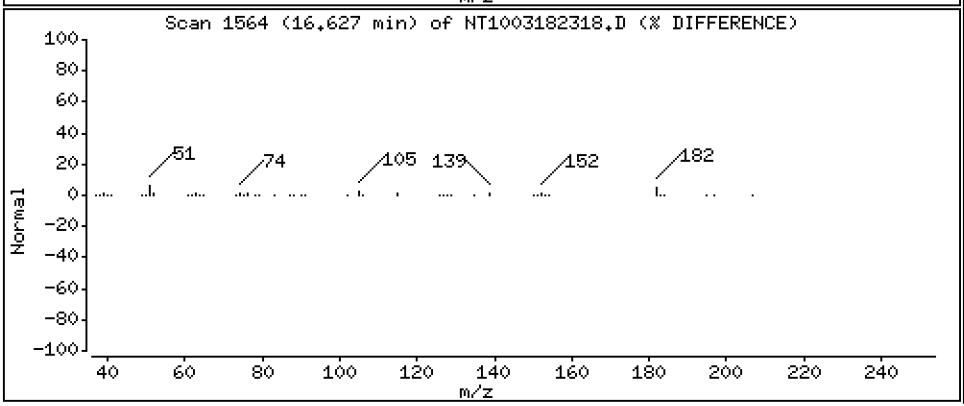












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

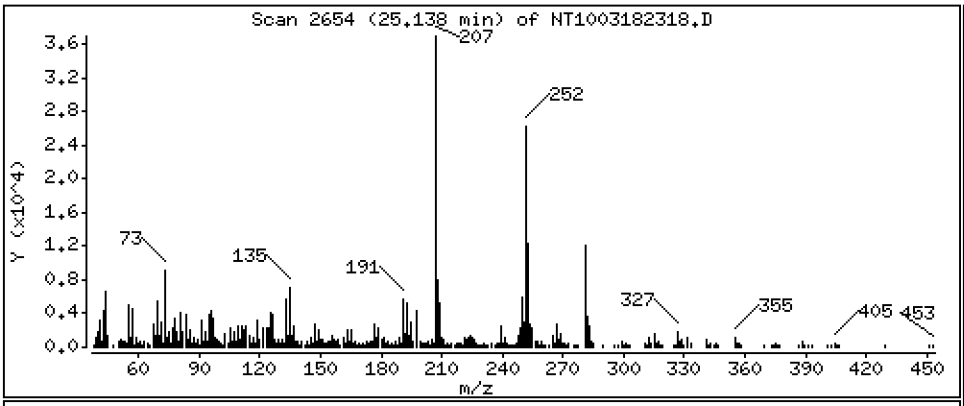
Operator: VTS

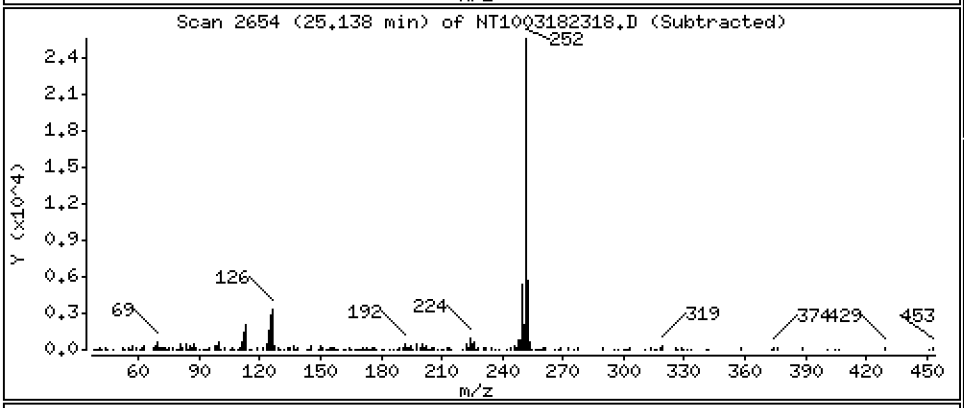
Column phase: ZB-5msi

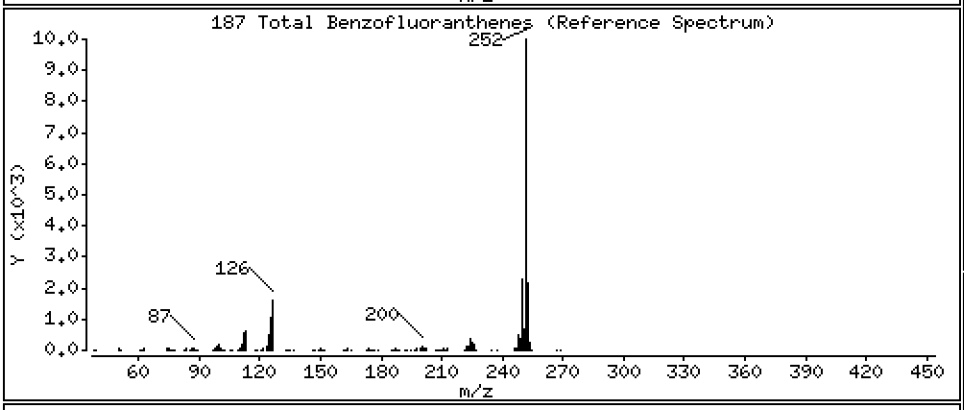
Column diameter: 0.25

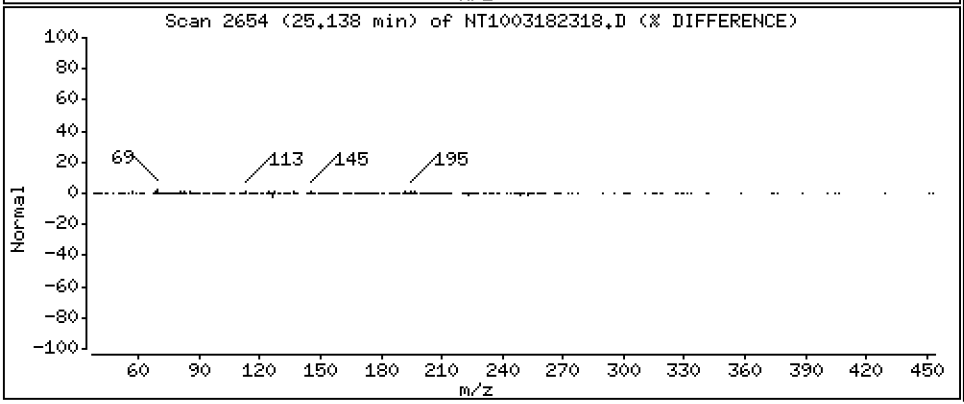
187 Total Benzofluoranthenes

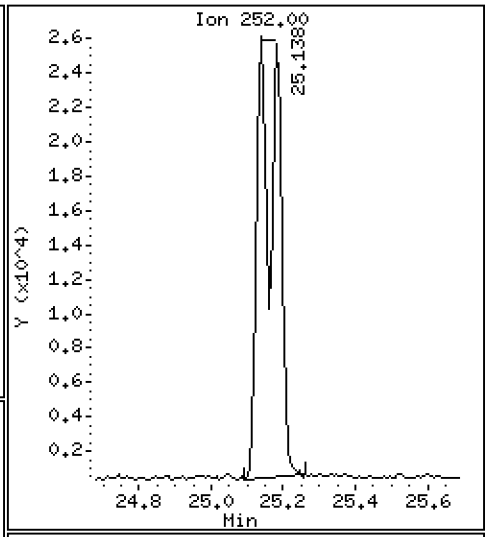
Concentration: 0.4377 ug/mL

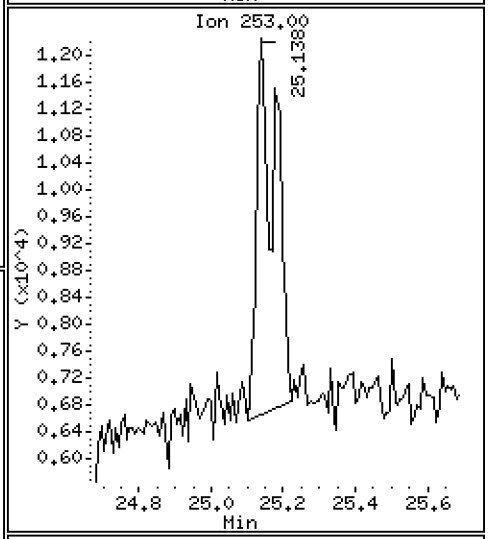


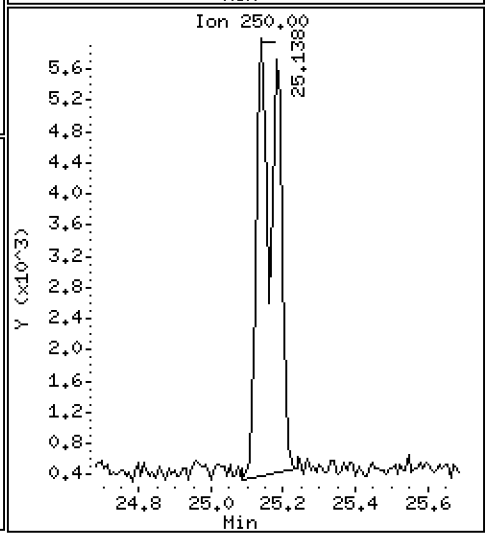












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Date : 19-MAR-2023 04:35

Client ID:

Instrument: nt10.i

Sample Info: SLC0504-LCV2

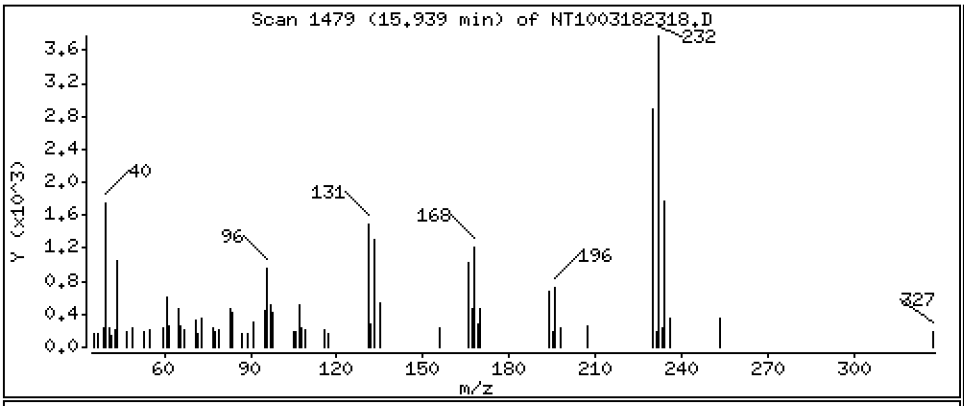
Operator: VTS

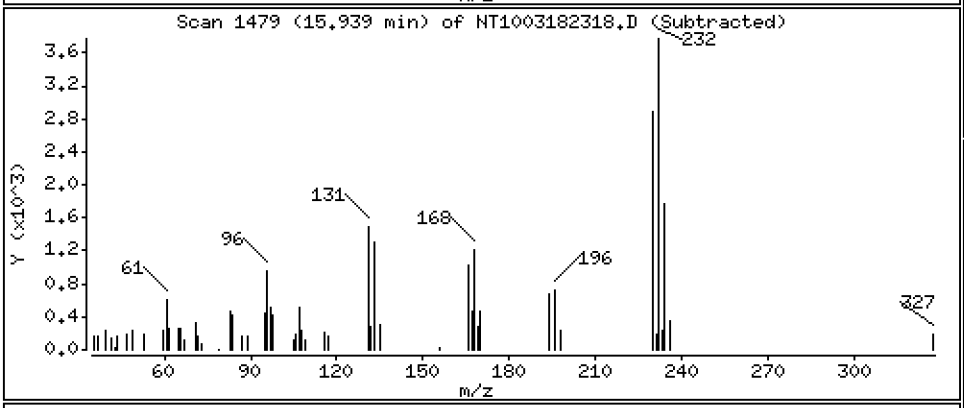
Column phase: ZB-5msi

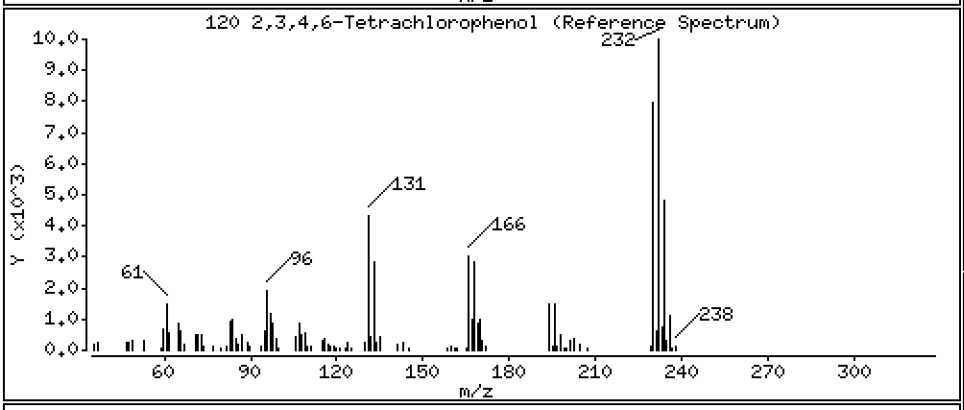
Column diameter: 0.25

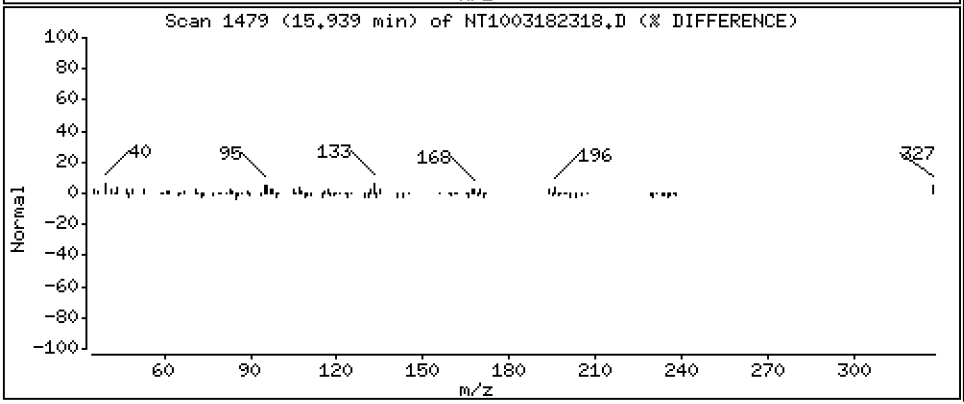
120 2,3,4,6-Tetrachlorophenol

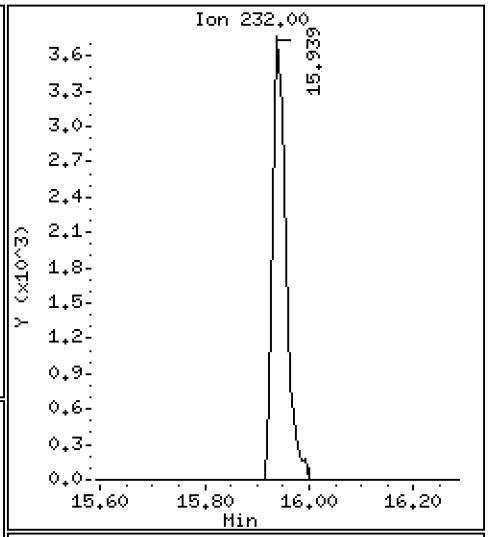
Concentration: 0.1608 ug/mL

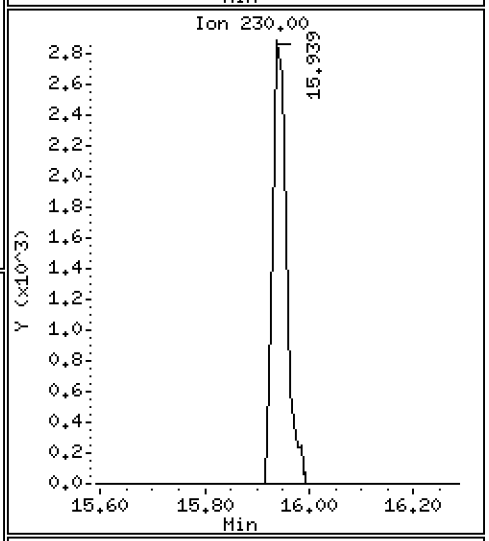


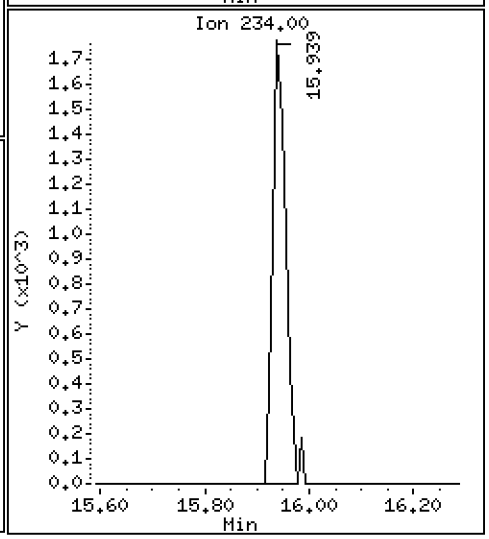












ARI Labs, Inc.

Semivolatile Report SW846 Method 8270D

Data file : \\target\share\chem3\nt10.i\20230318.b\NT1003182318.D
Lab Smp Id: SLC0504-LCV2
Inj Date : 19-MAR-2023 04:35
Operator : VTS Inst ID: nt10.i
Smp Info : SLC0504-LCV2
Misc Info :
Comment : 1ul Injection
Method : \\target\share\chem3\nt10.i\20230318.b\ABN.m
Meth Date : 04-Apr-2023 09:07 van Quant Type: ISTD
Cal Date : 16-MAR-2023 00:22 Cal File: NT10031508.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICAL.sub
Target Version: 4.14
Processing Host: VANS-201906

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/mL)
$	1 2-Fluorophenol	112	6.959	6.967	(0.759)	20354	0.32901	0.3290
$	2 Phenol-d5	99	8.528	8.528	(0.930)	23740	0.29252	0.2925
	3 Phenol	94	8.543	8.551	(0.932)	17405	0.20638	0.2064
$	5 2-Chlorophenol-d4	132	8.813	8.813	(0.961)	21099	0.30445	0.3045
	4 Bis(2-Chloroethyl)ether	93	8.713	8.713	(0.950)	12834	0.20518	0.2052
	6 2-Chlorophenol	128	8.837	8.837	(0.964)	14832	0.20549	0.2055
	7 1,3-Dichlorobenzene	146	9.107	9.107	(0.993)	15866	0.20792	0.2079
*	8 1,4-Dichlorobenzene-d4	152	9.169	9.169	(1.000)	204568	4.00000	
	9 1,4-Dichlorobenzene	146	9.200	9.200	(1.003)	15212	0.20636	0.2064
$	10 1,2-Dichlorobenzene-d4	152	9.526	9.526	(1.039)	10847	0.21795	0.2179
	12 1,2-Dichlorobenzene	146	9.557	9.557	(1.042)	15310	0.21104	0.2110
	11 Benzyl alcohol	108	9.433	9.433	(1.029)	7773	0.19637	0.1964
	14 2,2'-oxybis(1-Chloropropane)	121	9.728	9.728	(1.061)	4308	0.20221	0.2022(M)
	13 2-Methylphenol	108	9.651	9.651	(1.052)	12638	0.20557	0.2056
	17 Hexachloroethane	117	10.140	10.140	(1.106)	4278	0.14145	0.1414
	16 N-Nitroso-di-n-propylamine	70	9.984	9.984	(1.089)	10220	0.21054	0.2105
	15 4-Methylphenol	108	9.922	9.915	(1.082)	13467	0.20790	0.2079
$	18 Nitrobenzene-d5	82	10.256	10.256	(0.881)	15498	0.21076	0.2108
	19 Nitrobenzene	77	10.287	10.287	(0.884)	13872	0.19223	0.1922
	20 Isophorone	82	10.729	10.737	(0.922)	18563	0.20108	0.2011
	21 2-Nitrophenol	139	10.912	10.912	(0.938)	6674	0.19019	0.1902
	22 2,4-Dimethylphenol	107	10.955	10.955	(0.941)	27561	0.41580	0.4158
	23 Bis(2-Chloroethoxy)methane	93	11.150	11.150	(0.958)	13118	0.21273	0.2127
	24 Benzoic acid	105	11.040	11.150	(0.949)	11900	0.32318	0.3232(H)
	25 2,4-Dichlorophenol	162	11.362	11.362	(0.976)	21121	0.39819	0.3982
	26 1,2,4-Trichlorobenzene	180	11.545	11.545	(0.992)	13584	0.21817	0.2182
*	27 Naphthalene-d8	136	11.637	11.638	(1.000)	728529	4.00000	
	28 Naphthalene	128	11.676	11.676	(1.003)	40562	0.21017	0.2102
	29 4-Chloroaniline	127	11.792	11.800	(1.013)	28370	0.37680	0.3768
	30 Hexachlorobutadiene	225	12.024	12.024	(1.033)	7952	0.21796	0.2180
	31 4-Chloro-3-methylphenol	107	12.736	12.743	(1.094)	22248	0.38745	0.3874
	32 2-Methylnaphthalene	142	13.045	13.053	(1.121)	29845	0.21428	0.2143
	33 Hexachlorocyclopentadiene	237	13.510	13.510	(0.888)	165	0.00453	0.004534

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/mL)
	34	2,4,6-Trichlorophenol	196	13.664	13.664	(0.898)	14868	0.38252	0.3825
	35	2,4,5-Trichlorophenol	196	13.742	13.742	(0.903)	14754	0.34162	0.3416
$	36	2-Fluorobiphenyl	172	13.819	13.827	(0.908)	33213	0.21350	0.2135
	37	2-Chloronaphthalene	162	14.036	14.044	(0.922)	26178	0.20783	0.2078
	38	2-Nitroaniline	65	14.291	14.299	(0.939)	11926	0.33706	0.3371
	39	Dimethylphthalate	163	14.717	14.717	(0.967)	28633	0.22413	0.2241
	40	Acenaphthylene	152	14.903	14.910	(0.979)	42635	0.21722	0.2172
	41	2,6-Dinitrotoluene	165	14.856	14.864	(0.976)	11334	0.41069	0.4107
*	42	Acenaphthene-d10	164	15.220	15.220	(1.000)	393259	4.00000	
	43	3-Nitroaniline	138	15.143	15.143	(0.995)	10529	0.33801	0.3380
	44	Acenaphthene	153	15.282	15.282	(1.004)	24532	0.20232	0.2023
	45	2,4-Dinitrophenol	184	15.367	15.351	(1.010)	364	0.02186	0.02186(M)
	46	Dibenzofuran	168	15.606	15.606	(1.025)	36985	0.20684	0.2068
	47	4-Nitrophenol	109	15.467	15.460	(1.016)	4659	0.23780	0.2378(M)
	48	2,4-Dinitrotoluene	165	15.661	15.668	(1.029)	12819	0.30709	0.3071
	50	Diethylphthalate	149	16.163	16.171	(1.062)	28239	0.22529	0.2253
	49	Fluorene	166	16.318	16.318	(1.072)	22759	0.16178	0.1618
	51	4-Chlorophenyl-phenylether	204	16.295	16.295	(1.071)	8794	0.13146	0.1315
	52	4-Nitroaniline	138	16.410	16.410	(1.078)	8611	0.30675	0.3068
	53	4,6-Dinitro-2-methylphenol	198	16.495	16.503	(0.904)	4726	0.21885	0.2188
	54	N-Nitrosodiphenylamine	169	16.549	16.557	(0.907)	20108	0.21048	0.2105
$	55	2,4,6-Tribromophenol	330	16.850	16.850	(1.107)	4823	0.26067	0.2607
	56	4-Bromophenyl-phenylether	248	17.305	17.305	(0.949)	8690	0.21744	0.2174
	57	Hexachlorobenzene	284	17.621	17.621	(0.966)	9083	0.21677	0.2168
	58	Pentachlorophenol	266	17.978	17.978	(0.986)	5020	0.20250	0.2025
*	59	Phenanthrene-d10	188	18.241	18.241	(1.000)	714551	4.00000	
	60	Phenanthrene	178	18.287	18.295	(1.003)	39981	0.20520	0.2052
	61	Anthracene	178	18.380	18.380	(1.008)	40405	0.21618	0.2162
	62	Carbazole	167	18.713	18.713	(1.026)	34976	0.20883	0.2088
	63	Di-n-butylphthalate	149	19.494	19.494	(1.069)	47344	0.21025	0.2103
	64	Fluoranthene	202	20.670	20.670	(0.888)	47653	0.19455	0.1946
	65	Pyrene	202	21.096	21.096	(0.906)	48865	0.19448	0.1945
$	66	Terphenyl-d14	244	21.374	21.374	(0.918)	39365	0.20862	0.2086
	67	Butylbenzylphthalate	149	22.296	22.296	(0.958)	21741	0.24631	0.2463
	68	Benzo(a)anthracene	228	23.248	23.248	(0.999)	49059	0.22801	0.2280
*	69	Chrysene-d12	240	23.279	23.279	(1.000)	609569	4.00000	
	70	3,3'-Dichlorobenzidine	252	23.202	23.209	(0.997)	45584	0.66142	0.6614
	71	Chrysene	228	23.318	23.326	(1.002)	44238	0.21045	0.2105
	72	bis(2-Ethylhexyl)phthalate	149	23.310	23.318	(0.959)	29996	0.19942	0.1994
*	134	Di-n-octylphthalate-d4	153	24.301	24.301	(1.000)	1028437	4.00000	
	73	Di-n-octylphthalate	149	24.309	24.309	(1.000)	53924	0.20036	0.2004
	74	Benzo(b)fluoranthene	252	25.137	25.145	(0.970)	49865	0.21758	0.2176
	75	Benzo(k)fluoranthene	252	25.184	25.184	(0.972)	52894	0.22729	0.2273(M)
	76	Benzo(a)pyrene	252	25.795	25.803	(0.995)	45910	0.22406	0.2241
*	77	Perylene-d12	264	25.919	25.919	(1.000)	707008	4.00000	
	78	Indeno(1,2,3-cd)pyrene	276	28.602	28.594	(1.104)	51606	0.19797	0.1980
	79	Dibenzo(a,h)anthracene	278	28.610	28.618	(1.104)	42991	0.19865	0.1986
	80	Benzo(g,h,i)perylene	276	29.379	29.402	(1.133)	44111	0.19553	0.1955(M)
	90	N-Nitrosodimethylamine	74	4.850	4.850	(0.529)	16481	0.41758	0.4176
	91	Aniline	93	8.628	8.636	(0.941)	35887	0.41530	0.4153
	93	Benzidine	184	20.902	20.902	(0.898)	36439	0.36218	0.3622
	103	Pyridine	79	4.904	4.881	(0.535)	24960	0.41178	0.4118
	105	1-methylnaphthalene	142	13.270	13.277	(1.140)	26768	0.20977	0.2098
	111	Azobenzene (1,2-DP-Hydrazine)	77	16.626	16.626	(1.092)	27015	0.19294	0.1929

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/mL)
187 Total Benzofluoranthenes	252	25.137	25.184	(0.970)	96856	0.43772	0.4377(M)
120 2,3,4,6-Tetrachlorophenol	232	15.939	15.939	(1.047)	6366	0.16079	0.1608

QC Flag Legend

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

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182318.D
Lab Smp Id: SLC0504-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: \\target\share\chem3\nt10.i\20230318.b\ABN.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:19
Level:
Sample Type:

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	209537	104769	419074	204568	-2.37
27 Naphthalene-d8	795859	397930	1591718	728529	-8.46
42 Acenaphthene-d10	432510	216255	865020	393259	-9.08
59 Phenanthrene-d10	808891	404446	1617782	714551	-11.66
69 Chrysene-d12	657926	328963	1315852	609569	-7.35
134 Di-n-octylphthala	1187734	593867	2375468	1028437	-13.41
77 Perylene-d12	770107	385054	1540214	707008	-8.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	-0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	-0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	-0.00
59 Phenanthrene-d10	18.24	17.74	18.74	18.24	-0.00
69 Chrysene-d12	23.28	22.78	23.78	23.28	-0.00
134 Di-n-octylphthala	24.30	23.80	24.80	24.30	-0.00
77 Perylene-d12	25.92	25.42	26.42	25.92	-0.00

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

REVIEW SUMMARY FOR FILE - NT1003182318.D

Lab ID: SLC0504-LCV2
nt10.i, 20230318.b\ABN.m,   19-MAR-2023 04:35

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.958	-0.0095	Benzoic acid

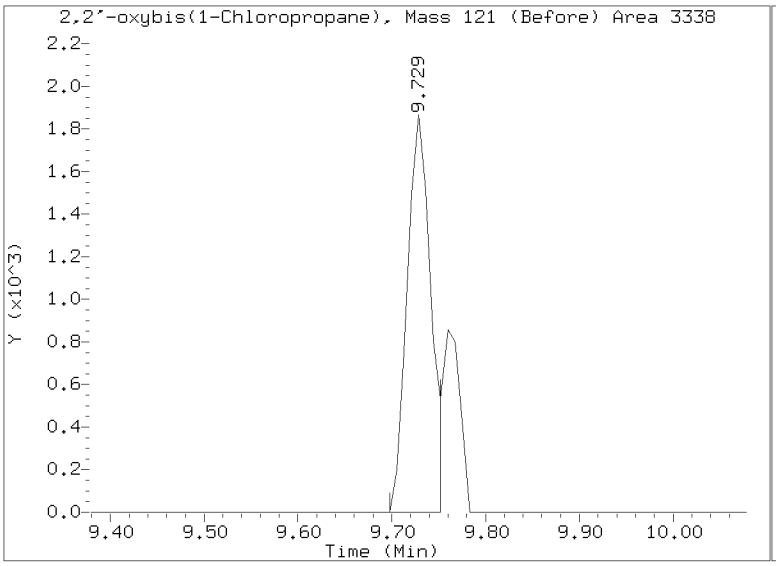
RRT check based on Ccal File: NT1003182316.D

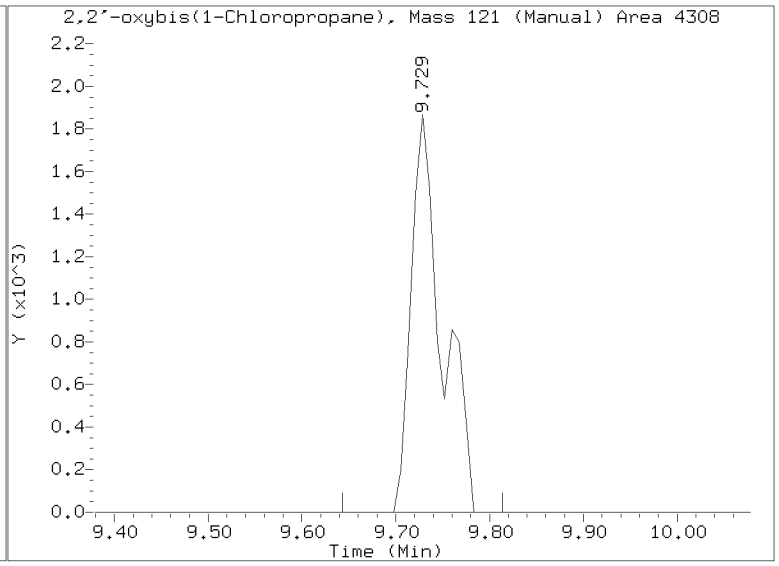
On Column LOD for nt10.i, 20230318.b\ABN.m, ICAL.sub = 0.0000

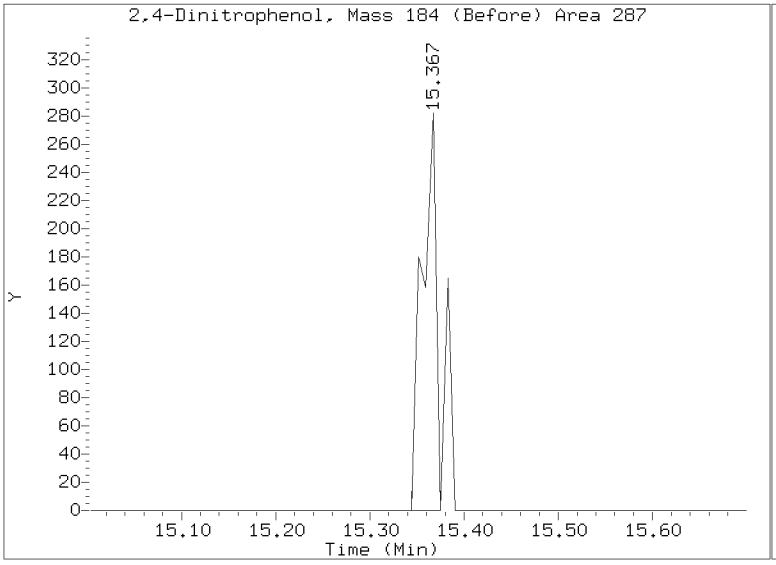
* Only compounds listed in the work order have been verified by the analyst *

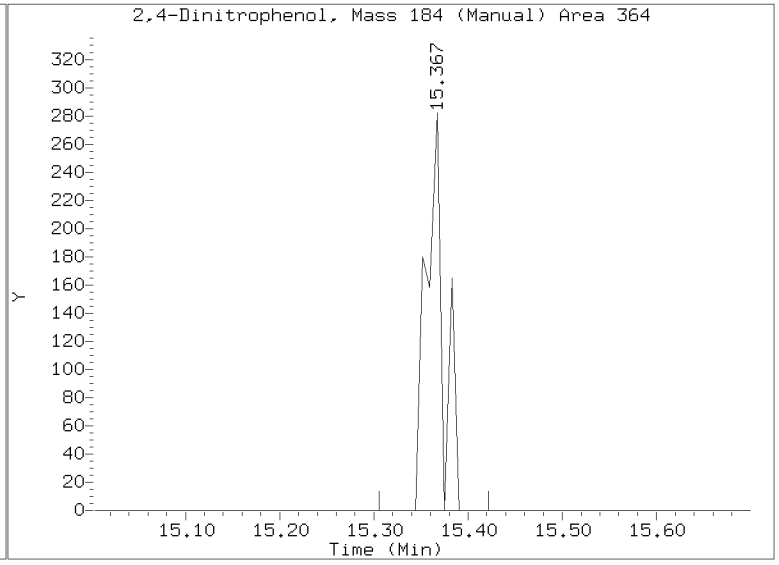
Quant Ion Manual Peak Adjustment Report

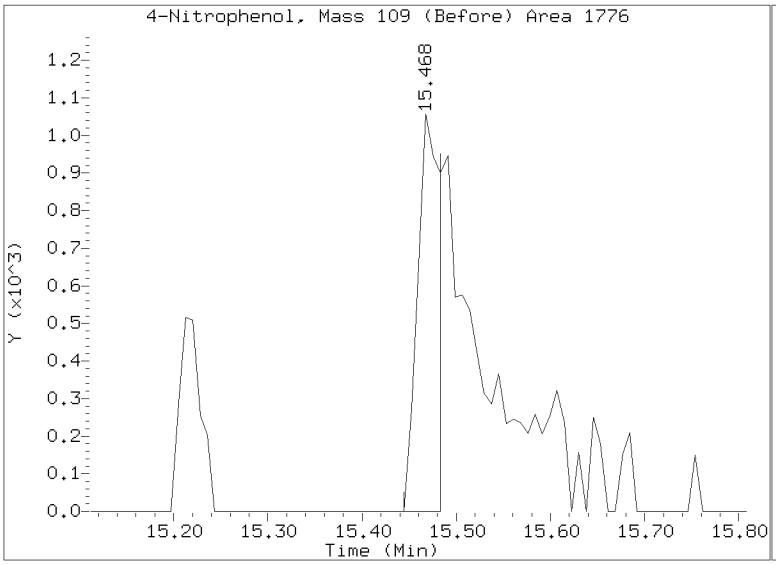
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182318.D
Injection Date: 19-MAR-2023 04:35
Lab ID:SLC0504-LCV2 Client ID:
Report Date: 04/04/2023 10:37

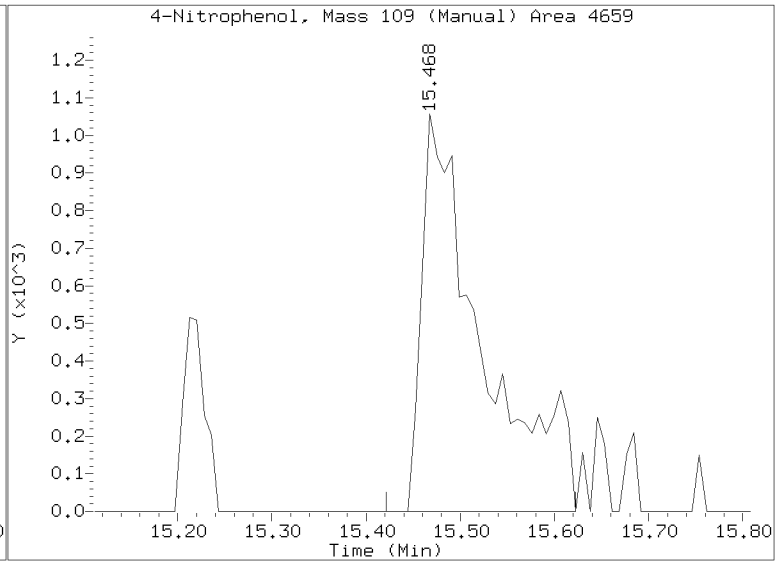






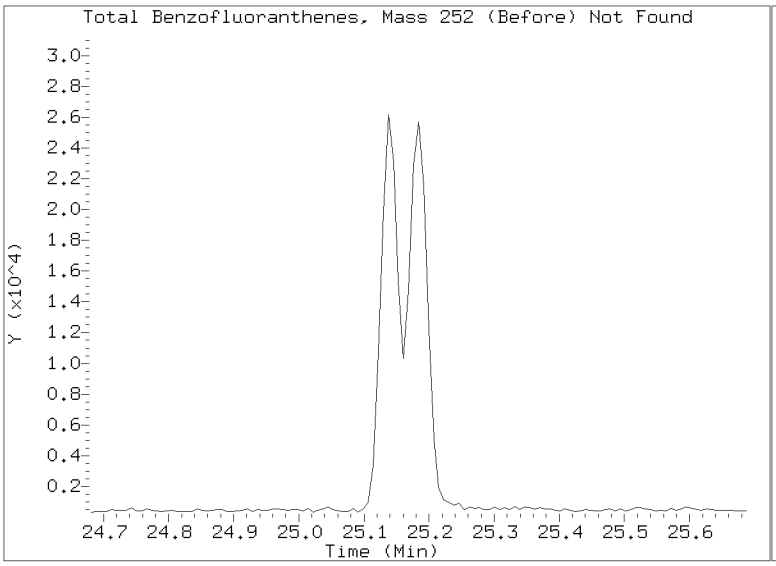


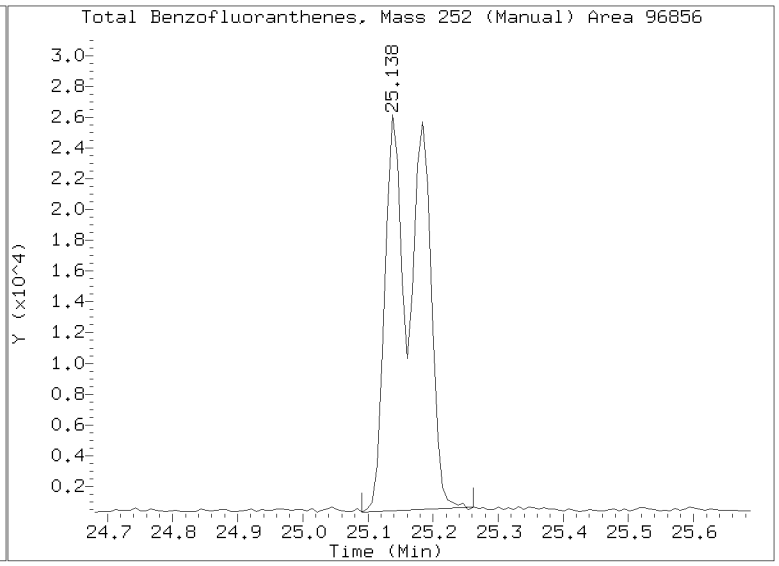


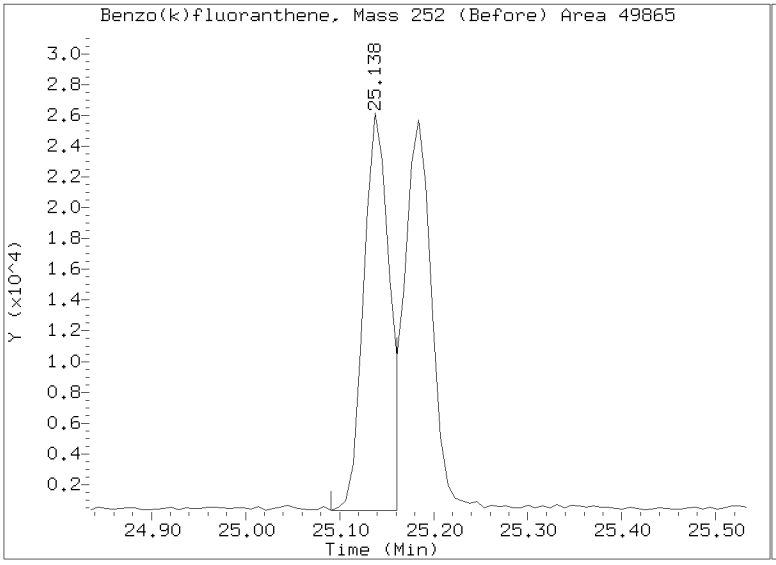


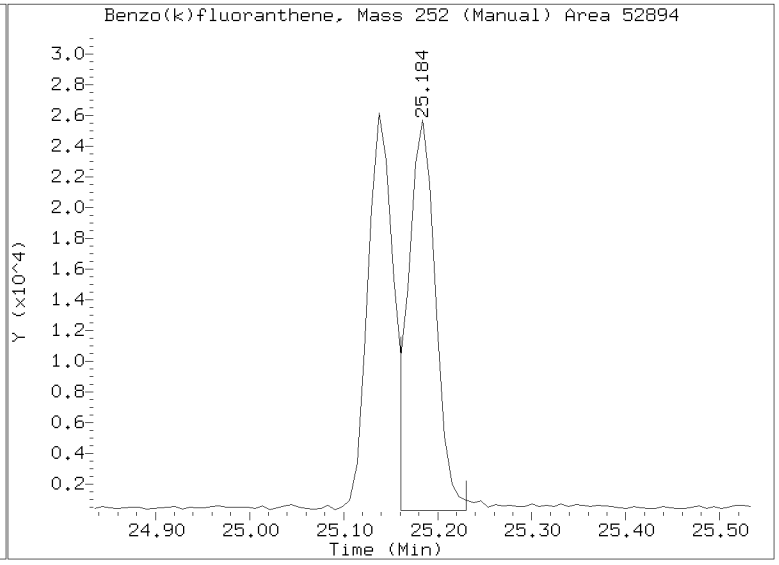
Quant Ion Manual Peak Adjustment Report

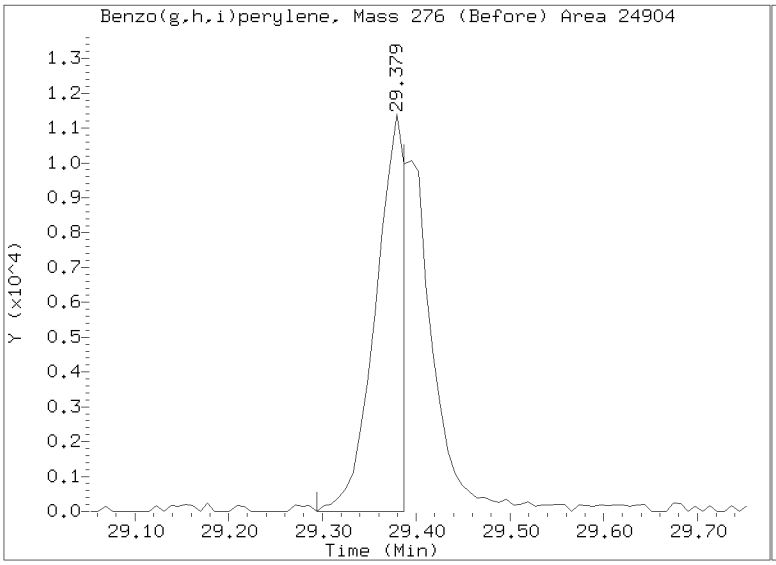
Datafile: //target/share/chem3/nt10.i/20230318.b/NT1003182318.D
Injection Date: 19-MAR-2023 04:35
Lab ID:SLC0504-LCV2 Client ID:
Report Date: 04/04/2023 10:37

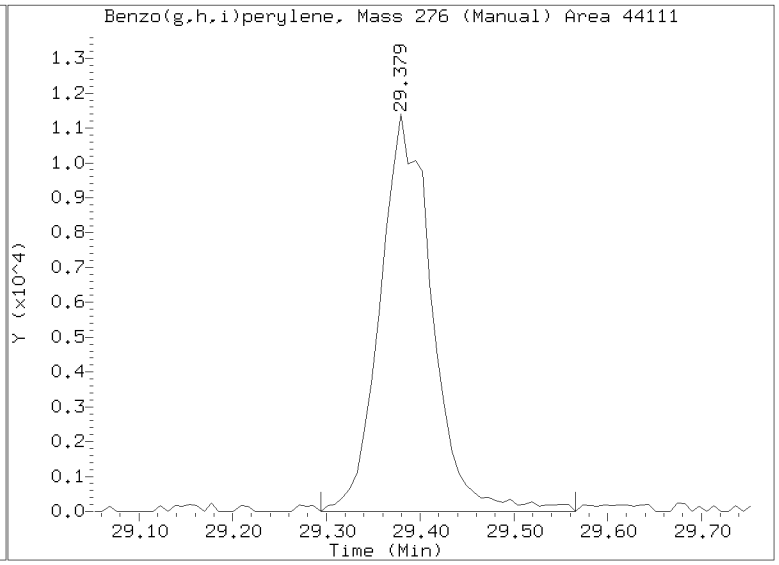












Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0228	Instrument:	NT10
		Calibration:	GC00046

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0228-TUN1	NT10031501.D	NA	03/15/23 20:19
CAL 20	SLC0228-CAL7	NT10031502.D	NA	03/15/23 20:34
CAL 10	SLC0228-CAL6	NT10031503.D	NA	03/15/23 21:12
CAL 5	SLC0228-CAL5	NT10031504.D	NA	03/15/23 21:50
CAL 2.5	SLC0228-CAL4	NT10031505.D	NA	03/15/23 22:28
CAL 1.0	SLC0228-CAL3	NT10031506.D	NA	03/15/23 23:06
CAL 0.5	SLC0228-CAL2	NT10031507.D	NA	03/15/23 23:44
CAL 0.2	SLC0228-CAL1	NT10031508.D	NA	03/16/23 00:22
SCV 5.0	SLC0228-SCV1	NT10031511.D	NA	03/16/23 02:16
Initial Cal Blank	SLC0228-ICB1	NT10031512.D	NA	03/16/23 02:54

ANALYSIS SEQUENCE

SLC0228

Instrument ID: NT10
Calibration ID: GC00046
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0228-TUN1	MS Tune	QC		1	K004775		03/15/2023 20:19	NT10031501.D	JGR	
SLC0228-CAL7	CAL 20	QC		2	K011111	K010831	03/15/2023 20:34	NT10031502.D	VTS	
SLC0228-CAL6	CAL 10	QC		3	K011110	K010831	03/15/2023 21:12	NT10031503.D	VTS	
SLC0228-CAL5	CAL 5	QC		4	K011109	K010831	03/15/2023 21:50	NT10031504.D	VTS	
SLC0228-CAL4	CAL 2.5	QC		5	K011108	K010831	03/15/2023 22:28	NT10031505.D	VTS	
SLC0228-CAL3	CAL 1.0	QC		6	K011107	K010831	03/15/2023 23:06	NT10031506.D	VTS	
SLC0228-CAL2	CAL 0.5	QC		7	K011106	K010831	03/15/2023 23:44	NT10031507.D	VTS	
SLC0228-CAL1	CAL 0.2	QC		8	K011105	K010831	03/16/2023 00:22	NT10031508.D	VTS	
SLC0228-SCV1	SCV 5.0	QC		9	L002833	K010831	03/16/2023 02:16	NT10031511.D	VTS	
SLC0228-ICB1	Initial Cal Blank	QC		10	K005156	K010831	03/16/2023 02:54	NT10031512.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b

	Time	Filename	LabID	ClientId	DF																			
1	2019	NT10031501.D	SLC0228-TUN1		1	|NO ISTDS FOUND||																		
2	2034	NT10031502.D	SLC0228-CAL7		1	| 9.30	177375	||11.78	659656	||15.38	352987	||18.42	587447	||23.46	356463	||26.19	404994	||24.49	617041	|				
3	2112	NT10031503.D	SLC0228-CAL6		1	| 9.30	174984	||11.78	633941	||15.38	344087	||18.42	605930	||23.46	437116	||26.18	463440	||24.48	674085	|				
4	2150	NT10031504.D	SLC0228-CAL5		1	| 9.30	171542	||11.78	624466	||15.38	337226	||18.42	572849	||23.45	347068	||26.18	421549	||24.48	500317	|				
5	2228	NT10031505.D	SLC0228-CAL4		1	| 9.30	158570	||11.78	582079	||15.38	306729	||18.42	522311	||23.45	356282	||26.18	420725	||24.48	471925	|				
6	2306	NT10031506.D	SLC0228-CAL3		1	| 9.29	172257	||11.78	625894	||15.38	330997	||18.42	568685	||23.45	426836	||26.18	489106	||24.48	555437	|				
7	2344	NT10031507.D	SLC0228-CAL2		1	| 9.30	176328	||11.78	638835	||15.38	333617	||18.42	594262	||23.45	428263	||26.18	479116	||24.48	530893	|				
8	0022	NT10031508.D	SLC0228-CAL1		1	| 9.29	173382	||11.77	622719	||15.38	323444	||18.42	582036	||23.45	443504	||26.18	490725	||24.48	540769	|				
9	0100	NT10031509.D	SEQ-SIM2		1	| 9.29	175576	||11.78	624440	||15.38	329518	||18.42	581173	||23.45	424576	||26.18	472151	||24.48	491201	|				
10	0138	NT10031510.D	SEQ-SIM1		1	| 9.30	172228	||11.77	609518	||15.38	313933	||18.42	564567	||23.45	413842	||26.18	461161	||24.48	469814	|				
11	0216	NT10031511.D	SLC0228-SCV1		1	| 9.30	154809	||11.78	570882	||15.38	303490	||18.42	533431	||23.46	435381	||26.19	494648	||24.49	660827	|				
12	0254	NT10031512.D	SLC0228-ICB1		1	| 9.30	173115	||11.78	625865	||15.38	328712	||18.42	592693	||23.45	442208	||26.18	499804	||24.48	526309	|				

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b

Instrument: nt10.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
2019	NT10031501.D	SLC0228-TUN1	1	NO MANUAL INTEGRATION
2034	NT10031502.D	SLC0228-CAL7	1	Benzoic acid,
2112	NT10031503.D	SLC0228-CAL6	1	2,2'-oxybis(1-Chloropropane),
2150	NT10031504.D	SLC0228-CAL5	1	2,2'-oxybis(1-Chloropropane),
2228	NT10031505.D	SLC0228-CAL4	1	2,2'-oxybis(1-Chloropropane),
2306	NT10031506.D	SLC0228-CAL3	1	2,2'-oxybis(1-Chloropropane),
2344	NT10031507.D	SLC0228-CAL2	1	2,2'-oxybis(1-Chloropropane), Benzoic acid,
0022	NT10031508.D	SLC0228-CAL1	1	2,2'-oxybis(1-Chloropropane), 1,2-Dichlorobenzene-d4,
0100	NT10031509.D	SEQ-SIM2	1	NO MANUAL INTEGRATION
0138	NT10031510.D	SEQ-SIM1	1	NO MANUAL INTEGRATION
0216	NT10031511.D	SLC0228-SCV1	1	NO MANUAL INTEGRATION
0254	NT10031512.D	SLC0228-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 13:06

NT10031501.D	Data Locked	van, 16-Mar-2023 13:06
NT10031502.D	Data Locked	van, 16-Mar-2023 13:06
NT10031503.D	Data Locked	van, 16-Mar-2023 13:06
NT10031504.D	Data Locked	van, 16-Mar-2023 13:06
NT10031505.D	Data Locked	van, 16-Mar-2023 13:06
NT10031506.D	Data Locked	van, 16-Mar-2023 13:06
NT10031507.D	Data Locked	van, 16-Mar-2023 13:06
NT10031508.D	Data Locked	van, 16-Mar-2023 13:06
NT10031509.D	Data Locked	van, 16-Mar-2023 13:06
NT10031510.D	Data Locked	van, 16-Mar-2023 13:06
NT10031511.D	Data Locked	van, 16-Mar-2023 13:06
NT10031512.D	Data Locked	van, 16-Mar-2023 13:06

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0504-TUN1	NT1003182301.D	NA	03/18/23 18:04
ABN 5	SLC0504-ICV1	NT1003182302.D	NA	03/18/23 18:19
ABN 0.2	SLC0504-LCV1	NT1003182304.D	NA	03/18/23 19:37
Blank	BLB0579-BLK1	NT1003182306.D	Solid	03/18/23 20:55
LCS	BLB0579-BS1	NT1003182307.D	Solid	03/18/23 21:33
LCS Dup	BLB0579-BSD1	NT1003182308.D	Solid	03/18/23 22:12
Reference	BLB0579-SRM1	NT1003182309.D	Solid	03/18/23 22:50
LDW23-SS1010	23A0467-01	NT1003182310.D	Solid	03/18/23 23:29
LDW23-SS1005	23A0467-02	NT1003182311.D	Solid	03/19/23 00:07
LDW23-SS1006	23A0467-03	NT1003182312.D	Solid	03/19/23 00:46
LDW23-SS1003	23A0467-04	NT1003182313.D	Solid	03/19/23 01:24
LDW23-SS1004	23A0467-05	NT1003182314.D	Solid	03/19/23 02:02
LDW23-SS1204	23A0467-06	NT1003182315.D	Solid	03/19/23 02:41
ABN 5	SLC0504-ICV2	NT1003182316.D	NA	03/19/23 03:19
ABN 0.2	SLC0504-LCV2	NT1003182318.D	NA	03/19/23 04:35
LDW23-SS1238	23A0467-07	NT1003182320.D	Solid	03/19/23 05:51
LDW23-SS1238	BLB0579-MS1	NT1003182321.D	Solid	03/19/23 06:29
LDW23-SS1238	BLB0579-MSD1	NT1003182322.D	Solid	03/19/23 07:08
LDW23-SS1013	23A0467-08	NT1003182323.D	Solid	03/19/23 07:46
LDW23-SS1014	23A0467-09	NT1003182324.D	Solid	03/19/23 08:24
ABN 5	SLC0504-CCV1	NT1003182325.D	NA	03/19/23 09:03

ANALYSIS SEQUENCE

SLC0504

Instrument ID: NT10
Calibration ID: GC00046
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0504-TUN1	MS Tune	QC		1	K004775		03/18/2023 18:04	NT1003182301.D	JGR	
SLC0504-ICV1	ABN 5	QC		2	K011109	K010831	03/18/2023 18:19	NT1003182302.D	VTS	
SLC0504-LCV1	ABN 0.2	QC		3	K011105	K010831	03/18/2023 19:37	NT1003182304.D	VTS	
BLB0579-BLK1	Blank	QC		4		K010831	03/18/2023 20:55	NT1003182306.D	VTS	
BLB0579-BS1	LCS	QC		5		K010831	03/18/2023 21:33	NT1003182307.D	VTS	
BLB0579-BSD1	LCS Dup	QC		6		K010831	03/18/2023 22:12	NT1003182308.D	VTS	
BLB0579-SRM1	Reference	QC		7		K010831	03/18/2023 22:50	NT1003182309.D	VTS	
23A0467-01	LDW23-SS1010	(20ug/kg solid or 0.2ug/L l	A 02	8		K010831	03/18/2023 23:29	NT1003182310.D	VTS	
23A0467-02	LDW23-SS1005	(20ug/kg solid or 0.2ug/L l	A 02	9		K010831	03/19/2023 00:07	NT1003182311.D	VTS	
23A0467-03	LDW23-SS1006	(20ug/kg solid or 0.2ug/L l	A 02	10		K010831	03/19/2023 00:46	NT1003182312.D	VTS	
23A0467-04	LDW23-SS1003	(20ug/kg solid or 0.2ug/L l	A 02	11		K010831	03/19/2023 01:24	NT1003182313.D	VTS	
23A0467-05	LDW23-SS1004	(20ug/kg solid or 0.2ug/L l	A 02	12		K010831	03/19/2023 02:02	NT1003182314.D	VTS	
23A0467-06	LDW23-SS1204	(20ug/kg solid or 0.2ug/L l	A 02	13		K010831	03/19/2023 02:41	NT1003182315.D	VTS	
SLC0504-ICV2	ABN 5	QC		14	K011109	K010831	03/19/2023 03:19	NT1003182316.D	VTS	
SLC0504-LCV2	ABN 0.2	QC		15	K011105	K010831	03/19/2023 04:35	NT1003182318.D	VTS	
23A0467-07	LDW23-SS1238	(20ug/kg solid or 0.2ug/L l	A 02	16		K010831	03/19/2023 05:51	NT1003182320.D	VTS	
BLB0579-MS1	Matrix Spike	QC		17		K010831	03/19/2023 06:29	NT1003182321.D	VTS	
BLB0579-MSD1	Matrix Spike Dup	QC		18		K010831	03/19/2023 07:08	NT1003182322.D	VTS	
23A0467-08	LDW23-SS1013	(20ug/kg solid or 0.2ug/L l	A 02	19		K010831	03/19/2023 07:46	NT1003182323.D	VTS	
23A0467-09	LDW23-SS1014	(20ug/kg solid or 0.2ug/L l	A 02	20		K010831	03/19/2023 08:24	NT1003182324.D	VTS	
SLC0504-CCV1	ABN 5	QC		21	K011109	K010831	03/19/2023 09:03	NT1003182325.D	VTS	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b

	Time	Filename	LabID	ClientId	DF														
1	1804	NT1003182301.D	SLC0504-TUN1		1	NO ISTDS FOUND													
2	1819	NT1003182302.D	SLC0504-ICV1		1	9.16	186408	11.62	688740	15.21	373663	18.23	652323	23.27	537141	25.90	602550	24.29	947608
3	1858	NT1003182303.D	SEQ-ICVSIM		1	9.16	175474	11.63	645616	15.21	354380	18.23	653456	23.27	547283	25.90	597427	24.29	845561
4	1937	NT1003182304.D	SLC0504-LCV1		1	9.16	186398	11.63	658189	15.21	347153	18.23	610141	23.27	487006	25.90	548181	24.29	770279
5	2016	NT1003182305.D	SEQ-LCV100		1	9.16	185849	11.63	659549	15.21	350957	18.23	621768	23.27	496891	25.90	542586	24.29	745813
6	2055	NT1003182306.D	BLB0579-BLK1		1	9.16	227542	11.62	810852	15.21	430879	18.23	750996	23.27	586071	25.91	628586	24.29	975272
7	2133	NT1003182307.D	BLB0579-BS1		1	9.16	218004	11.63	786535	15.21	426407	18.23	749465	23.27	585611	25.90	613771	24.29	1045243
8	2212	NT1003182308.D	BLB0579-BSD1		1	9.17	225726	11.63	836374	15.21	449937	18.23	821072	23.27	658672	25.91	679632	24.29	1139486
9	2250	NT1003182309.D	BLB0579-SRM1		1	9.16	261332	11.63	928634	15.21	504780	18.23	889660	23.27	697679	25.91	708612	24.29	1269802
10	2329	NT1003182310.D	23A0467-01		1	9.16	246170	11.63	877643	15.21	469587	18.23	855170	23.28	766933	25.92	891578	24.30	1412839
11	0007	NT1003182311.D	23A0467-02		1	9.17	253705	11.63	907983	15.21	492533	18.24	924575	23.28	776417	25.93	869986	24.30	1399920
12	0046	NT1003182312.D	23A0467-03		1	9.17	274533	11.63	1001952	15.21	547853	18.24	1025087	23.29	857658	25.93	920559	24.31	1507709
13	0124	NT1003182313.D	23A0467-04		1	9.17	261595	11.63	954014	15.22	519234	18.24	959028	23.29	817875	25.94	892524	24.31	1438608
14	0202	NT1003182314.D	23A0467-05		1	9.17	237211	11.63	858498	15.21	471073	18.24	870067	23.28	752106	25.93	824270	24.30	1309201
15	0241	NT1003182315.D	23A0467-06		1	9.17	256896	11.63	931319	15.22	499339	18.25	947429	23.29	806460	25.94	849056	24.32	1400947
16	0319	NT1003182316.D	SLC0504-ICV2		1	9.17	209537	11.64	795859	15.22	432510	18.24	808891	23.28	657926	25.92	770107	24.30	1187734
17	0357	NT1003182317.D	SEQ-CCVSIM		1	9.17	198554	11.63	728432	15.21	402065	18.24	761890	23.28	643526	25.92	745315	24.30	1093779
18	0435	NT1003182318.D	SLC0504-LCV2		1	9.17	204568	11.64	728529	15.22	393259	18.24	714551	23.28	609569	25.92	707008	24.30	1028437
19	0513	NT1003182319.D	SEQ-LCV100		1	9.17	193187	11.63	689122	15.22	368757	18.24	677686	23.28	560119	25.92	652325	24.30	931271
20	0551	NT1003182320.D	23A0467-07		1	9.17	216108	11.63	786727	15.22	421285	18.24	803711	23.29	706121	25.93	797005	24.31	1253054

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b

	Time	Filename	LabID	ClientId	DF											
21	0629	NT1003182321.D	BLB0579-MS1		1	9.17	230931	11.64	851477	15.22	462680	18.25	867188	23.29	755284	25.94	809058	24.31	1324046
22	0708	NT1003182322.D	BLB0579-MSD1		1	9.17	245981	11.64	900997	15.22	493178	18.25	927466	23.29	788957	25.94	874415	24.31	1394856
23	0746	NT1003182323.D	23A0467-08		1	9.17	222704	11.64	816117	15.22	446608	18.25	823538	23.29	730762	25.94	784361	24.31	1251920
24	0824	NT1003182324.D	23A0467-09		1	9.17	229301	11.63	831548	15.22	452432	18.25	846672	23.29	730444	25.94	799379	24.31	1237768
25	0903	NT1003182325.D	SLC0504-CCV1		1	9.17	205845	11.64	760130	15.22	418962	18.25	771512	23.29	666169	25.93	754137	24.30	1155729
26	0941	NT1003182326.D	SEQ-CCVSIM		1	9.17	204165	11.63	738944	15.22	412520	18.25	764375	23.28	661840	25.92	748863	24.30	1080073

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b

Instrument: nt10.i Date: 18-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1804	NT1003182301.D	SLC0504-TUN1	1	NO MANUAL INTEGRATION
1819	NT1003182302.D	SLC0504-ICV1	1	2,2'-oxybis(1-Chloropropane),
1858	NT1003182303.D	SEQ-ICVSIM	1	NO MANUAL INTEGRATION
1937	NT1003182304.D	SLC0504-LCV1	1	2,2'-oxybis(1-Chloropropane), Benzoic acid, 2,4-Dinitrophenol, 4-Nitrophenol, Benzo(k)fluoranthene, Total Benz
2016	NT1003182305.D	SEQ-LCV100	1	NO MANUAL INTEGRATION
2055	NT1003182306.D	BLB0579-BLK1	1	NO MANUAL INTEGRATION
2133	NT1003182307.D	BLB0579-BS1	1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
2212	NT1003182308.D	BLB0579-BSD1	1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
2250	NT1003182309.D	BLB0579-SRM1	1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
2329	NT1003182310.D	23A0467-01	1	Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0007	NT1003182311.D	23A0467-02	1	Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0046	NT1003182312.D	23A0467-03	1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0124	NT1003182313.D	23A0467-04	1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
0202	NT1003182314.D	23A0467-05	1	Benzoic acid, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0241	NT1003182315.D	23A0467-06	1	Benzoic acid, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0319	NT1003182316.D	SLC0504-ICV2	1	2,2'-oxybis(1-Chloropropane), Benzo(k)fluoranthene, Total Benzofluoranthenes,
0357	NT1003182317.D	SEQ-CCVSIM	1	NO MANUAL INTEGRATION

Instrument: nt10.i Date: 19-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0435	NT1003182318.D	SLC0504-LCV2	1	2,2'-oxybis(1-Chloropropane), 2,4-Dinitrophenol, 4-Nitrophenol, Benzo(k)fluoranthene, Benzo(g,h,i)perylene, To
0513	NT1003182319.D	SEQ-LCV100	1	NO MANUAL INTEGRATION
0551	NT1003182320.D	23A0467-07	1	Benzoic acid, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0629	NT1003182321.D	BLB0579-MS1	1	4-Chloroaniline, Benzo(k)fluoranthene, Total Benzofluoranthenes,
0708	NT1003182322.D	BLB0579-MSD1	1	Benzo(k)fluoranthene, Total Benzofluoranthenes,
0746	NT1003182323.D	23A0467-08	1	Benzoic acid, Di-n-octylphthalate, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0824	NT1003182324.D	23A0467-09	1	Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Total Benzofluoranthenes,
0903	NT1003182325.D	SLC0504-CCV1	1	2,2'-oxybis(1-Chloropropane), Benzo(k)fluoranthene, Total Benzofluoranthenes,
0941	NT1003182326.D	SEQ-CCVSIM	1	NO MANUAL INTEGRATION

Security Status Report

Date: 04-Apr-2023 11:02

NT1003182301.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182302.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182303.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182304.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182305.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182306.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182307.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182308.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182309.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182310.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182311.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182312.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182313.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182314.D	Data Locked	van, 04-Apr-2023 11:02
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NT1003182316.D	Data Locked	van, 04-Apr-2023 11:02
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NT1003182318.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182319.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182320.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182321.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182322.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182323.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182324.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182325.D	Data Locked	van, 04-Apr-2023 11:02
NT1003182326.D	Data Locked	van, 04-Apr-2023 11:02

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0228	Instrument:	NT10
Calibration:	GC00046	Calibration Date:	03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0228-SCV1 (Solid)			Lab File ID: NT10031511.D			Analyzed: 03/16/23 02:16		
2-Fluorophenol			80 - 120		7.067714	-7.0677	N/A	
Phenol-d5			80 - 120		8.638143	-8.6381	N/A	
2-Chlorophenol-d4			80 - 120		8.931857	-8.9319	N/A	
1,2-Dichlorobenzene-d4			80 - 120		9.659143	-9.6591	N/A	
Nitrobenzene-d5			80 - 120		10.389	-10.3890	N/A	
2-Fluorobiphenyl			80 - 120		13.982	-13.9820	N/A	
2,4,6-Tribromophenol			80 - 120		17.02143	-17.0214	N/A	
p-Terphenyl-d14			80 - 120		21.54257	-21.5426	N/A	
SLC0228-ICB1 (Solid)			Lab File ID: NT10031512.D			Analyzed: 03/16/23 02:54		
2-Fluorophenol	7.5000	92.3	27 - 120	7.067	7.067714	-0.0007	N/A	
Phenol-d5	7.5000	92.6	29 - 120	8.636	8.638143	-0.0021	N/A	
2-Chlorophenol-d4	7.5000	94.7	31 - 120	8.929	8.931857	-0.0029	N/A	
1,2-Dichlorobenzene-d4	5.0000	92.2	32 - 120	9.658	9.659143	-0.0011	N/A	
Nitrobenzene-d5	5.0000	93.1	30 - 120	10.387	10.389	-0.0020	N/A	
2-Fluorobiphenyl	5.0000	94.6	35 - 120	13.981	13.982	-0.0010	N/A	
2,4,6-Tribromophenol	7.5000	74.6	24 - 134	17.02	17.02143	-0.0014	N/A	
p-Terphenyl-d14	5.0000	91.7	37 - 120	21.544	21.54257	0.0014	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0504	Instrument:	NT10
Calibration:	GC00046	Calibration Date:	03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0504-ICV1 (Solid)			Lab File ID: NT1003182302.D			Analyzed: 03/18/23 18:19		
2-Fluorophenol	7.5000	98.4	80 - 120	6.952	7.067714	-0.1157	N/A	
Phenol-d5	7.5000	99.1	80 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	7.5000	99.9	80 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	5.0000	98.6	80 - 120	9.519	9.659143	-0.1401	N/A	
Nitrobenzene-d5	5.0000	101	80 - 120	10.249	10.389	-0.1400	N/A	
2-Fluorobiphenyl	5.0000	97.4	80 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	7.5000	99.3	80 - 120	16.843	17.02143	-0.1784	N/A	
p-Terphenyl-d14	5.0000	94.3	80 - 120	21.36	21.54257	-0.1826	N/A	
SLC0504-LCV1 (Solid)			Lab File ID: NT1003182304.D			Analyzed: 03/18/23 19:37		
2-Fluorophenol	0.30000	97.7	50 - 150	6.959	7.067714	-0.1087	N/A	
Phenol-d5	0.30000	88.2	50 - 150	8.512	8.638143	-0.1261	N/A	
2-Chlorophenol-d4	0.30000	93.5	50 - 150	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	0.20000	107	50 - 150	9.519	9.659143	-0.1401	N/A	
Nitrobenzene-d5	0.20000	96.8	50 - 150	10.248	10.389	-0.1410	N/A	
2-Fluorobiphenyl	0.20000	104	50 - 150	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	0.30000	63.4	50 - 150	16.842	17.02143	-0.1794	N/A	
p-Terphenyl-d14	0.20000	99.6	50 - 150	21.367	21.54257	-0.1756	N/A	
BLB0579-BLK1 (Solid)			Lab File ID: NT1003182306.D			Analyzed: 03/18/23 20:55		
2-Fluorophenol	750.00	35.3	27 - 120	6.967	7.067714	-0.1007	N/A	
Phenol-d5	750.00	58.0	29 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	750.00	45.8	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	500.00	71.9	32 - 120	9.519	9.659143	-0.1401	N/A	
Nitrobenzene-d5	500.00	77.1	30 - 120	10.249	10.389	-0.1400	N/A	
2-Fluorobiphenyl	500.00	75.9	35 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	750.00	8.35	24 - 134	16.843	17.02143	-0.1784	N/A	*
p-Terphenyl-d14	500.00	84.5	37 - 120	21.368	21.54257	-0.1746	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0579-BS1 (Solid)			Lab File ID: NT1003182307.D			Analyzed: 03/18/23 21:33		
2-Fluorophenol	750.00	71.9	27 - 120	6.967	7.067714	-0.1007	N/A	
Phenol-d5	750.00	75.4	29 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	750.00	78.2	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	500.00	73.0	32 - 120	9.519	9.659143	-0.1401	N/A	
Nitrobenzene-d5	500.00	80.1	30 - 120	10.248	10.389	-0.1410	N/A	
2-Fluorobiphenyl	500.00	80.3	35 - 120	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	750.00	86.9	24 - 134	16.842	17.02143	-0.1794	N/A	
p-Terphenyl-d14	500.00	90.5	37 - 120	21.367	21.54257	-0.1756	N/A	
BLB0579-BSD1 (Solid)			Lab File ID: NT1003182308.D			Analyzed: 03/18/23 22:12		
2-Fluorophenol	750.00	80.9	27 - 120	6.967	7.067714	-0.1007	N/A	
Phenol-d5	750.00	84.3	29 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	750.00	88.8	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	500.00	83.3	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	500.00	88.8	30 - 120	10.249	10.389	-0.1400	N/A	
2-Fluorobiphenyl	500.00	86.2	35 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	750.00	90.9	24 - 134	16.843	17.02143	-0.1784	N/A	
p-Terphenyl-d14	500.00	90.7	37 - 120	21.368	21.54257	-0.1746	N/A	
BLB0579-SRM1 (Solid)			Lab File ID: NT1003182309.D			Analyzed: 03/18/23 22:50		
2-Fluorophenol	7500.0	75.5	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	7500.0	78.6	29 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	7500.0	82.8	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	5000.0	78.1	32 - 120	9.519	9.659143	-0.1401	N/A	
Nitrobenzene-d5	5000.0	84.2	30 - 120	10.249	10.389	-0.1400	N/A	
2-Fluorobiphenyl	5000.0	84.4	35 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	7500.0	96.8	24 - 134	16.843	17.02143	-0.1784	N/A	
p-Terphenyl-d14	5000.0	96.1	37 - 120	21.368	21.54257	-0.1746	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-01 (Solid)			Lab File ID: NT1003182310.D				Analyzed: 03/18/23 23:29	
2-Fluorophenol	749.11	66.6	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	749.11	69.6	29 - 120	8.52	8.638143	-0.1181	N/A	
2-Chlorophenol-d4	749.11	73.0	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	499.40	69.1	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.40	75.9	30 - 120	10.249	10.389	-0.1400	N/A	
2-Fluorobiphenyl	499.40	77.0	35 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	749.11	82.7	24 - 134	16.843	17.02143	-0.1784	N/A	
p-Terphenyl-d14	499.40	73.9	37 - 120	21.368	21.54257	-0.1746	N/A	
23A0467-02 (Solid)			Lab File ID: NT1003182311.D				Analyzed: 03/19/23 00:07	
2-Fluorophenol	749.02	78.9	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	749.02	80.3	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	749.02	83.5	31 - 120	8.806	8.931857	-0.1259	N/A	
1,2-Dichlorobenzene-d4	499.34	77.8	32 - 120	9.526	9.659143	-0.1331	N/A	
Nitrobenzene-d5	499.34	84.4	30 - 120	10.248	10.389	-0.1410	N/A	
2-Fluorobiphenyl	499.34	86.0	35 - 120	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	749.02	97.7	24 - 134	16.842	17.02143	-0.1794	N/A	
p-Terphenyl-d14	499.34	86.3	37 - 120	21.374	21.54257	-0.1686	N/A	
23A0467-03 (Solid)			Lab File ID: NT1003182312.D				Analyzed: 03/19/23 00:46	
2-Fluorophenol	748.59	75.5	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	748.59	77.2	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	748.59	82.2	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.06	75.3	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.06	79.6	30 - 120	10.248	10.389	-0.1410	N/A	
2-Fluorobiphenyl	499.06	82.6	35 - 120	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	748.59	91.8	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	499.06	81.8	37 - 120	21.374	21.54257	-0.1686	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-04 (Solid)			Lab File ID: NT1003182313.D				Analyzed: 03/19/23 01:24	
2-Fluorophenol	750.09	73.2	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	750.09	73.4	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	750.09	78.5	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	500.06	73.1	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	500.06	76.8	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	500.06	79.3	35 - 120	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	750.09	87.1	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	500.06	86.8	37 - 120	21.382	21.54257	-0.1606	N/A	
23A0467-05 (Solid)			Lab File ID: NT1003182314.D				Analyzed: 03/19/23 02:02	
2-Fluorophenol	748.72	78.7	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	748.72	81.0	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	748.72	85.3	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.15	80.7	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.15	84.9	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.15	86.9	35 - 120	13.82	13.982	-0.1620	N/A	
2,4,6-Tribromophenol	748.72	85.9	24 - 134	16.851	17.02143	-0.1704	N/A	
p-Terphenyl-d14	499.15	83.2	37 - 120	21.375	21.54257	-0.1676	N/A	
23A0467-06 (Solid)			Lab File ID: NT1003182315.D				Analyzed: 03/19/23 02:41	
2-Fluorophenol	748.89	74.6	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	748.89	76.4	29 - 120	8.536	8.638143	-0.1021	N/A	
2-Chlorophenol-d4	748.89	82.1	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.26	72.5	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.26	78.8	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.26	83.5	35 - 120	13.827	13.982	-0.1550	N/A	
2,4,6-Tribromophenol	748.89	96.8	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	499.26	101	37 - 120	21.382	21.54257	-0.1606	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0504-ICV2 (Solid)			Lab File ID: NT1003182316.D				Analyzed: 03/19/23 03:19	
2-Fluorophenol	7.5000	104	80 - 120	6.967	7.067714	-0.1007	N/A	
Phenol-d5	7.5000	105	80 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	7.5000	108	80 - 120	8.813	8.931857	-0.1189	N/A	
1,2-Dichlorobenzene-d4	5.0000	102	80 - 120	9.526	9.659143	-0.1331	N/A	
Nitrobenzene-d5	5.0000	99.7	80 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	5.0000	97.6	80 - 120	13.827	13.982	-0.1550	N/A	
2,4,6-Tribromophenol	7.5000	101	80 - 120	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	5.0000	94.9	80 - 120	21.374	21.54257	-0.1686	N/A	
SLC0504-LCV2 (Solid)			Lab File ID: NT1003182318.D				Analyzed: 03/19/23 04:35	
2-Fluorophenol	0.30000	110	50 - 150	6.959	7.067714	-0.1087	N/A	
Phenol-d5	0.30000	97.5	50 - 150	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	0.30000	101	50 - 150	8.813	8.931857	-0.1189	N/A	
1,2-Dichlorobenzene-d4	0.20000	109	50 - 150	9.526	9.659143	-0.1331	N/A	
Nitrobenzene-d5	0.20000	105	50 - 150	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	0.20000	107	50 - 150	13.819	13.982	-0.1630	N/A	
2,4,6-Tribromophenol	0.30000	86.9	50 - 150	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	0.20000	104	50 - 150	21.374	21.54257	-0.1686	N/A	
23A0467-07 (Solid)			Lab File ID: NT1003182320.D				Analyzed: 03/19/23 05:51	
2-Fluorophenol	748.59	73.1	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	748.59	76.0	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	748.59	79.6	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.06	74.1	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.06	78.6	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.06	83.9	35 - 120	13.827	13.982	-0.1550	N/A	
2,4,6-Tribromophenol	748.59	98.6	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	499.06	93.5	37 - 120	21.382	21.54257	-0.1606	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0504
Instrument: NT10
Calibration: GC00046
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0579-MS1 (Solid)			Lab File ID: NT1003182321.D				Analyzed: 03/19/23 06:29	
2-Fluorophenol	749.83	72.6	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	749.83	76.8	29 - 120	8.536	8.638143	-0.1021	N/A	
2-Chlorophenol-d4	749.83	79.5	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.89	71.2	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.89	76.4	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.89	77.8	35 - 120	13.827	13.982	-0.1550	N/A	
2,4,6-Tribromophenol	749.83	91.9	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	499.89	78.0	37 - 120	21.382	21.54257	-0.1606	N/A	
BLB0579-MSD1 (Solid)			Lab File ID: NT1003182322.D				Analyzed: 03/19/23 07:08	
2-Fluorophenol	749.83	74.5	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	749.83	75.1	29 - 120	8.536	8.638143	-0.1021	N/A	
2-Chlorophenol-d4	749.83	78.9	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.89	72.6	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.89	75.6	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.89	78.4	35 - 120	13.828	13.982	-0.1540	N/A	
2,4,6-Tribromophenol	749.83	92.9	24 - 134	16.851	17.02143	-0.1704	N/A	
p-Terphenyl-d14	499.89	80.2	37 - 120	21.383	21.54257	-0.1596	N/A	
23A0467-08 (Solid)			Lab File ID: NT1003182323.D				Analyzed: 03/19/23 07:46	
2-Fluorophenol	749.99	75.5	27 - 120	6.975	7.067714	-0.0927	N/A	
Phenol-d5	749.99	76.4	29 - 120	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	749.99	81.1	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.99	75.4	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.99	80.0	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.99	80.0	35 - 120	13.827	13.982	-0.1550	N/A	
2,4,6-Tribromophenol	749.99	89.8	24 - 134	16.85	17.02143	-0.1714	N/A	
p-Terphenyl-d14	499.99	78.3	37 - 120	21.382	21.54257	-0.1606	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0504	Instrument:	NT10
Calibration:	GC00046	Calibration Date:	03/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-09 (Solid)			Lab File ID: NT1003182324.D			Analyzed: 03/19/23 08:24		
2-Fluorophenol	749.36	72.6	27 - 120	6.983	7.067714	-0.0847	N/A	
Phenol-d5	749.36	75.7	29 - 120	8.536	8.638143	-0.1021	N/A	
2-Chlorophenol-d4	749.36	80.3	31 - 120	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	499.57	76.2	32 - 120	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	499.57	79.9	30 - 120	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	499.57	83.3	35 - 120	13.828	13.982	-0.1540	N/A	
2,4,6-Tribromophenol	749.36	85.7	24 - 134	16.851	17.02143	-0.1704	N/A	
p-Terphenyl-d14	499.57	95.0	37 - 120	21.375	21.54257	-0.1676	N/A	
SLC0504-CCV1 (Solid)			Lab File ID: NT1003182325.D			Analyzed: 03/19/23 09:03		
2-Fluorophenol	7.5000	103	50 - 150	6.967	7.067714	-0.1007	N/A	
Phenol-d5	7.5000	103	50 - 150	8.528	8.638143	-0.1101	N/A	
2-Chlorophenol-d4	7.5000	105	50 - 150	8.814	8.931857	-0.1179	N/A	
1,2-Dichlorobenzene-d4	5.0000	99.4	50 - 150	9.527	9.659143	-0.1321	N/A	
Nitrobenzene-d5	5.0000	102	50 - 150	10.256	10.389	-0.1330	N/A	
2-Fluorobiphenyl	5.0000	95.6	50 - 150	13.828	13.982	-0.1540	N/A	
2,4,6-Tribromophenol	7.5000	98.3	50 - 150	16.851	17.02143	-0.1704	N/A	
p-Terphenyl-d14	5.0000	90.8	50 - 150	21.375	21.54257	-0.1676	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0228
Instrument: NT10
Calibration: GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLC0228-SCV1)		(Solid)		Lab File ID: NT10031511.D				Analyzed: 03/16/23 02:16	
1,4-Dichlorobenzene-d4	154809	9.301	171542	9.301	90	50 - 200	0.000	+/-0.50	
Naphthalene-d8	570882	11.777	624466	11.777	91	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	303490	15.383	337226	15.382	90	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	533431	18.42	572849	18.419	93	50 - 200	0.001	+/-0.50	
Chrysene-d12	435381	23.458	347068	23.449	125	50 - 200	0.009	+/-0.50	
Di-n-Octylphthalate-d4	660827	24.487	500317	24.479	132	50 - 200	0.008	+/-0.50	
Perylene-d12	494648	26.191	421549	26.182	117	50 - 200	0.009	+/-0.50	
Initial Cal Blank (SLC0228-ICB1)		(Solid)		Lab File ID: NT10031512.D				Analyzed: 03/16/23 02:54	
1,4-Dichlorobenzene-d4	173115	9.301	171542	9.301	101	50 - 200	0.000	+/-0.50	
Naphthalene-d8	625865	11.776	624466	11.777	100	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	328712	15.382	337226	15.382	97	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	592693	18.419	572849	18.419	103	50 - 200	0.000	+/-0.50	
Chrysene-d12	442208	23.449	347068	23.449	127	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	526309	24.479	500317	24.479	105	50 - 200	0.000	+/-0.50	
Perylene-d12	499804	26.182	421549	26.182	119	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0504	Instrument:	NT10
		Calibration:	GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0504-ICV1)		(Solid)	Lab File ID: NT1003182302.D				Analyzed: 03/18/23 18:19		
1,4-Dichlorobenzene-d4	186408	9.162	186408	9.162	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	688740	11.623	688740	11.623	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	373663	15.213	373663	15.213	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	652323	18.234	652323	18.234	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	537141	23.272	537141	23.272	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	947608	24.294	947608	24.294	100	50 - 200	0.000	+/-0.50	
Perylene-d12	602550	25.897	602550	25.897	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0504-LCV1)		(Solid)	Lab File ID: NT1003182304.D				Analyzed: 03/18/23 19:37		
1,4-Dichlorobenzene-d4	186398	9.162	186408	9.162	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	658189	11.63	688740	11.623	96	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	347153	15.212	373663	15.213	93	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	610141	18.233	652323	18.234	94	50 - 200	-0.001	+/-0.50	
Chrysene-d12	487006	23.272	537141	23.272	91	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	770279	24.293	947608	24.294	81	50 - 200	-0.001	+/-0.50	
Perylene-d12	548181	25.904	602550	25.897	91	50 - 200	0.007	+/-0.50	
Blank (BLB0579-BLK1)		(Solid)	Lab File ID: NT1003182306.D				Analyzed: 03/18/23 20:55		
1,4-Dichlorobenzene-d4	227542	9.162	186408	9.162	122	50 - 200	0.000	+/-0.50	
Naphthalene-d8	810852	11.623	688740	11.623	118	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	430879	15.213	373663	15.213	115	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	750996	18.234	652323	18.234	115	50 - 200	0.000	+/-0.50	
Chrysene-d12	586071	23.272	537141	23.272	109	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	975272	24.294	947608	24.294	103	50 - 200	0.000	+/-0.50	
Perylene-d12	628586	25.905	602550	25.897	104	50 - 200	0.008	+/-0.50	
LCS (BLB0579-BS1)		(Solid)	Lab File ID: NT1003182307.D				Analyzed: 03/18/23 21:33		
1,4-Dichlorobenzene-d4	218004	9.162	186408	9.162	117	50 - 200	0.000	+/-0.50	
Naphthalene-d8	786535	11.63	688740	11.623	114	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	426407	15.212	373663	15.213	114	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	749465	18.233	652323	18.234	115	50 - 200	-0.001	+/-0.50	
Chrysene-d12	585611	23.271	537141	23.272	109	50 - 200	-0.001	+/-0.50	
Di-n-Octylphthalate-d4	1045243	24.293	947608	24.294	110	50 - 200	-0.001	+/-0.50	
Perylene-d12	613771	25.904	602550	25.897	102	50 - 200	0.007	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0504

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLB0579-BSD1)		(Solid)	Lab File ID: NT1003182308.D				Analyzed: 03/18/23 22:12		
1,4-Dichlorobenzene-d4	225726	9.17	186408	9.162	121	50 - 200	0.008	+/-0.50	
Naphthalene-d8	836374	11.631	688740	11.623	121	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	449937	15.213	373663	15.213	120	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	821072	18.234	652323	18.234	126	50 - 200	0.000	+/-0.50	
Chrysene-d12	658672	23.272	537141	23.272	123	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1139486	24.294	947608	24.294	120	50 - 200	0.000	+/-0.50	
Perylene-d12	679632	25.905	602550	25.897	113	50 - 200	0.008	+/-0.50	
Reference (BLB0579-SRM1)		(Solid)	Lab File ID: NT1003182309.D				Analyzed: 03/18/23 22:50		
1,4-Dichlorobenzene-d4	261332	9.162	186408	9.162	140	50 - 200	0.000	+/-0.50	
Naphthalene-d8	928634	11.631	688740	11.623	135	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	504780	15.213	373663	15.213	135	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	889660	18.234	652323	18.234	136	50 - 200	0.000	+/-0.50	
Chrysene-d12	697679	23.272	537141	23.272	130	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1269802	24.294	947608	24.294	134	50 - 200	0.000	+/-0.50	
Perylene-d12	708612	25.905	602550	25.897	118	50 - 200	0.008	+/-0.50	
LDW23-SS1010 (23A0467-01)		(Solid)	Lab File ID: NT1003182310.D				Analyzed: 03/18/23 23:29		
1,4-Dichlorobenzene-d4	246170	9.162	186408	9.162	132	50 - 200	0.000	+/-0.50	
Naphthalene-d8	877643	11.631	688740	11.623	127	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	469587	15.213	373663	15.213	126	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	855170	18.234	652323	18.234	131	50 - 200	0.000	+/-0.50	
Chrysene-d12	766933	23.28	537141	23.272	143	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	1412839	24.302	947608	24.294	149	50 - 200	0.008	+/-0.50	
Perylene-d12	891578	25.92	602550	25.897	148	50 - 200	0.023	+/-0.50	
LDW23-SS1005 (23A0467-02)		(Solid)	Lab File ID: NT1003182311.D				Analyzed: 03/19/23 00:07		
1,4-Dichlorobenzene-d4	253705	9.17	186408	9.162	136	50 - 200	0.008	+/-0.50	
Naphthalene-d8	907983	11.63	688740	11.623	132	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	492533	15.212	373663	15.213	132	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	924575	18.241	652323	18.234	142	50 - 200	0.007	+/-0.50	
Chrysene-d12	776417	23.279	537141	23.272	145	50 - 200	0.007	+/-0.50	
Di-n-Octylphthalate-d4	1399920	24.301	947608	24.294	148	50 - 200	0.007	+/-0.50	
Perylene-d12	869986	25.927	602550	25.897	144	50 - 200	0.030	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0504
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1006 (23A0467-03)		(Solid)	Lab File ID: NT1003182312.D				Analyzed: 03/19/23 00:46		
1,4-Dichlorobenzene-d4	274533	9.17	186408	9.162	147	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1001952	11.63	688740	11.623	145	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	547853	15.212	373663	15.213	147	50 - 200	-0.001	+/-0.50	
Phenanthrene-d10	1025087	18.241	652323	18.234	157	50 - 200	0.007	+/-0.50	
Chrysene-d12	857658	23.287	537141	23.272	160	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1507709	24.309	947608	24.294	159	50 - 200	0.015	+/-0.50	
Perylene-d12	920559	25.927	602550	25.897	153	50 - 200	0.030	+/-0.50	
LDW23-SS1003 (23A0467-04)		(Solid)	Lab File ID: NT1003182313.D				Analyzed: 03/19/23 01:24		
1,4-Dichlorobenzene-d4	261595	9.17	186408	9.162	140	50 - 200	0.008	+/-0.50	
Naphthalene-d8	954014	11.63	688740	11.623	139	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	519234	15.22	373663	15.213	139	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	959028	18.241	652323	18.234	147	50 - 200	0.007	+/-0.50	
Chrysene-d12	817875	23.287	537141	23.272	152	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1438608	24.309	947608	24.294	152	50 - 200	0.015	+/-0.50	
Perylene-d12	892524	25.935	602550	25.897	148	50 - 200	0.038	+/-0.50	
LDW23-SS1004 (23A0467-05)		(Solid)	Lab File ID: NT1003182314.D				Analyzed: 03/19/23 02:02		
1,4-Dichlorobenzene-d4	237211	9.17	186408	9.162	127	50 - 200	0.008	+/-0.50	
Naphthalene-d8	858498	11.631	688740	11.623	125	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	471073	15.213	373663	15.213	126	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	870067	18.242	652323	18.234	133	50 - 200	0.008	+/-0.50	
Chrysene-d12	752106	23.28	537141	23.272	140	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	1309201	24.302	947608	24.294	138	50 - 200	0.008	+/-0.50	
Perylene-d12	824270	25.928	602550	25.897	137	50 - 200	0.031	+/-0.50	
LDW23-SS1204 (23A0467-06)		(Solid)	Lab File ID: NT1003182315.D				Analyzed: 03/19/23 02:41		
1,4-Dichlorobenzene-d4	256896	9.17	186408	9.162	138	50 - 200	0.008	+/-0.50	
Naphthalene-d8	931319	11.63	688740	11.623	135	50 - 200	0.007	+/-0.50	
Acenaphthene-d10	499339	15.22	373663	15.213	134	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	947429	18.249	652323	18.234	145	50 - 200	0.015	+/-0.50	
Chrysene-d12	806460	23.287	537141	23.272	150	50 - 200	0.015	+/-0.50	
Di-n-Octylphthalate-d4	1400947	24.317	947608	24.294	148	50 - 200	0.023	+/-0.50	
Perylene-d12	849056	25.943	602550	25.897	141	50 - 200	0.046	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0504
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0504-ICV2)		(Solid)	Lab File ID: NT1003182316.D				Analyzed: 03/19/23 03:19		
1,4-Dichlorobenzene-d4	209537	9.169	209537	9.169	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	795859	11.638	795859	11.638	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	432510	15.22	432510	15.22	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	808891	18.241	808891	18.241	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	657926	23.279	657926	23.279	100	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1187734	24.301	1187734	24.301	100	50 - 200	0.000	+/-0.50	
Perylene-d12	770107	25.919	770107	25.919	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0504-LCV2)		(Solid)	Lab File ID: NT1003182318.D				Analyzed: 03/19/23 04:35		
1,4-Dichlorobenzene-d4	204568	9.169	209537	9.169	98	50 - 200	0.000	+/-0.50	
Naphthalene-d8	728529	11.637	795859	11.638	92	50 - 200	-0.001	+/-0.50	
Acenaphthene-d10	393259	15.22	432510	15.22	91	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	714551	18.241	808891	18.241	88	50 - 200	0.000	+/-0.50	
Chrysene-d12	609569	23.279	657926	23.279	93	50 - 200	0.000	+/-0.50	
Di-n-Octylphthalate-d4	1028437	24.301	1187734	24.301	87	50 - 200	0.000	+/-0.50	
Perylene-d12	707008	25.919	770107	25.919	92	50 - 200	0.000	+/-0.50	
LDW23-SS1238 (23A0467-07)		(Solid)	Lab File ID: NT1003182320.D				Analyzed: 03/19/23 05:51		
1,4-Dichlorobenzene-d4	216108	9.17	209537	9.169	103	50 - 200	0.001	+/-0.50	
Naphthalene-d8	786727	11.63	795859	11.638	99	50 - 200	-0.008	+/-0.50	
Acenaphthene-d10	421285	15.22	432510	15.22	97	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	803711	18.241	808891	18.241	99	50 - 200	0.000	+/-0.50	
Chrysene-d12	706121	23.287	657926	23.279	107	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	1253054	24.309	1187734	24.301	105	50 - 200	0.008	+/-0.50	
Perylene-d12	797005	25.927	770107	25.919	103	50 - 200	0.008	+/-0.50	
Matrix Spike (BLB0579-MS1)		(Solid)	Lab File ID: NT1003182321.D				Analyzed: 03/19/23 06:29		
1,4-Dichlorobenzene-d4	230931	9.17	209537	9.169	110	50 - 200	0.001	+/-0.50	
Naphthalene-d8	851477	11.638	795859	11.638	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	462680	15.22	432510	15.22	107	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	867188	18.249	808891	18.241	107	50 - 200	0.008	+/-0.50	
Chrysene-d12	755284	23.287	657926	23.279	115	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	1324046	24.309	1187734	24.301	111	50 - 200	0.008	+/-0.50	
Perylene-d12	809058	25.935	770107	25.919	105	50 - 200	0.016	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0504

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00046

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BLB0579-MSD1)		(Solid)	Lab File ID: NT1003182322.D				Analyzed: 03/19/23 07:08		
1,4-Dichlorobenzene-d4	245981	9.17	209537	9.169	117	50 - 200	0.001	+/-0.50	
Naphthalene-d8	900997	11.639	795859	11.638	113	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	493178	15.221	432510	15.22	114	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	927466	18.25	808891	18.241	115	50 - 200	0.009	+/-0.50	
Chrysene-d12	788957	23.288	657926	23.279	120	50 - 200	0.009	+/-0.50	
Di-n-Octylphthalate-d4	1394856	24.31	1187734	24.301	117	50 - 200	0.009	+/-0.50	
Perylene-d12	874415	25.936	770107	25.919	114	50 - 200	0.017	+/-0.50	
LDW23-SS1013 (23A0467-08)		(Solid)	Lab File ID: NT1003182323.D				Analyzed: 03/19/23 07:46		
1,4-Dichlorobenzene-d4	222704	9.17	209537	9.169	106	50 - 200	0.001	+/-0.50	
Naphthalene-d8	816117	11.638	795859	11.638	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	446608	15.22	432510	15.22	103	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	823538	18.249	808891	18.241	102	50 - 200	0.008	+/-0.50	
Chrysene-d12	730762	23.287	657926	23.279	111	50 - 200	0.008	+/-0.50	
Di-n-Octylphthalate-d4	1251920	24.309	1187734	24.301	105	50 - 200	0.008	+/-0.50	
Perylene-d12	784361	25.943	770107	25.919	102	50 - 200	0.024	+/-0.50	
LDW23-SS1014 (23A0467-09)		(Solid)	Lab File ID: NT1003182324.D				Analyzed: 03/19/23 08:24		
1,4-Dichlorobenzene-d4	229301	9.17	209537	9.169	109	50 - 200	0.001	+/-0.50	
Naphthalene-d8	831548	11.631	795859	11.638	104	50 - 200	-0.007	+/-0.50	
Acenaphthene-d10	452432	15.221	432510	15.22	105	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	846672	18.25	808891	18.241	105	50 - 200	0.009	+/-0.50	
Chrysene-d12	730444	23.288	657926	23.279	111	50 - 200	0.009	+/-0.50	
Di-n-Octylphthalate-d4	1237768	24.31	1187734	24.301	104	50 - 200	0.009	+/-0.50	
Perylene-d12	799379	25.936	770107	25.919	104	50 - 200	0.017	+/-0.50	
Calibration Check (SLC0504-CCV1)		(Solid)	Lab File ID: NT1003182325.D				Analyzed: 03/19/23 09:03		
1,4-Dichlorobenzene-d4	205845	9.17	209537	9.169	98	50 - 200	0.001	+/-0.50	
Naphthalene-d8	760130	11.639	795859	11.638	96	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	418962	15.221	432510	15.22	97	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	771512	18.25	808891	18.241	95	50 - 200	0.009	+/-0.50	
Chrysene-d12	666169	23.288	657926	23.279	101	50 - 200	0.009	+/-0.50	
Di-n-Octylphthalate-d4	1155729	24.302	1187734	24.301	97	50 - 200	0.001	+/-0.50	
Perylene-d12	754137	25.928	770107	25.919	98	50 - 200	0.009	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	02/23/23 15:49	31	365	03/18/23 23:29	23	40	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 00:07	23	40	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 00:46	23	40	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 01:24	23	40	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 02:02	23	40	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 02:41	23	40	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 05:51	24	40	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 07:46	24	40	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 08:24	24	40	
Matrix Spike BLB0579-MS1	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 06:29	24	40	
Matrix Spike Dup BLB0579-MSD1	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 07:08	24	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT10

Analyte	MDL	RL	Units
Phenol	4.4	20.0	ug/kg
4-Methylphenol	7.4	20.0	ug/kg
Naphthalene	4.2	20.0	ug/kg
2-Methylnaphthalene	4.5	20.0	ug/kg
Acenaphthylene	6.2	20.0	ug/kg
Dimethylphthalate	4.4	20.0	ug/kg
Acenaphthene	5.2	20.0	ug/kg
Dibenzofuran	14.1	20.0	ug/kg
Fluorene	14.6	20.0	ug/kg
Phenanthrene	8.7	20.0	ug/kg
Anthracene	7.2	20.0	ug/kg
Fluoranthene	6.1	20.0	ug/kg
Pyrene	5.7	20.0	ug/kg
Butylbenzylphthalate	9.4	20.0	ug/kg
Benzo(a)anthracene	6.0	20.0	ug/kg
Chrysene	6.1	20.0	ug/kg
bis(2-Ethylhexyl)phthalate	5.5	50.0	ug/kg
Benzofluoranthenes, Total	10.0	40.0	ug/kg
Benzo(a)pyrene	4.2	20.0	ug/kg
Indeno(1,2,3-cd)pyrene	14.7	20.0	ug/kg
Dibenzo(a,h)anthracene	17.2	20.0	ug/kg
Benzo(g,h,i)perylene	13.6	20.0	ug/kg

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 1

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0214339

Purity: 98%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

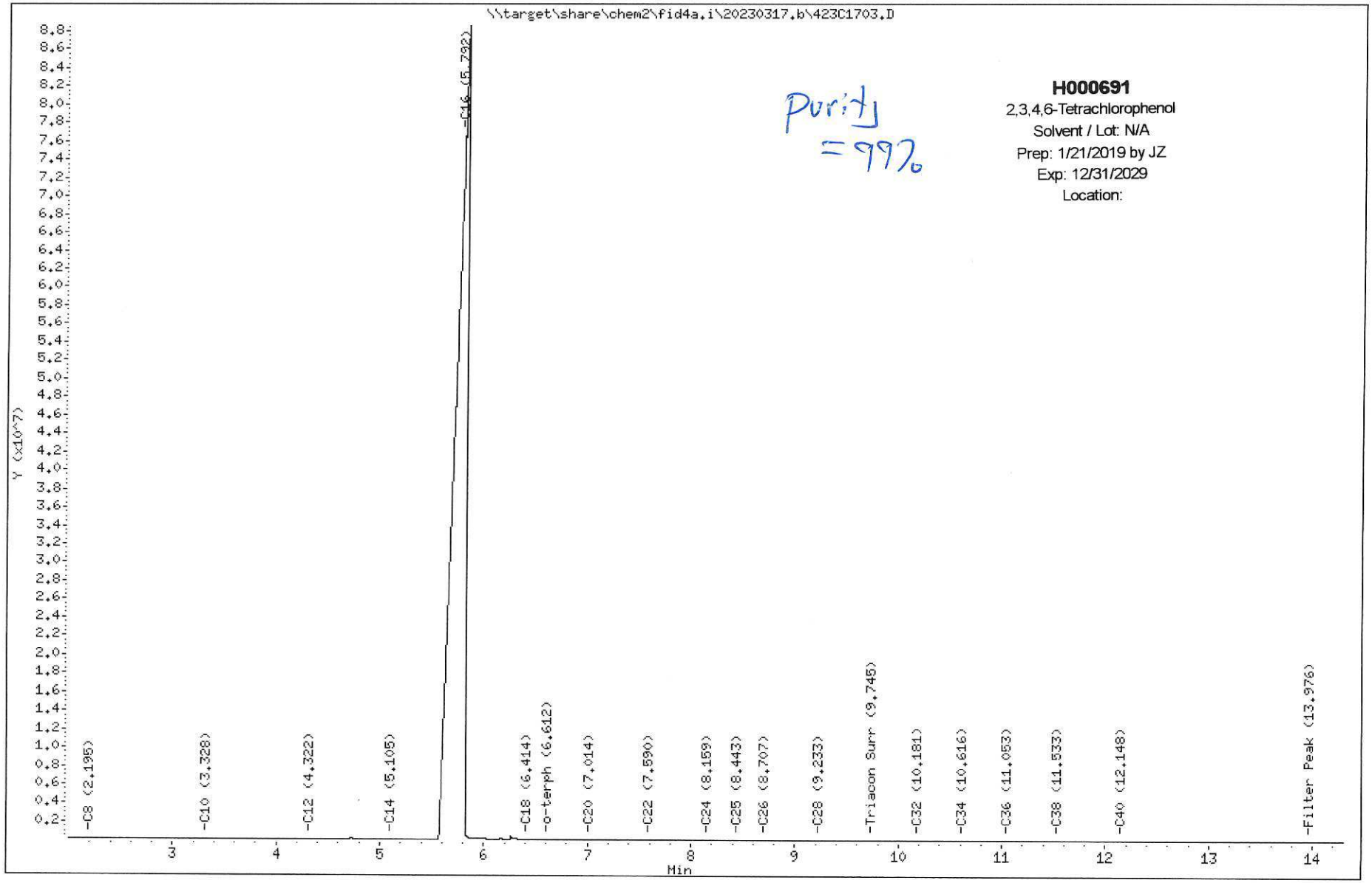
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

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Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101291	**Lot Number:**	CL11000
Description:	GC/MS Tuning Mix	**Certification Date:**	May 9, 2014
Storage:	4 °C	**Expiration Date:**	December 31, 2023
Provided As:	1 mL in 2 mL Ampoule in Methylene chloride	**Revision Date:**	August 5, 2015

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty (%)
Benzidine	92-87-5	1000	± 0.208%
Decafluorotriphenylphosphine (DFTPP)	5074-71-5	1000	± 0.057%
4,4'-DDT	50-29-3	1000	± 0.056%
Pentachlorophenol	87-86-5	1000	± 0.061%

K003891
GC/MS Tune solution-1000ug/ml
Solvent / Lot: CL11000
Prep: 4/22/2022 by VS
Exp: 12/31/2023
Location:

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL111110613_us

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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ECS

Certificate of Analysis

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Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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SPEX CertiPrep®

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Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50					
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

Supelco®

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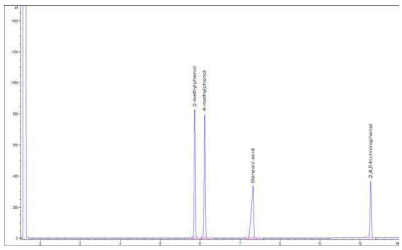
Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

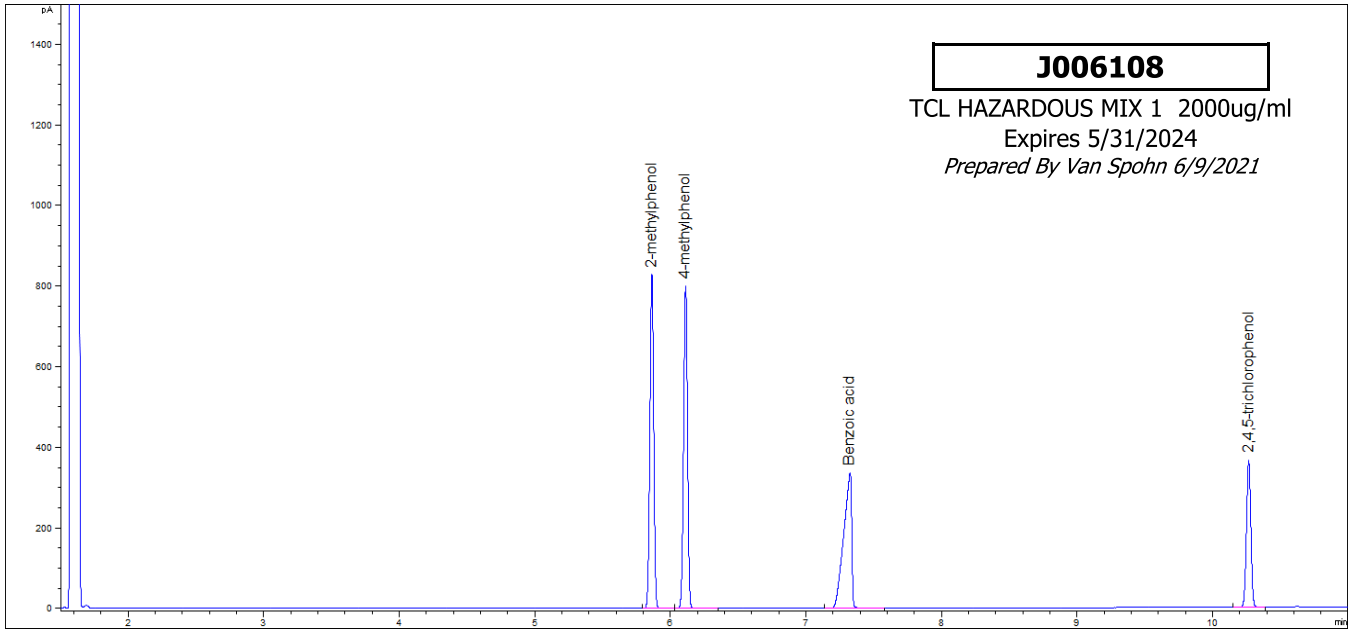
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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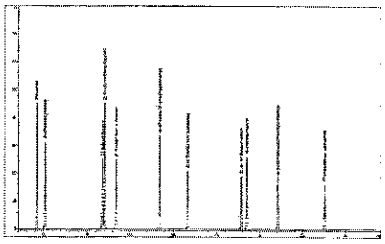
Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



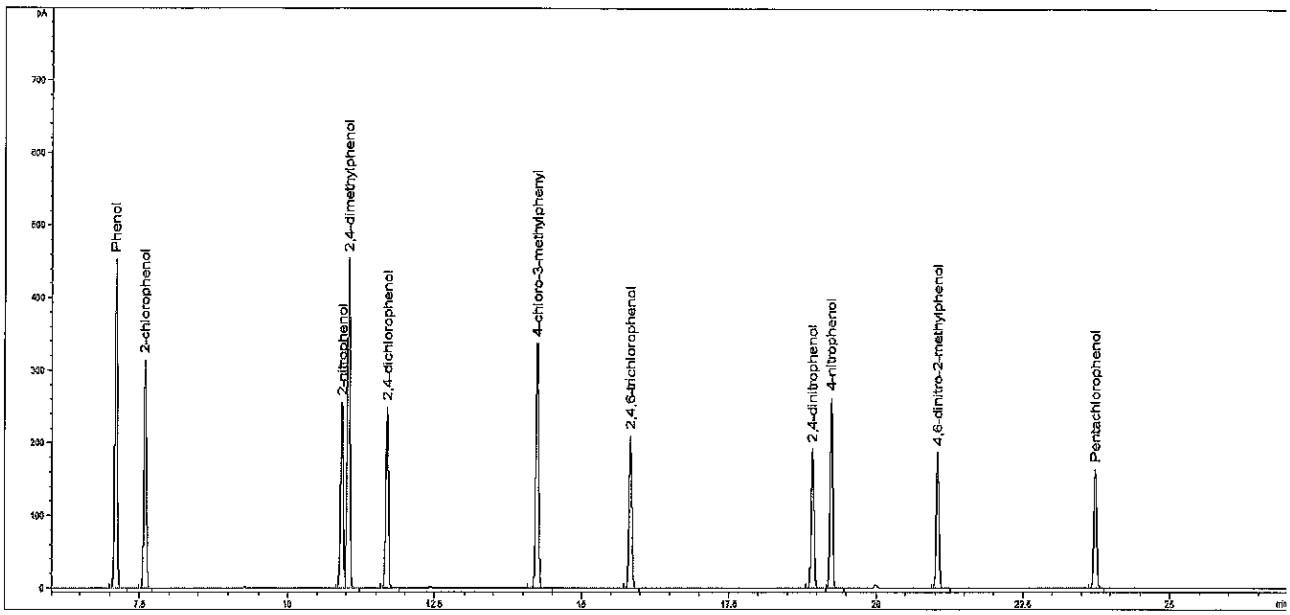
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Certified Reference Material

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

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www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOCK

Product no.: 22523046
Lot no.: LRAD2750
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2750.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	800	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	800	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	801	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1799	µg/mL	66.9	STBJ5751
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	800	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	800	µg/mL	100.0	BCCD4461
4-NITROPHENOL CAS# 100-02-7	800	µg/mL	100.0	MKCN1089
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1800	µg/mL	100.0	BCBX5762
PENTACHLOROPHENOL CAS# 87-86-5	800	µg/mL	99.0	23614-01
BENZOIC ACID CAS# 65-85-0	1800	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2750.01	03 JUN 2022	Original Release Date

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Certificate of Analysis

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Certified Reference Material

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Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL18939
Certification Date: September 7, 2022
Expiration Date: August 31, 2032

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 3.812%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.419%

L001288
Benzidines std @2000ug/ml
Solvent / Lot: CL18939
Prep: 2/7/2023 by VS
Exp: 8/31/2032
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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Certificate of Analysis

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Certified Reference Material

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Catalog No.: AL0-101443
Lot Number: CL18741
Description: Aniline
Certification Date: July 21, 2022
Storage: 4 °C
Expiration Date: July 31, 2030
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 1.719%

L001290
Anline-1000ug/mL
Solvent / Lot: CL18741
Prep: 2/7/2023 by VS
Exp: 7/31/2030
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

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Certified Reference Material

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Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Aaron Dukes, Certified Reference Materials Manager

L001291
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: CL18811
Prep: 2/7/2023 by VS
Exp: 11/30/2023
Location: FREEZER 44

Component	CAS #	µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 1.643%
Acenaphthylene	208-96-8	1000	± 1.317%
Anthracene	120-12-7	1000	± 2.136%
Azobenzene	103-33-3	1000	± 1.630%
Benzo(a)anthracene	56-55-3	1000	± 2.372%
Benzo(a)pyrene	50-32-8	1000	± 3.028%
Benzo(b)fluoranthene	205-99-2	1000	± 2.377%
Benzo(k)fluoranthene	207-08-9	1000	± 2.286%
Benzo(g,h,i)perylene	191-24-2	1000	± 2.561%
Benzyl alcohol	100-51-6	1000	± 1.803%
Benzyl butyl phthalate	85-68-7	1000	± 1.855%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 1.626%
bis(2-Chloroethyl) ether	111-44-4	1000	± 1.776%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 2.406%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 2.415%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 2.350%
4-Bromophenyl phenyl ether	101-55-3	1000	± 1.708%
Carbazole	86-74-8	1000	± 1.844%

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Catalog No.: AL0-101444
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Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 2.831%
4-Chloro-3-methylphenol	59-50-7	1000	± 1.571%
2-Chloronaphthalene	91-58-7	1000	± 2.022%
2-Chlorophenol	95-57-8	1000	± 2.001%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 1.634%
Chrysene	218-01-9	1000	± 2.358%
Dibenz(a,h)anthracene	53-70-3	1000	± 2.452%
Dibenzofuran	132-64-9	1000	± 0.310%
Di-n-butyl phthalate	84-74-2	1000	± 2.347%
1,2-Dichlorobenzene	95-50-1	1000	± 1.803%
1,3-Dichlorobenzene	541-73-1	1000	± 1.808%
1,4-Dichlorobenzene	106-46-7	1000	± 1.503%
2,4-Dichlorophenol	120-83-2	1000	± 1.393%
Diethyl phthalate	84-66-2	1000	± 1.870%
2,4-Dimethylphenol	105-67-9	1000	± 2.495%
Dimethyl phthalate	131-11-3	1000	± 2.113%
1,2-Dinitrobenzene	528-29-0	1000	± 0.240%
1,3-Dinitrobenzene	99-65-0	1000	± 1.221%
1,4-Dinitrobenzene	100-25-4	1000	± 0.246%
2,4-Dinitrophenol	51-28-5	1000	± 0.519%
2,4-Dinitrotoluene	121-14-2	1000	± 2.242%

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Catalog No.: AL0-101444
Lot Number: CL18811
Description: 8270 Calibration Standard
Certification Date: August 9, 2022
Storage: -18 °C
Expiration Date: November 30, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 2.154%
Di-n-octyl phthalate	117-84-0	1000	± 2.670%
Fluoranthene	206-44-0	1000	± 2.103%
Fluorene	86-73-7	1000	± 0.890%
Hexachlorobenzene	118-74-1	1000	± 1.210%
Hexachlorobutadiene	87-68-3	1000	± 1.304%
Hexachlorocyclopentadiene	77-47-4	1000	± 1.510%
Hexachloroethane	67-72-1	1000	± 3.281%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 1.921%
Isophorone	78-59-1	1000	± 2.022%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 1.661%
1-Methylnaphthalene	90-12-0	1000	± 1.929%
2-Methylnaphthalene	91-57-6	1000	± 2.220%
2-Methylphenol	95-48-7	1000	± 2.168%
3-Methylphenol	108-39-4	500	± 1.025%
4-Methylphenol	106-44-5	500	± 1.064%
Naphthalene	91-20-3	1000	± 1.199%
2-Nitroaniline	88-74-4	1000	± 1.874%
3-Nitroaniline	99-09-2	1000	± 2.146%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 1.704%

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 2.051%
4-Nitrophenol	100-02-7	1000	± 1.413%
N-Nitrosodimethylamine	62-75-9	1000	± 0.545%
N-Nitrosodiphenylamine	86-30-6	1000	± 1.669%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.712%
Pentachlorophenol	87-86-5	1000	± 2.454%
Phenanthrene	85-01-8	1000	± 2.072%
Phenol	108-95-2	1000	± 2.140%
Pyrene	129-00-0	1000	± 1.869%
Pyridine	110-86-1	1000	± 0.545%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 2.552%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 2.220%
1,2,4-Trichlorobenzene	120-82-1	1000	± 1.632%
2,4,5-Trichlorophenol	95-95-4	1000	± 1.596%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.481%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1010

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	02/23/23 15:49	File ID:	NT1003182310S.D
% Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/18/23 23:29
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	20.06 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.5	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	22.4		2.5	20.0
65-85-0	Benzoic acid	1	90.9	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	2.5	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	6.0	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.11	499	66.6	27 - 120	
p-Terphenyl-d14	499.40	438	87.8	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823105.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

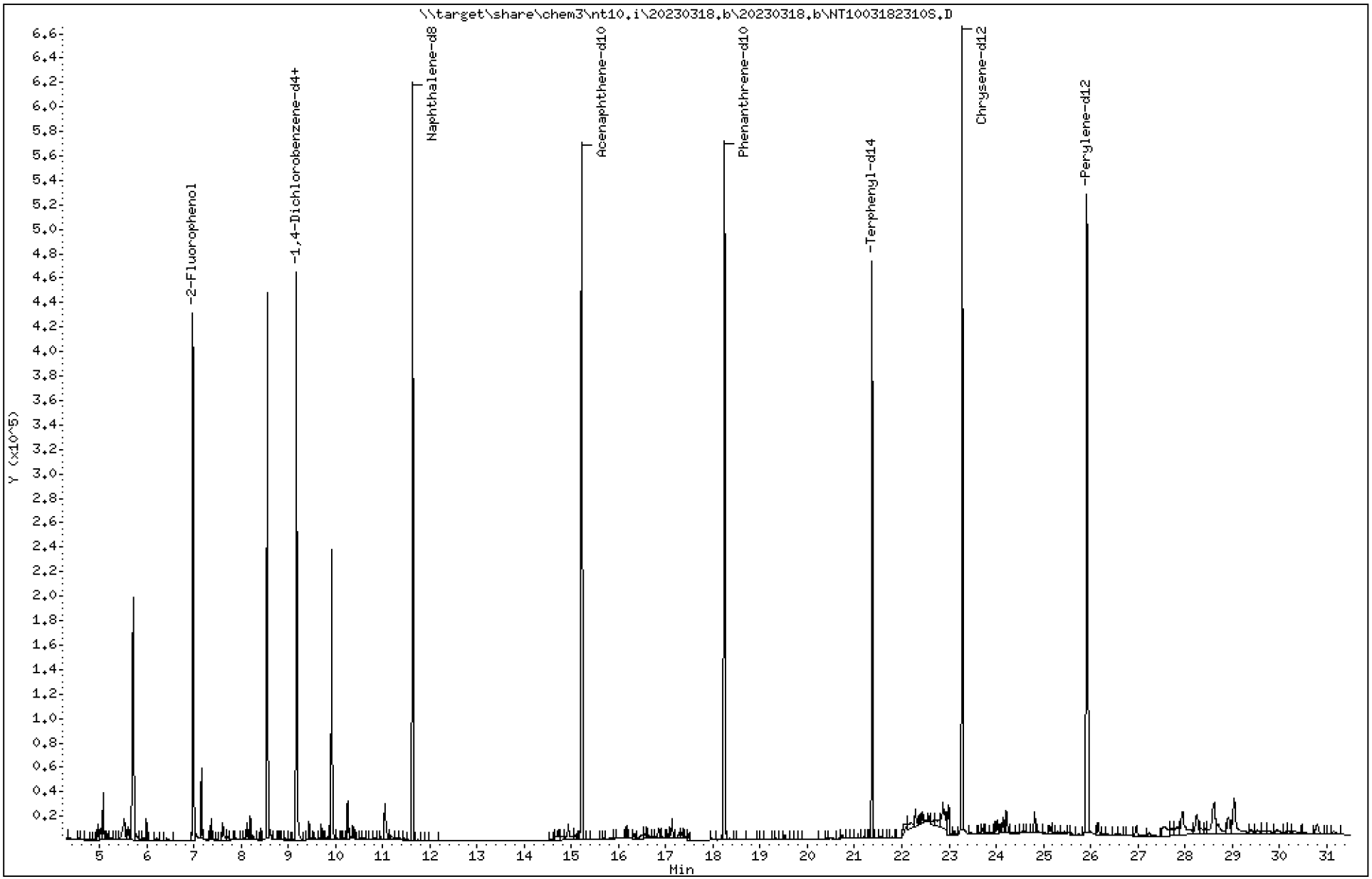
Sample Info: 23A0467-01

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

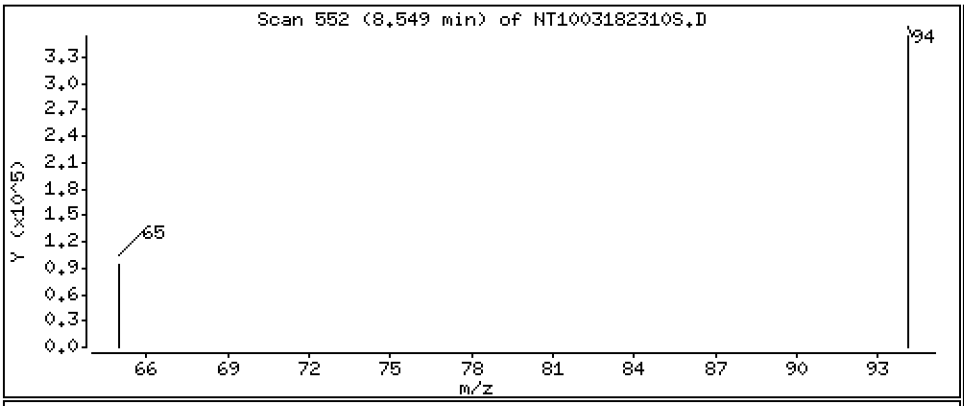
Operator: JGR

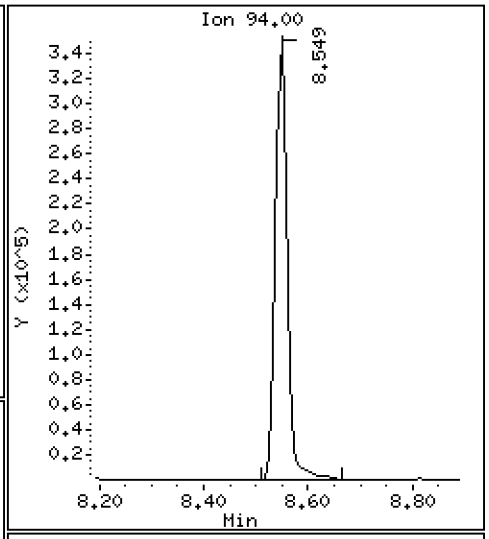
Column phase: ZB-5msi

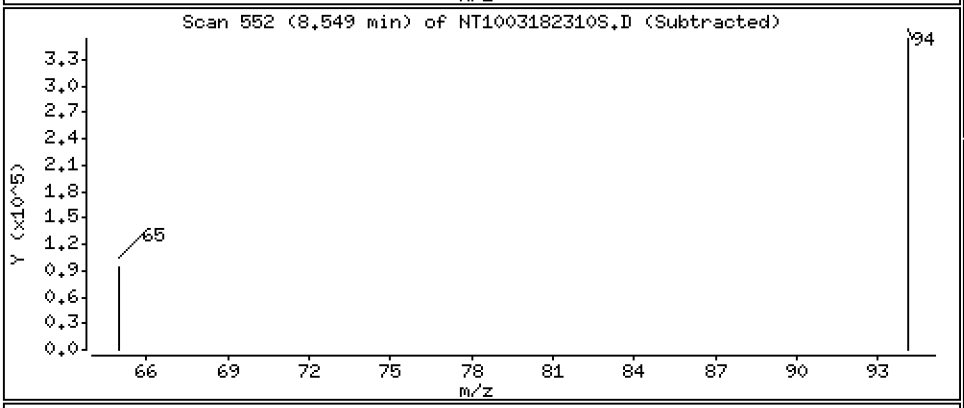
Column diameter: 0.25

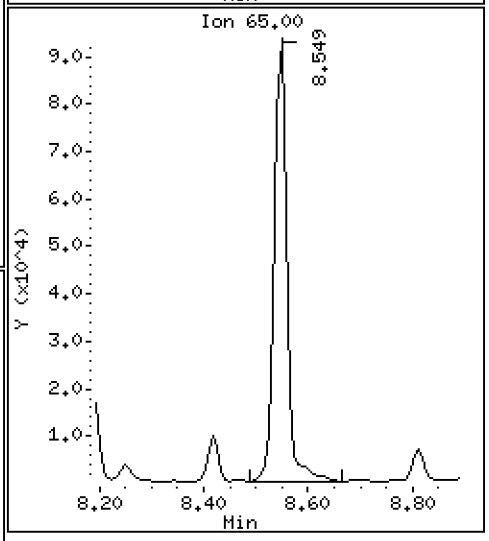
3 Phenol

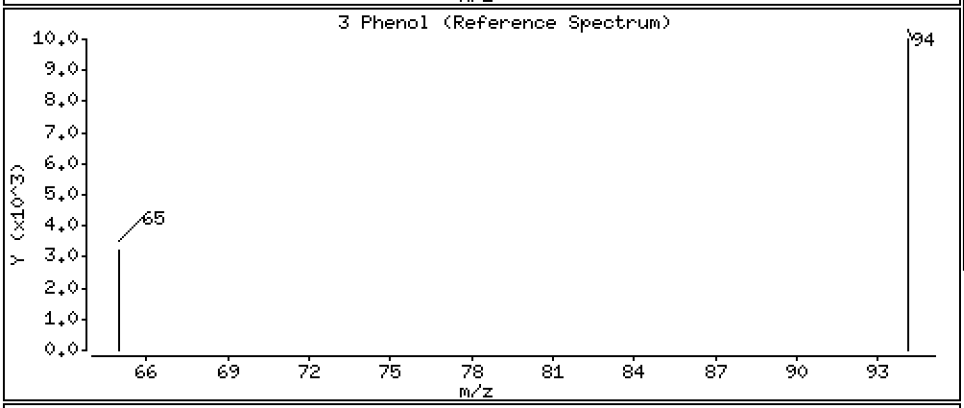
Concentration: 4.574 ug/L

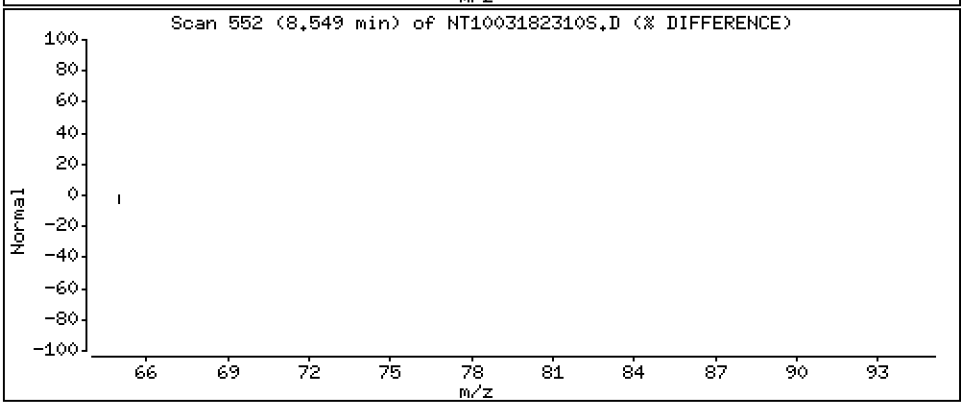












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

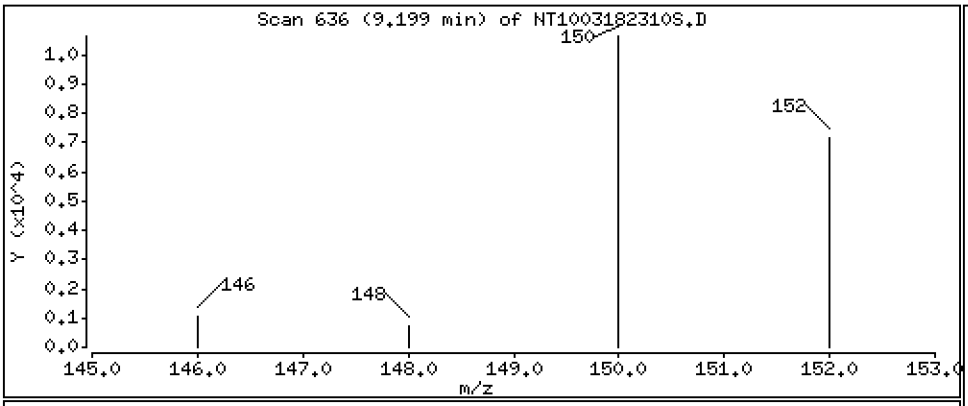
Operator: JGR

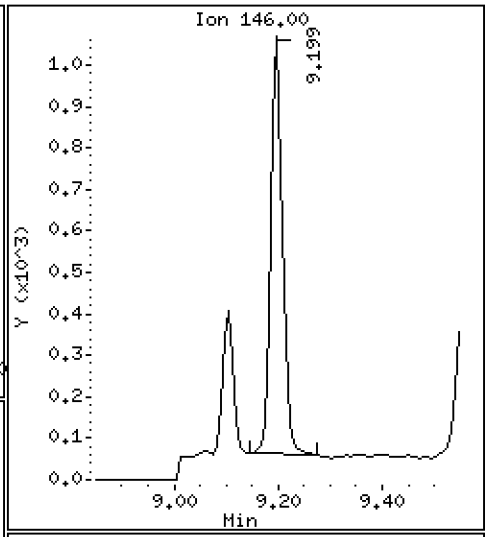
Column phase: ZB-5msi

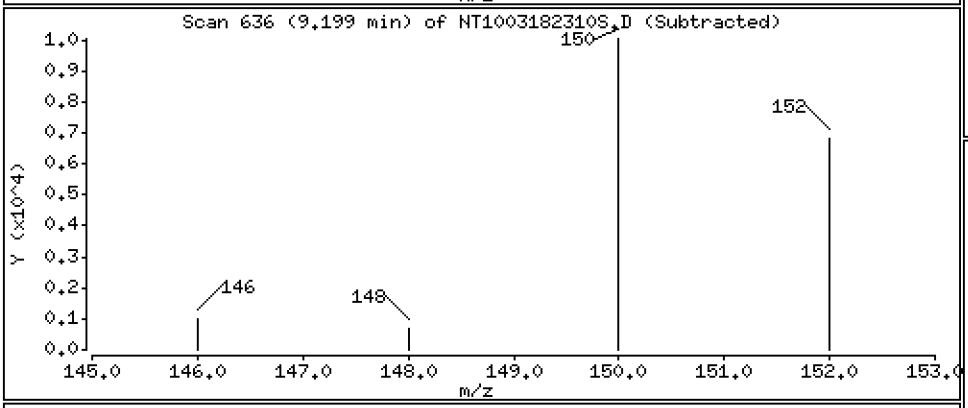
Column diameter: 0.25

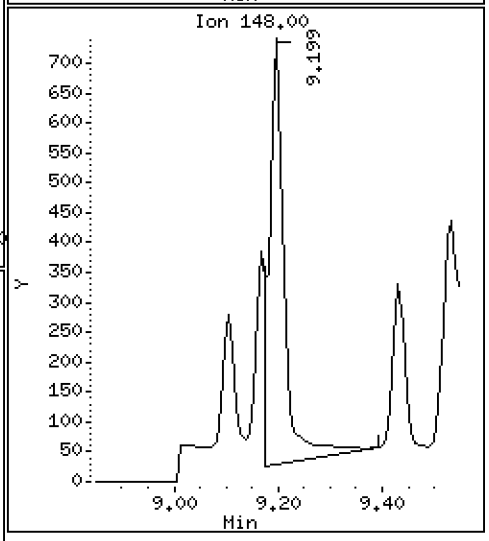
9 1,4-Dichlorobenzene

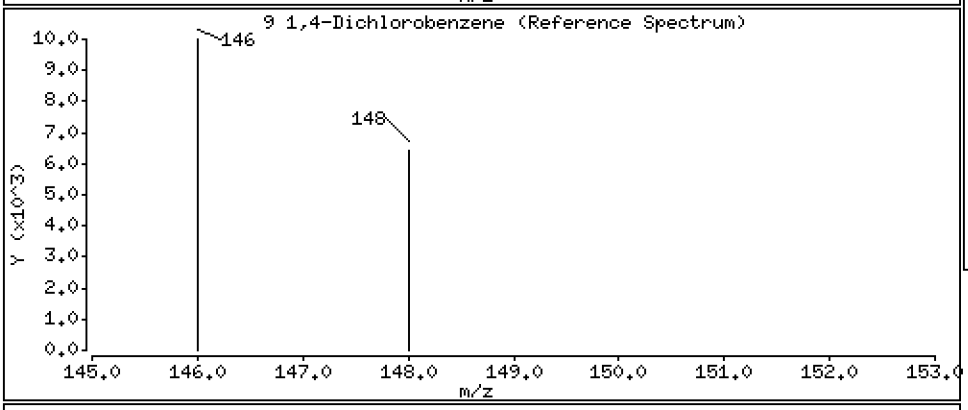
Concentration: 0.01513 ug/L

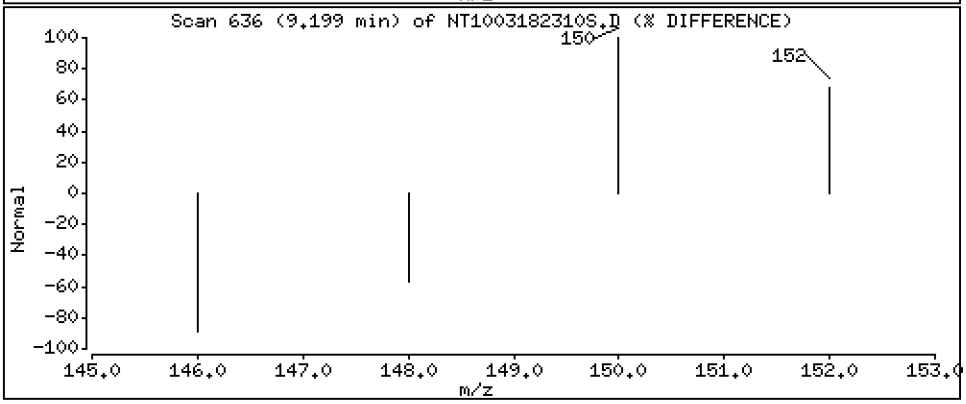












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

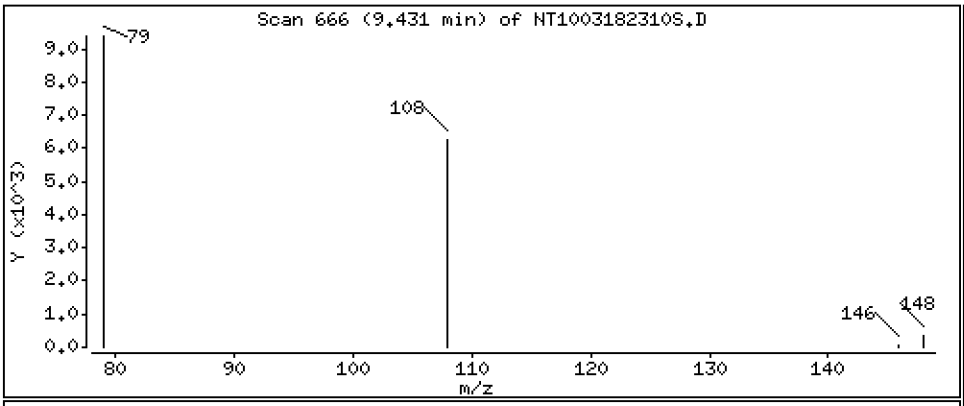
Operator: JGR

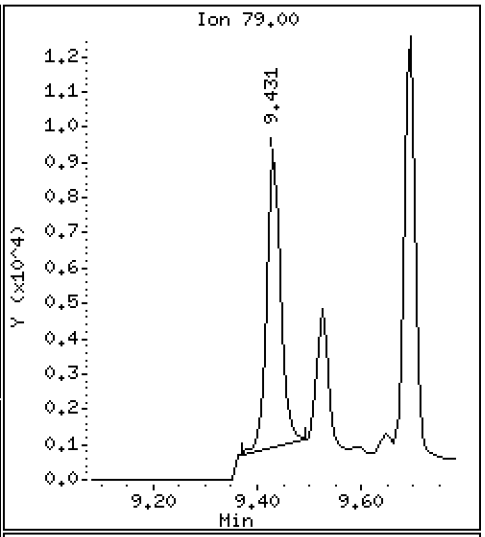
Column phase: ZB-5msi

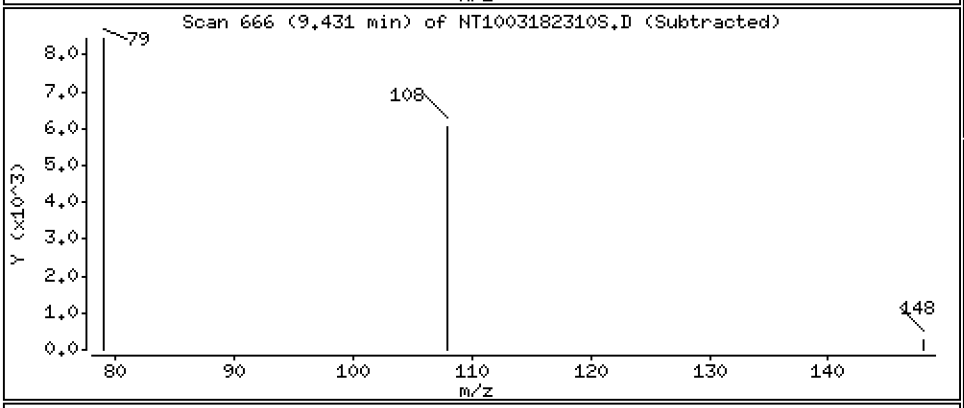
Column diameter: 0.25

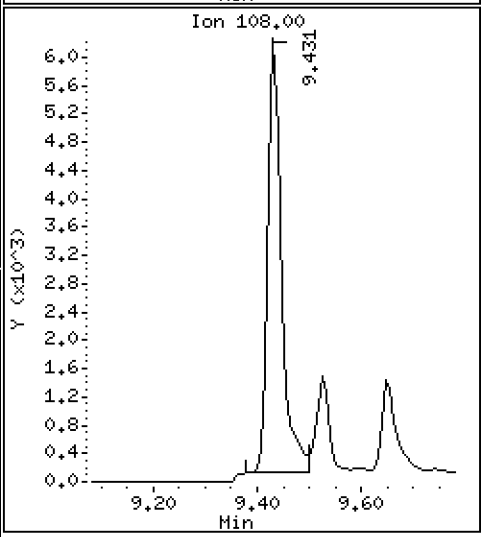
11 Benzyl alcohol

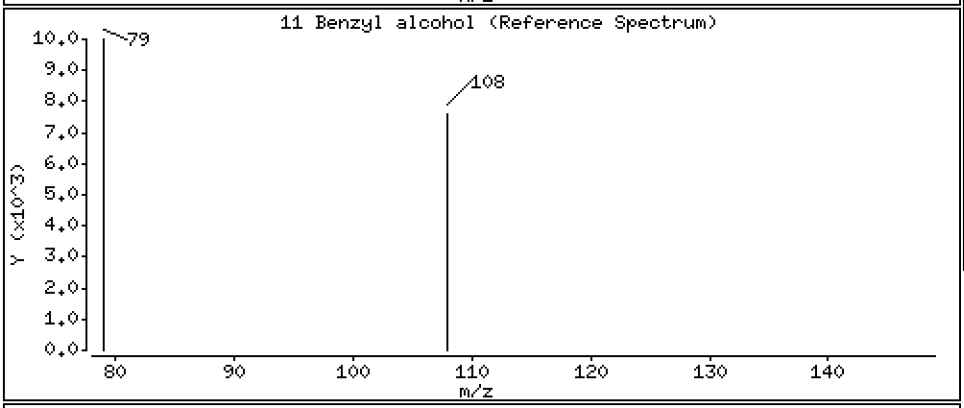
Concentration: 0.2241 ug/L

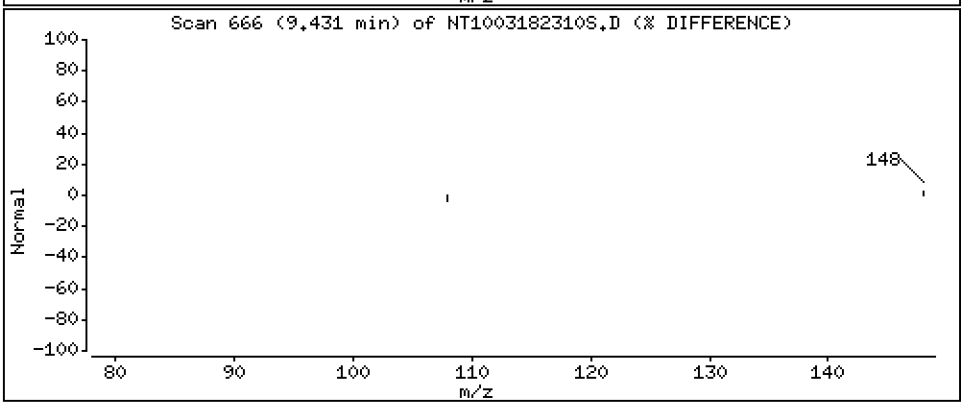












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

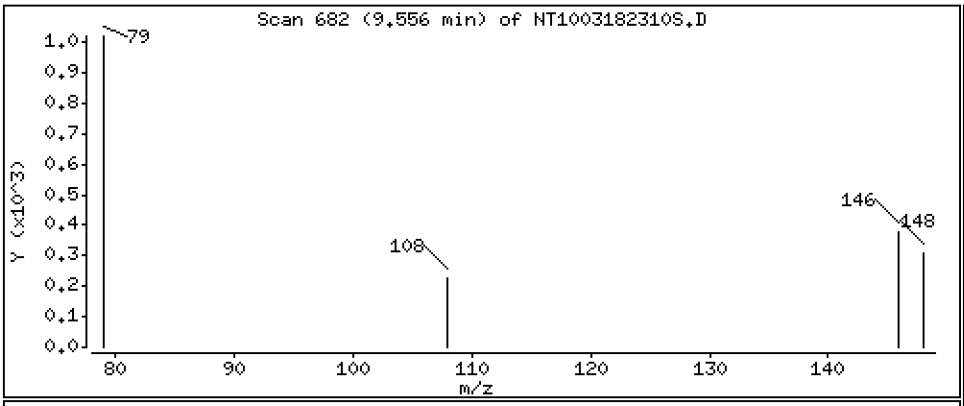
Operator: JGR

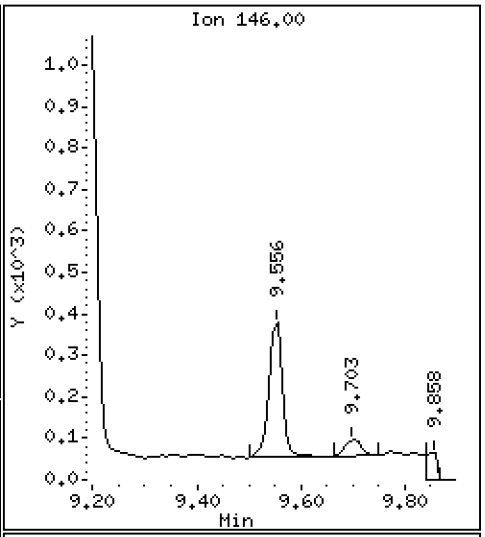
Column phase: ZB-5msi

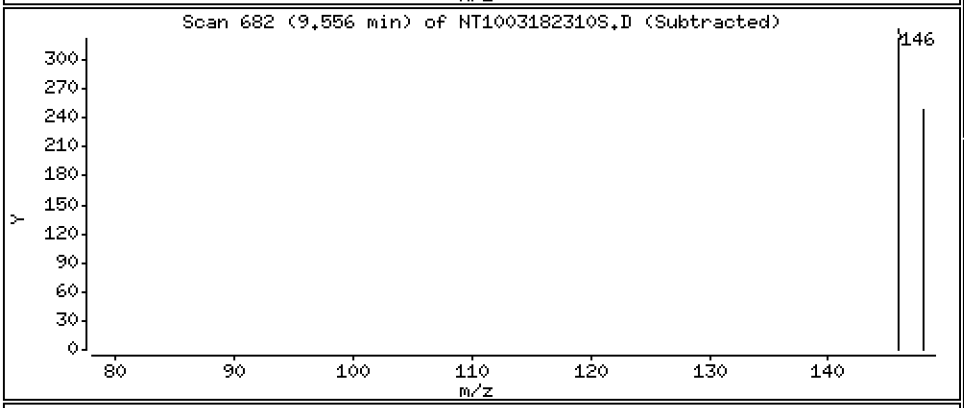
Column diameter: 0.25

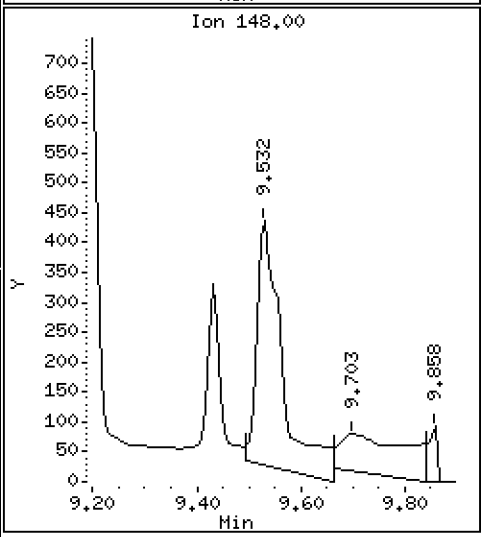
12 1,2-Dichlorobenzene

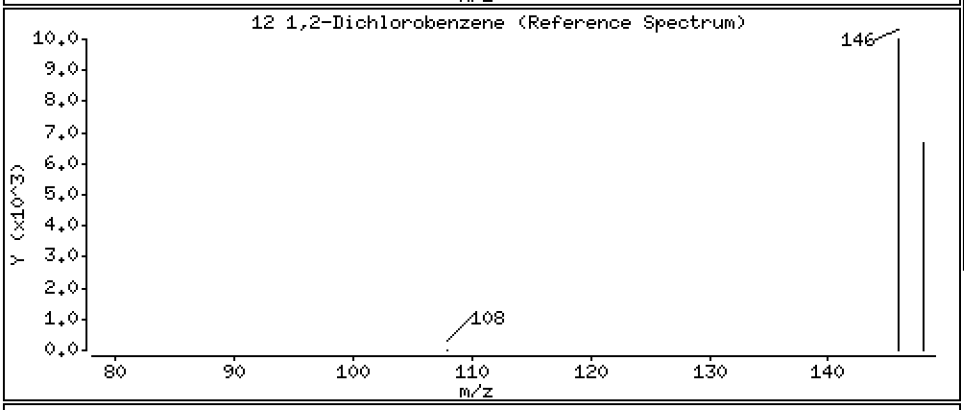
Concentration: 0.005556 ug/L

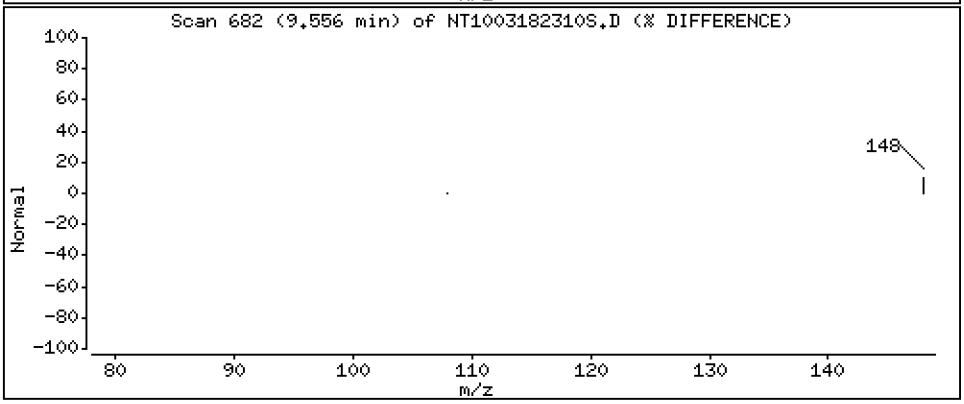












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

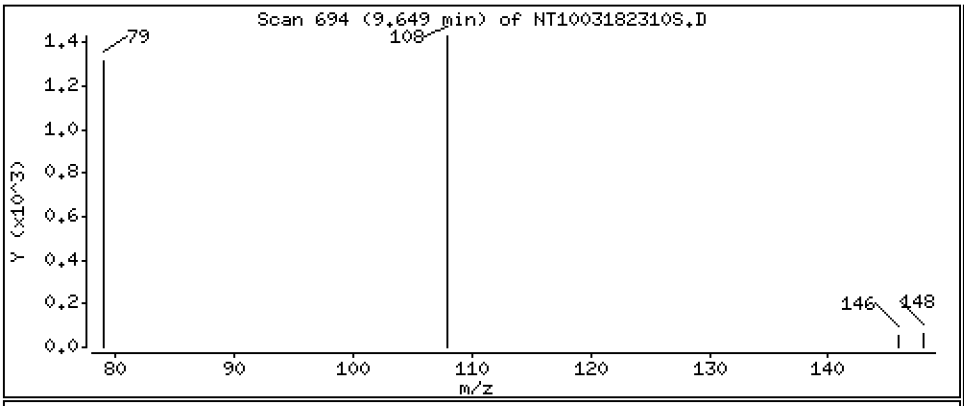
Operator: JGR

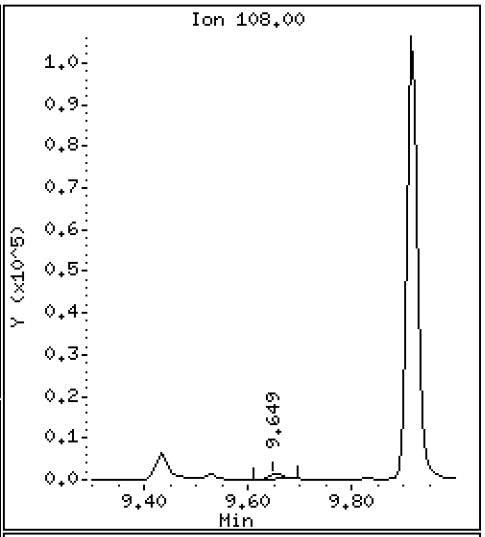
Column phase: ZB-5msi

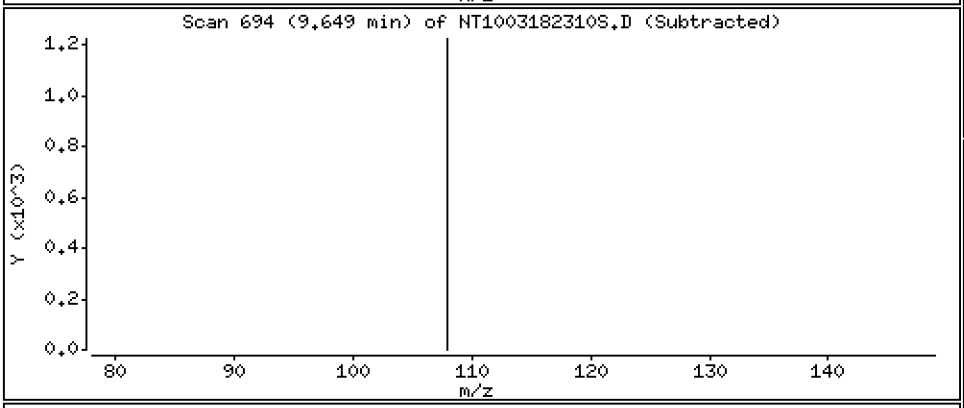
Column diameter: 0.25

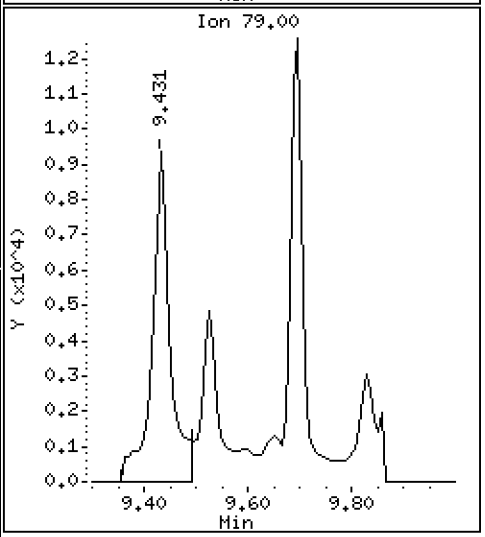
13 2-Methylphenol

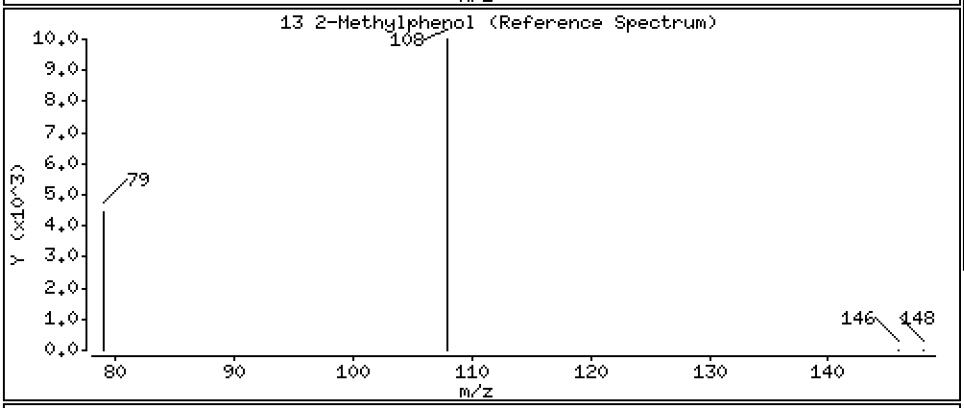
Concentration: 0.02477 ug/L

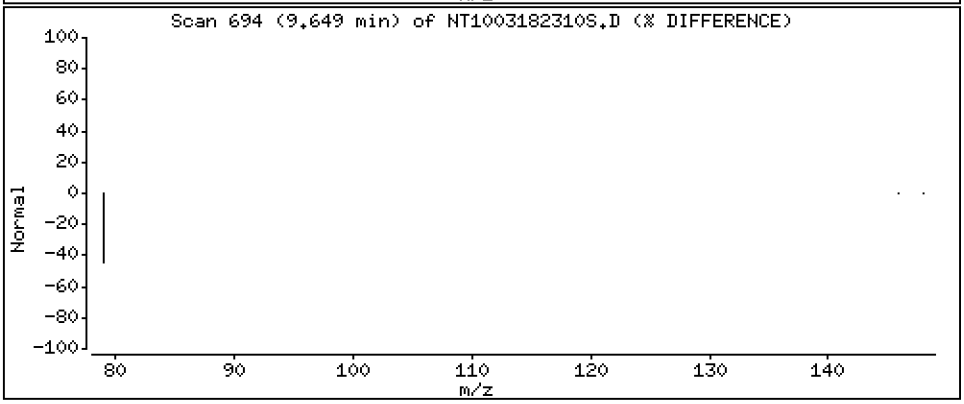












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

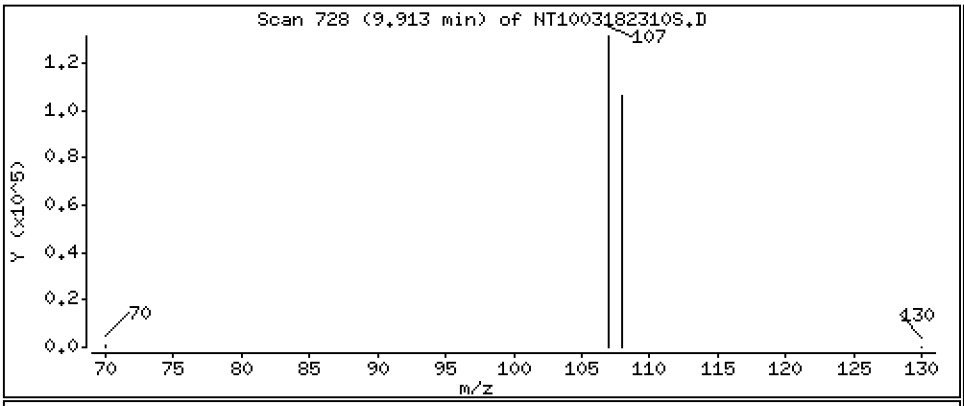
Operator: JGR

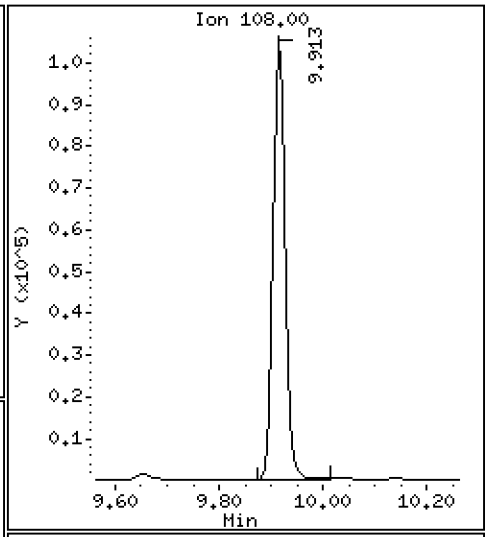
Column phase: ZB-5msi

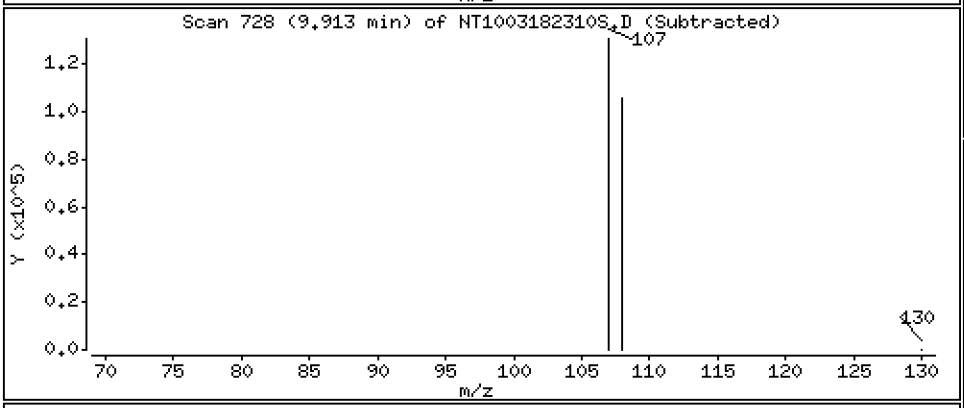
Column diameter: 0.25

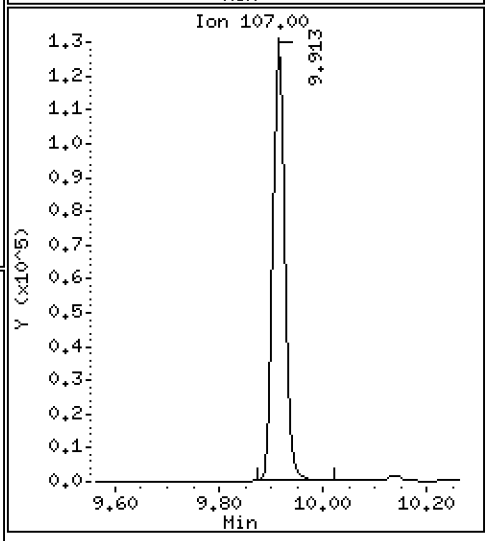
15 4-Methylphenol

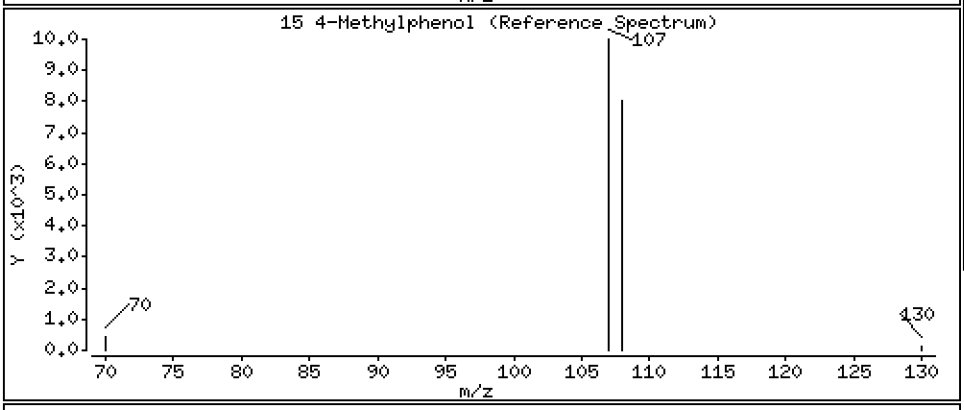
Concentration: 1.949 ug/L

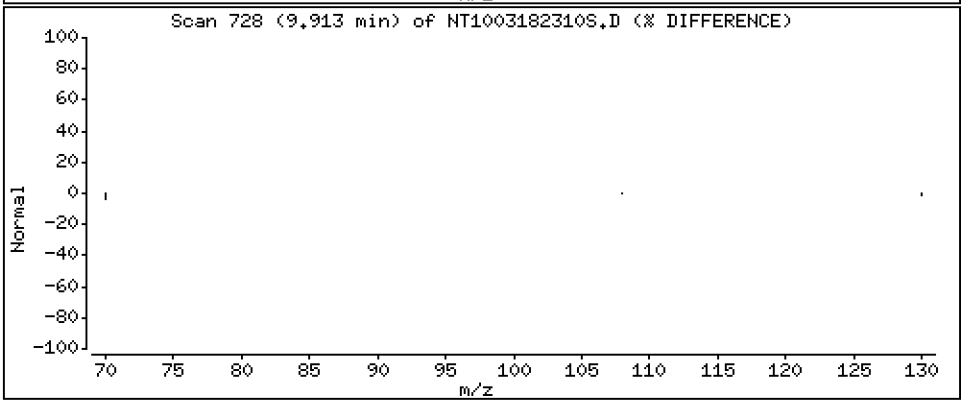












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

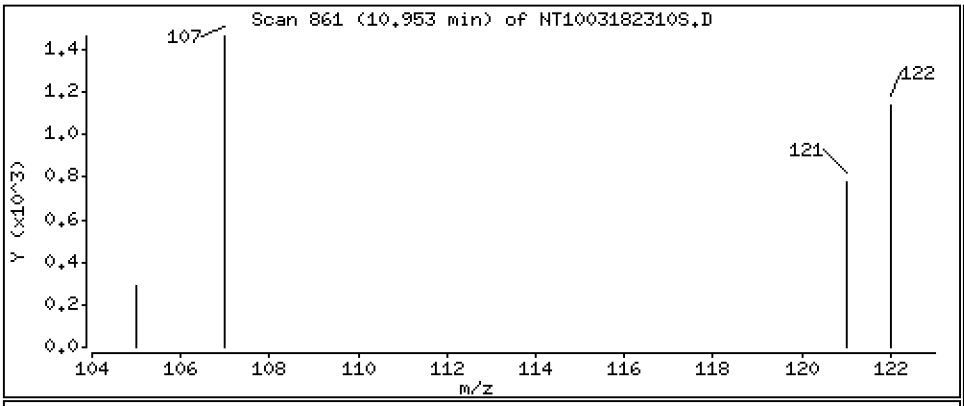
Operator: JGR

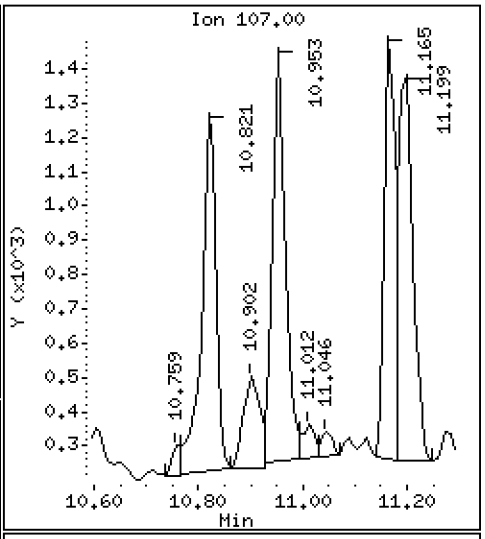
Column phase: ZB-5msi

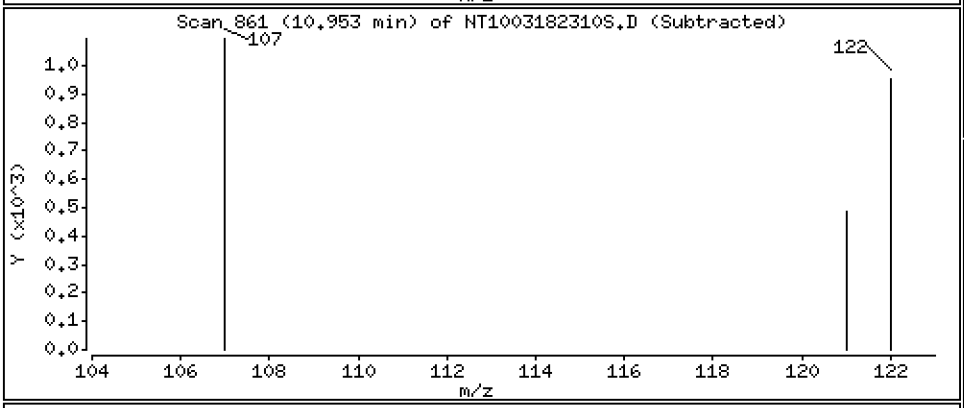
Column diameter: 0.25

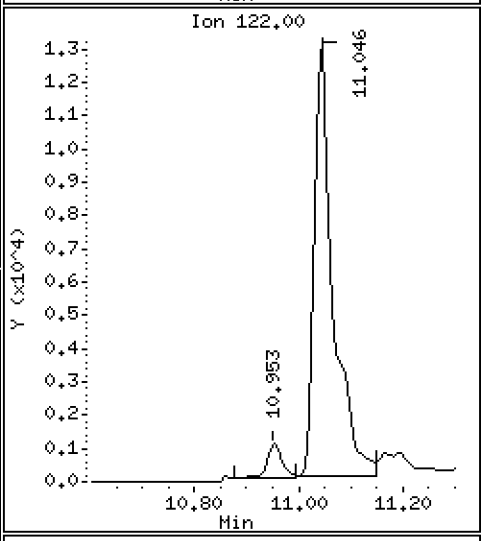
22 2,4-Dimethylphenol

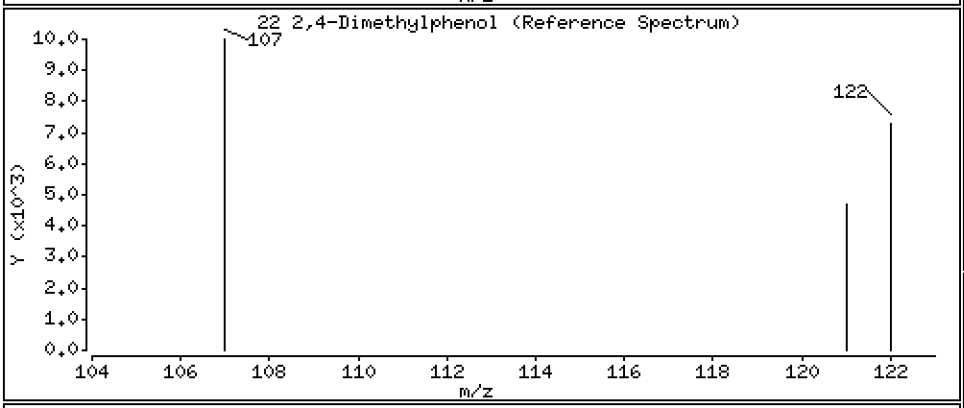
Concentration: 0.02551 ug/L

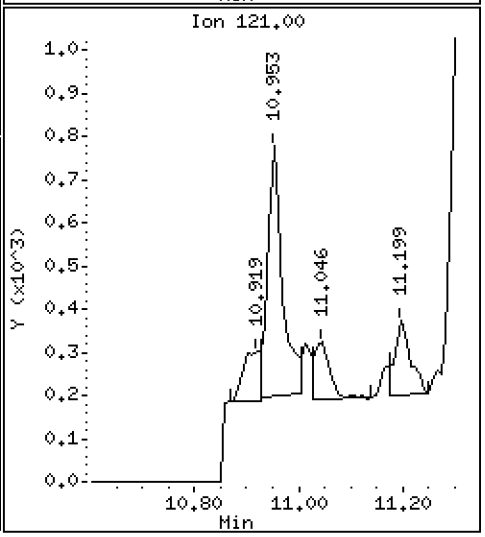


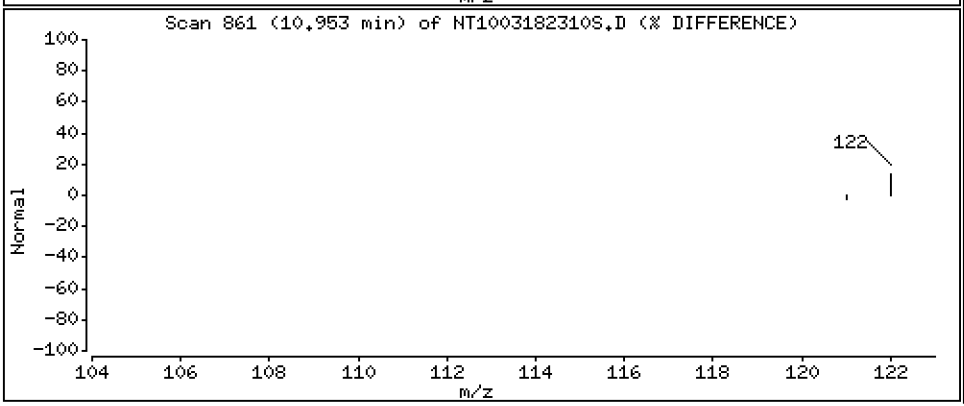












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Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

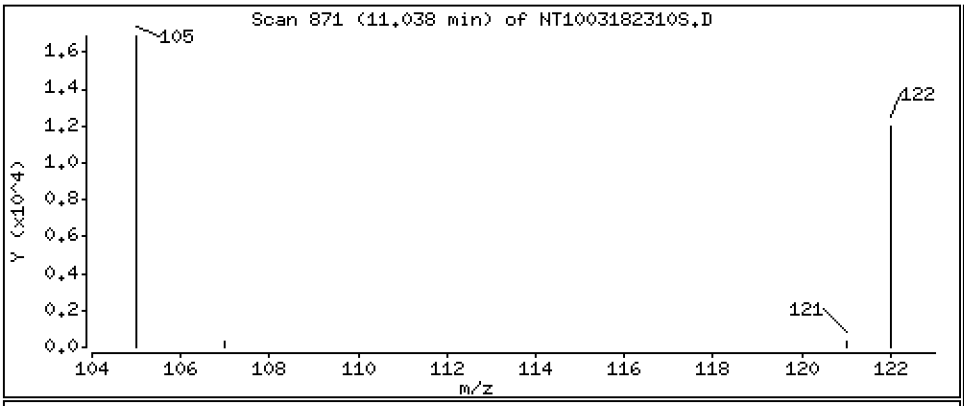
Operator: JGR

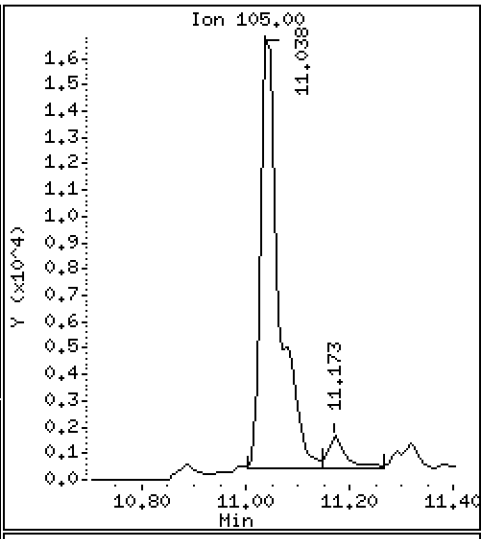
Column phase: ZB-5msi

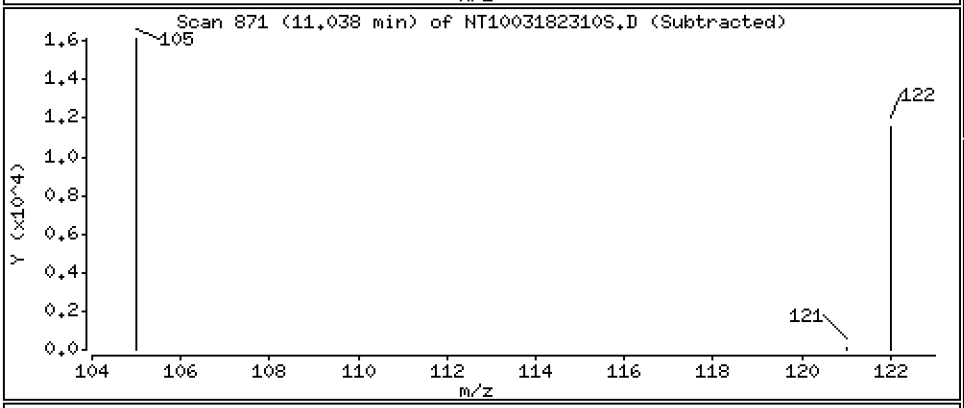
Column diameter: 0.25

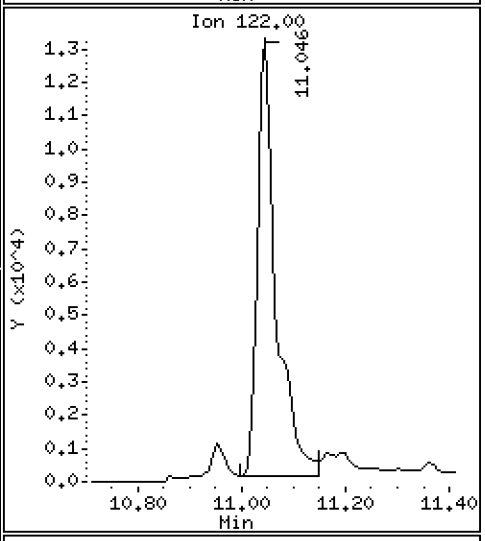
24 Benzoic acid

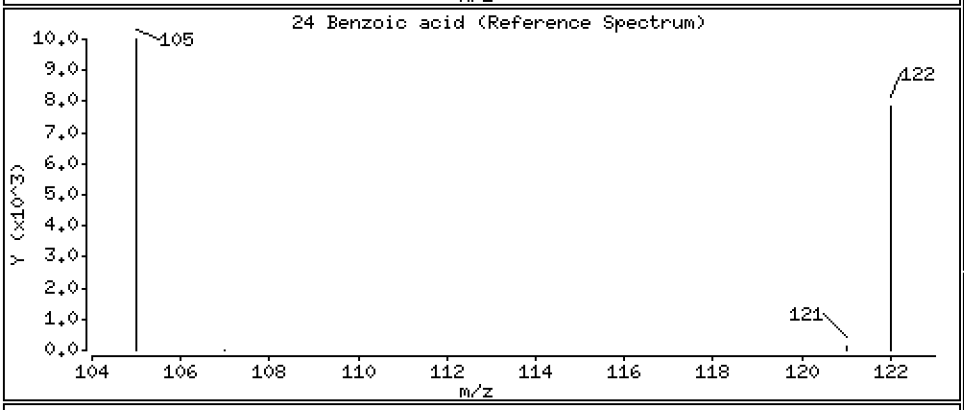
Concentration: 0.9106 ug/L

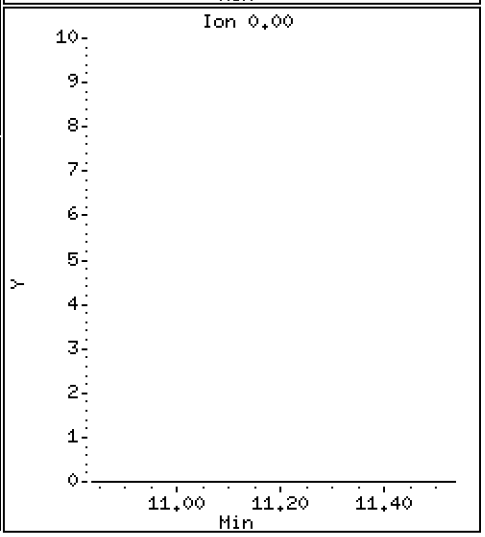


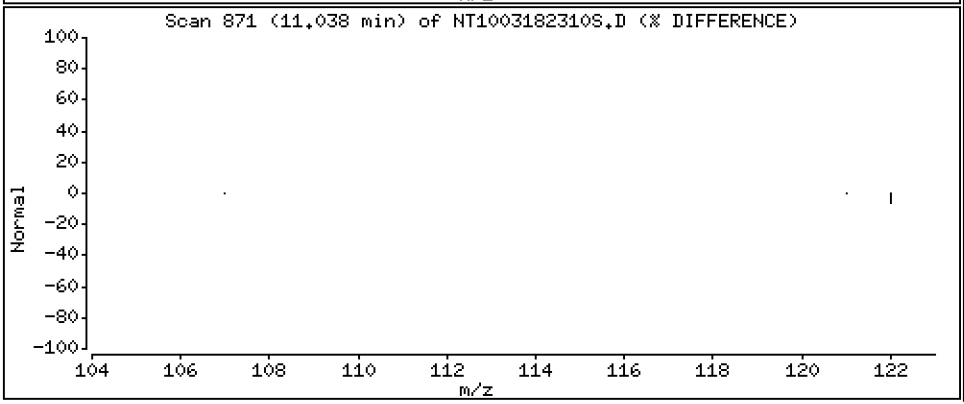












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

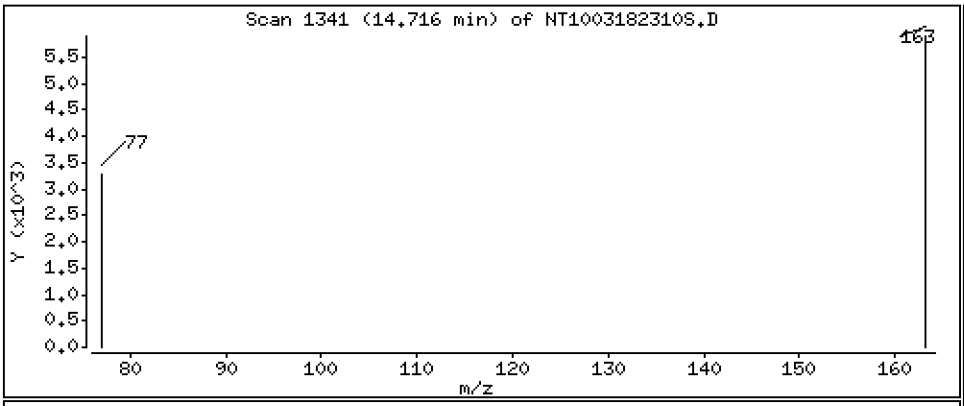
Operator: JGR

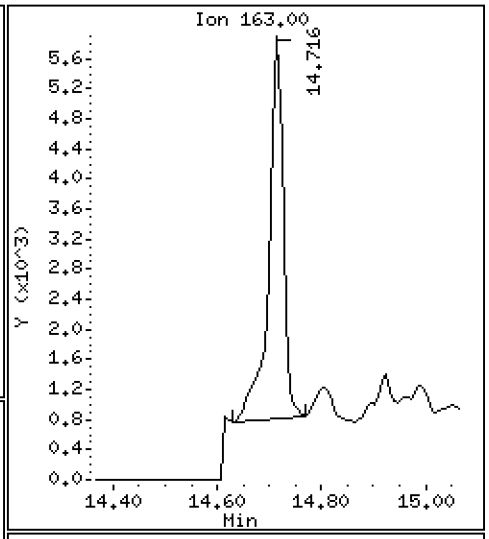
Column phase: ZB-5msi

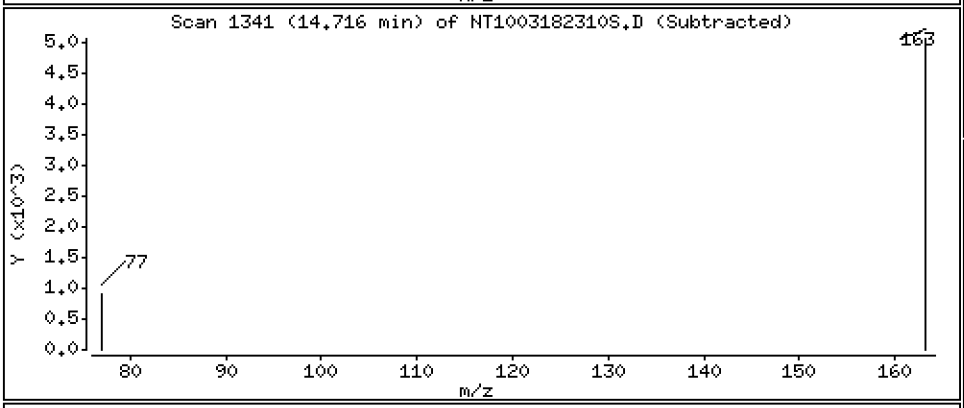
Column diameter: 0.25

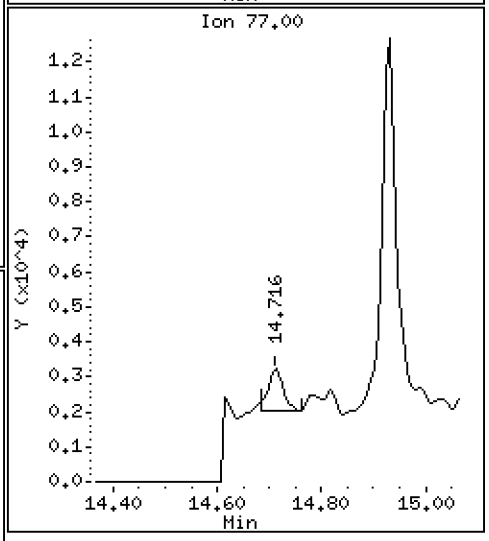
39 Dimethylphthalate

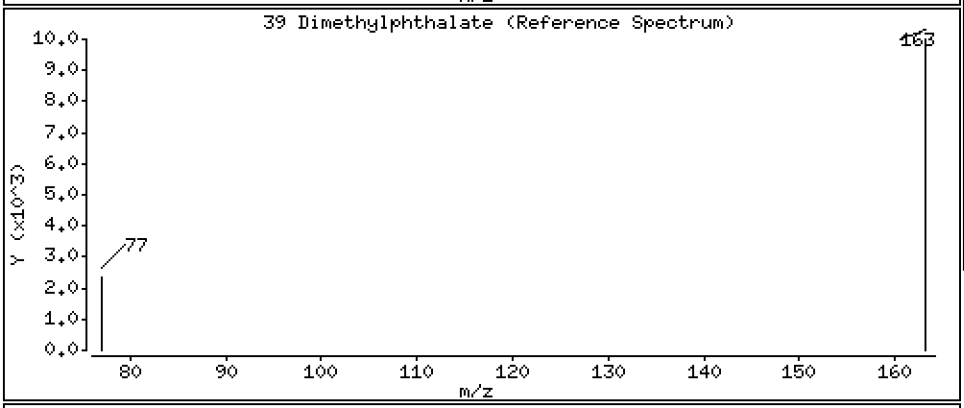
Concentration: 0.06402 ug/L

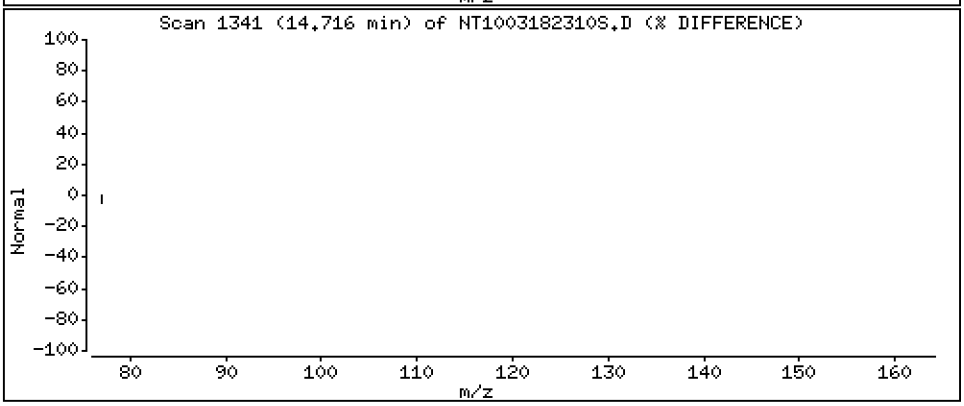












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

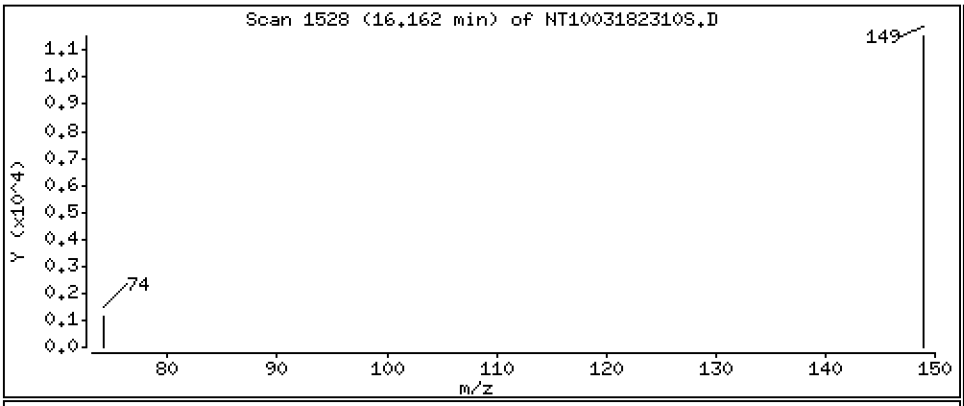
Operator: JGR

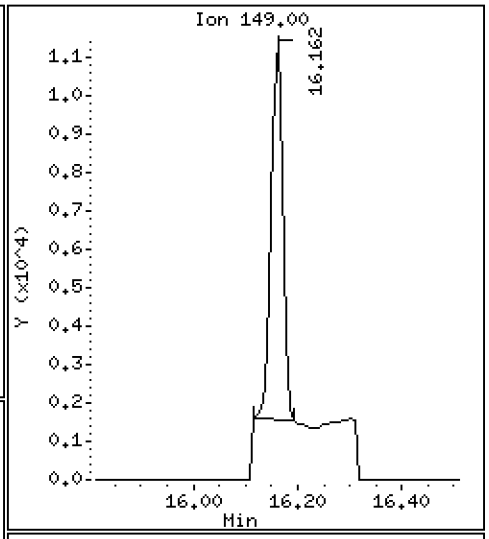
Column phase: ZB-5msi

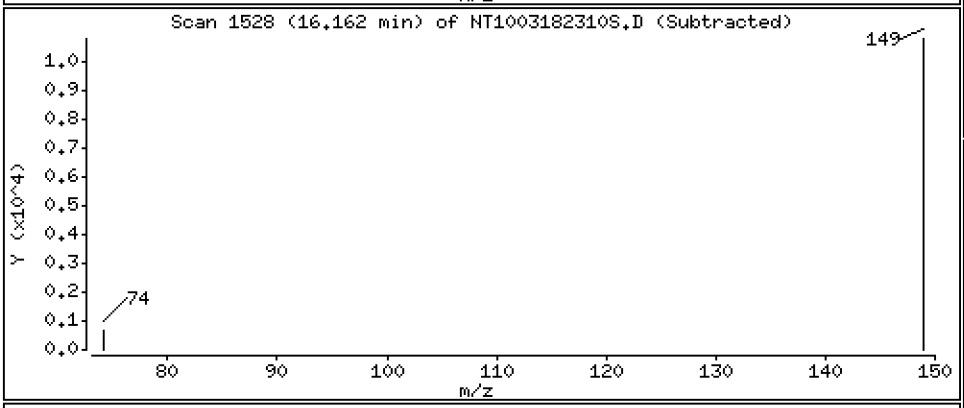
Column diameter: 0.25

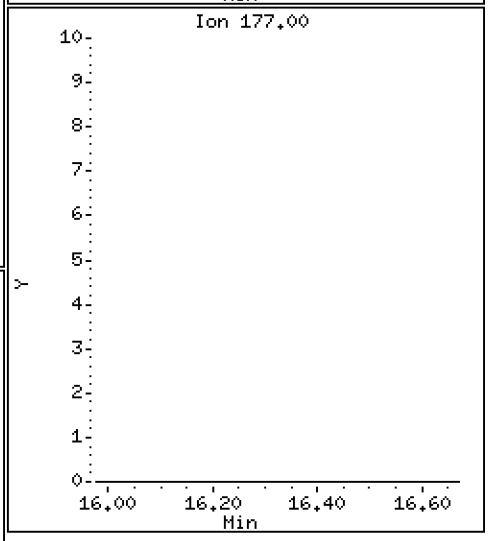
50 Diethylphthalate

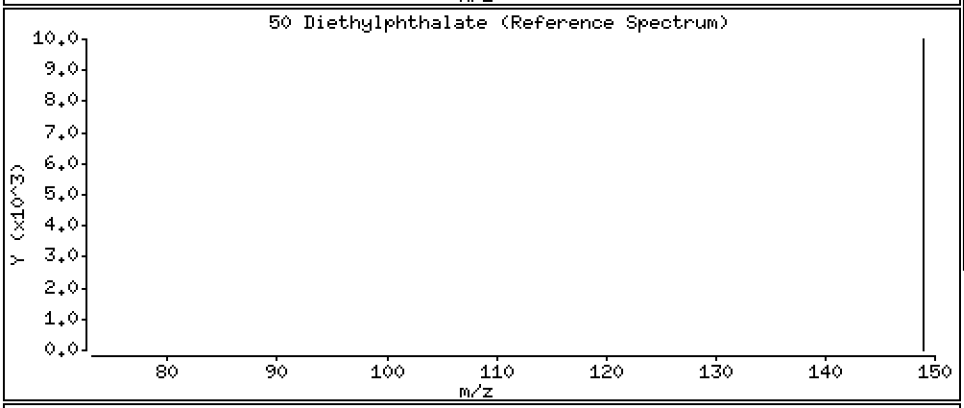
Concentration: 0.09444 ug/L

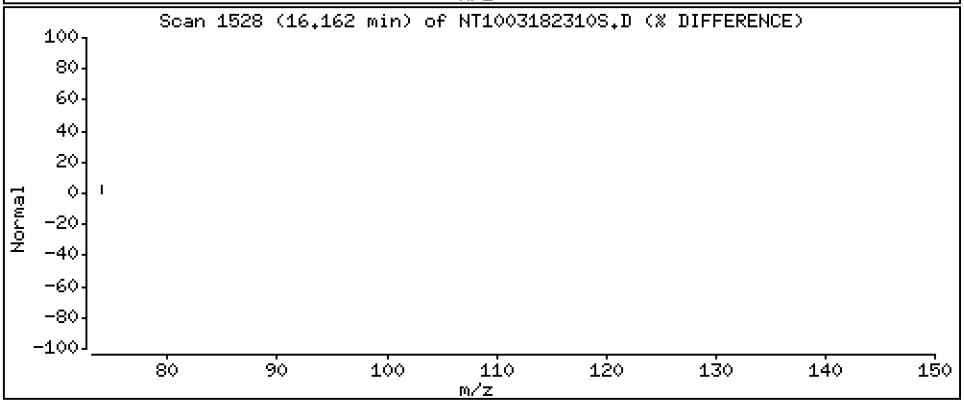












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

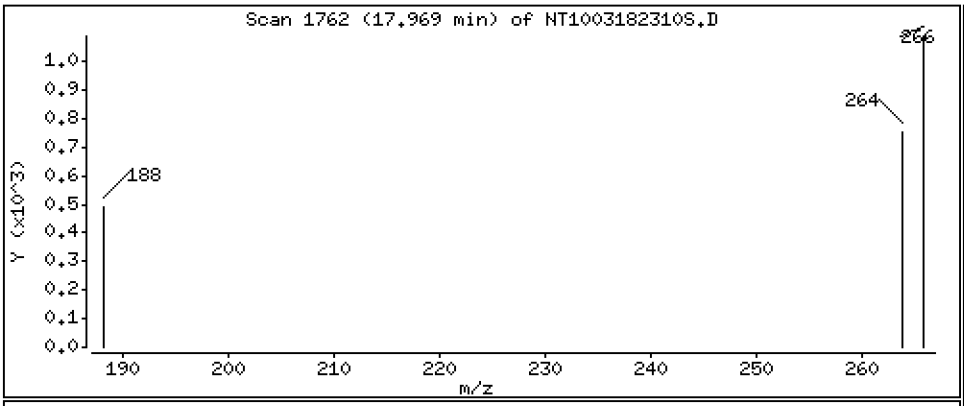
Operator: JGR

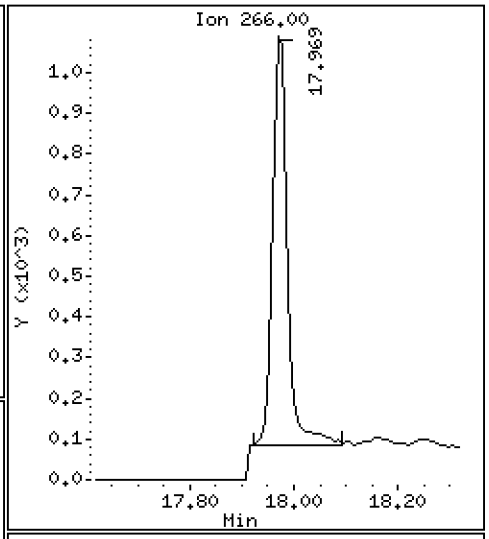
Column phase: ZB-5msi

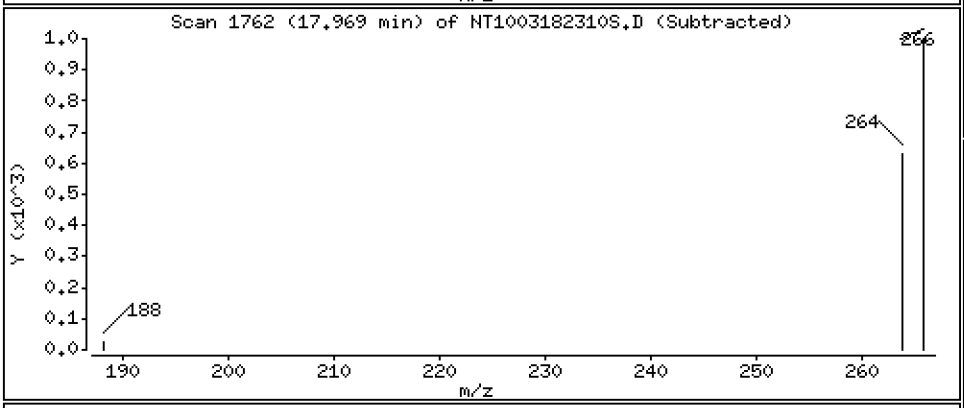
Column diameter: 0.25

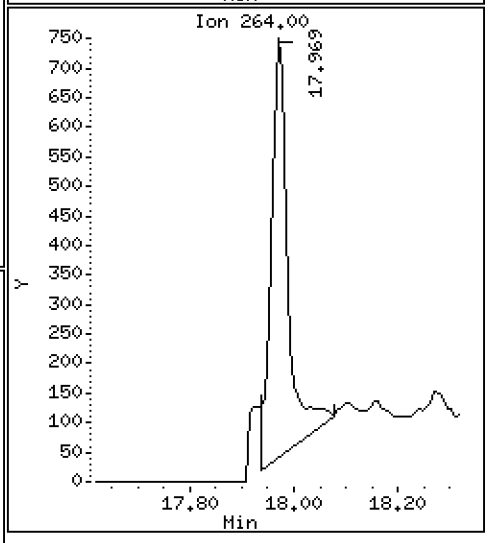
58 Pentachlorophenol

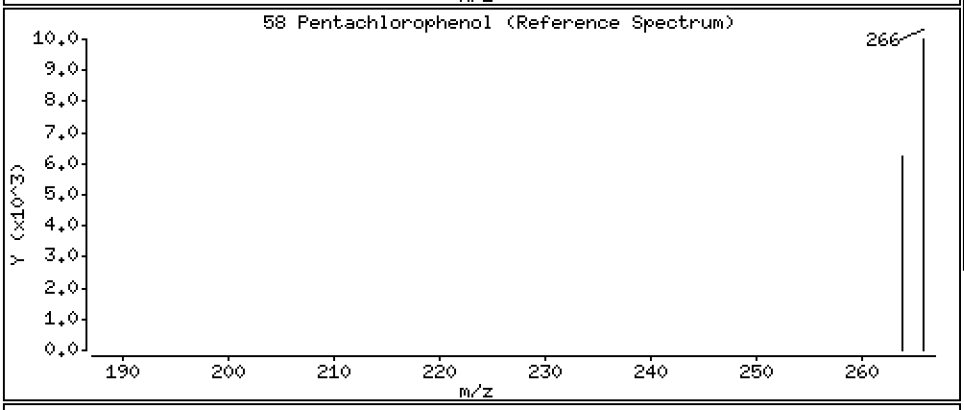
Concentration: 0.06054 ug/L

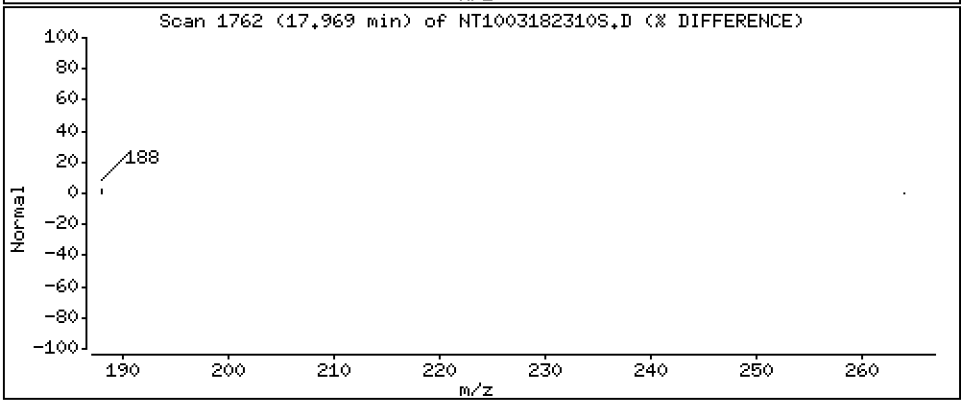












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

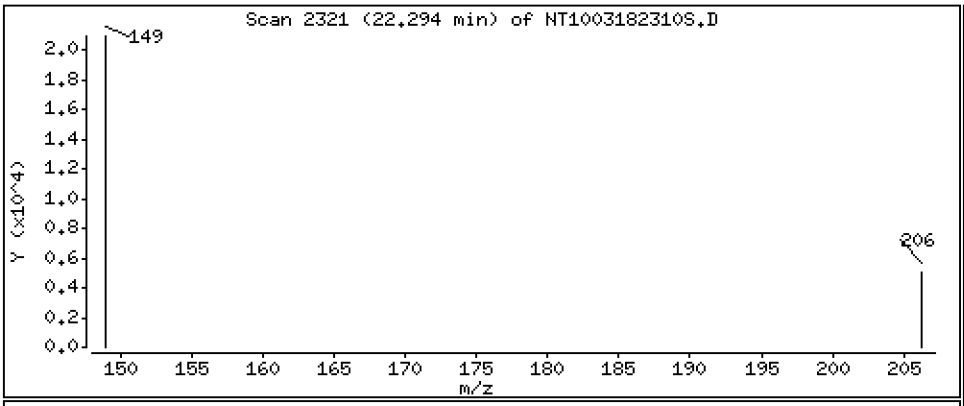
Operator: JGR

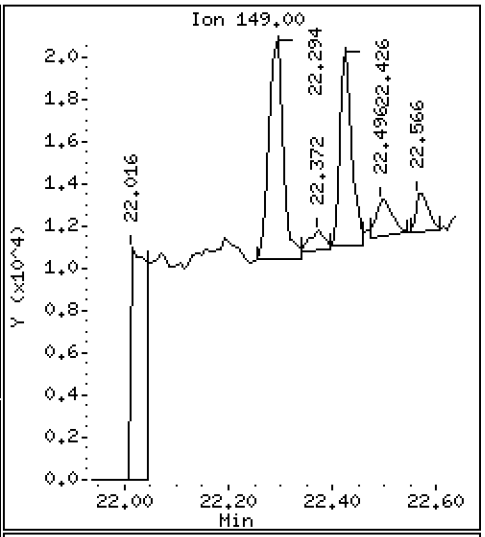
Column phase: ZB-5msi

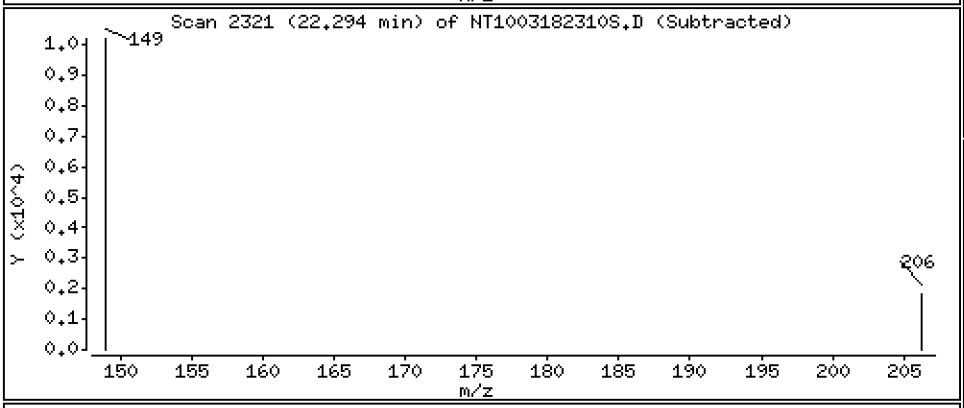
Column diameter: 0.25

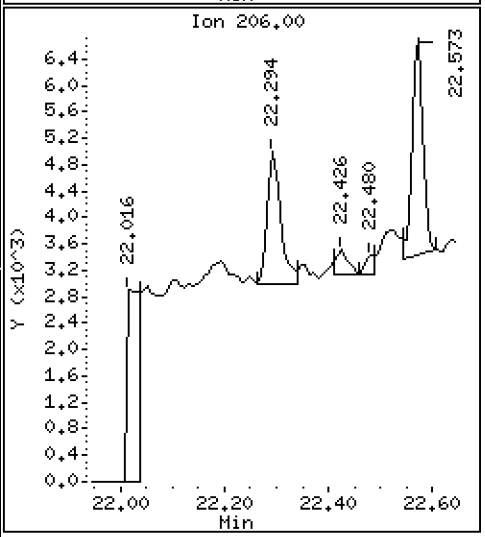
67 Butylbenzylphthalate

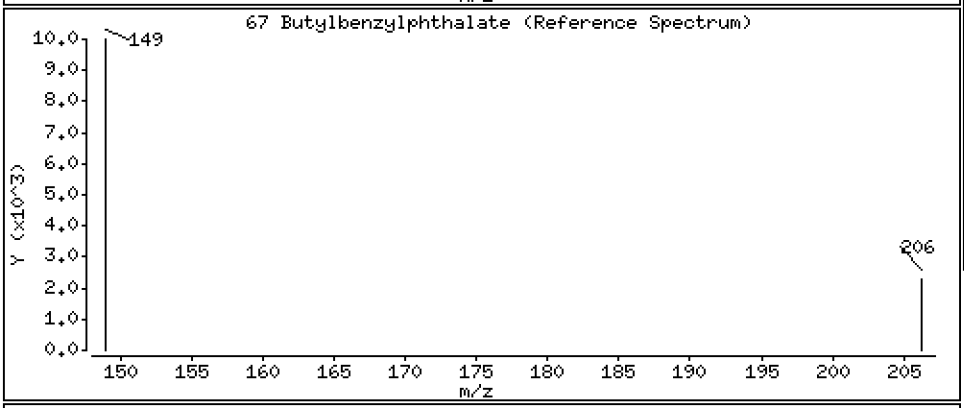
Concentration: 0.1697 ug/L

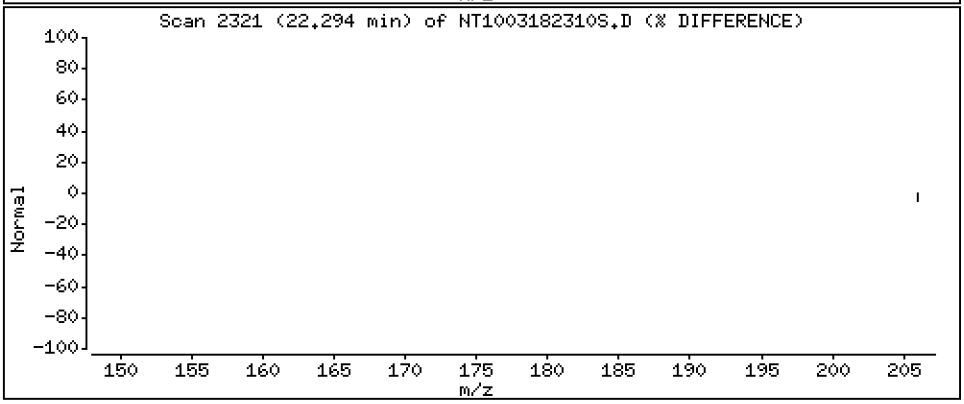












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D

Date : 18-MAR-2023 23:29

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-01

Volume Injected (uL): 1.0

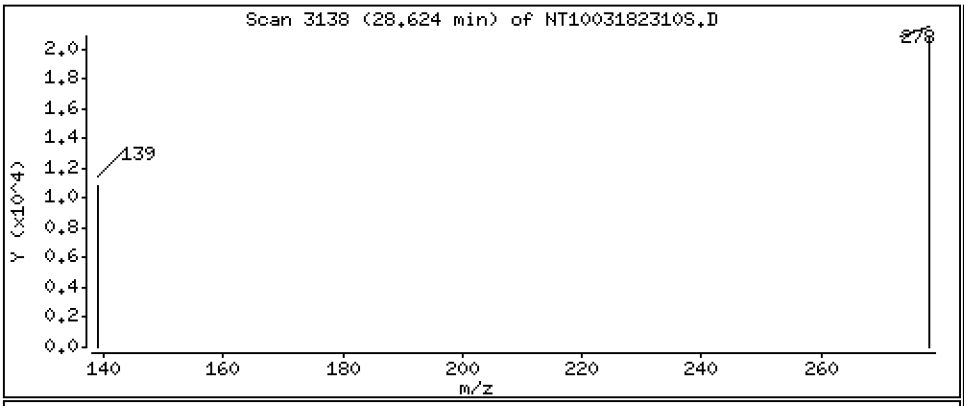
Operator: JGR

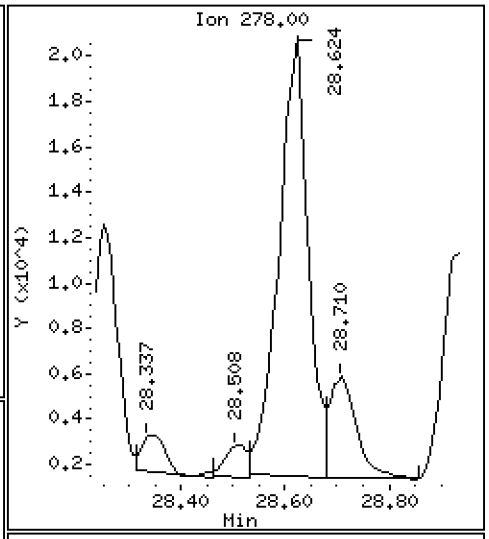
Column phase: ZB-5msi

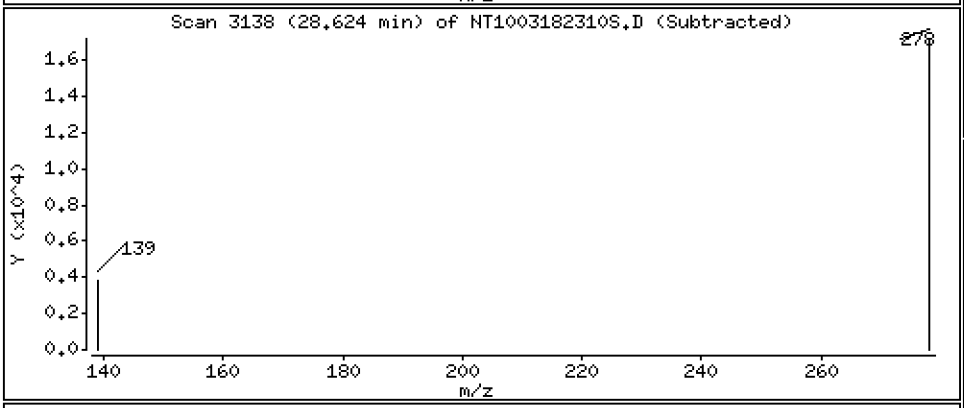
Column diameter: 0.25

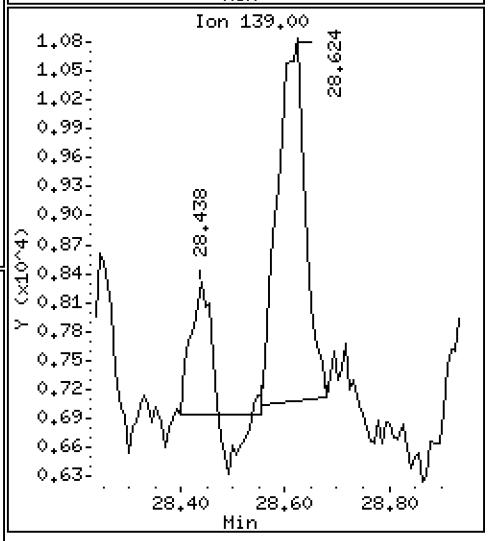
79 Dibenzo(a,h)anthracene

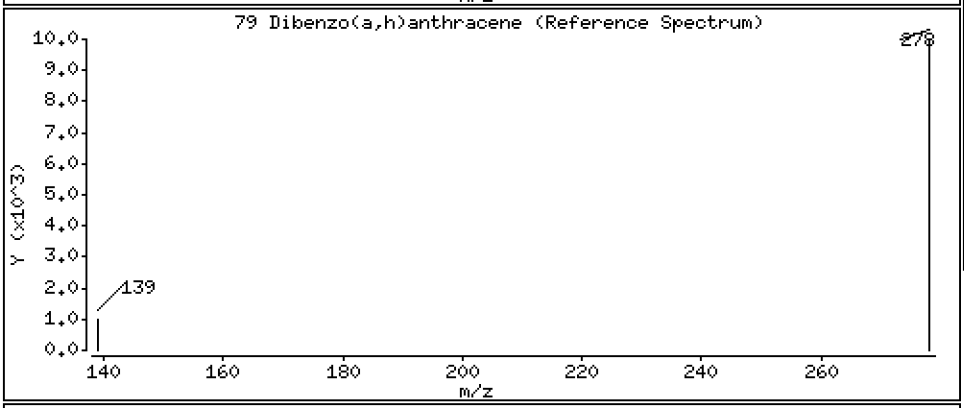
Concentration: 0.2428 ug/L

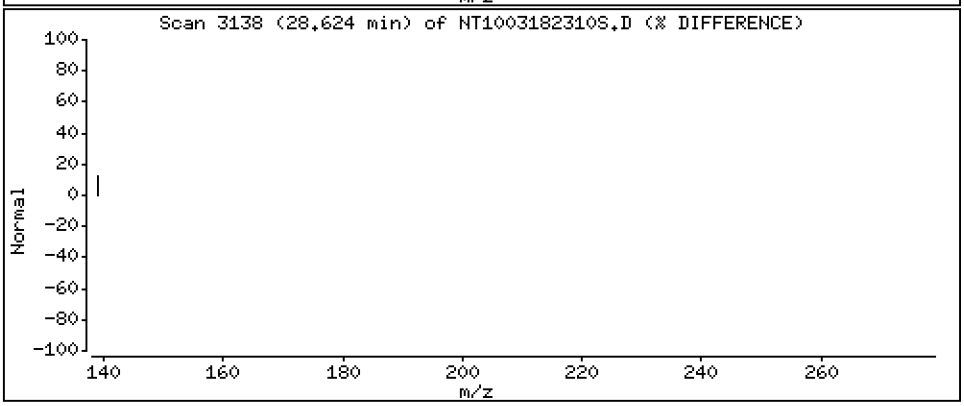












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182310S.D
Lab Smp Id: 23A0467-01
Inj Date : 18-MAR-2023 23:29 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-01
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.972	6.957	(0.761)	412256	4.99403	4.994(R)
3	Phenol	94	8.548	8.541	(0.933)	518019	4.57399	4.574
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	272221	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	1548	0.01513	0.01513(M)
11	Benzyl alcohol	79	9.431	9.431	(1.029)	14715	0.22412	0.2241(M)
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.042)	559	0.00556	0.005556
13	2-Methylphenol	108	9.648	9.648	(1.052)	1944	0.02477	0.02477(MH)
15	4-Methylphenol	108	9.912	9.912	(1.081)	158947	1.94922	1.949
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.952	10.943	(0.942)	2114	0.02551	0.02551
24	Benzoic acid	105	11.037	11.053	(0.949)	41387	0.91058	0.9106
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.628	11.627	(1.000)	958646	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.715	14.714	(0.967)	9315	0.06402	0.06402(M)
* 42	Acenaphthene-d10	162	15.211	15.210	(1.000)	461109	4.00000	
50	Diethylphthalate	149	16.161	16.161	(1.063)	14236	0.09444	0.09444(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
58	Pentachlorophenol	266	17.968	17.968	(0.985)	1882	0.06054	0.06054
* 59	Phenanthrene-d10	188	18.239	18.231	(1.000)	937494	4.00000	
$ 66	Terphenyl-d14	244	21.373	21.364	(0.918)	594443	4.38861	4.389(R)
67	Butylbenzylphthalate	149	22.294	22.285	(0.958)	18573	0.16972	0.1697
* 69	Chrysene-d12	240	23.277	23.269	(1.000)	831317	4.00000	
* 77	Perylene-d12	264	25.925	25.909	(1.000)	976539	4.00000	
79	Dibenzo(a,h)anthracene	278	28.624	28.584	(1.104)	77726	0.24275	0.2428
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182310S.D
Lab Smp Id: 23A0467-01
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	272221	37.52
27 Naphthalene-d8	704013	352007	1408026	958646	36.17
42 Acenaphthene-d10	353977	176989	707954	461109	30.27
59 Phenanthrene-d10	686752	343376	1373504	937494	36.51
69 Chrysene-d12	597733	298867	1195466	831317	39.08
77 Perylene-d12	645663	322832	1291326	976539	51.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.01
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.05
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.04
77 Perylene-d12	25.91	25.41	26.41	25.93	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182310S.D

Lab ID: 23A0467-01
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 23:29

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

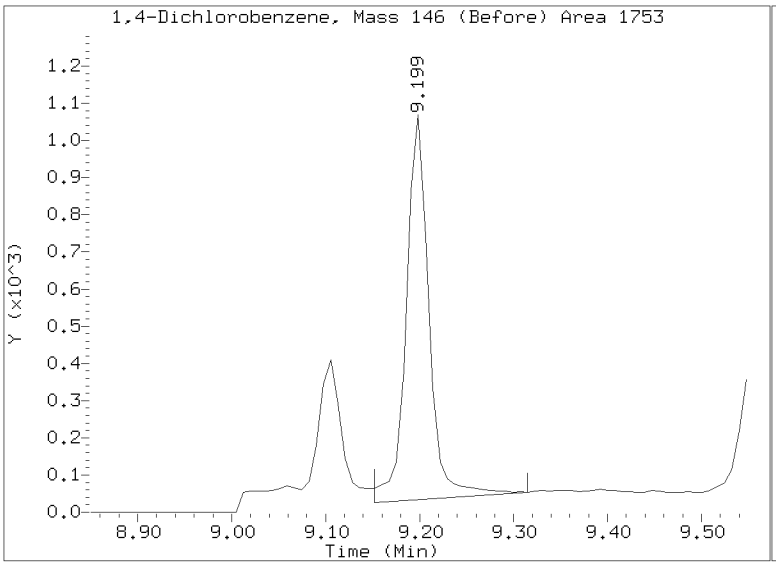
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

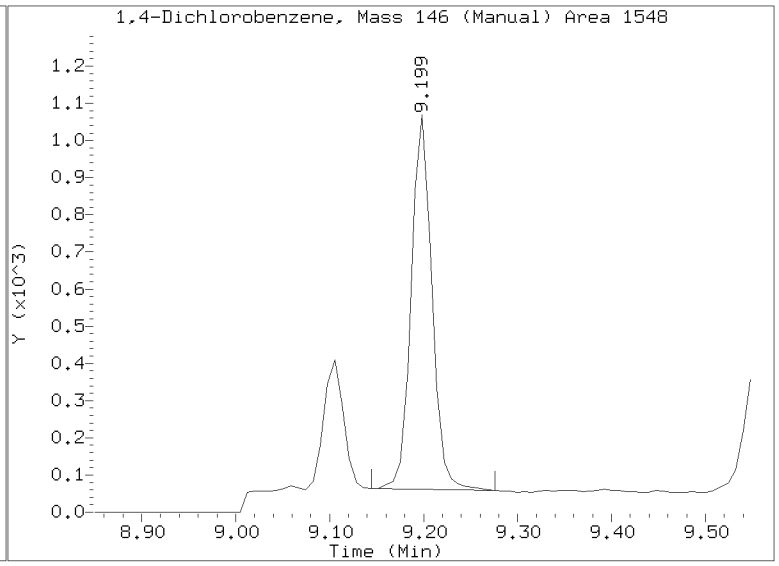
Exception: 1,2,4-Trichlorobenzene 0.0010

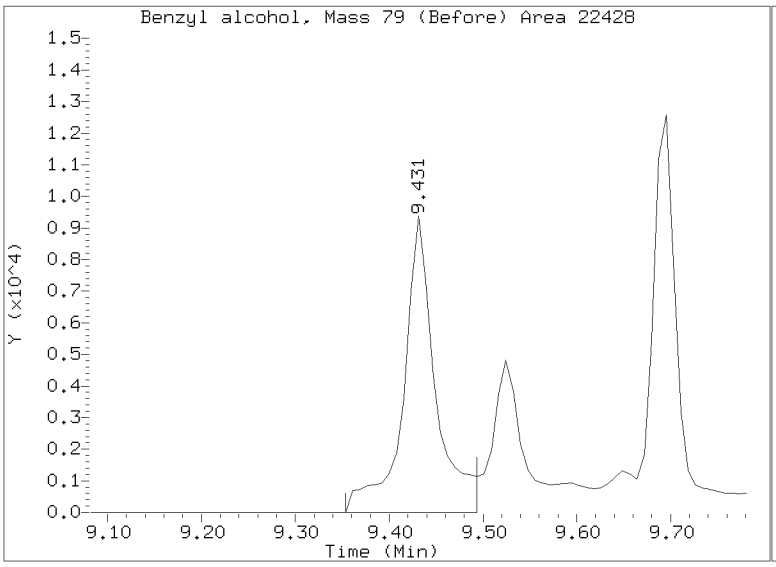
* Only compounds listed in the work order have been verified by the analyst *

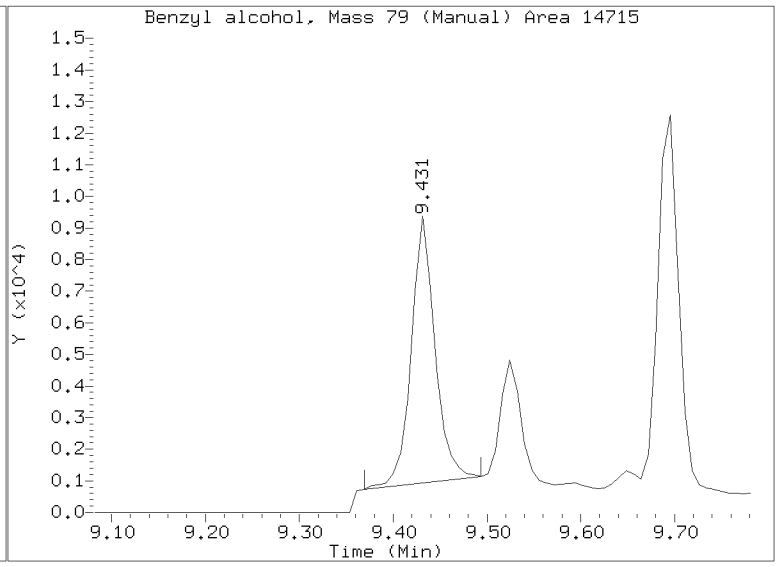
Quant Ion Manual Peak Adjustment Report

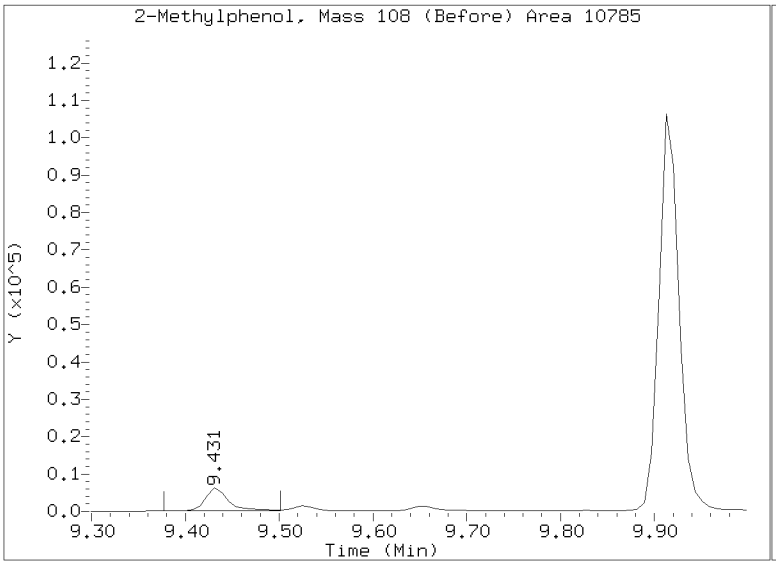
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182310S.D
Injection Date: 18-MAR-2023 23:29
Lab ID:23A0467-01 Client ID:
Report Date: 04/04/2023 12:31

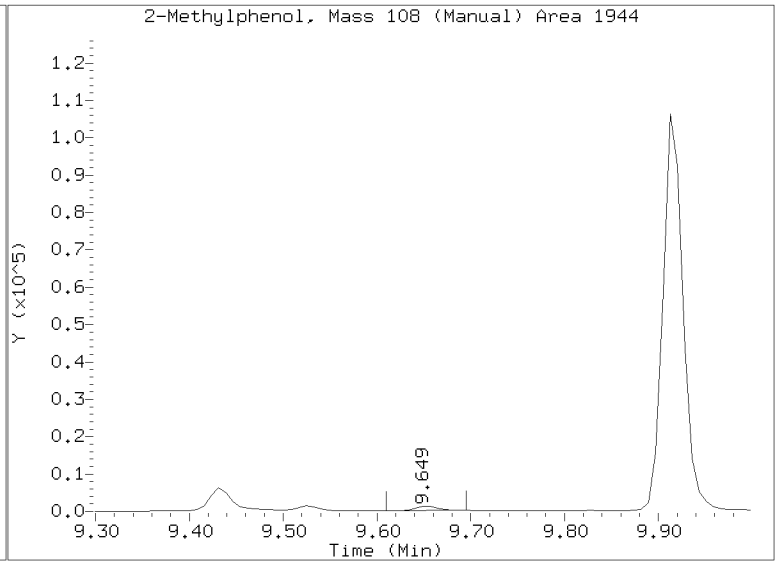






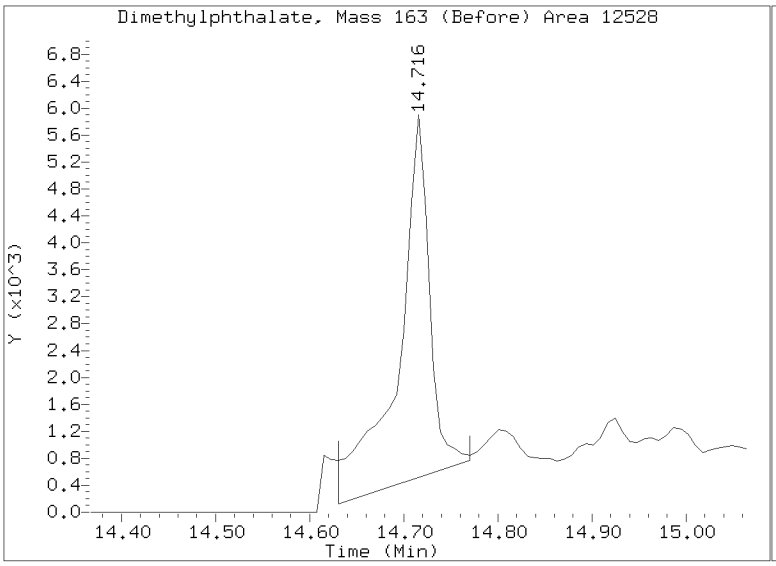


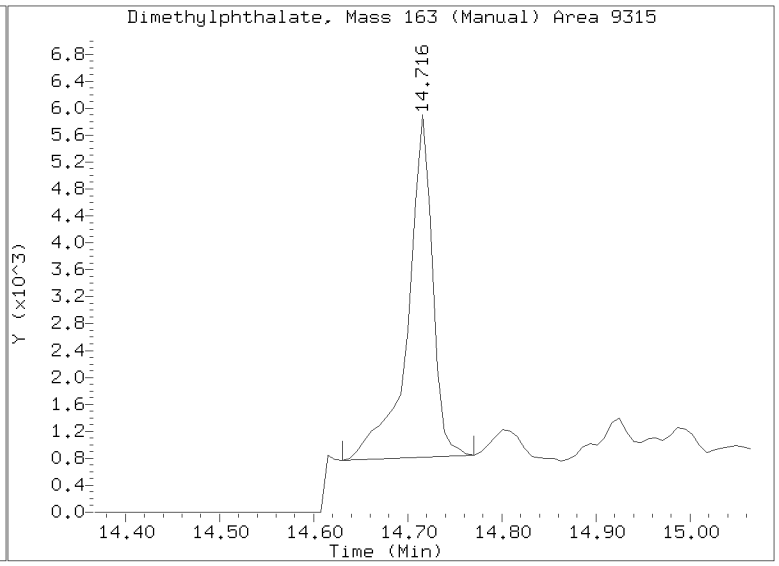


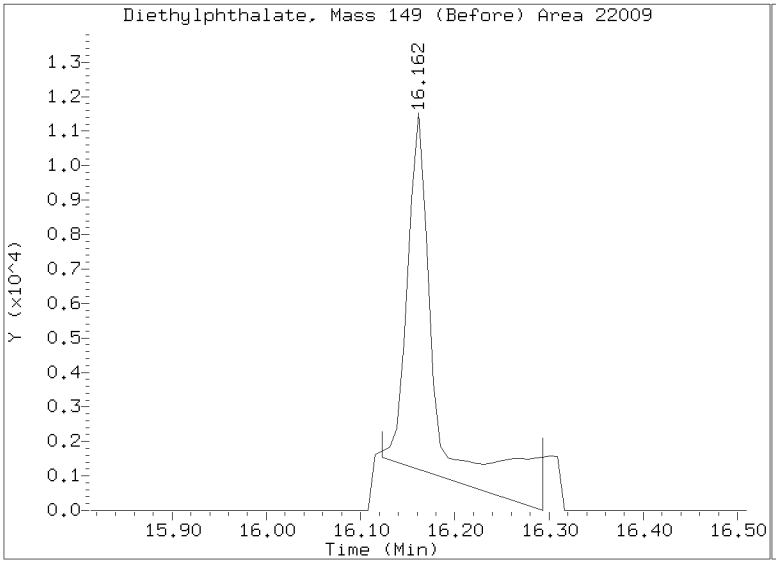


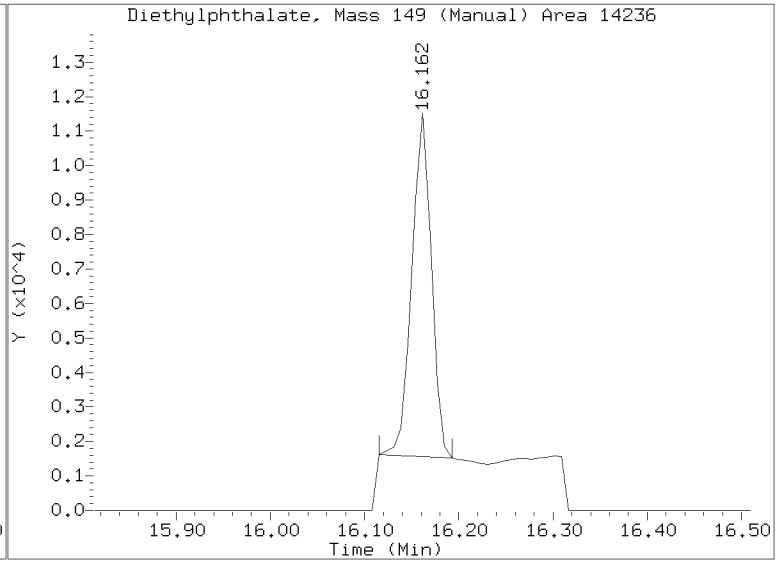
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182310S.D
Injection Date: 18-MAR-2023 23:29
Lab ID:23A0467-01 Client ID:
Report Date: 04/04/2023 12:31









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1005

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	02/23/23 15:49	File ID:	NT1003182311S.D
% Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:07
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	21.35 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.5	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	30.3		2.5	20.0
65-85-0	Benzoic acid	1	96.8	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	4.4	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.02	584	78.0	27 - 120	
p-Terphenyl-d14	499.34	533	107	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823111S.D

Date : 19-MAR-2023 00:07

Client ID:

Sample Info: 23A0467-02

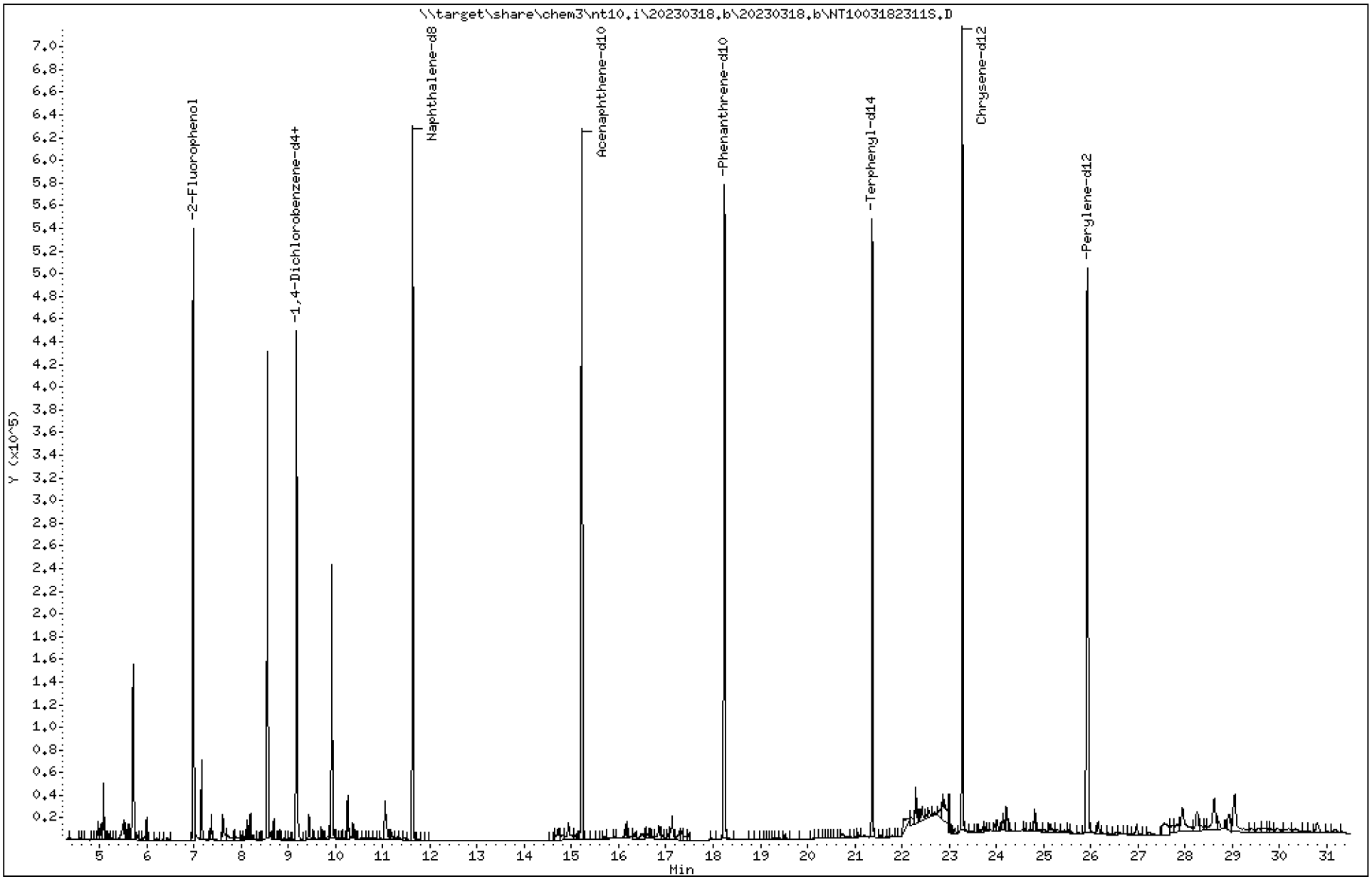
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: JGR

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

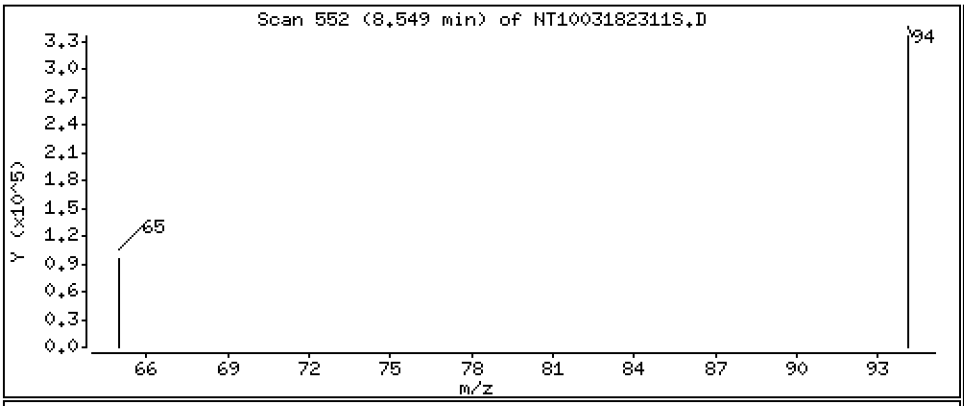
Operator: JGR

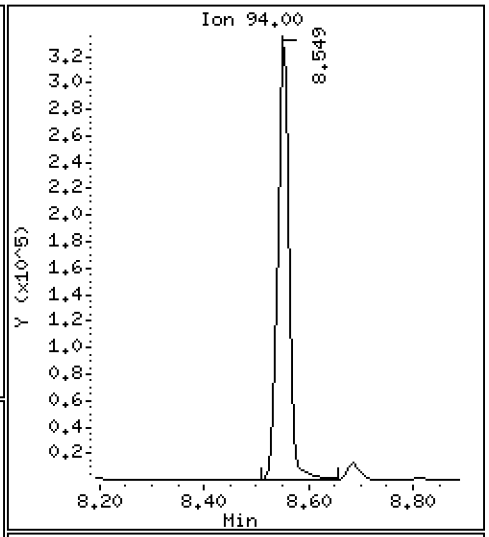
Column phase: ZB-5msi

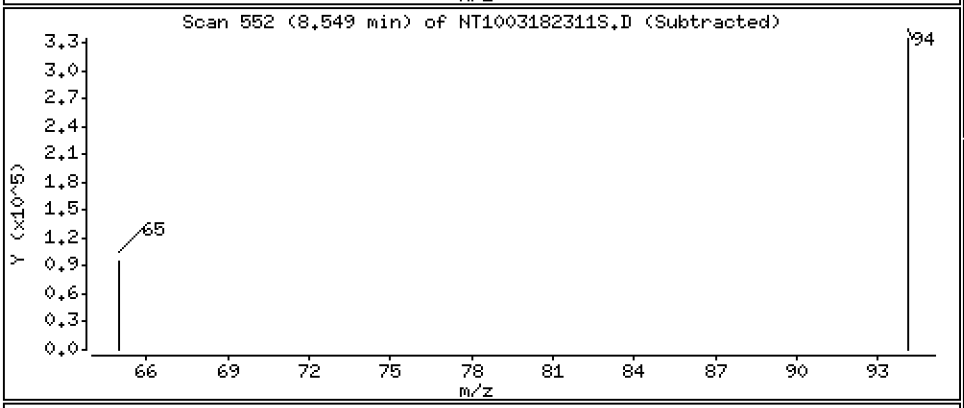
Column diameter: 0.25

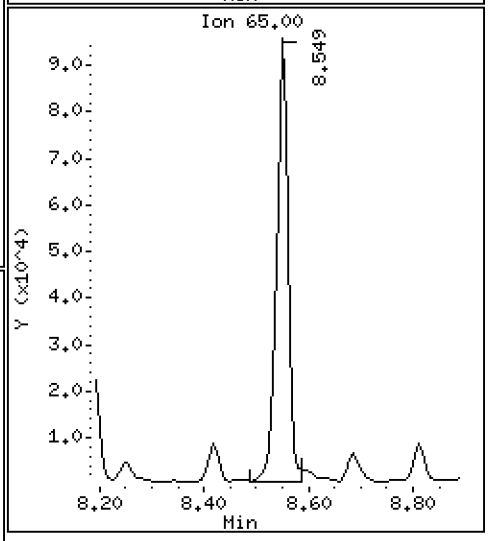
3 Phenol

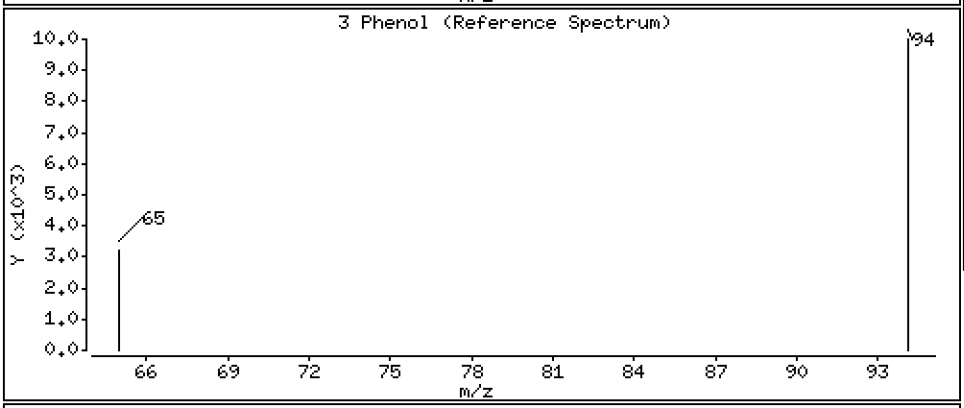
Concentration: 4.283 ug/L

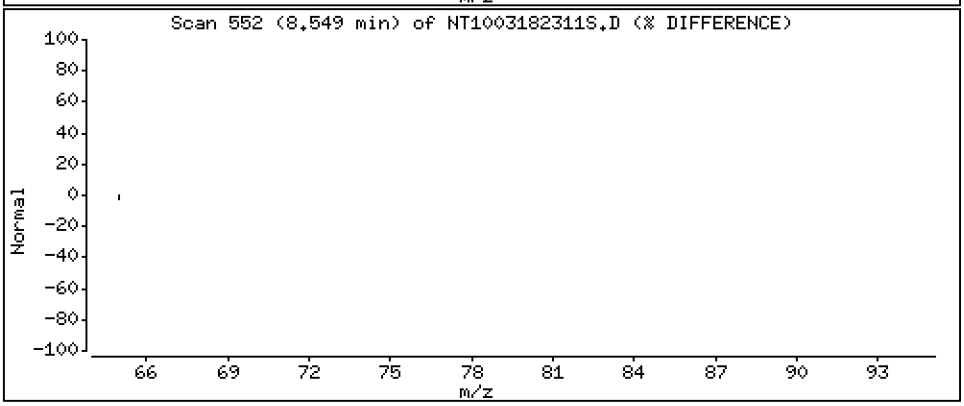












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

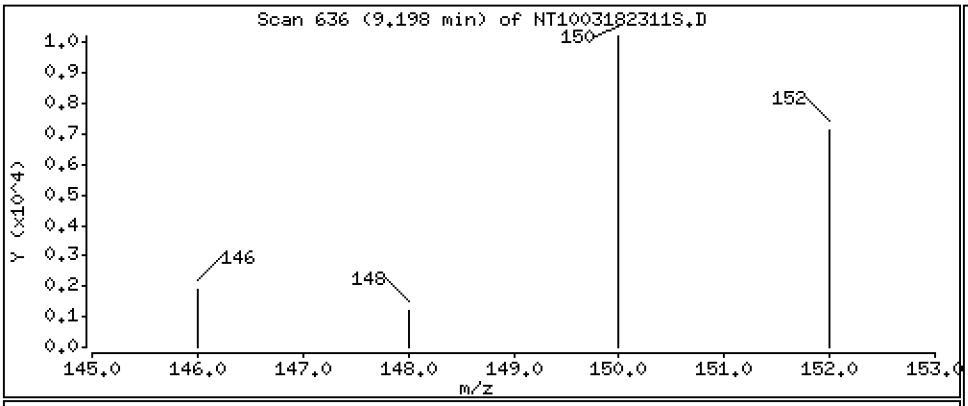
Operator: JGR

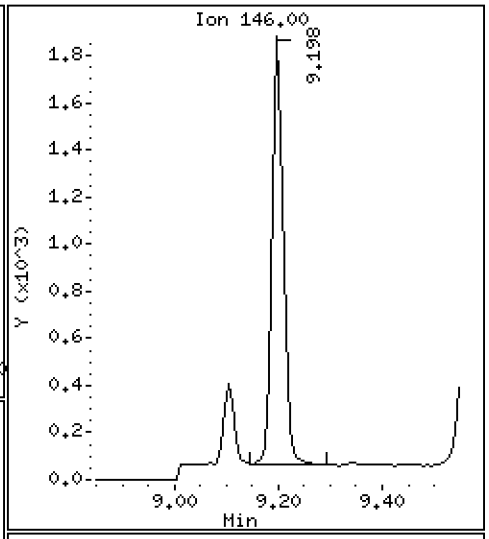
Column phase: ZB-5msi

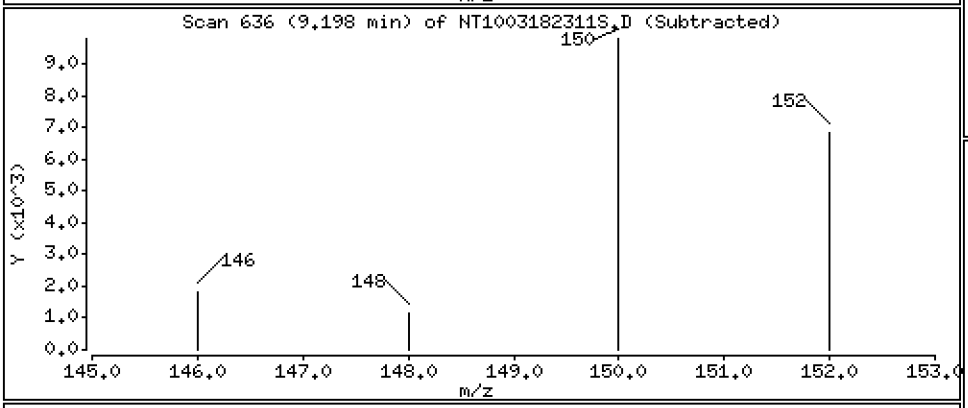
Column diameter: 0.25

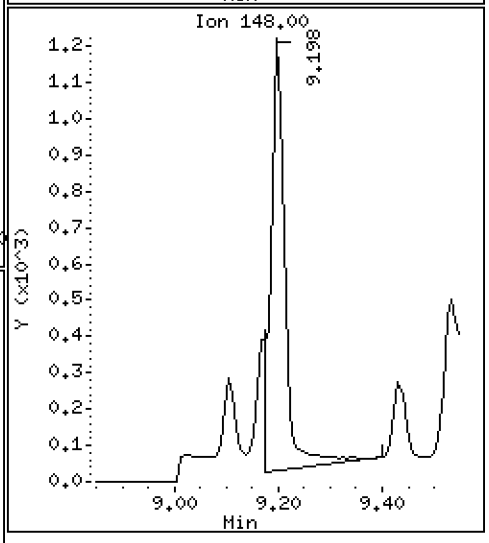
9 1,4-Dichlorobenzene

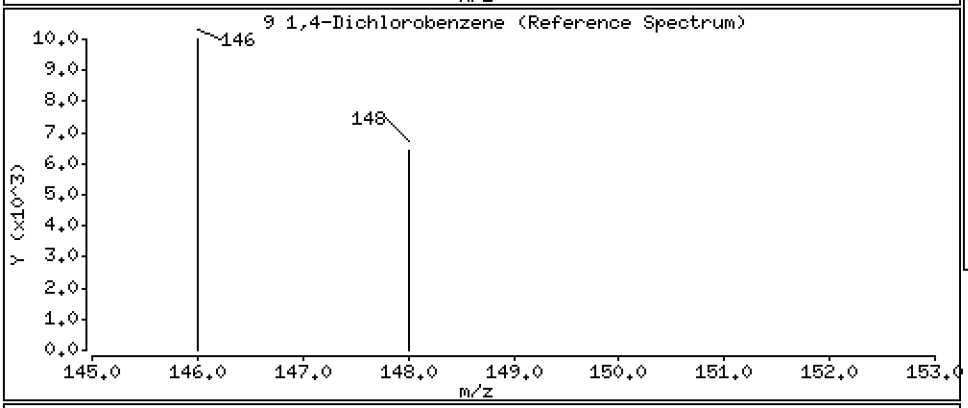
Concentration: 0.02497 ug/L

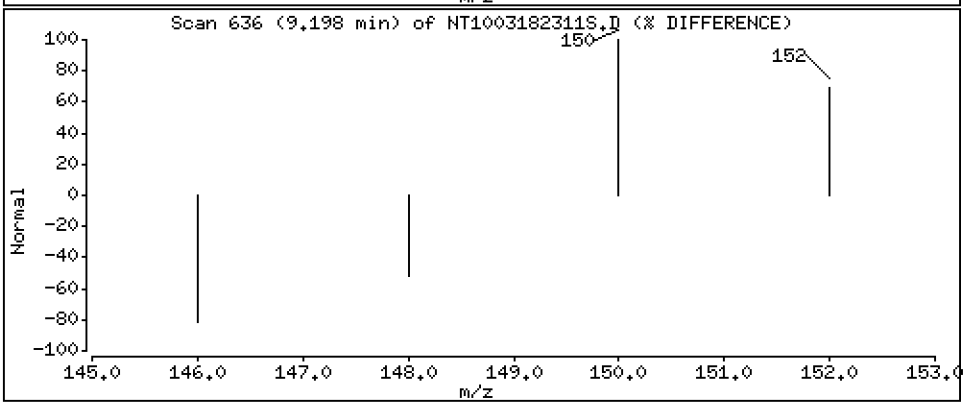












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

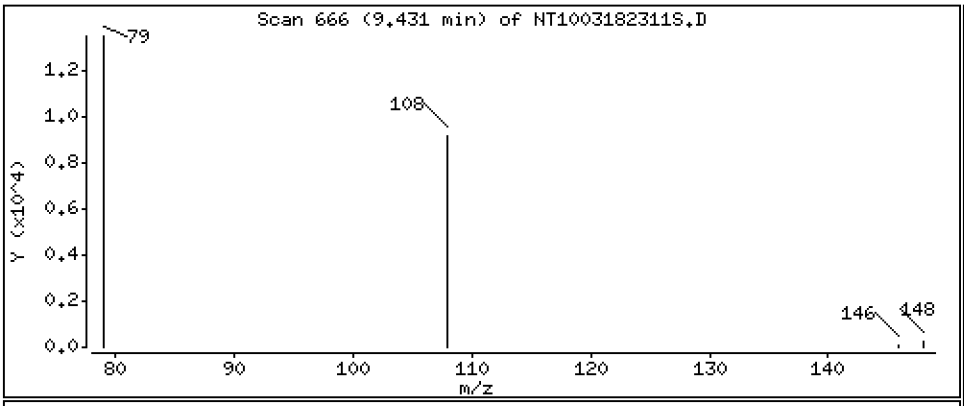
Operator: JGR

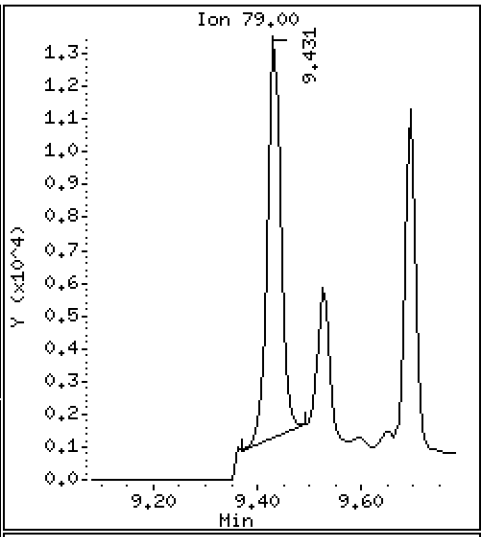
Column phase: ZB-5msi

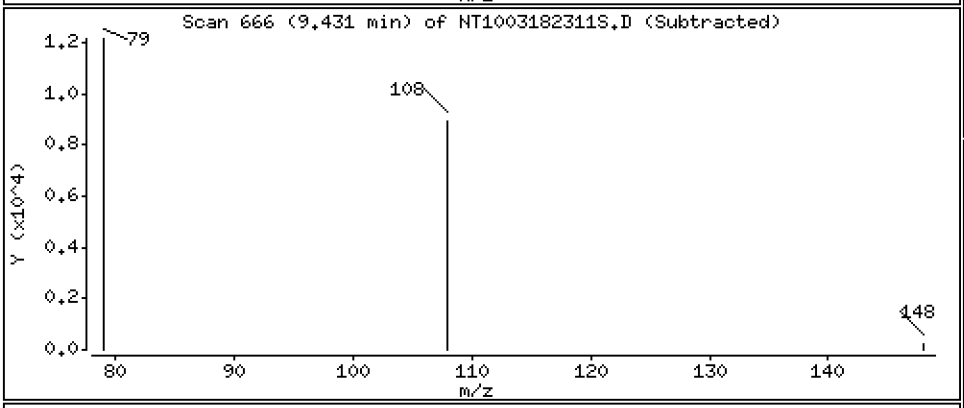
Column diameter: 0.25

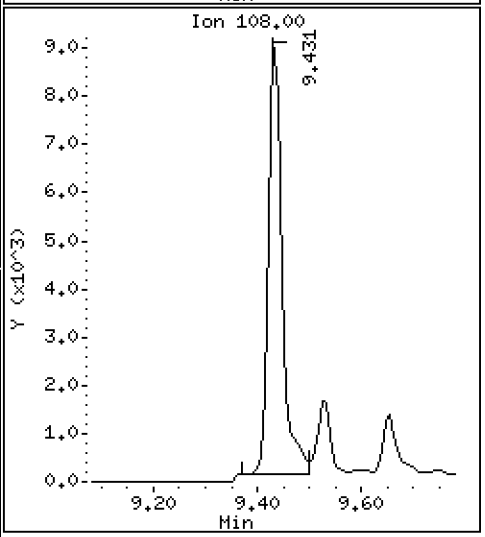
11 Benzyl alcohol

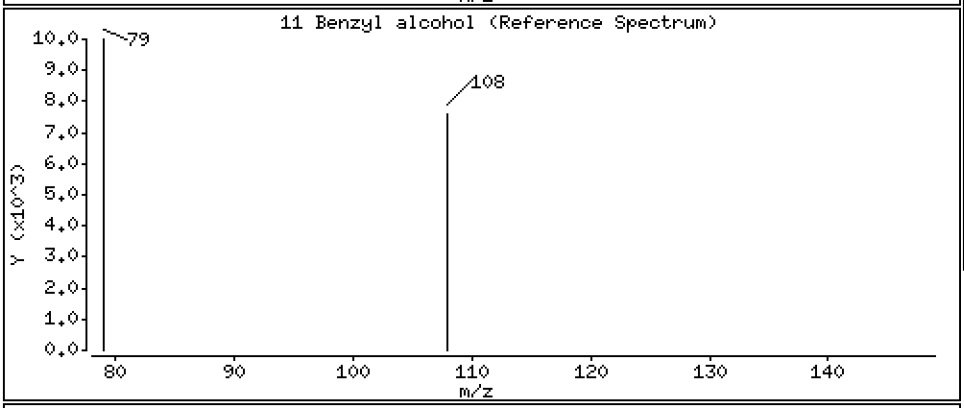
Concentration: 0.3038 ug/L

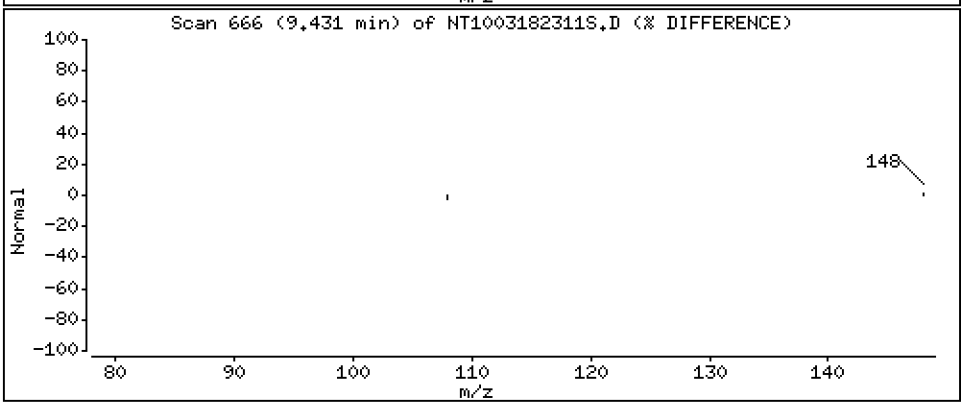












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

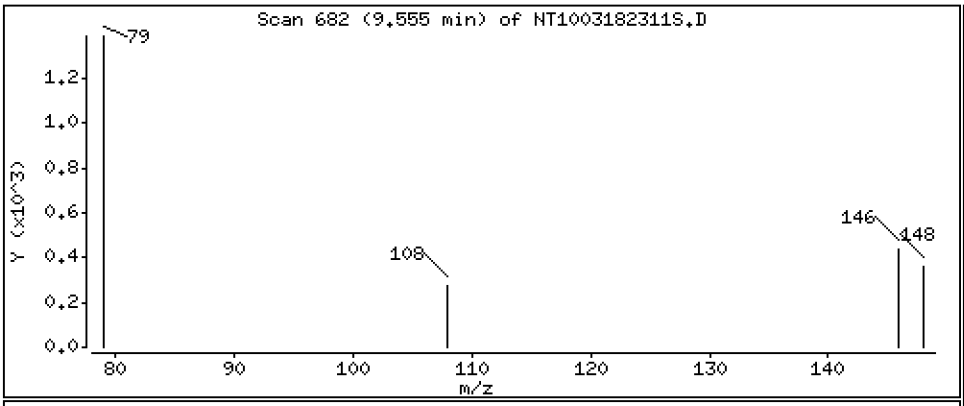
Operator: JGR

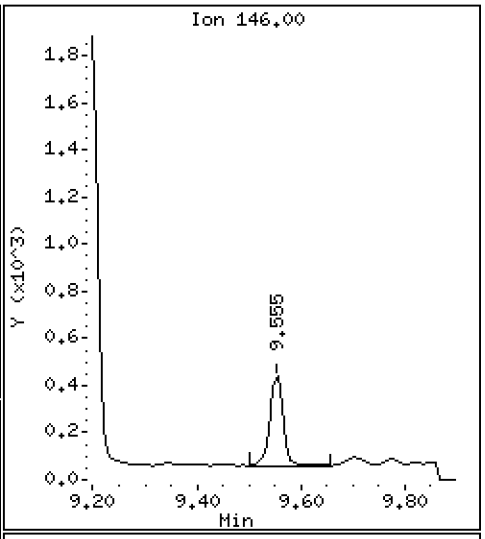
Column phase: ZB-5msi

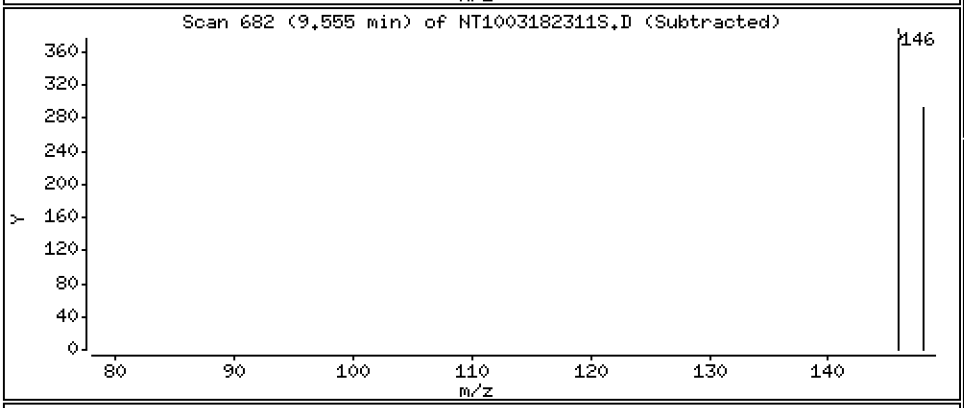
Column diameter: 0.25

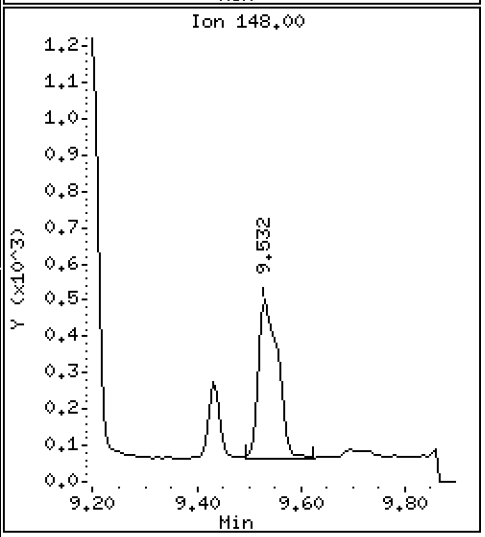
12 1,2-Dichlorobenzene

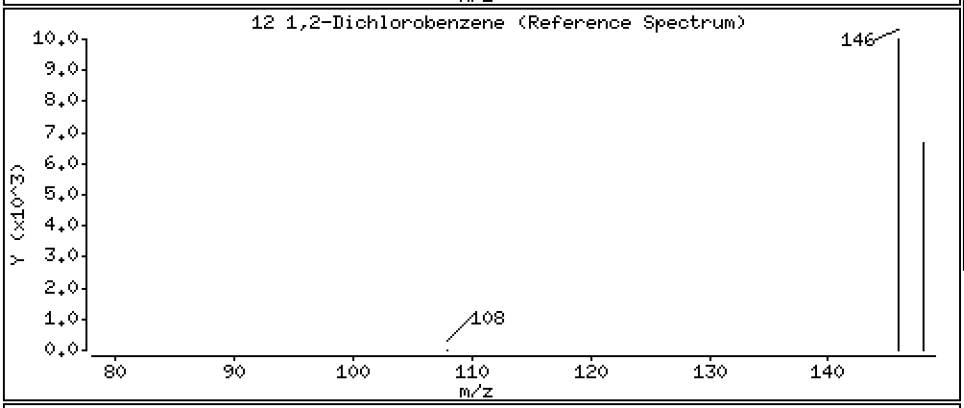
Concentration: 0.006076 ug/L

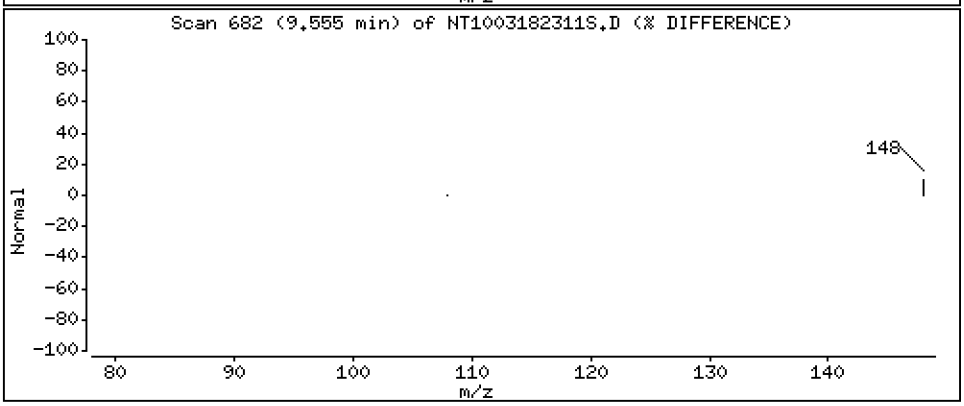












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

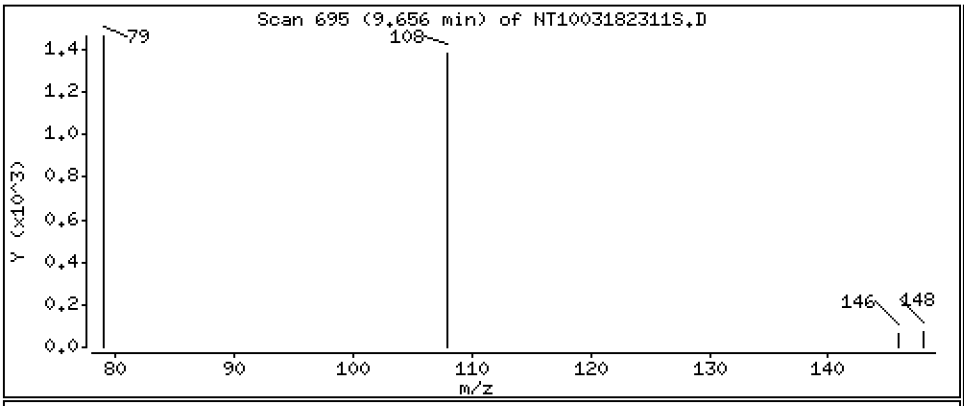
Operator: JGR

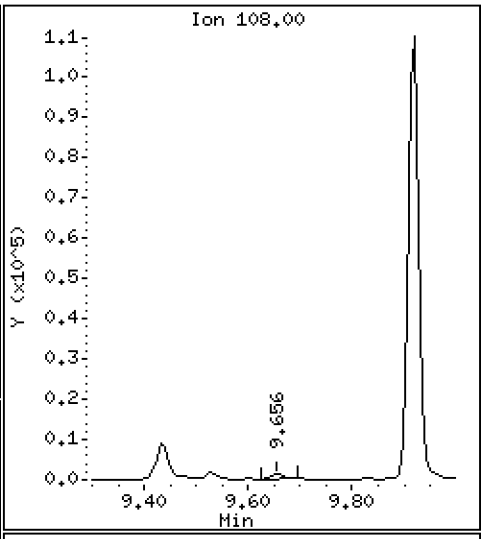
Column phase: ZB-5msi

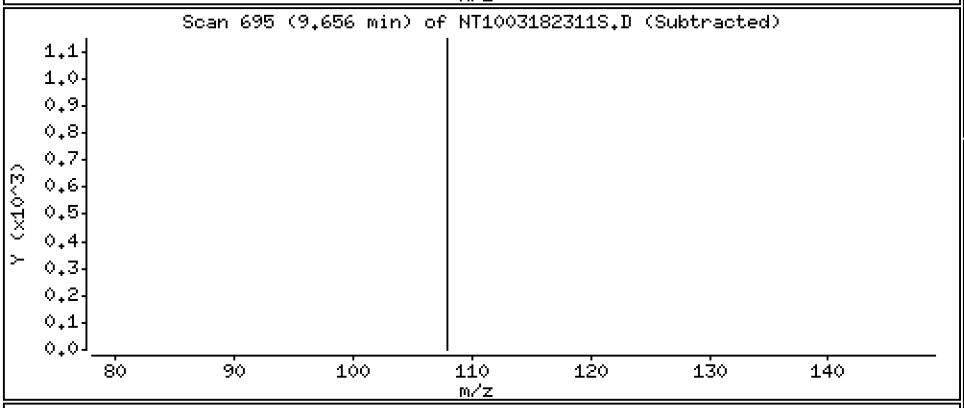
Column diameter: 0.25

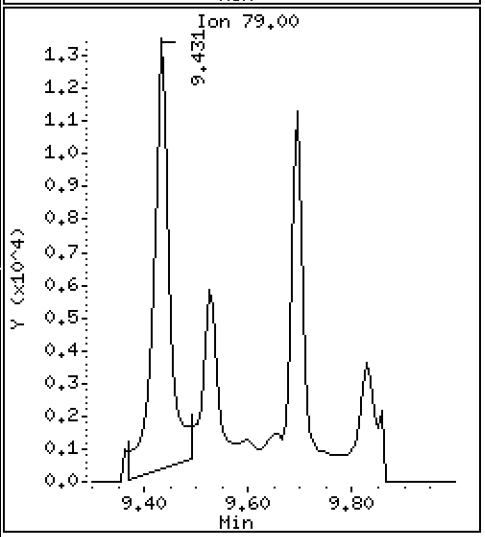
13 2-Methylphenol

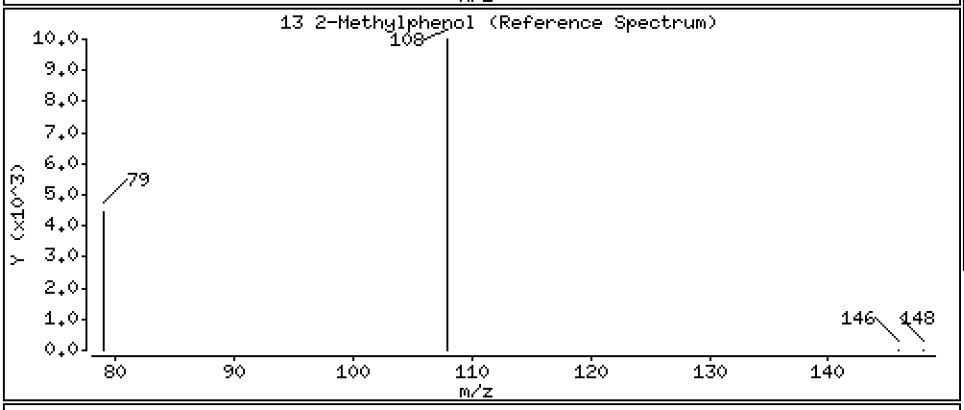
Concentration: 0.02182 ug/L

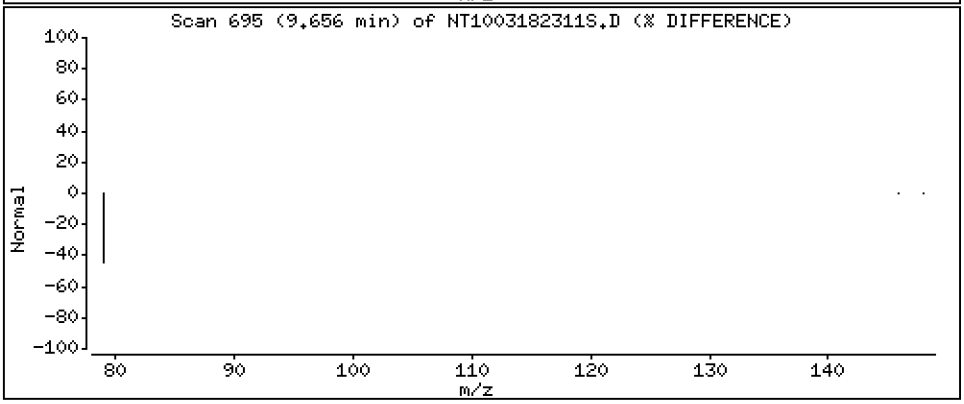












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

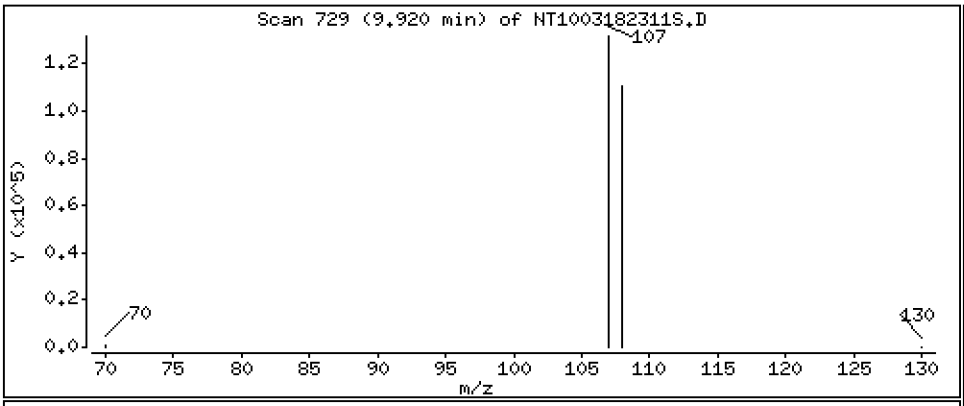
Operator: JGR

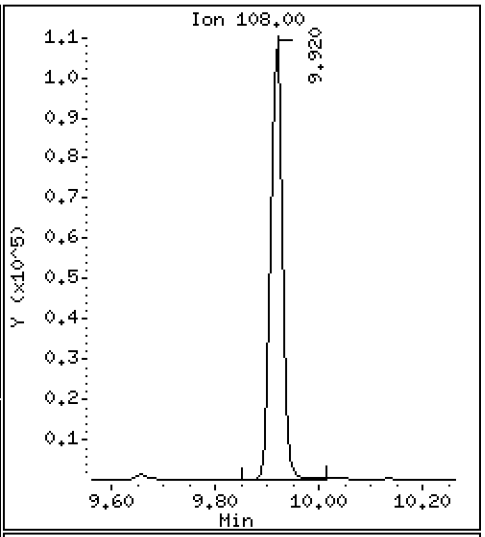
Column phase: ZB-5msi

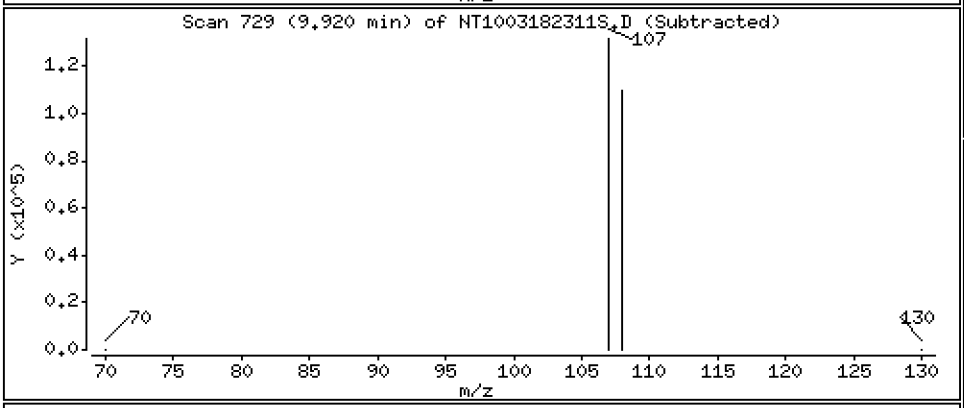
Column diameter: 0.25

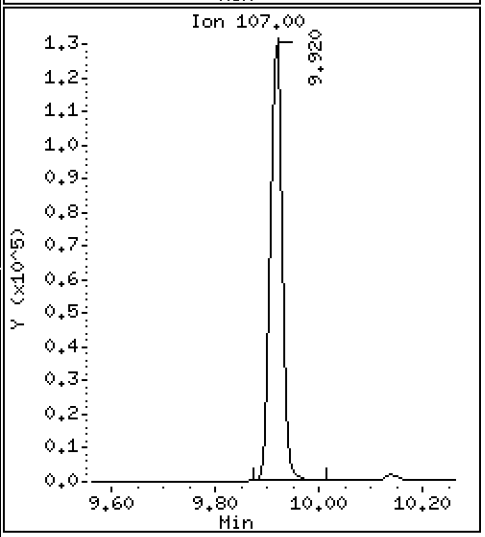
15 4-Methylphenol

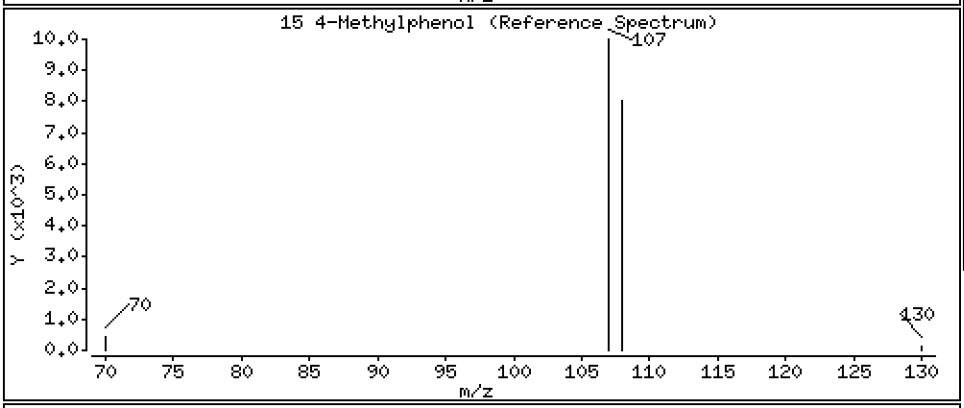
Concentration: 1.955 ug/L

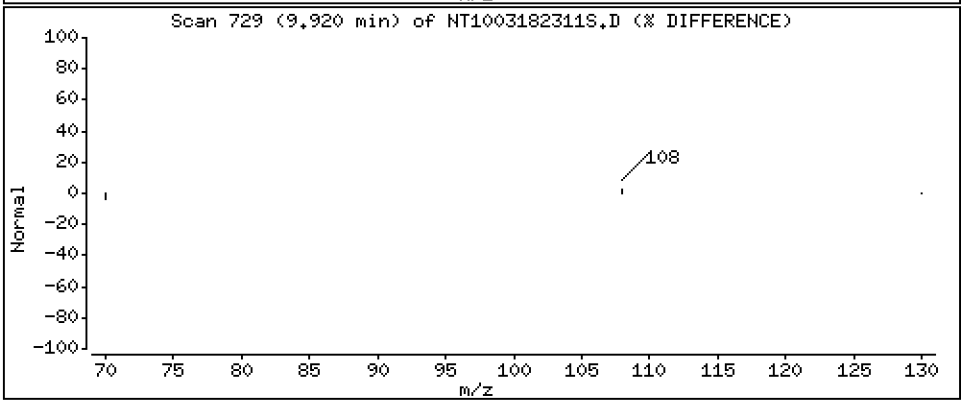












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823115.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

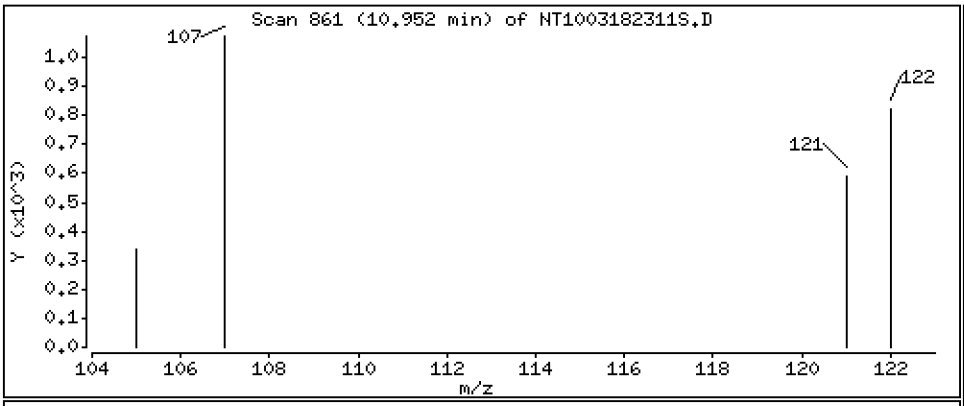
Operator: JGR

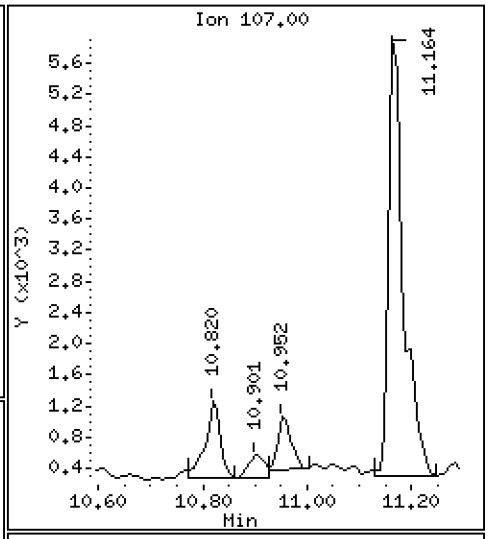
Column phase: ZB-5msi

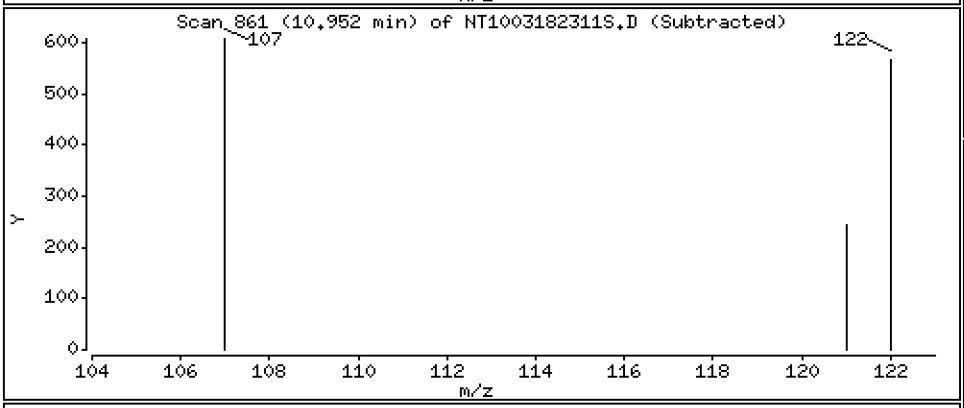
Column diameter: 0.25

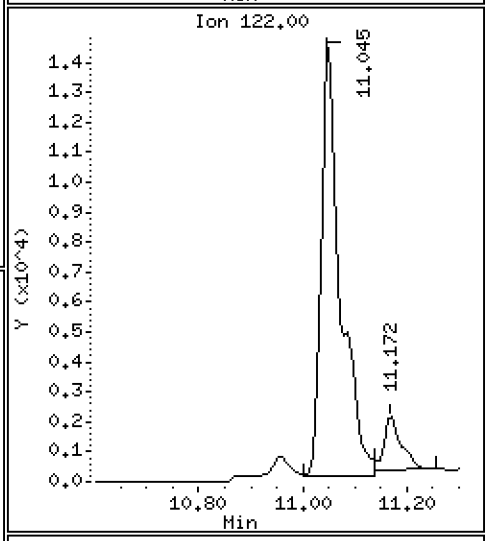
22 2,4-Dimethylphenol

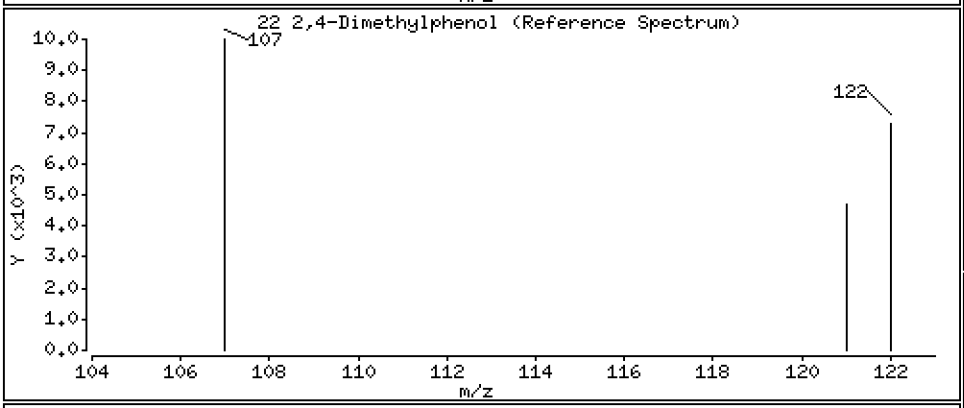
Concentration: 0.01467 ug/L

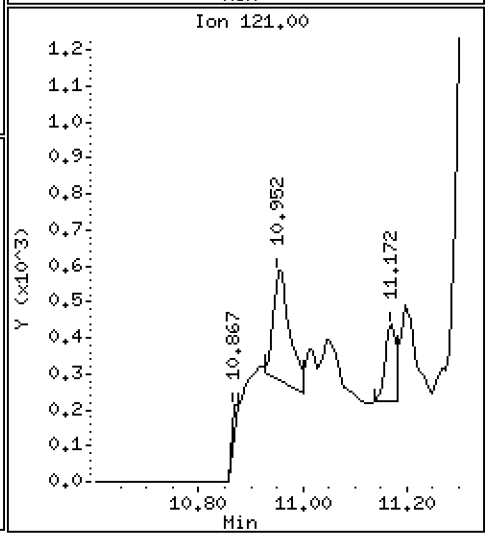


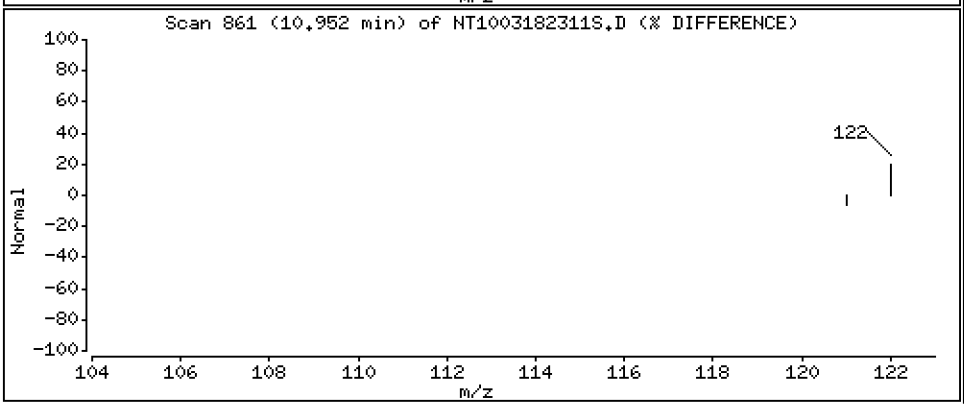












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823115.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

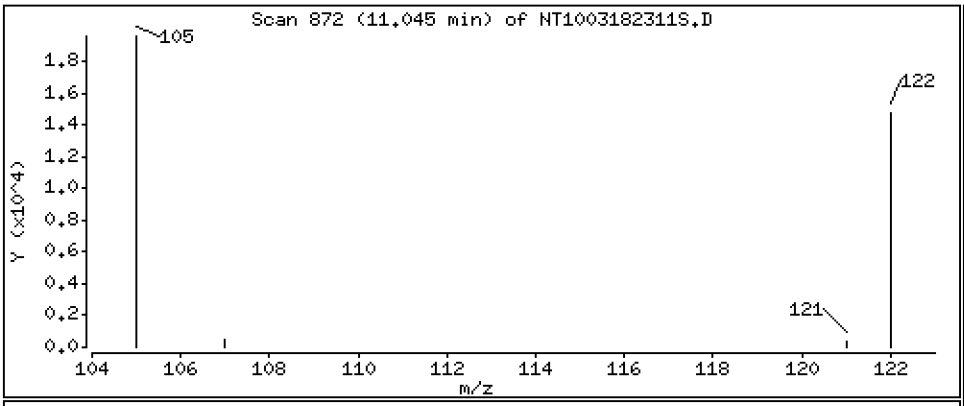
Operator: JGR

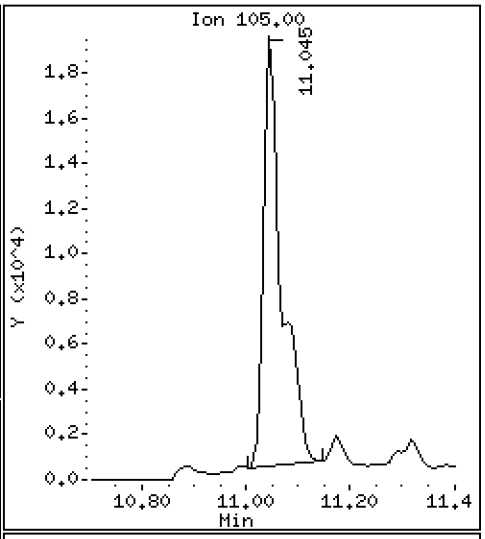
Column phase: ZB-5msi

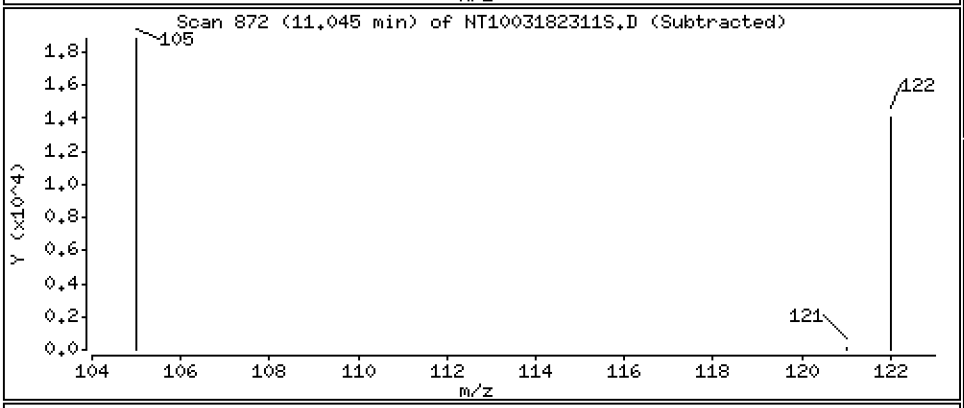
Column diameter: 0.25

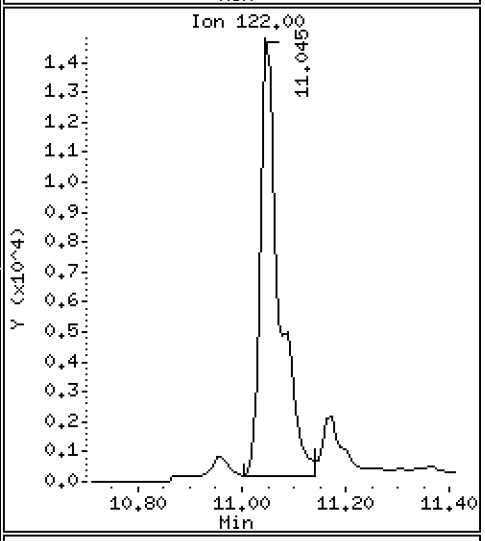
24 Benzoic acid

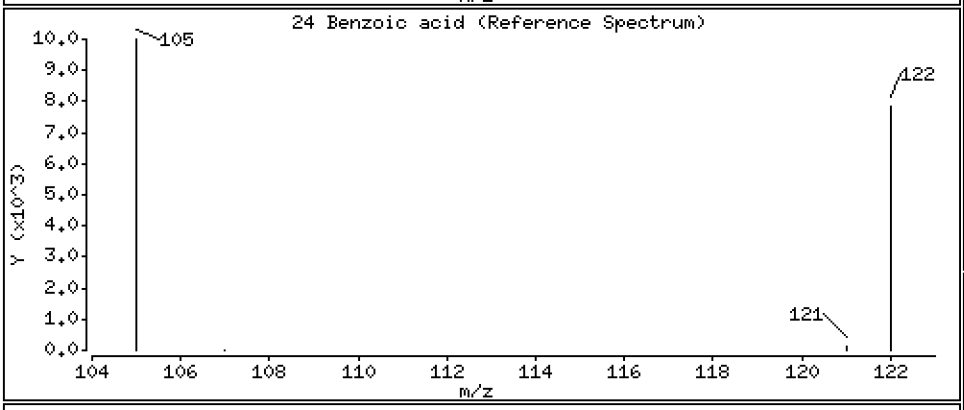
Concentration: 0.9690 ug/L

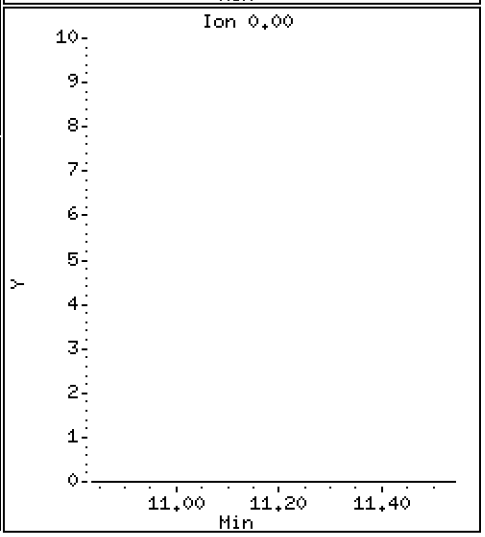


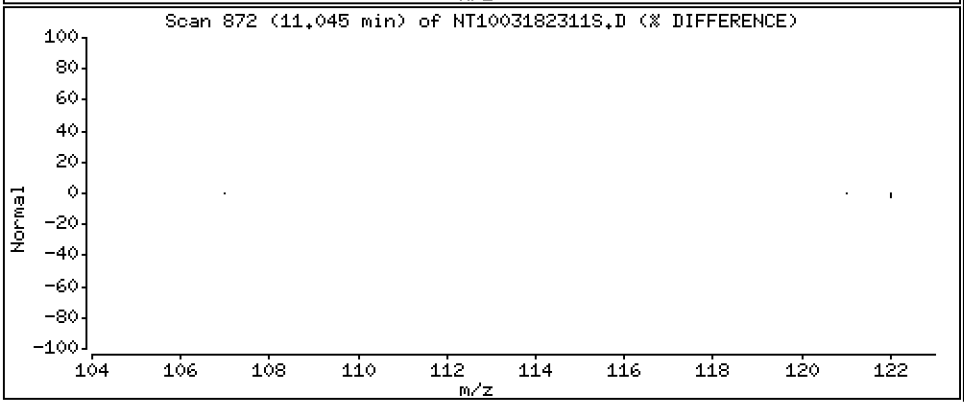












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

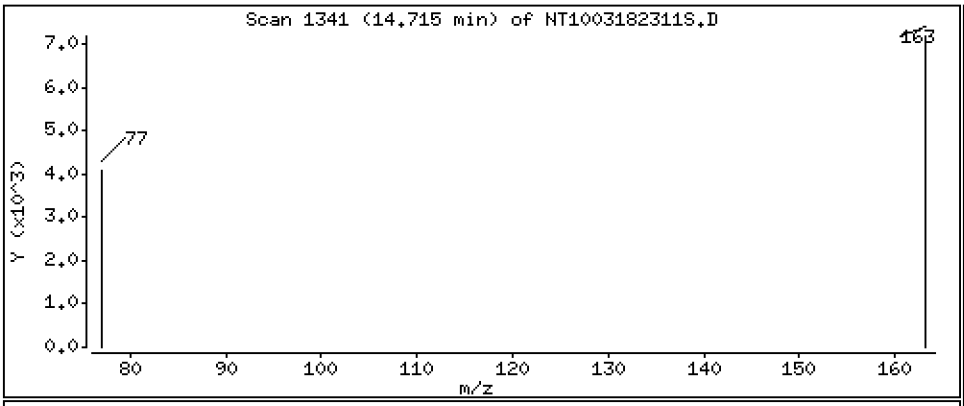
Operator: JGR

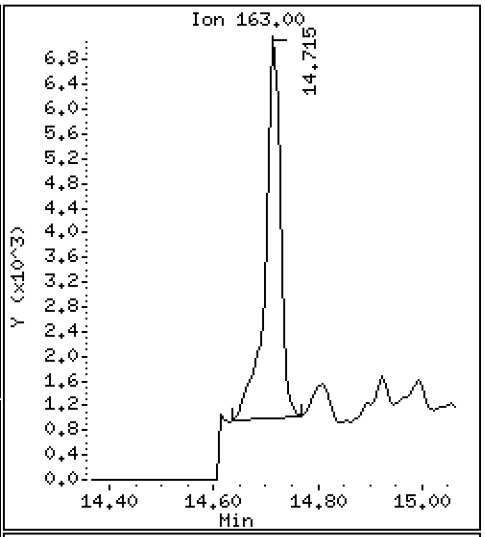
Column phase: ZB-5msi

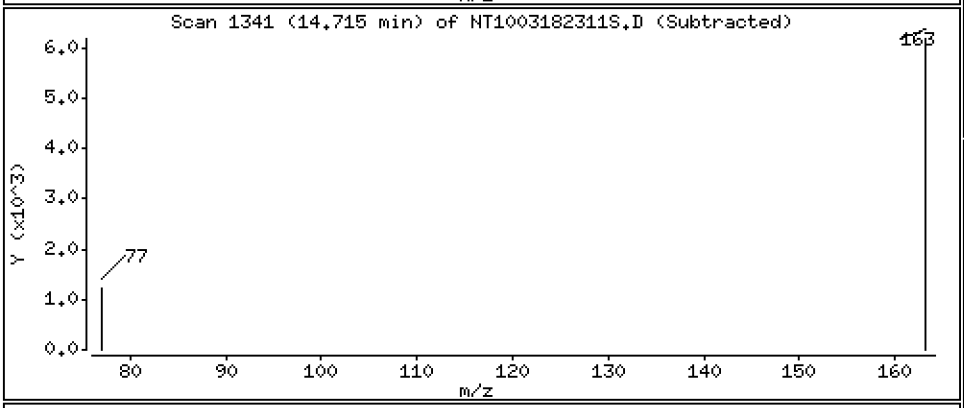
Column diameter: 0.25

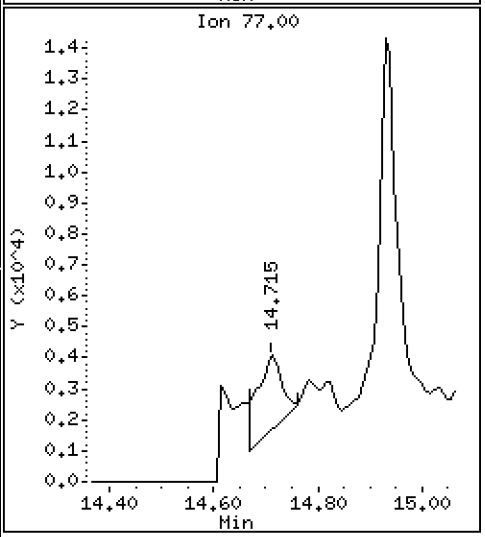
39 Dimethylphthalate

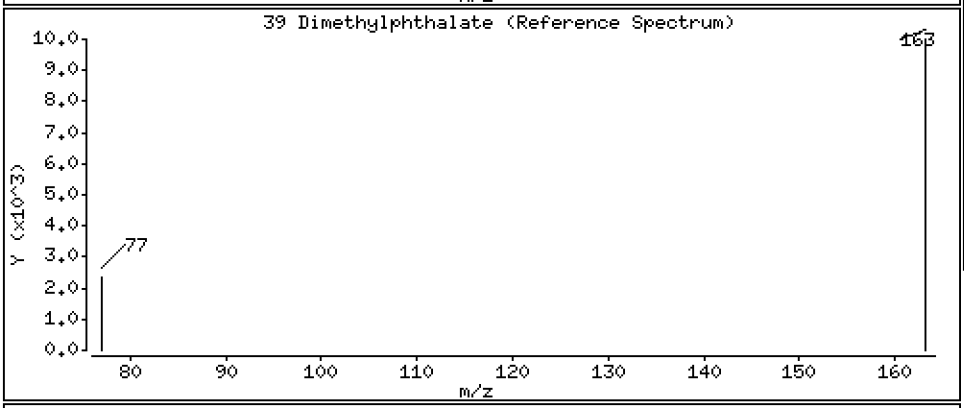
Concentration: 0.07763 ug/L

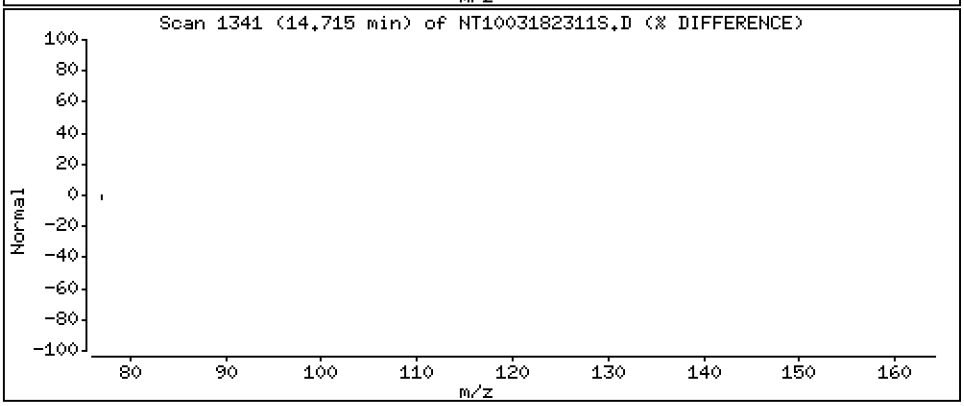












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

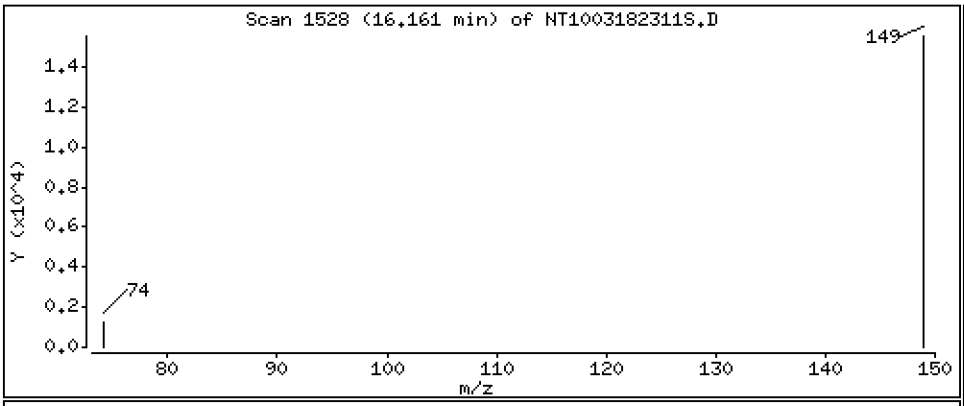
Operator: JGR

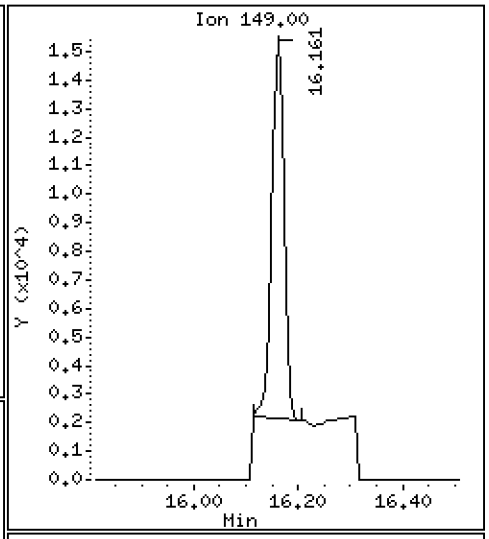
Column phase: ZB-5msi

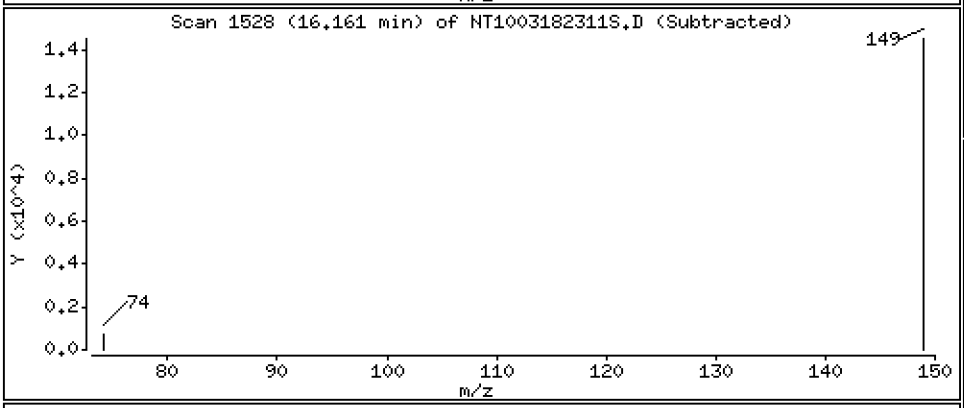
Column diameter: 0.25

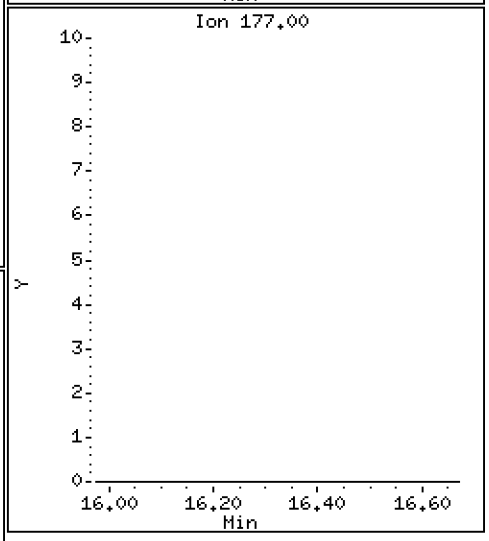
50 Diethylphthalate

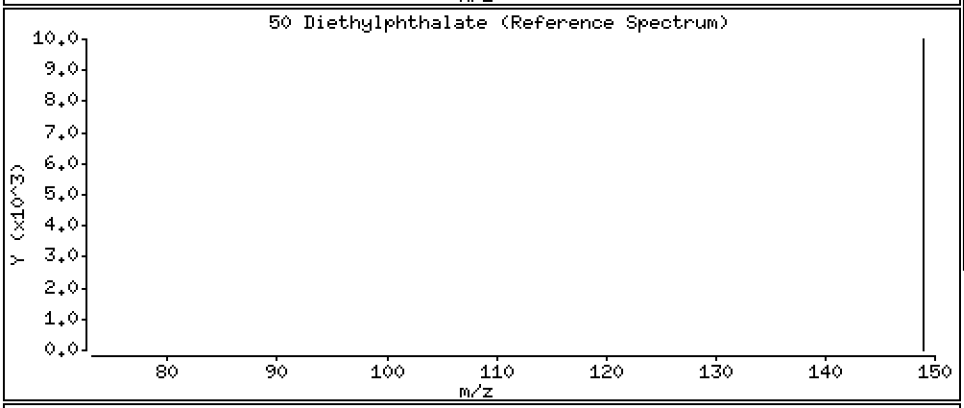
Concentration: 0.1303 ug/L

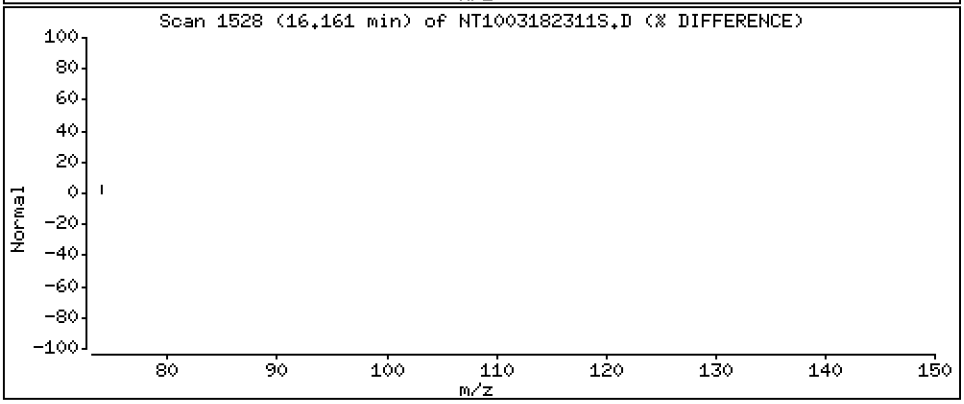












Date : 19-MAR-2023 00:07

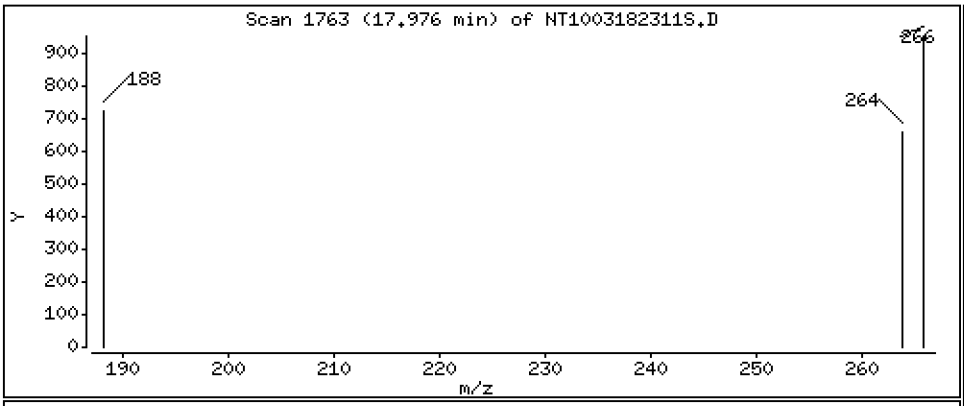
Client ID: Instrument: nt10.i

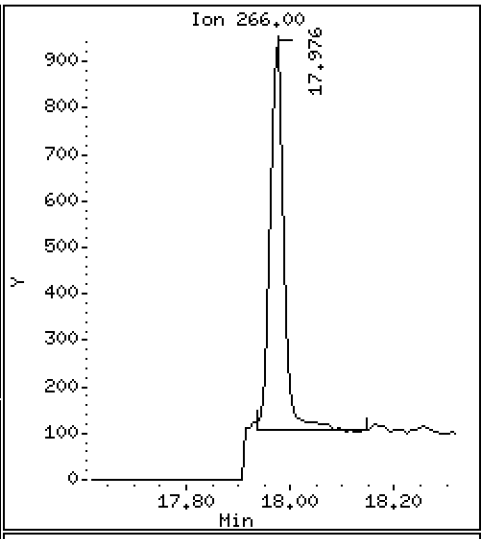
Sample Info: 23A0467-02

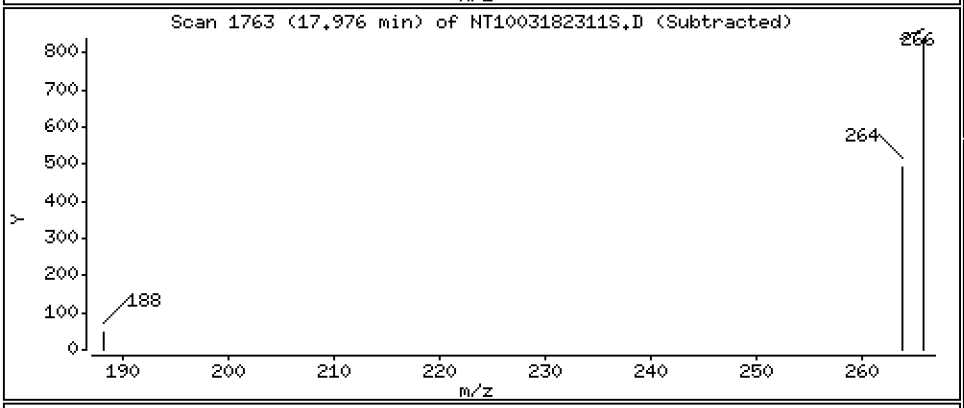
Volume Injected (uL): 1.0 Operator: JGR

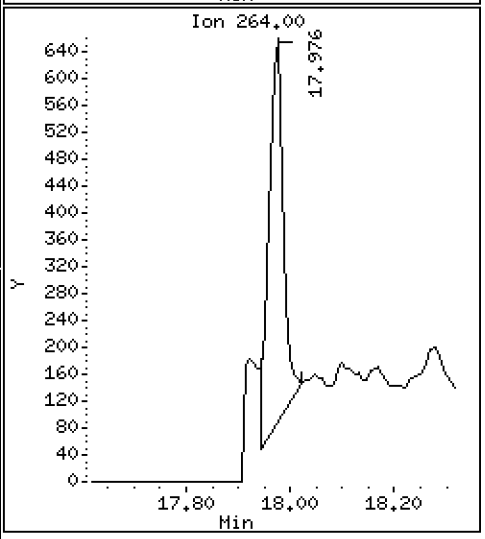
Column phase: ZB-5msi Column diameter: 0.25

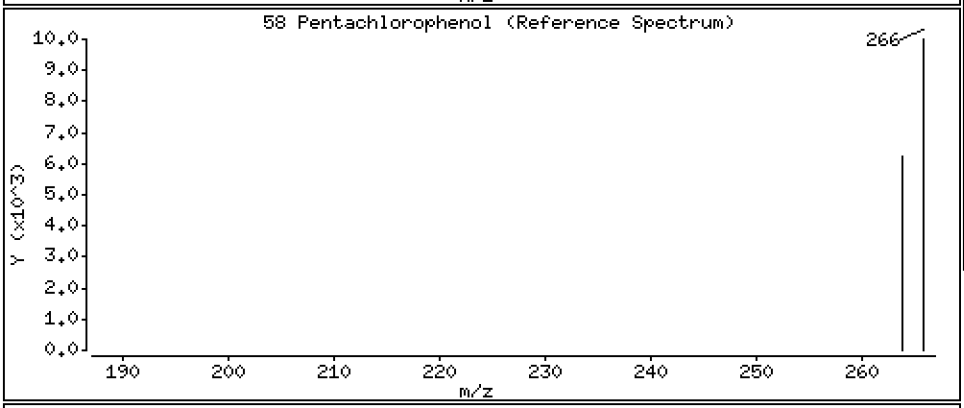
58 Pentachlorophenol Concentration: 0.04451 ug/L

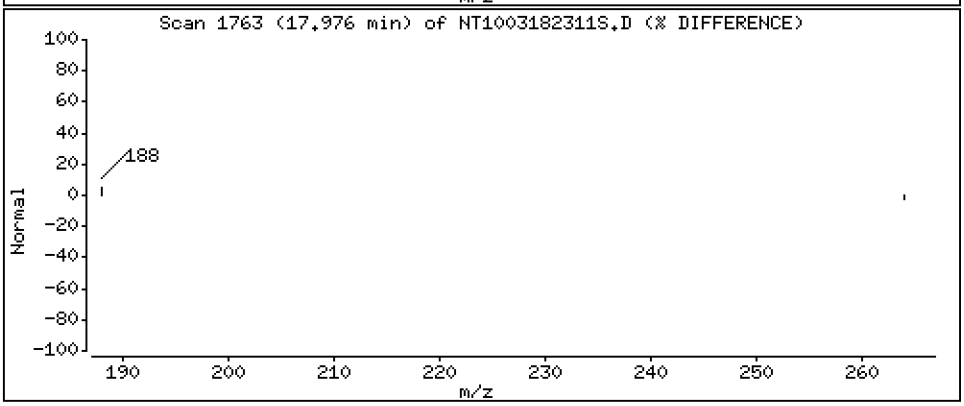












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Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

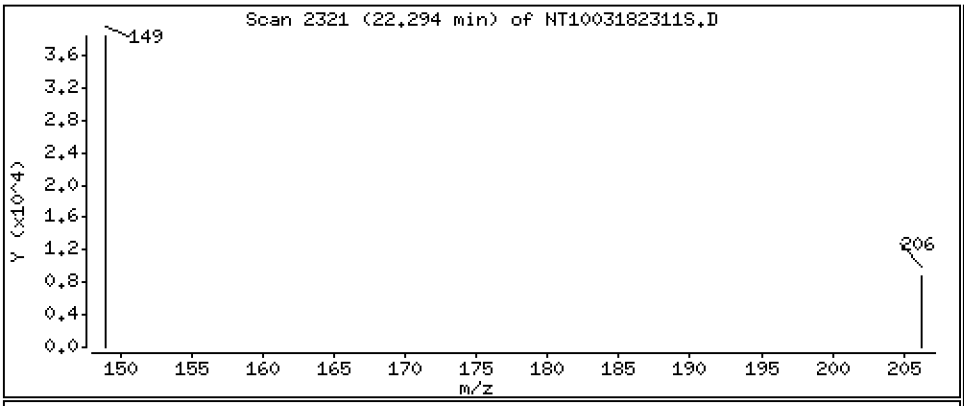
Operator: JGR

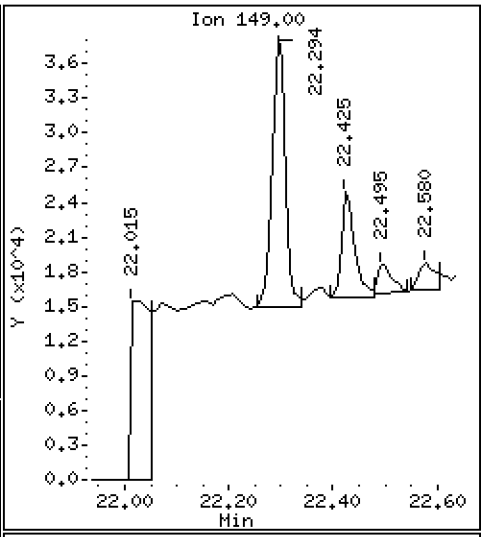
Column phase: ZB-5msi

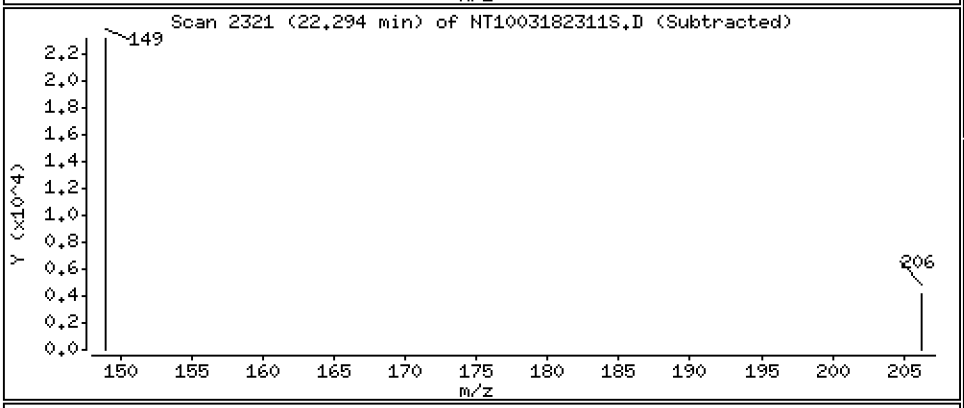
Column diameter: 0.25

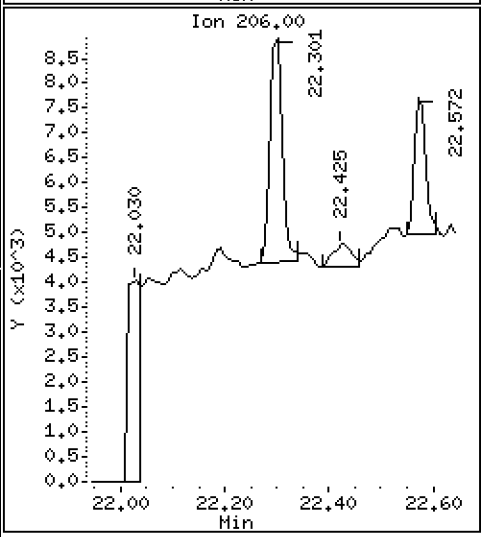
67 Butylbenzylphthalate

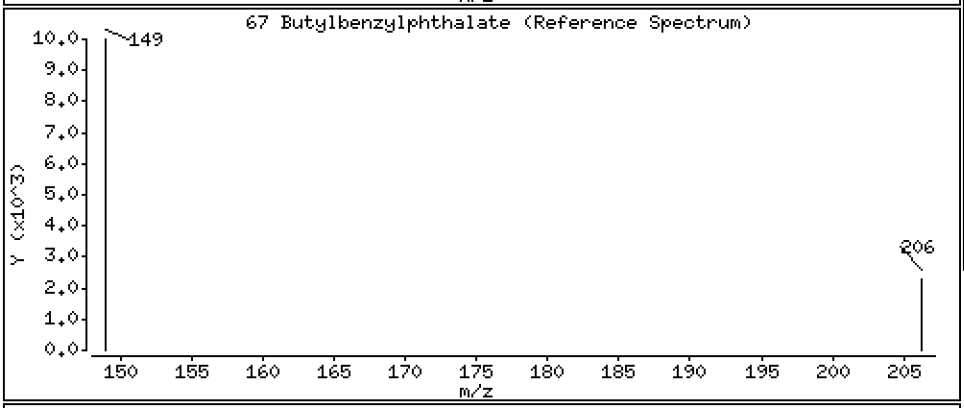
Concentration: 0.3393 ug/L

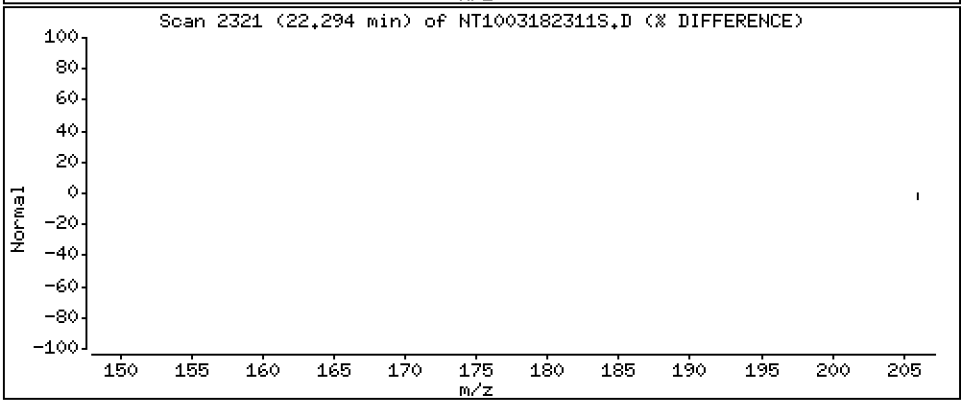












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D

Date : 19-MAR-2023 00:07

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-02

Volume Injected (uL): 1.0

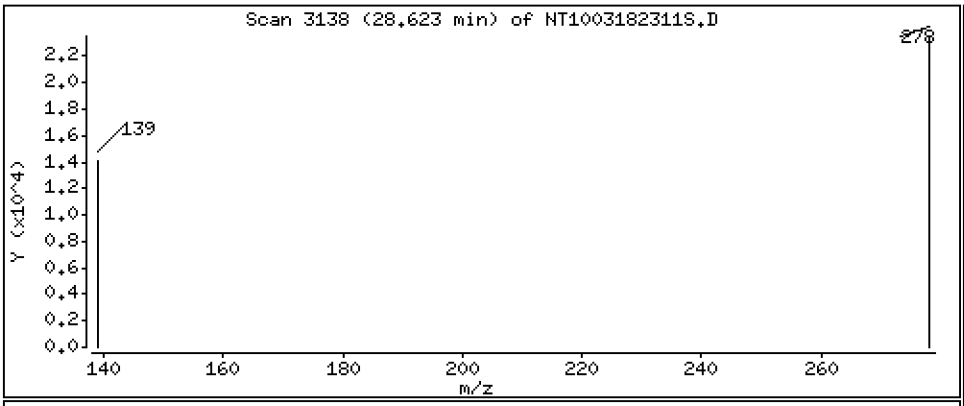
Operator: JGR

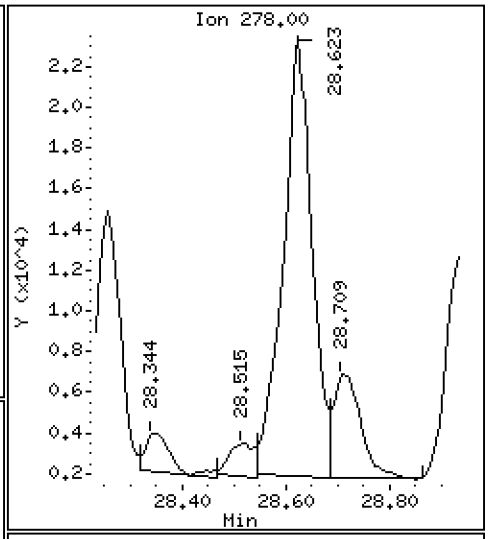
Column phase: ZB-5msi

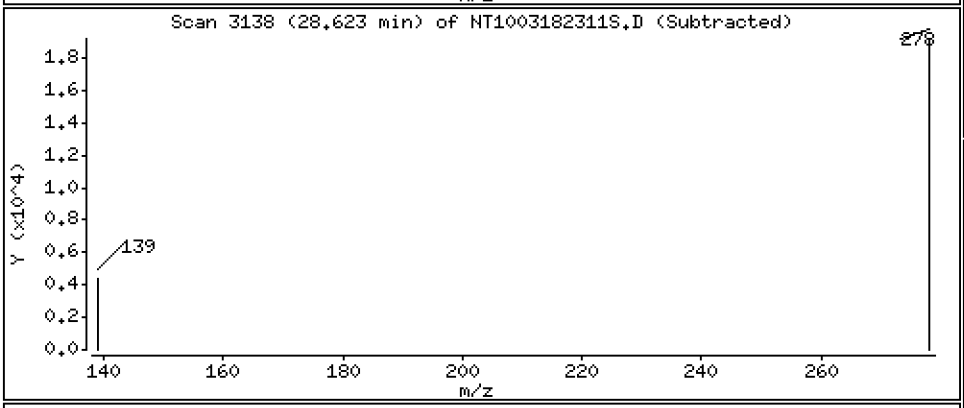
Column diameter: 0.25

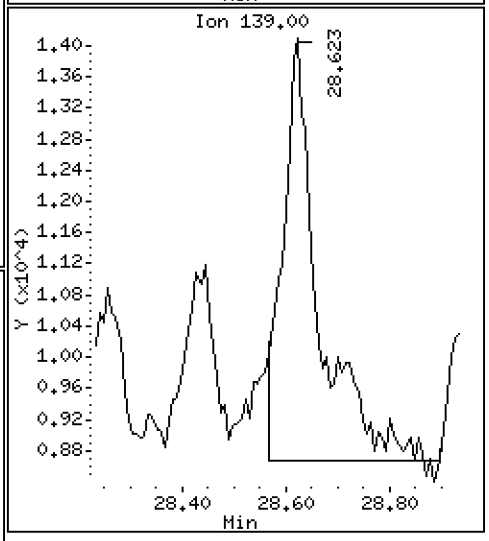
79 Dibenzo(a,h)anthracene

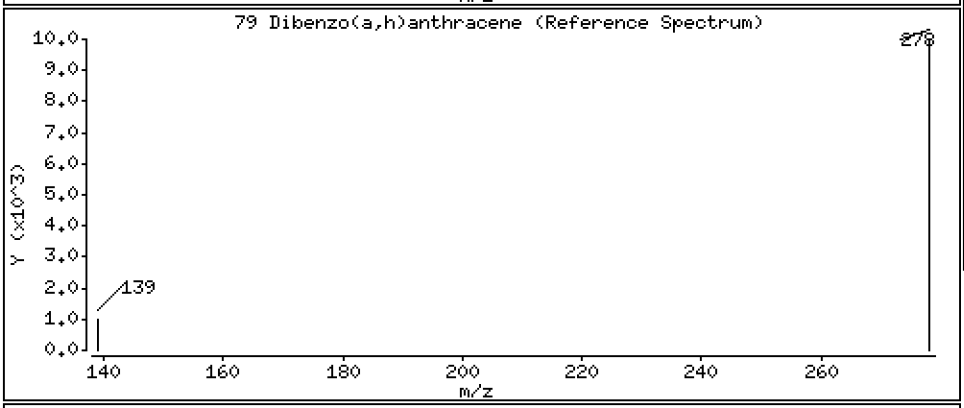
Concentration: 0.2771 ug/L

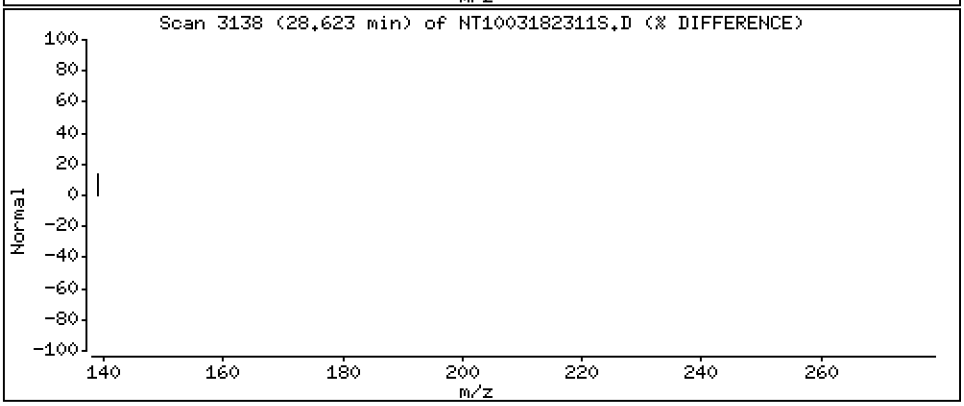












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182311S.D
Lab Smp Id: 23A0467-02
Inj Date : 19-MAR-2023 00:07 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-02
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.957	(0.761)	499173	5.84867	5.849(R)
3	Phenol	94	8.548	8.541	(0.933)	501506	4.28300	4.283
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	281449	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	2641	0.02497	0.02497(M)
11	Benzyl alcohol	79	9.431	9.431	(1.029)	20620	0.30376	0.3038(M)
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.042)	632	0.00608	0.006076
13	2-Methylphenol	108	9.656	9.648	(1.053)	1770	0.02182	0.02182(M)
15	4-Methylphenol	108	9.920	9.912	(1.082)	164829	1.95507	1.955
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.951	10.943	(0.941)	1275	0.01467	0.01467
24	Benzoic acid	105	11.045	11.053	(0.949)	46216	0.96900	0.9690(M)
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.635	11.627	(1.000)	1005730	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.714	14.714	(0.967)	11756	0.07763	0.07763(M)
* 42	Acenaphthene-d10	162	15.217	15.210	(1.000)	479888	4.00000	
50	Diethylphthalate	149	16.160	16.161	(1.062)	20449	0.13035	0.1303(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.975	17.968	(0.986)	1488	0.04451	0.04451
*	59 Phenanthrene-d10	188	18.238	18.231	(1.000)	1008213	4.00000	
$	66 Terphenyl-d14	244	21.372	21.364	(0.918)	750683	5.33270	5.333(R)
	67 Butylbenzylphthalate	149	22.293	22.285	(0.957)	38664	0.33933	0.3393
*	69 Chrysene-d12	240	23.284	23.269	(1.000)	863959	4.00000	
*	77 Perylene-d12	264	25.932	25.909	(1.000)	937100	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.623	28.584	(1.104)	85117	0.27708	0.2771
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182311S.D
Lab Smp Id: 23A0467-02
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	281449	42.18
27 Naphthalene-d8	704013	352007	1408026	1005730	42.86
42 Acenaphthene-d10	353977	176989	707954	479888	35.57
59 Phenanthrene-d10	686752	343376	1373504	1008213	46.81
69 Chrysene-d12	597733	298867	1195466	863959	44.54
77 Perylene-d12	645663	322832	1291326	937100	45.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	-0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.07
77 Perylene-d12	25.91	25.41	26.41	25.93	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182311S.D

Lab ID: 23A0467-02
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 00:07

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

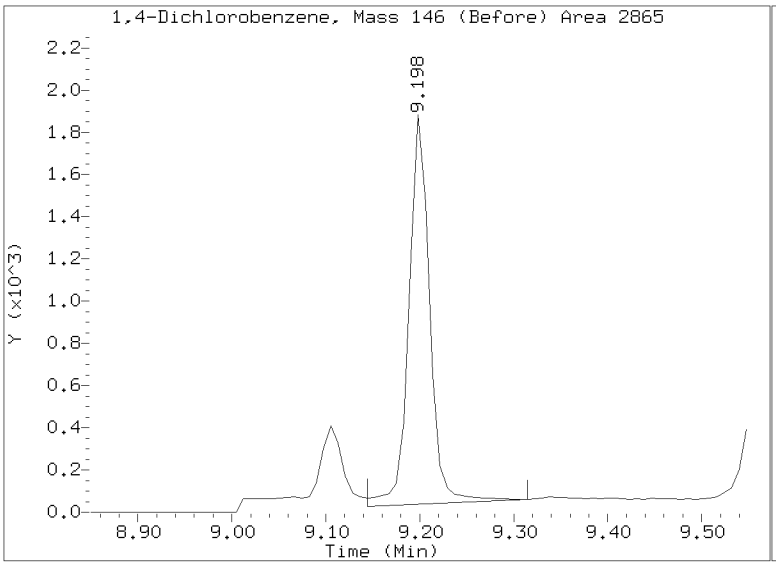
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

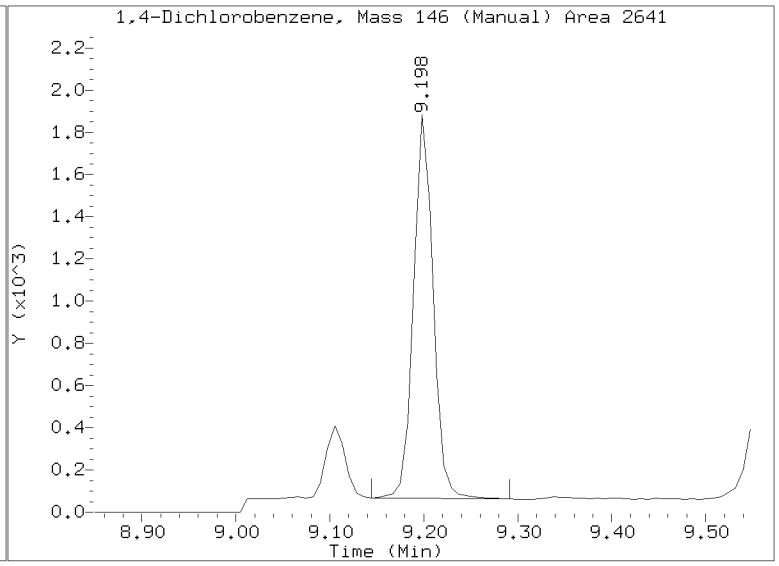
Exception: 1,2,4-Trichlorobenzene 0.0010

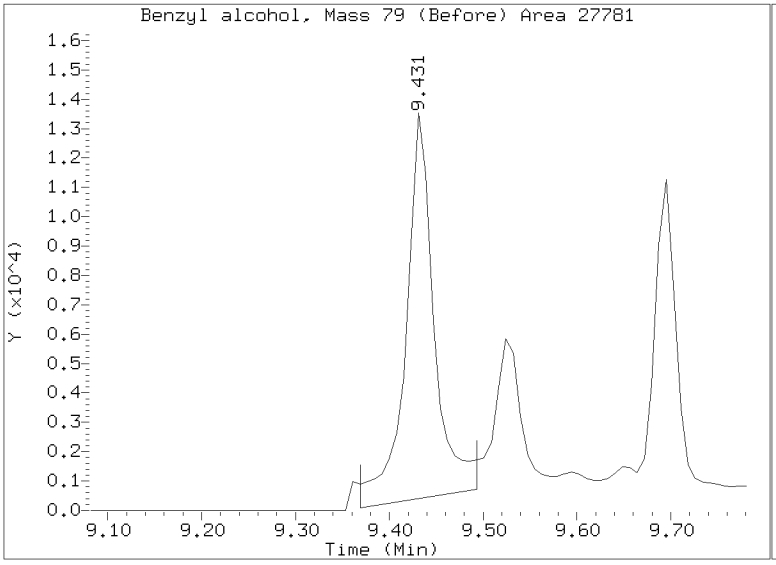
* Only compounds listed in the work order have been verified by the analyst *

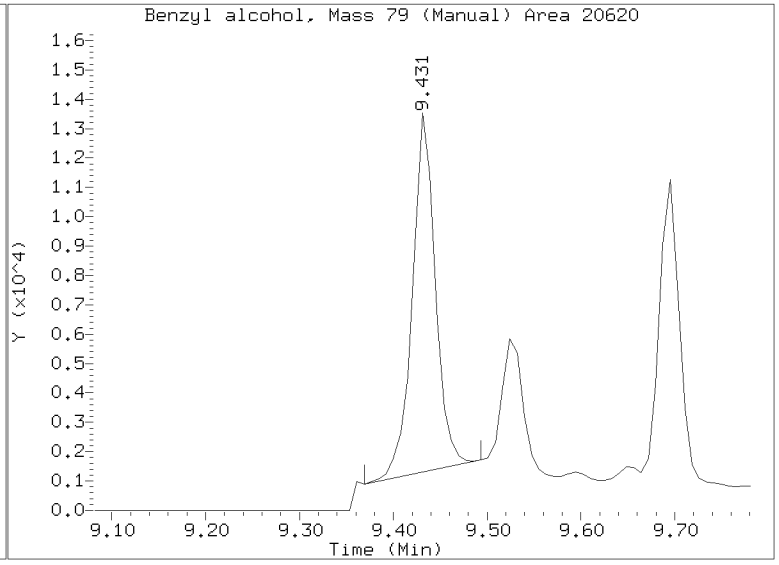
Quant Ion Manual Peak Adjustment Report

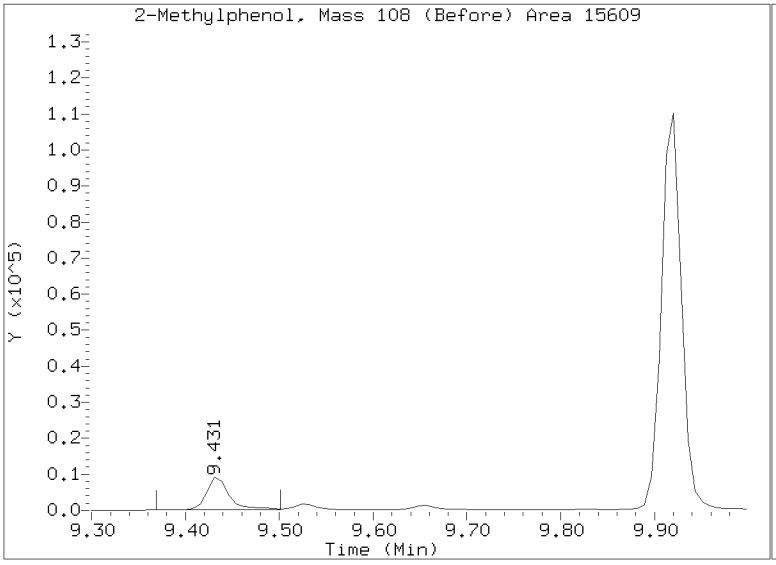
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182311S.D
Injection Date: 19-MAR-2023 00:07
Lab ID:23A0467-02 Client ID:
Report Date: 04/04/2023 12:31

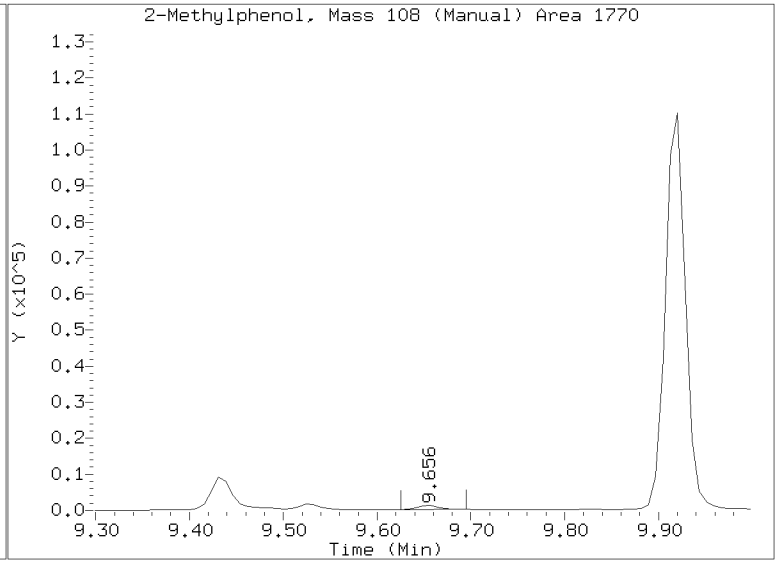












Quant Ion Manual Peak Adjustment Report

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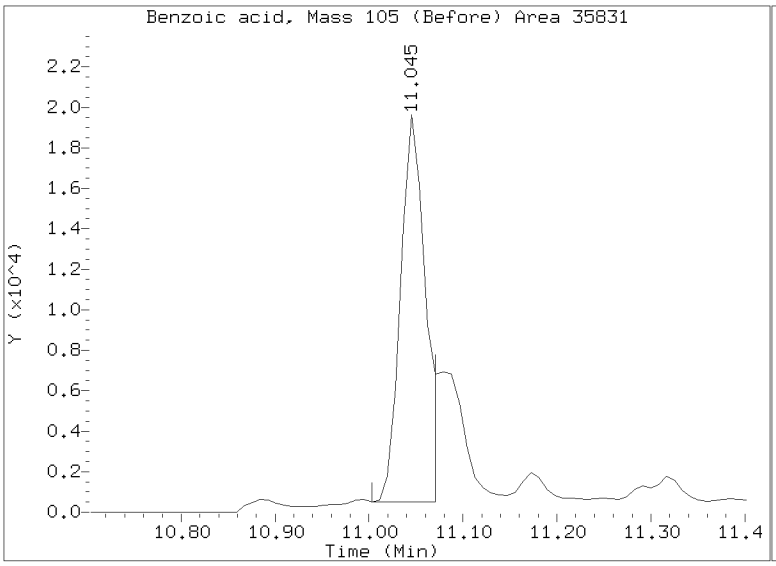
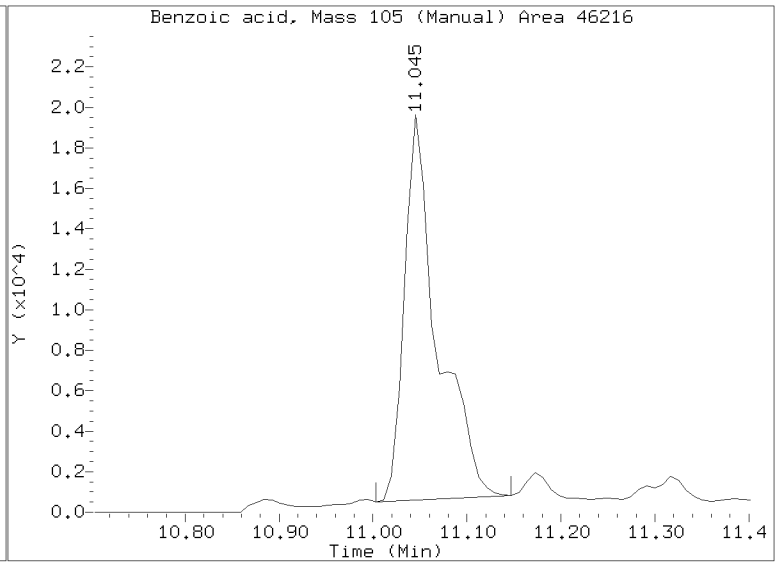
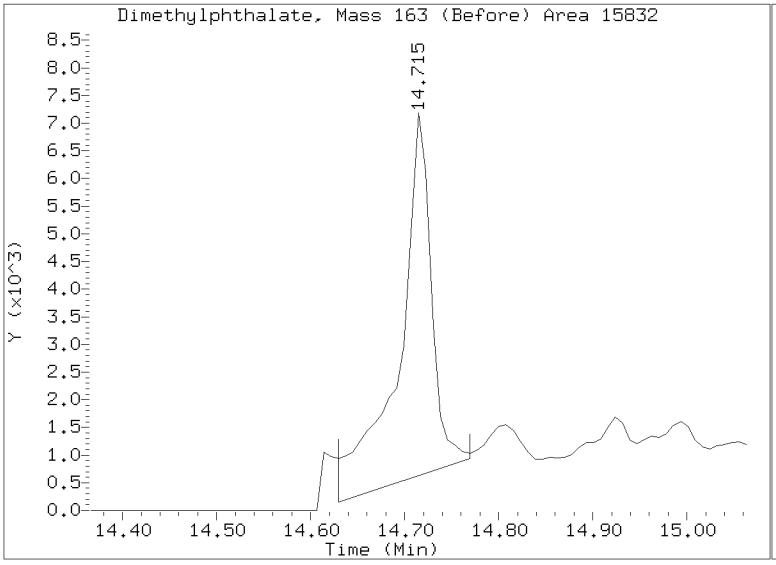
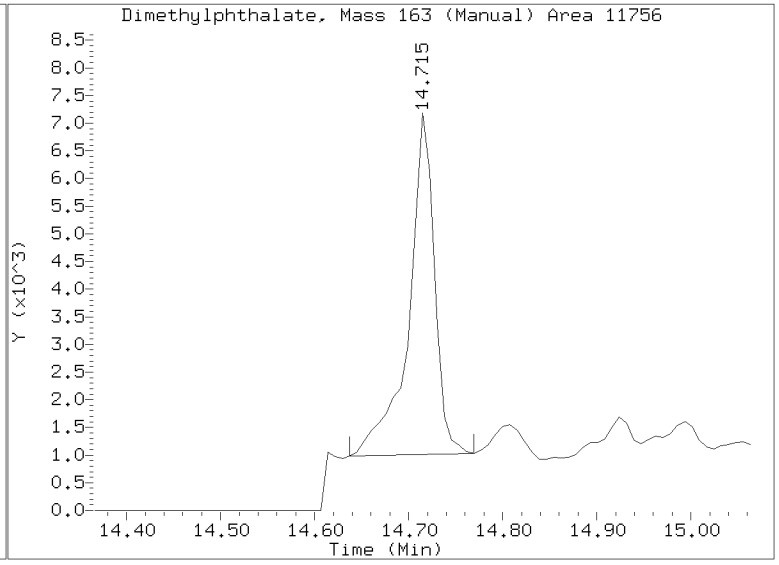
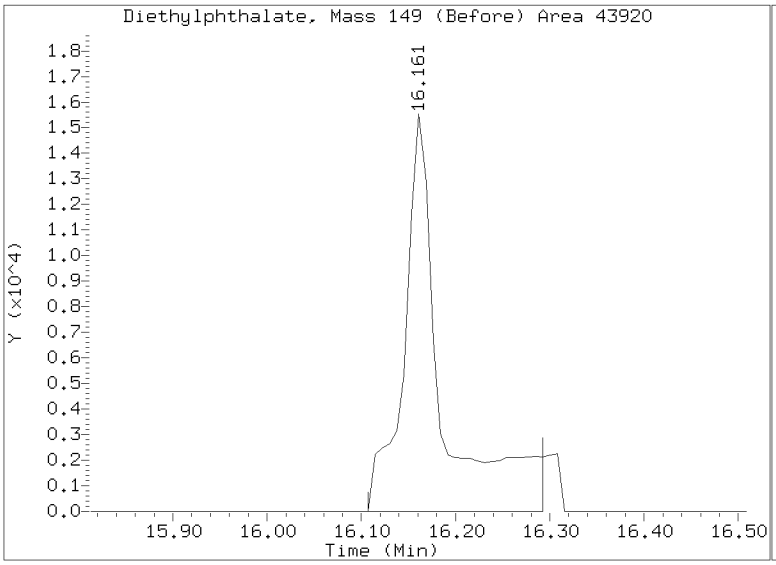
Injection Date: 19-MAR-2023 00:07
Lab ID:23A0467-02 Client ID:
Report Date: 04/04/2023 12:31

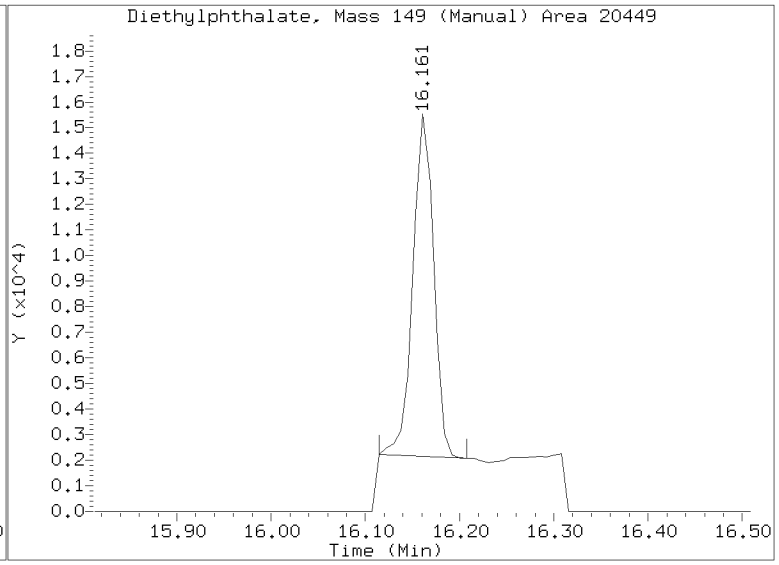












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1006

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	02/23/23 15:49	File ID:	NT1003182312S.D
% Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 00:46
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	20.89 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.1	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	31.5		2.5	20.0
65-85-0	Benzoic acid	1	99.8		13.4	99.8
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	5.1	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.59	558	74.5	27 - 120	
p-Terphenyl-d14	499.06	550	110	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823128.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

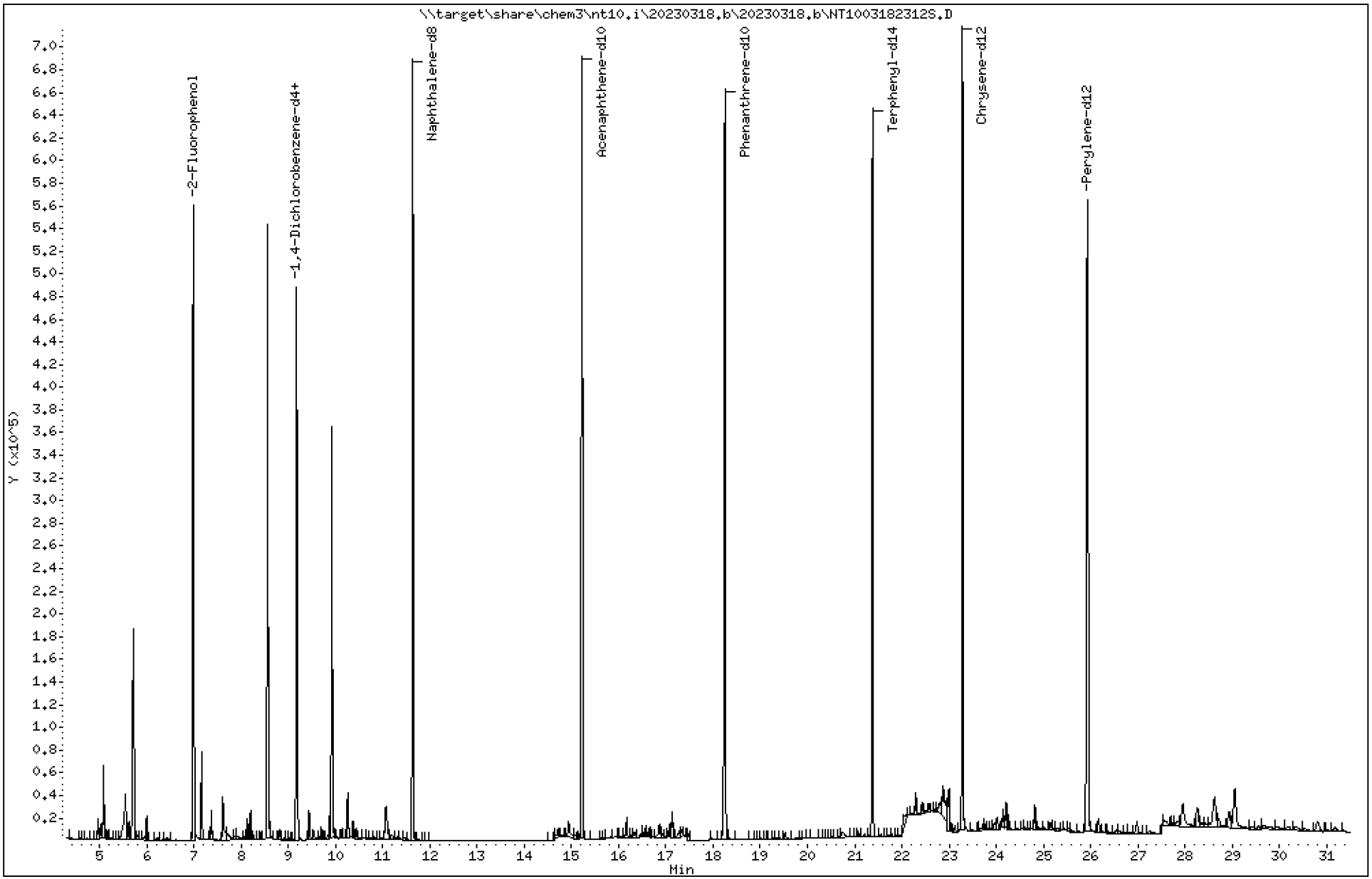
Sample Info: 23A0467-03

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

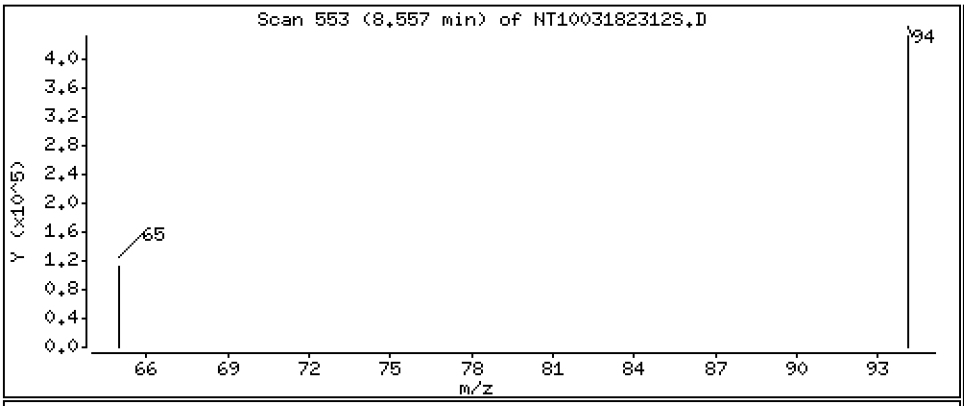
Operator: JGR

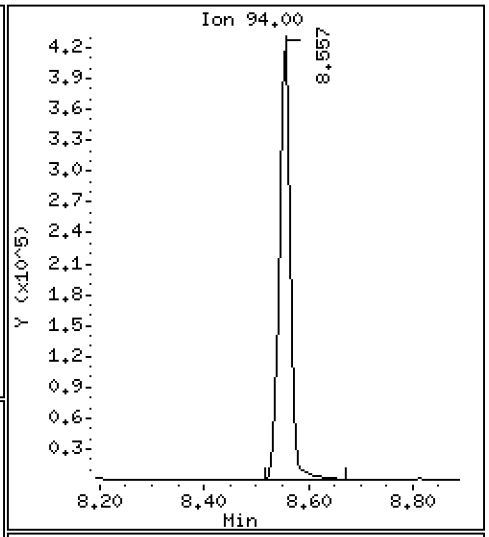
Column phase: ZB-5msi

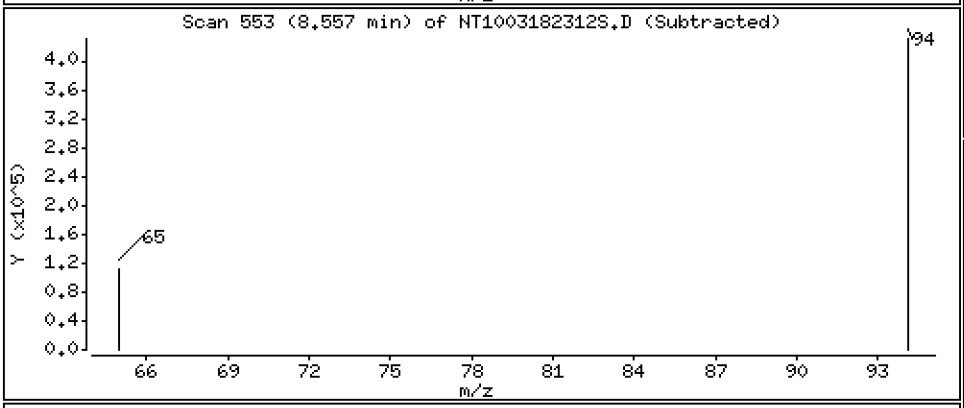
Column diameter: 0.25

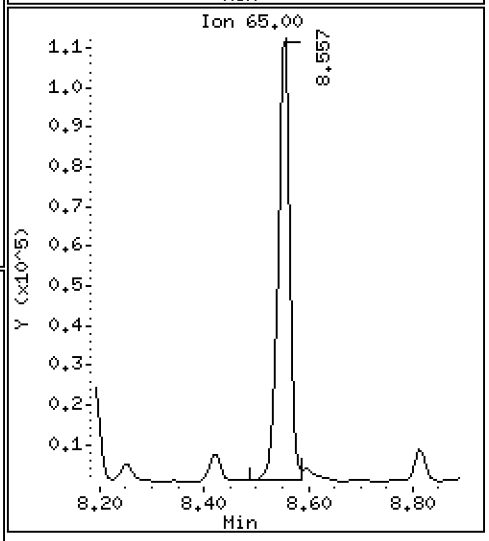
3 Phenol

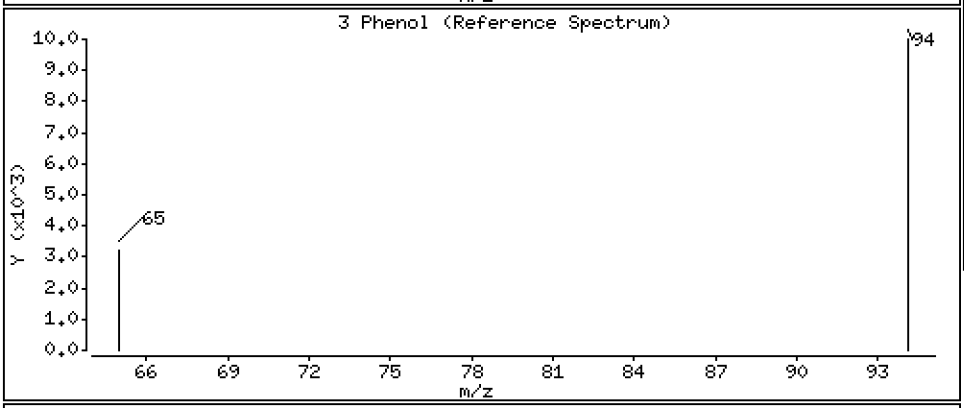
Concentration: 4.933 ug/L

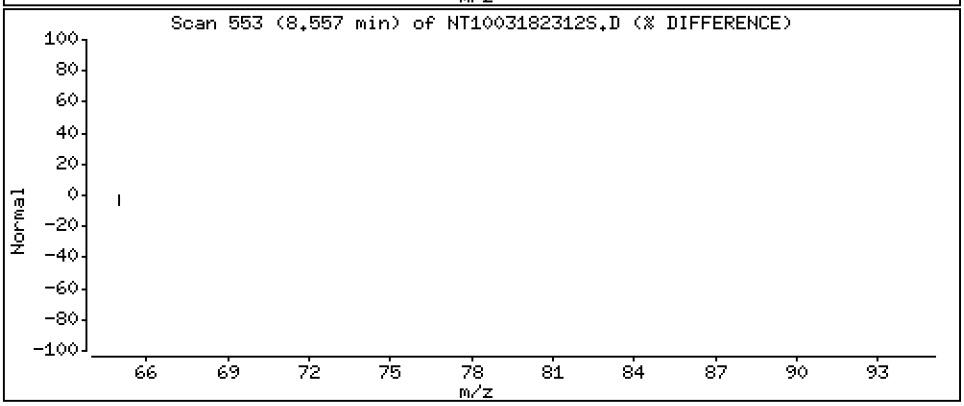












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182312S.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

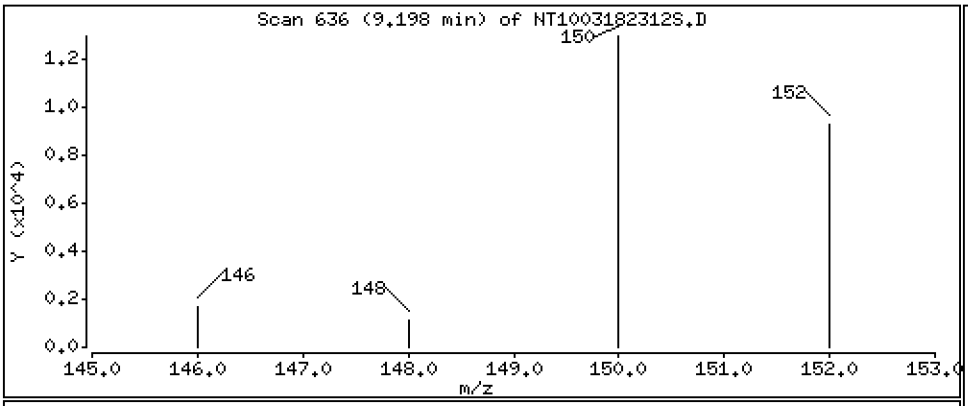
Operator: JGR

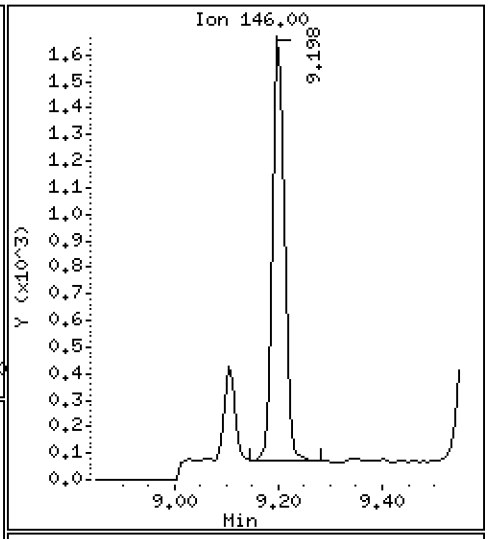
Column phase: ZB-5msi

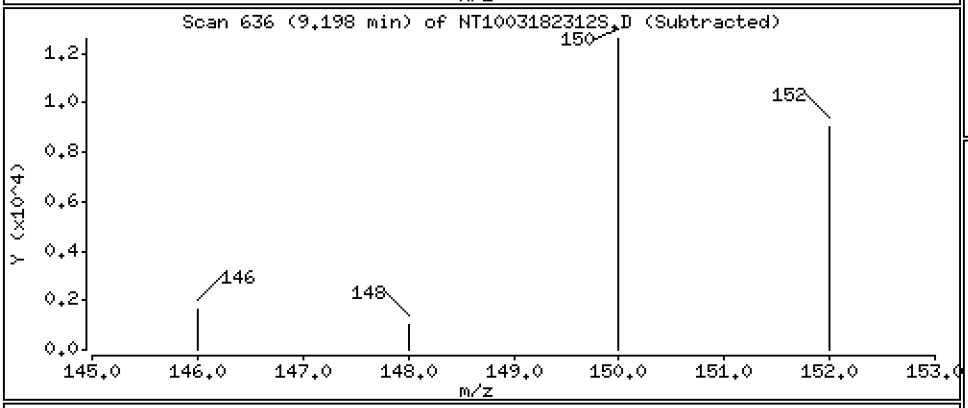
Column diameter: 0.25

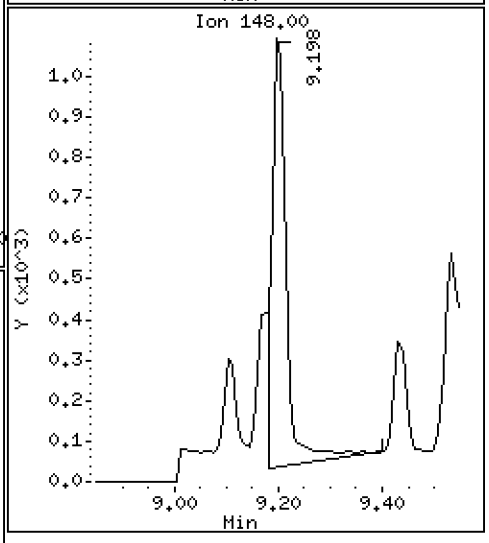
9 1,4-Dichlorobenzene

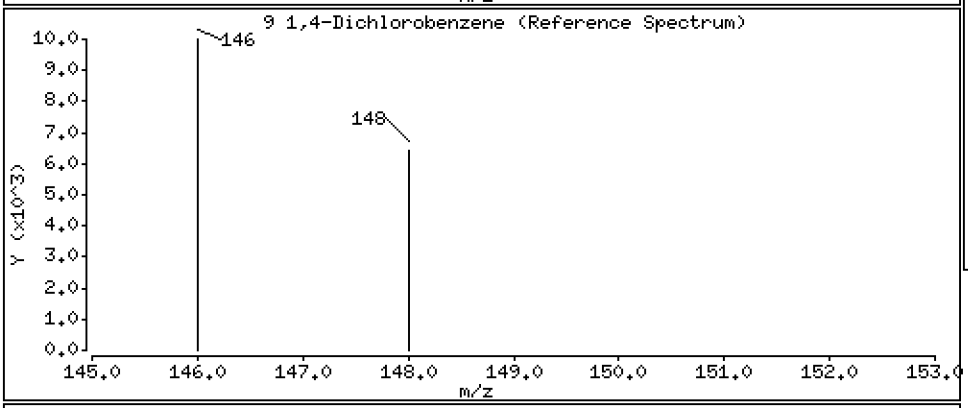
Concentration: 0.02121 ug/L

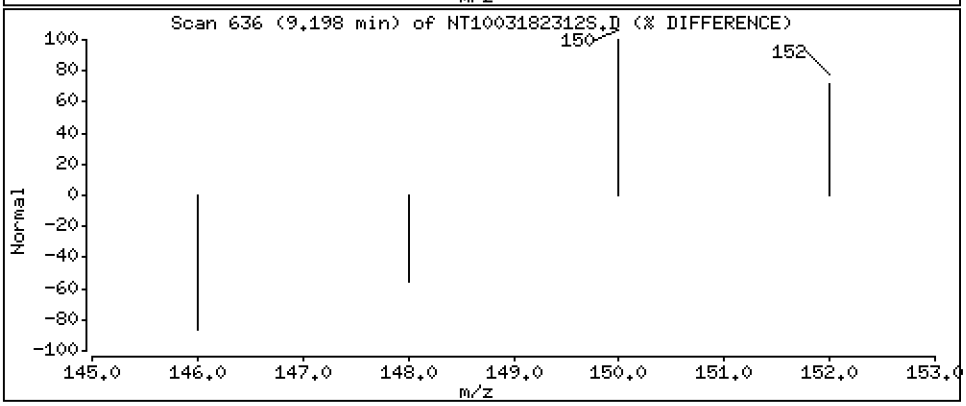












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

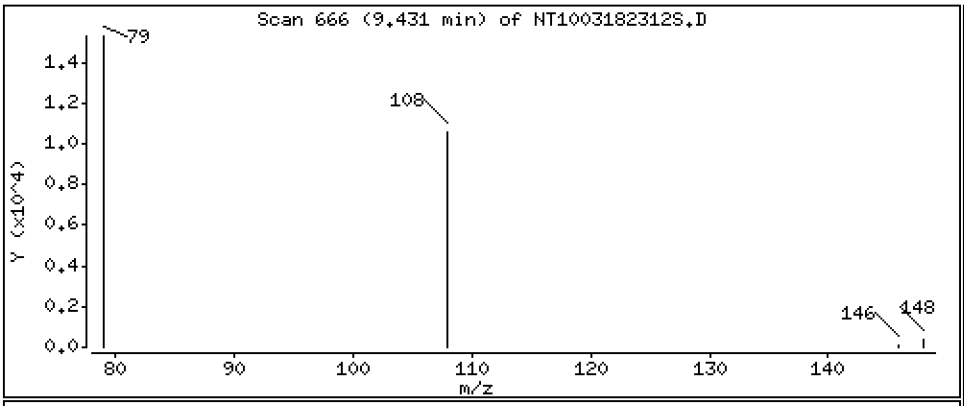
Operator: JGR

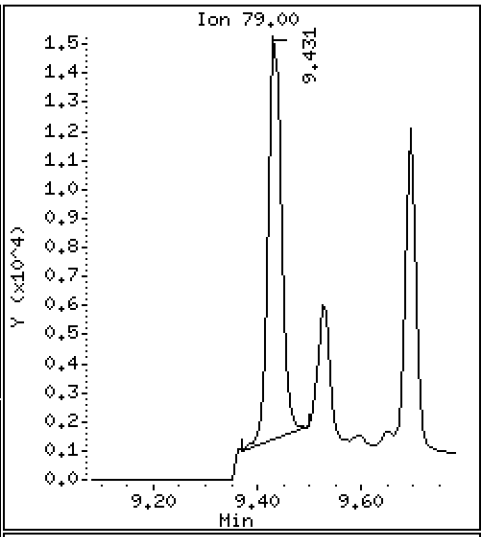
Column phase: ZB-5msi

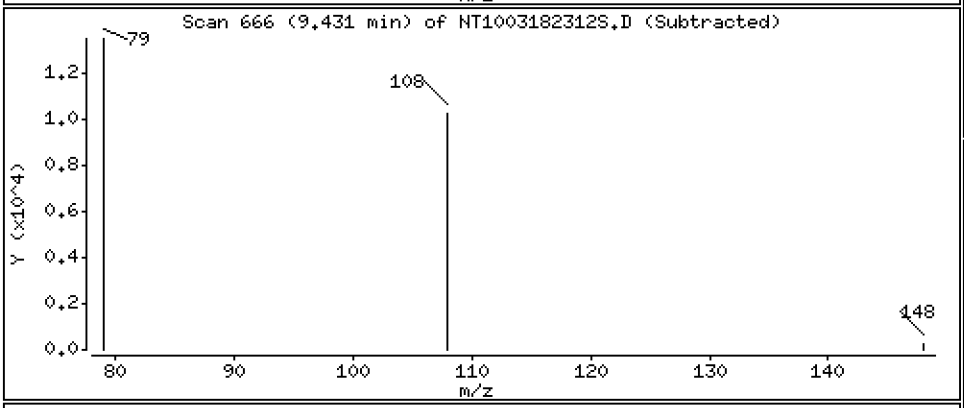
Column diameter: 0.25

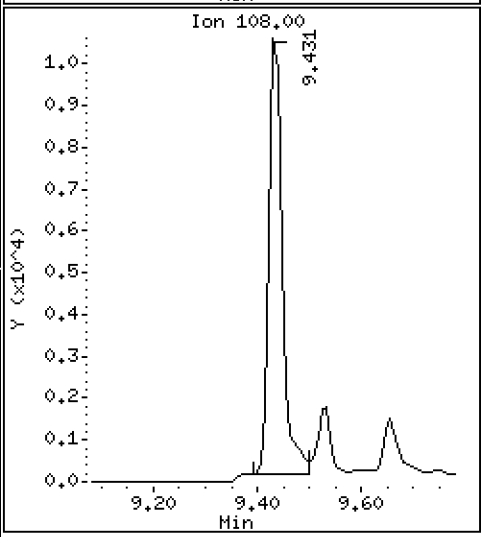
11 Benzyl alcohol

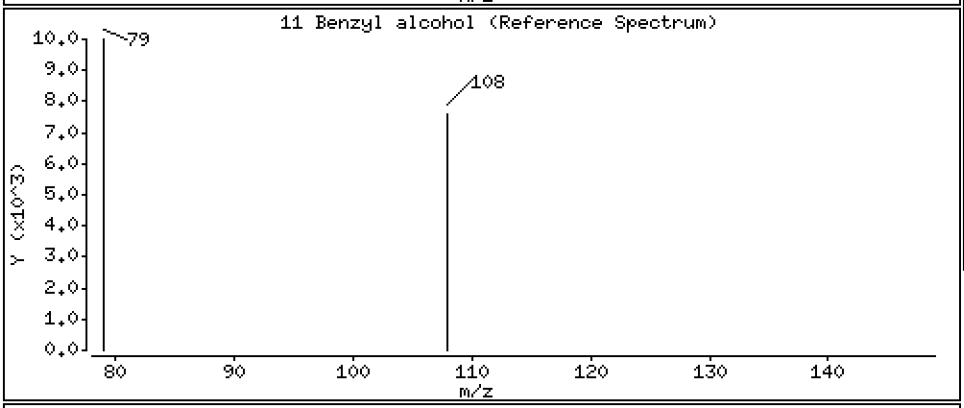
Concentration: 0.3157 ug/L

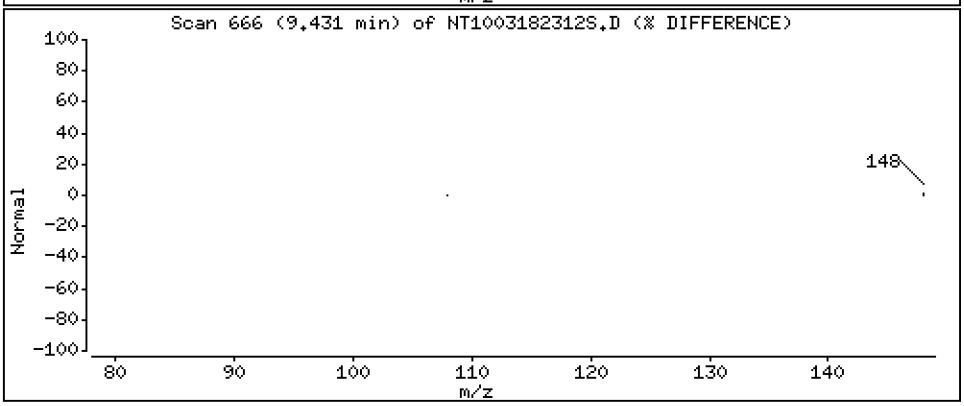












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

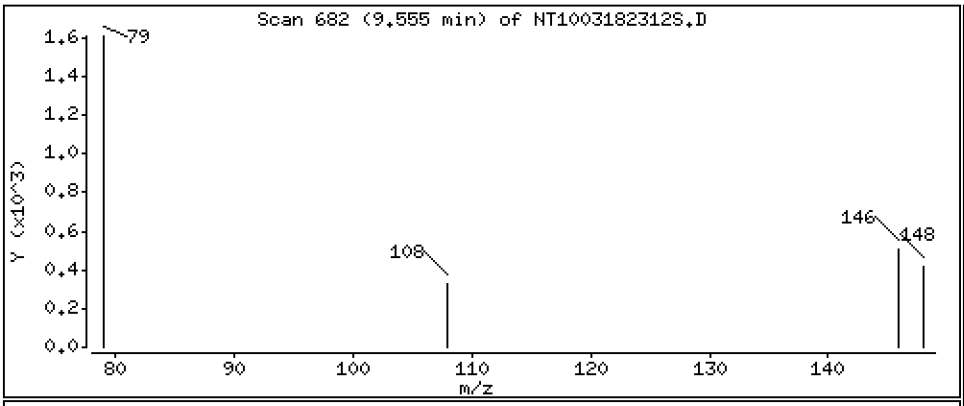
Operator: JGR

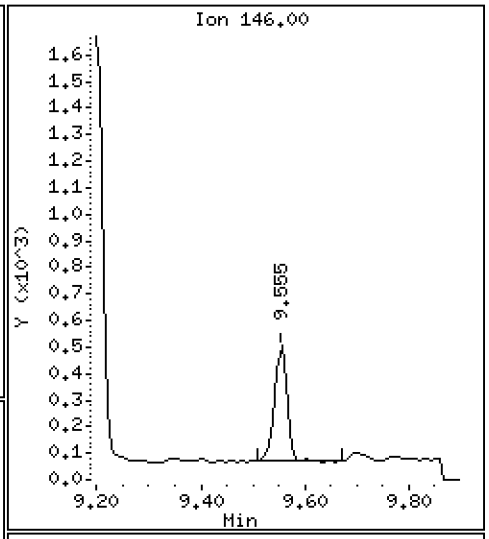
Column phase: ZB-5msi

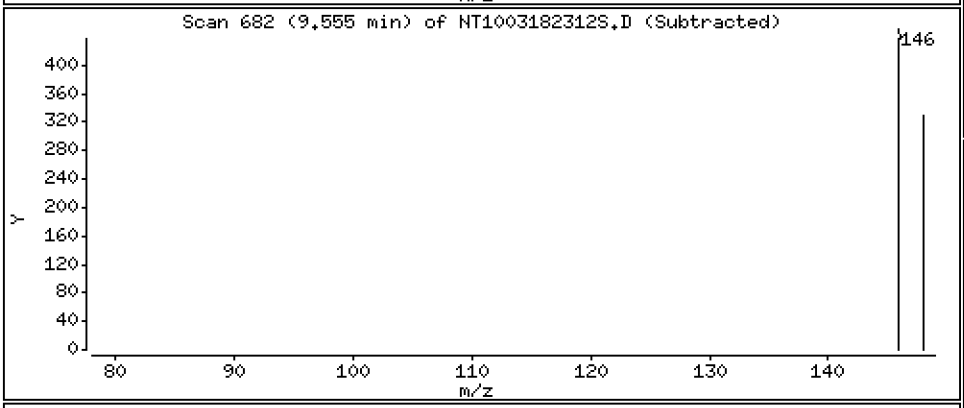
Column diameter: 0.25

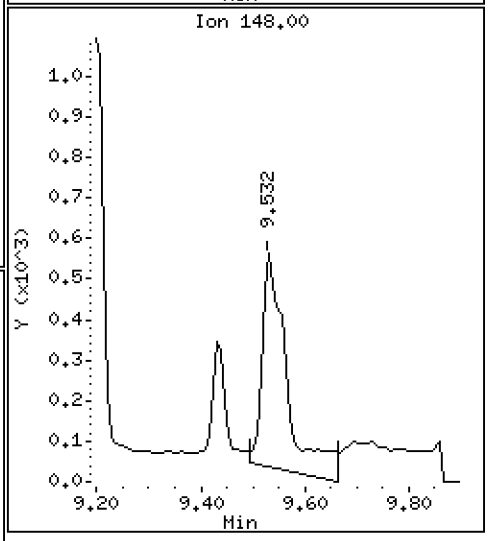
12 1,2-Dichlorobenzene

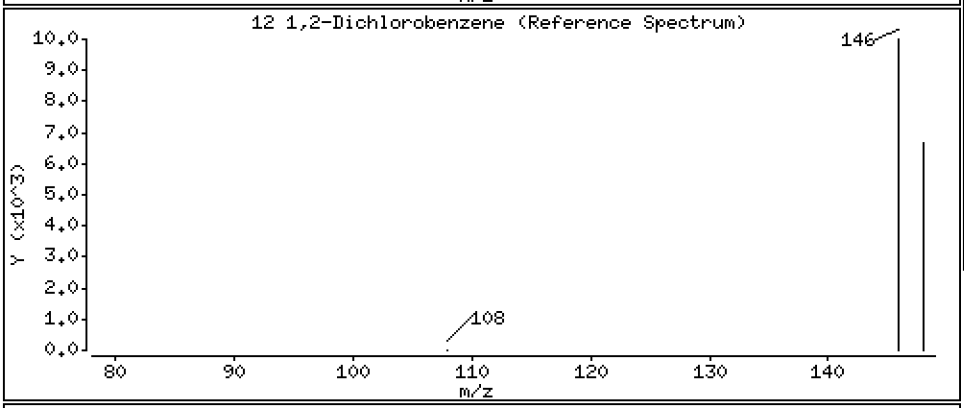
Concentration: 0.006075 ug/L

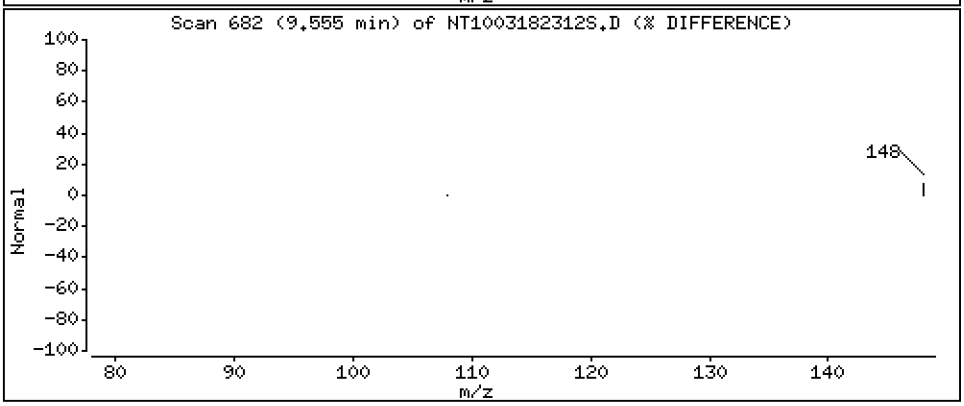












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

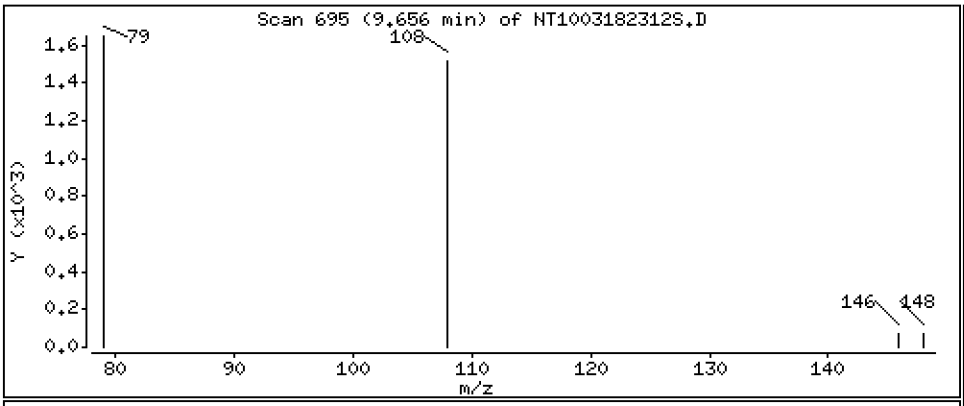
Operator: JGR

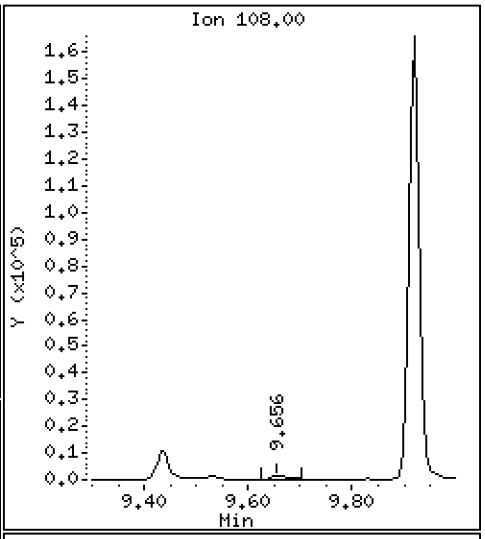
Column phase: ZB-5msi

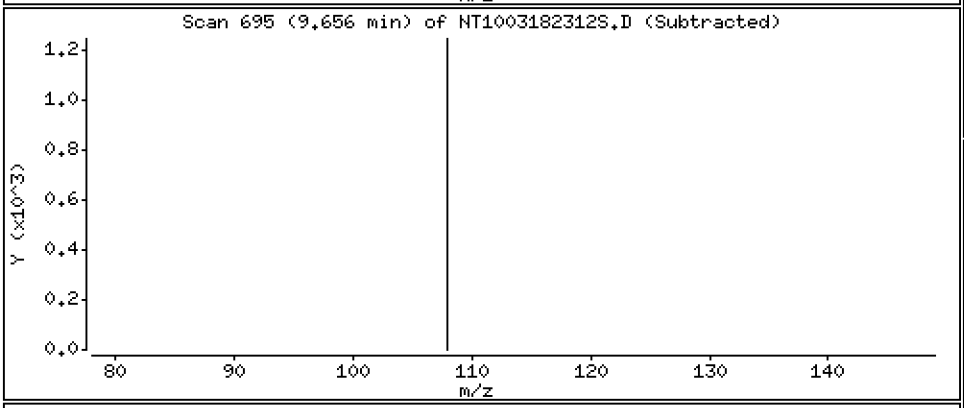
Column diameter: 0.25

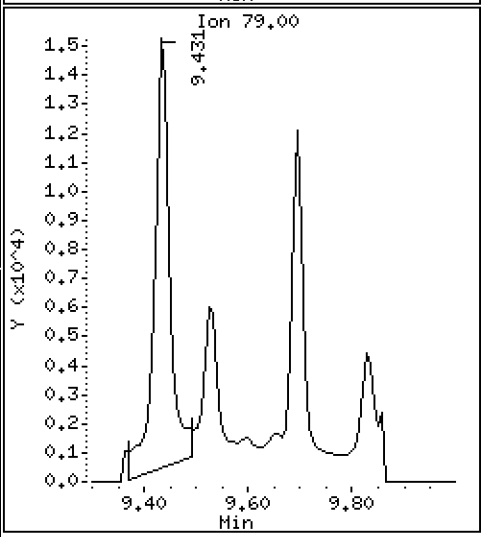
13 2-Methylphenol

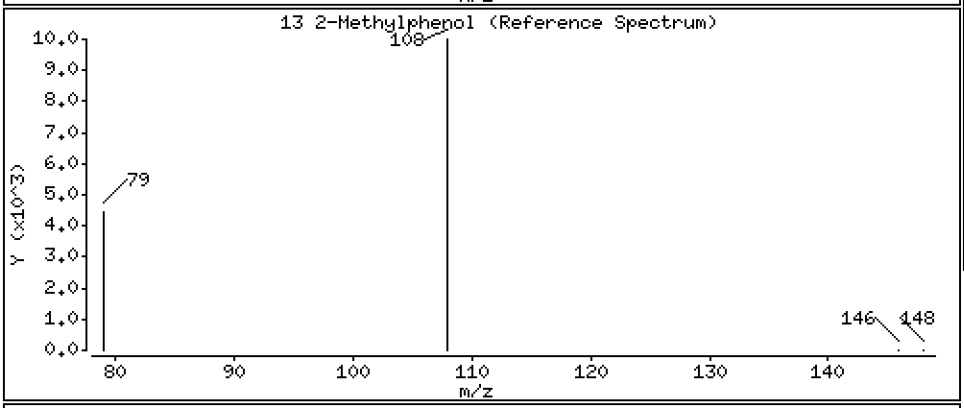
Concentration: 0.02300 ug/L

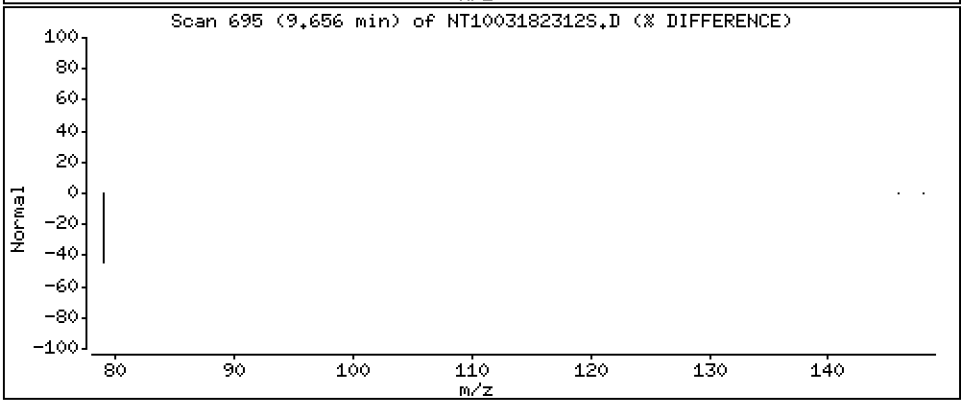












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182312S.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

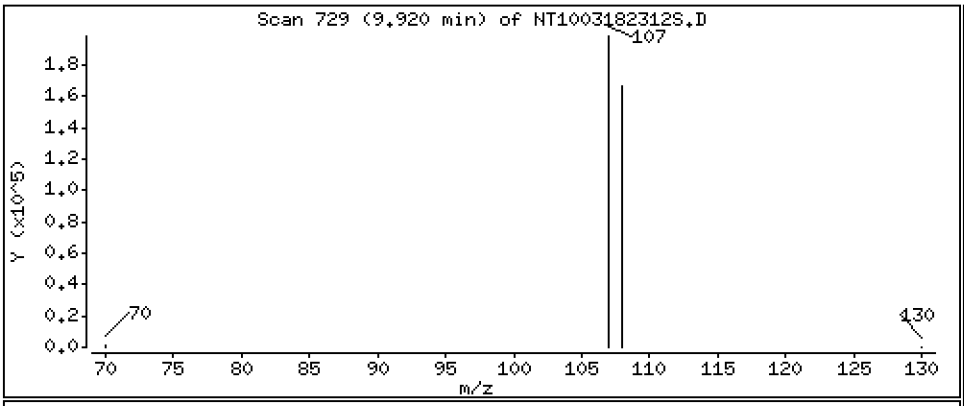
Operator: JGR

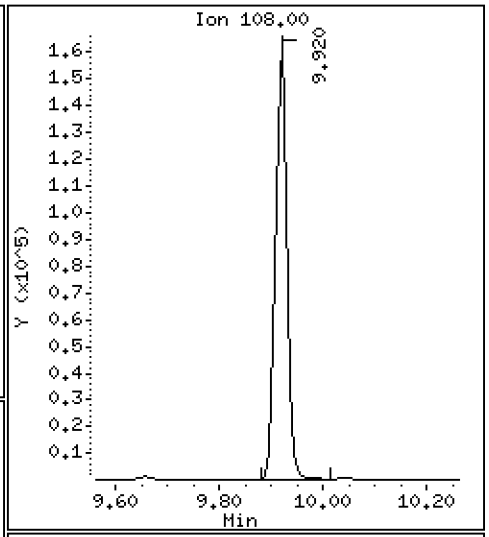
Column phase: ZB-5msi

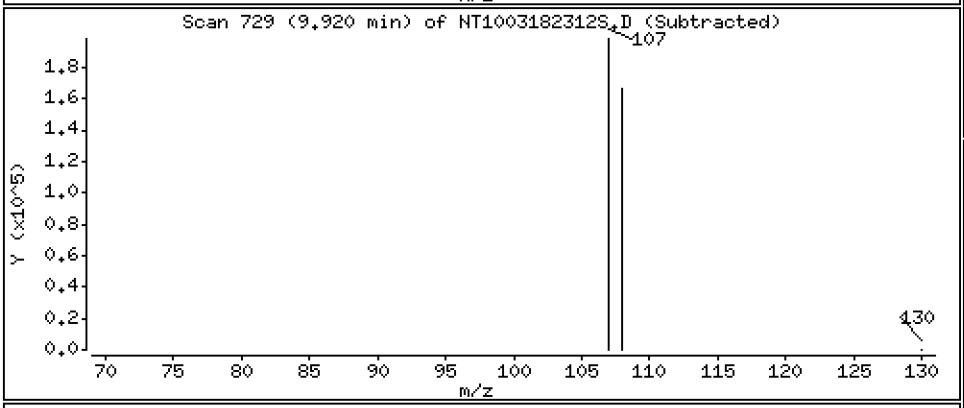
Column diameter: 0.25

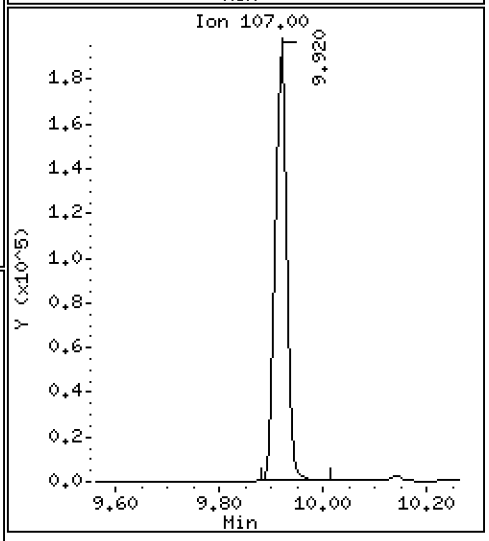
15 4-Methylphenol

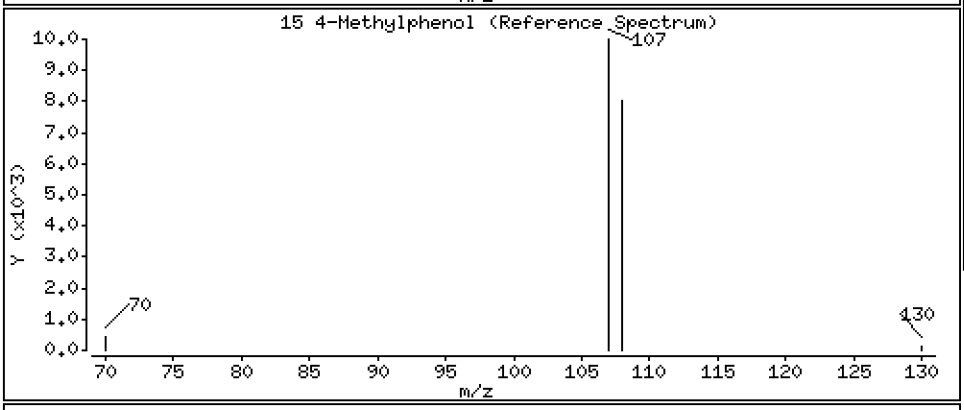
Concentration: 2.604 ug/L

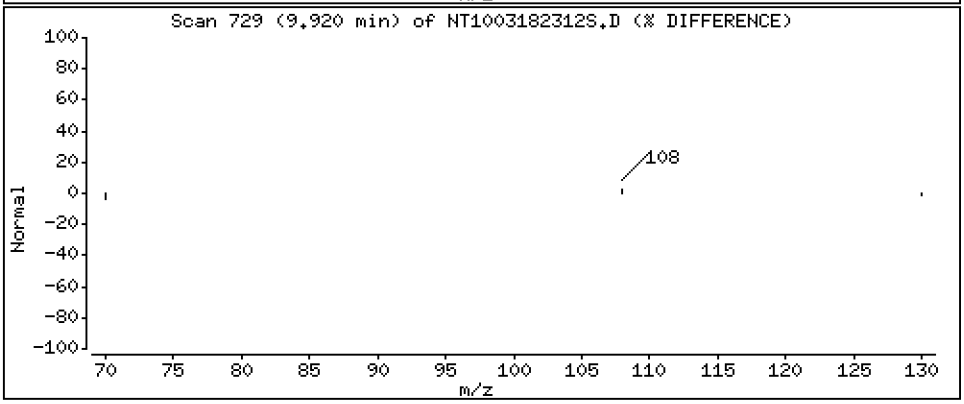












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

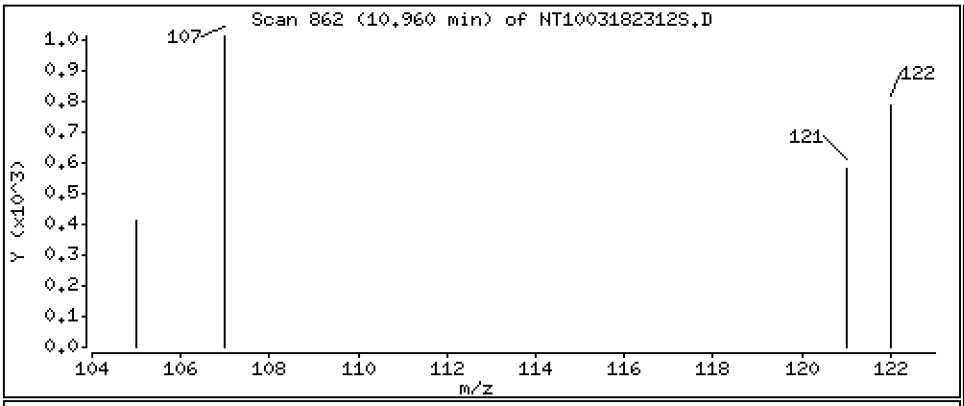
Operator: JGR

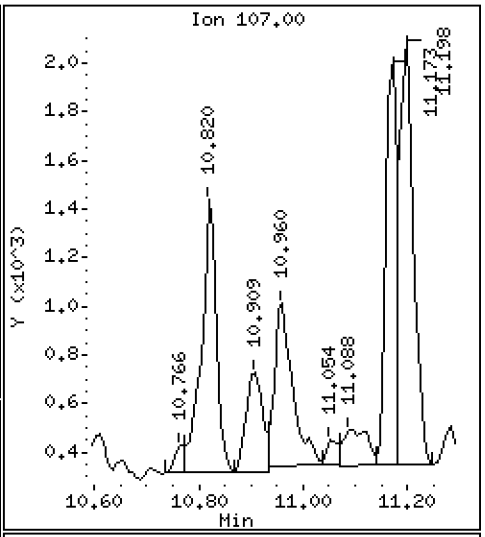
Column phase: ZB-5msi

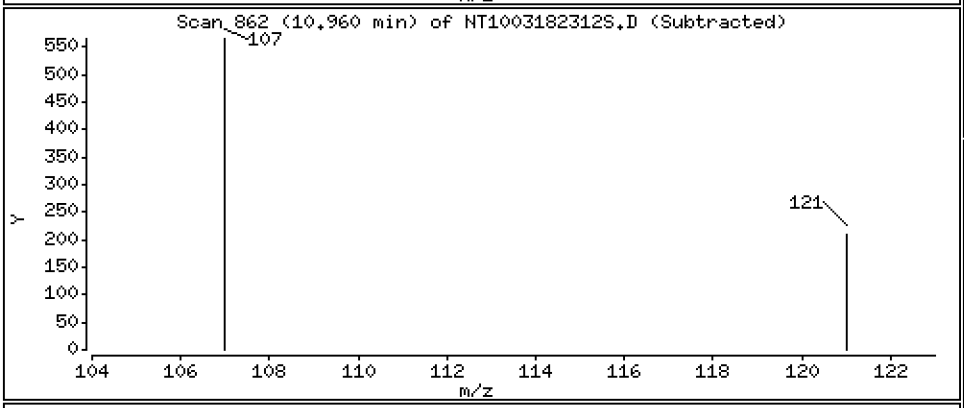
Column diameter: 0.25

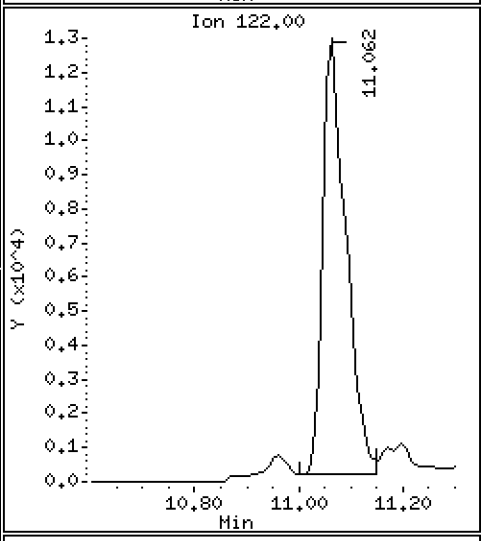
22 2,4-Dimethylphenol

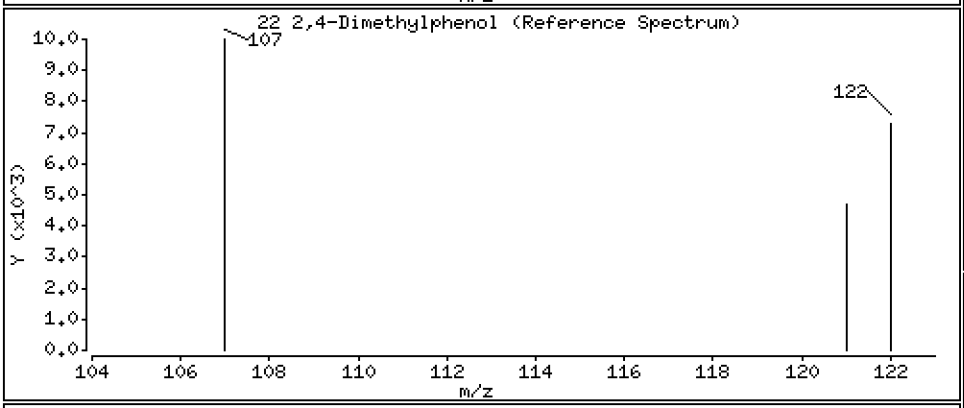
Concentration: 0.01782 ug/L

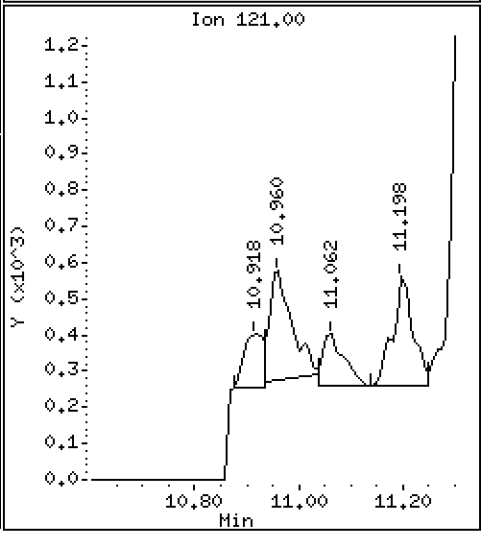


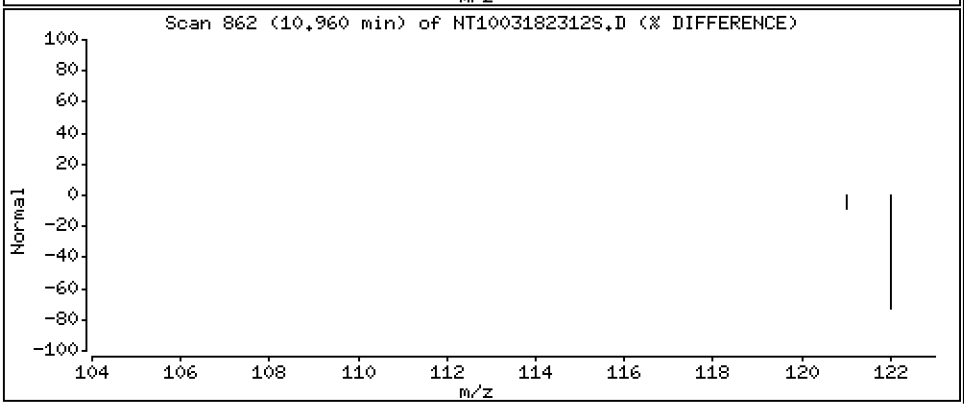












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823125.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

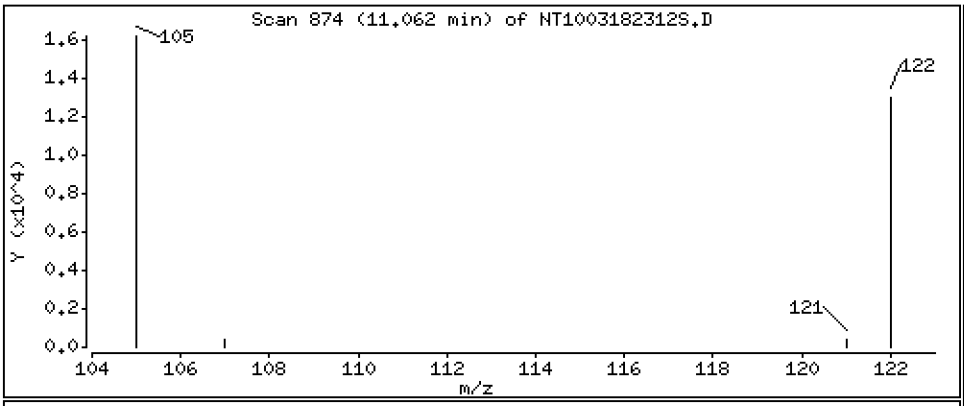
Operator: JGR

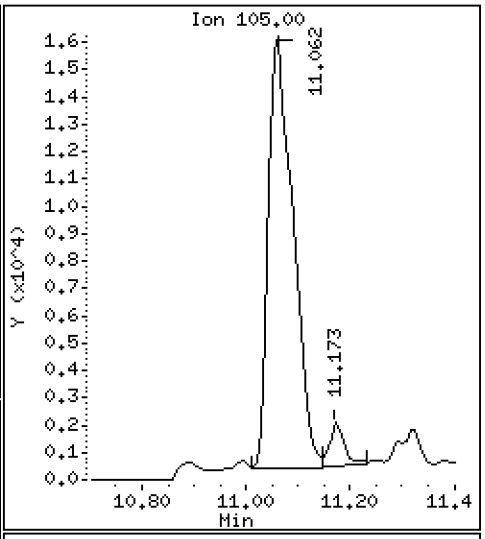
Column phase: ZB-5msi

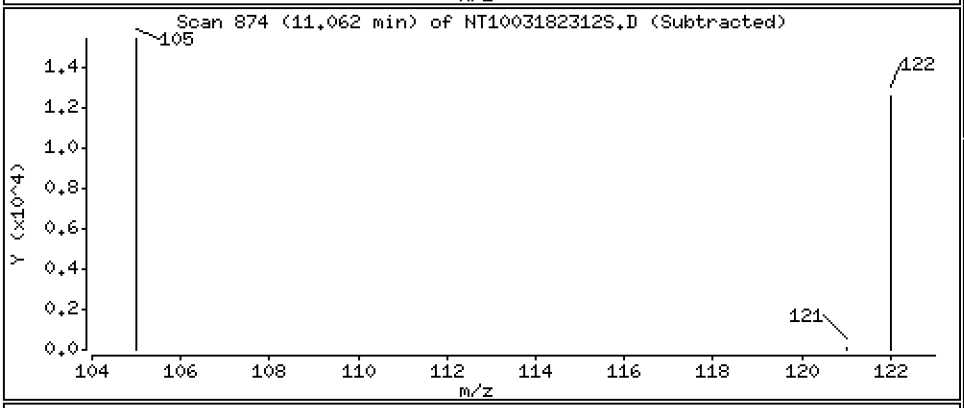
Column diameter: 0.25

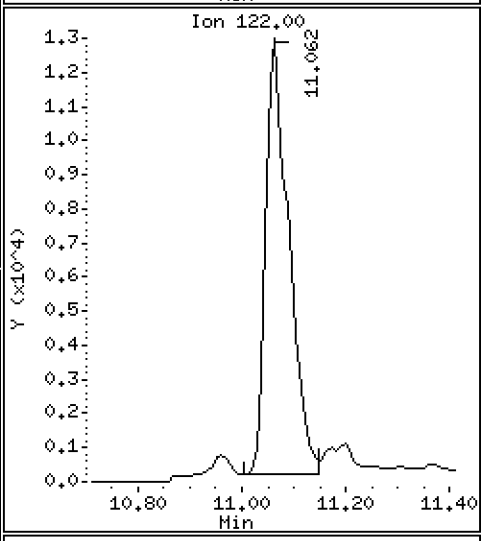
24 Benzoic acid

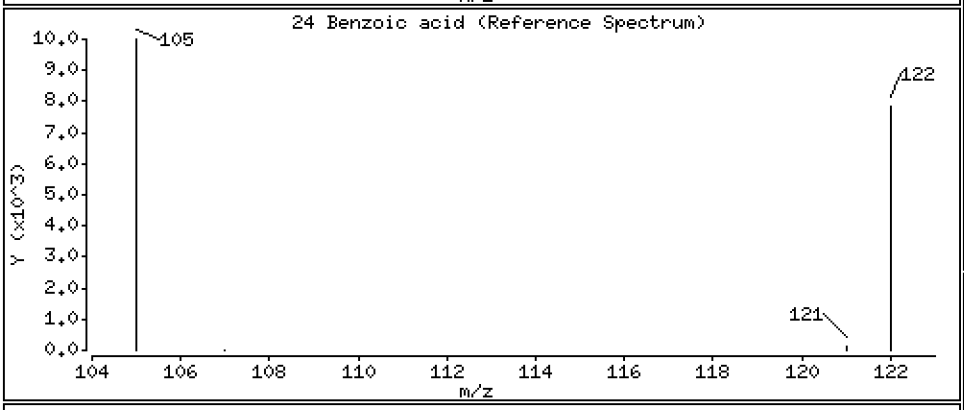
Concentration: 1.000 ug/L

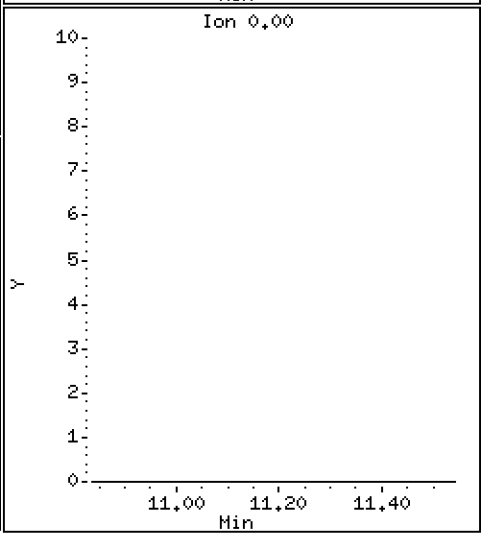


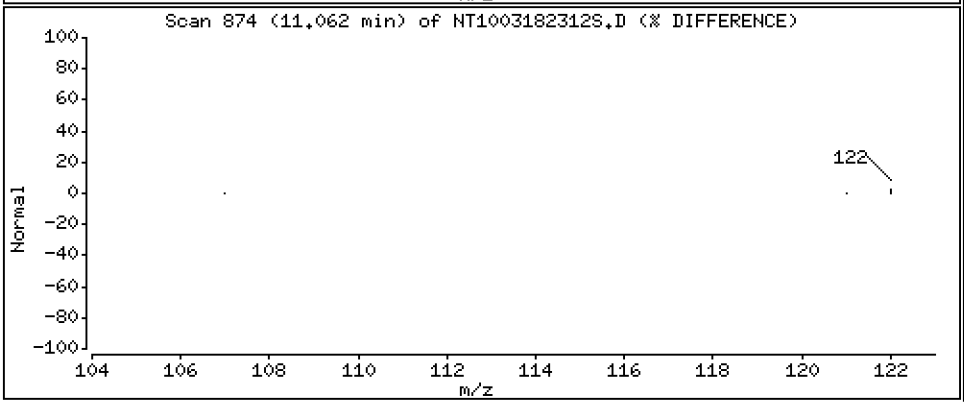












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182312S.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

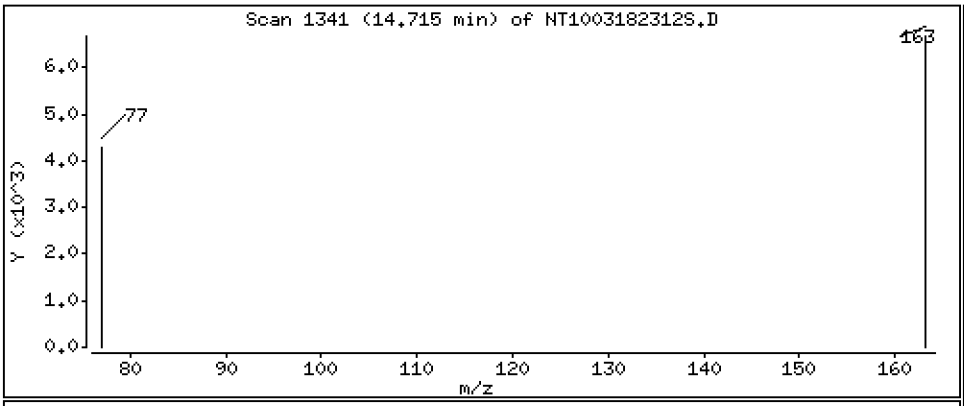
Operator: JGR

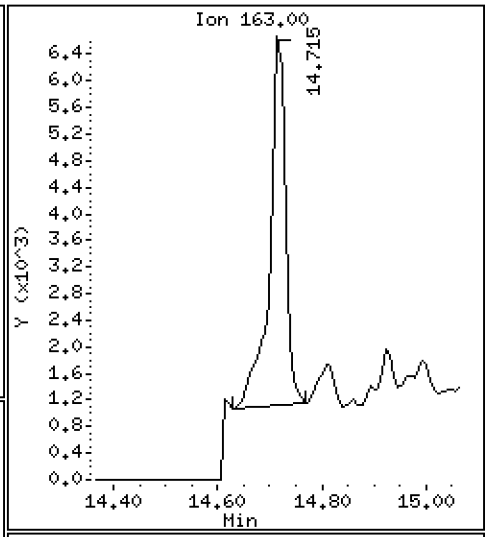
Column phase: ZB-5msi

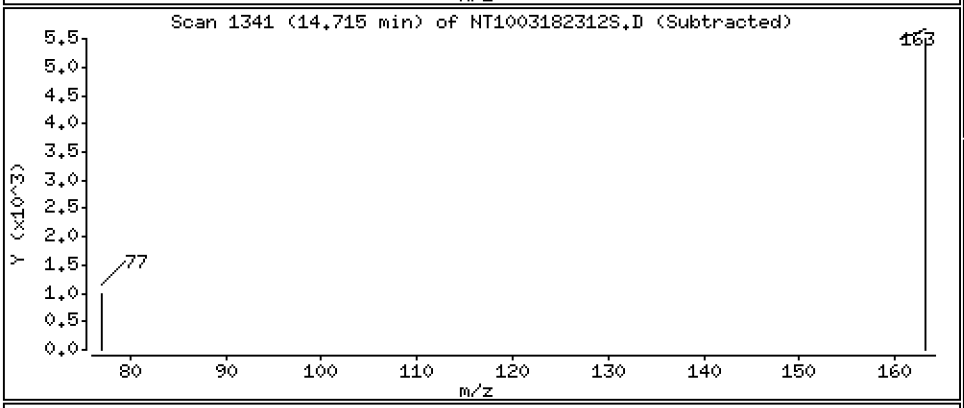
Column diameter: 0.25

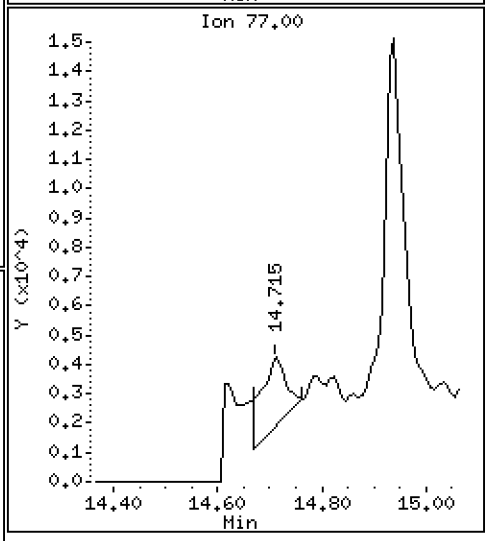
39 Dimethylphthalate

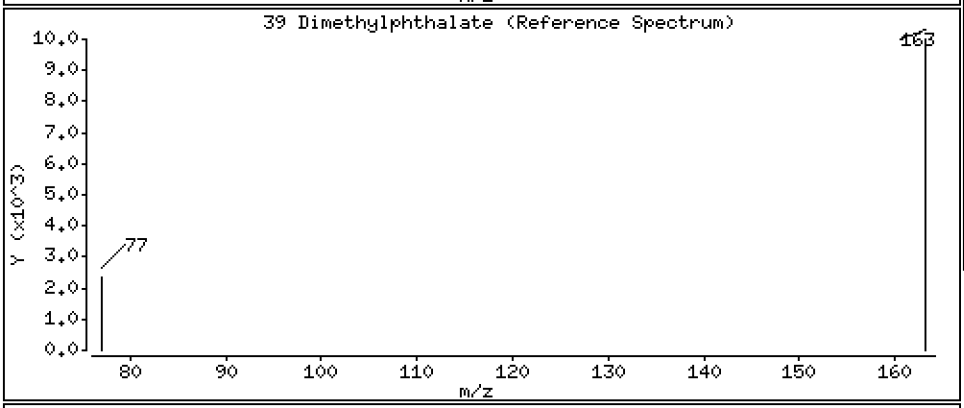
Concentration: 0.06841 ug/L

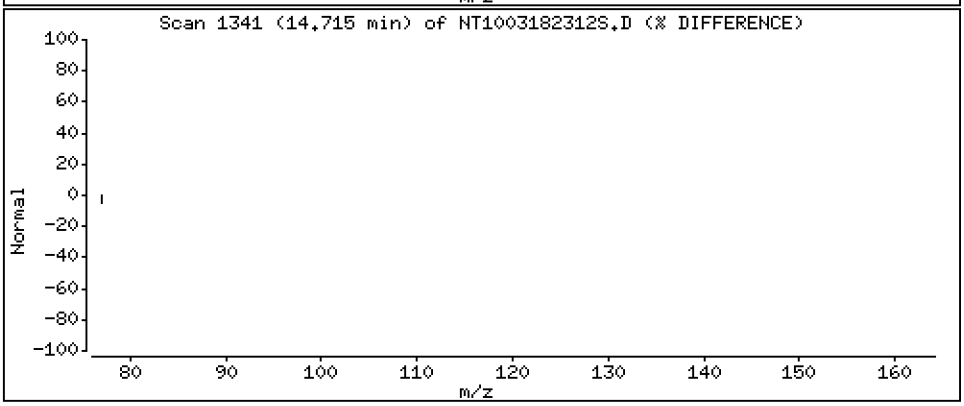












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182312S.D

Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

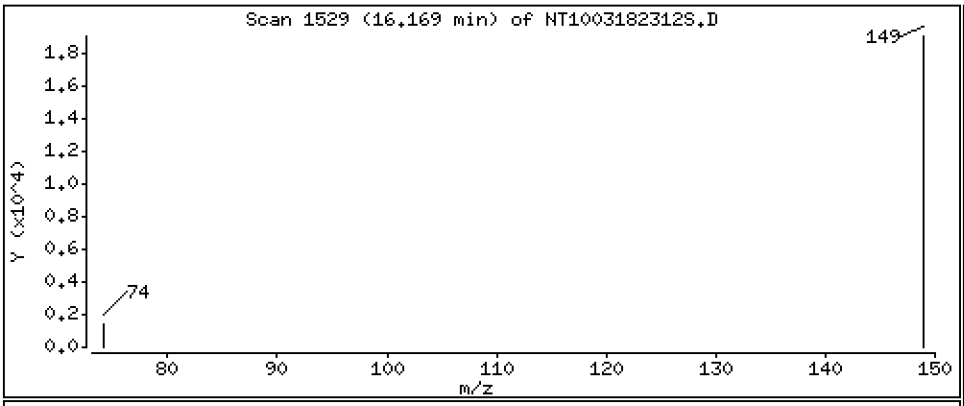
Operator: JGR

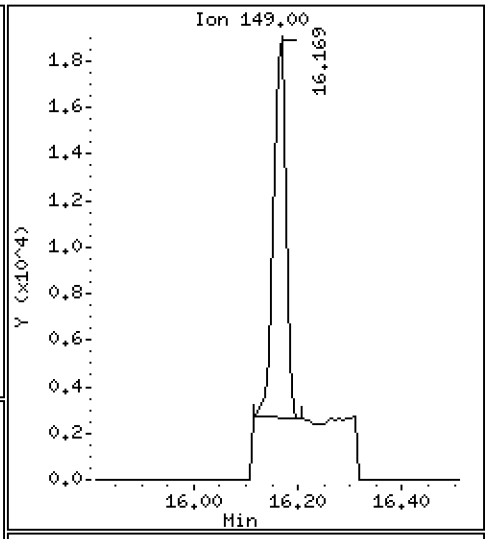
Column phase: ZB-5msi

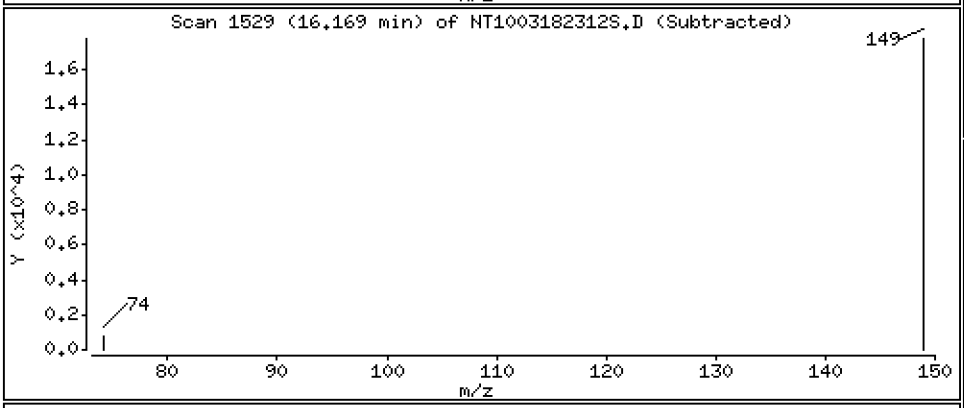
Column diameter: 0.25

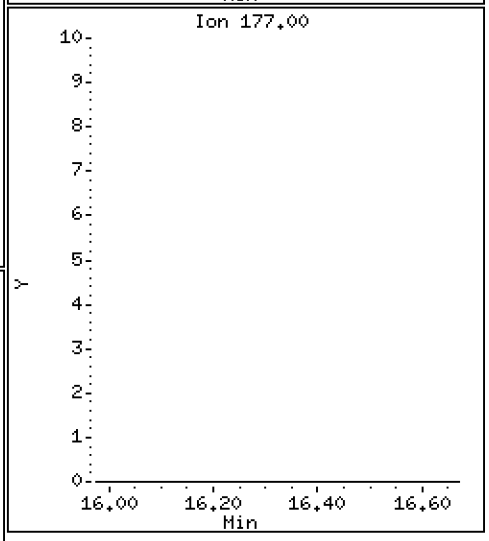
50 Diethylphthalate

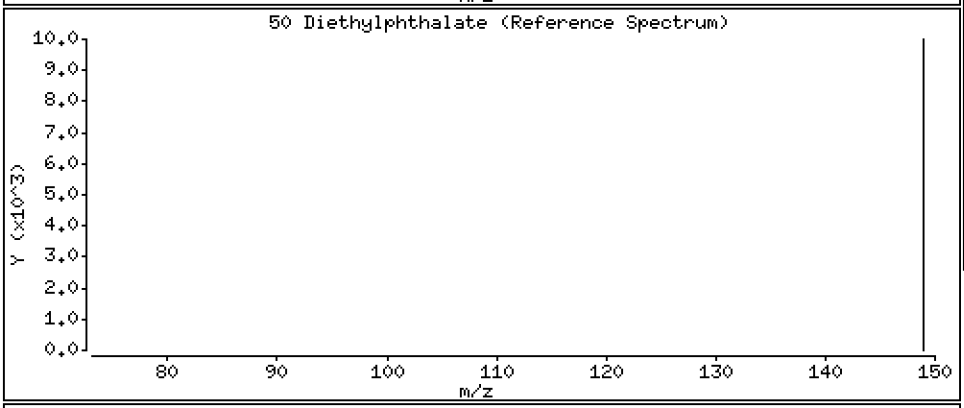
Concentration: 0.1532 ug/L

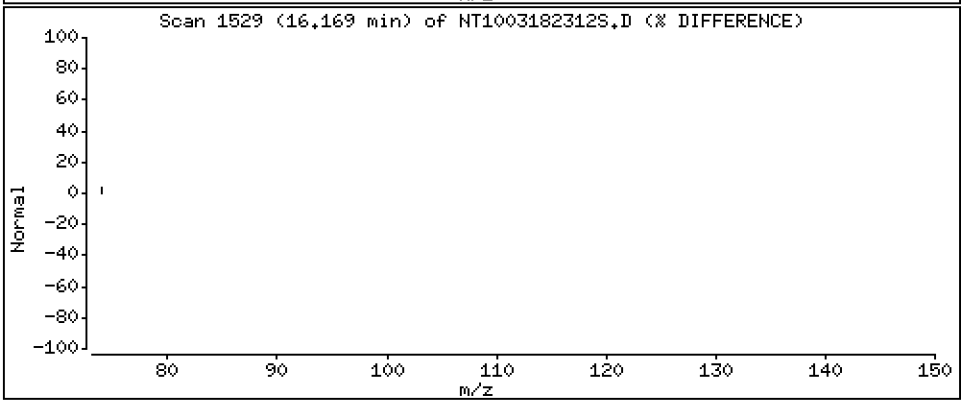












Date : 19-MAR-2023 00:46

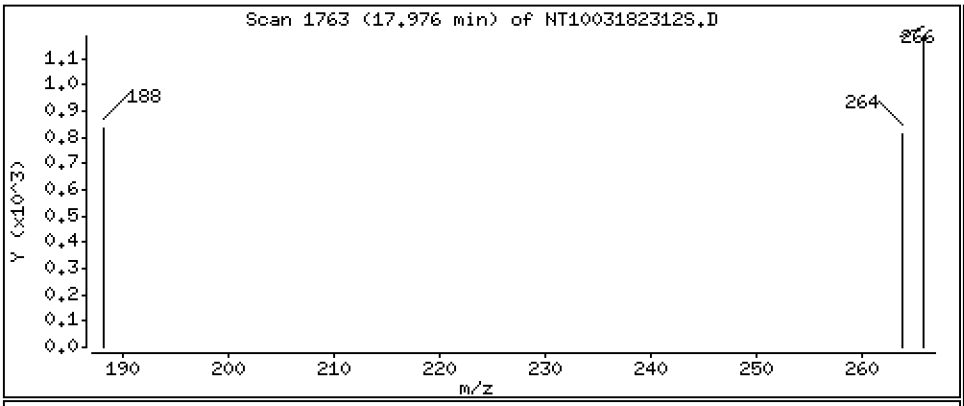
Client ID: Instrument: nt10.i

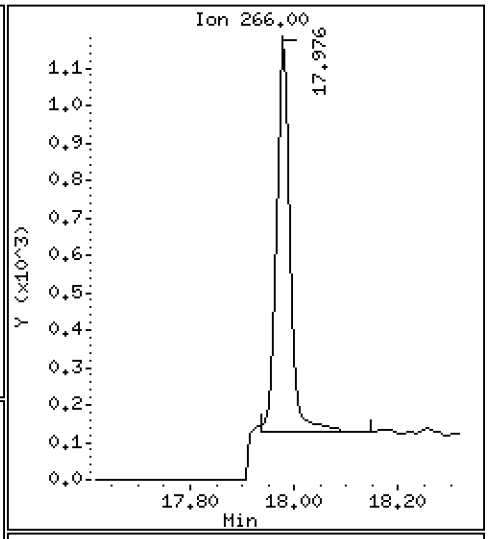
Sample Info: 23A0467-03

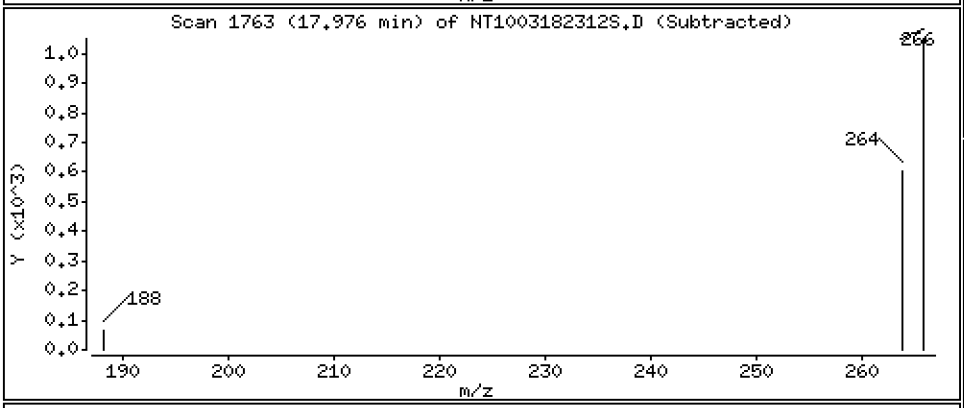
Volume Injected (uL): 1.0 Operator: JGR

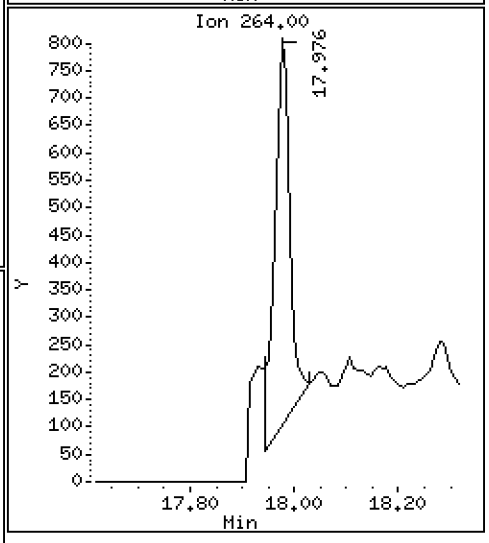
Column phase: ZB-5msi Column diameter: 0.25

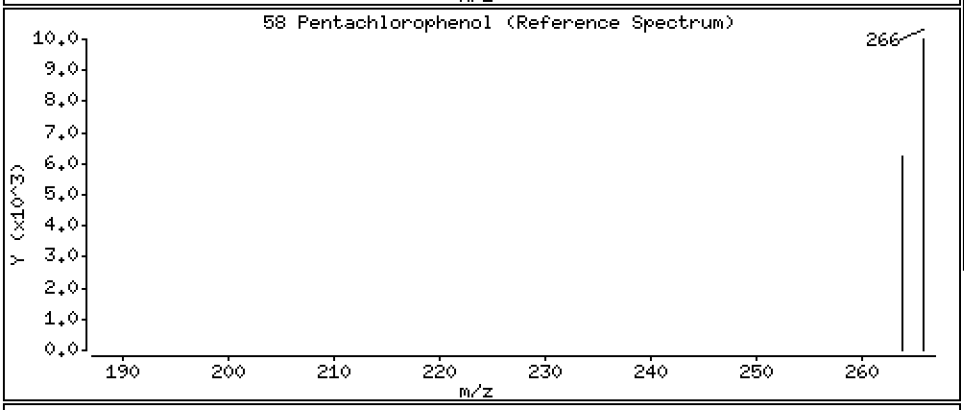
58 Pentachlorophenol Concentration: 0.05145 ug/L

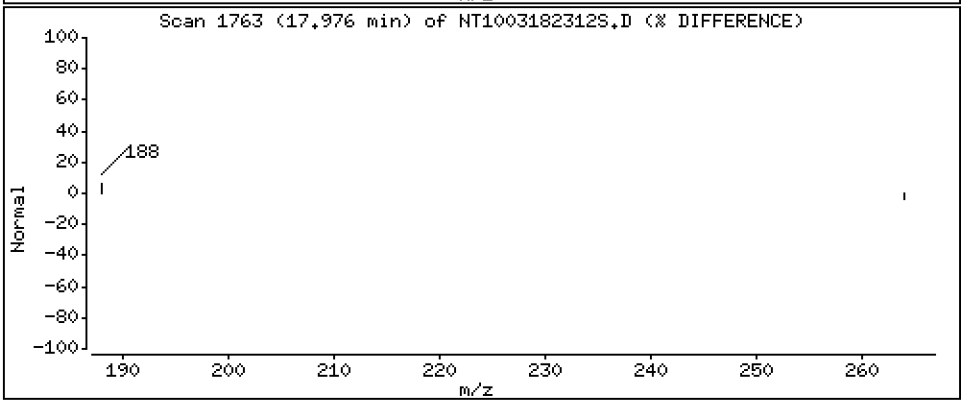












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

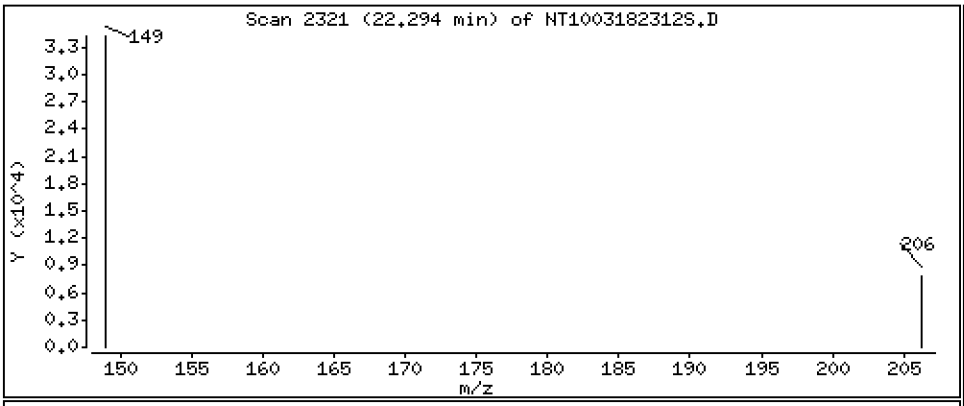
Operator: JGR

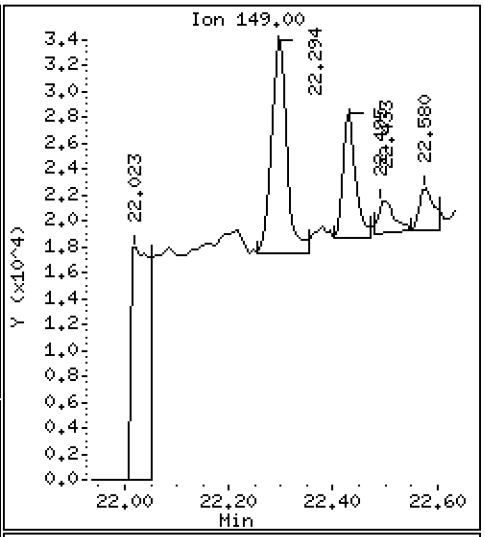
Column phase: ZB-5msi

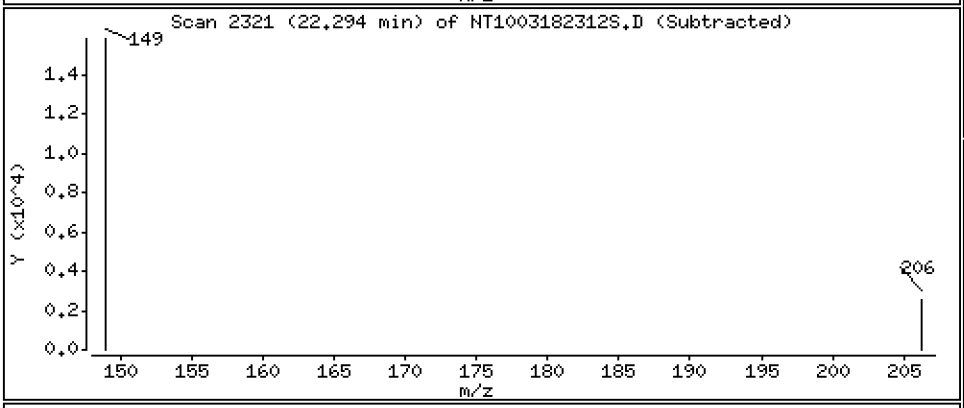
Column diameter: 0.25

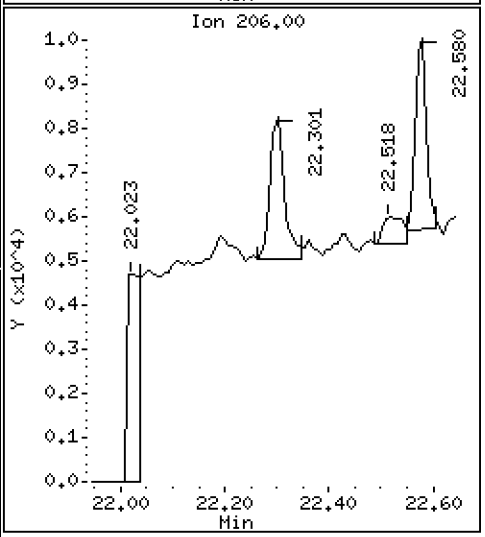
67 Butylbenzylphthalate

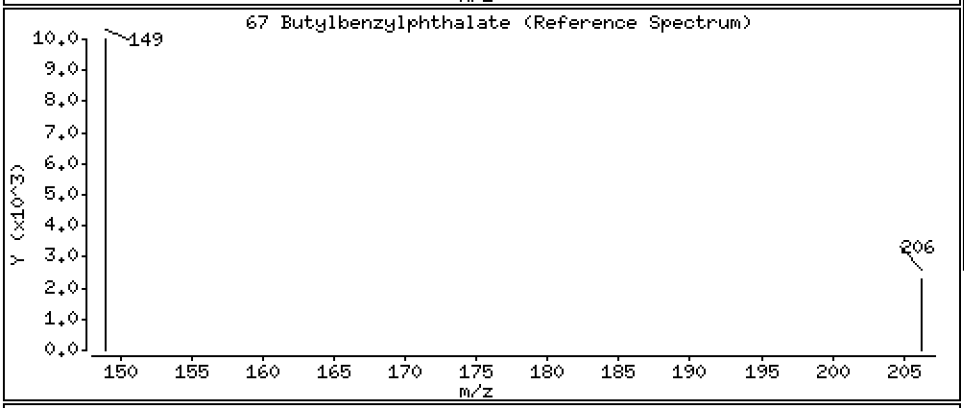
Concentration: 0.2630 ug/L

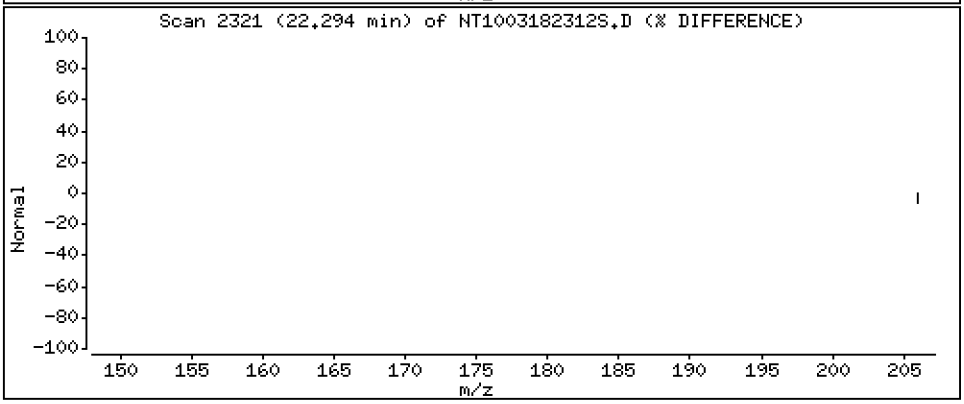












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Date : 19-MAR-2023 00:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-03

Volume Injected (uL): 1.0

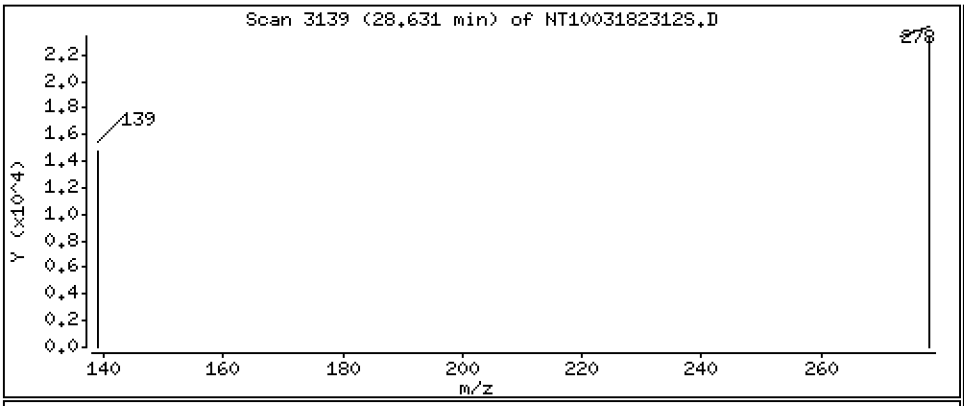
Operator: JGR

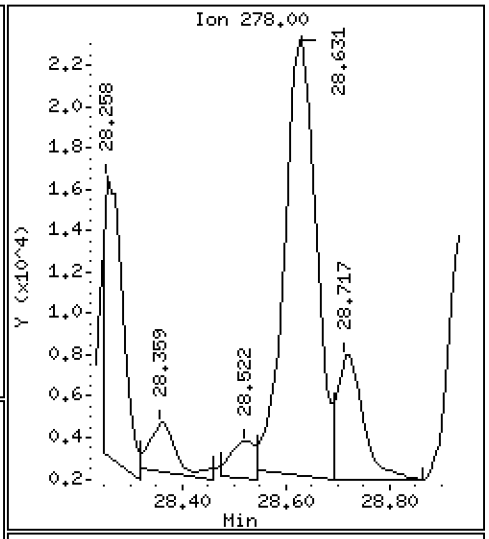
Column phase: ZB-5msi

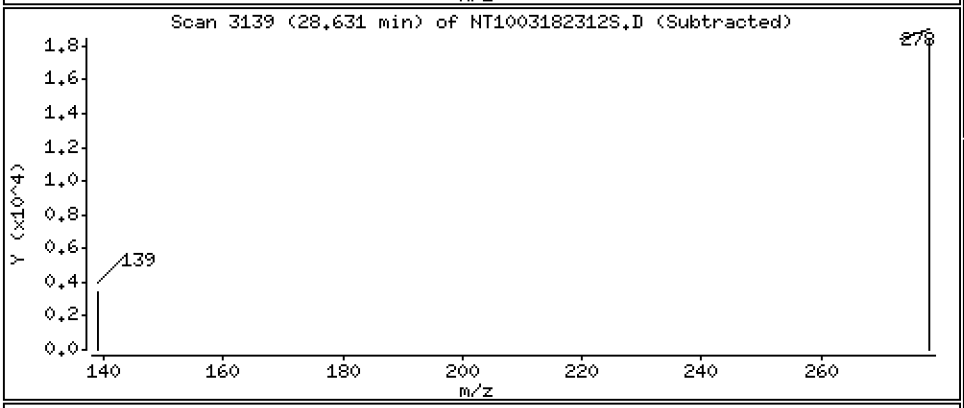
Column diameter: 0.25

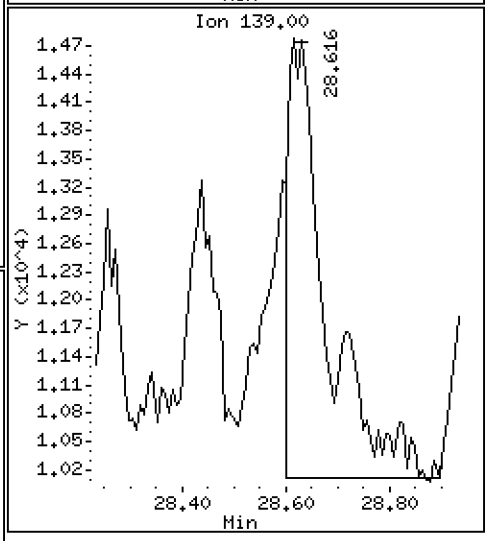
79 Dibenzo(a,h)anthracene

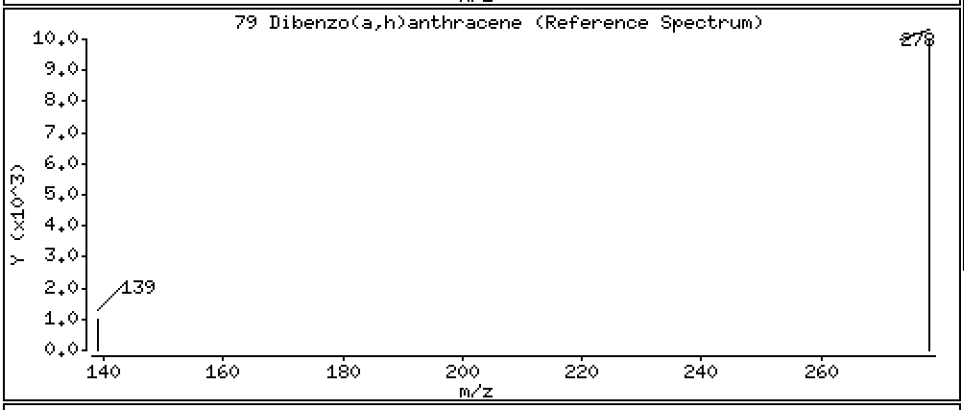
Concentration: 0.2698 ug/L

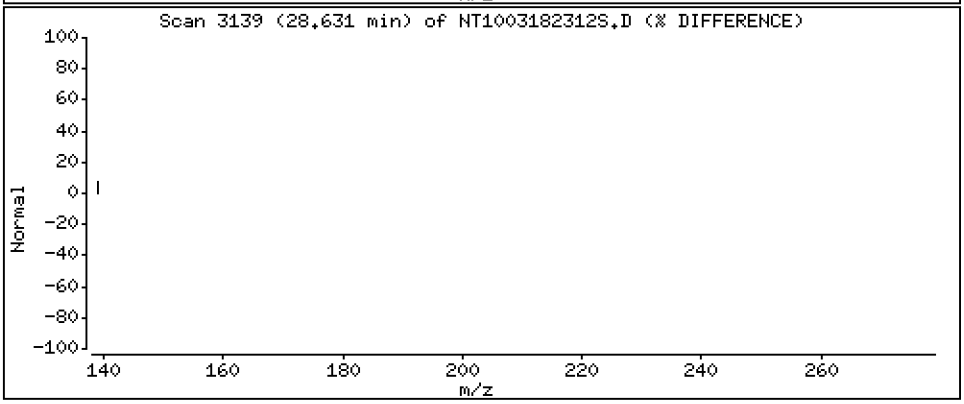












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182312S.D
Lab Smp Id: 23A0467-03
Inj Date : 19-MAR-2023 00:46 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-03
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.957	(0.761)	520271	5.59100	5.591(R)
3	Phenol	94	8.556	8.541	(0.933)	629768	4.93294	4.933
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.167	(1.000)	306864	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	2446	0.02121	0.02121(M)
11	Benzyl alcohol	79	9.431	9.431	(1.028)	23365	0.31569	0.3157(M)
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.041)	689	0.00608	0.006075
13	2-Methylphenol	108	9.656	9.648	(1.052)	2035	0.02300	0.02300(MH)
15	4-Methylphenol	108	9.920	9.912	(1.081)	239336	2.60370	2.604
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.960	10.943	(0.942)	1685	0.01782	0.01782
24	Benzoic acid	105	11.062	11.053	(0.951)	51911	1.00026	1.000
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.635	11.627	(1.000)	1094228	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.714	14.714	(0.967)	11215	0.06841	0.06841(M)
* 42	Acenaphthene-d10	162	15.217	15.210	(1.000)	519464	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	26009	0.15315	0.1532(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
58	Pentachlorophenol	266	17.975	17.968	(0.985)	1899	0.05145	0.05145
* 59	Phenanthrene-d10	188	18.246	18.231	(1.000)	1113095	4.00000	
$ 66	Terphenyl-d14	244	21.380	21.364	(0.918)	831735	5.50947	5.509(R)
67	Butylbenzylphthalate	149	22.293	22.285	(0.957)	32115	0.26304	0.2630
* 69	Chrysene-d12	240	23.284	23.269	(1.000)	926529	4.00000	
* 77	Perylene-d12	264	25.932	25.909	(1.000)	1029870	4.00000	
79	Dibenzo(a,h)anthracene	278	28.631	28.584	(1.104)	91106	0.26985	0.2698
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182312S.D
Lab Smp Id: 23A0467-03
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	306864	55.02
27 Naphthalene-d8	704013	352007	1408026	1094228	55.43
42 Acenaphthene-d10	353977	176989	707954	519464	46.75
59 Phenanthrene-d10	686752	343376	1373504	1113095	62.08
69 Chrysene-d12	597733	298867	1195466	926529	55.01
77 Perylene-d12	645663	322832	1291326	1029870	59.51

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.18	0.08
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.08
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.07
77 Perylene-d12	25.91	25.41	26.41	25.93	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182312S.D

Lab ID: 23A0467-03
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 00:46

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

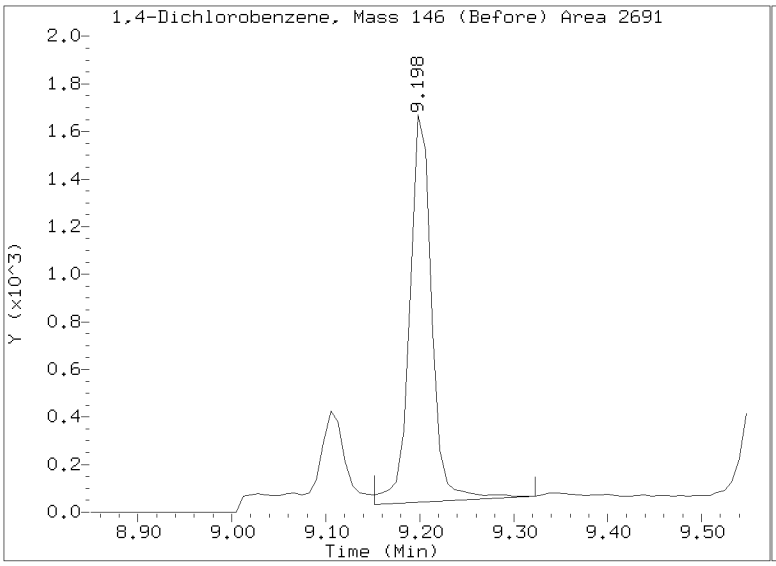
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

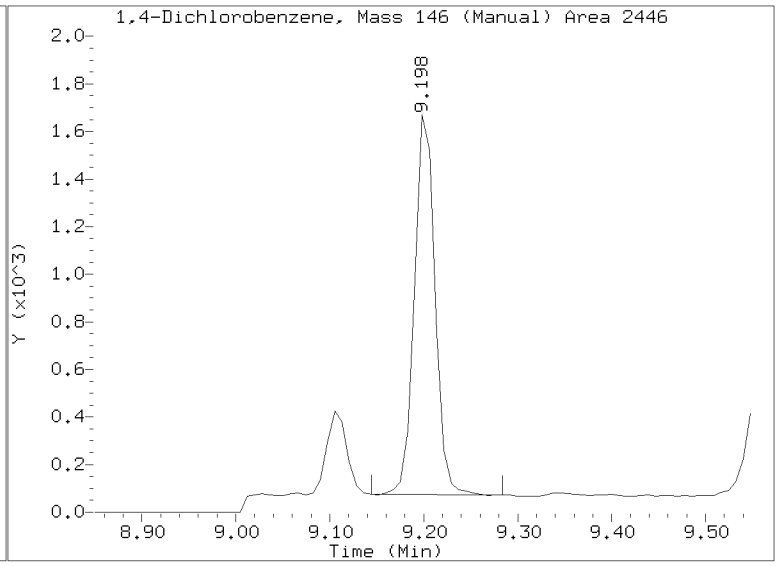
Exception: 1,2,4-Trichlorobenzene 0.0010

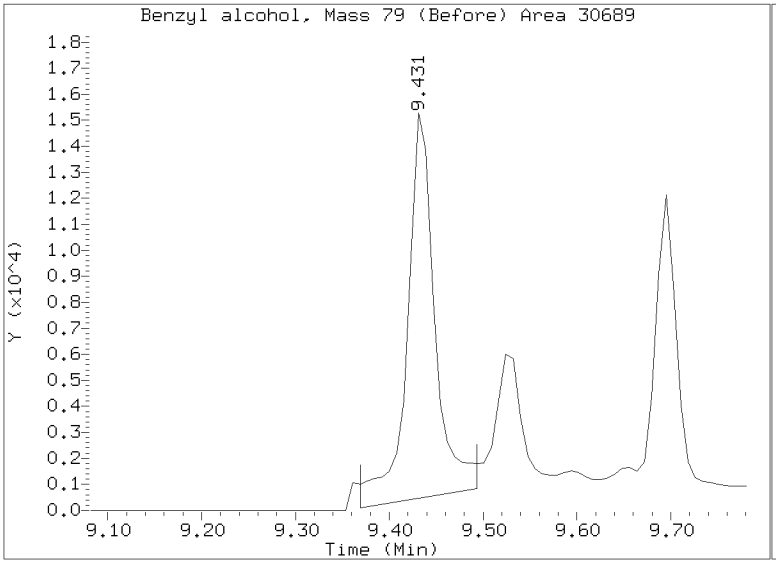
* Only compounds listed in the work order have been verified by the analyst *

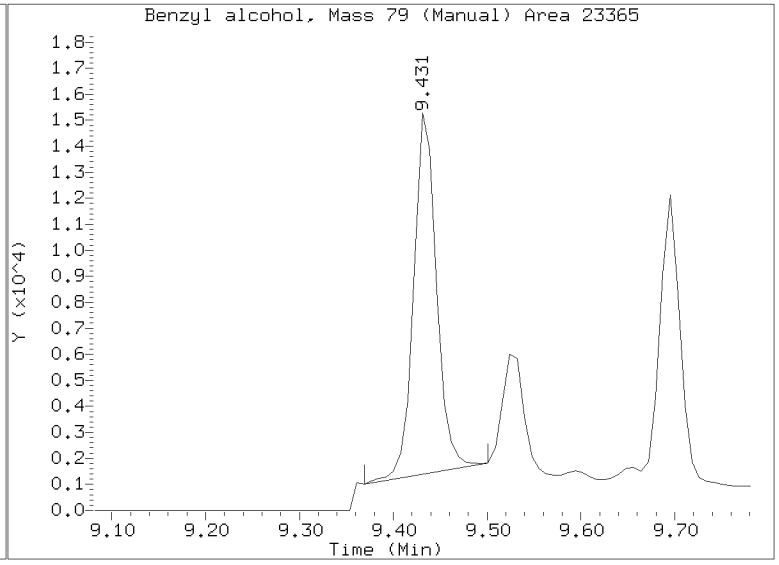
Quant Ion Manual Peak Adjustment Report

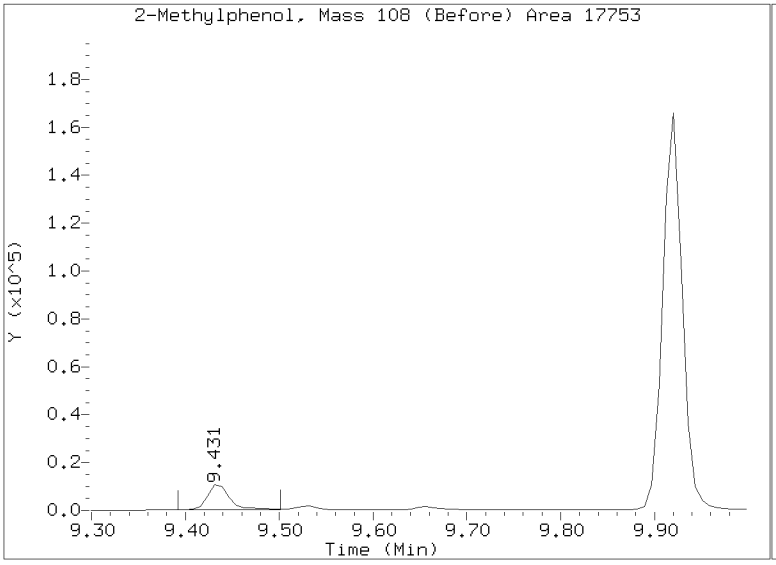
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182312S.D
Injection Date: 19-MAR-2023 00:46
Lab ID:23A0467-03 Client ID:
Report Date: 04/04/2023 12:31

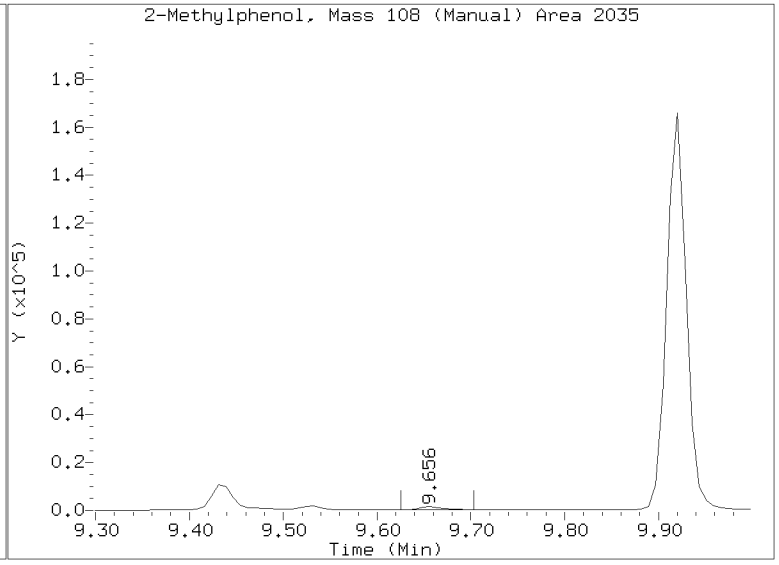






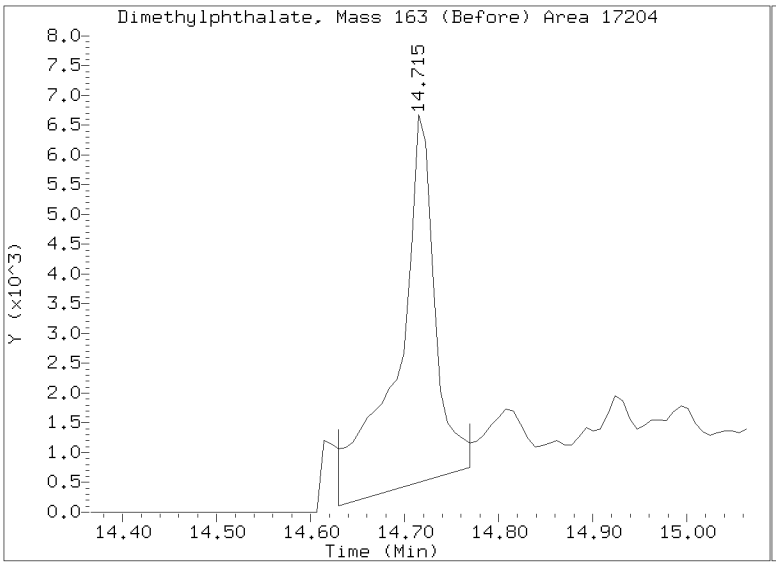


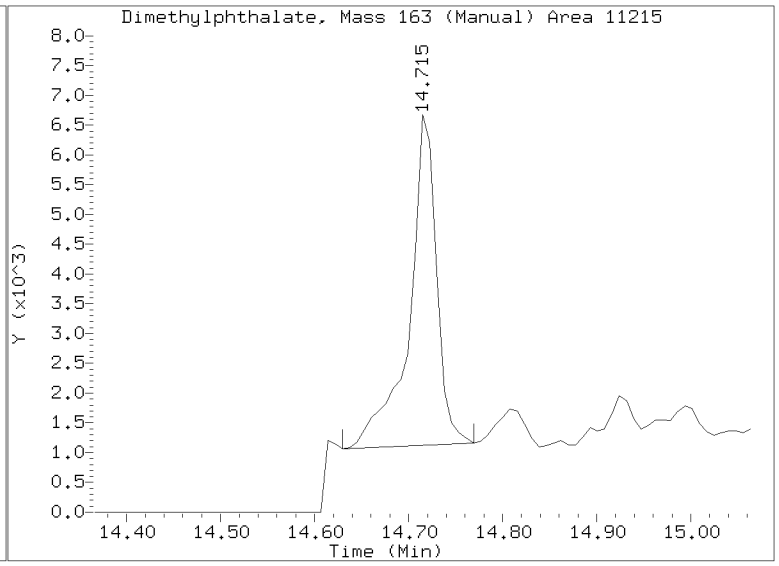


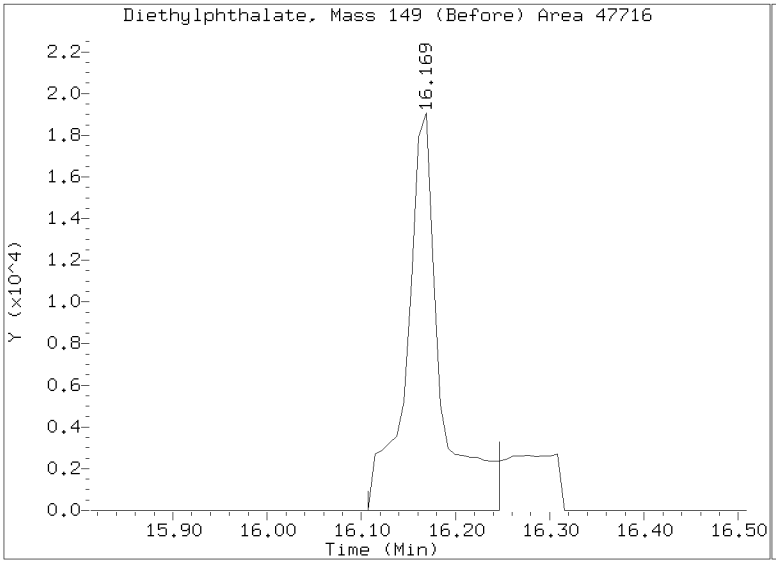


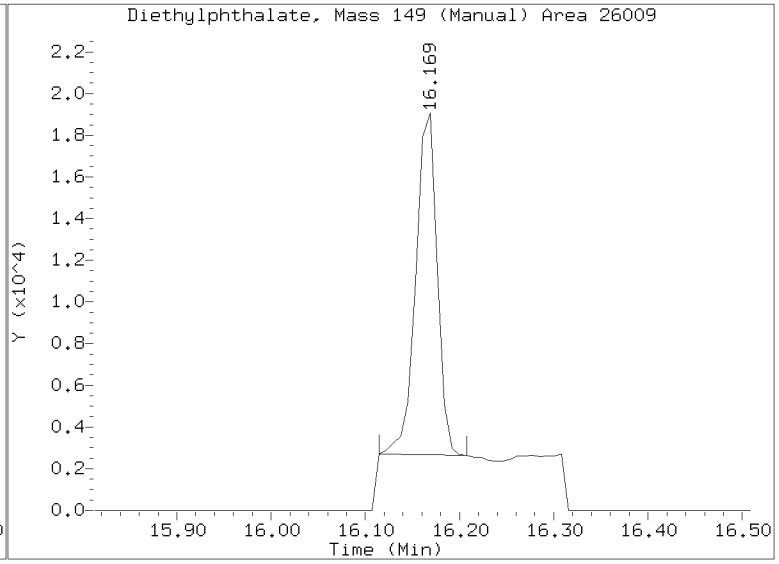
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182312S.D
Injection Date: 19-MAR-2023 00:46
Lab ID:23A0467-03 Client ID:
Report Date: 04/04/2023 12:31









Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1003

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

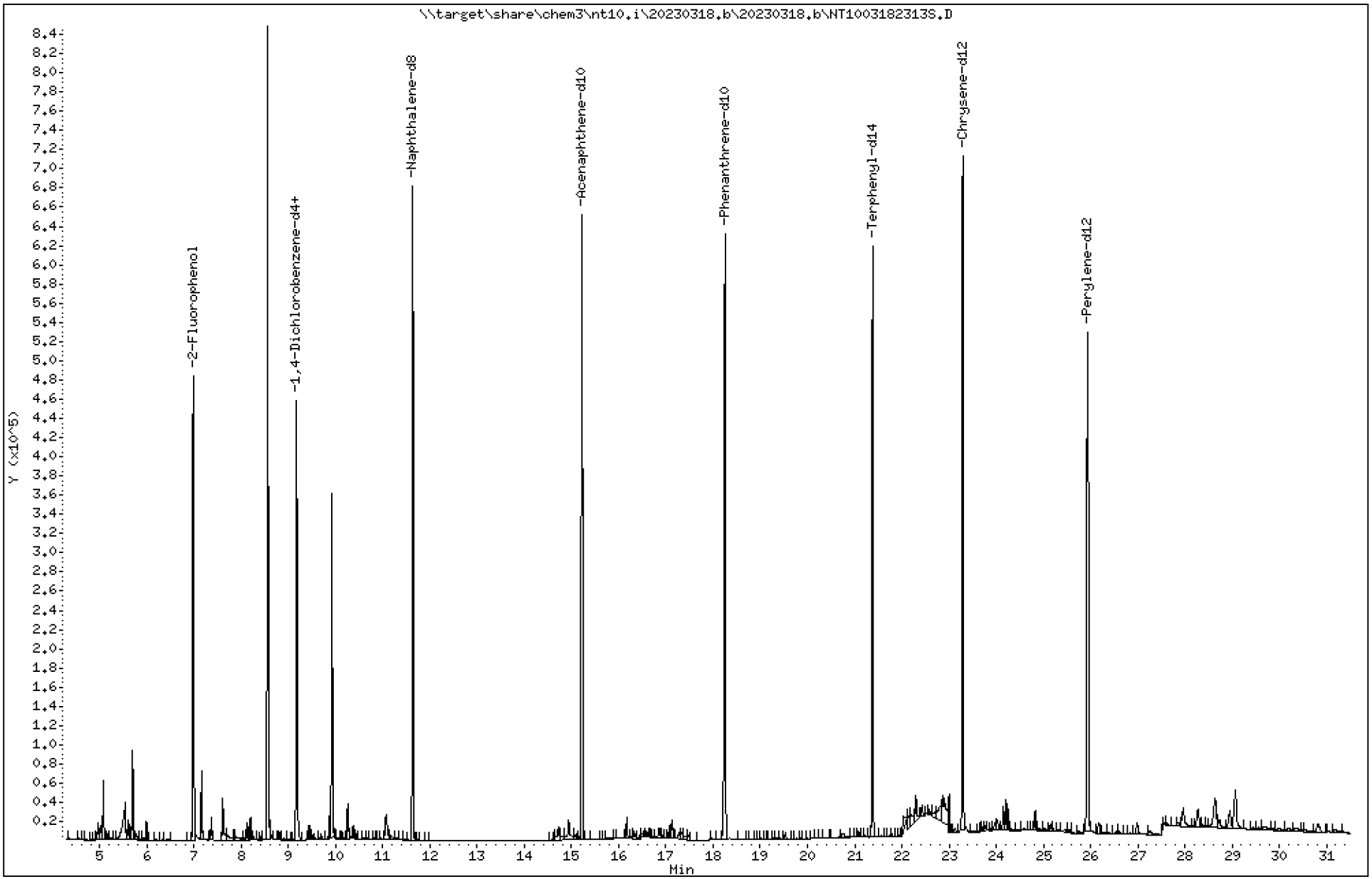
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	02/23/23 15:49	File ID:	NT1003182313S.D
% Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 01:24
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	21.22 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.3	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	0.8	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	23.9		2.5	20.0
65-85-0	Benzoic acid	1	93.9	J	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	5.3	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	750.09	541	72.1	27 - 120	
p-Terphenyl-d14	500.06	534	107	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823133S.D
Date : 19-MAR-2023 01:24
Client ID:
Sample Info: 23A0467-04
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

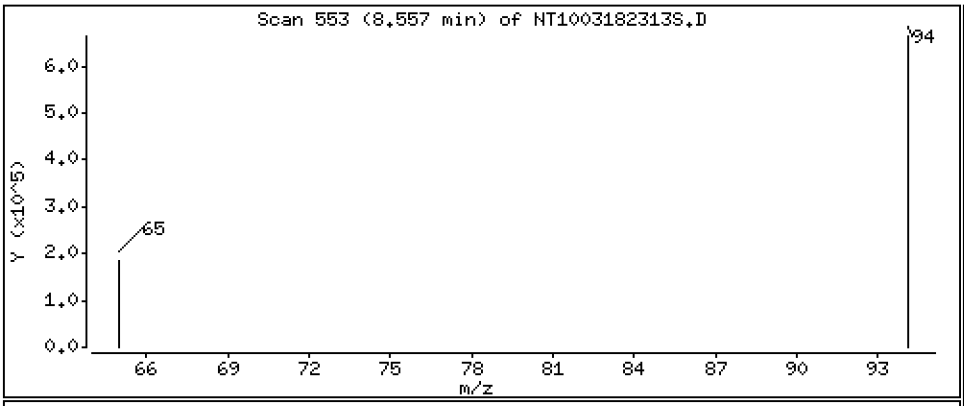
Operator: JGR

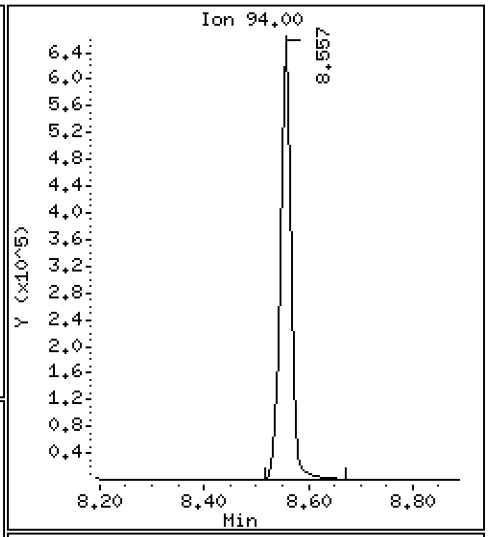
Column phase: ZB-5msi

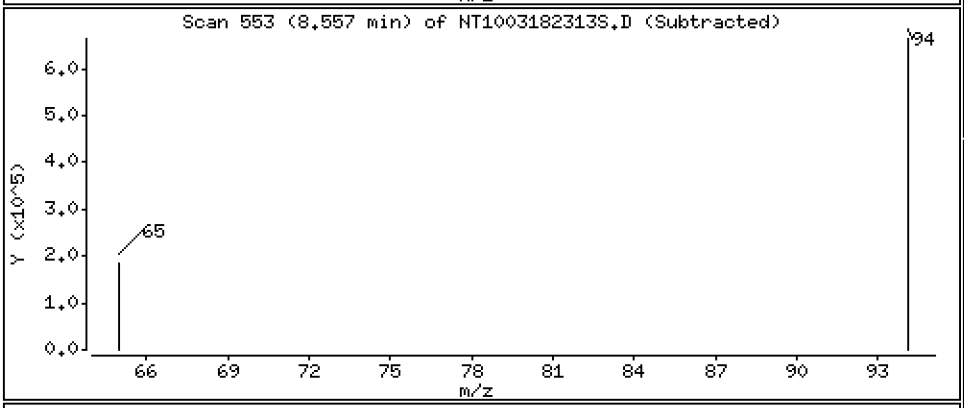
Column diameter: 0.25

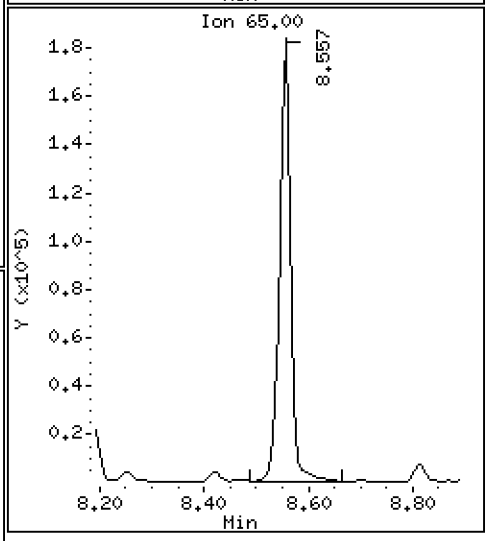
3 Phenol

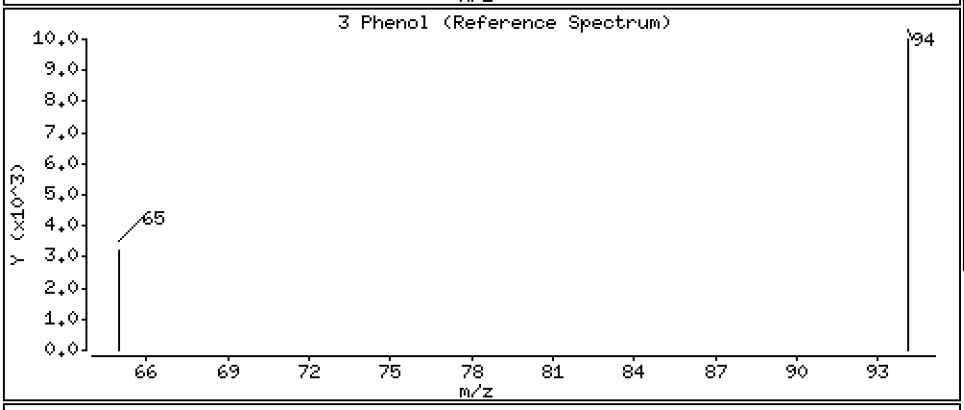
Concentration: 8.014 ug/L

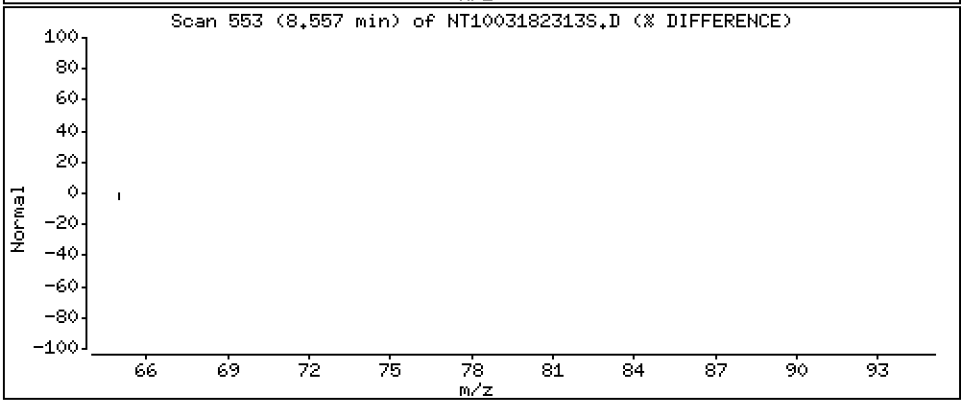












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

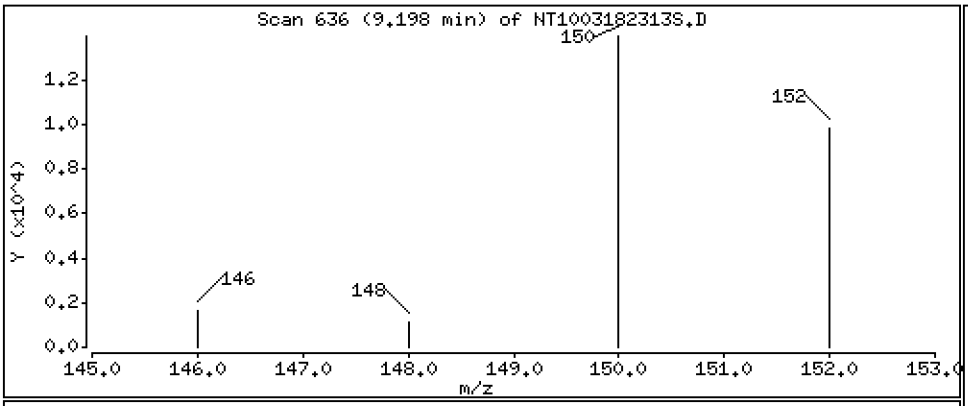
Operator: JGR

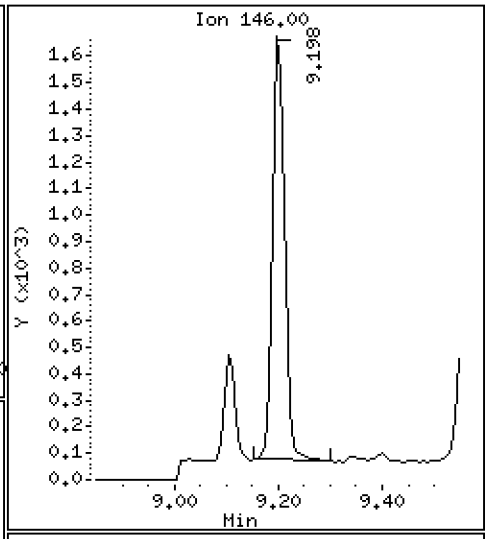
Column phase: ZB-5msi

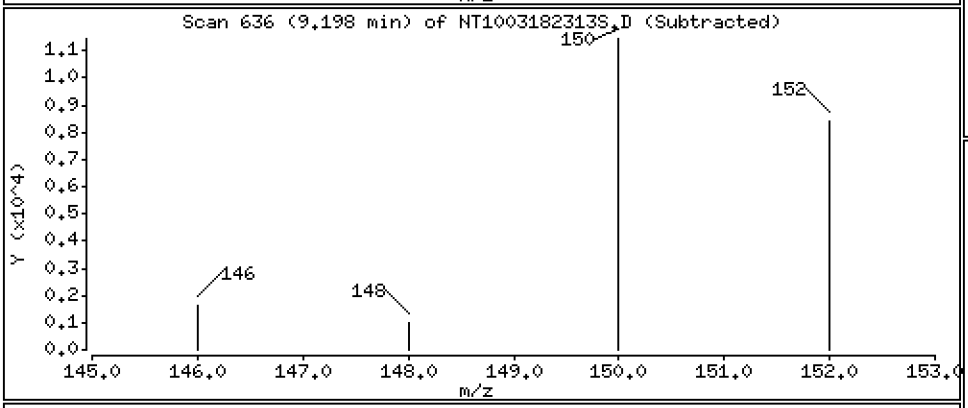
Column diameter: 0.25

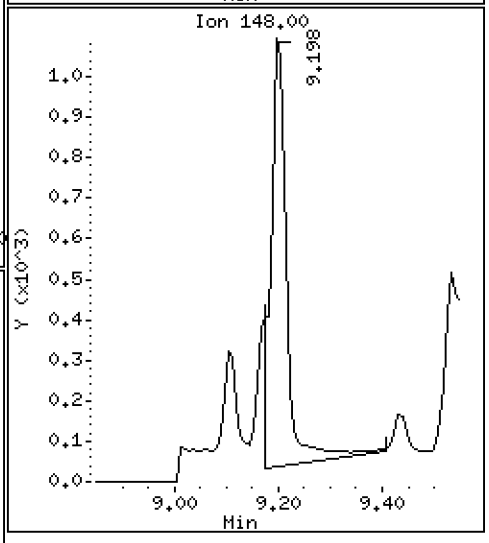
9 1,4-Dichlorobenzene

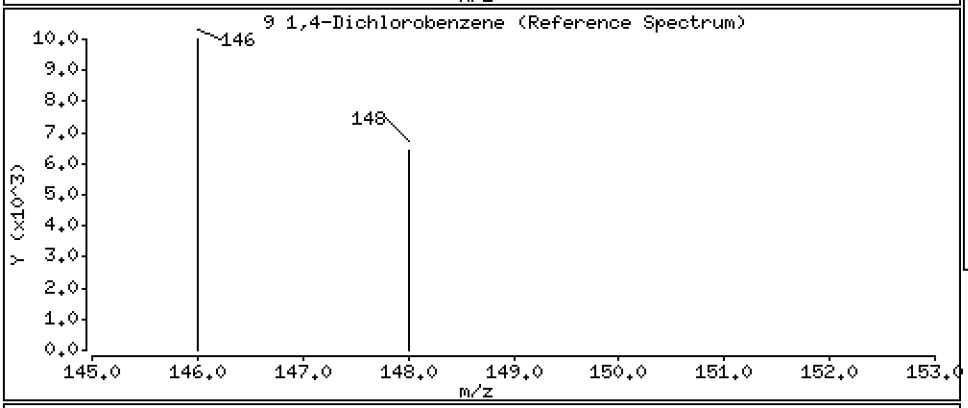
Concentration: 0.02304 ug/L

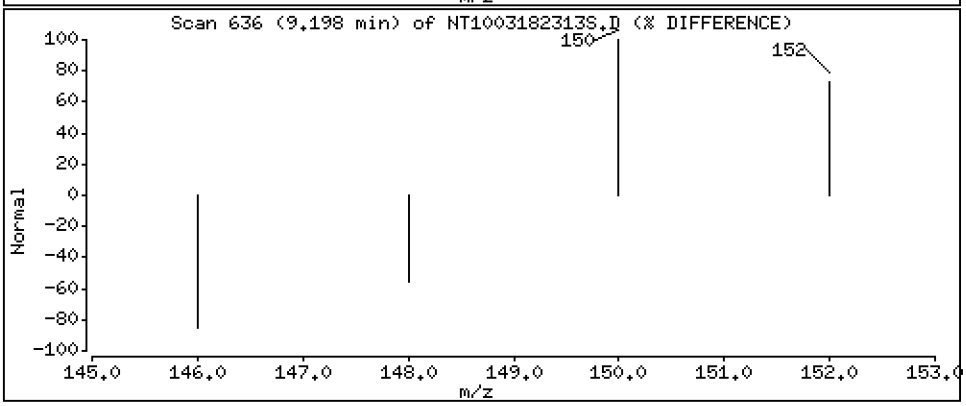












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

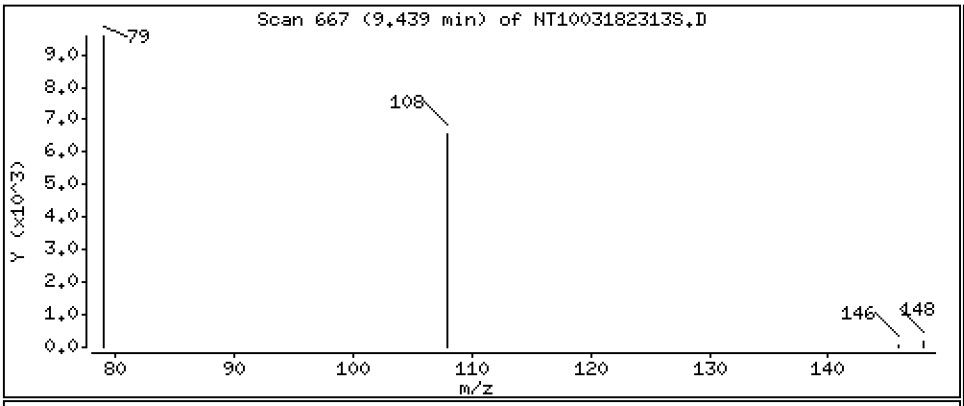
Operator: JGR

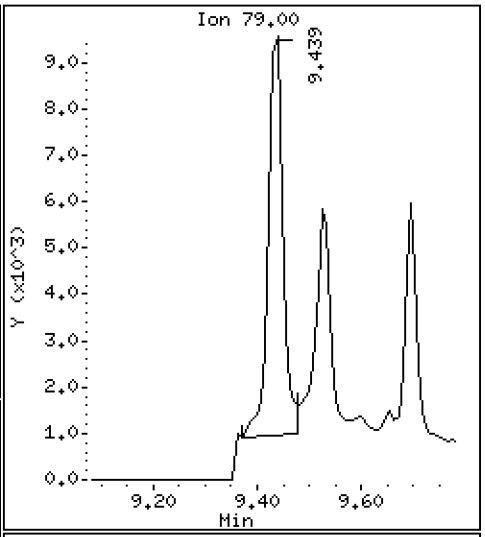
Column phase: ZB-5msi

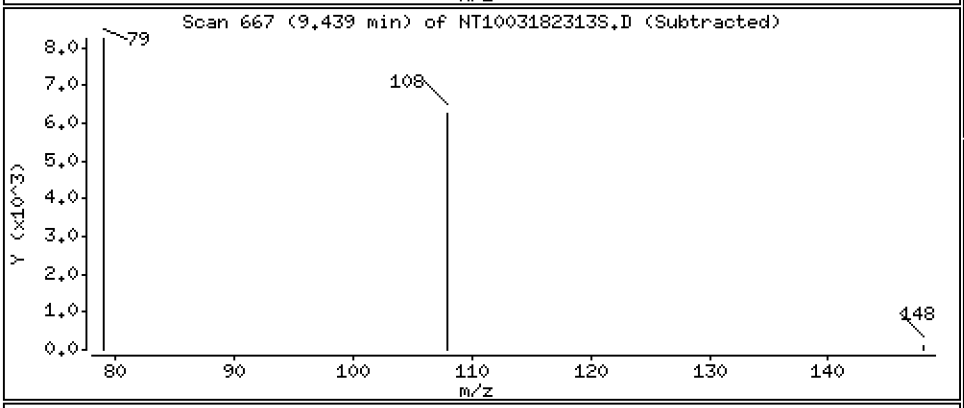
Column diameter: 0.25

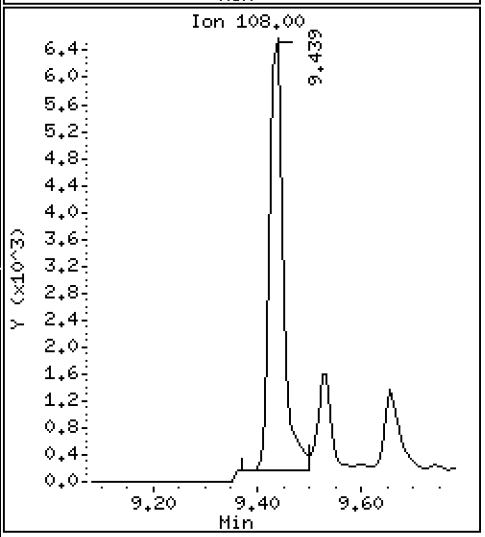
11 Benzyl alcohol

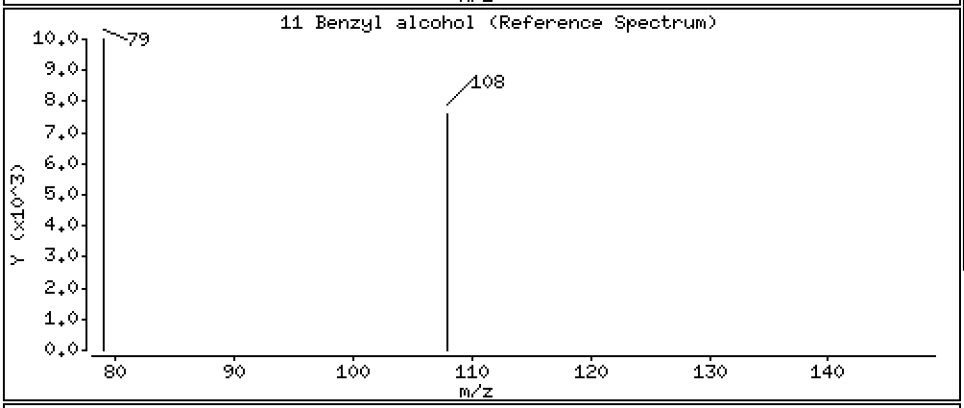
Concentration: 0.2385 ug/L

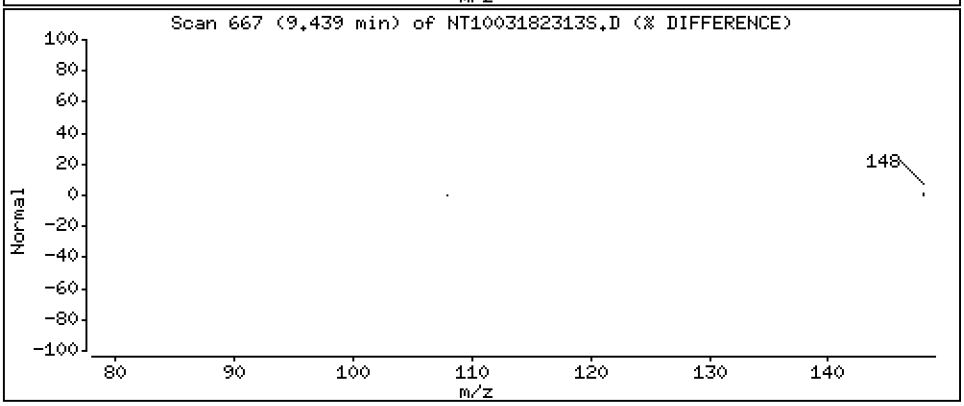












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

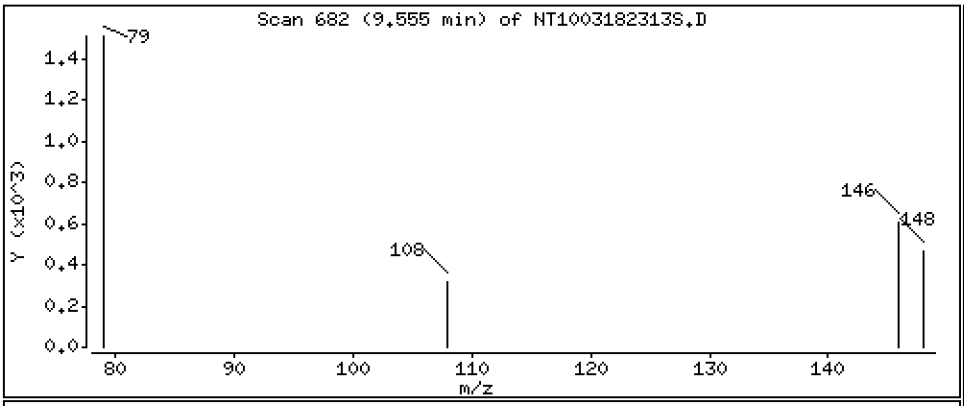
Operator: JGR

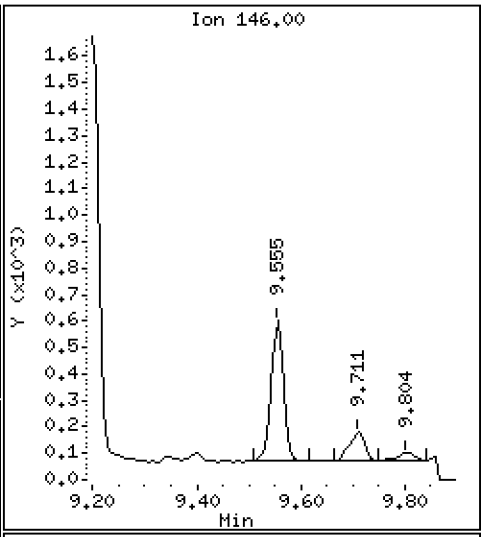
Column phase: ZB-5msi

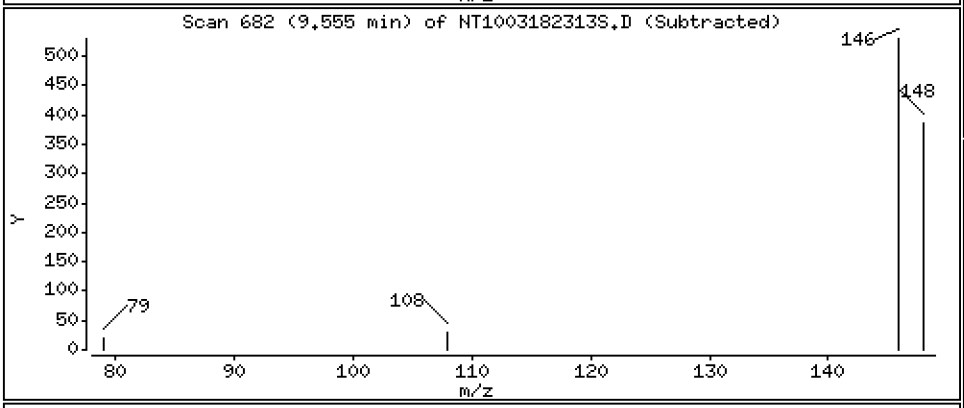
Column diameter: 0.25

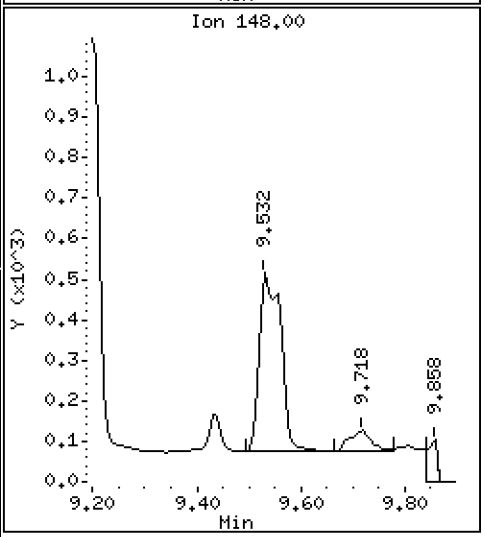
12 1,2-Dichlorobenzene

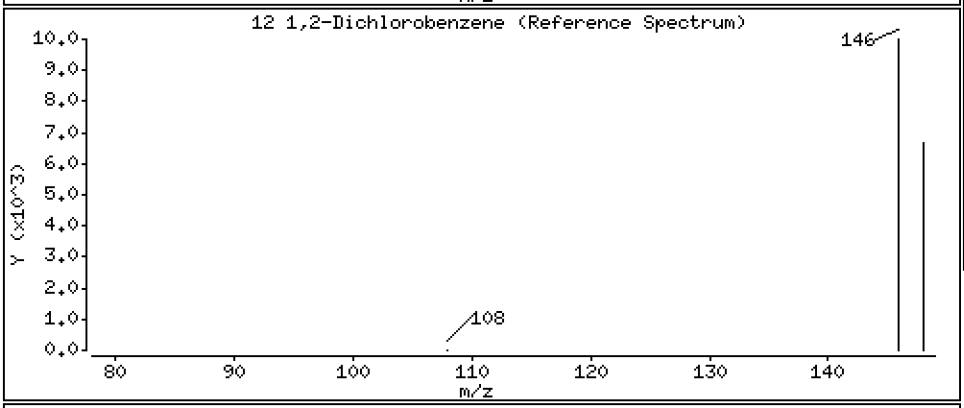
Concentration: 0.007863 ug/L

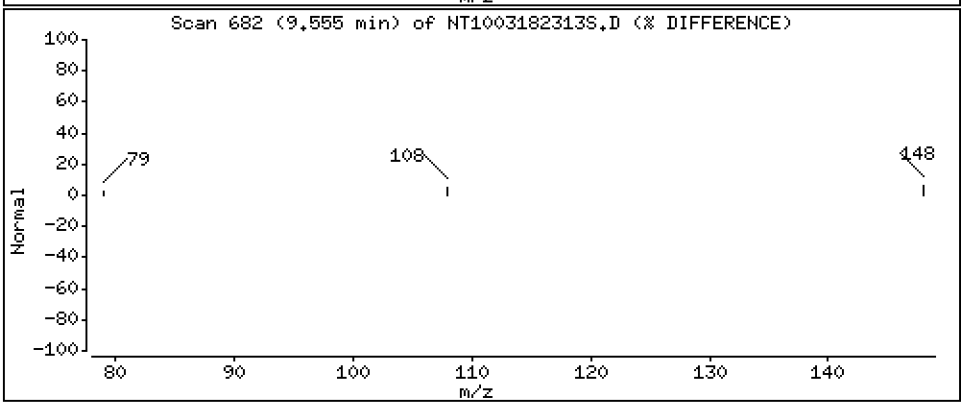












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

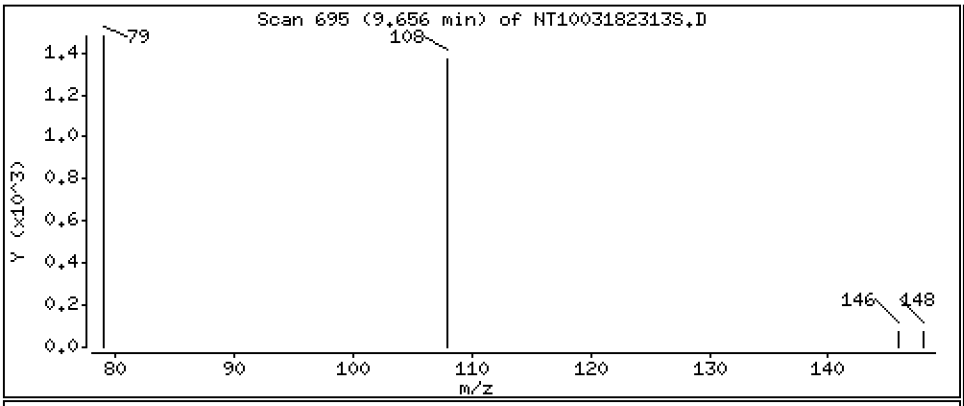
Operator: JGR

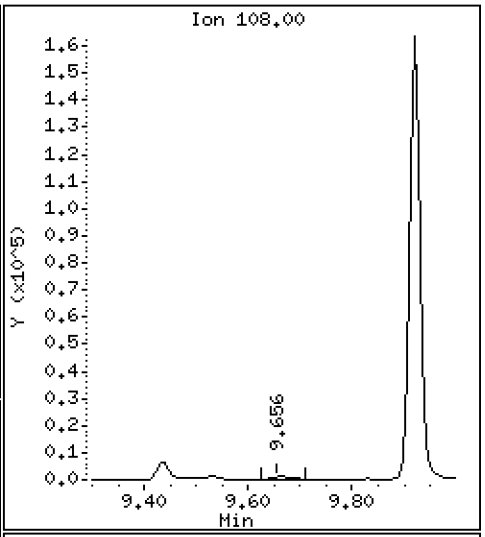
Column phase: ZB-5msi

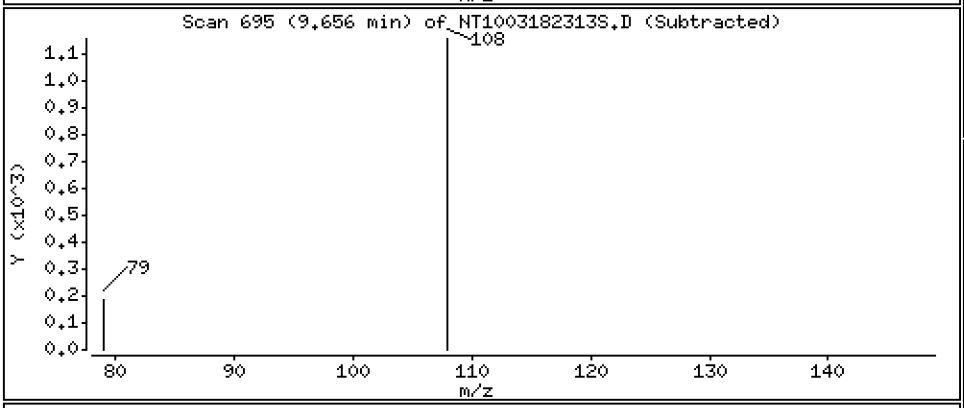
Column diameter: 0.25

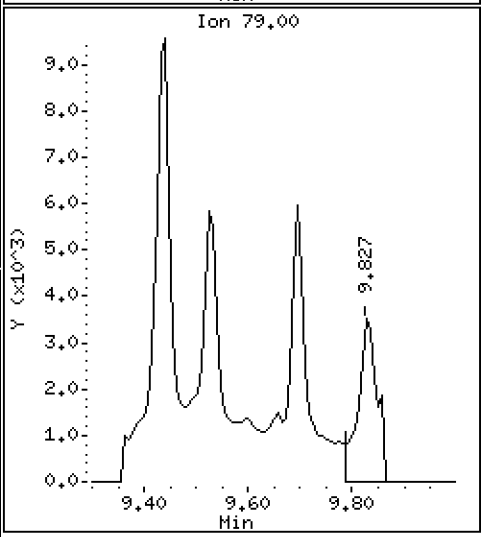
13 2-Methylphenol

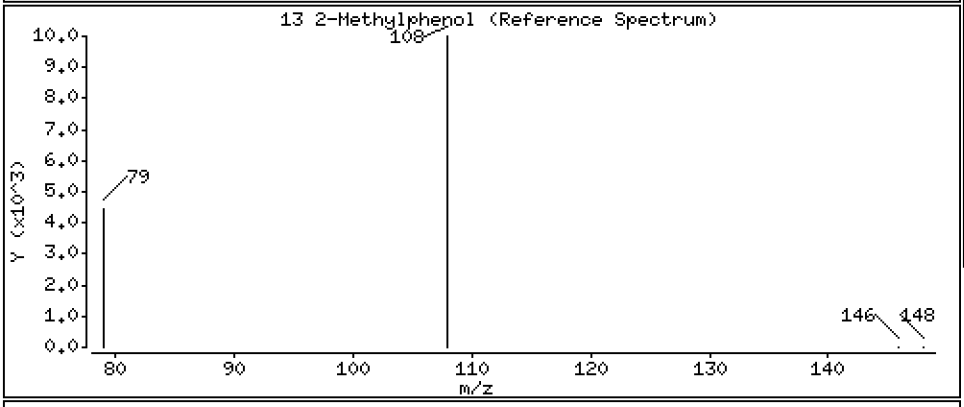
Concentration: 0.02477 ug/L

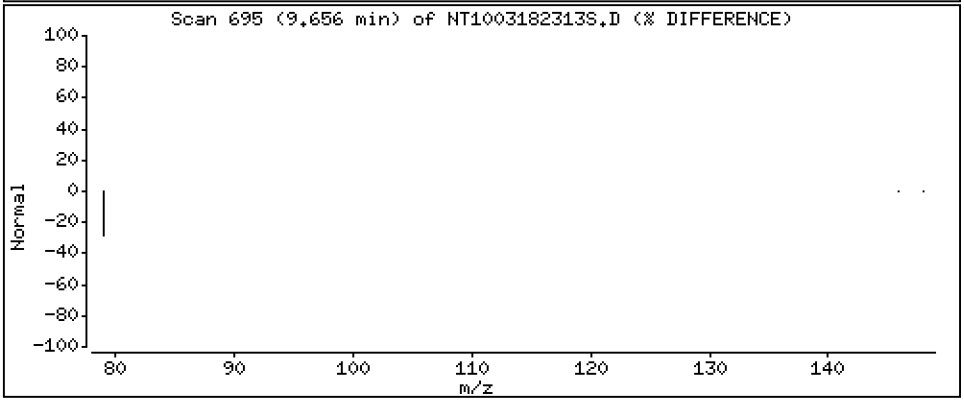












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

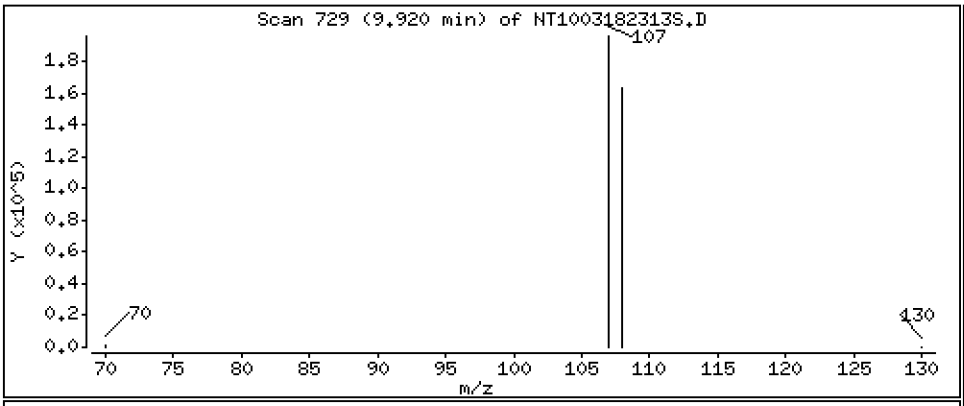
Operator: JGR

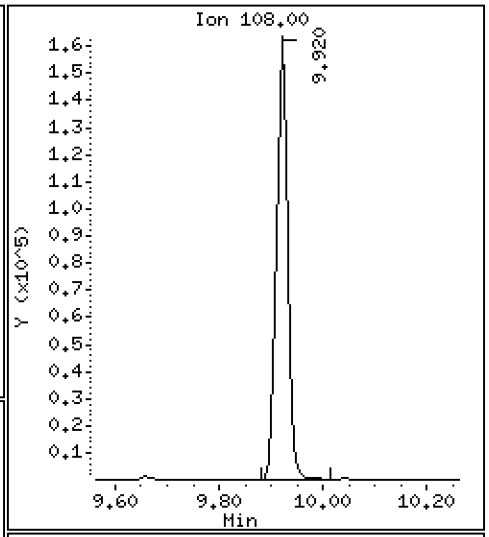
Column phase: ZB-5msi

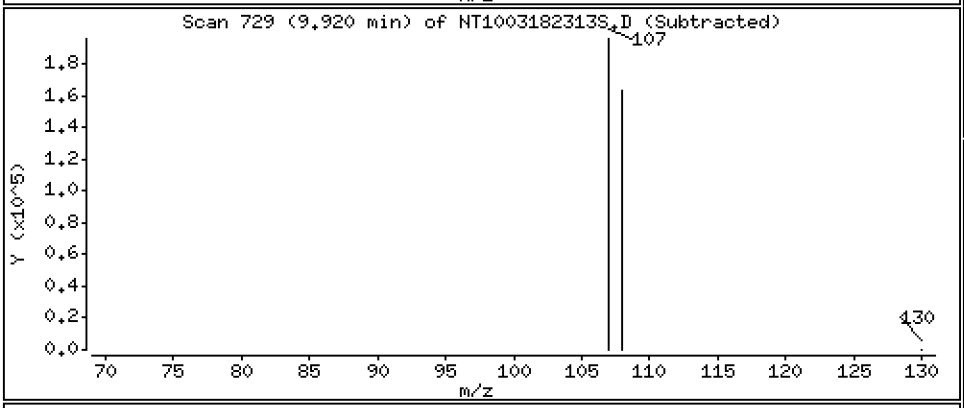
Column diameter: 0.25

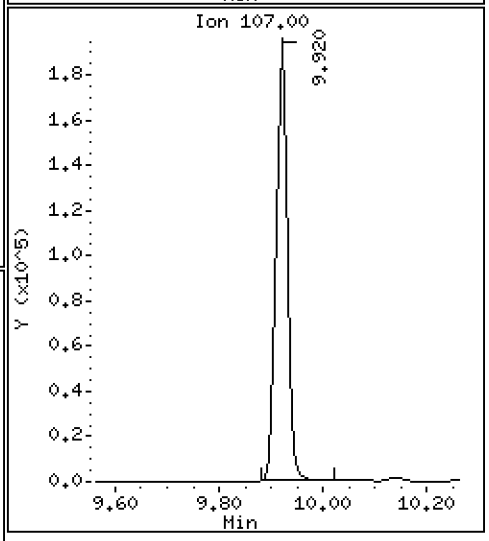
15 4-Methylphenol

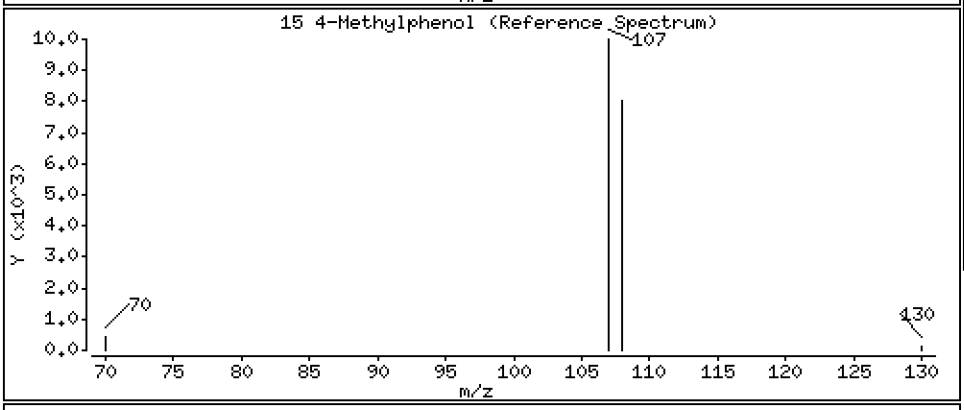
Concentration: 2.771 ug/L

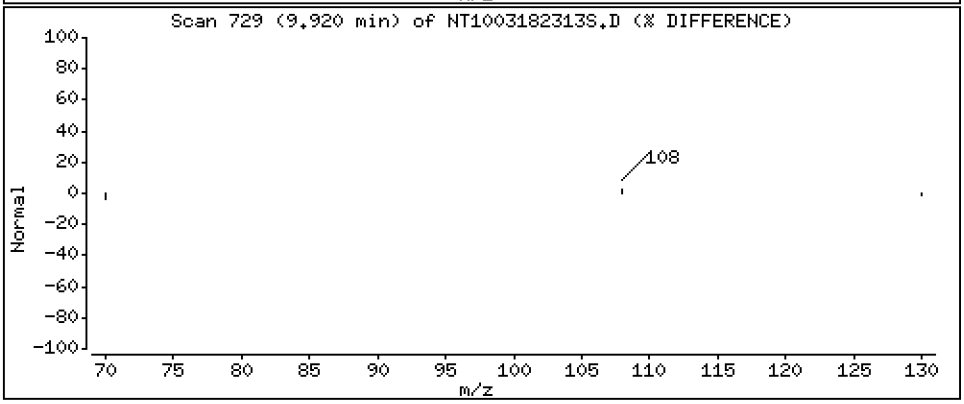












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823135.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

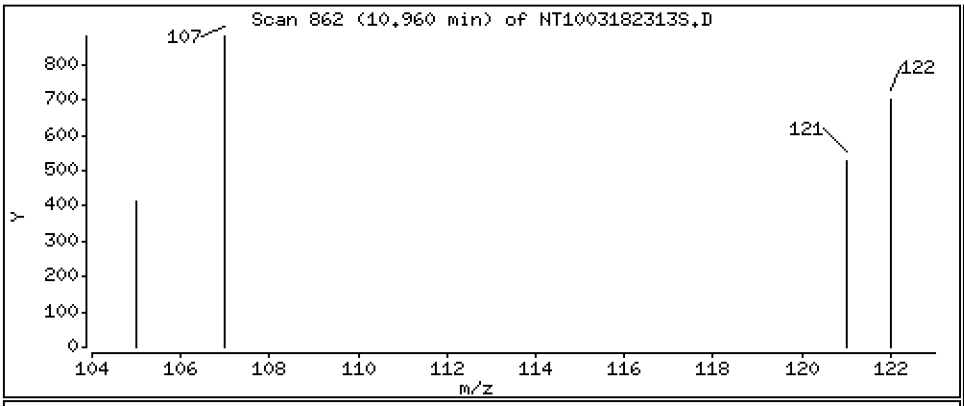
Operator: JGR

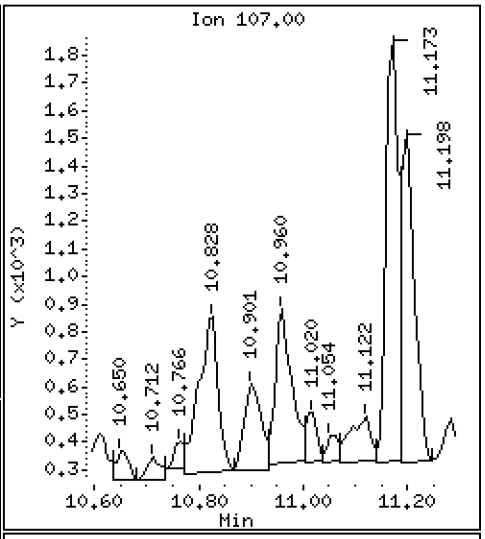
Column phase: ZB-5msi

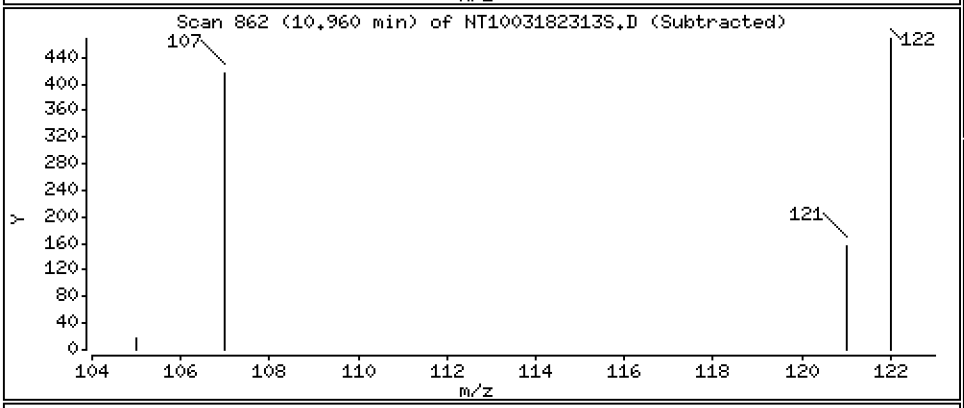
Column diameter: 0.25

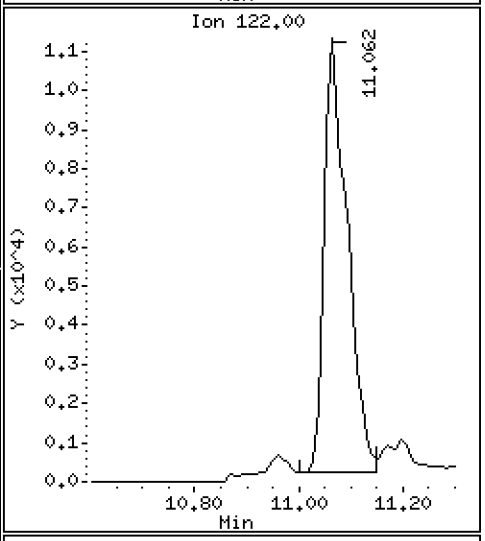
22 2,4-Dimethylphenol

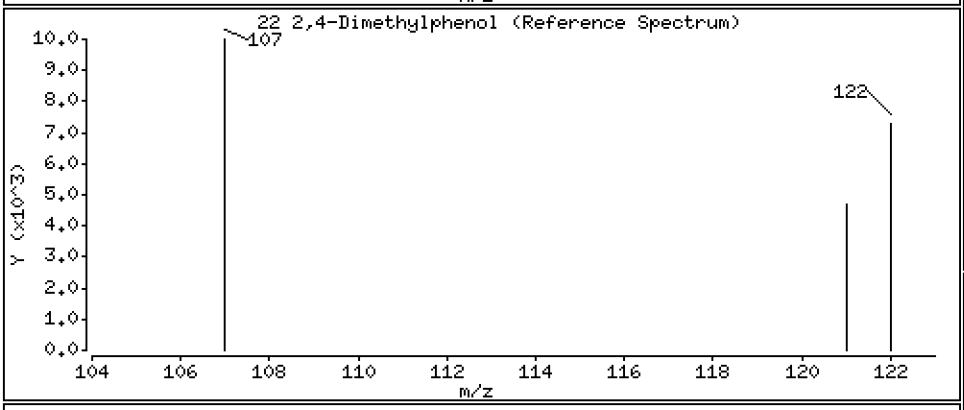
Concentration: 0.01430 ug/L

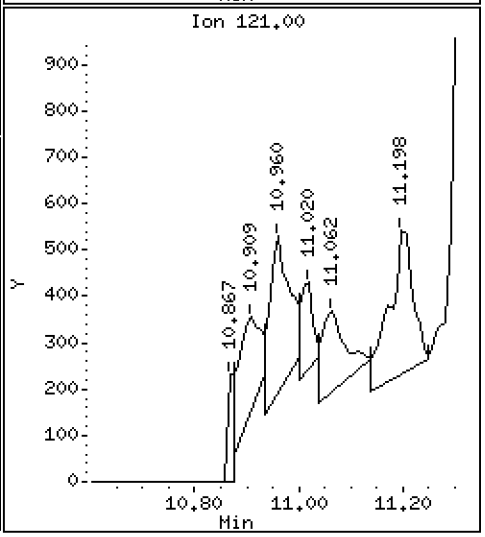


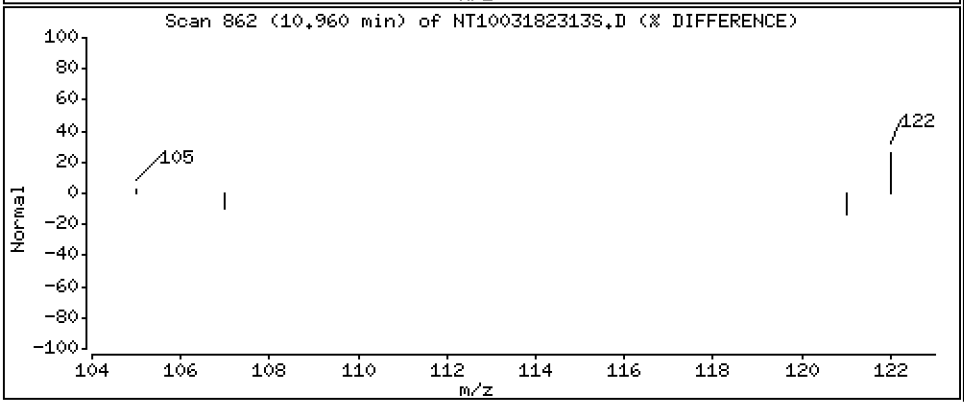












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Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

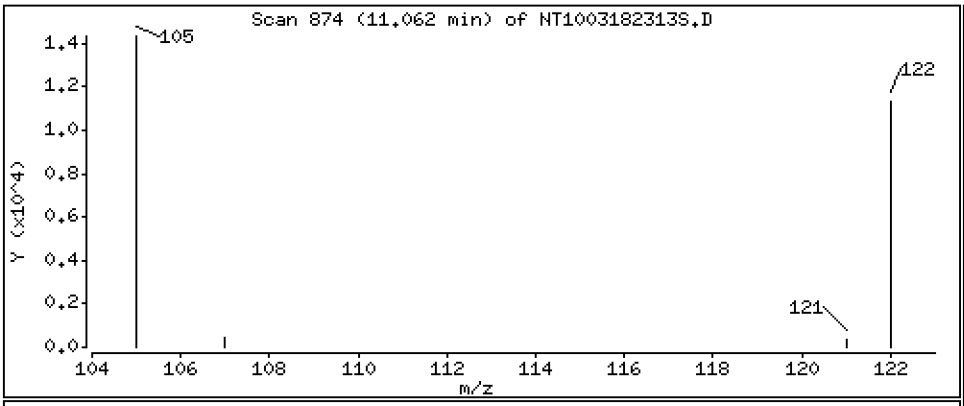
Operator: JGR

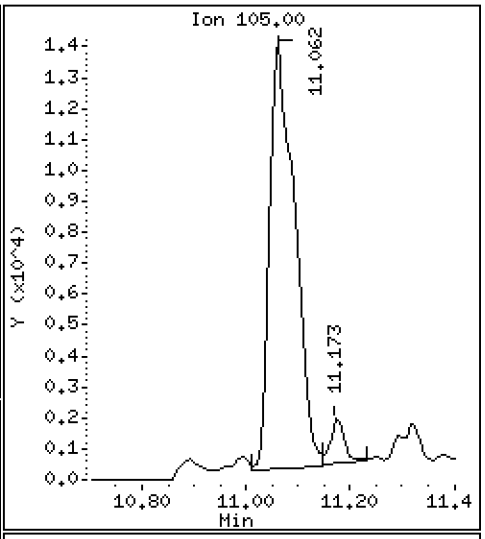
Column phase: ZB-5msi

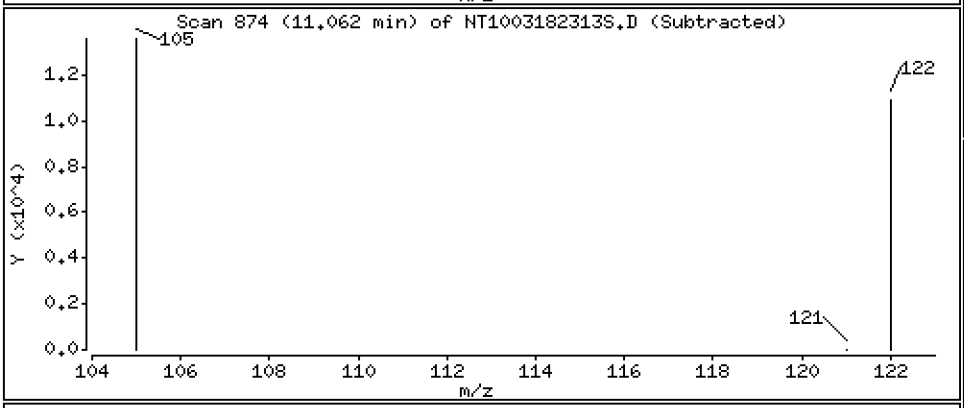
Column diameter: 0.25

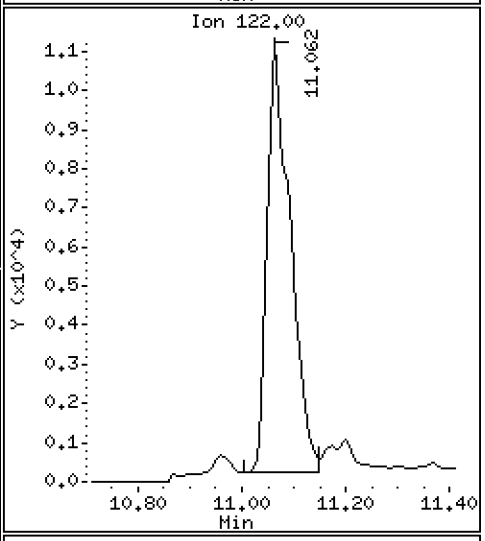
24 Benzoic acid

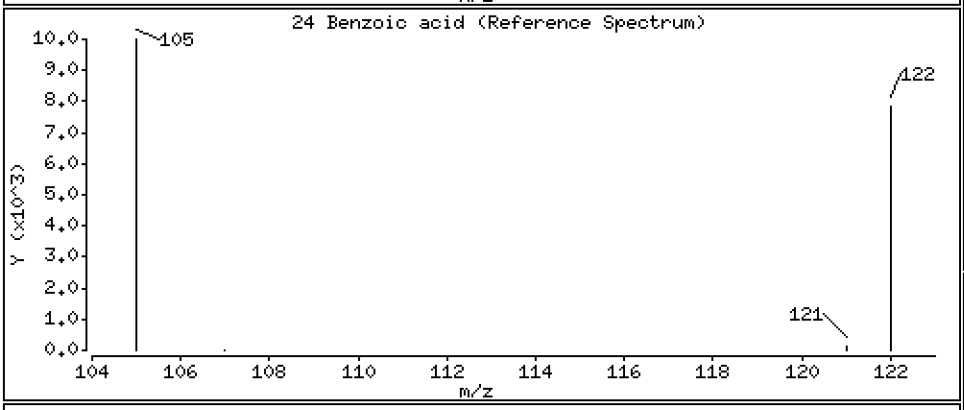
Concentration: 0.9385 ug/L

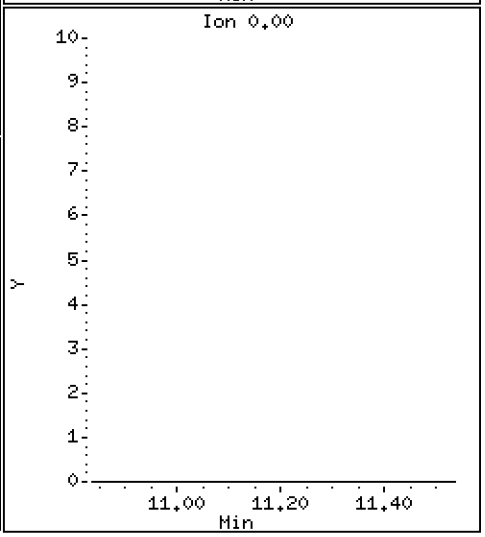


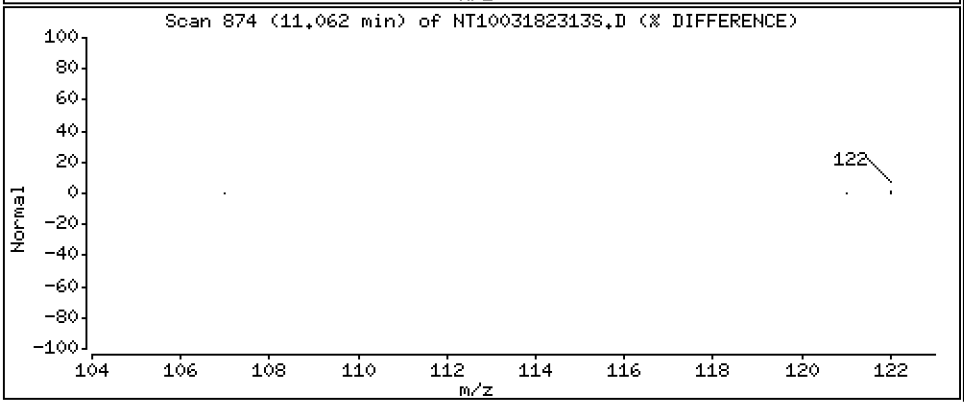












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

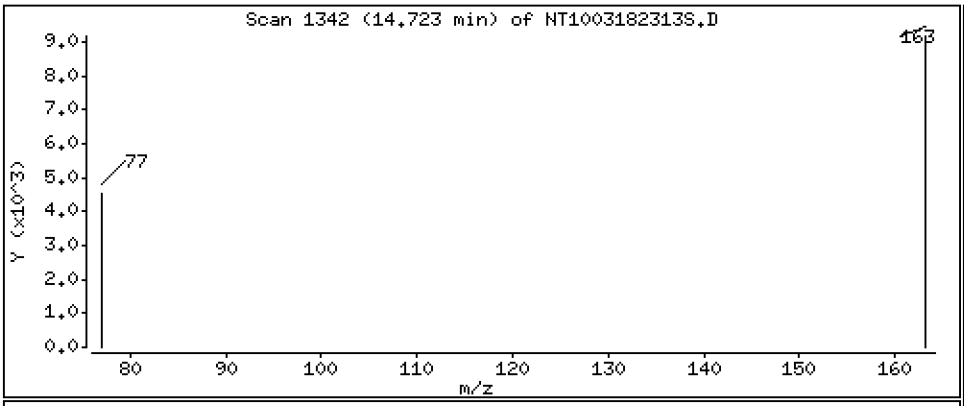
Operator: JGR

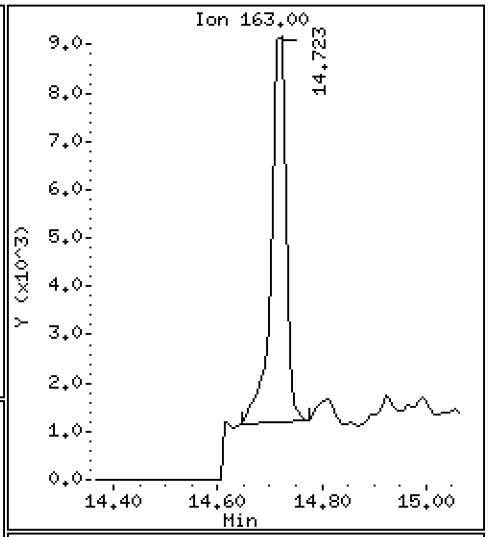
Column phase: ZB-5msi

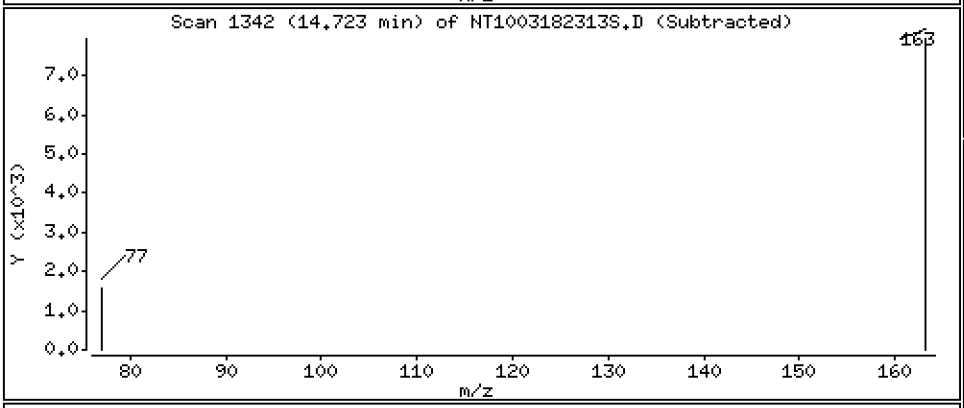
Column diameter: 0.25

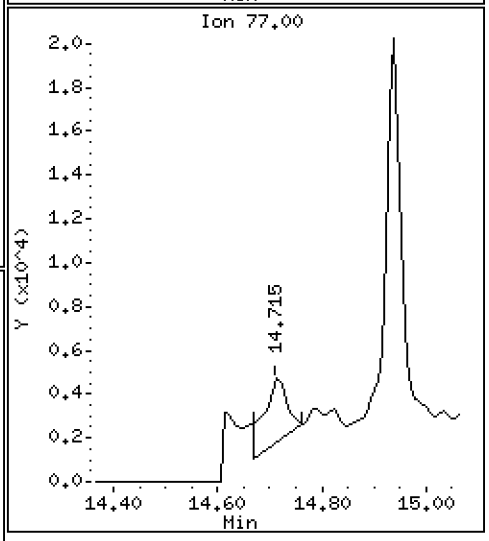
39 Dimethylphthalate

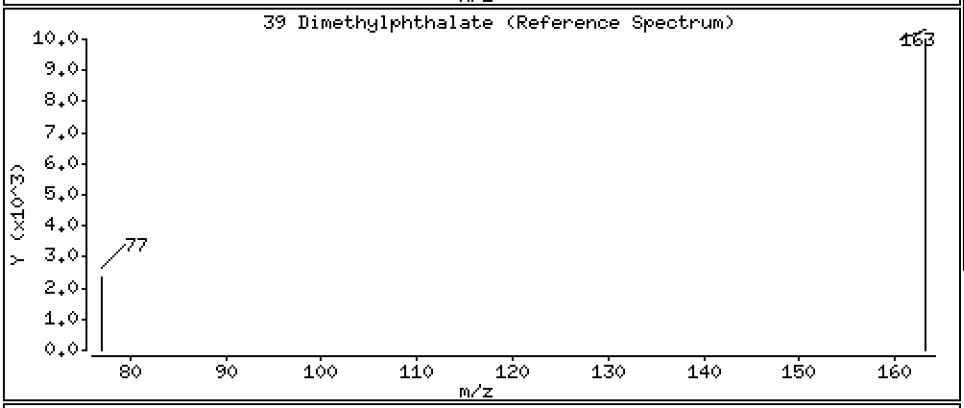
Concentration: 0.09597 ug/L

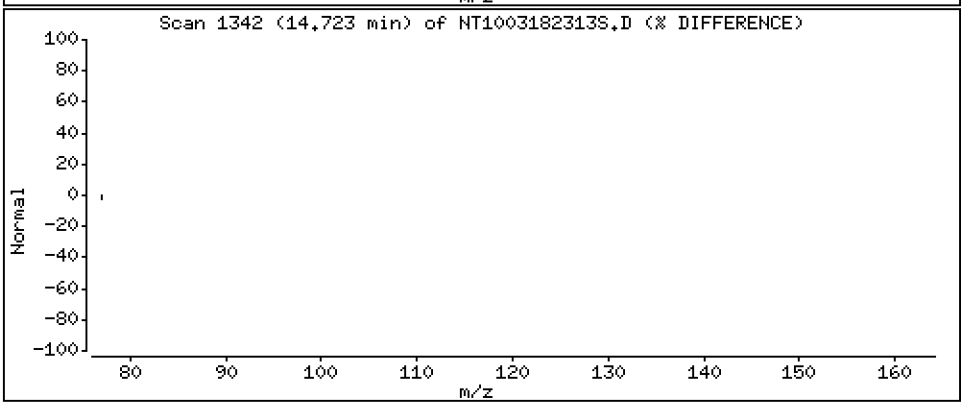












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

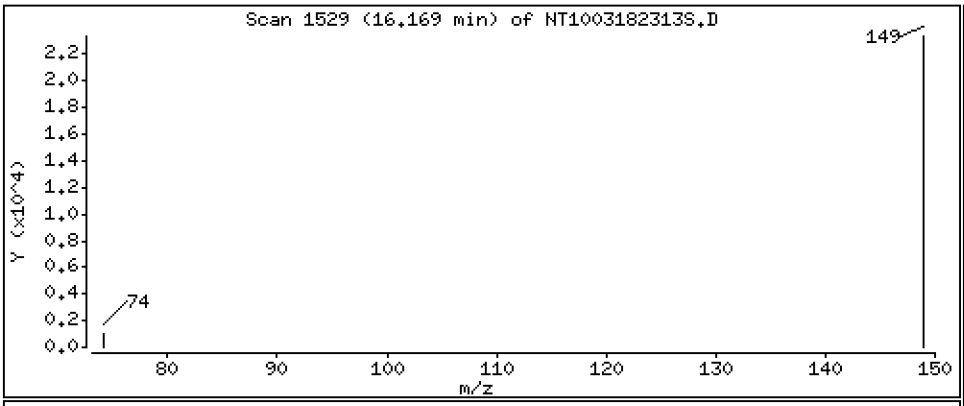
Operator: JGR

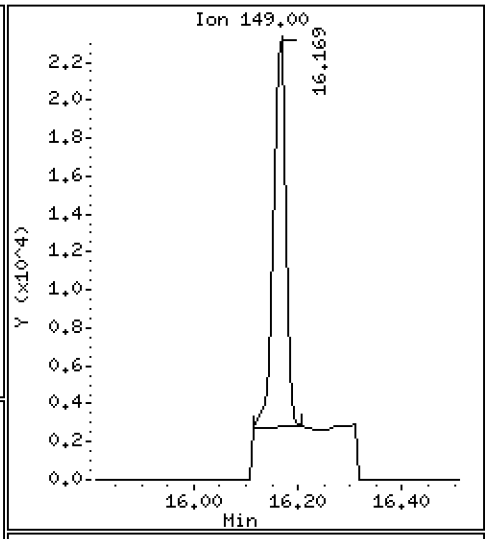
Column phase: ZB-5msi

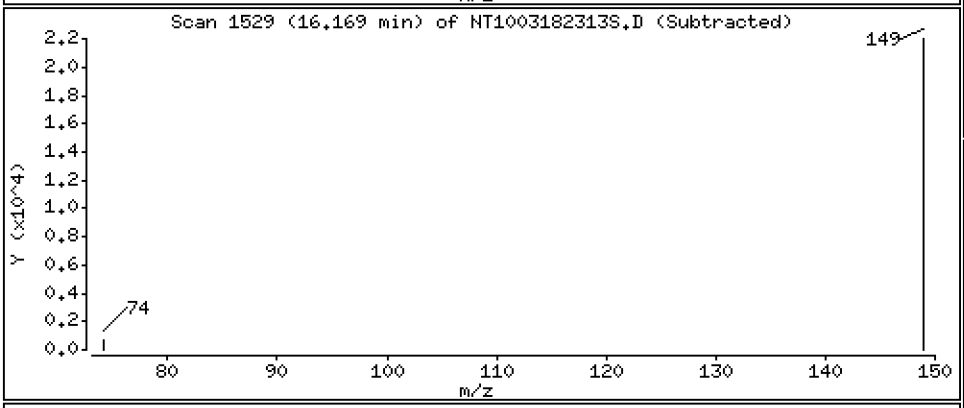
Column diameter: 0.25

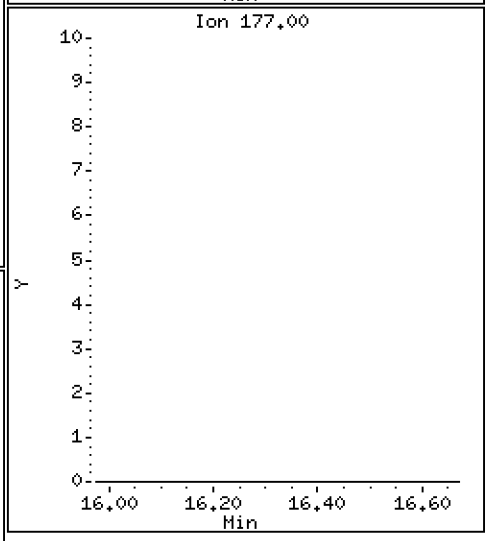
50 Diethylphthalate

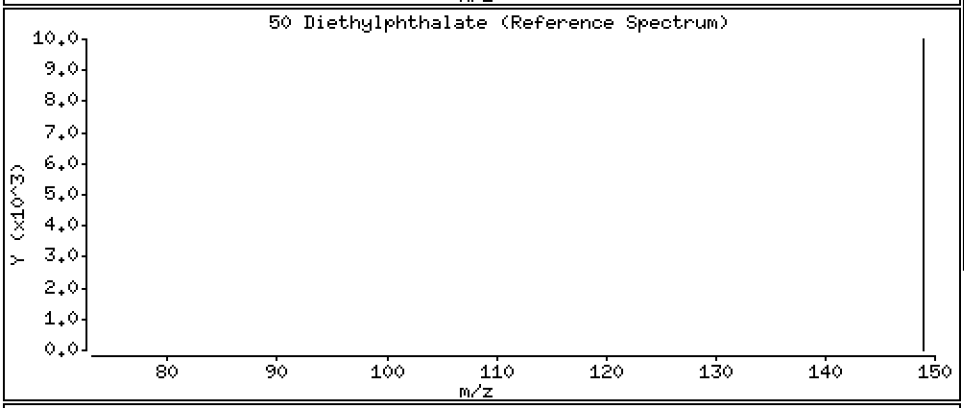
Concentration: 0.1984 ug/L

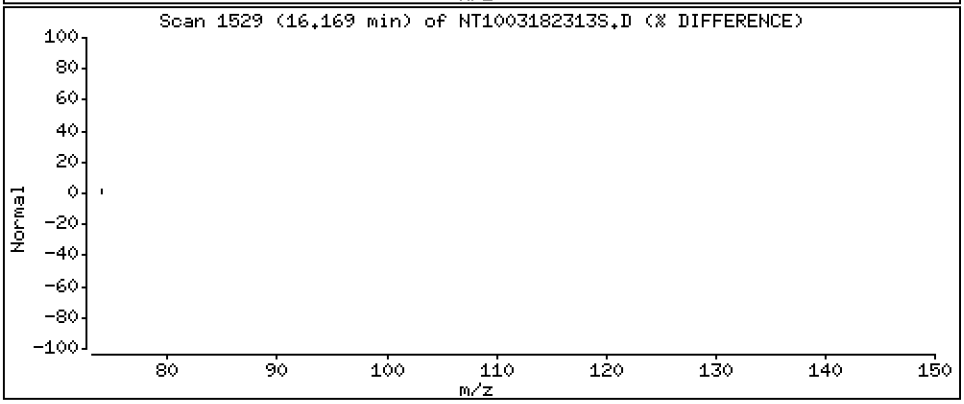












Date : 19-MAR-2023 01:24

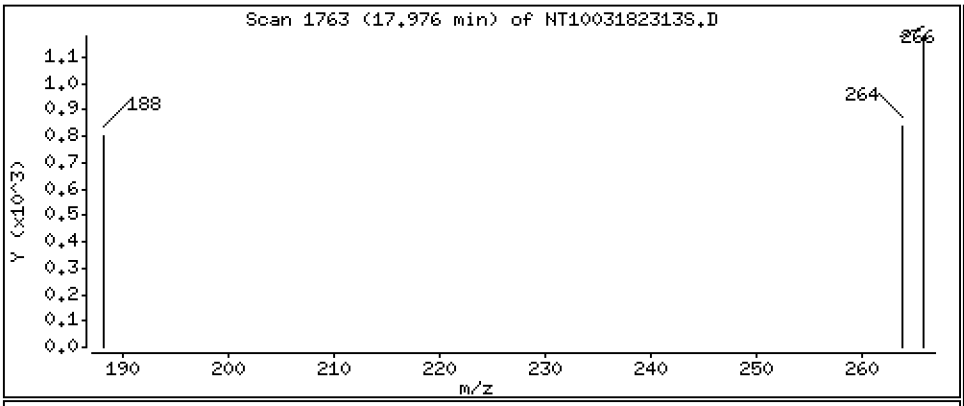
Client ID: Instrument: nt10.i

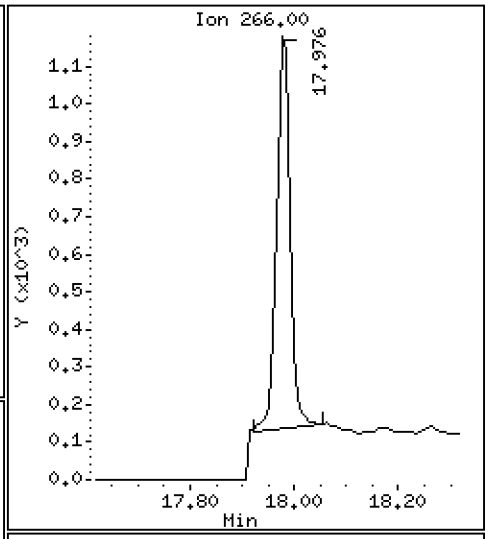
Sample Info: 23A0467-04

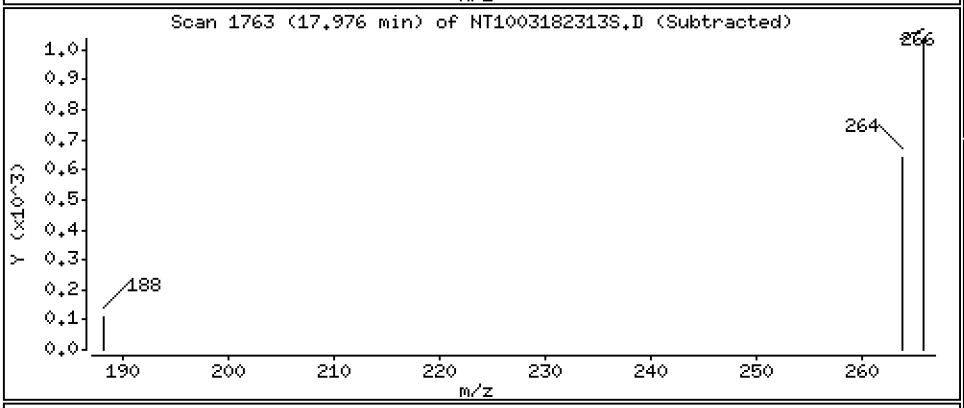
Volume Injected (uL): 1.0 Operator: JGR

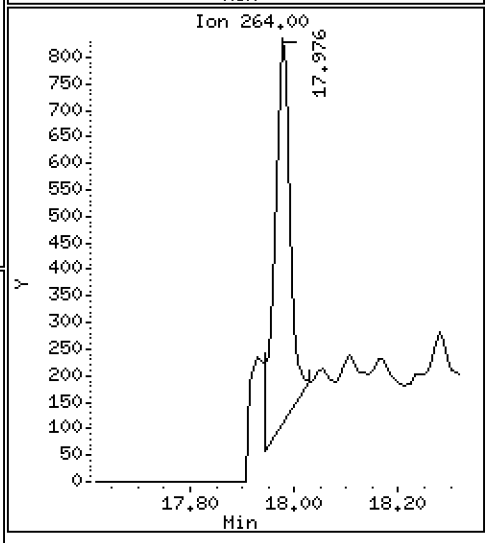
Column phase: ZB-5msi Column diameter: 0.25

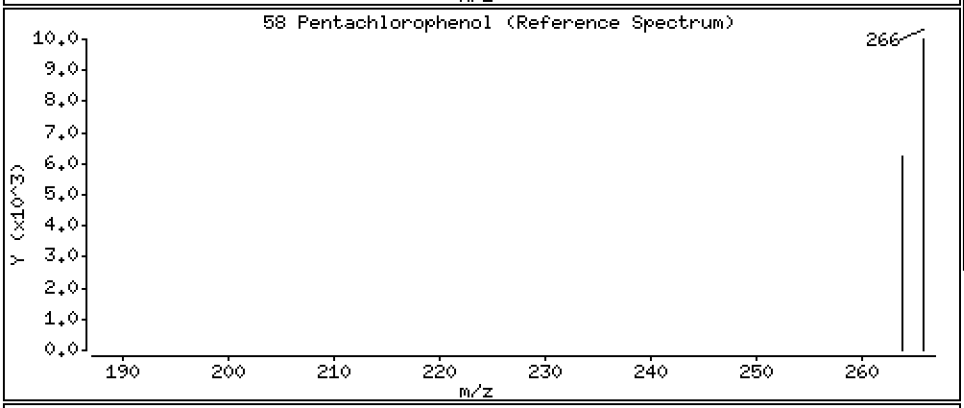
58 Pentachlorophenol Concentration: 0.05306 ug/L

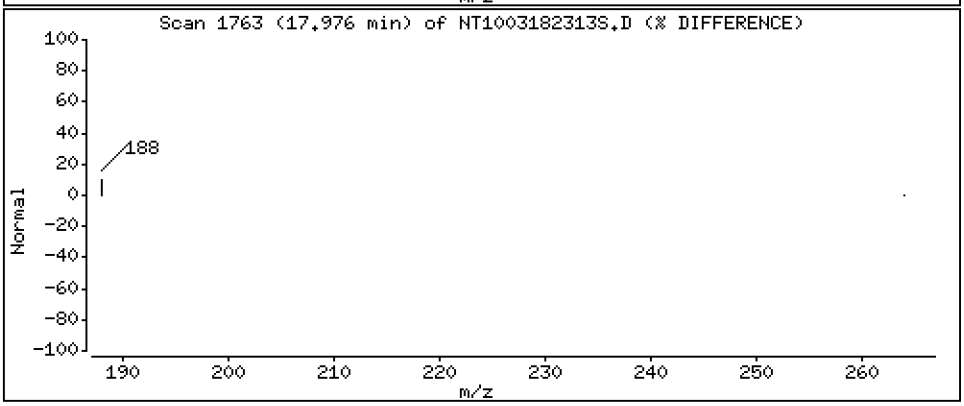












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

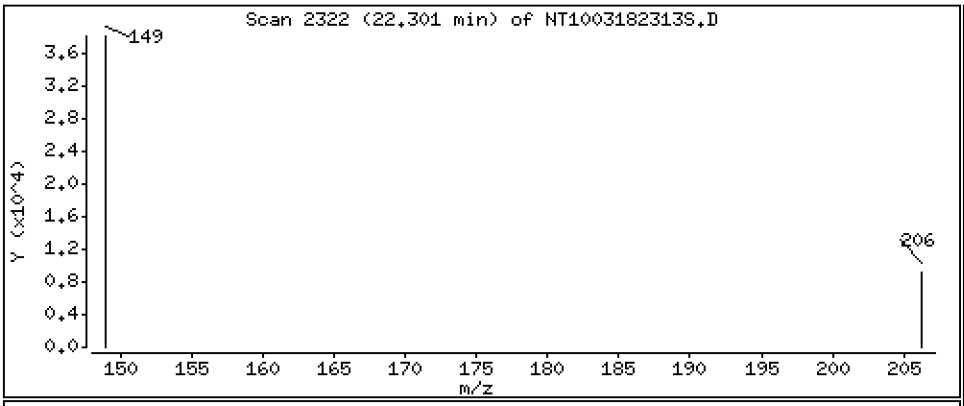
Operator: JGR

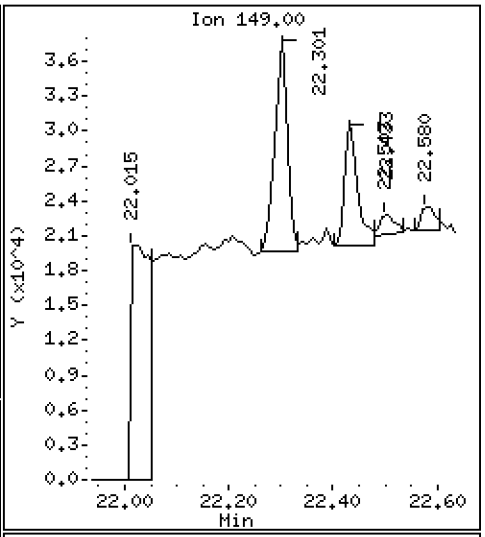
Column phase: ZB-5msi

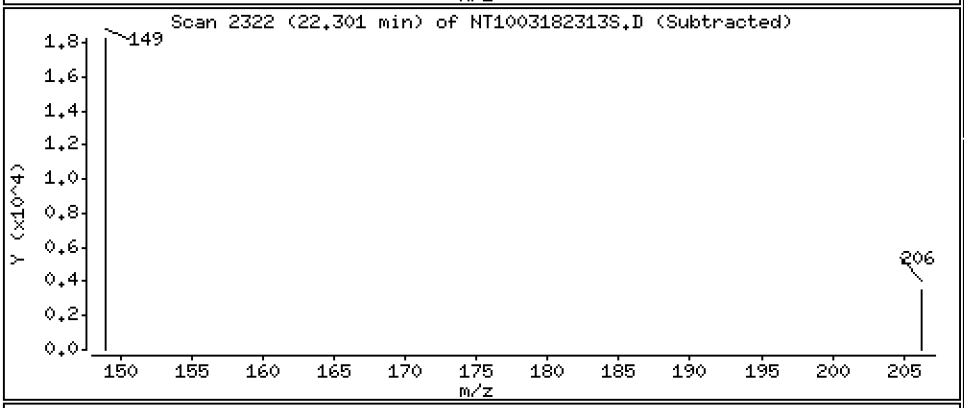
Column diameter: 0.25

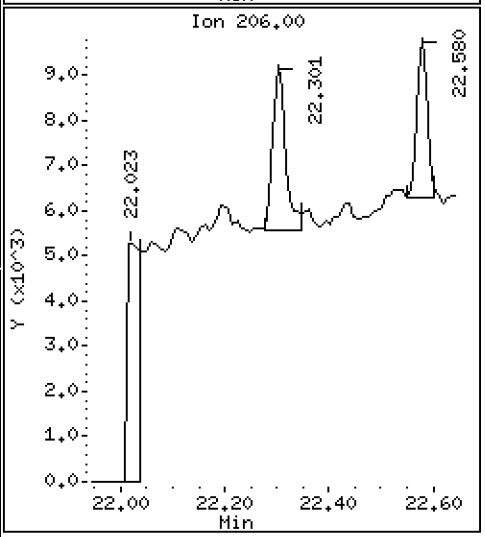
67 Butylbenzylphthalate

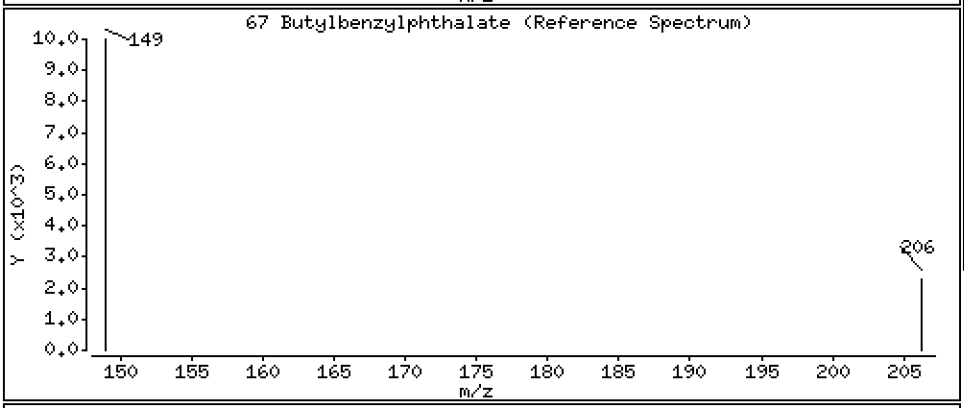
Concentration: 0.2521 ug/L

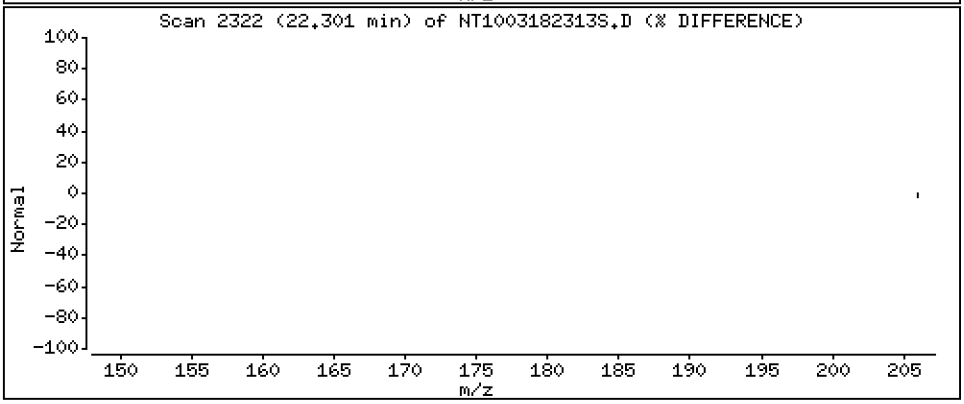












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D

Date : 19-MAR-2023 01:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-04

Volume Injected (uL): 1.0

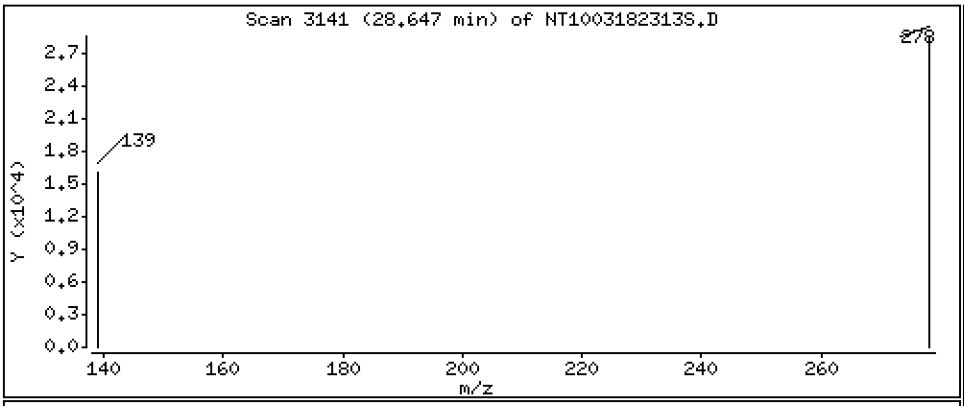
Operator: JGR

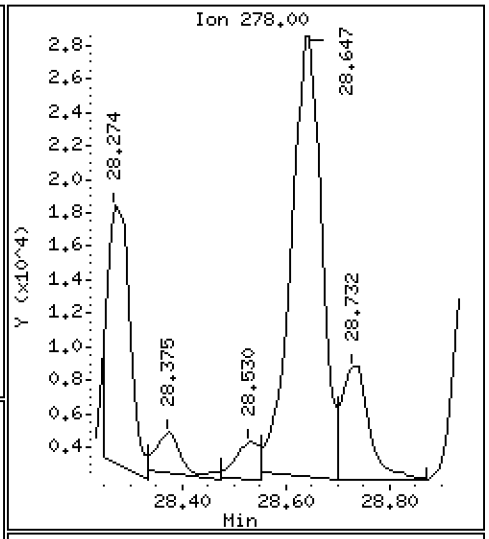
Column phase: ZB-5msi

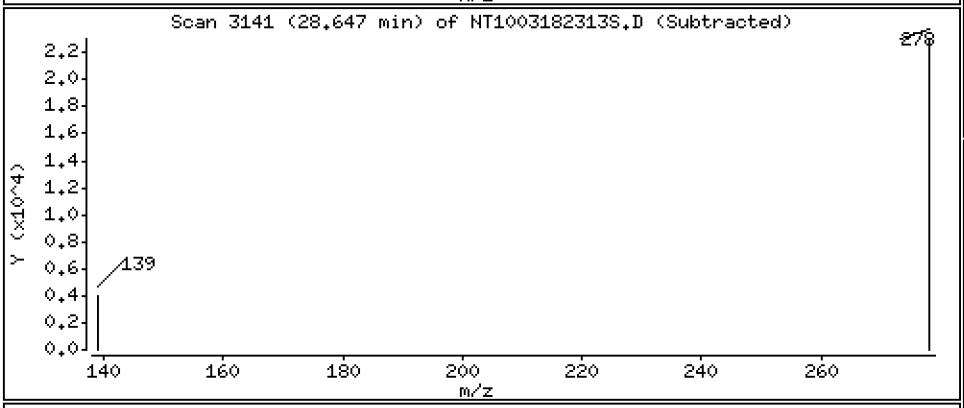
Column diameter: 0.25

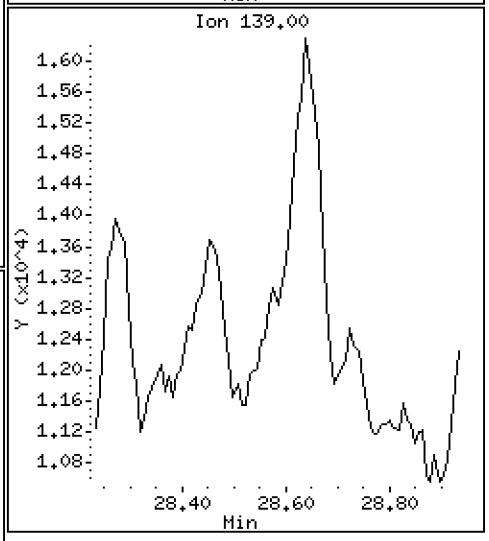
79 Dibenzo(a,h)anthracene

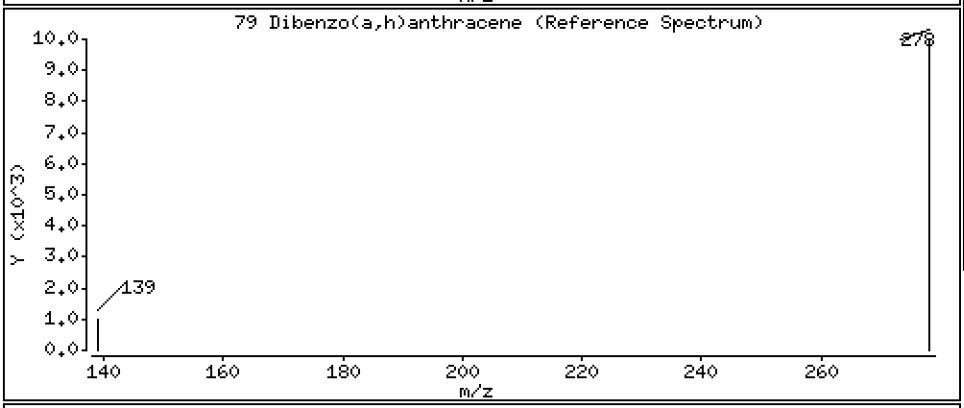
Concentration: 0.3368 ug/L

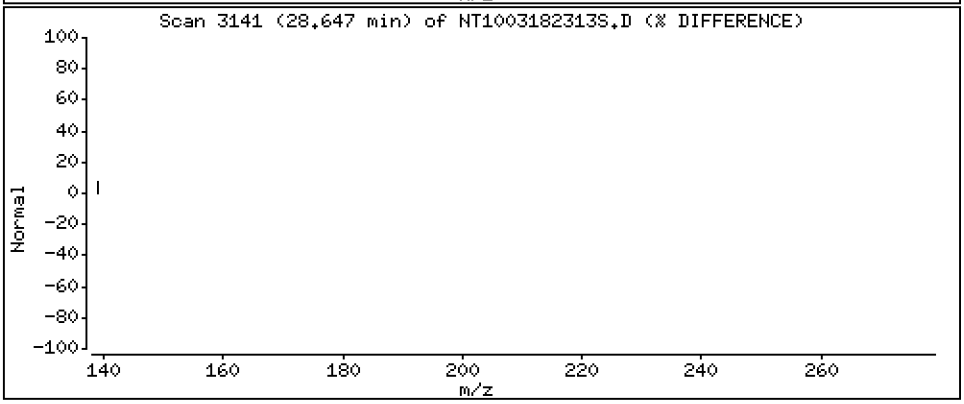












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182313S.D
Lab Smp Id: 23A0467-04
Inj Date : 19-MAR-2023 01:24 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-04
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.957	(0.761)	469855	5.40527	5.405(R)
3	Phenol	94	8.556	8.541	(0.933)	955700	8.01385	8.014
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.167	(1.000)	286650	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	2482	0.02304	0.02304(M)
11	Benzyl alcohol	79	9.438	9.431	(1.029)	16489	0.23850	0.2385(M)
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.041)	833	0.00786	0.007863
13	2-Methylphenol	108	9.656	9.648	(1.052)	2047	0.02477	0.02477(M)
15	4-Methylphenol	108	9.920	9.912	(1.081)	237893	2.77051	2.771
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.960	10.943	(0.942)	1276	0.01430	0.01430
24	Benzoic acid	105	11.062	11.053	(0.951)	45945	0.93852	0.9385
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.635	11.627	(1.000)	1032425	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.722	14.714	(0.967)	14987	0.09597	0.09597(M)
* 42	Acenaphthene-d10	162	15.217	15.210	(1.000)	494837	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	32090	0.19837	0.1984(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.975	17.968	(0.985)	1872	0.05306	0.05306(M)
*	59 Phenanthrene-d10	188	18.246	18.231	(1.000)	1063972	4.00000	
$	66 Terphenyl-d14	244	21.380	21.364	(0.918)	782987	5.33710	5.337(R)
	67 Butylbenzylphthalate	149	22.301	22.285	(0.957)	29902	0.25205	0.2521
*	69 Chrysene-d12	240	23.292	23.269	(1.000)	900394	4.00000	
*	77 Perylene-d12	264	25.940	25.909	(1.000)	985877	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.646	28.584	(1.104)	108820	0.33683	0.3368(H)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182313S.D
Lab Smp Id: 23A0467-04
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	286650	44.81
27 Naphthalene-d8	704013	352007	1408026	1032425	46.65
42 Acenaphthene-d10	353977	176989	707954	494837	39.79
59 Phenanthrene-d10	686752	343376	1373504	1063972	54.93
69 Chrysene-d12	597733	298867	1195466	900394	50.63
77 Perylene-d12	645663	322832	1291326	985877	52.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.18	0.08
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.08
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.10
77 Perylene-d12	25.91	25.41	26.41	25.94	0.12

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

REVIEW SUMMARY FOR FILE - NT1003182313S.D

Lab ID: 23A0467-04
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 01:24

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

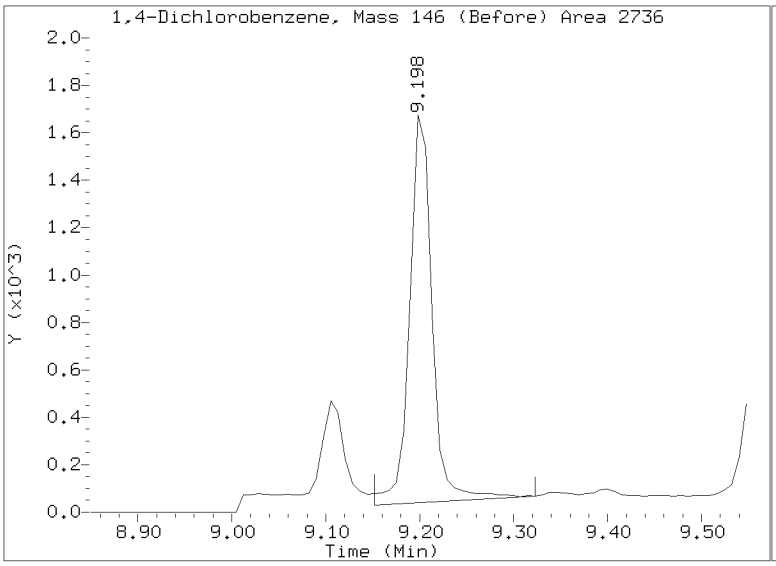
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

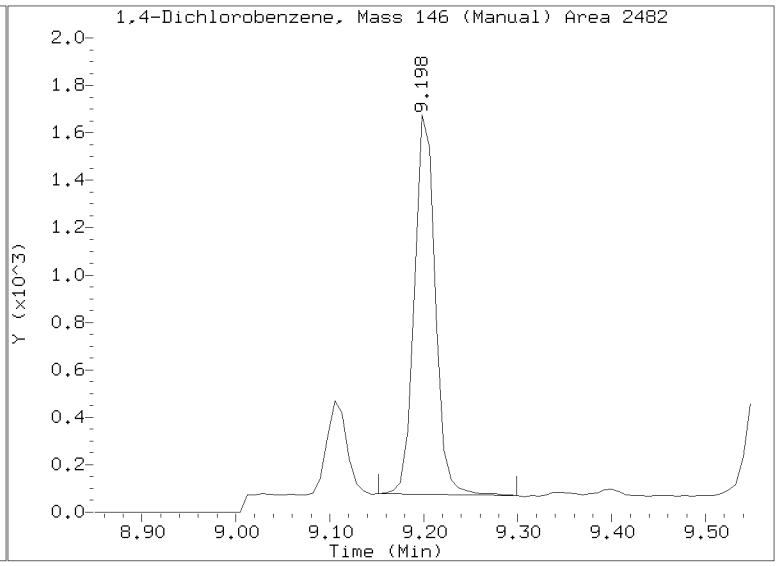
Exception: 1,2,4-Trichlorobenzene 0.0010

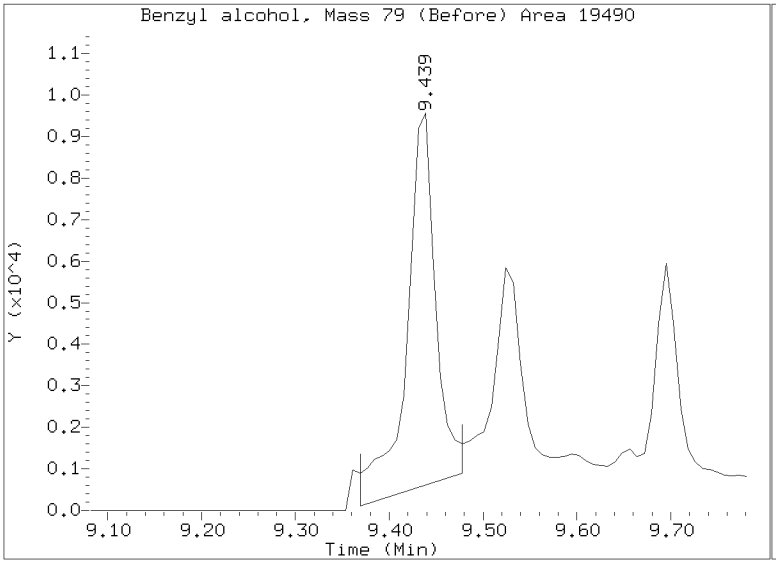
* Only compounds listed in the work order have been verified by the analyst *

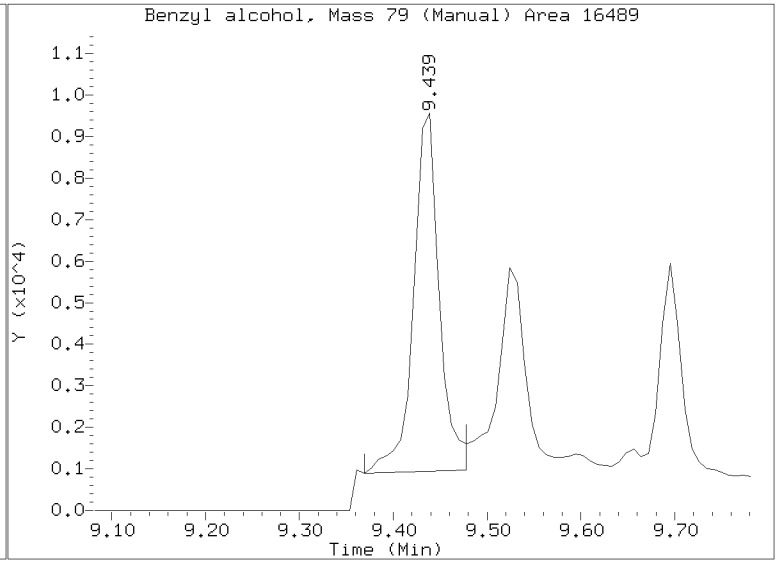
Quant Ion Manual Peak Adjustment Report

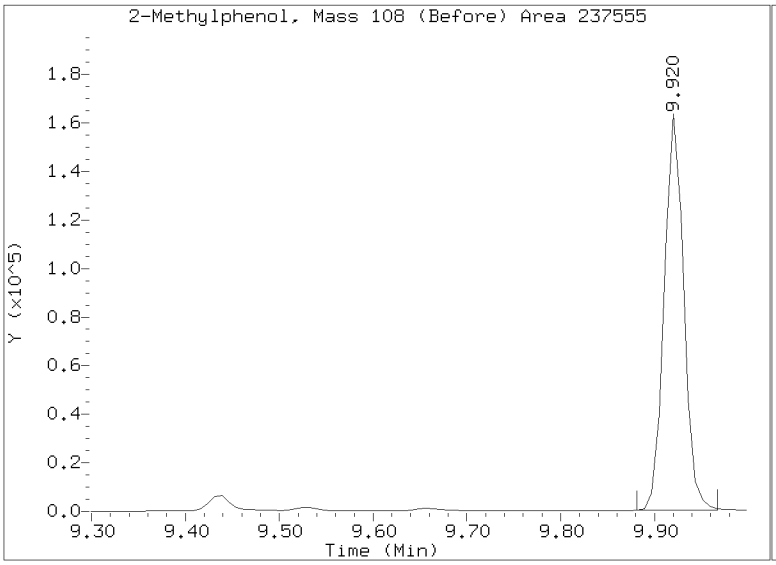
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182313S.D
Injection Date: 19-MAR-2023 01:24
Lab ID:23A0467-04 Client ID:
Report Date: 04/04/2023 12:31

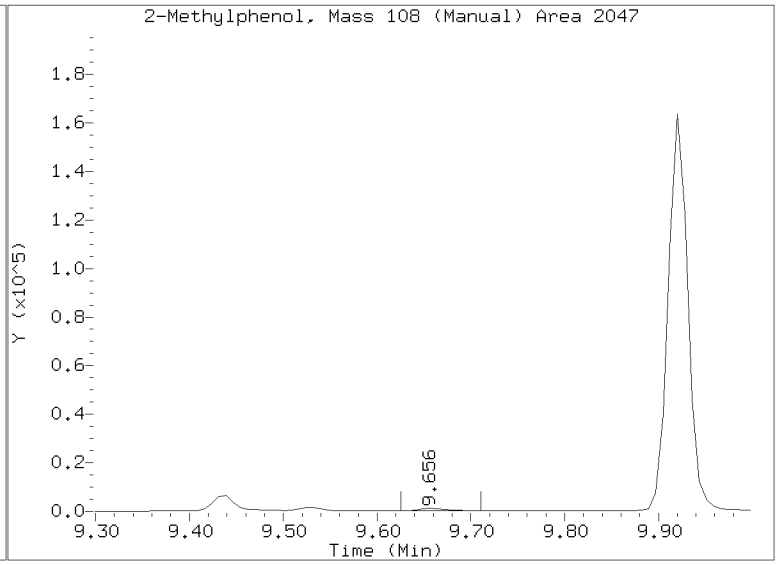












Quant Ion Manual Peak Adjustment Report

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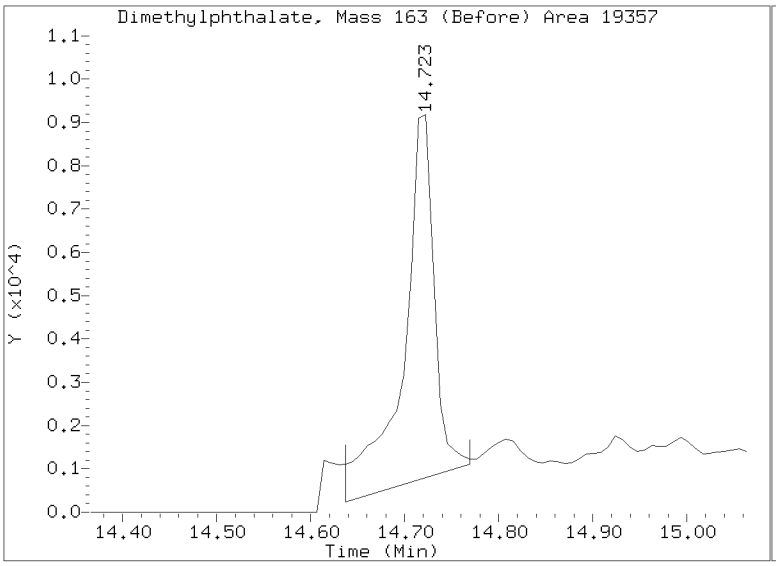
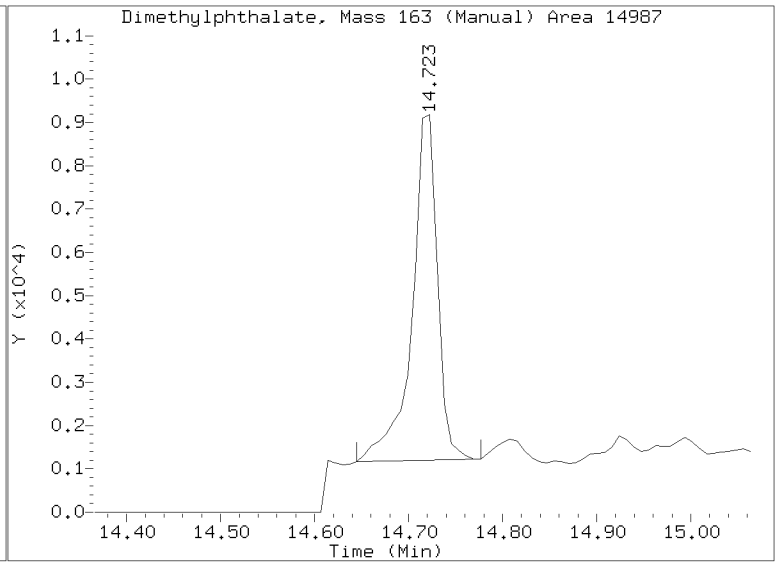
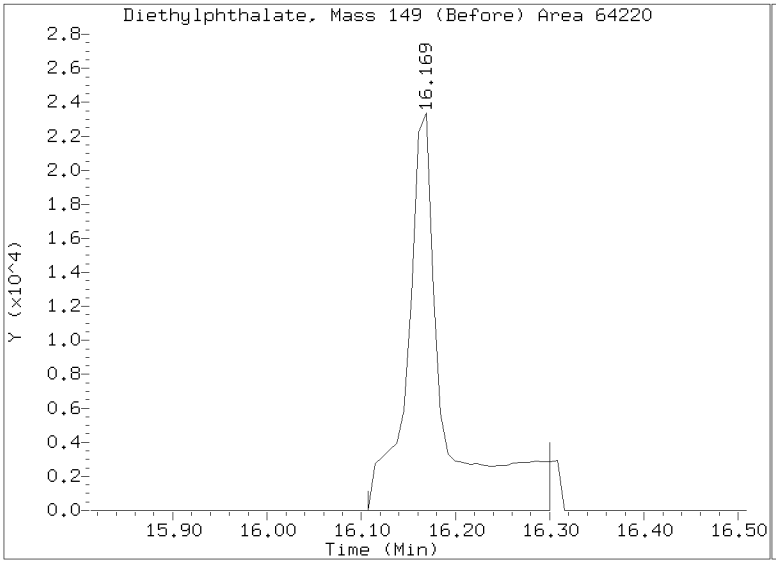
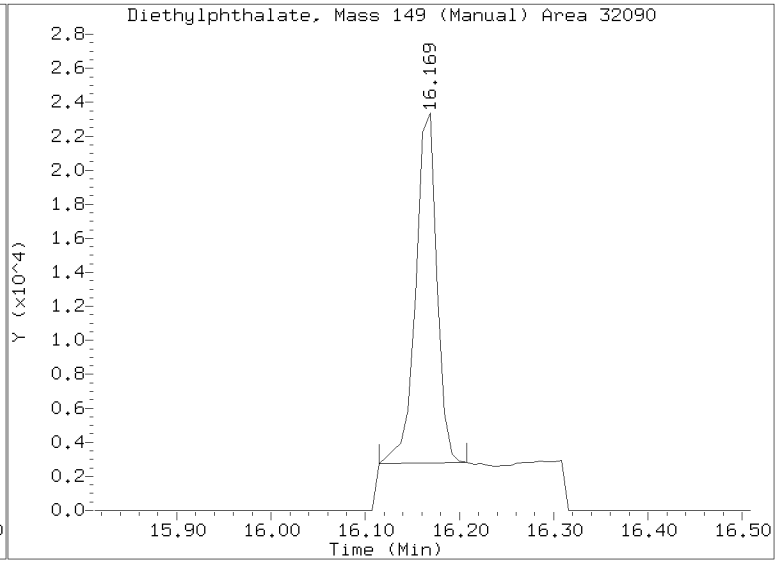
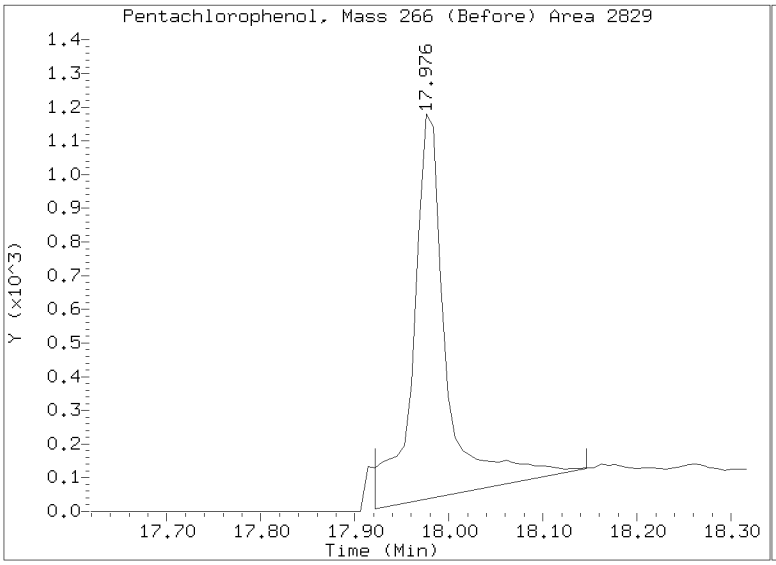
Injection Date: 19-MAR-2023 01:24
Lab ID:23A0467-04 Client ID:
Report Date: 04/04/2023 12:31

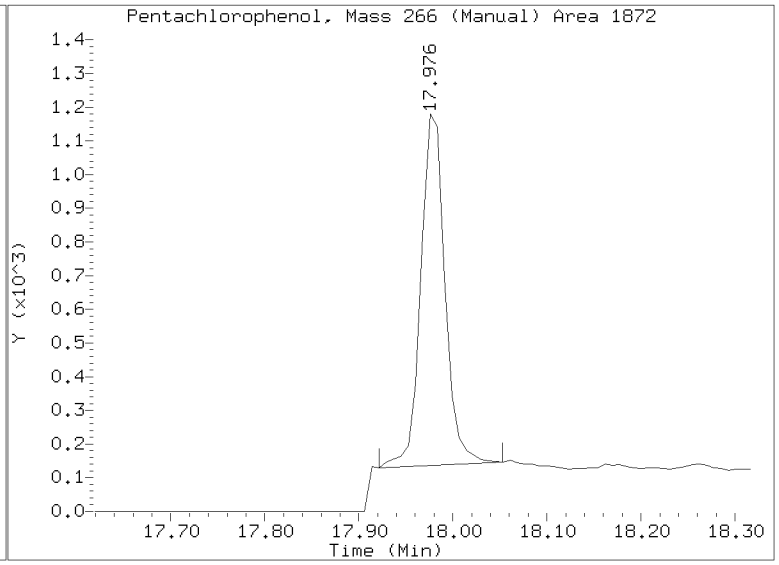












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1004

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	02/23/23 15:49	File ID:	NT1003182314S.D
% Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:02
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	18.17 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.6	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	17.8	J	2.5	20.0
65-85-0	Benzoic acid	1	64.1	J	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	4.2	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.72	578	77.2	27 - 120	
p-Terphenyl-d14	499.15	530	106	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823145.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

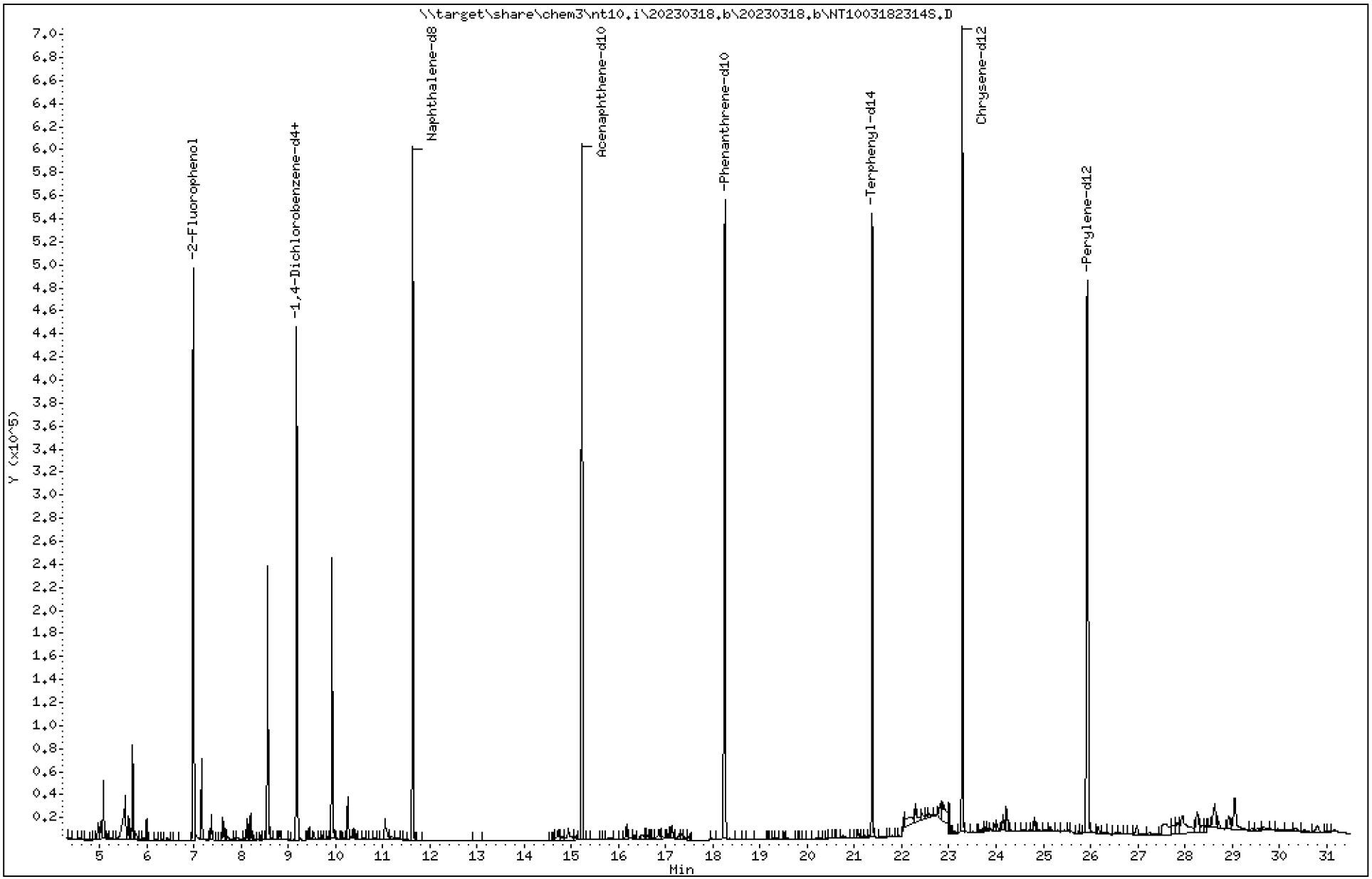
Sample Info: 23A0467-05

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

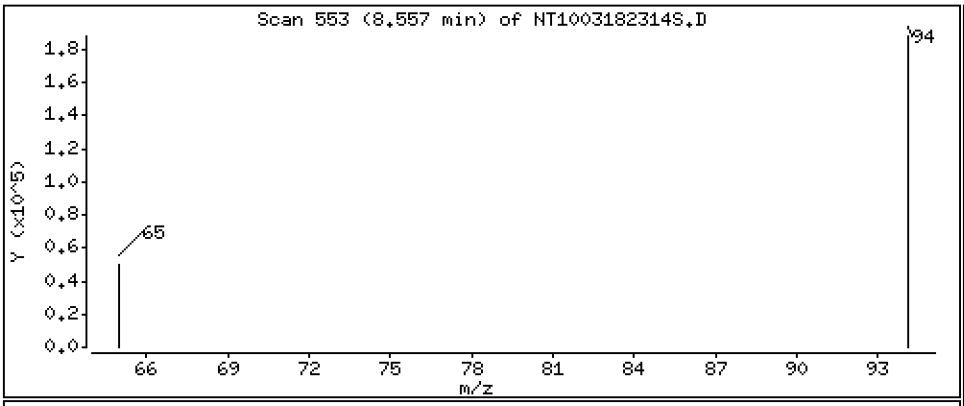
Operator: JGR

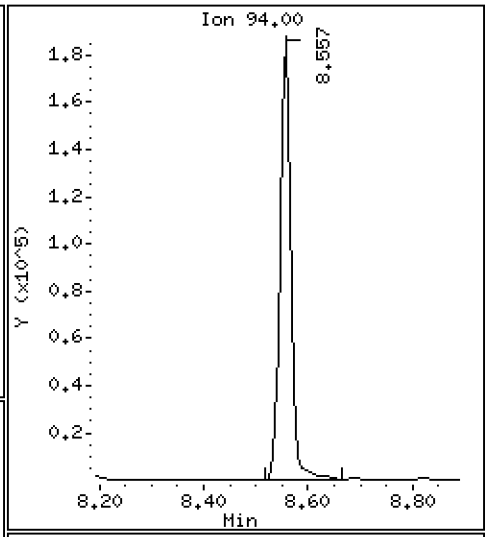
Column phase: ZB-5msi

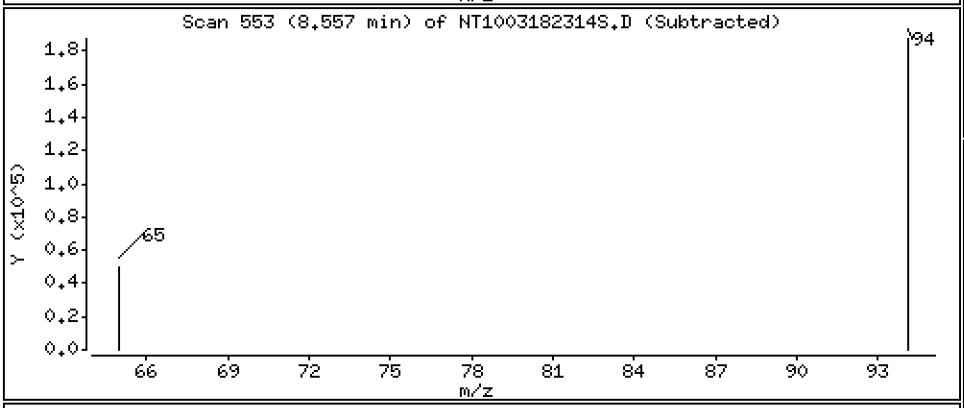
Column diameter: 0.25

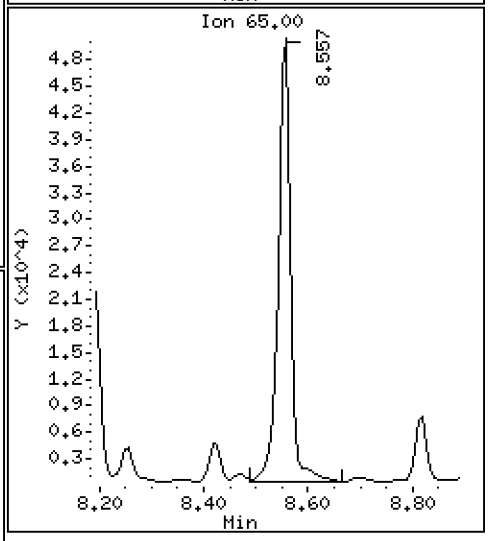
3 Phenol

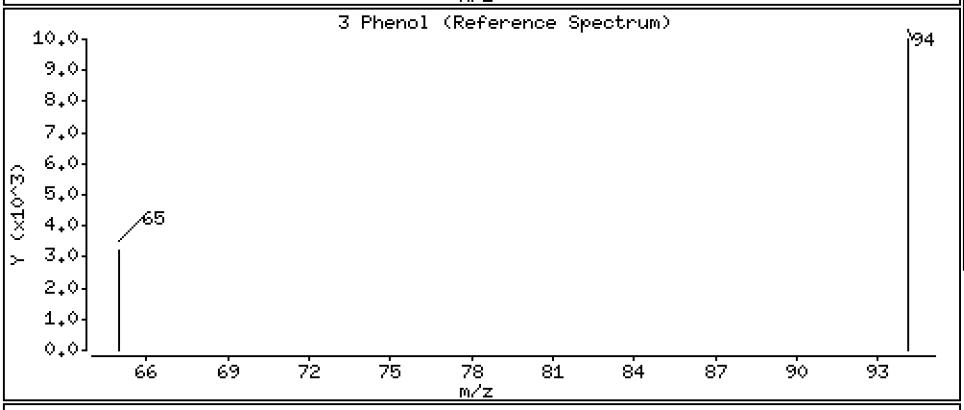
Concentration: 2.496 ug/L

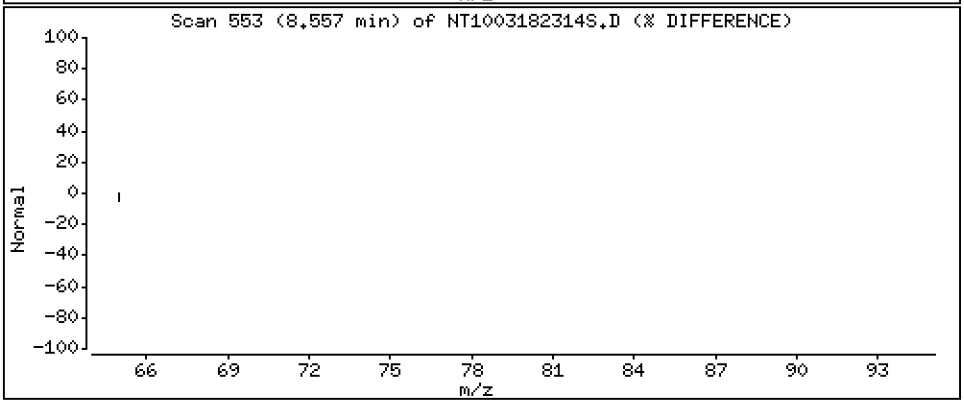












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

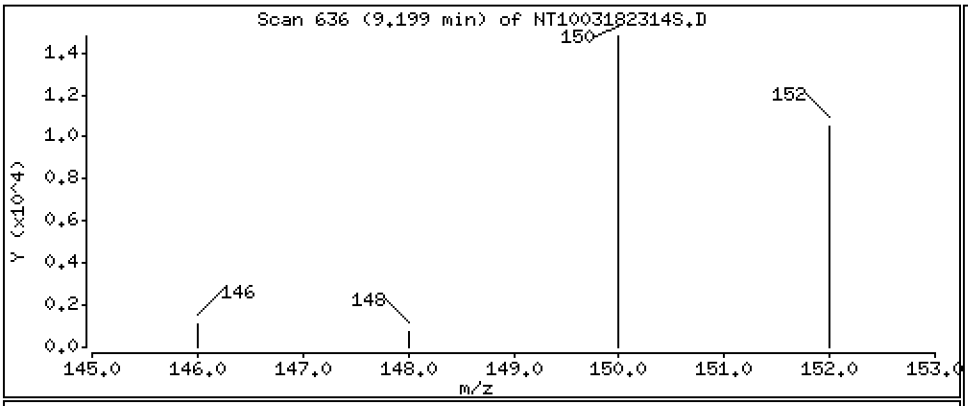
Operator: JGR

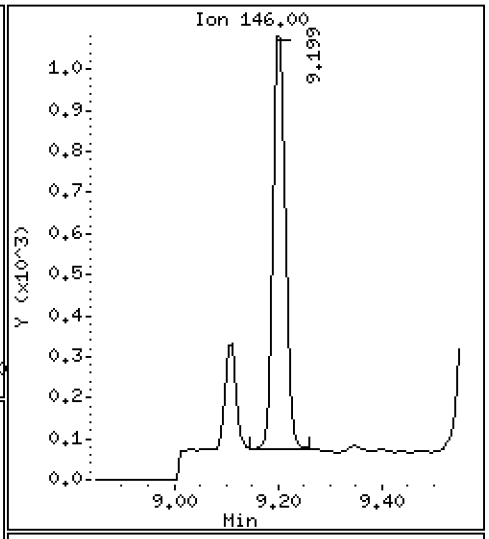
Column phase: ZB-5msi

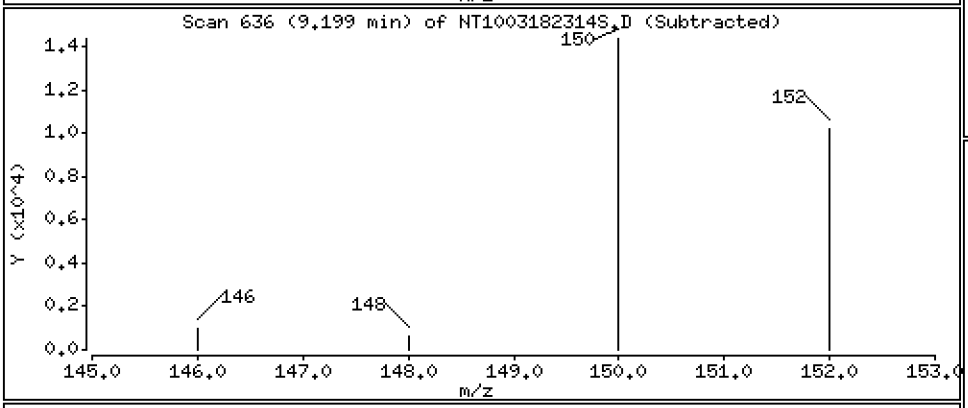
Column diameter: 0.25

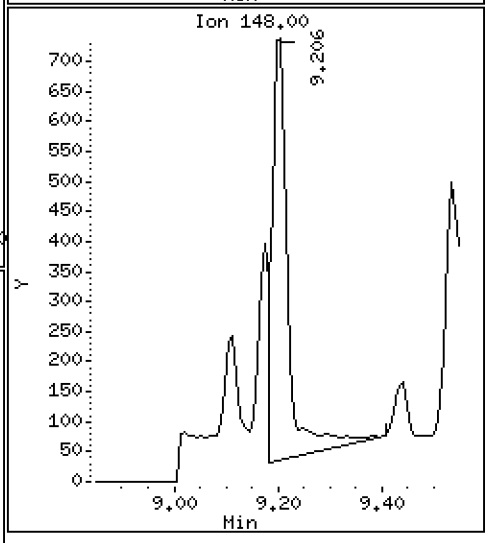
9 1,4-Dichlorobenzene

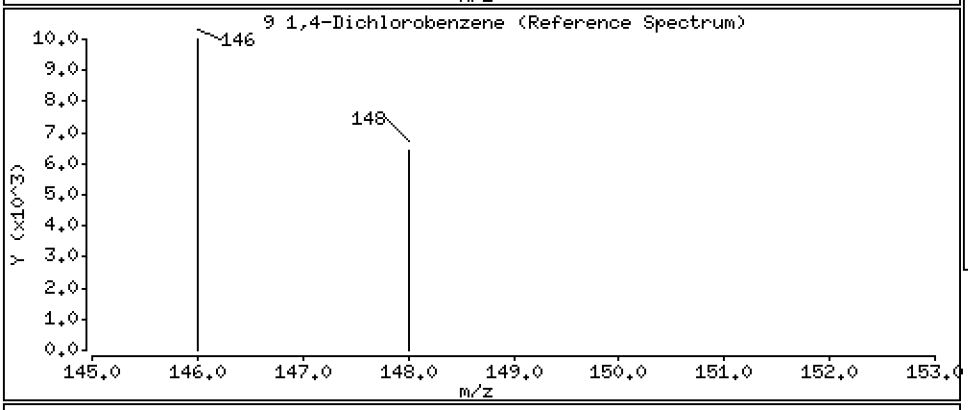
Concentration: 0.01618 ug/L

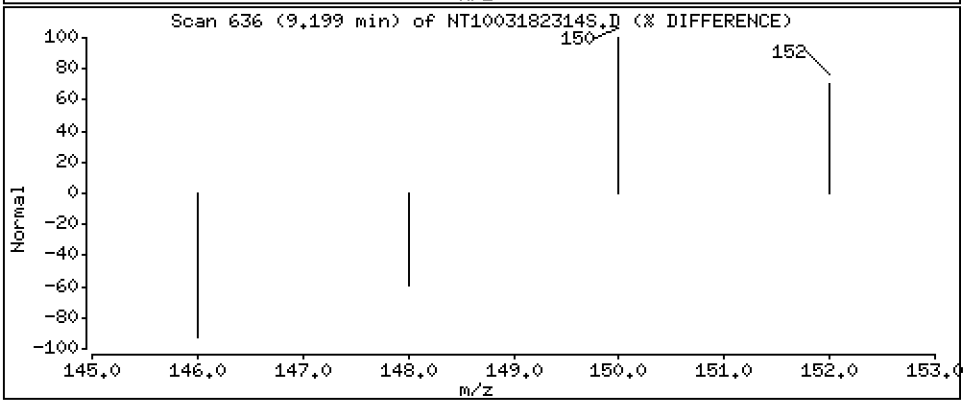












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

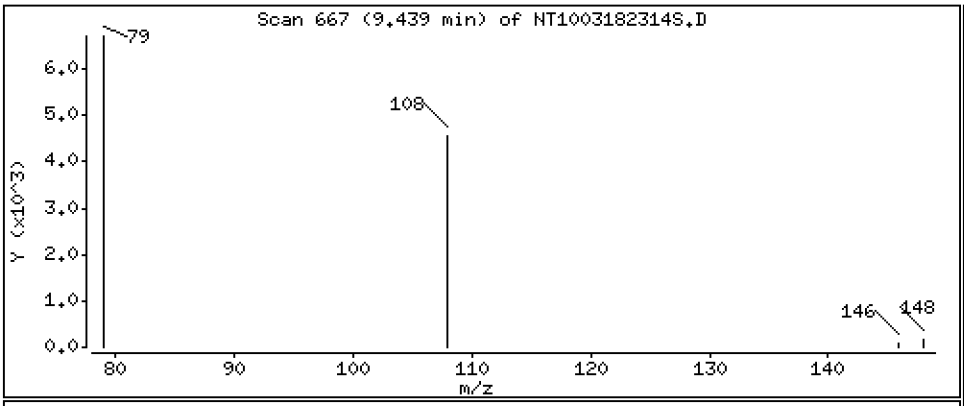
Operator: JGR

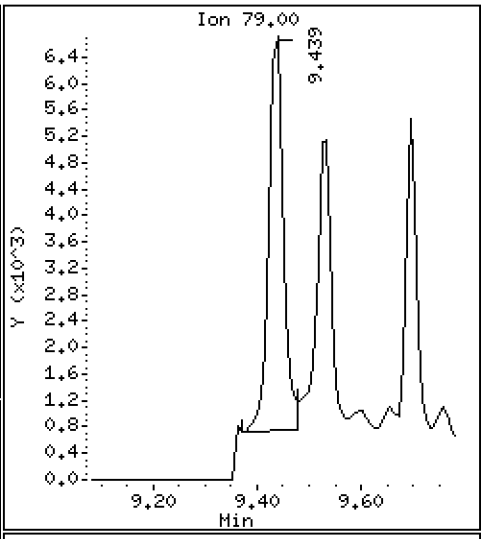
Column phase: ZB-5msi

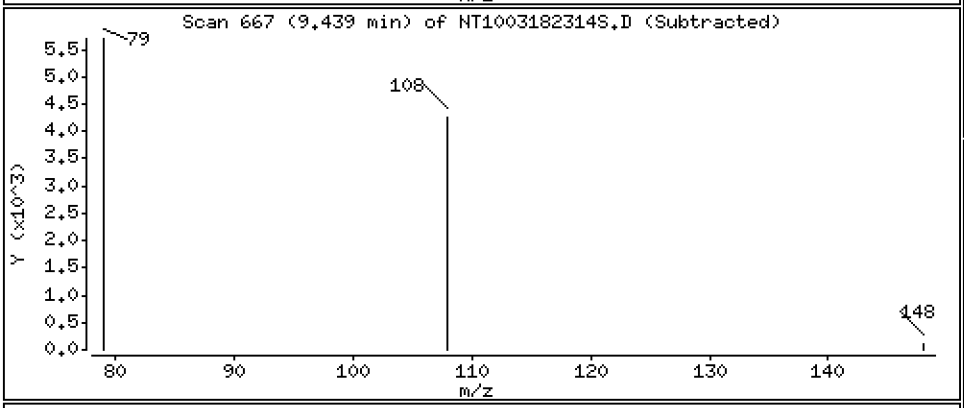
Column diameter: 0.25

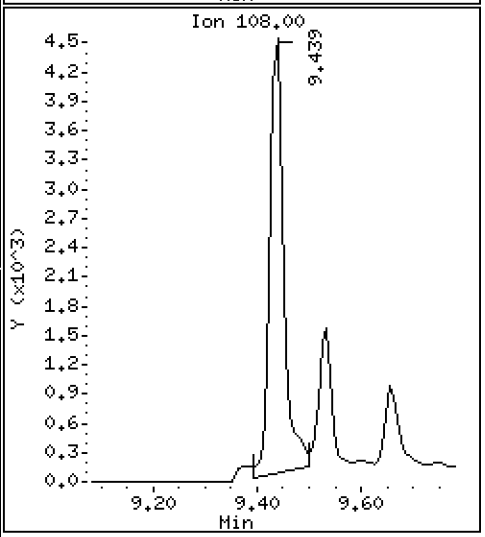
11 Benzyl alcohol

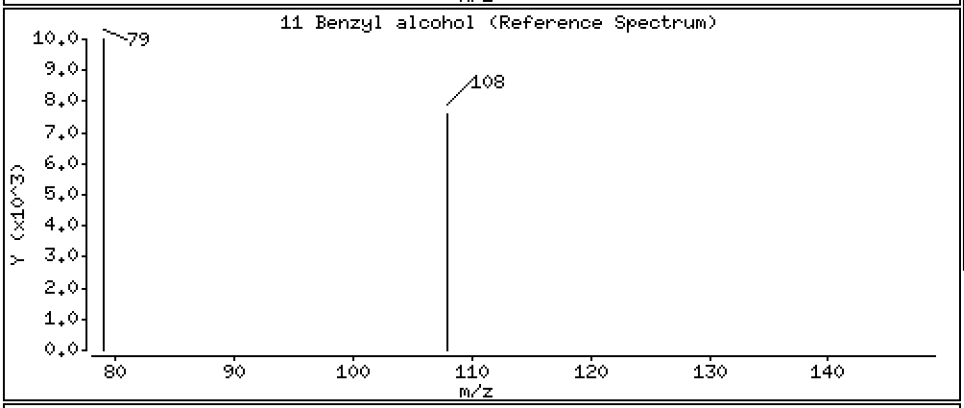
Concentration: 0.1779 ug/L

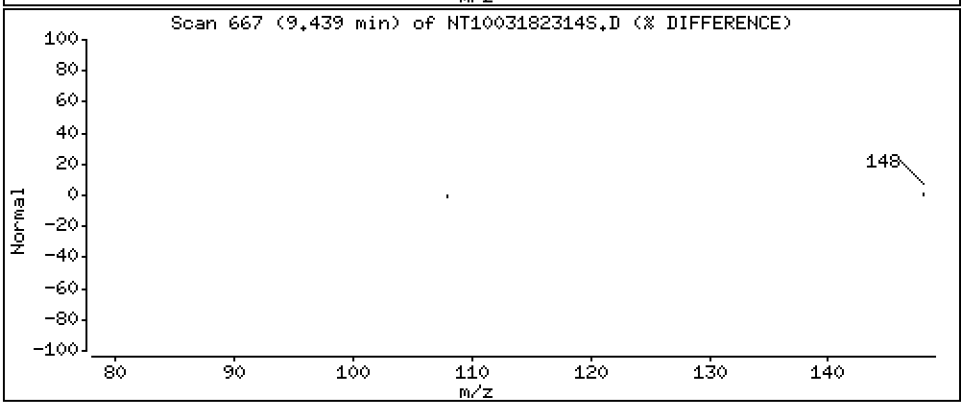












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

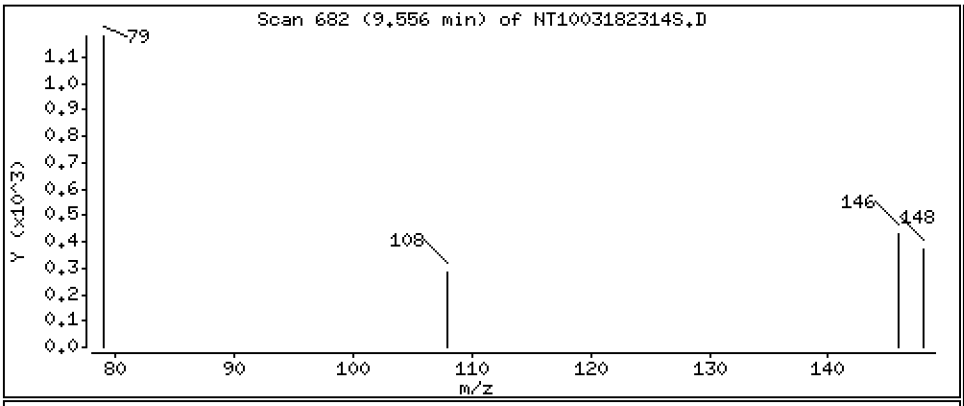
Operator: JGR

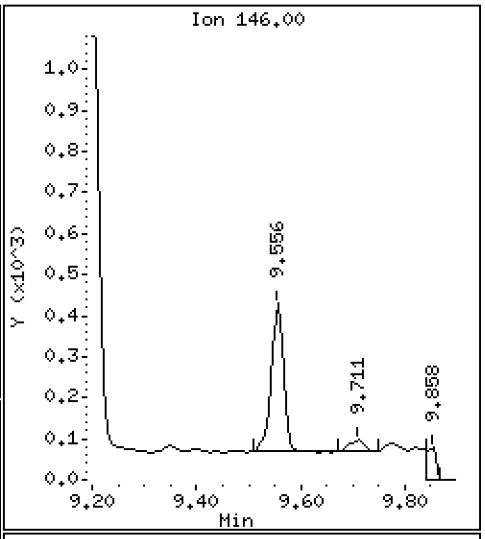
Column phase: ZB-5msi

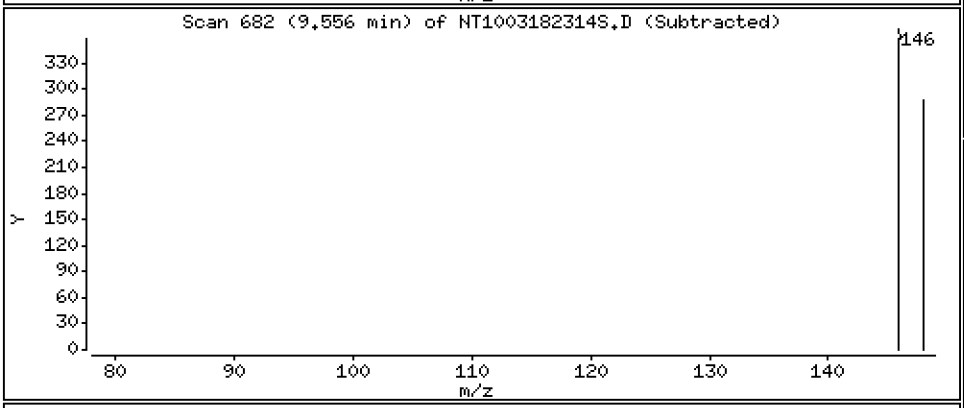
Column diameter: 0.25

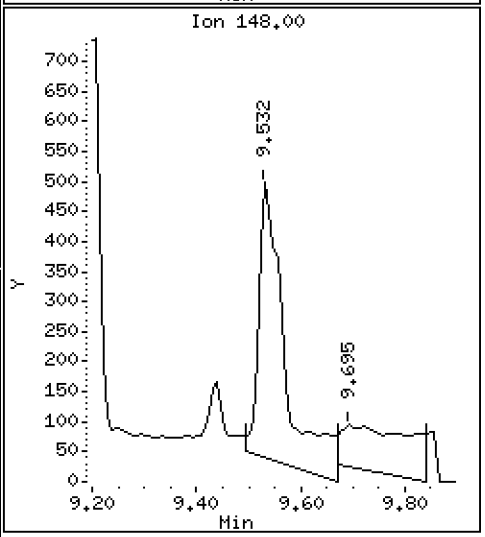
12 1,2-Dichlorobenzene

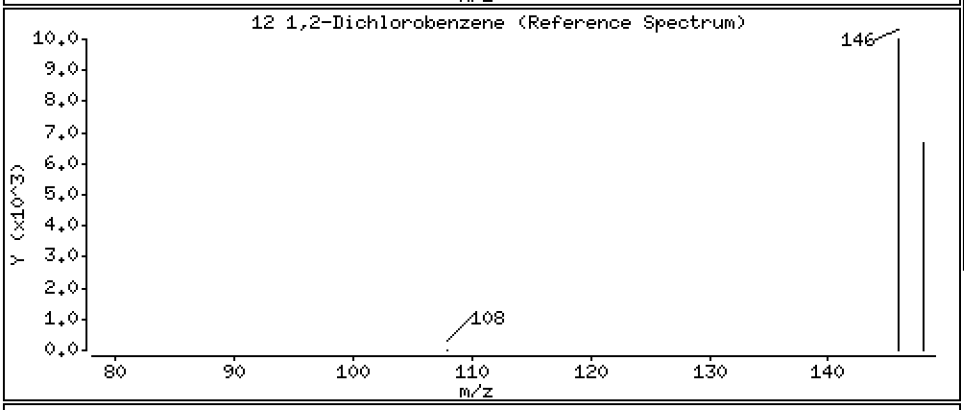
Concentration: 0.005770 ug/L

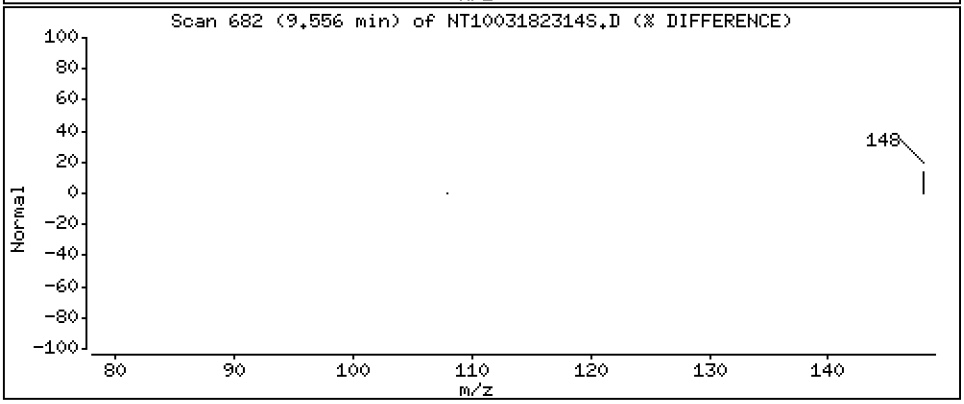












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

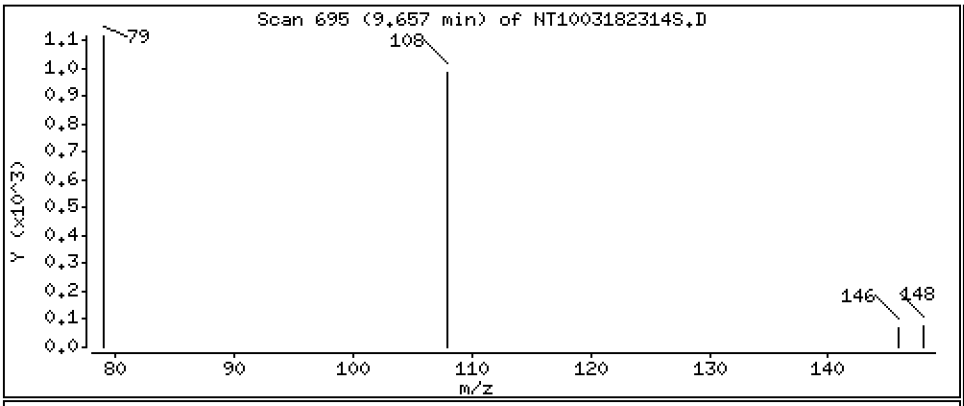
Operator: JGR

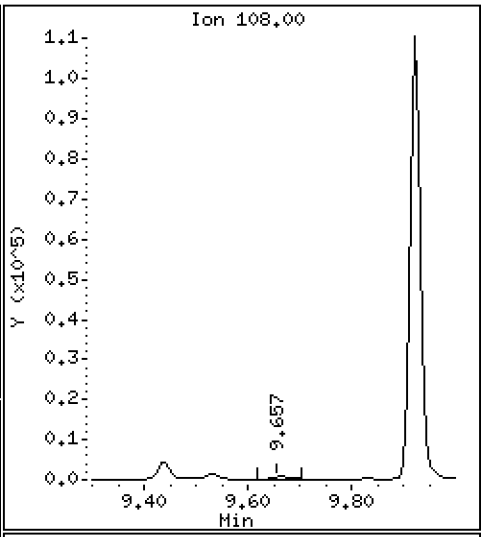
Column phase: ZB-5msi

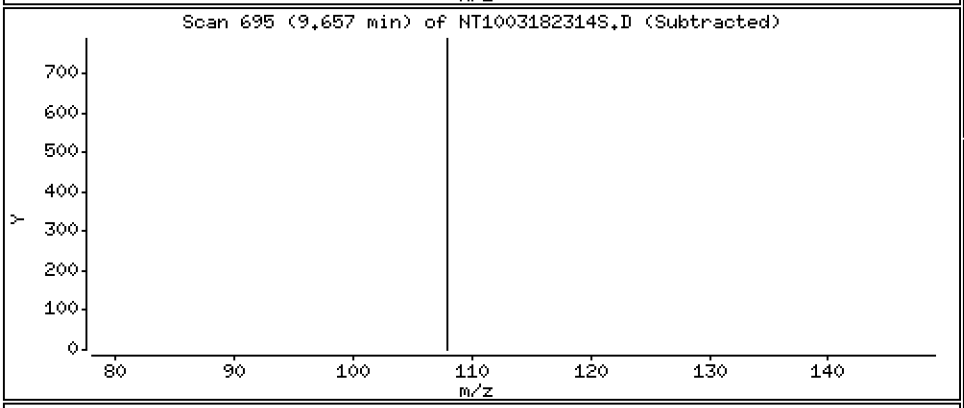
Column diameter: 0.25

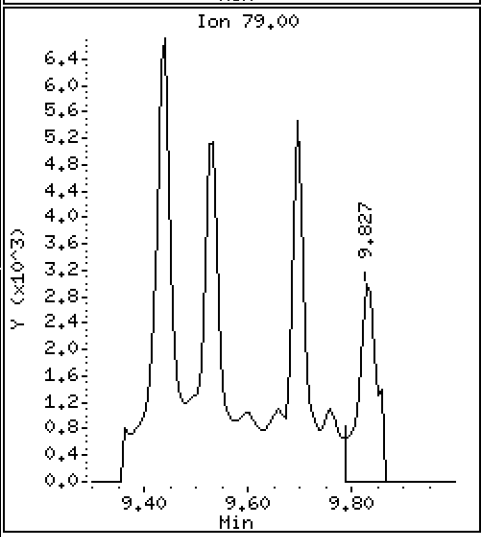
13 2-Methylphenol

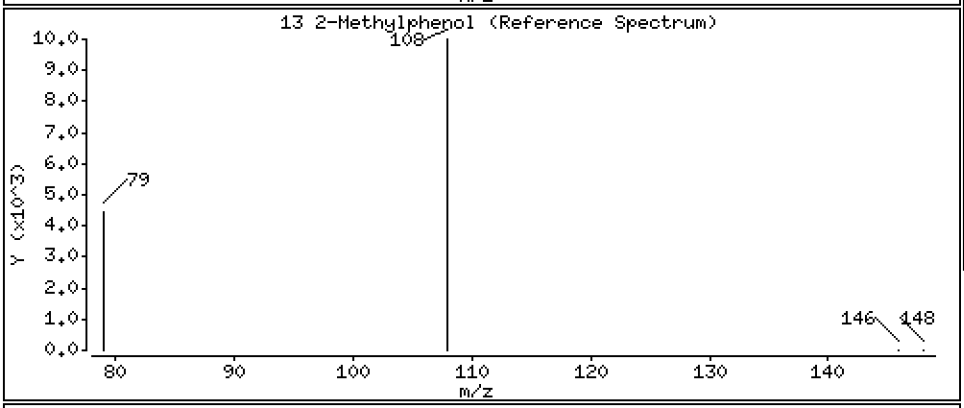
Concentration: 0.01590 ug/L

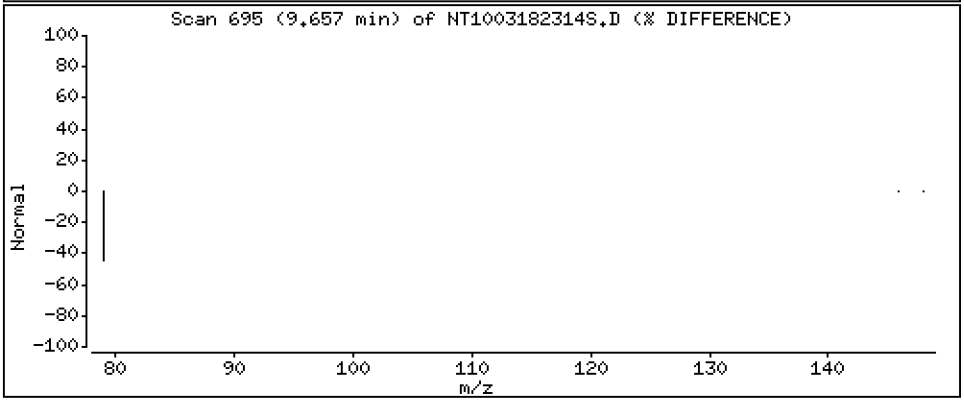












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

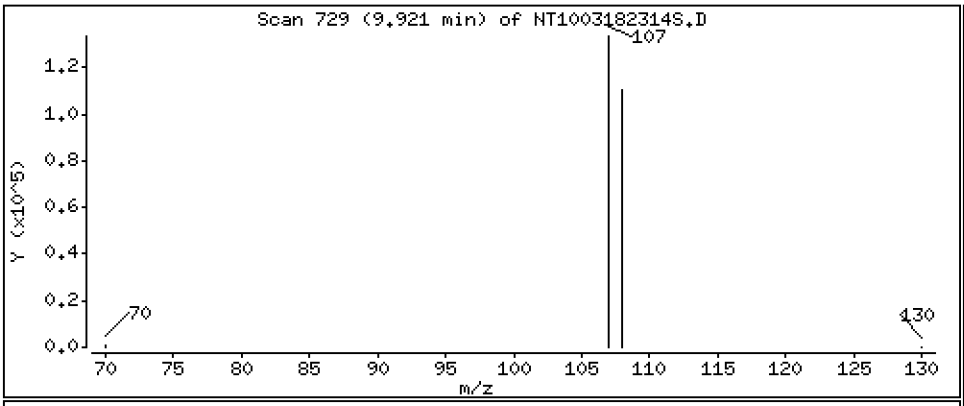
Operator: JGR

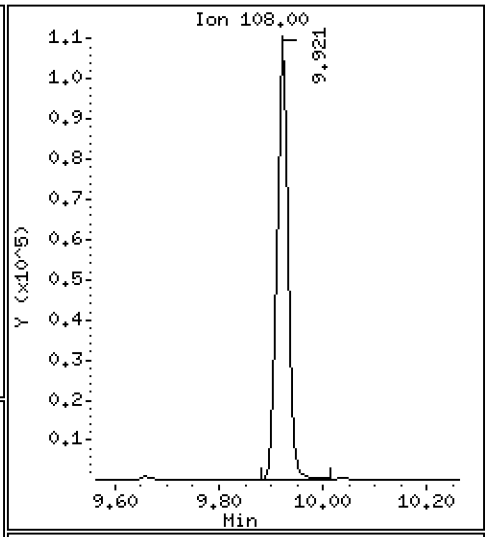
Column phase: ZB-5msi

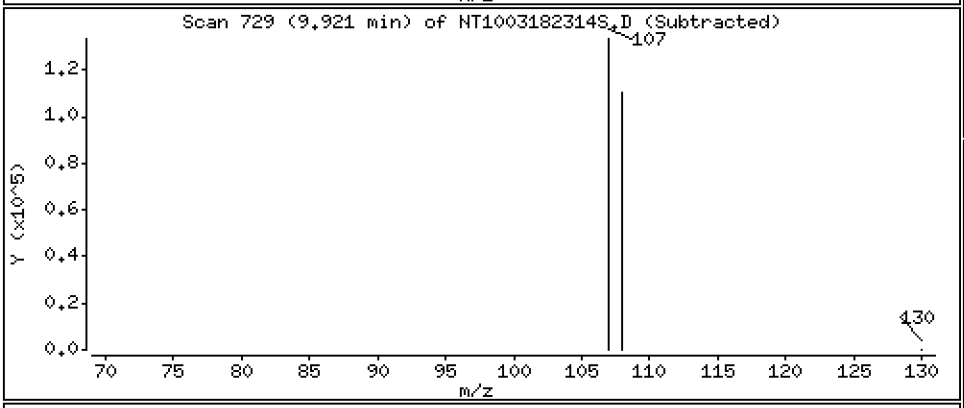
Column diameter: 0.25

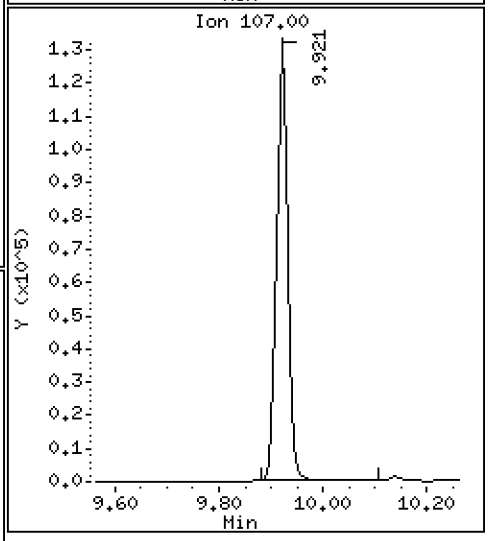
15 4-Methylphenol

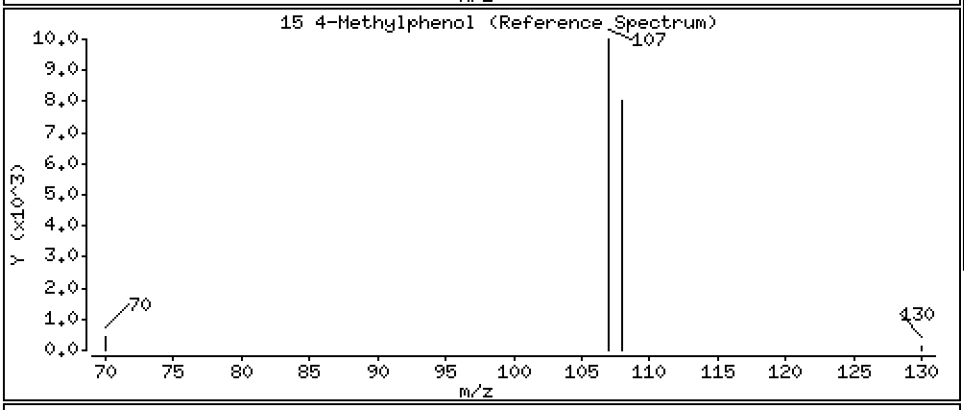
Concentration: 2.028 ug/L

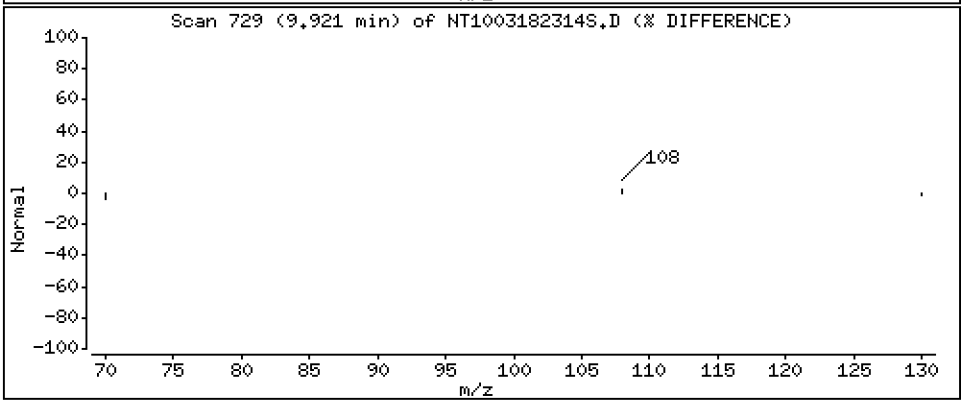












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823145.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

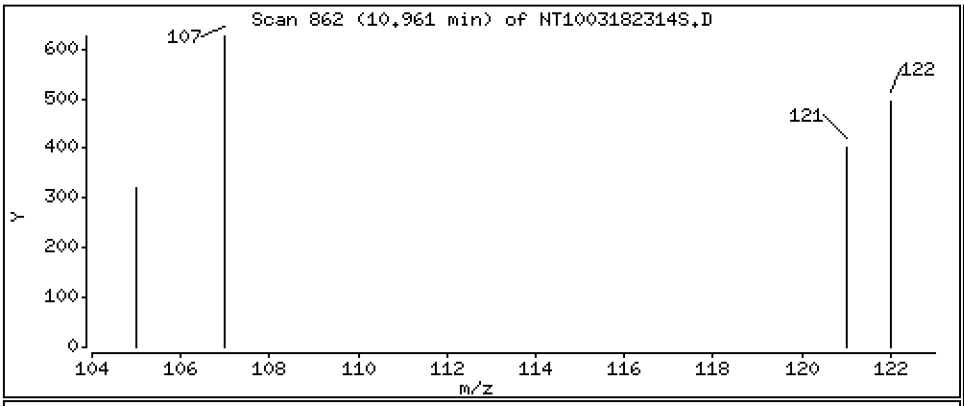
Operator: JGR

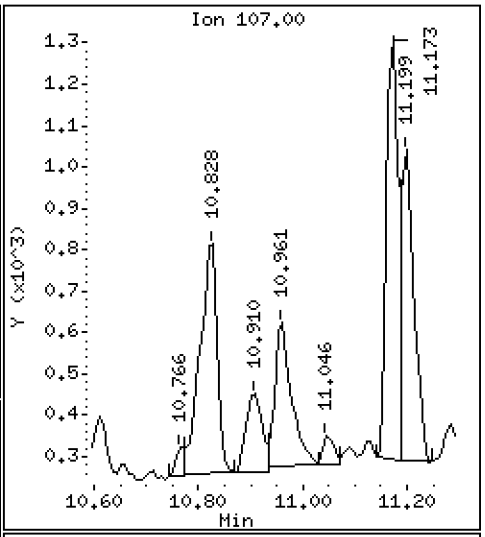
Column phase: ZB-5msi

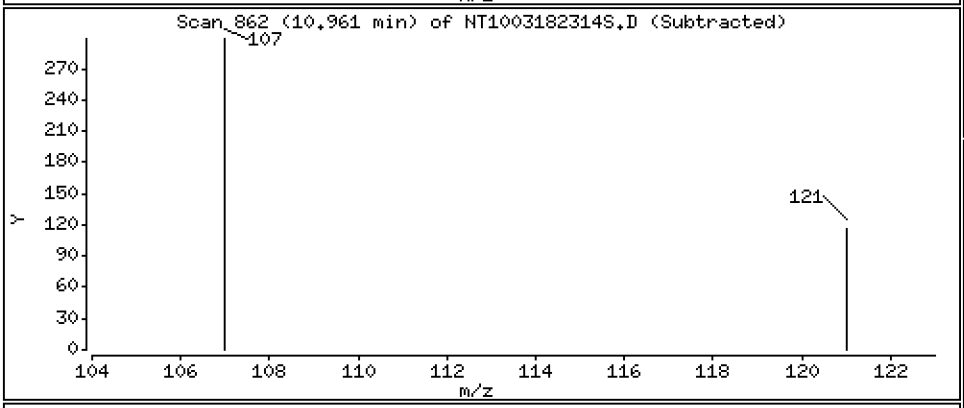
Column diameter: 0.25

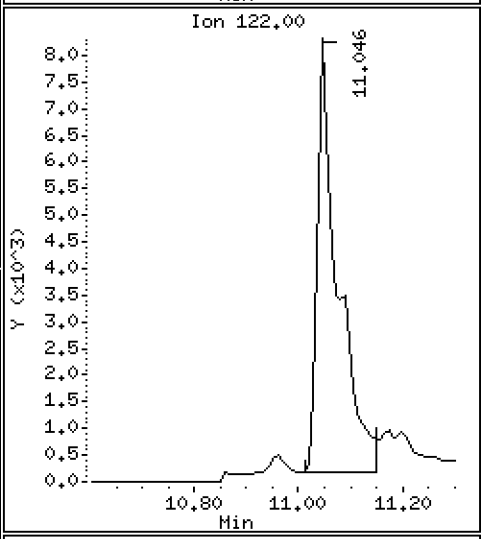
22 2,4-Dimethylphenol

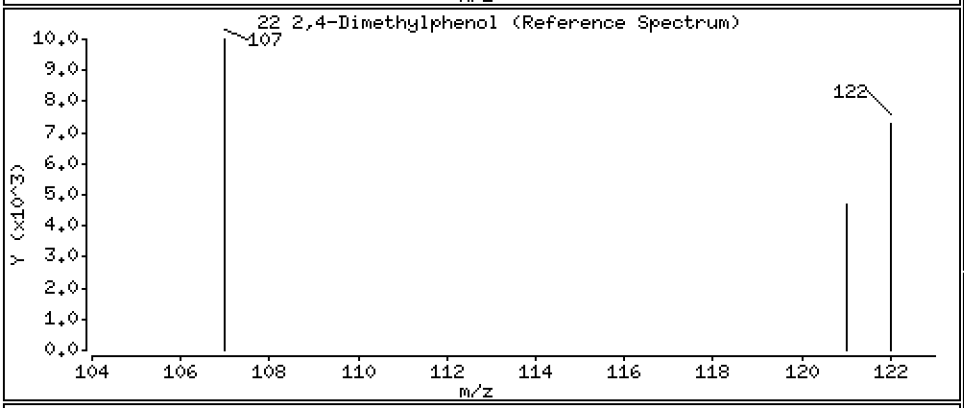
Concentration: 0.009383 ug/L

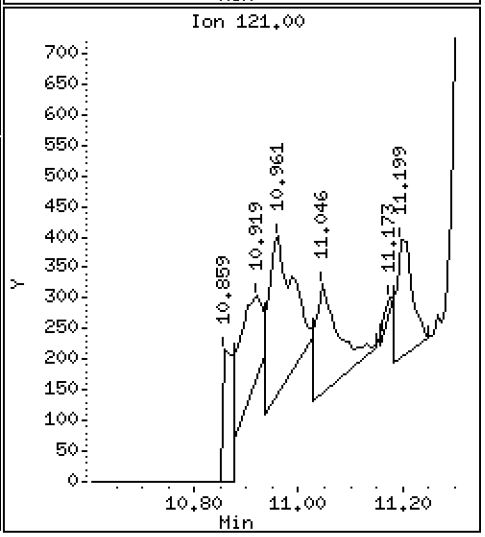


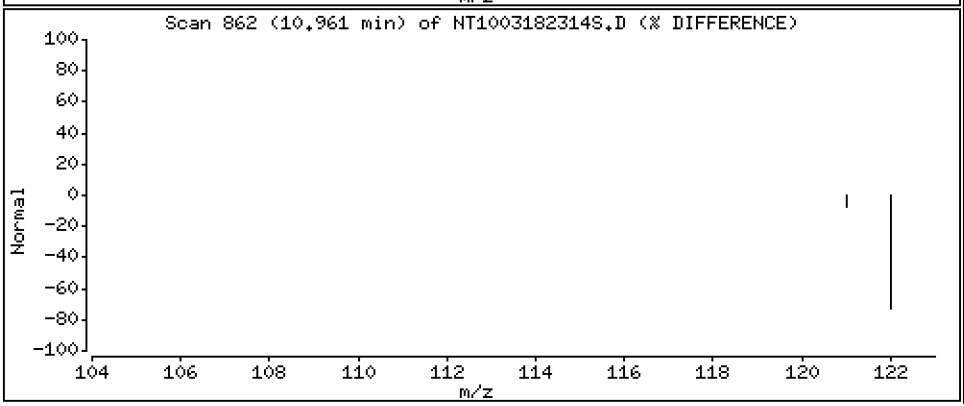












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823145.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

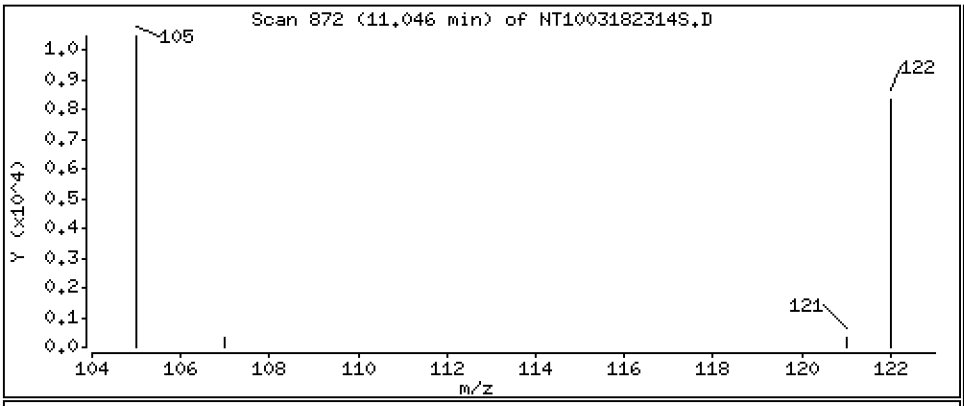
Operator: JGR

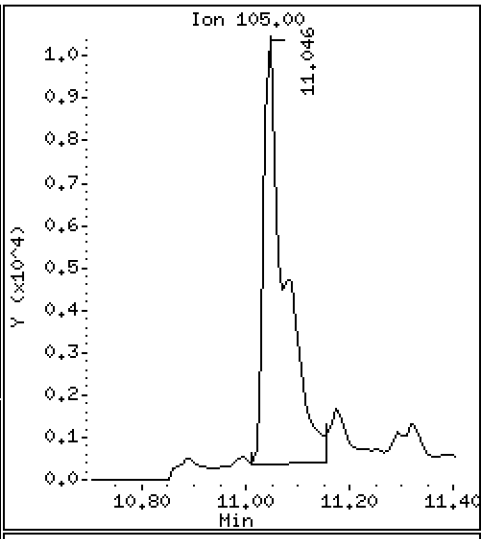
Column phase: ZB-5msi

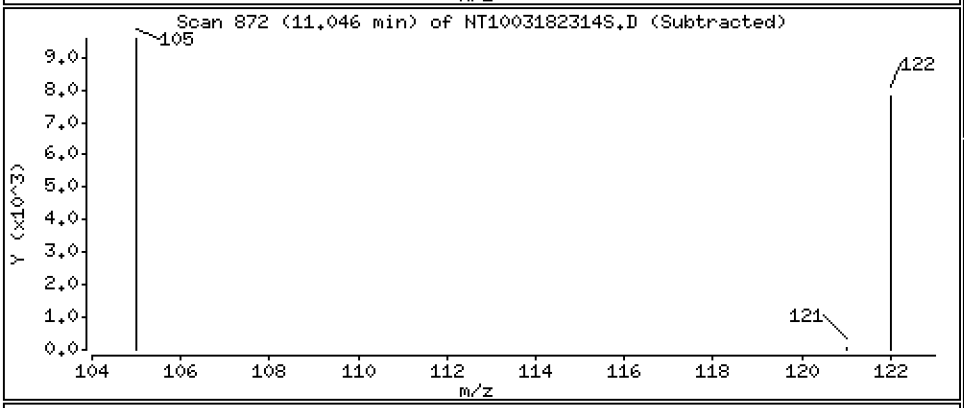
Column diameter: 0.25

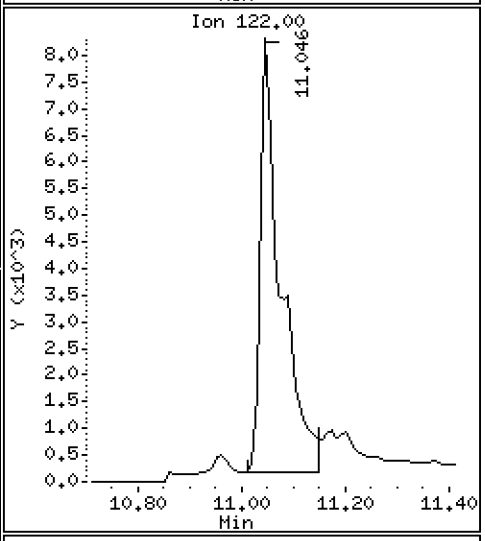
24 Benzoic acid

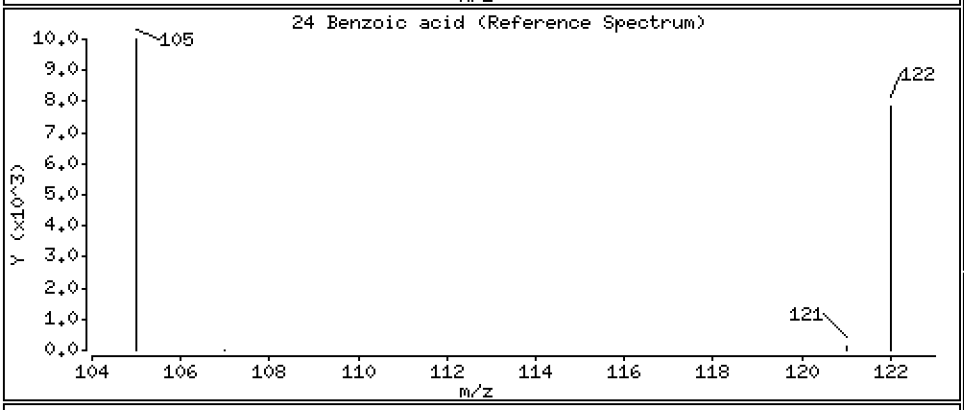
Concentration: 0.6422 ug/L

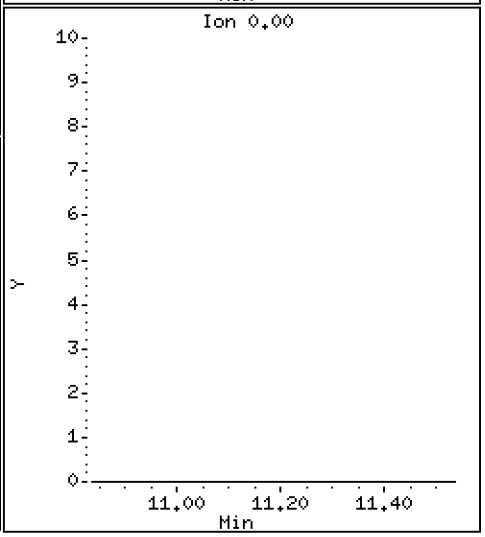


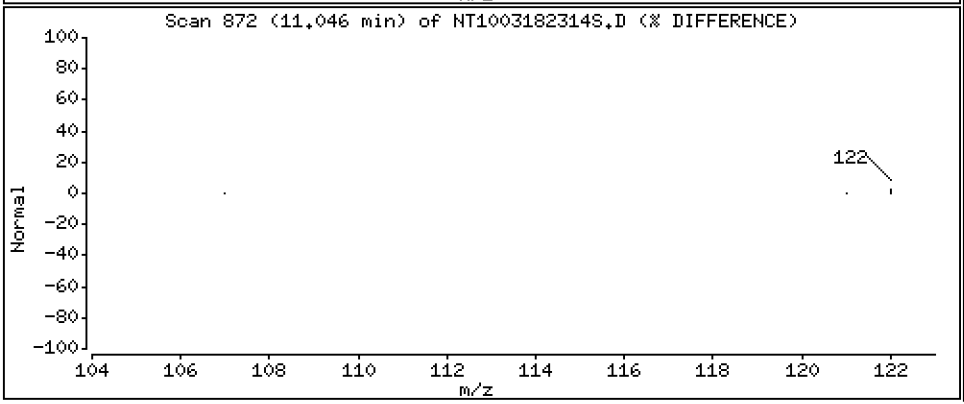












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

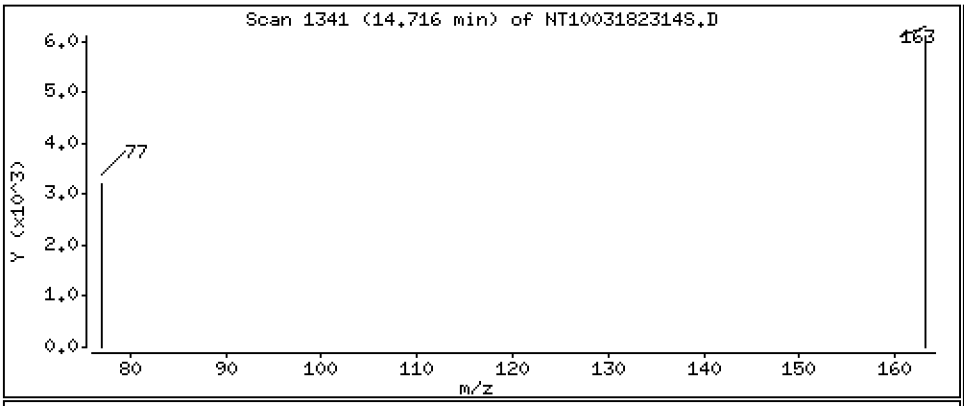
Operator: JGR

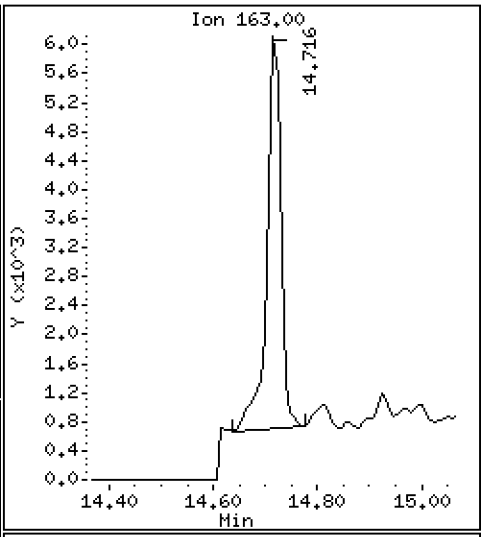
Column phase: ZB-5msi

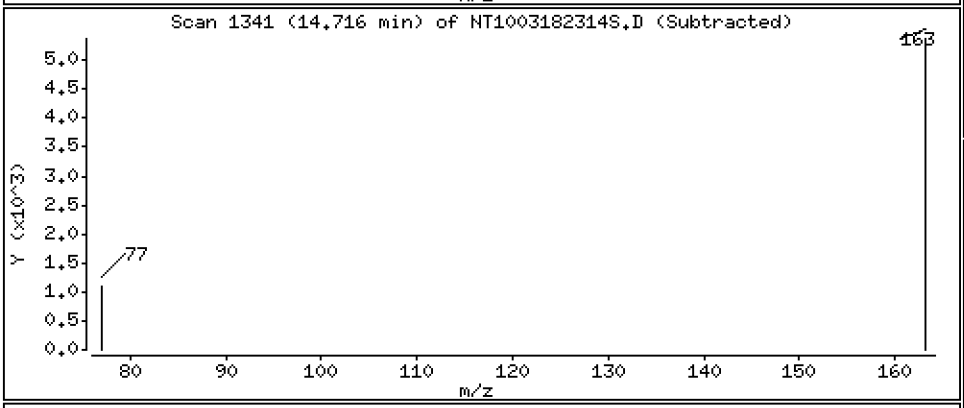
Column diameter: 0.25

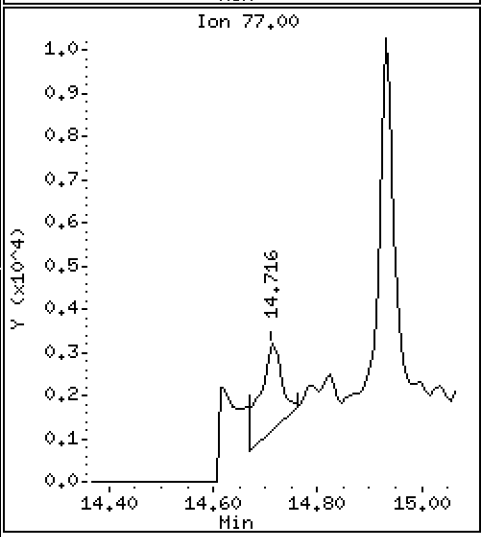
39 Dimethylphthalate

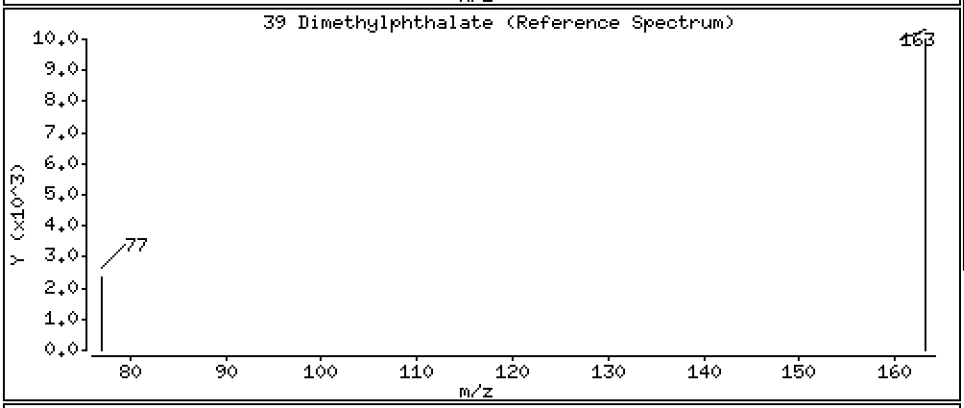
Concentration: 0.06675 ug/L

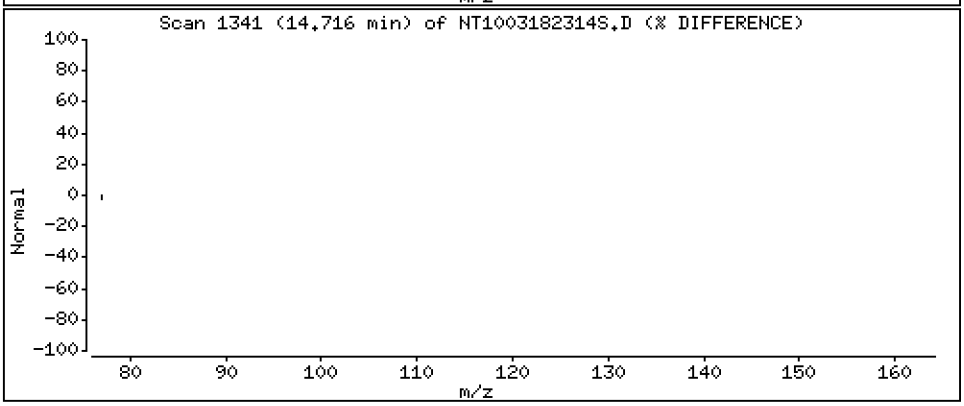












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

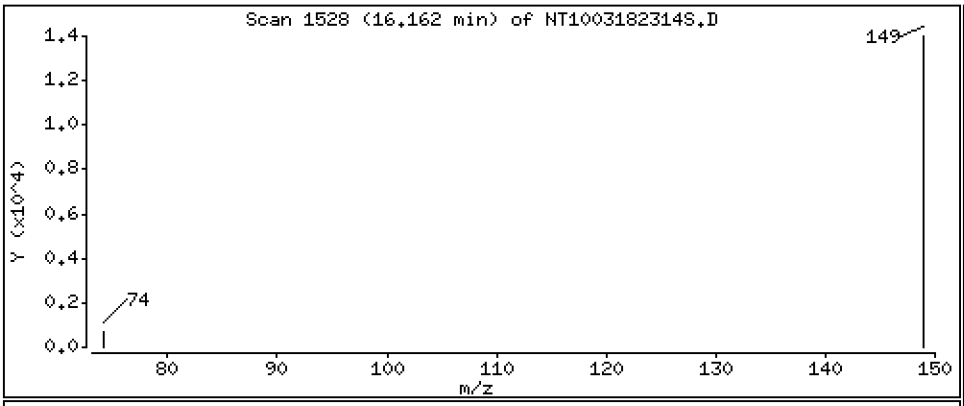
Operator: JGR

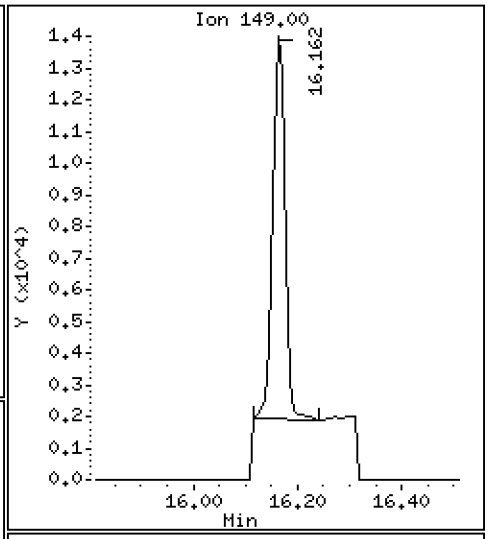
Column phase: ZB-5msi

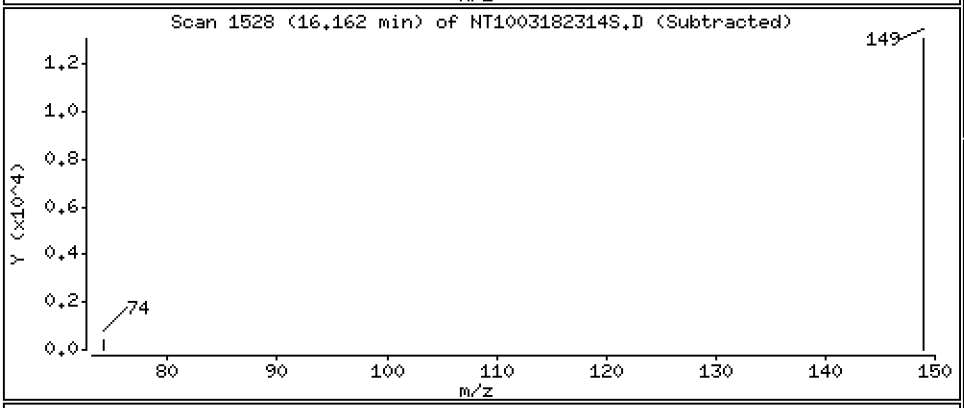
Column diameter: 0.25

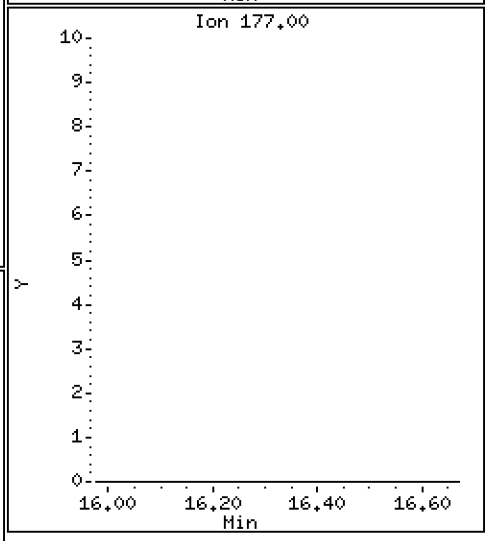
50 Diethylphthalate

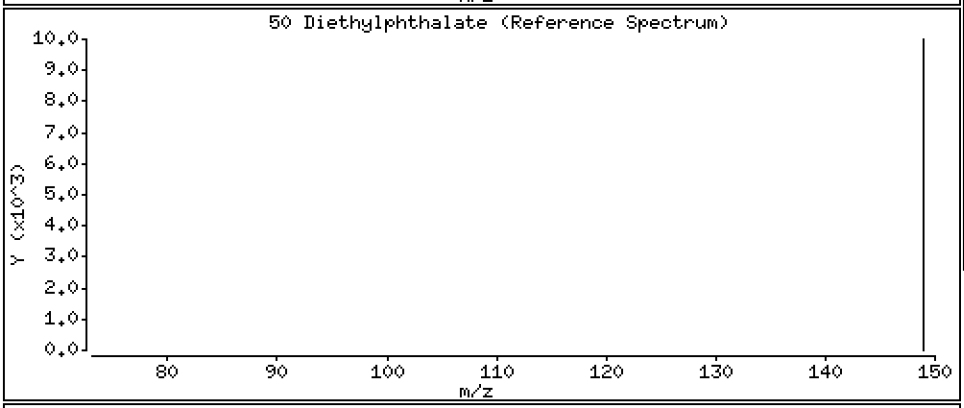
Concentration: 0.1272 ug/L

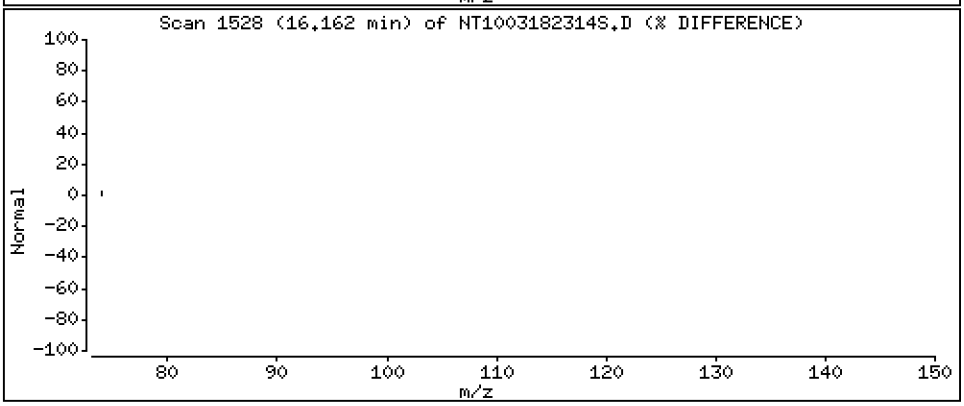












Date : 19-MAR-2023 02:02

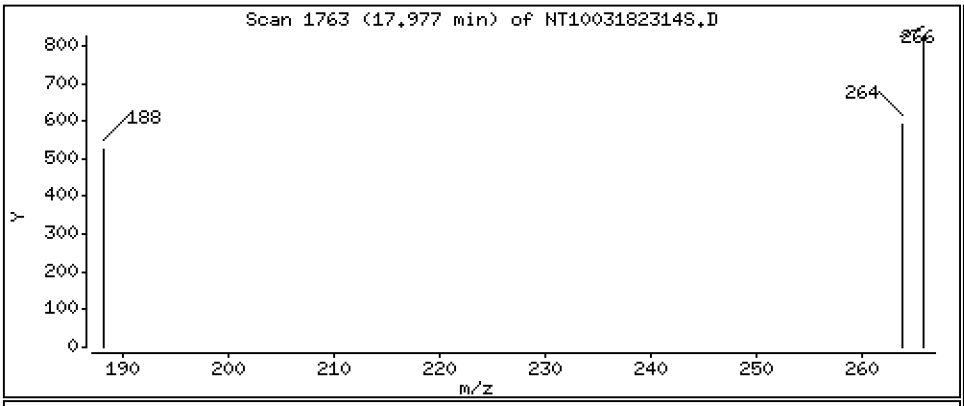
Client ID: Instrument: nt10.i

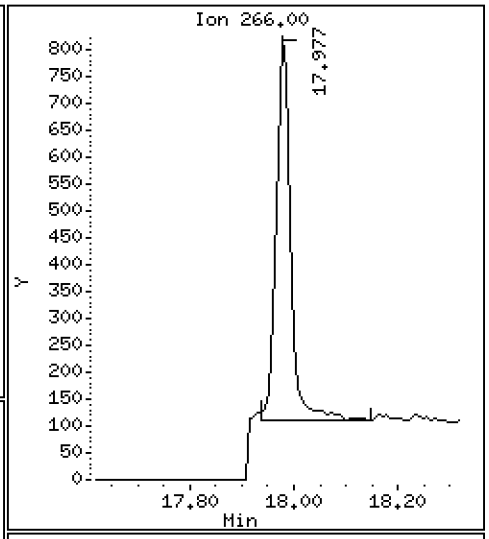
Sample Info: 23A0467-05

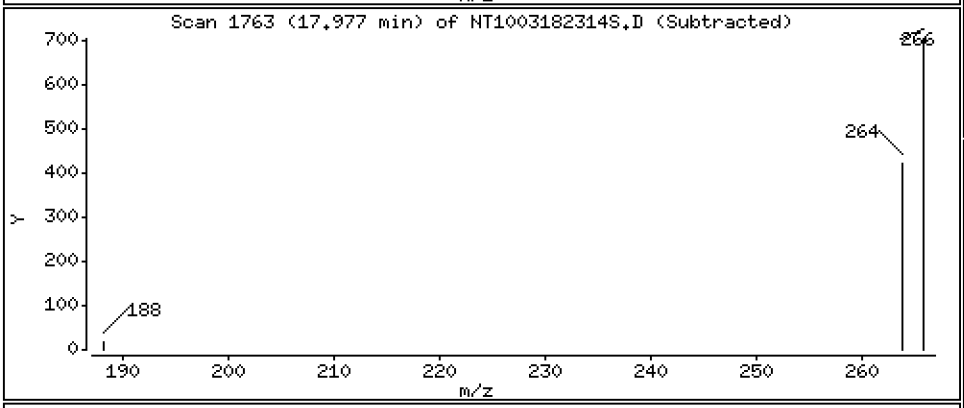
Volume Injected (uL): 1.0 Operator: JGR

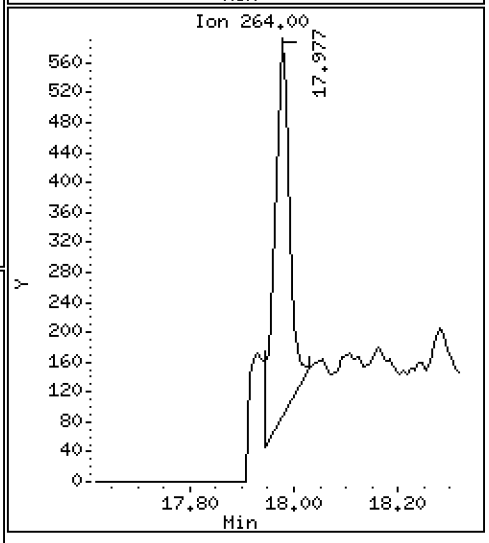
Column phase: ZB-5msi Column diameter: 0.25

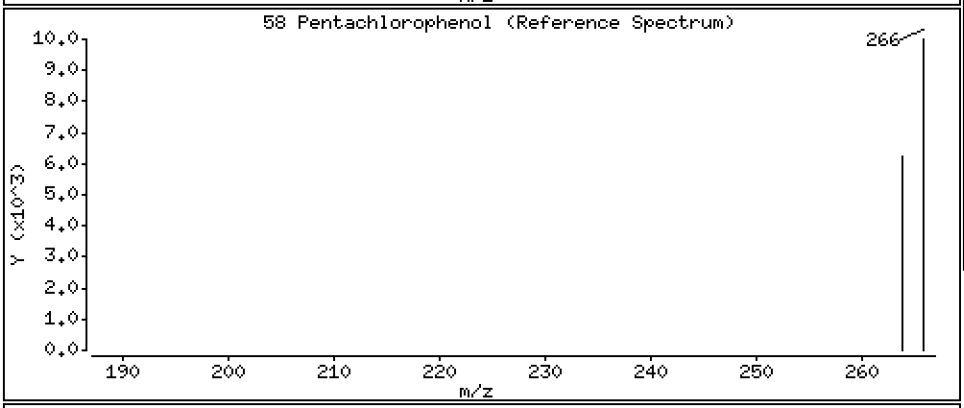
58 Pentachlorophenol Concentration: 0.04255 ug/L

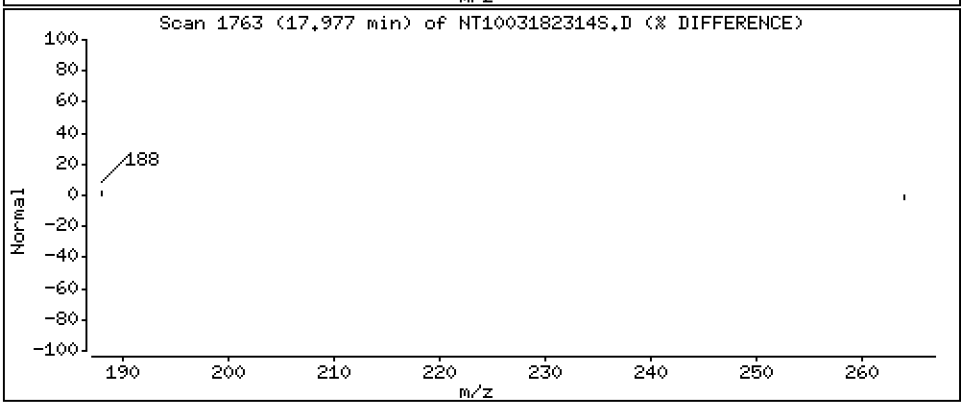












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Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

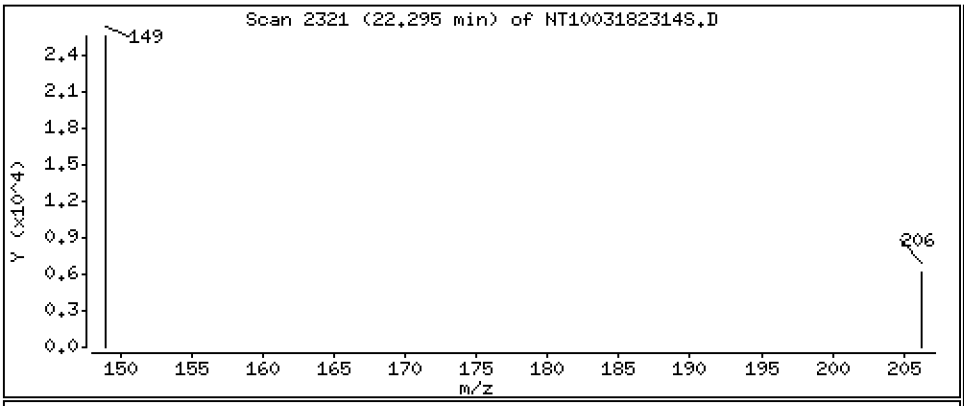
Operator: JGR

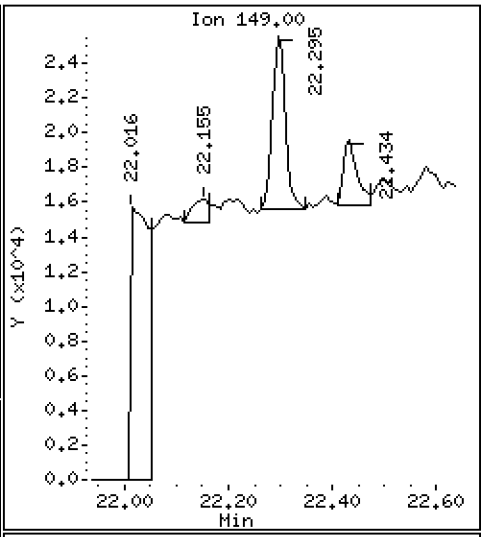
Column phase: ZB-5msi

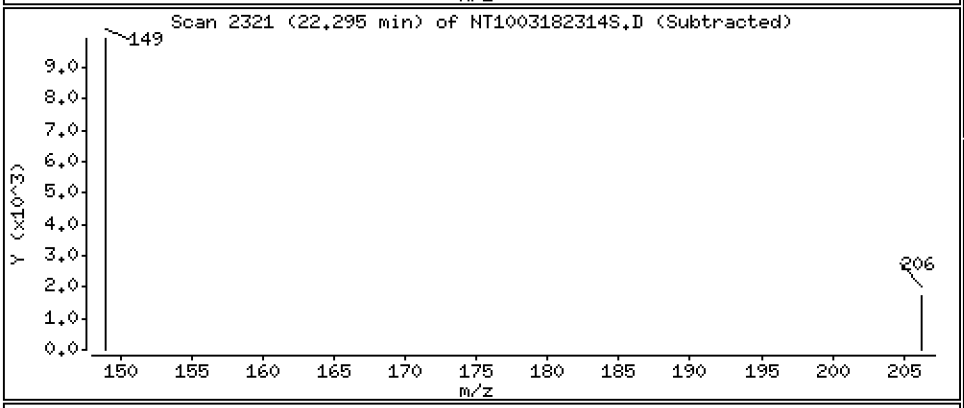
Column diameter: 0.25

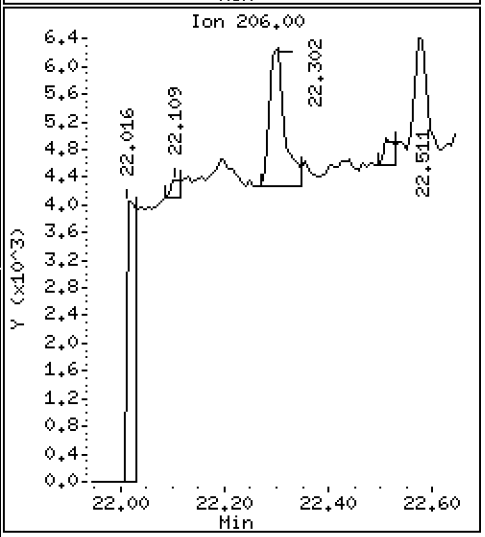
67 Butylbenzylphthalate

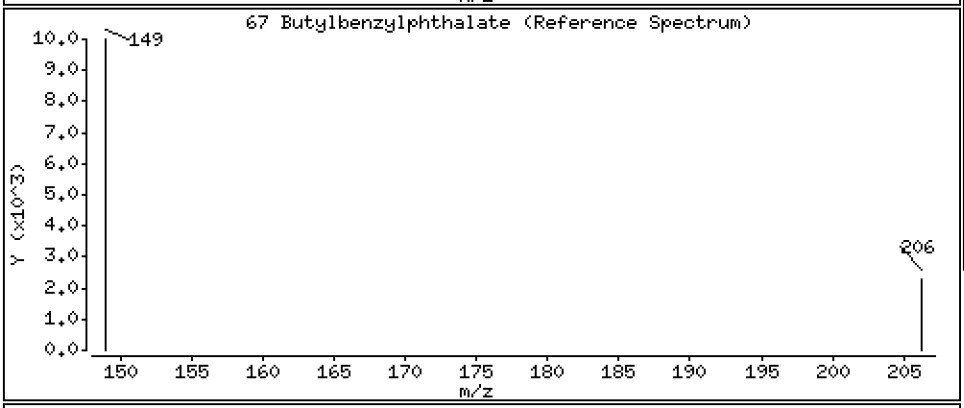
Concentration: 0.1503 ug/L

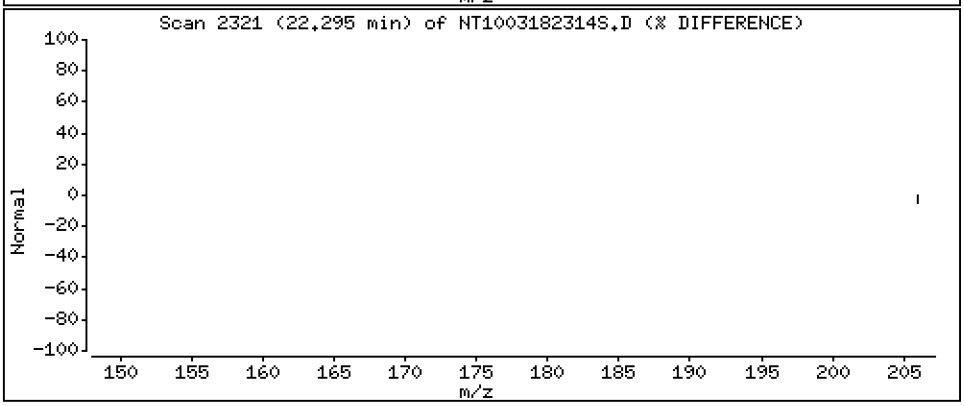












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D

Date : 19-MAR-2023 02:02

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-05

Volume Injected (uL): 1.0

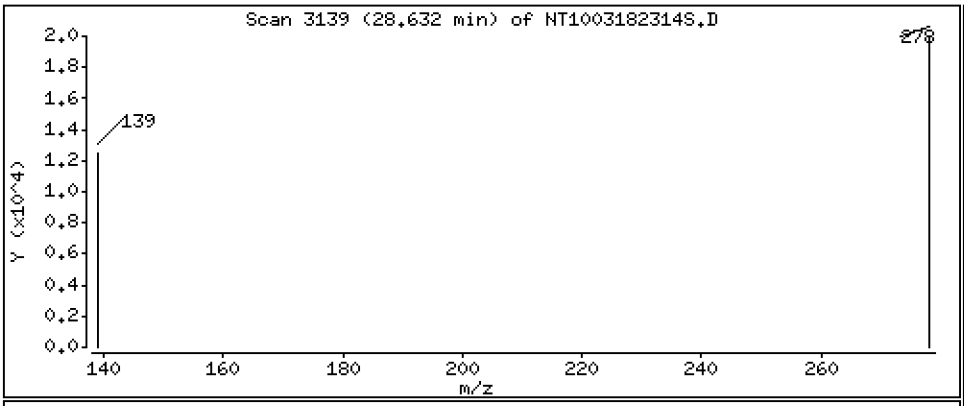
Operator: JGR

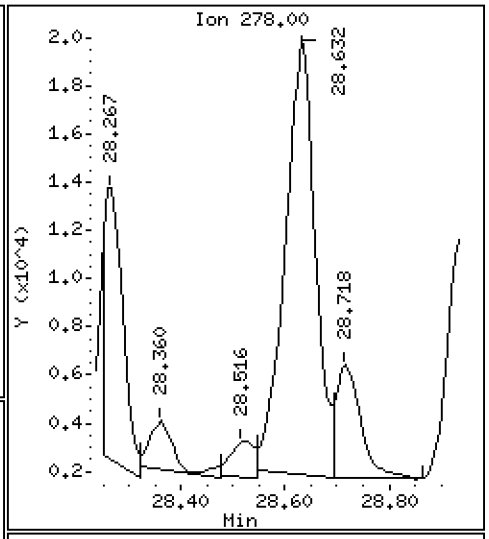
Column phase: ZB-5msi

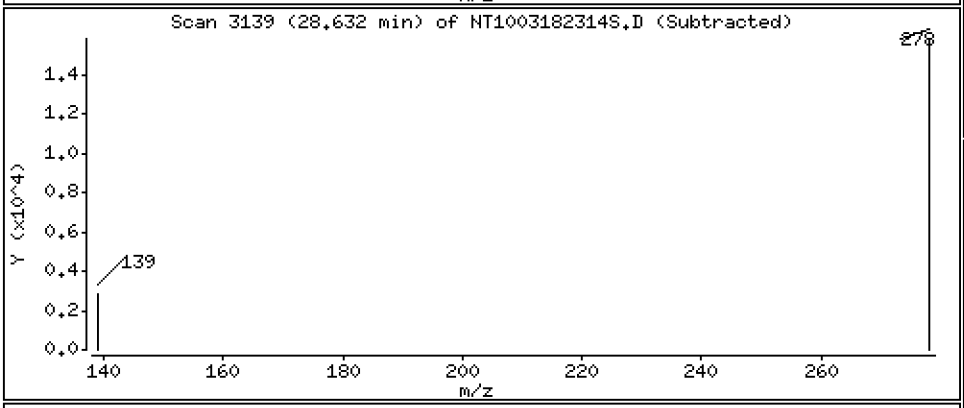
Column diameter: 0.25

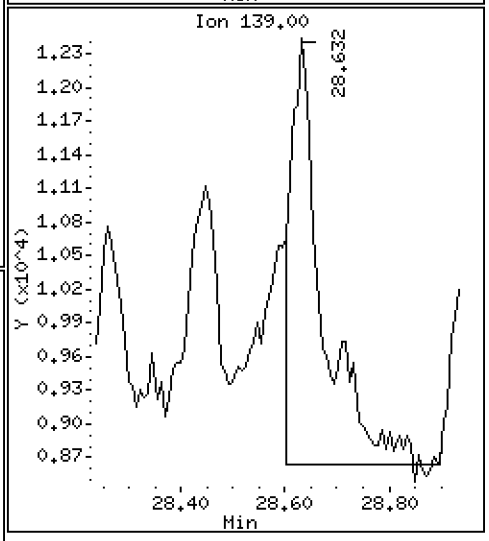
79 Dibenzo(a,h)anthracene

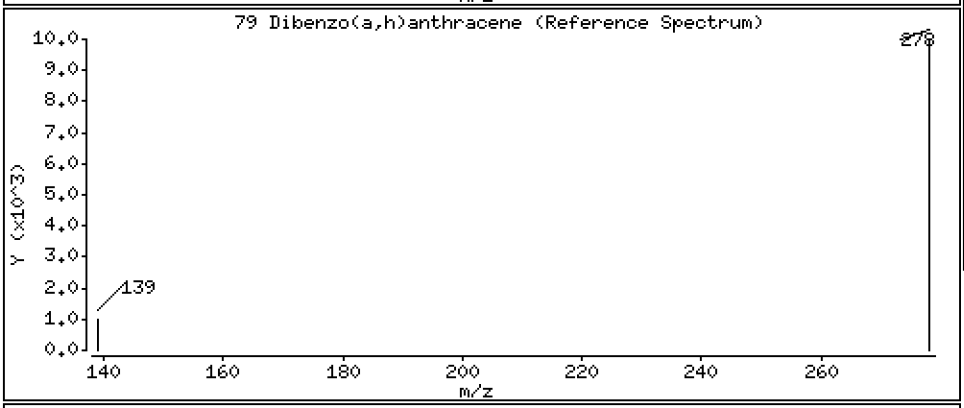
Concentration: 0.2487 ug/L

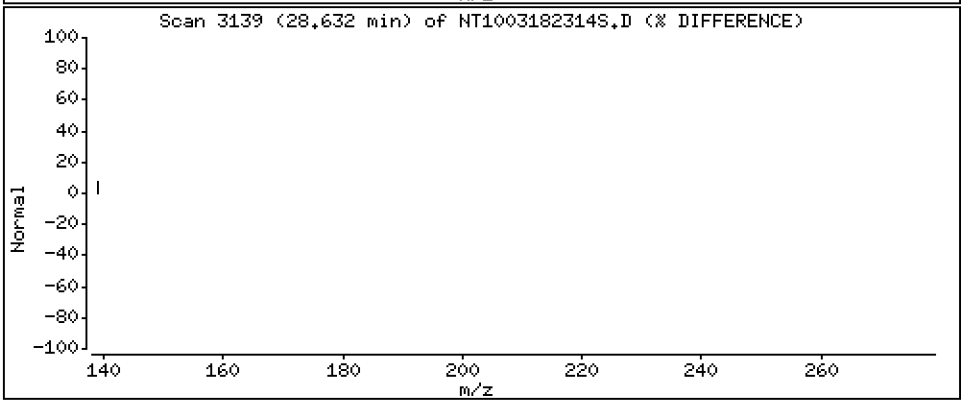












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182314S.D
Lab Smp Id: 23A0467-05
Inj Date : 19-MAR-2023 02:02 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-05
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.957	(0.761)	461947	5.79044	5.790(R)
3	Phenol	94	8.556	8.541	(0.933)	273234	2.49643	2.496
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.167	(1.000)	263079	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	1600	0.01618	0.01618(M)
11	Benzyl alcohol	79	9.439	9.431	(1.029)	11290	0.17793	0.1779(M)
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.041)	561	0.00577	0.005770
13	2-Methylphenol	108	9.656	9.648	(1.081)	1206	0.01590	0.01590(MH)
15	4-Methylphenol	108	9.920	9.912	(1.081)	159850	2.02841	2.028
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.961	10.943	(0.942)	771	0.00938	0.009383
24	Benzoic acid	105	11.046	11.053	(0.949)	28913	0.64218	0.6422(M)
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.636	11.627	(1.000)	950624	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.715	14.714	(0.967)	9514	0.06675	0.06675(M)
* 42	Acenaphthene-d10	162	15.218	15.210	(1.000)	451659	4.00000	
50	Diethylphthalate	149	16.161	16.161	(1.062)	18781	0.12720	0.1272(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
58	Pentachlorophenol	266	17.976	17.968	(0.985)	1343	0.04255	0.04255
* 59	Phenanthrene-d10	188	18.247	18.231	(1.000)	951963	4.00000	
$ 66	Terphenyl-d14	244	21.373	21.364	(0.918)	709554	5.30773	5.308(R)
67	Butylbenzylphthalate	149	22.294	22.285	(0.957)	16233	0.15033	0.1503
* 69	Chrysene-d12	240	23.285	23.269	(1.000)	820465	4.00000	
* 77	Perylene-d12	264	25.933	25.909	(1.000)	914392	4.00000	
79	Dibenzo(a,h)anthracene	278	28.632	28.584	(1.104)	74565	0.24871	0.2487
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182314S.D
Lab Smp Id: 23A0467-05
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	263079	32.90
27 Naphthalene-d8	704013	352007	1408026	950624	35.03
42 Acenaphthene-d10	353977	176989	707954	451659	27.60
59 Phenanthrene-d10	686752	343376	1373504	951963	38.62
69 Chrysene-d12	597733	298867	1195466	820465	37.26
77 Perylene-d12	645663	322832	1291326	914392	41.62

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.18	0.09
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.06
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.09
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.07
77 Perylene-d12	25.91	25.41	26.41	25.93	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182314S.D

Lab ID: 23A0467-05
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 02:02

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.081	1.052	0.0287	2-Methylphenol

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

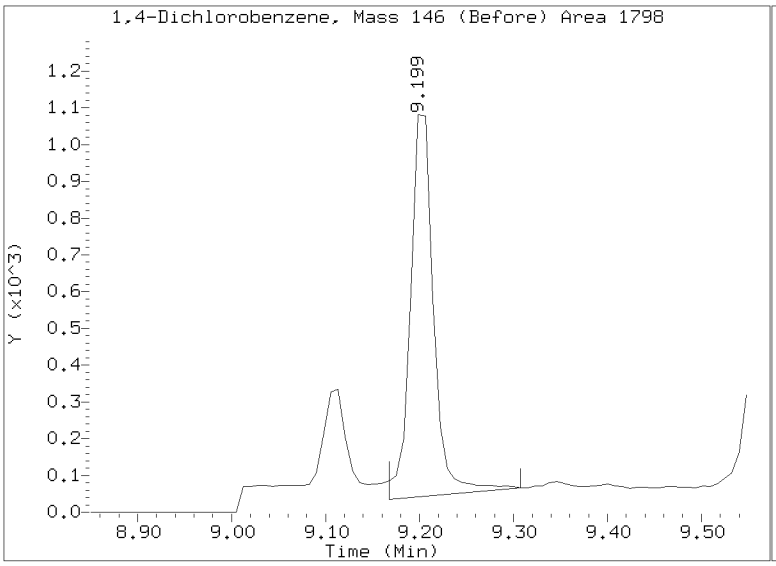
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

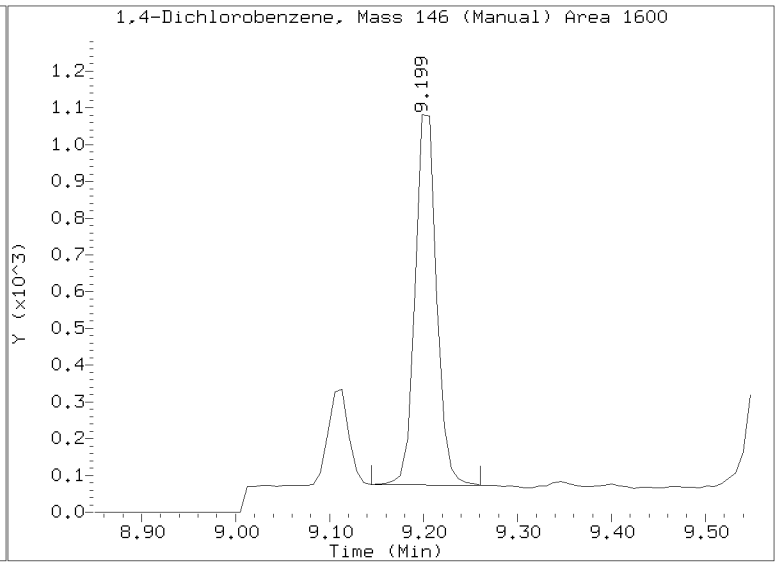
Exception: 1,2,4-Trichlorobenzene 0.0010

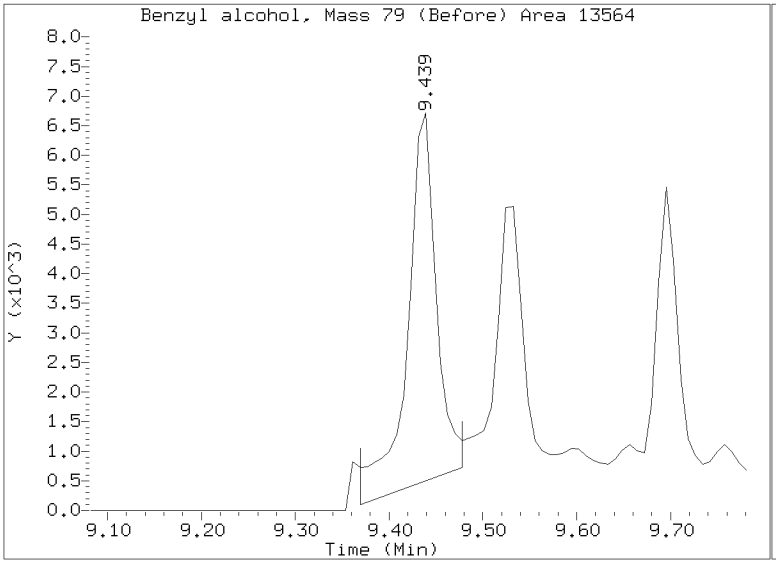
* Only compounds listed in the work order have been verified by the analyst *

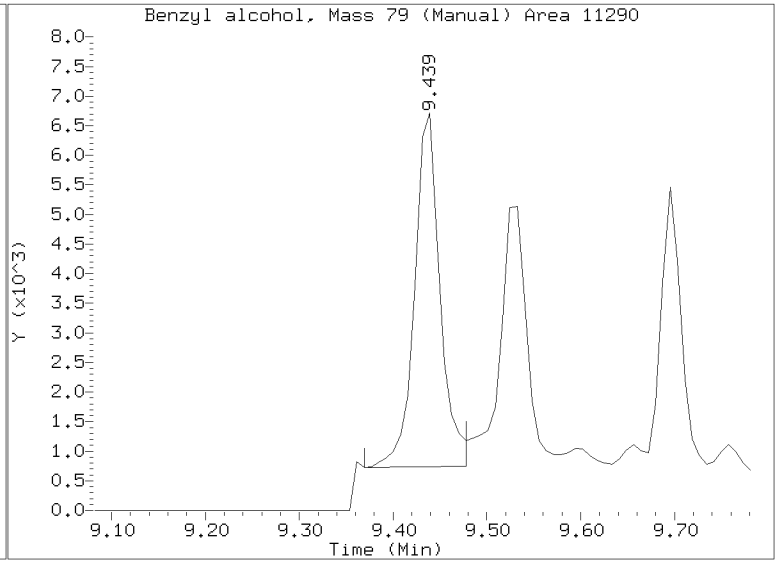
Quant Ion Manual Peak Adjustment Report

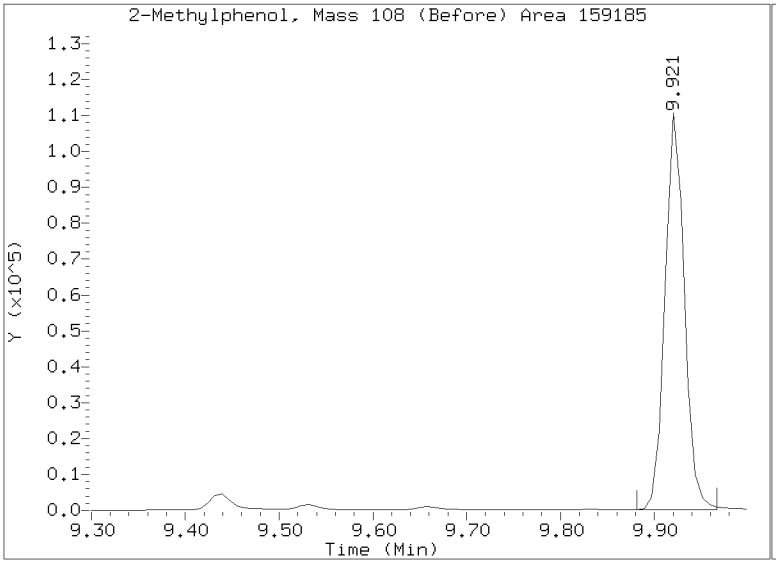
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182314S.D
Injection Date: 19-MAR-2023 02:02
Lab ID:23A0467-05 Client ID:
Report Date: 04/04/2023 12:31

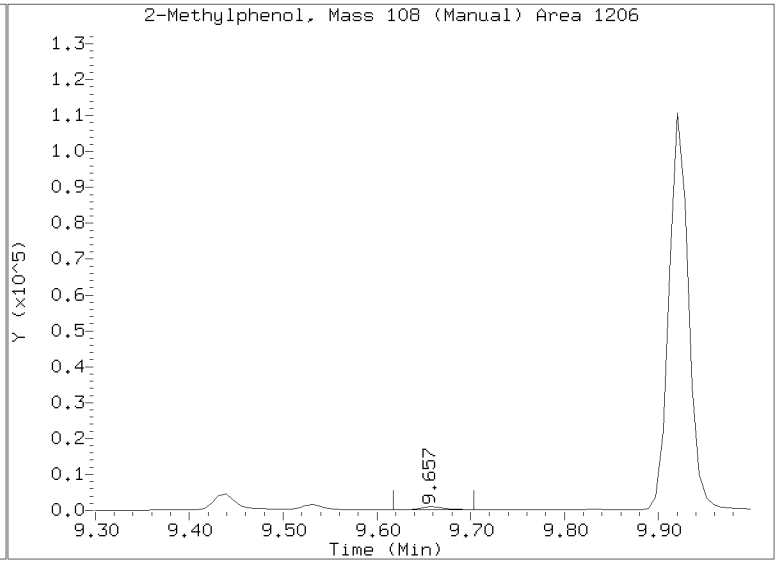












Quant Ion Manual Peak Adjustment Report

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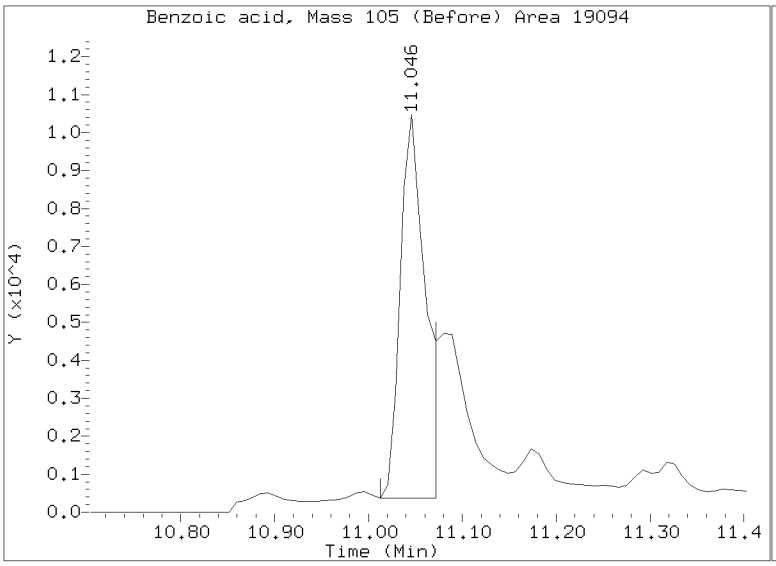
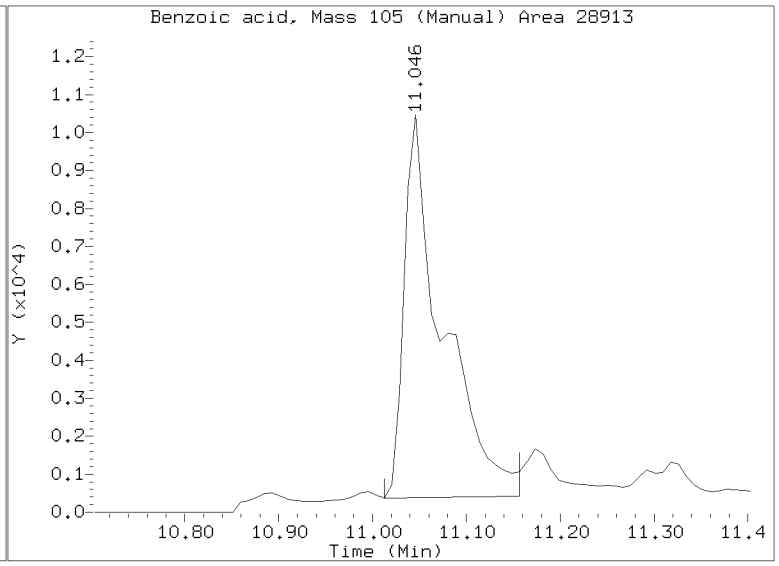
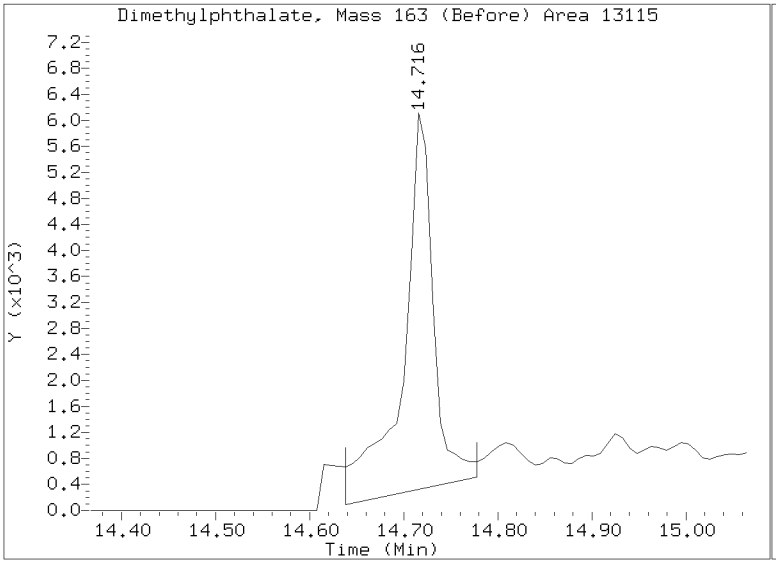
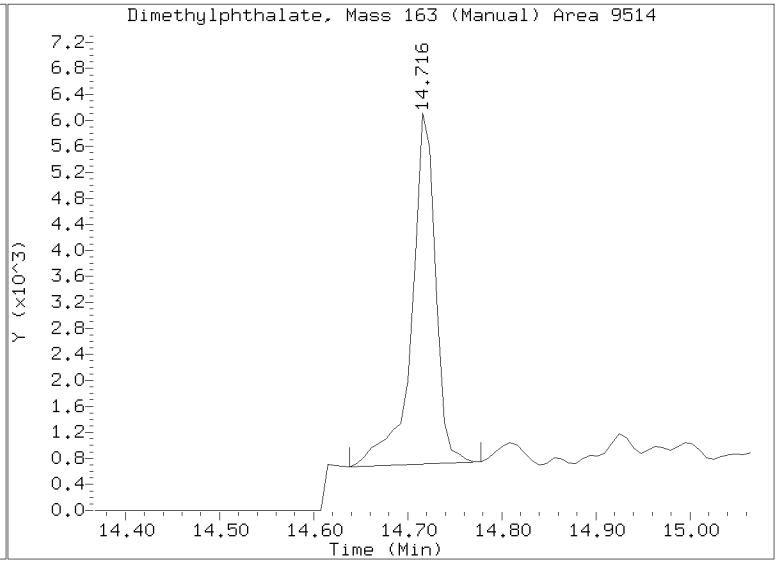
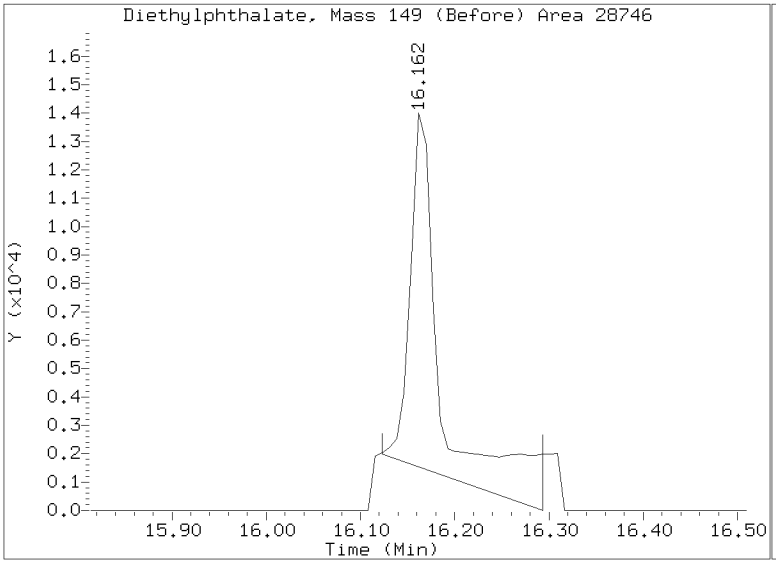
Injection Date: 19-MAR-2023 02:02
Lab ID:23A0467-05 Client ID:
Report Date: 04/04/2023 12:31

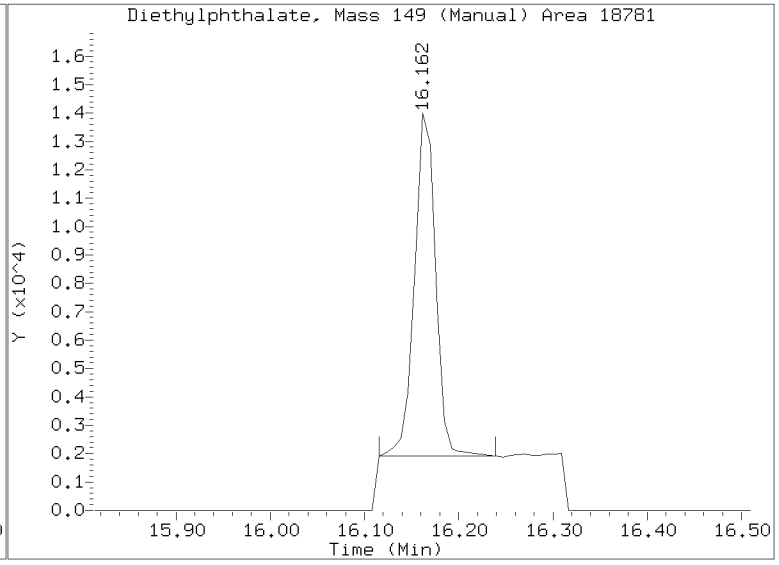












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1204

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	02/23/23 15:49	File ID:	NT1003182315S.D
% Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 02:41
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	21.2 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.8	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	410		2.5	20.0
65-85-0	Benzoic acid	1	154		13.4	99.9
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	4.5	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.89	571	76.3	27 - 120	
p-Terphenyl-d14	499.26	663	133	37 - 120	*

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823158.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

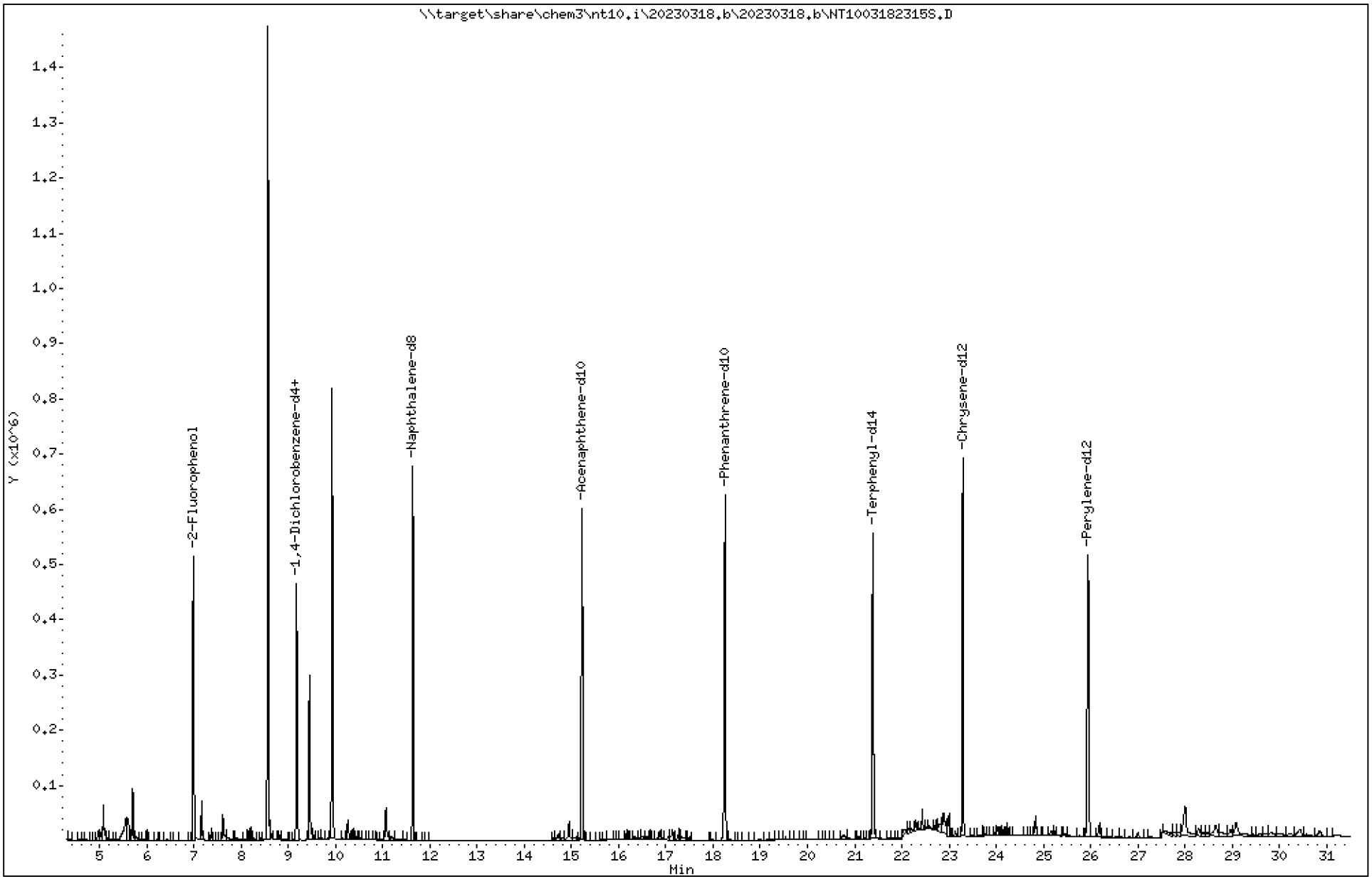
Sample Info: 23A0467-06

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

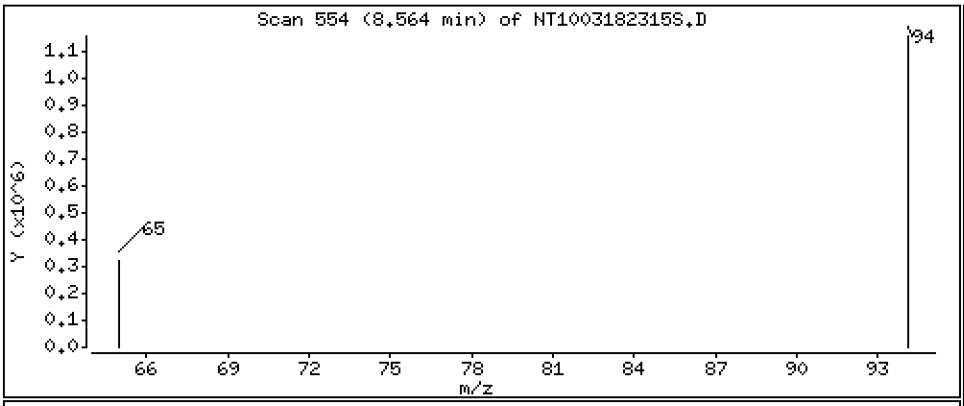
Operator: JGR

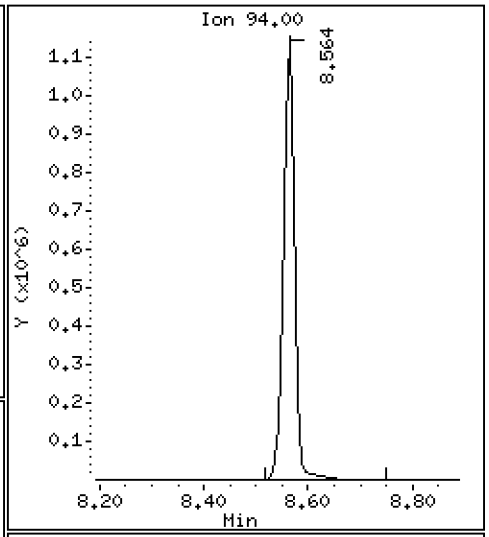
Column phase: ZB-5msi

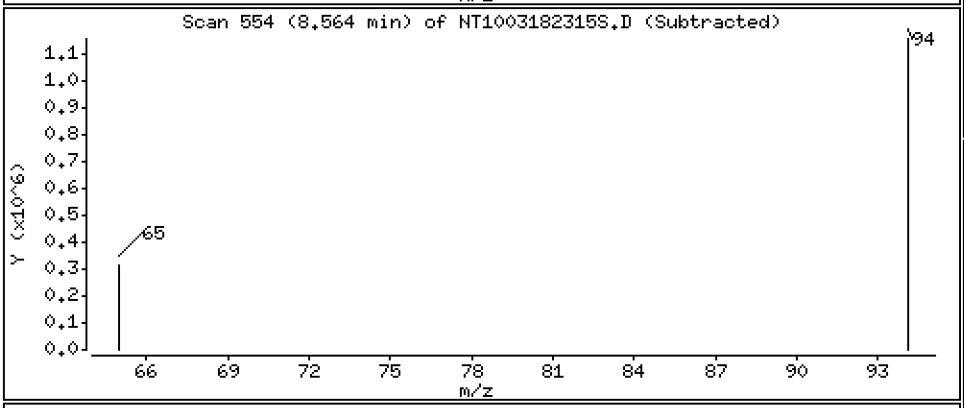
Column diameter: 0.25

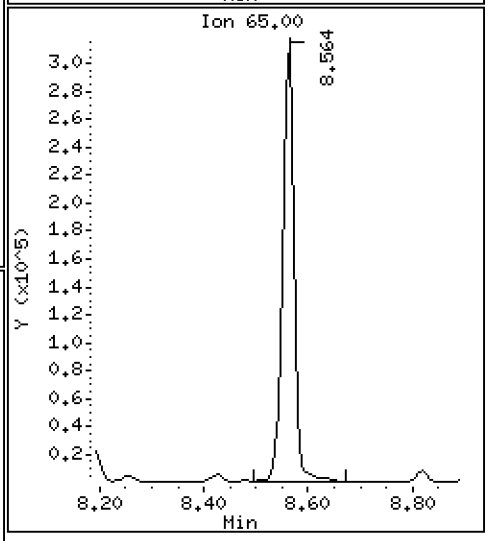
3 Phenol

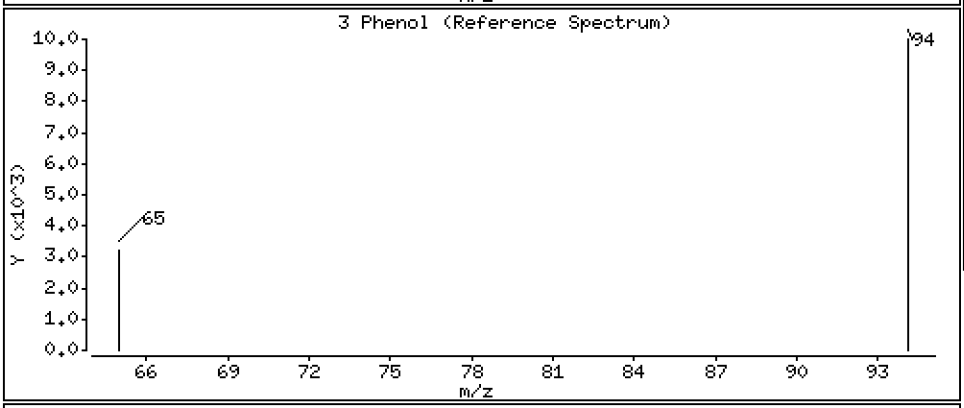
Concentration: 14.99 ug/L

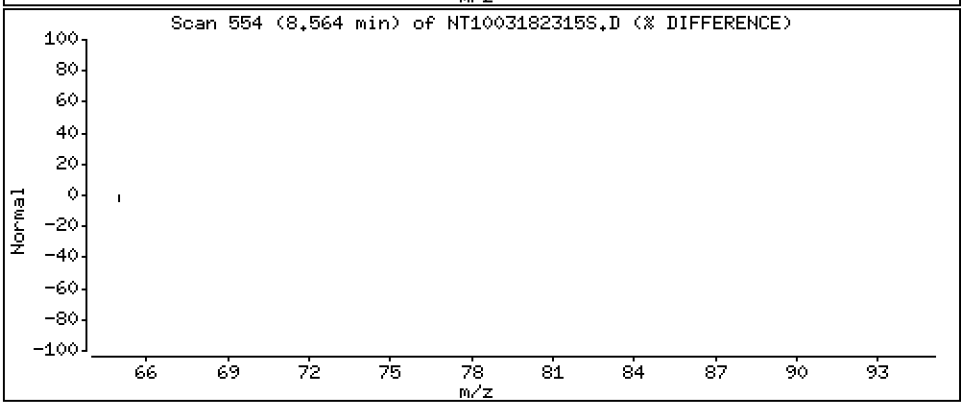












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

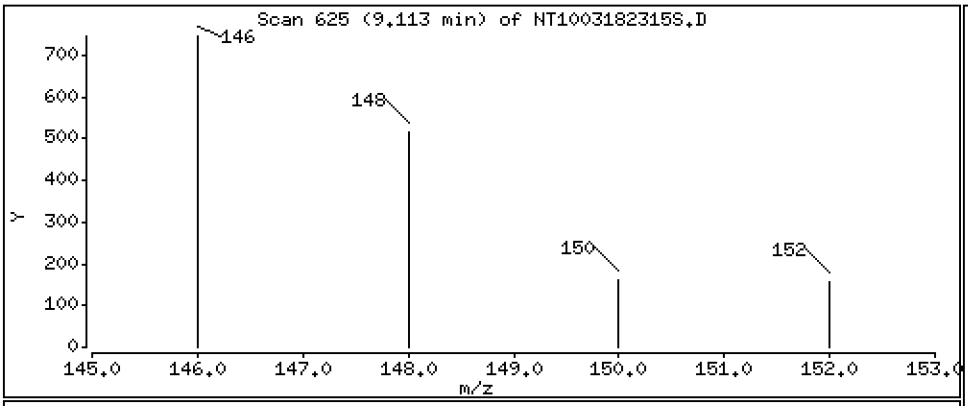
Operator: JGR

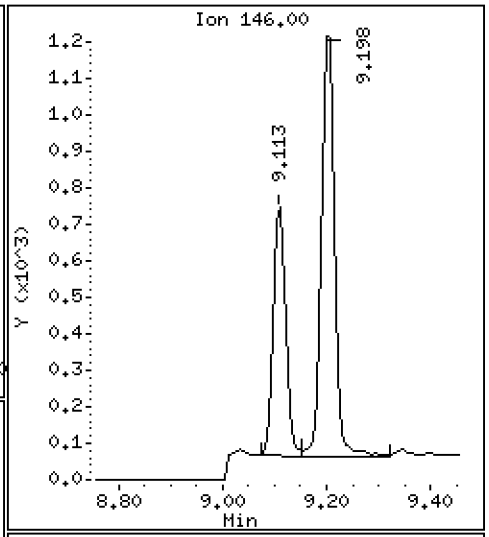
Column phase: ZB-5msi

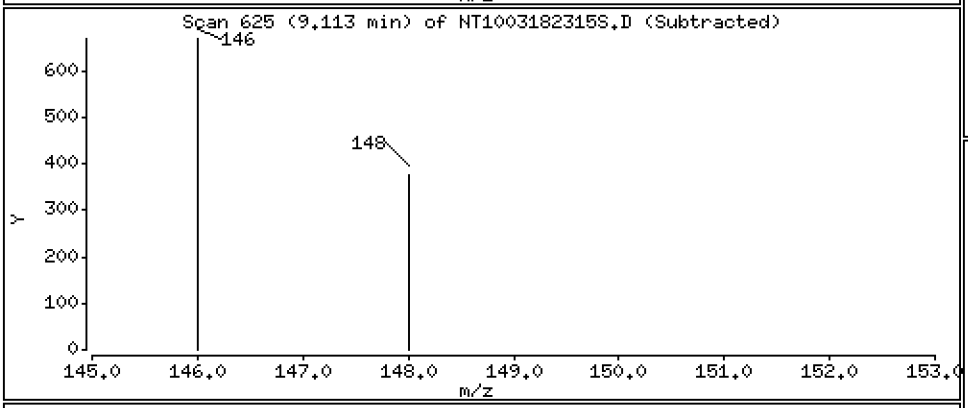
Column diameter: 0.25

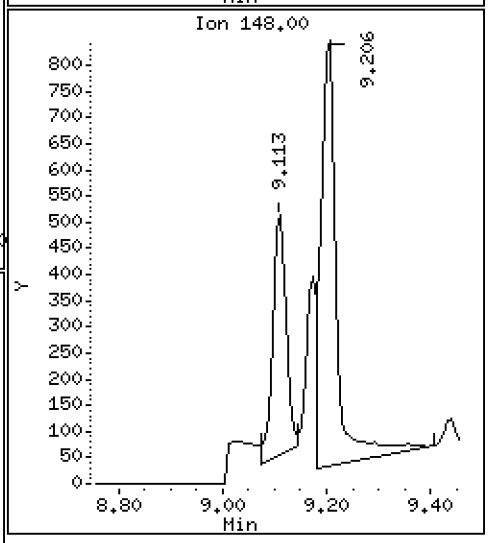
7 1,3-Dichlorobenzene

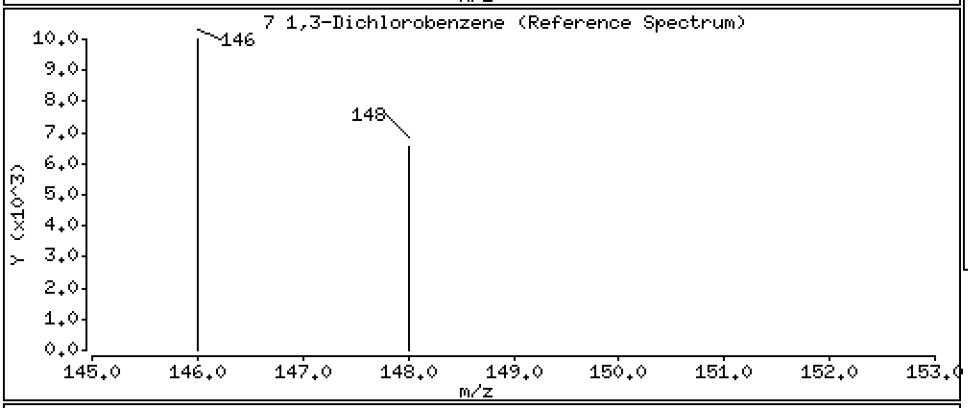
Concentration: 0.009786 ug/L

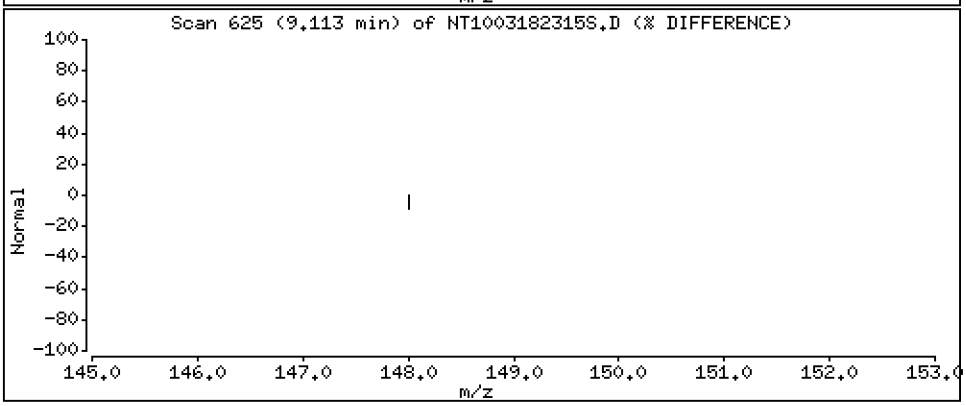












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

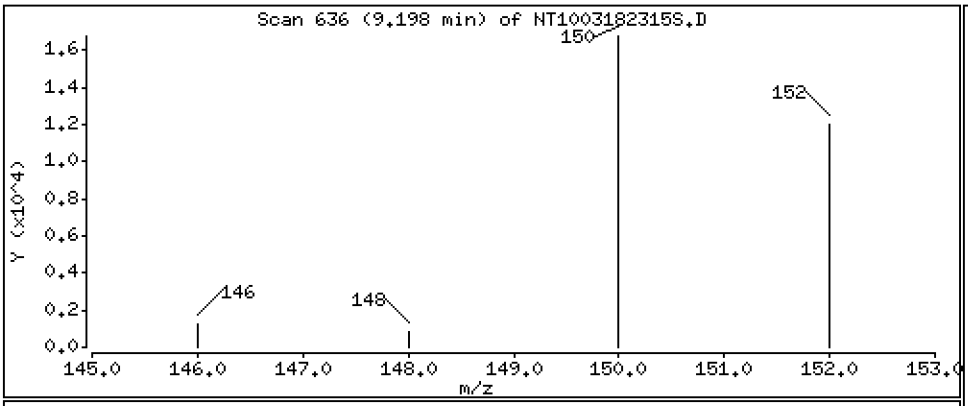
Operator: JGR

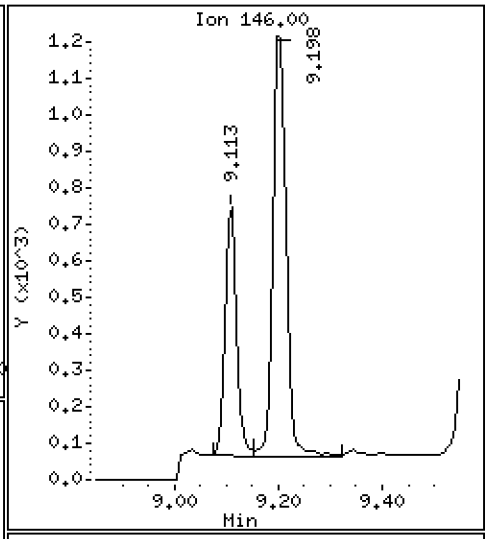
Column phase: ZB-5msi

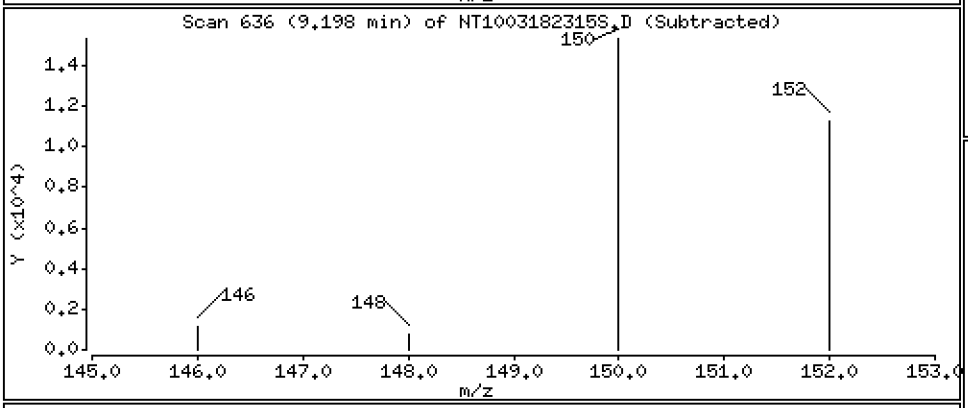
Column diameter: 0.25

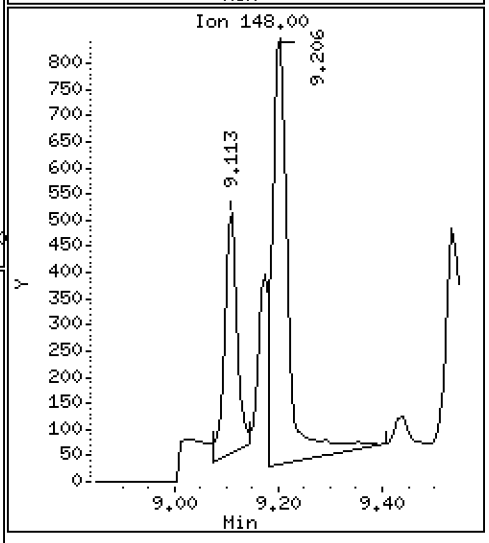
9 1,4-Dichlorobenzene

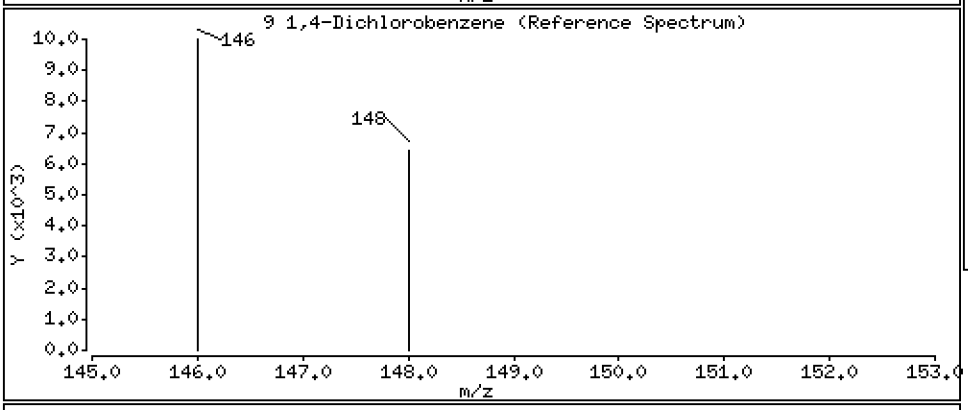
Concentration: 0.01838 ug/L

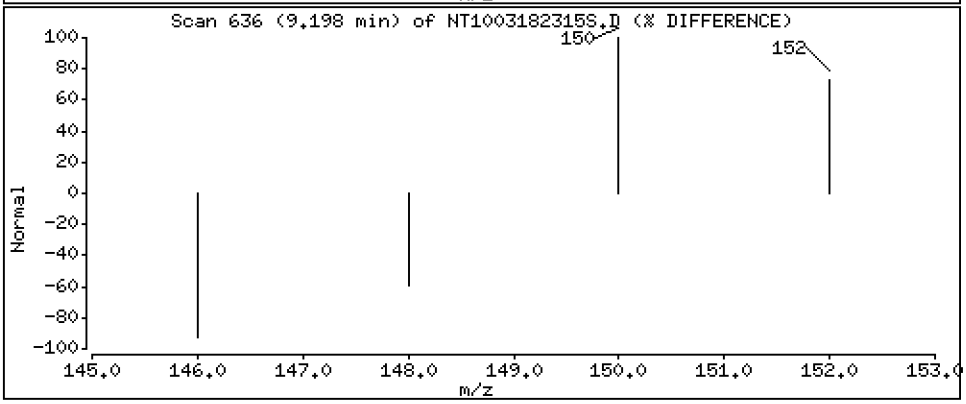












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

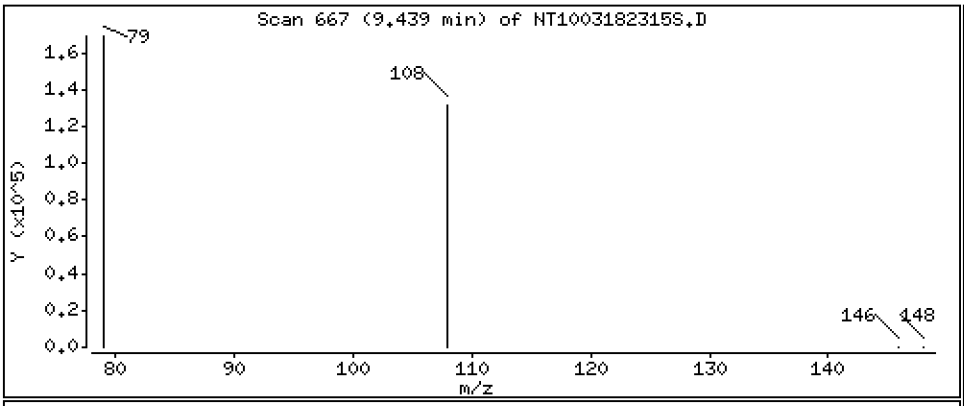
Operator: JGR

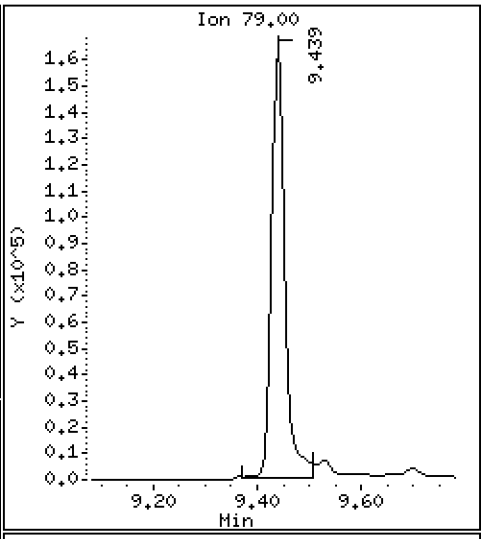
Column phase: ZB-5msi

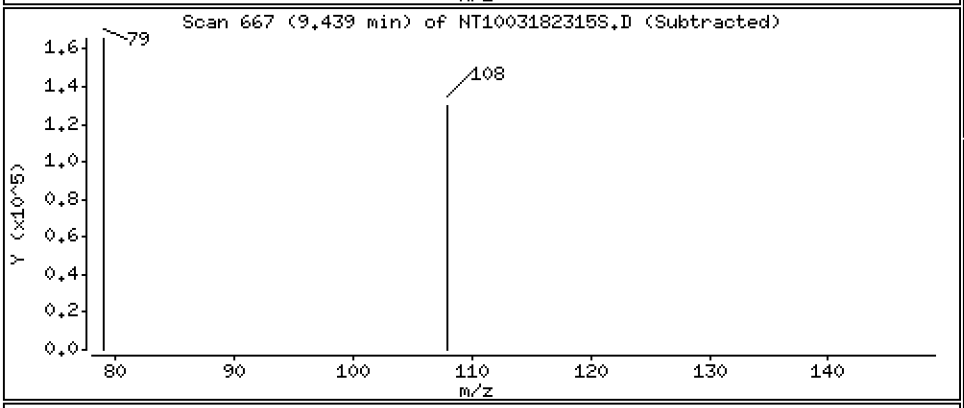
Column diameter: 0.25

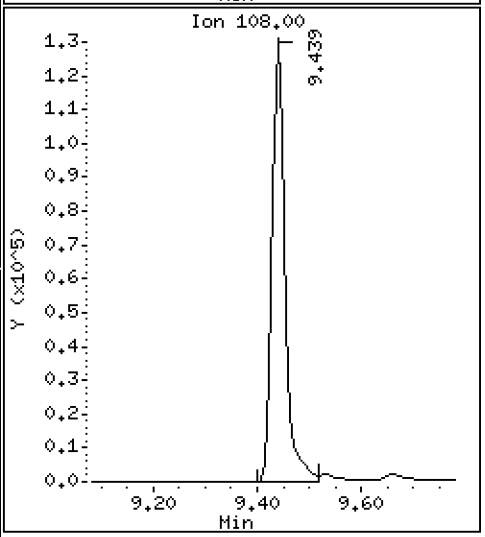
11 Benzyl alcohol

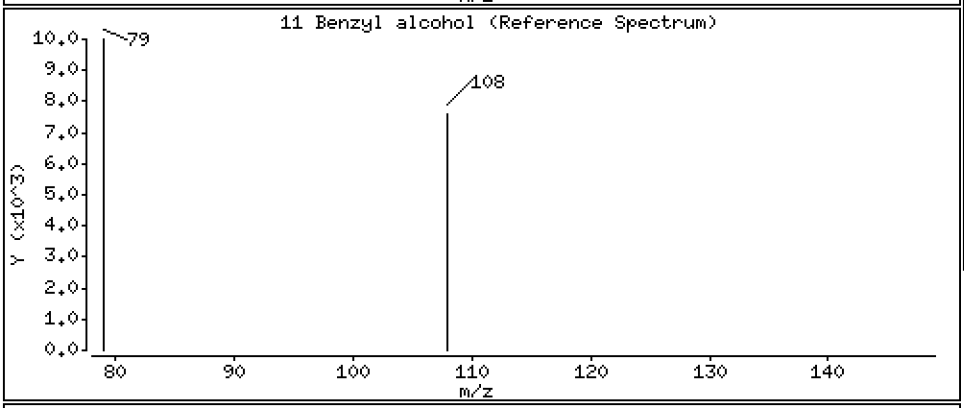
Concentration: 4.107 ug/L

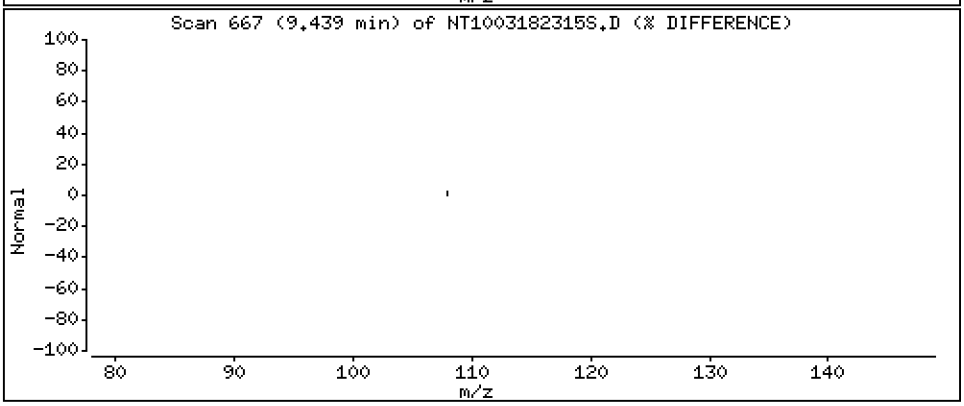












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

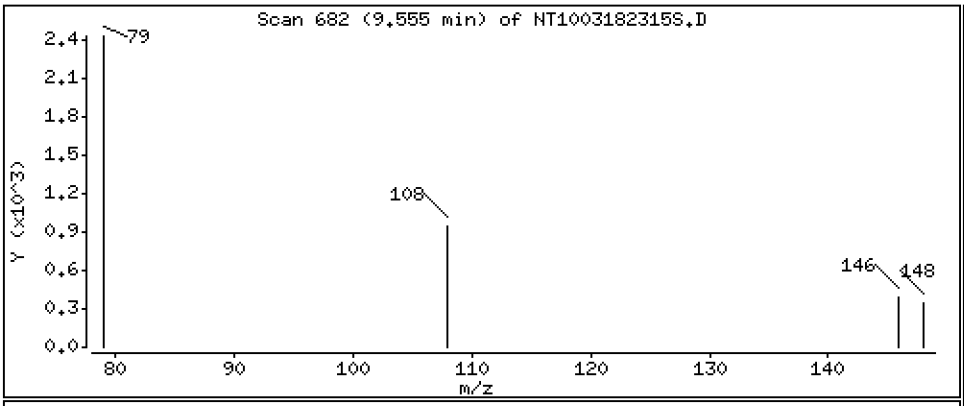
Operator: JGR

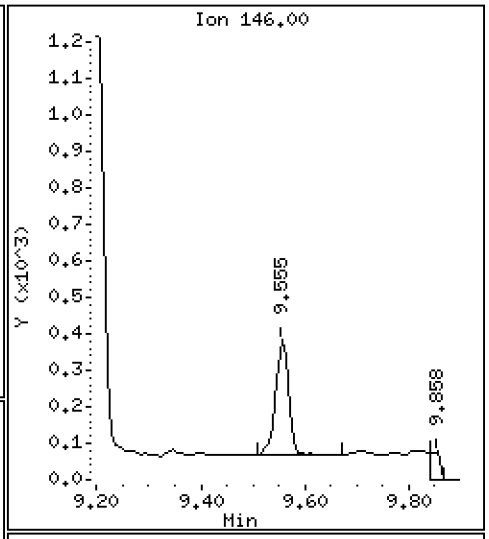
Column phase: ZB-5msi

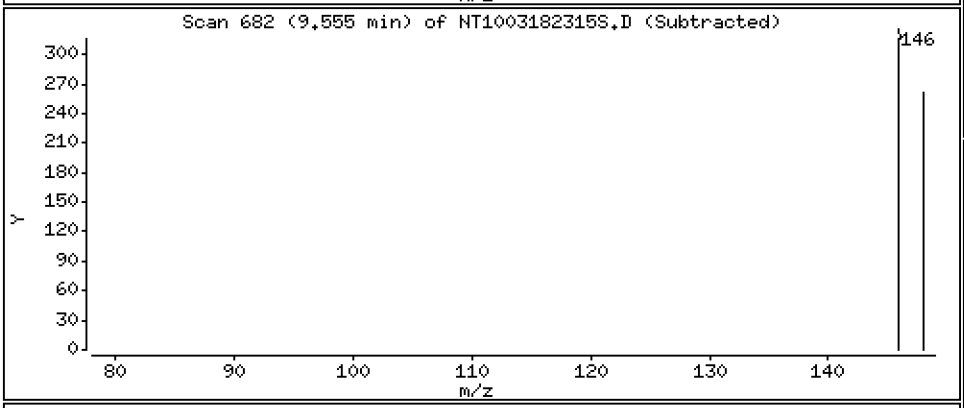
Column diameter: 0.25

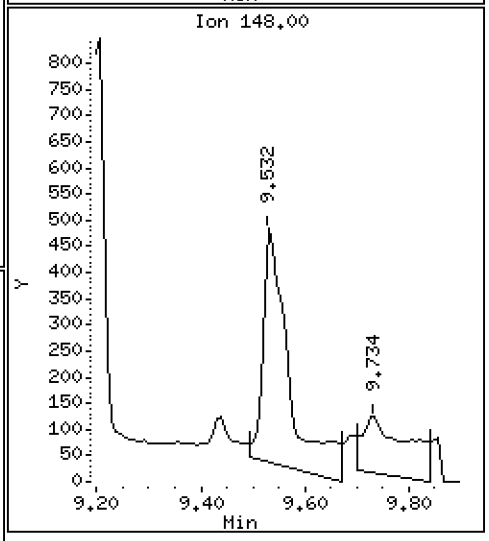
12 1,2-Dichlorobenzene

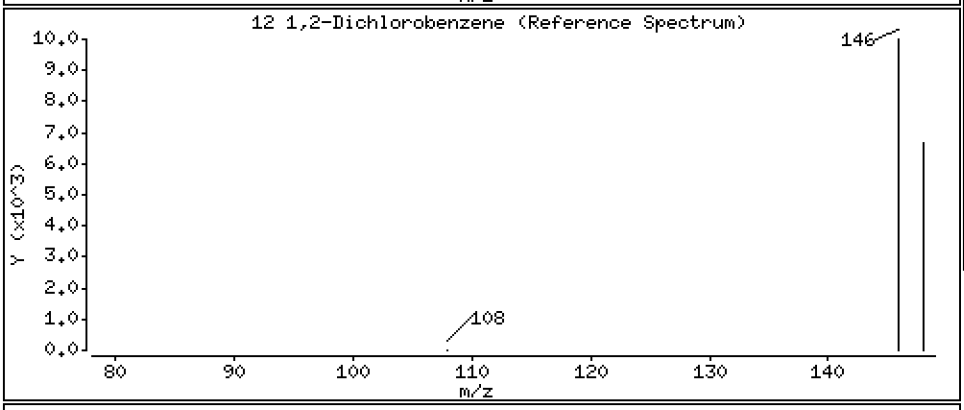
Concentration: 0.005149 ug/L

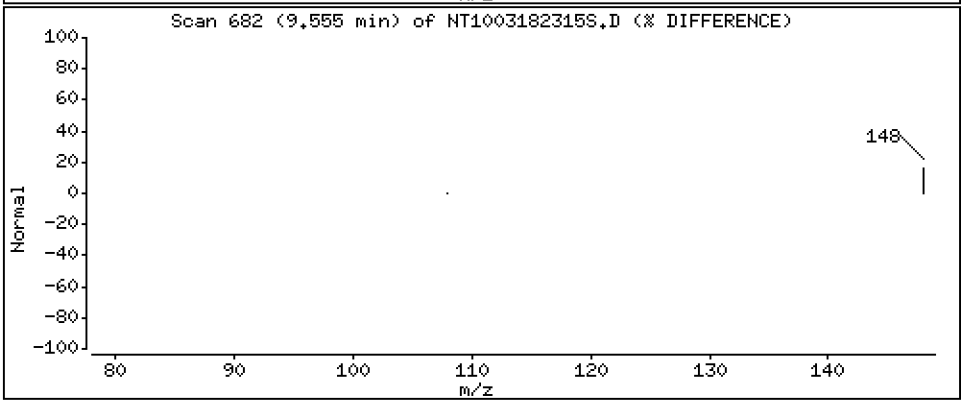












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

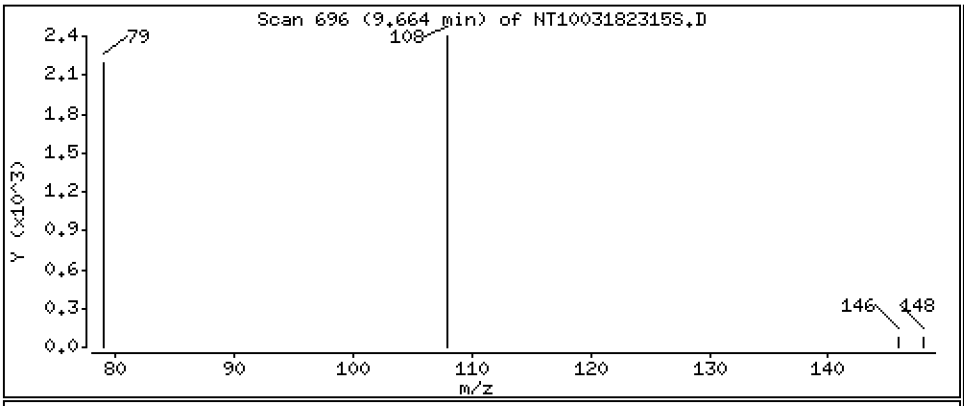
Operator: JGR

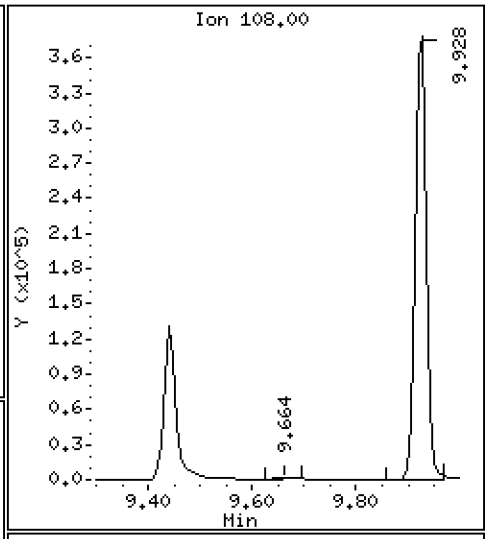
Column phase: ZB-5msi

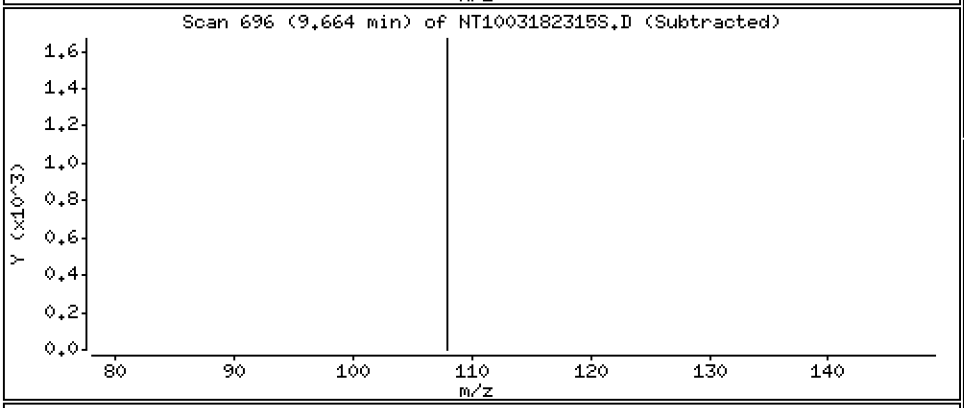
Column diameter: 0.25

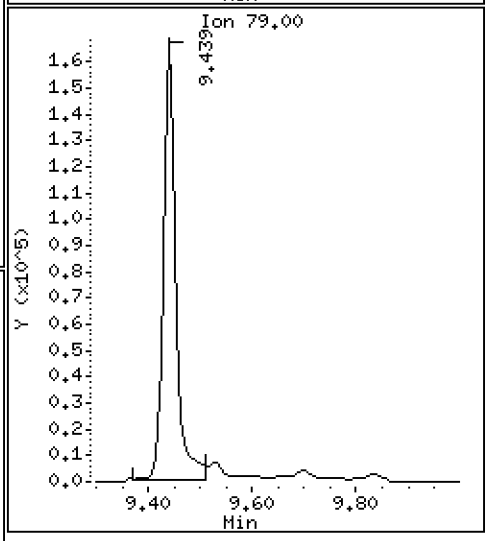
13 2-Methylphenol

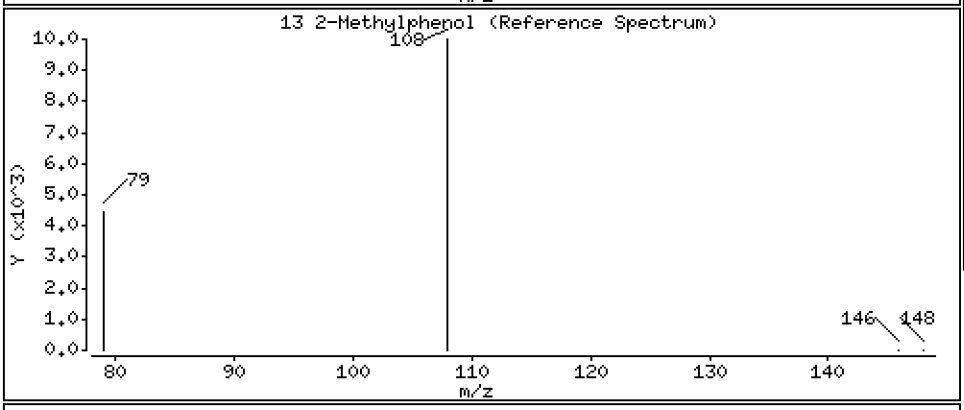
Concentration: 0.03196 ug/L

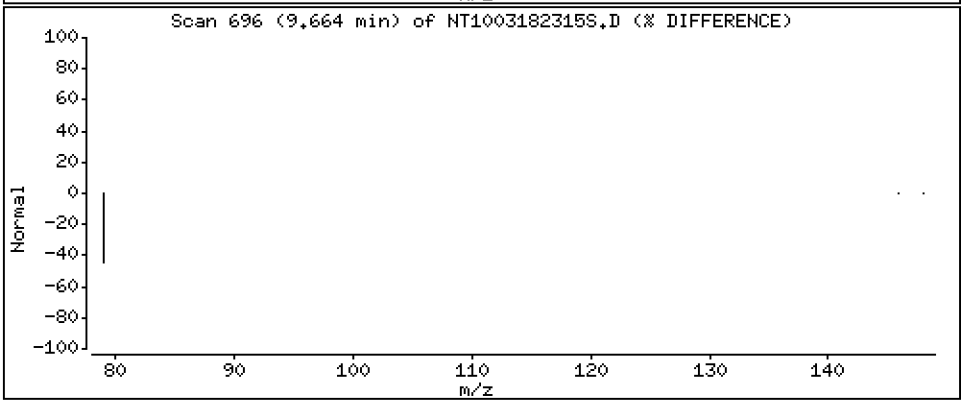












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

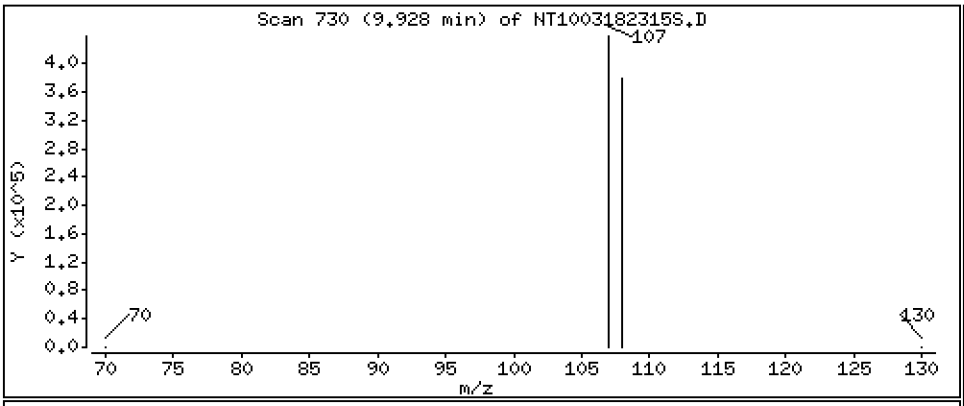
Operator: JGR

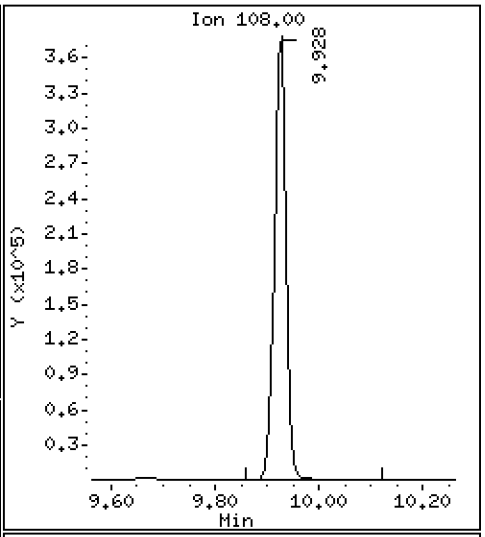
Column phase: ZB-5msi

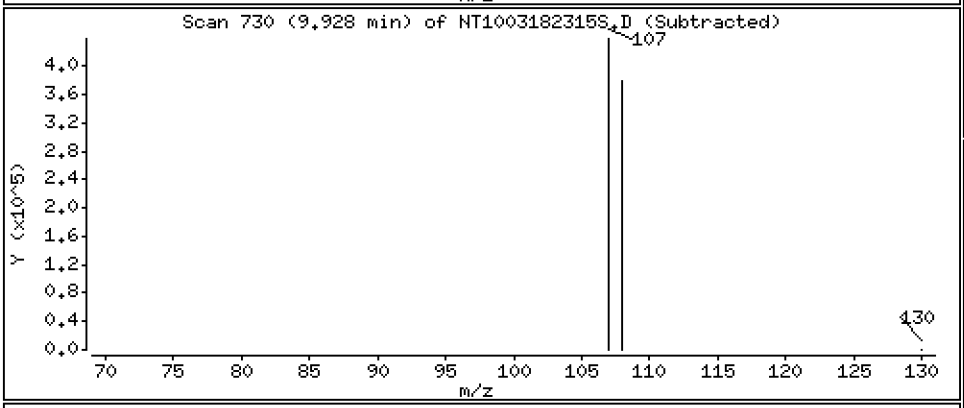
Column diameter: 0.25

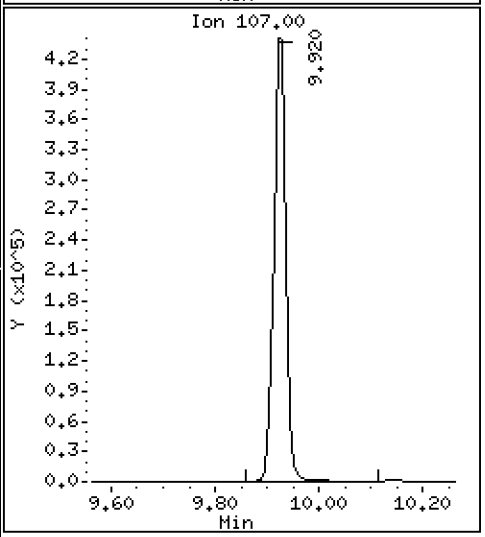
15 4-Methylphenol

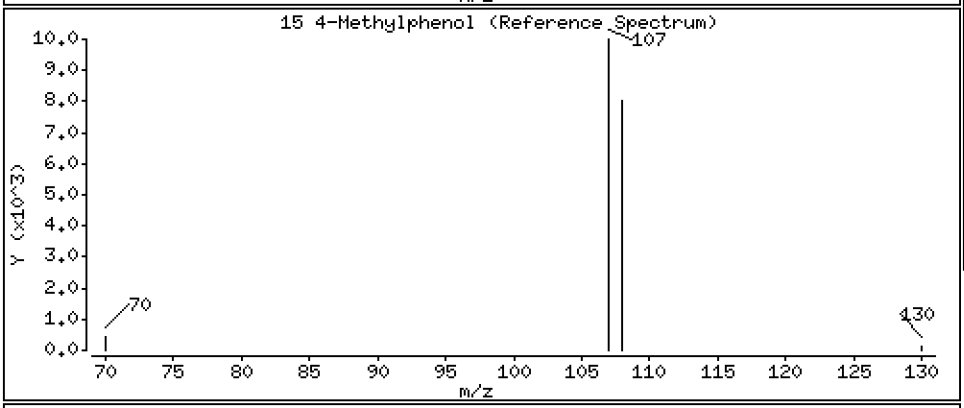
Concentration: 7.014 ug/L

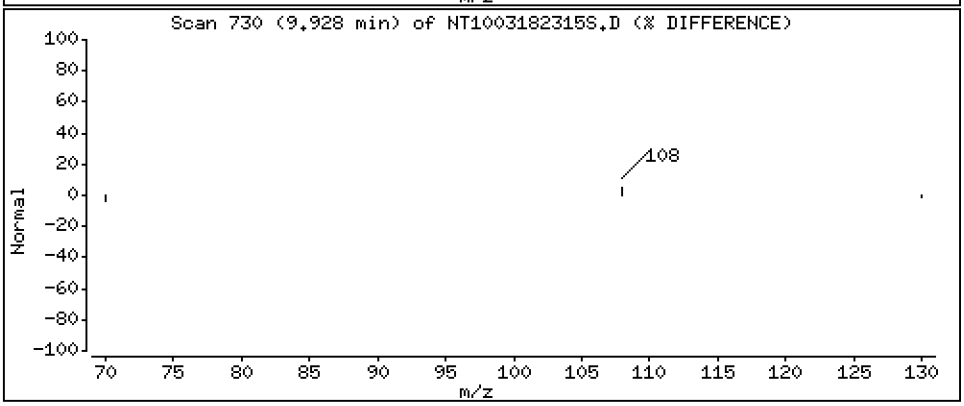












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823155.D

Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

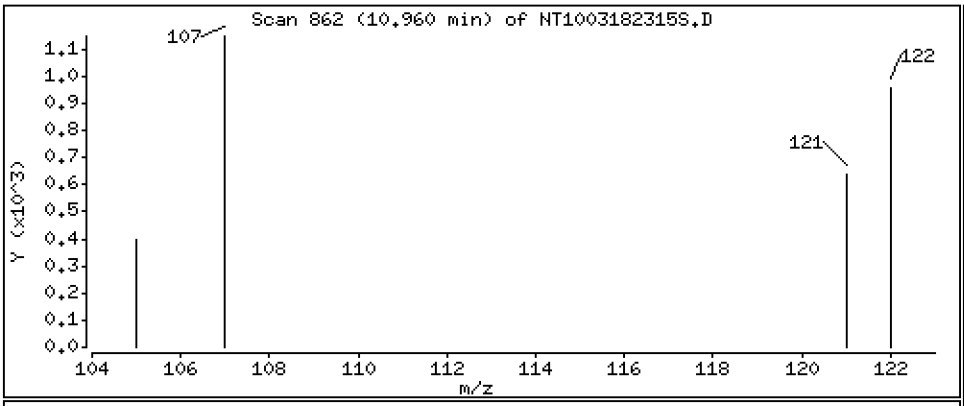
Operator: JGR

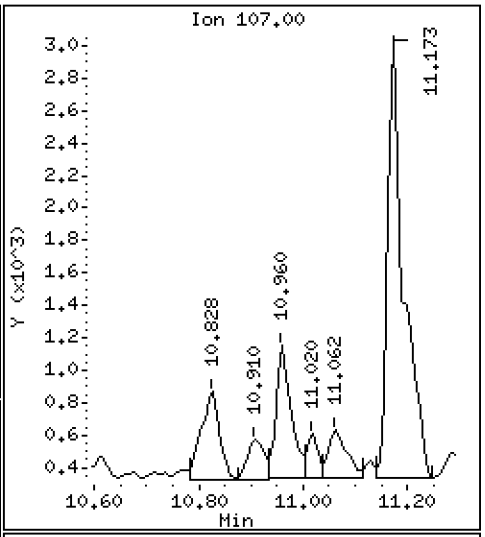
Column phase: ZB-5msi

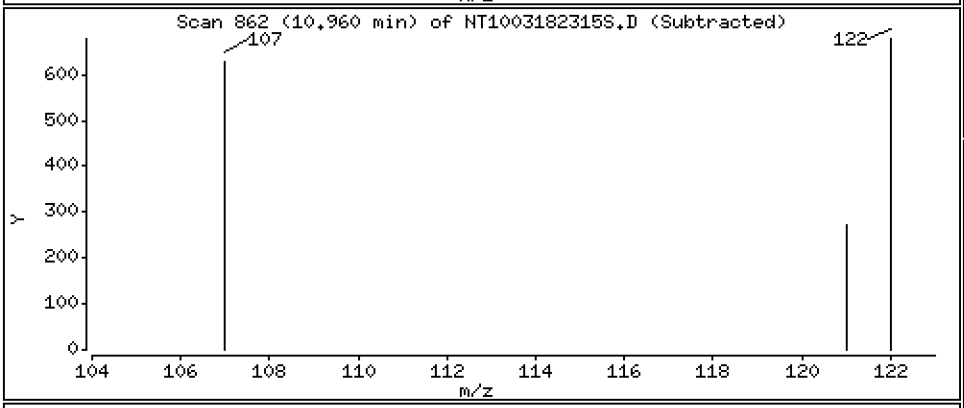
Column diameter: 0.25

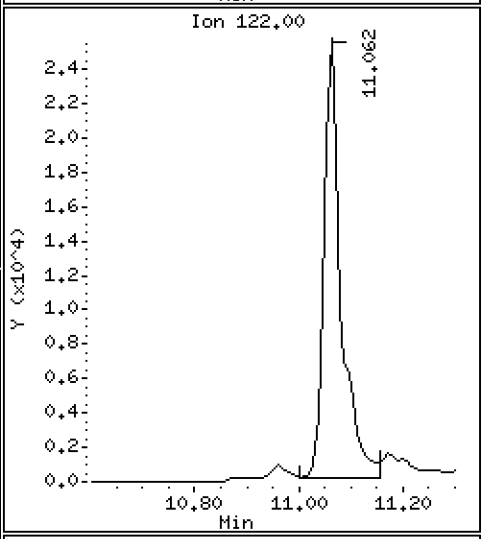
22 2,4-Dimethylphenol

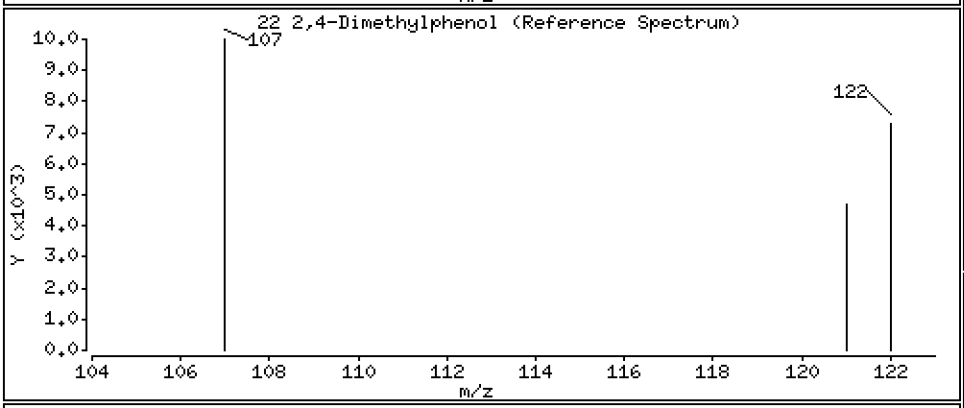
Concentration: 0.01964 ug/L

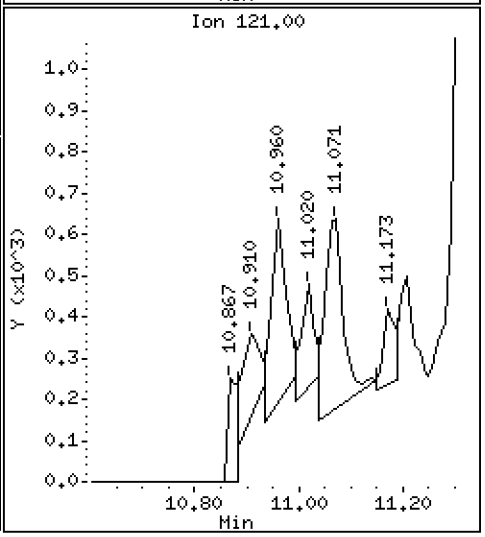


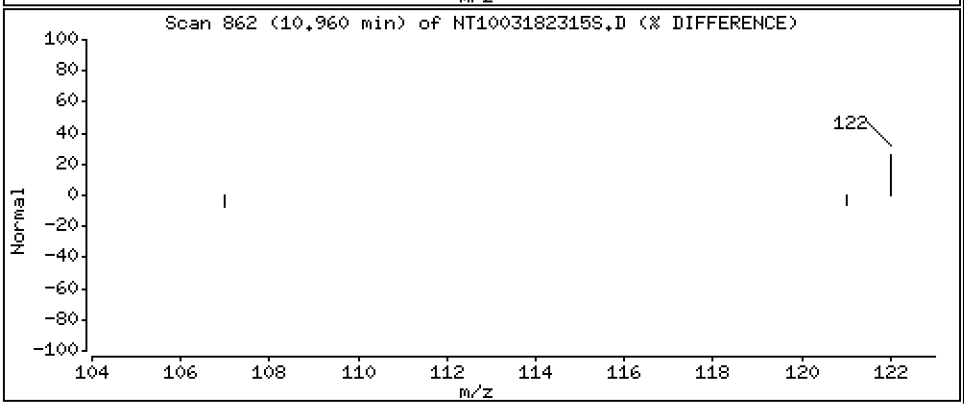












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

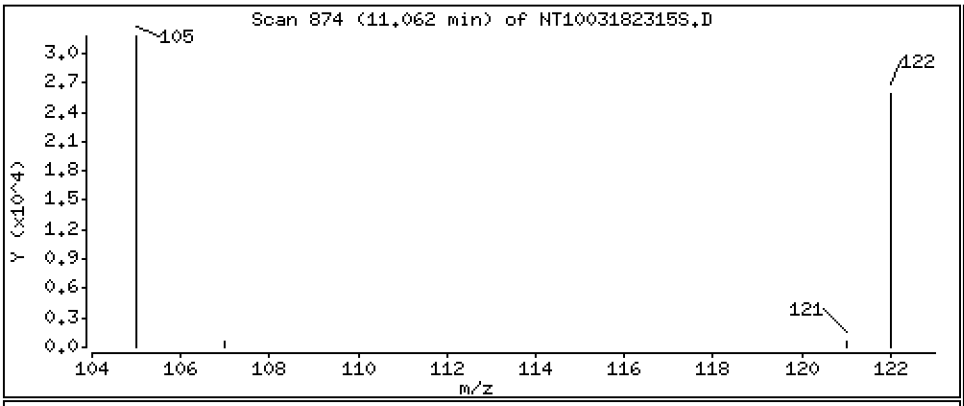
Operator: JGR

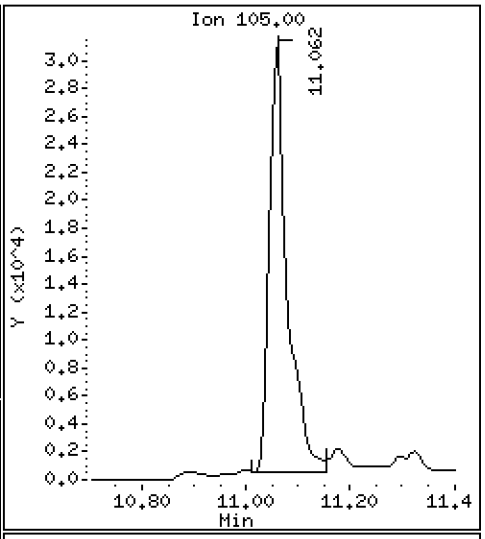
Column phase: ZB-5msi

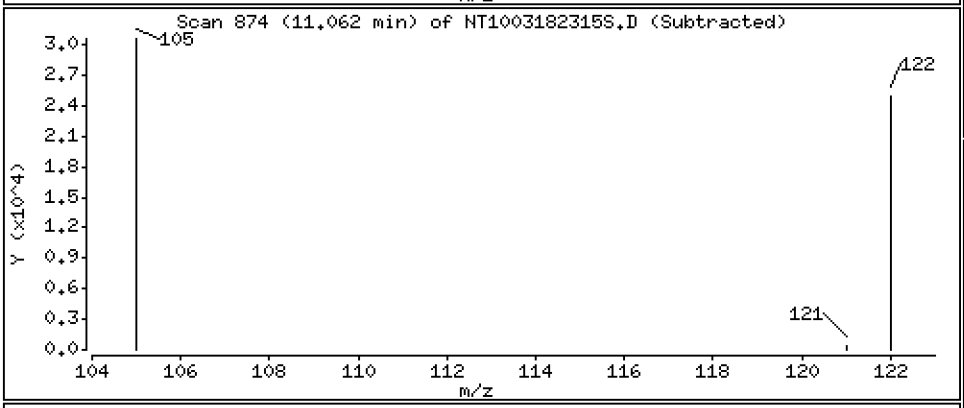
Column diameter: 0.25

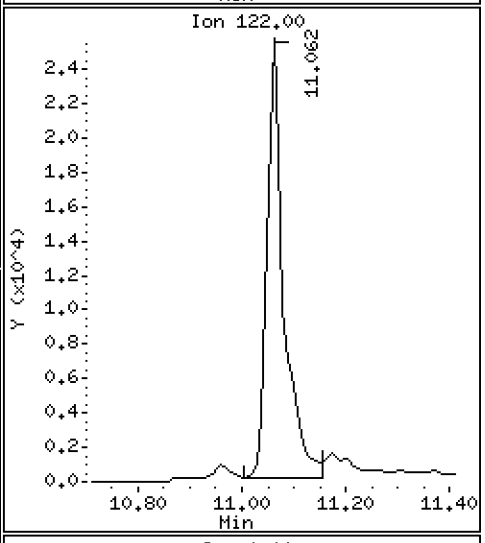
24 Benzoic acid

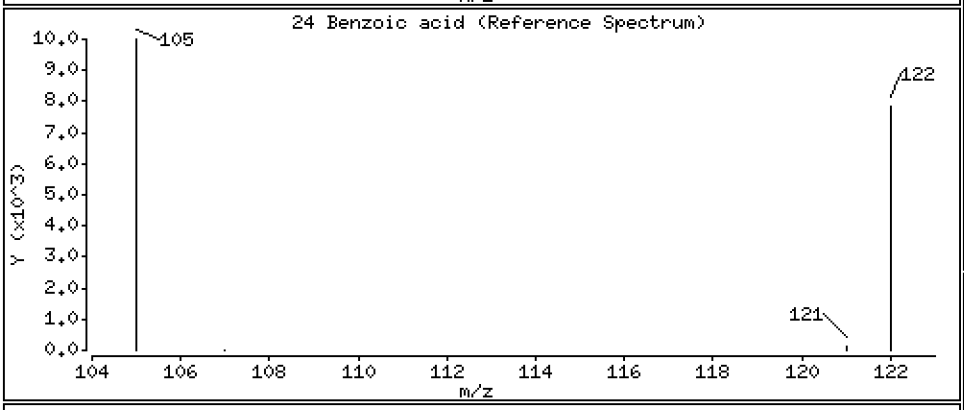
Concentration: 1.545 ug/L

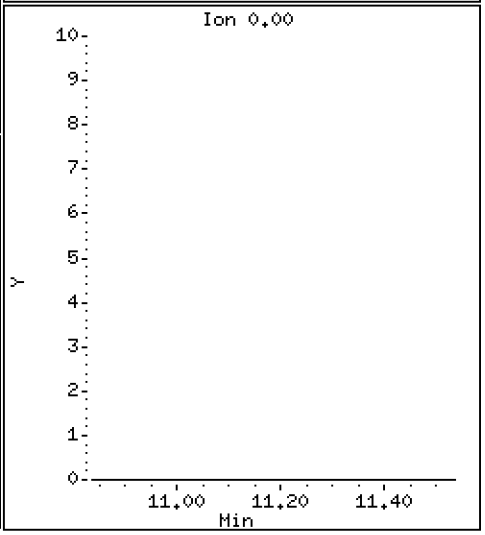


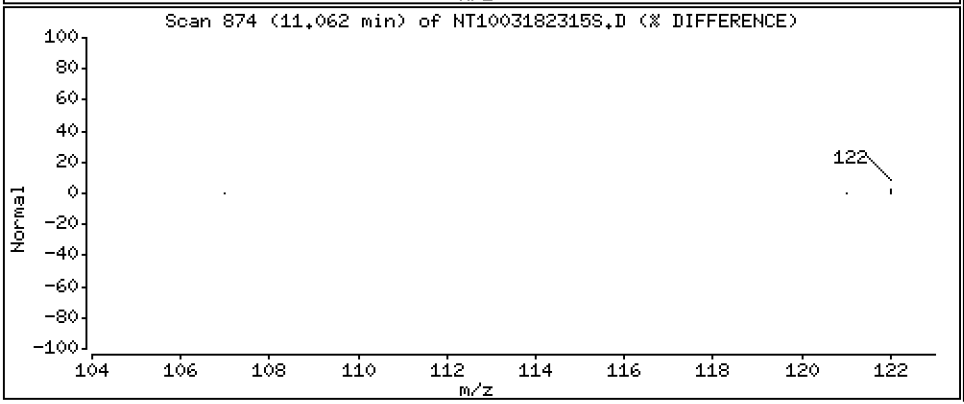












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

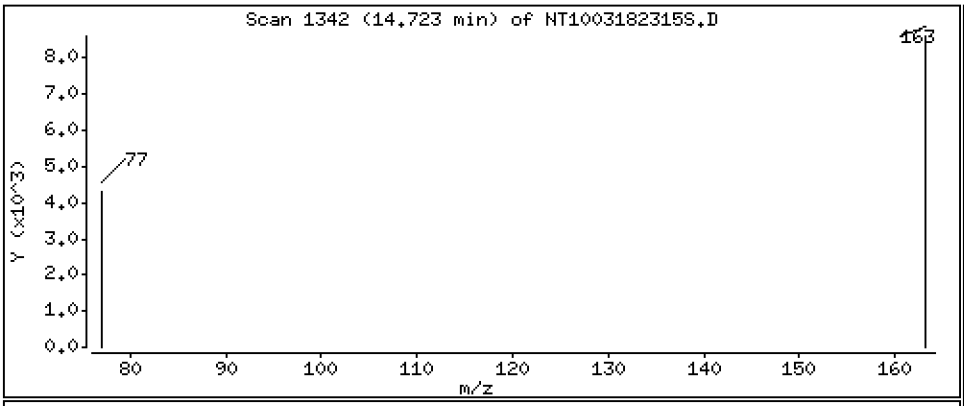
Operator: JGR

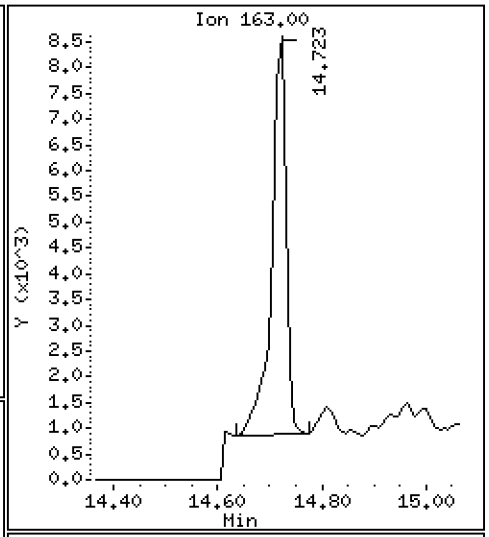
Column phase: ZB-5msi

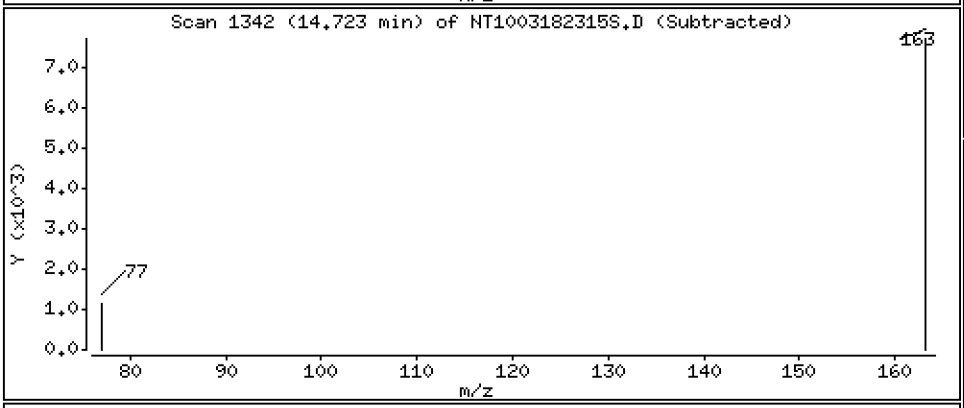
Column diameter: 0.25

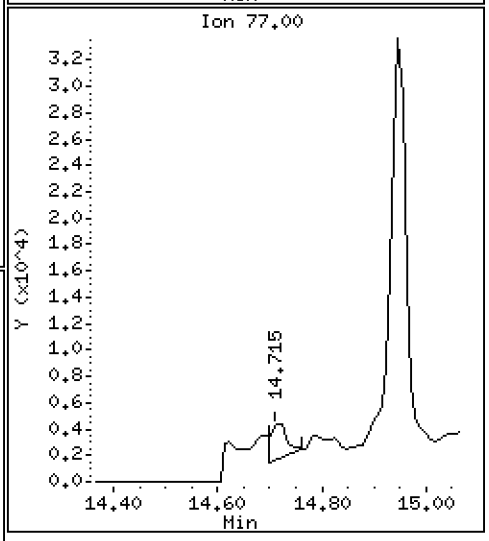
39 Dimethylphthalate

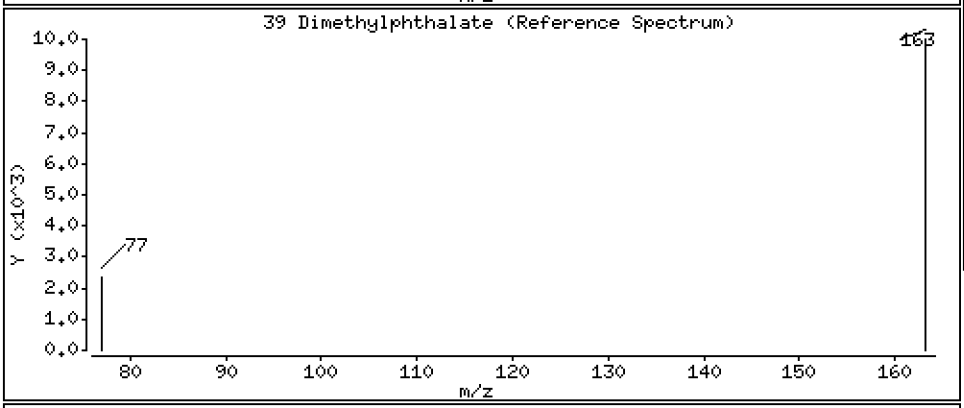
Concentration: 0.09029 ug/L

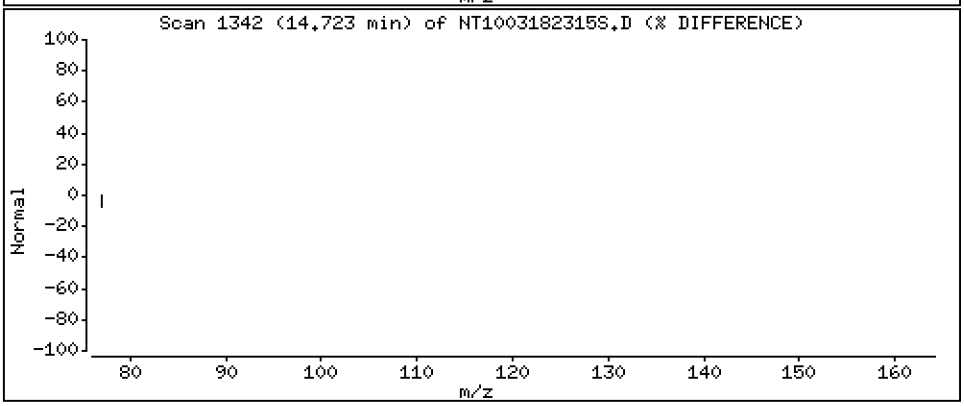












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

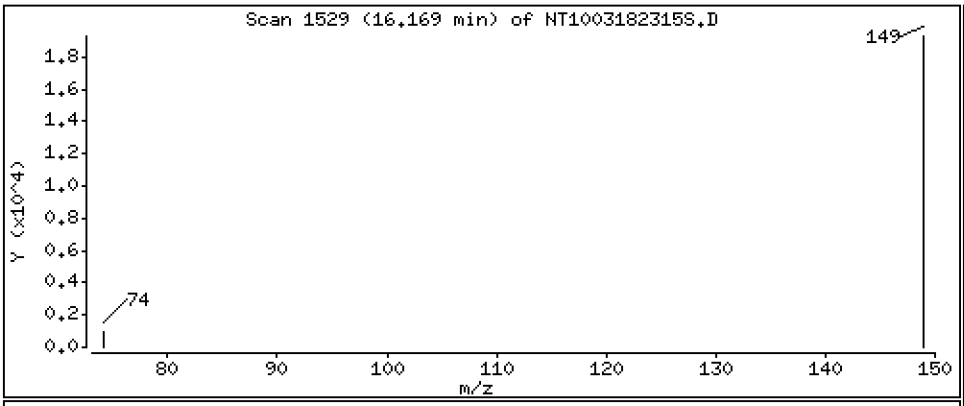
Operator: JGR

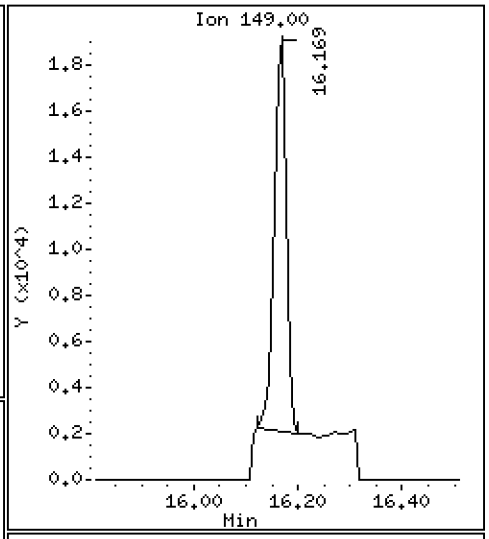
Column phase: ZB-5msi

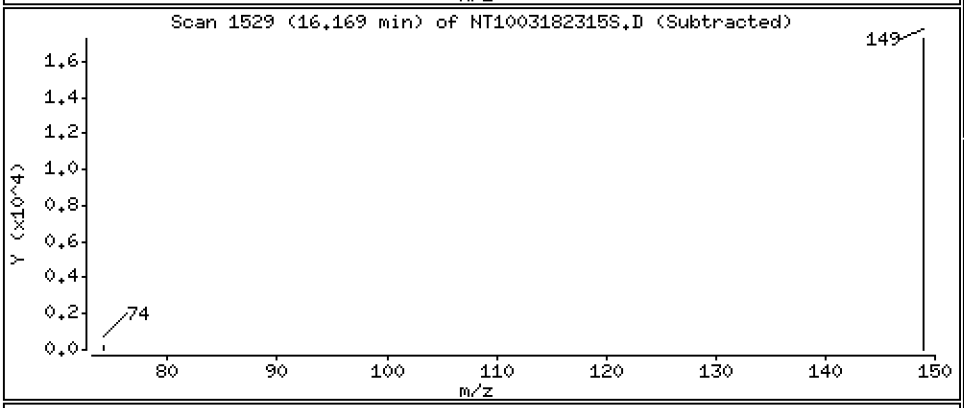
Column diameter: 0.25

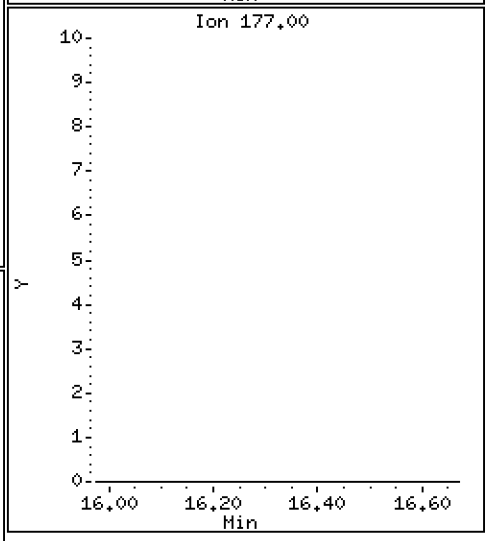
50 Diethylphthalate

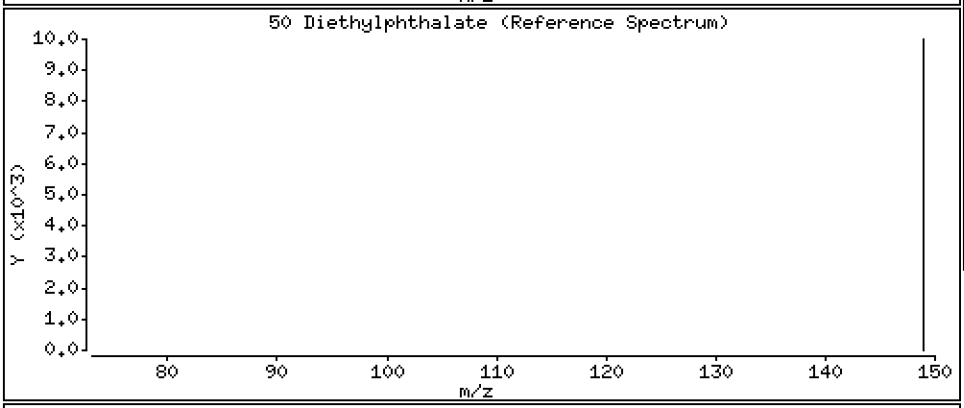
Concentration: 0.1624 ug/L

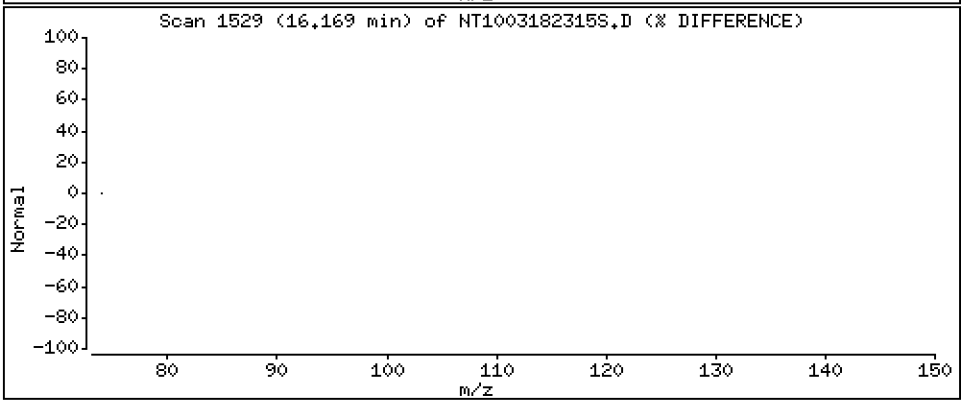












Date : 19-MAR-2023 02:41

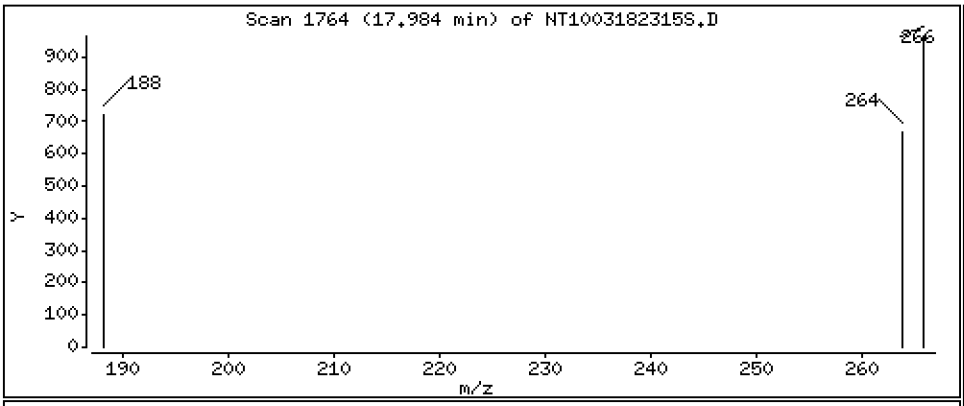
Client ID: Instrument: nt10.i

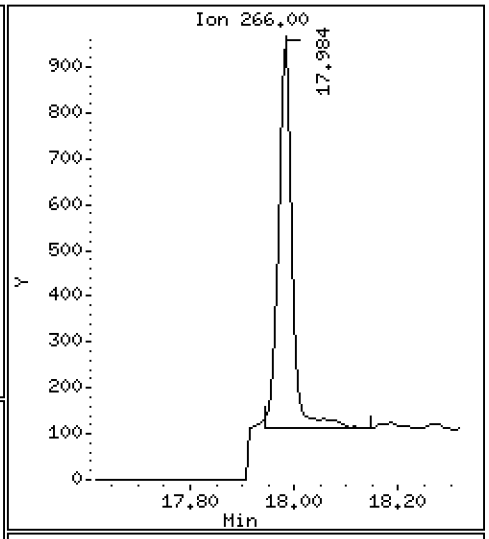
Sample Info: 23A0467-06

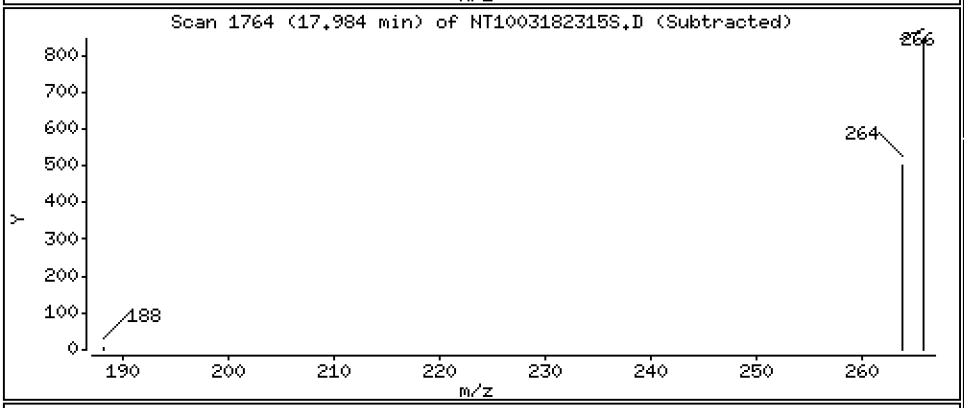
Volume Injected (uL): 1.0 Operator: JGR

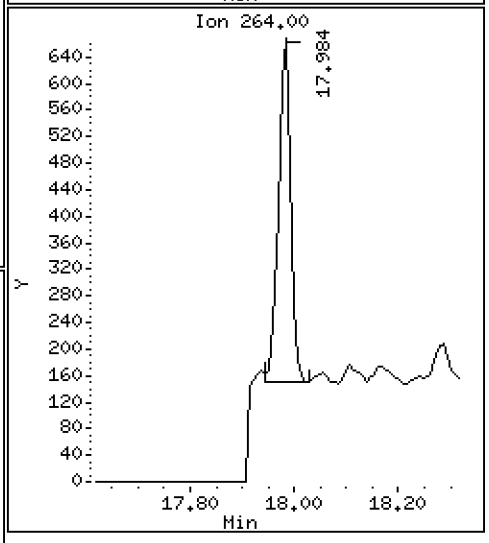
Column phase: ZB-5msi Column diameter: 0.25

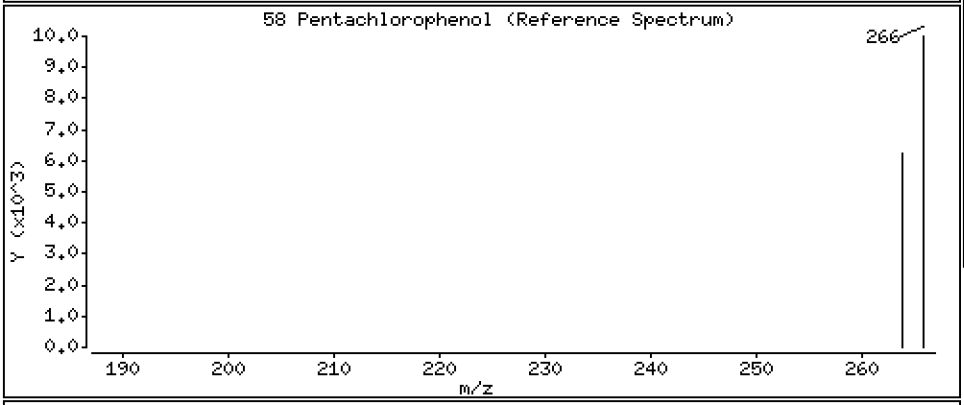
58 Pentachlorophenol Concentration: 0.04477 ug/L

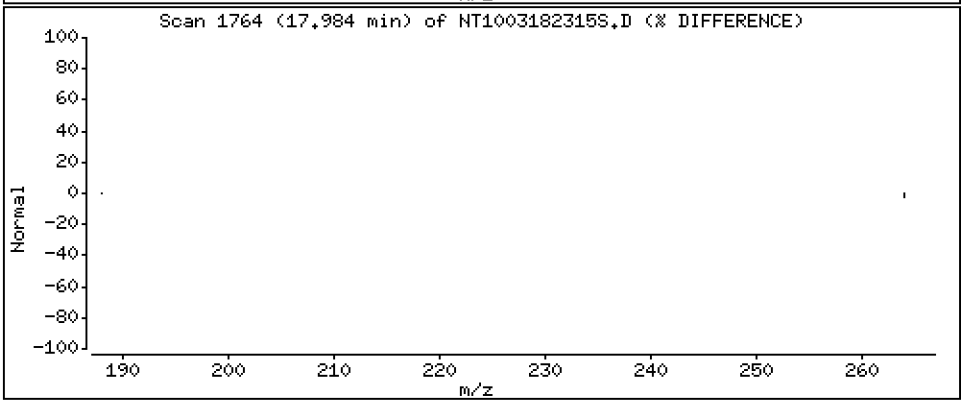












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

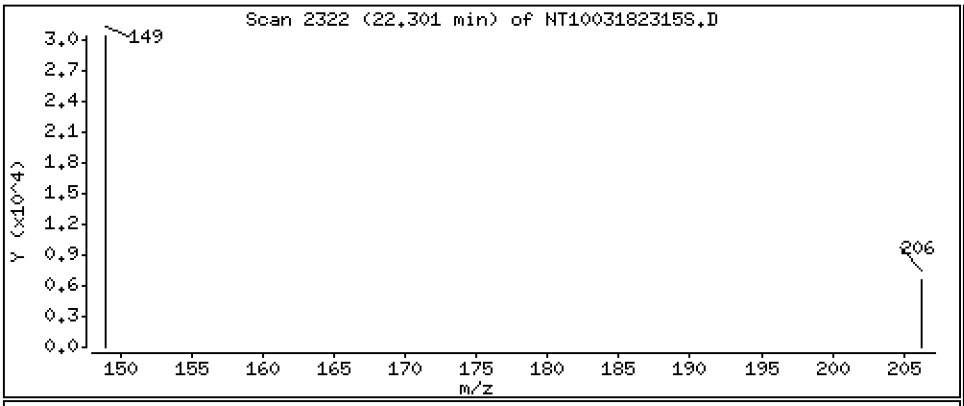
Operator: JGR

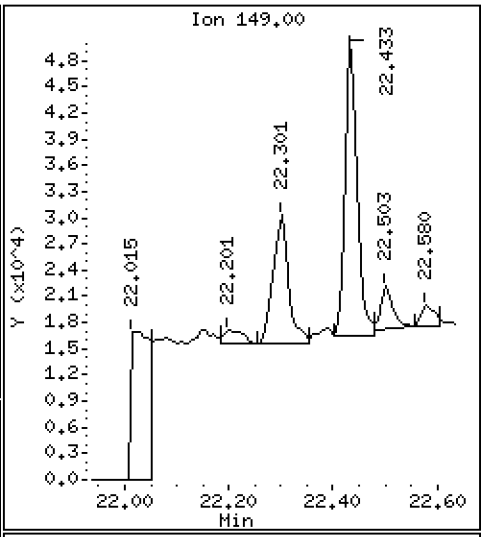
Column phase: ZB-5msi

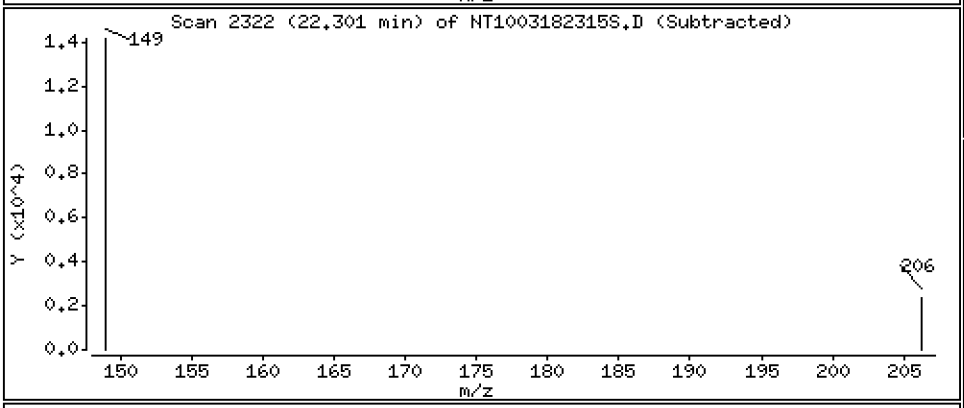
Column diameter: 0.25

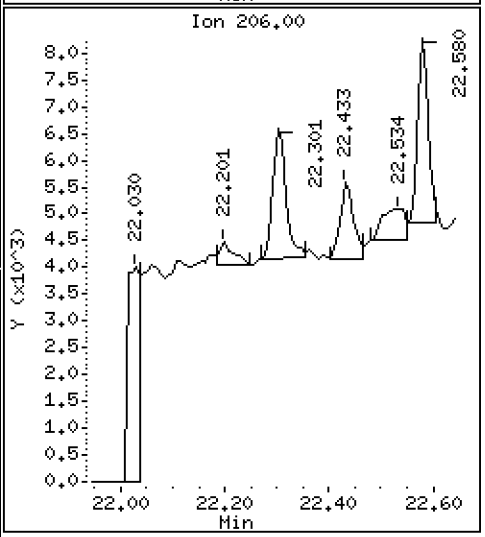
67 Butylbenzylphthalate

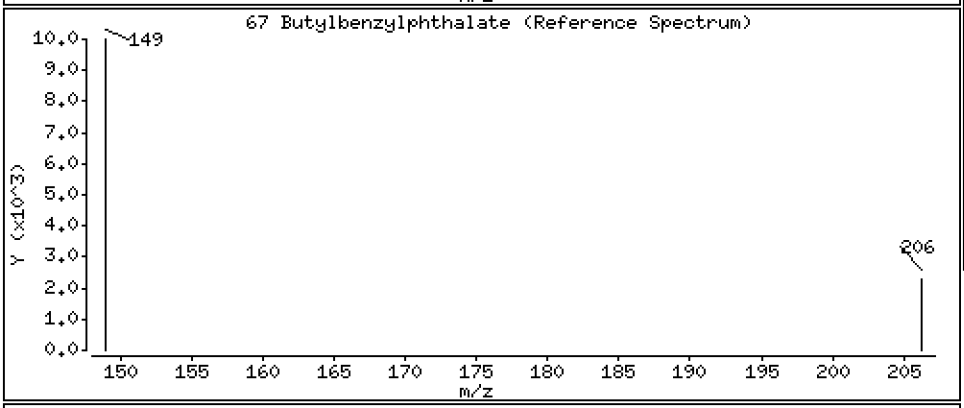
Concentration: 0.2599 ug/L

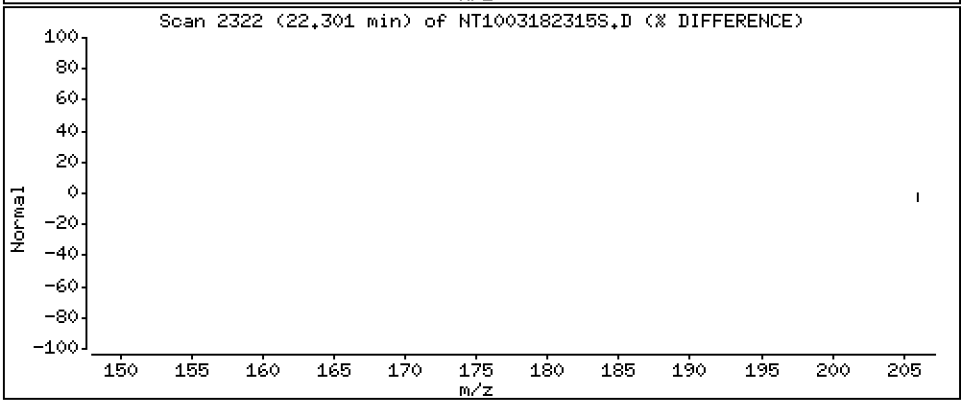












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Date : 19-MAR-2023 02:41

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-06

Volume Injected (uL): 1.0

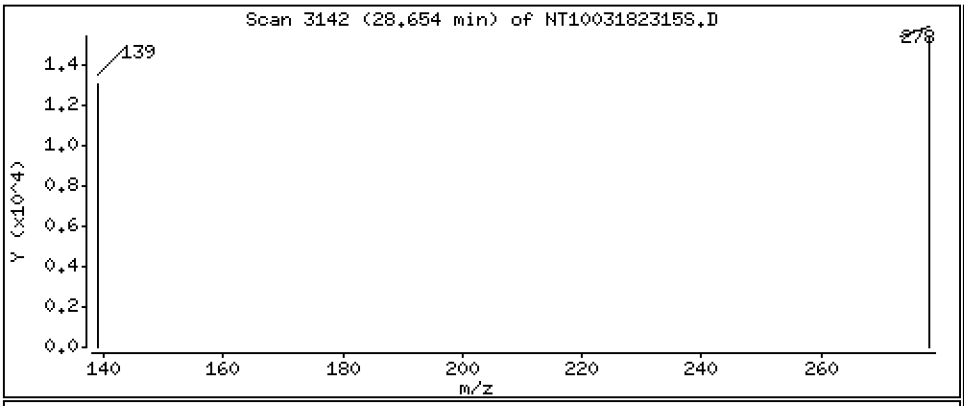
Operator: JGR

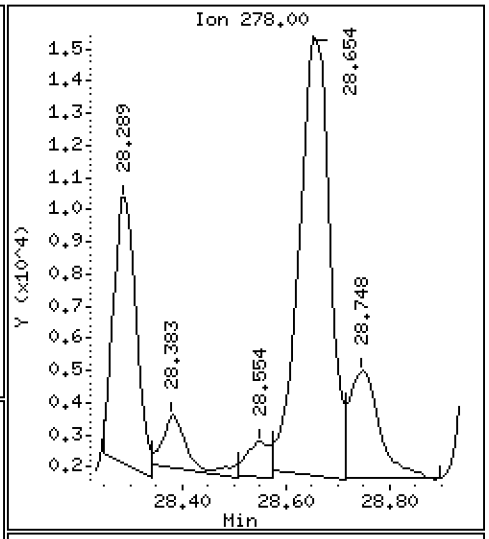
Column phase: ZB-5msi

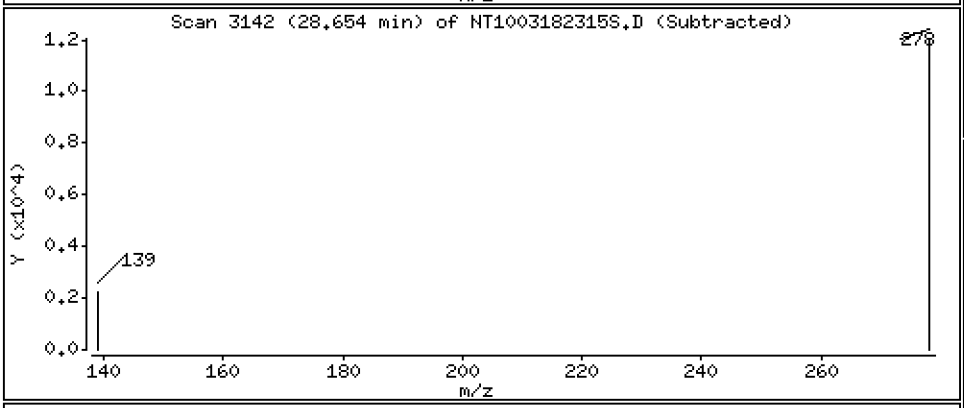
Column diameter: 0.25

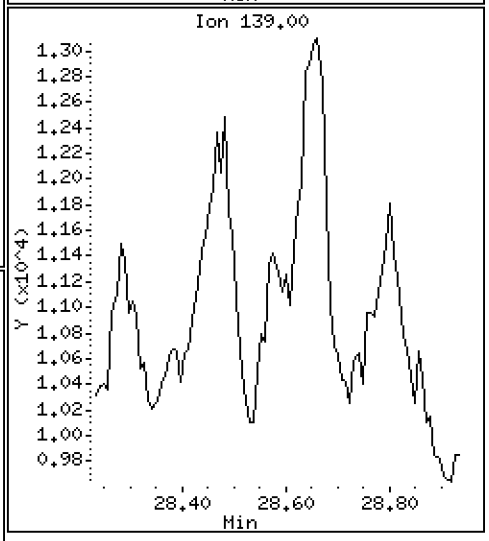
79 Dibenzo(a,h)anthracene

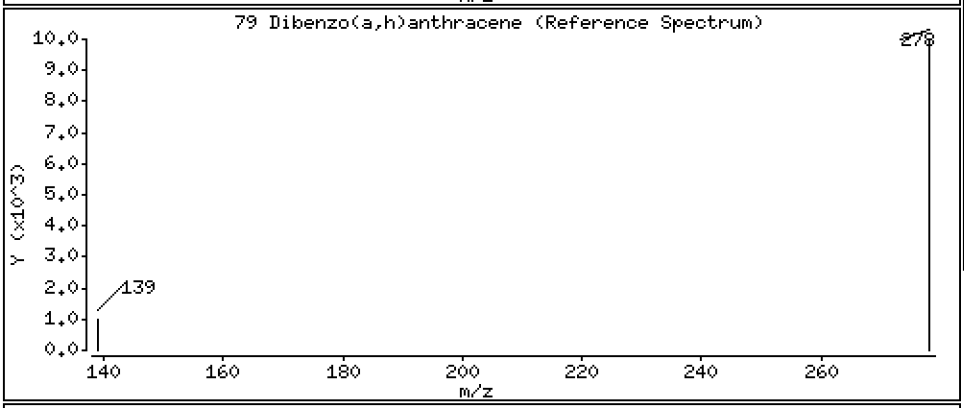
Concentration: 0.1871 ug/L

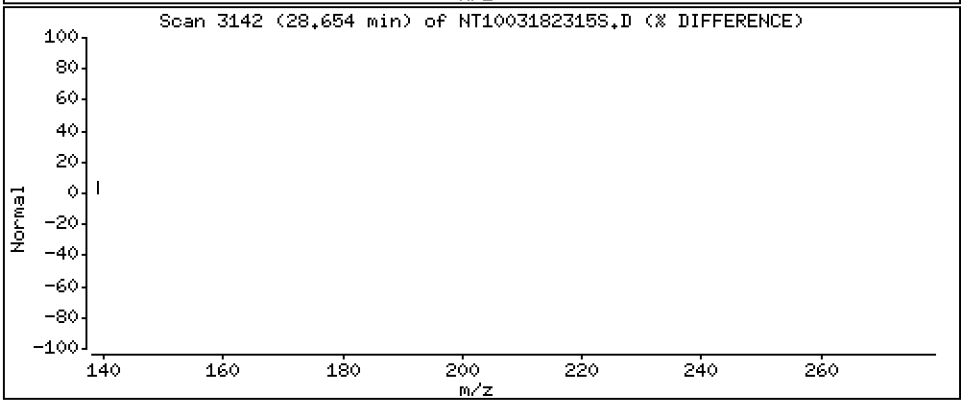












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182315S.D
Lab Smp Id: 23A0467-06
Inj Date : 19-MAR-2023 02:41 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-06
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	6.980	6.957	(0.761)	488592	5.72055	5.721(R)
	3 Phenol	94	8.564	8.541	(0.933)	1756756	14.9923	14.99
	7 1,3-Dichlorobenzene	146	9.113	9.105	(0.993)	1073	0.00979	0.009786
*	8 1,4-Dichlorobenzene-d4	152	9.175	9.167	(1.000)	281653	4.00000	
	9 1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	1945	0.01838	0.01838
	11 Benzyl alcohol	79	9.438	9.431	(1.029)	279026	4.10743	4.107
	12 1,2-Dichlorobenzene	146	9.555	9.547	(1.041)	536	0.00515	0.005149
	13 2-Methylphenol	108	9.664	9.648	(1.029)	2595	0.03196	0.03196(MH)
	15 4-Methylphenol	108	9.928	9.912	(1.082)	591760	7.01391	7.014
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.960	10.943	(0.942)	1715	0.01964	0.01964
	24 Benzoic acid	105	11.062	11.053	(0.951)	74187	1.54473	1.545
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.635	11.627	(1.000)	1010417	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	39 Dimethylphthalate	163	14.722	14.714	(0.967)	14145	0.09029	0.09029(M)
*	42 Acenaphthene-d10	162	15.217	15.210	(1.000)	496425	4.00000	
	50 Diethylphthalate	149	16.168	16.161	(1.062)	26356	0.16240	0.1624(M)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.983	17.968	(0.986)	1538	0.04477	0.04477
*	59 Phenanthrene-d10	188	18.246	18.231	(1.000)	1036036	4.00000	
$	66 Terphenyl-d14	244	21.380	21.364	(0.918)	949166	6.64399	6.644(R)
	67 Butylbenzylphthalate	149	22.301	22.285	(0.957)	30029	0.25991	0.2599
*	69 Chrysene-d12	240	23.292	23.269	(1.000)	876792	4.00000	
*	77 Perylene-d12	264	25.948	25.909	(1.000)	921995	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.654	28.584	(1.104)	56579	0.18710	0.1871(H)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182315S.D
Lab Smp Id: 23A0467-06
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	281653	42.28
27 Naphthalene-d8	704013	352007	1408026	1010417	43.52
42 Acenaphthene-d10	353977	176989	707954	496425	40.24
59 Phenanthrene-d10	686752	343376	1373504	1036036	50.86
69 Chrysene-d12	597733	298867	1195466	876792	46.69
77 Perylene-d12	645663	322832	1291326	921995	42.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.18	0.09
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.09
69 Chrysene-d12	23.27	22.77	23.77	23.29	0.10
77 Perylene-d12	25.91	25.41	26.41	25.95	0.15

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

REVIEW SUMMARY FOR FILE - NT1003182315S.D

Lab ID: 23A0467-06
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 02:41

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
1.029	1.052	-0.0238	2-Methylphenol

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

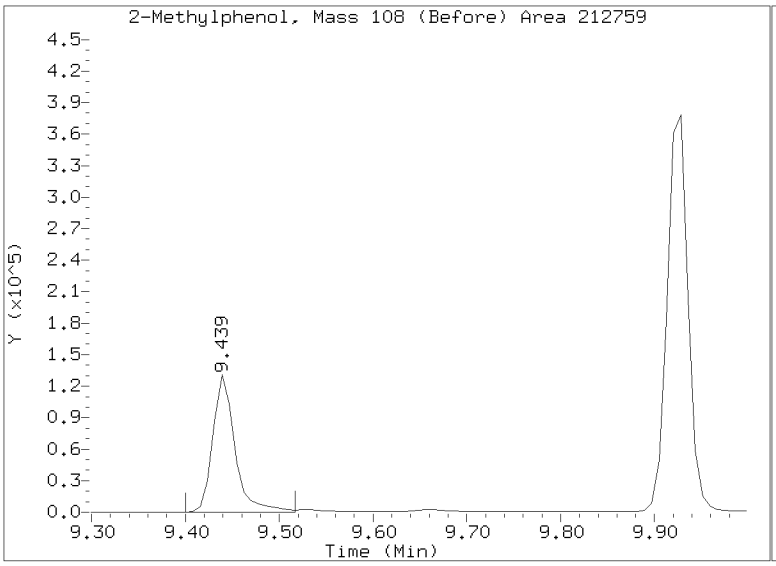
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

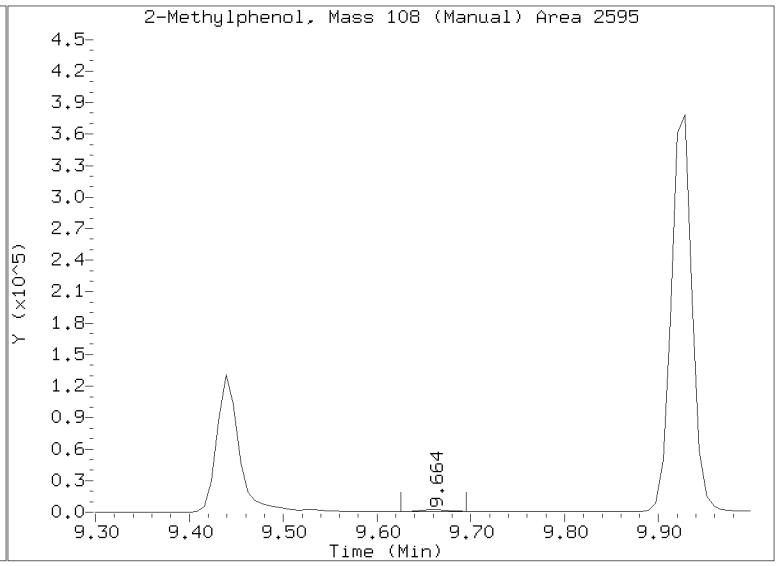
Exception: 1,2,4-Trichlorobenzene 0.0010

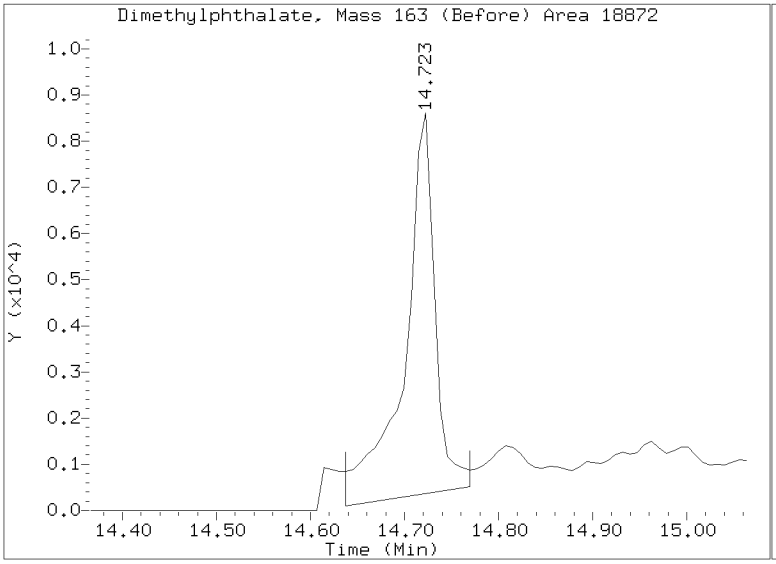
* Only compounds listed in the work order have been verified by the analyst *

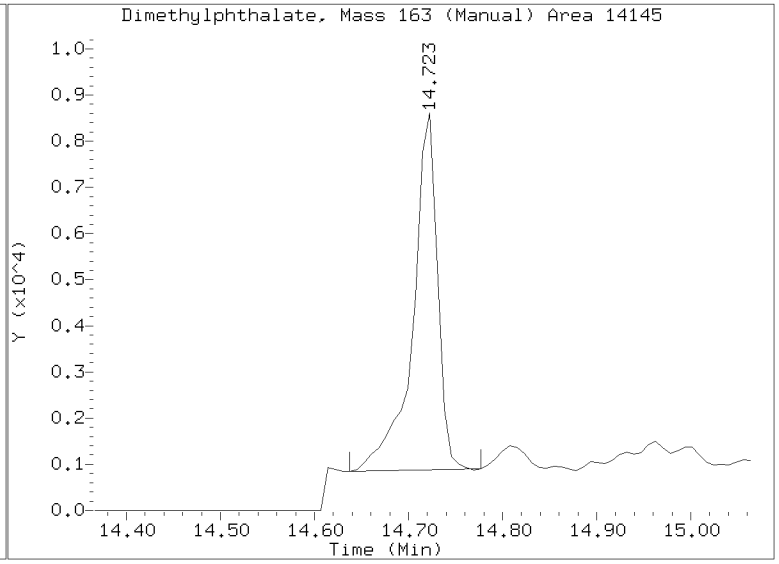
Quant Ion Manual Peak Adjustment Report

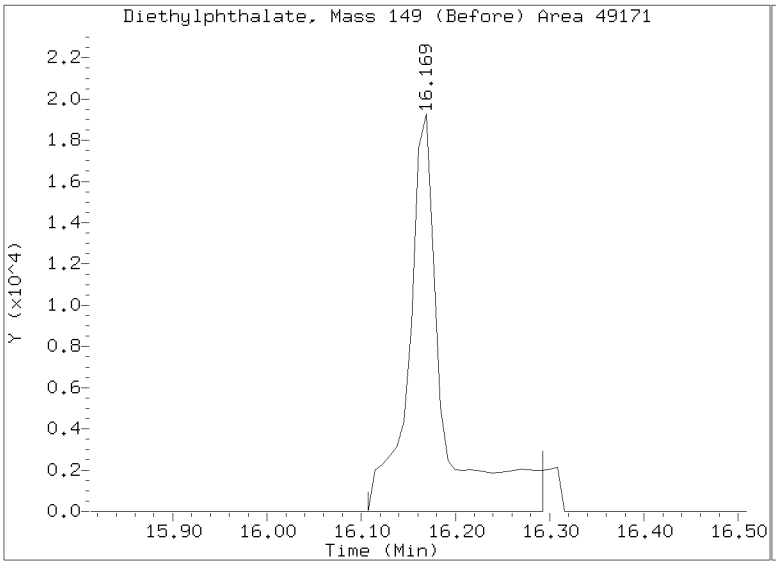
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182315S.D
Injection Date: 19-MAR-2023 02:41
Lab ID:23A0467-06 Client ID:
Report Date: 04/04/2023 12:31

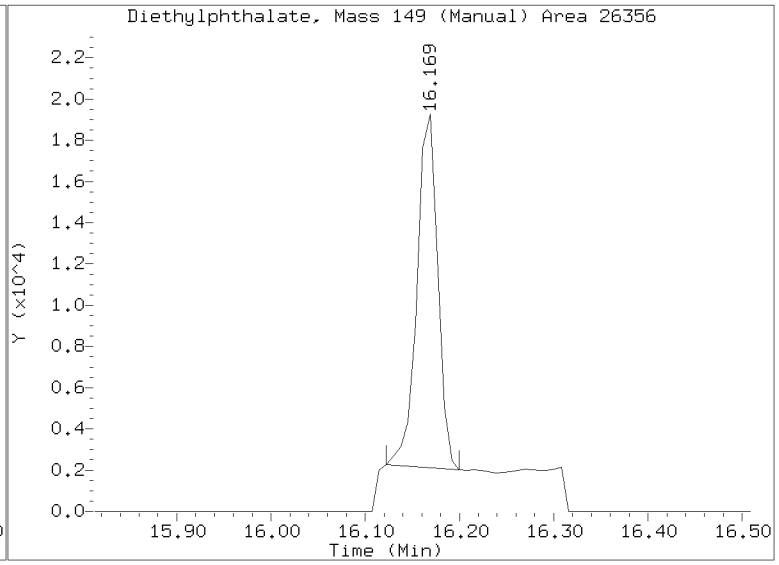












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1238

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

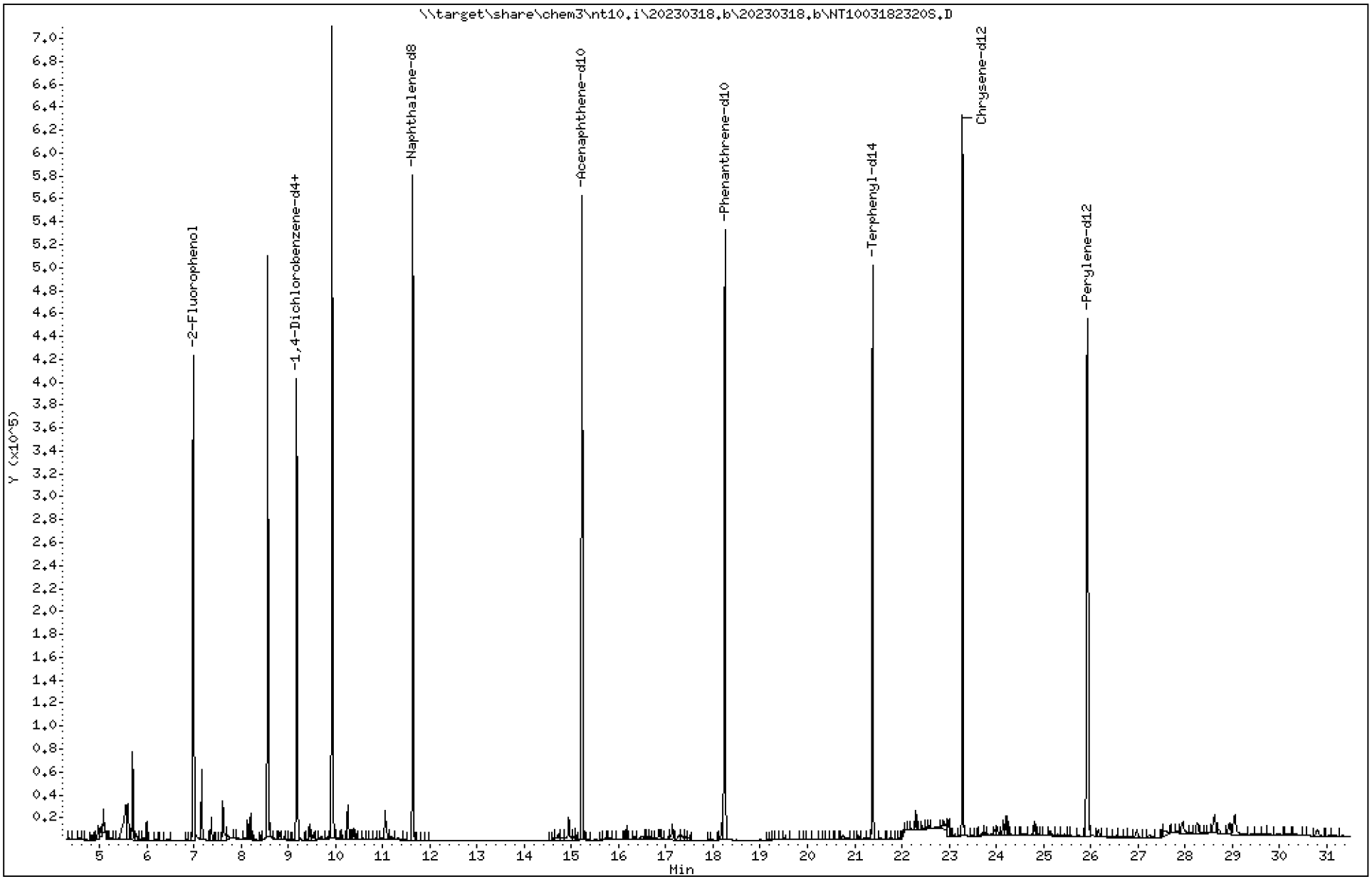
Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	02/23/23 15:49	File ID:	NT1003182320S.D
% Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 05:51
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	18.15 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.2	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.3		2.5	20.0
65-85-0	Benzoic acid	1	83.0	J	13.4	99.8
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	748.59	542	72.5	27 - 120	
p-Terphenyl-d14	499.06	508	102	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823205.D
Date : 19-MAR-2023 05:51
Client ID:
Sample Info: 23A0467-07
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

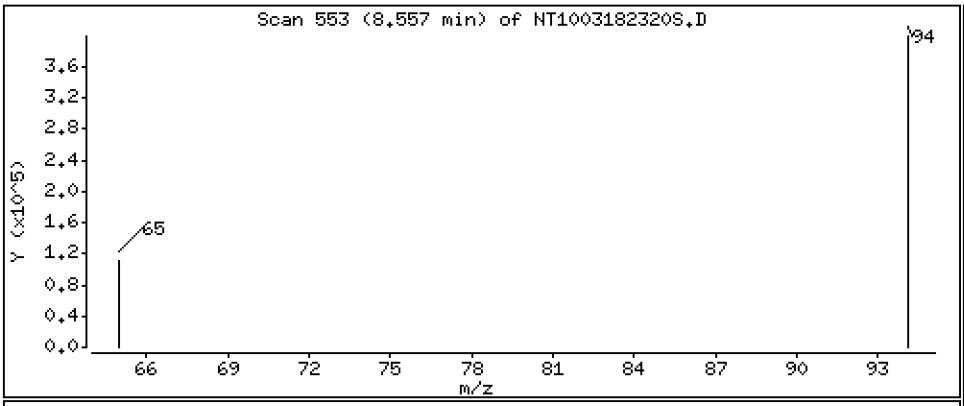
Operator: JGR

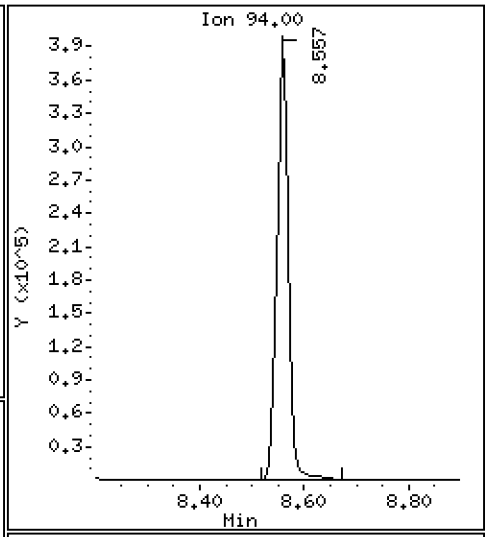
Column phase: ZB-5msi

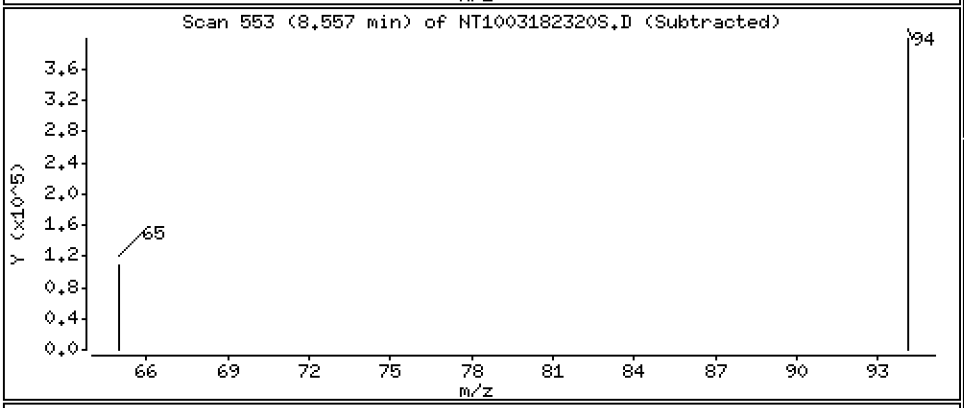
Column diameter: 0.25

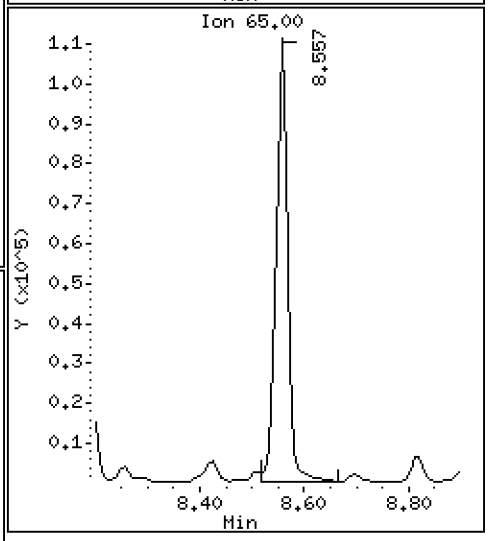
3 Phenol

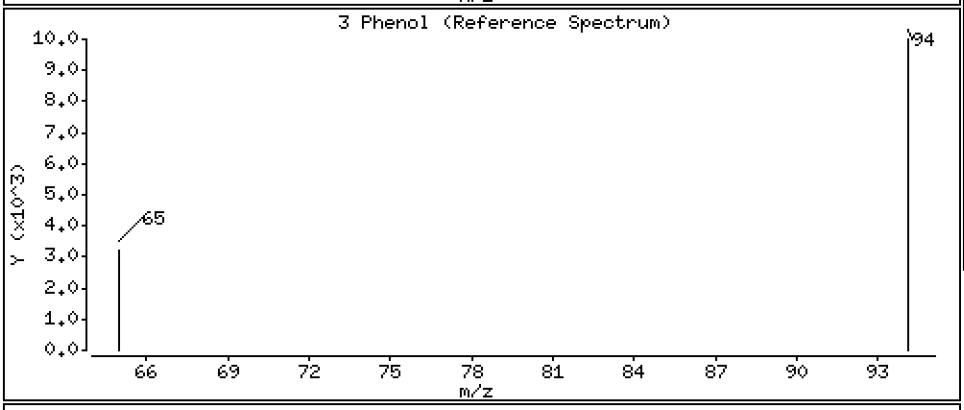
Concentration: 5.854 ug/L

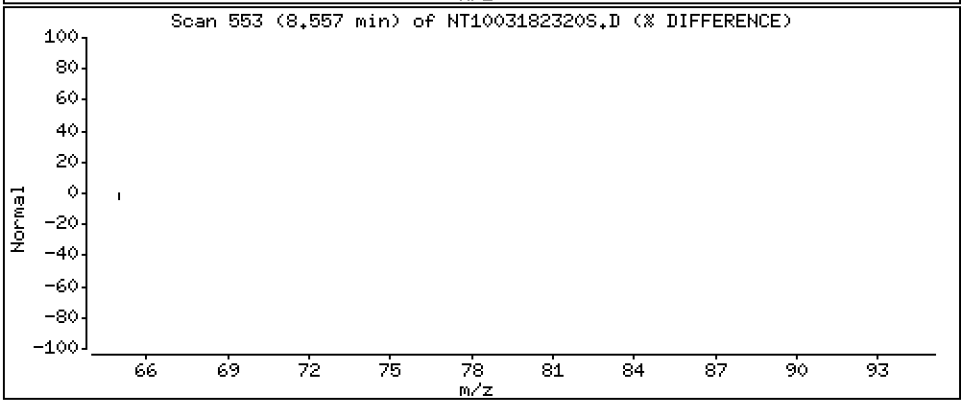












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

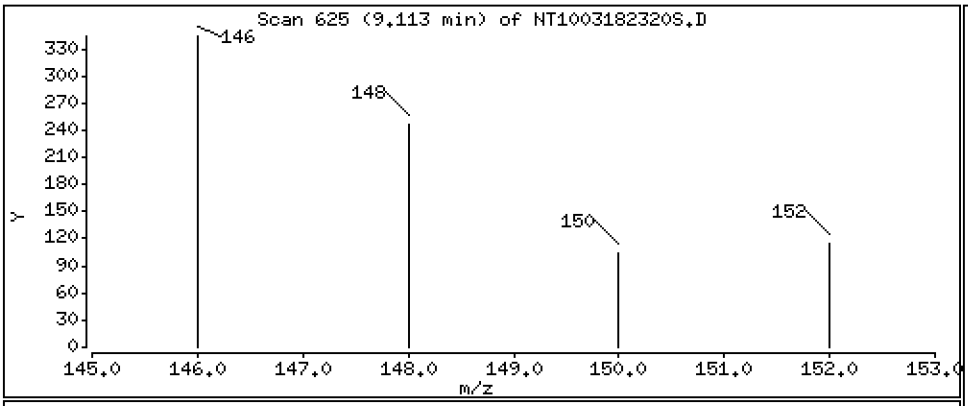
Operator: JGR

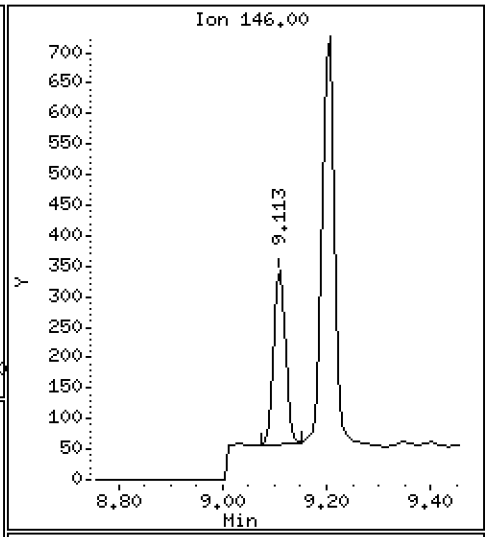
Column phase: ZB-5msi

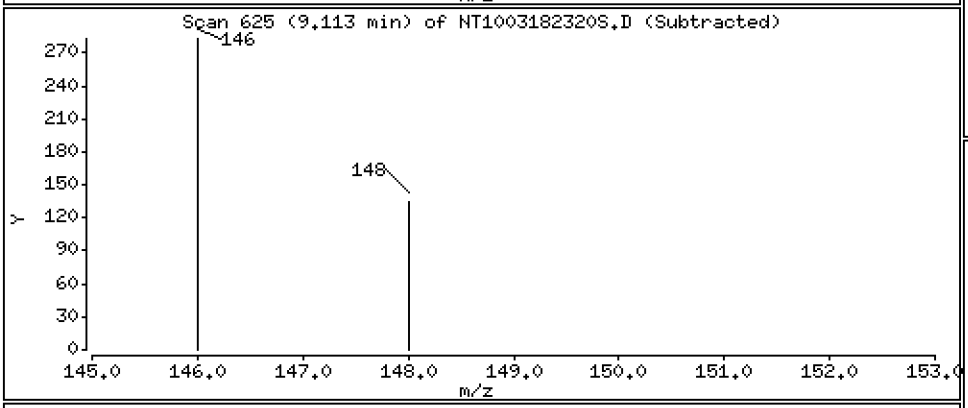
Column diameter: 0.25

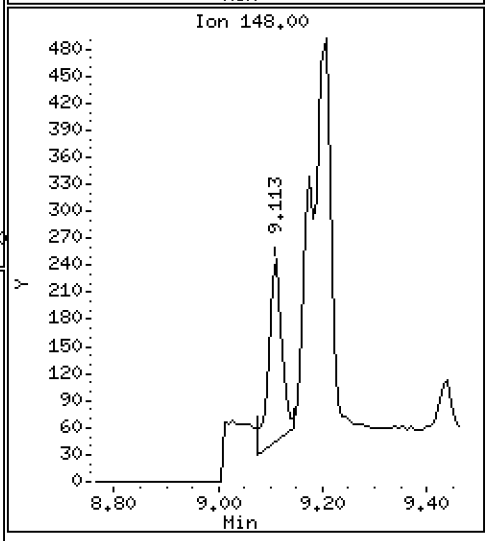
7 1,3-Dichlorobenzene

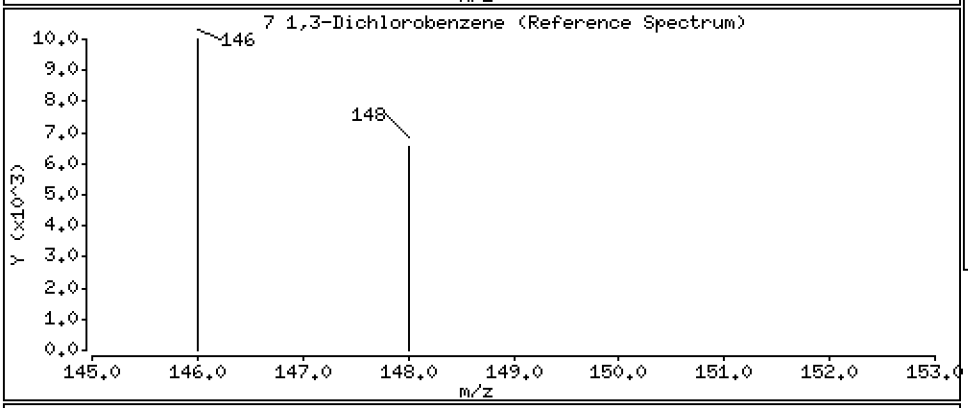
Concentration: 0.004578 ug/L

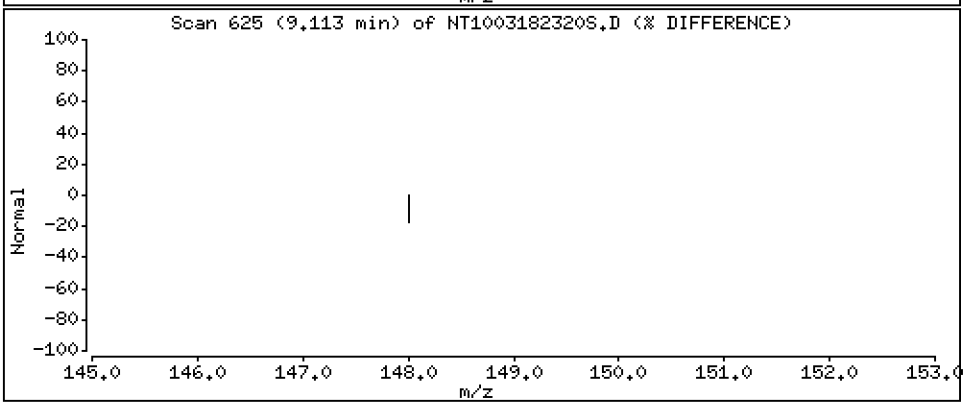












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

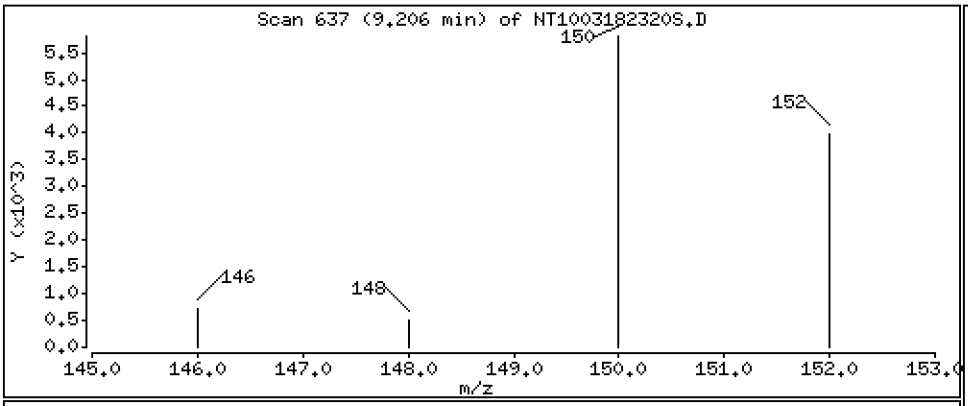
Operator: JGR

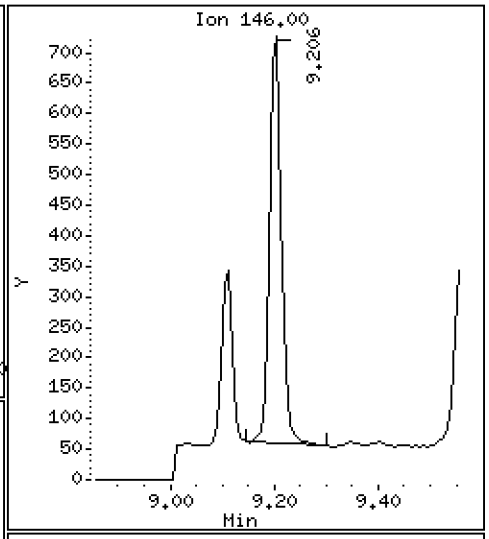
Column phase: ZB-5msi

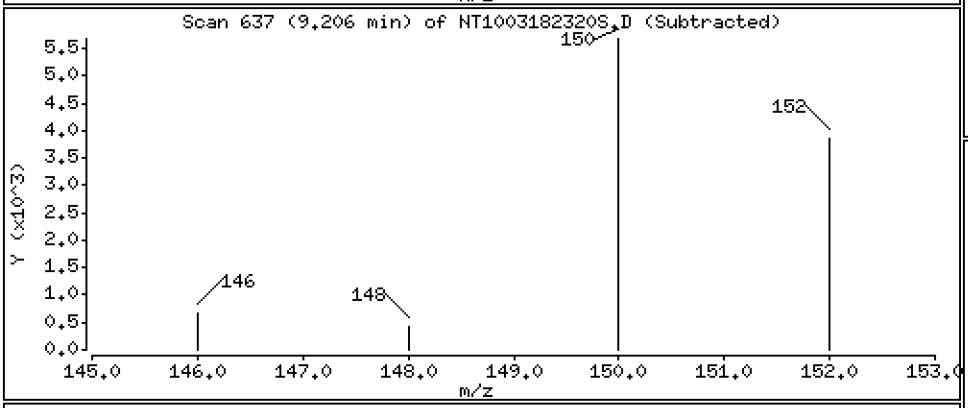
Column diameter: 0.25

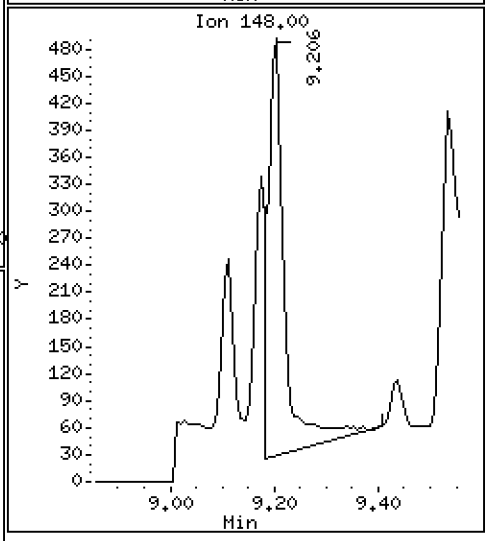
9 1,4-Dichlorobenzene

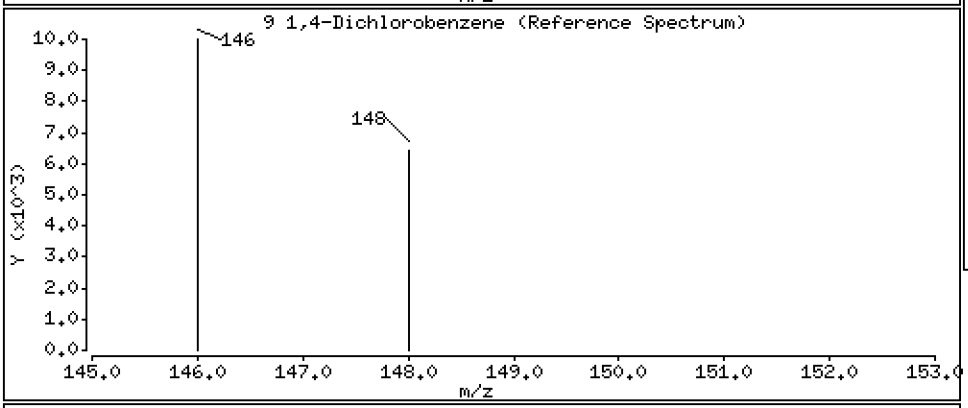
Concentration: 0.01164 ug/L

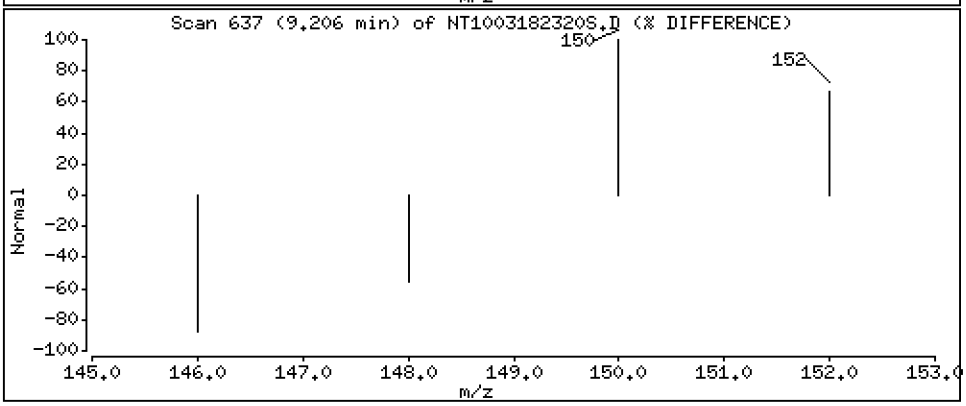












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

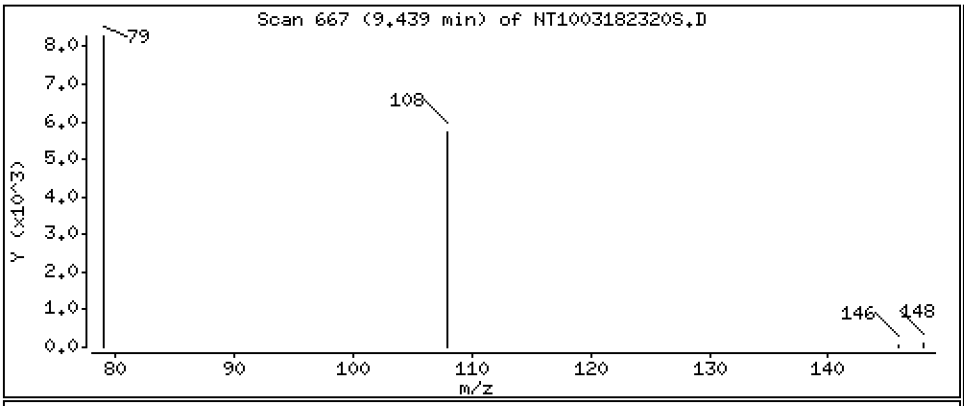
Operator: JGR

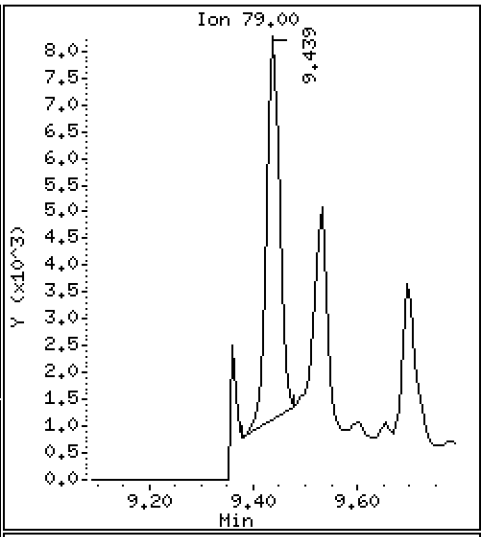
Column phase: ZB-5msi

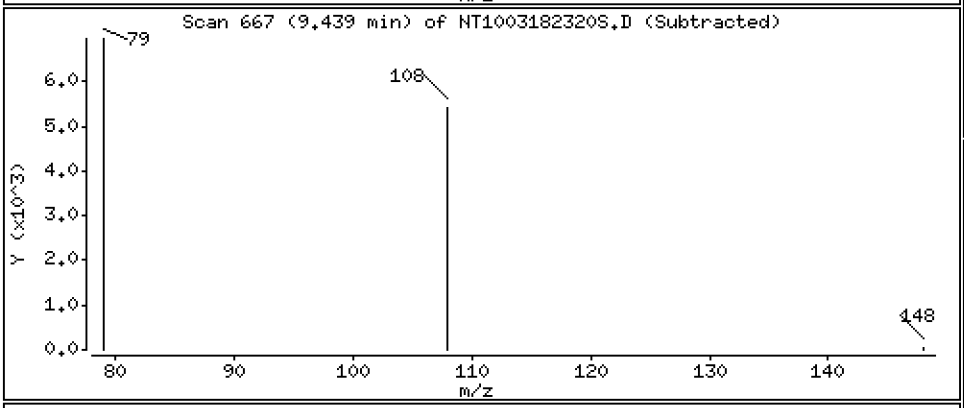
Column diameter: 0.25

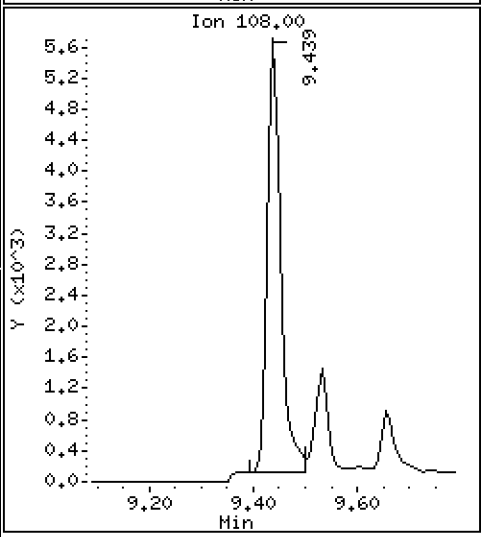
11 Benzyl alcohol

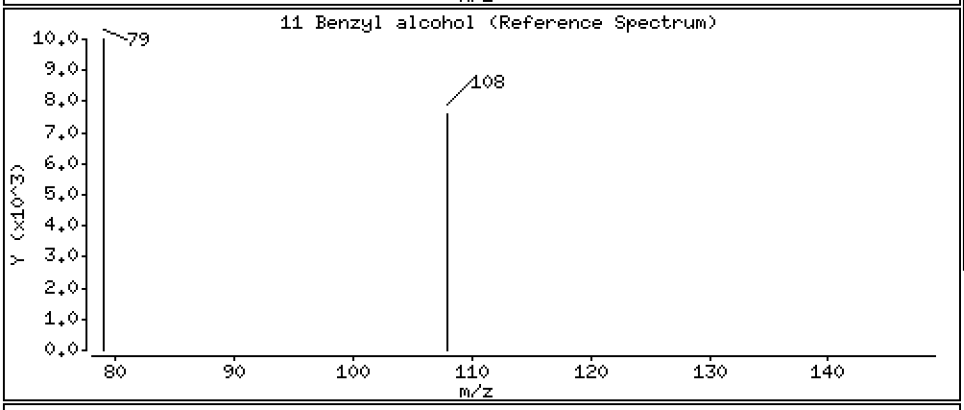
Concentration: 0.2032 ug/L

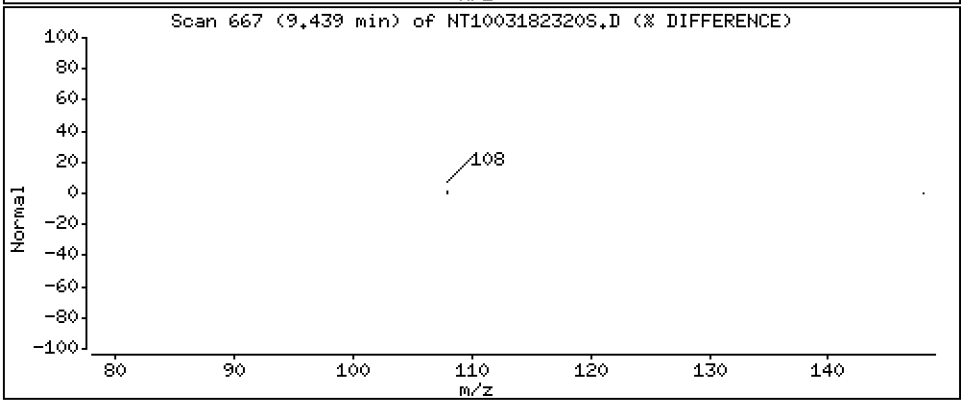












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182320S.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

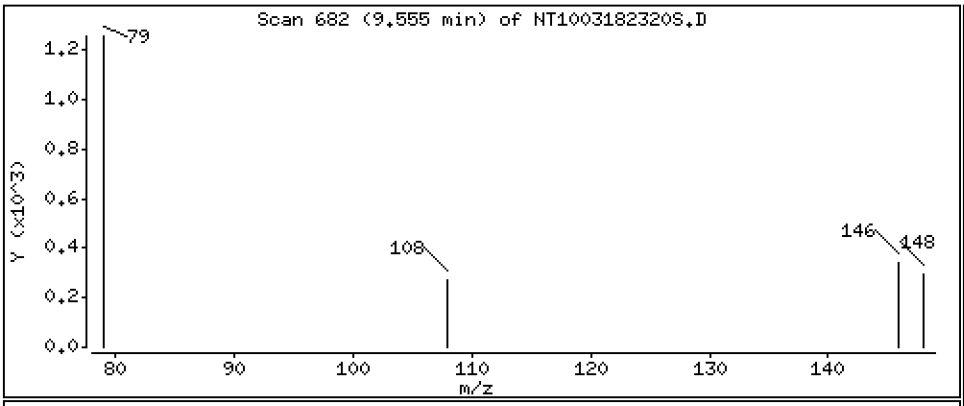
Operator: JGR

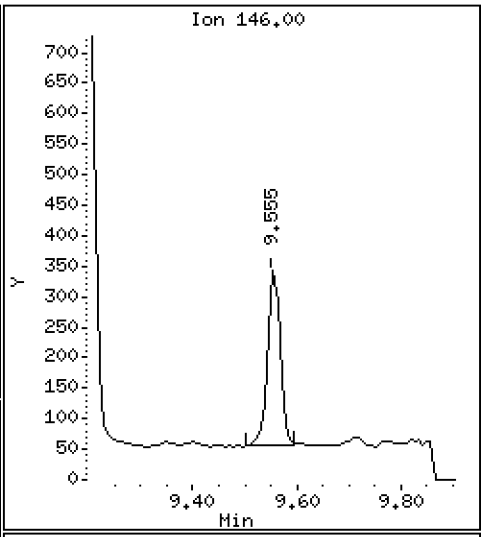
Column phase: ZB-5msi

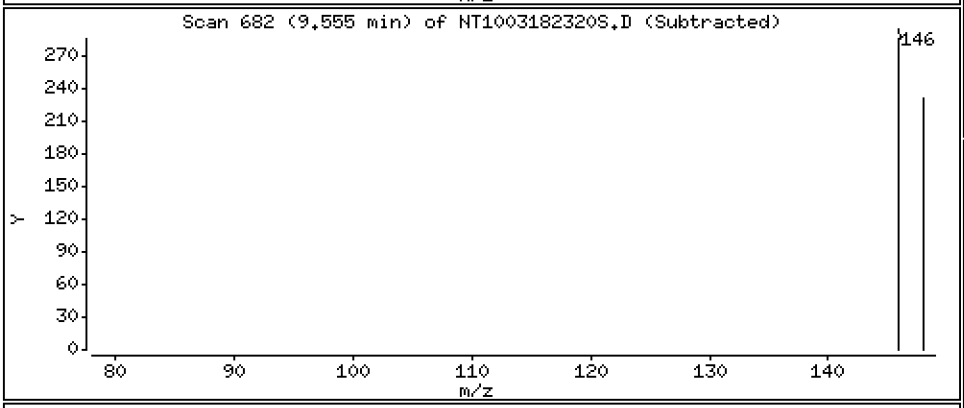
Column diameter: 0.25

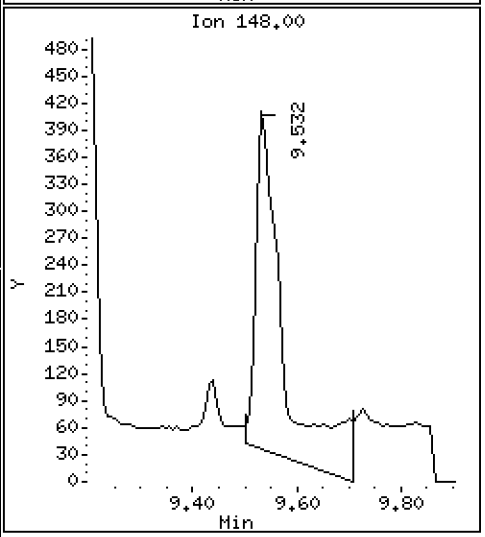
12 1,2-Dichlorobenzene

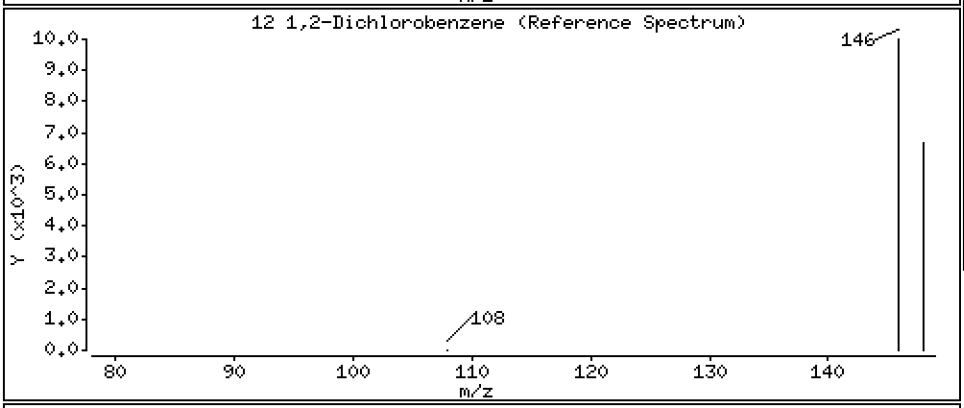
Concentration: 0.005193 ug/L

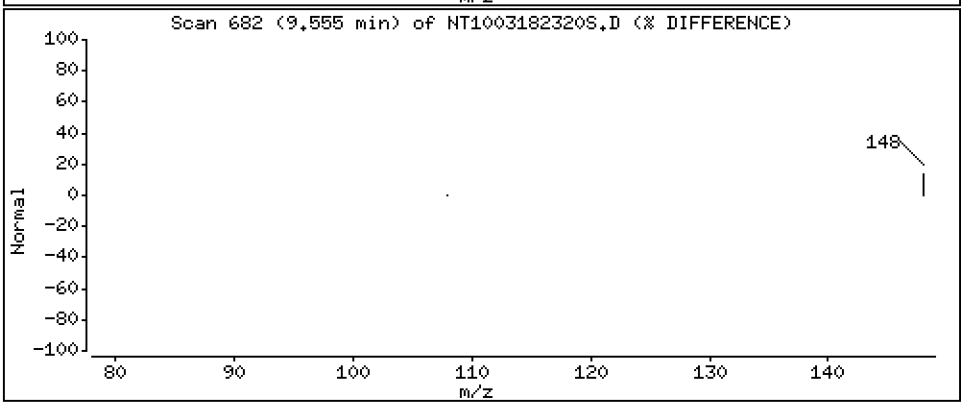












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

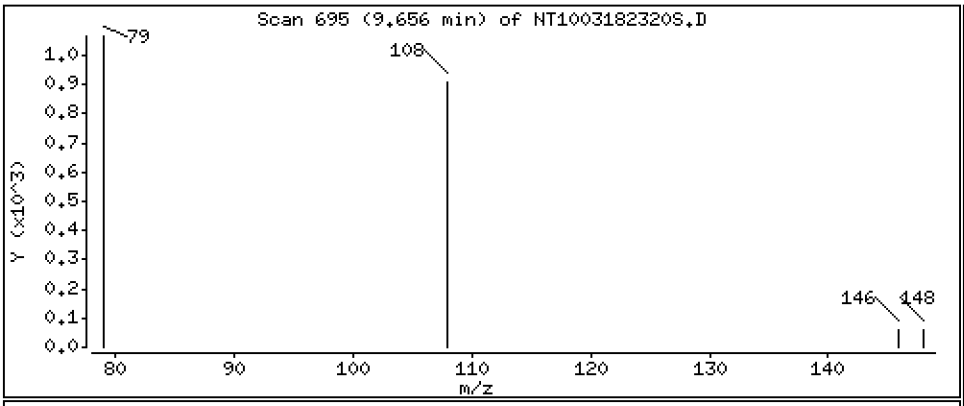
Operator: JGR

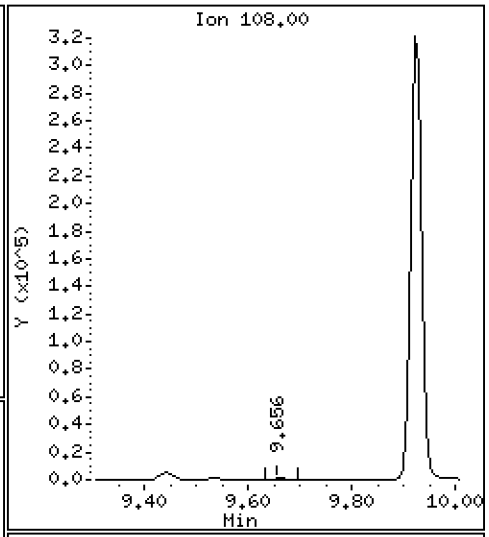
Column phase: ZB-5msi

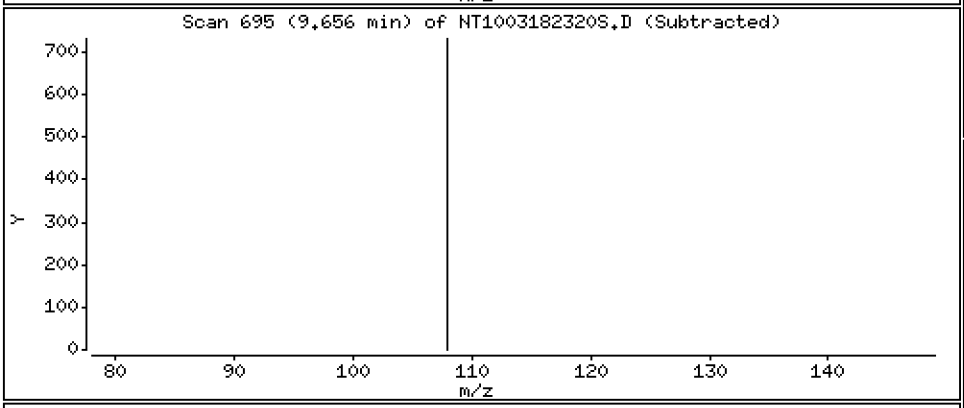
Column diameter: 0.25

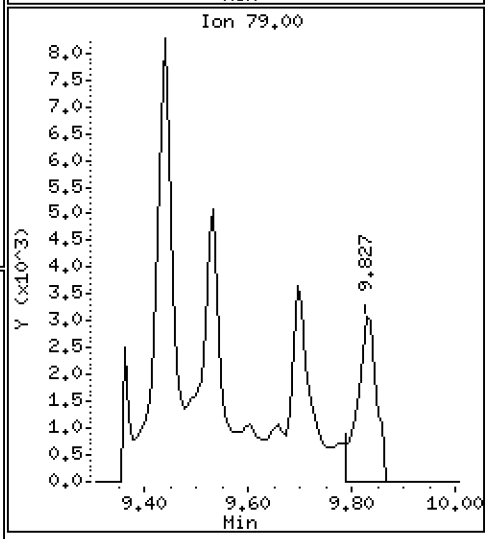
13 2-Methylphenol

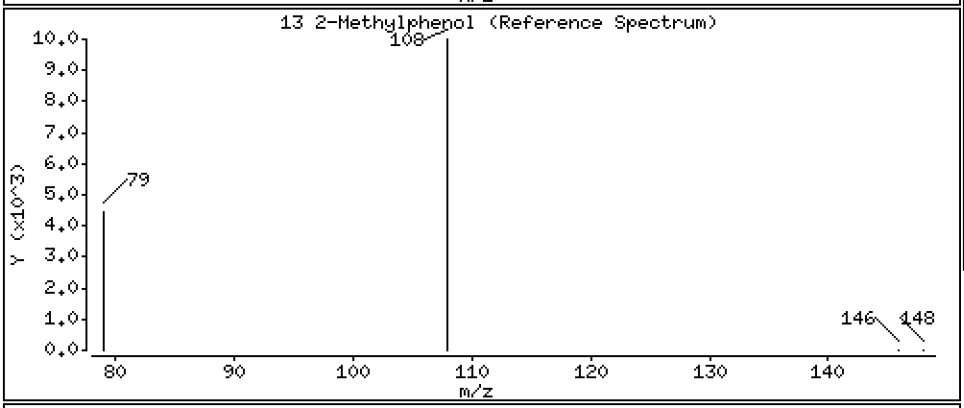
Concentration: 0.01539 ug/L

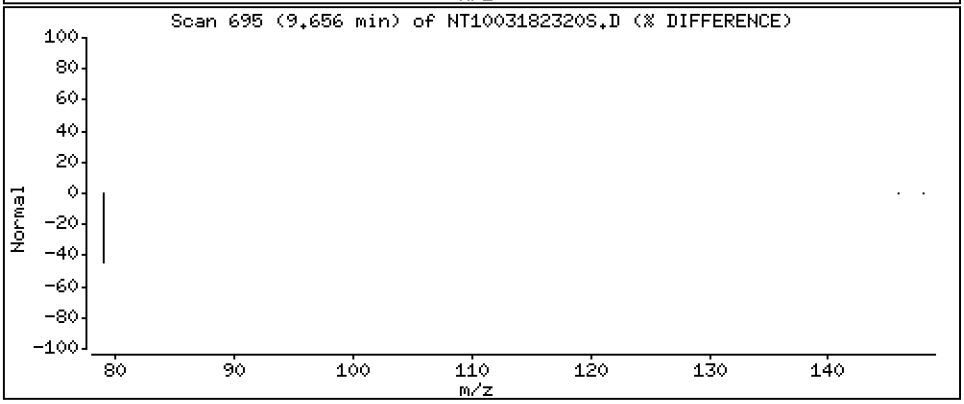












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

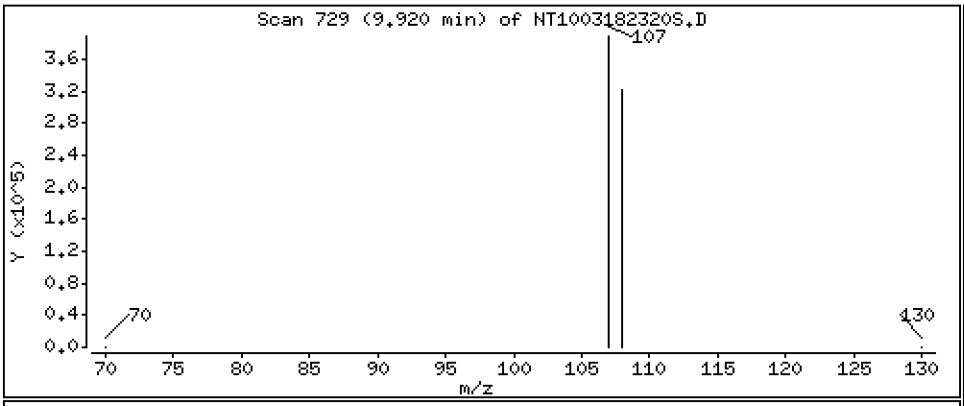
Operator: JGR

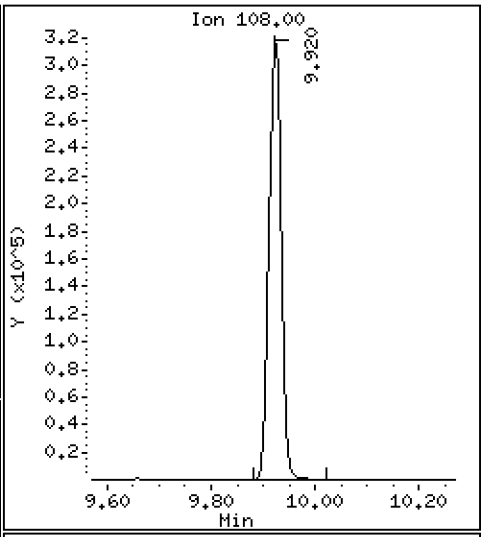
Column phase: ZB-5msi

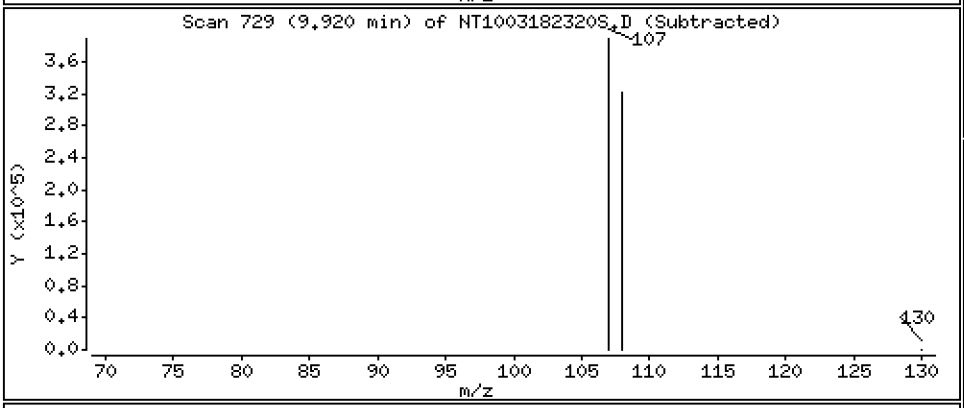
Column diameter: 0.25

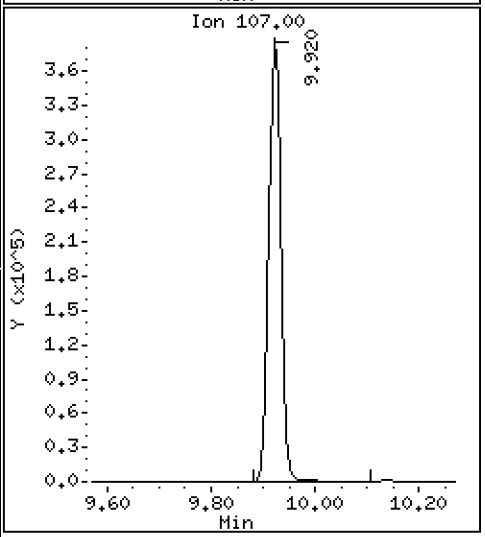
15 4-Methylphenol

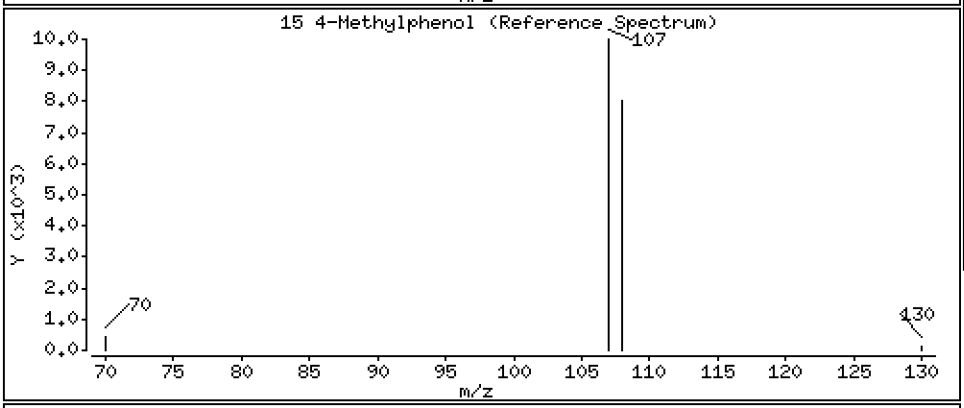
Concentration: 6.847 ug/L

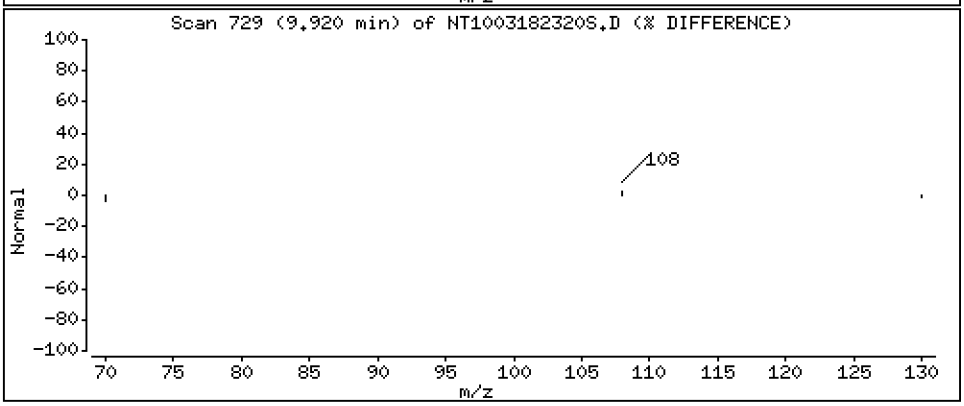












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

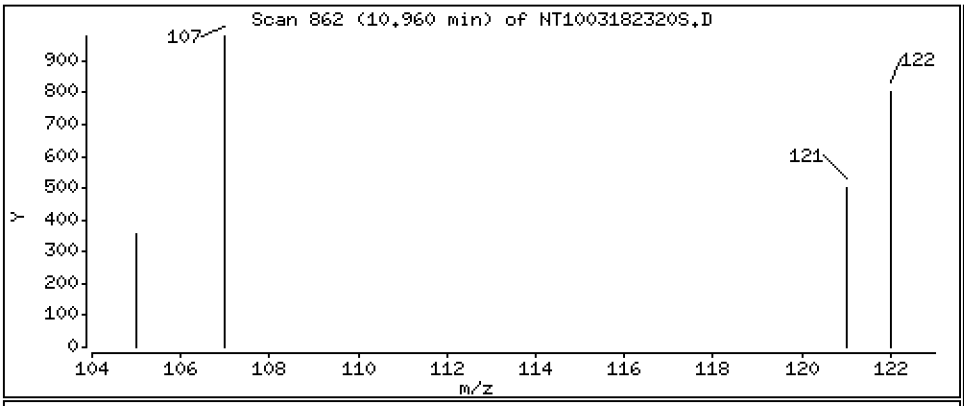
Operator: JGR

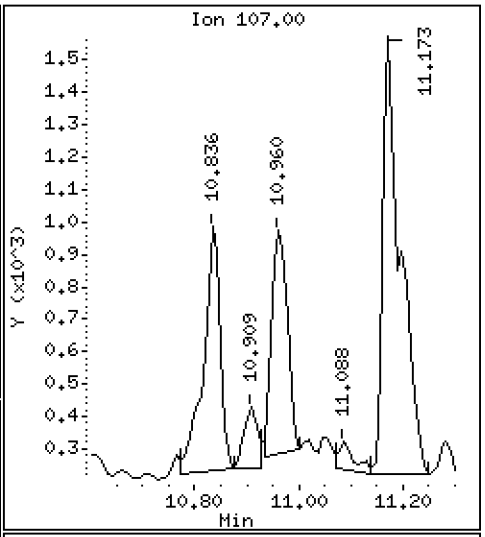
Column phase: ZB-5msi

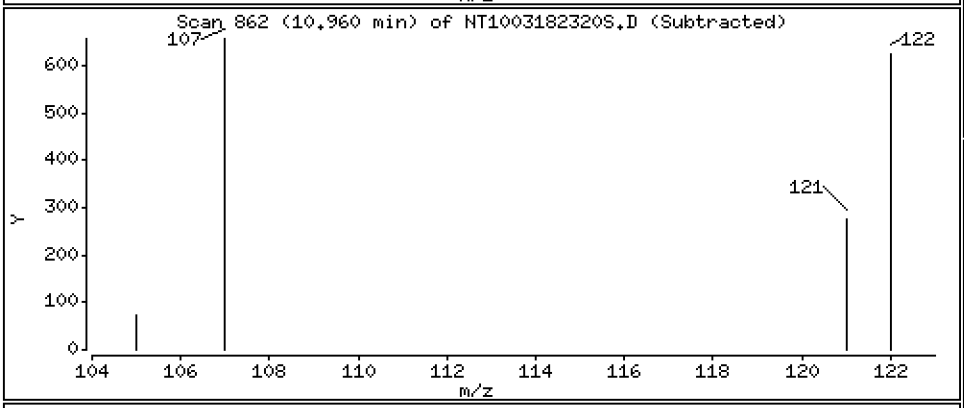
Column diameter: 0.25

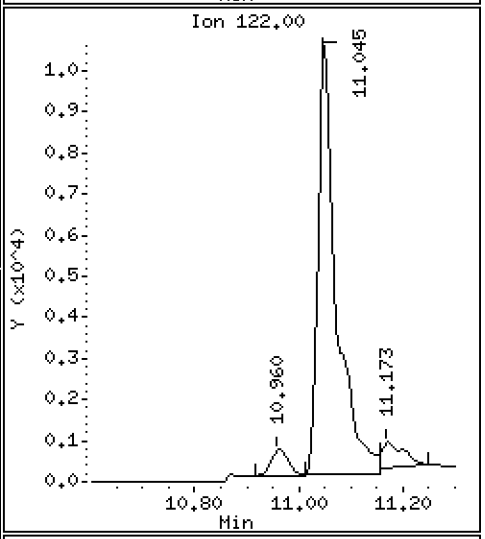
22 2,4-Dimethylphenol

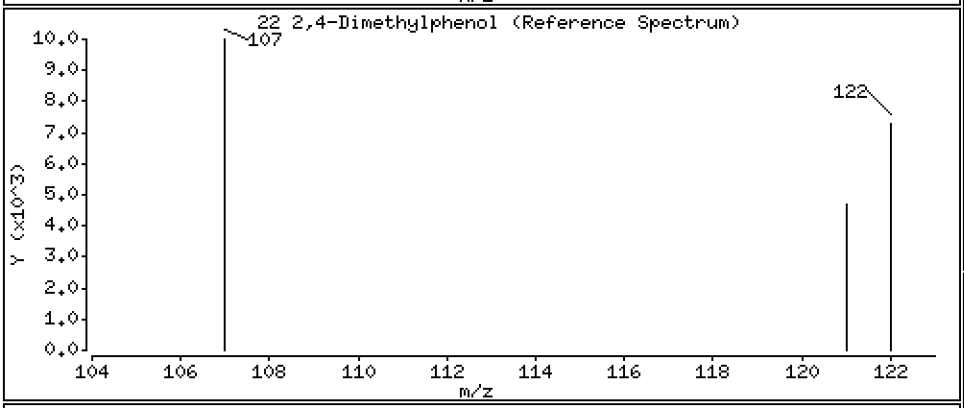
Concentration: 0.01958 ug/L

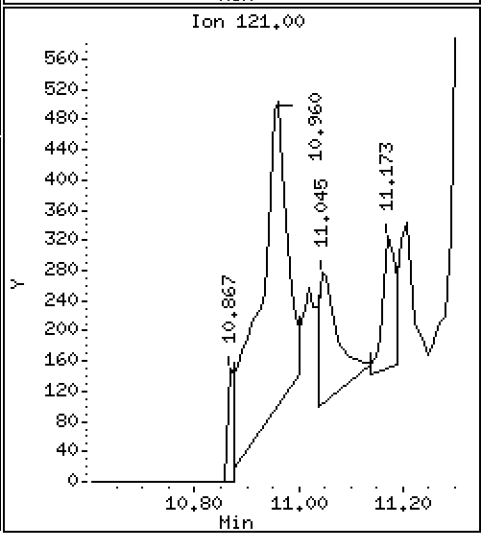


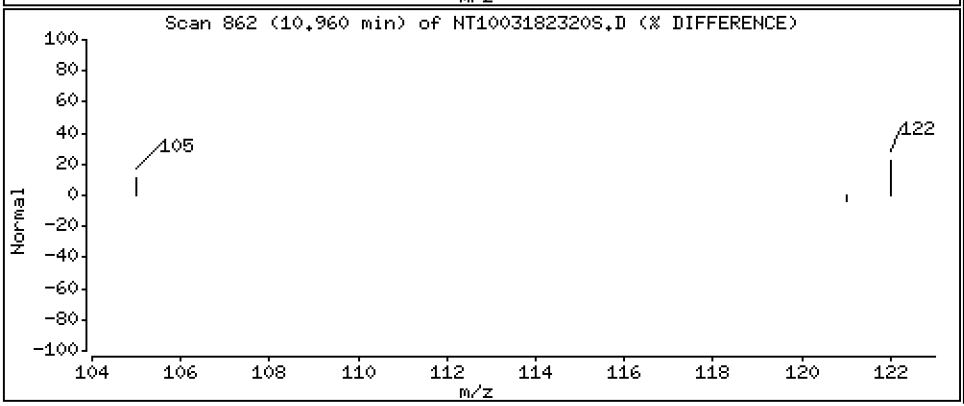












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

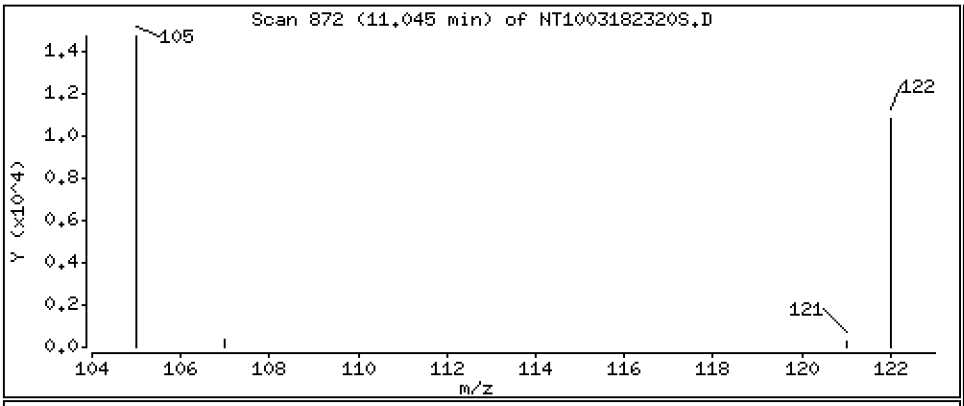
Operator: JGR

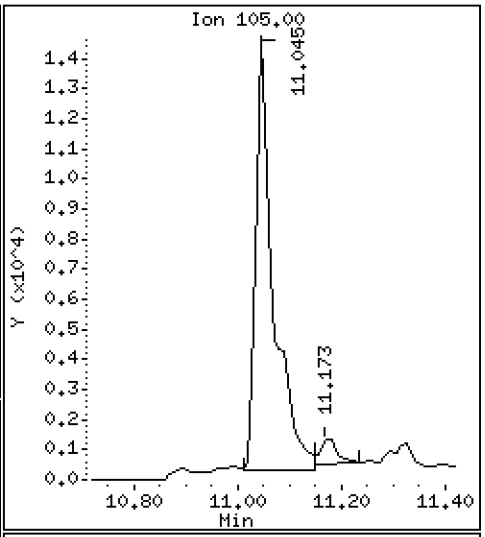
Column phase: ZB-5msi

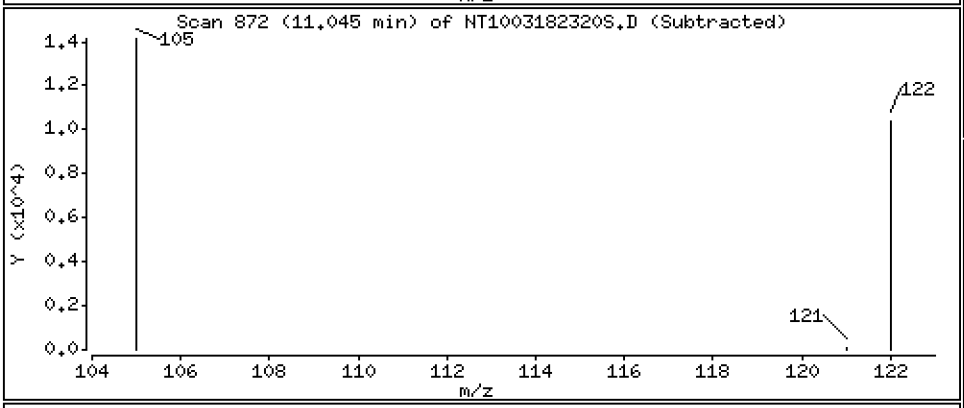
Column diameter: 0.25

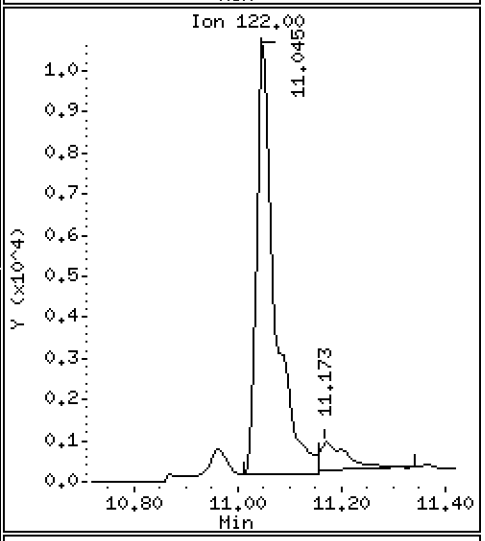
24 Benzoic acid

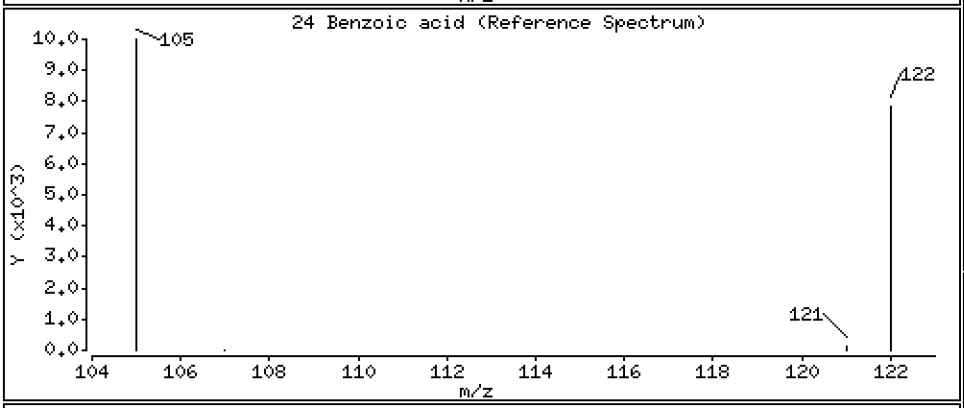
Concentration: 0.8319 ug/L

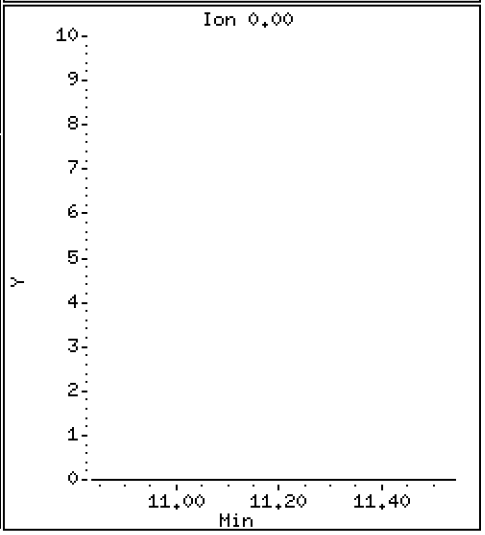


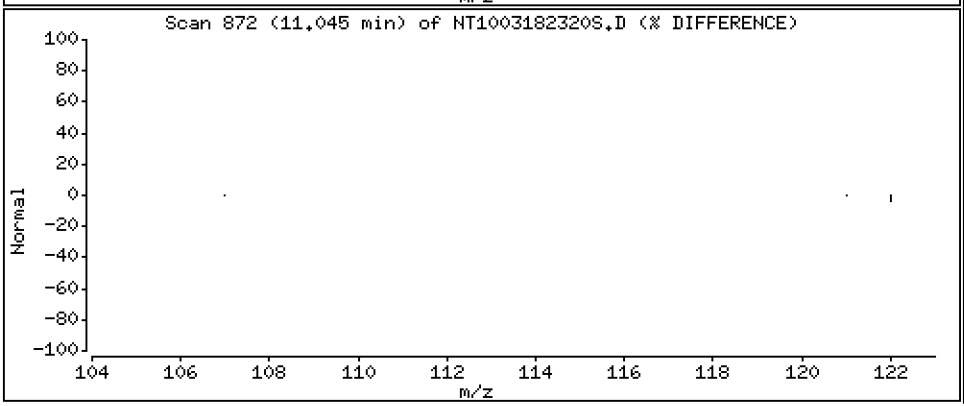












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

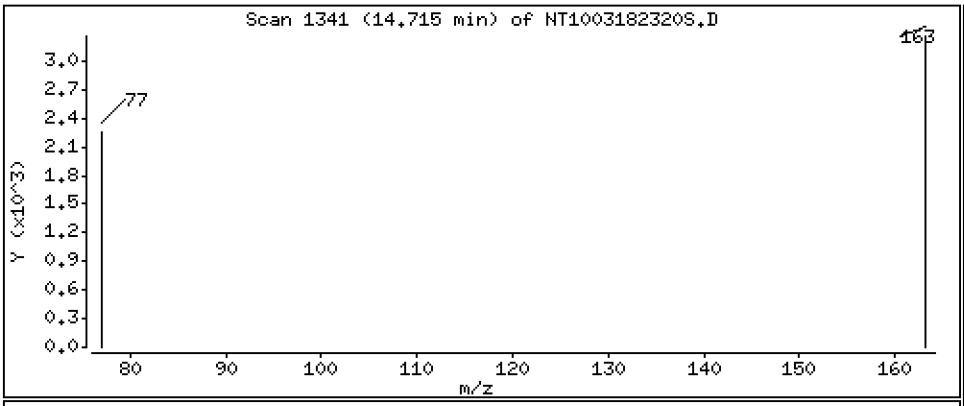
Operator: JGR

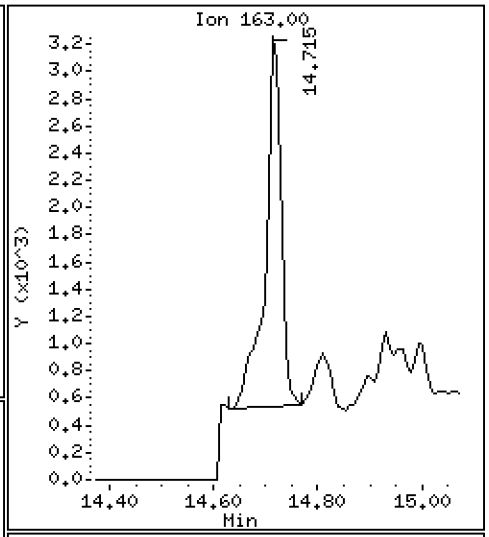
Column phase: ZB-5msi

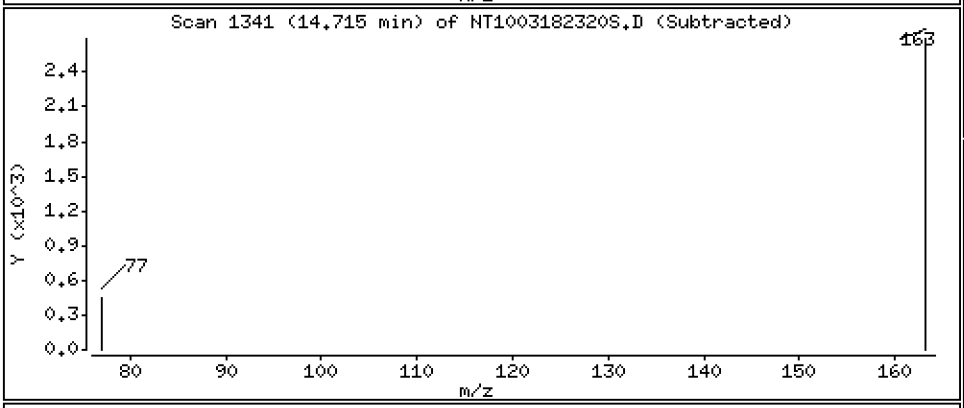
Column diameter: 0.25

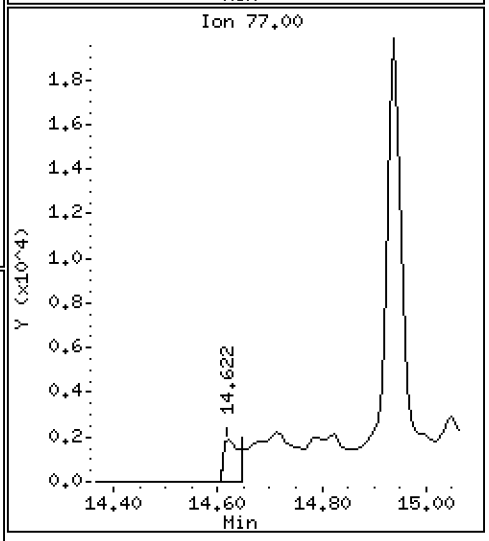
39 Dimethylphthalate

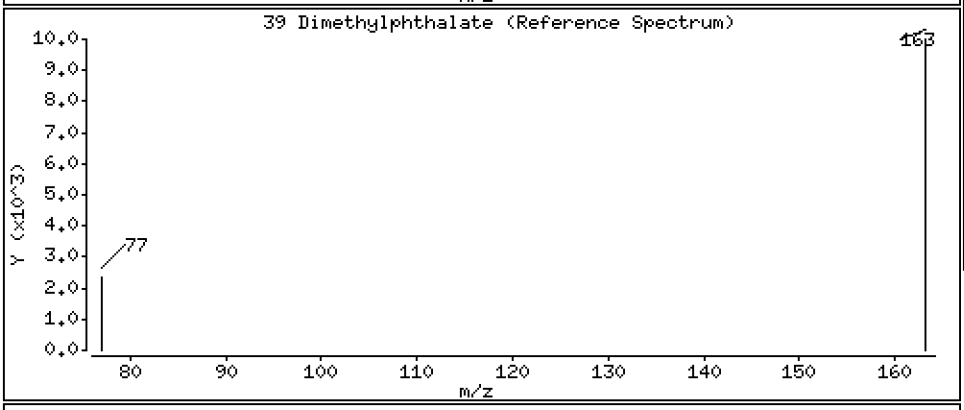
Concentration: 0.04109 ug/L

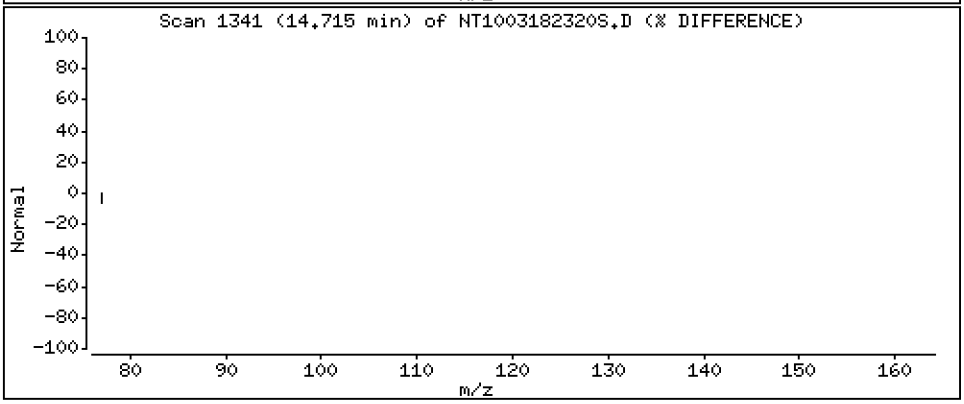












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

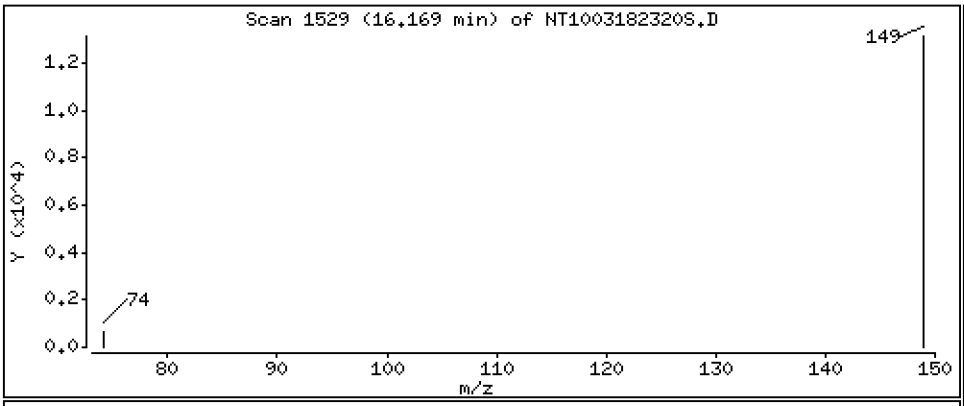
Operator: JGR

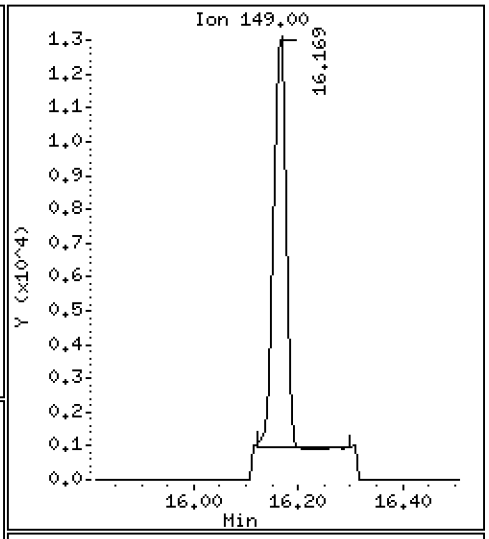
Column phase: ZB-5msi

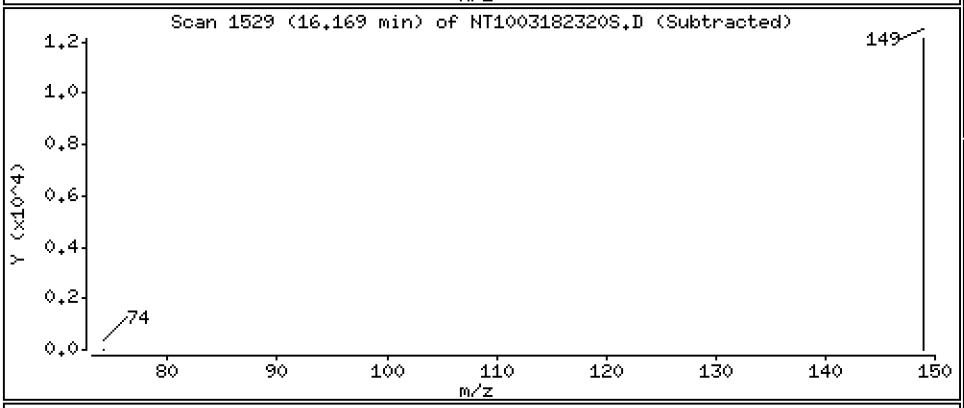
Column diameter: 0.25

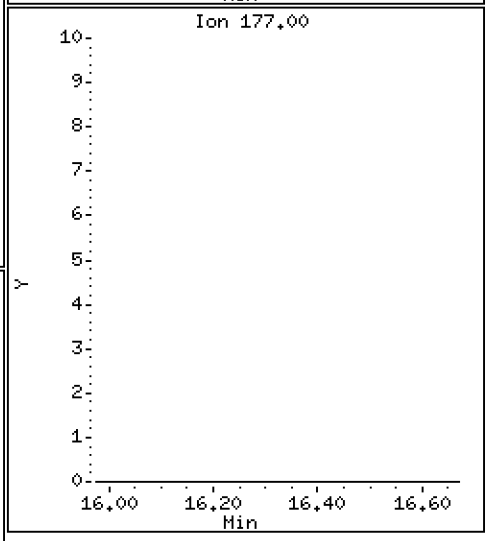
50 Diethylphthalate

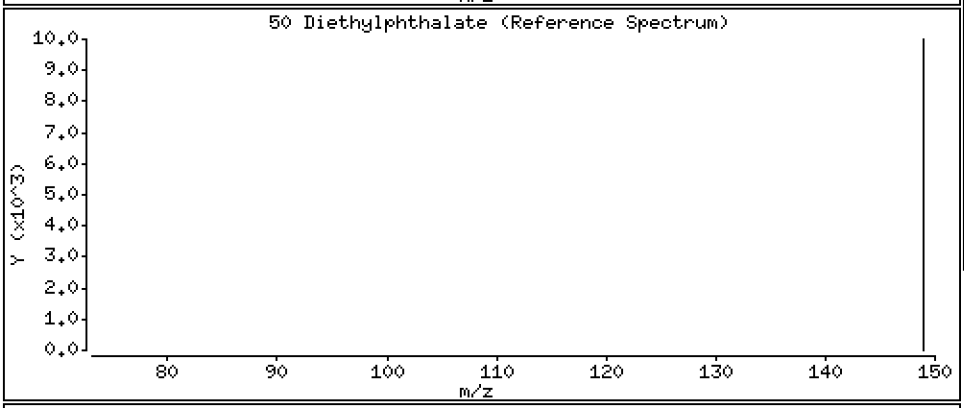
Concentration: 0.1360 ug/L

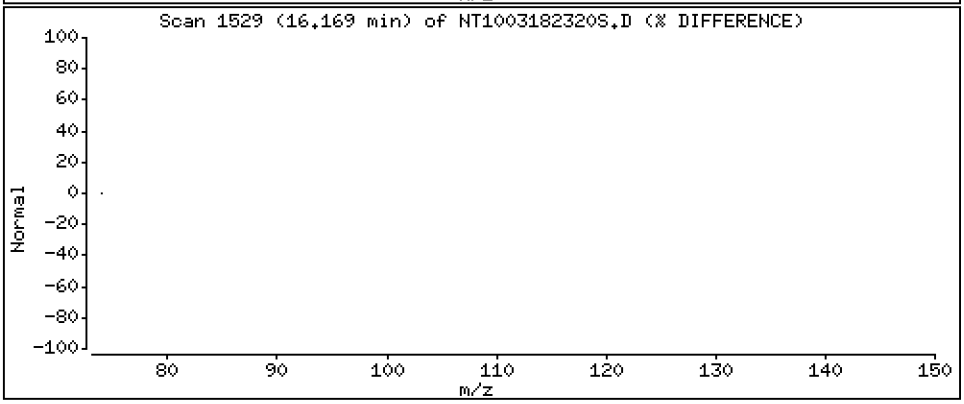












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Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

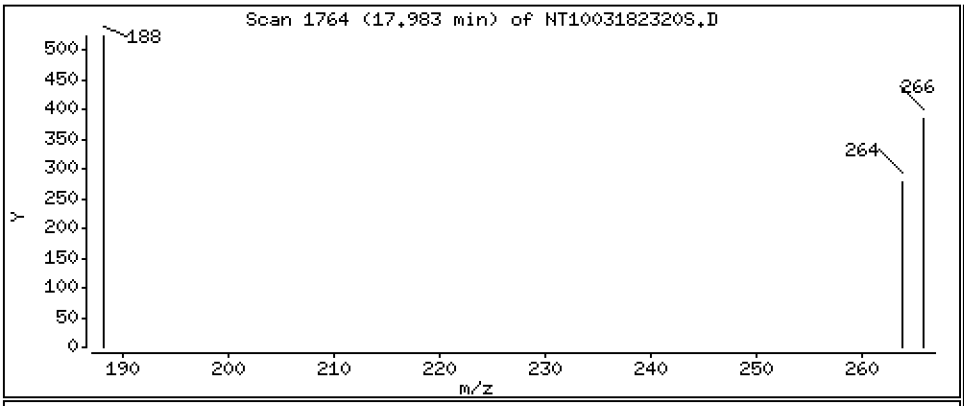
Operator: JGR

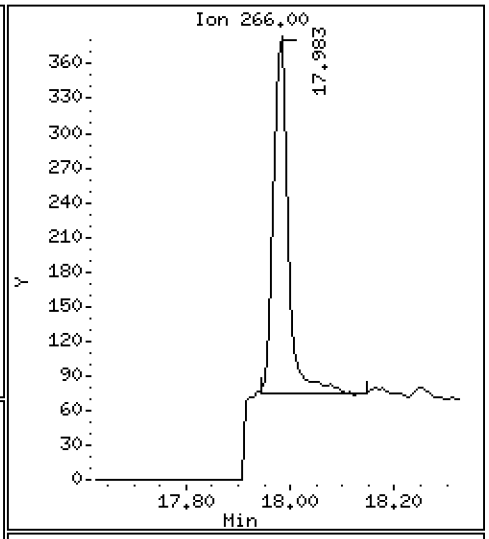
Column phase: ZB-5msi

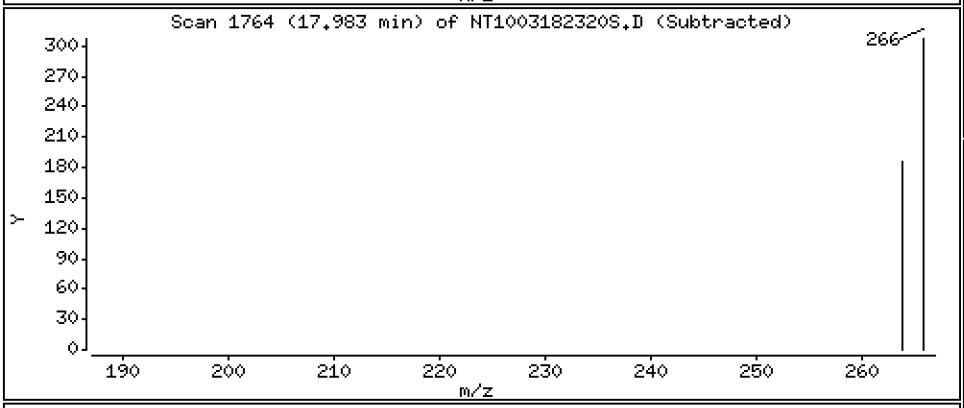
Column diameter: 0.25

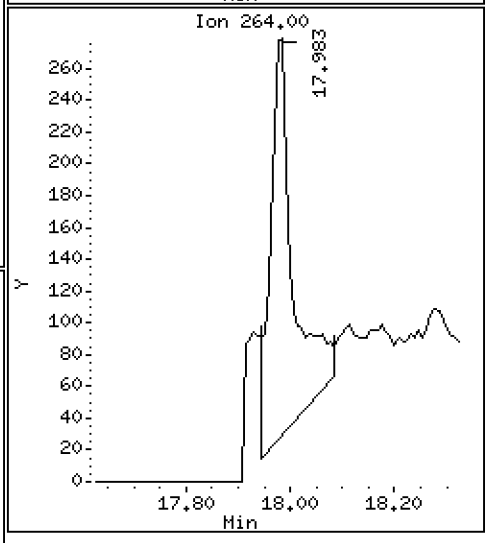
58 Pentachlorophenol

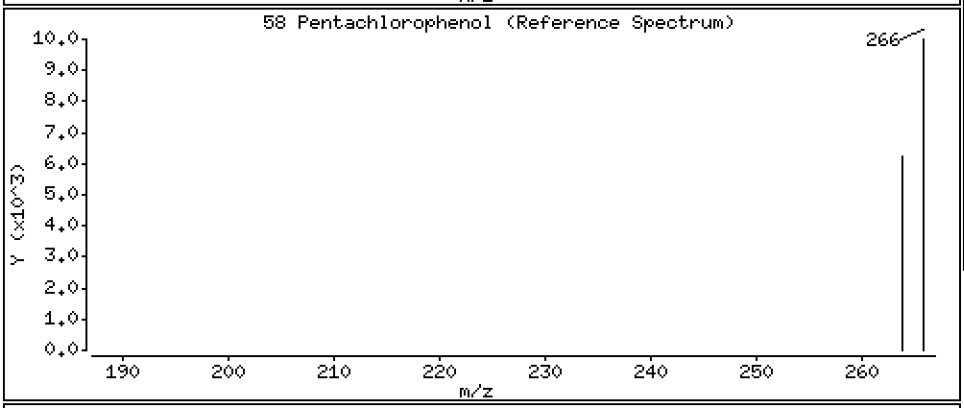
Concentration: 0.02048 ug/L

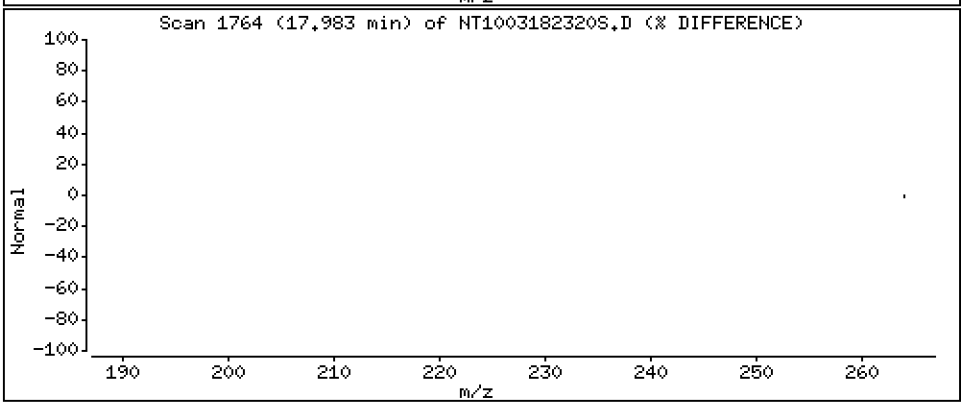












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182320S.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

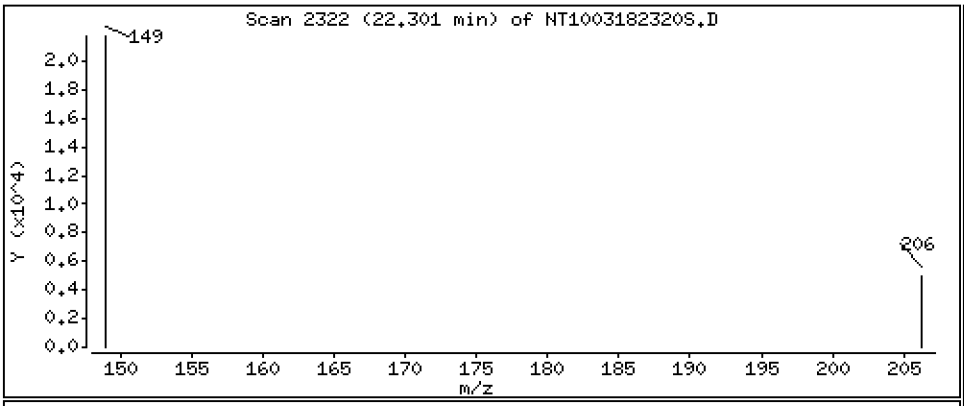
Operator: JGR

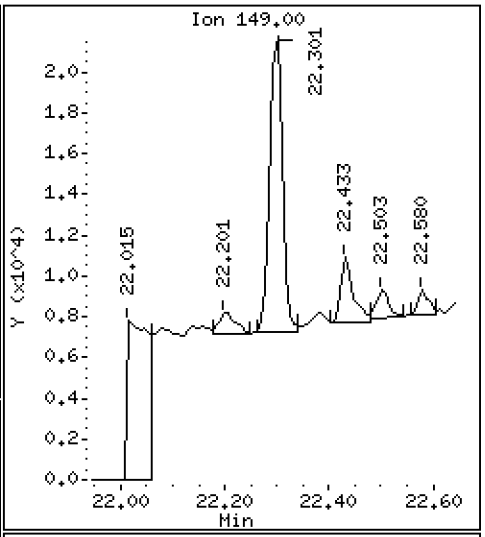
Column phase: ZB-5msi

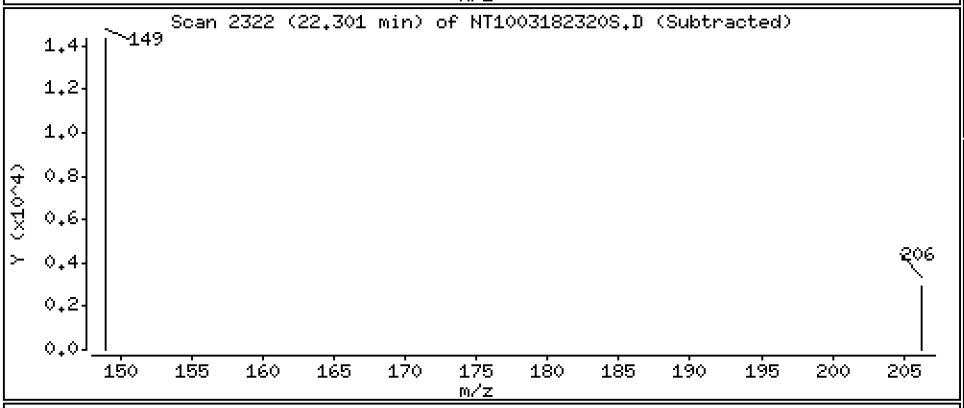
Column diameter: 0.25

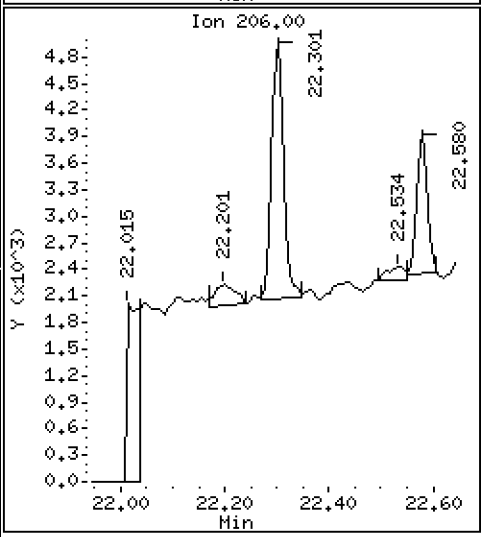
67 Butylbenzylphthalate

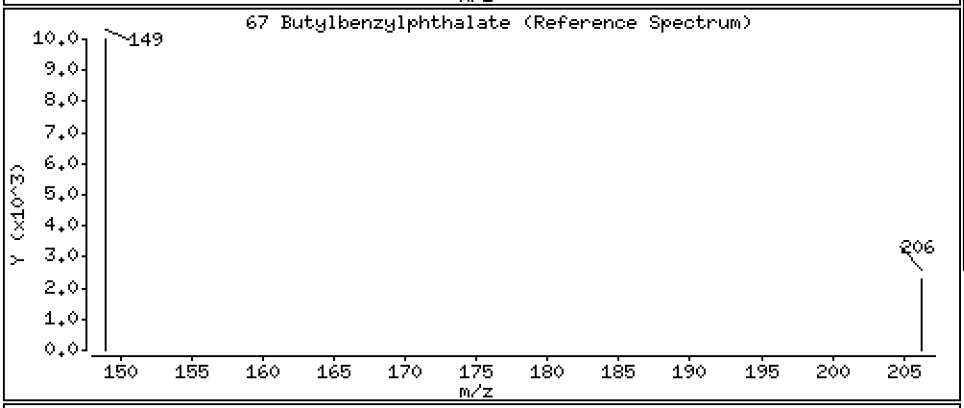
Concentration: 0.2306 ug/L

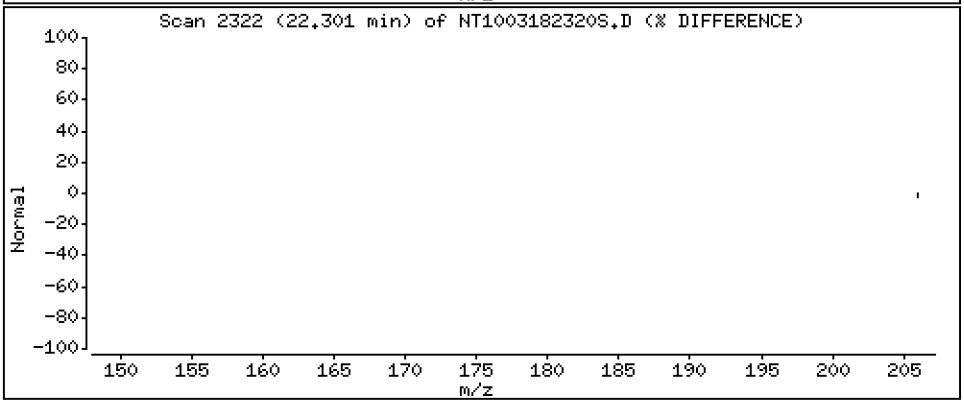












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182320S.D

Date : 19-MAR-2023 05:51

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-07

Volume Injected (uL): 1.0

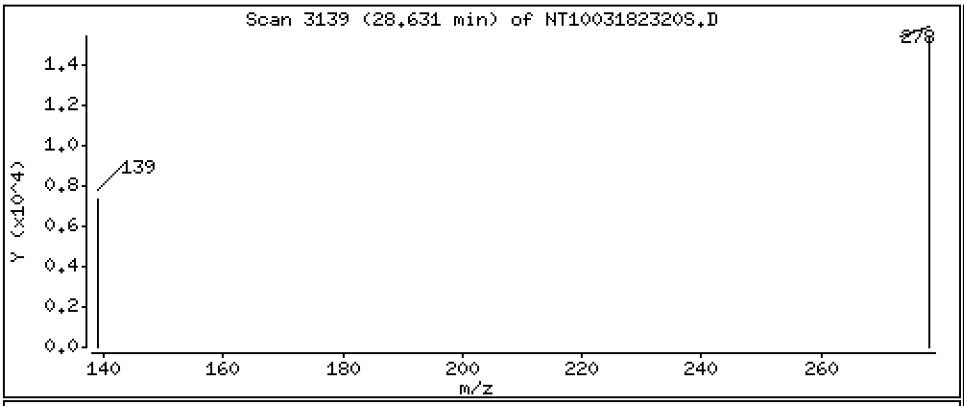
Operator: JGR

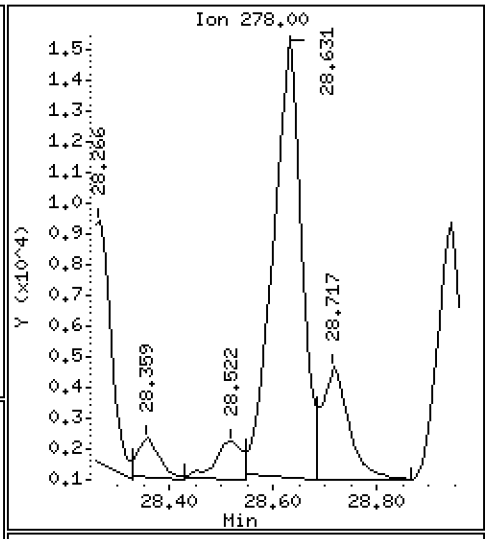
Column phase: ZB-5msi

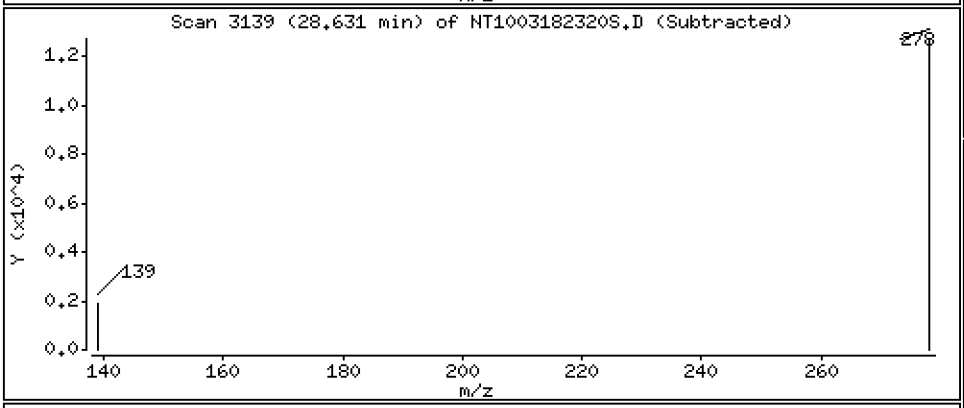
Column diameter: 0.25

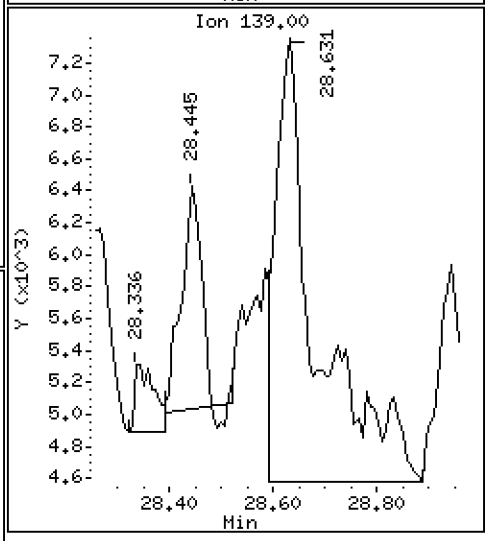
79 Dibenzo(a,h)anthracene

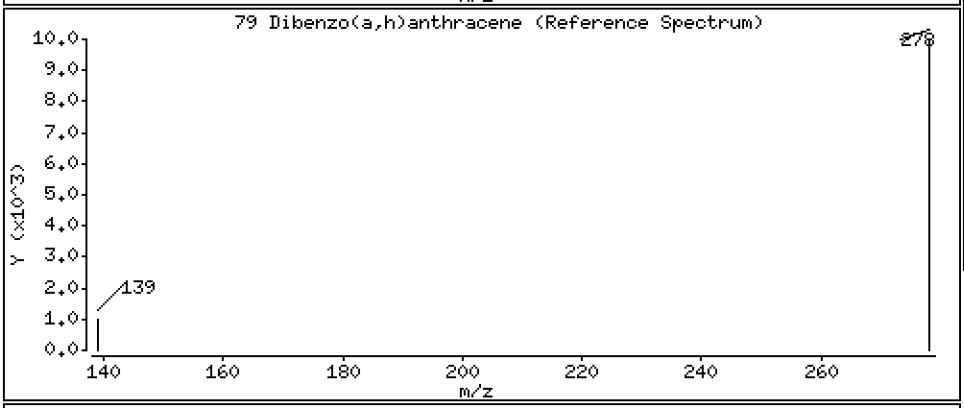
Concentration: 0.1948 ug/L

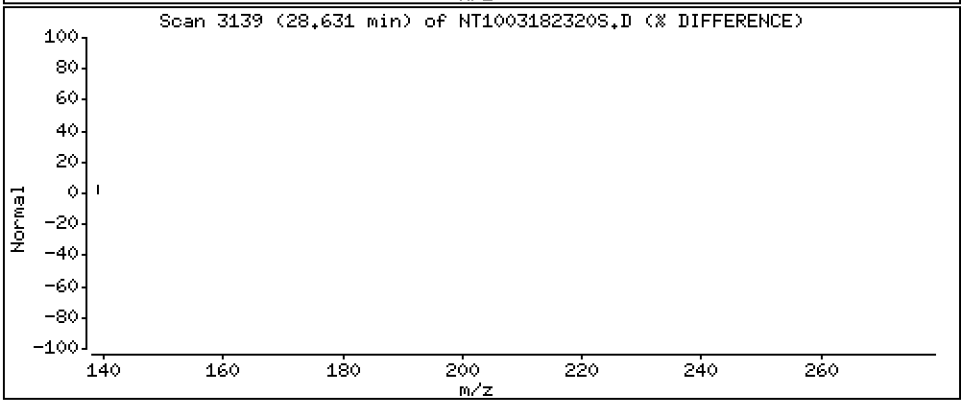












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182320S.D
Lab Smp Id: 23A0467-07
Inj Date : 19-MAR-2023 05:51 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-07
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.964	(0.761)	396634	5.43379	5.434(R)
3	Phenol	94	8.556	8.548	(0.933)	586193	5.85356	5.854
7	1,3-Dichlorobenzene	146	9.113	9.105	(0.993)	429	0.00458	0.004578(M)
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	240709	4.00000	
9	1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	1053	0.01164	0.01164(M)
11	Benzyl alcohol	79	9.438	9.438	(1.029)	11798	0.20322	0.2032(M)
12	1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	462	0.00519	0.005193(M)
13	2-Methylphenol	108	9.656	9.656	(1.052)	1068	0.01539	0.01539(M)
15	4-Methylphenol	108	9.920	9.920	(1.081)	493665	6.84651	6.847
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.960	10.951	(0.942)	1448	0.01958	0.01958
24	Benzoic acid	105	11.045	11.070	(0.949)	33737	0.83195	0.8319
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.635	11.635	(1.000)	855575	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.714	14.722	(0.967)	5578	0.04109	0.04109(M)
* 42	Acenaphthene-d10	162	15.217	15.217	(1.000)	430145	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	19124	0.13600	0.1360
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
58	Pentachlorophenol	266	17.983	17.975	(0.986)	584	0.02048	0.02048
* 59	Phenanthrene-d10	188	18.246	18.246	(1.000)	860138	4.00000	
$ 66	Terphenyl-d14	244	21.380	21.372	(0.918)	633721	5.09377	5.094(R)
67	Butylbenzylphthalate	149	22.301	22.293	(0.958)	23191	0.23057	0.2306
* 69	Chrysene-d12	240	23.284	23.277	(1.000)	763559	4.00000	
* 77	Perylene-d12	264	25.932	25.917	(1.000)	870706	4.00000	
79	Dibenzo(a,h)anthracene	278	28.631	28.607	(1.104)	55640	0.19484	0.1948
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182320S.D
Lab Smp Id: 23A0467-07
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	240709	7.78
27 Naphthalene-d8	802913	401457	1605826	855575	6.56
42 Acenaphthene-d10	396793	198397	793586	430145	8.41
59 Phenanthrene-d10	821666	410833	1643332	860138	4.68
69 Chrysene-d12	707165	353583	1414330	763559	7.97
77 Perylene-d12	813685	406843	1627370	870706	7.01

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	-0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	-0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	-0.00
69 Chrysene-d12	23.28	22.78	23.78	23.28	0.03
77 Perylene-d12	25.92	25.42	26.42	25.93	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182320S.D

Lab ID: 23A0467-07
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 05:51

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

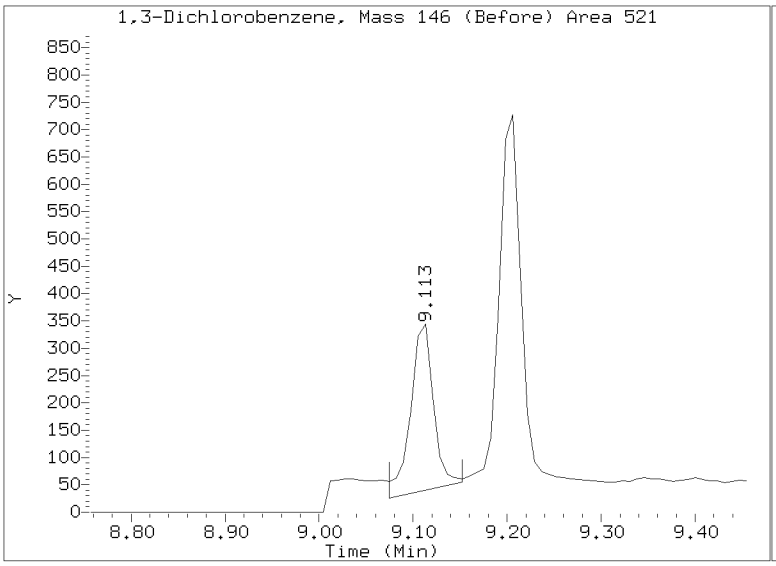
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

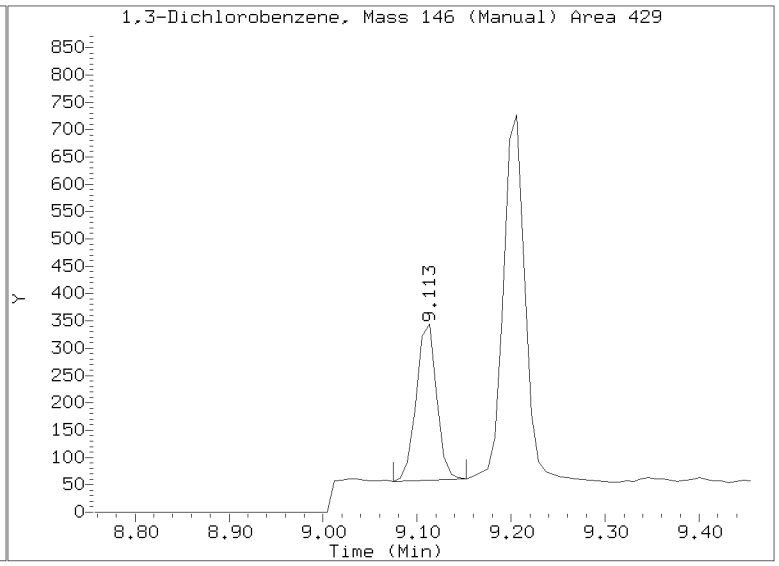
Exception: 1,2,4-Trichlorobenzene 0.0010

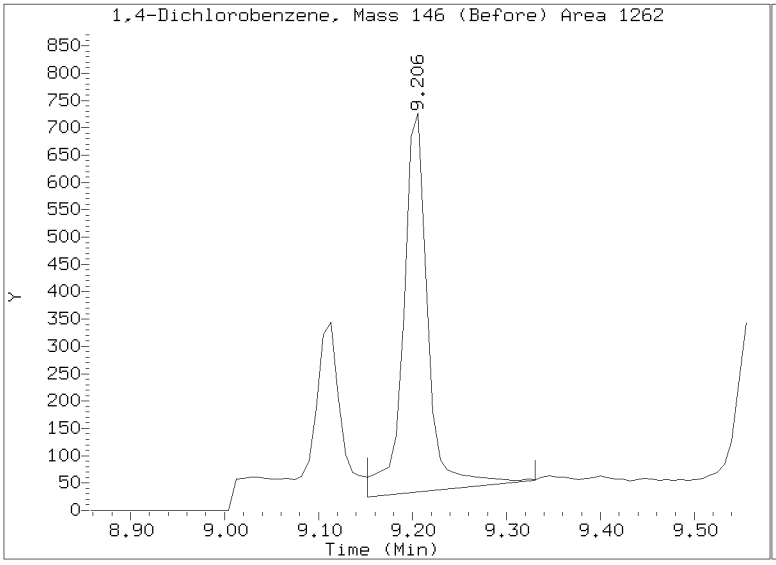
* Only compounds listed in the work order have been verified by the analyst *

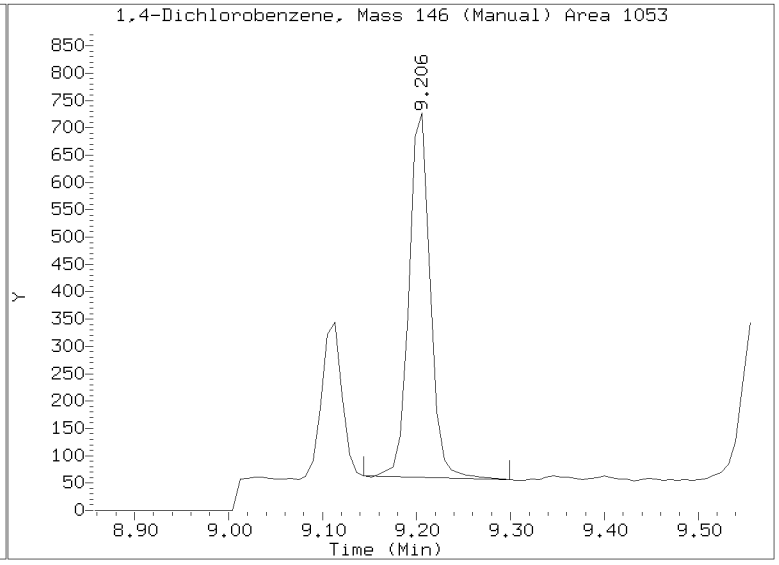
Quant Ion Manual Peak Adjustment Report

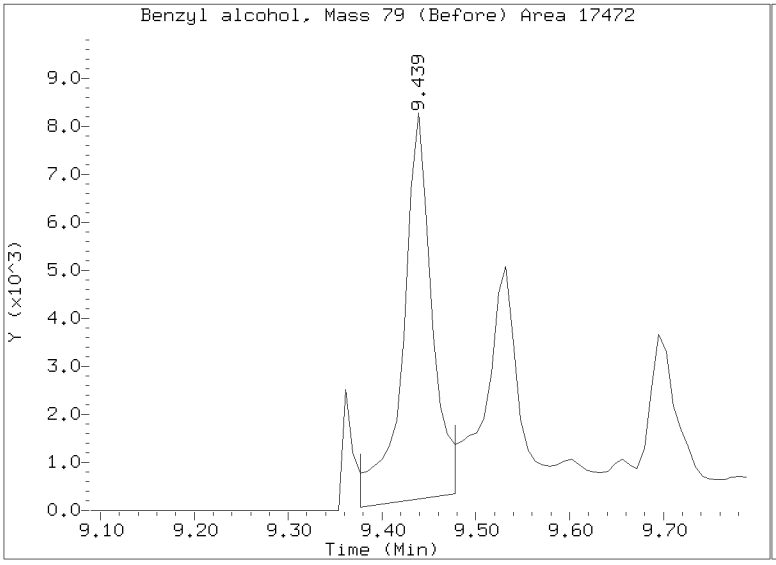
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182320S.D
Injection Date: 19-MAR-2023 05:51
Lab ID:23A0467-07 Client ID:
Report Date: 04/04/2023 13:21

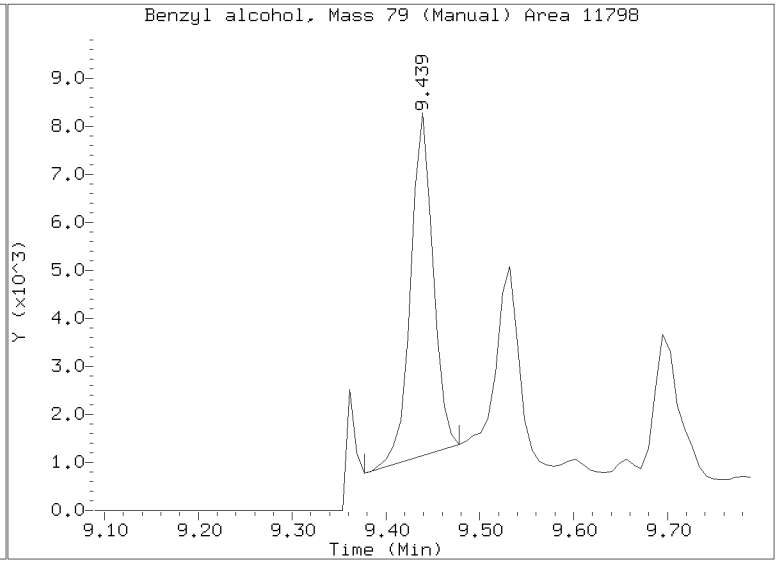












Quant Ion Manual Peak Adjustment Report

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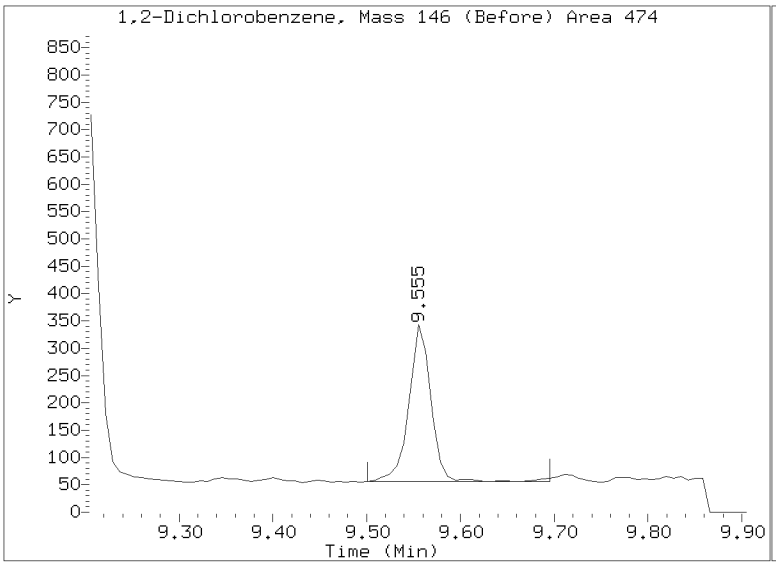
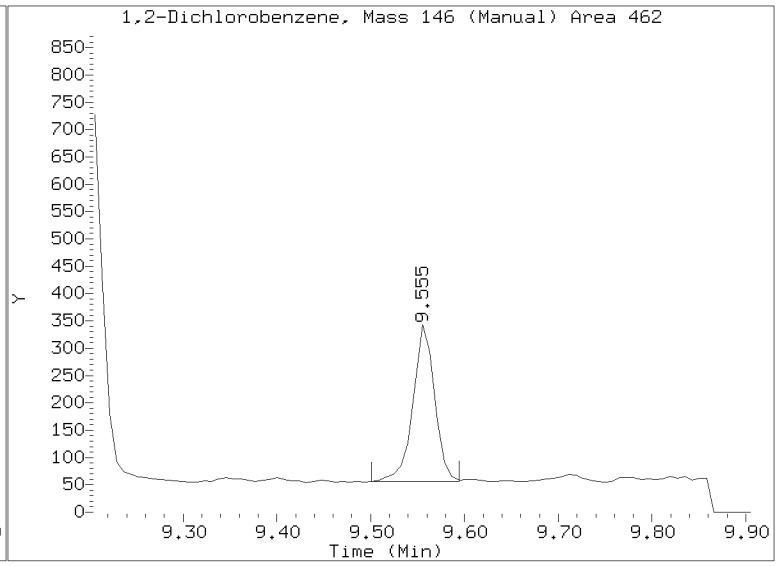
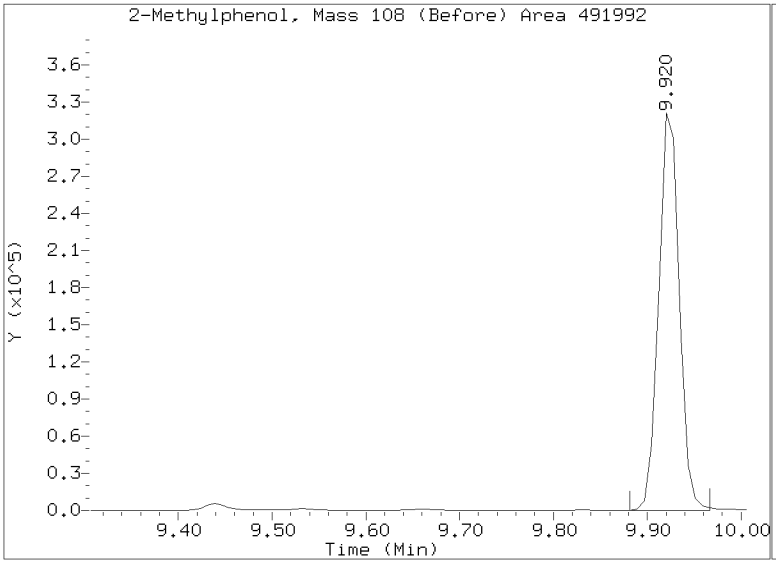
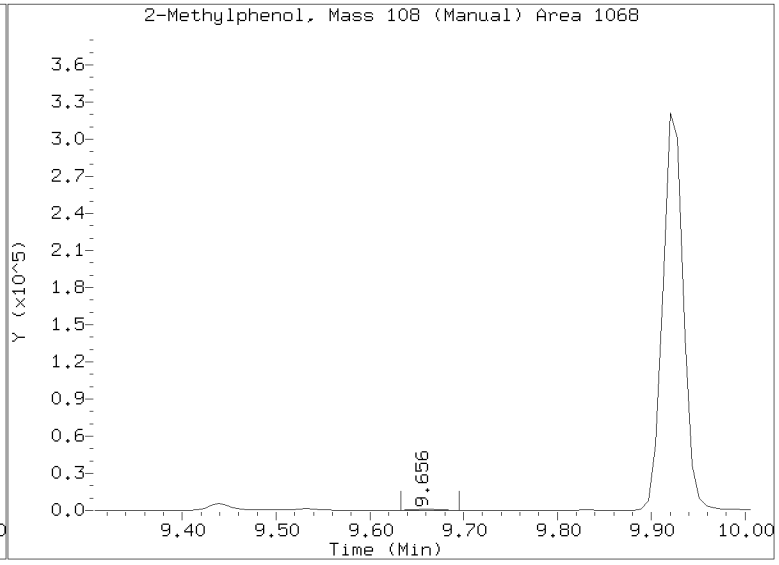
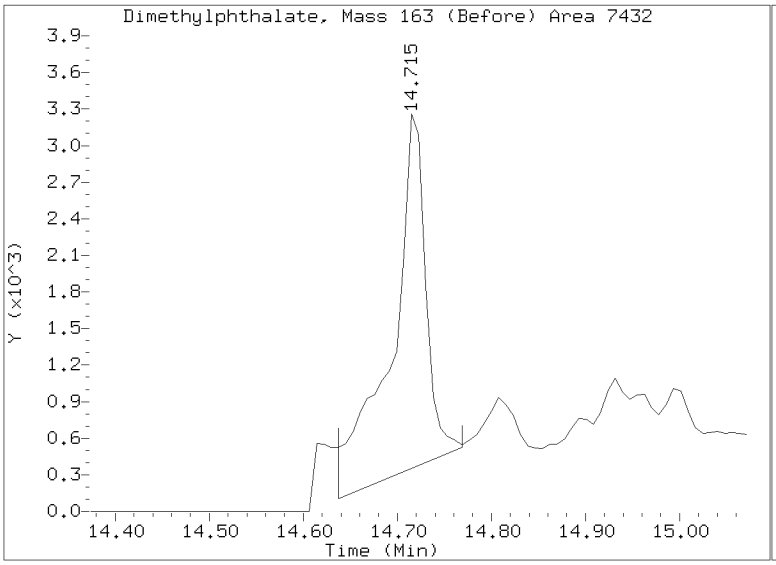
Injection Date: 19-MAR-2023 05:51
Lab ID:23A0467-07 Client ID:
Report Date: 04/04/2023 13:21

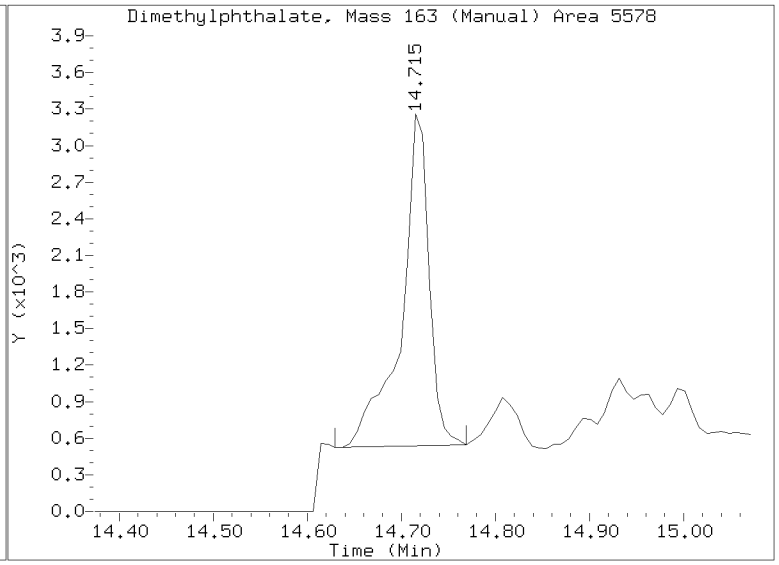












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1013

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	02/23/23 15:49	File ID:	NT1003182323S.D
% Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 07:46
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	20.67 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	2.9	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	1.5	J	0.7	5.0
100-51-6	Benzyl Alcohol	1	21.1		2.5	20.0
65-85-0	Benzoic acid	1	54.7	J	13.4	100
105-67-9	2,4-Dimethylphenol	1	3.3	J	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	5.5	J	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.99	557	74.2	27 - 120	
p-Terphenyl-d14	499.99	515	103	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823238.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

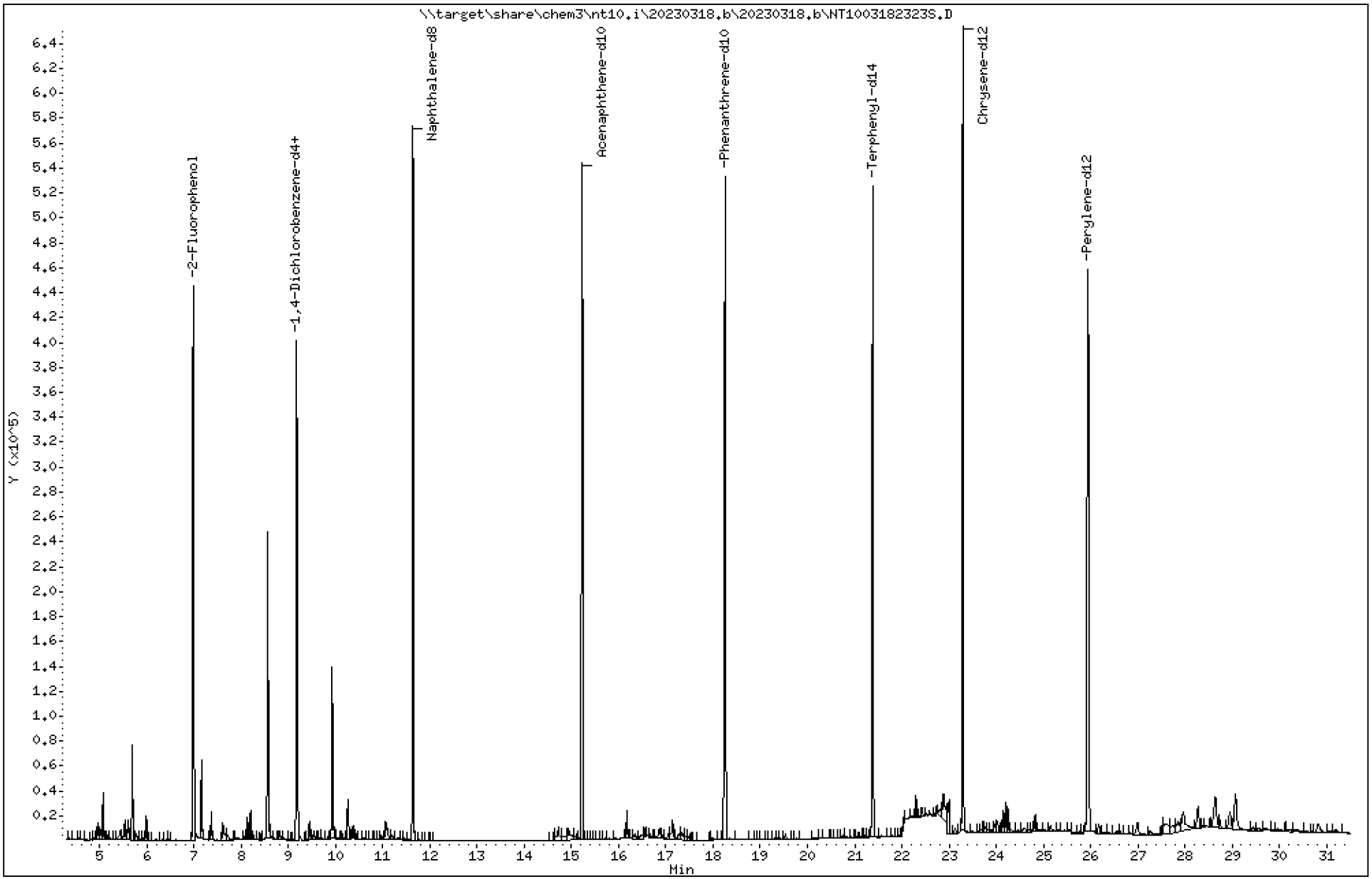
Sample Info: 23A0467-08

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

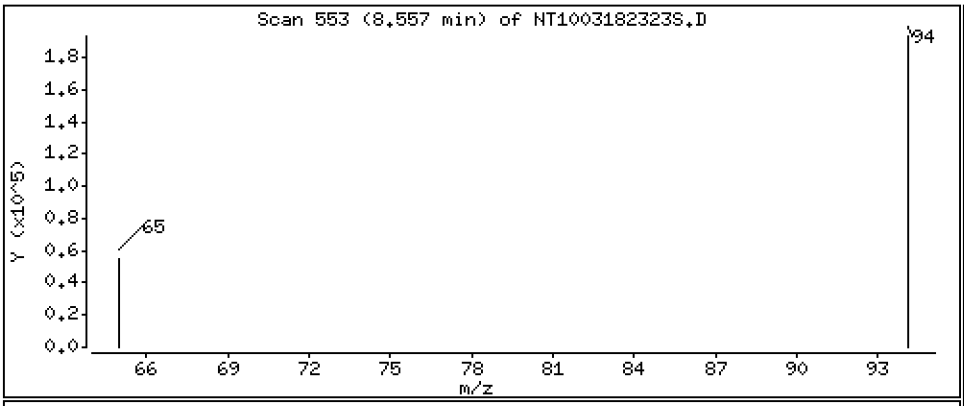
Operator: JGR

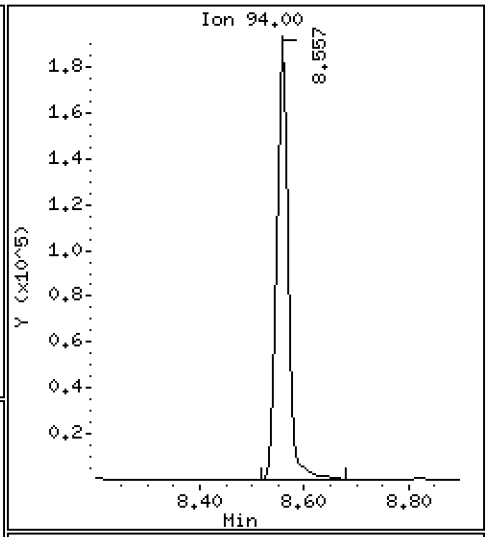
Column phase: ZB-5msi

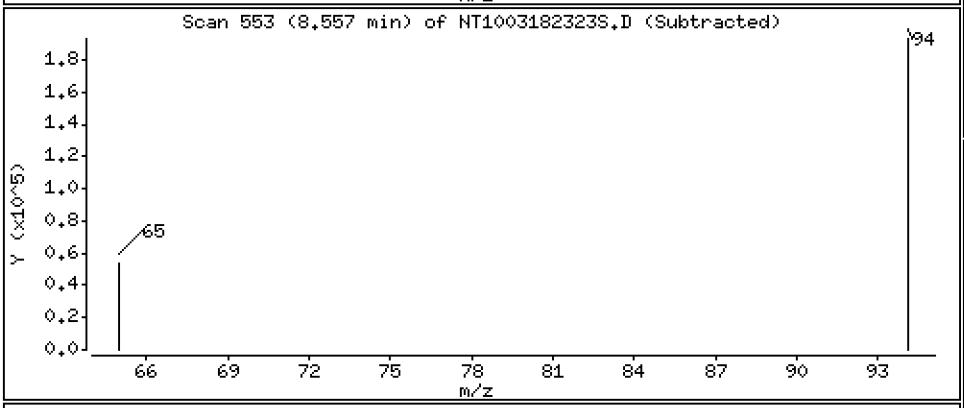
Column diameter: 0.25

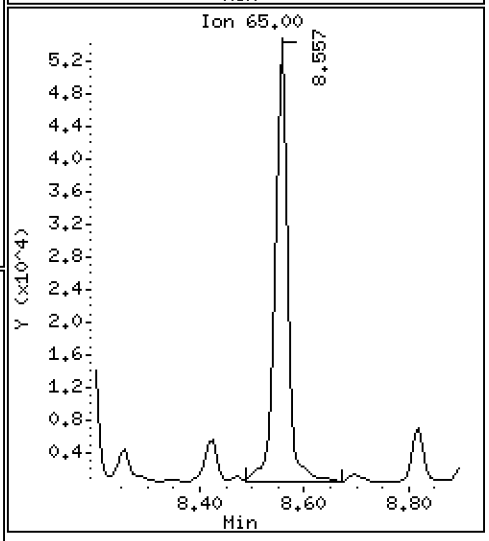
3 Phenol

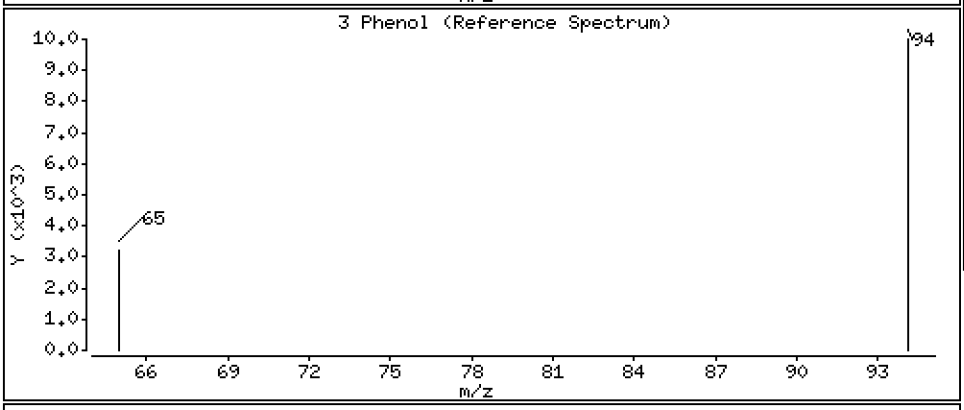
Concentration: 2.802 ug/L

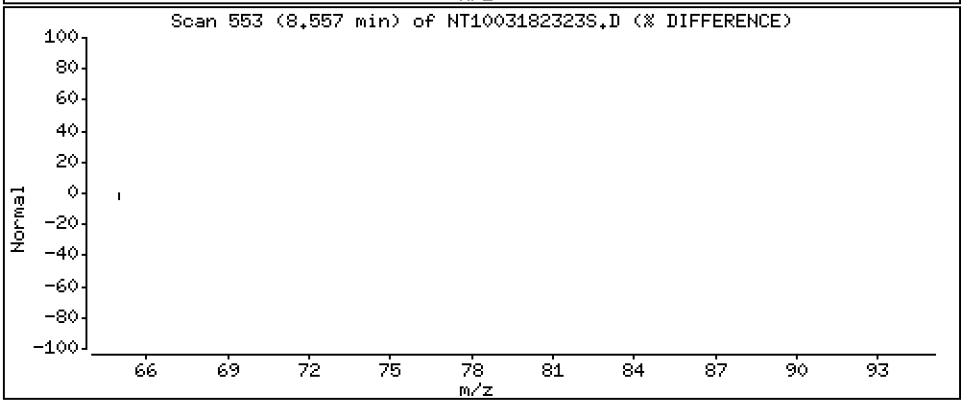












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

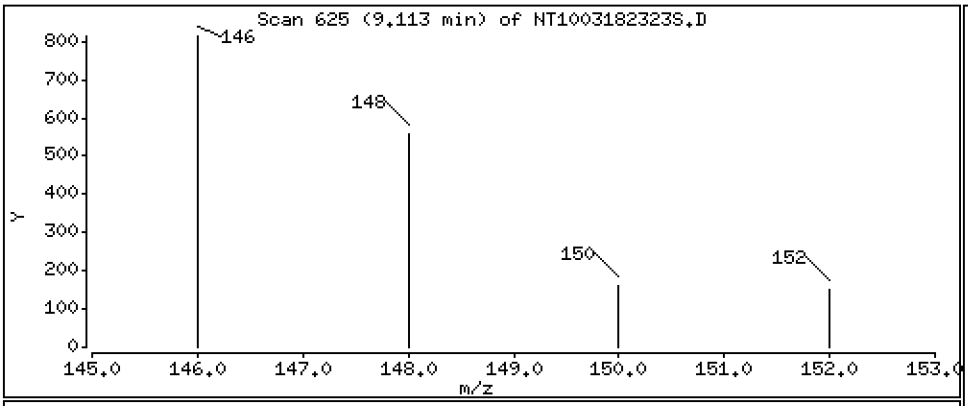
Operator: JGR

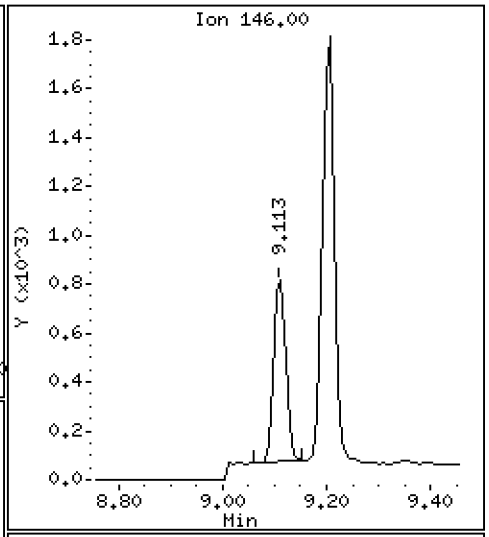
Column phase: ZB-5msi

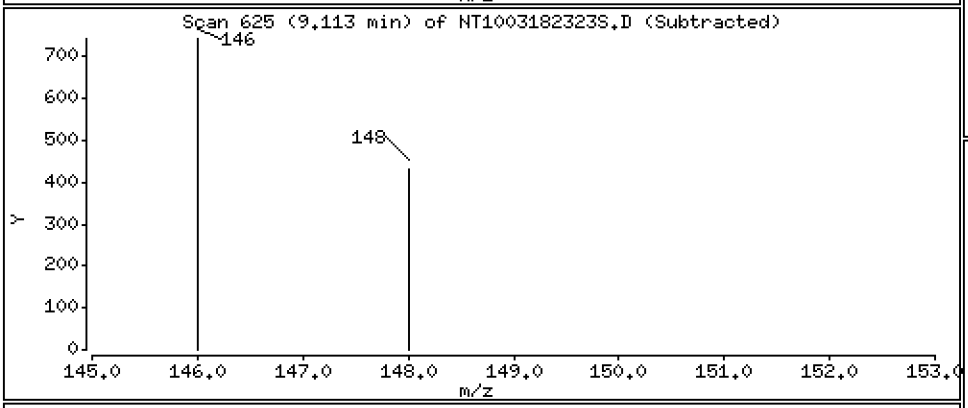
Column diameter: 0.25

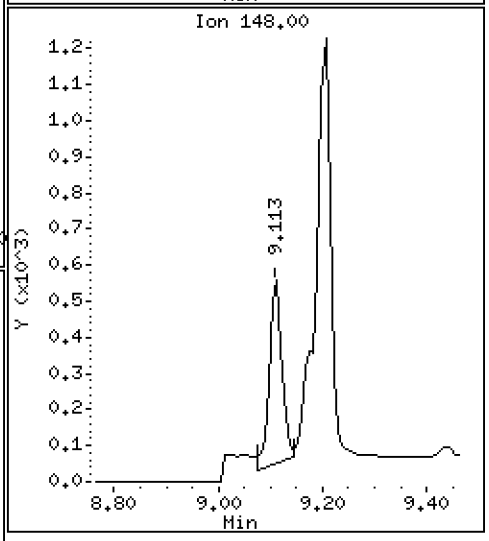
7 1,3-Dichlorobenzene

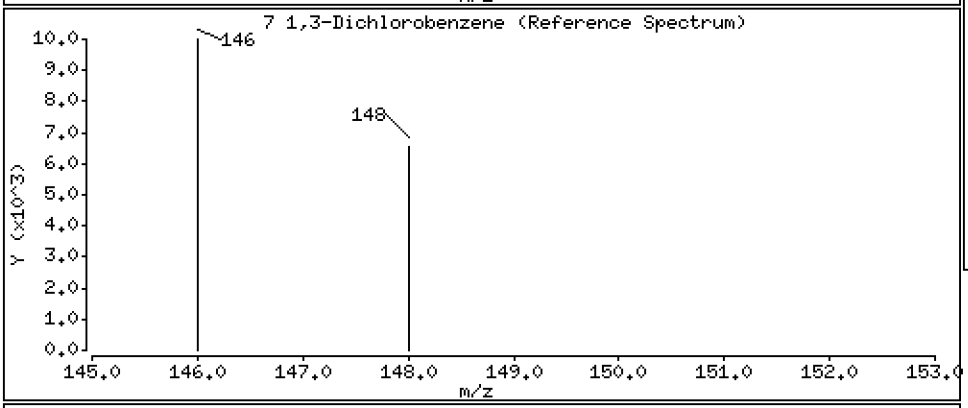
Concentration: 0.01184 ug/L

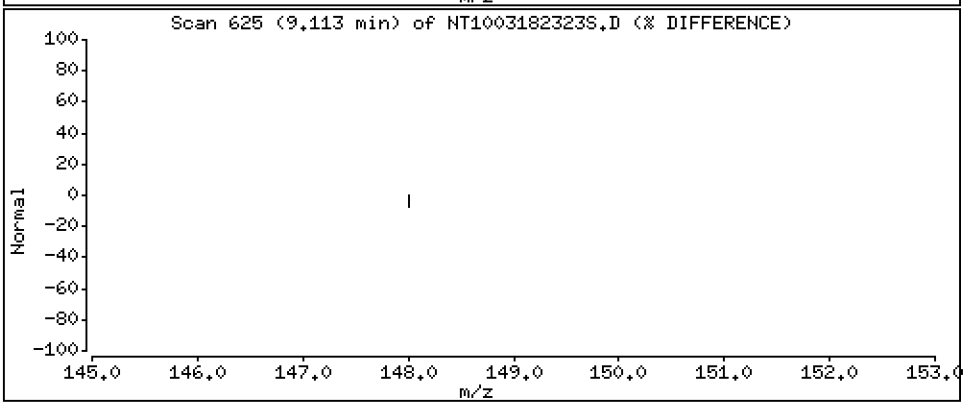












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

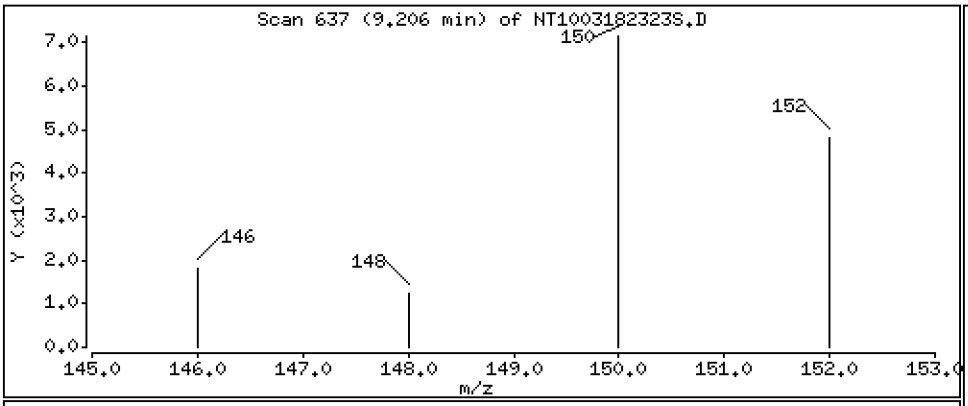
Operator: JGR

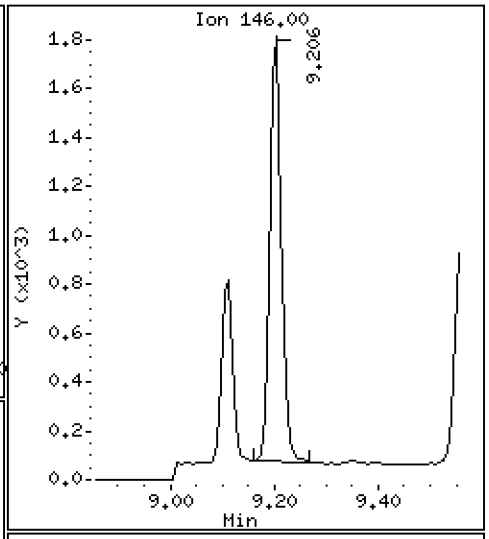
Column phase: ZB-5msi

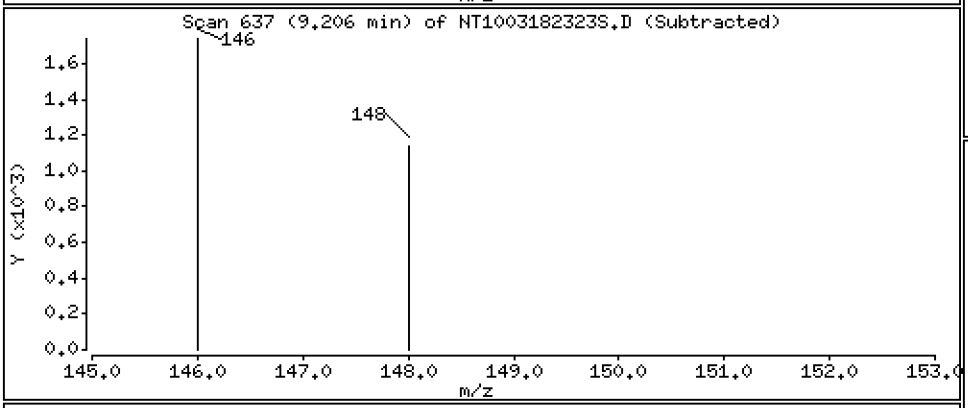
Column diameter: 0.25

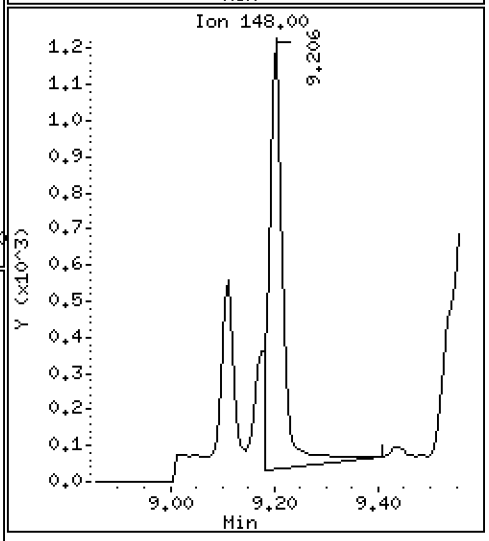
9 1,4-Dichlorobenzene

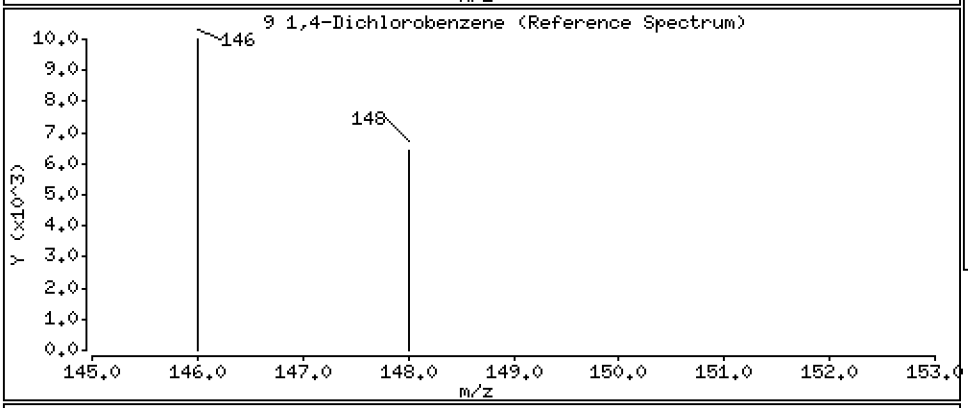
Concentration: 0.02851 ug/L

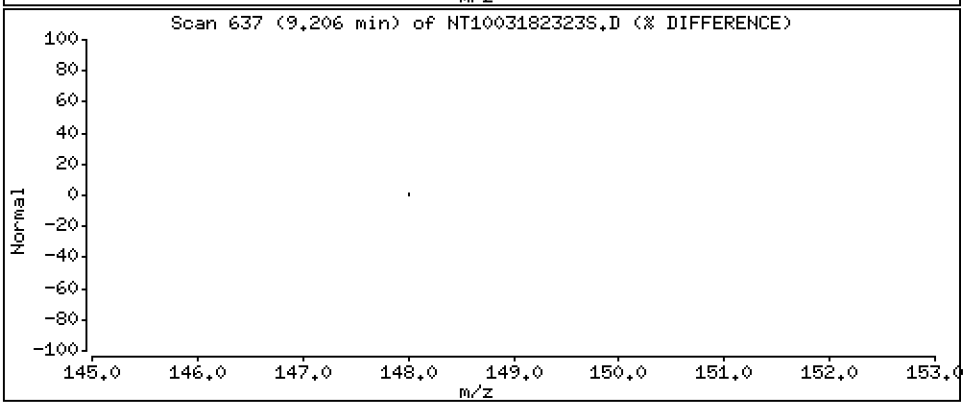












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

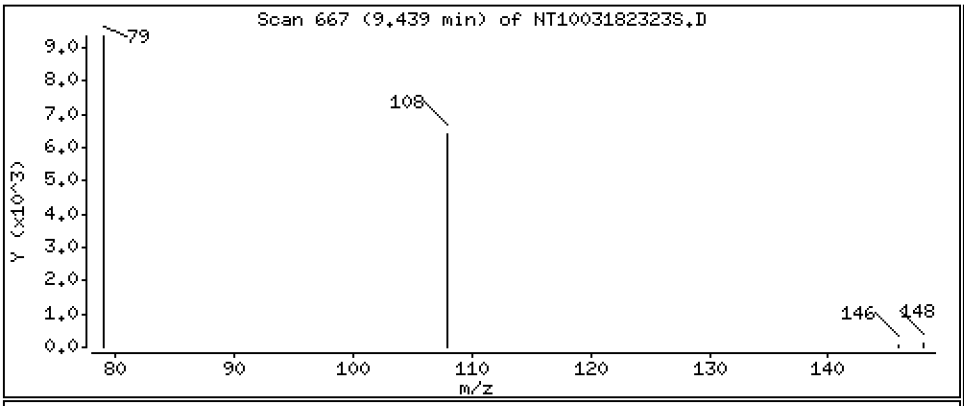
Operator: JGR

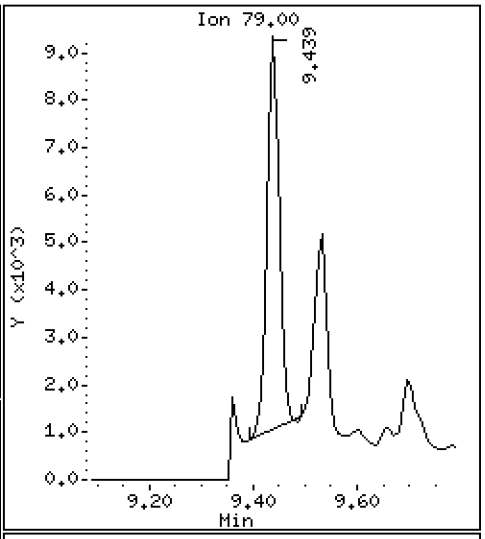
Column phase: ZB-5msi

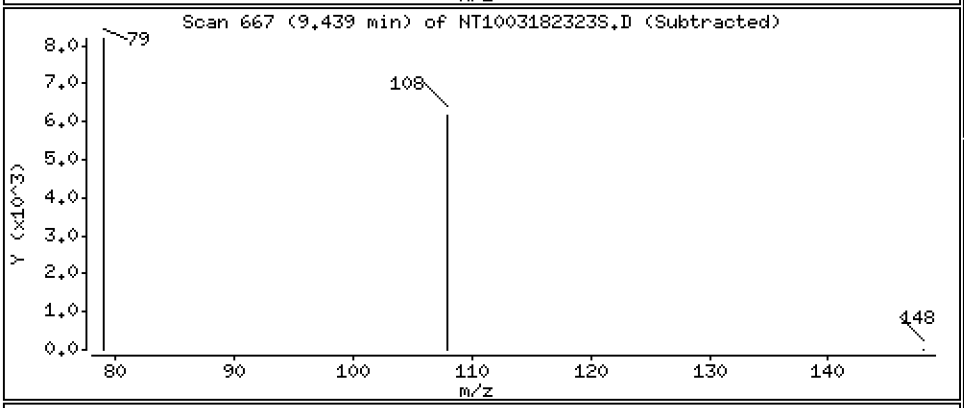
Column diameter: 0.25

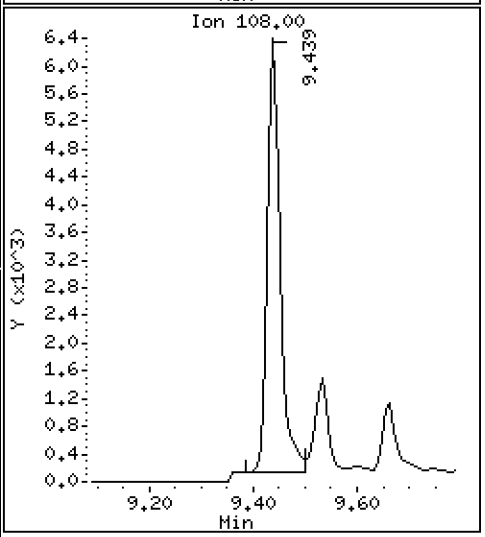
11 Benzyl alcohol

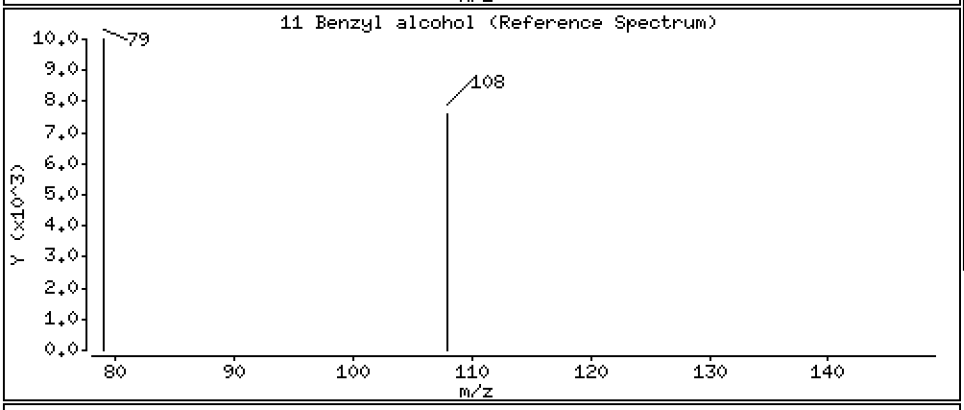
Concentration: 0.2115 ug/L

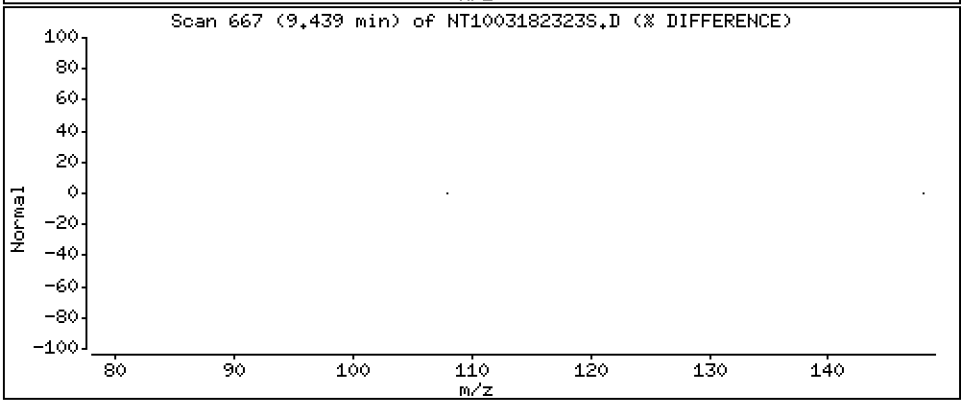












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

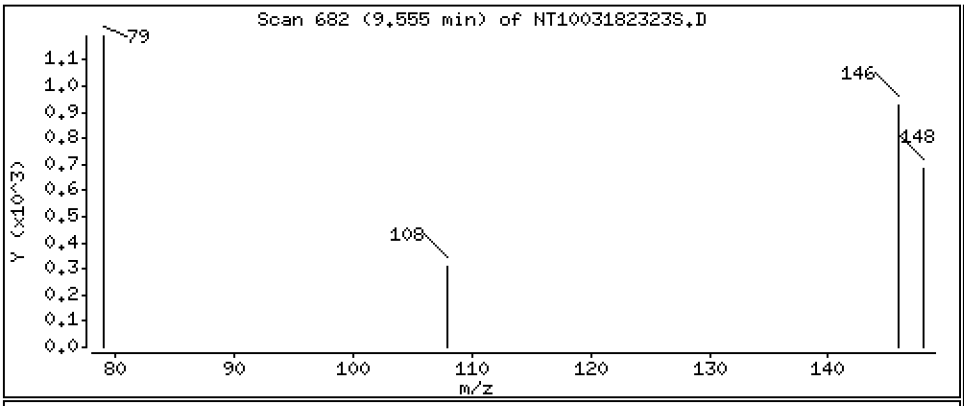
Operator: JGR

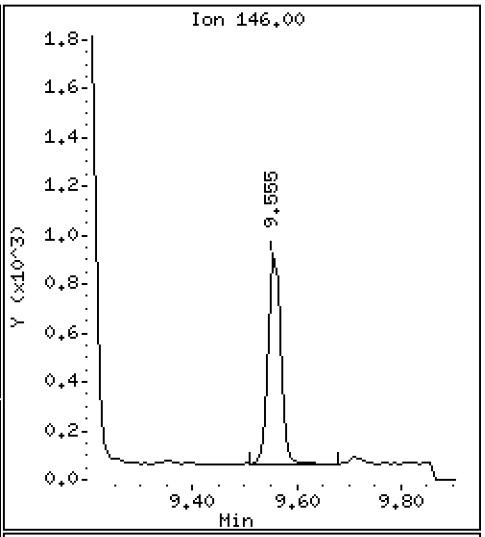
Column phase: ZB-5msi

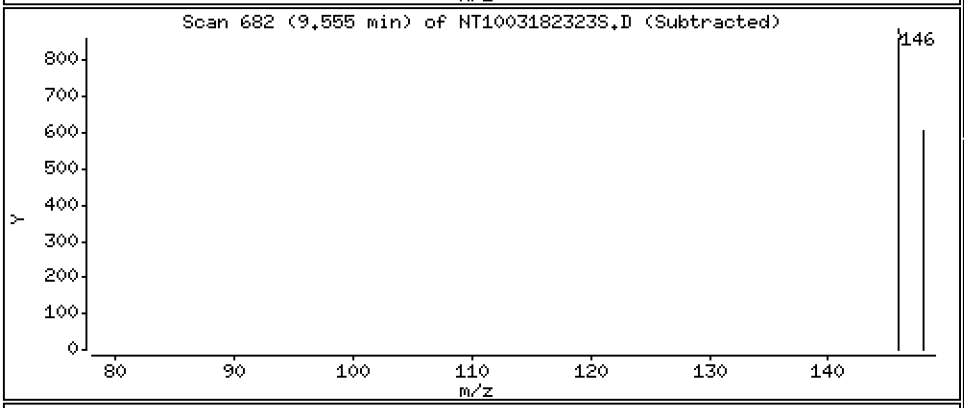
Column diameter: 0.25

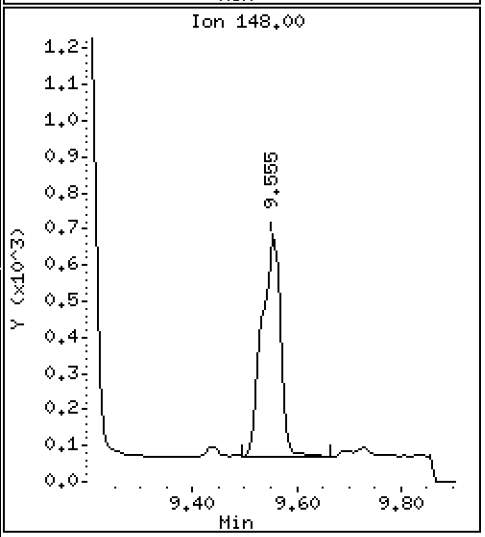
12 1,2-Dichlorobenzene

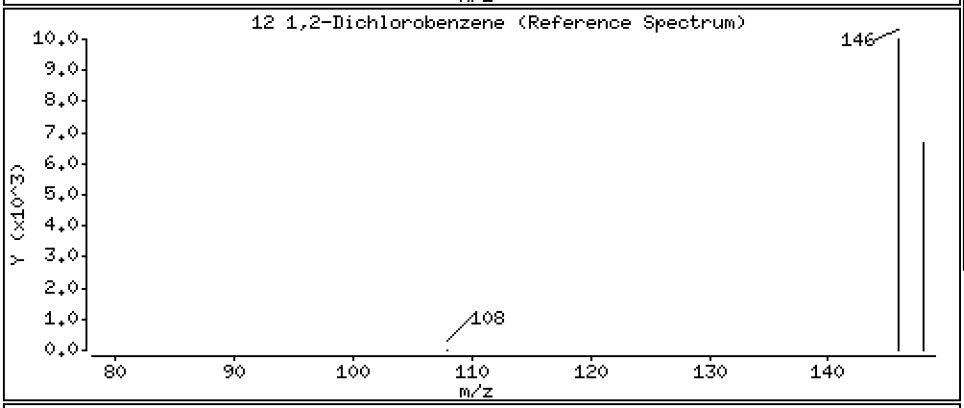
Concentration: 0.01495 ug/L

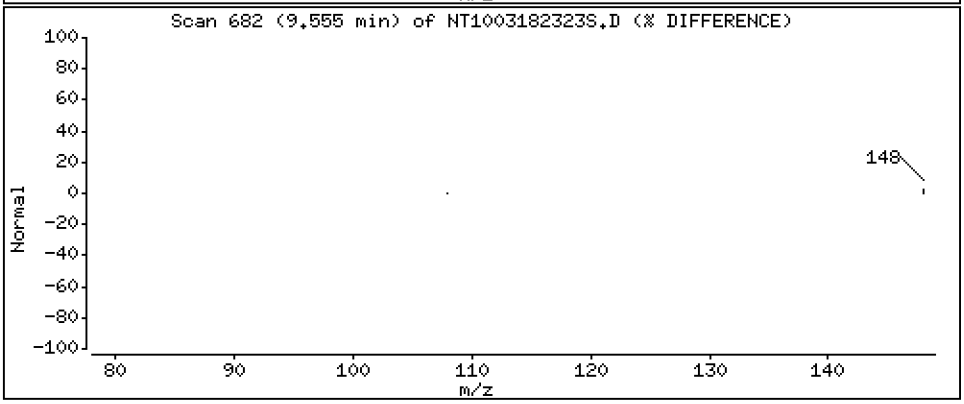












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

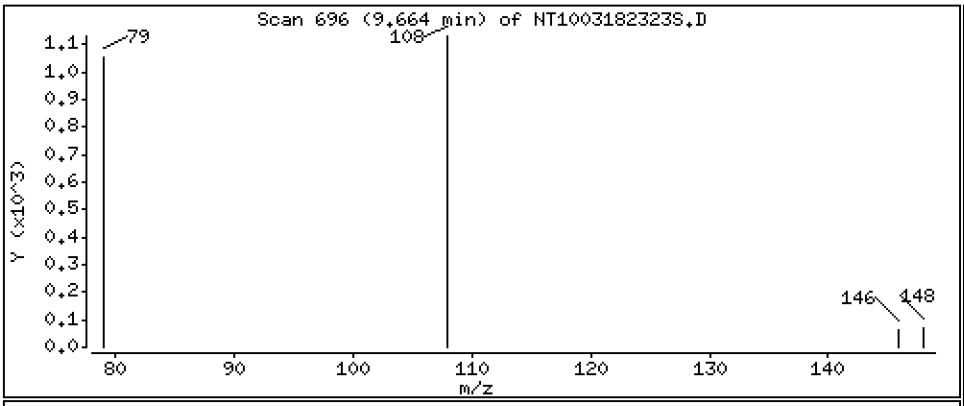
Operator: JGR

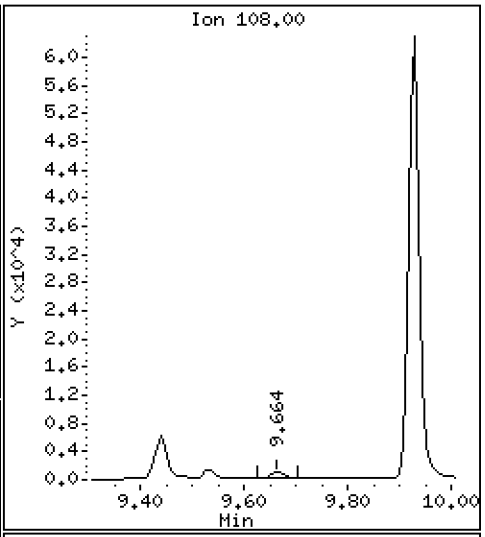
Column phase: ZB-5msi

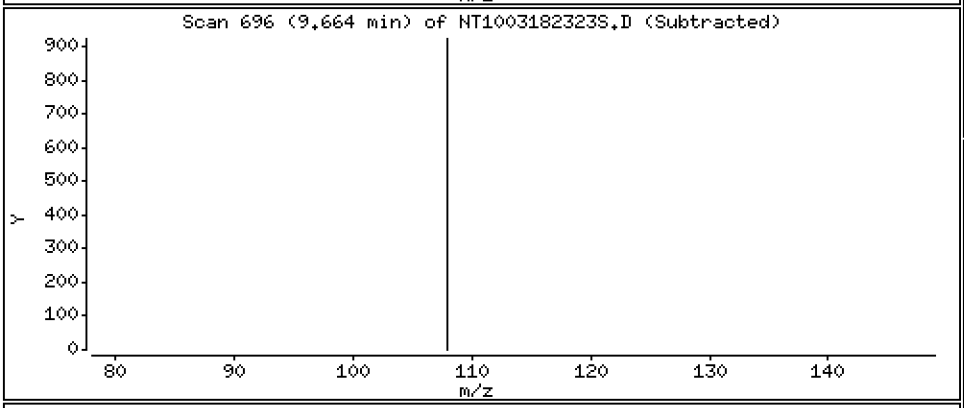
Column diameter: 0.25

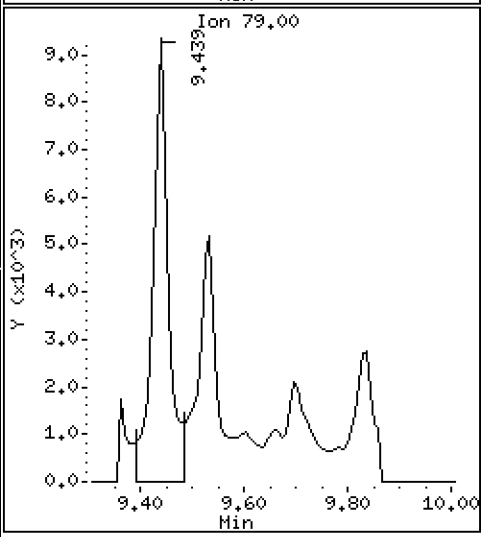
13 2-Methylphenol

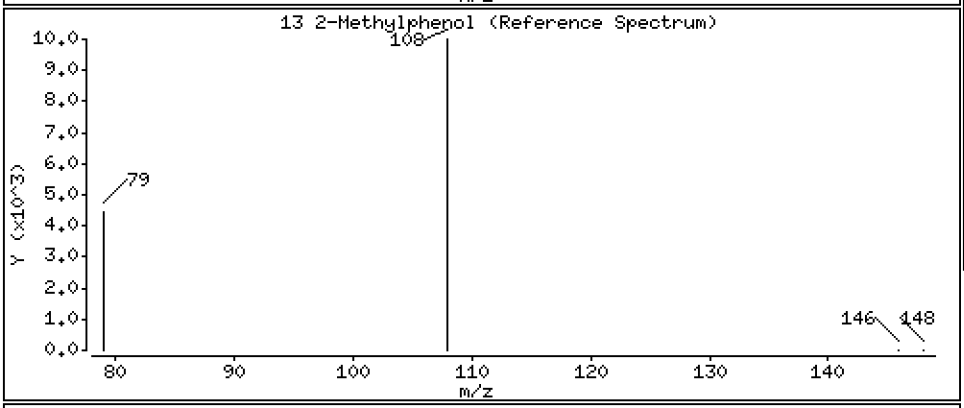
Concentration: 0.02014 ug/L

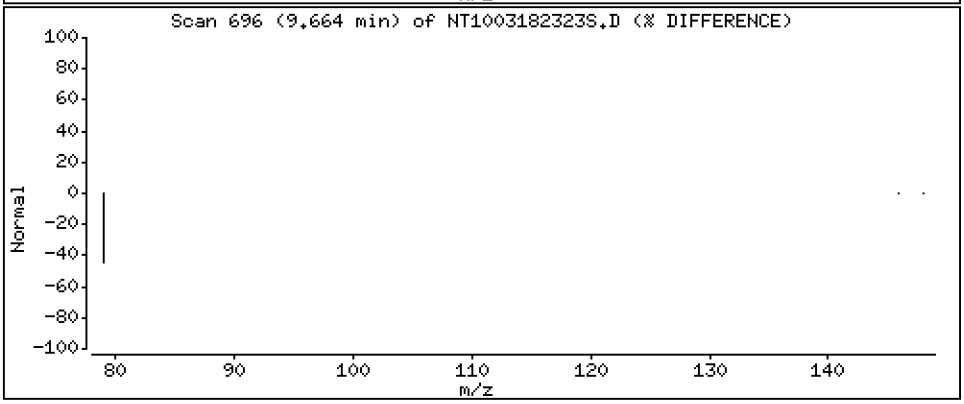












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

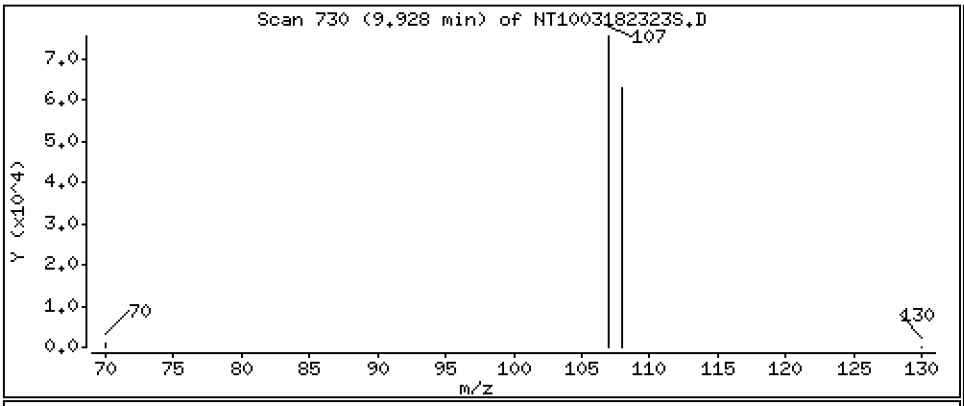
Operator: JGR

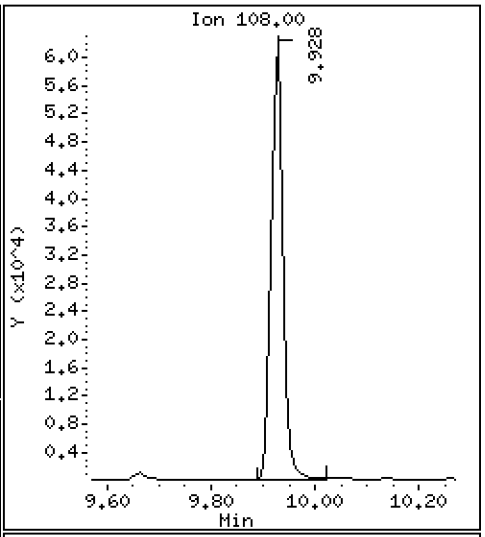
Column phase: ZB-5msi

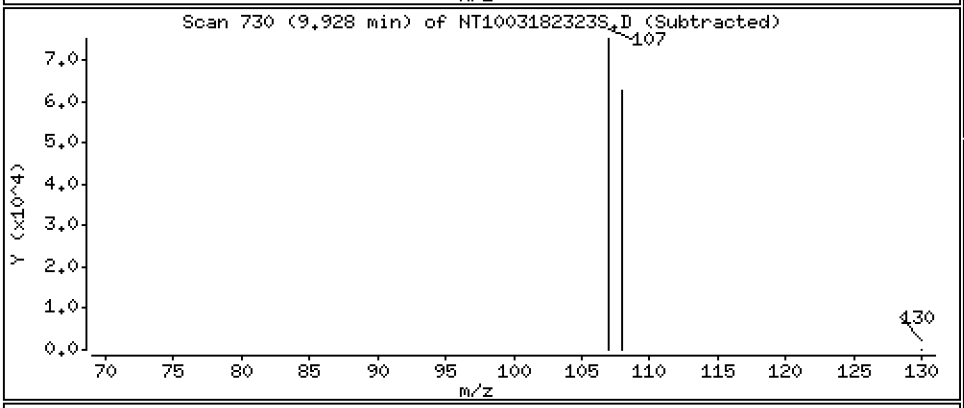
Column diameter: 0.25

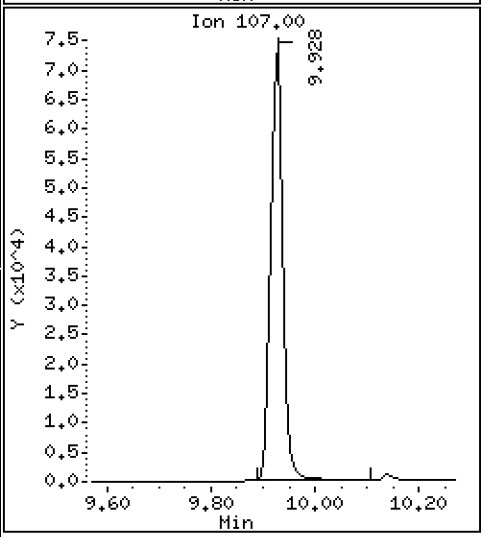
15 4-Methylphenol

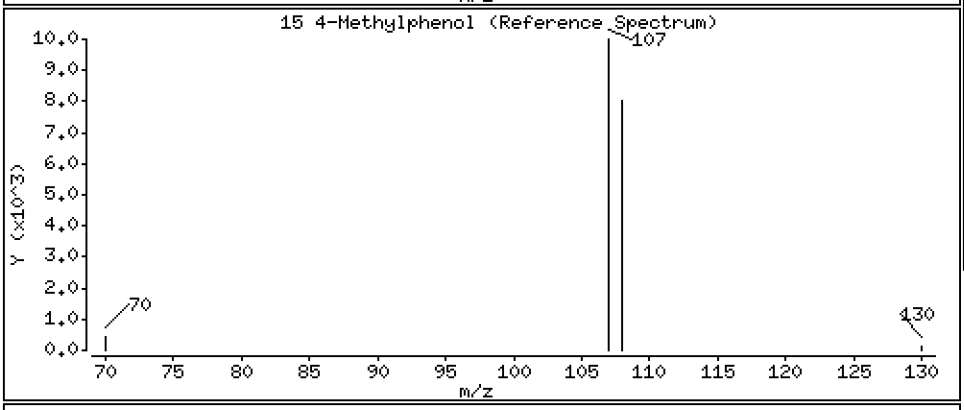
Concentration: 1.272 ug/L

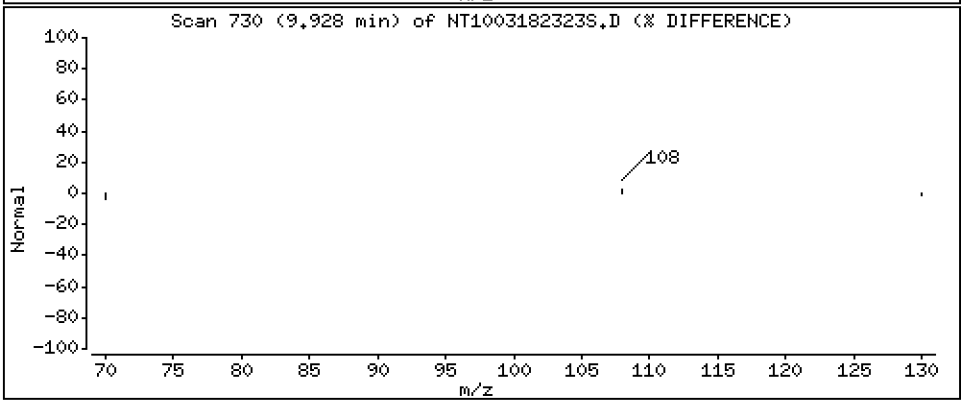












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823235.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

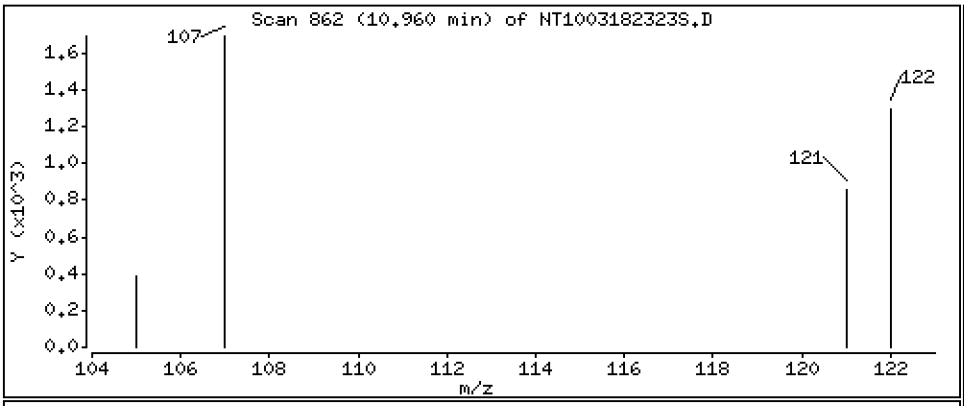
Operator: JGR

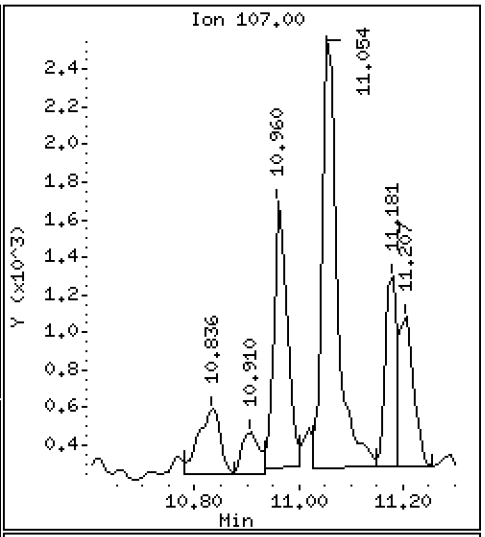
Column phase: ZB-5msi

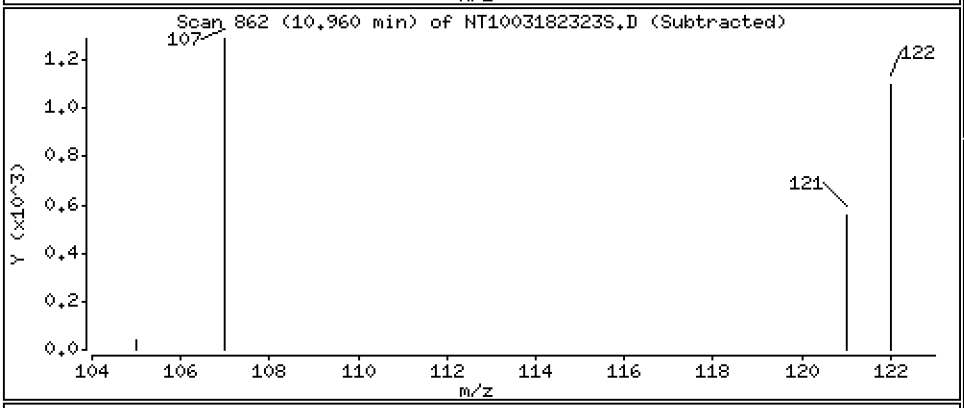
Column diameter: 0.25

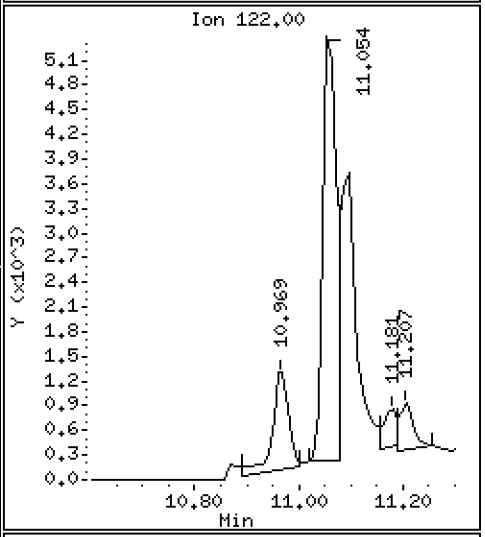
22 2,4-Dimethylphenol

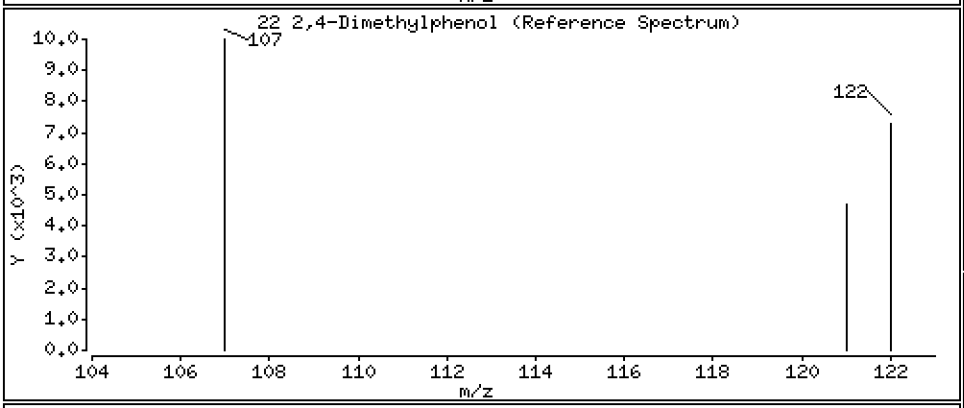
Concentration: 0.03276 ug/L

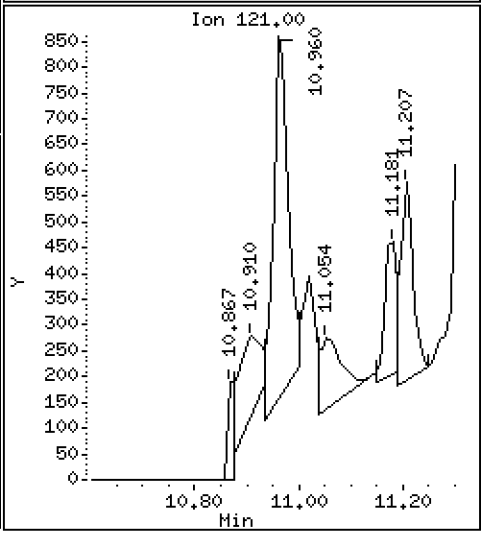


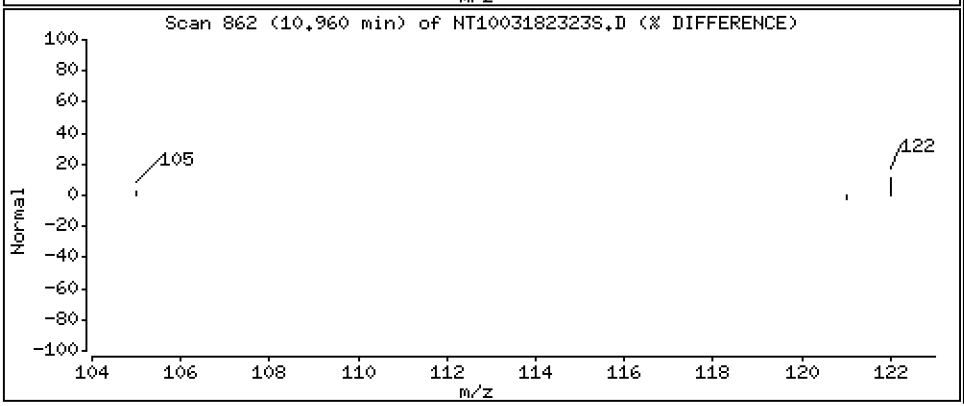












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823235.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

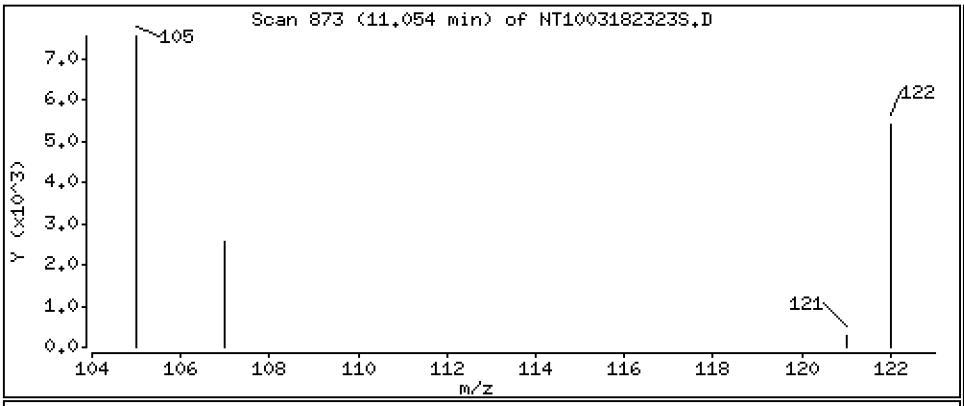
Operator: JGR

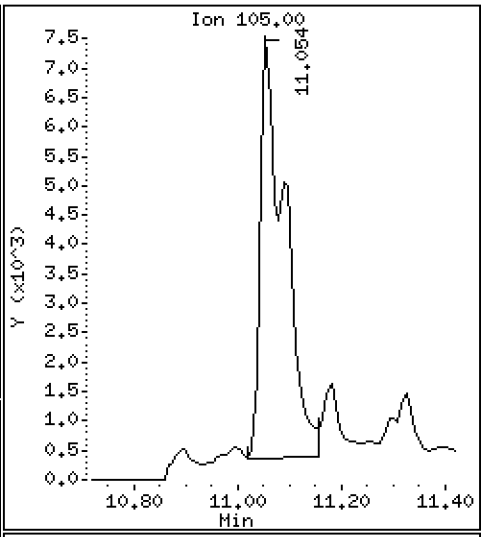
Column phase: ZB-5msi

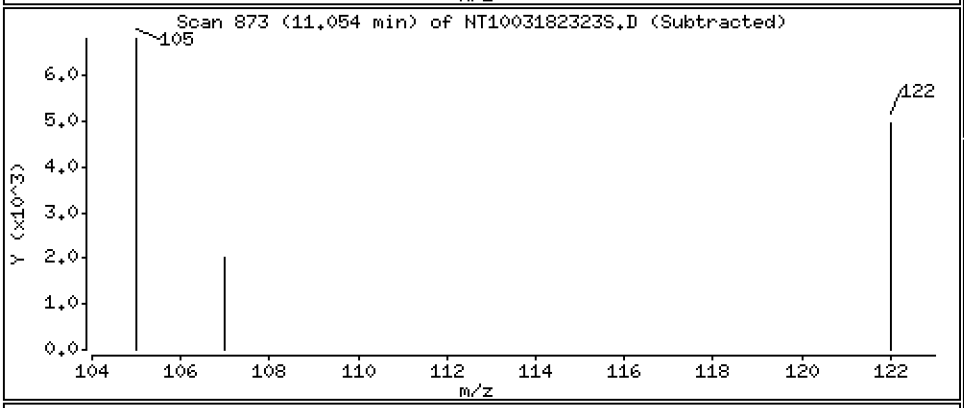
Column diameter: 0.25

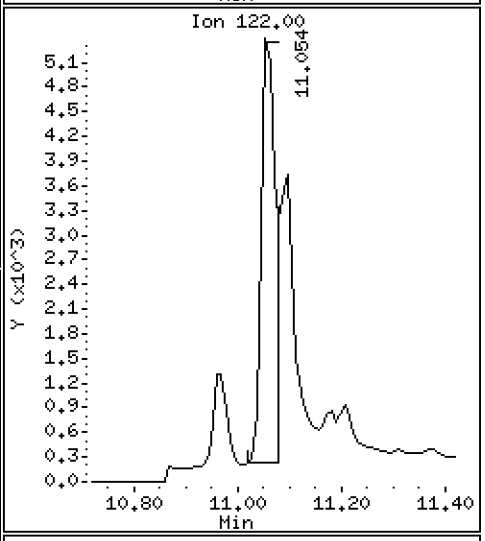
24 Benzoic acid

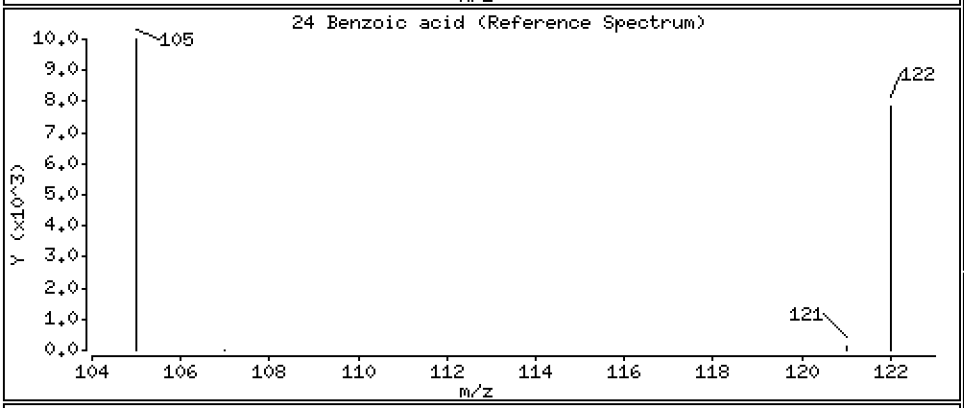
Concentration: 0.5474 ug/L

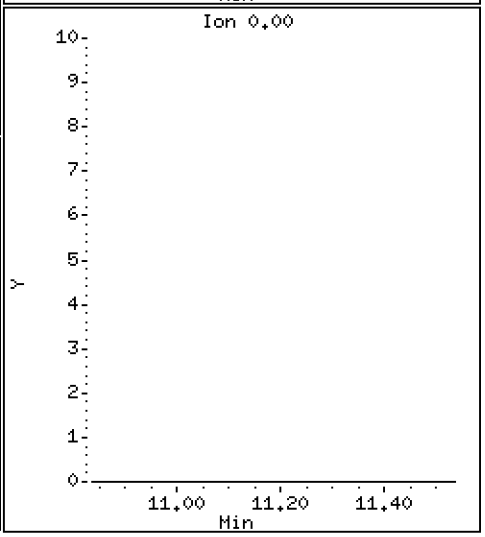


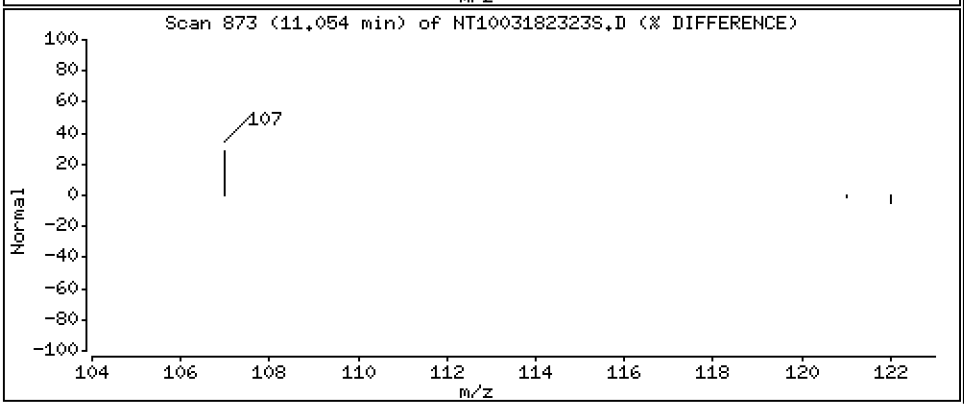












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

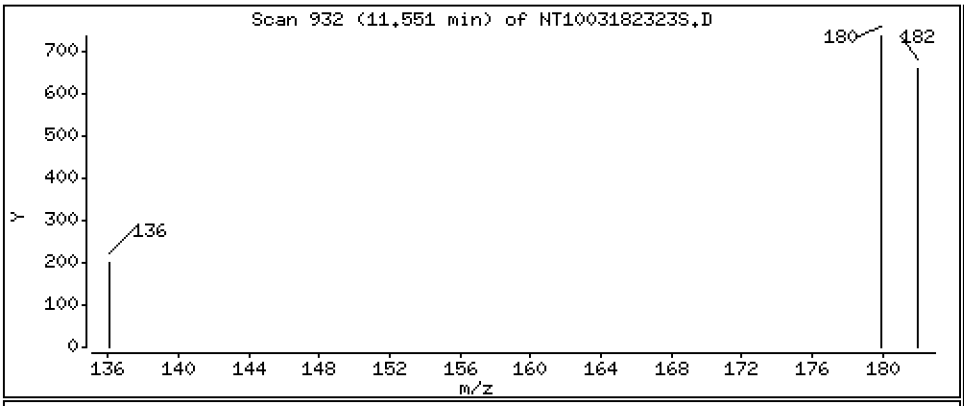
Operator: JGR

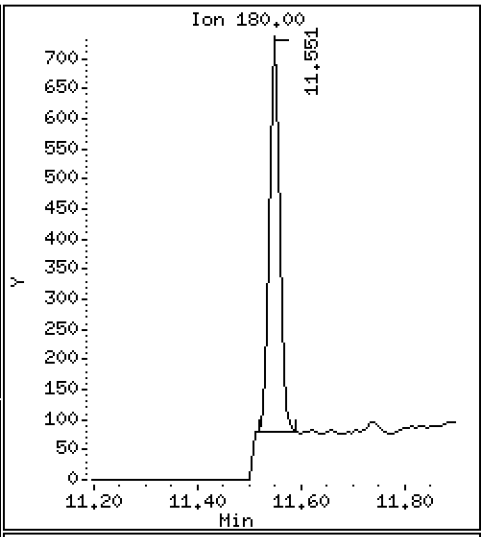
Column phase: ZB-5msi

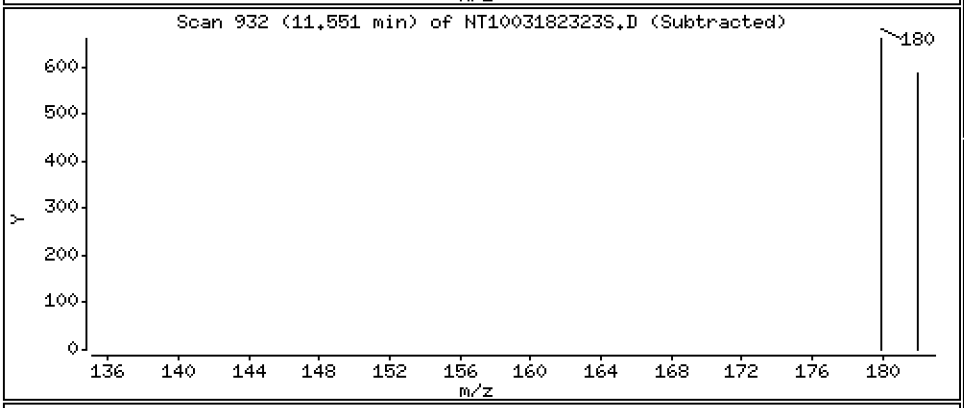
Column diameter: 0.25

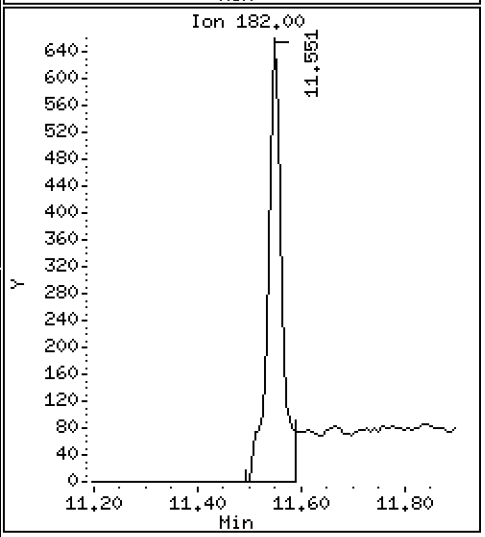
26 1,2,4-Trichlorobenzene

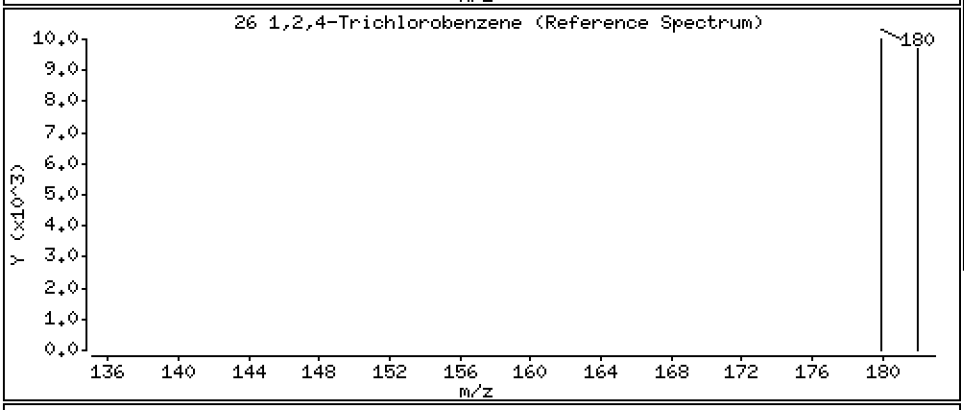
Concentration: 0.01202 ug/L

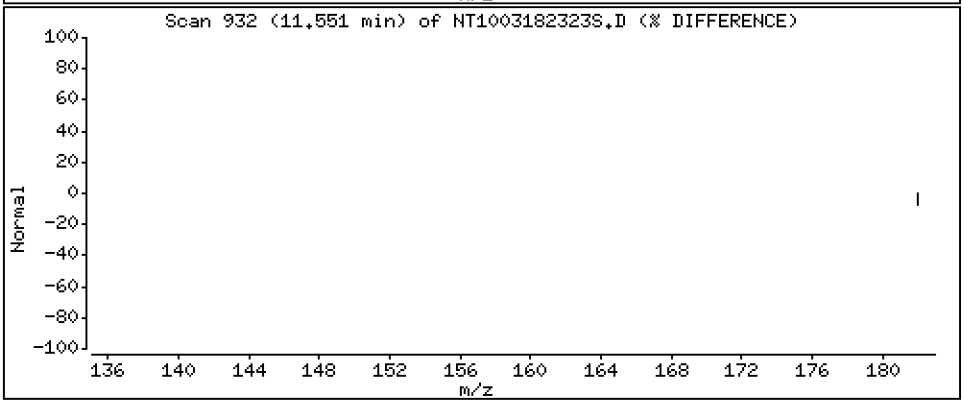












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

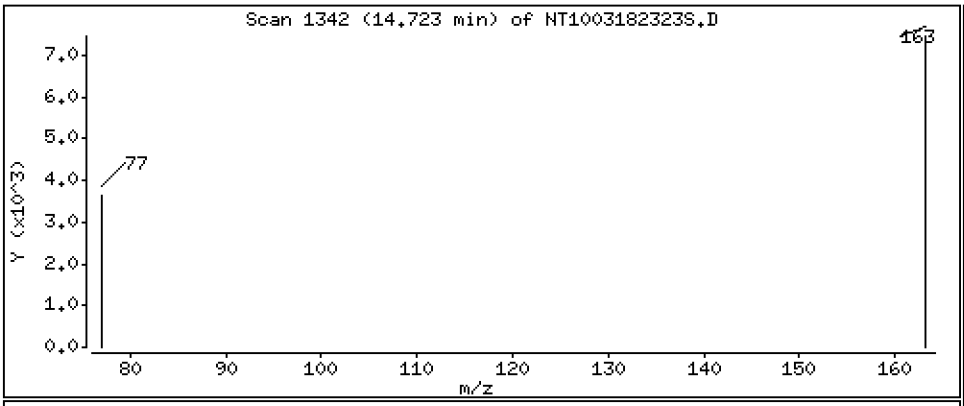
Operator: JGR

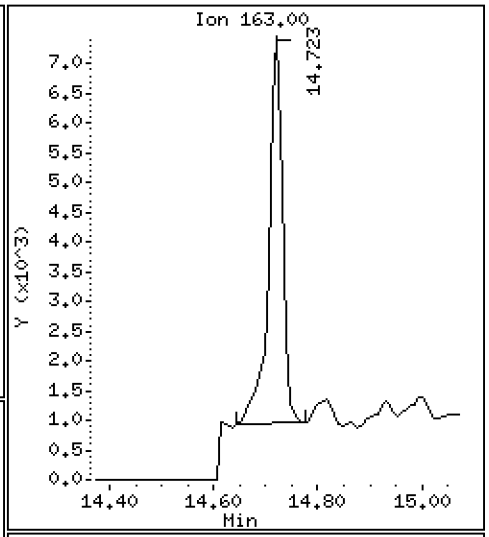
Column phase: ZB-5msi

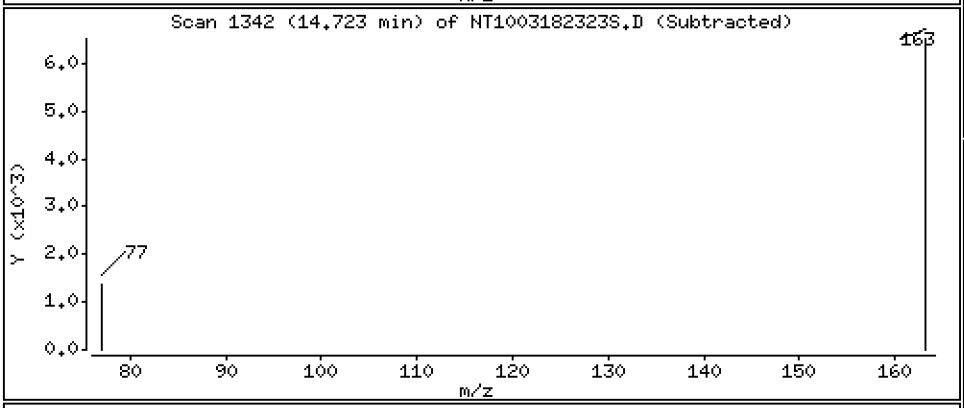
Column diameter: 0.25

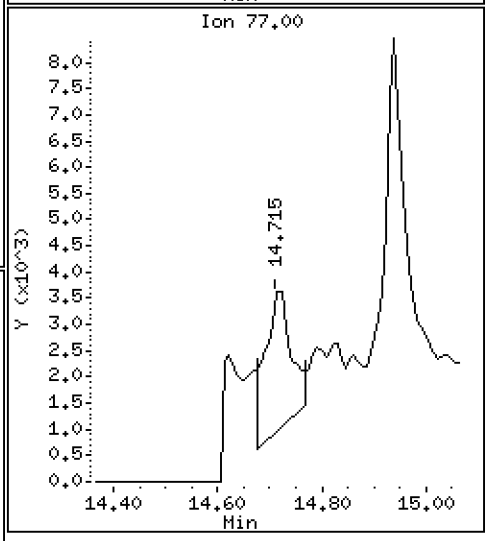
39 Dimethylphthalate

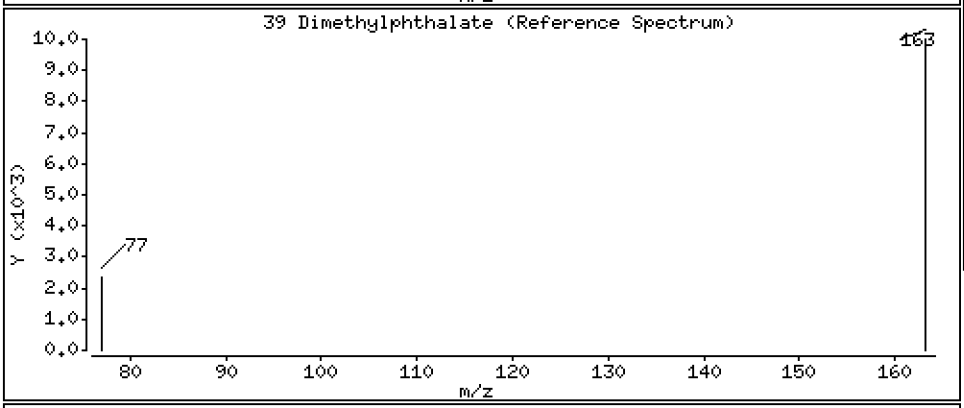
Concentration: 0.08439 ug/L

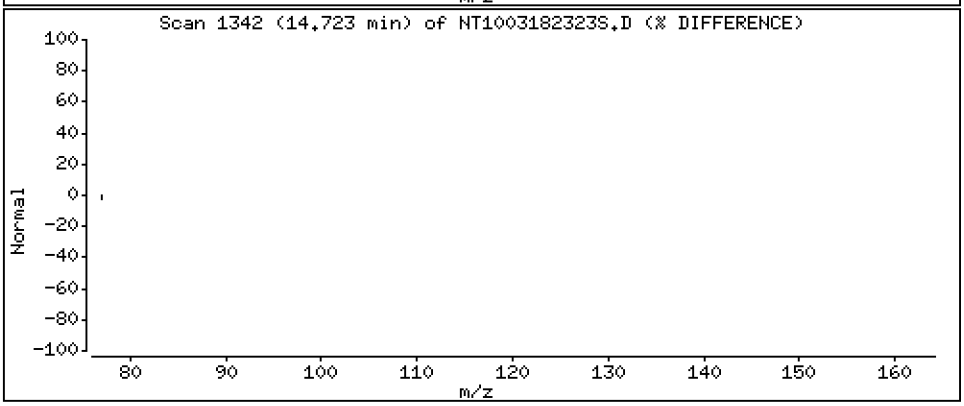












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

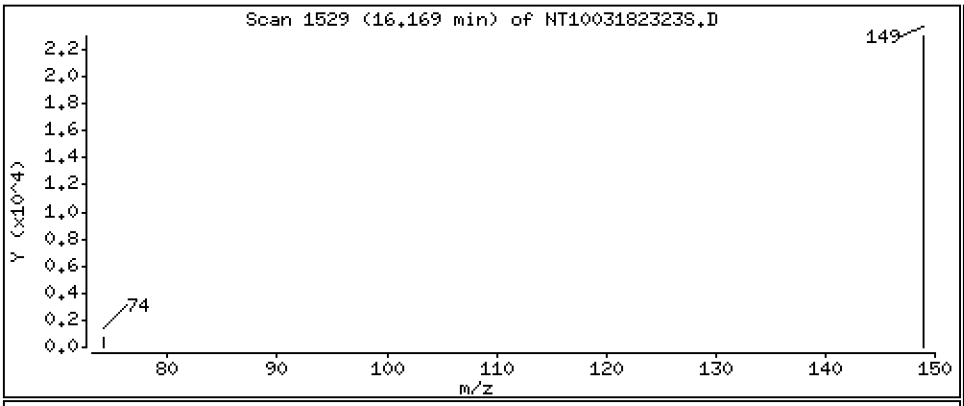
Operator: JGR

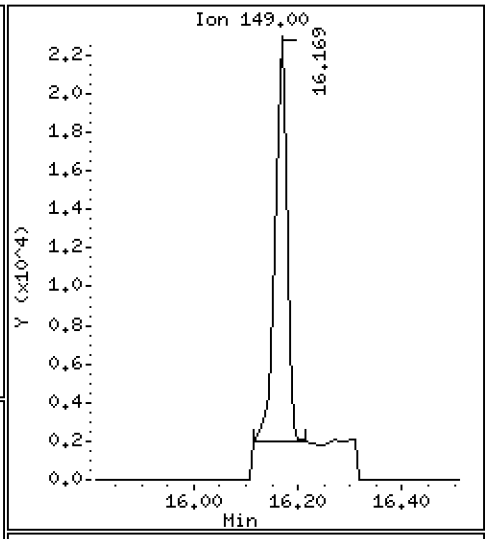
Column phase: ZB-5msi

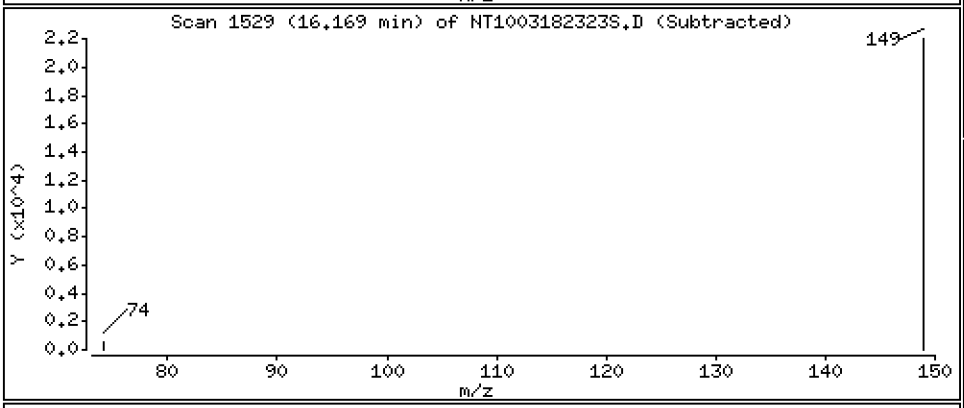
Column diameter: 0.25

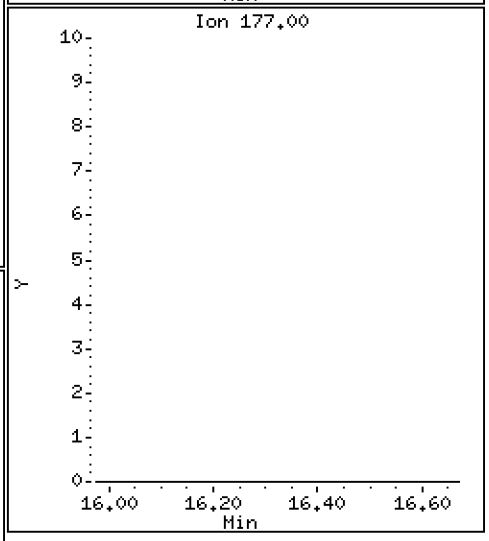
50 Diethylphthalate

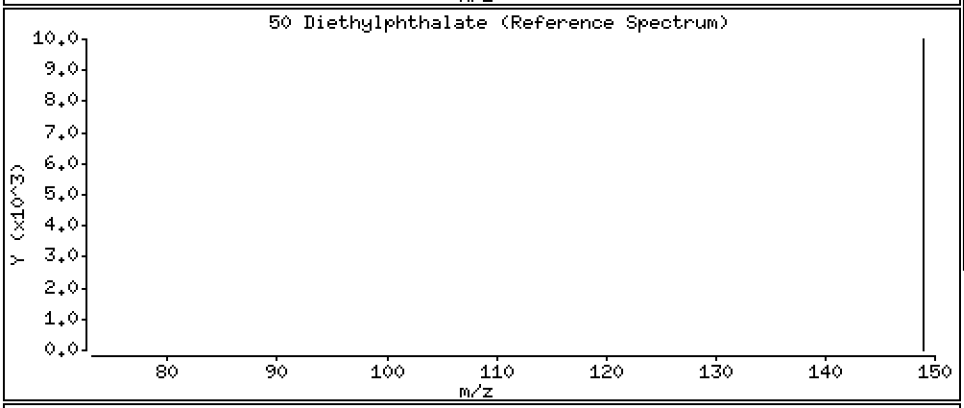
Concentration: 0.2289 ug/L

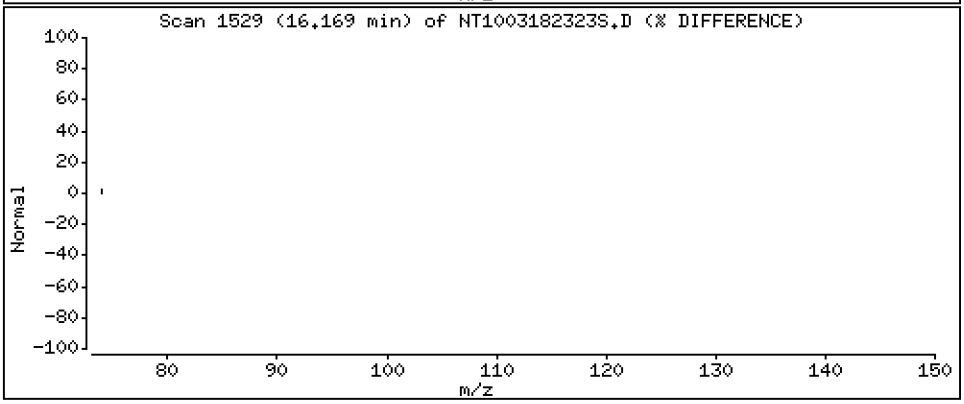












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

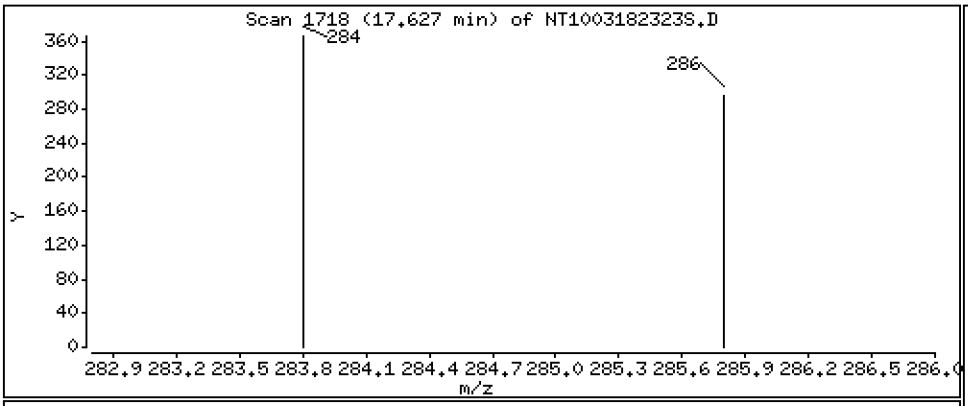
Operator: JGR

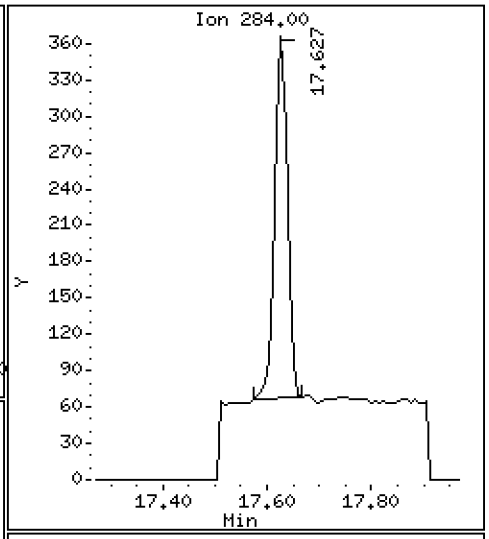
Column phase: ZB-5msi

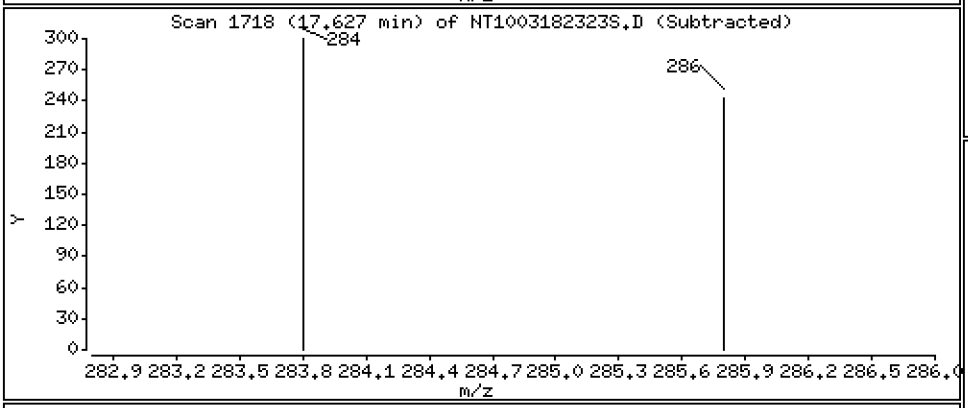
Column diameter: 0.25

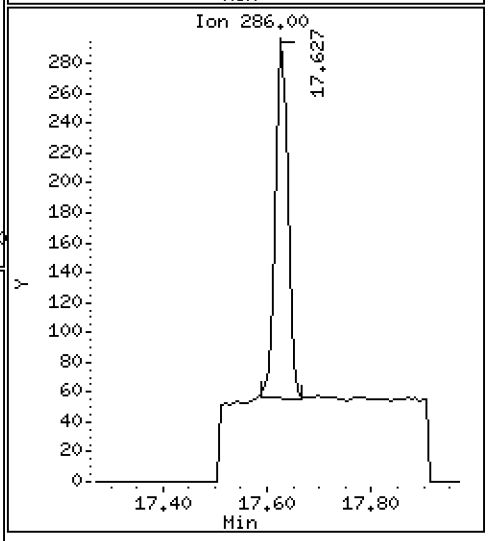
57 Hexachlorobenzene

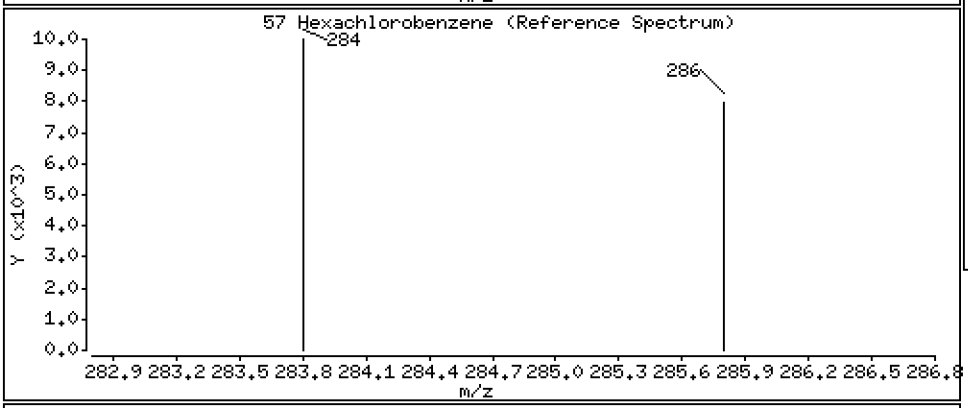
Concentration: 0.008611 ug/L

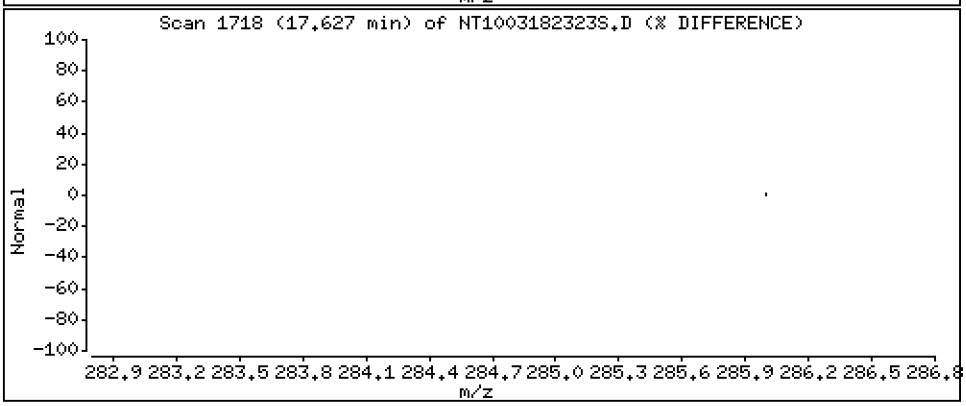












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D

Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

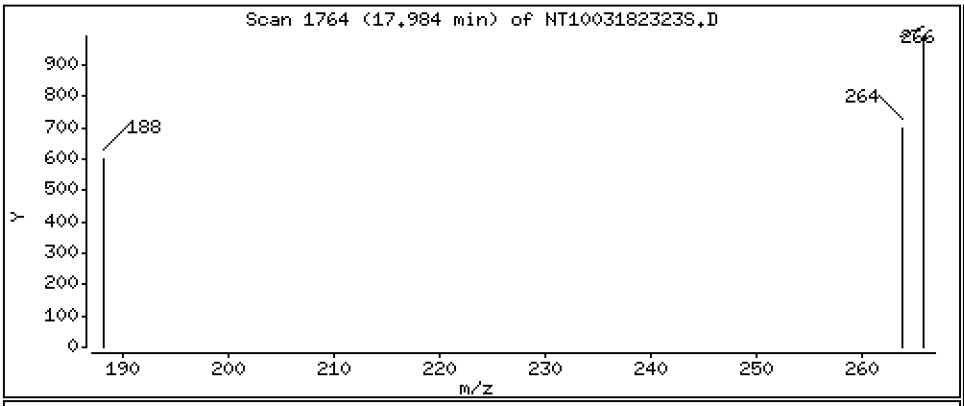
Operator: JGR

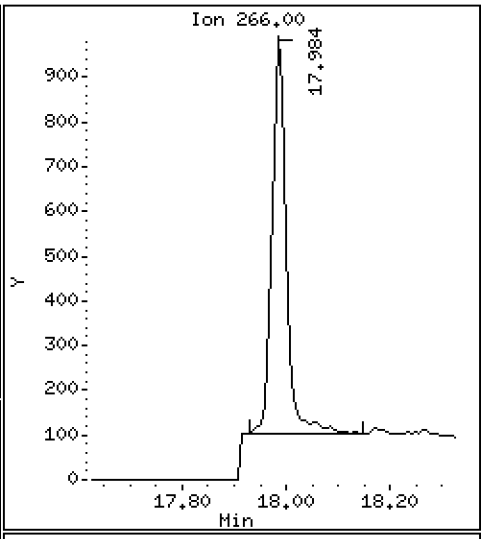
Column phase: ZB-5msi

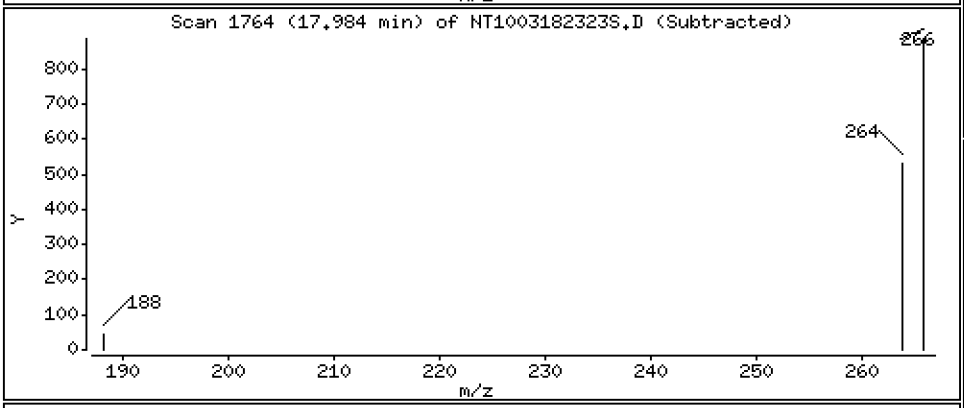
Column diameter: 0.25

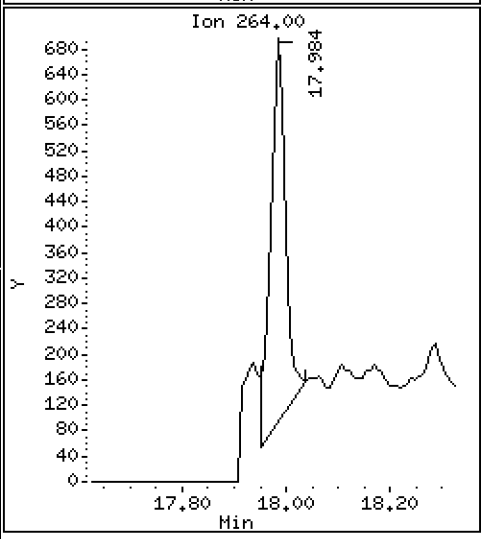
58 Pentachlorophenol

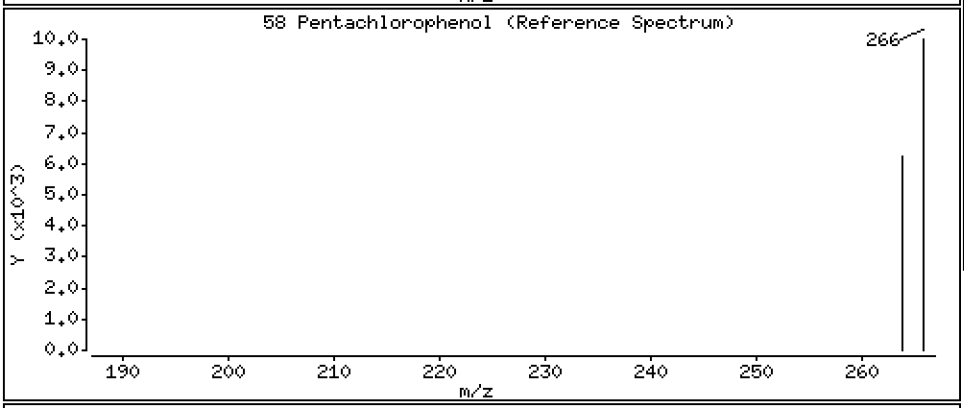
Concentration: 0.05496 ug/L

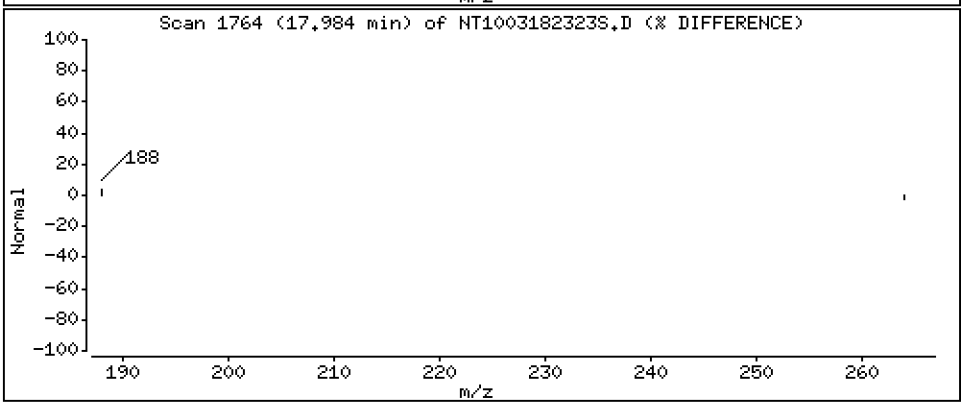












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

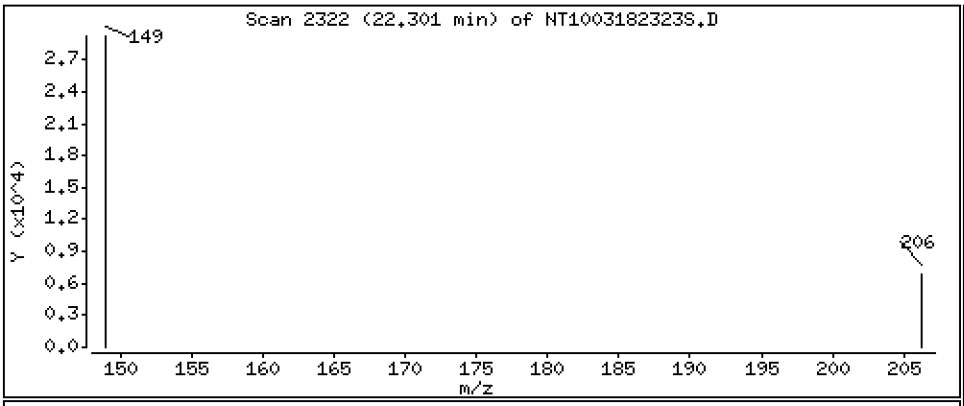
Operator: JGR

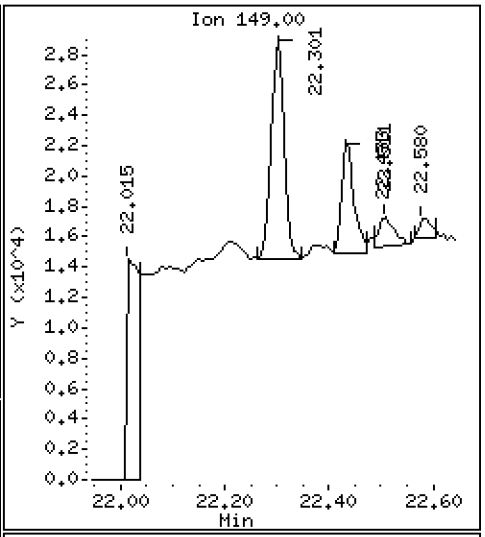
Column phase: ZB-5msi

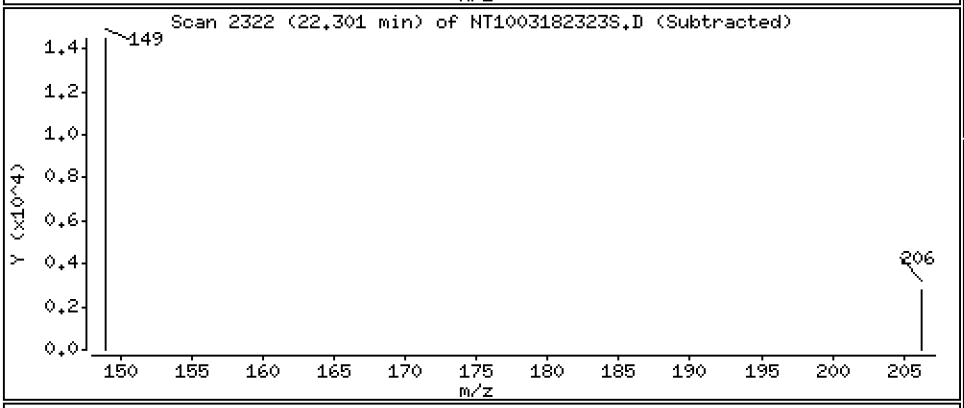
Column diameter: 0.25

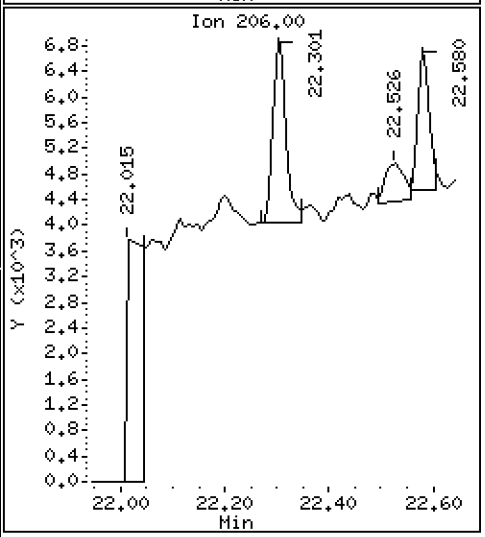
67 Butylbenzylphthalate

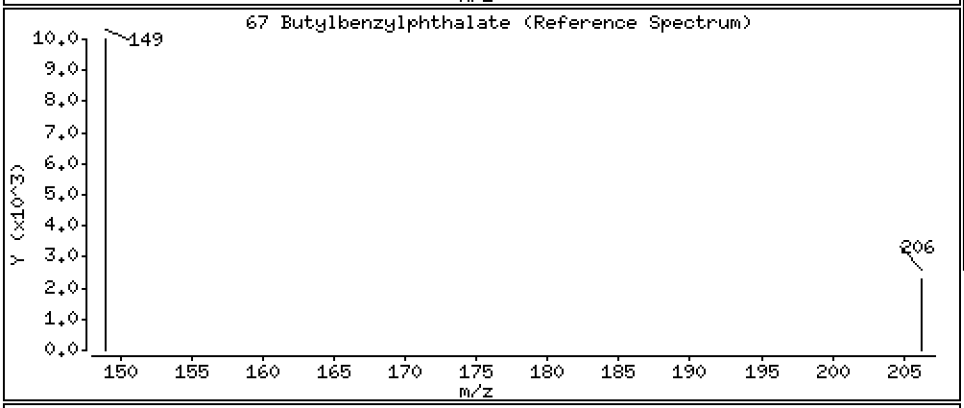
Concentration: 0.2265 ug/L

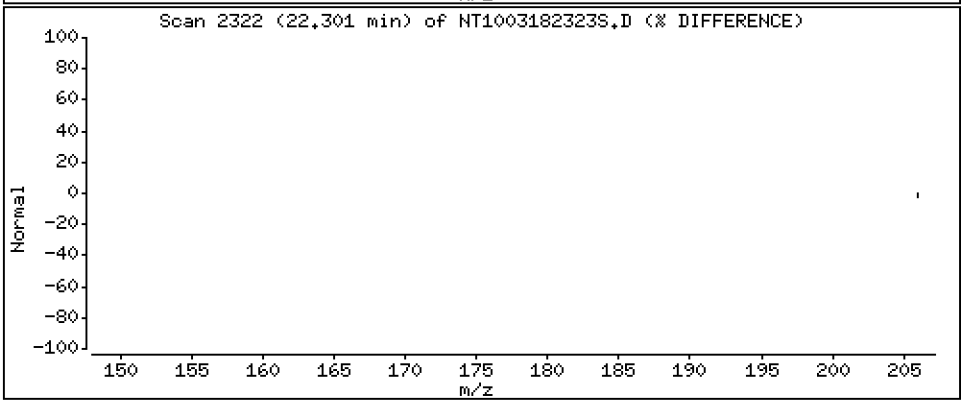












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Date : 19-MAR-2023 07:46

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-08

Volume Injected (uL): 1.0

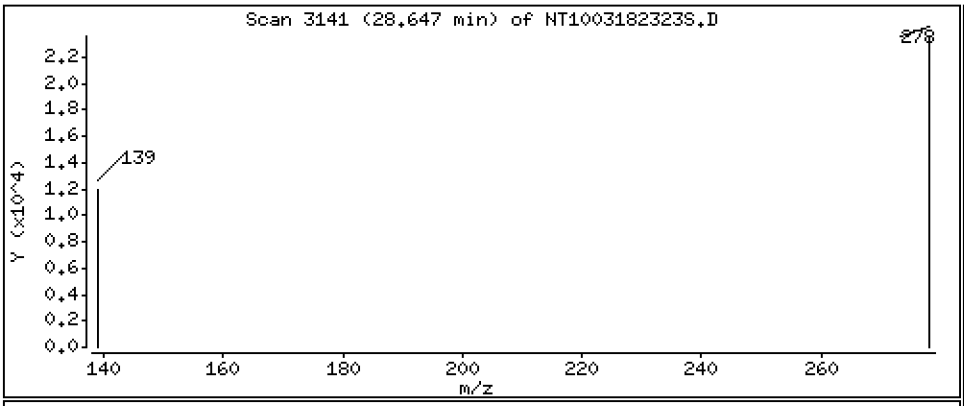
Operator: JGR

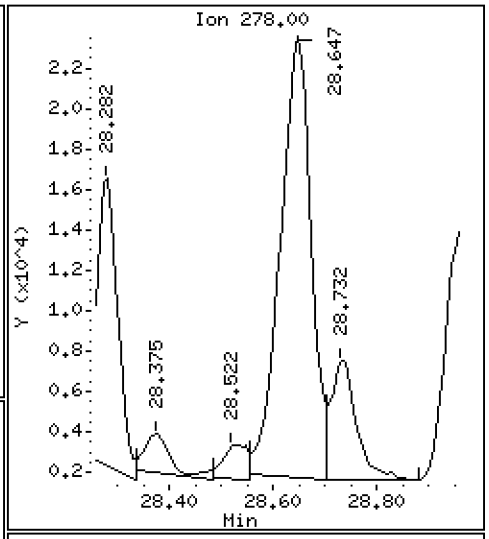
Column phase: ZB-5msi

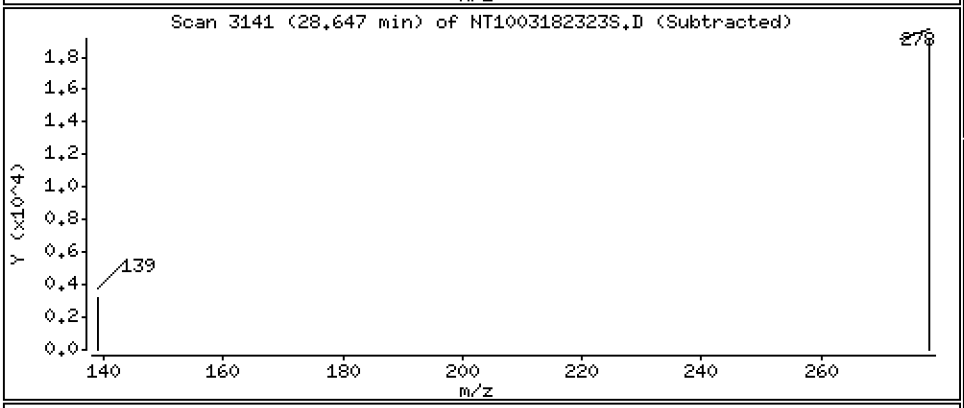
Column diameter: 0.25

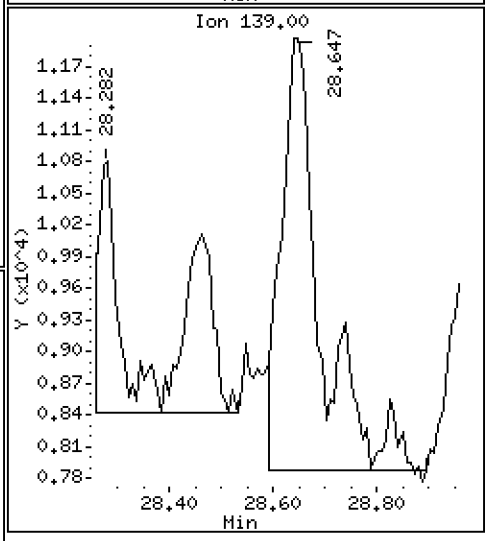
79 Dibenzo(a,h)anthracene

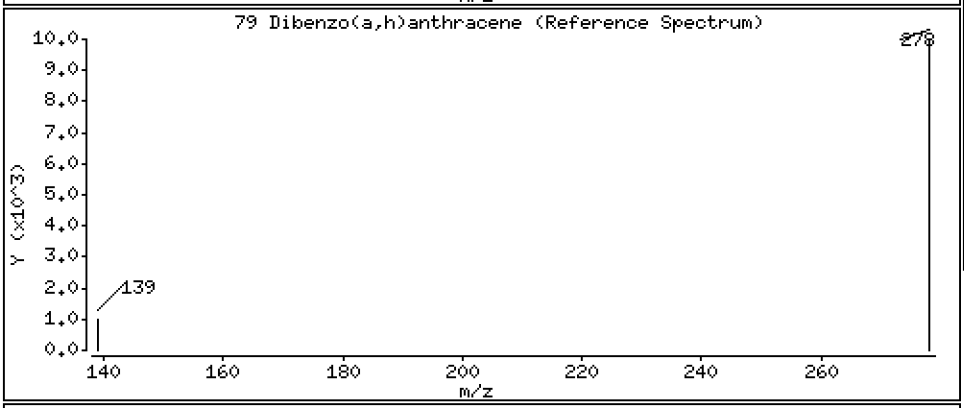
Concentration: 0.3158 ug/L

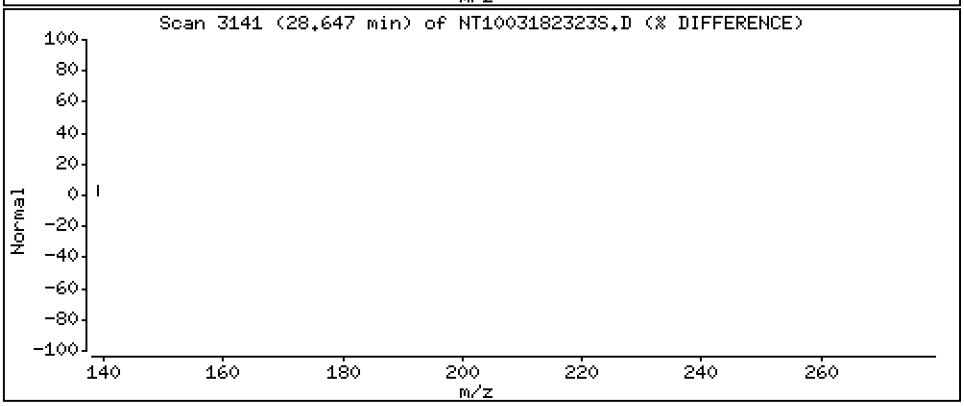












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182323S.D
Lab Smp Id: 23A0467-08
Inj Date : 19-MAR-2023 07:46 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-08
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.980	6.964	(0.761)	417695	5.56855	5.569(R)
3	Phenol	94	8.556	8.548	(0.933)	288342	2.80193	2.802
7	1,3-Dichlorobenzene	146	9.113	9.105	(0.993)	1140	0.01184	0.01184(M)
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	247356	4.00000	
9	1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	2650	0.02851	0.02851(M)
11	Benzyl alcohol	79	9.438	9.438	(1.029)	12618	0.21150	0.2115(M)
12	1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	1367	0.01495	0.01495
13	2-Methylphenol	108	9.664	9.656	(1.053)	1436	0.02014	0.02014(M)
15	4-Methylphenol	108	9.928	9.920	(1.082)	94229	1.27172	1.272
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.960	10.951	(0.942)	2539	0.03276	0.03276
24	Benzoic acid	105	11.053	11.070	(0.950)	23236	0.54740	0.5474(M)
26	1,2,4-Trichlorobenzene	180	11.550	11.550	(0.993)	937	0.01202	0.01202(M)
* 27	Naphthalene-d8	136	11.635	11.635	(1.000)	896572	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.722	14.722	(0.967)	11427	0.08439	0.08439(M)
* 42	Acenaphthene-d10	162	15.225	15.217	(1.000)	429087	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	32113	0.22893	0.2289(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	17.627	17.619	(0.966)	479	0.00861	0.008611(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
58	Pentachlorophenol	266	17.983	17.975	(0.986)	1688	0.05496	0.05496
* 59	Phenanthrene-d10	188	18.246	18.246	(1.000)	926167	4.00000	
$ 66	Terphenyl-d14	244	21.380	21.372	(0.918)	663171	5.14730	5.147(R)
67	Butylbenzylphthalate	149	22.301	22.293	(0.957)	23590	0.22649	0.2265
* 69	Chrysene-d12	240	23.292	23.277	(1.000)	790733	4.00000	
* 77	Perylene-d12	264	25.948	25.917	(1.000)	879853	4.00000	
79	Dibenzo(a,h)anthracene	278	28.646	28.607	(1.104)	91076	0.31584	0.3158(H)
90	N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182323S.D
Lab Smp Id: 23A0467-08
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	247356	10.76
27 Naphthalene-d8	802913	401457	1605826	896572	11.66
42 Acenaphthene-d10	396793	198397	793586	429087	8.14
59 Phenanthrene-d10	821666	410833	1643332	926167	12.72
69 Chrysene-d12	707165	353583	1414330	790733	11.82
77 Perylene-d12	813685	406843	1627370	879853	8.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.23	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.07
77 Perylene-d12	25.92	25.42	26.42	25.95	0.12

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

REVIEW SUMMARY FOR FILE - NT1003182323S.D

Lab ID: 23A0467-08
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 07:46

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

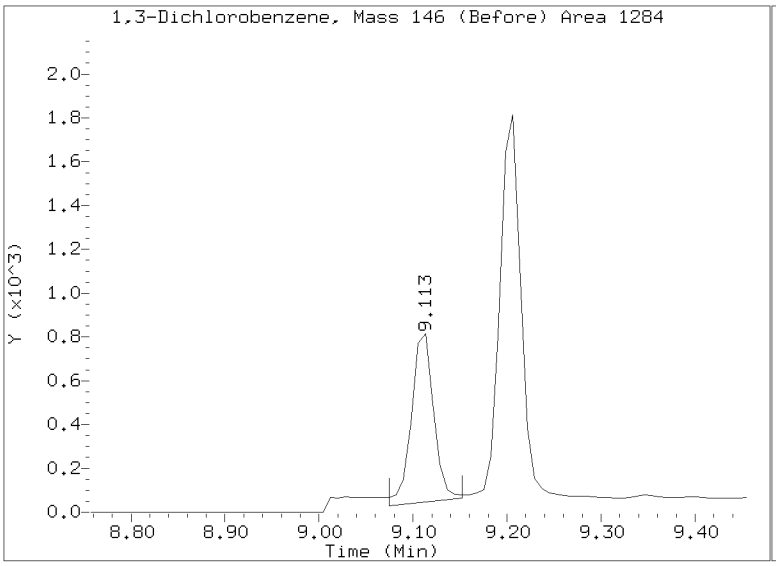
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

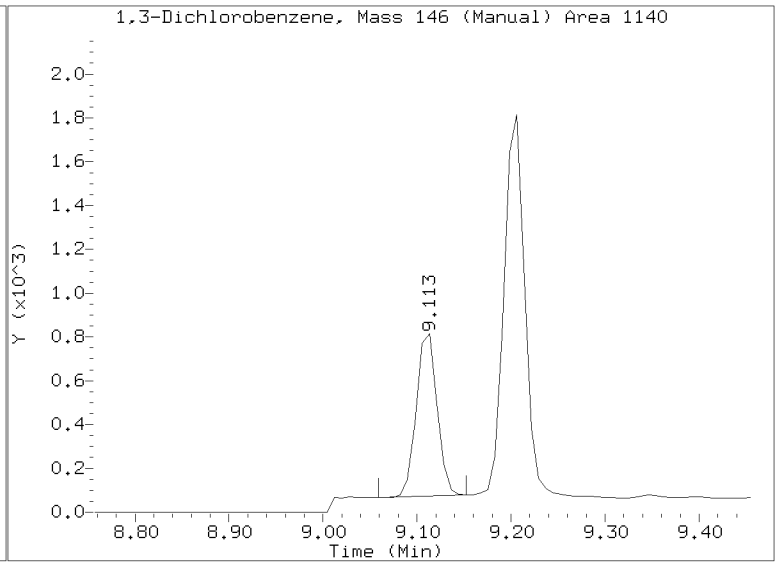
Exception: 1,2,4-Trichlorobenzene 0.0010

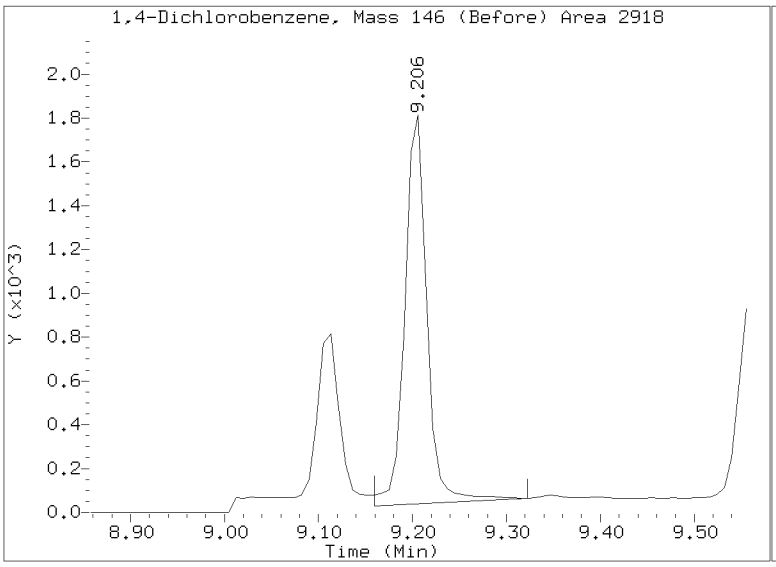
* Only compounds listed in the work order have been verified by the analyst *

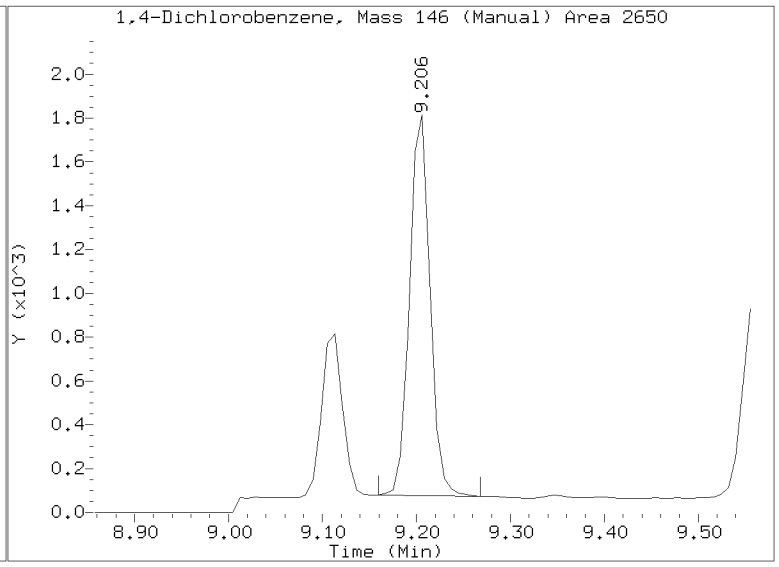
Quant Ion Manual Peak Adjustment Report

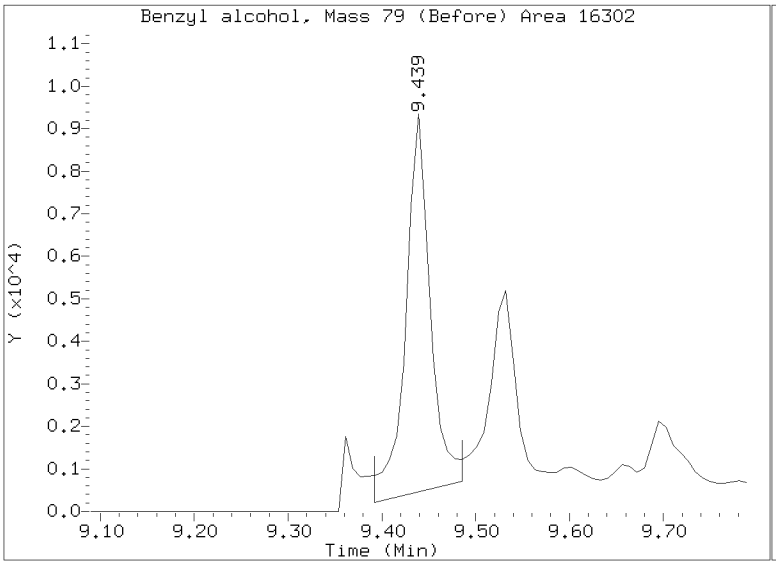
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182323S.D
Injection Date: 19-MAR-2023 07:46
Lab ID:23A0467-08 Client ID:
Report Date: 04/04/2023 13:21

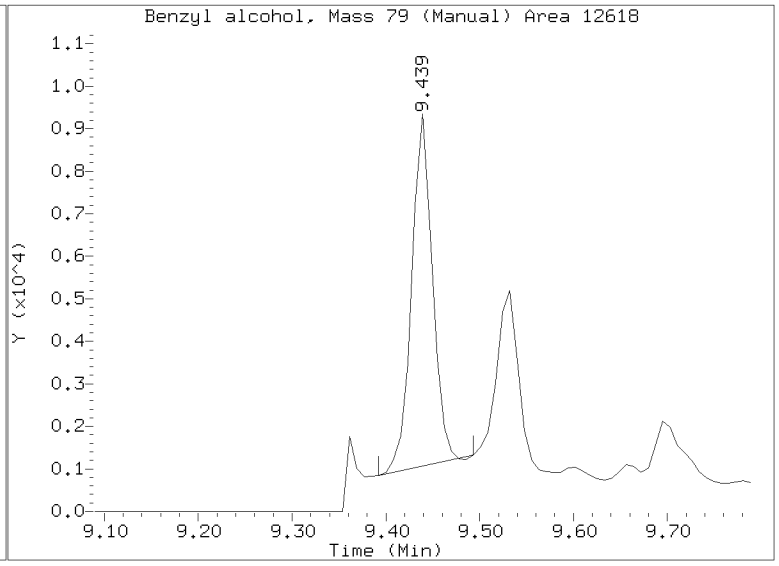












Quant Ion Manual Peak Adjustment Report

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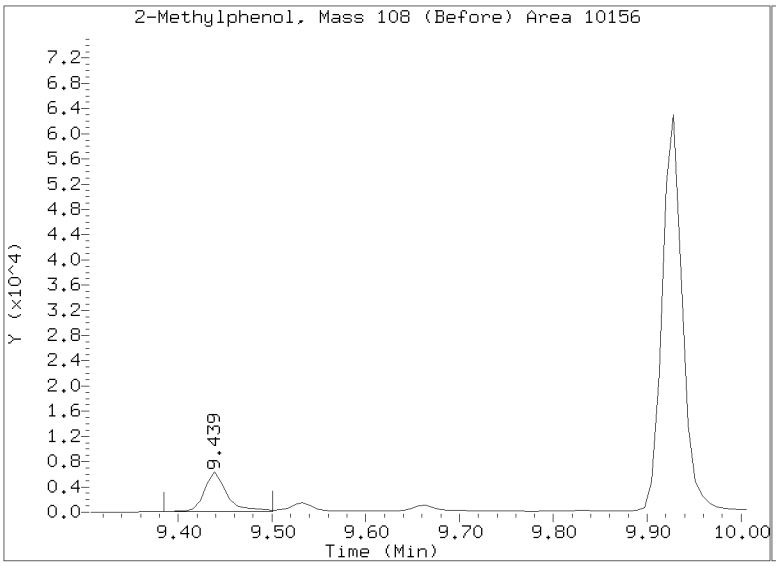
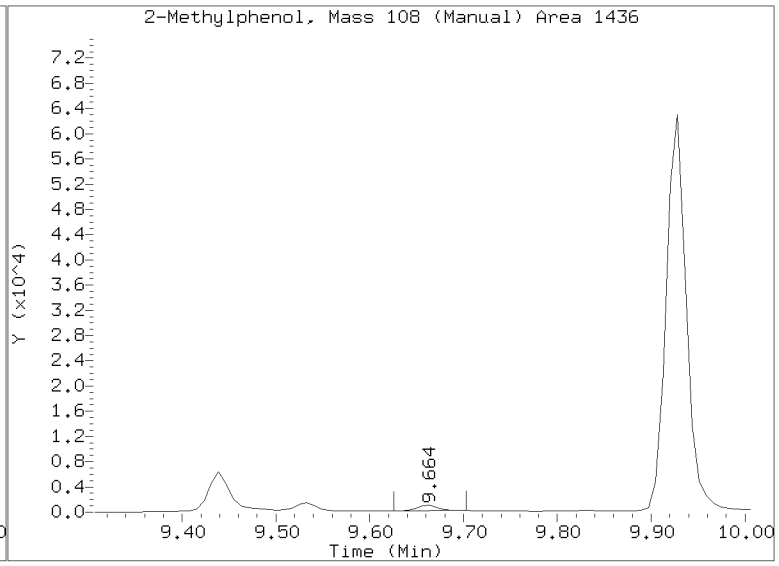
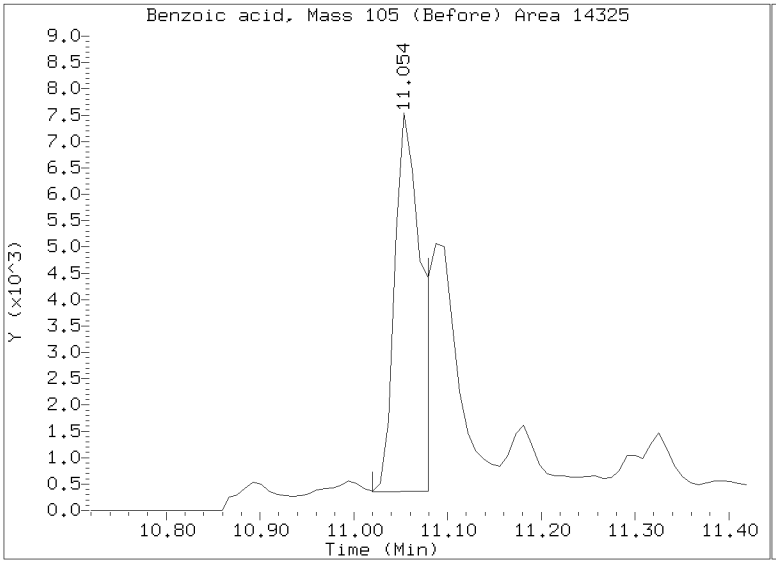
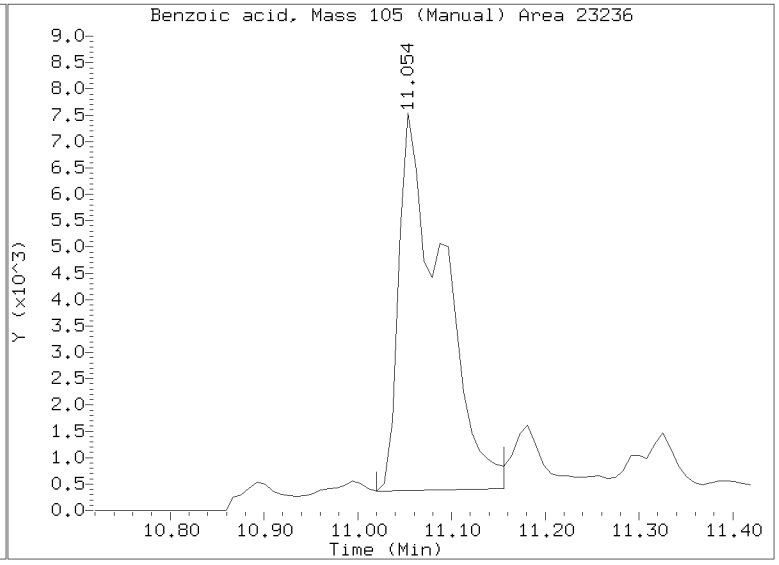
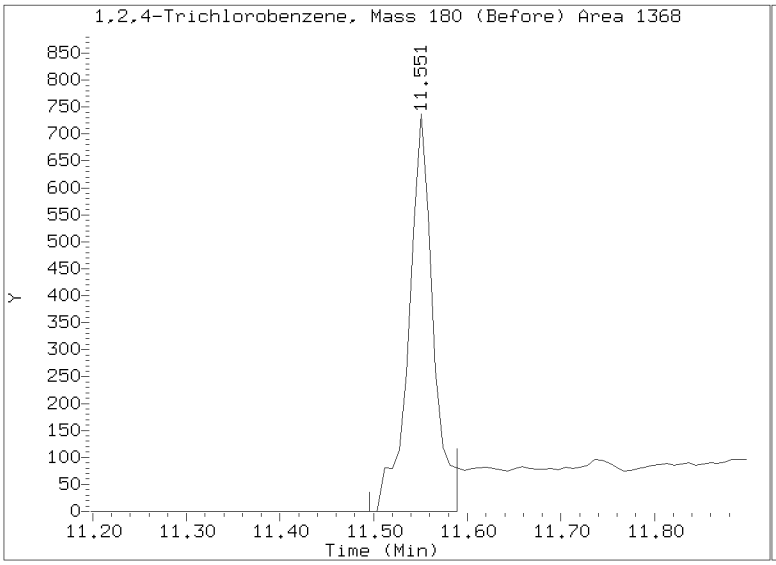
Injection Date: 19-MAR-2023 07:46
Lab ID:23A0467-08 Client ID:
Report Date: 04/04/2023 13:21

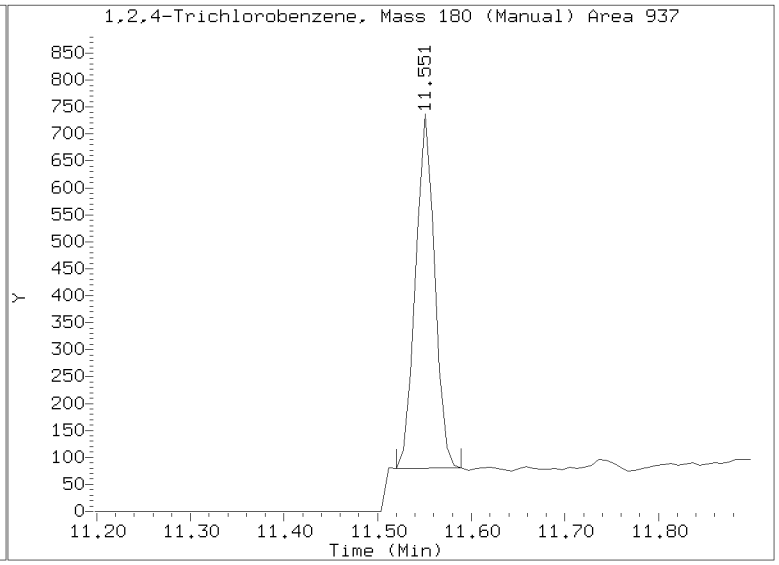












Quant Ion Manual Peak Adjustment Report

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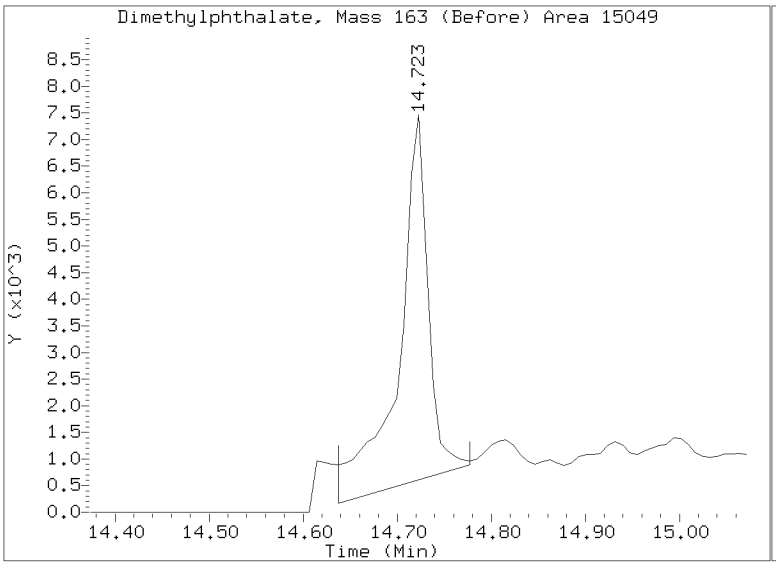
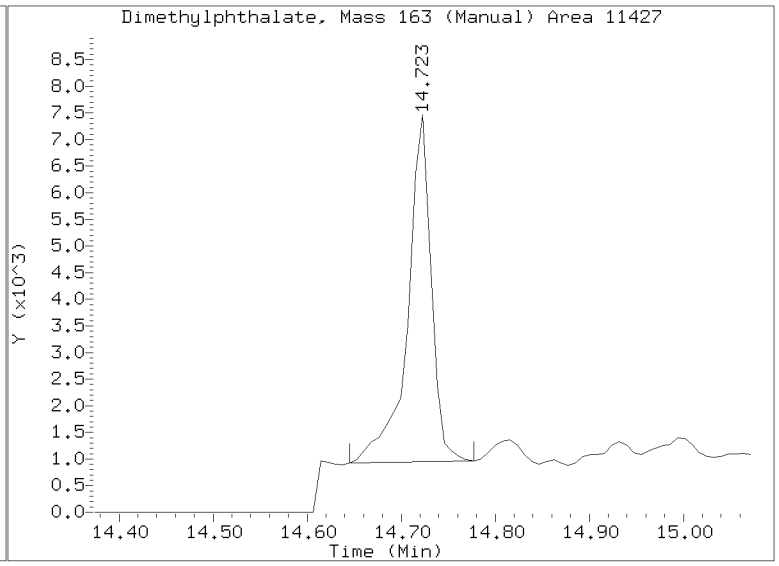
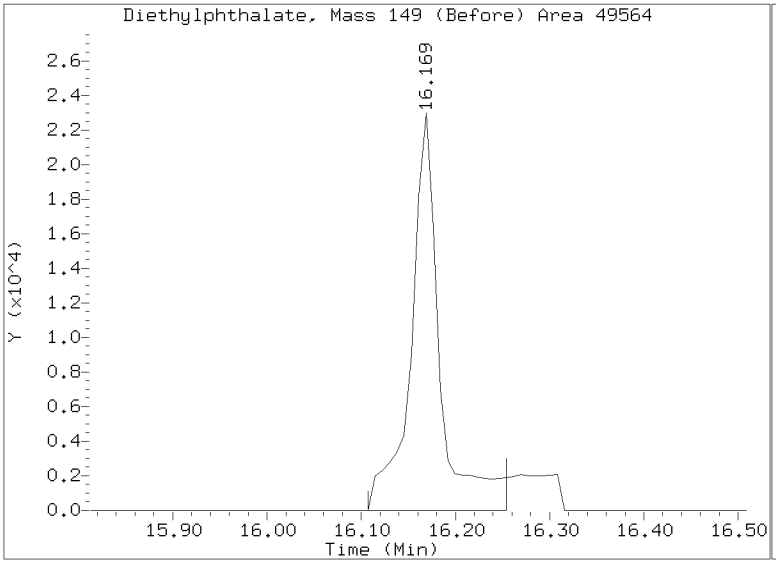
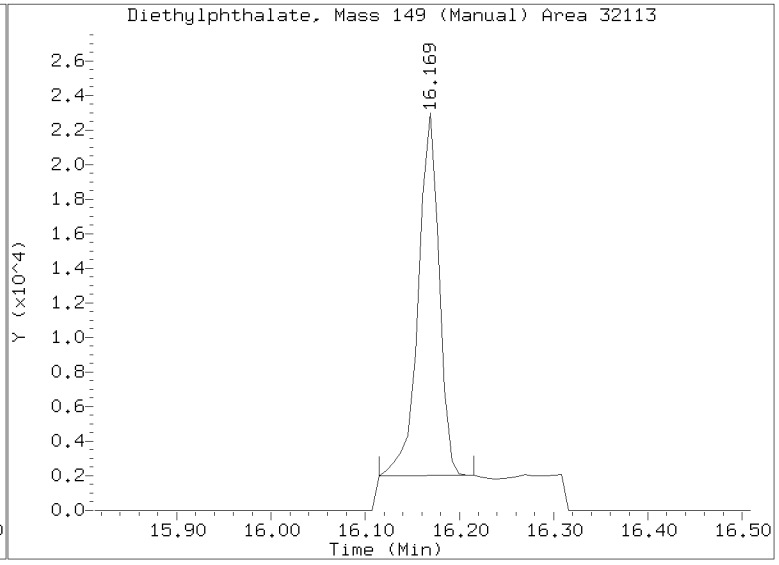
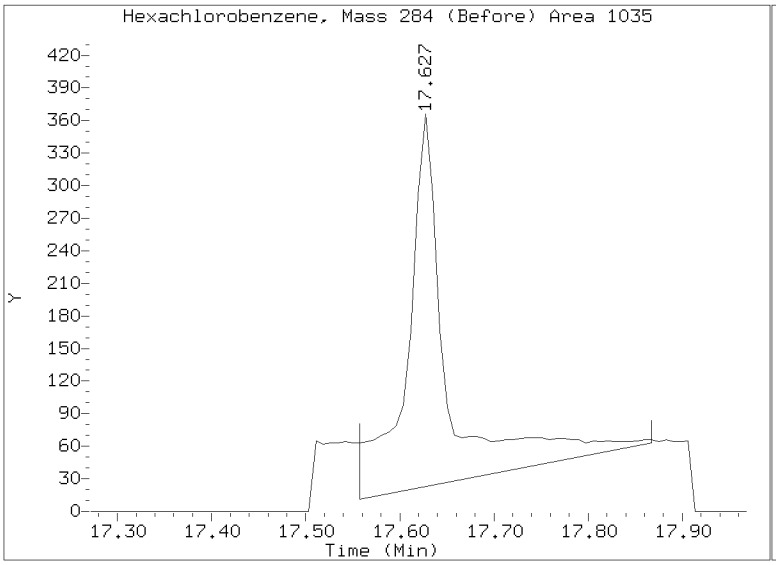
Injection Date: 19-MAR-2023 07:46
Lab ID:23A0467-08 Client ID:
Report Date: 04/04/2023 13:21

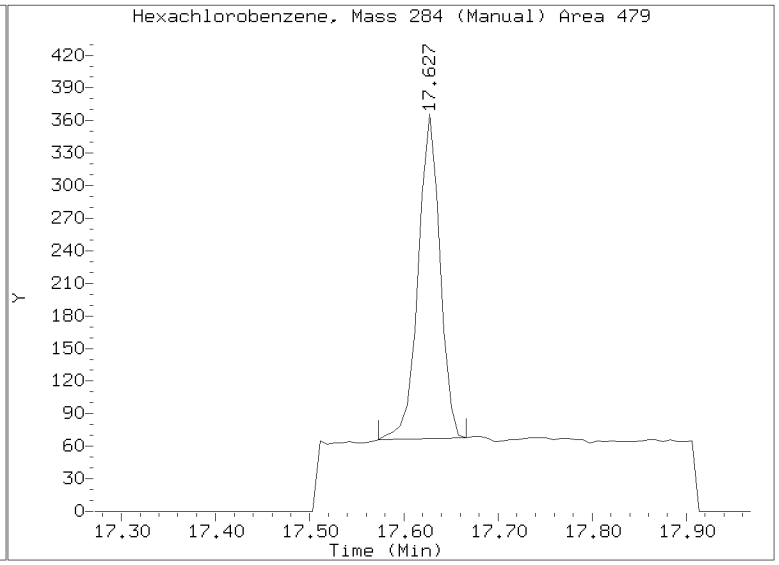












Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1014

Form I

ORGANIC ANALYSIS DATA SHEET

EPA 8270E-SIM

SIM SVOC Organics (Dual scan list)

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	02/23/23 15:49	File ID:	NT1003182324S.D
% Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Analyzed:	03/19/23 08:24
Batch:	BLB0579	Sequence:	SLC0505	Initial/Final:	15.68 g Wet / 1 mL
Instrument:	NT10	Column:	ZB-5MSi	Calibration:	GC00049
Cleanups:	GPC				

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg dry)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	1.1	J	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	10.3	J	2.5	20.0
65-85-0	Benzoic acid	1	50.4	J	13.4	99.9
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg dry)	FOUND: (ug/kg dry)	% REC	QC LIMITS	Q
2-Fluorophenol	749.36	550	73.4	27 - 120	
p-Terphenyl-d14	499.57	535	107	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823248.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

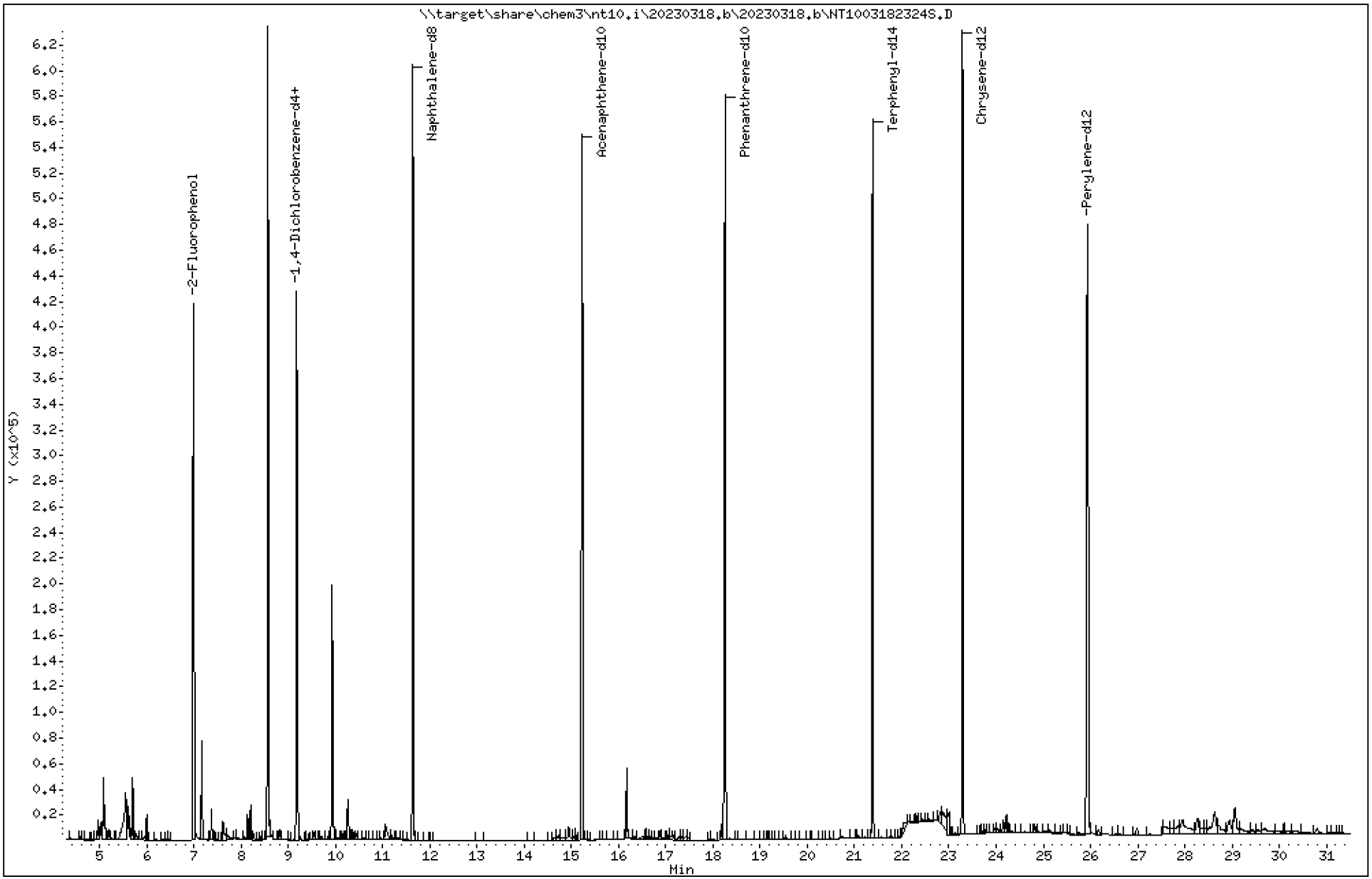
Sample Info: 23A0467-09

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

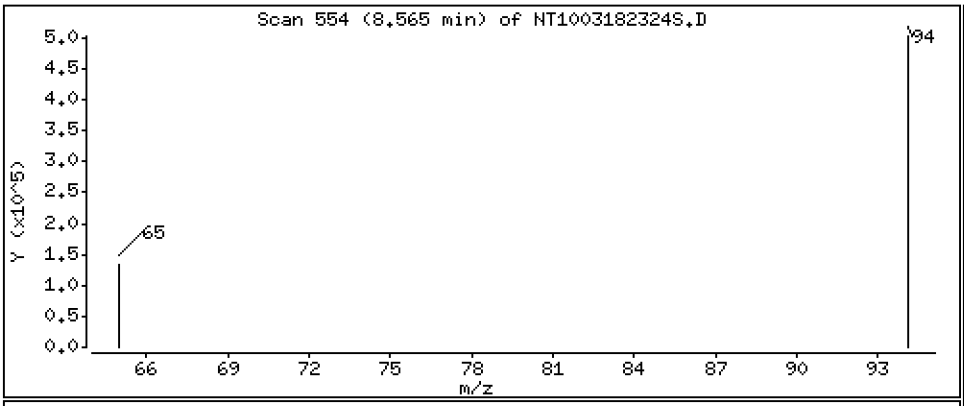
Operator: JGR

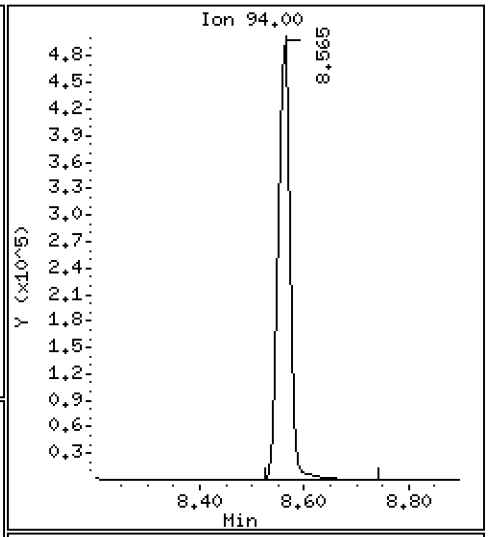
Column phase: ZB-5msi

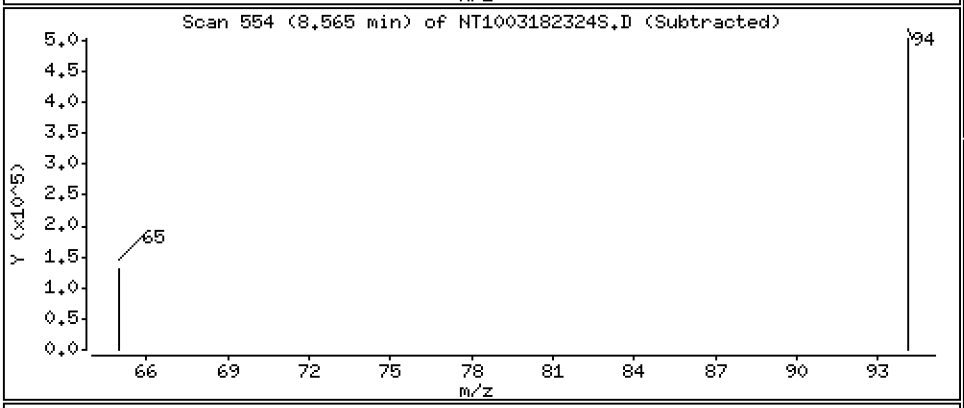
Column diameter: 0.25

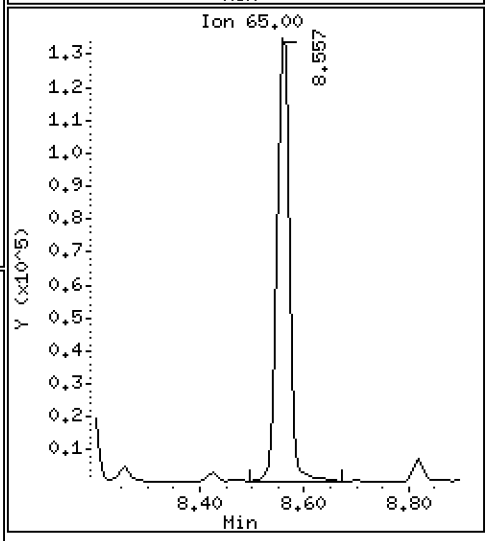
3 Phenol

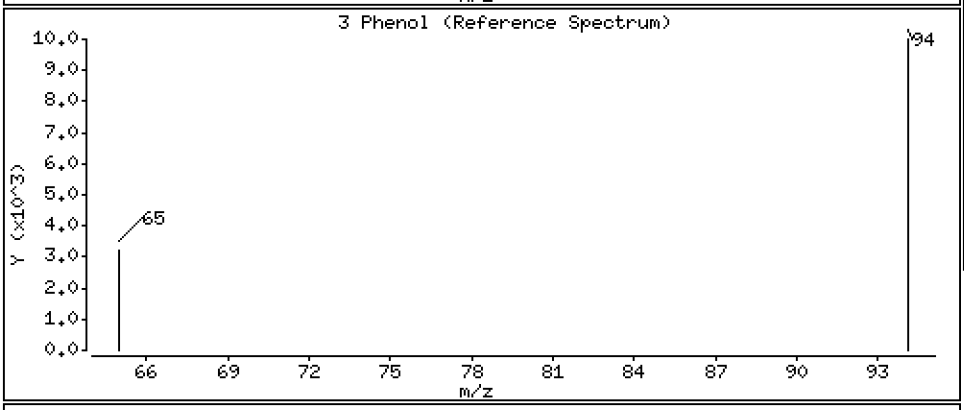
Concentration: 7.187 ug/L

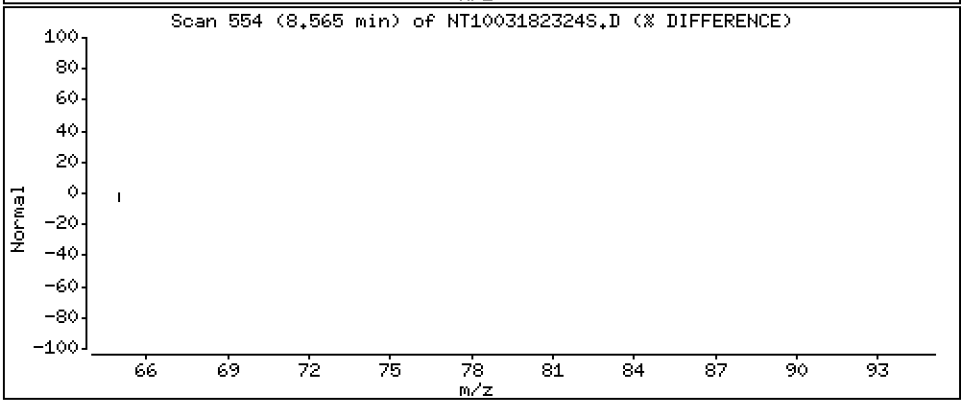












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

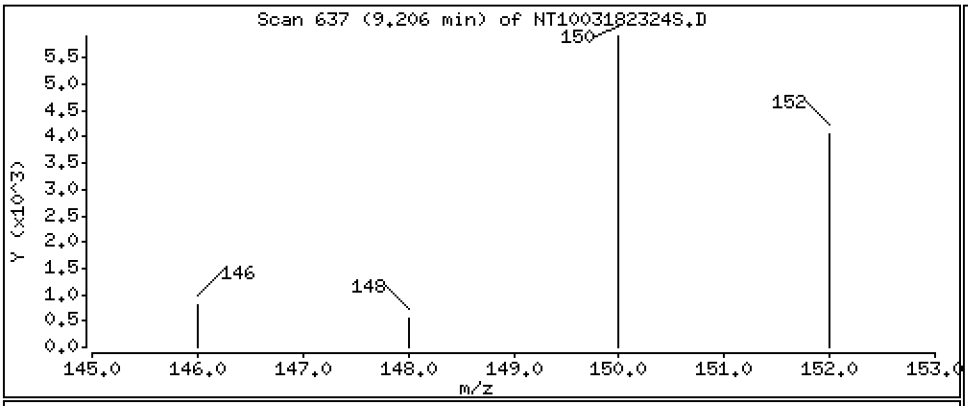
Operator: JGR

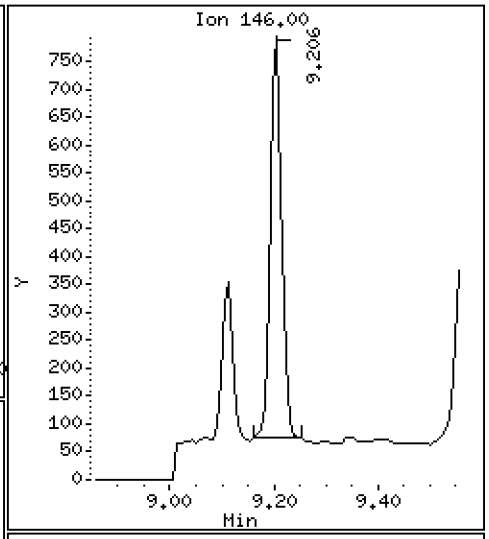
Column phase: ZB-5msi

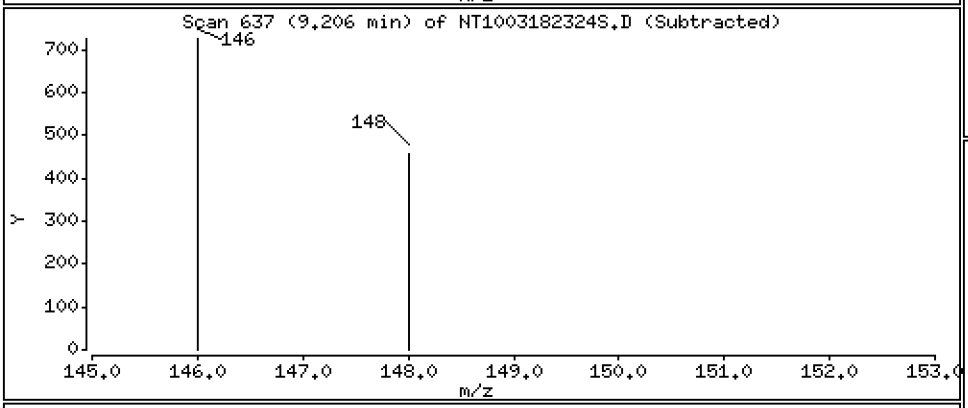
Column diameter: 0.25

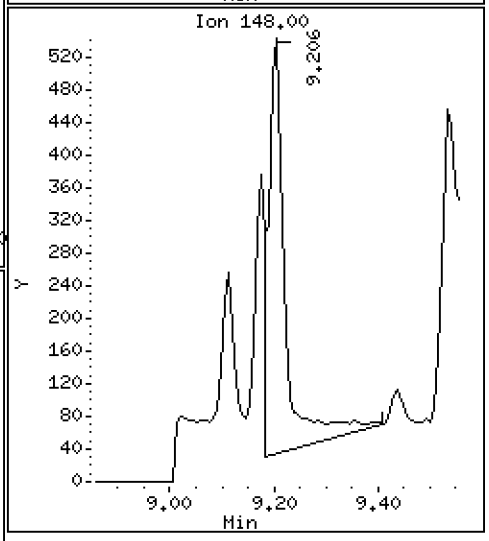
9 1,4-Dichlorobenzene

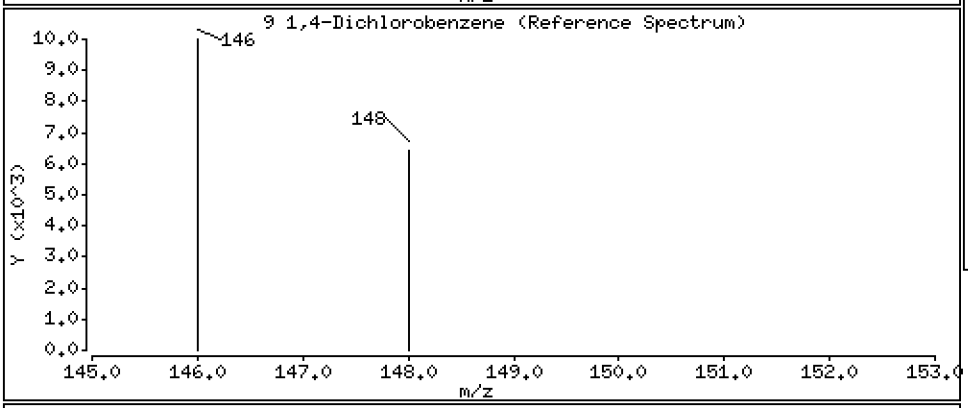
Concentration: 0.01122 ug/L

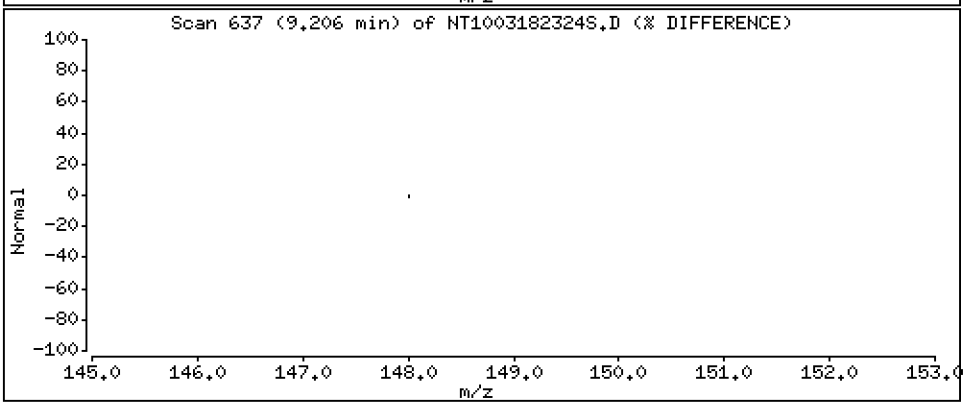












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

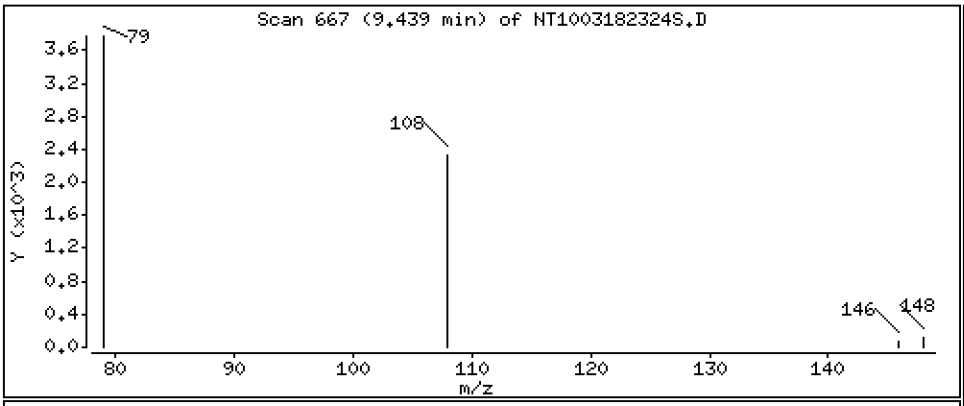
Operator: JGR

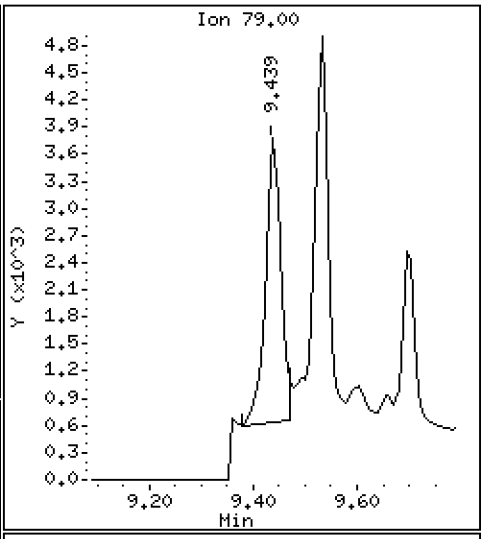
Column phase: ZB-5msi

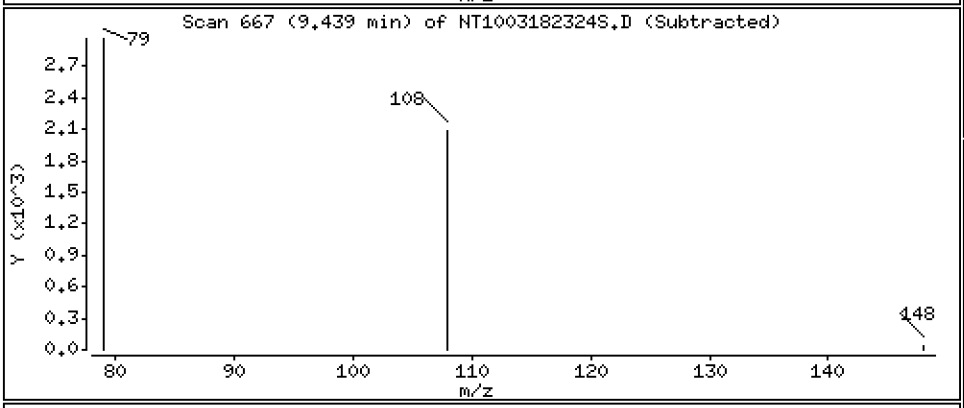
Column diameter: 0.25

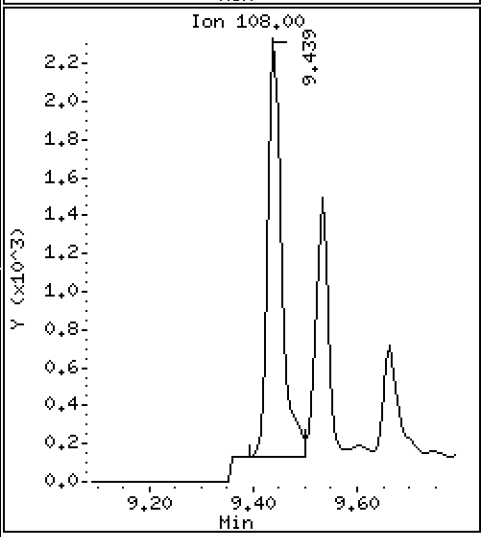
11 Benzyl alcohol

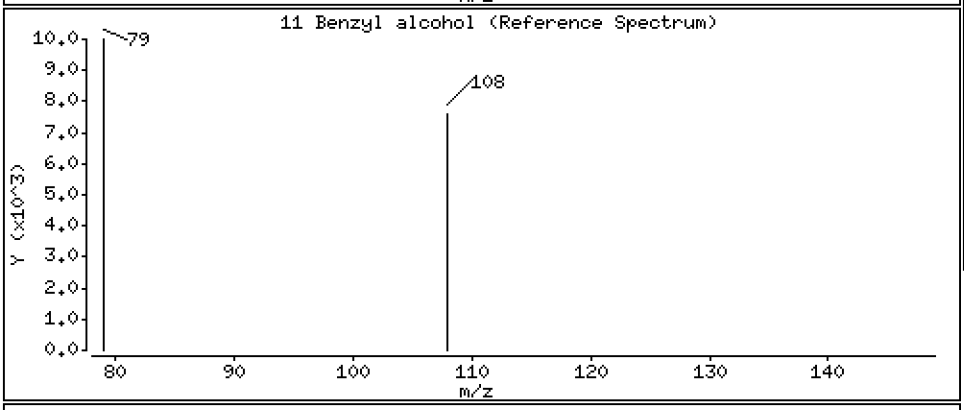
Concentration: 0.1029 ug/L

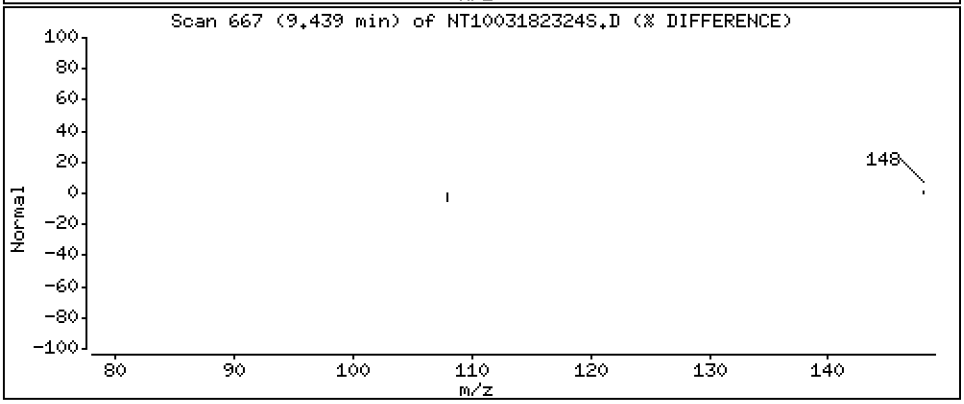












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

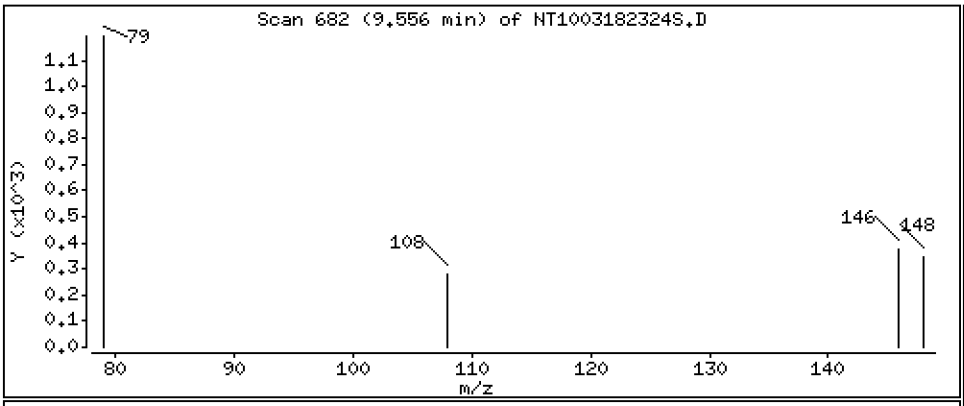
Operator: JGR

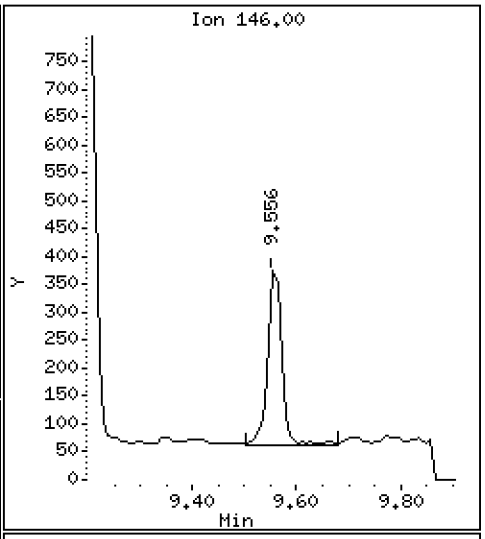
Column phase: ZB-5msi

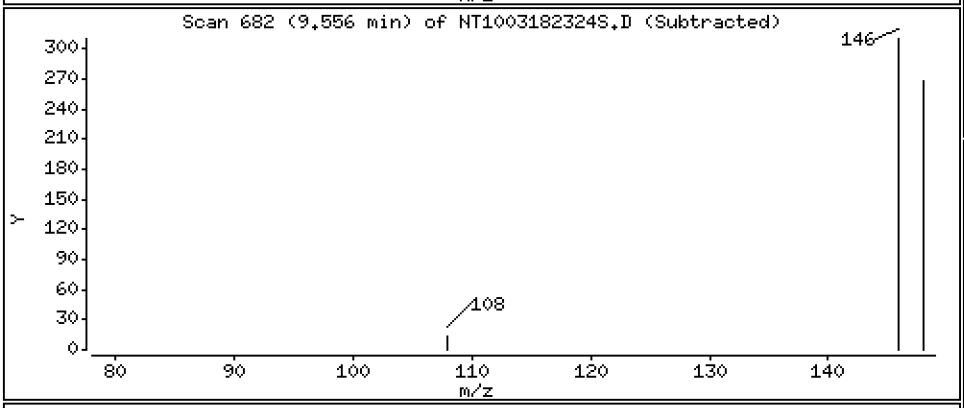
Column diameter: 0.25

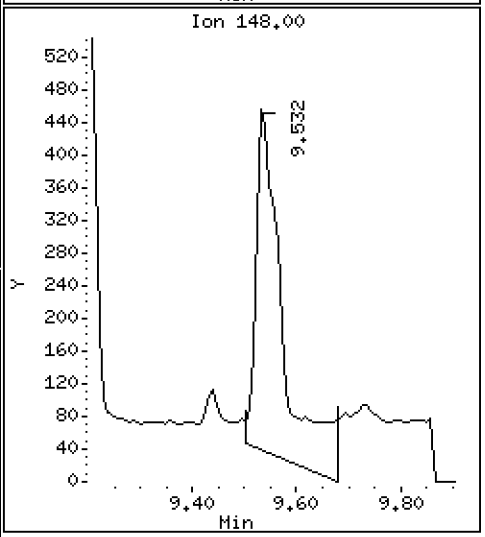
12 1,2-Dichlorobenzene

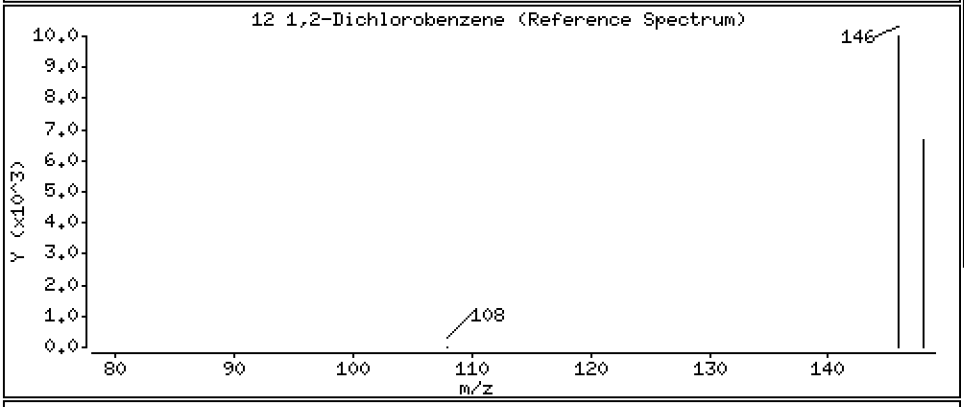
Concentration: 0.006003 ug/L

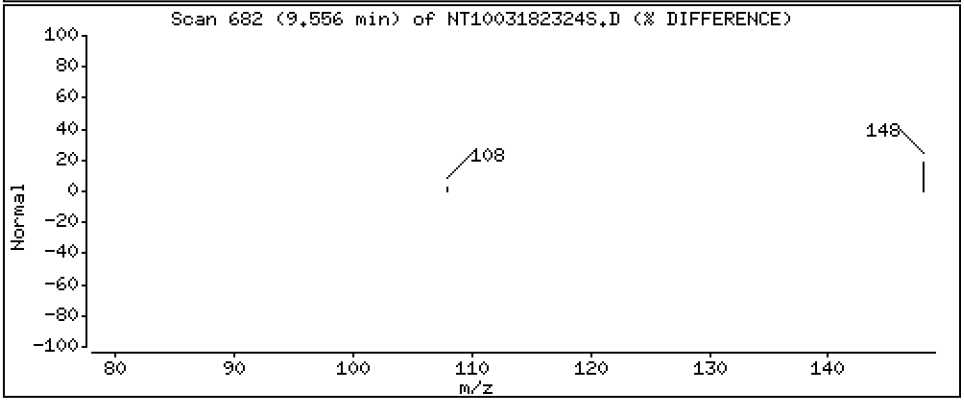












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

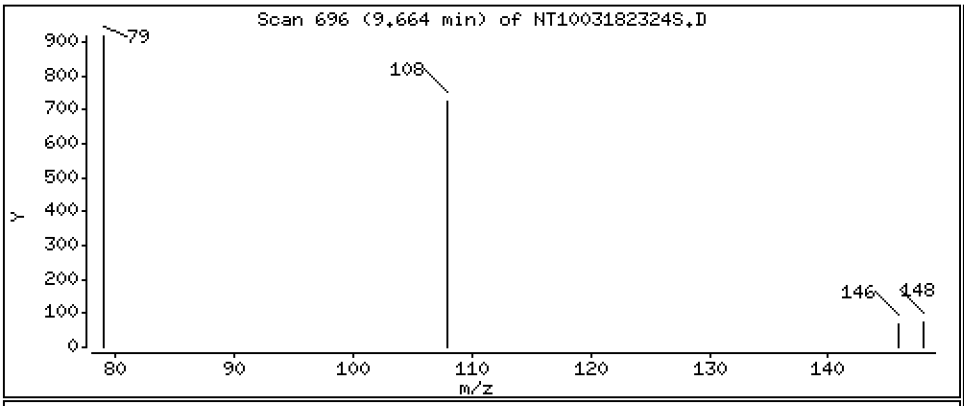
Operator: JGR

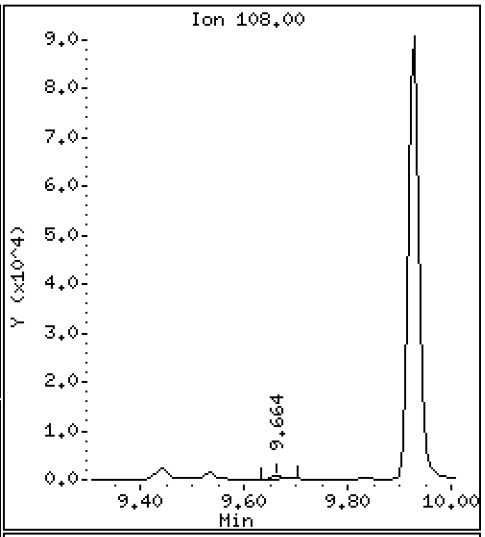
Column phase: ZB-5msi

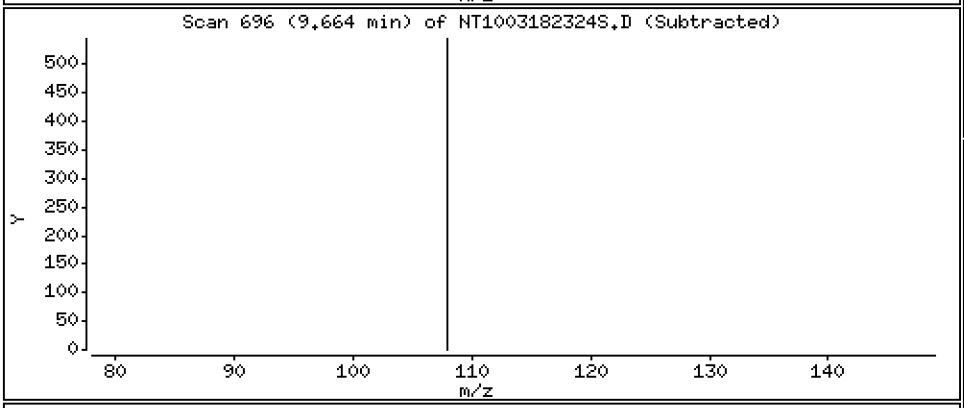
Column diameter: 0.25

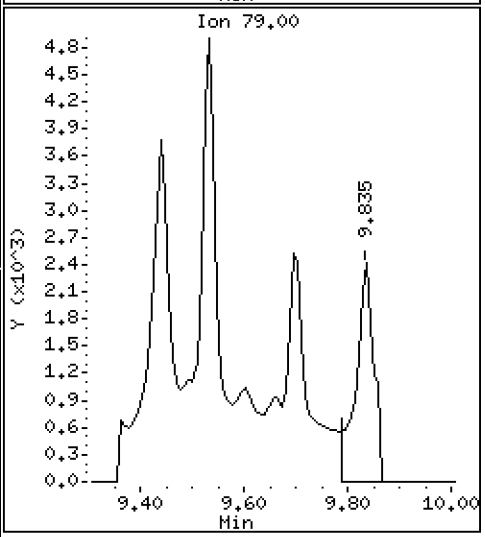
13 2-Methylphenol

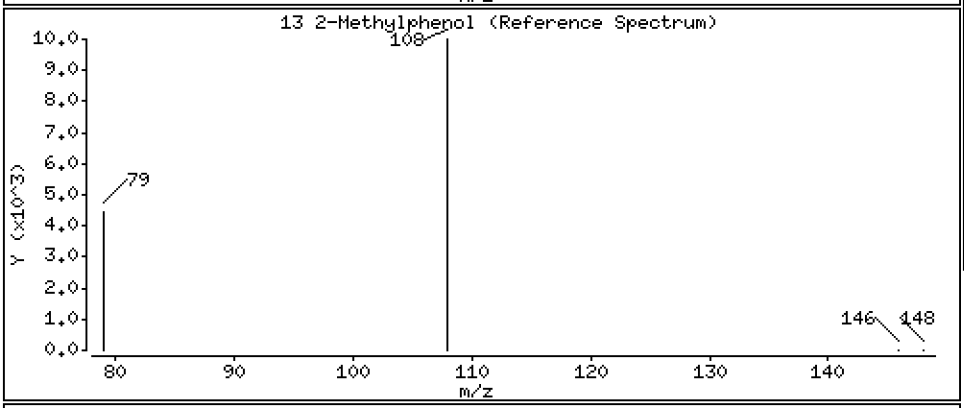
Concentration: 0.01128 ug/L

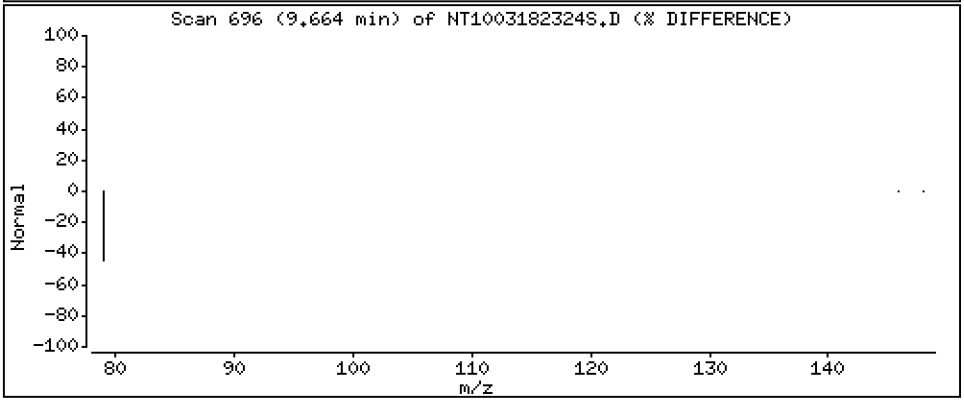












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

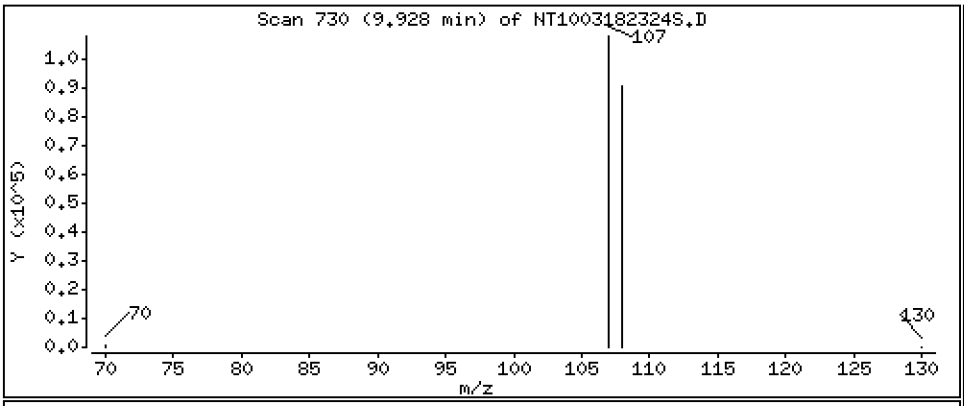
Operator: JGR

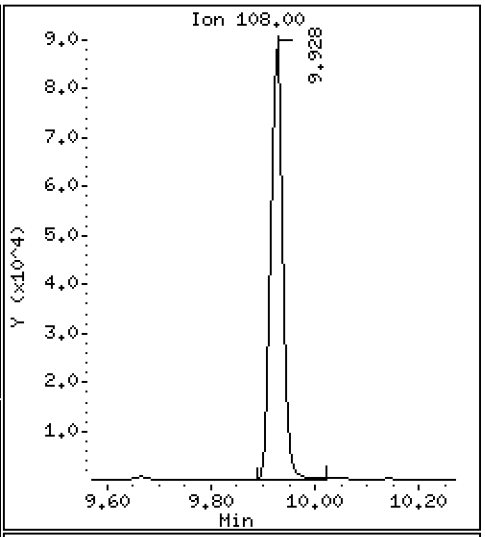
Column phase: ZB-5msi

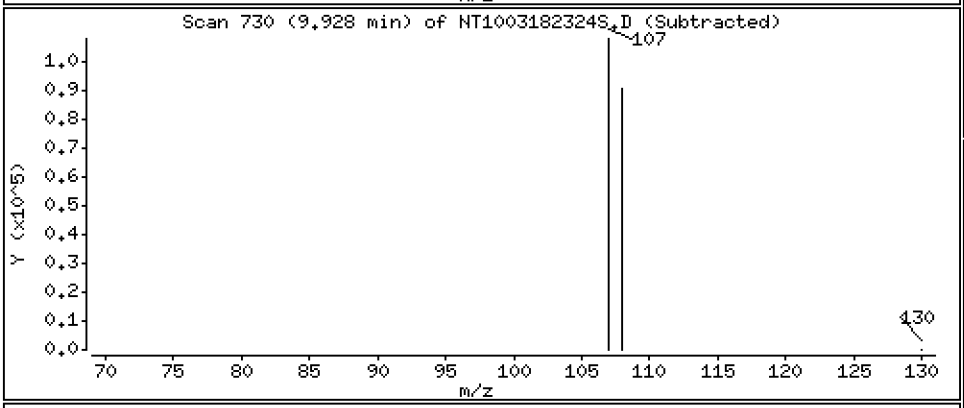
Column diameter: 0.25

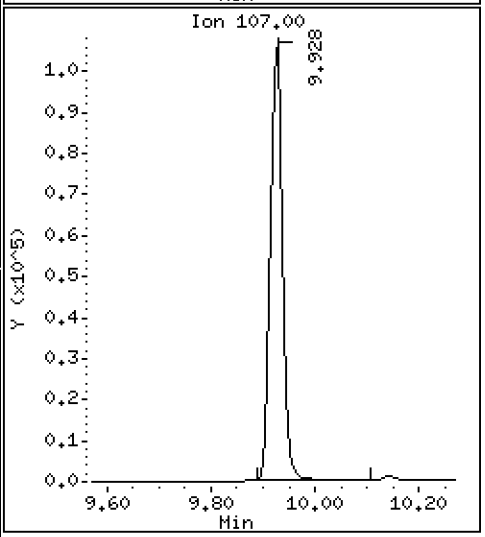
15 4-Methylphenol

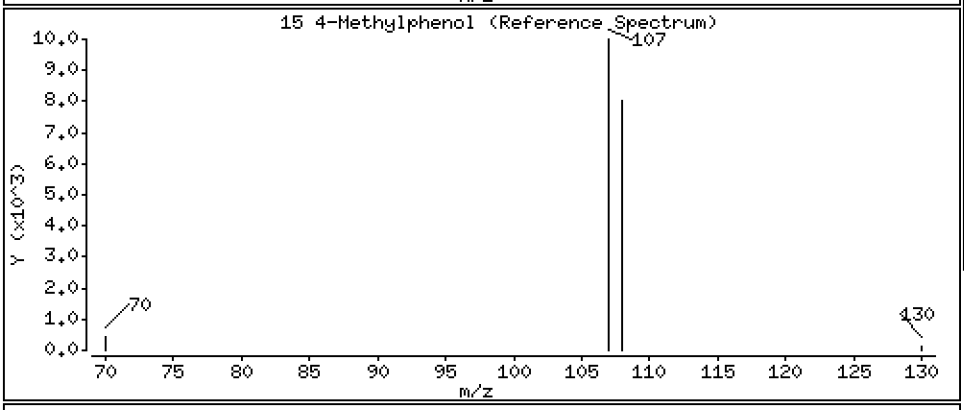
Concentration: 1.821 ug/L

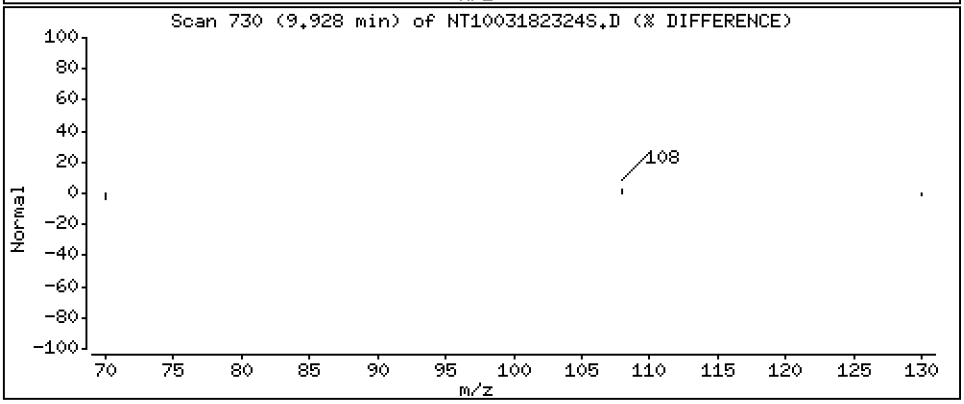












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

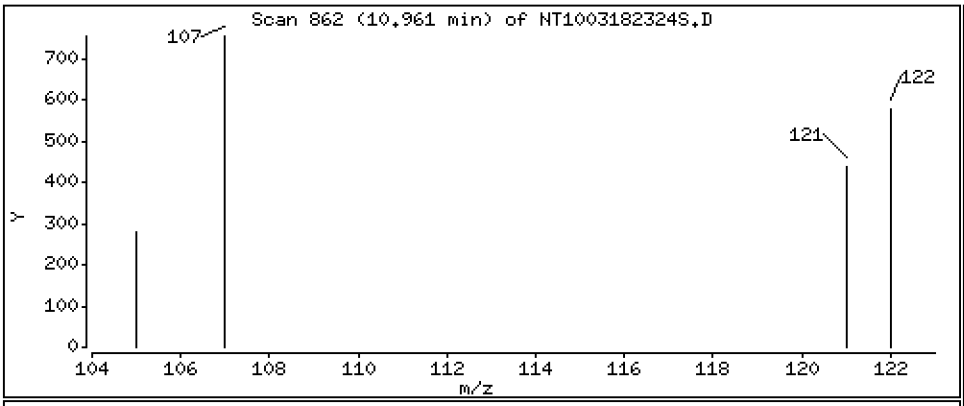
Operator: JGR

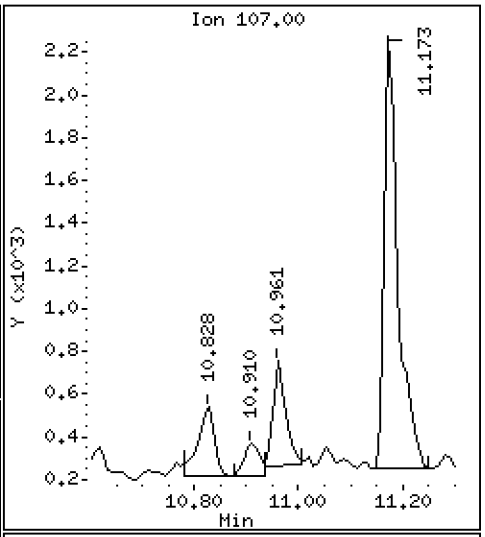
Column phase: ZB-5msi

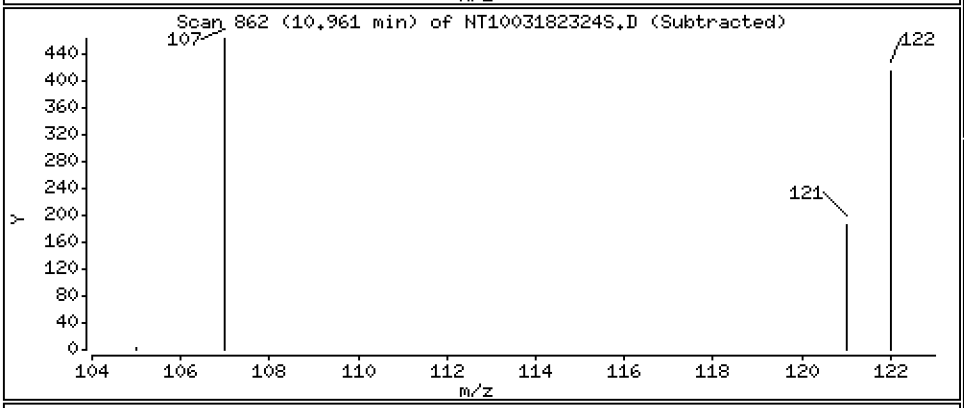
Column diameter: 0.25

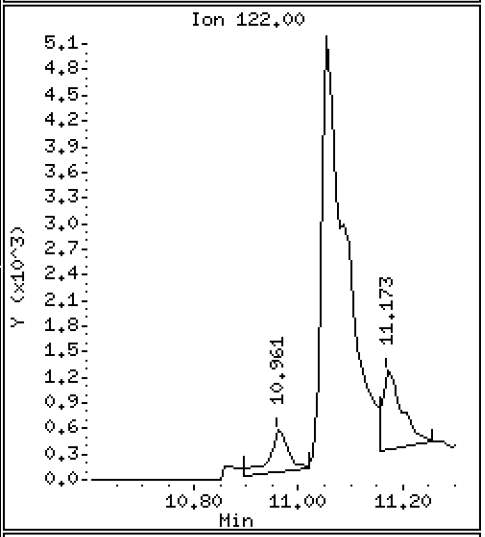
22 2,4-Dimethylphenol

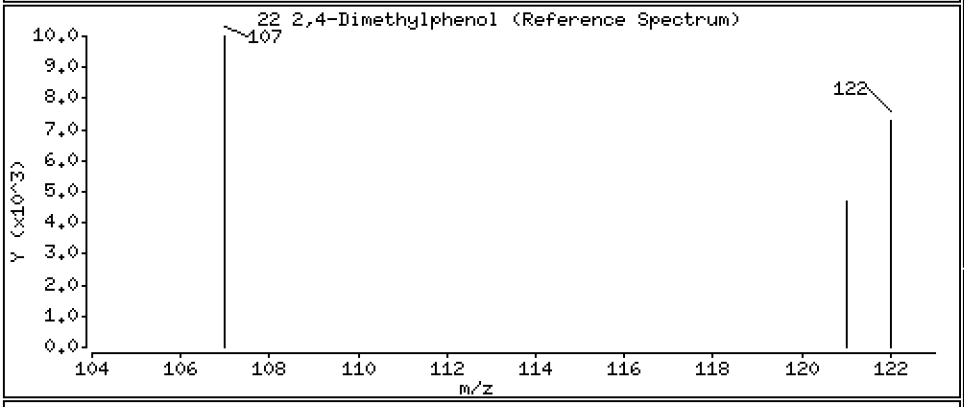
Concentration: 0.01035 ug/L

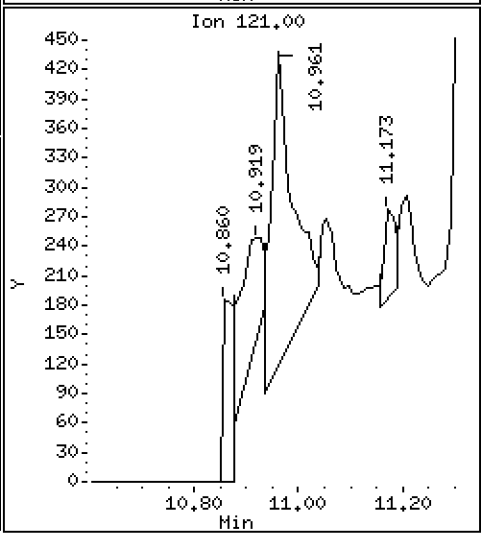


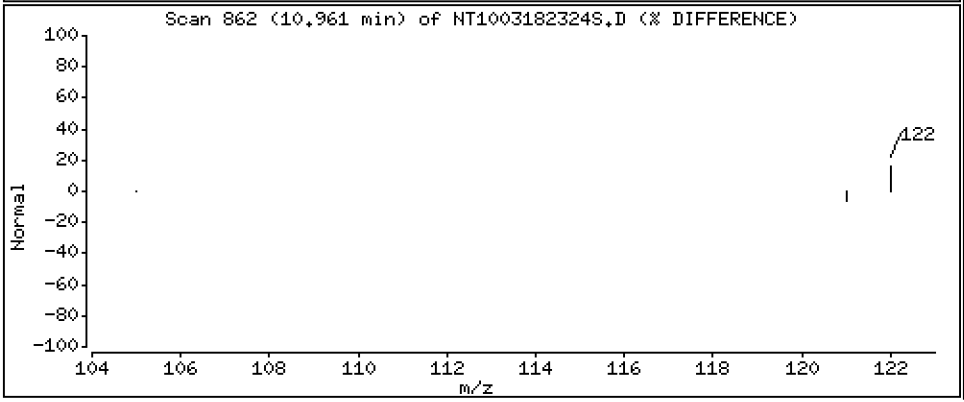












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Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

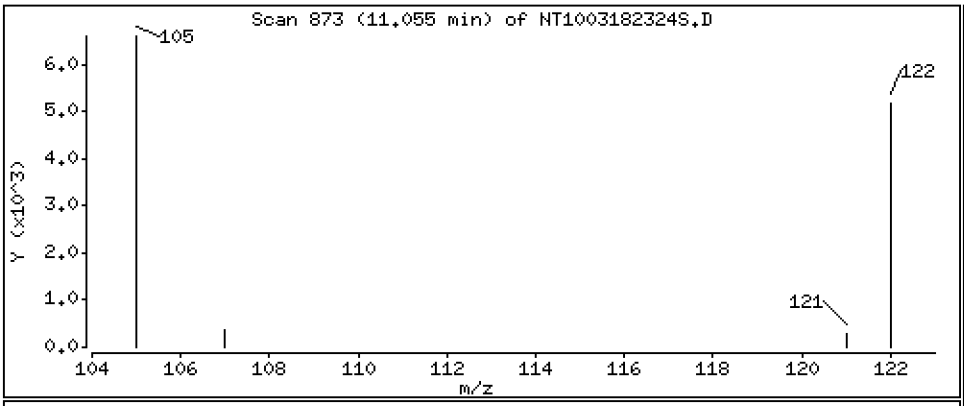
Operator: JGR

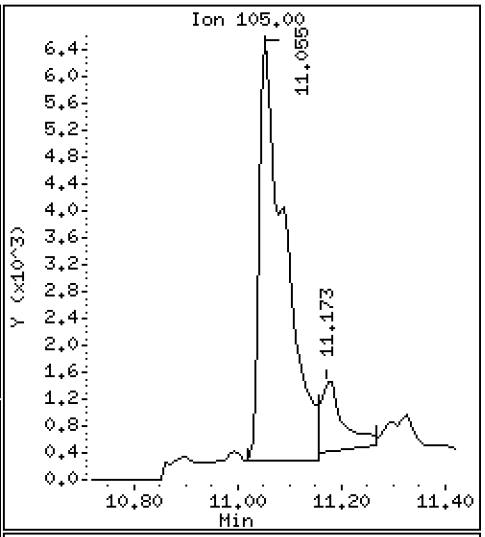
Column phase: ZB-5msi

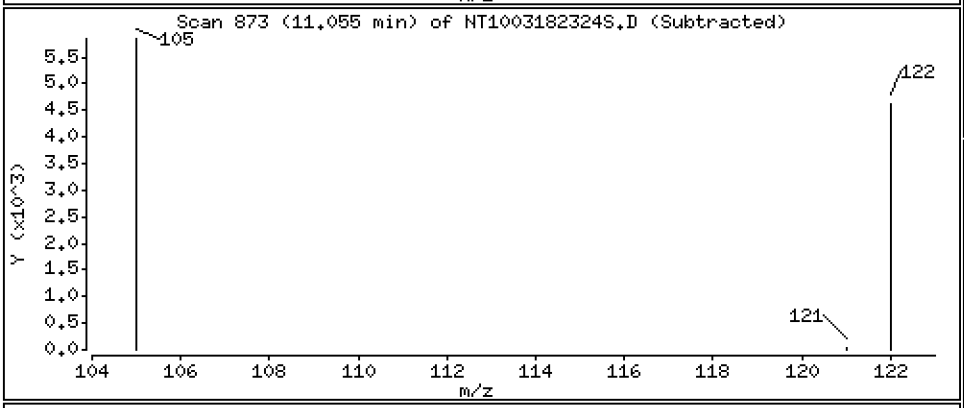
Column diameter: 0.25

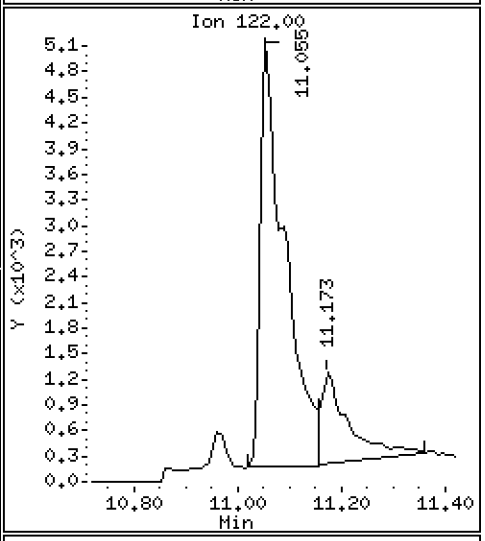
24 Benzoic acid

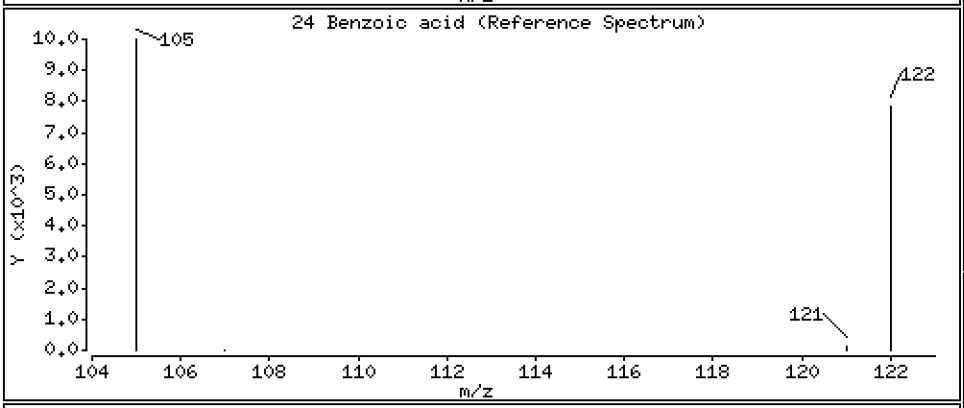
Concentration: 0.5044 ug/L

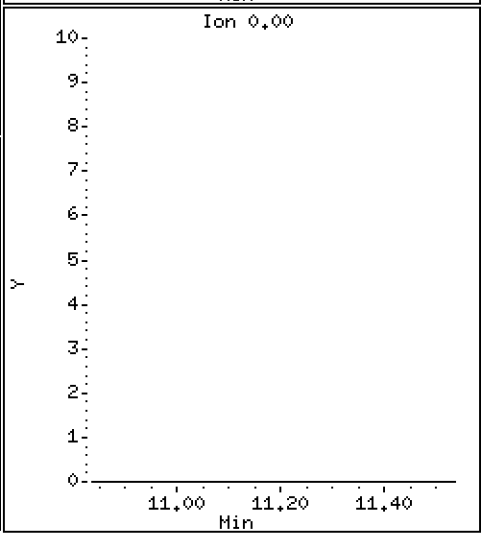


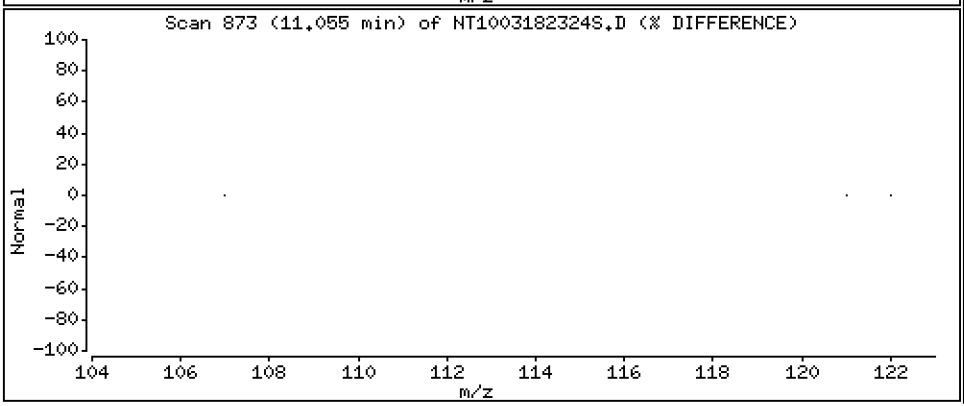












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

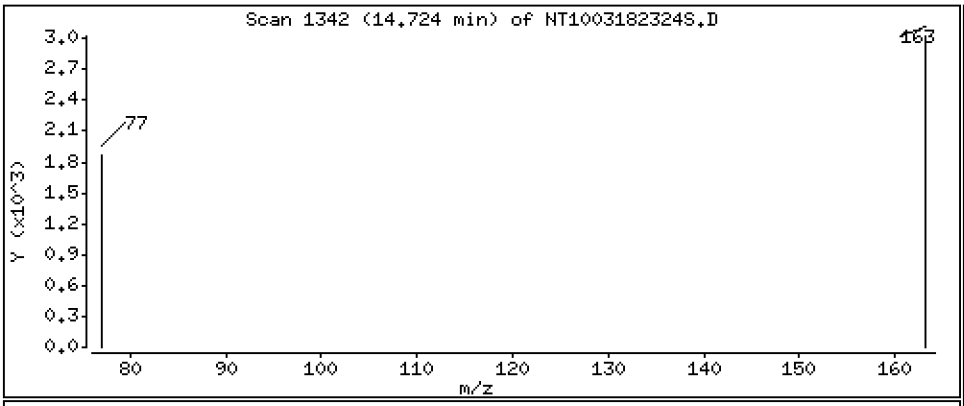
Operator: JGR

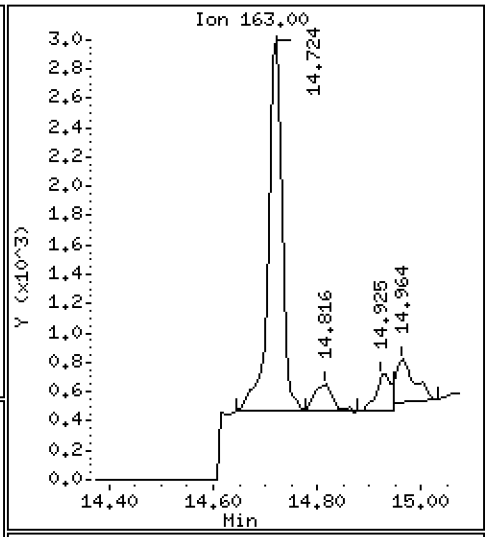
Column phase: ZB-5msi

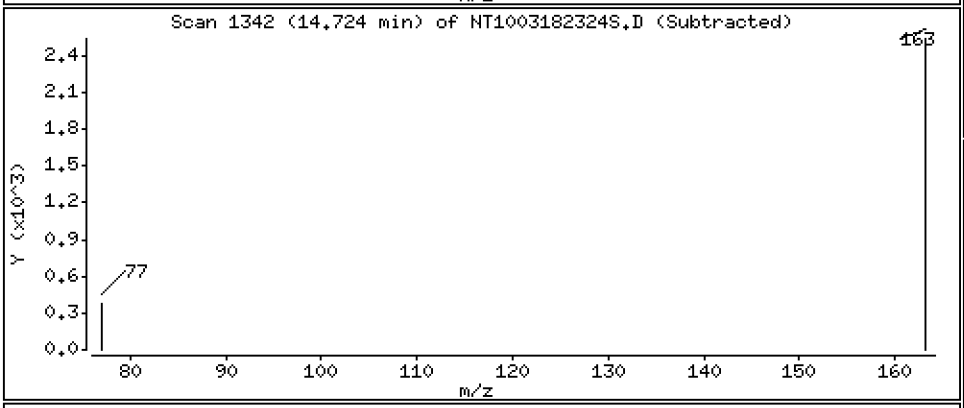
Column diameter: 0.25

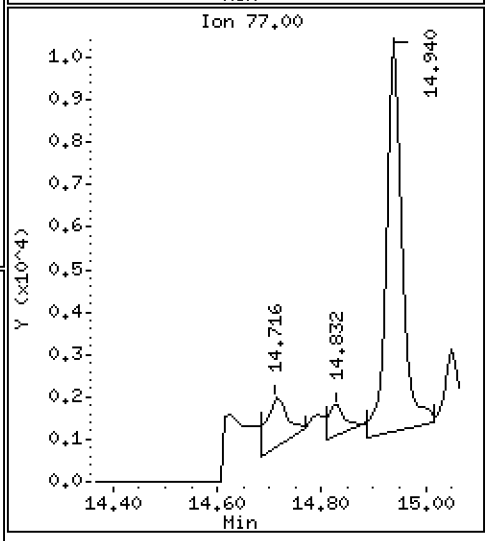
39 Dimethylphthalate

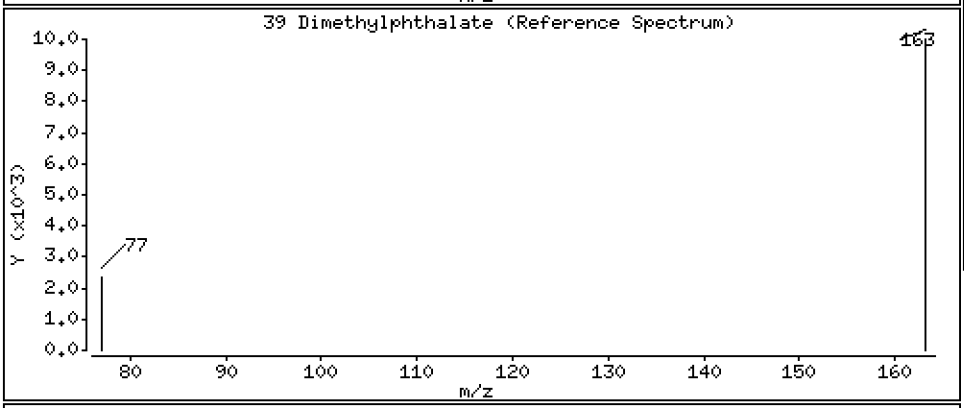
Concentration: 0.03267 ug/L

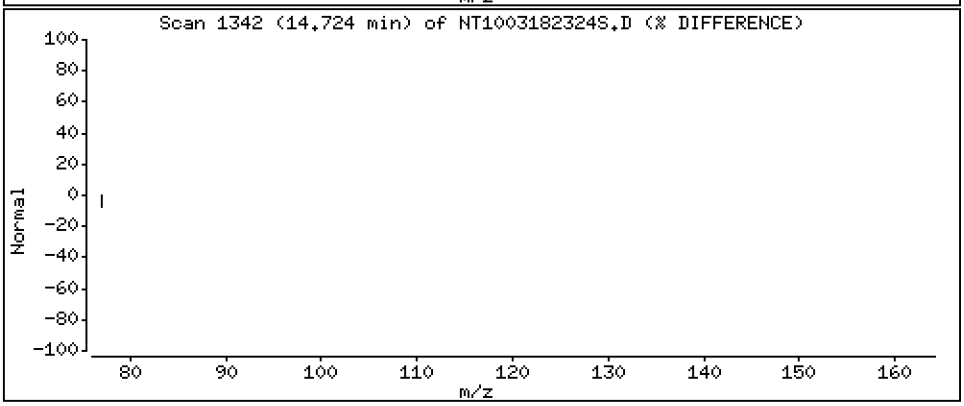












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

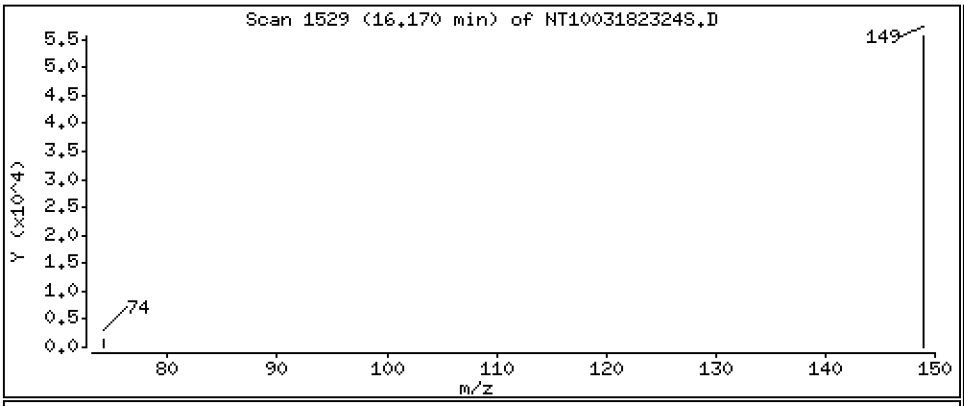
Operator: JGR

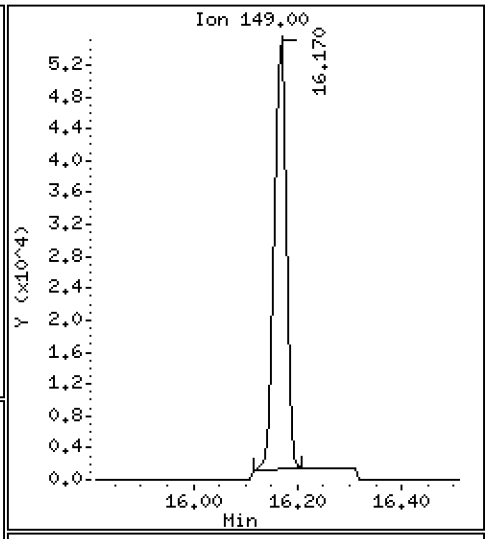
Column phase: ZB-5msi

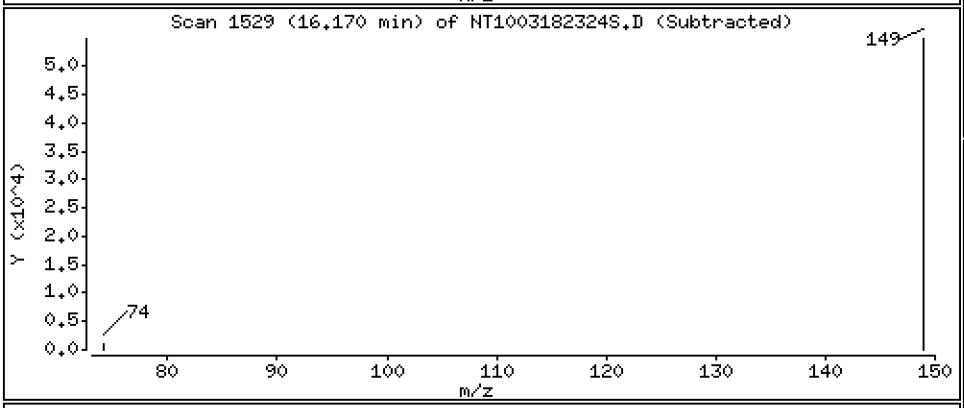
Column diameter: 0.25

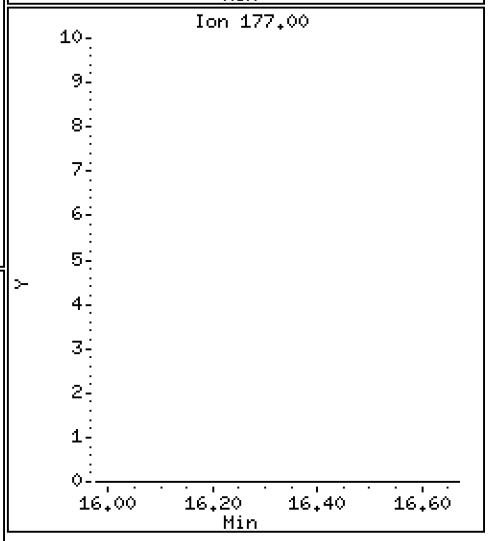
50 Diethylphthalate

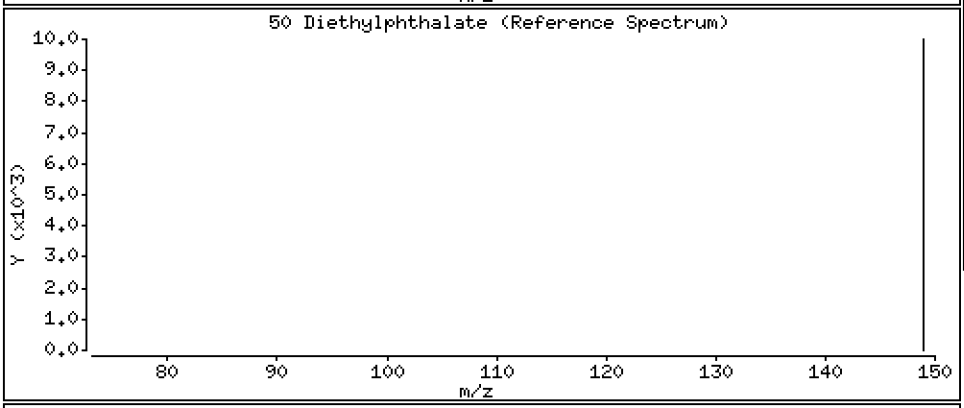
Concentration: 0.5858 ug/L

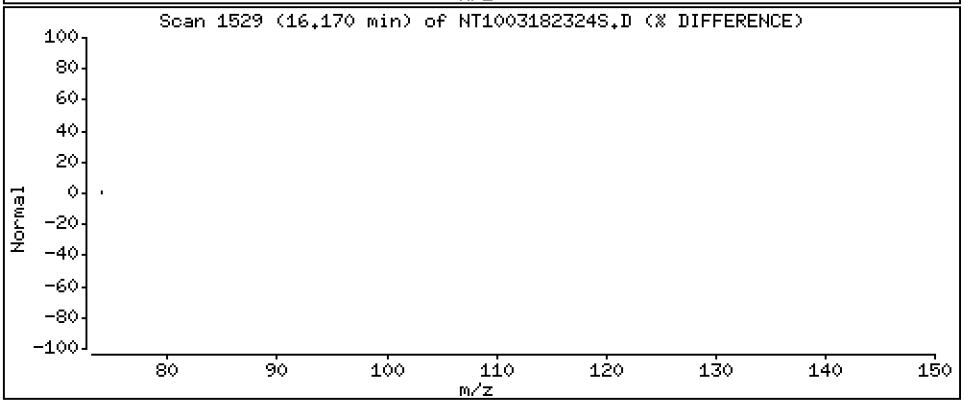












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

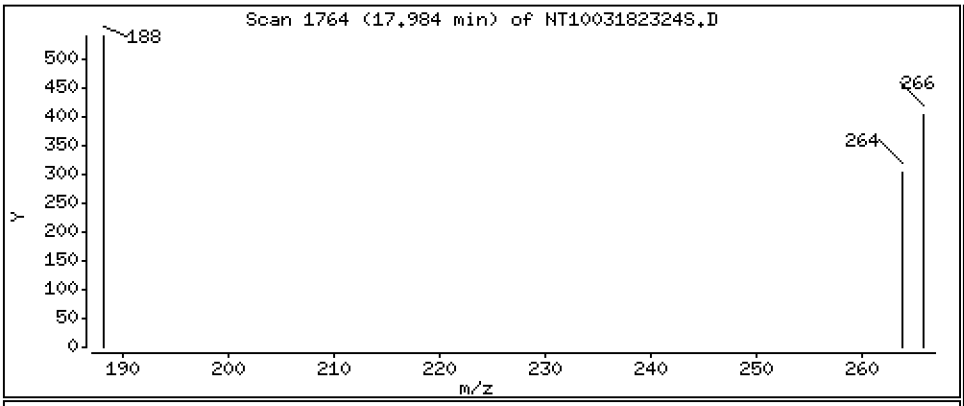
Operator: JGR

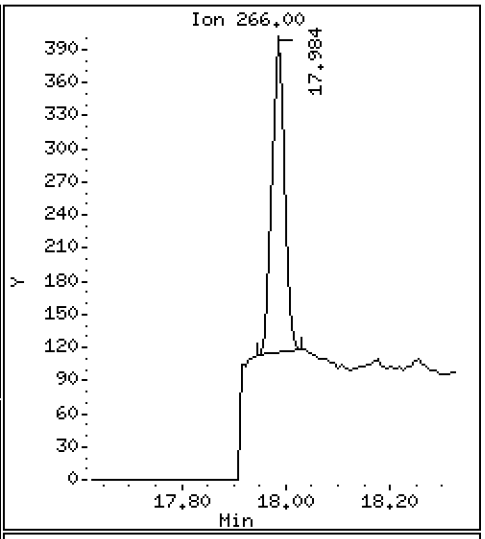
Column phase: ZB-5msi

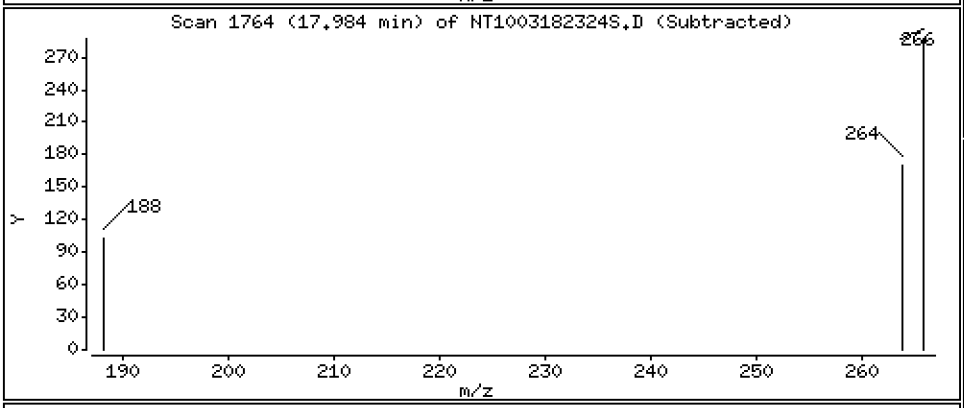
Column diameter: 0.25

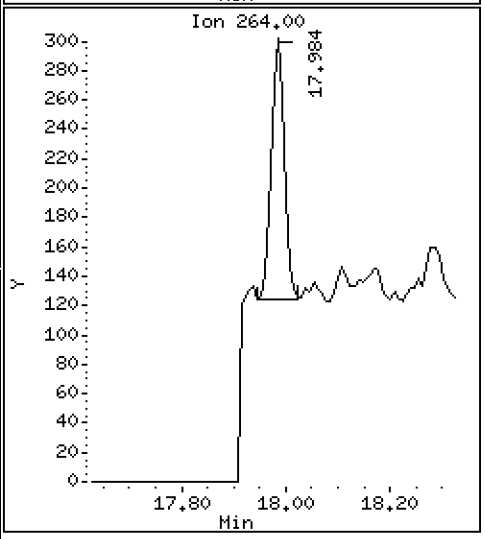
58 Pentachlorophenol

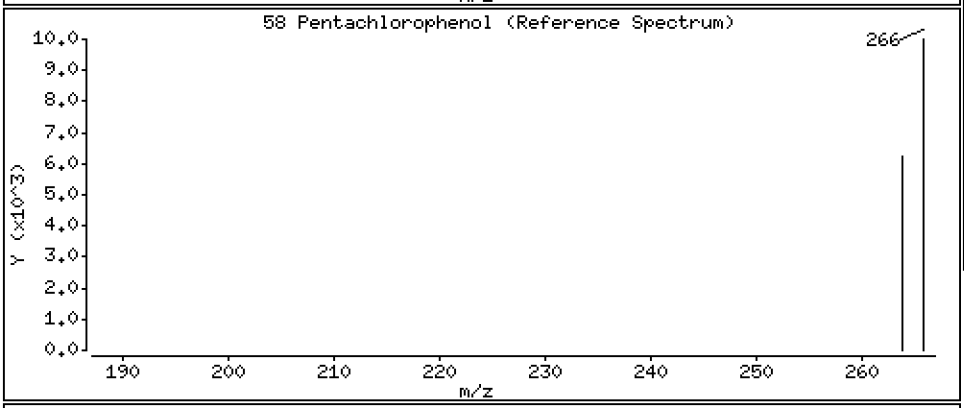
Concentration: 0.01545 ug/L

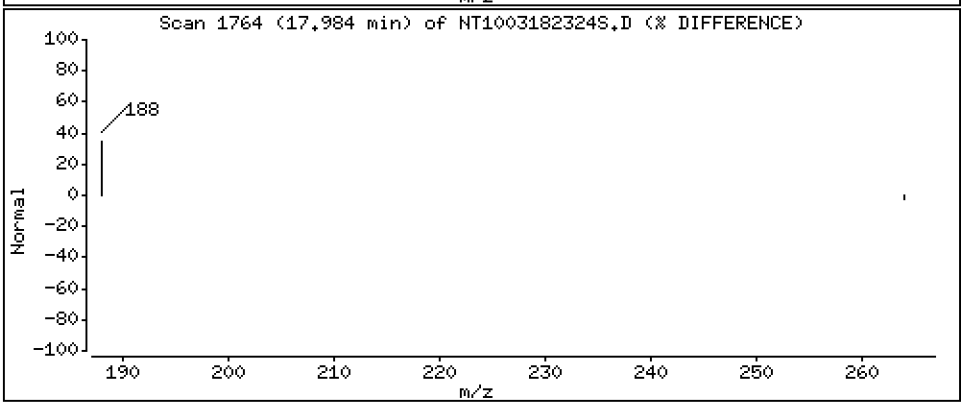












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

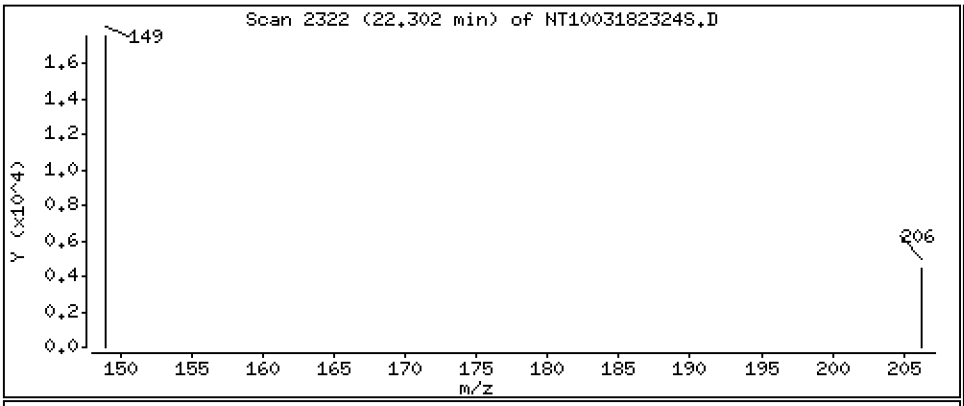
Operator: JGR

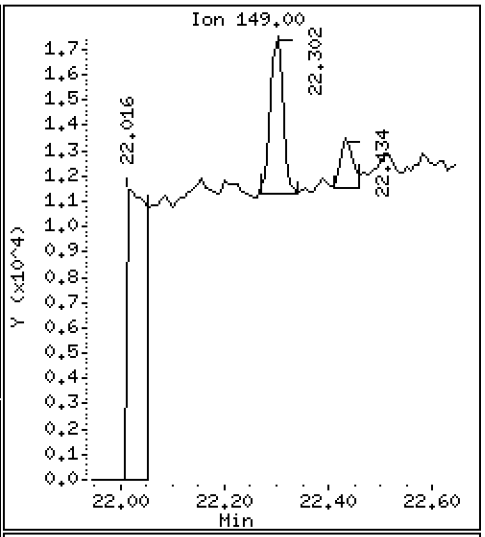
Column phase: ZB-5msi

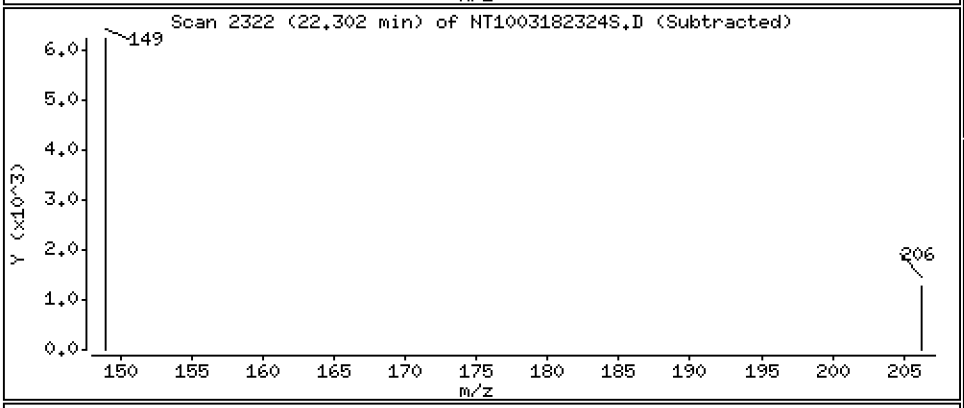
Column diameter: 0.25

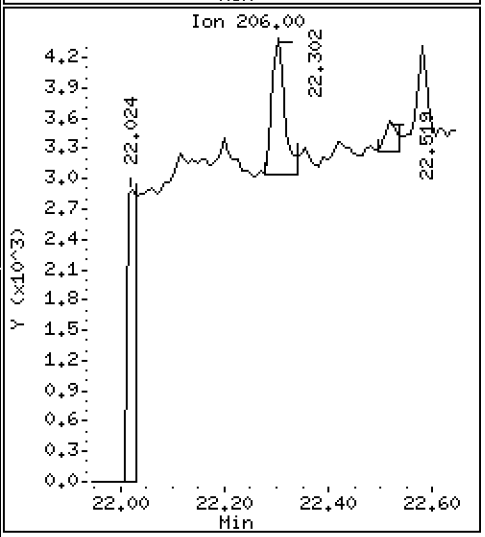
67 Butylbenzylphthalate

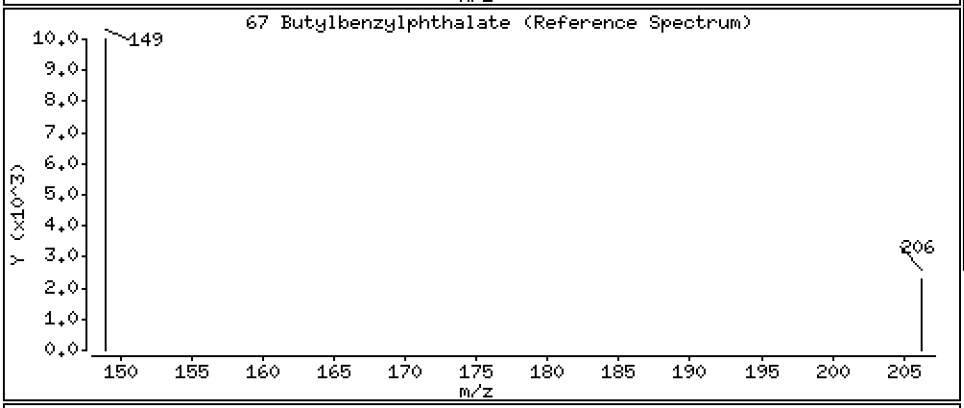
Concentration: 0.09331 ug/L

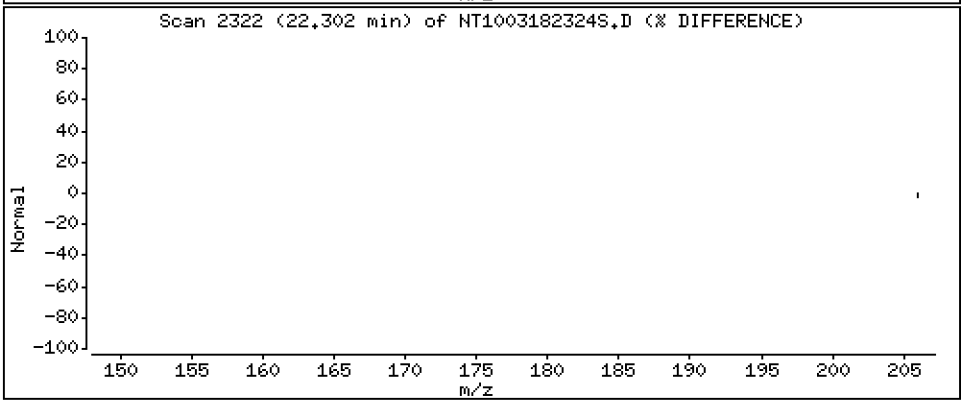












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D

Date : 19-MAR-2023 08:24

Client ID:

Instrument: nt10.i

Sample Info: 23A0467-09

Volume Injected (uL): 1.0

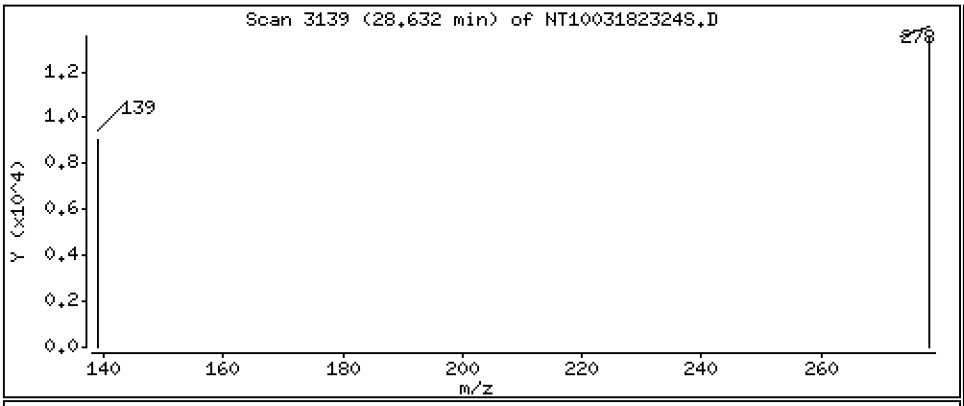
Operator: JGR

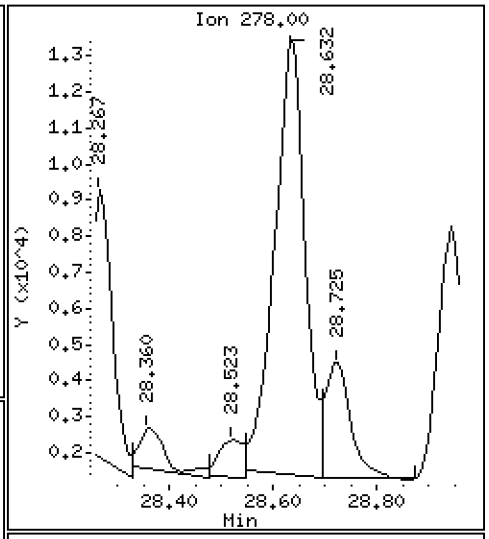
Column phase: ZB-5msi

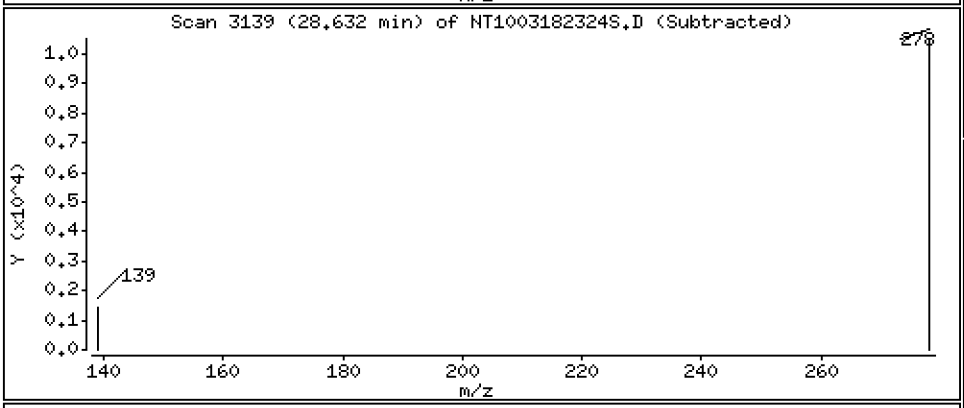
Column diameter: 0.25

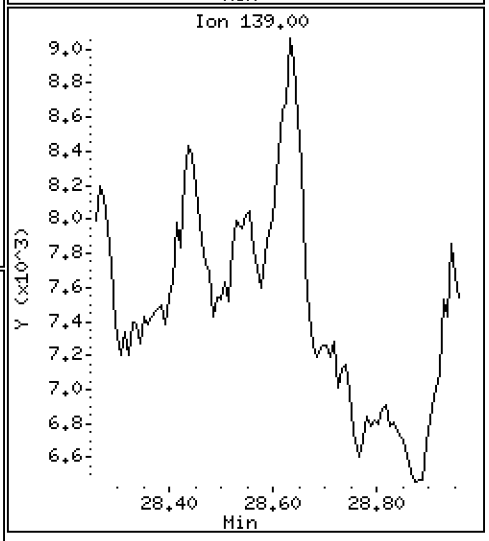
79 Dibenzo(a,h)anthracene

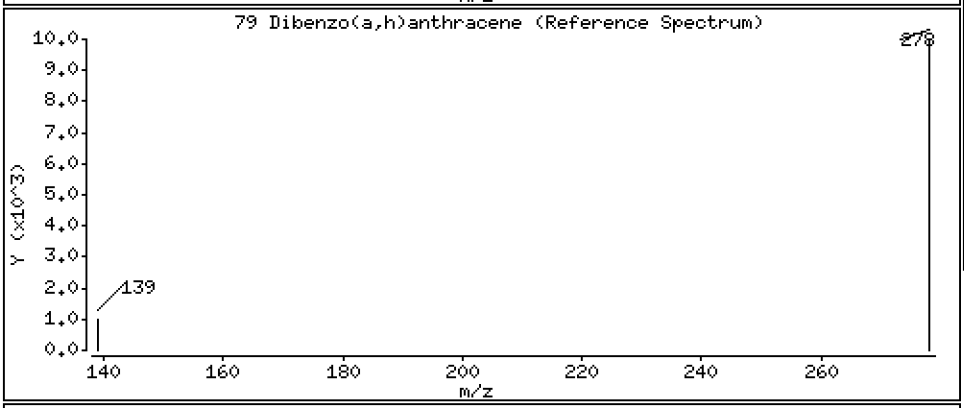
Concentration: 0.1727 ug/L

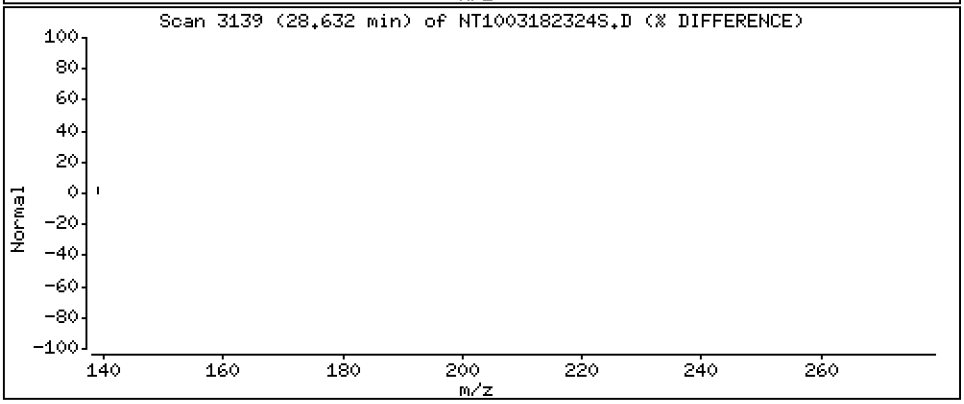












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182324S.D
Lab Smp Id: 23A0467-09
Inj Date : 19-MAR-2023 08:24 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : 23A0467-09
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.988	6.964	(0.762)	420739	5.50627	5.506(R)
3	Phenol	94	8.564	8.548	(0.933)	753374	7.18656	7.187
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	251977	4.00000	
9	1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	1062	0.01122	0.01122(M)
11	Benzyl alcohol	79	9.439	9.438	(1.029)	6256	0.10294	0.1029(M)
12	1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	559	0.00600	0.006003
13	2-Methylphenol	108	9.664	9.656	(1.053)	819	0.01128	0.01128(M)
15	4-Methylphenol	108	9.928	9.920	(1.082)	137417	1.82058	1.821
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.961	10.951	(0.942)	813	0.01035	0.01035
24	Benzoic acid	105	11.054	11.070	(0.950)	21692	0.50441	0.5044
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.636	11.635	(1.000)	908495	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.723	14.722	(0.967)	4495	0.03267	0.03267
* 42	Acenaphthene-d10	162	15.218	15.217	(1.000)	436042	4.00000	
50	Diethylphthalate	149	16.169	16.161	(1.062)	83502	0.58578	0.5858(M)
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.984	17.975	(0.986)	467	0.01545	0.01545(M)
*	59 Phenanthrene-d10	188	18.247	18.246	(1.000)	911685	4.00000	
$	66 Terphenyl-d14	244	21.380	21.372	(0.918)	692376	5.35063	5.351(R)
	67 Butylbenzylphthalate	149	22.302	22.293	(0.958)	9747	0.09331	0.09331
*	69 Chrysene-d12	240	23.285	23.277	(1.000)	794183	4.00000	
*	77 Perylene-d12	264	25.933	25.917	(1.000)	892970	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.632	28.607	(1.104)	50591	0.17272	0.1727
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182324S.D
Lab Smp Id: 23A0467-09
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	251977	12.83
27 Naphthalene-d8	802913	401457	1605826	908495	13.15
42 Acenaphthene-d10	396793	198397	793586	436042	9.89
59 Phenanthrene-d10	821666	410833	1643332	911685	10.96
69 Chrysene-d12	707165	353583	1414330	794183	12.31
77 Perylene-d12	813685	406843	1627370	892970	9.74

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.01
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.01
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.01
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.04
77 Perylene-d12	25.92	25.42	26.42	25.93	0.06

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

REVIEW SUMMARY FOR FILE - NT1003182324S.D

Lab ID: 23A0467-09
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 08:24

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

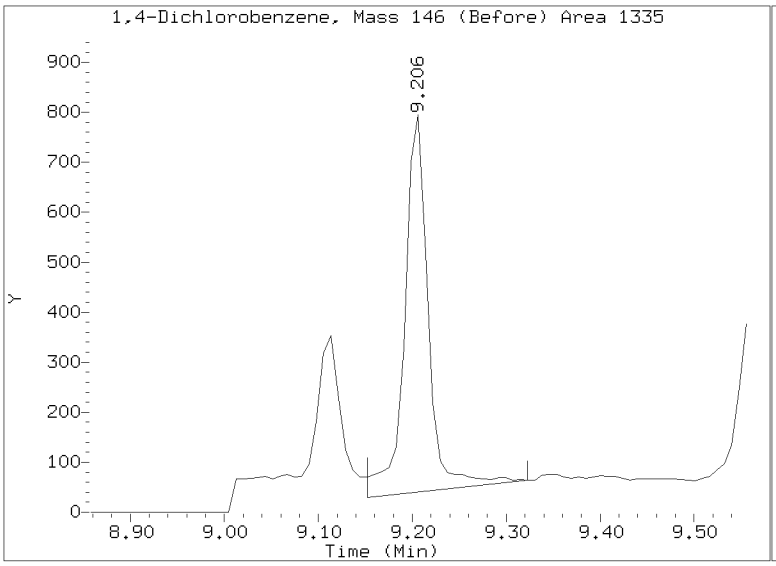
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

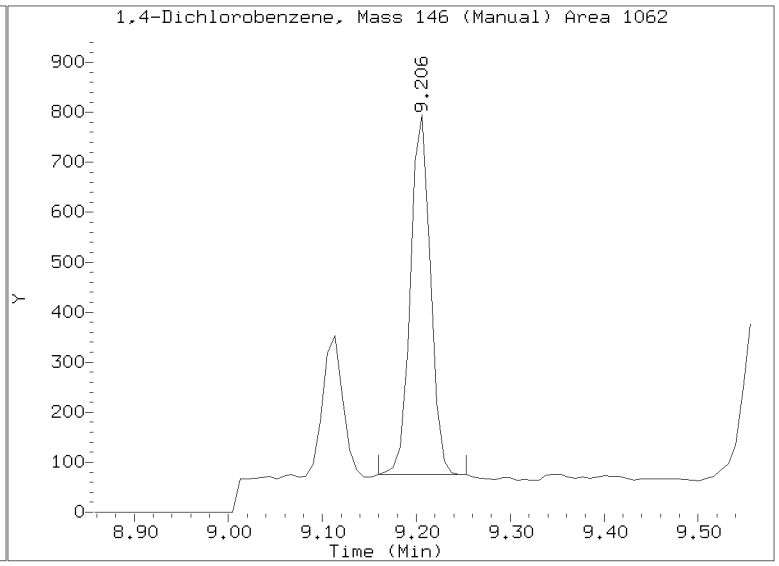
Exception: 1,2,4-Trichlorobenzene 0.0010

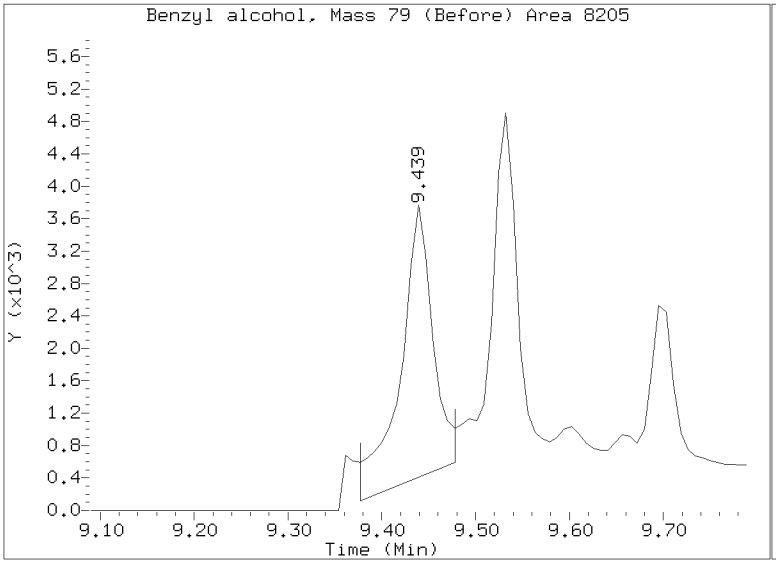
* Only compounds listed in the work order have been verified by the analyst *

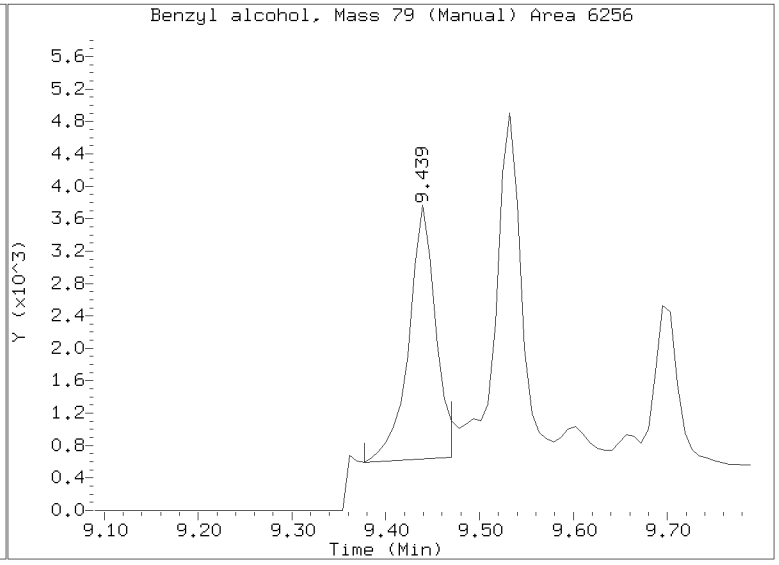
Quant Ion Manual Peak Adjustment Report

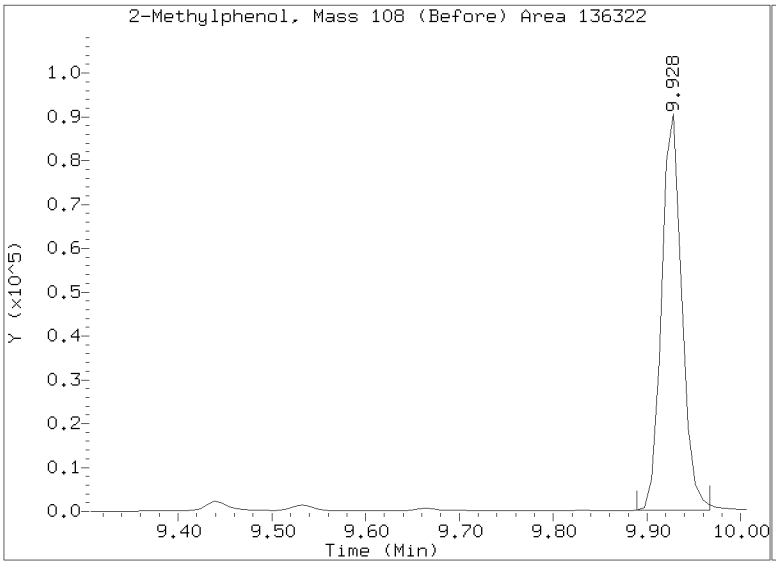
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182324S.D
Injection Date: 19-MAR-2023 08:24
Lab ID:23A0467-09 Client ID:
Report Date: 04/04/2023 13:21

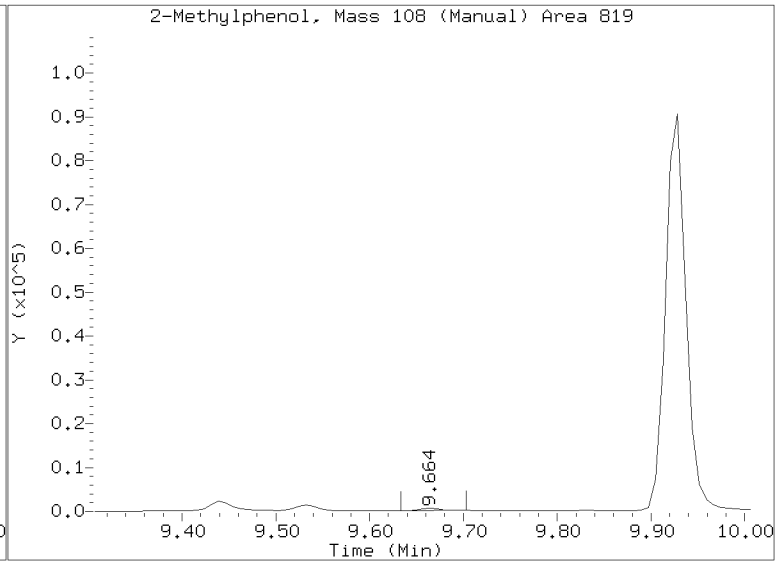






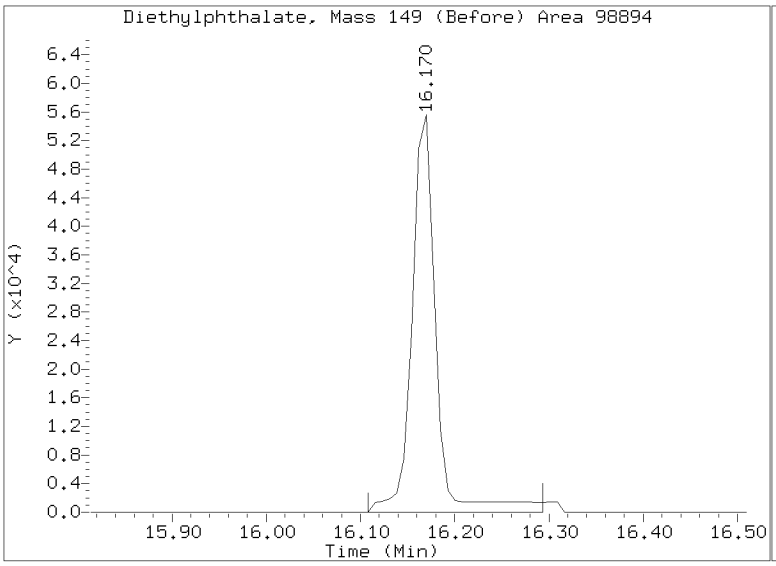


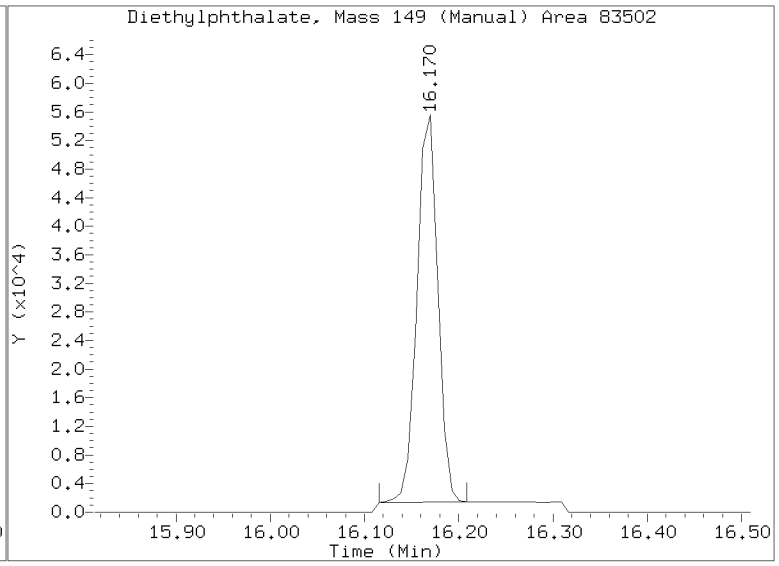


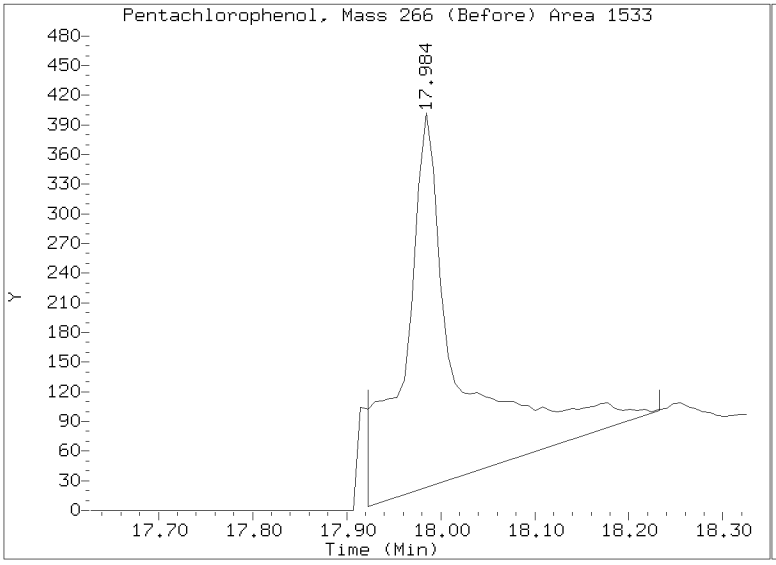


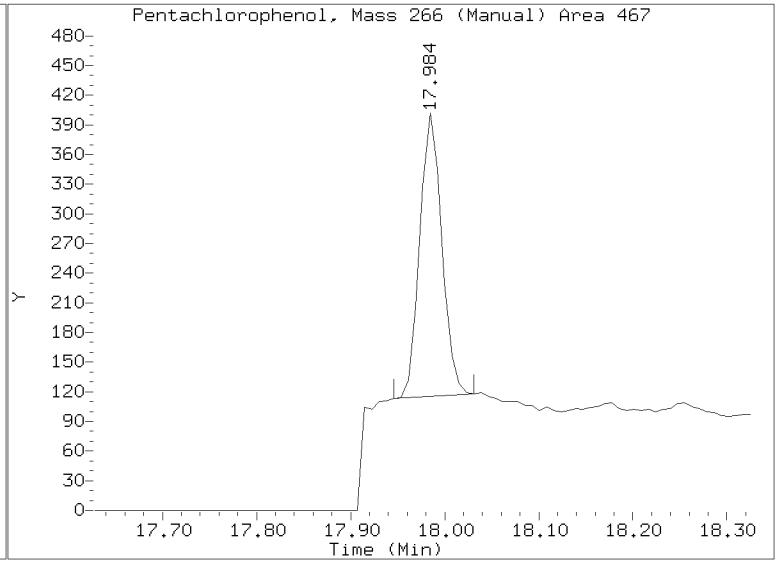
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182324S.D
Injection Date: 19-MAR-2023 08:24
Lab ID:23A0467-09 Client ID:
Report Date: 04/04/2023 13:21









PREPARATION BATCH SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Batch: BLB0579 Batch Matrix: Solid Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	NT1003182310S.D	02/23/23 15:49	
LDW23-SS1005	23A0467-02	NT1003182311S.D	02/23/23 15:49	
LDW23-SS1006	23A0467-03	NT1003182312S.D	02/23/23 15:49	
LDW23-SS1003	23A0467-04	NT1003182313S.D	02/23/23 15:49	
LDW23-SS1004	23A0467-05	NT1003182314S.D	02/23/23 15:49	
LDW23-SS1204	23A0467-06	NT1003182315S.D	02/23/23 15:49	
LDW23-SS1238	23A0467-07	NT1003182320S.D	02/23/23 15:49	
LDW23-SS1013	23A0467-08	NT1003182323S.D	02/23/23 15:49	
LDW23-SS1014	23A0467-09	NT1003182324S.D	02/23/23 15:49	
Blank	BLB0579-BLK2	NT1003182306S.D	02/23/23 15:49	
LCS	BLB0579-BS2	NT1003182307S.D	02/23/23 15:49	
LCS Dup	BLB0579-BSD2	NT1003182308S.D	02/23/23 15:49	
LDW23-SS1238	BLB0579-MS2	NT1003182321S.D	02/23/23 15:49	
LDW23-SS1238	BLB0579-MSD2	NT1003182322S.D	02/23/23 15:49	
Reference	BLB0579-SRM2	NT1003182309S.D	02/23/23 15:49	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

Matrix: Solid **Date Prepared:** 02/23/23 **Balance ID:** B146462614 **Set Up By:** CTO 2/22/23

WO Comments
23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

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

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

Lab Number & Container	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0467-01 A	49.9	(20.04) 20.06	(1:1)	1mL	1	0.5	
23A0467-02 A	46.9	(21.32) 21.35	(1:1)	1mL	1	0.5	
23A0467-03 A	48.0	(20.85) 20.89	(1:1)	1mL	1	0.5	
23A0467-04 A	47.1	(21.22) 21.22	(1:1)	1mL	1	0.5	
23A0467-05 A	55.1	(18.14) 18.17	(1:1)	1mL	1	0.5	
23A0467-06 A	47.2	(21.17) 21.20	(1:1)	1mL	1	0.5	
23A0467-07 A	55.2	(18.12) 18.15	(1:1)	1mL	1	0.5	
23A0467-08 A	48.4	(20.67) 20.67	(1:1)	1mL	1	0.5	
23A0467-09 A	63.8	(15.67) 15.68	(1:1)	1mL	1	0.5	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 10 (Wet) Actual	(REQ) GPC C/U (1:1) 1 2 3	Water Wash 1mL	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0579-BLK1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-BS1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-BSD1	100.0	(10.00) 10.00	(1:1)	1mL	1	0.5	Use 5g Neutral Sodium Sulfate for Blanks
BLB0579-MS1	55.2	(18.12) 18.12	(1:1)	1mL	1	0.5	Use 23A0467-07
BLB0579-MSD1	55.2	(18.12) 18.12	(1:1)	1mL	1	0.5	Use 23A0467-07
BLB0579-SRM1	100.0	~~(10.00)~~ (1.00) 1.00	(1:1)	1mL	1	0.5	Use K003477

+1g DI WATER

N 02/23/23 — Client ID verified By / Date

TWC 3/4/23 — Preparation Reviewed By / Date

02/23/23 15:49 — Extraction Date and Time

Printed: 2/22/2023 3:52:48PM

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
Φ2/24/23
GT
Analyst/Date

Pre-GPC KD
100°C
Exchange to Hexane
(add 10 mL to KD)
0 2 4 5 6
LO 2-27
Analyst/Date

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

Post GPC KD
80-85°C
1 0 2 4 5 6
LO 3-1
Analyst/Date

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

Water Wash
TWC 3/4/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: GT Date: Φ2/24/23	
Anhydrous Sodium Sulfate	LΦΦ1285
1:1 Methylene Chloride/Acetone	LΦΦ1416
Methylene Chloride	KΦΦ5158
Pre-Deactivated Glass Wool	LΦΦΦ252
Pre GPC KD Analyst: LO Date: 2/27/23	
Pre-Deactivated Glass Wool	
Anhydrous Sodium Sulfate	
Methylene Chloride	KΦΦ5158
Hexane	HΦΦ1373
GPC Filter Prep Analyst: LO Date: 2/27/23	
Methylene Chloride	K005158
GPC Filter	L001749
GPC Analyst: GTO Date: 2/28/23	
Methylene Chloride	K005158
GPC Calibration File	CLB0250
Post GPC KD Analyst: LO Date: 3-1-23	
Methylene Chloride	KΦΦ5158
Vialing Analyst: TWC Date: 3/4/23	
Methylene Chloride	K005158

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 100/150µg/mL	A L001153 Exp Date: 8/1/2023	50µL	GT	✓
Full List Spike (Freezer) 100µg/mL	7 L001812 (V) Exp LΦ91781 Date: 8/4/2023	50µL	GT	✓
Base Spike 200µg/mL	56 L001812 (V) Exp LΦ41778 Date: 8/24/2023	50µL	GT	✓
Acid Spike 100/200µg/mL	38 L001812 (V) Exp LΦ41779 Date: 8/24/2023	50µL	GT	✓

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0579

Prepared using: EPA 3546 (Microwave)

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

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: SVOA Extraction Batch BLB0579

Total Solids Batch: BLB0378 Work Order(s): 23A0467

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-05	CR 2/20/23
☒ Standing Water Decanted (Not shared)= 01-09	CR 2/20/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/sulfur odors= 06,07,08,09	CR 2/20/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-09	CR 2/20/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 2/20/23
☒ Multiple Jars Y / (N)	CR 2/20/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0039	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8270E-SIM

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1204	23A0467-06	NT1003182315S.D	02/28/2023	
Reference	BLB0579-SRM2	NT1003182309S.D	02/28/2023	
LDW23-SS1003	23A0467-04	NT1003182313S.D	02/28/2023	
LDW23-SS1004	23A0467-05	NT1003182314S.D	02/28/2023	
LDW23-SS1005	23A0467-02	NT1003182311S.D	02/28/2023	
LDW23-SS1006	23A0467-03	NT1003182312S.D	02/28/2023	
LDW23-SS1010	23A0467-01	NT1003182310S.D	02/28/2023	
LDW23-SS1014	23A0467-09	NT1003182324S.D	02/28/2023	
LDW23-SS1238	23A0467-07	NT1003182320S.D	02/28/2023	
Blank	BLB0579-BLK2	NT1003182306S.D	02/28/2023	
Matrix Spike Dup	BLB0579-MSD2	NT1003182322S.D	02/28/2023	
Matrix Spike	BLB0579-MS2	NT1003182321S.D	02/28/2023	
LDW23-SS1013	23A0467-08	NT1003182323S.D	02/28/2023	
LCS	BLB0579-BS2	NT1003182307S.D	02/28/2023	
LCS Dup	BLB0579-BSD2	NT1003182308S.D	02/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0039

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0150-GPC2** **Printed: 3/4/2023 12:45:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-01	A	LDW23-SS1010	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-02	A	LDW23-SS1005	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-02	A	LDW23-SS1005	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-03	A	LDW23-SS1006	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-03	A	LDW23-SS1006	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-04	A	LDW23-SS1003	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-04	A	LDW23-SS1003	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-05	A	LDW23-SS1004	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-05	A	LDW23-SS1004	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-06	A	LDW23-SS1204	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-06	A	LDW23-SS1204	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-07	A	LDW23-SS1238	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-07	A	LDW23-SS1238	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-08	A	LDW23-SS1013	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
23A0467-08	A	LDW23-SS1013	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-09	A	LDW23-SS1014	A 02	1	1	SVOC (20ug/kg solid or 0.2ug/L low H2	2/28/2023	CTO	
23A0467-09	A	LDW23-SS1014	A 04	1	1	8270E-SIM Dual Scan SVOC	2/28/2023	CTO	
BLB0579-BLK1	-	Blank	-	1	1	-	2/28/2023	CTO	
BLB0579-BLK2	-	Blank	-	1	1	-	2/28/2023	CTO	
BLB0579-BS1	-	LCS	-	1	1	-	2/28/2023	CTO	
BLB0579-BS2	-	LCS	-	1	1	-	2/28/2023	CTO	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0039

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0150-GPC2** **Printed: 3/4/2023 12:45:16PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
BLB0579-BSD1	-	LCS Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-BSD2	-	LCS Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-MS1	-	Matrix Spike	-	1	1	-	2/28/2023	CTO	
BLB0579-MS2	-	Matrix Spike	-	1	1	-	2/28/2023	CTO	
BLB0579-MSD1	-	Matrix Spike Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-MSD2	-	Matrix Spike Dup	-	1	1	-	2/28/2023	CTO	
BLB0579-SRM1	-	Reference	-	1	1	-	2/28/2023	CTO	
BLB0579-SRM2	-	Reference	-	1	1	-	2/28/2023	CTO	

Form I

METHOD BLANK DATA SHEET

EPA 8270E-SIM

Blank

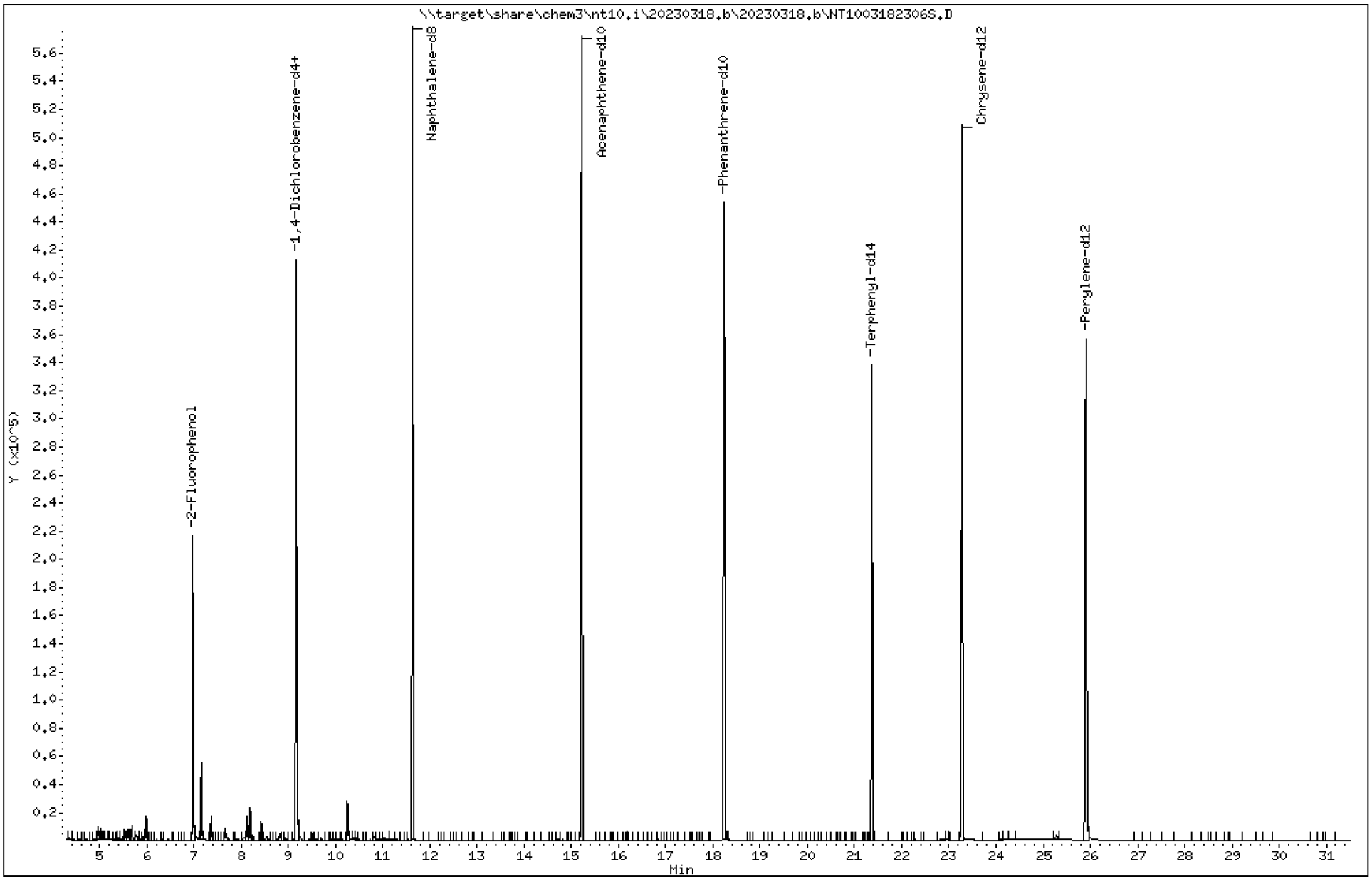
Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0579-BLK2	File ID:	NT1003182306S.D
Sampled:	N/A	Prepared:	02/23/23 15:49	Analyzed:	03/18/23 20:55
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	10 g / 1 mL
Batch:	BLB0579	Sequence:	SLC0505	Calibration:	GC00049
Instrument:	NT10	Column:	ZB-5MSi	Cleanups:	GPC

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
106-46-7	1,4-Dichlorobenzene	1	5.0	U	0.6	5.0
95-50-1	1,2-Dichlorobenzene	1	5.0	U	0.7	5.0
100-51-6	Benzyl Alcohol	1	20.0	U	2.5	20.0
65-85-0	Benzoic acid	1	100	U	13.4	100
105-67-9	2,4-Dimethylphenol	1	20.0	U	2.2	20.0
120-82-1	1,2,4-Trichlorobenzene	1	5.0	U	2.7	5.0
86-30-6	N-Nitrosodiphenylamine	1	5.0	U	1.3	5.0
87-86-5	Pentachlorophenol	1	20.0	U	2.1	20.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
2-Fluorophenol	750.00	266	35.5	27 - 120	
p-Terphenyl-d14	500.00	401	80.3	37 - 120	

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823068.D
Date : 18-MAR-2023 20:55
Client ID:
Sample Info: BLB0579-BLK2
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



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Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

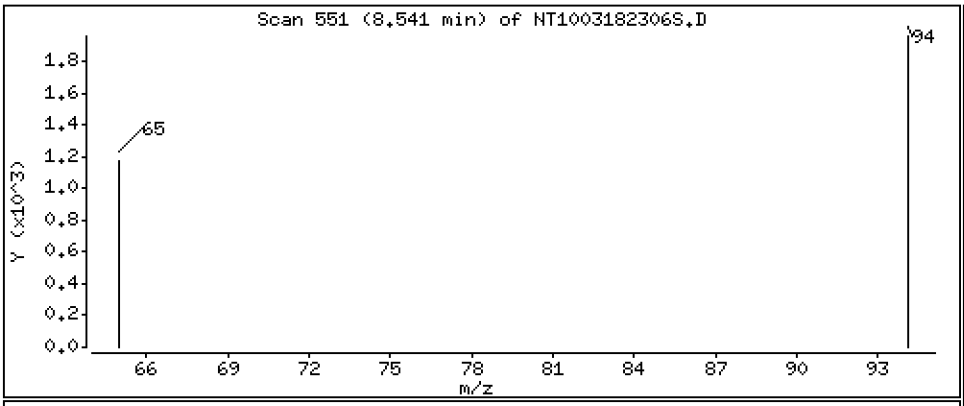
Operator: JGR

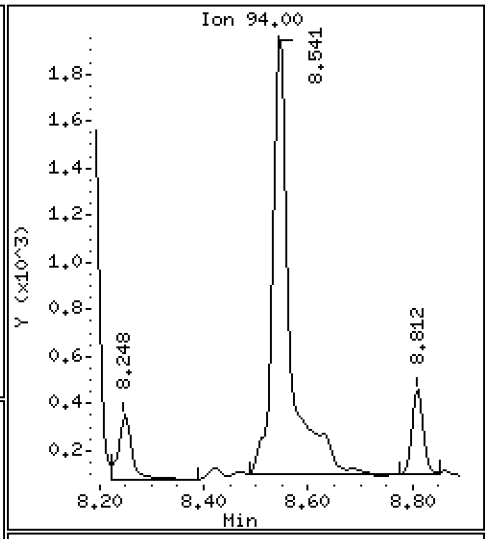
Column phase: ZB-5msi

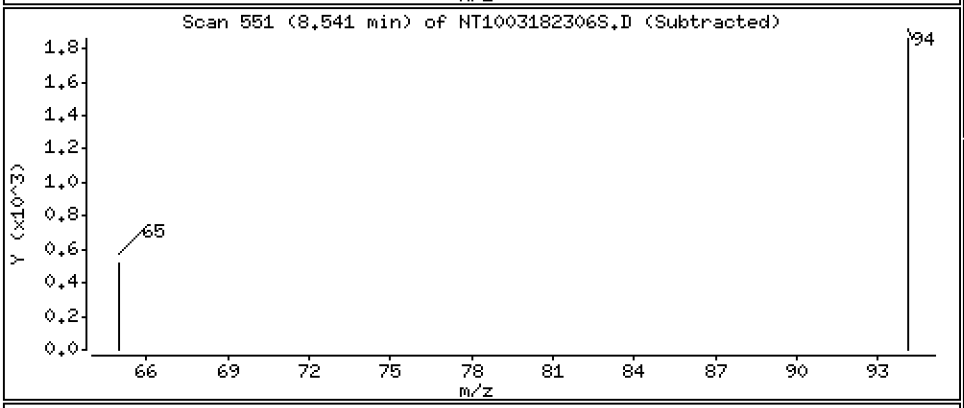
Column diameter: 0.25

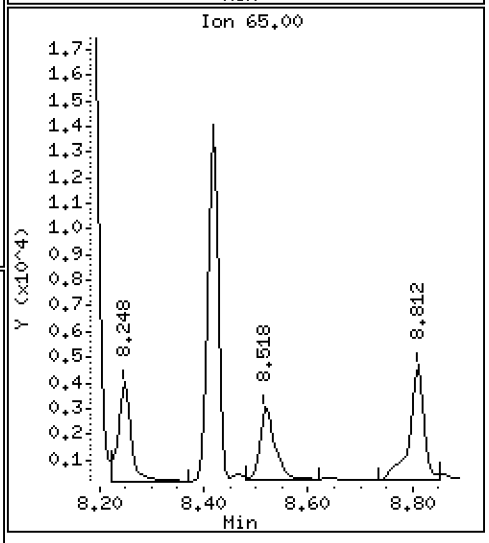
3 Phenol

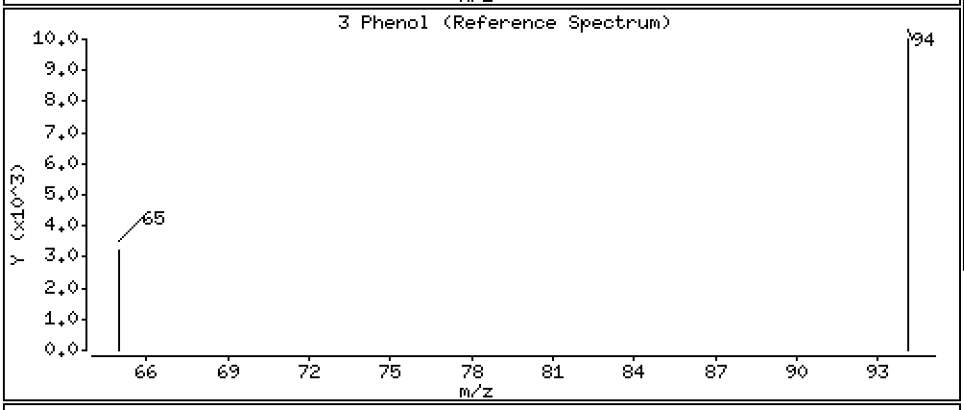
Concentration: 0.04025 ug/L

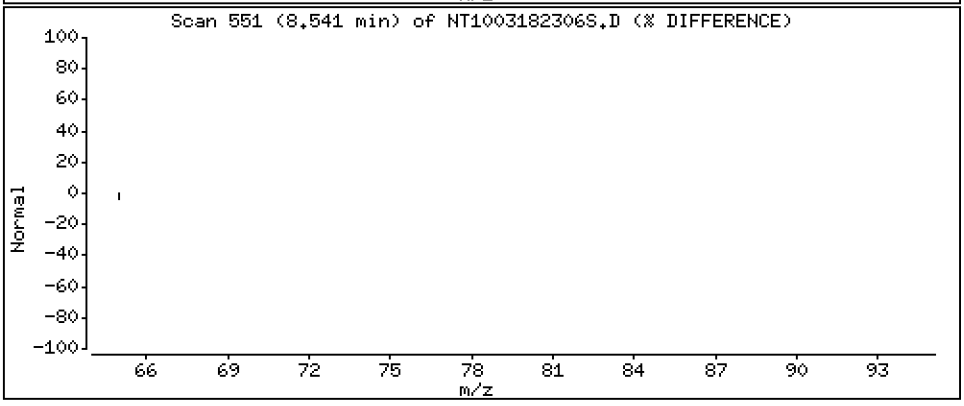












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

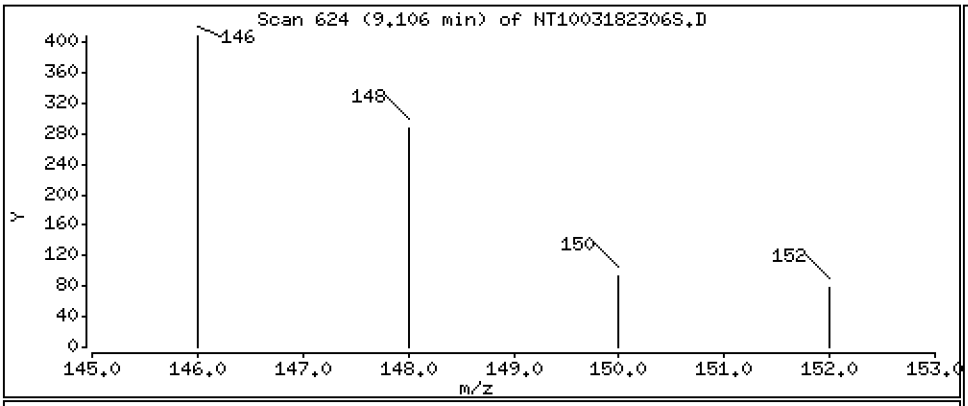
Operator: JGR

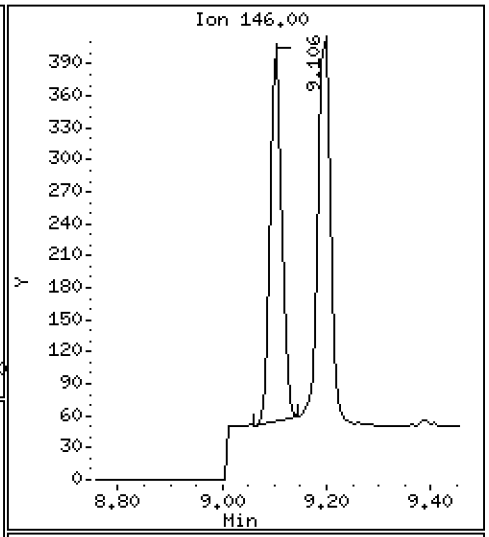
Column phase: ZB-5msi

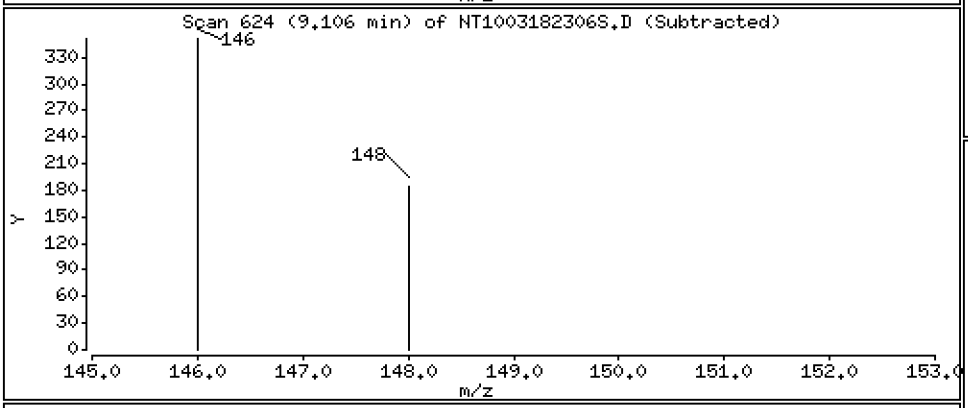
Column diameter: 0.25

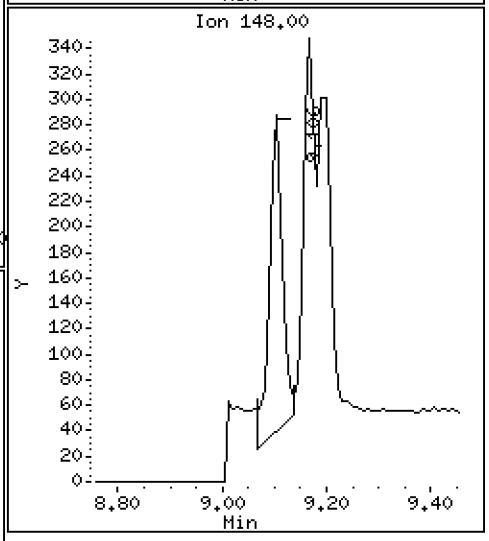
7 1,3-Dichlorobenzene

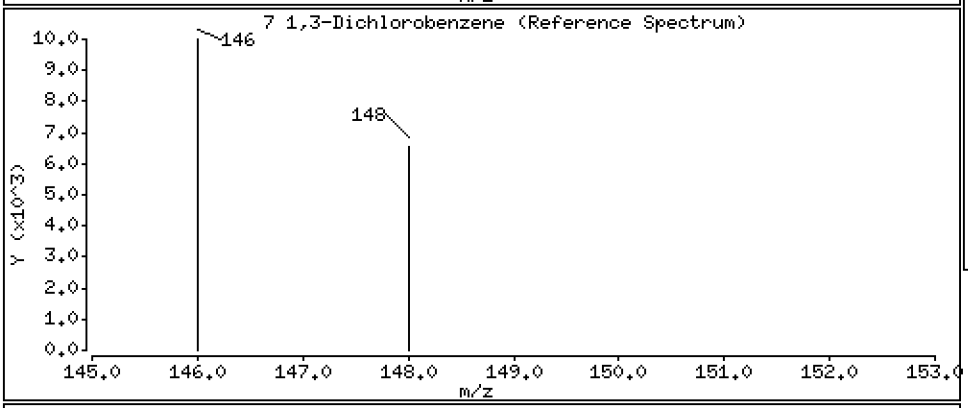
Concentration: 0.005473 ug/L

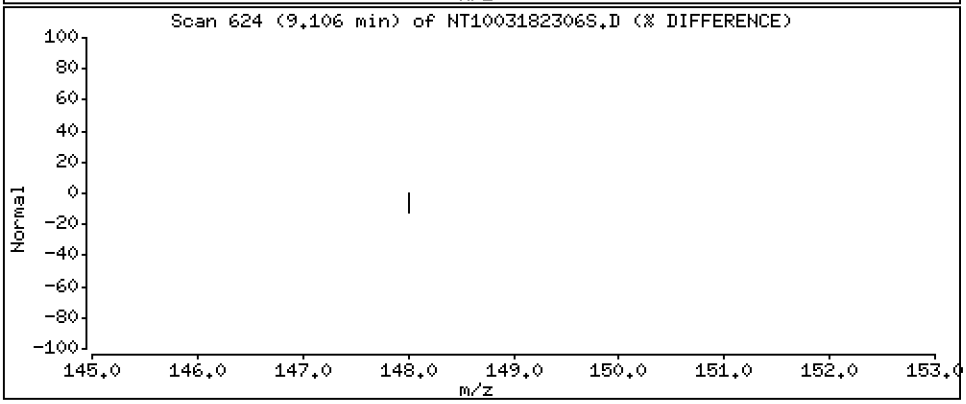












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

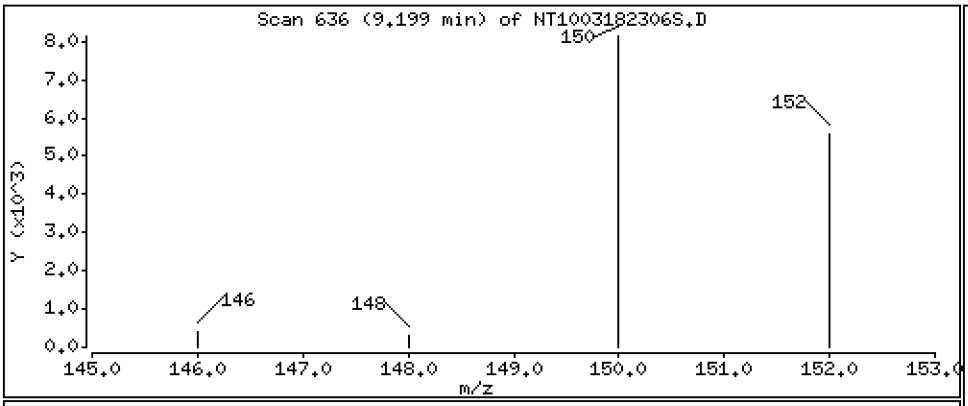
Operator: JGR

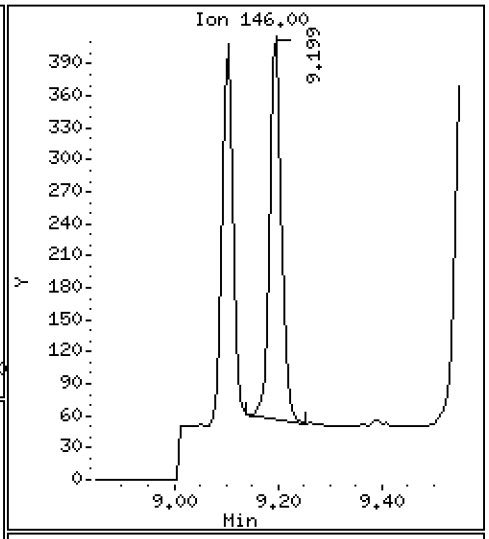
Column phase: ZB-5msi

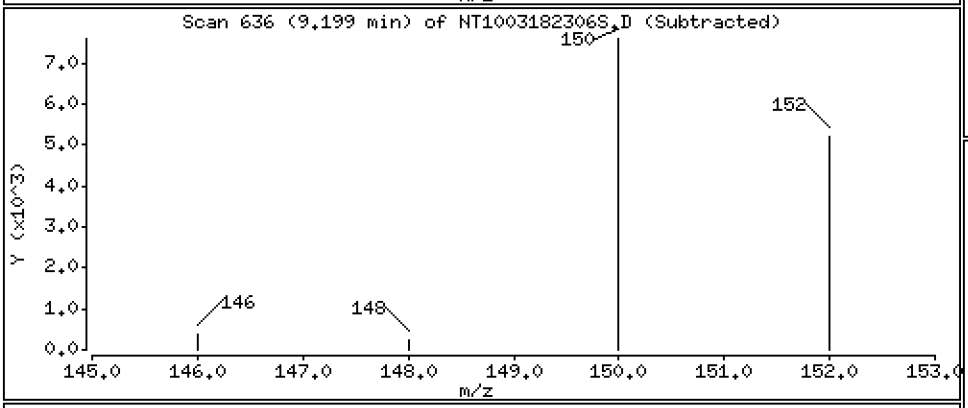
Column diameter: 0.25

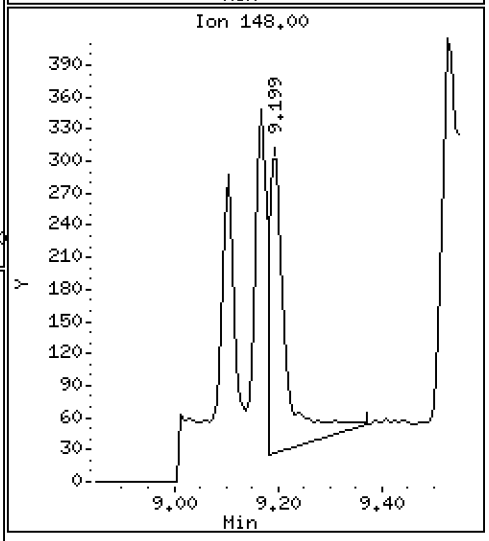
9 1,4-Dichlorobenzene

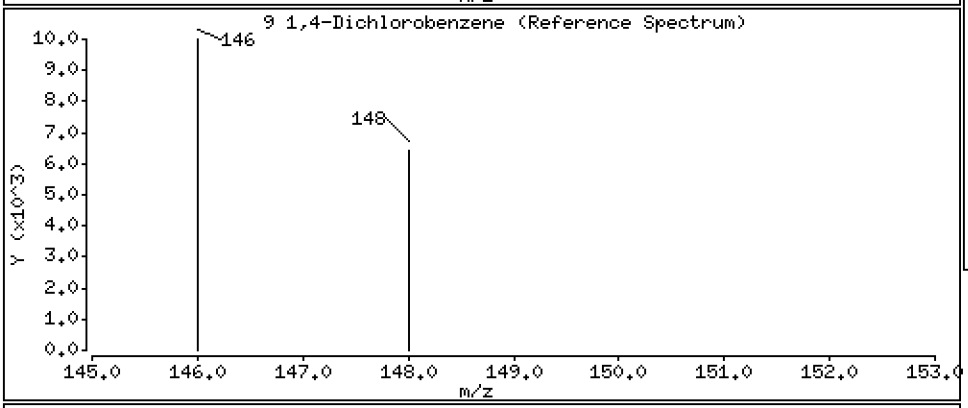
Concentration: 0.005914 ug/L

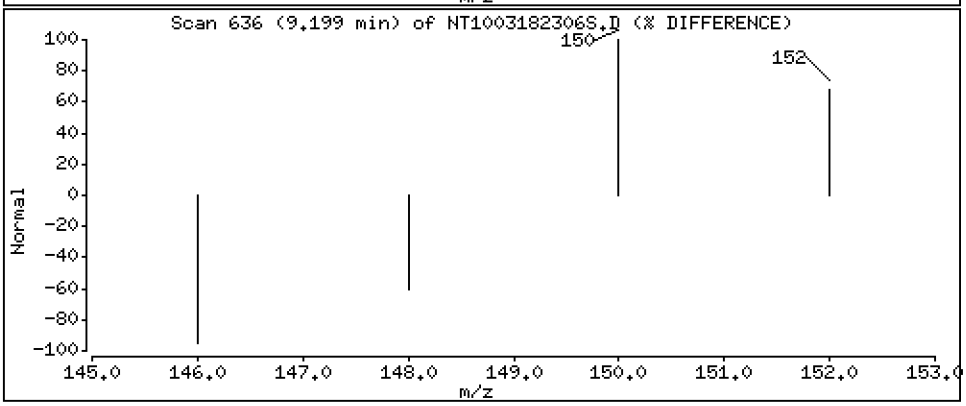












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

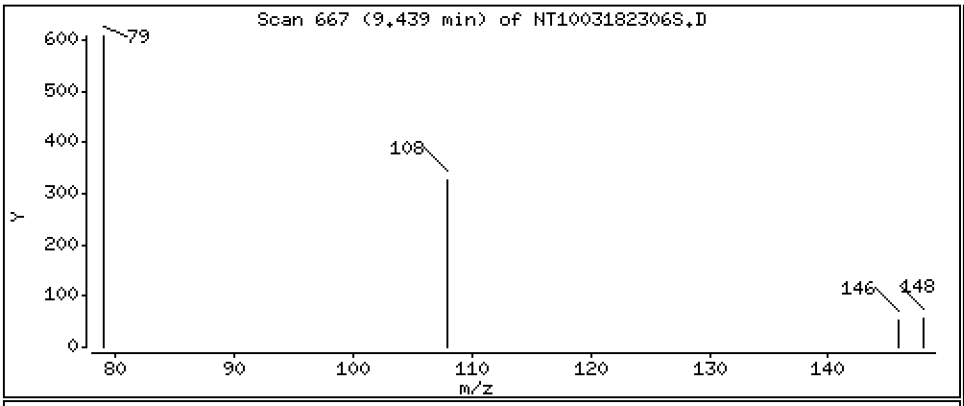
Operator: JGR

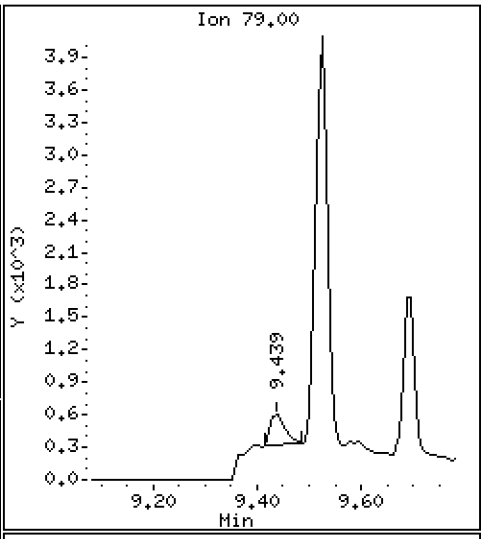
Column phase: ZB-5msi

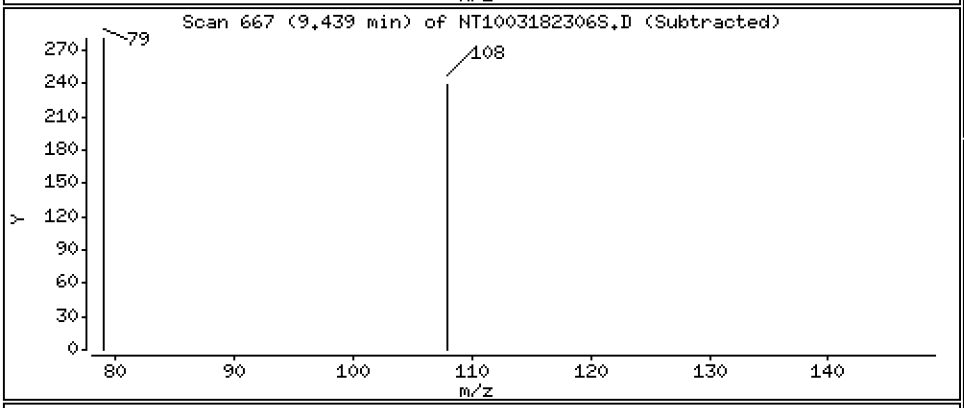
Column diameter: 0.25

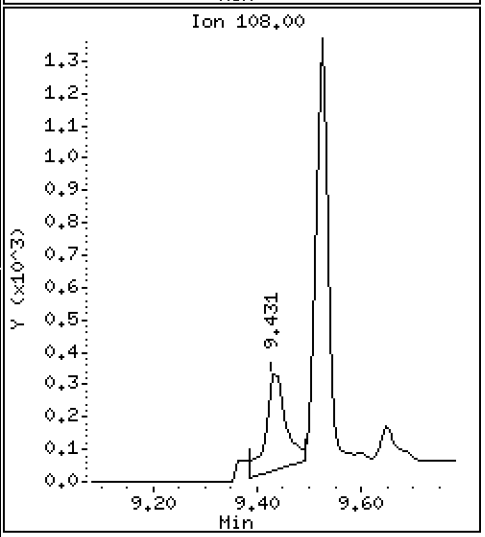
11 Benzyl alcohol

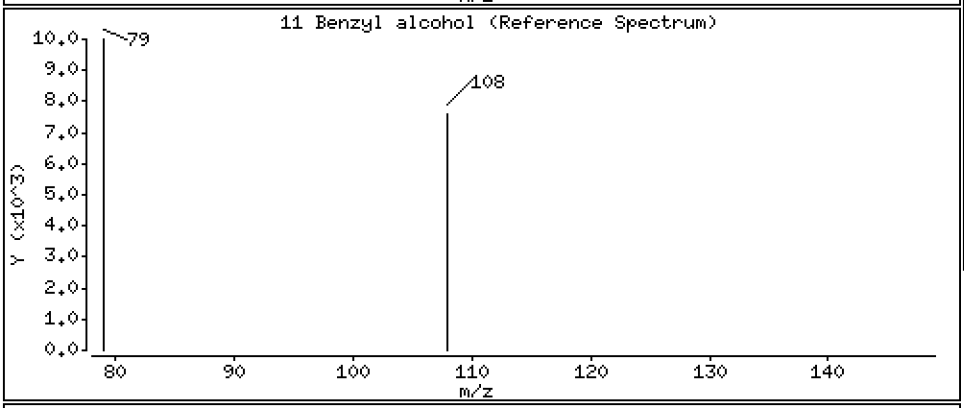
Concentration: 0.008354 ug/L

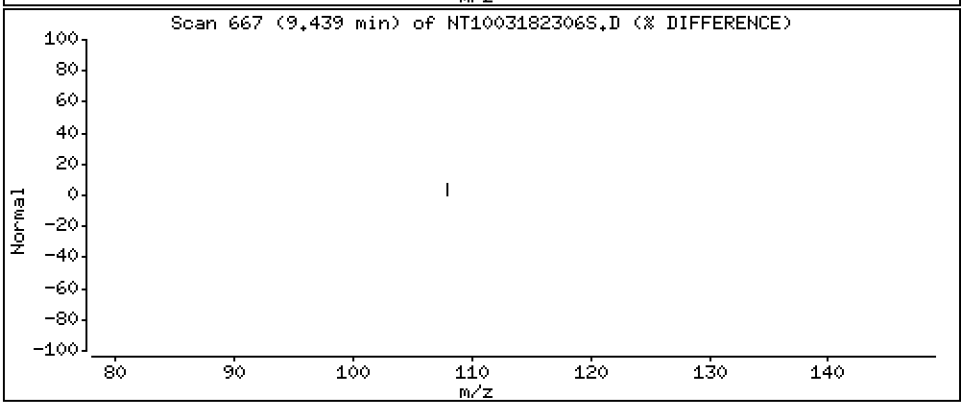












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823065.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

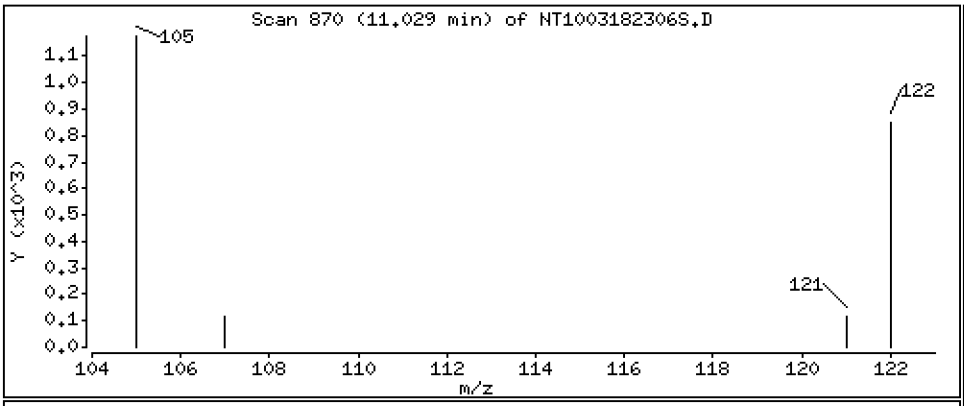
Operator: JGR

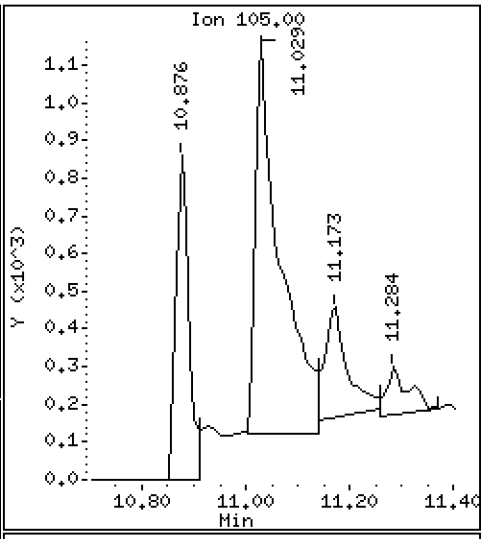
Column phase: ZB-5msi

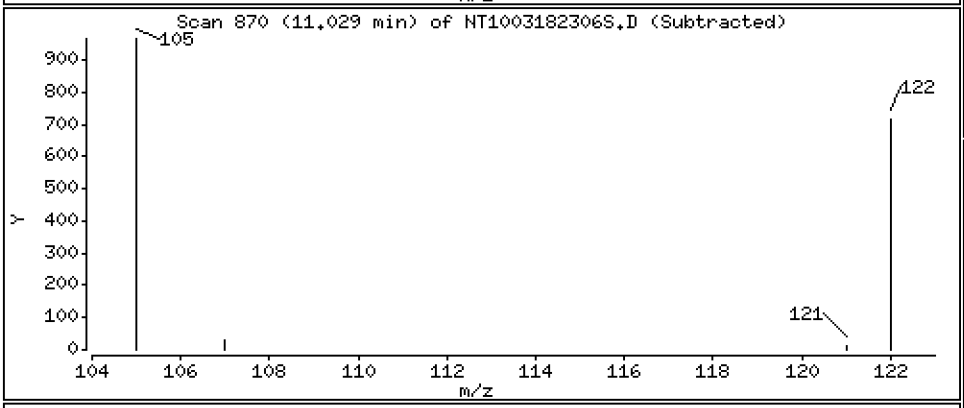
Column diameter: 0.25

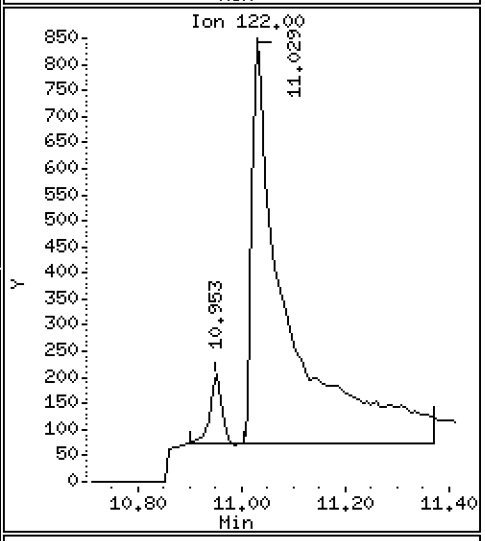
24 Benzoic acid

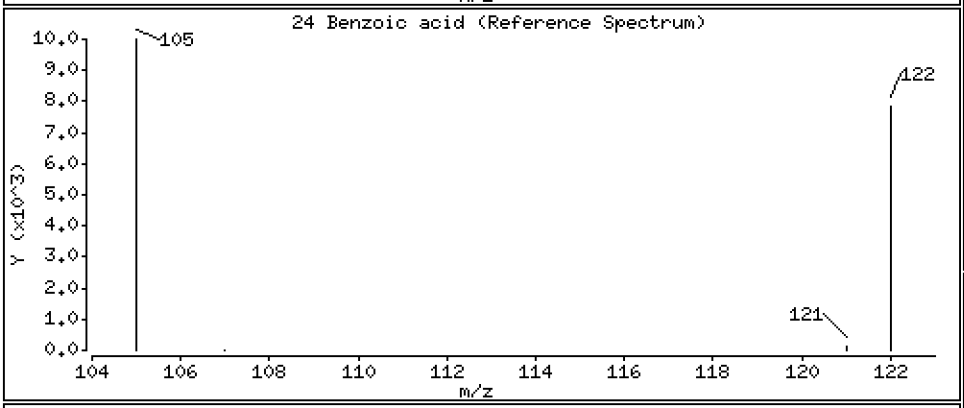
Concentration: 0.08351 ug/L

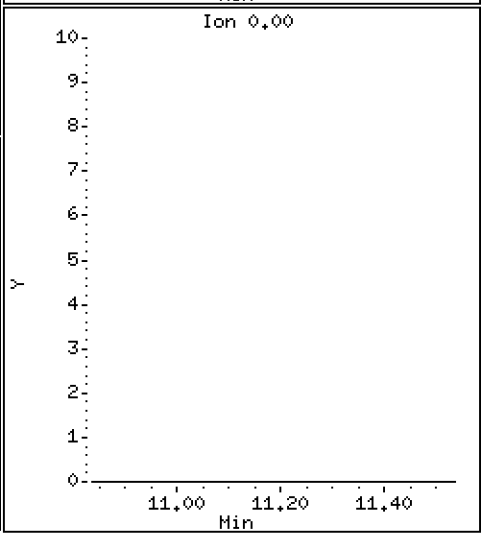


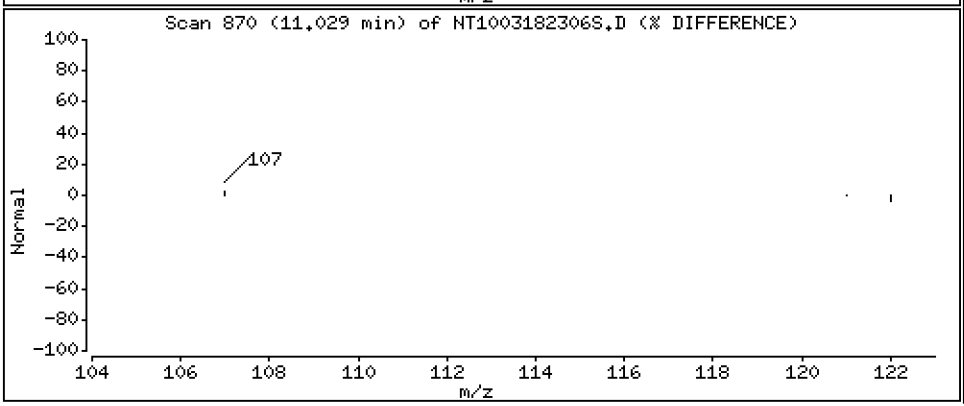












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

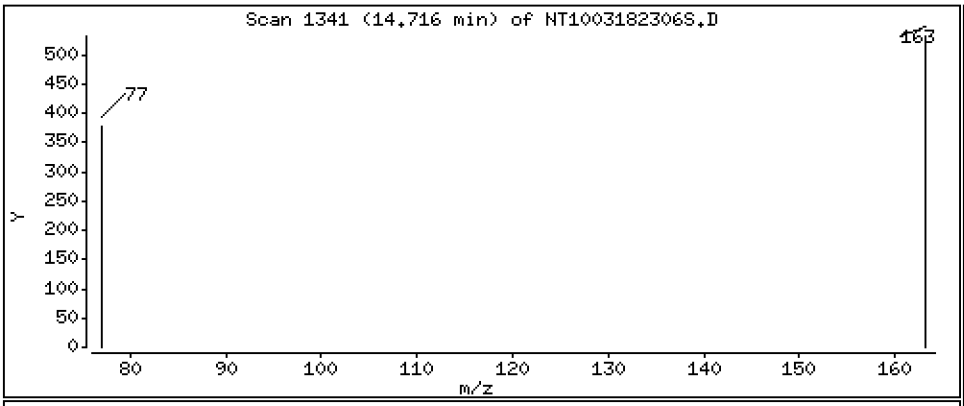
Operator: JGR

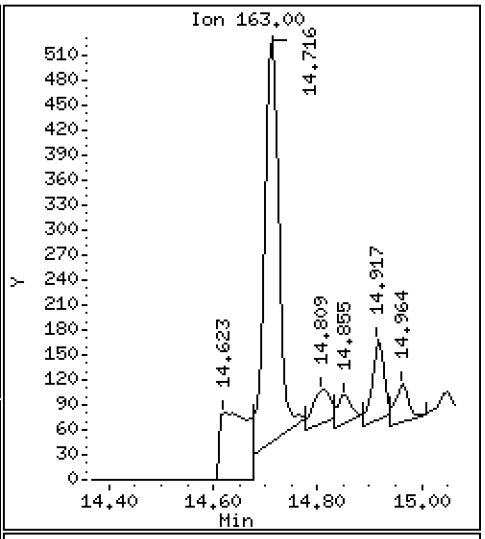
Column phase: ZB-5msi

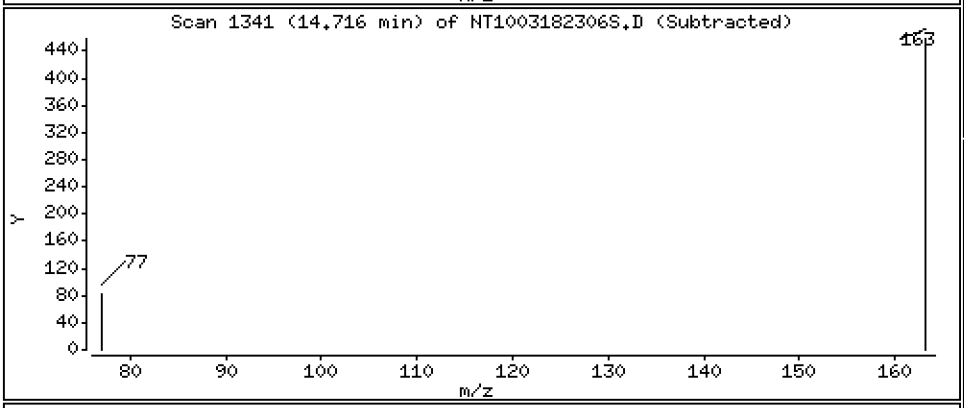
Column diameter: 0.25

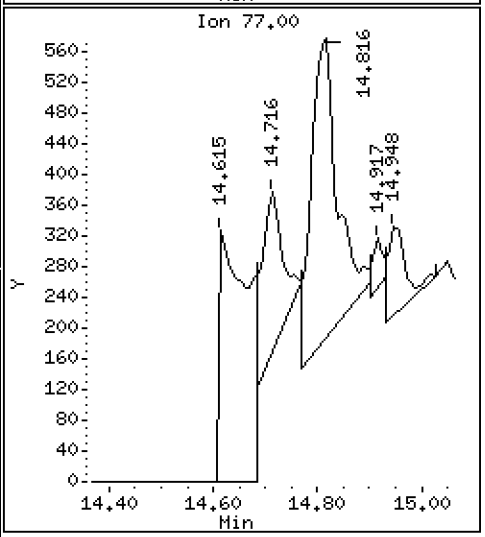
39 Dimethylphthalate

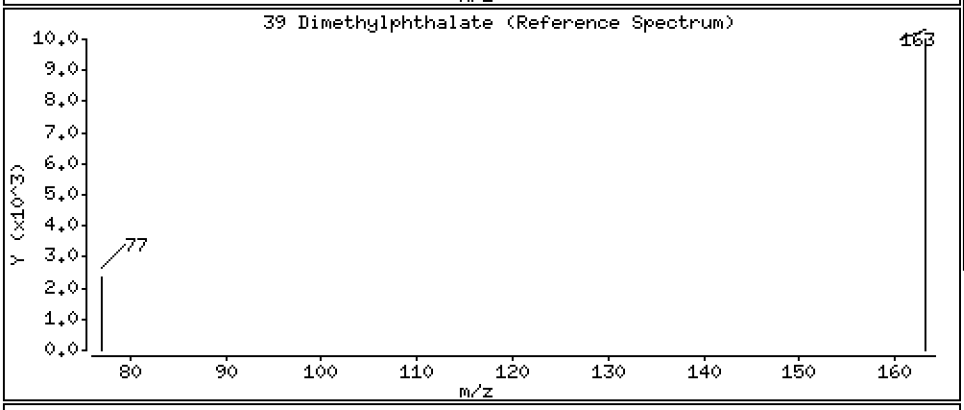
Concentration: 0.006667 ug/L

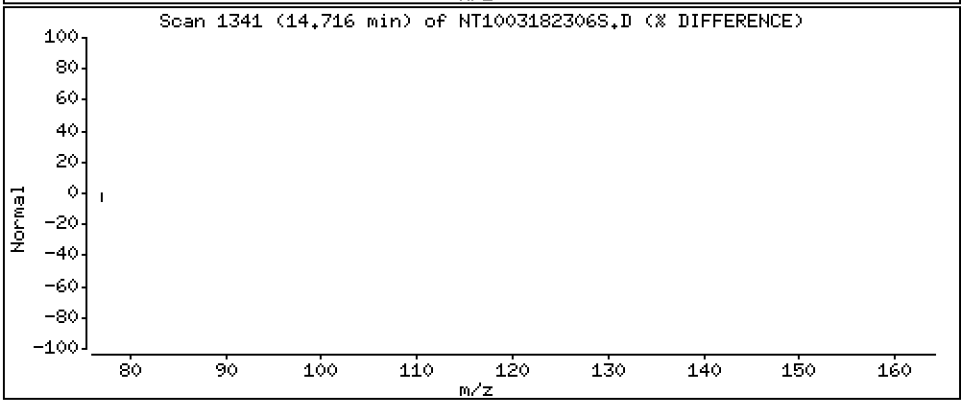












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D

Date : 18-MAR-2023 20:55

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BLK2

Volume Injected (uL): 1.0

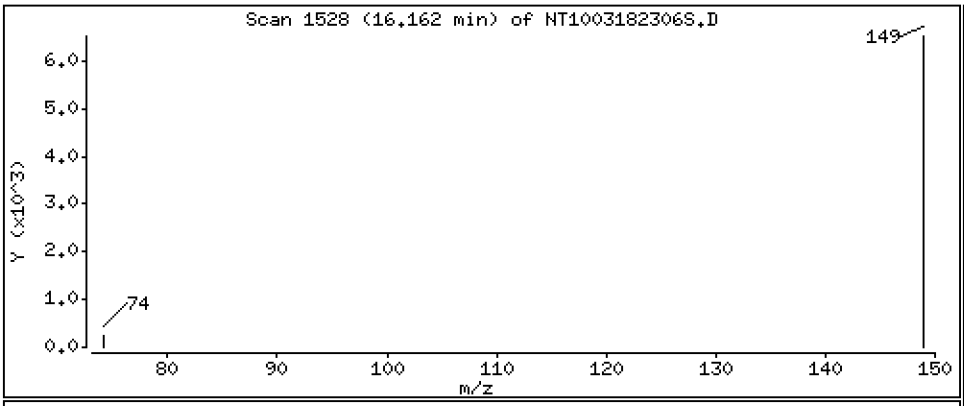
Operator: JGR

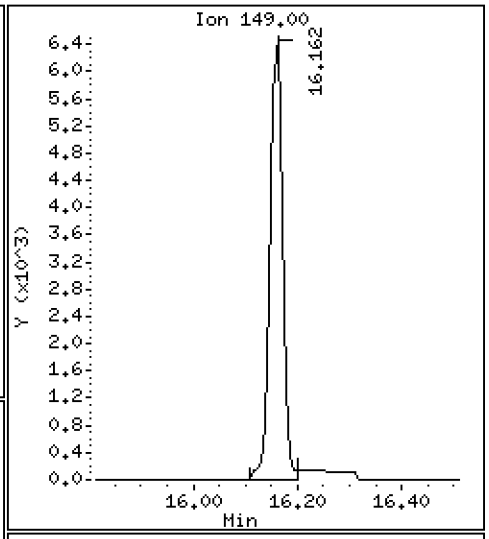
Column phase: ZB-5msi

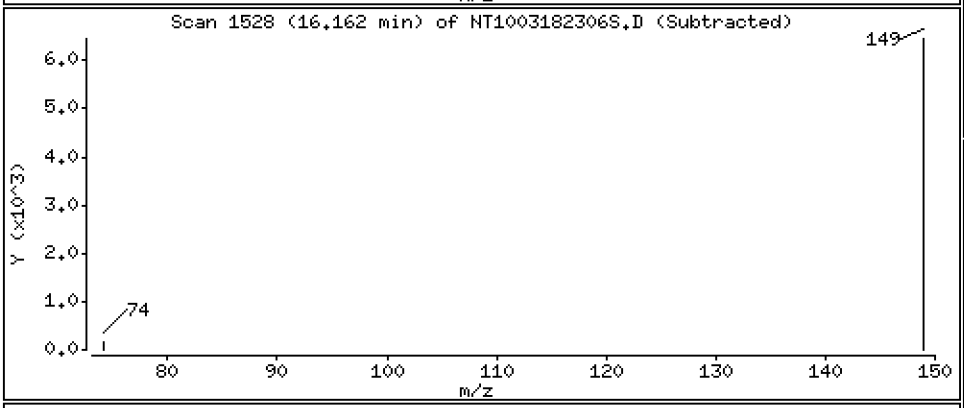
Column diameter: 0.25

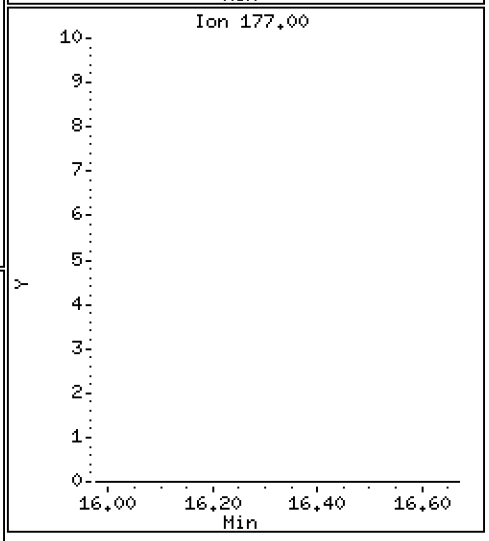
50 Diethylphthalate

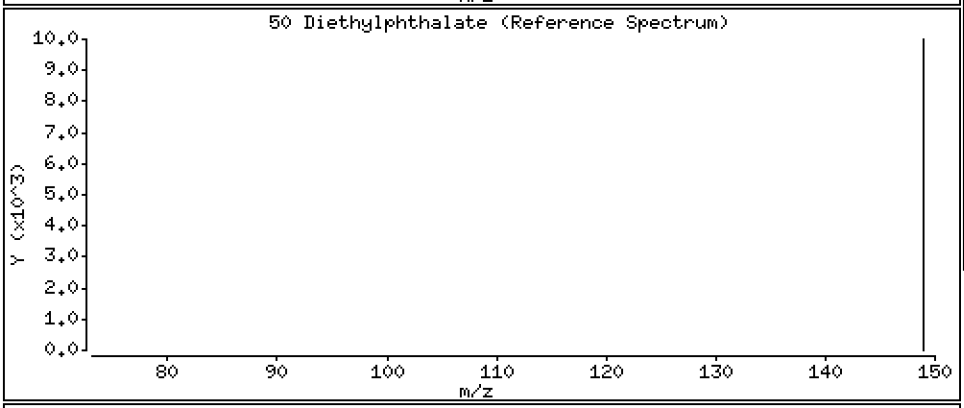
Concentration: 0.07399 ug/L

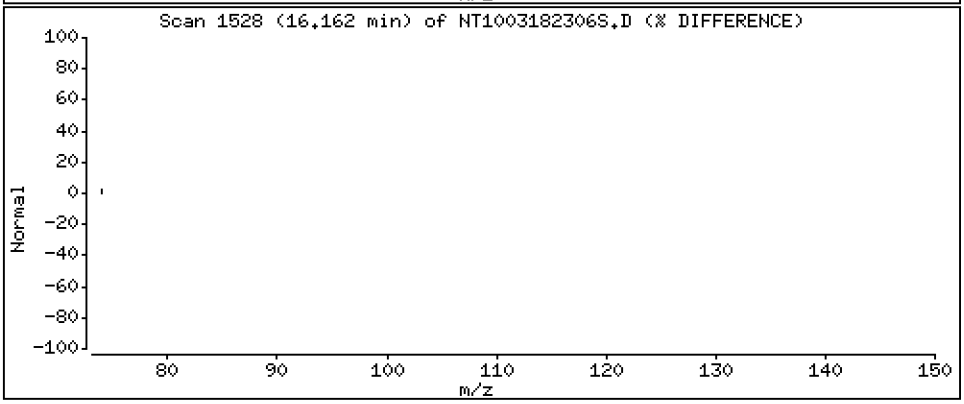












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182306S.D
Lab Smp Id: BLB0579-BLK2
Inj Date : 18-MAR-2023 20:55 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-BLK2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.972	6.957	(0.761)	202376	2.66281	2.663(R)
3	Phenol	94	8.541	8.541	(0.932)	4197	0.04025	0.04025
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	534	0.00547	0.005473(M)
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	250625	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	557	0.00591	0.005914(M)
11	Benzyl alcohol	79	9.439	9.431	(1.030)	505	0.00835	0.008354(M)
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
24	Benzoic acid	105	11.029	11.053	(0.948)	3485	0.08351	0.08351
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.628	11.627	(1.000)	883087	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	14.715	14.714	(0.967)	893	0.00667	0.006667
* 42	Acenaphthene-d10	162	15.211	15.210	(1.000)	424457	4.00000	
50	Diethylphthalate	149	16.161	16.161	(1.063)	10267	0.07399	0.07399
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.232	18.231	(1.000)	779040	4.00000	
$	66 Terphenyl-d14	244	21.365	21.364	(0.918)	415073	4.01432	4.014(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.270	23.269	(1.000)	634594	4.00000	
*	77 Perylene-d12	264	25.902	25.909	(1.000)	681042	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182306S.D
Lab Smp Id: BLB0579-BLK2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	250625	26.61
27 Naphthalene-d8	704013	352007	1408026	883087	25.44
42 Acenaphthene-d10	353977	176989	707954	424457	19.91
59 Phenanthrene-d10	686752	343376	1373504	779040	13.44
69 Chrysene-d12	597733	298867	1195466	634594	6.17
77 Perylene-d12	645663	322832	1291326	681042	5.48

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.01
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.01
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
77 Perylene-d12	25.91	25.41	26.41	25.90	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003182306S.D

Lab ID: BLB0579-BLK2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 20:55

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

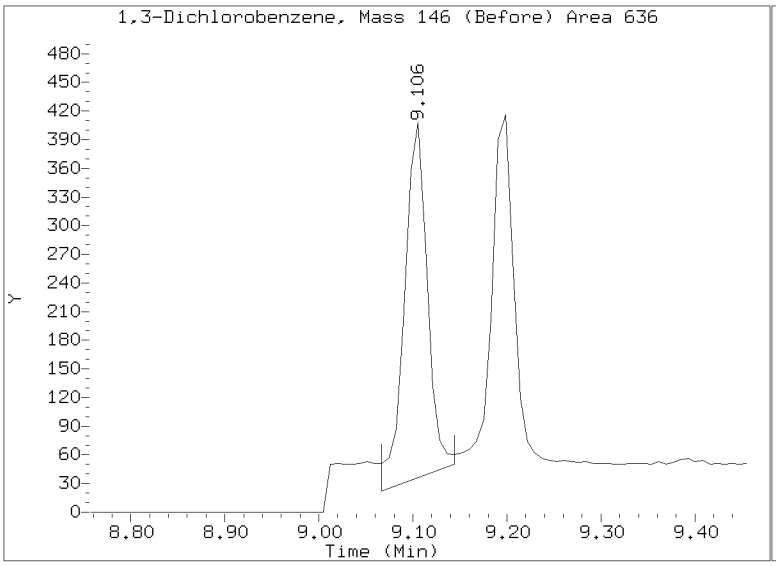
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

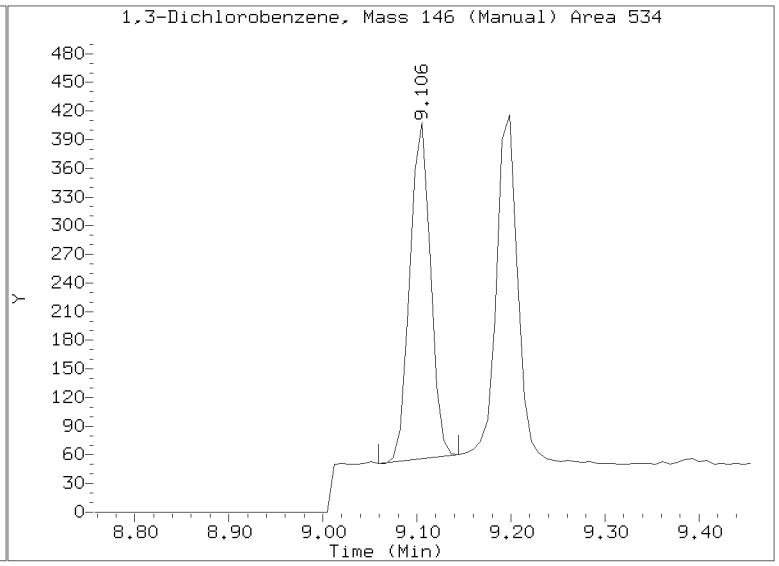
Exception: 1,2,4-Trichlorobenzene 0.0010

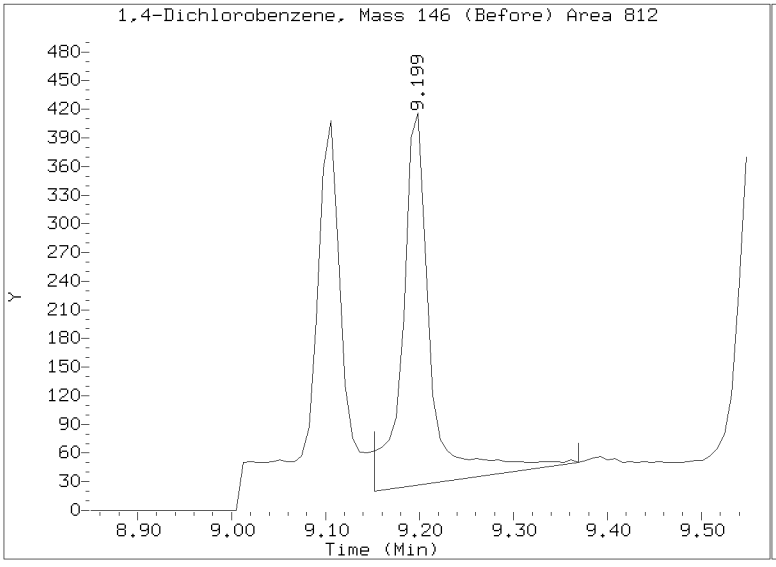
* Only compounds listed in the work order have been verified by the analyst *

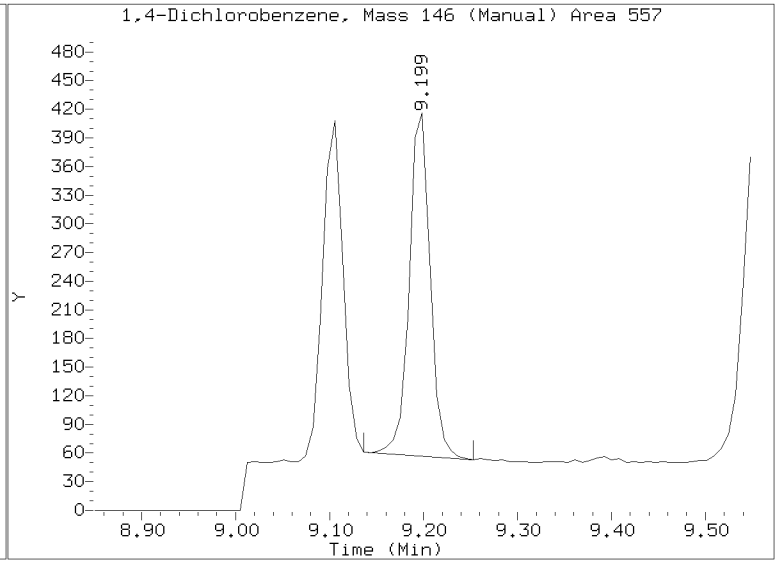
Quant Ion Manual Peak Adjustment Report

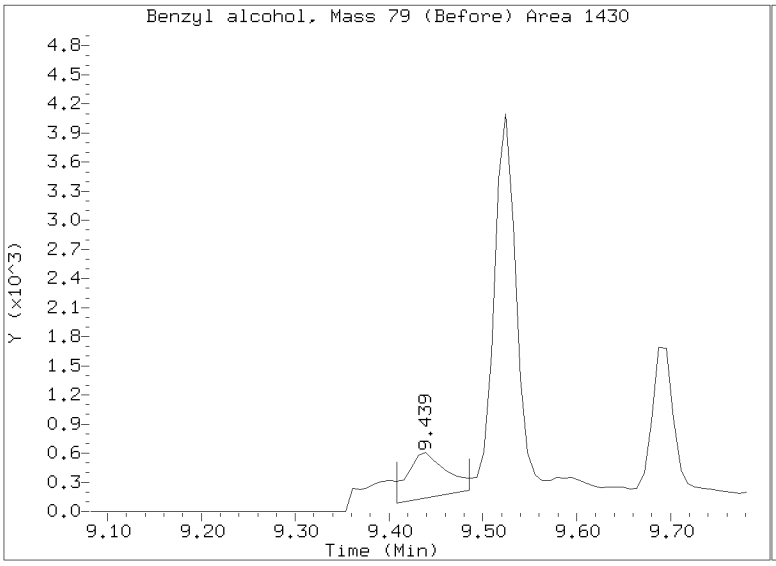
Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182306S.D
Injection Date: 18-MAR-2023 20:55
Lab ID:BLB0579-BLK2 Client ID:
Report Date: 04/04/2023 12:31

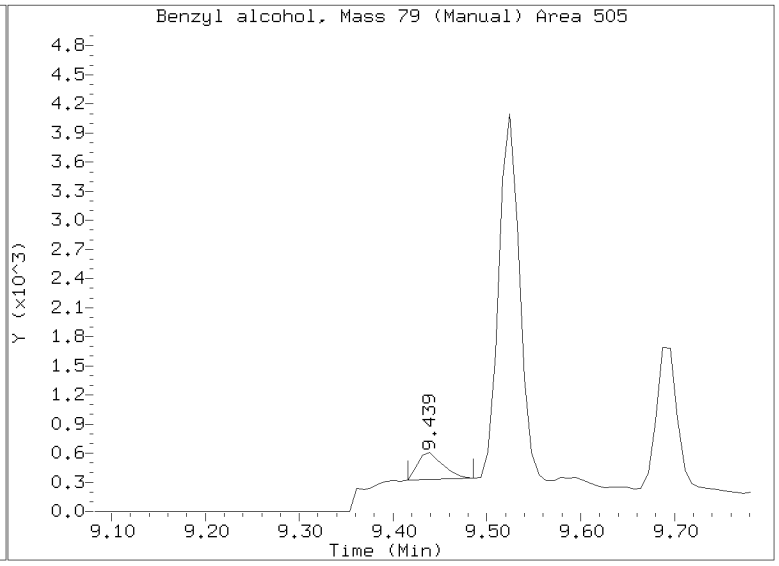












LCS / LCS DUPLICATE RECOVERY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/18/23 21:33
Batch:	BLB0579	Laboratory ID:	BLB0579-BS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	10 g / 1 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	366		73.1	36 - 120
1,2-Dichlorobenzene	500	363		72.5	36 - 120
Benzyl Alcohol	500	403		80.7	25 - 123
Benzoic acid	2300	2480		108	10 - 160
2,4-Dimethylphenol	1300	452		34.7	10 - 120
1,2,4-Trichlorobenzene	500	372		74.4	35 - 120
N-Nitrosodiphenylamine	500	410		82.1	27 - 120
Pentachlorophenol	1300	1270	Q	98.1	26 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	410		81.9	11.3	30	36 - 120
1,2-Dichlorobenzene	500	408		81.6	11.8	30	36 - 120
Benzyl Alcohol	500	459		91.8	12.9	30	25 - 123
Benzoic acid	2300	2760		120	10.6	30	10 - 160
2,4-Dimethylphenol	1300	411		31.6	9.34	30	10 - 120
1,2,4-Trichlorobenzene	500	408		81.6	9.23	30	35 - 120
N-Nitrosodiphenylamine	500	432		86.4	5.14	30	27 - 120
Pentachlorophenol	1300	1370	Q	105	6.86	30	26 - 120

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823078.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

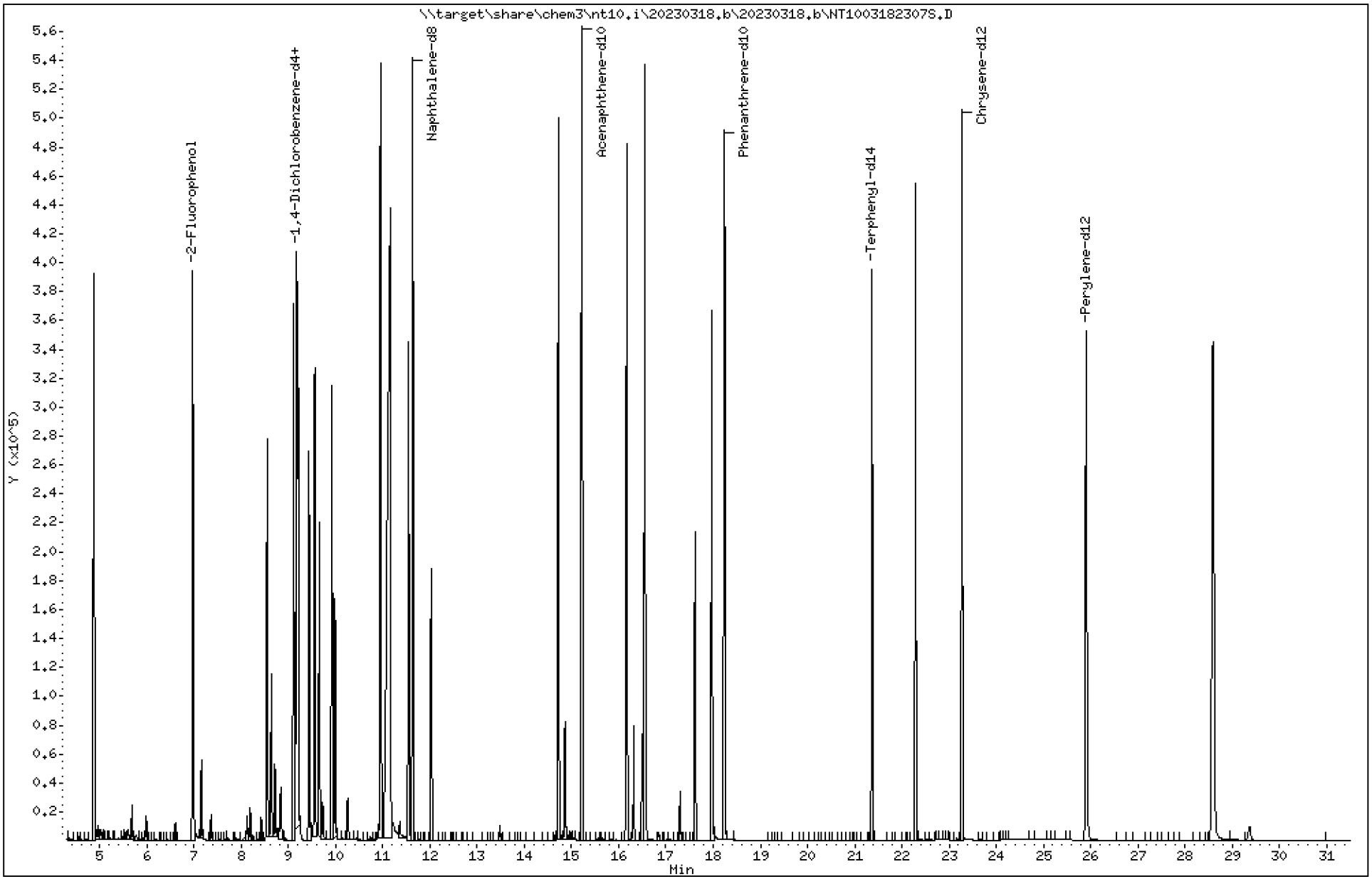
Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

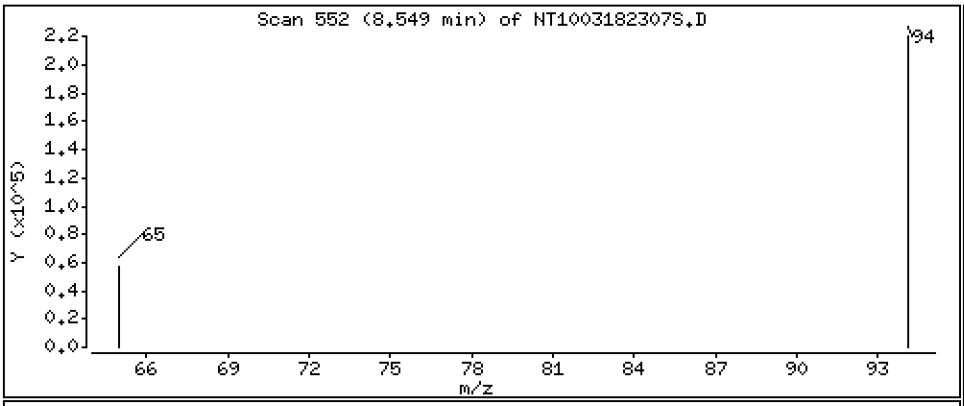
Operator: JGR

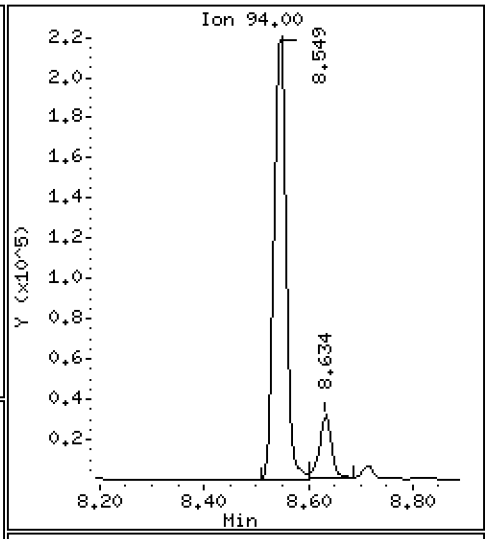
Column phase: ZB-5msi

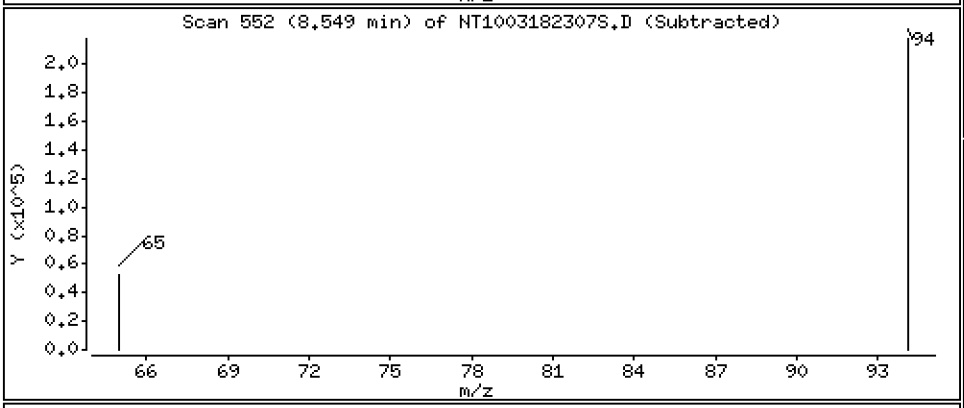
Column diameter: 0.25

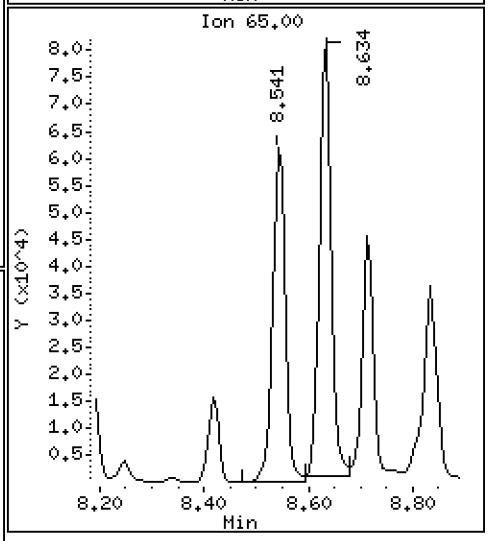
3 Phenol

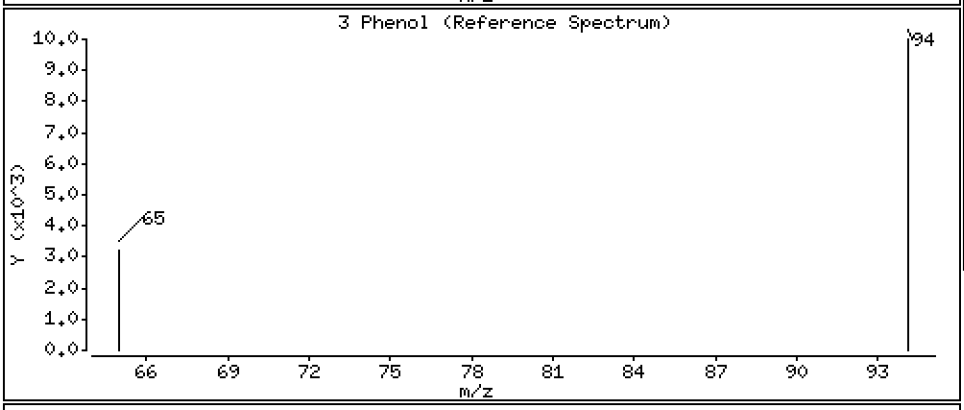
Concentration: 3.418 ug/L

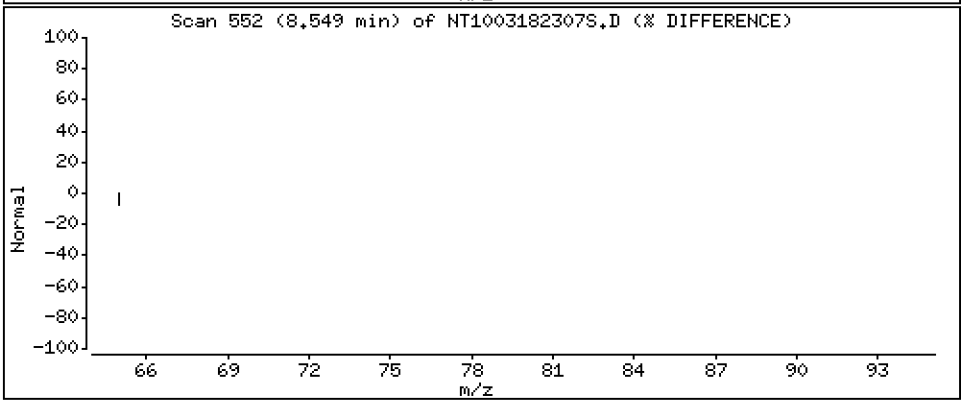












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

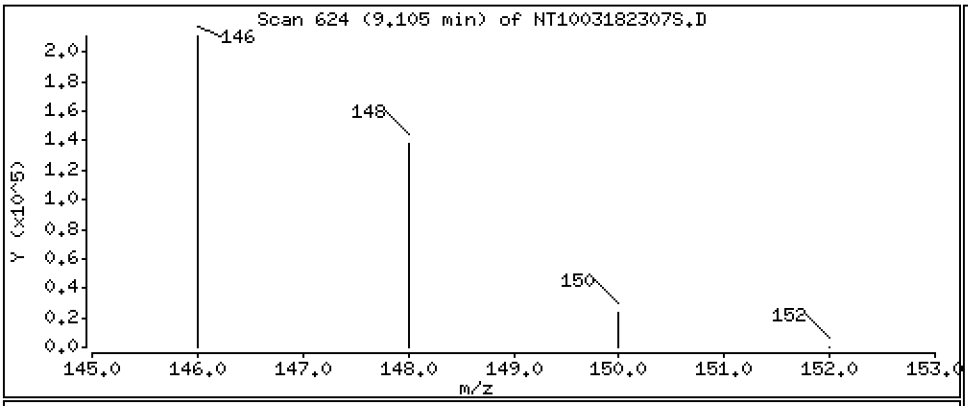
Operator: JGR

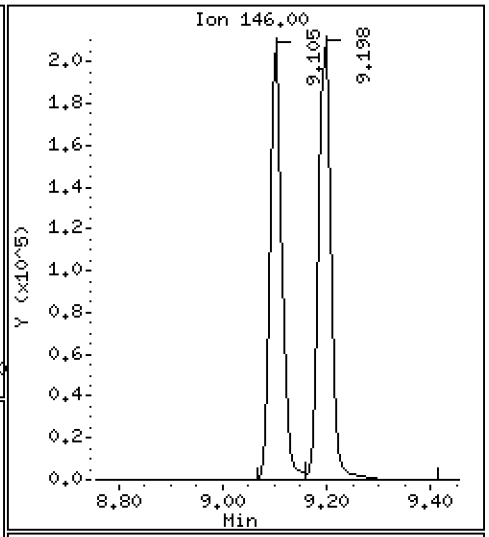
Column phase: ZB-5msi

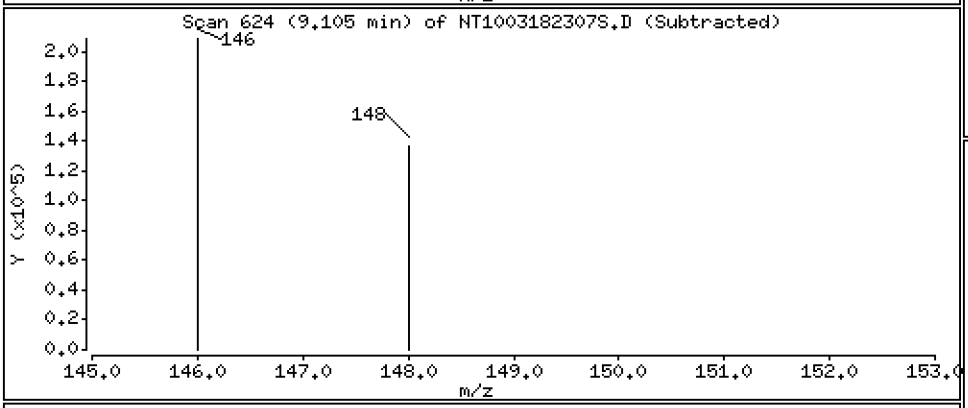
Column diameter: 0.25

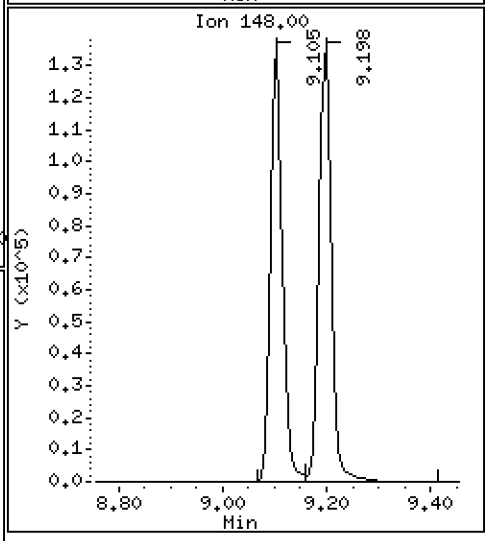
7 1,3-Dichlorobenzene

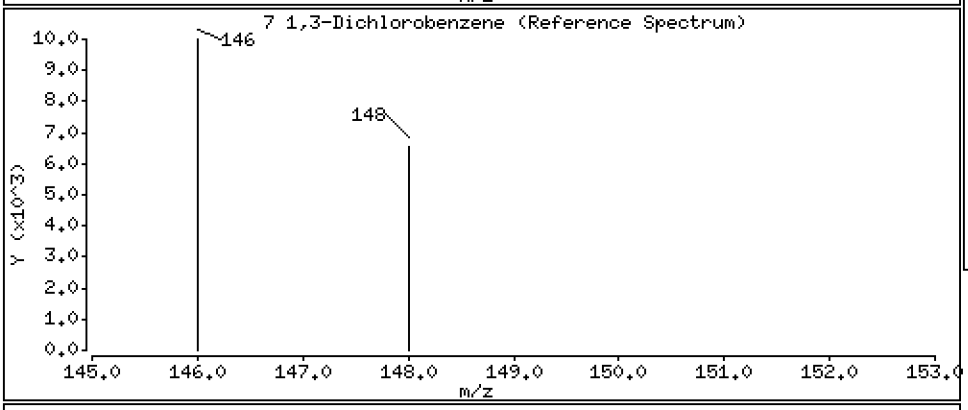
Concentration: 3.521 ug/L

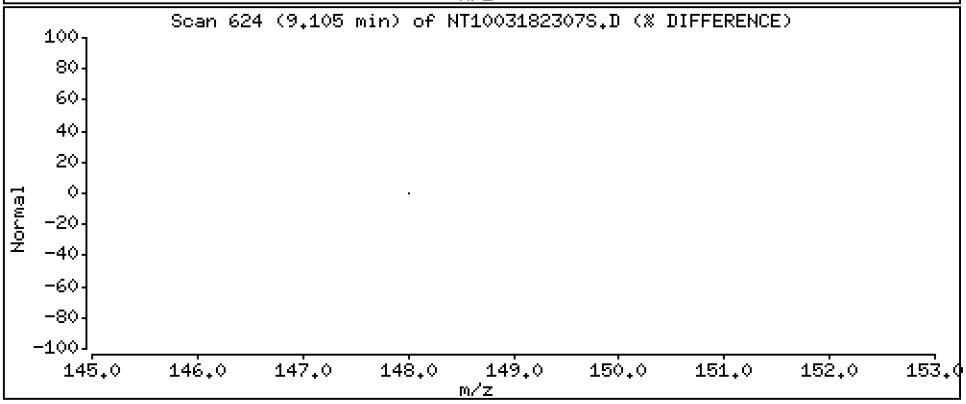












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

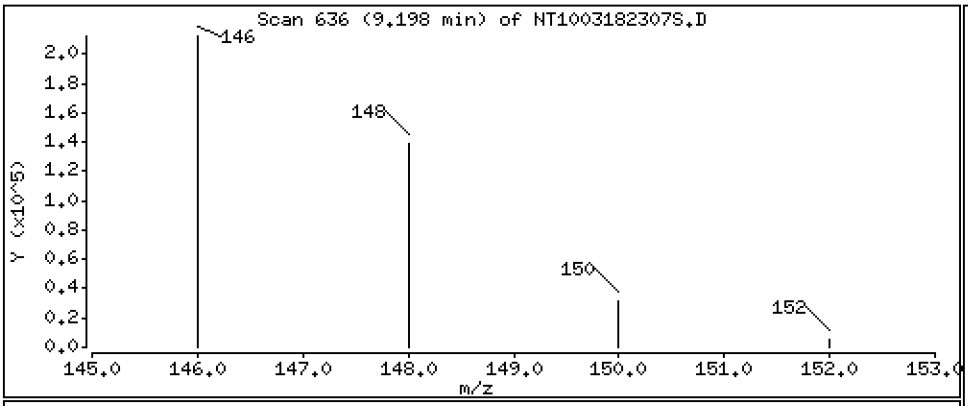
Operator: JGR

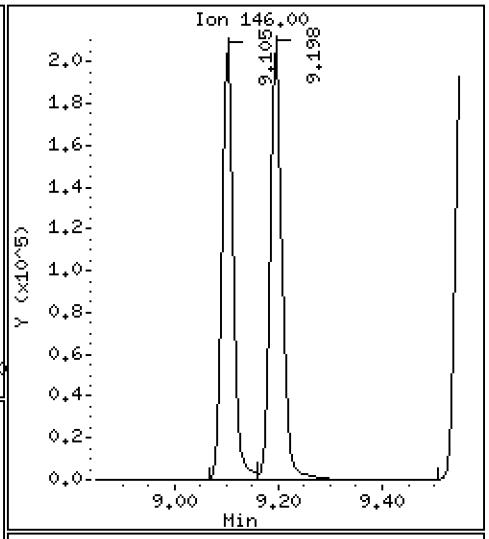
Column phase: ZB-5msi

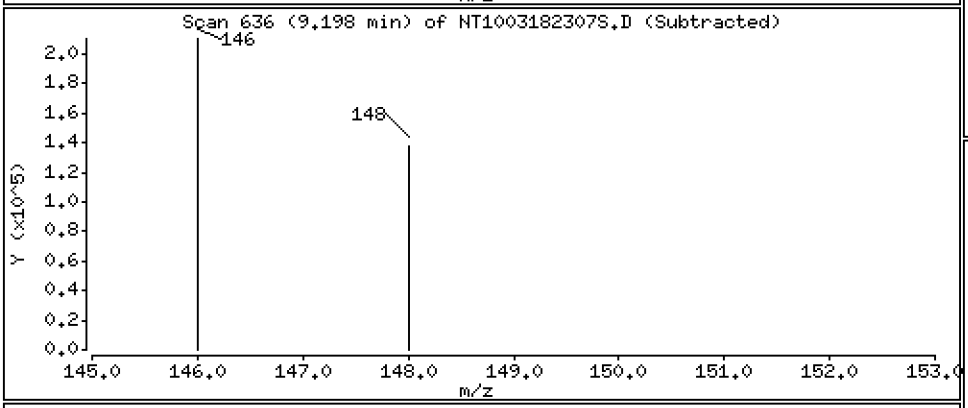
Column diameter: 0.25

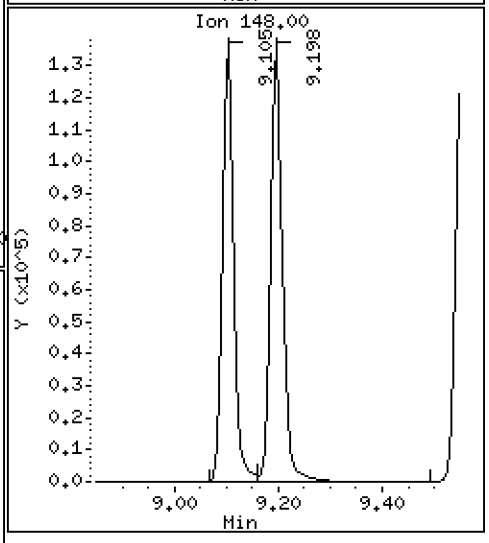
9 1,4-Dichlorobenzene

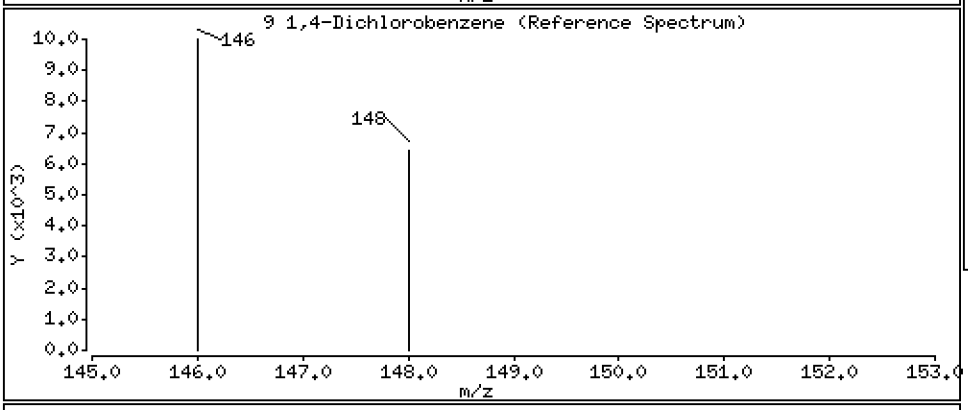
Concentration: 3.657 ug/L

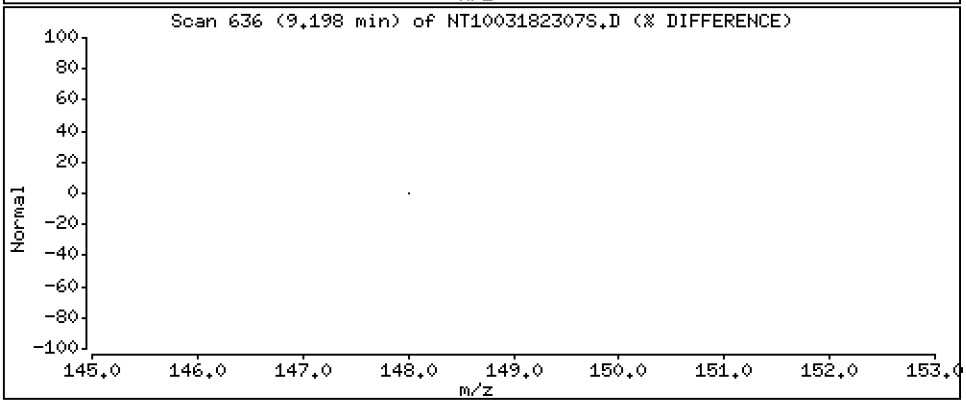












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

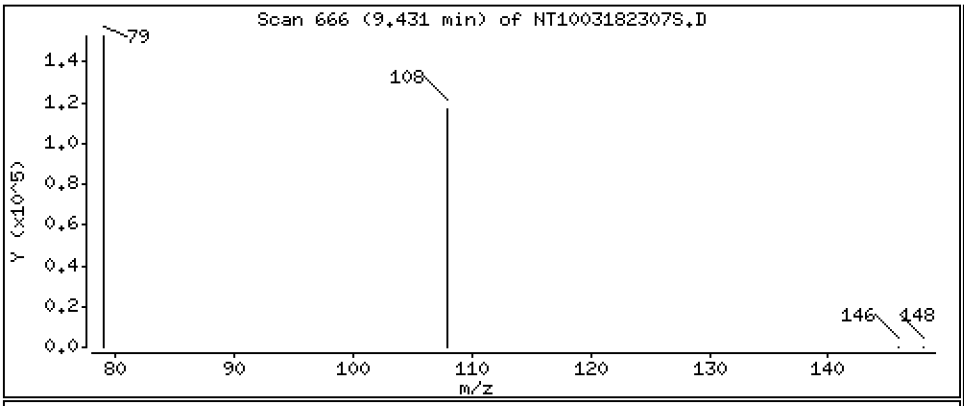
Operator: JGR

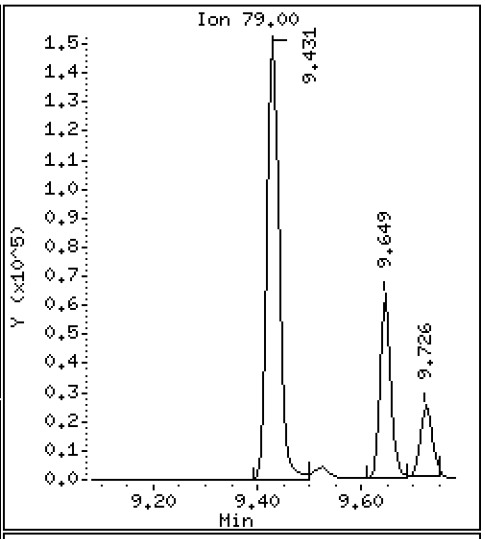
Column phase: ZB-5msi

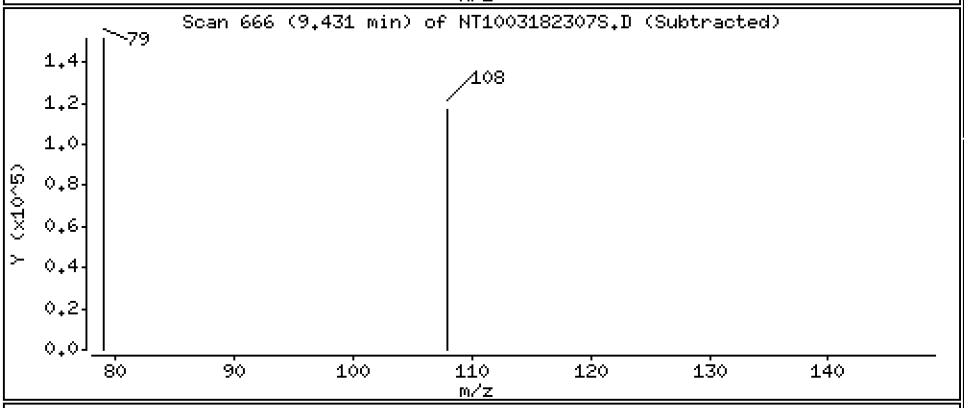
Column diameter: 0.25

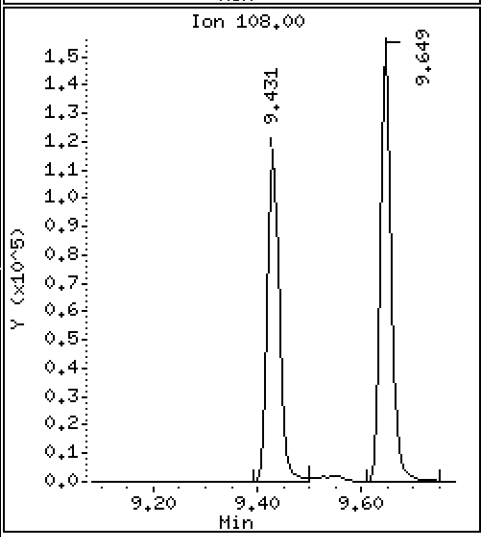
11 Benzyl alcohol

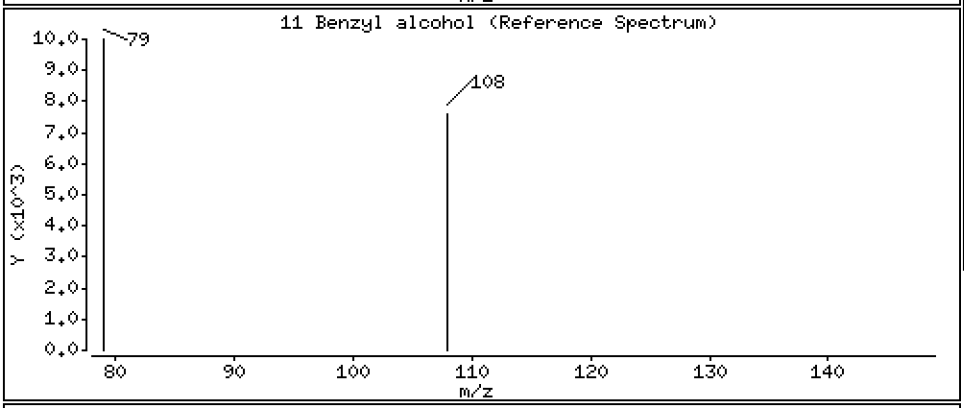
Concentration: 4.033 ug/L

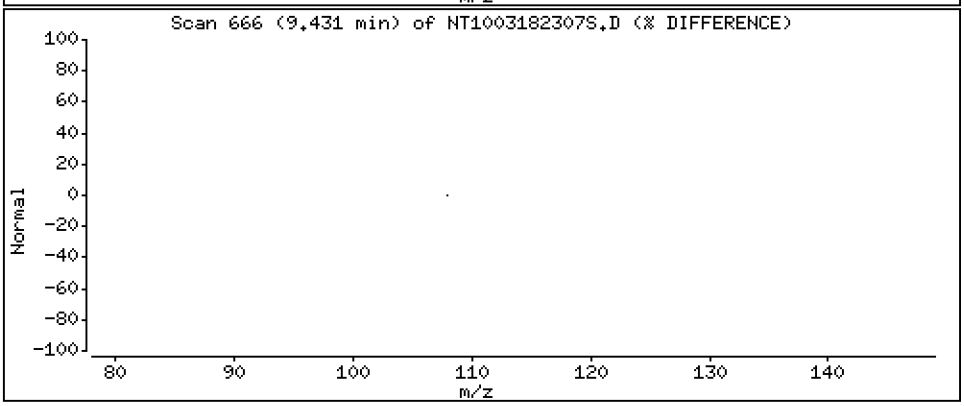












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182307S.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

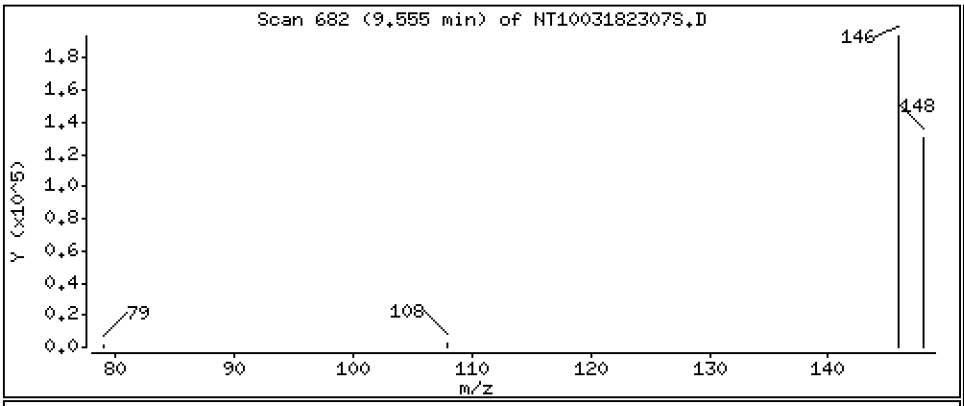
Operator: JGR

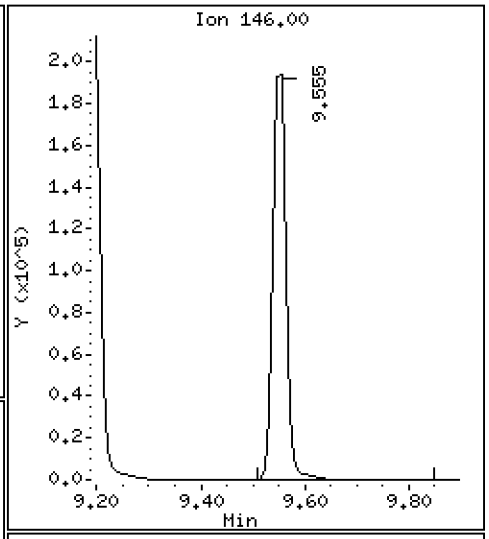
Column phase: ZB-5msi

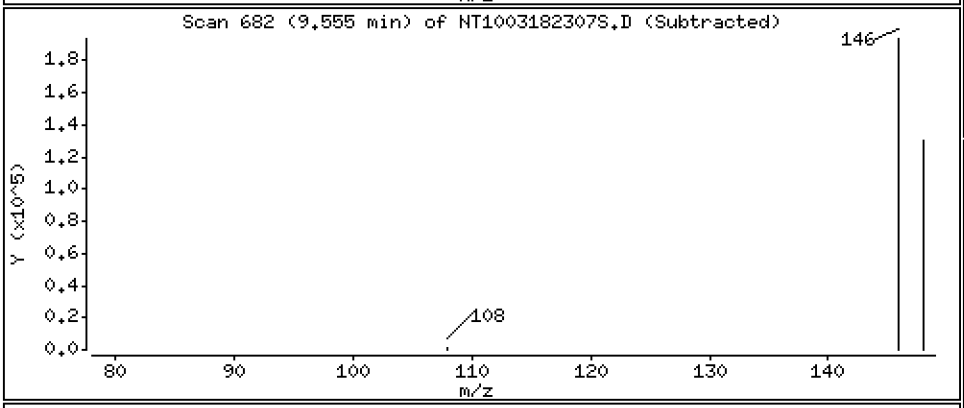
Column diameter: 0.25

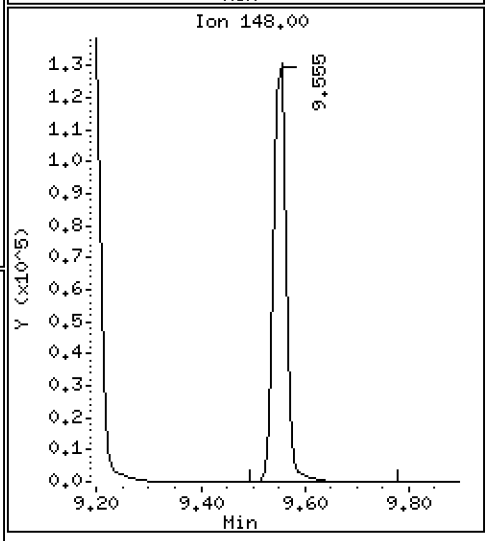
12 1,2-Dichlorobenzene

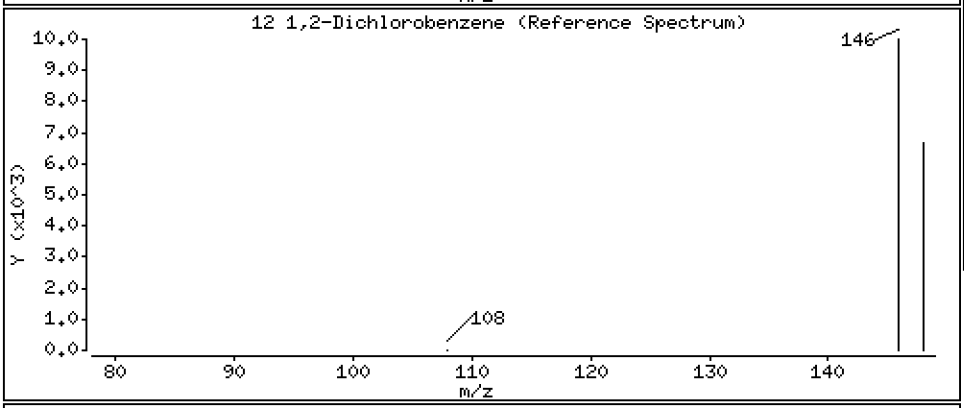
Concentration: 3.627 ug/L

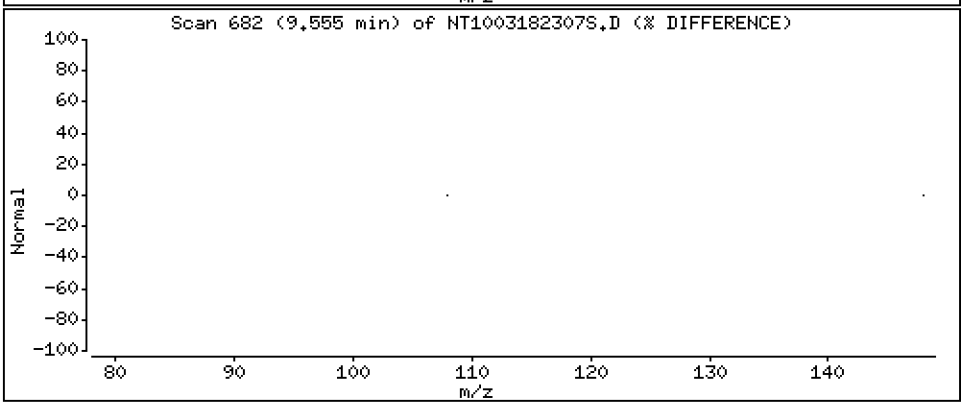












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182307S.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

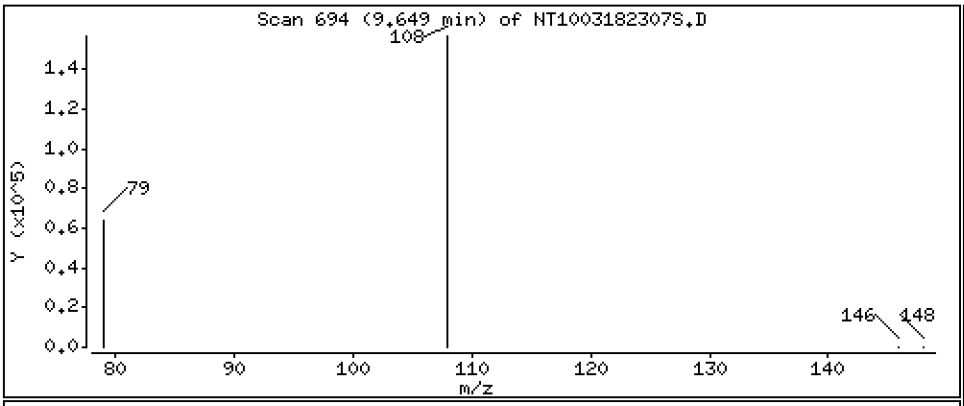
Operator: JGR

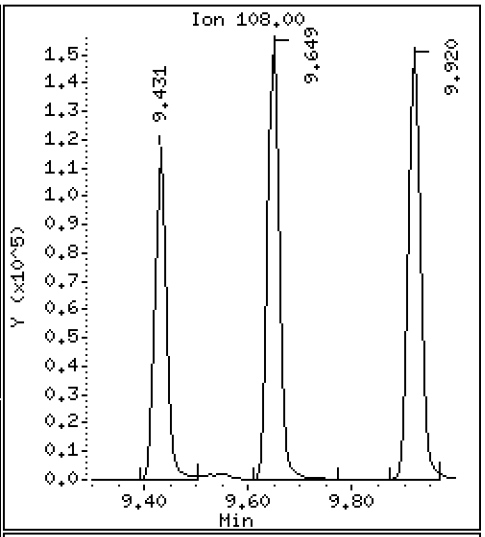
Column phase: ZB-5msi

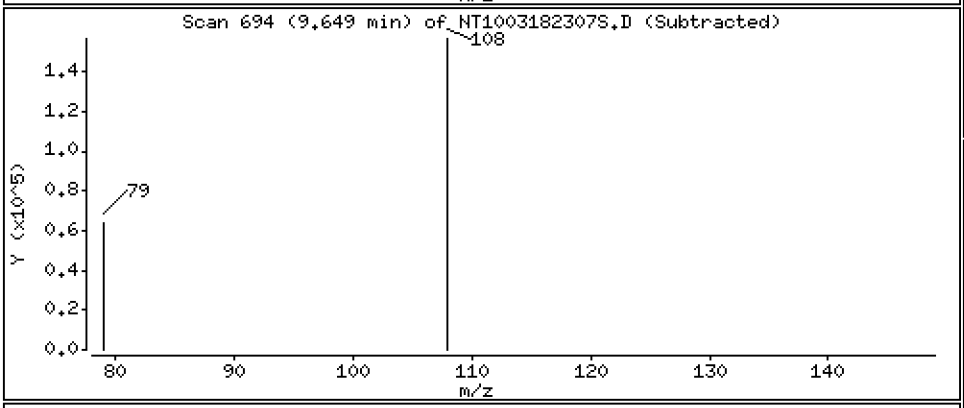
Column diameter: 0.25

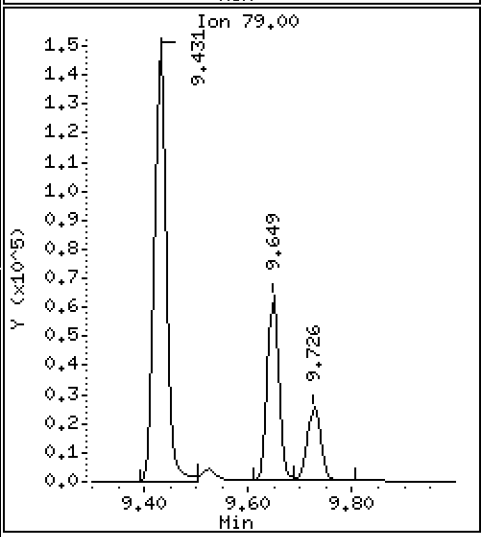
13 2-Methylphenol

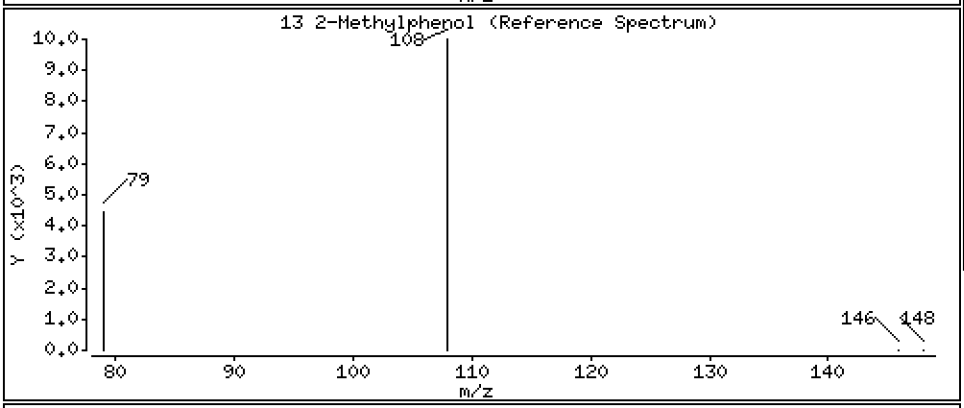
Concentration: 3.301 ug/L

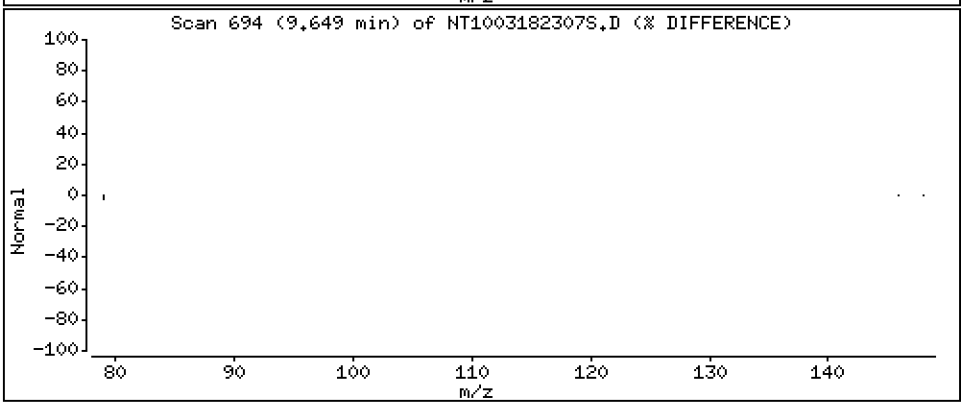












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

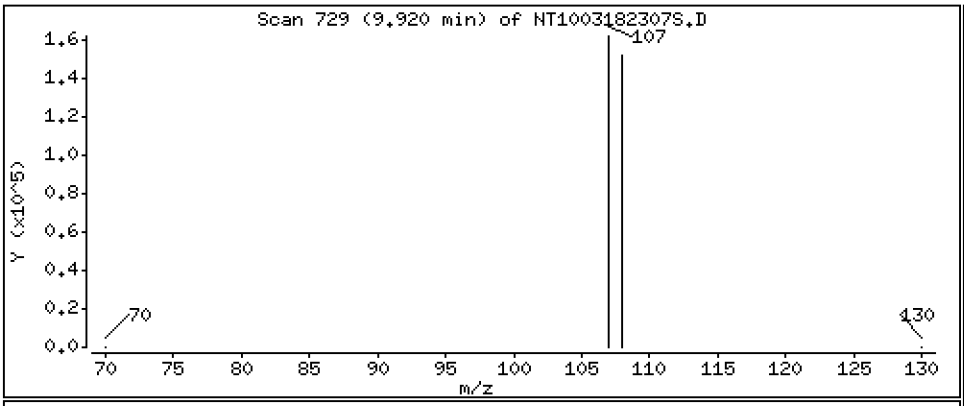
Operator: JGR

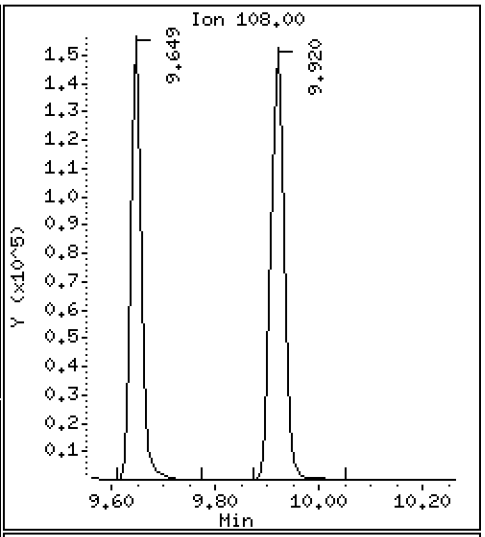
Column phase: ZB-5msi

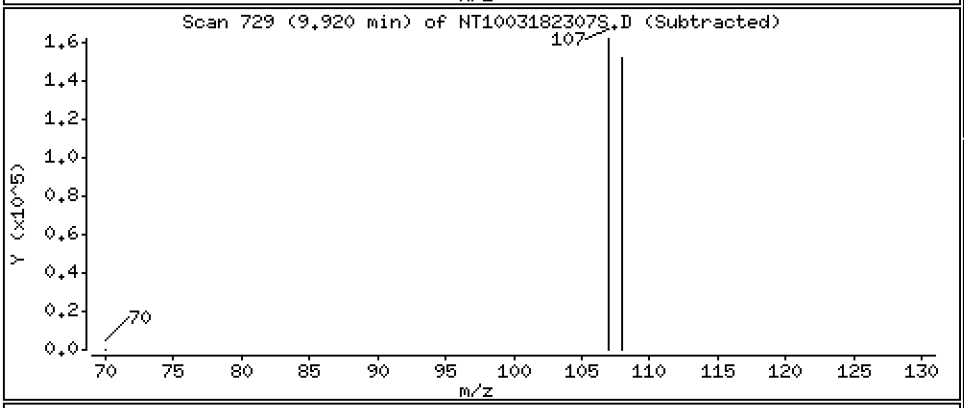
Column diameter: 0.25

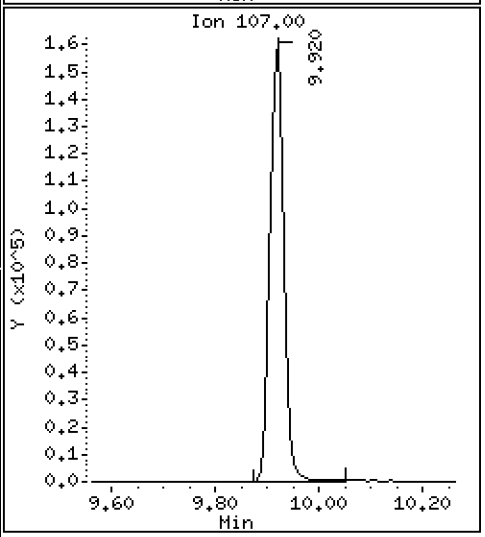
15 4-Methylphenol

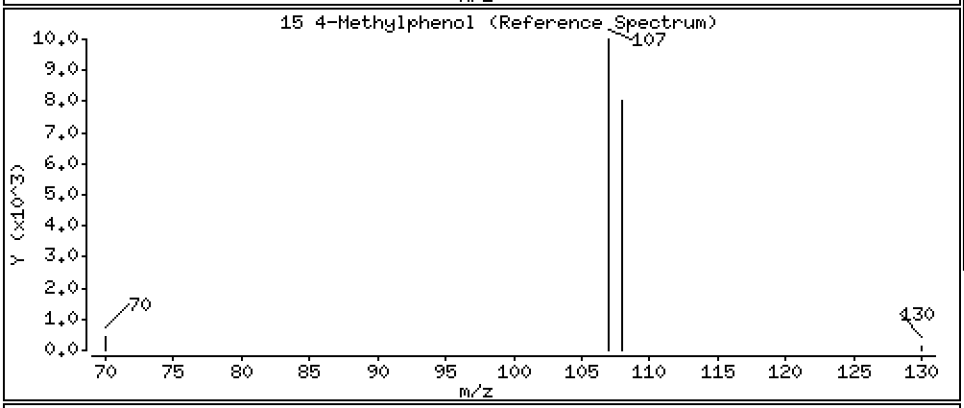
Concentration: 3.707 ug/L

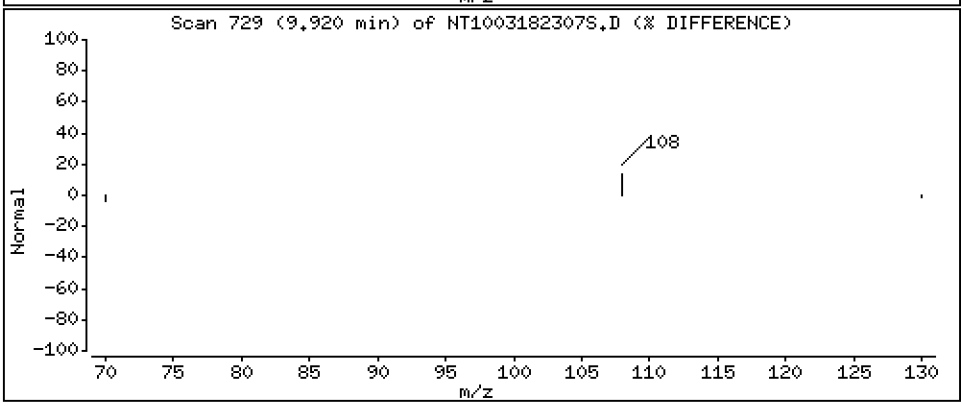












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182307S.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

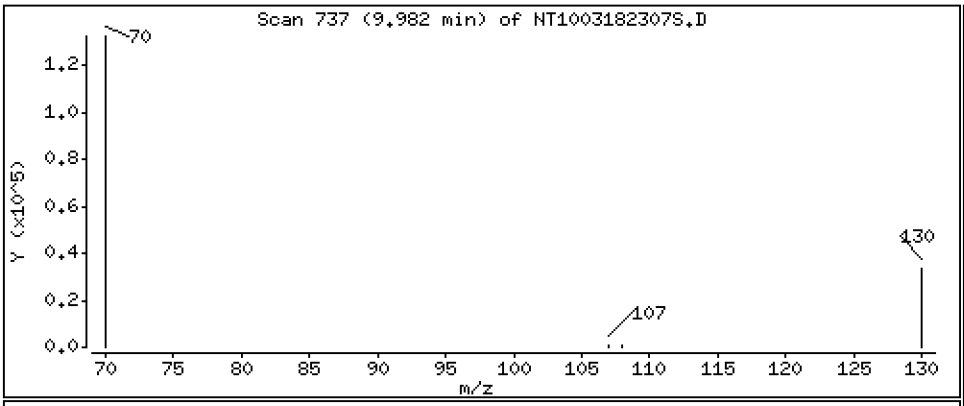
Operator: JGR

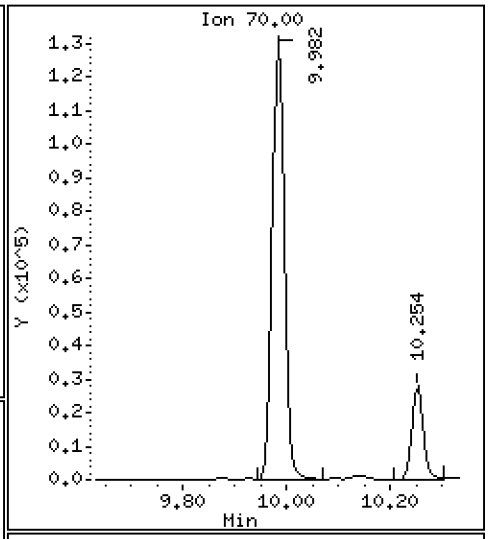
Column phase: ZB-5msi

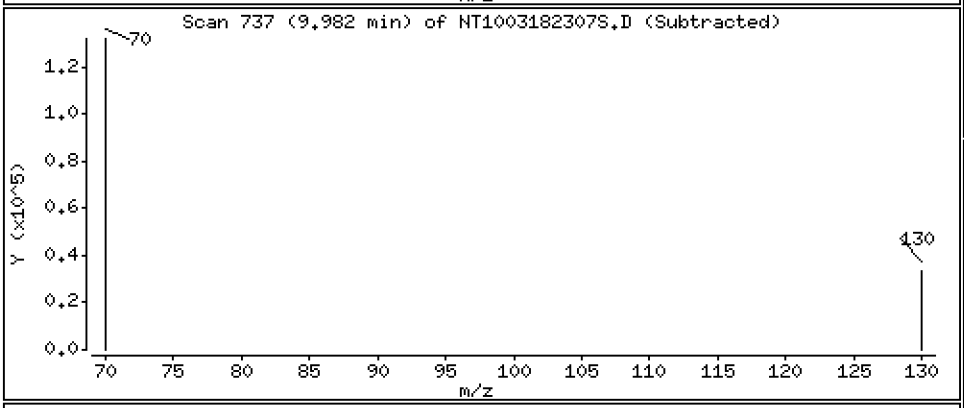
Column diameter: 0.25

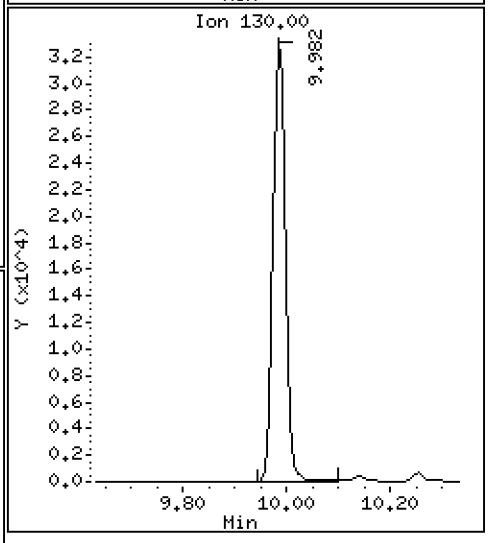
16 N-Nitroso-di-n-propylamine

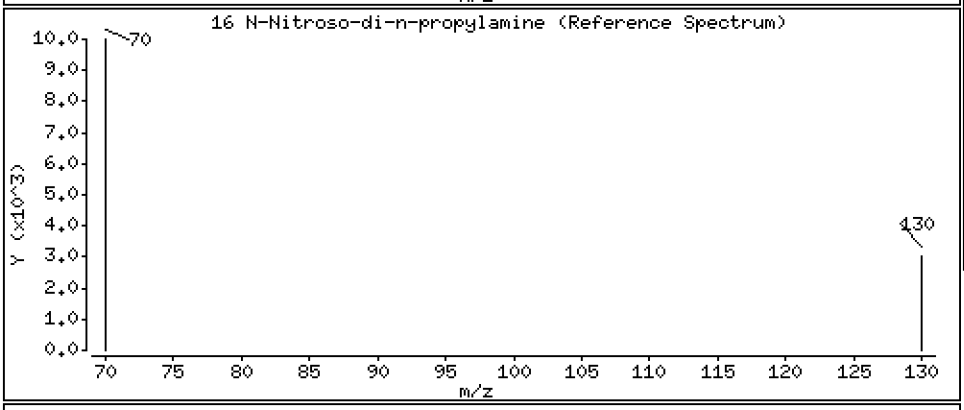
Concentration: 3.940 ug/L

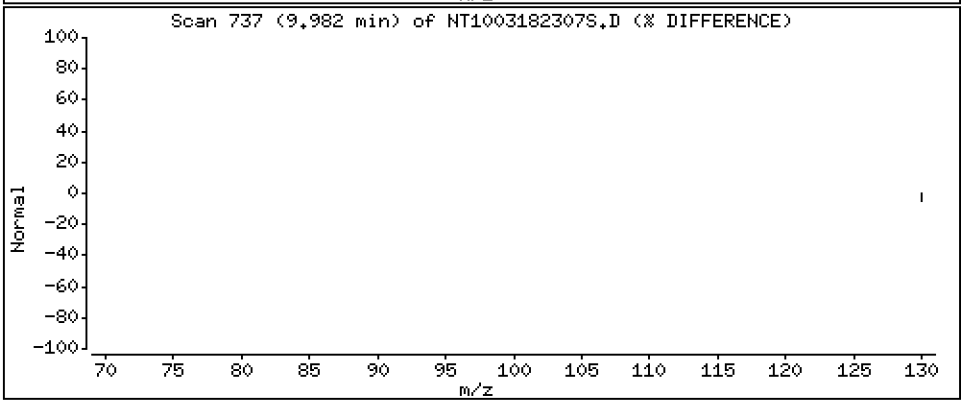












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

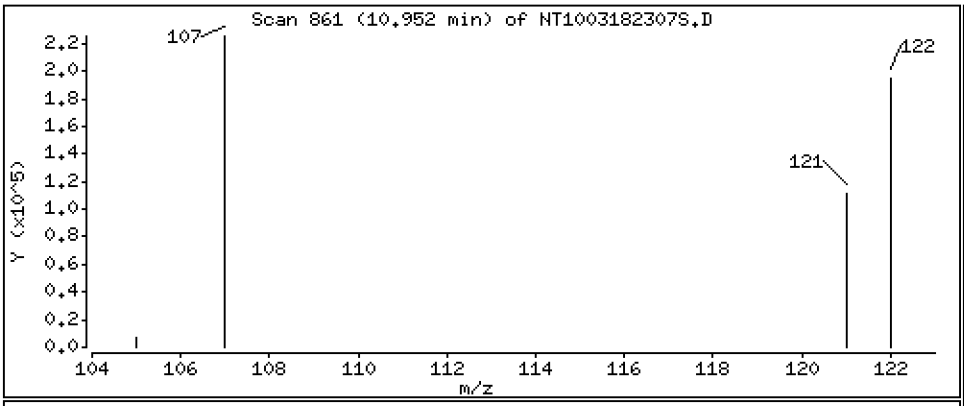
Operator: JGR

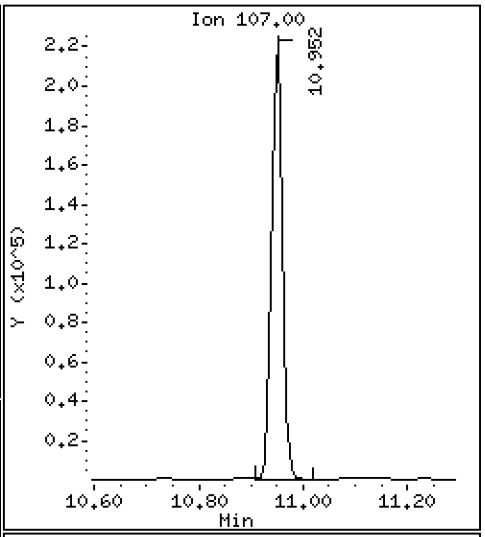
Column phase: ZB-5msi

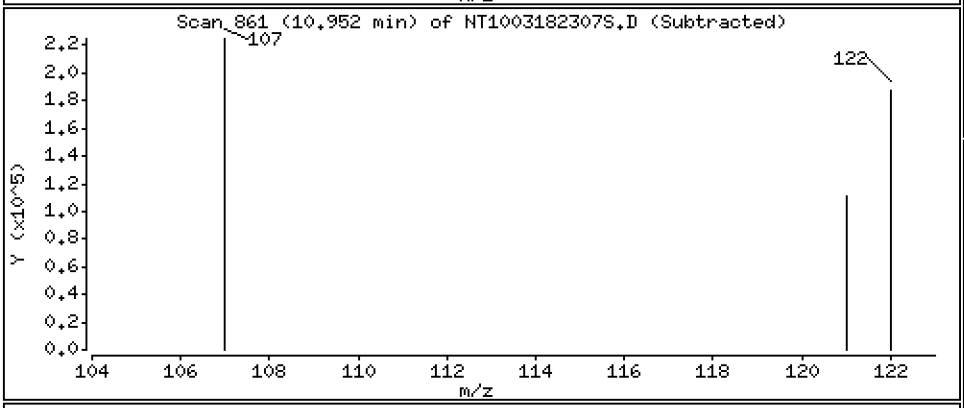
Column diameter: 0.25

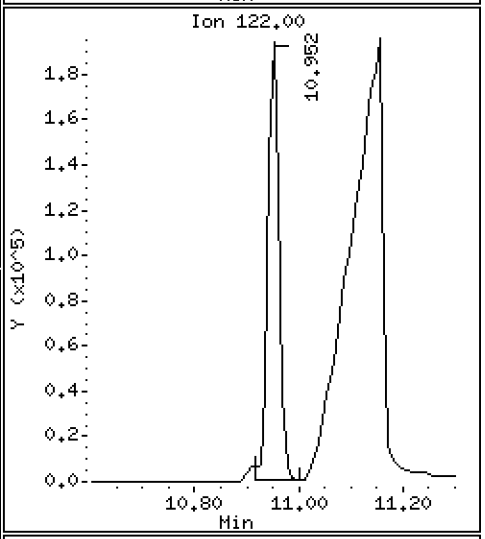
22 2,4-Dimethylphenol

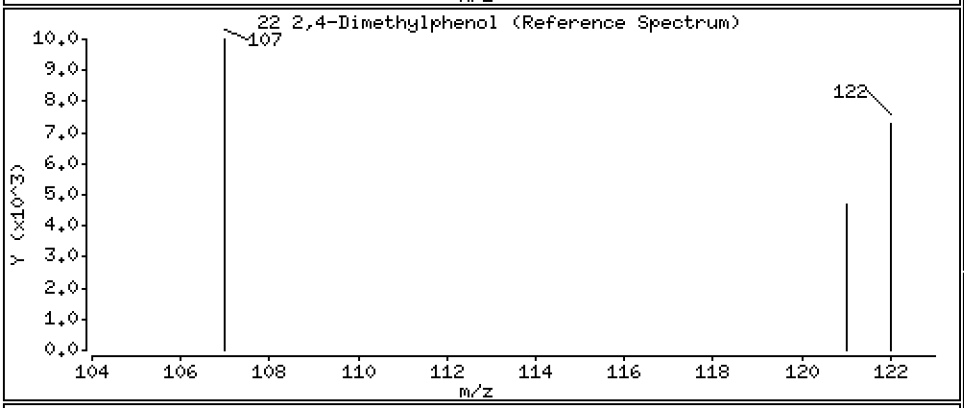
Concentration: 4.515 ug/L

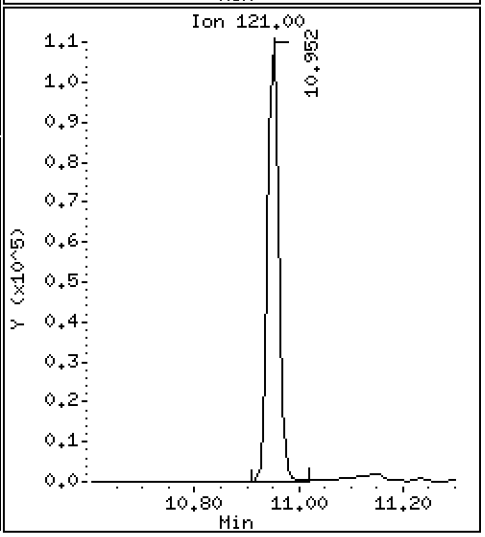


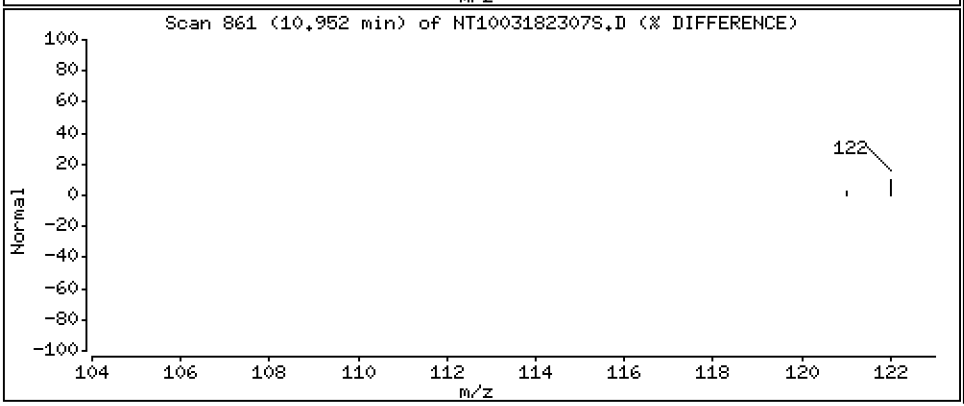












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

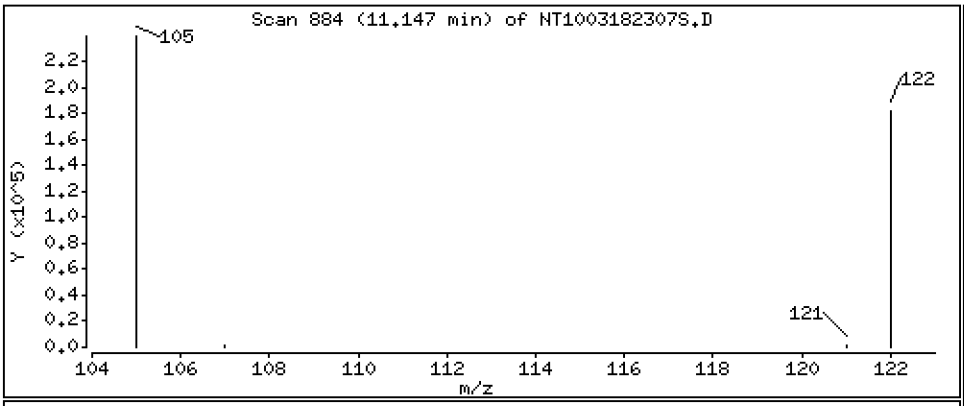
Operator: JGR

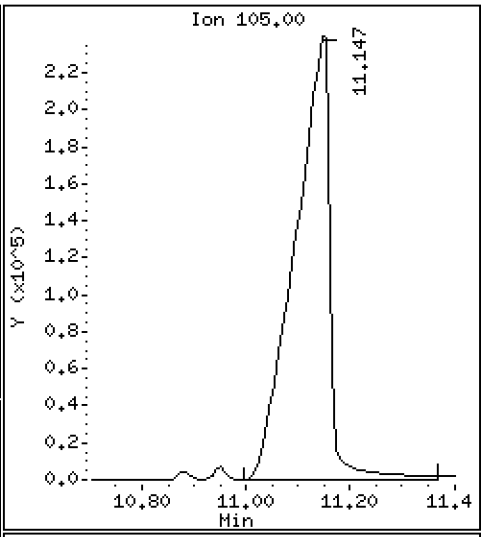
Column phase: ZB-5msi

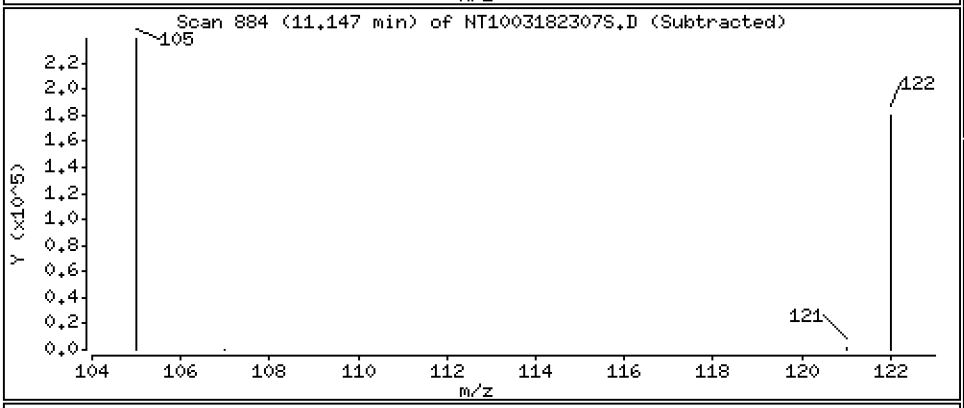
Column diameter: 0.25

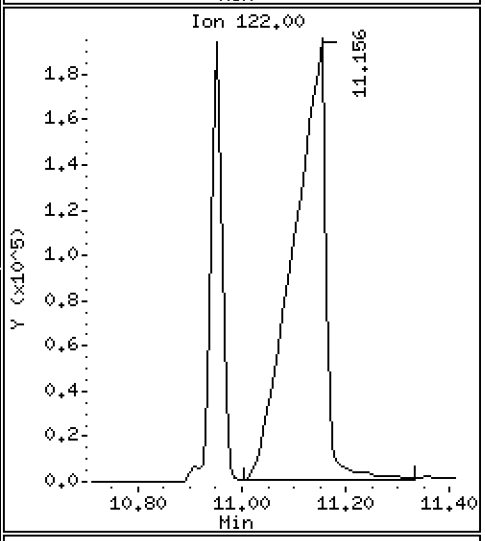
24 Benzoic acid

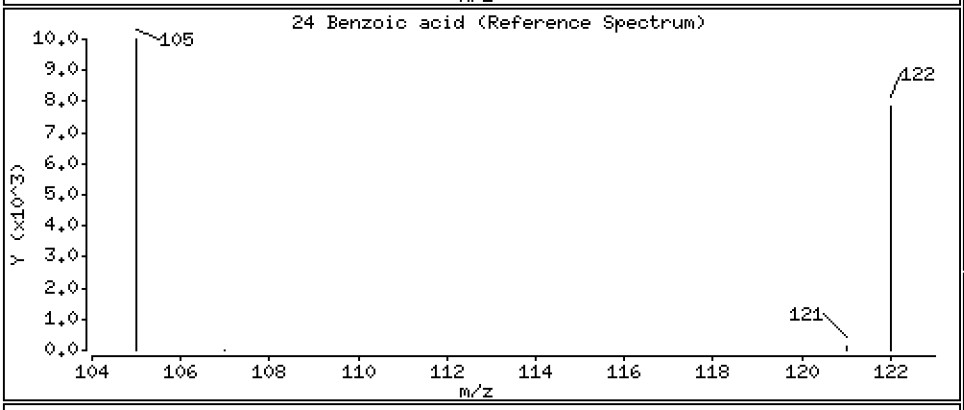
Concentration: 24.82 ug/L

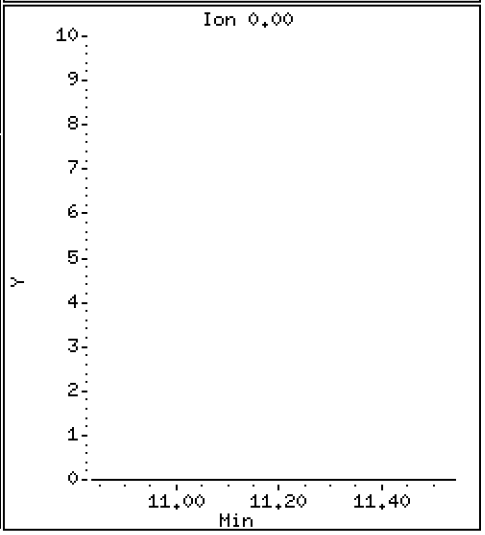


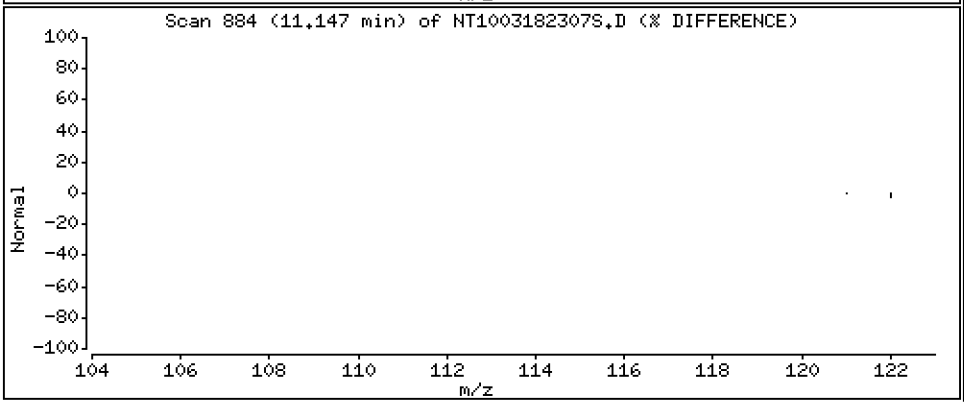












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

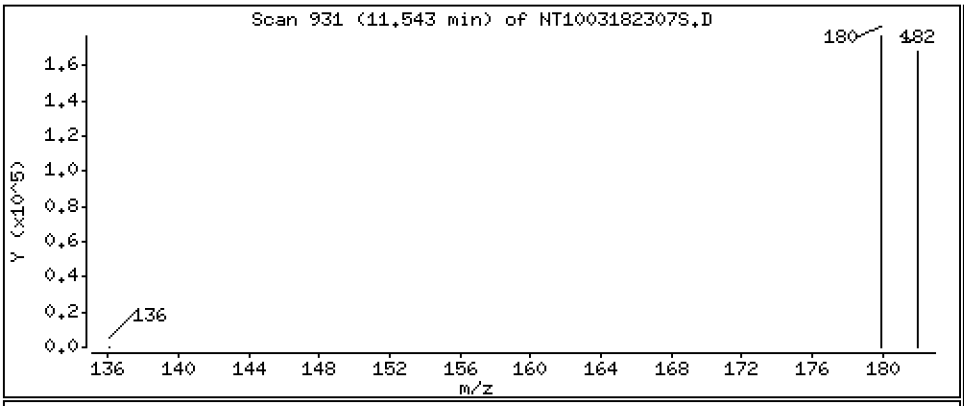
Operator: JGR

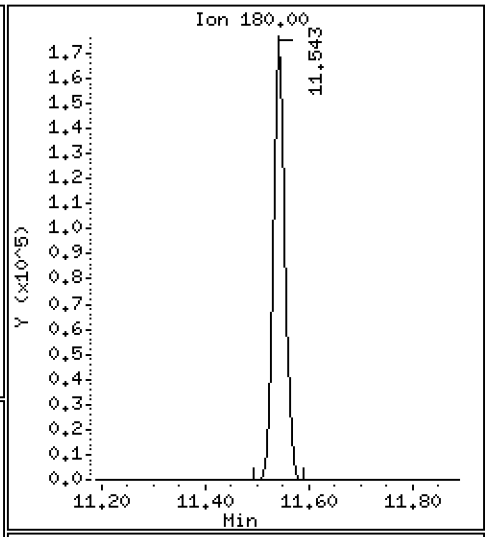
Column phase: ZB-5msi

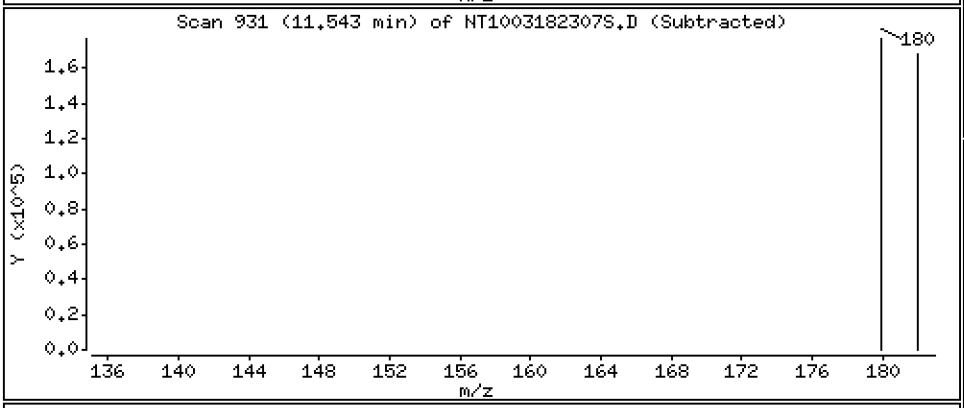
Column diameter: 0.25

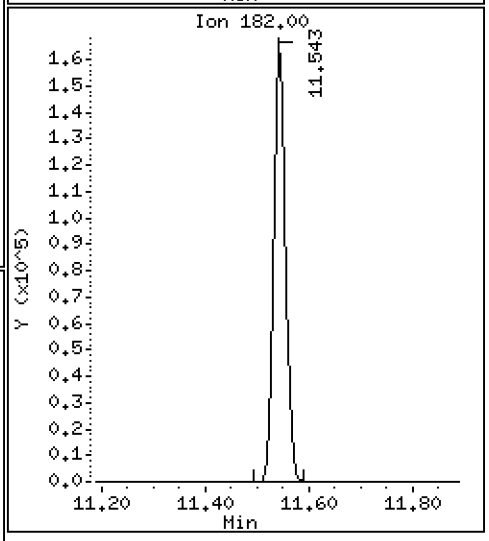
26 1,2,4-Trichlorobenzene

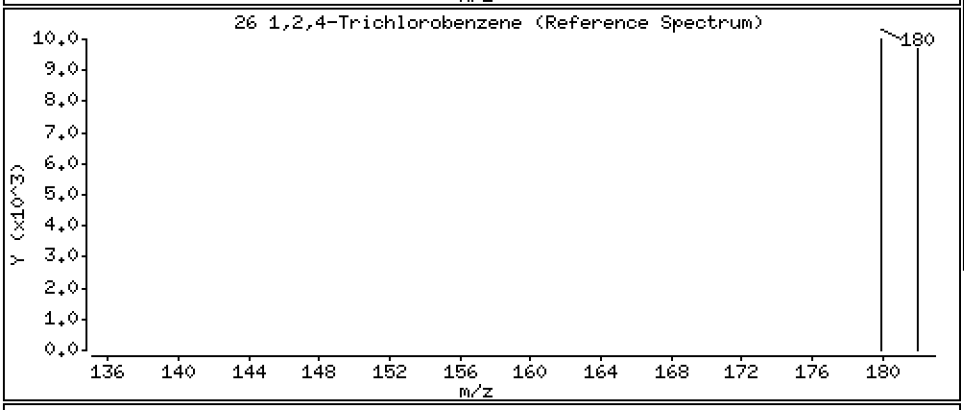
Concentration: 3.719 ug/L

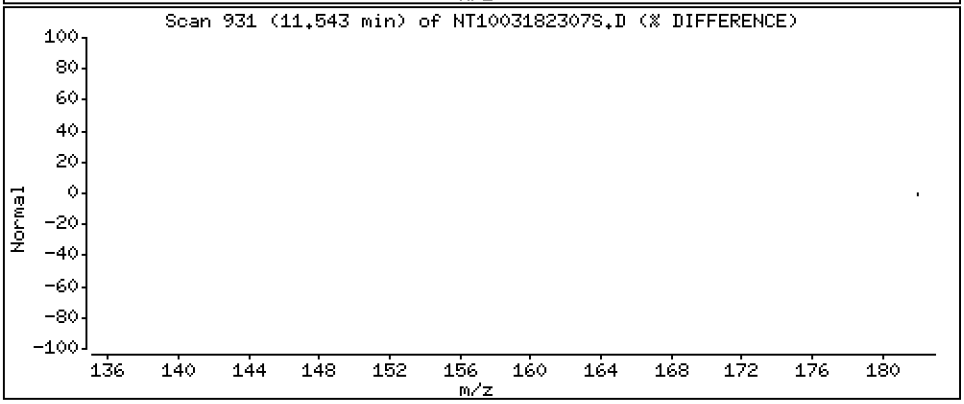












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

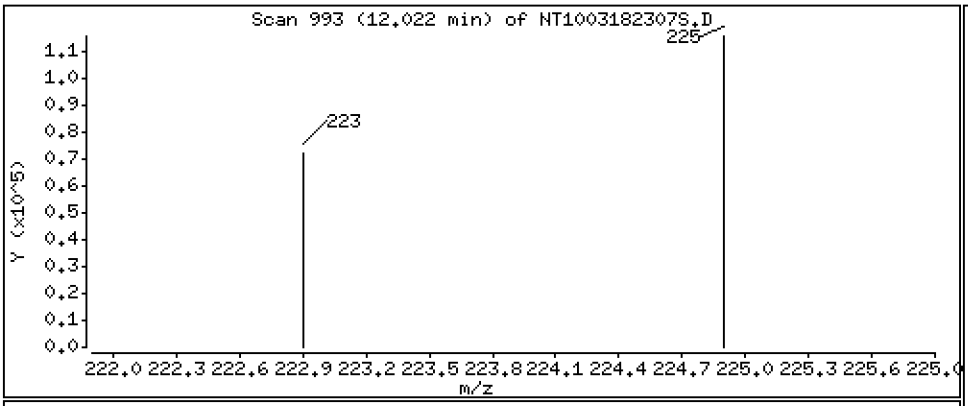
Operator: JGR

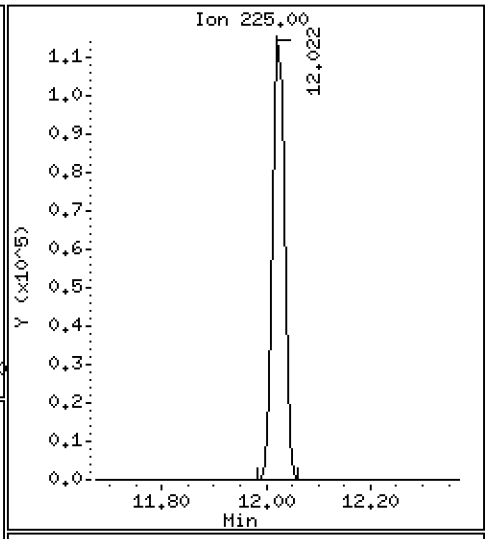
Column phase: ZB-5msi

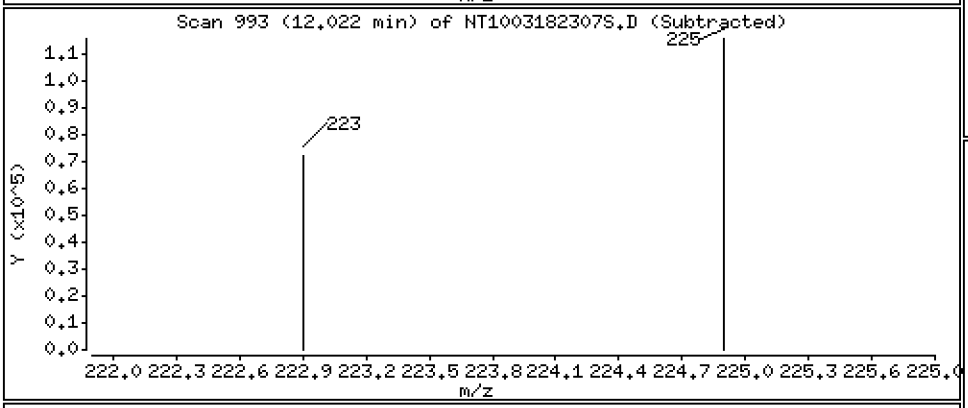
Column diameter: 0.25

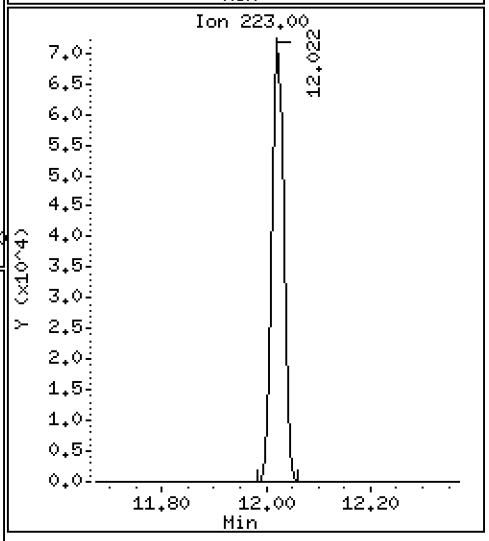
30 Hexachlorobutadiene

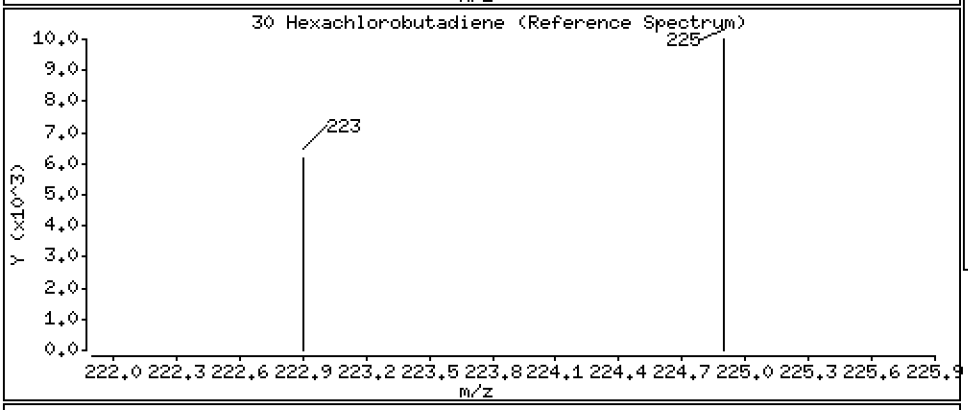
Concentration: 3.823 ug/L

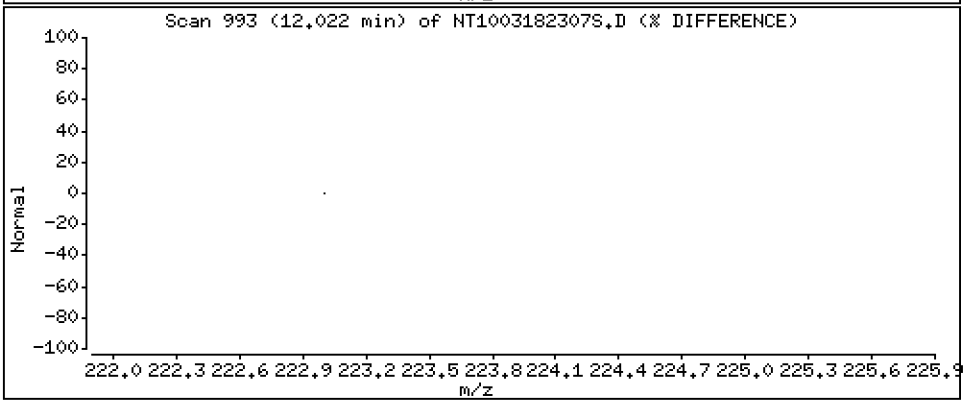












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

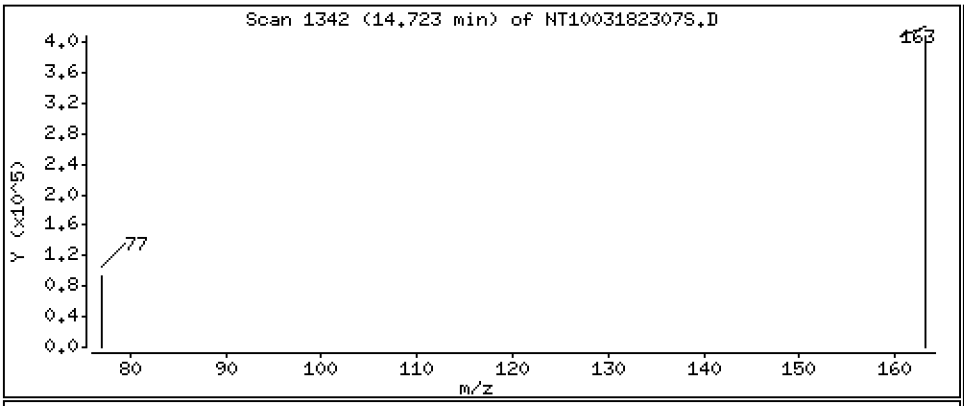
Operator: JGR

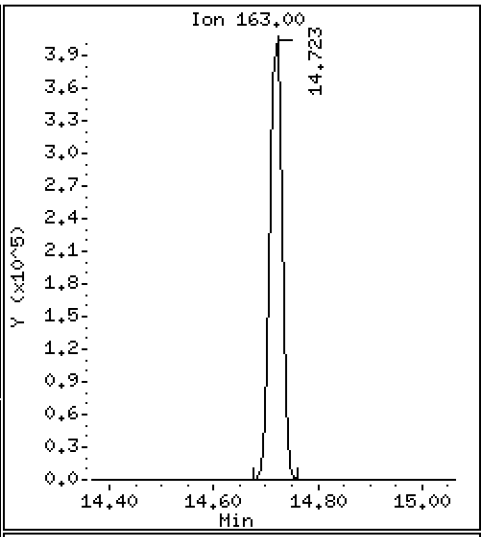
Column phase: ZB-5msi

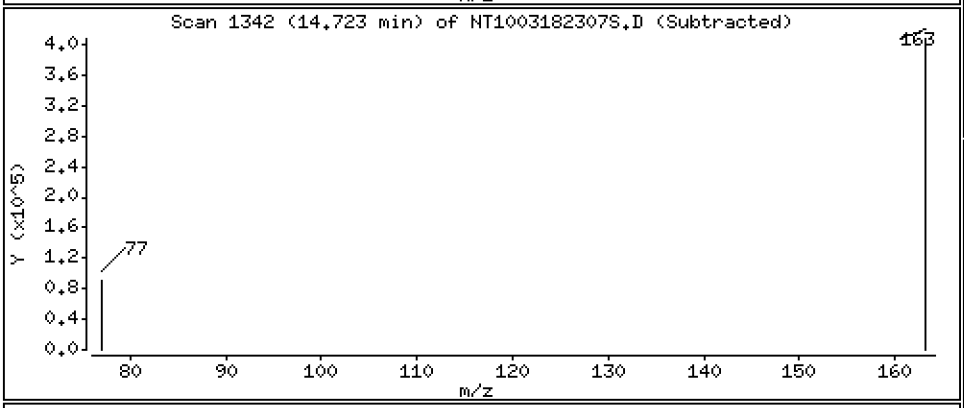
Column diameter: 0.25

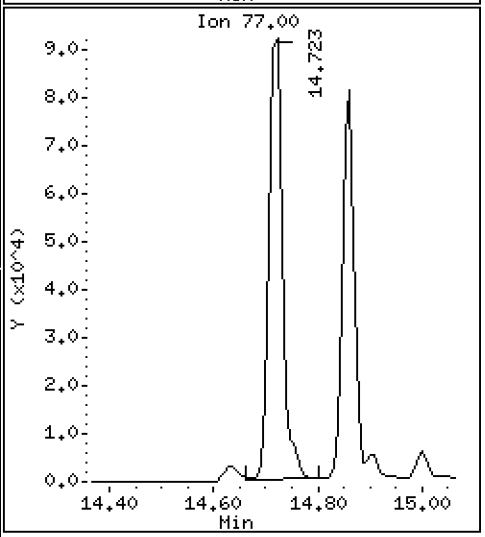
39 Dimethylphthalate

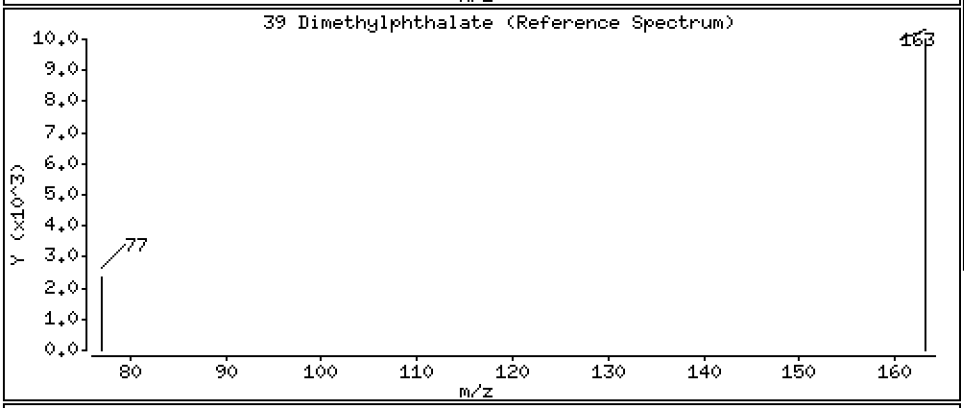
Concentration: 4.723 ug/L

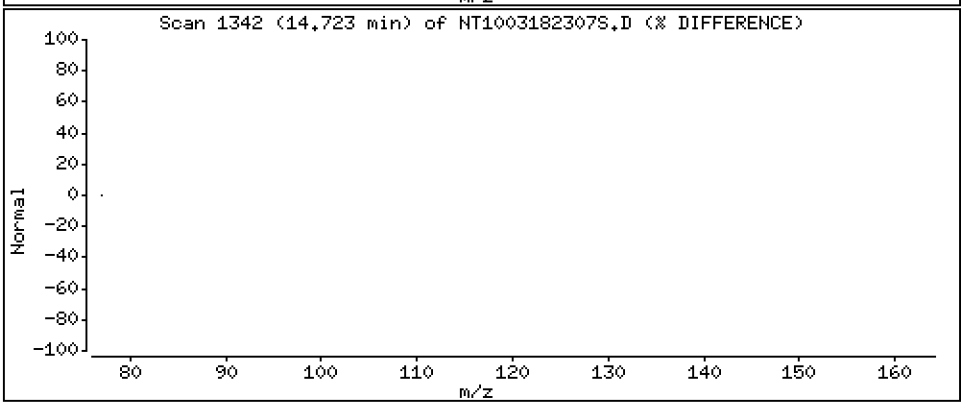












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182307S.D

Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

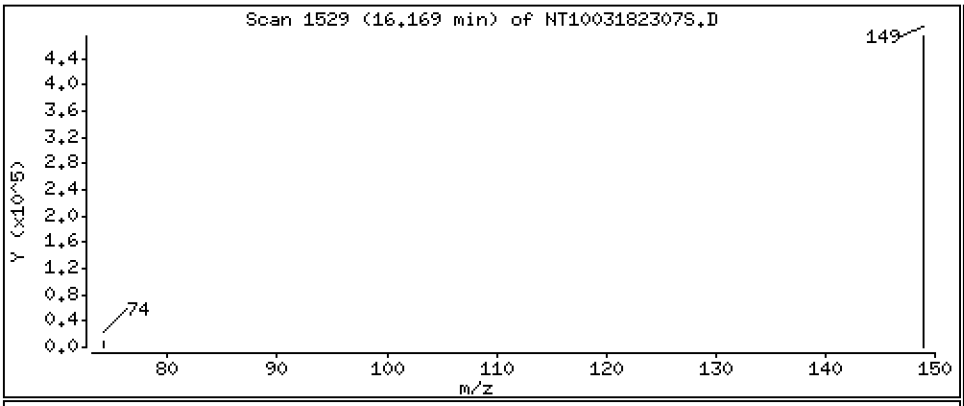
Operator: JGR

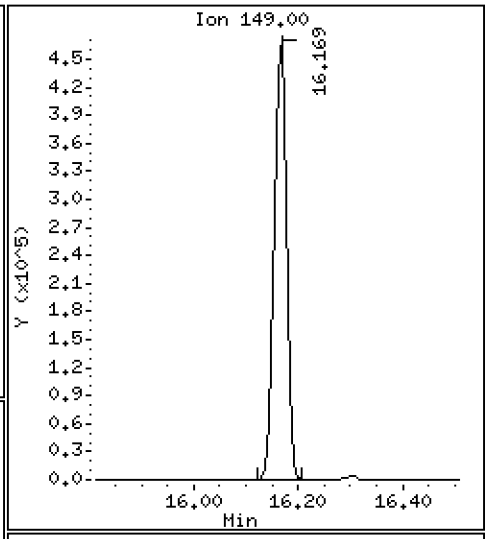
Column phase: ZB-5msi

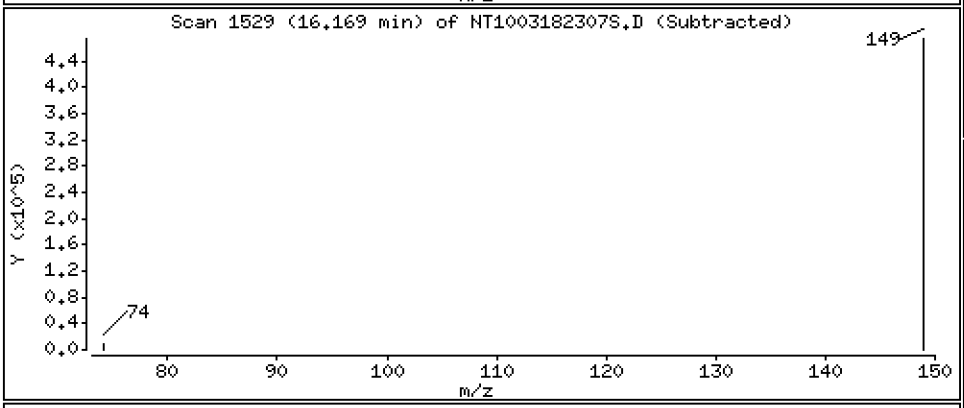
Column diameter: 0.25

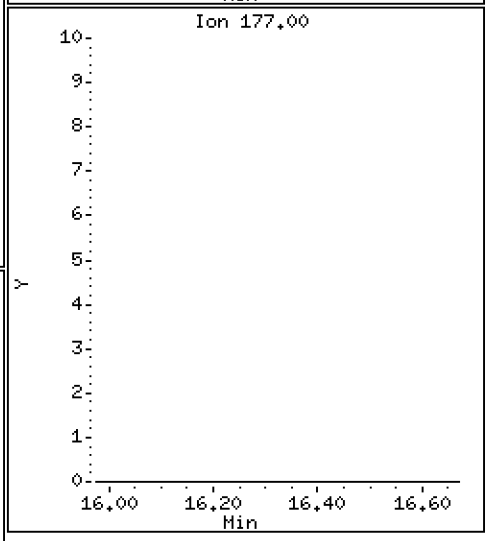
50 Diethylphthalate

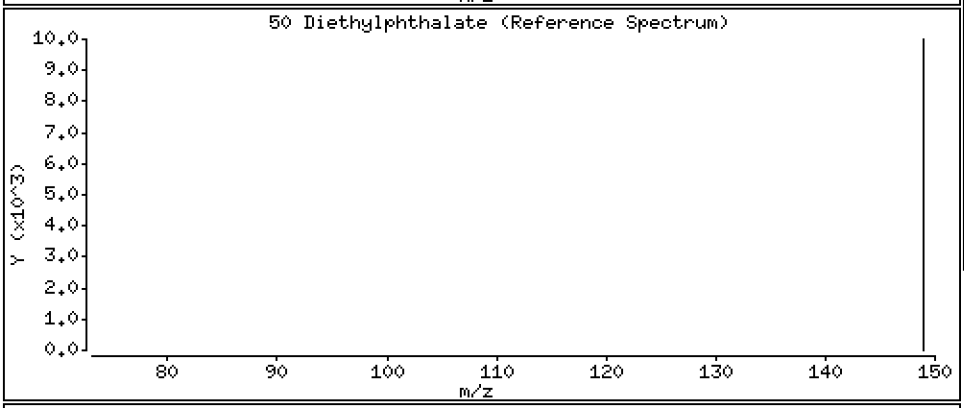
Concentration: 5.423 ug/L

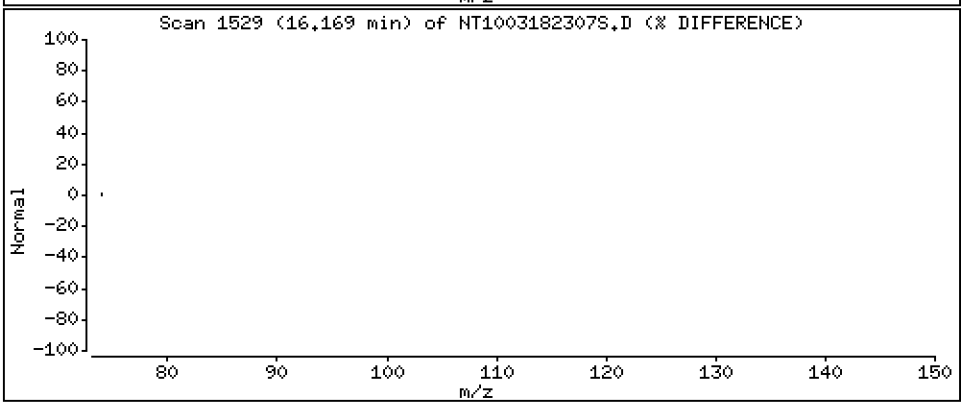












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

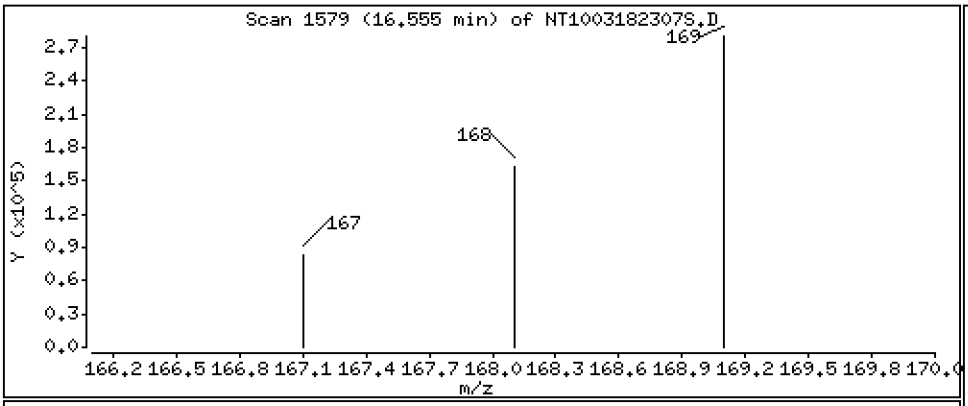
Operator: JGR

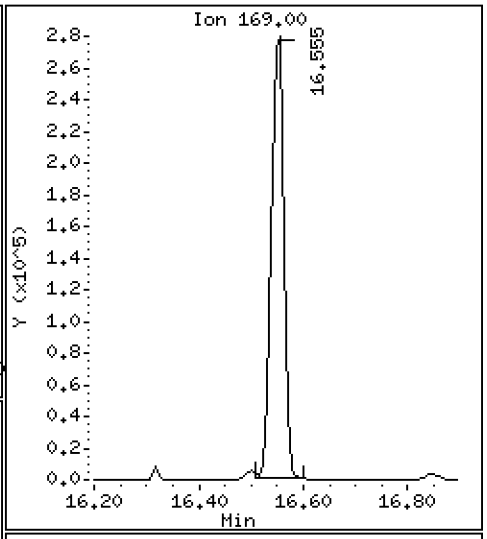
Column phase: ZB-5msi

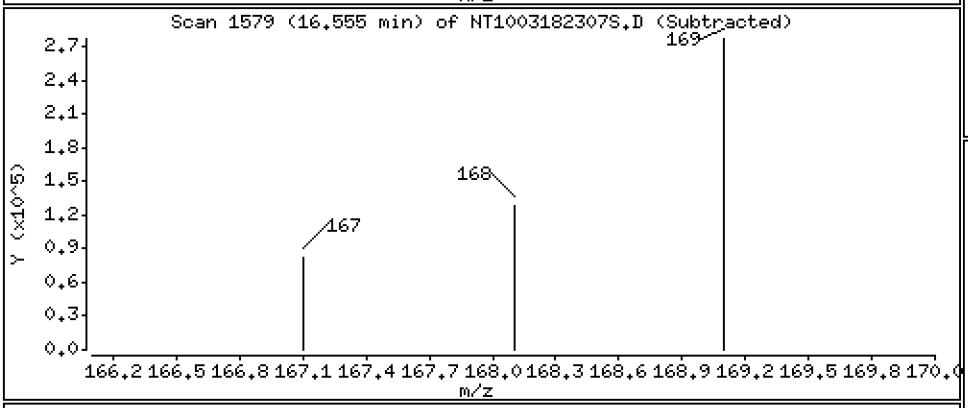
Column diameter: 0.25

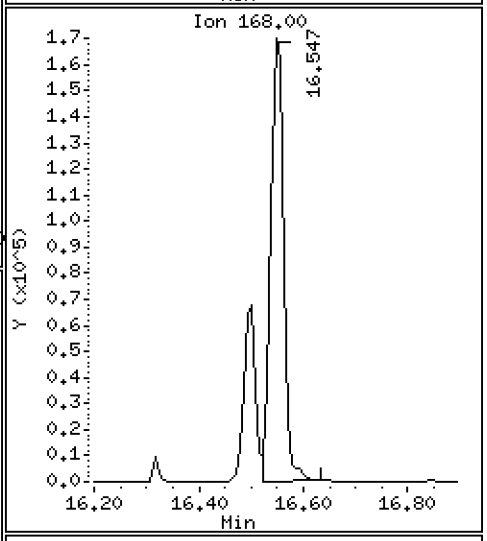
54 N-Nitrosodiphenylamine

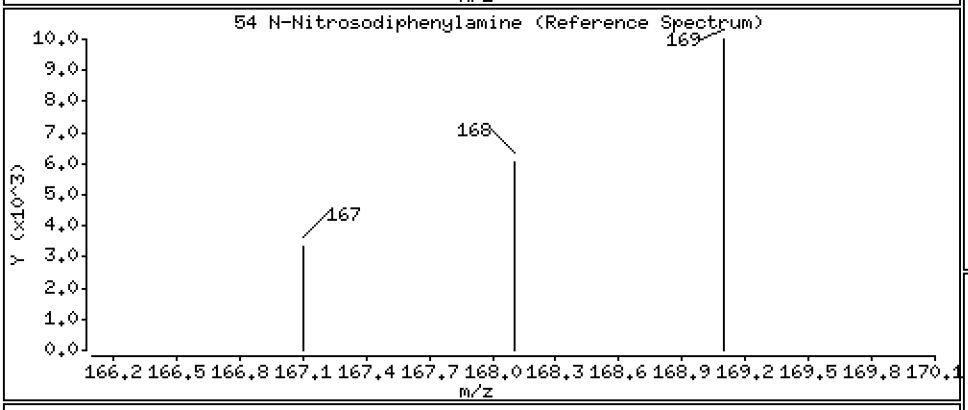
Concentration: 4.103 ug/L

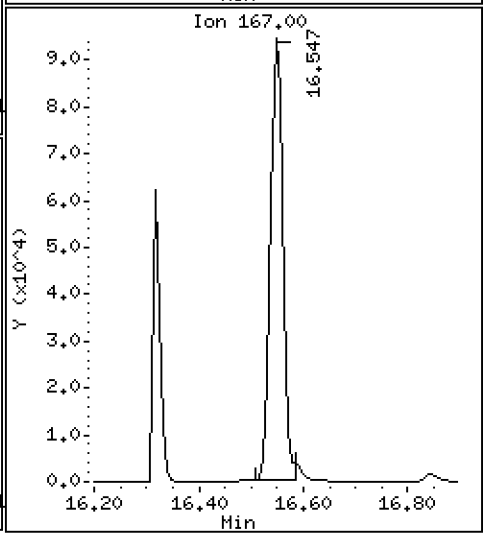


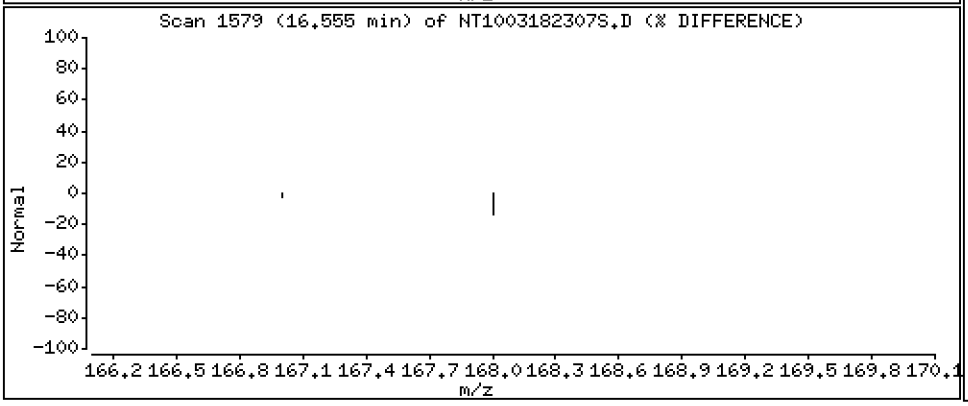












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

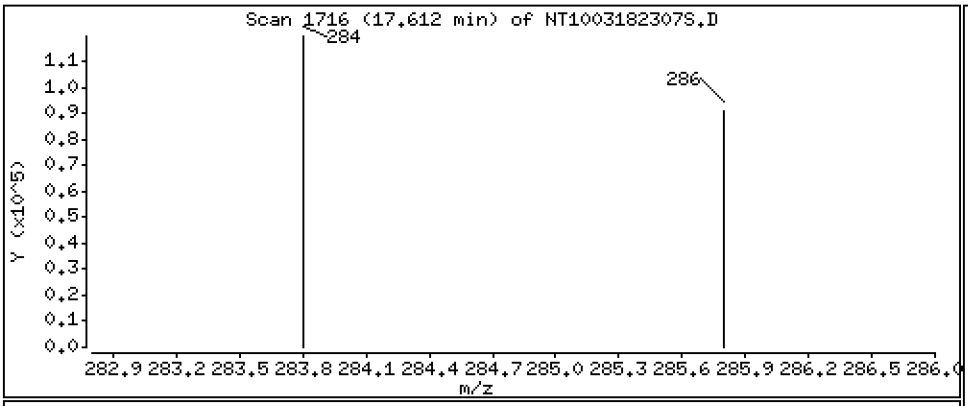
Operator: JGR

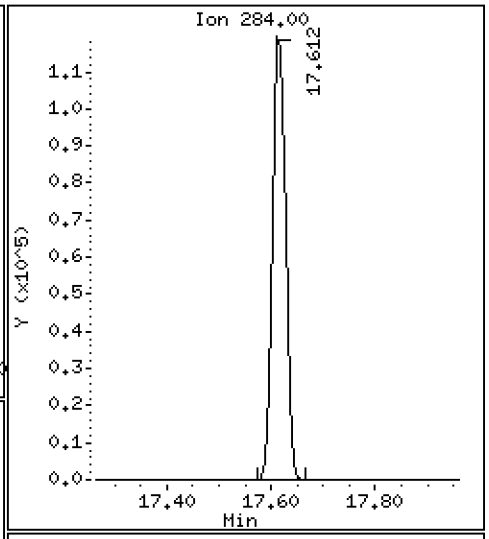
Column phase: ZB-5msi

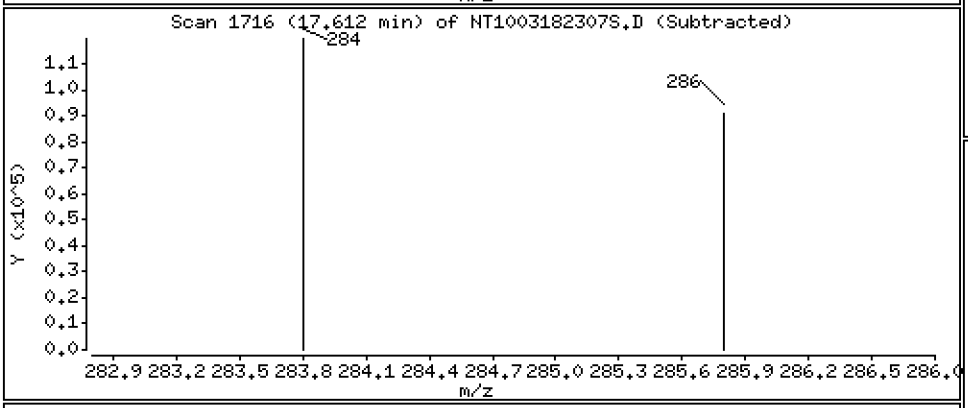
Column diameter: 0.25

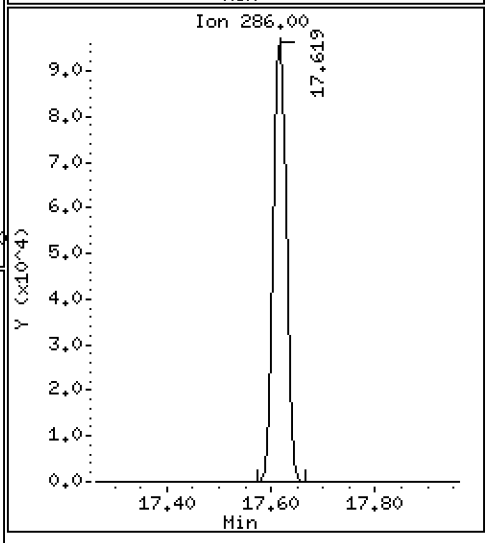
57 Hexachlorobenzene

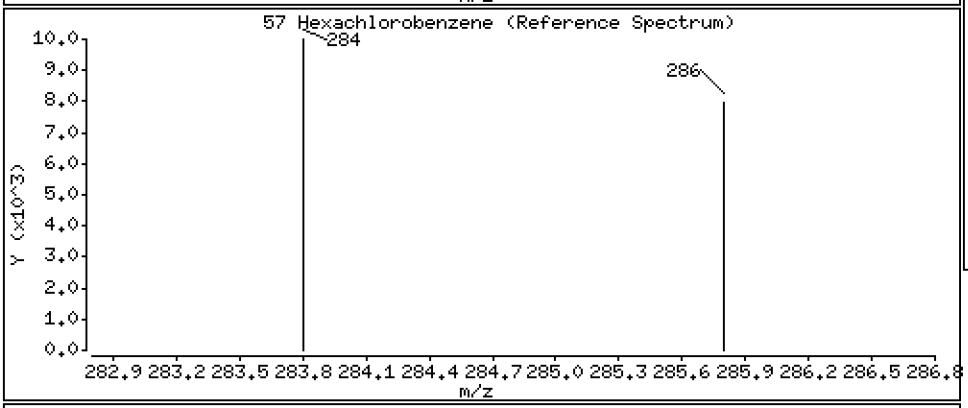
Concentration: 4.128 ug/L

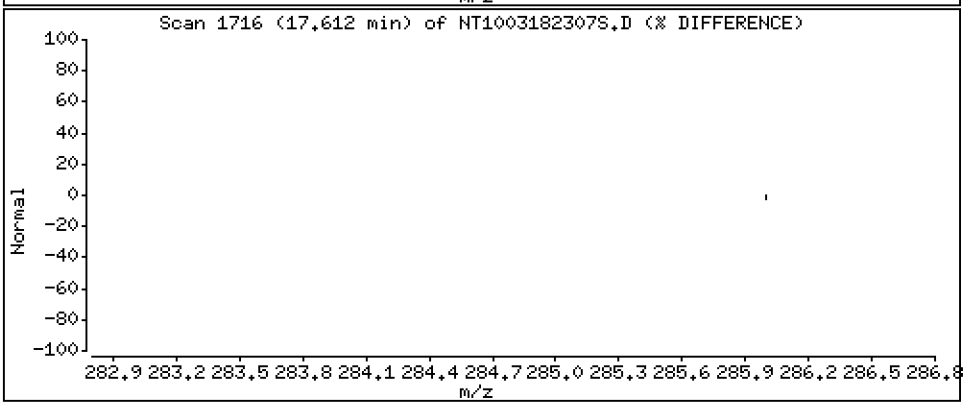












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

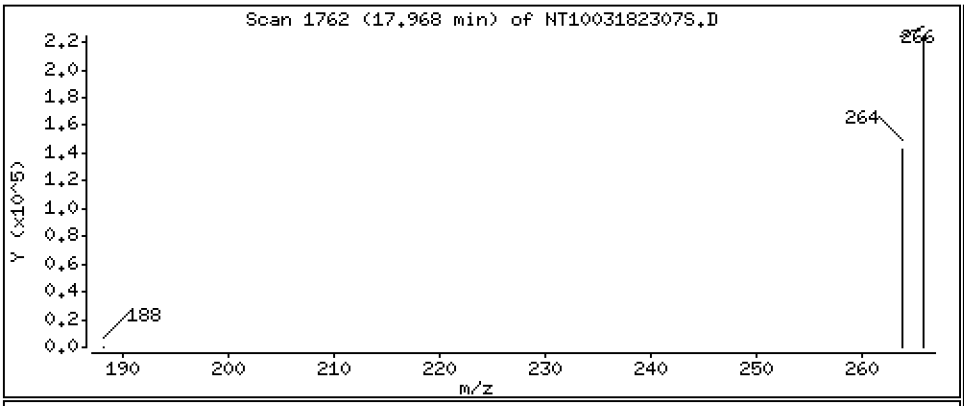
Operator: JGR

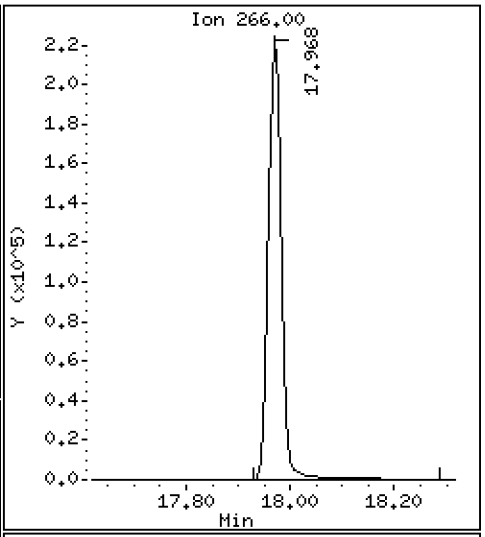
Column phase: ZB-5msi

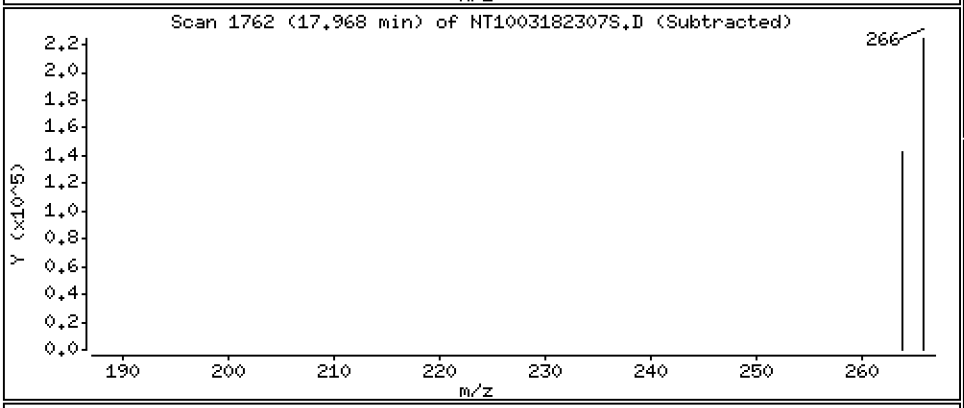
Column diameter: 0.25

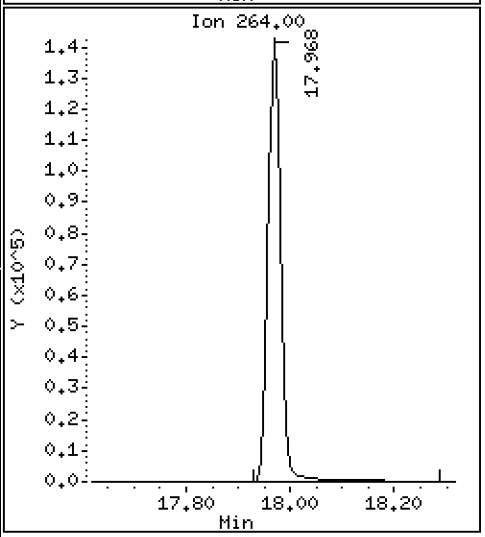
58 Pentachlorophenol

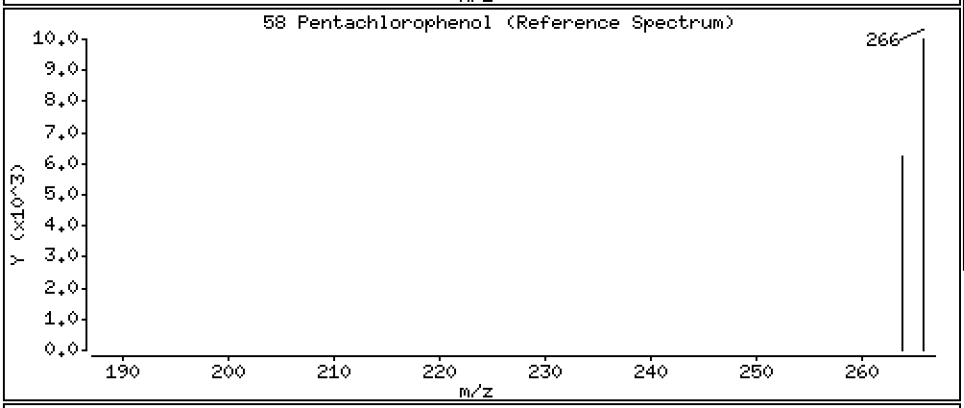
Concentration: 12.75 ug/L

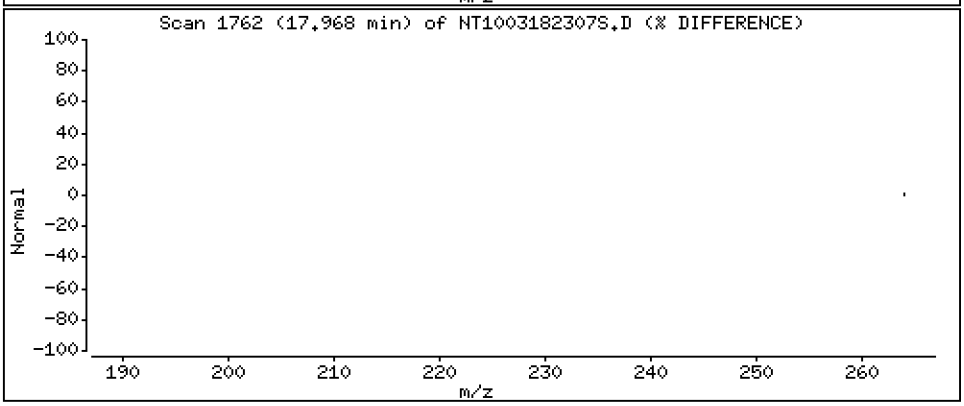












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

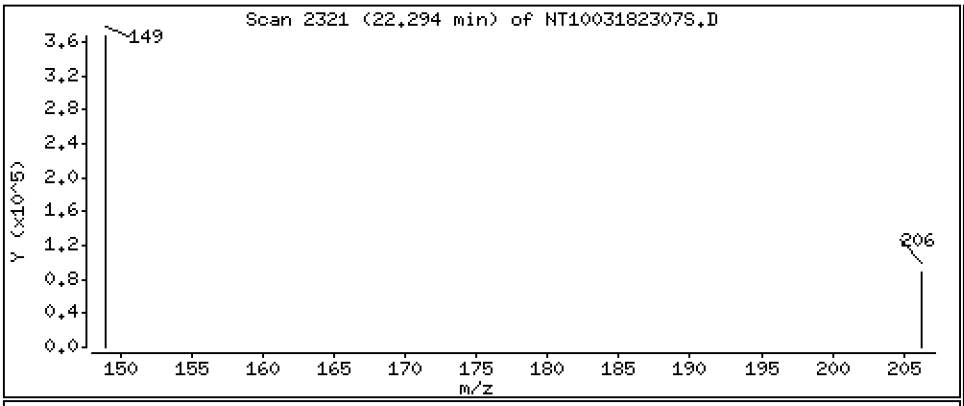
Operator: JGR

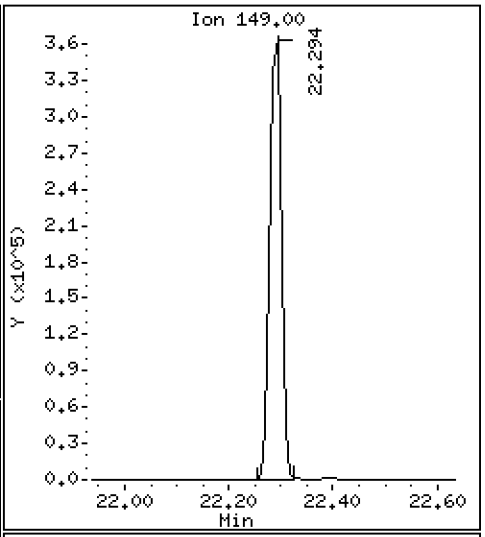
Column phase: ZB-5msi

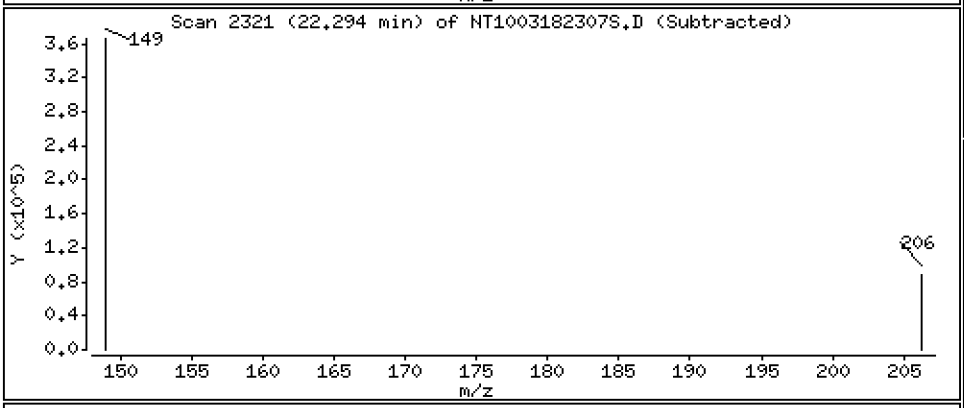
Column diameter: 0.25

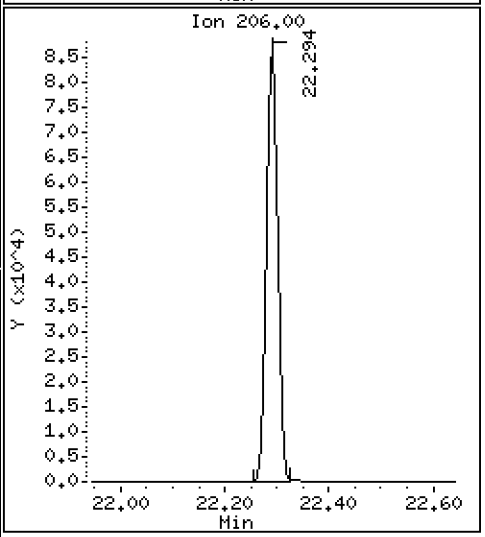
67 Butylbenzylphthalate

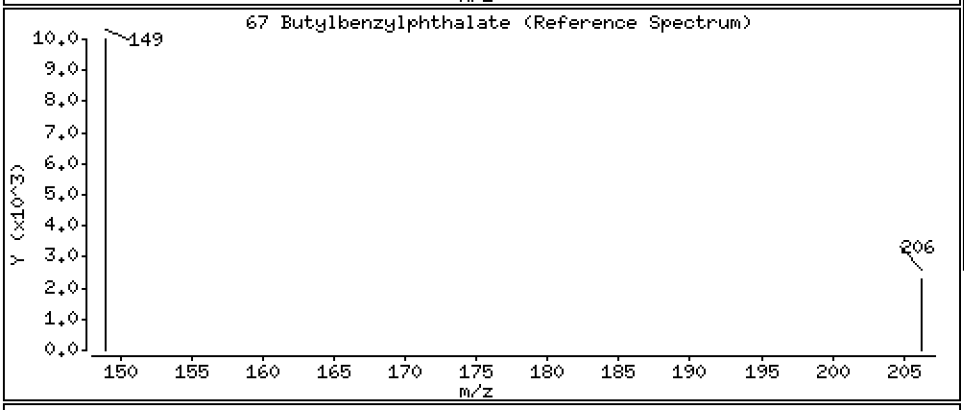
Concentration: 5.835 ug/L

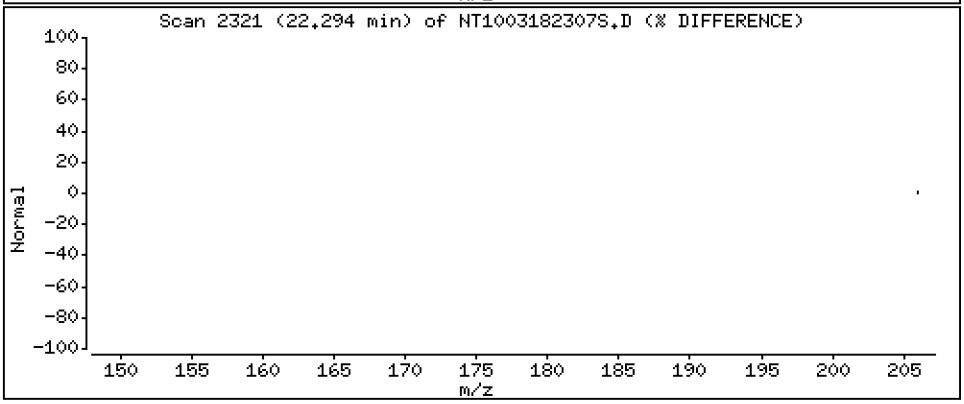












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

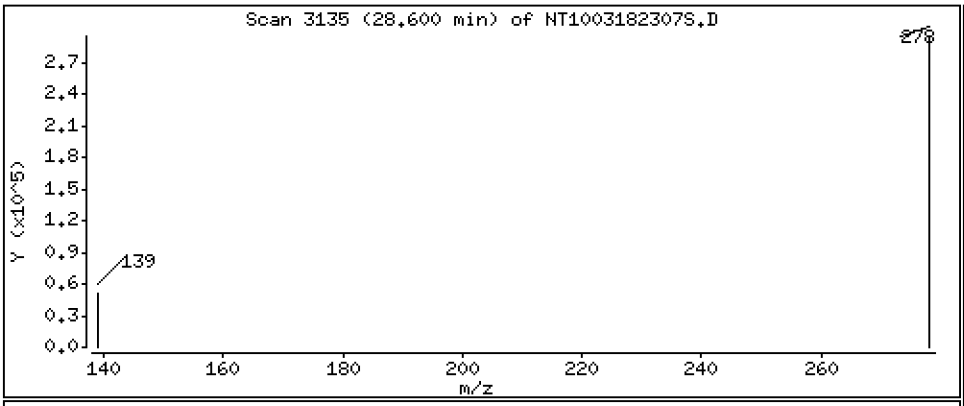
Operator: JGR

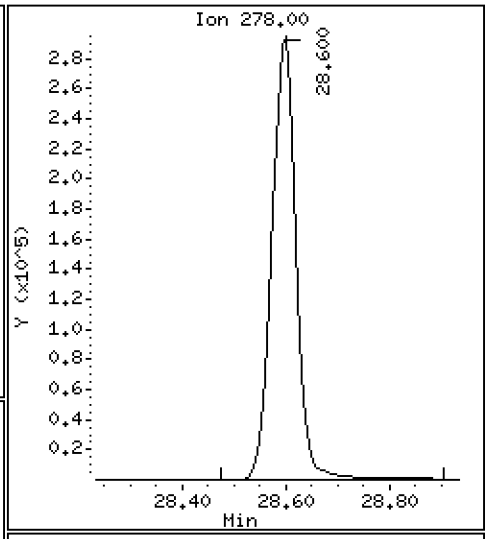
Column phase: ZB-5msi

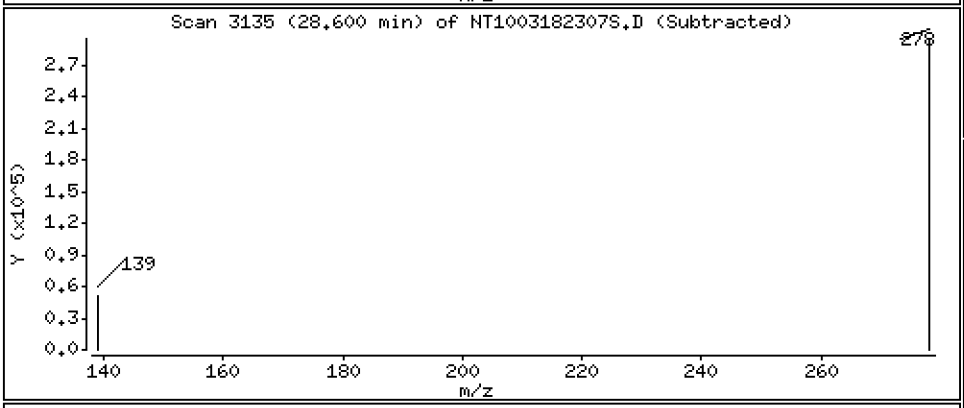
Column diameter: 0.25

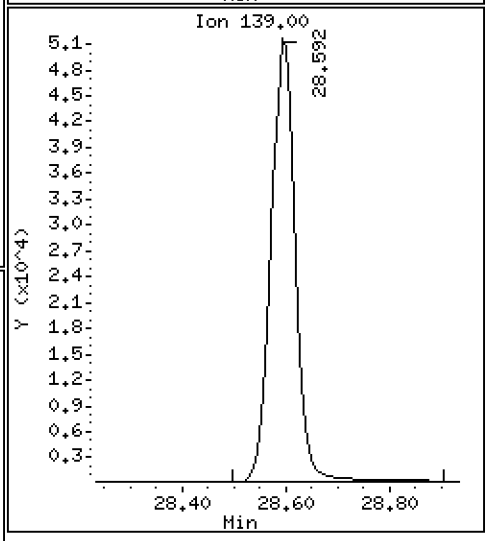
79 Dibenzo(a,h)anthracene

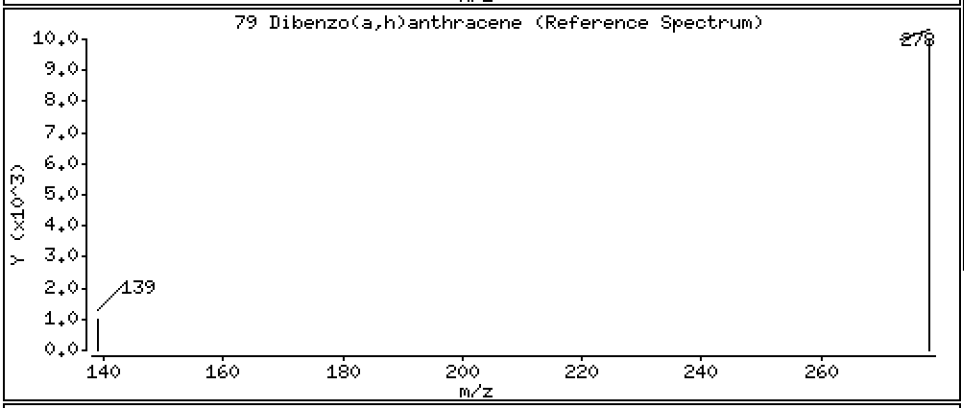
Concentration: 4.503 ug/L

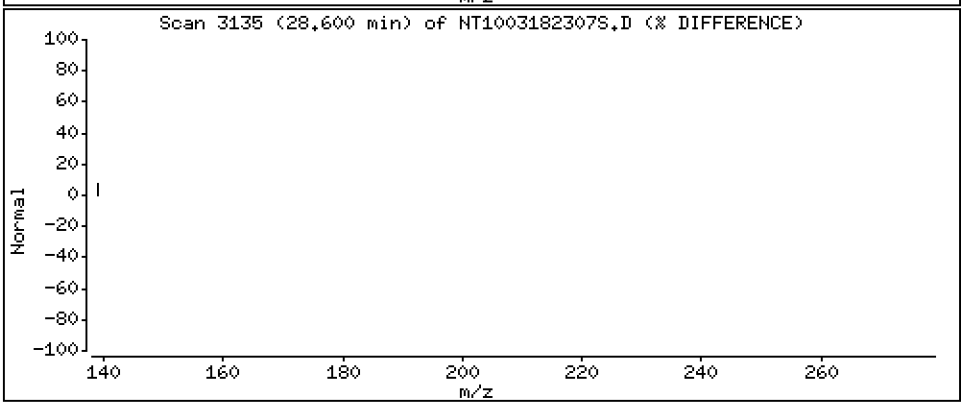












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Date : 18-MAR-2023 21:33

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BS2

Volume Injected (uL): 1.0

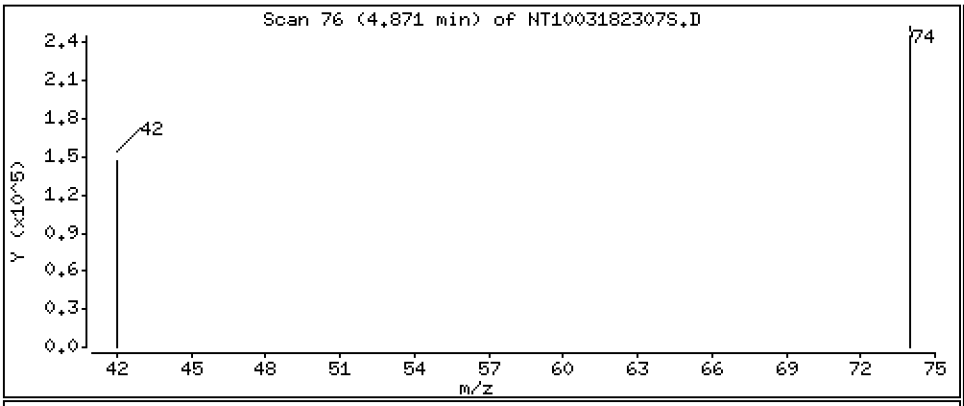
Operator: JGR

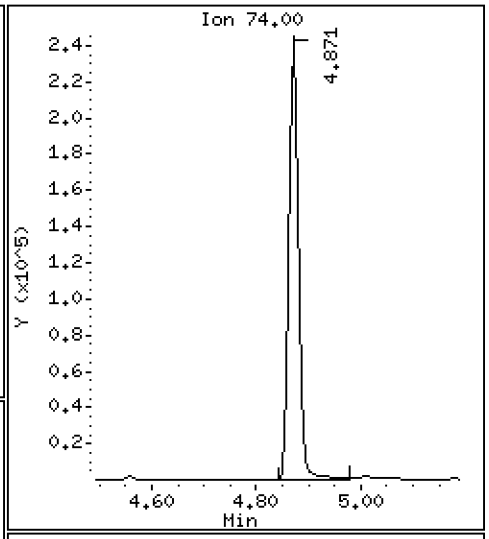
Column phase: ZB-5msi

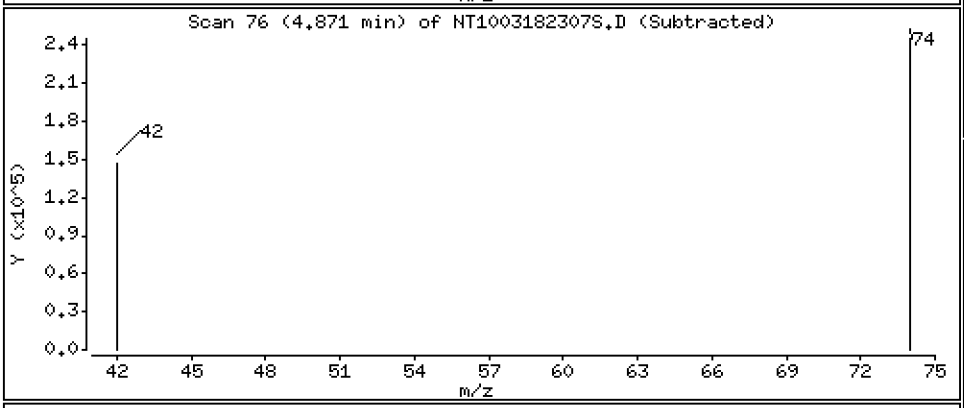
Column diameter: 0.25

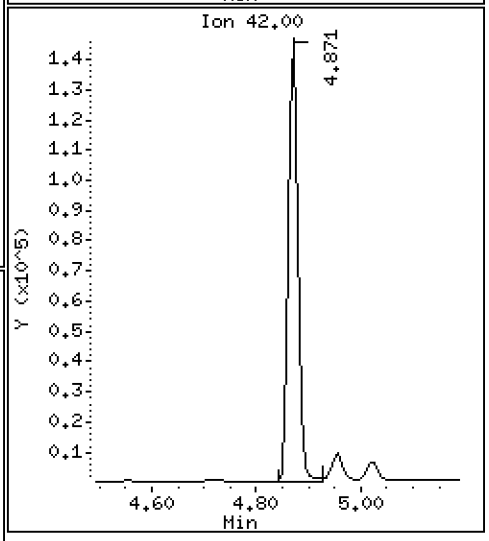
90 N-Nitrosodimethylamine

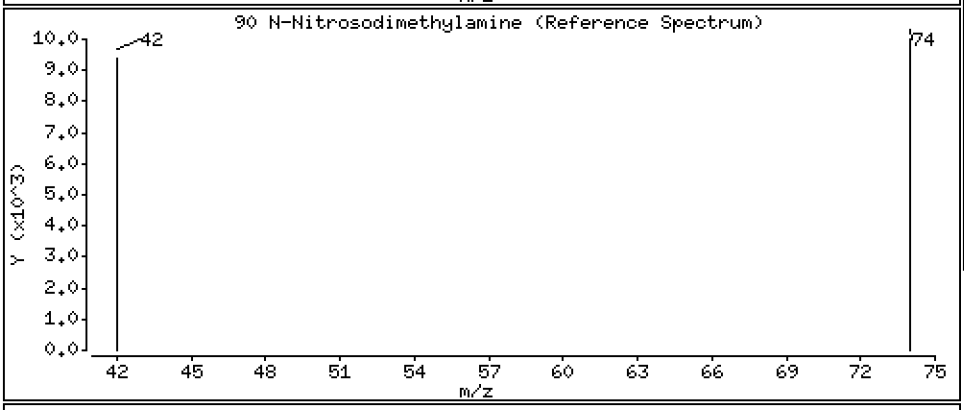
Concentration: 7.149 ug/L

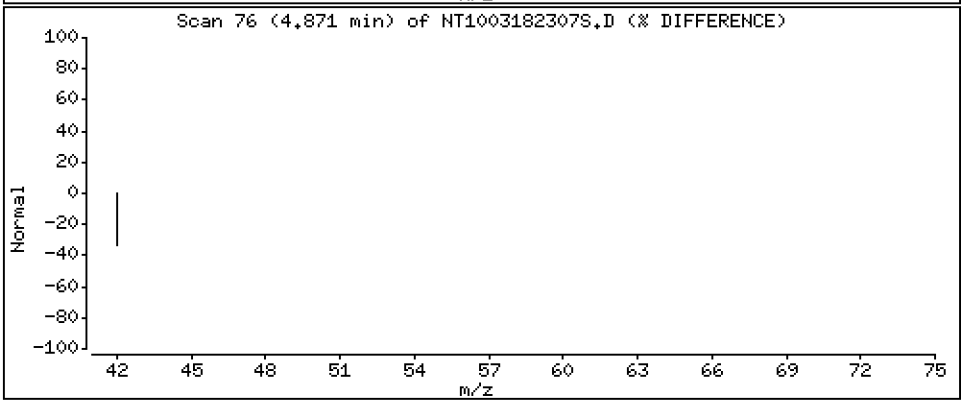












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182307S.D
Lab Smp Id: BLB0579-BS2
Inj Date : 18-MAR-2023 21:33 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-BS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.972	6.957	(0.761)	388831	5.35443	5.354(R)
3	Phenol	94	8.548	8.541	(0.933)	340494	3.41765	3.418
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	328278	3.52134	3.521
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	239471	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	329129	3.65727	3.657
11	Benzyl alcohol	79	9.431	9.431	(1.029)	232956	4.03331	4.033
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.042)	321005	3.62704	3.627
13	2-Methylphenol	108	9.648	9.648	(1.052)	227854	3.30064	3.301
15	4-Methylphenol	108	9.920	9.912	(1.082)	265924	3.70710	3.707
16	N-Nitroso-di-n-propylamine	70	9.982	9.982	(1.089)	199903	3.94049	3.940
22	2,4-Dimethylphenol	107	10.951	10.943	(0.942)	333995	4.51550	4.515
24	Benzoic acid	105	11.147	11.053	(0.959)	1125006	24.8177	24.82
26	1,2,4-Trichlorobenzene	180	11.542	11.542	(0.993)	276698	3.71865	3.719
* 27	Naphthalene-d8	136	11.627	11.627	(1.000)	855721	4.00000	
30	Hexachlorobutadiene	225	12.021	12.021	(1.034)	172937	3.82279	3.823
39	Dimethylphthalate	163	14.722	14.714	(0.967)	627030	4.72261	4.723
* 42	Acenaphthene-d10	162	15.217	15.210	(1.000)	420737	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	745921	5.42307	5.423
54	N-Nitrosodiphenylamine	169	16.554	16.547	(0.908)	444000	4.10290	4.103
57	Hexachlorobenzene	284	17.611	17.611	(0.966)	200000	4.12849	4.128

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.967	17.968	(0.985)	370022	12.7499	12.75
*	59 Phenanthrene-d10	188	18.238	18.231	(1.000)	806572	4.00000	
$	66 Terphenyl-d14	244	21.364	21.364	(0.918)	480837	4.60074	4.601(R)
	67 Butylbenzylphthalate	149	22.293	22.285	(0.958)	527676	5.83506	5.835
*	69 Chrysene-d12	240	23.277	23.269	(1.000)	641437	4.00000	
*	77 Perylene-d12	264	25.909	25.909	(1.000)	662325	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.600	28.584	(1.104)	953973	4.50300	4.503
	90 N-Nitrosodimethylamine	74	4.871	4.840	(0.531)	329266	7.14906	7.149

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182307S.D
Lab Smp Id: BLB0579-BS2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	239471	20.97
27 Naphthalene-d8	704013	352007	1408026	855721	21.55
42 Acenaphthene-d10	353977	176989	707954	420737	18.86
59 Phenanthrene-d10	686752	343376	1373504	806572	17.45
69 Chrysene-d12	597733	298867	1195466	641437	7.31
77 Perylene-d12	645663	322832	1291326	662325	2.58

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	-0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	-0.00
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.04
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.03
77 Perylene-d12	25.91	25.41	26.41	25.91	-0.00

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

REVIEW SUMMARY FOR FILE - NT1003182307S.D

Lab ID: BLB0579-BS2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 21:33

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.959	0.951	0.0080	Benzoic acid

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

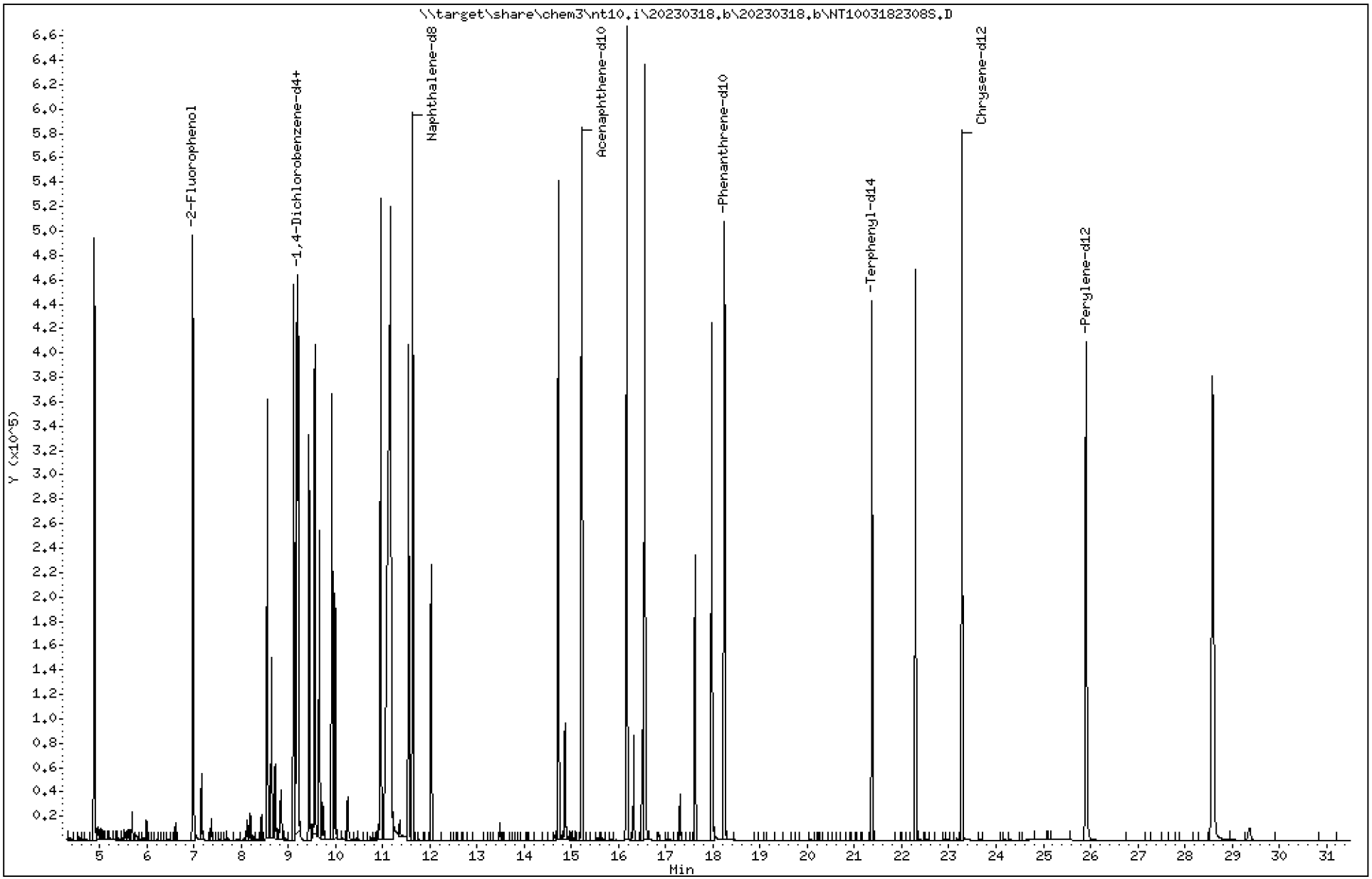
Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

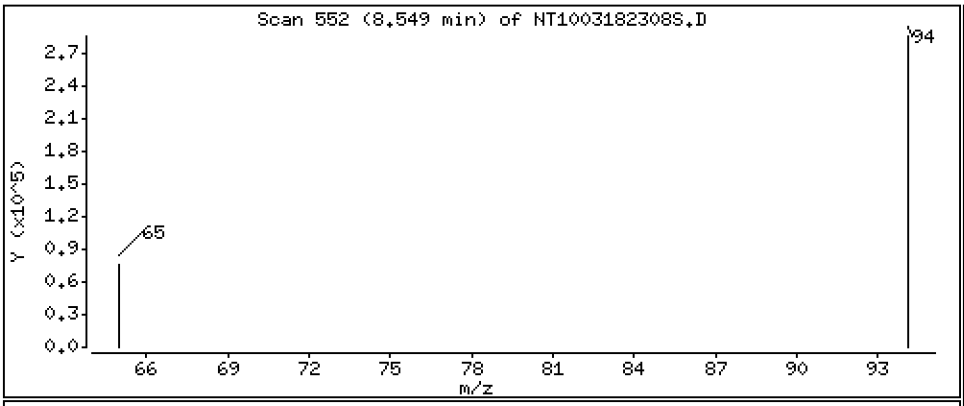
Operator: JGR

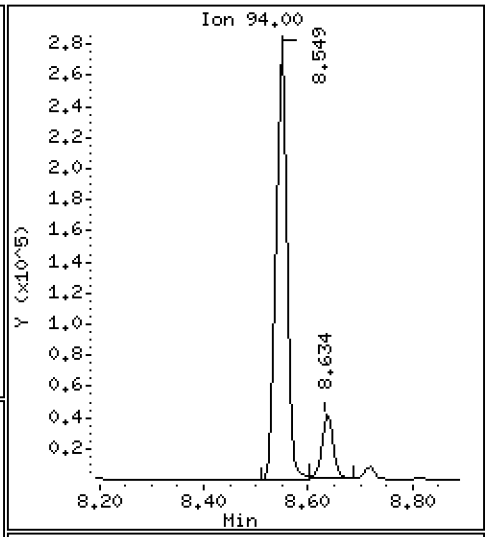
Column phase: ZB-5msi

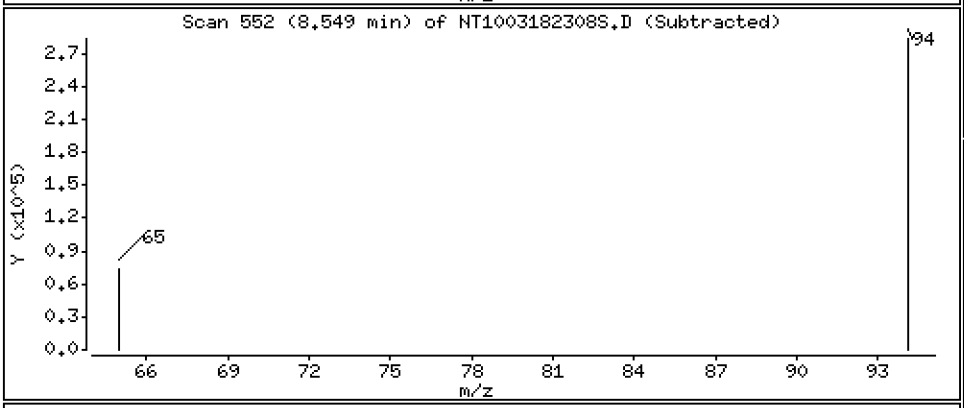
Column diameter: 0.25

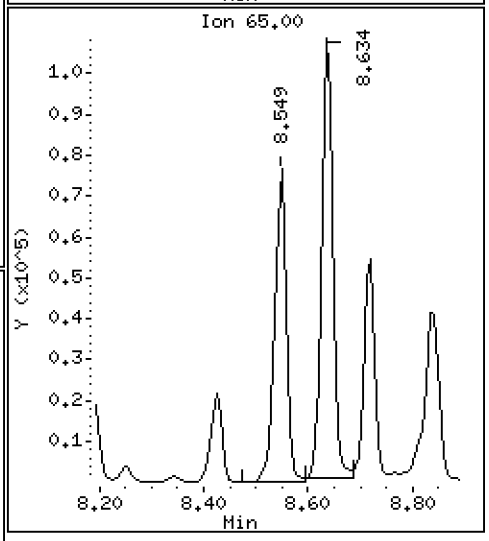
3 Phenol

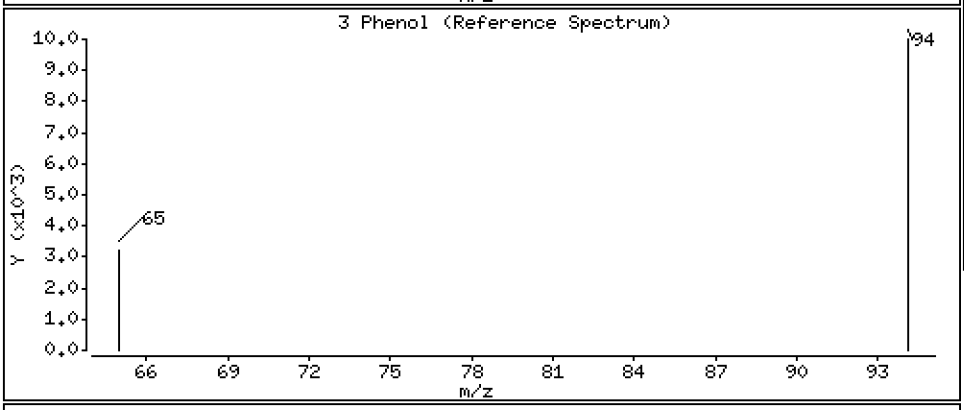
Concentration: 3.820 ug/L

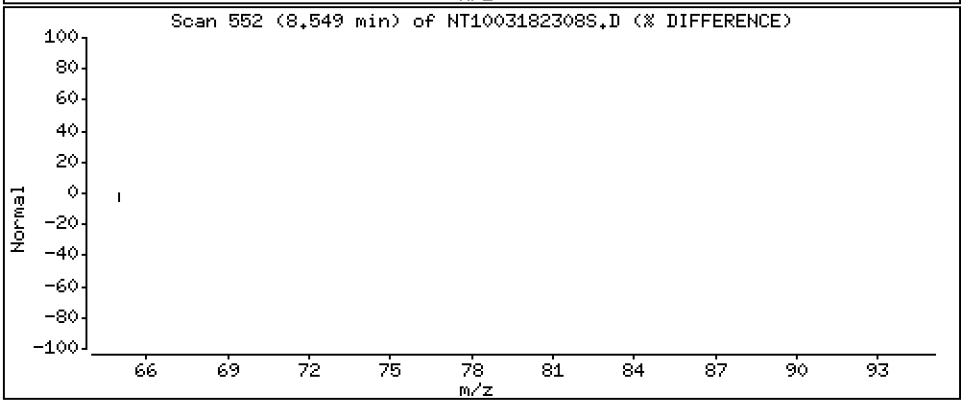












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

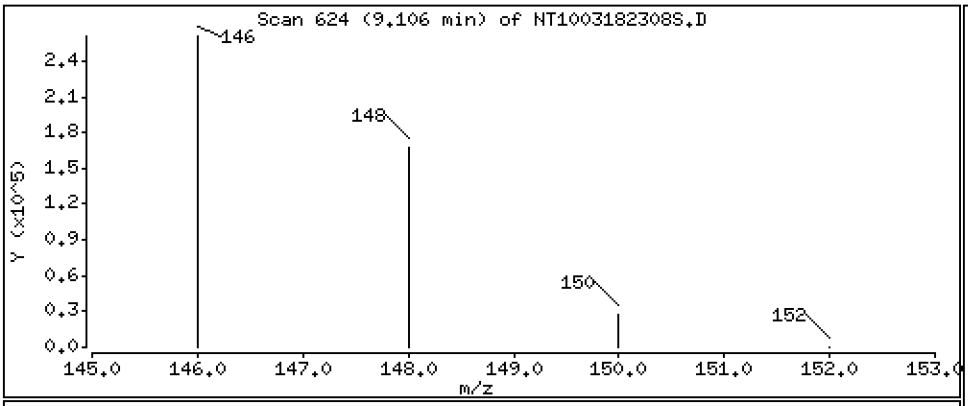
Operator: JGR

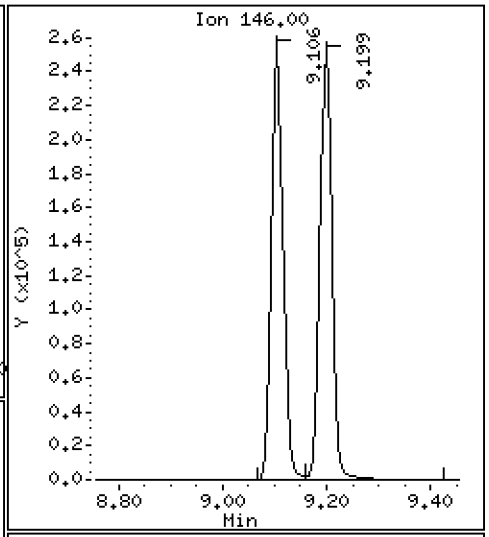
Column phase: ZB-5msi

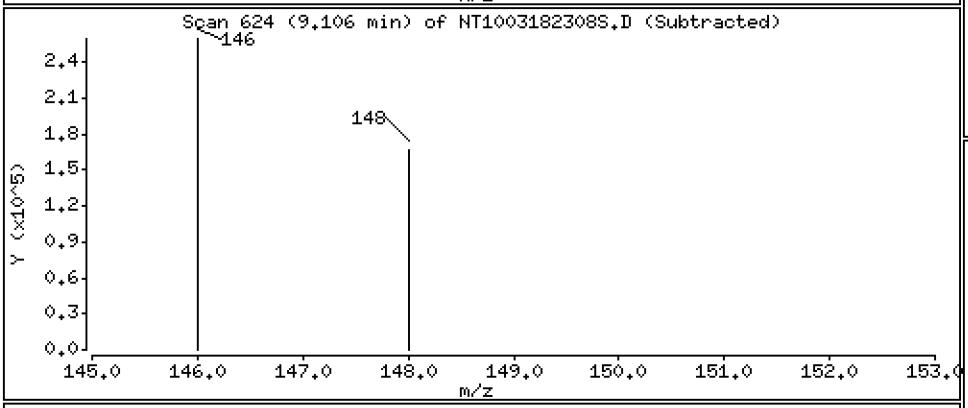
Column diameter: 0.25

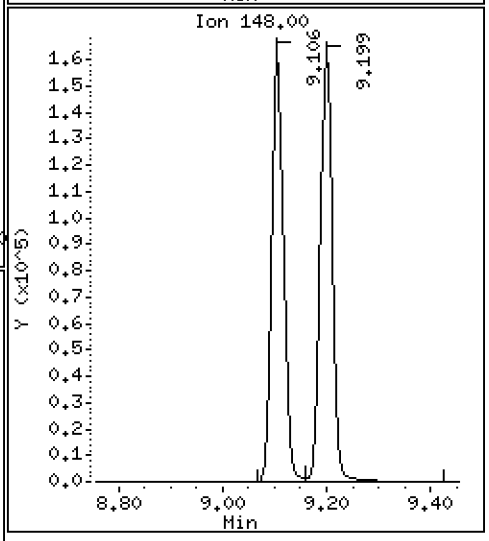
7 1,3-Dichlorobenzene

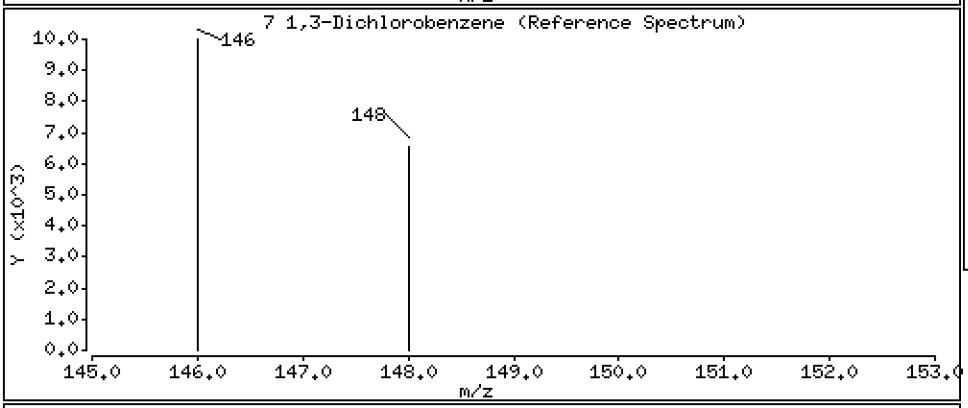
Concentration: 3.976 ug/L

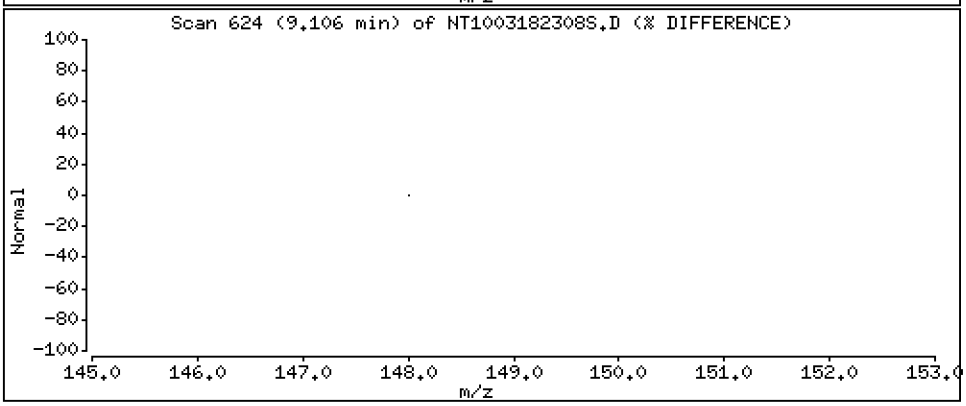












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

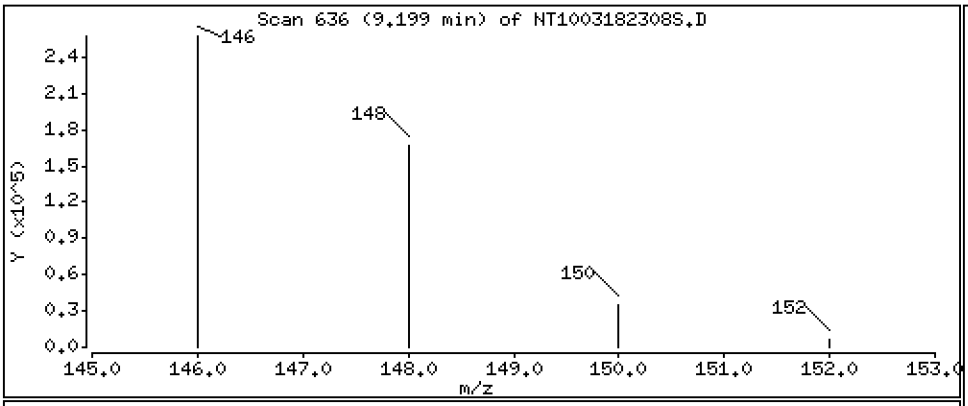
Operator: JGR

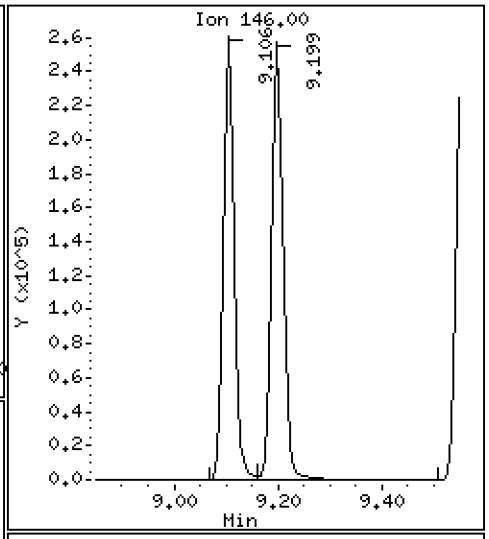
Column phase: ZB-5msi

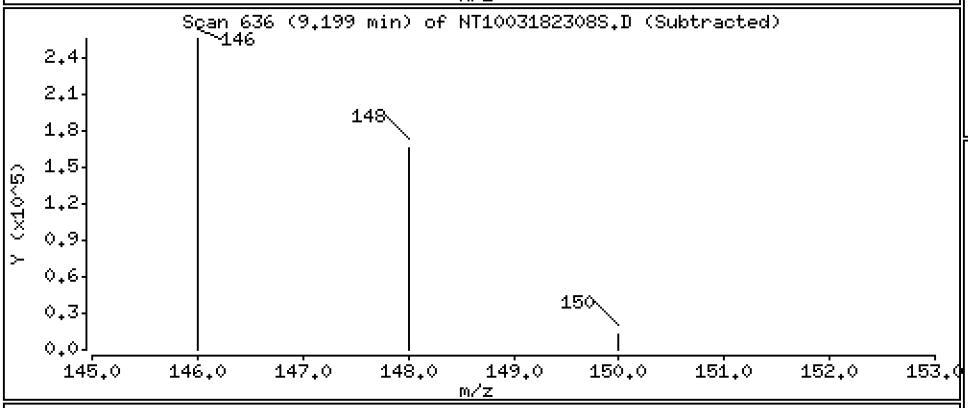
Column diameter: 0.25

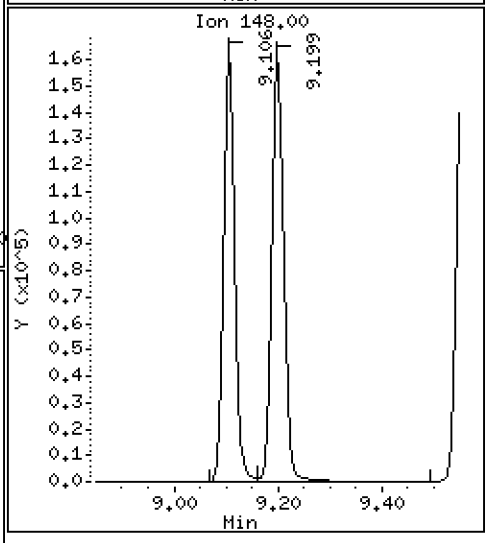
9 1,4-Dichlorobenzene

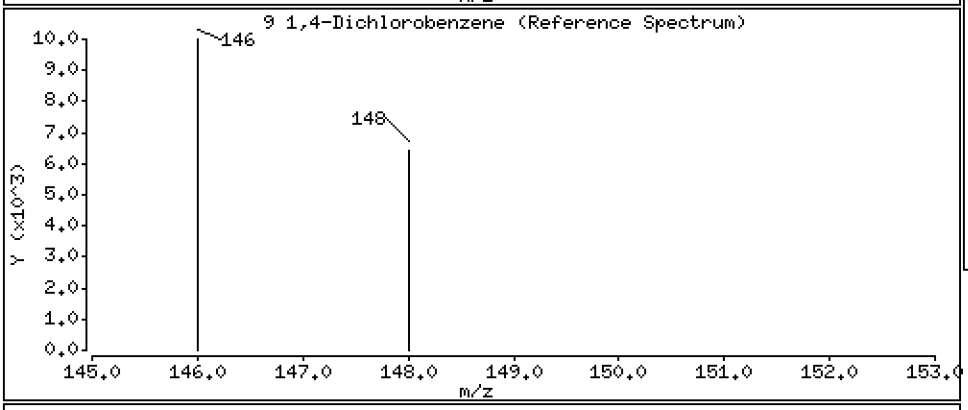
Concentration: 4.096 ug/L

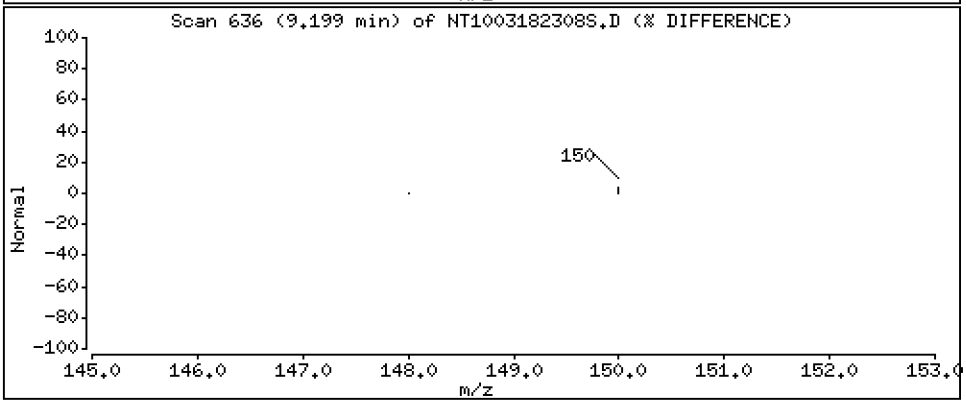












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

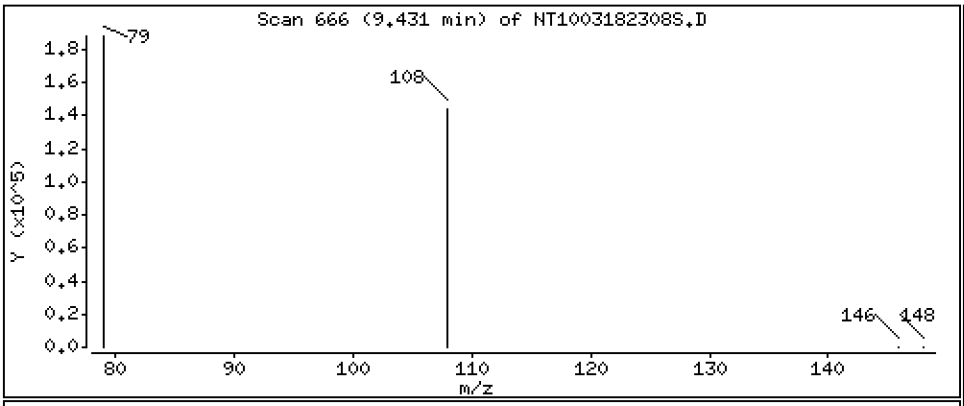
Operator: JGR

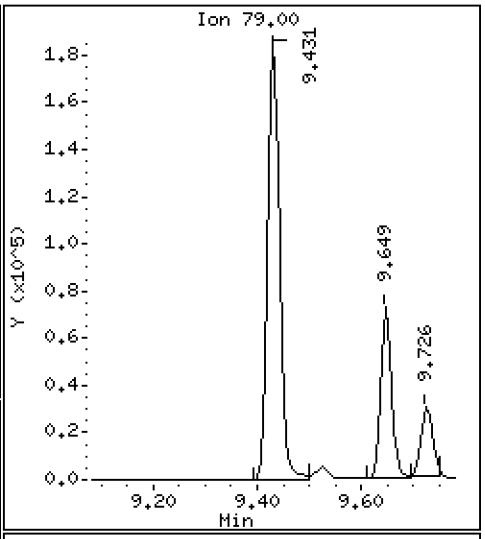
Column phase: ZB-5msi

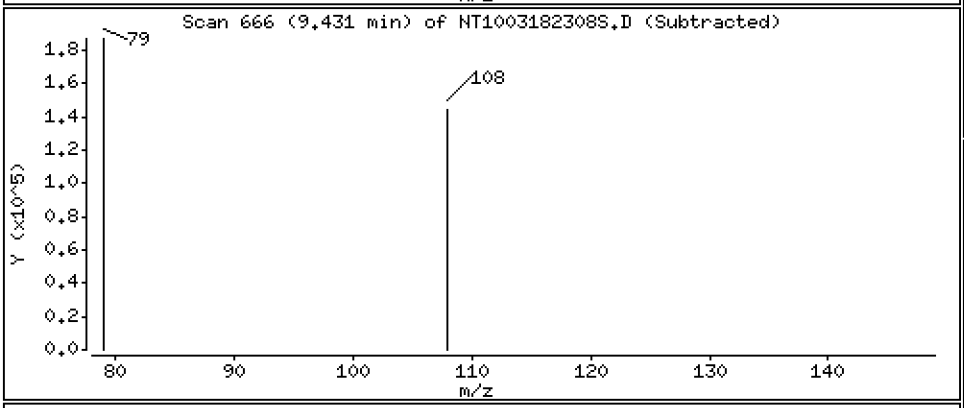
Column diameter: 0.25

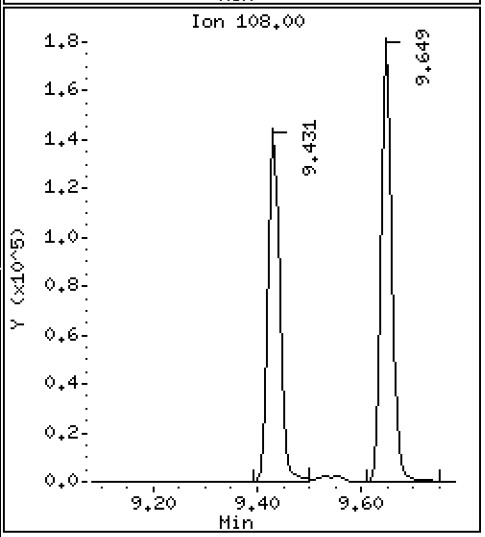
11 Benzyl alcohol

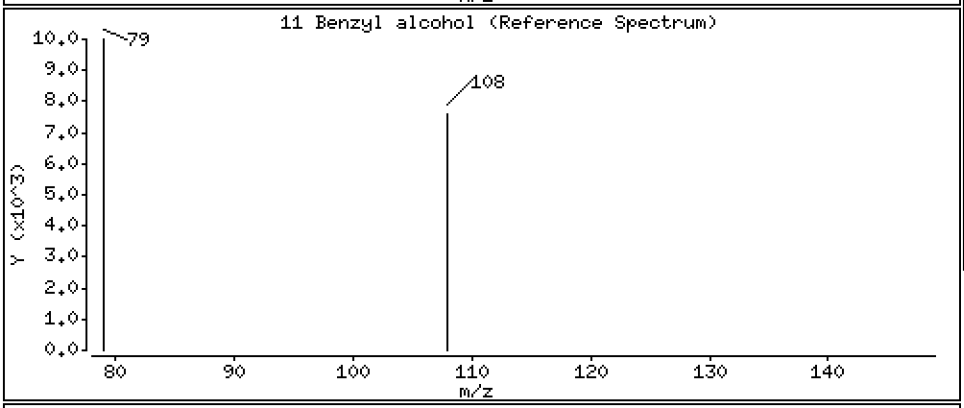
Concentration: 4.589 ug/L

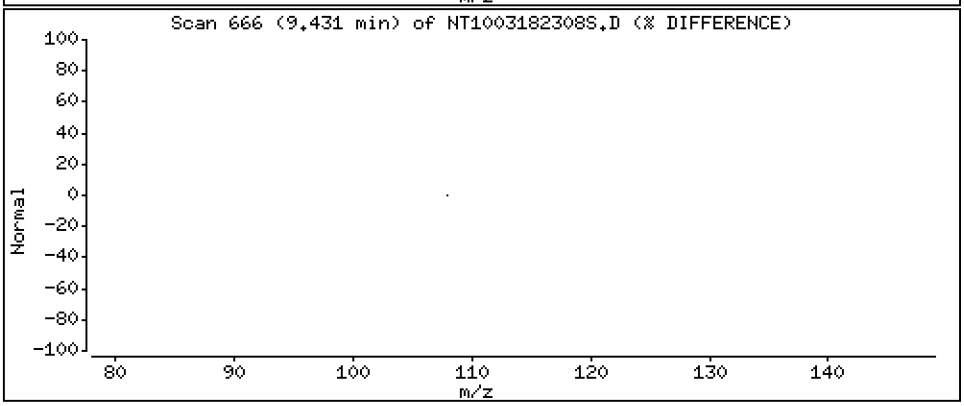












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

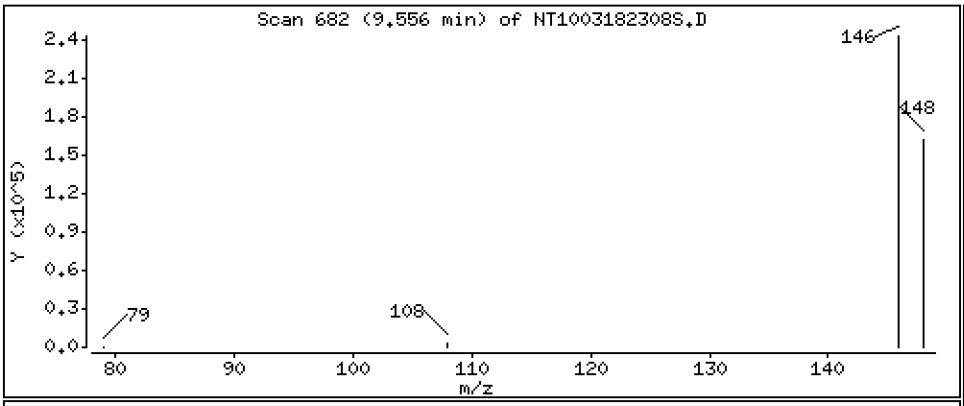
Operator: JGR

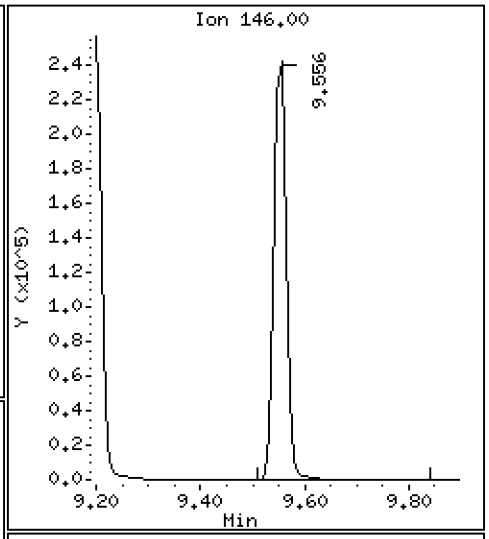
Column phase: ZB-5msi

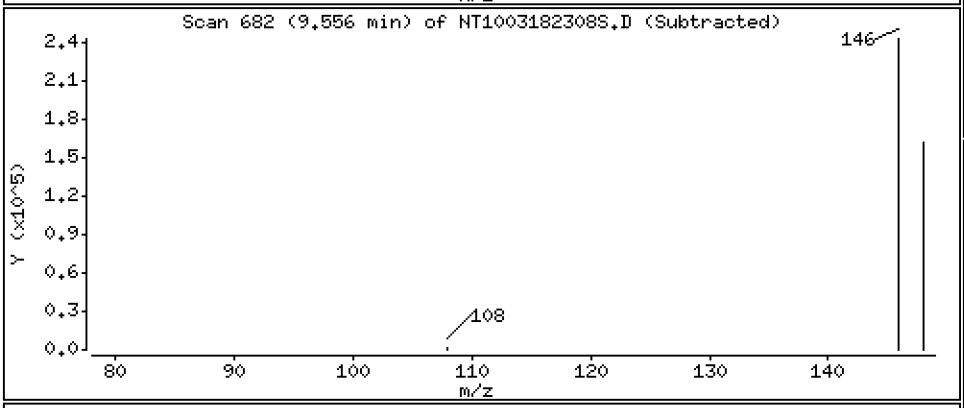
Column diameter: 0.25

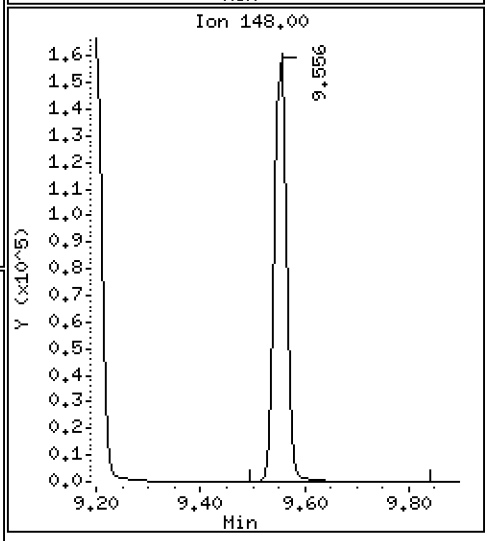
12 1,2-Dichlorobenzene

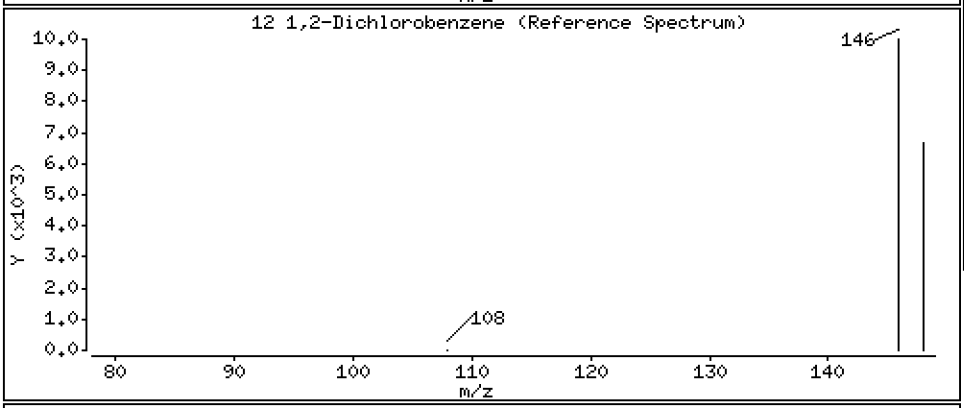
Concentration: 4.082 ug/L

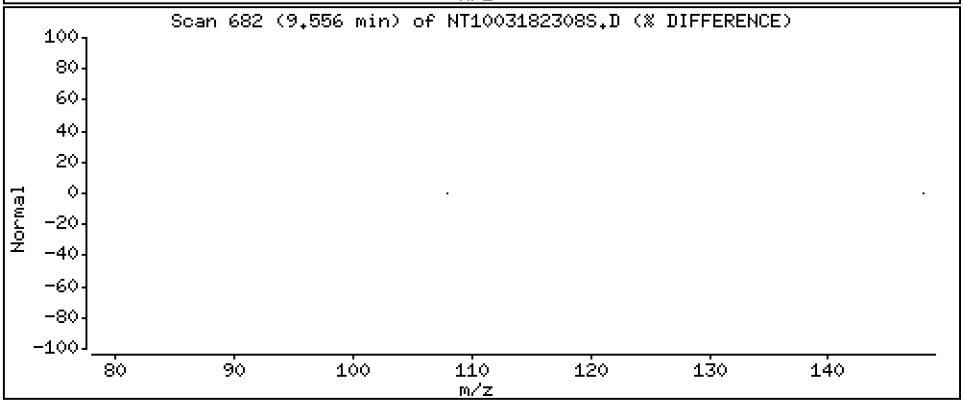












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

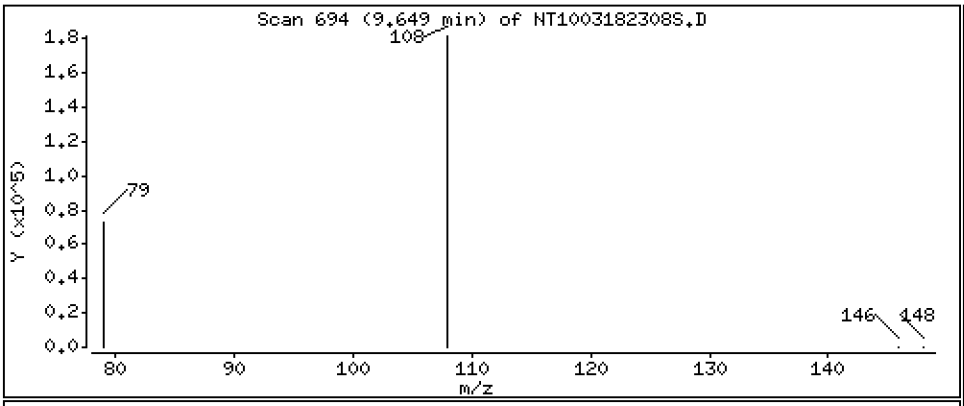
Operator: JGR

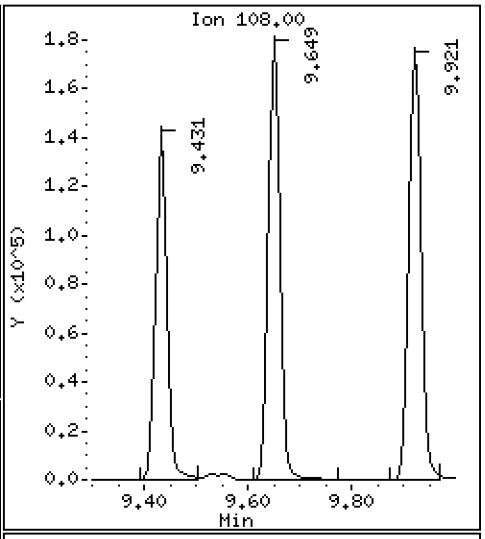
Column phase: ZB-5msi

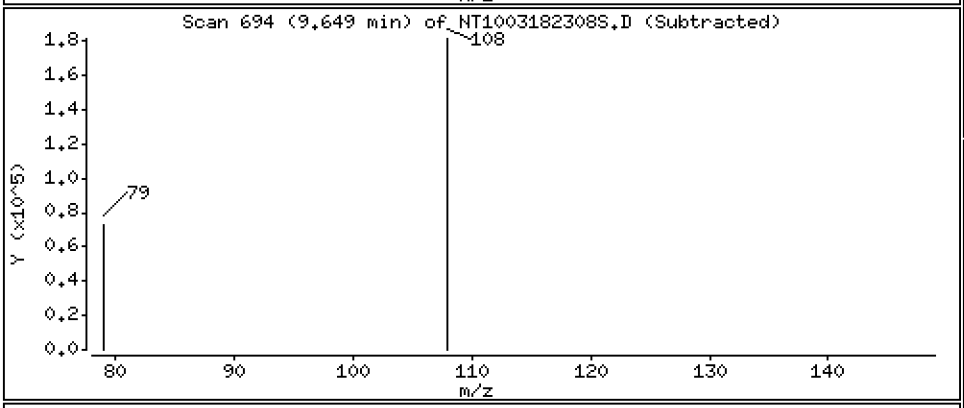
Column diameter: 0.25

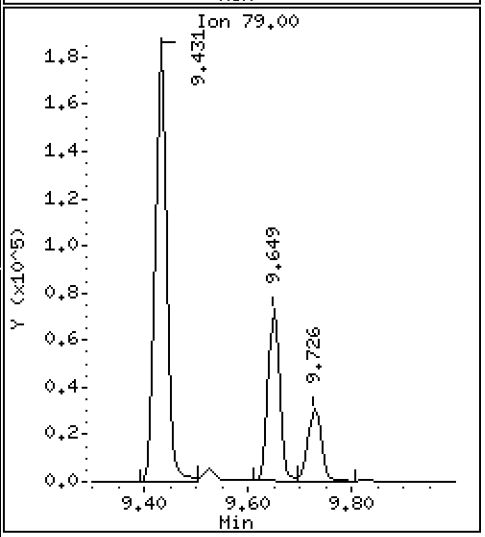
13 2-Methylphenol

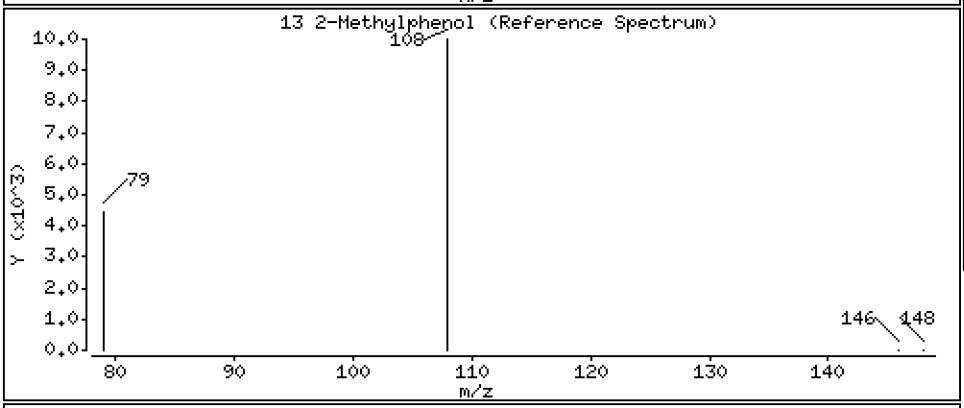
Concentration: 3.639 ug/L

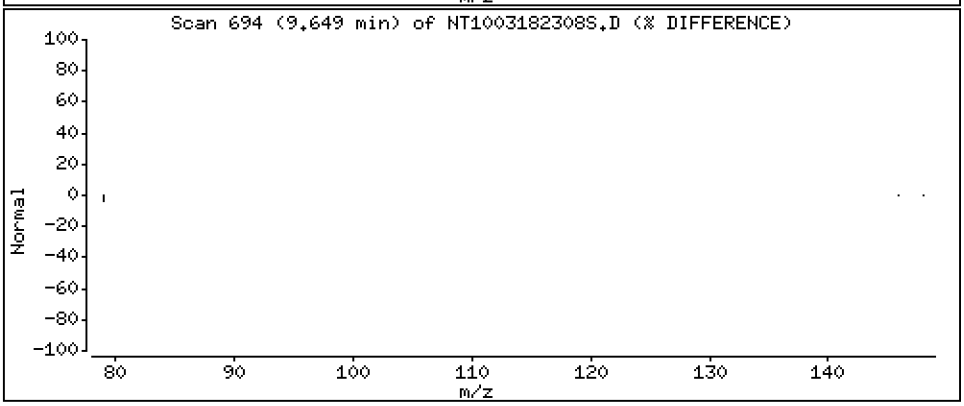












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

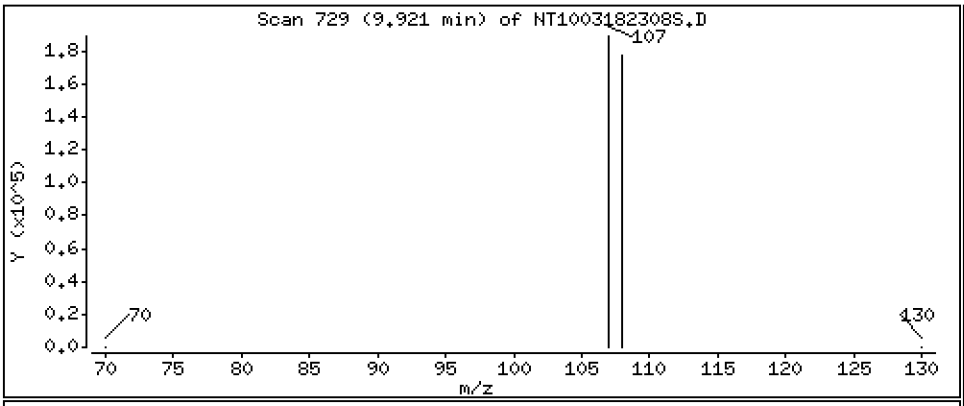
Operator: JGR

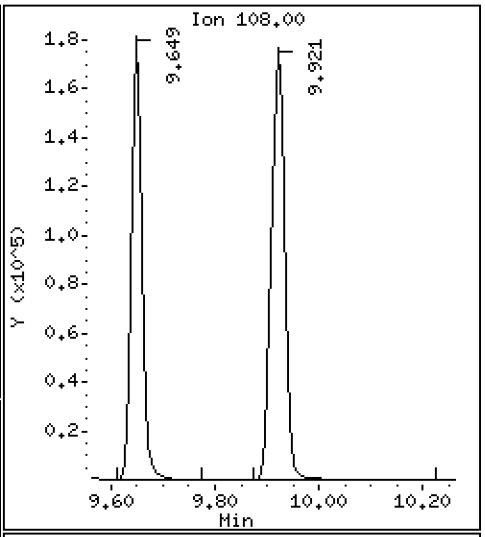
Column phase: ZB-5msi

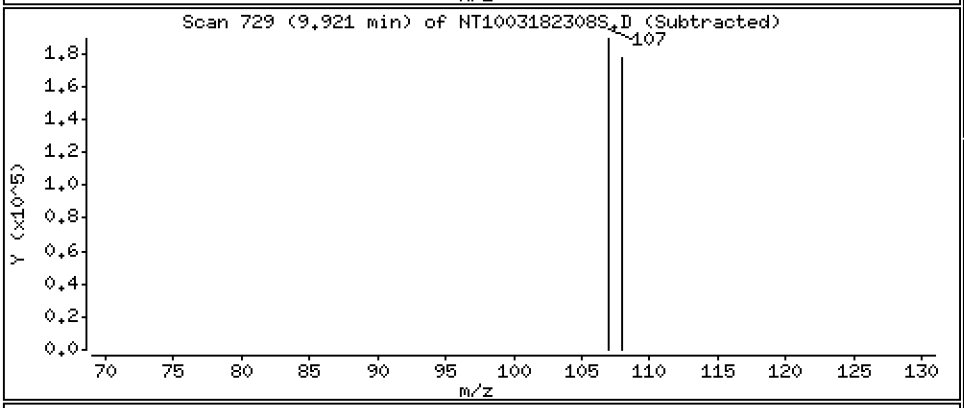
Column diameter: 0.25

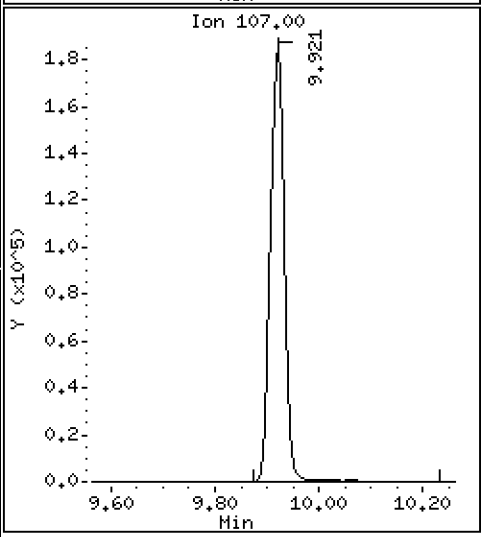
15 4-Methylphenol

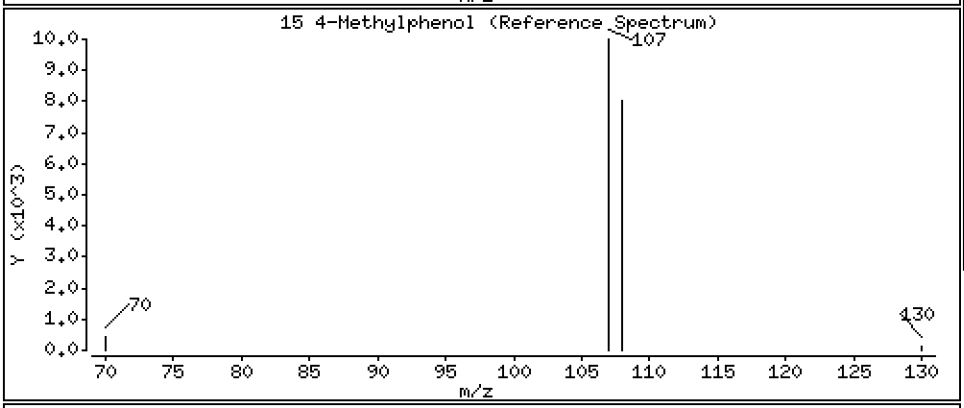
Concentration: 4.142 ug/L

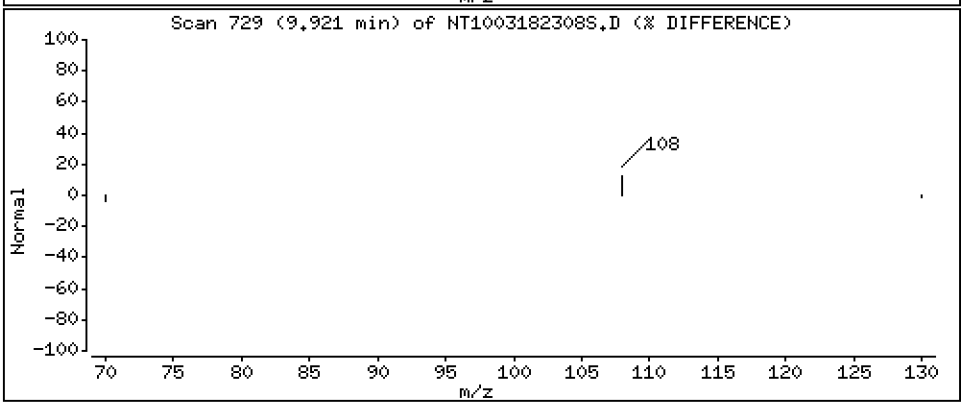












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

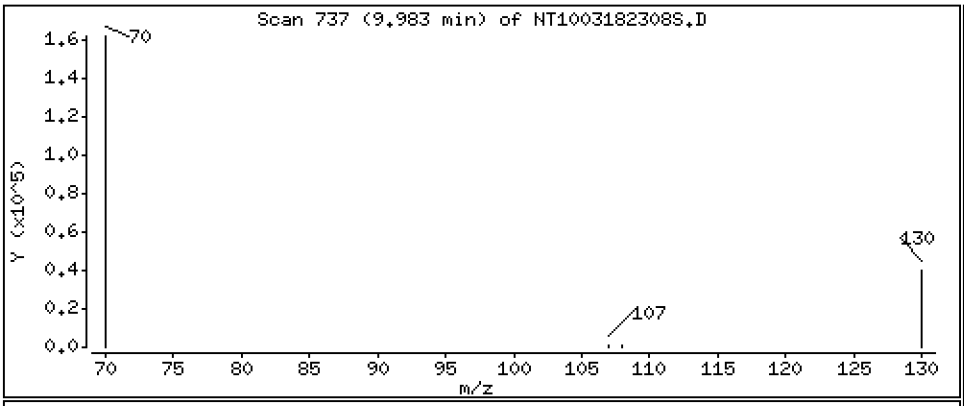
Operator: JGR

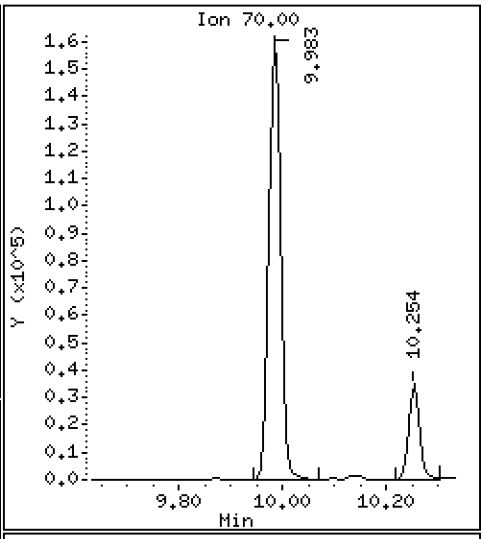
Column phase: ZB-5msi

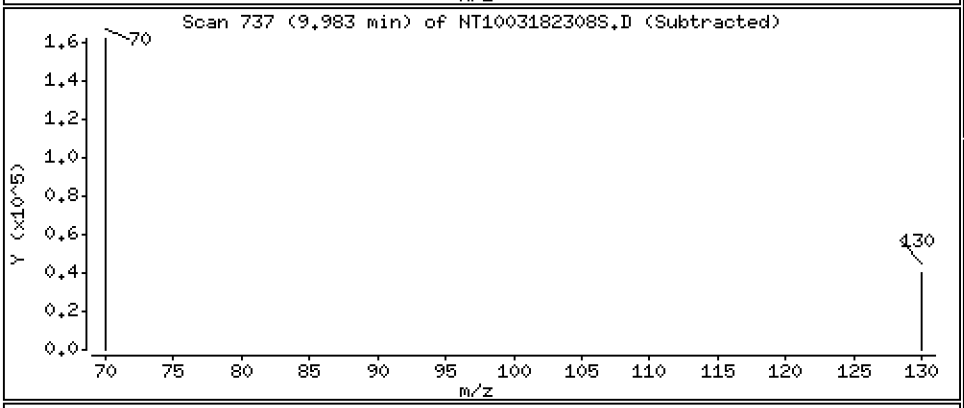
Column diameter: 0.25

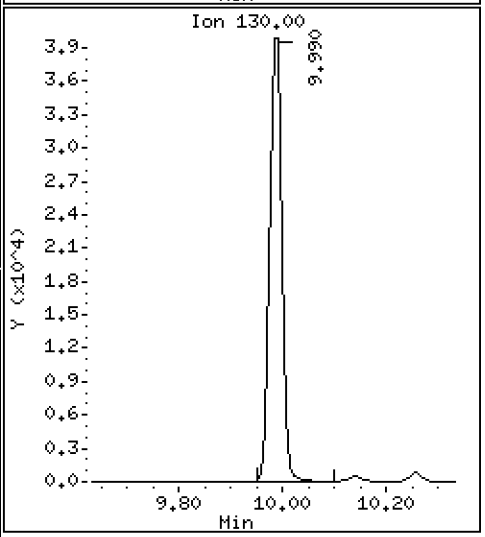
16 N-Nitroso-di-n-propylamine

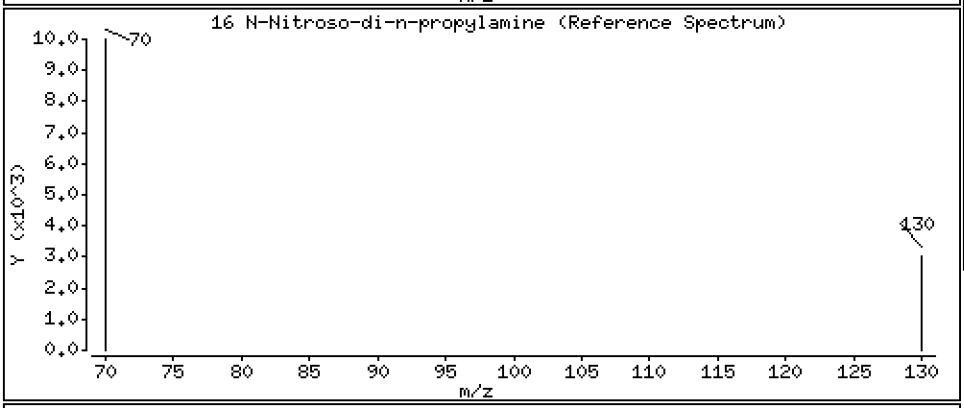
Concentration: 4.484 ug/L

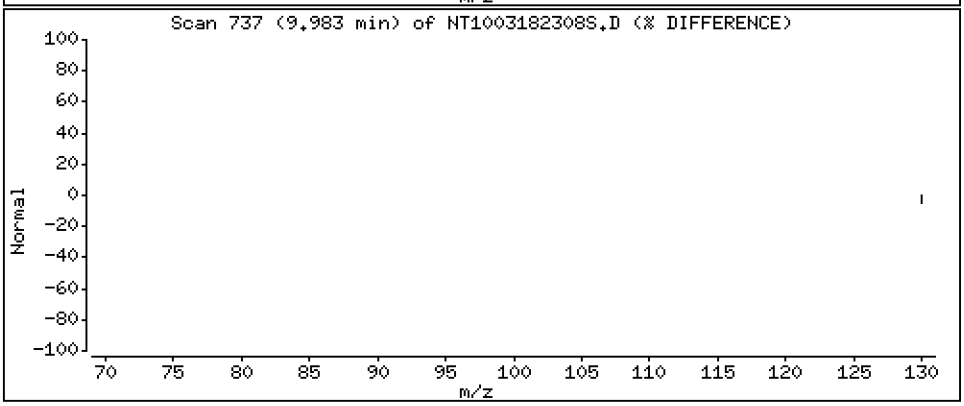












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

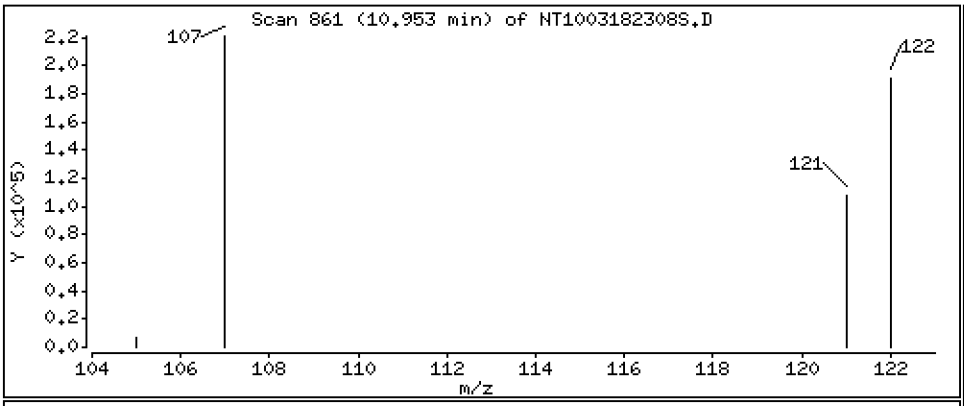
Operator: JGR

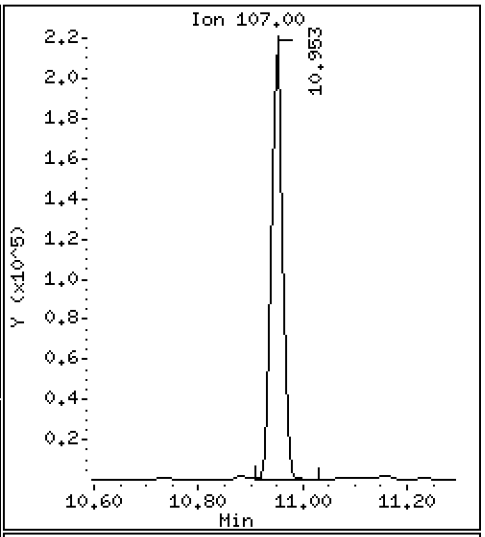
Column phase: ZB-5msi

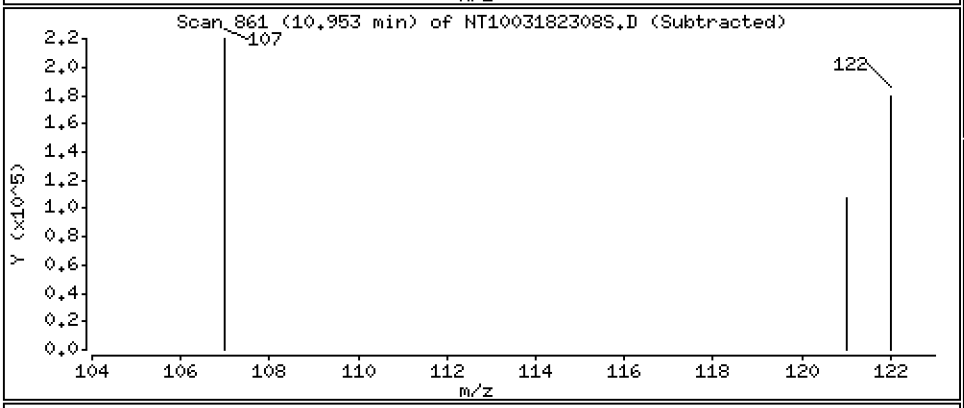
Column diameter: 0.25

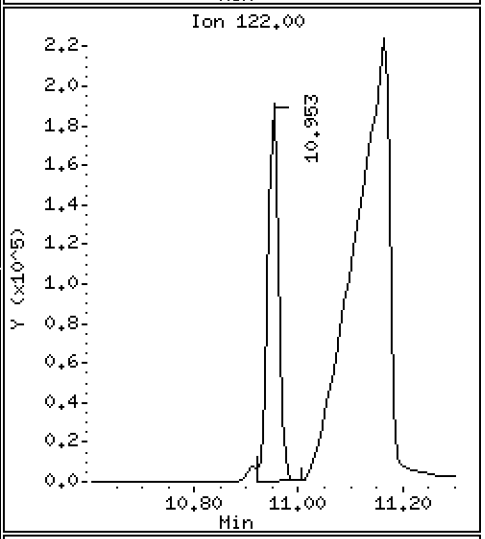
22 2,4-Dimethylphenol

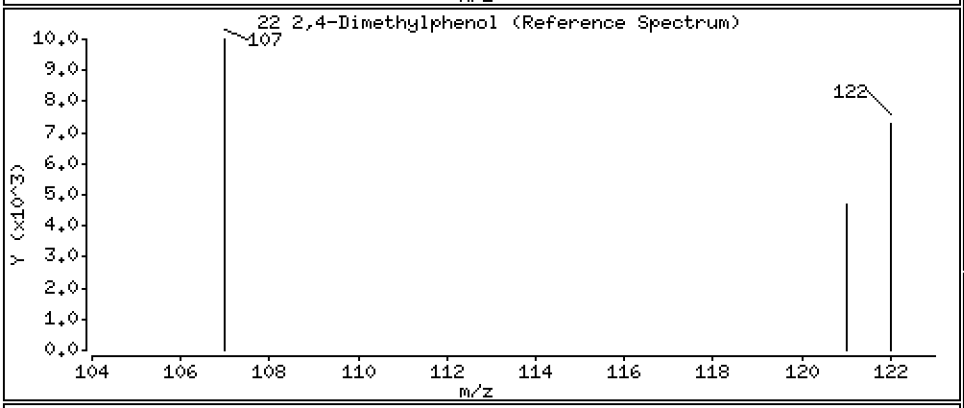
Concentration: 4.113 ug/L

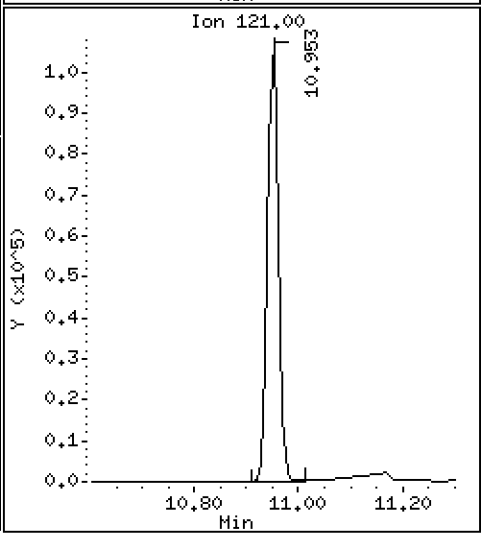


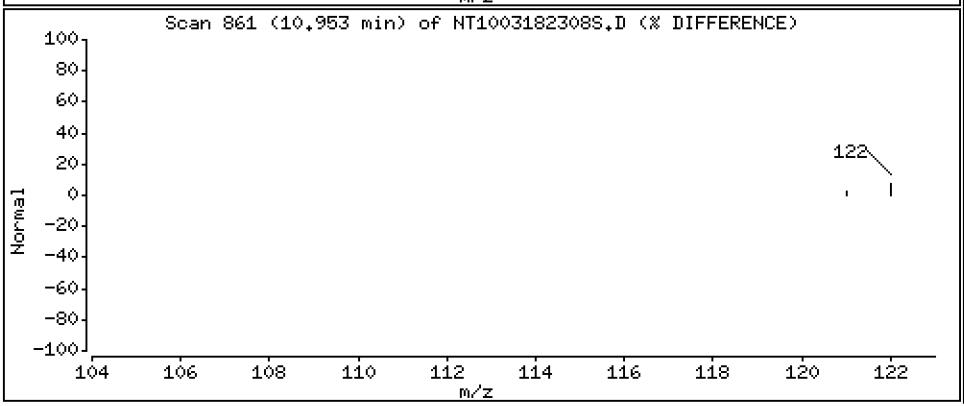












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

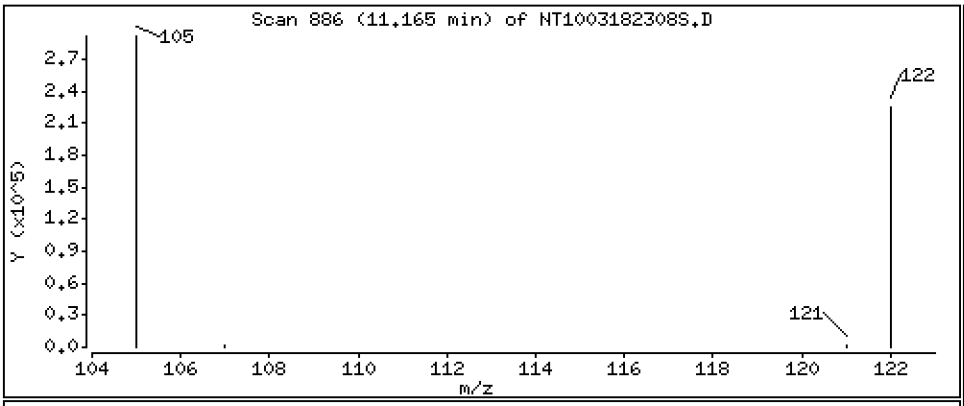
Operator: JGR

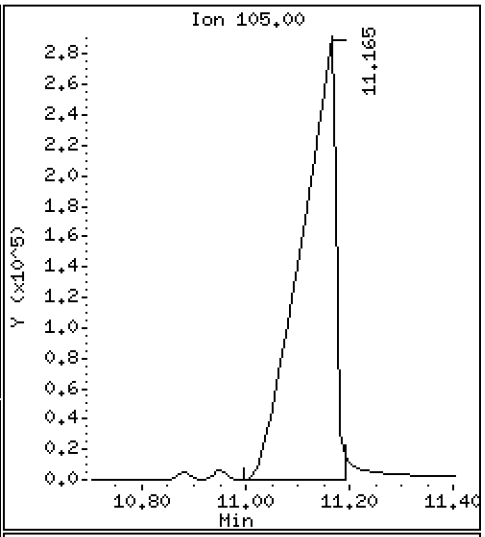
Column phase: ZB-5msi

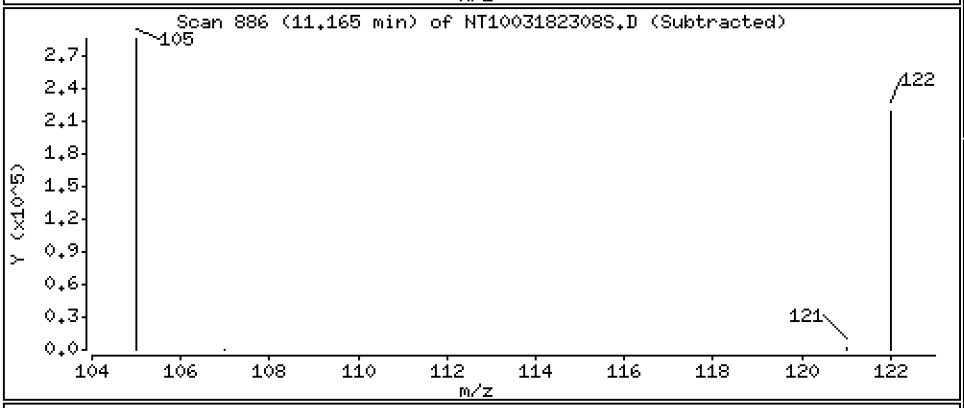
Column diameter: 0.25

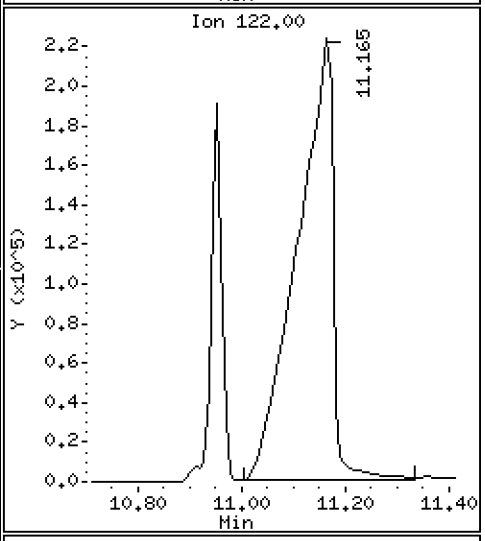
24 Benzoic acid

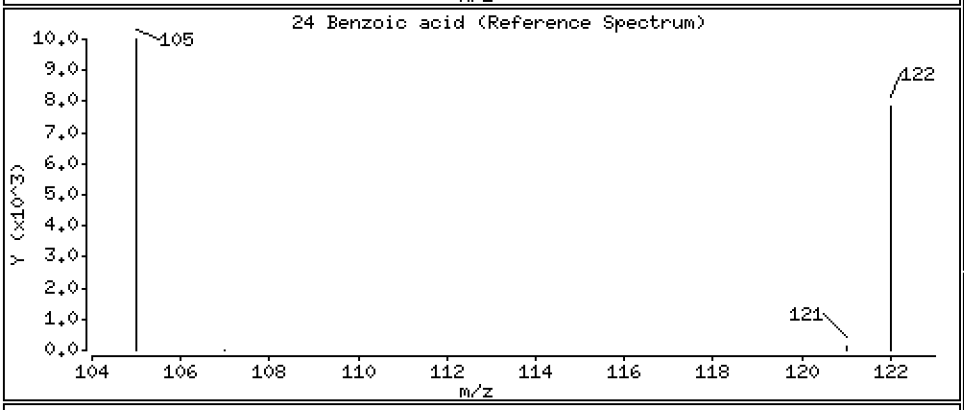
Concentration: 27.61 ug/L

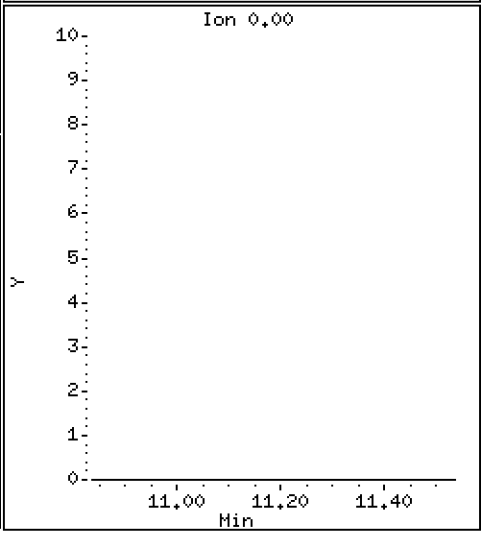


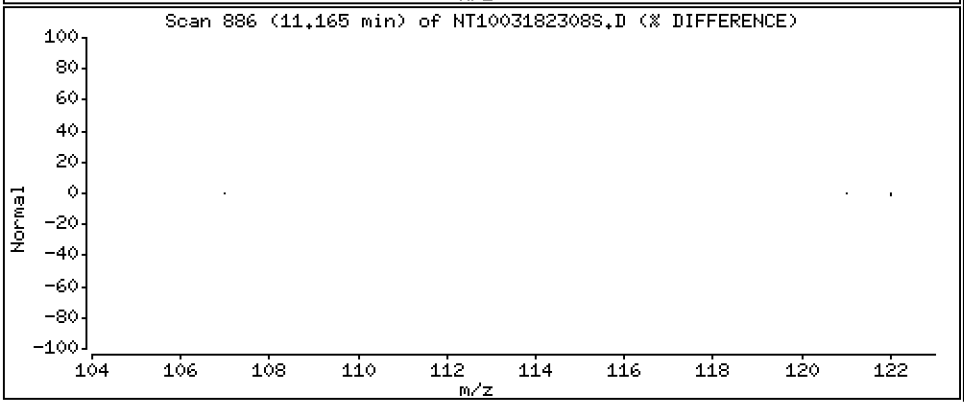












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

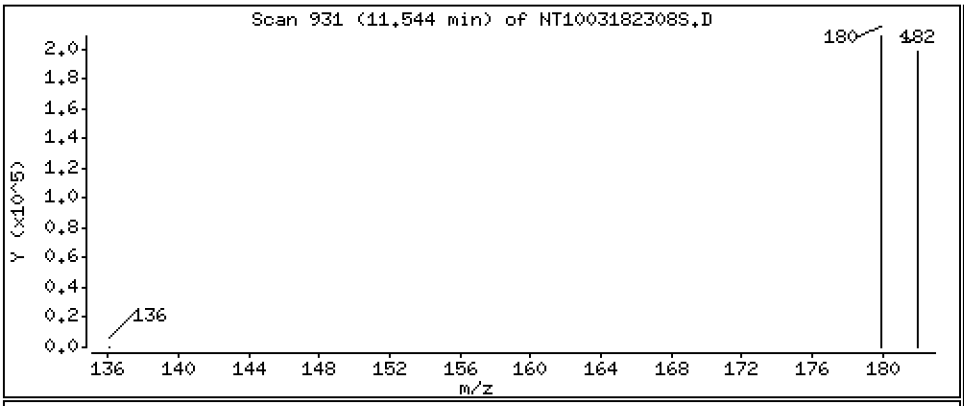
Operator: JGR

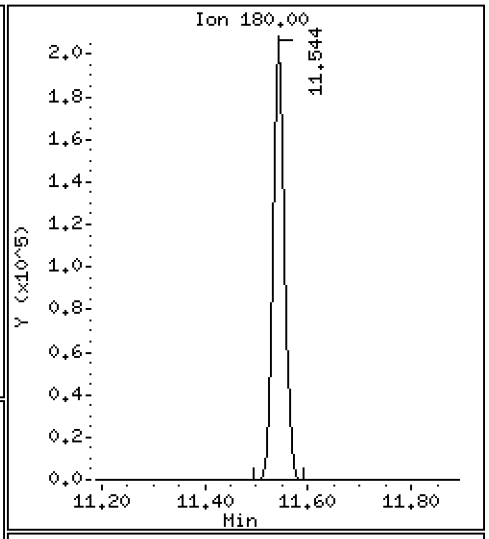
Column phase: ZB-5msi

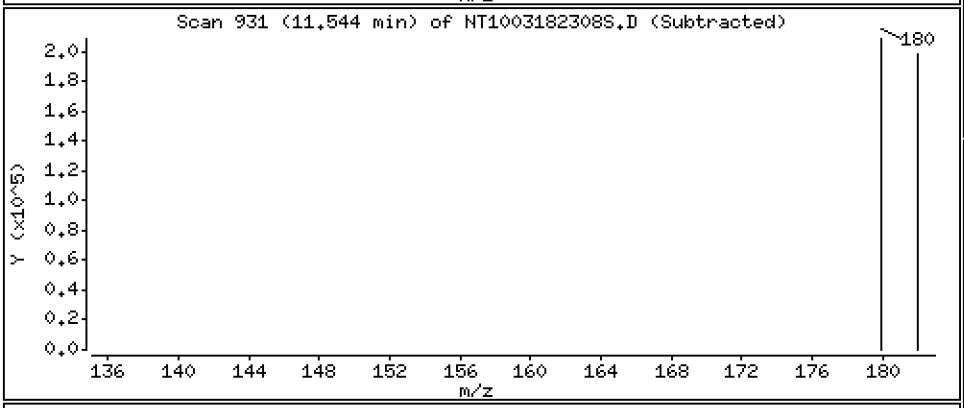
Column diameter: 0.25

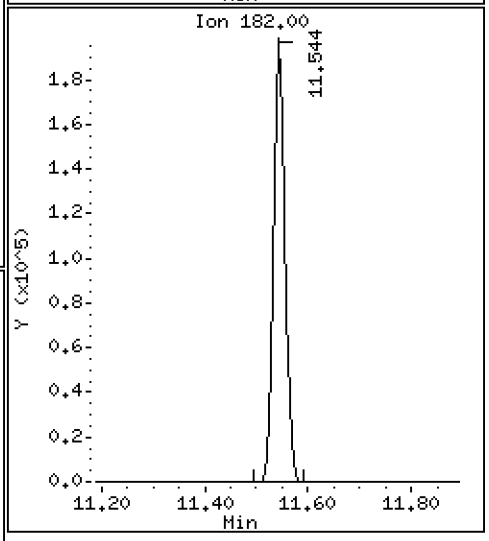
26 1,2,4-Trichlorobenzene

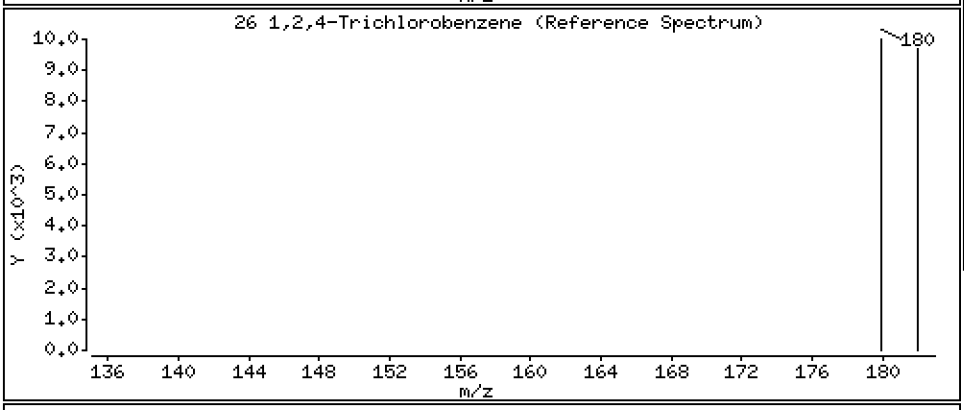
Concentration: 4.079 ug/L

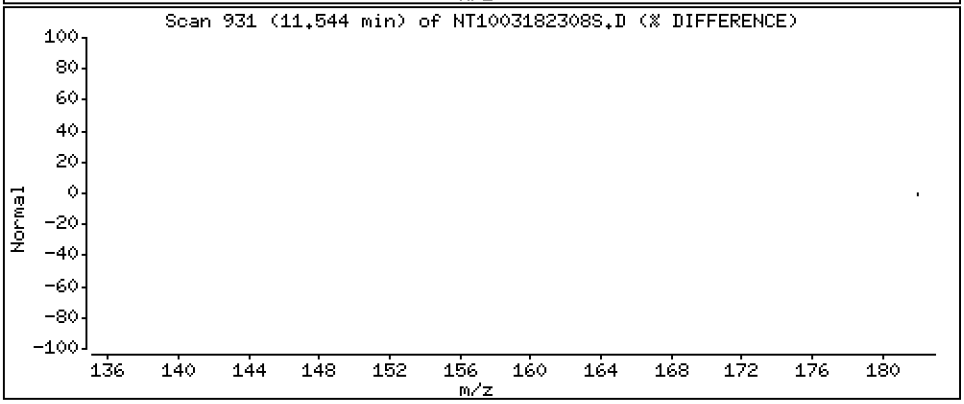












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823085.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

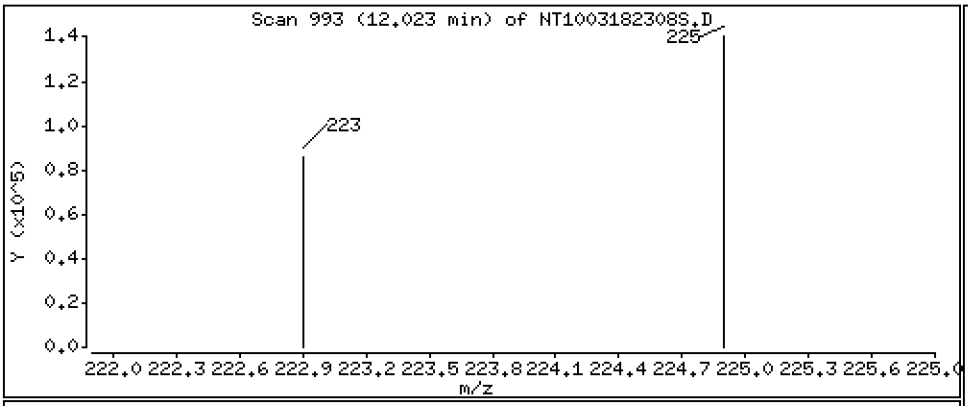
Operator: JGR

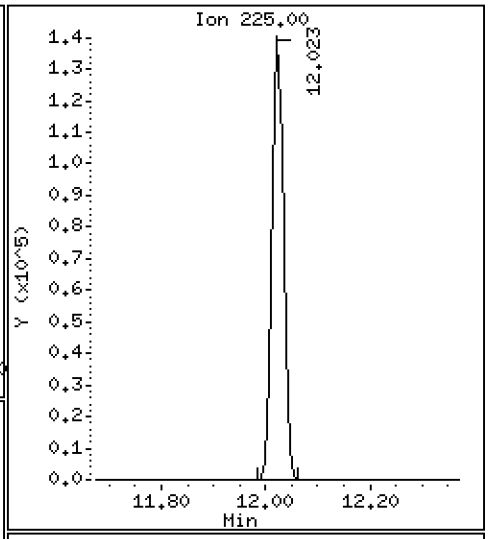
Column phase: ZB-5msi

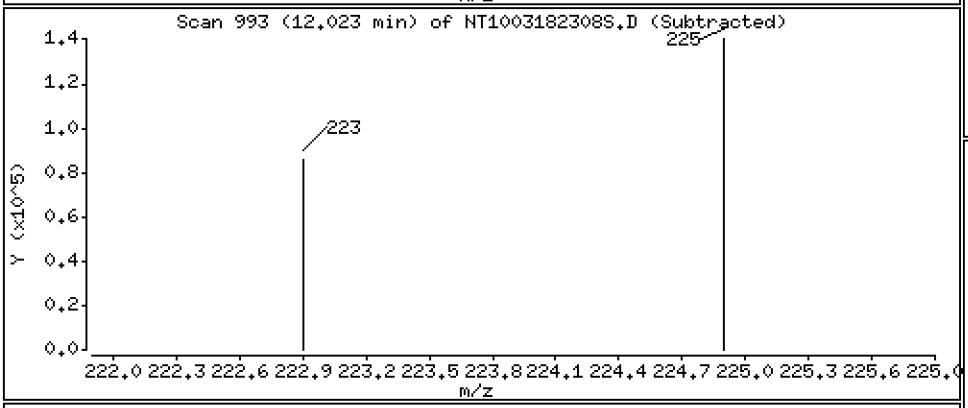
Column diameter: 0.25

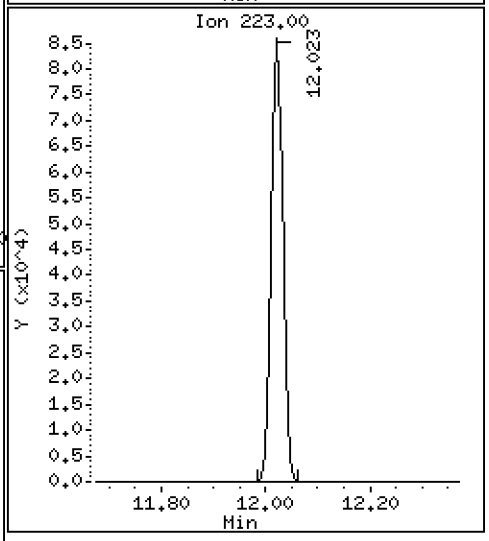
30 Hexachlorobutadiene

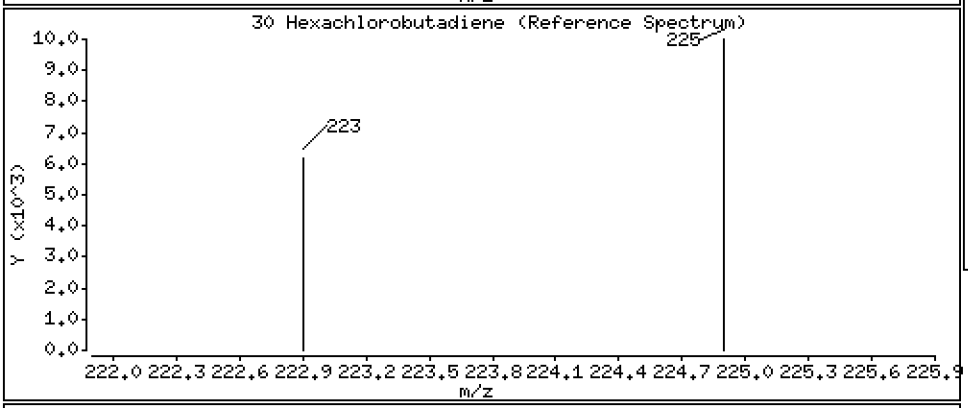
Concentration: 4.189 ug/L

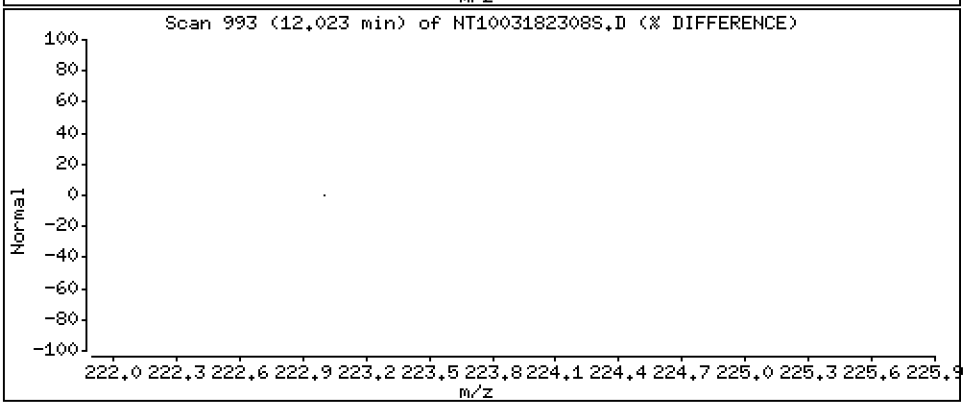












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

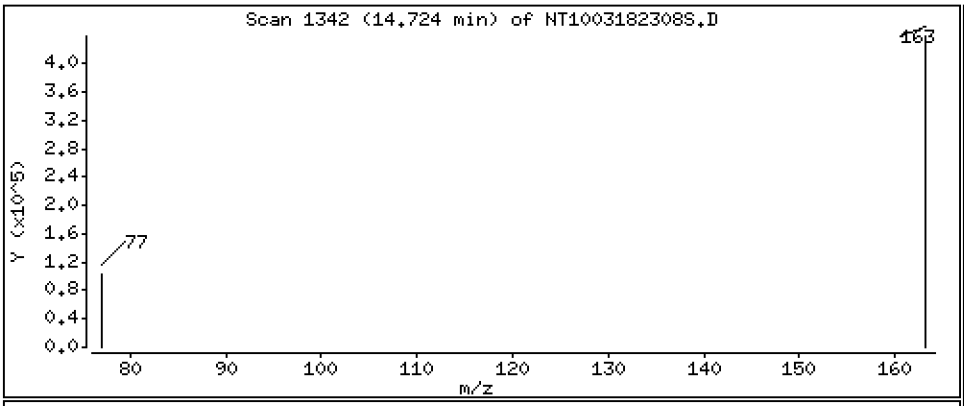
Operator: JGR

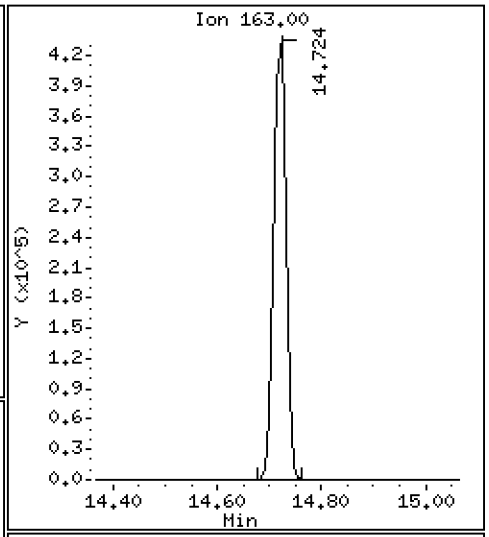
Column phase: ZB-5msi

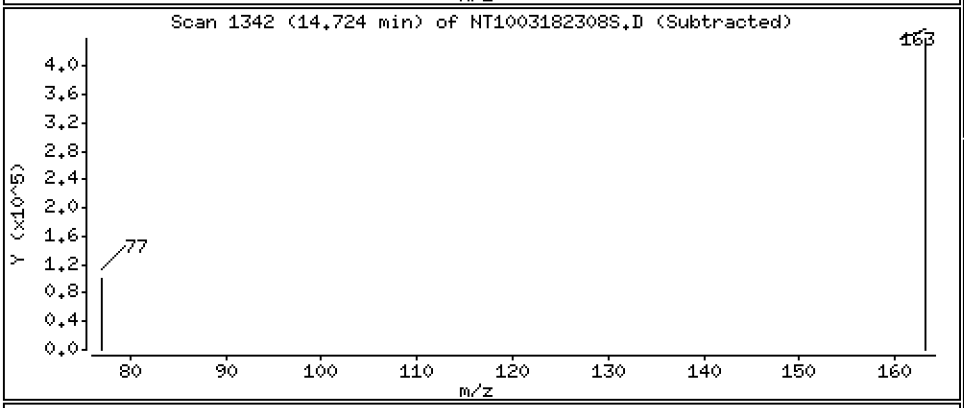
Column diameter: 0.25

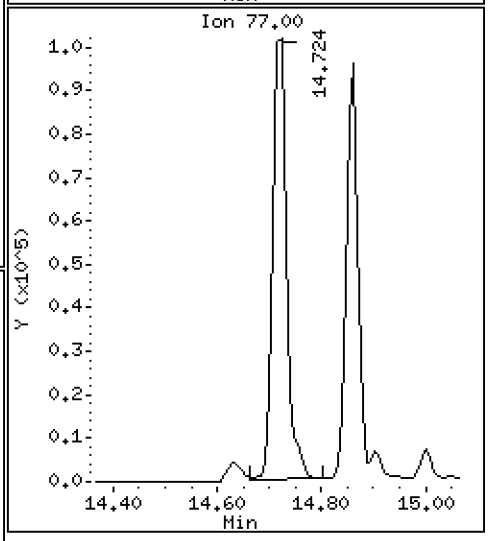
39 Dimethylphthalate

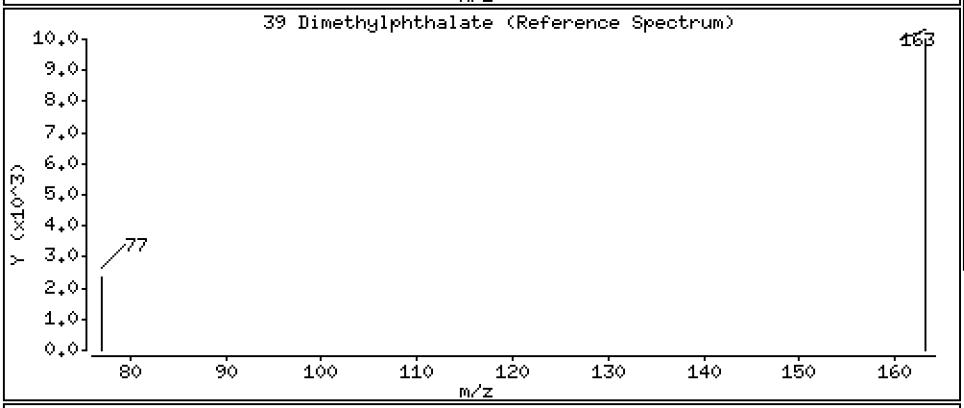
Concentration: 4.781 ug/L

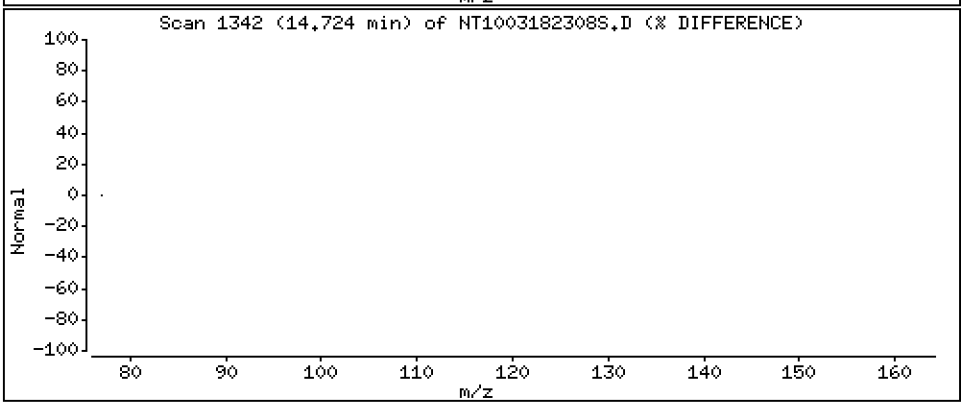












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

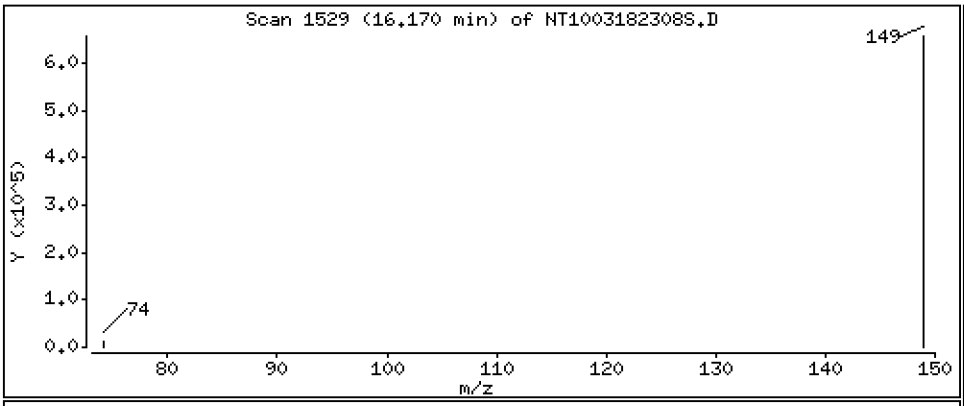
Operator: JGR

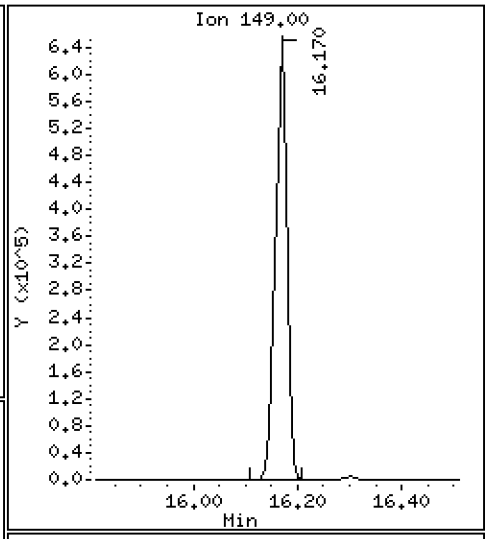
Column phase: ZB-5msi

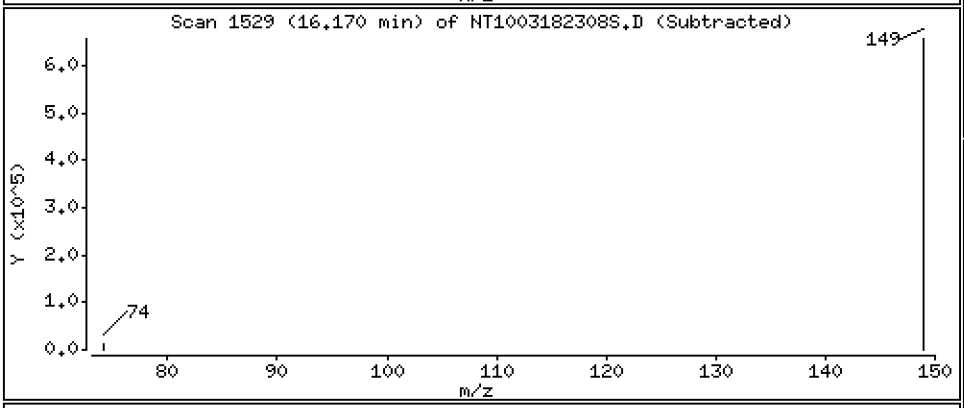
Column diameter: 0.25

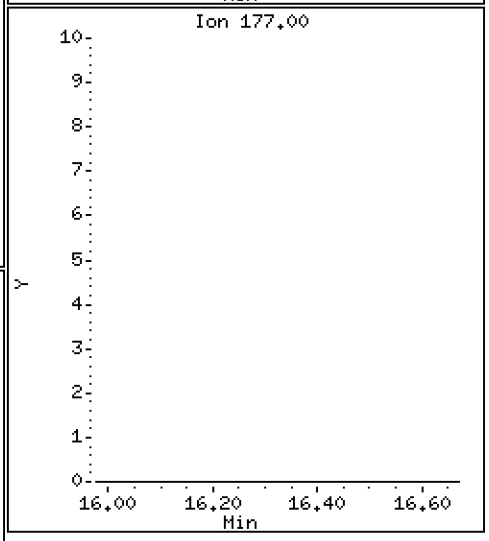
50 Diethylphthalate

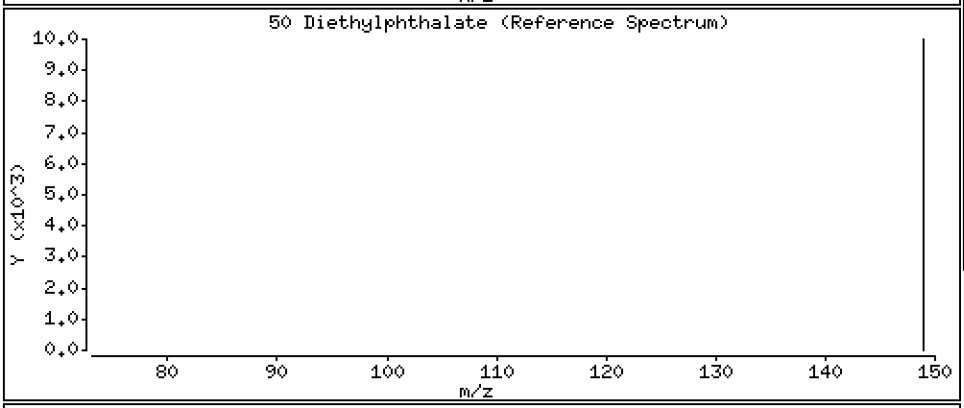
Concentration: 6.613 ug/L

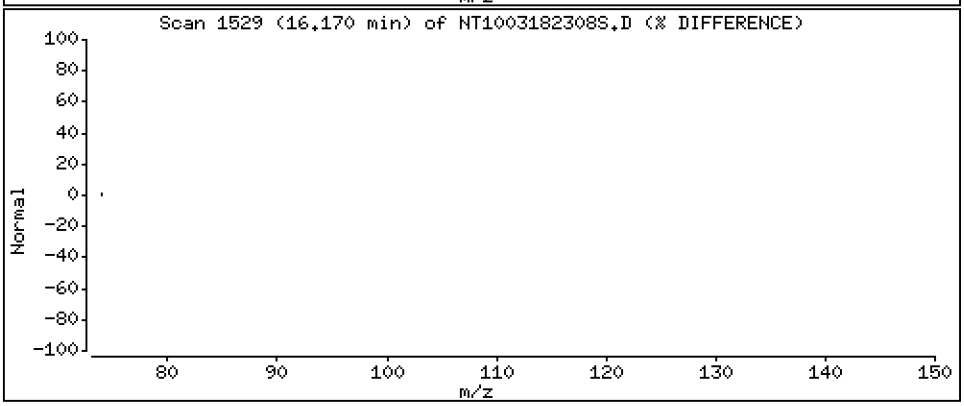












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

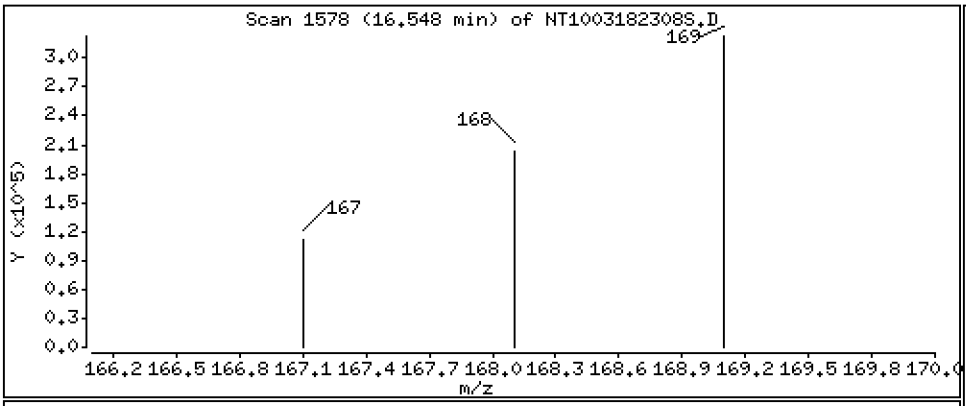
Operator: JGR

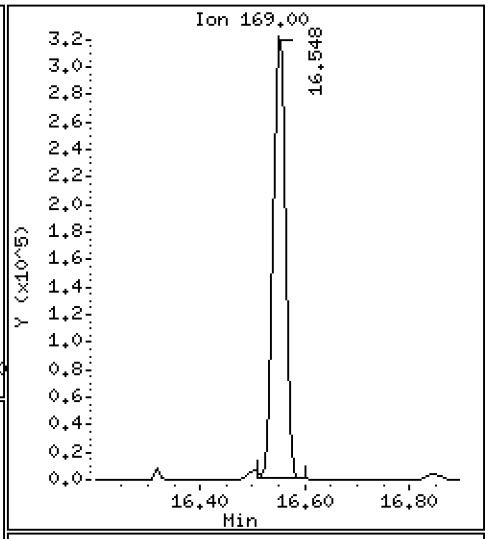
Column phase: ZB-5msi

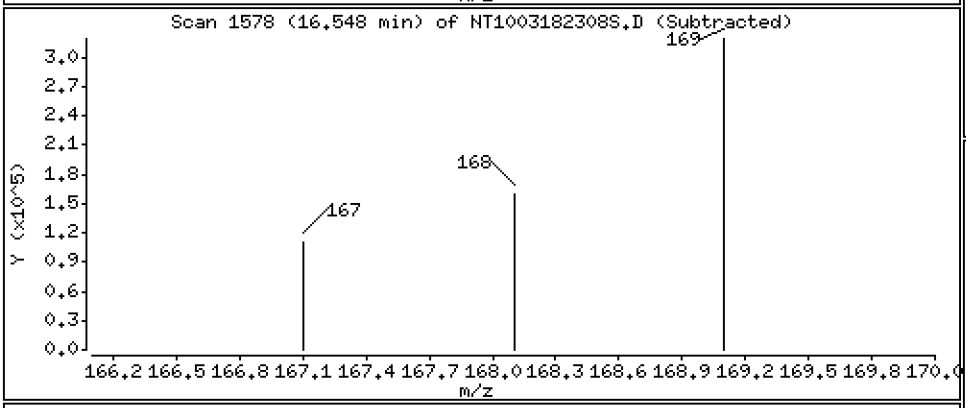
Column diameter: 0.25

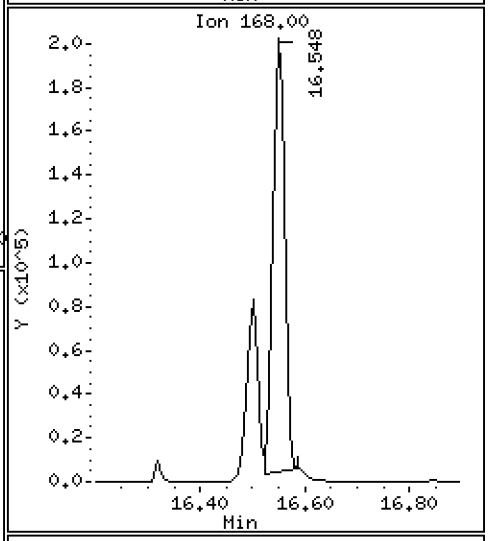
54 N-Nitrosodiphenylamine

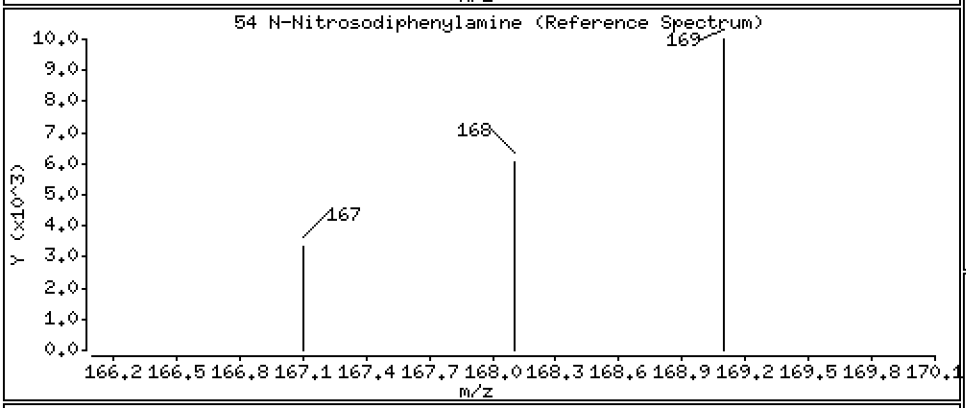
Concentration: 4.319 ug/L

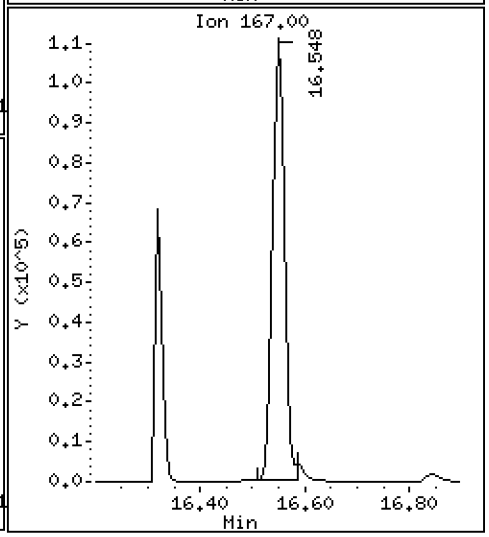


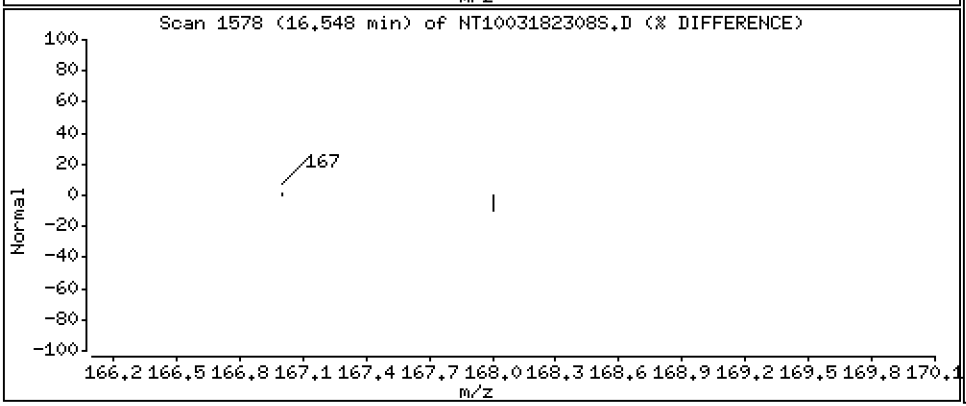












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

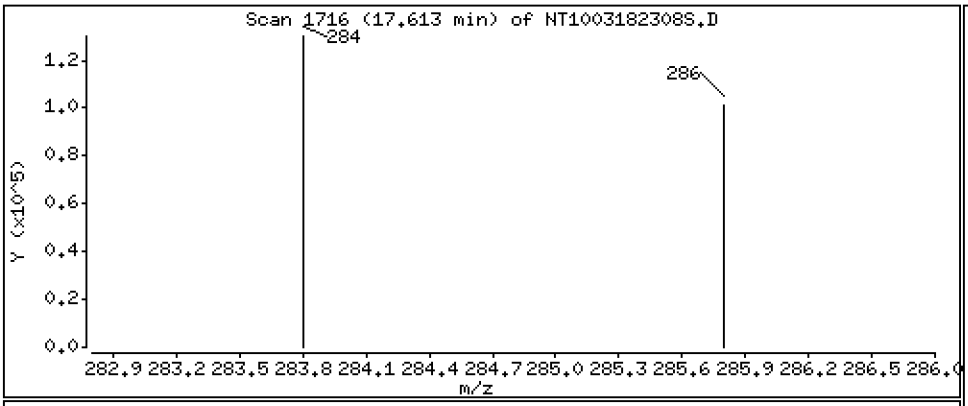
Operator: JGR

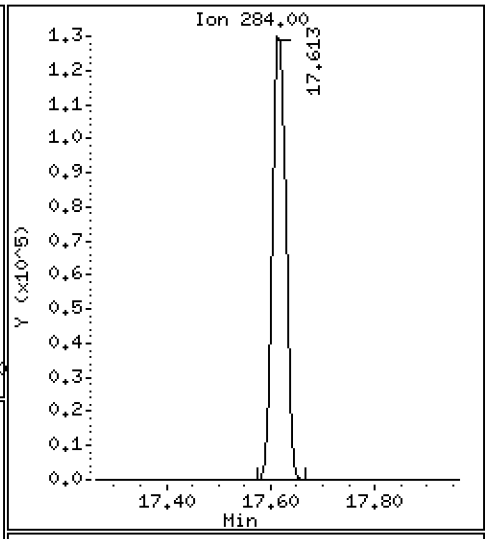
Column phase: ZB-5msi

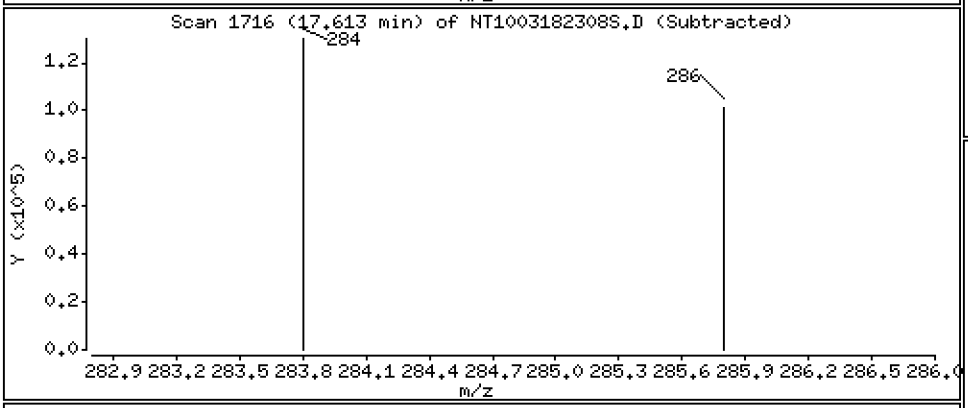
Column diameter: 0.25

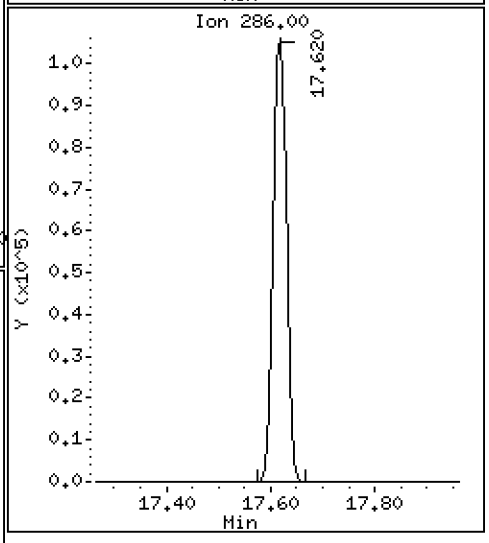
57 Hexachlorobenzene

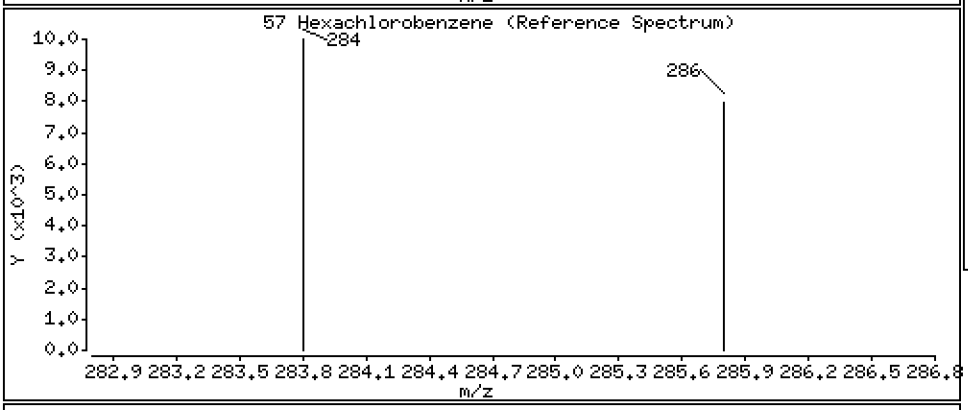
Concentration: 4.277 ug/L

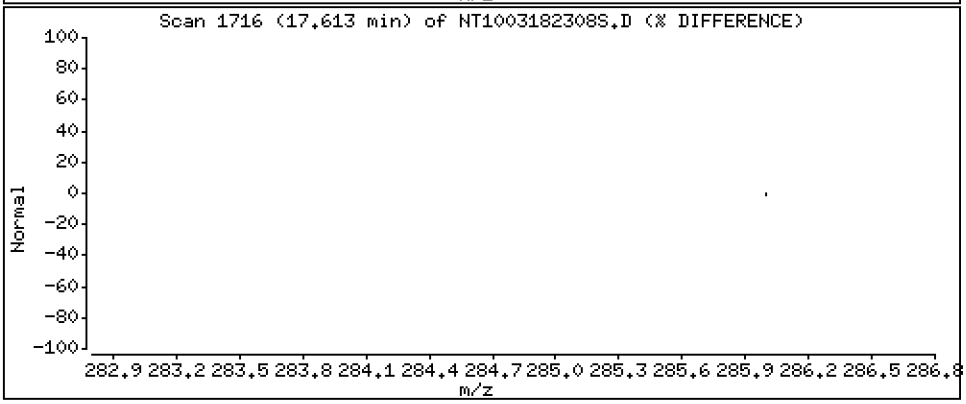












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

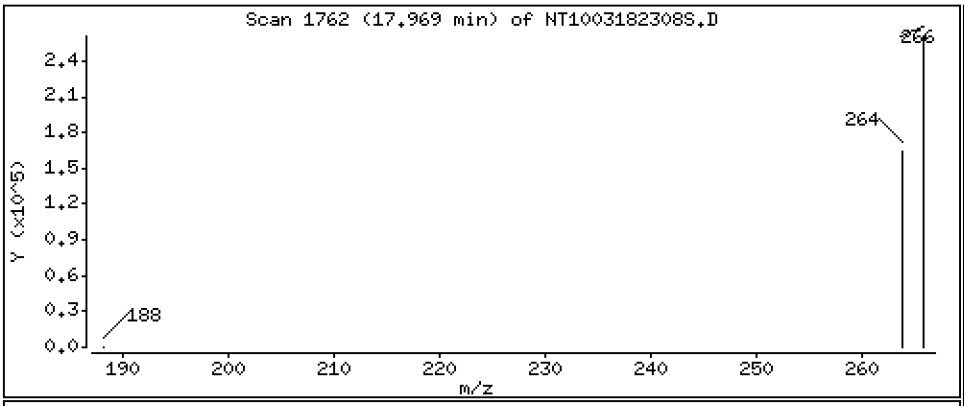
Operator: JGR

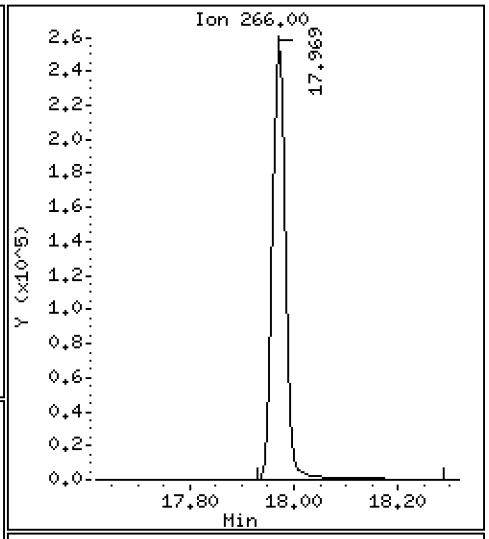
Column phase: ZB-5msi

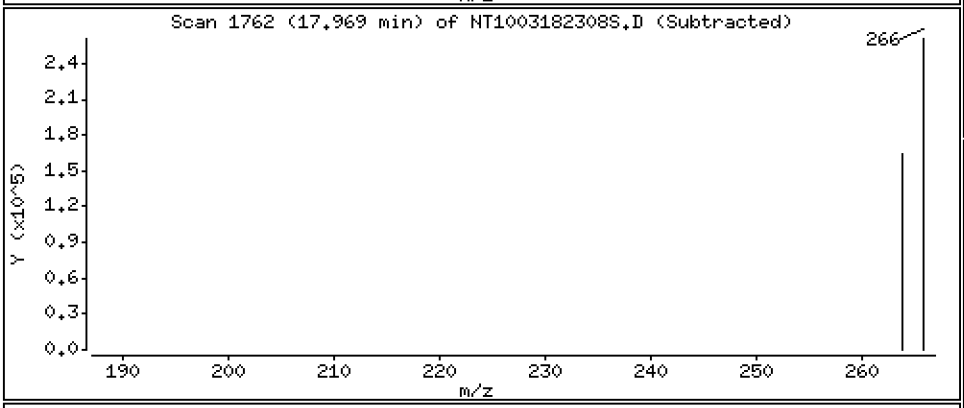
Column diameter: 0.25

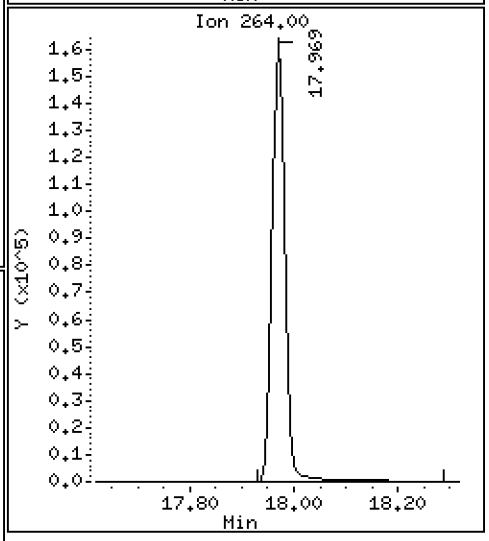
58 Pentachlorophenol

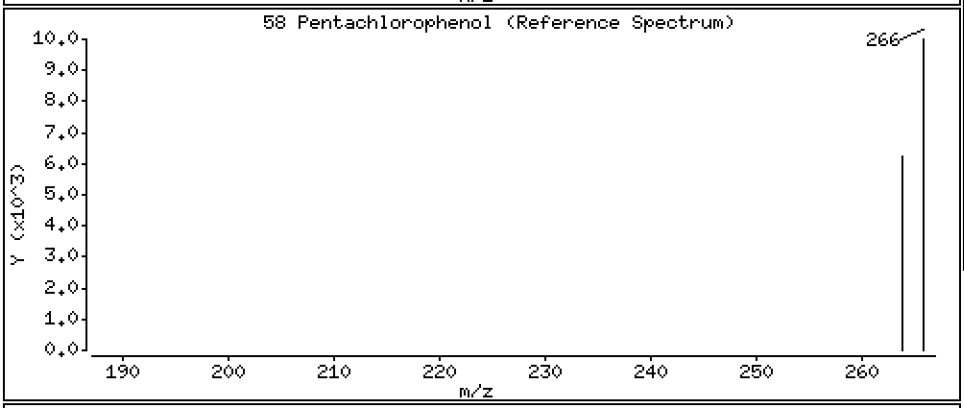
Concentration: 13.66 ug/L

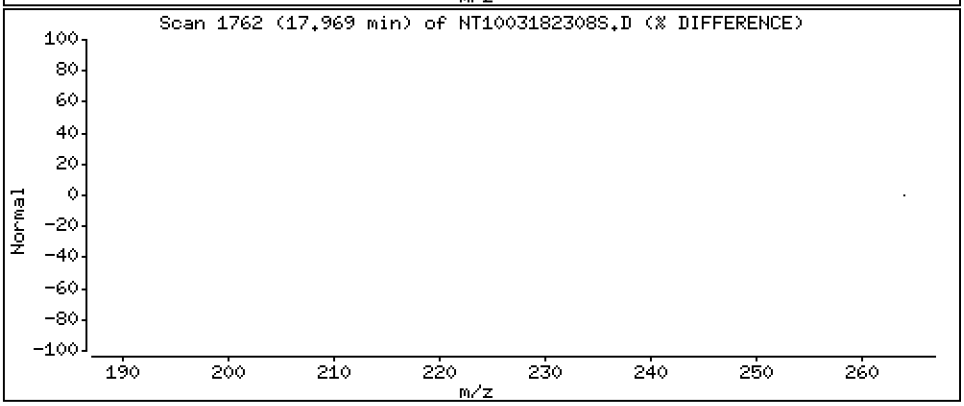












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

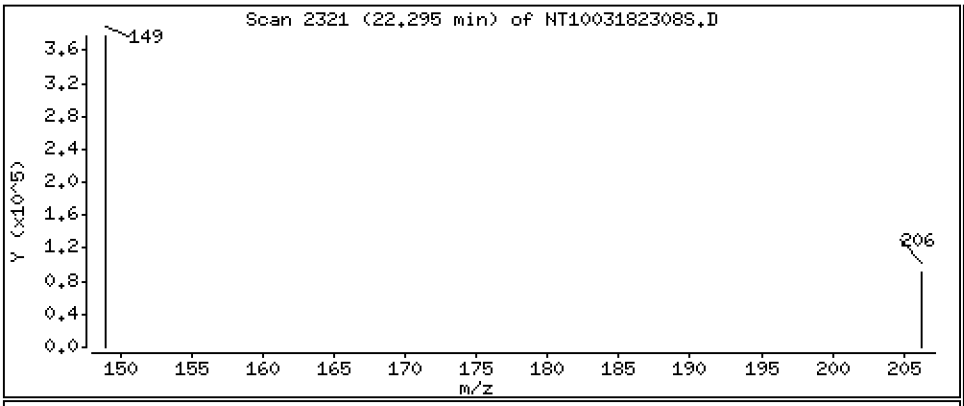
Operator: JGR

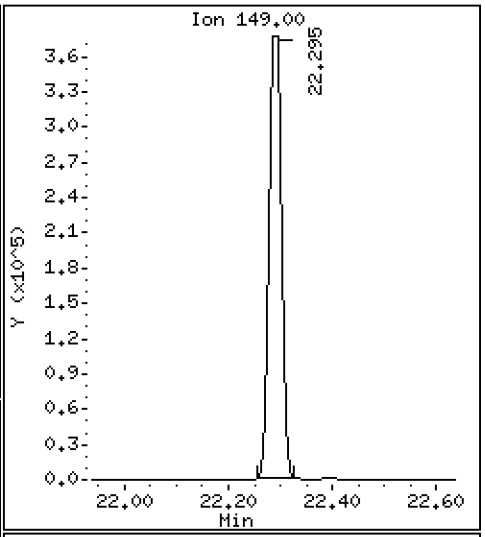
Column phase: ZB-5msi

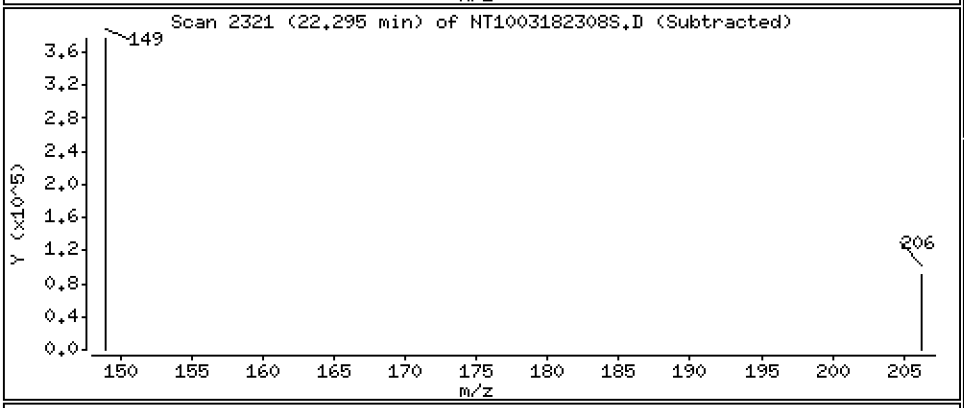
Column diameter: 0.25

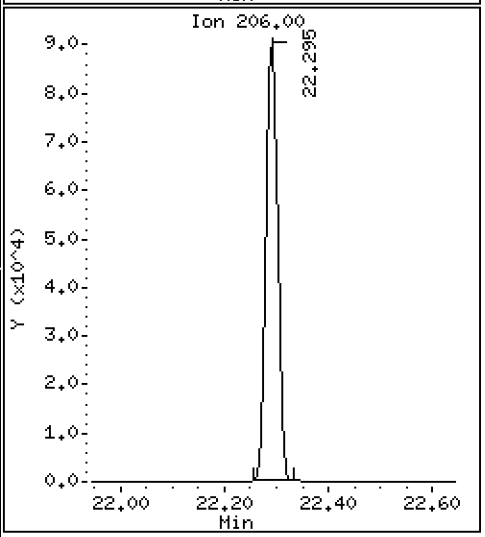
67 Butylbenzylphthalate

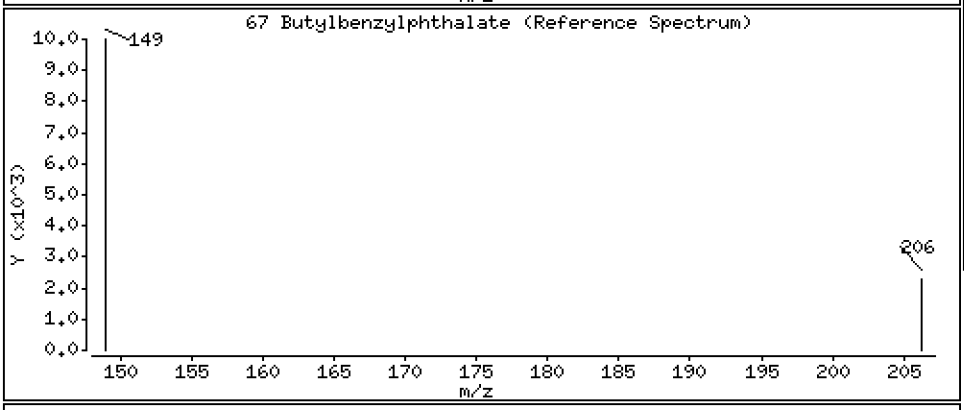
Concentration: 5.691 ug/L

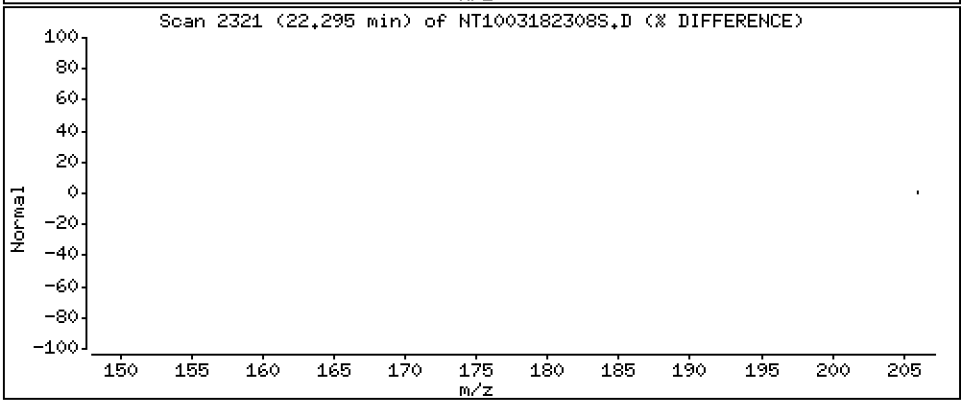












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

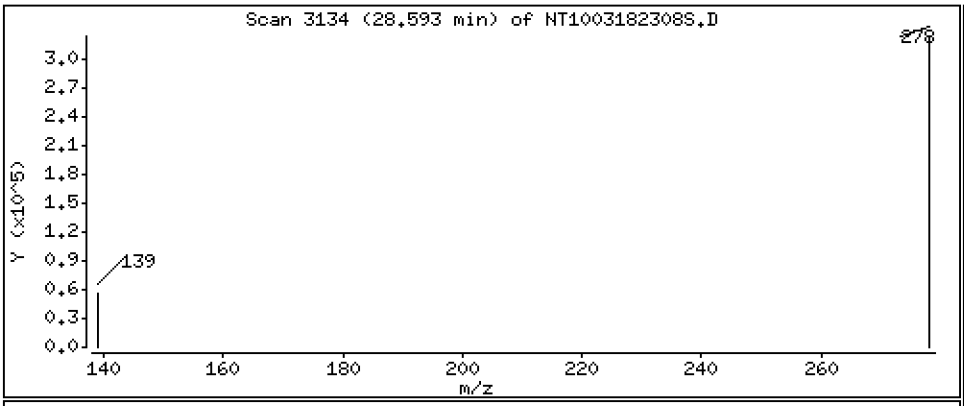
Operator: JGR

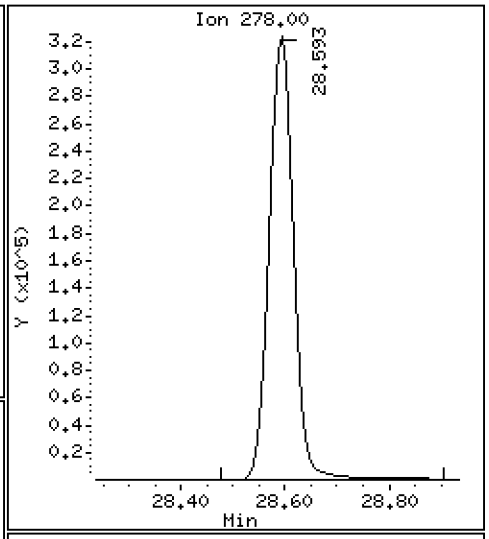
Column phase: ZB-5msi

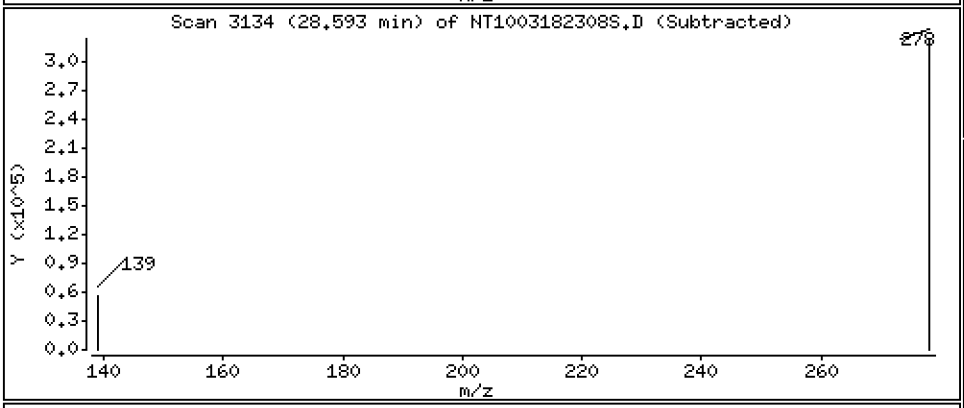
Column diameter: 0.25

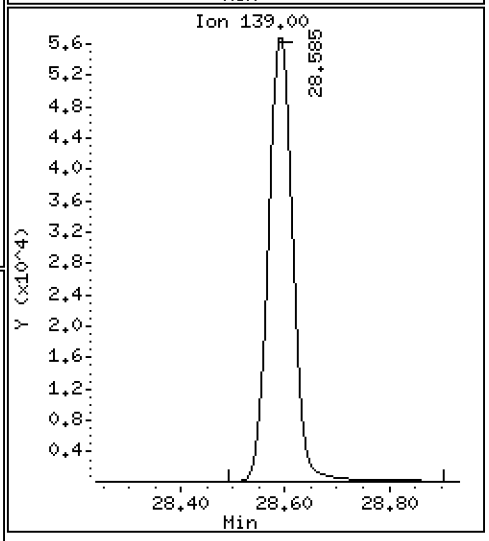
79 Dibenzo(a,h)anthracene

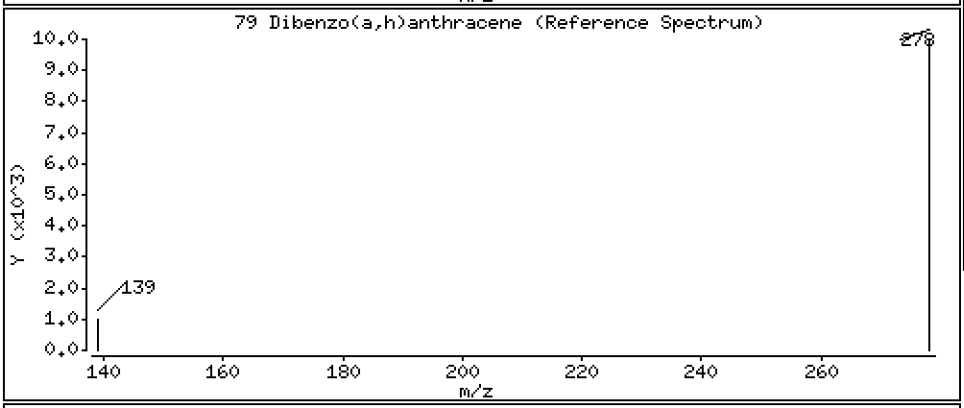
Concentration: 4.382 ug/L

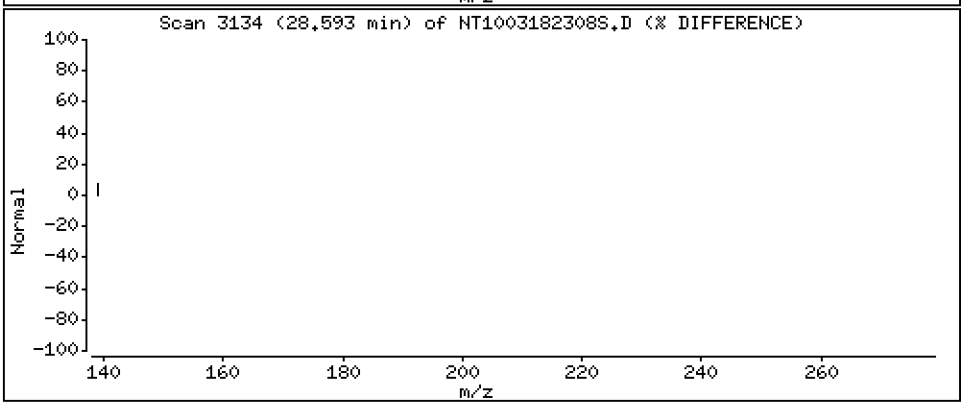












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D

Date : 18-MAR-2023 22:12

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-BSD2

Volume Injected (uL): 1.0

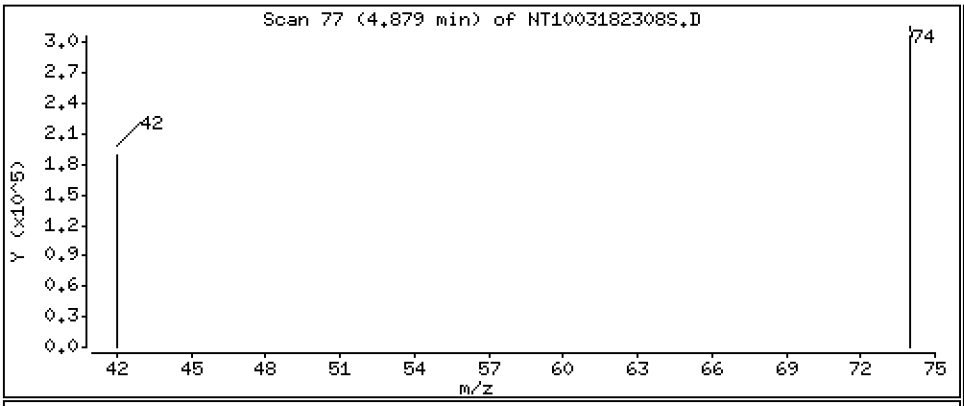
Operator: JGR

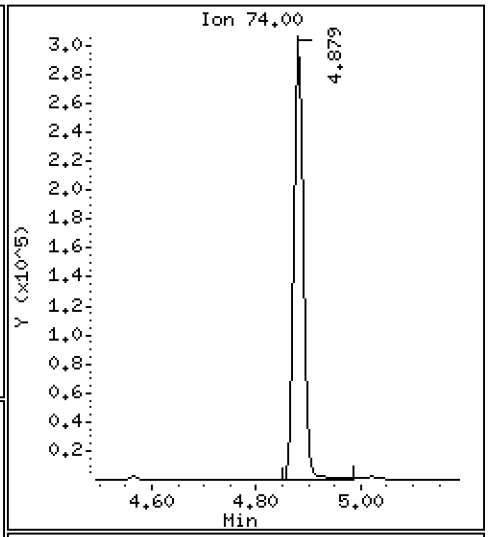
Column phase: ZB-5msi

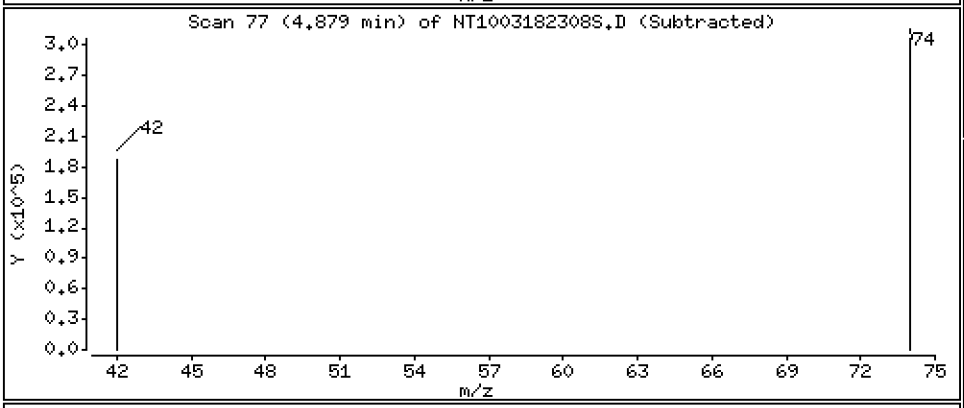
Column diameter: 0.25

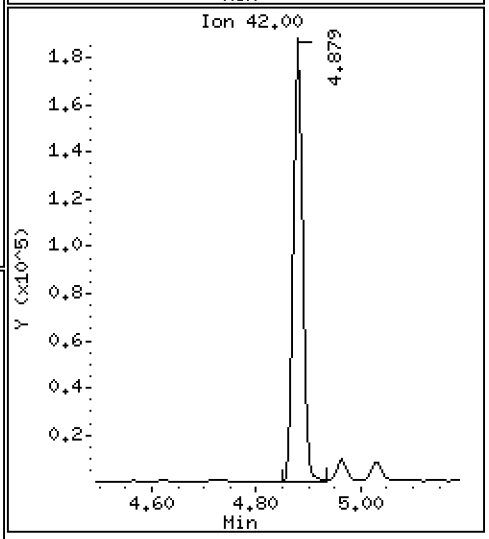
90 N-Nitrosodimethylamine

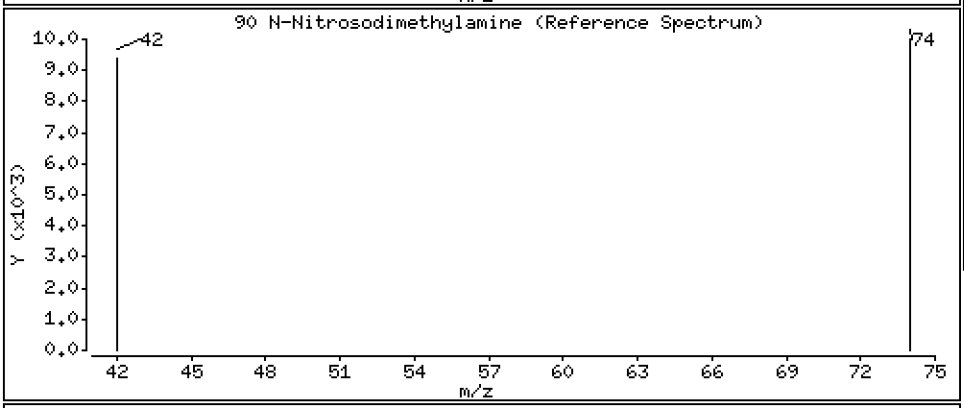
Concentration: 8.486 ug/L

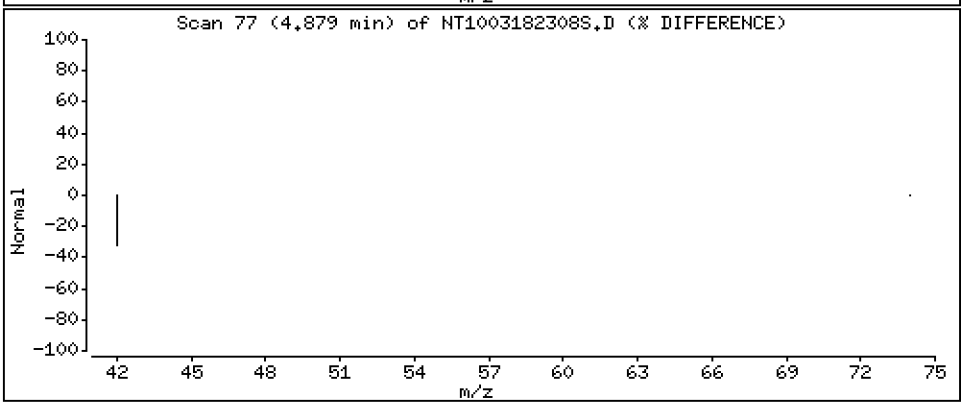












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182308S.D
Lab Smp Id: BLB0579-BSD2
Inj Date : 18-MAR-2023 22:12 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-BSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.972	6.957	(0.761)	451219	5.93482	5.935(R)
3	Phenol	94	8.549	8.541	(0.933)	398460	3.82006	3.820
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	388090	3.97618	3.976
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	250718	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	385952	4.09630	4.096
11	Benzyl alcohol	79	9.431	9.431	(1.029)	277489	4.58881	4.589
12	1,2-Dichlorobenzene	146	9.555	9.547	(1.042)	378269	4.08234	4.082
13	2-Methylphenol	108	9.648	9.648	(1.052)	263041	3.63942	3.639
15	4-Methylphenol	108	9.920	9.912	(1.082)	311042	4.14155	4.142
16	N-Nitroso-di-n-propylamine	70	9.982	9.982	(1.089)	238178	4.48436	4.484
22	2,4-Dimethylphenol	107	10.952	10.943	(0.942)	323964	4.11276	4.113
24	Benzoic acid	105	11.164	11.053	(0.960)	1354071	27.6061	27.61
26	1,2,4-Trichlorobenzene	180	11.543	11.542	(0.993)	323186	4.07852	4.079
* 27	Naphthalene-d8	136	11.628	11.627	(1.000)	911301	4.00000	
30	Hexachlorobutadiene	225	12.022	12.021	(1.034)	201812	4.18900	4.189
39	Dimethylphthalate	163	14.723	14.714	(0.967)	679553	4.78134	4.781
* 42	Acenaphthene-d10	162	15.218	15.210	(1.000)	450379	4.00000	
50	Diethylphthalate	149	16.169	16.161	(1.062)	973705	6.61321	6.613
54	N-Nitrosodiphenylamine	169	16.548	16.547	(0.907)	502880	4.31916	4.319
57	Hexachlorobenzene	284	17.612	17.611	(0.966)	222904	4.27667	4.277

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.968	17.968	(0.985)	429243	13.6552	13.66
*	59 Phenanthrene-d10	188	18.239	18.231	(1.000)	867793	4.00000	
$	66 Terphenyl-d14	244	21.365	21.364	(0.918)	547977	4.63094	4.631(R)
	67 Butylbenzylphthalate	149	22.294	22.285	(0.958)	581574	5.69115	5.691
*	69 Chrysene-d12	240	23.278	23.269	(1.000)	726235	4.00000	
*	77 Perylene-d12	264	25.910	25.909	(1.000)	749426	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.593	28.584	(1.104)	1051153	4.38207	4.382
	90 N-Nitrosodimethylamine	74	4.879	4.840	(0.532)	409208	8.48620	8.486

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182308S.D
Lab Smp Id: BLB0579-BSD2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	250718	26.66
27 Naphthalene-d8	704013	352007	1408026	911301	29.44
42 Acenaphthene-d10	353977	176989	707954	450379	27.23
59 Phenanthrene-d10	686752	343376	1373504	867793	26.36
69 Chrysene-d12	597733	298867	1195466	726235	21.50
77 Perylene-d12	645663	322832	1291326	749426	16.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.01
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.06
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.05
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.04
77 Perylene-d12	25.91	25.41	26.41	25.91	0.00

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

REVIEW SUMMARY FOR FILE - NT1003182308S.D

Lab ID: BLB0579-BSD2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 22:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.960	0.951	0.0095	Benzoic acid

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/19/23 06:29
Batch:	BLB0579	Laboratory ID:	BLB0579-MS2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	18.12 g / 1 mL	Source Sample:	LDW23-SS1238

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
1,4-Dichlorobenzene	500	1.2	J	347		69.2	36 - 120
1,2-Dichlorobenzene	500	ND	U	347		69.3	36 - 120
Benzyl Alcohol	500	20.3		387		73.4	25 - 123
Benzoic acid	2300	83.0	J	1760		72.7	10 - 160
2,4-Dimethylphenol	1300	ND	U	883		67.9	10 - 120
1,2,4-Trichlorobenzene	500	ND	U	362		72.3	35 - 120
N-Nitrosodiphenylamine	500	ND	U	392		78.3	27 - 120
Pentachlorophenol	1300	ND	U	1370		105	26 - 120

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/19/23 07:08
Batch:	BLB0579	Laboratory ID:	BLB0579-MSD2
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	18.12 g / 1 mL	Source Sample:	LDW23-SS1238

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,4-Dichlorobenzene	500	357		71.3	2.87	30	36 - 120
1,2-Dichlorobenzene	500	357		71.4	2.93	30	36 - 120
Benzyl Alcohol	500	373		70.5	3.74	30	25 - 123
Benzoic acid	2300	1540		63.3	13.1	30	10 - 160
2,4-Dimethylphenol	1300	719		55.3	20.5	30	10 - 120
1,2,4-Trichlorobenzene	500	380		76.0	4.96	30	35 - 120
N-Nitrosodiphenylamine	500	418		83.5	6.41	30	27 - 120
Pentachlorophenol	1300	1400		108	2.21	30	26 - 120

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823218.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

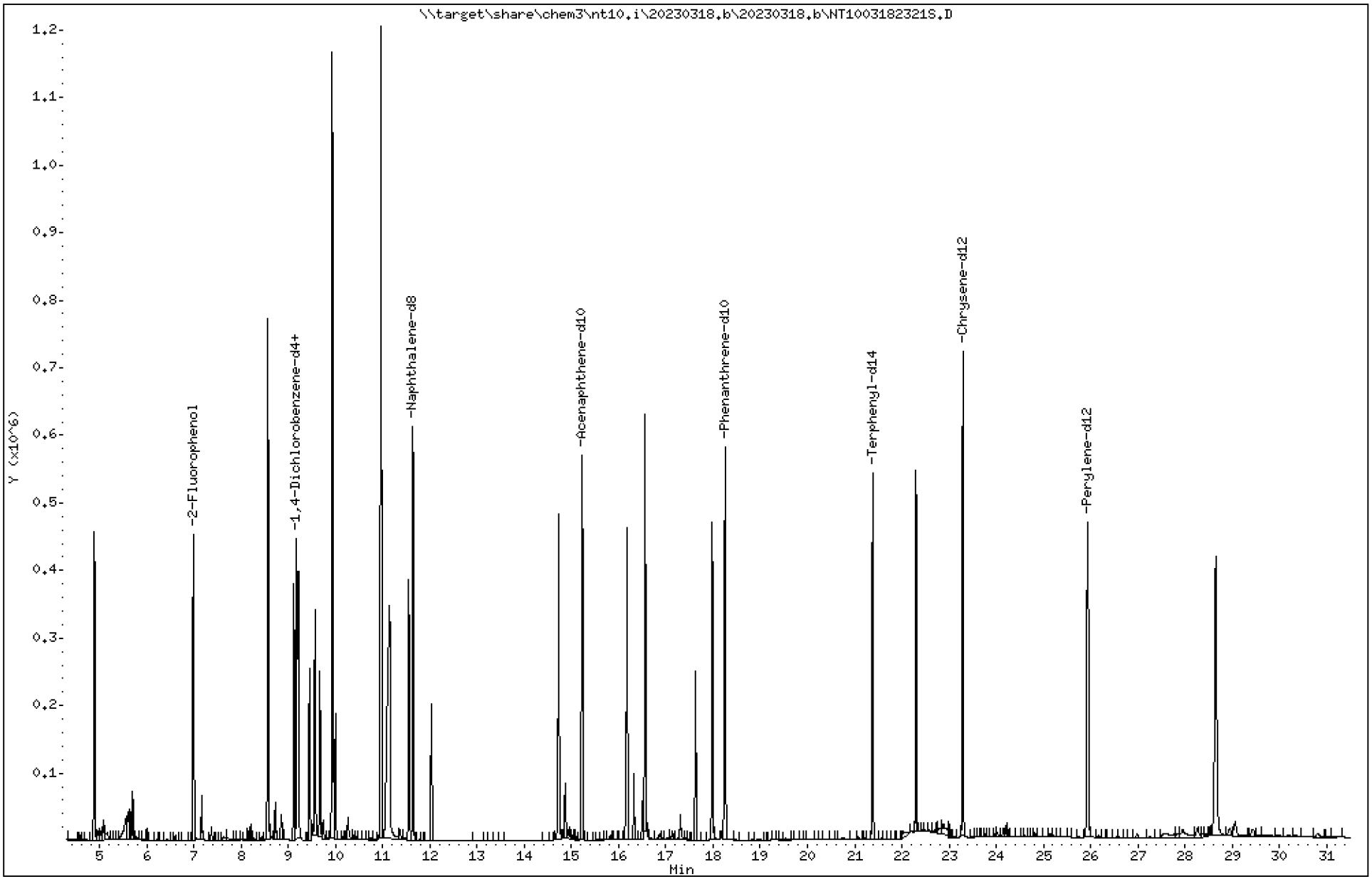
Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

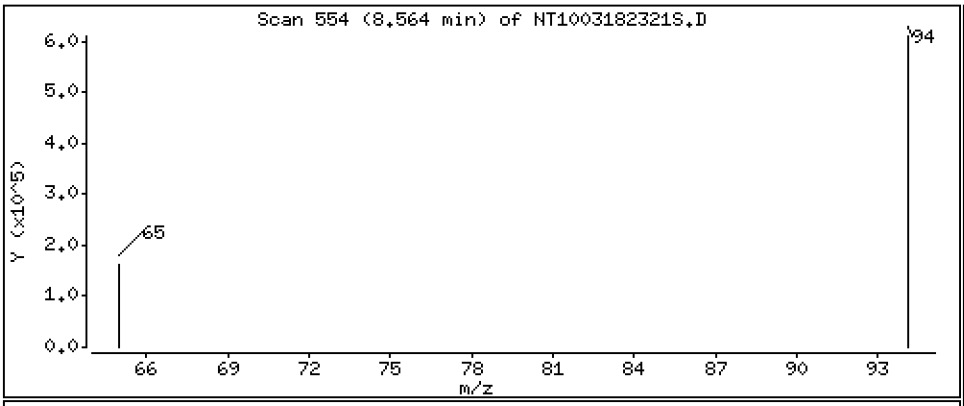
Operator: JGR

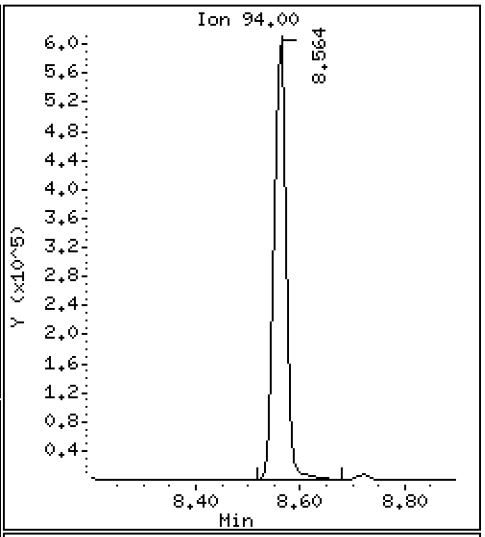
Column phase: ZB-5msi

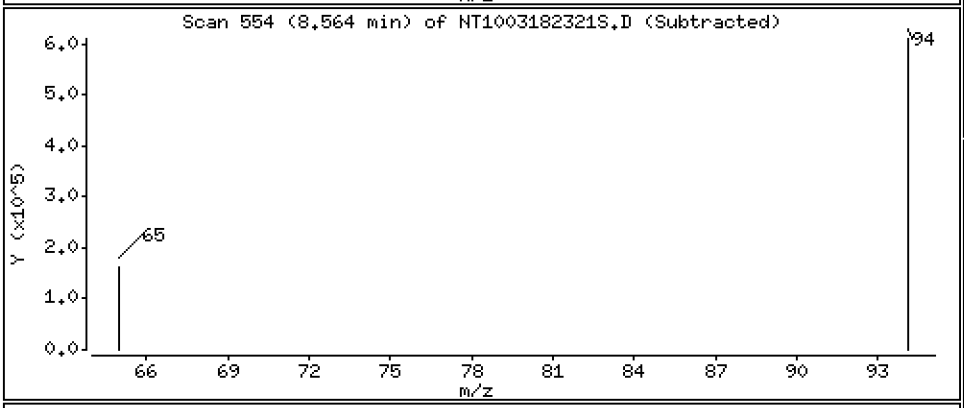
Column diameter: 0.25

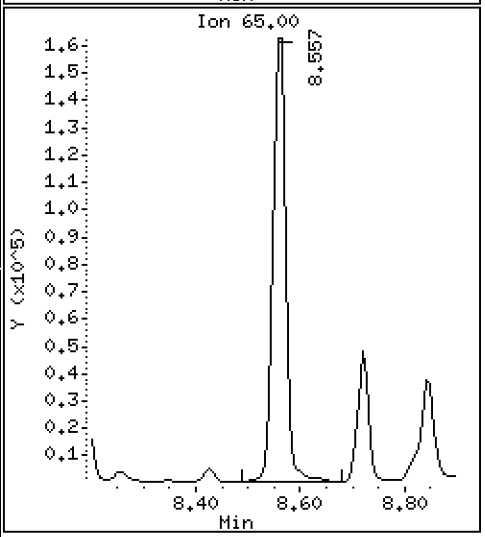
3 Phenol

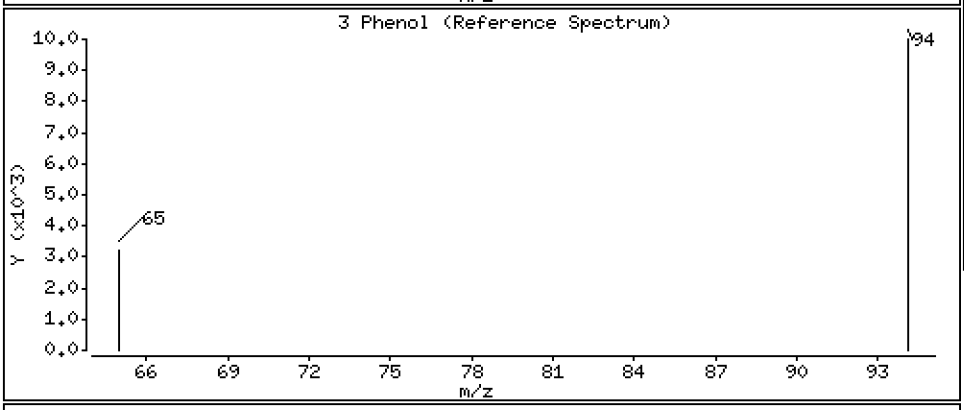
Concentration: 8.714 ug/L

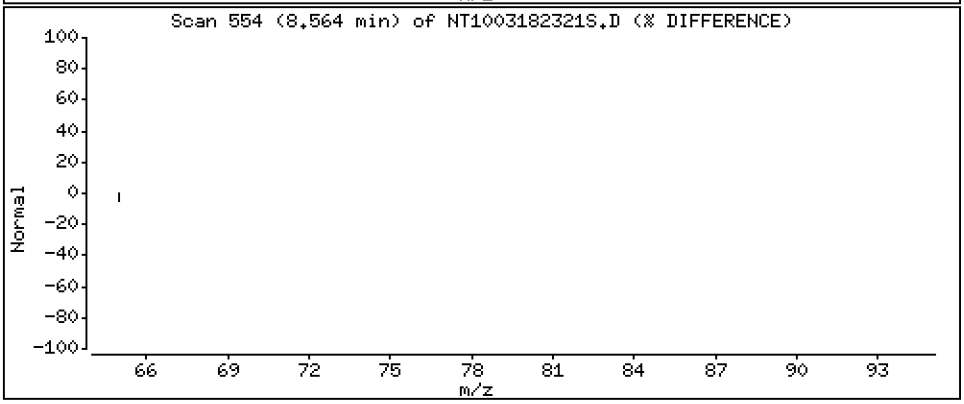












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

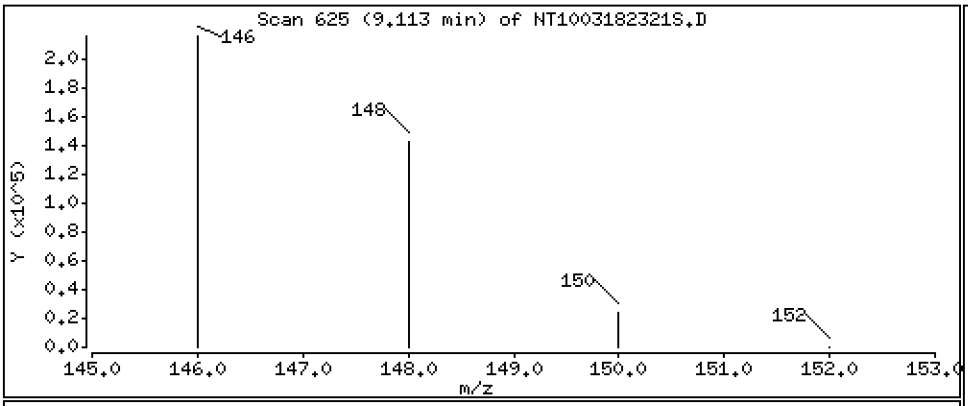
Operator: JGR

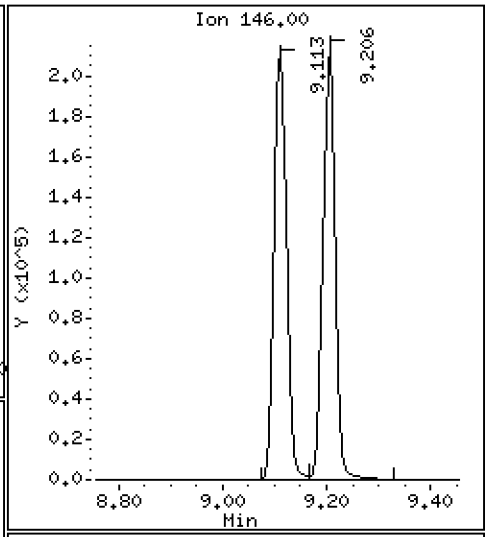
Column phase: ZB-5msi

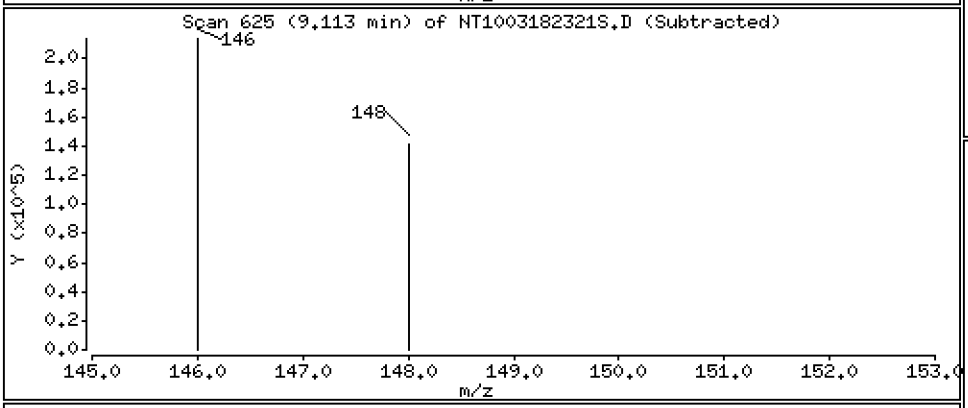
Column diameter: 0.25

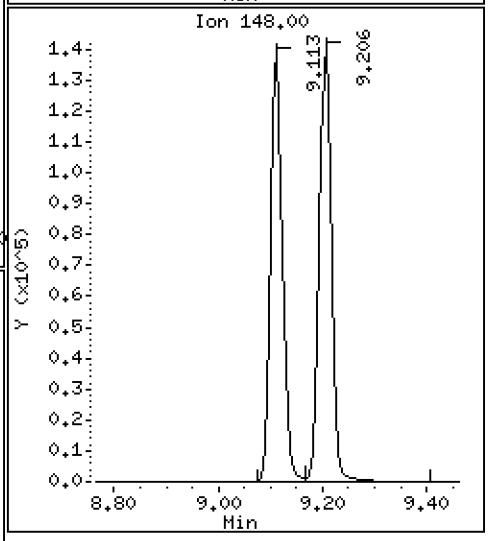
7 1,3-Dichlorobenzene

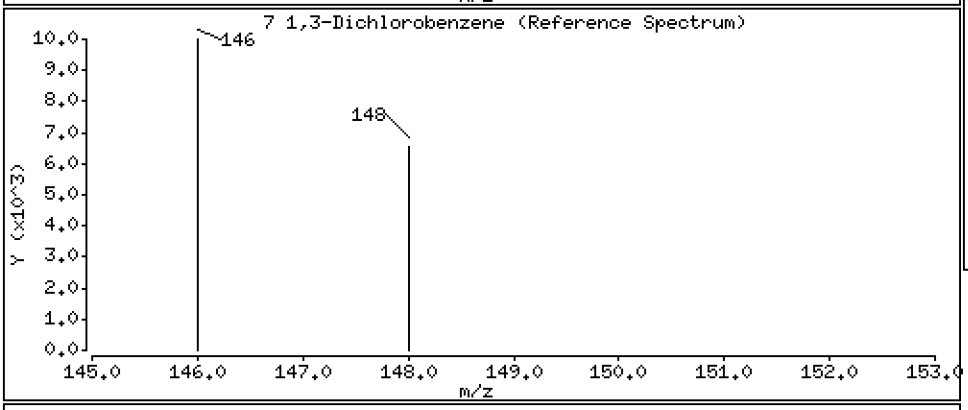
Concentration: 3.355 ug/L

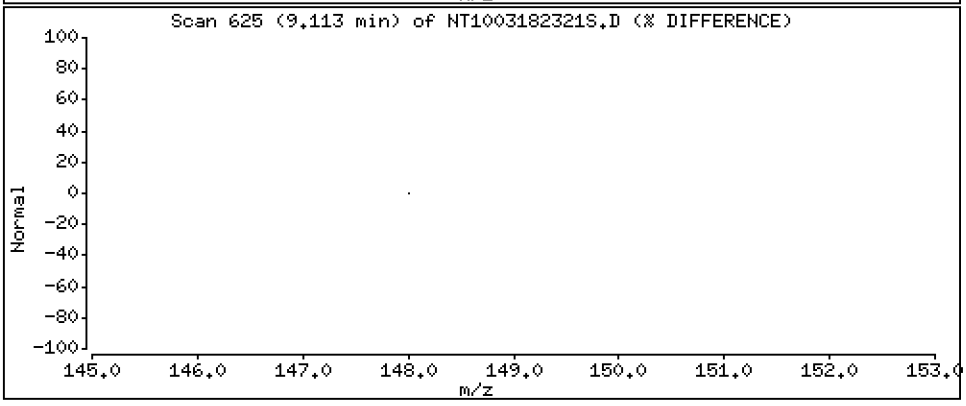












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

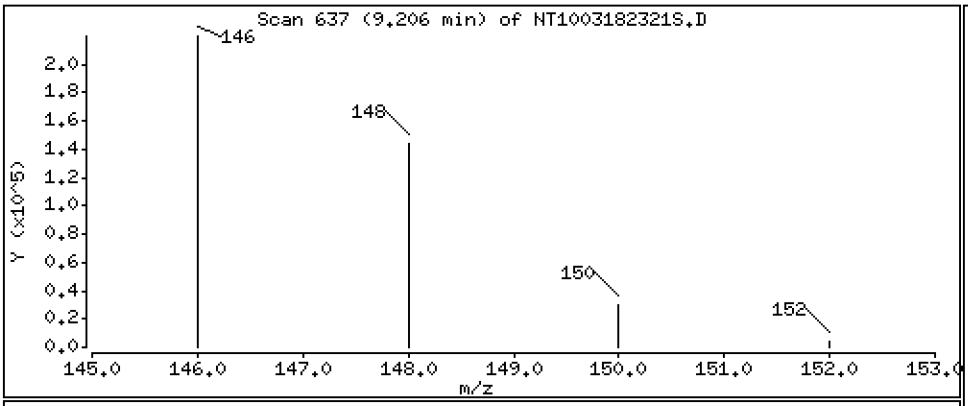
Operator: JGR

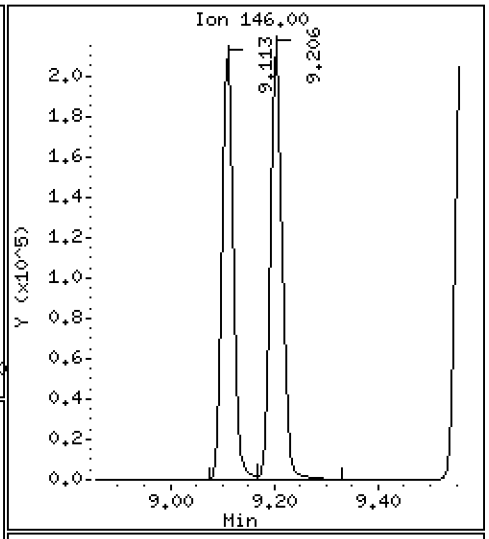
Column phase: ZB-5msi

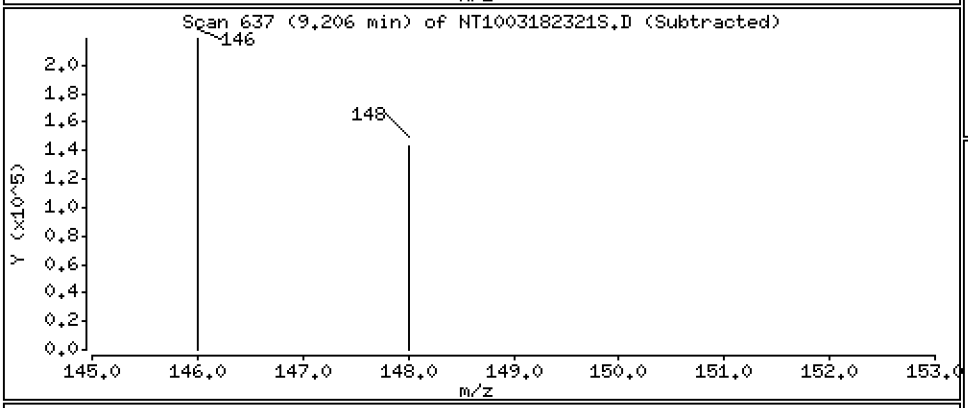
Column diameter: 0.25

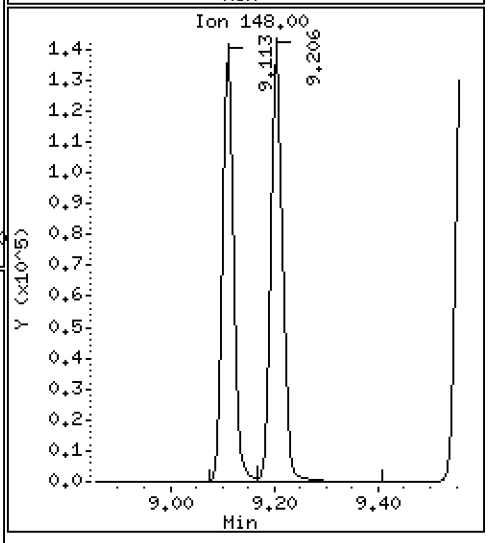
9 1,4-Dichlorobenzene

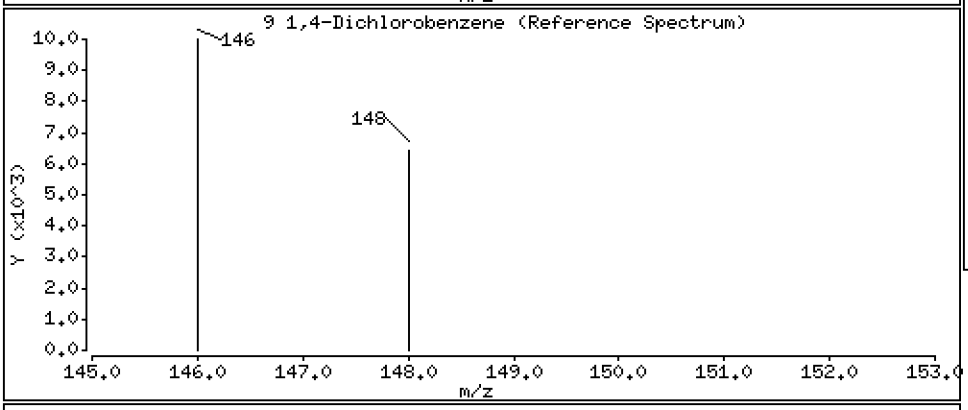
Concentration: 3.474 ug/L

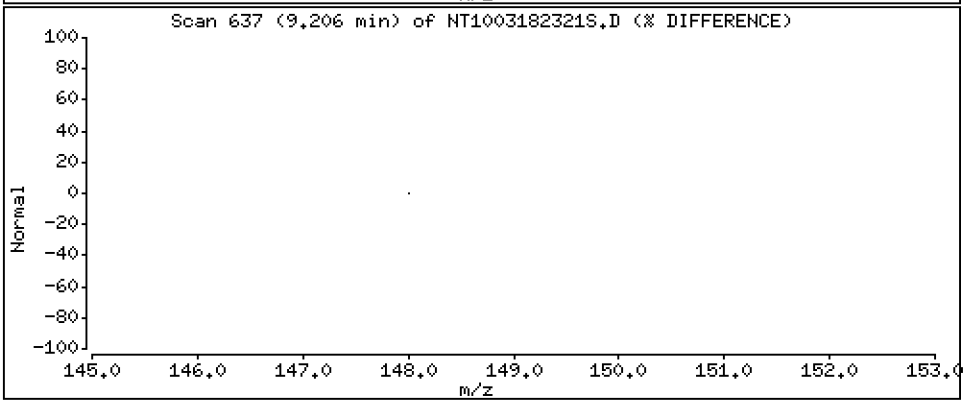












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

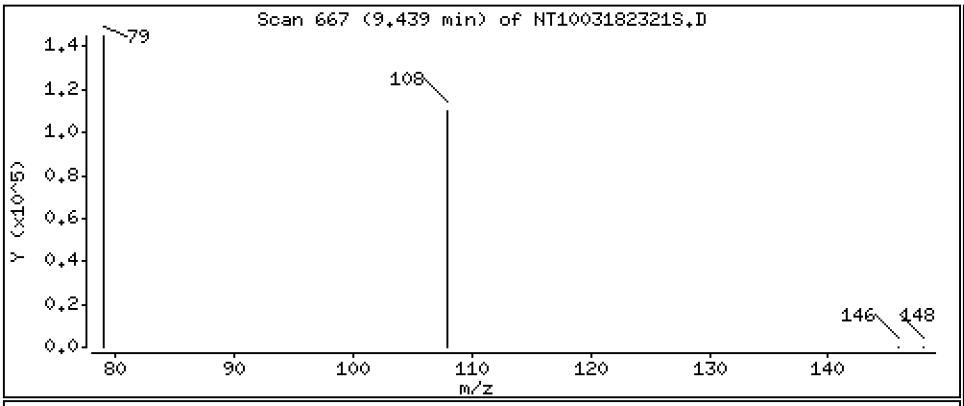
Operator: JGR

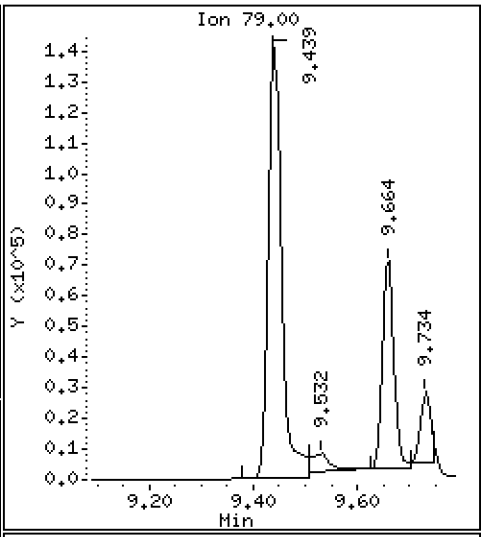
Column phase: ZB-5msi

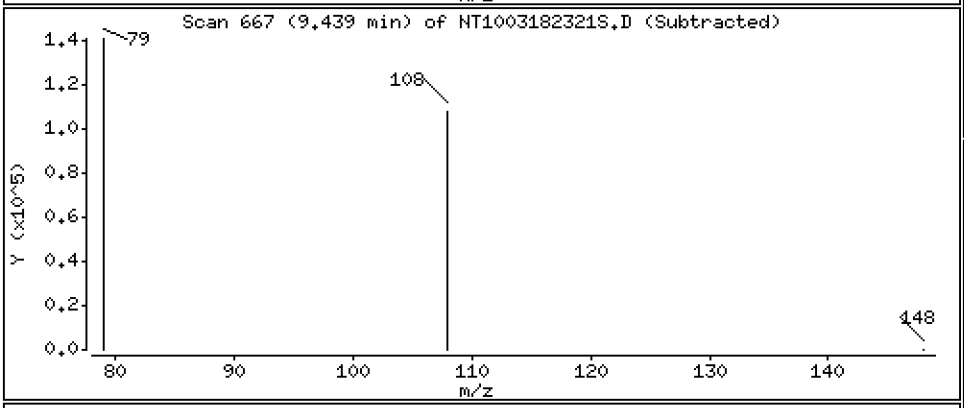
Column diameter: 0.25

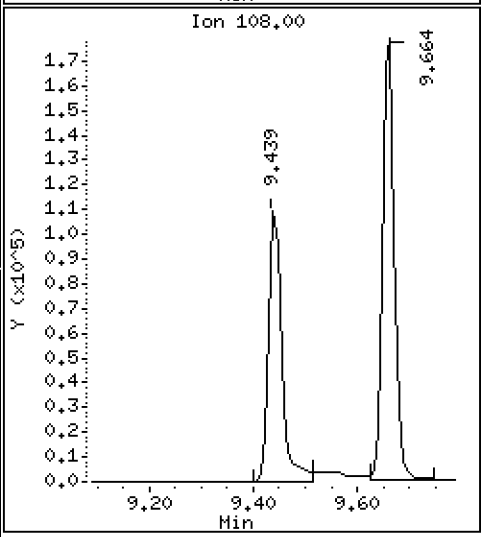
11 Benzyl alcohol

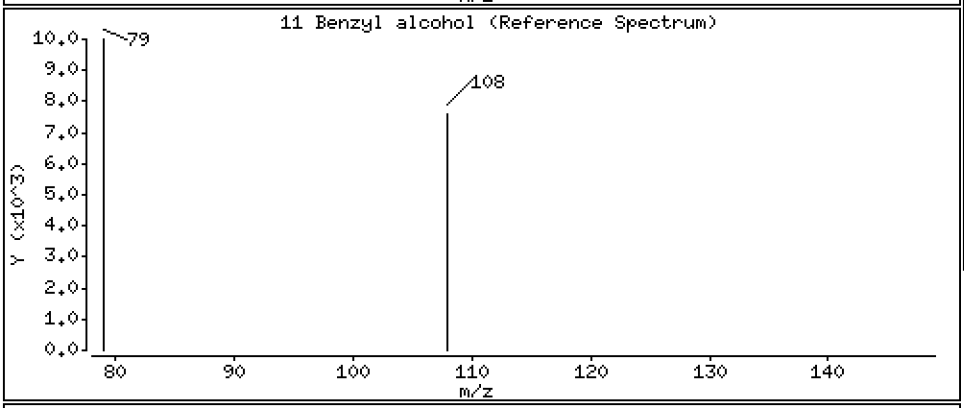
Concentration: 3.871 ug/L

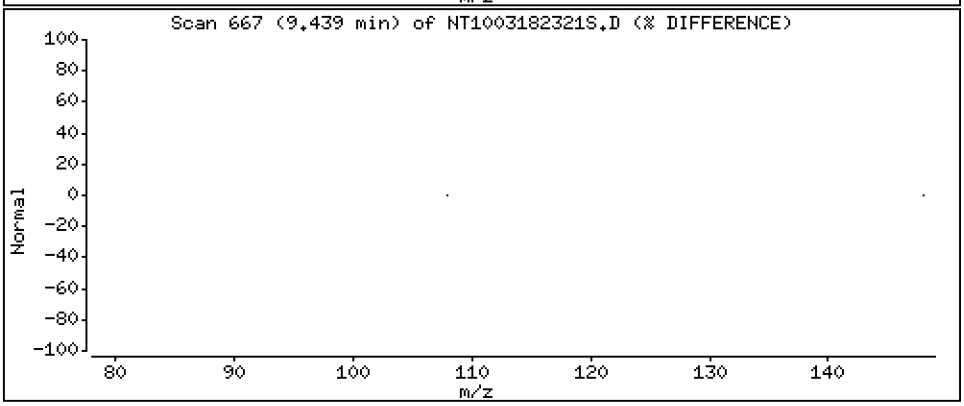












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

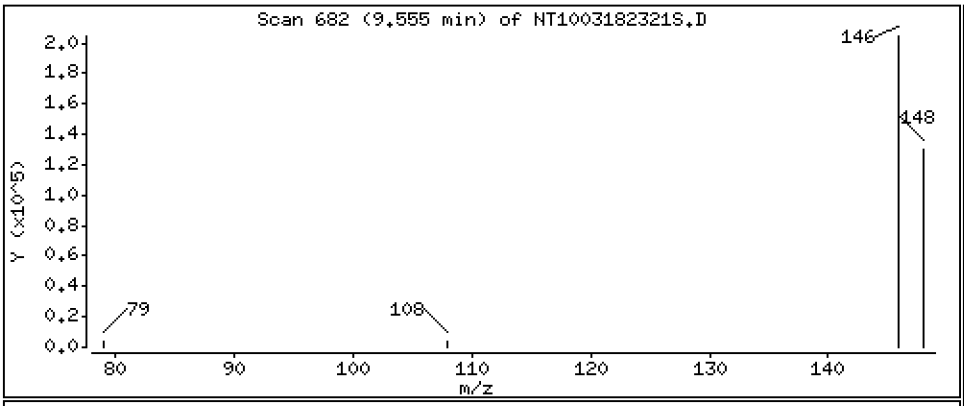
Operator: JGR

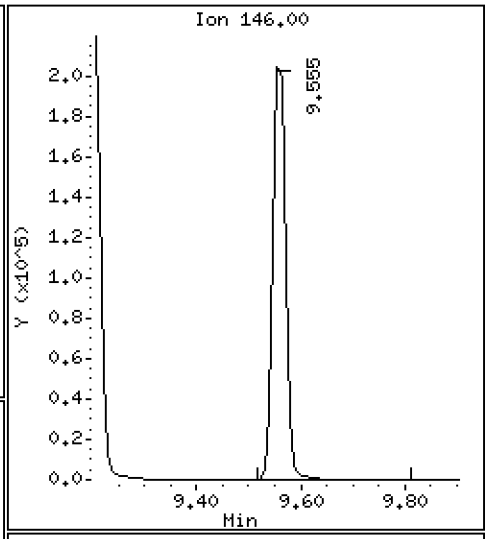
Column phase: ZB-5msi

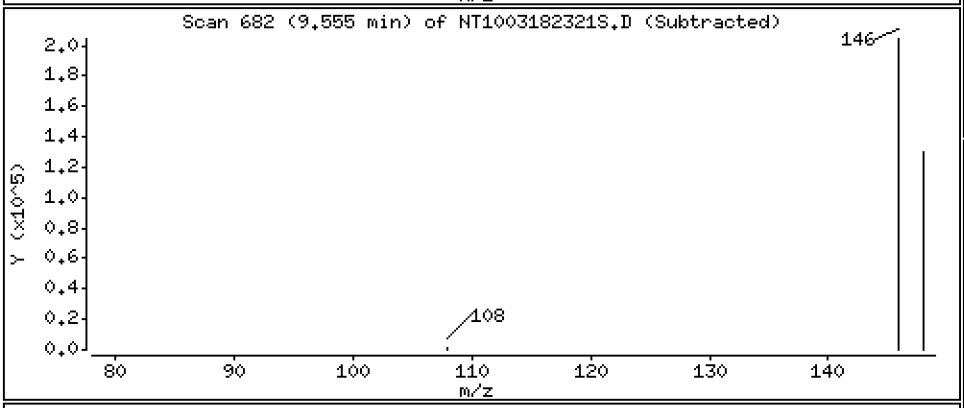
Column diameter: 0.25

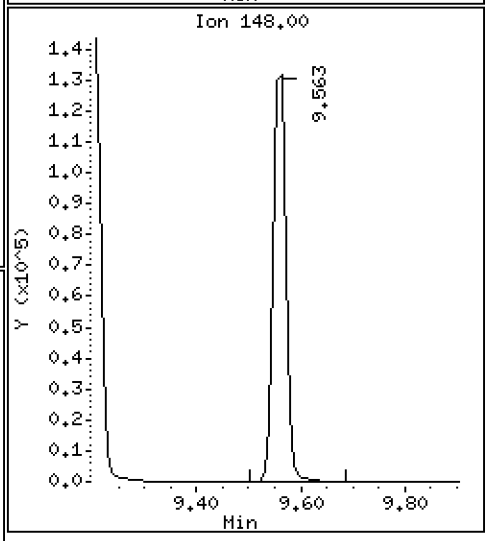
12 1,2-Dichlorobenzene

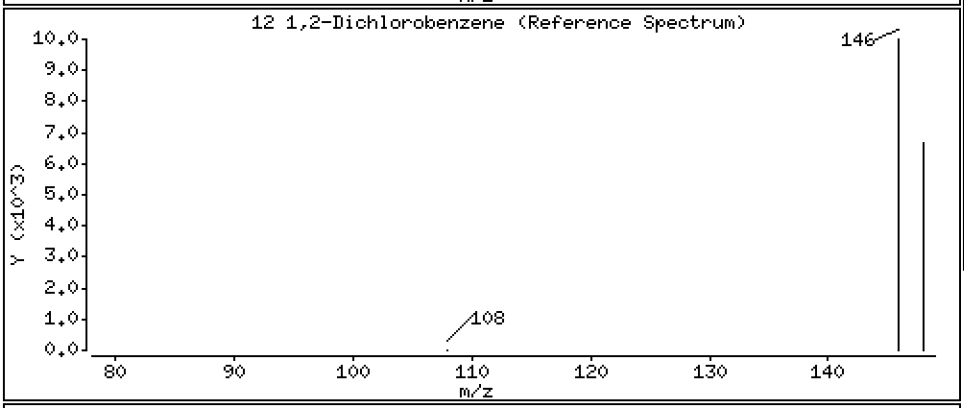
Concentration: 3.466 ug/L

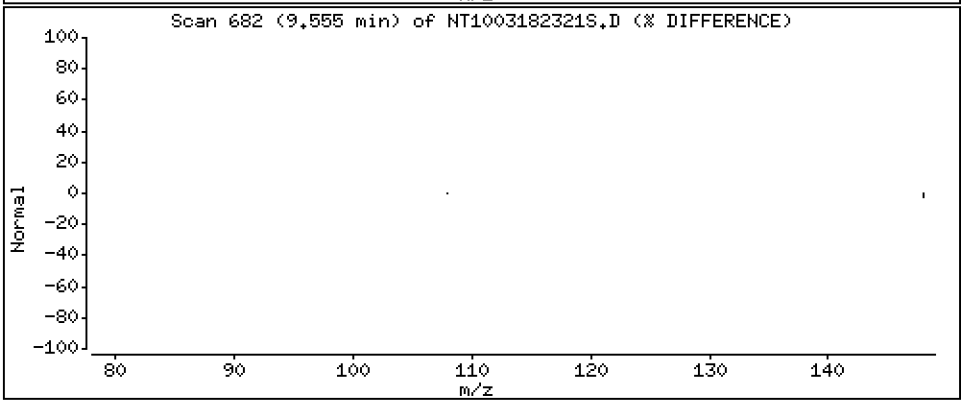












Date : 19-MAR-2023 06:29

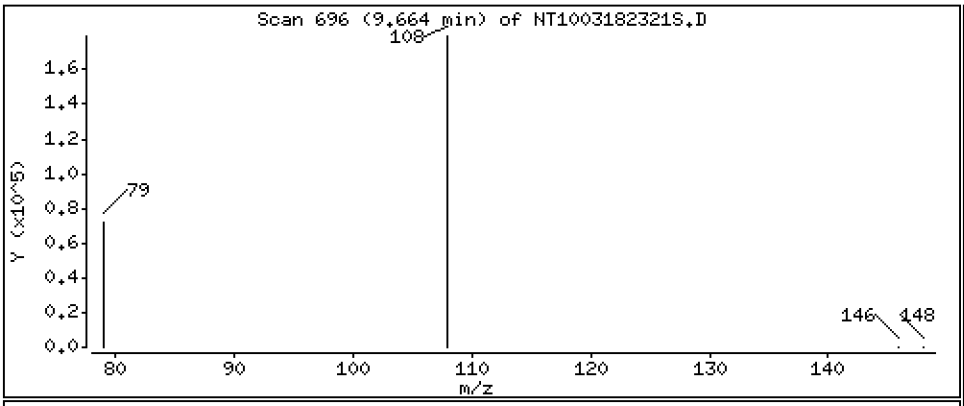
Client ID: Instrument: nt10.i

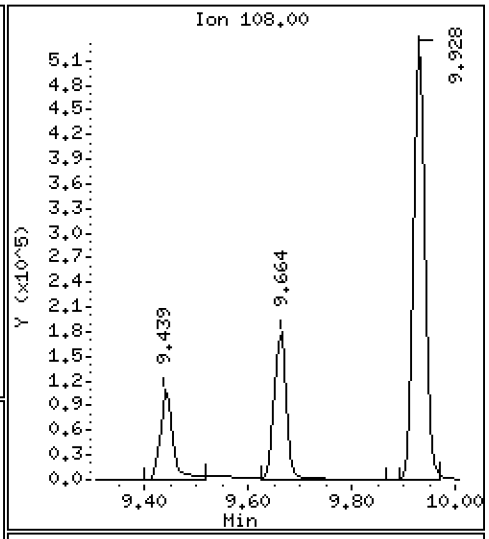
Sample Info: BLB0579-MS2

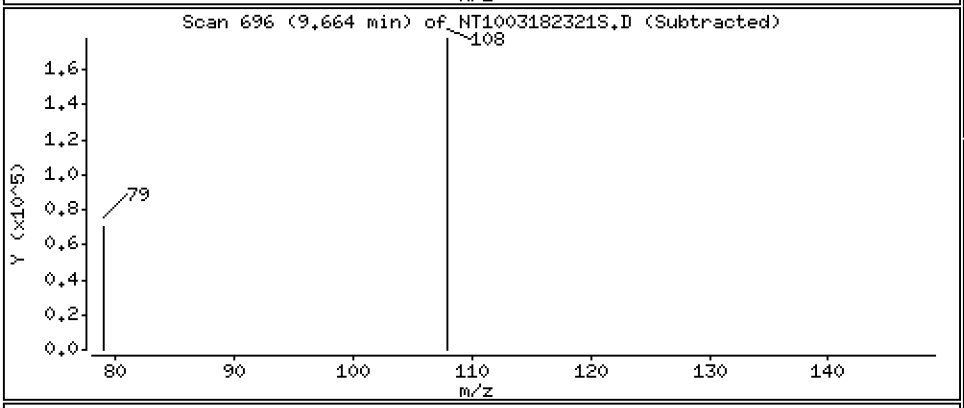
Volume Injected (uL): 1.0 Operator: JGR

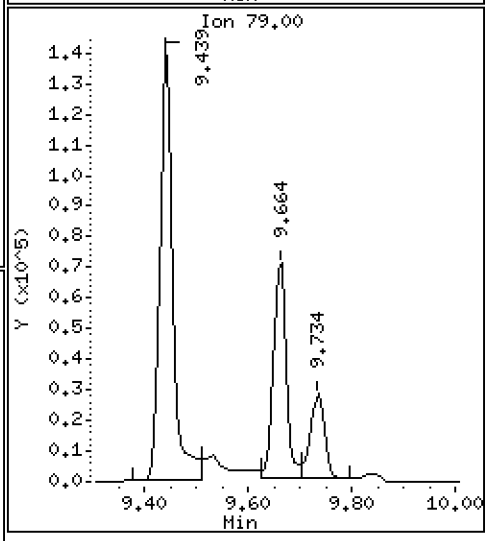
Column phase: ZB-5msi Column diameter: 0.25

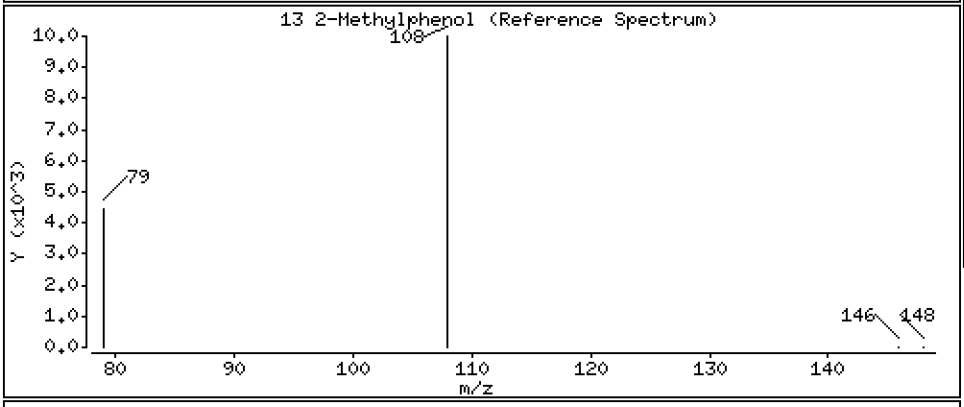
13 2-Methylphenol Concentration: 3.781 ug/L

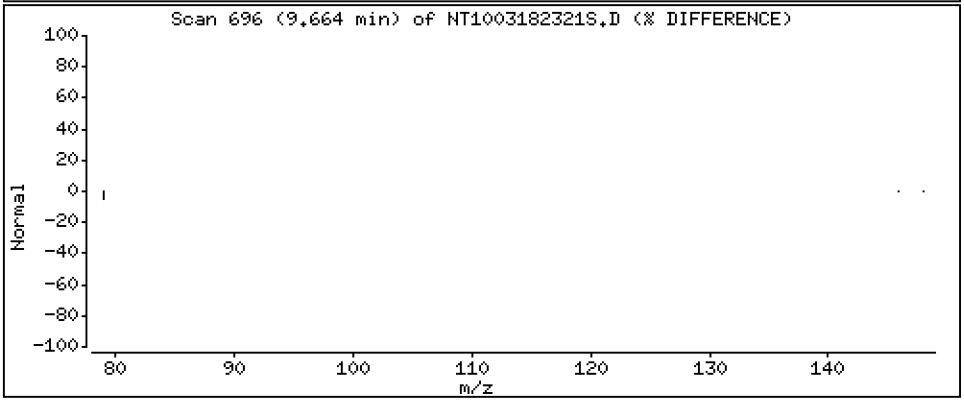












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

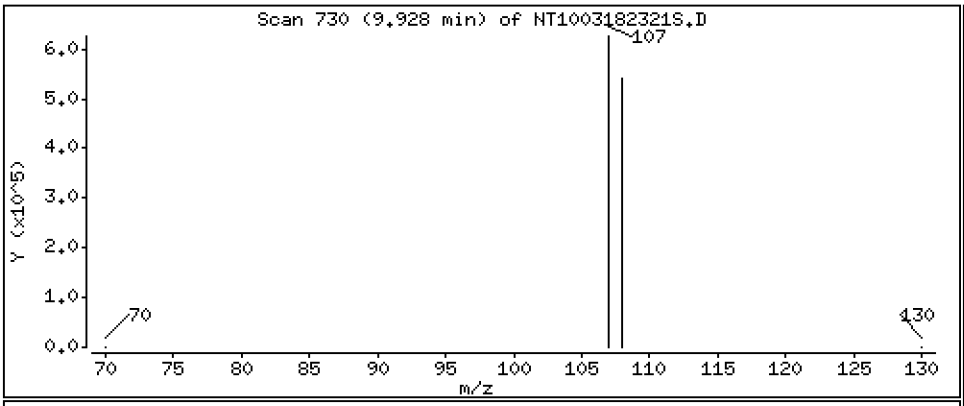
Operator: JGR

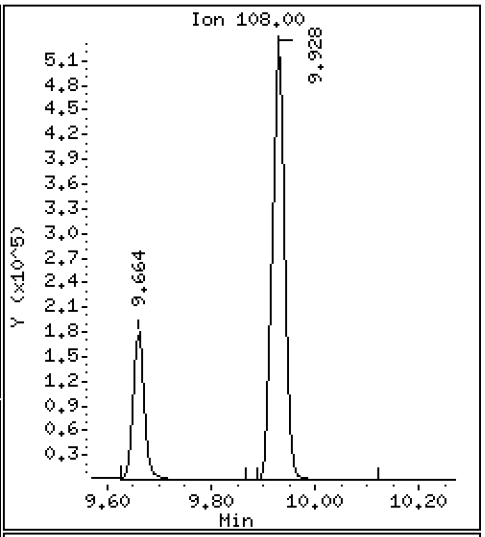
Column phase: ZB-5msi

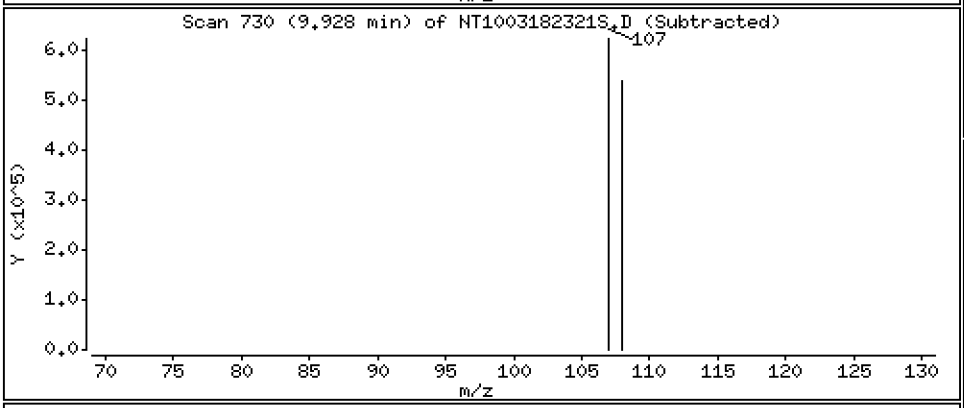
Column diameter: 0.25

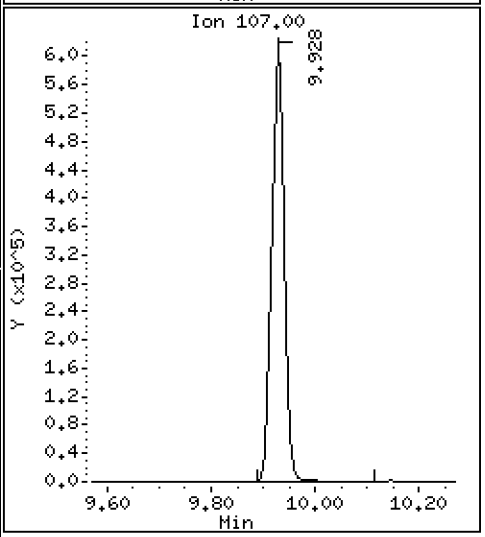
15 4-Methylphenol

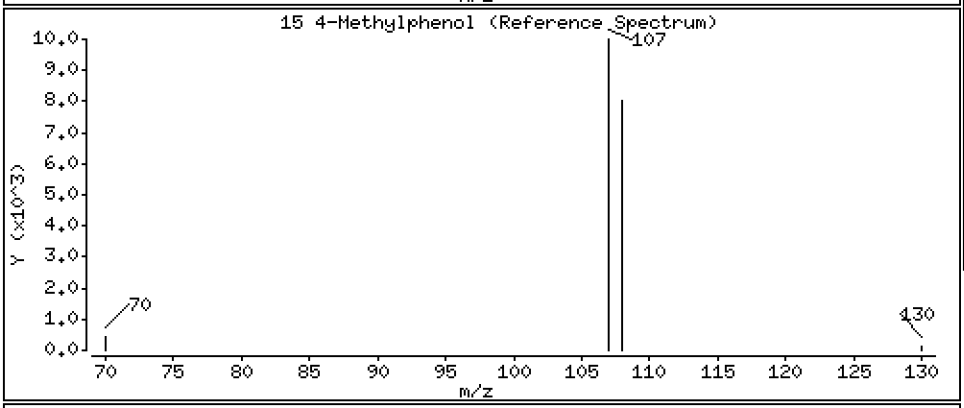
Concentration: 11.15 ug/L

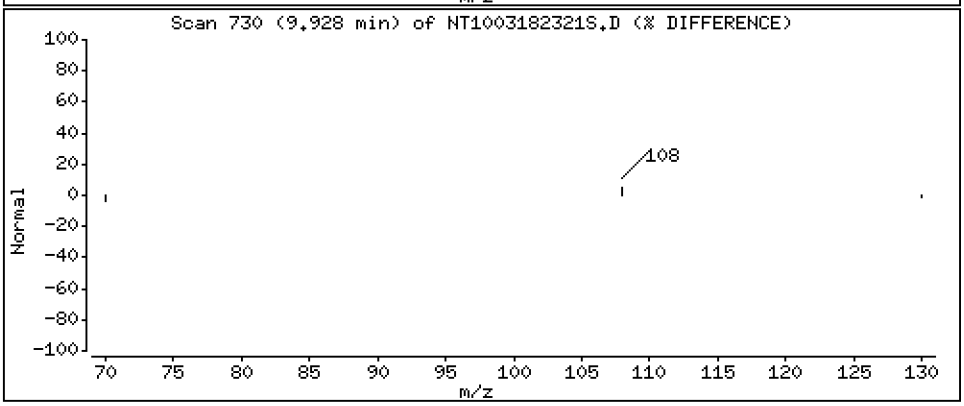












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

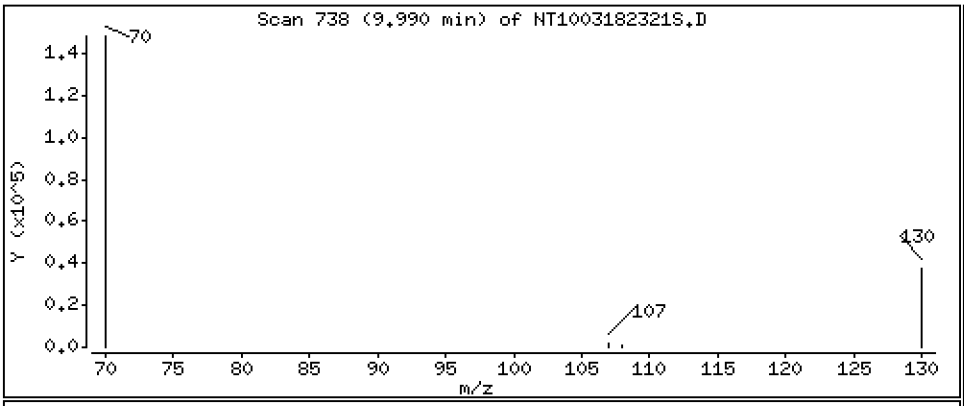
Operator: JGR

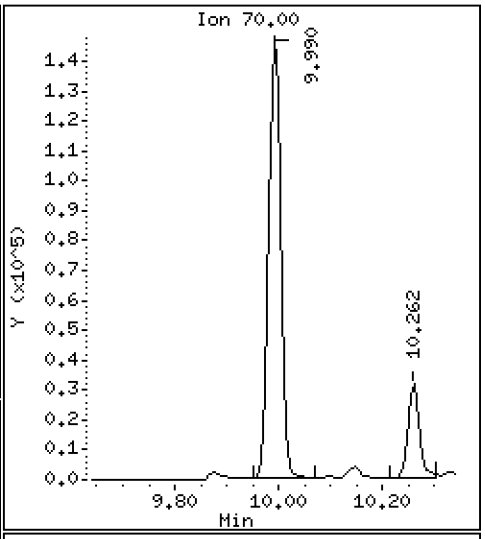
Column phase: ZB-5msi

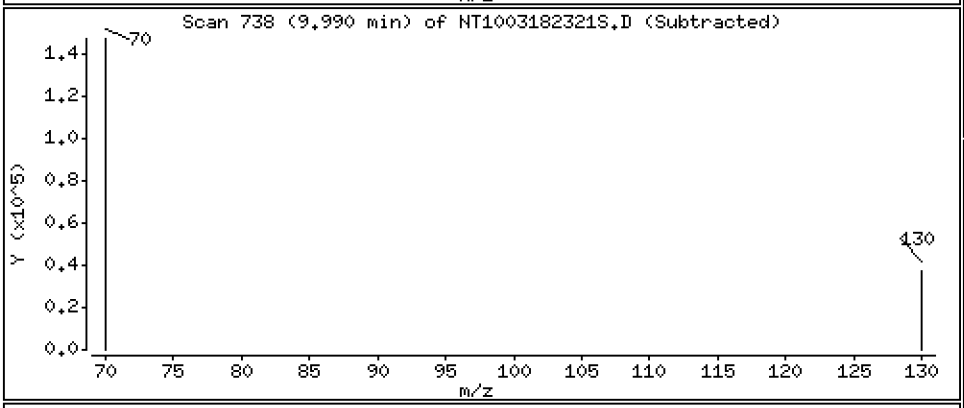
Column diameter: 0.25

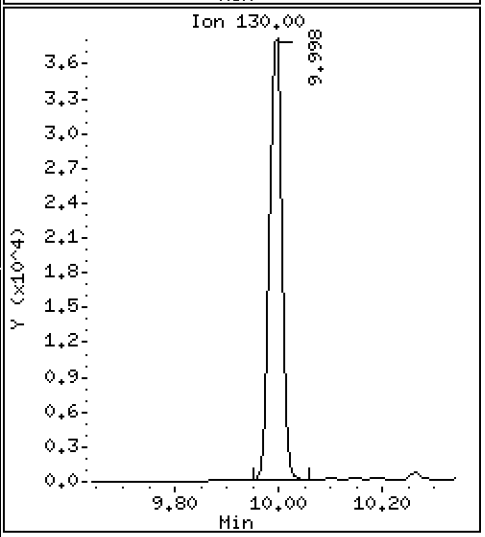
16 N-Nitroso-di-n-propylamine

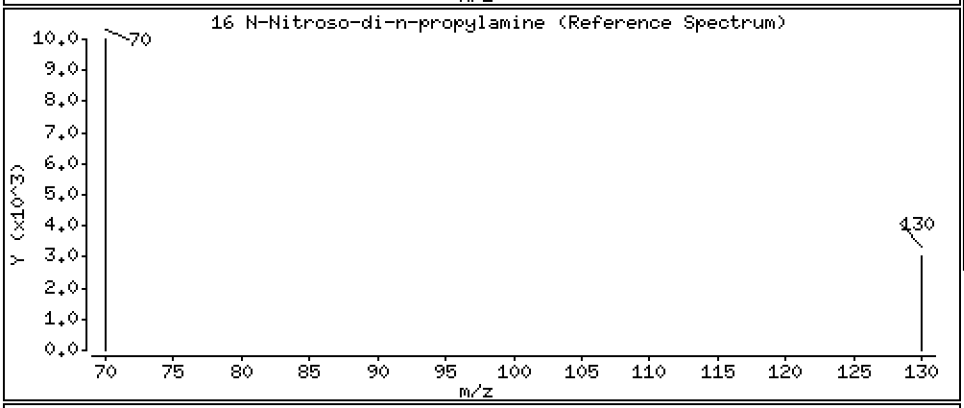
Concentration: 4.115 ug/L

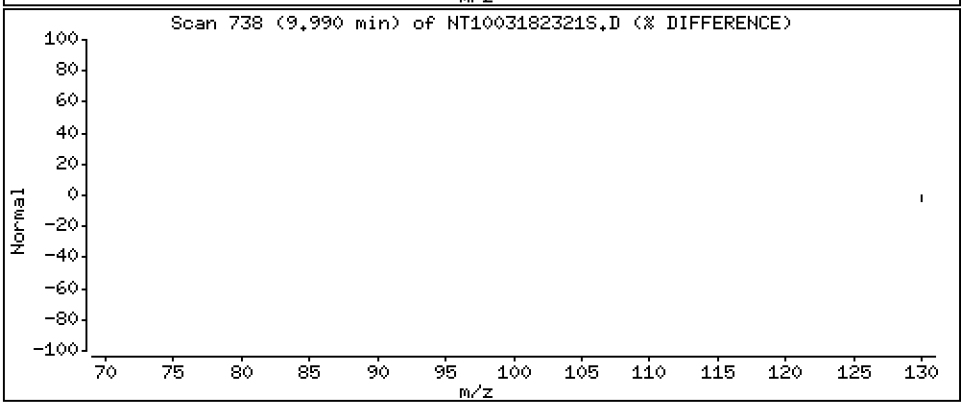












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

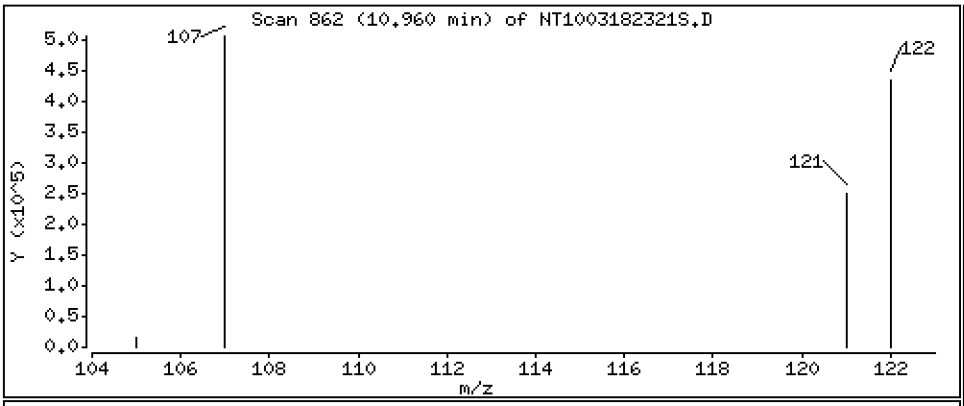
Operator: JGR

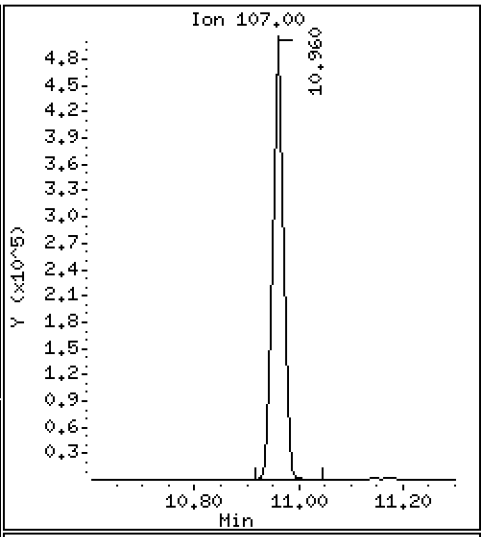
Column phase: ZB-5msi

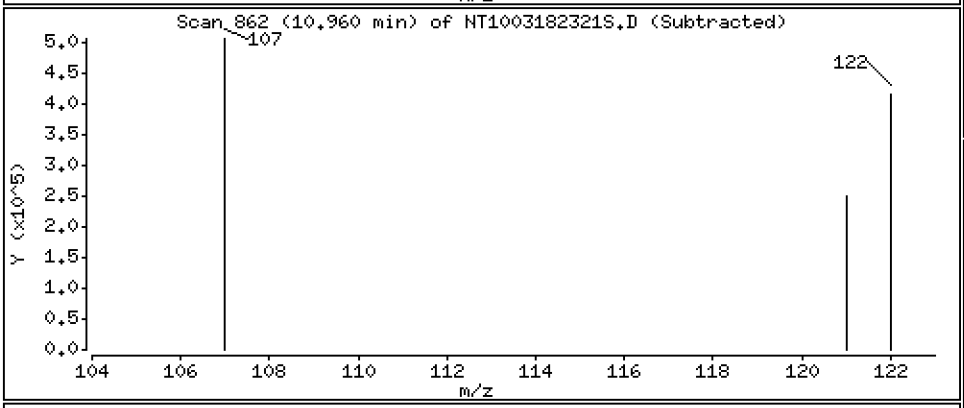
Column diameter: 0.25

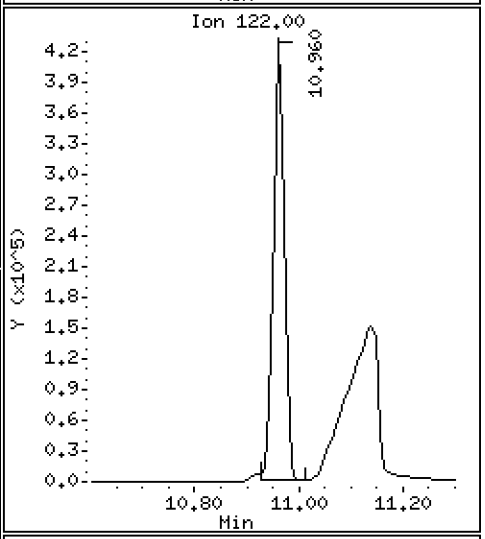
22 2,4-Dimethylphenol

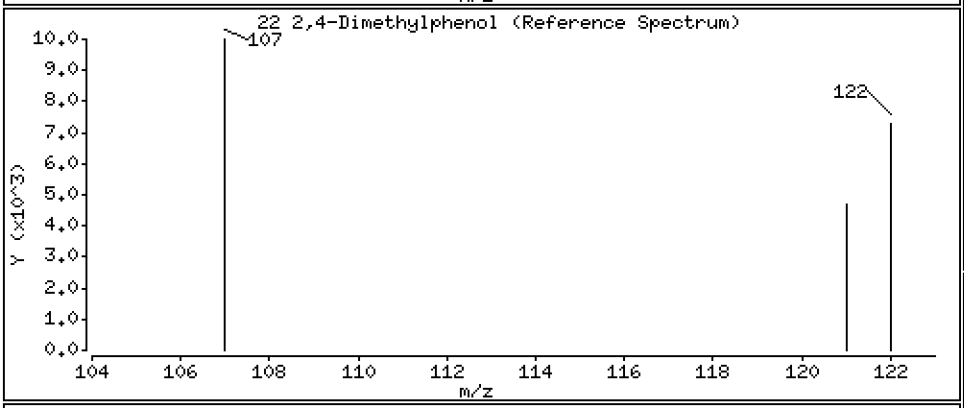
Concentration: 8.832 ug/L

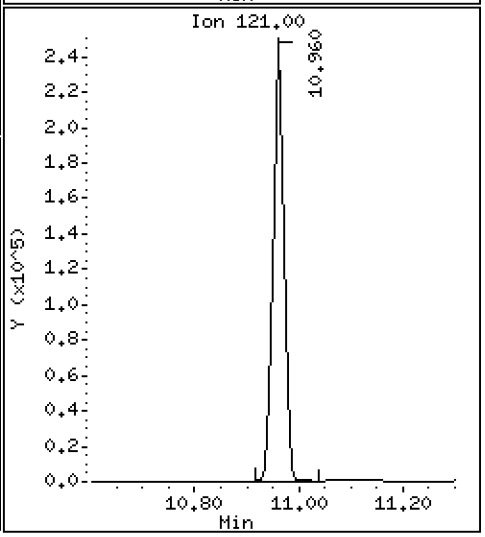


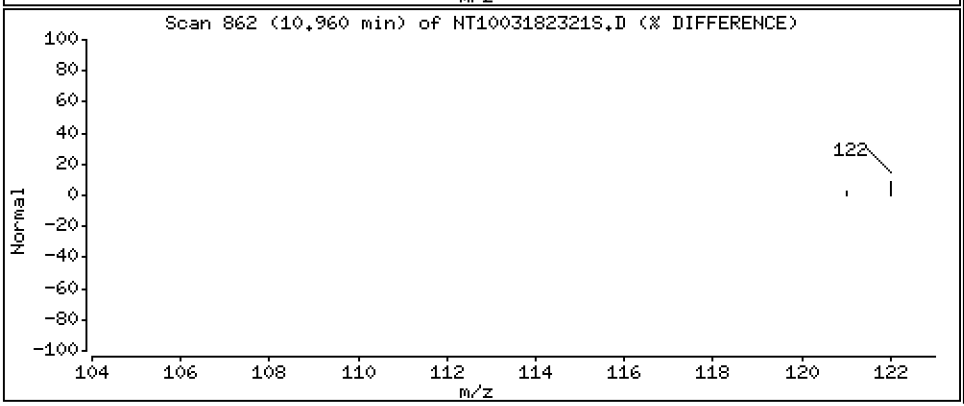












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

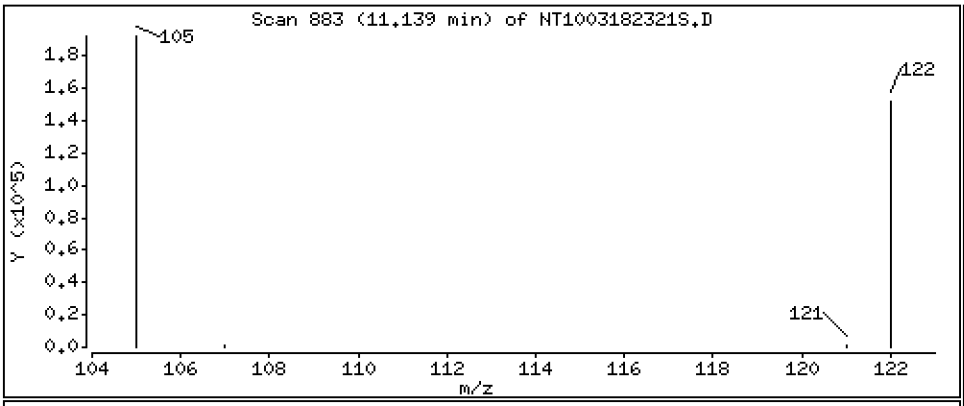
Operator: JGR

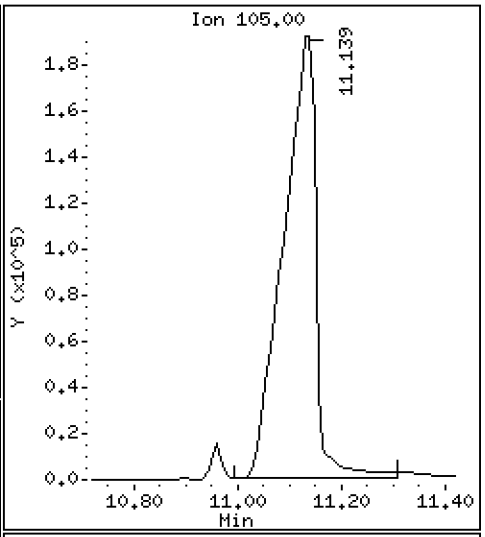
Column phase: ZB-5msi

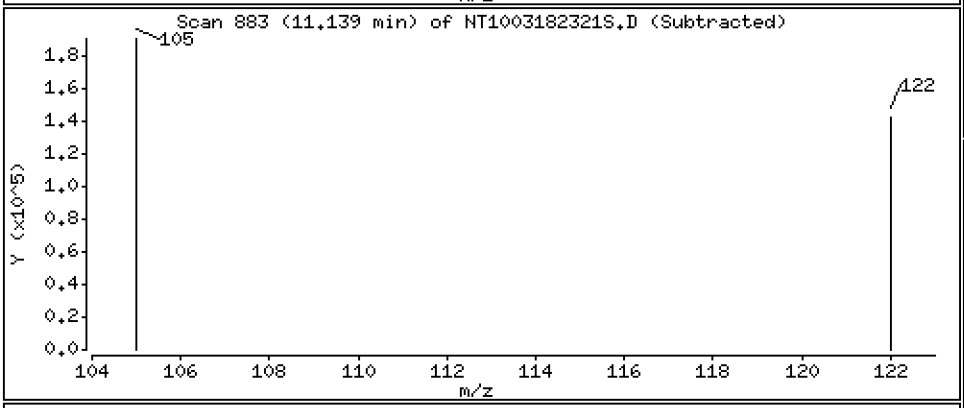
Column diameter: 0.25

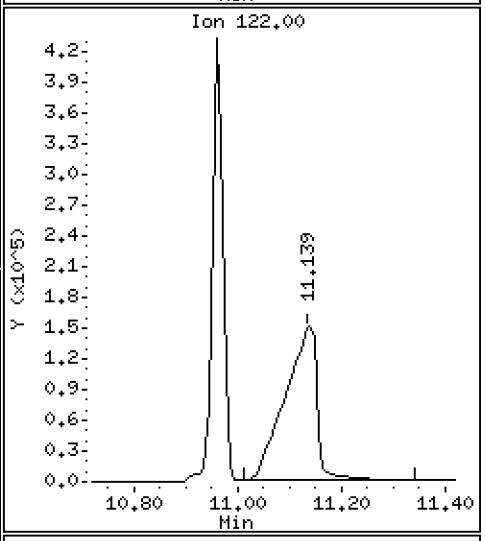
24 Benzoic acid

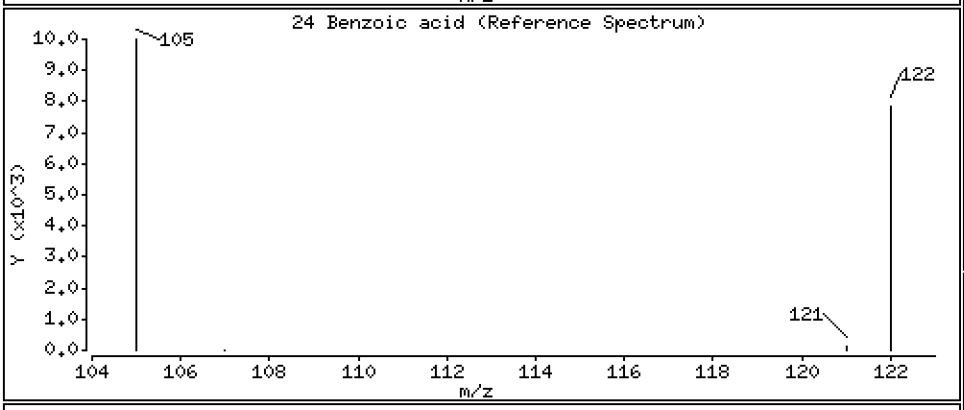
Concentration: 17.56 ug/L

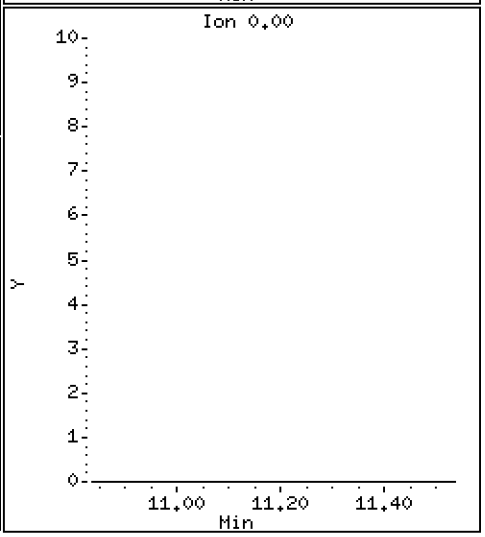


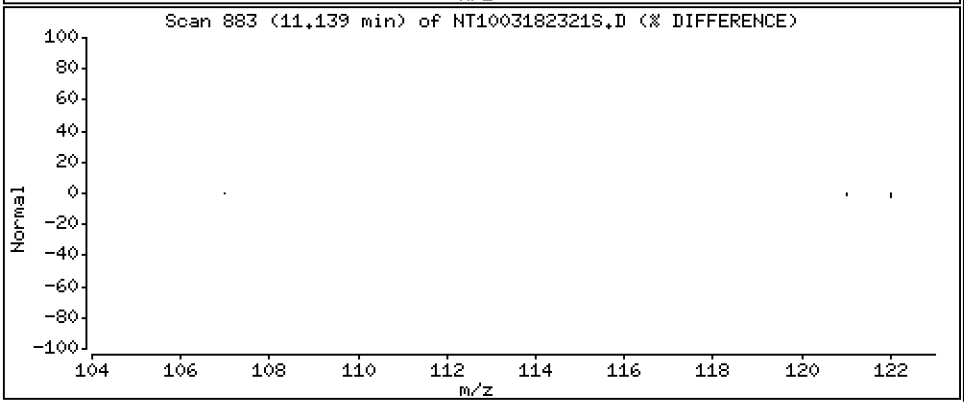












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

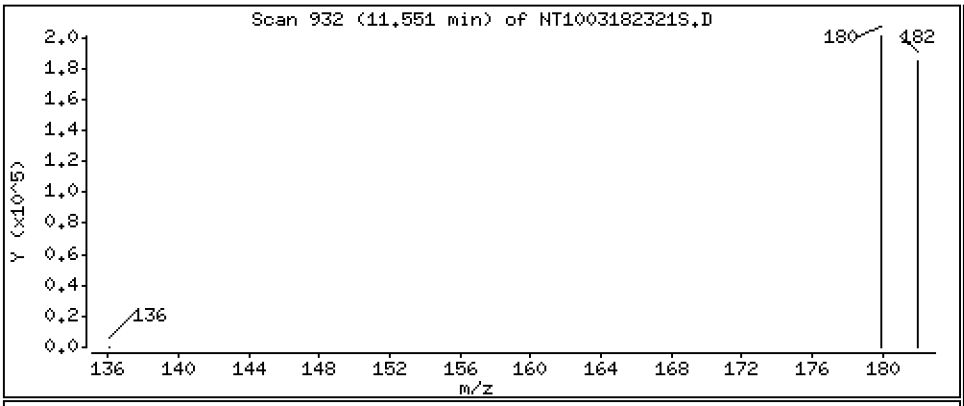
Operator: JGR

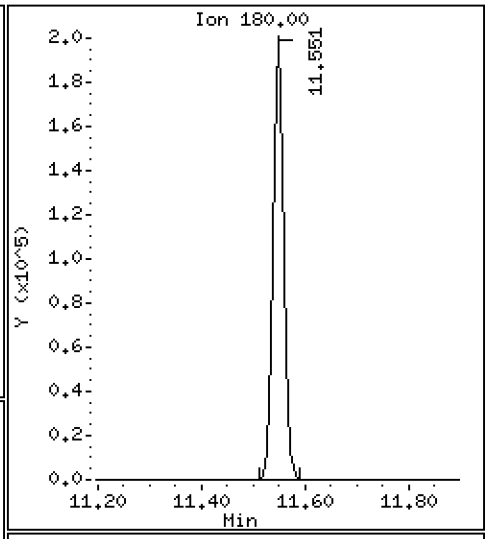
Column phase: ZB-5msi

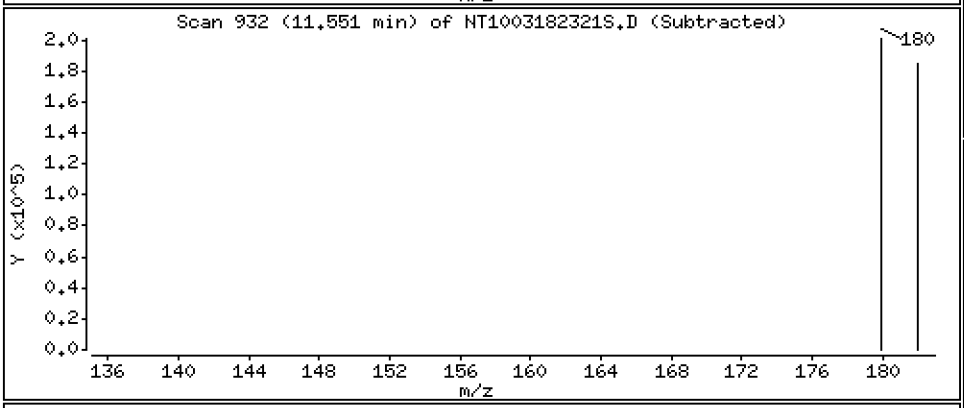
Column diameter: 0.25

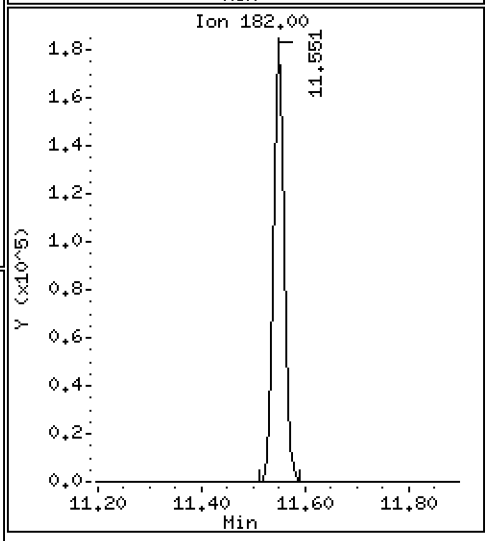
26 1,2,4-Trichlorobenzene

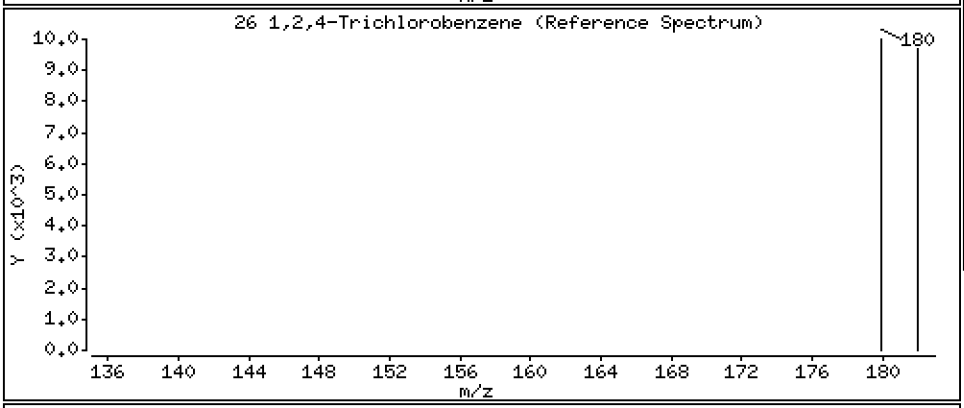
Concentration: 3.617 ug/L

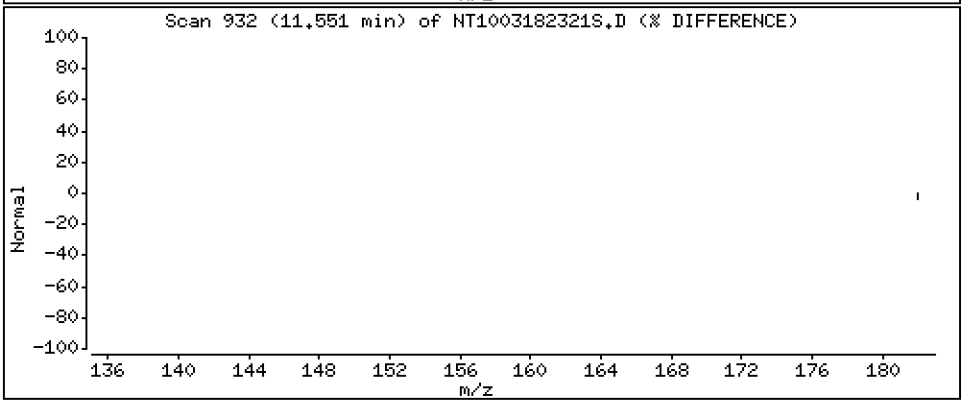












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

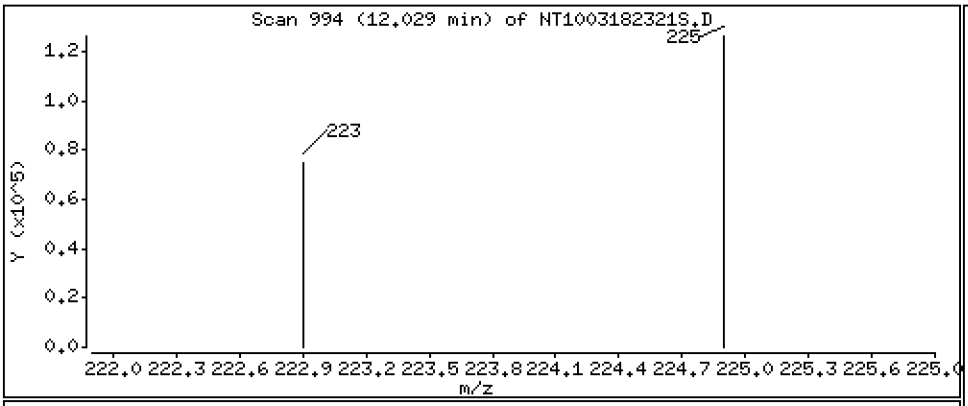
Operator: JGR

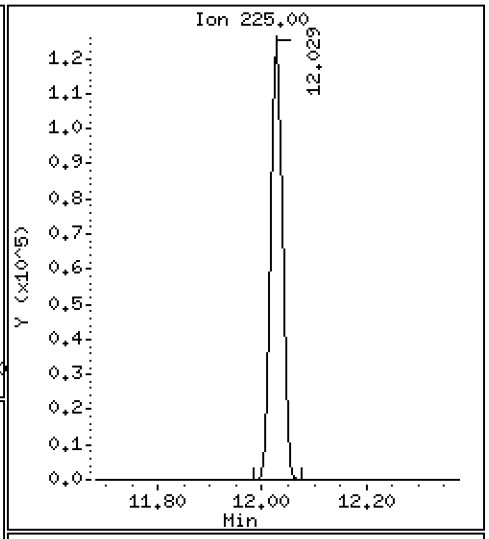
Column phase: ZB-5msi

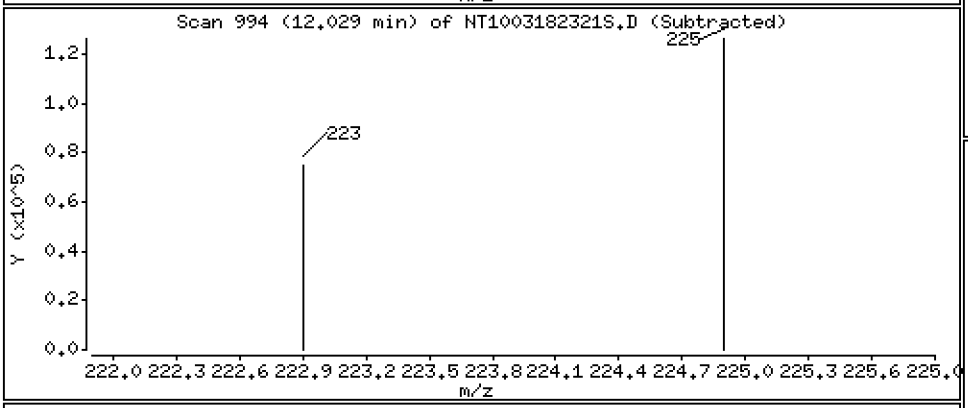
Column diameter: 0.25

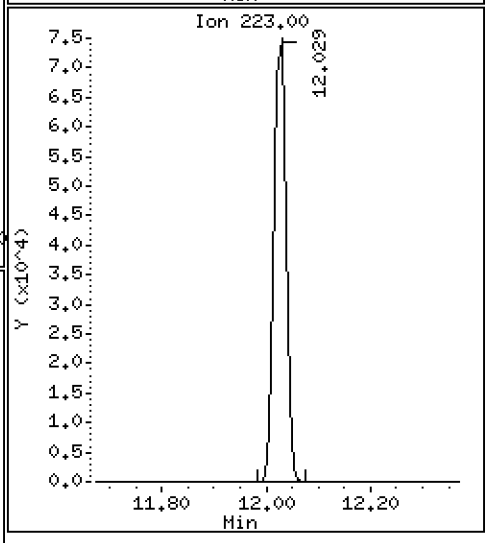
30 Hexachlorobutadiene

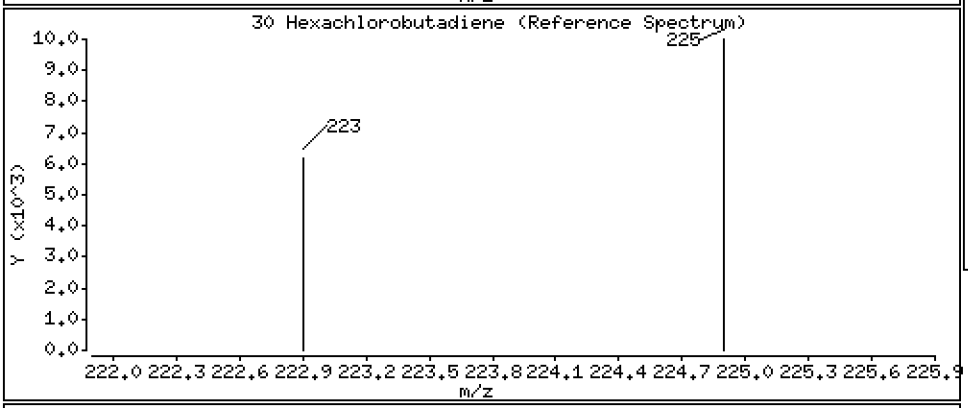
Concentration: 3.733 ug/L

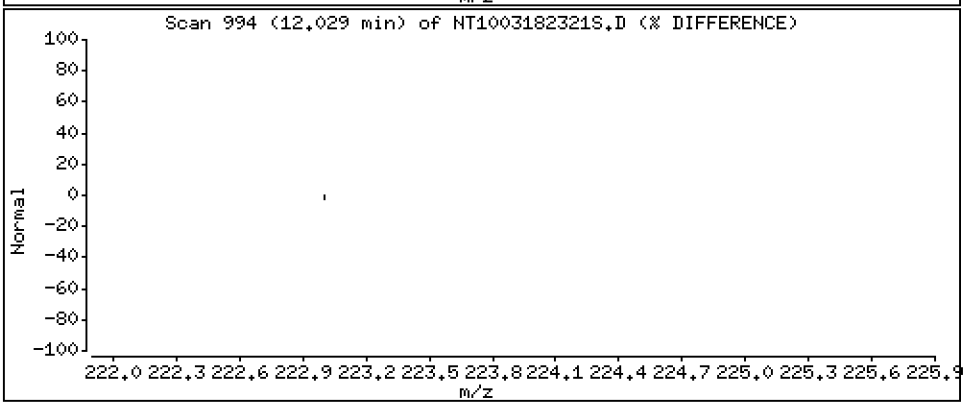












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

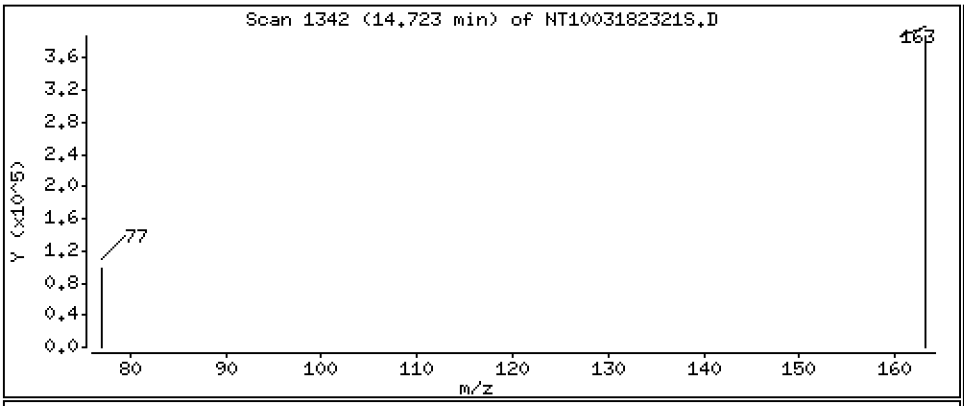
Operator: JGR

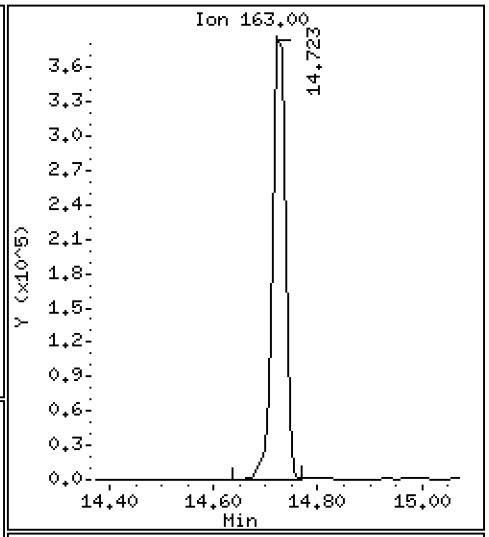
Column phase: ZB-5msi

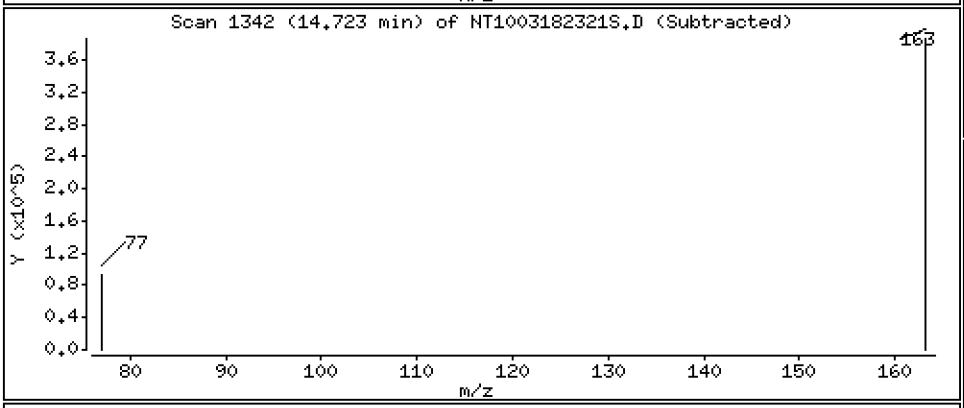
Column diameter: 0.25

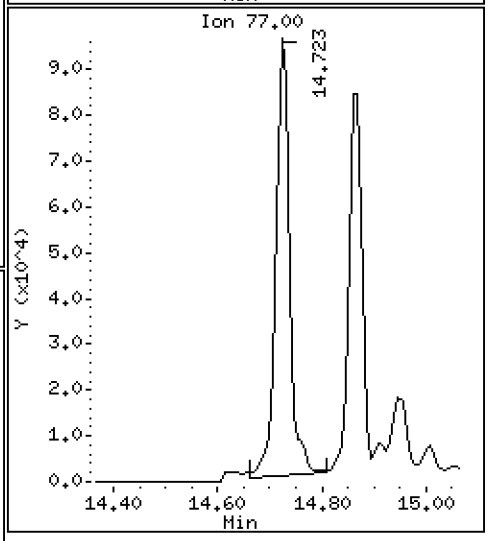
39 Dimethylphthalate

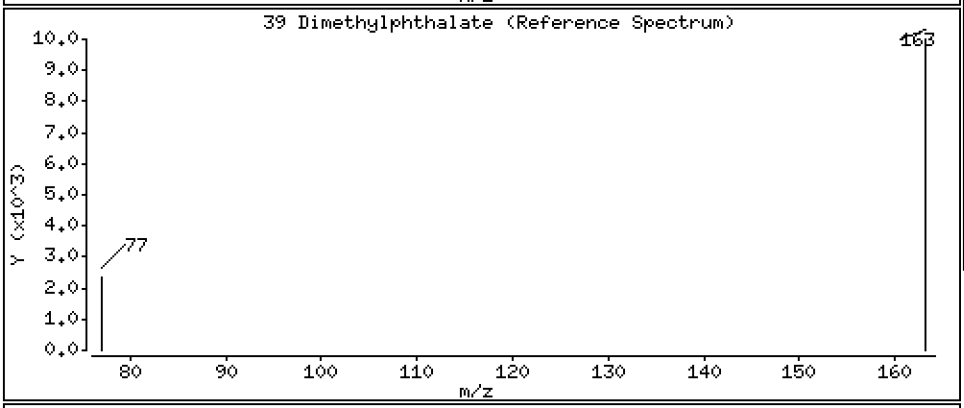
Concentration: 4.330 ug/L

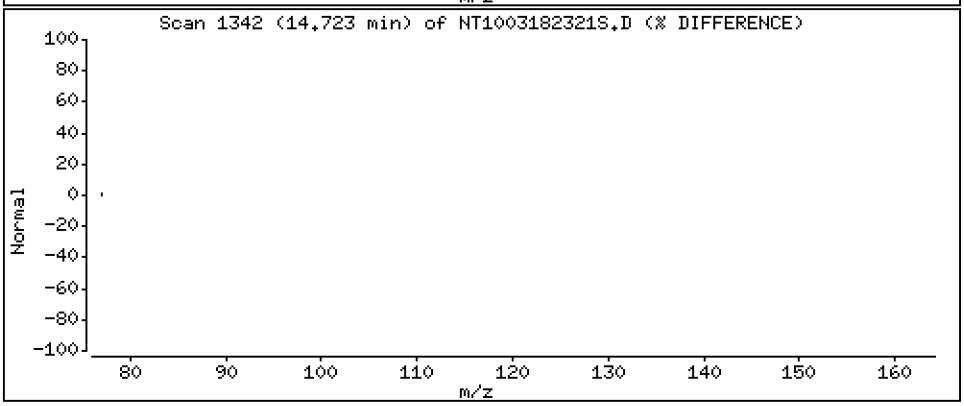












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

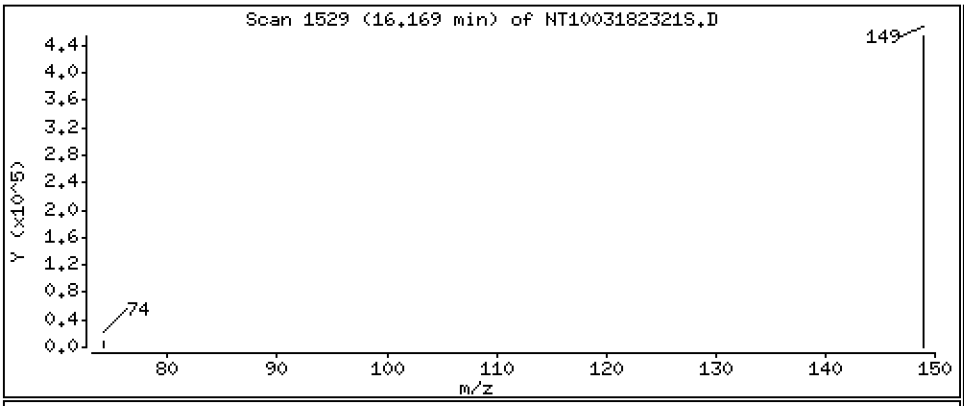
Operator: JGR

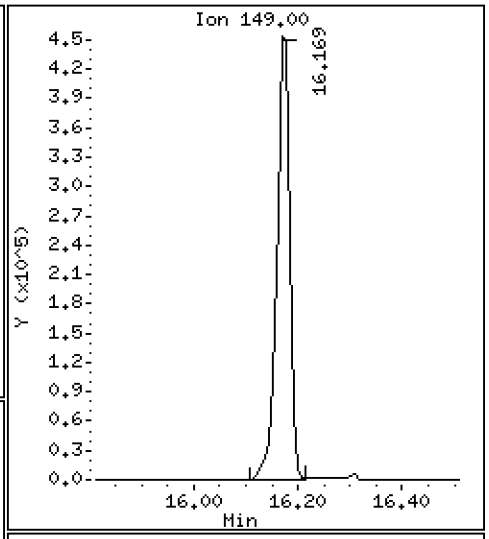
Column phase: ZB-5msi

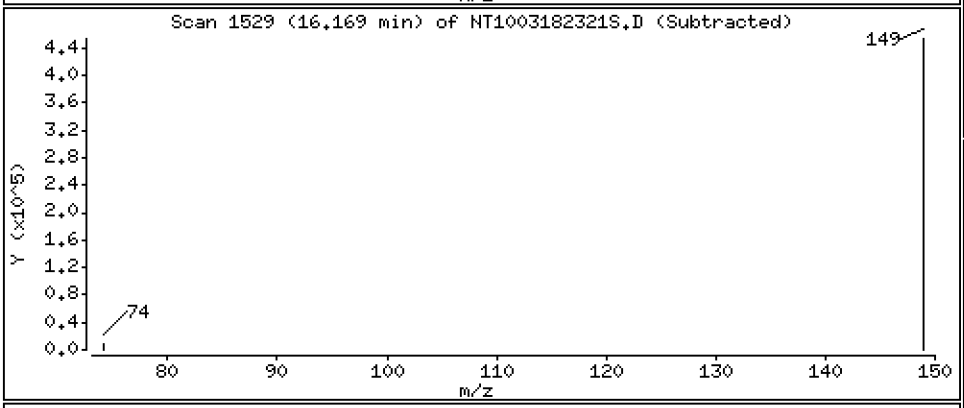
Column diameter: 0.25

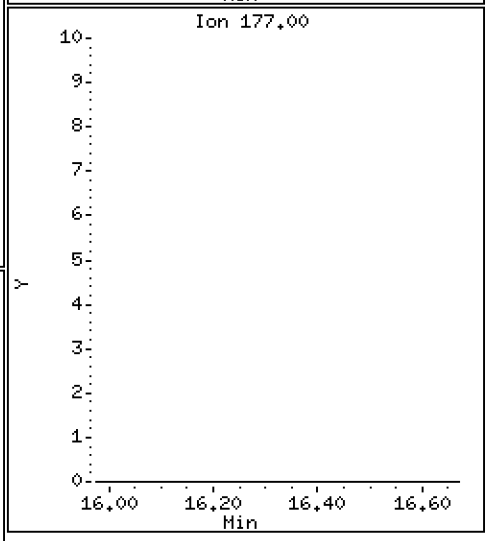
50 Diethylphthalate

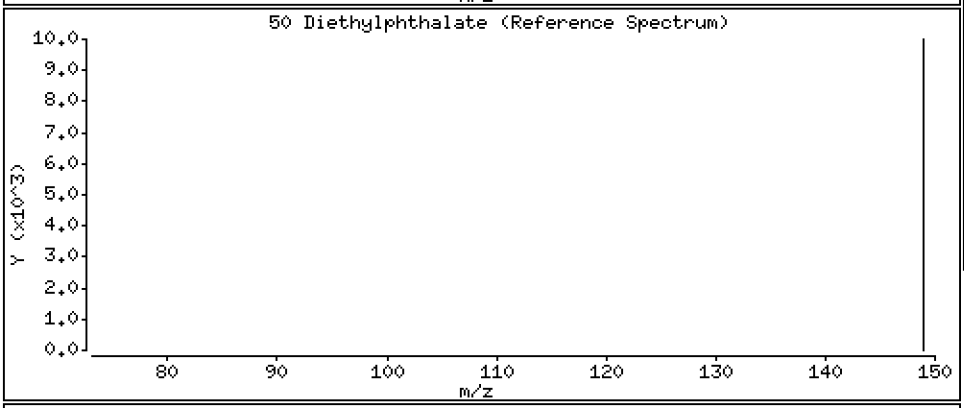
Concentration: 5.183 ug/L

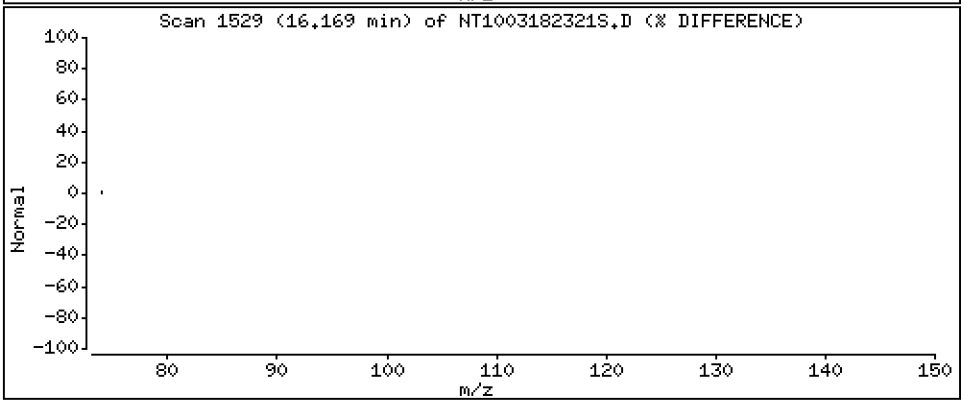












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

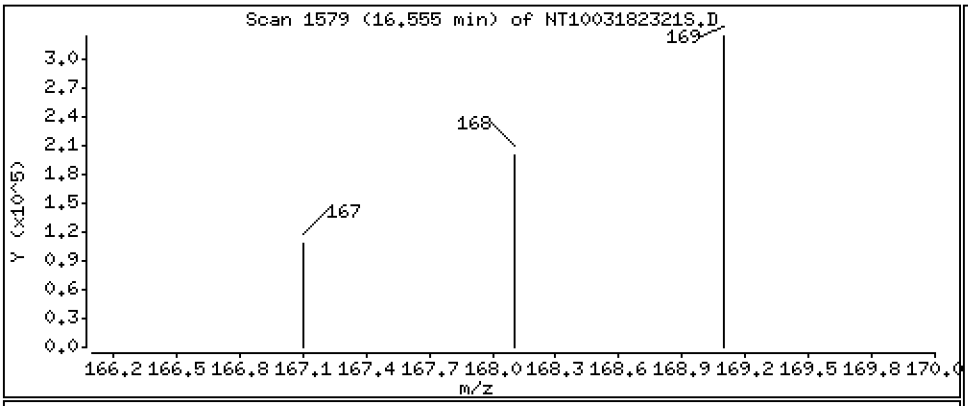
Operator: JGR

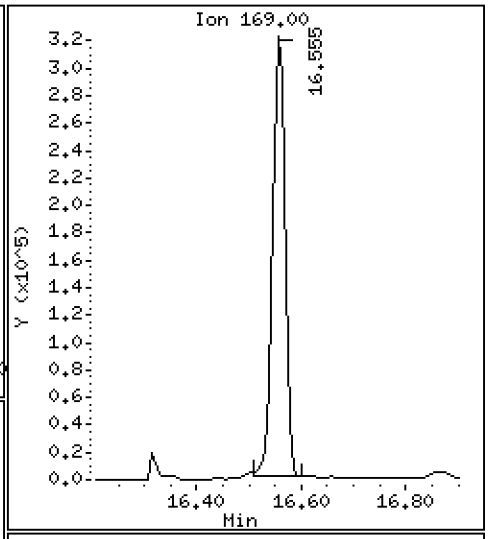
Column phase: ZB-5msi

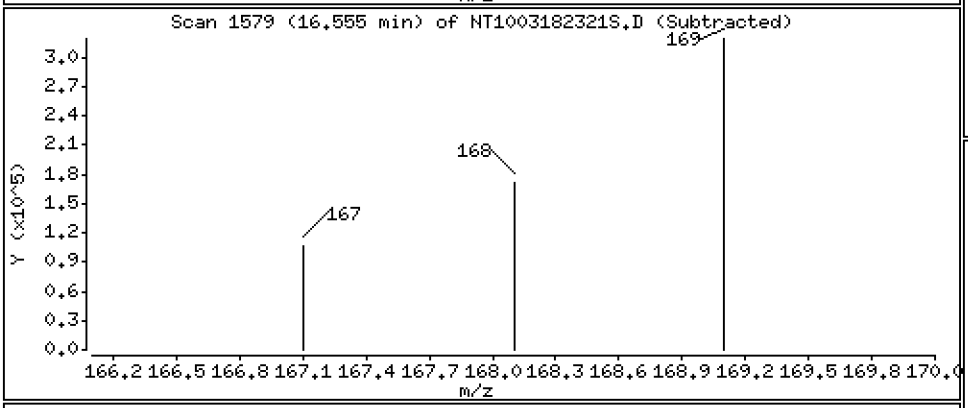
Column diameter: 0.25

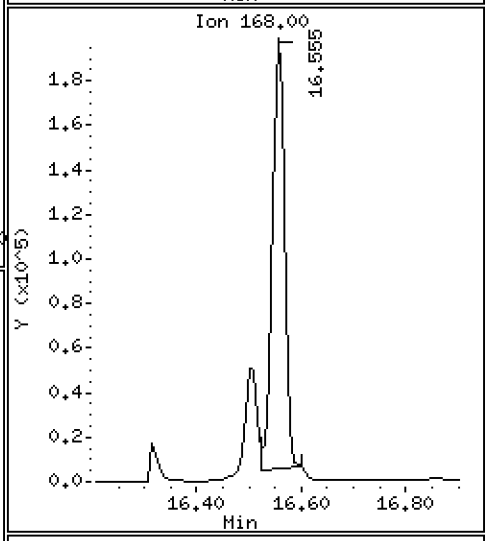
54 N-Nitrosodiphenylamine

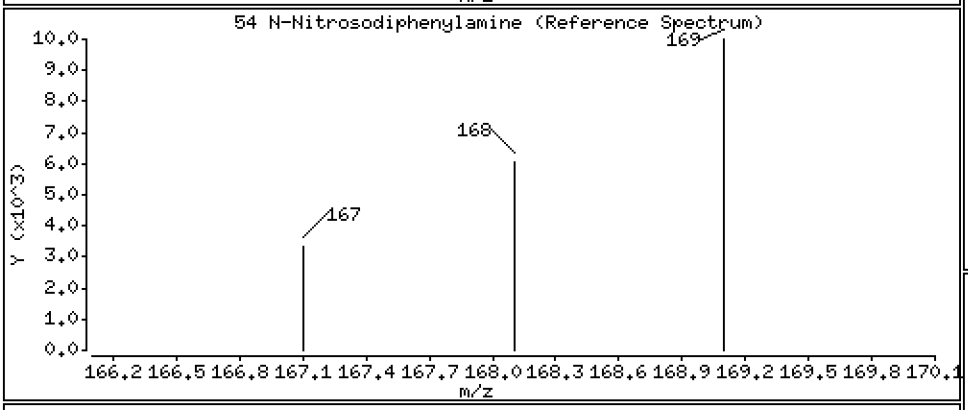
Concentration: 3.917 ug/L

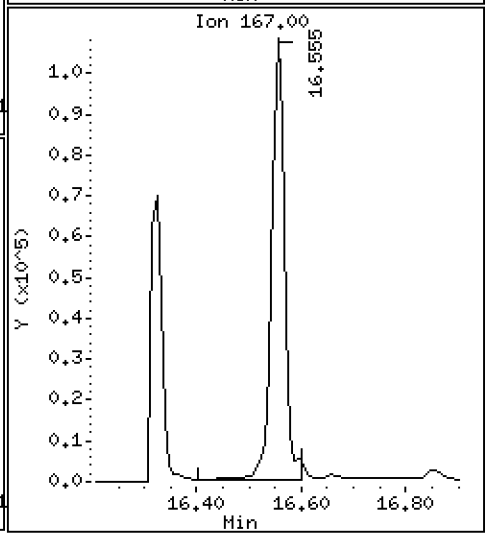


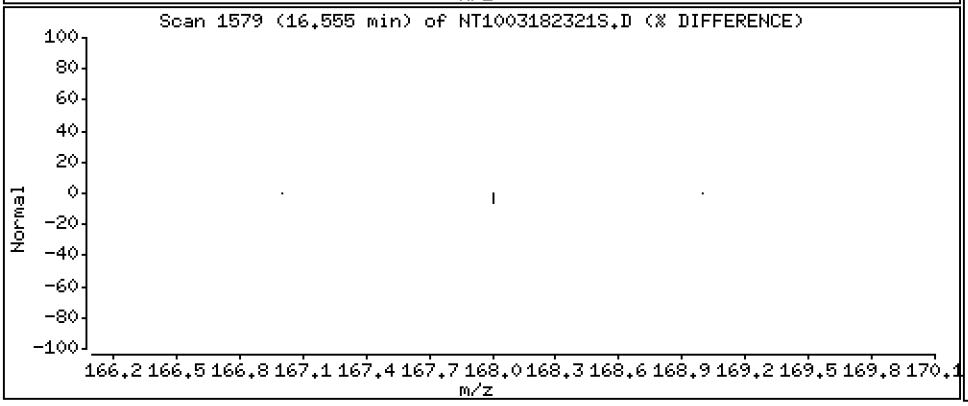












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

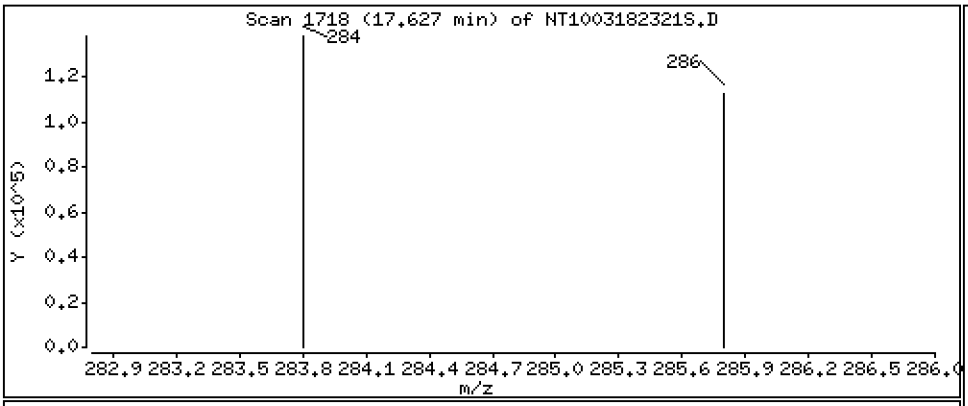
Operator: JGR

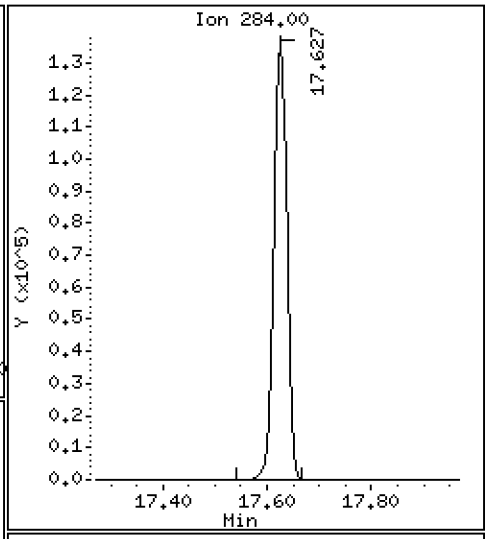
Column phase: ZB-5msi

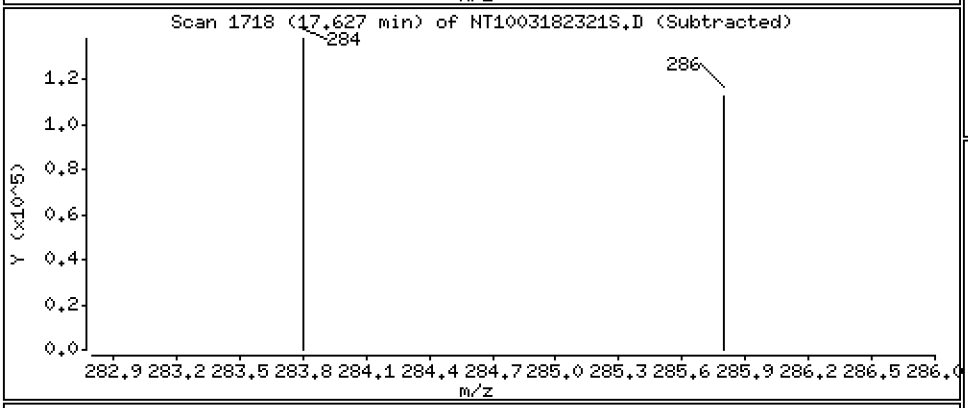
Column diameter: 0.25

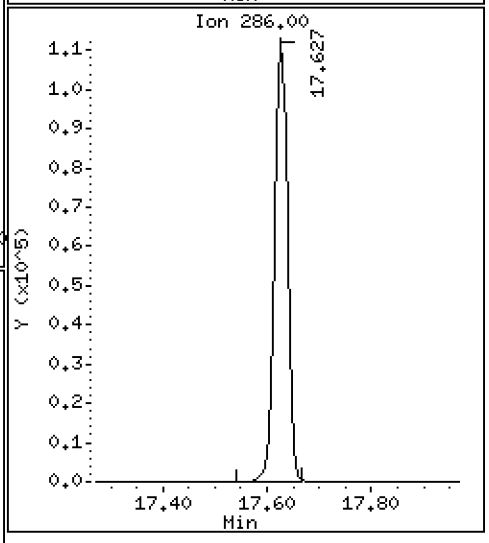
57 Hexachlorobenzene

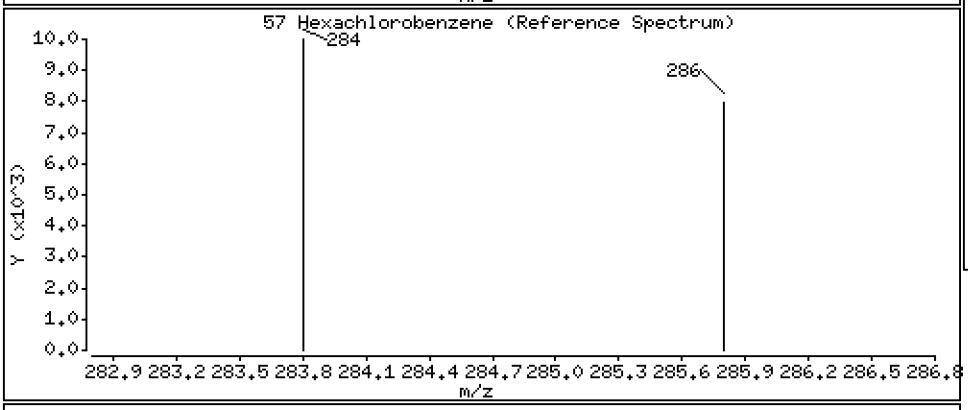
Concentration: 3.905 ug/L

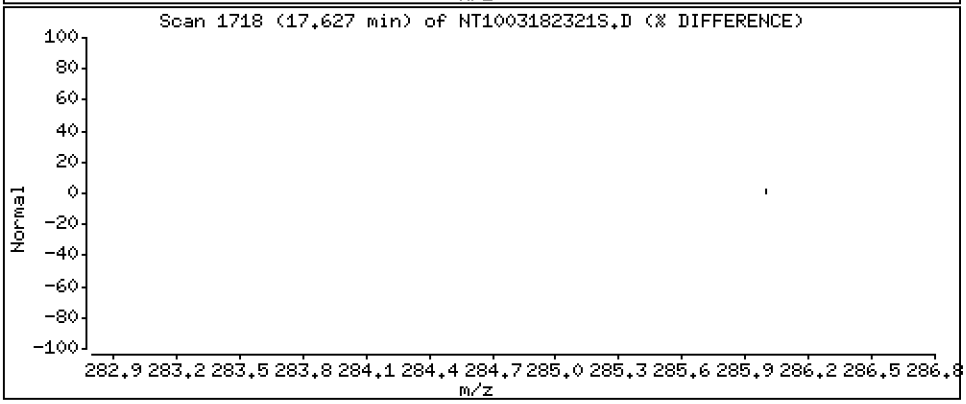












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D

Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

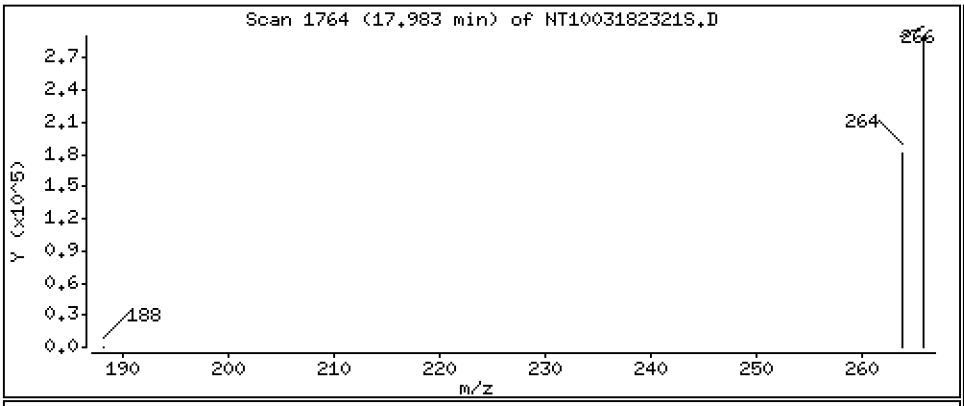
Operator: JGR

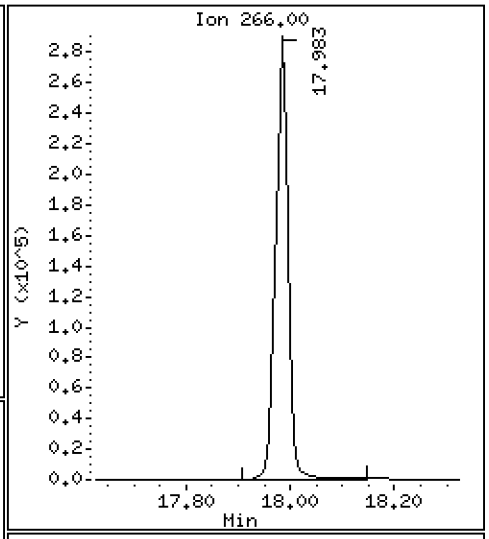
Column phase: ZB-5msi

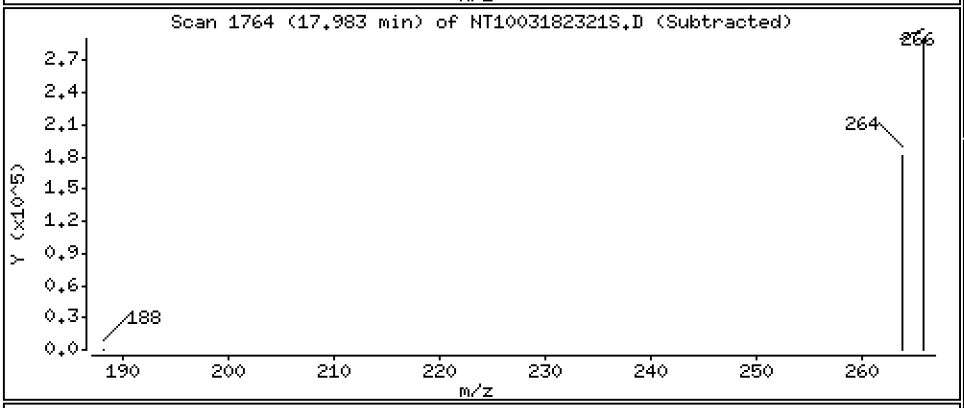
Column diameter: 0.25

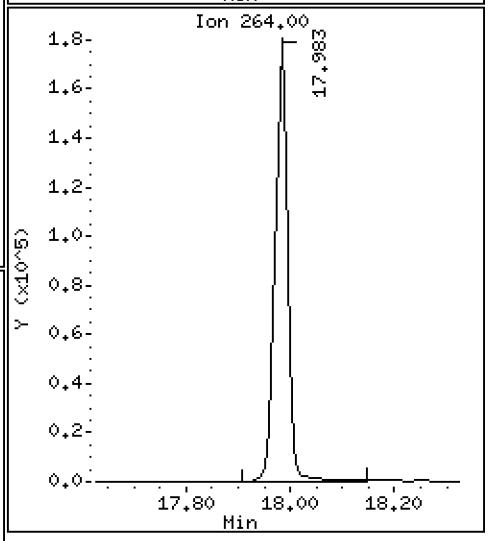
58 Pentachlorophenol

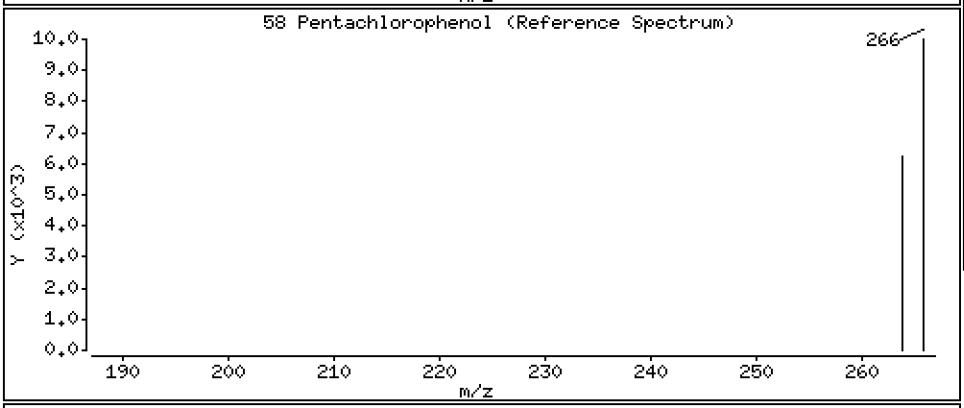
Concentration: 13.70 ug/L

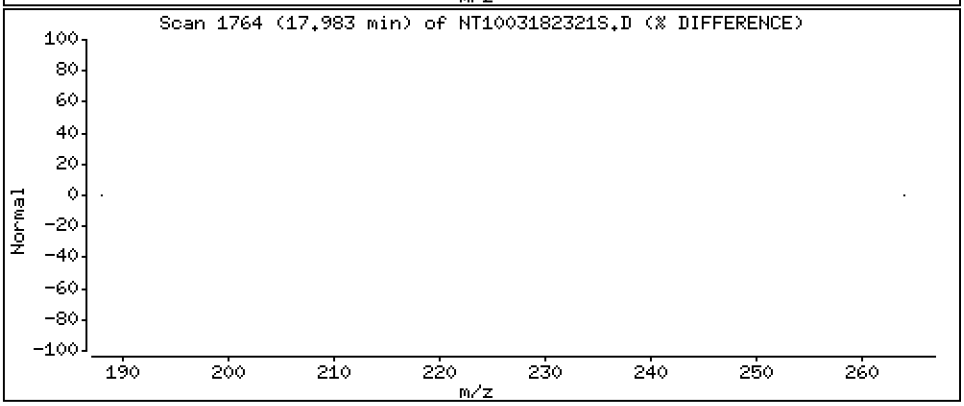












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

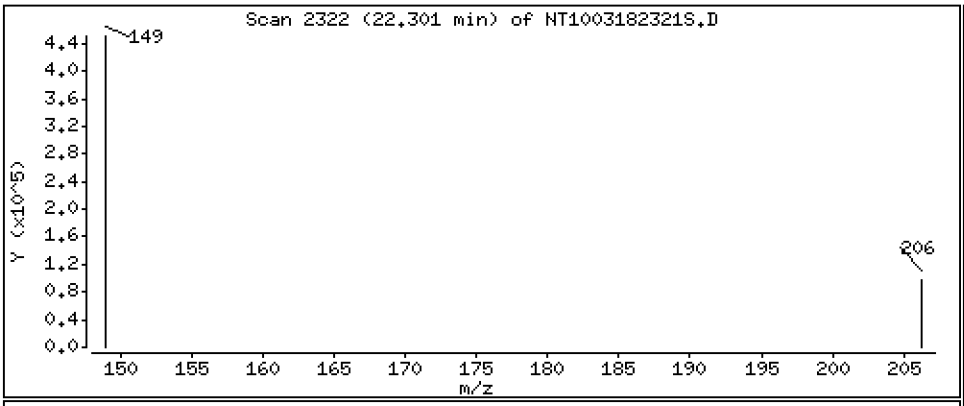
Operator: JGR

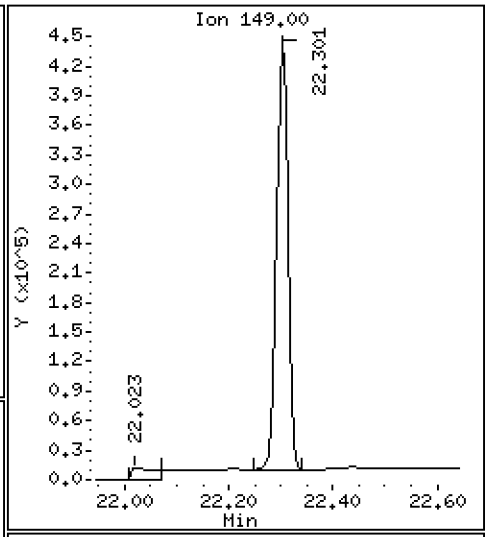
Column phase: ZB-5msi

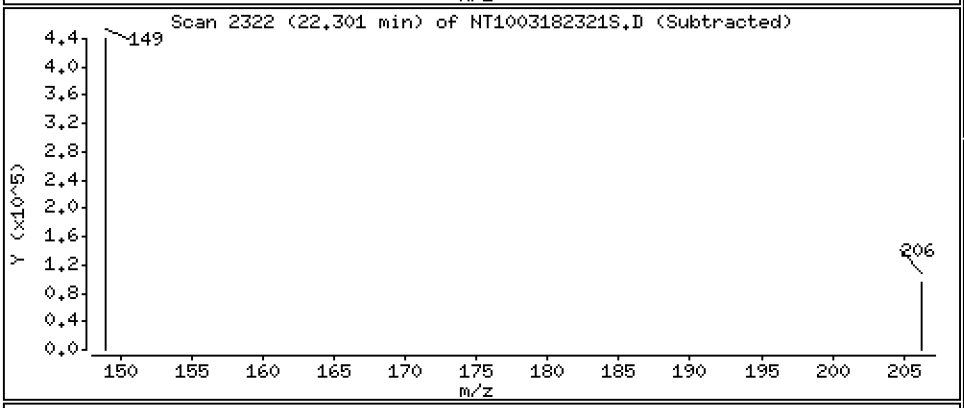
Column diameter: 0.25

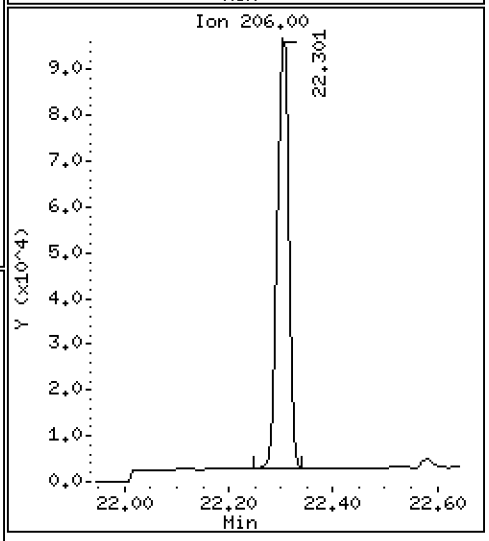
67 Butylbenzylphthalate

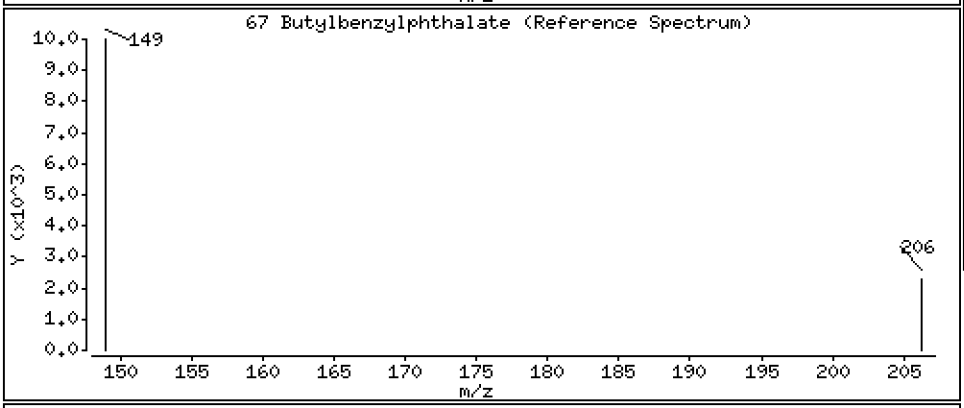
Concentration: 5.429 ug/L

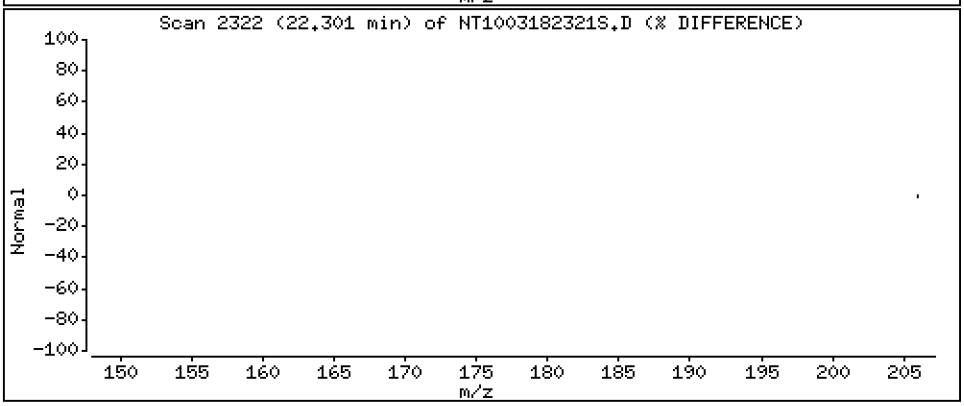












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

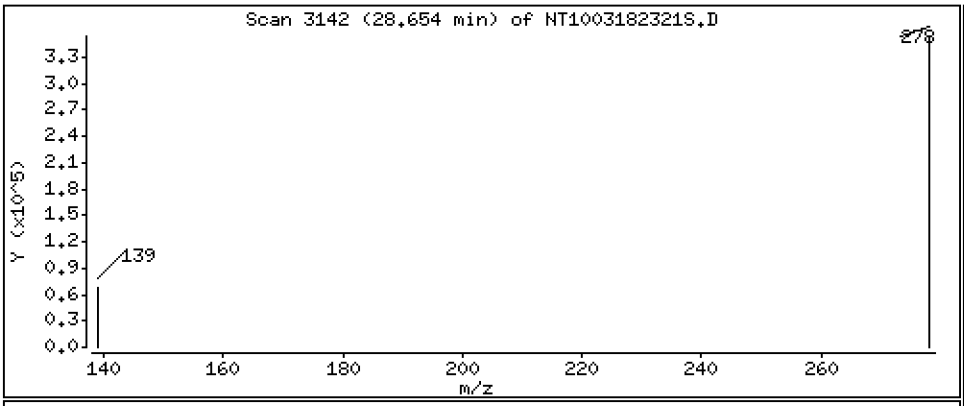
Operator: JGR

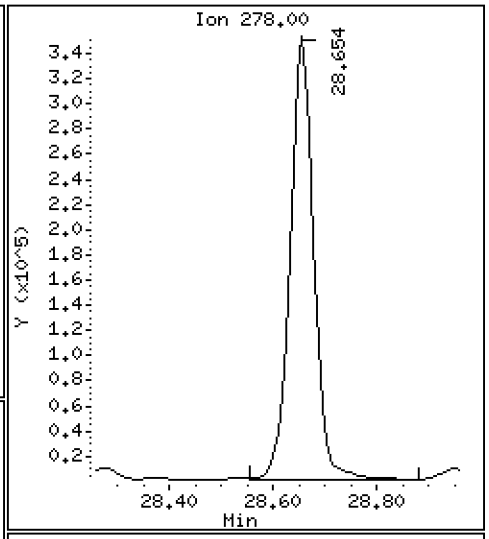
Column phase: ZB-5msi

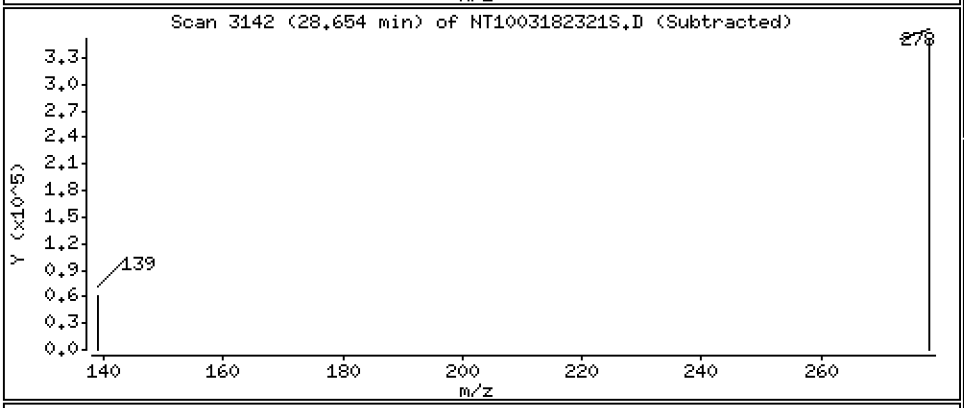
Column diameter: 0.25

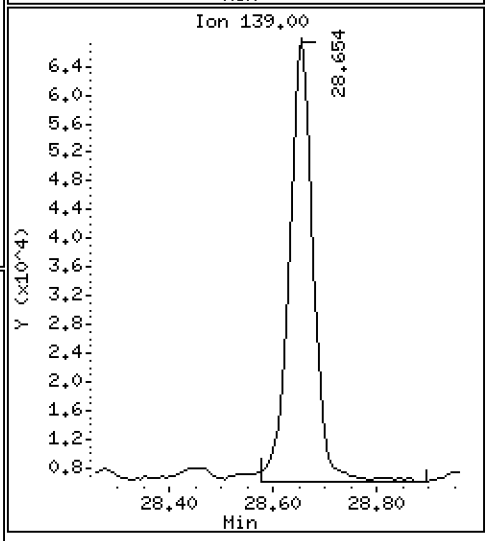
79 Dibenzo(a,h)anthracene

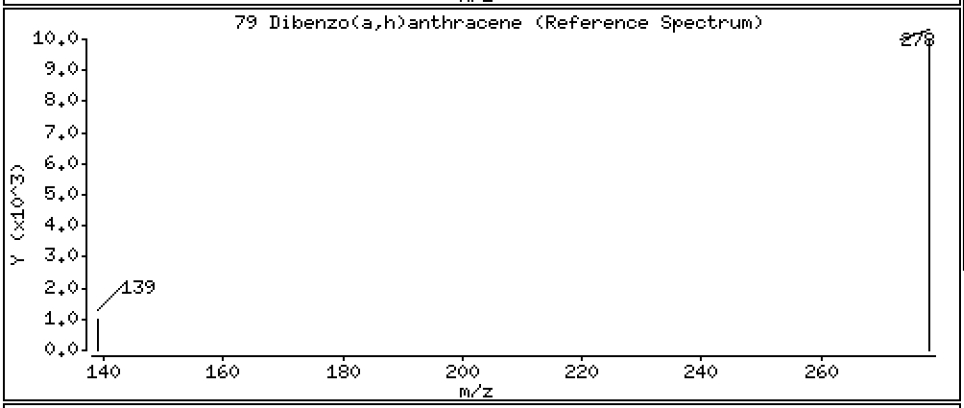
Concentration: 3.817 ug/L

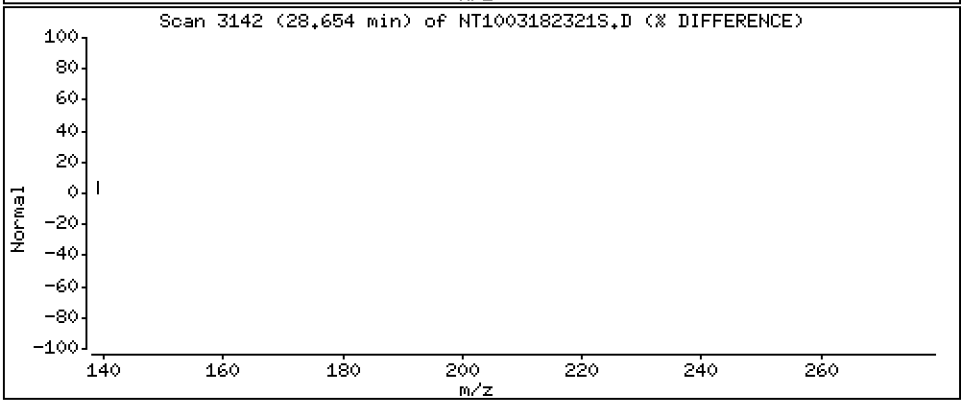












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Date : 19-MAR-2023 06:29

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MS2

Volume Injected (uL): 1.0

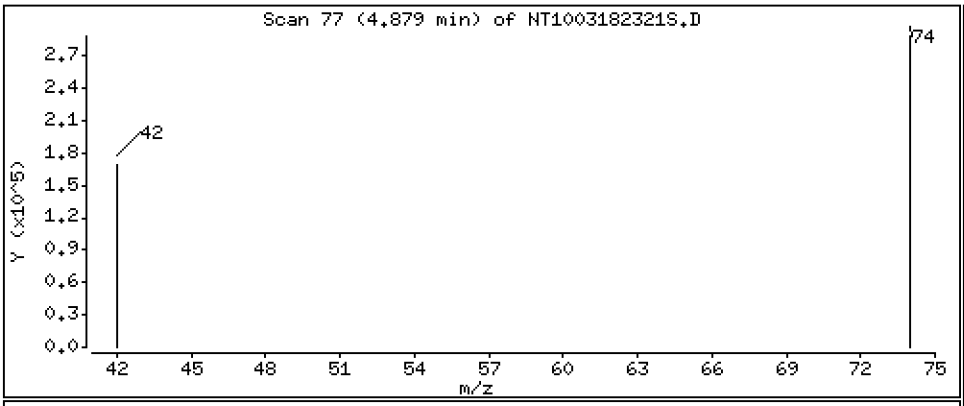
Operator: JGR

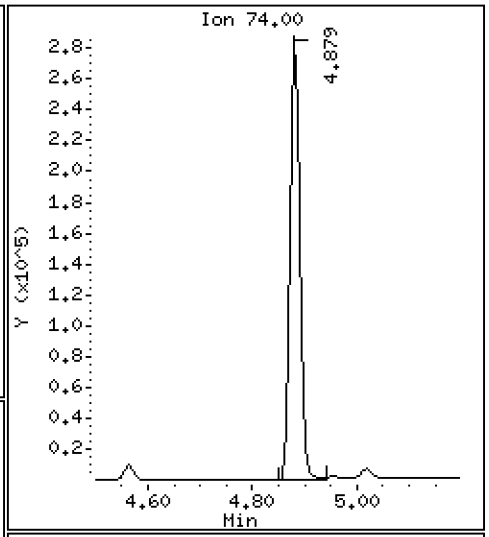
Column phase: ZB-5msi

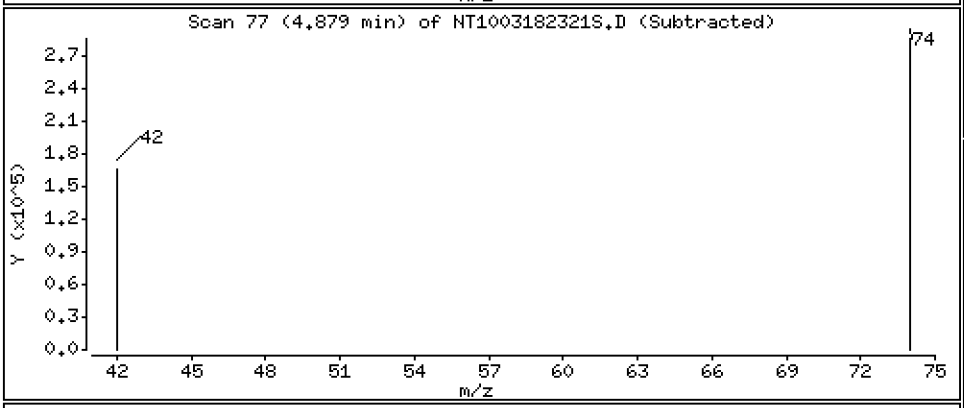
Column diameter: 0.25

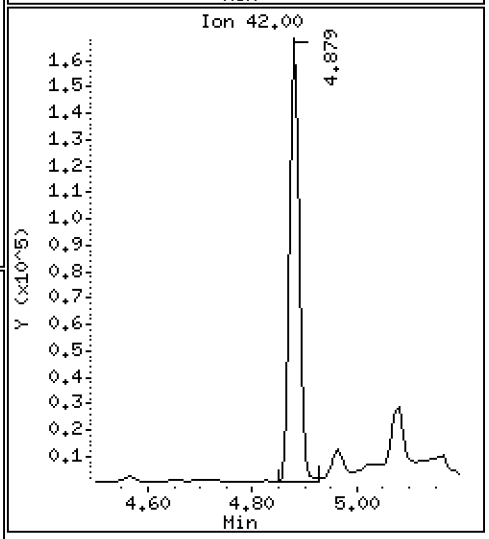
90 N-Nitrosodimethylamine

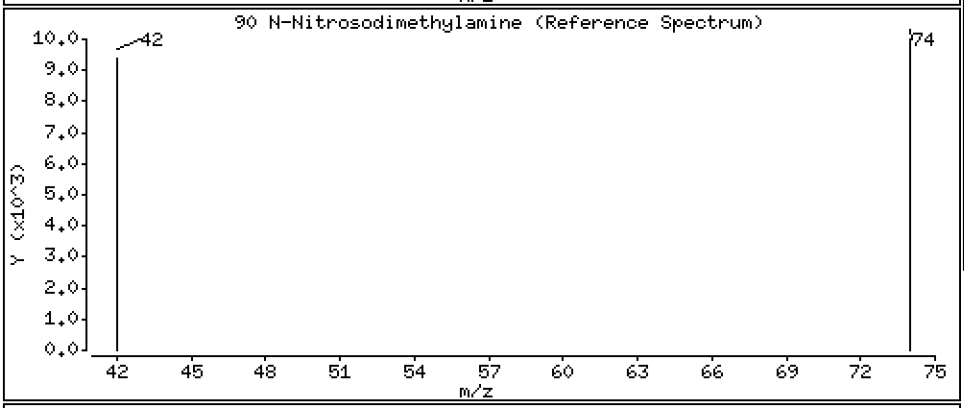
Concentration: 7.915 ug/L

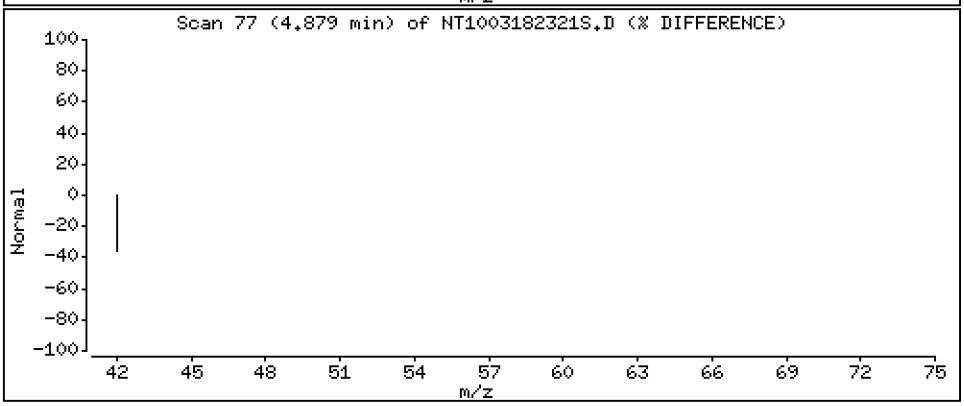












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182321S.D
Lab Smp Id: BLB0579-MS2
Inj Date : 19-MAR-2023 06:29 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-MS2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	6.980	6.964	(0.761)	424917	5.42167	5.422(R)
	3 Phenol	94	8.564	8.548	(0.933)	937014	8.71447	8.714
	7 1,3-Dichlorobenzene	146	9.113	9.105	(0.993)	337577	3.35517	3.355
*	8 1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	258450	4.00000	
	9 1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	337365	3.47350	3.474
	11 Benzyl alcohol	79	9.438	9.438	(1.029)	241272	3.87053	3.871
	12 1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	331070	3.46606	3.466
	13 2-Methylphenol	108	9.664	9.656	(1.053)	281670	3.78058	3.781
	15 4-Methylphenol	108	9.928	9.920	(1.082)	862907	11.1459	11.15
	16 N-Nitroso-di-n-propylamine	70	9.990	9.990	(1.089)	225282	4.11466	4.115
	22 2,4-Dimethylphenol	107	10.960	10.951	(0.942)	713971	8.83246	8.832
	24 Benzoic acid	105	11.138	11.070	(0.957)	837403	17.5573	17.56
	26 1,2,4-Trichlorobenzene	180	11.550	11.550	(0.993)	294093	3.61659	3.617
*	27 Naphthalene-d8	136	11.635	11.635	(1.000)	935184	4.00000	
	30 Hexachlorobutadiene	225	12.029	12.029	(1.034)	184565	3.73317	3.733
	39 Dimethylphthalate	163	14.722	14.722	(0.967)	631566	4.33016	4.330
*	42 Acenaphthene-d10	162	15.217	15.217	(1.000)	462188	4.00000	
	50 Diethylphthalate	149	16.168	16.161	(1.062)	783135	5.18299	5.183
	54 N-Nitrosodiphenylamine	169	16.554	16.554	(0.907)	504464	3.91728	3.917
	57 Hexachlorobenzene	284	17.627	17.619	(0.966)	225118	3.90497	3.905

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.983	17.975	(0.986)	476631	13.7038	13.70
*	59 Phenanthrene-d10	188	18.246	18.246	(1.000)	959835	4.00000	
$	66 Terphenyl-d14	244	21.380	21.372	(0.918)	683396	5.13704	5.137(R)
	67 Butylbenzylphthalate	149	22.301	22.293	(0.957)	621567	5.42918	5.429
*	69 Chrysene-d12	240	23.292	23.277	(1.000)	816475	4.00000	
*	77 Perylene-d12	264	25.940	25.917	(1.000)	911565	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.654	28.607	(1.105)	1117334	3.81728	3.817
	90 N-Nitrosodimethylamine	74	4.879	4.848	(0.532)	393447	7.91525	7.915

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182321S.D
Lab Smp Id: BLB0579-MS2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	258450	15.73
27 Naphthalene-d8	802913	401457	1605826	935184	16.47
42 Acenaphthene-d10	396793	198397	793586	462188	16.48
59 Phenanthrene-d10	821666	410833	1643332	959835	16.82
69 Chrysene-d12	707165	353583	1414330	816475	15.46
77 Perylene-d12	813685	406843	1627370	911565	12.03

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.07
77 Perylene-d12	25.92	25.42	26.42	25.94	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182321S.D

Lab ID: BLB0579-MS2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 06:29

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.951	0.0058	Benzoic acid

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823228.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

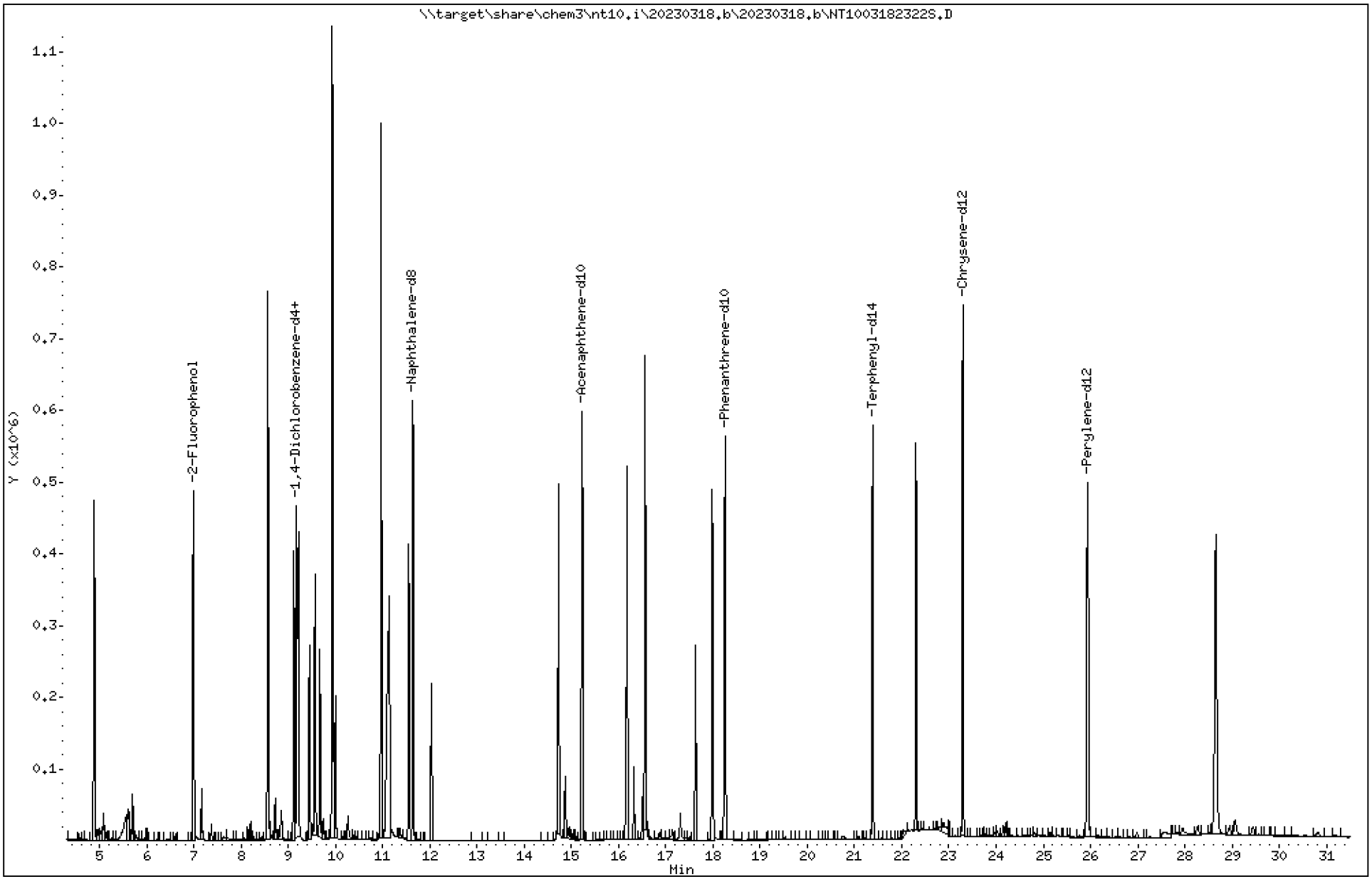
Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

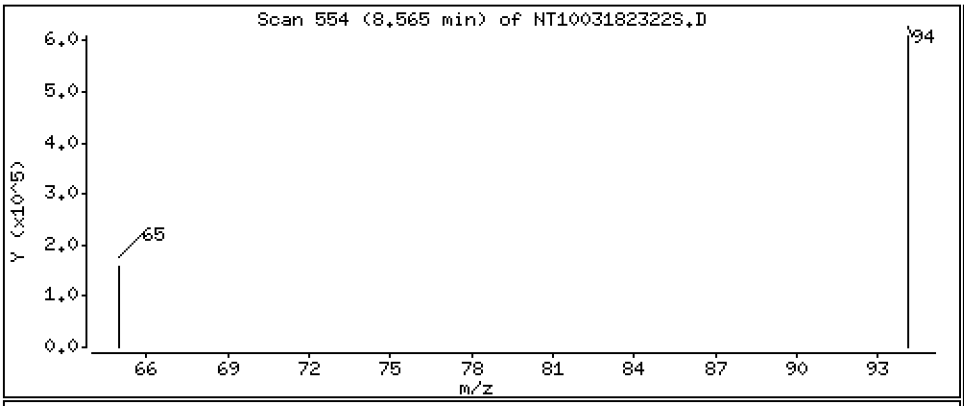
Operator: JGR

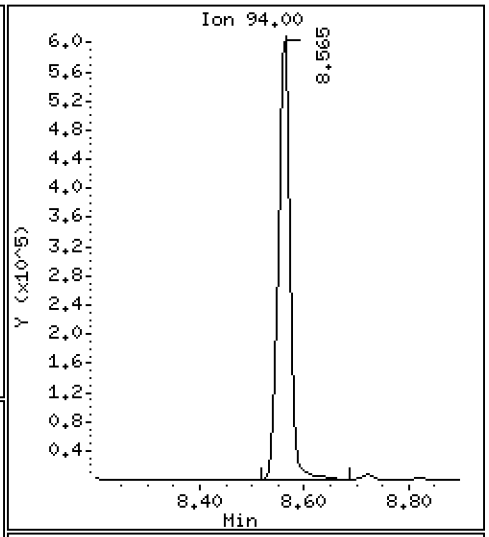
Column phase: ZB-5msi

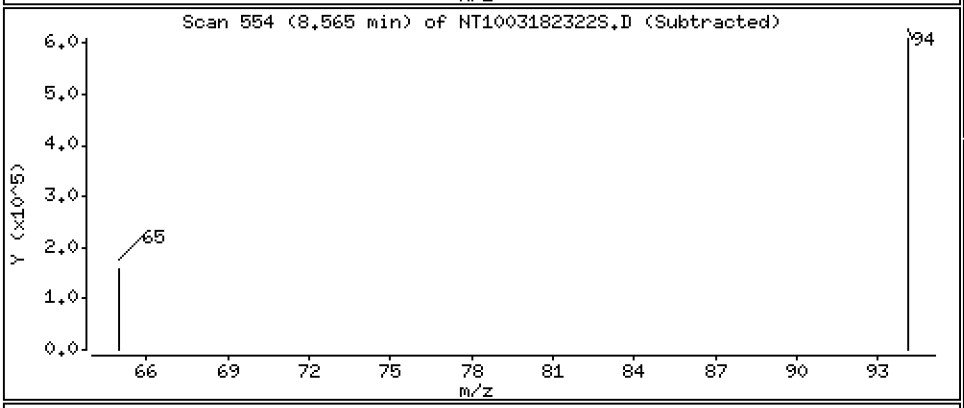
Column diameter: 0.25

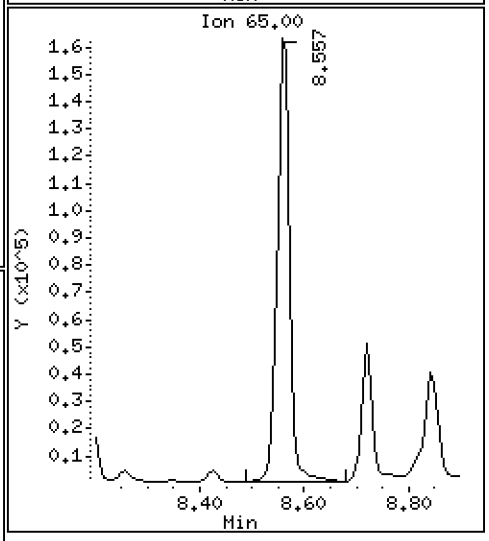
3 Phenol

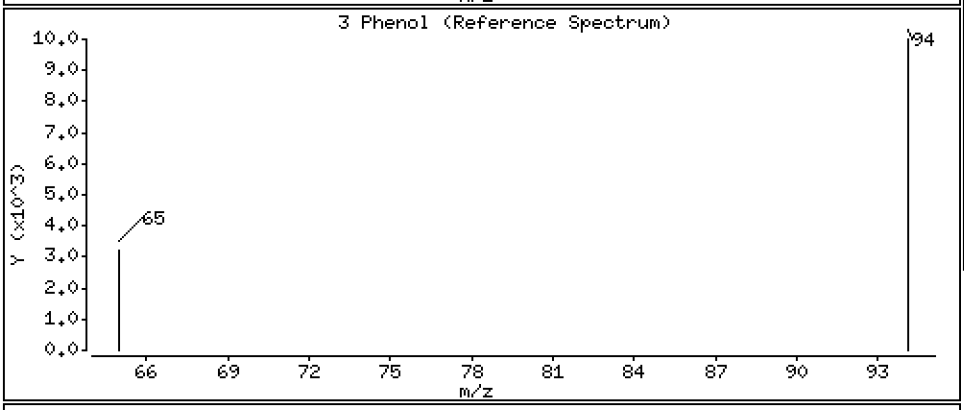
Concentration: 8.533 ug/L

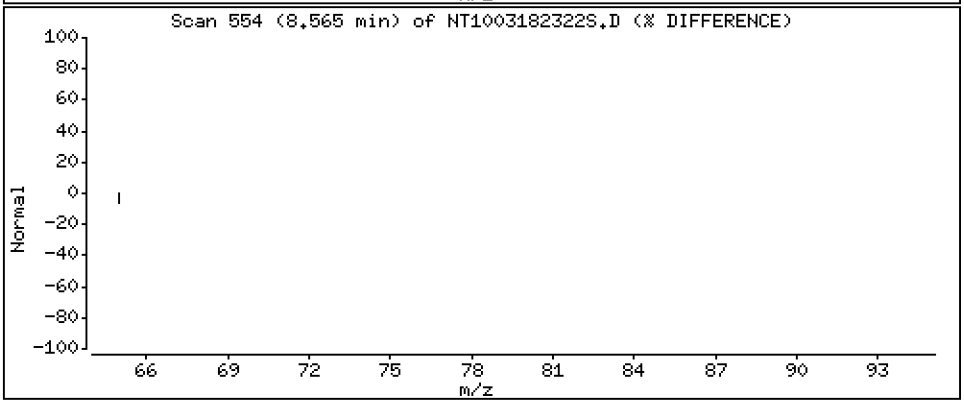












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

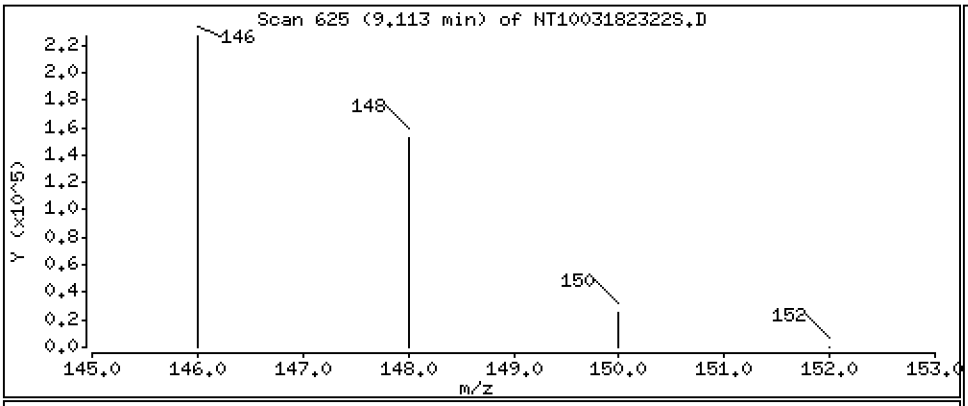
Operator: JGR

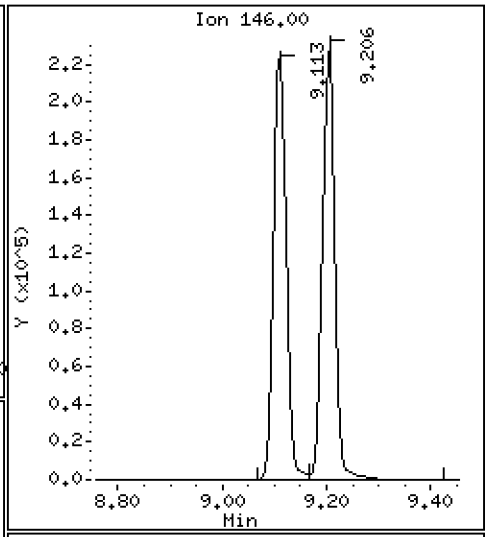
Column phase: ZB-5msi

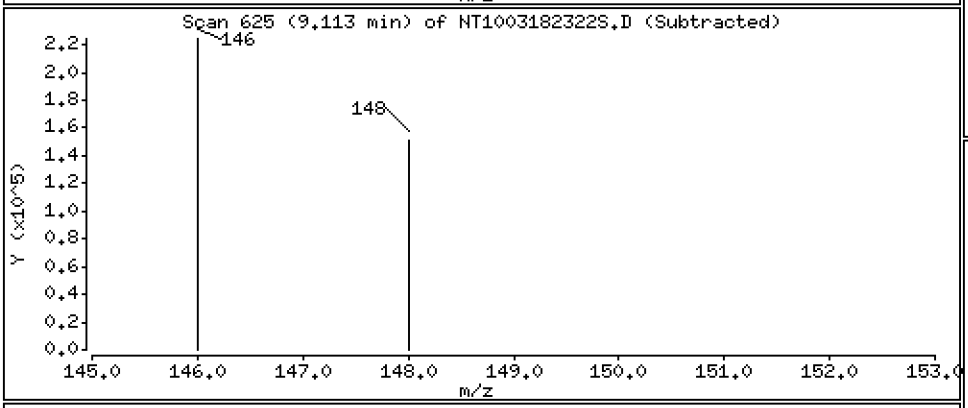
Column diameter: 0.25

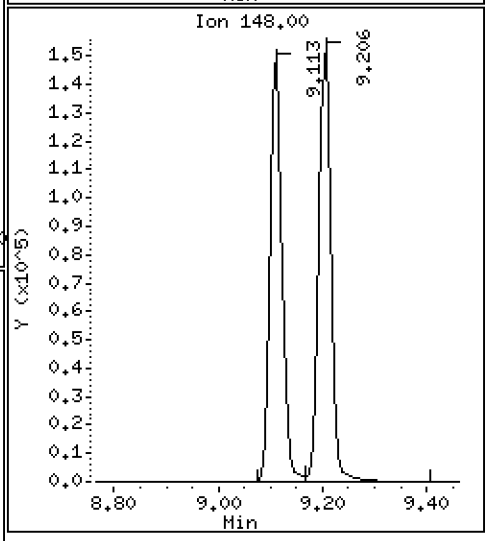
7 1,3-Dichlorobenzene

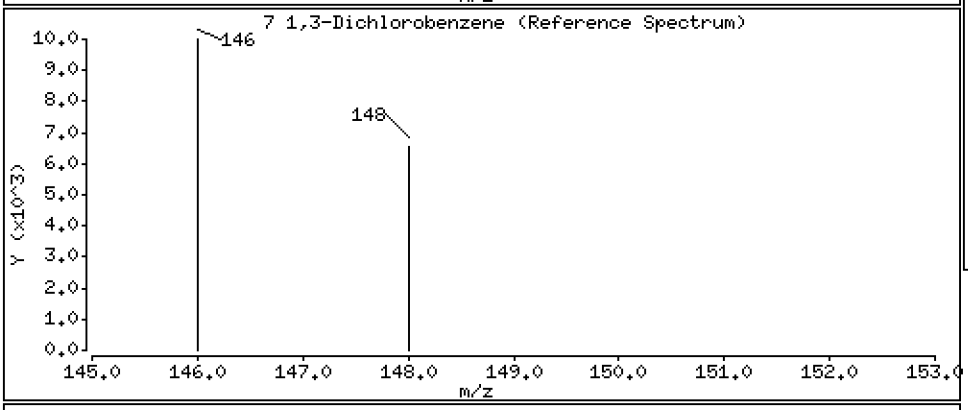
Concentration: 3.461 ug/L

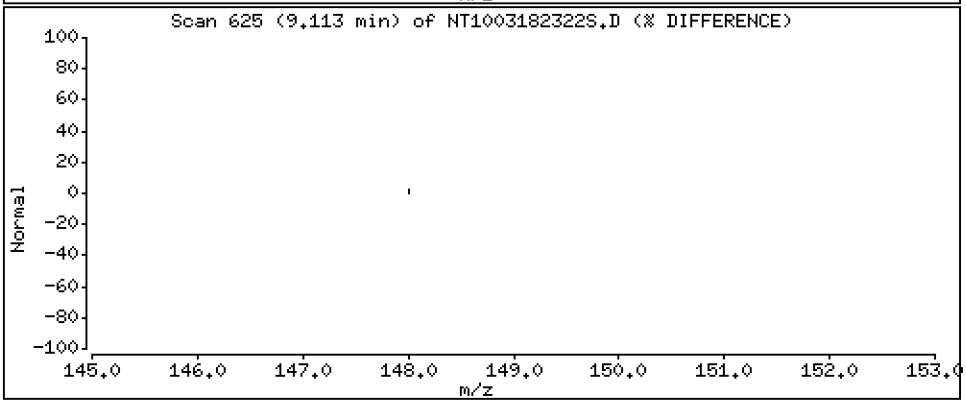












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

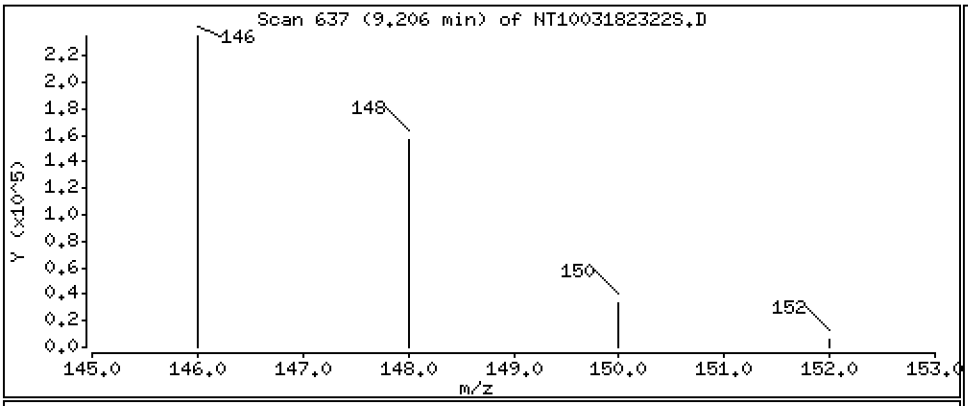
Operator: JGR

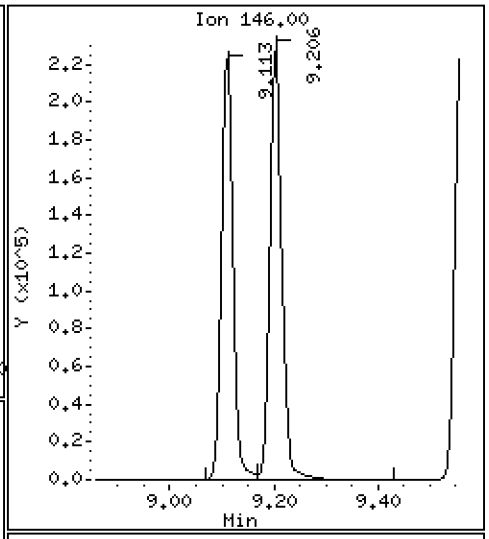
Column phase: ZB-5msi

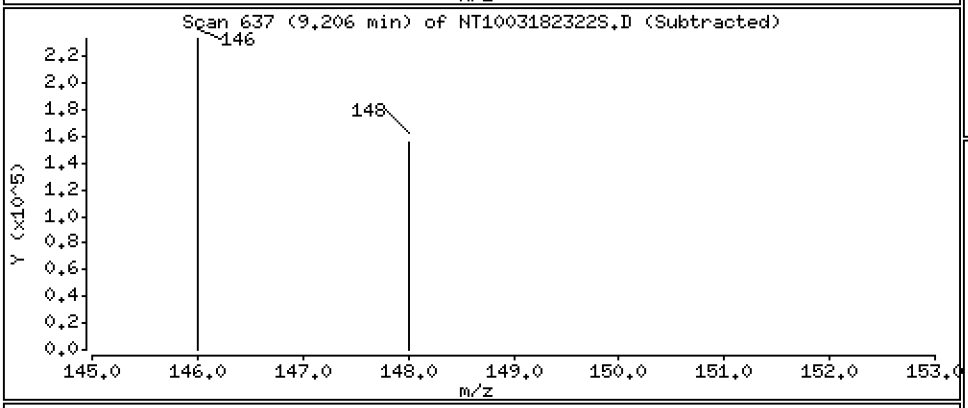
Column diameter: 0.25

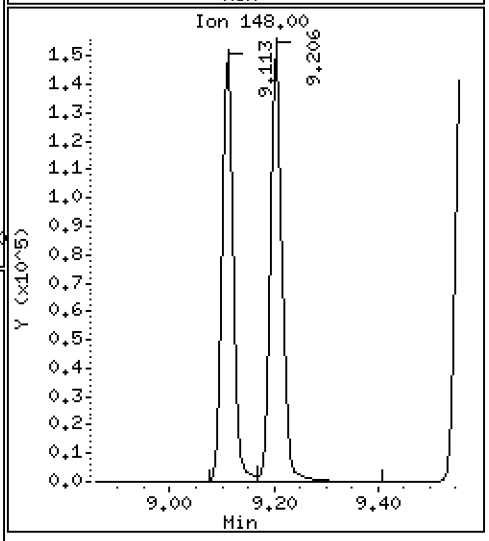
9 1,4-Dichlorobenzene

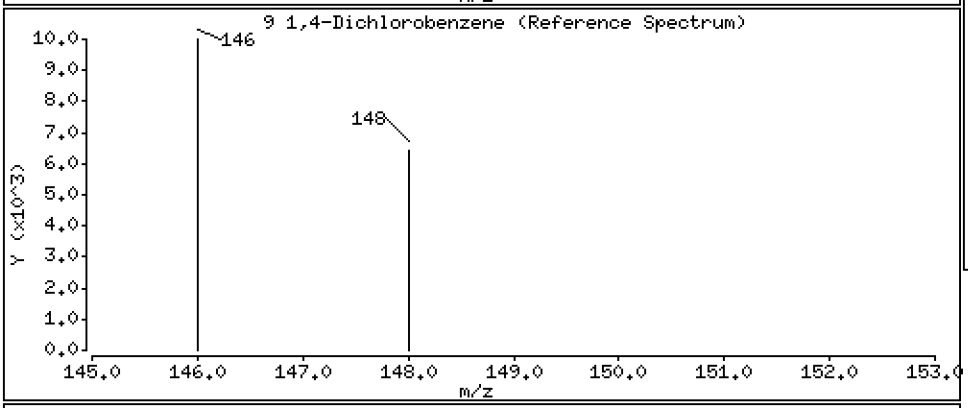
Concentration: 3.575 ug/L

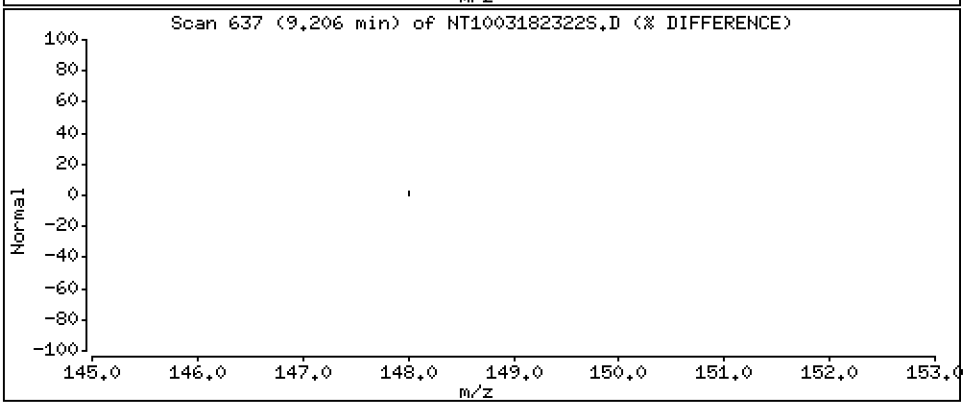












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

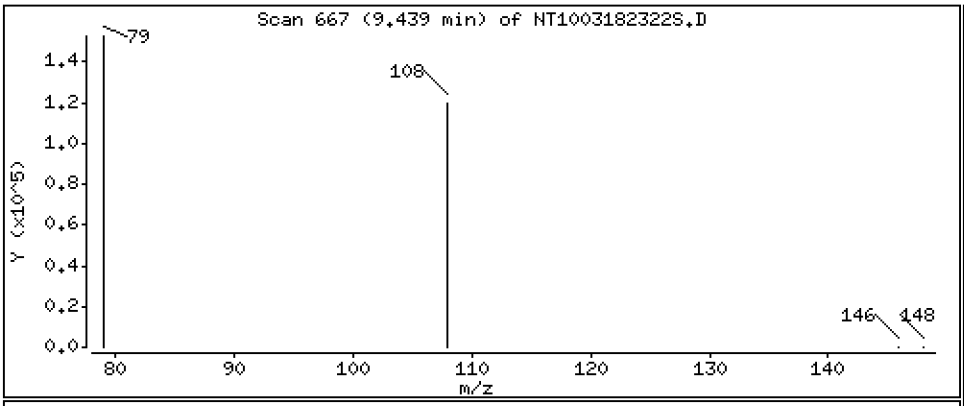
Operator: JGR

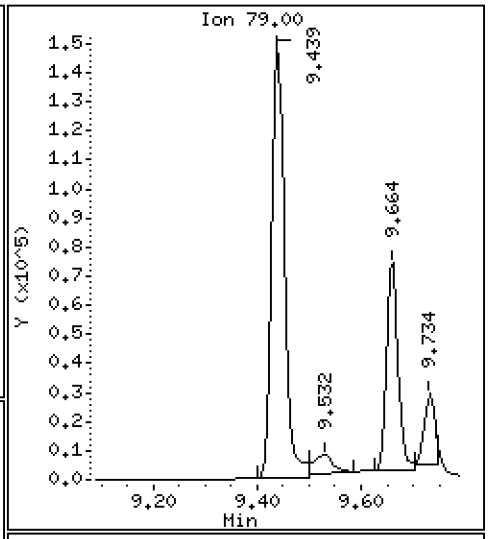
Column phase: ZB-5msi

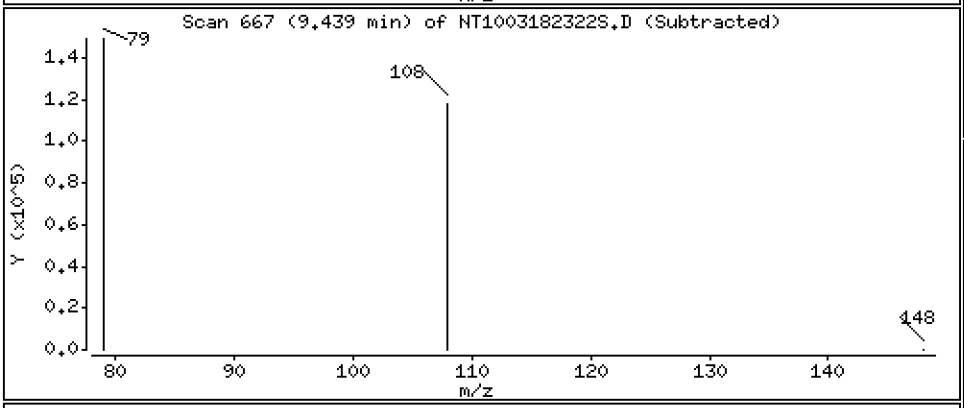
Column diameter: 0.25

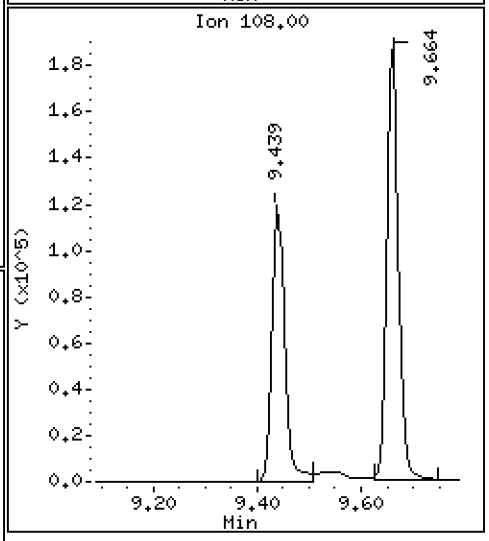
11 Benzyl alcohol

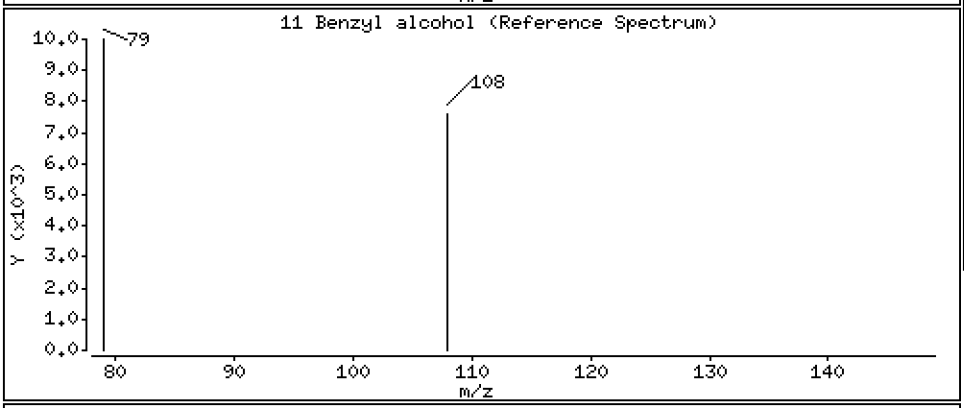
Concentration: 3.728 ug/L

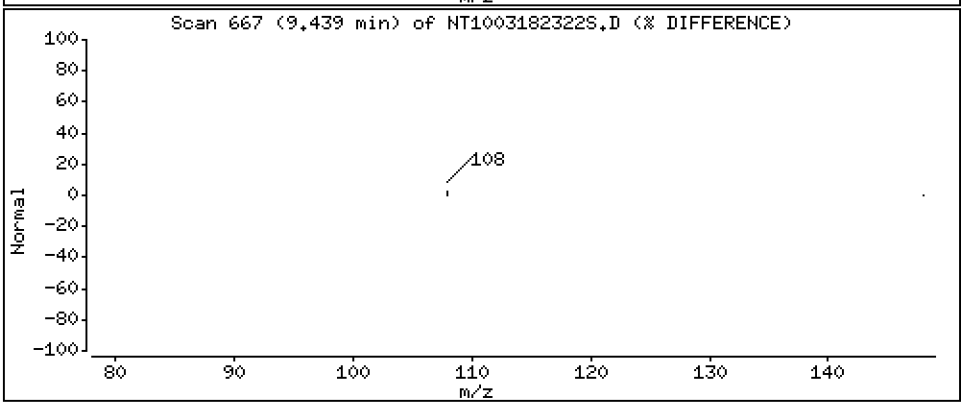












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

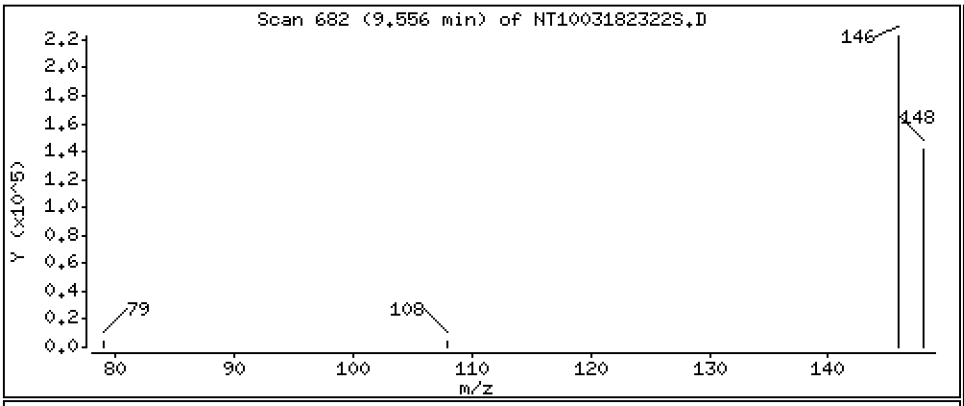
Operator: JGR

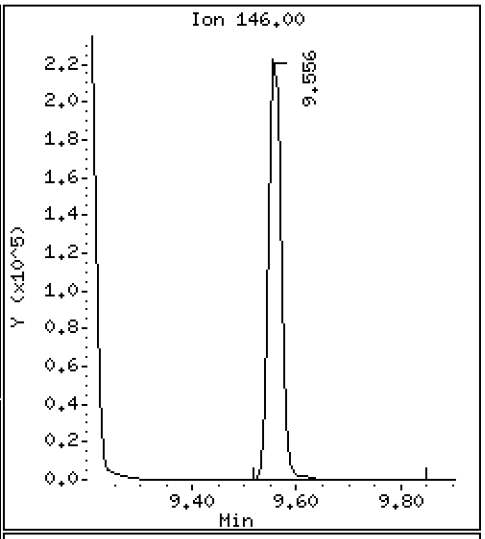
Column phase: ZB-5msi

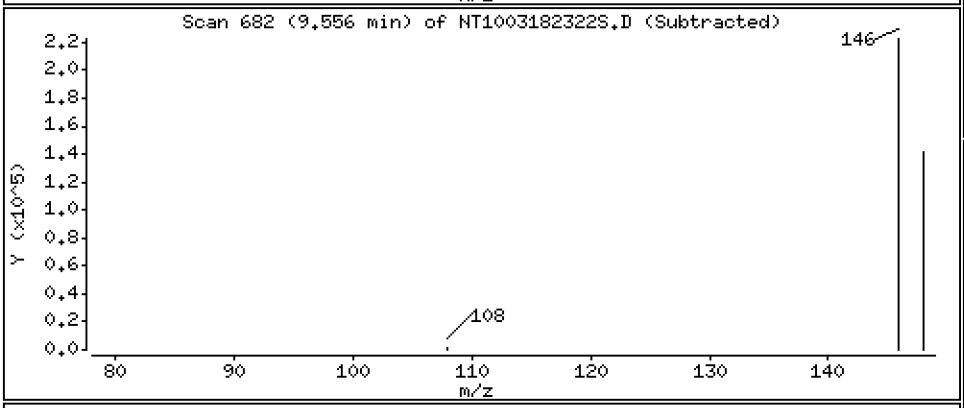
Column diameter: 0.25

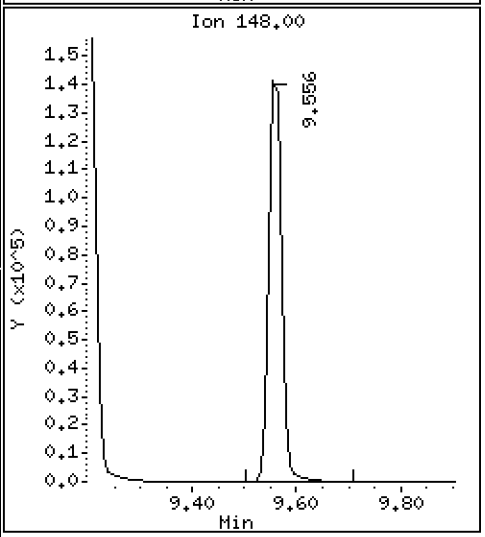
12 1,2-Dichlorobenzene

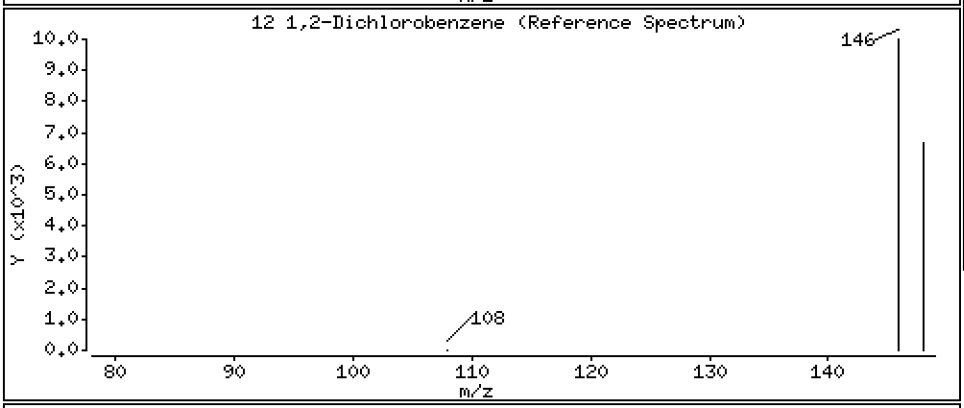
Concentration: 3.569 ug/L

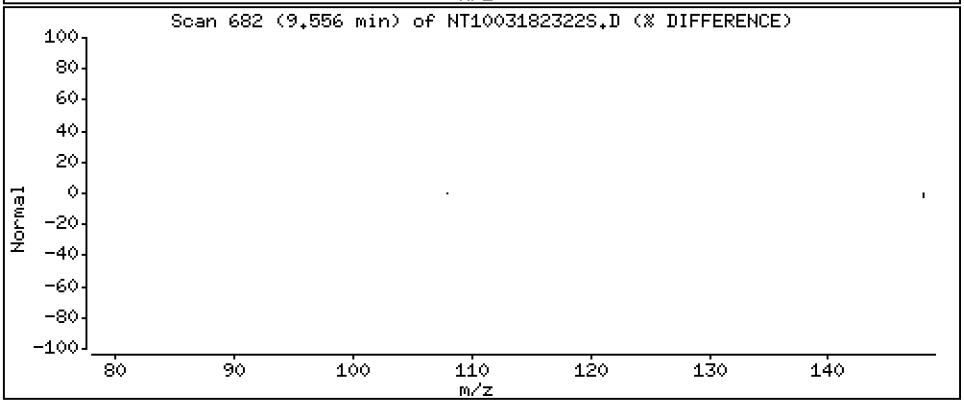












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

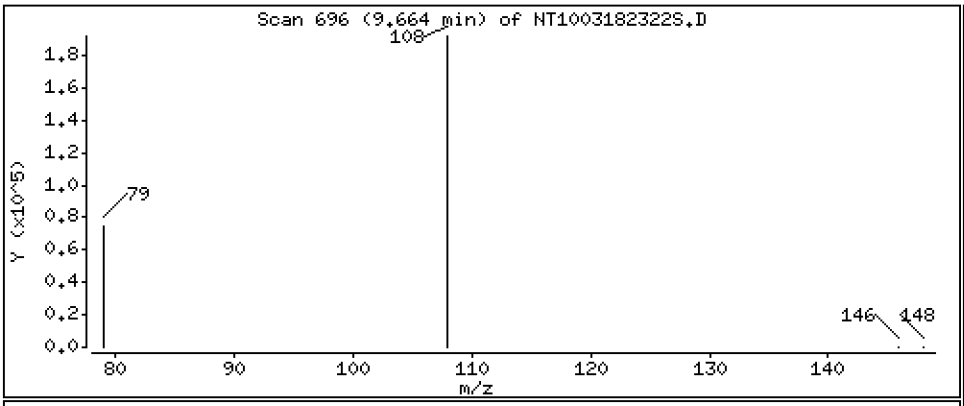
Operator: JGR

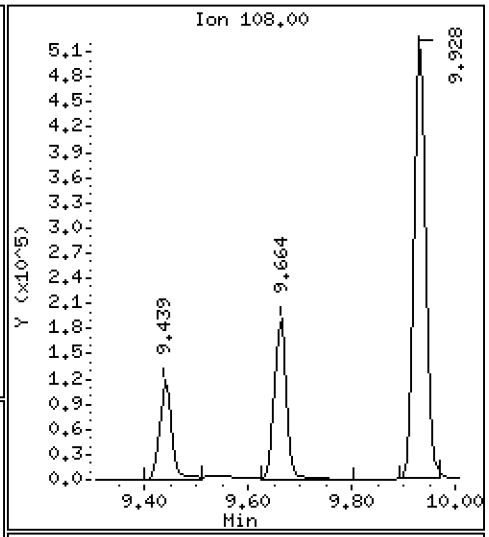
Column phase: ZB-5msi

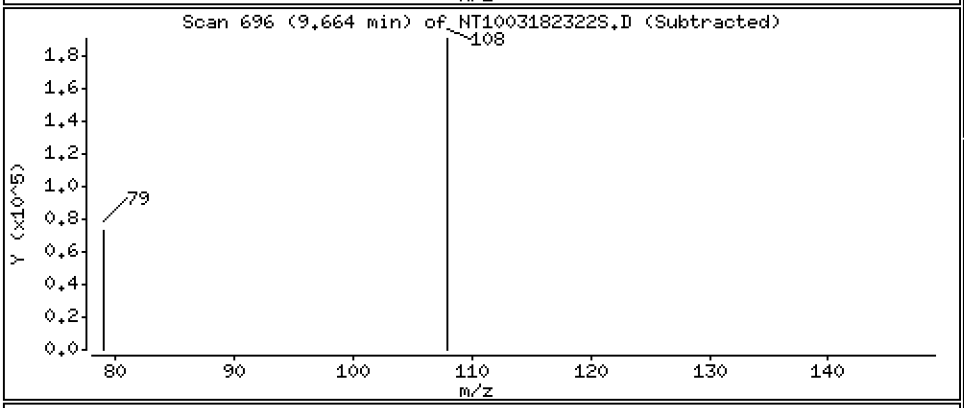
Column diameter: 0.25

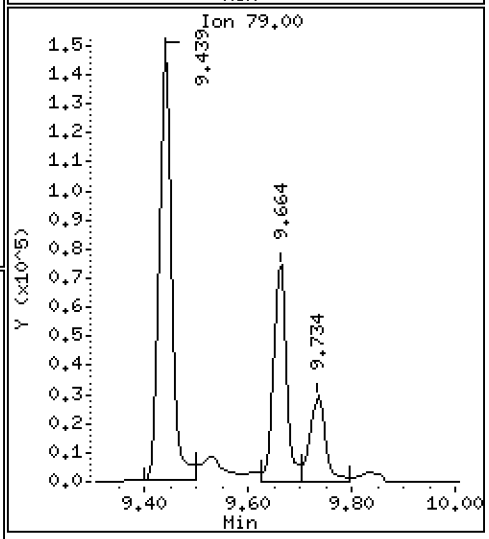
13 2-Methylphenol

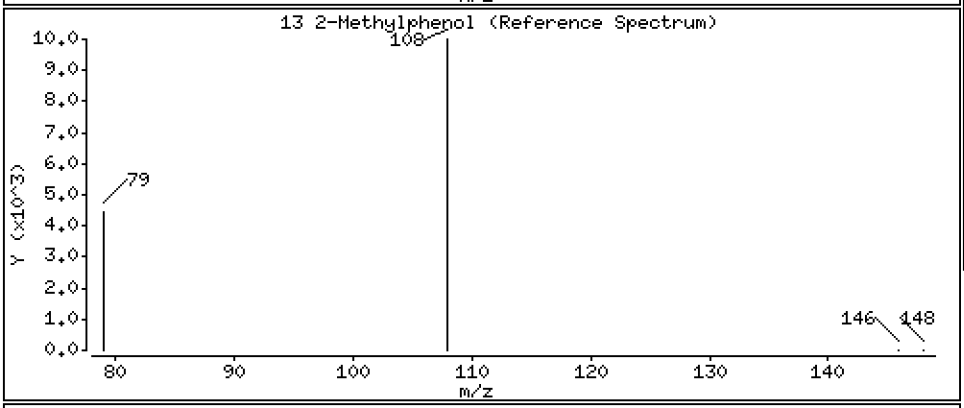
Concentration: 3.740 ug/L

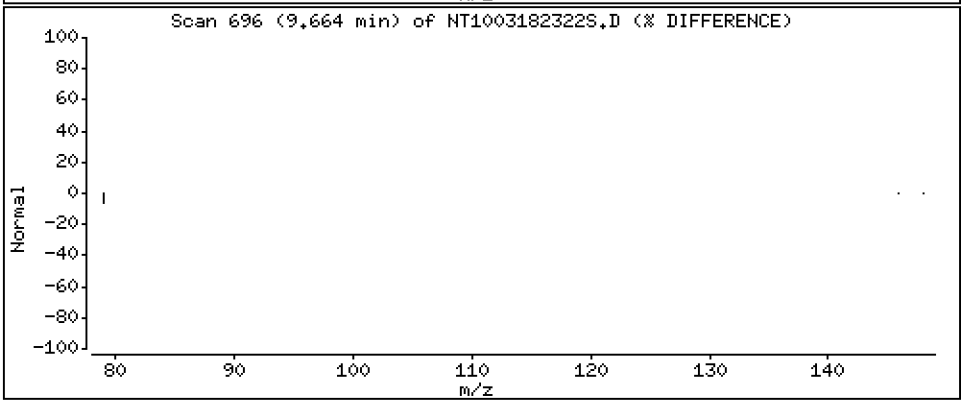












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

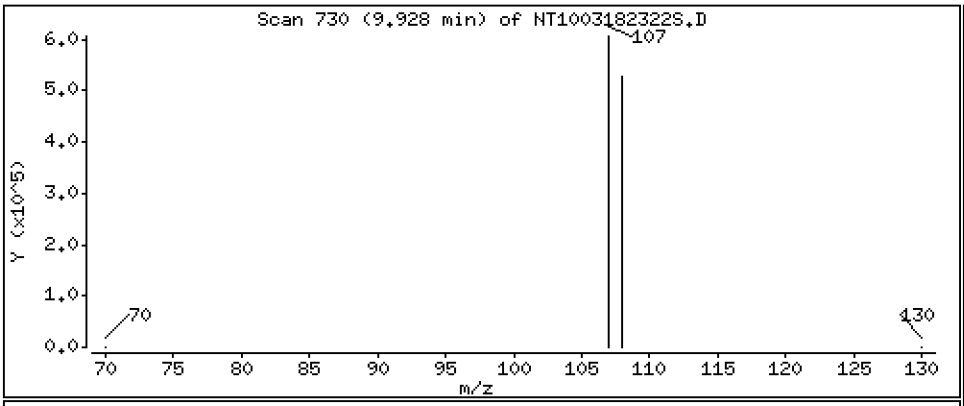
Operator: JGR

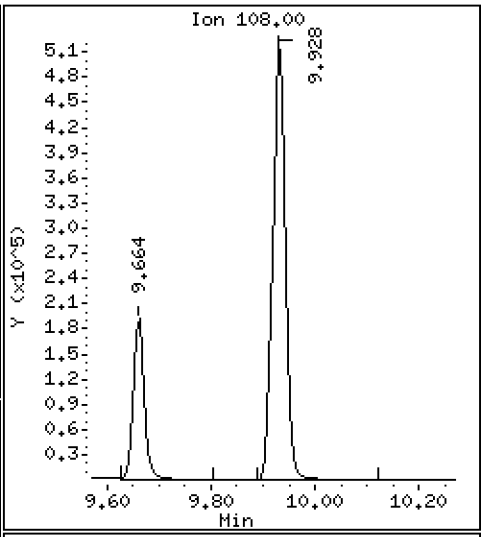
Column phase: ZB-5msi

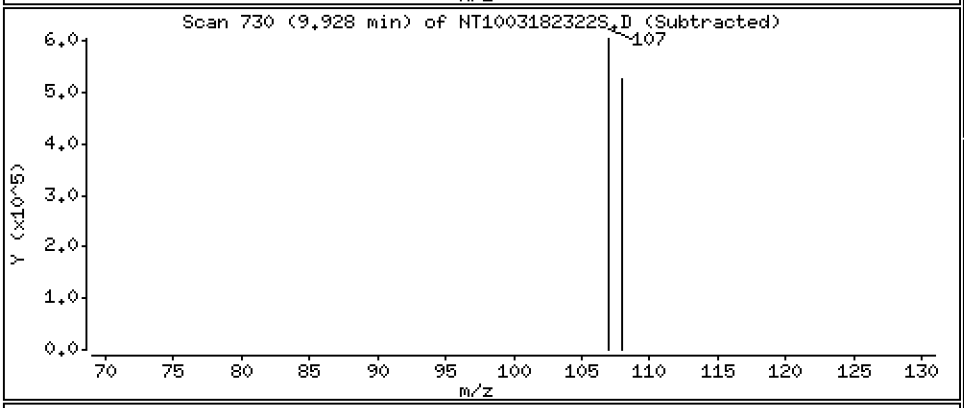
Column diameter: 0.25

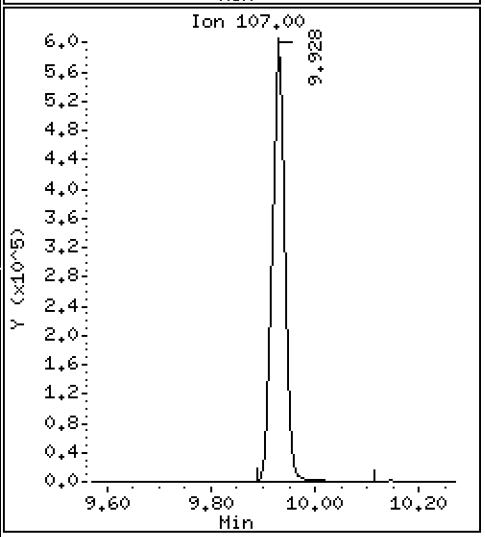
15 4-Methylphenol

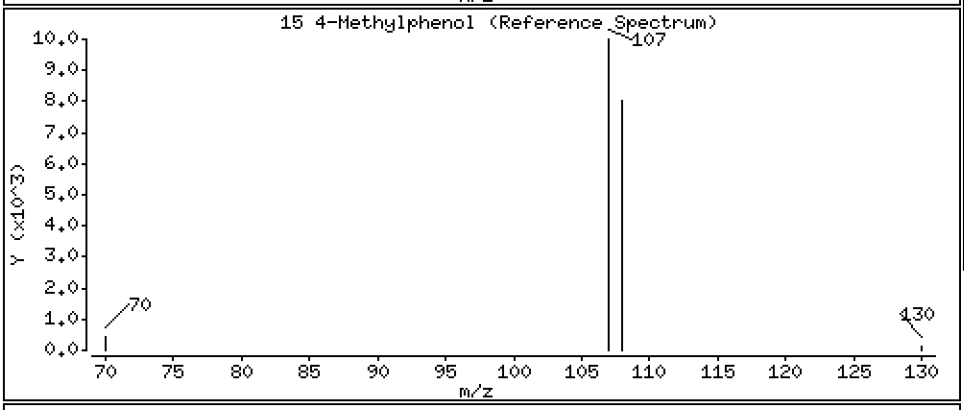
Concentration: 10.76 ug/L

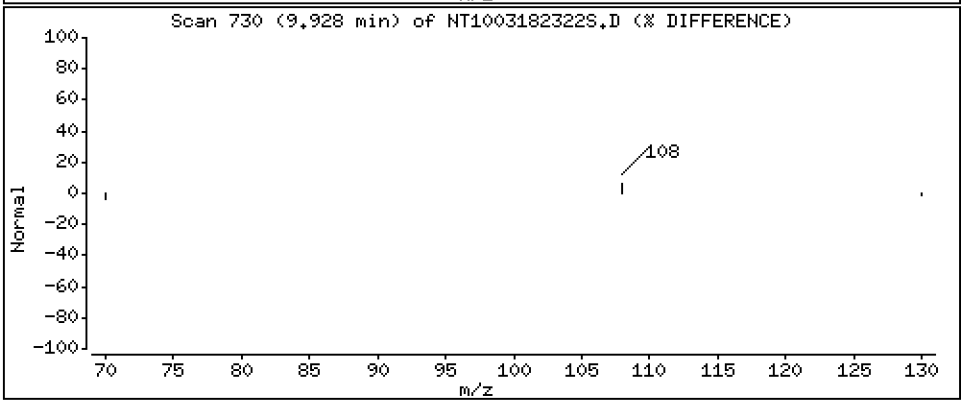












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

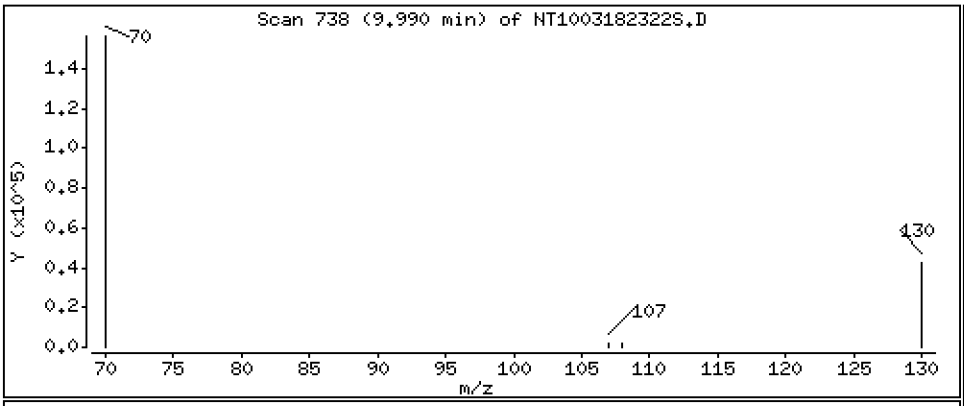
Operator: JGR

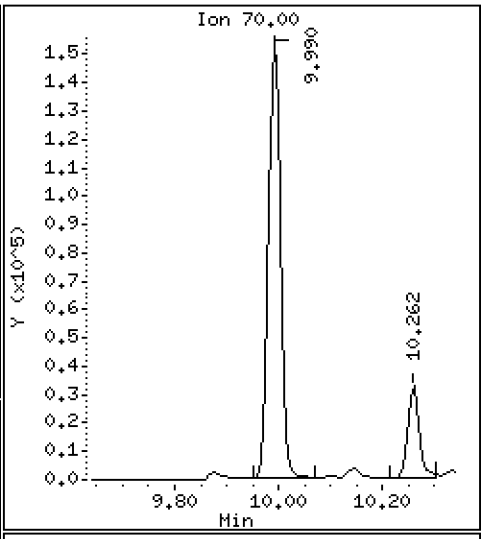
Column phase: ZB-5msi

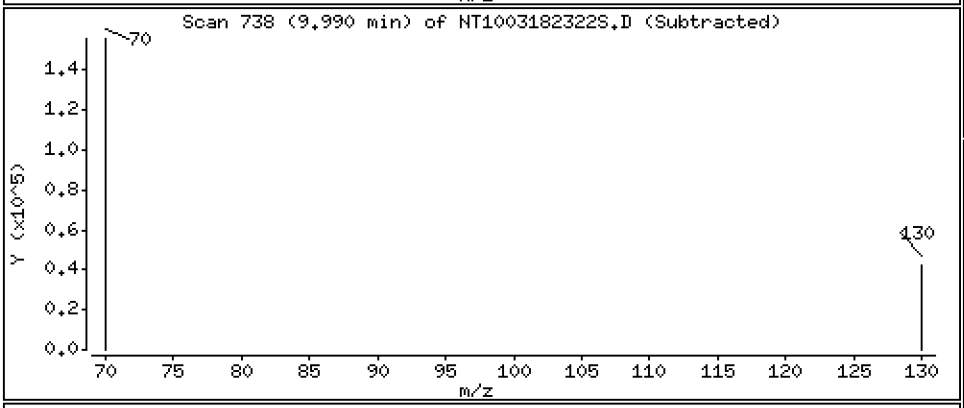
Column diameter: 0.25

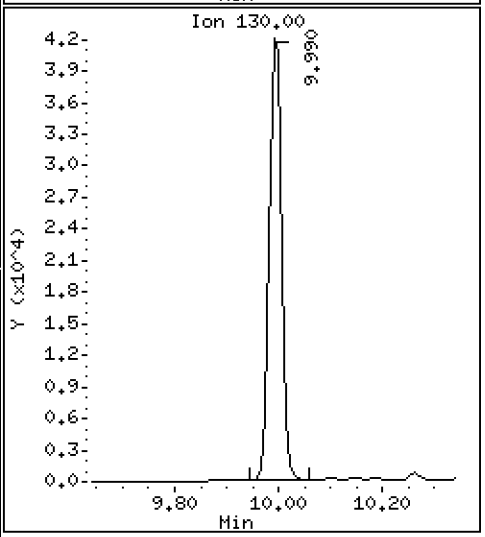
16 N-Nitroso-di-n-propylamine

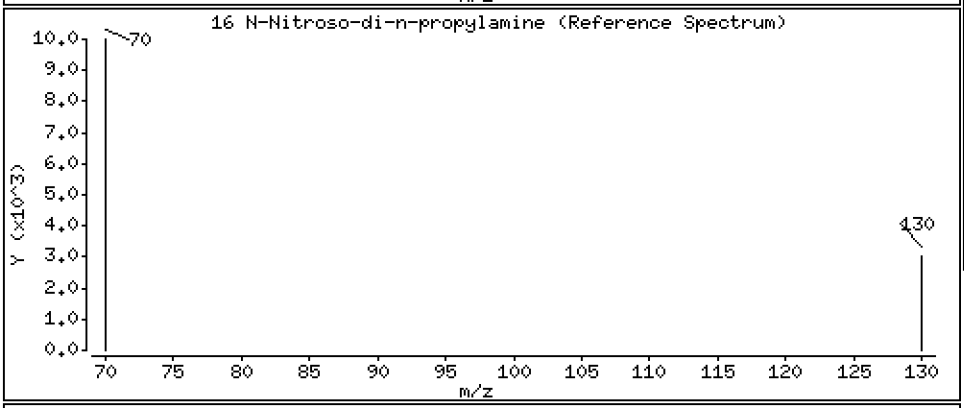
Concentration: 4.100 ug/L

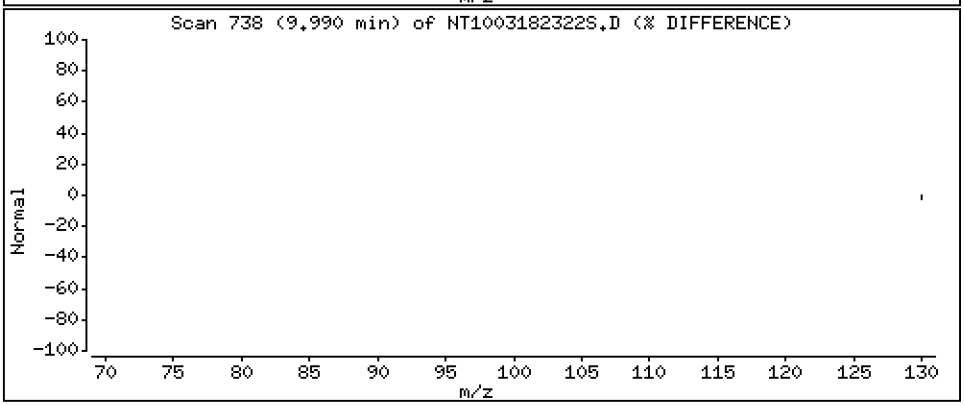












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

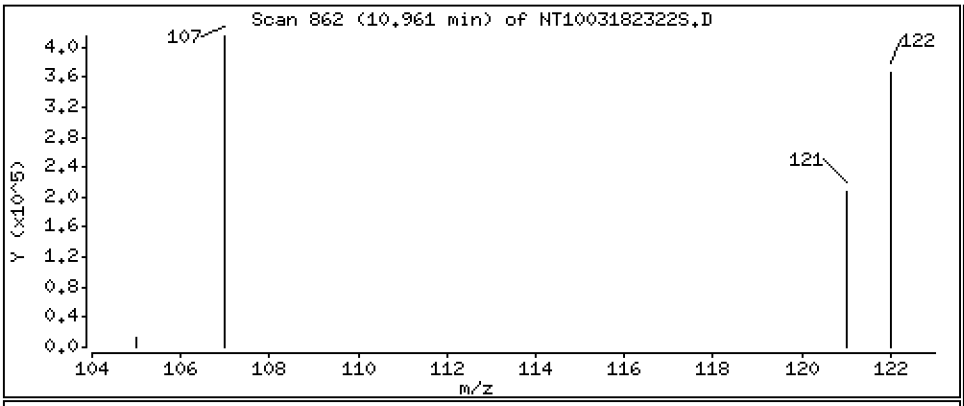
Operator: JGR

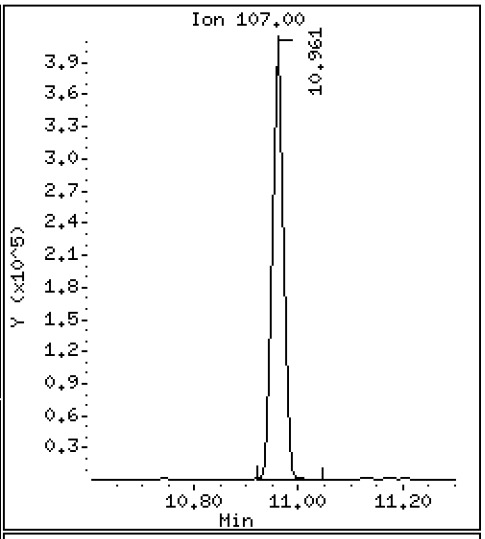
Column phase: ZB-5msi

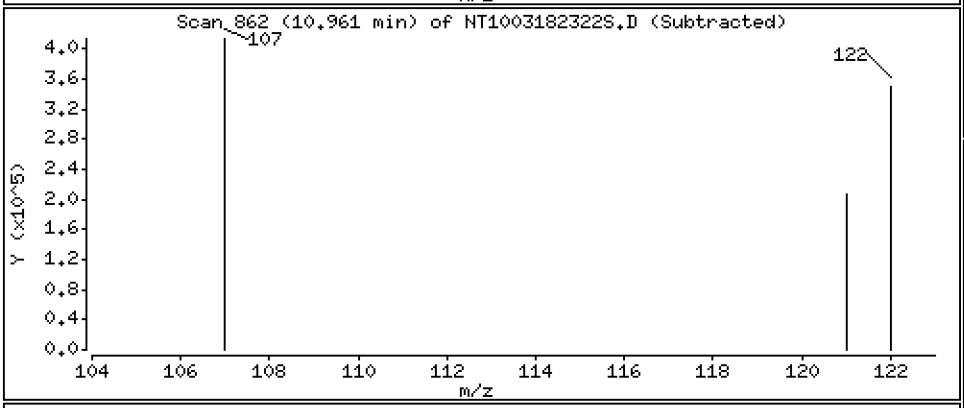
Column diameter: 0.25

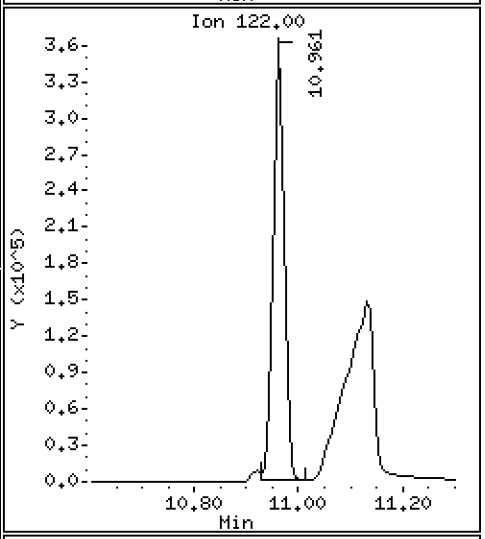
22 2,4-Dimethylphenol

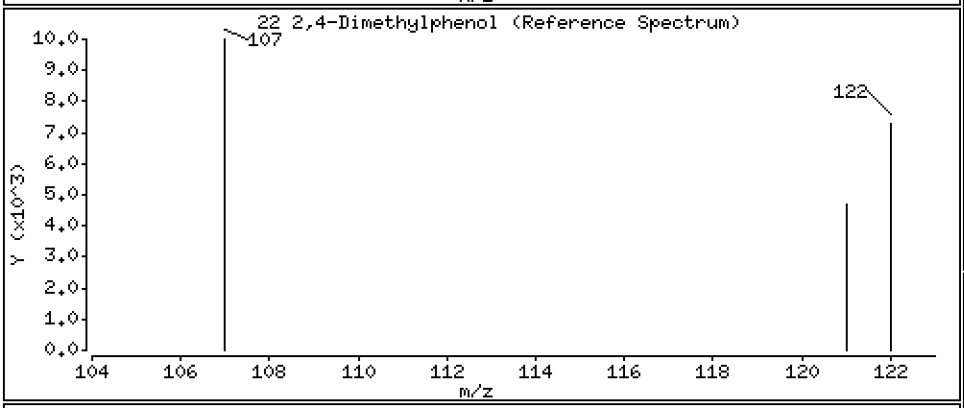
Concentration: 7.190 ug/L

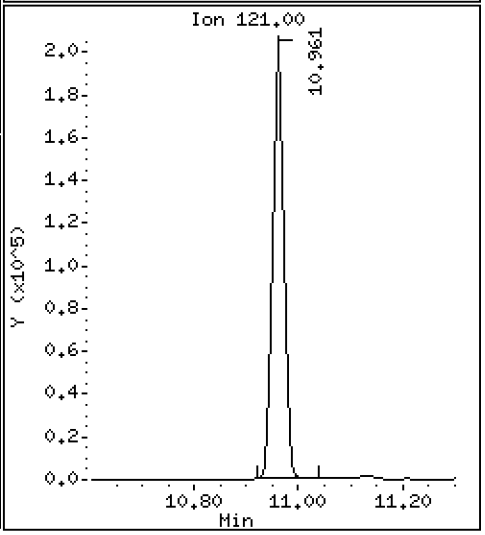


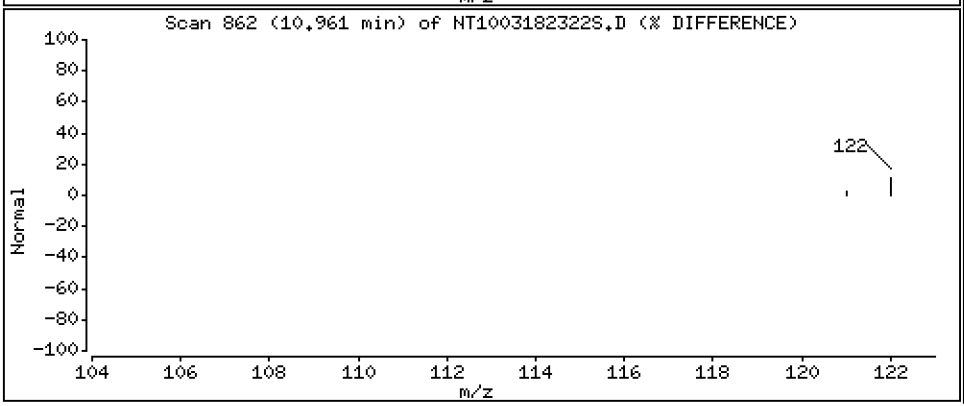












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

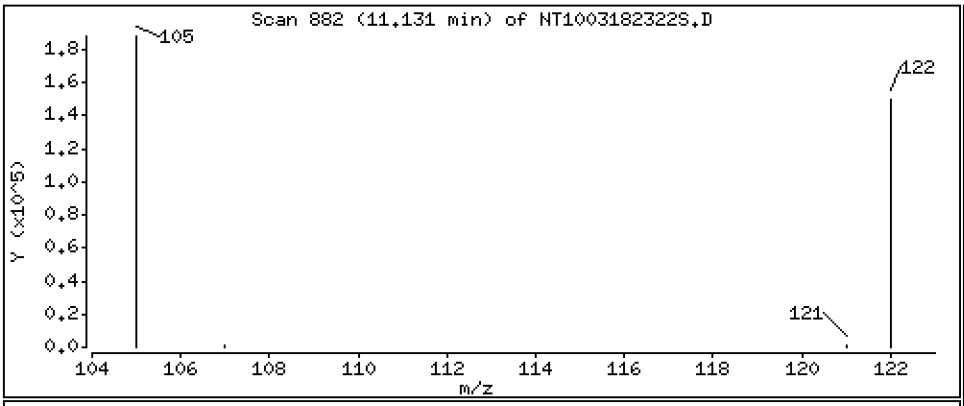
Operator: JGR

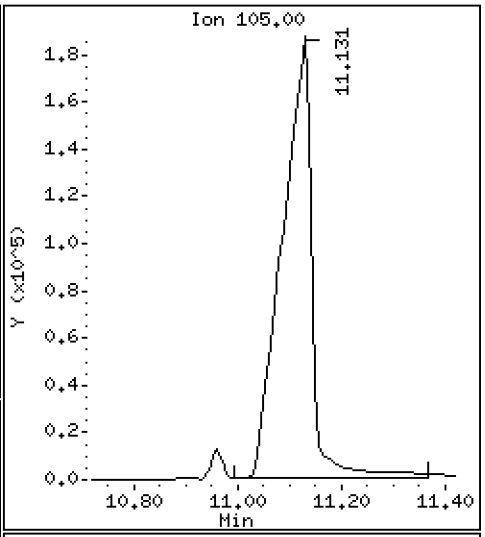
Column phase: ZB-5msi

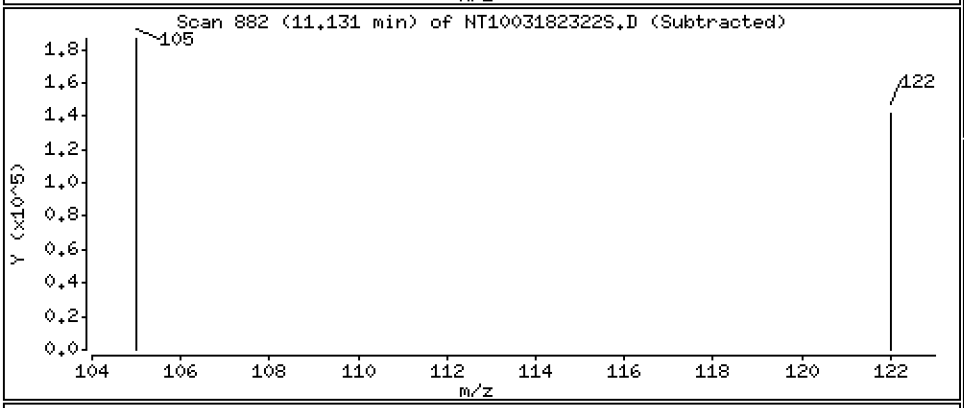
Column diameter: 0.25

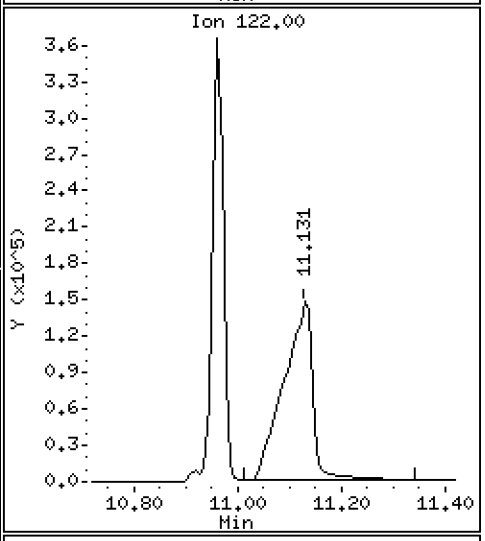
24 Benzoic acid

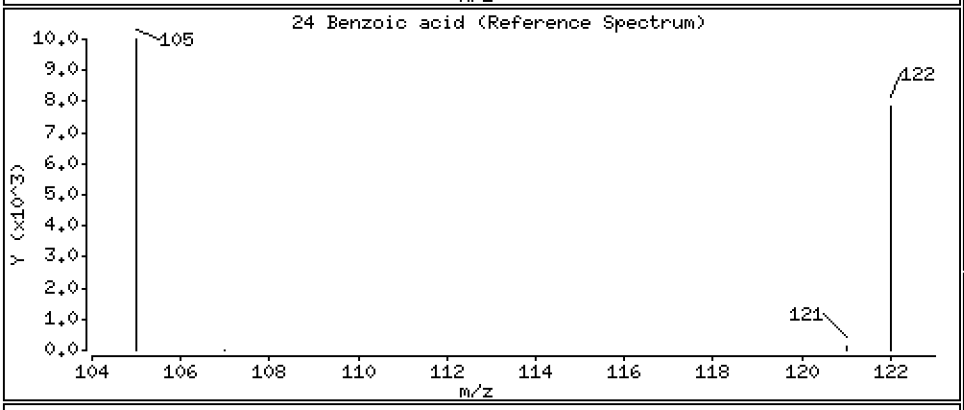
Concentration: 15.39 ug/L

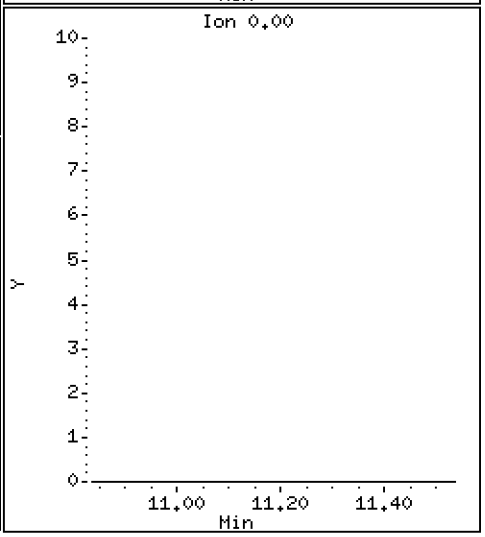


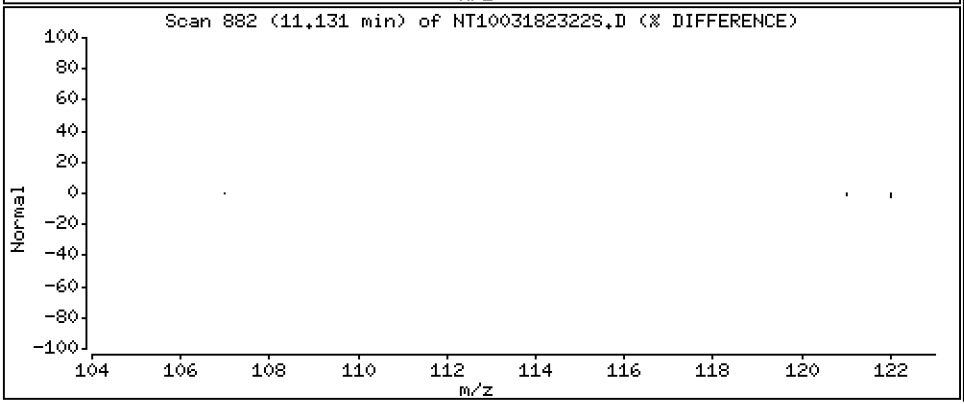












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

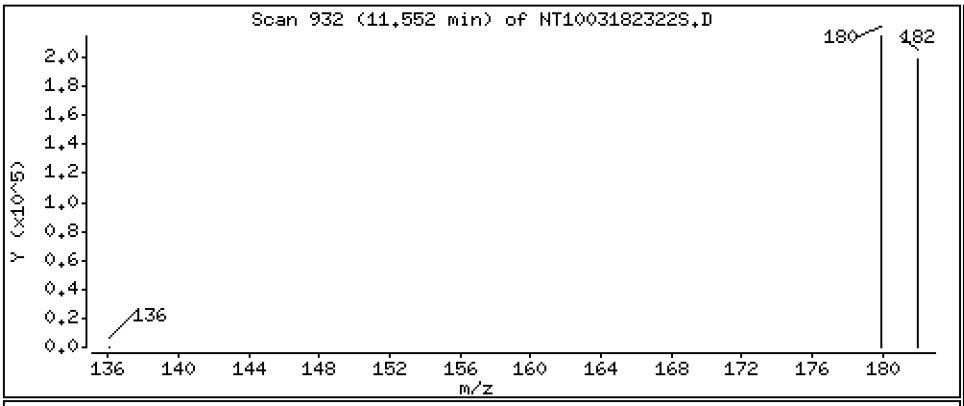
Operator: JGR

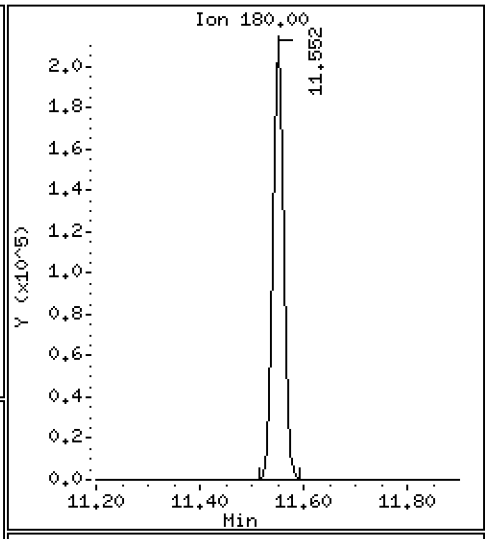
Column phase: ZB-5msi

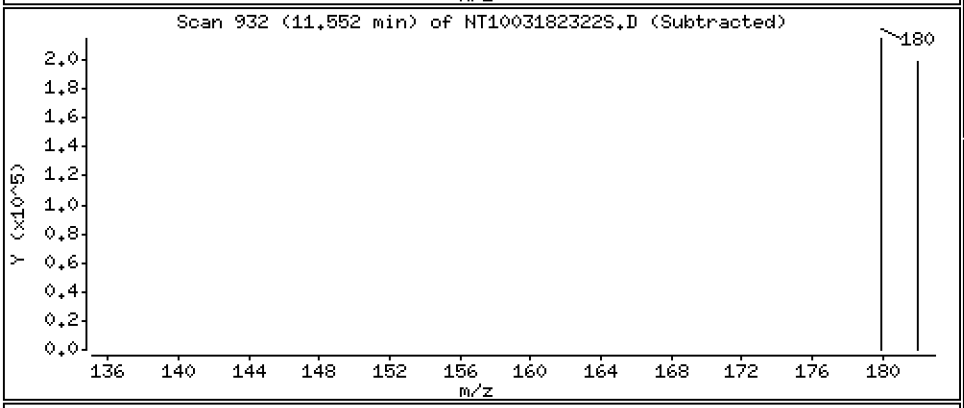
Column diameter: 0.25

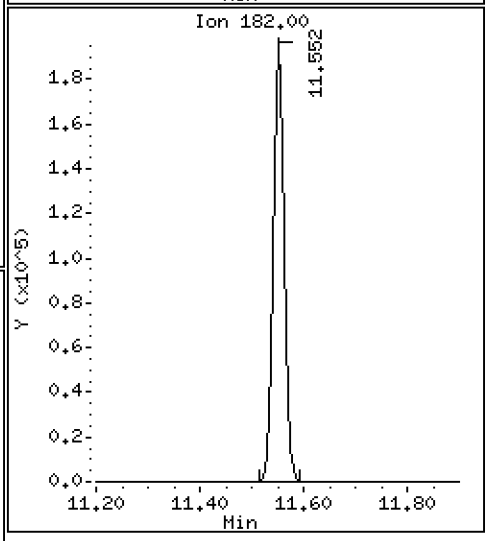
26 1,2,4-Trichlorobenzene

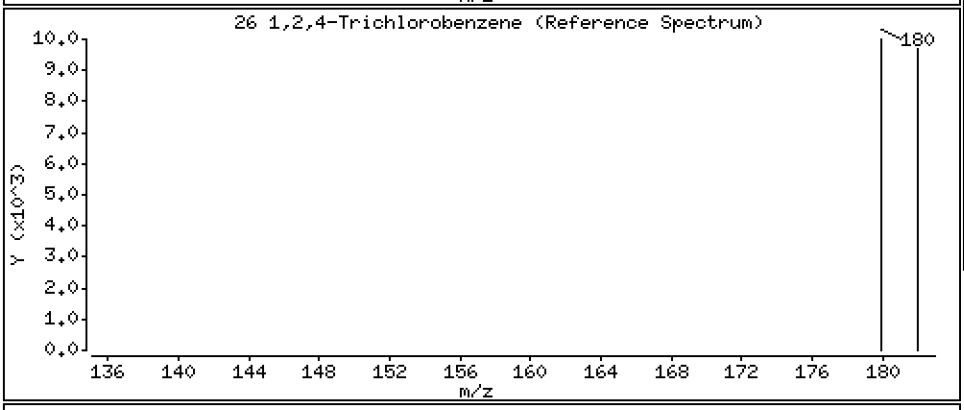
Concentration: 3.800 ug/L

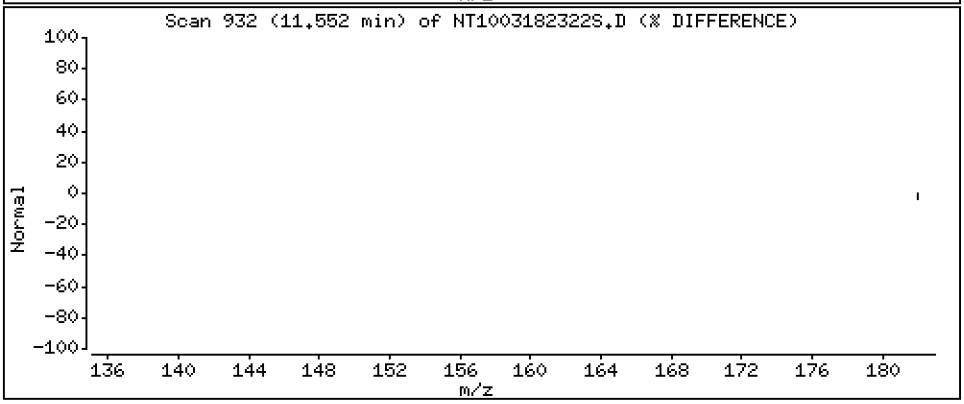












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

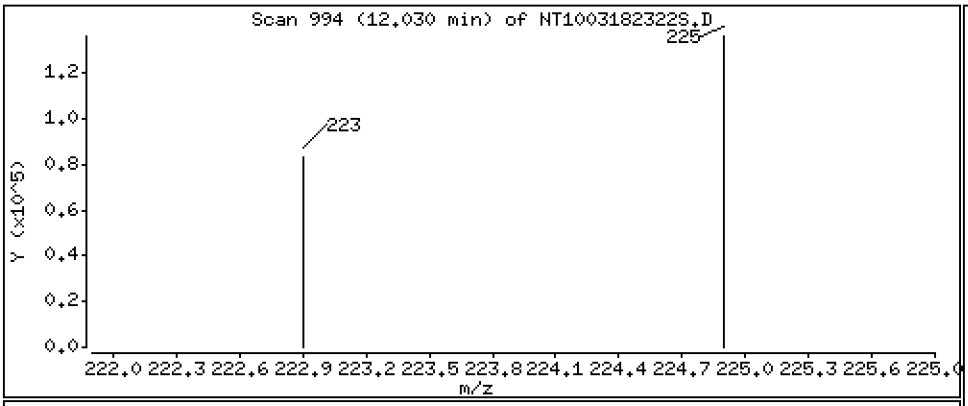
Operator: JGR

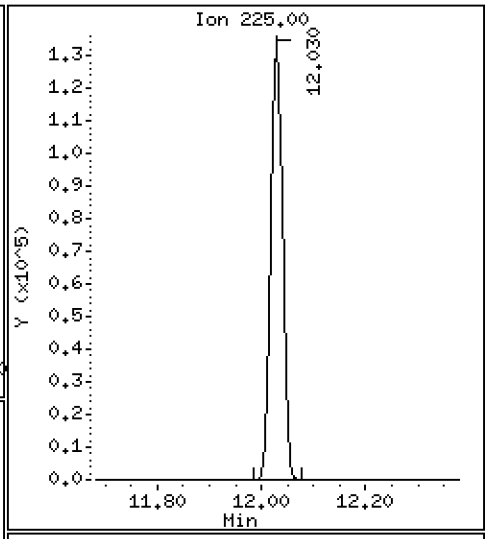
Column phase: ZB-5msi

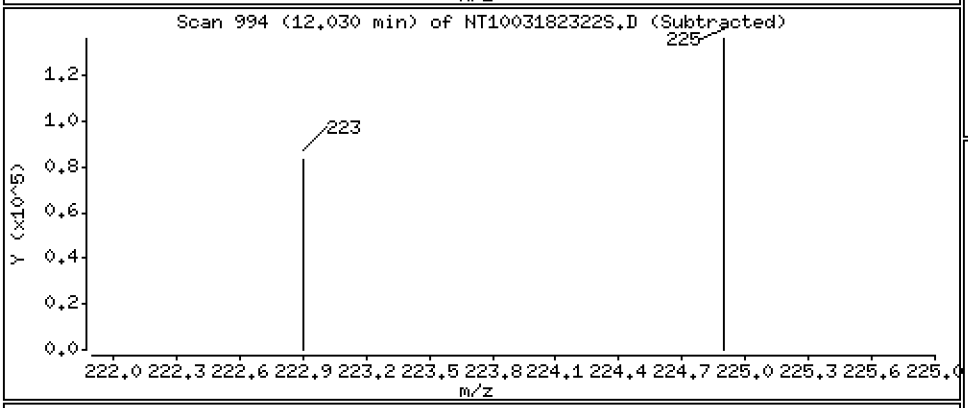
Column diameter: 0.25

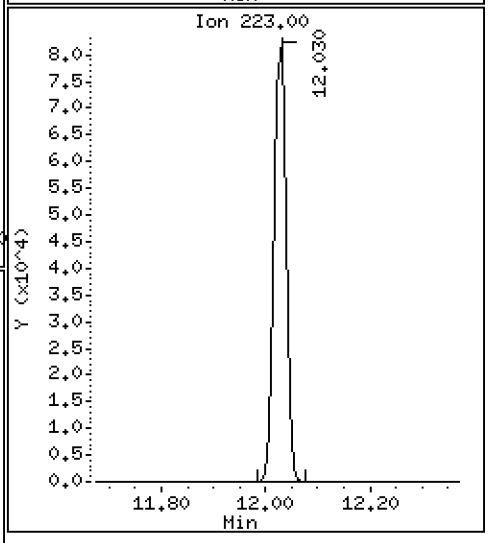
30 Hexachlorobutadiene

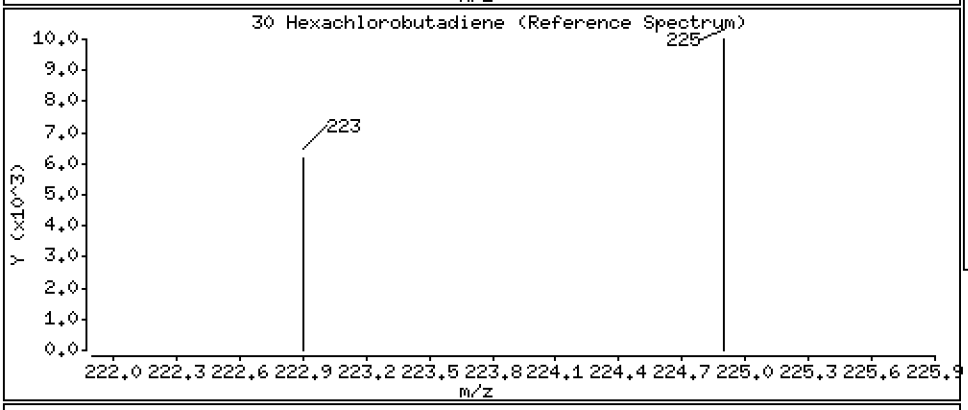
Concentration: 3.901 ug/L

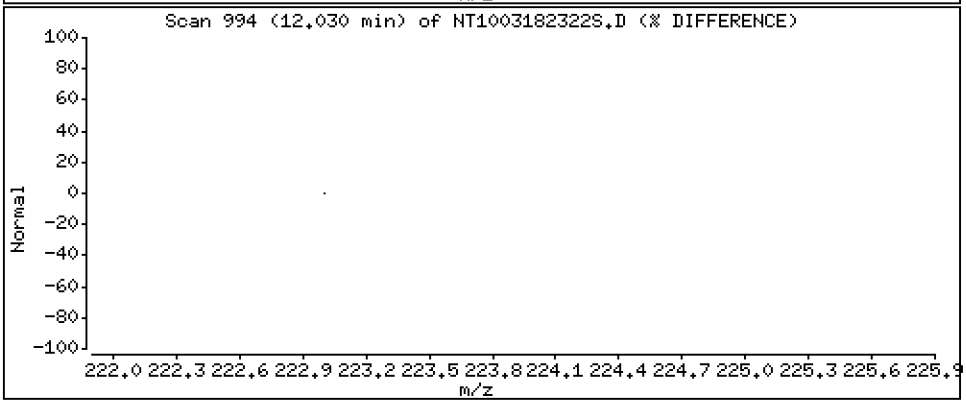












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182322S.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

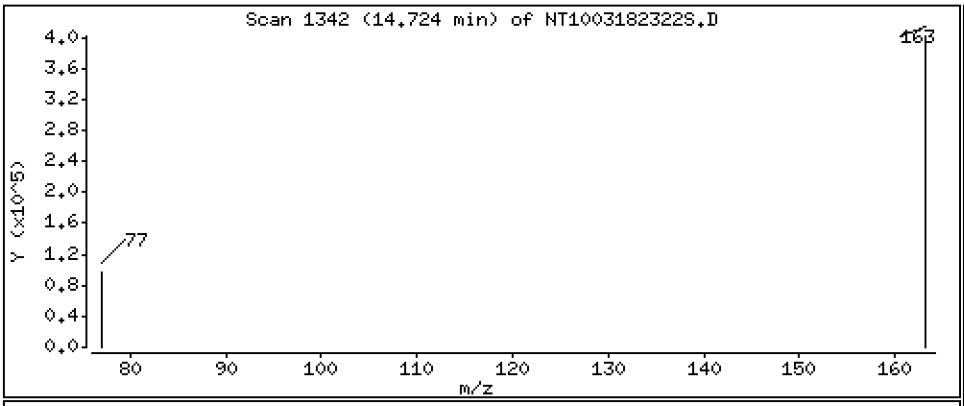
Operator: JGR

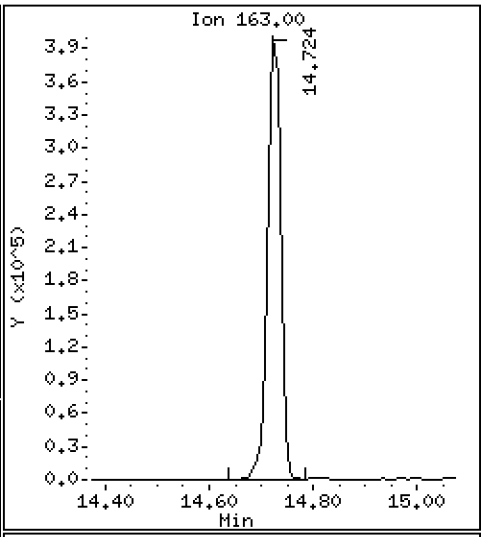
Column phase: ZB-5msi

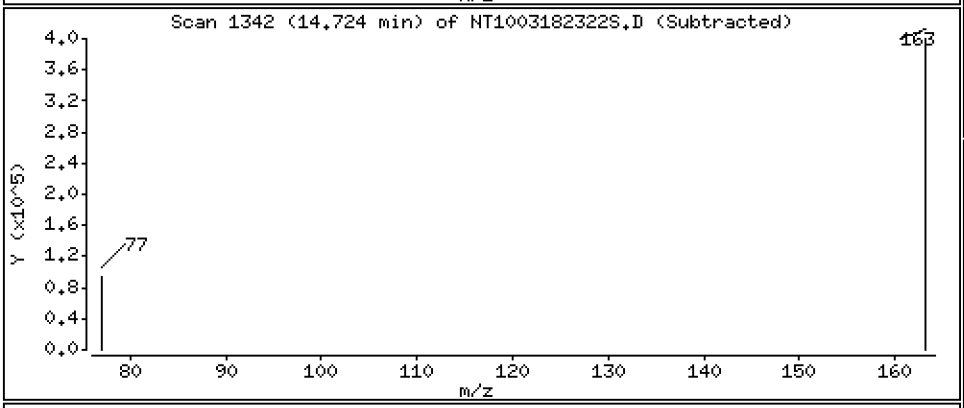
Column diameter: 0.25

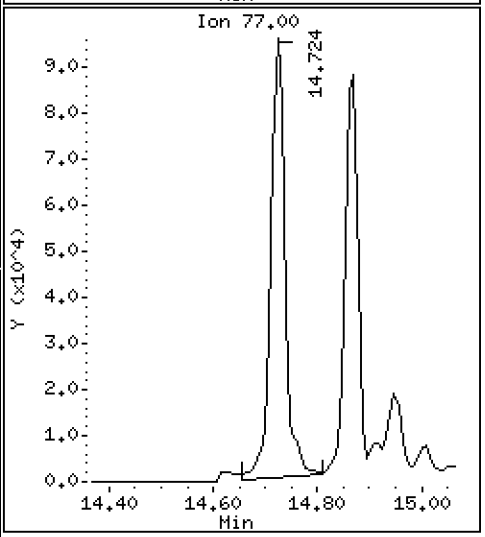
39 Dimethylphthalate

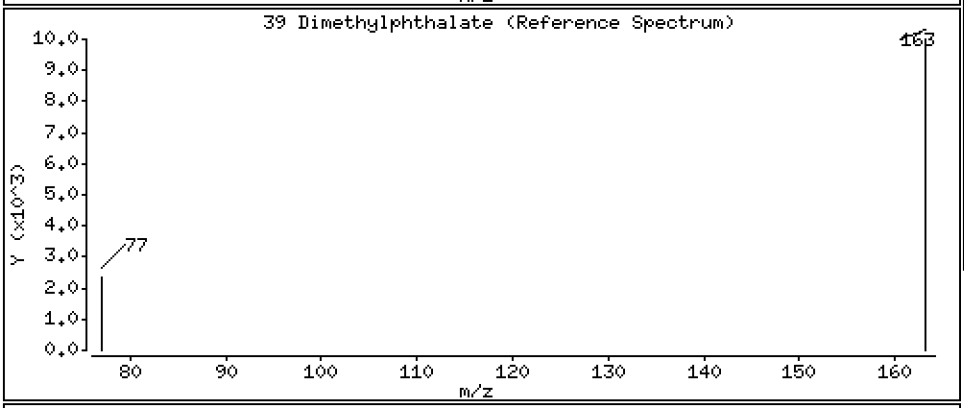
Concentration: 4.343 ug/L

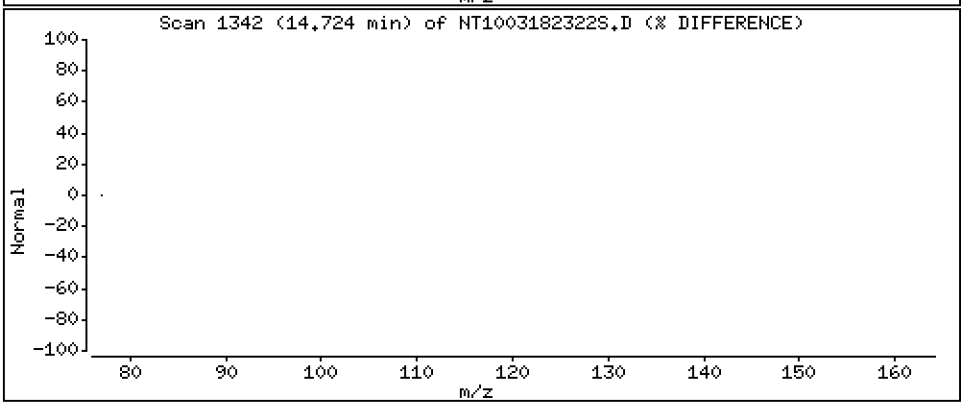












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182322S.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

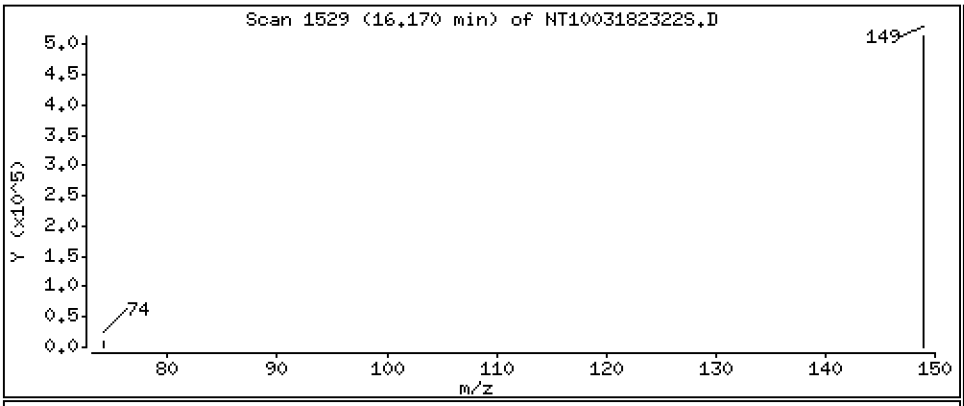
Operator: JGR

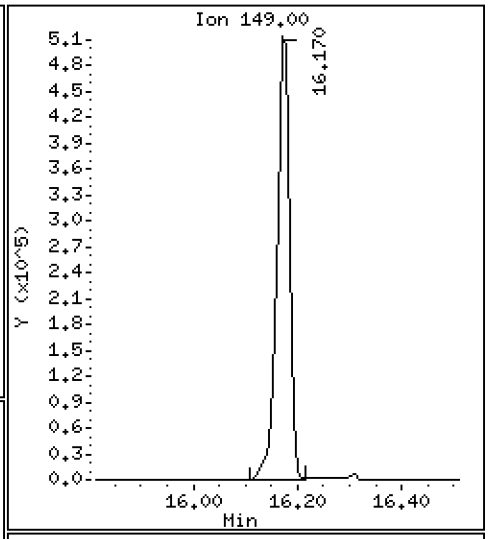
Column phase: ZB-5msi

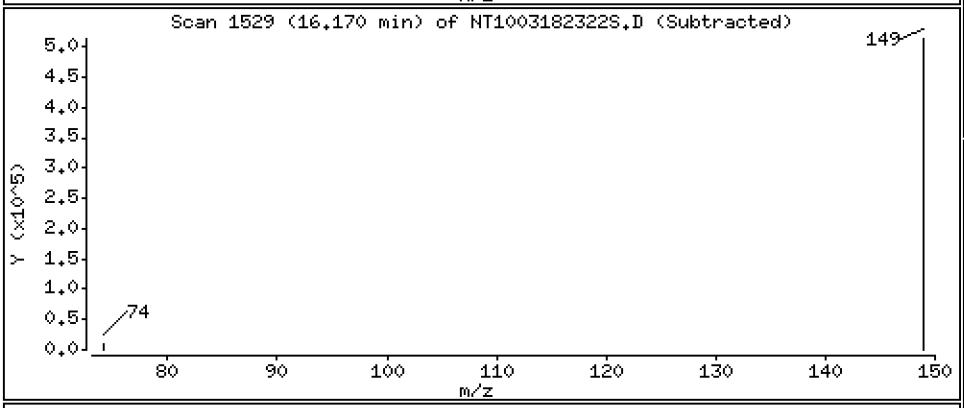
Column diameter: 0.25

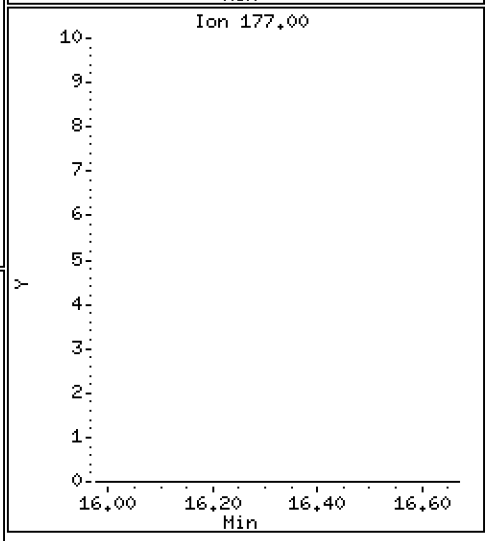
50 Diethylphthalate

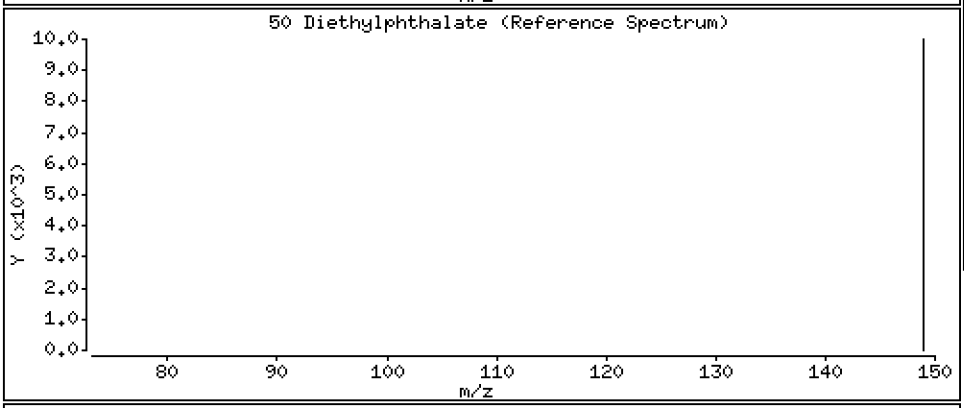
Concentration: 5.493 ug/L

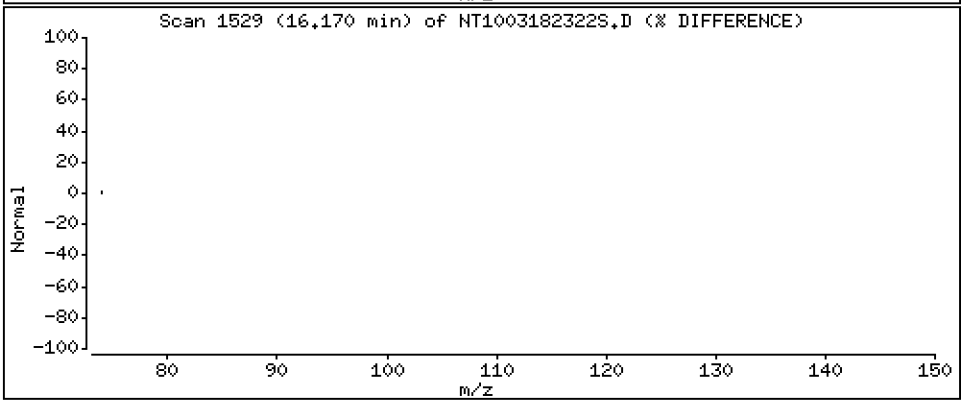












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

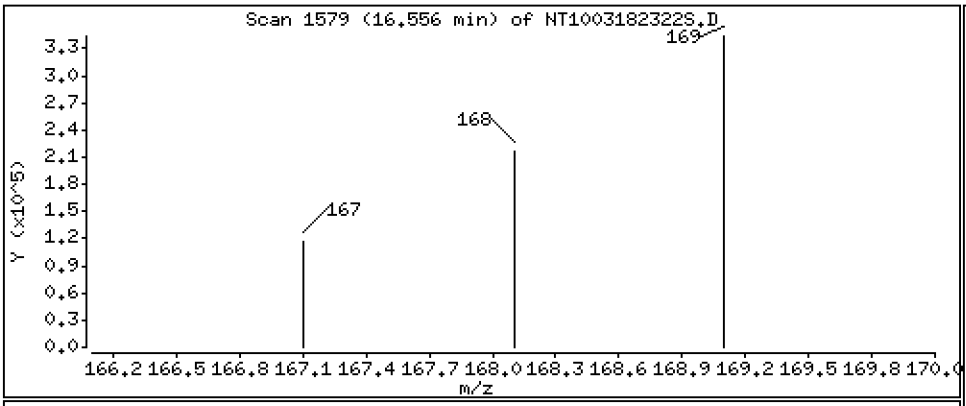
Operator: JGR

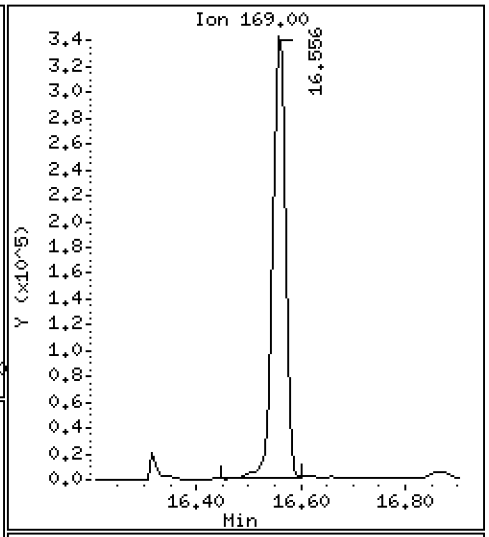
Column phase: ZB-5msi

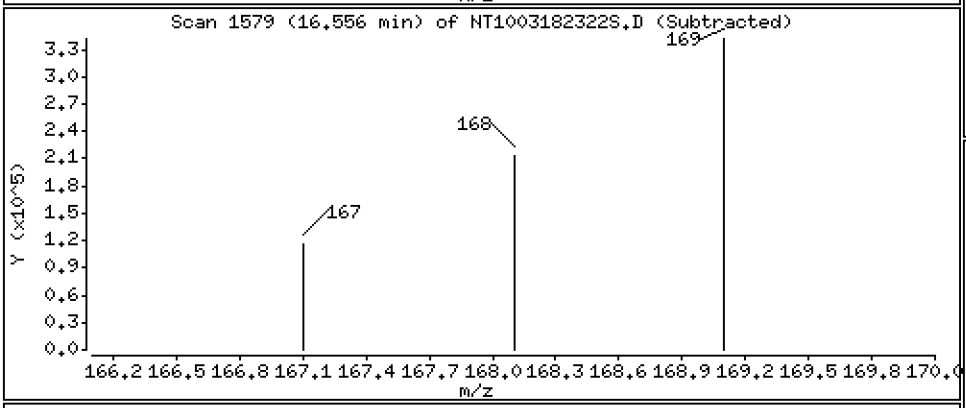
Column diameter: 0.25

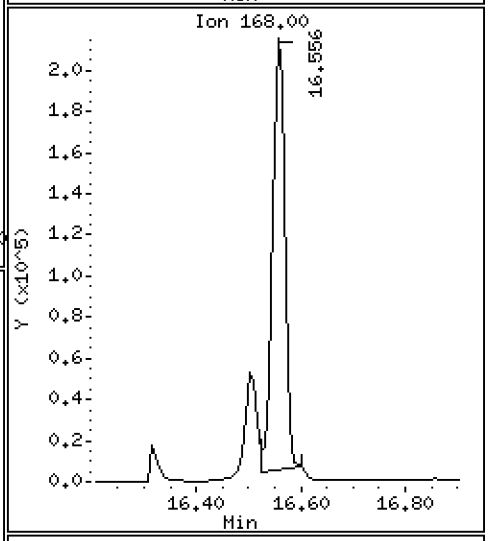
54 N-Nitrosodiphenylamine

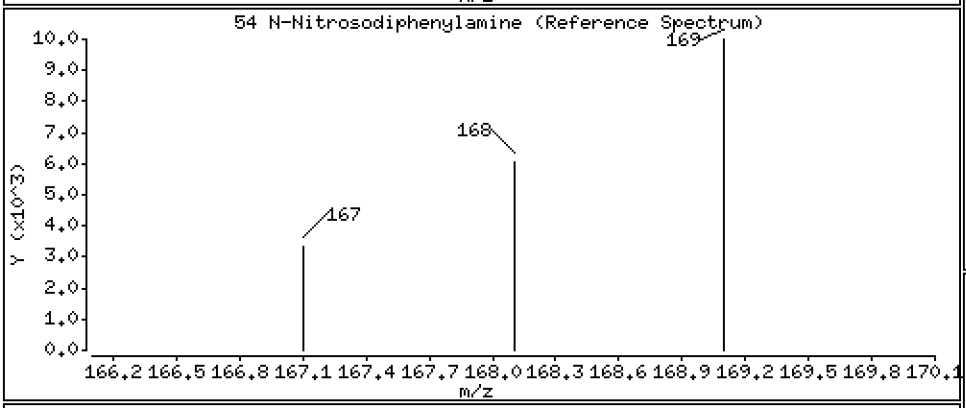
Concentration: 4.177 ug/L

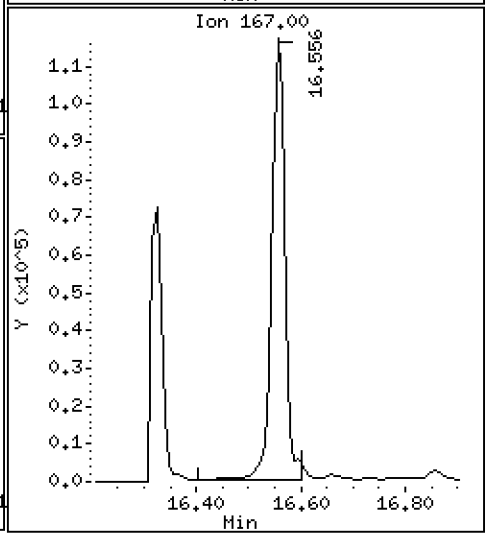


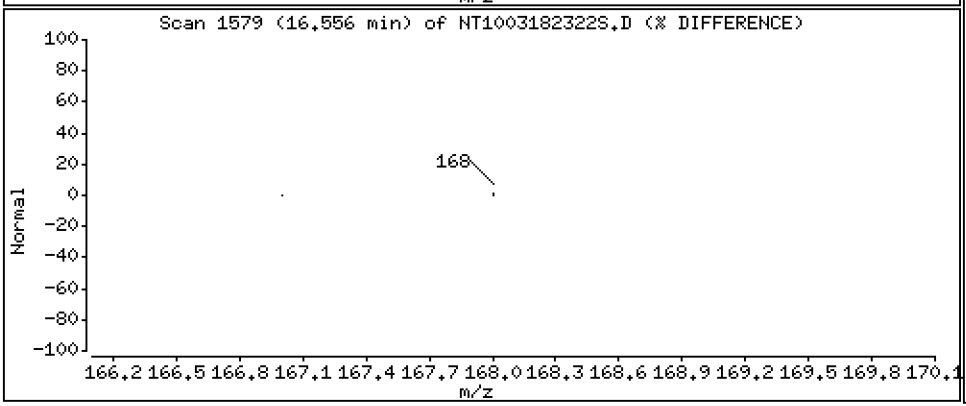












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

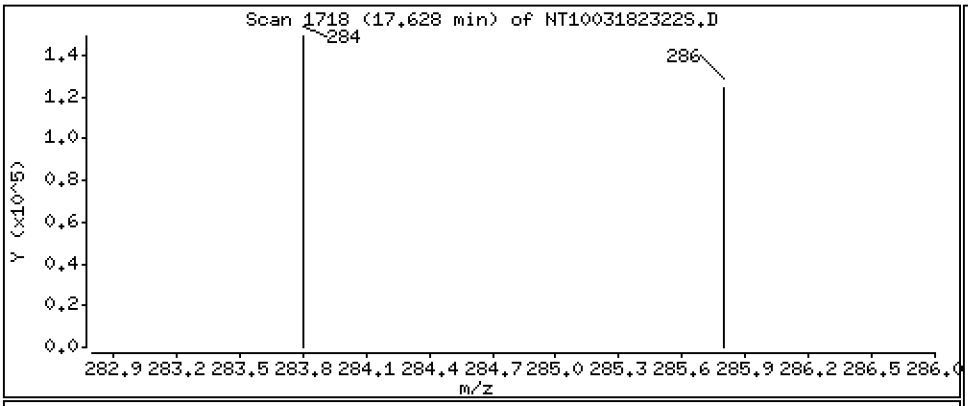
Operator: JGR

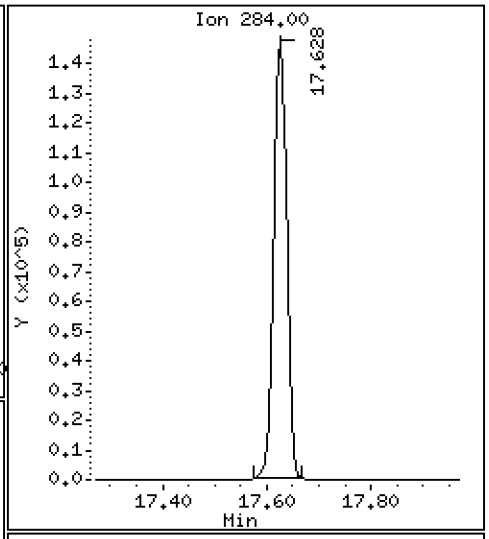
Column phase: ZB-5msi

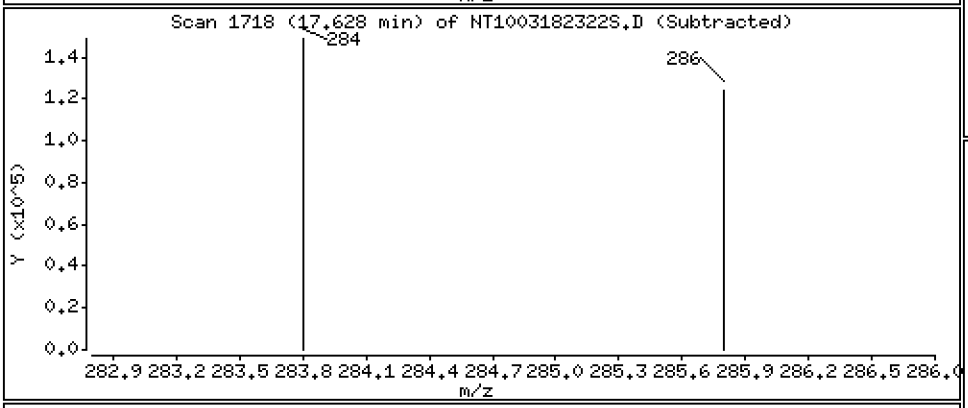
Column diameter: 0.25

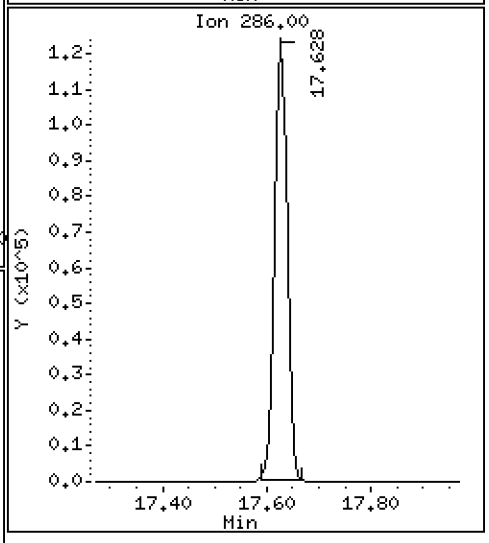
57 Hexachlorobenzene

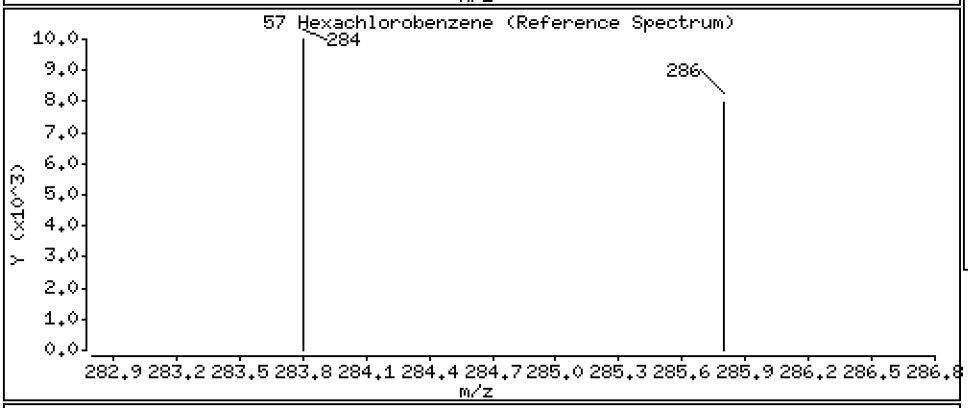
Concentration: 4.031 ug/L

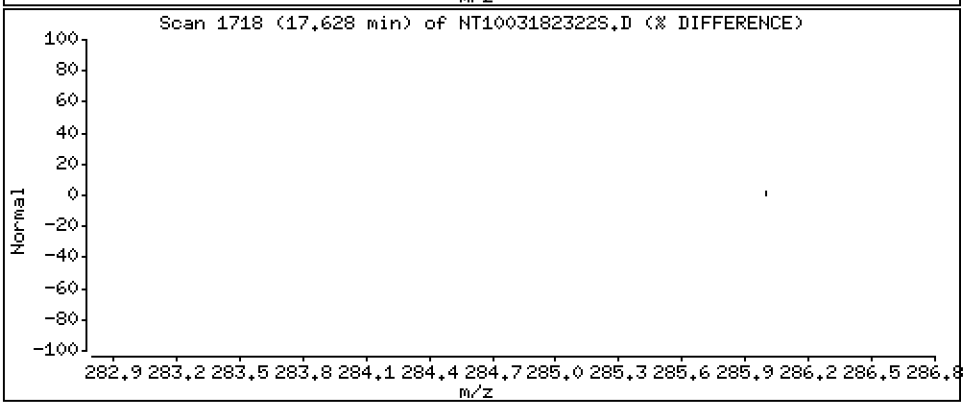












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

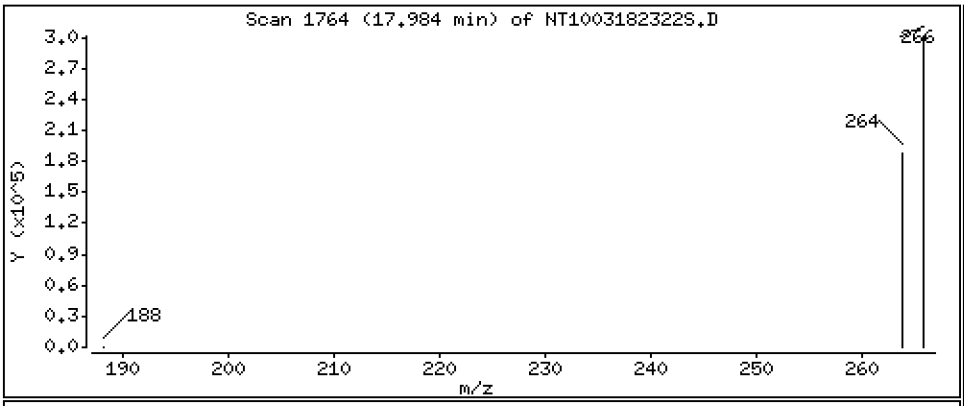
Operator: JGR

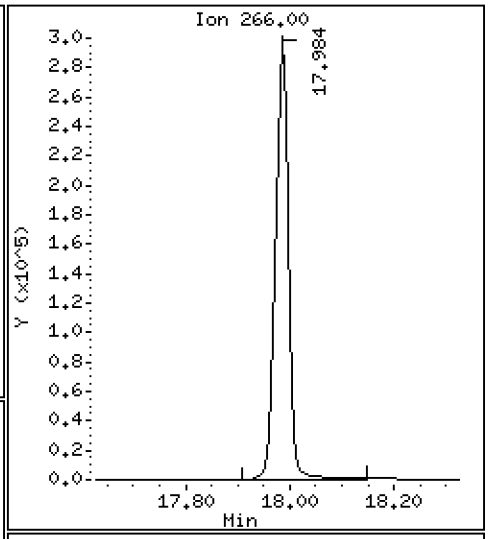
Column phase: ZB-5msi

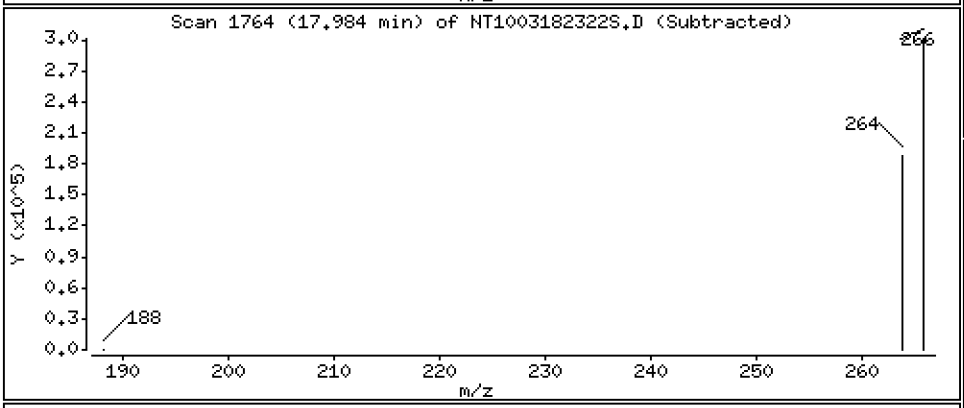
Column diameter: 0.25

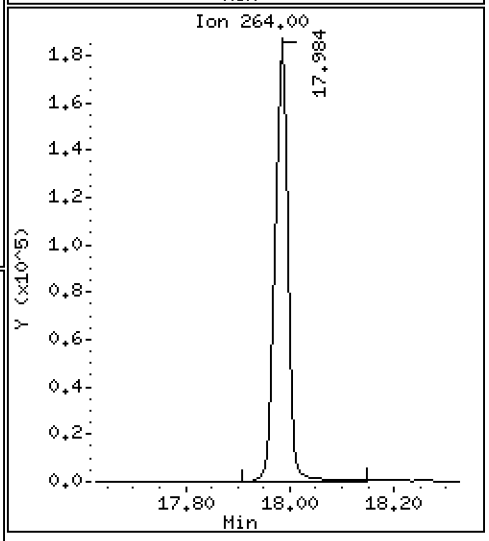
58 Pentachlorophenol

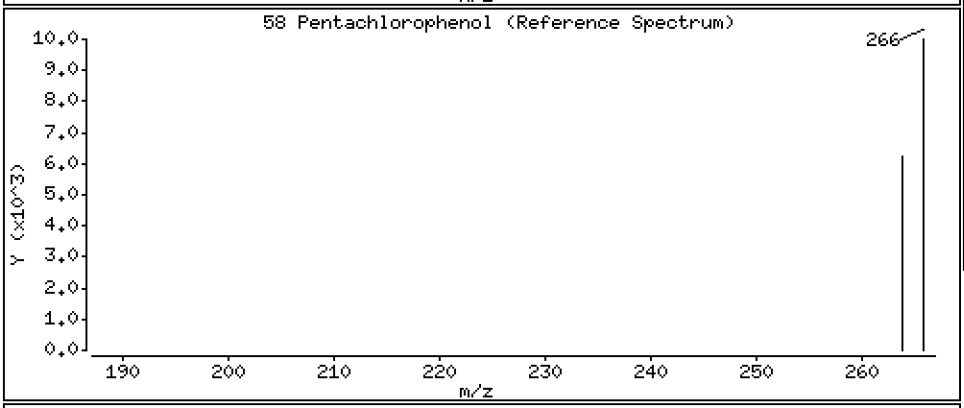
Concentration: 14.01 ug/L

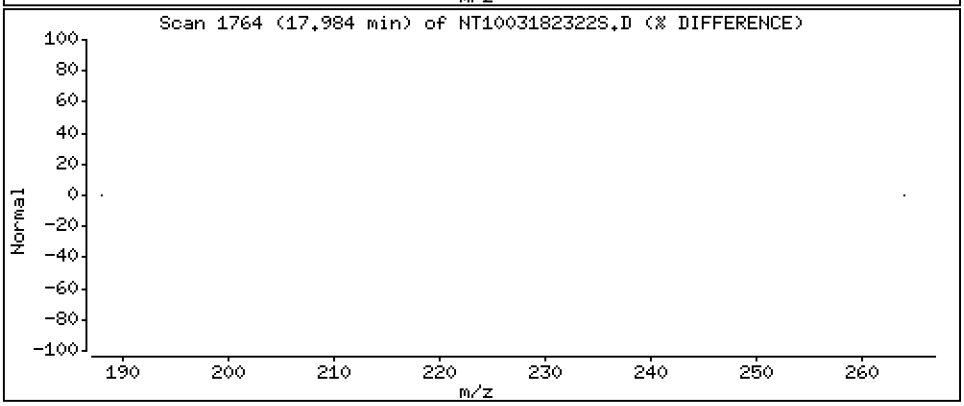












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

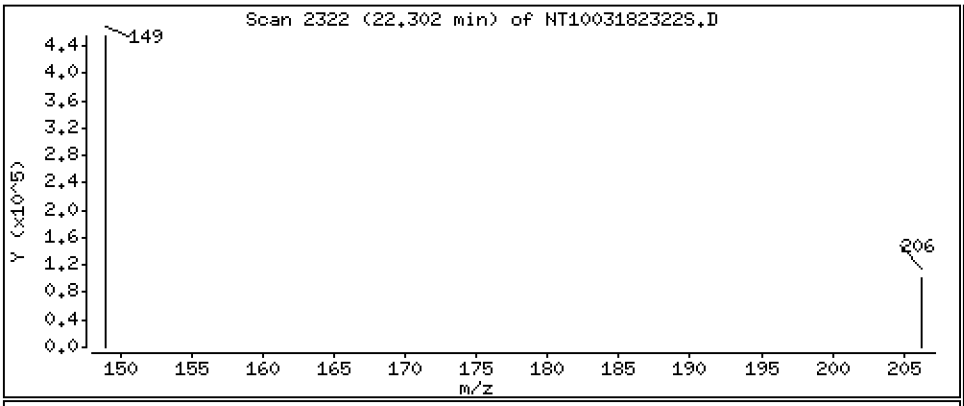
Operator: JGR

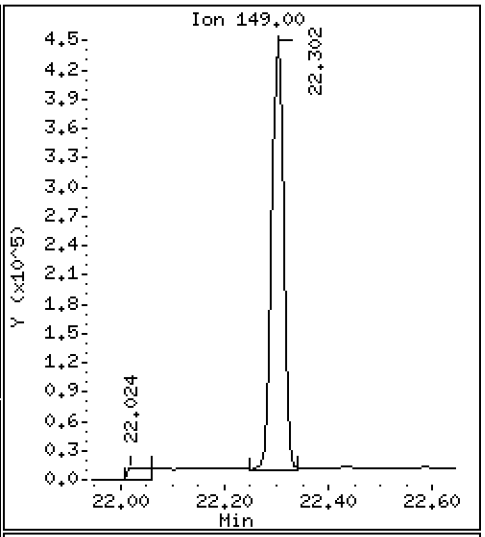
Column phase: ZB-5msi

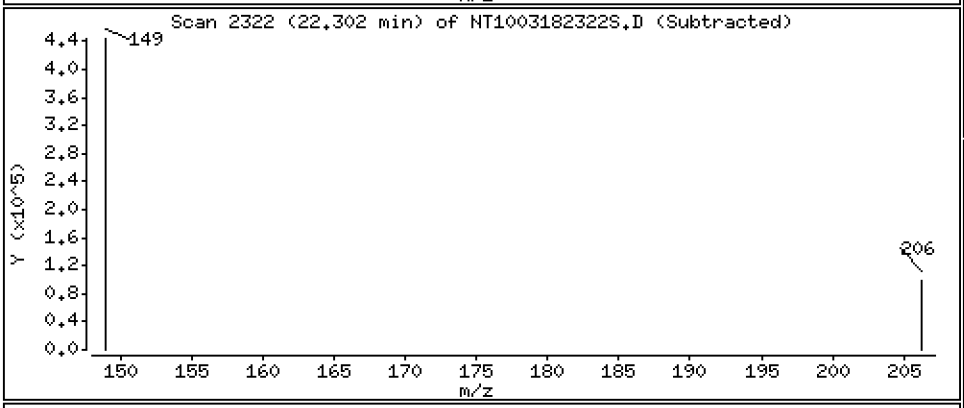
Column diameter: 0.25

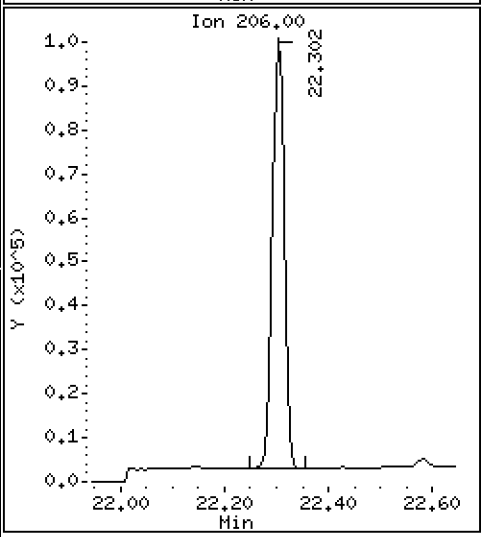
67 Butylbenzylphthalate

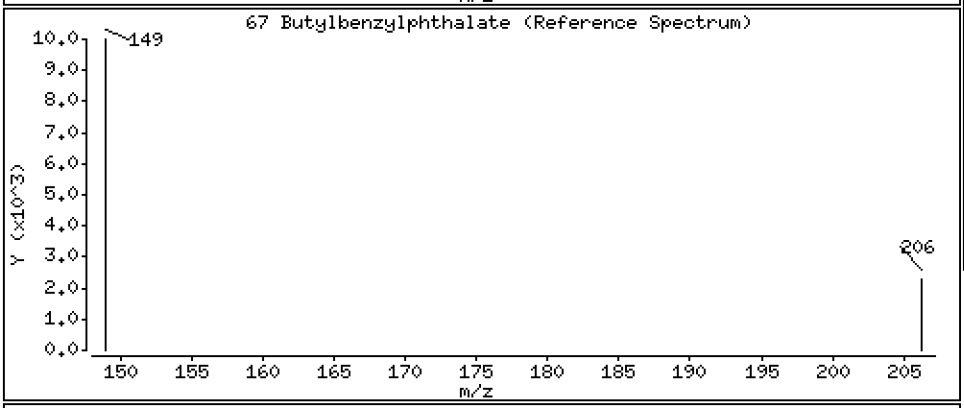
Concentration: 5.298 ug/L

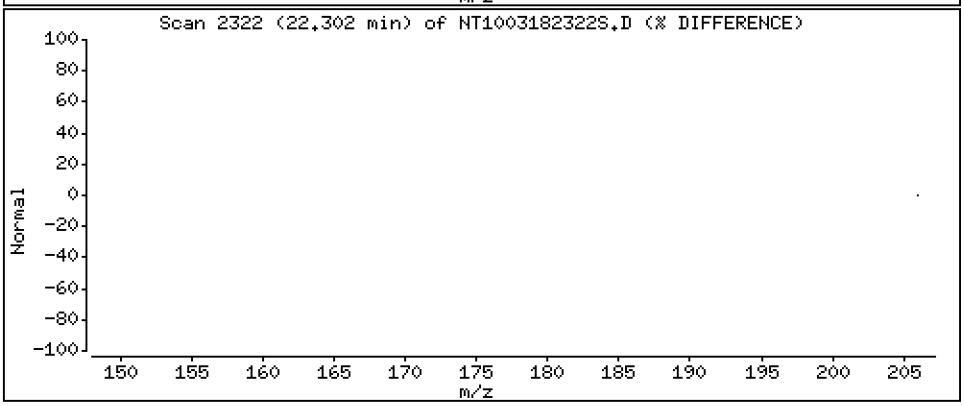












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182322S.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

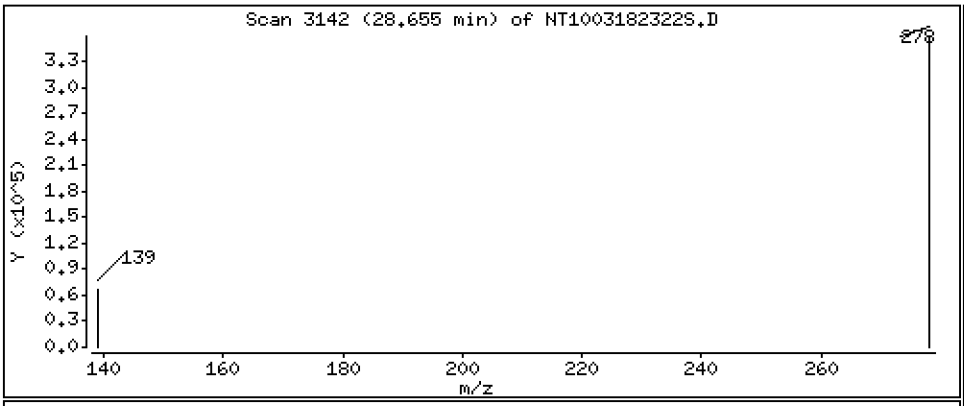
Operator: JGR

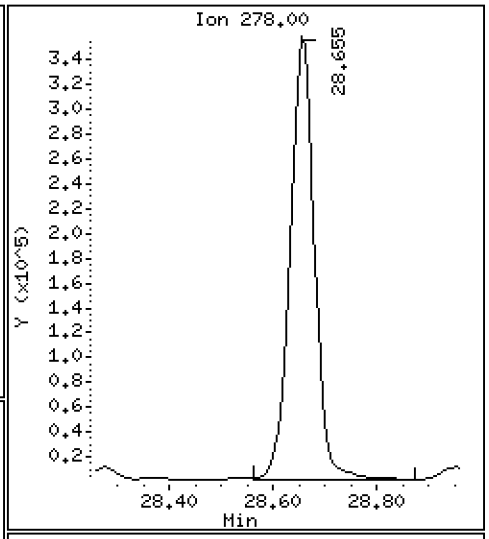
Column phase: ZB-5msi

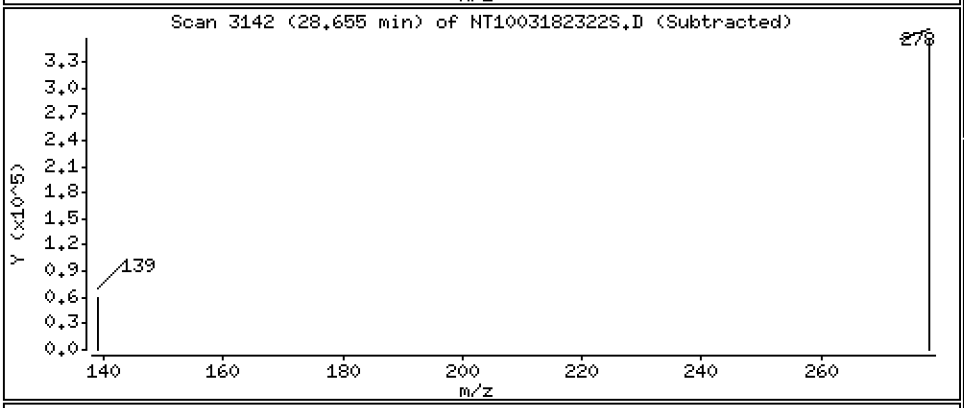
Column diameter: 0.25

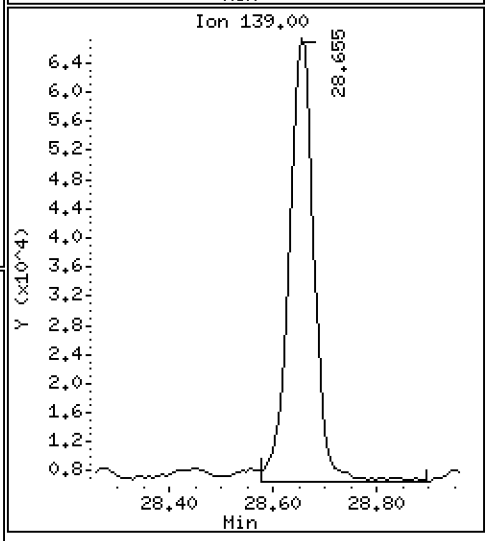
79 Dibenzo(a,h)anthracene

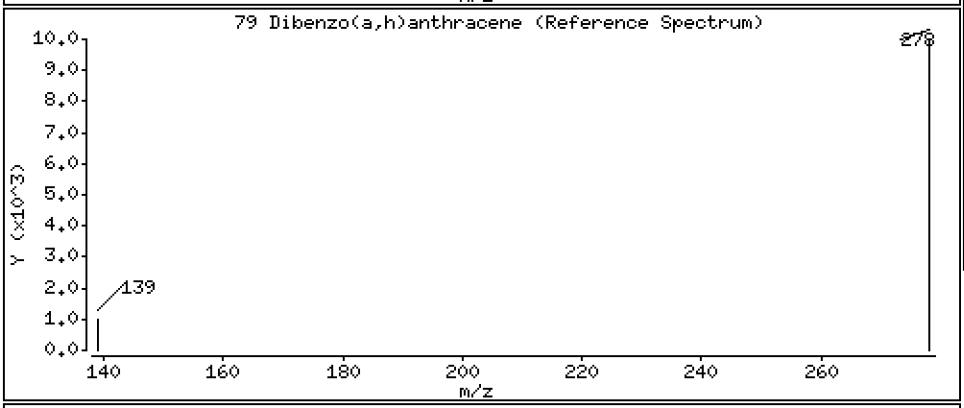
Concentration: 3.790 ug/L

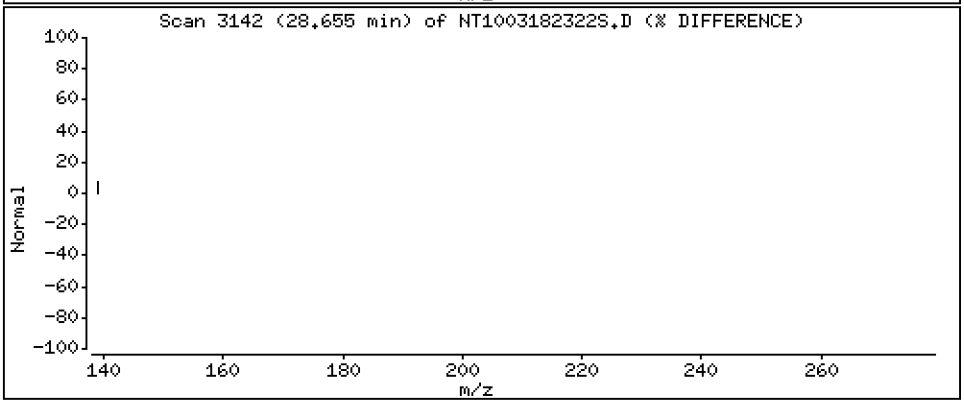












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823225.D

Date : 19-MAR-2023 07:08

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-MSD2

Volume Injected (uL): 1.0

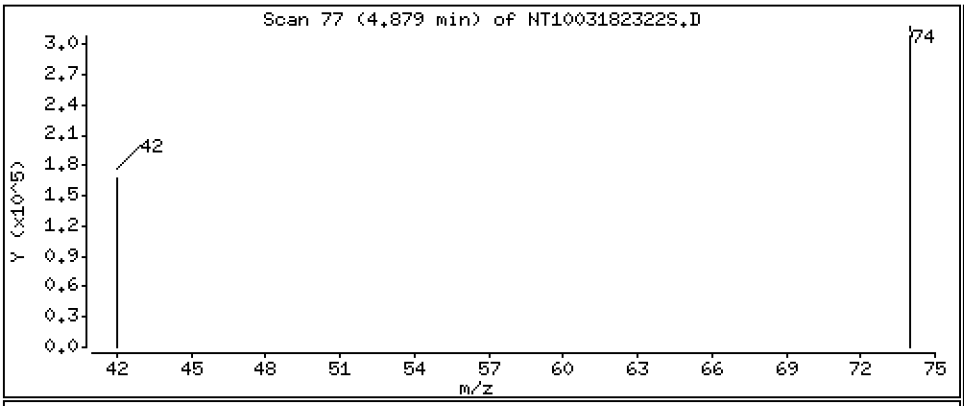
Operator: JGR

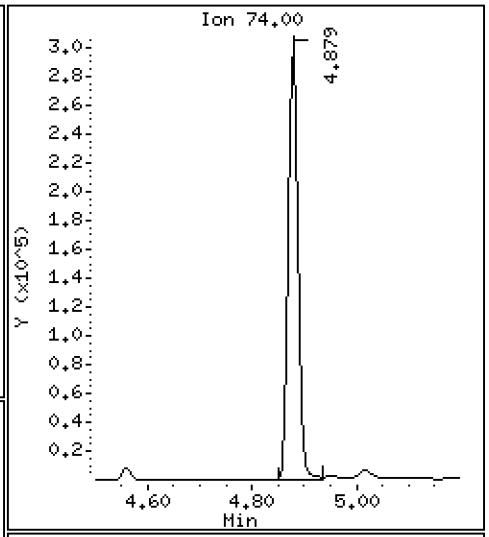
Column phase: ZB-5msi

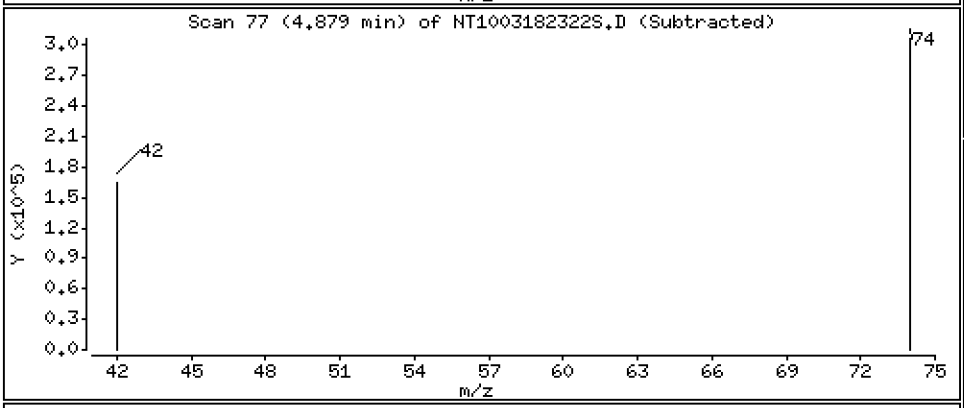
Column diameter: 0.25

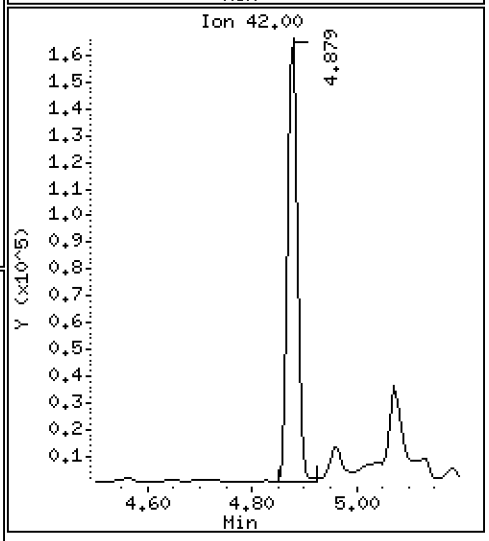
90 N-Nitrosodimethylamine

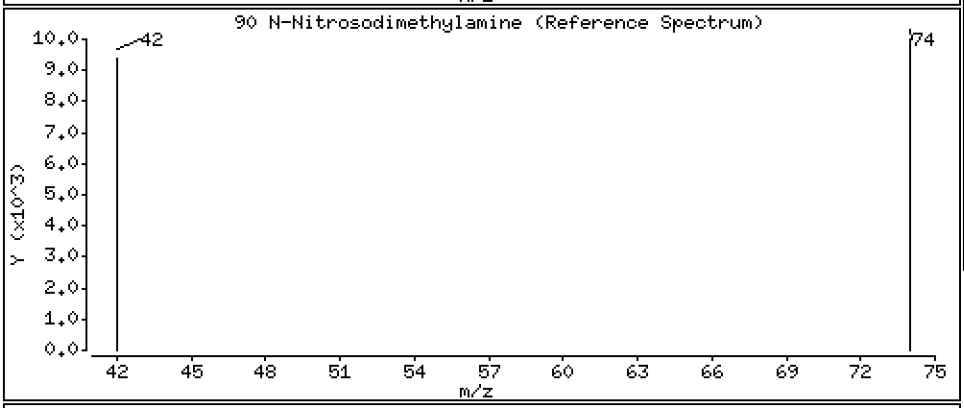
Concentration: 7.959 ug/L

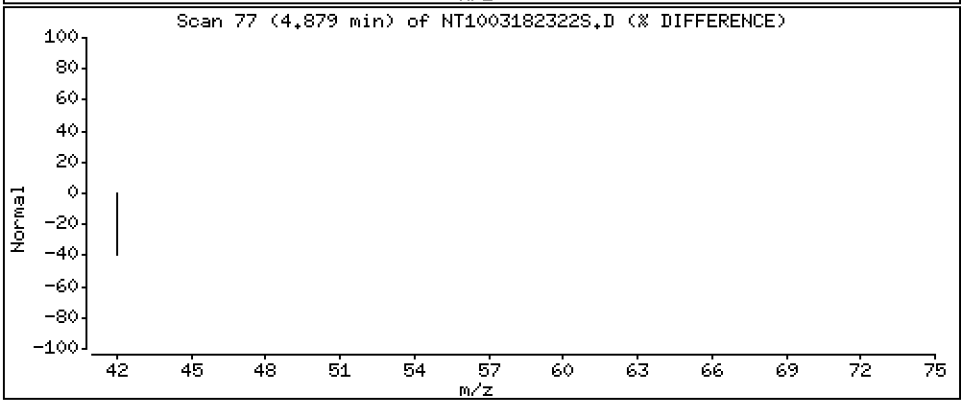












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182322S.D
Lab Smp Id: BLB0579-MSD2
Inj Date : 19-MAR-2023 07:08 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-MSD2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$	1 2-Fluorophenol	112	6.980	6.964	(0.761)	457158	5.58425	5.584(R)
	3 Phenol	94	8.564	8.548	(0.933)	958399	8.53317	8.533
	7 1,3-Dichlorobenzene	146	9.113	9.105	(0.993)	363692	3.46055	3.461
*	8 1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	269965	4.00000	
	9 1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	362659	3.57466	3.575
	11 Benzyl alcohol	79	9.439	9.438	(1.029)	242758	3.72826	3.728
	12 1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	356117	3.56926	3.569
	13 2-Methylphenol	108	9.664	9.656	(1.053)	291039	3.73971	3.740
	15 4-Methylphenol	108	9.928	9.920	(1.082)	869780	10.7555	10.76
	16 N-Nitroso-di-n-propylamine	70	9.990	9.990	(1.089)	234500	4.10034	4.100
	22 2,4-Dimethylphenol	107	10.961	10.951	(0.942)	601163	7.19008	7.190
	24 Benzoic acid	105	11.131	11.070	(0.957)	751373	15.3912	15.39
	26 1,2,4-Trichlorobenzene	180	11.551	11.550	(0.993)	319649	3.80039	3.800
*	27 Naphthalene-d8	136	11.636	11.635	(1.000)	967290	4.00000	
	30 Hexachlorobutadiene	225	12.030	12.029	(1.034)	199498	3.90128	3.901
	39 Dimethylphthalate	163	14.723	14.722	(0.967)	666482	4.34263	4.343
*	42 Acenaphthene-d10	162	15.226	15.217	(1.000)	486340	4.00000	
	50 Diethylphthalate	149	16.169	16.161	(1.062)	873426	5.49350	5.493
	54 N-Nitrosodiphenylamine	169	16.555	16.554	(0.907)	562048	4.17654	4.177
	57 Hexachlorobenzene	284	17.628	17.619	(0.966)	242820	4.03070	4.031

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.984	17.975	(0.986)	510370	14.0098	14.01
*	59 Phenanthrene-d10	188	18.247	18.246	(1.000)	1003017	4.00000	
$	66 Terphenyl-d14	244	21.380	21.372	(0.918)	725696	5.04150	5.042(R)
	67 Butylbenzylphthalate	149	22.302	22.293	(0.957)	655141	5.29785	5.298
*	69 Chrysene-d12	240	23.293	23.277	(1.000)	883443	4.00000	
*	77 Perylene-d12	264	25.941	25.917	(1.000)	965440	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.655	28.607	(1.105)	1175071	3.78992	3.790
	90 N-Nitrosodimethylamine	74	4.879	4.848	(0.532)	413223	7.95851	7.959

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182322S.D
Lab Smp Id: BLB0579-MSD2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	269965	20.88
27 Naphthalene-d8	802913	401457	1605826	967290	20.47
42 Acenaphthene-d10	396793	198397	793586	486340	22.57
59 Phenanthrene-d10	821666	410833	1643332	1003017	22.07
69 Chrysene-d12	707165	353583	1414330	883443	24.93
77 Perylene-d12	813685	406843	1627370	965440	18.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.01
42 Acenaphthene-d10	15.22	14.72	15.72	15.23	0.06
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.01
69 Chrysene-d12	23.28	22.78	23.78	23.29	0.07
77 Perylene-d12	25.92	25.42	26.42	25.94	0.09

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

REVIEW SUMMARY FOR FILE - NT1003182322S.D

Lab ID: BLB0579-MSD2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 07:08

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.951	0.0051	Benzoic acid

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0579-SRM2
Batch: BLB0579
Initial/Final: 1 g / 1 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 03/18/2023 22:50
Standard ID: K003477
Expires: 01/31/2024
Standard Lot#: CRM 143 (LRAC8918)
Description: CRM 143 BNAs - Sandy Loam

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,4-Dimethylphenol	6357.0	3810	21.7	200		60.0	0 - 220
1,2,4-Trichlorobenzene	1477.0	1190	26.8	50.0		80.4	10 - 193
N-Nitrosodiphenylamine	2854.0	3400	13.1	50.0		119	40 - 160
Pentachlorophenol	3411.0	3810	21.3	200	Q	112	10 - 206

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823095.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

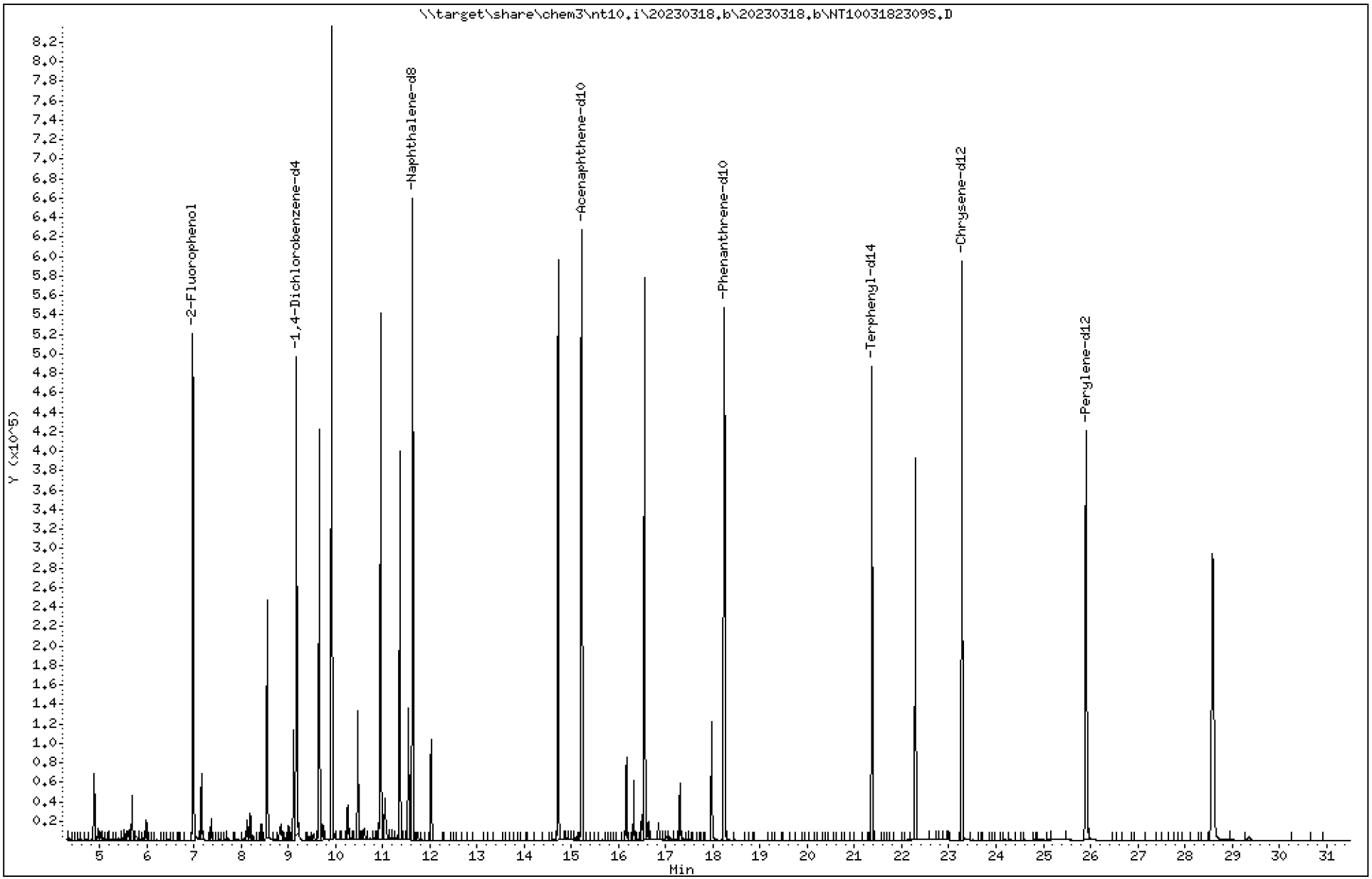
Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

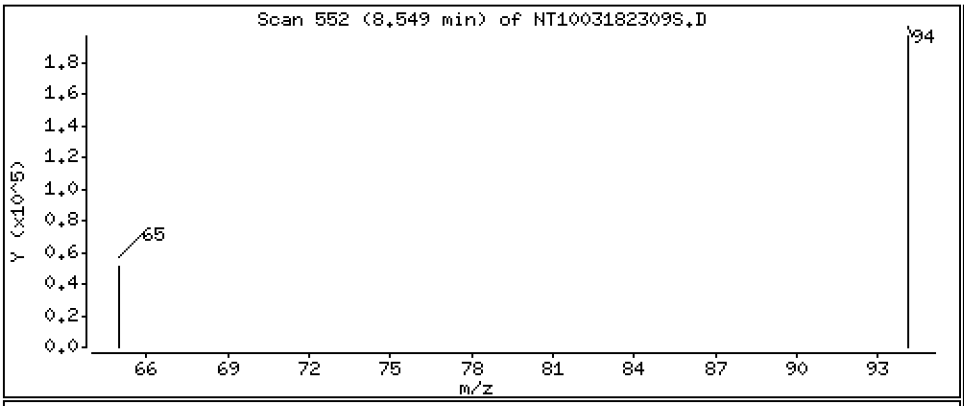
Operator: JGR

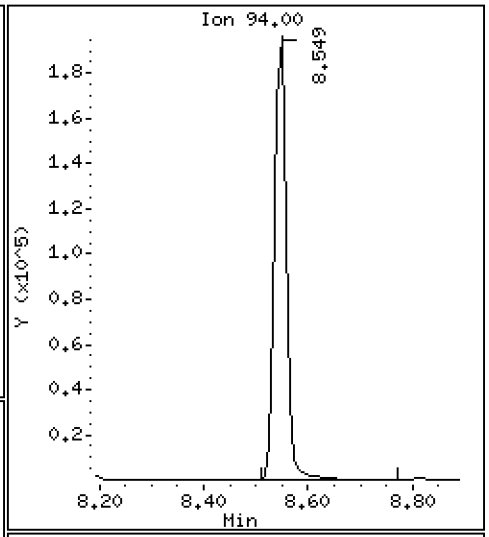
Column phase: ZB-5msi

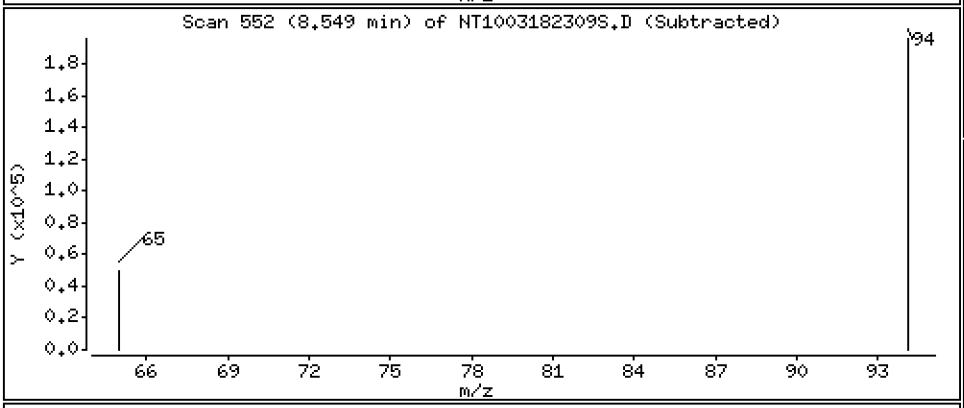
Column diameter: 0.25

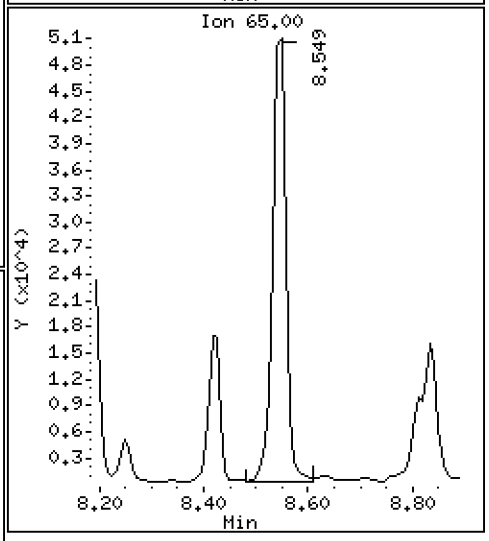
3 Phenol

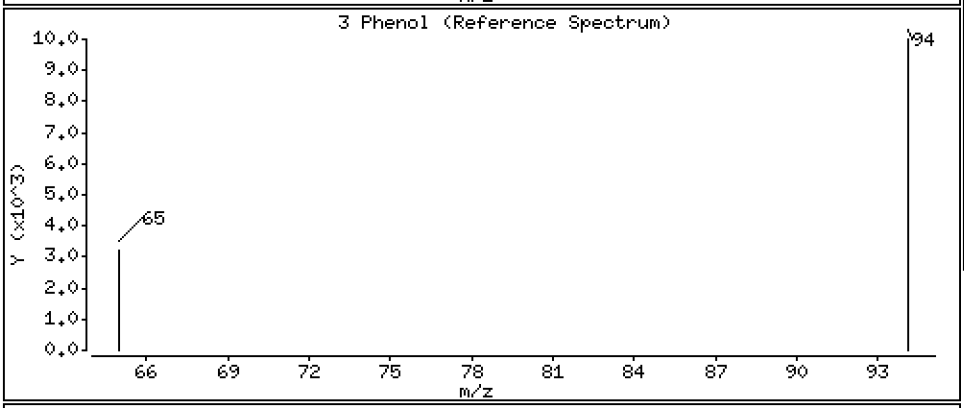
Concentration: 2.428 ug/L

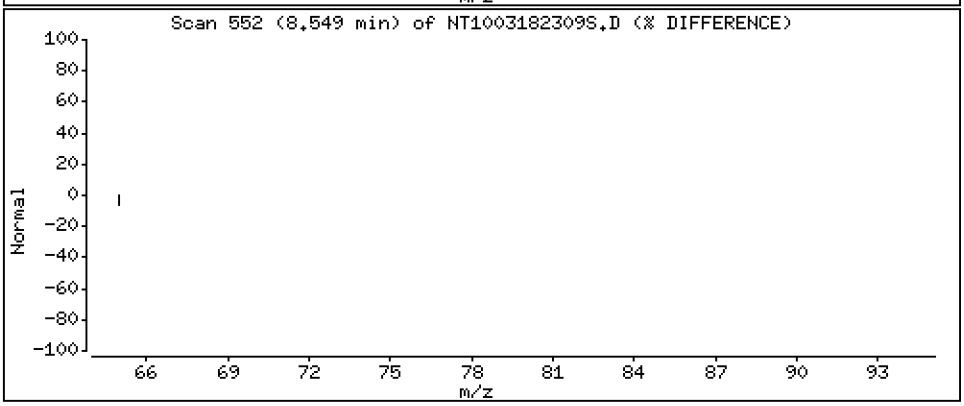












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

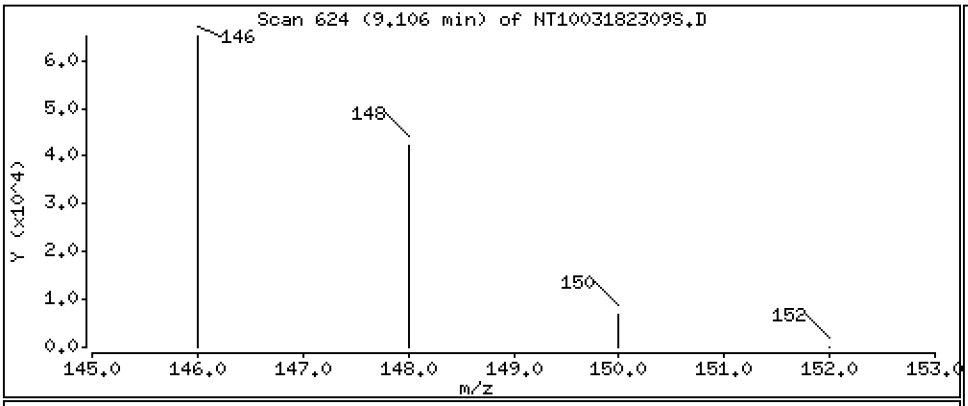
Operator: JGR

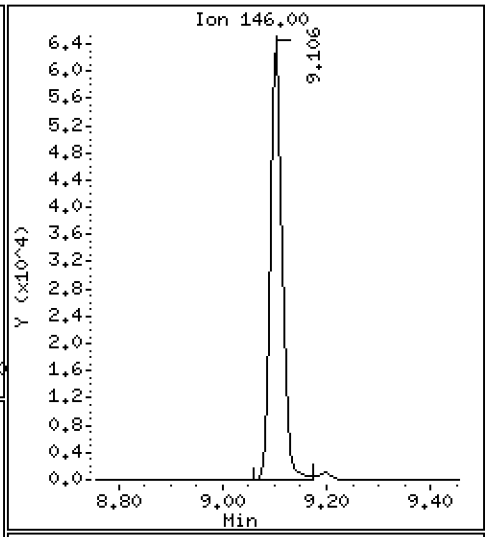
Column phase: ZB-5msi

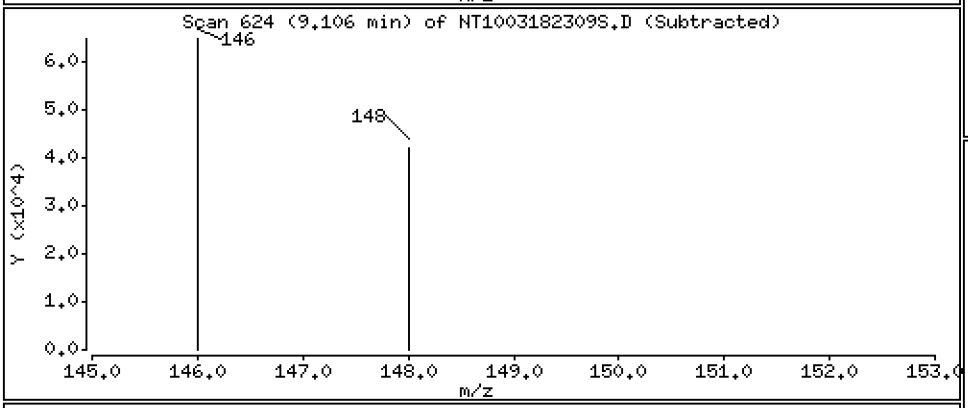
Column diameter: 0.25

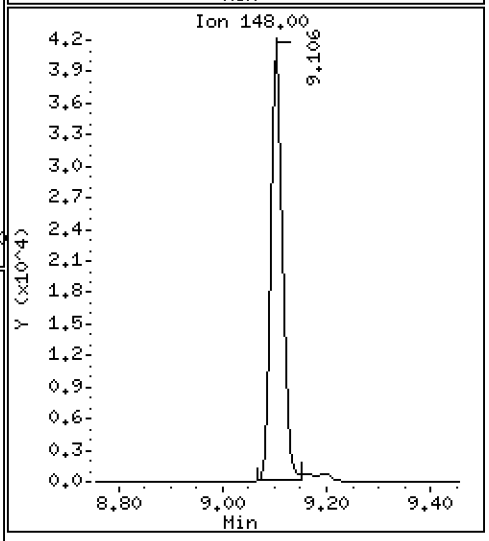
7 1,3-Dichlorobenzene

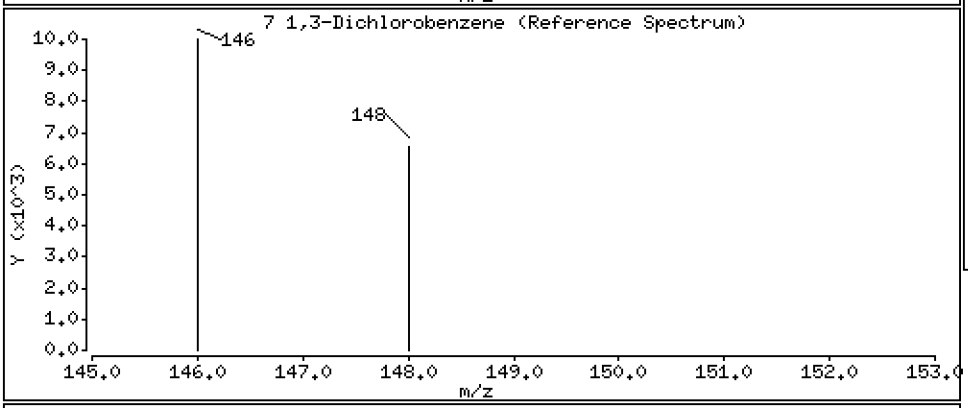
Concentration: 0.8869 ug/L

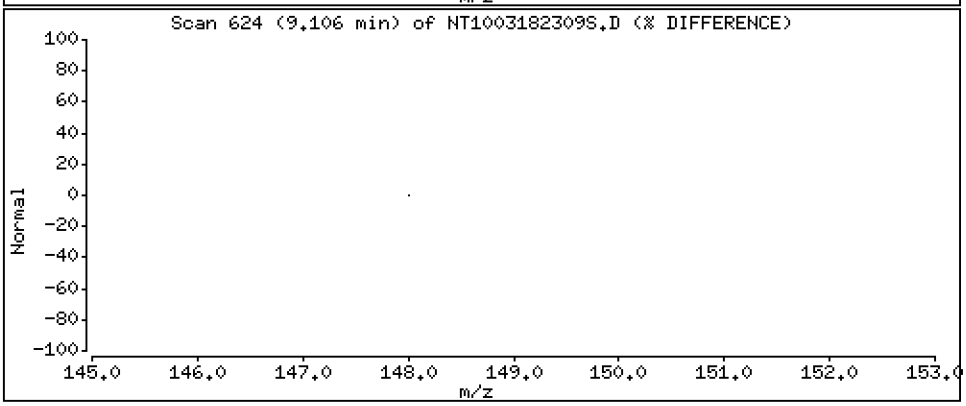












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

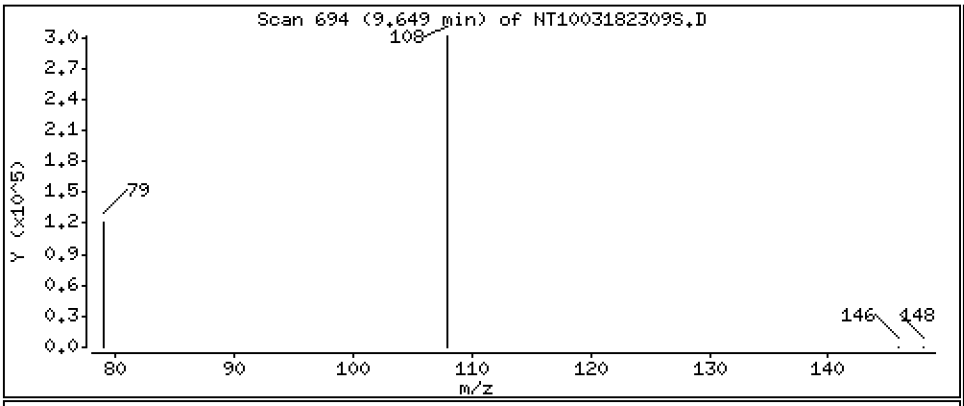
Operator: JGR

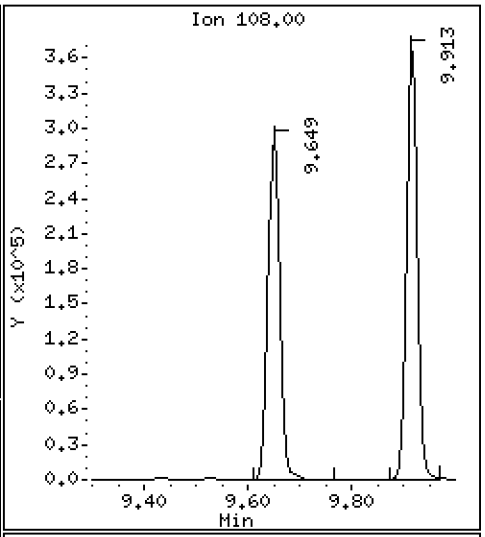
Column phase: ZB-5msi

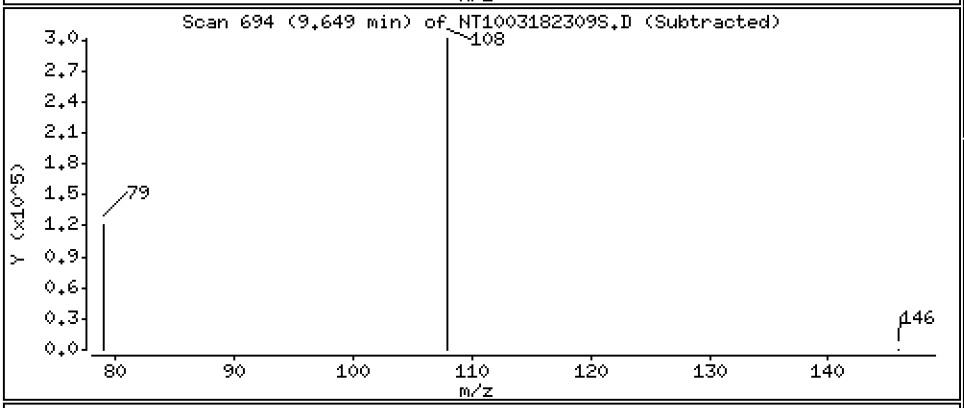
Column diameter: 0.25

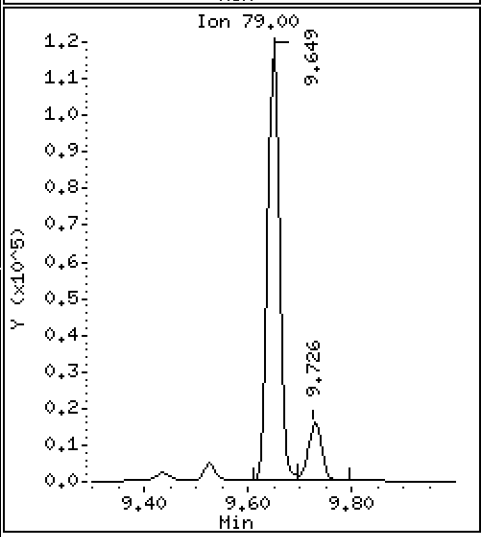
13 2-Methylphenol

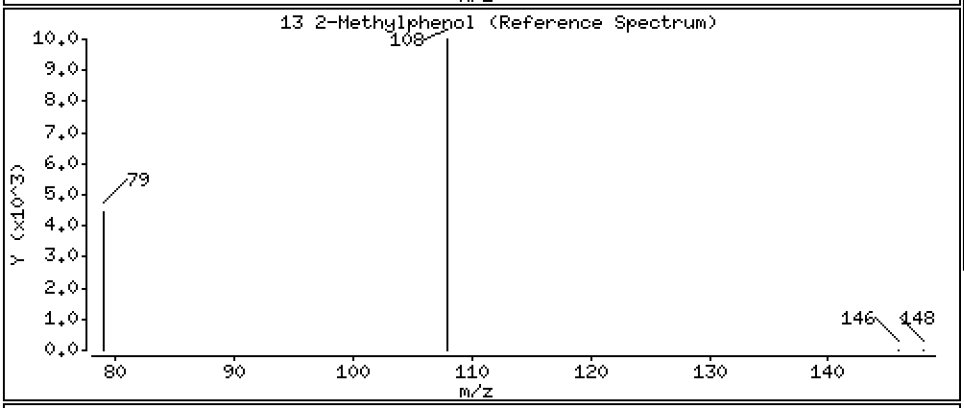
Concentration: 5.279 ug/L

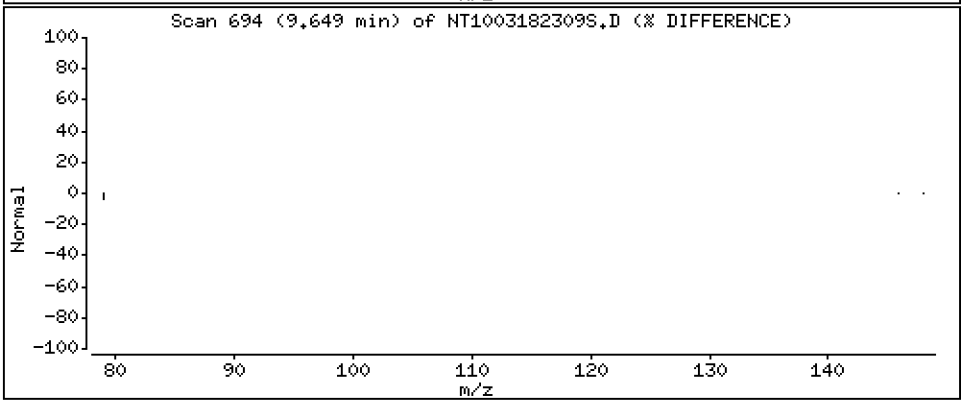












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

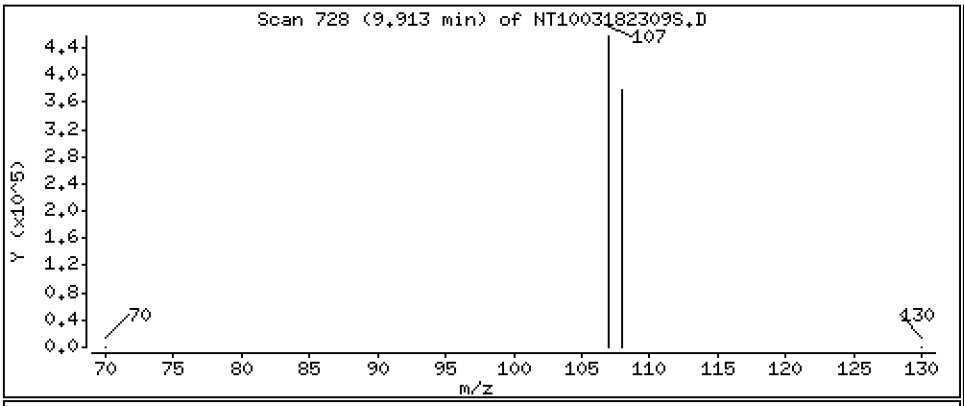
Operator: JGR

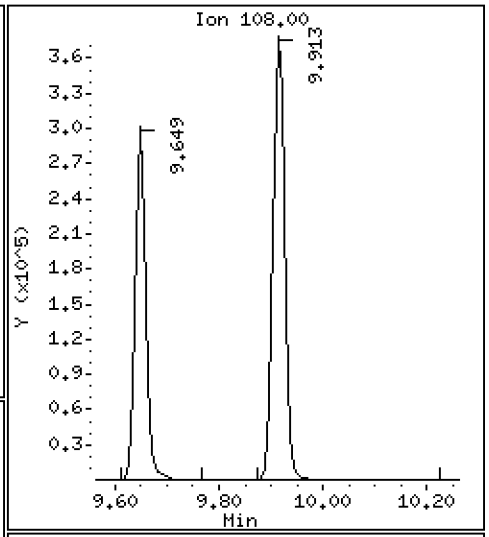
Column phase: ZB-5msi

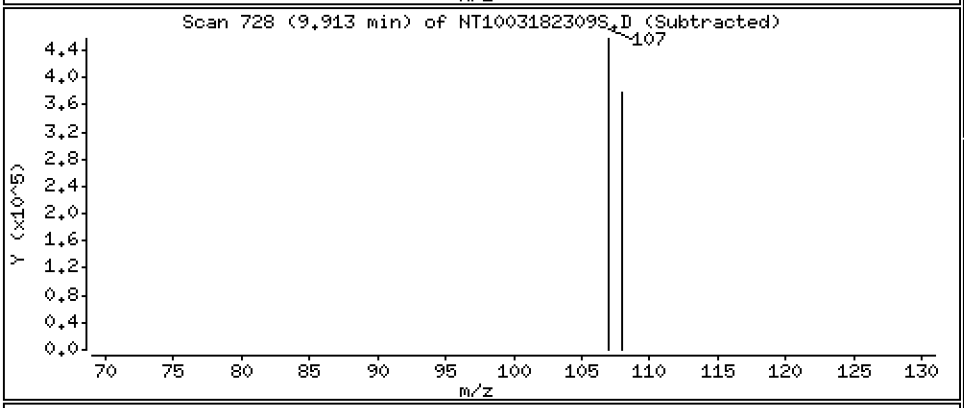
Column diameter: 0.25

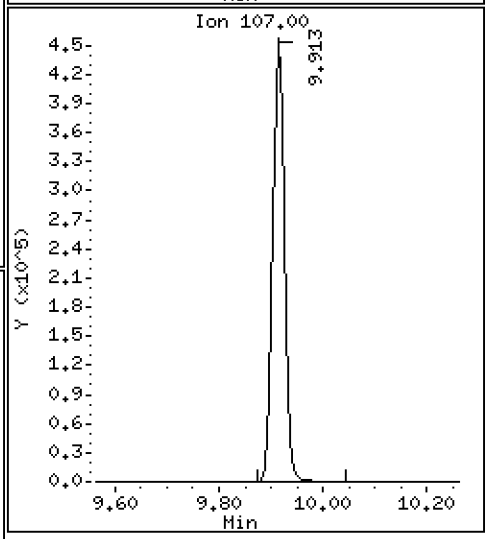
15 4-Methylphenol

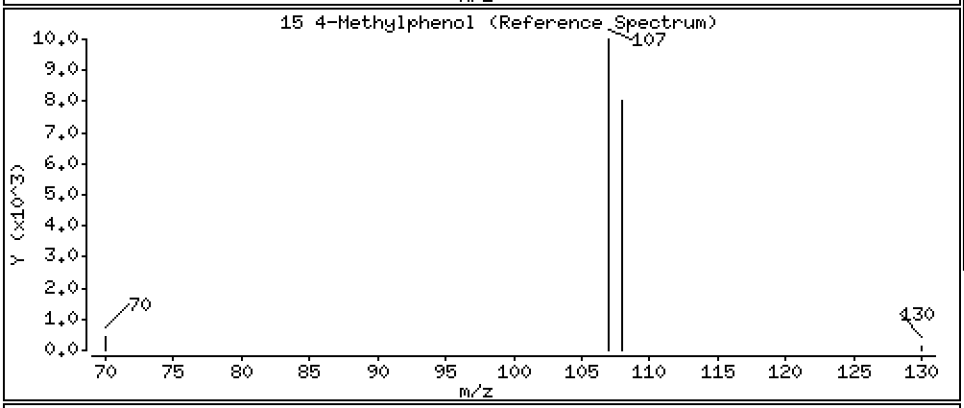
Concentration: 6.496 ug/L

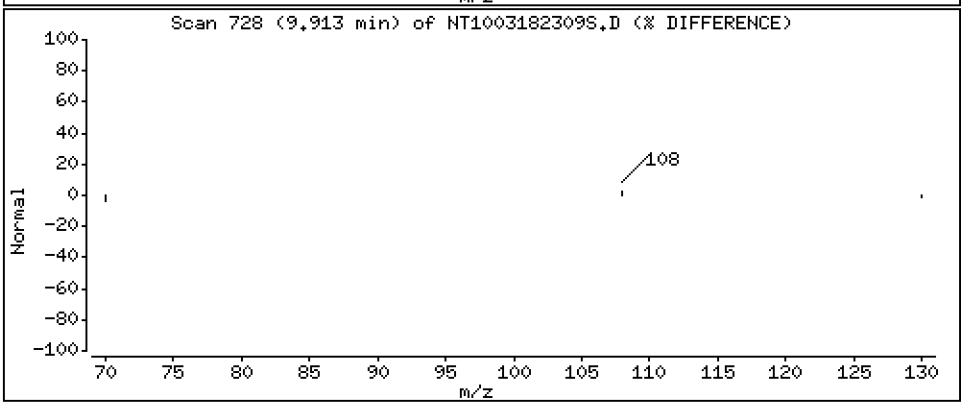












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

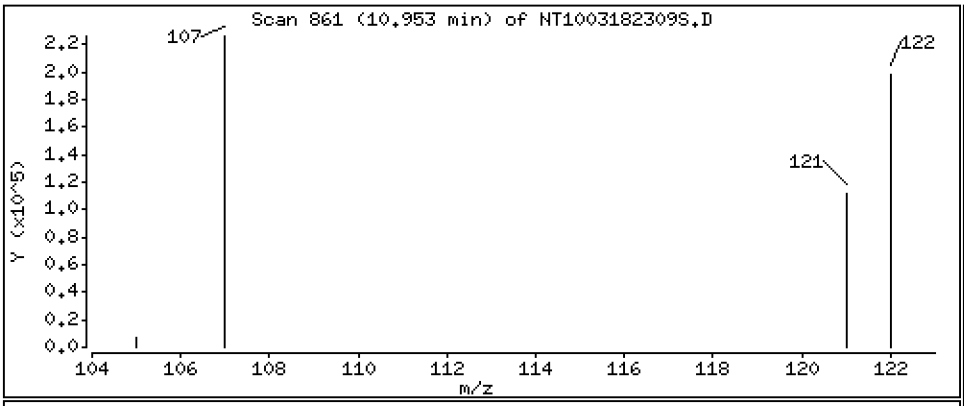
Operator: JGR

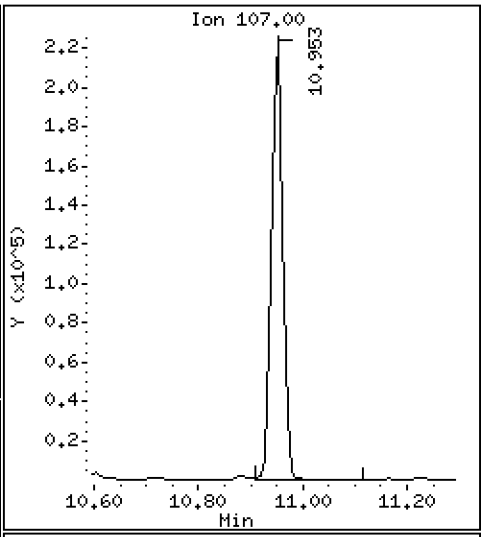
Column phase: ZB-5msi

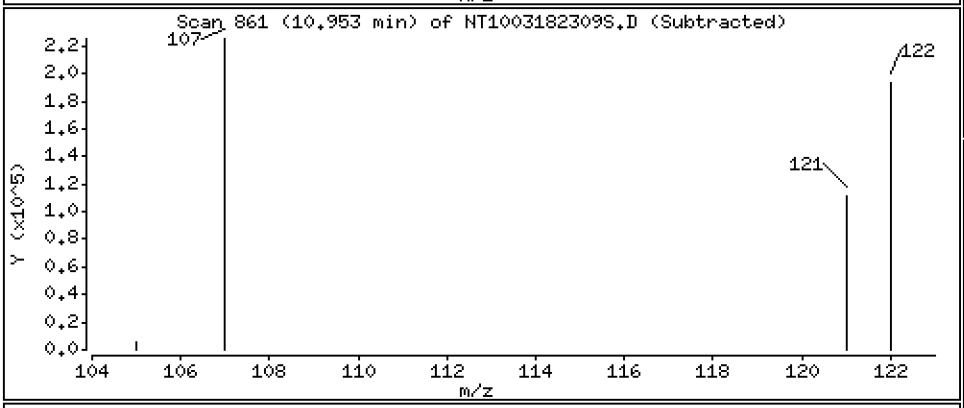
Column diameter: 0.25

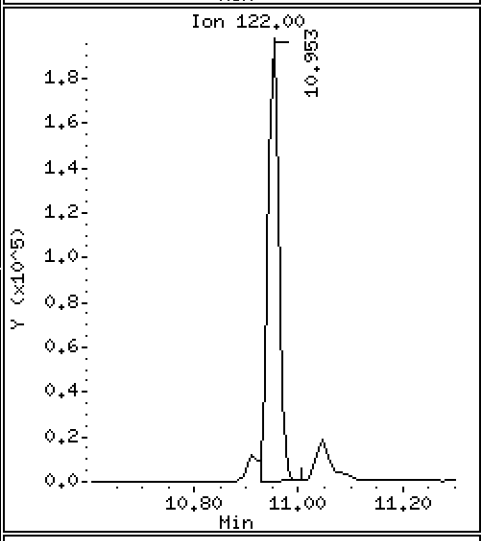
22 2,4-Dimethylphenol

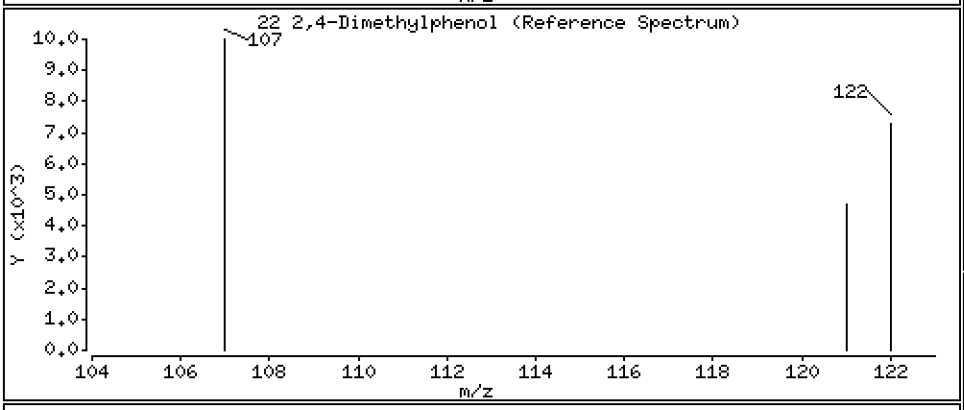
Concentration: 3.814 ug/L

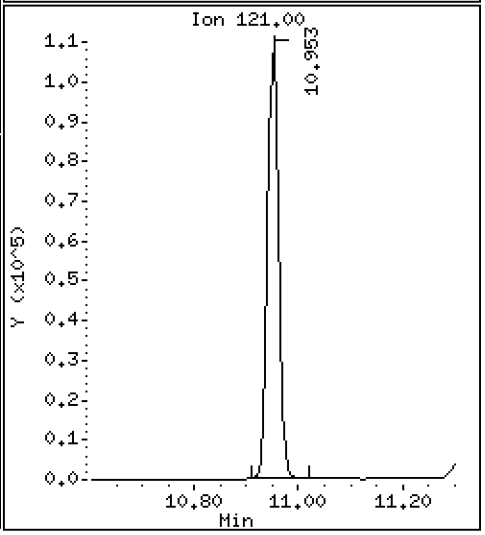


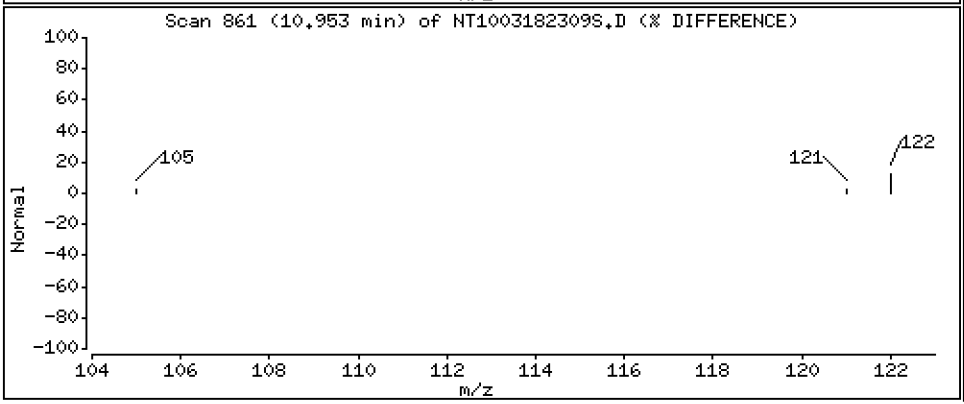












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

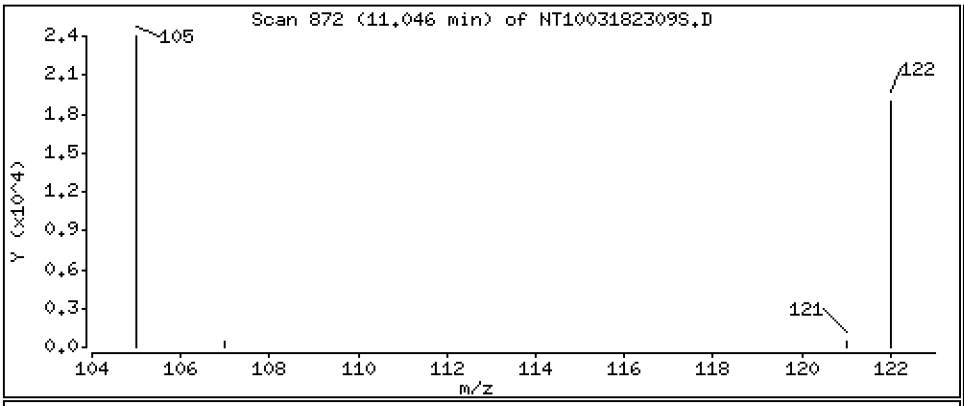
Operator: JGR

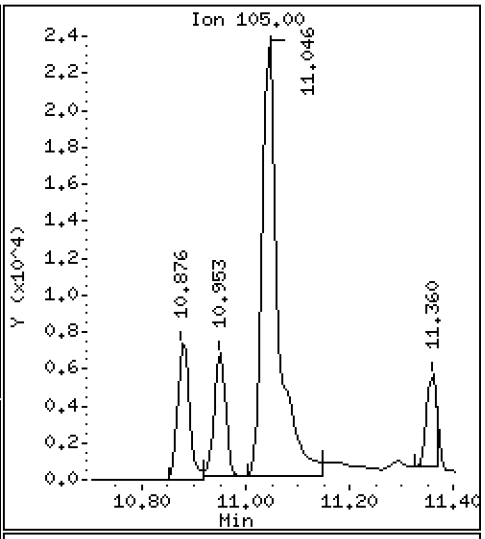
Column phase: ZB-5msi

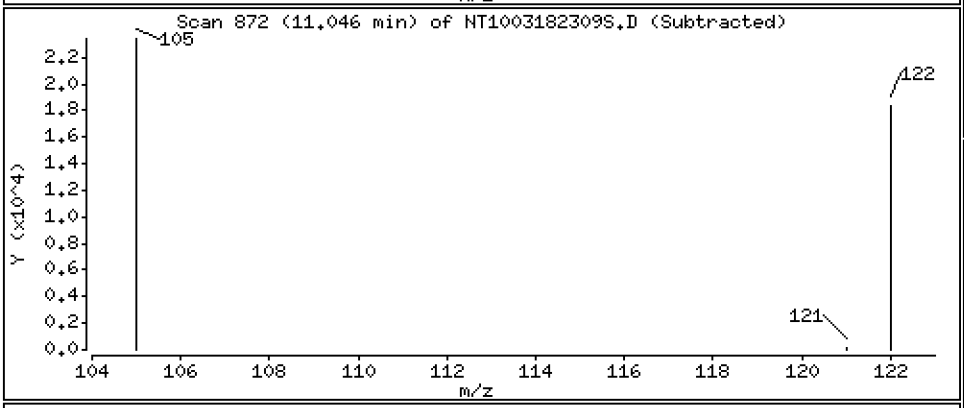
Column diameter: 0.25

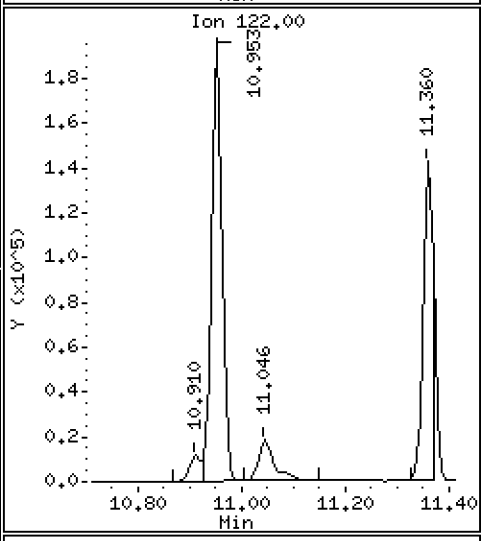
24 Benzoic acid

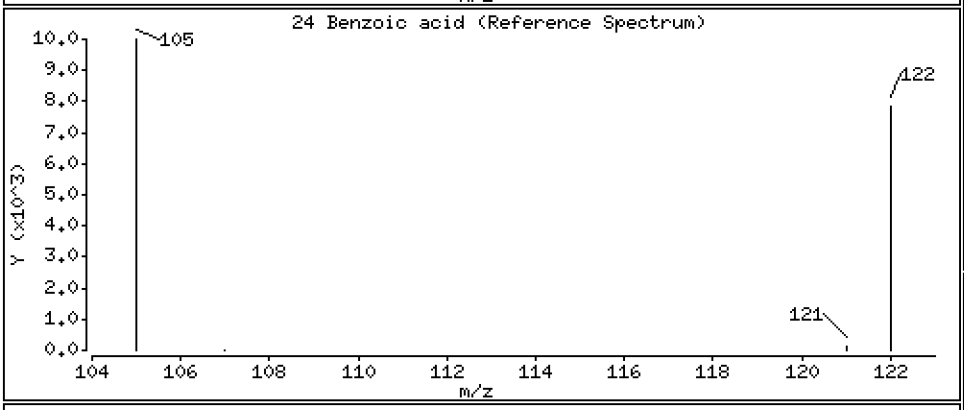
Concentration: 1.061 ug/L

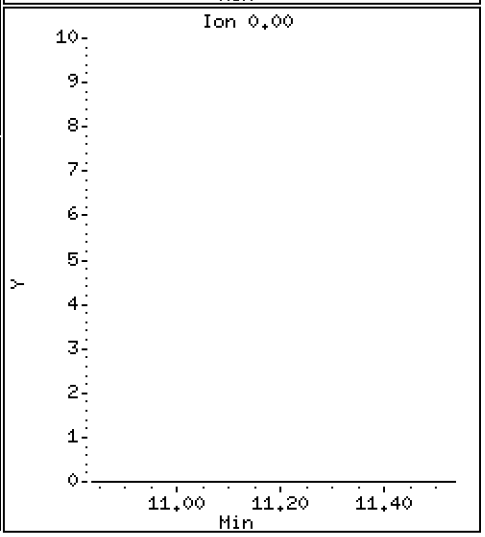


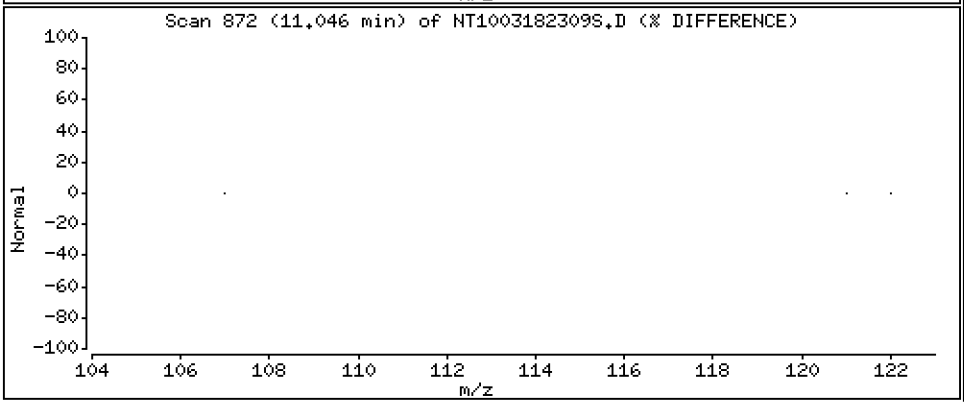












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823095.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

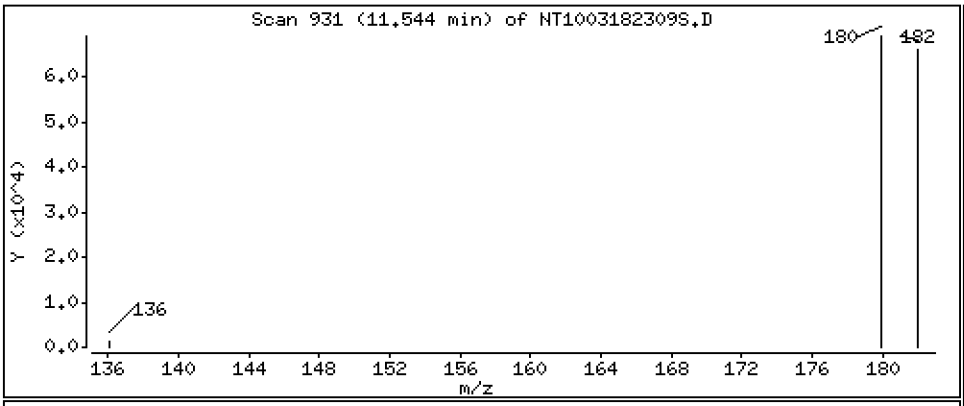
Operator: JGR

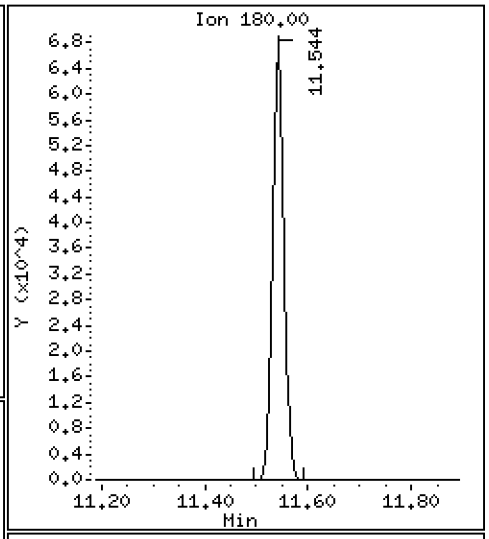
Column phase: ZB-5msi

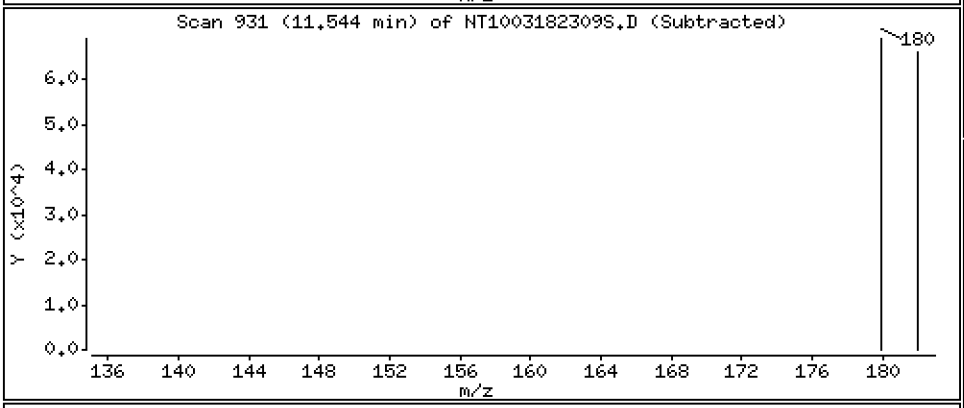
Column diameter: 0.25

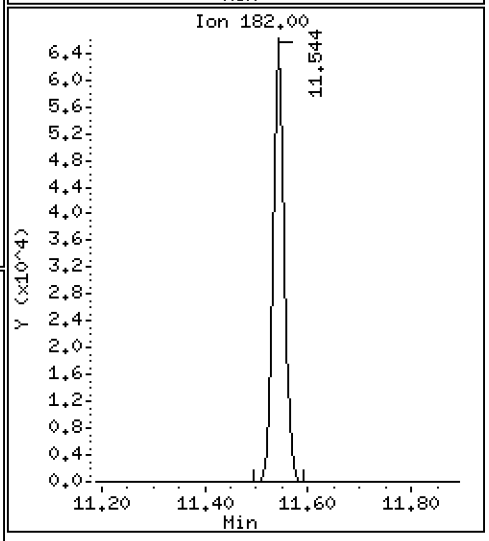
26 1,2,4-Trichlorobenzene

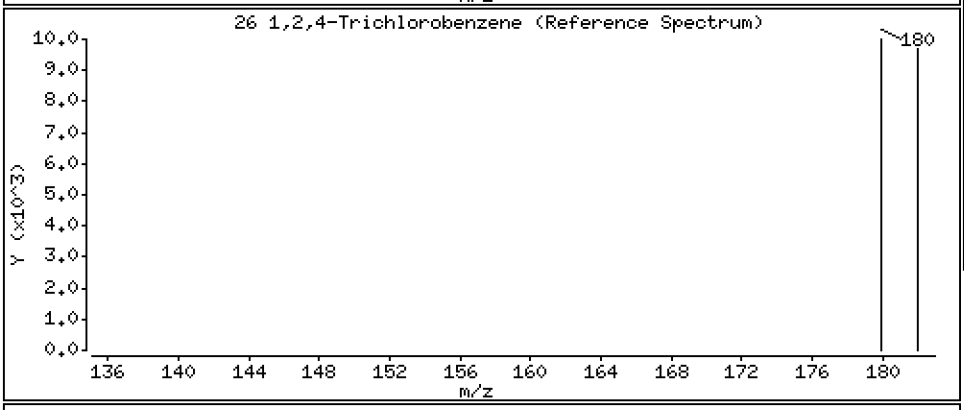
Concentration: 1.188 ug/L

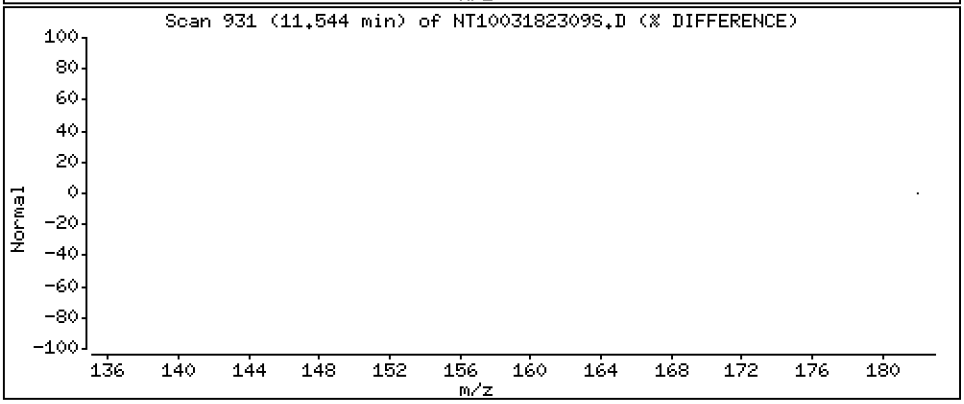












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

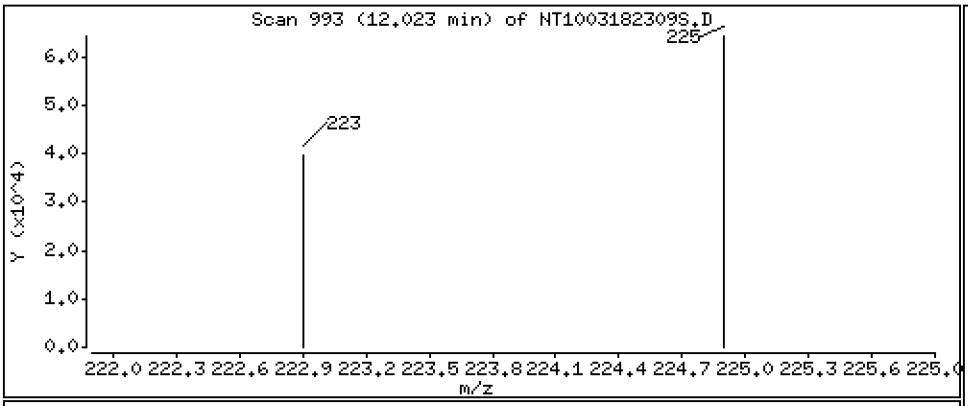
Operator: JGR

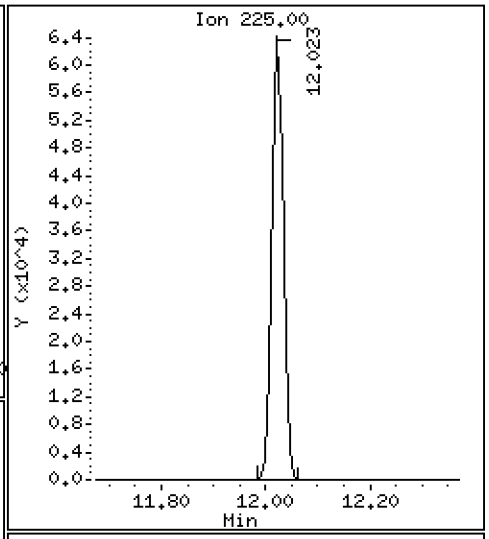
Column phase: ZB-5msi

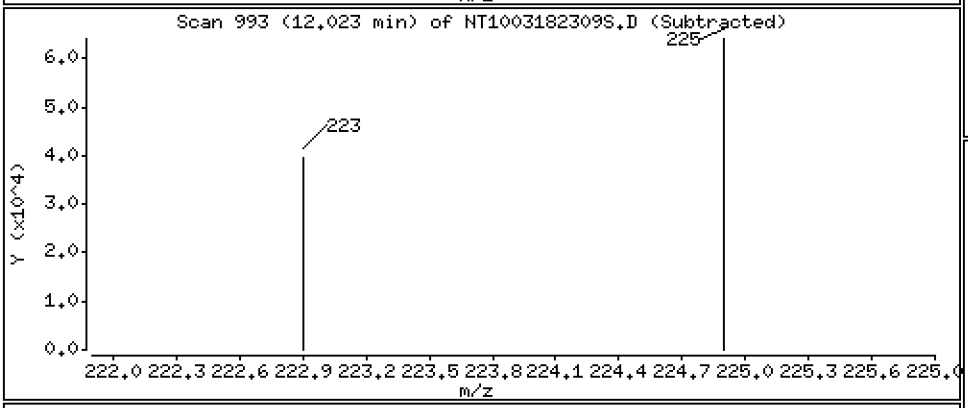
Column diameter: 0.25

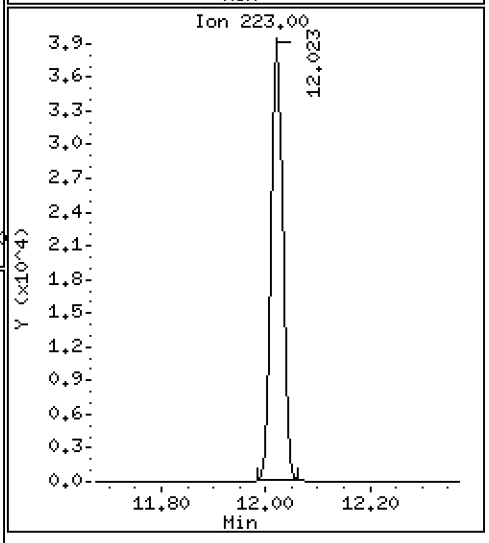
30 Hexachlorobutadiene

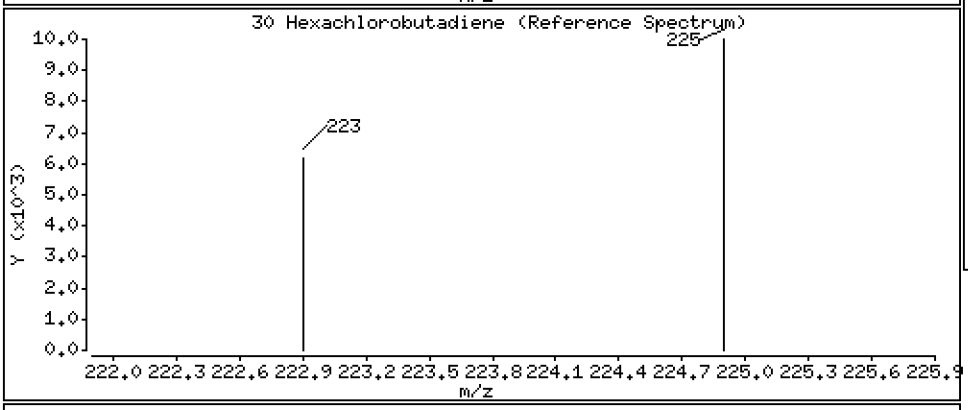
Concentration: 1.697 ug/L

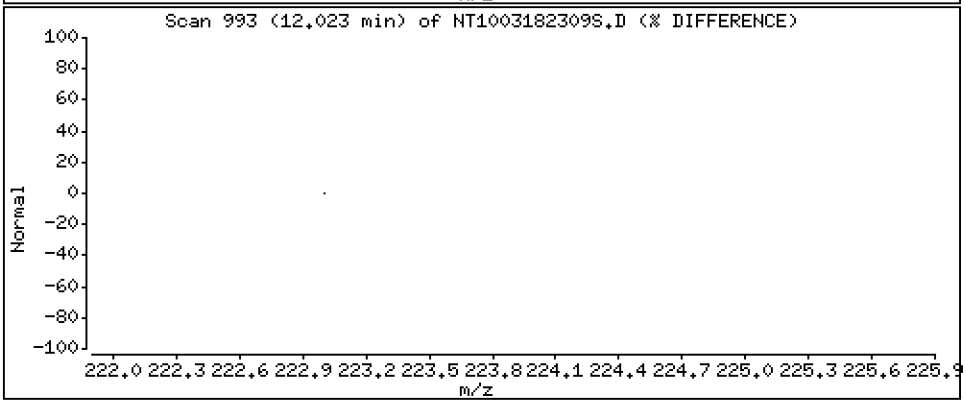












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

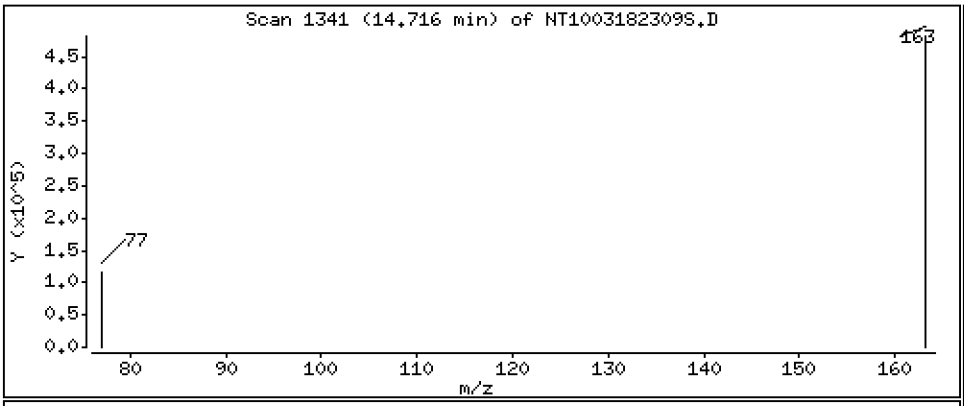
Operator: JGR

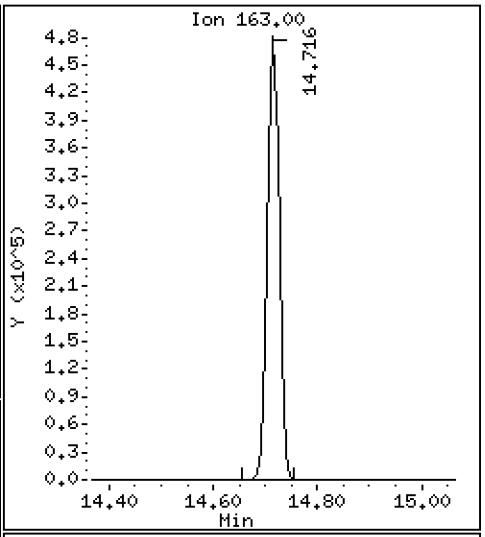
Column phase: ZB-5msi

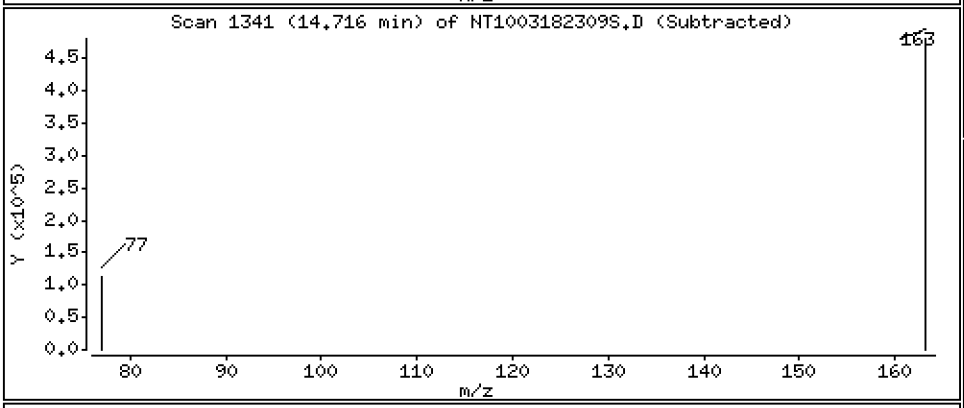
Column diameter: 0.25

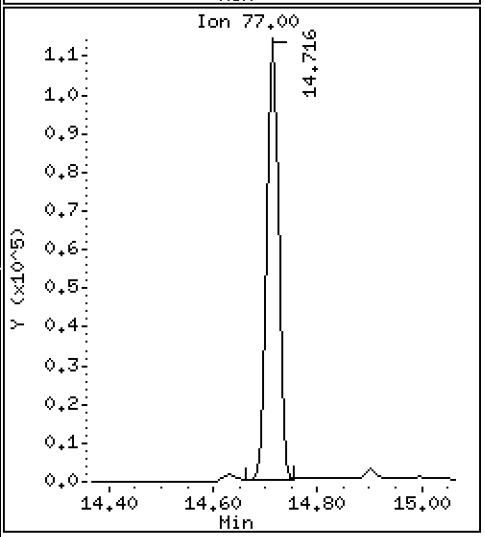
39 Dimethylphthalate

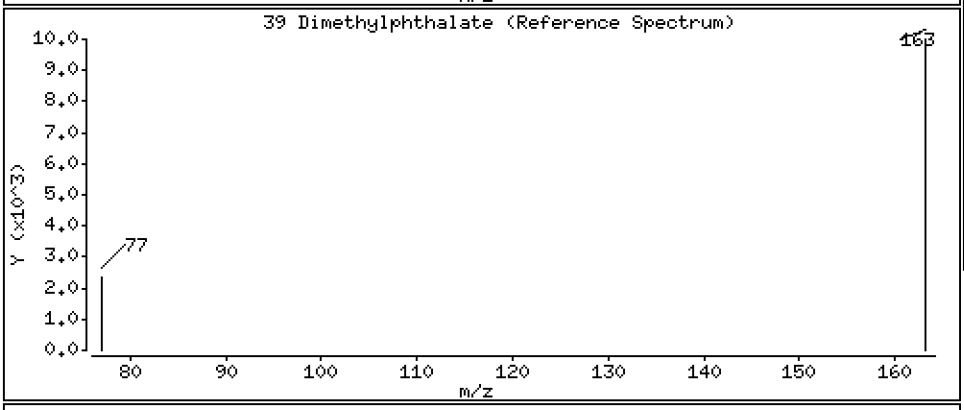
Concentration: 4.595 ug/L

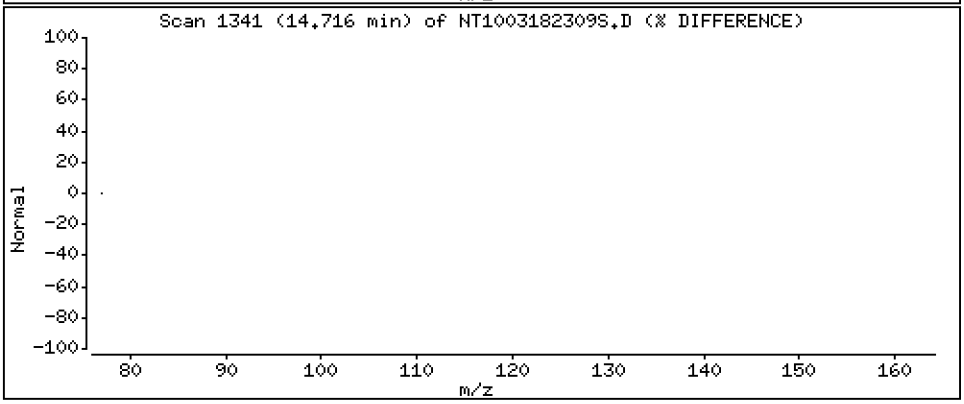












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

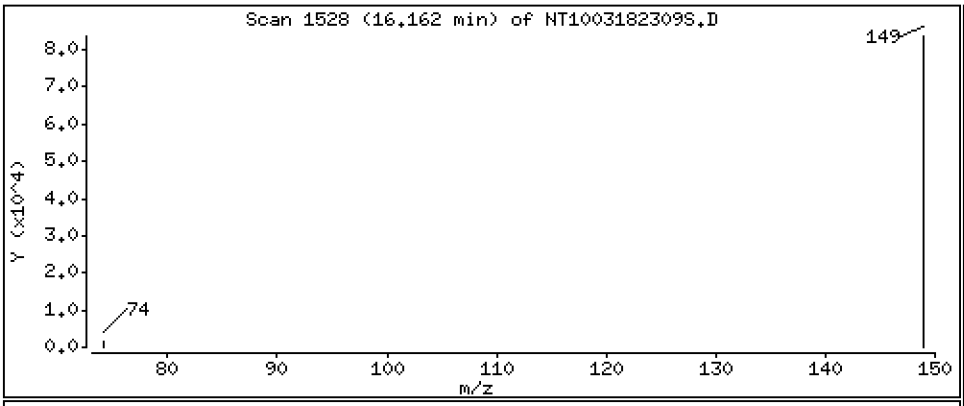
Operator: JGR

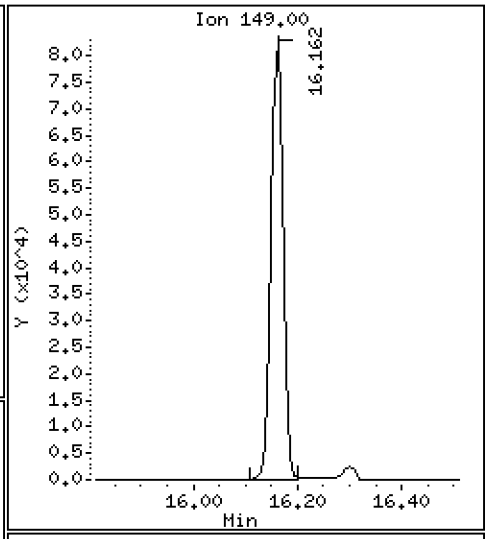
Column phase: ZB-5msi

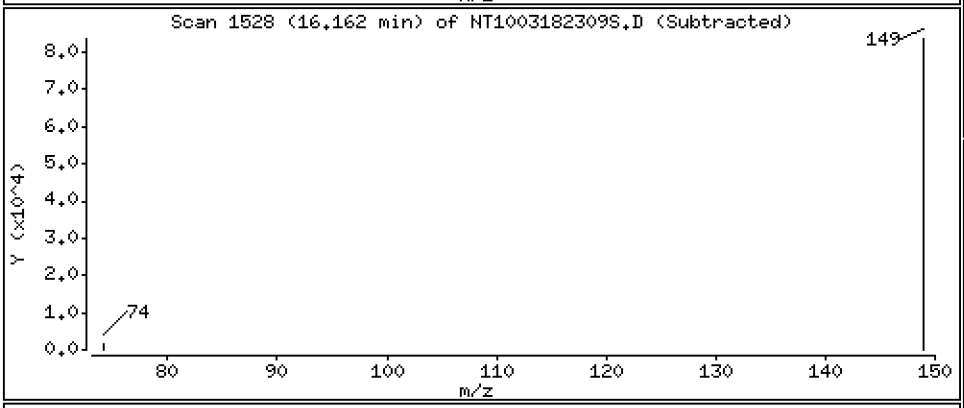
Column diameter: 0.25

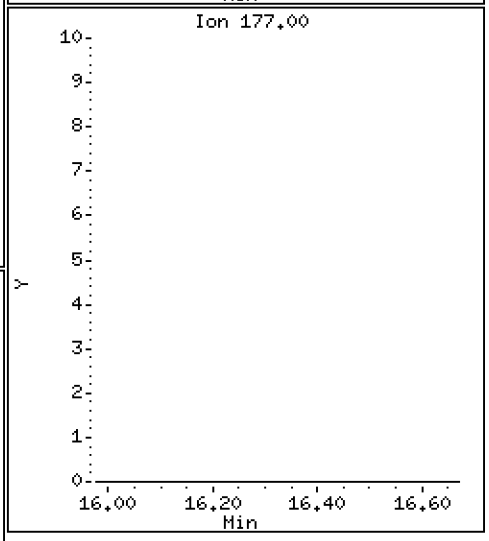
50 Diethylphthalate

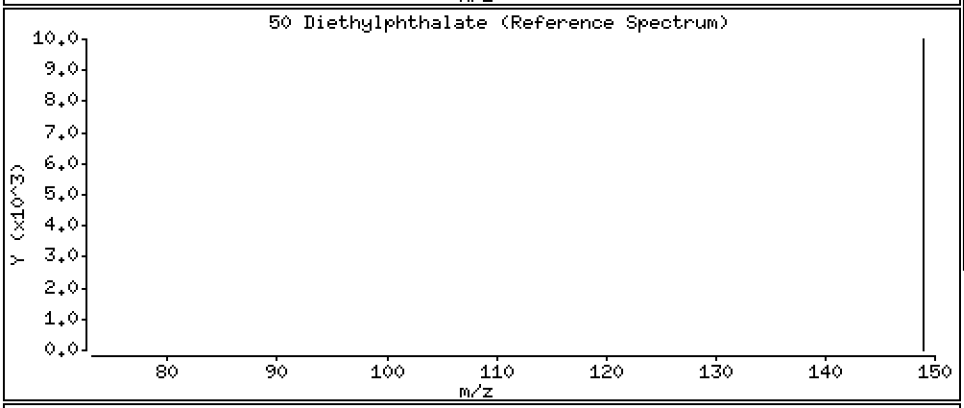
Concentration: 0.7712 ug/L

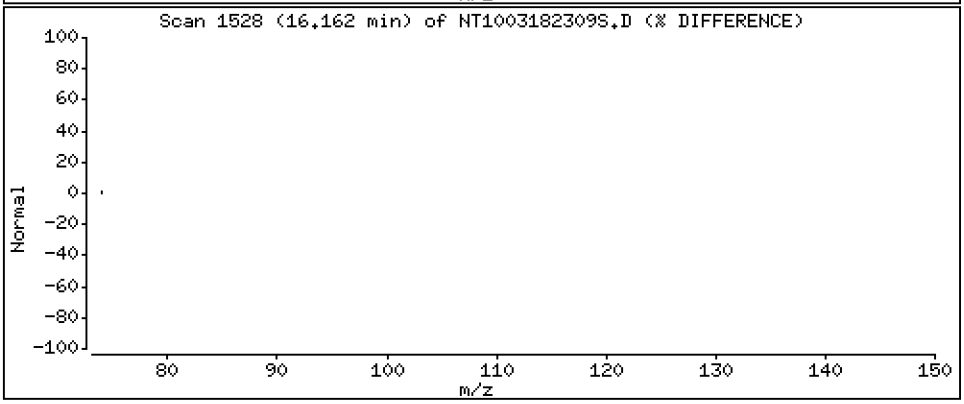












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

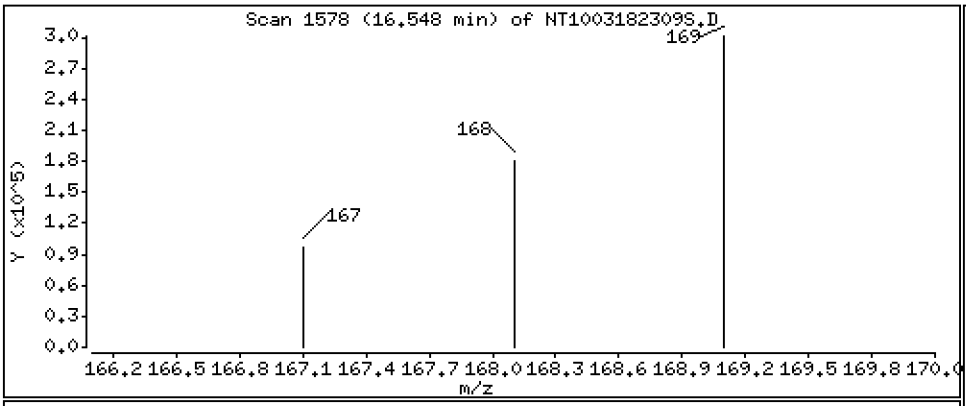
Operator: JGR

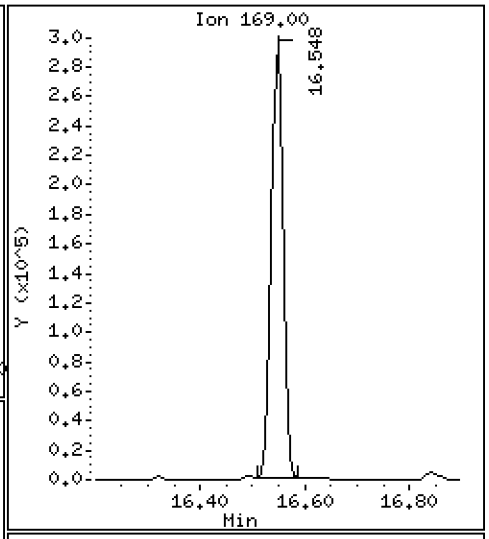
Column phase: ZB-5msi

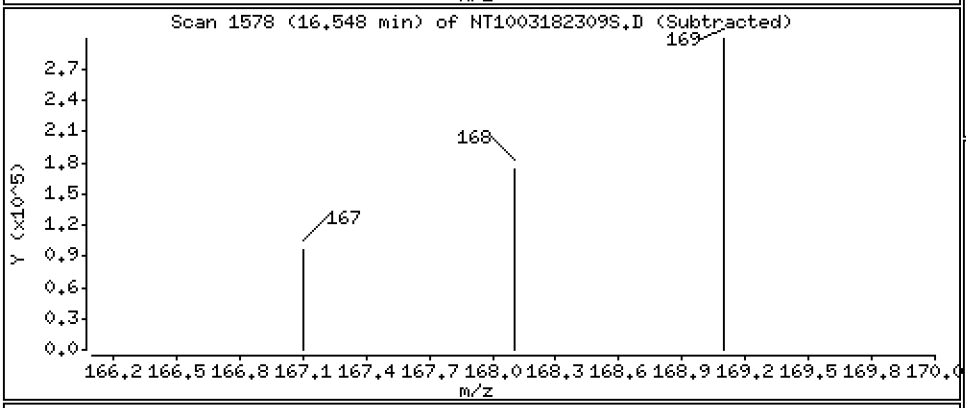
Column diameter: 0.25

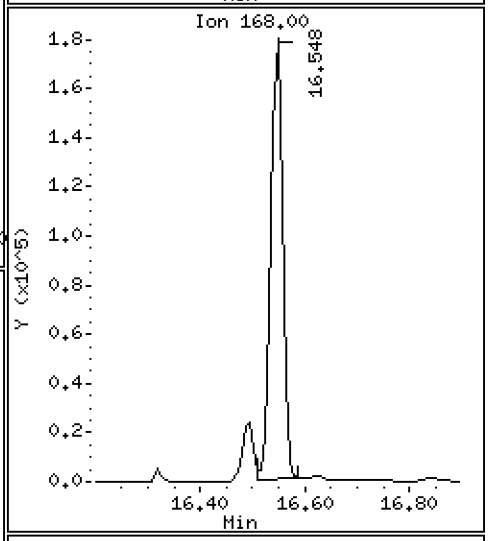
54 N-Nitrosodiphenylamine

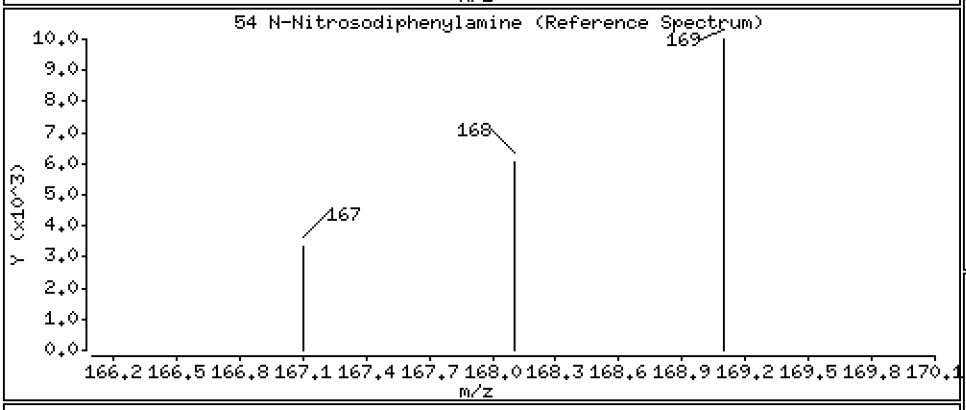
Concentration: 3.399 ug/L

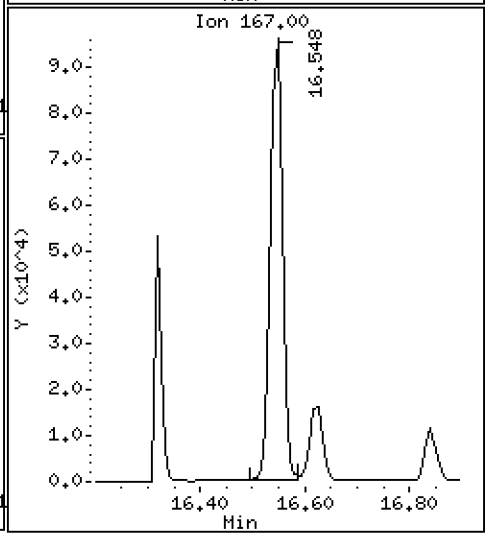


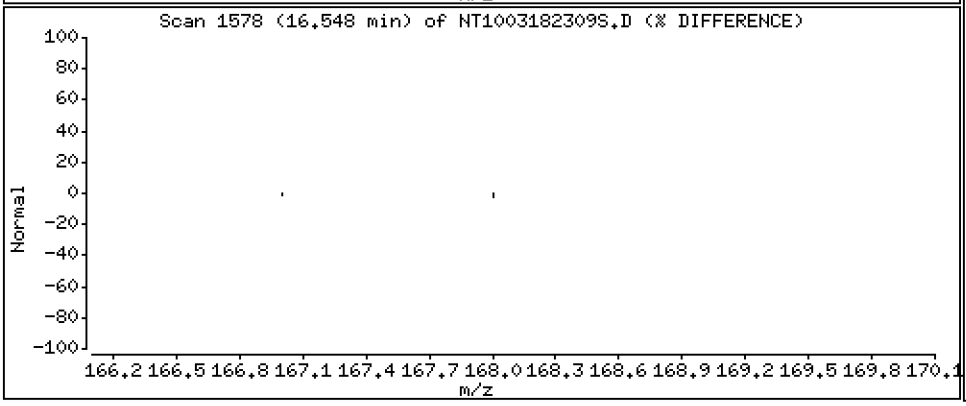












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

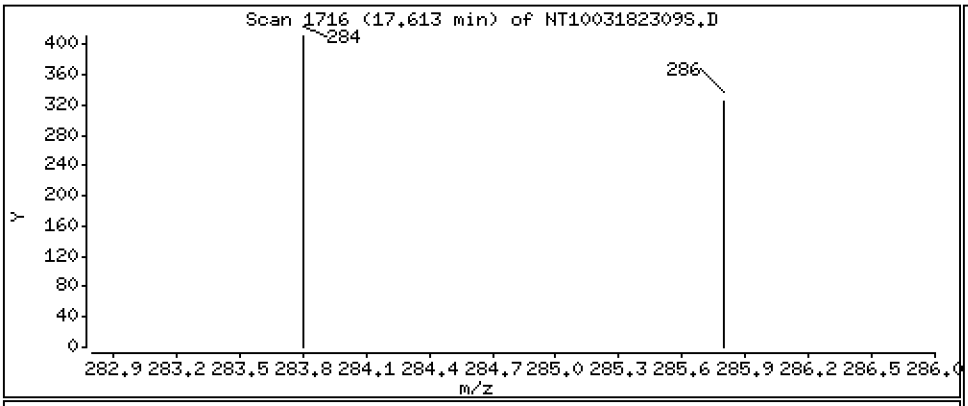
Operator: JGR

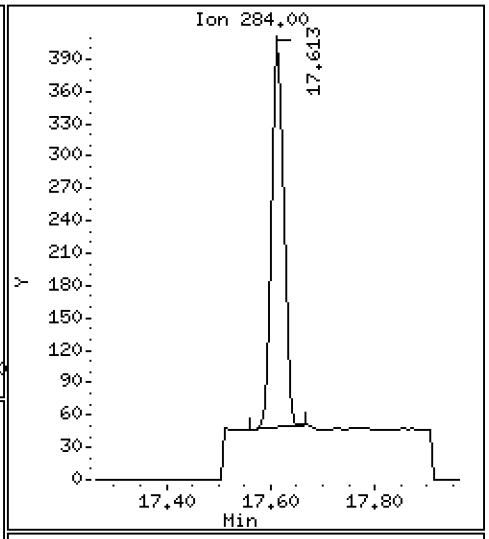
Column phase: ZB-5msi

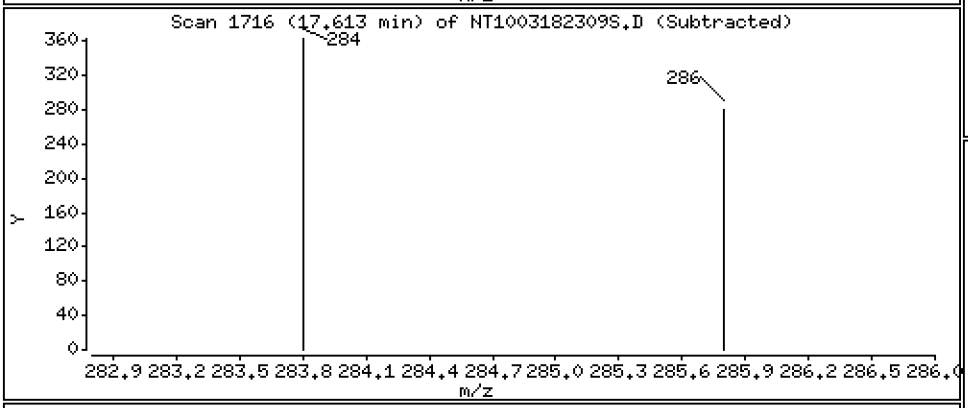
Column diameter: 0.25

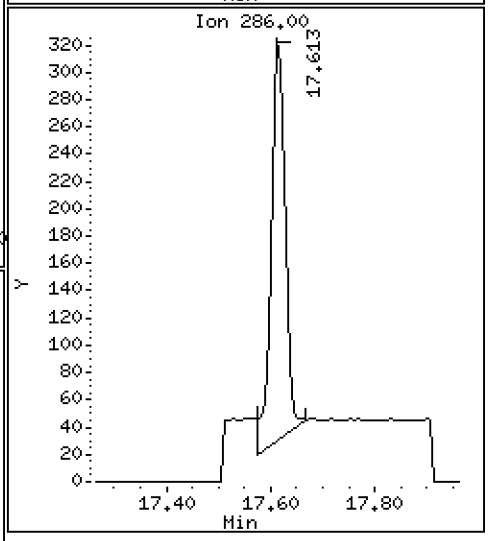
57 Hexachlorobenzene

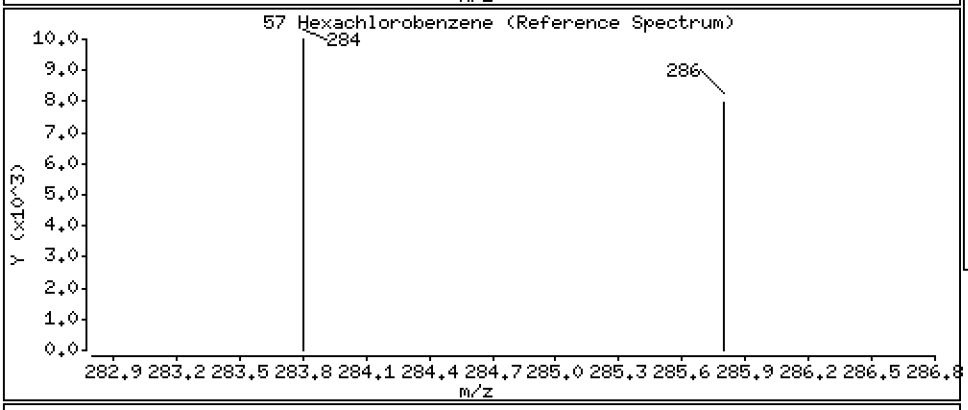
Concentration: 0.009767 ug/L

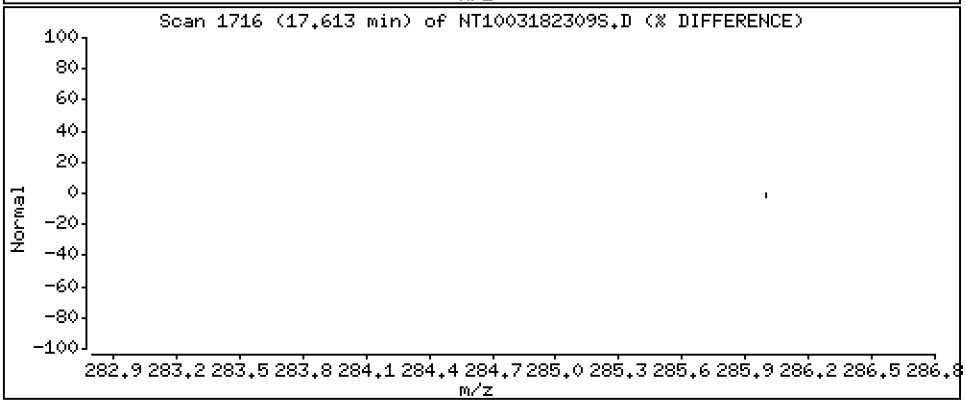












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

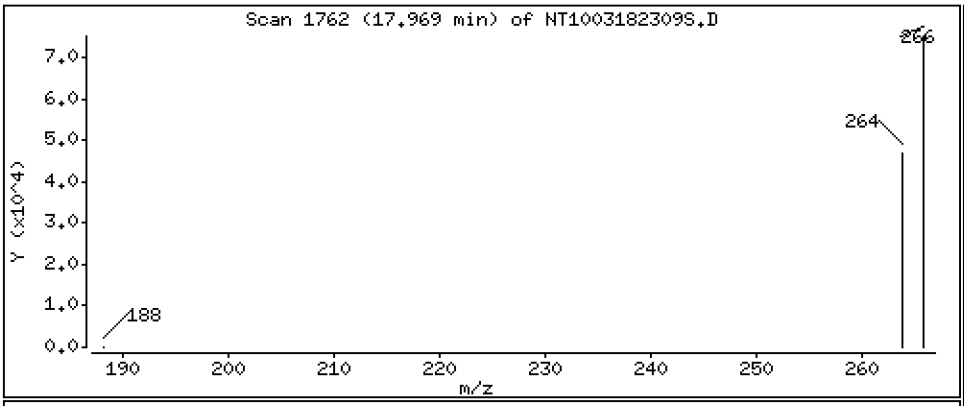
Operator: JGR

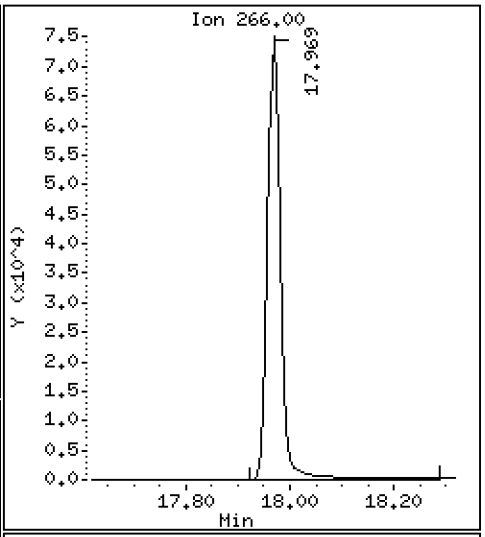
Column phase: ZB-5msi

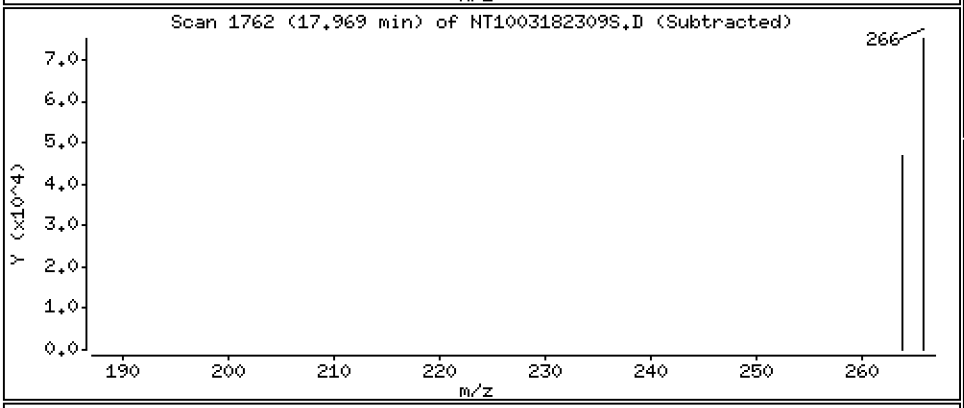
Column diameter: 0.25

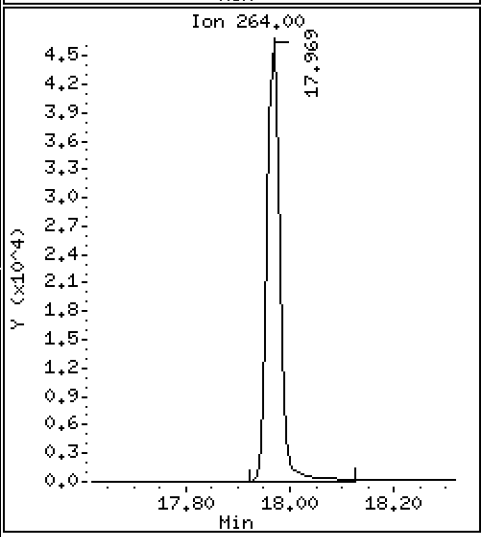
58 Pentachlorophenol

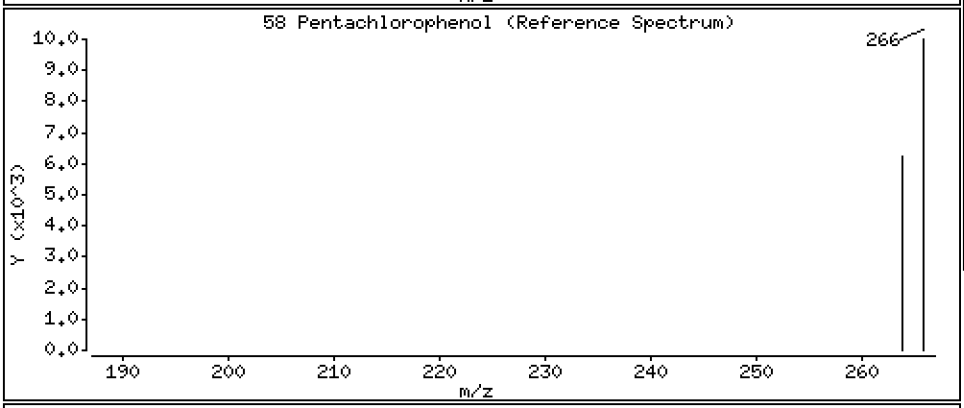
Concentration: 3.814 ug/L

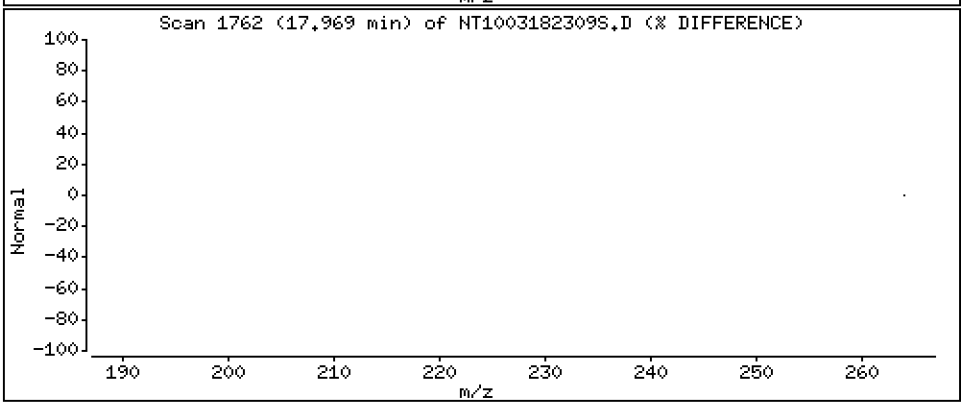












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Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

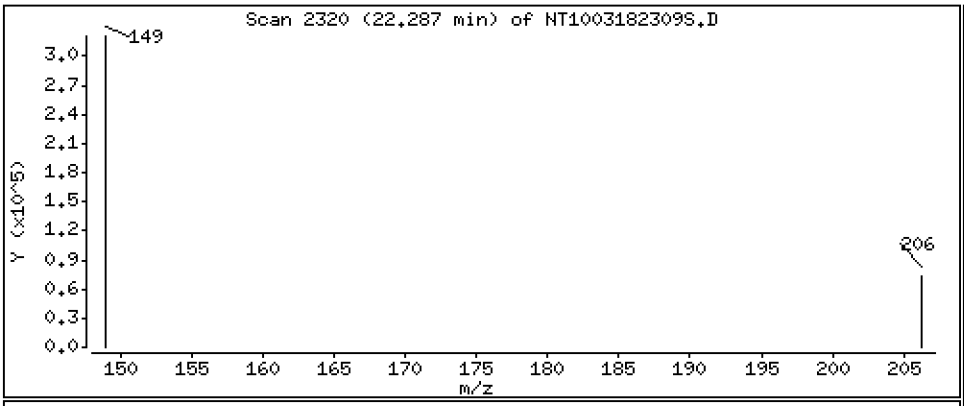
Operator: JGR

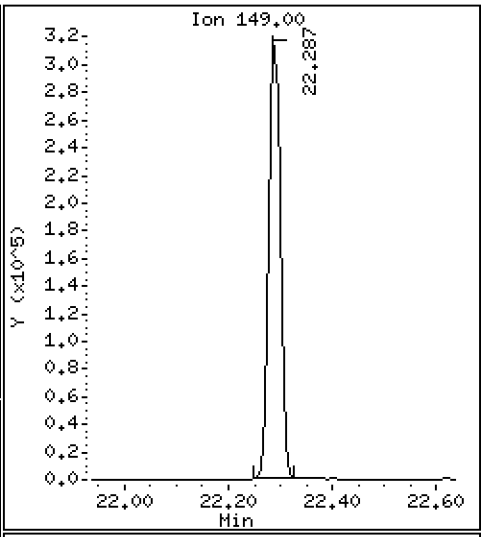
Column phase: ZB-5msi

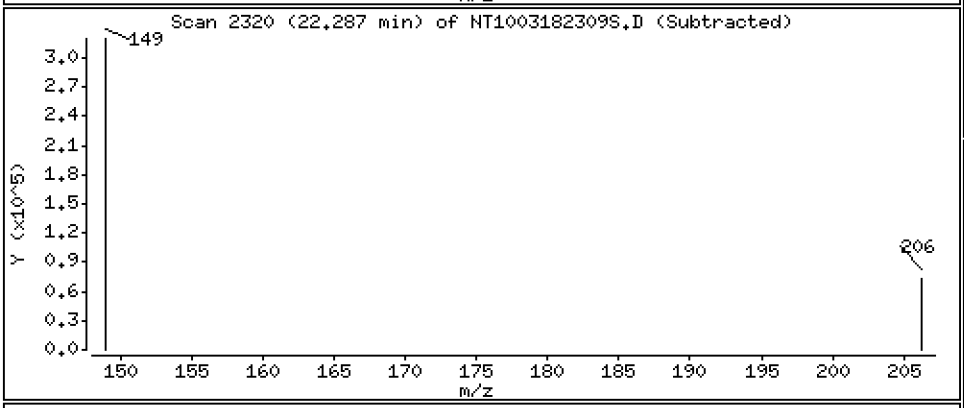
Column diameter: 0.25

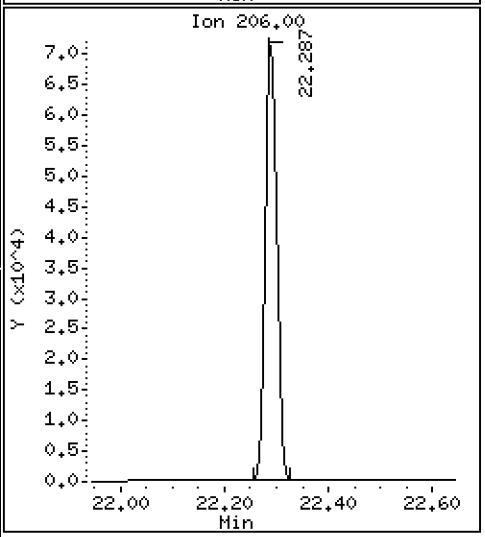
67 Butylbenzylphthalate

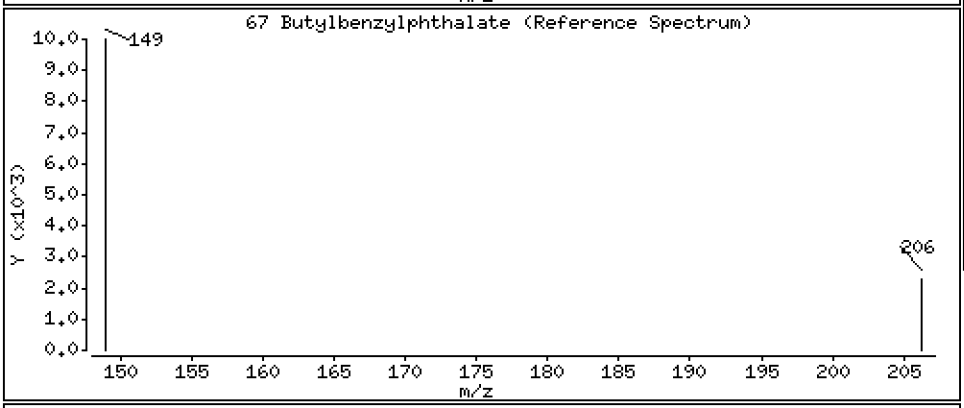
Concentration: 4.389 ug/L

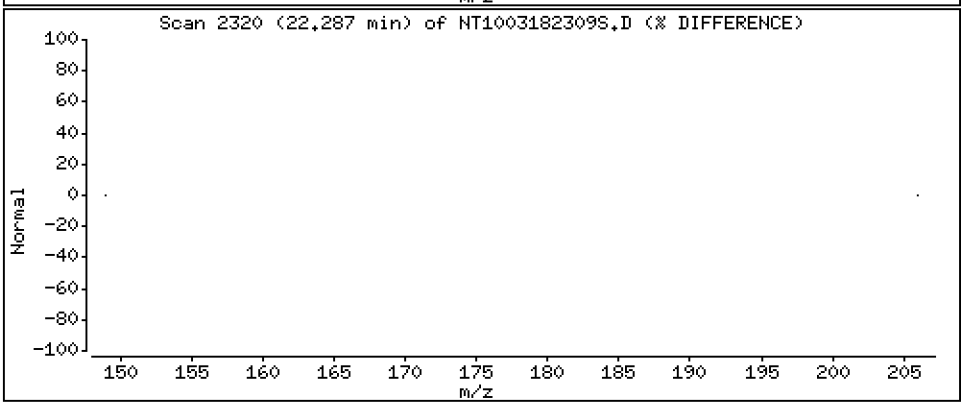












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182309S.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

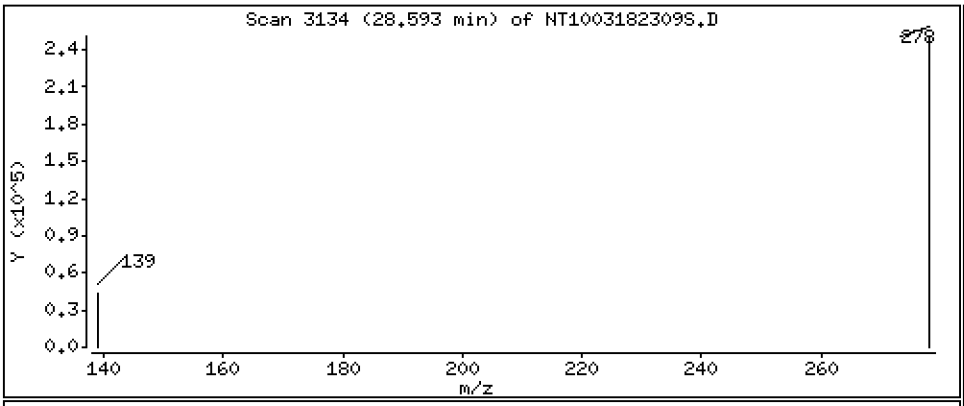
Operator: JGR

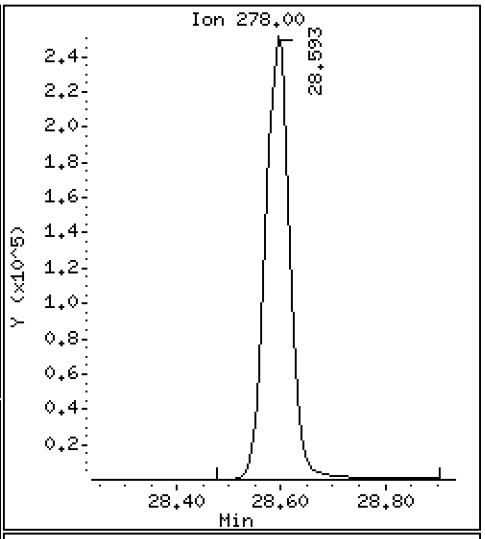
Column phase: ZB-5msi

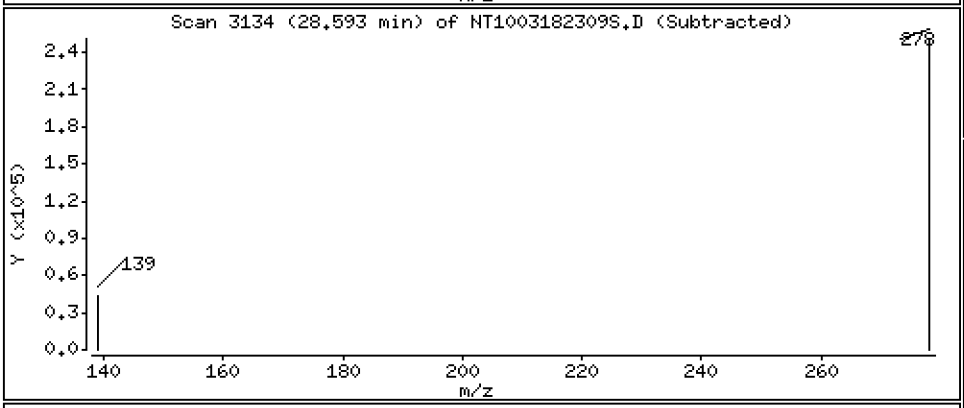
Column diameter: 0.25

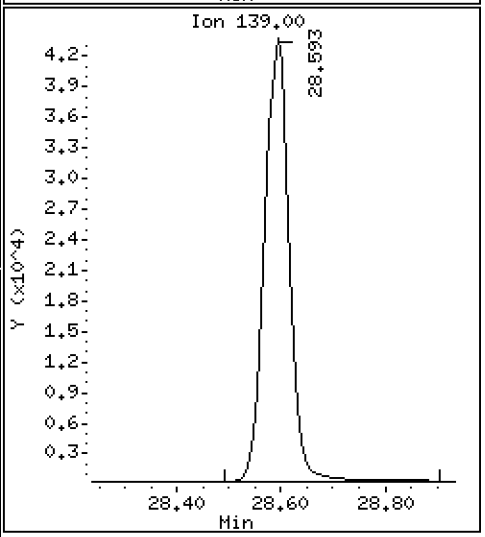
79 Dibenzo(a,h)anthracene

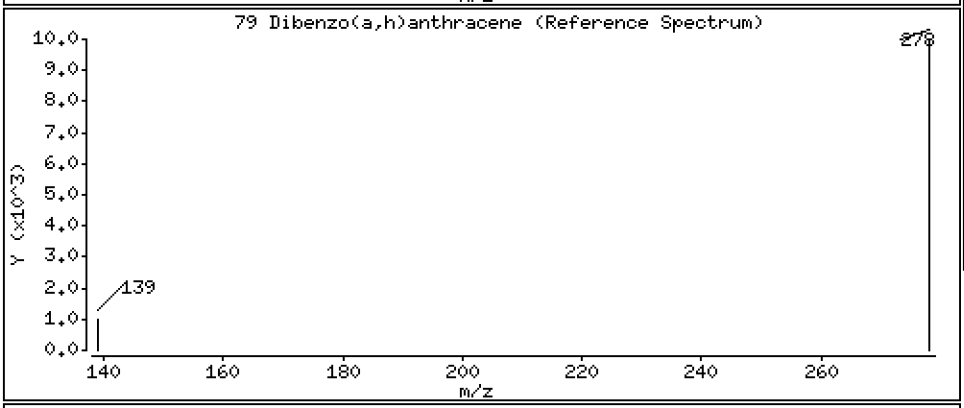
Concentration: 3.313 ug/L

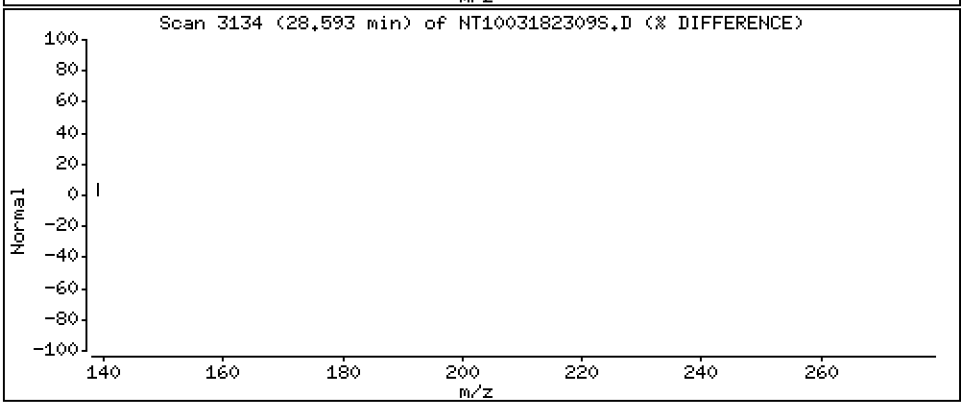












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182309S.D

Date : 18-MAR-2023 22:50

Client ID:

Instrument: nt10.i

Sample Info: BLB0579-SRM2

Volume Injected (uL): 1.0

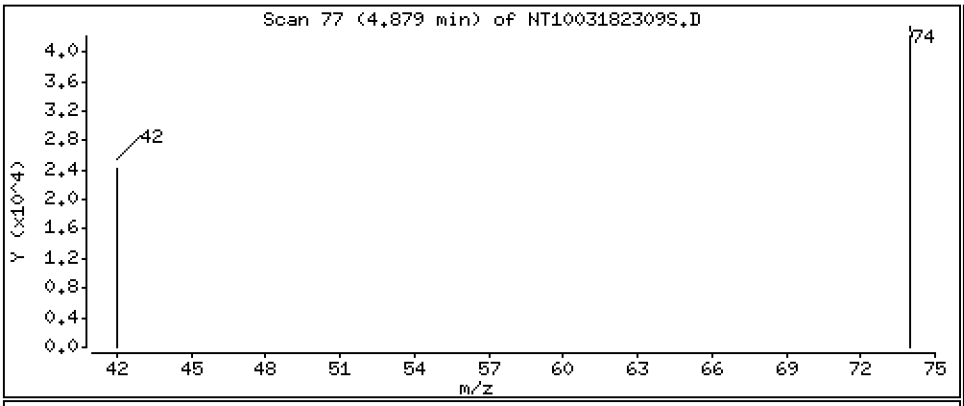
Operator: JGR

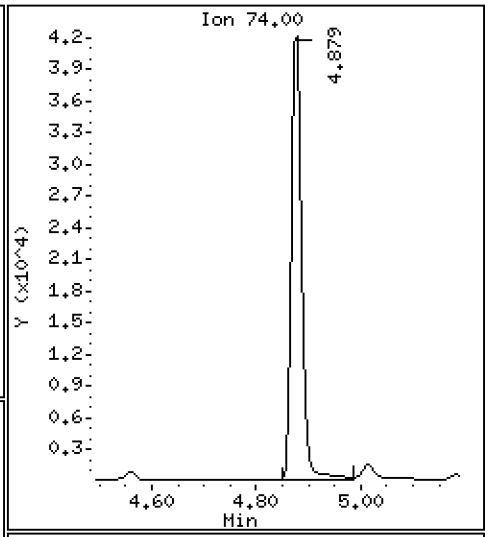
Column phase: ZB-5msi

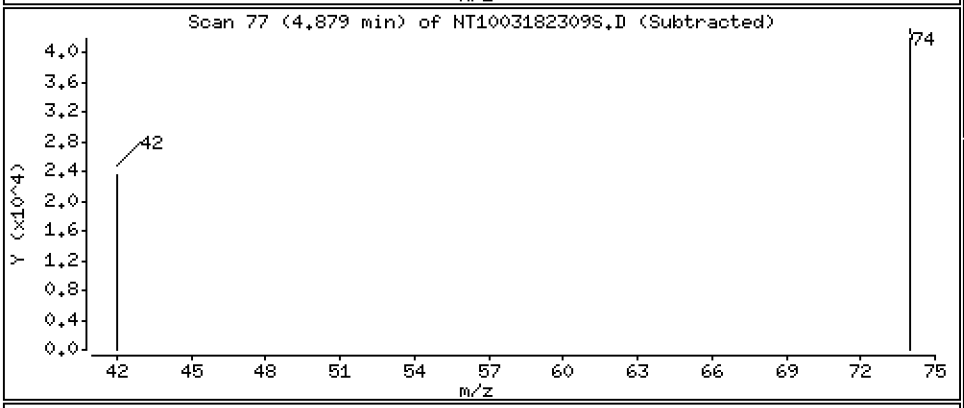
Column diameter: 0.25

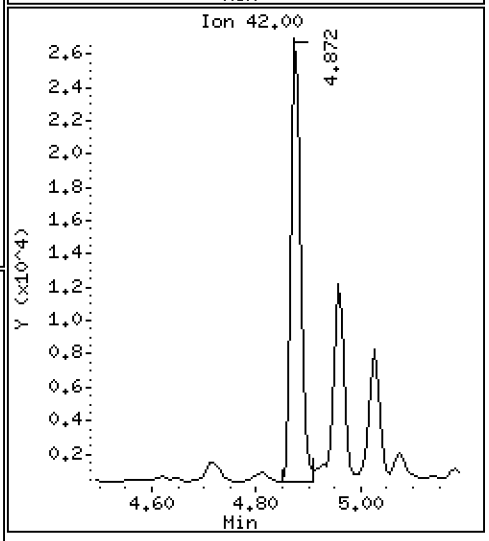
90 N-Nitrosodimethylamine

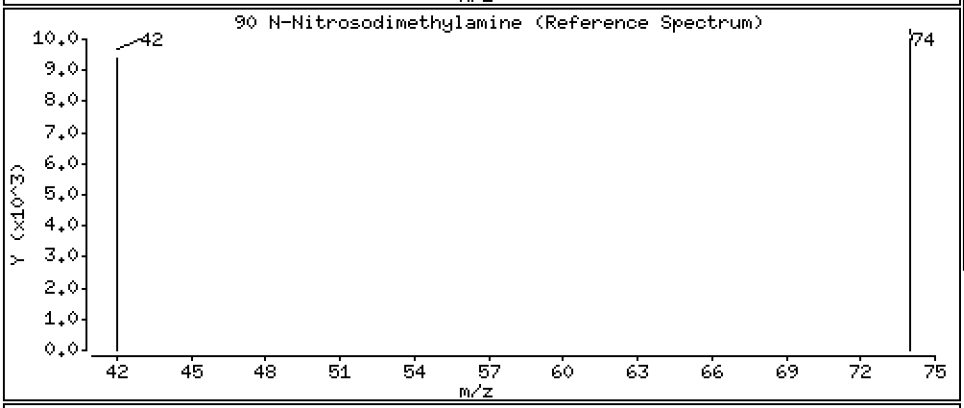
Concentration: 1.110 ug/L

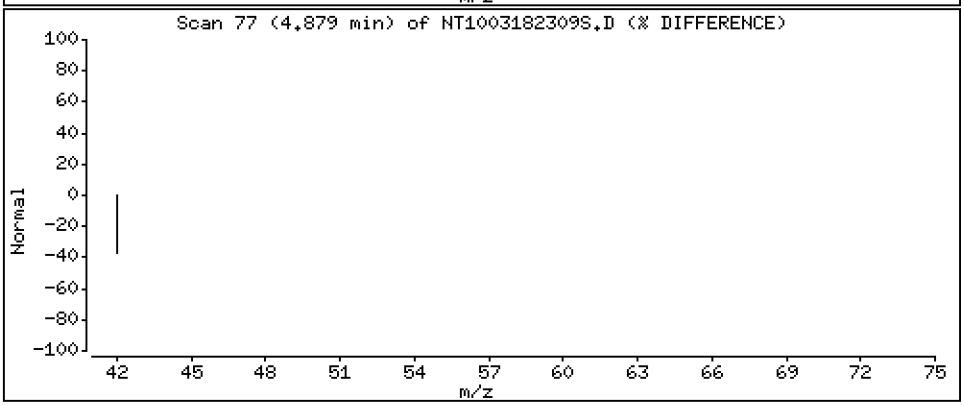












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182309S.D
Lab Smp Id: BLB0579-SRM2
Inj Date : 18-MAR-2023 22:50 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : BLB0579-SRM2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.972	6.957	(0.761)	491993	5.63377	5.634(R)
3	Phenol	94	8.549	8.541	(0.933)	290856	2.42764	2.428
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	99433	0.88692	0.8869
* 8	1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	287982	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	79	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
13	2-Methylphenol	108	9.648	9.648	(1.052)	438267	5.27919	5.279
15	4-Methylphenol	108	9.912	9.912	(1.081)	560390	6.49612	6.496
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	10.952	10.943	(0.942)	336478	3.81352	3.814
24	Benzoic acid	105	11.046	11.053	(0.950)	51377	1.06095	1.061
26	1,2,4-Trichlorobenzene	180	11.543	11.542	(0.993)	105451	1.18805	1.188
* 27	Naphthalene-d8	136	11.628	11.627	(1.000)	1020771	4.00000	
30	Hexachlorobutadiene	225	12.022	12.021	(1.034)	91583	1.69712	1.697
39	Dimethylphthalate	163	14.715	14.714	(0.967)	720852	4.59456	4.595
* 42	Acenaphthene-d10	162	15.211	15.210	(1.000)	497172	4.00000	
50	Diethylphthalate	149	16.161	16.161	(1.063)	125340	0.77116	0.7712
54	N-Nitrosodiphenylamine	169	16.548	16.547	(0.907)	437623	3.39858	3.399
57	Hexachlorobenzene	284	17.612	17.611	(0.966)	563	0.00977	0.009767(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.968	17.968	(0.985)	124079	3.81351	3.814
*	59 Phenanthrene-d10	188	18.239	18.231	(1.000)	959741	4.00000	
$	66 Terphenyl-d14	244	21.365	21.364	(0.918)	601535	4.90624	4.906(R)
	67 Butylbenzylphthalate	149	22.286	22.285	(0.957)	456838	4.38856	4.389
*	69 Chrysene-d12	240	23.278	23.269	(1.000)	752482	4.00000	
*	77 Perylene-d12	264	25.910	25.909	(1.000)	772131	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.593	28.584	(1.104)	823746	3.31294	3.313
	90 N-Nitrosodimethylamine	74	4.879	4.840	(0.532)	61459	1.10962	1.110

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182309S.D
Lab Smp Id: BLB0579-SRM2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	287982	45.48
27 Naphthalene-d8	704013	352007	1408026	1020771	44.99
42 Acenaphthene-d10	353977	176989	707954	497172	40.45
59 Phenanthrene-d10	686752	343376	1373504	959741	39.75
69 Chrysene-d12	597733	298867	1195466	752482	25.89
77 Perylene-d12	645663	322832	1291326	772131	19.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.01
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.01
59 Phenanthrene-d10	18.23	17.73	18.73	18.24	0.05
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.04
77 Perylene-d12	25.91	25.41	26.41	25.91	0.00

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

REVIEW SUMMARY FOR FILE - NT1003182309S.D

Lab ID: BLB0579-SRM2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 22:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

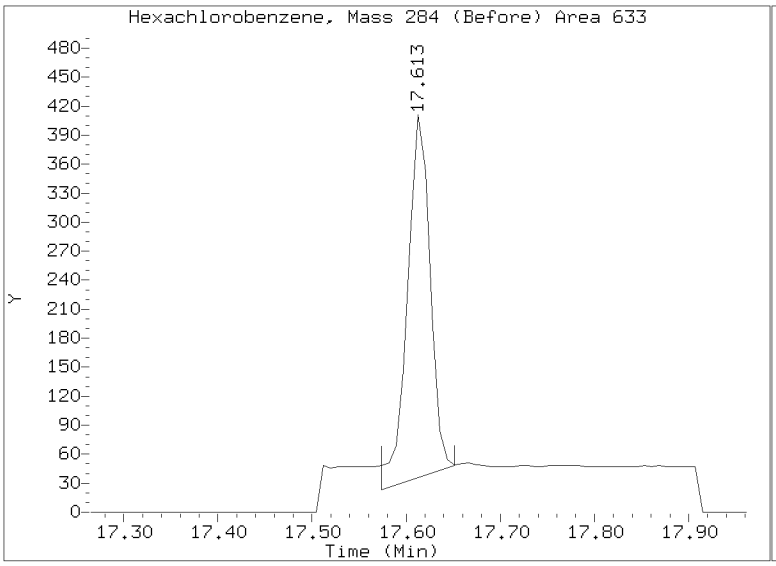
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

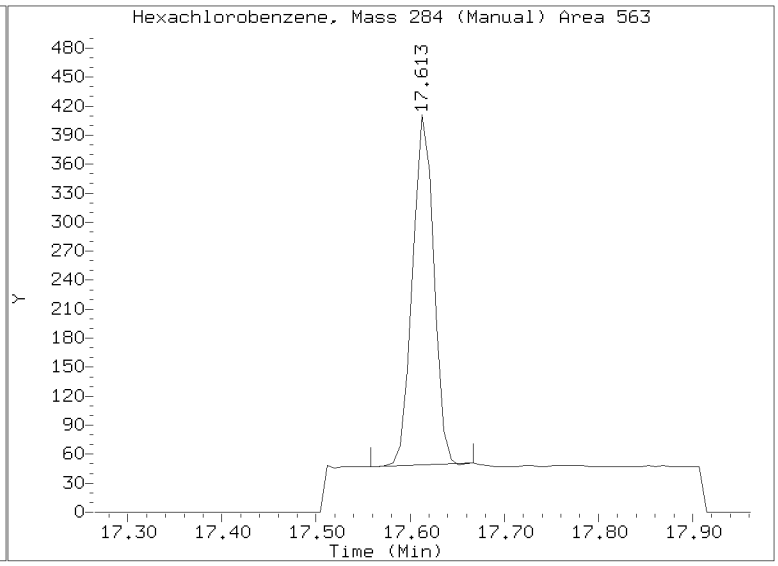
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182309S.D
Injection Date: 18-MAR-2023 22:50
Lab ID:BLB0579-SRM2 Client ID:
Report Date: 04/04/2023 12:31





Analytical Resources, LLC
Analytical Chemists and Consultants

MASS SPECTROMETER
INSTRUMENT PERFORMANCE CHECK
EPA 8270E-SIM

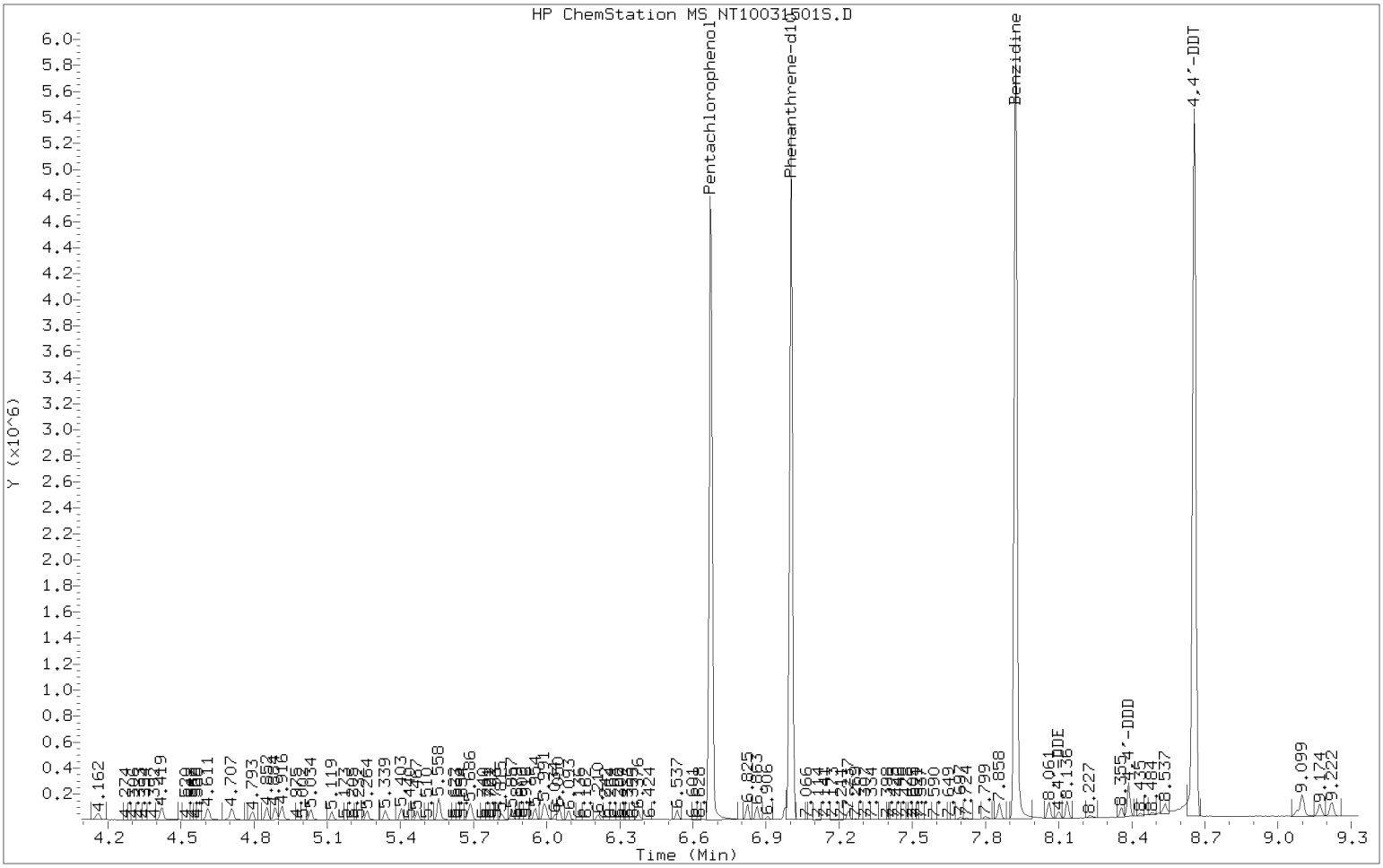
Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Lab File ID:	NT10031501S.D	Injection Date:	03/15/23
Instrument ID:	NT10	Injection Time:	20:19
Sequence:	SLC0238	Lab Sample ID:	SLC0238-TUN1

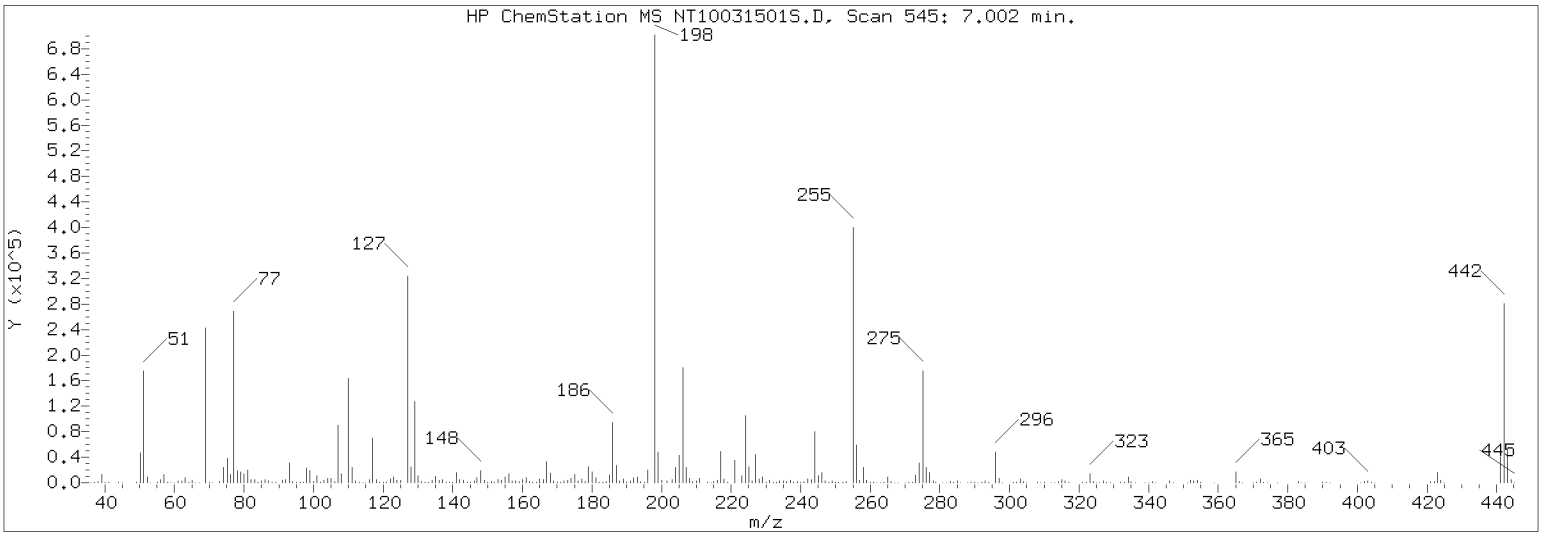
m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
68	Less than 2% of 69	0.372	PASS
69	Less than 100% of 198	36.5	PASS
70	Less than 2% of 69	0.498	PASS
197	Less than 2% of 198	0	PASS
198	Base peak, 100% relative abundance	100	PASS
199	5 - 9% of 198	6.88	PASS
365	1 - 100% of 198	2.52	PASS
441	Less than 150% of 443	77.1	PASS
442	1 - 200% of 198	42.8	PASS
443	15 - 24% of 442	18.5	PASS
4,4'-DDD	Less than 20% of 4,4'-DDT		
4,4'-DDE	Less than 20% of 4,4'-DDT		
4,4'-DDT	Base peak, 100% relative abundance		

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
MS Tune	SLC0238-TUN1	NT10031501S.D	03/15/2023	20:19
Cal Standard	SLC0238-CAL8	NT10031503S.D	03/15/2023	21:12
Cal Standard	SLC0238-CAL7	NT10031504S.D	03/15/2023	21:50
Cal Standard	SLC0238-CAL6	NT10031505S.D	03/15/2023	22:28
Cal Standard	SLC0238-CAL5	NT10031506S.D	03/15/2023	23:06
Cal Standard	SLC0238-CAL4	NT10031507S.D	03/15/2023	23:44
Cal Standard	SLC0238-CAL3	NT10031508S.D	03/16/2023	0:22
Cal Standard	SLC0238-CAL2	NT10031509S.D	03/16/2023	1:00
Cal Standard	SLC0238-CAL1	NT10031510S.D	03/16/2023	1:38
Secondary Cal Check	SLC0238-SCV1	NT10031511S.D	03/16/2023	2:16
Initial Cal Blank	SLC0238-ICB1	NT10031512S.D	03/16/2023	2:54

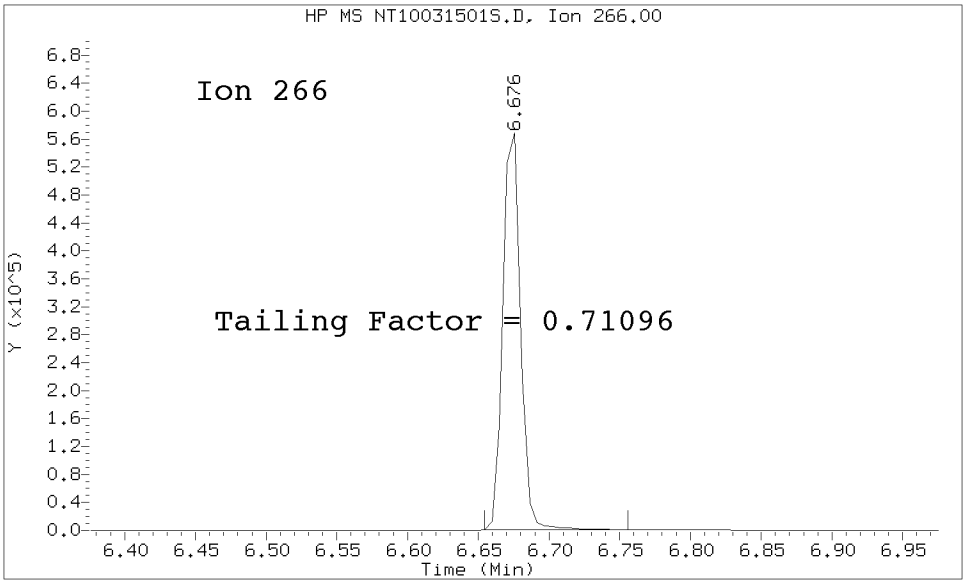
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/20230315.b/NT10031501S.D/NT10031501S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SLC0238-TUN1 SLC0238-TUN1
Report Date: 03/16/2023 14:49



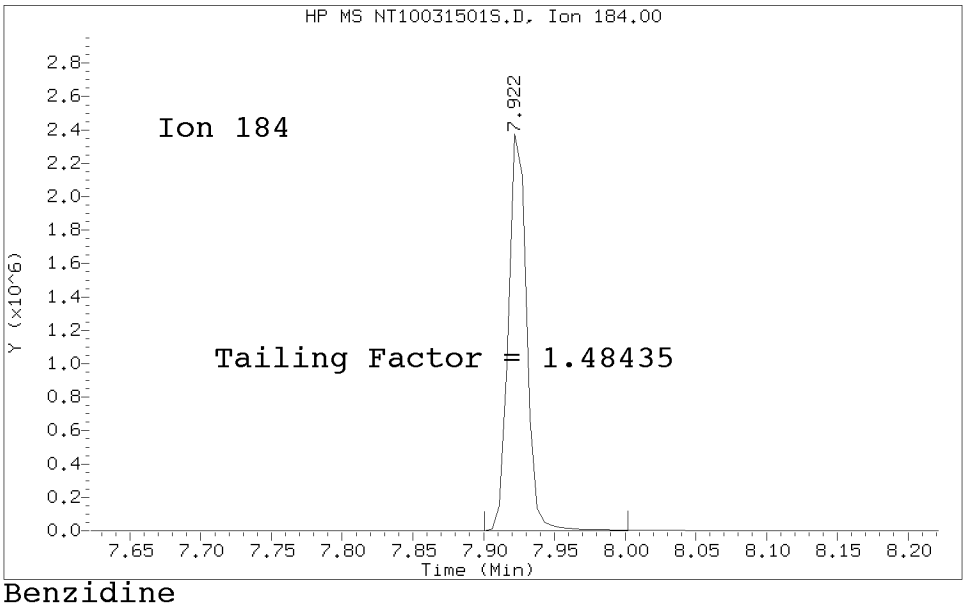


Datafile Analyzed: /20230315.b/20230315.b/NT10031501S.D/NT10031501S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SEQ-TUN1
Report Date: 03/16/2023 14:49



Pentachlorophenol
==========
 Exp. RT = 6.676
Found RT = 6.676

Tail Factor = 0.711 Maximum Allowed = 2.0



Benzidine
==========
 Exp. RT = 7.922
Found RT = 7.922

Tail Factor = 1.484 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7109557	2.000	PASS
Benzidine	1.4843493	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	962640			N/A
4,4-DDE	5158	0.5	20.0	PASS
4,4-DDD	41277	4.1	20.0	PASS
4,4-DDD + DDE	46435	4.6	20.0	PASS

Tuning Sample, nt10.i/20230315.b/20230315.b/NT10031501S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.14 (0.37)
69	Mass 69 relative abundance	36.50
70	Less than 2.00% of mass 69	0.18 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
365	1.00 - 100.00% of mass 198	2.52
441	Less than 150.00% of mass 443	6.11 (77.09)
442	Less than 200.00% of mass 198	42.80
443	15.00 - 24.00% of mass 442	7.92 (18.52)

Data File: NT10031501S.D
Spectrum: Avg. Scans 544-546 (7.00), Background Scan 536
Location of Maximum: 198.00
Number of points: 316

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	226	124.00	3185	207.00	17112	293.00	2318
37.00	575	125.00	2909	208.00	4722	294.00	588
38.00	1820	127.00	243264	209.00	1586	295.00	171
39.00	10159	128.00	18696	210.00	2002	296.00	36168
40.00	405	129.00	96304	211.00	5093	297.00	5056
41.00	312	130.00	8257	213.00	371	298.00	351
42.00	59	131.00	1626	214.00	74	301.00	422
45.00	283	132.00	820	215.00	1549	302.00	552
49.00	910	133.00	415	216.00	2822	303.00	4130
50.00	35800	134.00	2800	217.00	36520	304.00	1107
51.00	136000	135.00	7704	218.00	4515	305.00	126
52.00	7201	136.00	3195	219.00	360	308.00	532
53.00	294	137.00	3970	221.00	25672	309.00	330
55.00	668	138.00	948	222.00	2863	310.00	461
56.00	4206	139.00	563	223.00	8094	312.00	63
57.00	9877	140.00	1193	224.00	76160	313.00	360
58.00	478	141.00	12476	225.00	18680	314.00	1762
59.00	106	142.00	3876	226.00	2197	315.00	4011
60.00	125	143.00	2757	227.00	32752	316.00	2200
61.00	1897	144.00	726	228.00	4949	317.00	416
62.00	2103	145.00	710	229.00	6725	321.00	1068
63.00	6654	146.00	2200	230.00	933	322.00	491
64.00	895	147.00	6157	231.00	2854	323.00	10541
65.00	3279	148.00	13642	232.00	574	324.00	1817
66.00	188	149.00	2992	233.00	660	325.00	178
67.00	249	150.00	753	234.00	2022	326.00	218
68.00	704	151.00	1678	235.00	2475	327.00	2103
69.00	189184	152.00	893	236.00	1621	328.00	1092
70.00	943	153.00	4091	237.00	2803	329.00	211
71.00	156	154.00	3154	238.00	375	332.00	739
73.00	1307	155.00	6743	239.00	1387	333.00	975
74.00	18768	156.00	10344	240.00	943	334.00	6536
75.00	30000	157.00	2091	241.00	1718	335.00	1733
76.00	10364	158.00	2204	242.00	4096	336.00	201
77.00	207552	159.00	1689	243.00	3931	339.00	148
78.00	14246	160.00	3864	244.00	58560	340.00	135
79.00	13356	161.00	5891	245.00	7760	341.00	1142
80.00	10539	162.00	1637	246.00	11941	342.00	277
81.00	15173	163.00	475	247.00	2526	346.00	2192
82.00	3906	164.00	608	248.00	602	347.00	346
83.00	3545	165.00	4507	249.00	2169	351.00	182
84.00	178	166.00	3807	250.00	370	352.00	3059
85.00	2559	167.00	24880	251.00	462	353.00	1950
86.00	4226	168.00	11639	252.00	590	354.00	3010
87.00	1998	169.00	2046	253.00	1331	355.00	569
88.00	783	170.00	776	255.00	296384	359.00	242
89.00	418	171.00	1036	256.00	43272	365.00	13085
91.00	3237	172.00	2248	257.00	3394	366.00	1813
92.00	3764	173.00	2906	258.00	18176	367.00	150

93.00	24104	174.00	5113	259.00	2926	370.00	291
94.00	1672	175.00	9851	260.00	520	371.00	690
95.00	503	176.00	2588	261.00	479	372.00	4605
96.00	1130	177.00	4756	262.00	60	373.00	1002
97.00	380	178.00	1657	263.00	151	374.00	50
98.00	17936	179.00	18424	264.00	377	377.00	67
99.00	14658	180.00	12975	265.00	6992	383.00	1157
100.00	1303	181.00	6000	266.00	984	384.00	328
101.00	8724	182.00	963	267.00	105	385.00	50
102.00	480	183.00	493	268.00	248	390.00	595
103.00	2859	184.00	1456	270.00	285	391.00	401
104.00	5461	185.00	9317	271.00	631	392.00	204
105.00	5056	186.00	70384	272.00	750	401.00	211
106.00	1781	187.00	20112	273.00	8749	402.00	1564
107.00	67936	188.00	2185	274.00	23296	403.00	2292
108.00	10471	189.00	4453	275.00	129008	404.00	796
109.00	595	190.00	772	276.00	17320	405.00	237
110.00	122760	191.00	2090	277.00	11470	421.00	1827
111.00	18400	192.00	5915	278.00	2005	422.00	1658
112.00	2357	193.00	6863	279.00	468	423.00	12304
113.00	756	194.00	1470	281.00	147	424.00	2795
114.00	128	195.00	841	282.00	368	425.00	263
115.00	298	196.00	14341	283.00	1453	441.00	31664
116.00	3871	198.00	518272	284.00	874	442.00	221824
117.00	54088	199.00	35680	285.00	2012	443.00	41072
118.00	3919	200.00	2830	286.00	333	444.00	3778
119.00	531	201.00	2302	288.00	146	445.00	177
120.00	920	203.00	3657	289.00	446		
121.00	362	204.00	18200	290.00	444		
122.00	4396	205.00	31664	291.00	199		
123.00	6778	206.00	132736	292.00	486		

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00049	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: SIM ABN ICAL

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
1,4-Dichlorobenzene	0.05	1.592272	0.1	1.586931	0.2	1.531032	0.5	1.525923	1	1.515432	2.5	1.504782
1,2-Dichlorobenzene	0.05	1.56064	0.1	1.560751	0.2	1.516719	0.5	1.51987	1	1.490507	2.5	1.472424
Benzyl Alcohol	0.05	0.782671	0.1	0.8201691	0.2	0.8740273	0.5	1.001336	1	1.030407	2.5	1.109109
Benzoic acid	0.2		0.4		0.8	6.708155E-03	2	6.190403E-02	4	0.1152489	10	0.1827842
2,4-Dimethylphenol	0.1	0.3036003	0.2	0.3286116	0.4	0.3508719	1	0.3747964	2	0.3711962	5	0.3672727
1,2,4-Trichlorobenzene	0.05	0.3845889	0.1	0.3611836	0.2	0.3536726	0.5	0.3564226	1	0.3477346	2.5	0.3419587
N-Nitrosodiphenylamine	0.05	0.4535426	0.1	0.5106592	0.2	0.5366733	0.5	0.5716845	1	0.5845597	2.5	0.5722409
Pentachlorophenol	0.1	2.310914E-02	0.2	3.752894E-02	0.4	5.531502E-02	1	8.792089E-02	2	0.1125666	5	0.1349126
2-Fluorophenol	0.075	1.096851	0.15	1.182501	0.3	1.198448	0.75	1.278705	1.5	1.28736	3.75	1.294114
p-Terphenyl-d14	0.05	0.6363201	0.1	0.6085315	0.2	0.6174532	0.5	0.6484741	1	0.6506625	2.5	0.6938122

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00049	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: SIM ABN ICAL

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
1,4-Dichlorobenzene	5	1.407857	10	1.361355								
1,2-Dichlorobenzene	5	1.378422	10	1.327177								
Benzyl Alcohol	5	1.078683	10	1.021686								
Benzoic acid	20	0.2157908	40	0.2329458								
2,4-Dimethylphenol	10	0.3419758	20	0.3276736								
1,2,4-Trichlorobenzene	5	0.3213898	10	0.3155673								
N-Nitrosodiphenylamine	5	0.5475779	10	0.5164376								
Pentachlorophenol	10	0.1437906	20	0.1522559								
2-Fluorophenol	7.5	1.204517	15	1.16136								
p-Terphenyl-d14	5	0.6837	10	0.6749908								

INITIAL CALIBRATION DATA

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00049	Instrument:	NT10
Calibration Date:	03/15/2023	Column (1):	ZB-5MSi

Calibration Comments: SIM ABN ICAL

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
1,4-Dichlorobenzene	1.503198	5.4			RSD (15)	
1,2-Dichlorobenzene	1.478314	5.7			RSD (15)	
Benzyl Alcohol	0.964761	12.7			RSD (15)	
Benzoic acid	0.135897	66.3		0.9947	QCOD (0.99)	
2,4-Dimethylphenol	0.3457498	7.2			RSD (15)	
1,2,4-Trichlorobenzene	0.3478148	6.3			RSD (15)	
N-Nitrosodiphenylamine	0.536672	8.0			RSD (15)	
Pentachlorophenol	9.342496E-02	53.7		0.9990	QCOD (0.99)	
2-Fluorophenol	1.212982	5.7			RSD (15)	
p-Terphenyl-d14	0.651743	4.7			RSD (15)	

ANALYSIS SEQUENCE

SLC0238

Instrument ID: NT10
Calibration ID: GC00049
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0238-TUN1	MS Tune	QC		1	L002618		03/15/2023 20:19	NT10031501S.D	JGR	
SLC0238-CAL8	ABN 10.0	QC		2	K011110	K010831	03/15/2023 21:12	NT10031503S.D	JGR	
SLC0238-CAL7	ABN 5.0	QC		3	K011109	K010831	03/15/2023 21:50	NT10031504S.D	JGR	
SLC0238-CAL6	ABN 2.5	QC		4	K011108	K010831	03/15/2023 22:28	NT10031505S.D	JGR	
SLC0238-CAL5	ABN 1.0	QC		5	K011107	K010831	03/15/2023 23:06	NT10031506S.D	JGR	
SLC0238-CAL4	ABN 0.5	QC		6	K011106	K010831	03/15/2023 23:44	NT10031507S.D	JGR	
SLC0238-CAL3	ABN 0.2	QC		7	K011105	K010831	03/16/2023 00:22	NT10031508S.D	JGR	
SLC0238-CAL2	ABN 0.1	QC		8	L002877	K010831	03/16/2023 01:00	NT10031509S.D	JGR	
SLC0238-CAL1	ABN 0.05	QC		9	L002878	K010831	03/16/2023 01:38	NT10031510S.D	JGR	
SLC0238-SCV1	SCV 5.0	QC		10	K010066	K010831	03/16/2023 02:16	NT10031511S.D	JGR	
SLC0238-ICB1	Initial Cal Blank	QC		11	K005156	K010831	03/16/2023 02:54	NT10031512S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b\20230315.b

	Time	Filename	LabID	ClientId	DF											
1	2019	NT10031501S.D	SLC0238-TUN1		1	NO ISTDS FOUND										
2	2034	NT10031502S.D	FULL SCAN ONLY		1	9.31	193857	11.78	709633	15.39	344841	18.43	635594	23.46	392013	26.19	449978
3	2112	NT10031503S.D	SLC0238-CAL8		1	9.31	192425	11.78	689875	15.39	341663	18.42	651934	23.45	482051	26.19	502718
4	2150	NT10031504S.D	SLC0238-CAL7		1	9.30	187419	11.77	682446	15.38	331603	18.42	598629	23.45	389338	26.19	466441
5	2228	NT10031505S.D	SLC0238-CAL6		1	9.30	173412	11.78	624286	15.38	310309	18.43	554860	23.46	385144	26.19	456369
6	2306	NT10031506S.D	SLC0238-CAL5		1	9.30	188081	11.77	674549	15.39	328275	18.42	597140	23.45	466503	26.19	518203
7	2344	NT10031507S.D	SLC0238-CAL4		1	9.30	191648	11.77	679665	15.39	335786	18.42	613961	23.45	464623	26.19	521317
8	0022	NT10031508S.D	SLC0238-CAL3		1	9.30	188644	11.78	664117	15.38	328147	18.42	603272	23.46	468991	26.18	525052
9	0100	NT10031509S.D	SLC0238-CAL2		1	9.30	190985	11.77	684638	15.39	328366	18.42	602202	23.45	451316	26.19	517188
10	0138	NT10031510S.D	SLC0238-CAL1		1	9.30	187154	11.78	654413	15.38	318969	18.42	583319	23.46	440533	26.19	488759
11	0216	NT10031511S.D	SLC0238-SCV1		1	9.31	166866	11.78	612104	15.39	302524	18.43	553619	23.46	465428	26.19	532593
12	0254	NT10031512S.D	SLC0238-ICB1		1	9.31	189475	11.77	676186	15.38	328650	18.42	617605	23.45	473513	26.19	534734

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b\20230315.b

Instrument: nt10.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
2019	NT10031501S.D	SLC0238-TUN1	1	NO MANUAL INTEGRATION
2034	NT10031502S.D	FULL SCAN ONLY	1	NO MANUAL INTEGRATION
2112	NT10031503S.D	SLC0238-CAL8	1	NO MANUAL INTEGRATION
2150	NT10031504S.D	SLC0238-CAL7	1	NO MANUAL INTEGRATION
2228	NT10031505S.D	SLC0238-CAL6	1	NO MANUAL INTEGRATION
2306	NT10031506S.D	SLC0238-CAL5	1	NO MANUAL INTEGRATION
2344	NT10031507S.D	SLC0238-CAL4	1	NO MANUAL INTEGRATION
0022	NT10031508S.D	SLC0238-CAL3	1	Benzoic acid,
0100	NT10031509S.D	SLC0238-CAL2	1	Pentachlorophenol,
0138	NT10031510S.D	SLC0238-CAL1	1	Pentachlorophenol,
0216	NT10031511S.D	SLC0238-SCV1	1	Terphenyl-d14,
0254	NT10031512S.D	SLC0238-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 14:47

NT10031501S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031502S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031503S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031504S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031505S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031506S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031507S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031508S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031509S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031510S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031511S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031512S.D	Data Locked	van, 16-Mar-2023 14:47

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Calibration File Names:
Level 1: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031510S.D
Level 2: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031509S.D
Level 3: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031508S.D
Level 4: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031507S.D
Level 5: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031506S.D
Level 6: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031505S.D
Level 7: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031504S.D
Level 8: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031503S.D

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
133 Butylatedhydroxytoluene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
131 1-Methylphenanthrene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
146 Benzo(j)fluoranthene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
130 Dibenzothiophene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
129 1-Methylfluorene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
128 N-Hexadecane	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
127 2-Isopropylnaphthalene	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
126 N-Tetradecane	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
144 alpha-Terpineol	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
125 Safrole	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
124 3,4-Dimethylphenol	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
123 Acetophenone	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
122 Furfuraldehyde	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
143 1,4-Dioxane	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000
121 Quinoline	+++++ / +++++	+++++ / +++++	+++++	+++++	+++++	+++++	AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
120 2,3,4,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
106 Guaiacol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
105 1-methylnaphthalene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
3 Phenol	1.56149	1.65772	1.68063	1.76515	1.75148	1.75667					
	1.62297	1.51697					AVRG		1.66414		5.59099
4 Bis(2-Chloroethyl)ether	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
6 2-Chlorophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
7 1,3-Dichlorobenzene	1.66537	1.66694	1.59369	1.58637	1.56403	1.55057					
	1.44651	1.38404					AVRG		1.55719		6.34113
9 1,4-Dichlorobenzene	1.59227	1.58693	1.53103	1.52592	1.51543	1.50478					
	1.40786	1.36136					AVRG		1.50320		5.36917

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Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
11 Benzyl alcohol	0.78267	0.82017	0.87403	1.00134	1.03041	1.10911					
	1.07868	1.02169					AVRG		0.96476		12.69470
12 1,2-Dichlorobenzene	1.56064	1.56075	1.51672	1.51987	1.49051	1.47242					
	1.37842	1.32718					AVRG		1.47831		5.70440
13 2-Methylphenol	1.10796	1.06982	1.09063	1.18375	1.19440	1.23938					
	1.18782	1.15101					AVRG		1.15310		5.09645
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
15 4-Methylphenol	1.03102	1.10647	1.13727	1.24194	1.26988	1.30504					
	1.27388	1.22012					AVRG		1.19820		8.02665
16 N-Nitroso-di-n-propylamine	0.74420	0.77640	0.80427	0.88191	0.89897	0.92866					
	0.89355	0.85105					AVRG		0.84738		7.74495
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
22 2,4-Dimethylphenol	0.30360	0.32861	0.35087	0.37480	0.37120	0.36727					
	0.34198	0.32767					AVRG		0.34575		7.24468
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
24 Benzoic acid	+++++	+++++	891	21037	77741	285274					
	736328	1607035					QUAD	0.000e+000	5.29174	-0.43541	0.99817
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
26 1,2,4-Trichlorobenzene	0.38459	0.36118	0.35367	0.35642	0.34773	0.34196					
	0.32139	0.31557					AVRG		0.34781		6.34752
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
30 Hexachlorobutadiene	0.23044	0.21302	0.21319	0.21525	0.21116	0.21214					
	0.19866	0.19786					AVRG		0.21146		4.82681
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	5.0000 Level 7	10.0000 Level 8	Curve	Coefficients b	m1	m2	%RSD or R^2
34 2,4,6-Trichlorophenol	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000
35 2,4,5-Trichlorophenol	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000
37 2-Chloronaphthalene	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000
38 2-Nitroaniline	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000
39 Dimethylphthalate	1.27787	1.27224	1.24048	1.29313	1.32502	1.28149	1.22328	1.18473					
									AVRG		1.26228		3.49321
40 Acenaphthylene	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000
41 2,6-Dinitrotoluene	*****	*****	*****	*****	*****	*****	*****	*****					
									AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
43 3-Nitroaniline	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
44 Acenaphthene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
45 2,4-Dinitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
46 Dibenzofuran	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
47 4-Nitrophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
48 2,4-Dinitrotoluene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
49 Fluorene	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
50 Diethylphthalate	1.09879	1.17308	1.27815	1.36289	1.42716	1.41289					
	1.35423	1.35415					AVRG		1.30767		8.92477
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
54 N-Nitrosodiphenylamine	0.45354	0.51066	0.53667	0.57168	0.58456	0.57224					
	0.54758	0.51644					AVRG		0.53667		7.99896
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
57 Hexachlorobenzene	0.25043	0.25088	0.24115	0.24237	0.24203	0.24151					
	0.23339	0.22020					AVRG		0.24025		4.08944

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
58 Pentachlorophenol	+++++	1130	3337	13495	33609	93572					
	215193	496304					QUAD	0.000e+000	7.54154	-1.29368	0.99963
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
67 Butylbenzylphthalate	1336	3284	7787	24470	56297	133147					
	271734	722761					QUAD	0.000e+000	1.90264	-0.15728	0.99983
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1 / 5.0000 Level 7	0.1000000 Level 2 / 10.0000 Level 8	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
79 Dibenzo(a,h)anthracene	4785	11218	24266	72052	155363	368157					
	751404	1559411					QUAD	0.000e+000	0.76135	0.01405	0.99989
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
90 N-Nitrosodimethylamine	0.74719	0.78006	0.77776	0.82263	0.80430	0.80649					
	0.73835	0.67774					AVRG		0.76932		6.11057
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
101 Cholesterol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
102 beta-Sitosterol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
103 Pyridine	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 1 2-Fluorophenol	1.09685	1.18250	1.19845	1.27871	1.28736	1.29411					
	1.20452	1.16136					AVRG		1.21298		5.72847
$ 145 d8-1,4-Dioxane	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 2 Phenol-d5	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 5 2-Chlorophenol-d4	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

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Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
$ 10 1,2-Dichlorobenzene-d4	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 18 Nitrobenzene-d5	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 36 2-Fluorobiphenyl	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 55 2,4,6-Tribromophenol	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 66 Terphenyl-d14	0.63632	0.60853	0.61745	0.64847	0.65066	0.69381					
	0.68370	0.67499					AVRG		0.65174		4.72002
$ 85 p-Cresol-d4	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000
$ 86 Anthracene-d10	*****	*****	*****	*****	*****	*****					
	*****	*****					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

Compound	0.0500000 Level 1	0.1000000 Level 2	0.2000000 Level 3	0.5000000 Level 4	1.0000 Level 5	2.5000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	5.0000 Level 7	10.0000 Level 8									
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+000		0.000e+000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-MAR-2023 21:12
End Cal Date : 16-MAR-2023 01:38
Quant Method : ISTD
Origin : Force
Target Version : 4.14
Integrator : HP RTE
Method file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Last Edit : 16-Mar-2023 14:34 van

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230315.b\20230315.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	NT10031503S	NT10031504S	NT10031505S	NT10031506S	NT10031507S	NT10031508S	NT10031509S	NT10031510S
INJ.DATE:	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	15-MAR-2023	16-MAR-2023	16-MAR-2023	16-MAR-2023
INJ.TIME:	21:12	21:50	22:28	23:06	23:44	00:22	01:00	01:38

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	7.073	7.073	7.066	7.073	7.073	7.073	7.073	7.073	7.073	6.573-7.573	7.072	0.003
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.768	23.268-24.268	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230315.b\20230315.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.349	22.849-23.849	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.474	21.974-22.974	+++++	+++++
144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.191	10.691-11.691	+++++	+++++
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.779	17.279-18.279	+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.310	15.810-16.810	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.707	17.207-18.207	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.921	8.421-9.421	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.736	3.236-4.236	+++++	+++++
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.914	2.414-3.414	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.148	19.648-20.648	+++++	+++++
120 2,3,4,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.588	15.088-16.088	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.587	38.087-39.087	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.382	19.882-20.882	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.734	18.234-19.234	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.987	16.487-17.487	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.204	14.704-15.704	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.586	21.086-22.086	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.692	17.192-18.192	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.268	15.768-16.768	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.055	17.555-18.555	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.228	16.728-17.728	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Batch File: \\target\share\chem3\nt10.i\20230315.b\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.927	12.427-13.427	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.235	7.735-8.735	+++++	+++++
	3 Phenol	8.664	8.665	8.657	8.657	8.657	8.657	8.657	8.665	8.665	8.165-9.165	8.660	0.004
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.397	7.897-8.897	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.490	7.990-8.990	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.521	8.021-9.021	+++++	+++++
	7 1,3-Dichlorobenzene	9.236	9.237	9.237	9.237	9.237	9.237	9.237	9.237	9.237	8.737-9.737	9.237	0.000
*	8 1,4-Dichlorobenzene-d4	9.306	9.299	9.299	9.299	9.299	9.299	9.299	9.299	9.299	8.799-9.799	9.300	0.003
	9 1,4-Dichlorobenzene	9.330	9.330	9.330	9.330	9.330	9.330	9.330	9.330	9.330	8.830-9.830	9.330	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.230	8.730-9.730	+++++	+++++
	11 Benzyl alcohol	9.562	9.563	9.563	9.563	9.563	9.563	9.563	9.570	9.570	9.070-10.070	9.564	0.003
	12 1,2-Dichlorobenzene	9.687	9.687	9.687	9.687	9.687	9.687	9.687	9.687	9.687	9.187-10.187	9.687	0.000
	13 2-Methylphenol	9.780	9.772	9.772	9.772	9.772	9.772	9.772	9.772	9.772	9.272-10.272	9.773	0.003
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.413	8.913-9.913	+++++	+++++
	15 4-Methylphenol	10.044	10.036	10.036	10.036	10.036	10.036	10.036	10.036	10.036	9.536-10.536	10.037	0.003
	16 N-Nitroso-di-n-propyla	10.121	10.114	10.114	10.114	10.114	10.114	10.114	10.114	10.114	9.614-10.614	10.115	0.003
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.809	9.309-10.309	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.917	9.417-10.417	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.948	9.448-10.448	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.399	9.899-10.899	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.575	10.075-11.075	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230315.b\20230315.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	11.086	11.086	11.079	11.078	11.086	11.079	11.086	11.087	11.087	10.587-11.587	11.083	0.004
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.830	10.330-11.330	+++++	+++++
	24 Benzoic acid	11.332	11.273	11.223	11.188	11.171	11.189	+++++	+++++	11.189	10.689-11.689	11.229	0.062
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.033	10.533-11.533	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.689	11.690	11.691	11.689	11.690	11.691	11.690	11.690	11.690	11.190-12.190	11.690	0.001
*	27 Naphthalene-d8	11.782	11.775	11.775	11.774	11.775	11.775	11.775	11.775	11.775	11.275-12.275	11.776	0.003
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.326	10.826-11.826	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.457	10.957-11.957	+++++	+++++
	30 Hexachlorobutadiene	12.176	12.169	12.169	12.176	12.176	12.169	12.176	12.169	12.169	11.669-12.669	12.173	0.004
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.432	11.932-12.932	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.710	12.210-13.210	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.182	12.682-13.682	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.330	12.830-13.830	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.415	12.915-13.915	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.484	12.984-13.984	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.686	13.186-14.186	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.941	13.441-14.441	+++++	+++++
	39 Dimethylphthalate	14.885	14.877	14.878	14.877	14.877	14.878	14.877	14.878	14.878	14.378-15.378	14.878	0.003
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.545	14.045-15.045	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.506	14.006-15.006	+++++	+++++
*	42 Acenaphthene-d10	15.388	15.380	15.381	15.388	15.388	15.381	15.388	15.381	15.381	14.881-15.881	15.384	0.004
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.785	14.285-15.285	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.924	14.424-15.424	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.001	14.501-15.501	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.248	14.748-15.748	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.171	14.671-15.671	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.302	14.802-15.802	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
	50 Diethylphthalate	16.339	16.331	16.332	16.331	16.331	16.324	16.331	16.324	16.324	15.824-16.824	16.330	0.005
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.952	15.452-16.452	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.037	15.537-16.537	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.145	15.645-16.645	+++++	+++++
	54 N-Nitrosodiphenylamine	16.724	16.717	16.718	16.724	16.717	16.718	16.717	16.718	16.718	16.218-17.218	16.719	0.003
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.477	15.977-16.977	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.939	16.439-17.439	+++++	+++++
	57 Hexachlorobenzene	17.797	17.797	17.798	17.797	17.797	17.790	17.797	17.798	17.798	17.298-18.298	17.797	0.003
	58 Pentachlorophenol	18.153	18.146	18.154	18.153	18.154	18.154	18.154	18.154	18.154	17.654-18.654	18.153	0.003
*	59 Phenanthrene-d10	18.424	18.417	18.425	18.424	18.424	18.418	18.424	18.417	18.417	17.917-18.917	18.422	0.004
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.899	17.399-18.399	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.991	17.491-18.491	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.324	17.824-18.824	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.152	18.652-19.652	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.289	19.789-20.789	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.715	20.215-21.215	+++++	+++++
$	66 Terphenyl-d14	21.542	21.542	21.543	21.542	21.542	21.543	21.542	21.543	21.543	21.043-22.043	21.543	0.000
	67 Butylbenzylphthalate	22.464	22.456	22.465	22.464	22.464	22.465	22.464	22.465	22.465	21.965-22.965	22.463	0.003
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.875	22.375-23.375	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

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Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.455	23.455	23.456	23.455	23.455	23.456	23.455	23.456	23.456	22.956-23.956	23.455	0.000
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.844	22.344-23.344	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.952	22.452-23.452	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.007	22.507-23.507	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.990	23.490-24.490	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.687	24.187-25.187	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.725	24.225-25.225	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.283	24.783-25.783	+++++	+++++
*	77 Perylene-d12	26.188	26.188	26.189	26.188	26.188	26.181	26.188	26.189	26.189	25.689-26.689	26.187	0.003
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.794	27.294-28.294	+++++	+++++
	79 Dibenzo(a,h)anthracene	29.033	29.018	29.019	29.010	29.010	29.003	29.010	29.019	29.019	28.519-29.519	29.015	0.009
	80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.494	27.994-28.994	+++++	+++++
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.085	15.585-16.585	+++++	+++++
	90 N-Nitrosodimethylamine	4.941	4.933	4.926	4.941	4.941	4.941	4.941	4.949	4.949	4.449-5.449	4.939	0.007
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.305	7.805-8.805	+++++	+++++
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.529	20.029-21.029	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

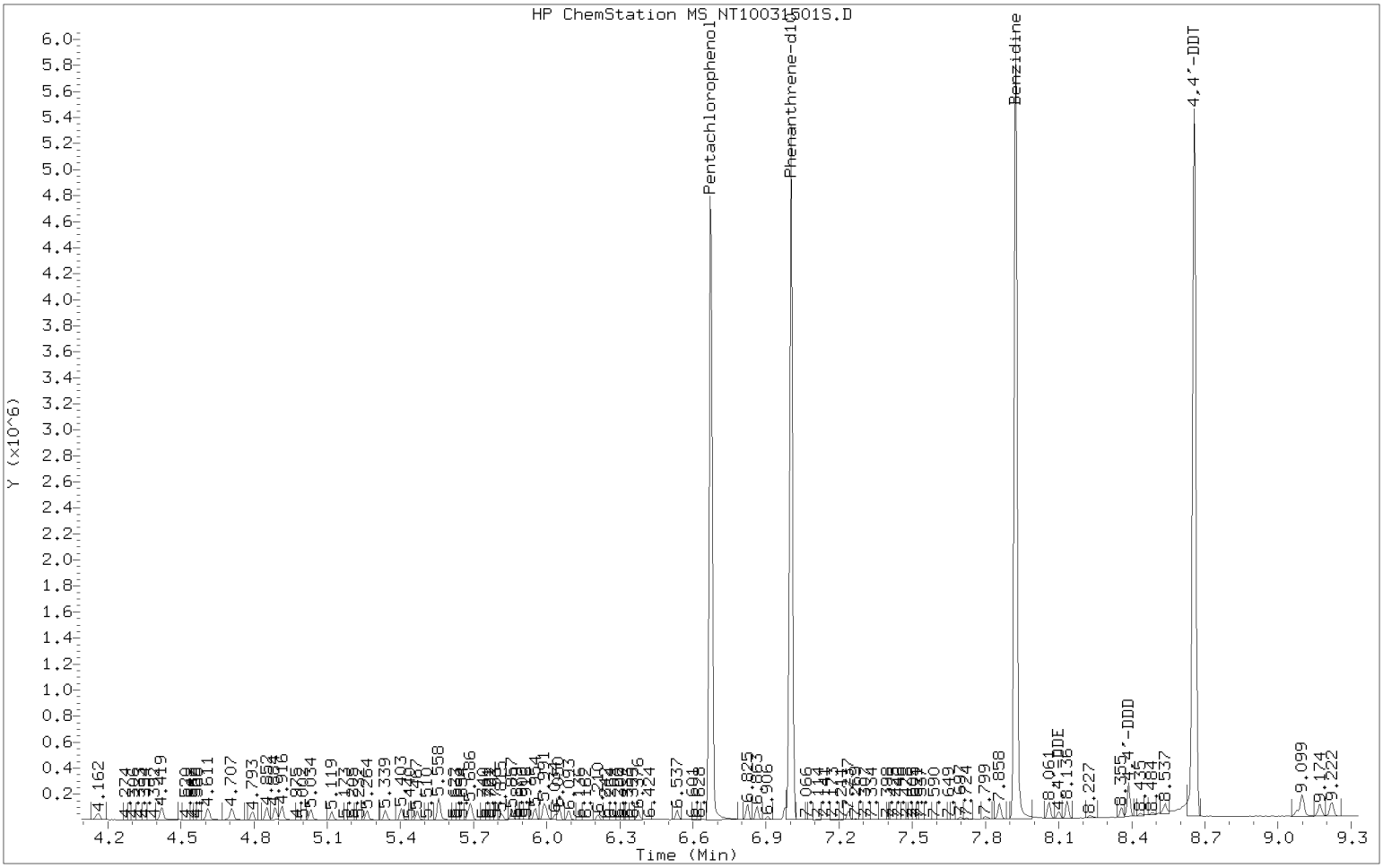
ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

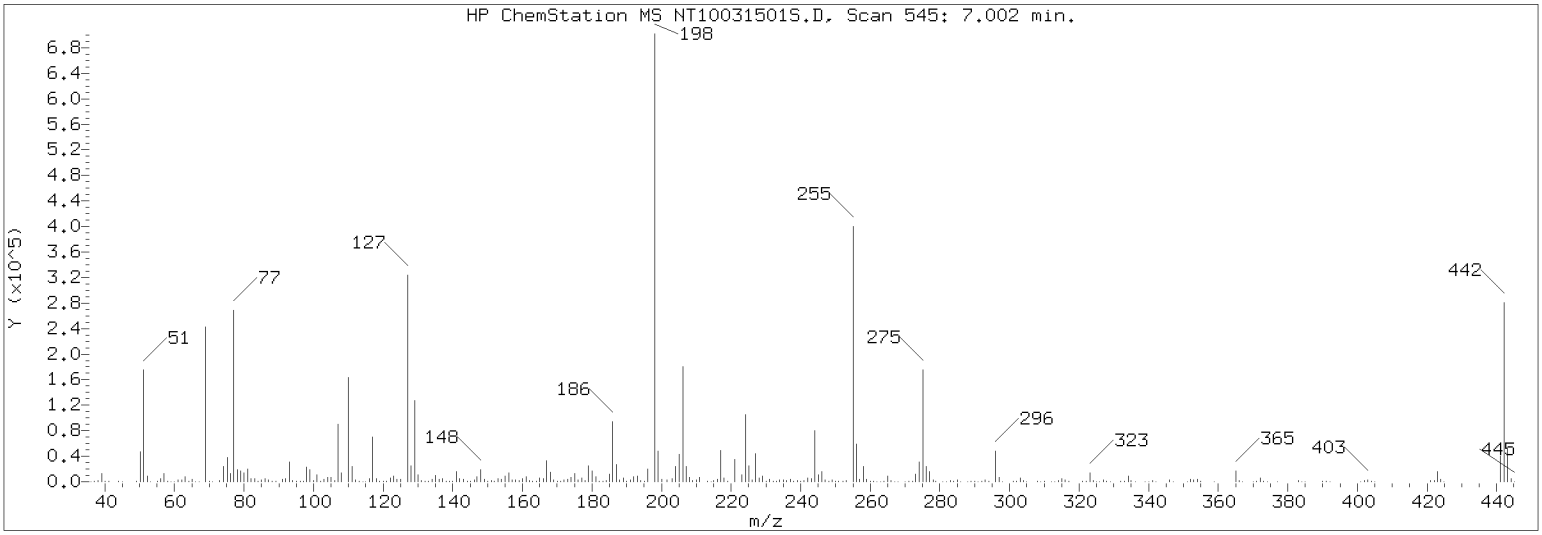
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Batch File: \\target\share\chem3\nt10.i\20230315.b\20230315.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.609	19.109-20.109	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.438	24.938-25.938	+++++	+++++
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.384	25.884-26.884	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.881	43.381-44.381	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	45.573	45.073-46.073	+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.535	4.035-5.035	+++++	+++++

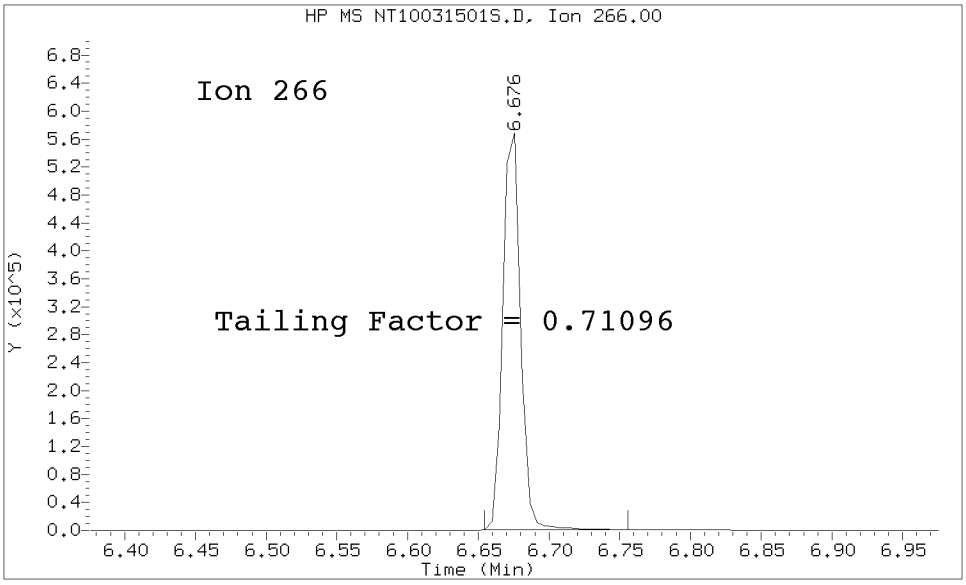
DFTPP TAILING FACTOR AND BREAKDOWN GRAPHIC REPORT

Datafile Analyzed: /20230315.b/20230315.b/NT10031501S.D/NT10031501S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SLC0238-TUN1 SLC0238-TUN1
Report Date: 03/16/2023 14:49



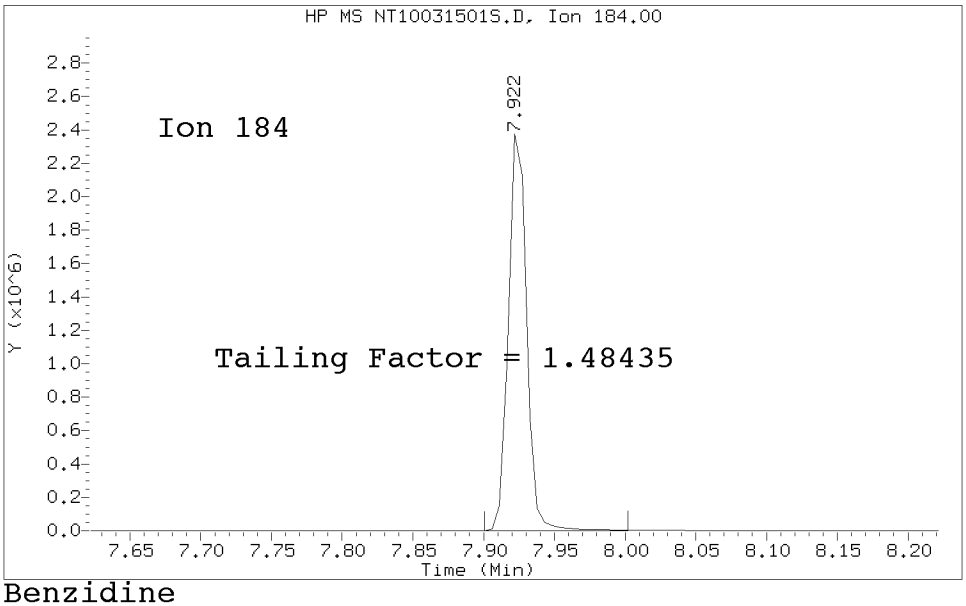


Datafile Analyzed: /20230315.b/20230315.b/NT10031501S.D/NT10031501S.D
Method Used: \20230315.b\20230315.b\DFTPP8270E.m\sw846ddt.m Inst: nt10
Injection Date: 15-MAR-2023 20:19 Operator: JGR
Sample Info: SEQ-TUN1
Report Date: 03/16/2023 14:49



Pentachlorophenol
==========
 Exp. RT = 6.676
Found RT = 6.676

Tail Factor = 0.711 Maximum Allowed = 2.0



Benzidine
=========
 Exp. RT = 7.922
Found RT = 7.922

Tail Factor = 1.484 Maximum Allowed = 2.0

8270 TAILING FACTOR/BREAKDOWN SUMMARY RESULTS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	0.7109557	2.000	PASS
Benzidine	1.4843493	2.000	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	962640			N/A
4,4-DDE	5158	0.5	20.0	PASS
4,4-DDD	41277	4.1	20.0	PASS
4,4-DDD + DDE	46435	4.6	20.0	PASS

Tuning Sample, nt10.i/20230315.b/20230315.b/NT10031501S.D, *** PASSED ***

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
68	Less than 2.00% of mass 69	0.14 (0.37)
69	Mass 69 relative abundance	36.50
70	Less than 2.00% of mass 69	0.18 (0.50)
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
365	1.00 - 100.00% of mass 198	2.52
441	Less than 150.00% of mass 443	6.11 (77.09)
442	Less than 200.00% of mass 198	42.80
443	15.00 - 24.00% of mass 442	7.92 (18.52)

Data File: NT10031501S.D
Spectrum: Avg. Scans 544-546 (7.00), Background Scan 536
Location of Maximum: 198.00
Number of points: 316

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	226	124.00	3185	207.00	17112	293.00	2318
37.00	575	125.00	2909	208.00	4722	294.00	588
38.00	1820	127.00	243264	209.00	1586	295.00	171
39.00	10159	128.00	18696	210.00	2002	296.00	36168
40.00	405	129.00	96304	211.00	5093	297.00	5056
41.00	312	130.00	8257	213.00	371	298.00	351
42.00	59	131.00	1626	214.00	74	301.00	422
45.00	283	132.00	820	215.00	1549	302.00	552
49.00	910	133.00	415	216.00	2822	303.00	4130
50.00	35800	134.00	2800	217.00	36520	304.00	1107
51.00	136000	135.00	7704	218.00	4515	305.00	126
52.00	7201	136.00	3195	219.00	360	308.00	532
53.00	294	137.00	3970	221.00	25672	309.00	330
55.00	668	138.00	948	222.00	2863	310.00	461
56.00	4206	139.00	563	223.00	8094	312.00	63
57.00	9877	140.00	1193	224.00	76160	313.00	360
58.00	478	141.00	12476	225.00	18680	314.00	1762
59.00	106	142.00	3876	226.00	2197	315.00	4011
60.00	125	143.00	2757	227.00	32752	316.00	2200
61.00	1897	144.00	726	228.00	4949	317.00	416
62.00	2103	145.00	710	229.00	6725	321.00	1068
63.00	6654	146.00	2200	230.00	933	322.00	491
64.00	895	147.00	6157	231.00	2854	323.00	10541
65.00	3279	148.00	13642	232.00	574	324.00	1817
66.00	188	149.00	2992	233.00	660	325.00	178
67.00	249	150.00	753	234.00	2022	326.00	218
68.00	704	151.00	1678	235.00	2475	327.00	2103
69.00	189184	152.00	893	236.00	1621	328.00	1092
70.00	943	153.00	4091	237.00	2803	329.00	211
71.00	156	154.00	3154	238.00	375	332.00	739
73.00	1307	155.00	6743	239.00	1387	333.00	975
74.00	18768	156.00	10344	240.00	943	334.00	6536
75.00	30000	157.00	2091	241.00	1718	335.00	1733
76.00	10364	158.00	2204	242.00	4096	336.00	201
77.00	207552	159.00	1689	243.00	3931	339.00	148
78.00	14246	160.00	3864	244.00	58560	340.00	135
79.00	13356	161.00	5891	245.00	7760	341.00	1142
80.00	10539	162.00	1637	246.00	11941	342.00	277
81.00	15173	163.00	475	247.00	2526	346.00	2192
82.00	3906	164.00	608	248.00	602	347.00	346
83.00	3545	165.00	4507	249.00	2169	351.00	182
84.00	178	166.00	3807	250.00	370	352.00	3059
85.00	2559	167.00	24880	251.00	462	353.00	1950
86.00	4226	168.00	11639	252.00	590	354.00	3010
87.00	1998	169.00	2046	253.00	1331	355.00	569
88.00	783	170.00	776	255.00	296384	359.00	242
89.00	418	171.00	1036	256.00	43272	365.00	13085
91.00	3237	172.00	2248	257.00	3394	366.00	1813
92.00	3764	173.00	2906	258.00	18176	367.00	150

93.00	24104	174.00	5113	259.00	2926	370.00	291
94.00	1672	175.00	9851	260.00	520	371.00	690
95.00	503	176.00	2588	261.00	479	372.00	4605
96.00	1130	177.00	4756	262.00	60	373.00	1002
97.00	380	178.00	1657	263.00	151	374.00	50
98.00	17936	179.00	18424	264.00	377	377.00	67
99.00	14658	180.00	12975	265.00	6992	383.00	1157
100.00	1303	181.00	6000	266.00	984	384.00	328
101.00	8724	182.00	963	267.00	105	385.00	50
102.00	480	183.00	493	268.00	248	390.00	595
103.00	2859	184.00	1456	270.00	285	391.00	401
104.00	5461	185.00	9317	271.00	631	392.00	204
105.00	5056	186.00	70384	272.00	750	401.00	211
106.00	1781	187.00	20112	273.00	8749	402.00	1564
107.00	67936	188.00	2185	274.00	23296	403.00	2292
108.00	10471	189.00	4453	275.00	129008	404.00	796
109.00	595	190.00	772	276.00	17320	405.00	237
110.00	122760	191.00	2090	277.00	11470	421.00	1827
111.00	18400	192.00	5915	278.00	2005	422.00	1658
112.00	2357	193.00	6863	279.00	468	423.00	12304
113.00	756	194.00	1470	281.00	147	424.00	2795
114.00	128	195.00	841	282.00	368	425.00	263
115.00	298	196.00	14341	283.00	1453	441.00	31664
116.00	3871	198.00	518272	284.00	874	442.00	221824
117.00	54088	199.00	35680	285.00	2012	443.00	41072
118.00	3919	200.00	2830	286.00	333	444.00	3778
119.00	531	201.00	2302	288.00	146	445.00	177
120.00	920	203.00	3657	289.00	446		
121.00	362	204.00	18200	290.00	444		
122.00	4396	205.00	31664	291.00	199		
123.00	6778	206.00	132736	292.00	486		

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031503S.D

Date : 15-MAR-2023 21:12

Client ID:

Instrument: nt10.i

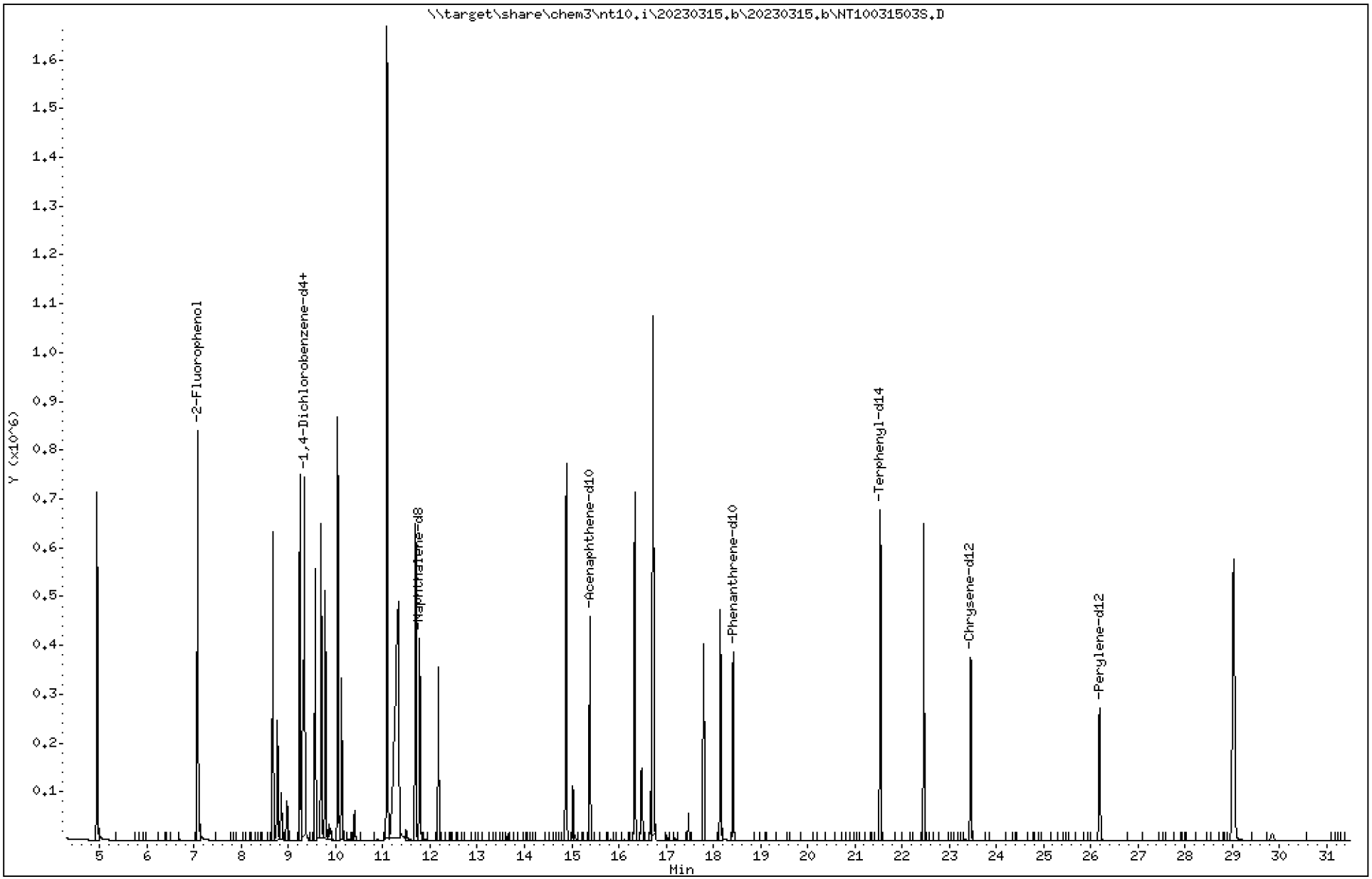
Sample Info: SLC0238-CAL8

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031503S.D
Lab Smp Id: SLC0238-CAL8
Inj Date : 15-MAR-2023 21:12 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL8
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.072	7.073	(0.760)	838030	15.0000	14.36
3	Phenol	94	8.664	8.664	(0.931)	729755	10.0000	9.116
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.992)	665810	10.0000	8.888
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	192425	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.002)	654897	10.0000	9.056
11	Benzyl alcohol	79	9.562	9.570	(1.028)	491495	10.0000	10.59
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.041)	638455	10.0000	8.978
13	2-Methylphenol	108	9.779	9.772	(1.051)	553708	10.0000	9.982
15	4-Methylphenol	108	10.043	10.036	(1.079)	586952	10.0000	10.18
16	N-Nitroso-di-n-propylamine	70	10.121	10.113	(1.088)	409406	10.0000	10.04
22	2,4-Dimethylphenol	107	11.085	11.087	(0.941)	1130269	20.0000	18.95
24	Benzoic acid	105	11.332	11.189	(0.962)	1607035	40.0000	39.86
26	1,2,4-Trichlorobenzene	180	11.689	11.690	(0.992)	544255	10.0000	9.073
* 27	Naphthalene-d8	136	11.781	11.775	(1.000)	689875	4.00000	
30	Hexachlorobutadiene	225	12.175	12.169	(1.033)	341241	10.0000	9.357
39	Dimethylphthalate	163	14.884	14.877	(0.967)	1011946	10.0000	9.386
* 42	Acenaphthene-d10	162	15.387	15.380	(1.000)	341663	4.00000	
50	Diethylphthalate	149	16.338	16.324	(1.062)	1156658	10.0000	10.36
54	N-Nitrosodiphenylamine	169	16.724	16.717	(0.908)	841708	10.0000	9.623
57	Hexachlorobenzene	284	17.797	17.798	(0.966)	358890	10.0000	9.166

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	18.153	18.154	(0.985)	496304	20.0000	19.97
*	59 Phenanthrene-d10	188	18.424	18.417	(1.000)	651934	4.00000	
$	66 Terphenyl-d14	244	21.542	21.543	(0.918)	813450	10.0000	10.36
	67 Butylbenzylphthalate	149	22.463	22.465	(0.958)	722761	10.0000	9.997
*	69 Chrysene-d12	240	23.454	23.455	(1.000)	482051	4.00000	
*	77 Perylene-d12	264	26.187	26.188	(1.000)	502718	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.033	29.019	(1.109)	1559411	10.0000	9.987
	90 N-Nitrosodimethylamine	74	4.940	4.948	(0.531)	652075	20.0000	17.62

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031503S.D
Lab Smp Id: SLC0238-CAL8
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	192425	2.31
27 Naphthalene-d8	674549	337275	1349098	689875	2.27
42 Acenaphthene-d10	328275	164138	656550	341663	4.08
59 Phenanthrene-d10	597140	298570	1194280	651934	9.18
69 Chrysene-d12	466503	233252	933006	482051	3.33
77 Perylene-d12	518203	259102	1036406	502718	-2.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.06
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	-0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	-0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	-0.00

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

REVIEW SUMMARY FOR FILE - NT10031503S.D

Lab ID: SLC0238-CAL8
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 21:12

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.962	0.000	0.9618	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031504S.D

Date : 15-MAR-2023 21:50

Client ID:

Instrument: nt10.i

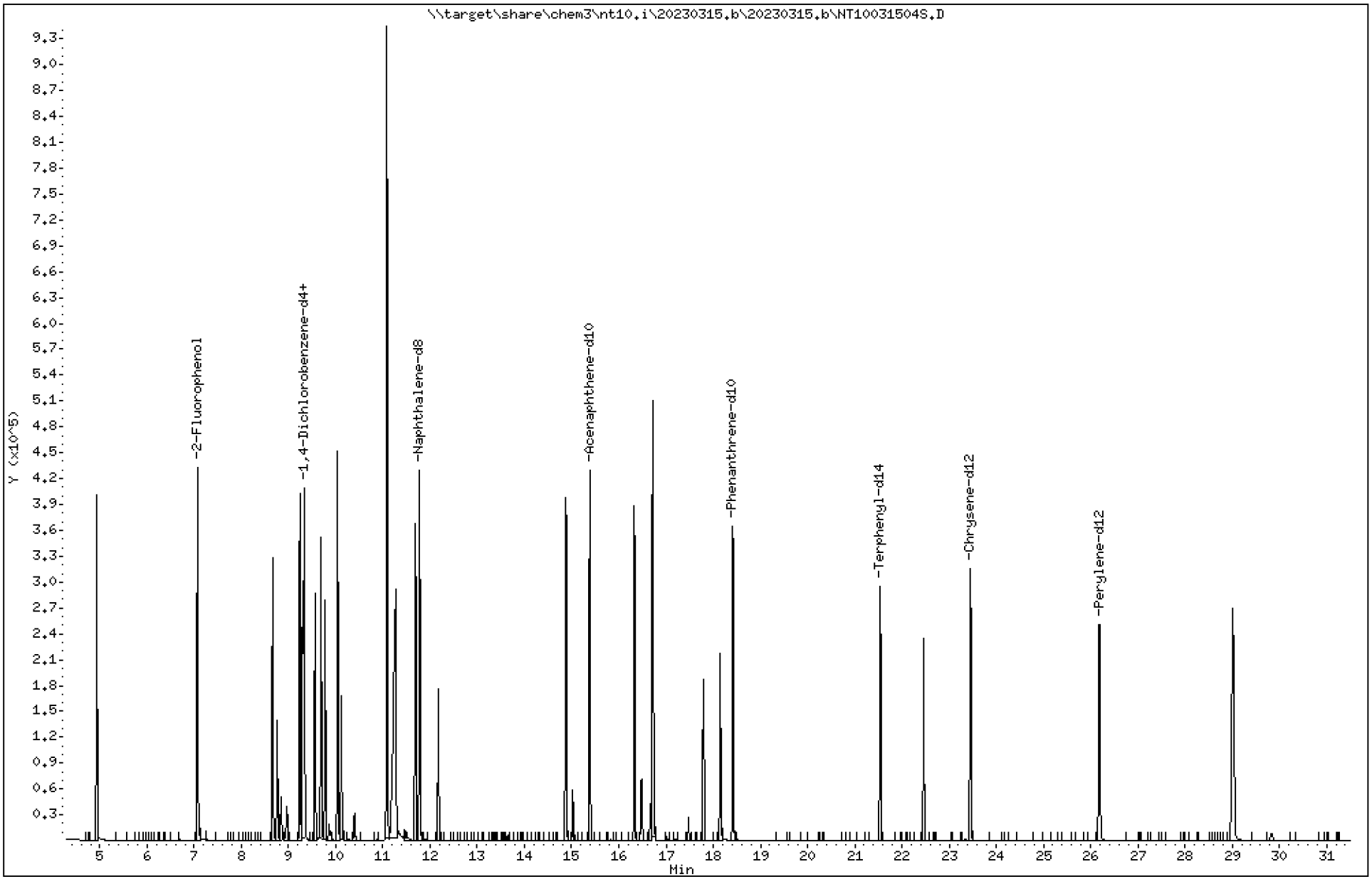
Sample Info: SLC0238-CAL7

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031504S.D
Lab Smp Id: SLC0238-CAL7
Inj Date : 15-MAR-2023 21:50 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL7
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 4 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.073	7.073	(0.761)	423280	7.50000	7.448
3	Phenol	94	8.664	8.664	(0.932)	380220	5.00000	4.876
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	338879	5.00000	4.645
* 8	1,4-Dichlorobenzene-d4	152	9.298	9.298	(1.000)	187419	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.003)	329824	5.00000	4.683
11	Benzyl alcohol	79	9.562	9.570	(1.028)	252707	5.00000	5.590
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.042)	322928	5.00000	4.662
13	2-Methylphenol	108	9.772	9.772	(1.051)	278276	5.00000	5.151
15	4-Methylphenol	108	10.036	10.036	(1.079)	298436	5.00000	5.316
16	N-Nitroso-di-n-propylamine	70	10.113	10.113	(1.088)	209335	5.00000	5.272
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	583450	10.0000	9.891
24	Benzoic acid	105	11.272	11.189	(0.957)	736328	20.0000	20.81
26	1,2,4-Trichlorobenzene	180	11.689	11.690	(0.993)	274164	5.00000	4.620
* 27	Naphthalene-d8	136	11.774	11.775	(1.000)	682446	4.00000	
30	Hexachlorobutadiene	225	12.168	12.169	(1.033)	169468	5.00000	4.697
39	Dimethylphthalate	163	14.877	14.877	(0.967)	507054	5.00000	4.846
* 42	Acenaphthene-d10	162	15.380	15.380	(1.000)	331603	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.062)	561334	5.00000	5.178
54	N-Nitrosodiphenylamine	169	16.716	16.717	(0.908)	409745	5.00000	5.102
57	Hexachlorobenzene	284	17.797	17.798	(0.966)	174645	5.00000	4.857

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	18.145	18.154	(0.985)	215193	10.0000	10.18
*	59 Phenanthrene-d10	188	18.416	18.417	(1.000)	598629	4.00000	
$	66 Terphenyl-d14	244	21.542	21.543	(0.918)	332738	5.00000	5.245
	67 Butylbenzylphthalate	149	22.456	22.465	(0.957)	271734	5.00000	5.005
*	69 Chrysene-d12	240	23.454	23.455	(1.000)	389338	4.00000	
*	77 Perylene-d12	264	26.187	26.188	(1.000)	466441	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.017	29.019	(1.108)	751404	5.00000	5.052
	90 N-Nitrosodimethylamine	74	4.933	4.948	(0.531)	345951	10.0000	9.597

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031504S.D
Lab Smp Id: SLC0238-CAL7
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	187419	-0.35
27 Naphthalene-d8	674549	337275	1349098	682446	1.17
42 Acenaphthene-d10	328275	164138	656550	331603	1.01
59 Phenanthrene-d10	597140	298570	1194280	598629	0.25
69 Chrysene-d12	466503	233252	933006	389338	-16.54
77 Perylene-d12	518203	259102	1036406	466441	-9.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.77	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.38	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.04
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031504S.D

Lab ID: SLC0238-CAL7
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 21:50

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.957	0.000	0.9574	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031505S.D

Date : 15-MAR-2023 22:28

Client ID:

Instrument: nt10.i

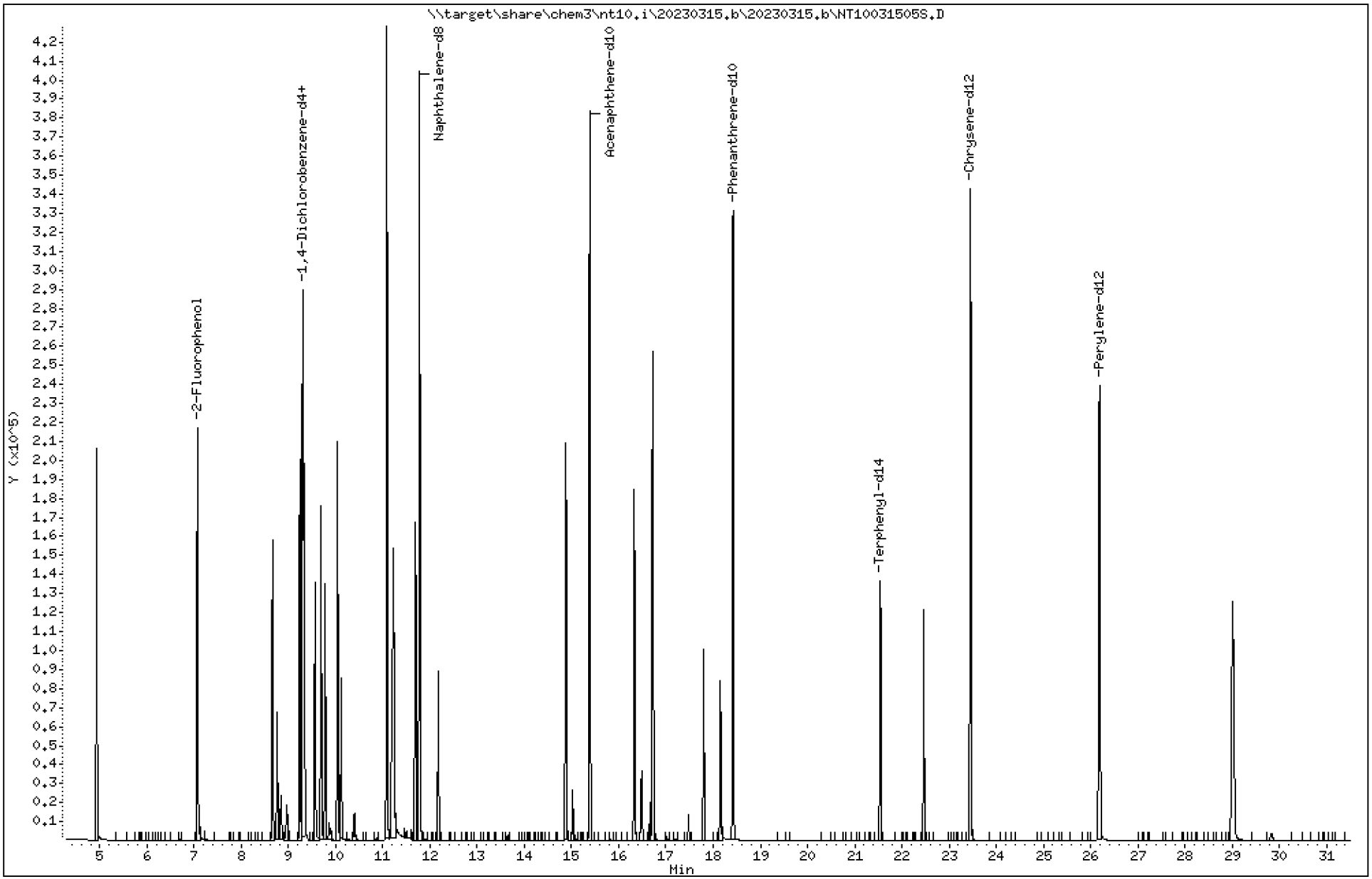
Sample Info: SLC0238-CAL6

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031505S.D
Lab Smp Id: SLC0238-CAL6
Inj Date : 15-MAR-2023 22:28 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL6
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 5 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	7.065	7.073	(0.760)	210389	3.75000	4.001
	3 Phenol	94	8.657	8.664	(0.931)	190392	2.50000	2.639
	7 1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	168055	2.50000	2.489
*	8 1,4-Dichlorobenzene-d4	152	9.299	9.298	(1.000)	173412	4.00000	
	9 1,4-Dichlorobenzene	146	9.330	9.329	(1.003)	163092	2.50000	2.503
	11 Benzyl alcohol	79	9.562	9.570	(1.028)	120208	2.50000	2.874
	12 1,2-Dichlorobenzene	146	9.687	9.686	(1.042)	159585	2.50000	2.490
	13 2-Methylphenol	108	9.772	9.772	(1.051)	134327	2.50000	2.687
	15 4-Methylphenol	108	10.036	10.036	(1.079)	141444	2.50000	2.723
	16 N-Nitroso-di-n-propylamine	70	10.114	10.113	(1.088)	100651	2.50000	2.740
	22 2,4-Dimethylphenol	107	11.078	11.087	(0.941)	286604	5.00000	5.311
	24 Benzoic acid	105	11.222	11.189	(0.953)	285274	10.0000	9.309
	26 1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	133425	2.50000	2.458
*	27 Naphthalene-d8	136	11.775	11.775	(1.000)	624286	4.00000	
	30 Hexachlorobutadiene	225	12.169	12.169	(1.033)	82773	2.50000	2.508
	39 Dimethylphthalate	163	14.878	14.877	(0.967)	248536	2.50000	2.538
*	42 Acenaphthene-d10	162	15.381	15.380	(1.000)	310309	4.00000	
	50 Diethylphthalate	149	16.332	16.324	(1.062)	274020	2.50000	2.701
	54 N-Nitrosodiphenylamine	169	16.717	16.717	(0.907)	198446	2.50000	2.666
	57 Hexachlorobenzene	284	17.798	17.798	(0.966)	83753	2.50000	2.513

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
58	Pentachlorophenol	266	18.154	18.154	(0.985)	93572	5.00000	4.940
* 59	Phenanthrene-d10	188	18.425	18.417	(1.000)	554860	4.00000	
$ 66	Terphenyl-d14	244	21.543	21.543	(0.918)	167011	2.50000	2.661
67	Butylbenzylphthalate	149	22.464	22.465	(0.958)	133147	2.50000	2.556
* 69	Chrysene-d12	240	23.455	23.455	(1.000)	385144	4.00000	
* 77	Perylene-d12	264	26.188	26.188	(1.000)	456369	4.00000	
79	Dibenzo(a,h)anthracene	278	29.018	29.019	(1.108)	368157	2.50000	2.493
90	N-Nitrosodimethylamine	74	4.925	4.948	(0.530)	174819	5.00000	5.242

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031505S.D
Lab Smp Id: SLC0238-CAL6
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	173412	-7.80
27 Naphthalene-d8	674549	337275	1349098	624286	-7.45
42 Acenaphthene-d10	328275	164138	656550	310309	-5.47
59 Phenanthrene-d10	597140	298570	1194280	554860	-7.08
69 Chrysene-d12	466503	233252	933006	385144	-17.44
77 Perylene-d12	518203	259102	1036406	456369	-11.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.38	-0.04
59 Phenanthrene-d10	18.42	17.92	18.92	18.43	0.01
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031505S.D

Lab ID: SLC0238-CAL6
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 22:28

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.953	0.000	0.9531	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031506S.D

Date : 15-MAR-2023 23:06

Client ID:

Instrument: nt10.i

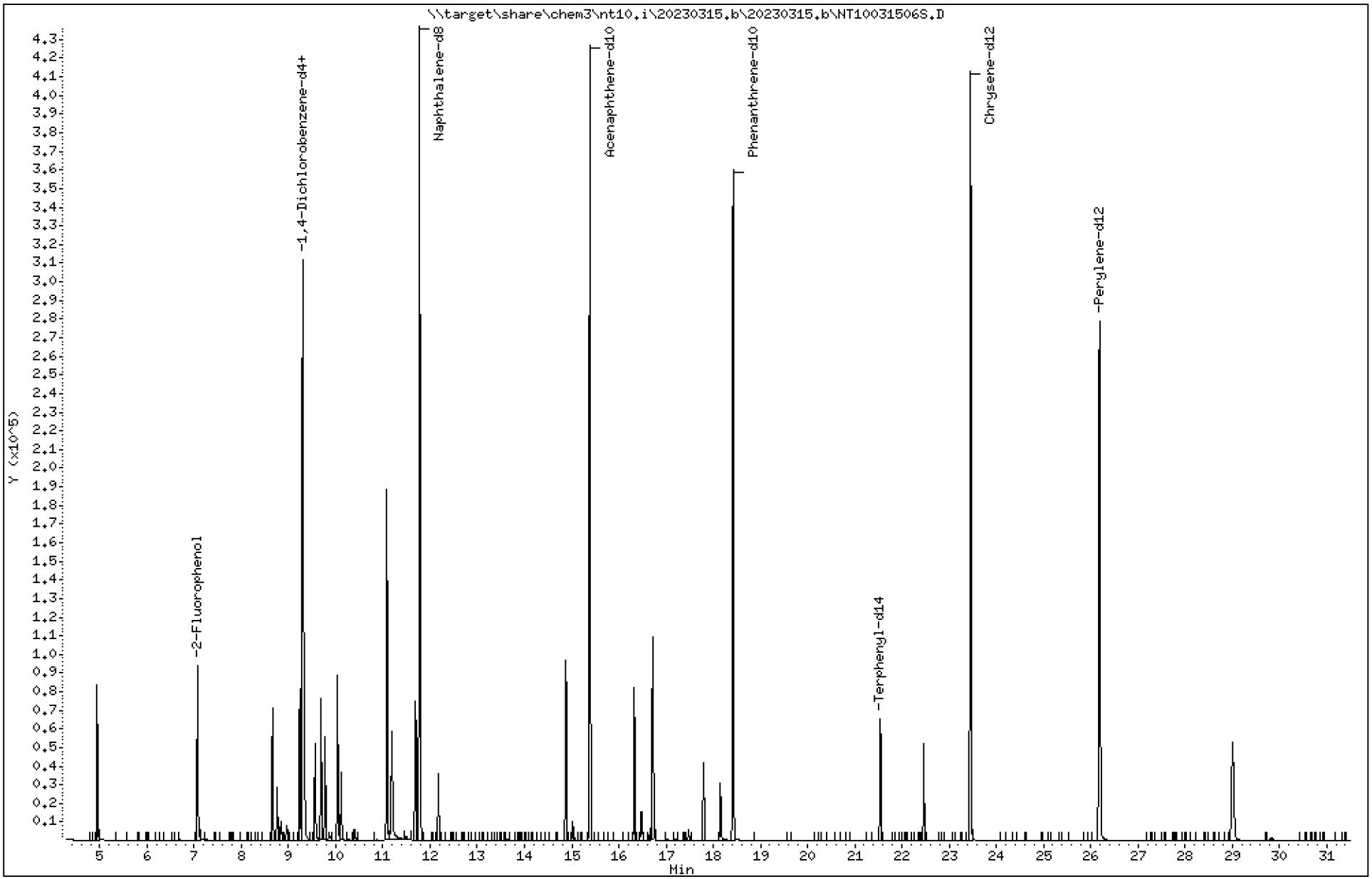
Sample Info: SLC0238-CAL5

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031506S.D
Lab Smp Id: SLC0238-CAL5
Inj Date : 15-MAR-2023 23:06 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL5
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.072	7.073	(0.761)	90798	1.50000	1.592
3	Phenol	94	8.656	8.664	(0.931)	82355	1.00000	1.052
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	73541	1.00000	1.004
* 8	1,4-Dichlorobenzene-d4	152	9.298	9.298	(1.000)	188081	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.003)	71256	1.00000	1.008
11	Benzyl alcohol	79	9.562	9.570	(1.028)	48450	1.00000	1.068
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.042)	70084	1.00000	1.008
13	2-Methylphenol	108	9.772	9.772	(1.051)	56161	1.00000	1.036
15	4-Methylphenol	108	10.036	10.036	(1.079)	59710	1.00000	1.060
16	N-Nitroso-di-n-propylamine	70	10.113	10.113	(1.088)	42270	1.00000	1.061
22	2,4-Dimethylphenol	107	11.077	11.087	(0.941)	125195	2.00000	2.147
24	Benzoic acid	105	11.187	11.189	(0.950)	77741	4.00000	2.416
26	1,2,4-Trichlorobenzene	180	11.689	11.690	(0.993)	58641	1.00000	0.9998
* 27	Naphthalene-d8	136	11.774	11.775	(1.000)	674549	4.00000	
30	Hexachlorobutadiene	225	12.176	12.169	(1.034)	35610	1.00000	0.9986
39	Dimethylphthalate	163	14.877	14.877	(0.967)	108743	1.00000	1.050
* 42	Acenaphthene-d10	162	15.387	15.380	(1.000)	328275	4.00000	
50	Diethylphthalate	149	16.330	16.324	(1.061)	117125	1.00000	1.091
54	N-Nitrosodiphenylamine	169	16.724	16.717	(0.908)	87266	1.00000	1.089
57	Hexachlorobenzene	284	17.797	17.798	(0.966)	36131	1.00000	1.007

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
58	Pentachlorophenol	266	18.153	18.154	(0.985)	33609	2.00000	1.681
* 59	Phenanthrene-d10	188	18.424	18.417	(1.000)	597140	4.00000	
$ 66	Terphenyl-d14	244	21.542	21.543	(0.918)	75884	1.00000	0.9983
67	Butylbenzylphthalate	149	22.463	22.465	(0.958)	56297	1.00000	0.9093
* 69	Chrysene-d12	240	23.454	23.455	(1.000)	466503	4.00000	
* 77	Perylene-d12	264	26.187	26.188	(1.000)	518203	4.00000	
79	Dibenzo(a,h)anthracene	278	29.009	29.019	(1.108)	155363	1.00000	0.9181
90	N-Nitrosodimethylamine	74	4.940	4.948	(0.531)	75637	2.00000	2.091

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031506S.D
Lab Smp Id: SLC0238-CAL5
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	188081	0.00
27 Naphthalene-d8	674549	337275	1349098	674549	0.00
42 Acenaphthene-d10	328275	164138	656550	328275	0.00
59 Phenanthrene-d10	597140	298570	1194280	597140	0.00
69 Chrysene-d12	466503	233252	933006	466503	0.00
77 Perylene-d12	518203	259102	1036406	518203	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.77	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031506S.D

Lab ID: SLC0238-CAL5
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 23:06

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.000	0.9502	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

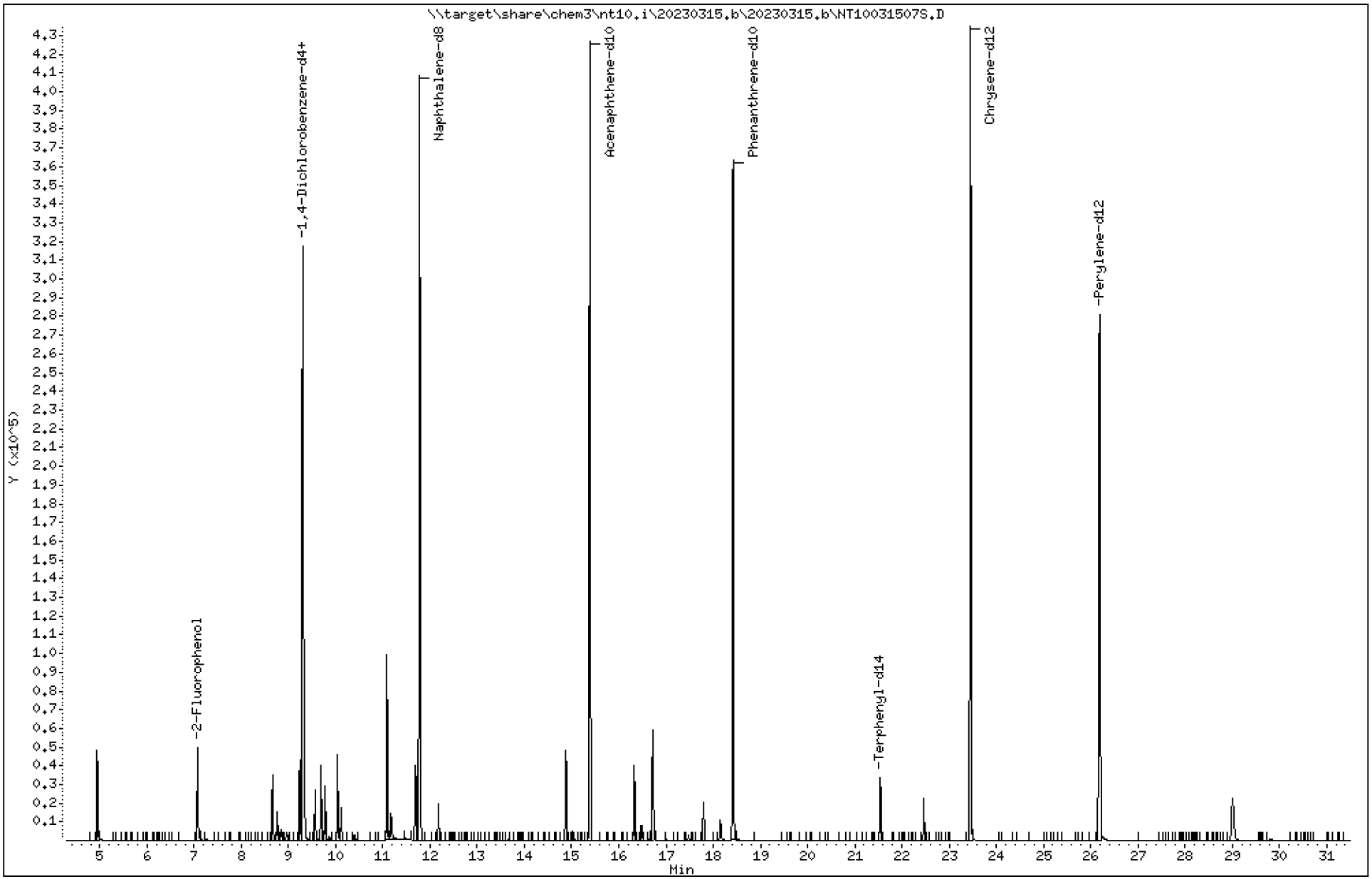
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031507S.D
Date : 15-MAR-2023 23:44
Client ID:
Sample Info: SLC0238-CAL4
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031507S.D
Lab Smp Id: SLC0238-CAL4
Inj Date : 15-MAR-2023 23:44 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL4
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.073	7.073	(0.761)	45949	0.75000	0.7906
3	Phenol	94	8.657	8.664	(0.931)	42286	0.50000	0.5304
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	38003	0.50000	0.5094
* 8	1,4-Dichlorobenzene-d4	152	9.298	9.298	(1.000)	191648	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.003)	36555	0.50000	0.5076
11	Benzyl alcohol	79	9.562	9.570	(1.028)	23988	0.50000	0.5190
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.042)	36410	0.50000	0.5141
13	2-Methylphenol	108	9.772	9.772	(1.051)	28358	0.50000	0.5133
15	4-Methylphenol	108	10.036	10.036	(1.079)	29752	0.50000	0.5183
16	N-Nitroso-di-n-propylamine	70	10.113	10.113	(1.088)	21127	0.50000	0.5204
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	63684	1.00000	1.084
24	Benzoic acid	105	11.171	11.189	(0.949)	21037	2.00000	0.6535
26	1,2,4-Trichlorobenzene	180	11.689	11.690	(0.993)	30281	0.50000	0.5124
* 27	Naphthalene-d8	136	11.774	11.775	(1.000)	679665	4.00000	
30	Hexachlorobutadiene	225	12.176	12.169	(1.034)	18287	0.50000	0.5089
39	Dimethylphthalate	163	14.877	14.877	(0.967)	54277	0.50000	0.5122
* 42	Acenaphthene-d10	162	15.387	15.380	(1.000)	335786	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	57205	0.50000	0.5211
54	N-Nitrosodiphenylamine	169	16.716	16.717	(0.907)	43874	0.50000	0.5326
57	Hexachlorobenzene	284	17.797	17.798	(0.966)	18601	0.50000	0.5044

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	18.153	18.154	(0.985)	13495	1.00000	0.6606
*	59 Phenanthrene-d10	188	18.424	18.417	(1.000)	613961	4.00000	
$	66 Terphenyl-d14	244	21.542	21.543	(0.918)	37662	0.50000	0.4975
	67 Butylbenzylphthalate	149	22.463	22.465	(0.958)	24470	0.50000	0.3991
*	69 Chrysene-d12	240	23.454	23.455	(1.000)	464623	4.00000	
*	77 Perylene-d12	264	26.187	26.188	(1.000)	521317	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.010	29.019	(1.108)	72052	0.50000	0.4220
	90 N-Nitrosodimethylamine	74	4.941	4.948	(0.531)	39414	1.00000	1.069

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031507S.D
Lab Smp Id: SLC0238-CAL4
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	191648	1.90
27 Naphthalene-d8	674549	337275	1349098	679665	0.76
42 Acenaphthene-d10	328275	164138	656550	335786	2.29
59 Phenanthrene-d10	597140	298570	1194280	613961	2.82
69 Chrysene-d12	466503	233252	933006	464623	-0.40
77 Perylene-d12	518203	259102	1036406	521317	0.60

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.77	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031507S.D

Lab ID: SLC0238-CAL4
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   15-MAR-2023 23:44

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.949	0.000	0.9487	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT100315085.D

Date : 16-MAR-2023 00:22

Client ID:

Instrument: nt10.i

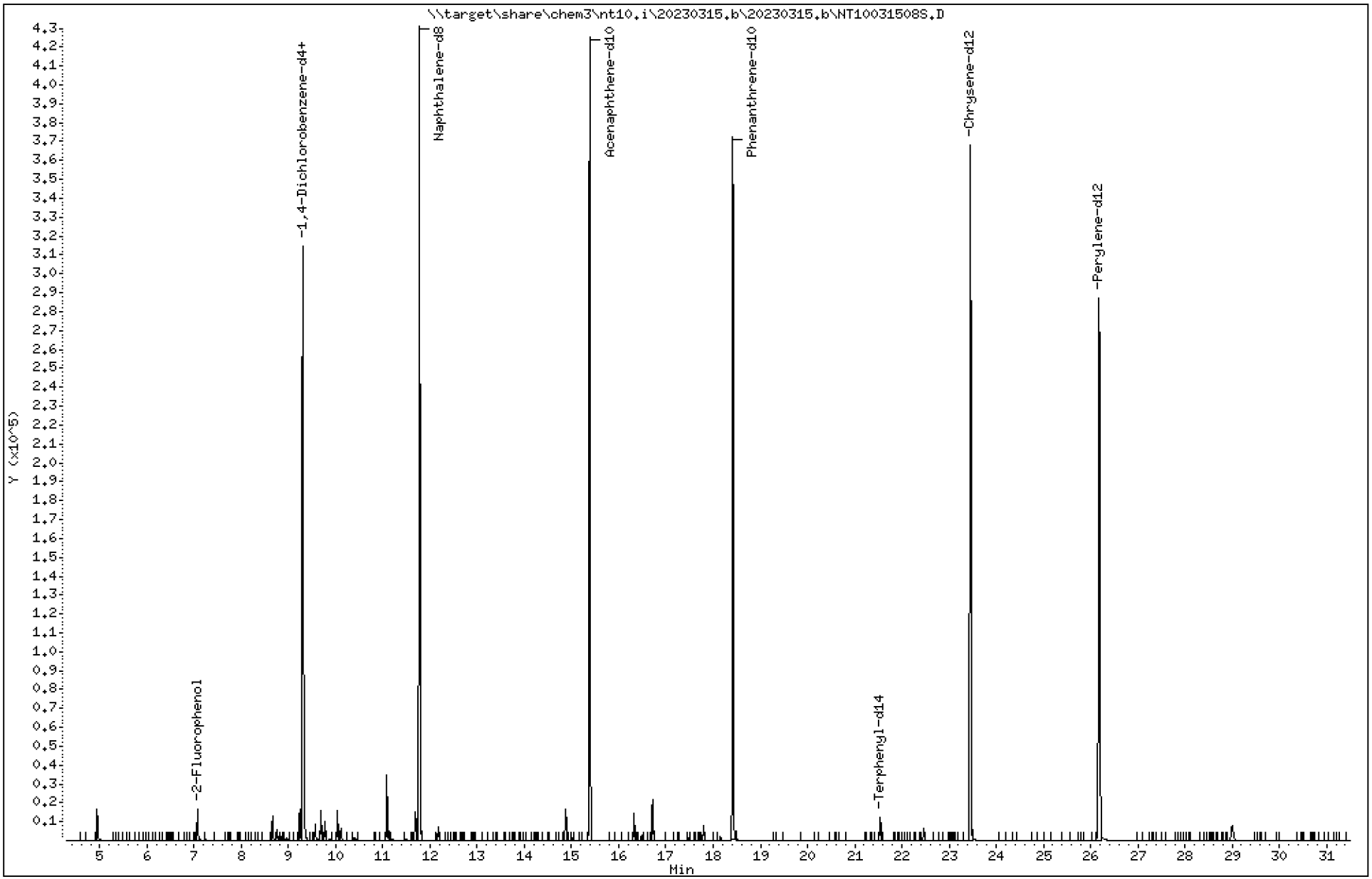
Sample Info: SLC0238-CAL3

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031508S.D
Lab Smp Id: SLC0238-CAL3
Inj Date : 16-MAR-2023 00:22 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL3
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.073	7.073	(0.761)	16956	0.30000	0.2964
3	Phenol	94	8.657	8.664	(0.931)	15852	0.20000	0.2020
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	15032	0.20000	0.2047
* 8	1,4-Dichlorobenzene-d4	152	9.299	9.298	(1.000)	188644	4.00000	
9	1,4-Dichlorobenzene	146	9.330	9.329	(1.003)	14441	0.20000	0.2037
11	Benzyl alcohol	79	9.562	9.570	(1.028)	8244	0.20000	0.1812
12	1,2-Dichlorobenzene	146	9.687	9.686	(1.042)	14306	0.20000	0.2052
13	2-Methylphenol	108	9.772	9.772	(1.051)	10287	0.20000	0.1892
15	4-Methylphenol	108	10.036	10.036	(1.079)	10727	0.20000	0.1898
16	N-Nitroso-di-n-propylamine	70	10.114	10.113	(1.088)	7586	0.20000	0.1898
22	2,4-Dimethylphenol	107	11.078	11.087	(0.941)	23302	0.40000	0.4059
24	Benzoic acid	105	11.189	11.189	(0.950)	891	0.80000	0.02840(M)
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	11744	0.20000	0.2034
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	664117	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	7079	0.20000	0.2016
39	Dimethylphthalate	163	14.878	14.877	(0.967)	20353	0.20000	0.1965
* 42	Acenaphthene-d10	162	15.381	15.380	(1.000)	328147	4.00000	
50	Diethylphthalate	149	16.324	16.324	(1.061)	20971	0.20000	0.1955
54	N-Nitrosodiphenylamine	169	16.717	16.717	(0.908)	16188	0.20000	0.2000
57	Hexachlorobenzene	284	17.790	17.798	(0.966)	7274	0.20000	0.2008

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	18.154	18.154	(0.986)	3337	0.40000	0.1667
*	59 Phenanthrene-d10	188	18.417	18.417	(1.000)	603272	4.00000	
$	66 Terphenyl-d14	244	21.543	21.543	(0.918)	14479	0.20000	0.1895
	67 Butylbenzylphthalate	149	22.464	22.465	(0.958)	7787	0.20000	0.1262
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	468991	4.00000	
*	77 Perylene-d12	264	26.181	26.188	(1.000)	525052	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.003	29.019	(1.108)	24266	0.20000	0.1409
	90 N-Nitrosodimethylamine	74	4.941	4.948	(0.531)	14672	0.40000	0.4044

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031508S.D
Lab Smp Id: SLC0238-CAL3
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	188644	0.30
27 Naphthalene-d8	674549	337275	1349098	664117	-1.55
42 Acenaphthene-d10	328275	164138	656550	328147	-0.04
59 Phenanthrene-d10	597140	298570	1194280	603272	1.03
69 Chrysene-d12	466503	233252	933006	468991	0.53
77 Perylene-d12	518203	259102	1036406	525052	1.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.38	-0.04
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.04
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.18	-0.03

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

REVIEW SUMMARY FOR FILE - NT10031508S.D

Lab ID: SLC0238-CAL3
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 00:22

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.950	0.000	0.9502	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

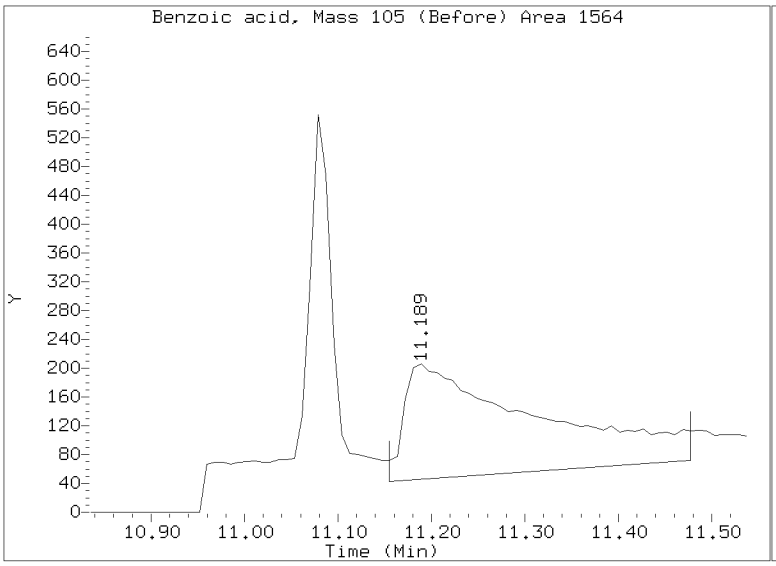
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

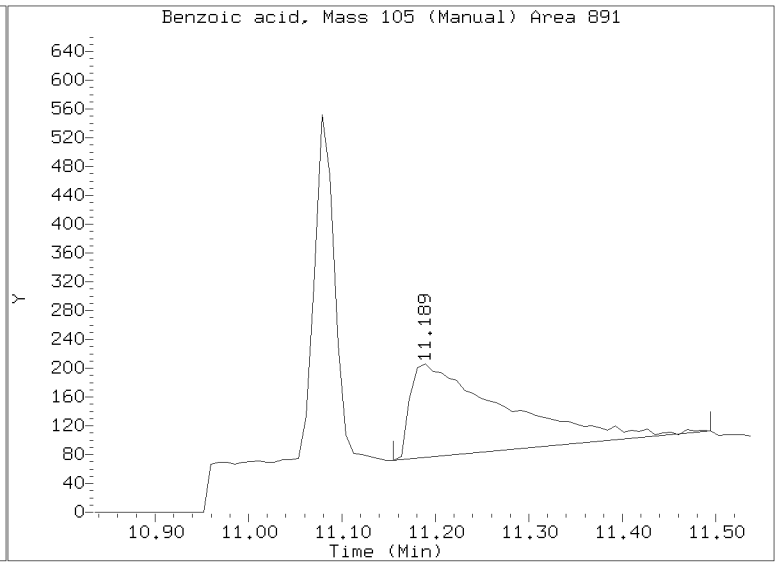
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031508S.D
Injection Date: 16-MAR-2023 00:22
Lab ID:SLC0238-CAL3 Client ID:
Report Date: 03/16/2023 14:49





Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031509S.D

Date : 16-MAR-2023 01:00

Client ID:

Instrument: nt10.i

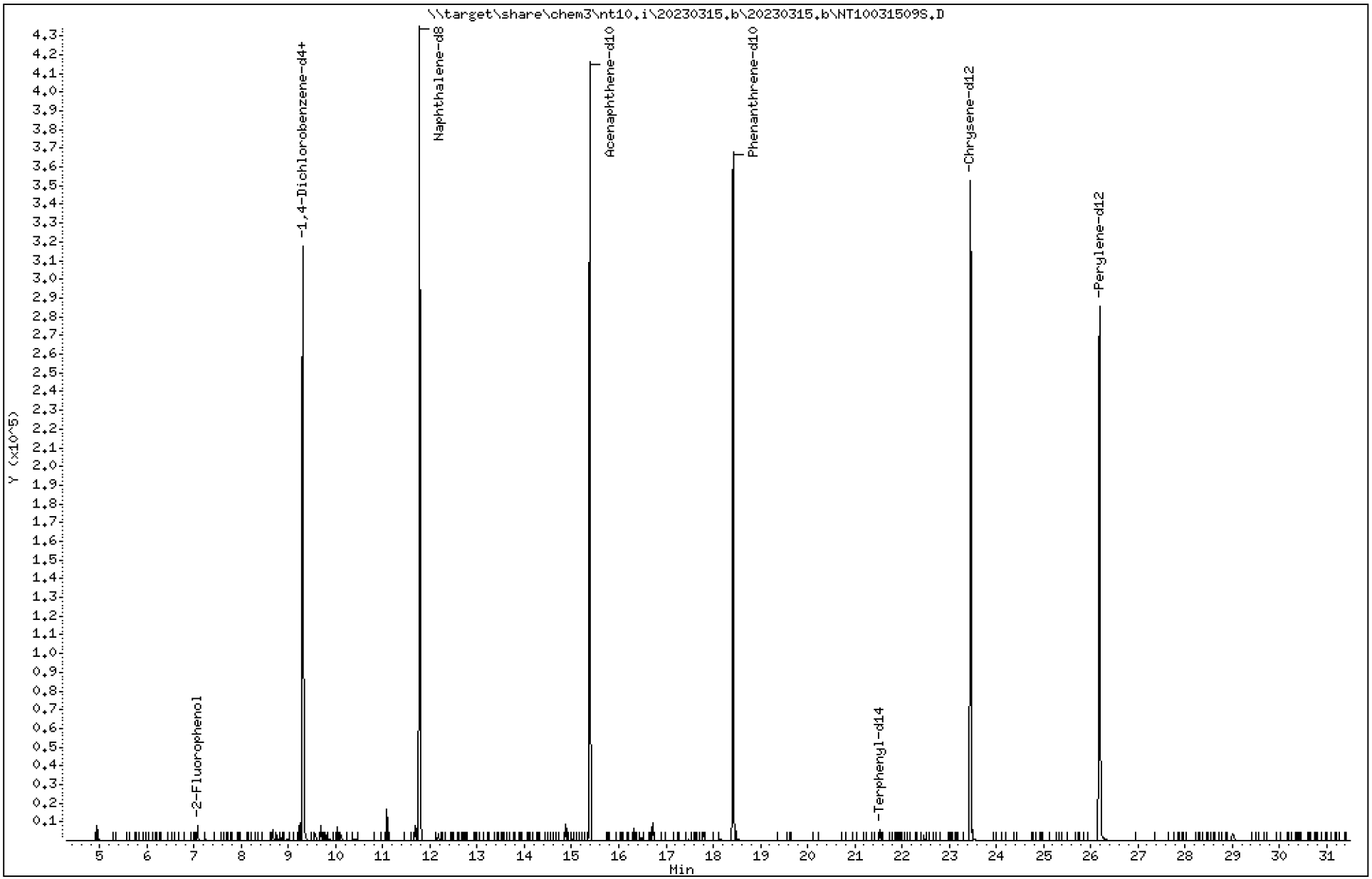
Sample Info: SLC0238-CAL2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031509S.D
Lab Smp Id: SLC0238-CAL2
Inj Date : 16-MAR-2023 01:00 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.073	7.073	(0.761)	8469	0.15000	0.1462
3	Phenol	94	8.657	8.664	(0.931)	7915	0.10000	0.09961
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	7959	0.10000	0.1070
* 8	1,4-Dichlorobenzene-d4	152	9.298	9.298	(1.000)	190985	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.003)	7577	0.10000	0.1056
11	Benzyl alcohol	79	9.562	9.570	(1.028)	3916	0.10000	0.08501
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.042)	7452	0.10000	0.1056
13	2-Methylphenol	108	9.772	9.772	(1.051)	5108	0.10000	0.09278
15	4-Methylphenol	108	10.036	10.036	(1.079)	5283	0.10000	0.09234
16	N-Nitroso-di-n-propylamine	70	10.113	10.113	(1.088)	3707	0.10000	0.09162
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	11249	0.20000	0.1901
24	Benzoic acid	105	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	11.689	11.690	(0.993)	6182	0.10000	0.1038
* 27	Naphthalene-d8	136	11.774	11.775	(1.000)	684638	4.00000	
30	Hexachlorobutadiene	225	12.176	12.169	(1.034)	3646	0.10000	0.1007
39	Dimethylphthalate	163	14.877	14.877	(0.967)	10444	0.10000	0.1008
* 42	Acenaphthene-d10	162	15.387	15.380	(1.000)	328366	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	9630	0.10000	0.08971
54	N-Nitrosodiphenylamine	169	16.716	16.717	(0.907)	7688	0.10000	0.09515
57	Hexachlorobenzene	284	17.797	17.798	(0.966)	3777	0.10000	0.1044

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	18.153	18.154	(0.985)	1130	0.20000	0.05659(M)
*	59 Phenanthrene-d10	188	18.424	18.417	(1.000)	602202	4.00000	
$	66 Terphenyl-d14	244	21.542	21.543	(0.918)	6866	0.10000	0.09337
	67 Butylbenzylphthalate	149	22.463	22.465	(0.958)	3284	0.10000	0.05534
*	69 Chrysene-d12	240	23.454	23.455	(1.000)	451316	4.00000	
*	77 Perylene-d12	264	26.187	26.188	(1.000)	517188	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.010	29.019	(1.108)	11218	0.10000	0.06608
	90 N-Nitrosodimethylamine	74	4.941	4.948	(0.531)	7449	0.20000	0.2028

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031509S.D
Lab Smp Id: SLC0238-CAL2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	190985	1.54
27 Naphthalene-d8	674549	337275	1349098	684638	1.50
42 Acenaphthene-d10	328275	164138	656550	328366	0.03
59 Phenanthrene-d10	597140	298570	1194280	602202	0.85
69 Chrysene-d12	466503	233252	933006	451316	-3.26
77 Perylene-d12	518203	259102	1036406	517188	-0.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.77	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031509S.D

Lab ID: SLC0238-CAL2
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 01:00

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230315.b/NT10031510S.D

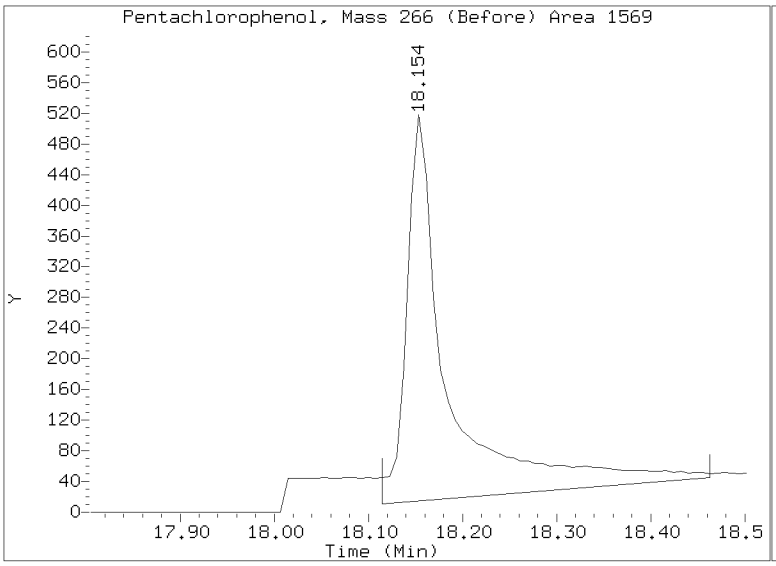
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

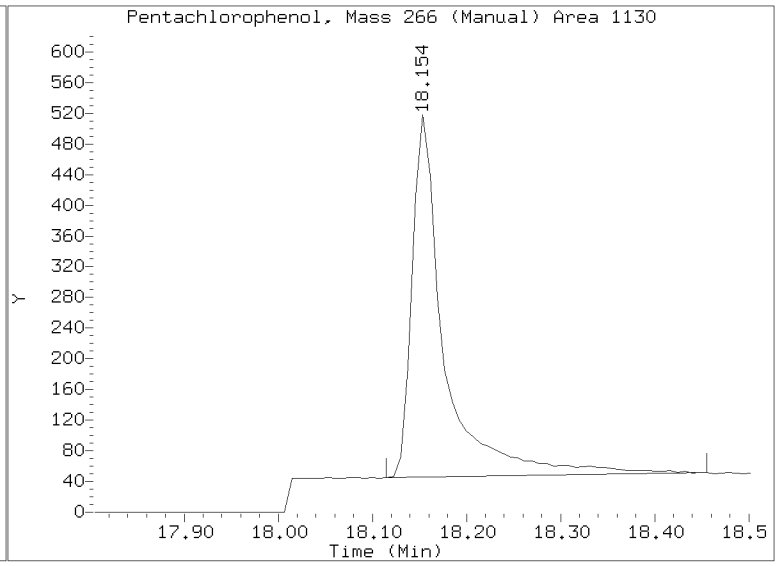
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031509S.D
Injection Date: 16-MAR-2023 01:00
Lab ID:SLC0238-CAL2 Client ID:
Report Date: 03/16/2023 14:49





Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031510S.D

Date : 16-MAR-2023 01:38

Client ID:

Instrument: nt10.i

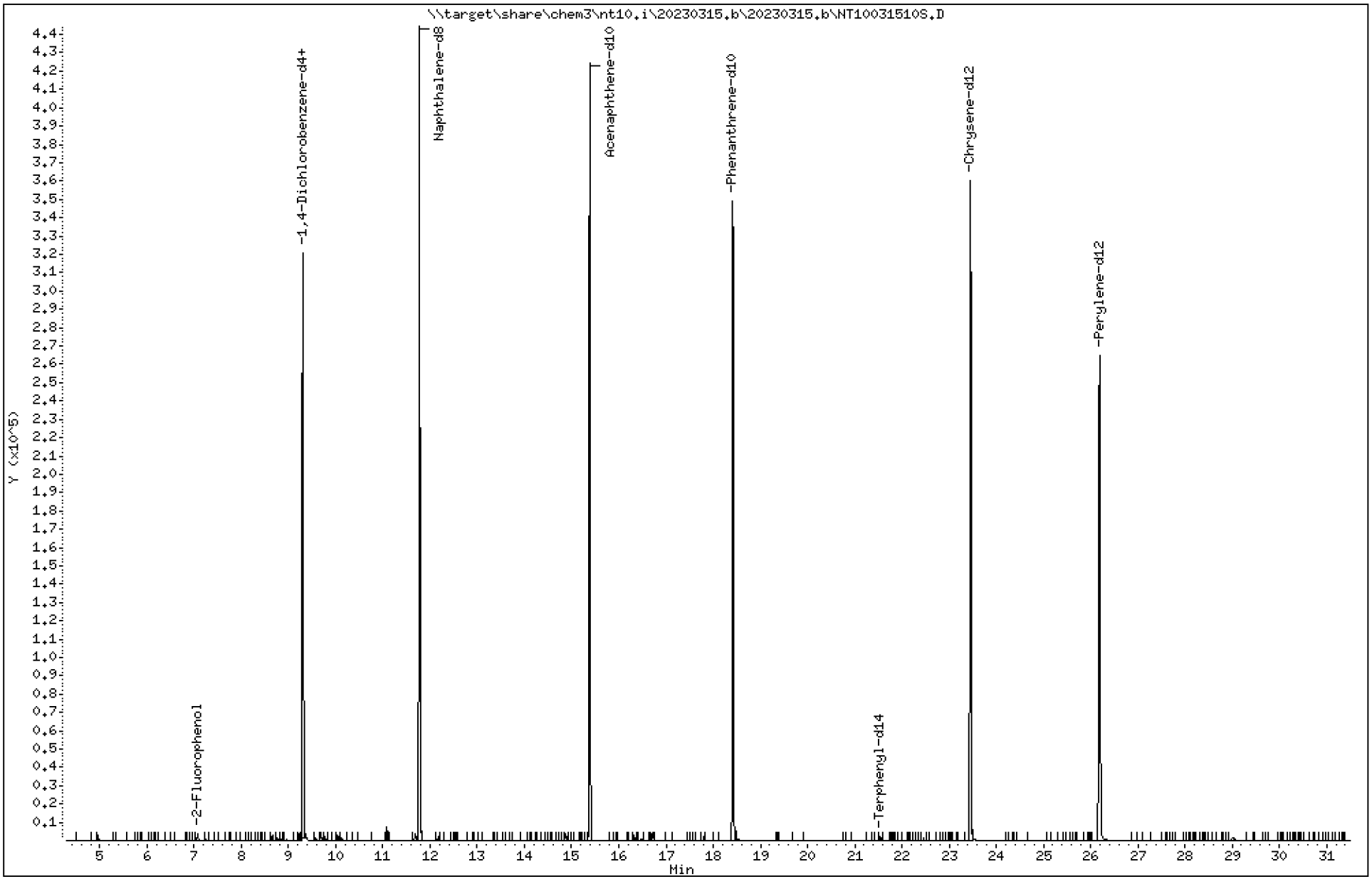
Sample Info: SLC0238-CAL1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031510S.D
Lab Smp Id: SLC0238-CAL1
Inj Date : 16-MAR-2023 01:38 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-CAL1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	7.073	7.073	(0.761)	3849	0.07500	0.06782
3	Phenol	94	8.664	8.664	(0.932)	3653	0.05000	0.04692
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.993)	3896	0.05000	0.05347
* 8	1,4-Dichlorobenzene-d4	152	9.298	9.298	(1.000)	187154	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.003)	3725	0.05000	0.05296
11	Benzyl alcohol	79	9.570	9.570	(1.029)	1831	0.05000	0.04056
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.042)	3651	0.05000	0.05278
13	2-Methylphenol	108	9.772	9.772	(1.051)	2592	0.05000	0.04804
15	4-Methylphenol	108	10.036	10.036	(1.079)	2412	0.05000	0.04302
16	N-Nitroso-di-n-propylamine	70	10.113	10.113	(1.088)	1741	0.05000	0.04391
22	2,4-Dimethylphenol	107	11.087	11.087	(0.942)	4967	0.10000	0.08781
24	Benzoic acid	105	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	3146	0.05000	0.05529
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	654413	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	1885	0.05000	0.05449
39	Dimethylphthalate	163	14.877	14.877	(0.967)	5095	0.05000	0.05062
* 42	Acenaphthene-d10	162	15.380	15.380	(1.000)	318969	4.00000	
50	Diethylphthalate	149	16.324	16.324	(1.061)	4381	0.05000	0.04201
54	N-Nitrosodiphenylamine	169	16.717	16.717	(0.908)	3307	0.05000	0.04226
57	Hexachlorobenzene	284	17.798	17.798	(0.966)	1826	0.05000	0.05212

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
58	Pentachlorophenol	266	18.154	18.154	(0.986)	337	0.10000	0.01743(M)
* 59	Phenanthrene-d10	188	18.417	18.417	(1.000)	583319	4.00000	
$ 66	Terphenyl-d14	244	21.543	21.543	(0.918)	3504	0.05000	0.04882
67	Butylbenzylphthalate	149	22.464	22.465	(0.958)	1336	0.05000	0.02307
* 69	Chrysene-d12	240	23.455	23.455	(1.000)	440533	4.00000	
* 77	Perylene-d12	264	26.188	26.188	(1.000)	488759	4.00000	
79	Dibenzo(a,h)anthracene	278	29.018	29.019	(1.108)	4785	0.05000	0.02982
90	N-Nitrosodimethylamine	74	4.948	4.948	(0.532)	3496	0.10000	0.09712

QC Flag Legend

M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031510S.D
Lab Smp Id: SLC0238-CAL1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	187154	-0.49
27 Naphthalene-d8	674549	337275	1349098	654413	-2.99
42 Acenaphthene-d10	328275	164138	656550	318969	-2.83
59 Phenanthrene-d10	597140	298570	1194280	583319	-2.31
69 Chrysene-d12	466503	233252	933006	440533	-5.57
77 Perylene-d12	518203	259102	1036406	488759	-5.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.30	0.00
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.38	-0.04
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.04
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031510S.D

Lab ID: SLC0238-CAL1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 01:38

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230315.b/NT10031510S.D

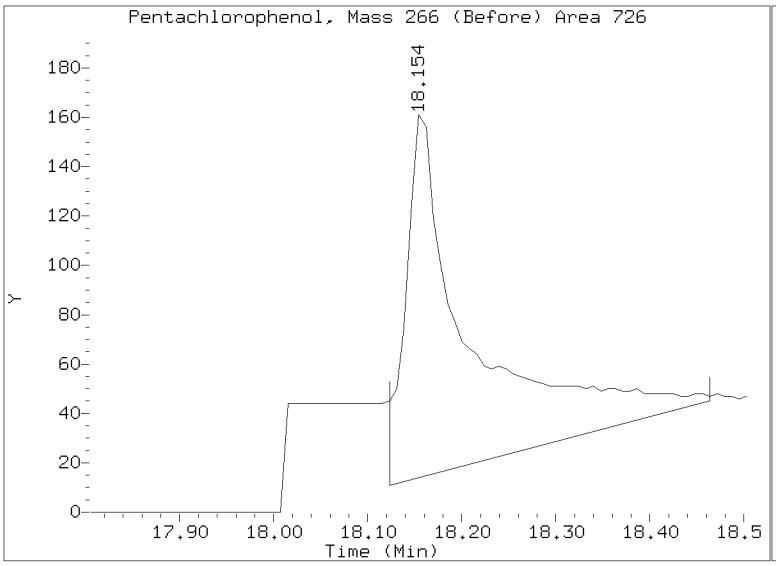
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

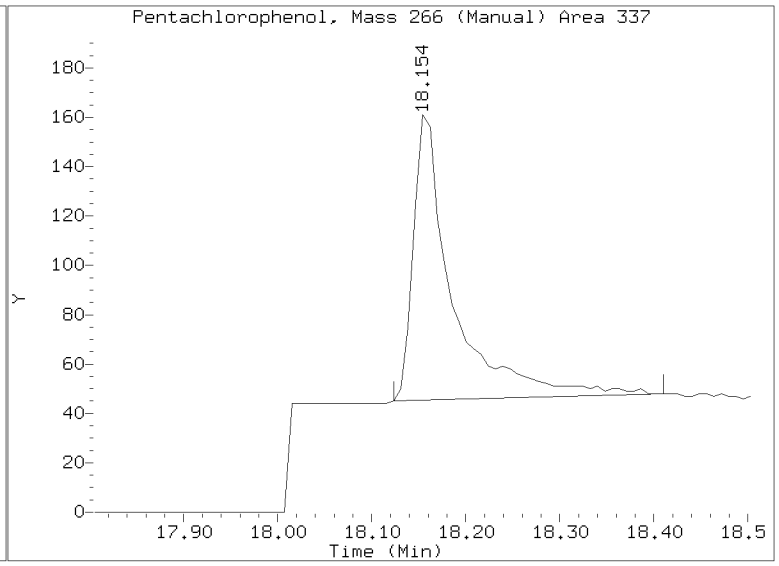
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031510S.D
Injection Date: 16-MAR-2023 01:38
Lab ID:SLC0238-CAL1 Client ID:
Report Date: 03/16/2023 14:49





Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

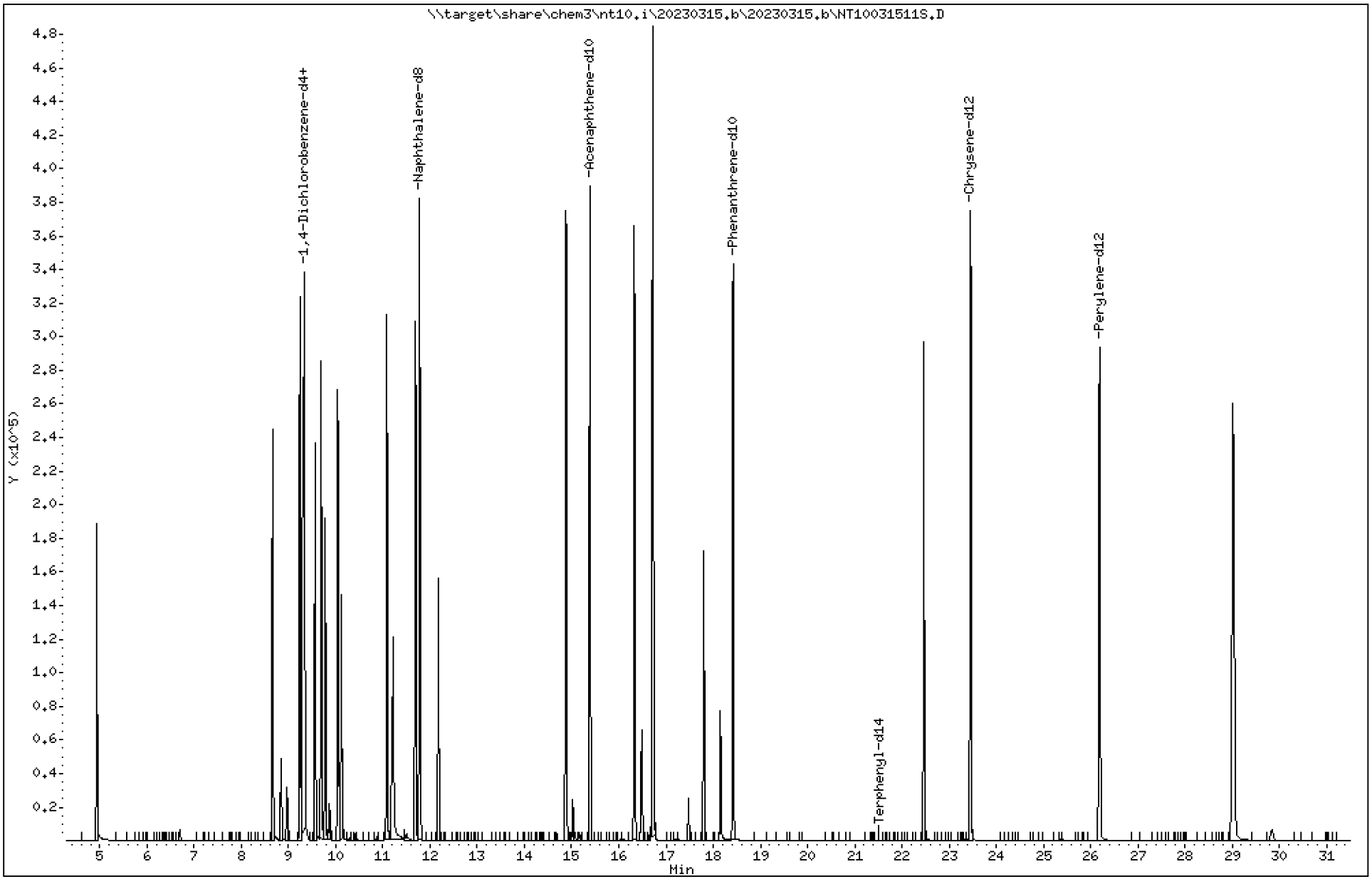
Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

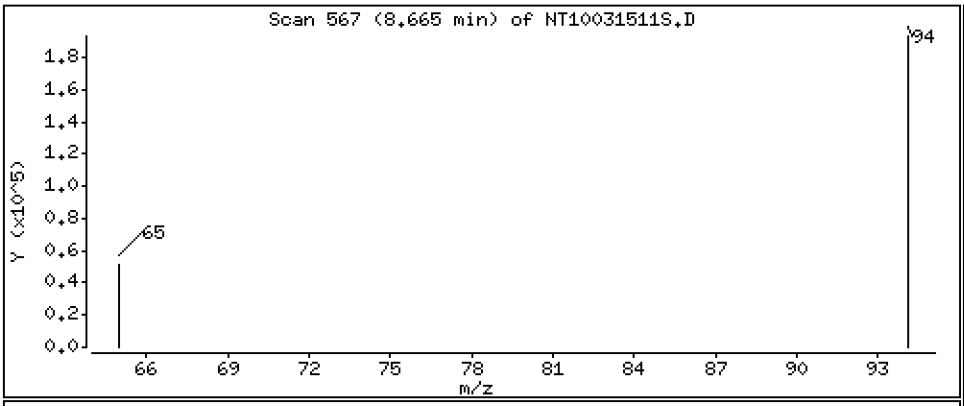
Operator: JGR

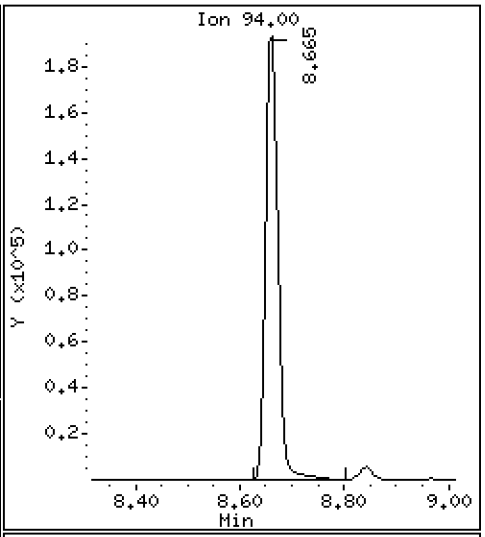
Column phase: ZB-5msi

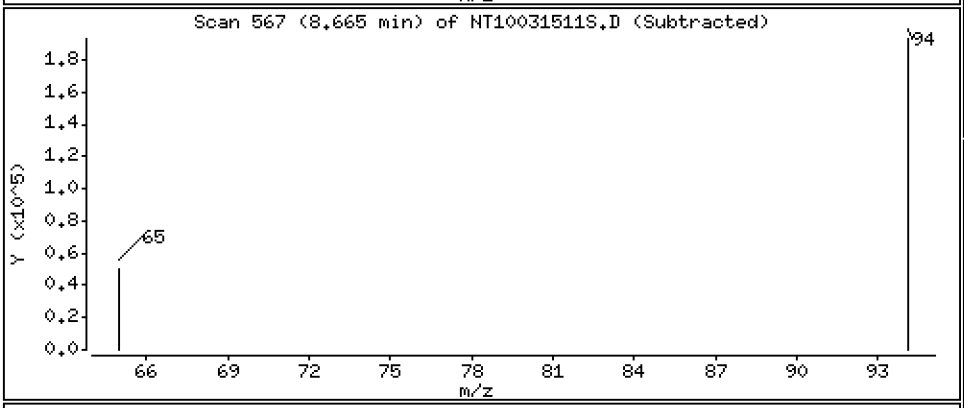
Column diameter: 0.25

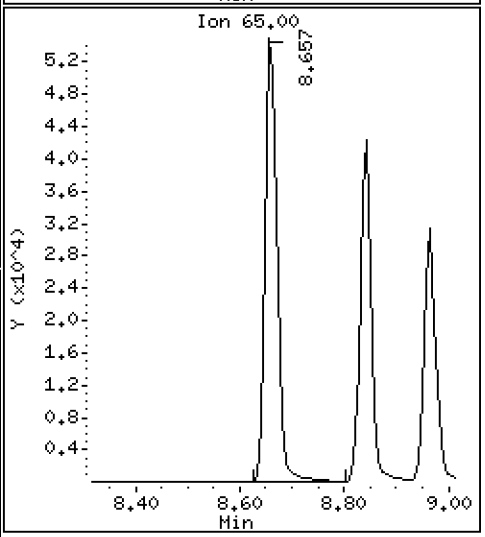
3 Phenol

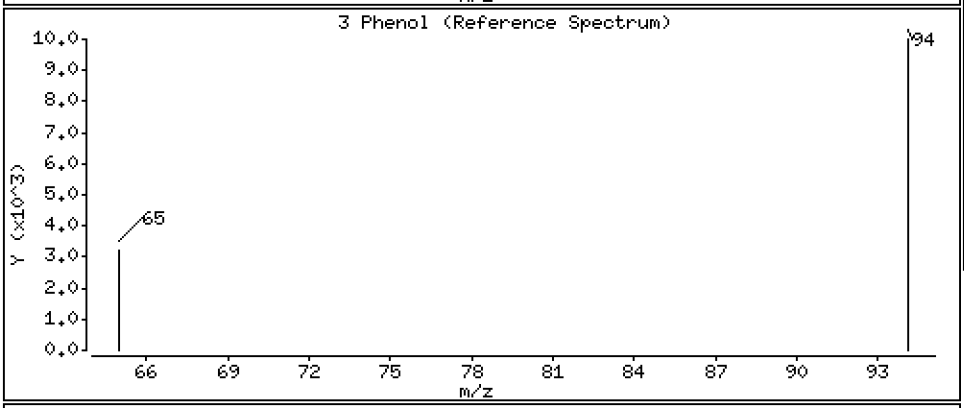
Concentration: 4.373 ug/L

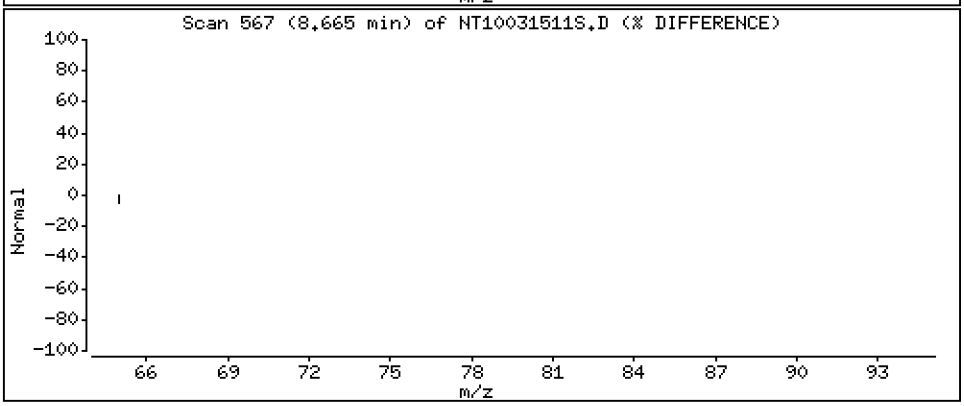












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

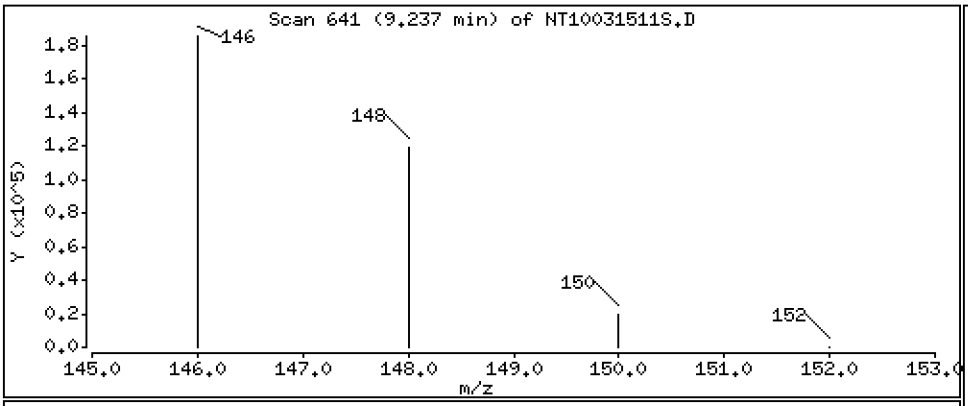
Operator: JGR

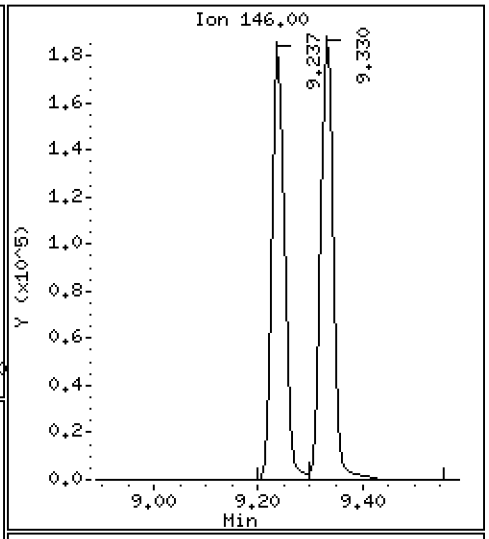
Column phase: ZB-5msi

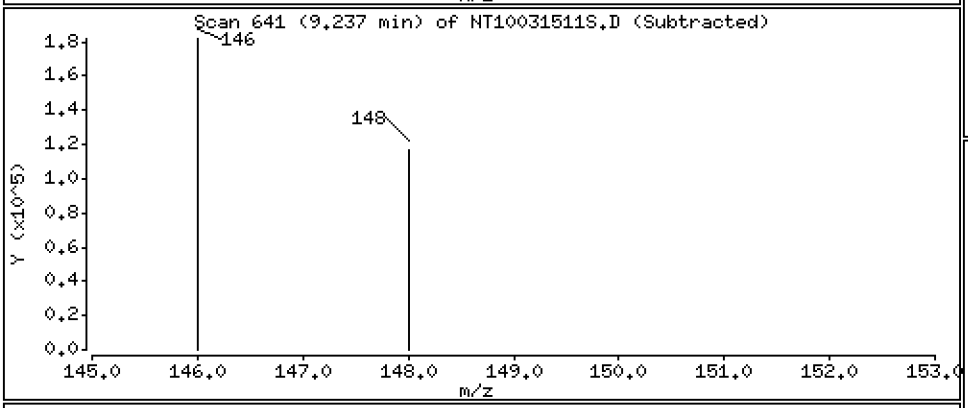
Column diameter: 0.25

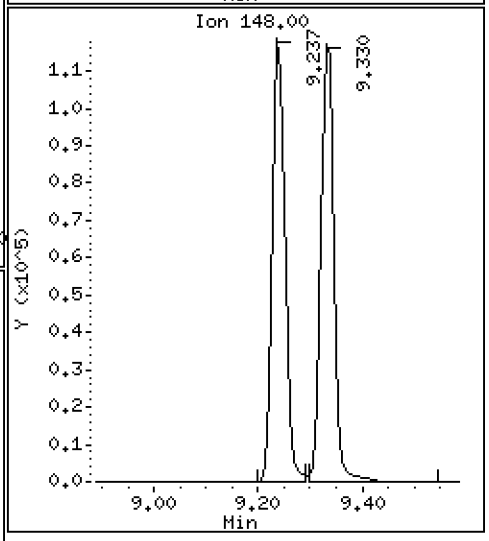
7 1,3-Dichlorobenzene

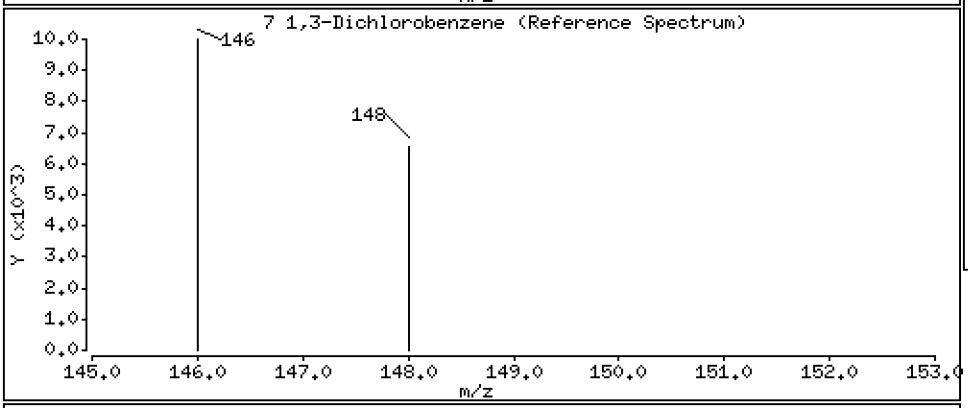
Concentration: 4.643 ug/L

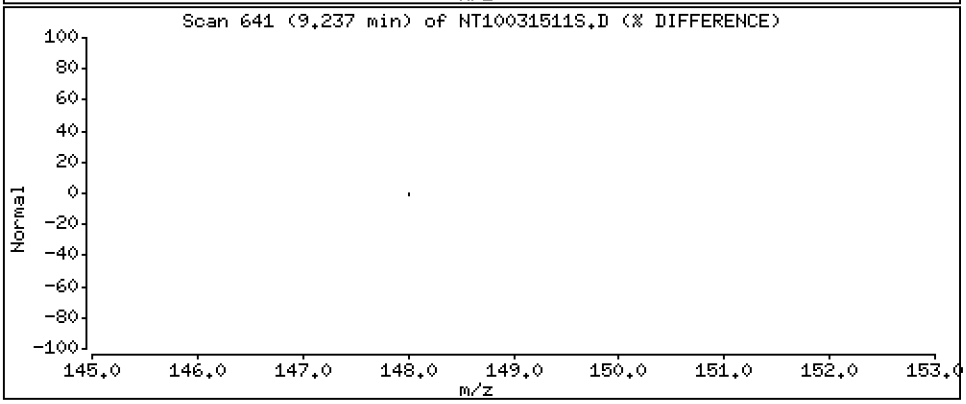












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

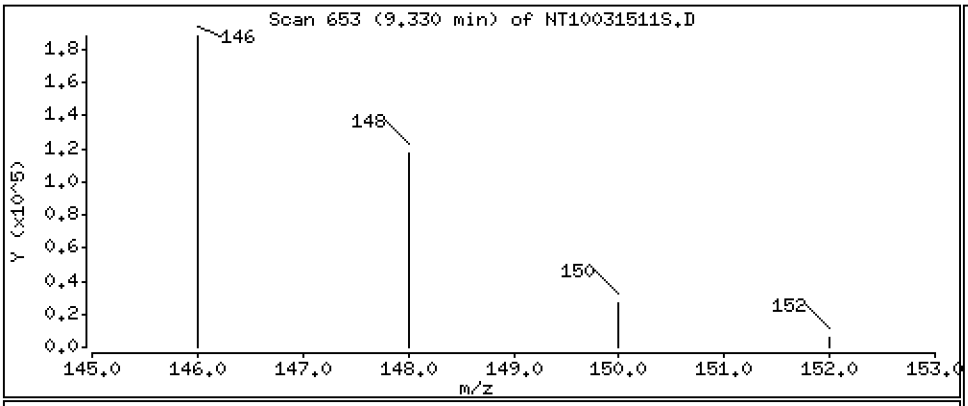
Operator: JGR

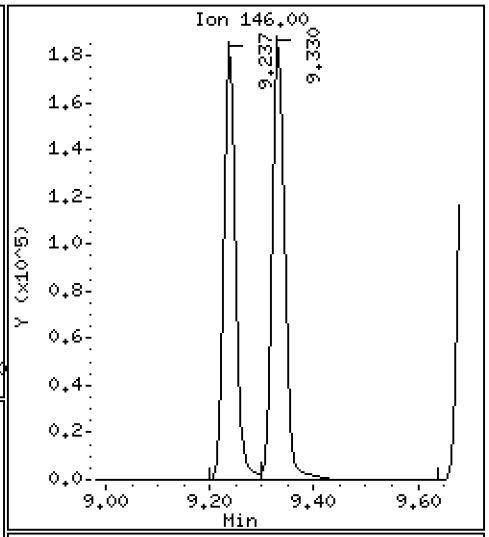
Column phase: ZB-5msi

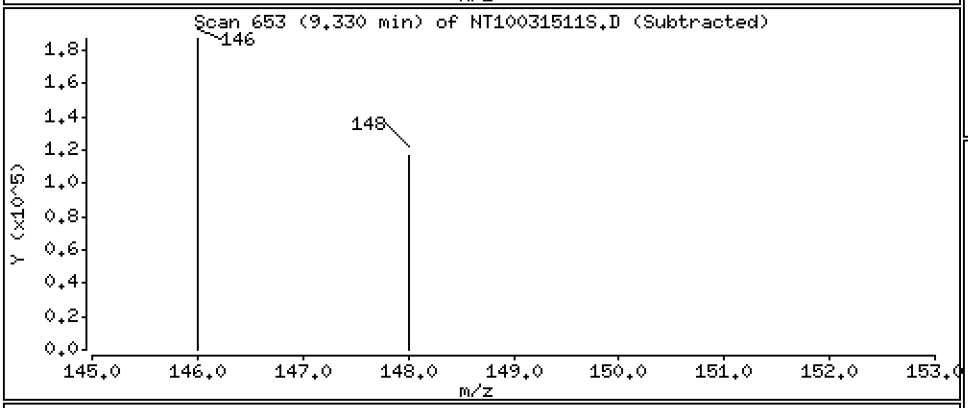
Column diameter: 0.25

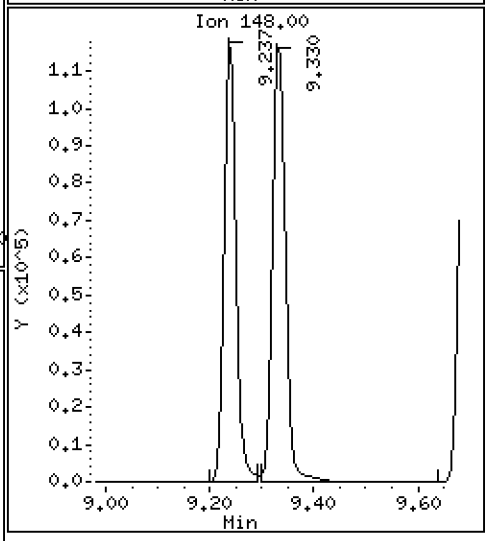
9 1,4-Dichlorobenzene

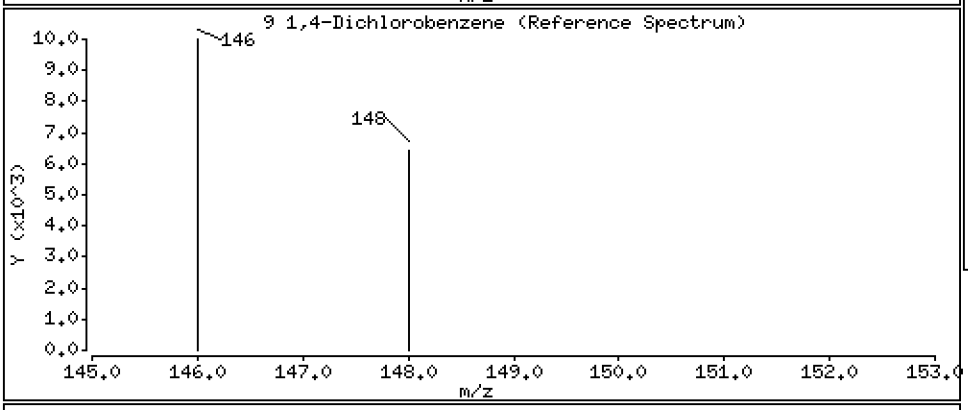
Concentration: 4.838 ug/L

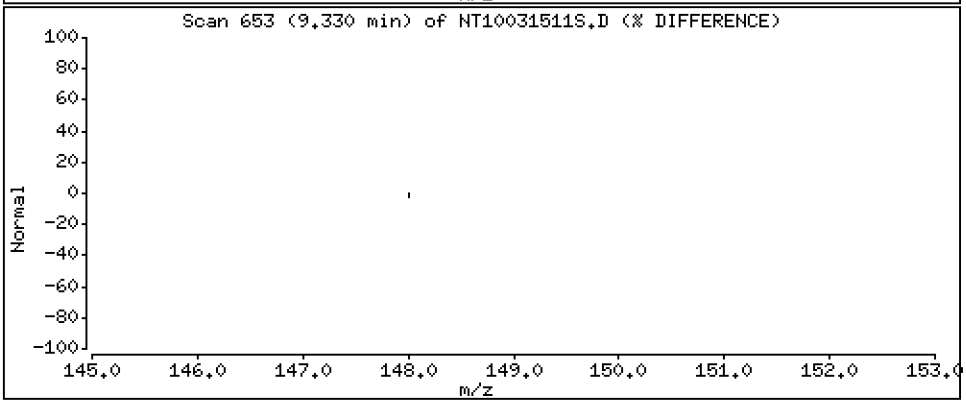












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

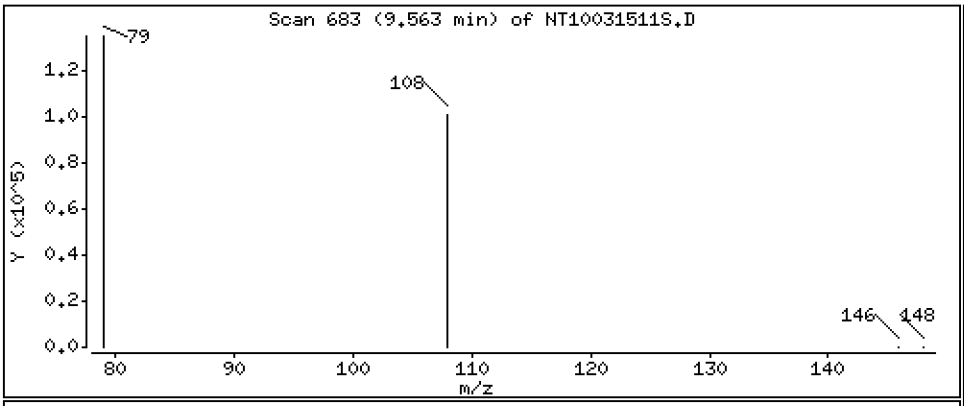
Operator: JGR

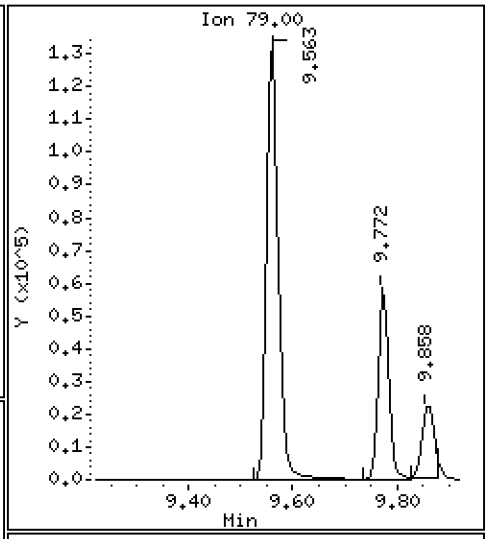
Column phase: ZB-5msi

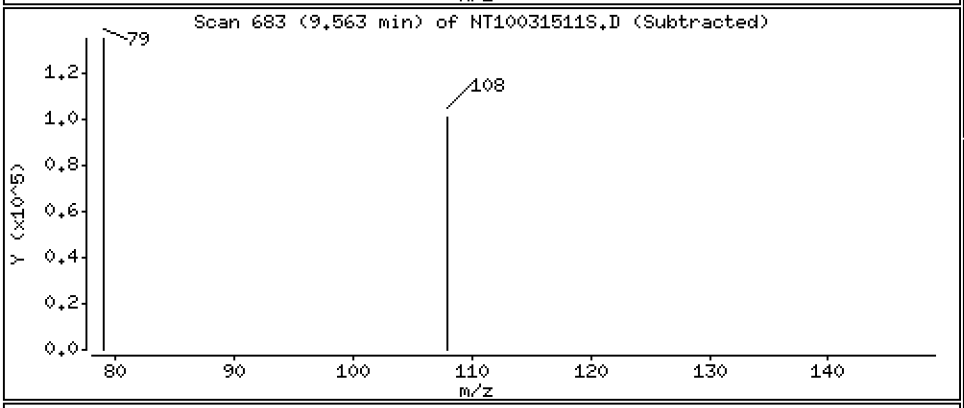
Column diameter: 0.25

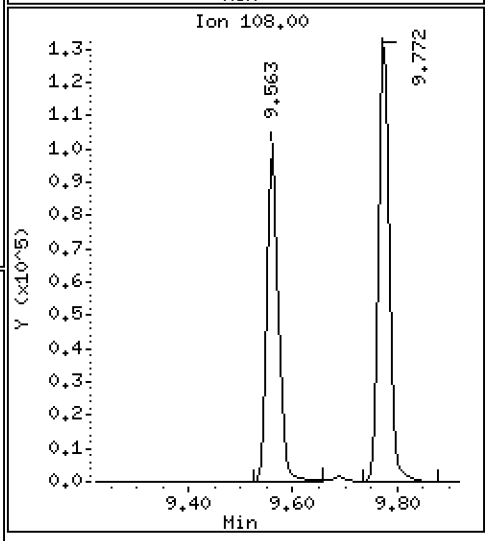
11 Benzyl alcohol

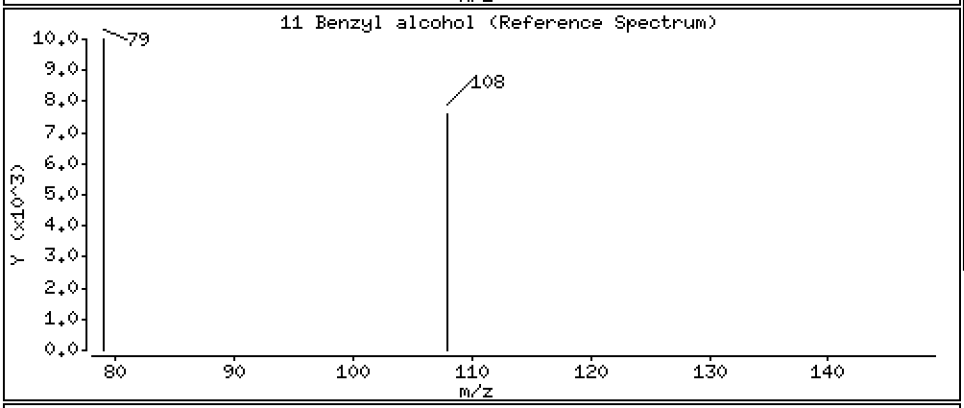
Concentration: 5.181 ug/L

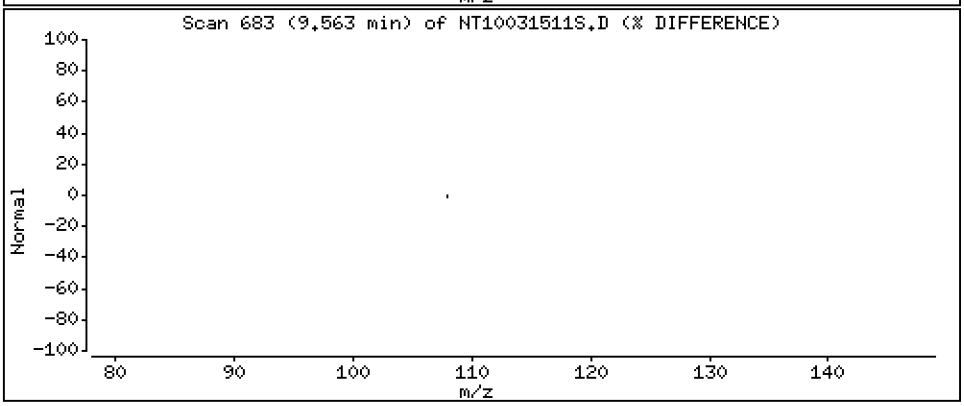












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

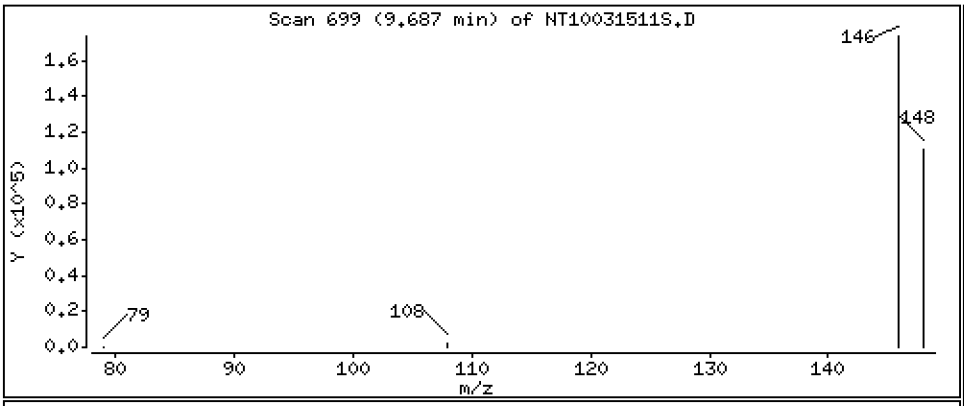
Operator: JGR

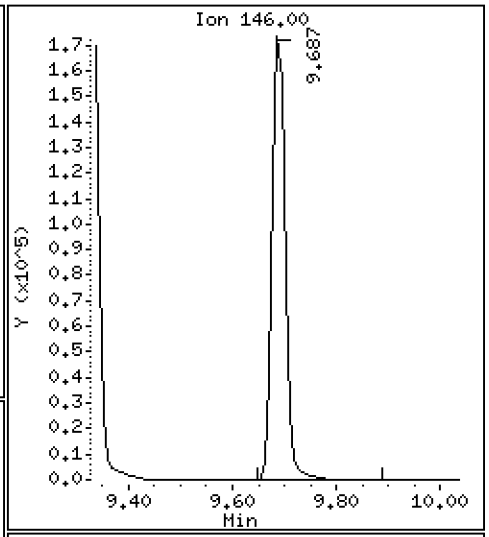
Column phase: ZB-5msi

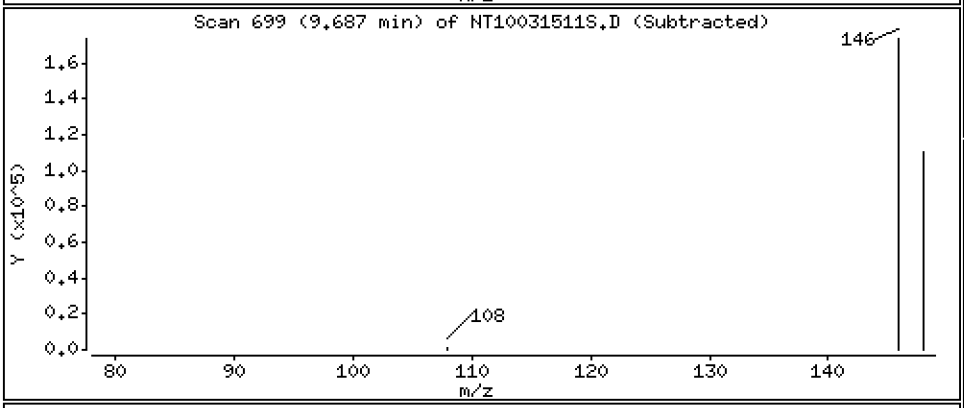
Column diameter: 0.25

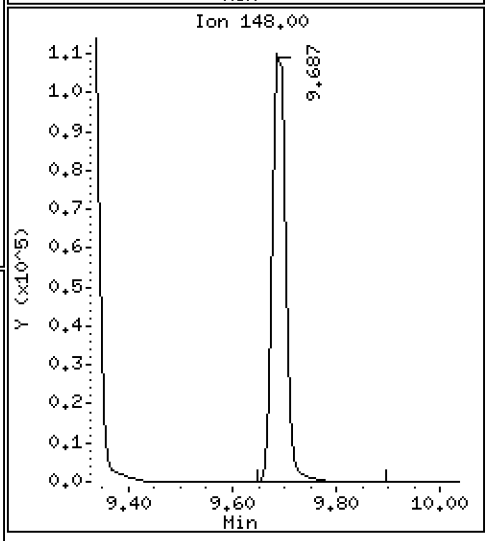
12 1,2-Dichlorobenzene

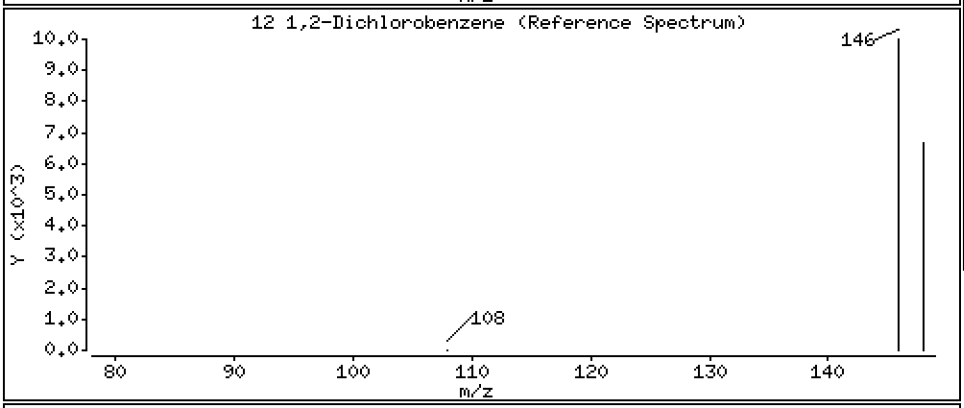
Concentration: 4.679 ug/L

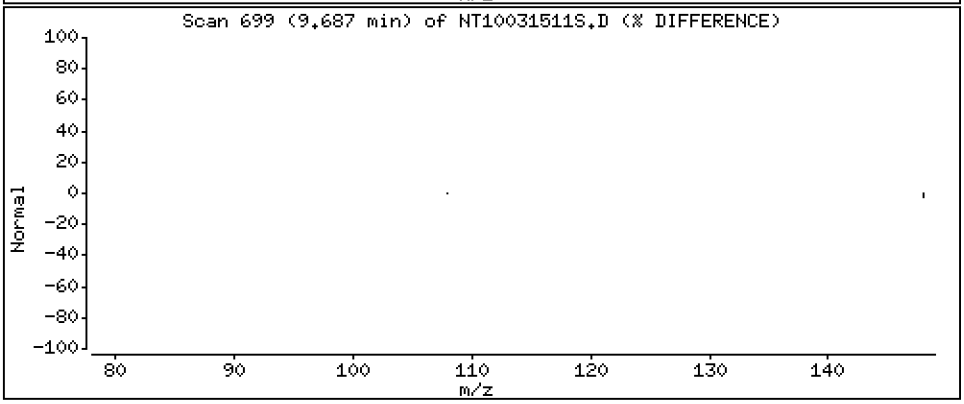












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

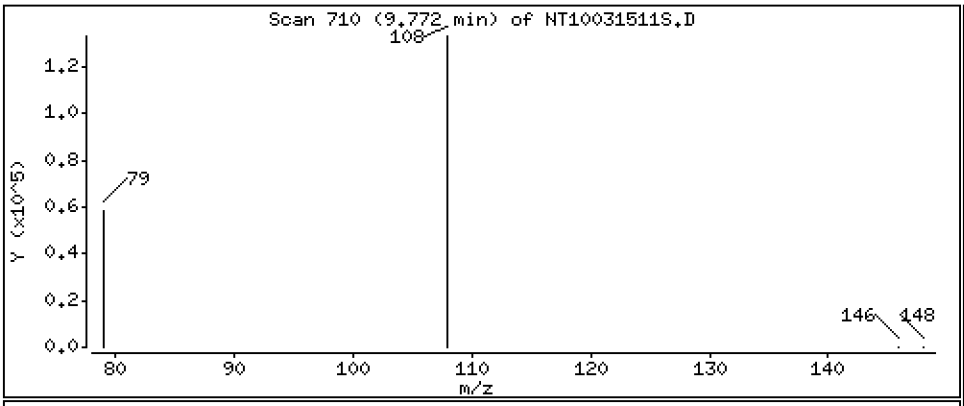
Operator: JGR

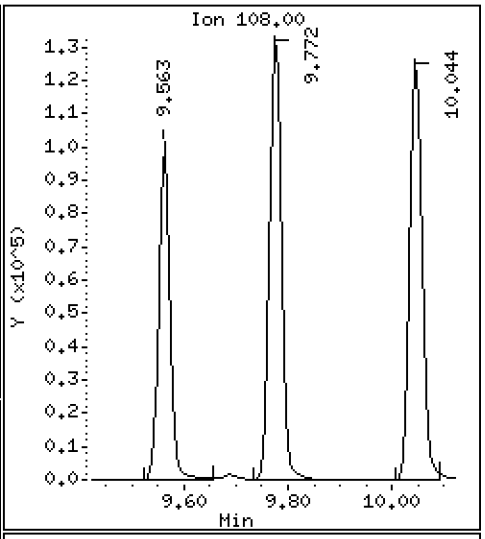
Column phase: ZB-5msi

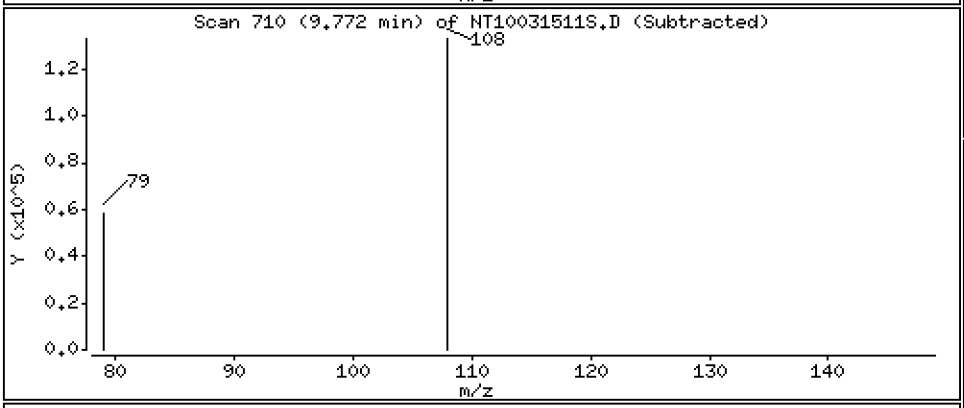
Column diameter: 0.25

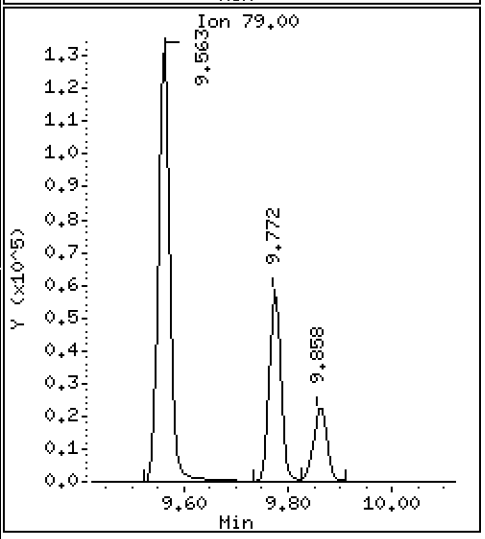
13 2-Methylphenol

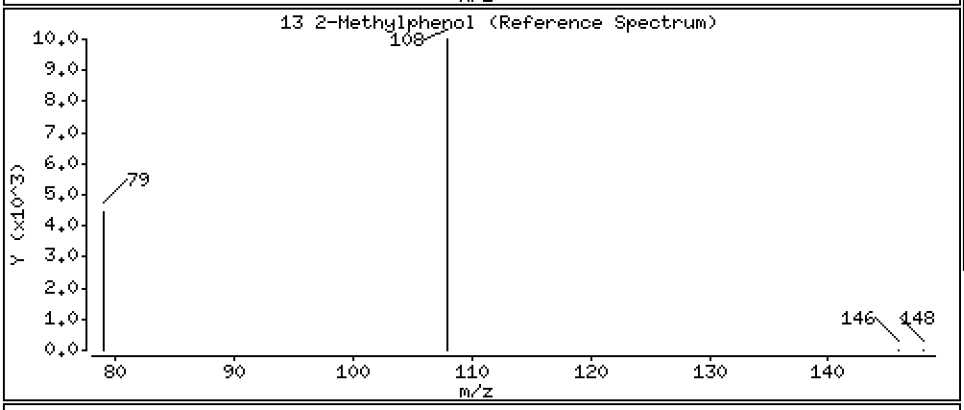
Concentration: 4.197 ug/L

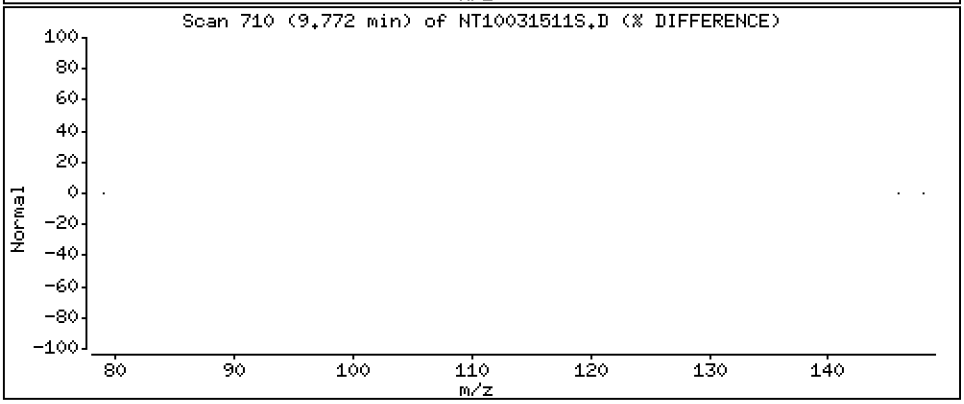












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

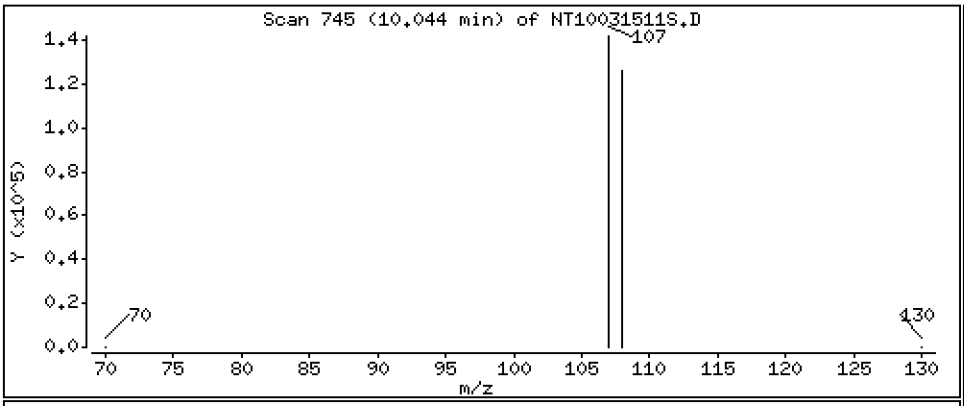
Operator: JGR

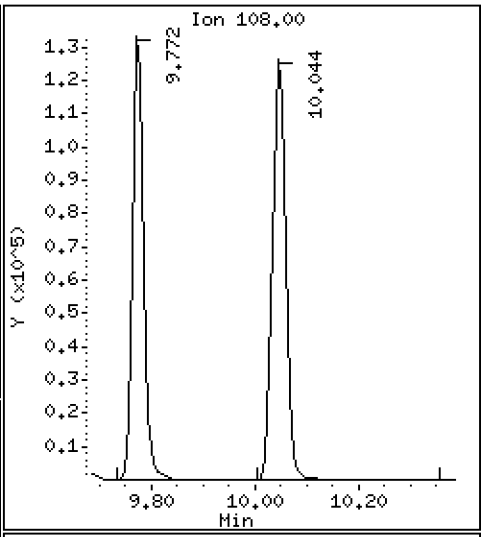
Column phase: ZB-5msi

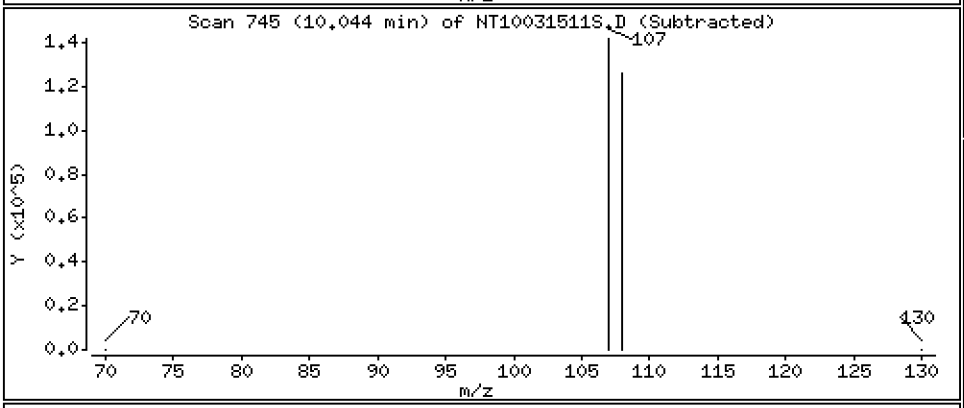
Column diameter: 0.25

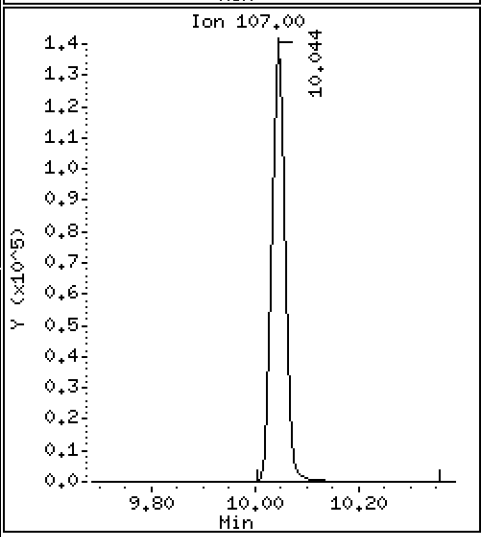
15 4-Methylphenol

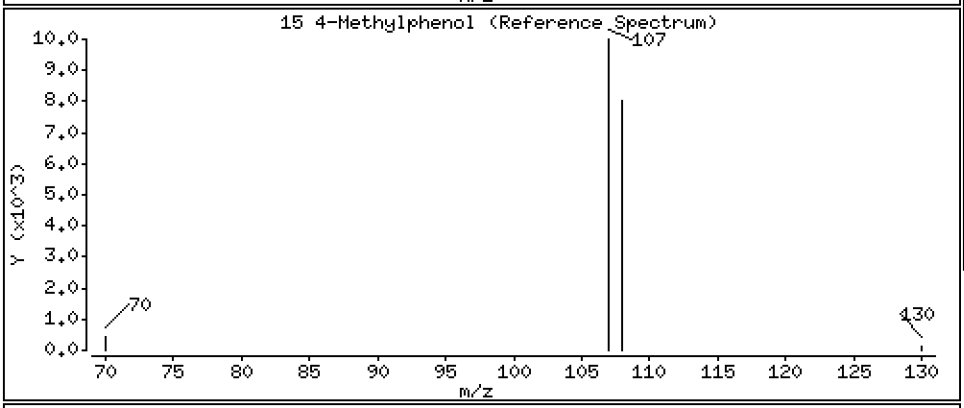
Concentration: 4.463 ug/L

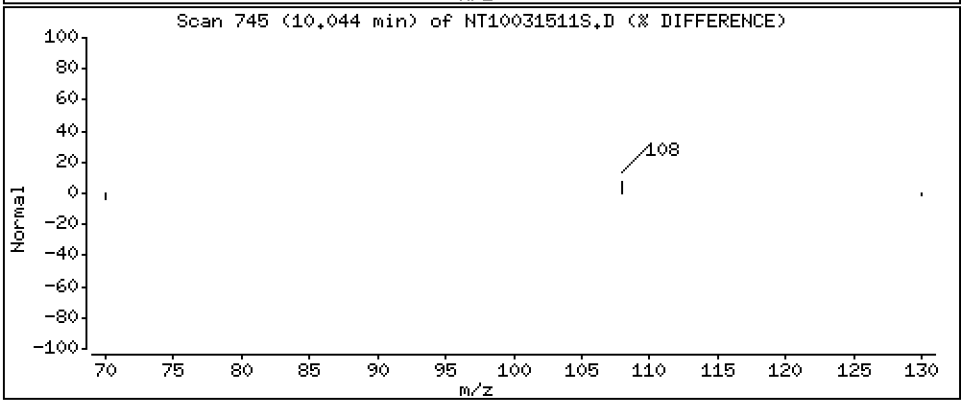












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

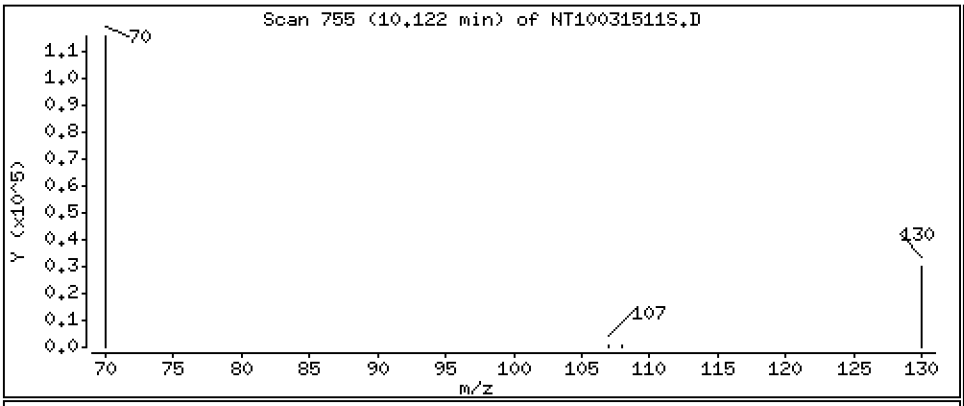
Operator: JGR

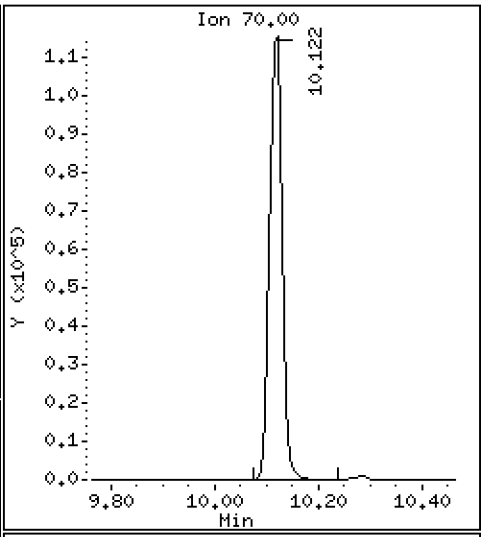
Column phase: ZB-5msi

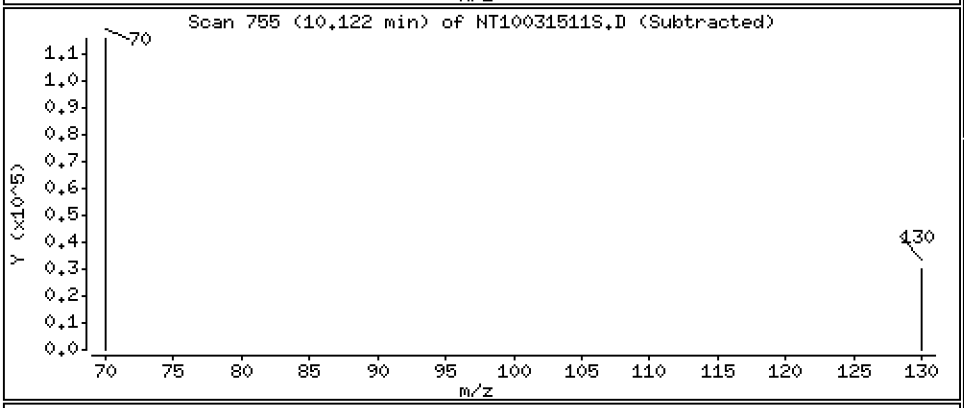
Column diameter: 0.25

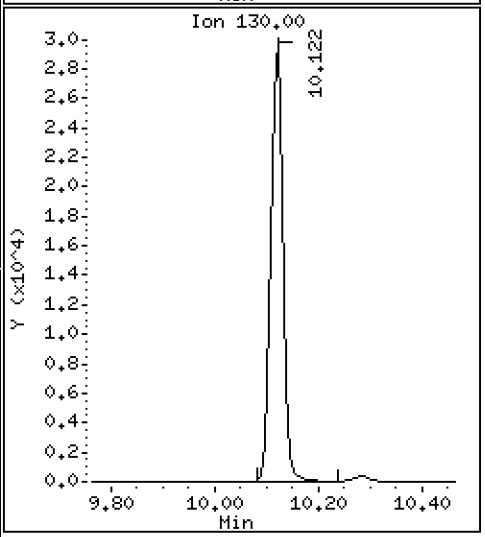
16 N-Nitroso-di-n-propylamine

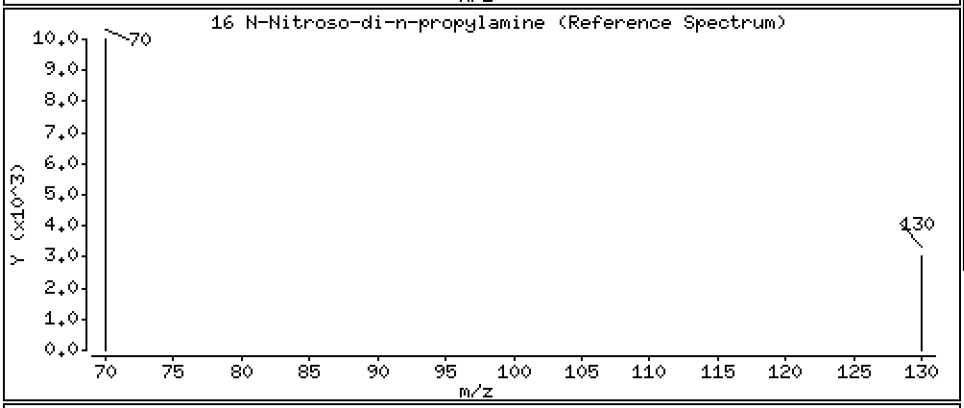
Concentration: 5.282 ug/L

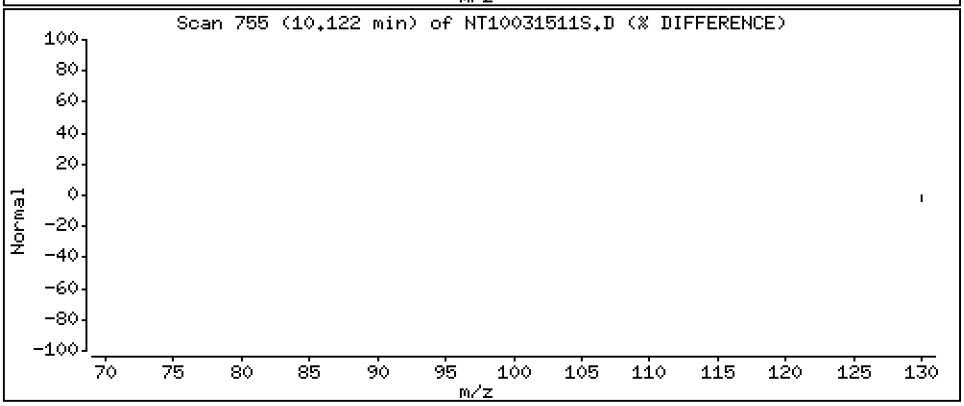












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

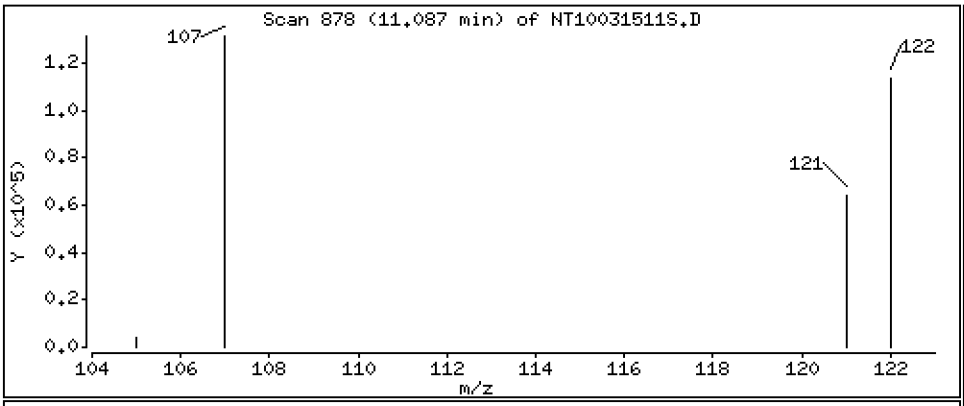
Operator: JGR

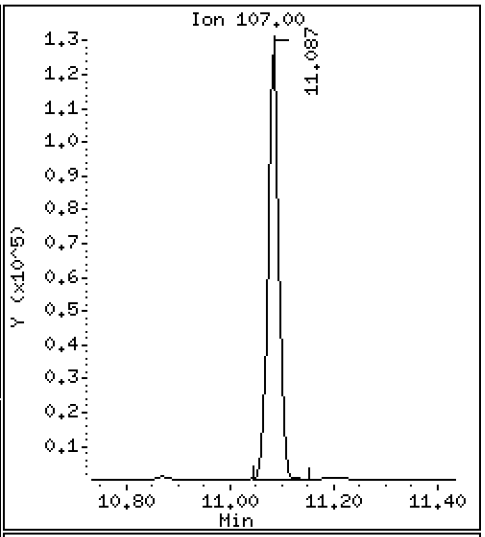
Column phase: ZB-5msi

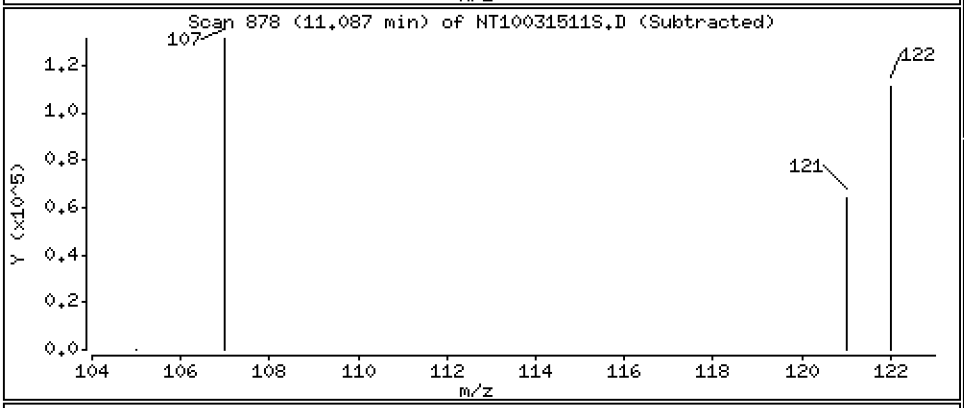
Column diameter: 0.25

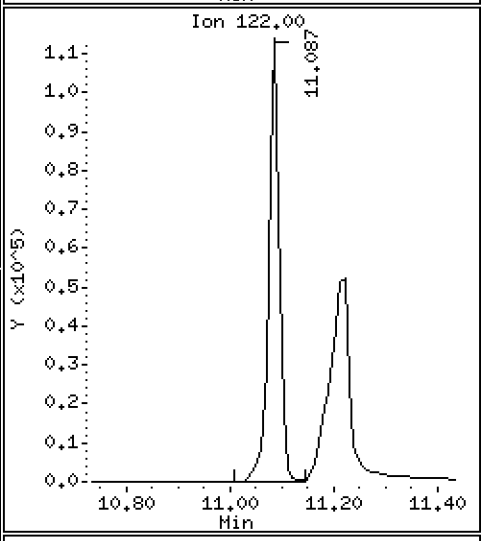
22 2,4-Dimethylphenol

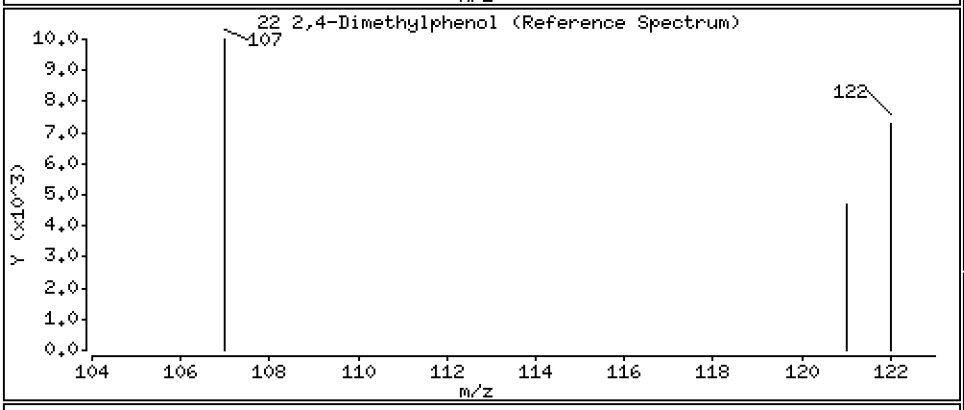
Concentration: 3.660 ug/L

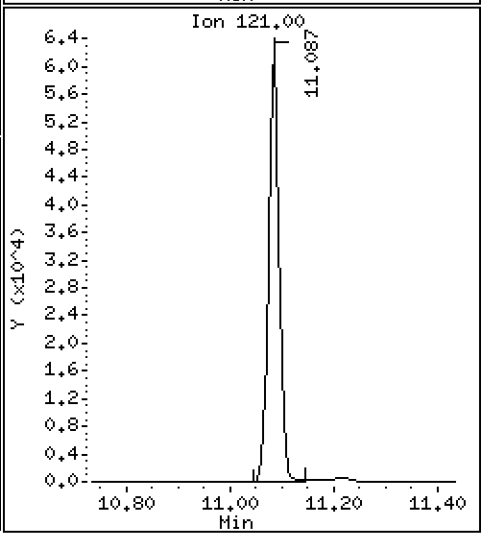


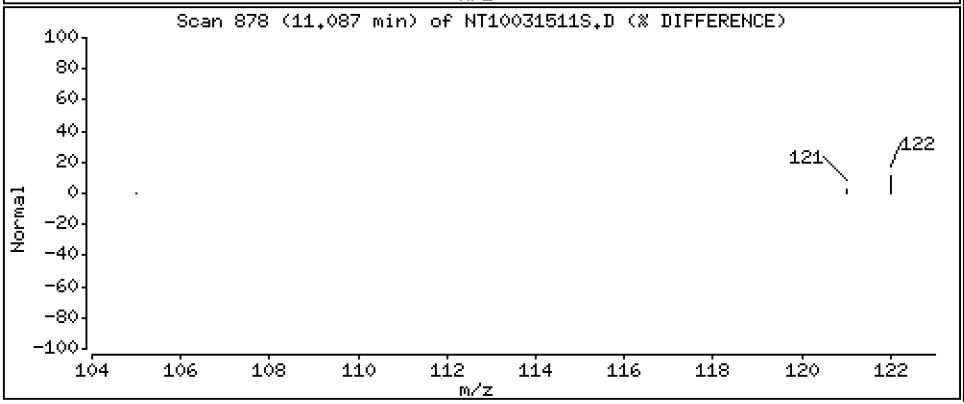












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

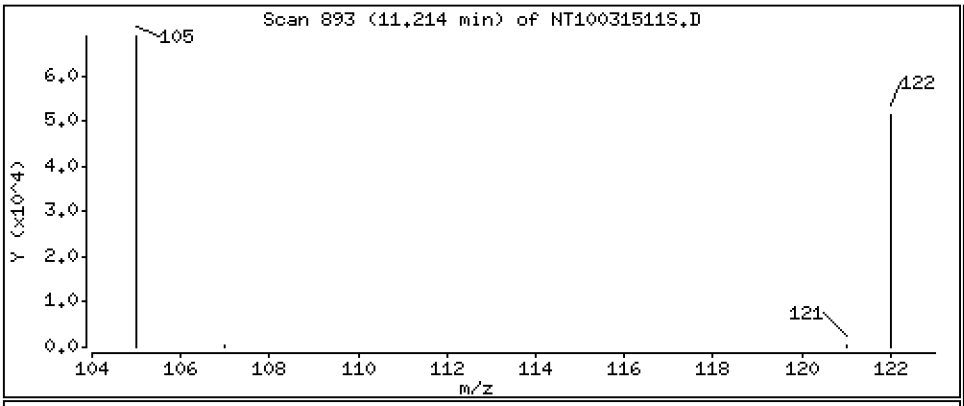
Operator: JGR

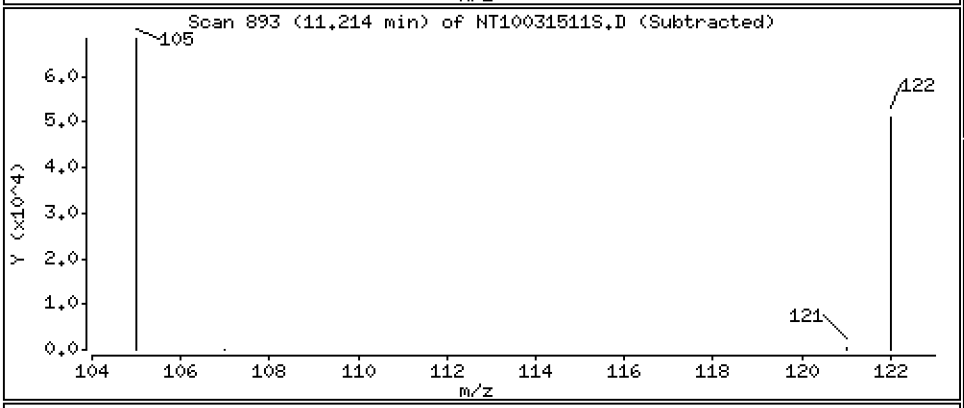
Column phase: ZB-5msi

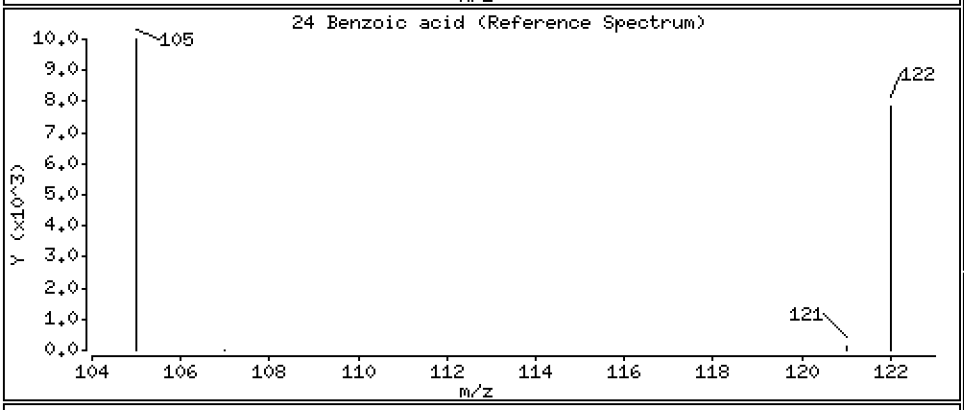
Column diameter: 0.25

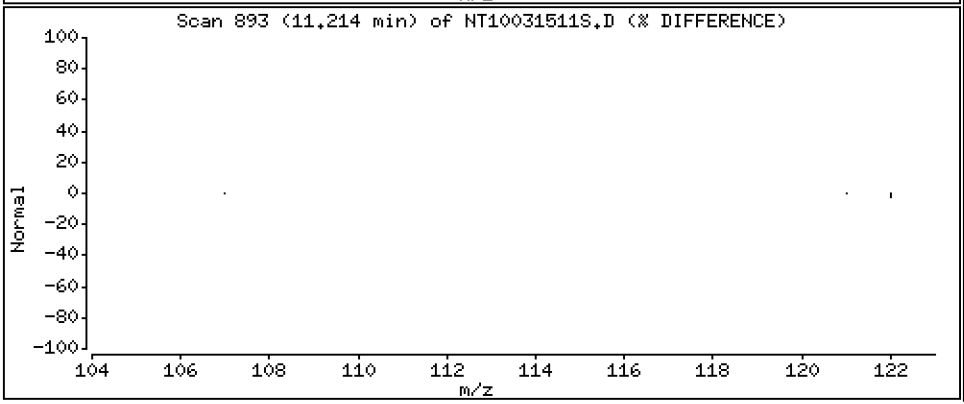
24 Benzoic acid

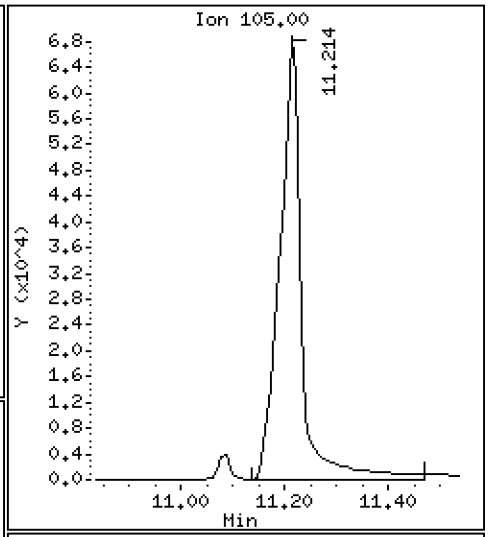
Concentration: 6.746 ug/L

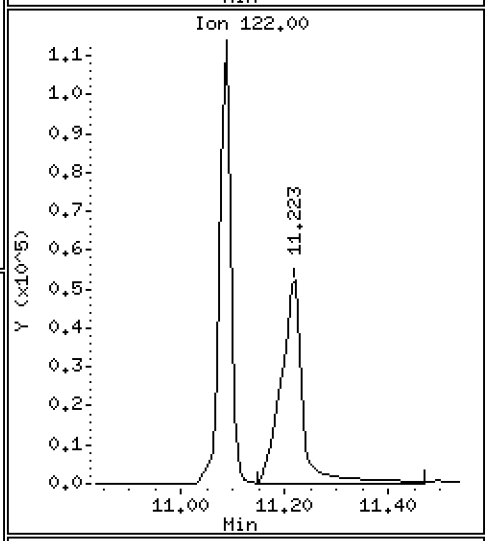


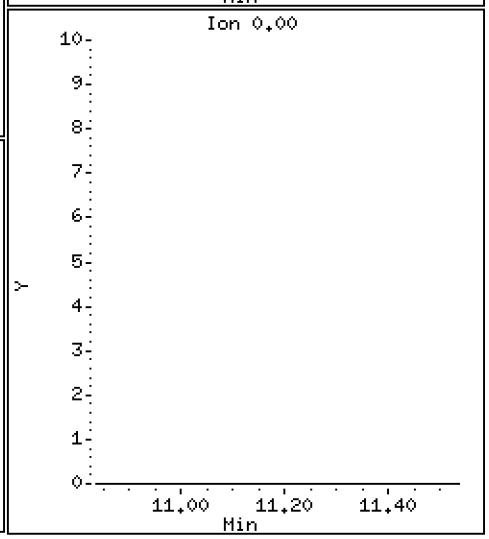












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

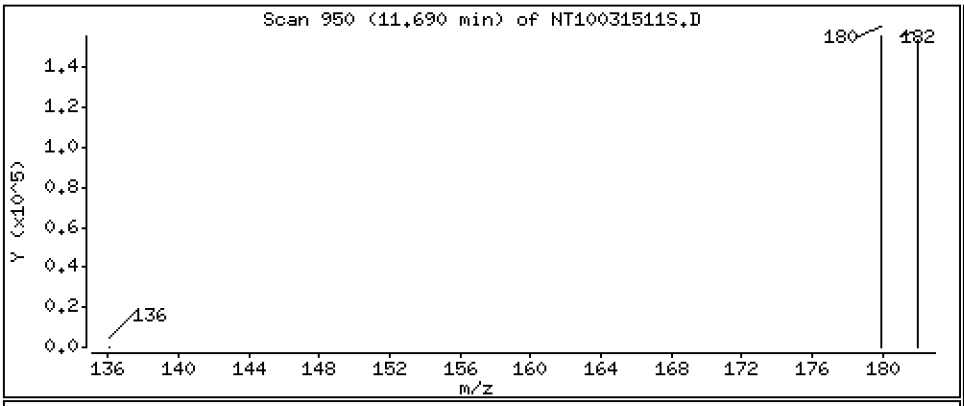
Operator: JGR

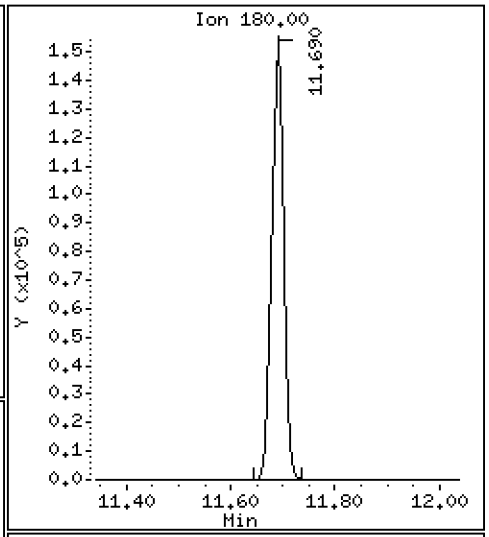
Column phase: ZB-5msi

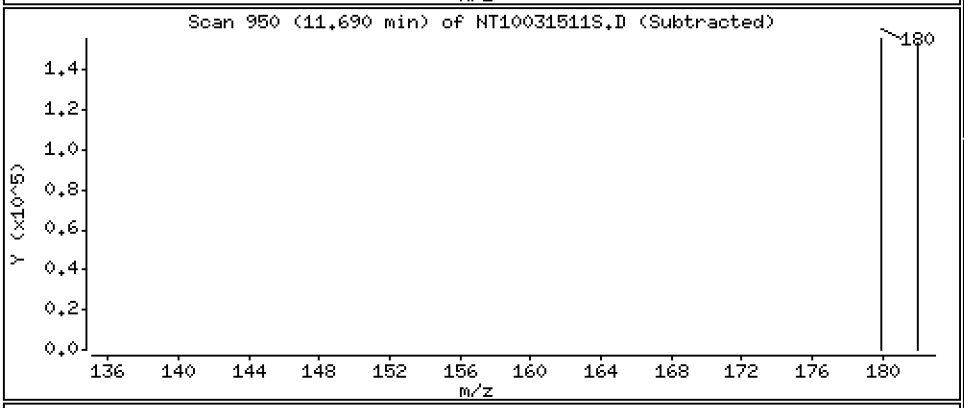
Column diameter: 0.25

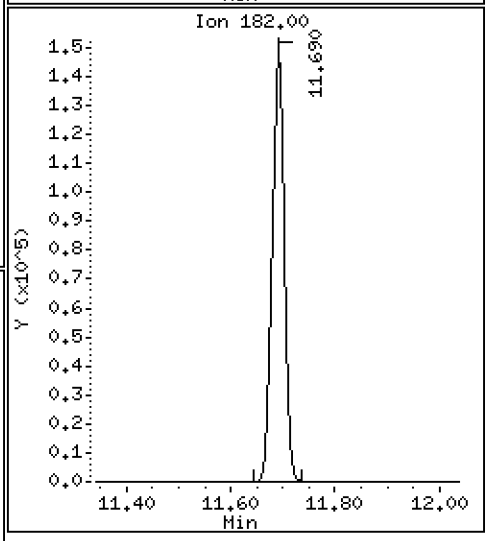
26 1,2,4-Trichlorobenzene

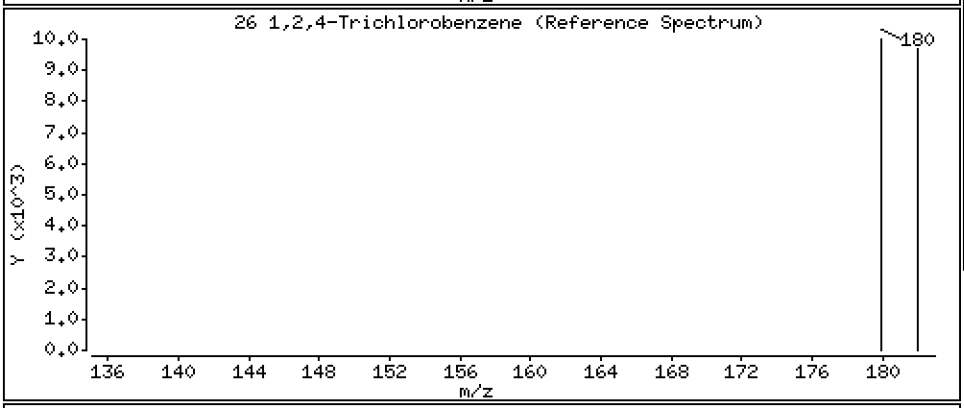
Concentration: 4.445 ug/L

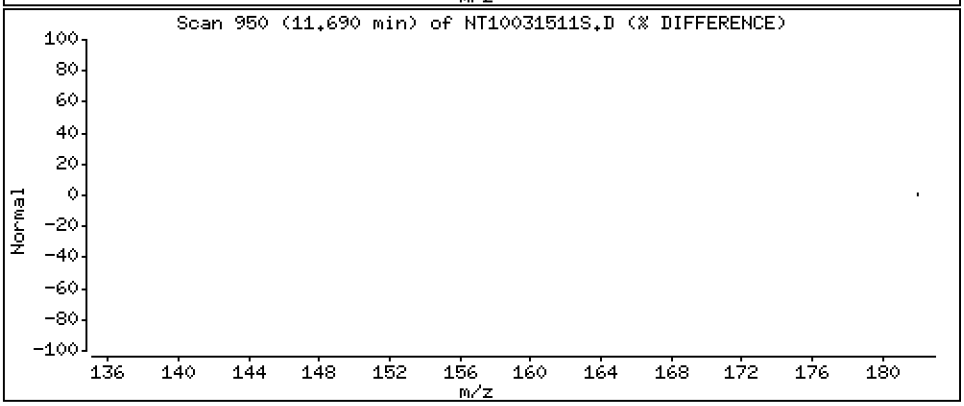












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

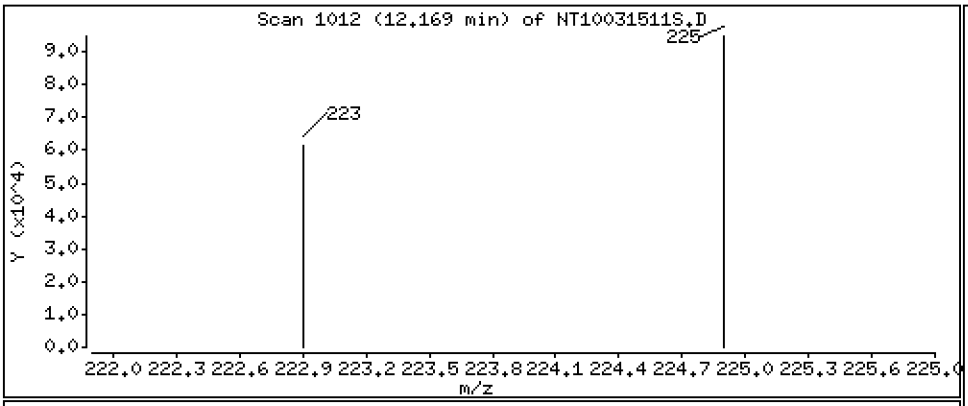
Operator: JGR

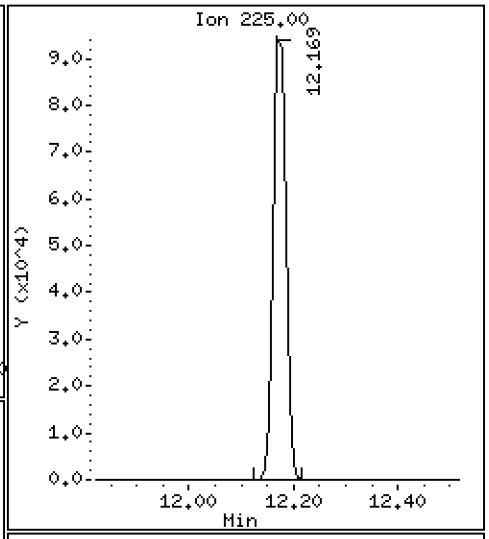
Column phase: ZB-5msi

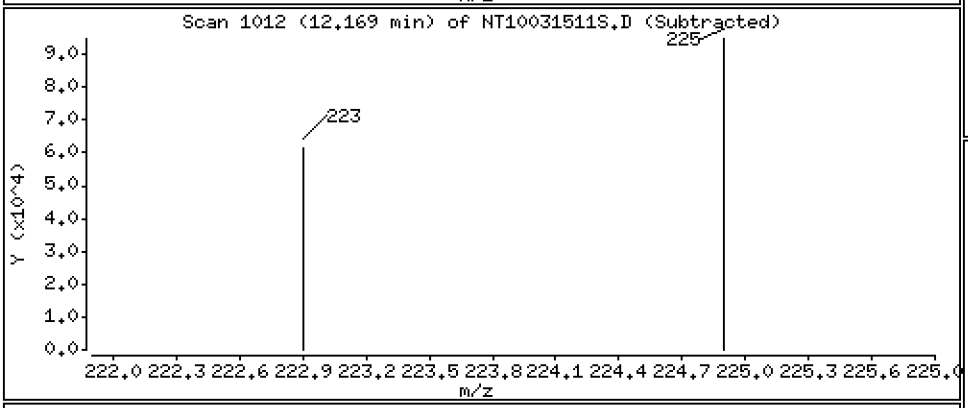
Column diameter: 0.25

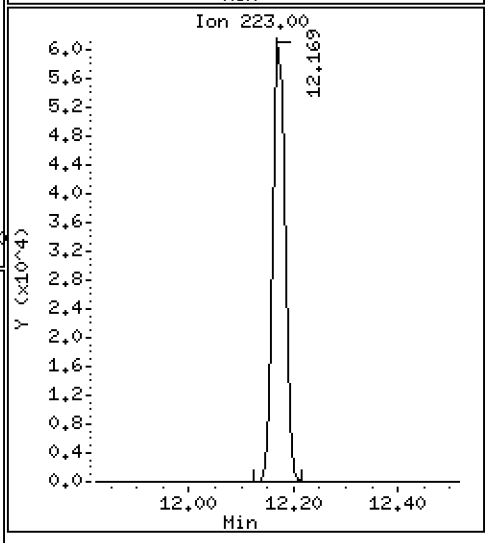
30 Hexachlorobutadiene

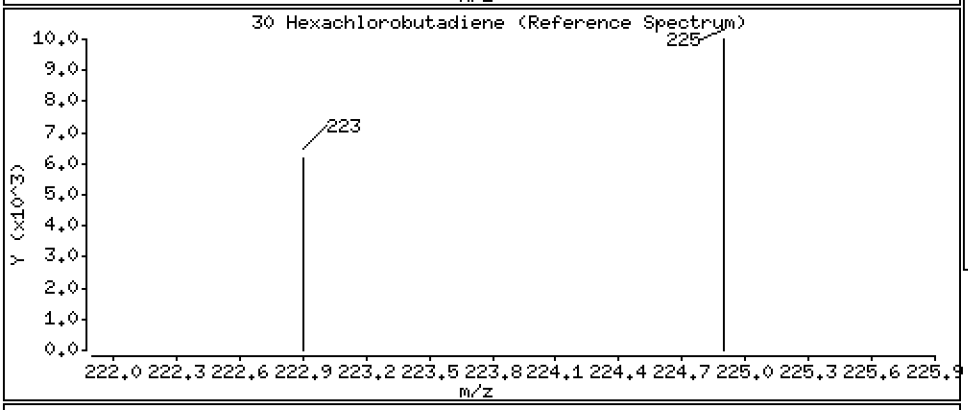
Concentration: 4.653 ug/L

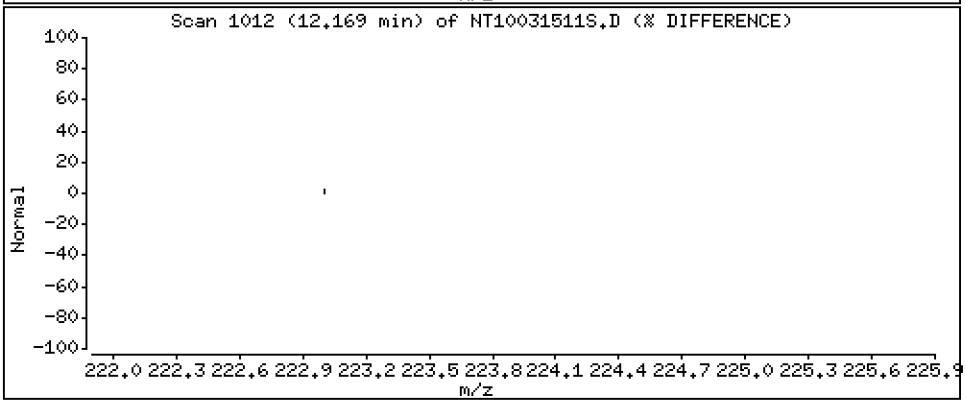












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

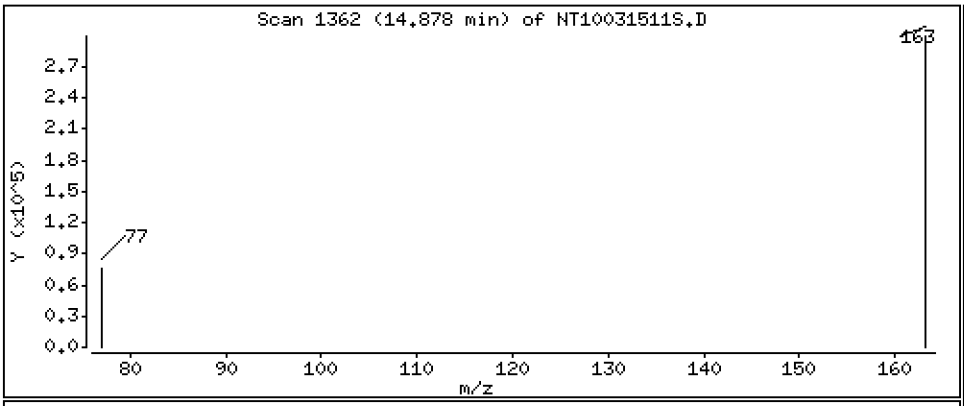
Operator: JGR

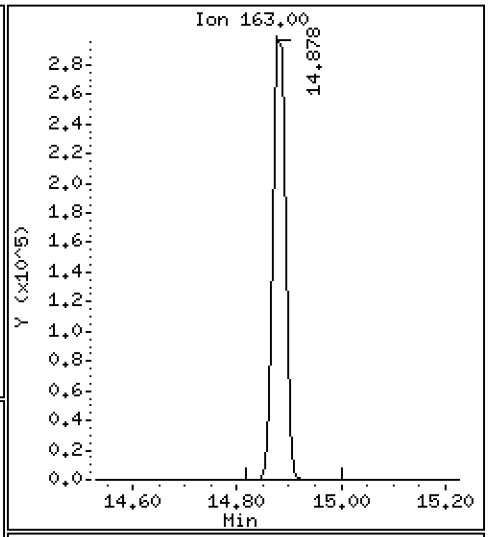
Column phase: ZB-5msi

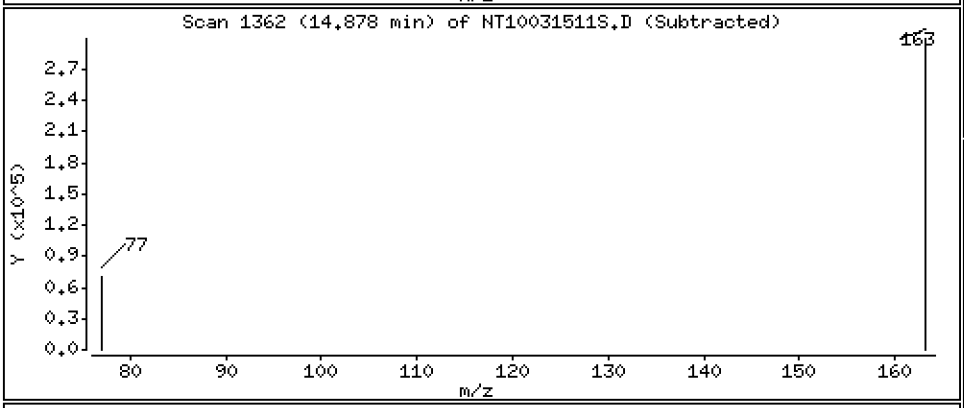
Column diameter: 0.25

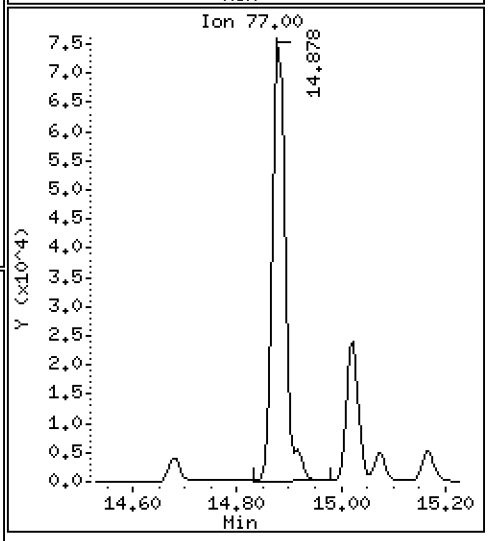
39 Dimethylphthalate

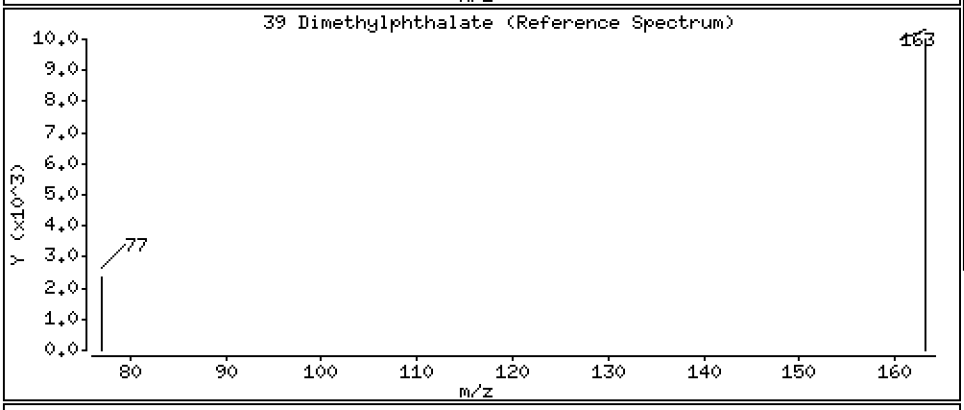
Concentration: 4.948 ug/L

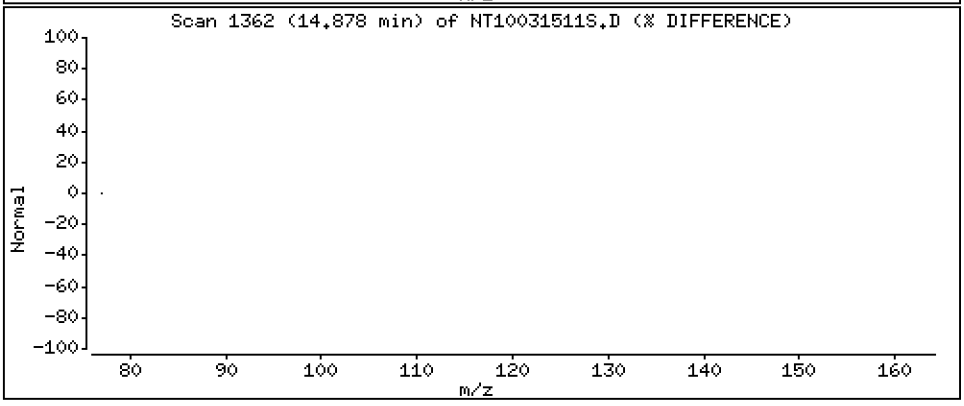












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

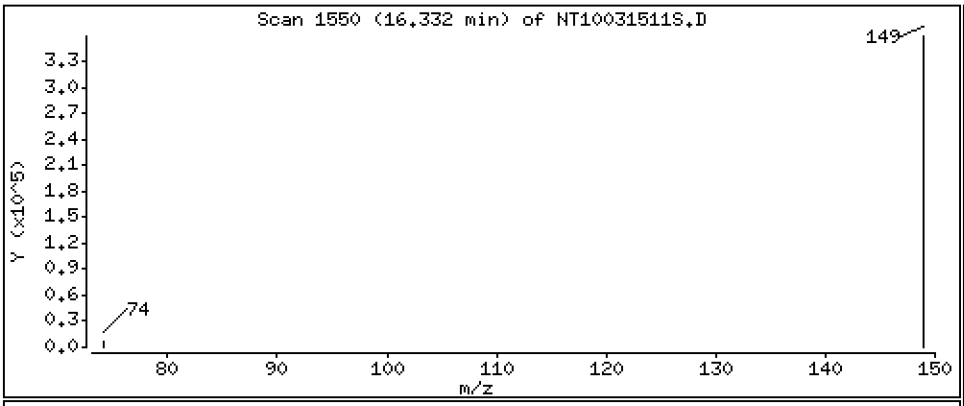
Operator: JGR

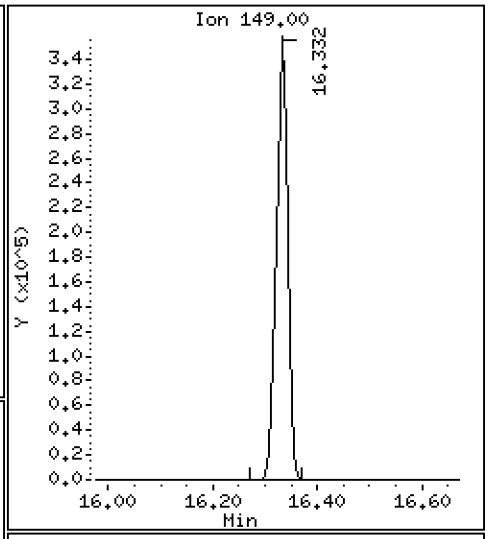
Column phase: ZB-5msi

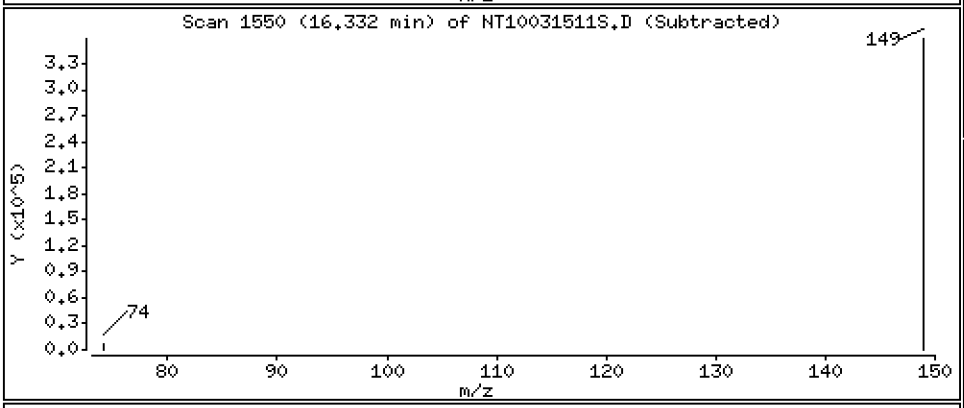
Column diameter: 0.25

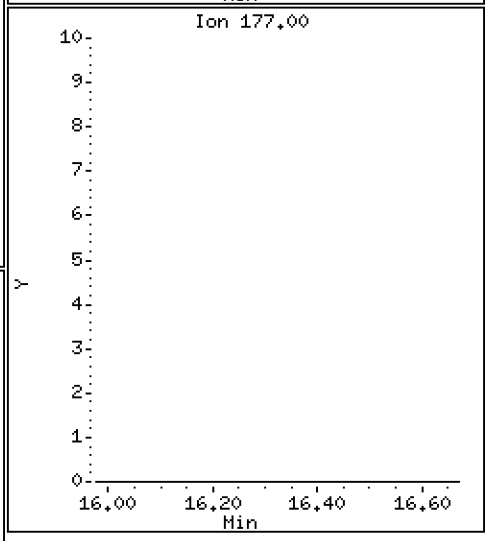
50 Diethylphthalate

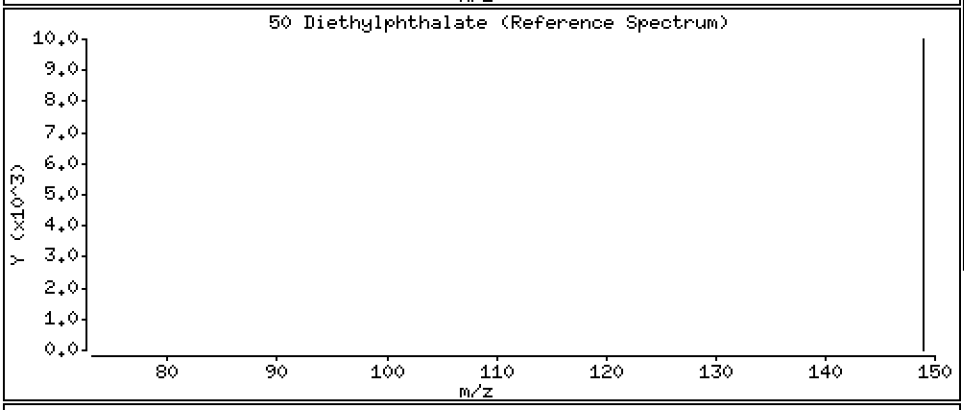
Concentration: 5.364 ug/L

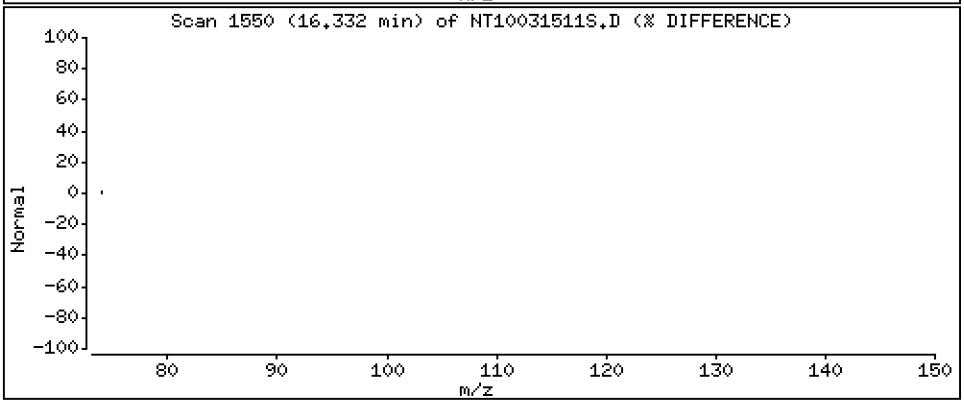












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

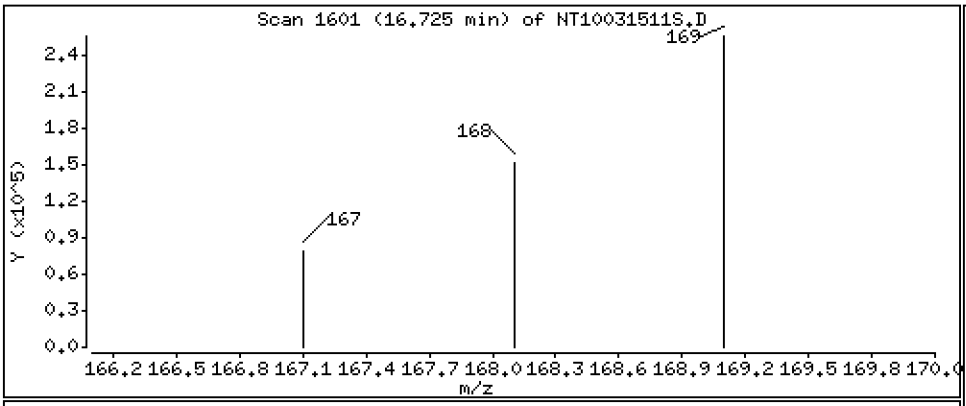
Operator: JGR

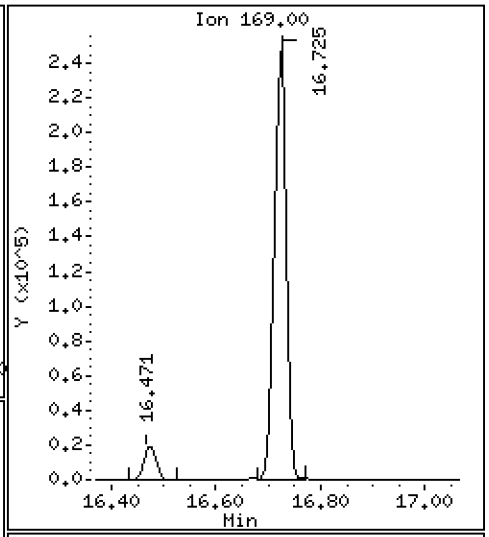
Column phase: ZB-5msi

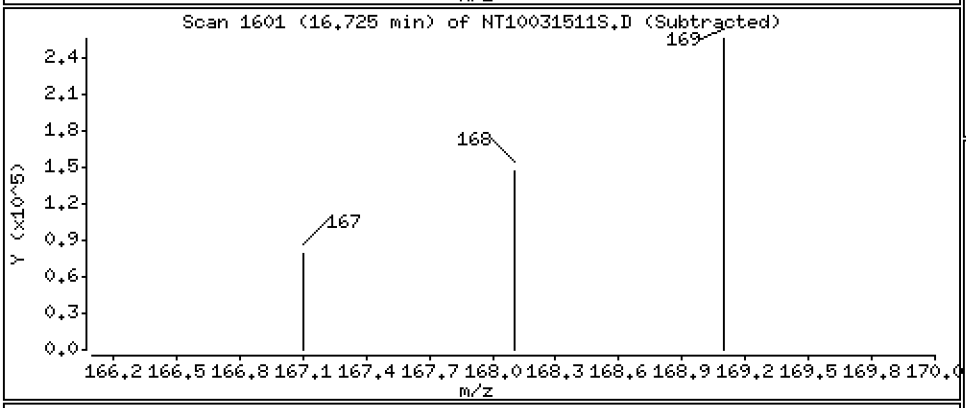
Column diameter: 0.25

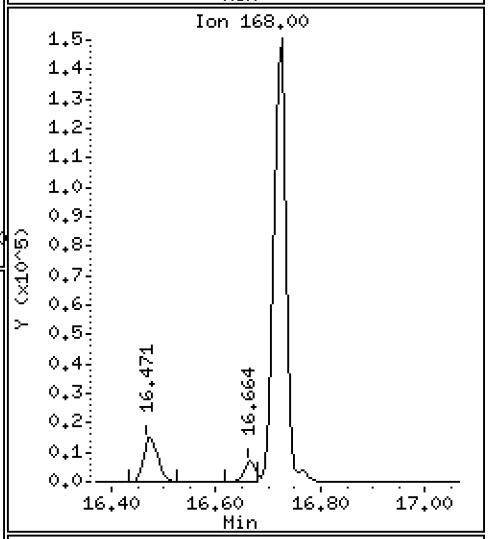
54 N-Nitrosodiphenylamine

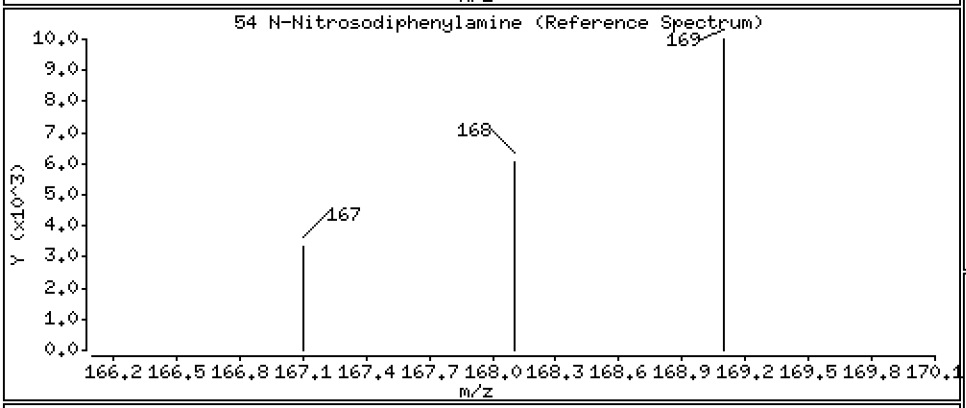
Concentration: 5.080 ug/L

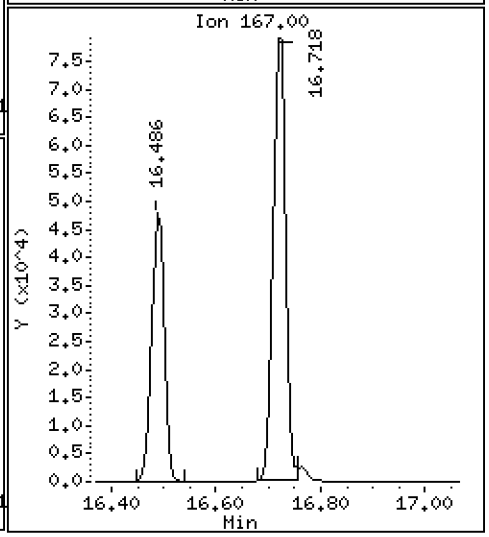


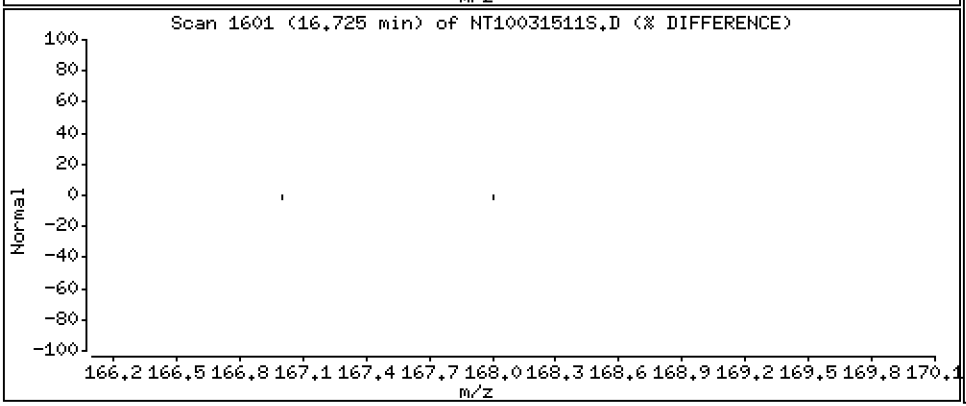












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

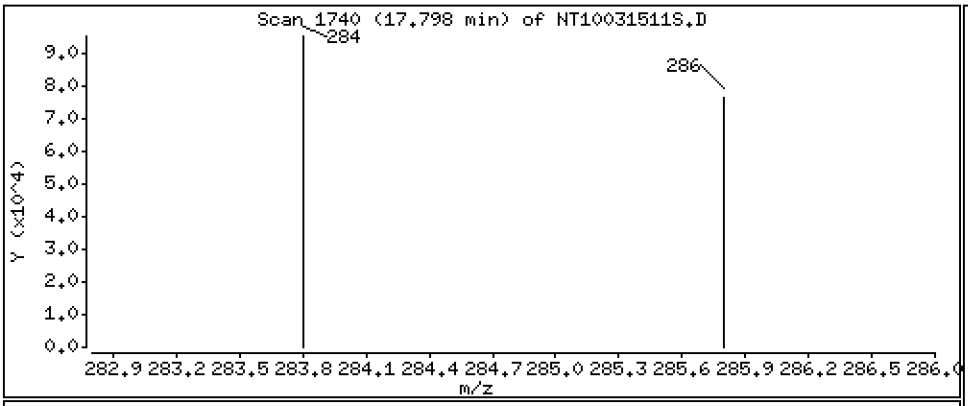
Operator: JGR

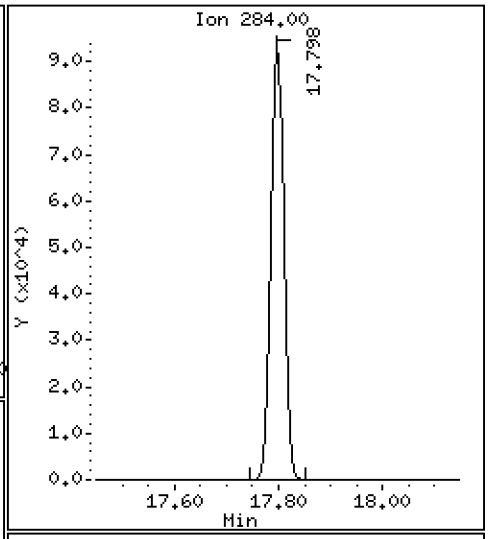
Column phase: ZB-5msi

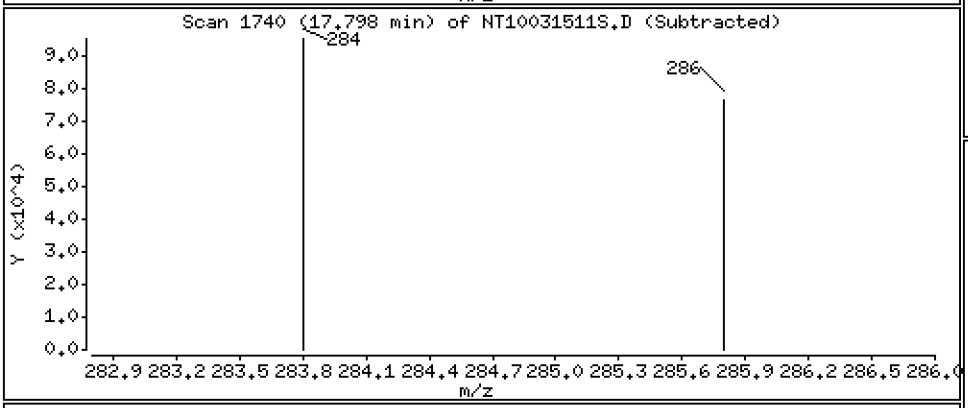
Column diameter: 0.25

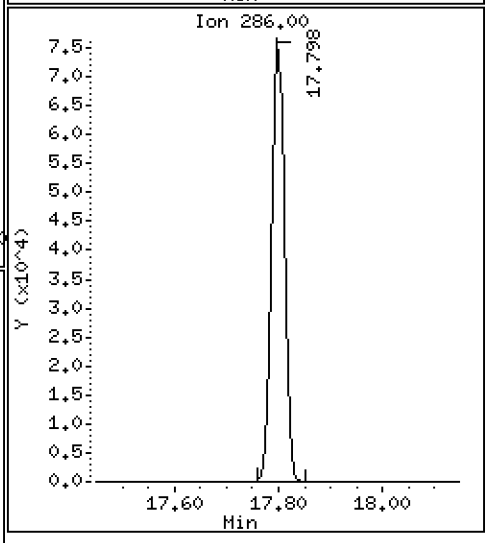
57 Hexachlorobenzene

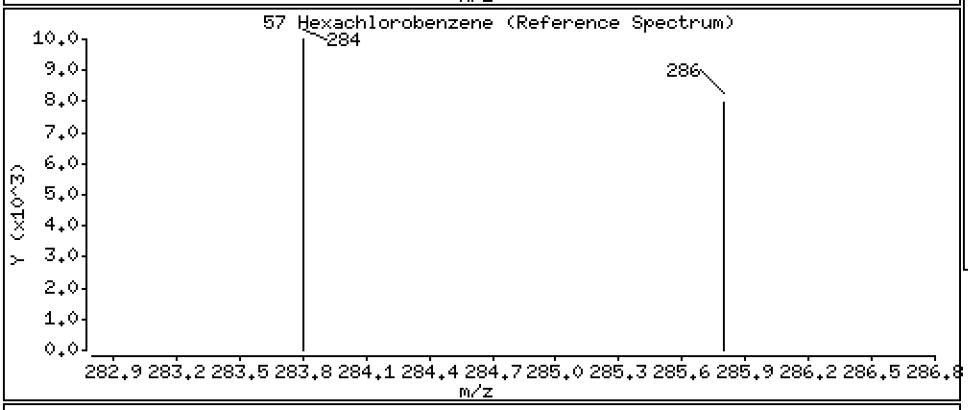
Concentration: 4.614 ug/L

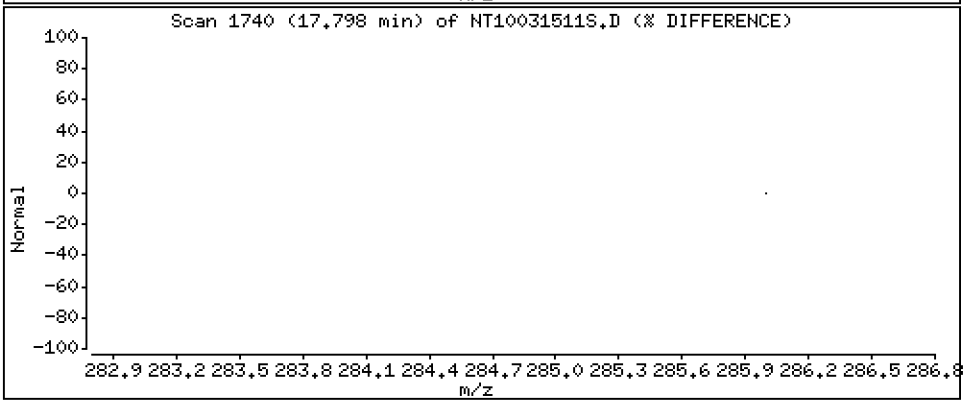












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

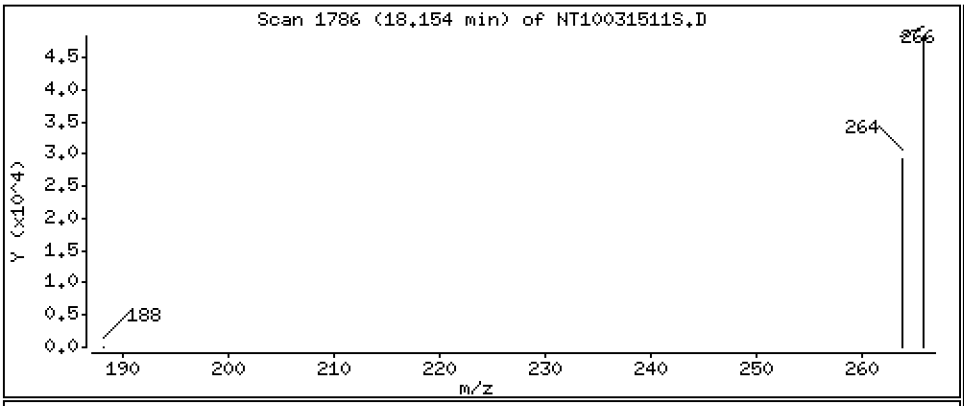
Operator: JGR

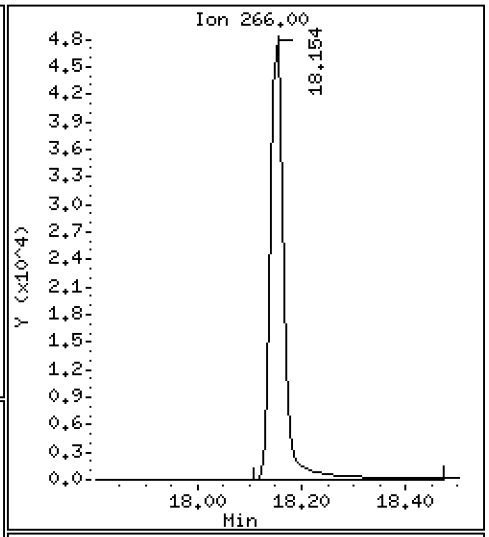
Column phase: ZB-5msi

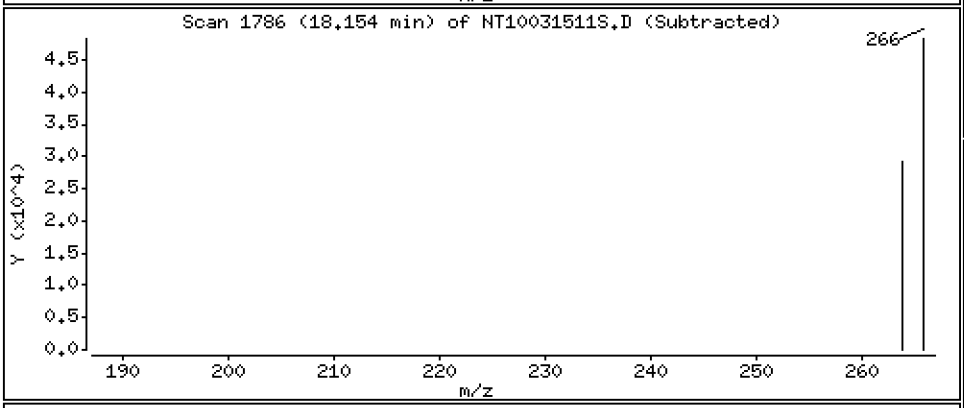
Column diameter: 0.25

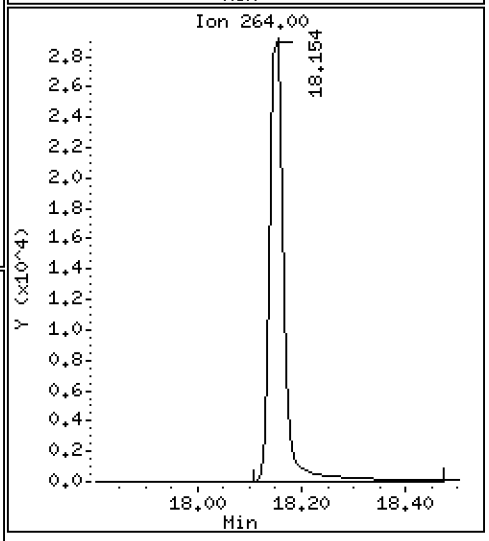
58 Pentachlorophenol

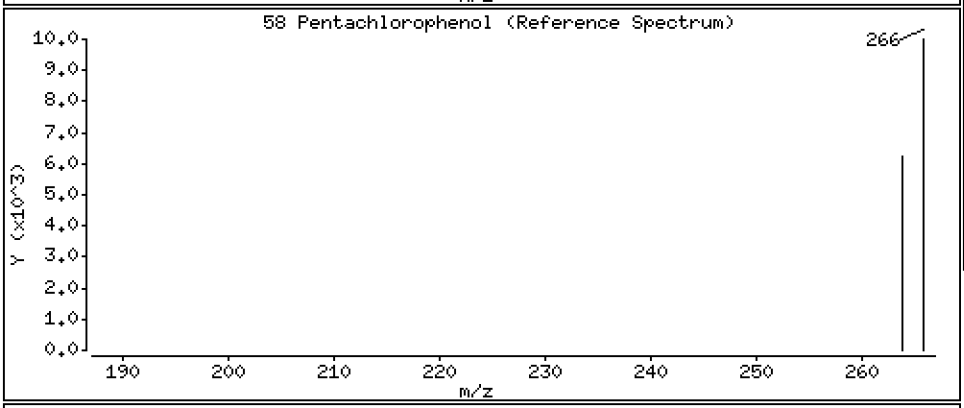
Concentration: 4.418 ug/L

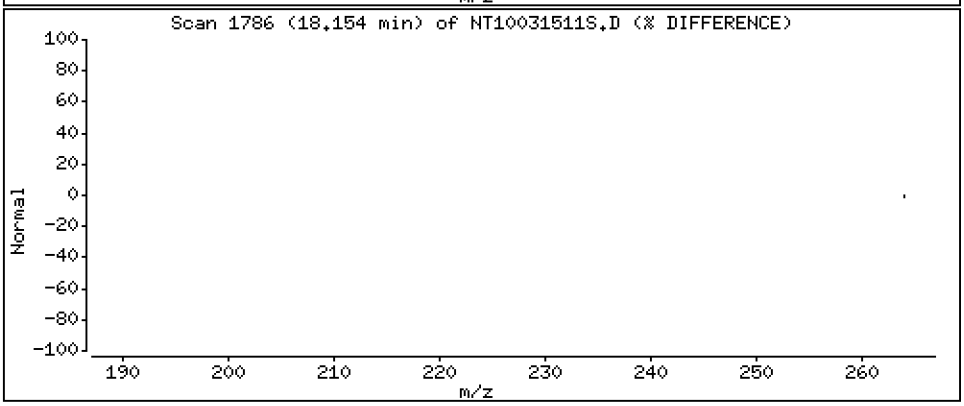












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

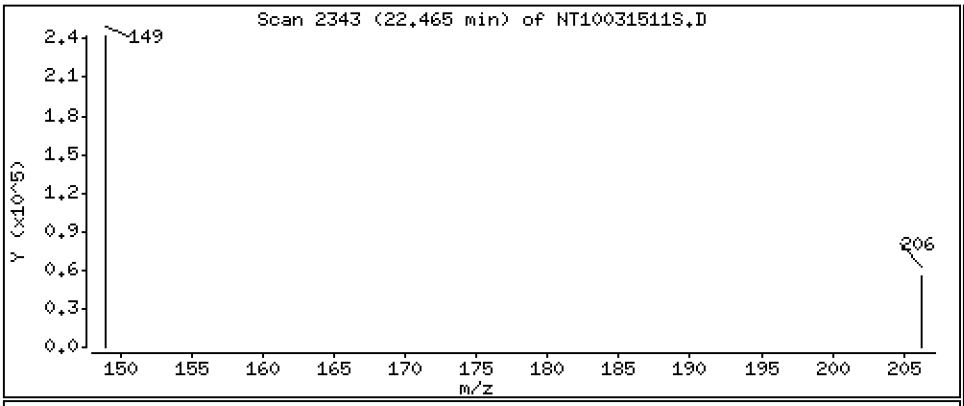
Operator: JGR

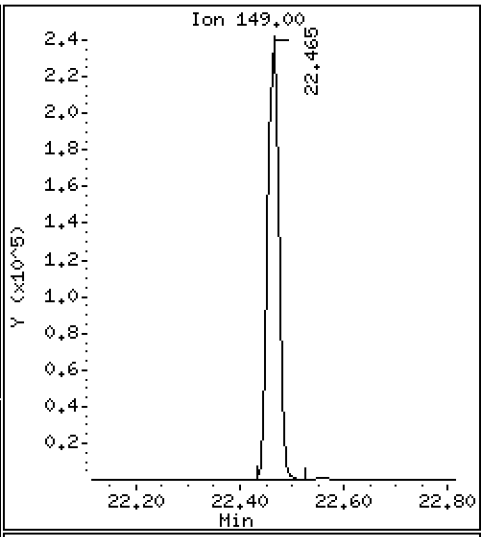
Column phase: ZB-5msi

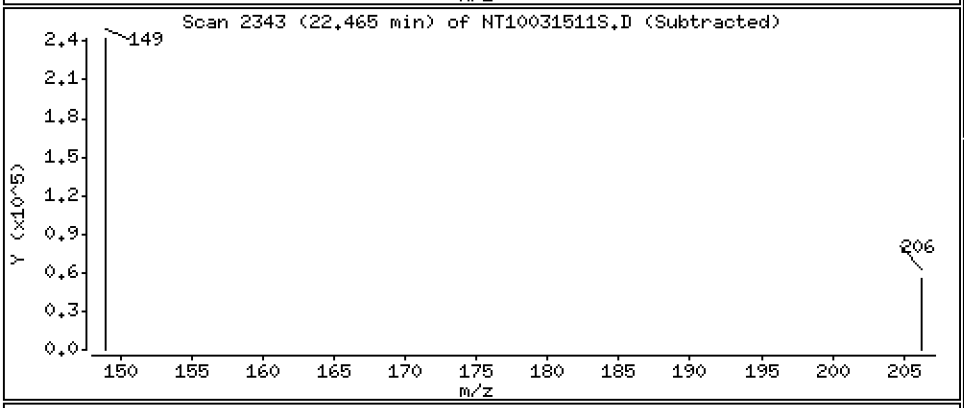
Column diameter: 0.25

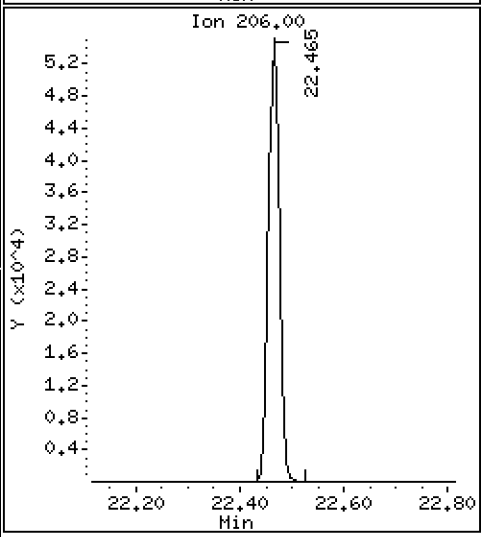
67 Butylbenzylphthalate

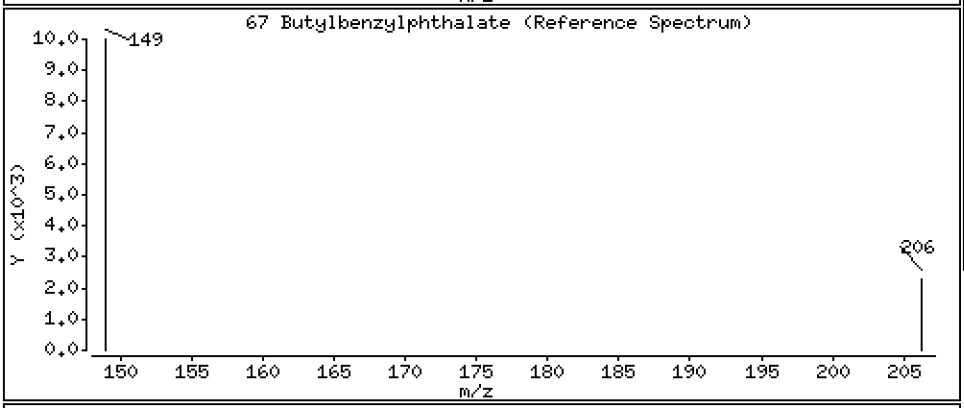
Concentration: 5.121 ug/L

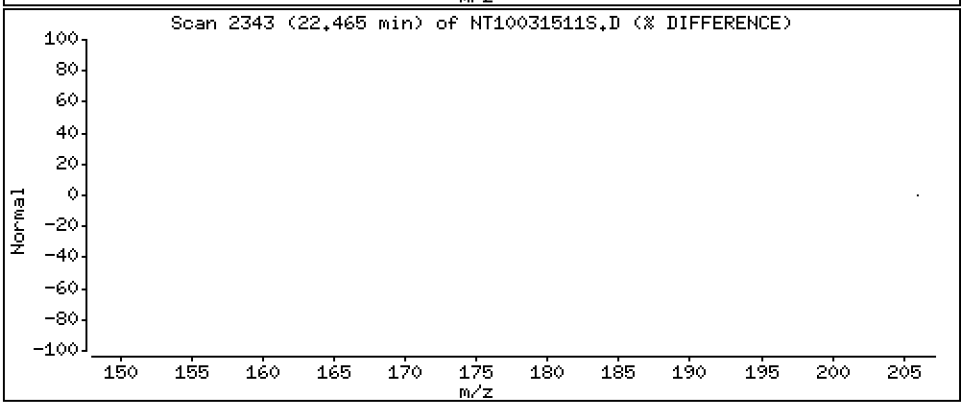












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

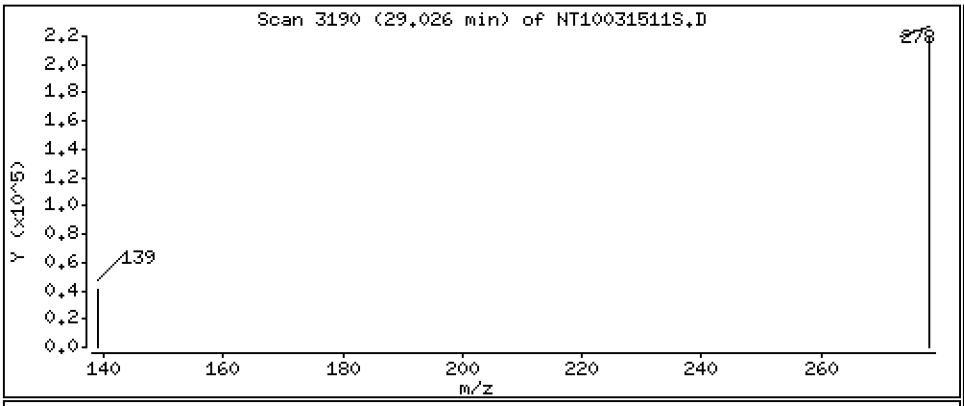
Operator: JGR

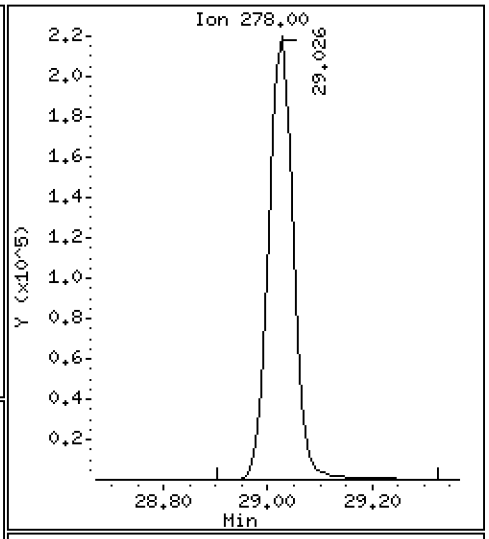
Column phase: ZB-5msi

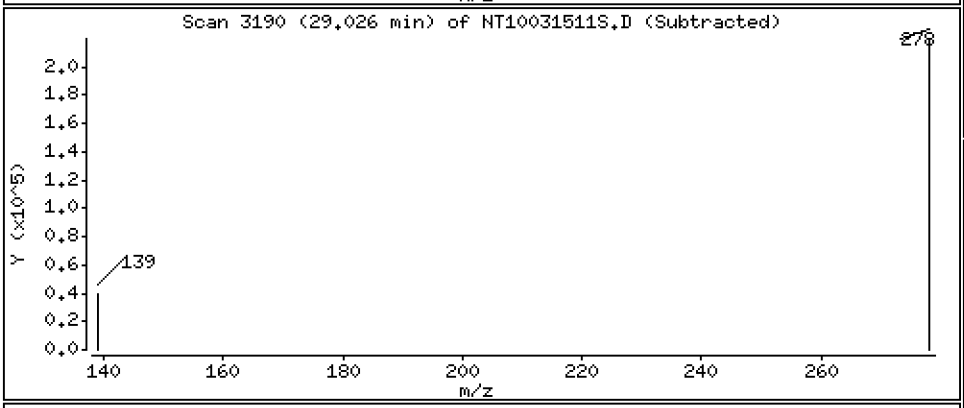
Column diameter: 0.25

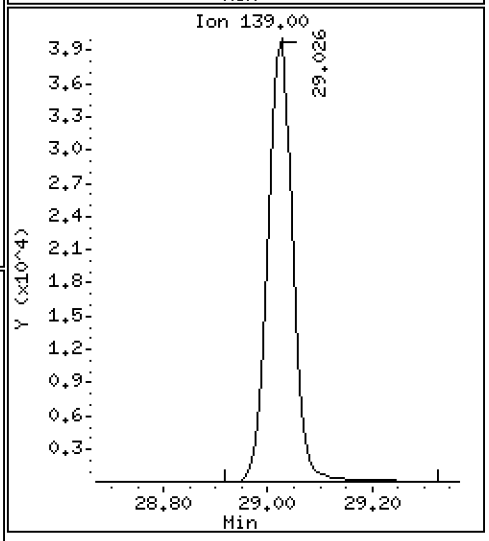
79 Dibenzo(a,h)anthracene

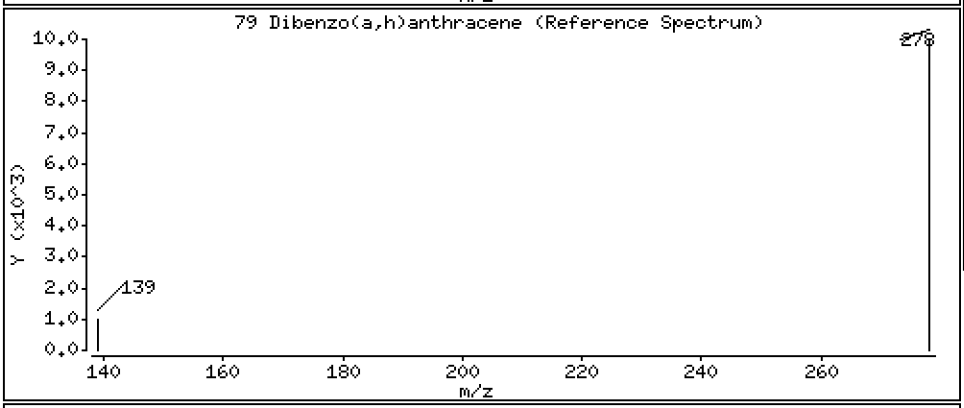
Concentration: 4.238 ug/L

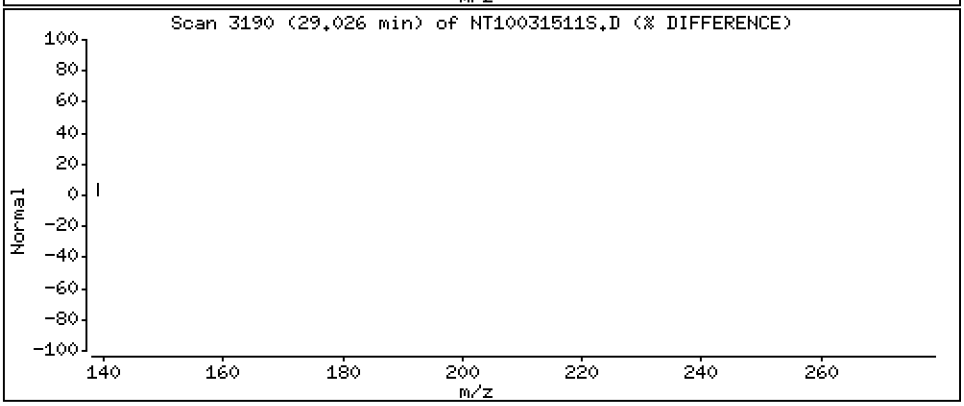












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

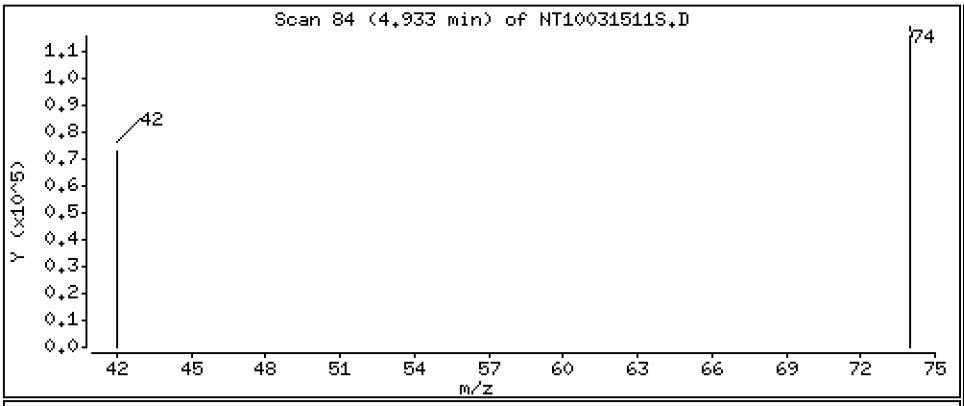
Operator: JGR

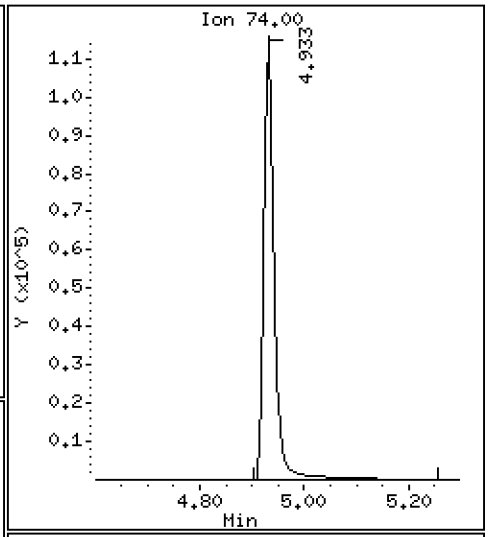
Column phase: ZB-5msi

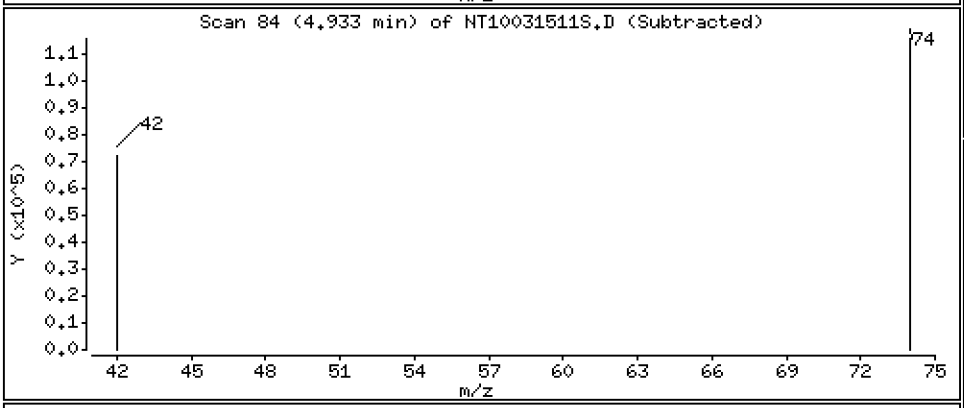
Column diameter: 0.25

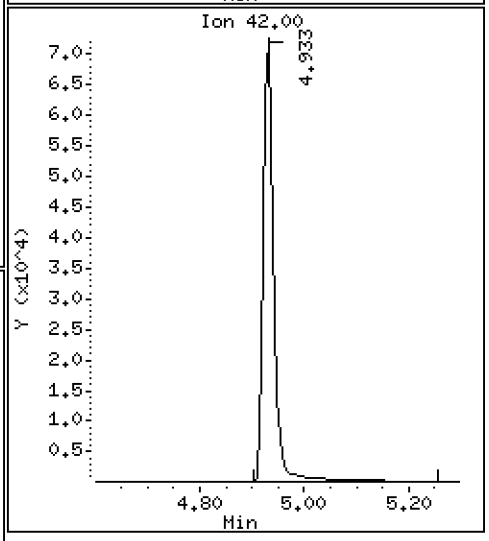
90 N-Nitrosodimethylamine

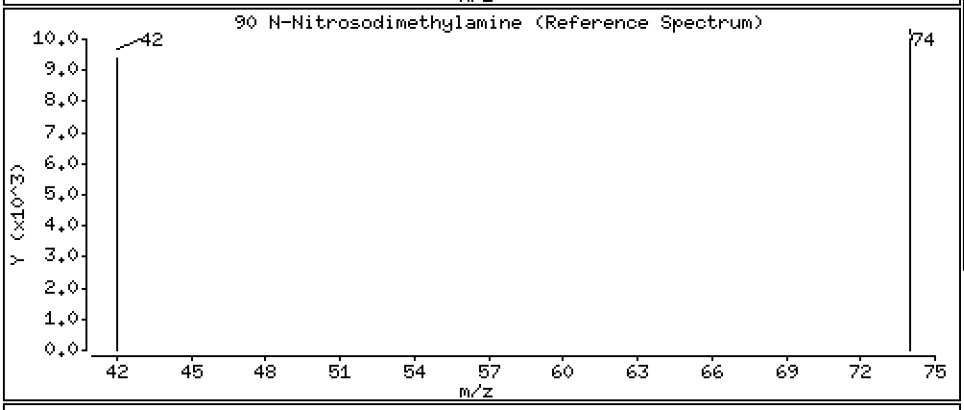
Concentration: 5.096 ug/L

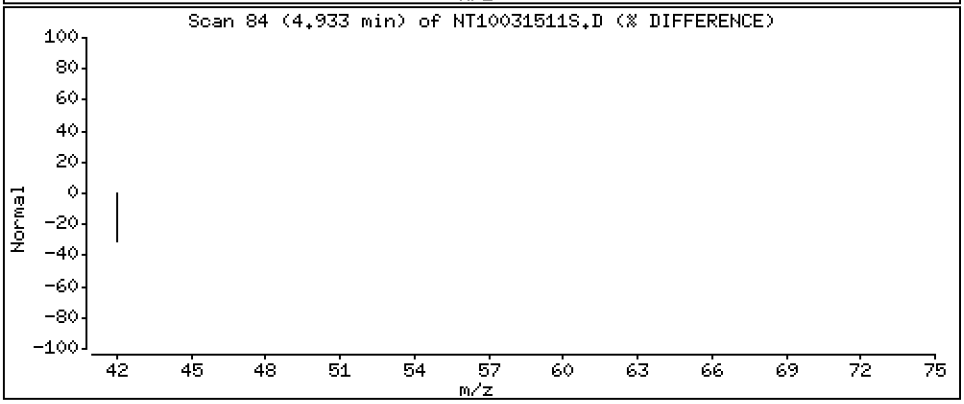












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Inj Date : 16-MAR-2023 02:16 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
3	Phenol	94	8.664	8.664	(0.931)	303581	4.37299	4.373
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.992)	301605	4.64290	4.643
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	166866	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.002)	303390	4.83813	4.838
11	Benzyl alcohol	79	9.562	9.570	(1.028)	208505	5.18071	5.181
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.041)	288539	4.67875	4.679
13	2-Methylphenol	108	9.772	9.772	(1.050)	201888	4.19698	4.197
15	4-Methylphenol	108	10.043	10.036	(1.079)	223083	4.46301	4.463
16	N-Nitroso-di-n-propylamine	70	10.121	10.113	(1.088)	186707	5.28174	5.282
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	193654	3.66015	3.660
24	Benzoic acid	105	11.214	11.189	(0.952)	200487	6.74612	6.746
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	236605	4.44540	4.445
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	612104	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	150581	4.65339	4.653
39	Dimethylphthalate	163	14.877	14.877	(0.967)	472341	4.94766	4.948
* 42	Acenaphthene-d10	162	15.388	15.380	(1.000)	302524	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	530540	5.36440	5.364
54	N-Nitrosodiphenylamine	169	16.725	16.717	(0.908)	377357	5.08034	5.080
57	Hexachlorobenzene	284	17.798	17.798	(0.966)	153405	4.61353	4.614

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	18.154	18.154	(0.985)	83223	4.41780	4.418
*	59 Phenanthrene-d10	188	18.425	18.417	(1.000)	553619	4.00000	
$	66 Terphenyl-d14	244	21.543	21.543	(0.918)	117	0.00154	0.001543(RM)
	67 Butylbenzylphthalate	149	22.464	22.465	(0.958)	332887	5.12147	5.121
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	465428	4.00000	
*	77 Perylene-d12	264	26.188	26.188	(1.000)	532593	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.026	29.019	(1.108)	722983	4.23762	4.238
	90 N-Nitrosodimethylamine	74	4.933	4.948	(0.530)	163555	5.09625	5.096

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	166866	-11.28
27 Naphthalene-d8	674549	337275	1349098	612104	-9.26
42 Acenaphthene-d10	328275	164138	656550	302524	-7.84
59 Phenanthrene-d10	597140	298570	1194280	553619	-7.29
69 Chrysene-d12	466503	233252	933006	465428	-0.23
77 Perylene-d12	518203	259102	1036406	532593	2.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.43	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031511S.D

Lab ID: SLC0238-SCV1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

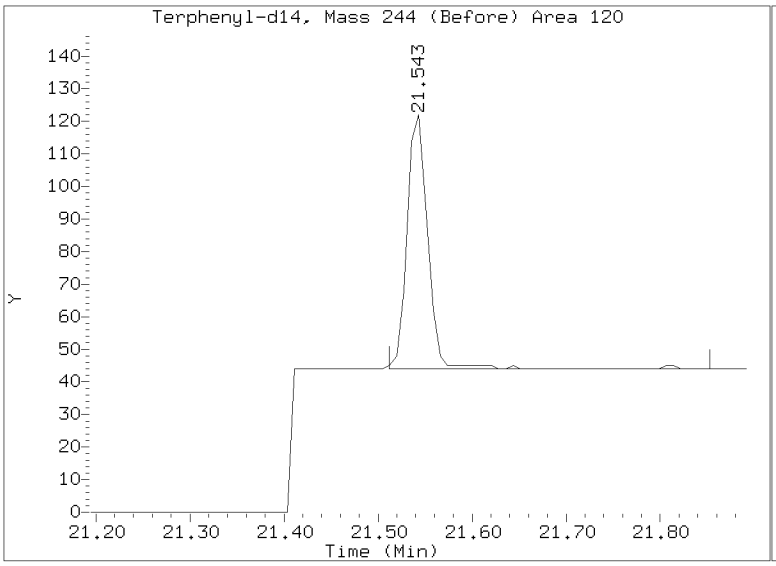
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

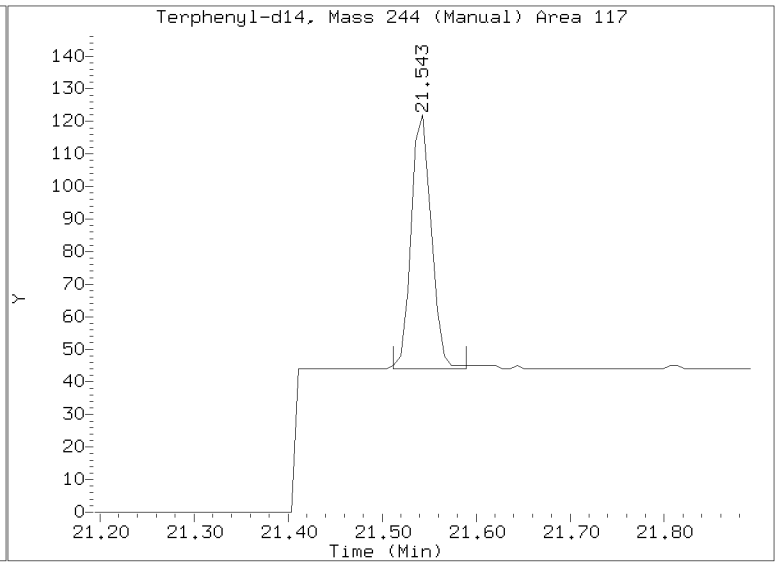
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031511S.D
Injection Date: 16-MAR-2023 02:16
Lab ID:SLC0238-SCV1 Client ID:
Report Date: 03/16/2023 14:49





Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT100315128.D

Date : 16-MAR-2023 02:54

Client ID:

Instrument: nt10.i

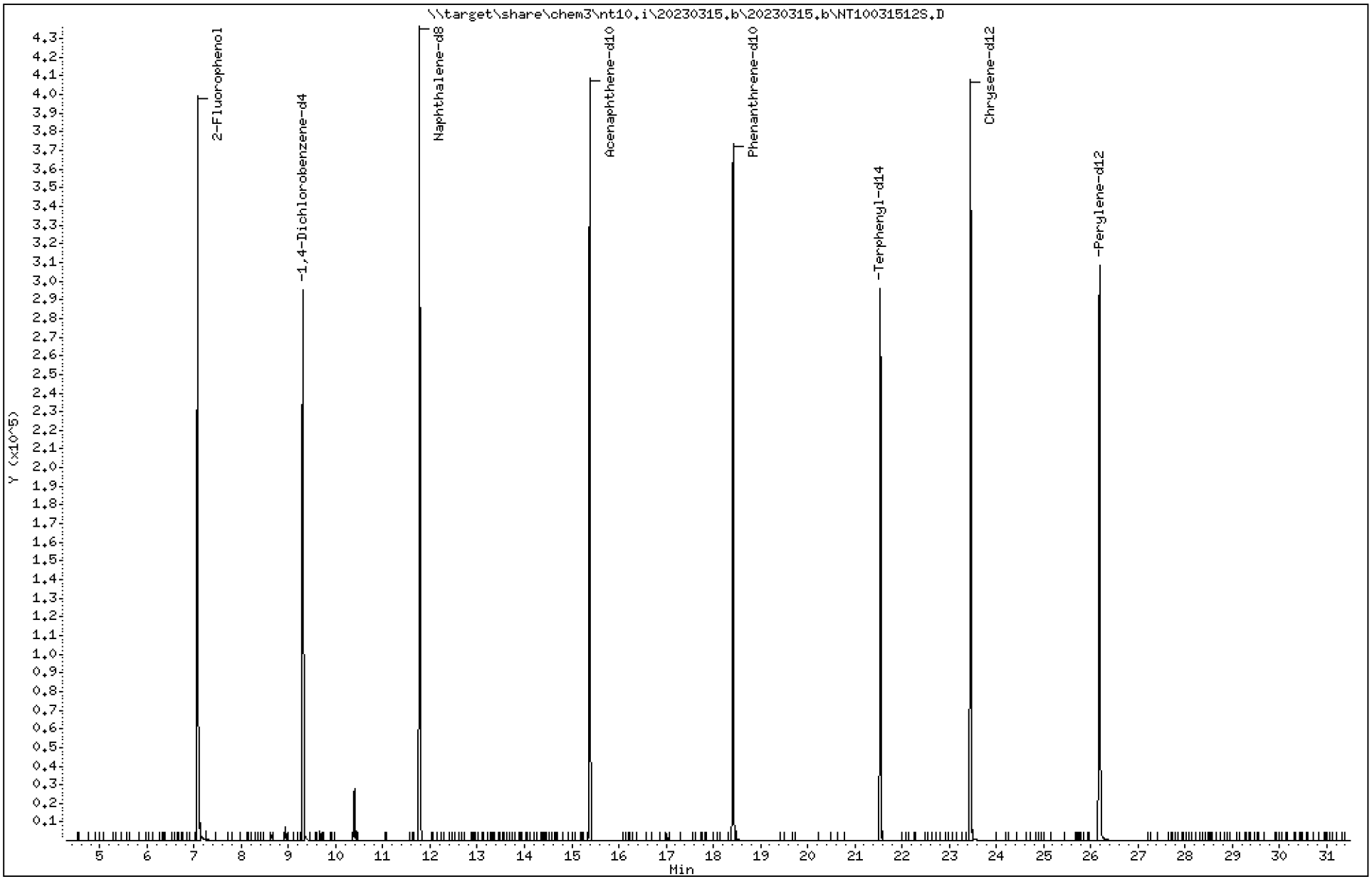
Sample Info: SLC0238-ICB1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031512S.D
Lab Smp Id: SLC0238-ICB1
Inj Date : 16-MAR-2023 02:54 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-ICB1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	7.072	7.073	(0.760)	392056	6.82342	6.823(R)
3	Phenol	94	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	189475	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	79	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
24	Benzoic acid	105	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.774	11.775	(1.000)	676186	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					
39	Dimethylphthalate	163	Compound Not Detected.					
* 42	Acenaphthene-d10	162	15.379	15.380	(1.000)	328650	4.00000	
50	Diethylphthalate	149	Compound Not Detected.					
54	N-Nitrosodiphenylamine	169	Compound Not Detected.					
57	Hexachlorobenzene	284	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.424	18.417	(1.000)	617605	4.00000	
$	66 Terphenyl-d14	244	21.542	21.543	(0.918)	340833	4.41767	4.418(R)
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.454	23.455	(1.000)	473513	4.00000	
*	77 Perylene-d12	264	26.187	26.188	(1.000)	534734	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031512S.D
Lab Smp Id: SLC0238-ICB1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	189475	0.74
27 Naphthalene-d8	674549	337275	1349098	676186	0.24
42 Acenaphthene-d10	328275	164138	656550	328650	0.11
59 Phenanthrene-d10	597140	298570	1194280	617605	3.43
69 Chrysene-d12	466503	233252	933006	473513	1.50
77 Perylene-d12	518203	259102	1036406	534734	3.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.77	-0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.38	-0.05
59 Phenanthrene-d10	18.42	17.92	18.92	18.42	-0.00
69 Chrysene-d12	23.45	22.95	23.95	23.45	-0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	-0.00

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

REVIEW SUMMARY FOR FILE - NT10031512S.D

Lab ID: SLC0238-ICB1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 02:54

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230315.b/NT10031510S.D

On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00049
Laboratory ID: SLC0238-SCV1
Sequence: SLC0238
Sequence Name: SCV 5.0
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	4.8	-3.2	20.00
1,2-Dichlorobenzene	5.0000	4.7	-6.4	20.00
Benzyl Alcohol	5.0000	5.2	3.6	20.00
Benzoic acid	10.000	6.7	-32.5 *	20.00
2,4-Dimethylphenol	5.0000	3.7	-26.8 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.4	-11.1	20.00
N-Nitrosodiphenylamine	5.0000	5.1	1.6	20.00
Pentachlorophenol	5.0000	4.4	-11.6	20.00
2-Fluorophenol	7.5000	0.00		
p-Terphenyl-d14	5.0000	0.00154	-100	

* Indicates values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

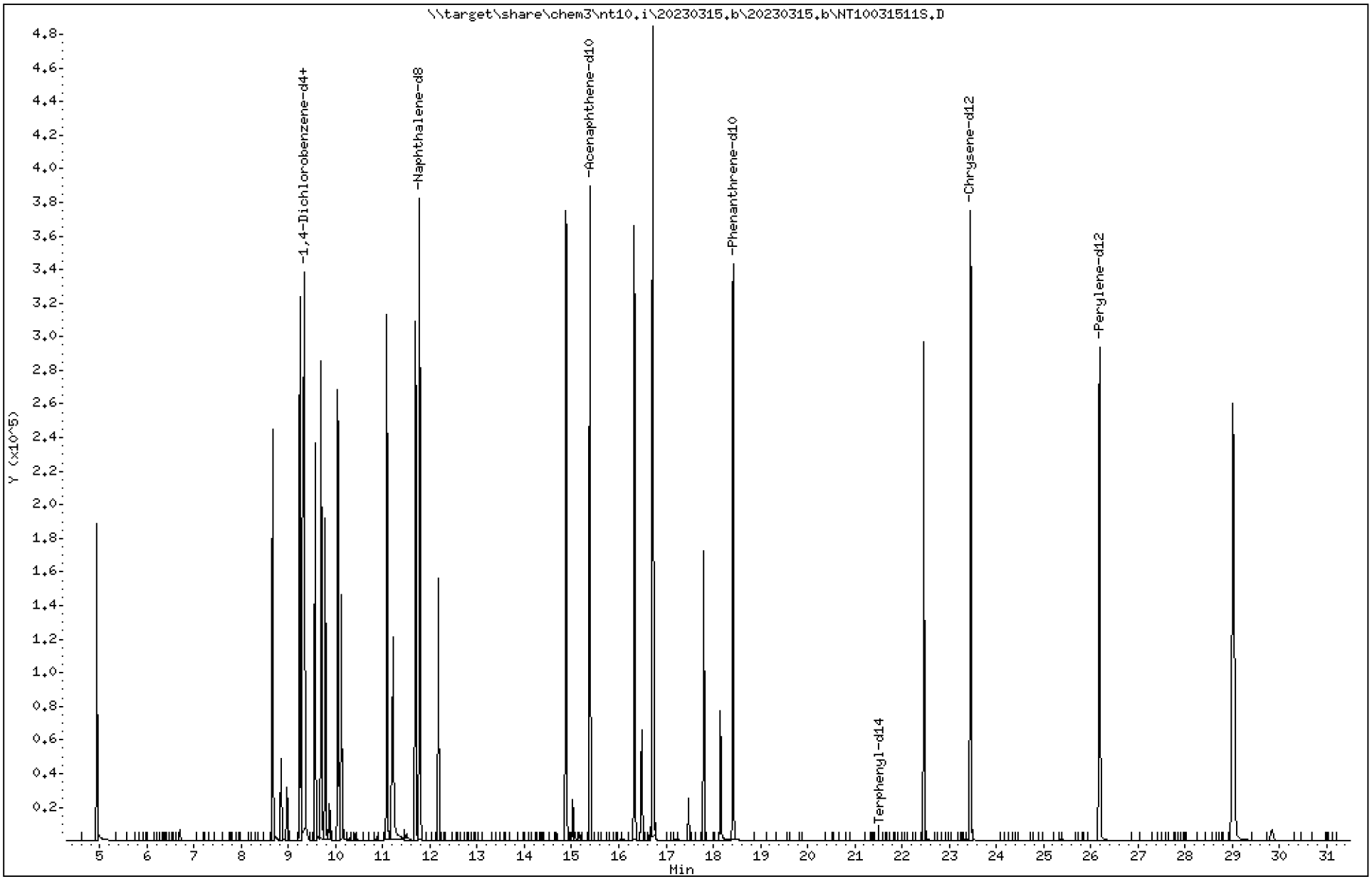
Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

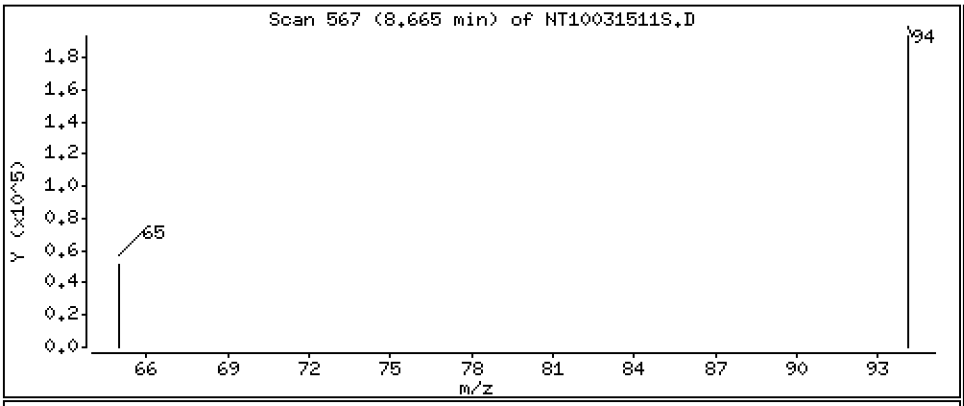
Operator: JGR

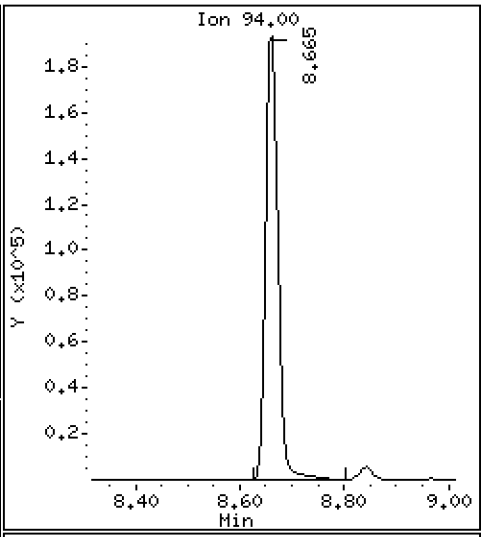
Column phase: ZB-5msi

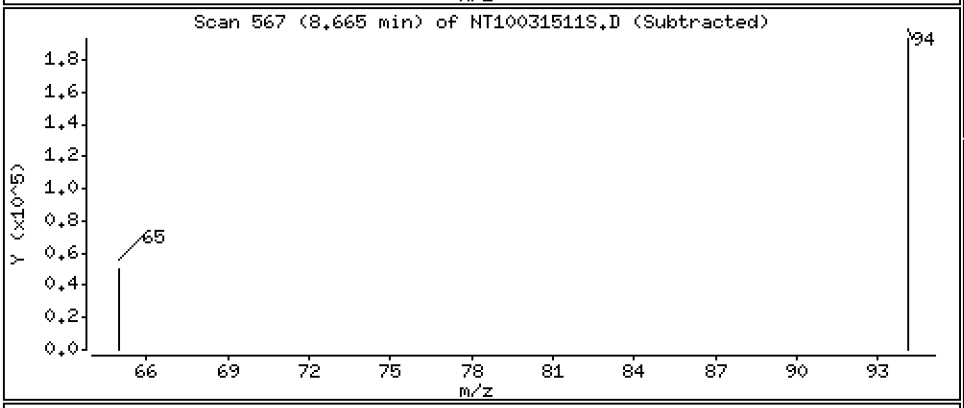
Column diameter: 0.25

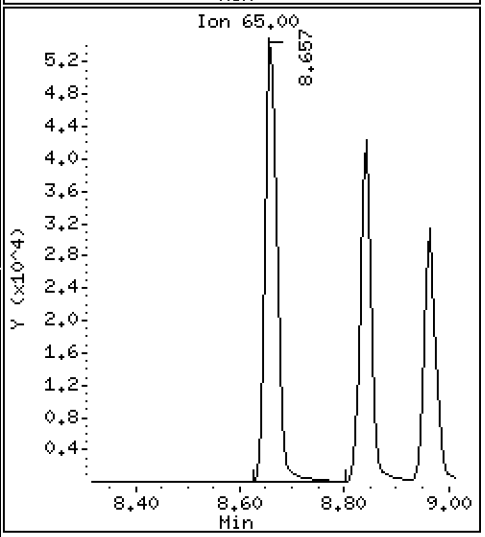
3 Phenol

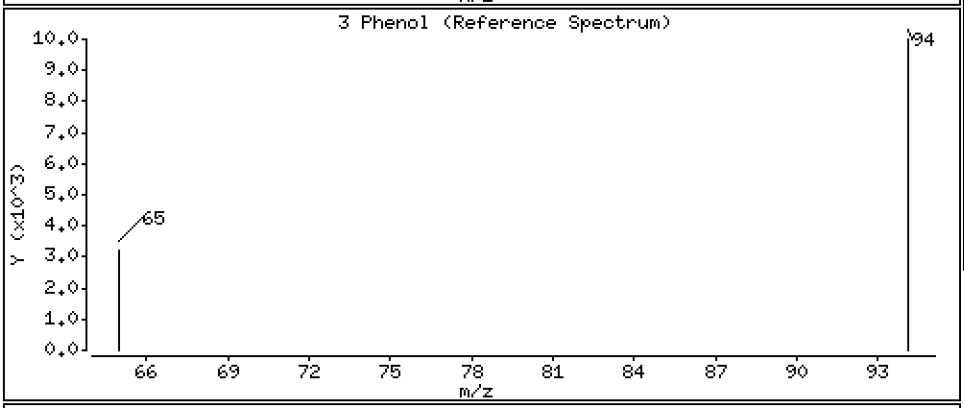
Concentration: 4.373 ug/L

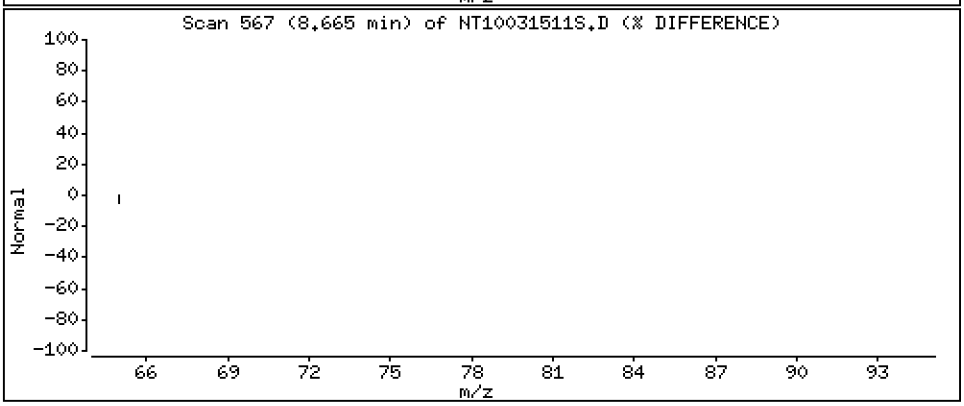












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

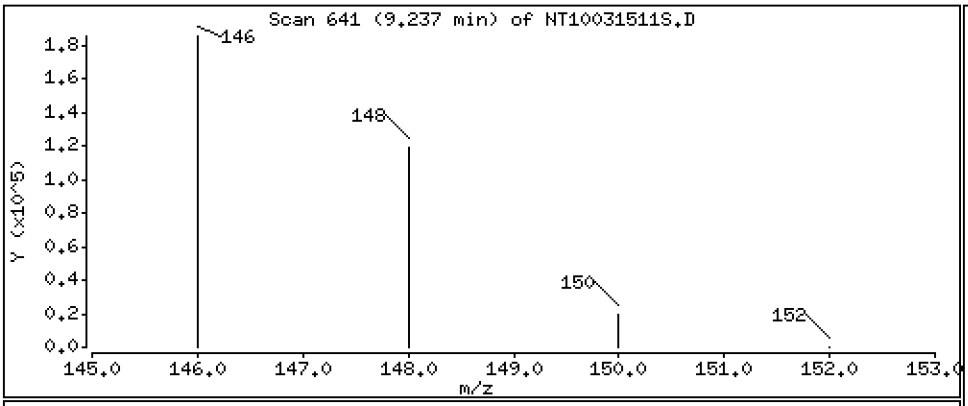
Operator: JGR

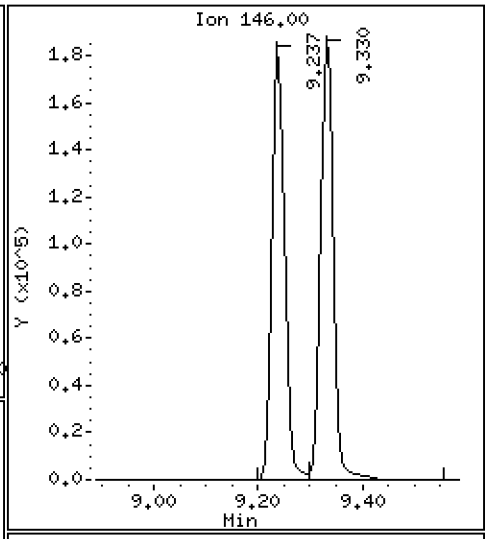
Column phase: ZB-5msi

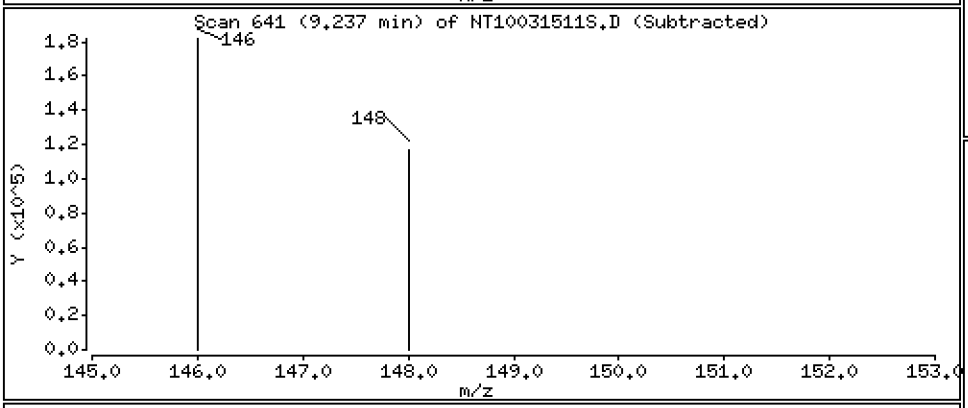
Column diameter: 0.25

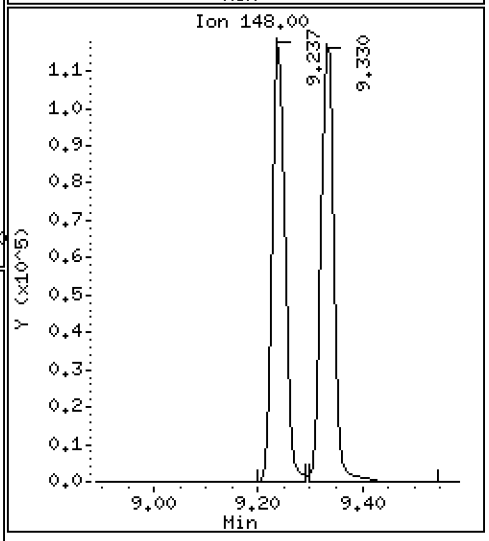
7 1,3-Dichlorobenzene

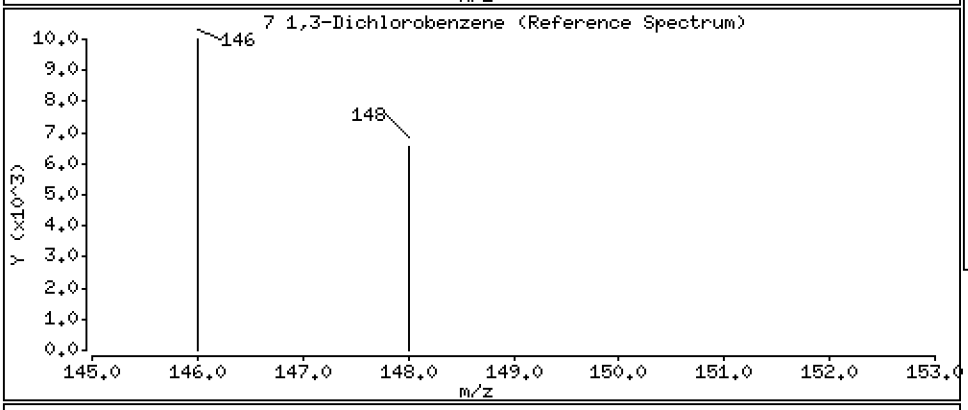
Concentration: 4.643 ug/L

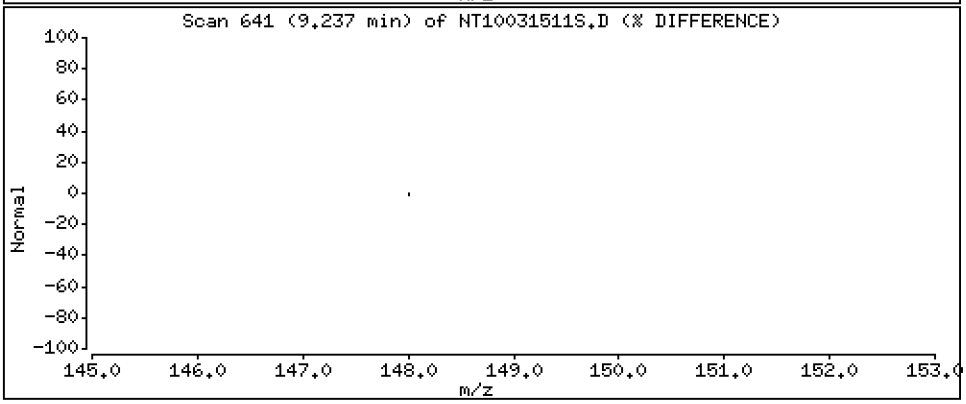












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

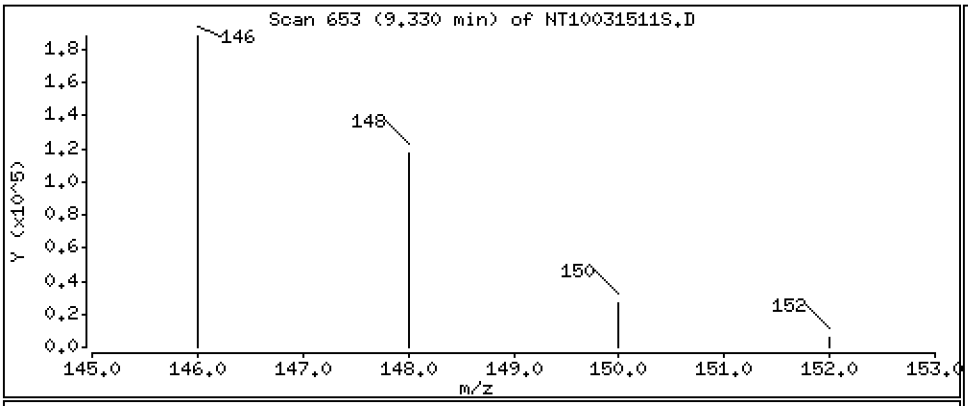
Operator: JGR

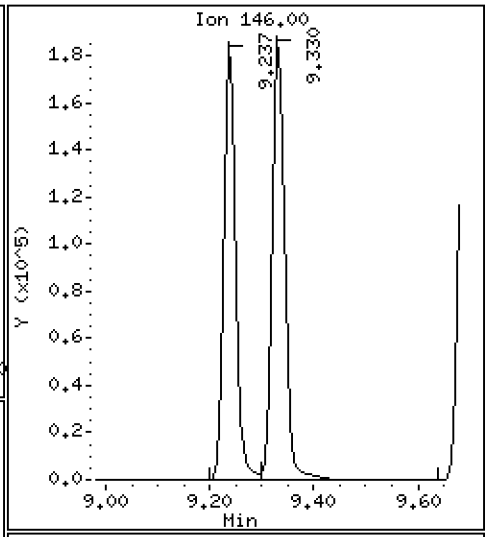
Column phase: ZB-5msi

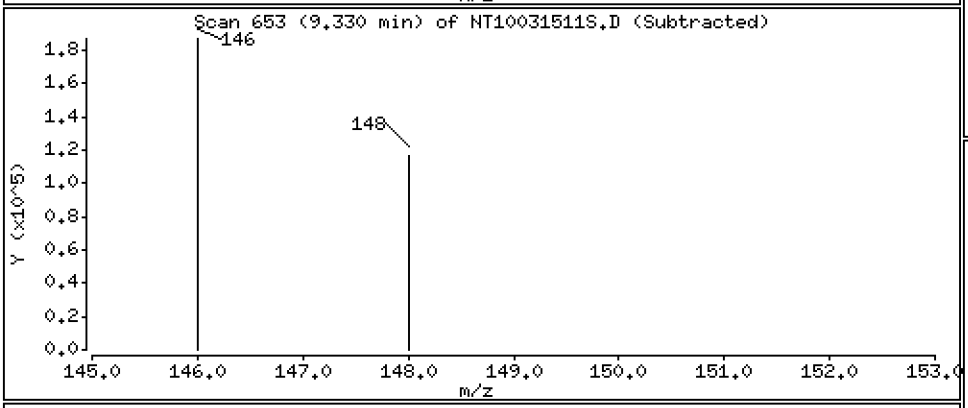
Column diameter: 0.25

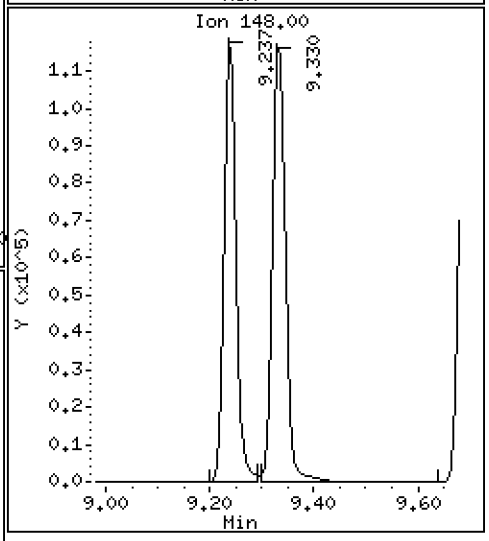
9 1,4-Dichlorobenzene

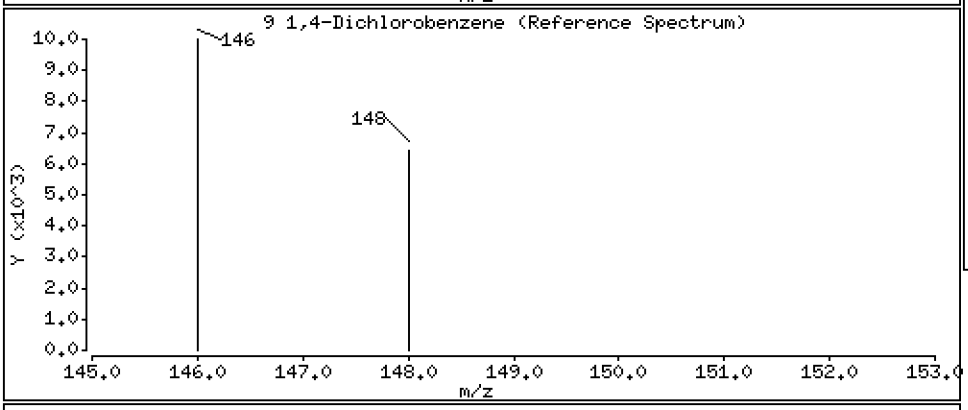
Concentration: 4.838 ug/L

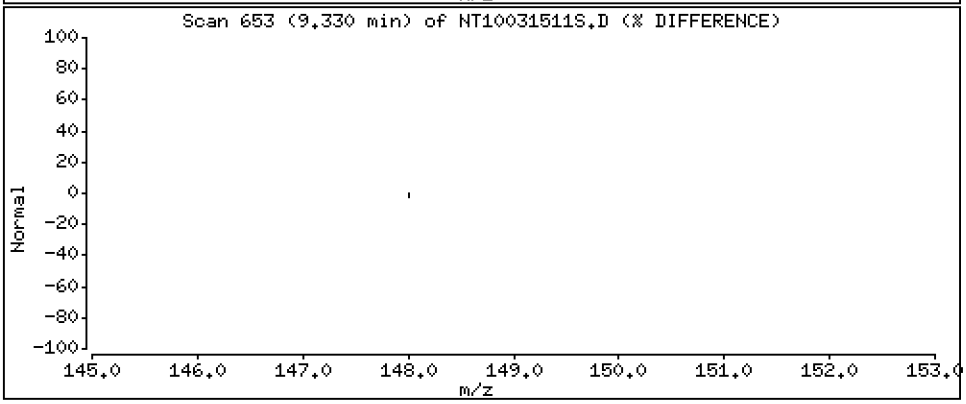












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

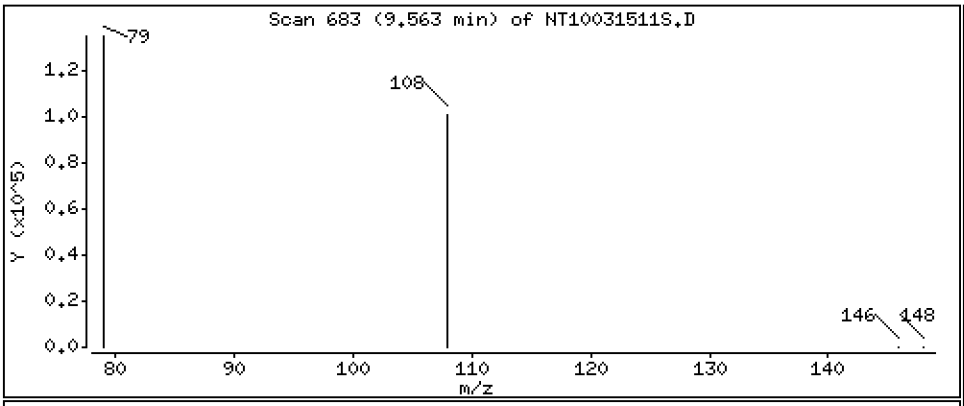
Operator: JGR

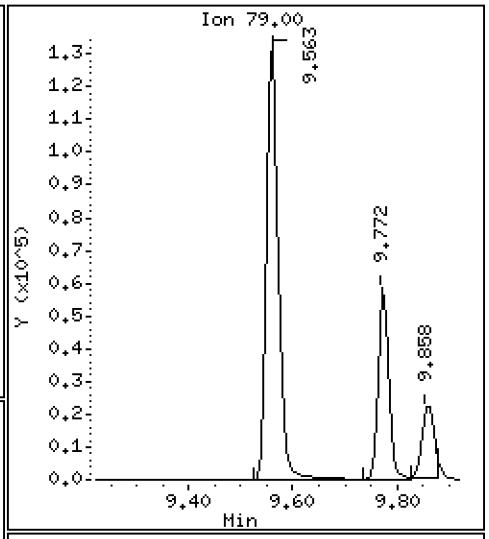
Column phase: ZB-5msi

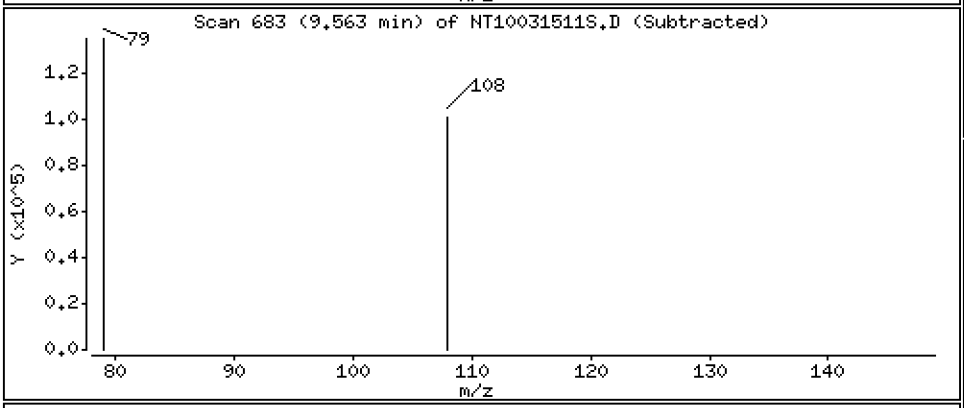
Column diameter: 0.25

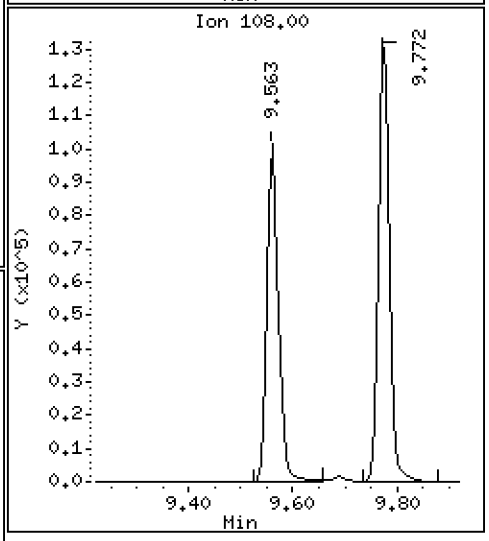
11 Benzyl alcohol

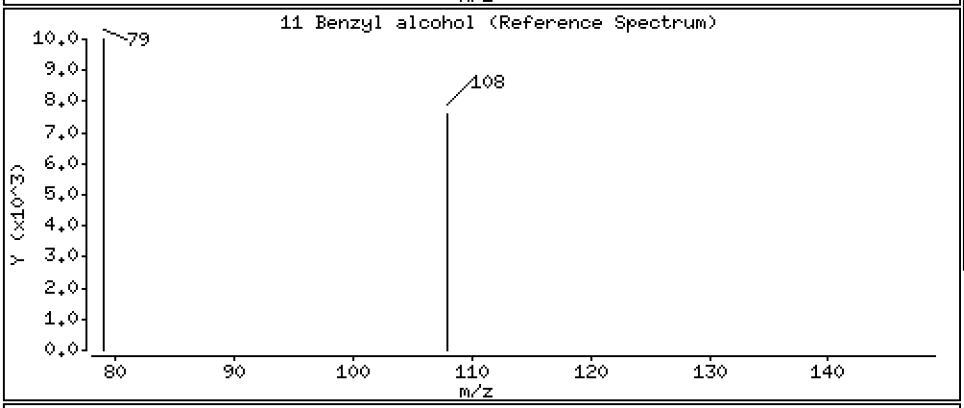
Concentration: 5.181 ug/L

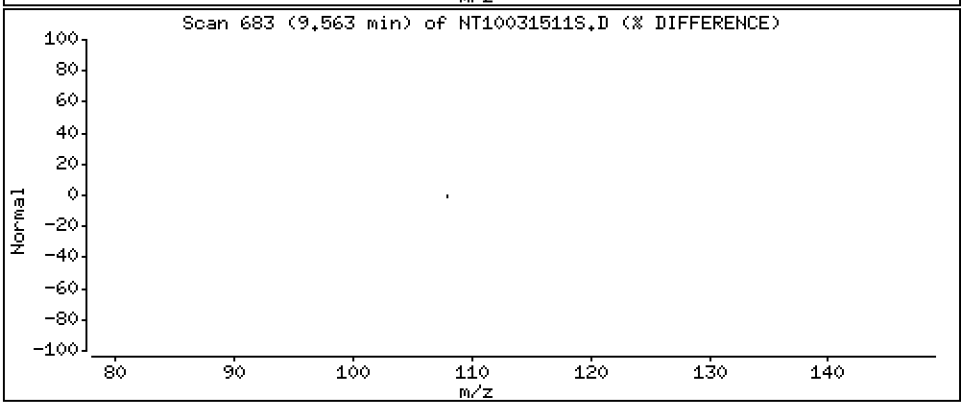












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

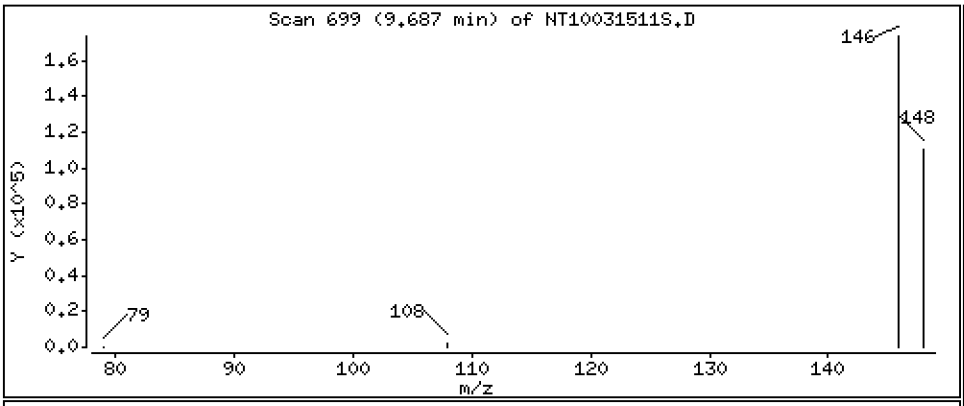
Operator: JGR

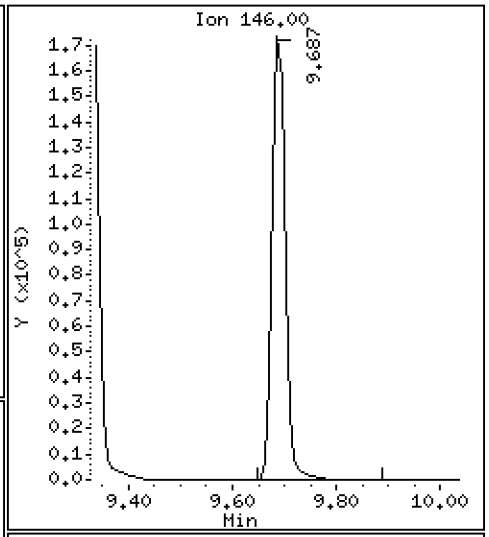
Column phase: ZB-5msi

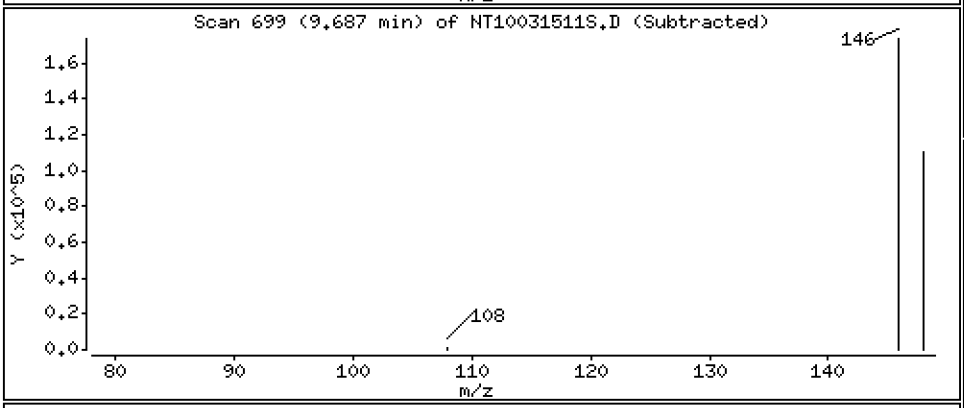
Column diameter: 0.25

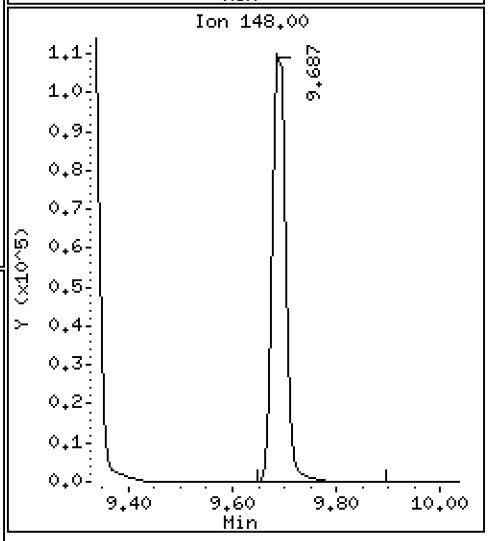
12 1,2-Dichlorobenzene

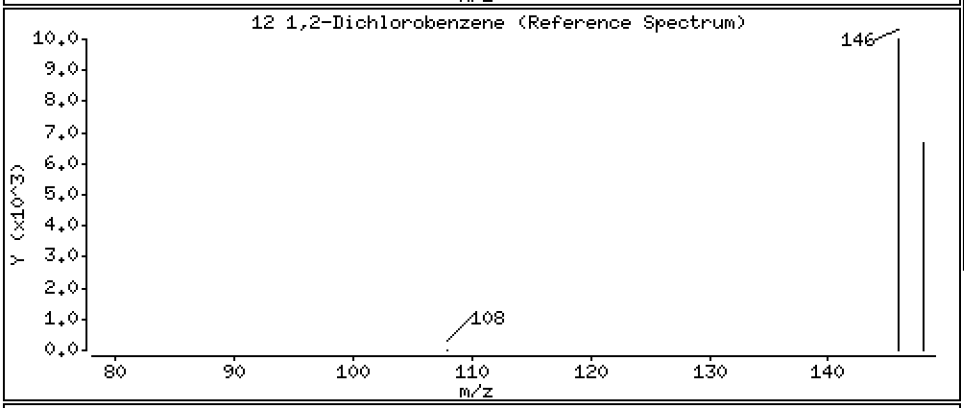
Concentration: 4.679 ug/L

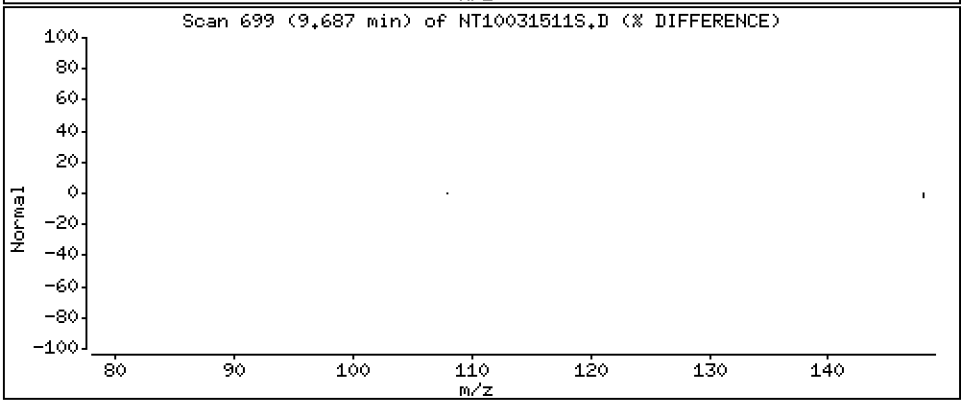












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

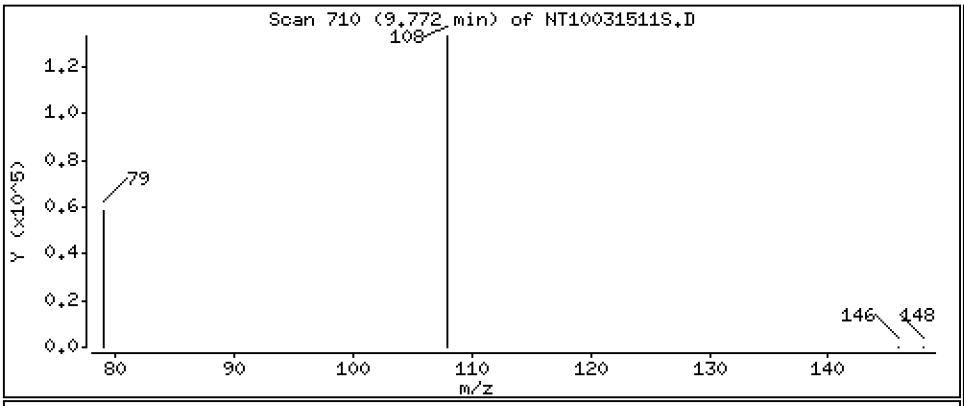
Operator: JGR

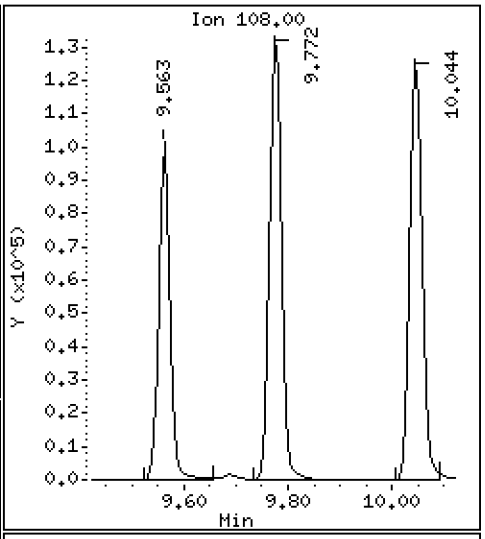
Column phase: ZB-5msi

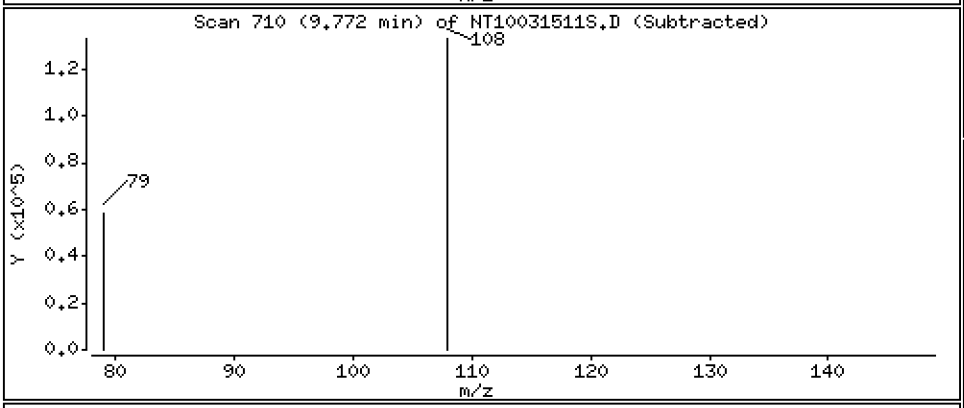
Column diameter: 0.25

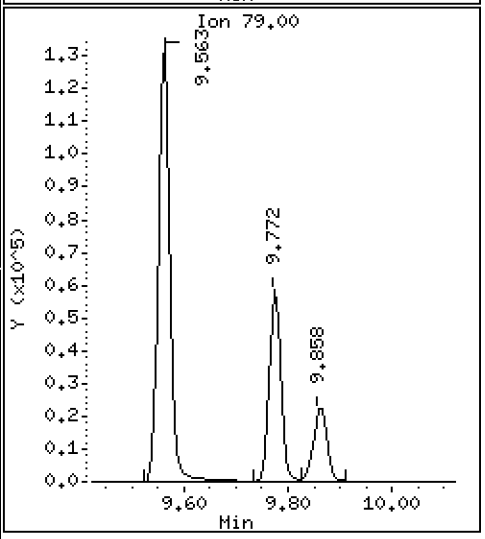
13 2-Methylphenol

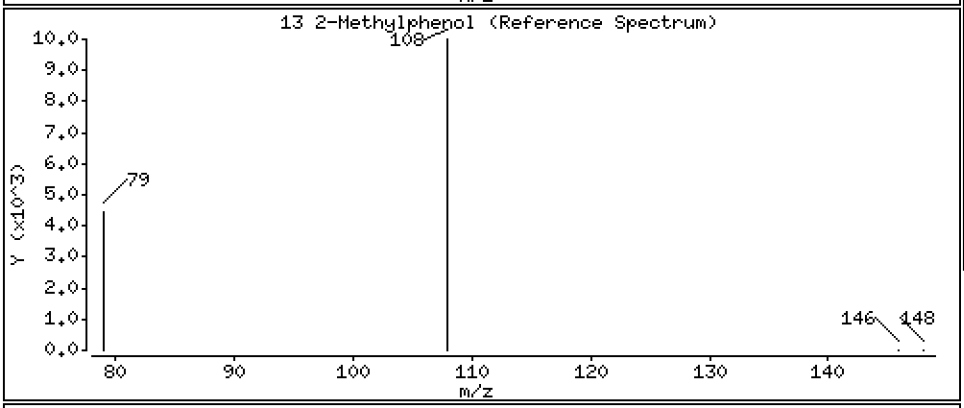
Concentration: 4.197 ug/L

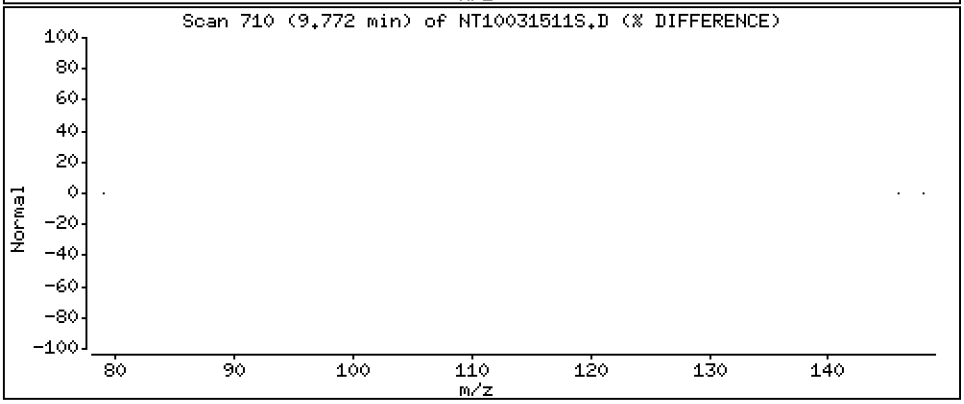












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

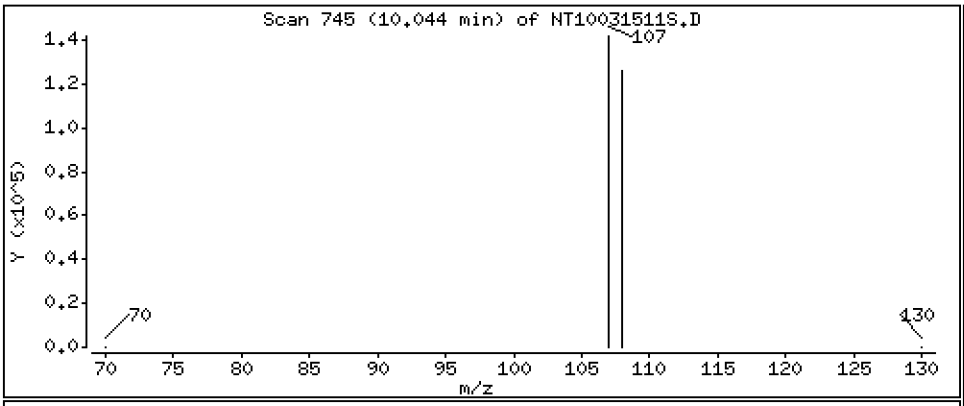
Operator: JGR

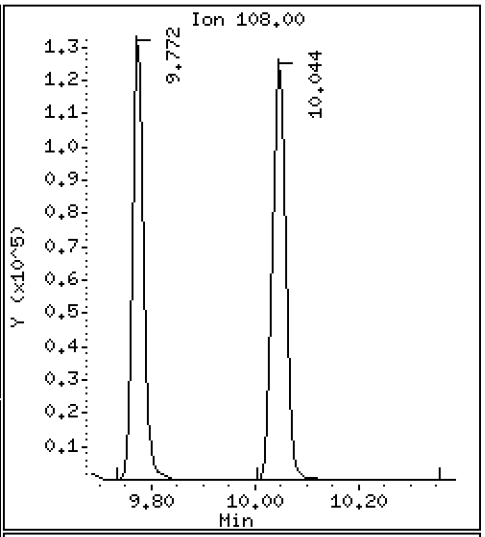
Column phase: ZB-5msi

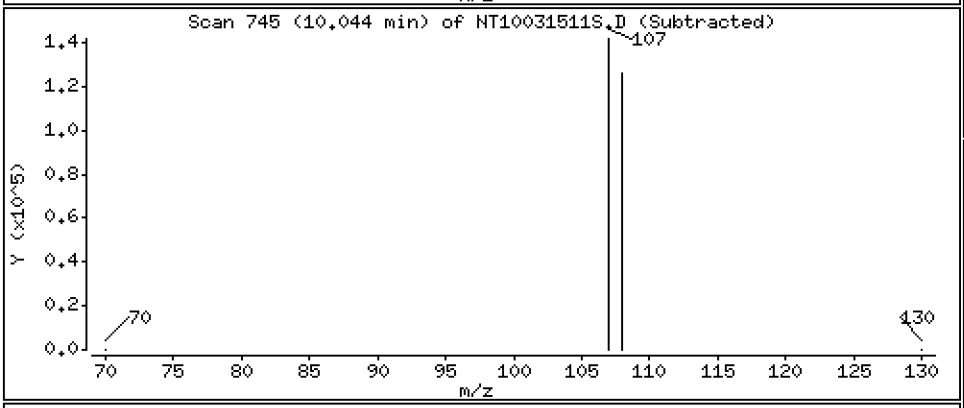
Column diameter: 0.25

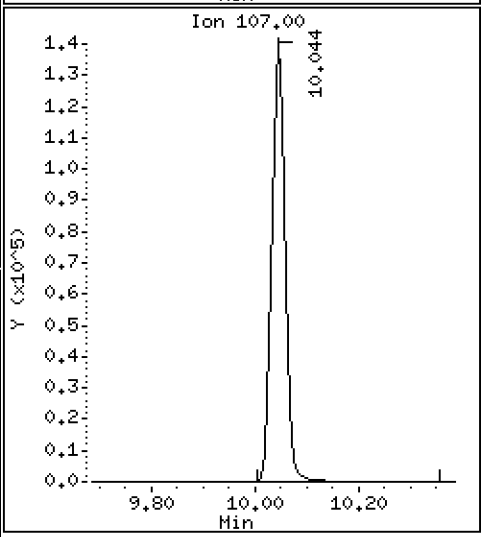
15 4-Methylphenol

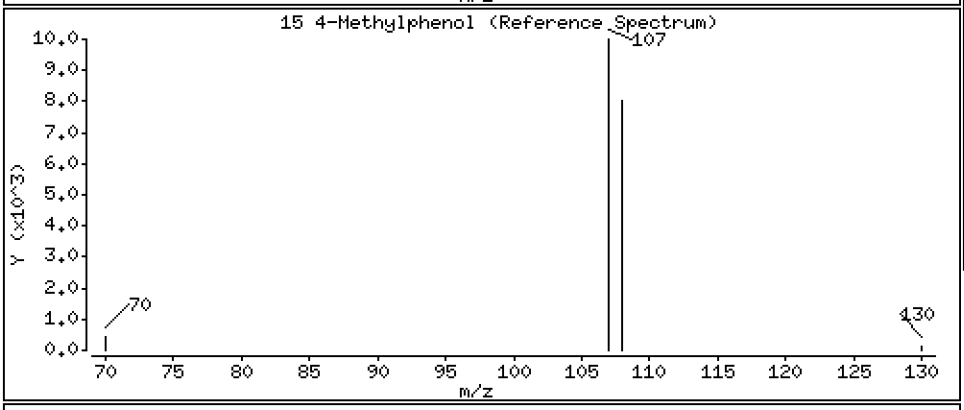
Concentration: 4.463 ug/L

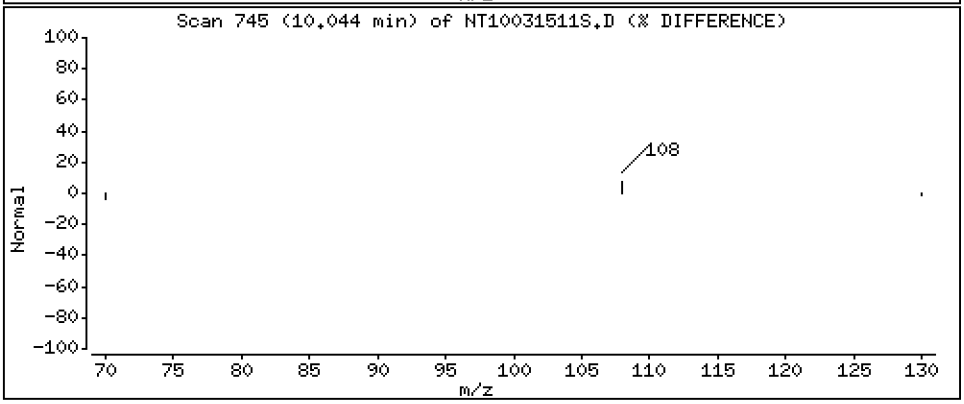












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

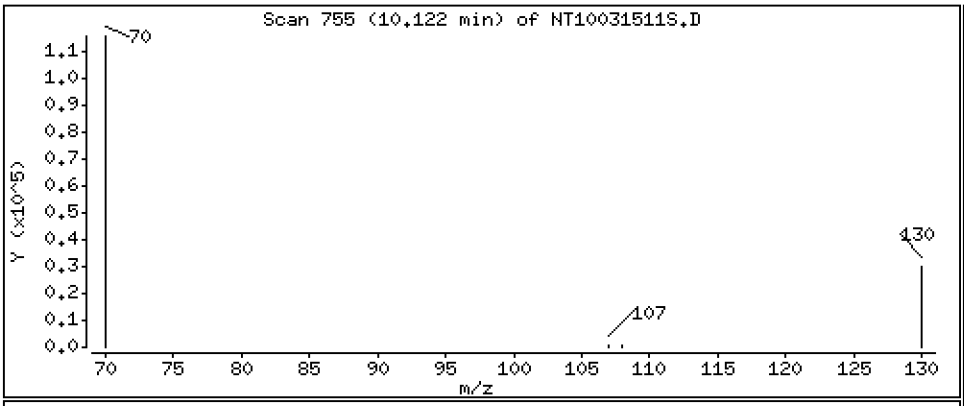
Operator: JGR

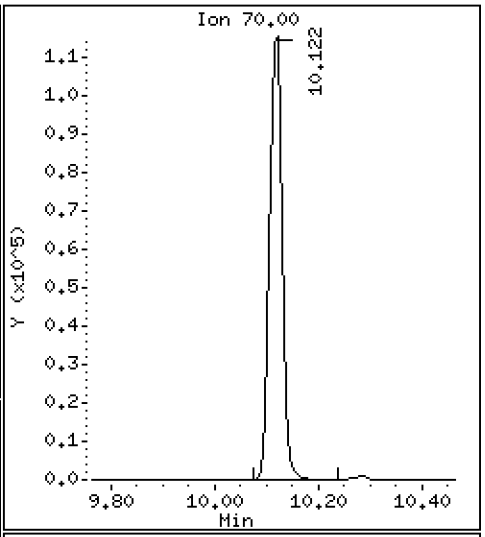
Column phase: ZB-5msi

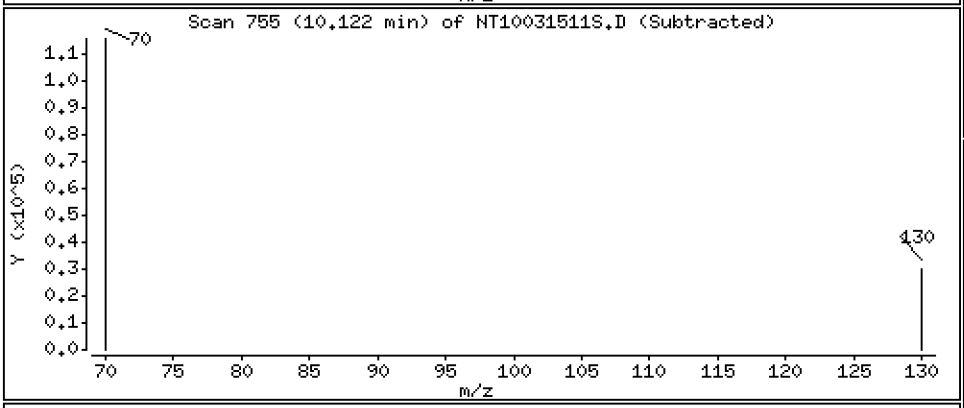
Column diameter: 0.25

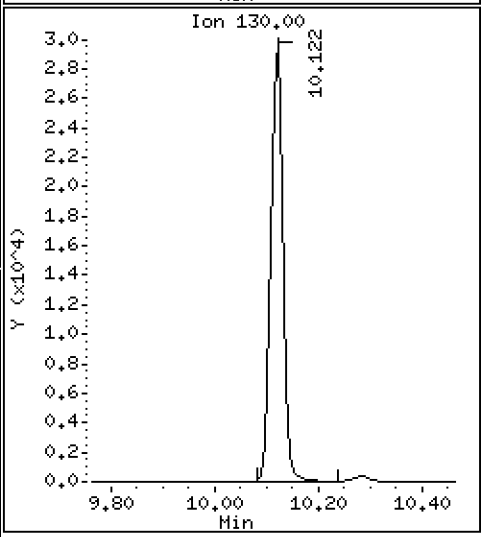
16 N-Nitroso-di-n-propylamine

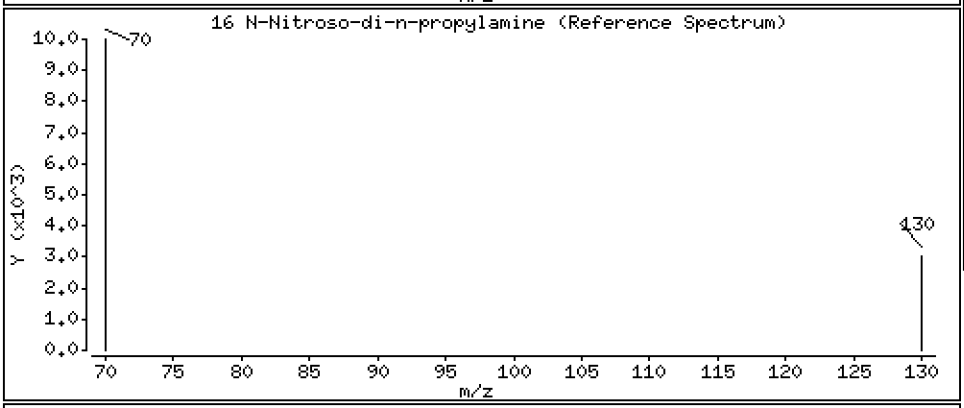
Concentration: 5.282 ug/L

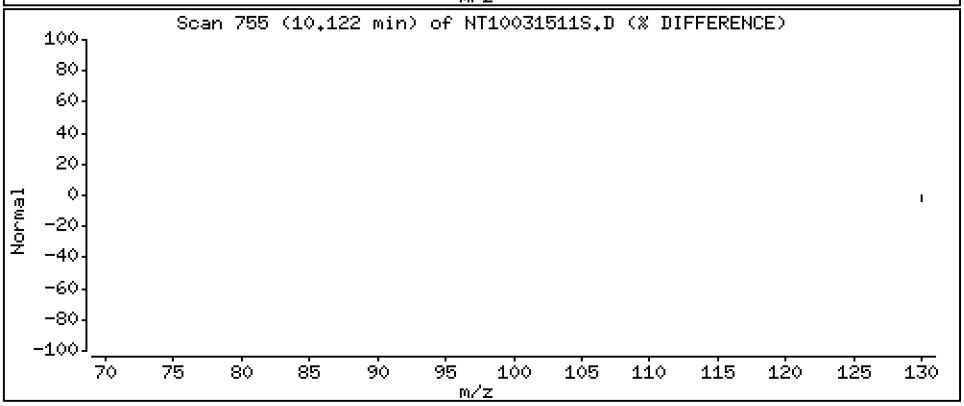












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

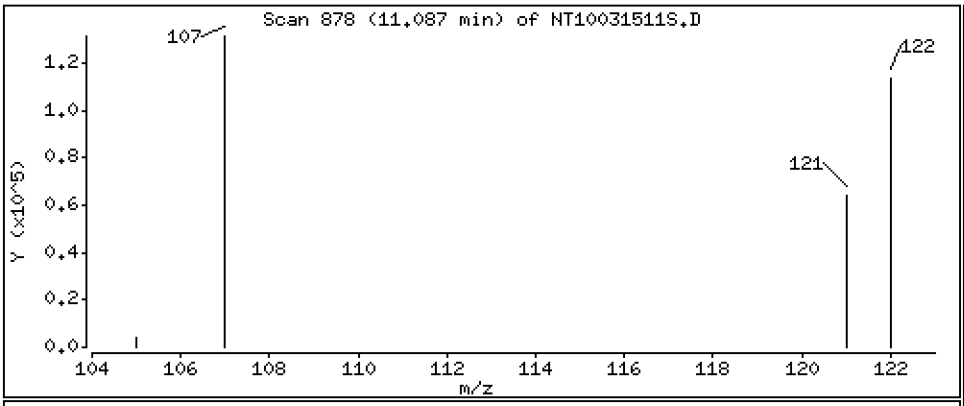
Operator: JGR

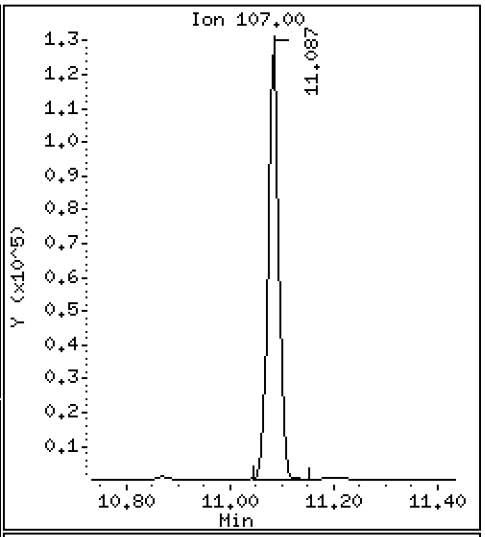
Column phase: ZB-5msi

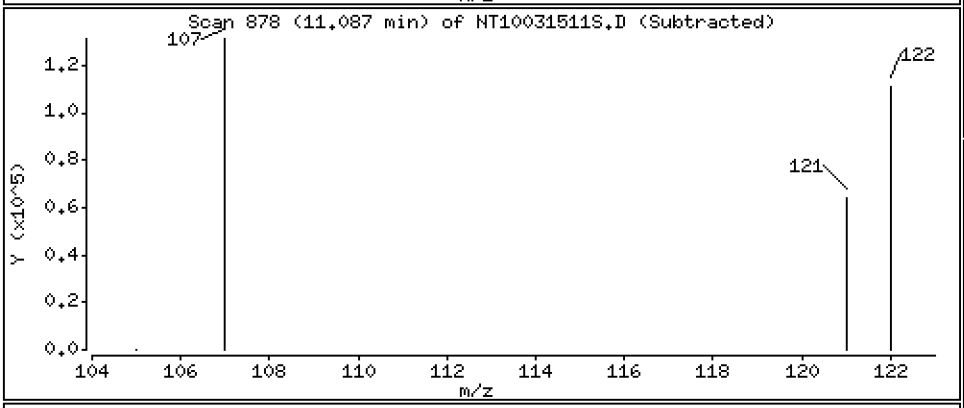
Column diameter: 0.25

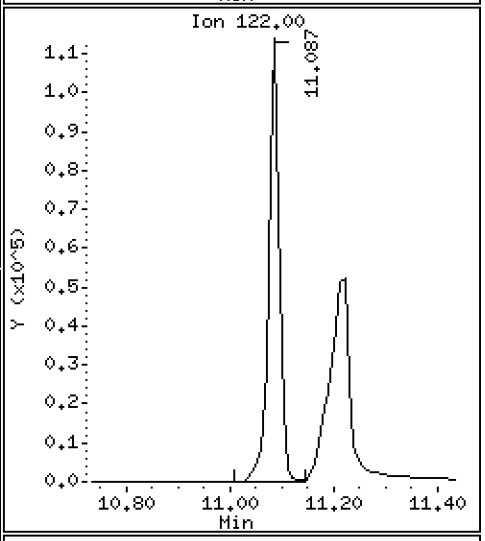
22 2,4-Dimethylphenol

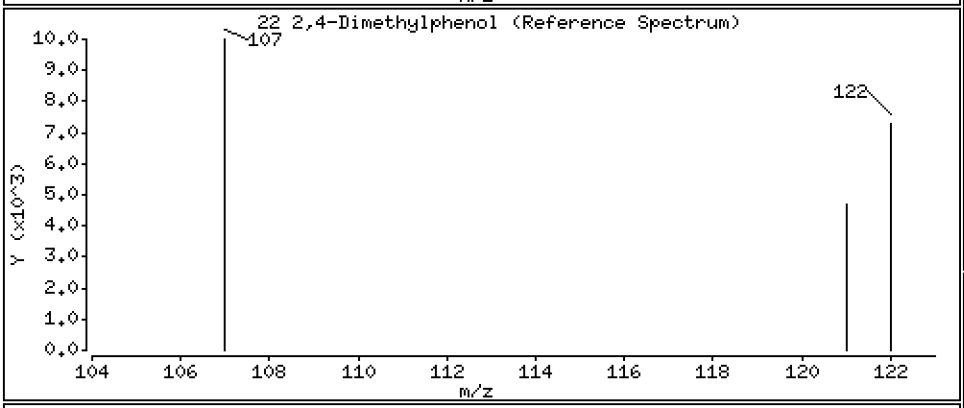
Concentration: 3.660 ug/L

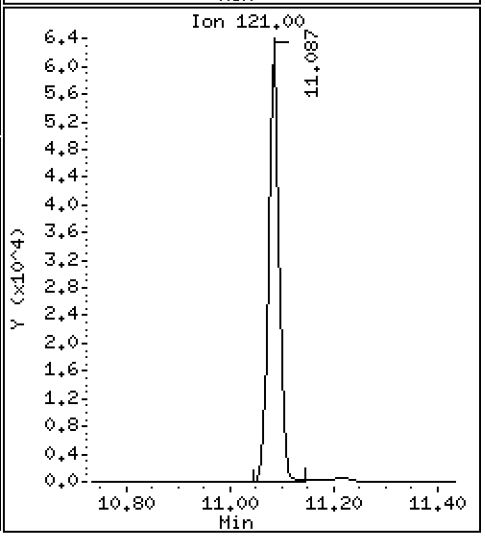


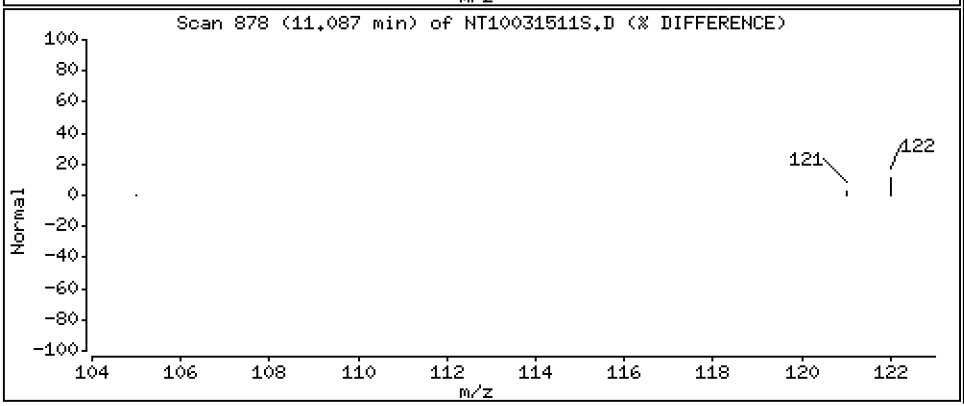












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

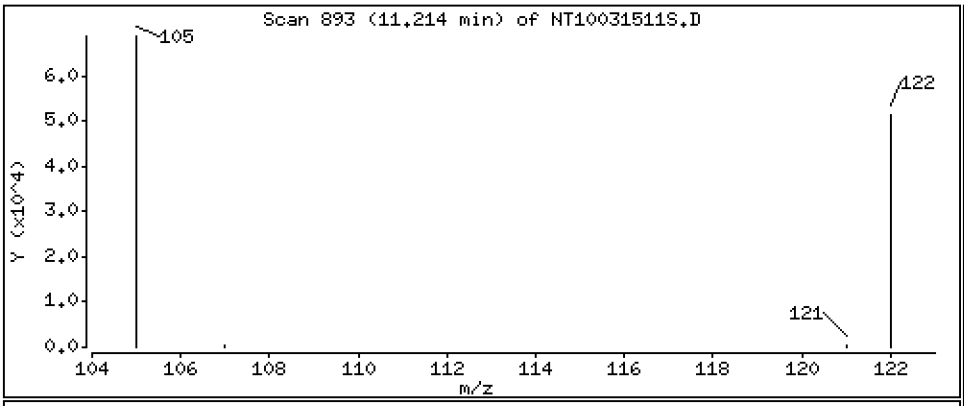
Operator: JGR

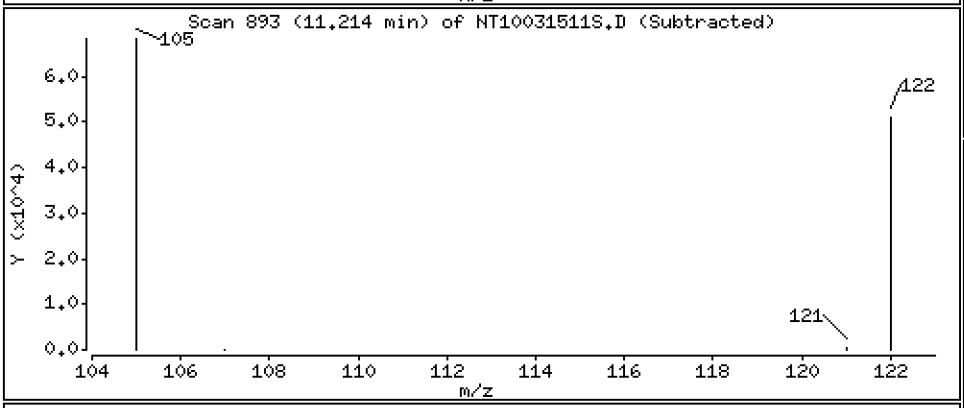
Column phase: ZB-5msi

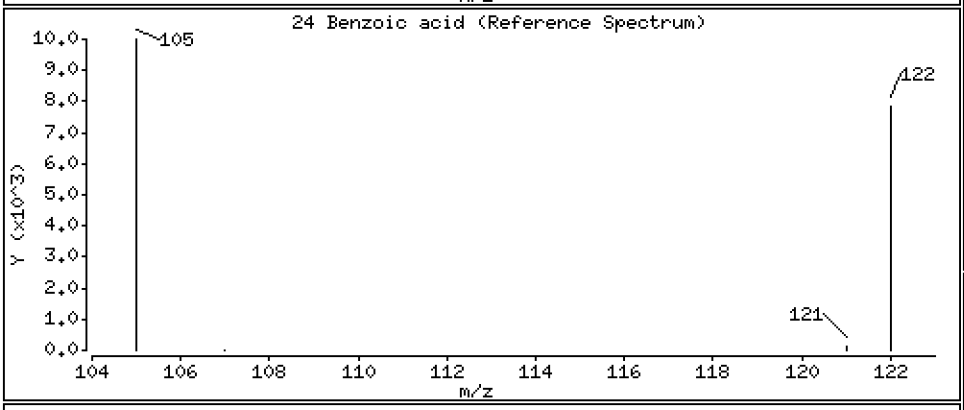
Column diameter: 0.25

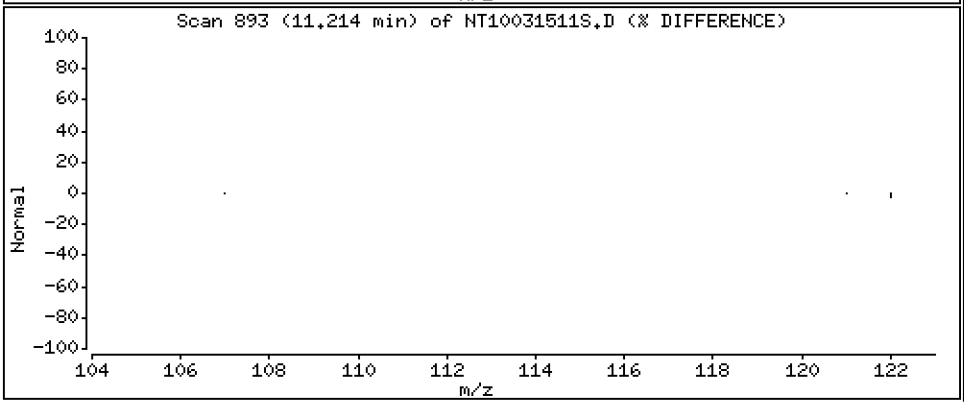
24 Benzoic acid

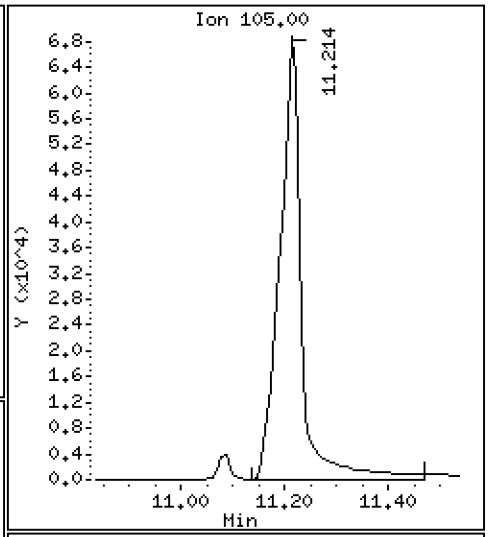
Concentration: 6.746 ug/L

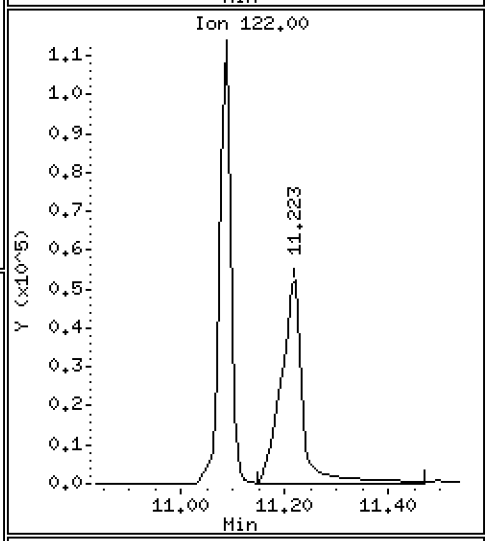


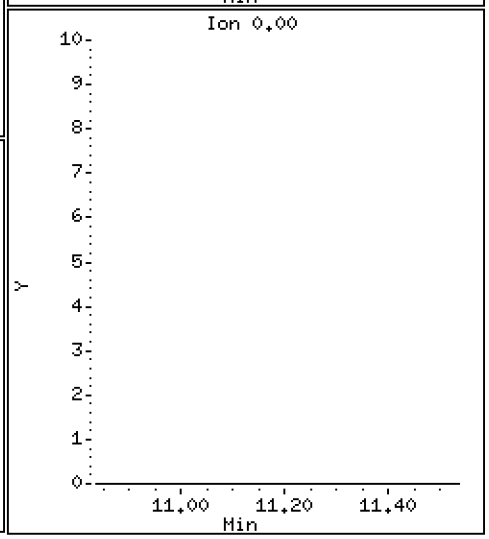












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

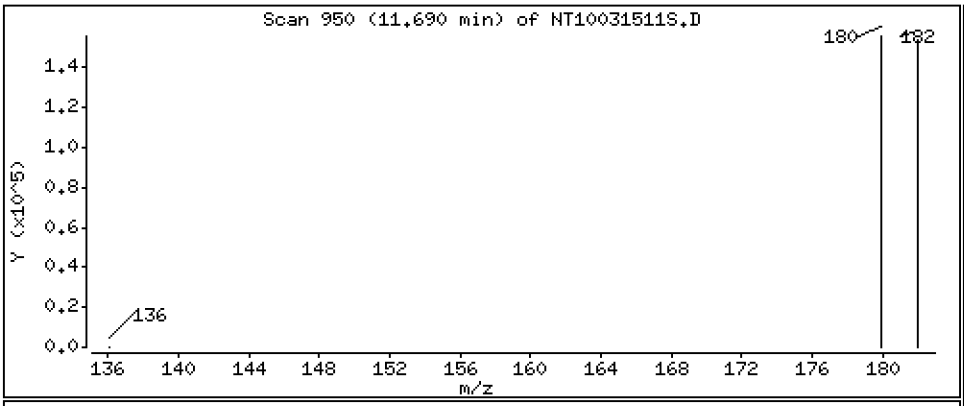
Operator: JGR

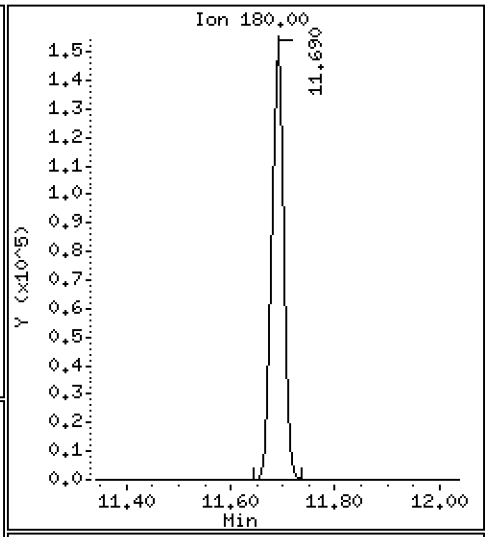
Column phase: ZB-5msi

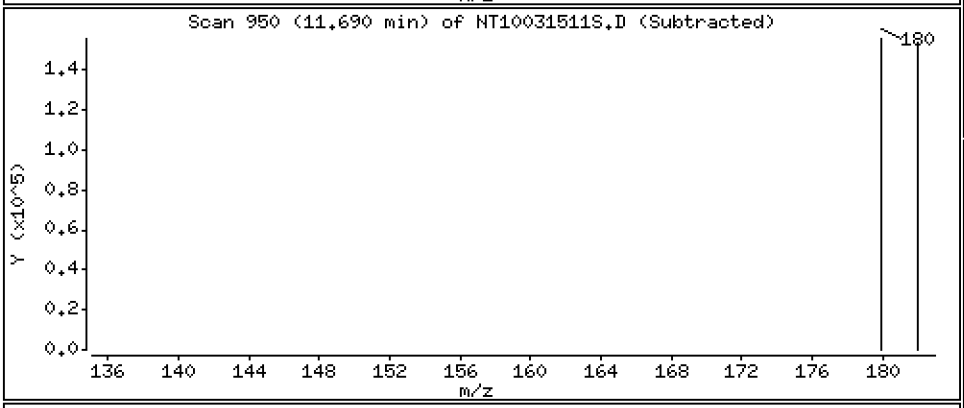
Column diameter: 0.25

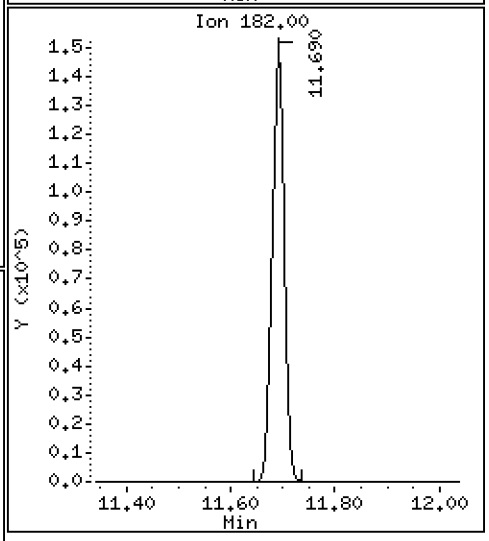
26 1,2,4-Trichlorobenzene

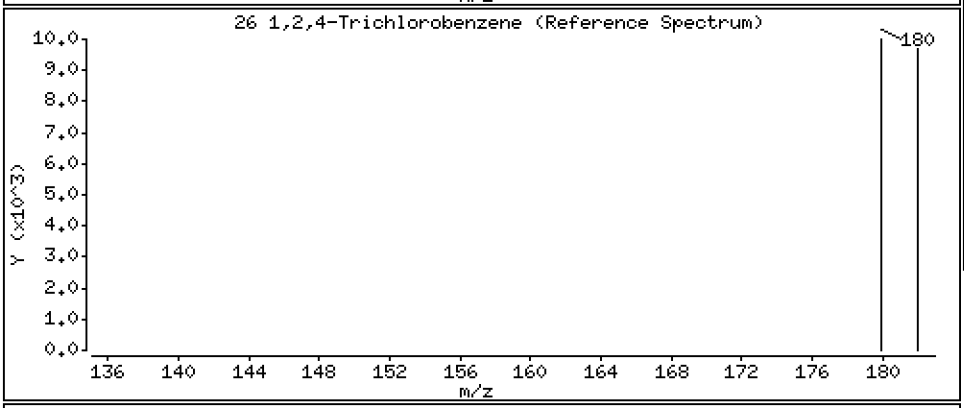
Concentration: 4.445 ug/L

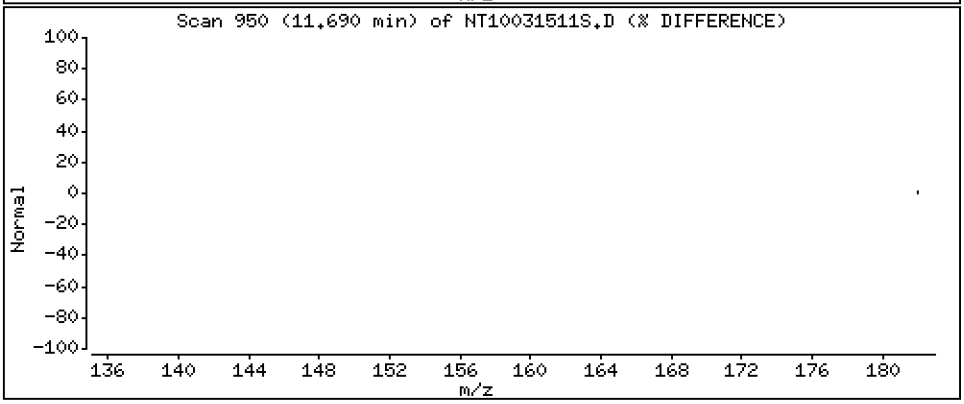












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

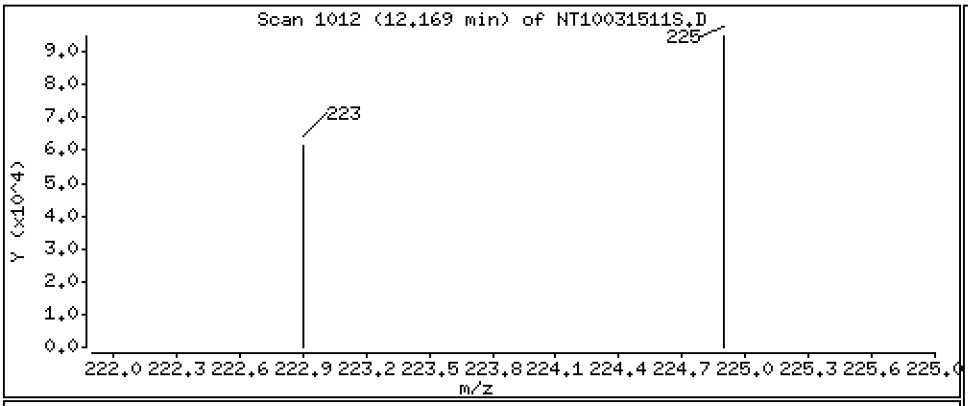
Operator: JGR

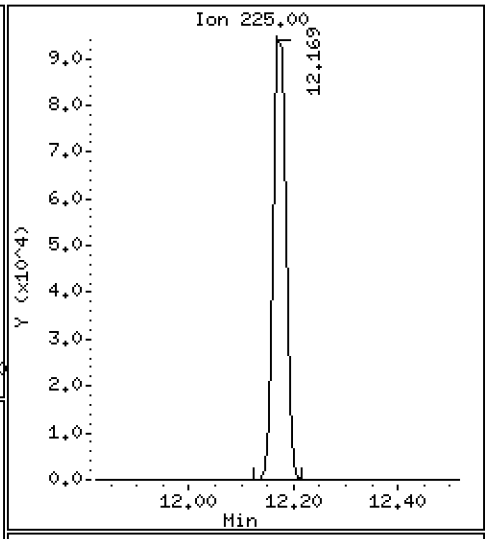
Column phase: ZB-5msi

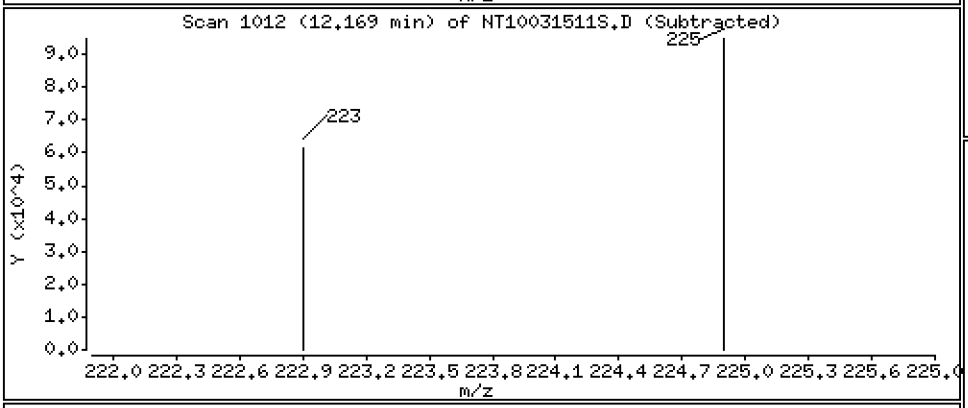
Column diameter: 0.25

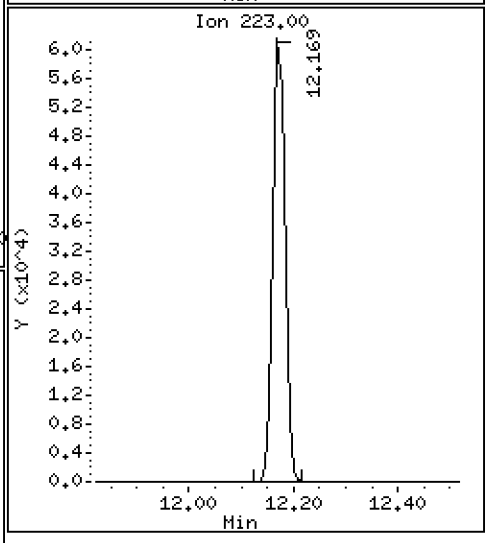
30 Hexachlorobutadiene

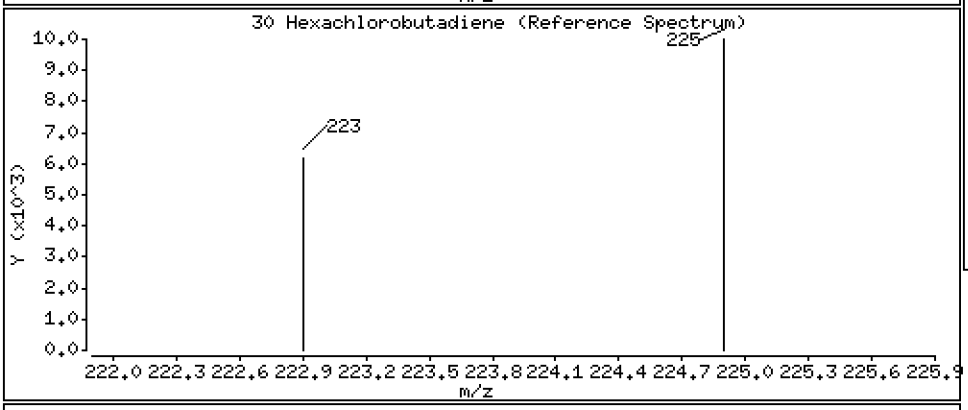
Concentration: 4.653 ug/L

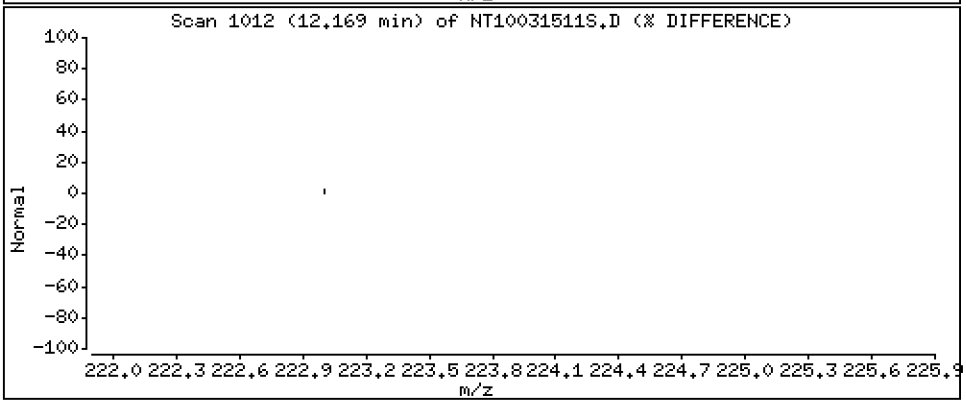












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

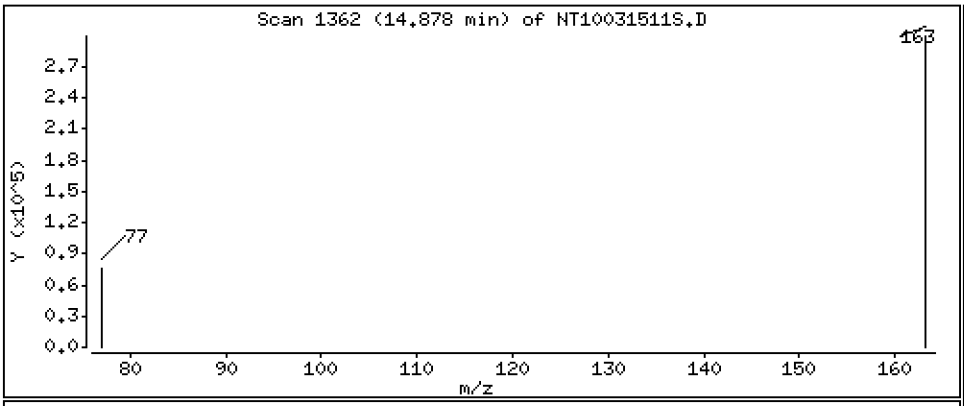
Operator: JGR

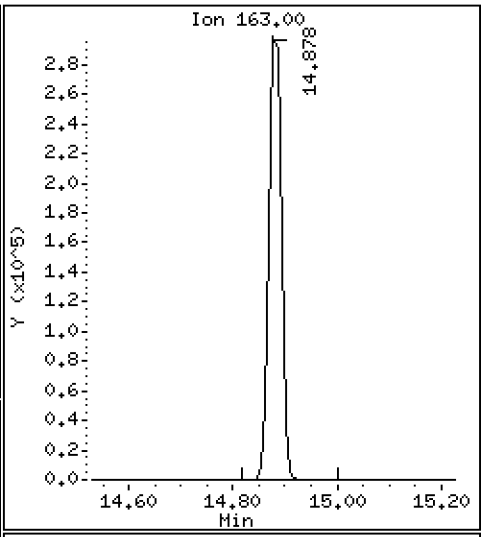
Column phase: ZB-5msi

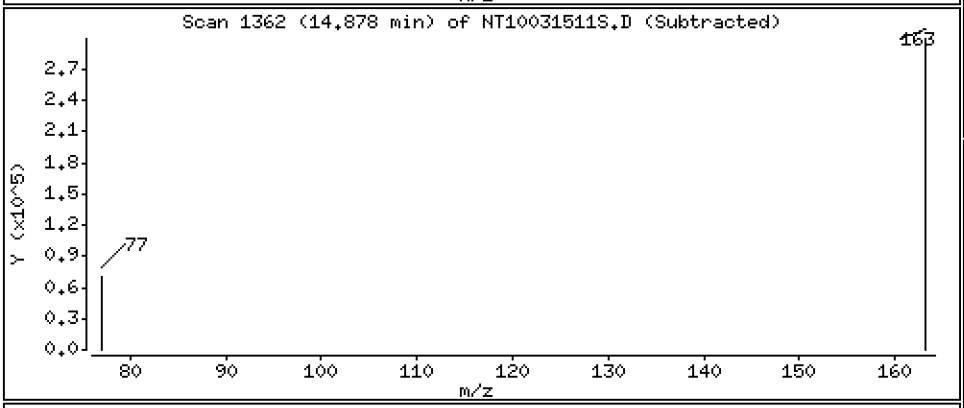
Column diameter: 0.25

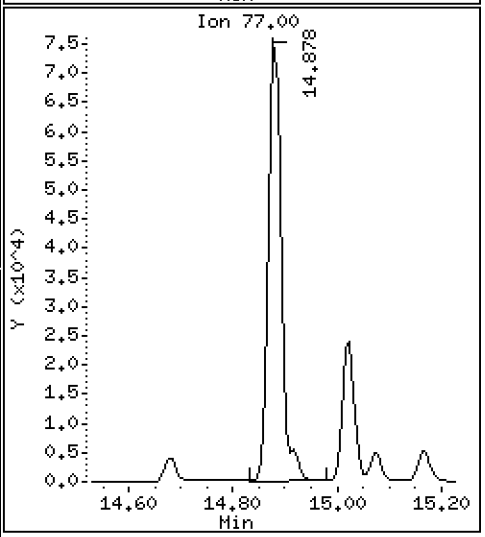
39 Dimethylphthalate

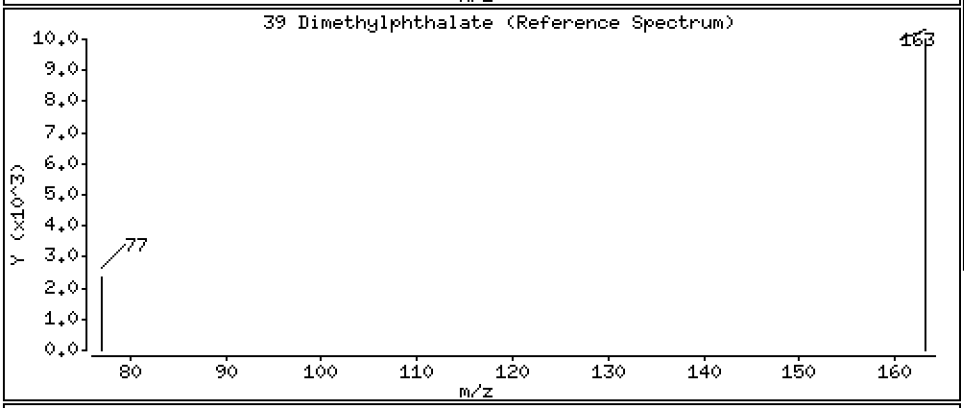
Concentration: 4.948 ug/L

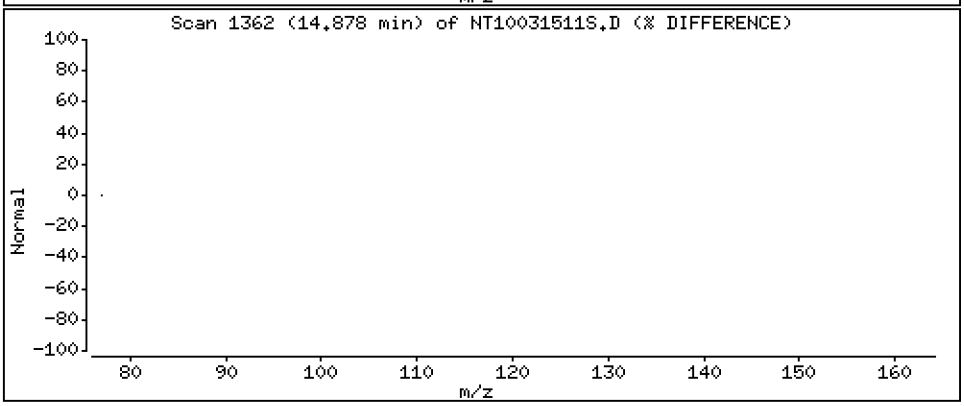












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

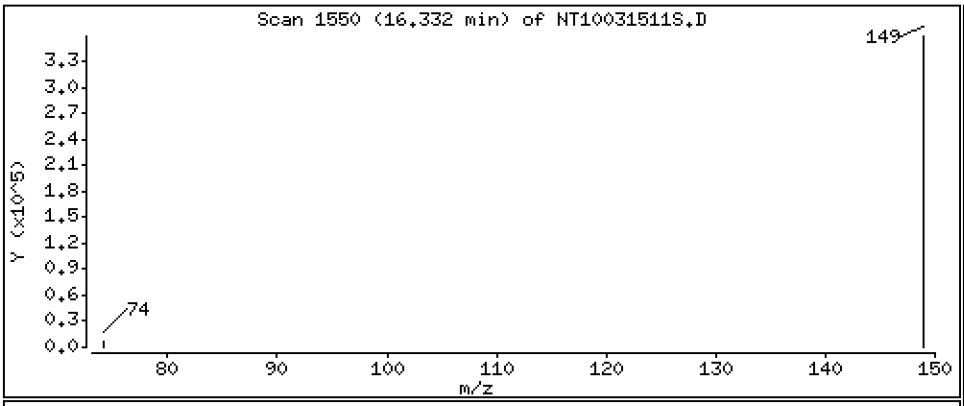
Operator: JGR

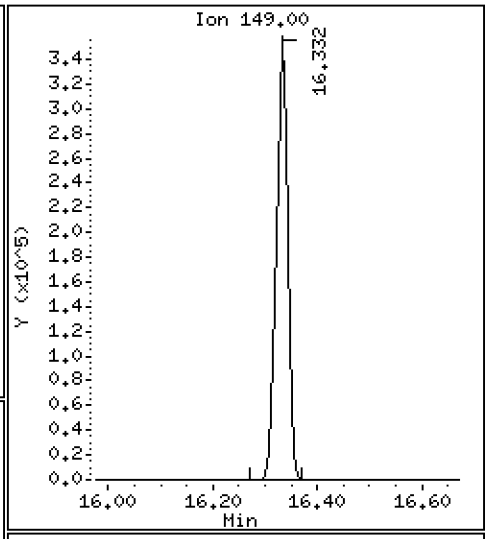
Column phase: ZB-5msi

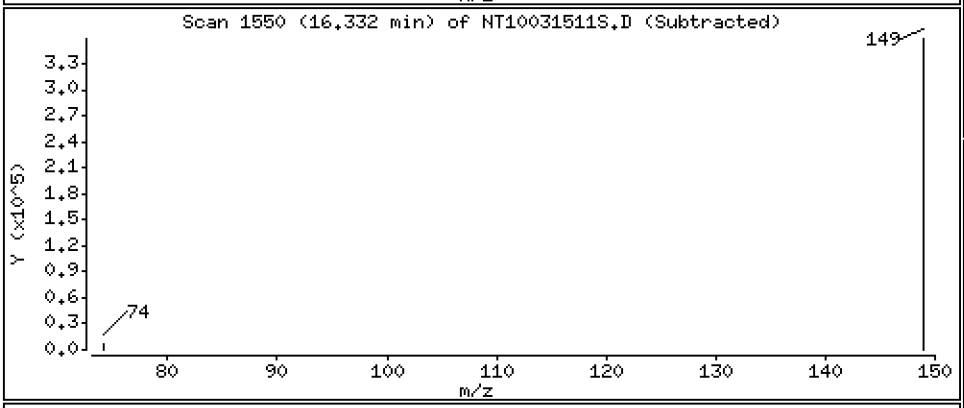
Column diameter: 0.25

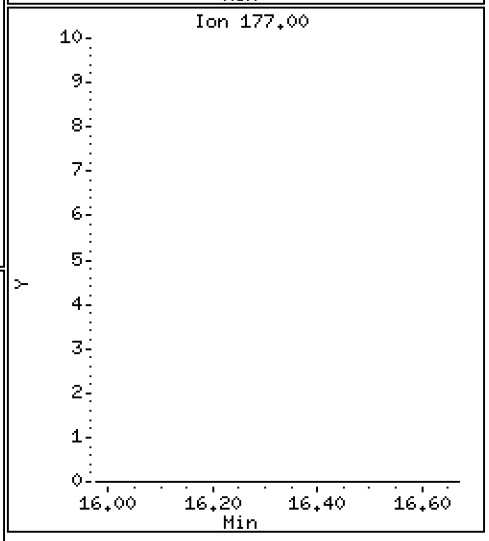
50 Diethylphthalate

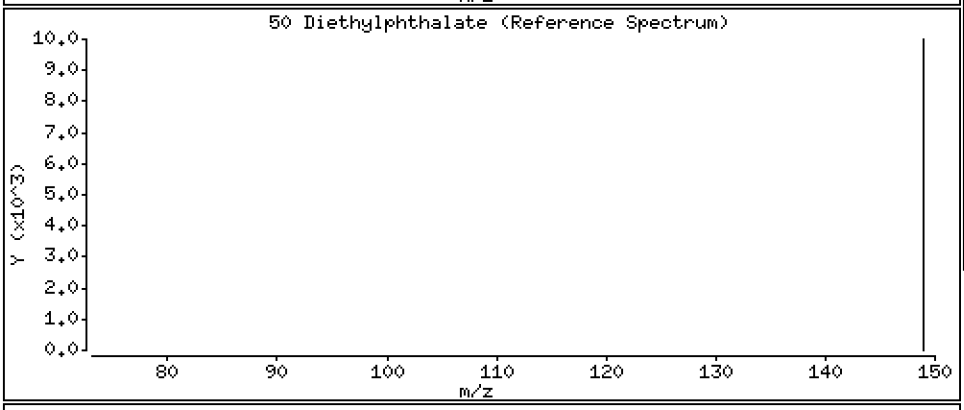
Concentration: 5.364 ug/L

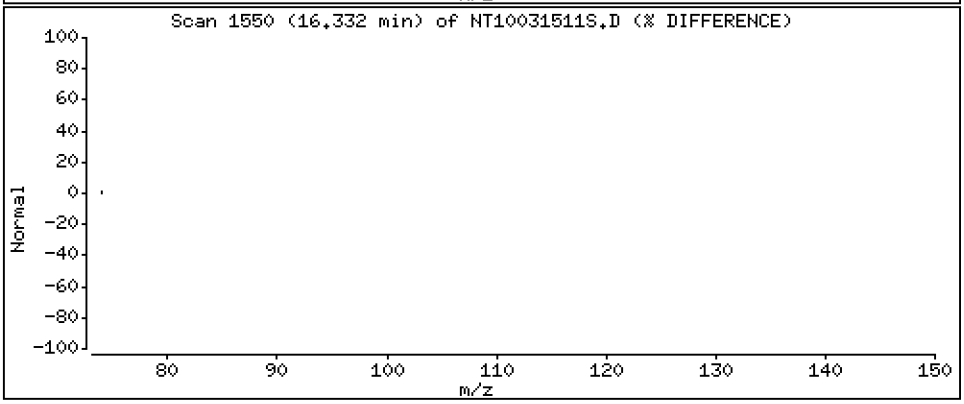












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

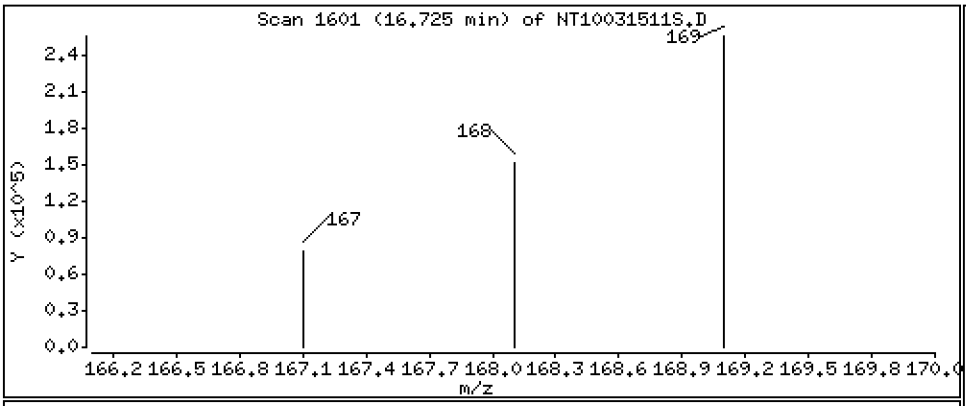
Operator: JGR

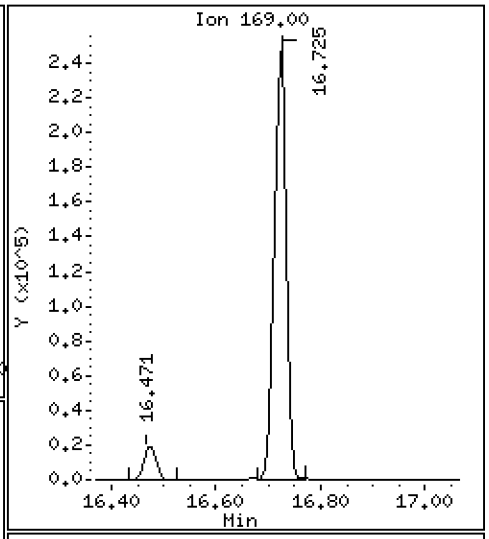
Column phase: ZB-5msi

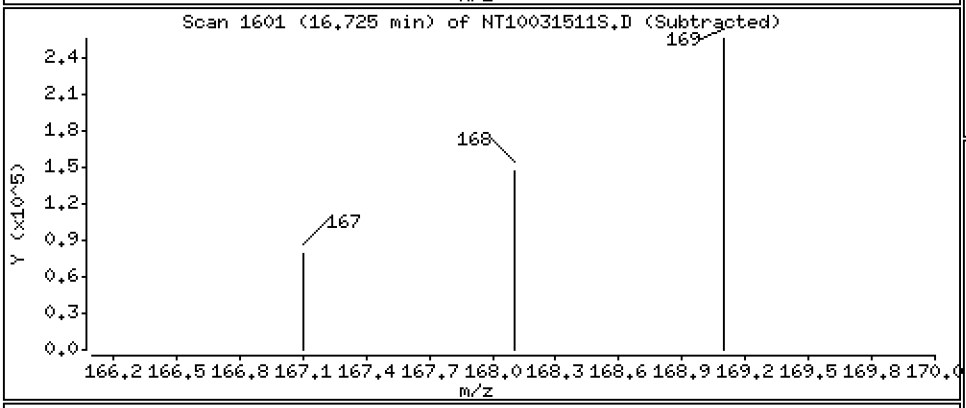
Column diameter: 0.25

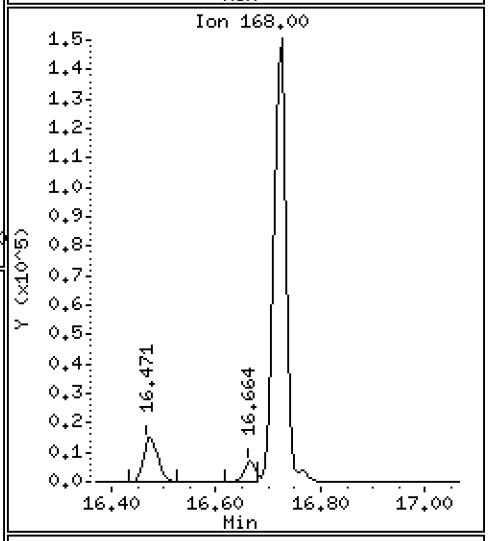
54 N-Nitrosodiphenylamine

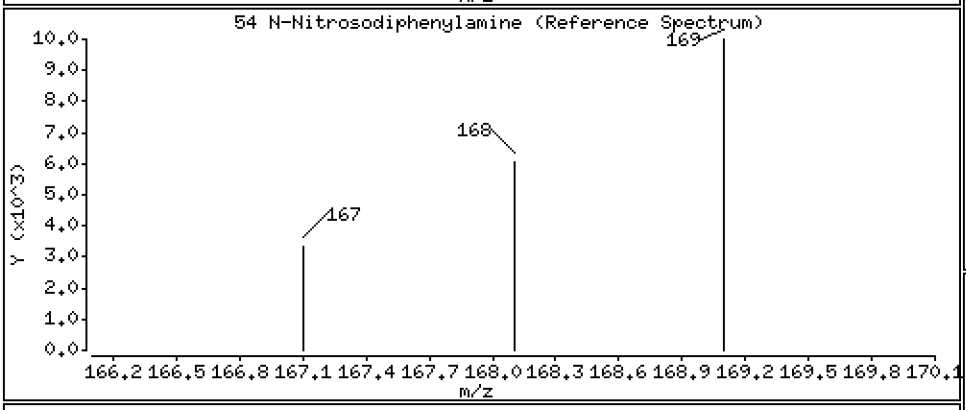
Concentration: 5.080 ug/L

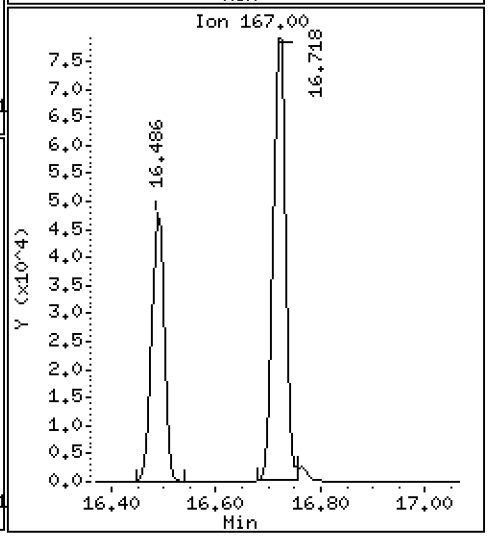


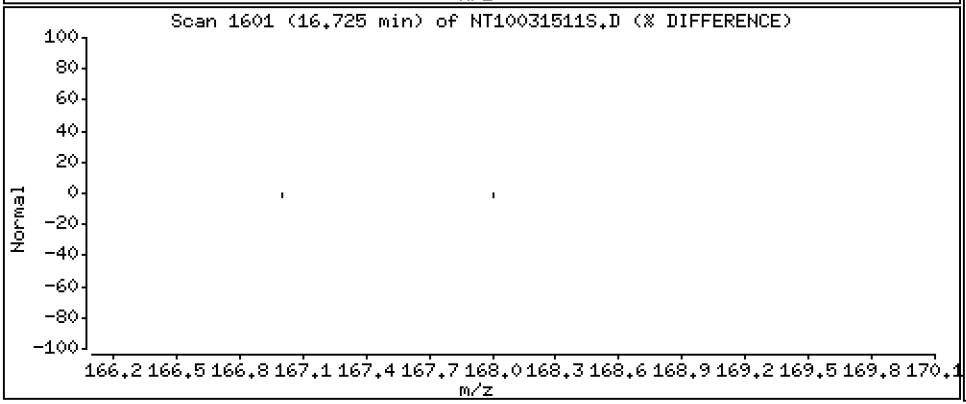












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

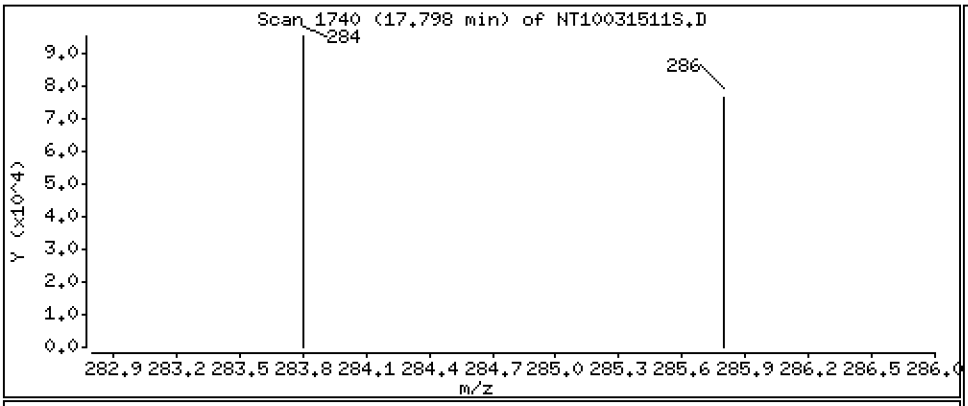
Operator: JGR

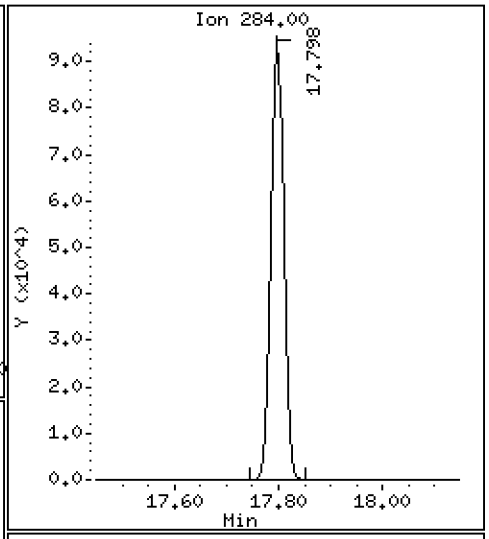
Column phase: ZB-5msi

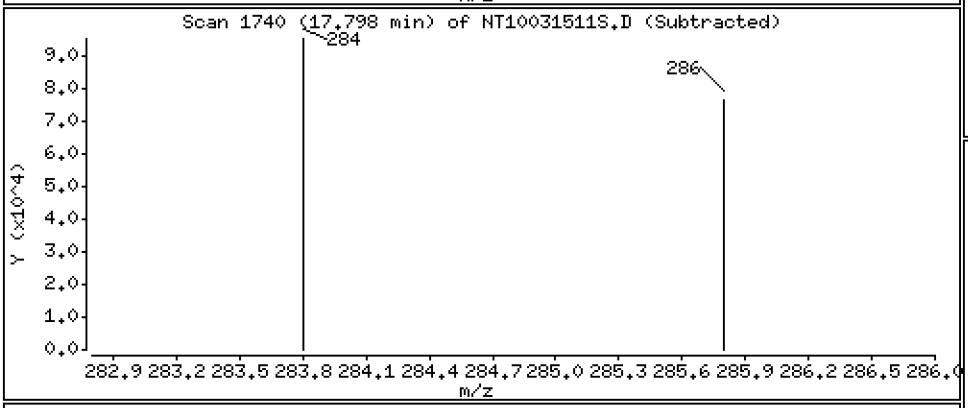
Column diameter: 0.25

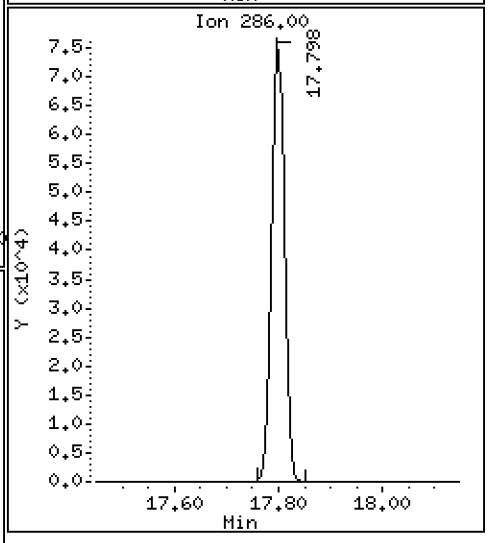
57 Hexachlorobenzene

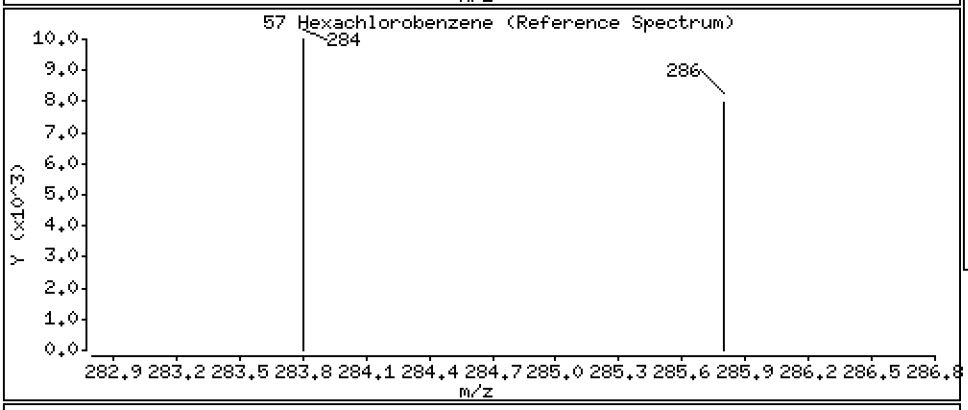
Concentration: 4.614 ug/L

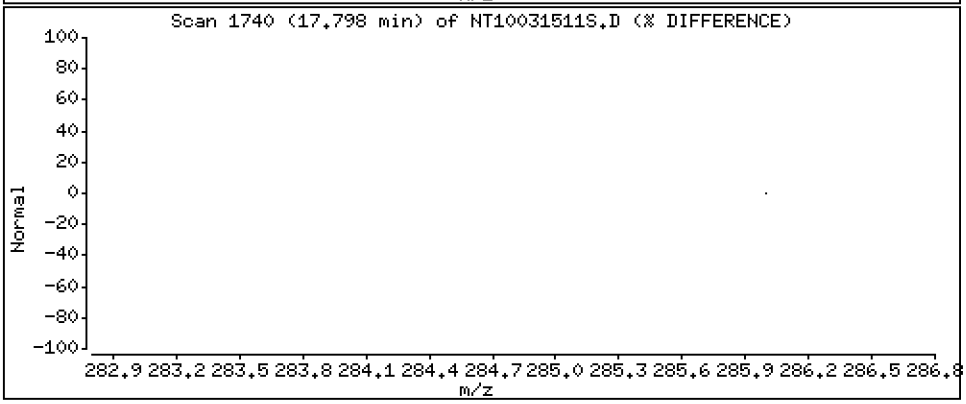












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

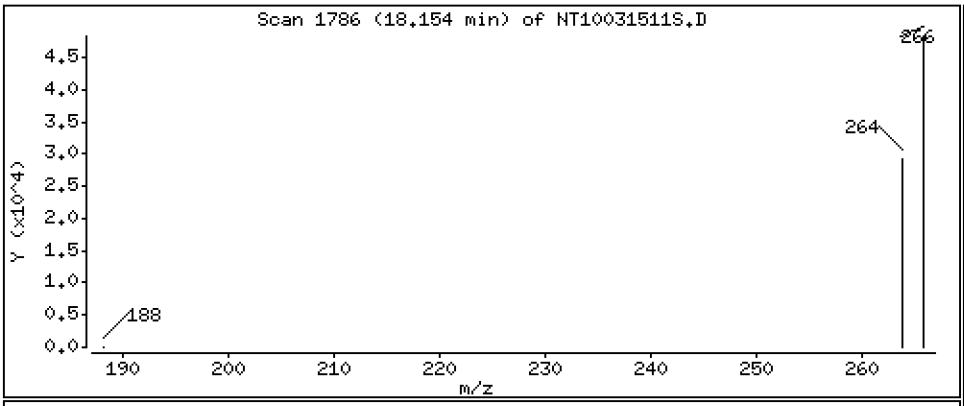
Operator: JGR

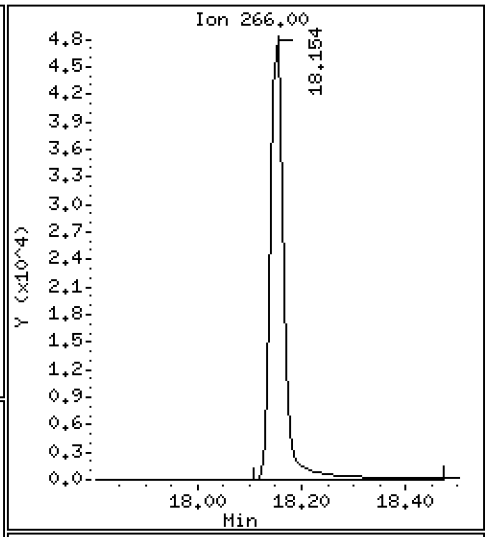
Column phase: ZB-5msi

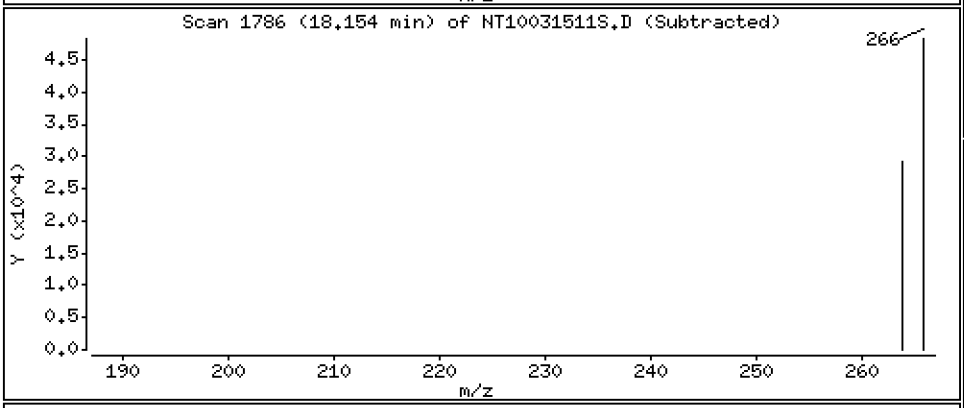
Column diameter: 0.25

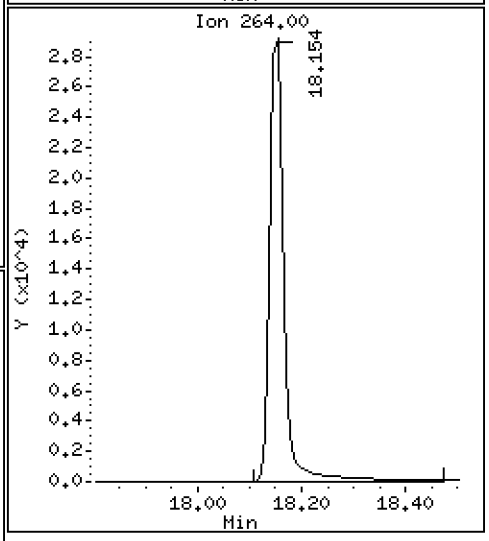
58 Pentachlorophenol

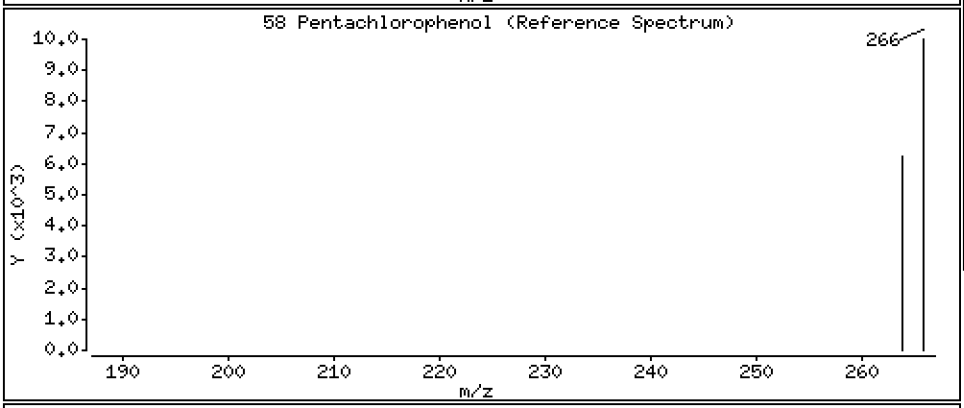
Concentration: 4.418 ug/L

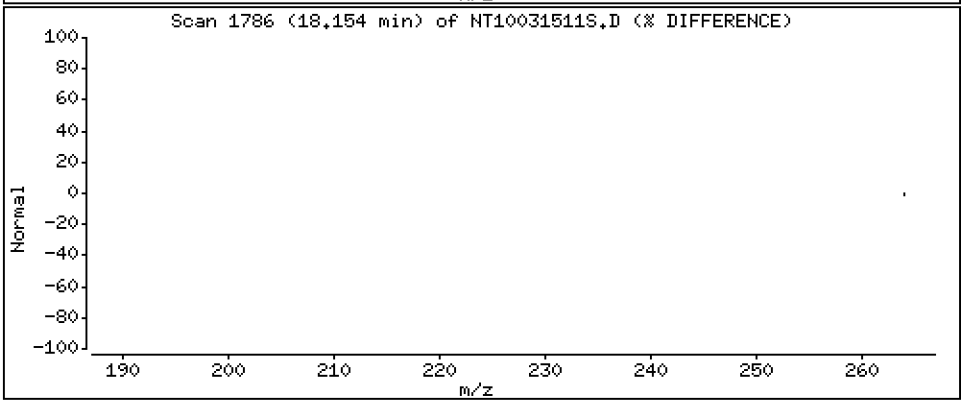












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

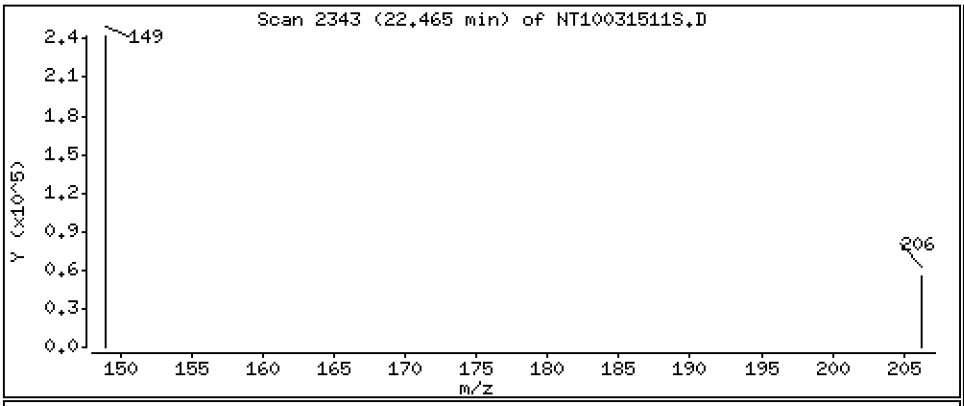
Operator: JGR

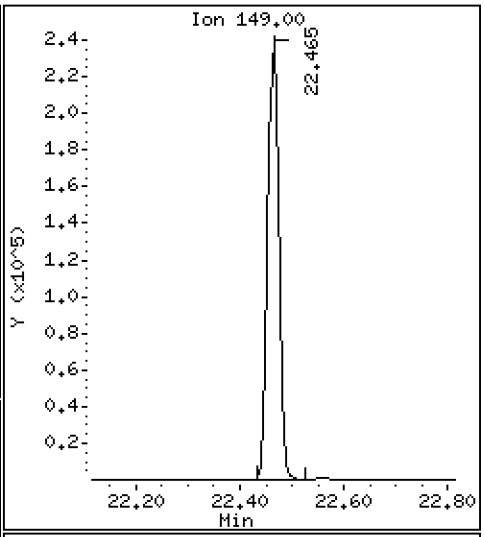
Column phase: ZB-5msi

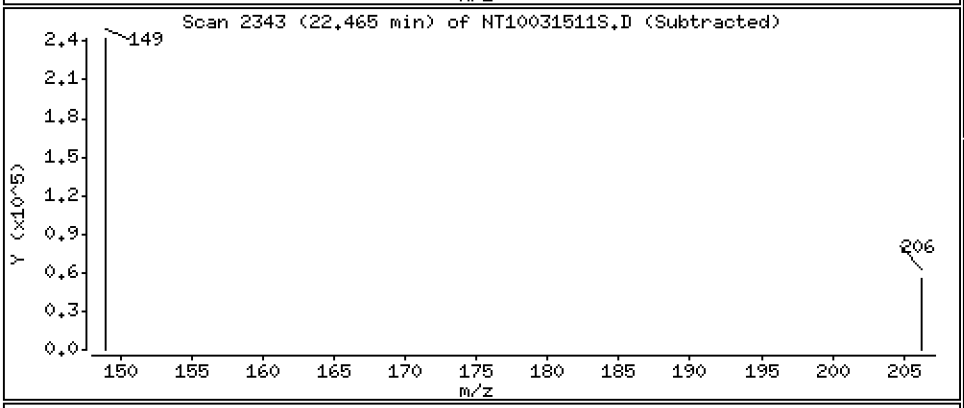
Column diameter: 0.25

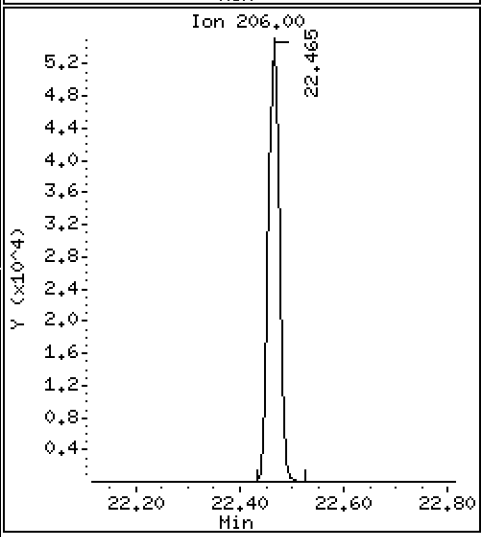
67 Butylbenzylphthalate

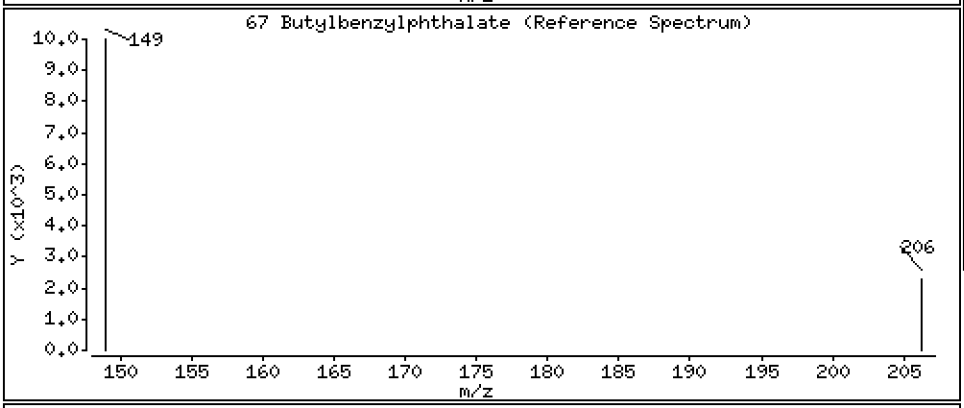
Concentration: 5.121 ug/L

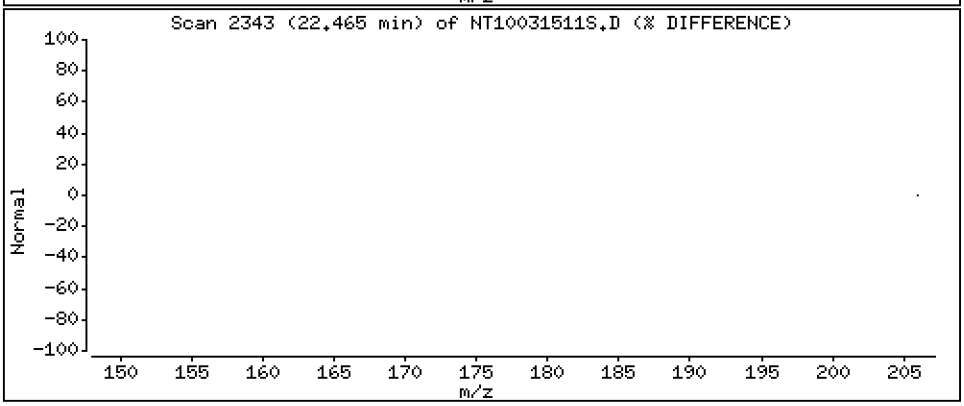












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

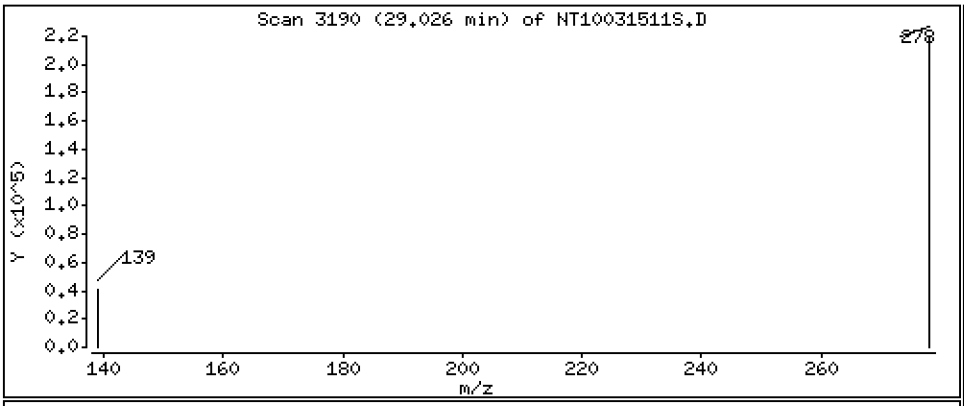
Operator: JGR

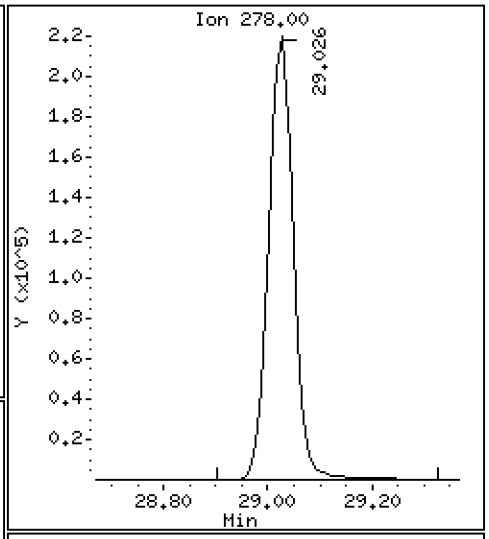
Column phase: ZB-5msi

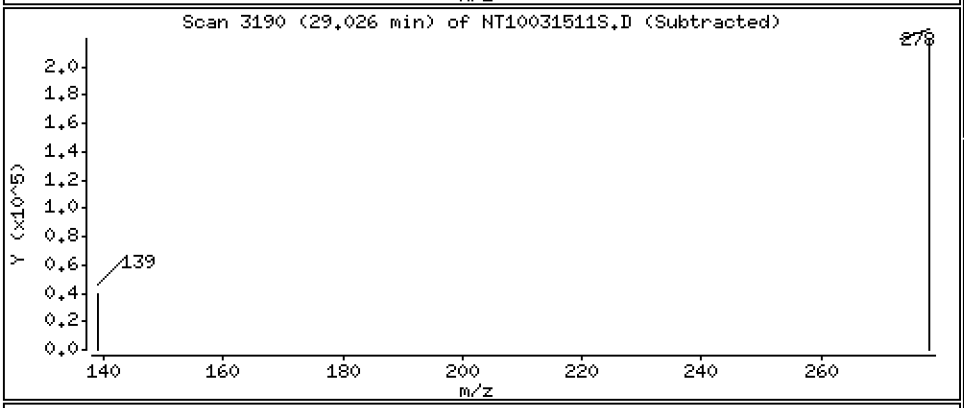
Column diameter: 0.25

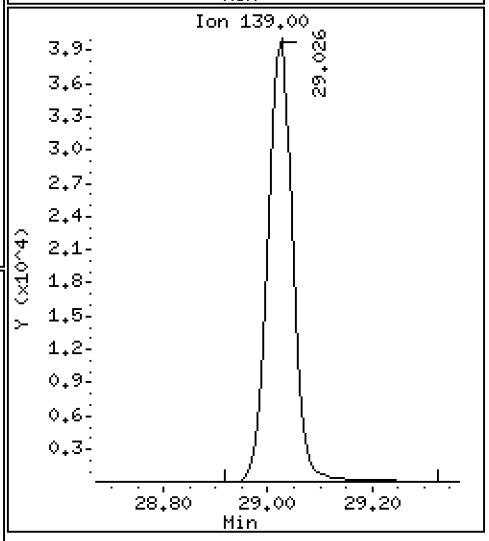
79 Dibenzo(a,h)anthracene

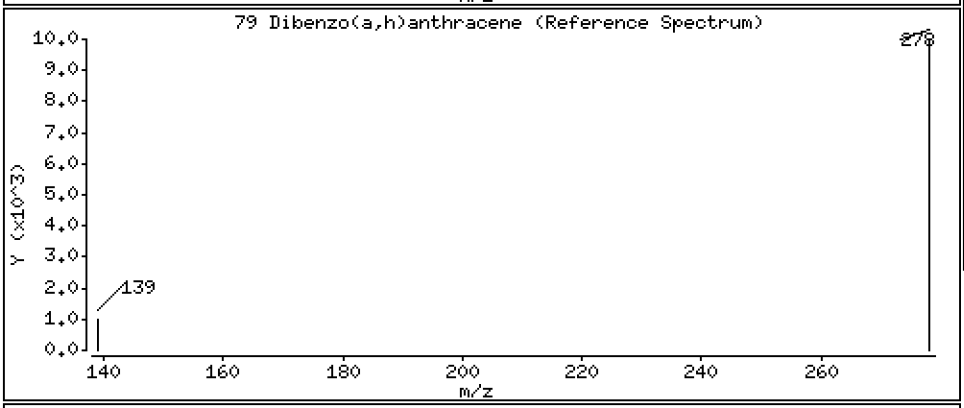
Concentration: 4.238 ug/L

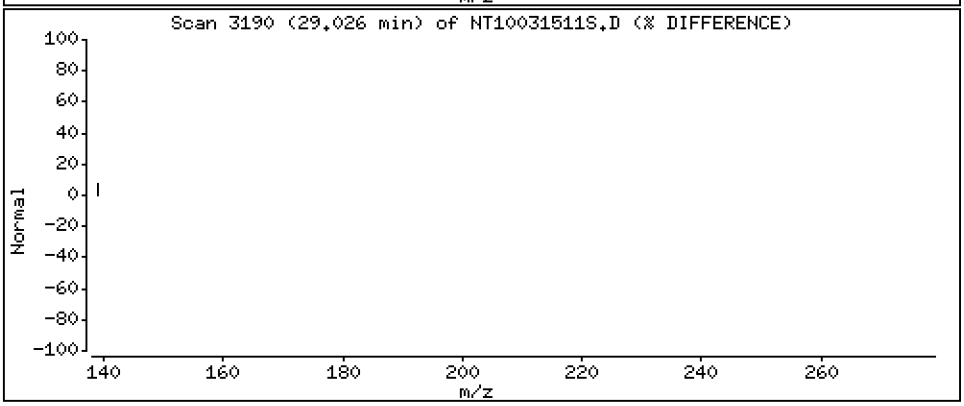












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

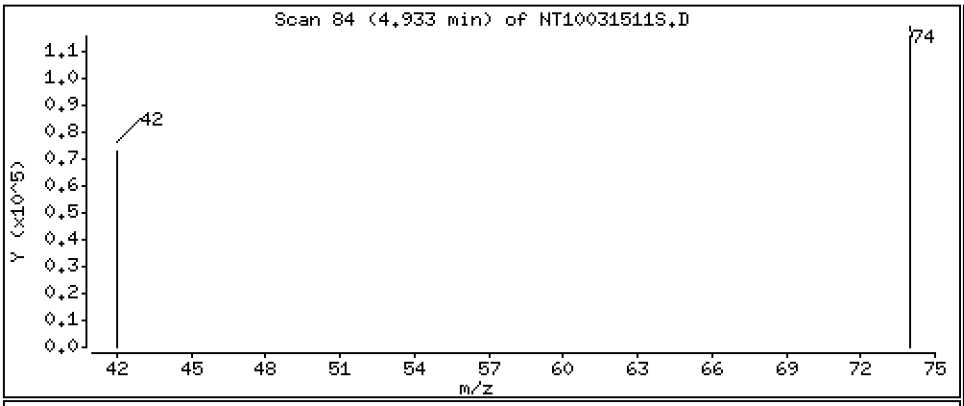
Operator: JGR

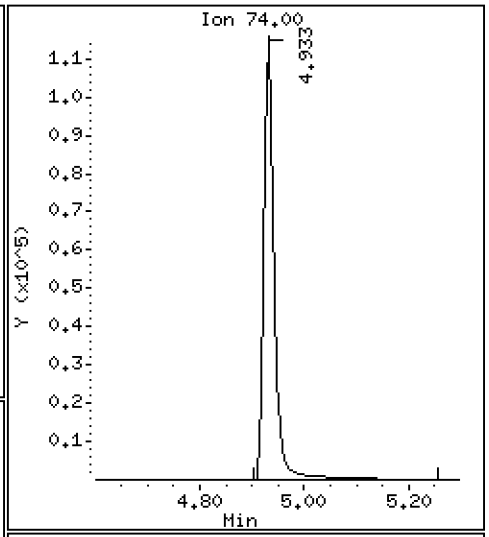
Column phase: ZB-5msi

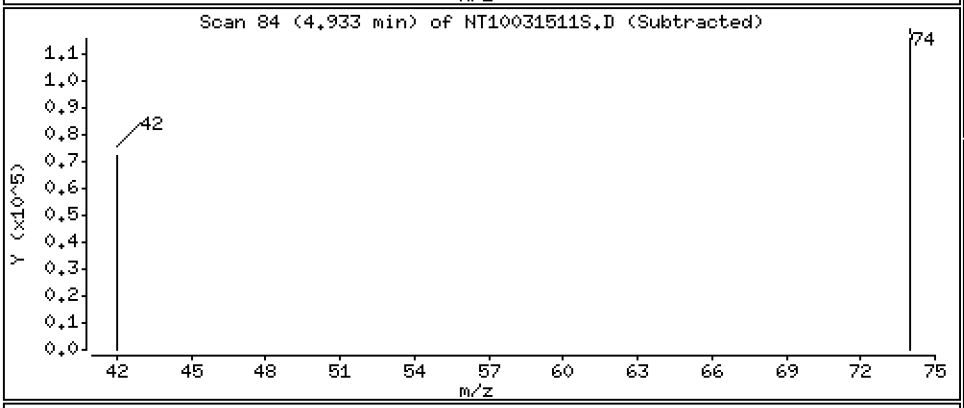
Column diameter: 0.25

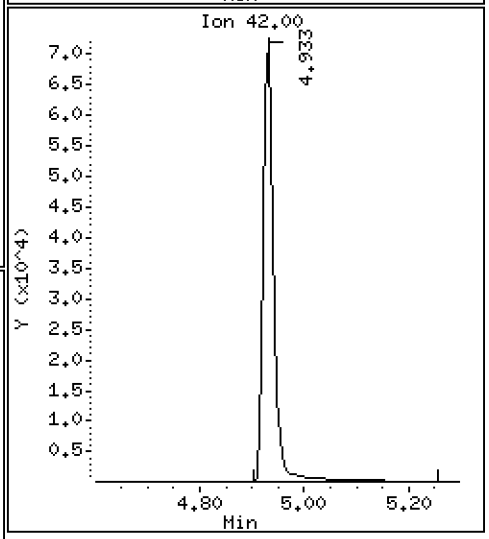
90 N-Nitrosodimethylamine

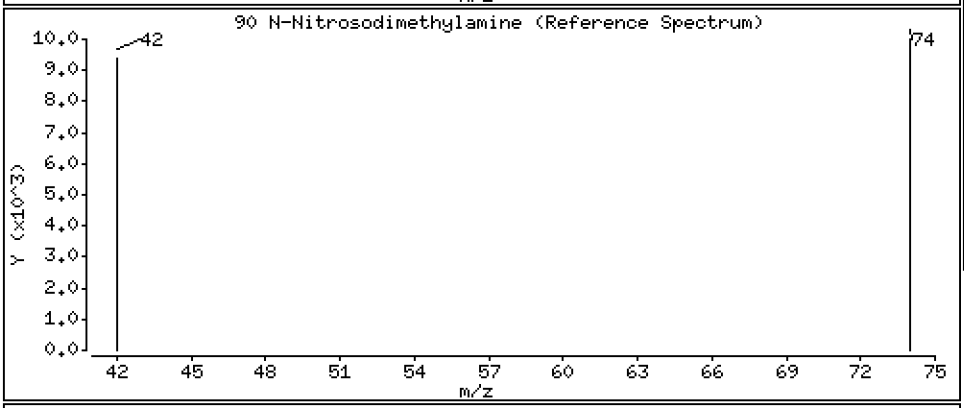
Concentration: 5.096 ug/L

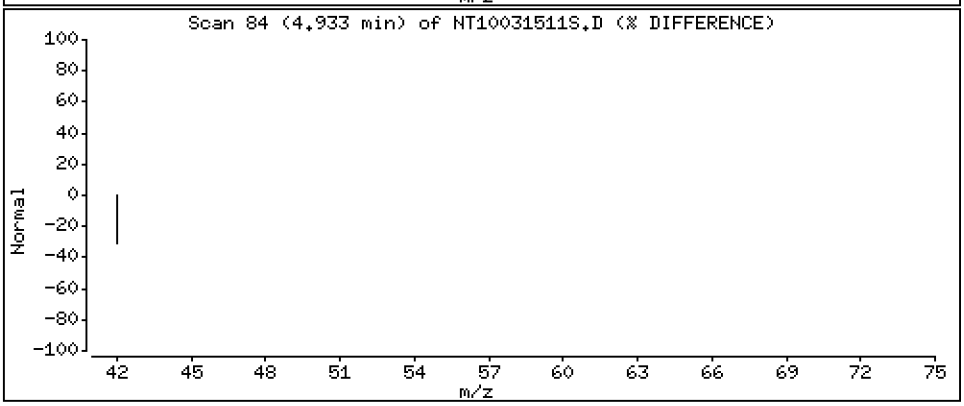












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Inj Date : 16-MAR-2023 02:16 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
3	Phenol	94	8.664	8.664	(0.931)	303581	4.37299	4.373
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.992)	301605	4.64290	4.643
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	166866	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.002)	303390	4.83813	4.838
11	Benzyl alcohol	79	9.562	9.570	(1.028)	208505	5.18071	5.181
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.041)	288539	4.67875	4.679
13	2-Methylphenol	108	9.772	9.772	(1.050)	201888	4.19698	4.197
15	4-Methylphenol	108	10.043	10.036	(1.079)	223083	4.46301	4.463
16	N-Nitroso-di-n-propylamine	70	10.121	10.113	(1.088)	186707	5.28174	5.282
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	193654	3.66015	3.660
24	Benzoic acid	105	11.214	11.189	(0.952)	200487	6.74612	6.746
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	236605	4.44540	4.445
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	612104	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	150581	4.65339	4.653
39	Dimethylphthalate	163	14.877	14.877	(0.967)	472341	4.94766	4.948
* 42	Acenaphthene-d10	162	15.388	15.380	(1.000)	302524	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	530540	5.36440	5.364
54	N-Nitrosodiphenylamine	169	16.725	16.717	(0.908)	377357	5.08034	5.080
57	Hexachlorobenzene	284	17.798	17.798	(0.966)	153405	4.61353	4.614

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	18.154	18.154	(0.985)	83223	4.41780	4.418
*	59 Phenanthrene-d10	188	18.425	18.417	(1.000)	553619	4.00000	
$	66 Terphenyl-d14	244	21.543	21.543	(0.918)	117	0.00154	0.001543(RM)
	67 Butylbenzylphthalate	149	22.464	22.465	(0.958)	332887	5.12147	5.121
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	465428	4.00000	
*	77 Perylene-d12	264	26.188	26.188	(1.000)	532593	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.026	29.019	(1.108)	722983	4.23762	4.238
	90 N-Nitrosodimethylamine	74	4.933	4.948	(0.530)	163555	5.09625	5.096

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	166866	-11.28
27 Naphthalene-d8	674549	337275	1349098	612104	-9.26
42 Acenaphthene-d10	328275	164138	656550	302524	-7.84
59 Phenanthrene-d10	597140	298570	1194280	553619	-7.29
69 Chrysene-d12	466503	233252	933006	465428	-0.23
77 Perylene-d12	518203	259102	1036406	532593	2.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.43	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031511S.D

Lab ID: SLC0238-SCV1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

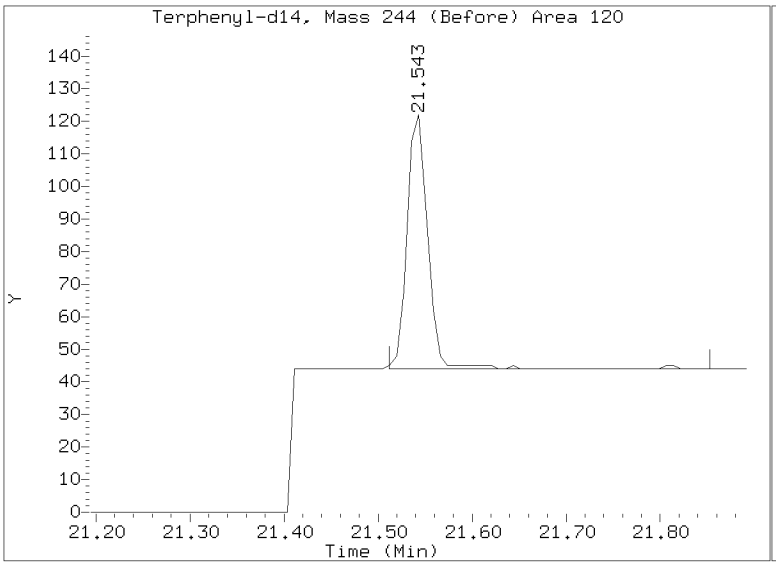
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

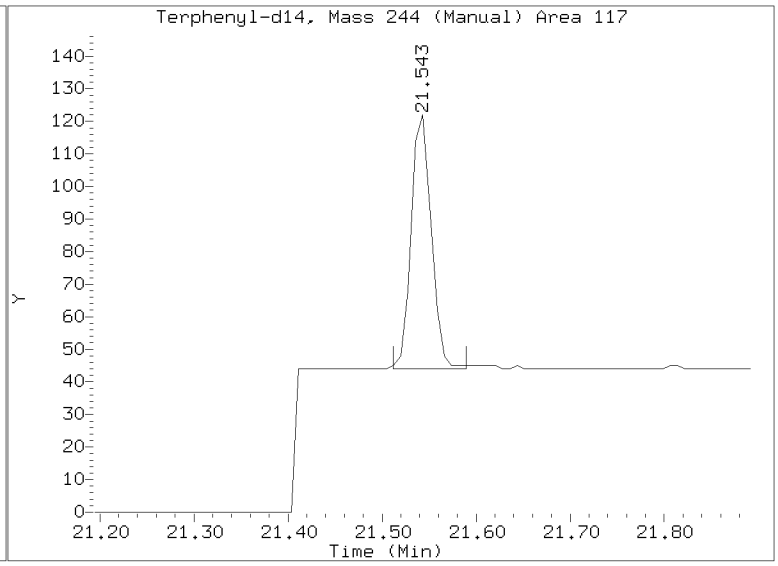
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031511S.D
Injection Date: 16-MAR-2023 02:16
Lab ID:SLC0238-SCV1 Client ID:
Report Date: 03/16/2023 14:49





SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00049
Laboratory ID: SLC0238-SCV1
Sequence: SLC0238
Standard ID: K010066

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
1,4-Dichlorobenzene	5.0000	4.8	-3.2	20.00
1,2-Dichlorobenzene	5.0000	4.7	-6.4	20.00
Benzyl Alcohol	5.0000	5.2	3.6	20.00
Benzoic acid	10.000	6.7	-32.5 *	20.00
2,4-Dimethylphenol	5.0000	3.7	-26.8 *	20.00
1,2,4-Trichlorobenzene	5.0000	4.4	-11.1	20.00
N-Nitrosodiphenylamine	5.0000	5.1	1.6	20.00
Pentachlorophenol	5.0000	4.4	-11.6	20.00
2-Fluorophenol	7.5000	0.00		
p-Terphenyl-d14	5.0000	0.00154	-100	

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

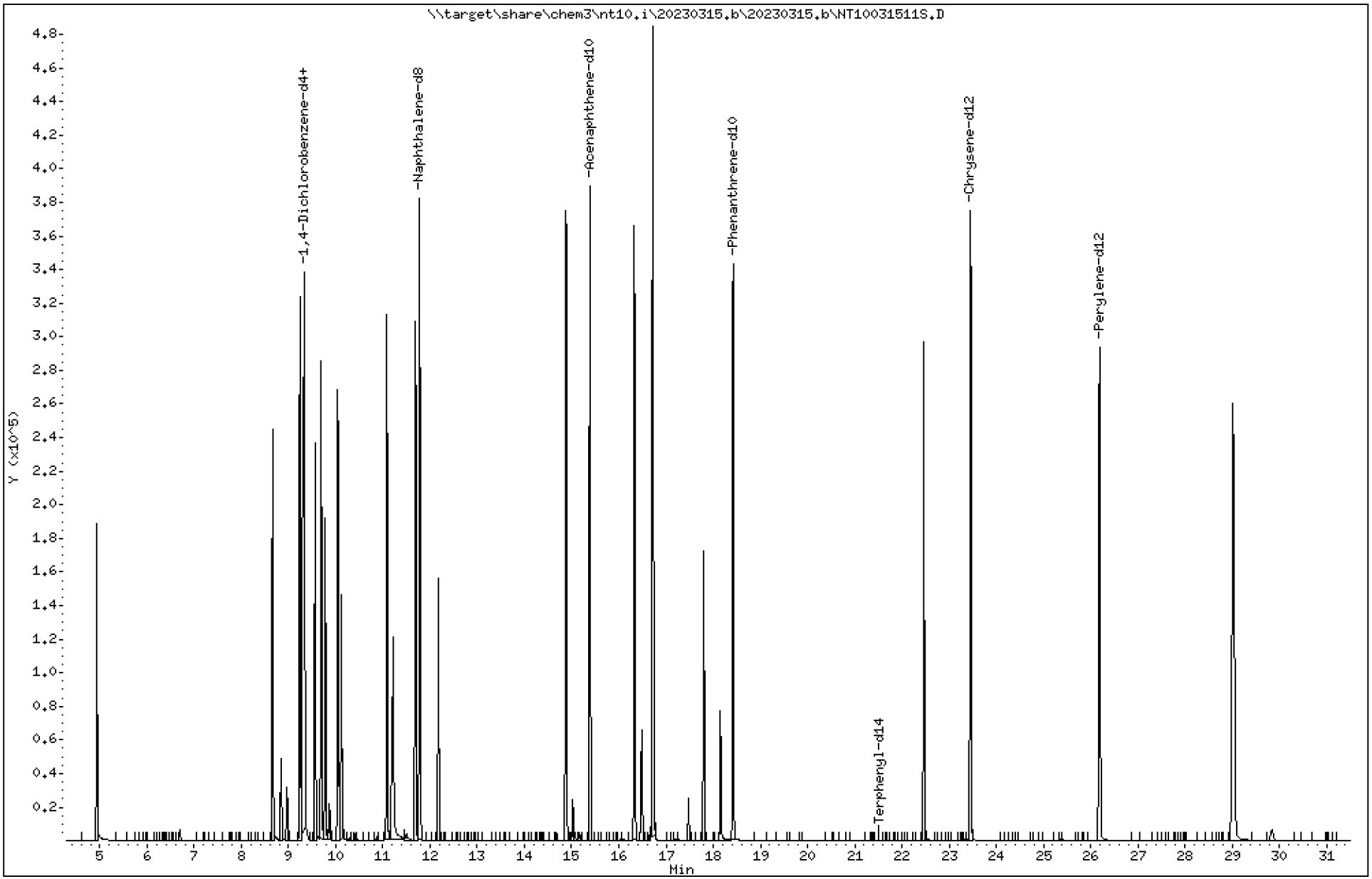
Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

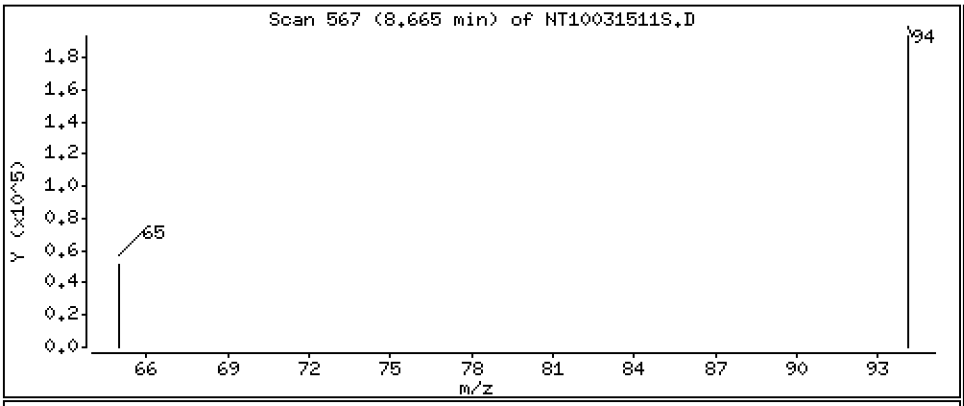
Operator: JGR

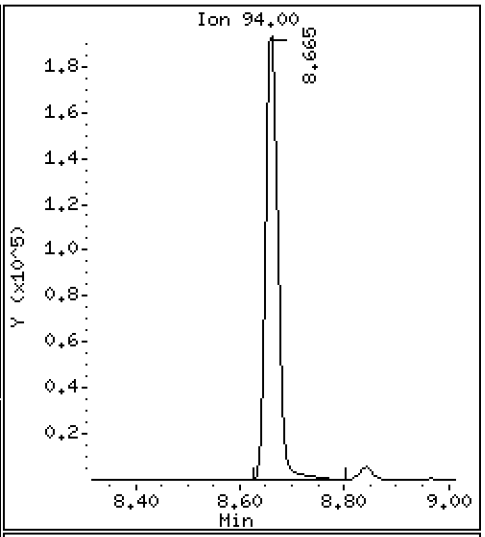
Column phase: ZB-5msi

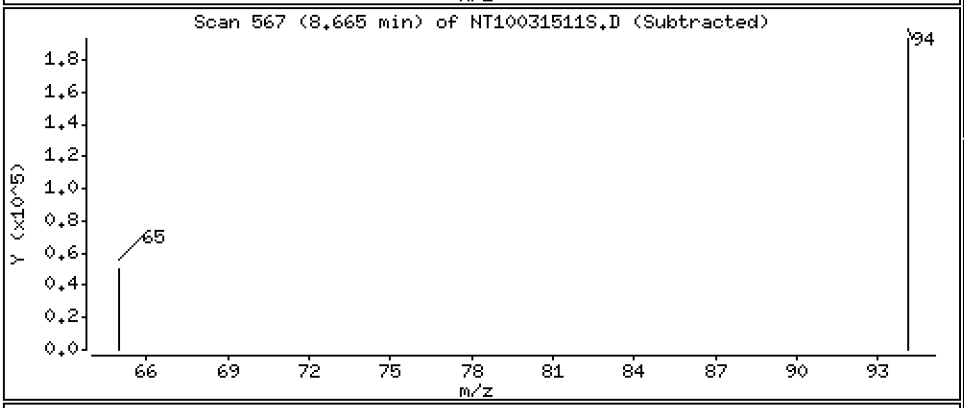
Column diameter: 0.25

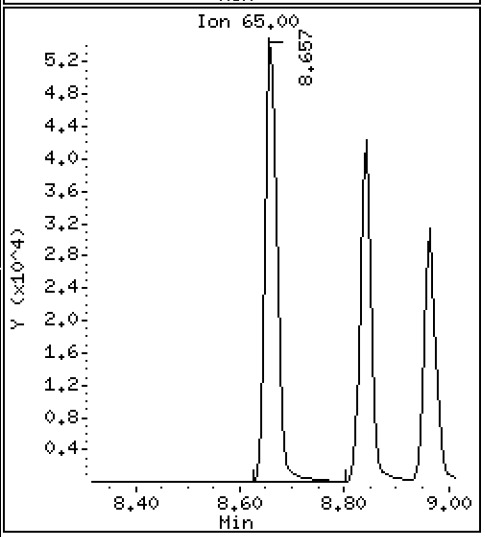
3 Phenol

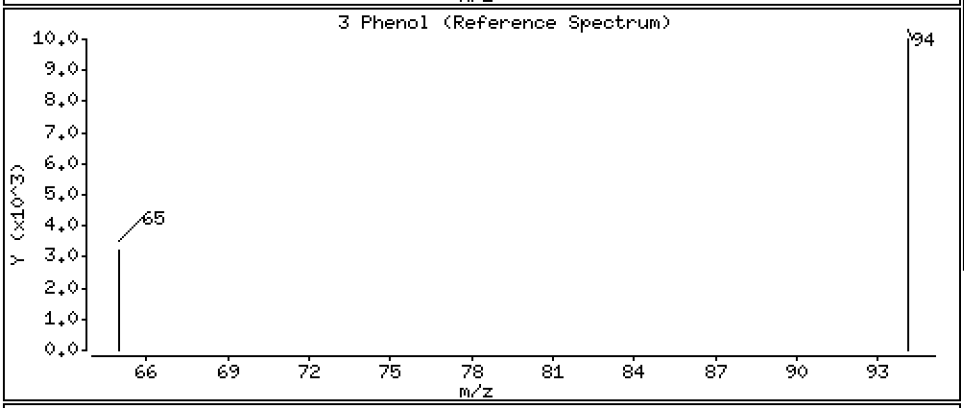
Concentration: 4.373 ug/L

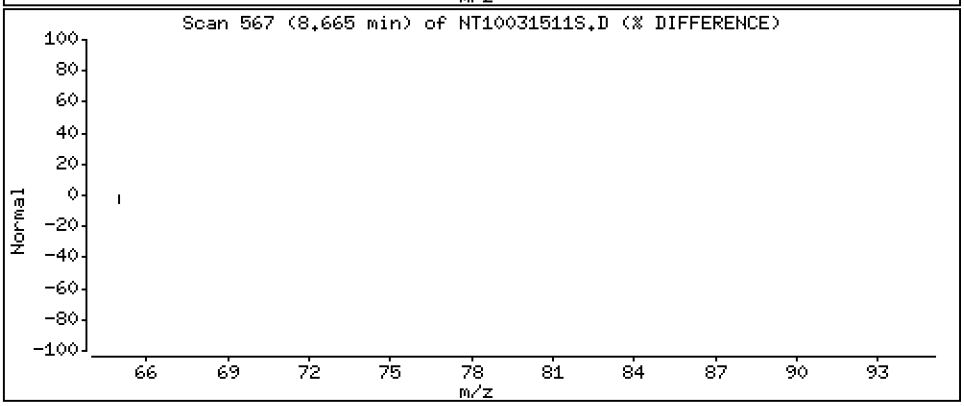












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

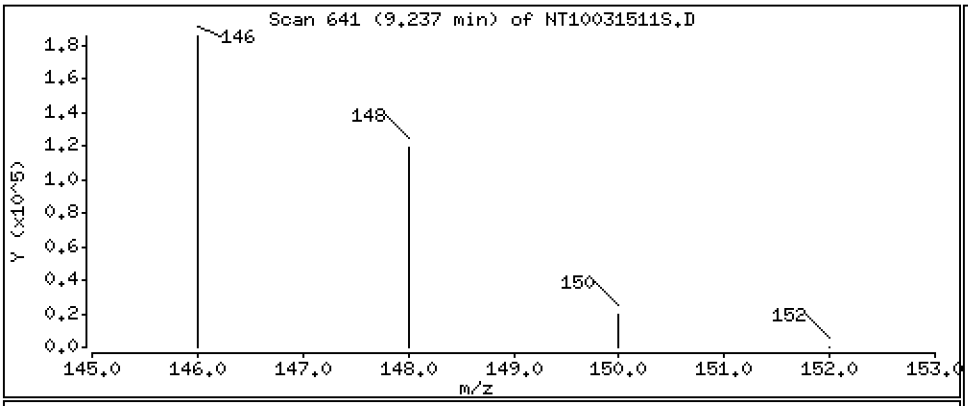
Operator: JGR

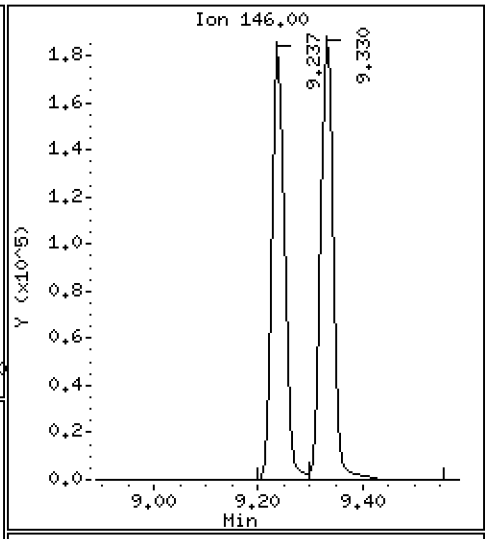
Column phase: ZB-5msi

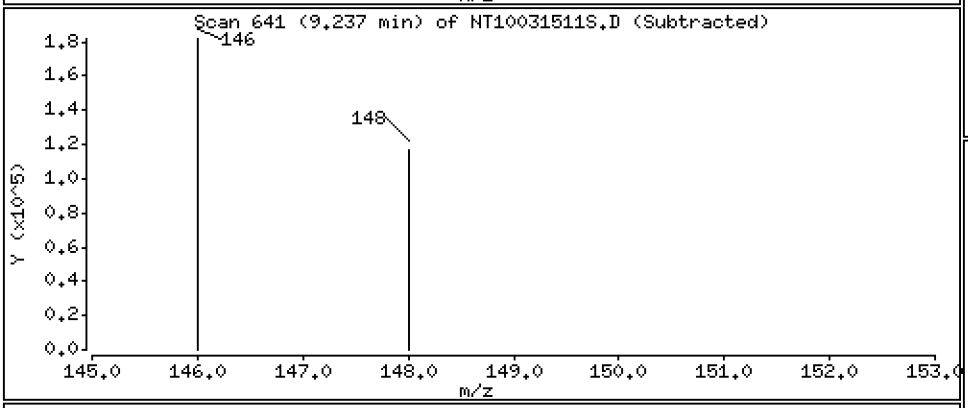
Column diameter: 0.25

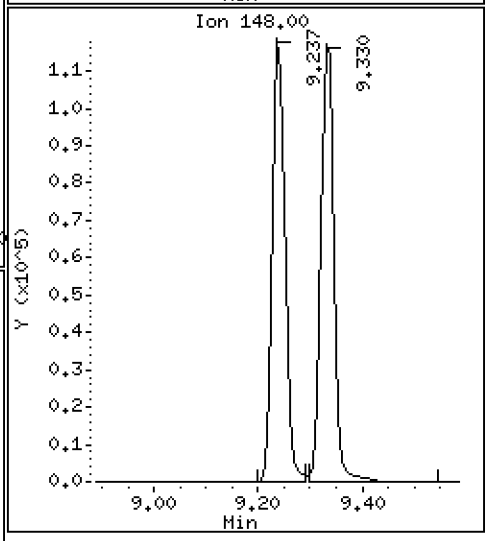
7 1,3-Dichlorobenzene

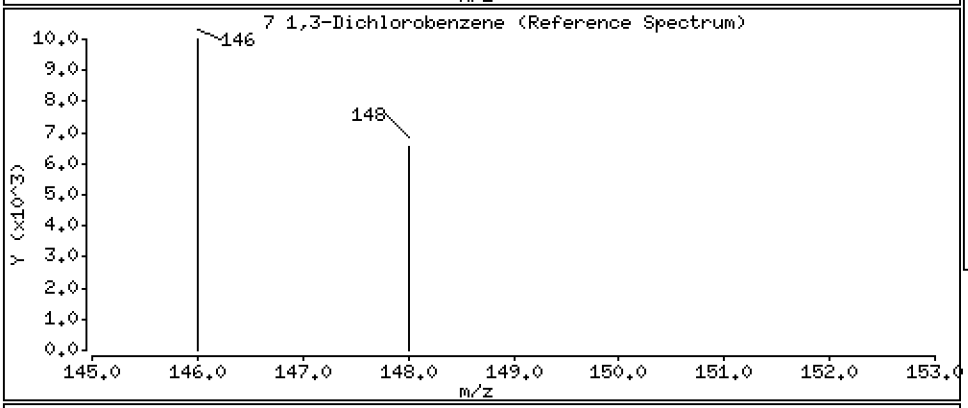
Concentration: 4.643 ug/L

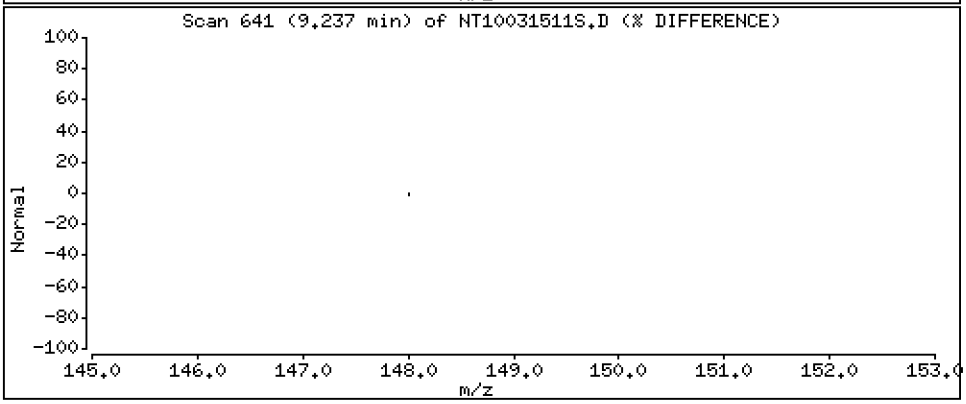












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

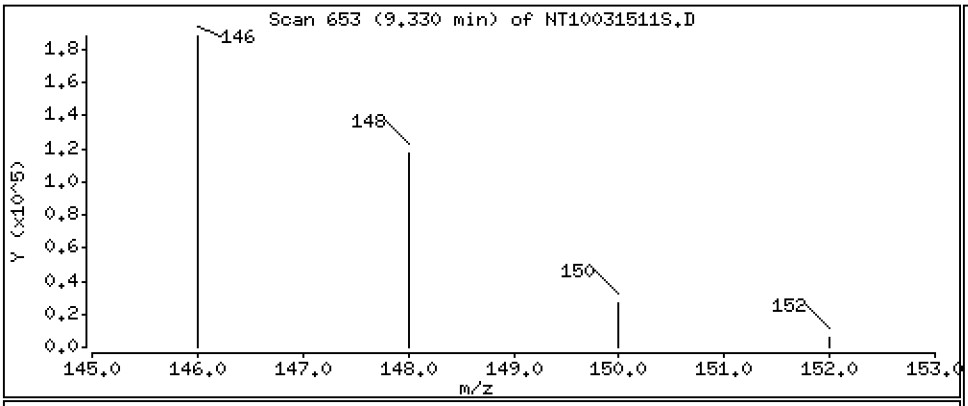
Operator: JGR

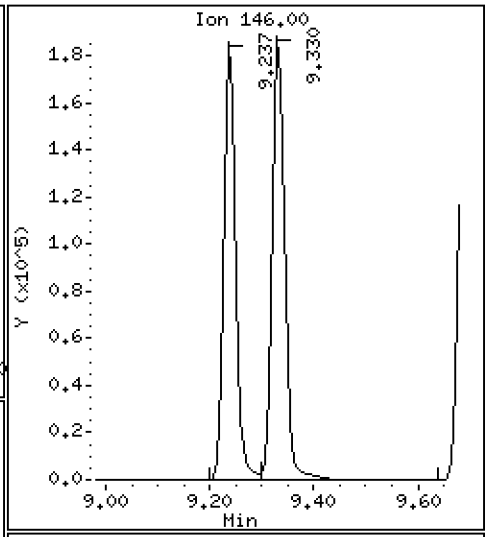
Column phase: ZB-5msi

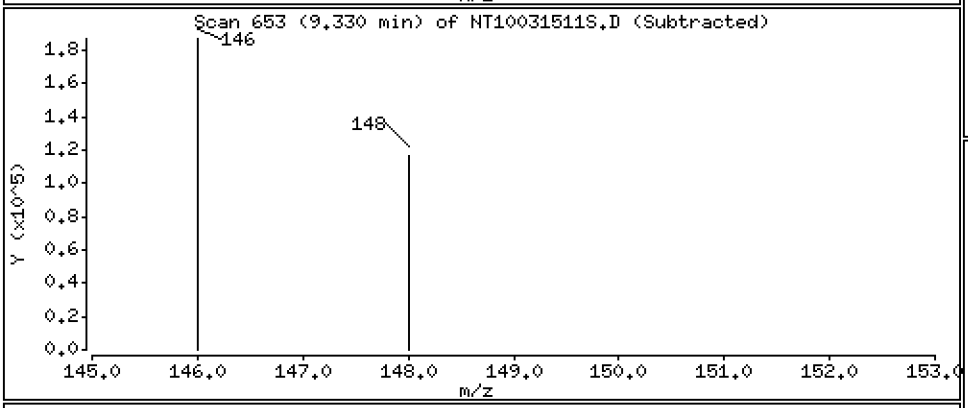
Column diameter: 0.25

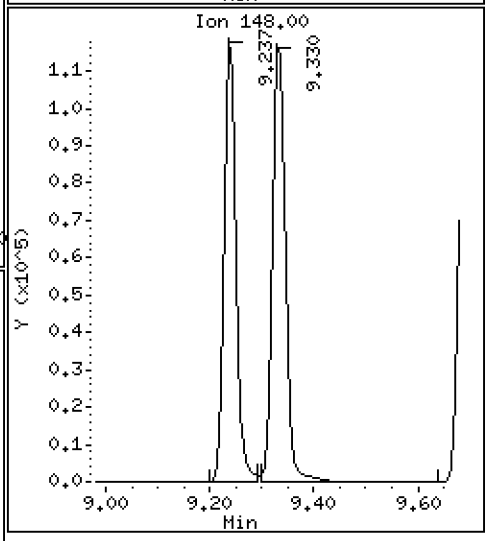
9 1,4-Dichlorobenzene

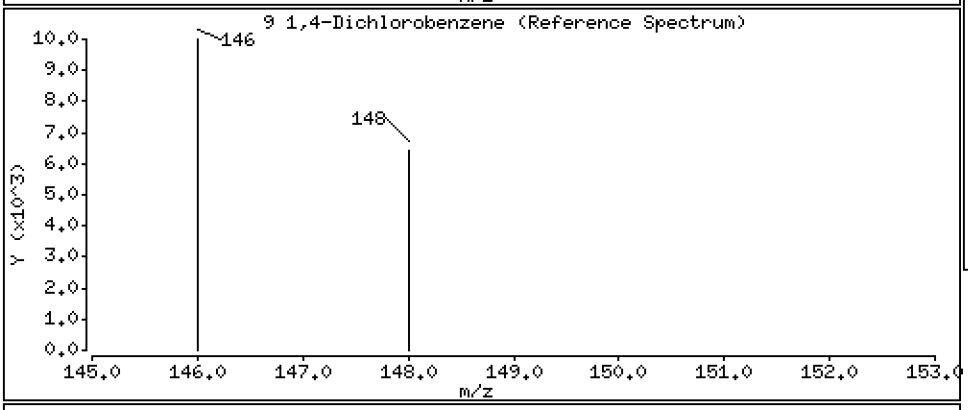
Concentration: 4.838 ug/L

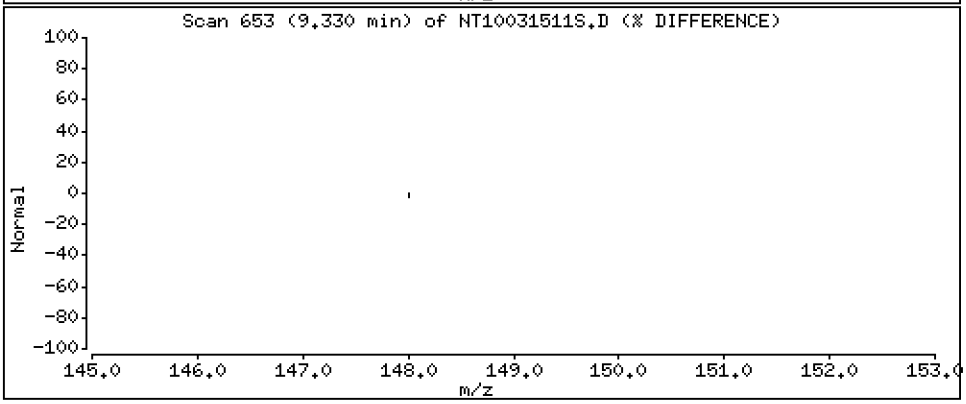












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

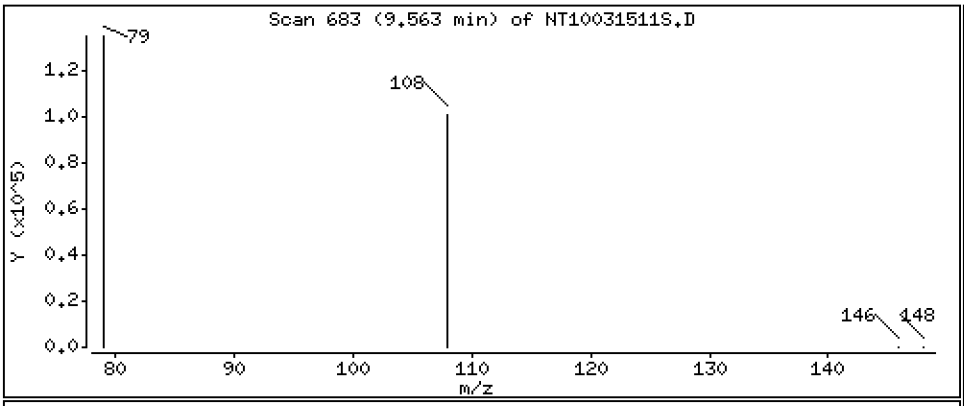
Operator: JGR

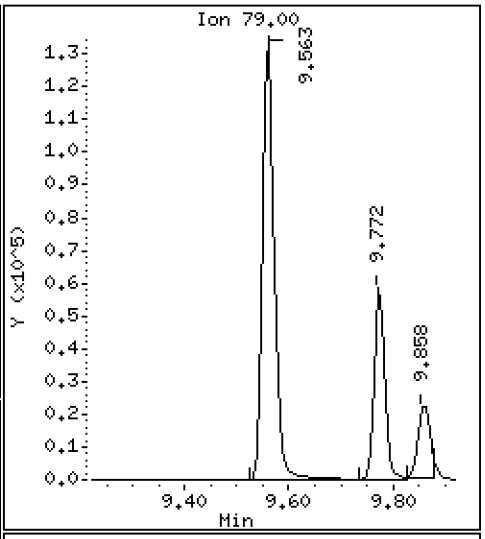
Column phase: ZB-5msi

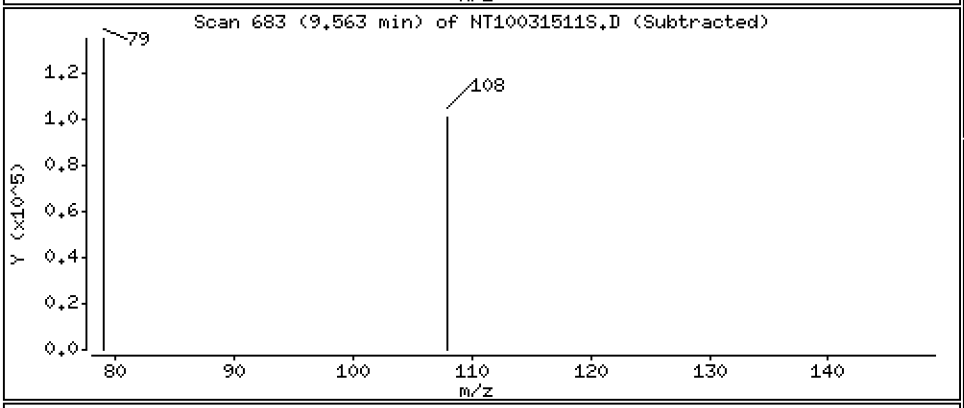
Column diameter: 0.25

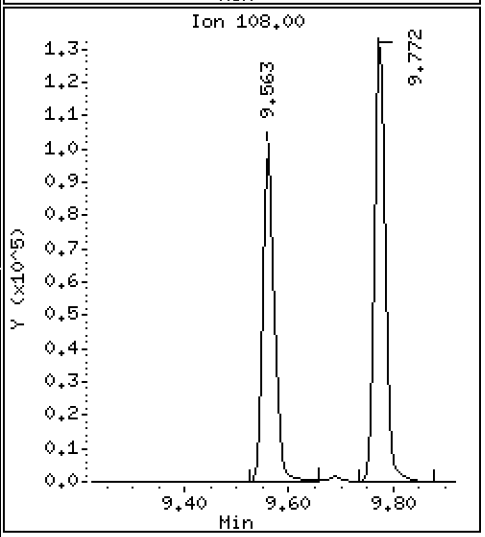
11 Benzyl alcohol

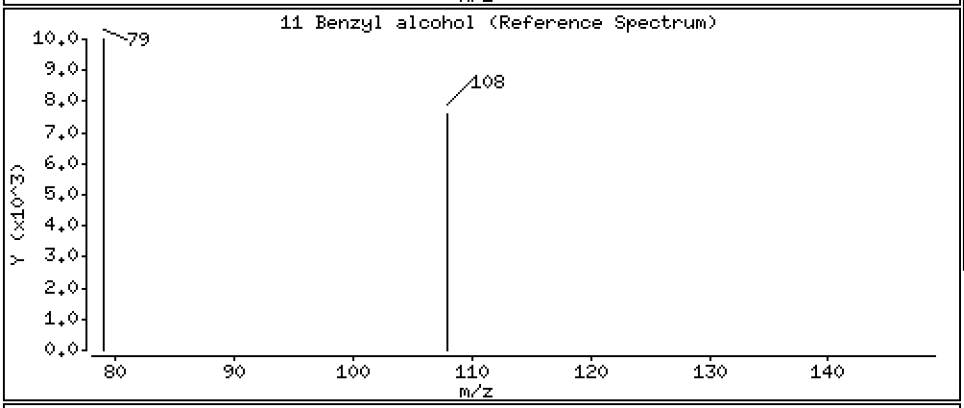
Concentration: 5.181 ug/L

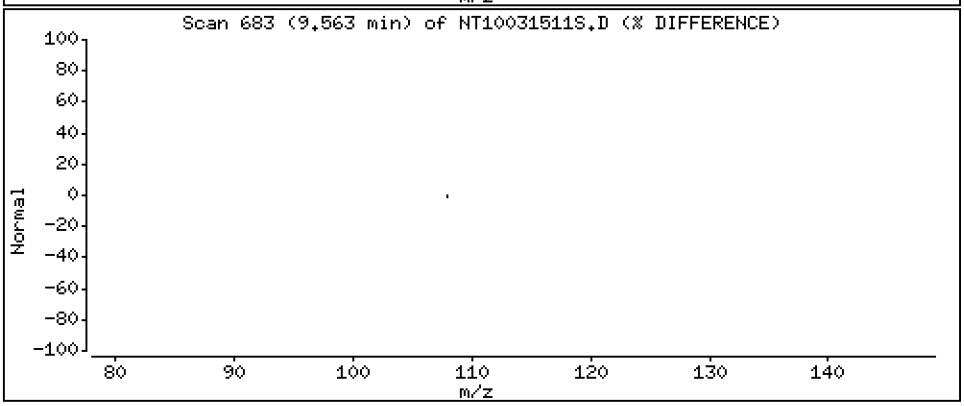












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

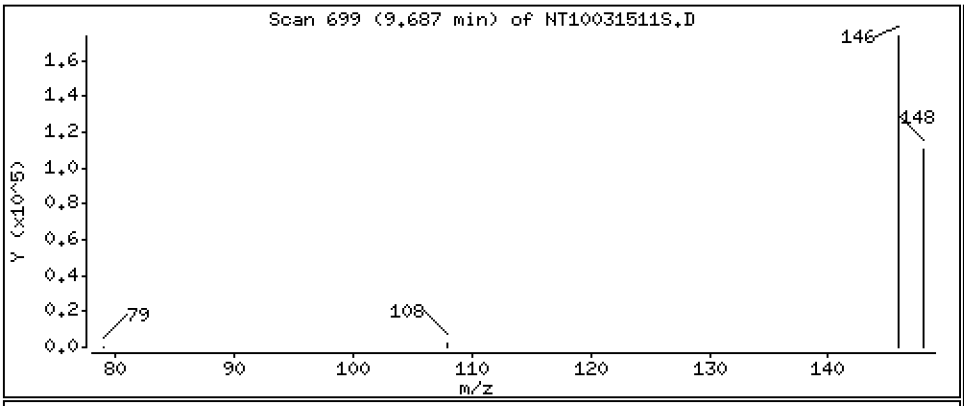
Operator: JGR

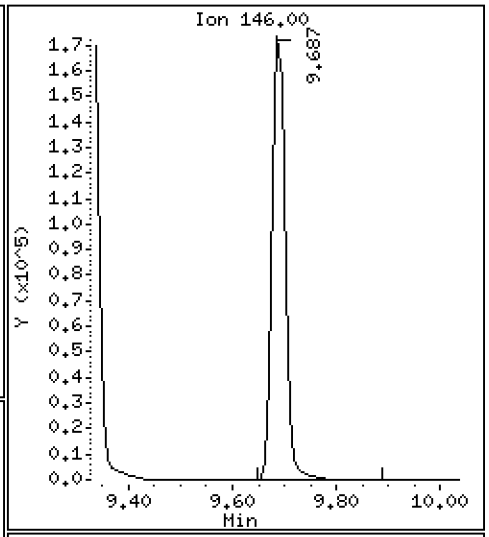
Column phase: ZB-5msi

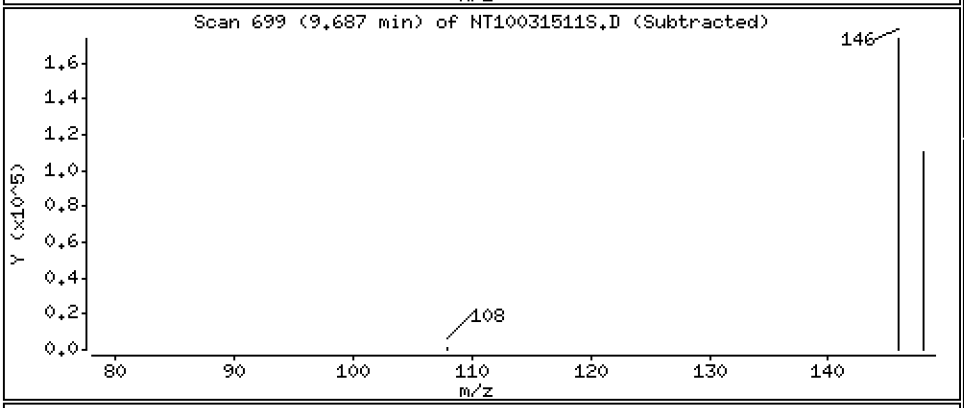
Column diameter: 0.25

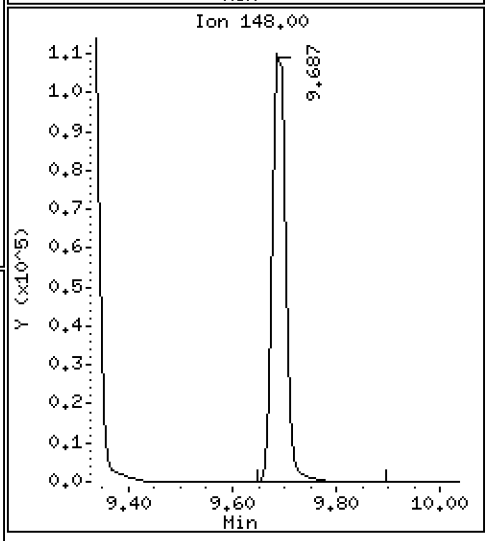
12 1,2-Dichlorobenzene

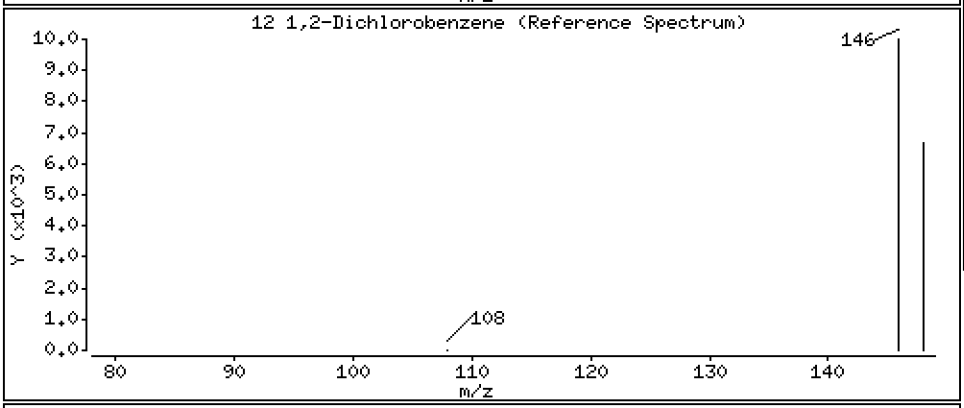
Concentration: 4.679 ug/L

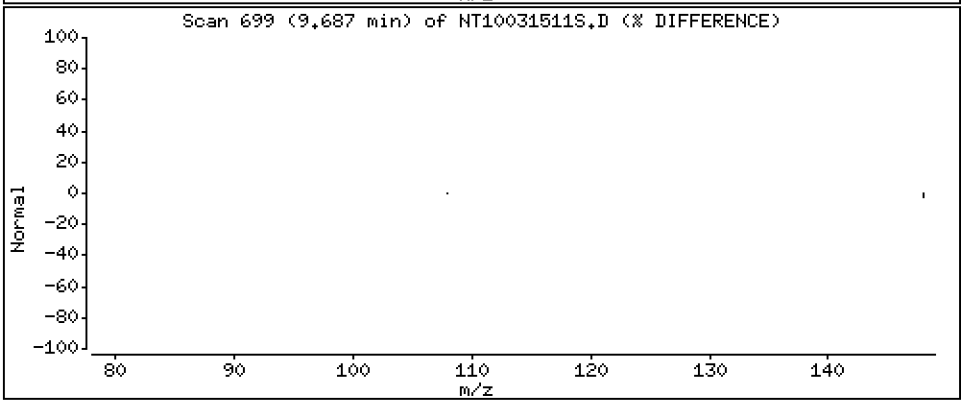












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

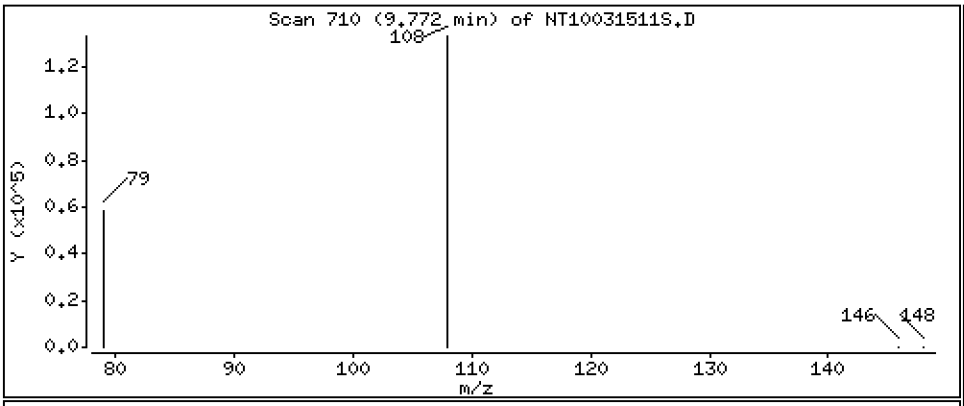
Operator: JGR

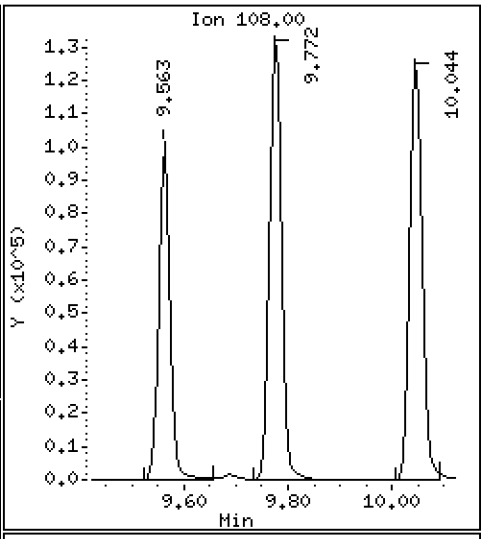
Column phase: ZB-5msi

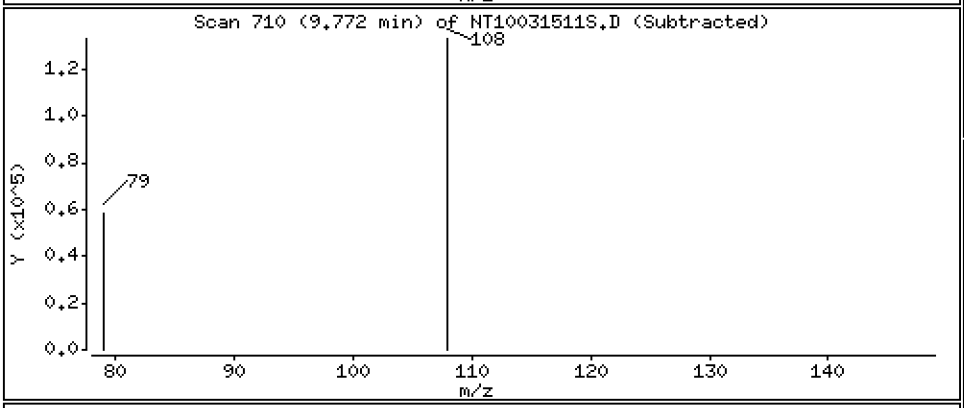
Column diameter: 0.25

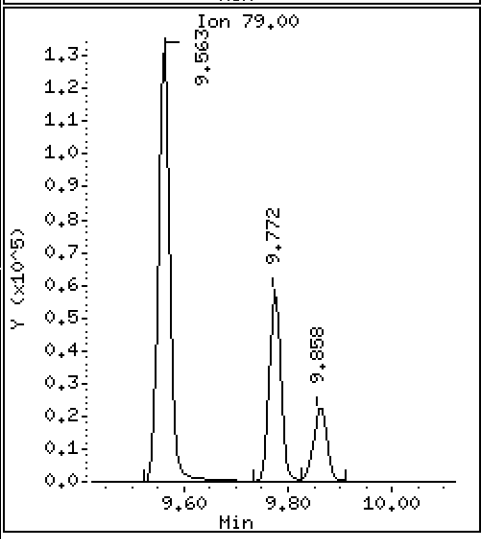
13 2-Methylphenol

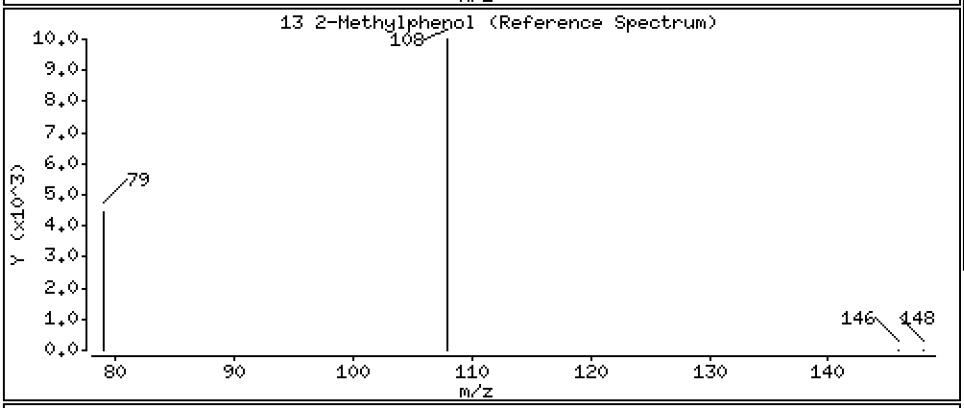
Concentration: 4.197 ug/L

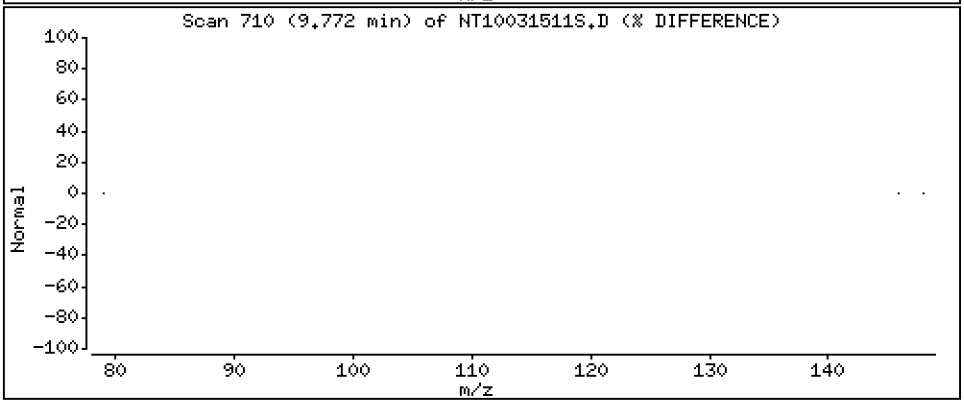












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

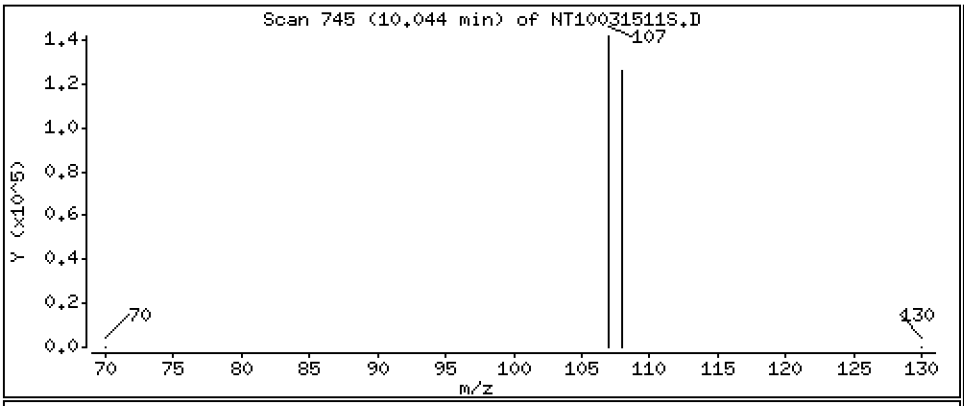
Operator: JGR

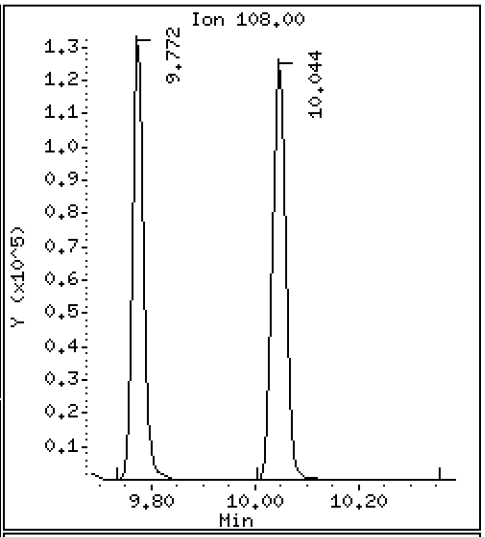
Column phase: ZB-5msi

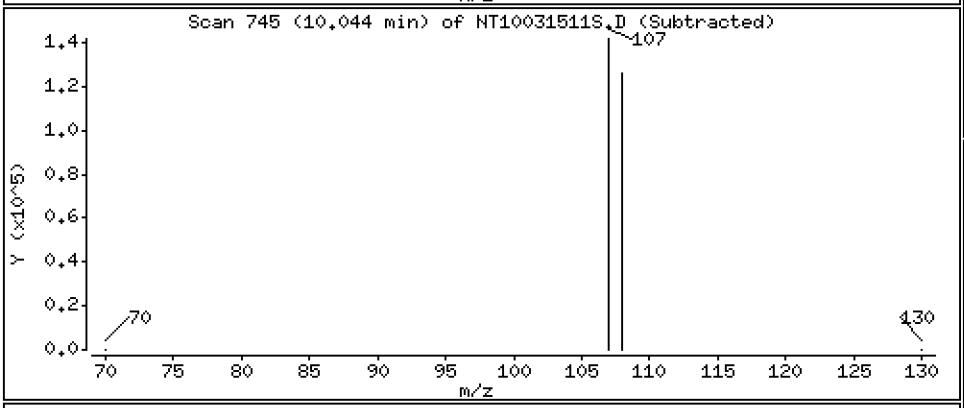
Column diameter: 0.25

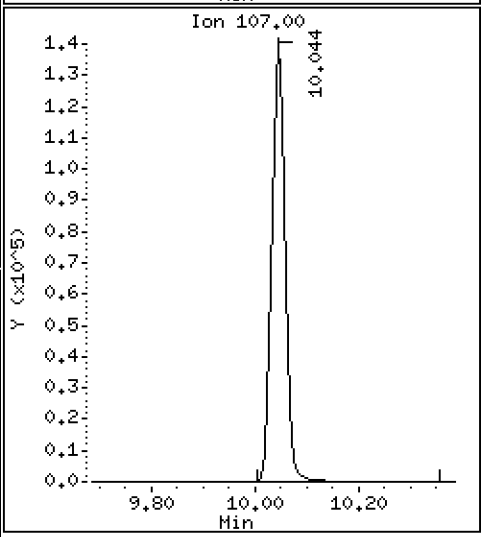
15 4-Methylphenol

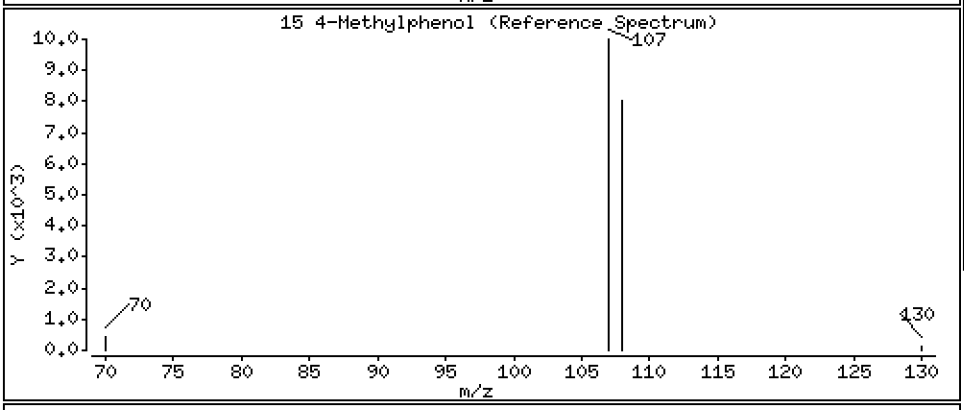
Concentration: 4.463 ug/L

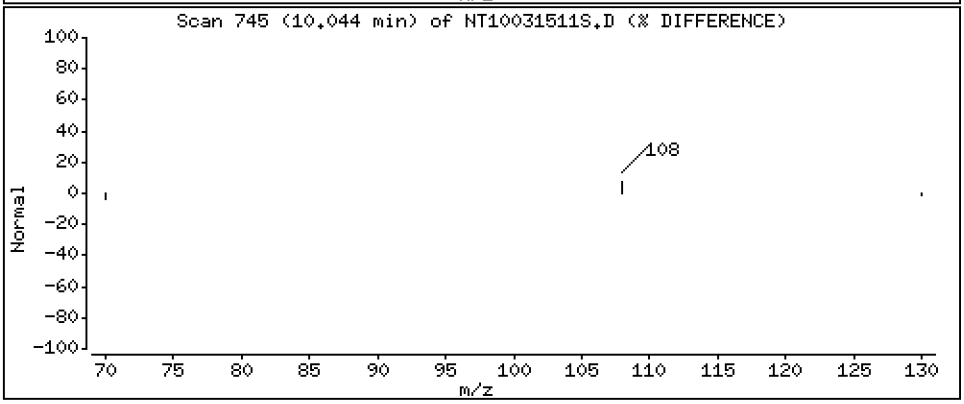












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

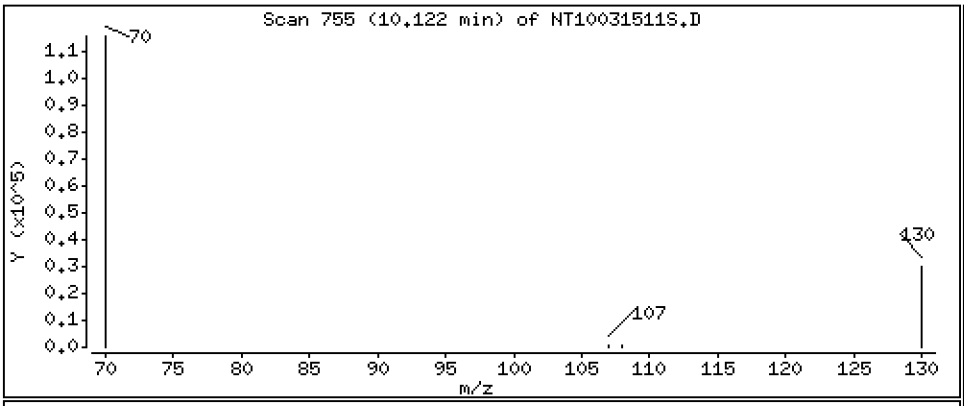
Operator: JGR

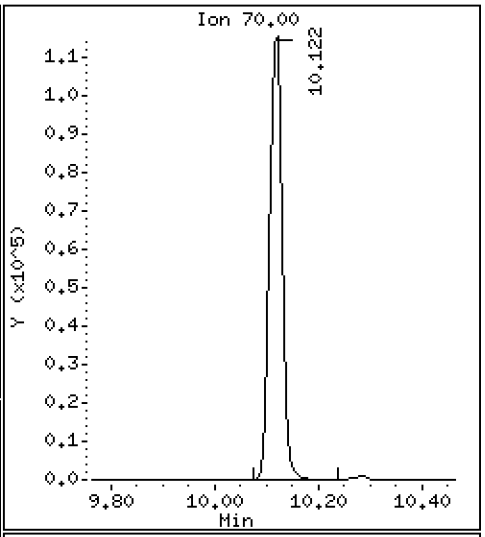
Column phase: ZB-5msi

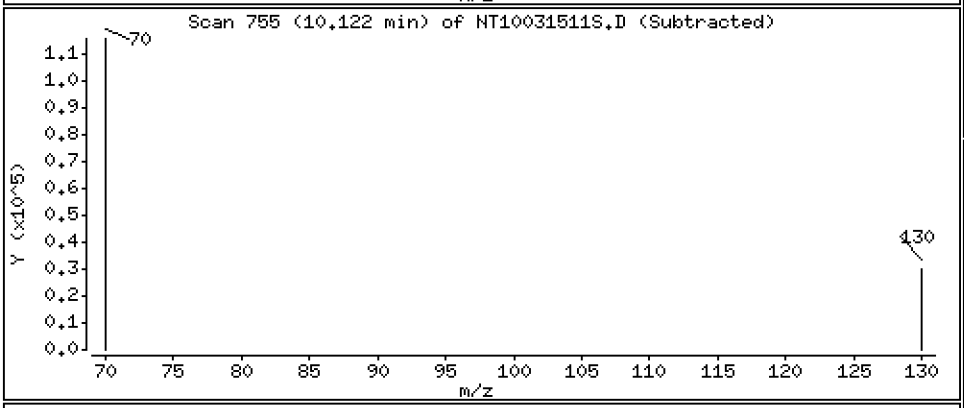
Column diameter: 0.25

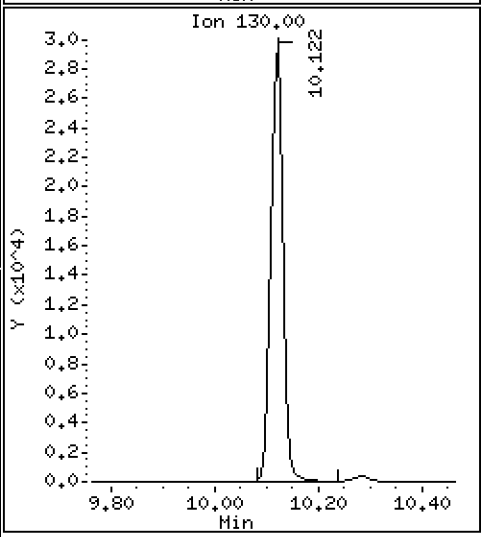
16 N-Nitroso-di-n-propylamine

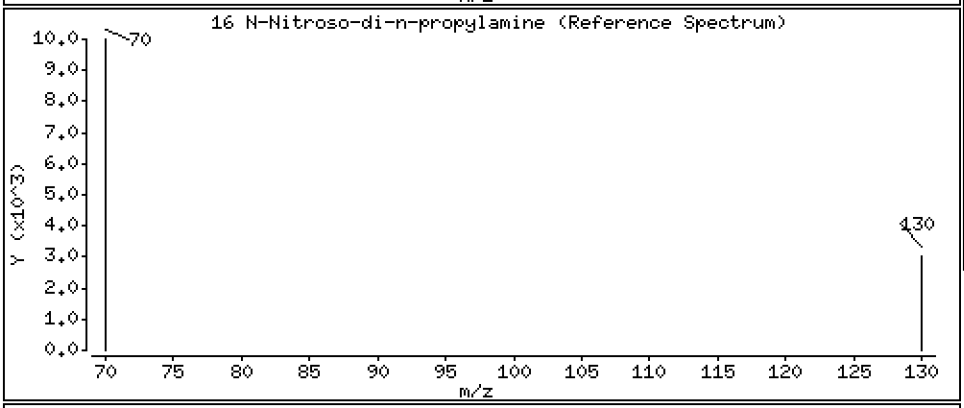
Concentration: 5.282 ug/L

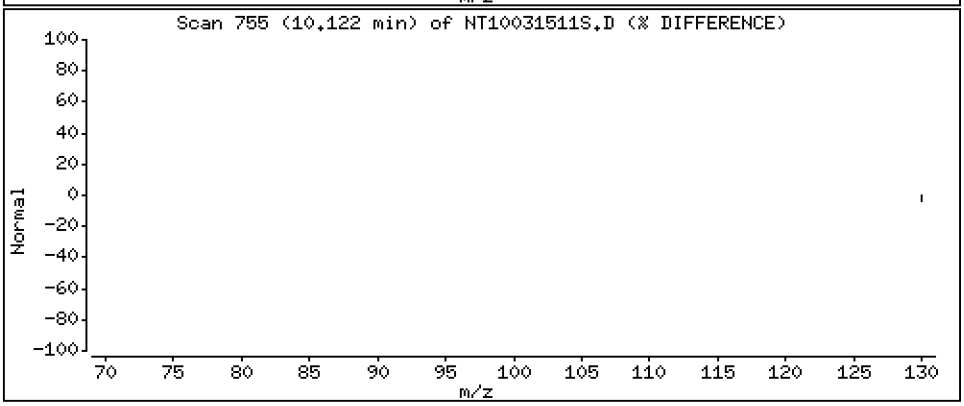












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

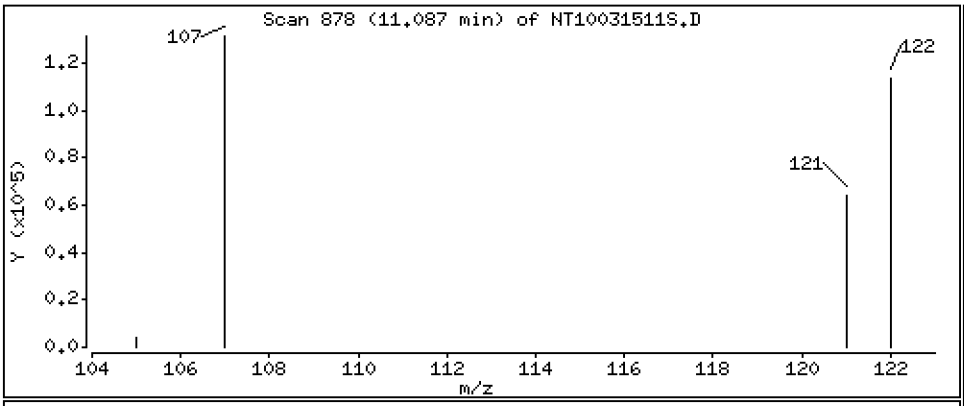
Operator: JGR

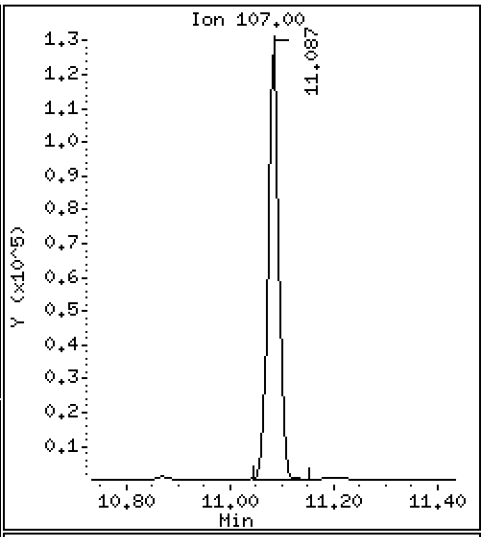
Column phase: ZB-5msi

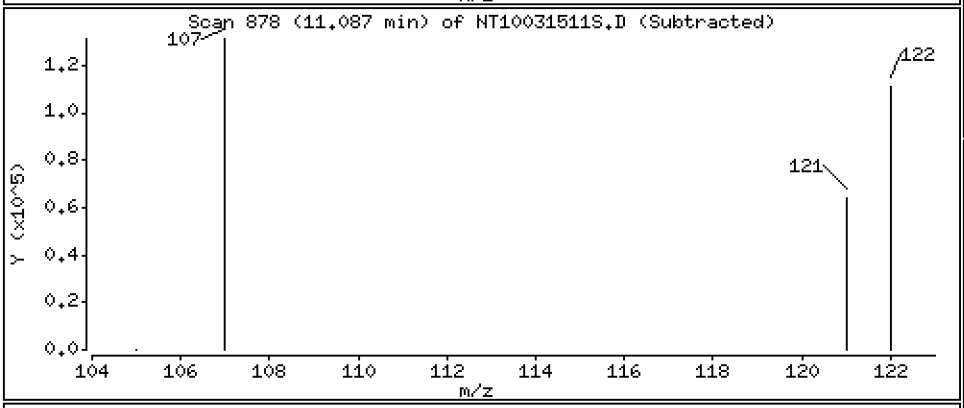
Column diameter: 0.25

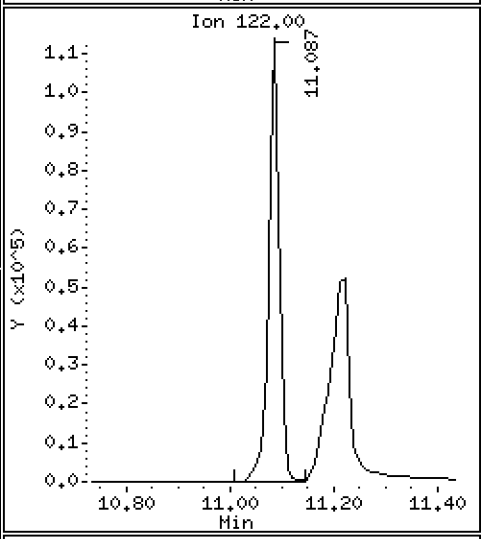
22 2,4-Dimethylphenol

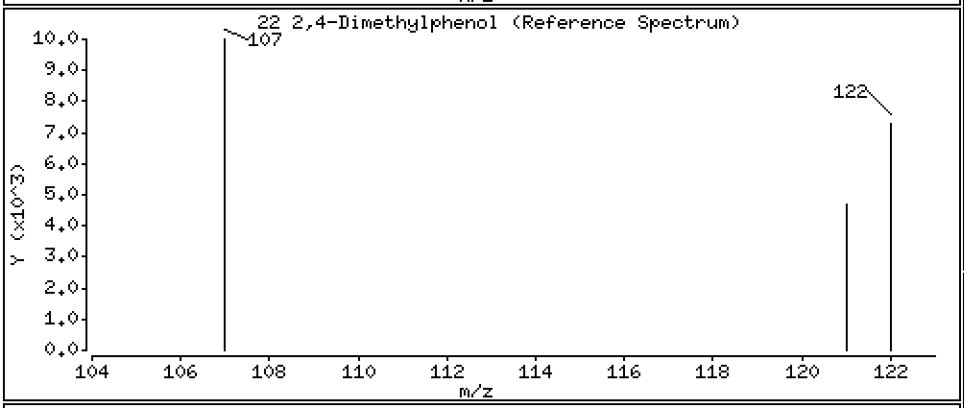
Concentration: 3.660 ug/L

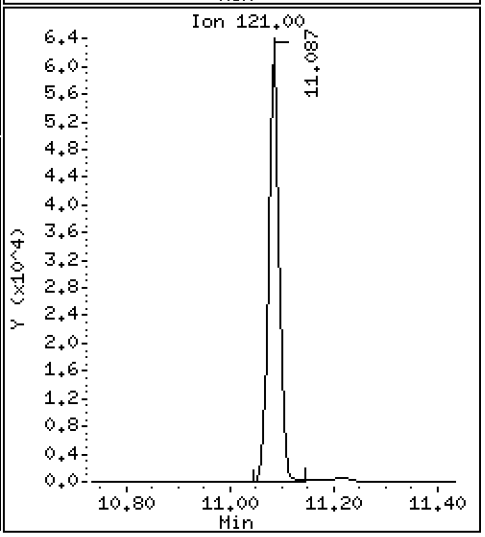


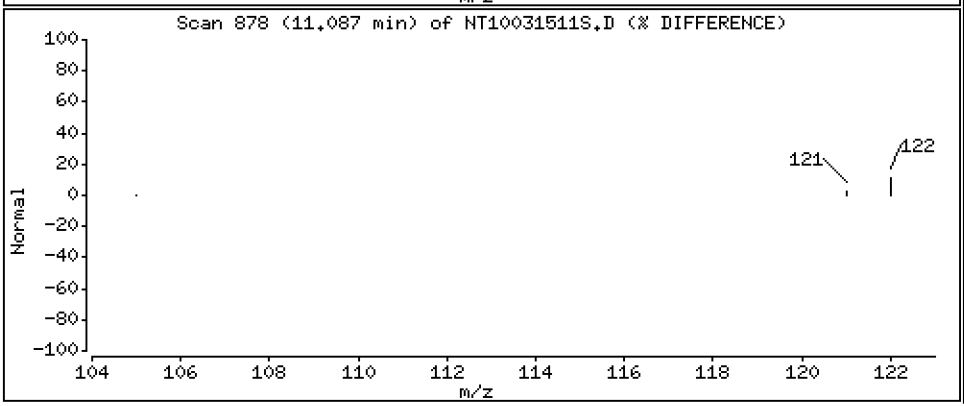












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

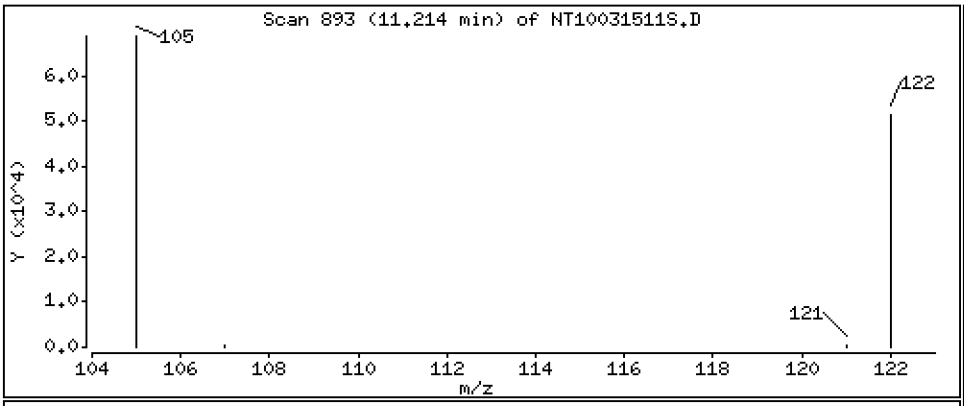
Operator: JGR

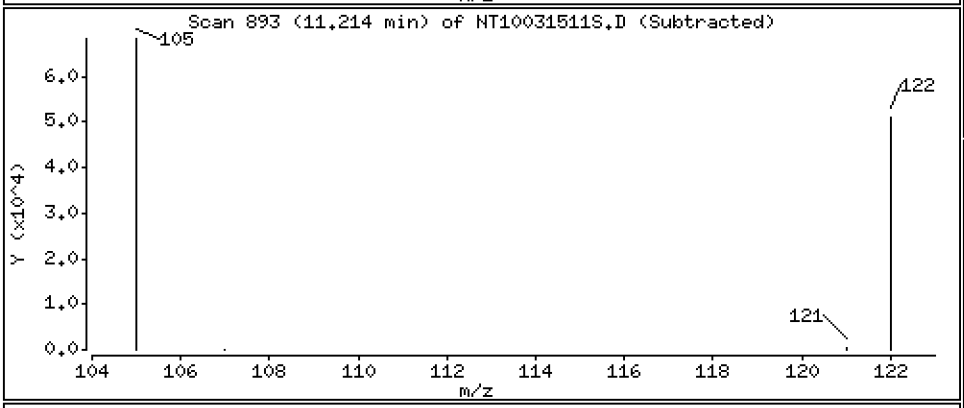
Column phase: ZB-5msi

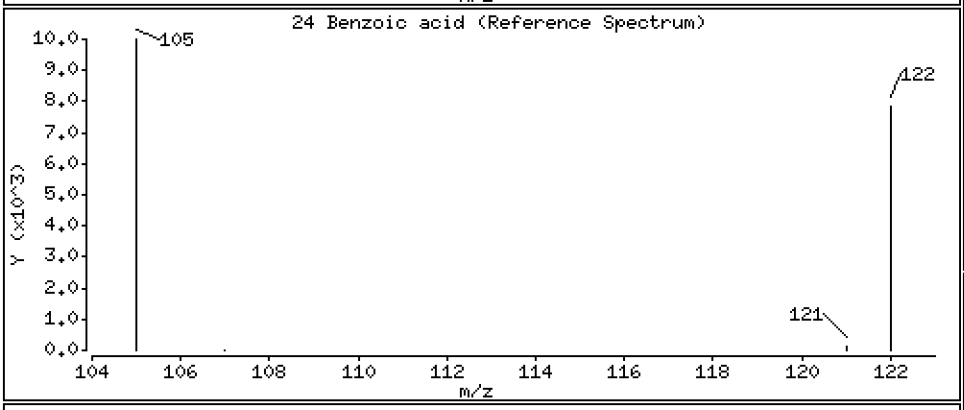
Column diameter: 0.25

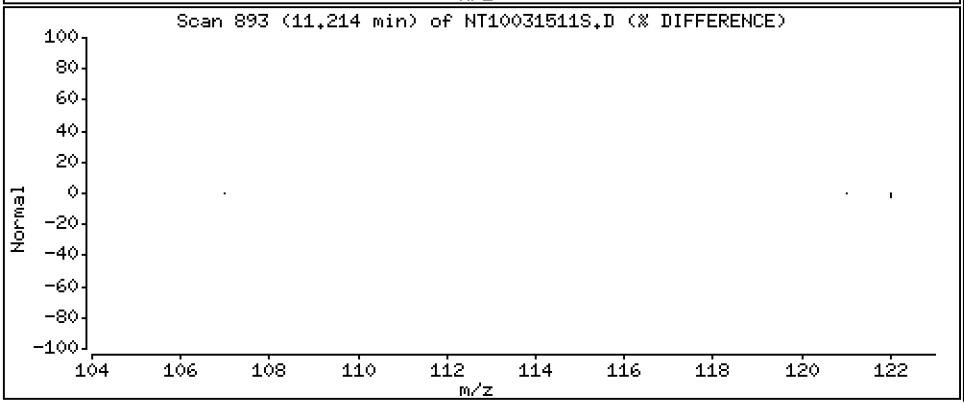
24 Benzoic acid

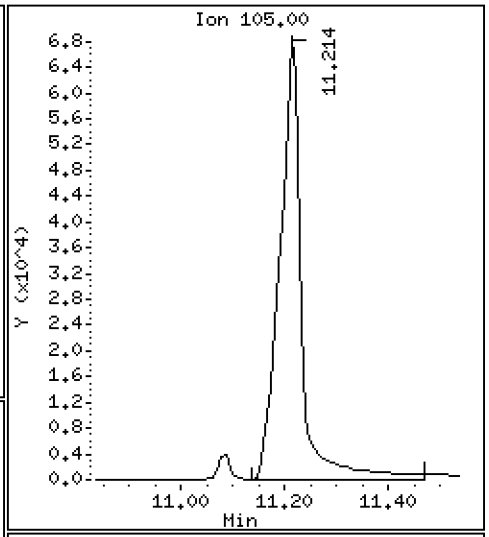
Concentration: 6.746 ug/L

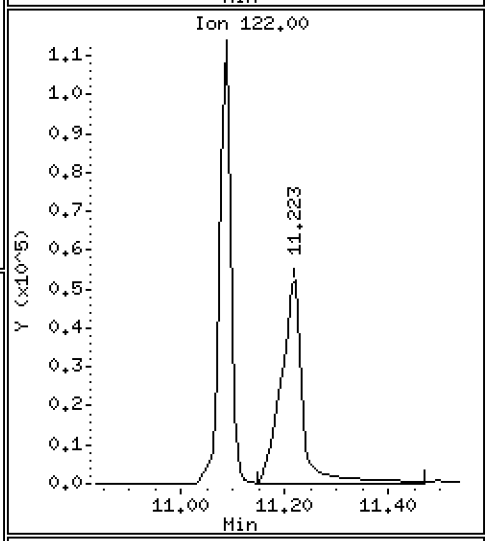


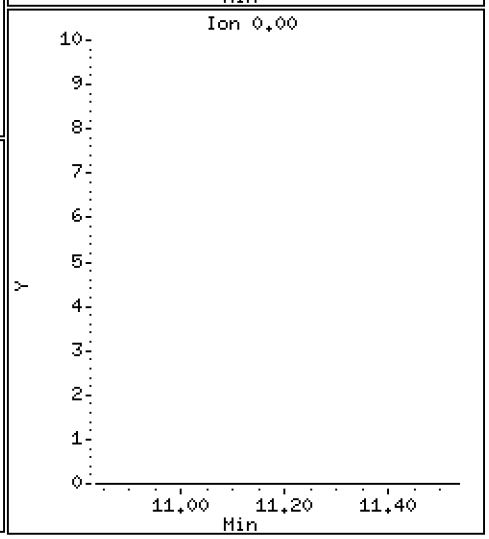












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

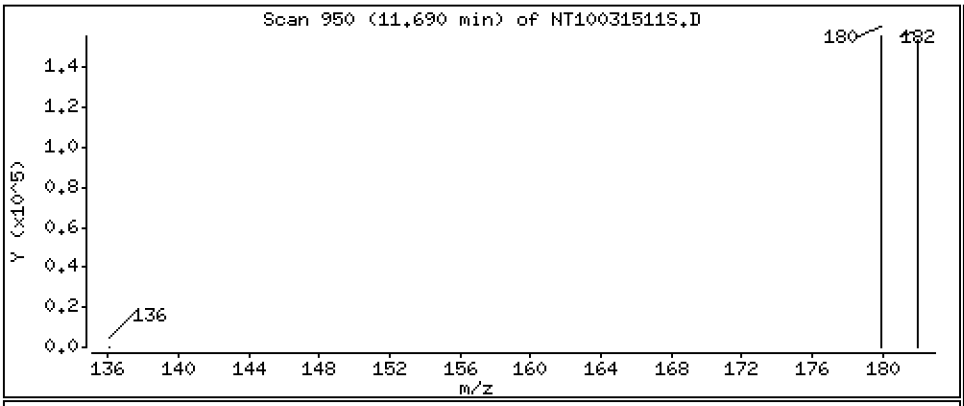
Operator: JGR

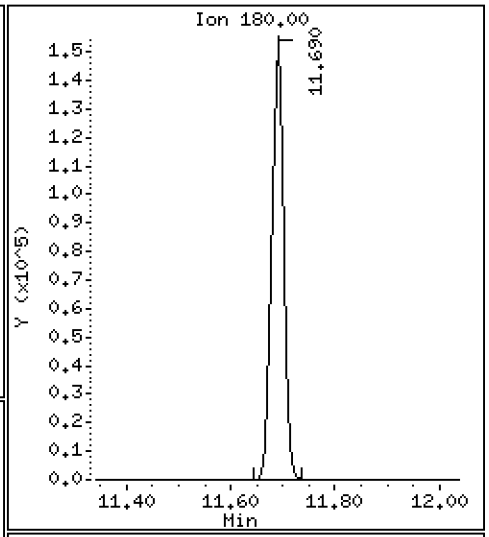
Column phase: ZB-5msi

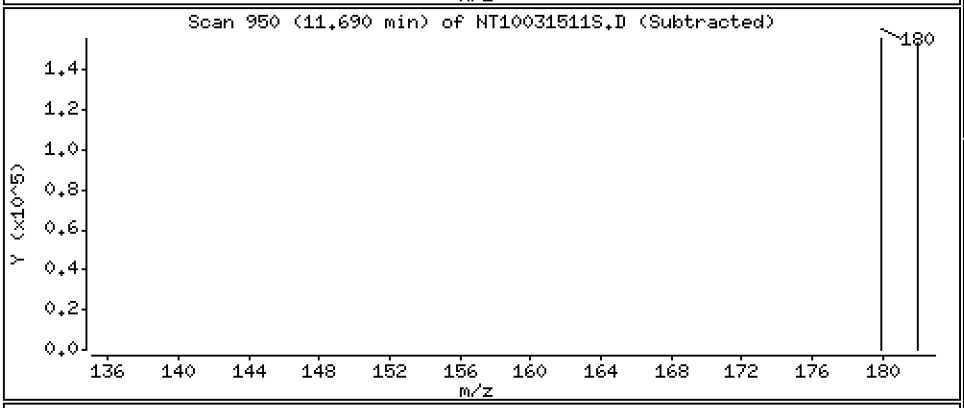
Column diameter: 0.25

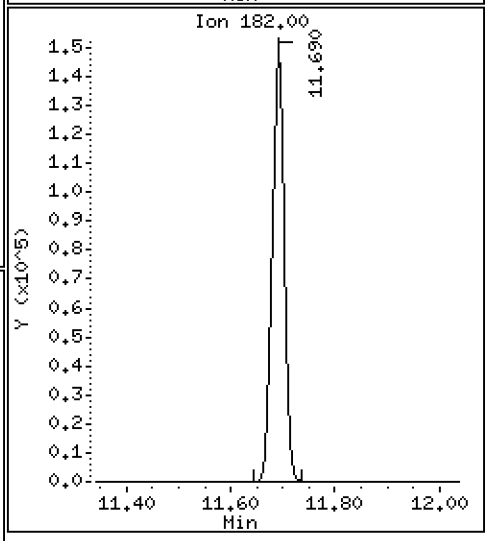
26 1,2,4-Trichlorobenzene

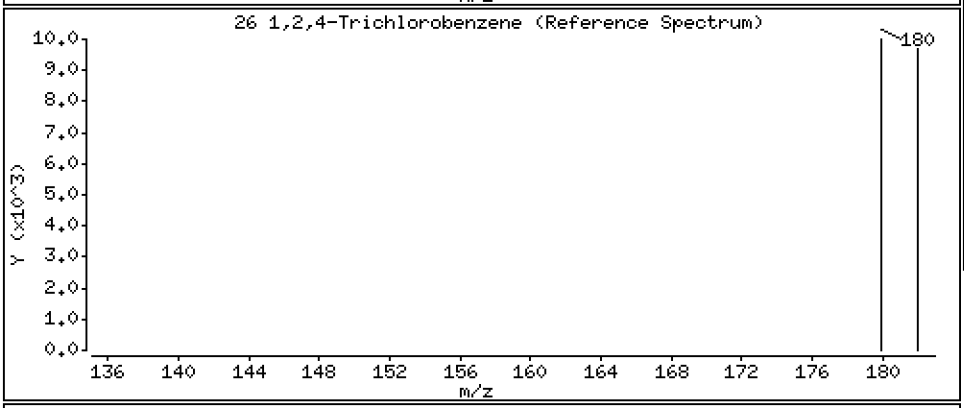
Concentration: 4.445 ug/L

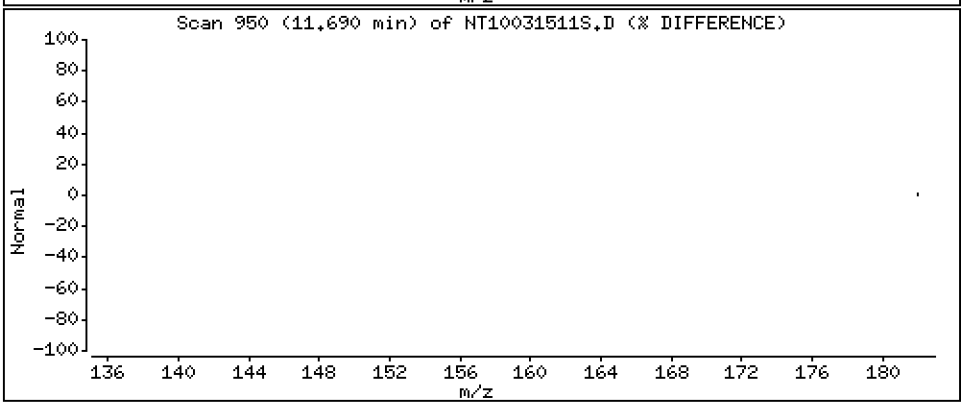












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

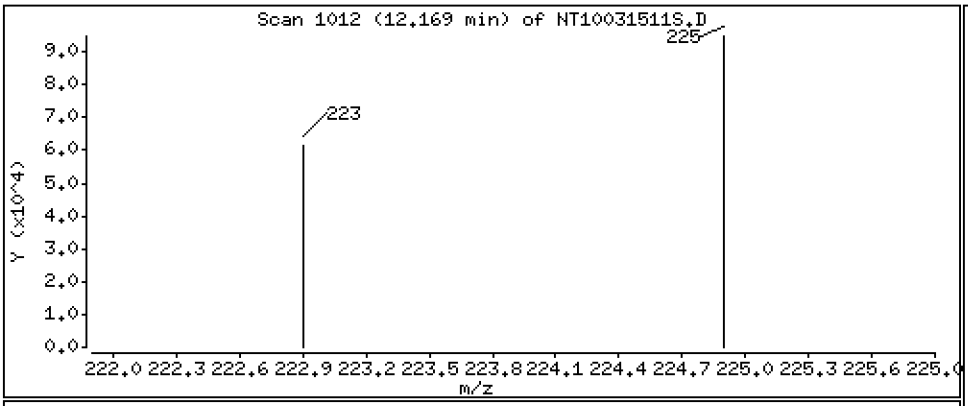
Operator: JGR

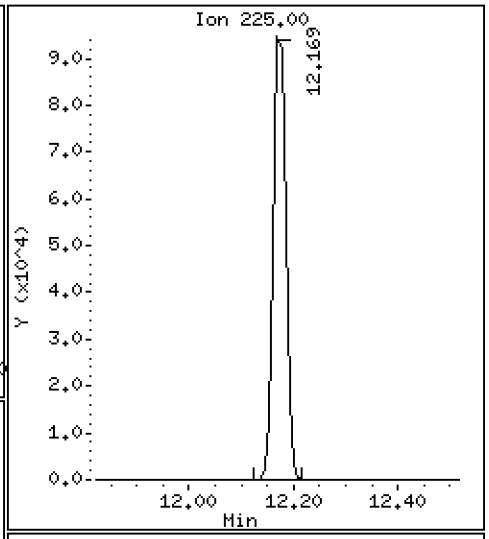
Column phase: ZB-5msi

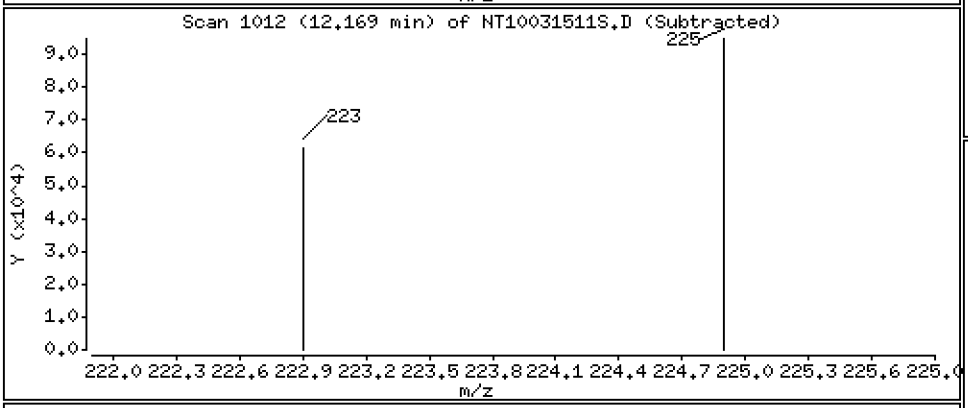
Column diameter: 0.25

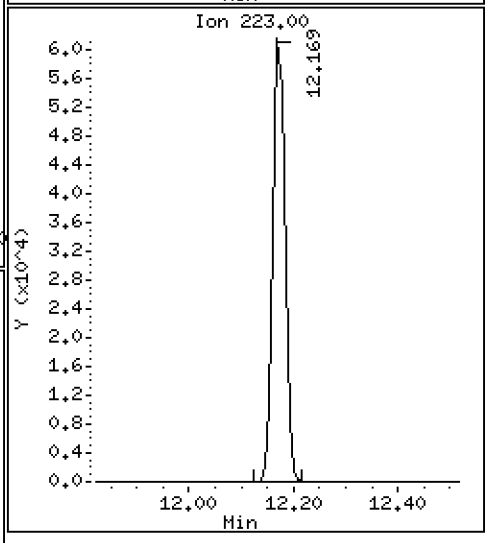
30 Hexachlorobutadiene

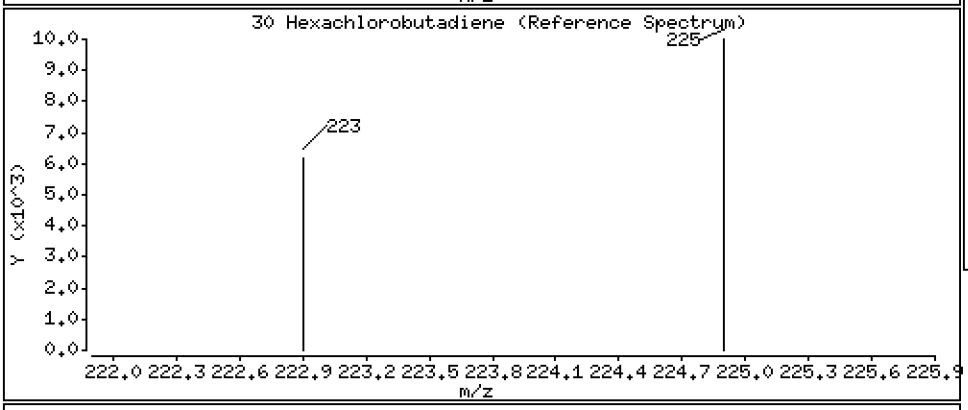
Concentration: 4.653 ug/L

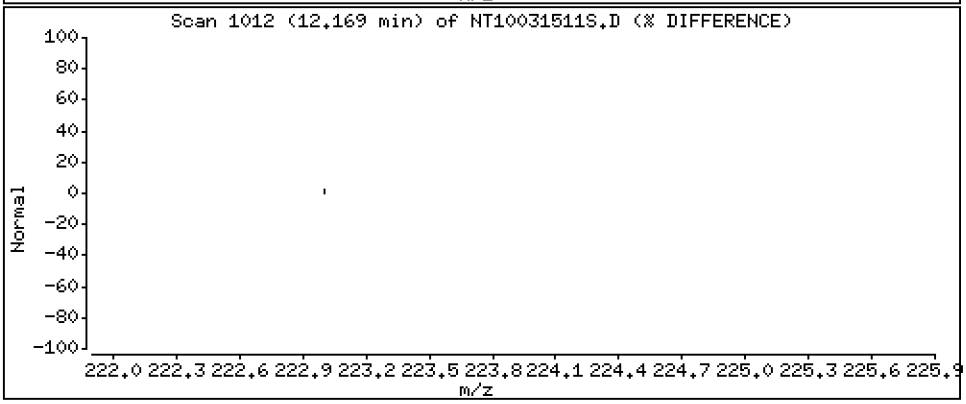












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

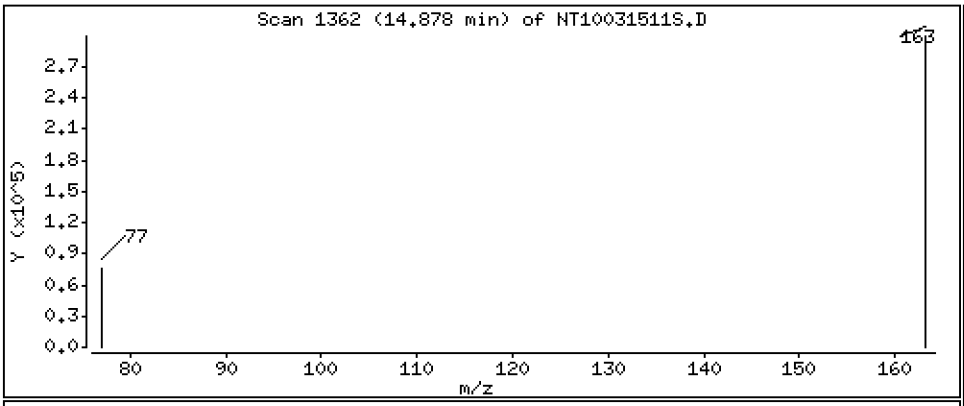
Operator: JGR

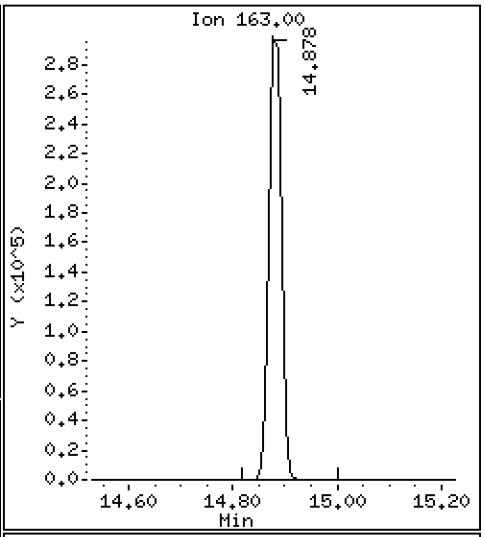
Column phase: ZB-5msi

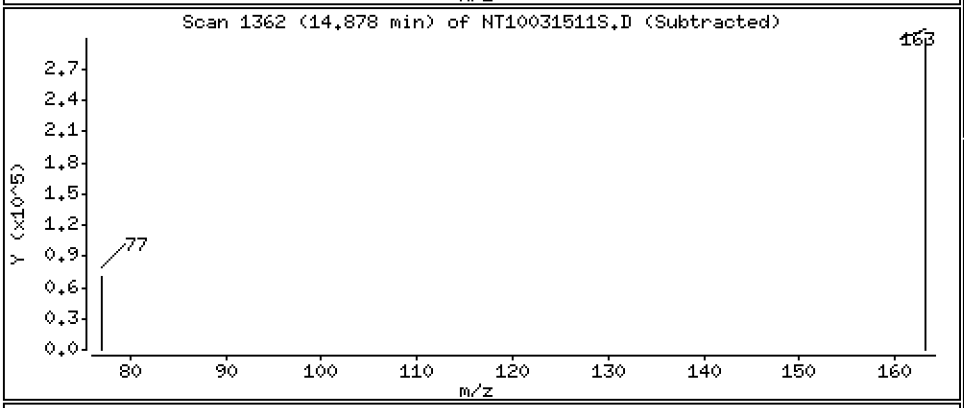
Column diameter: 0.25

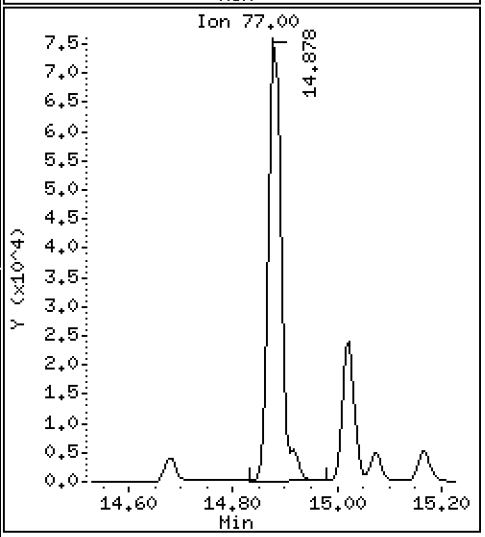
39 Dimethylphthalate

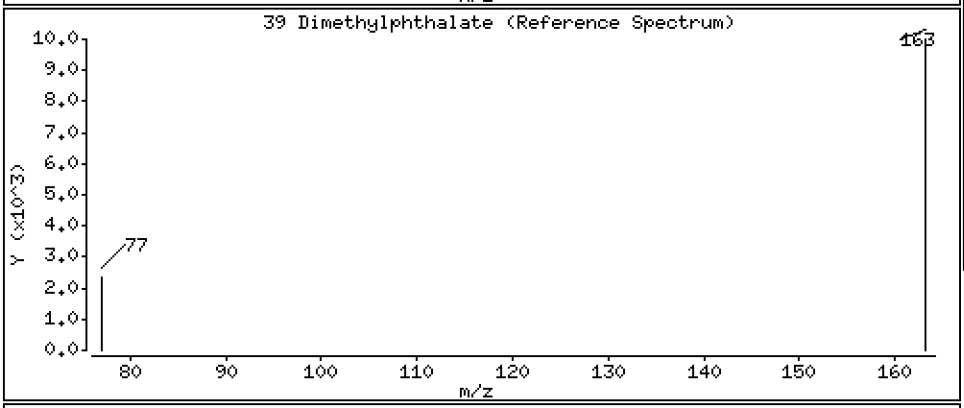
Concentration: 4.948 ug/L

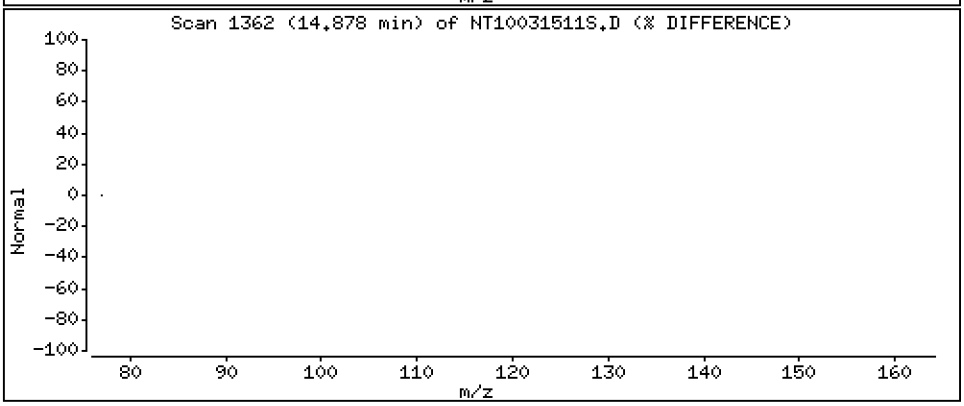












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

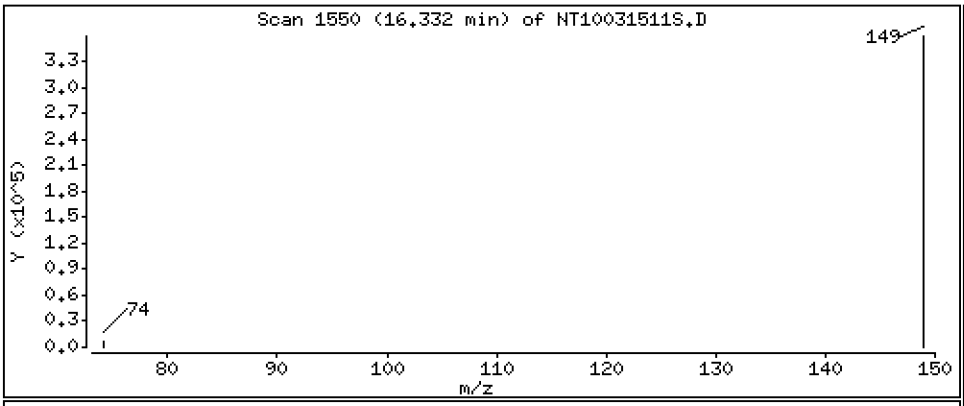
Operator: JGR

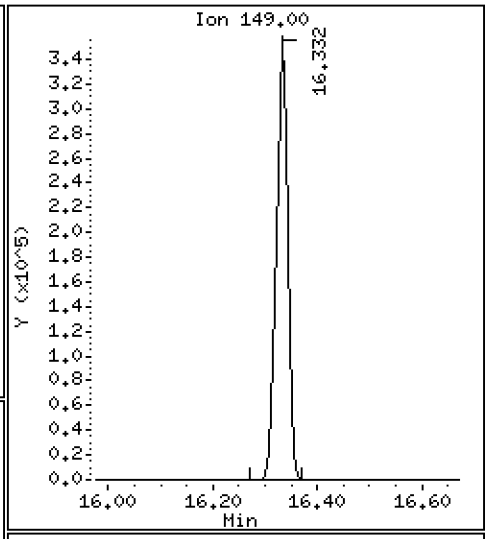
Column phase: ZB-5msi

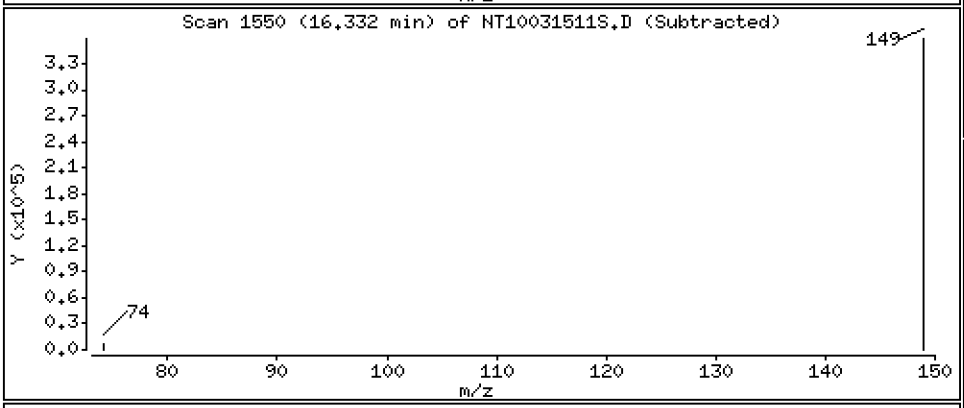
Column diameter: 0.25

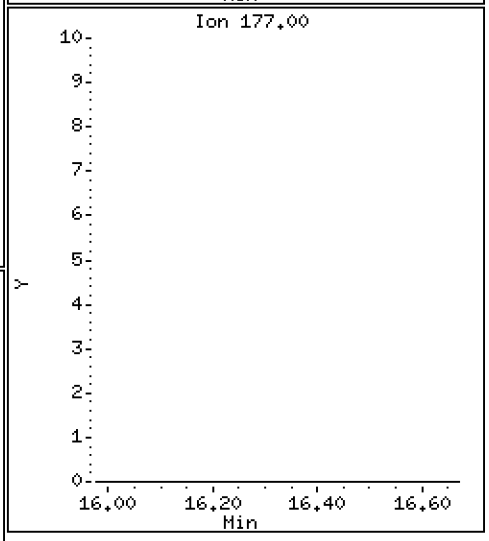
50 Diethylphthalate

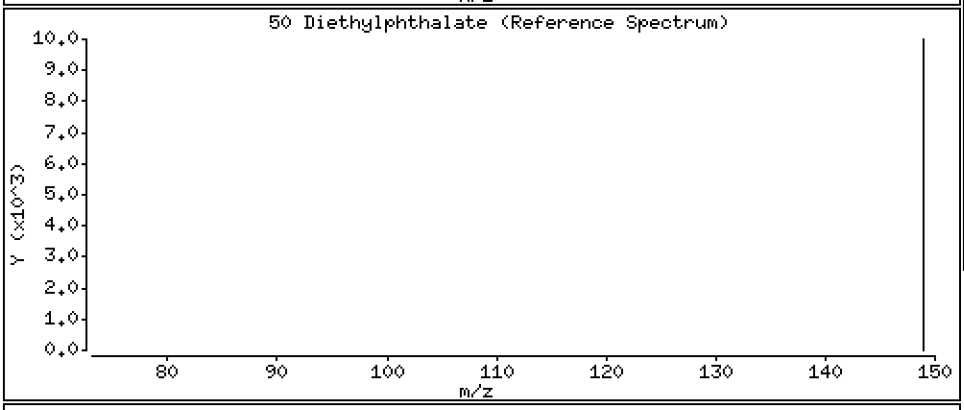
Concentration: 5.364 ug/L

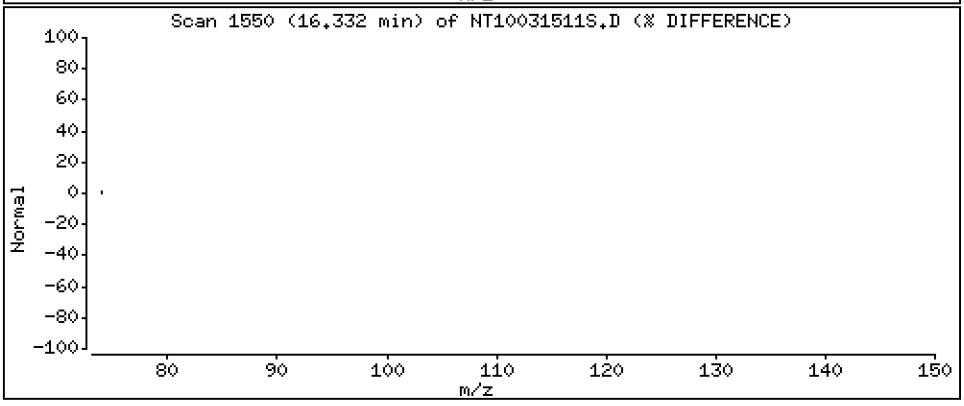












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

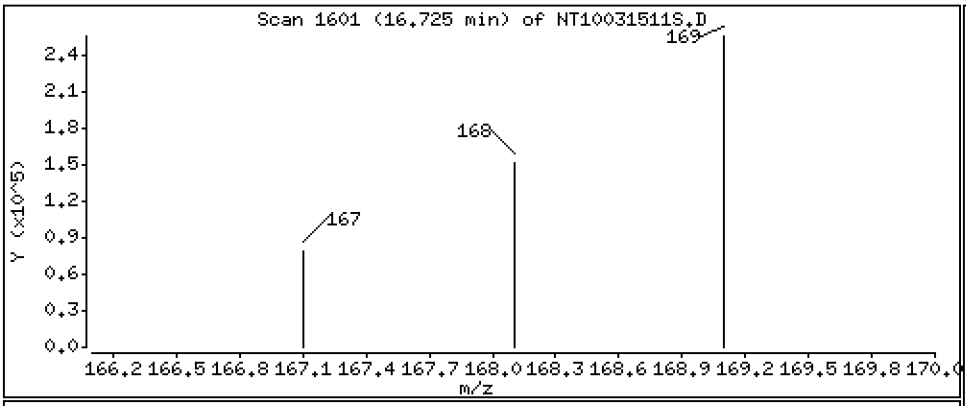
Operator: JGR

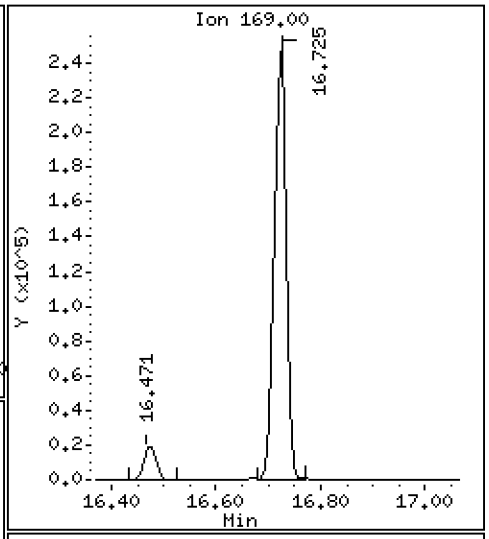
Column phase: ZB-5msi

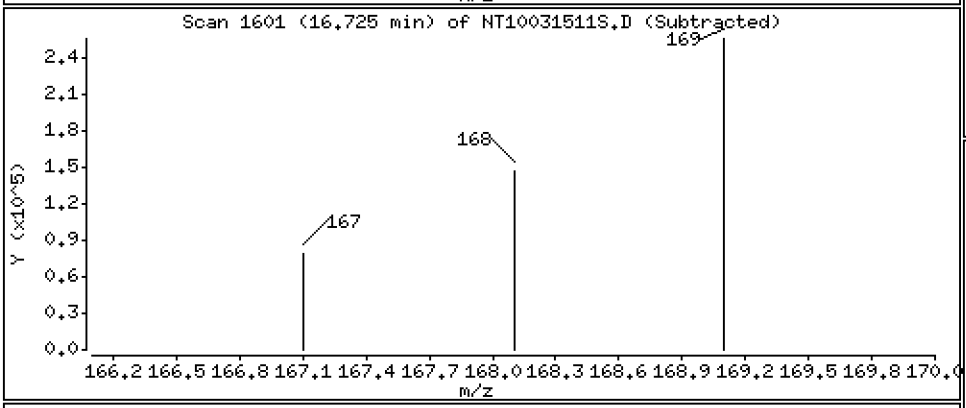
Column diameter: 0.25

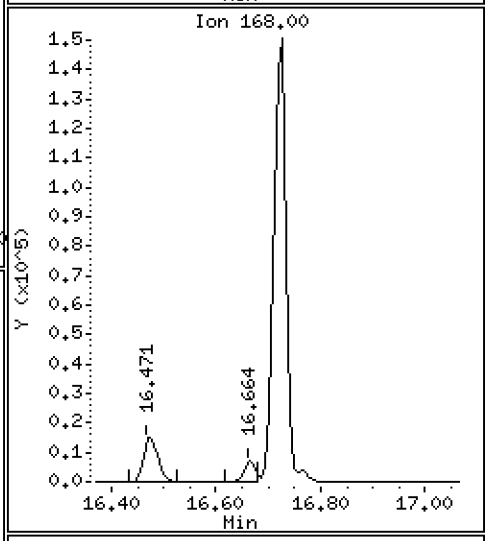
54 N-Nitrosodiphenylamine

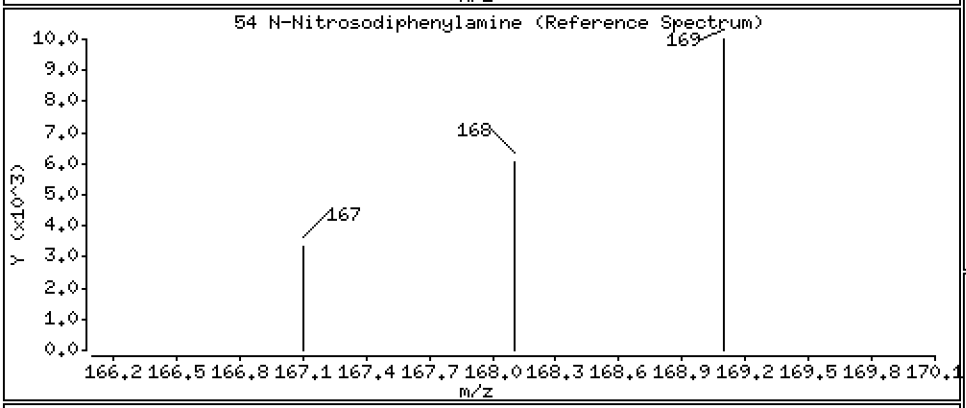
Concentration: 5.080 ug/L

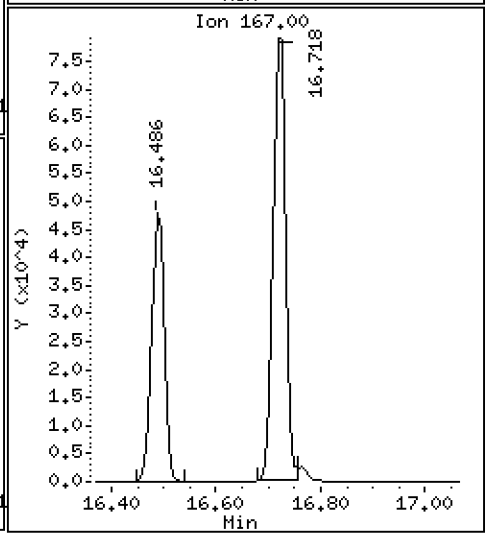


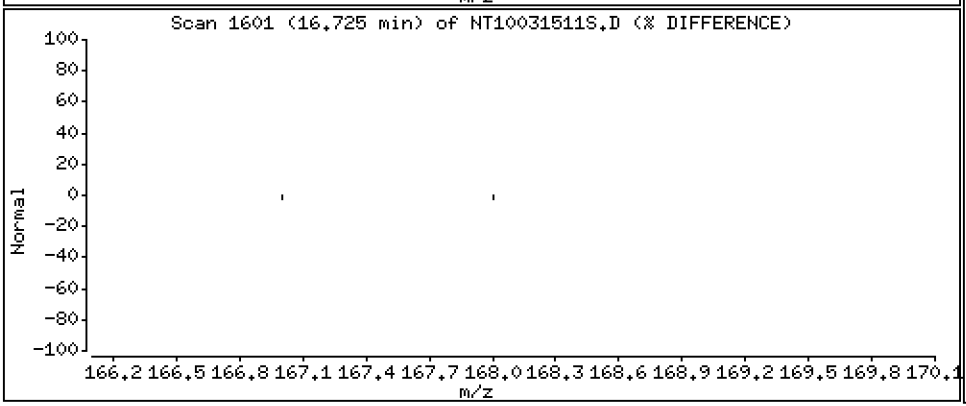












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

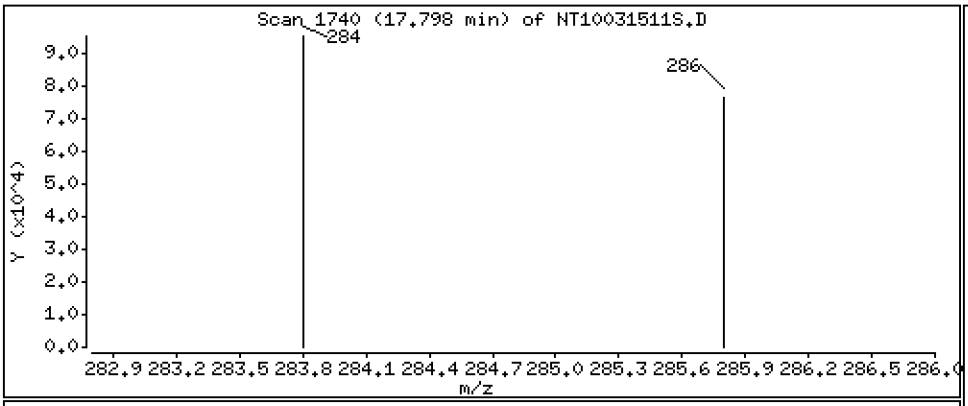
Operator: JGR

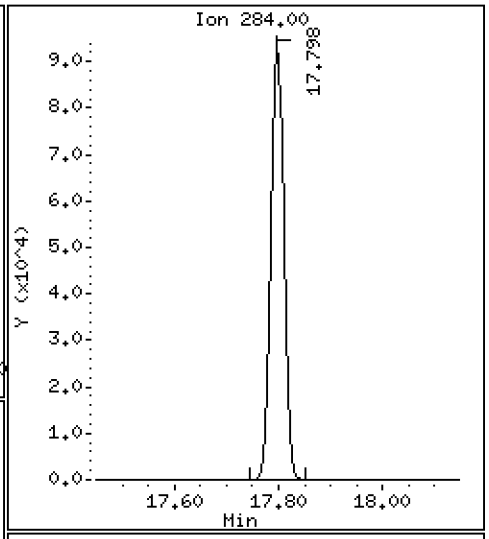
Column phase: ZB-5msi

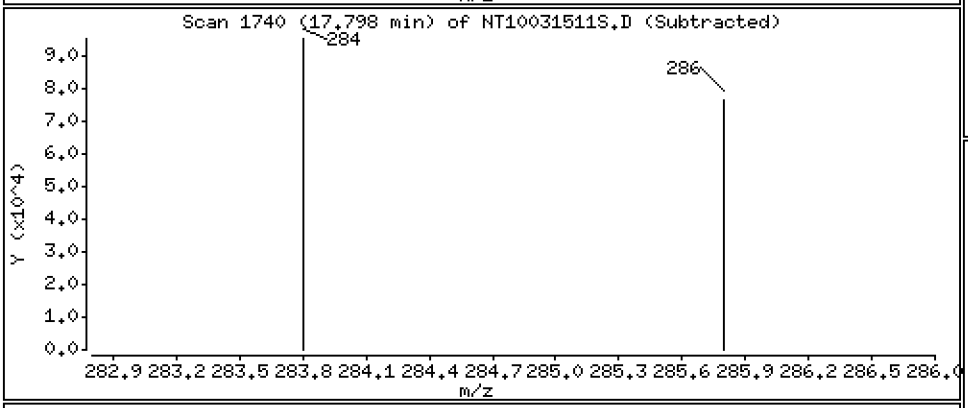
Column diameter: 0.25

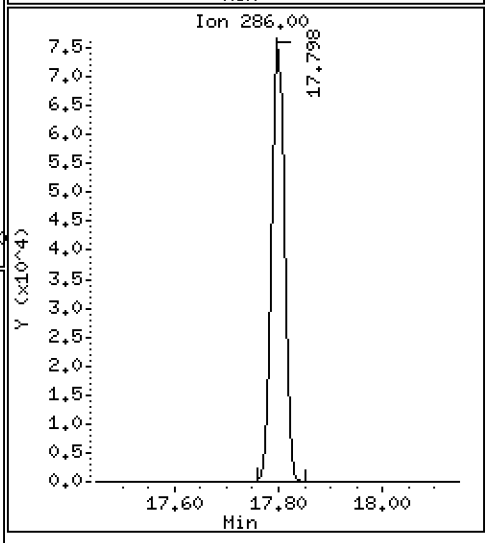
57 Hexachlorobenzene

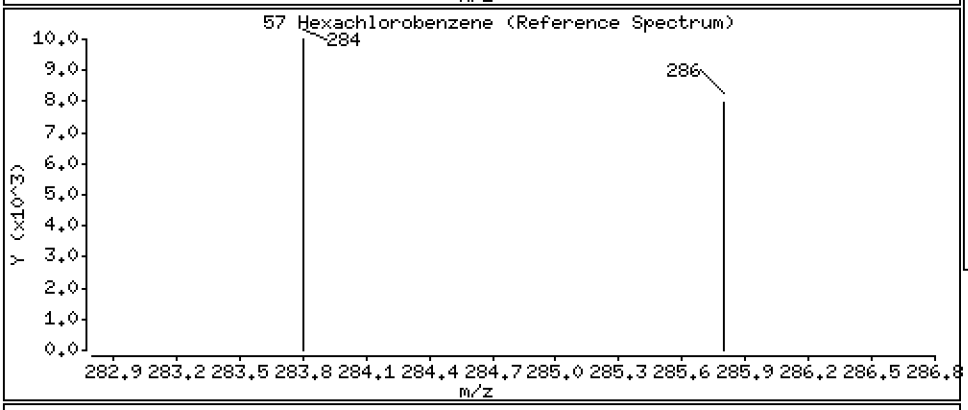
Concentration: 4.614 ug/L

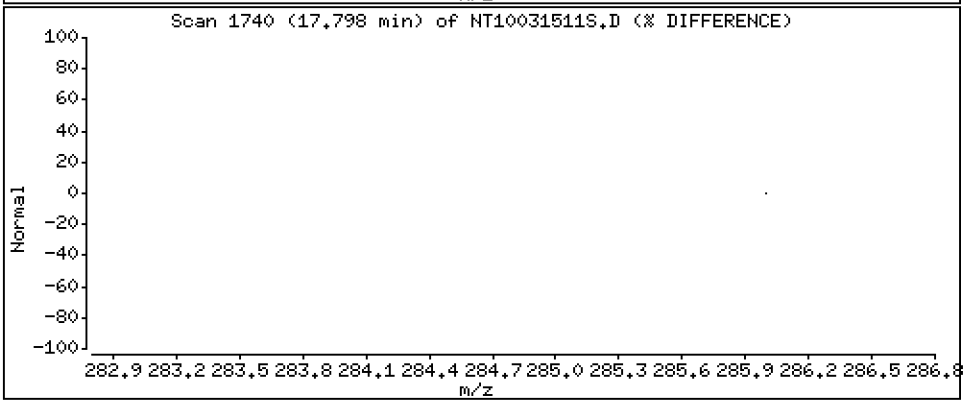












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

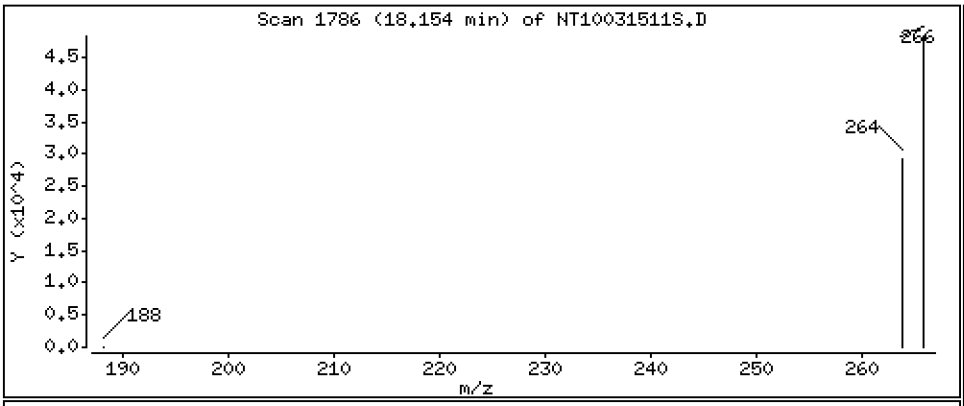
Operator: JGR

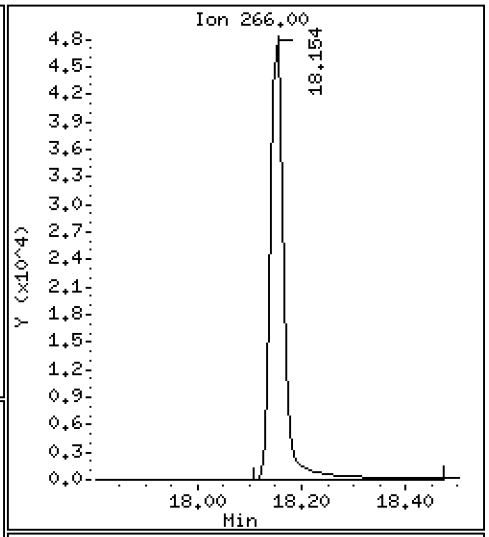
Column phase: ZB-5msi

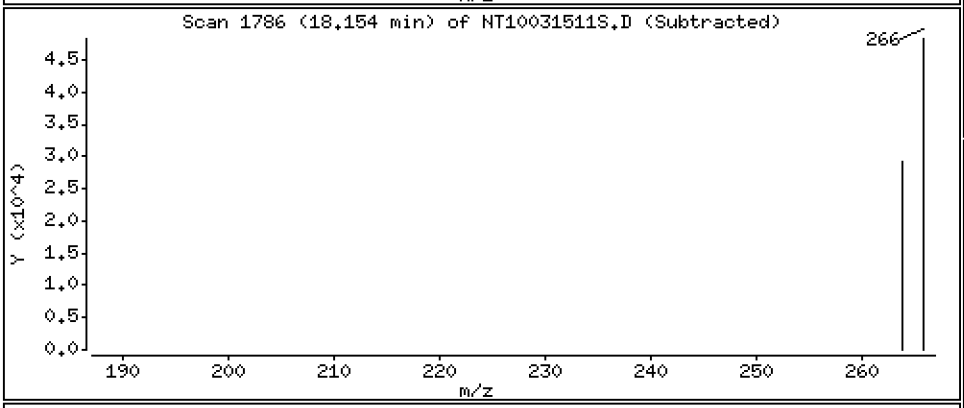
Column diameter: 0.25

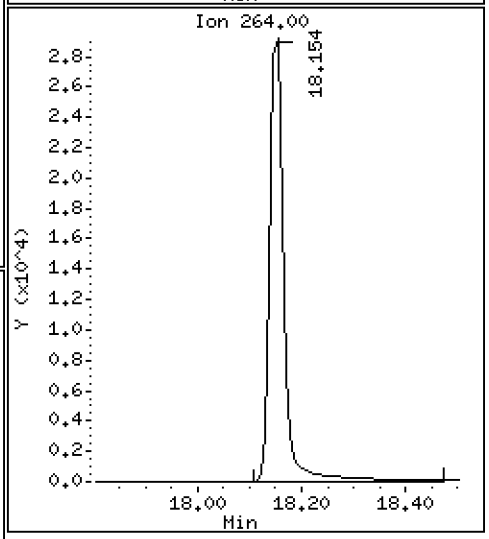
58 Pentachlorophenol

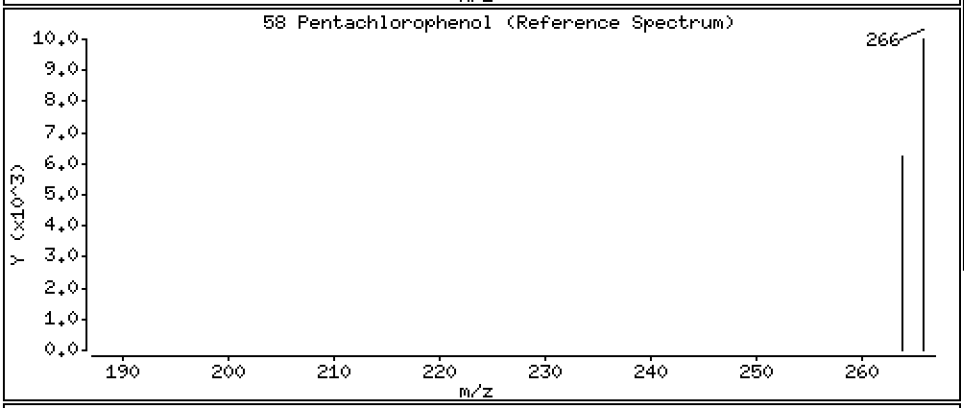
Concentration: 4.418 ug/L

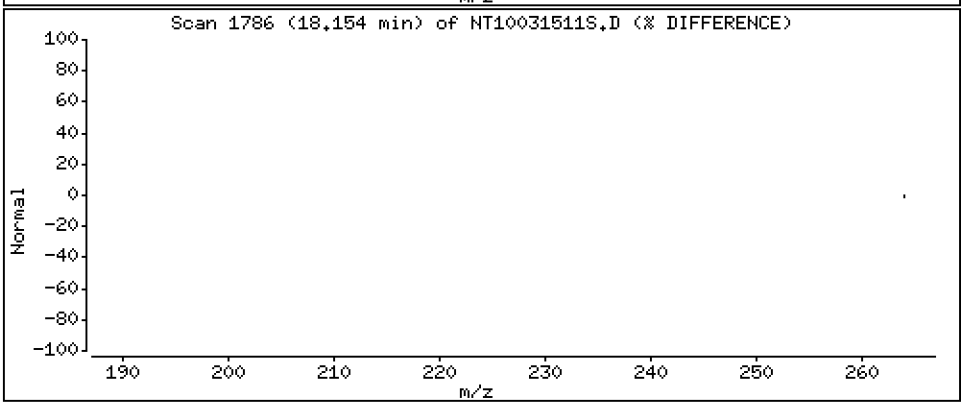












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

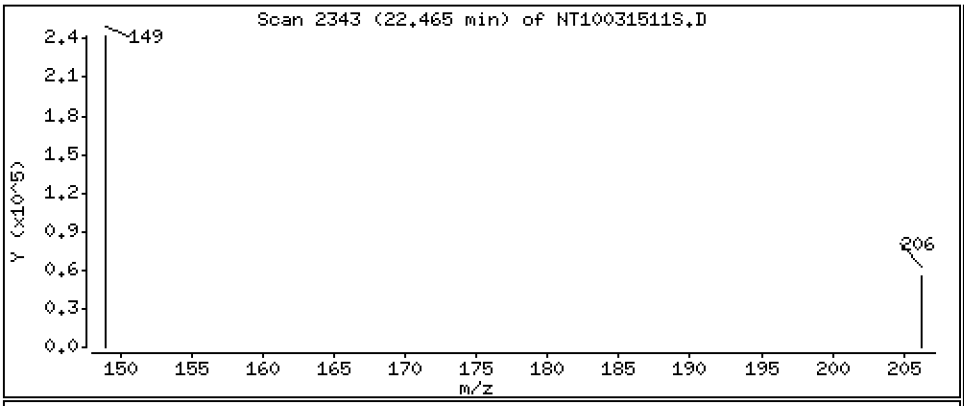
Operator: JGR

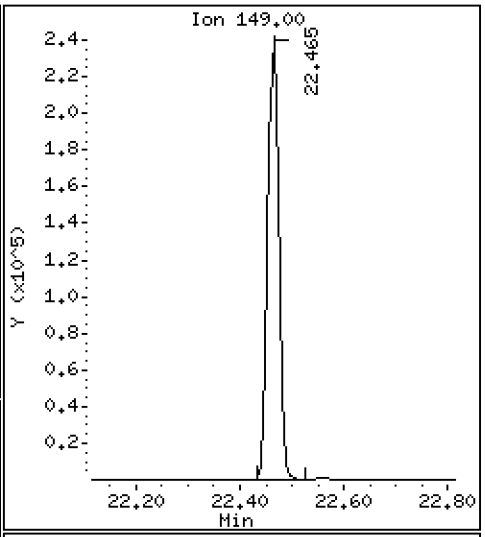
Column phase: ZB-5msi

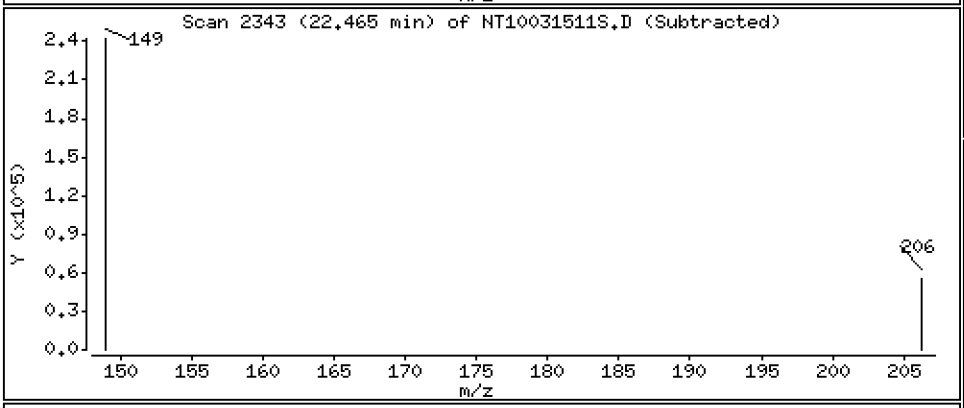
Column diameter: 0.25

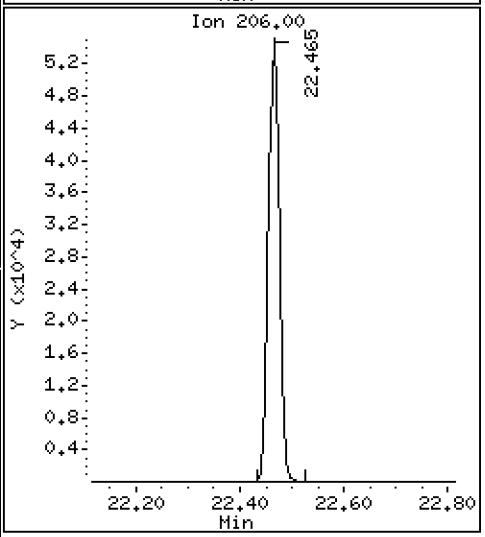
67 Butylbenzylphthalate

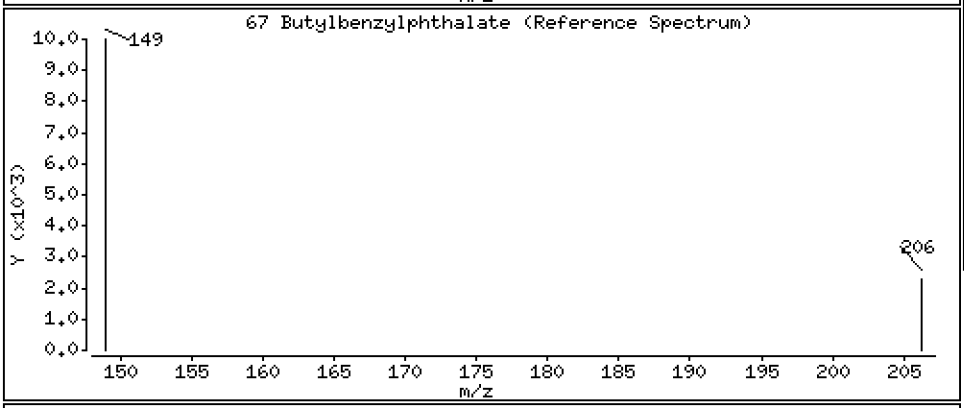
Concentration: 5.121 ug/L

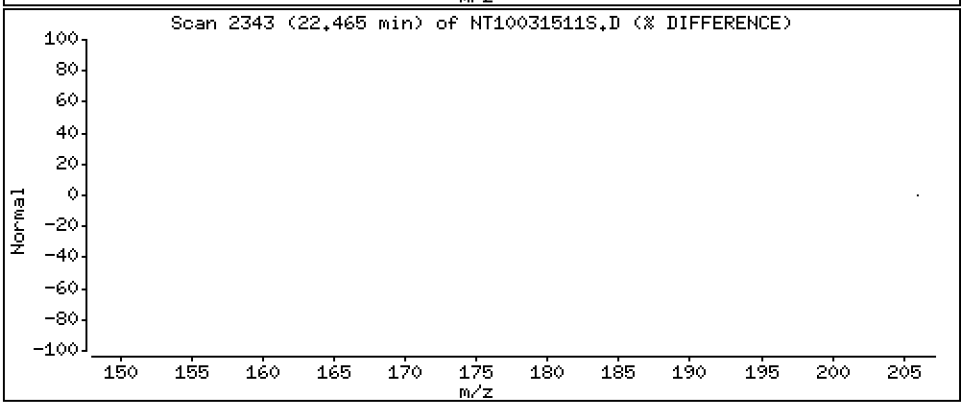












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

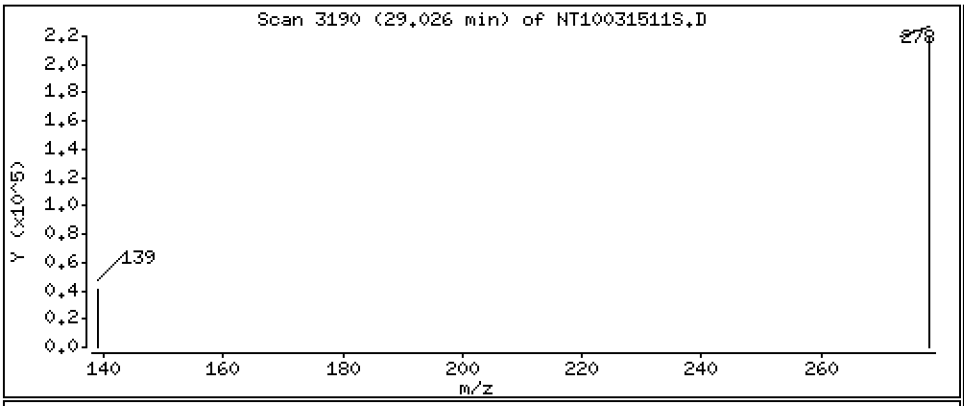
Operator: JGR

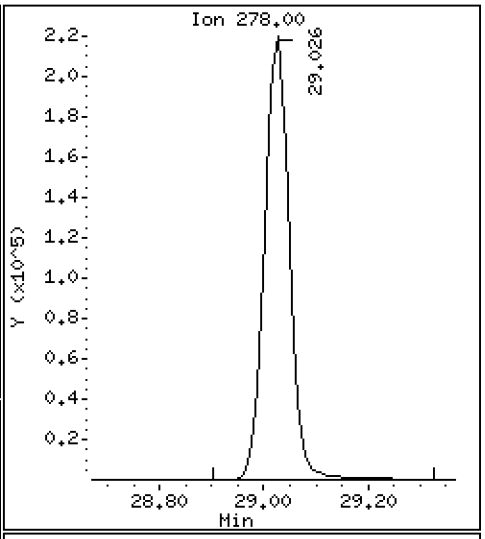
Column phase: ZB-5msi

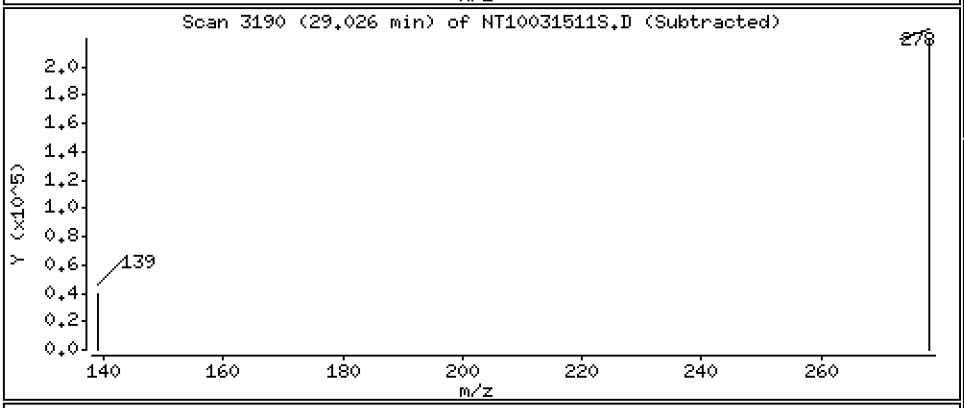
Column diameter: 0.25

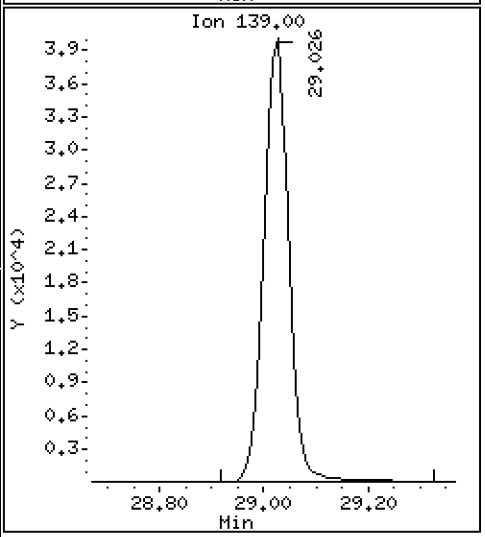
79 Dibenzo(a,h)anthracene

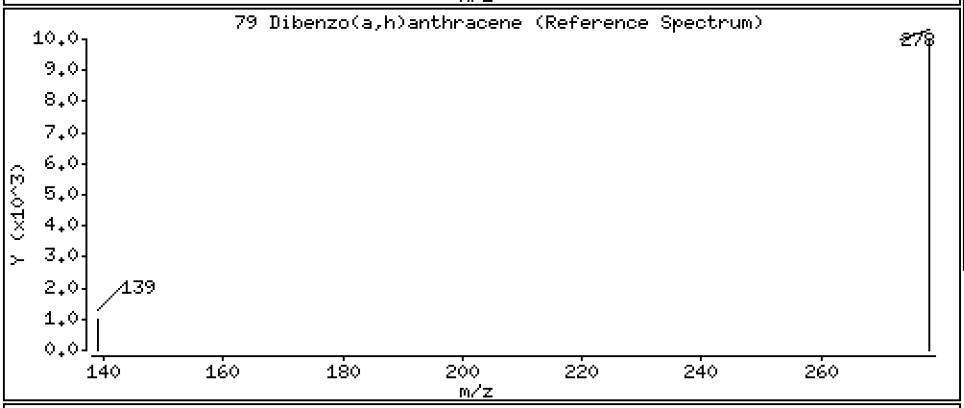
Concentration: 4.238 ug/L

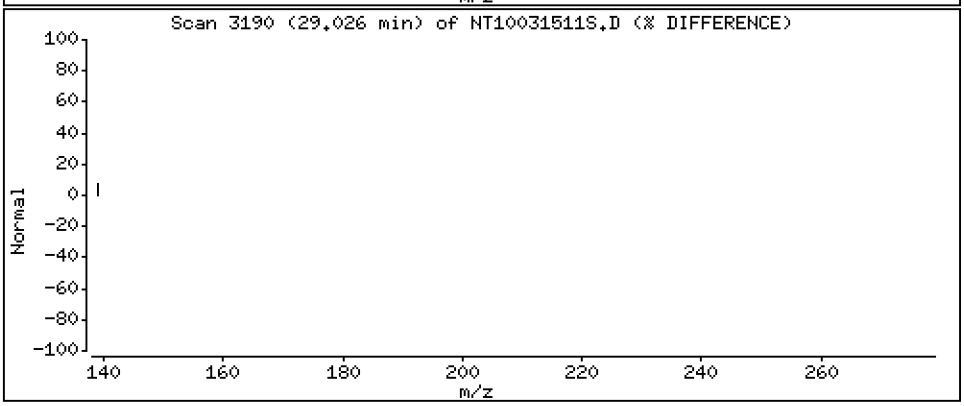












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

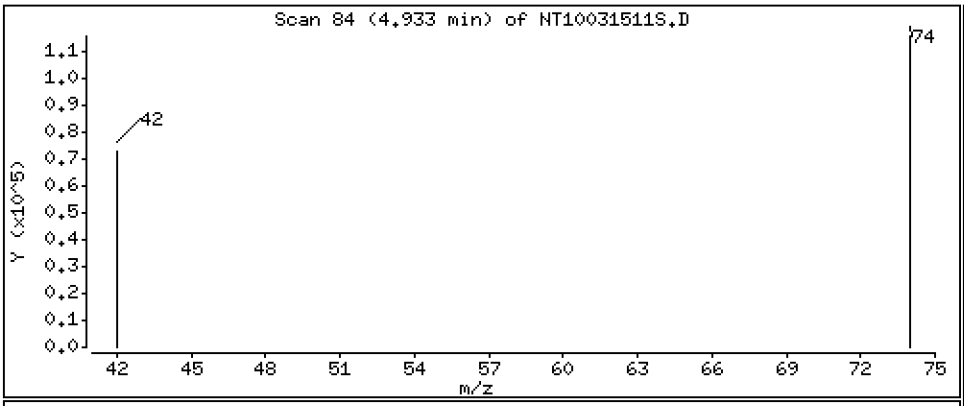
Operator: JGR

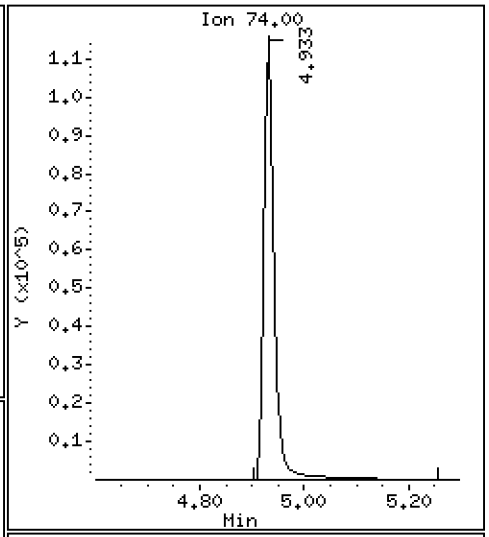
Column phase: ZB-5msi

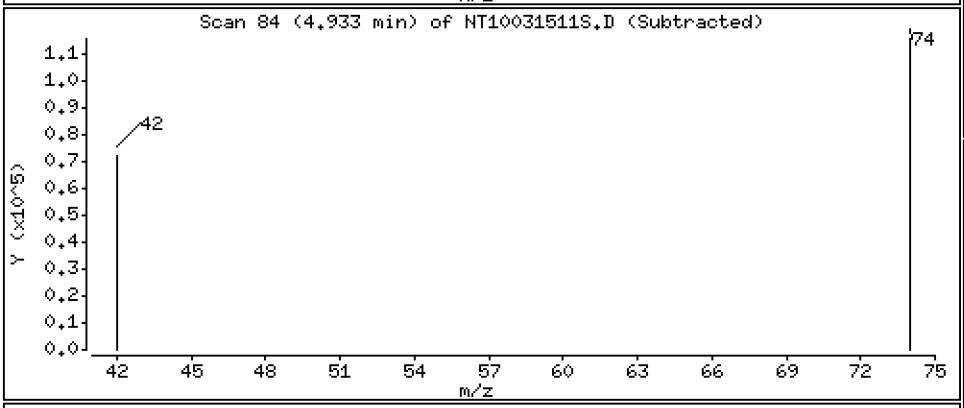
Column diameter: 0.25

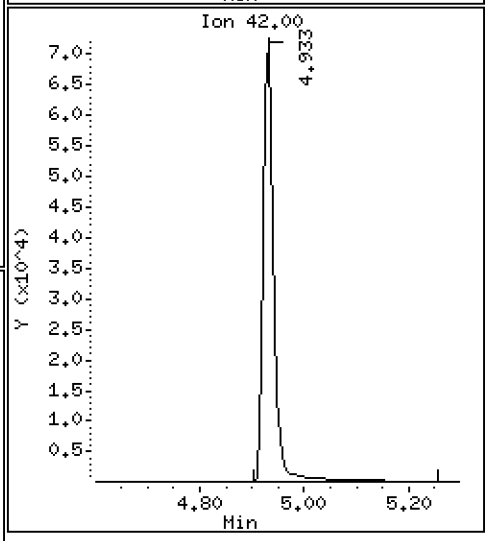
90 N-Nitrosodimethylamine

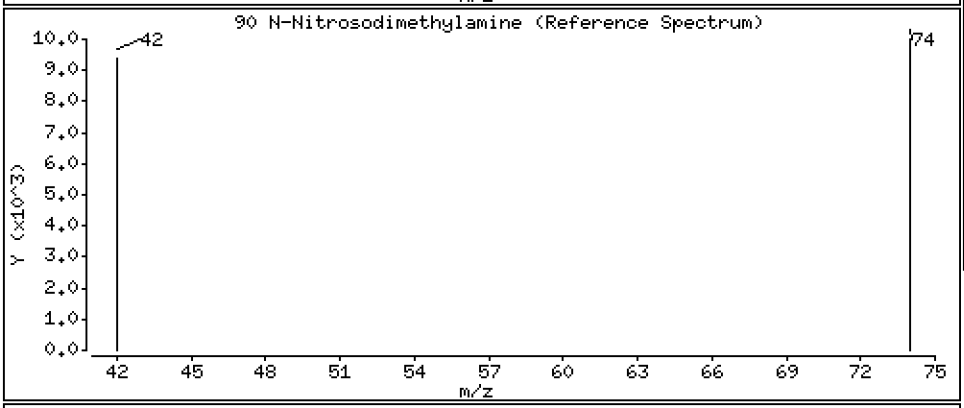
Concentration: 5.096 ug/L

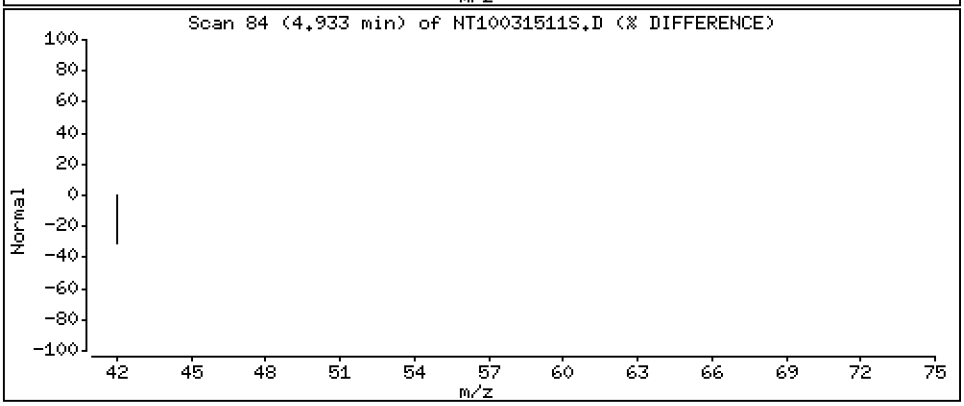












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Inj Date : 16-MAR-2023 02:16 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
3	Phenol	94	8.664	8.664	(0.931)	303581	4.37299	4.373
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.992)	301605	4.64290	4.643
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	166866	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.002)	303390	4.83813	4.838
11	Benzyl alcohol	79	9.562	9.570	(1.028)	208505	5.18071	5.181
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.041)	288539	4.67875	4.679
13	2-Methylphenol	108	9.772	9.772	(1.050)	201888	4.19698	4.197
15	4-Methylphenol	108	10.043	10.036	(1.079)	223083	4.46301	4.463
16	N-Nitroso-di-n-propylamine	70	10.121	10.113	(1.088)	186707	5.28174	5.282
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	193654	3.66015	3.660
24	Benzoic acid	105	11.214	11.189	(0.952)	200487	6.74612	6.746
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	236605	4.44540	4.445
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	612104	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	150581	4.65339	4.653
39	Dimethylphthalate	163	14.877	14.877	(0.967)	472341	4.94766	4.948
* 42	Acenaphthene-d10	162	15.388	15.380	(1.000)	302524	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	530540	5.36440	5.364
54	N-Nitrosodiphenylamine	169	16.725	16.717	(0.908)	377357	5.08034	5.080
57	Hexachlorobenzene	284	17.798	17.798	(0.966)	153405	4.61353	4.614

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	18.154	18.154	(0.985)	83223	4.41780	4.418
*	59 Phenanthrene-d10	188	18.425	18.417	(1.000)	553619	4.00000	
$	66 Terphenyl-d14	244	21.543	21.543	(0.918)	117	0.00154	0.001543(RM)
	67 Butylbenzylphthalate	149	22.464	22.465	(0.958)	332887	5.12147	5.121
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	465428	4.00000	
*	77 Perylene-d12	264	26.188	26.188	(1.000)	532593	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.026	29.019	(1.108)	722983	4.23762	4.238
	90 N-Nitrosodimethylamine	74	4.933	4.948	(0.530)	163555	5.09625	5.096

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	166866	-11.28
27 Naphthalene-d8	674549	337275	1349098	612104	-9.26
42 Acenaphthene-d10	328275	164138	656550	302524	-7.84
59 Phenanthrene-d10	597140	298570	1194280	553619	-7.29
69 Chrysene-d12	466503	233252	933006	465428	-0.23
77 Perylene-d12	518203	259102	1036406	532593	2.78

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.43	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031511S.D

Lab ID: SLC0238-SCV1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

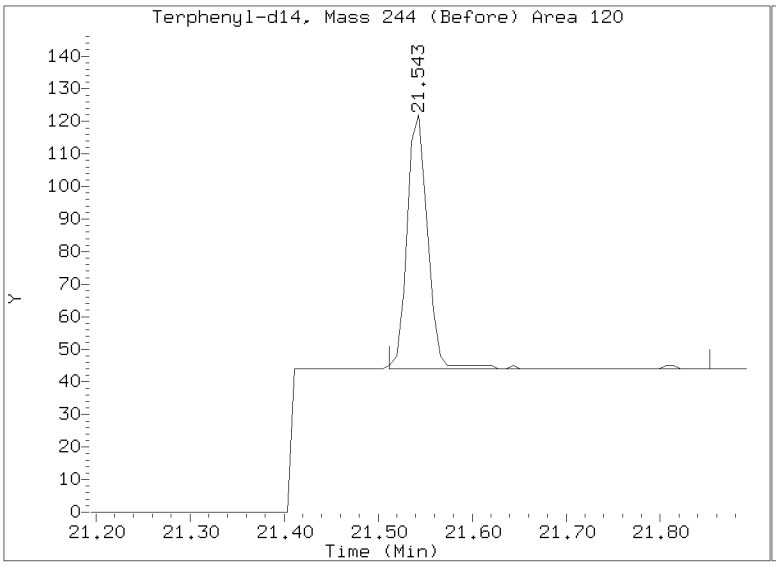
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

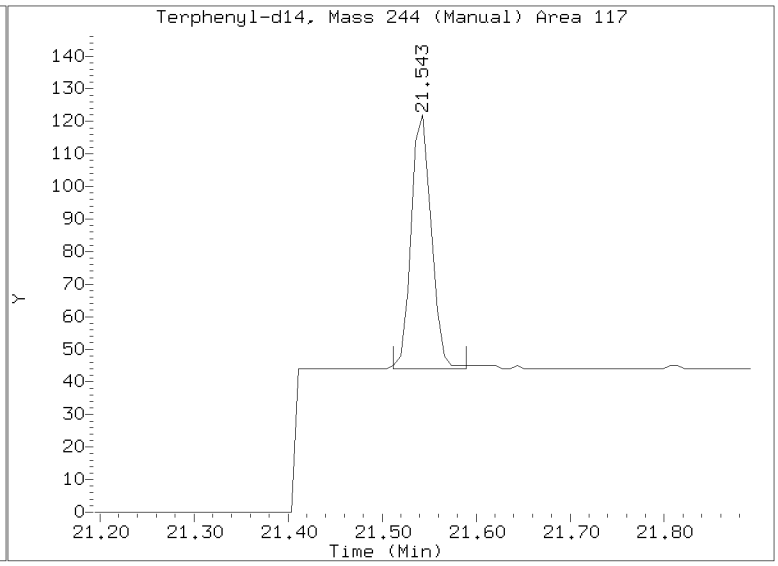
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031511S.D
Injection Date: 16-MAR-2023 02:16
Lab ID:SLC0238-SCV1 Client ID:
Report Date: 03/16/2023 14:49





Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT1003182303S.D	Calibration Date:	03/15/2023
Sequence:	SLC0505	Injection Date:	03/18/23
Lab Sample ID:	SLC0505-ICV1	Injection Time:	18:58
Sequence Name:	ABN 1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
1,4-Dichlorobenzene	A	1.0000	1.0	1.5031980	1.5176940		1.0	+/-20	
1,2-Dichlorobenzene	A	1.0000	1.0	1.4783140	1.4915860		0.9	+/-20	
Benzyl Alcohol	A	1.0000	1.0	0.9647610	0.9384046		-2.7	+/-20	
Benzoic acid	A	4.0000	3.5	0.1358970	0.1665182		-13.1	+/-20	
2,4-Dimethylphenol	A	2.0000	2.0	0.3457498	0.3393375		-1.9	+/-20	
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3478148	0.3573514		2.7	+/-20	
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5366720	0.5716591		6.5	+/-20	
Pentachlorophenol	A	2.0000	1.6	0.0934250	0.1037900		-22.4	+/-20	*
2-Fluorophenol	A	1.5000	1.53	1.2129820	1.2354040		1.9	+/-20	
p-Terphenyl-d14	A	1.0000	0.979	0.6517430	0.6382515		-2.1	+/-20	
1,4-Dichlorobenzene-d4	A	4.0000	4.0	46867.7500	1.0000		0.0		
Naphthalene-d8	A	4.0000	4.0	167312.2000	1.0000		0.0		
Acenaphthene-d10	A	4.0000	4.0	81972.4400	1.0000		0.0		
Phenanthrene-d10	A	4.0000	4.0	150166.2000	1.0000		0.0		
Chrysene-d12	A	4.0000	4.0	110890.6000	1.0000		0.0		
Perylene-d12	A	4.0000	4.0	124876.5000	1.0000		0.0		

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823033.D

Date : 18-MAR-2023 18:58

Client ID:

Instrument: nt10.i

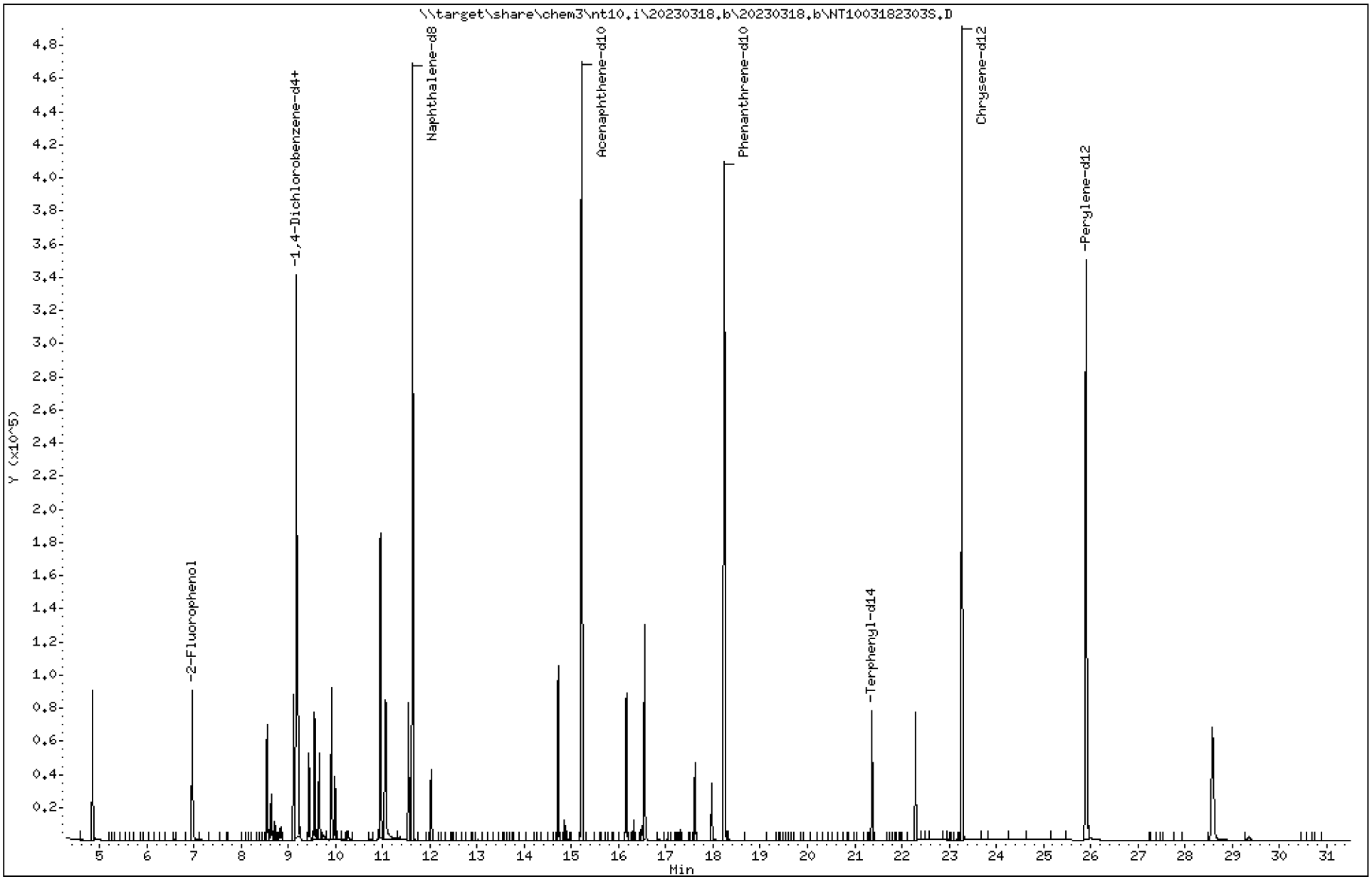
Sample Info: SLC0505-ICV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182303S.D
Lab Smp Id: SLC0505-ICV1
Inj Date : 18-MAR-2023 18:58 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0505-ICV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.957	6.957	(0.759)	91707	1.50000	1.528
	3 Phenol	94	8.541	8.541	(0.932)	82810	1.00000	1.006
	7 1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	77416	1.00000	1.005
*	8 1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	197953	4.00000	
	9 1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	75108	1.00000	1.010
	11 Benzyl alcohol	79	9.431	9.431	(1.029)	46440	1.00000	0.9727
	12 1,2-Dichlorobenzene	146	9.547	9.547	(1.041)	73816	1.00000	1.009
	13 2-Methylphenol	108	9.648	9.648	(1.052)	57586	1.00000	1.009
	15 4-Methylphenol	108	9.912	9.912	(1.081)	61283	1.00000	1.033
	16 N-Nitroso-di-n-propylamine	70	9.982	9.982	(1.089)	42548	1.00000	1.015
	22 2,4-Dimethylphenol	107	10.943	10.943	(0.941)	119449	2.00000	1.963
	24 Benzoic acid	105	11.053	11.053	(0.951)	117231	4.00000	3.476
	26 1,2,4-Trichlorobenzene	180	11.542	11.542	(0.993)	62895	1.00000	1.027
*	27 Naphthalene-d8	136	11.627	11.627	(1.000)	704013	4.00000	
	30 Hexachlorobutadiene	225	12.021	12.021	(1.034)	37971	1.00000	1.020
	39 Dimethylphthalate	163	14.714	14.714	(0.967)	123374	1.00000	1.104
*	42 Acenaphthene-d10	162	15.210	15.210	(1.000)	353977	4.00000	
	50 Diethylphthalate	149	16.161	16.161	(1.063)	130936	1.00000	1.131
	54 N-Nitrosodiphenylamine	169	16.547	16.547	(0.908)	98147	1.00000	1.065
	57 Hexachlorobenzene	284	17.611	17.611	(0.966)	41371	1.00000	1.003

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	58 Pentachlorophenol	266	17.968	17.968	(0.986)	35639	2.00000	1.552
*	59 Phenanthrene-d10	188	18.231	18.231	(1.000)	686752	4.00000	
$	66 Terphenyl-d14	244	21.364	21.364	(0.918)	95376	1.00000	0.9793
	67 Butylbenzylphthalate	149	22.285	22.285	(0.958)	91289	1.00000	1.148
*	69 Chrysene-d12	240	23.269	23.269	(1.000)	597733	4.00000	
*	77 Perylene-d12	264	25.909	25.909	(1.000)	645663	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.584	28.584	(1.103)	198485	1.00000	0.9415
	90 N-Nitrosodimethylamine	74	4.840	4.840	(0.528)	78046	2.00000	2.050

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182303S.D
Lab Smp Id: SLC0505-ICV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 15:03
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	197953	0.00
27 Naphthalene-d8	704013	352007	1408026	704013	0.00
42 Acenaphthene-d10	353977	176989	707954	353977	0.00
59 Phenanthrene-d10	686752	343376	1373504	686752	0.00
69 Chrysene-d12	597733	298867	1195466	597733	0.00
77 Perylene-d12	645663	322832	1291326	645663	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.00
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
77 Perylene-d12	25.91	25.41	26.41	25.91	0.00

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

REVIEW SUMMARY FOR FILE - NT1003182303S.D

Lab ID: SLC0505-ICV1
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 18:58

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b

Instrument: nt10.i Date: 18-MAR-2023 Method: 20230318.b\SIMABN2.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1003182303S.D 18-MAR-2023 18:58

Compound	%D
Pentachlorophenol	-22.4

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT1003182317S.D	Calibration Date:	03/15/2023
Sequence:	SLC0505	Injection Date:	03/19/23
Lab Sample ID:	SLC0505-ICV2	Injection Time:	03:57
Sequence Name:	ABN 1		

		CONC. (ug/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.5031980	1.4907760		-0.8	+/-20
1,2-Dichlorobenzene	A	1.0000	1.0	1.4783140	1.4754440		-0.2	+/-20
Benzyl Alcohol	A	1.0000	1.1	0.9647610	1.0415170		8.0	+/-20
Benzoic acid	A	4.0000	4.4	0.1358970	0.2119047		10.2	+/-20
2,4-Dimethylphenol	A	2.0000	2.0	0.3457498	0.3470588		0.4	+/-20
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3478148	0.3624203		4.2	+/-20
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5366720	0.5633043		5.0	+/-20
Pentachlorophenol	A	2.0000	1.9	0.0934250	0.1264504		-5.7	+/-20
2-Fluorophenol	A	1.5000	1.59	1.2129820	1.2824190		5.7	+/-20
p-Terphenyl-d14	A	1.0000	1.11	0.6517430	0.7251038		11.3	+/-20
1,4-Dichlorobenzene-d4	A	4.0000	4.0	46867.7500	1.0000		0.0	
Naphthalene-d8	A	4.0000	4.0	167312.2000	1.0000		0.0	
Acenaphthene-d10	A	4.0000	4.0	81972.4400	1.0000		0.0	
Phenanthrene-d10	A	4.0000	4.0	150166.2000	1.0000		0.0	
Chrysene-d12	A	4.0000	4.0	110890.6000	1.0000		0.0	
Perylene-d12	A	4.0000	4.0	124876.5000	1.0000		0.0	

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823178.D

Date : 19-MAR-2023 03:57

Client ID:

Instrument: nt10.i

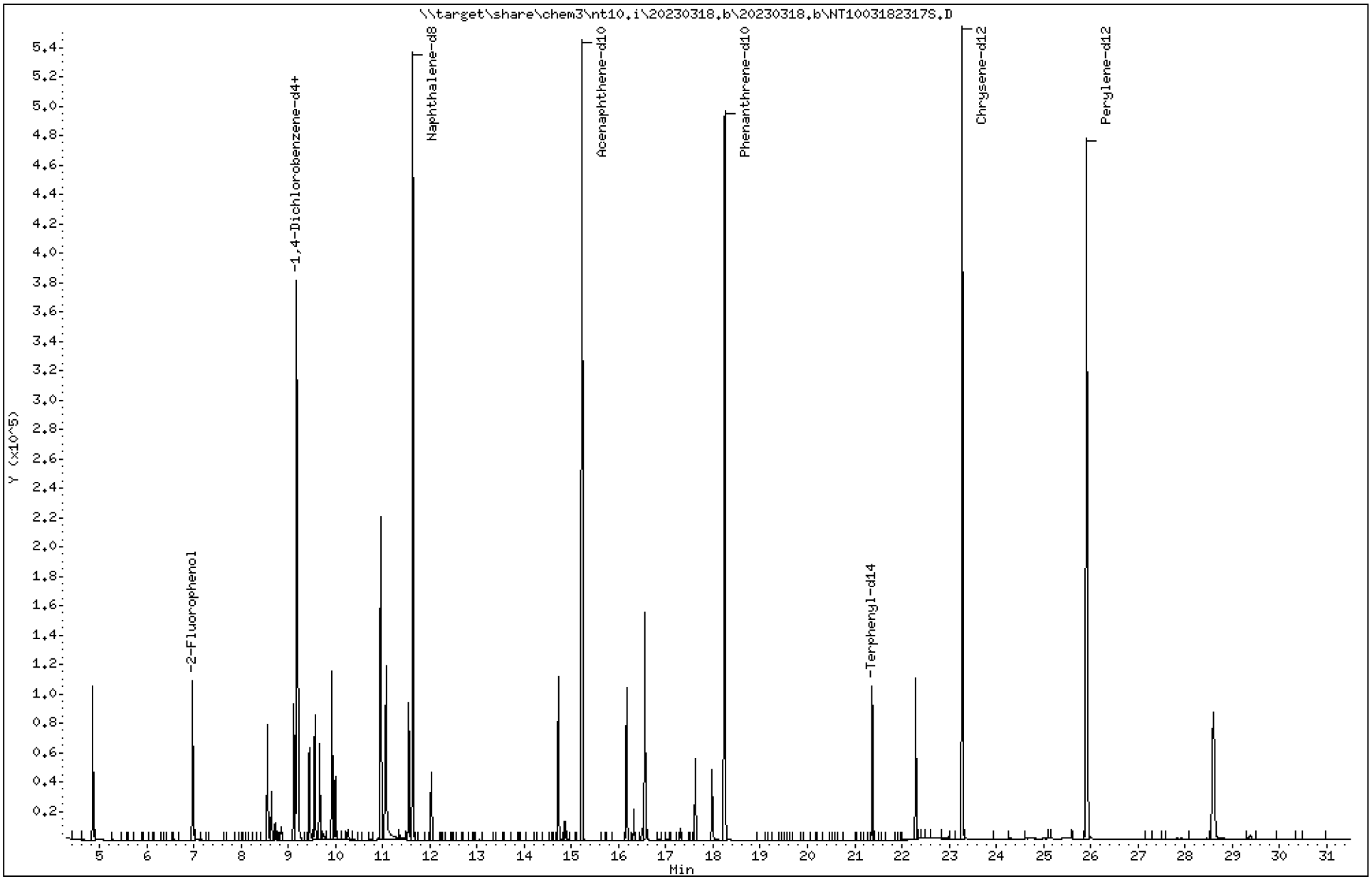
Sample Info: SLC0505-ICV2

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182317S.D
Lab Smp Id: SLC0505-ICV2
Inj Date : 19-MAR-2023 03:57 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0505-ICV2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.964	6.964	(0.759)	107400	1.50000	1.586
	3 Phenol	94	8.548	8.548	(0.932)	92955	1.00000	1.000
	7 1,3-Dichlorobenzene	146	9.105	9.105	(0.992)	87008	1.00000	1.001
*	8 1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	223328	4.00000	
	9 1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	83233	1.00000	0.9917
	11 Benzyl alcohol	79	9.438	9.438	(1.029)	58150	1.00000	1.080
	12 1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	82377	1.00000	0.9981
	13 2-Methylphenol	108	9.656	9.656	(1.052)	70119	1.00000	1.089
	15 4-Methylphenol	108	9.920	9.920	(1.081)	75815	1.00000	1.133
	16 N-Nitroso-di-n-propylamine	70	9.990	9.990	(1.089)	50744	1.00000	1.073
	22 2,4-Dimethylphenol	107	10.951	10.951	(0.941)	139329	2.00000	2.008
	24 Benzoic acid	105	11.070	11.070	(0.951)	170141	4.00000	4.407
	26 1,2,4-Trichlorobenzene	180	11.550	11.550	(0.993)	72748	1.00000	1.042
*	27 Naphthalene-d8	136	11.635	11.635	(1.000)	802913	4.00000	
	30 Hexachlorobutadiene	225	12.029	12.029	(1.034)	43483	1.00000	1.024
	39 Dimethylphthalate	163	14.722	14.722	(0.967)	139380	1.00000	1.113
*	42 Acenaphthene-d10	162	15.217	15.217	(1.000)	396793	4.00000	
	50 Diethylphthalate	149	16.161	16.161	(1.062)	157672	1.00000	1.215
	54 N-Nitrosodiphenylamine	169	16.554	16.554	(0.907)	115712	1.00000	1.050
	57 Hexachlorobenzene	284	17.619	17.619	(0.966)	50541	1.00000	1.024

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
58	Pentachlorophenol	266	17.975	17.975	(0.985)	51950	2.00000	1.887
* 59	Phenanthrene-d10	188	18.246	18.246	(1.000)	821666	4.00000	
$ 66	Terphenyl-d14	244	21.372	21.372	(0.918)	128192	1.00000	1.113
67	Butylbenzylphthalate	149	22.293	22.293	(0.958)	123040	1.00000	1.305
* 69	Chrysene-d12	240	23.277	23.277	(1.000)	707165	4.00000	
* 77	Perylene-d12	264	25.917	25.917	(1.000)	813685	4.00000	
79	Dibenzo(a,h)anthracene	278	28.607	28.607	(1.104)	246344	1.00000	0.9272
90	N-Nitrosodimethylamine	74	4.848	4.848	(0.528)	87674	2.00000	2.041

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182317S.D
Lab Smp Id: SLC0505-ICV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	223328	12.82
27 Naphthalene-d8	704013	352007	1408026	802913	14.05
42 Acenaphthene-d10	353977	176989	707954	396793	12.10
59 Phenanthrene-d10	686752	343376	1373504	821666	19.65
69 Chrysene-d12	597733	298867	1195466	707165	18.31
77 Perylene-d12	645663	322832	1291326	813685	26.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.18	0.08
27 Naphthalene-d8	11.63	11.13	12.13	11.64	0.07
42 Acenaphthene-d10	15.21	14.71	15.71	15.22	0.05
59 Phenanthrene-d10	18.23	17.73	18.73	18.25	0.08
69 Chrysene-d12	23.27	22.77	23.77	23.28	0.03
77 Perylene-d12	25.91	25.41	26.41	25.92	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182317S.D

Lab ID: SLC0505-ICV2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 03:57

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

No RRT check. Ccal file.

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Q-FLAG SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b

Instrument: nt10.i Date: 19-MAR-2023 Method: 20230318.b\SIMABN2.m

INITIAL CAL: 15-MAR-2023

Compound	%RSD or R^2
NO Q-FLAGS	

ICV CAL: NT1003182317S.D 19-MAR-2023 03:57

Compound	%D
Diethylphthalate	21.5
Butylbenzylphthalate	30.5

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT10031511S.D	Calibration Date:	03/15/2023
Sequence:	SLC0238	Injection Date:	03/16/23
Lab Sample ID:	SLC0238-SCV1	Injection Time:	02:16
Sequence Name:	SCV 5.0		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
1,4-Dichlorobenzene	A	5.0000	4.8	1.5031980	1.4545320		-3.2	+/-20	
1,2-Dichlorobenzene	A	5.0000	4.7	1.4783140	1.3833330		-6.4	+/-20	
Benzyl Alcohol	A	5.0000	5.2	0.9647610	0.9996284		3.6	+/-20	
Benzoic acid	A	10.000	6.7	0.1358970	0.1310150		-32.5	+/-20	*
2,4-Dimethylphenol	A	5.0000	3.7	0.3457498	0.2530995		-26.8	+/-20	*
1,2,4-Trichlorobenzene	A	5.0000	4.4	0.3478148	0.3092350		-11.1	+/-20	
N-Nitrosodiphenylamine	A	5.0000	5.1	0.5366720	0.5452949		1.6	+/-20	
Pentachlorophenol	A	5.0000	4.4	0.0934250	0.1202603		-11.6	+/-20	
2-Fluorophenol	A	7.5000	0.00	1.2129820					
p-Terphenyl-d14	A	5.0000	0.00154	0.6517430	0.0002011		-100		

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

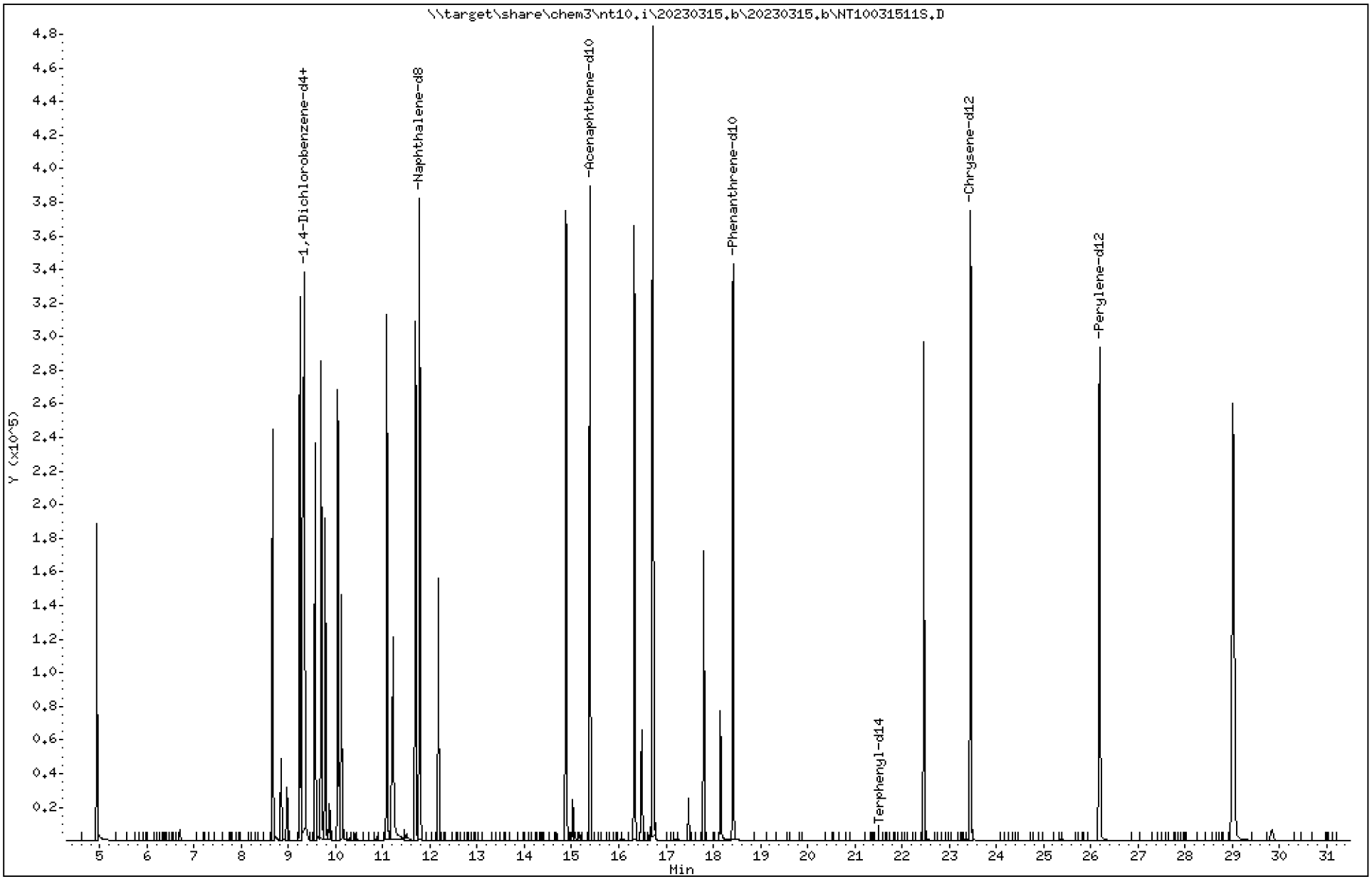
Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

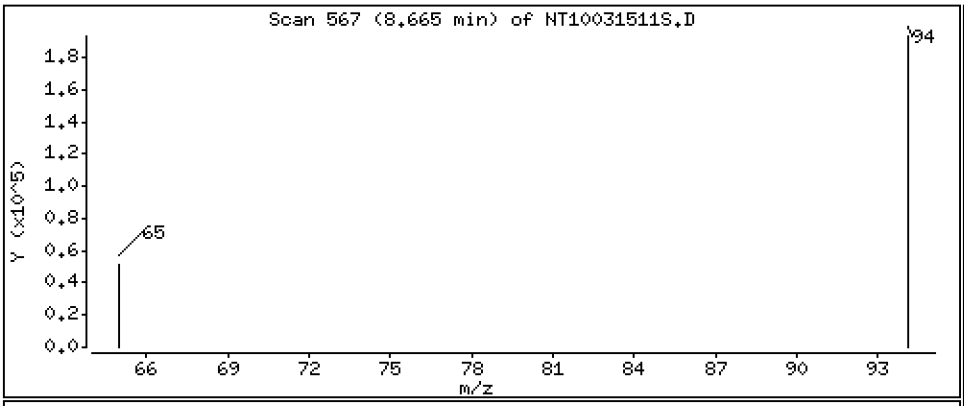
Operator: JGR

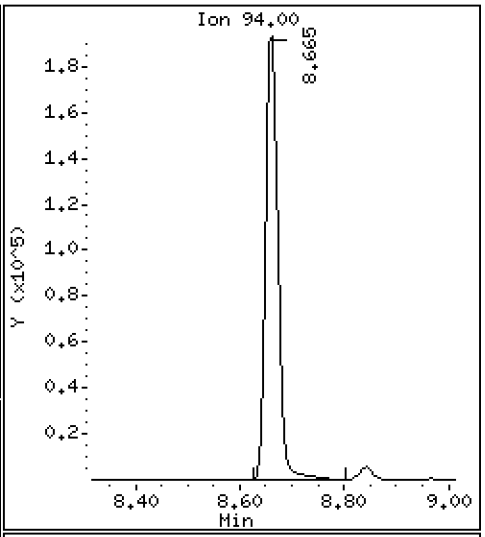
Column phase: ZB-5msi

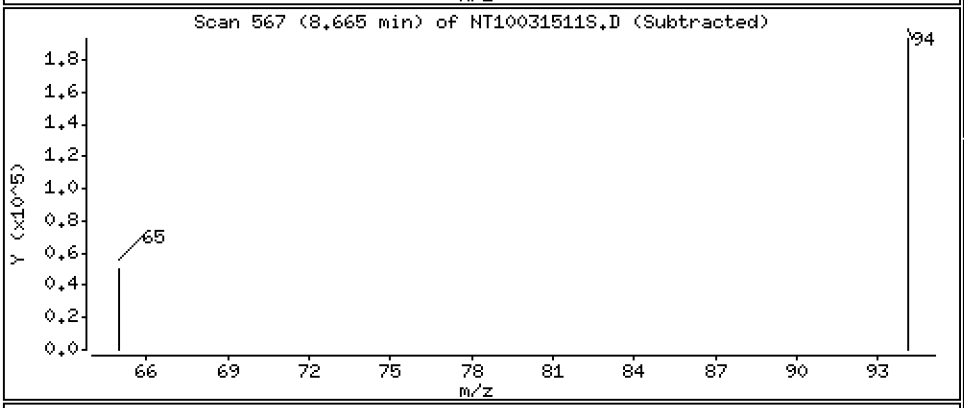
Column diameter: 0.25

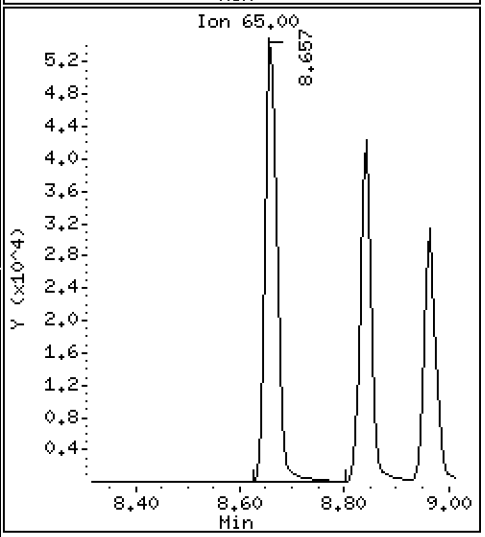
3 Phenol

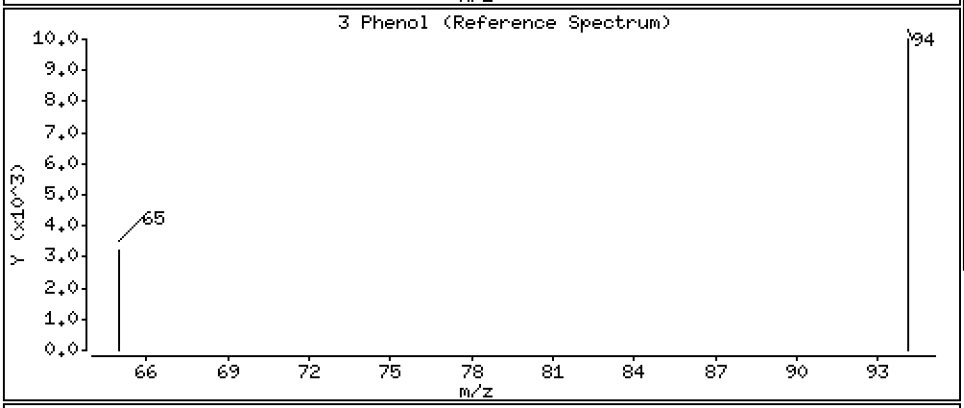
Concentration: 4.373 ug/L

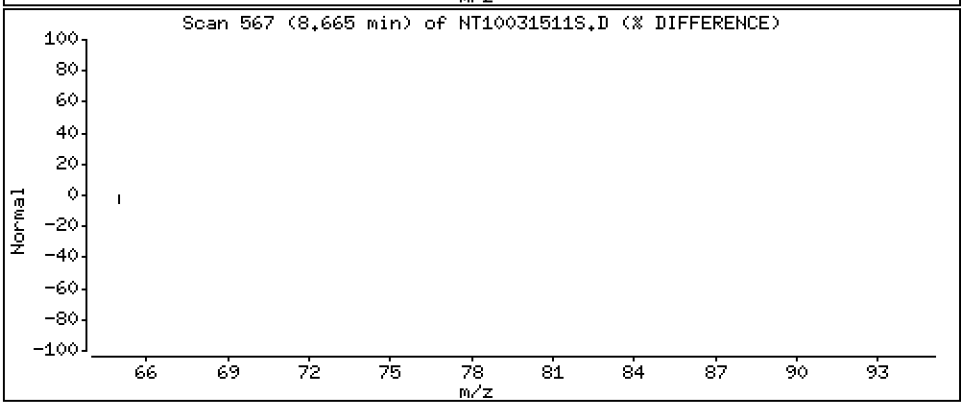












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

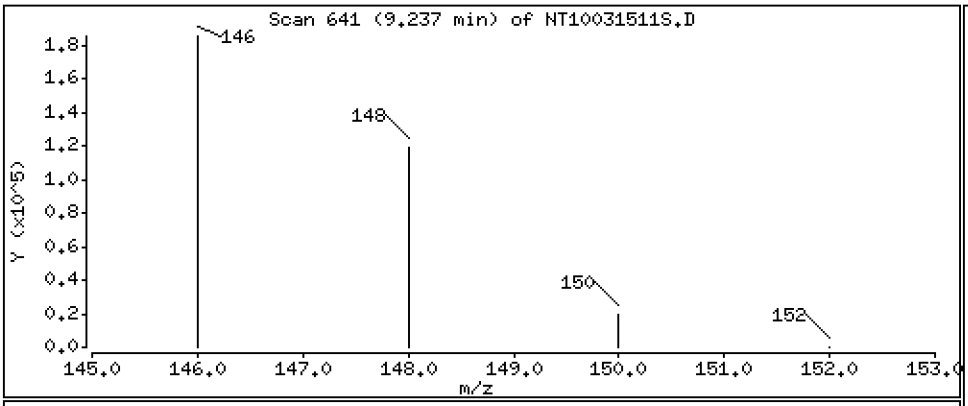
Operator: JGR

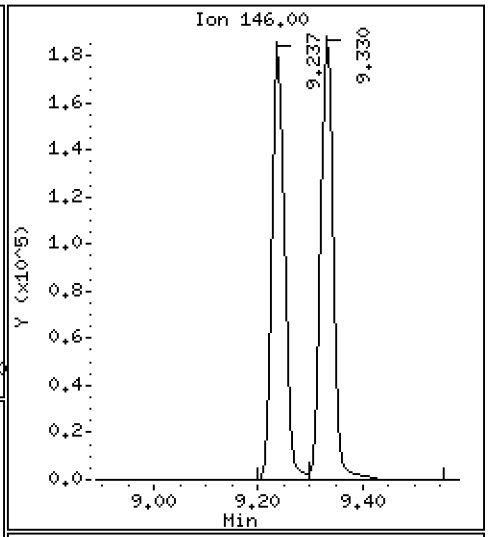
Column phase: ZB-5msi

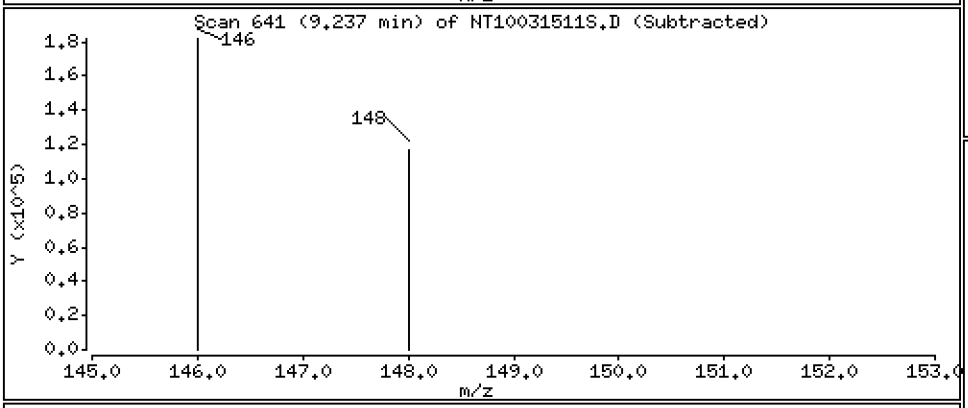
Column diameter: 0.25

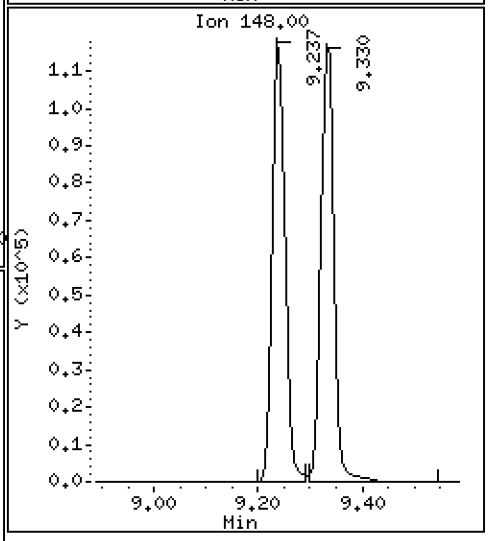
7 1,3-Dichlorobenzene

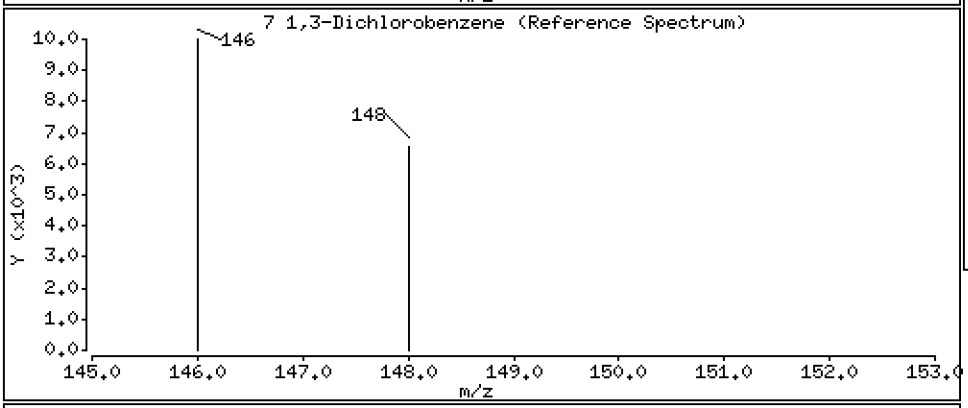
Concentration: 4.643 ug/L

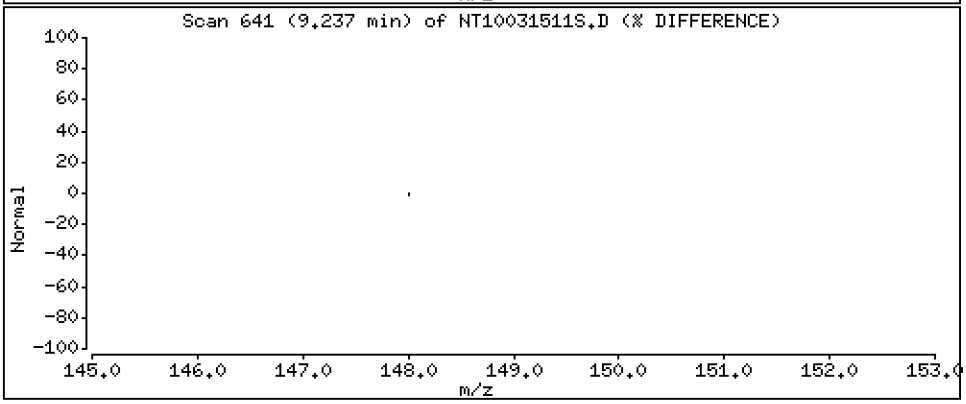












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

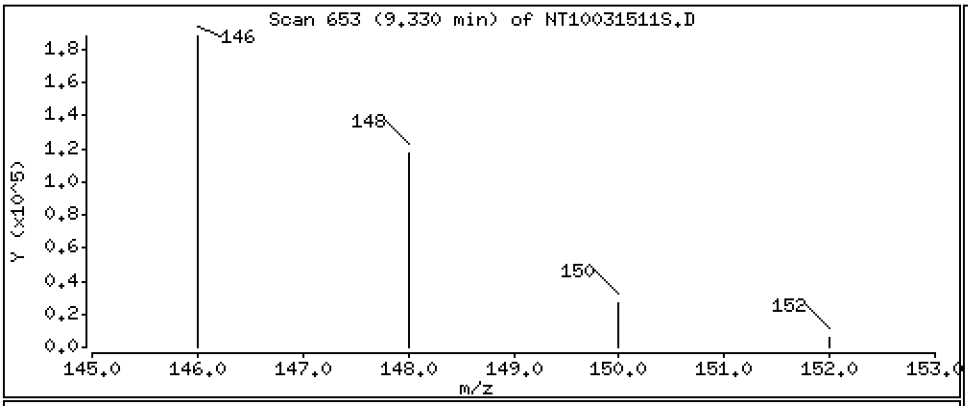
Operator: JGR

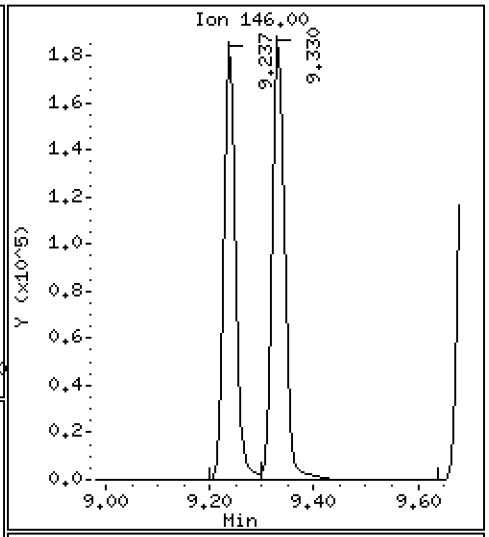
Column phase: ZB-5msi

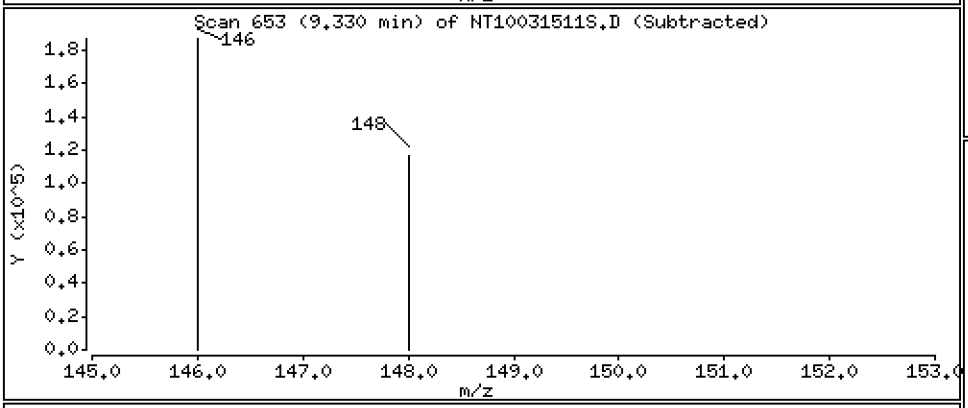
Column diameter: 0.25

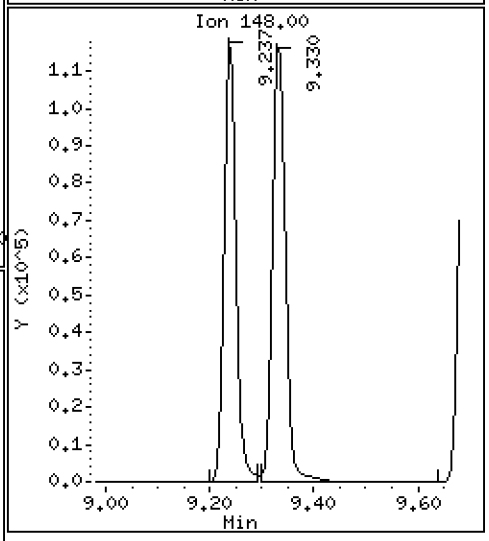
9 1,4-Dichlorobenzene

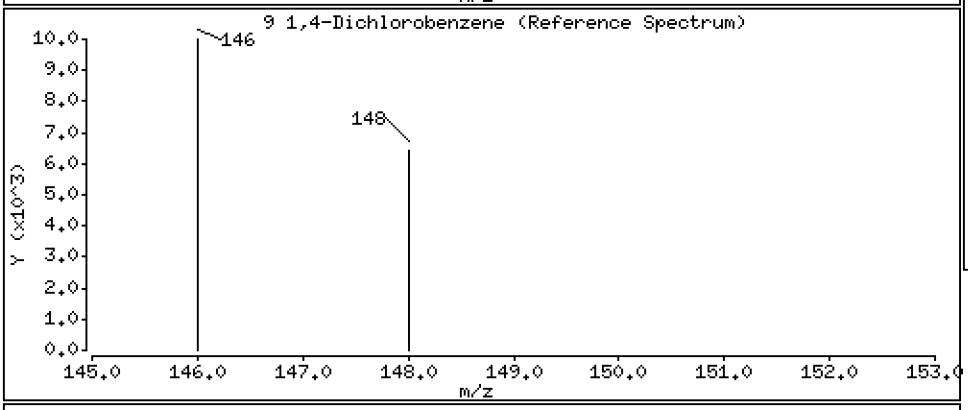
Concentration: 4.838 ug/L

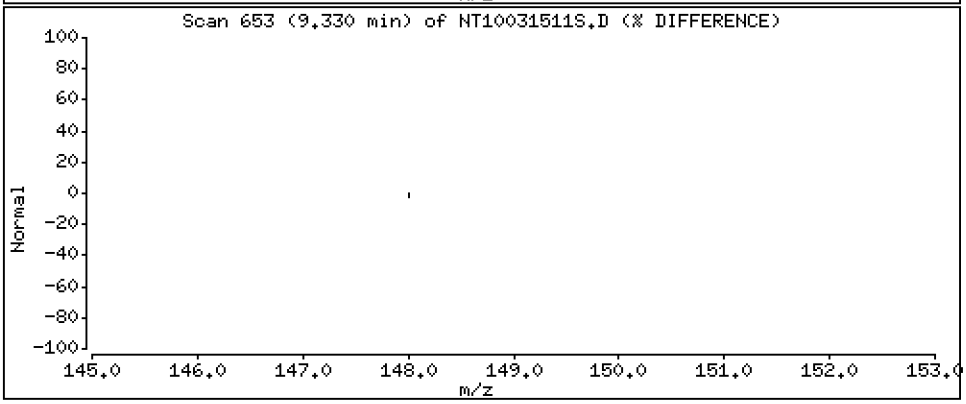












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

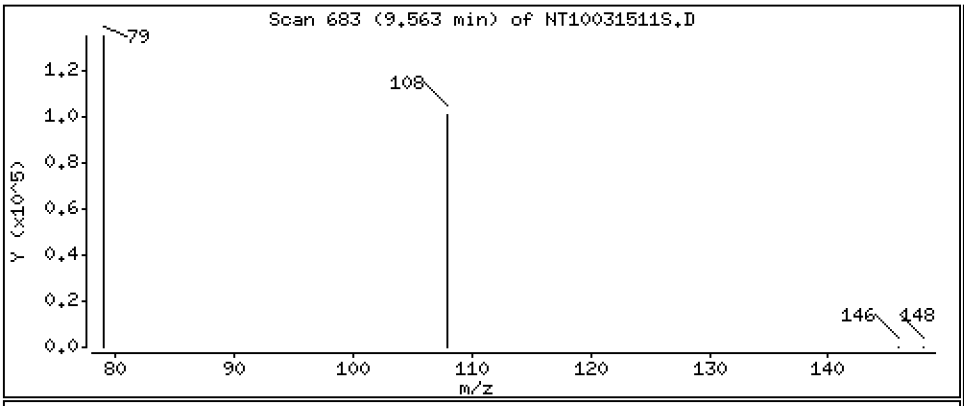
Operator: JGR

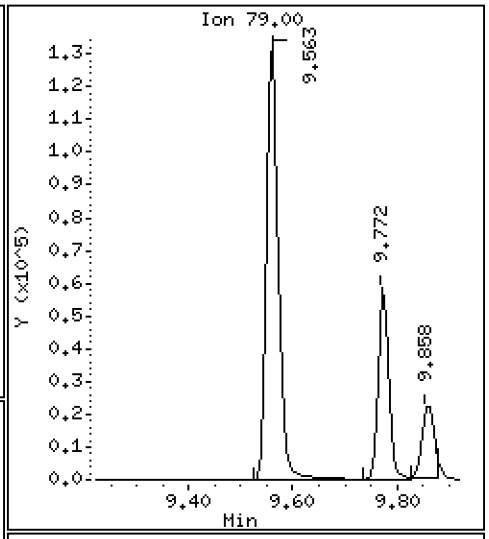
Column phase: ZB-5msi

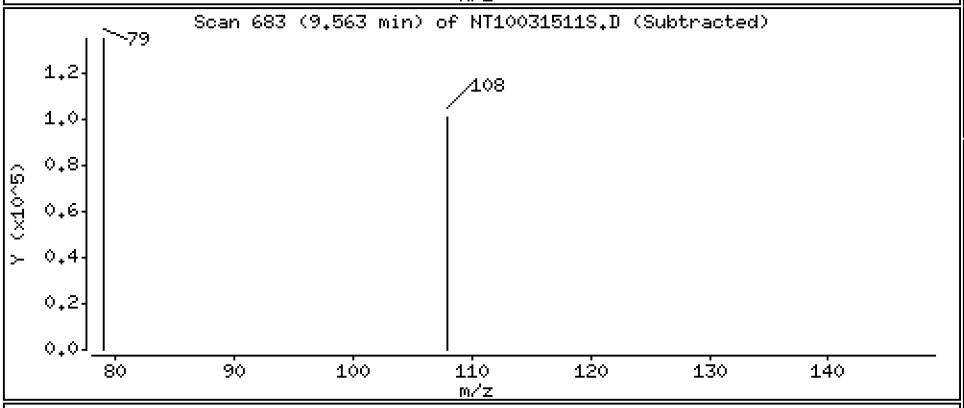
Column diameter: 0.25

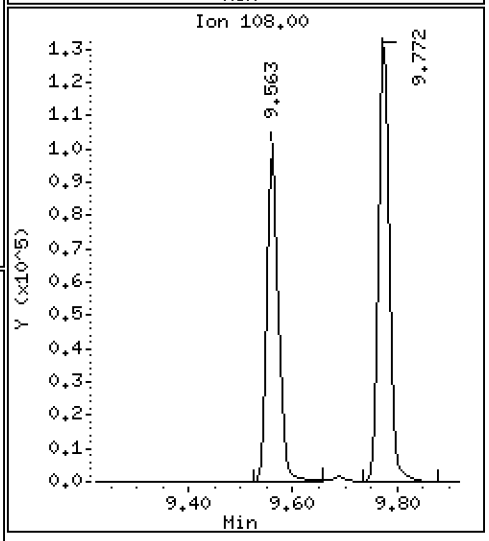
11 Benzyl alcohol

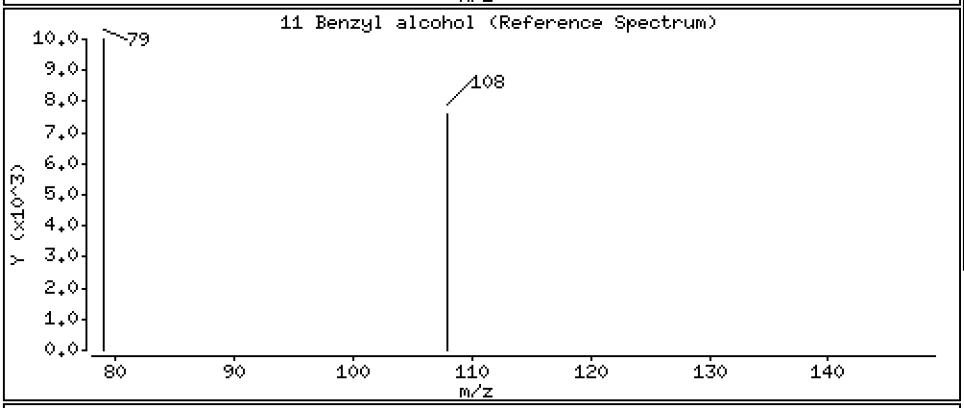
Concentration: 5.181 ug/L

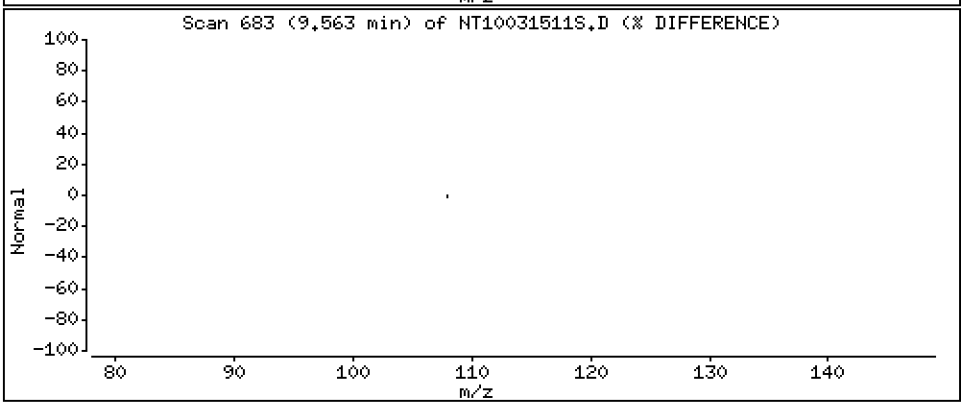












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

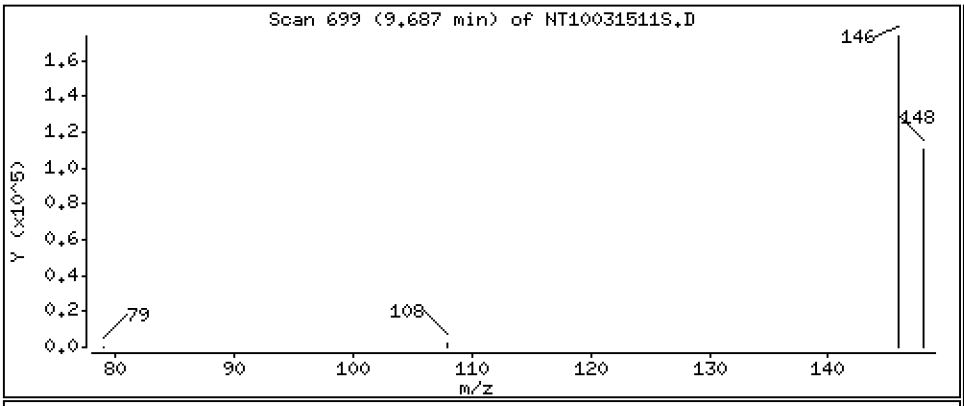
Operator: JGR

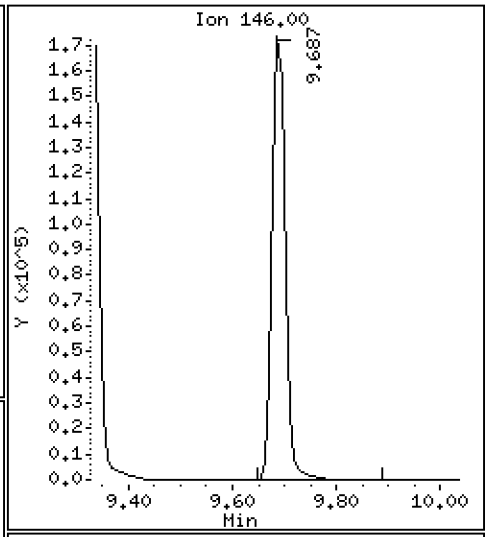
Column phase: ZB-5msi

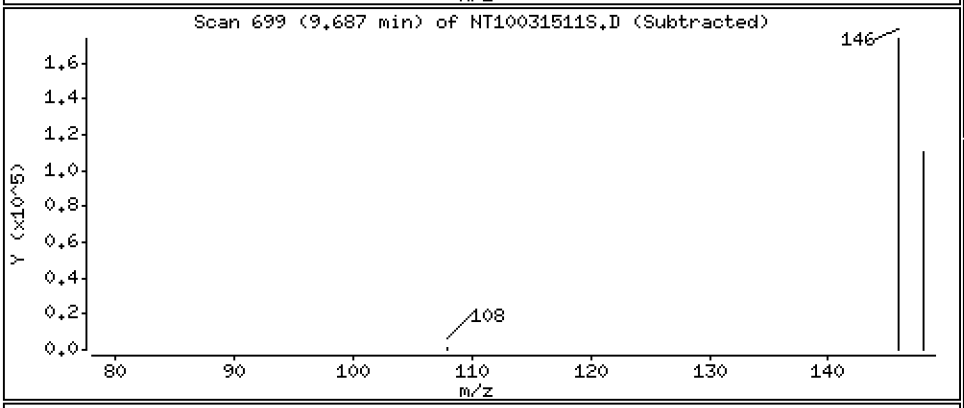
Column diameter: 0.25

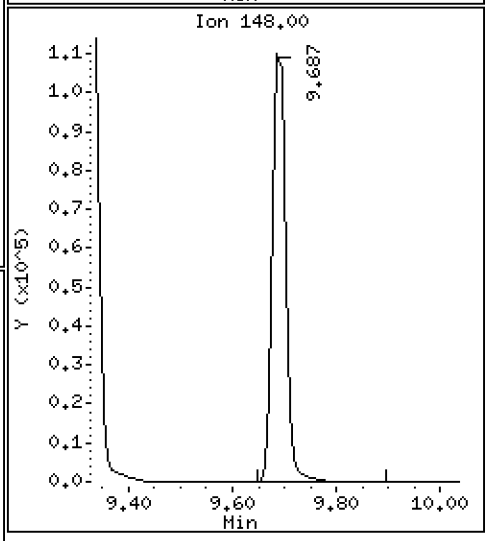
12 1,2-Dichlorobenzene

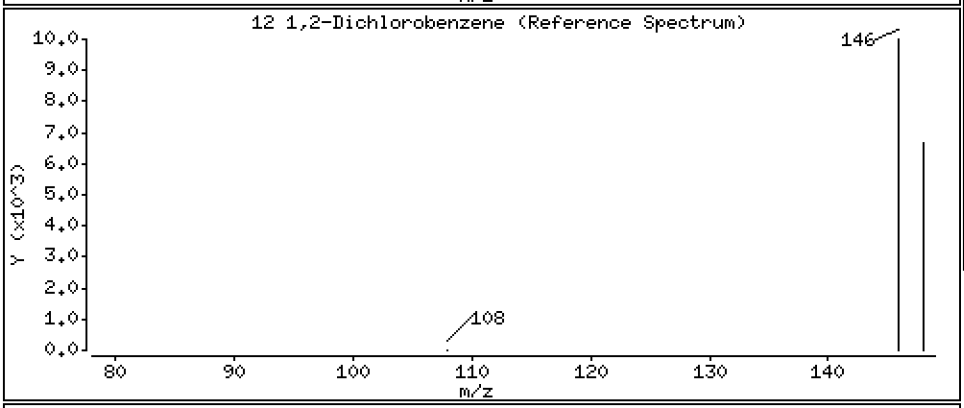
Concentration: 4.679 ug/L

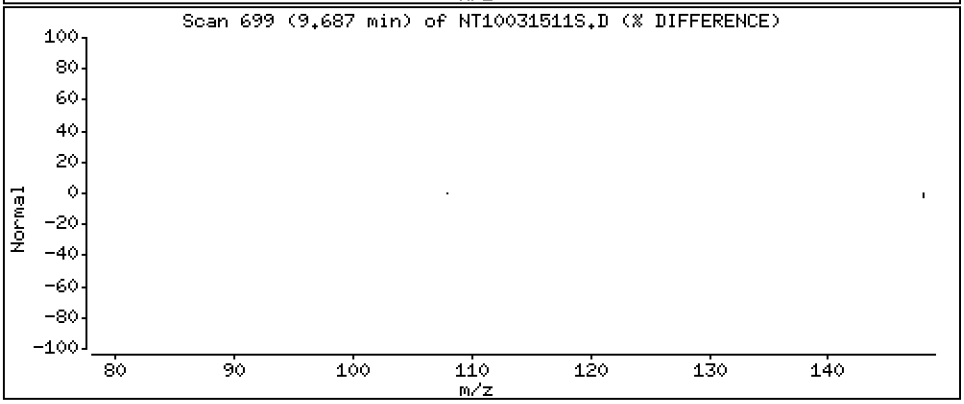












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

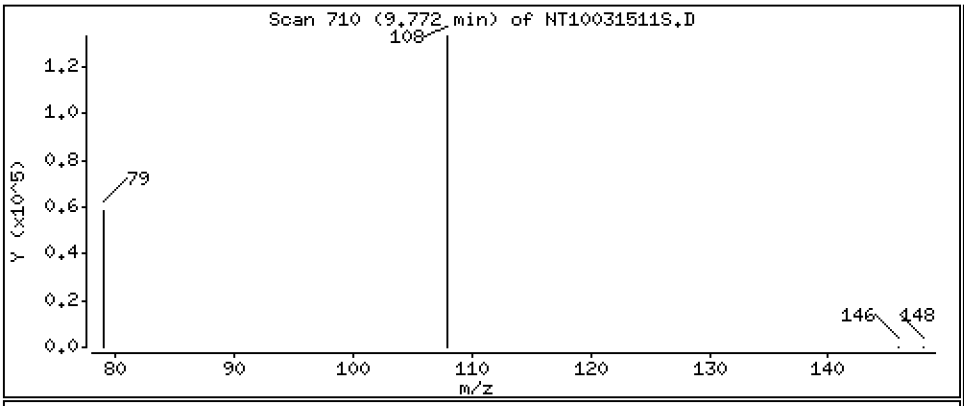
Operator: JGR

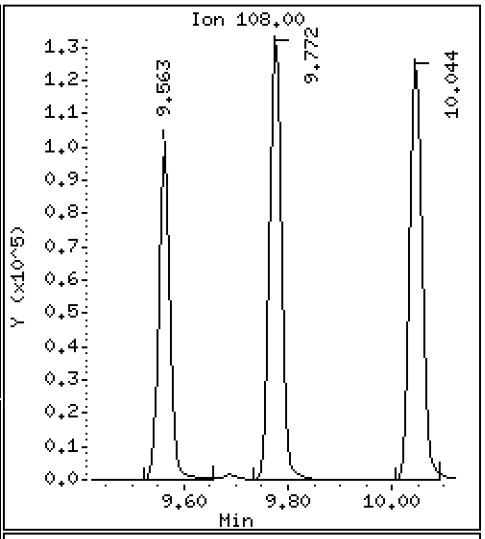
Column phase: ZB-5msi

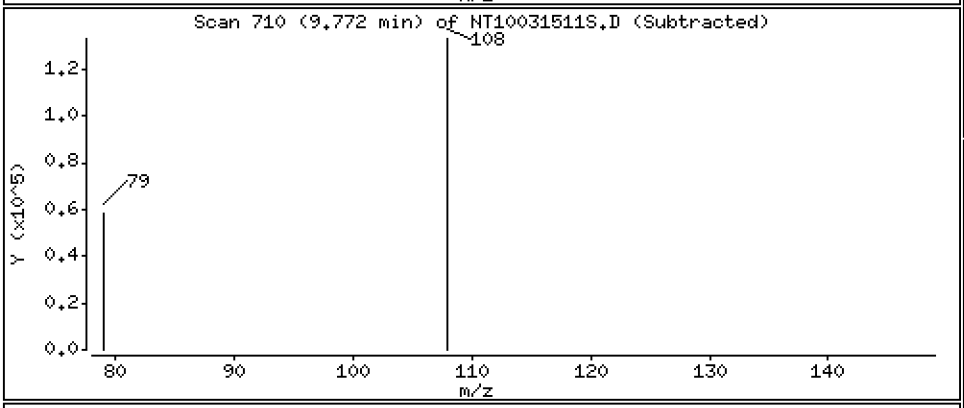
Column diameter: 0.25

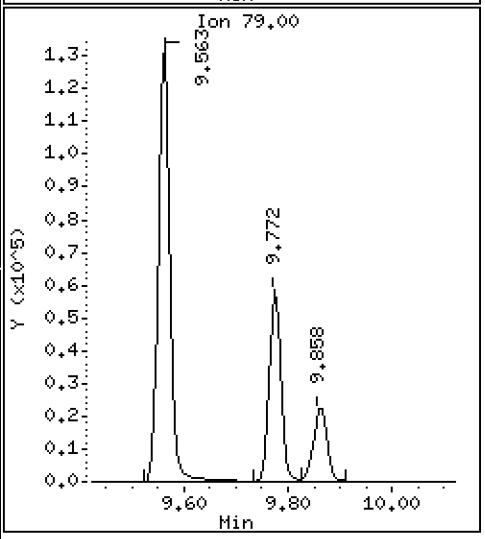
13 2-Methylphenol

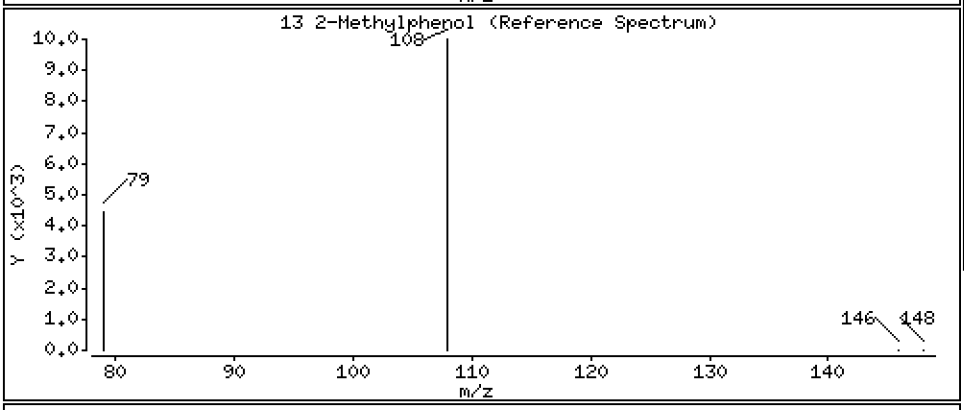
Concentration: 4.197 ug/L

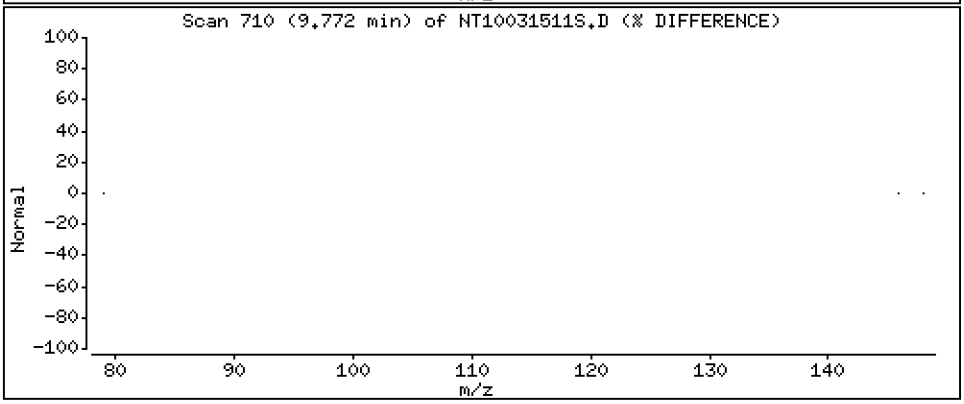












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

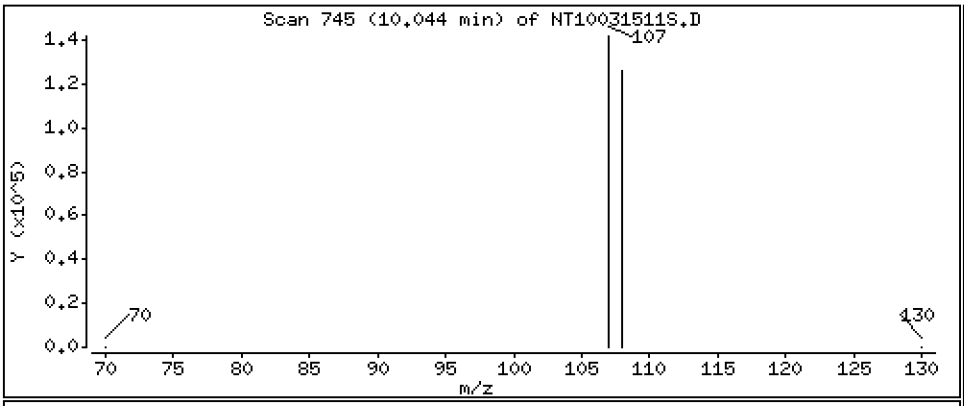
Operator: JGR

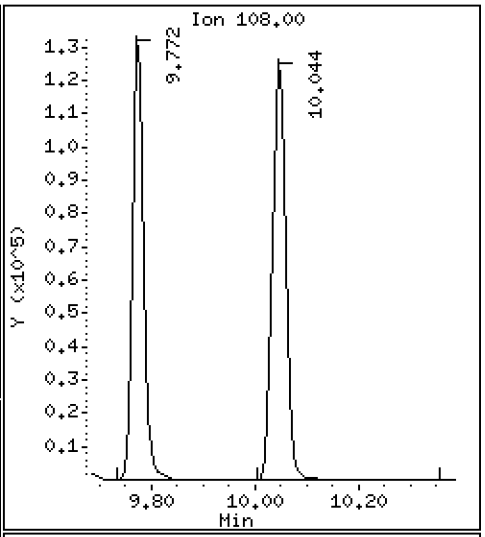
Column phase: ZB-5msi

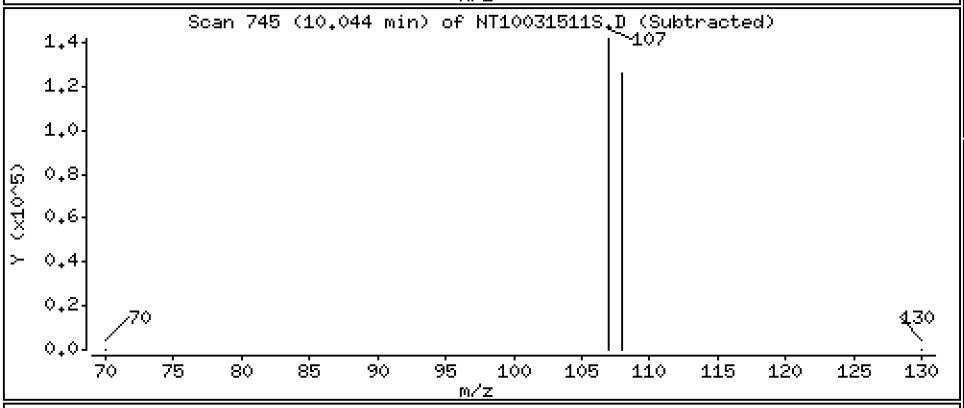
Column diameter: 0.25

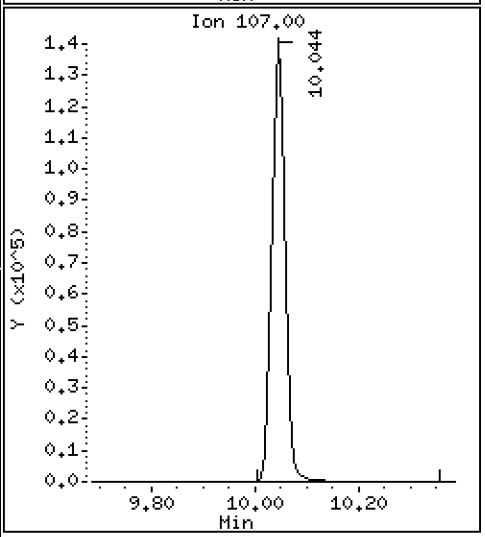
15 4-Methylphenol

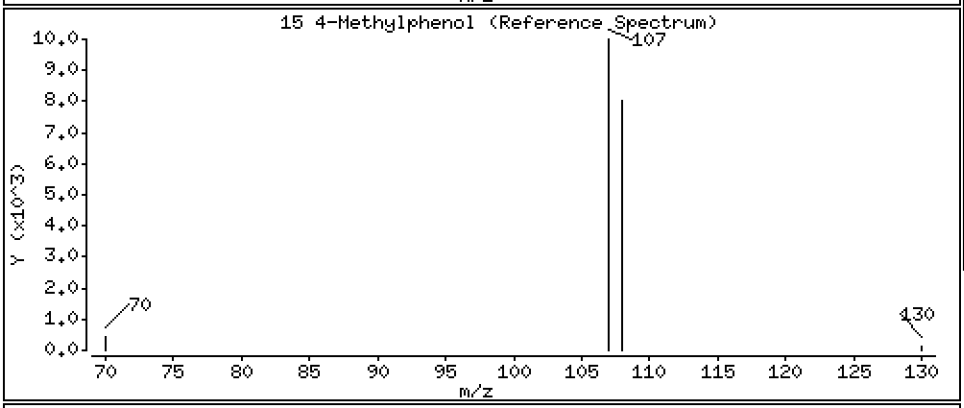
Concentration: 4.463 ug/L

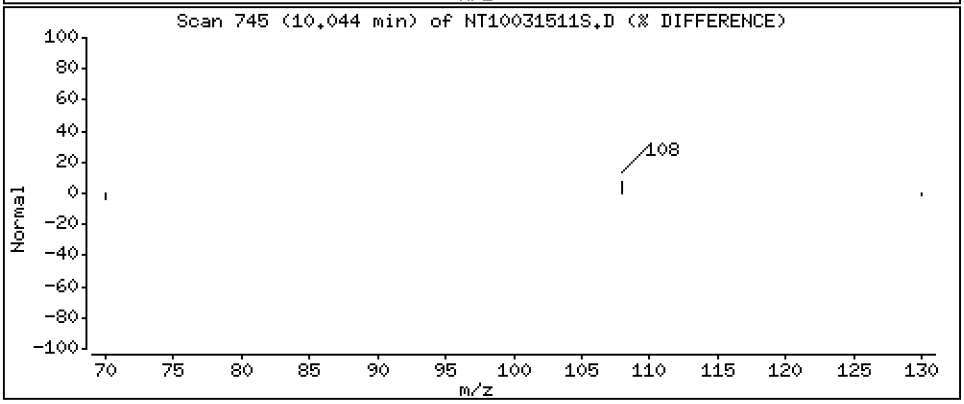












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

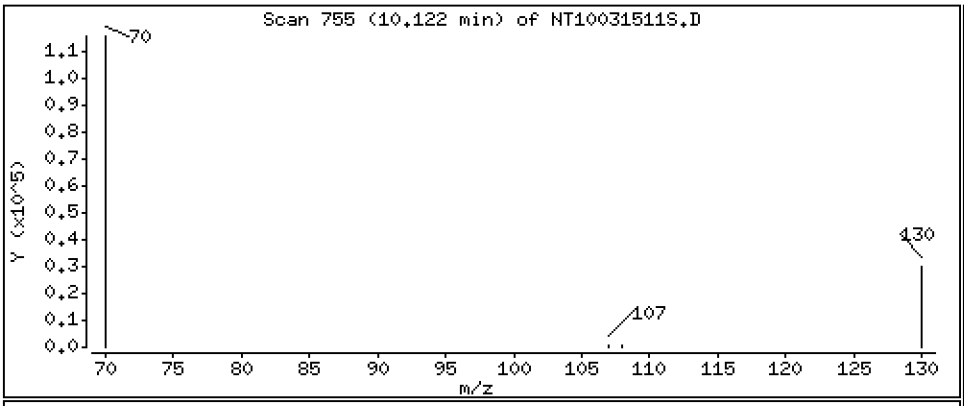
Operator: JGR

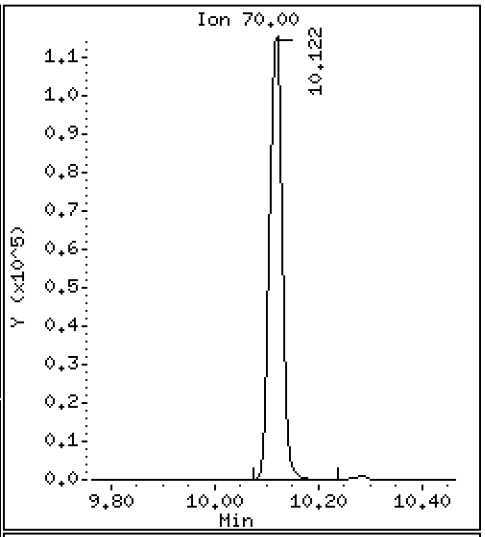
Column phase: ZB-5msi

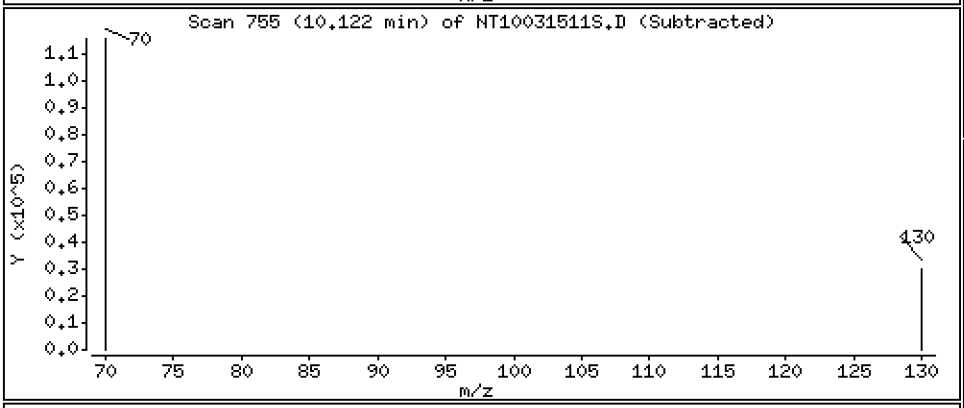
Column diameter: 0.25

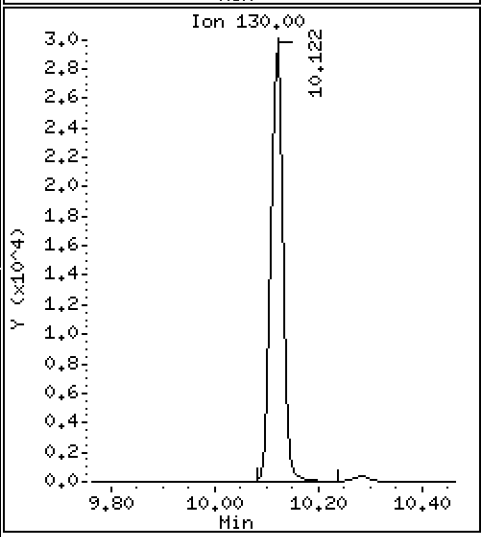
16 N-Nitroso-di-n-propylamine

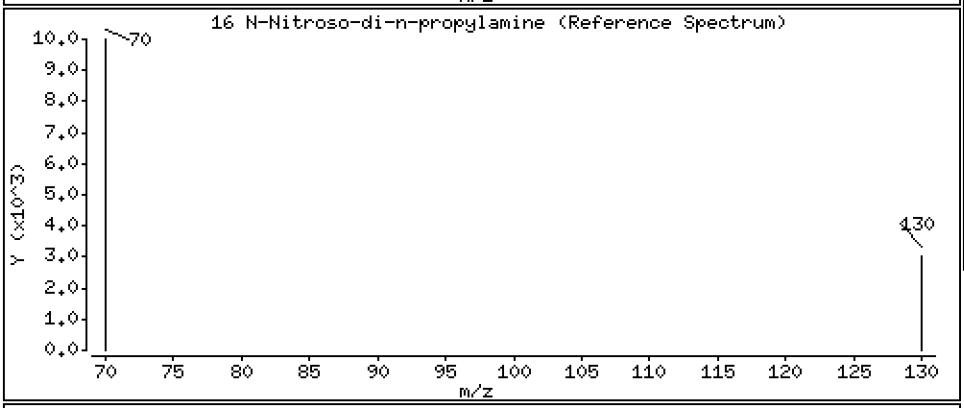
Concentration: 5.282 ug/L

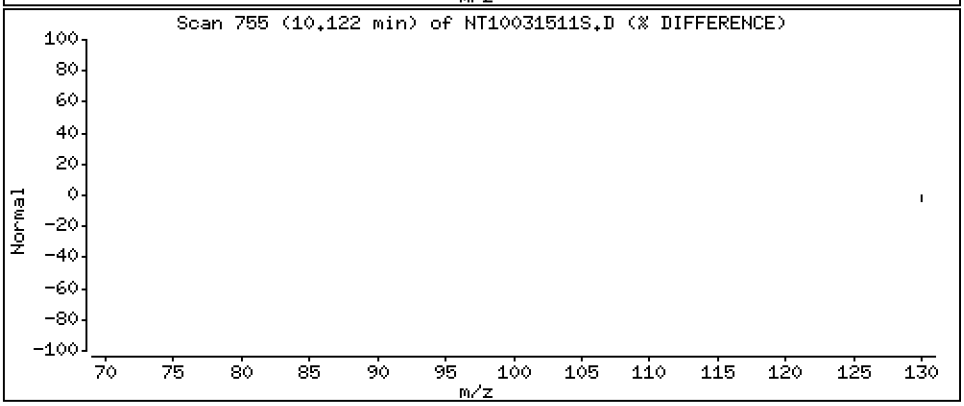












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

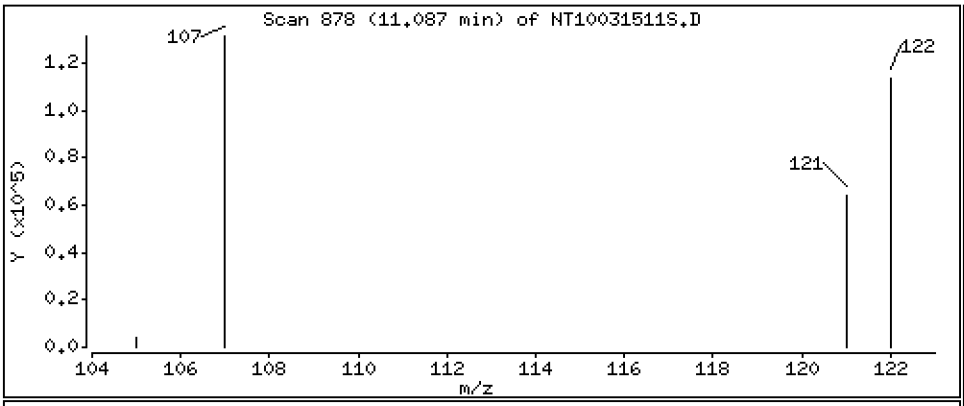
Operator: JGR

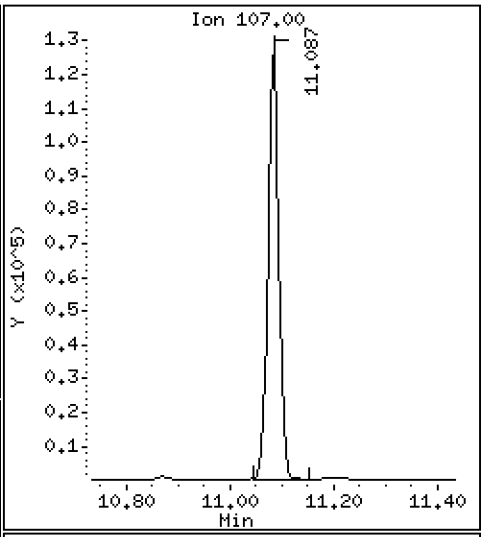
Column phase: ZB-5msi

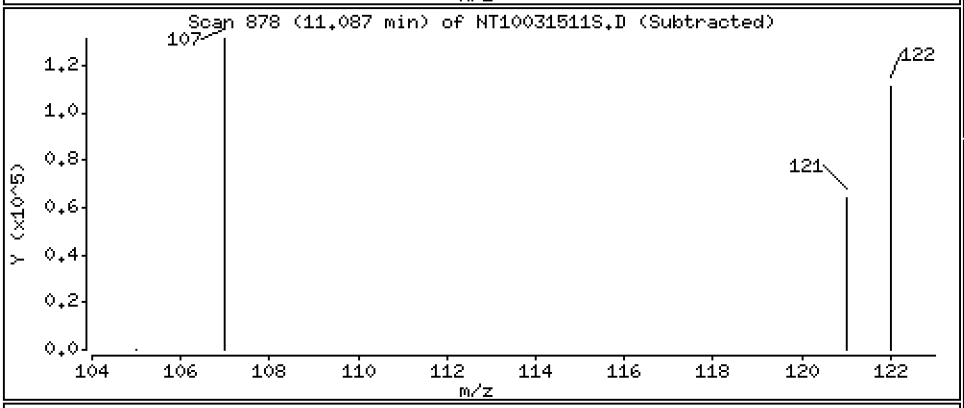
Column diameter: 0.25

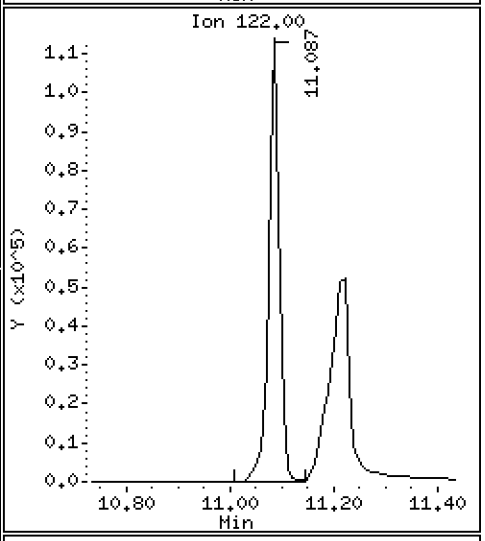
22 2,4-Dimethylphenol

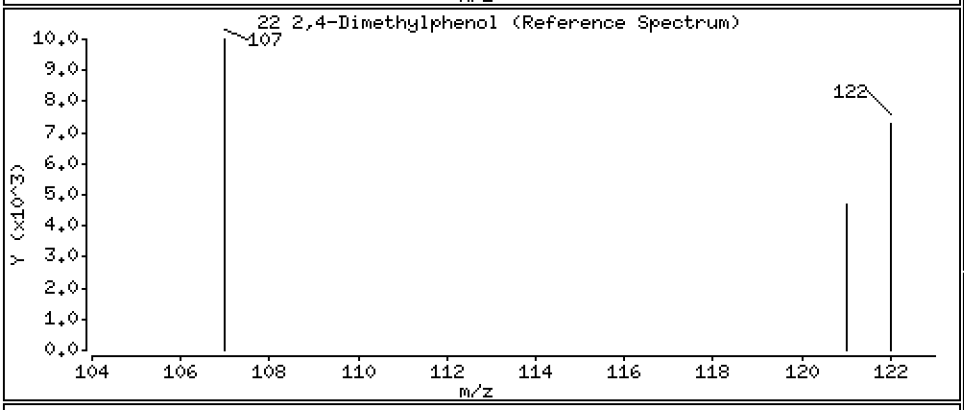
Concentration: 3.660 ug/L

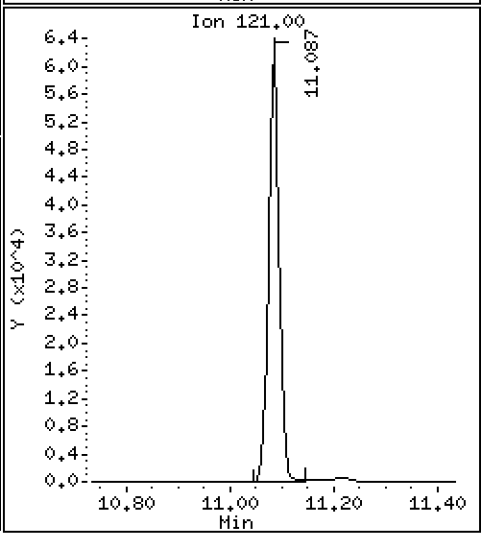


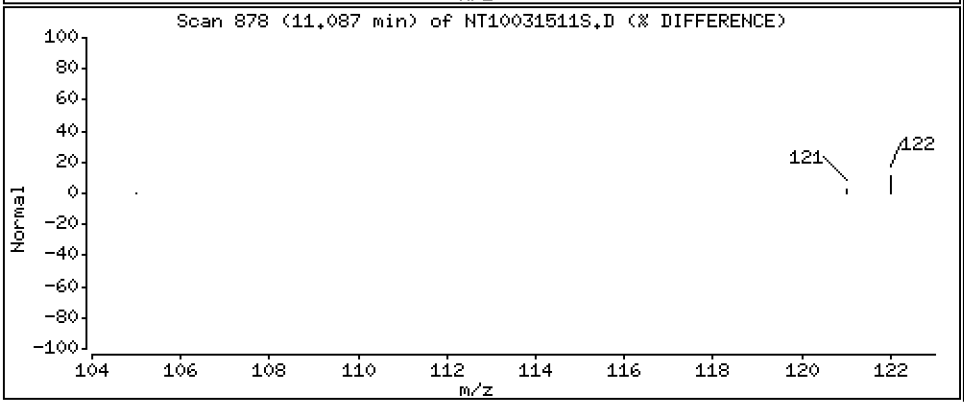












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Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

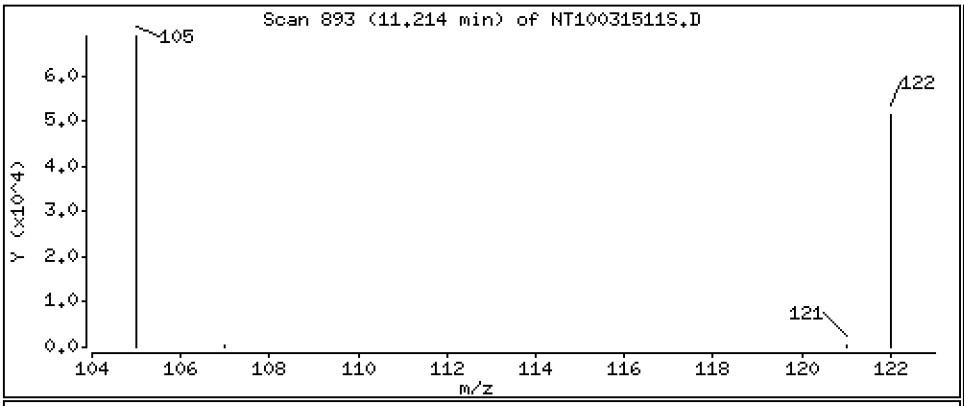
Operator: JGR

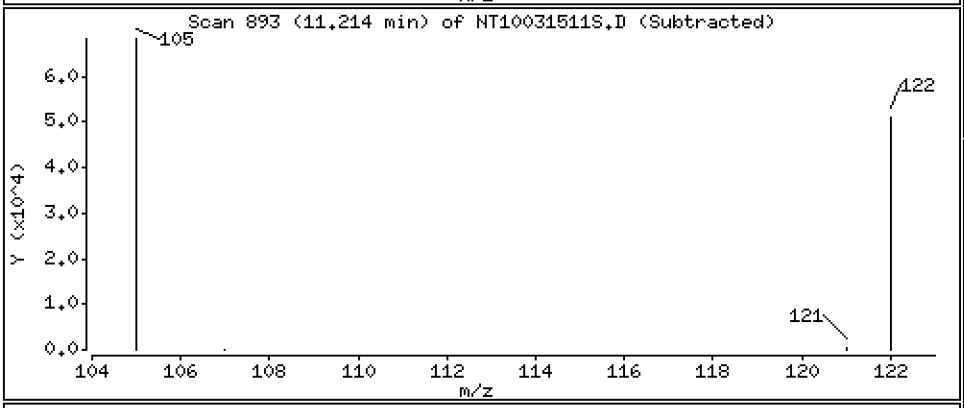
Column phase: ZB-5msi

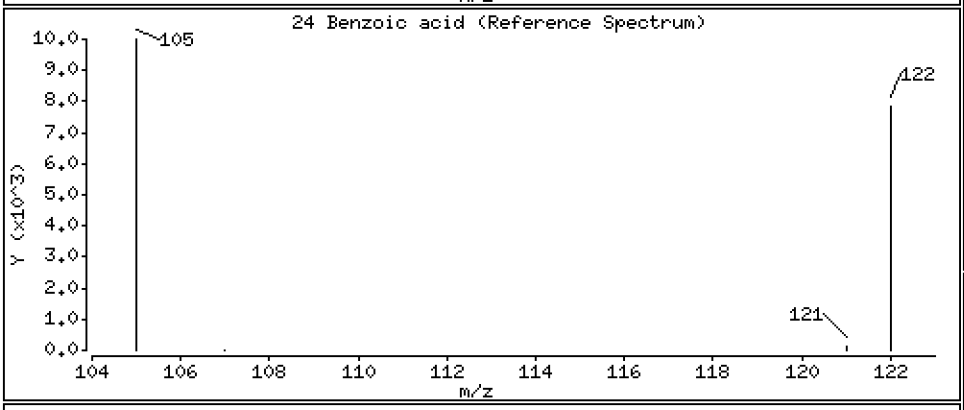
Column diameter: 0.25

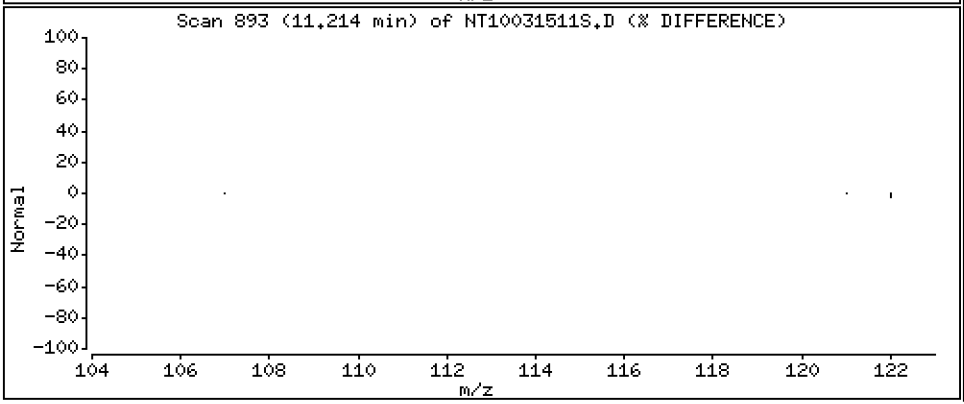
24 Benzoic acid

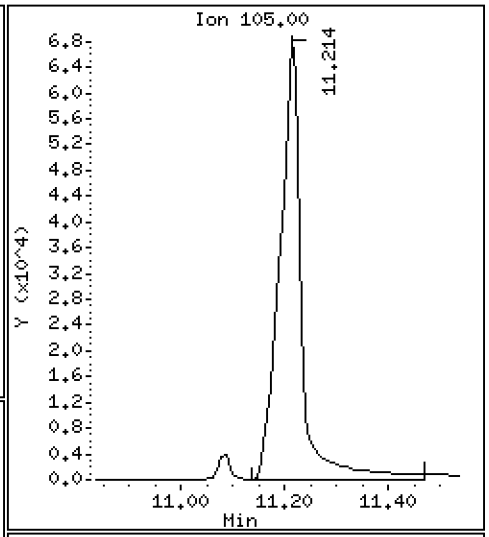
Concentration: 6.746 ug/L

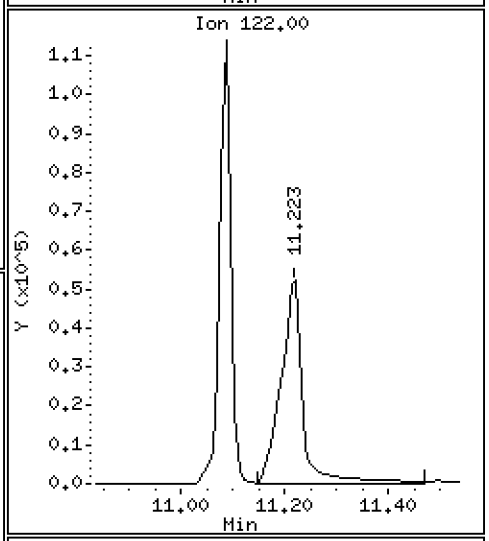


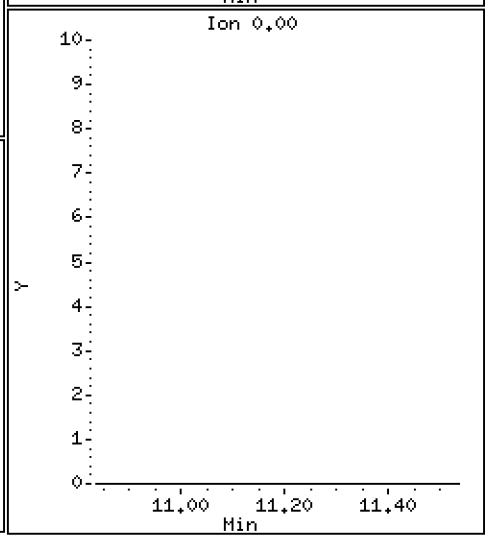












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

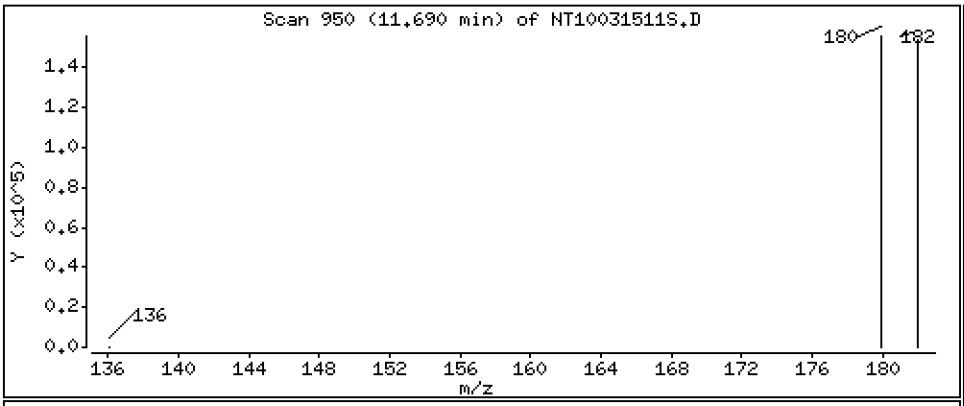
Operator: JGR

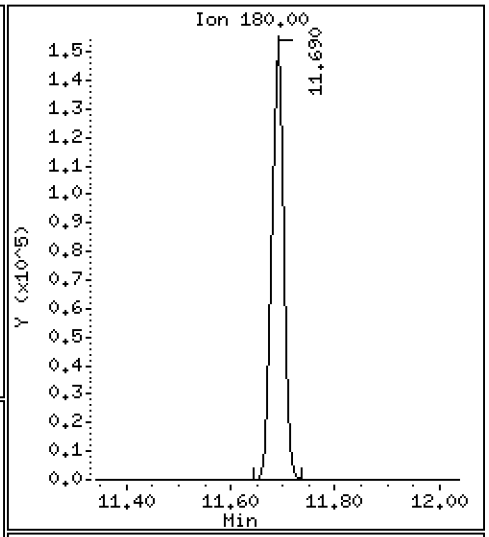
Column phase: ZB-5msi

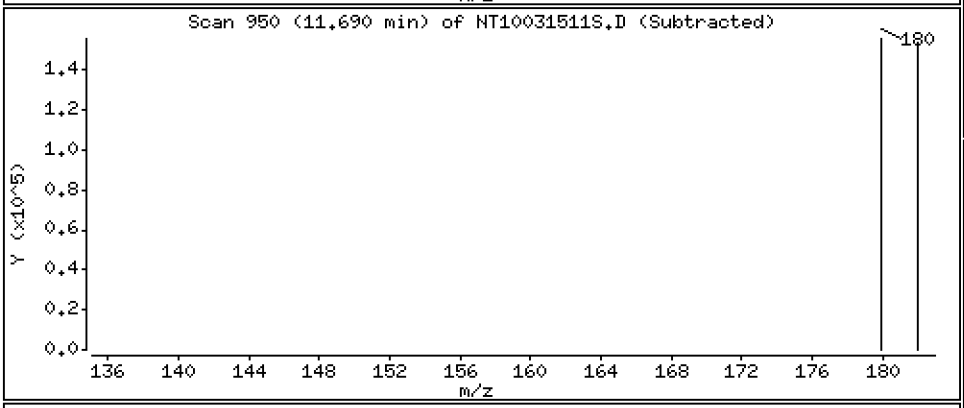
Column diameter: 0.25

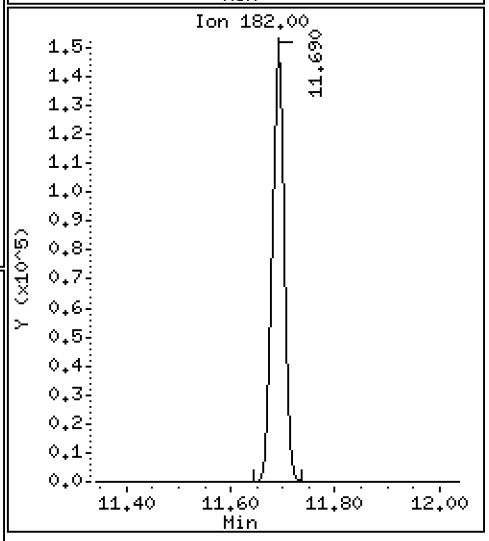
26 1,2,4-Trichlorobenzene

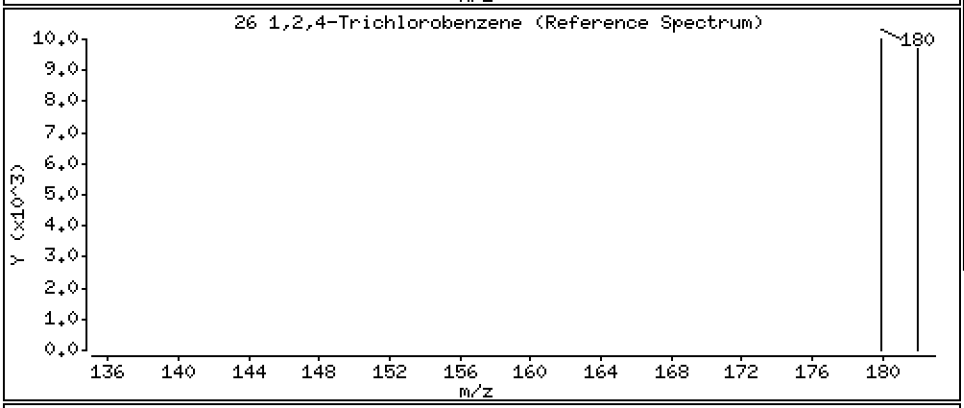
Concentration: 4.445 ug/L

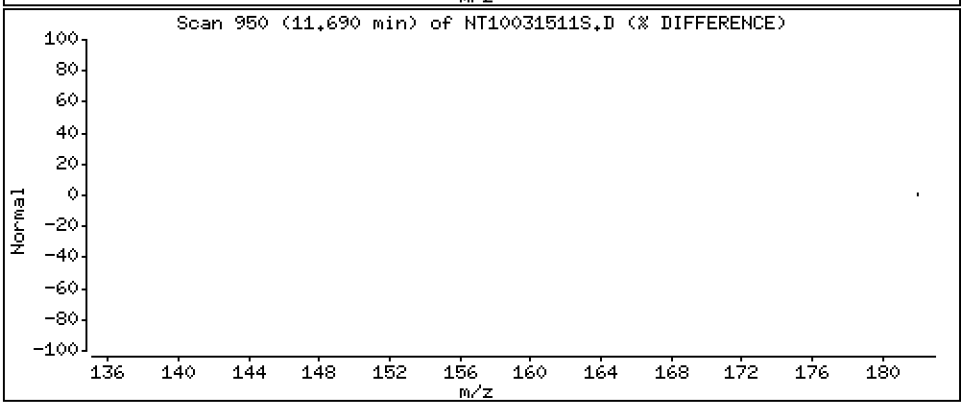












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

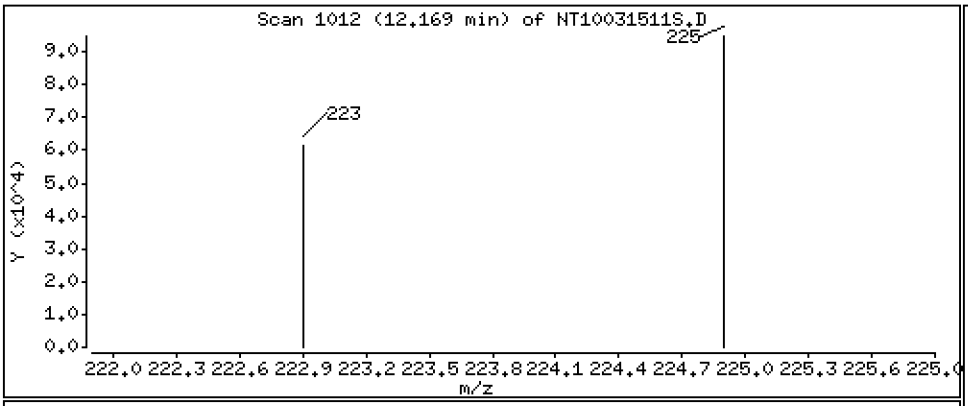
Operator: JGR

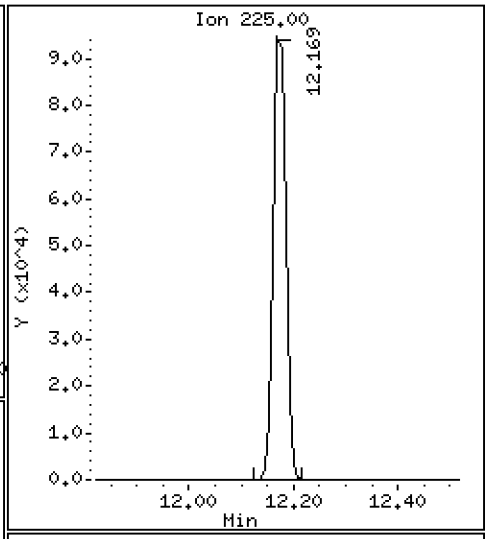
Column phase: ZB-5msi

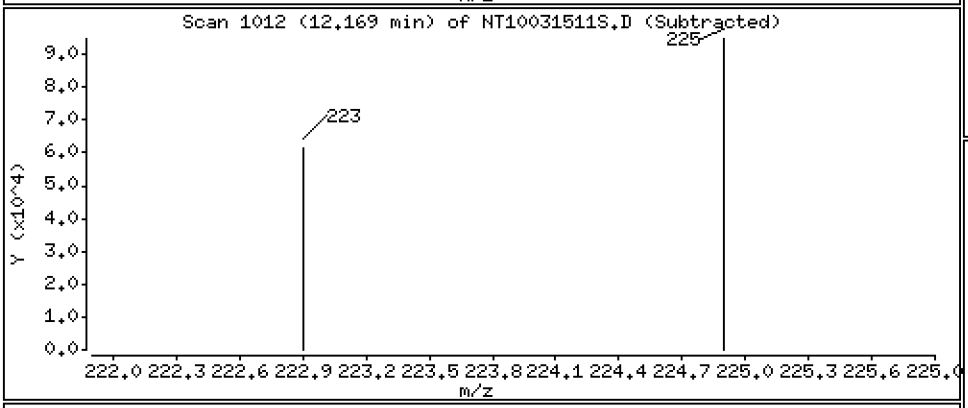
Column diameter: 0.25

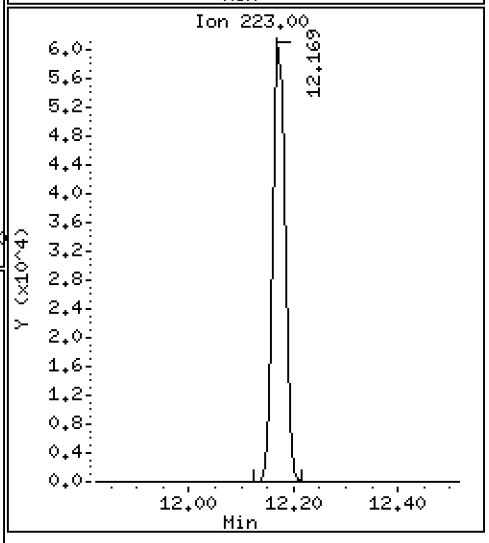
30 Hexachlorobutadiene

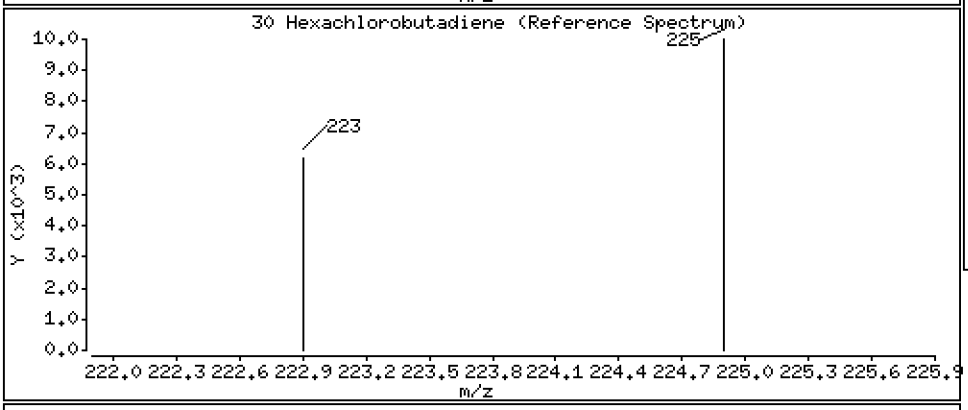
Concentration: 4.653 ug/L

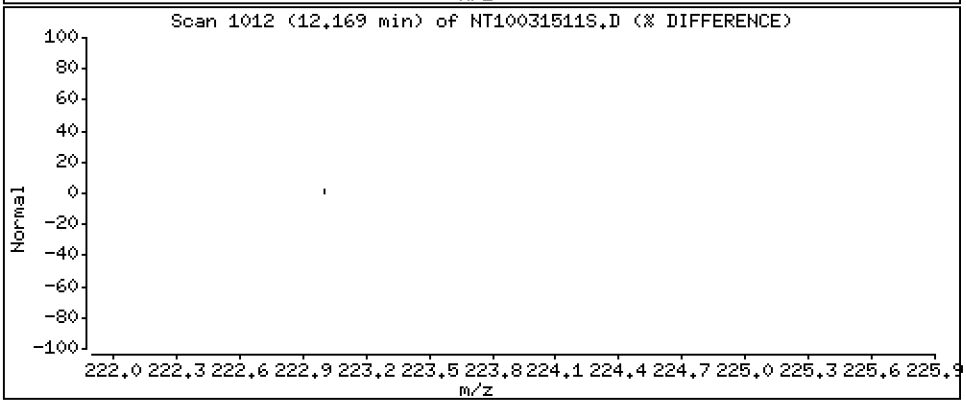












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

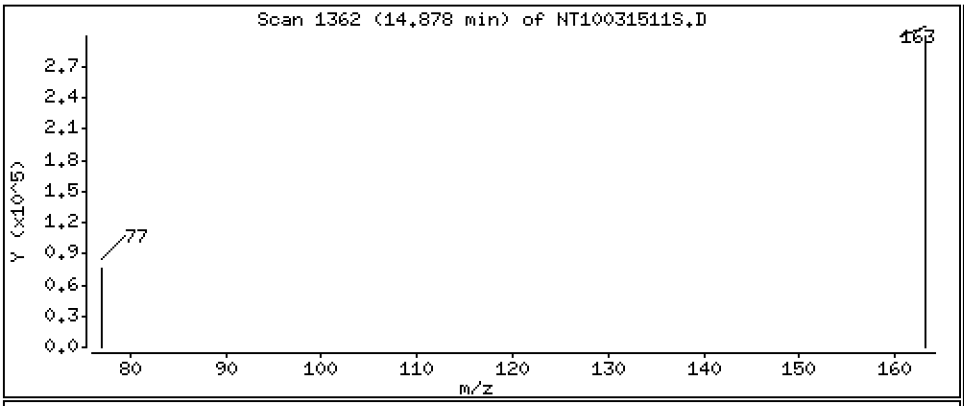
Operator: JGR

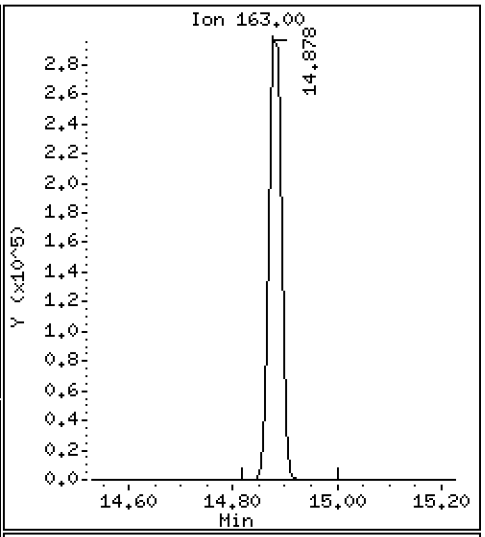
Column phase: ZB-5msi

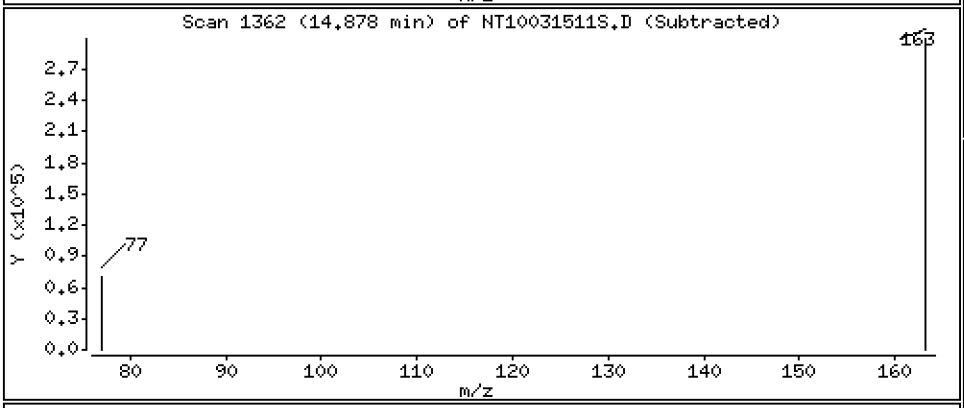
Column diameter: 0.25

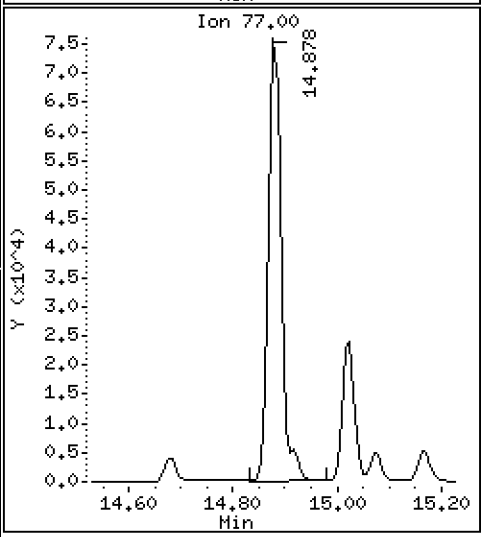
39 Dimethylphthalate

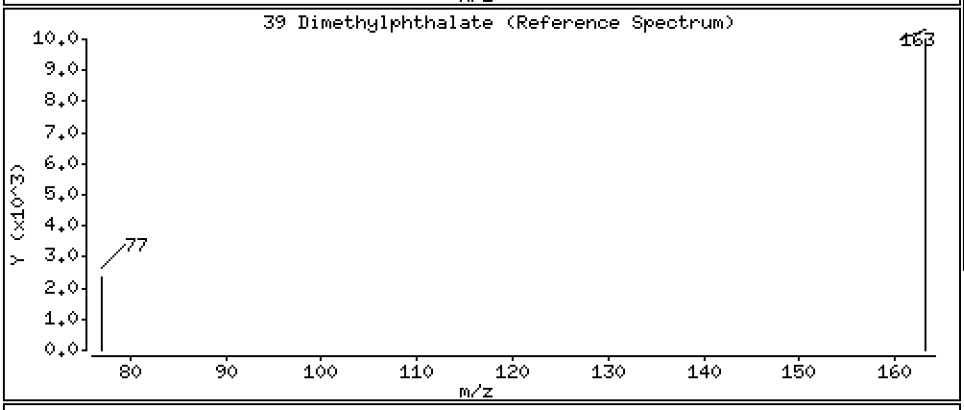
Concentration: 4.948 ug/L

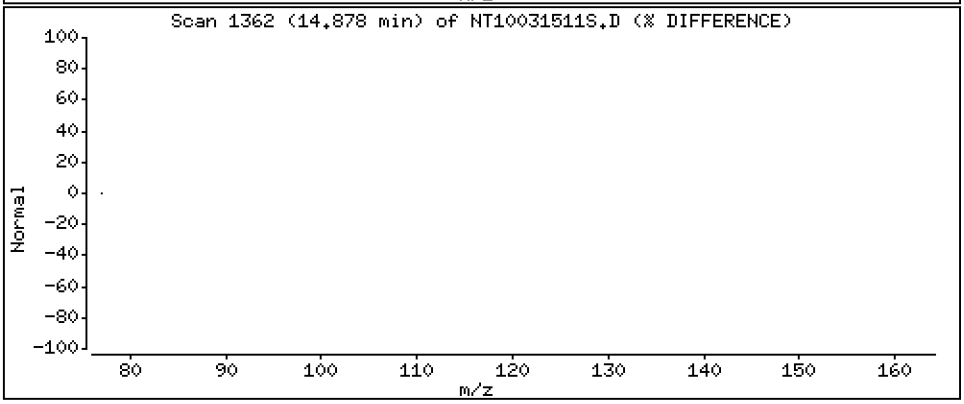












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

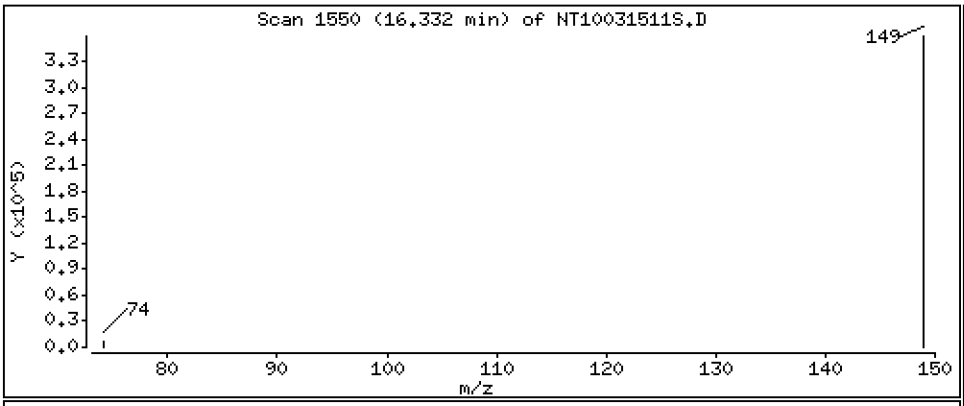
Operator: JGR

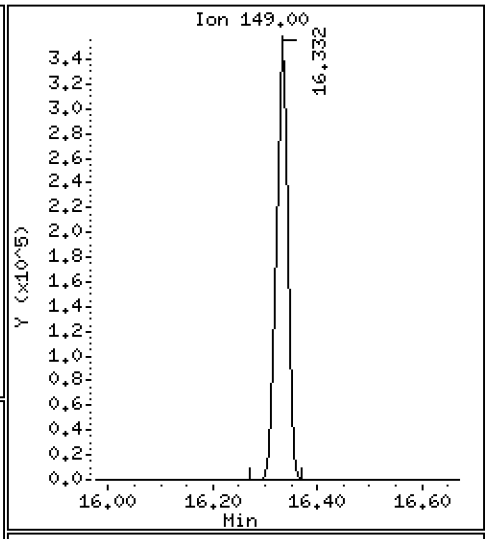
Column phase: ZB-5msi

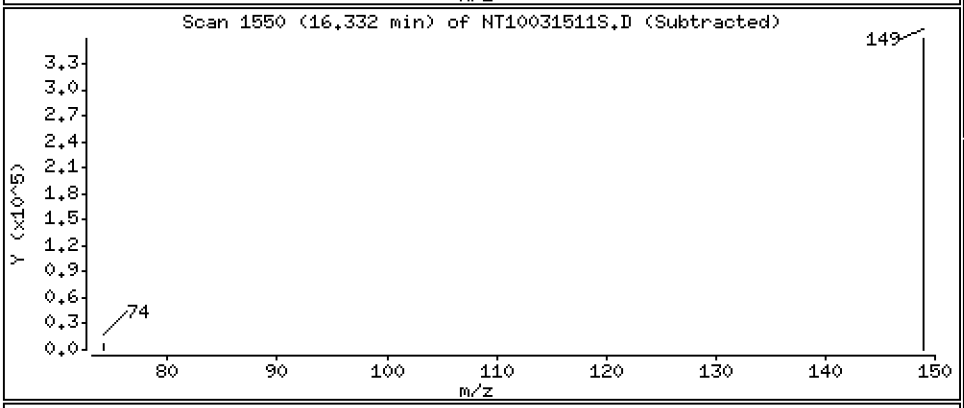
Column diameter: 0.25

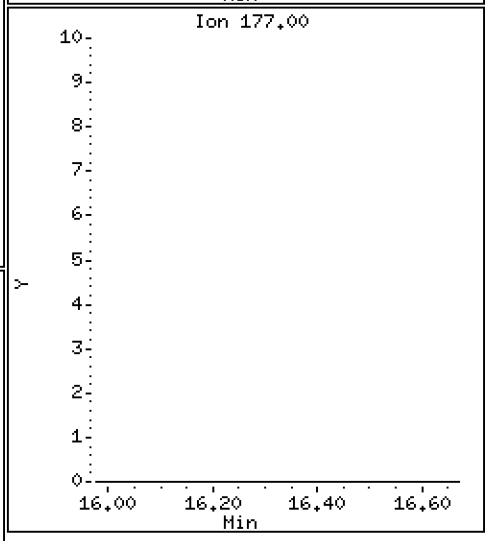
50 Diethylphthalate

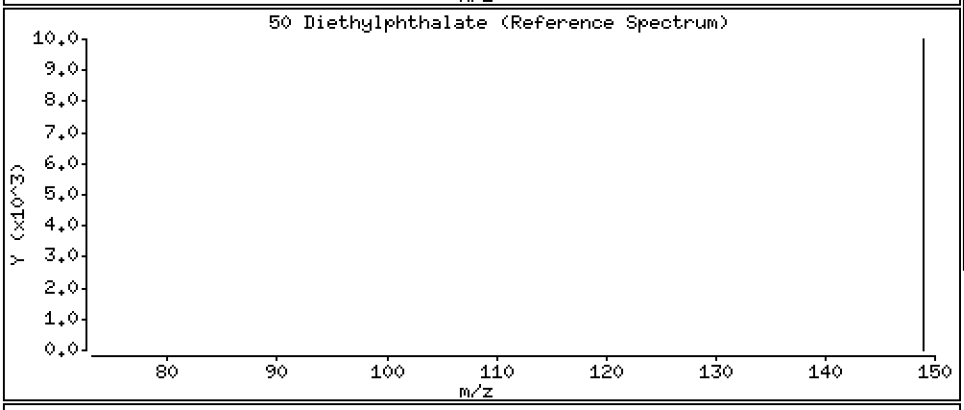
Concentration: 5.364 ug/L

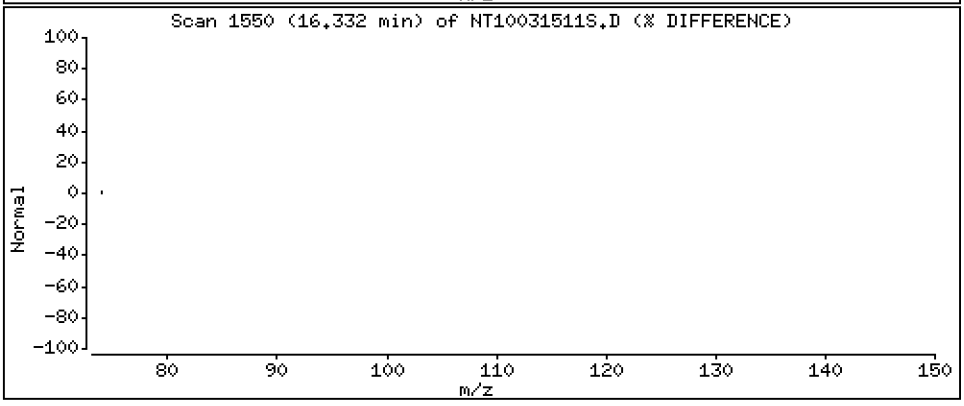












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

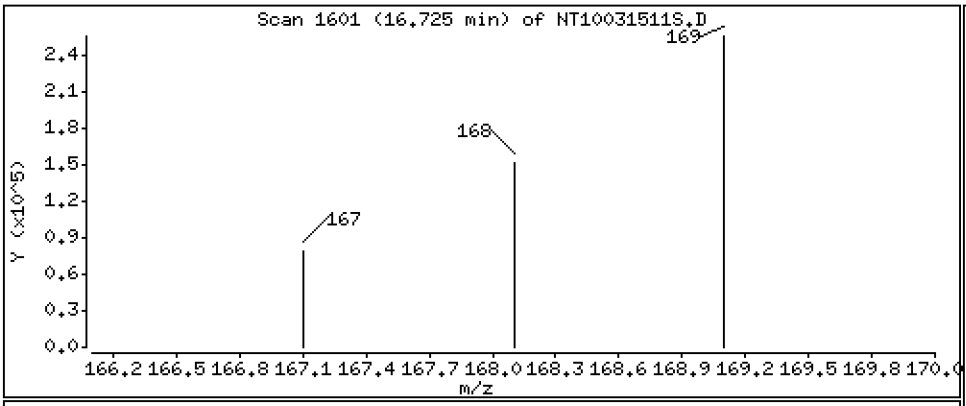
Operator: JGR

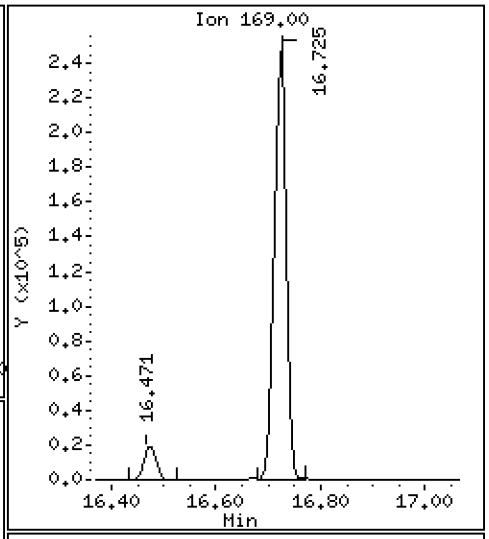
Column phase: ZB-5msi

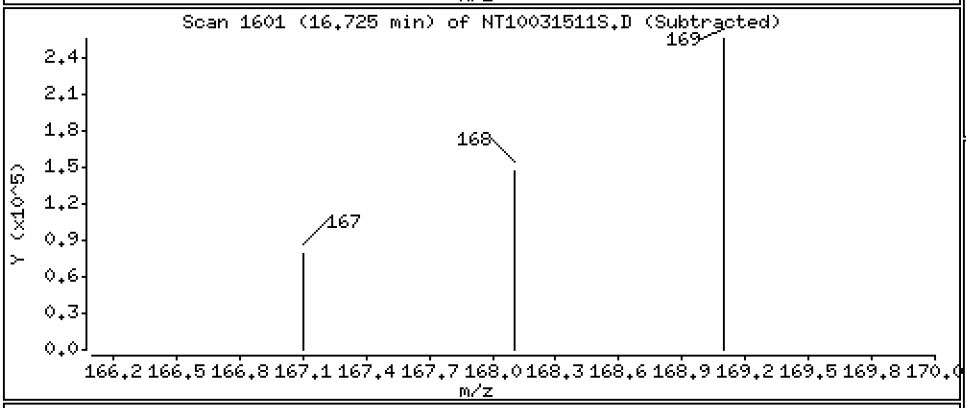
Column diameter: 0.25

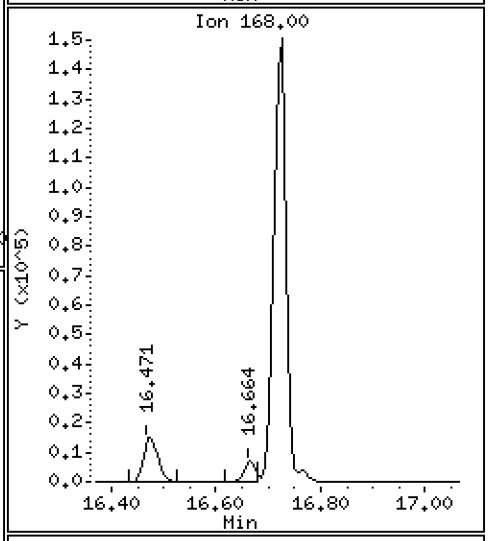
54 N-Nitrosodiphenylamine

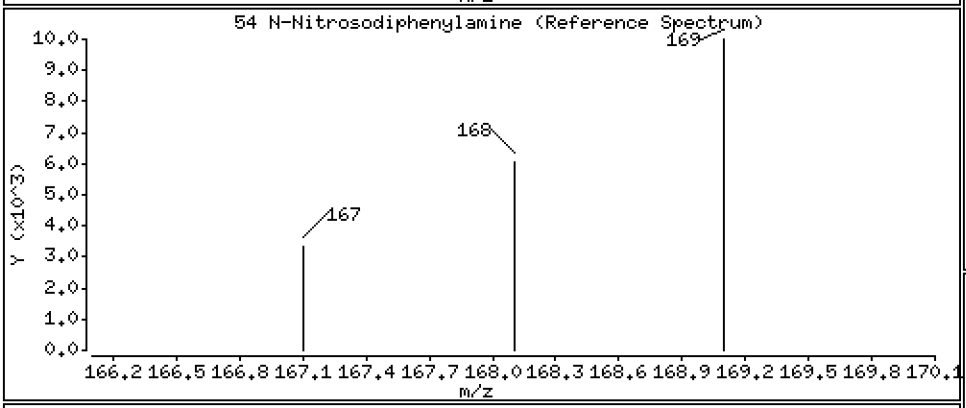
Concentration: 5.080 ug/L

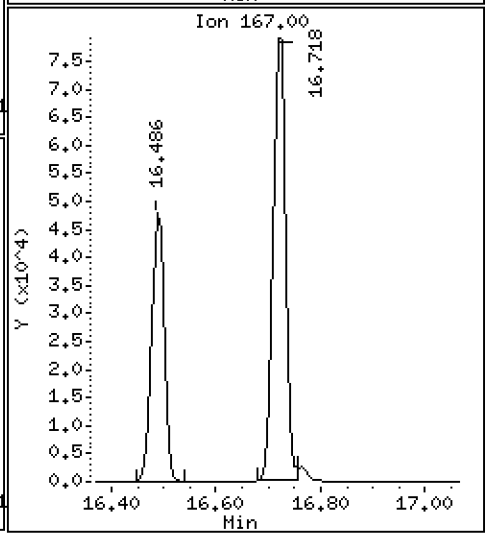


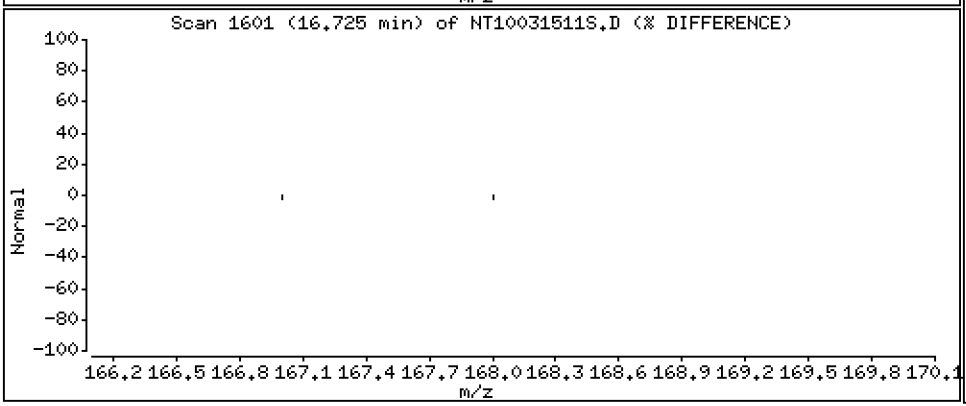












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

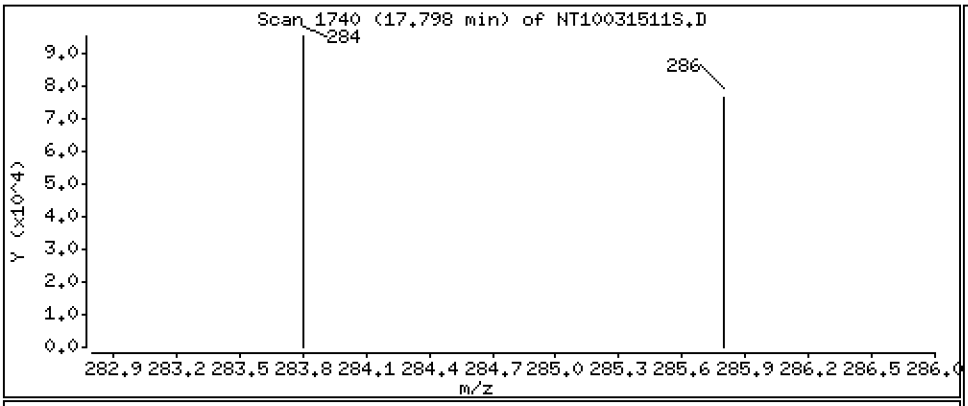
Operator: JGR

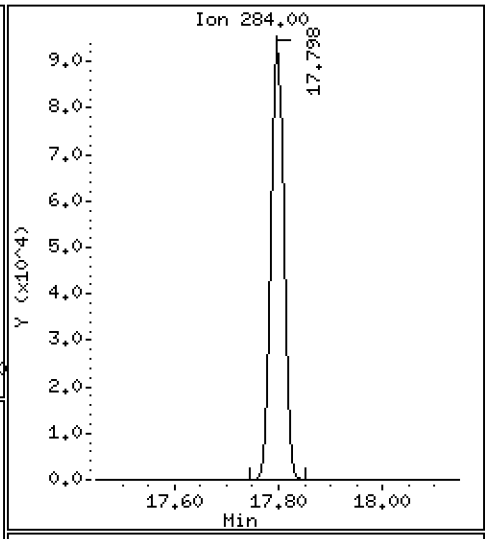
Column phase: ZB-5msi

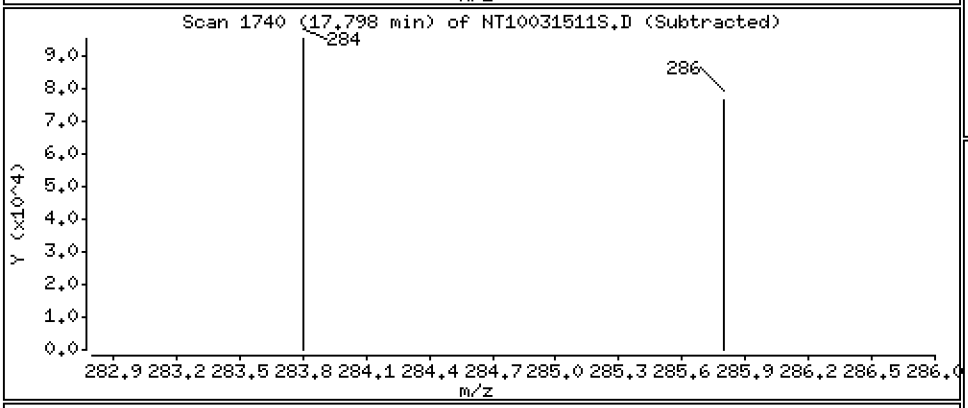
Column diameter: 0.25

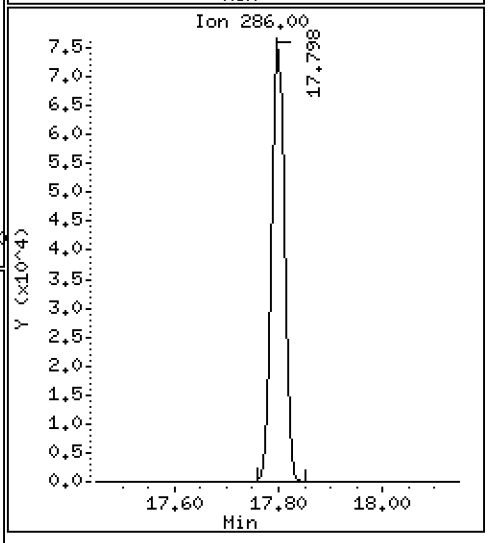
57 Hexachlorobenzene

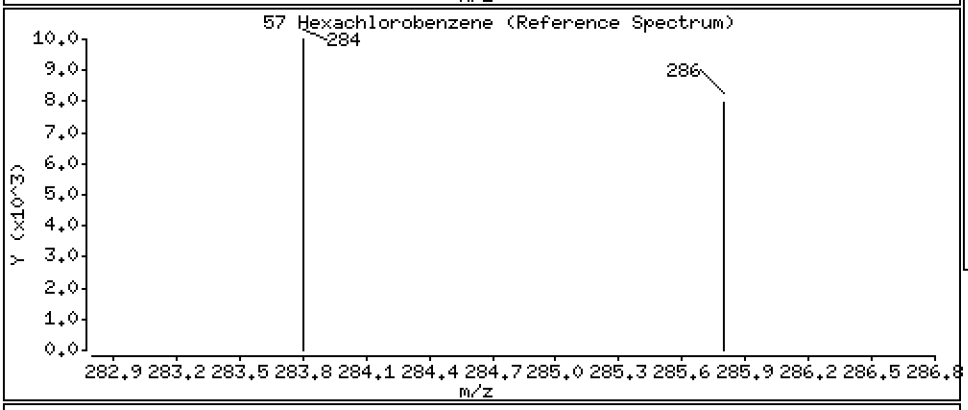
Concentration: 4.614 ug/L

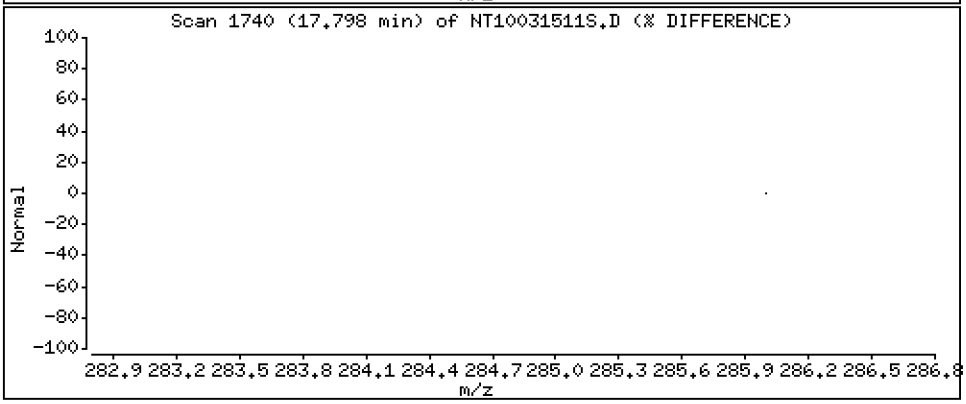












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

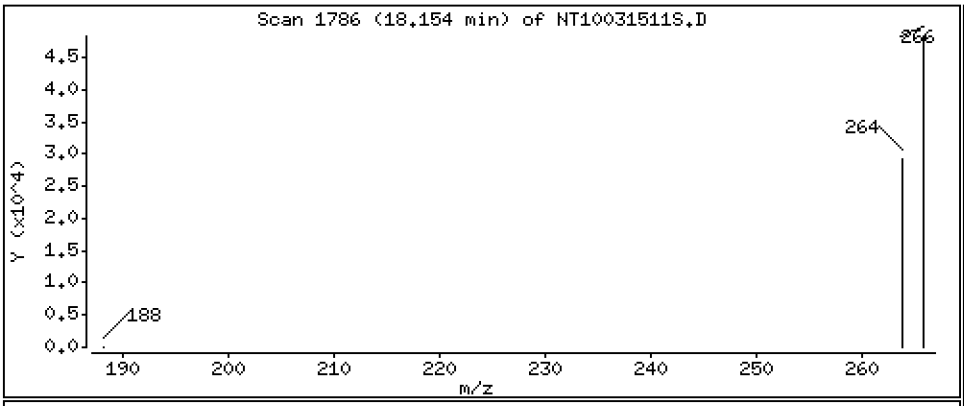
Operator: JGR

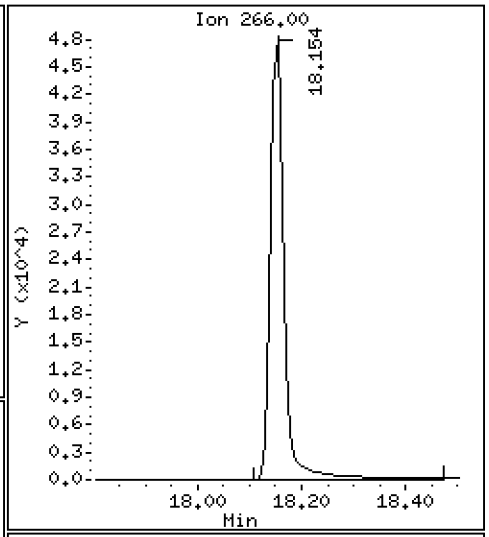
Column phase: ZB-5msi

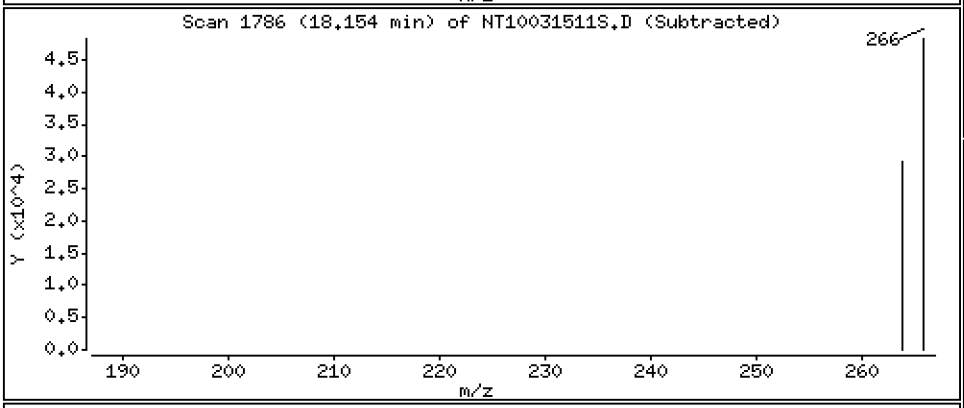
Column diameter: 0.25

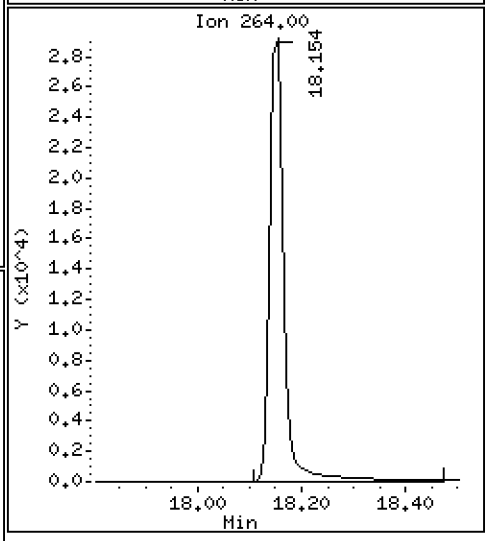
58 Pentachlorophenol

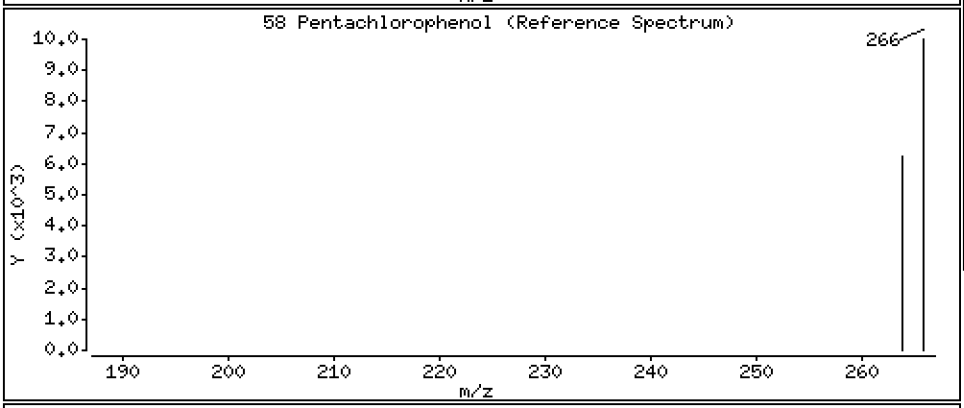
Concentration: 4.418 ug/L

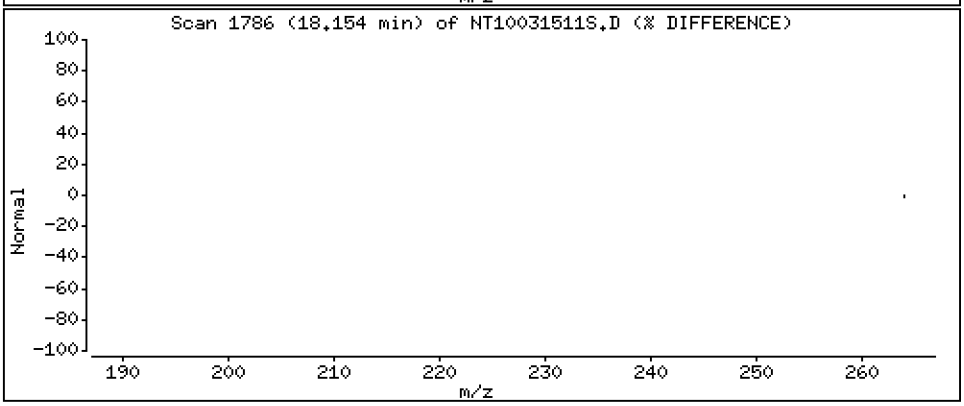












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

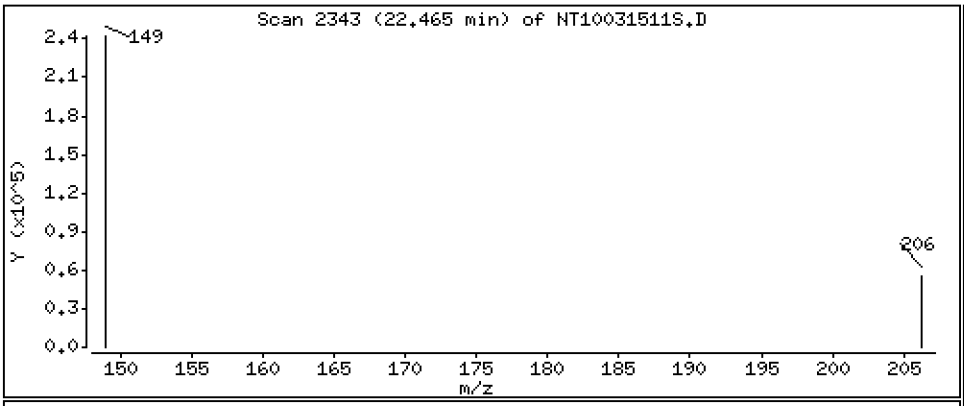
Operator: JGR

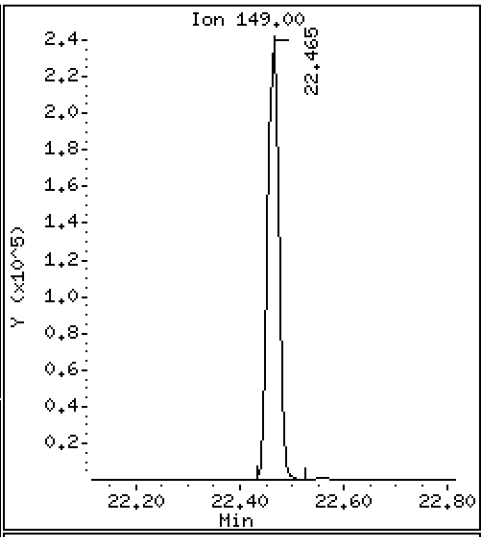
Column phase: ZB-5msi

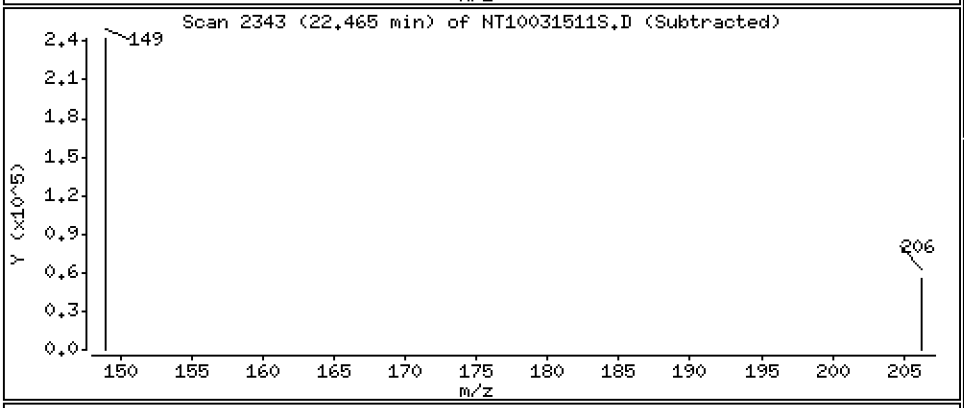
Column diameter: 0.25

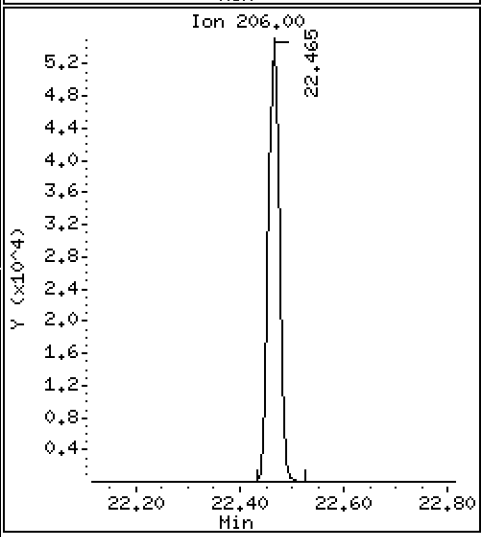
67 Butylbenzylphthalate

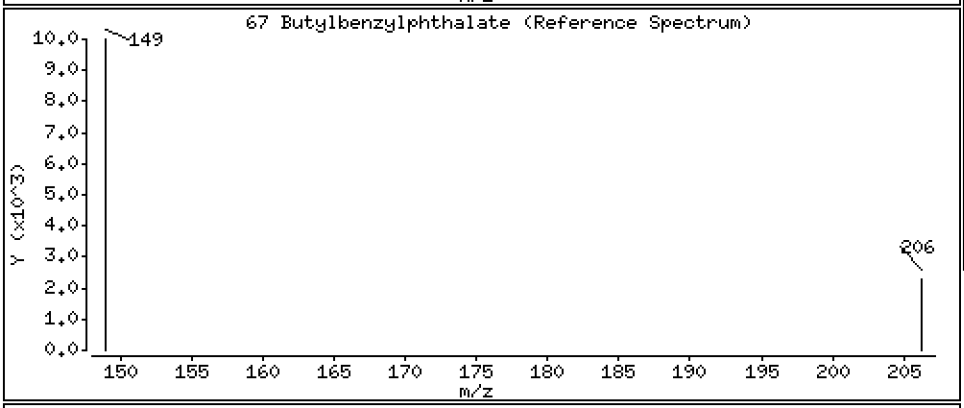
Concentration: 5.121 ug/L

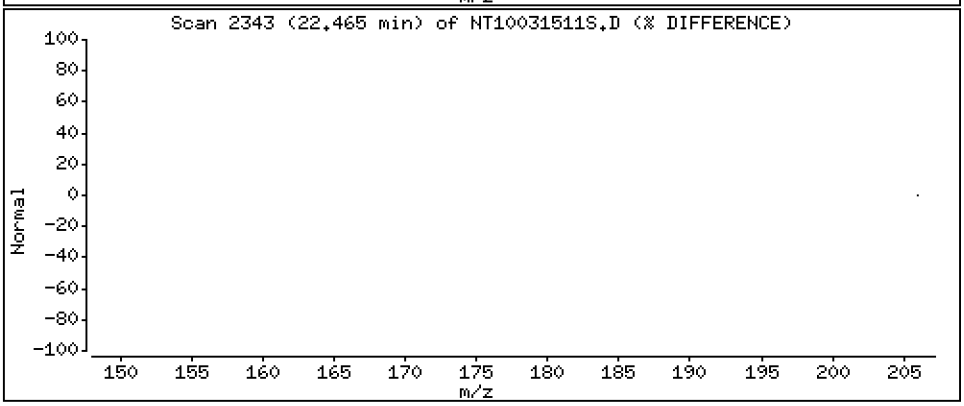












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

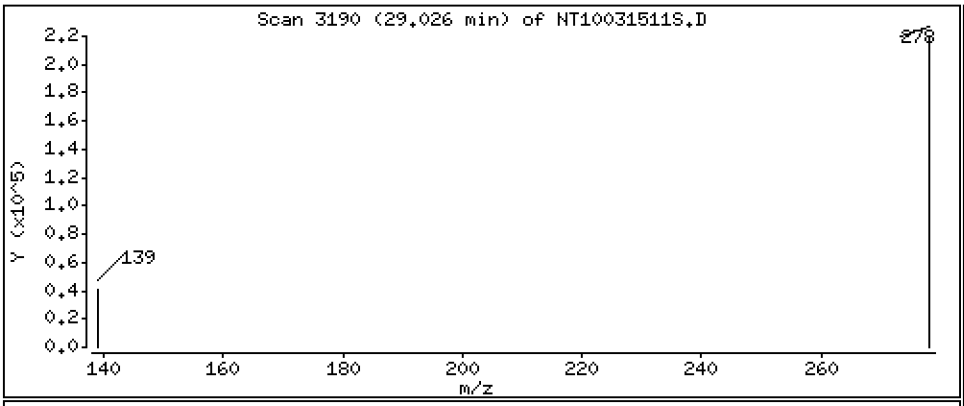
Operator: JGR

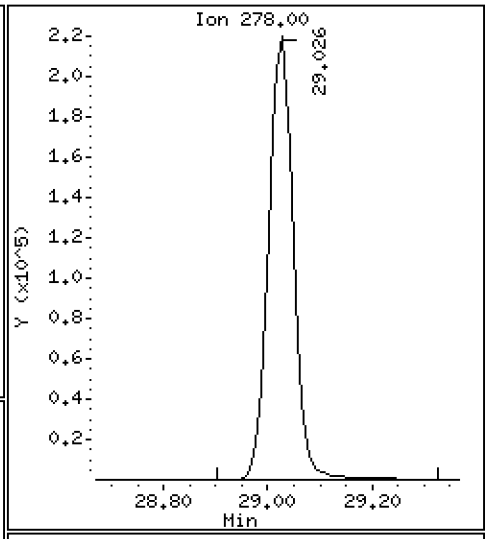
Column phase: ZB-5msi

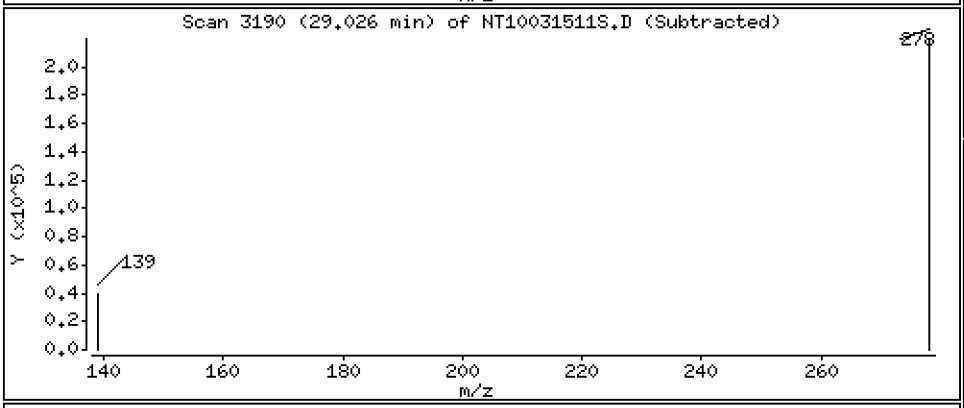
Column diameter: 0.25

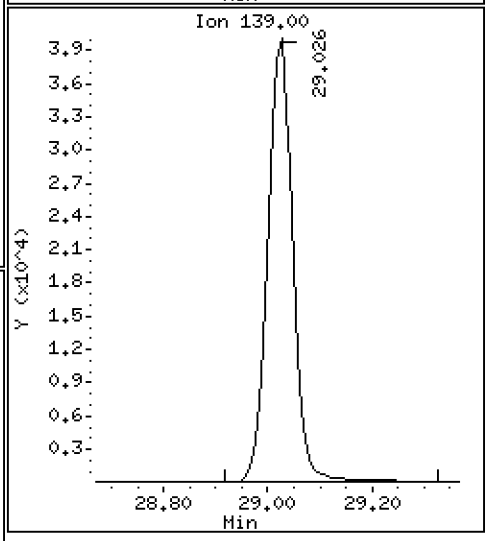
79 Dibenzo(a,h)anthracene

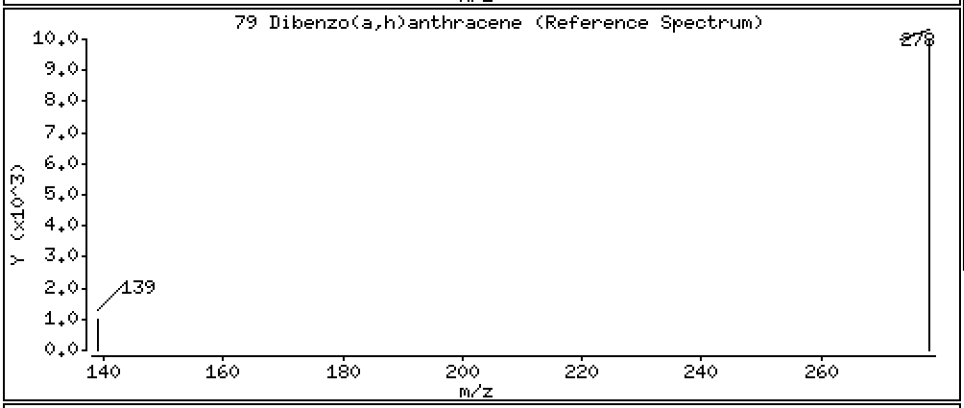
Concentration: 4.238 ug/L

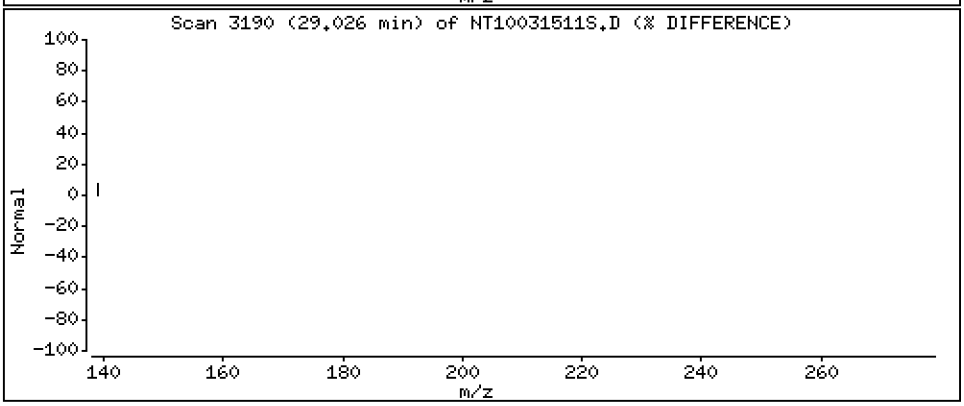












Data File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D

Date : 16-MAR-2023 02:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0238-SCV1

Volume Injected (uL): 1.0

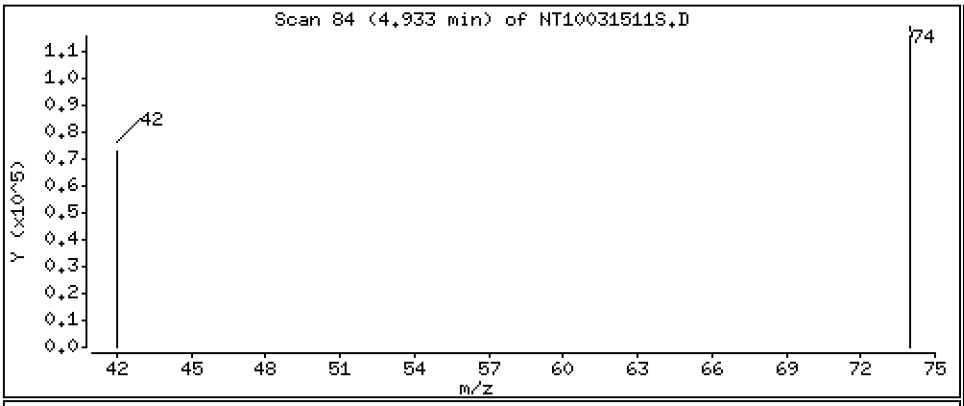
Operator: JGR

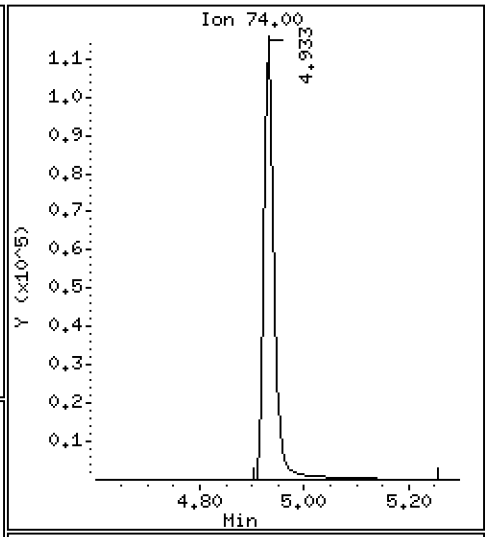
Column phase: ZB-5msi

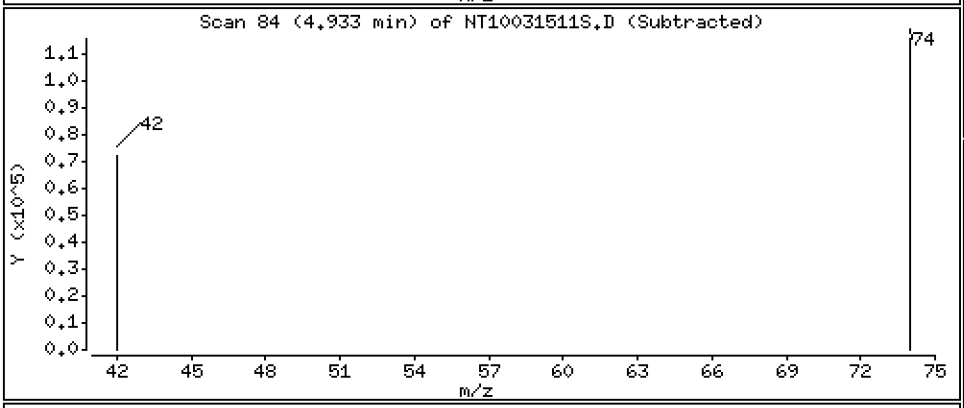
Column diameter: 0.25

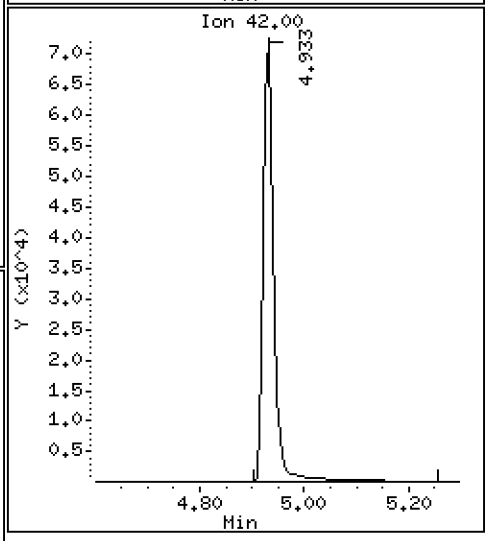
90 N-Nitrosodimethylamine

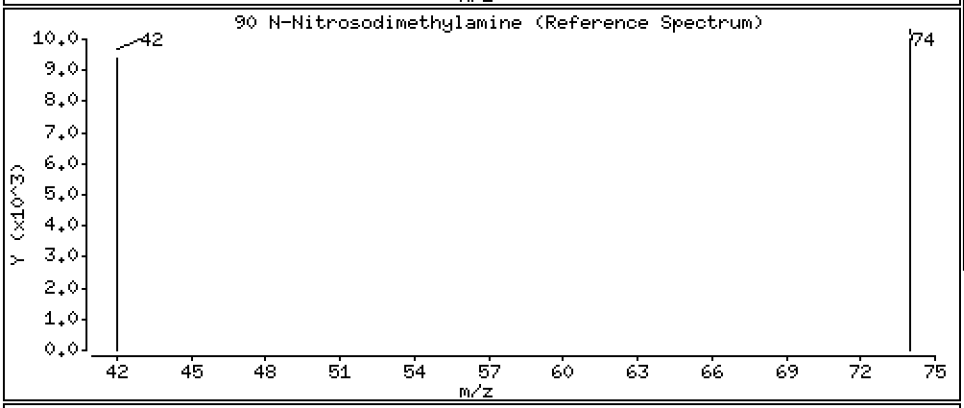
Concentration: 5.096 ug/L

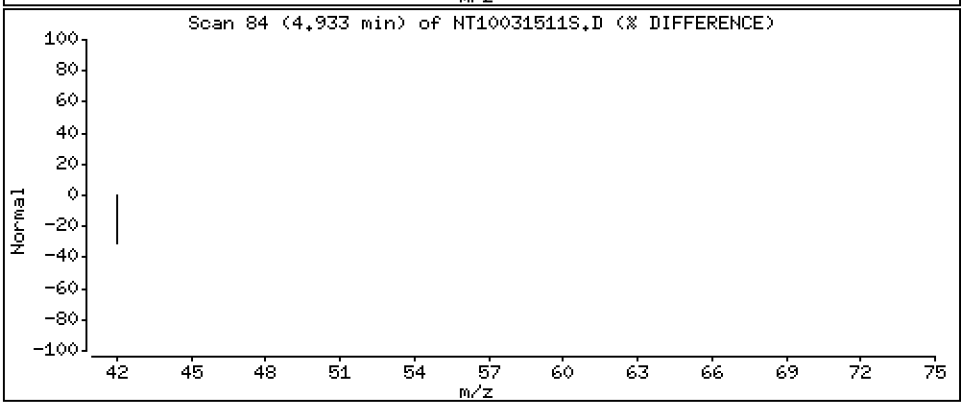












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230315.b\20230315.b\NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Inj Date : 16-MAR-2023 02:16 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0238-SCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Meth Date : 16-Mar-2023 14:39 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	Compound Not Detected.					
3	Phenol	94	8.664	8.664	(0.931)	303581	4.37299	4.373
7	1,3-Dichlorobenzene	146	9.236	9.236	(0.992)	301605	4.64290	4.643
* 8	1,4-Dichlorobenzene-d4	152	9.306	9.298	(1.000)	166866	4.00000	
9	1,4-Dichlorobenzene	146	9.329	9.329	(1.002)	303390	4.83813	4.838
11	Benzyl alcohol	79	9.562	9.570	(1.028)	208505	5.18071	5.181
12	1,2-Dichlorobenzene	146	9.686	9.686	(1.041)	288539	4.67875	4.679
13	2-Methylphenol	108	9.772	9.772	(1.050)	201888	4.19698	4.197
15	4-Methylphenol	108	10.043	10.036	(1.079)	223083	4.46301	4.463
16	N-Nitroso-di-n-propylamine	70	10.121	10.113	(1.088)	186707	5.28174	5.282
22	2,4-Dimethylphenol	107	11.086	11.087	(0.942)	193654	3.66015	3.660
24	Benzoic acid	105	11.214	11.189	(0.952)	200487	6.74612	6.746
26	1,2,4-Trichlorobenzene	180	11.690	11.690	(0.993)	236605	4.44540	4.445
* 27	Naphthalene-d8	136	11.775	11.775	(1.000)	612104	4.00000	
30	Hexachlorobutadiene	225	12.169	12.169	(1.033)	150581	4.65339	4.653
39	Dimethylphthalate	163	14.877	14.877	(0.967)	472341	4.94766	4.948
* 42	Acenaphthene-d10	162	15.388	15.380	(1.000)	302524	4.00000	
50	Diethylphthalate	149	16.331	16.324	(1.061)	530540	5.36440	5.364
54	N-Nitrosodiphenylamine	169	16.725	16.717	(0.908)	377357	5.08034	5.080
57	Hexachlorobenzene	284	17.798	17.798	(0.966)	153405	4.61353	4.614

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	18.154	18.154	(0.985)	83223	4.41780	4.418
*	59 Phenanthrene-d10	188	18.425	18.417	(1.000)	553619	4.00000	
$	66 Terphenyl-d14	244	21.543	21.543	(0.918)	117	0.00154	0.001543(RM)
	67 Butylbenzylphthalate	149	22.464	22.465	(0.958)	332887	5.12147	5.121
*	69 Chrysene-d12	240	23.455	23.455	(1.000)	465428	4.00000	
*	77 Perylene-d12	264	26.188	26.188	(1.000)	532593	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.026	29.019	(1.108)	722983	4.23762	4.238
	90 N-Nitrosodimethylamine	74	4.933	4.948	(0.530)	163555	5.09625	5.096

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT10031511S.D
Lab Smp Id: SLC0238-SCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230315.b\20230315.b\SIMABN2.m
Misc Info:

Calibration Date: 15-MAR-2023
Calibration Time: 23:06
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	188081	94041	376162	166866	-11.28
27 Naphthalene-d8	674549	337275	1349098	612104	-9.26
42 Acenaphthene-d10	328275	164138	656550	302524	-7.84
59 Phenanthrene-d10	597140	298570	1194280	553619	-7.29
69 Chrysene-d12	466503	233252	933006	465428	-0.23
77 Perylene-d12	518203	259102	1036406	532593	2.78

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.30	8.80	9.80	9.31	0.08
27 Naphthalene-d8	11.77	11.27	12.27	11.78	0.01
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.01
59 Phenanthrene-d10	18.42	17.92	18.92	18.43	0.00
69 Chrysene-d12	23.45	22.95	23.95	23.46	0.00
77 Perylene-d12	26.19	25.69	26.69	26.19	0.00

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

REVIEW SUMMARY FOR FILE - NT10031511S.D

Lab ID: SLC0238-SCV1
nt10.i, 20230315.b\20230315.b\SIMABN2.m,   16-MAR-2023 02:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
0.952	0.000	0.9524	Benzoic acid

RRT check based on Ccal File: 20230315.b/NT10031510S.D

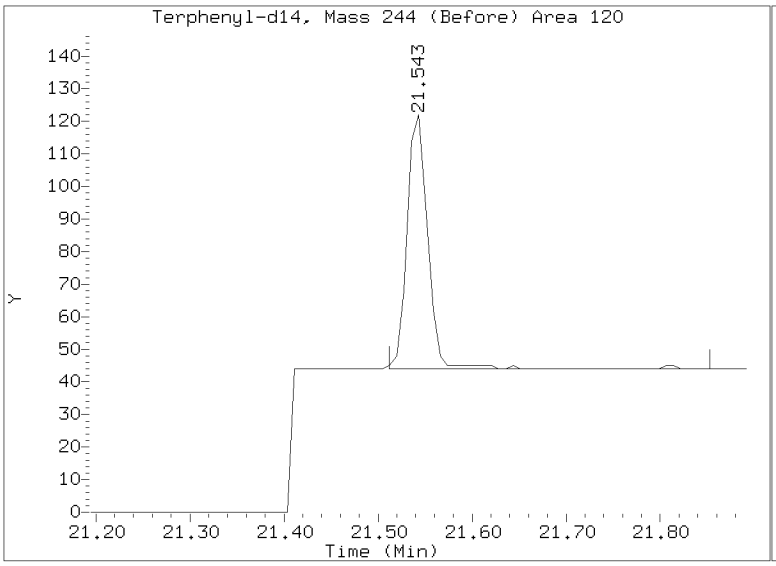
On Column LOD for nt10.i, 20230315.b\SIMABN2.m, PSDDA.sub = 0.0000

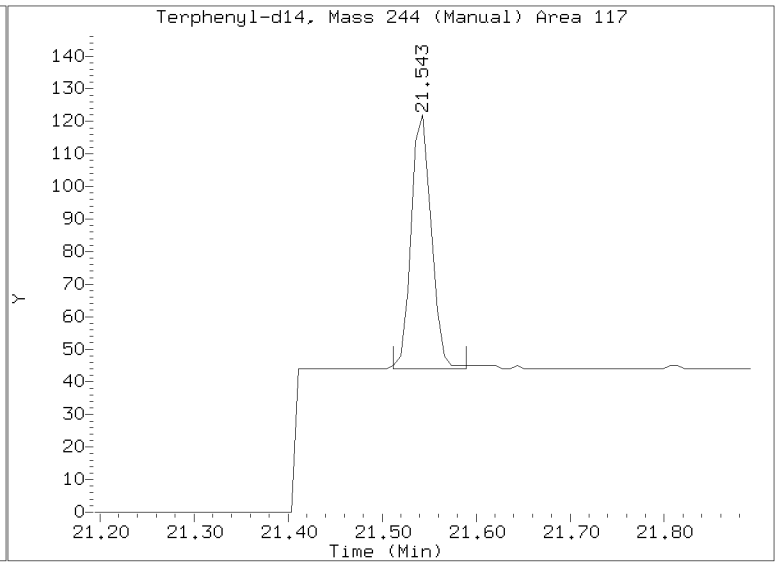
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230315.b/20230315.b/NT10031511S.D
Injection Date: 16-MAR-2023 02:16
Lab ID:SLC0238-SCV1 Client ID:
Report Date: 03/16/2023 14:49





Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT1003182326S.D	Calibration Date:	03/15/2023
Sequence:	SLC0505	Injection Date:	03/19/23
Lab Sample ID:	SLC0505-CCV1	Injection Time:	09:41
Sequence Name:	ABN 1		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	1.0000	1.0	1.5031980	1.4937530		-0.6	+/-50
1,2-Dichlorobenzene	A	1.0000	1.0	1.4783140	1.4736530		-0.3	+/-50
Benzyl Alcohol	A	1.0000	1.1	0.9647610	1.0264890		6.4	+/-50
Benzoic acid	A	4.0000	3.6	0.1358970	0.1704786		-11.1	+/-50
2,4-Dimethylphenol	A	2.0000	2.0	0.3457498	0.3410651		-1.4	+/-50
1,2,4-Trichlorobenzene	A	1.0000	1.0	0.3478148	0.3631635		4.4	+/-50
N-Nitrosodiphenylamine	A	1.0000	1.1	0.5366720	0.5645440		5.2	+/-50
Pentachlorophenol	A	2.0000	1.6	0.0934250	0.1092298		-18.4	+/-50
2-Fluorophenol	A	1.5000	1.59	1.2129820	1.2879560		6.2	+/-50
p-Terphenyl-d14	A	1.0000	1.13	0.6517430	0.7345486		12.7	+/-50

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823268.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

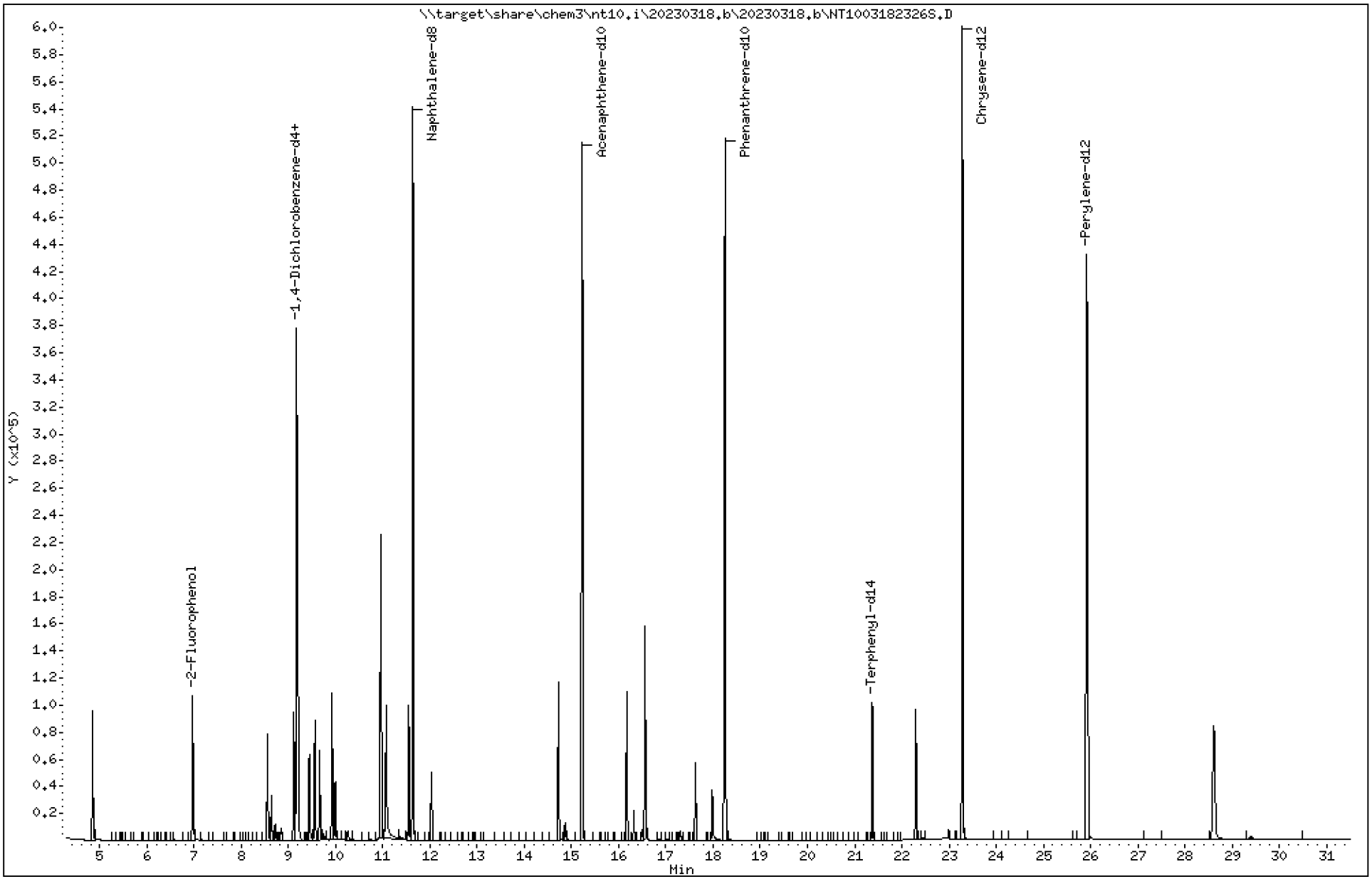
Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

Operator: JGR

Column phase: ZB-5msi

Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

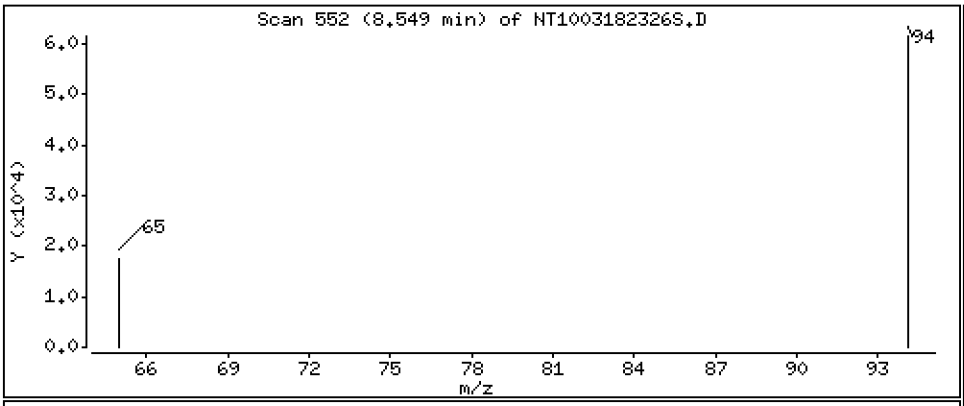
Operator: JGR

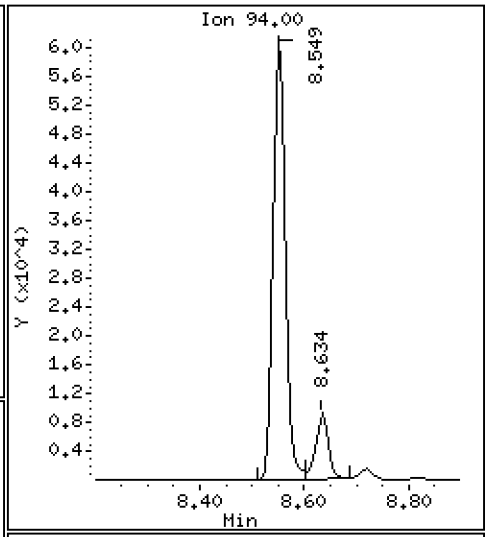
Column phase: ZB-5msi

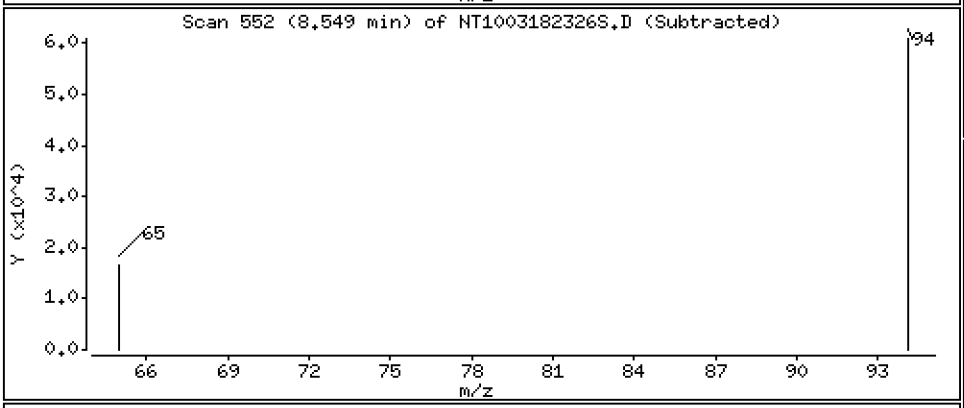
Column diameter: 0.25

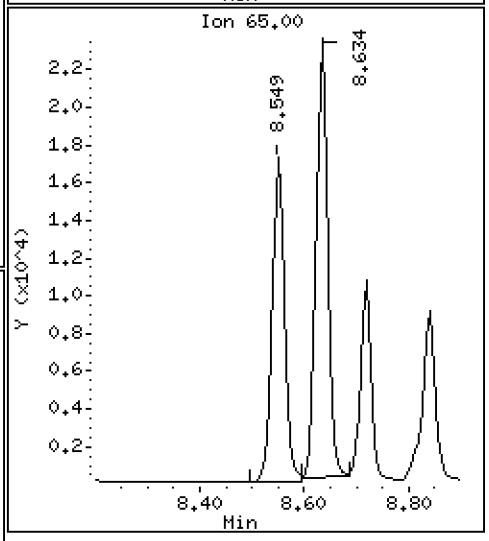
3 Phenol

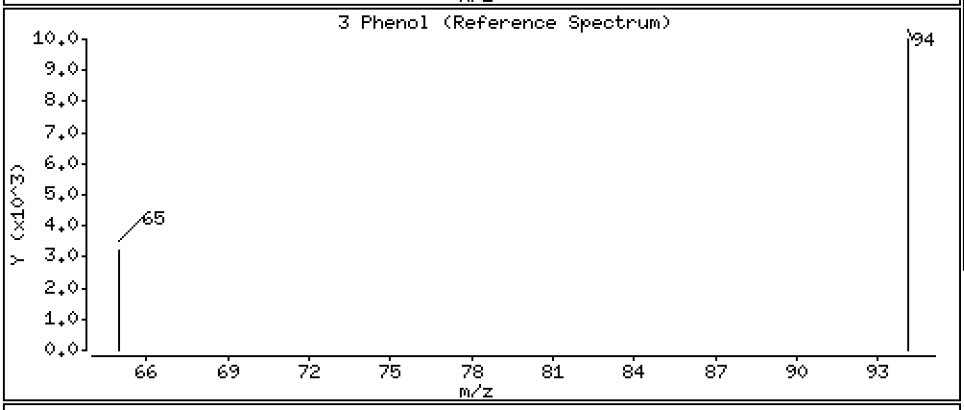
Concentration: 0.9941 ug/L

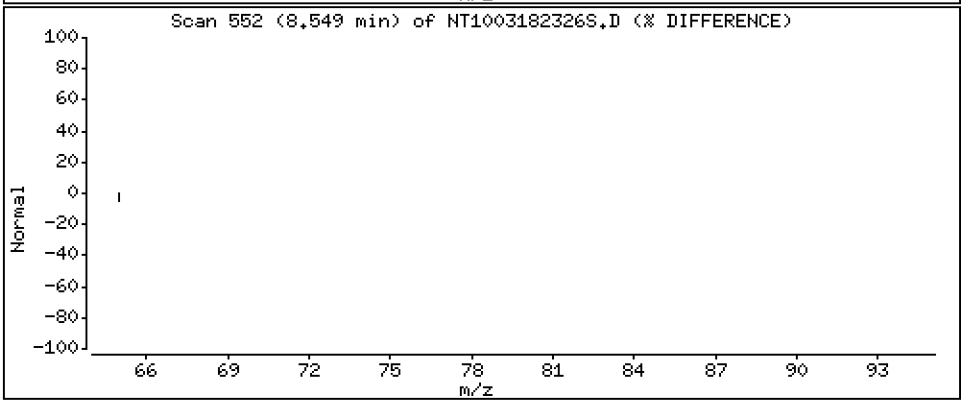












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

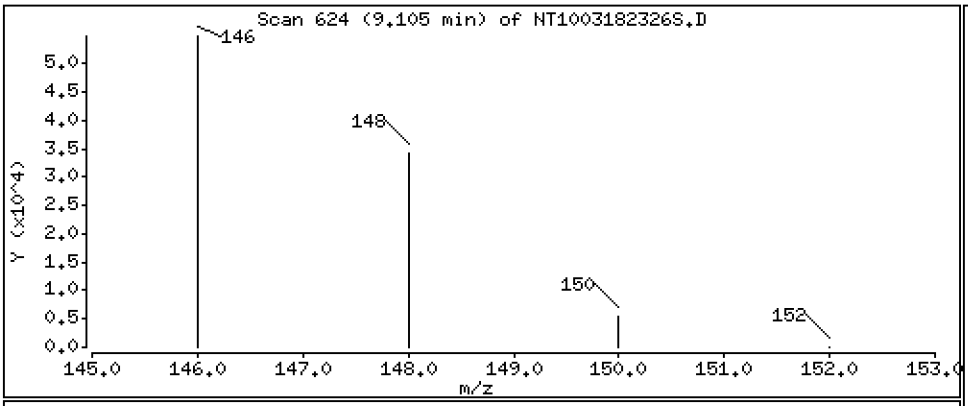
Operator: JGR

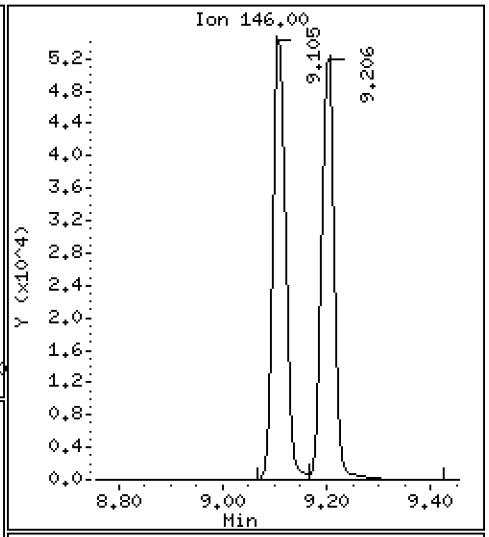
Column phase: ZB-5msi

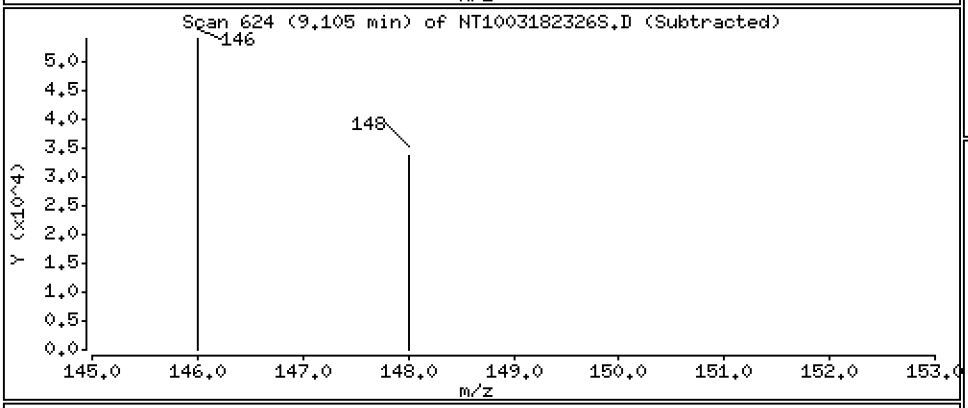
Column diameter: 0.25

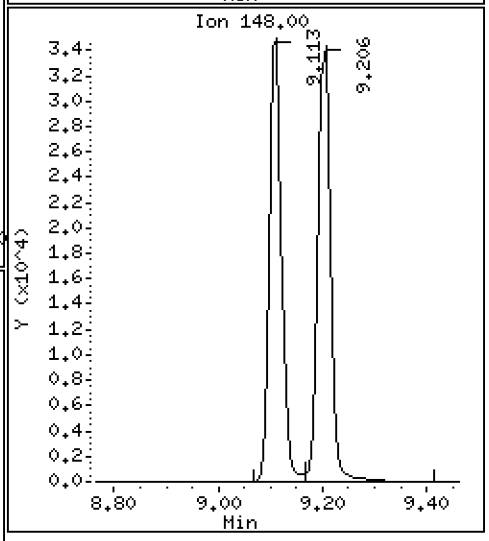
7 1,3-Dichlorobenzene

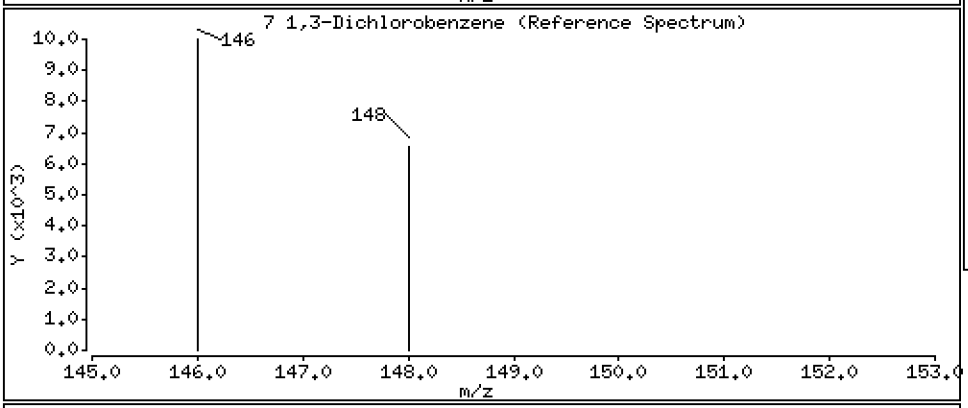
Concentration: 1.001 ug/L

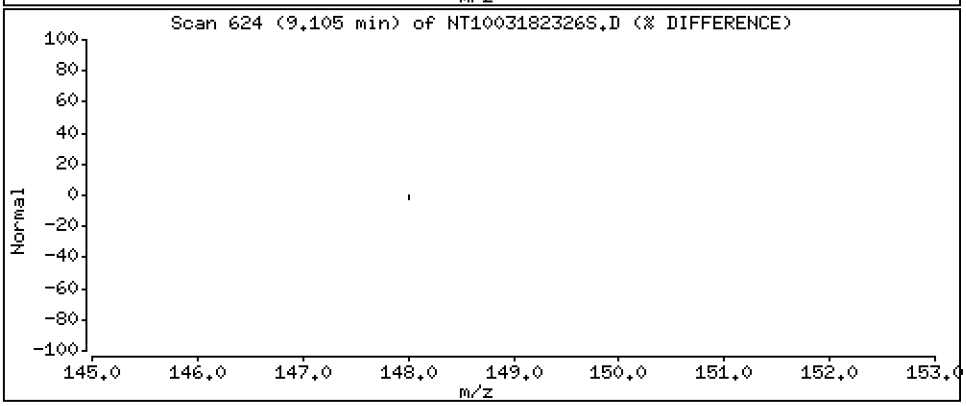












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

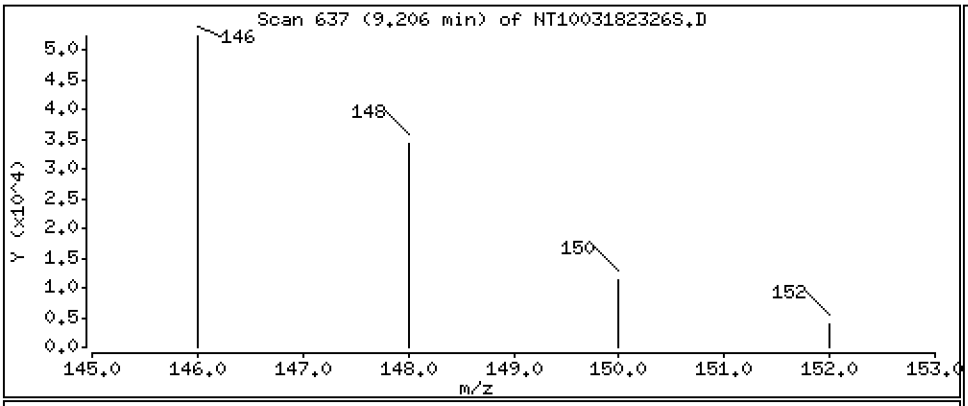
Operator: JGR

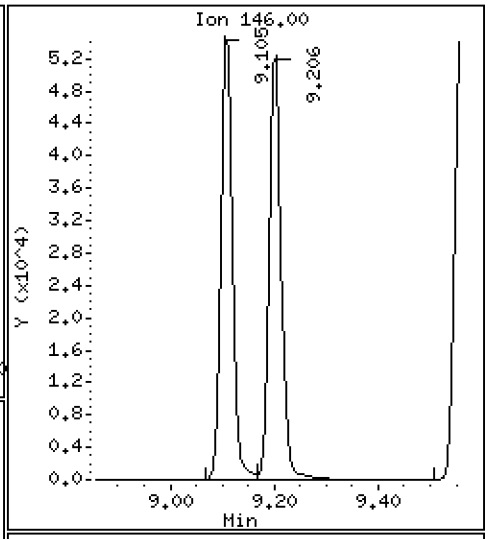
Column phase: ZB-5msi

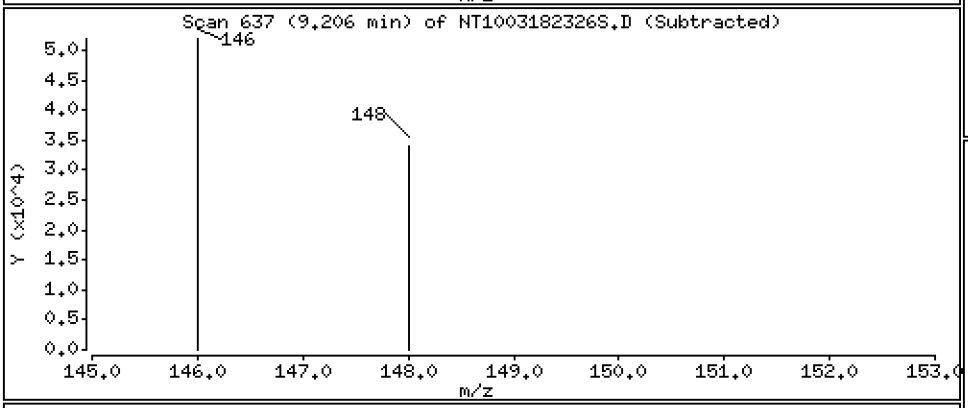
Column diameter: 0.25

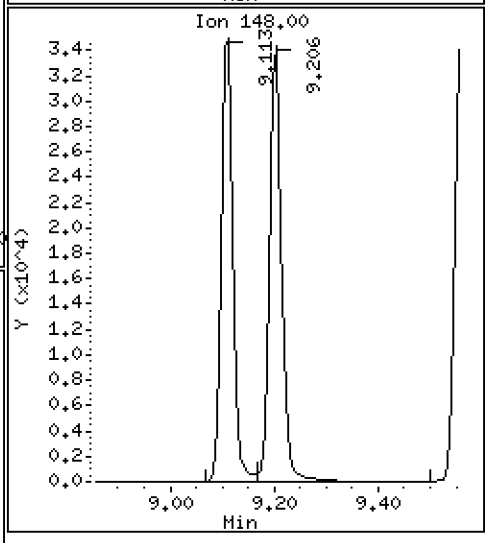
9 1,4-Dichlorobenzene

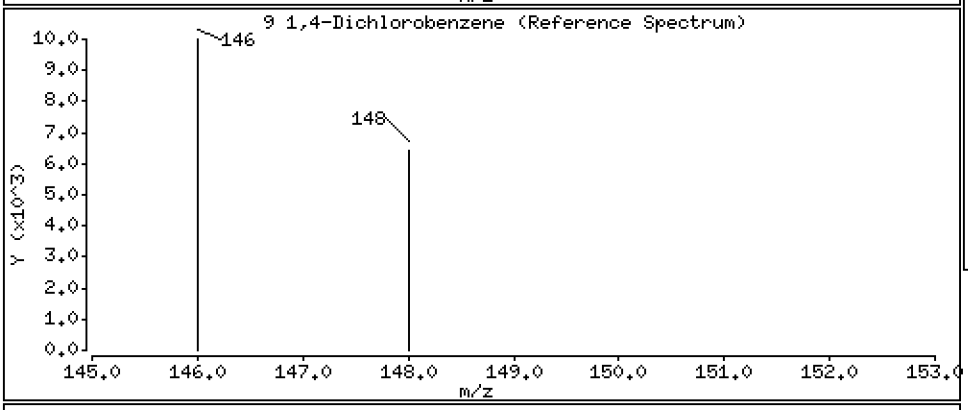
Concentration: 0.9937 ug/L

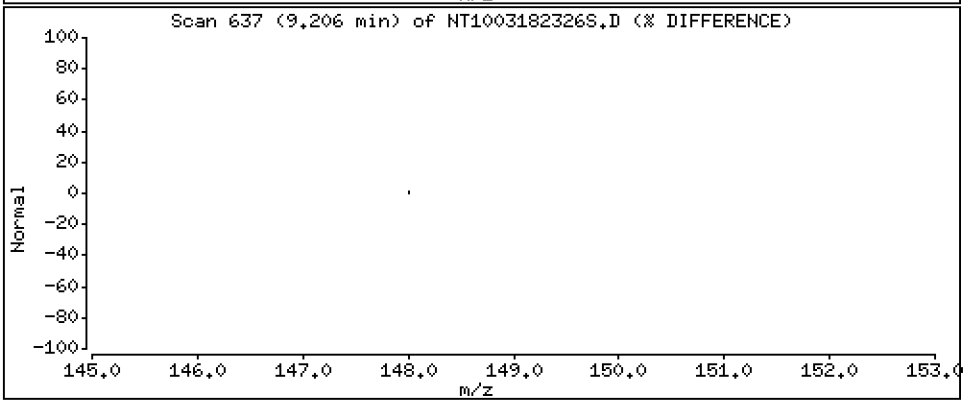












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

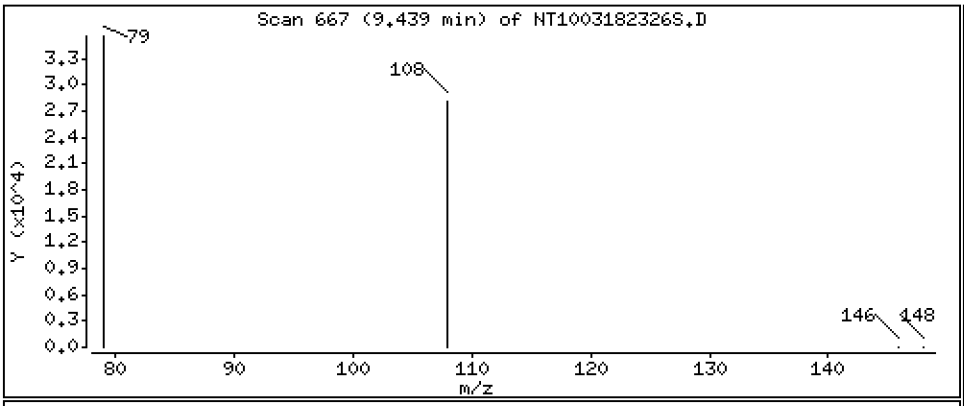
Operator: JGR

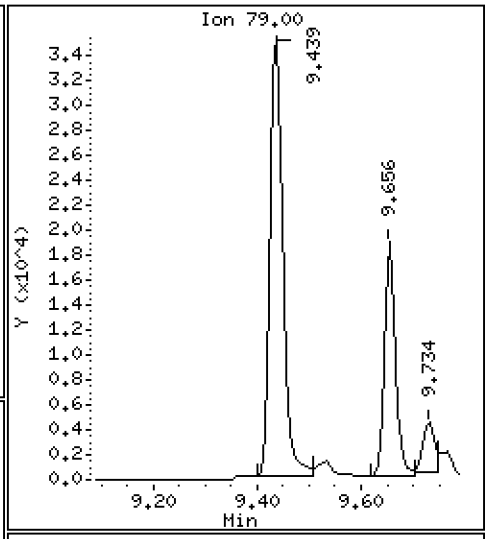
Column phase: ZB-5msi

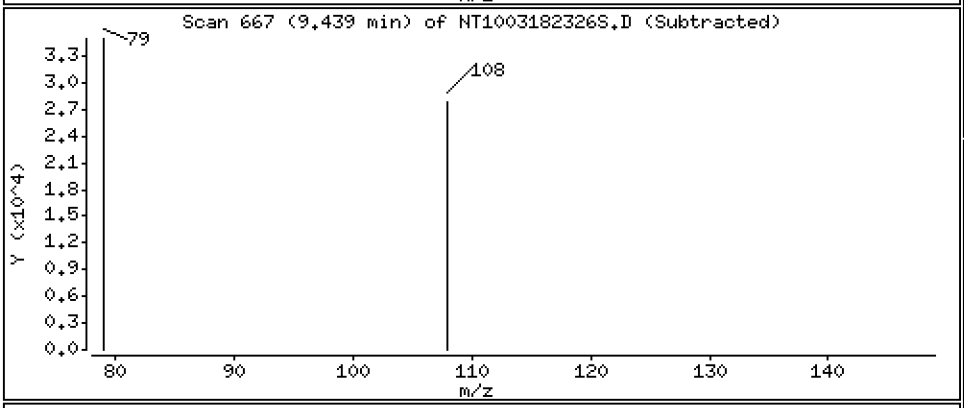
Column diameter: 0.25

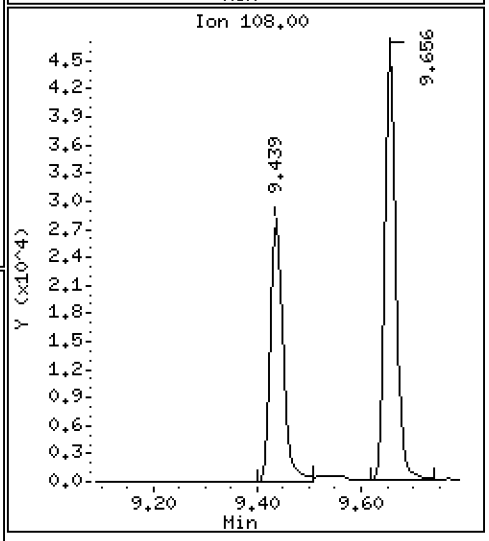
11 Benzyl alcohol

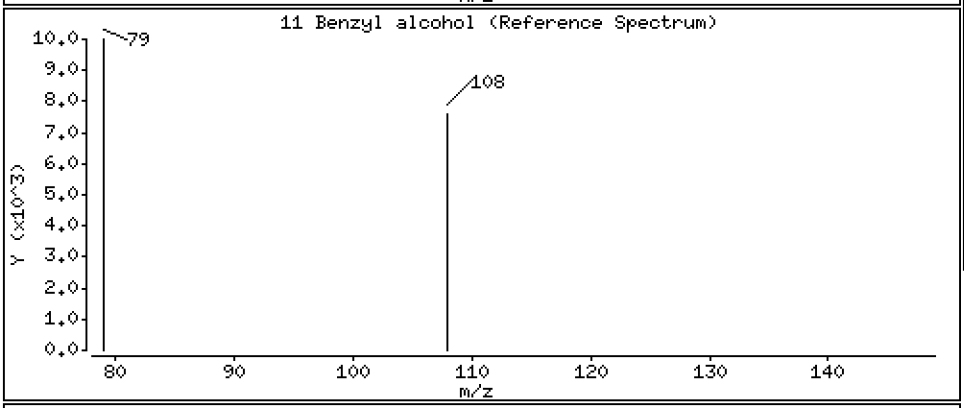
Concentration: 1.064 ug/L

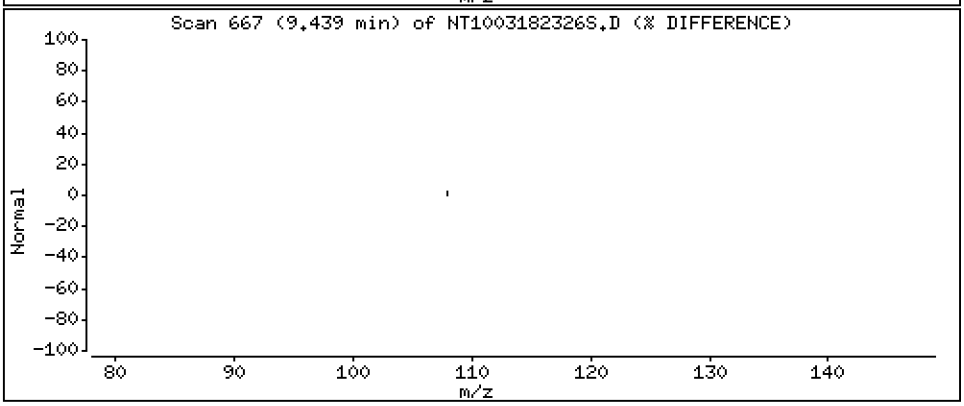












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

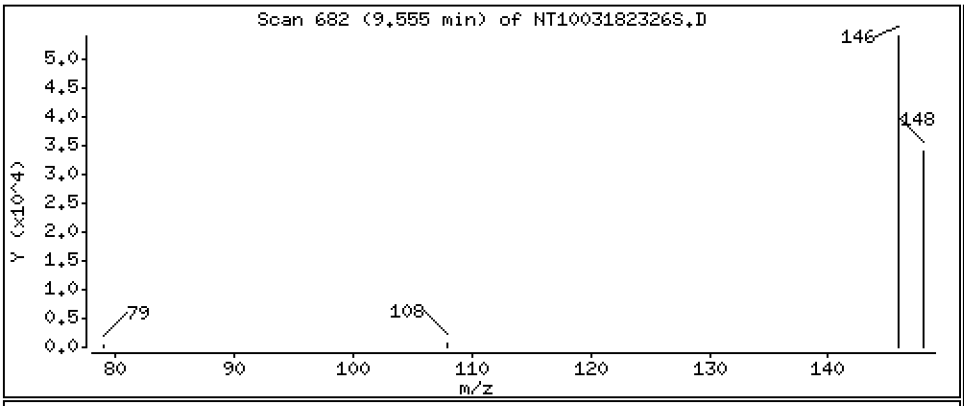
Operator: JGR

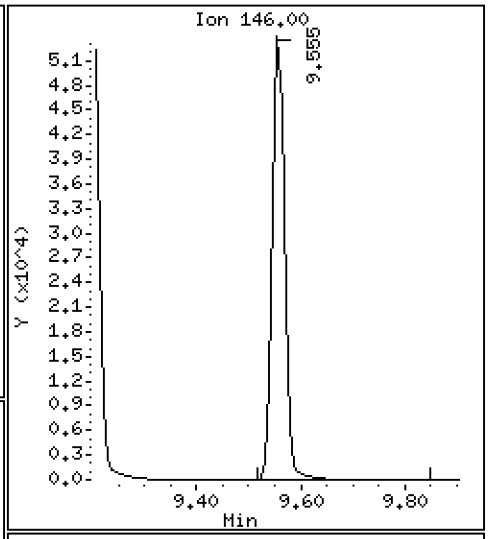
Column phase: ZB-5msi

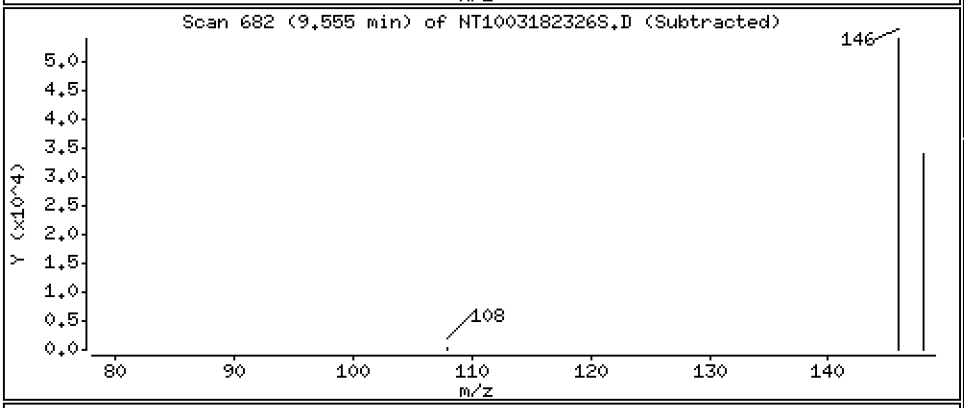
Column diameter: 0.25

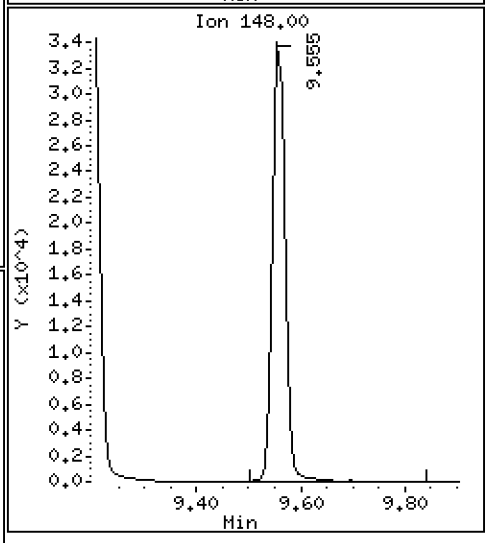
12 1,2-Dichlorobenzene

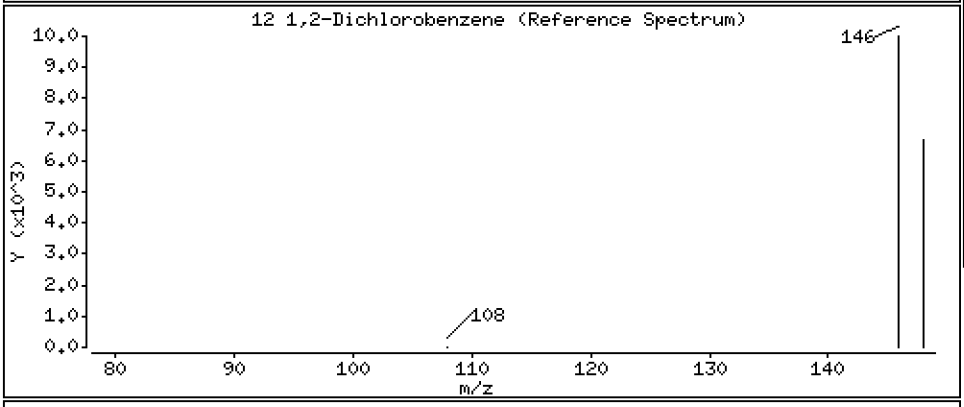
Concentration: 0.9968 ug/L

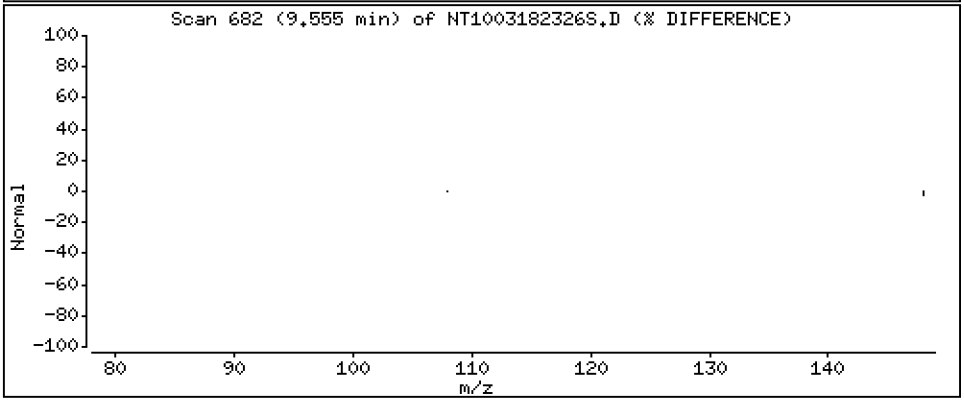












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

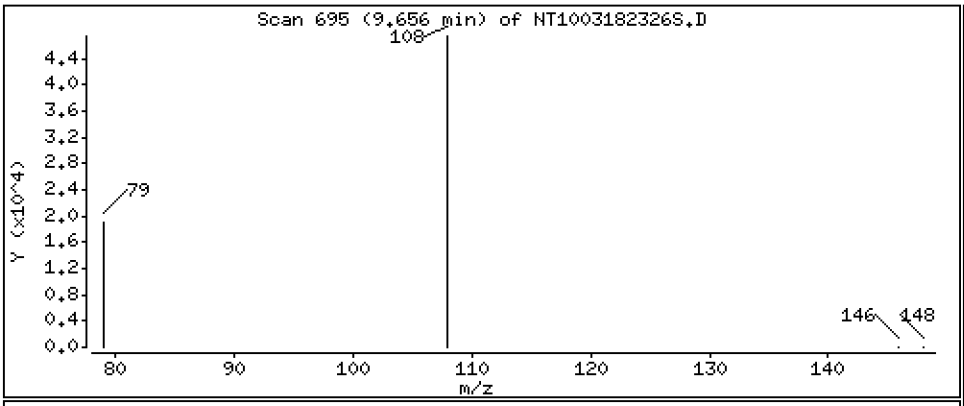
Operator: JGR

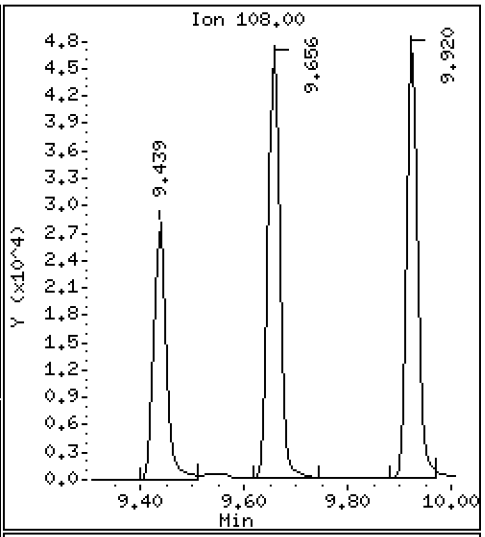
Column phase: ZB-5msi

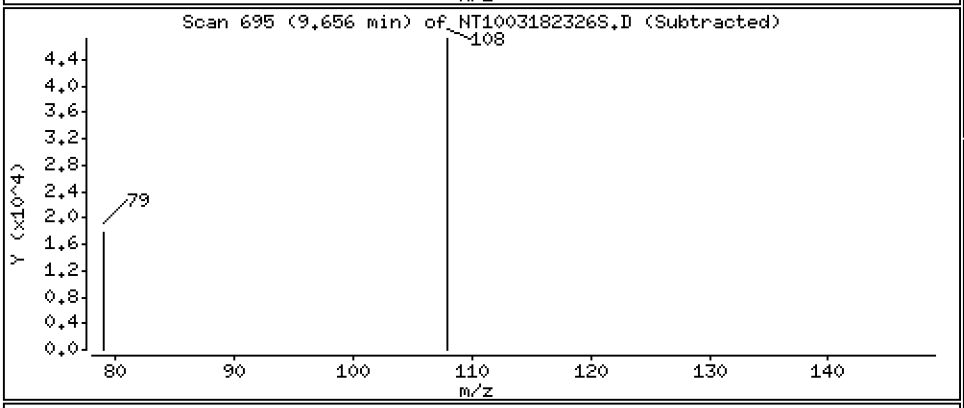
Column diameter: 0.25

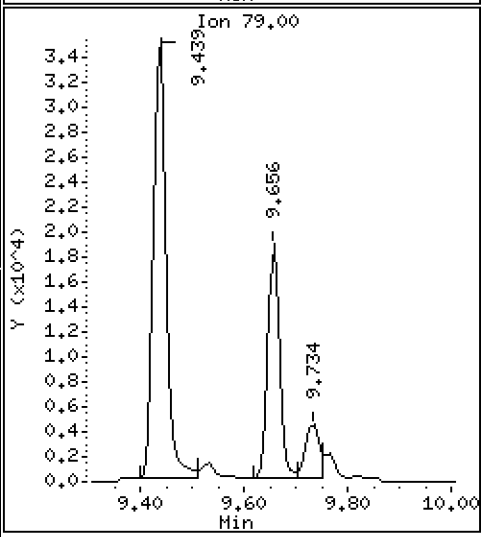
13 2-Methylphenol

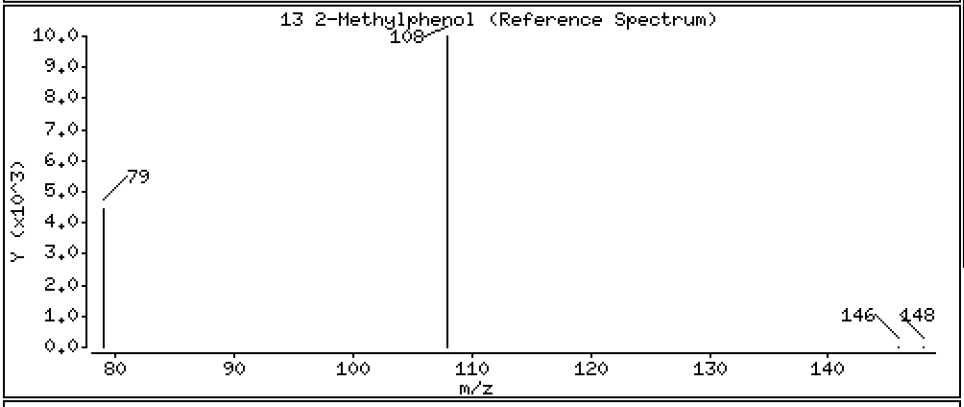
Concentration: 1.074 ug/L

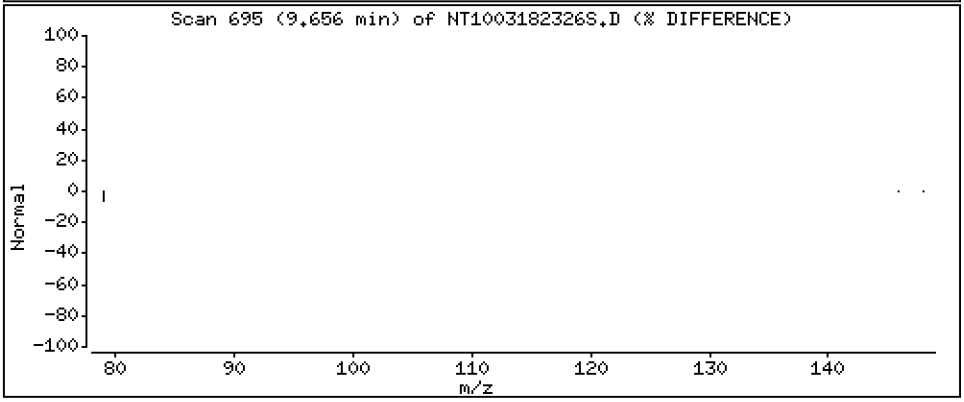












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

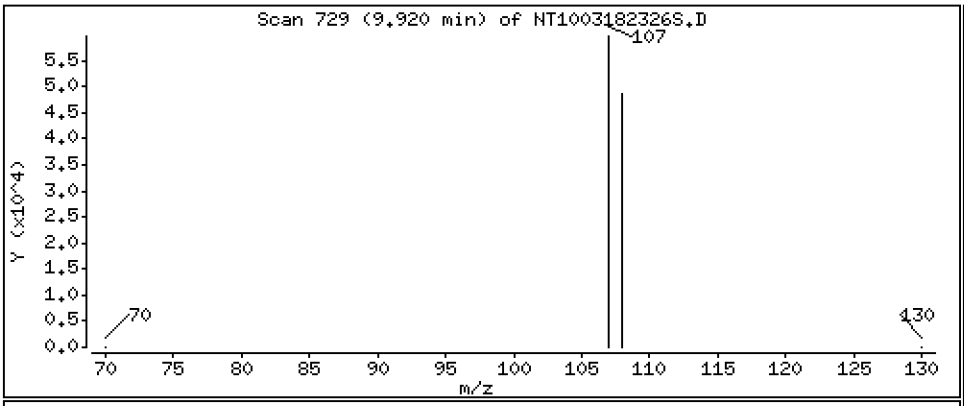
Operator: JGR

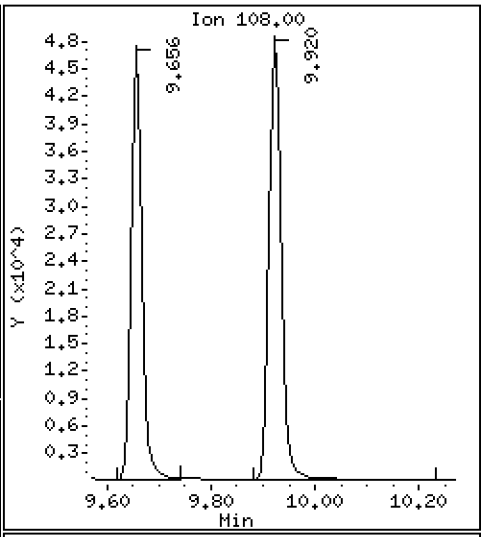
Column phase: ZB-5msi

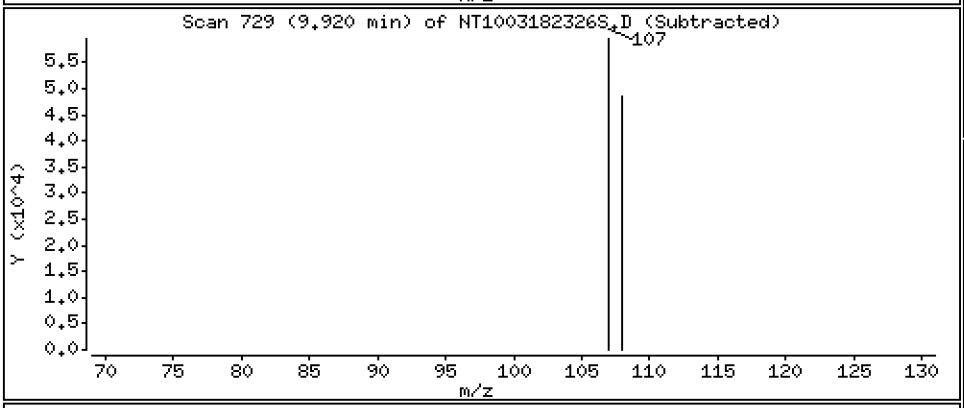
Column diameter: 0.25

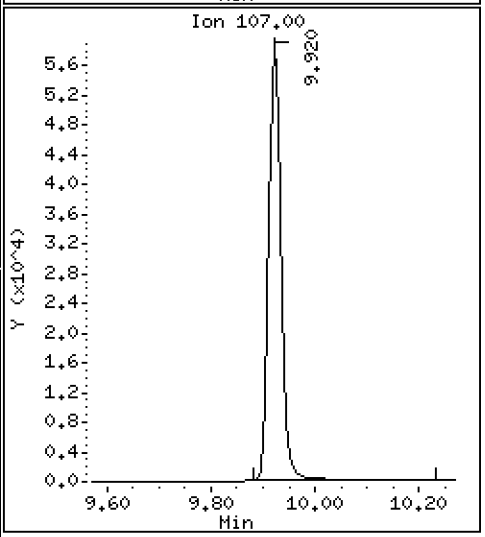
15 4-Methylphenol

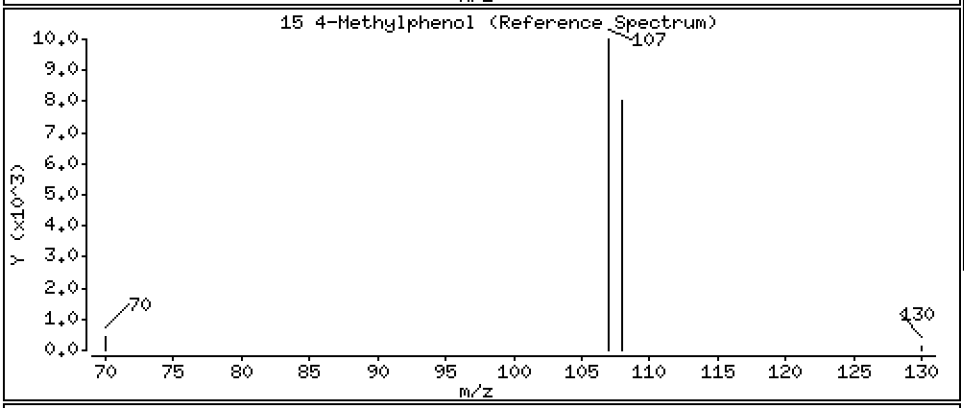
Concentration: 1.112 ug/L

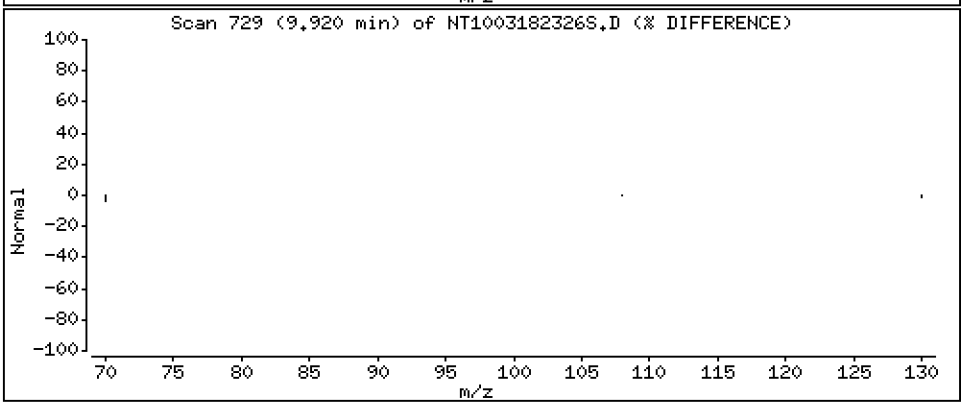












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

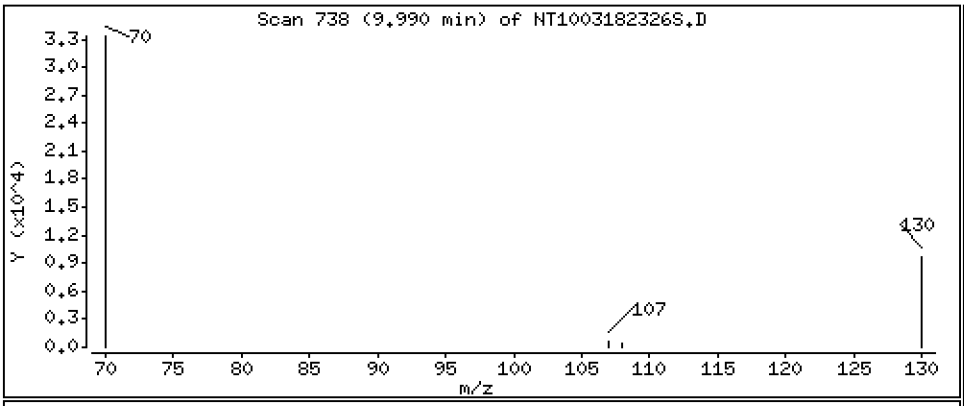
Operator: JGR

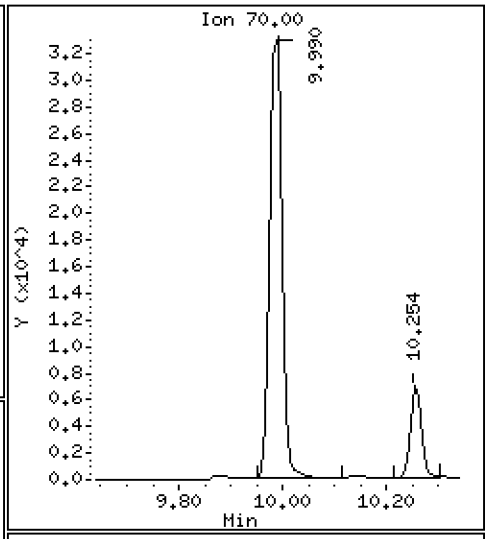
Column phase: ZB-5msi

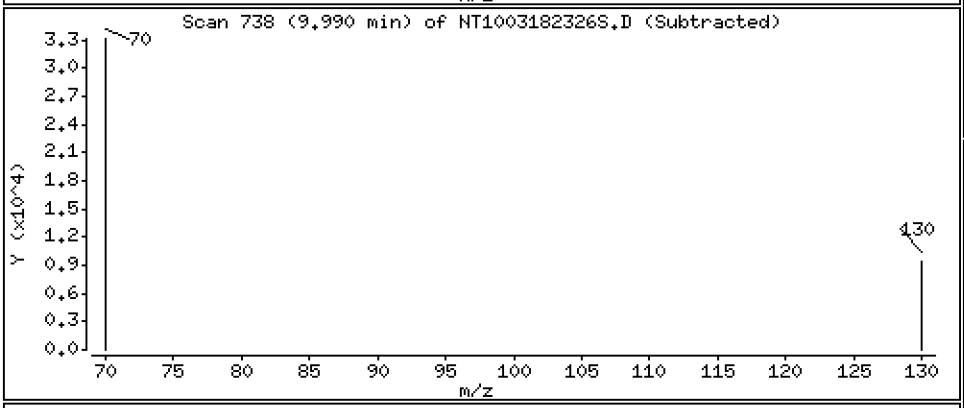
Column diameter: 0.25

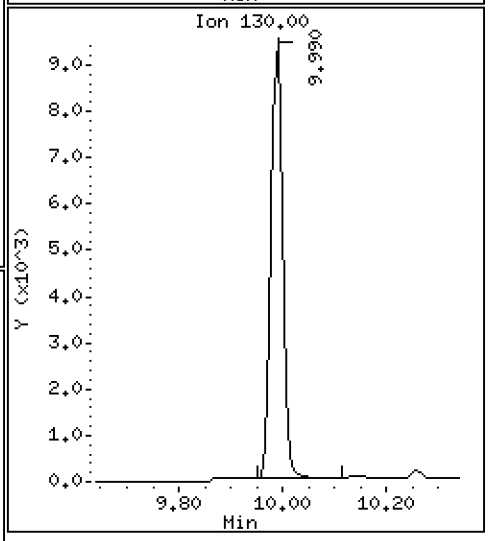
16 N-Nitroso-di-n-propylamine

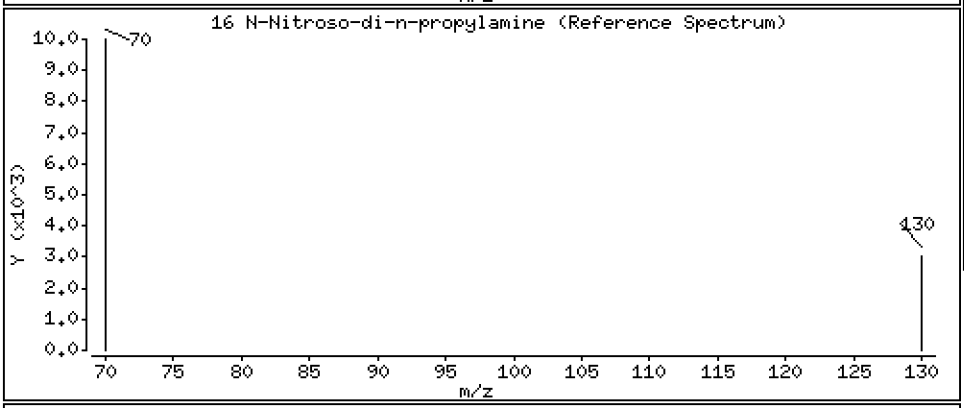
Concentration: 1.058 ug/L

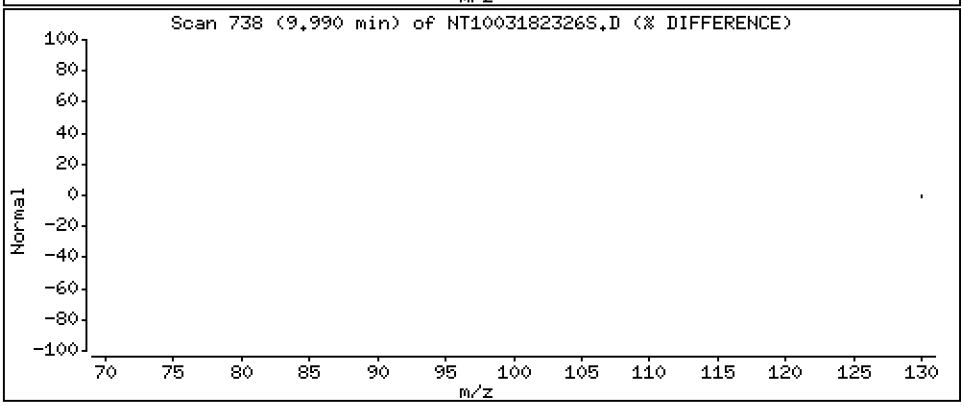












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

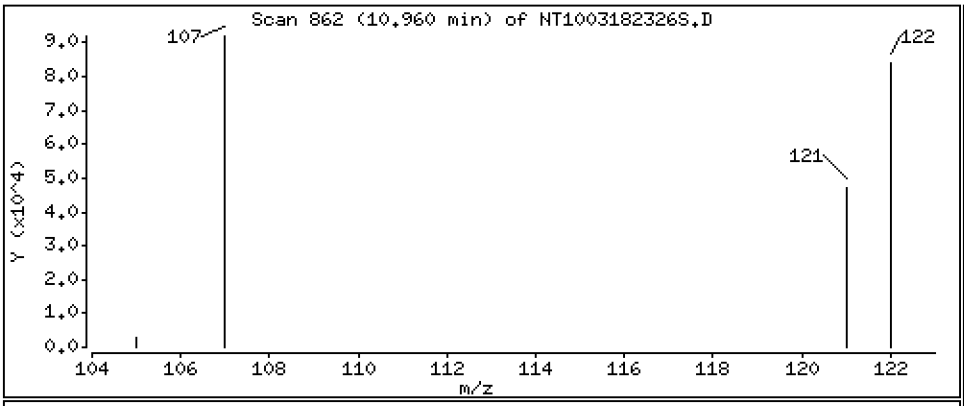
Operator: JGR

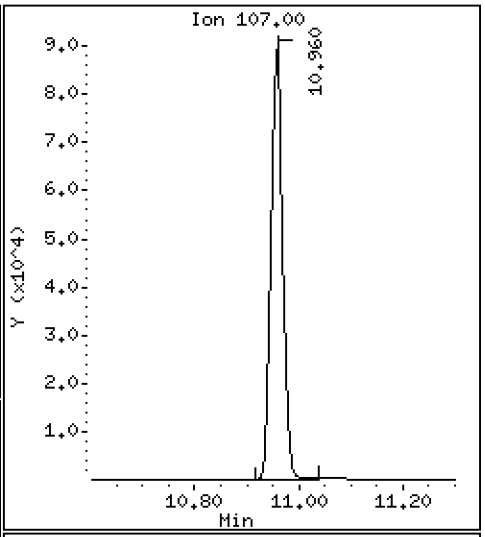
Column phase: ZB-5msi

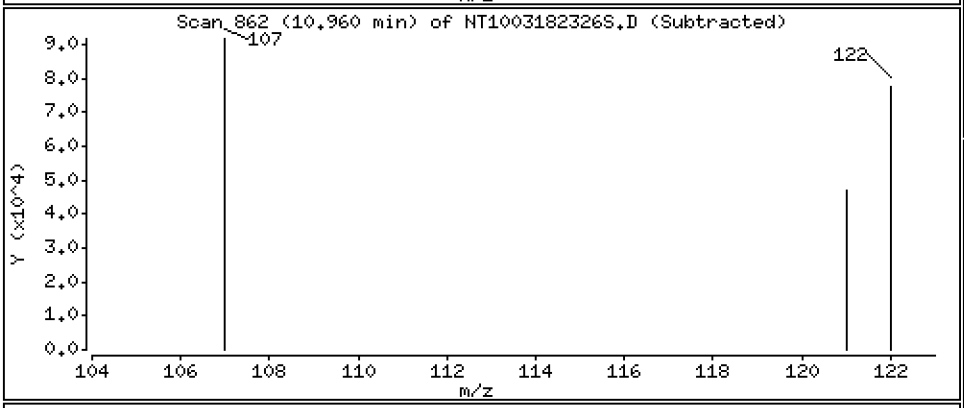
Column diameter: 0.25

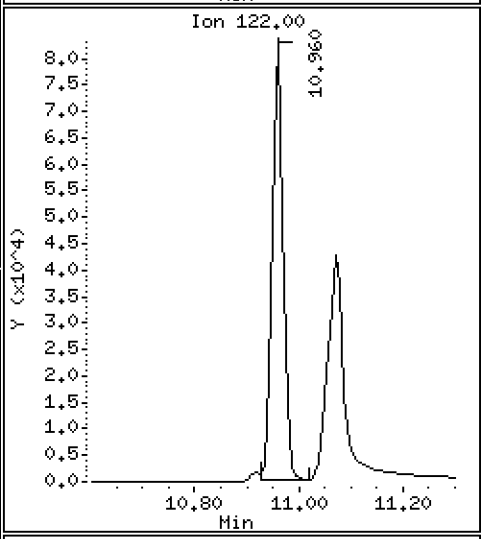
22 2,4-Dimethylphenol

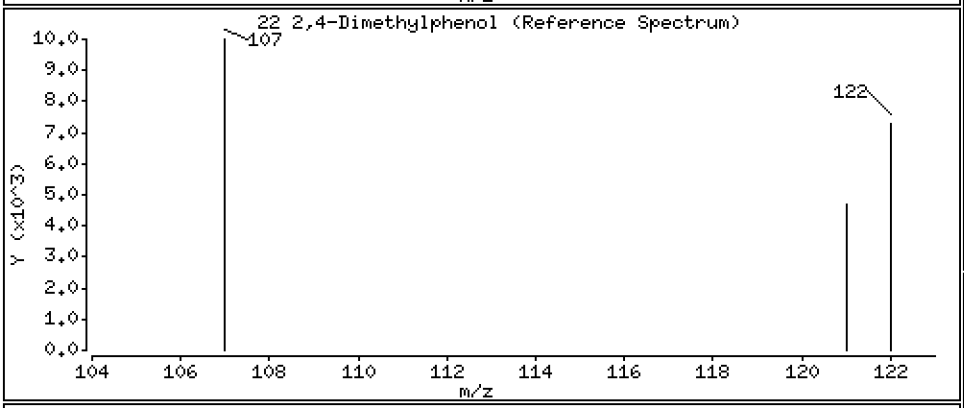
Concentration: 1.973 ug/L

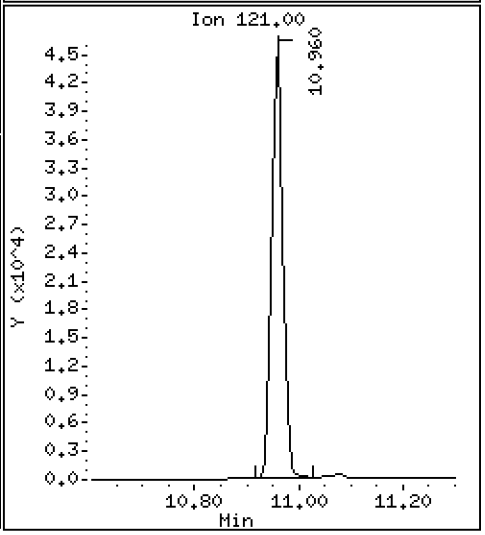


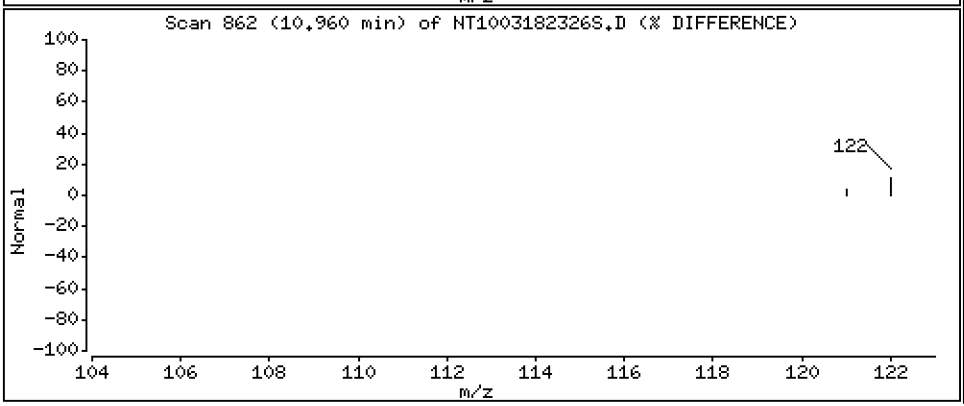












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

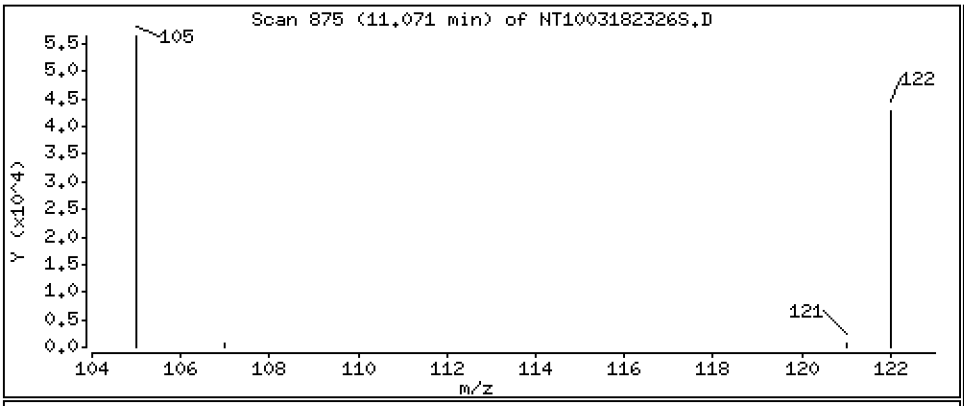
Operator: JGR

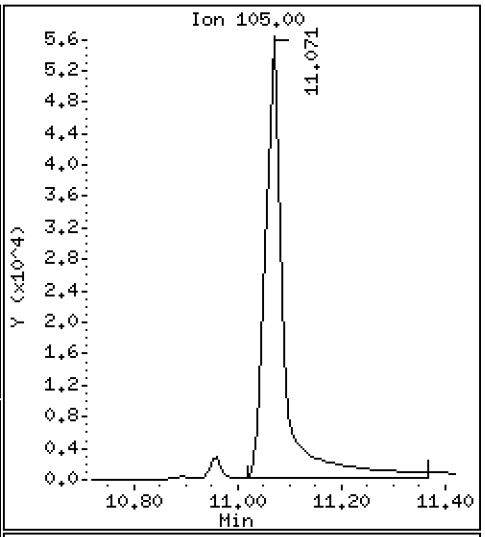
Column phase: ZB-5msi

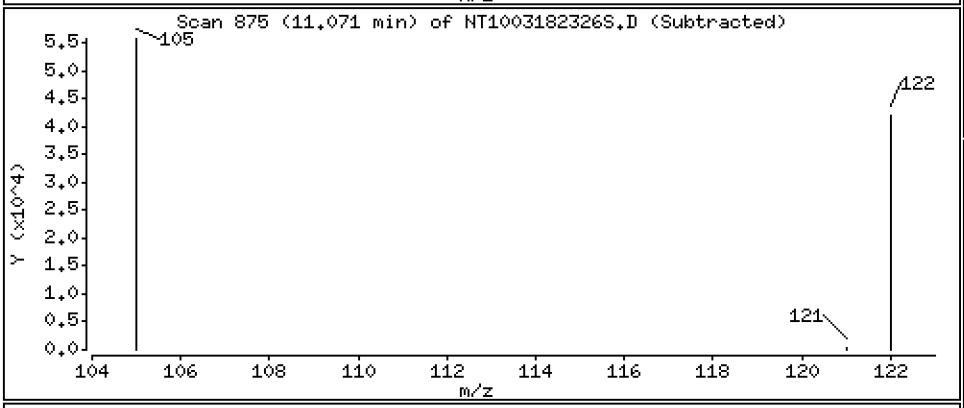
Column diameter: 0.25

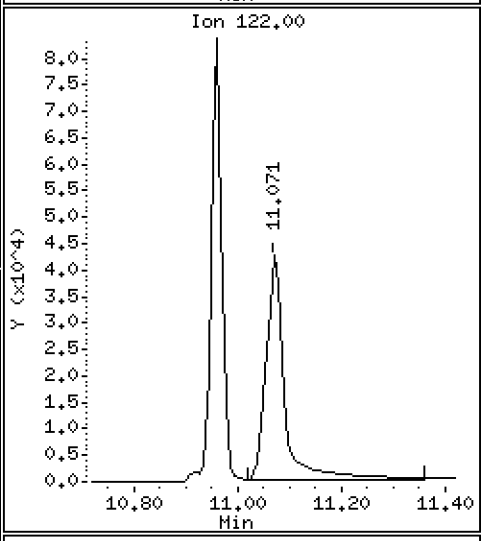
24 Benzoic acid

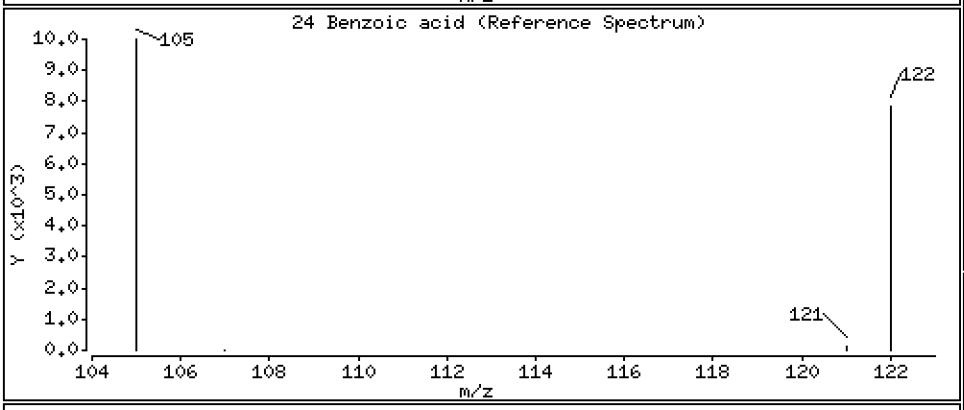
Concentration: 3.558 ug/L

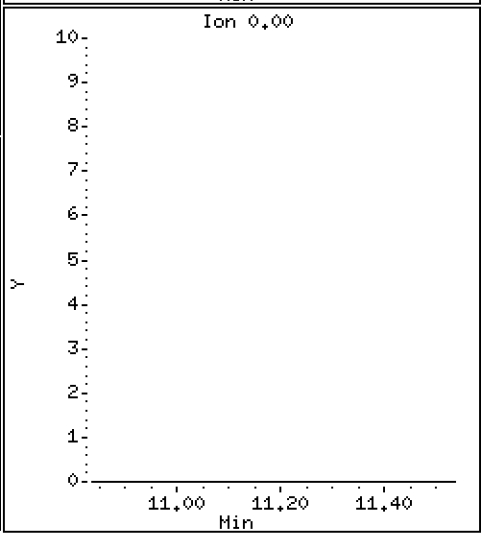


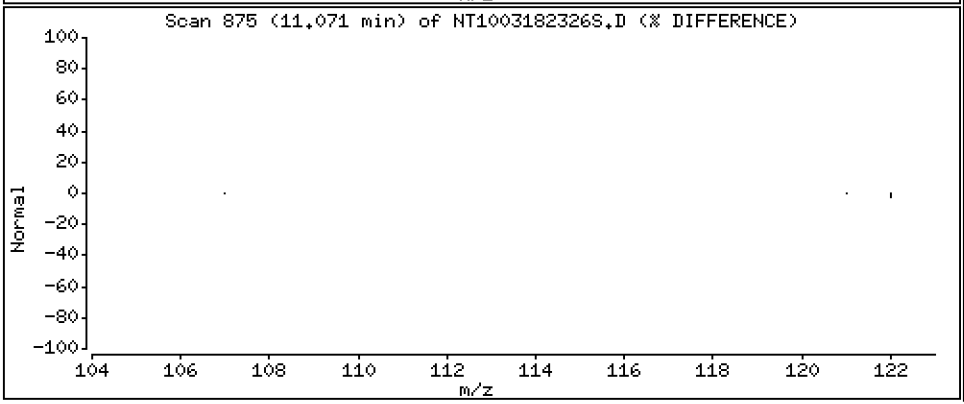












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

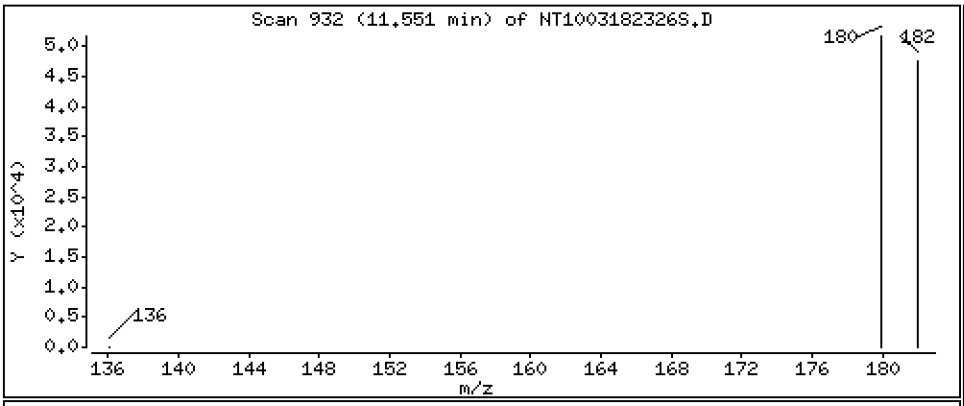
Operator: JGR

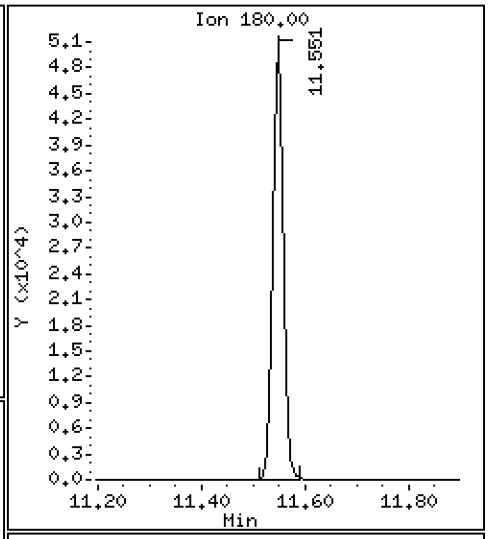
Column phase: ZB-5msi

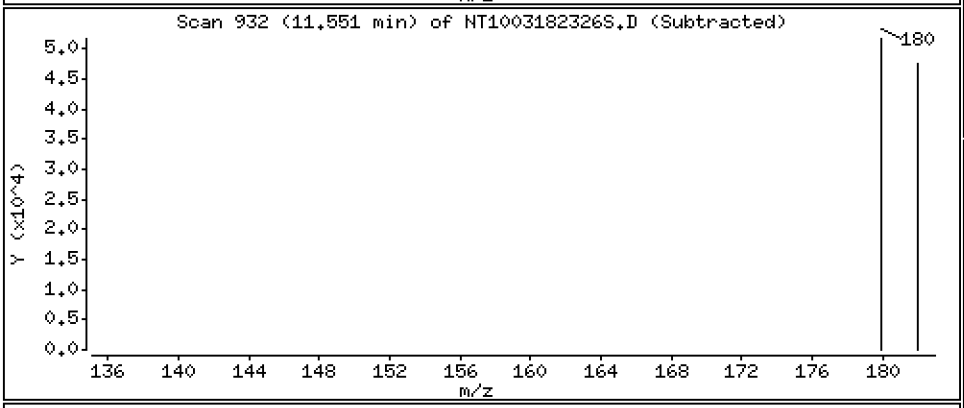
Column diameter: 0.25

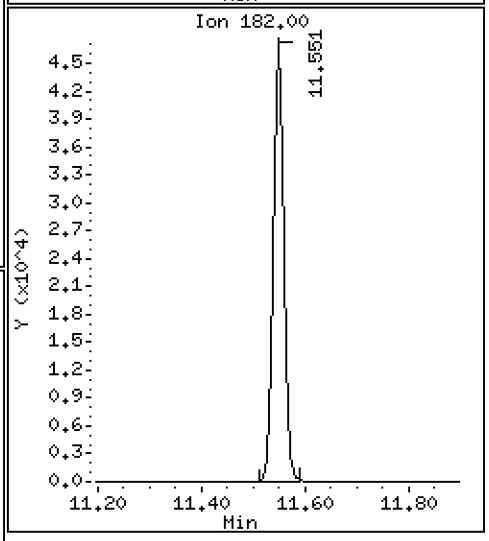
26 1,2,4-Trichlorobenzene

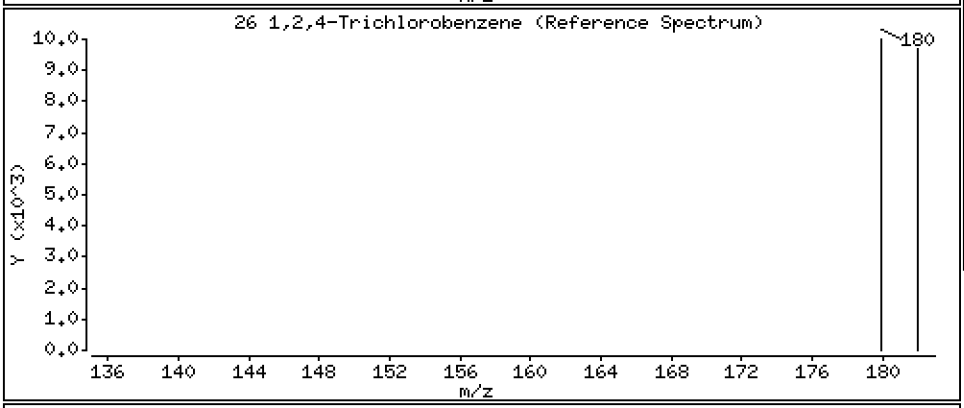
Concentration: 1.044 ug/L

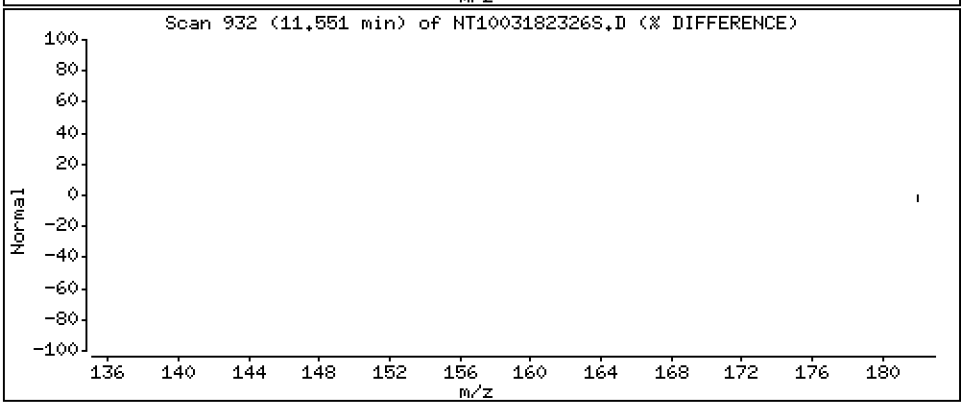












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

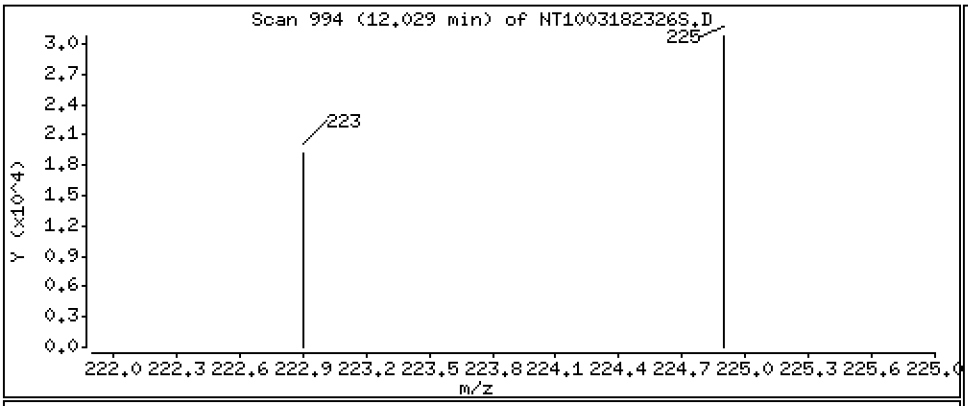
Operator: JGR

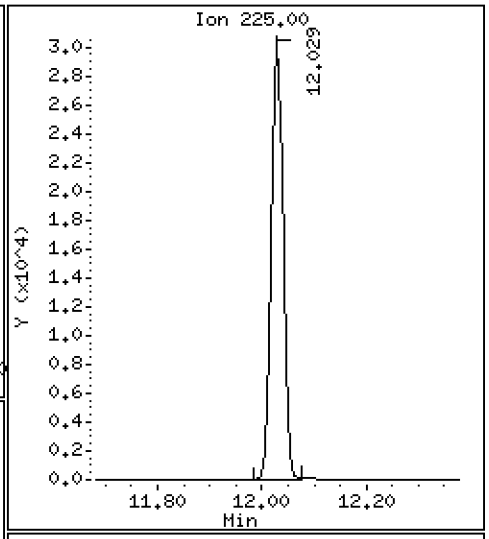
Column phase: ZB-5msi

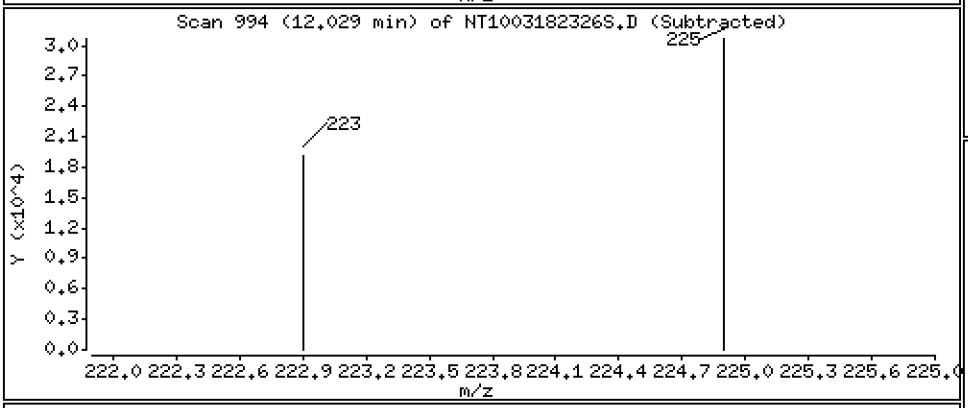
Column diameter: 0.25

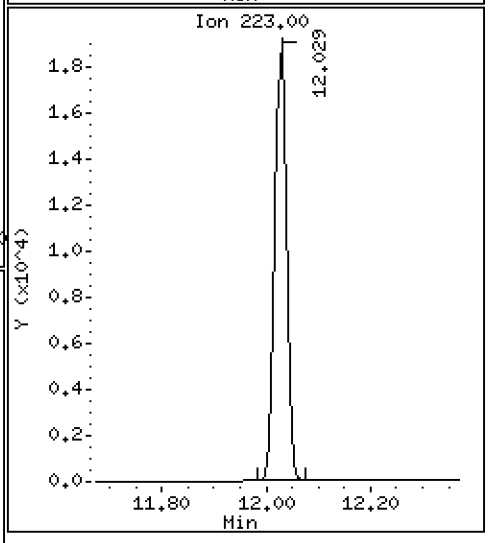
30 Hexachlorobutadiene

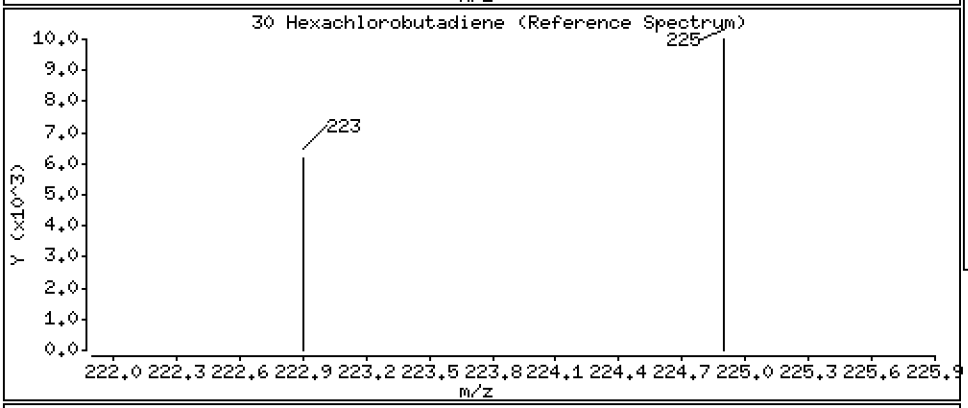
Concentration: 1.032 ug/L

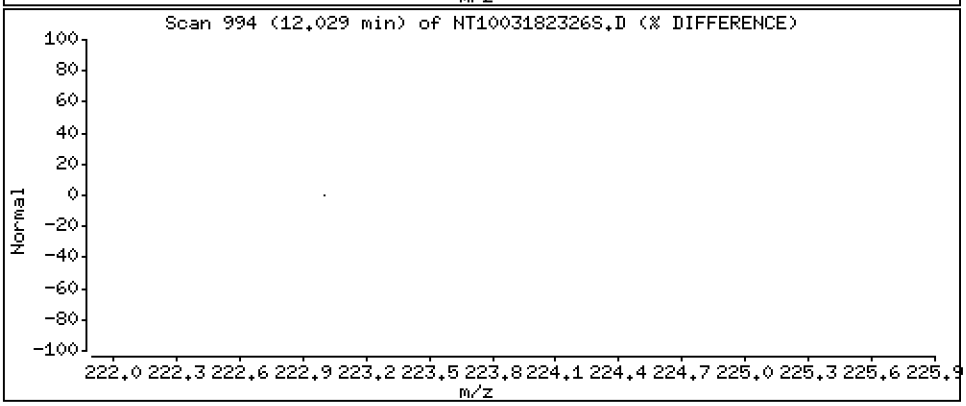












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

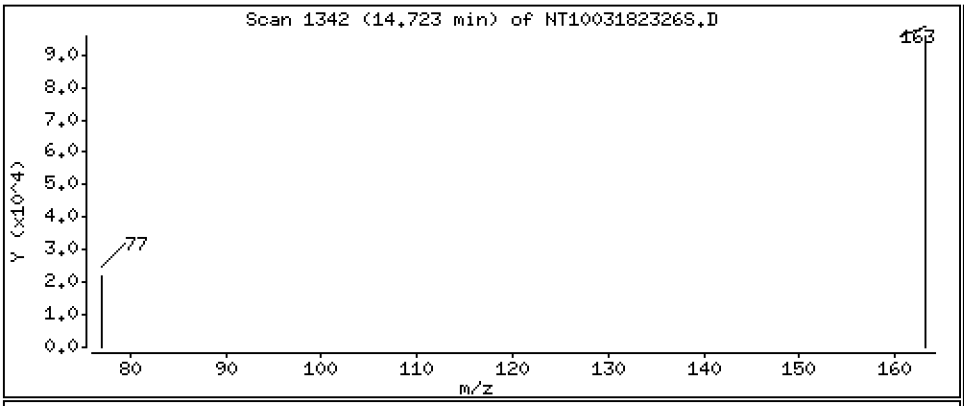
Operator: JGR

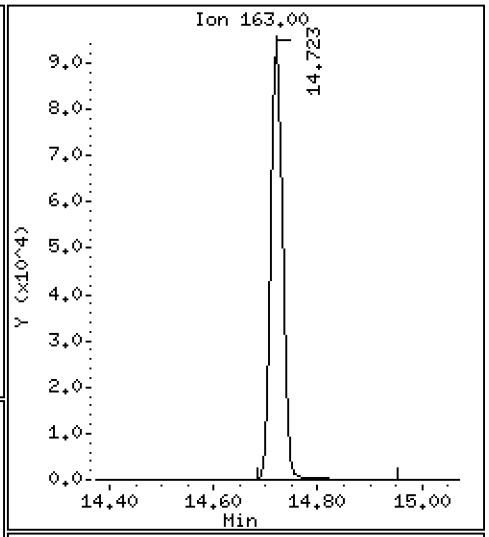
Column phase: ZB-5msi

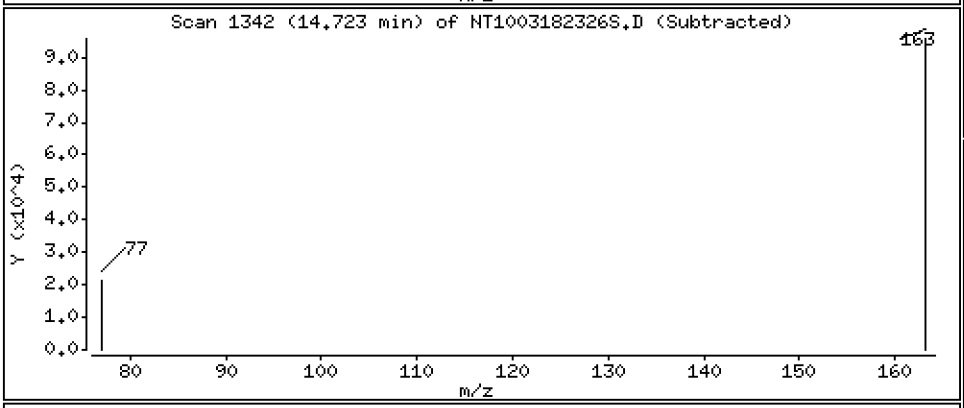
Column diameter: 0.25

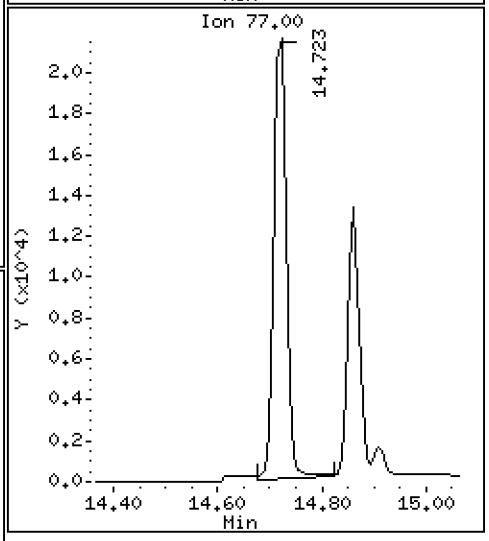
39 Dimethylphthalate

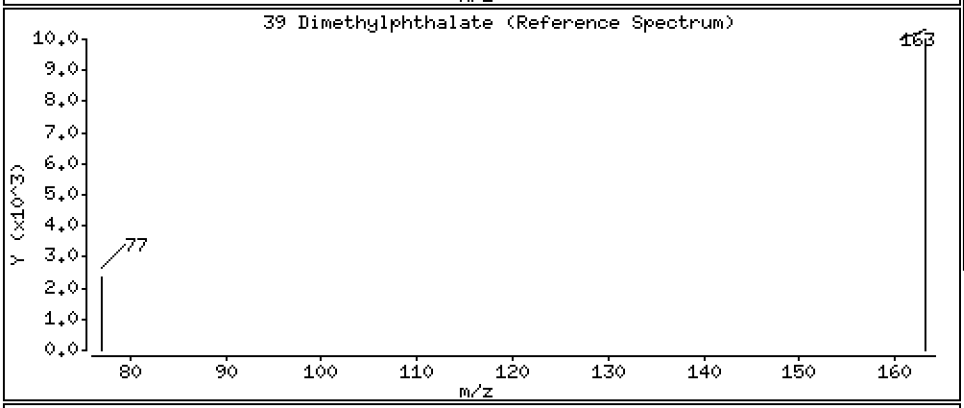
Concentration: 1.109 ug/L

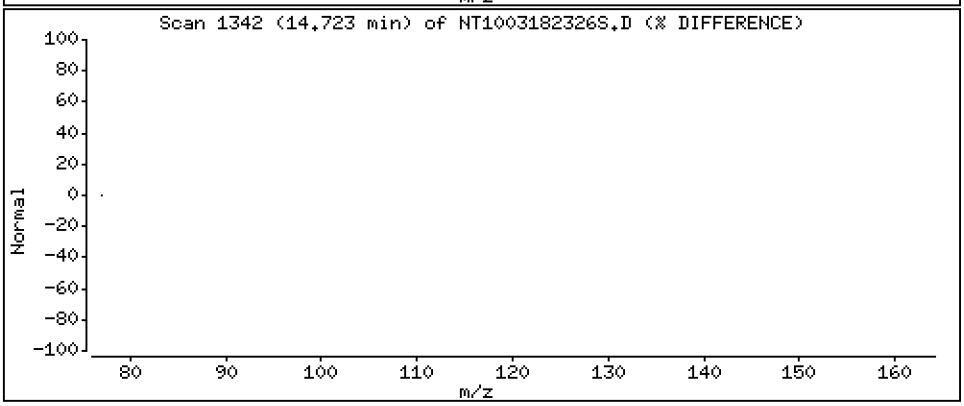












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

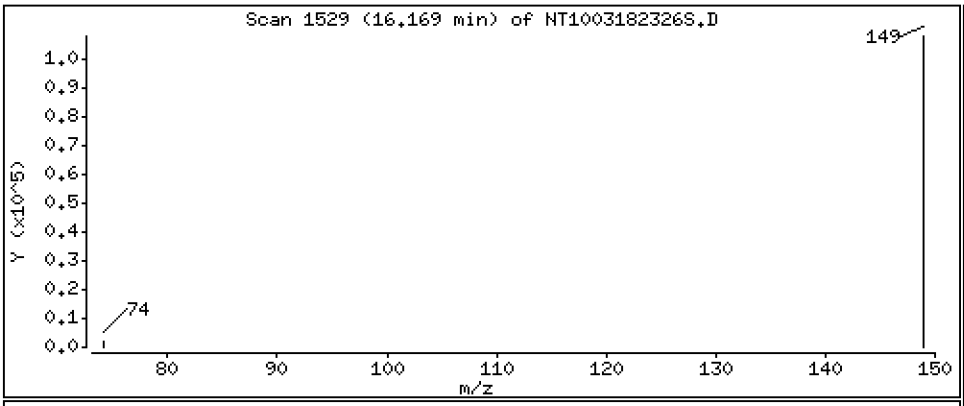
Operator: JGR

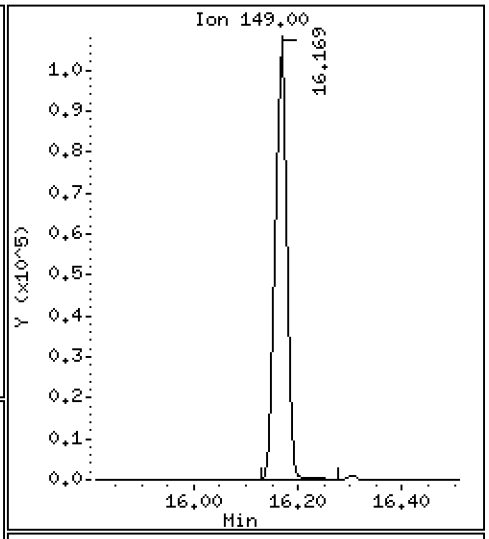
Column phase: ZB-5msi

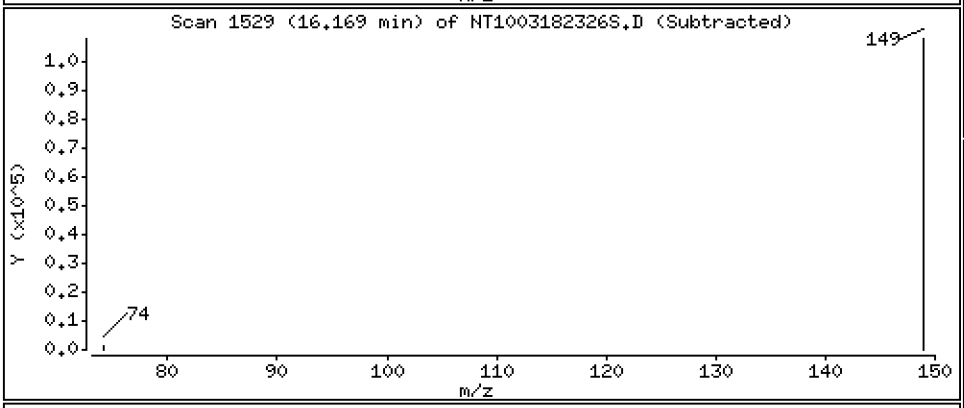
Column diameter: 0.25

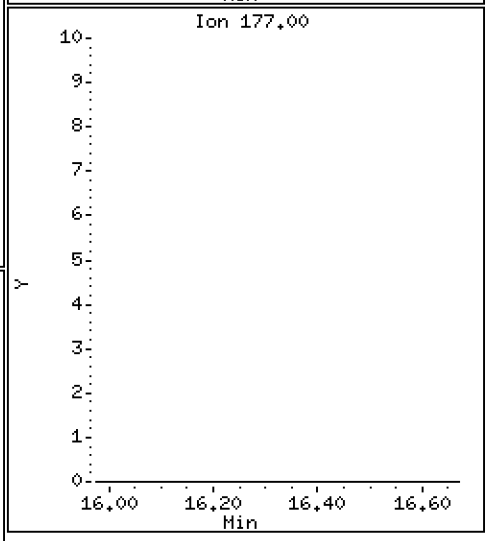
50 Diethylphthalate

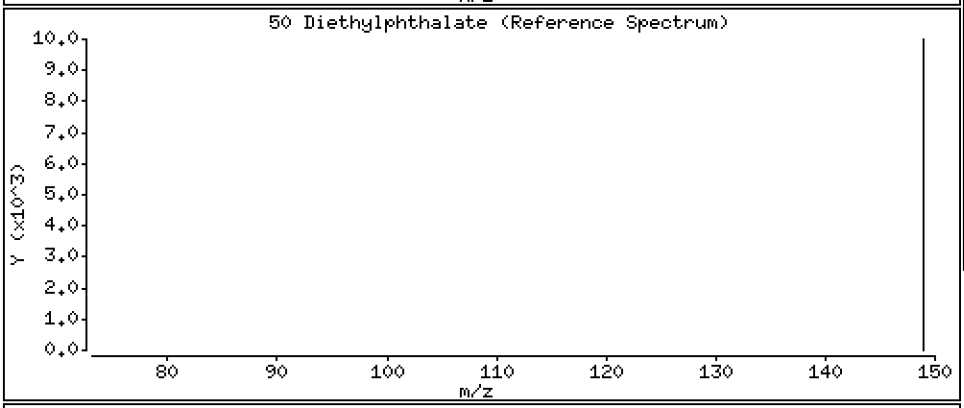
Concentration: 1.214 ug/L

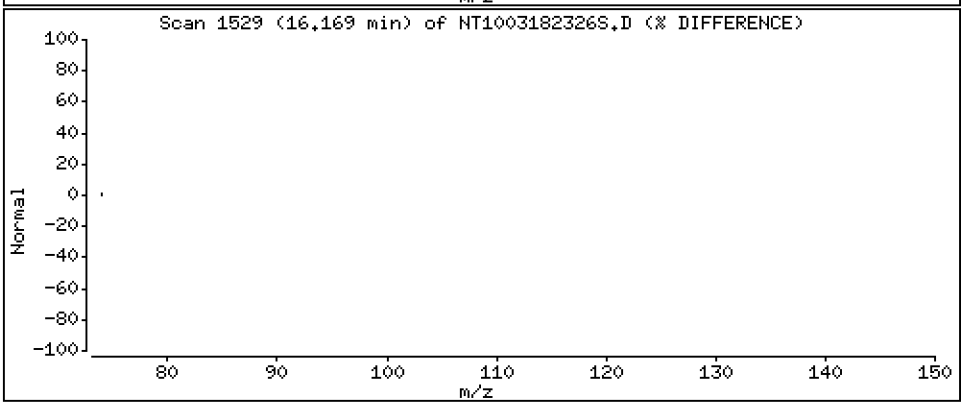












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

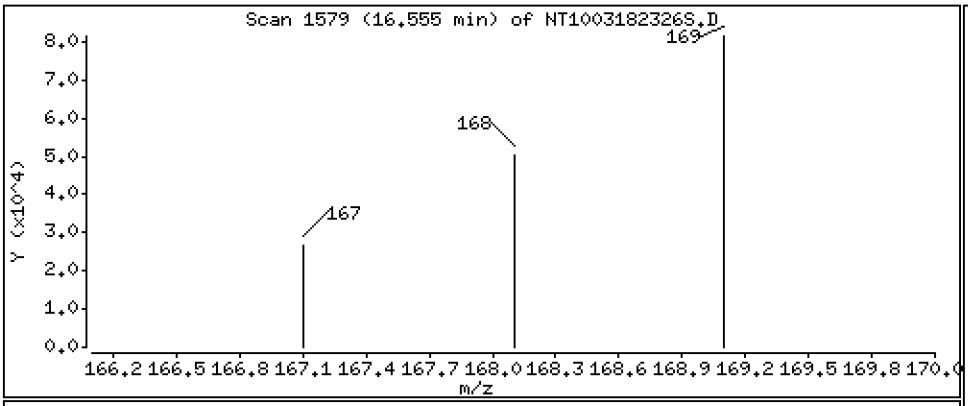
Operator: JGR

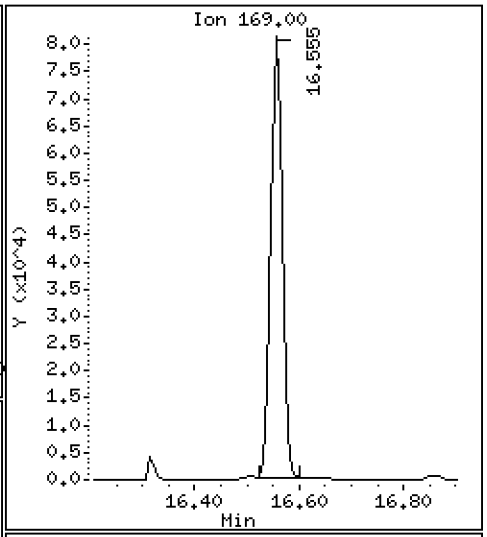
Column phase: ZB-5msi

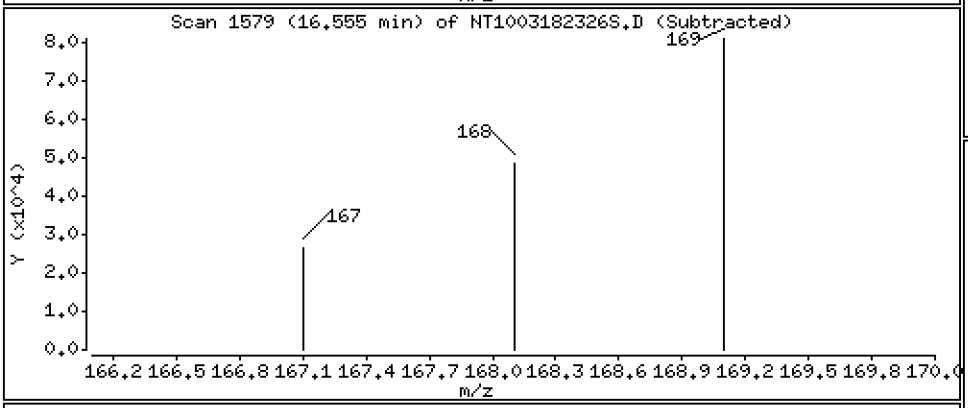
Column diameter: 0.25

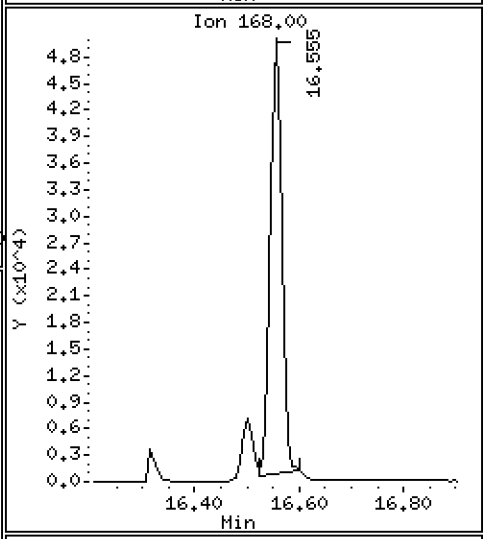
54 N-Nitrosodiphenylamine

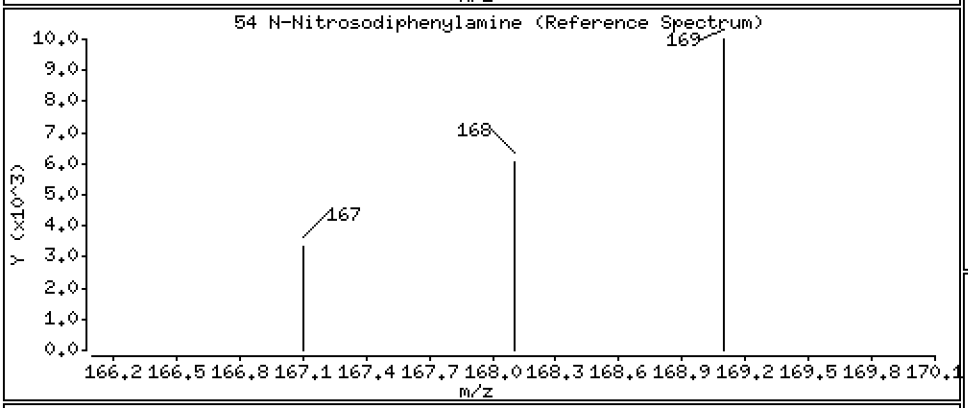
Concentration: 1.052 ug/L

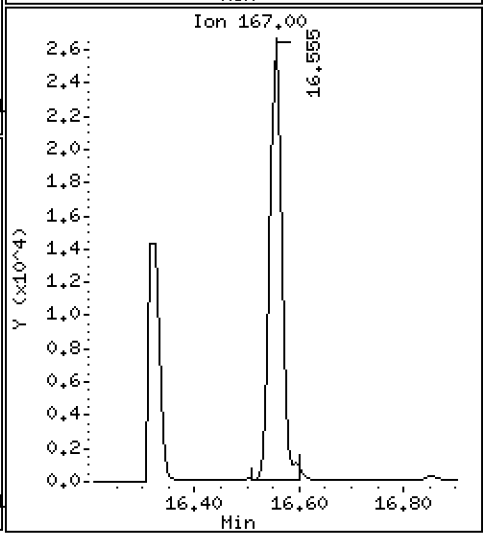


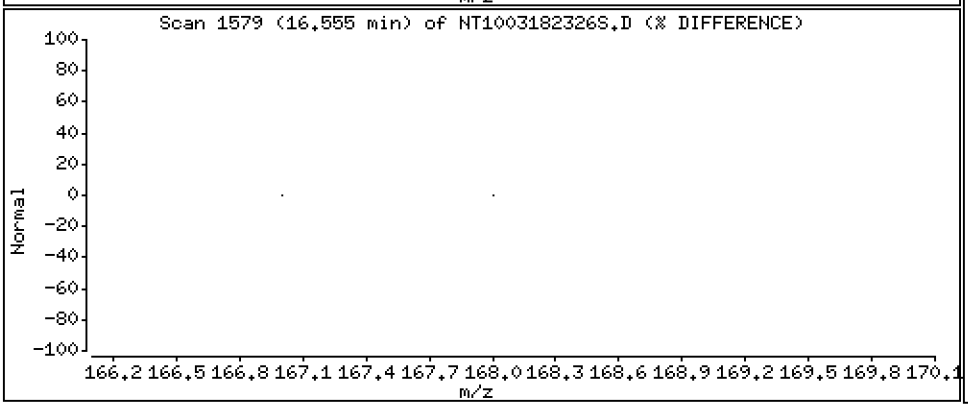












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Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

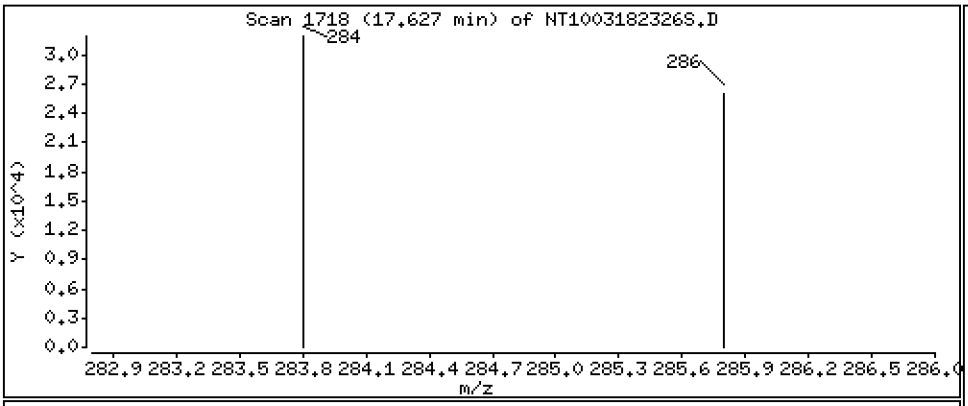
Operator: JGR

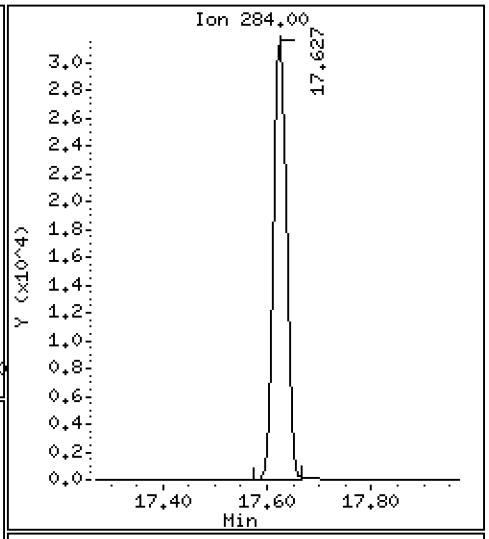
Column phase: ZB-5msi

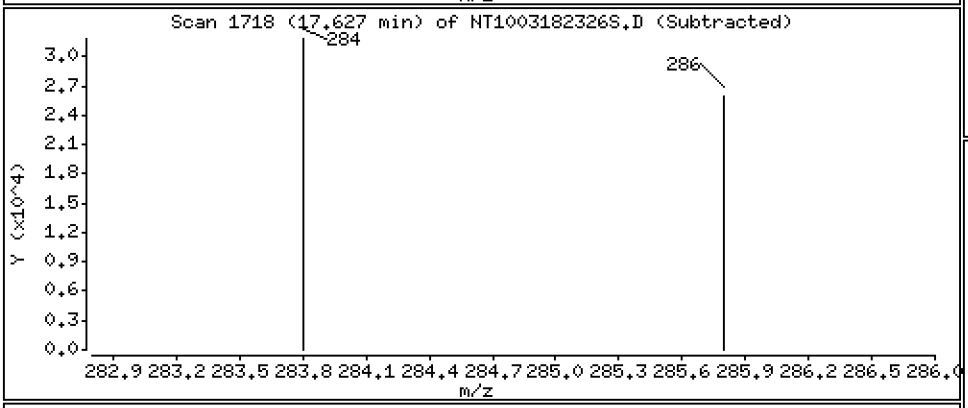
Column diameter: 0.25

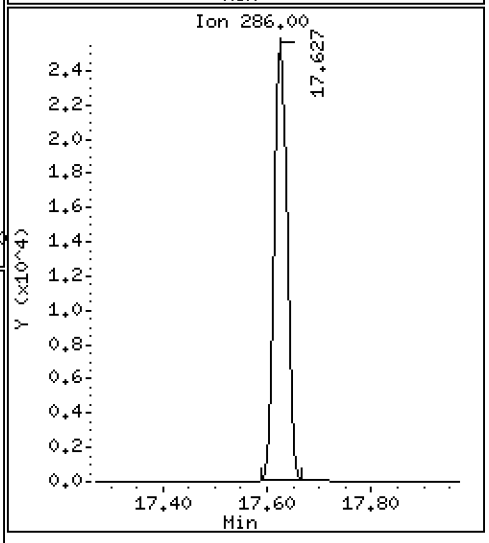
57 Hexachlorobenzene

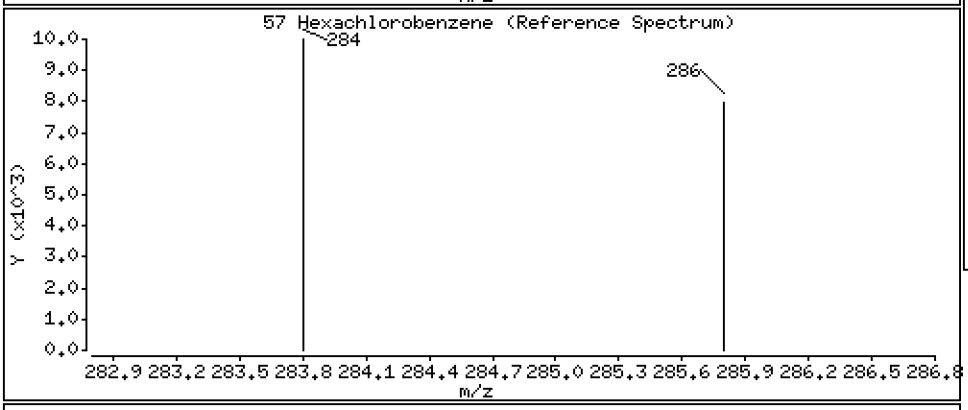
Concentration: 1.048 ug/L

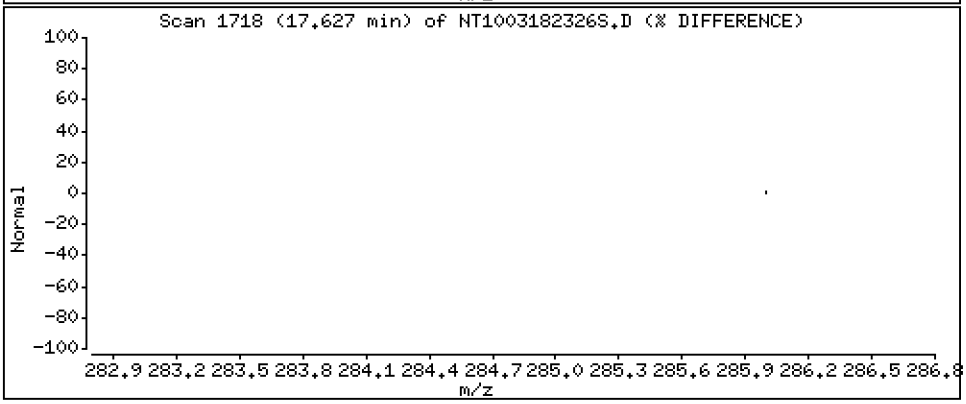












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

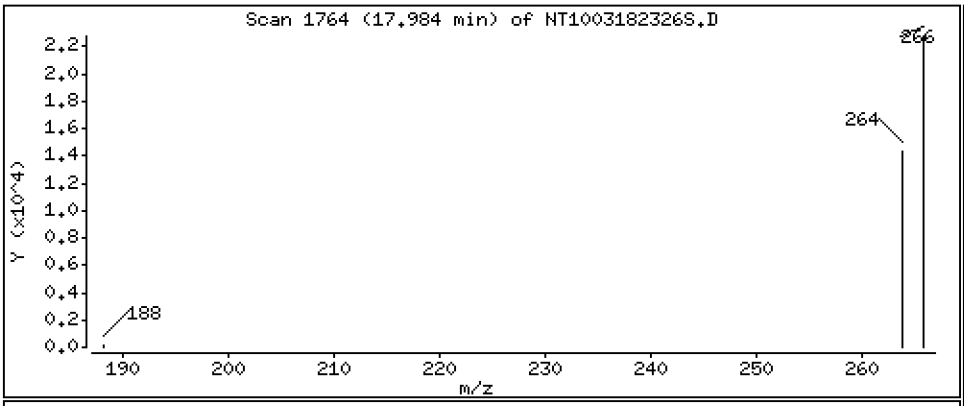
Operator: JGR

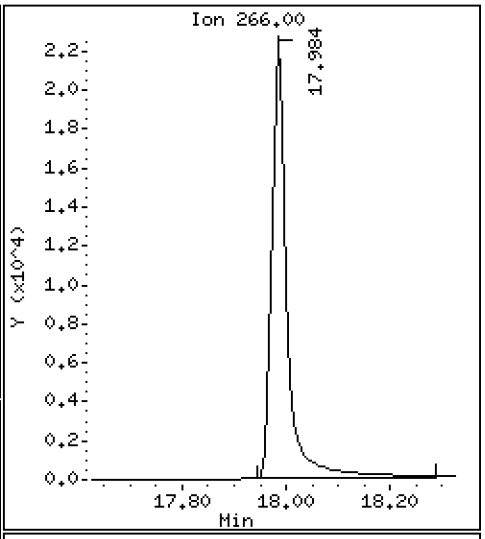
Column phase: ZB-5msi

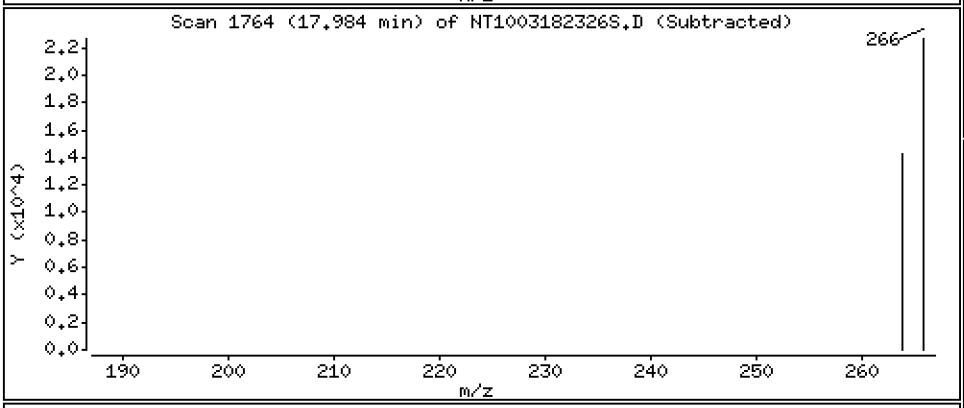
Column diameter: 0.25

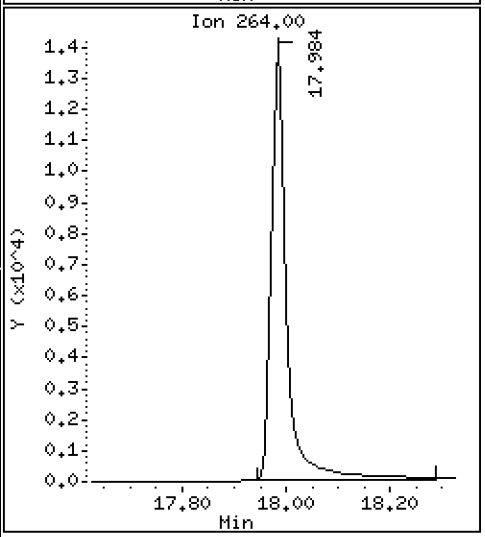
58 Pentachlorophenol

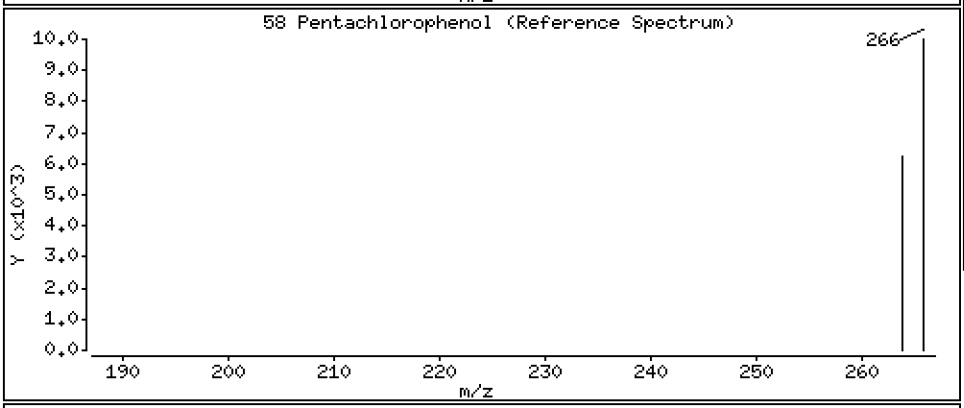
Concentration: 1.632 ug/L

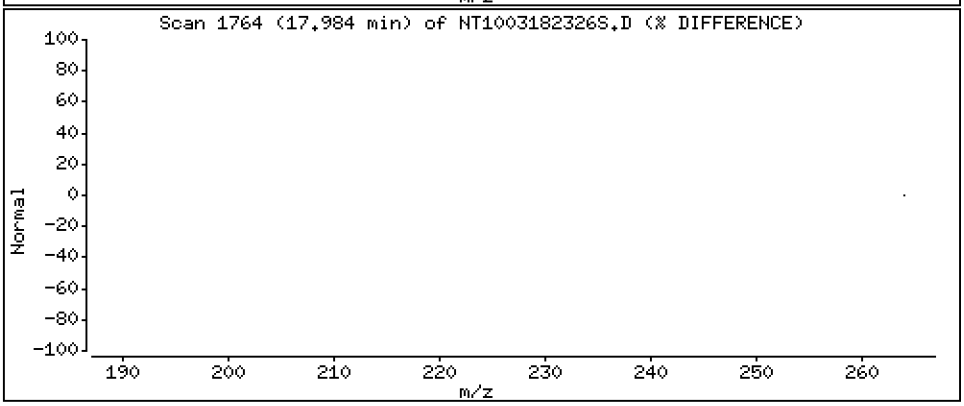












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

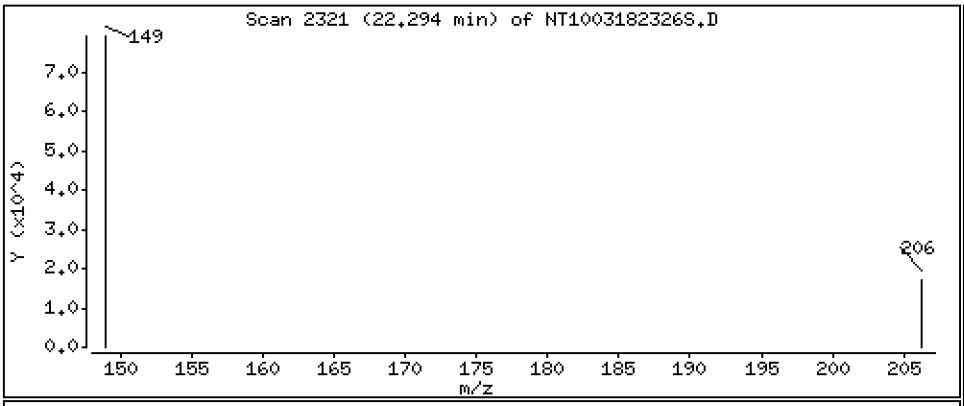
Operator: JGR

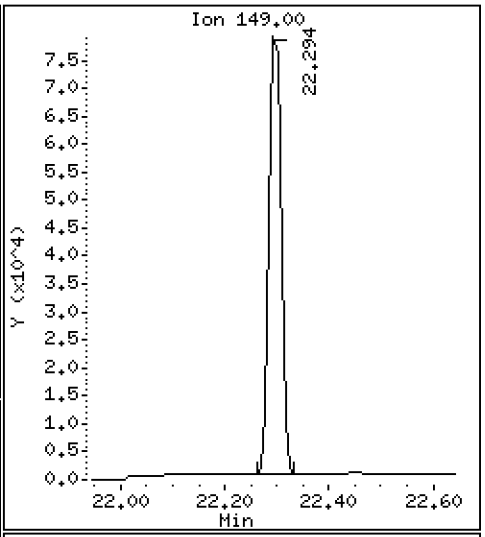
Column phase: ZB-5msi

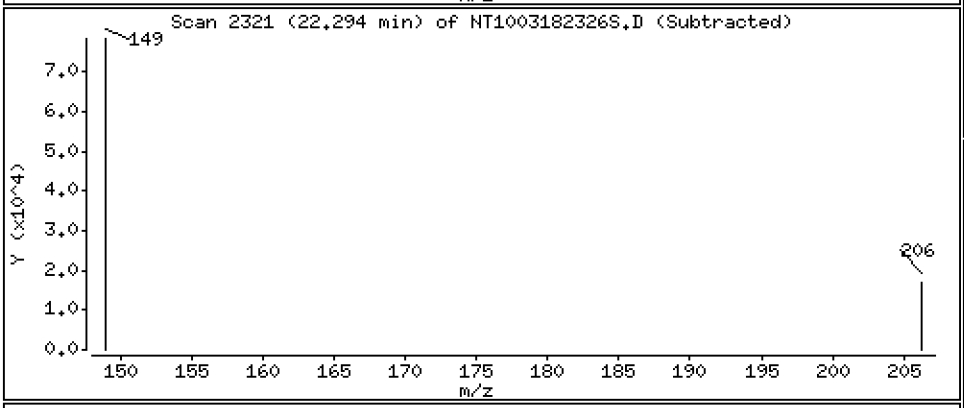
Column diameter: 0.25

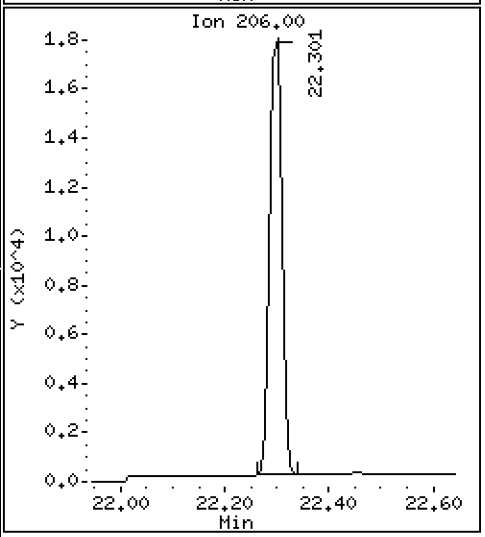
67 Butylbenzylphthalate

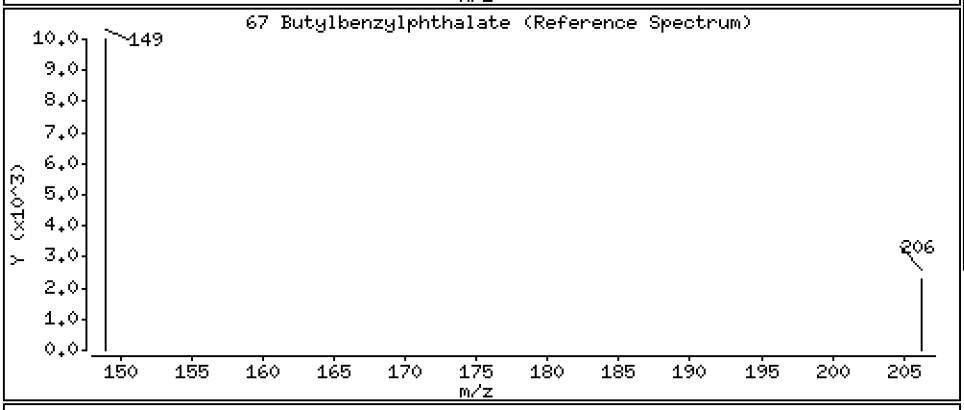
Concentration: 1.259 ug/L

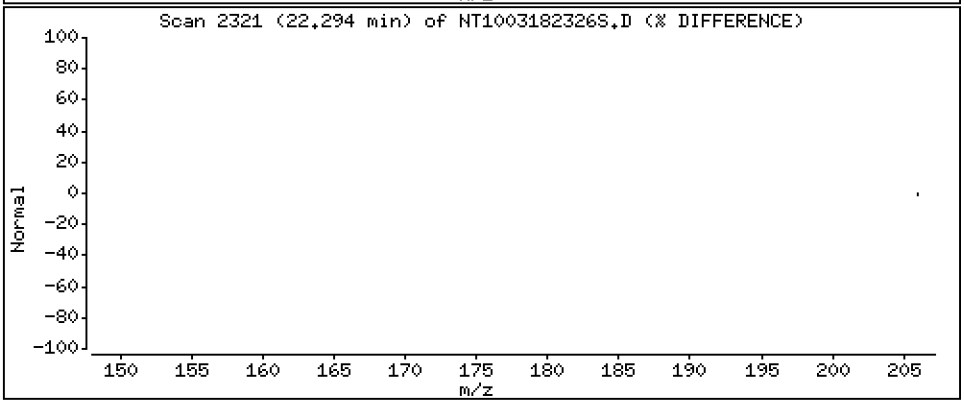












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

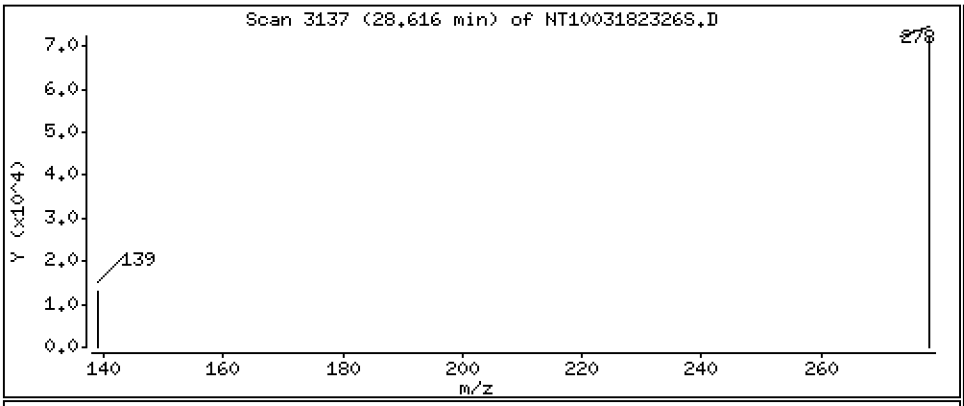
Operator: JGR

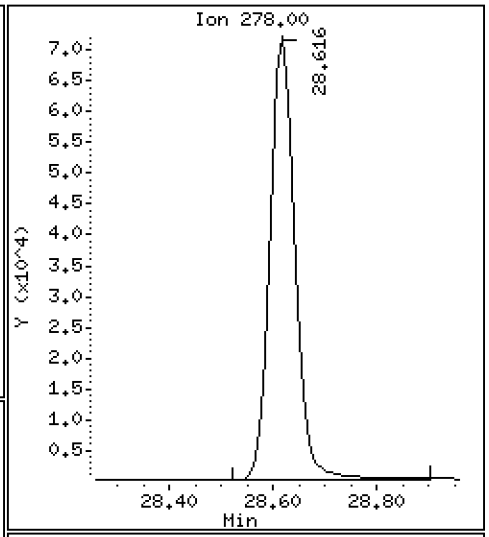
Column phase: ZB-5msi

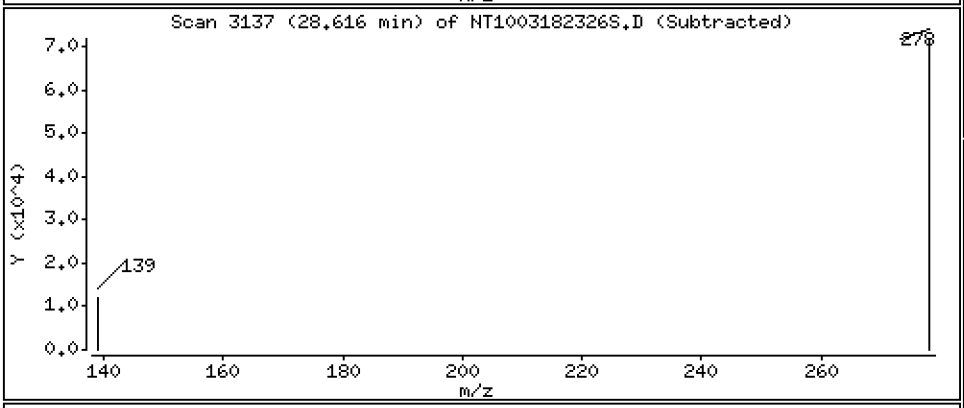
Column diameter: 0.25

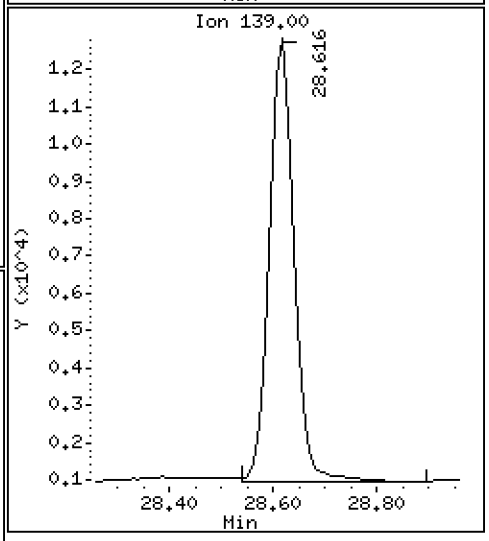
79 Dibenzo(a,h)anthracene

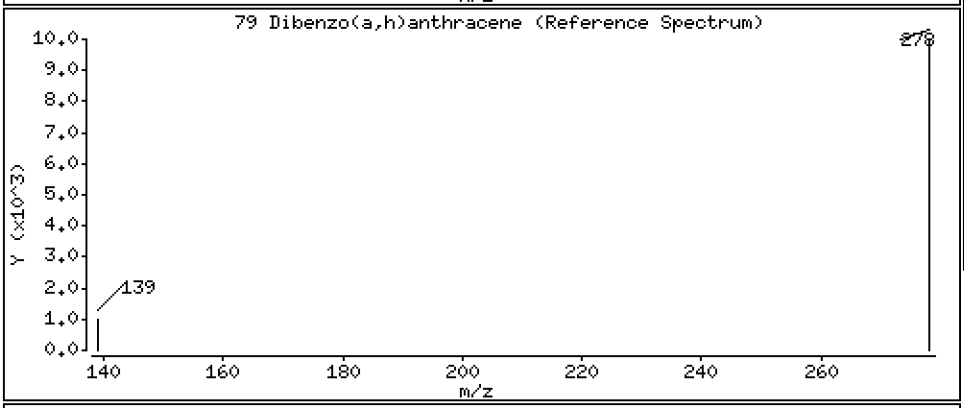
Concentration: 0.8894 ug/L

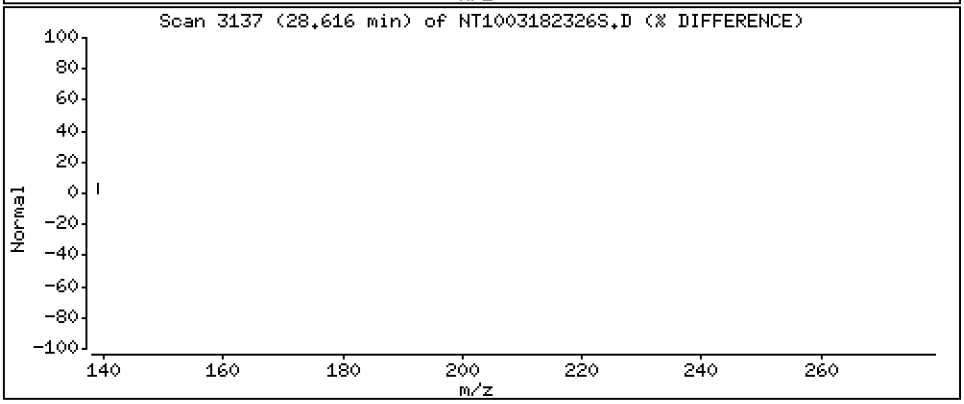












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823265.D

Date : 19-MAR-2023 09:41

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-CCV1

Volume Injected (uL): 1.0

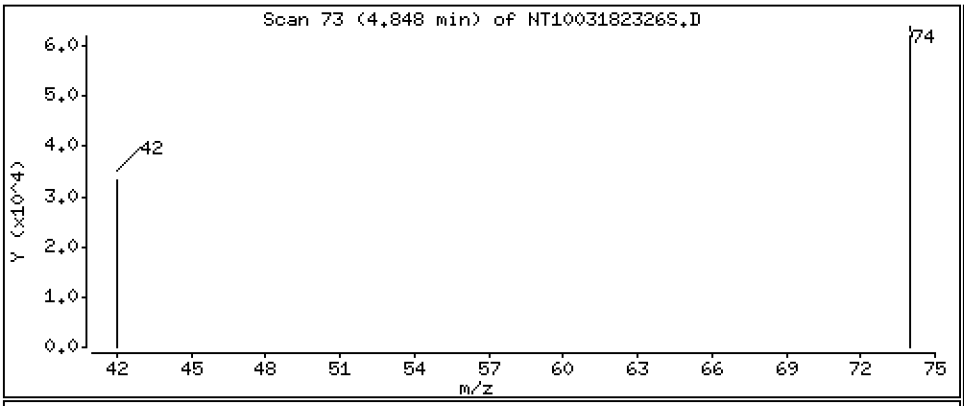
Operator: JGR

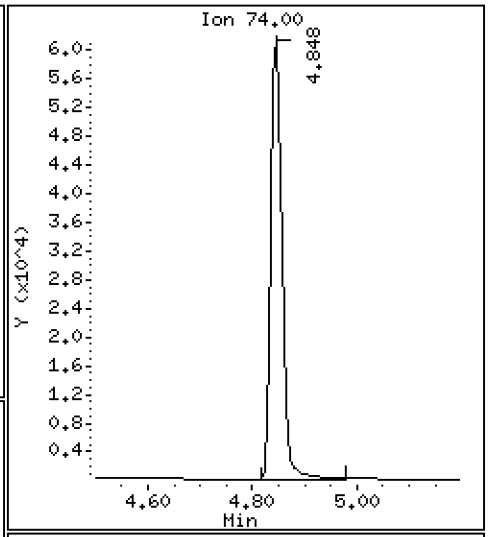
Column phase: ZB-5msi

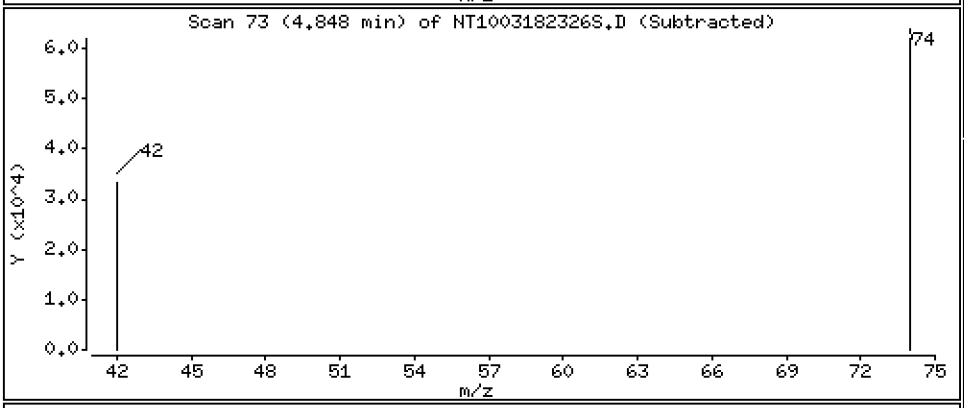
Column diameter: 0.25

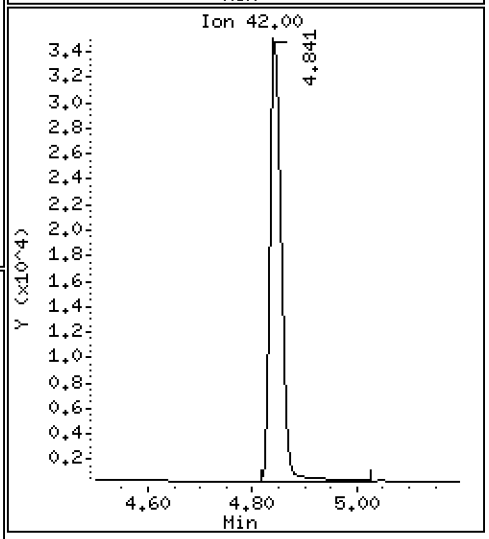
90 N-Nitrosodimethylamine

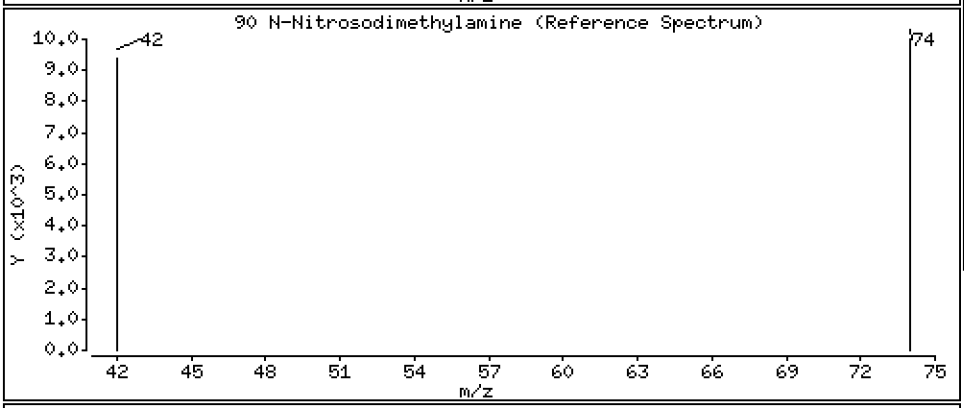
Concentration: 2.014 ug/L

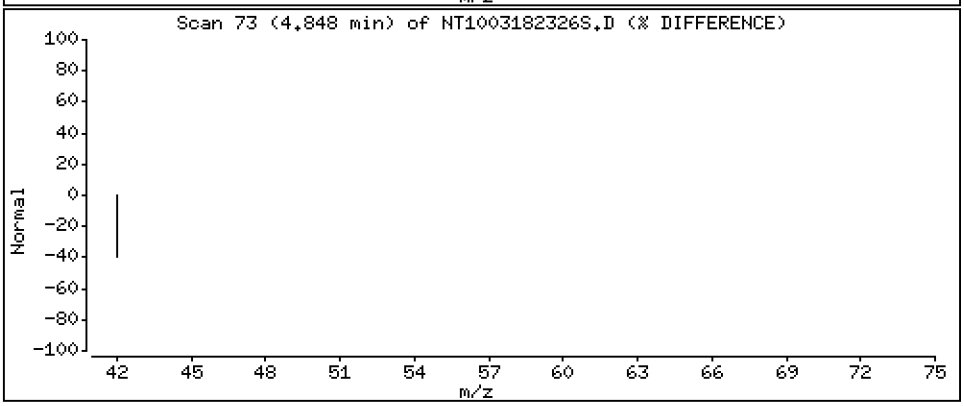












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182326S.D
Lab Smp Id: SLC0505-CCV1
Inj Date : 19-MAR-2023 09:41 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0505-CCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.964	6.964	(0.759)	109475	1.59271	1.593(R)
3	Phenol	94	8.548	8.548	(0.932)	93747	0.99414	0.9941
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.992)	88320	1.00091	1.001
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	226664	4.00000	
9	1,4-Dichlorobenzene	146	9.206	9.206	(1.003)	84645	0.99372	0.9937
11	Benzyl alcohol	79	9.439	9.438	(1.029)	58167	1.06398	1.064
12	1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	83506	0.99685	0.9968
13	2-Methylphenol	108	9.656	9.656	(1.052)	70147	1.07355	1.074
15	4-Methylphenol	108	9.920	9.920	(1.081)	75504	1.11203	1.112
16	N-Nitroso-di-n-propylamine	70	9.990	9.990	(1.089)	50779	1.05751	1.058
22	2,4-Dimethylphenol	107	10.960	10.951	(0.942)	139137	1.97290	1.973
24	Benzoic acid	105	11.070	11.070	(0.951)	139093	3.55789	3.558
26	1,2,4-Trichlorobenzene	180	11.550	11.550	(0.993)	74076	1.04413	1.044
* 27	Naphthalene-d8	136	11.635	11.635	(1.000)	815897	4.00000	
30	Hexachlorobutadiene	225	12.029	12.029	(1.034)	44531	1.03241	1.032
39	Dimethylphthalate	163	14.722	14.722	(0.967)	140094	1.10919	1.109
* 42	Acenaphthene-d10	162	15.225	15.217	(1.000)	400239	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	158885	1.21430	1.214
54	N-Nitrosodiphenylamine	169	16.554	16.554	(0.907)	117191	1.05193	1.052
57	Hexachlorobenzene	284	17.627	17.619	(0.966)	52266	1.04801	1.048

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.983	17.975	(0.986)	45349	1.63209	1.632
*	59 Phenanthrene-d10	188	18.246	18.246	(1.000)	830341	4.00000	
$	66 Terphenyl-d14	244	21.372	21.372	(0.918)	132584	1.12705	1.127(R)
	67 Butylbenzylphthalate	149	22.293	22.293	(0.957)	121106	1.25889	1.259
*	69 Chrysene-d12	240	23.284	23.277	(1.000)	721989	4.00000	
*	77 Perylene-d12	264	25.924	25.917	(1.000)	819632	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.615	28.607	(1.104)	238098	0.88941	0.8894
	90 N-Nitrosodimethylamine	74	4.848	4.848	(0.528)	87793	2.01387	2.014

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182326S.D
Lab Smp Id: SLC0505-CCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	226664	1.49
27 Naphthalene-d8	802913	401457	1605826	815897	1.62
42 Acenaphthene-d10	396793	198397	793586	400239	0.87
59 Phenanthrene-d10	821666	410833	1643332	830341	1.06
69 Chrysene-d12	707165	353583	1414330	721989	2.10
77 Perylene-d12	813685	406843	1627370	819632	0.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.23	0.05
59 Phenanthrene-d10	18.25	17.75	18.75	18.25	0.00
69 Chrysene-d12	23.28	22.78	23.78	23.28	0.03
77 Perylene-d12	25.92	25.42	26.42	25.92	0.03

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

REVIEW SUMMARY FOR FILE - NT1003182326S.D

Lab ID: SLC0505-CCV1
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 09:41

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND

NONE

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

Exception: 1,2,4-Trichlorobenzene 0.0010

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

Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT1003182305S.D	Calibration Date:	03/15/2023
Sequence:	SLC0505	Injection Date:	03/18/23
Lab Sample ID:	SLC0505-LCV1	Injection Time:	20:16
Sequence Name:	ABN 0.1		

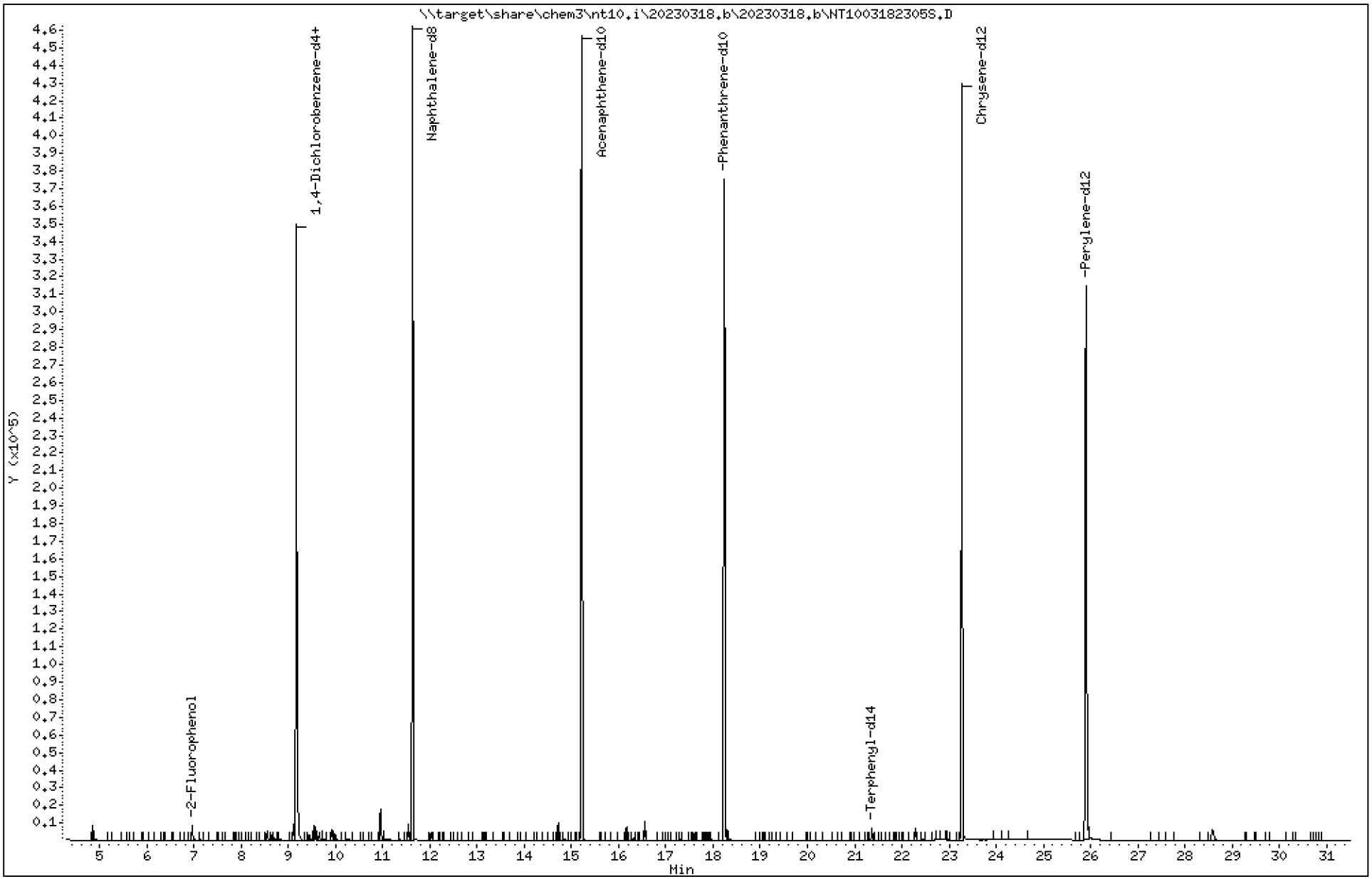
		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.10000	0.1	1.5031980	1.6031980		6.7	
1,2-Dichlorobenzene	A	0.10000	0.1	1.4783140	1.5707890		6.3	
Benzyl Alcohol	A	0.10000	0.07	0.9647610	0.7172764		-25.7	
Benzoic acid	A	0.40000	0.04	0.1358970	0.0208815		-89.0	
2,4-Dimethylphenol	A	0.20000	0.2	0.3457498	0.3376185		-2.4	
1,2,4-Trichlorobenzene	A	0.10000	0.1	0.3478148	0.3957656		13.8	
N-Nitrosodiphenylamine	A	0.10000	0.1	0.5366720	0.5339835		-0.5	
Pentachlorophenol	A	0.20000	0.05	0.0934250	0.0301700		-77.3	
2-Fluorophenol	A	0.15000	0.148	1.2129820	1.1996010		-1.1	
p-Terphenyl-d14	A	0.10000	0.0995	0.6517430	0.6481619		-0.6	

* Values outside of QC limits

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823058.D
Date : 18-MAR-2023 20:16
Client ID:
Sample Info: SLC0505-LCV1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

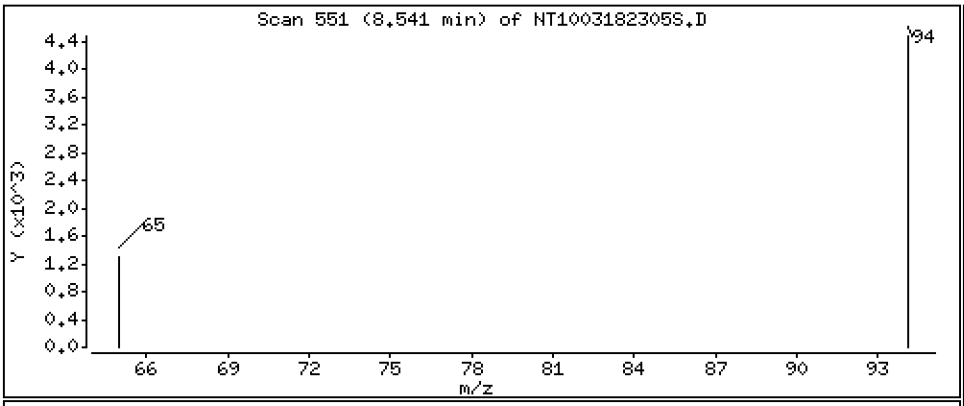
Operator: JGR

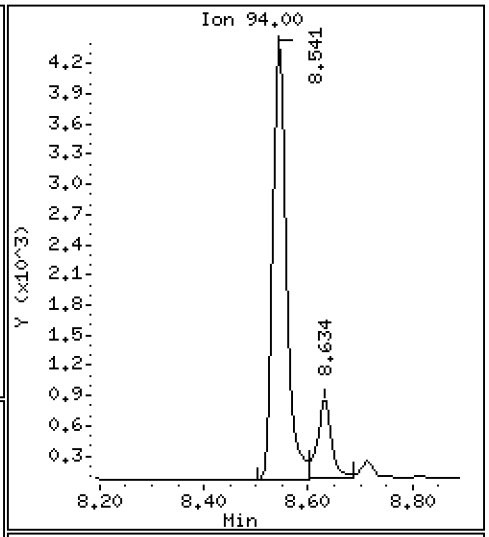
Column phase: ZB-5msi

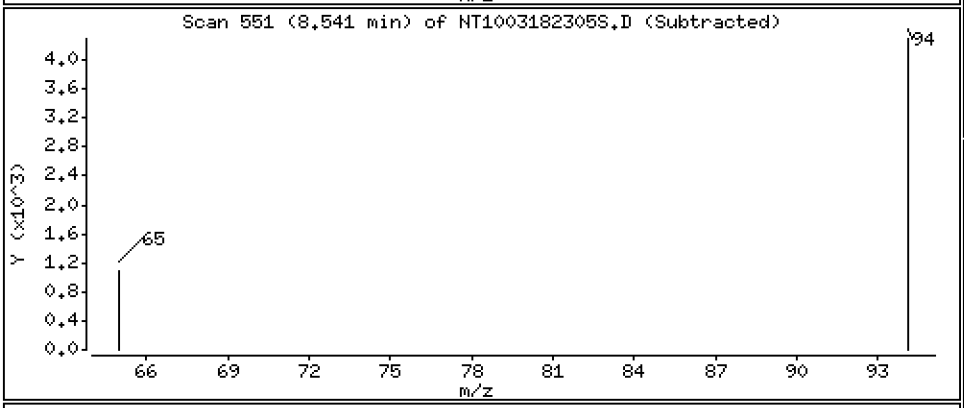
Column diameter: 0.25

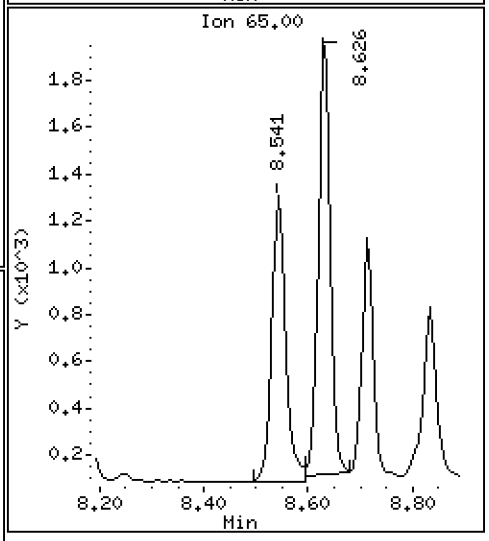
3 Phenol

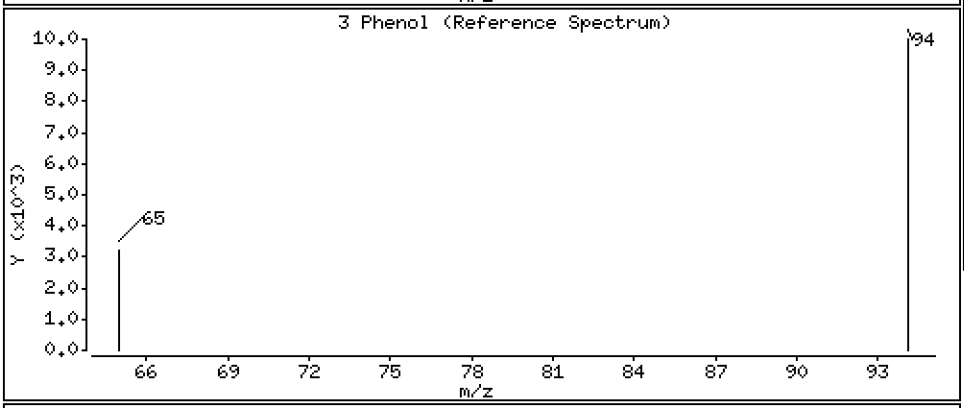
Concentration: 0.08865 ug/L

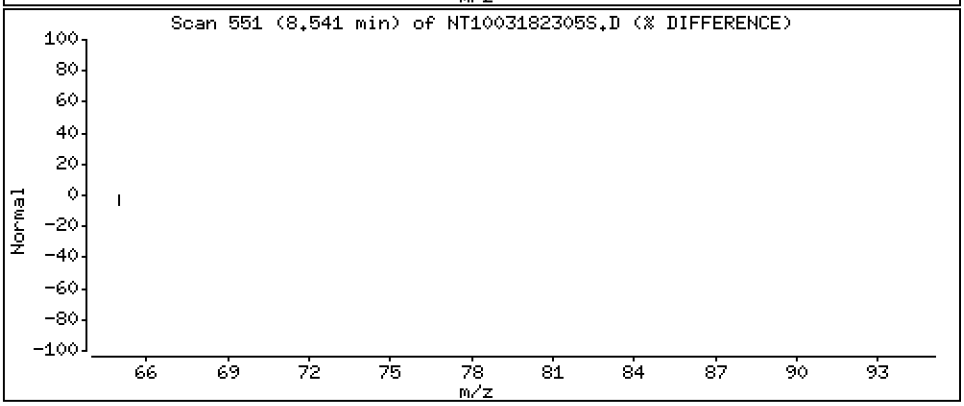












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

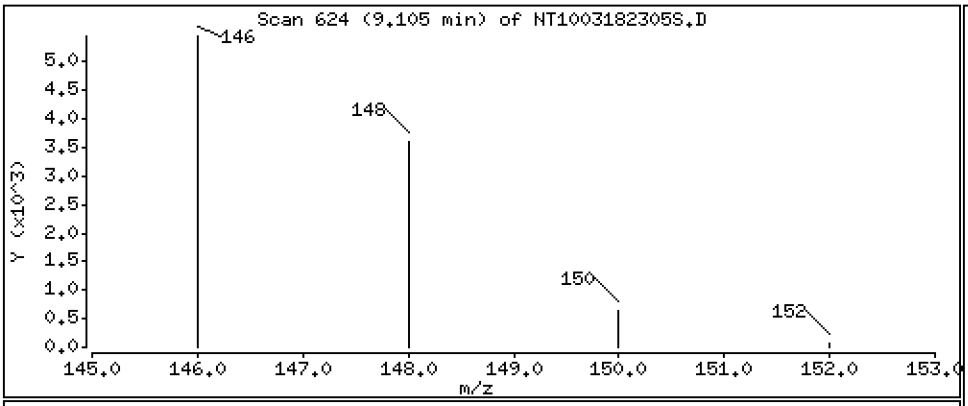
Operator: JGR

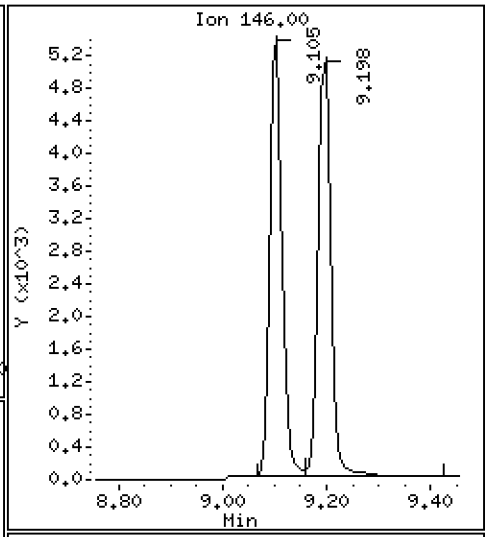
Column phase: ZB-5msi

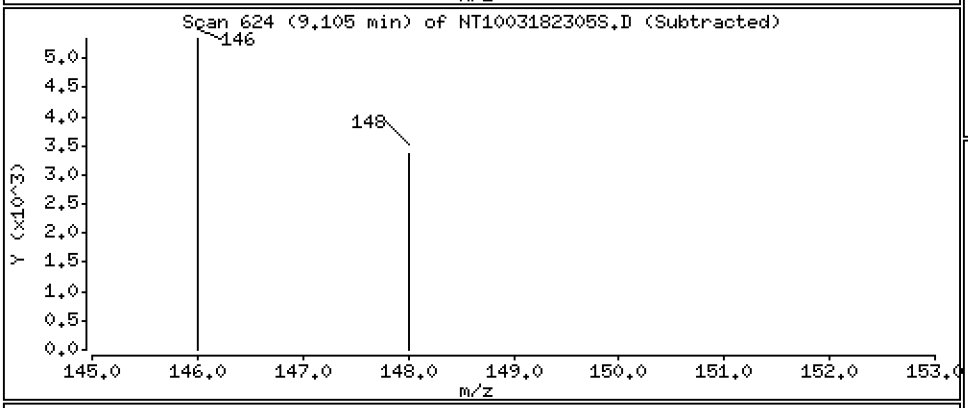
Column diameter: 0.25

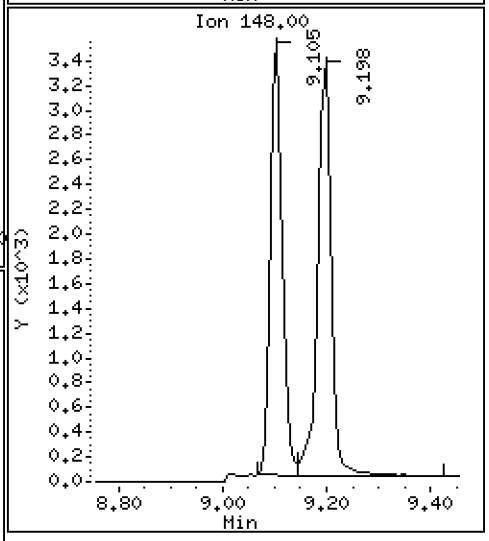
7 1,3-Dichlorobenzene

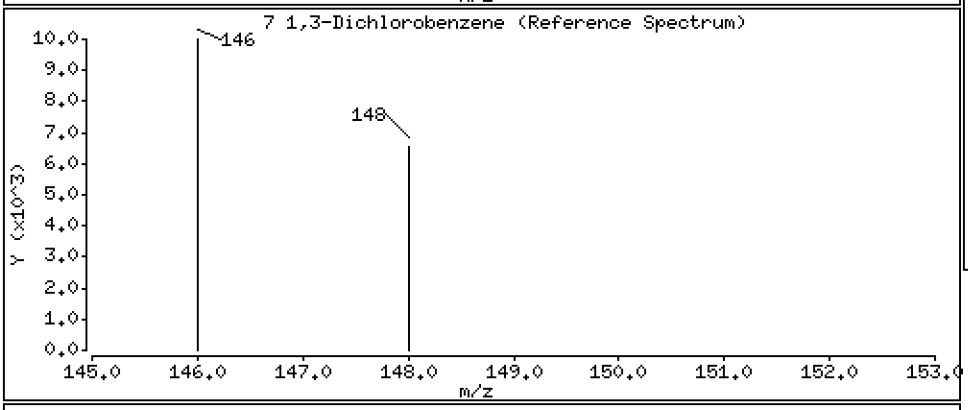
Concentration: 0.1078 ug/L

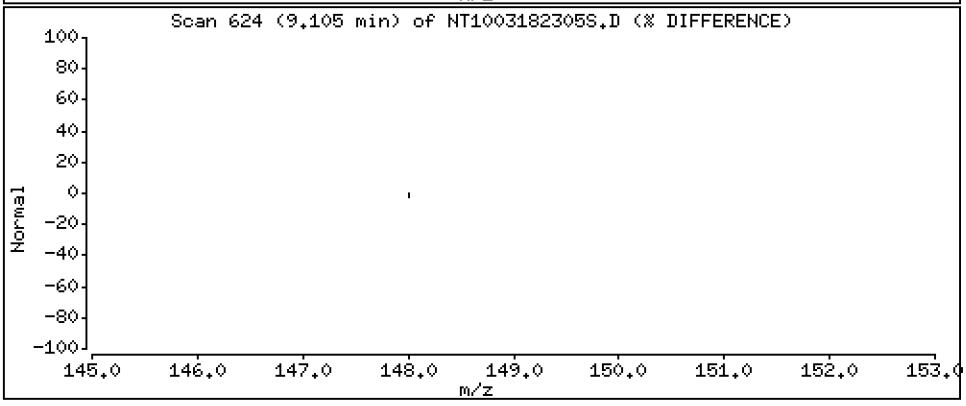












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

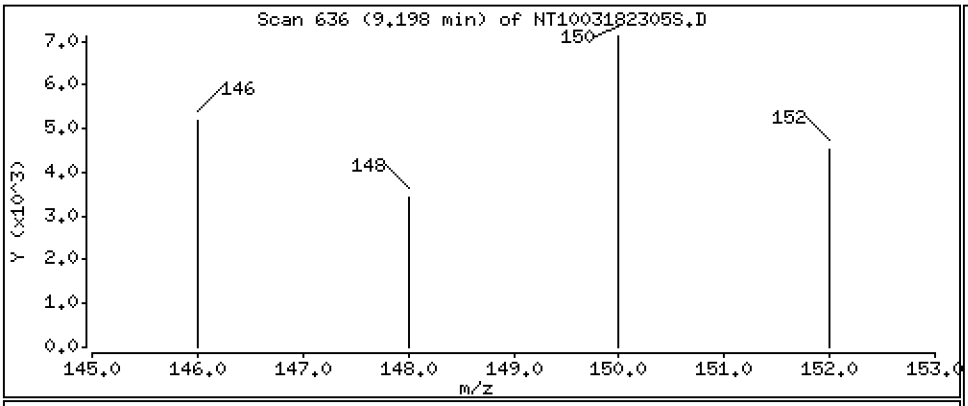
Operator: JGR

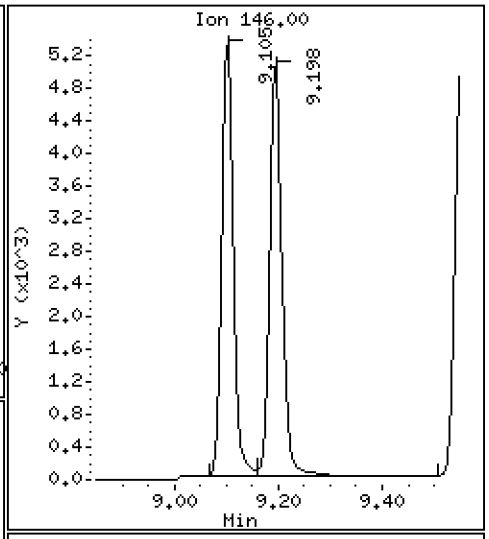
Column phase: ZB-5msi

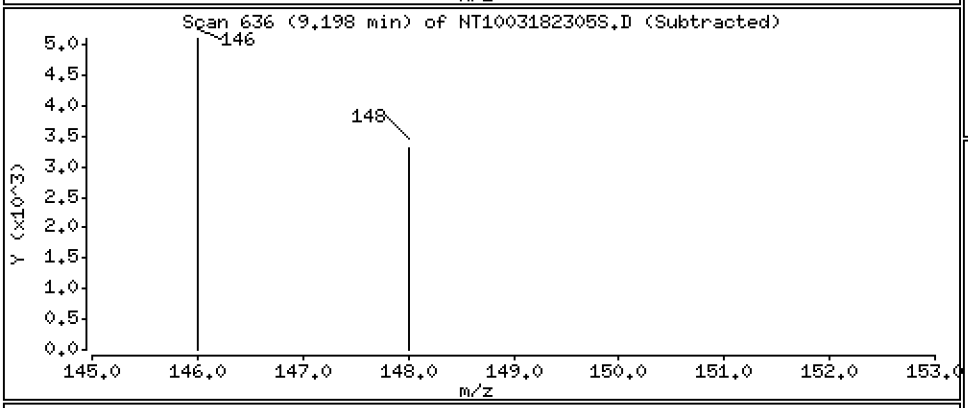
Column diameter: 0.25

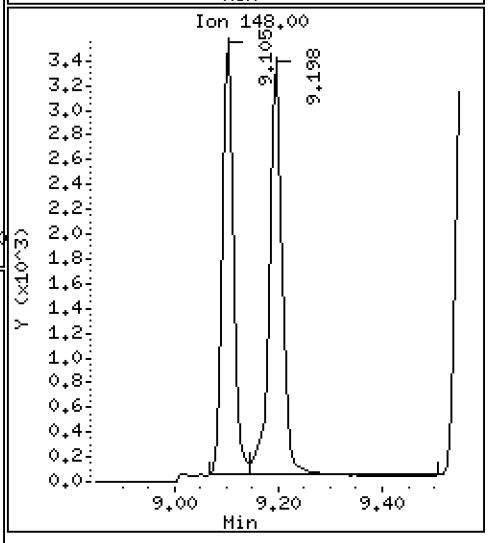
9 1,4-Dichlorobenzene

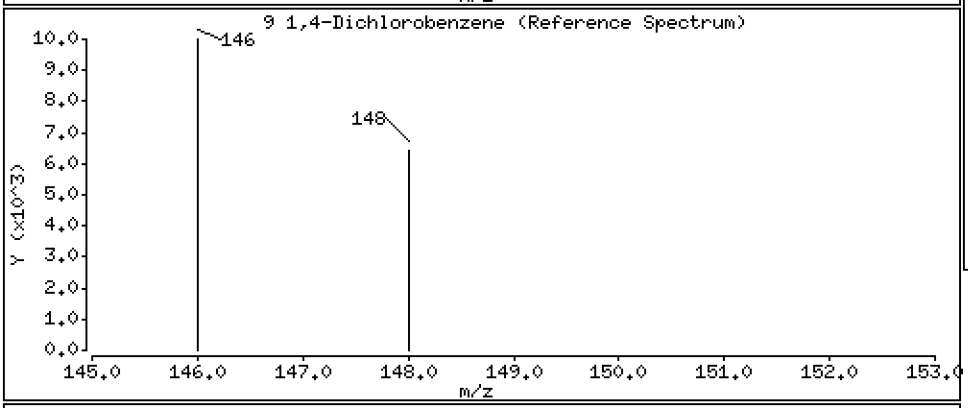
Concentration: 0.1067 ug/L

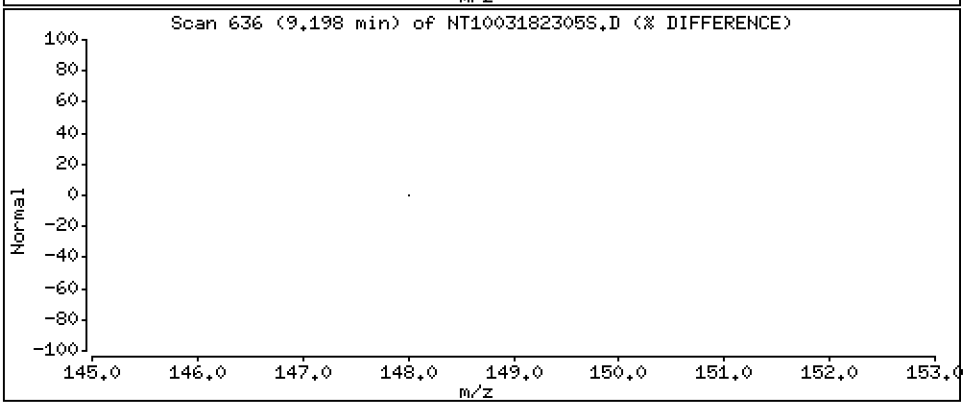












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

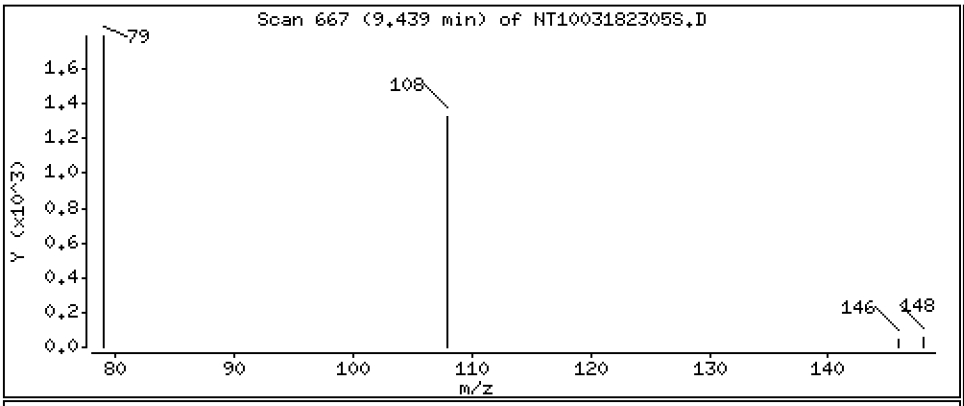
Operator: JGR

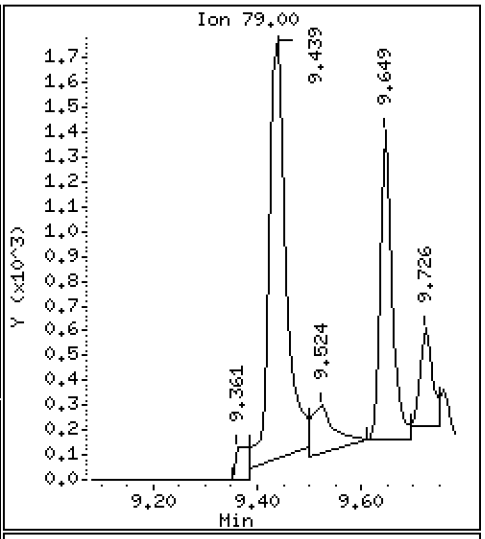
Column phase: ZB-5msi

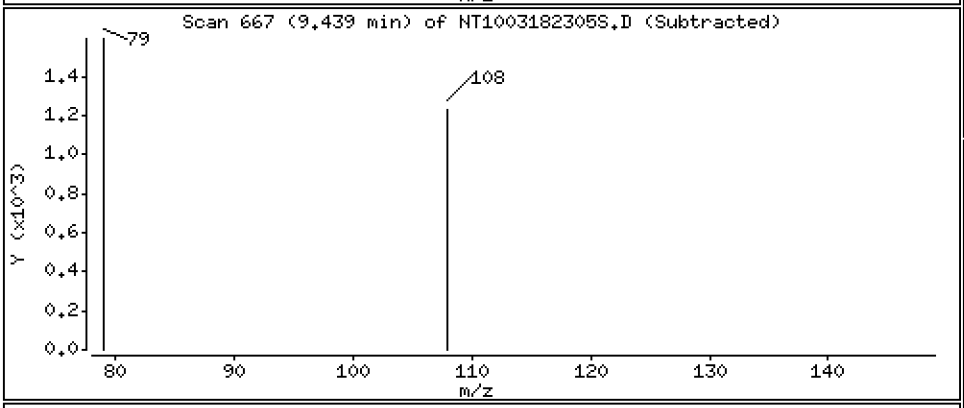
Column diameter: 0.25

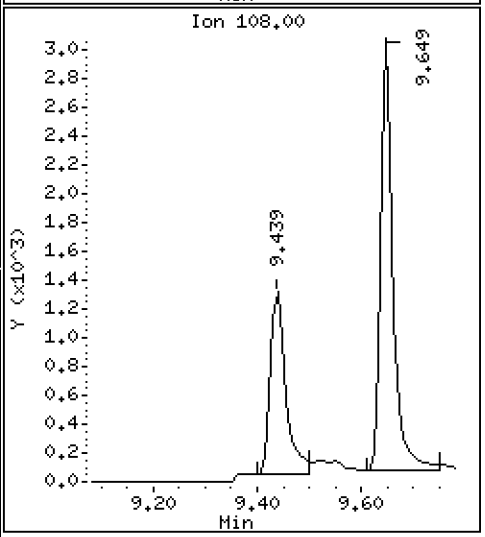
11 Benzyl alcohol

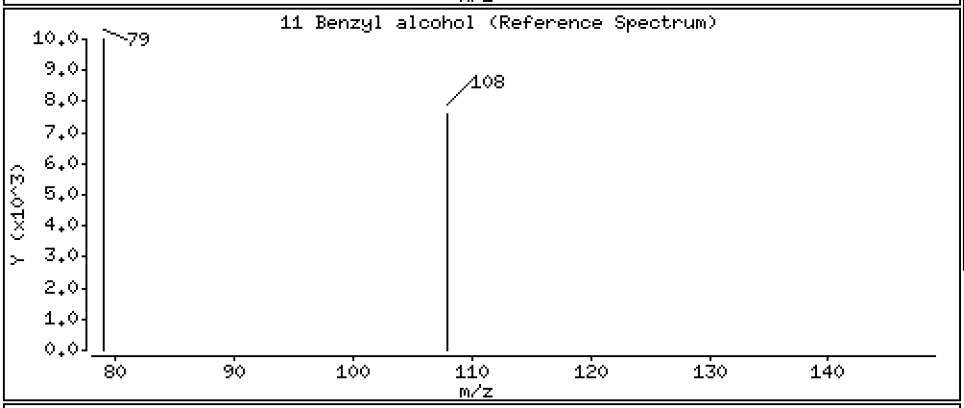
Concentration: 0.07435 ug/L

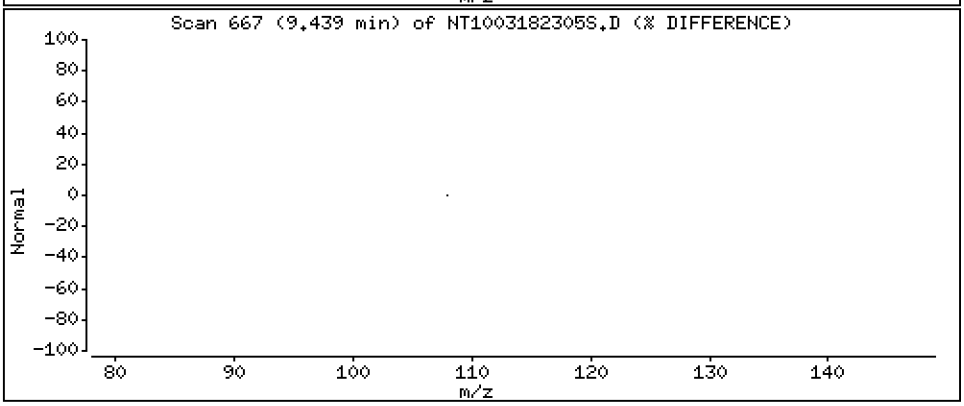












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

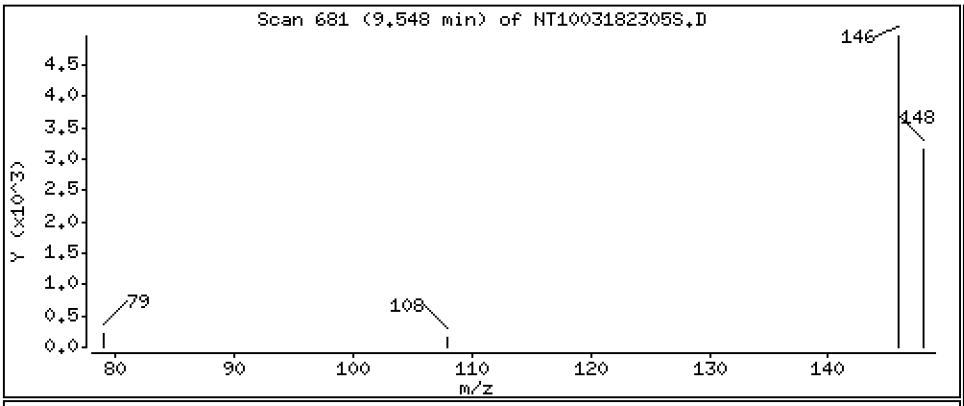
Operator: JGR

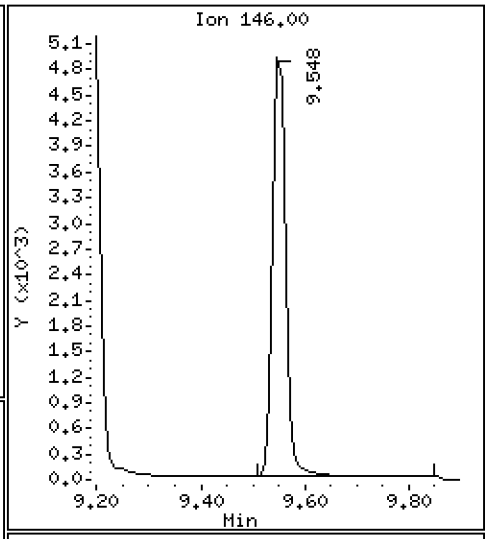
Column phase: ZB-5msi

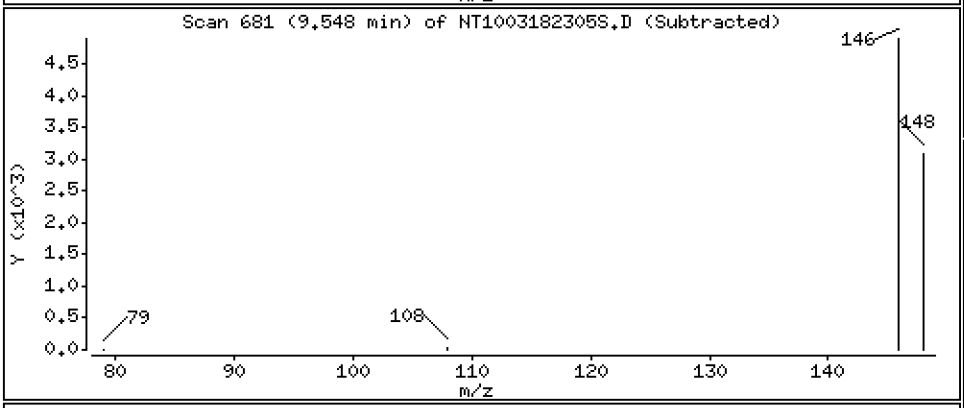
Column diameter: 0.25

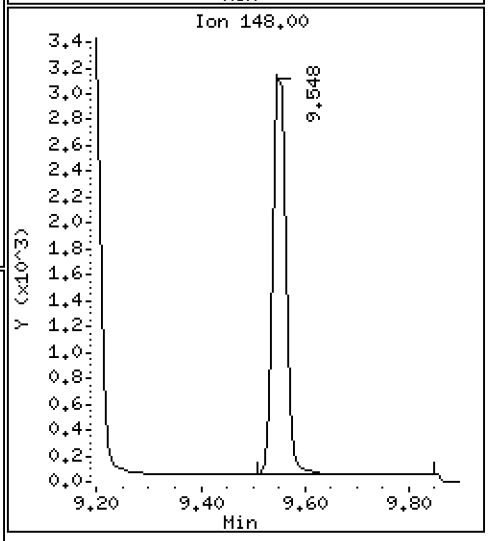
12 1,2-Dichlorobenzene

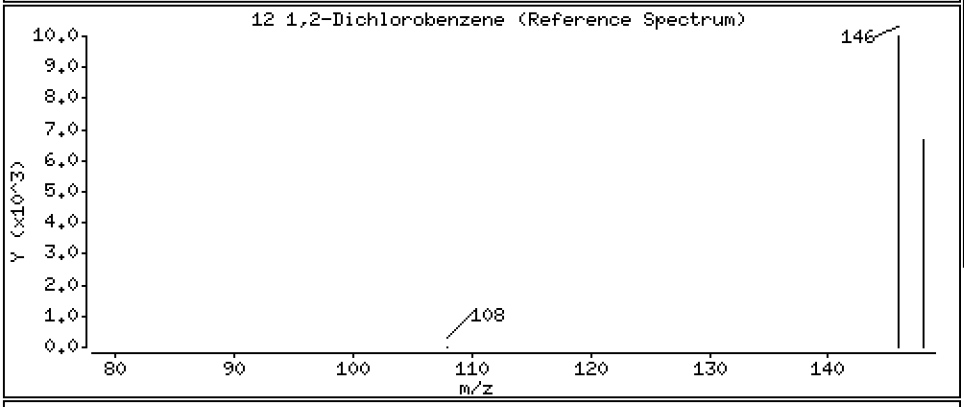
Concentration: 0.1063 ug/L

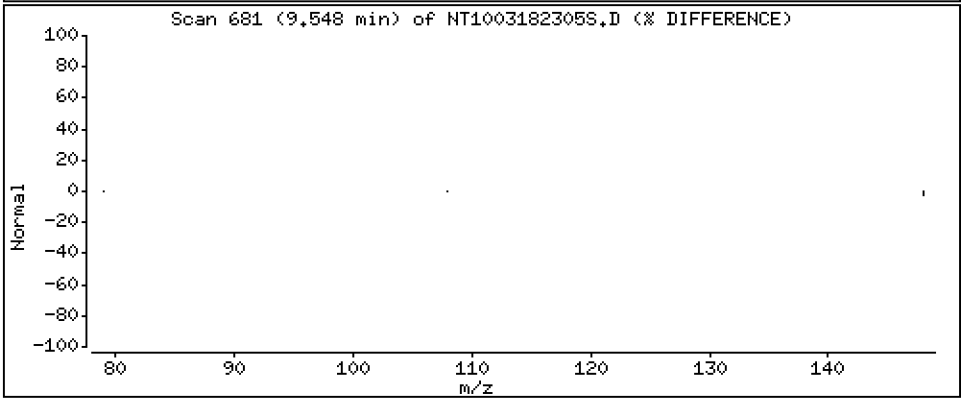












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

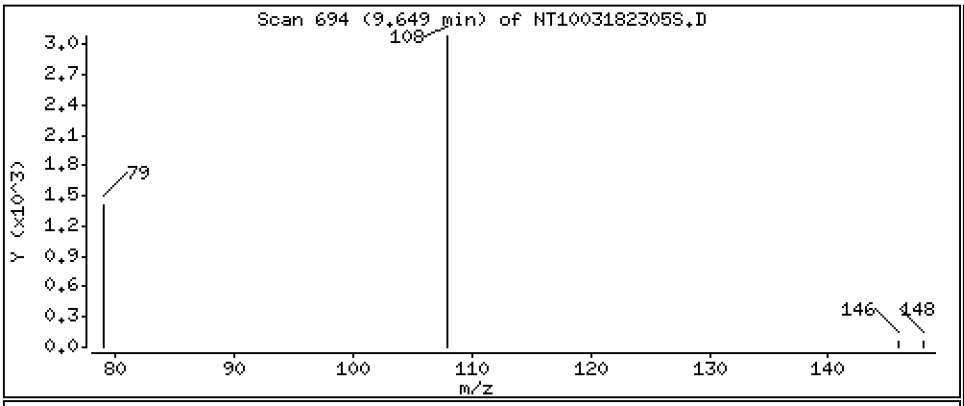
Operator: JGR

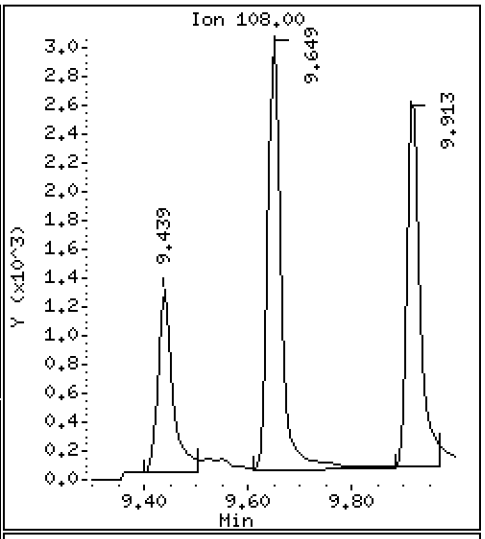
Column phase: ZB-5msi

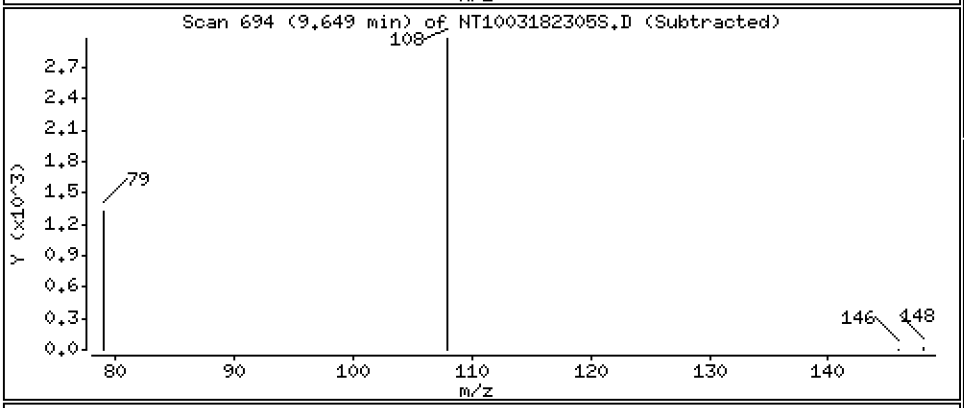
Column diameter: 0.25

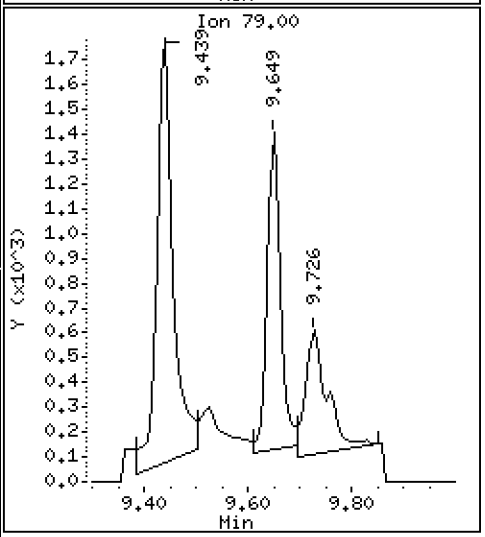
13 2-Methylphenol

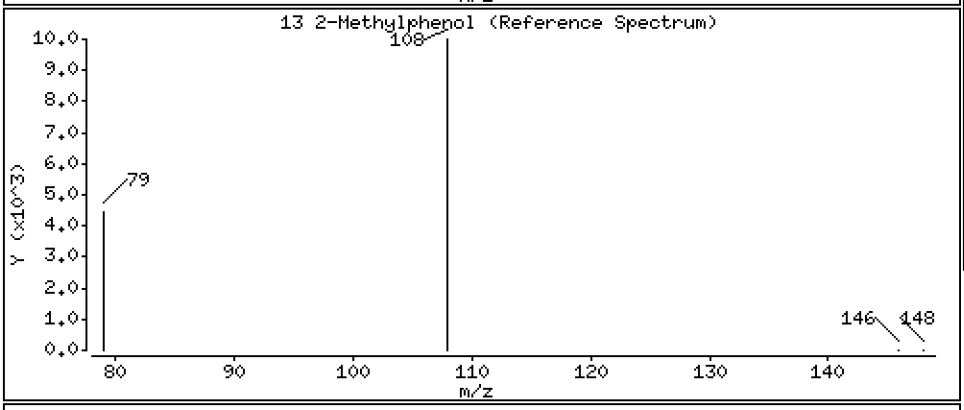
Concentration: 0.08637 ug/L

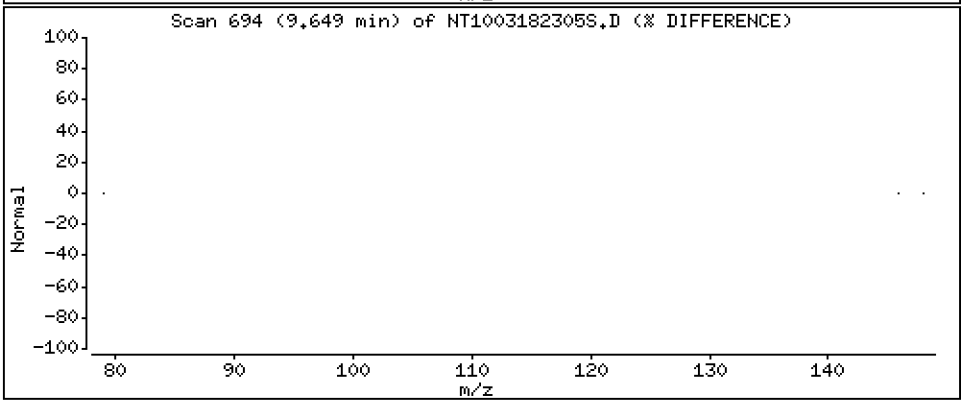












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

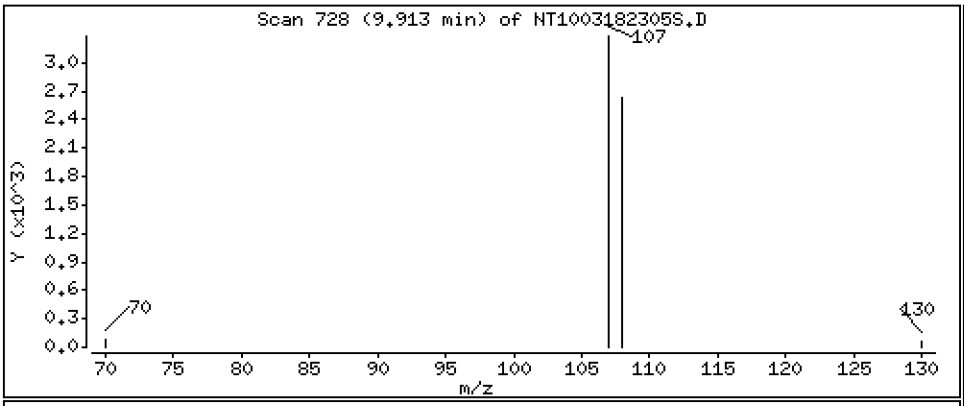
Operator: JGR

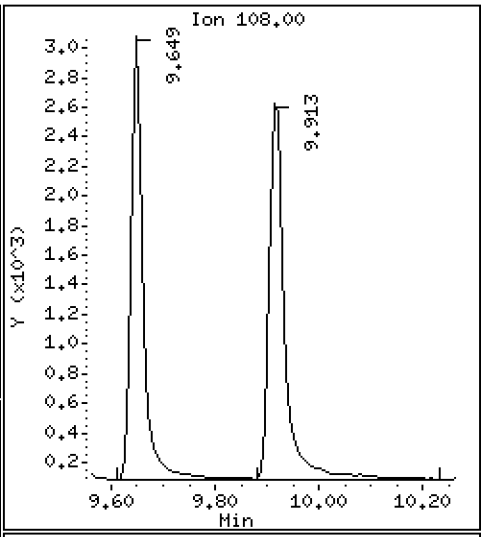
Column phase: ZB-5msi

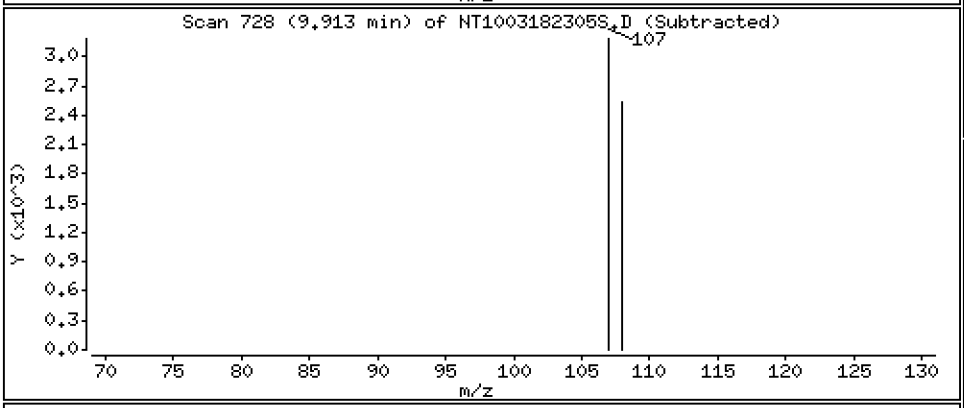
Column diameter: 0.25

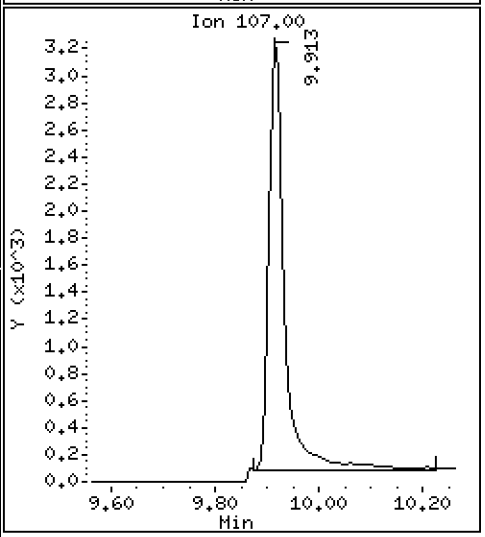
15 4-Methylphenol

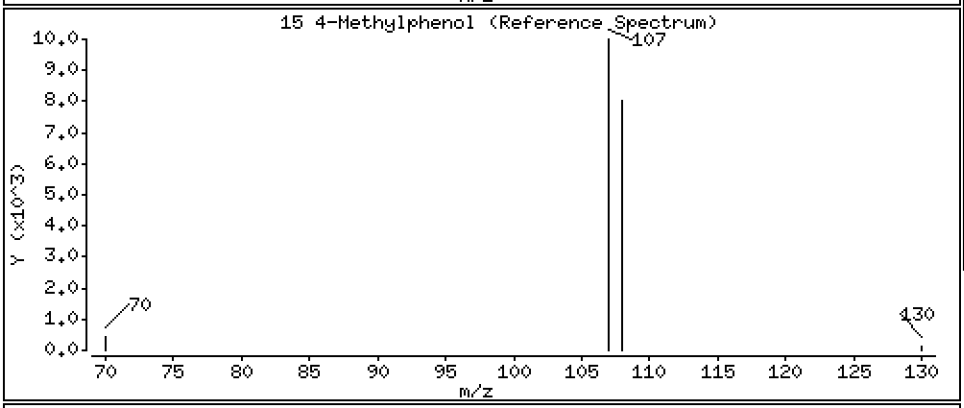
Concentration: 0.08383 ug/L

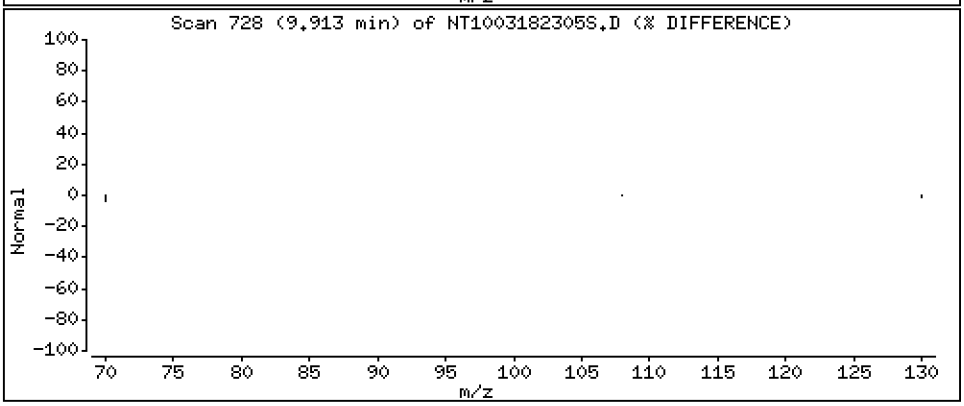












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

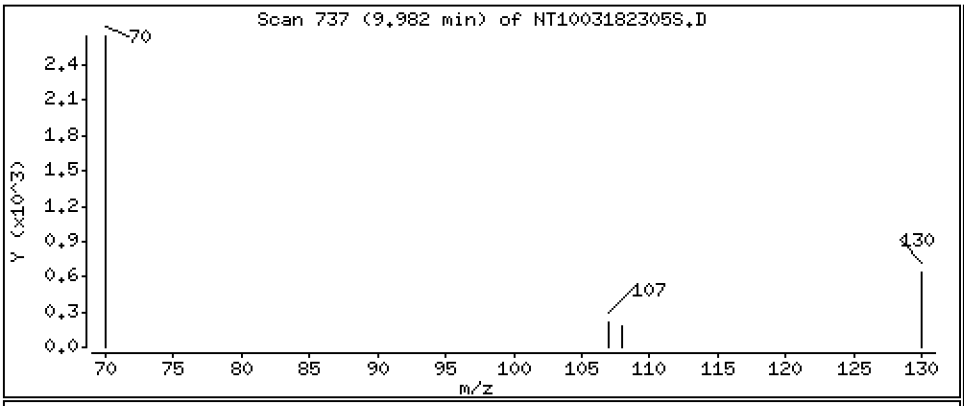
Operator: JGR

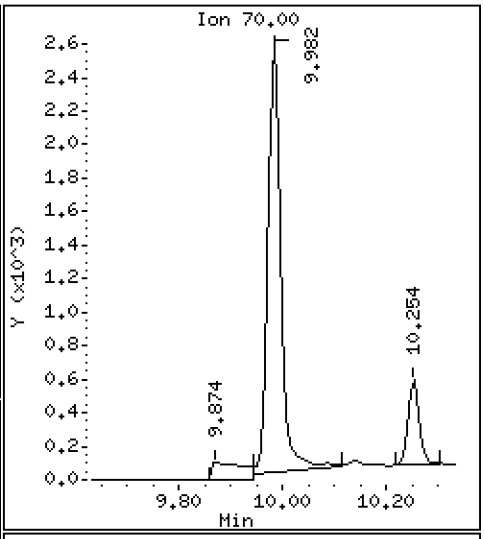
Column phase: ZB-5msi

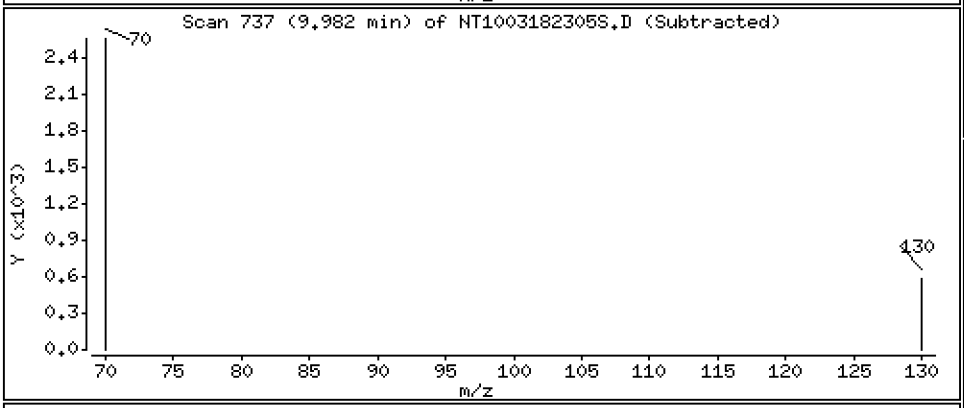
Column diameter: 0.25

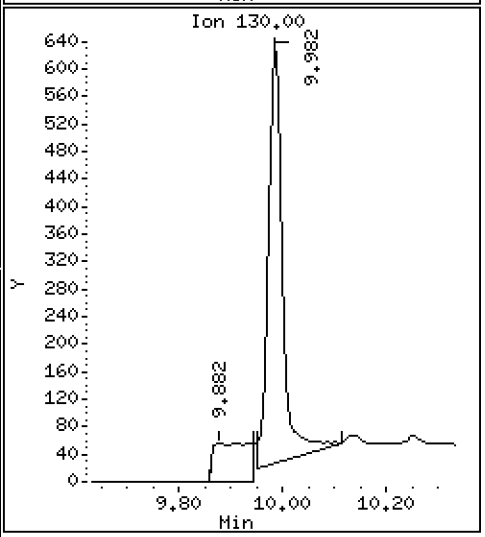
16 N-Nitroso-di-n-propylamine

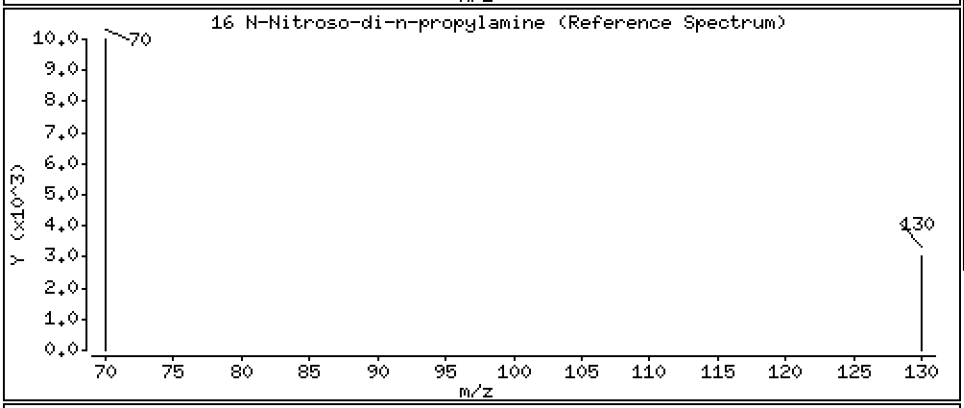
Concentration: 0.09699 ug/L

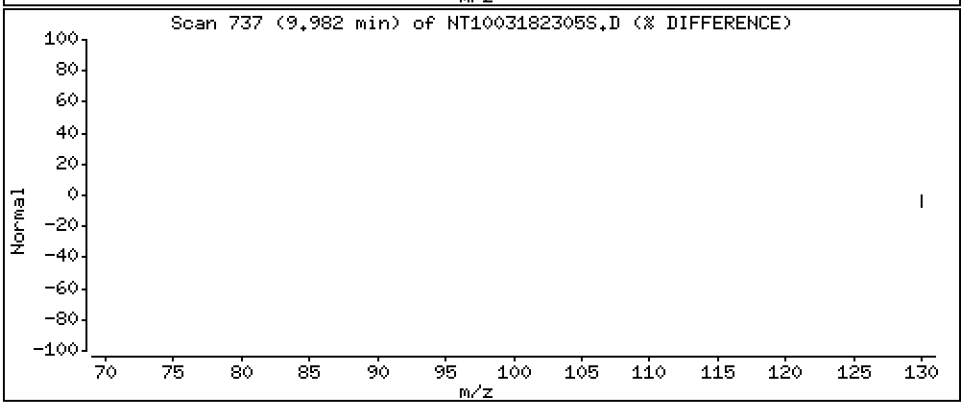












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823055.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

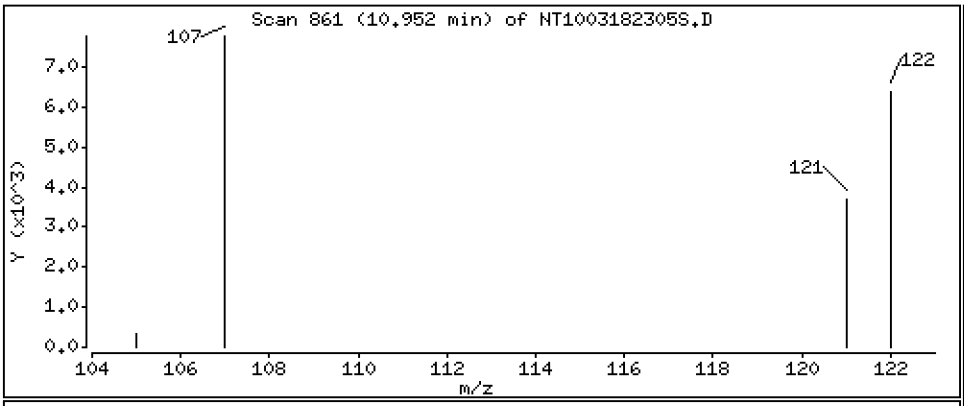
Operator: JGR

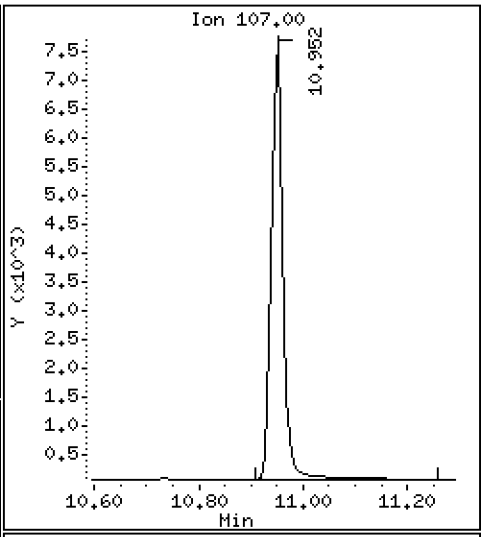
Column phase: ZB-5msi

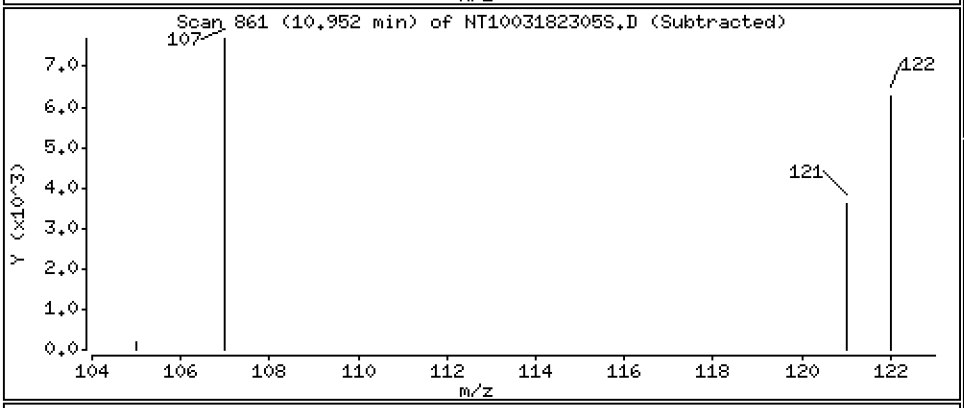
Column diameter: 0.25

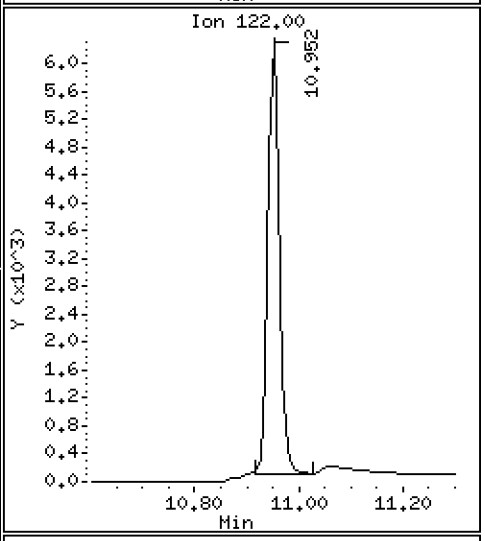
22 2,4-Dimethylphenol

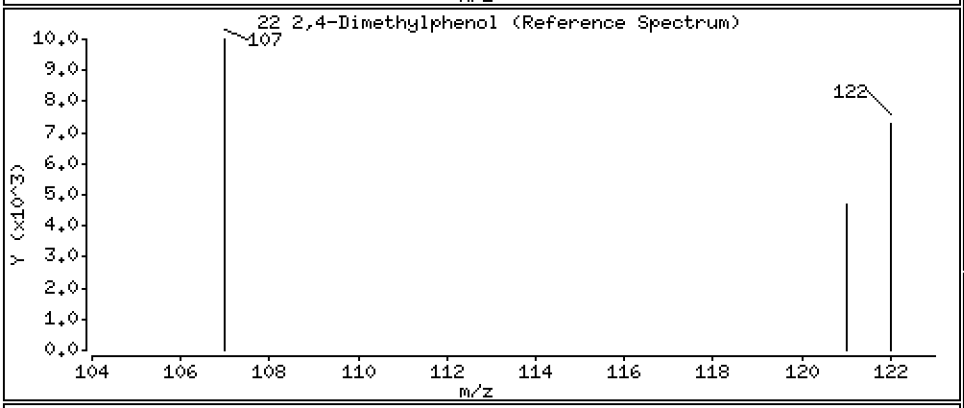
Concentration: 0.1953 ug/L

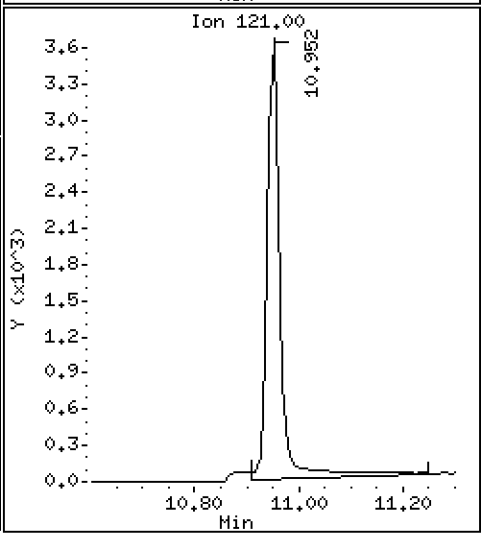


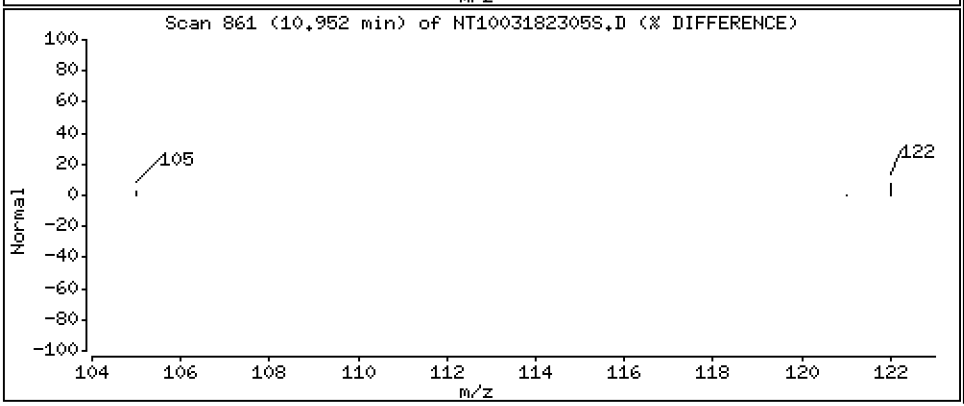












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

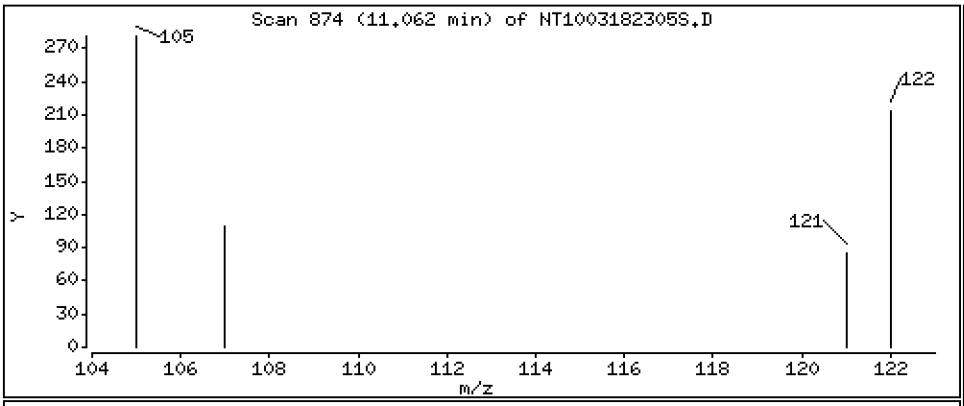
Operator: JGR

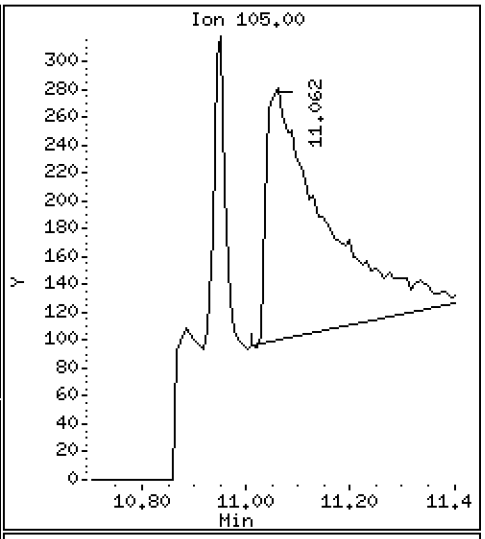
Column phase: ZB-5msi

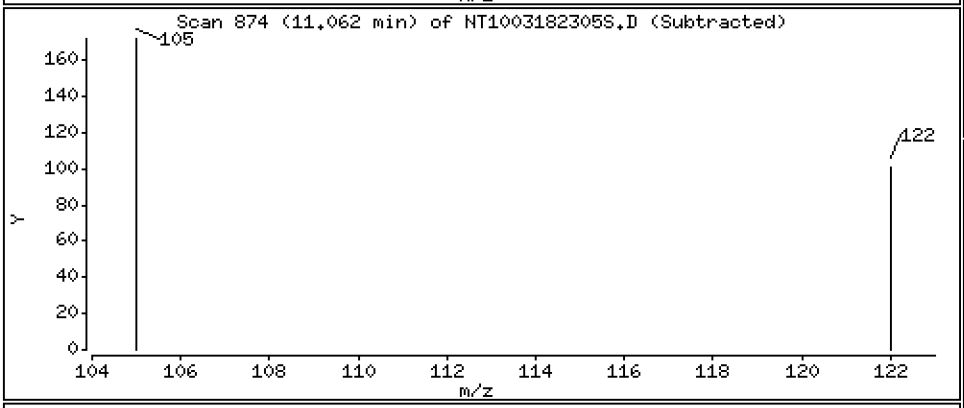
Column diameter: 0.25

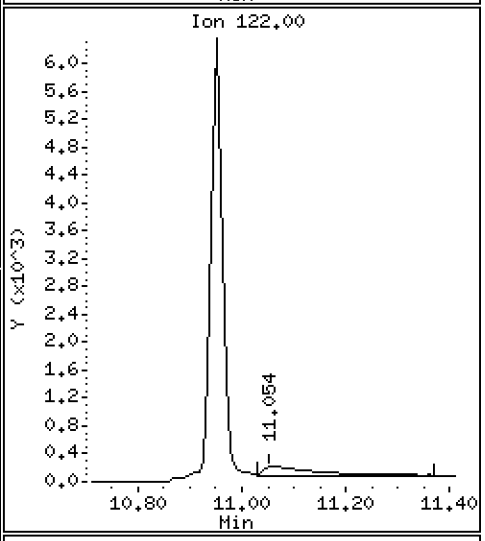
24 Benzoic acid

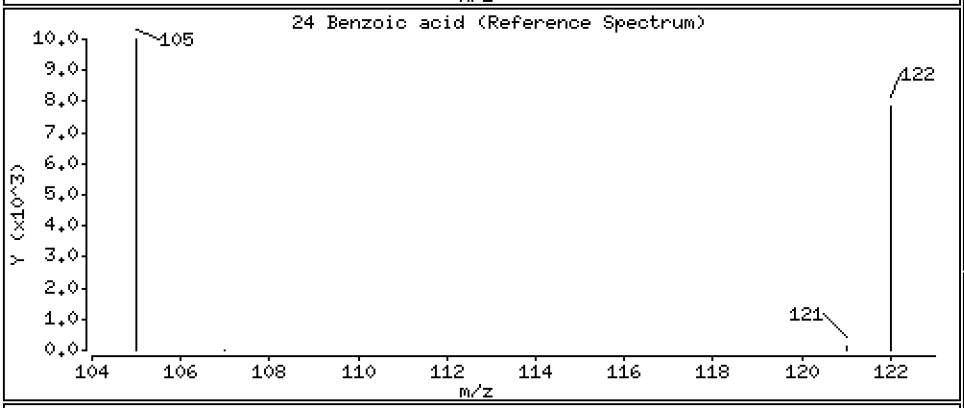
Concentration: 0.04419 ug/L

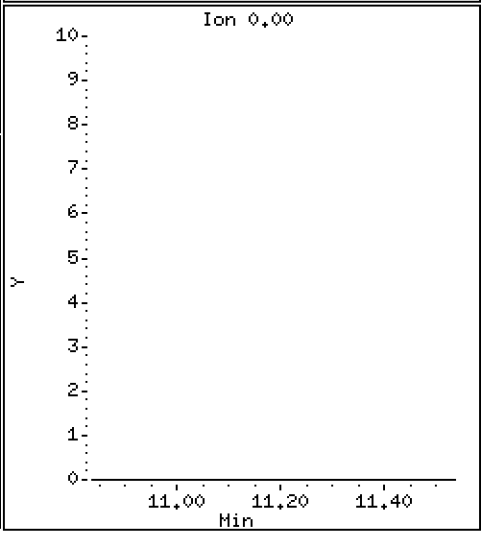


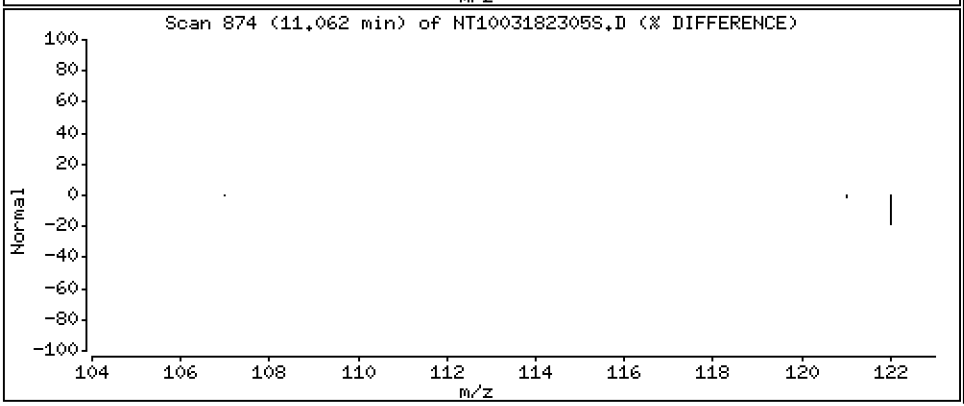












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

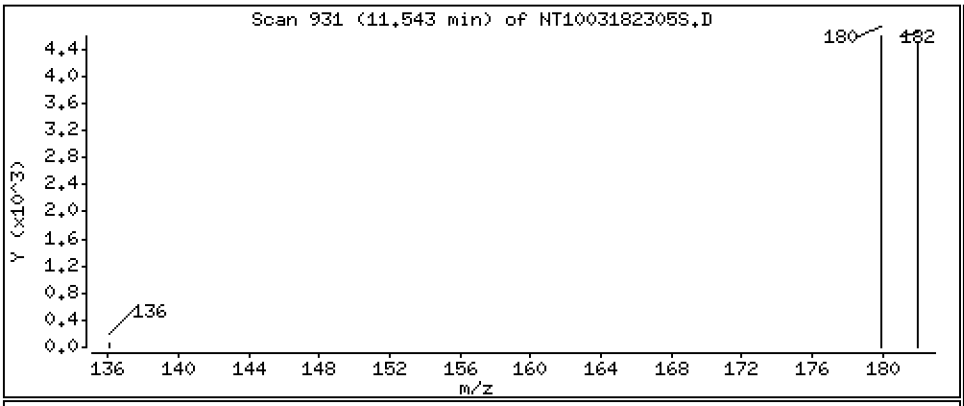
Operator: JGR

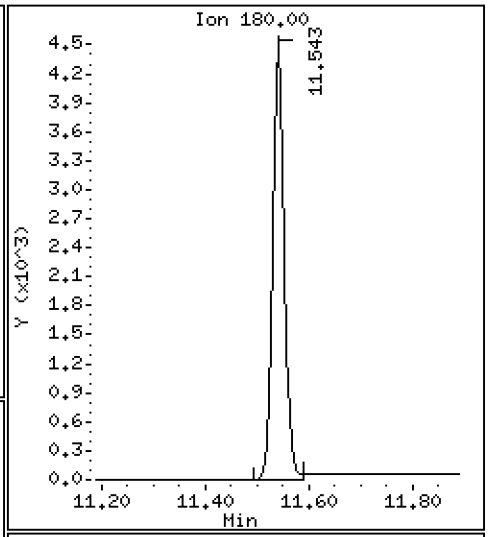
Column phase: ZB-5msi

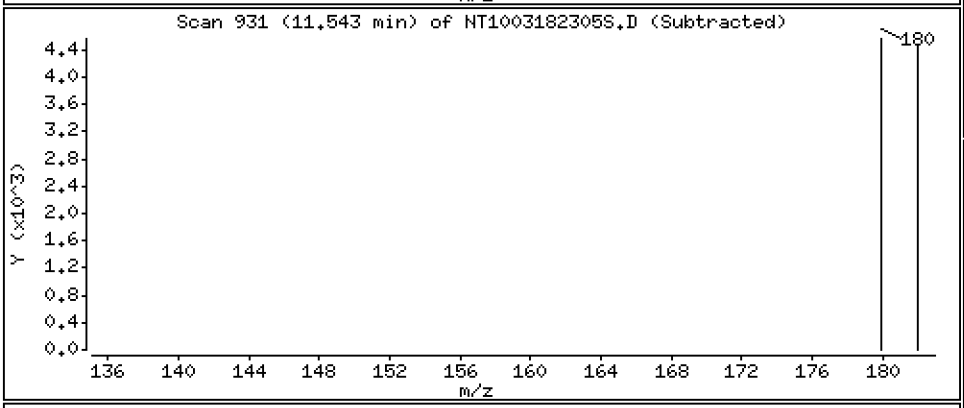
Column diameter: 0.25

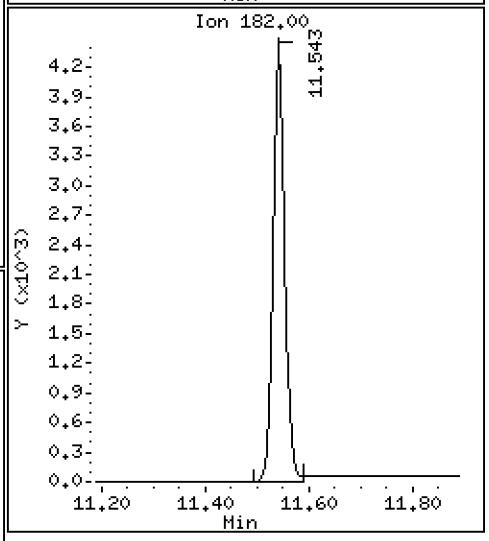
26 1,2,4-Trichlorobenzene

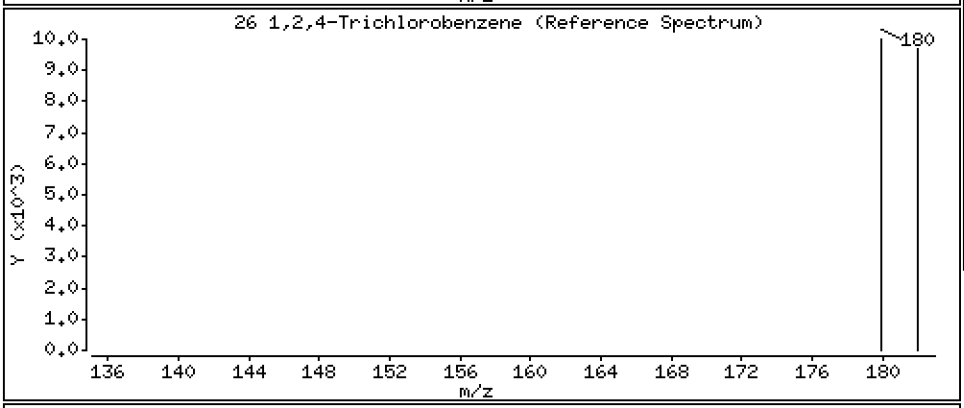
Concentration: 0.1138 ug/L

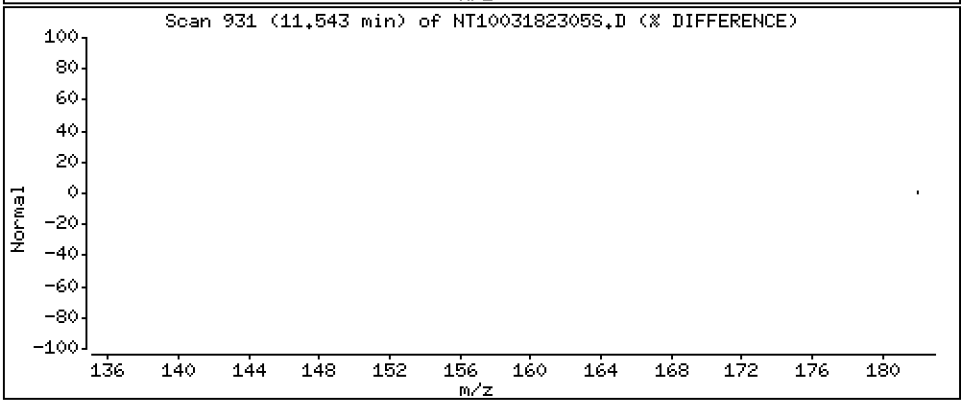












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

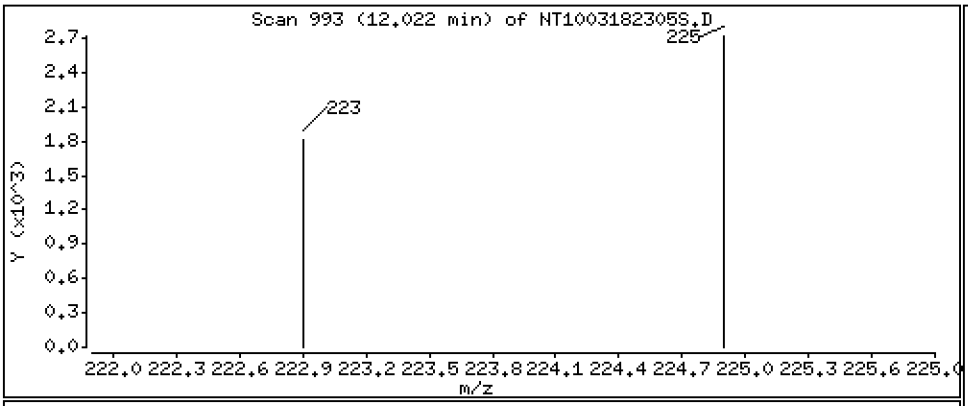
Operator: JGR

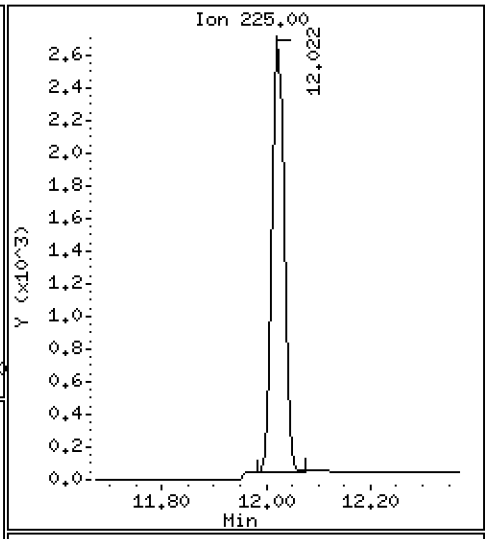
Column phase: ZB-5msi

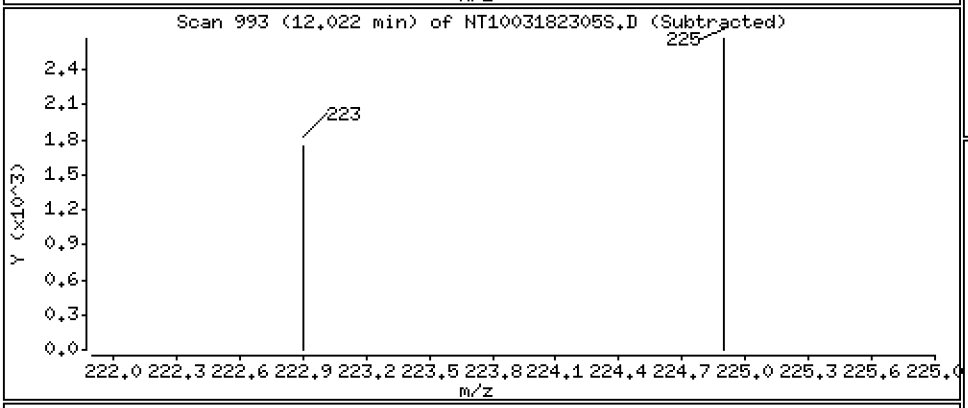
Column diameter: 0.25

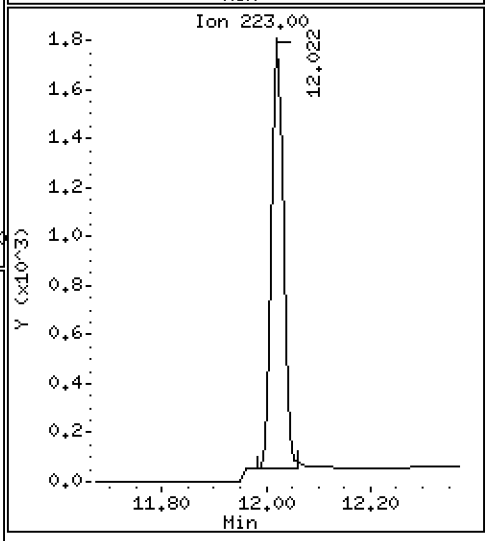
30 Hexachlorobutadiene

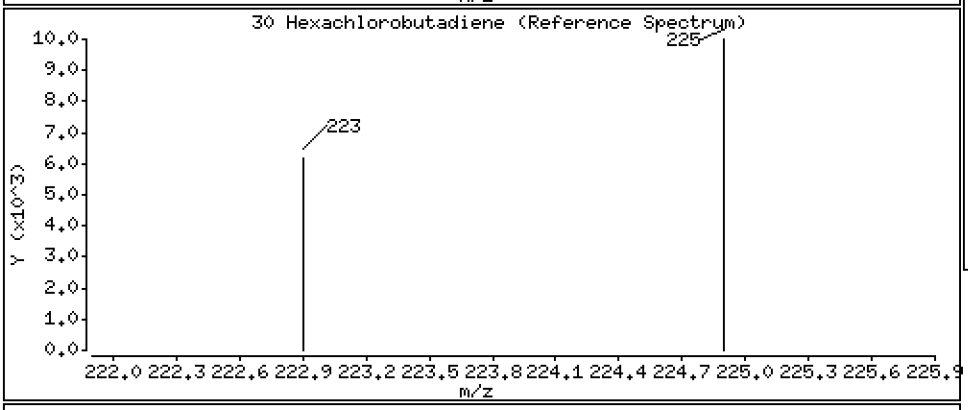
Concentration: 0.1058 ug/L

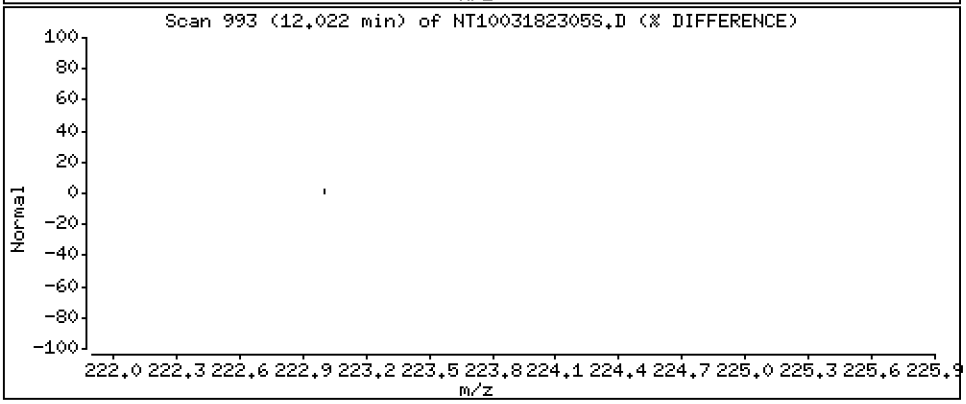












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

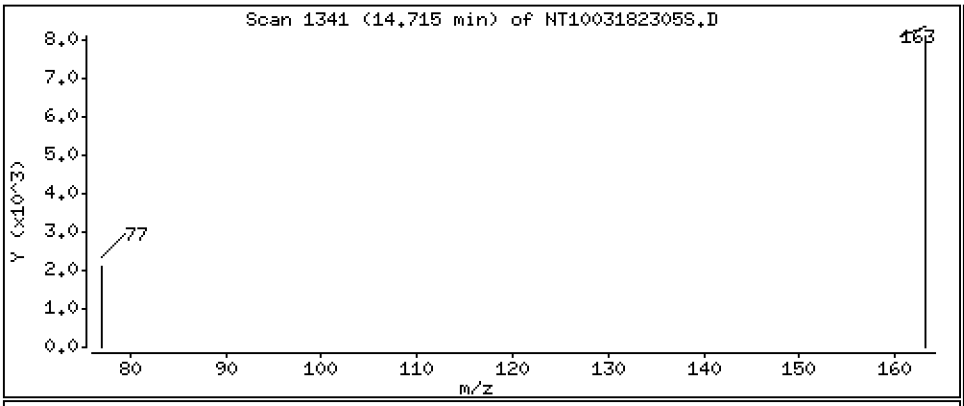
Operator: JGR

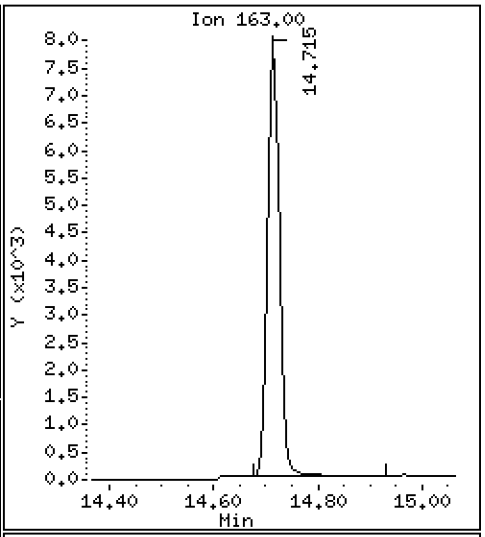
Column phase: ZB-5msi

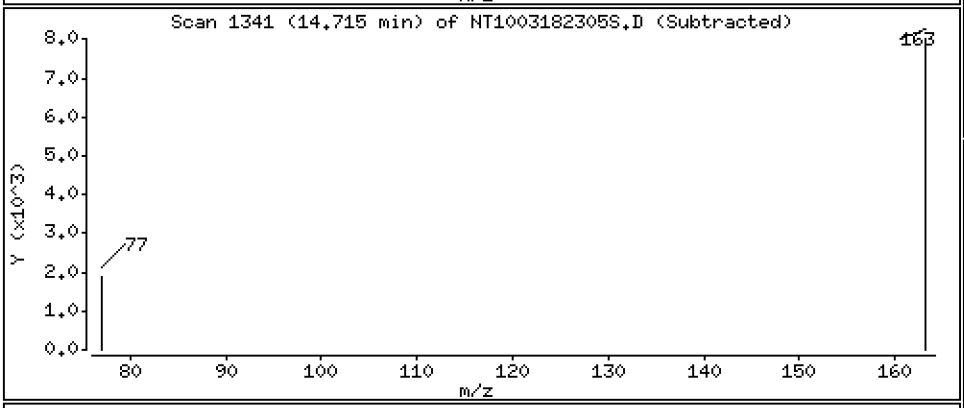
Column diameter: 0.25

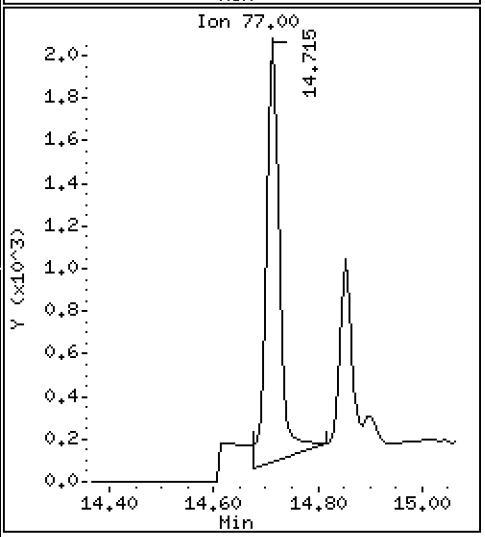
39 Dimethylphthalate

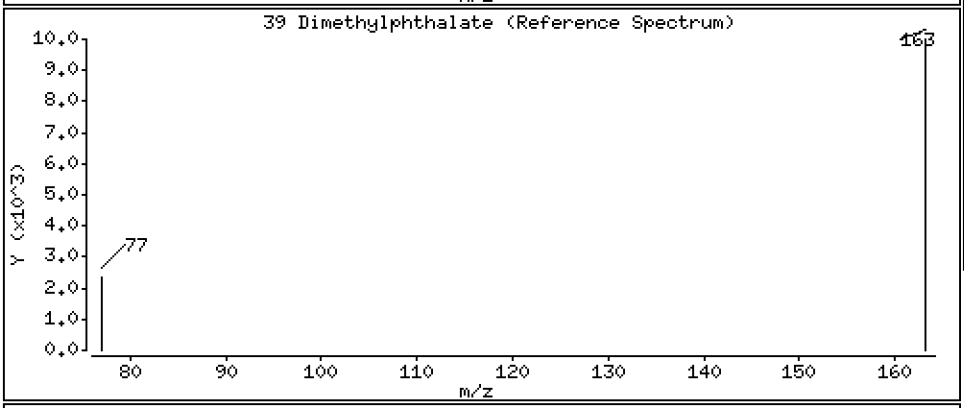
Concentration: 0.1070 ug/L

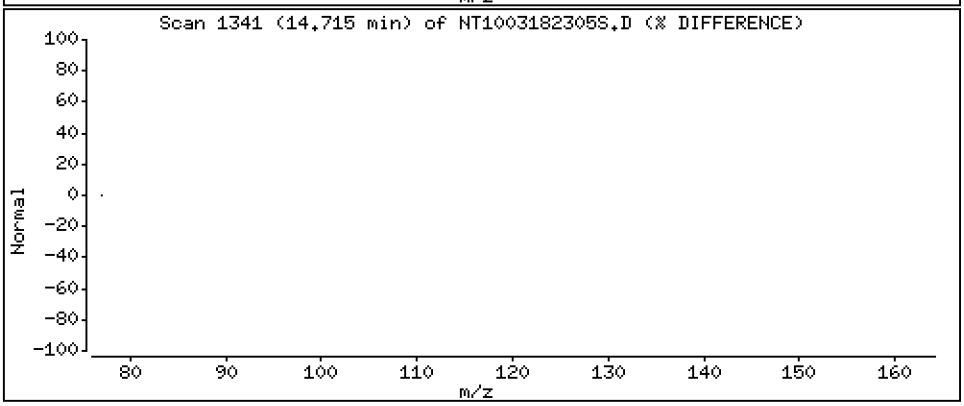












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Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

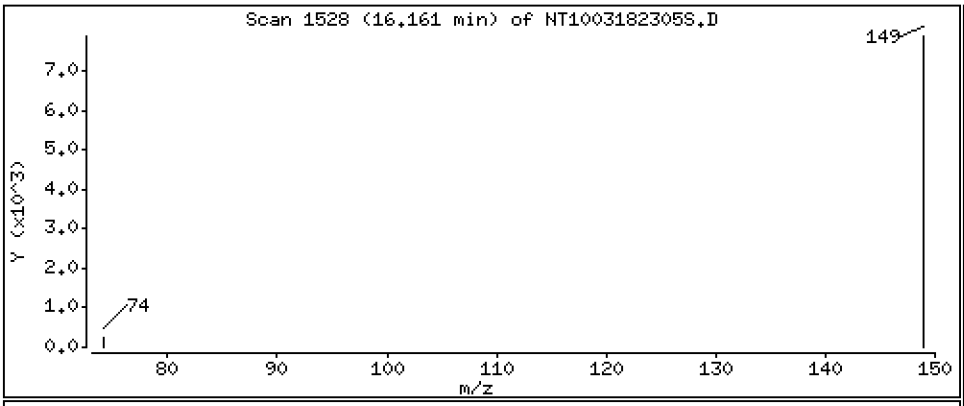
Operator: JGR

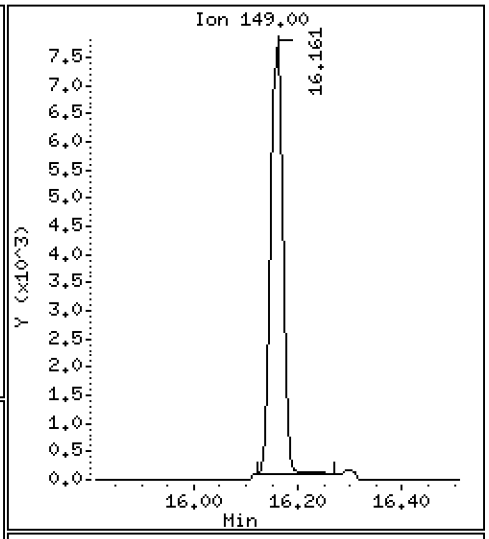
Column phase: ZB-5msi

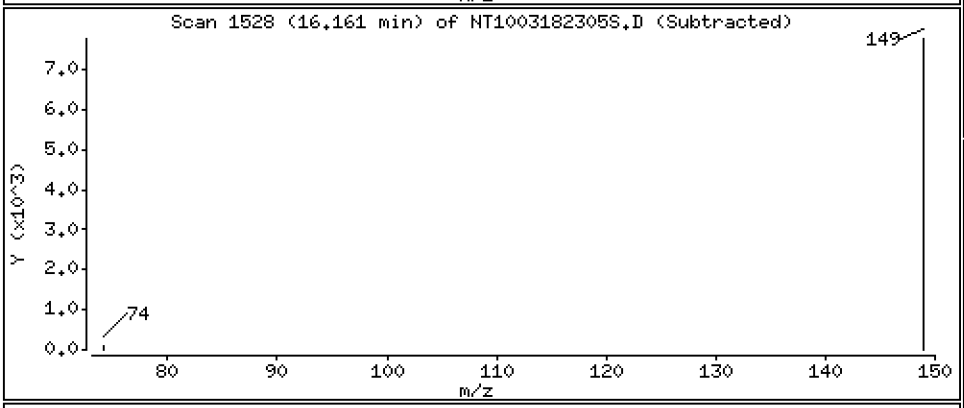
Column diameter: 0.25

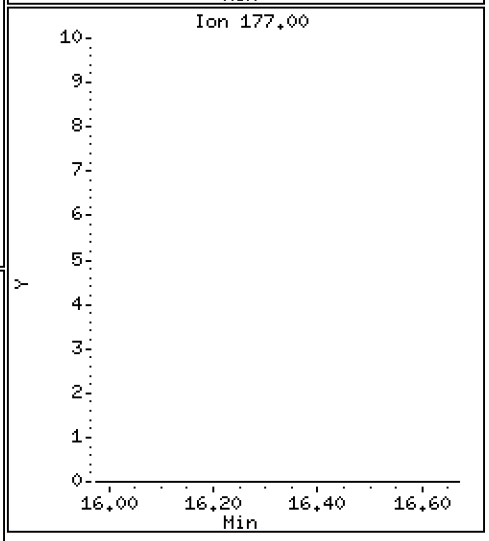
50 Diethylphthalate

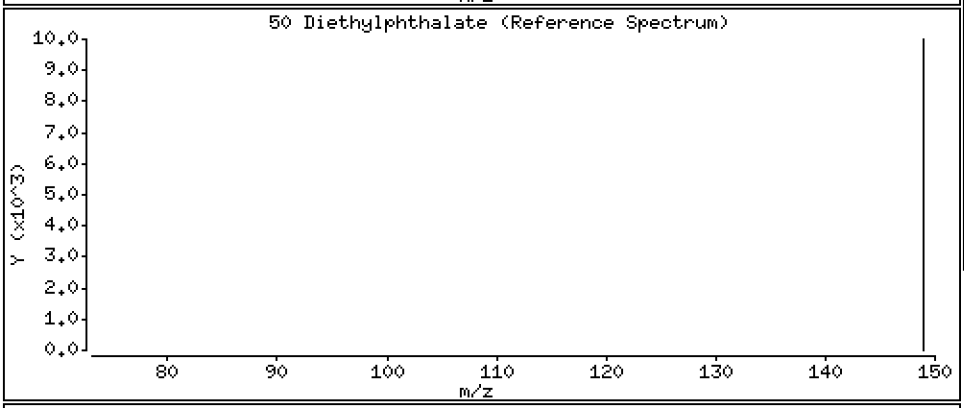
Concentration: 0.1031 ug/L

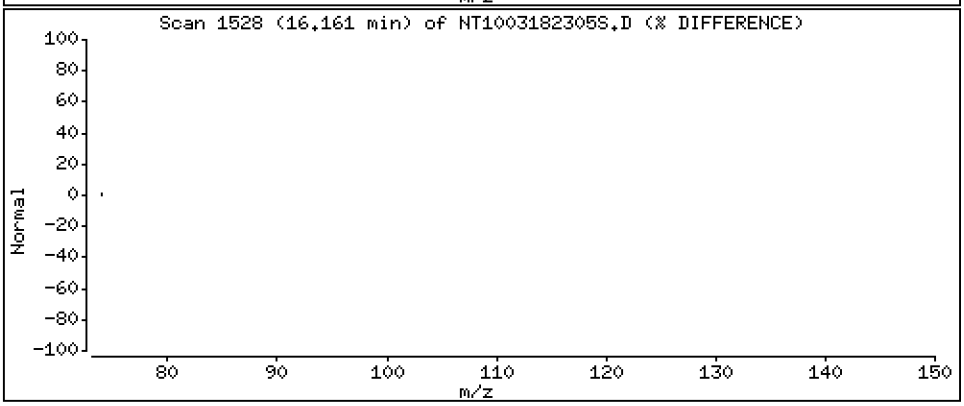












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Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

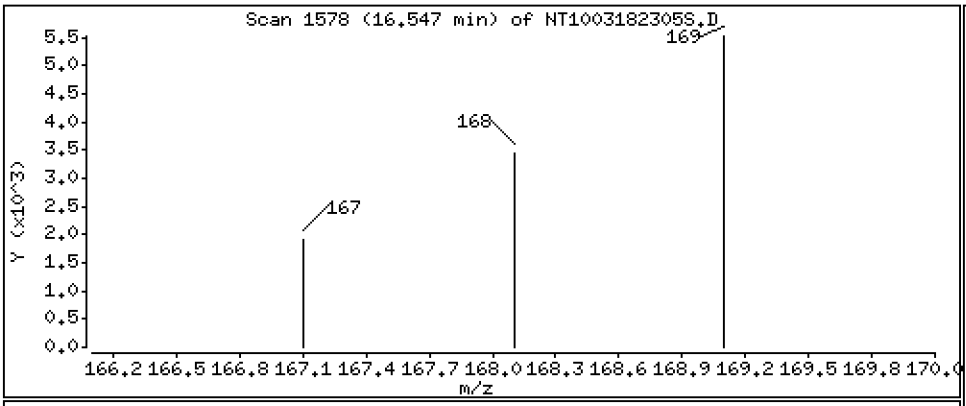
Operator: JGR

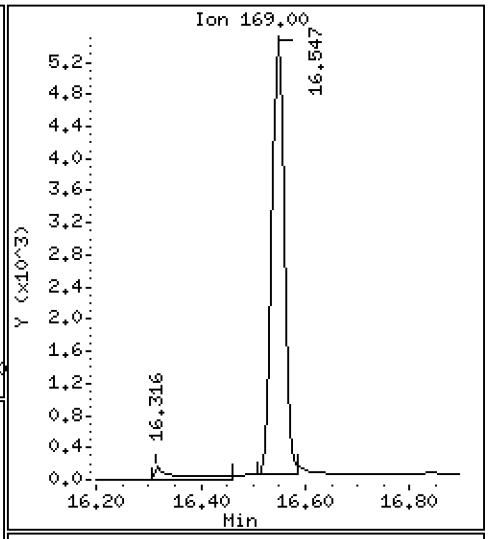
Column phase: ZB-5msi

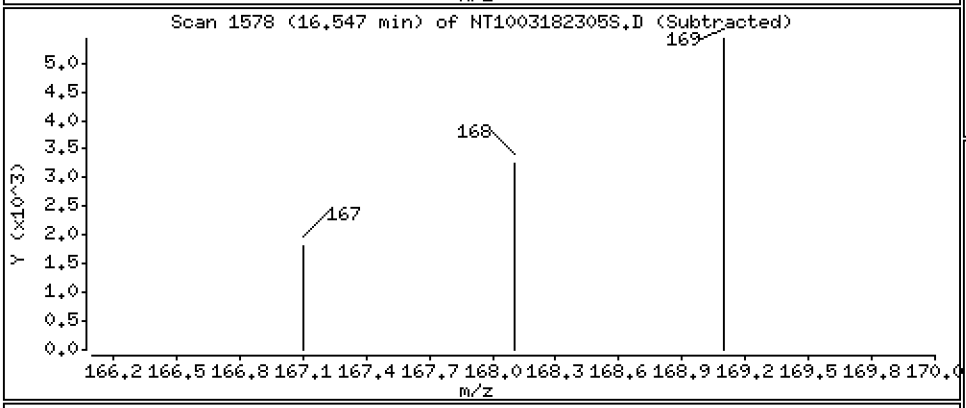
Column diameter: 0.25

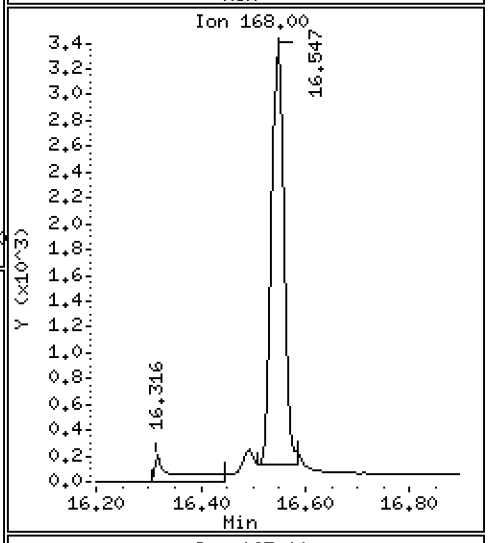
54 N-Nitrosodiphenylamine

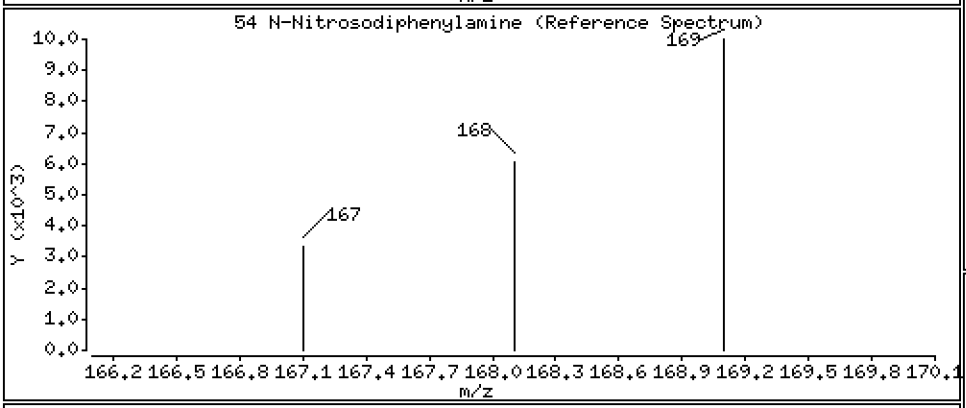
Concentration: 0.09950 ug/L

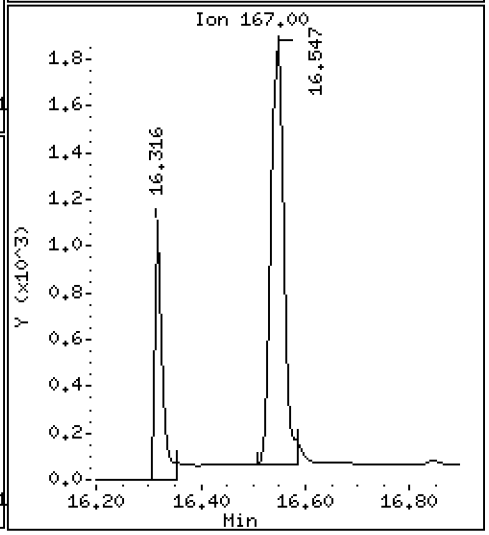


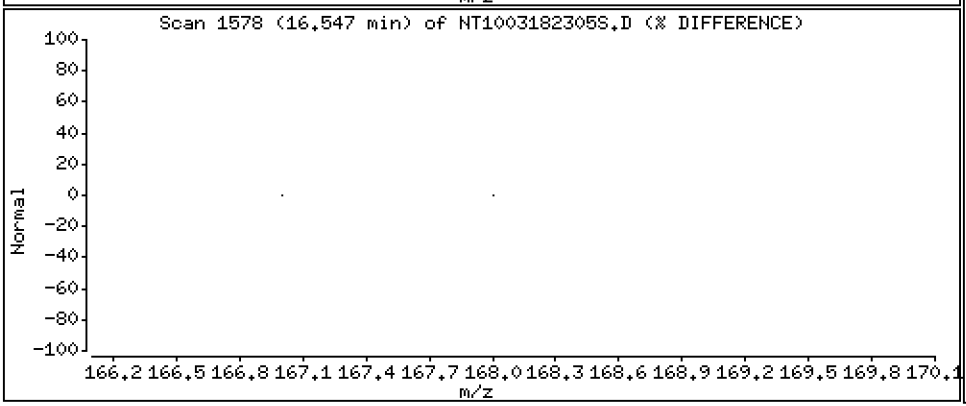












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Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

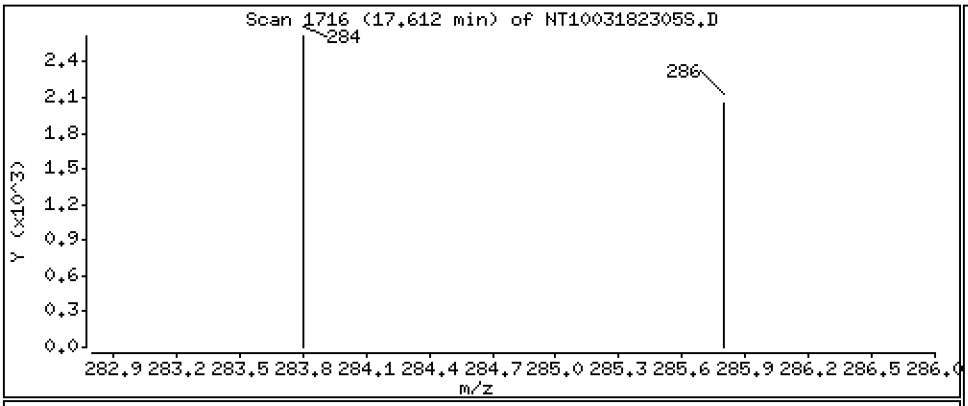
Operator: JGR

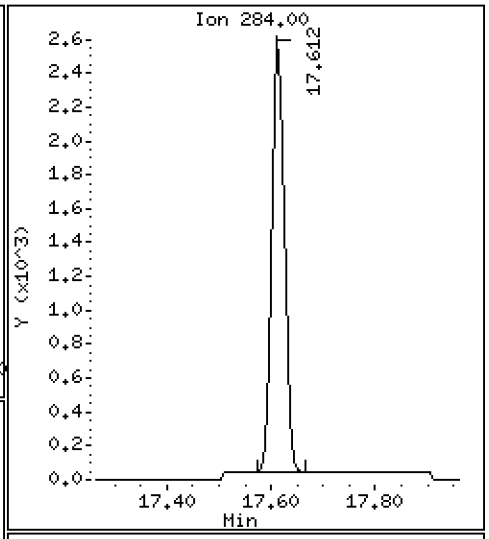
Column phase: ZB-5msi

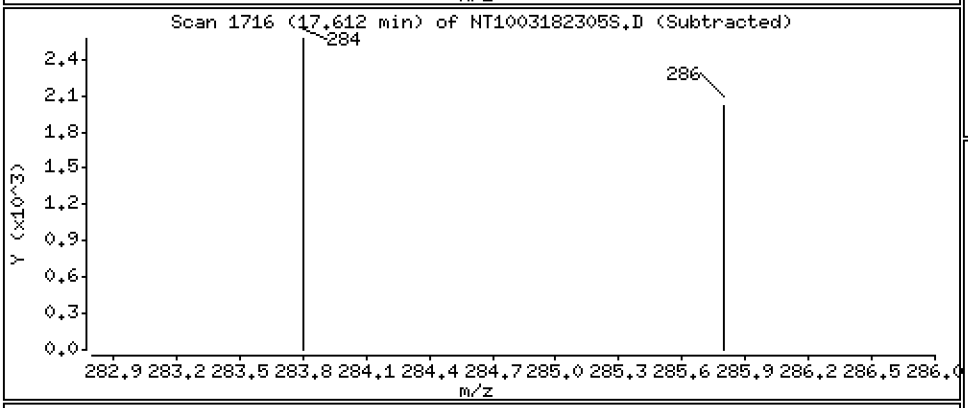
Column diameter: 0.25

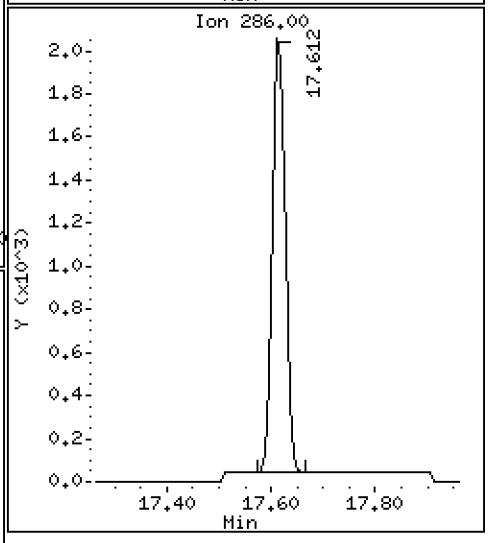
57 Hexachlorobenzene

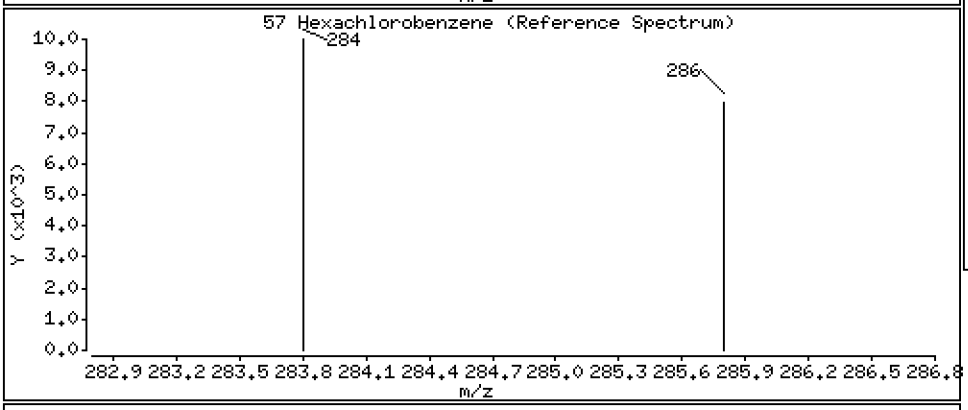
Concentration: 0.1072 ug/L

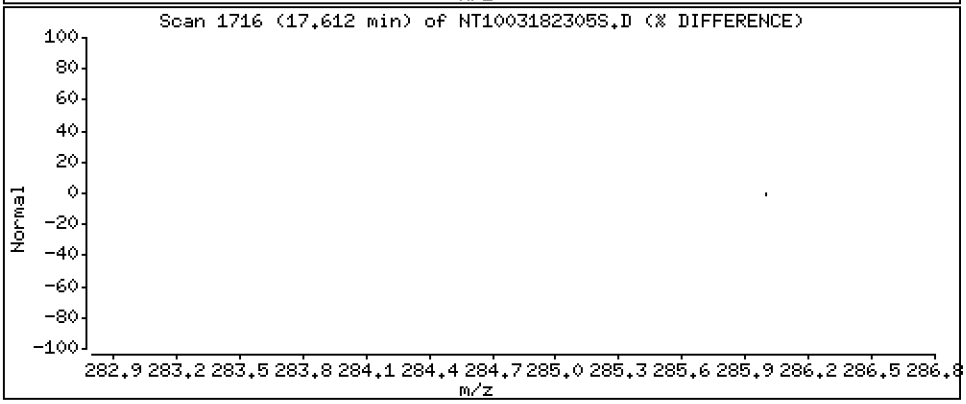












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

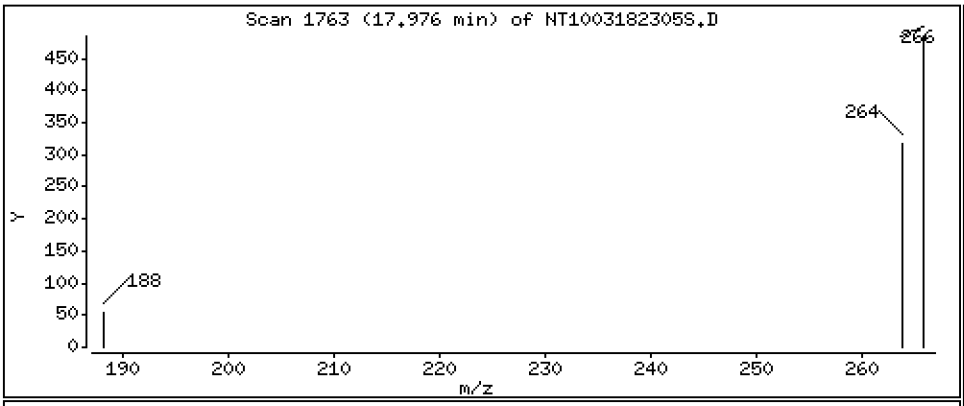
Operator: JGR

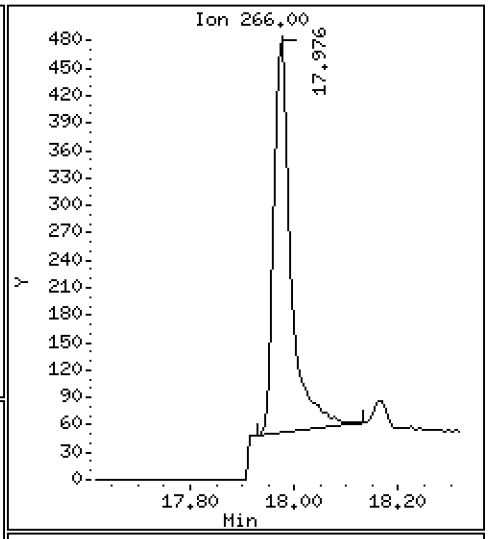
Column phase: ZB-5msi

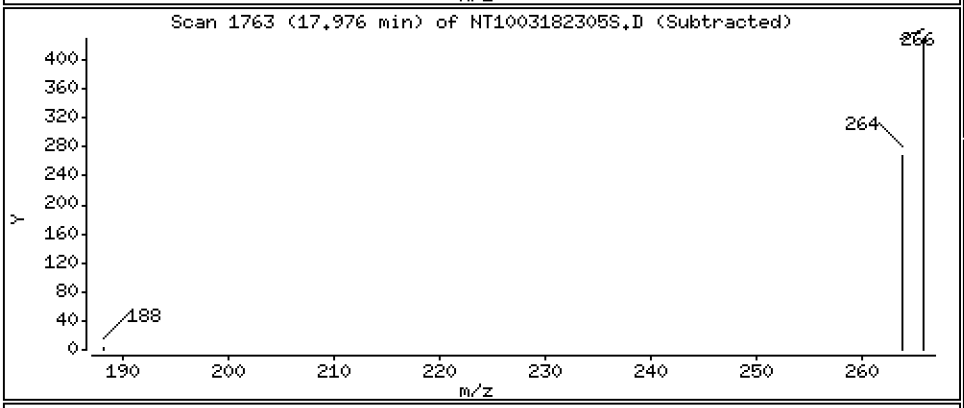
Column diameter: 0.25

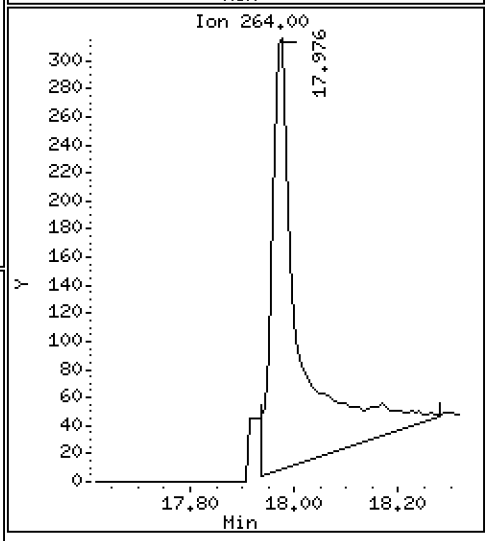
58 Pentachlorophenol

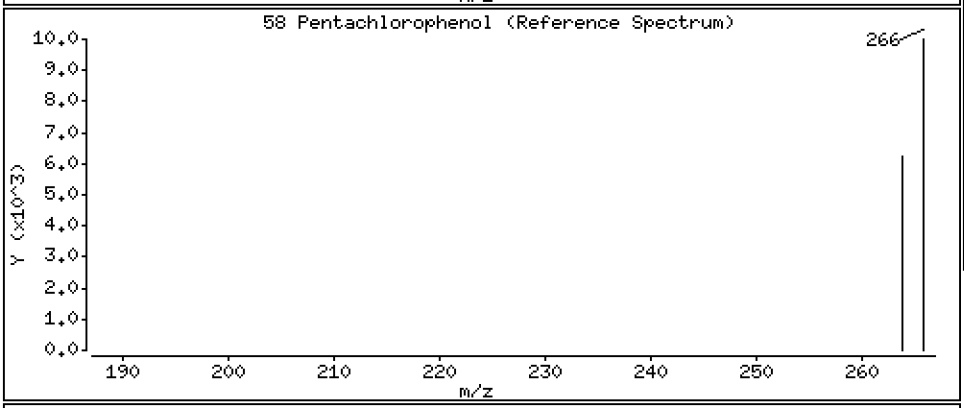
Concentration: 0.04549 ug/L

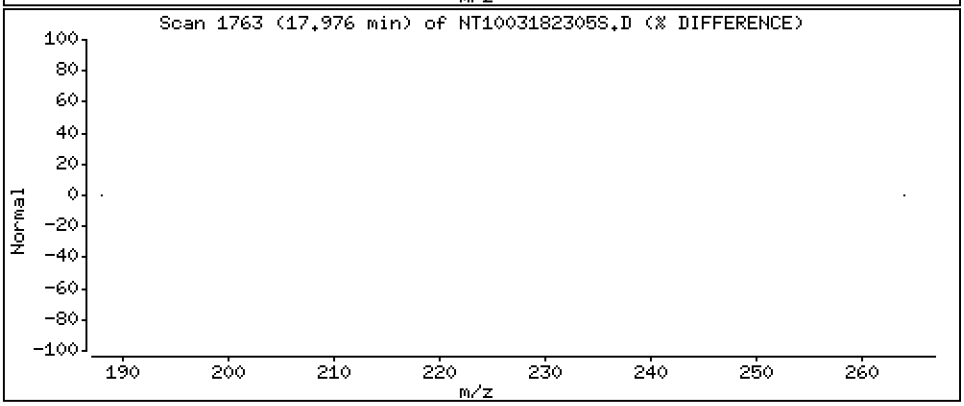












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

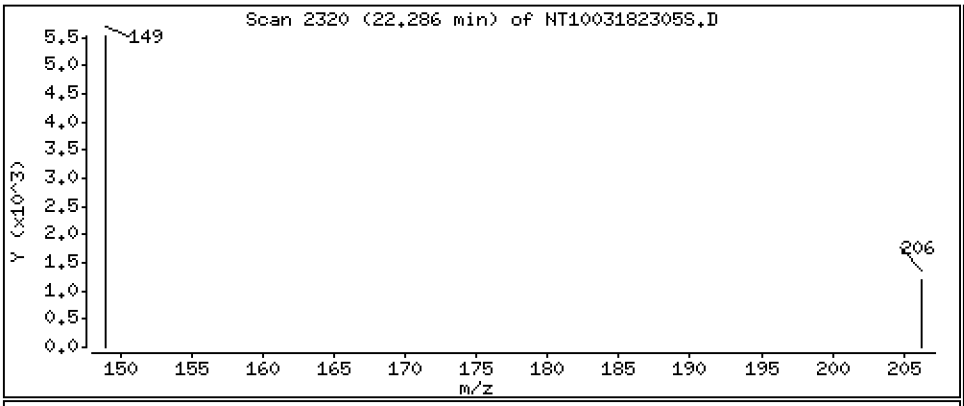
Operator: JGR

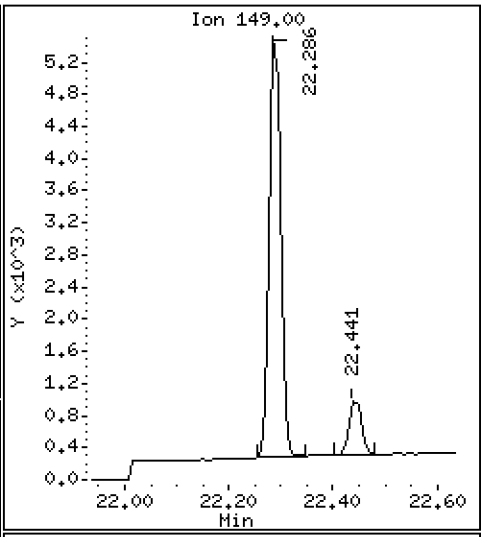
Column phase: ZB-5msi

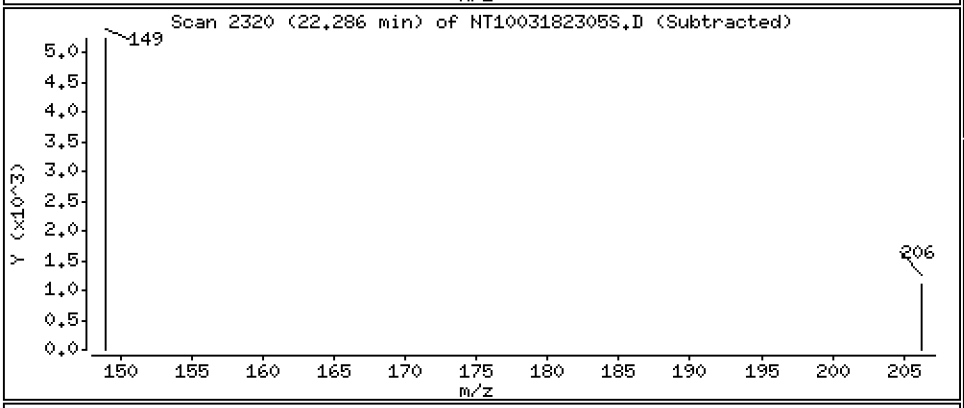
Column diameter: 0.25

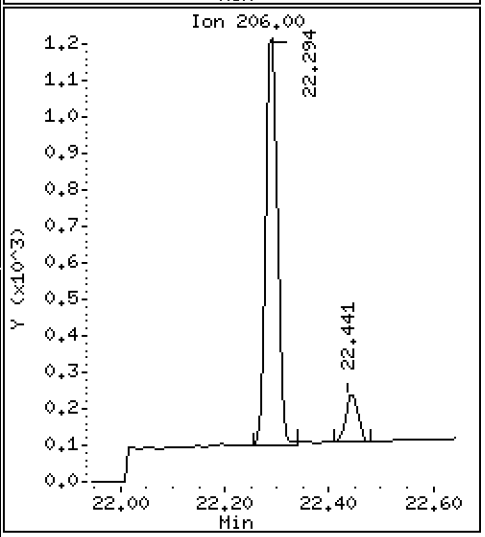
67 Butylbenzylphthalate

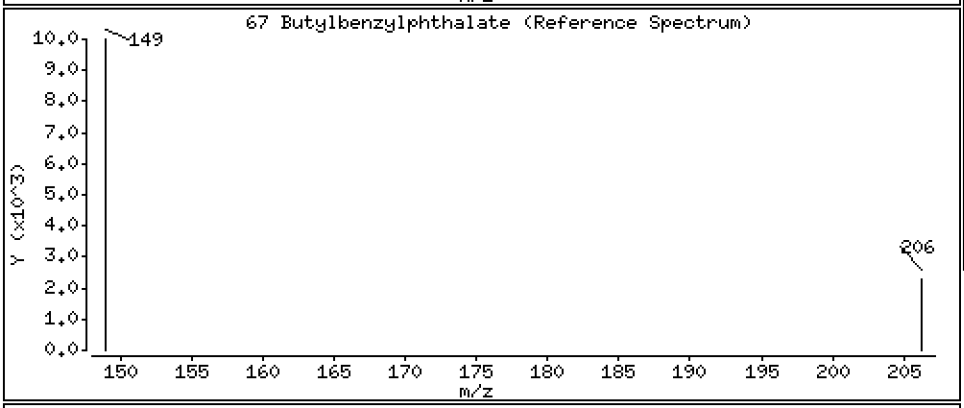
Concentration: 0.1086 ug/L

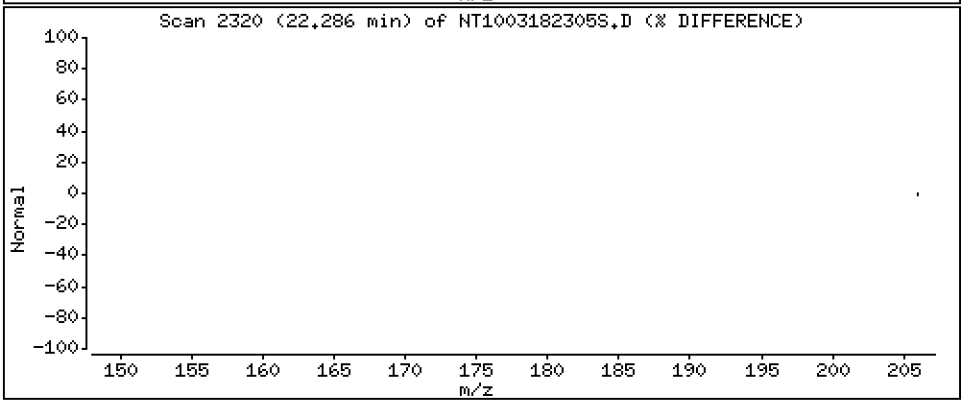












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

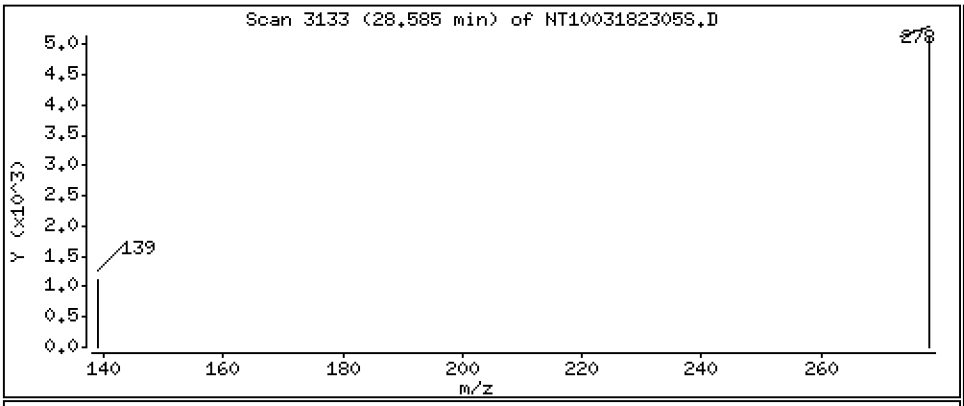
Operator: JGR

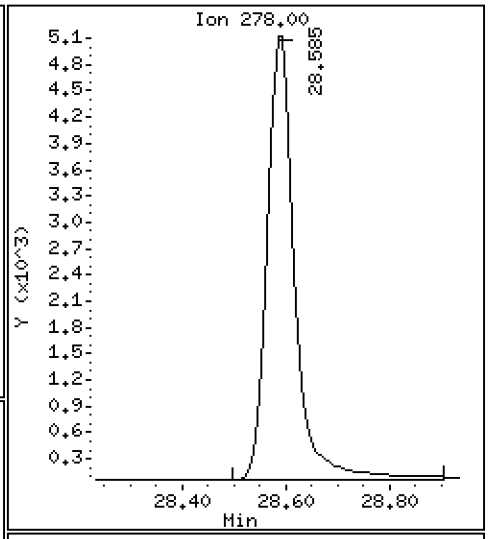
Column phase: ZB-5msi

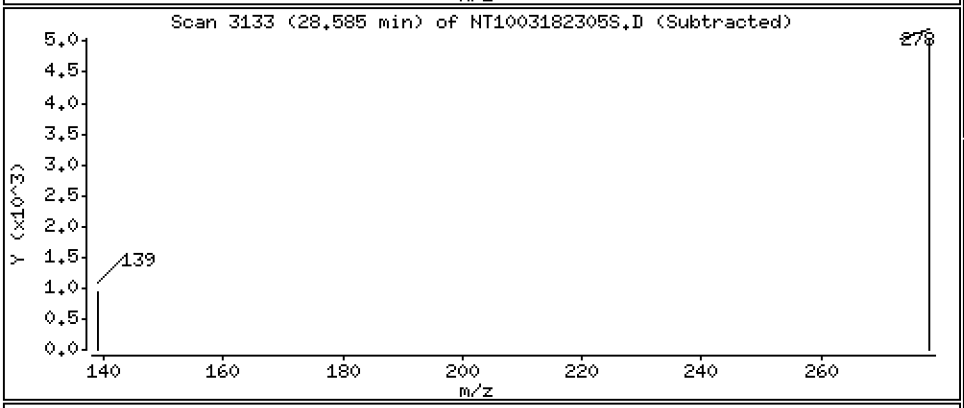
Column diameter: 0.25

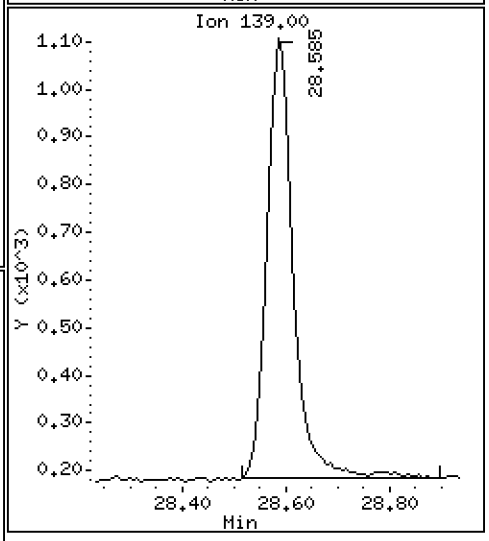
79 Dibenzo(a,h)anthracene

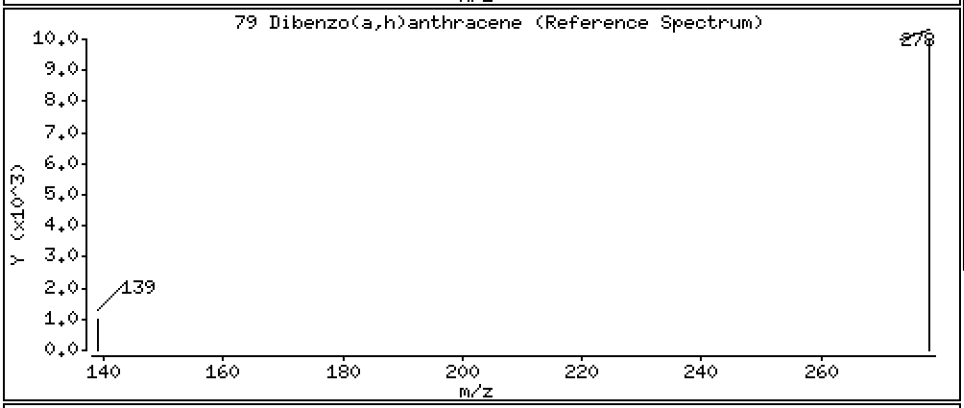
Concentration: 0.09612 ug/L

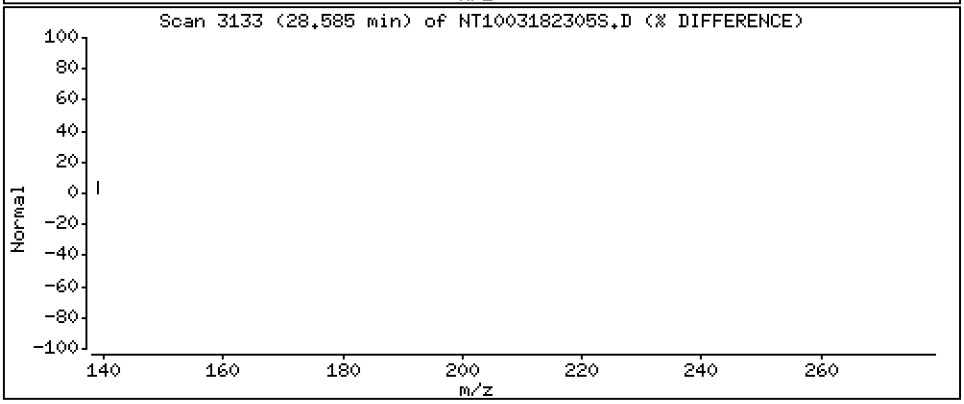












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D

Date : 18-MAR-2023 20:16

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV1

Volume Injected (uL): 1.0

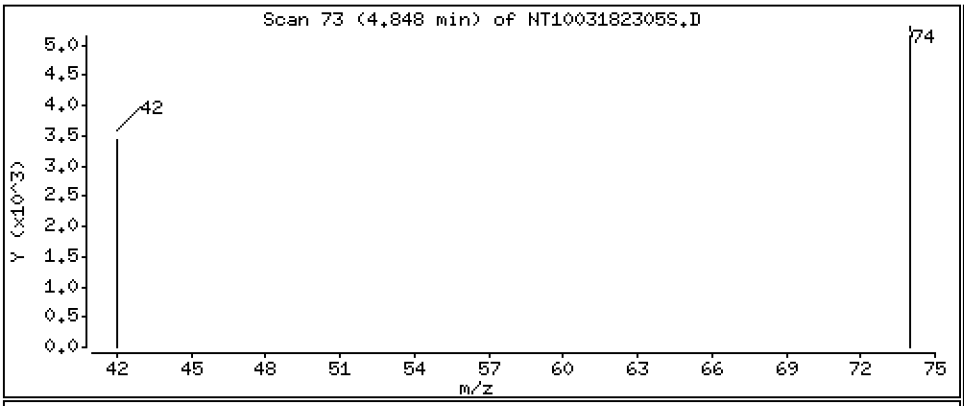
Operator: JGR

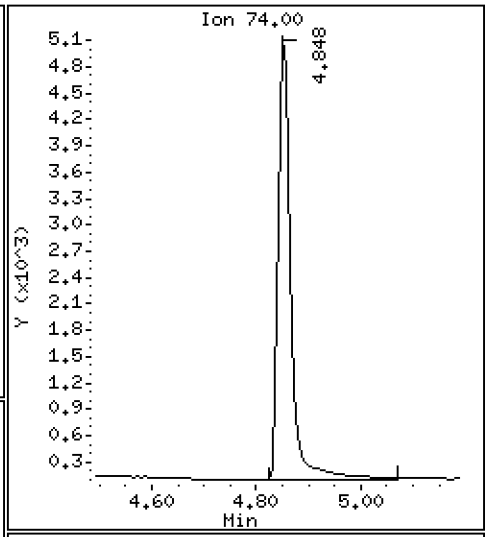
Column phase: ZB-5msi

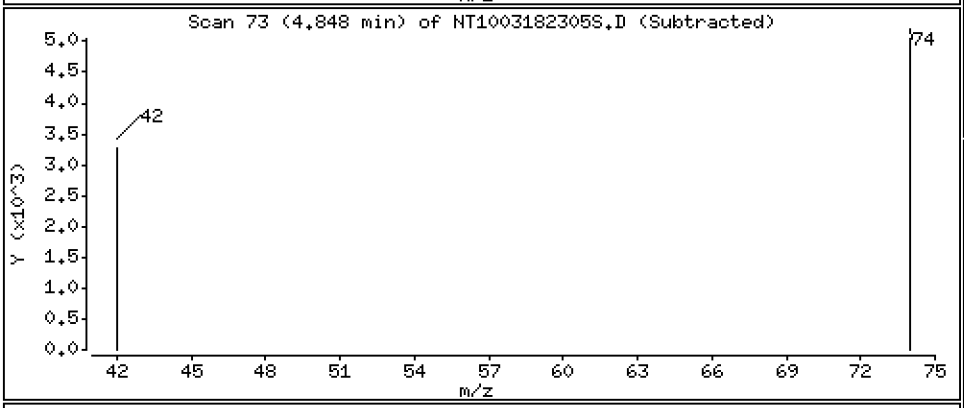
Column diameter: 0.25

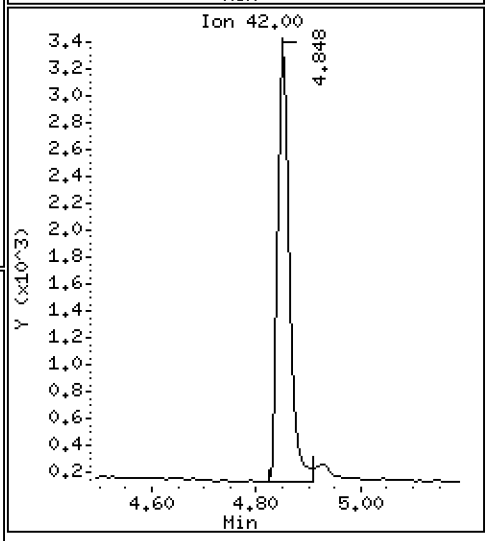
90 N-Nitrosodimethylamine

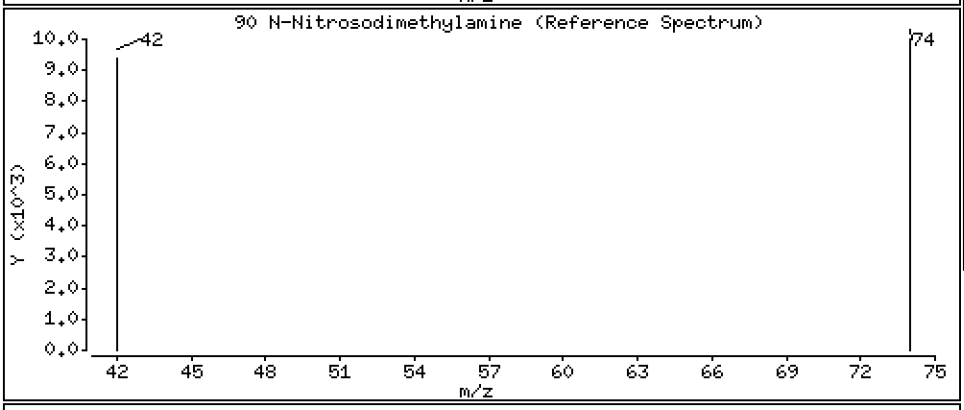
Concentration: 0.2046 ug/L

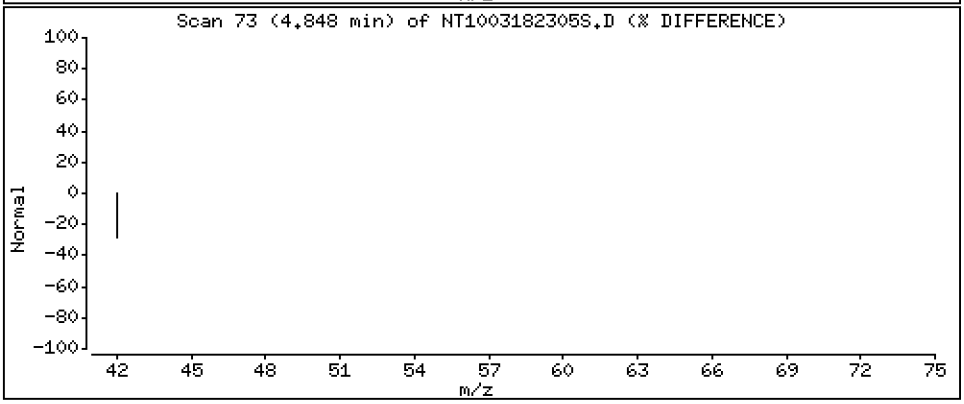












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182305S.D
Lab Smp Id: SLC0505-LCV1
Inj Date : 18-MAR-2023 20:16 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0505-LCV1
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:21 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	6.964	6.957	(0.760)	9272	0.14835	0.1483(R)
	3 Phenol	94	8.541	8.541	(0.932)	7602	0.08865	0.08865
	7 1,3-Dichlorobenzene	146	9.105	9.105	(0.993)	8647	0.10777	0.1078
*	8 1,4-Dichlorobenzene-d4	152	9.167	9.167	(1.000)	206113	4.00000	
	9 1,4-Dichlorobenzene	146	9.198	9.198	(1.003)	8261	0.10665	0.1067
	11 Benzyl alcohol	79	9.438	9.431	(1.030)	3696	0.07435	0.07435
	12 1,2-Dichlorobenzene	146	9.547	9.547	(1.041)	8094	0.10626	0.1063
	13 2-Methylphenol	108	9.648	9.648	(1.052)	5132	0.08637	0.08637
	15 4-Methylphenol	108	9.912	9.912	(1.081)	5176	0.08383	0.08383
	16 N-Nitroso-di-n-propylamine	70	9.982	9.982	(1.089)	4235	0.09699	0.09699
	22 2,4-Dimethylphenol	107	10.951	10.943	(0.942)	12199	0.19530	0.1953
	24 Benzoic acid	105	11.062	11.053	(0.951)	1509	0.04419	0.04419(M)
	26 1,2,4-Trichlorobenzene	180	11.542	11.542	(0.993)	7150	0.11379	0.1138
*	27 Naphthalene-d8	136	11.627	11.627	(1.000)	722650	4.00000	
	30 Hexachlorobutadiene	225	12.021	12.021	(1.034)	4041	0.10578	0.1058
	39 Dimethylphthalate	163	14.714	14.714	(0.967)	11827	0.10703	0.1070
*	42 Acenaphthene-d10	162	15.210	15.210	(1.000)	350173	4.00000	
	50 Diethylphthalate	149	16.161	16.161	(1.063)	11802	0.10309	0.1031
	54 N-Nitrosodiphenylamine	169	16.547	16.547	(0.908)	8531	0.09950	0.09950
	57 Hexachlorobenzene	284	17.611	17.611	(0.966)	4116	0.10724	0.1072

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.975	17.968	(0.986)	964	0.04549	0.04549(M)
*	59 Phenanthrene-d10	188	18.231	18.231	(1.000)	639046	4.00000	
$	66 Terphenyl-d14	244	21.364	21.364	(0.918)	8508	0.09945	0.09945(R)
	67 Butylbenzylphthalate	149	22.285	22.285	(0.958)	7500	0.10858	0.1086
*	69 Chrysene-d12	240	23.269	23.269	(1.000)	525054	4.00000	
*	77 Perylene-d12	264	25.901	25.909	(1.000)	588722	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.584	28.584	(1.104)	18571	0.09612	0.09612
	90 N-Nitrosodimethylamine	74	4.848	4.840	(0.529)	8112	0.20463	0.2046

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182305S.D
Lab Smp Id: SLC0505-LCV1
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 18-MAR-2023
Calibration Time: 18:58
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	197953	98977	395906	206113	4.12
27 Naphthalene-d8	704013	352007	1408026	722650	2.65
42 Acenaphthene-d10	353977	176989	707954	350173	-1.07
59 Phenanthrene-d10	686752	343376	1373504	639046	-6.95
69 Chrysene-d12	597733	298867	1195466	525054	-12.16
77 Perylene-d12	645663	322832	1291326	588722	-8.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.17	8.67	9.67	9.17	0.00
27 Naphthalene-d8	11.63	11.13	12.13	11.63	0.00
42 Acenaphthene-d10	15.21	14.71	15.71	15.21	0.00
59 Phenanthrene-d10	18.23	17.73	18.73	18.23	0.00
69 Chrysene-d12	23.27	22.77	23.77	23.27	0.00
77 Perylene-d12	25.91	25.41	26.41	25.90	-0.03

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

REVIEW SUMMARY FOR FILE - NT1003182305S.D

Lab ID: SLC0505-LCV1
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   18-MAR-2023 20:16

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182303S.D

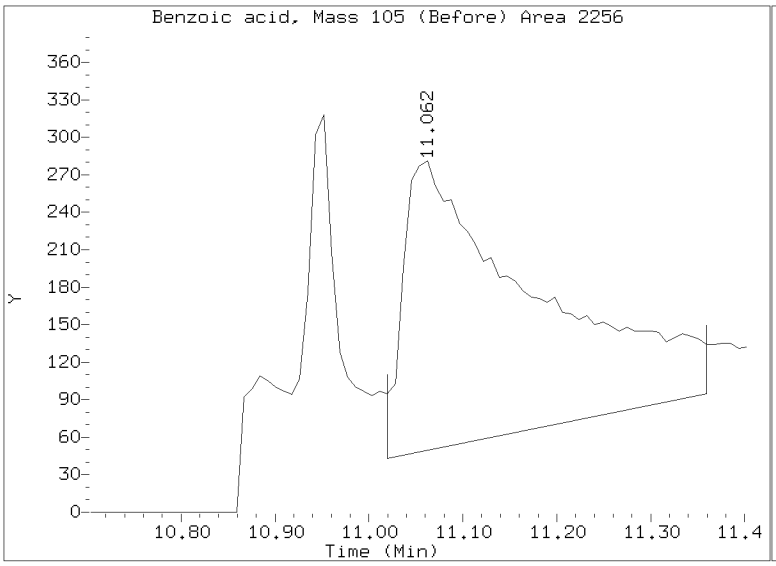
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

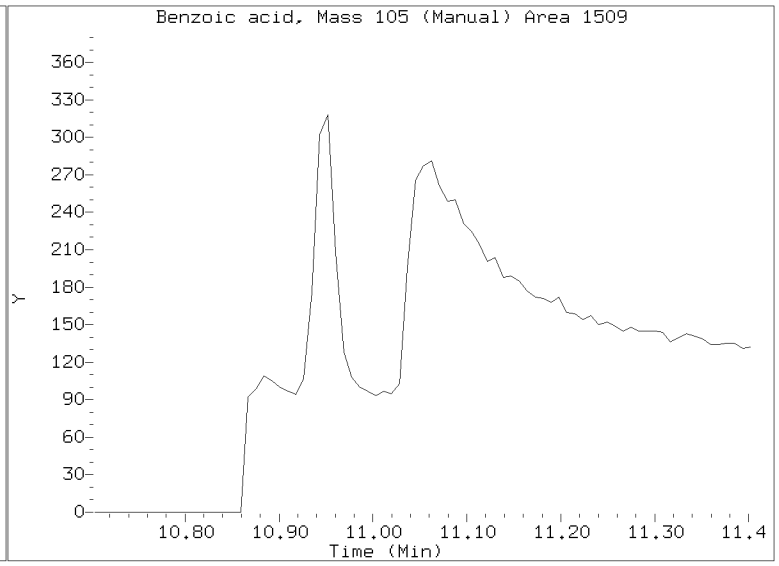
Exception: 1,2,4-Trichlorobenzene 0.0010

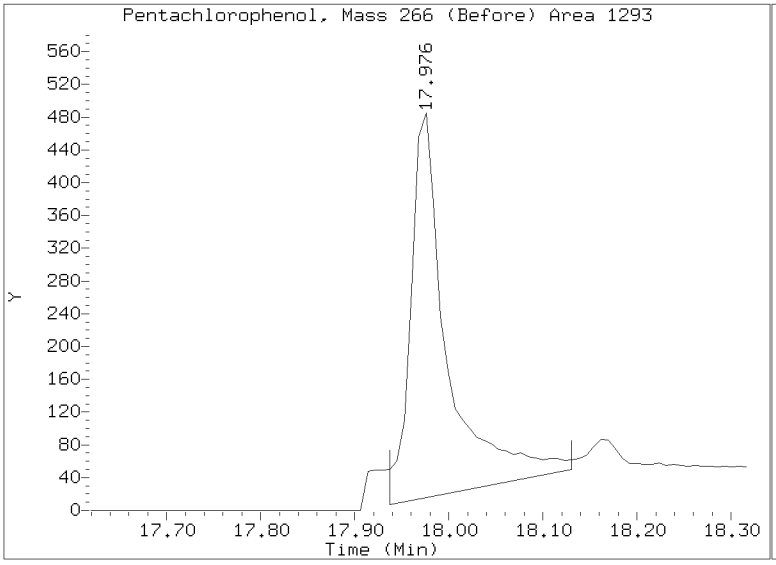
* Only compounds listed in the work order have been verified by the analyst *

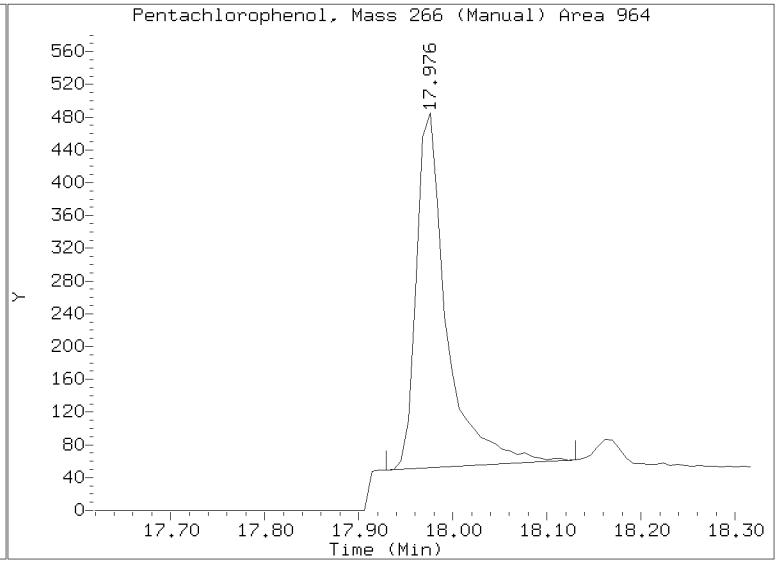
Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182305S.D
Injection Date: 18-MAR-2023 20:16
Lab ID:SLC0505-LCV1 Client ID:
Report Date: 04/04/2023 12:31









Analytical Resources, LLC
Analytical Chemists and Consultants

LOW-CONCENTRATION
CONTINUING CALIBRATION CHECK
EPA 8270E-SIM

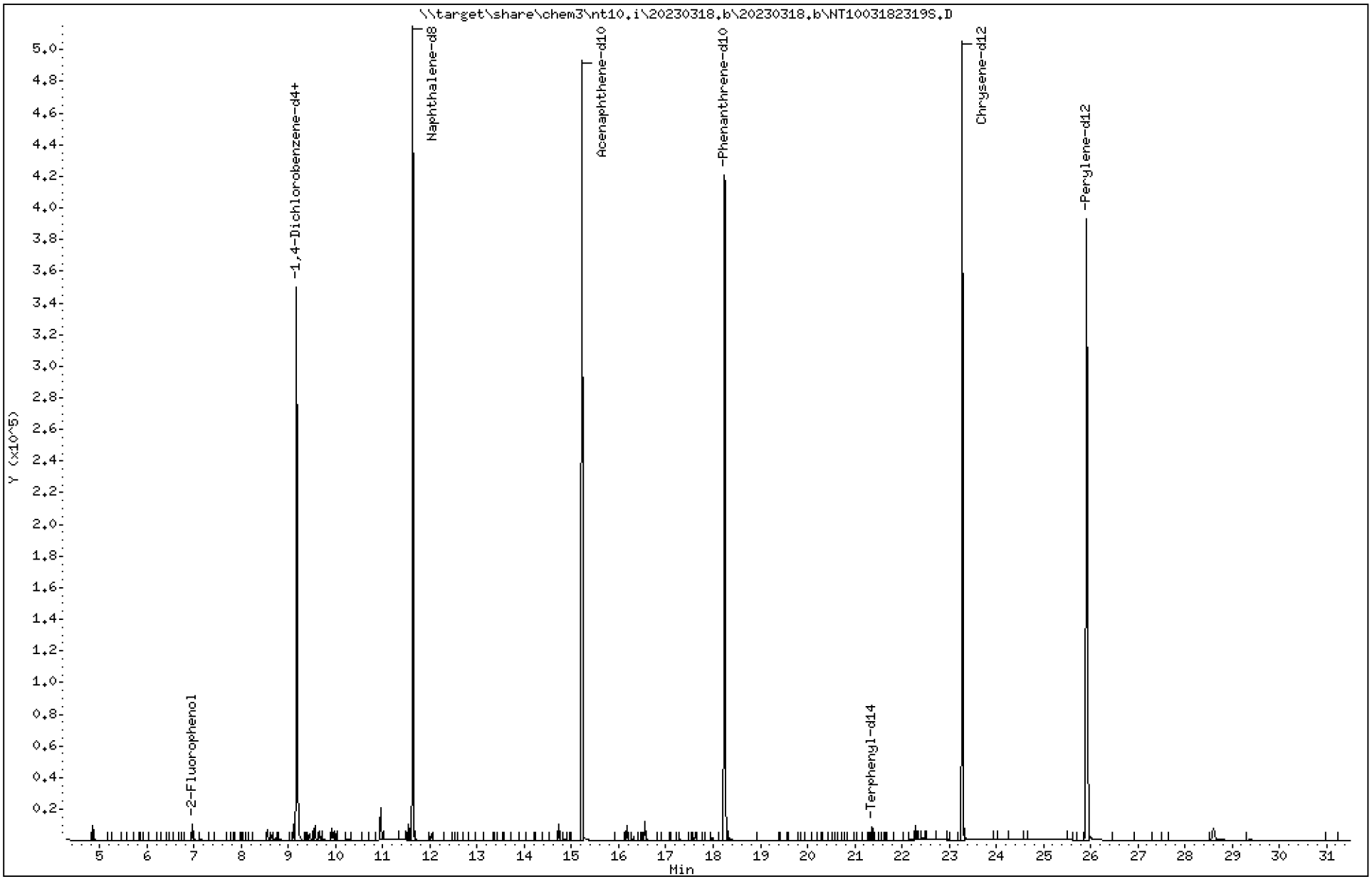
Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	NT10	Calibration:	GC00049
Lab File ID:	NT1003182319S.D	Calibration Date:	03/15/2023
Sequence:	SLC0505	Injection Date:	03/19/23
Lab Sample ID:	SLC0505-LCV2	Injection Time:	05:13
Sequence Name:	ABN 0.1		

		CONC. (ug/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
1,4-Dichlorobenzene	A	0.20000	0.1	1.5031980	0.7935793		-47.2	
1,2-Dichlorobenzene	A	0.20000	0.1	1.4783140	0.7840114		-47.0	
Benzyl Alcohol	A	0.20000	0.09	0.9647610	0.4390092		-54.5	
Benzoic acid	A	0.80000	0.1	0.1358970	0.0290016		-84.7	
2,4-Dimethylphenol	A	0.40000	0.2	0.3457498	0.1824026		-47.2	
1,2,4-Trichlorobenzene	A	0.20000	0.1	0.3478148	0.2016105		-42.0	
N-Nitrosodiphenylamine	A	0.20000	0.1	0.5366720	0.3017808		-43.8	
Pentachlorophenol	A	0.40000	0.09	0.0934250	0.0314390		-76.3	
2-Fluorophenol	A	0.30000	0.161	1.2129820	0.6509276		-46.3	
p-Terphenyl-d14	A	0.20000	0.109	0.6517430	0.3561689		-45.4	

* Values outside of QC limits

Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D
Date : 19-MAR-2023 05:13
Client ID:
Sample Info: SLC0505-LCV2
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: JGR
Column diameter: 0.25



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Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

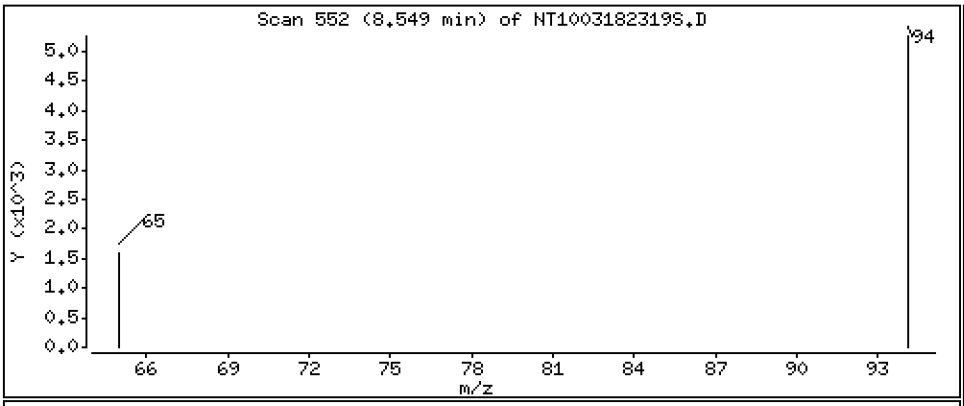
Operator: JGR

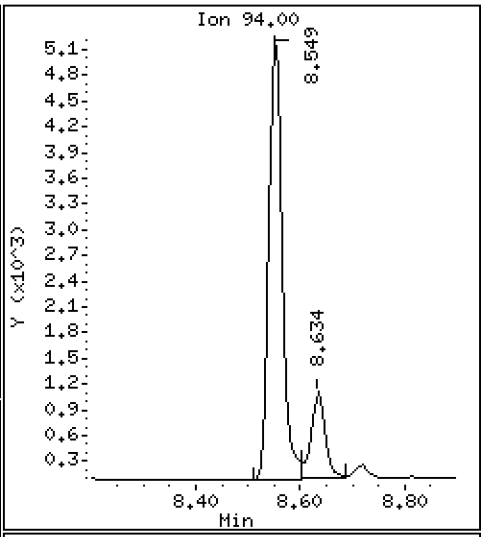
Column phase: ZB-5msi

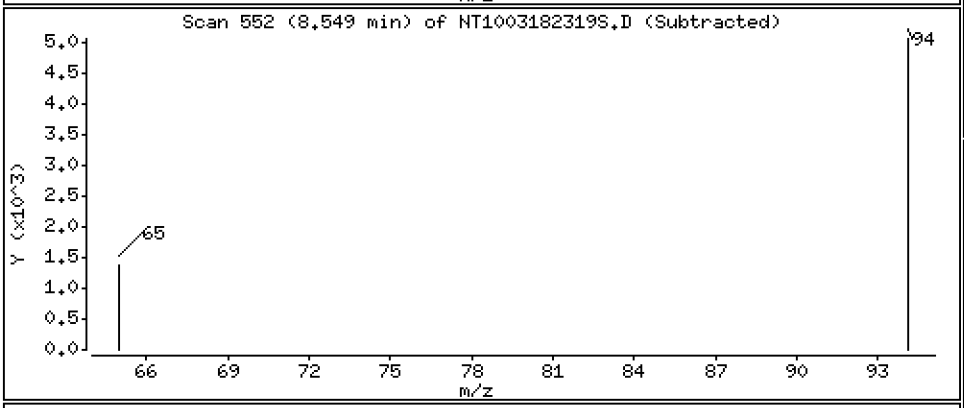
Column diameter: 0.25

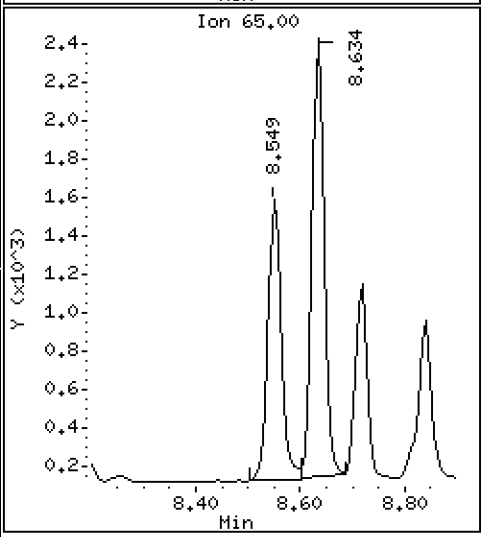
3 Phenol

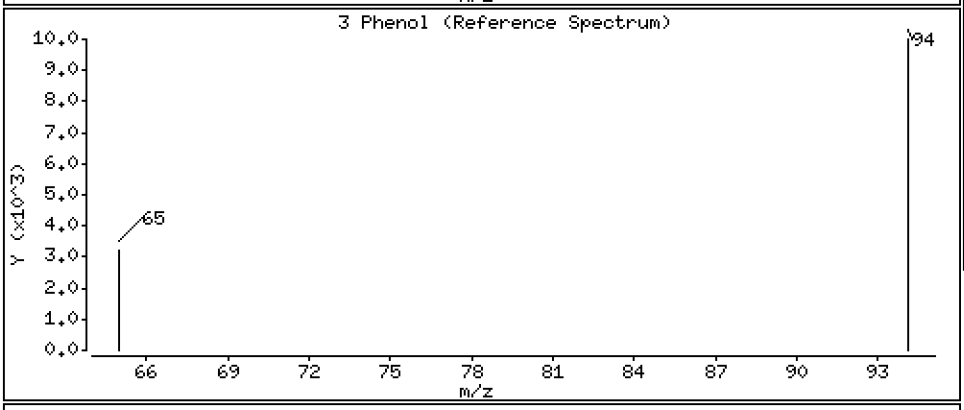
Concentration: 0.09751 ug/L

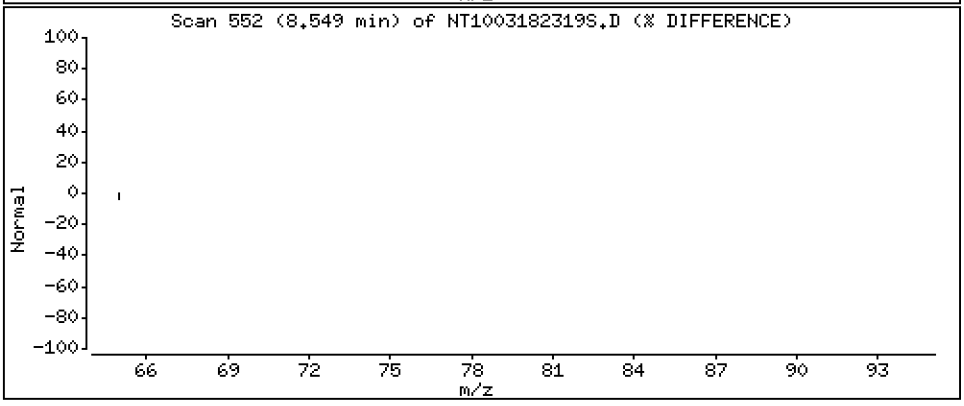












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

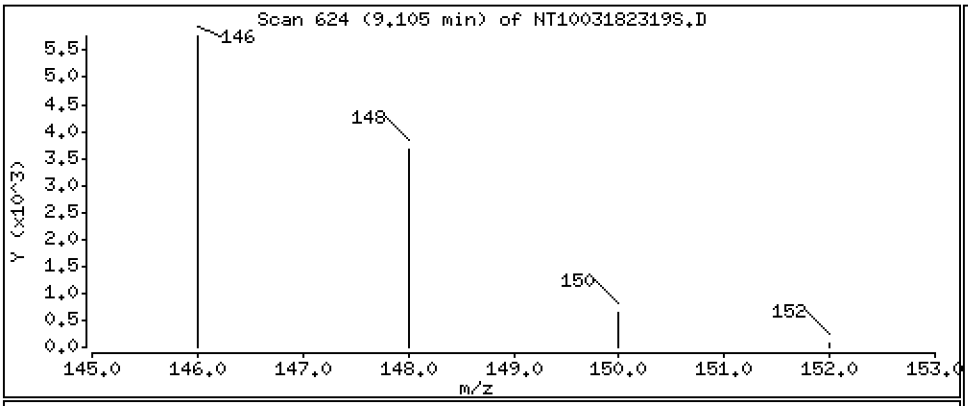
Operator: JGR

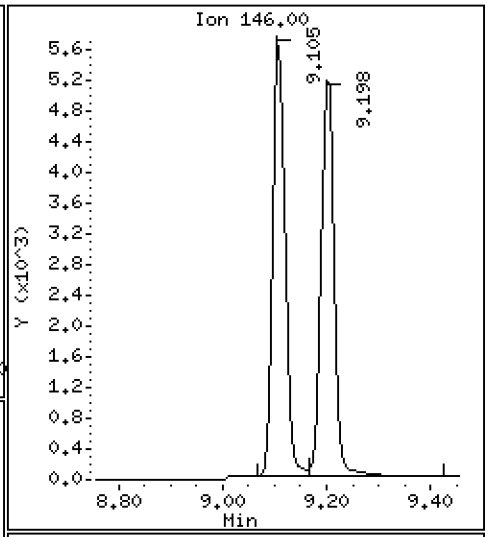
Column phase: ZB-5msi

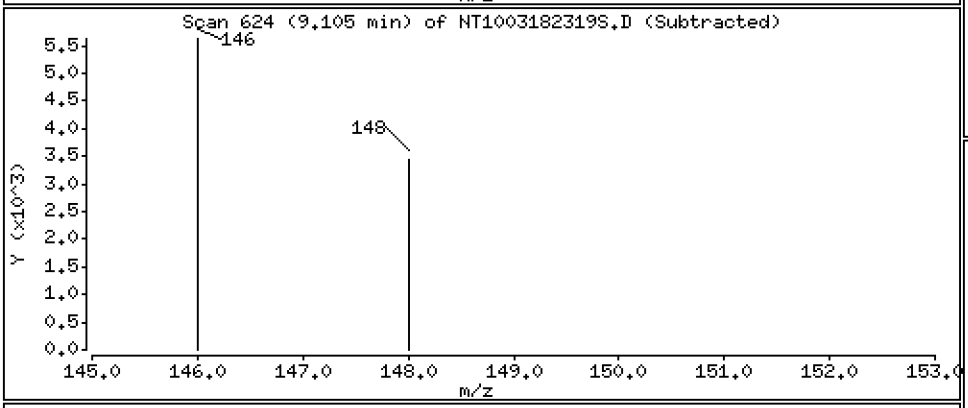
Column diameter: 0.25

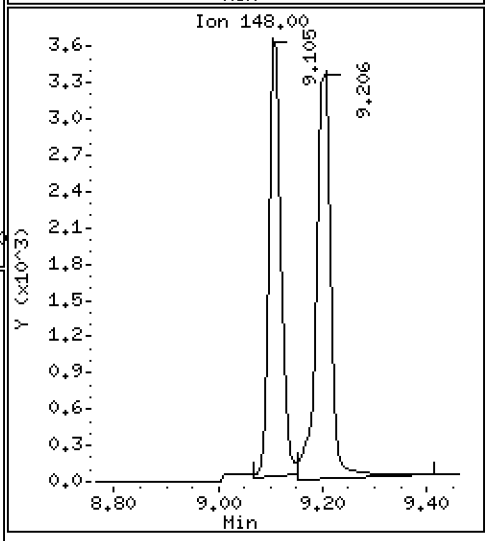
7 1,3-Dichlorobenzene

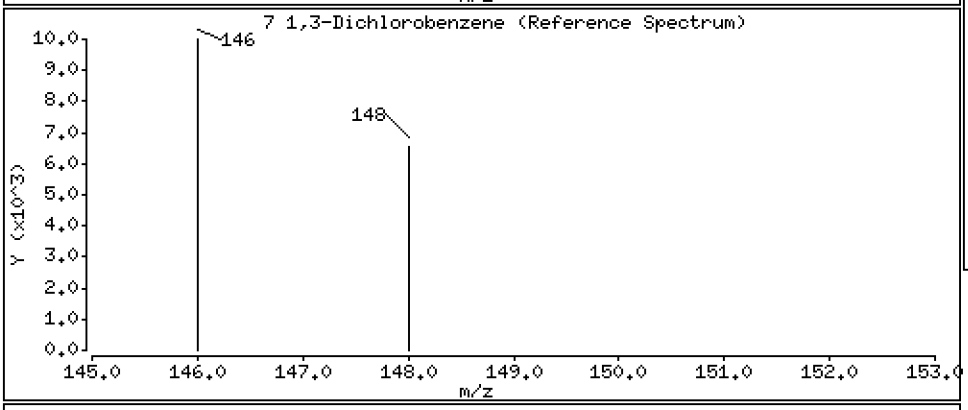
Concentration: 0.1074 ug/L

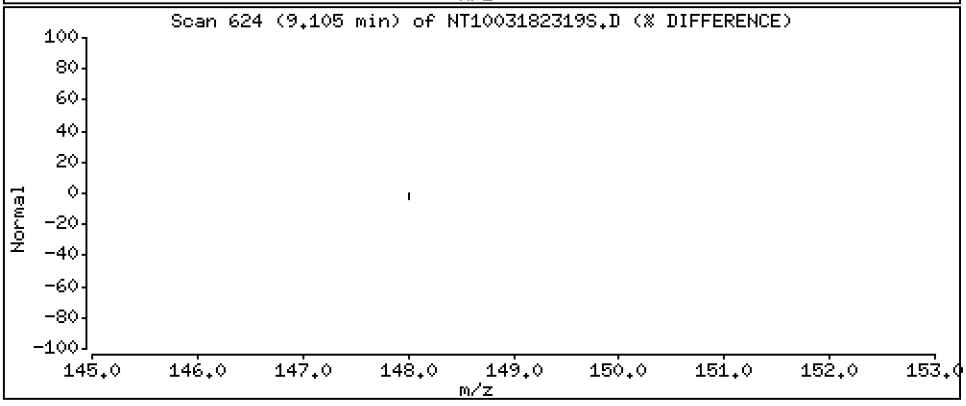












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

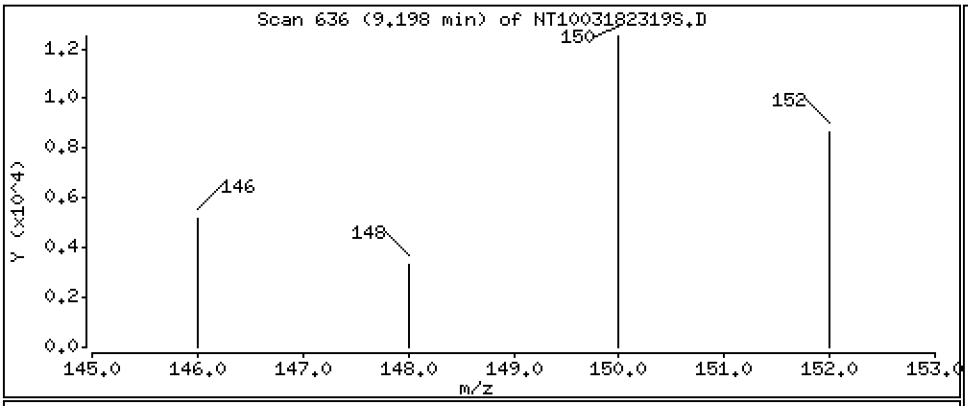
Operator: JGR

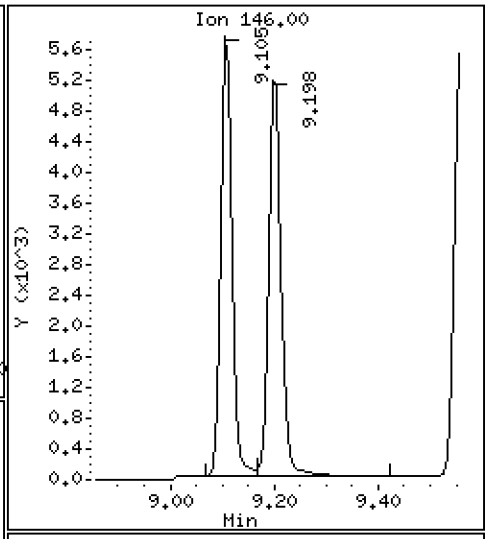
Column phase: ZB-5msi

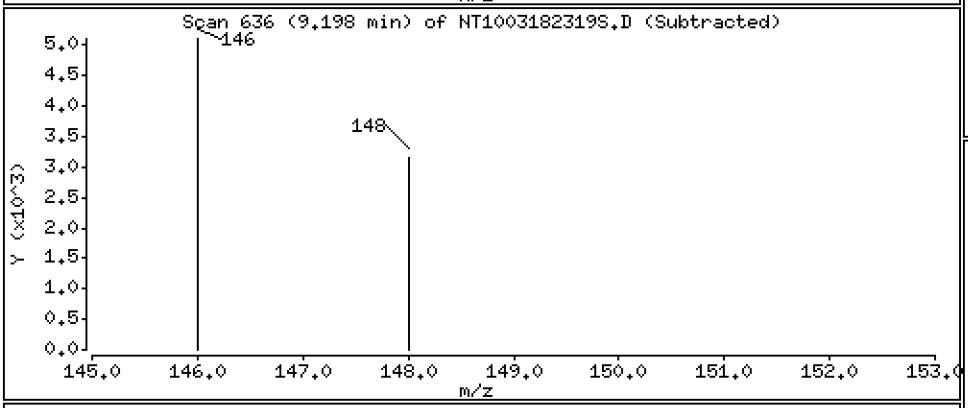
Column diameter: 0.25

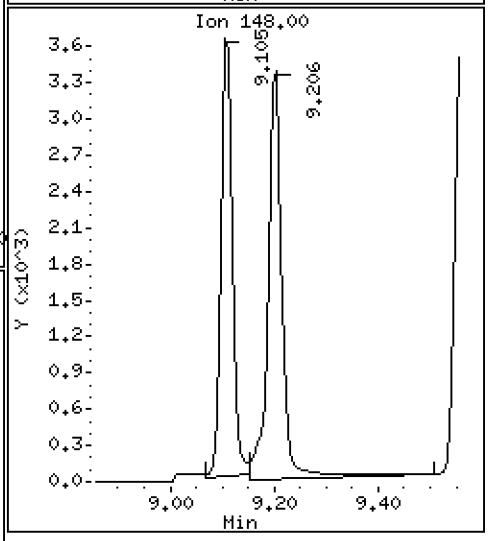
9 1,4-Dichlorobenzene

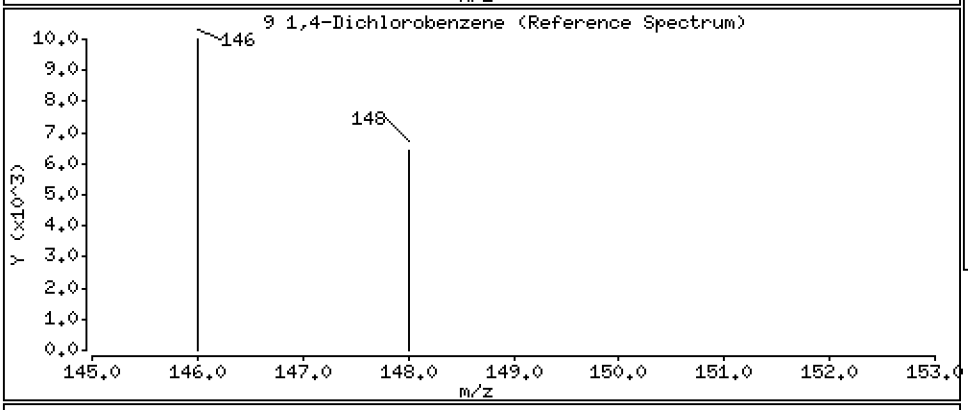
Concentration: 0.1056 ug/L

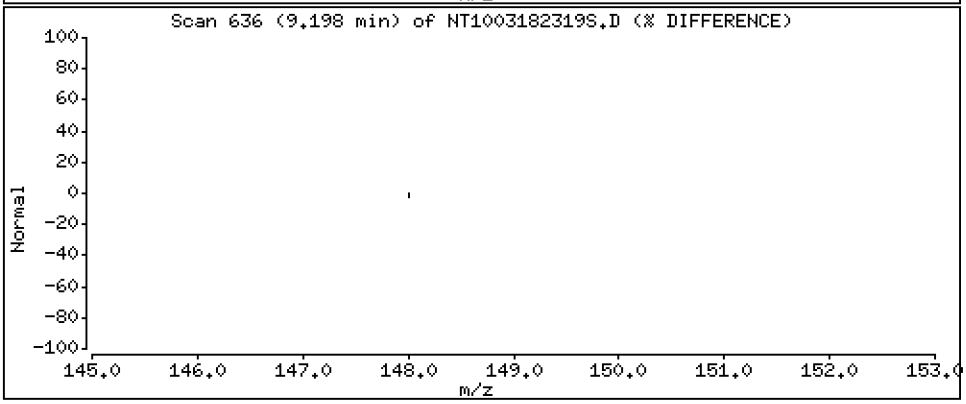












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

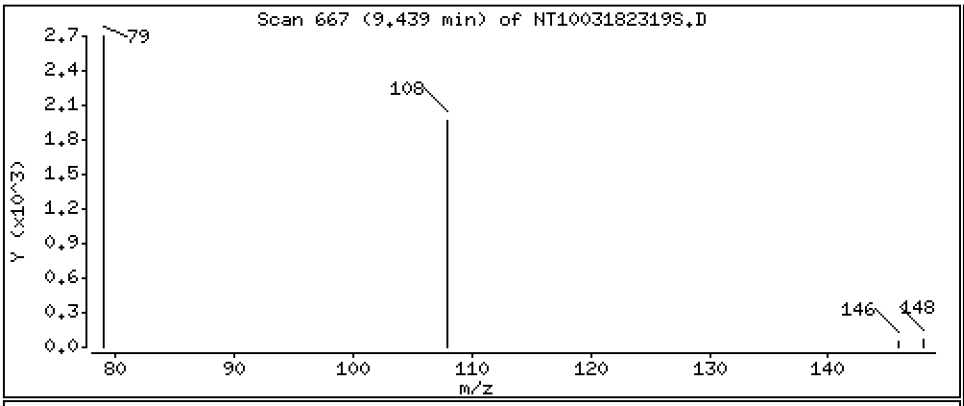
Operator: JGR

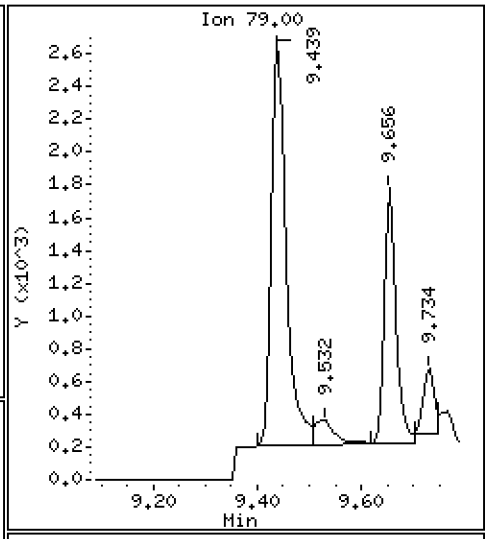
Column phase: ZB-5msi

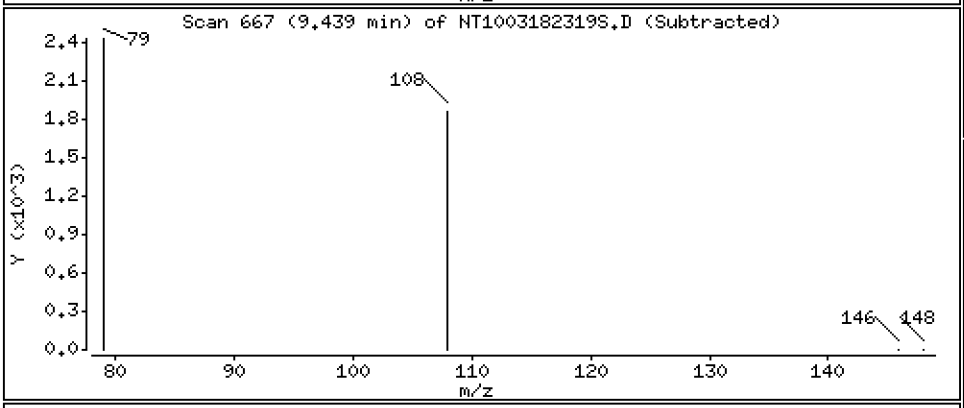
Column diameter: 0.25

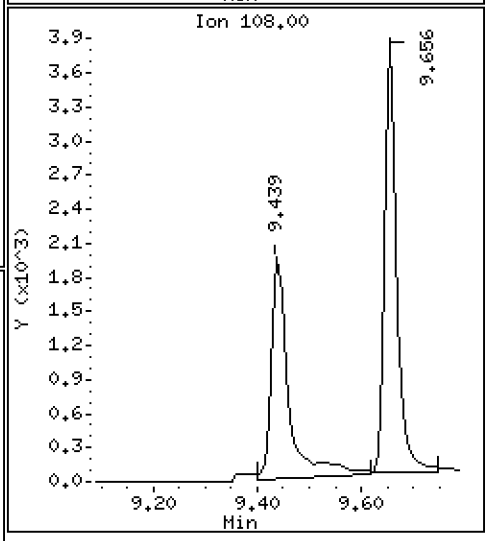
11 Benzyl alcohol

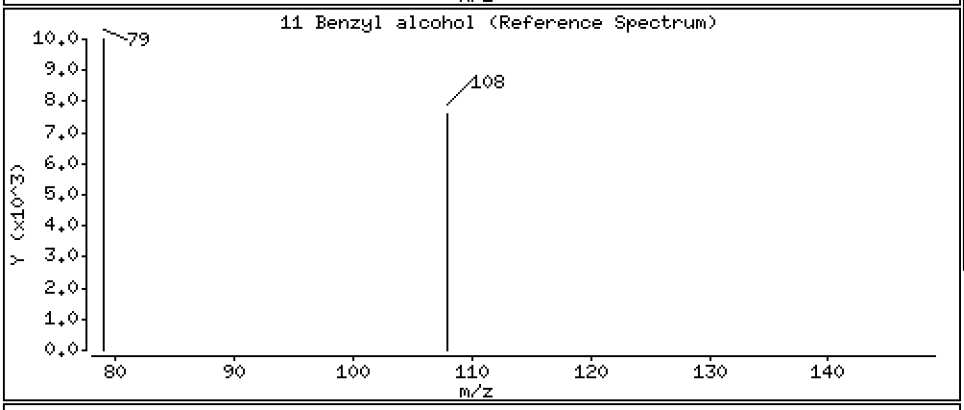
Concentration: 0.09101 ug/L

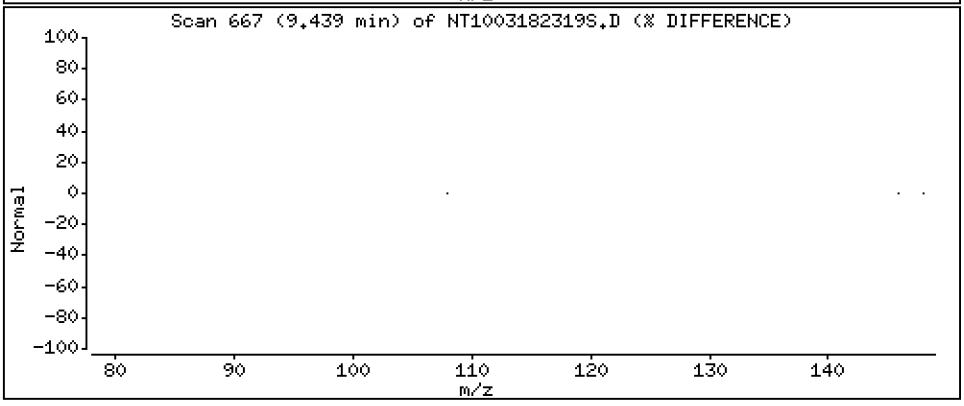












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

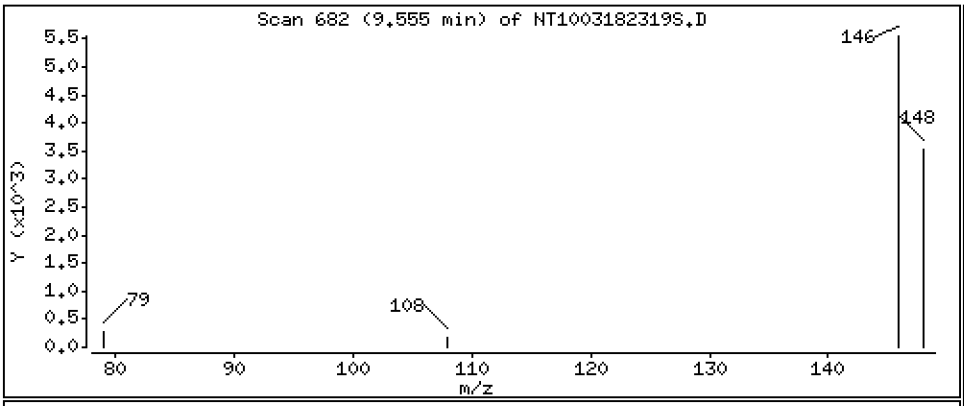
Operator: JGR

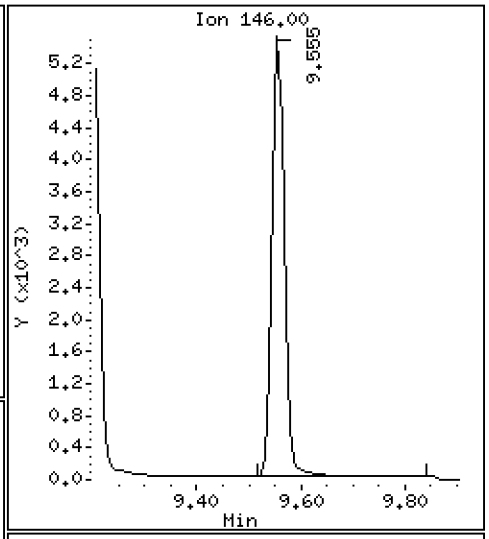
Column phase: ZB-5msi

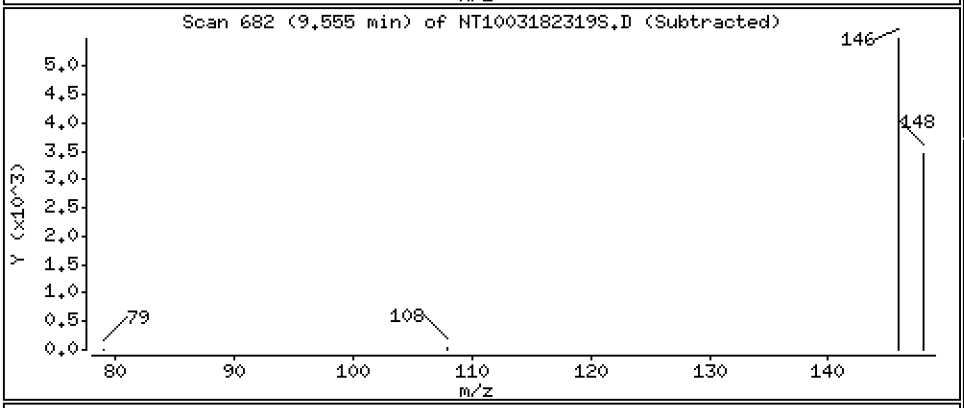
Column diameter: 0.25

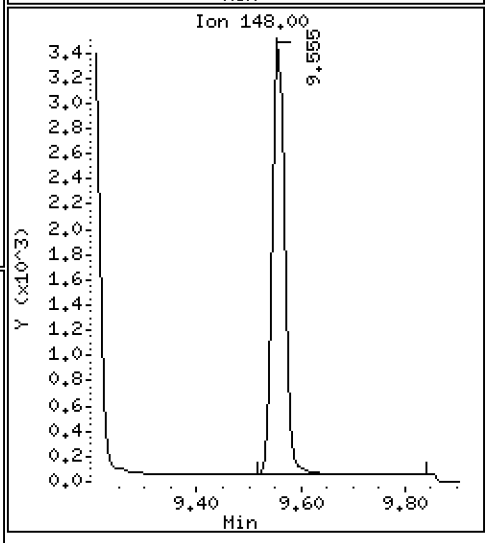
12 1,2-Dichlorobenzene

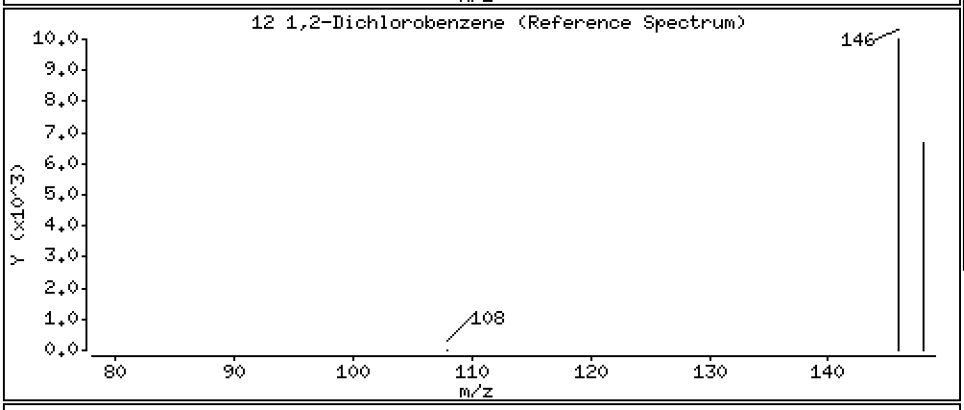
Concentration: 0.1061 ug/L

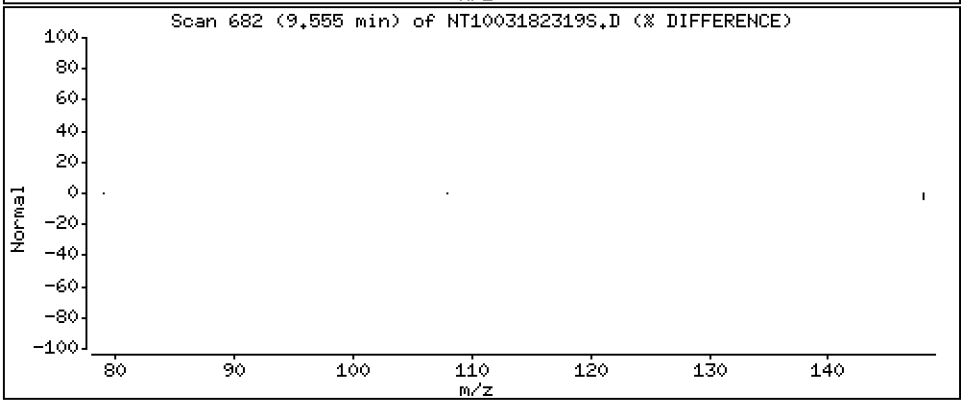












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

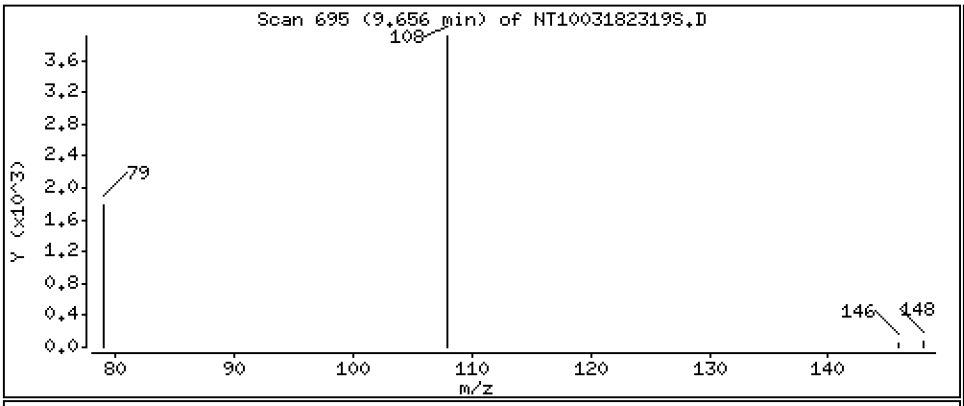
Operator: JGR

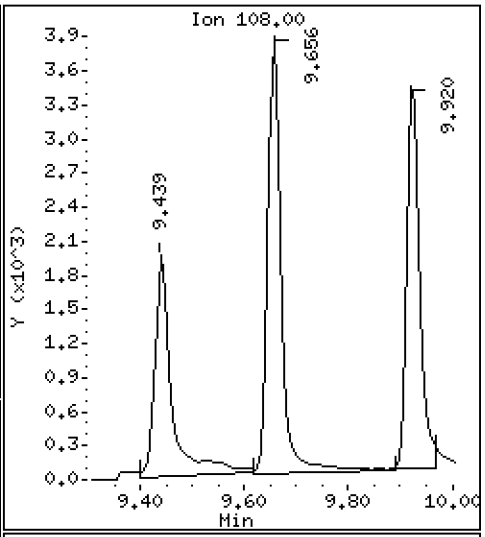
Column phase: ZB-5msi

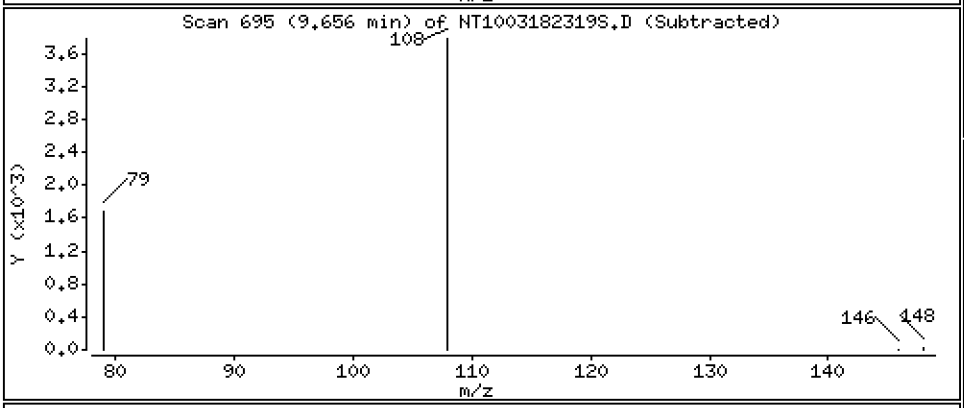
Column diameter: 0.25

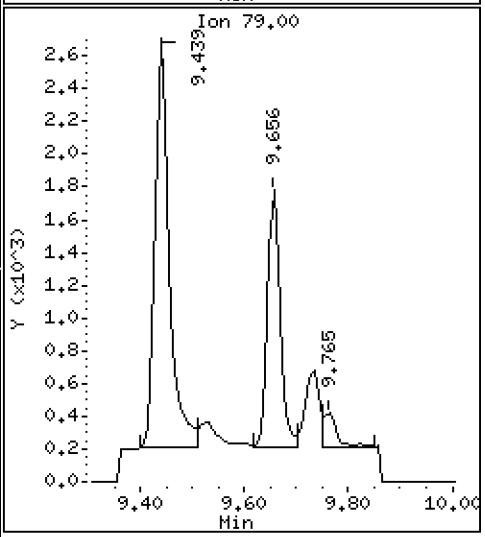
13 2-Methylphenol

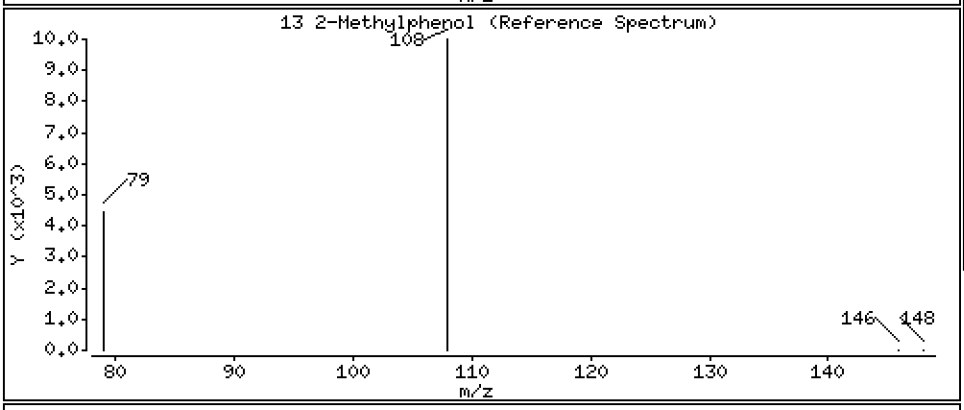
Concentration: 0.1060 ug/L

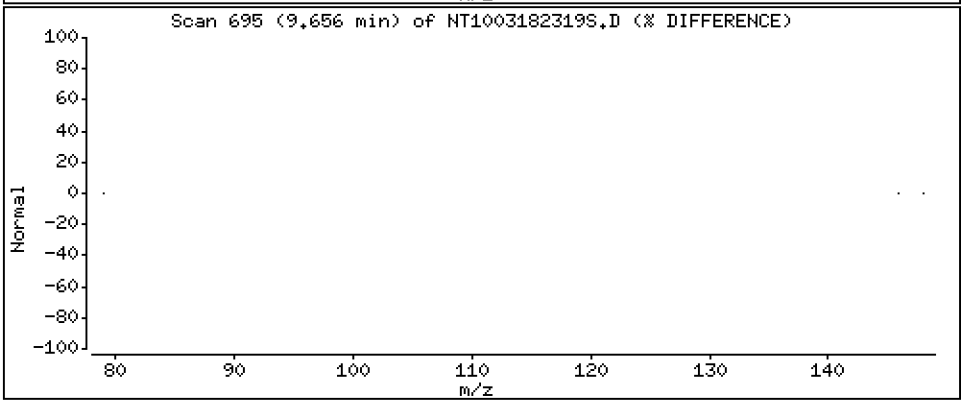












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

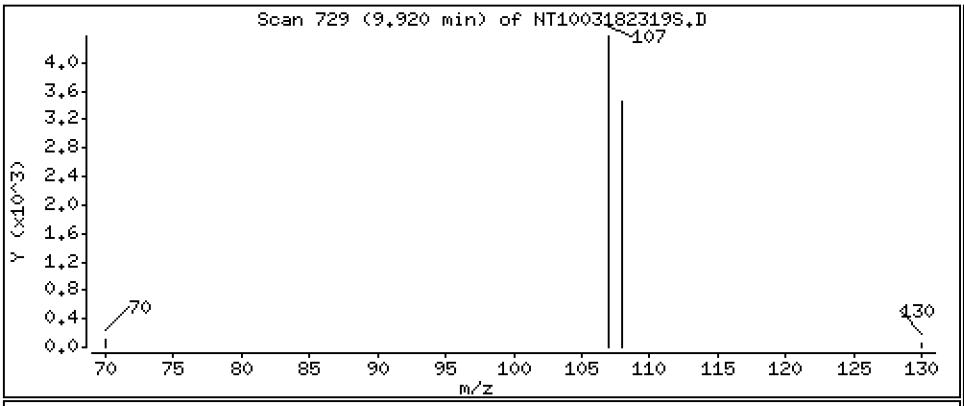
Operator: JGR

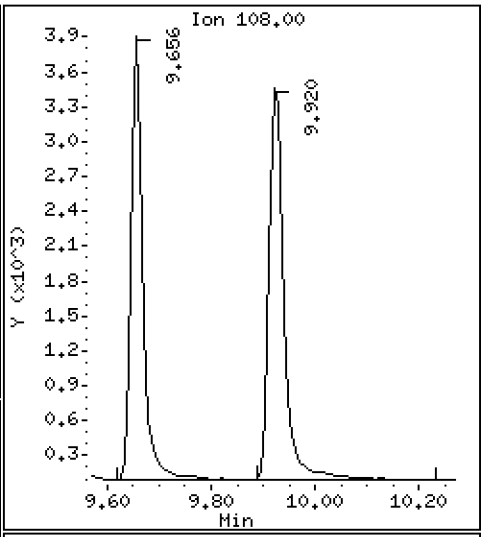
Column phase: ZB-5msi

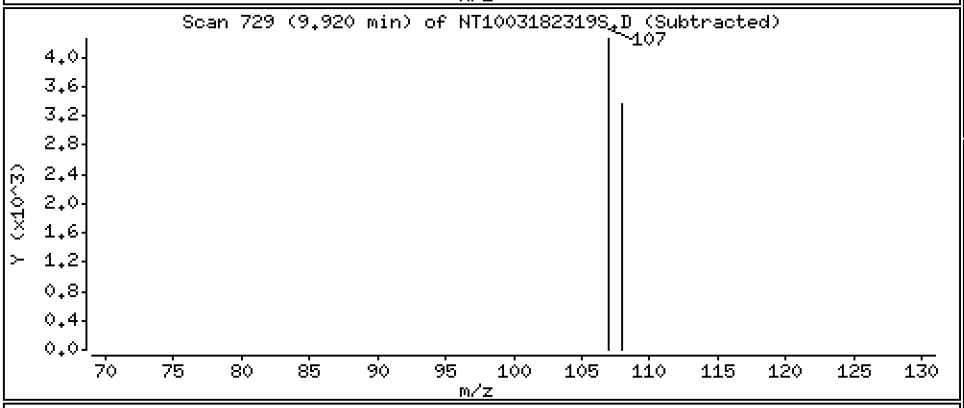
Column diameter: 0.25

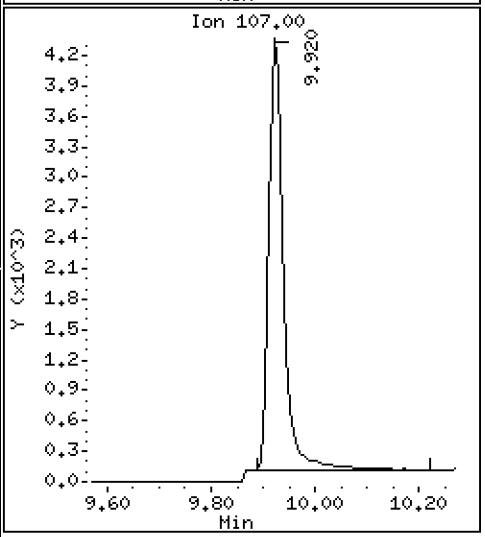
15 4-Methylphenol

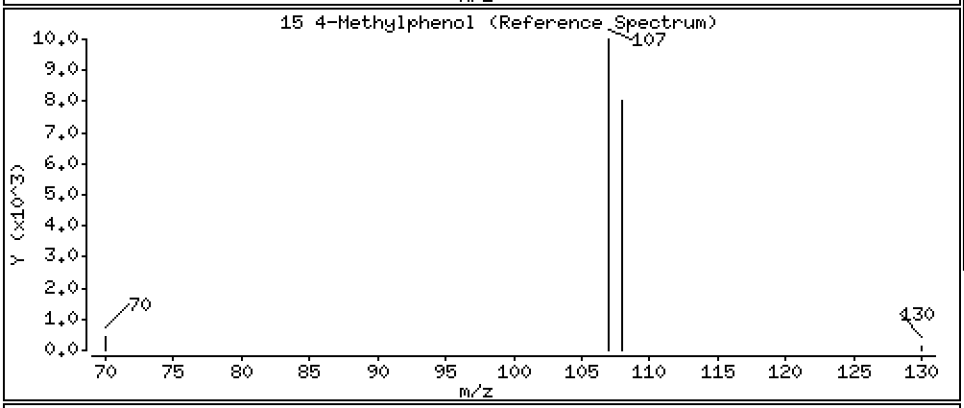
Concentration: 0.1017 ug/L

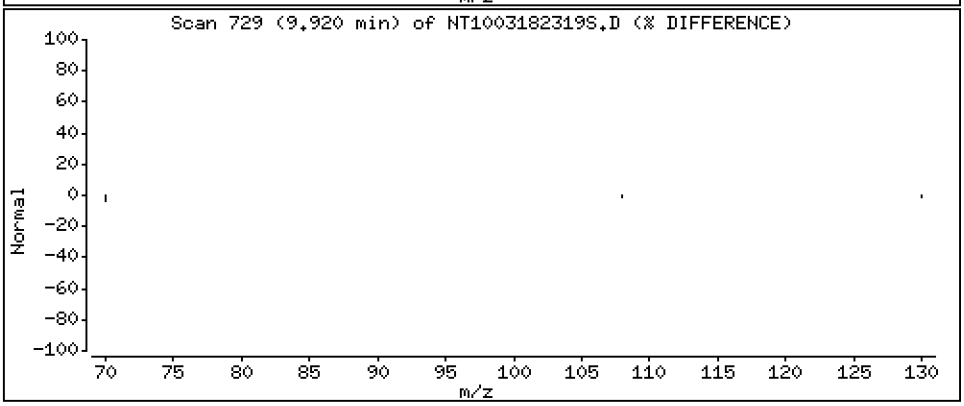












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

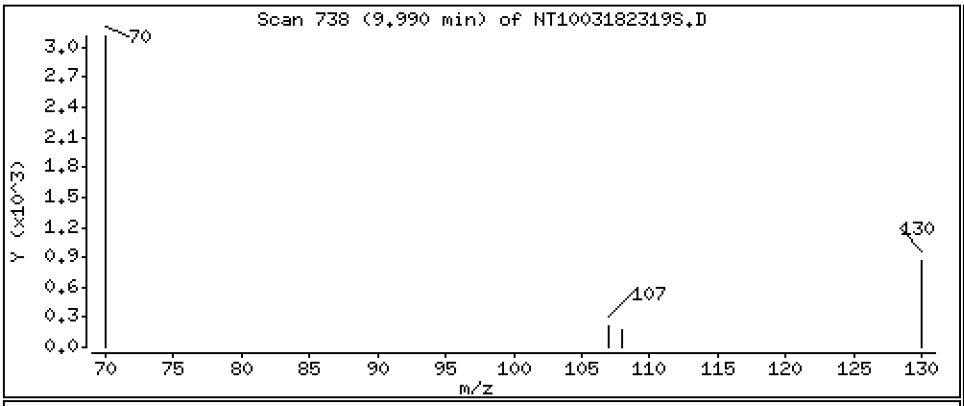
Operator: JGR

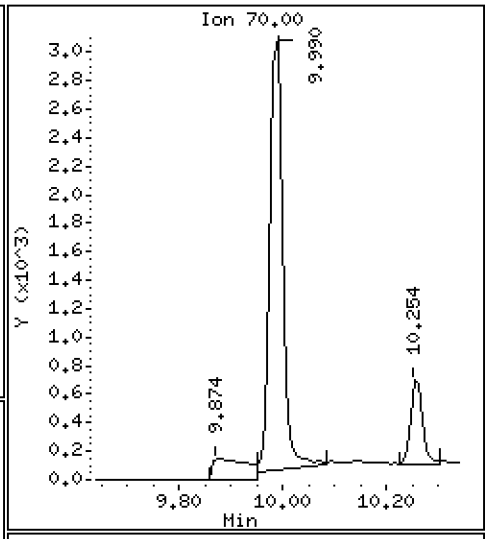
Column phase: ZB-5msi

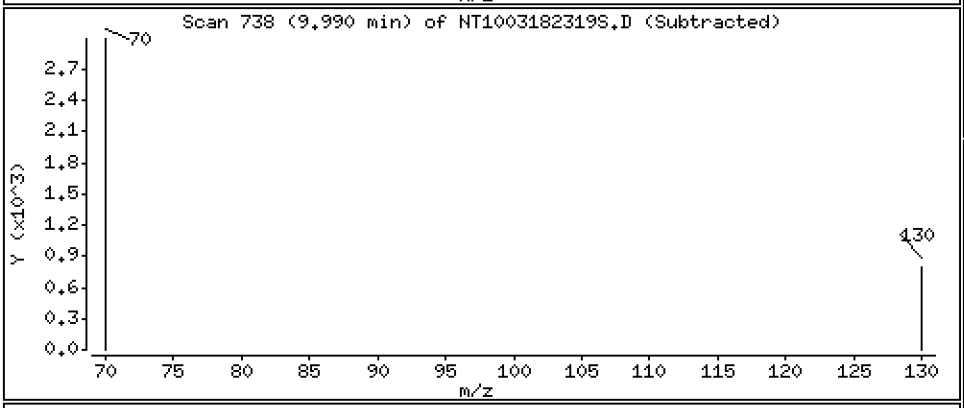
Column diameter: 0.25

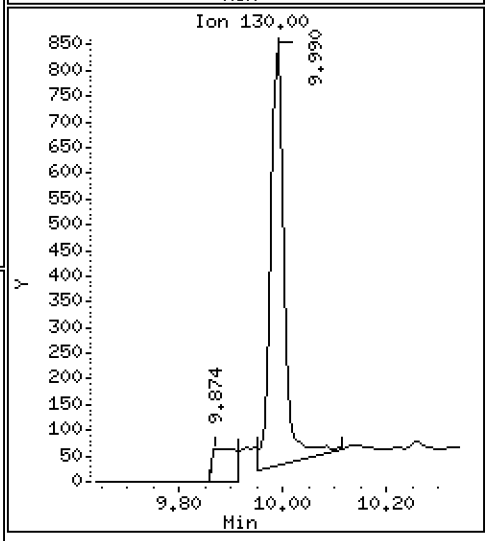
16 N-Nitroso-di-n-propylamine

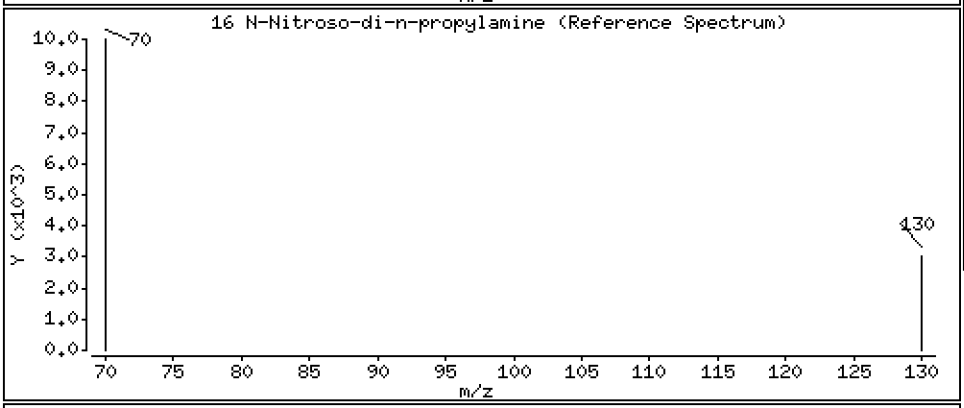
Concentration: 0.1091 ug/L

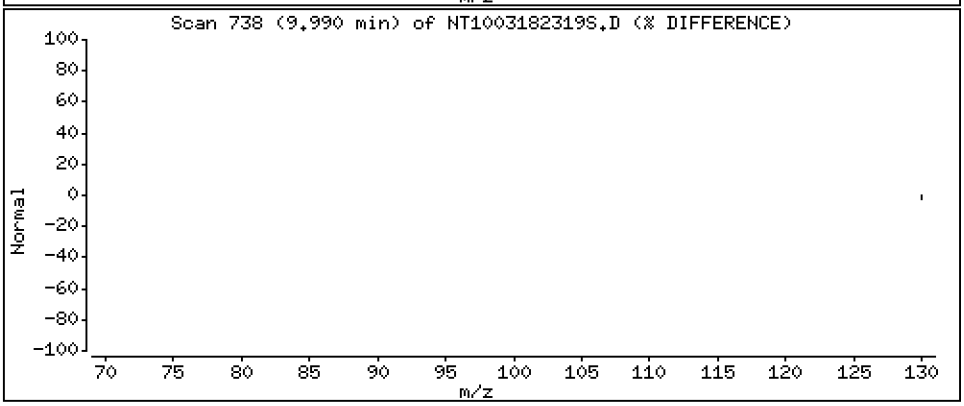












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

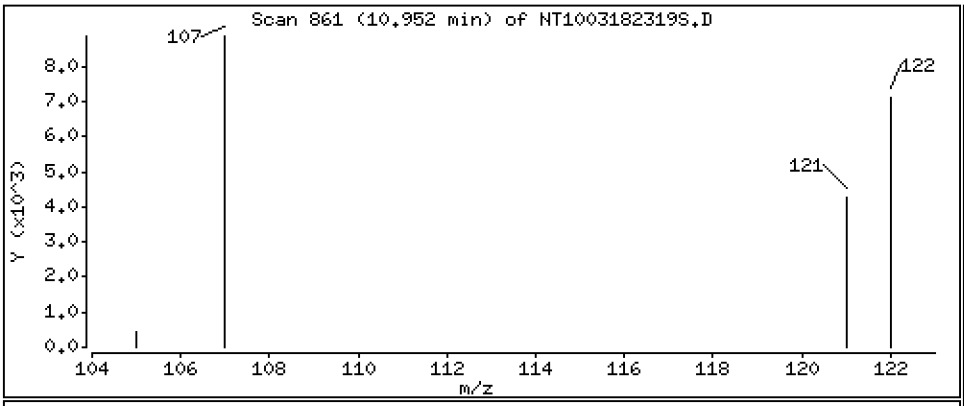
Operator: JGR

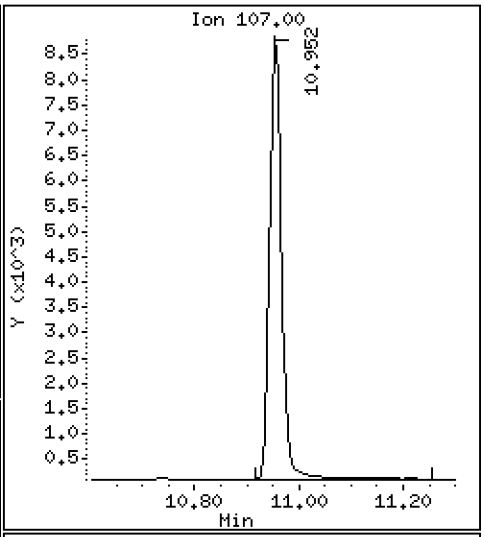
Column phase: ZB-5msi

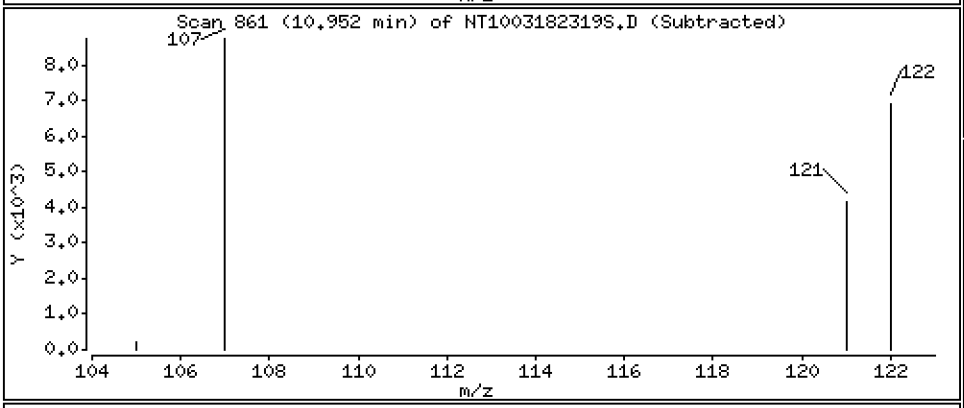
Column diameter: 0.25

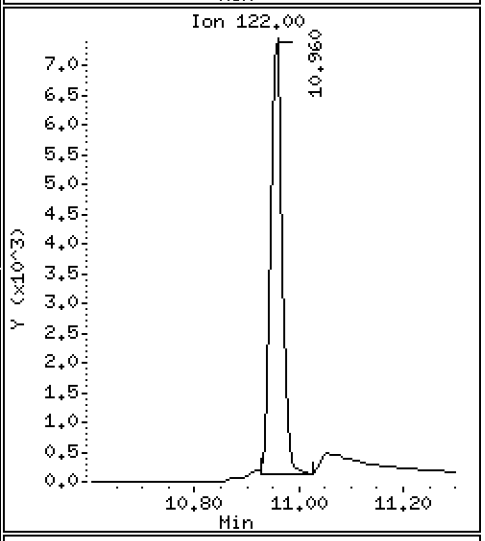
22 2,4-Dimethylphenol

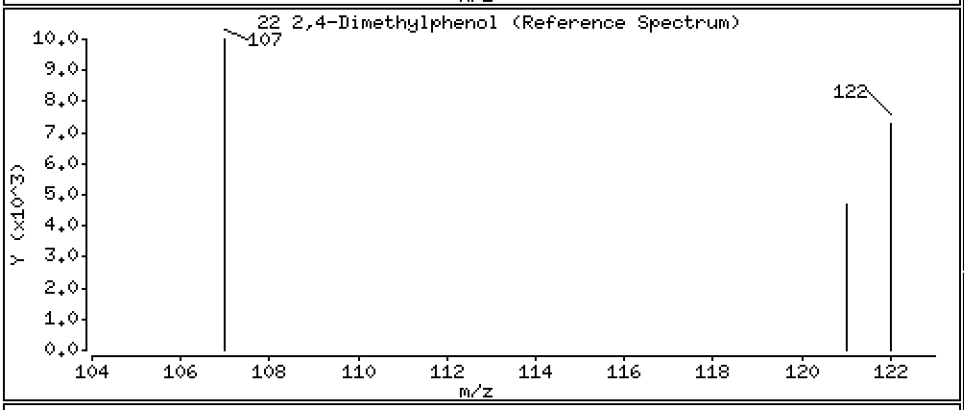
Concentration: 0.2110 ug/L

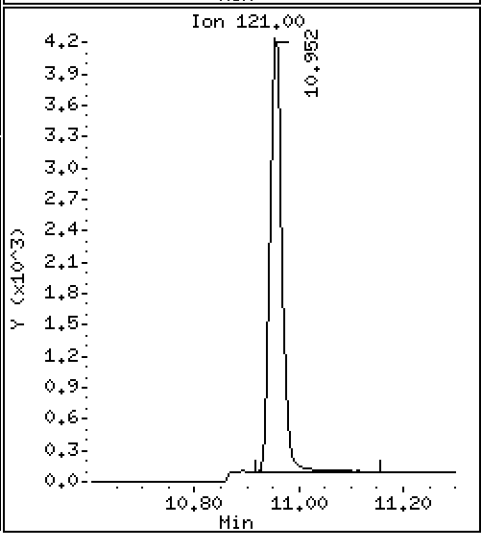


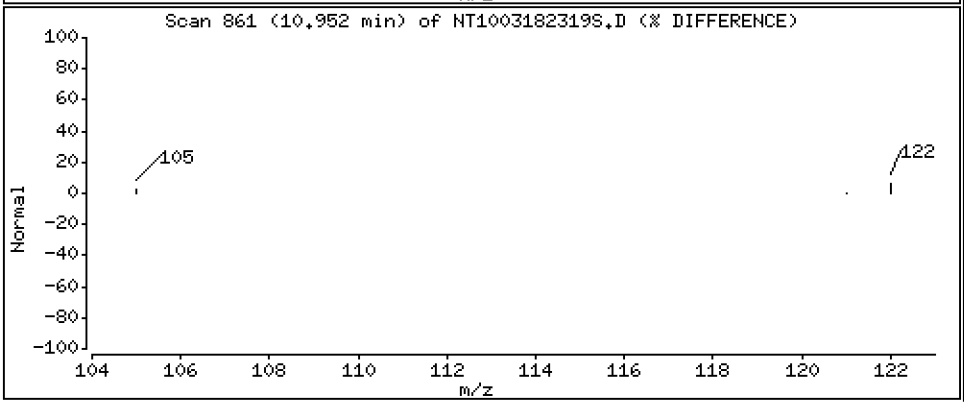












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Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

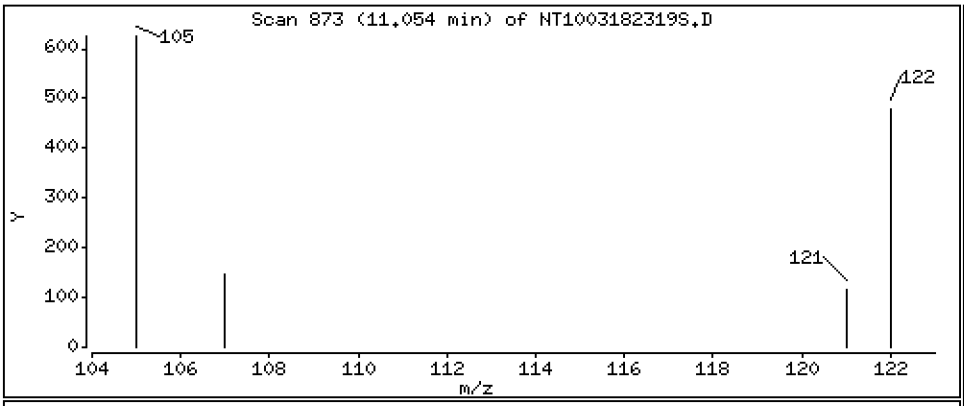
Operator: JGR

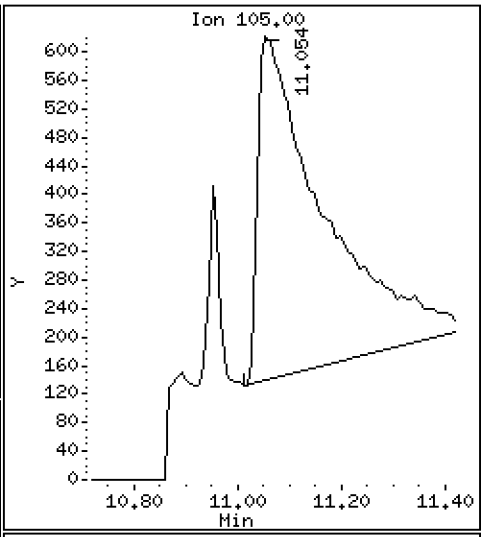
Column phase: ZB-5msi

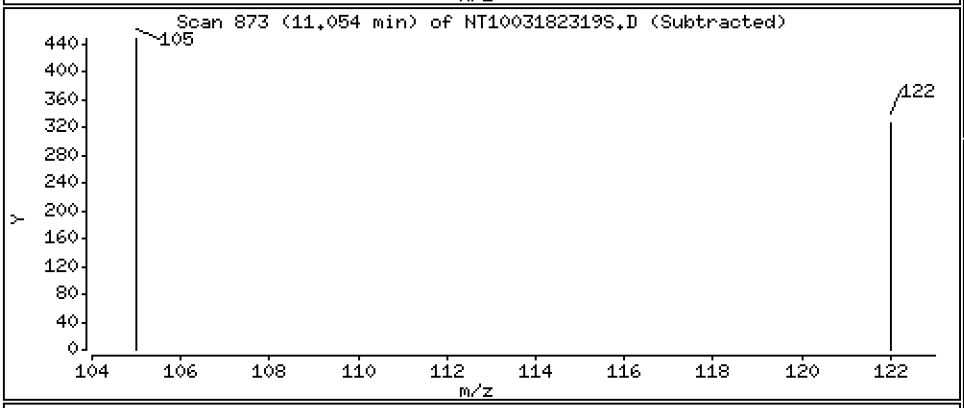
Column diameter: 0.25

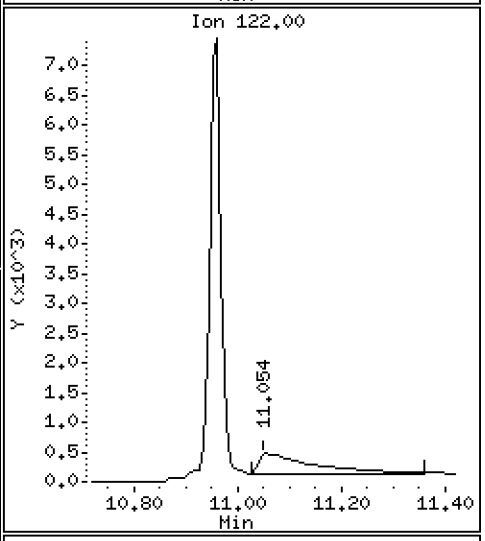
24 Benzoic acid

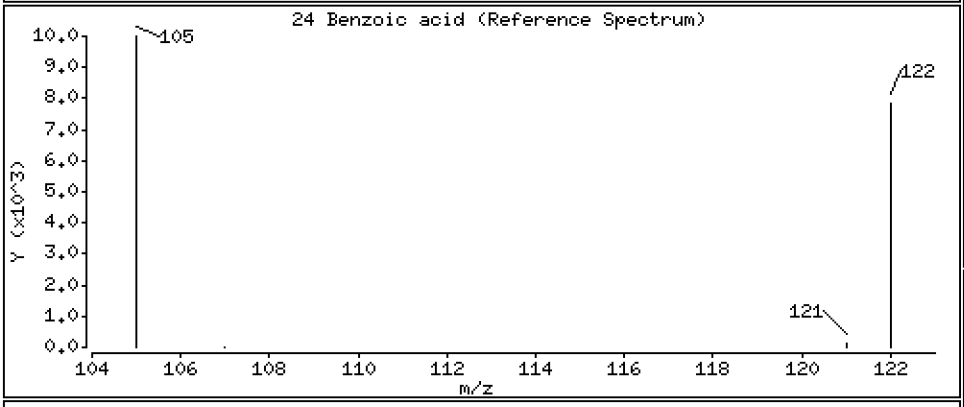
Concentration: 0.1227 ug/L

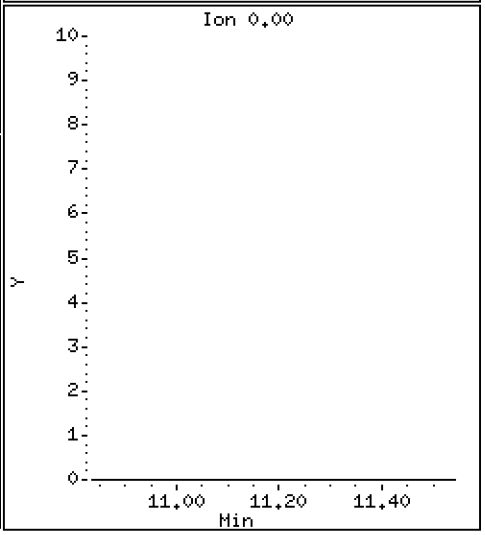


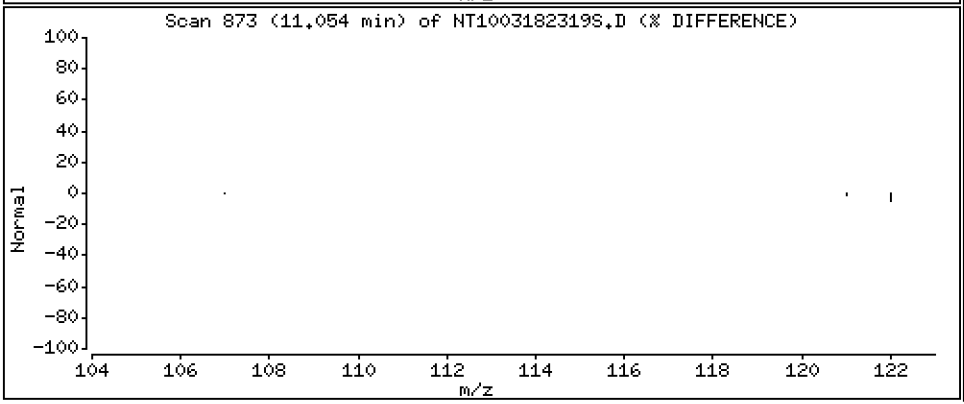












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Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

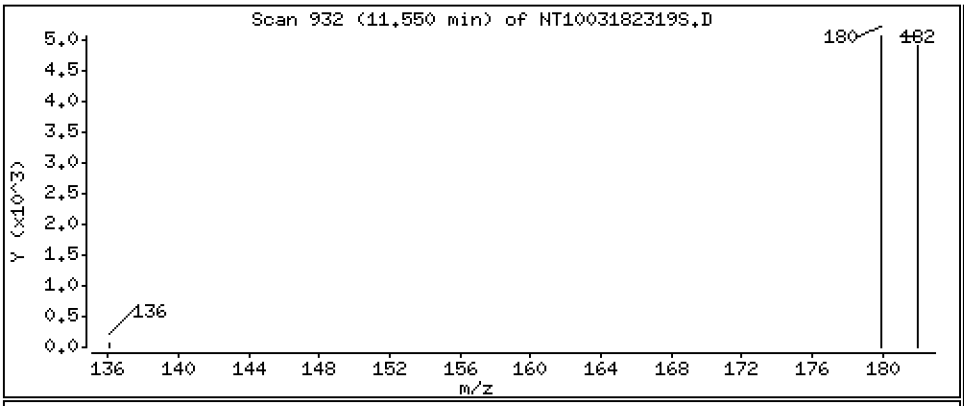
Operator: JGR

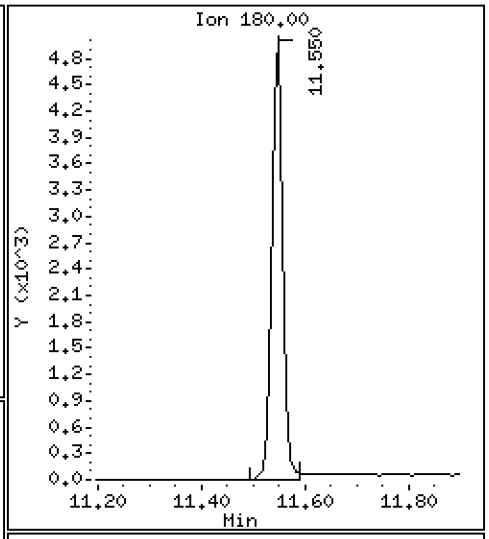
Column phase: ZB-5msi

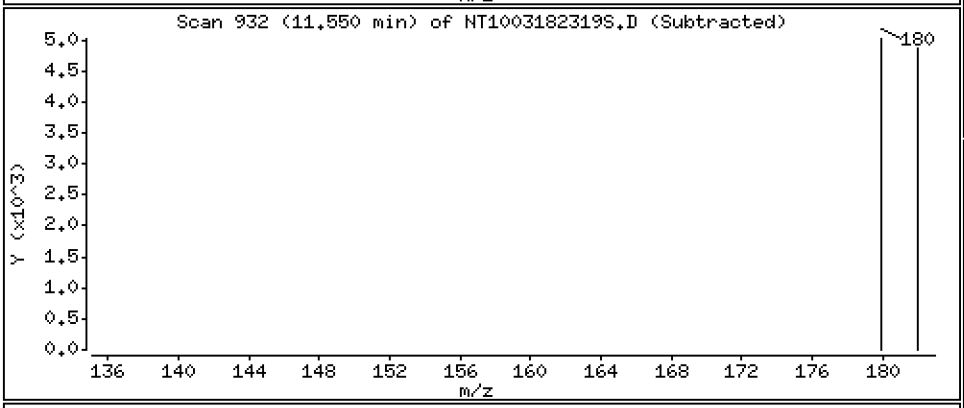
Column diameter: 0.25

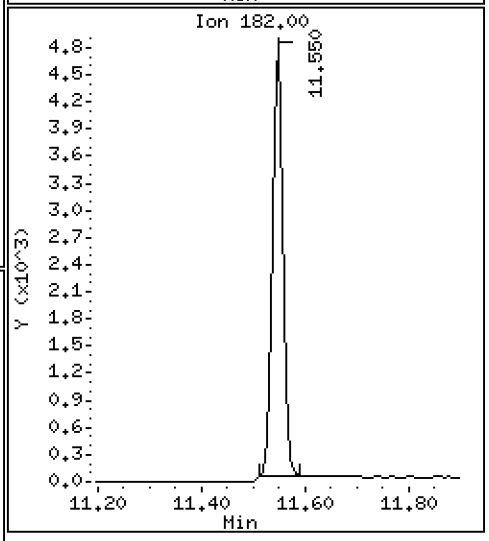
26 1,2,4-Trichlorobenzene

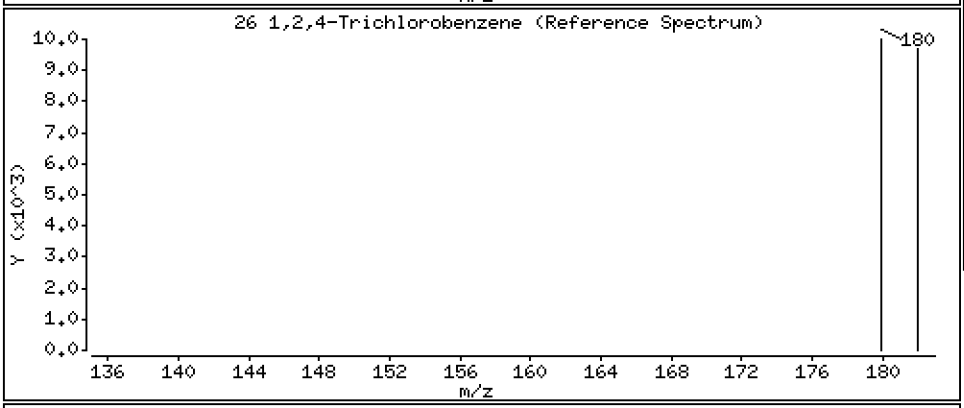
Concentration: 0.1159 ug/L

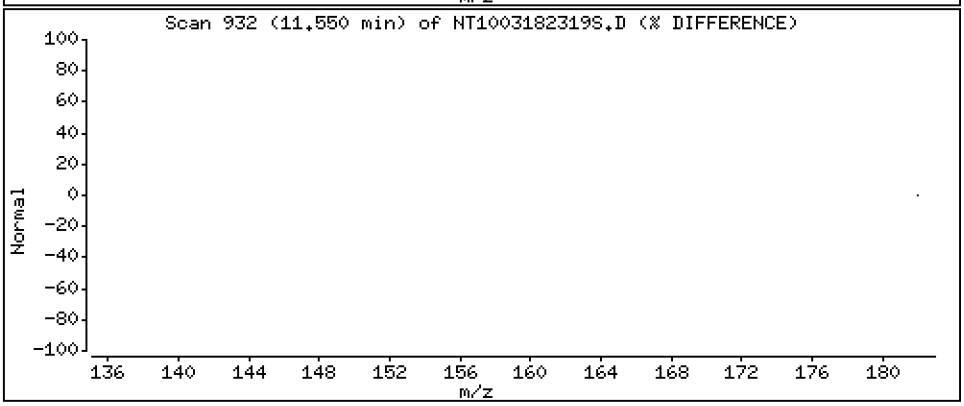












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

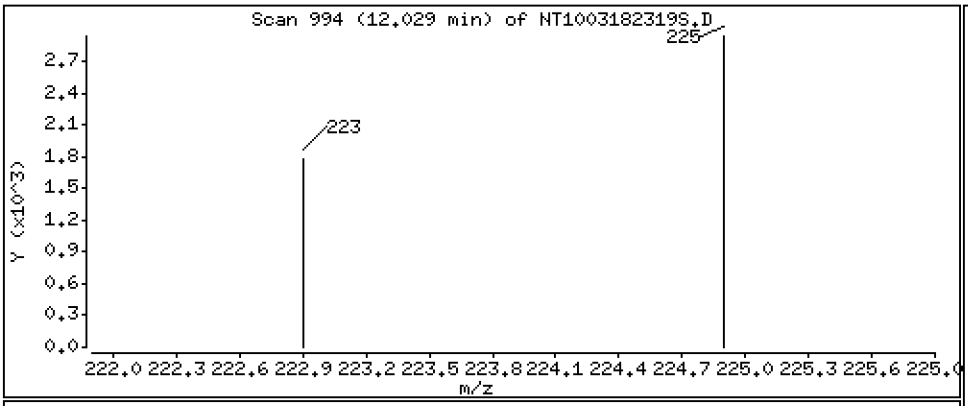
Operator: JGR

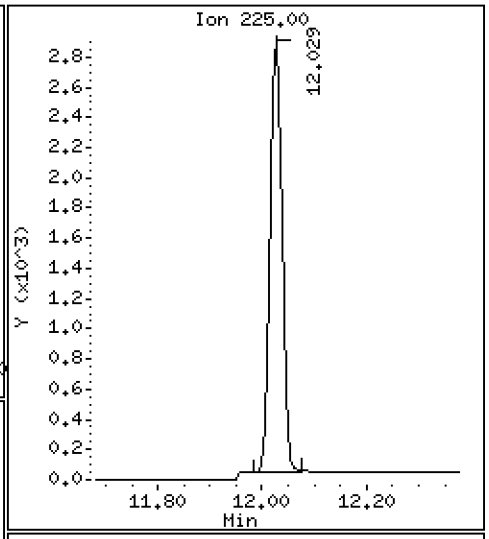
Column phase: ZB-5msi

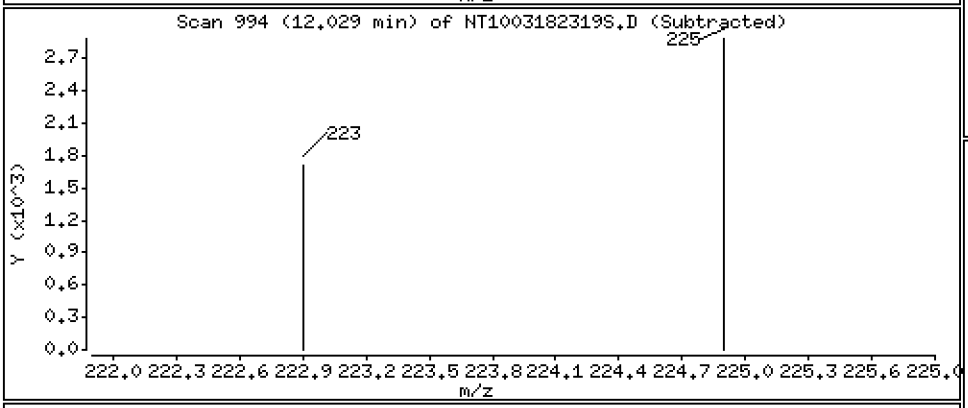
Column diameter: 0.25

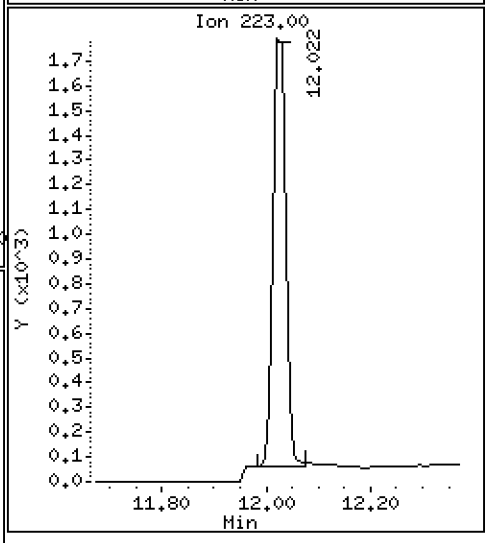
30 Hexachlorobutadiene

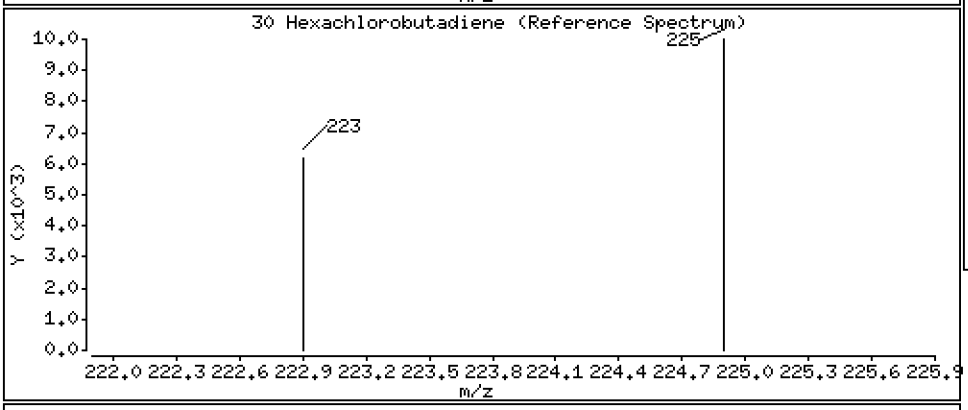
Concentration: 0.1070 ug/L

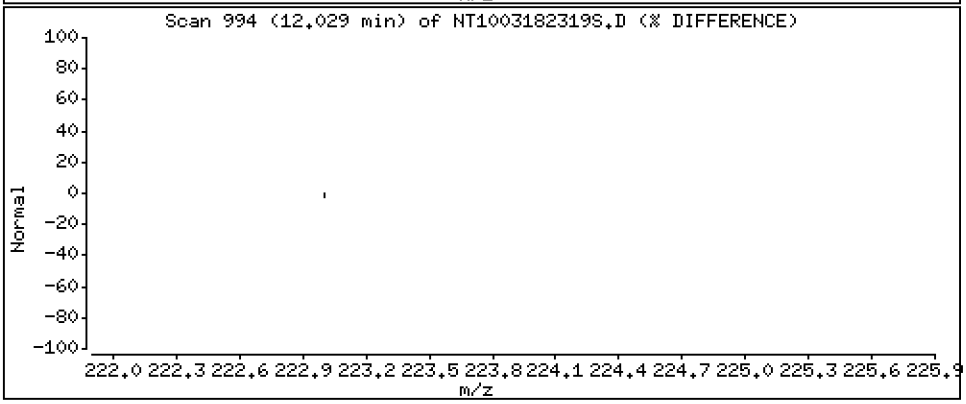












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Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

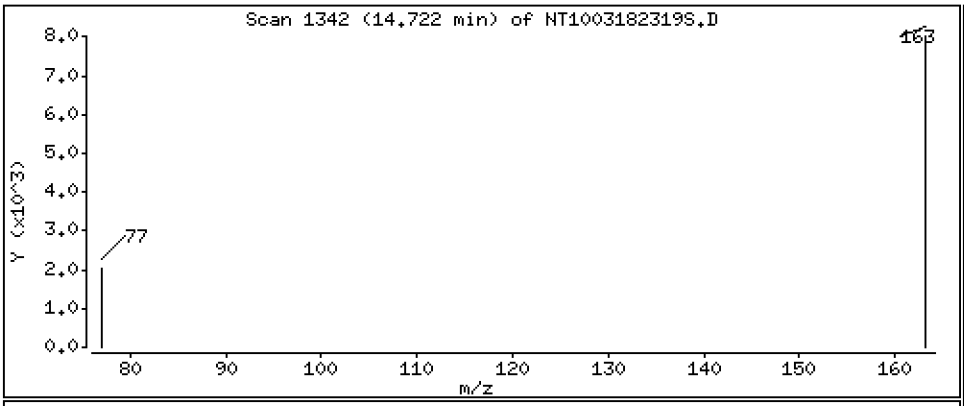
Operator: JGR

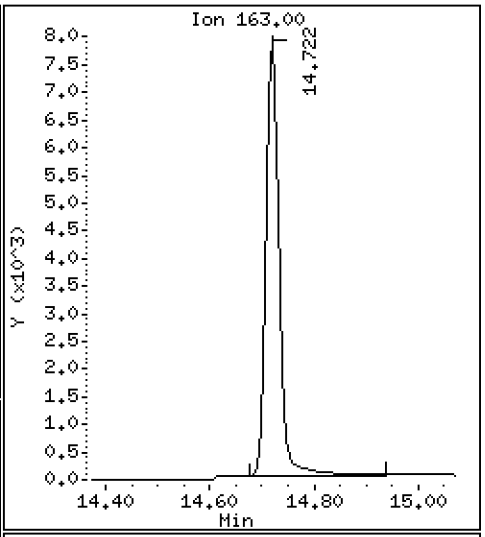
Column phase: ZB-5msi

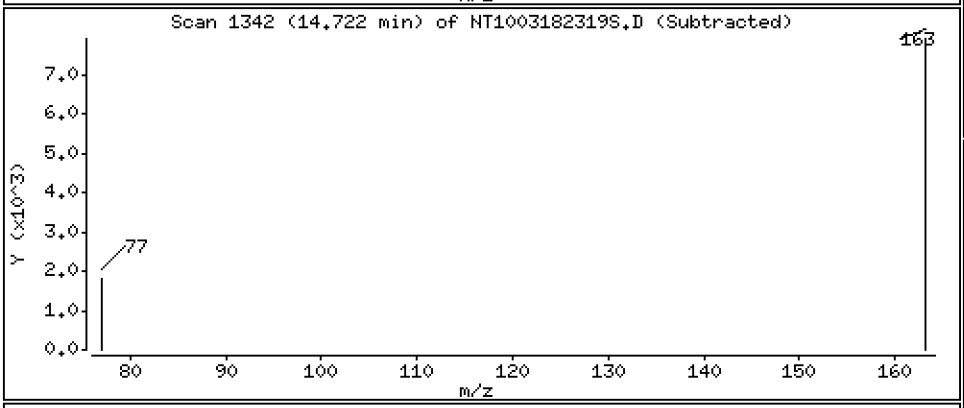
Column diameter: 0.25

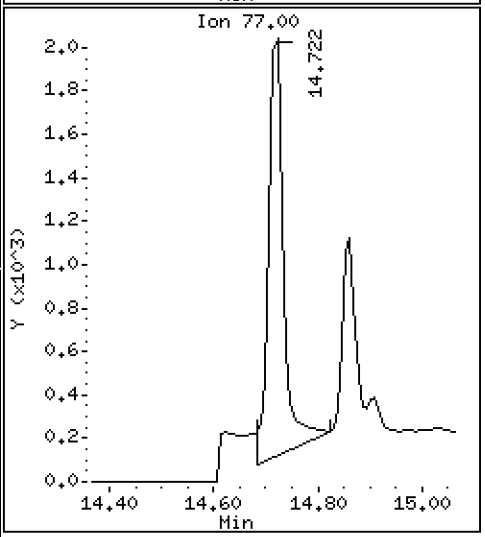
39 Dimethylphthalate

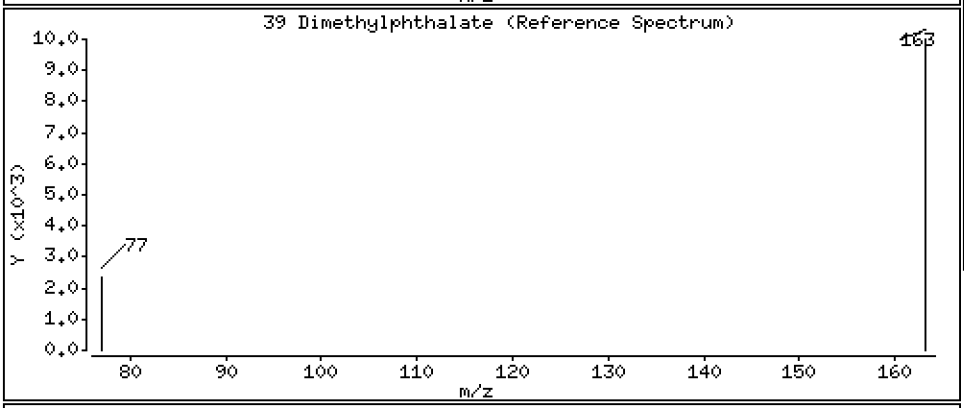
Concentration: 0.1130 ug/L

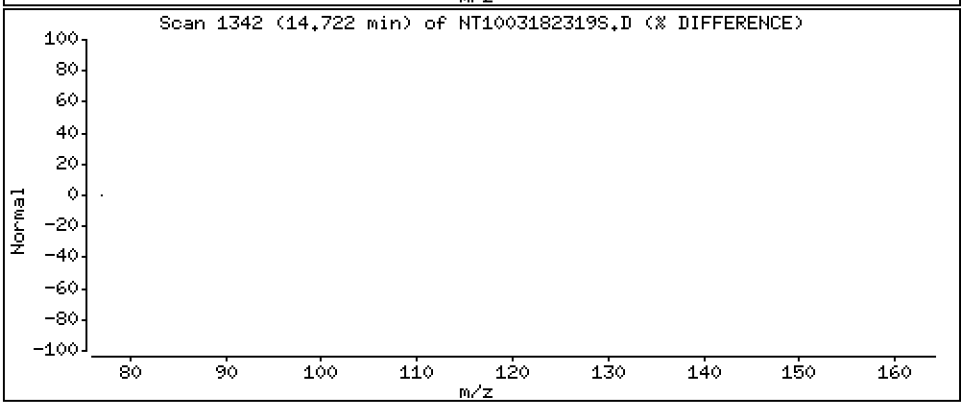












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Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

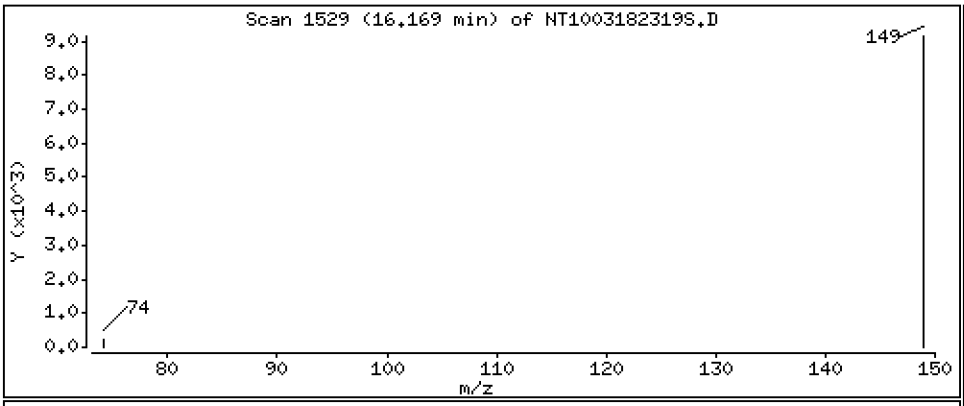
Operator: JGR

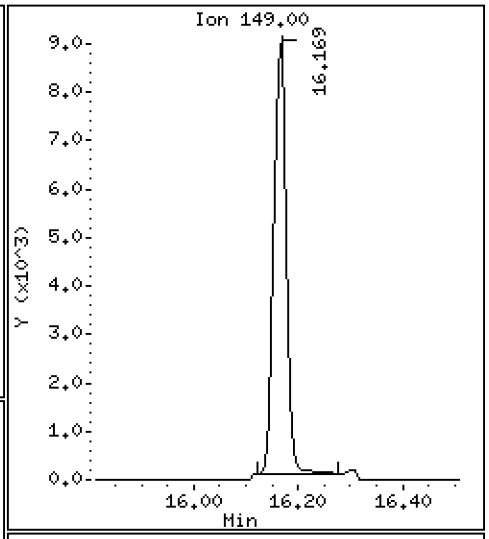
Column phase: ZB-5msi

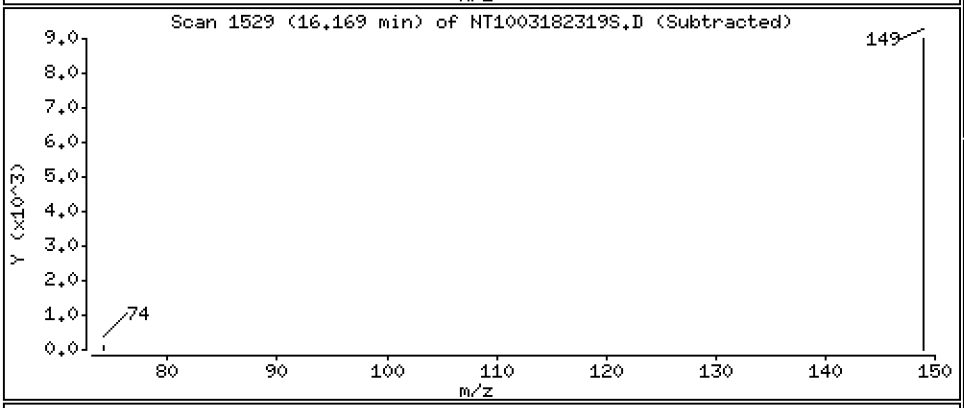
Column diameter: 0.25

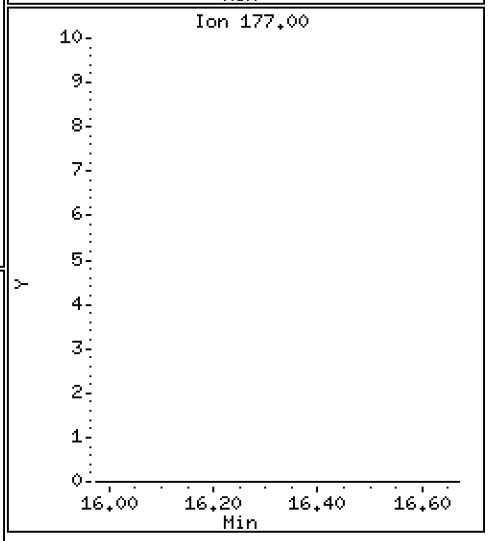
50 Diethylphthalate

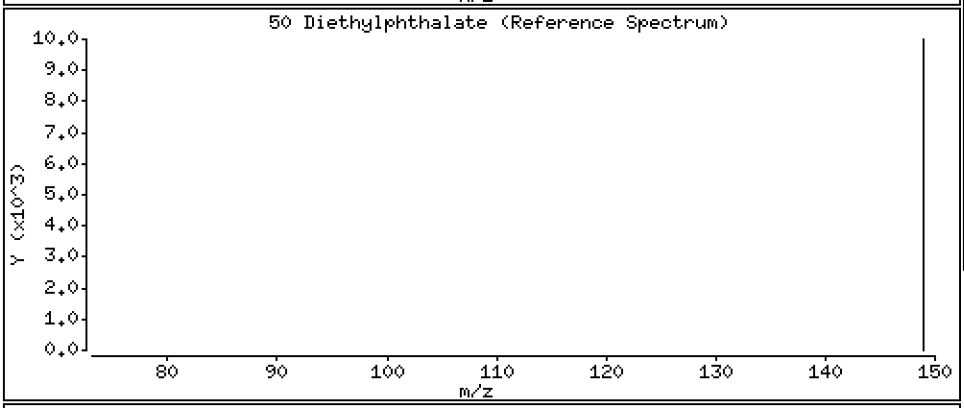
Concentration: 0.1184 ug/L

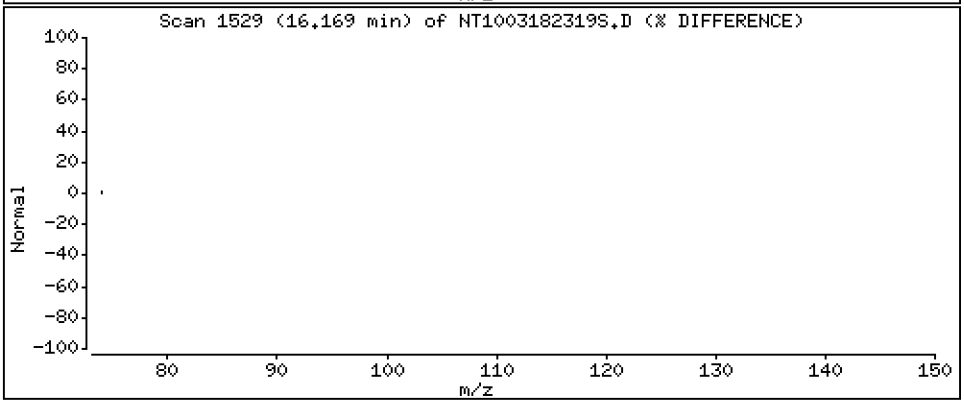












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

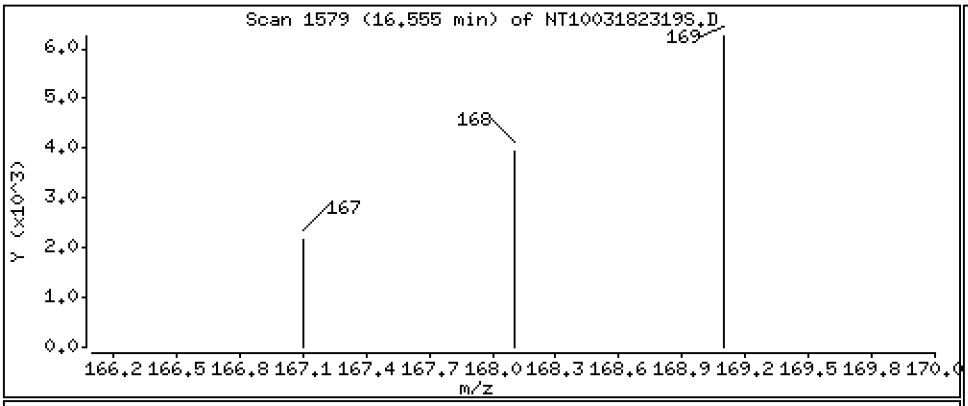
Operator: JGR

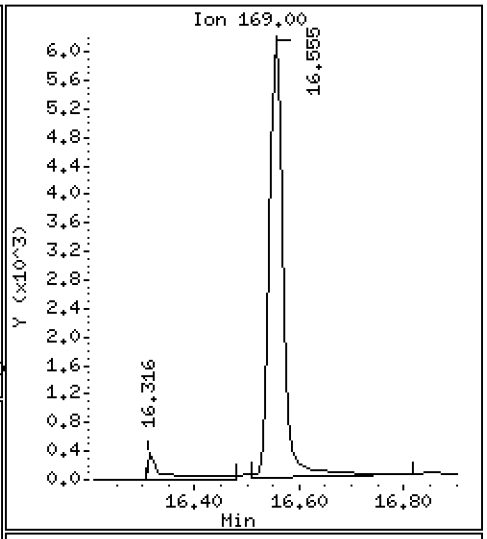
Column phase: ZB-5msi

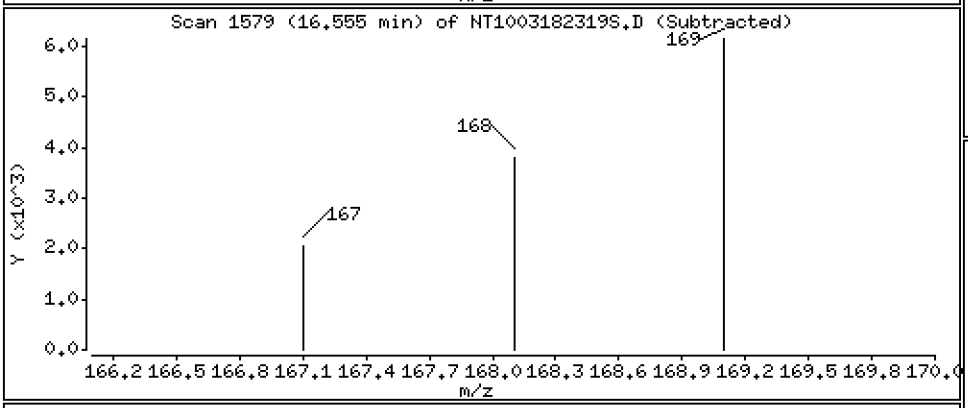
Column diameter: 0.25

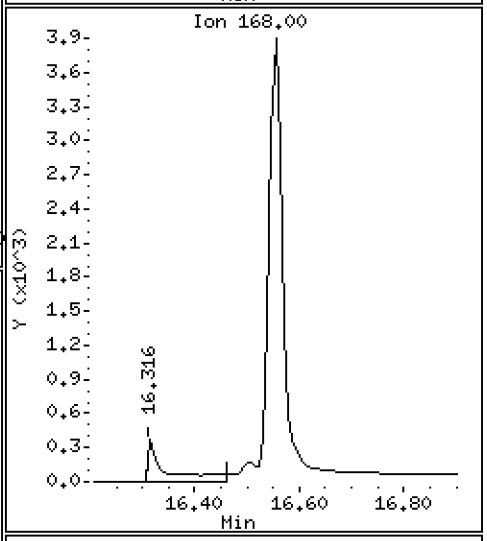
54 N-Nitrosodiphenylamine

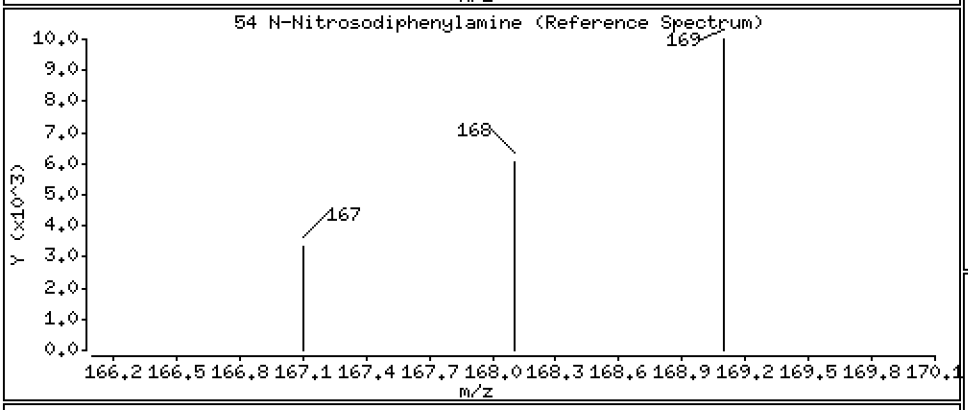
Concentration: 0.1125 ug/L

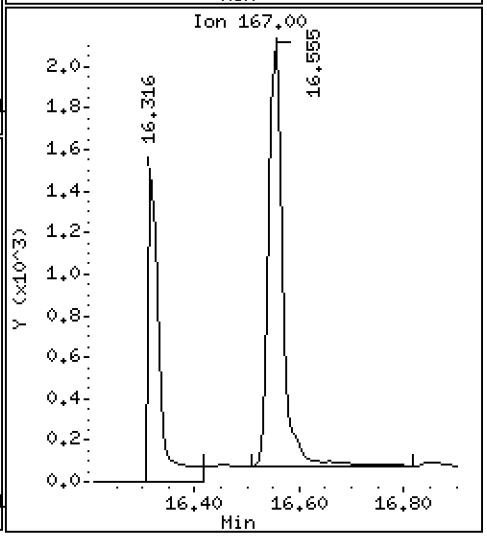


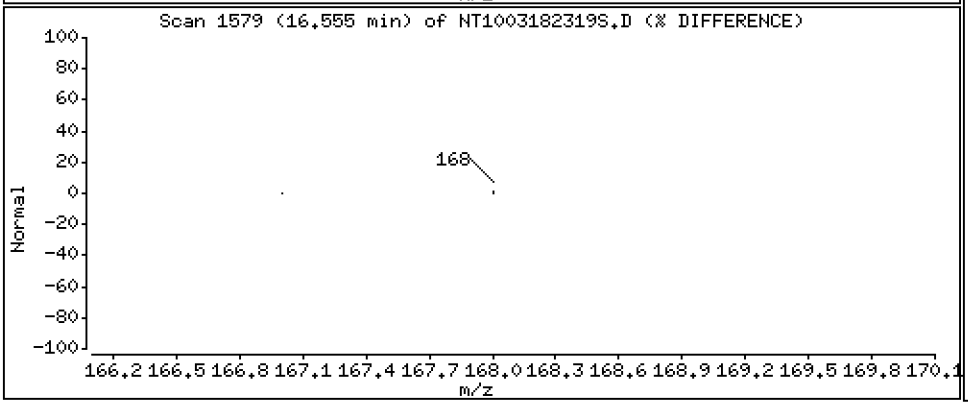












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

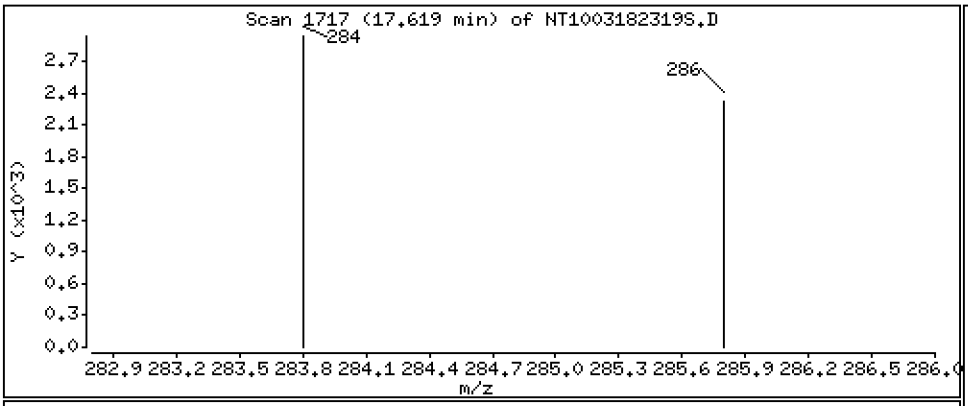
Operator: JGR

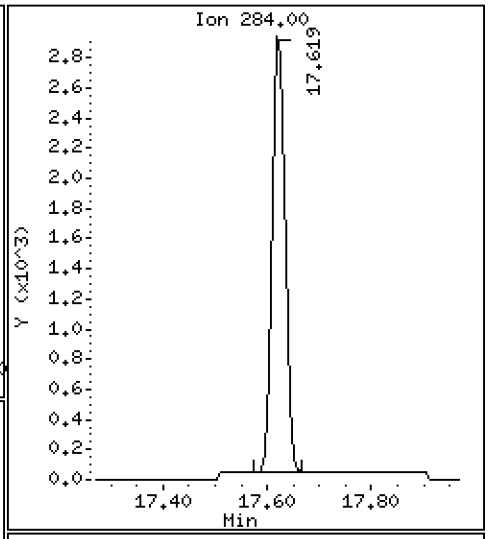
Column phase: ZB-5msi

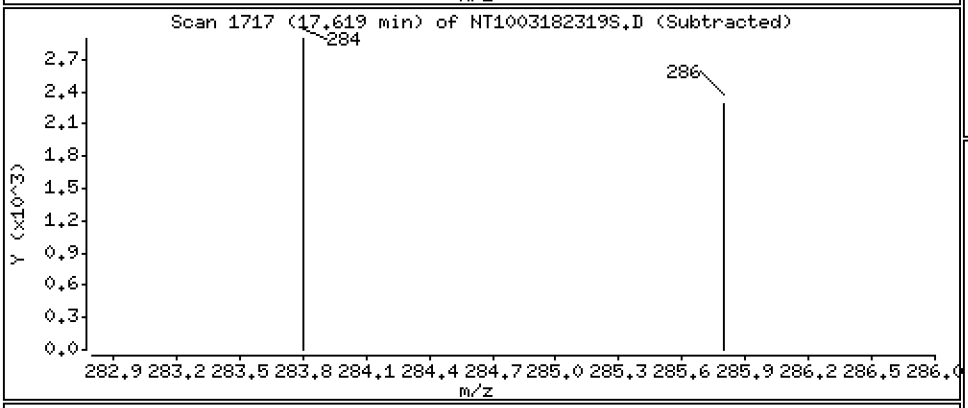
Column diameter: 0.25

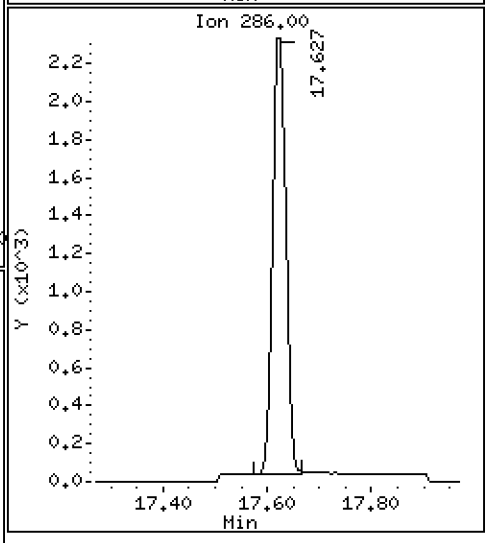
57 Hexachlorobenzene

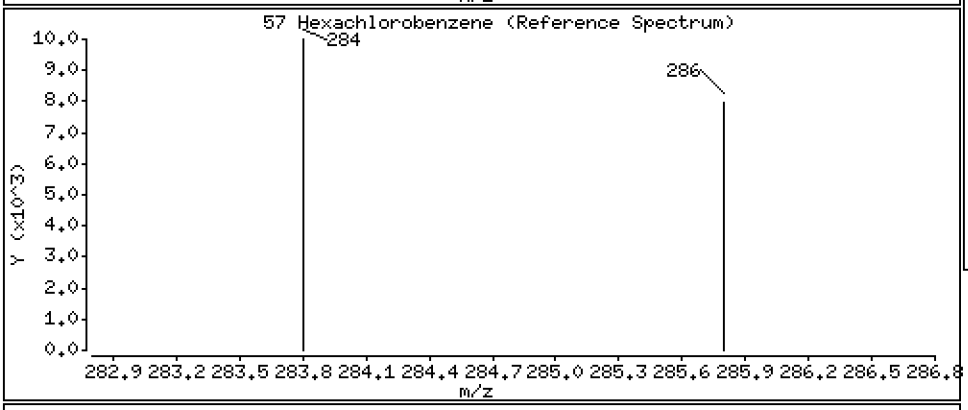
Concentration: 0.1109 ug/L

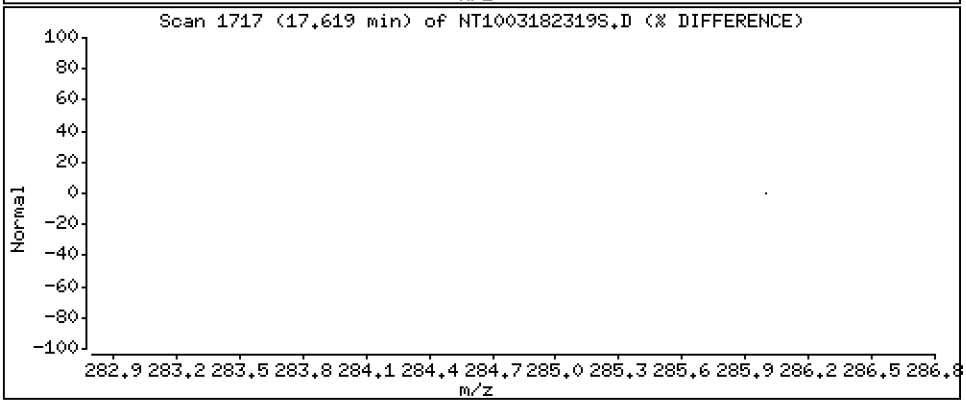












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

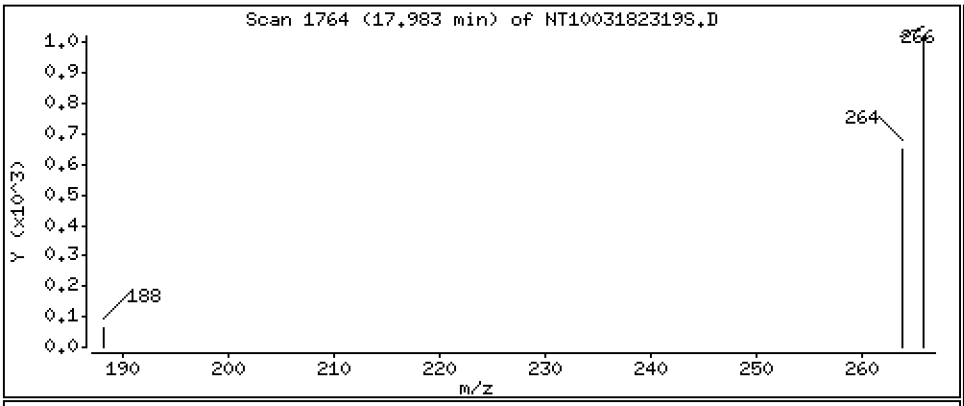
Operator: JGR

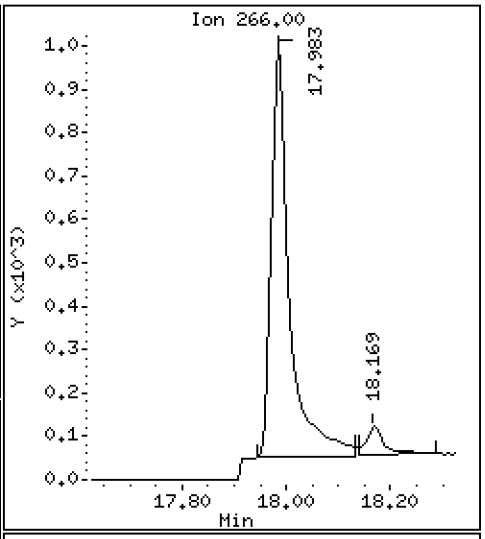
Column phase: ZB-5msi

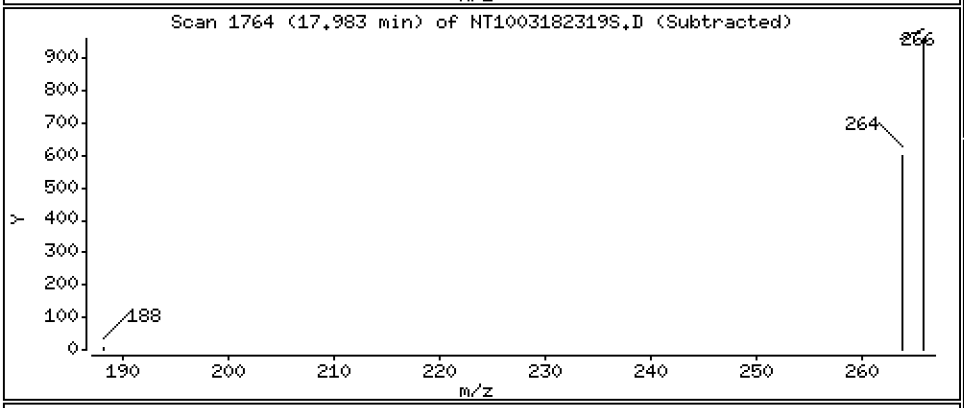
Column diameter: 0.25

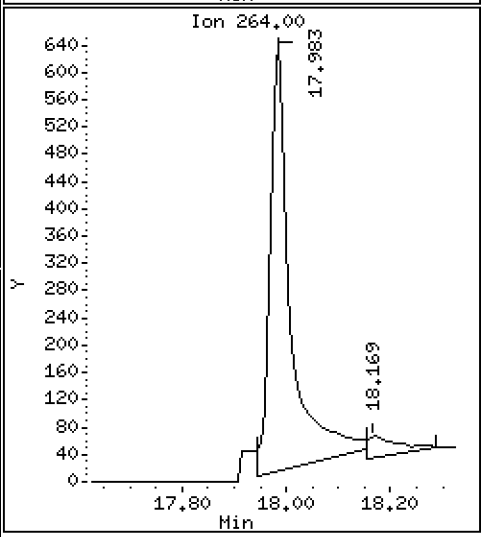
58 Pentachlorophenol

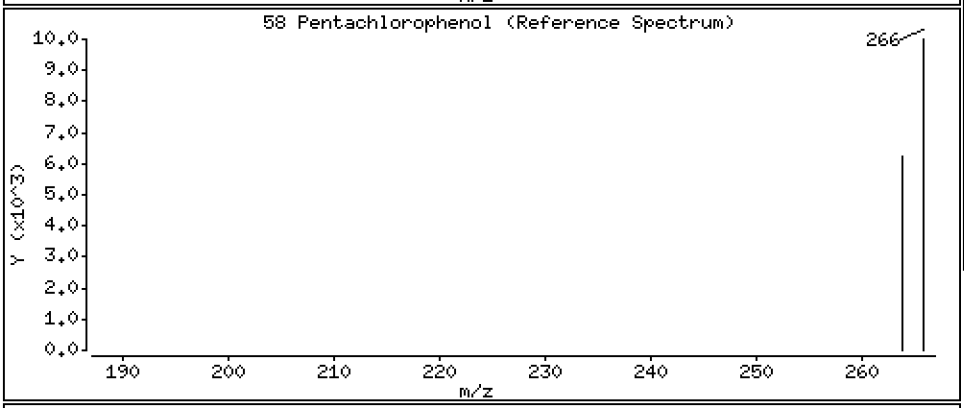
Concentration: 0.09479 ug/L

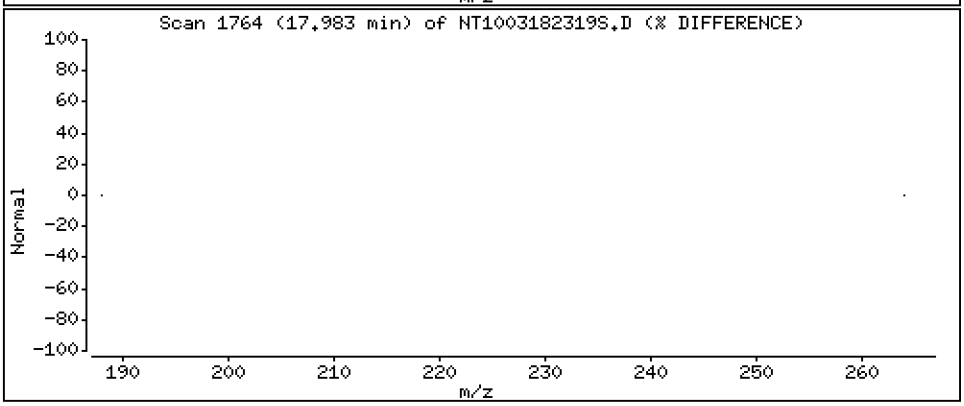












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

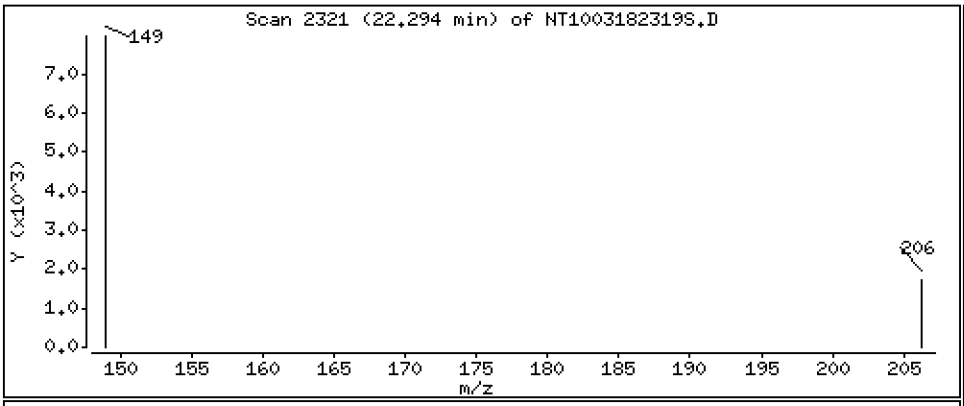
Operator: JGR

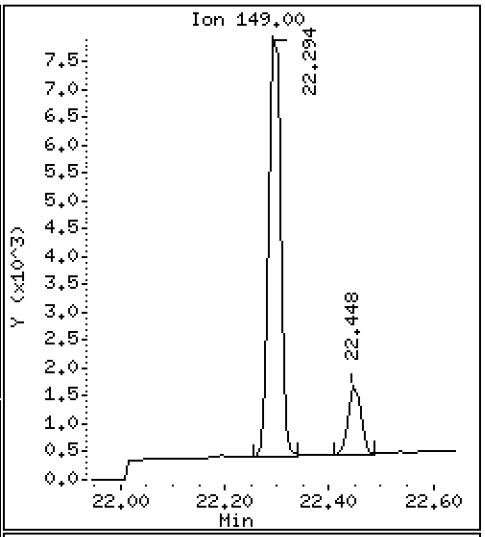
Column phase: ZB-5msi

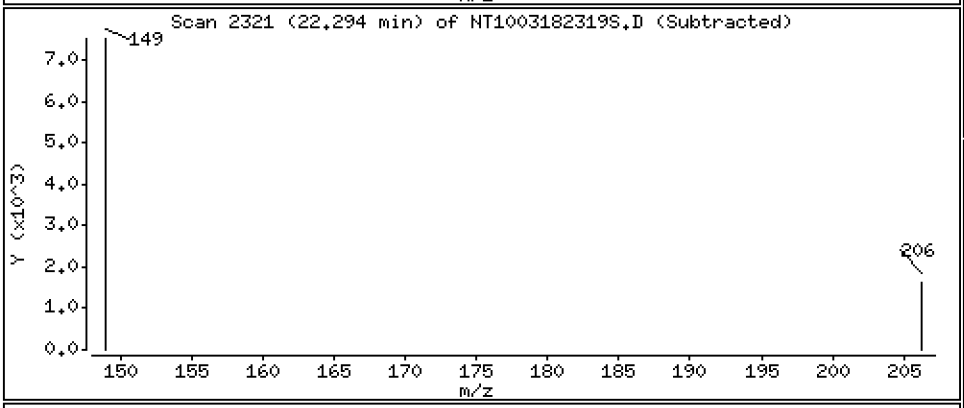
Column diameter: 0.25

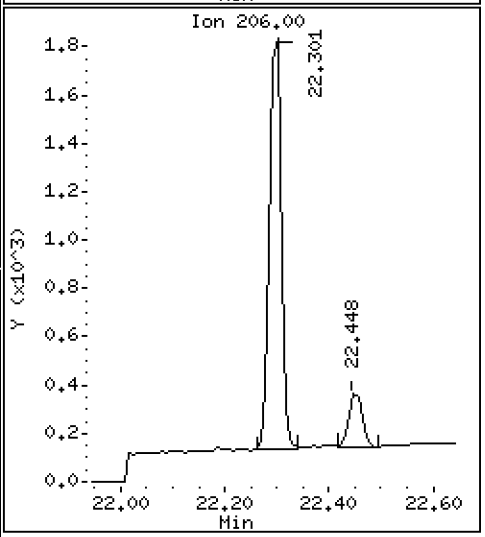
67 Butylbenzylphthalate

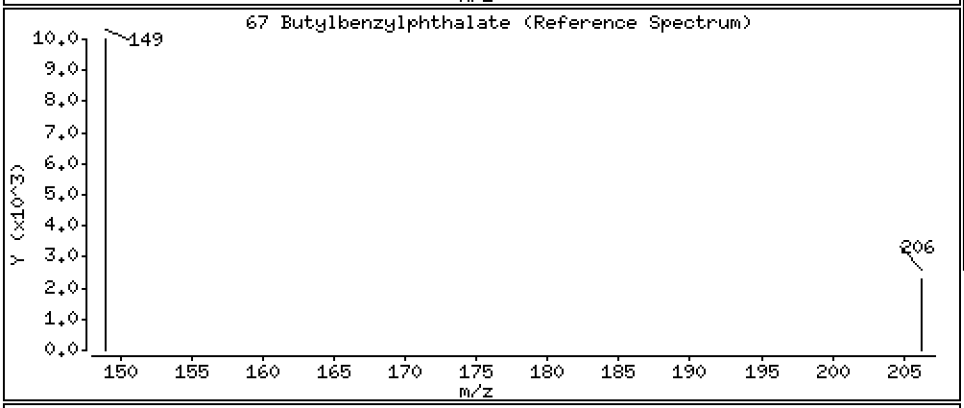
Concentration: 0.1371 ug/L

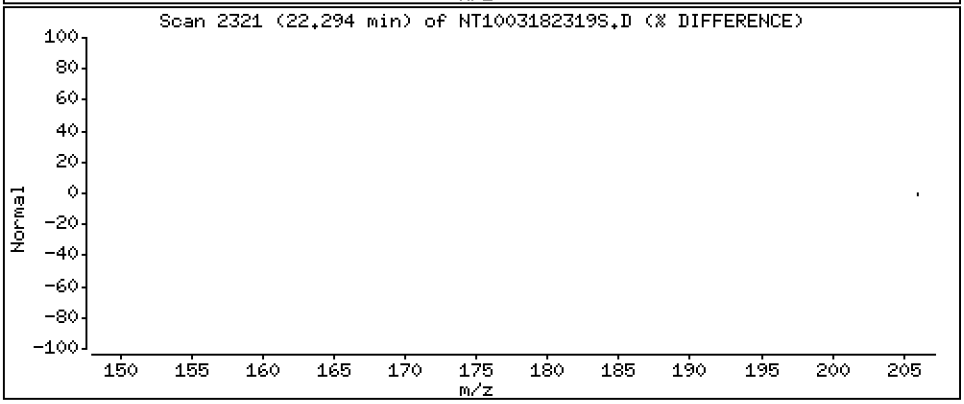












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

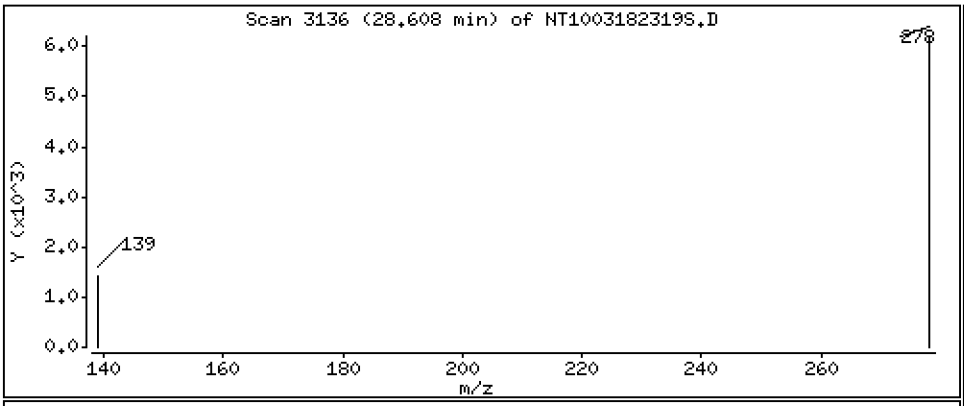
Operator: JGR

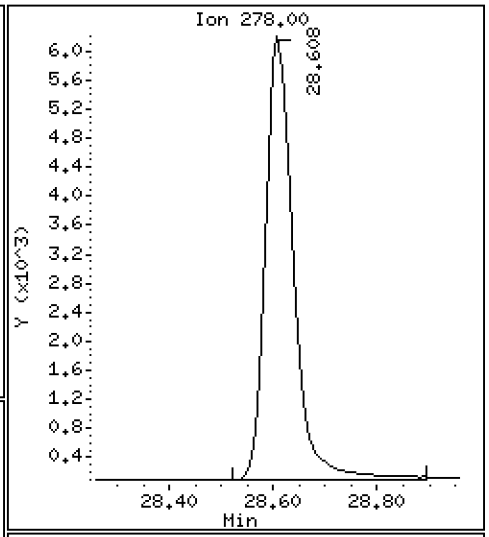
Column phase: ZB-5msi

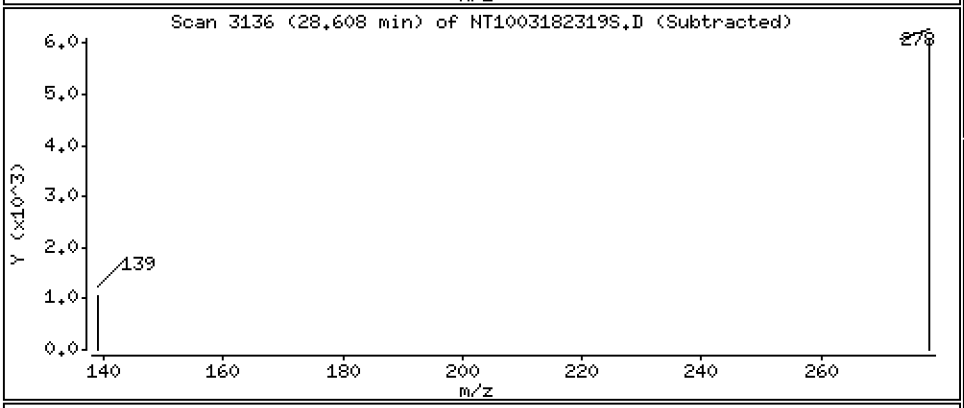
Column diameter: 0.25

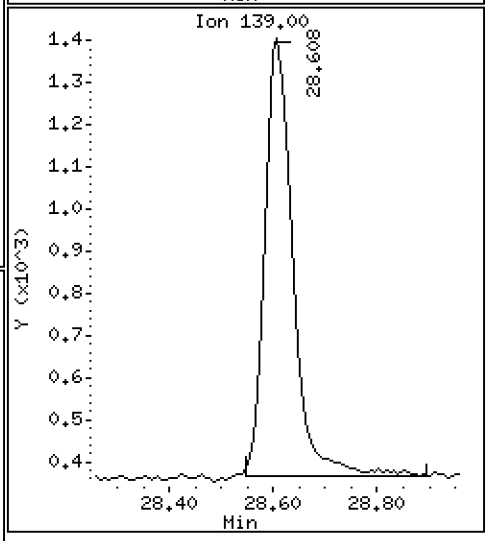
79 Dibenzo(a,h)anthracene

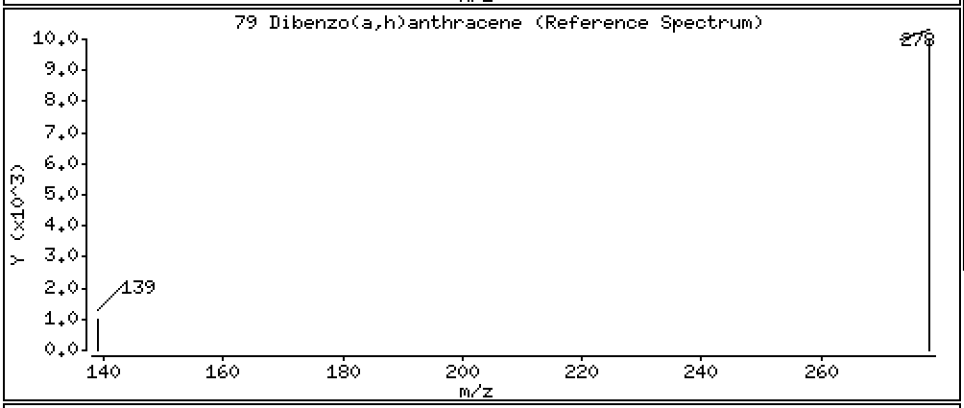
Concentration: 0.09521 ug/L

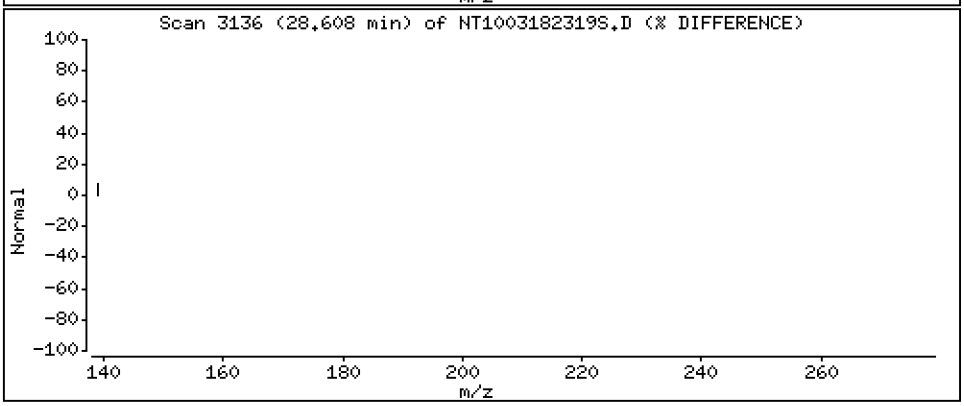












Data File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT10031823195.D

Date : 19-MAR-2023 05:13

Client ID:

Instrument: nt10.i

Sample Info: SLC0505-LCV2

Volume Injected (uL): 1.0

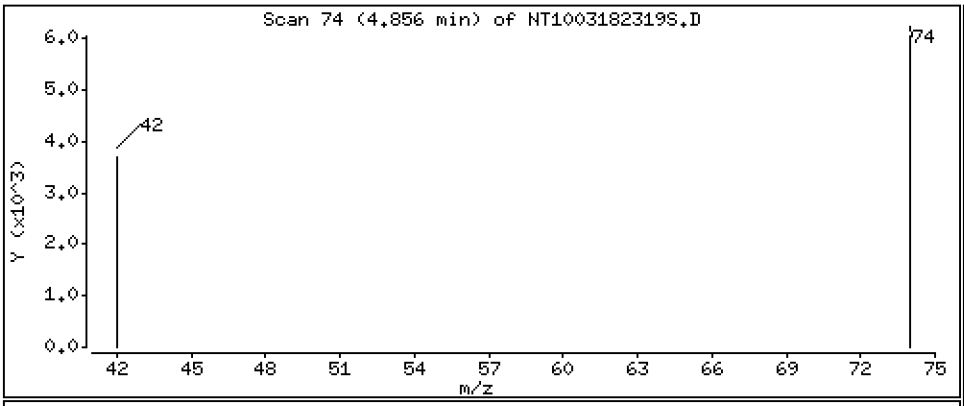
Operator: JGR

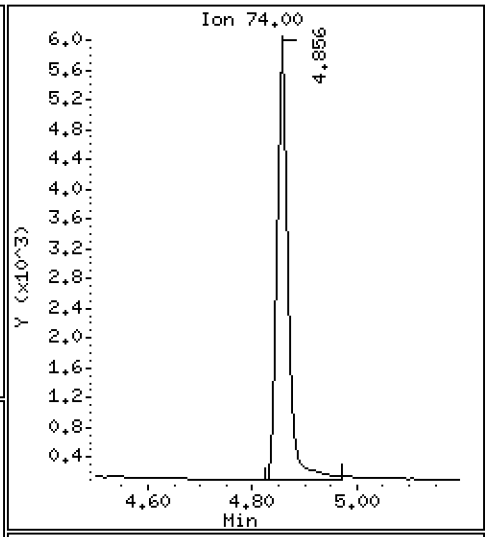
Column phase: ZB-5msi

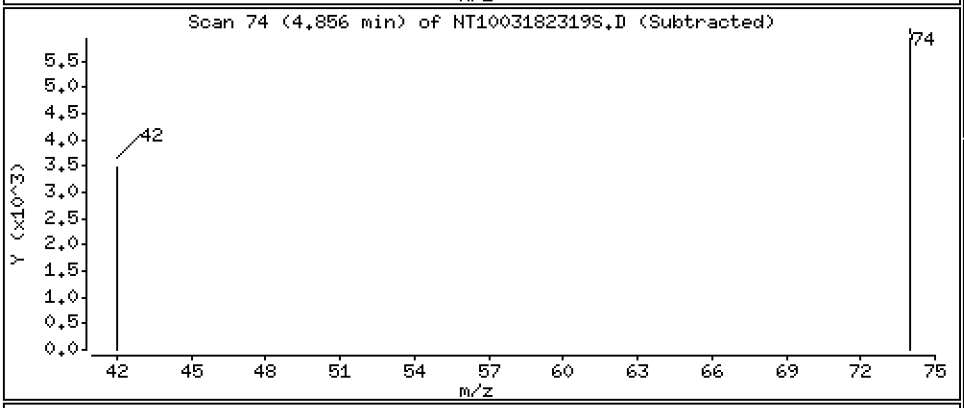
Column diameter: 0.25

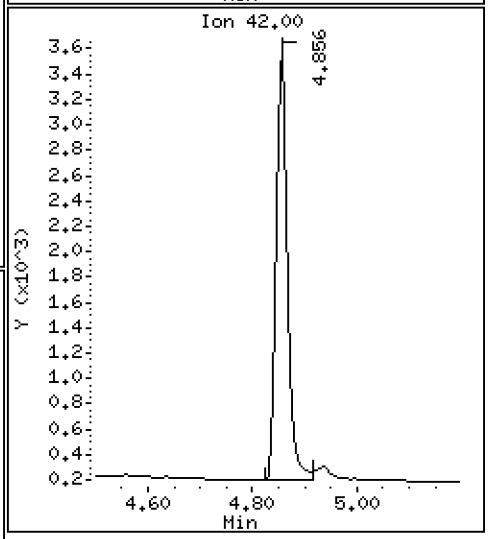
90 N-Nitrosodimethylamine

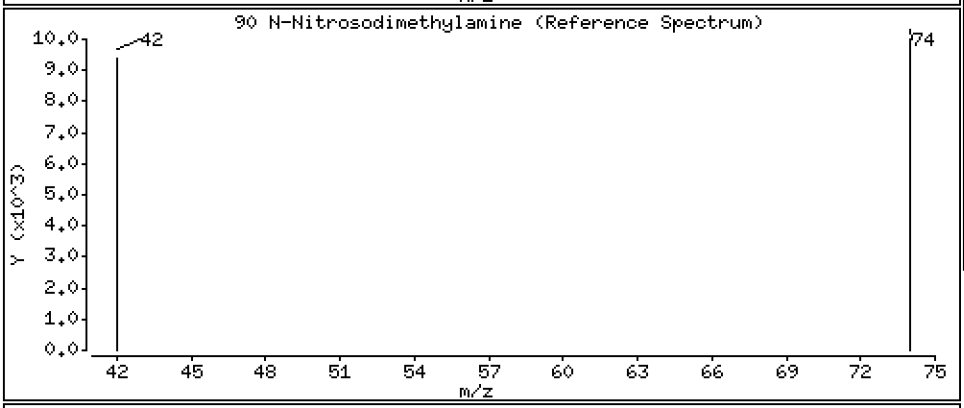
Concentration: 0.2054 ug/L

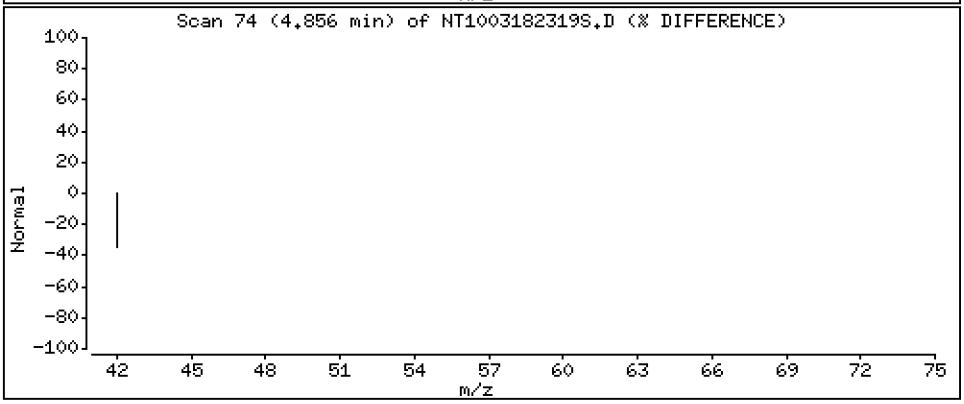












ARI Labs, Inc.

METHOD 8270D-SIM

Data file : \\target\share\chem3\nt10.i\20230318.b\20230318.b\NT1003182319S.D
Lab Smp Id: SLC0505-LCV2
Inj Date : 19-MAR-2023 05:13 MS Autotune Date: 16-JAN-2023 17:42
Operator : JGR Inst ID: nt10.i
Smp Info : SLC0505-LCV2
Misc Info :
Comment :
Method : \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Meth Date : 04-Apr-2023 12:37 van Quant Type: ISTD
Cal Date : 16-MAR-2023 01:38 Cal File: NT10031510S.D
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 4.14
Processing Host: VANS-201906

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	1000.000	Volume of sample extracted (mL)
Vt	1000.000	Volume of final extract (uL)
Vi	1.000	Volume injected (uL)
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.964	6.964	(0.759)	10511	0.16099	0.1610(R)
3	Phenol	94	8.548	8.548	(0.932)	8734	0.09751	0.09751
7	1,3-Dichlorobenzene	146	9.105	9.105	(0.992)	9000	0.10738	0.1074
* 8	1,4-Dichlorobenzene-d4	152	9.175	9.175	(1.000)	215303	4.00000	
9	1,4-Dichlorobenzene	146	9.198	9.206	(1.003)	8543	0.10559	0.1056
11	Benzyl alcohol	79	9.438	9.438	(1.029)	4726	0.09101	0.09101
12	1,2-Dichlorobenzene	146	9.555	9.555	(1.041)	8440	0.10607	0.1061
13	2-Methylphenol	108	9.656	9.656	(1.052)	6581	0.10603	0.1060
15	4-Methylphenol	108	9.920	9.920	(1.081)	6562	0.10175	0.1017
16	N-Nitroso-di-n-propylamine	70	9.990	9.990	(1.089)	4974	0.10905	0.1091
22	2,4-Dimethylphenol	107	10.951	10.951	(0.941)	13931	0.21102	0.2110
24	Benzoic acid	105	11.053	11.070	(0.950)	4430	0.12272	0.1227(M)
26	1,2,4-Trichlorobenzene	180	11.550	11.550	(0.993)	7699	0.11593	0.1159
* 27	Naphthalene-d8	136	11.635	11.635	(1.000)	763750	4.00000	
30	Hexachlorobutadiene	225	12.029	12.029	(1.034)	4320	0.10699	0.1070
39	Dimethylphthalate	163	14.722	14.722	(0.967)	13127	0.11298	0.1130
* 42	Acenaphthene-d10	162	15.217	15.217	(1.000)	368181	4.00000	
50	Diethylphthalate	149	16.168	16.161	(1.062)	14254	0.11842	0.1184
54	N-Nitrosodiphenylamine	169	16.554	16.554	(0.908)	10890	0.11246	0.1125
57	Hexachlorobenzene	284	17.619	17.619	(0.966)	4809	0.11094	0.1109

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	58 Pentachlorophenol	266	17.983	17.975	(0.986)	2269	0.09479	0.09479
*	59 Phenanthrene-d10	188	18.238	18.246	(1.000)	721716	4.00000	
$	66 Terphenyl-d14	244	21.372	21.372	(0.918)	11115	0.10930	0.1093(R)
	67 Butylbenzylphthalate	149	22.293	22.293	(0.958)	11257	0.13706	0.1371
*	69 Chrysene-d12	240	23.276	23.277	(1.000)	624142	4.00000	
*	77 Perylene-d12	264	25.917	25.917	(1.000)	719794	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.607	28.607	(1.104)	22491	0.09521	0.09521
	90 N-Nitrosodimethylamine	74	4.855	4.848	(0.529)	8504	0.20537	0.2054

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

ARI Labs, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: NT1003182319S.D
Lab Smp Id: SLC0505-LCV2
Analysis Type: SV
Quant Type: ISTD
Operator: JGR
Method File: \\target\share\chem3\nt10.i\20230318.b\20230318.b\SIMABN2.m
Misc Info:

Calibration Date: 19-MAR-2023
Calibration Time: 03:57
Level: LOW
Sample Type: AIR

Test Mode:
Use Last Continuing Calibrator.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	223328	111664	446656	215303	-3.59
27 Naphthalene-d8	802913	401457	1605826	763750	-4.88
42 Acenaphthene-d10	396793	198397	793586	368181	-7.21
59 Phenanthrene-d10	821666	410833	1643332	721716	-12.16
69 Chrysene-d12	707165	353583	1414330	624142	-11.74
77 Perylene-d12	813685	406843	1627370	719794	-11.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	9.18	8.68	9.68	9.18	-0.00
27 Naphthalene-d8	11.64	11.14	12.14	11.64	-0.00
42 Acenaphthene-d10	15.22	14.72	15.72	15.22	-0.00
59 Phenanthrene-d10	18.25	17.75	18.75	18.24	-0.04
69 Chrysene-d12	23.28	22.78	23.78	23.28	-0.00
77 Perylene-d12	25.92	25.42	26.42	25.92	-0.00

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

REVIEW SUMMARY FOR FILE - NT1003182319S.D

Lab ID: SLC0505-LCV2
nt10.i, 20230318.b\20230318.b\SIMABN2.m,   19-MAR-2023 05:13

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Quant Method: ICAL

RRT CHECK

RRT	CCV RRT	DELTA	COMPOUND
NONE			

RRT check based on Ccal File: 20230318.b/NT1003182317S.D

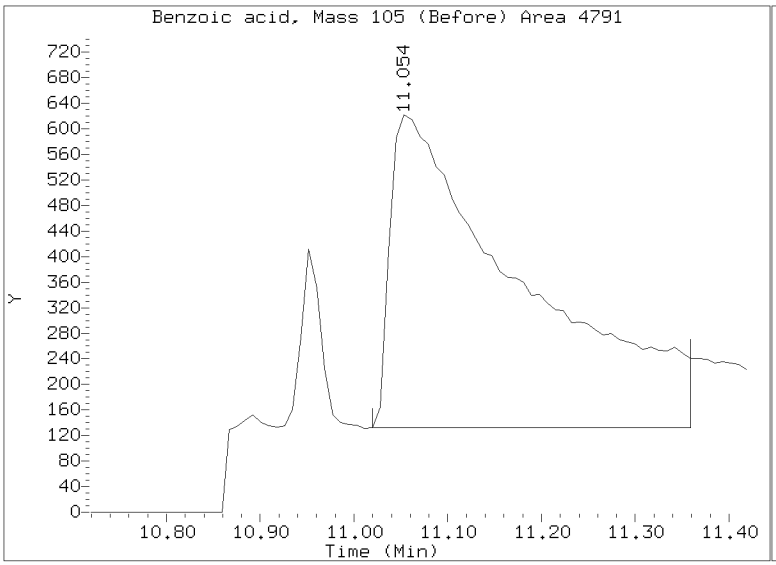
On Column LOD for nt10.i, 20230318.b\SIMABN2.m, PSDDA.sub = 0.0000

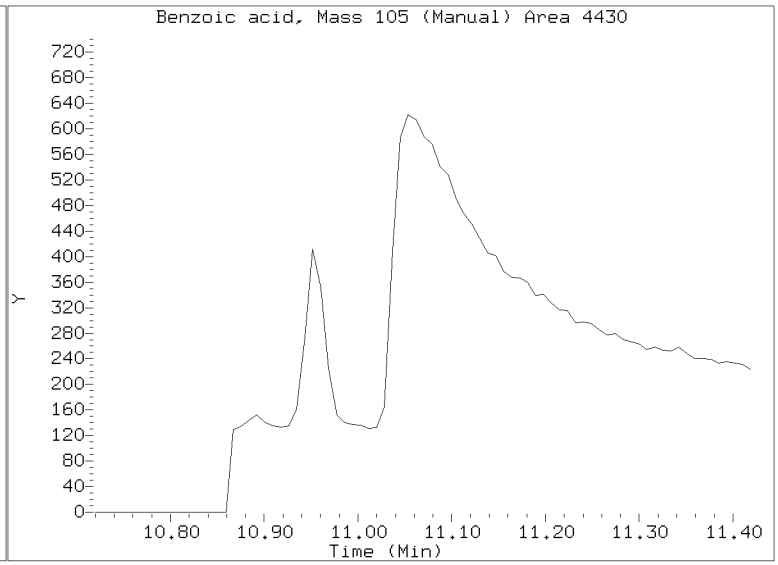
Exception: 1,2,4-Trichlorobenzene 0.0010

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

Quant Ion Manual Peak Adjustment Report

Datafile: //target/share/chem3/nt10.i/20230318.b/20230318.b/NT1003182319S.D
Injection Date: 19-MAR-2023 05:13
Lab ID:SLC0505-LCV2 Client ID:
Report Date: 04/04/2023 13:21





Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0238	Instrument:	NT10
		Calibration:	GC00049

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0238-TUN1	NT10031501S.D	NA	03/15/23 20:19
ABN 10.0	SLC0238-CAL8	NT10031503S.D	NA	03/15/23 21:12
ABN 5.0	SLC0238-CAL7	NT10031504S.D	NA	03/15/23 21:50
ABN 2.5	SLC0238-CAL6	NT10031505S.D	NA	03/15/23 22:28
ABN 1.0	SLC0238-CAL5	NT10031506S.D	NA	03/15/23 23:06
ABN 0.5	SLC0238-CAL4	NT10031507S.D	NA	03/15/23 23:44
ABN 0.2	SLC0238-CAL3	NT10031508S.D	NA	03/16/23 00:22
ABN 0.1	SLC0238-CAL2	NT10031509S.D	NA	03/16/23 01:00
ABN 0.05	SLC0238-CAL1	NT10031510S.D	NA	03/16/23 01:38
SCV 5.0	SLC0238-SCV1	NT10031511S.D	NA	03/16/23 02:16
Initial Cal Blank	SLC0238-ICB1	NT10031512S.D	NA	03/16/23 02:54

ANALYSIS SEQUENCE

SLC0238

Instrument ID: NT10
Calibration ID: GC00049
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0238-TUN1	MS Tune	QC		1	L002618		03/15/2023 20:19	NT10031501S.D	JGR	
SLC0238-CAL8	ABN 10.0	QC		2	K011110	K010831	03/15/2023 21:12	NT10031503S.D	JGR	
SLC0238-CAL7	ABN 5.0	QC		3	K011109	K010831	03/15/2023 21:50	NT10031504S.D	JGR	
SLC0238-CAL6	ABN 2.5	QC		4	K011108	K010831	03/15/2023 22:28	NT10031505S.D	JGR	
SLC0238-CAL5	ABN 1.0	QC		5	K011107	K010831	03/15/2023 23:06	NT10031506S.D	JGR	
SLC0238-CAL4	ABN 0.5	QC		6	K011106	K010831	03/15/2023 23:44	NT10031507S.D	JGR	
SLC0238-CAL3	ABN 0.2	QC		7	K011105	K010831	03/16/2023 00:22	NT10031508S.D	JGR	
SLC0238-CAL2	ABN 0.1	QC		8	L002877	K010831	03/16/2023 01:00	NT10031509S.D	JGR	
SLC0238-CAL1	ABN 0.05	QC		9	L002878	K010831	03/16/2023 01:38	NT10031510S.D	JGR	
SLC0238-SCV1	SCV 5.0	QC		10	K010066	K010831	03/16/2023 02:16	NT10031511S.D	JGR	
SLC0238-ICB1	Initial Cal Blank	QC		11	K005156	K010831	03/16/2023 02:54	NT10031512S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b\20230315.b

	Time	Filename	LabID	ClientId	DF											
1	2019	NT10031501S.D	SLC0238-TUN1		1	|NO ISTDS FOUND||										
2	2034	NT10031502S.D	FULL SCAN ONLY		1	9.31	193857||	11.78	709633||	15.39	344841||	18.43	635594||	23.46	392013||	26.19	449978|
3	2112	NT10031503S.D	SLC0238-CAL8		1	9.31	192425||	11.78	689875||	15.39	341663||	18.42	651934||	23.45	482051||	26.19	502718|
4	2150	NT10031504S.D	SLC0238-CAL7		1	9.30	187419||	11.77	682446||	15.38	331603||	18.42	598629||	23.45	389338||	26.19	466441|
5	2228	NT10031505S.D	SLC0238-CAL6		1	9.30	173412||	11.78	624286||	15.38	310309||	18.43	554860||	23.46	385144||	26.19	456369|
6	2306	NT10031506S.D	SLC0238-CAL5		1	9.30	188081||	11.77	674549||	15.39	328275||	18.42	597140||	23.45	466503||	26.19	518203|
7	2344	NT10031507S.D	SLC0238-CAL4		1	9.30	191648||	11.77	679665||	15.39	335786||	18.42	613961||	23.45	464623||	26.19	521317|
8	0022	NT10031508S.D	SLC0238-CAL3		1	9.30	188644||	11.78	664117||	15.38	328147||	18.42	603272||	23.46	468991||	26.18	525052|
9	0100	NT10031509S.D	SLC0238-CAL2		1	9.30	190985||	11.77	684638||	15.39	328366||	18.42	602202||	23.45	451316||	26.19	517188|
10	0138	NT10031510S.D	SLC0238-CAL1		1	9.30	187154||	11.78	654413||	15.38	318969||	18.42	583319||	23.46	440533||	26.19	488759|
11	0216	NT10031511S.D	SLC0238-SCV1		1	9.31	166866||	11.78	612104||	15.39	302524||	18.43	553619||	23.46	465428||	26.19	532593|
12	0254	NT10031512S.D	SLC0238-ICB1		1	9.31	189475||	11.77	676186||	15.38	328650||	18.42	617605||	23.45	473513||	26.19	534734|

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230315.b\20230315.b

Instrument: nt10.i Date: 15-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
2019	NT10031501S.D	SLC0238-TUN1	1	NO MANUAL INTEGRATION
2034	NT10031502S.D	FULL SCAN ONLY	1	NO MANUAL INTEGRATION
2112	NT10031503S.D	SLC0238-CAL8	1	NO MANUAL INTEGRATION
2150	NT10031504S.D	SLC0238-CAL7	1	NO MANUAL INTEGRATION
2228	NT10031505S.D	SLC0238-CAL6	1	NO MANUAL INTEGRATION
2306	NT10031506S.D	SLC0238-CAL5	1	NO MANUAL INTEGRATION
2344	NT10031507S.D	SLC0238-CAL4	1	NO MANUAL INTEGRATION
0022	NT10031508S.D	SLC0238-CAL3	1	Benzoic acid,
0100	NT10031509S.D	SLC0238-CAL2	1	Pentachlorophenol,
0138	NT10031510S.D	SLC0238-CAL1	1	Pentachlorophenol,
0216	NT10031511S.D	SLC0238-SCV1	1	Terphenyl-d14,
0254	NT10031512S.D	SLC0238-ICB1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 16-Mar-2023 14:47

NT10031501S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031502S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031503S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031504S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031505S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031506S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031507S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031508S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031509S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031510S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031511S.D	Data Locked	van, 16-Mar-2023 14:47
NT10031512S.D	Data Locked	van, 16-Mar-2023 14:47

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0505
Instrument: NT10
Calibration: GC00049

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
MS Tune	SLC0505-TUN1	NT1003182301S.D	NA	03/18/23 18:04
ABN 1	SLC0505-ICV1	NT1003182303S.D	NA	03/18/23 18:58
ABN 0.1	SLC0505-LCV1	NT1003182305S.D	NA	03/18/23 20:16
Blank	BLB0579-BLK2	NT1003182306S.D	Solid	03/18/23 20:55
LCS	BLB0579-BS2	NT1003182307S.D	Solid	03/18/23 21:33
LCS Dup	BLB0579-BSD2	NT1003182308S.D	Solid	03/18/23 22:12
Reference	BLB0579-SRM2	NT1003182309S.D	Solid	03/18/23 22:50
LDW23-SS1010	23A0467-01	NT1003182310S.D	Solid	03/18/23 23:29
LDW23-SS1005	23A0467-02	NT1003182311S.D	Solid	03/19/23 00:07
LDW23-SS1006	23A0467-03	NT1003182312S.D	Solid	03/19/23 00:46
LDW23-SS1003	23A0467-04	NT1003182313S.D	Solid	03/19/23 01:24
LDW23-SS1004	23A0467-05	NT1003182314S.D	Solid	03/19/23 02:02
LDW23-SS1204	23A0467-06	NT1003182315S.D	Solid	03/19/23 02:41
ABN 1	SLC0505-ICV2	NT1003182317S.D	NA	03/19/23 03:57
ABN 0.1	SLC0505-LCV2	NT1003182319S.D	NA	03/19/23 05:13
LDW23-SS1238	23A0467-07	NT1003182320S.D	Solid	03/19/23 05:51
LDW23-SS1238	BLB0579-MS2	NT1003182321S.D	Solid	03/19/23 06:29
LDW23-SS1238	BLB0579-MSD2	NT1003182322S.D	Solid	03/19/23 07:08
LDW23-SS1013	23A0467-08	NT1003182323S.D	Solid	03/19/23 07:46
LDW23-SS1014	23A0467-09	NT1003182324S.D	Solid	03/19/23 08:24
ABN 1	SLC0505-CCV1	NT1003182326S.D	NA	03/19/23 09:41

ANALYSIS SEQUENCE

SLC0505

Instrument ID: NT10
Calibration ID: GC00049
MS EM Level: 1271 EV

GCMS Description: Agilent 5975/MS http://bi
GCMS Column ID: L002830

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0505-TUN1	MS Tune	QC		1	L002618		03/18/2023 18:04	NT1003182301S.D	JGR	
SLC0505-ICV1	ABN 1	QC		2	K011107	K010831	03/18/2023 18:58	NT1003182303S.D	JGR	
SLC0505-LCV1	ABN 0.1	QC		3	L002877	K010831	03/18/2023 20:16	NT1003182305S.D	JGR	
BLB0579-BLK2	Blank	QC		4		K010831	03/18/2023 20:55	NT1003182306S.D	JGR	
BLB0579-BS2	LCS	QC		5		K010831	03/18/2023 21:33	NT1003182307S.D	JGR	
BLB0579-BSD2	LCS Dup	QC		6		K010831	03/18/2023 22:12	NT1003182308S.D	JGR	
BLB0579-SRM2	Reference	QC		7		K010831	03/18/2023 22:50	NT1003182309S.D	JGR	
23A0467-01	LDW23-SS1010	270E-SIM Dual Scan SVO	A 02	8		K010831	03/18/2023 23:29	NT1003182310S.D	JGR	
23A0467-02	LDW23-SS1005	270E-SIM Dual Scan SVO	A 02	9		K010831	03/19/2023 00:07	NT1003182311S.D	JGR	
23A0467-03	LDW23-SS1006	270E-SIM Dual Scan SVO	A 02	10		K010831	03/19/2023 00:46	NT1003182312S.D	JGR	
23A0467-04	LDW23-SS1003	270E-SIM Dual Scan SVO	A 02	11		K010831	03/19/2023 01:24	NT1003182313S.D	JGR	
23A0467-05	LDW23-SS1004	270E-SIM Dual Scan SVO	A 02	12		K010831	03/19/2023 02:02	NT1003182314S.D	JGR	
23A0467-06	LDW23-SS1204	270E-SIM Dual Scan SVO	A 02	13		K010831	03/19/2023 02:41	NT1003182315S.D	JGR	
SLC0505-ICV2	ABN 1	QC		14	K011107	K010831	03/19/2023 03:57	NT1003182317S.D	JGR	
SLC0505-LCV2	ABN 0.1	QC		15	K011105	K010831	03/19/2023 05:13	NT1003182319S.D	JGR	
23A0467-07	LDW23-SS1238	270E-SIM Dual Scan SVO	A 02	16		K010831	03/19/2023 05:51	NT1003182320S.D	JGR	
BLB0579-MS2	Matrix Spike	QC		17		K010831	03/19/2023 06:29	NT1003182321S.D	JGR	
BLB0579-MSD2	Matrix Spike Dup	QC		18		K010831	03/19/2023 07:08	NT1003182322S.D	JGR	
23A0467-08	LDW23-SS1013	270E-SIM Dual Scan SVO	A 02	19		K010831	03/19/2023 07:46	NT1003182323S.D	JGR	
23A0467-09	LDW23-SS1014	270E-SIM Dual Scan SVO	A 02	20		K010831	03/19/2023 08:24	NT1003182324S.D	JGR	
SLC0505-CCV1	ABN 1	QC		21	K011107	K010831	03/19/2023 09:41	NT1003182326S.D	JGR	

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b

	Time	Filename	LabID	ClientId	DF												
1	1804	NT1003182301S.D	SLC0505-TUN1		1	NO ISTDS FOUND											
2	1819	NT1003182302S.D	SEQ-ICVFULL		1	9.17	202953	11.63	741226	15.21	369033	18.23	705722	23.27	578812	25.90	657894
3	1858	NT1003182303S.D	SLC0505-ICV1		1	9.17	197953	11.63	704013	15.21	353977	18.23	686752	23.27	597733	25.91	645663
4	1937	NT1003182304S.D	SEQ-LCV200		1	9.17	204060	11.63	719932	15.21	349746	18.23	638522	23.27	526076	25.90	592448
5	2016	NT1003182305S.D	SLC0505-LCV1		1	9.17	206113	11.63	722650	15.21	350173	18.23	639046	23.27	525054	25.90	588722
6	2055	NT1003182306S.D	BLB0579-BLK2		1	9.17	250625	11.63	883087	15.21	424457	18.23	779040	23.27	634594	25.90	681042
7	2133	NT1003182307S.D	BLB0579-BS2		1	9.17	239471	11.63	855721	15.22	420737	18.24	806572	23.28	641437	25.91	662325
8	2212	NT1003182308S.D	BLB0579-BSD2		1	9.17	250718	11.63	911301	15.22	450379	18.24	867793	23.28	726235	25.91	749426
9	2250	NT1003182309S.D	BLB0579-SRM2		1	9.17	287982	11.63	1020771	15.21	497172	18.24	959741	23.28	752482	25.91	772131
10	2329	NT1003182310S.D	23A0467-01		1	9.17	272221	11.63	958646	15.21	461109	18.24	937494	23.28	831317	25.93	976539
11	0007	NT1003182311S.D	23A0467-02		1	9.17	281449	11.64	1005730	15.22	479888	18.24	1008213	23.28	863959	25.93	937100
12	0046	NT1003182312S.D	23A0467-03		1	9.18	306864	11.64	1094228	15.22	519464	18.25	1113095	23.28	926529	25.93	1029870
13	0124	NT1003182313S.D	23A0467-04		1	9.18	286650	11.64	1032425	15.22	494837	18.25	1063972	23.29	900394	25.94	985877
14	0202	NT1003182314S.D	23A0467-05		1	9.18	263079	11.64	950624	15.22	451659	18.25	951963	23.29	820465	25.93	914392
15	0241	NT1003182315S.D	23A0467-06		1	9.18	281653	11.64	1010417	15.22	496425	18.25	1036036	23.29	876792	25.95	921995
16	0319	NT1003182316S.D	SEQ-CCVFULL		1	9.17	238572	11.64	860134	15.22	421987	18.25	877927	23.28	735111	25.92	842605
17	0357	NT1003182317S.D	SLC0505-ICV2		1	9.18	223328	11.64	802913	15.22	396793	18.25	821666	23.28	707165	25.92	813685
18	0435	NT1003182318S.D	SEQ-LCV200		1	9.17	226854	11.64	802677	15.22	393529	18.25	784238	23.28	660241	25.92	774163
19	0513	NT1003182319S.D	SLC0505-LCV2		1	9.18	215303	11.64	763750	15.22	368181	18.24	721716	23.28	624142	25.92	719794
20	0551	NT1003182320S.D	23A0467-07		1	9.18	240709	11.64	855575	15.22	430145	18.25	860138	23.28	763559	25.93	870706

INTERNAL STANDARD SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b

	Time	Filename	LabID	ClientId	DF											
21	0629	NT1003182321S.D	BLB0579-MS2		1	9.18	258450	11.64	935184	15.22	462188	18.25	959835	23.29	816475	25.94	911565
22	0708	NT1003182322S.D	BLB0579-MSD2		1	9.18	269965	11.64	967290	15.23	486340	18.25	1003017	23.29	883443	25.94	965440
23	0746	NT1003182323S.D	23A0467-08		1	9.18	247356	11.64	896572	15.23	429087	18.25	926167	23.29	790733	25.95	879853
24	0824	NT1003182324S.D	23A0467-09		1	9.18	251977	11.64	908495	15.22	436042	18.25	911685	23.29	794183	25.93	892970
25	0903	NT1003182325S.D	SEQ-CCVFULL		1	9.18	230955	11.64	838441	15.23	405092	18.25	841174	23.29	731434	25.93	834235
26	0941	NT1003182326S.D	SLC0505-CCV1		1	9.18	226664	11.64	815897	15.23	400239	18.25	830341	23.28	721989	25.92	819632

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b

Instrument: nt10.i Date: 18-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
1804	NT1003182301S.D	SLC0505-TUN1	1	NO MANUAL INTEGRATION
1819	NT1003182302S.D	SEQ-ICVFULL	1	NO MANUAL INTEGRATION
1858	NT1003182303S.D	SLC0505-ICV1	1	NO MANUAL INTEGRATION
1937	NT1003182304S.D	SEQ-LCV200	1	NO MANUAL INTEGRATION
2016	NT1003182305S.D	SLC0505-LCV1	1	Benzoic acid, Pentachlorophenol,
2055	NT1003182306S.D	BLB0579-BLK2	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzyl alcohol,
2133	NT1003182307S.D	BLB0579-BS2	1	NO MANUAL INTEGRATION
2212	NT1003182308S.D	BLB0579-BSD2	1	NO MANUAL INTEGRATION
2250	NT1003182309S.D	BLB0579-SRM2	1	Hexachlorobenzene,
2329	NT1003182310S.D	23A0467-01	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Dimethylphthalate, Diethylphthalate,
0007	NT1003182311S.D	23A0467-02	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Benzoic acid, Dimethylphthalate, Diethylphthalate,
0046	NT1003182312S.D	23A0467-03	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Dimethylphthalate, Diethylphthalate,
0124	NT1003182313S.D	23A0467-04	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Dimethylphthalate, Diethylphthalate, Pentachlorophenol,
0202	NT1003182314S.D	23A0467-05	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Benzoic acid, Dimethylphthalate, Diethylphthalate,
0241	NT1003182315S.D	23A0467-06	1	2-Methylphenol, Dimethylphthalate, Diethylphthalate,
0319	NT1003182316S.D	SEQ-CCVFULL	1	NO MANUAL INTEGRATION
0357	NT1003182317S.D	SLC0505-ICV2	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem3\nt10.i\20230318.b\20230318.b page

Instrument: nt10.i Date: 19-MAR-2023

Time	Filename	LabID	DF	Manually Integrated Compounds
0435	NT1003182318S.D	SEQ-LCV200	1	NO MANUAL INTEGRATION
0513	NT1003182319S.D	SLC0505-LCV2	1	Benzoic acid,
0551	NT1003182320S.D	23A0467-07	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzyl alcohol, 1,2-Dichlorobenzene, 2-Methylphenol, Dimethylphthala
0629	NT1003182321S.D	BLB0579-MS2	1	NO MANUAL INTEGRATION
0708	NT1003182322S.D	BLB0579-MSD2	1	NO MANUAL INTEGRATION
0746	NT1003182323S.D	23A0467-08	1	1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Benzoic acid, 1,2,4-Trichlorobenzene Dimethylphthalate, Diethylphthalate, Hexachlorobenzene,
0824	NT1003182324S.D	23A0467-09	1	1,4-Dichlorobenzene, Benzyl alcohol, 2-Methylphenol, Diethylphthalate, Pentachlorophenol,
0903	NT1003182325S.D	SEQ-CCVFULL	1	NO MANUAL INTEGRATION
0941	NT1003182326S.D	SLC0505-CCV1	1	NO MANUAL INTEGRATION

Security Status Report

Date: 04-Apr-2023 13:25

NT1003182301S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182302S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182303S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182304S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182305S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182306S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182307S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182308S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182309S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182310S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182311S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182312S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182313S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182314S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182315S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182316S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182317S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182318S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182319S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182320S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182321S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182322S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182323S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182324S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182325S.D	Data Locked	van, 04-Apr-2023 13:25
NT1003182326S.D	Data Locked	van, 04-Apr-2023 13:25

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0238	Instrument:	NT10
Calibration:	GC00049	Calibration Date:	03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0238-SCV1 (Solid)			Lab File ID: NT10031511S.D			Analyzed: 03/16/23 02:16		
2-Fluorophenol	7.5000		0 - 200		7.07175	-7.0718	N/A	
p-Terphenyl-d14	5.0000	0.0308	0 - 200	21.543	21.54237	0.0006	N/A	
SLC0238-ICB1 (Solid)			Lab File ID: NT10031512S.D			Analyzed: 03/16/23 02:54		
2-Fluorophenol	7.5000	91.0	27 - 120	7.072	7.07175	0.0003	N/A	
p-Terphenyl-d14	5.0000	88.4	37 - 120	21.542	21.54237	-0.0004	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0505
Instrument: NT10
Calibration: GC00049
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0505-ICV1 (Solid)			Lab File ID: NT1003182303S.D			Analyzed: 03/18/23 18:58		
2-Fluorophenol	1.5000	102	80 - 120	6.957	7.07175	-0.1148	N/A	
p-Terphenyl-d14	1.0000	97.9	80 - 120	21.364	21.54237	-0.1784	N/A	
SLC0505-LCV1 (Solid)			Lab File ID: NT1003182305S.D			Analyzed: 03/18/23 20:16		
2-Fluorophenol	0.15000	98.9	0 - 200	6.964	7.07175	-0.1077	N/A	
p-Terphenyl-d14	0.10000	99.5	0 - 200	21.364	21.54237	-0.1784	N/A	
BLB0579-BLK2 (Solid)			Lab File ID: NT1003182306S.D			Analyzed: 03/18/23 20:55		
2-Fluorophenol	750.00	35.5	27 - 120	6.972	7.07175	-0.0997	N/A	
p-Terphenyl-d14	500.00	80.3	37 - 120	21.365	21.54237	-0.1774	N/A	
BLB0579-BS2 (Solid)			Lab File ID: NT1003182307S.D			Analyzed: 03/18/23 21:33		
2-Fluorophenol	750.00	71.4	27 - 120	6.972	7.07175	-0.0997	N/A	
p-Terphenyl-d14	500.00	92.0	37 - 120	21.364	21.54237	-0.1784	N/A	
BLB0579-BSD2 (Solid)			Lab File ID: NT1003182308S.D			Analyzed: 03/18/23 22:12		
2-Fluorophenol	750.00	79.1	27 - 120	6.972	7.07175	-0.0997	N/A	
p-Terphenyl-d14	500.00	92.6	37 - 120	21.365	21.54237	-0.1774	N/A	
BLB0579-SRM2 (Solid)			Lab File ID: NT1003182309S.D			Analyzed: 03/18/23 22:50		
2-Fluorophenol	7500.0	75.1	27 - 120	6.972	7.07175	-0.0997	N/A	
p-Terphenyl-d14	5000.0	98.1	37 - 120	21.365	21.54237	-0.1774	N/A	
23A0467-01 (Solid)			Lab File ID: NT1003182310S.D			Analyzed: 03/18/23 23:29		
2-Fluorophenol	749.11	66.6	27 - 120	6.972	7.07175	-0.0997	N/A	
p-Terphenyl-d14	499.40	87.8	37 - 120	21.373	21.54237	-0.1694	N/A	
23A0467-02 (Solid)			Lab File ID: NT1003182311S.D			Analyzed: 03/19/23 00:07		
2-Fluorophenol	749.02	78.0	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.34	107	37 - 120	21.372	21.54237	-0.1704	N/A	
23A0467-03 (Solid)			Lab File ID: NT1003182312S.D			Analyzed: 03/19/23 00:46		
2-Fluorophenol	748.59	74.5	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.06	110	37 - 120	21.38	21.54237	-0.1624	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0505
Instrument: NT10
Calibration: GC00049
Calibration Date: 03/16/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-04 (Solid)			Lab File ID: NT1003182313S.D				Analyzed: 03/19/23 01:24	
2-Fluorophenol	750.09	72.1	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	500.06	107	37 - 120	21.38	21.54237	-0.1624	N/A	
23A0467-05 (Solid)			Lab File ID: NT1003182314S.D				Analyzed: 03/19/23 02:02	
2-Fluorophenol	748.72	77.2	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.15	106	37 - 120	21.373	21.54237	-0.1694	N/A	
23A0467-06 (Solid)			Lab File ID: NT1003182315S.D				Analyzed: 03/19/23 02:41	
2-Fluorophenol	748.89	76.3	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.26	133	37 - 120	21.38	21.54237	-0.1624	N/A	*
SLC0505-ICV2 (Solid)			Lab File ID: NT1003182317S.D				Analyzed: 03/19/23 03:57	
2-Fluorophenol	1.5000	106	80 - 120	6.964	7.07175	-0.1077	N/A	
p-Terphenyl-d14	1.0000	111	80 - 120	21.372	21.54237	-0.1704	N/A	
SLC0505-LCV2 (Solid)			Lab File ID: NT1003182319S.D				Analyzed: 03/19/23 05:13	
2-Fluorophenol	0.30000	53.7	0 - 200	6.964	7.07175	-0.1077	N/A	
p-Terphenyl-d14	0.20000	54.7	0 - 200	21.372	21.54237	-0.1704	N/A	
23A0467-07 (Solid)			Lab File ID: NT1003182320S.D				Analyzed: 03/19/23 05:51	
2-Fluorophenol	748.59	72.5	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.06	102	37 - 120	21.38	21.54237	-0.1624	N/A	
BLB0579-MS2 (Solid)			Lab File ID: NT1003182321S.D				Analyzed: 03/19/23 06:29	
2-Fluorophenol	749.83	72.3	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.89	103	37 - 120	21.38	21.54237	-0.1624	N/A	
BLB0579-MSD2 (Solid)			Lab File ID: NT1003182322S.D				Analyzed: 03/19/23 07:08	
2-Fluorophenol	749.83	74.5	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.89	101	37 - 120	21.38	21.54237	-0.1624	N/A	
23A0467-08 (Solid)			Lab File ID: NT1003182323S.D				Analyzed: 03/19/23 07:46	
2-Fluorophenol	749.99	74.2	27 - 120	6.98	7.07175	-0.0917	N/A	
p-Terphenyl-d14	499.99	103	37 - 120	21.38	21.54237	-0.1624	N/A	
23A0467-09 (Solid)			Lab File ID: NT1003182324S.D				Analyzed: 03/19/23 08:24	
2-Fluorophenol	749.36	73.4	27 - 120	6.988	7.07175	-0.0837	N/A	
p-Terphenyl-d14	499.57	107	37 - 120	21.38	21.54237	-0.1624	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0505	Instrument:	NT10
Calibration:	GC00049	Calibration Date:	03/16/2023

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0505-CCV1 (Solid)			Lab File ID: NT1003182326S.D				Analyzed: 03/19/23 09:41	
2-Fluorophenol	1.5000	106	50 - 150	6.964	7.07175	-0.1077	N/A	
p-Terphenyl-d14	1.0000	113	50 - 150	21.372	21.54237	-0.1704	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0238	Instrument:	NT10
		Calibration:	GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLC0238-SCV1)		(Solid)		Lab File ID: NT10031511S.D				Analyzed: 03/16/23 02:16	
1,4-Dichlorobenzene-d4	166866	9.306	188081	9.298	89	50 - 200	0.008	+/-0.50	
Naphthalene-d8	612104	11.775	674549	11.774	91	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	302524	15.388	328275	15.387	92	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	553619	18.425	597140	18.424	93	50 - 200	0.001	+/-0.50	
Chrysene-d12	465428	23.455	466503	23.454	100	50 - 200	0.001	+/-0.50	
Perylene-d12	532593	26.188	518203	26.187	103	50 - 200	0.001	+/-0.50	
Initial Cal Blank (SLC0238-ICB1)		(Solid)		Lab File ID: NT10031512S.D				Analyzed: 03/16/23 02:54	
1,4-Dichlorobenzene-d4	189475	9.306	188081	9.298	101	50 - 200	0.008	+/-0.50	
Naphthalene-d8	676186	11.774	674549	11.774	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	328650	15.379	328275	15.387	100	50 - 200	-0.008	+/-0.50	
Phenanthrene-d10	617605	18.424	597140	18.424	103	50 - 200	0.000	+/-0.50	
Chrysene-d12	473513	23.454	466503	23.454	102	50 - 200	0.000	+/-0.50	
Perylene-d12	534734	26.187	518203	26.187	103	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0505
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0505-ICV1)		(Solid)	Lab File ID: NT1003182303S.D				Analyzed: 03/18/23 18:58		
1,4-Dichlorobenzene-d4	197953	9.167	197953	9.167	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	704013	11.627	704013	11.627	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	353977	15.21	353977	15.21	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	686752	18.231	686752	18.231	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	597733	23.269	597733	23.269	100	50 - 200	0.000	+/-0.50	
Perylene-d12	645663	25.909	645663	25.909	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0505-LCV1)		(Solid)	Lab File ID: NT1003182305S.D				Analyzed: 03/18/23 20:16		
1,4-Dichlorobenzene-d4	206113	9.167	197953	9.167	104	50 - 200	0.000	+/-0.50	
Naphthalene-d8	722650	11.627	704013	11.627	103	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	350173	15.21	353977	15.21	99	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	639046	18.231	686752	18.231	93	50 - 200	0.000	+/-0.50	
Chrysene-d12	525054	23.269	597733	23.269	88	50 - 200	0.000	+/-0.50	
Perylene-d12	588722	25.901	645663	25.909	91	50 - 200	-0.008	+/-0.50	
Blank (BLB0579-BLK2)		(Solid)	Lab File ID: NT1003182306S.D				Analyzed: 03/18/23 20:55		
1,4-Dichlorobenzene-d4	250625	9.167	197953	9.167	127	50 - 200	0.000	+/-0.50	
Naphthalene-d8	883087	11.628	704013	11.627	125	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	424457	15.211	353977	15.21	120	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	779040	18.232	686752	18.231	113	50 - 200	0.001	+/-0.50	
Chrysene-d12	634594	23.27	597733	23.269	106	50 - 200	0.001	+/-0.50	
Perylene-d12	681042	25.902	645663	25.909	105	50 - 200	-0.007	+/-0.50	
LCS (BLB0579-BS2)		(Solid)	Lab File ID: NT1003182307S.D				Analyzed: 03/18/23 21:33		
1,4-Dichlorobenzene-d4	239471	9.167	197953	9.167	121	50 - 200	0.000	+/-0.50	
Naphthalene-d8	855721	11.627	704013	11.627	122	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	420737	15.217	353977	15.21	119	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	806572	18.238	686752	18.231	117	50 - 200	0.007	+/-0.50	
Chrysene-d12	641437	23.277	597733	23.269	107	50 - 200	0.008	+/-0.50	
Perylene-d12	662325	25.909	645663	25.909	103	50 - 200	0.000	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0505	Instrument:	NT10
		Calibration:	GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (BLB0579-BSD2)		(Solid)	Lab File ID: NT1003182308S.D				Analyzed: 03/18/23 22:12		
1,4-Dichlorobenzene-d4	250718	9.167	197953	9.167	127	50 - 200	0.000	+/-0.50	
Naphthalene-d8	911301	11.628	704013	11.627	129	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	450379	15.218	353977	15.21	127	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	867793	18.239	686752	18.231	126	50 - 200	0.008	+/-0.50	
Chrysene-d12	726235	23.278	597733	23.269	121	50 - 200	0.009	+/-0.50	
Perylene-d12	749426	25.91	645663	25.909	116	50 - 200	0.001	+/-0.50	
Reference (BLB0579-SRM2)		(Solid)	Lab File ID: NT1003182309S.D				Analyzed: 03/18/23 22:50		
1,4-Dichlorobenzene-d4	287982	9.167	197953	9.167	145	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1020771	11.628	704013	11.627	145	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	497172	15.211	353977	15.21	140	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	959741	18.239	686752	18.231	140	50 - 200	0.008	+/-0.50	
Chrysene-d12	752482	23.278	597733	23.269	126	50 - 200	0.009	+/-0.50	
Perylene-d12	772131	25.91	645663	25.909	120	50 - 200	0.001	+/-0.50	
LDW23-SS1010 (23A0467-01)		(Solid)	Lab File ID: NT1003182310S.D				Analyzed: 03/18/23 23:29		
1,4-Dichlorobenzene-d4	272221	9.167	197953	9.167	138	50 - 200	0.000	+/-0.50	
Naphthalene-d8	958646	11.628	704013	11.627	136	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	461109	15.211	353977	15.21	130	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	937494	18.239	686752	18.231	137	50 - 200	0.008	+/-0.50	
Chrysene-d12	831317	23.277	597733	23.269	139	50 - 200	0.008	+/-0.50	
Perylene-d12	976539	25.925	645663	25.909	151	50 - 200	0.016	+/-0.50	
LDW23-SS1005 (23A0467-02)		(Solid)	Lab File ID: NT1003182311S.D				Analyzed: 03/19/23 00:07		
1,4-Dichlorobenzene-d4	281449	9.167	197953	9.167	142	50 - 200	0.000	+/-0.50	
Naphthalene-d8	1005730	11.635	704013	11.627	143	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	479888	15.217	353977	15.21	136	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1008213	18.238	686752	18.231	147	50 - 200	0.007	+/-0.50	
Chrysene-d12	863959	23.284	597733	23.269	145	50 - 200	0.015	+/-0.50	
Perylene-d12	937100	25.932	645663	25.909	145	50 - 200	0.023	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0505	Instrument:	NT10
		Calibration:	GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1006 (23A0467-03)		(Solid)	Lab File ID: NT1003182312S.D				Analyzed: 03/19/23 00:46		
1,4-Dichlorobenzene-d4	306864	9.175	197953	9.167	155	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1094228	11.635	704013	11.627	155	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	519464	15.217	353977	15.21	147	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1113095	18.246	686752	18.231	162	50 - 200	0.015	+/-0.50	
Chrysene-d12	926529	23.284	597733	23.269	155	50 - 200	0.015	+/-0.50	
Perylene-d12	1029870	25.932	645663	25.909	160	50 - 200	0.023	+/-0.50	
LDW23-SS1003 (23A0467-04)		(Solid)	Lab File ID: NT1003182313S.D				Analyzed: 03/19/23 01:24		
1,4-Dichlorobenzene-d4	286650	9.175	197953	9.167	145	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1032425	11.635	704013	11.627	147	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	494837	15.217	353977	15.21	140	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1063972	18.246	686752	18.231	155	50 - 200	0.015	+/-0.50	
Chrysene-d12	900394	23.292	597733	23.269	151	50 - 200	0.023	+/-0.50	
Perylene-d12	985877	25.94	645663	25.909	153	50 - 200	0.031	+/-0.50	
LDW23-SS1004 (23A0467-05)		(Solid)	Lab File ID: NT1003182314S.D				Analyzed: 03/19/23 02:02		
1,4-Dichlorobenzene-d4	263079	9.175	197953	9.167	133	50 - 200	0.008	+/-0.50	
Naphthalene-d8	950624	11.636	704013	11.627	135	50 - 200	0.009	+/-0.50	
Acenaphthene-d10	451659	15.218	353977	15.21	128	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	951963	18.247	686752	18.231	139	50 - 200	0.016	+/-0.50	
Chrysene-d12	820465	23.285	597733	23.269	137	50 - 200	0.016	+/-0.50	
Perylene-d12	914392	25.933	645663	25.909	142	50 - 200	0.024	+/-0.50	
LDW23-SS1204 (23A0467-06)		(Solid)	Lab File ID: NT1003182315S.D				Analyzed: 03/19/23 02:41		
1,4-Dichlorobenzene-d4	281653	9.175	197953	9.167	142	50 - 200	0.008	+/-0.50	
Naphthalene-d8	1010417	11.635	704013	11.627	144	50 - 200	0.008	+/-0.50	
Acenaphthene-d10	496425	15.217	353977	15.21	140	50 - 200	0.007	+/-0.50	
Phenanthrene-d10	1036036	18.246	686752	18.231	151	50 - 200	0.015	+/-0.50	
Chrysene-d12	876792	23.292	597733	23.269	147	50 - 200	0.023	+/-0.50	
Perylene-d12	921995	25.948	645663	25.909	143	50 - 200	0.039	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0505	Instrument:	NT10
		Calibration:	GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0505-ICV2)		(Solid)	Lab File ID: NT1003182317S.D				Analyzed: 03/19/23 03:57		
1,4-Dichlorobenzene-d4	223328	9.175	223328	9.175	100	50 - 200	0.000	+/-0.50	
Naphthalene-d8	802913	11.635	802913	11.635	100	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	396793	15.217	396793	15.217	100	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	821666	18.246	821666	18.246	100	50 - 200	0.000	+/-0.50	
Chrysene-d12	707165	23.277	707165	23.277	100	50 - 200	0.000	+/-0.50	
Perylene-d12	813685	25.917	813685	25.917	100	50 - 200	0.000	+/-0.50	
Low Cal Check (SLC0505-LCV2)		(Solid)	Lab File ID: NT1003182319S.D				Analyzed: 03/19/23 05:13		
1,4-Dichlorobenzene-d4	215303	9.175	223328	9.175	96	50 - 200	0.000	+/-0.50	
Naphthalene-d8	763750	11.635	802913	11.635	95	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	368181	15.217	396793	15.217	93	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	721716	18.238	821666	18.246	88	50 - 200	-0.008	+/-0.50	
Chrysene-d12	624142	23.276	707165	23.277	88	50 - 200	-0.001	+/-0.50	
Perylene-d12	719794	25.917	813685	25.917	88	50 - 200	0.000	+/-0.50	
LDW23-SS1238 (23A0467-07)		(Solid)	Lab File ID: NT1003182320S.D				Analyzed: 03/19/23 05:51		
1,4-Dichlorobenzene-d4	240709	9.175	223328	9.175	108	50 - 200	0.000	+/-0.50	
Naphthalene-d8	855575	11.635	802913	11.635	107	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	430145	15.217	396793	15.217	108	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	860138	18.246	821666	18.246	105	50 - 200	0.000	+/-0.50	
Chrysene-d12	763559	23.284	707165	23.277	108	50 - 200	0.007	+/-0.50	
Perylene-d12	870706	25.932	813685	25.917	107	50 - 200	0.015	+/-0.50	
Matrix Spike (BLB0579-MS2)		(Solid)	Lab File ID: NT1003182321S.D				Analyzed: 03/19/23 06:29		
1,4-Dichlorobenzene-d4	258450	9.175	223328	9.175	116	50 - 200	0.000	+/-0.50	
Naphthalene-d8	935184	11.635	802913	11.635	116	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	462188	15.217	396793	15.217	116	50 - 200	0.000	+/-0.50	
Phenanthrene-d10	959835	18.246	821666	18.246	117	50 - 200	0.000	+/-0.50	
Chrysene-d12	816475	23.292	707165	23.277	115	50 - 200	0.015	+/-0.50	
Perylene-d12	911565	25.94	813685	25.917	112	50 - 200	0.023	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0505
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: NT10
Calibration: GC00049

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike Dup (BLB0579-MSD2)		(Solid)	Lab File ID: NT1003182322S.D				Analyzed: 03/19/23 07:08		
1,4-Dichlorobenzene-d4	269965	9.175	223328	9.175	121	50 - 200	0.000	+/-0.50	
Naphthalene-d8	967290	11.636	802913	11.635	120	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	486340	15.226	396793	15.217	123	50 - 200	0.009	+/-0.50	
Phenanthrene-d10	1003017	18.247	821666	18.246	122	50 - 200	0.001	+/-0.50	
Chrysene-d12	883443	23.293	707165	23.277	125	50 - 200	0.016	+/-0.50	
Perylene-d12	965440	25.941	813685	25.917	119	50 - 200	0.024	+/-0.50	
LDW23-SS1013 (23A0467-08)		(Solid)	Lab File ID: NT1003182323S.D				Analyzed: 03/19/23 07:46		
1,4-Dichlorobenzene-d4	247356	9.175	223328	9.175	111	50 - 200	0.000	+/-0.50	
Naphthalene-d8	896572	11.635	802913	11.635	112	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	429087	15.225	396793	15.217	108	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	926167	18.246	821666	18.246	113	50 - 200	0.000	+/-0.50	
Chrysene-d12	790733	23.292	707165	23.277	112	50 - 200	0.015	+/-0.50	
Perylene-d12	879853	25.948	813685	25.917	108	50 - 200	0.031	+/-0.50	
LDW23-SS1014 (23A0467-09)		(Solid)	Lab File ID: NT1003182324S.D				Analyzed: 03/19/23 08:24		
1,4-Dichlorobenzene-d4	251977	9.175	223328	9.175	113	50 - 200	0.000	+/-0.50	
Naphthalene-d8	908495	11.636	802913	11.635	113	50 - 200	0.001	+/-0.50	
Acenaphthene-d10	436042	15.218	396793	15.217	110	50 - 200	0.001	+/-0.50	
Phenanthrene-d10	911685	18.247	821666	18.246	111	50 - 200	0.001	+/-0.50	
Chrysene-d12	794183	23.285	707165	23.277	112	50 - 200	0.008	+/-0.50	
Perylene-d12	892970	25.933	813685	25.917	110	50 - 200	0.016	+/-0.50	
Calibration Check (SLC0505-CCV1)		(Solid)	Lab File ID: NT1003182326S.D				Analyzed: 03/19/23 09:41		
1,4-Dichlorobenzene-d4	226664	9.175	223328	9.175	101	50 - 200	0.000	+/-0.50	
Naphthalene-d8	815897	11.635	802913	11.635	102	50 - 200	0.000	+/-0.50	
Acenaphthene-d10	400239	15.225	396793	15.217	101	50 - 200	0.008	+/-0.50	
Phenanthrene-d10	830341	18.246	821666	18.246	101	50 - 200	0.000	+/-0.50	
Chrysene-d12	721989	23.284	707165	23.277	102	50 - 200	0.007	+/-0.50	
Perylene-d12	819632	25.924	813685	25.917	101	50 - 200	0.007	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8270E-SIM

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	02/23/23 15:49	31	365	03/18/23 23:29	23	40	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 00:07	23	40	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 00:46	23	40	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 01:24	23	40	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 02:02	23	40	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 02:41	23	40	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 05:51	24	40	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 07:46	24	40	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 08:24	24	40	
Matrix Spike BLB0579-MS2	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 06:29	24	40	
Matrix Spike Dup BLB0579-MSD2	01/23/23 11:35	01/23/23 13:30	02/23/23 15:49	31	365	03/19/23 07:08	24	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8270E-SIM

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: NT10

Analyte	MDL	RL	Units
1,4-Dichlorobenzene	0.6	5.0	ug/kg
1,2-Dichlorobenzene	0.7	5.0	ug/kg
Benzyl Alcohol	2.5	20.0	ug/kg
Benzoic acid	13.4	100	ug/kg
2,4-Dimethylphenol	2.2	20.0	ug/kg
1,2,4-Trichlorobenzene	2.7	5.0	ug/kg
N-Nitrosodiphenylamine	1.3	5.0	ug/kg
Pentachlorophenol	2.1	20.0	ug/kg

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: NA

Chemical: Tributyl Phosphate

Manufacturer: Chemservice

Product #: O-916

Lot #: 59-57A

Purity: 99%

Analyst: VB

Element: B000954

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001873

Printed: 9/23/2013 11:47:03AM

Description:	SVOC 4,4 DDT	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	23-Sep-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 11:46 by JZ
Vendor:	Chem Service	Lot #:	198-128A
Vendor Catalog #:			

Comments

Neat, Purity @ 99.2%. (ARI#: 790A)

Analyte	CAS Number	Concentration	Units
4,4'-DDT	50-29-3	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,4' DDT

Manufacturer: Chem Service

Product #: _____

Lot #: 198-128A

Purity: 99.2%

Analyst: AB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001875

Printed: 9/23/2013 12:13:55PM

Description:	SVOC alpha-Terpineol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 12:13 by JZ
Vendor:	ACROS Organics	Lot #:	AD16481201
Vendor Catalog #:			

Comments

Neat, Purity @ 98%. (ARI#: I1582A)

Analyte	CAS Number	Concentration	Units
alpha-Terpineol	98-55-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: alpha-Terpineol

Manufacturer: Acros Organics

Product #: _____

Lot #: A0648170 1

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001885

Printed: 9/23/2013 3:45:57PM

Description:	SVOA Dibutyl Phenyl phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:45 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98.9%.

Analyte	CAS Number	Concentration	Units
Dibutyl Phenyl Phosphate	2528-36-1	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Dibutyl Phenyl Phosphate

Manufacturer: Monsanto

Product #: N/A

Lot #: N/A

Purity: 98.9%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001886

Printed: 9/23/2013 3:59:35PM

Description:	SVOC Triphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 15:59 by JZ
Vendor:	Aldrich	Lot #:	04902CM
Vendor Catalog #:			

Comments

Neat, Purity @ 99%.

Analyte	CAS Number	Concentration	Units
Triphenyl Phosphate	115-86-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Triphenyl Phosphate

Manufacturer: Aldrich

Product #: _____

Lot #: 04907CM

Purity: 99%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001887

Printed: 9/23/2013 4:18:55PM

Description:	SVOC Butylated Hydroxytoluene	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 16:18 by JZ
Vendor:	SIGMA	Lot #:	39F-0197
Vendor Catalog #:			

Comments

neat,Purity @ 99.9%.

Analyte	CAS Number	Concentration	Units
Butylated Hydroxytoluene	128-37-0	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butylated Hydroxytoluene

Manufacturer: Sigma

Product #: _____

Lot #: 39F-0197

Purity: 99.8%

Analyst: AR

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001890

Printed: 9/23/2013 5:02:53PM

Description:	SVOC Butyl Diphenyl Phosphate	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	23-Sep-13 17:02 by JZ
Vendor:	Monsanto	Lot #:	N/A
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Butyl Diphenyl Phosphate	2752-95-6	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: Butyl Diphenyl Phosphate

Manufacturer: Monsanto

Product #: NA

Lot #: NA

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001941

Printed: 9/25/2013 1:45:31PM

Description:	SVOC 2,4-Dinitrophenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 13:45 by JZ
Vendor:	SIGMA	Lot #:	65H5021
Vendor Catalog #:			

Comments

Neat, Purity @ 90-95%. (ARI#: 0466)

Analyte	CAS Number	Concentration	Units
2,4-Dinitrophenol	51-28-5	1000000	ug/mL

B001941
SVOA 2,4-Dinitrophenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 2,4-Dinitrophenol

Manufacturer: Sigma

Product #: _____

Lot #: bEH 502 I

Purity: 90 ~ 94%

Analyst: _____

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001945

Printed: 9/25/2013 3:23:22PM

Description:	SVOC Benzoic Acid	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	31-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:23 by JZ
Vendor:	ACROS Organics	Lot #:	A0224339
Vendor Catalog #:			

Comments

Neat, Purity @ 98%.

Analyte	CAS Number	Concentration	Units
Benzoic acid	65-85-0	1000000	ug/mL

B001945
SVOC Benzoic Acid
Expires 12/31/2029
Prepared By Jianqing Zhou 12/31/2012

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzoic Acid

Manufacturer: Acros Organics

Product #: _____

Lot #: A0214339

Purity: 98%

Analyst: [signature]

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B001948

Printed: 9/25/2013 3:37:51PM

Description:	SVOC 4,6-Dinitro-2-Methylphenol	Expires:	31-Dec-29
Standard Type:	Calibration Stan	Prepared:	25-Sep-13
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	25-Sep-13 15:37 by JZ
Vendor:	Chem Service	Lot #:	179-31A
Vendor Catalog #:			

Comments

Neat, Purity @ 99%. (ARI#: 009A)

Analyte	CAS Number	Concentration	Units
4,6-Dinitro-2-methylphenol	534-52-1	1000000	ug/mL

B001948
SVOA 4,6-Dinitro-2-Methylphenol
Expires 12/31/2029
Prepared By Jianqing Zhou 9/25/2013

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer: _____

Chemical: 4,6-Dinitro-2-Methylphenol

Manufacturer: Chem Service

Product #: _____

Lot #: 179-31A

Purity: 99%

Analyst: KB

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002054

Printed: 10/4/2013 6:32:21PM

Description:	SVOA 1-Methylnaphthalene	Expires:	02-Apr-14
Standard Type:	Analyte Spike	Prepared:	13-Dec-12
Solvent:	NA	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	04-Oct-13 18:32 by JZ
Vendor:	Chem Service	Lot #:	62-5B
Vendor Catalog #:			

Comments

Neat, Purity @ 99%

Analyte	CAS Number	Concentration	Units
1-Methylnaphthalene	90-12-0	1000000	ug/mL

B002054
SVOA 1-Methylnaphthalene
Solvent / Lot: NA
Prep: 12/13/2012 by JZ
Exp: 12/31/2029
Location:

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: 1-Methyl naphthalene

Manufacturer: Chem Service

Product #: 0787

Lot #: 67-53

Purity: 99%

Analyst: AZ

Analytical Resources, Incorporated

Analytical Standard Record
Analytical Resources, Inc.
Standard ID: B002135

Printed: 10/15/2013 12:07:39PM

Description:	SVOA Benzidine	Expires:	31-Dec-29
Standard Type:	Analyte Spike	Prepared:	15-Oct-13
Solvent:	N/A	Prepared By:	Jianqing Zhou
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	15-Oct-13 12:07 by JZ
Vendor:	SIGMA	Lot #:	18C0024
Vendor Catalog #:			

Comments

Purity @ 95%. ARI#: 0467.

Analyte	CAS Number	Concentration	Units
Benzidine	92-87-5	1000000	ug/mL

Reviewed By Date

Appendix 20.1

ALTERNATE CERTIFICATE OF ANALYSIS

The manufacturer of the below chemical was unable to provide a Certificate of Analysis at the time of request by ARI.

Date Requested from Manufacturer:_____

Chemical: Benzidine

Manufacturer: Sigma

Product #: B-3503

Lot #: 18C0024

Purity: 98%

Analyst: [signature]

Certificate of Analysis

Product Name:	1,2,4,5-Tetrachlorobenzene
Product Description:	98%
Product Brand:	Sigma-Aldrich
Product Number:	131857
Molecular Weight:	215.89
CAS Number:	95-94-3

TEST	SPECIFICATION	LOT 19309JR RESULTS
APPEARANCE	WHITE POWDER, CHIPS OR CRYSTALS	WHITE CHIPS
INFRARED SPECTRUM	CONFORMS TO STRUCTURE.	CONFORMS TO STRUCTURE AND STANDARD AS
** **		ILLUSTRATED ON PAGE 1011C OF EDITION I,
** **		VOLUME 1 OF "THE ALDRICH LIBRARY OF FT-IR
** **		SPECTRA".
GAS LIQUID	97.5% (MINIMUM)	99.9 %
QUALITY CONTROL		JULY 1997

Barbara Rajzer, Supervisor
Quality Control
Milwaukee, Wisconsin USA

F009172
SVOC 1,2,4,5-Tetrachlorobenzene
Expires 12/31/2079
Prepared By Joshua Rains 10/6/2017

H000691

Data File: \\target\share\chem2\fid4a.i\20230317.b\423C1703.D

Page 1

Date : 17-MAR-2023 10:46

Client ID:

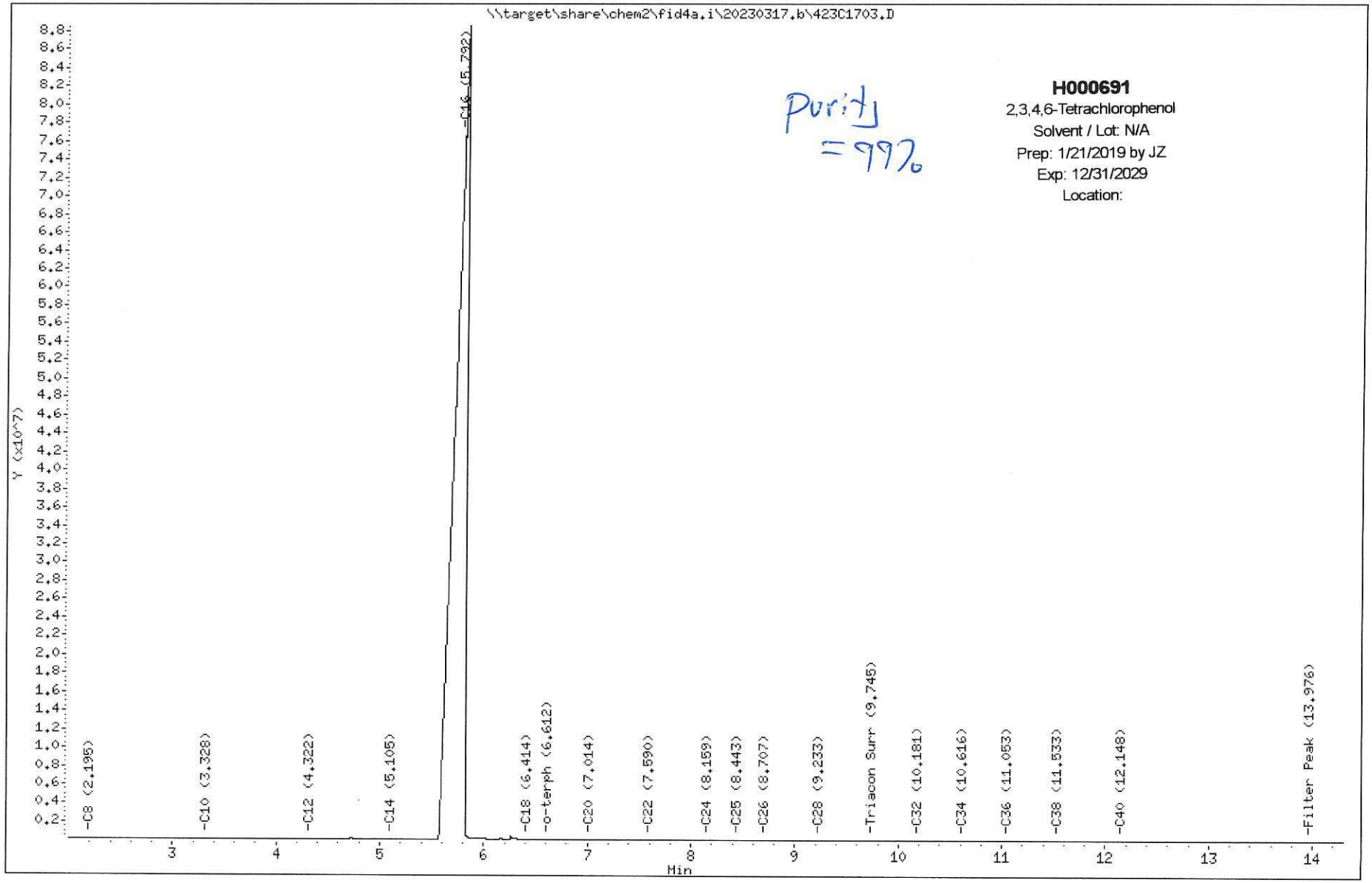
Instrument: fid4a.i

Sample Info: K007226

Operator: AA

Column phase: RTX-1

Column diameter: 0.25



Purity = 99%

H000691
2,3,4,6-Tetrachlorophenol
Solvent / Lot: N/A
Prep: 1/21/2019 by JZ
Exp: 12/31/2029
Location:

ARI Labs, Inc.

Data file : \\target\share\chem2\fid4a.i\20230317.b\423C1703.D
Lab Smp Id: K007226
Inj Date : 17-MAR-2023 10:46
Operator : AA Inst ID: fid4a.i
Smp Info : K007226
Misc Info :
Comment   :
Method   : \\target\share\chem2\fid4a.i\20230317.b\FID4TPH.m
Meth Date : 17-Mar-2023 16:58 alfonso Quant Type: AREA%
Cal Date : 18-AUG-2022 11:51 Cal File: 422H1803.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon+ Compound Sublist: tph.sub
Target Version: 4.14
Processing Host: ALFONSO-201901

Concentration Formula: Amt * DF * CpndVariable
Cpnd Variable Local Compound Variable

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.043	81395	55677	0.684	0.012	1 Toluene
2.074	68503	39991	0.584	0.010	
2.104	85451	37158	0.435	0.012	
2.146	59381	25207	0.424	0.008	
2.181	11414	22862	2.003	0.001	
2.195	34939	23199	0.664	0.005	2 C8
2.218	8679	21808	2.513	0.001	
2.224	21070	21832	1.036	0.003	
2.243	45086	20191	0.448	0.006	
2.286	3130	15677	5.009	0.000	
2.291	12615	15880	1.259	0.001	
2.313	20979	15888	0.757	0.003	
2.333	7621	15373	2.017	0.001	
2.348	31874	17112	0.537	0.004	
2.373	4619	13267	2.872	0.000	
2.380	12003	13446	1.120	0.001	
2.393	10327	13347	1.292	0.001	
2.408	9963	12697	1.274	0.001	
2.446	24366	11882	0.488	0.003	
2.498	24898	10214	0.410	0.003	
2.557	1592	6395	4.017	0.000	
2.570	4427	6384	1.442	0.000	
2.583	4275	6215	1.454	0.000	
2.595	1208	6068	5.024	0.000	
2.602	3076	6230	2.025	0.000	
2.607	1560	6270	4.019	0.000	
2.631	17195	8933	0.520	0.002	
2.654	17386	7637	0.439	0.002	
2.703	4531	5468	1.207	0.000	
2.717	9156	5741	0.627	0.001	
2.740	3955	5045	1.275	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
2.768	1029	4134	4.017	0.000	
2.771	830	4189	5.050	0.000	
2.778	1924	4438	2.307	0.000	
2.784	5498	4564	0.830	0.000	
2.846	25970	8400	0.323	0.003	
2.880	939	3165	3.370	0.000	
2.884	1885	3183	1.688	0.000	
2.901	4805	3504	0.729	0.000	
2.938	581	1990	3.423	0.000	
2.944	1450	2016	1.390	0.000	
2.955	449	1816	4.043	0.000	
2.967	1234	2009	1.629	0.000	
2.982	712	2087	2.931	0.000	
2.988	1000	2338	2.337	0.000	
3.001	3475	3541	1.019	0.000	
3.018	3528	3705	1.050	0.000	
3.033	983	2521	2.564	0.000	
3.038	1297	2686	2.070	0.000	
3.044	2547	2541	0.997	0.000	
3.069	389	1330	3.418	0.000	
3.078	728	1545	2.123	0.000	
3.085	1244	1637	1.316	0.000	
3.098	1115	1624	1.457	0.000	
3.108	926	1475	1.593	0.000	
3.119	239	1202	5.036	0.000	
3.125	540	1251	2.315	0.000	
3.133	409	1219	2.978	0.000	
3.144	2600	1886	0.725	0.000	
3.165	620	1604	2.588	0.000	
3.173	554	1647	2.972	0.000	
3.192	2423	2273	0.938	0.000	
3.197	582	2418	4.158	0.000	
3.204	1161	2723	2.346	0.000	
3.208	825	2777	3.364	0.000	
3.228	4472	3391	0.758	0.000	
3.246	1586	2676	1.688	0.000	
3.279	1194	2070	1.734	0.000	
3.293	854	1951	2.285	0.000	
3.298	595	2029	3.408	0.000	
3.315	2640	2597	0.984	0.000	
3.320	1015	2542	2.504	0.000	
3.328	1549	2593	1.674	0.000	3 C10
3.338	1314	2533	1.928	0.000	
3.350	523	2159	4.130	0.000	
3.358	1776	2105	1.185	0.000	
3.371	356	1797	5.043	0.000	
3.378	914	1880	2.057	0.000	
3.383	380	1927	5.068	0.000	
3.387	595	2023	3.399	0.000	
3.395	1390	2270	1.633	0.000	
3.405	1490	1994	1.338	0.000	
3.423	690	1601	2.321	0.000	
3.435	821	1554	1.894	0.000	
3.441	387	1583	4.087	0.000	
3.444	401	1625	4.051	0.000	
3.448	403	1636	4.060	0.000	
3.455	1216	1700	1.398	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
3.478	235	1185	5.047	0.000	
3.482	412	1229	2.986	0.000	
3.488	695	1177	1.694	0.000	
3.501	239	969	4.063	0.000	
3.509	914	1149	1.258	0.000	
3.520	1078	1069	0.992	0.000	
3.540	301	927	3.079	0.000	
3.556	406	849	2.089	0.000	
3.567	370	873	2.359	0.000	
3.572	178	939	5.270	0.000	
3.578	591	1171	1.981	0.000	
3.591	869	1353	1.556	0.000	
3.596	741	1352	1.826	0.000	
3.606	471	1401	2.976	0.000	
3.613	548	1411	2.577	0.000	
3.618	433	1521	3.511	0.000	
3.625	710	1635	2.303	0.000	
3.630	910	1667	1.832	0.000	
3.652	661	1562	2.362	0.000	
3.670	462	1214	2.627	0.000	
3.686	1036	1453	1.403	0.000	
3.690	829	1374	1.658	0.000	
3.702	531	1191	2.241	0.000	
3.712	452	1355	3.001	0.000	
3.716	820	1423	1.736	0.000	
3.736	2685	2093	0.780	0.000	
3.752	689	2030	2.946	0.000	
3.760	4109	2349	0.572	0.000	
3.805	3183	2036	0.640	0.000	
3.823	496	1686	3.401	0.000	
3.835	1641	2314	1.410	0.000	
3.859	9243	4616	0.499	0.001	
3.897	851	1745	2.051	0.000	
3.904	503	1721	3.419	0.000	
3.927	3866	3293	0.852	0.000	
3.941	5520	3558	0.645	0.000	
3.980	573	1715	2.991	0.000	
3.992	1027	1794	1.748	0.000	
3.995	1494	1860	1.245	0.000	
4.010	887	1639	1.847	0.000	
4.021	663	1724	2.602	0.000	
4.026	1380	1776	1.287	0.000	
4.045	306	1546	5.059	0.000	
4.053	1001	1758	1.757	0.000	
4.061	1137	1804	1.586	0.000	
4.072	779	1773	2.275	0.000	
4.080	989	1896	1.917	0.000	
4.087	561	1905	3.396	0.000	
4.098	1956	2156	1.103	0.000	
4.106	1168	2044	1.750	0.000	
4.127	1049	1627	1.551	0.000	
4.142	587	1545	2.633	0.000	
4.148	1155	1572	1.361	0.000	
4.173	3682	2398	0.651	0.000	
4.189	1023	1738	1.700	0.000	
4.204	549	1627	2.961	0.000	
4.213	628	1658	2.641	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
4.221	1039	1830	1.761	0.000	
4.227	447	1814	4.058	0.000	
4.248	2703	2638	0.976	0.000	
4.256	1387	2945	2.123	0.000	
4.260	743	2988	4.022	0.000	
4.265	912	3081	3.378	0.000	
4.268	779	3140	4.031	0.000	
4.275	1736	3217	1.853	0.000	
4.289	2688	3495	1.300	0.000	
4.295	3466	3448	0.995	0.000	
4.322	1054	2680	2.543	0.000	4 C12
4.330	1686	2627	1.558	0.000	
4.358	1066	1974	1.852	0.000	
4.378	434	1758	4.054	0.000	
4.384	1324	1879	1.419	0.000	
4.403	860	1608	1.869	0.000	
4.414	457	1567	3.431	0.000	
4.421	1117	1675	1.499	0.000	
4.433	910	1538	1.690	0.000	
4.439	865	1534	1.774	0.000	
4.449	764	1302	1.705	0.000	
4.471	433	1123	2.593	0.000	
4.476	734	1135	1.546	0.000	
4.490	385	1005	2.610	0.000	
4.498	555	1186	2.137	0.000	
4.502	695	1166	1.677	0.000	
4.518	587	949	1.618	0.000	
4.526	316	925	2.924	0.000	
4.533	560	989	1.765	0.000	
4.543	469	1001	2.135	0.000	
4.548	222	916	4.130	0.000	
4.553	188	980	5.207	0.000	
4.558	255	1038	4.076	0.000	
4.568	652	1157	1.775	0.000	
4.573	338	1151	3.409	0.000	
4.580	487	1283	2.636	0.000	
4.596	3801	1950	0.513	0.000	
4.631	531	1429	2.692	0.000	
4.663	4548	3737	0.822	0.000	
4.667	2815	3822	1.358	0.000	
4.679	2199	3760	1.710	0.000	
4.688	1068	3585	3.356	0.000	
4.694	2166	3742	1.727	0.000	
4.723	372603	172476	0.463	0.055	
4.894	47034	21828	0.464	0.006	
4.956	80510	28154	0.350	0.011	
4.999	54273	16950	0.312	0.008	
5.068	1137	5713	5.027	0.000	
5.072	8415	5792	0.688	0.001	
5.105	4203	4316	1.027	0.000	5 C14
5.146	660	2685	4.070	0.000	
5.153	2524	2649	1.050	0.000	
5.170	1076	2437	2.265	0.000	
5.174	2371	2438	1.028	0.000	
5.201	1013	2011	1.986	0.000	
5.210	2064	2332	1.130	0.000	
5.224	1083	2304	2.127	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
5.228	2027	2354	1.162	0.000	
5.276	4673	2682	0.574	0.000	
5.322	195	844	4.328	0.000	
5.331	977	1203	1.231	0.000	
5.356	490	993	2.027	0.000	
5.361	814	1044	1.283	0.000	
5.382	115	387	3.351	0.000	
5.399	619	960	1.551	0.000	
5.406	402	1035	2.576	0.000	
5.410	378	1122	2.968	0.000	
5.423	1663	1555	0.935	0.000	
5.452	5951	5020	0.844	0.000	
5.501	290	797	2.753	0.000	
5.523	2317	2472	1.067	0.000	
5.538	5946	6823	1.147	0.000	
5.792	501855376	76456669	0.152	74.449	6 C16
5.807	79757019	82319946	1.032	11.775	
5.823	77929961	88539160	1.136	11.505	
5.962	75333	84828	1.126	0.011	
5.986	474748	124326	0.262	0.070	
6.070	17103	57180	3.343	0.002	
6.074	120761	57565	0.477	0.017	
6.113	90233	47140	0.522	0.013	
6.165	407438	218439	0.536	0.060	
6.263	944101	374166	0.396	0.139	
6.414	114839	39498	0.344	0.016	7 C18
6.464	53190	31177	0.586	0.007	
6.523	31509	25870	0.821	0.004	
6.551	4785	23963	5.008	0.000	
6.559	51194	25409	0.496	0.007	
6.590	21354	21666	1.015	0.003	
6.612	35061	21127	0.603	0.005	$ 8 o-terph
6.638	17712	19934	1.125	0.002	
6.672	22159	19651	0.887	0.003	
6.683	26846	19268	0.718	0.003	
6.708	5413	18142	3.351	0.000	
6.713	24941	18247	0.732	0.003	
6.747	50657	18478	0.365	0.007	
6.795	23973	17444	0.728	0.003	
6.814	28457	17895	0.629	0.004	
6.837	10746	15445	1.437	0.001	
6.871	29974	21406	0.714	0.004	
6.874	4287	21471	5.009	0.000	
6.882	20520	21675	1.056	0.003	
6.944	32864	17445	0.531	0.004	
6.978	9138	15347	1.679	0.001	
7.014	4130	13830	3.348	0.000	9 C20
7.025	12567	14083	1.121	0.001	
7.038	4952	14274	2.882	0.000	
7.044	6508	14578	2.240	0.000	
7.050	25344	14736	0.581	0.003	
7.099	5531	12365	2.236	0.000	
7.108	16440	12371	0.752	0.002	
7.129	9415	11275	1.198	0.001	
7.175	3589	10327	2.878	0.000	
7.182	7285	10474	1.438	0.001	
7.212	11252	10002	0.889	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.227	5193	9506	1.830	0.000	
7.237	5172	9476	1.832	0.000	
7.247	4652	9357	2.011	0.000	
7.254	3258	9369	2.875	0.000	
7.259	7003	9455	1.350	0.001	
7.272	5540	9252	1.670	0.000	
7.283	4511	9087	2.014	0.000	
7.296	5828	9031	1.550	0.000	
7.308	4850	8866	1.828	0.000	
7.318	3111	9014	2.897	0.000	
7.324	3191	9168	2.873	0.000	
7.328	2775	9325	3.360	0.000	
7.339	6190	9713	1.569	0.000	
7.344	2920	9761	3.343	0.000	
7.350	17091	9874	0.578	0.002	
7.379	7217	8616	1.194	0.001	
7.395	5430	8408	1.548	0.000	
7.404	2492	8342	3.348	0.000	
7.409	1666	8354	5.014	0.000	
7.415	2955	8500	2.877	0.000	
7.423	3887	8782	2.259	0.000	
7.465	28160	14253	0.506	0.004	
7.471	6466	14499	2.242	0.000	
7.480	6649	15111	2.273	0.000	
7.484	26595	15197	0.571	0.003	
7.514	13964	13621	0.975	0.002	
7.539	8118	12614	1.554	0.001	
7.553	10540	12495	1.185	0.001	
7.584	2820	11307	4.010	0.000	
7.590	4522	11429	2.527	0.000	10 C22
7.620	16634	10435	0.627	0.002	
7.653	6793	9783	1.440	0.001	
7.663	8606	9666	1.123	0.001	
7.675	2827	9464	3.347	0.000	
7.683	9373	9620	1.026	0.001	
7.699	3657	9205	2.517	0.000	
7.708	5071	9290	1.832	0.000	
7.713	10483	9274	0.885	0.001	
7.735	10686	9257	0.866	0.001	
7.752	4732	8664	1.831	0.000	
7.765	5624	8765	1.558	0.000	
7.773	5614	8686	1.547	0.000	
7.784	3375	8506	2.520	0.000	
7.793	2118	8517	4.021	0.000	
7.799	10086	8544	0.847	0.001	
7.817	7761	8325	1.073	0.001	
7.833	2415	8088	3.350	0.000	
7.838	2838	8160	2.875	0.000	
7.844	3649	8173	2.240	0.000	
7.858	2009	8069	4.017	0.000	
7.864	4482	8197	1.829	0.000	
7.871	3688	8223	2.230	0.000	
7.879	4875	8269	1.696	0.000	
7.889	2009	8061	4.013	0.000	
7.897	4080	8308	2.036	0.000	
7.916	17828	10103	0.567	0.002	
7.935	4052	9086	2.242	0.000	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
7.940	2229	8948	4.015	0.000	
7.945	5765	8973	1.556	0.000	
7.954	6458	8765	1.357	0.000	
7.976	2099	8428	4.016	0.000	
7.984	10213	8807	0.862	0.001	
7.999	4897	8282	1.691	0.000	
8.013	8782	8112	0.924	0.001	
8.028	5860	7858	1.341	0.000	
8.040	3929	7871	2.003	0.000	
8.054	9161	8146	0.889	0.001	
8.067	2701	7766	2.876	0.000	
8.074	3069	7702	2.510	0.000	
8.081	2694	7742	2.874	0.000	
8.088	2705	7793	2.881	0.000	
8.095	5842	7832	1.341	0.000	
8.104	5419	7841	1.447	0.000	
8.119	5740	7735	1.348	0.000	
8.134	4986	7768	1.558	0.000	
8.141	5893	8009	1.359	0.000	
8.159	9098	8027	0.882	0.001	11 C24
8.174	3156	7971	2.526	0.000	
8.185	2376	7967	3.353	0.000	
8.190	4739	7937	1.675	0.000	
8.202	5181	8028	1.549	0.000	
8.212	1994	8027	4.025	0.000	
8.223	6137	8270	1.348	0.000	
8.236	6864	8171	1.190	0.001	
8.248	2383	7986	3.351	0.000	
8.253	2405	8059	3.351	0.000	
8.259	5294	8207	1.550	0.000	
8.268	2866	8235	2.874	0.000	
8.280	6583	8312	1.263	0.000	
8.289	4538	8296	1.828	0.000	
8.295	2060	8300	4.029	0.000	
8.300	2063	8291	4.020	0.000	
8.313	7062	8400	1.189	0.001	
8.318	1667	8375	5.023	0.000	
8.332	11362	9100	0.801	0.001	
8.343	4357	8741	2.006	0.000	
8.358	1267	8458	6.676	0.000	
8.363	2991	8621	2.882	0.000	
8.371	3980	8983	2.257	0.000	
8.379	6330	9083	1.435	0.000	
8.385	3111	8963	2.881	0.000	
8.393	6706	9050	1.349	0.000	
8.404	4903	8943	1.824	0.000	
8.417	8437	8972	1.063	0.001	
8.438	7166	9103	1.270	0.001	
8.443	3211	9227	2.873	0.000	12 C25
8.450	3688	9295	2.521	0.000	
8.455	2313	9276	4.010	0.000	
8.475	30054	13714	0.456	0.004	
8.504	5760	9733	1.690	0.000	
8.519	2799	9376	3.350	0.000	
8.529	4766	9710	2.037	0.000	
8.537	4875	9815	2.013	0.000	
8.543	8411	9973	1.186	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
8.555	2969	9916	3.340	0.000	
8.560	3974	9987	2.513	0.000	
8.568	2483	9997	4.026	0.000	
8.572	5007	10043	2.006	0.000	
8.591	14074	10725	0.762	0.002	
8.602	2648	10665	4.028	0.000	
8.606	2159	10862	5.032	0.000	
8.609	2183	10952	5.017	0.000	
8.633	7361	10561	1.435	0.001	
8.647	6774	10495	1.549	0.001	
8.658	2596	10420	4.014	0.000	
8.663	4723	10573	2.239	0.000	
8.669	3156	10589	3.355	0.000	
8.687	15405	11334	0.736	0.002	
8.699	6103	11158	1.828	0.000	
8.707	2223	11136	5.009	0.000	13 C26
8.730	28697	12536	0.437	0.004	
8.754	8658	11553	1.334	0.001	
8.763	2896	11612	4.010	0.000	
8.780	15029	12352	0.822	0.002	
8.788	1833	12243	6.680	0.000	
8.798	11854	12679	1.070	0.001	
8.806	1873	12509	6.677	0.000	
8.809	3133	12565	4.011	0.000	
8.813	2506	12550	5.008	0.000	
8.819	7588	12757	1.681	0.001	
8.829	4418	12679	2.870	0.000	
8.835	6988	12762	1.826	0.001	
8.848	13711	13258	0.967	0.002	
8.872	26625	13656	0.513	0.003	
8.894	4575	13127	2.869	0.000	
8.898	2631	13188	5.013	0.000	
8.902	5918	13262	2.241	0.000	
8.914	8577	13313	1.552	0.001	
8.922	4011	13433	3.349	0.000	
8.926	4724	13546	2.867	0.000	
8.933	6787	13651	2.011	0.001	
8.946	9614	13923	1.448	0.001	
8.951	6274	14004	2.232	0.000	
8.960	5592	14036	2.510	0.000	
8.966	3513	14090	4.011	0.000	
8.969	2829	14171	5.009	0.000	
8.973	4976	14233	2.860	0.000	
8.980	4289	14365	3.350	0.000	
8.996	27708	16441	0.593	0.004	
9.013	8129	14847	1.827	0.001	
9.025	8129	14840	1.826	0.001	
9.036	7503	15229	2.030	0.001	
9.040	4559	15225	3.340	0.000	
9.057	14920	16251	1.089	0.002	
9.067	9915	16831	1.698	0.001	
9.076	8535	17331	2.031	0.001	
9.081	5250	17596	3.352	0.000	
9.084	10558	17675	1.674	0.001	
9.095	4386	17601	4.013	0.000	
9.111	30564	19262	0.630	0.004	
9.128	8346	18722	2.243	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.139	15095	18986	1.258	0.002	
9.149	6655	19050	2.862	0.000	
9.158	23240	19719	0.848	0.003	
9.171	1903	19042	10.005	0.000	
9.175	4773	19156	4.013	0.000	
9.187	23630	19927	0.843	0.003	
9.199	4925	19763	4.013	0.000	
9.208	14115	20394	1.445	0.002	
9.219	12303	20691	1.682	0.001	
9.226	7266	20831	2.867	0.001	
9.233	15622	21000	1.344	0.002	14 C28
9.247	9280	20714	2.232	0.001	
9.262	45057	27849	0.618	0.006	
9.281	22651	23200	1.024	0.003	
9.304	13489	22820	1.692	0.001	
9.307	18038	22862	1.267	0.002	
9.328	8656	21778	2.516	0.001	
9.334	8635	21650	2.507	0.001	
9.343	16240	21738	1.339	0.002	
9.354	5409	21709	4.013	0.000	
9.367	16481	22234	1.349	0.002	
9.370	6683	22346	3.344	0.000	
9.382	14775	23166	1.568	0.002	
9.390	11679	23531	2.015	0.001	
9.394	12888	23584	1.830	0.001	
9.408	18752	23645	1.261	0.002	
9.416	4675	23396	5.004	0.000	
9.428	25138	24392	0.970	0.003	
9.438	20233	24095	1.191	0.002	
9.468	67429	26696	0.396	0.009	
9.496	8413	24122	2.867	0.001	
9.507	12049	24259	2.013	0.001	
9.527	36362	25771	0.709	0.005	
9.538	12891	25911	2.010	0.001	
9.543	6452	25853	4.007	0.000	
9.551	10420	26202	2.515	0.001	
9.557	29750	26593	0.894	0.004	
9.574	6252	25071	4.010	0.000	
9.593	29143	27655	0.949	0.004	
9.599	40783	27905	0.684	0.006	
9.620	13159	26364	2.004	0.001	
9.632	17259	26799	1.553	0.002	
9.640	13210	26592	2.013	0.001	
9.664	35362	28170	0.797	0.005	
9.672	27890	28134	1.009	0.004	
9.696	26737	28634	1.071	0.003	
9.711	53475	30848	0.577	0.007	
9.745	33266	29504	0.887	0.004	$ 15 Triacon Surr
9.752	7348	29501	4.015	0.001	
9.756	20542	29565	1.439	0.003	
9.768	7255	29059	4.005	0.001	
9.773	7275	29173	4.010	0.001	
9.785	31543	30611	0.970	0.004	
9.803	46804	32832	0.701	0.006	
9.821	10456	30060	2.875	0.001	
9.833	30772	31156	1.012	0.004	
9.860	77784	33514	0.431	0.011	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
9.881	12779	32069	2.510	0.001	
9.892	14531	32668	2.248	0.002	
9.896	8201	32902	4.012	0.001	
9.908	23357	33882	1.451	0.003	
9.912	27050	34095	1.260	0.003	
9.939	14585	32570	2.233	0.002	
9.951	23032	33095	1.437	0.003	
9.956	11596	33292	2.871	0.001	
9.966	16544	33271	2.011	0.002	
9.971	11660	33391	2.864	0.001	
9.975	10051	33617	3.345	0.001	
9.983	15209	33983	2.234	0.002	
9.988	15177	33830	2.229	0.002	
9.996	10128	33907	3.348	0.001	
10.018	43348	35629	0.822	0.006	
10.021	7133	35693	5.004	0.001	
10.025	8960	35988	4.016	0.001	
10.034	42064	36944	0.878	0.006	
10.063	65447	38699	0.591	0.009	
10.077	7375	36906	5.004	0.001	
10.083	16743	37428	2.235	0.002	
10.095	34467	38665	1.122	0.005	
10.118	90921	40621	0.447	0.013	
10.151	37738	38047	1.008	0.005	
10.158	11383	38037	3.342	0.001	
10.168	36074	38274	1.061	0.005	
10.181	15072	37809	2.509	0.002	16 C32
10.185	5655	37746	6.675	0.000	
10.198	43905	38471	0.876	0.006	
10.208	24771	38177	1.541	0.003	
10.218	19031	38113	2.003	0.002	
10.228	13353	38279	2.867	0.001	
10.237	21225	38826	1.829	0.003	
10.243	30946	38929	1.258	0.004	
10.266	43064	39733	0.923	0.006	
10.275	11912	39784	3.340	0.001	
10.278	19932	39886	2.001	0.002	
10.293	46366	40725	0.878	0.006	
10.318	46465	41024	0.883	0.006	
10.328	24720	41353	1.673	0.003	
10.334	10308	41278	4.005	0.001	
10.343	29100	41866	1.439	0.004	
10.354	22822	41695	1.827	0.003	
10.360	16568	41490	2.504	0.002	
10.376	31388	42321	1.348	0.004	
10.384	36478	43119	1.182	0.005	
10.393	21427	43144	2.014	0.003	
10.416	82339	44731	0.543	0.012	
10.434	23173	42257	1.824	0.003	
10.455	42801	43684	1.021	0.006	
10.459	19648	44004	2.240	0.002	
10.469	19632	43883	2.235	0.002	
10.492	56113	45807	0.816	0.008	
10.497	20626	45915	2.226	0.003	
10.503	27439	45837	1.671	0.004	
10.513	31833	45842	1.440	0.004	
10.523	6773	45190	6.672	0.001	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
10.529	22697	45513	2.005	0.003	
10.543	39087	46432	1.188	0.005	
10.552	16284	46719	2.869	0.002	
10.558	18796	47158	2.509	0.002	
10.576	69878	48769	0.698	0.010	
10.586	12085	48384	4.004	0.001	
10.592	21757	48469	2.228	0.003	
10.609	46960	50482	1.075	0.006	
10.616	40486	50812	1.255	0.005	17 C34
10.628	52392	50284	0.960	0.007	
10.665	99744	52644	0.528	0.014	
10.680	20832	52264	2.509	0.003	
10.699	126137	55939	0.443	0.018	
10.723	18258	52316	2.865	0.002	
10.733	65550	52928	0.807	0.009	
10.751	49102	51903	1.057	0.007	
10.765	10288	51490	5.005	0.001	
10.777	73220	52877	0.722	0.010	
10.791	15621	52150	3.338	0.002	
10.799	46819	52190	1.115	0.006	
10.817	52000	52328	1.006	0.007	
10.828	13014	52167	4.008	0.001	
10.833	18275	52280	2.861	0.002	
10.838	67284	52271	0.777	0.009	
10.860	15395	51401	3.339	0.002	
10.867	15366	51252	3.335	0.002	
10.874	25712	51608	2.007	0.003	
10.885	59363	52064	0.877	0.008	
10.901	33199	51247	1.544	0.004	
10.911	35859	51446	1.435	0.005	
10.925	15150	50526	3.335	0.002	
10.936	27761	50508	1.819	0.004	
10.954	40634	51235	1.261	0.005	
10.958	17973	51428	2.861	0.002	
10.982	101216	54997	0.543	0.014	
10.999	80380	54264	0.675	0.011	
11.022	15822	52869	3.342	0.002	
11.029	23878	53171	2.227	0.003	
11.032	23908	53219	2.226	0.003	
11.044	39793	53228	1.338	0.005	
11.053	13218	52959	4.007	0.001	19 C36
11.057	26491	53088	2.004	0.003	
11.069	47933	53454	1.115	0.007	
11.079	78088	52997	0.679	0.011	
11.132	4853	48537	10.002	0.000	
11.138	21933	48845	2.227	0.003	
11.148	46678	49317	1.057	0.006	
11.158	12248	49060	4.006	0.001	
11.164	14711	49102	3.338	0.002	
11.179	64473	49939	0.775	0.009	
11.192	19751	49439	2.503	0.002	
11.197	14848	49541	3.337	0.002	
11.202	17336	49566	2.859	0.002	
11.206	12400	49639	4.003	0.001	
11.212	56808	49881	0.878	0.008	
11.230	26830	48794	1.819	0.003	
11.263	19014	47590	2.503	0.002	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
11.267	11927	47790	4.007	0.001	
11.285	66432	50042	0.753	0.009	
11.308	17214	49235	2.860	0.002	
11.312	19684	49285	2.504	0.002	
11.322	19740	49570	2.511	0.002	
11.331	27467	50208	1.828	0.004	
11.334	12565	50301	4.003	0.001	
11.338	17617	50367	2.859	0.002	
11.356	50450	50688	1.005	0.007	
11.383	31641	48774	1.541	0.004	
11.392	14562	48589	3.337	0.002	
11.398	14566	48593	3.336	0.002	
11.405	21947	48858	2.226	0.003	
11.418	36961	49602	1.342	0.005	
11.428	52174	49838	0.955	0.007	
11.438	46900	49605	1.058	0.006	
11.456	66003	49218	0.746	0.009	
11.481	84312	48818	0.579	0.012	
11.518	39837	46996	1.180	0.005	
11.533	55836	46822	0.839	0.008	20 C38
11.560	30101	46465	1.544	0.004	
11.568	20916	46512	2.224	0.003	
11.573	11637	46596	4.004	0.001	
11.579	23274	46598	2.002	0.003	
11.586	13953	46531	3.335	0.002	
11.591	9318	46631	5.004	0.001	
11.623	97892	48831	0.499	0.014	
11.631	17107	48984	2.863	0.002	
11.638	22090	49260	2.230	0.003	
11.642	32050	49351	1.540	0.004	
11.669	95446	50981	0.534	0.014	
11.685	95822	49865	0.520	0.014	
11.788	8918	44609	5.002	0.001	
11.791	35704	44768	1.254	0.005	
11.804	11082	44350	4.002	0.001	
11.813	22172	44403	2.003	0.003	
11.823	19993	44543	2.228	0.002	
11.829	13395	44754	3.341	0.001	
11.837	20184	44981	2.228	0.002	
11.852	26933	44942	1.669	0.003	
11.866	36041	45224	1.255	0.005	
11.877	15835	45355	2.864	0.002	
11.883	18222	45726	2.509	0.002	
11.889	15985	45741	2.861	0.002	
11.896	20679	46117	2.230	0.003	
11.905	23259	46896	2.016	0.003	
11.929	70146	49826	0.710	0.010	
11.936	52288	50085	0.958	0.007	
11.951	14787	49369	3.339	0.002	
11.957	17313	49595	2.865	0.002	
11.961	32199	49647	1.542	0.004	
11.971	19578	49063	2.506	0.002	
11.980	34244	49065	1.433	0.005	
12.019	96987	51133	0.527	0.014	
12.025	48685	51499	1.058	0.007	
12.053	38386	51386	1.339	0.005	
12.062	38575	51549	1.336	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
12.070	17923	51300	2.862	0.002	
12.078	45780	51141	1.117	0.006	
12.105	31495	48817	1.550	0.004	
12.118	85510	48295	0.565	0.012	
12.148	55474	46657	0.841	0.008	21 C40
12.172	34299	45899	1.338	0.005	
12.181	18286	45754	2.502	0.002	
12.188	20565	45727	2.223	0.003	
12.198	29701	45787	1.542	0.004	
12.212	11377	45530	4.002	0.001	
12.218	29576	45566	1.541	0.004	
12.237	41054	45750	1.114	0.006	
12.243	13695	45701	3.337	0.002	
12.253	27528	46122	1.675	0.004	
12.260	16149	46201	2.861	0.002	
12.272	32473	46571	1.434	0.004	
12.347	231342	54259	0.235	0.034	
12.355	96470	54322	0.563	0.014	
12.383	13155	52687	4.005	0.001	
12.389	52817	52930	1.002	0.007	
12.434	117936	55204	0.468	0.017	
12.440	19323	55283	2.861	0.002	
12.448	22049	55156	2.502	0.003	
12.460	127044	56114	0.442	0.018	
12.500	63536	55700	0.877	0.009	
12.519	44746	56237	1.257	0.006	
12.523	16928	56556	3.341	0.002	
12.528	14154	56666	4.003	0.002	
12.532	14154	56644	4.002	0.002	
12.538	25607	57089	2.229	0.003	
12.543	31284	57010	1.822	0.004	
12.560	76588	57084	0.745	0.011	
12.574	22463	56167	2.500	0.003	
12.583	192414	56305	0.293	0.028	
12.668	201456	54098	0.269	0.029	
12.722	63529	49368	0.777	0.009	
12.744	14574	48683	3.340	0.002	
12.757	68233	49046	0.719	0.010	
12.777	29106	48653	1.672	0.004	
12.802	69072	49884	0.722	0.010	
12.805	19947	49915	2.502	0.002	
12.813	12457	49907	4.006	0.001	
12.826	42860	50672	1.182	0.006	
12.830	15192	50711	3.338	0.002	
12.835	63121	50727	0.804	0.009	
12.856	30109	50299	1.671	0.004	
12.871	12459	49875	4.003	0.001	
12.876	24950	49913	2.001	0.003	
12.883	12458	49860	4.002	0.001	
12.892	24999	50091	2.004	0.003	
12.904	37682	50442	1.339	0.005	
12.918	60965	51059	0.838	0.009	
12.929	15268	50972	3.338	0.002	
12.950	101236	52476	0.518	0.014	
12.991	32619	50285	1.542	0.004	
13.030	23826	47690	2.002	0.003	
13.047	49429	47410	0.959	0.007	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.072	11668	46709	4.003	0.001	
13.077	14056	46964	3.341	0.002	
13.083	21201	47214	2.227	0.003	
13.092	45034	47490	1.055	0.006	
13.103	33139	47401	1.430	0.004	
13.119	58622	47300	0.807	0.008	
13.136	61979	46406	0.749	0.009	
13.163	36232	45399	1.253	0.005	
13.172	13552	45219	3.337	0.002	
13.178	13550	45211	3.337	0.002	
13.183	13581	45318	3.337	0.002	
13.188	15867	45365	2.859	0.002	
13.193	11350	45433	4.003	0.001	
13.206	54879	45909	0.837	0.008	
13.233	74220	46899	0.632	0.010	
13.246	18724	46923	2.506	0.002	
13.250	14089	47028	3.338	0.002	
13.254	9392	46999	5.004	0.001	
13.261	35241	47103	1.337	0.005	
13.270	21093	46884	2.223	0.003	
13.278	16404	46889	2.858	0.002	
13.284	28108	46937	1.670	0.004	
13.309	27777	46575	1.677	0.004	
13.313	11643	46617	4.004	0.001	
13.323	30391	46938	1.544	0.004	
13.337	49696	47554	0.957	0.007	
13.345	11906	47686	4.005	0.001	
13.352	21499	47921	2.229	0.003	
13.358	14416	48133	3.339	0.002	
13.366	24163	48487	2.007	0.003	
13.391	108474	49842	0.459	0.016	
13.411	39818	49922	1.254	0.005	
13.421	140245	49882	0.356	0.020	
13.468	75433	46221	0.613	0.011	
13.519	59701	44435	0.744	0.008	
13.538	26345	44021	1.671	0.003	
13.553	17475	43727	2.502	0.002	
13.559	19699	43828	2.225	0.002	
13.566	15324	43832	2.860	0.002	
13.574	28519	43956	1.541	0.004	
13.585	21950	43943	2.002	0.003	
13.595	26497	44341	1.673	0.003	
13.603	22230	44574	2.005	0.003	
13.608	11135	44585	4.004	0.001	
13.633	100703	46371	0.460	0.014	
13.650	25255	45974	1.820	0.003	
13.663	20511	45675	2.227	0.003	
13.670	15945	45584	2.859	0.002	
13.677	40973	45642	1.114	0.006	
13.688	4544	45448	10.002	0.000	
13.693	29520	45508	1.542	0.004	
13.718	24720	44995	1.820	0.003	
13.727	11216	44890	4.002	0.001	
13.735	29185	45025	1.543	0.004	
13.752	17874	44782	2.505	0.002	
13.767	35874	45020	1.255	0.005	
13.775	36036	45104	1.252	0.005	

RT	AREA	HEIGHT	HT/AREA	% AREA	COMPOUNDS
13.785	11226	44939	4.003	0.001	
13.790	47016	44953	0.956	0.006	
13.813	11118	44516	4.004	0.001	
13.818	37641	44507	1.182	0.005	
13.832	15424	44192	2.865	0.002	
13.838	17564	43967	2.503	0.002	
13.844	26339	43892	1.666	0.003	
13.855	30567	43821	1.434	0.004	
13.865	23854	43526	1.825	0.003	
13.882	28266	43639	1.544	0.004	
13.886	30418	43629	1.434	0.004	
13.901	34702	43472	1.253	0.005	
13.920	48162	44005	0.914	0.007	
13.928	17577	43956	2.501	0.002	
13.941	15410	44084	2.861	0.002	
13.946	11045	44251	4.006	0.001	
13.949	24369	44341	1.820	0.003	
13.959	22103	44264	2.003	0.003	
13.967	22088	44195	2.001	0.003	
13.976	33207	44336	1.335	0.004	18 Filter Peak
13.998	24195	44018	1.819	0.003	
14.007	15335	43888	2.862	0.002	
14.014	17519	43863	2.504	0.002	
14.019	54335	43870	0.807	0.008	
14.046	10722	42915	4.003	0.001	
14.052	19305	42955	2.225	0.002	
14.058	8568	42864	5.003	0.001	
14.067	38739	43159	1.114	0.005	
14.077	15012	42931	2.860	0.002	
14.083	25753	42977	1.669	0.003	
14.102	25682	42913	1.671	0.003	
14.108	19267	42865	2.225	0.002	
14.116	12834	42815	3.336	0.001	
14.126	25874	43369	1.676	0.003	
14.133	56339	43595	0.774	0.008	
14.161	32503	43582	1.341	0.004	
14.165	10909	43696	4.006	0.001	
14.170	15313	43822	2.862	0.002	
14.175	10960	43911	4.007	0.001	
14.178	13176	43945	3.335	0.001	
14.183	19785	43976	2.223	0.002	
14.191	8796	44018	5.005	0.001	
14.197	17636	44177	2.505	0.002	
14.208	28815	44459	1.543	0.004	
14.219	8873	44379	5.002	0.001	
14.223	13318	44445	3.337	0.001	
14.229	28860	44456	1.540	0.004	
14.247	15436	44194	2.863	0.002	
14.260	37147	43758	1.178	0.005	
14.274	45685	43705	0.957	0.006	
	677340272	268782821		100.000	

Total unknown % area = 25.478

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOC"

Product no.: 22523046
Lot no.: LRAC9812
Expiry Date: May 2023
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: Dichloromethane
Certificate version: LRAC9812.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

J005200
SVOA-ABN ACID STOCK-200-800ug/ml
Solvent / Lot: DCM
Prep: 5/18/2021 by JZ
Exp: 5/31/2023
Location:

JZ 5/18/21

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	802	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	802	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	802	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1806	µg/mL	75.9	MKBP5833V
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	803	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	801	µg/mL	99.9	JS00013
4-NITROPHENOL CAS# 100-02-7	801	µg/mL	99.9	LC10889
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1804	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	803	µg/mL	98.7	MKCK8156
BENZOIC ACID CAS# 65-85-0	1805	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Agilent

Certificate of Analysis

J008074

SVOA PAH STD 2000ug/ml
Expires 6/30/2023
Prepared By Joshua Rains 8/5/2021

Product Name: PAH Standard

Product Number: US-106N-1

Lot Number: 0006540449

Lot Issue Date: 11-Jun-2020

Expiration Date: 30-Jun-2023

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
acenaphthene	000083-32-9	RM10879	2008 ± 10 µg/mL
acenaphthylene	000208-96-8	RM10891	2003 ± 10 µg/mL
anthracene	000120-12-7	RM14212	2006 ± 10 µg/mL
benz[a]anthracene	000056-55-3	RM16072	2006 ± 10 µg/mL
benzo[b]fluoranthene	000205-99-2	RM14571	2005 ± 10 µg/mL
benzo[k]fluoranthene	000207-08-9	RM14321	2009 ± 10 µg/mL
benzo[ghi]perylene	000191-24-2	RM15761	2008 ± 10 µg/mL
benzo[a]pyrene	000050-32-8	RM12669	2009 ± 10 µg/mL
chrysene	000218-01-9	RM12260	2009 ± 10 µg/mL
dibenz[a,h]anthracene	000053-70-3	RM06786	2009 ± 10 µg/mL
fluoranthene	000206-44-0	RM12277	2004 ± 10 µg/mL
fluorene	000086-73-7	RM09441	2009 ± 10 µg/mL
indeno[1,2,3-cd]pyrene	000193-39-5	RM14192	2009 ± 10 µg/mL
naphthalene	000091-20-3	NT00970	2008 ± 10 µg/mL
phenanthrene	000085-01-8	RM10495	2009 ± 10 µg/mL
pyrene	000129-00-0	RM03479	2008 ± 10 µg/mL

Matrix: methylene chloride/benzene (1:1)

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

Certificate of Analysis

Product Number: US-106N-1 **Lot Number:** 0006540449

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ISO 17034 Cert No.
AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 2 of 2

www.agilent.com/quality/

ISO 17025 Cert
No. AT-1937

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL16062
Certification Date: November 19, 2020
Expiration Date: November 30, 2030

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 2.740%
3,3'-Dichlorobenzidine	91-94-1	2000	± 3.229%

J008310
Benzidines std @2000ug/ml
Expires 11/30/2030
Prepared By Van Spohn 8/12/2021

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

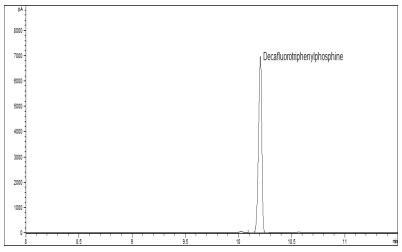
References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Certificate of Analysis - Certified Reference Material

Decafluorotriphenylphosphine solution

Product no.: 48724-U
Lot no.: LRAD0628
Expiry Date: October 2024
Manufacturing Date: September 2021
Storage: ROOM TEMPERATURE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0628.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

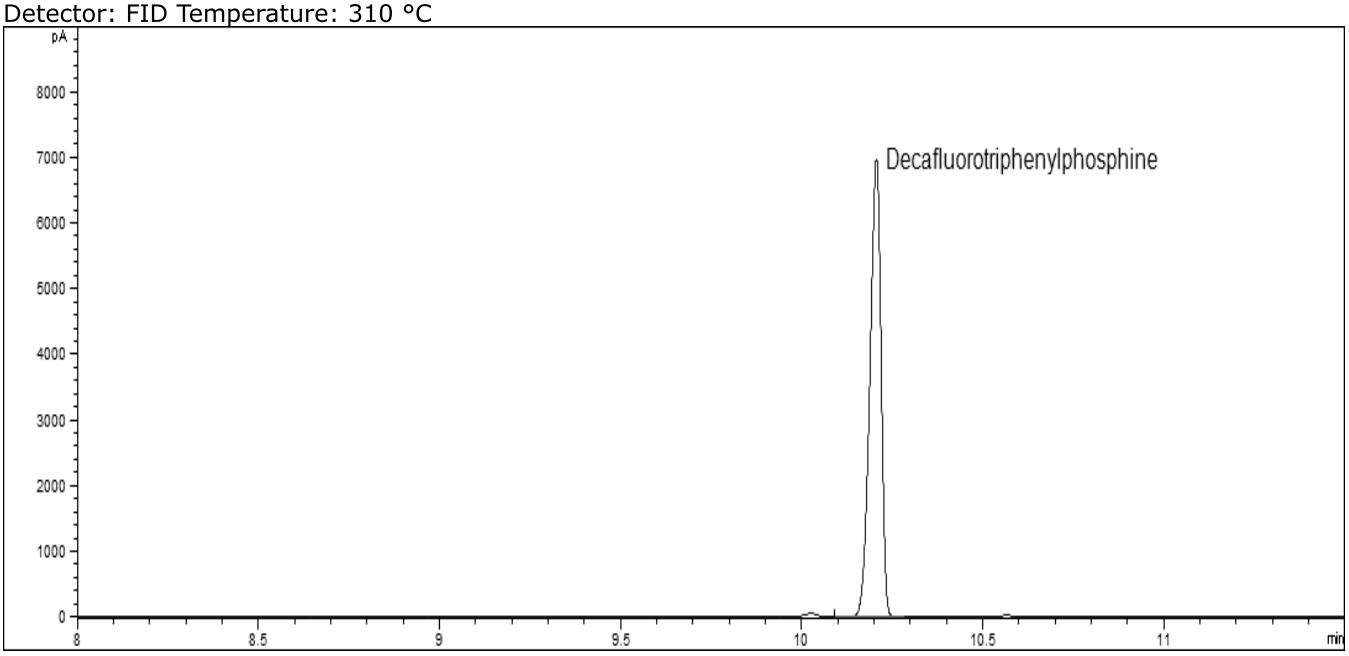


Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
DFTPP CAS# 5074-71-5	25.2 ± 2.6	mg/mL	97.0	10220909

ASSAY Method

METHOD: GC (BELLEFONTE)
Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.3 mL/min
Inlet Temperature: 250 °C Injection Volume: 1 µL
Injection Mode: 25:1
Temperature Program: 120 °C (Hold 0 min) @ 12 °C/min to 260 °C (Hold 0 min)
Detector: FID Temperature: 310 °C



Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Elution details:

EO	RT(MIN)	ANALYTE
1	10.206	Decafluorotriphenylphosphine

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Minimum sample size: 1 µL

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 30-Sep-2021

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0628.01	30-Sep-2021	Original Release Date

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Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Certified Values

Analyte	*Units*	*Certified Value* [1,4]
1,2,4-Trichlorobenzene	µg/Kg	1477 ± 181
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	1625 ± 292
1-Chloronaphthalene	µg/Kg	2809 ± 84
2,3-Dimethylphenol	µg/Kg	4552 ± 137
2,4,5-Trichlorophenol	µg/Kg	3438 ± 245
2,4,6-Trichlorophenol	µg/Kg	2194 ± 251
2,4-Dichlorophenol	µg/Kg	6991 ± 394
2,4-Dimethylphenol	µg/Kg	6357 ± 879
2,4-Dinitrophenol	µg/Kg	2922 ± 523
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	3318 ± 442
2,6-Dichlorophenol	µg/Kg	4578 ± 874
2,6-Dimethylphenol	µg/Kg	7582 ± 228
2-Chloronaphthalene	µg/Kg	2223 ± 168
2-Chlorophenol	µg/Kg	1678 ± 202
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	5148 ± 685
2-Methylphenol (o-Cresol)	µg/Kg	6004 ± 573
2-Nitrophenol	µg/Kg	6456 ± 383
3,4-Dimethylphenol	µg/Kg	7185 ± 216
3+4-Methylphenol (m+p-Cresol)	µg/Kg	8033 ± 1613
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	7169 ± 310
4-Chloro-3-methylphenol	µg/Kg	2071 ± 110
4-Chlorophenyl phenylether	µg/Kg	2052 ± 113
4-Methylphenol (p-Cresol)	µg/Kg	6617 ± 1371
4-Nitrophenol	µg/Kg	6812 ± 595
Acenaphthene	µg/Kg	5489 ± 380

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

SIGMA-ALDRICH®
2931 Soldier Springs Rd. Laramie, Wyoming 82070 USA
800-325-5832
TechService@milliporesigma.com www.sigma-aldrich.com

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Acenaphthylene	µg/Kg	1948 ± 240
Anthracene	µg/Kg	2866 ± 237
Benzo(a)anthracene	µg/Kg	5751 ± 552
Benzo(a)pyrene	µg/Kg	5902 ± 612
Benzo(b)fluoranthene	µg/Kg	3010 ± 409
Benzo(b+k)fluoranthene	µg/Kg	6534 ± 196
Benzo(g,h,i)perylene	µg/Kg	1380 ± 136
Benzo(k)fluoranthene	µg/Kg	2215 ± 237
Butyl benzyl phthalate	µg/Kg	3511 ± 384
Carbazole	µg/Kg	5412 ± 407
Chrysene	µg/Kg	1477 ± 72
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	2905 ± 321
Dibenzo(a,h)anthracene	µg/Kg	3420 ± 302
Dibenzofuran	µg/Kg	6130 ± 253
Dimethyl phthalate	µg/Kg	4537 ± 250
Di-n-butyl phthalate	µg/Kg	1721 ± 154
Di-n-octyl phthalate	µg/Kg	2744 ± 288
Fluoranthene	µg/Kg	2497 ± 222
Fluorene	µg/Kg	3724 ± 222
Hexachlorobutadiene	µg/Kg	1877 ± 245
Indeno(1,2,3-cd) pyrene	µg/Kg	3914 ± 409
Isophorone	µg/Kg	1615 ± 170
Naphthalene	µg/Kg	4458 ± 480
Nitrobenzene	µg/Kg	3539 ± 266
n-Nitrosodimethylamine	µg/Kg	1580 ± 402
n-Nitrosodiphenylamine	µg/Kg	2854 ± 379
Pentachlorophenol	µg/Kg	3411 ± 358
Phenanthrene	µg/Kg	5052 ± 385
Phenol	µg/Kg	2660 ± 184
Pyrene	µg/Kg	2964 ± 256
Pyridine	µg/Kg	1008 ± 30

Informational Values

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID CRM143-50G
Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Analyte	*Units*	*Suggested Acceptance Windows*	*Standard Deviation*
1,2,4-Trichlorobenzene	µg/Kg	148 to 2853	459
1,3-Dichlorobenzene (m-Dichlorobenzene)	µg/Kg	163 to 3440	605
1-Chloronaphthalene	µg/Kg	1123 to 4494	562
2,3-Dimethylphenol	µg/Kg	1821 to 7284	910
2,4,5-Trichlorophenol	µg/Kg	1003 to 5872	811
2,4,6-Trichlorophenol	µg/Kg	640 to 3748	518
2,4-Dichlorophenol	µg/Kg	2391 to 11591	1533
2,4-Dimethylphenol	µg/Kg	0.00 to 13959	2534
2,4-Dinitrophenol	µg/Kg	1169 to 4675	584
2,4-Dinitrotoluene (2,4-DNT)	µg/Kg	1248 to 5388	690
2,6-Dichlorophenol	µg/Kg	1831 to 7324	916
2,6-Dimethylphenol	µg/Kg	3033 to 12132	1516
2-Chloronaphthalene	µg/Kg	748 to 3699	492
2-Chlorophenol	µg/Kg	415 to 2942	421
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	µg/Kg	0.00 to 10347	1733
2-Methylphenol (o-Cresol)	µg/Kg	1306 to 10702	1566
2-Nitrophenol	µg/Kg	1534 to 11379	1641
3,4-Dimethylphenol	µg/Kg	2874 to 11495	1437
3+4-Methylphenol (m+p-Cresol)	µg/Kg	4054 to 16218	2027
4-Bromophenyl phenyl ether (BDE-3)	µg/Kg	2901 to 11437	1423
4-Chloro-3-methylphenol	µg/Kg	677 to 3464	464
4-Chlorophenyl phenylether	µg/Kg	756 to 3348	432
4-Methylphenol (p-Cresol)	µg/Kg	2647 to 10587	1323
4-Nitrophenol	µg/Kg	681 to 14762	2650
Acenaphthene	µg/Kg	2243 to 8736	1082
Acenaphthylene	µg/Kg	712 to 3183	412
Anthracene	µg/Kg	1218 to 4515	550
Benzo(a)anthracene	µg/Kg	2806 to 8696	982
Benzo(a)pyrene	µg/Kg	2512 to 9292	1130
Benzo(b)fluoranthene	µg/Kg	1197 to 4822	604
Benzo(b+k)fluoranthene	µg/Kg	2614 to 10454	1307

Description

Lot **LRAC8918**
Expiration Date January 2024
Manufacturing Date January 2021
Storage Conditions Refrigerate
Solvent/Matrix SOIL

Benzo(g,h,i)perylene	µg/Kg	489 to 2271	297
Benzo(k)fluoranthene	µg/Kg	892 to 3537	441
Butyl benzyl phthalate	µg/Kg	1255 to 5766	752
Carbazole	µg/Kg	2032 to 8792	1127
Chrysene	µg/Kg	669 to 2284	269
Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	µg/Kg	765 to 5045	713
Dibenzo(a,h)anthracene	µg/Kg	1257 to 5583	721
Dibenzofuran	µg/Kg	2766 to 9493	1121
Dimethyl phthalate	µg/Kg	1842 to 7231	898
Di-n-butyl phthalate	µg/Kg	495 to 2947	409
Di-n-octyl phthalate	µg/Kg	690 to 4798	685
Fluoranthene	µg/Kg	984 to 4009	504
Fluorene	µg/Kg	1638 to 5810	695
Hexachlorobutadiene	µg/Kg	425 to 3329	484
Indeno(1,2,3-cd) pyrene	µg/Kg	870 to 6957	1015
Isophorone	µg/Kg	437 to 2792	392
Naphthalene	µg/Kg	1131 to 7784	1109
Nitrobenzene	µg/Kg	1024 to 6054	838
n-Nitrosodimethylamine	µg/Kg	632 to 2528	316
n-Nitrosodiphenylamine	µg/Kg	1142 to 4567	571
Pentachlorophenol	µg/Kg	341 to 7037	1209
Phenanthrene	µg/Kg	2307 to 7798	915
Phenol	µg/Kg	681 to 4639	660
Pyrene	µg/Kg	1118 to 4810	615
Pyridine	µg/Kg	403 to 1613	202

Additional Information:

DESCRIPTION

The organic sample is a soil containing extractable BNAs for analysis by 8100, 8270, 8310 or equivalent methods.

This product consist of a 5 vials each containing 10g of soil for analysis of PAHs. Each vial is identical and has been tested how homogeneity. Only one vial is need for test the remaining vials are to be used for multiple methods or routine testing.

The soil has been sterilized to minimize degradation of the sample.

The sample has been sized to 100 mesh.

Required storage condition is 4ºC.

The sample has been intentionally prepared with an apparent headspace.

STORAGE

The sample should be stored at 4ºC. It has been determined to be stable for the duration of the expiration date.

After sub-sampling replace cap securely and store remaining sample at 4ºC.

The shelf life of the product was determined by historic stability of similar CRM's. The expiration date may be extended based on stock and popularity upon successful stability testing by a 17025 accredited laboratory.

Certificate of Analysis

BNAs - Sandy Loam 1

Certified Reference Material

Description

Product ID	CRM143-50G
Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

Stability and shelf life after opening must be determined by the user, taking into account sampling frequency/volume and all local conditions.

SAMPLE PREPARATION

Extract the complete contents of a single vial. Transfer entire contents of one vial to extraction vessel. Rinse vial and cap with extraction solvent.

Assume a 10g sample size for all calculations.

Note: Sample extracts and calibration solutions should be in the same solvent.

Report all results on a wet weight basis, do not correct for moisture.

NOTE: For method 8100 and using a packed column gas chromatographic method or cannot adequately resolve the following may coelute in four pairs of compounds: anthracene and phenanthrene; chrysene and benzo(a)anthracene; benzo(b)fluoranthene and benzo(k)fluoranthene; and dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

SCOPE AND APPLICATION

The BNAs in Soil Certified Reference Material (CRM) consists of 5 10mL VOA vials, with a Teflon lined closures containing approximately 10 grams of soil, fortified with BNAs. Being a natural matrix waste sample the analyst is challenged by the same preparation problems, analytical interferences, etc. as is typical for similar matrices received by the laboratory for analysis.

Description

Lot	**LRAC8918**
Expiration Date	January 2024
Manufacturing Date	January 2021
Storage Conditions	Refrigerate
Solvent/Matrix	SOIL

1 **Metrological traceability:** Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.
4 Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. K=2 unless specified. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom } ogeneity}^2 + u_{stability}^2}$$

***k*:** Coverage factor derived from a t-distribution table, based on the degrees of freedom of the data set. Assume 2.0 for a **Confidence interval = 95%**

6 Analytical Value- For QC verification of the certified value only- not to be used in calculations. Represents the analytical data obtained by comparison to a standard as analyzed by the method described in the CoA or another acceptable method. The result may differ from the certified value and UCRM based on method uncertainty as well as the uncertainty associated with the standard used for comparison.

Traceability: The standard was manufactured under an ISO/IEC 17025:2017 certified quality system. The balance used to weigh raw materials is accurate to +/- 0.0001g and calibrated regularly using mass standards traceable to NIST. All dilutions were preformed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Homogeneity: Homogeneity was assessed in accordance with ISO 17034:2016. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared using a one-way analysis of variance approach as described by TNI EL-V3-2009 Appendix A.2. See Instructions for minimum sub-sample size.

Expiration is at end of month given on certificate and label.

MSDS reports for components comprising greater than 1.0% of the solution or 0.1% for components known to be carcinogens are available upon request.

THIS PRODUCT WAS DESIGNED, PRODUCED AND VERIFIED FOR ACCURACY AND STABILITY IN ACCORDANCE WITH **ISO/IEC 17025:2017 (ANAB Cert AT-1467)** and **ISO 17034:2016 (ANAB Cert AR-1470).**

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Certification Date	January 05, 2021
Version	0-152021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-103N-1 **Lot Issue Date:** 25-May-2021

Lot Number: 0006609664 **Expiration Date:** 30-Jun-2024

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
benzoic acid	000065-85-0	RM01884	2005 ± 10 µg/mL
o-cresol	000095-48-7	RM12877	2005 ± 10 µg/mL
p-cresol	000106-44-5	RM01988	2005 ± 10 µg/mL
2,4,5-trichlorophenol	000095-95-4	NT00344	2004 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

5/11/22

K004539
toxic sub mix#1
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 6/30/2024
Location:

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: Phenols Standard
Product Number: US-107N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006648297
Lot Issue Date: 17-Nov-2021
Expiration Date: 31-Dec-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
4-chloro-3-methylphenol	2006 ±	10 µg/mL	000059-50-7	RM01885
2-chlorophenol	2007 ±	10 µg/mL	000095-57-8	RM01871
2,4-dichlorophenol	2005 ±	10 µg/mL	000120-83-2	RM13878
2,4-dimethylphenol	2006 ±	10 µg/mL	000105-67-9	RM13009
2,4-dinitrophenol	2006 ±	10 µg/mL	000051-28-5	RM02112
2-methyl-4,6-dinitrophenol	2005 ±	10 µg/mL	000534-52-1	RM02292
2-nitrophenol	2007 ±	10 µg/mL	000088-75-5	RM13445
4-nitrophenol	2006 ±	10 µg/mL	000100-02-7	RM03752
pentachlorophenol	2006 ±	10 µg/mL	000087-86-5	RM02474
phenol	2006 ±	10 µg/mL	000108-95-2	RM11471
2,4,6-trichlorophenol	2006 ±	10 µg/mL	000088-06-2	RM18096

Matrix: methylene chloride (dichloromethane)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

5/11/22

CSD-QA-015.1

K004540
phenols mix
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 12/31/2024
Location:

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name: PAH Standard
Product Number: US-106N-1
Storage Conditions: Store at Room Temperature (15° to 30°C).

Lot Number: 0006627349
Lot Issue Date: 17-Sep-2021
Expiration Date: 31-Oct-2024

Component Name	CERTIFIED VALUES Concentration	Expanded Uncertainty	CAS#	Analyte Lot
acenaphthene	2007 ±	10 µg/mL	000083-32-9	RM10879
acenaphthylene	2004 ±	10 µg/mL	000208-96-8	RM10891
anthracene	2006 ±	10 µg/mL	000120-12-7	RM14212
benz[a]anthracene	2006 ±	10 µg/mL	000056-55-3	RM16072
benzo[b]fluoranthene	2006 ±	10 µg/mL	000205-99-2	RM14571
benzo[k]fluoranthene	2006 ±	10 µg/mL	000207-08-9	RM18376
benzo[ghi]perylene	2006 ±	10 µg/mL	000191-24-2	RM15761
benzo[a]pyrene	2006 ±	10 µg/mL	000050-32-8	RM17573
chrysene	2007 ±	10 µg/mL	000218-01-9	RM13771
dibenz[a,h]anthracene	2006 ±	10 µg/mL	000053-70-3	RM06786
fluoranthene	2006 ±	10 µg/mL	000206-44-0	RM12277
fluorene	2006 ±	10 µg/mL	000086-73-7	RM09441
indeno[1,2,3-cd]pyrene	2006 ±	10 µg/mL	000193-39-5	RM14192
naphthalene	2007 ±	10 µg/mL	000091-20-3	RM10445
phenanthrene	2005 ±	10 µg/mL	000085-01-8	RM10495
pyrene	2005 ±	10 µg/mL	000129-00-0	RM16126

Matrix: methylene chloride/benzene (1:1)

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

K004541
SVOA PAH STD 2000ug/ml
Solvent / Lot: DCM/BENZENE
Prep: 5/11/2022 by JZ
Exp: 10/31/2024
Location: Fridge 19

CSD-QA-015.1

11/22

Reference Materials Producer
Cert #2495.01

Certificate of Analysis

Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics**® Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

Certificate of Reference Material

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021 Certifying Officer: Shannon Mora

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory , please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5 µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i, where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

ACCREDITED
Reference Materials Producer
Cert #2495.01

ECS

Certificate of Analysis

ilac-MRA ACCREDITED
Chemical Testing
Cert #2495.02

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This **SPEXOrganics®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for organic chromatography instrumentation such as GC, GC-MS, LC, and LC-MS. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

Certified Compounds:

Compound	CAS #	Labeled	Purity	Certified†	Uncertainty
1,2,4-Trichlorobenzene	120-82-1	2000 µg/mL	99%	2010 µg/mL	± 50 µg/mL
1,2-Dichlorobenzene	95-50-1	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
1,3-Dichlorobenzene	541-73-1	2000 µg/mL	98%	2021 µg/mL	± 51 µg/mL
1,4-Dichlorobenzene	106-46-7	2000 µg/mL	99%	2012 µg/mL	± 50 µg/mL
2,4-Dinitrotoluene	121-14-2	2000 µg/mL	97%	2006 µg/mL	± 50 µg/mL
2,6-Dinitrotoluene	606-20-2	2000 µg/mL	99.6%	2012 µg/mL	± 50 µg/mL
2-Chloronaphthalene	91-58-7	2000 µg/mL	98%	2004 µg/mL	± 50 µg/mL
4-Bromodiphenyl ether	101-55-3	2000 µg/mL	99%	2022 µg/mL	± 51 µg/mL
4-Chlorophenyl-phenyl ether	7005-72-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Azobenzene	103-33-3	2000 µg/mL	98%	2001 µg/mL	± 50 µg/mL
Bis(2-chloro-1-methylethyl) ether	108-60-1	2000 µg/mL	98.9%	2010 µg/mL	± 50 µg/mL
bis(2-Chloroethoxy)methane	111-91-1	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
bis(2-Chloroethyl)ether	111-44-4	2000 µg/mL	99%	2002 µg/mL	± 50 µg/mL
Bis(2-Ethylhexyl)phthalate	117-81-7	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Butylbenzyl phthalate	85-68-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Carbazole	86-74-8	2000 µg/mL	95%	2009 µg/mL	± 50 µg/mL
Di-n-butyl phthalate	84-74-2	2000 µg/mL	99%	2020 µg/mL	± 50 µg/mL
Di-n-octyl phthalate	117-84-0	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
Diethyl phthalate	84-66-2	2000 µg/mL	99.5%	2002 µg/mL	± 50 µg/mL
Dimethyl phthalate	131-11-3	2000 µg/mL	99%	2006 µg/mL	± 50 µg/mL
Hexachlorobenzene	118-74-1	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachlorobutadiene	87-68-3	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
Hexachlorocyclopentadiene	77-47-4	2000 µg/mL	99%	2003 µg/mL	± 50 µg/mL
Hexachloroethane	67-72-1	2000 µg/mL	98%	2003 µg/mL	± 50 µg/mL
Isophorone	78-59-1	2000 µg/mL	97%	2003 µg/mL	± 50 µg/mL
N-Nitrosodi-n-propylamine	621-64-7	2000 µg/mL	98%	2000 µg/mL	± 50 µg/mL
N-Nitrosodiphenylamine	86-30-6	2000 µg/mL	97%	2001 µg/mL	± 50 µg/mL
Nitrobenzene	98-95-3	2000 µg/mL	99%	2001 µg/mL	± 50 µg/mL
Pyridine	110-86-1	2000 µg/mL	99%	2004 µg/mL	± 50 µg/mL
N-Nitrosodimethylamine	62-75-9	2000 µg/mL	97%	2000 µg/mL	± 50 µg/mL

K004542

Certificate of Reference Material

Catalog Number: ECS-A-030

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Lot No. AA210126005

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

Final Solution Verification:

Final solution integrity verified by Gas Chromatography/Mass Spectrometry. The mass spectrum of each compound was confirmed against the NIST mass spectral database.

† Certified concentration based on gravimetric weights and corrected for the purity of the compound(s) used to prepare the standard. Analytical balance calibration is verified daily with C1 weight set #23-190006 which is registered with Atlantic Scale, and traceable to NIST and NJ Division of Weights and Measures.

This CRM is guaranteed stable and accurate to within the uncertainty listed for the certified value. This includes uncertainty components due to preparation, homogeneity, short term and long term stability. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further information, contact the Sales Support Department at crmsales@spexcsp.com.

Date of Certification: 1-26-2021

Certifying Officer: Shannon Nave

Report of Certification

Catalog Number: ECS-A-030 **Lot No.** AA210126005

Description: Base/Neutrals Mix 1

Matrix: Methylene Chloride

Manufactured Date: 1-26-2021

Expiration Date: 1-26-2024

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 Quality System consistent with the following standards:

- ISO 9001:2008: Quality management systems - Requirements - Certified by UL-DQS
- ISO 17025:2005: General Requirements for the Competence of Testing and Calibration Laboratories - Accredited by A2LA
- ISO Guide 34:2009: General Requirements for the Competence of Reference Material Producers - Accredited by A2LA
- ISO Guide 31:2000: Reference Materials - Contents of Certificates and Labels
- ISO Guide 35:2006: Reference Materials - General and statistical principals for certification
- Guide to the Expression of Uncertainty in Measurement 1997
- EURACHEM/CITAC Guide: Qualifying Uncertainty in Analytical Measurements - Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference material producers
- ISO/REMCO N280

Storage Requirements:

To ensure the stability of the product once it arrives in your laboratory, please store this product in a refrigerator (2°C to 8°C). Note: Shipping conditions may differ from storage conditions. The EXPIRATION DATE is calculated from the MANUFACTURED DATE using our stability data and is applicable only if the product is unopened and stored under the prescribed conditions.

Instructions for Use:

Let material come to room temperature before use. Check for precipitate and if necessary sonicate for one minute. If compounds do not dissolve after one minute then sonicate further until the product is dissolved. A clear appearance is acceptable. The minimum recommended amount that should be removed from this vial is 5µL with a 25µL gas tight syringe. All solutions should be thoroughly mixed, by shaking, prior to use. All surfaces that come in contact with the solution must be thoroughly cleaned prior to use. Dilutions should be performed only with Class A volumetric glassware.

Material Source:

All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For assistance, please contact sales support at crmsales@spexcsp.com.

Method of Preparation:

Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, and analytical instrumentation have been qualified prior to use. The highest purity solvents and Class A / calibrated volumetrics have been been used in all preparations.

Homogeneity:

The homogeneity of this CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4300-HOMOGEN-1A. This is consistent with the intended use of this CRM. The Degree of Homogeneity, as expressed as maximum between-bottle variation, is 1.2%

Statistical Estimator and Confidence Limits:

The Certified value 'X' as listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X=certified value, U=expanded uncertainty, x=property value
- $U = ku_c$ where k=2 is the coverage factor at the 95% confidence level
- u_c = combined standard uncertainty obtained by combining the individual compound standard uncertainty components u_i where $u_c = \sqrt{\sum u_i^2}$

Legal Notice:

SPEX CertiPrep Certified Reference Materials are not for any cosmetic, drug, or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep of any kind whatsoever, whether based on breech of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep be liable for any loss of profits or any incidental, special, or consequential damages.

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Accredited to 17025 & Guide 34 ISO Certified to 9001

Agilent

Certificate of Analysis

Product Name: 1-Methylnaphthalene Standard

Product Number: EPA-1225-1 **Lot Issue Date:** 19-Jul-2021

Lot Number: 0006624769 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
1-methylnaphthalene	000090-12-0	RM07712	999.3 ± 5.0 µg/mL

Matrix: methanol (methyl alcohol)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

K004543
1-Methylnaphthalene
Solvent / Lot: MEOH
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

5/11/22

Sample lot approver:
Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis

Product Name: Toxic Substances Standard

Product Number: US-104N-1 **Lot Issue Date:** 02-Jul-2021

Lot Number: 0006620643 **Expiration Date:** 31-Jul-2023

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
aniline	000062-53-3	RM12853	2005 ± 10 µg/mL
benzyl alcohol	000100-51-6	RM10547	2004 ± 10 µg/mL
4-chloroaniline	000106-47-8	RM01886	2002 ± 10 µg/mL
dibenzofuran	000132-64-9	RM02077	2002 ± 10 µg/mL
2-methylnaphthalene	000091-57-6	RM01258	2006 ± 10 µg/mL
2-nitroaniline	000088-74-4	RM02402	2003 ± 10 µg/mL
3-nitroaniline	000099-09-2	RM02424	2003 ± 10 µg/mL
4-nitroaniline	000100-01-6	RM02425	2003 ± 10 µg/mL

Matrix: methylene chloride (dichloromethane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

K004544
toxic sub mix#2
Solvent / Lot: methylene chloride
Prep: 5/11/2022 by JZ
Exp: 7/31/2023
Location:

05/11/22

ANAB ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0181243

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : October 31, 2025 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

05/11/22

K004545
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO175316
Prep: 5/11/2022 by JZ
Exp: 10/20/2025
Location:

Elution Order	Compound	Gr (weig					
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ2508) **Purity** 99%	1,50				µg/mL	Stressed
				+/-	53.3632	µg/mL	Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot PR-31262) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,510.0	µg/mL	+/-	8.9689	µg/mL	Gravimetric
				+/-	44.1050	µg/mL	Unstressed
				+/-	53.5049	µg/mL	Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32542/022621DB1 **Purity** 99%	1,004.0	µg/mL	+/-	5.9635	µg/mL	Gravimetric
				+/-	29.3255	µg/mL	Unstressed
				+/-	35.5754	µg/mL	Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,008.0	µg/mL	+/-	5.9872	µg/mL	Gravimetric
				+/-	29.4423	µg/mL	Unstressed
				+/-	35.7172	µg/mL	Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 19169) **Purity** 99%	1,006.0	µg/mL	+/-	5.9753	µg/mL	Gravimetric
				+/-	29.3839	µg/mL	Unstressed
				+/-	35.6463	µg/mL	Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,506.0	µg/mL	+/-	8.9452	µg/mL	Gravimetric
				+/-	43.9882	µg/mL	Unstressed
				+/-	53.3632	µg/mL	Stressed

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101246	**Lot Number:**	CL17953
Description:	Benzoic Acid	**Certification Date:**	January 31, 2022
Storage:	4 °C	**Expiration Date:**	January 31, 2032
Provided As:	1 mL in 2 mL Ampoule in Methylene Chloride		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzoic acid	65-85-0	2000	± 2.714%

K004603
Benzoic Acid @2000ug/ml
Solvent / Lot: N/A
Prep: 5/13/2022 by JZ
Exp: 1/31/2032
Location: GC

5/13/22

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018 us

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL17662
Certification Date: December 2, 2021
Expiration Date: November 30, 2031

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 0.211%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.305%

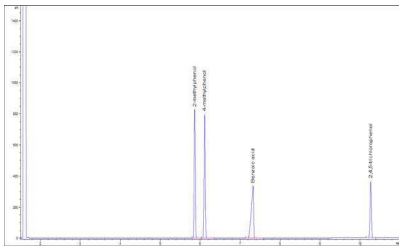
K004604
Benzidines std @2000ug/ml
Solvent / Lot: MeCl2
Prep: 5/13/2022 by JZ
Exp: 11/30/2031
Location: GC

5/13/22

Certificate of Analysis - Certified Reference Material

EPA TCL Hazardous Substances Mix 1

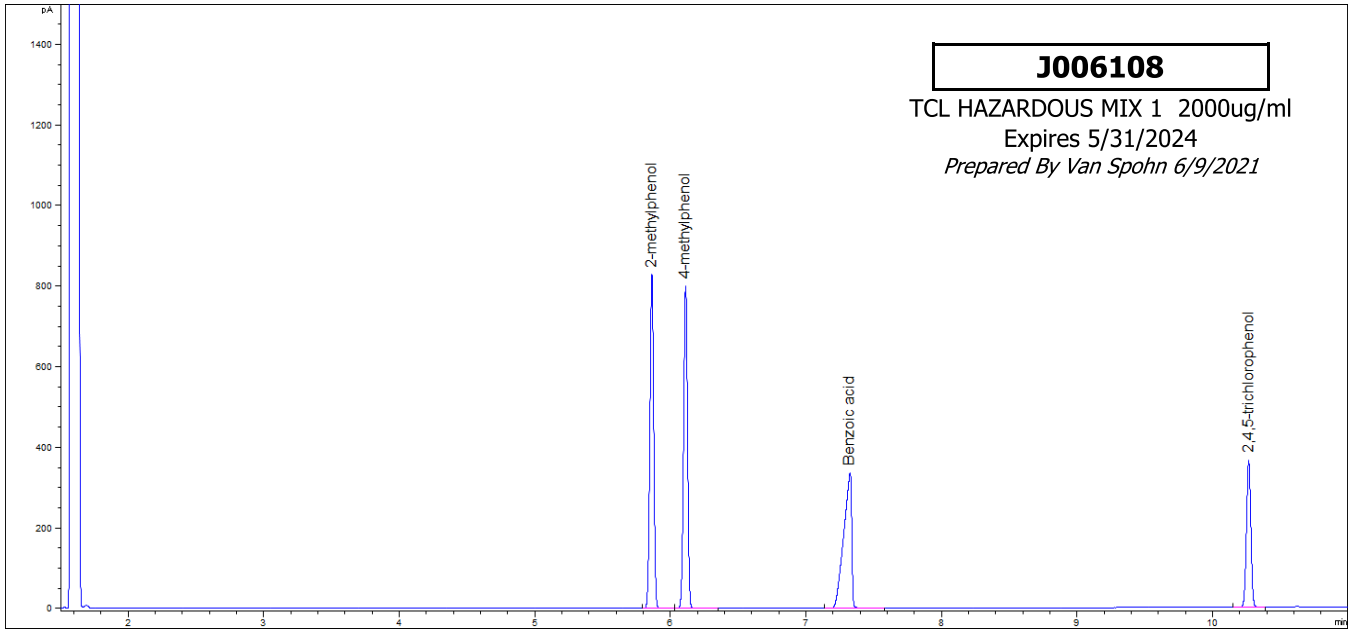
Product no.: 48907
Lot no.: LRAC9610
Expiry Date: May 2024
Manufacturing Date: May 2021
Storage: Refrigerate
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAC9610.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Elution order*	*Raw Material Lot*
2-METHYLPHENOL CAS# 95-48-7	2004 ± 9	µg/mL	99.0	1	G1735A
4-METHYLPHENOL CAS# 106-44-5	2004 ± 13	µg/mL	98.9	2	06921MG
BENZOIC ACID CAS# 65-85-0	2012 ± 6	µg/mL	99.9	3	LC16514
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	2003 ± 6	µg/mL	99.9	4	JS00008

Informational Values:



Additional Information:
Analytical Method Parameters:
Column: Equity-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness (Column #98)
Carrier Gas: H2, Flow: 4.5 mL/min
Inlet Temperature: 170 °C, Injection Volume: 1 µL
Injection Mode: Split, Split Ratio: 20:1

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Temperature Program: 80 °C @ 10 °C/min to 190 °C (Hold 5 min)
Detector: FID
Detector Temperature: 310 °C

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 20-May-2021

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{\text{hom}\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAC9610.01	20-May-2021	Original Release Date

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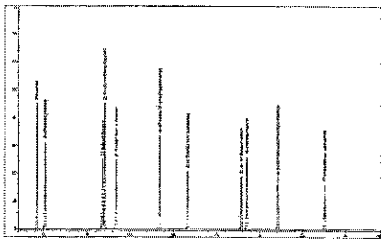
Certificate of Analysis - Certified Reference Material

EPA TCL Phenols Mix

Product no.: 48904
Lot no.: LRAD0139
Expiry Date: July 2024
Manufacturing Date: July 2021
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD0139.01 *(Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*



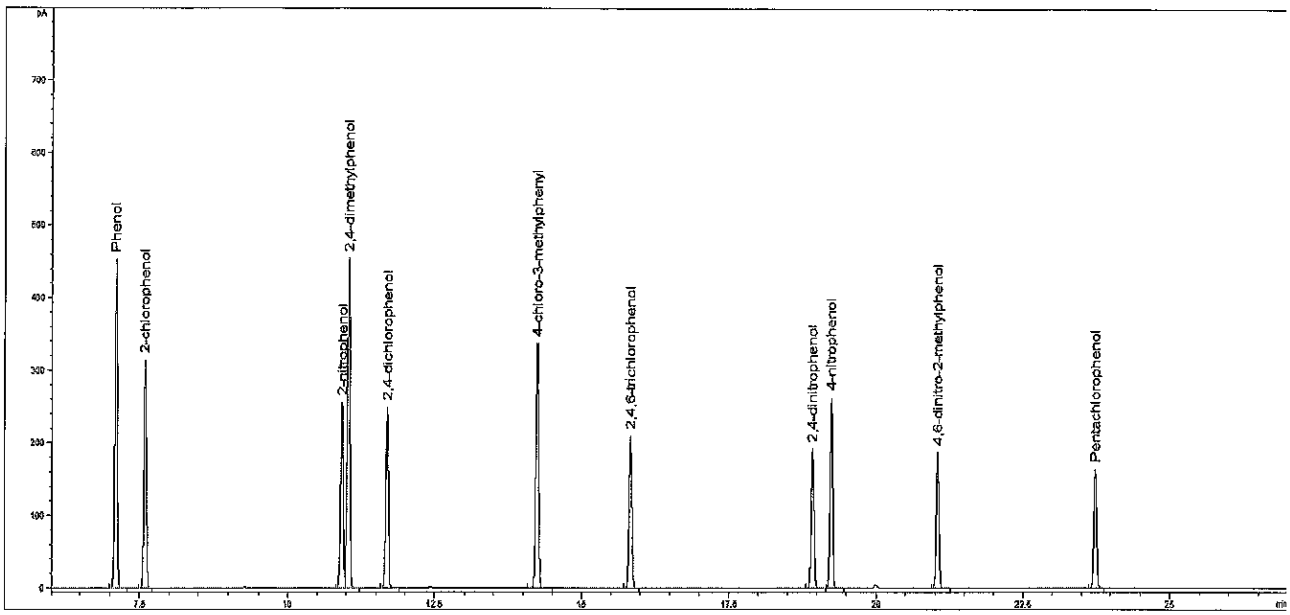
Certified Values:

Analyte	*Certified Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2-CHLOROPHENOL CAS# 95-57-8	2001 ± 25	µg/mL	99.9	STBG3033V
2-NITROPHENOL CAS# 88-75-5	1999 ± 18	µg/mL	99.3	15905BB
2,4-DIMETHYLPHENOL CAS# 105-67-9	2000 ± 14	µg/mL	99.2	05421CO
2,4-DICHLOROPHENOL CAS# 120-83-2	2000 ± 17	µg/mL	99.5	03221TN
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	2000 ± 5	µg/mL	99.9	JS00013
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	2002 ± 5	µg/mL	99.5	04212PS
2,4-DINITROPHENOL CAS# 51-28-5	2000 ± 28	µg/mL	66.9	STBJ5751
4-NITROPHENOL CAS# 100-02-7	2000 ± 33	µg/mL	99.0	04628LT
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	2000 ± 27	µg/mL	99.7	LC18338
PENTACHLOROPHENOL CAS# 87-86-5	1999 ± 25	µg/mL	97.9	MKCD2150

ASSAY Method

J013597
TCL Phenols Mix 2000ug/ml
Solvent / Lot: LRAD0139
Prep: 12/30/2021 by VS
Exp: 7/31/2024
Location:

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.



METHOD: GC (Bellefonte Method)

Column: SPB-5, 30 m × 0.53 mm I.D., 1.5 µm film thickness
Carrier Gas: H_2 Flow Rate: 4.5 mL/min
Inlet Temperature: 200 °C Injection Volume: 1.0 µL
Injection Mode: 25:1
Temperature Program: 80 °C (Hold 2 min) @ 6 °C/min to 260 °C (Hold 5 min)
Detector: FID Temperature: 310 °C

Elution details:

EO	RT(MIN)	ANALYTE
1	7.095	Phenol
2	7.585	2-chlorophenol
3	10.925	2-nitrophenol
4	11.037	2,4-dimethylphenol
5	11.696	2,4-dichlorphenol
6	14.242	4-chloro-3-m3thylphenol
7	15.842	2,4,6-trichlorophenol
8	18.93	2,4-dinitrophenol
9	19.25	4-nitrophenol
10	21.05	4,6-dinitro-2-methylphenol
11	23.752	Pentachlorophenol

Metrological traceability: Traceable to the SI and higher order standards from NIST through an unbroken chain of comparisons. The balance used to weigh raw materials is accurate to +/-0.0001 g and calibrated regularly using mass standards traceable to NIST. All dilutions were performed gravimetrically. Additionally, individual analytes are traceable to NIST SRMs where available and specified above.

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Accreditation: Sigma-Aldrich RTC is accredited by the US accreditation authority ANAB as a registered reference material producer AR-1470 in accordance with ISO 17034.

Certificate issue date: 12-Jul-2021

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

Andy Ommen - QC Manager

Mark Pooler - QA Supervisor

Details on metrological traceability: This standard has been gravimetrically prepared using balances that have been fully qualified and calibrated to ISO 17025 requirements. All calibrations utilize NIST traceable weights which are calibrated externally by a qualified ISO 17025 accredited calibration laboratory to NIST standards. Qualification of each balance includes the assignment of a minimum weighing by a qualified and ISO 17025 accredited calibration vendor taking into consideration the balance and installed environmental conditions to ensure compliance with USP tolerances of NMT 0.10% relative error. Fill volume to predetermined specifications is gravimetrically verified throughout the dispensing process using qualified and calibrated balances. Further traceability to a corresponding Primary Standard may be achieved through a direct comparison assay. Where a Primary Standard is available, the assay value will be included in the specified section of the COA.

Associated uncertainty: Ucrm - Uncertainty values in this document are expressed as Expanded Uncertainty (Ucrm) corresponding to the 95% confidence interval. Ucrm is derived from the combined standard uncertainty multiplied by the coverage factor k, which is obtained from a *t*-distribution and degrees of freedom. The components of combined standard uncertainty include the uncertainties due to characterization, homogeneity, long term stability, and short term stability (transport). The components due to stability are generally considered to be negligible unless otherwise indicated by stability studies. The mathematical representation of the Ucrm calculation is as follows:

$$u_{CRM} = \sqrt{u_{char}^2 + u_{hom\ ogeneity}^2 + u_{stability}^2}$$

Homogeneity assessment: Homogeneity was assessed in accordance with ISO Guide 35. Completed units were sampled using a random stratified sampling protocol. The results of chemical analysis were then compared by Single Factor Analysis of Variance (ANOVA). The uncertainty due to homogeneity was derived from the ANOVA. Heterogeneity was not detected under the conditions of the ANOVA.

Stability assessment: Significance of the stability assessment will be demonstrated if the analytical result of the study and the range of values represented by the Expanded Uncertainty do not overlap the result of the original assay and the range of its values represented by the Expanded Uncertainty. The method employed will usually be the same method used to characterize the assay value in the initial

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD0139.01	12-Jul-2021	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the US and Canada.

RESTEK® C

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

K007194
CLP 04.1 BNA SURR MIX
Solvent / Lot: AO187400
Prep: 8/5/2022 by VS
Exp: 4/30/2026
Location:

Certificate of Analysis

IAL

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 31493 **Lot No.:** A0187400

Description : CLP 04.1 BNA Surrogate Mix

CLP 04.1 BNA Surrogate Mix 1000-1500 µg/mL, Methylene Chloride, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Handling: Sonicate prior to use. **Ship:** Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	2-Fluorophenol **CAS #** 367-12-4 (Lot STBJ3299) **Purity** 99%	1,508.0 µg/mL	+/- 8.9571 µg/mL +/- 44.0466 µg/mL +/- 53.4340 µg/mL	Gravimetric Unstressed Stressed
2	Phenol-d6 **CAS #** 13127-88-3 (Lot SL210831) **Purity** 99%	1,510.0 µg/mL	+/- 8.9689 µg/mL +/- 44.1050 µg/mL +/- 53.5049 µg/mL	Gravimetric Unstressed Stressed
3	2-Chlorophenol-d4 **CAS #** 93951-73-6 (Lot PR-30568) **Purity** 99%	1,512.0 µg/mL	+/- 8.9808 µg/mL +/- 44.1635 µg/mL +/- 53.5758 µg/mL	Gravimetric Unstressed Stressed
4	1,2-Dichlorobenzene-d4 **CAS #** 2199-69-1 (Lot PR-32597) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
5	Nitrobenzene-d5 **CAS #** 4165-60-0 (Lot PR-29940A) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
6	2-Fluorobiphenyl **CAS #** 321-60-8 (Lot 00021384) **Purity** 99%	1,004.0 µg/mL	+/- 5.9635 µg/mL +/- 29.3255 µg/mL +/- 35.5754 µg/mL	Gravimetric Unstressed Stressed
7	2,4,6-Tribromophenol **CAS #** 118-79-6 (Lot MKCJ7664) **Purity** 99%	1,502.0 µg/mL	+/- 8.9214 µg/mL +/- 43.8714 µg/mL +/- 53.2214 µg/mL	Gravimetric Unstressed Stressed

8	p-Terphenyl-d14		1,002.0 µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 1718-51-0	(Lot PR-30504)		+/-	29.2671	µg/mL	Unstressed
	Purity 99%			+/-	35.5046	µg/mL	Stressed

Solvent: Methylene chloride
CAS # 75-09-2
Purity 99%

Tech Tips:
Due to the limited solubility of p-terphenyl-d14 in methanol, we do not recommend that this mixture be diluted in methanol.

Column:
30m x 0.25mm x 0.25µm
Rtx-5 (cat.#10223)

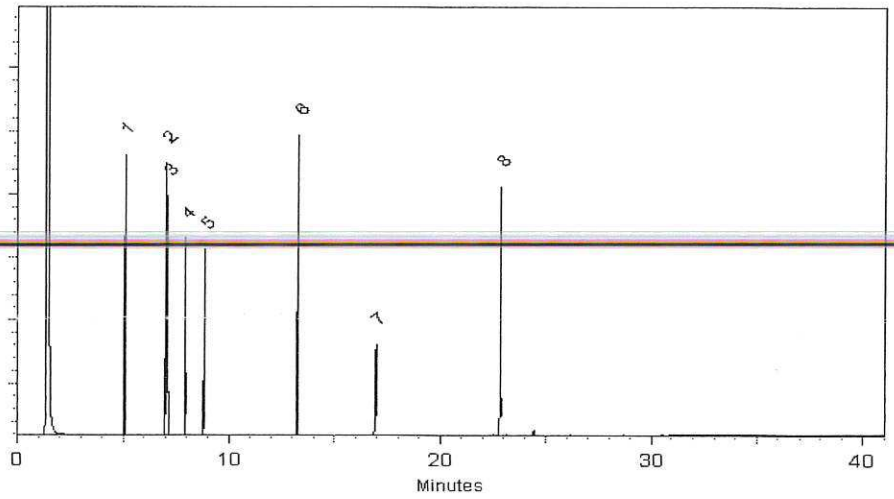
Carrier Gas:
hydrogen-constant pressure 10 psi.

Temp. Program:
40°C (hold 2 min.) to 330°C
@ 10°C/min. (hold 10 min.)

Inj. Temp:
250°C

Det. Temp:
330°C

Det. Type:
FID



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Bryan Snyder - Operations Tech I

Date Mixed: 17-Jul-2022 **Balance:** 1128353505

Christie Mills - Operations Tech II - ARM QC

Date Passed: 21-Jul-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ■ Tel: 303-940-0033 ■ Fax: 303-940-0043 ■ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18355
Certification Date: July 25, 2022
Expiration Date: August 31, 2023

K007995
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: N/A
Prep: 8/29/2022 by JZ
Exp: 8/31/2023
Location: FREEZER 44

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 0.300%
Acenaphthylene	208-96-8	1000	± 0.225%
Anthracene	120-12-7	1000	± 6.858%
Azobenzene	103-33-3	1000	± 0.224%
Benzo(a)anthracene	56-55-3	1000	± 0.247%
Benzo(a)pyrene	50-32-8	1000	± 0.270%
Benzo(b)fluoranthene	205-99-2	1000	± 0.635%
Benzo(k)fluoranthene	207-08-9	1000	± 0.682%
Benzo(g,h,i)perylene	191-24-2	1000	± 0.272%
Benzyl alcohol	100-51-6	1000	± 0.231%
Benzyl butyl phthalate	85-68-7	1000	± 0.480%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 0.479%
bis(2-Chloroethyl) ether	111-44-4	1000	± 0.479%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 0.550%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 0.479%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 0.479%
4-Bromophenyl phenyl ether	101-55-3	1000	± 0.479%
Carbazole	86-74-8	1000	± 0.146%

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Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 0.300%
4-Chloro-3-methylphenol	59-50-7	1000	± 0.545%
2-Chloronaphthalene	91-58-7	1000	± 0.224%
2-Chlorophenol	95-57-8	1000	± 0.507%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 0.479%
Chrysene	218-01-9	1000	± 0.145%
Dibenz(a,h)anthracene	53-70-3	1000	± 1.058%
Dibenzofuran	132-64-9	1000	± 0.302%
Di-n-butyl phthalate	84-74-2	1000	± 0.518%
1,2-Dichlorobenzene	95-50-1	1000	± 0.247%
1,3-Dichlorobenzene	541-73-1	1000	± 0.225%
1,4-Dichlorobenzene	106-46-7	1000	± 0.224%
2,4-Dichlorophenol	120-83-2	1000	± 0.545%
Diethyl phthalate	84-66-2	1000	± 0.518%
2,4-Dimethylphenol	105-67-9	1000	± 0.507%
Dimethyl phthalate	131-11-3	1000	± 0.518%
1,2-Dinitrobenzene	528-29-0	1000	± 0.361%
1,3-Dinitrobenzene	99-65-0	1000	± 0.300%
1,4-Dinitrobenzene	100-25-4	1000	± 0.242%
2,4-Dinitrophenol	51-28-5	1000	± 0.545%
2,4-Dinitrotoluene	121-14-2	1000	± 1.128%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 0.224%
Di-n-octyl phthalate	117-84-0	1000	± 0.486%
Fluoranthene	206-44-0	1000	± 0.224%
Fluorene	86-73-7	1000	± 0.224%
Hexachlorobenzene	118-74-1	1000	± 0.152%
Hexachlorobutadiene	87-68-3	1000	± 0.746%
Hexachlorocyclopentadiene	77-47-4	1000	± 0.153%
Hexachloroethane	67-72-1	1000	± 0.300%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 0.883%
Isophorone	78-59-1	1000	± 0.145%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 0.508%
1-Methylnaphthalene	90-12-0	1000	± 0.479%
2-Methylnaphthalene	91-57-6	1000	± 0.487%
2-Methylphenol	95-48-7	1000	± 0.545%
3-Methylphenol	108-39-4	500	± 0.279%
4-Methylphenol	106-44-5	500	± 0.399%
Naphthalene	91-20-3	1000	± 0.226%
2-Nitroaniline	88-74-4	1000	± 0.224%
3-Nitroaniline	99-09-2	1000	± 0.235%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 0.300%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18355
Description: 8270 Calibration Standard
Certification Date: July 25, 2022
Storage: -18 °C
Expiration Date: August 31, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 0.514%
4-Nitrophenol	100-02-7	1000	± 0.519%
N-Nitrosodimethylamine	62-75-9	1000	± 0.503%
N-Nitrosodiphenylamine	86-30-6	1000	± 0.476%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.461%
Pentachlorophenol	87-86-5	1000	± 0.202%
Phenanthrene	85-01-8	1000	± 0.145%
Phenol	108-95-2	1000	± 0.545%
Pyrene	129-00-0	1000	± 0.147%
Pyridine	110-86-1	1000	± 0.503%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 0.247%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 0.247%
1,2,4-Trichlorobenzene	120-82-1	1000	± 0.224%
2,4,5-Trichlorophenol	95-95-4	1000	± 0.507%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.509%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

BASE STOCK

Product no.: 22523051
Lot no.: LRAD2751
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2751.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
3,3'-DICHLOROBENZIDINE, 100MG, NEAT CAS# 91-94-1	799	µg/mL	99.8	LRAD2376
2,4-DINITROTOLUENE CAS# 121-14-2	801	µg/mL	97.8	LB46632
2,6-DINITROTOLUENE CAS# 606-20-2	800	µg/mL	99.2	11231AN
HEXACHLOROCYCLOPENTADIENE CAS# 77-47-4	800	µg/mL	96.0	LB95525
N-NITROSODIMETHYLAMINE CAS# 62-75-9	800	µg/mL	95.0	2019-030598 5
PERYLENE CAS# 198-55-0	200	µg/mL	99.6	04101PG
ANILINE CAS# 62-53-3	800	µg/mL	99.9	LA41596
4-CHLOROANILINE CAS# 106-47-8	800	µg/mL	100.0	MKBZ6909V
2-NITROANILINE CAS# 88-74-4	799	µg/mL	99.9	07411KN
3-NITROANILINE CAS# 99-09-2	800	µg/mL	99.9	LC09264
4-NITROANILINE CAS# 100-01-6	800	µg/mL	99.9	15609AA
PYRIDINE (LOW WATER) CAS# 110-86-1	800	µg/mL	100.0	SHBJ9218

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Sigma-Aldrich RTC, 2931 Soldier Springs Rd. Laramie, WY 82070, USA;
Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2751.01	03 JUN 2022	Original Release Date

Disclaimer: The purchaser is required to determine the suitability of this product for any particular application. Sigma-Aldrich RTC makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by Sigma-Aldrich RTC. We do not guarantee that the product can be used for any particular application.

Supelco®

www.sigmaaldrich.com

Certificate of Composition - Analytical Standard

ACID STOCK

Product no.: 22523046
Lot no.: LRAD2750
Expiry Date: June 2024
Manufacturing Date: June 2022
Storage: REFRIGERATE
Solvent/Matrix: DICHLOROMETHANE
Certificate version: LRAD2750.01 (*Note: Certificates may be updated due to the availability of new data. Check our website at: www.sigma-aldrich.com for the most current version.)*

Analyte	*Assigned Value*	*Units*	*Raw Material Purity,%*	*Raw Material Lot*
2,4-DIMETHYLPHENOL CAS# 105-67-9	800	µg/mL	99.9	LB88935
2,4-DICHLOROPHENOL CAS# 120-83-2	800	µg/mL	100.0	BCBZ6787
2,4,5-TRICHLOROPHENOL CAS# 95-95-4	801	µg/mL	99.9	JS00008
2,4-DINITROPHENOL CAS# 51-28-5	1799	µg/mL	66.9	STBJ5751
2,4,6-TRICHLOROPHENOL CAS# 88-06-2	800	µg/mL	98.7	LB82983
4-CHLORO-3-METHYLPHENOL CAS# 59-50-7	800	µg/mL	100.0	BCCD4461
4-NITROPHENOL CAS# 100-02-7	800	µg/mL	100.0	MKCN1089
2-METHYL-4,6-DINITROPHENOL CAS# 534-52-1	1800	µg/mL	100.0	BCBX5762
PENTACHLOROPHENOL CAS# 87-86-5	800	µg/mL	99.0	23614-01
BENZOIC ACID CAS# 65-85-0	1800	µg/mL	99.9	LC16514

Measurement method: Where applicable, the assigned value is based on a purity determination by mass balance and gravimetrically prepared value.

Intended use: Intended for R&D and Analytical Use only. Not for drug, household or other uses.

Packaging: 1 mL in amber ampule

Instructions for handling and correct use: Use on the as is basis. The internal pressure of the container may be slightly different from the atmospheric pressure at the user`s location. Open slowly and carefully to avoid dispersion of the material.

Health and safety information: All chemical reference materials should be considered potentially hazardous and should be used only by qualified laboratory personnel. Please refer to the Safety Data Sheet for detailed information about the nature of any hazard and appropriate precautions to be taken.

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Tel. 1 307-742-5452; Fax 1 855-831-9211; www.sigmaaldrich.com
Sigma-Aldrich RTC is a subsidiary of Merck KGaA, Darmstadt, Germany.

Certificate issue date: 03 JUN 2022

Andy Ommen - QC Manager

Scott Stetler - QA Manager

Certificate of analysis revision history:

Certificate version	Date	Reason for version
LRAD2750.01	03 JUN 2022	Original Release Date

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Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101244
Description: Benzidines Standard
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Lot Number: CL18939
Certification Date: September 7, 2022
Expiration Date: August 31, 2032

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Benzidine	92-87-5	2000	± 3.812%
3,3'-Dichlorobenzidine	91-94-1	2000	± 1.419%

L001288
Benzidines std @2000ug/ml
Solvent / Lot: CL18939
Prep: 2/7/2023 by VS
Exp: 8/31/2032
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

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Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64631018 us

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101443
Lot Number: CL18741
Description: Aniline
Certification Date: July 21, 2022
Storage: 4 °C
Expiration Date: July 31, 2030
Provided As: 1 mL in 2 mL Ampoule in Methylene Chloride

Aaron Dukes, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aniline	62-53-3	1000	± 1.719%

L001290
Anline-1000ug/mL
Solvent / Lot: CL18741
Prep: 2/7/2023 by VS
Exp: 7/31/2030
Location: GC

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

Certificate of Analysis

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Aaron Dukes, Certified Reference Materials Manager

L001291
SVOA-8270 LCS MIX 1000ug/ml
Solvent / Lot: CL18811
Prep: 2/7/2023 by VS
Exp: 11/30/2023
Location: FREEZER 44

Component	CAS #	µg/mL	Expanded Uncertainty
Acenaphthene	83-32-9	1000	± 1.643%
Acenaphthylene	208-96-8	1000	± 1.317%
Anthracene	120-12-7	1000	± 2.136%
Azobenzene	103-33-3	1000	± 1.630%
Benzo(a)anthracene	56-55-3	1000	± 2.372%
Benzo(a)pyrene	50-32-8	1000	± 3.028%
Benzo(b)fluoranthene	205-99-2	1000	± 2.377%
Benzo(k)fluoranthene	207-08-9	1000	± 2.286%
Benzo(g,h,i)perylene	191-24-2	1000	± 2.561%
Benzyl alcohol	100-51-6	1000	± 1.803%
Benzyl butyl phthalate	85-68-7	1000	± 1.855%
bis(2-Chloroethoxy)methane	111-91-1	1000	± 1.626%
bis(2-Chloroethyl) ether	111-44-4	1000	± 1.776%
bis(2-Chloroisopropyl) ether	108-60-1	1000	± 2.406%
bis(2-Ethylhexyl) adipate	103-23-1	1000	± 2.415%
bis(2-Ethylhexyl) phthalate	117-81-7	1000	± 2.350%
4-Bromophenyl phenyl ether	101-55-3	1000	± 1.708%
Carbazole	86-74-8	1000	± 1.844%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
4-Chloroaniline	106-47-8	1000	± 2.831%
4-Chloro-3-methylphenol	59-50-7	1000	± 1.571%
2-Chloronaphthalene	91-58-7	1000	± 2.022%
2-Chlorophenol	95-57-8	1000	± 2.001%
4-Chlorophenyl phenyl ether	7005-72-3	1000	± 1.634%
Chrysene	218-01-9	1000	± 2.358%
Dibenz(a,h)anthracene	53-70-3	1000	± 2.452%
Dibenzofuran	132-64-9	1000	± 0.310%
Di-n-butyl phthalate	84-74-2	1000	± 2.347%
1,2-Dichlorobenzene	95-50-1	1000	± 1.803%
1,3-Dichlorobenzene	541-73-1	1000	± 1.808%
1,4-Dichlorobenzene	106-46-7	1000	± 1.503%
2,4-Dichlorophenol	120-83-2	1000	± 1.393%
Diethyl phthalate	84-66-2	1000	± 1.870%
2,4-Dimethylphenol	105-67-9	1000	± 2.495%
Dimethyl phthalate	131-11-3	1000	± 2.113%
1,2-Dinitrobenzene	528-29-0	1000	± 0.240%
1,3-Dinitrobenzene	99-65-0	1000	± 1.221%
1,4-Dinitrobenzene	100-25-4	1000	± 0.246%
2,4-Dinitrophenol	51-28-5	1000	± 0.519%
2,4-Dinitrotoluene	121-14-2	1000	± 2.242%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Lot Number: CL18811
Description: 8270 Calibration Standard
Certification Date: August 9, 2022
Storage: -18 °C
Expiration Date: November 30, 2023
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2,6-Dinitrotoluene	606-20-2	1000	± 2.154%
Di-n-octyl phthalate	117-84-0	1000	± 2.670%
Fluoranthene	206-44-0	1000	± 2.103%
Fluorene	86-73-7	1000	± 0.890%
Hexachlorobenzene	118-74-1	1000	± 1.210%
Hexachlorobutadiene	87-68-3	1000	± 1.304%
Hexachlorocyclopentadiene	77-47-4	1000	± 1.510%
Hexachloroethane	67-72-1	1000	± 3.281%
Indeno(1,2,3-cd)pyrene	193-39-5	1000	± 1.921%
Isophorone	78-59-1	1000	± 2.022%
2-Methyl-4,6-dinitrophenol	534-52-1	1000	± 1.661%
1-Methylnaphthalene	90-12-0	1000	± 1.929%
2-Methylnaphthalene	91-57-6	1000	± 2.220%
2-Methylphenol	95-48-7	1000	± 2.168%
3-Methylphenol	108-39-4	500	± 1.025%
4-Methylphenol	106-44-5	500	± 1.064%
Naphthalene	91-20-3	1000	± 1.199%
2-Nitroaniline	88-74-4	1000	± 1.874%
3-Nitroaniline	99-09-2	1000	± 2.146%
4-Nitroaniline	100-01-6	1000	± 0.300%
Nitrobenzene	98-95-3	1000	± 1.704%

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101444
Description: 8270 Calibration Standard
Storage: -18 °C
Provided As: 1 mL in 2 mL Ampoule in MeCl2/Methanol (97:3)

Lot Number: CL18811
Certification Date: August 9, 2022
Expiration Date: November 30, 2023

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
2-Nitrophenol	88-75-5	1000	± 2.051%
4-Nitrophenol	100-02-7	1000	± 1.413%
N-Nitrosodimethylamine	62-75-9	1000	± 0.545%
N-Nitrosodiphenylamine	86-30-6	1000	± 1.669%
N-Nitrosodi-n-propylamine	621-64-7	1000	± 0.712%
Pentachlorophenol	87-86-5	1000	± 2.454%
Phenanthrene	85-01-8	1000	± 2.072%
Phenol	108-95-2	1000	± 2.140%
Pyrene	129-00-0	1000	± 1.869%
Pyridine	110-86-1	1000	± 0.545%
2,3,4,6-Tetrachlorophenol	58-90-2	1000	± 2.552%
2,3,5,6-Tetrachlorophenol	935-95-5	1000	± 2.220%
1,2,4-Trichlorobenzene	120-82-1	1000	± 1.632%
2,4,5-Trichlorophenol	95-95-4	1000	± 1.596%
2,4,6-Trichlorophenol	88-06-2	1000	± 0.481%

Notes: The proper chemical name for Bis(2-Chloroiospropyl) ether is 2,2'-oxybis(1-chloropropane). The analytical uncertainty contribution to the expanded uncertainty for 3 and 4-Methylphenol is measured as the total of the two analytes. N-Nitrosodiphenylamine presents as Diphenylamine at 854 µg/mL.

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1010

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-01 A	File ID:	23031436.D
Sampled:	01/23/23 08:26	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 01:52
% Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.1 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9825*	*7.00*	*87.7*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9825*	*7.06*	*88.4*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9825*	*4.79*	*60.0*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9825*	*5.64*	*70.7*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031436.D
Data file 2: /20230314.b/B20230314.b/23031436.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-01
Client ID:
Injection Date: 15-MAR-2023 01:52
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.855	-0.003	189648	4.176	-0.003	297672	23.98	28.28	16.5	Tetrachloro-m-xylene MN
9.415	0.000	124110	10.375	0.001	154672	35.06	35.36	0.9	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

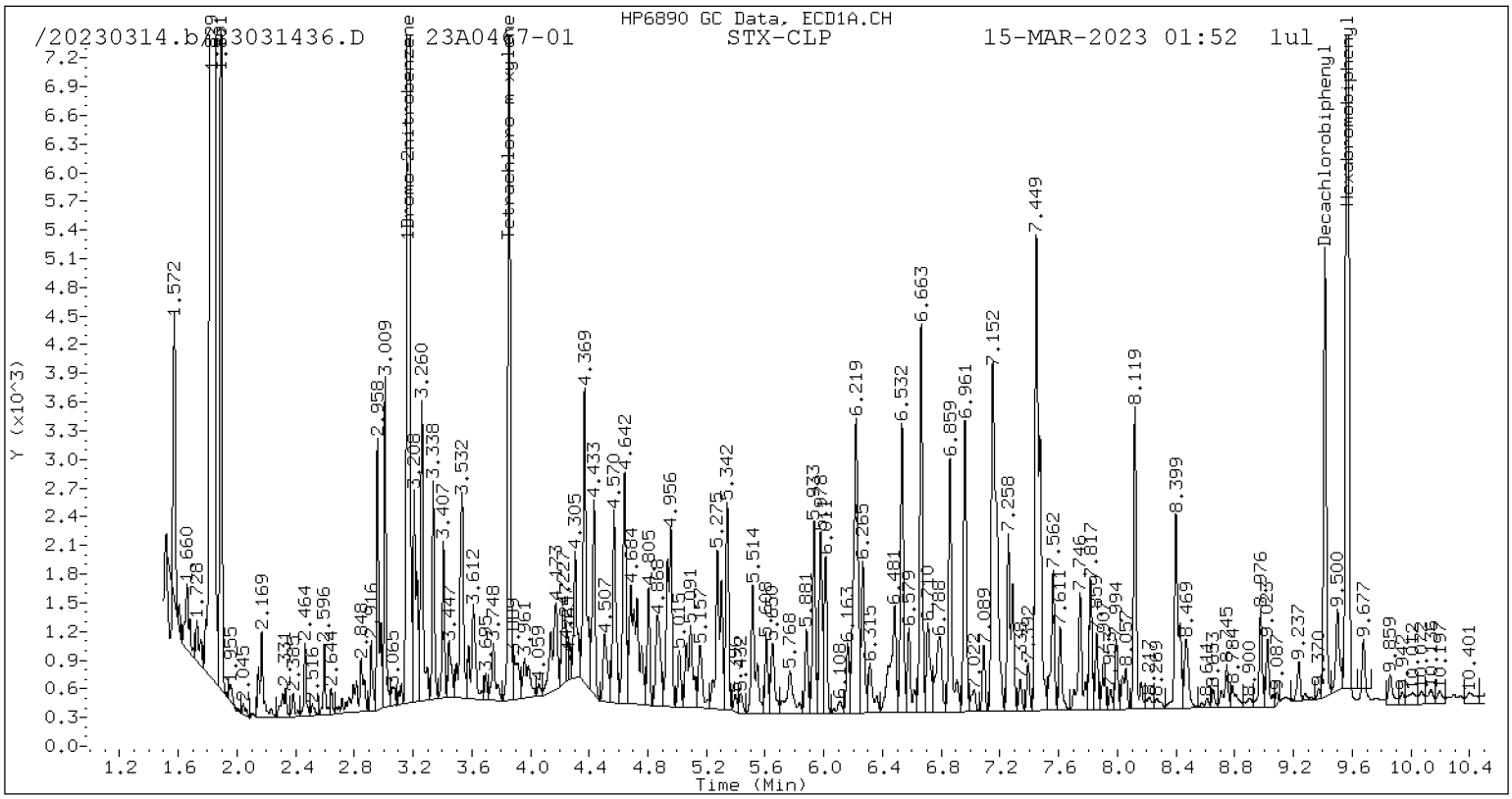
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	581437	-13.5
Hexabromobiphenyl	609723	349333	-42.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	747666	-25.7
Hexabromobiphenyl	769764	395734	-48.6

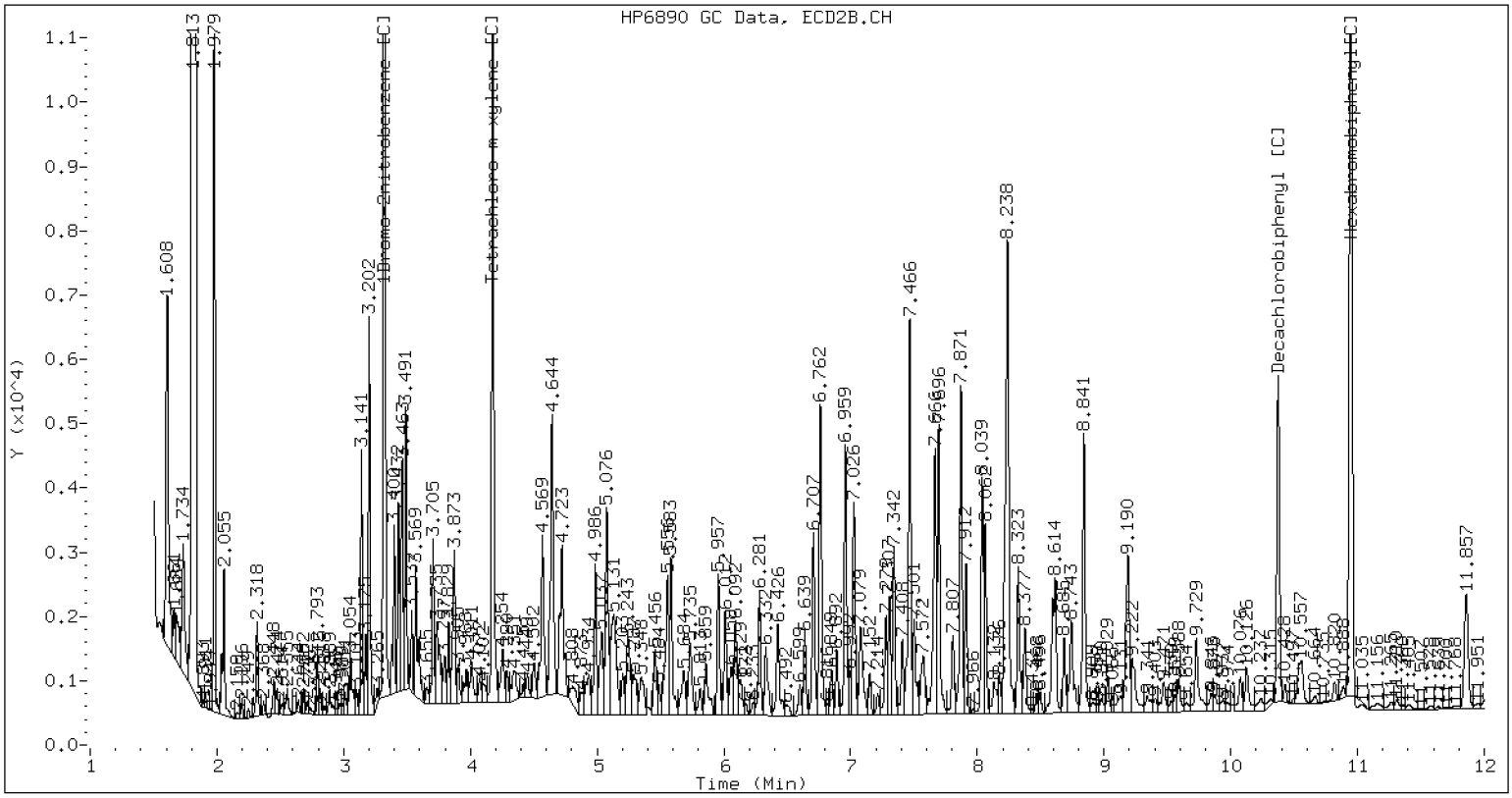
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

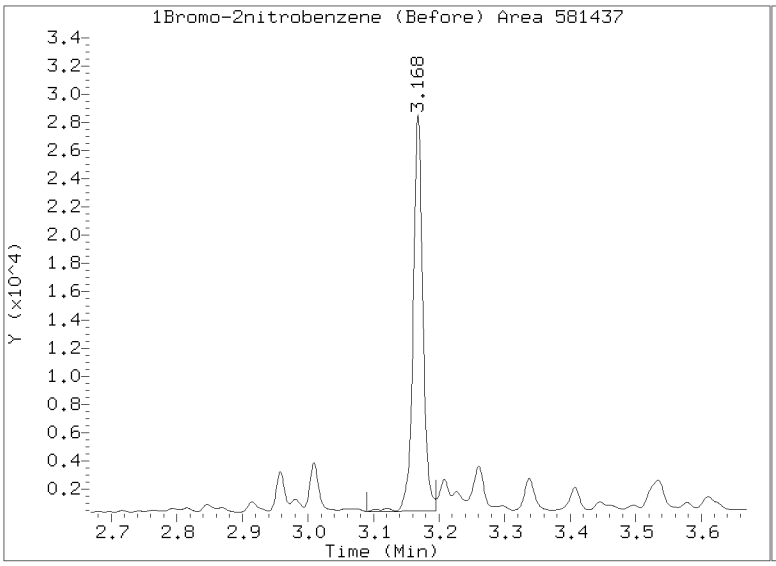
/20230314.b/B20230314.b/23031436.D 23A0467-01 CLP2

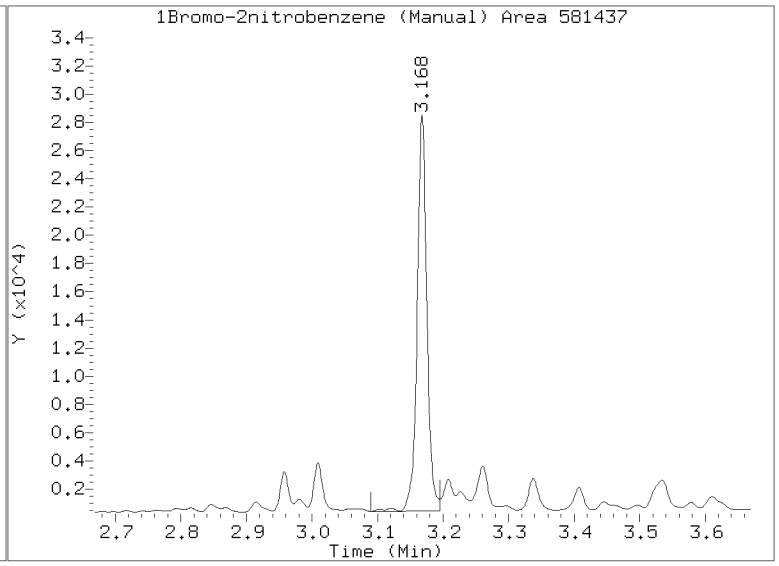


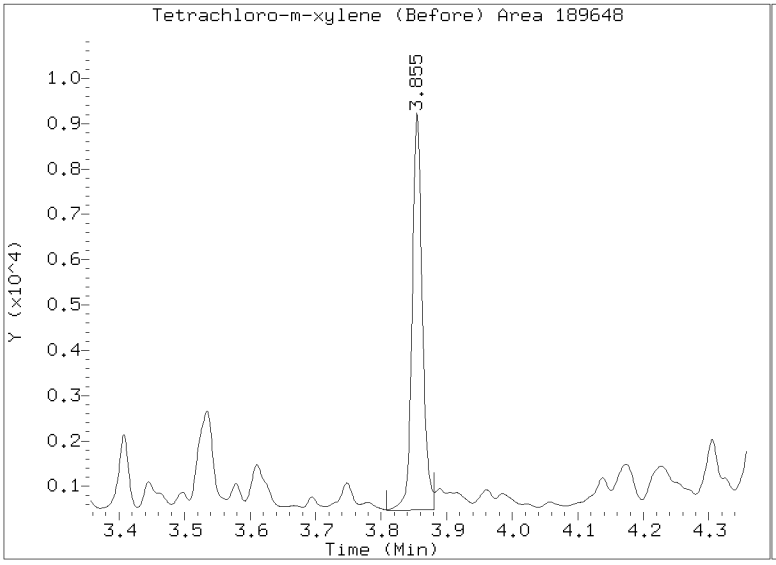
CLP-2 Manual Integration: YES

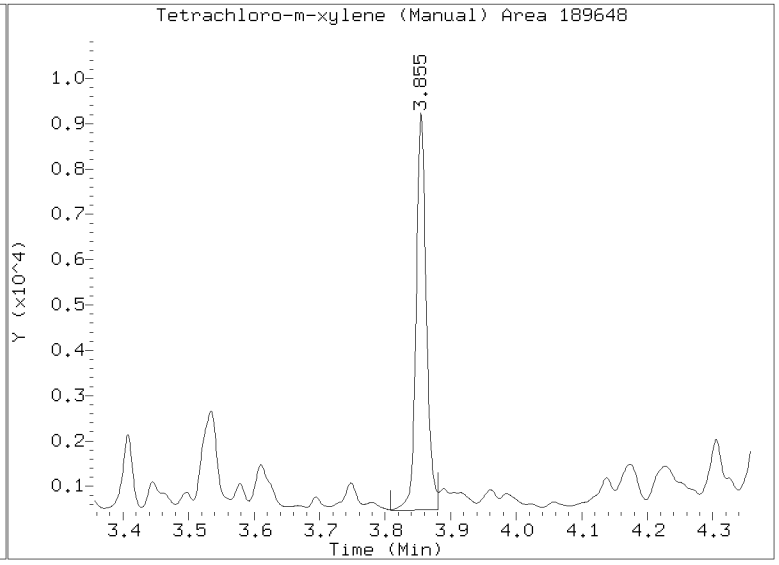
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031436.D
Injection Date: 15-MAR-2023 01:52
Lab ID:23A0467-01 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1005

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-02 A	File ID:	23031437.D
Sampled:	01/23/23 08:39	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 02:10
% Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.88 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9323*	*7.51*	*94.7*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9323*	*6.92*	*87.2*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9323*	*4.77*	*60.1*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9323*	*5.42*	*68.3*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031437.D
Data file 2: /20230314.b/B20230314.b/23031437.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-02
Client ID:
Injection Date: 15-MAR-2023 02:10
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.854	-0.003	175774	4.176	-0.002	278571	24.03	27.34	12.9	Tetrachloro-m-xylene MN
9.415	0.001	127013	10.374	0.000	154747	37.89	34.87	8.3	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

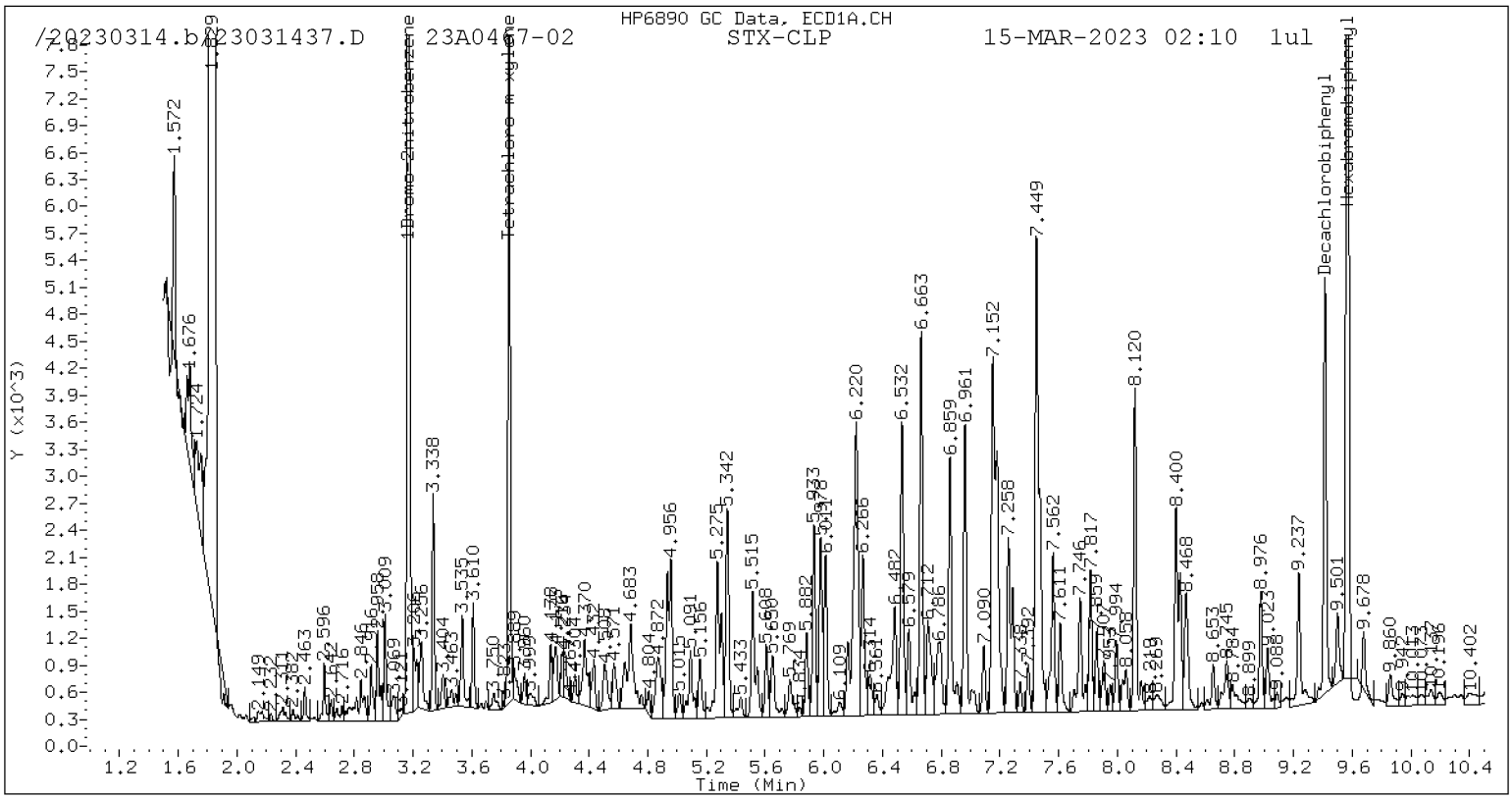
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	537902	-20.0
Hexabromobiphenyl	609723	330835	-45.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	723875	-28.1
Hexabromobiphenyl	769764	401489	-47.8

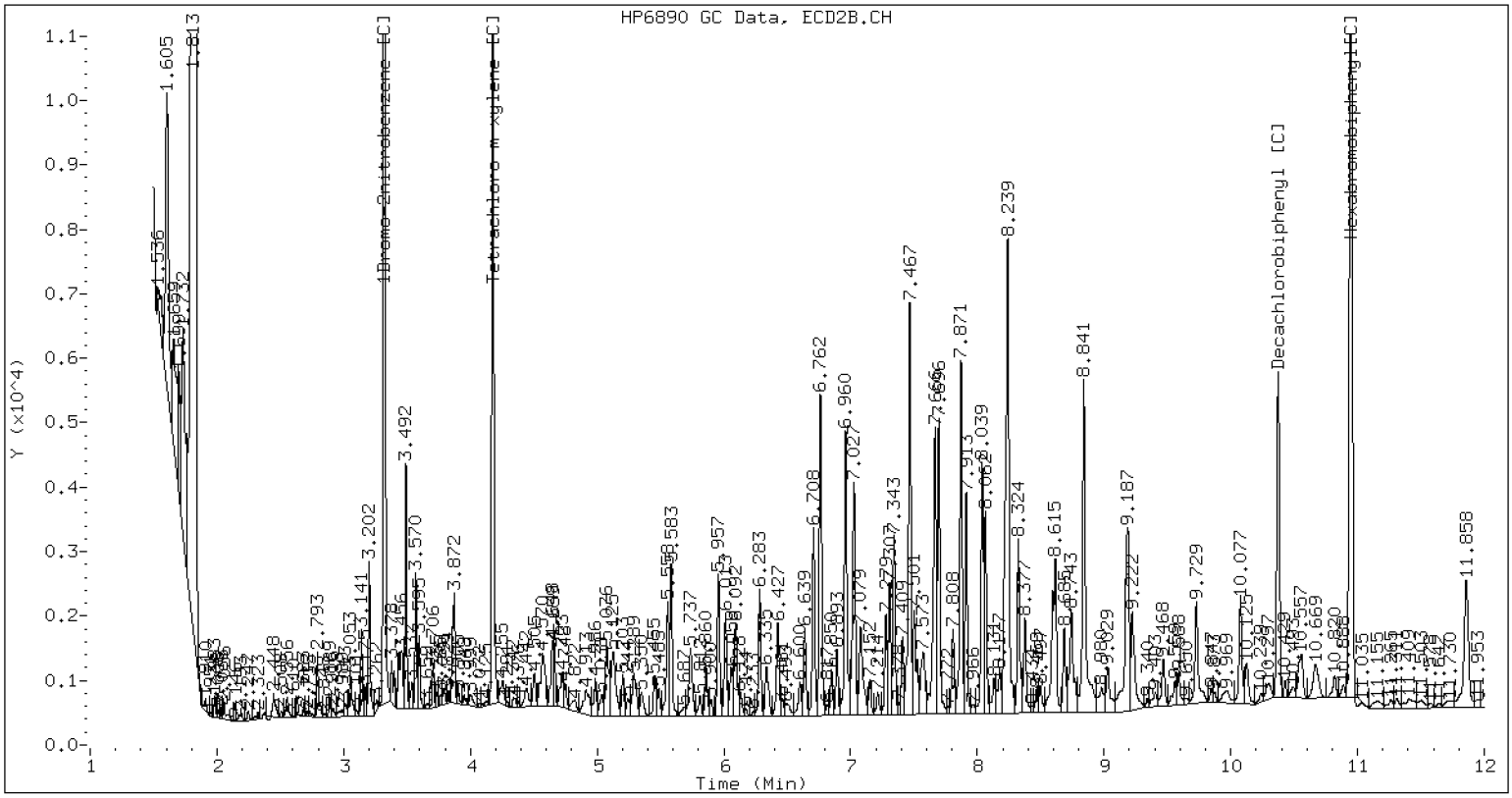
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

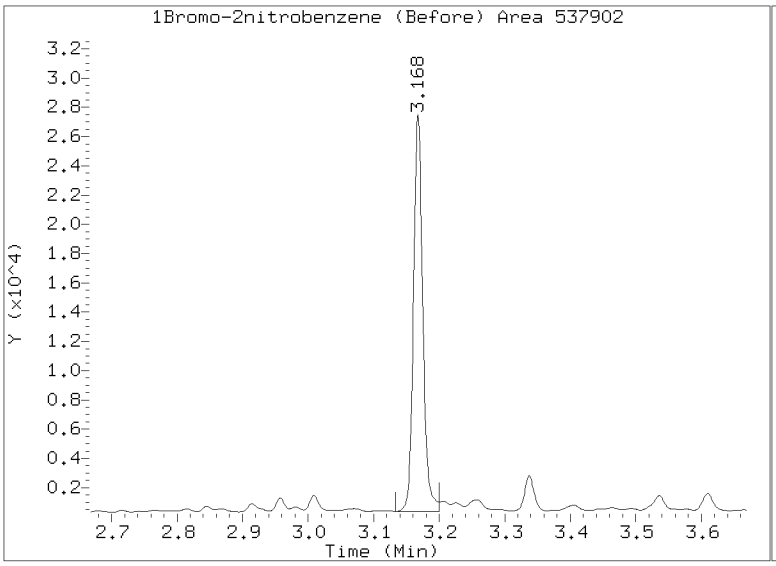
/20230314.b/B20230314.b/23031437.D 23A0467-02 CLP2

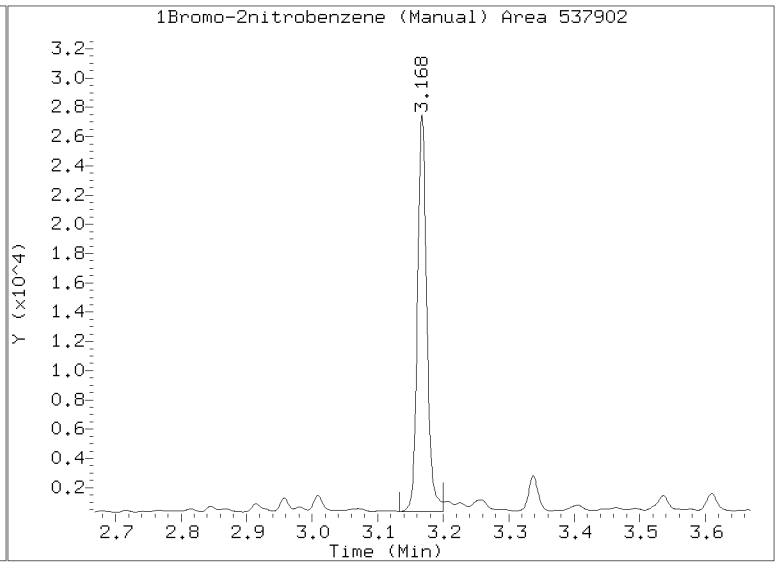


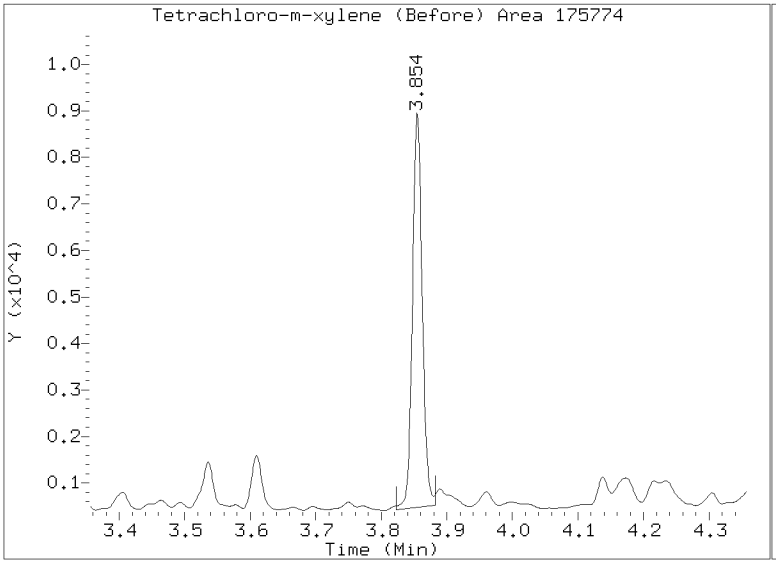
CLP-2 Manual Integration: YES

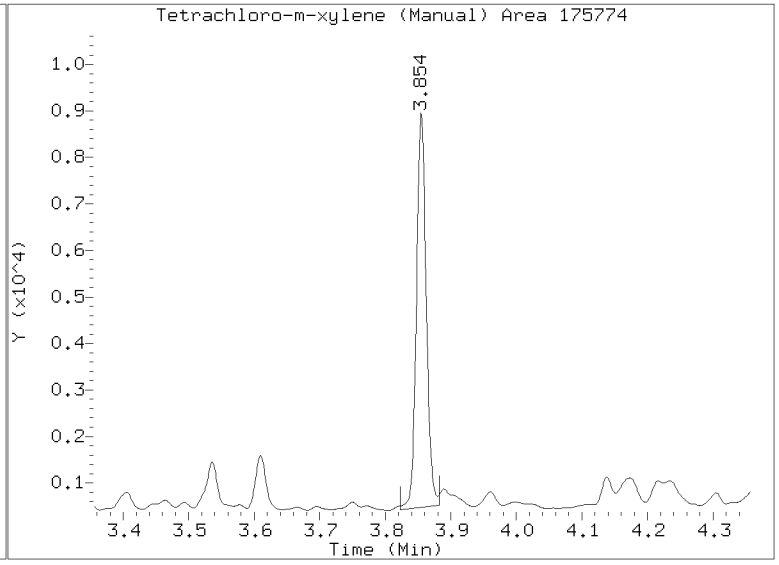
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031437.D
Injection Date: 15-MAR-2023 02:10
Lab ID:23A0467-02 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1006

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-03 A	File ID:	23031438.D
Sampled:	01/23/23 08:50	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 02:28
% Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.5 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.49	0.14	0.49	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.8682*	*7.29*	*92.7*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.8682*	*7.00*	*89.0*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.8682*	*5.08*	*64.5*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.8682*	*5.52*	*70.2*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031438.D
Data file 2: /20230314.b/B20230314.b/23031438.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-03
Client ID:
Injection Date: 15-MAR-2023 02:28
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP on col	CLP2 on col	RPD	Compound/Flag	
RT	Shift	Response	RT	Shift	Response					
----			----			0.00	0.00	---	alpha-BHC	
----			----			0.00	0.00	---	beta-BHC	
----			----			0.00	0.00	---	delta-BHC	
----			----			0.00	0.00	---	gamma-BHC (Lindane)	
----			----			0.00	0.00	---	Heptachlor	
----			----			0.00	0.00	---	Aldrin	
----			----			0.00	0.00	---	Heptachlor epoxide b	
----			----			0.00	0.00	---	Endosulfan I	
----			----			0.00	0.00	---	Dieldrin	
----			----			0.00	0.00	---	4,4'-DDE	
----			----			0.00	0.00	---	Endrin	
----			----			0.00	0.00	---	Endosulfan II	
----			----			0.00	0.00	---	4,4'-DDD	
----			----			0.00	0.00	---	Endosulfan sulfate	
----			----			0.00	0.00	---	4,4'-DDT	
----			----			0.00	0.00	---	Methoxychlor	
----			----			0.00	0.00	---	Endrin ketone	
----			----			0.00	0.00	---	Endrin aldehyde	
----			----			0.00	0.00	---	trans-Chlordane	
----			----			0.00	0.00	---	cis-Chlordane	
----			----			0.00	0.00	---	Hexachlorobutadiene	
----			----			0.00	0.00	---	Hexachlorobenzene	
3.855	-0.002	180720	4.176	-0.002	279655	25.81	28.07	8.4	Tetrachloro-m-xylene	MN
9.413	-0.001	122254	10.374	0.001	151626	37.08	35.59	4.1	Decachlorobiphenyl	MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

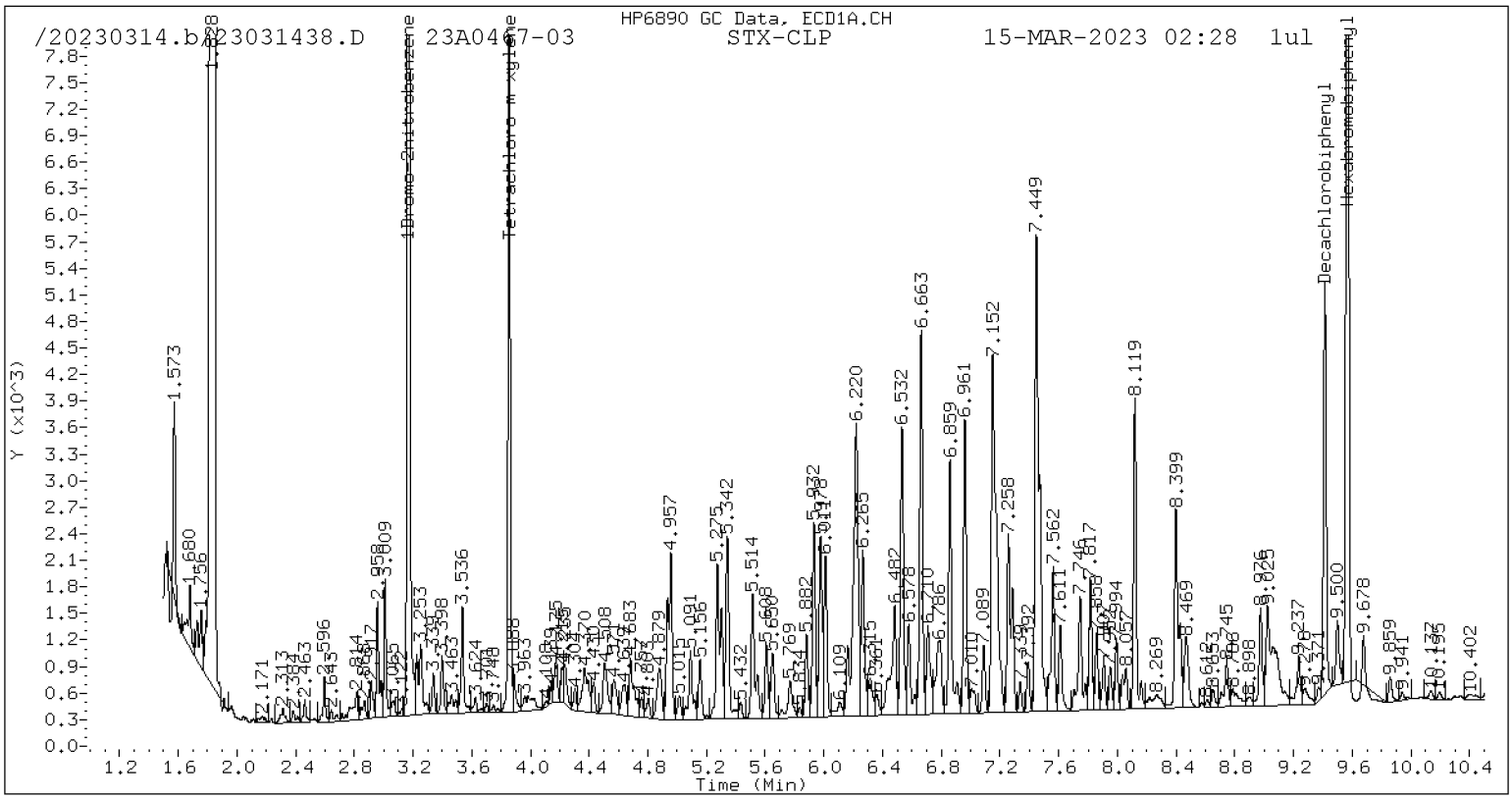
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	514915	-23.4
Hexabromobiphenyl	609723	325389	-46.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	707678	-29.7
Hexabromobiphenyl	769764	385480	-49.9

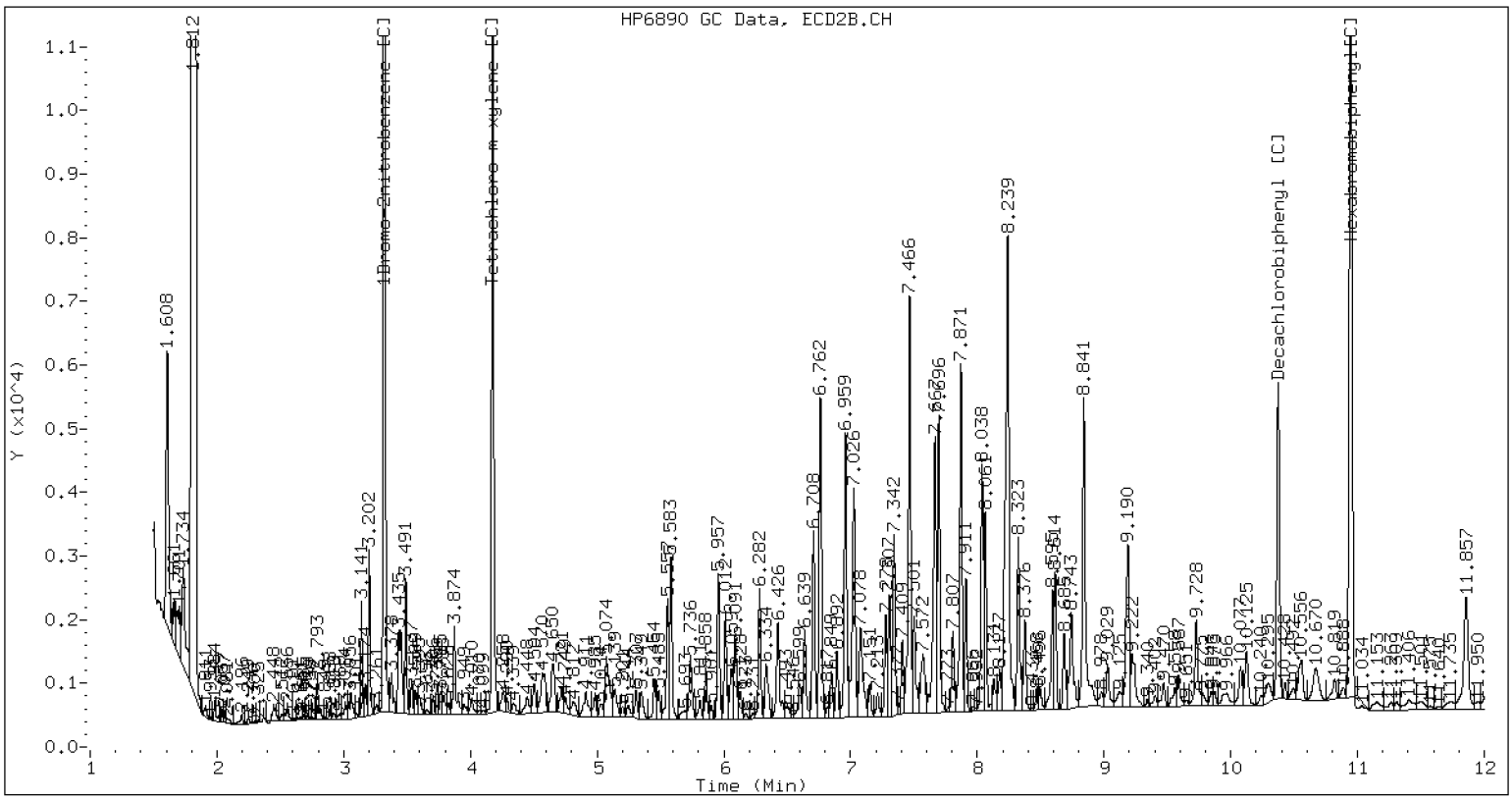
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

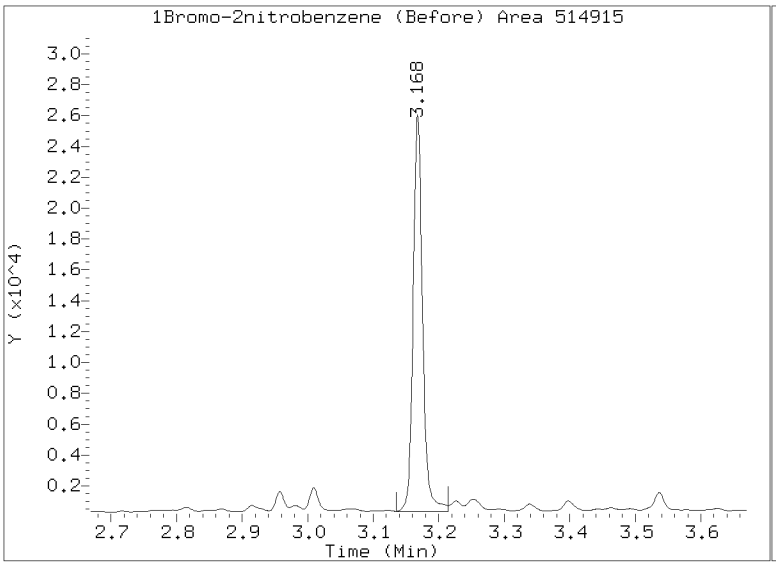
/20230314.b/B20230314.b/23031438.D 23A0467-03 CLP2

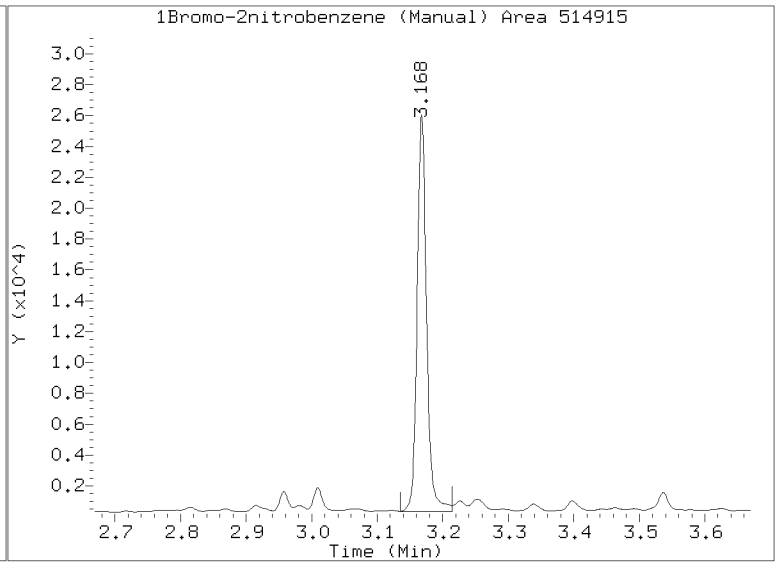


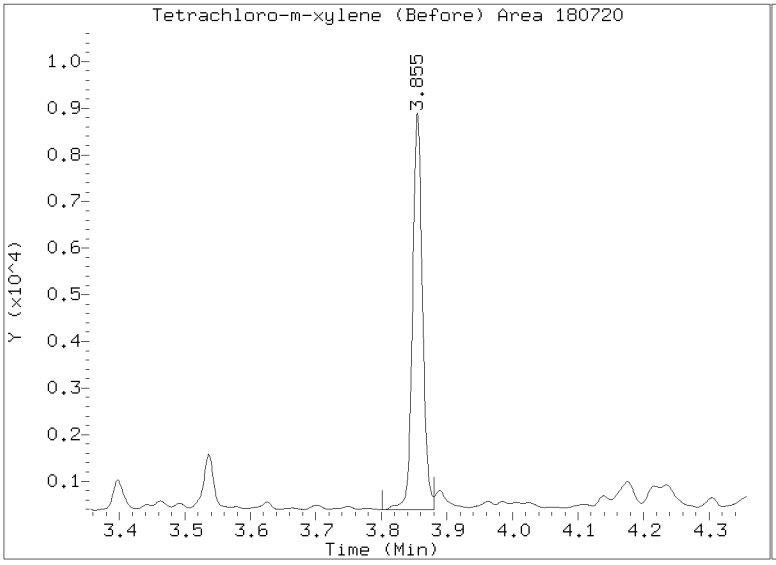
CLP-2 Manual Integration: YES

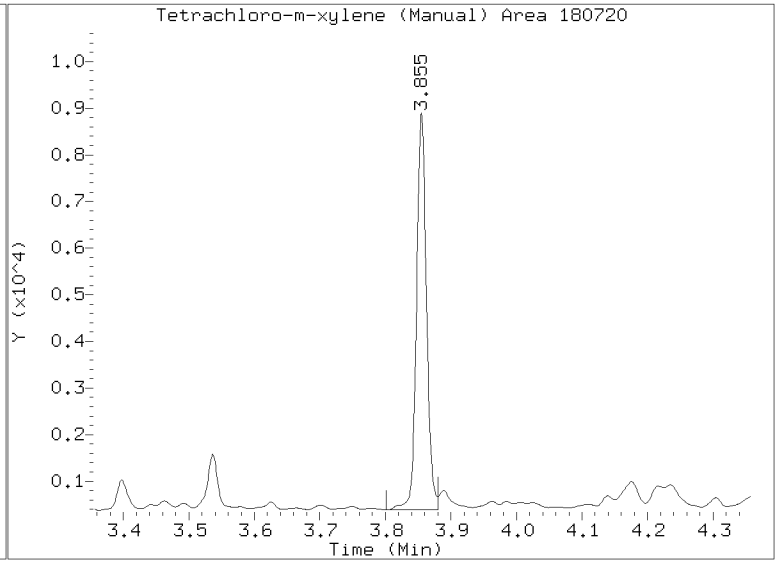
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031438.D
Injection Date: 15-MAR-2023 02:28
Lab ID:23A0467-03 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1003

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-04 A	File ID:	23031439.D
Sampled:	01/23/23 09:03	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 02:46
% Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.6 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9784*	*6.90*	*86.5*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9784*	*7.16*	*89.7*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9784*	*4.62*	*57.9*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9784*	*5.40*	*67.7*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031439.D
Data file 2: /20230314.b/B20230314.b/23031439.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-04
Client ID:
Injection Date: 15-MAR-2023 02:46
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.854	-0.003	180354	4.176	-0.003	274200	23.16	27.08	15.6	Tetrachloro-m-xylene MN
9.415	0.000	115470	10.374	0.001	151653	34.61	35.88	3.6	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

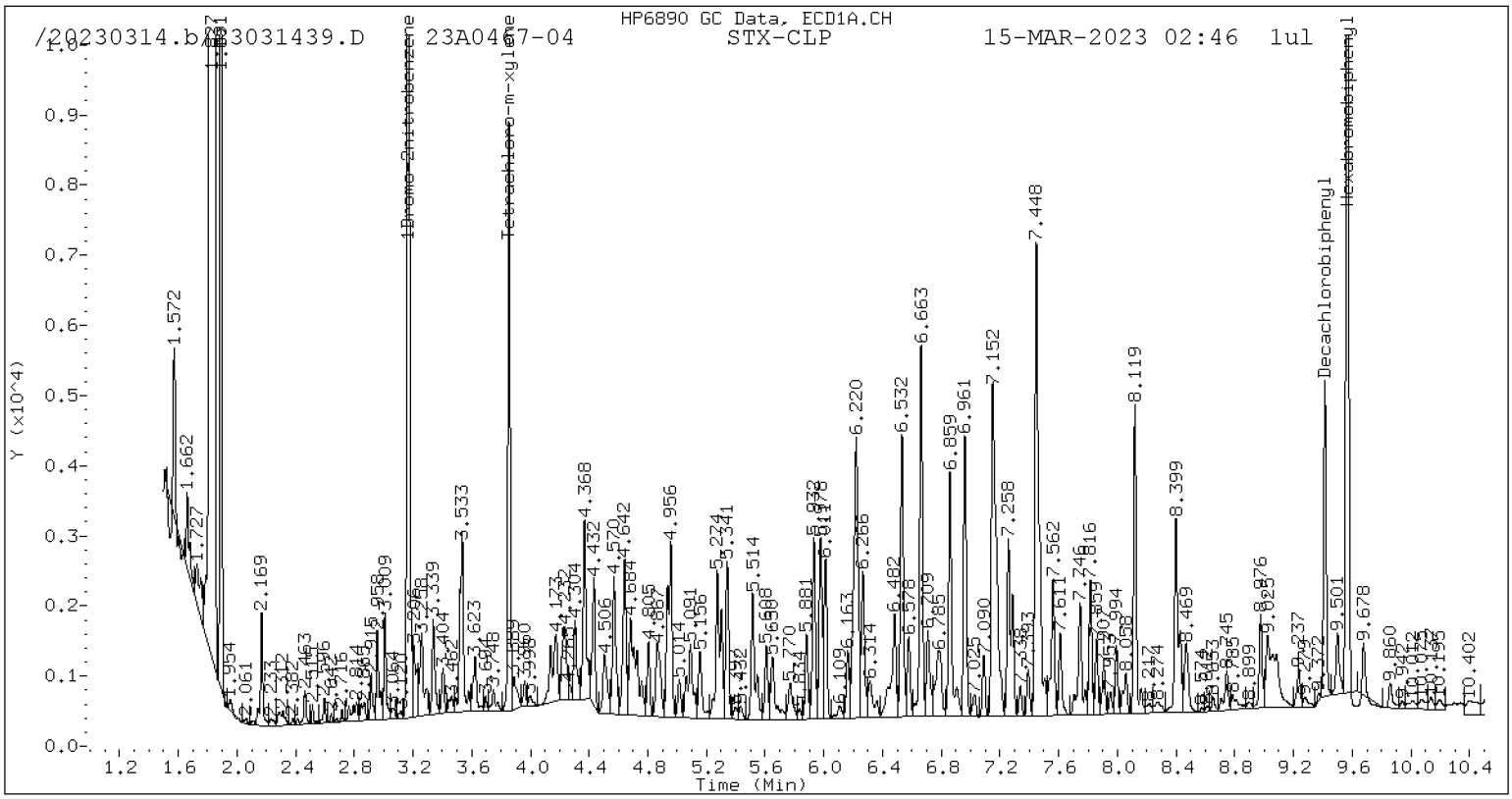
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	572567	-14.9
Hexabromobiphenyl	609723	329274	-46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	719439	-28.5
Hexabromobiphenyl	769764	382436	-50.3 <-

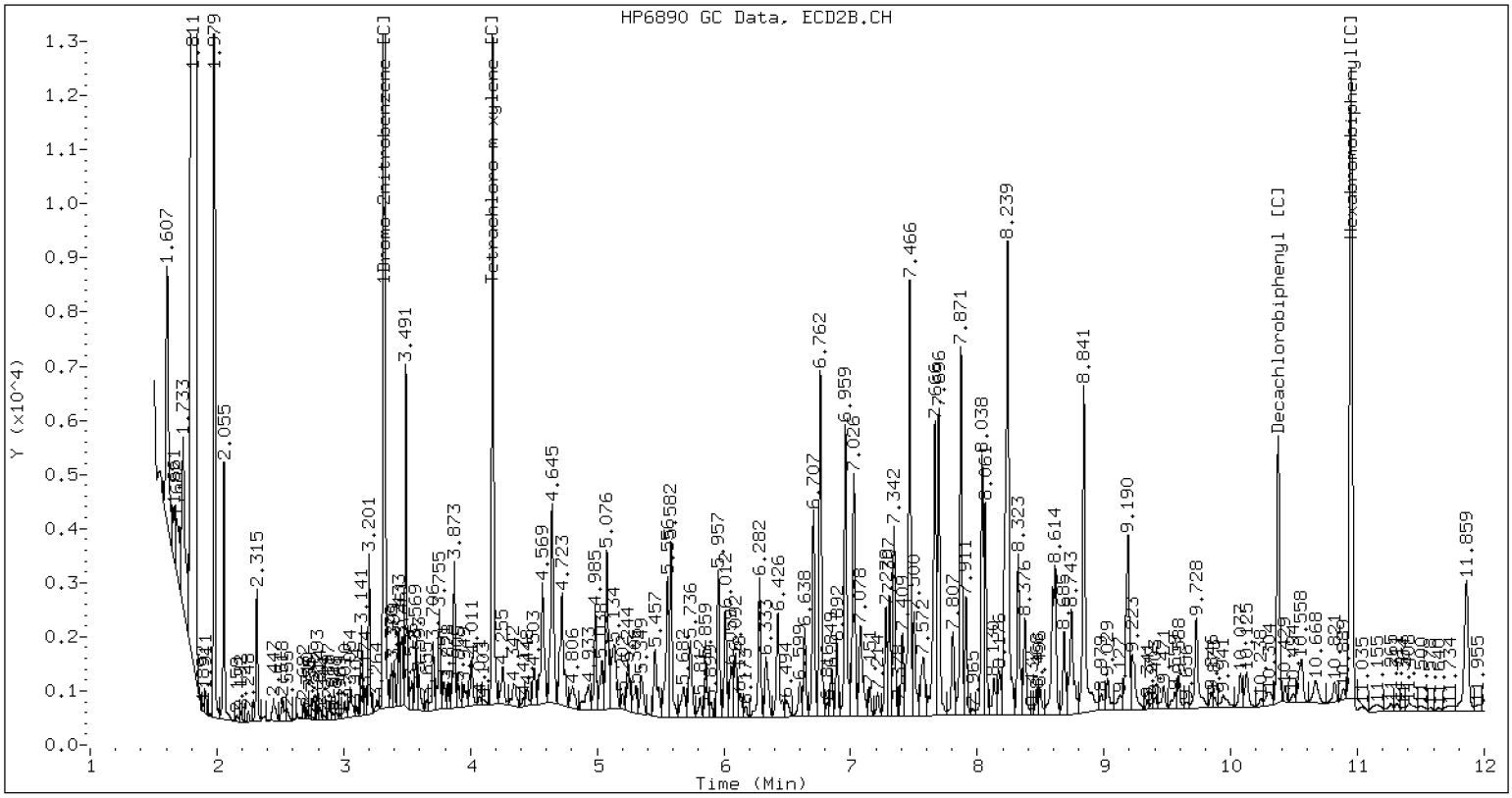
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

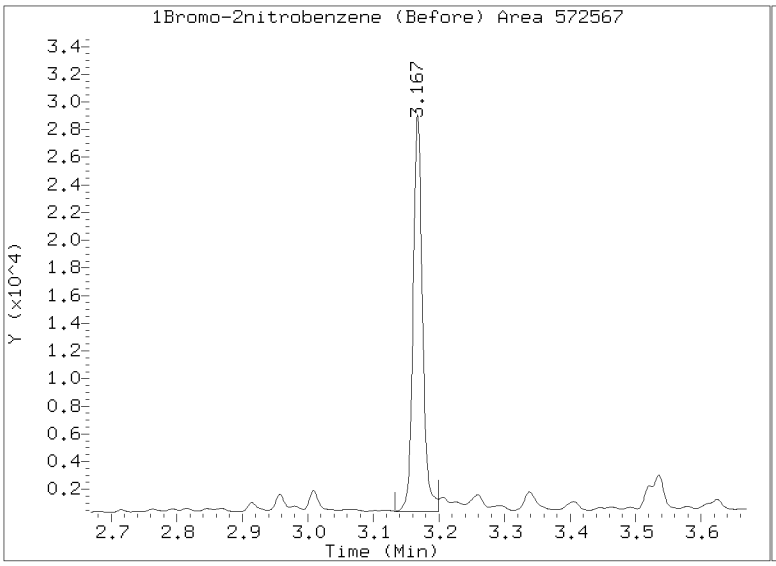
/20230314.b/B20230314.b/23031439.D 23A0467-04 CLP2

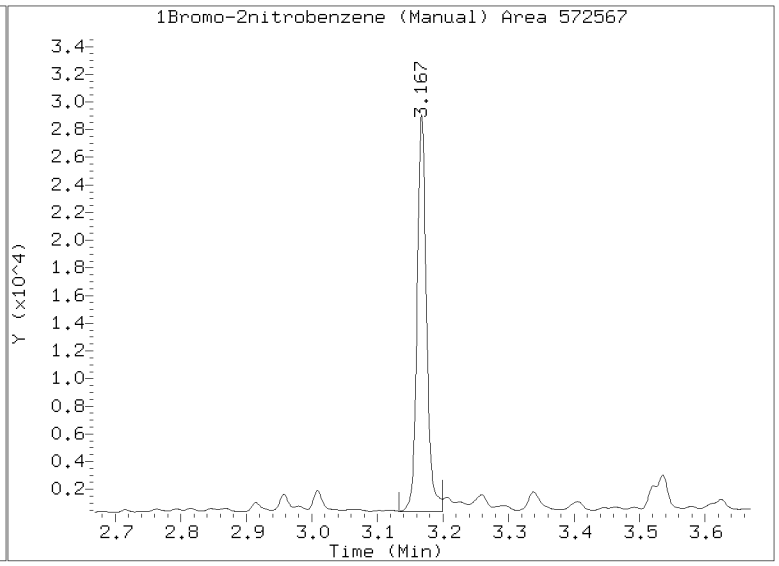


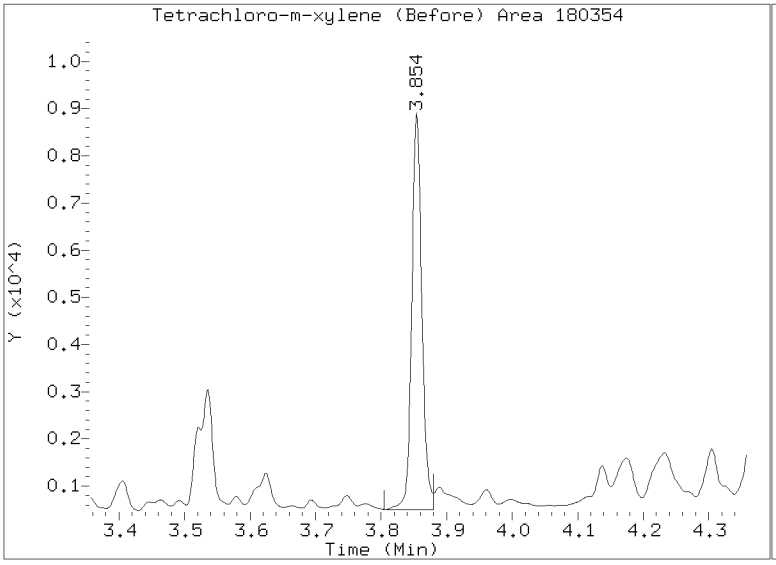
CLP-2 Manual Integration: YES

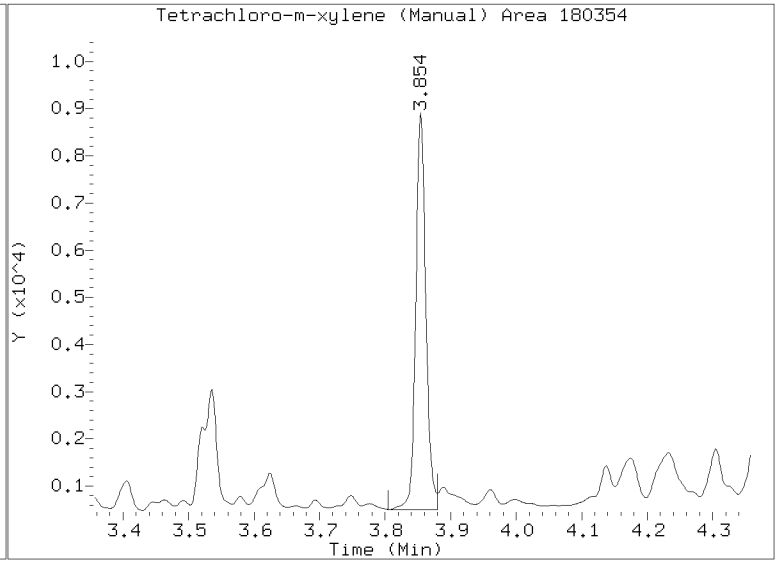
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031439.D
Injection Date: 15-MAR-2023 02:46
Lab ID:23A0467-04 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1004

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-05 A	File ID:	23031440.D
Sampled:	01/23/23 09:42	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 03:04
% Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.87 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9313*	*7.48*	*94.3*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9313*	*6.93*	*87.4*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9313*	*5.24*	*66.1*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9313*	*5.59*	*70.5*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031440.D
Data file 2: /20230314.b/B20230314.b/23031440.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-05
Client ID:
Injection Date: 15-MAR-2023 03:04
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.855	-0.002	178379	4.176	-0.002	277905	26.45	28.21	6.5	Tetrachloro-m-xylene MN
9.414	-0.001	125968	10.373	-0.000	147181	37.74	34.96	7.7	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

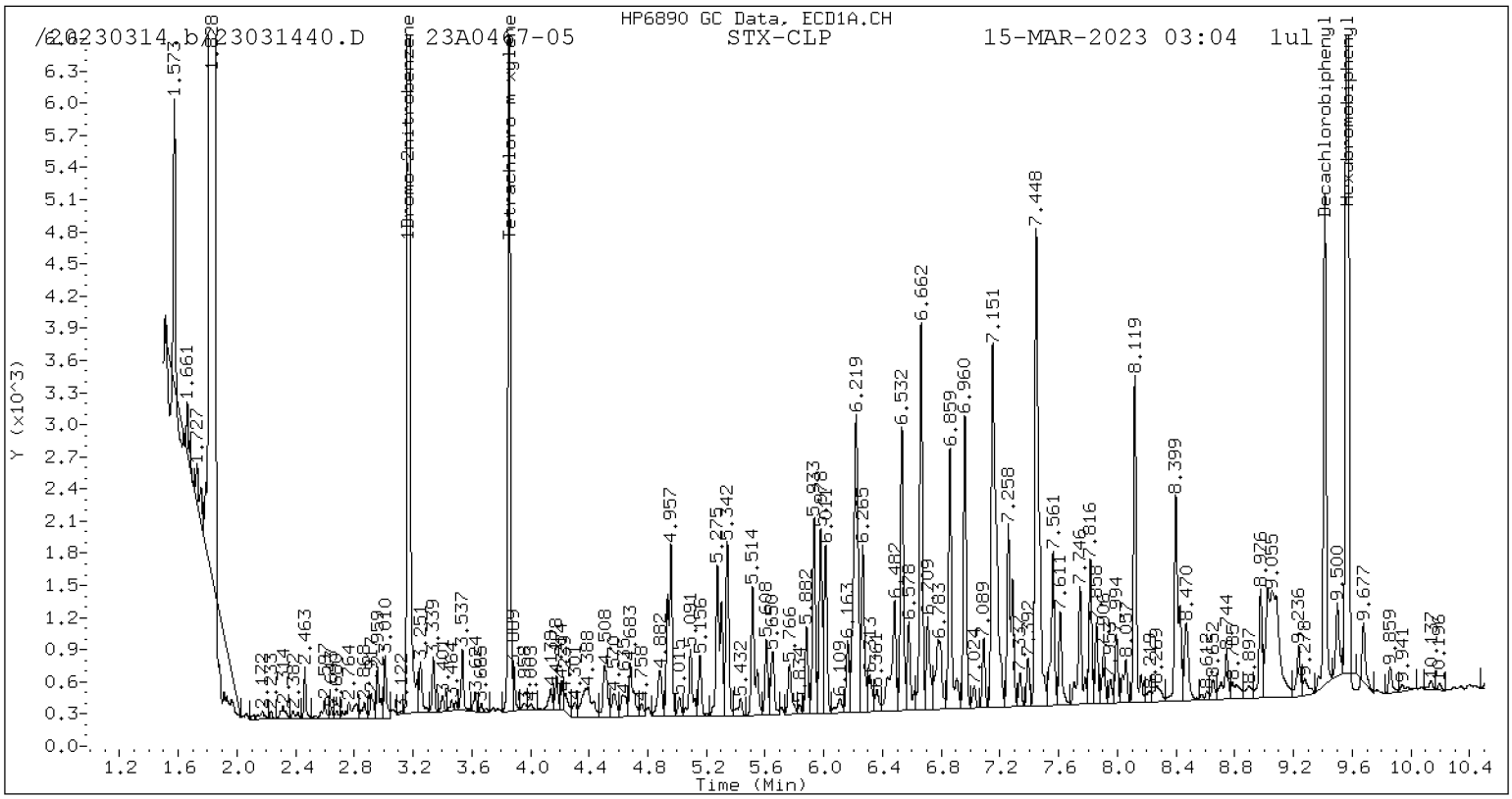
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	495996	-26.2
Hexabromobiphenyl	609723	329428	-46.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	699875	-30.5
Hexabromobiphenyl	769764	380936	-50.5 <-

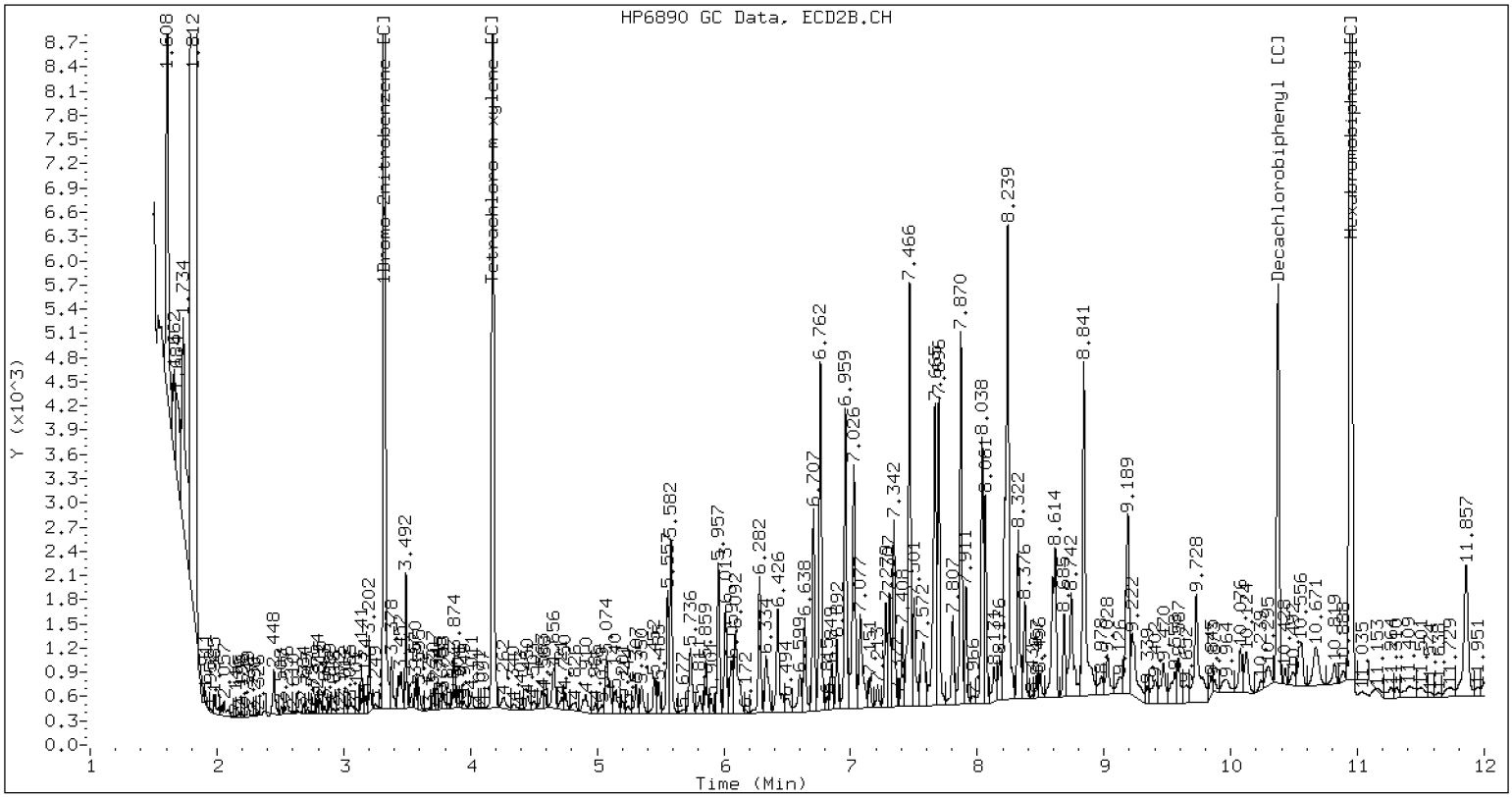
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

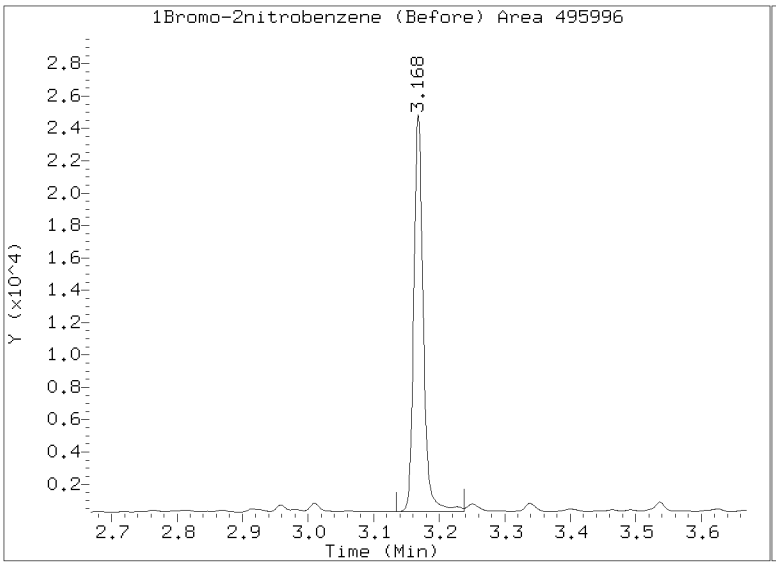
/20230314.b/B20230314.b/23031440.D 23A0467-05 CLP2

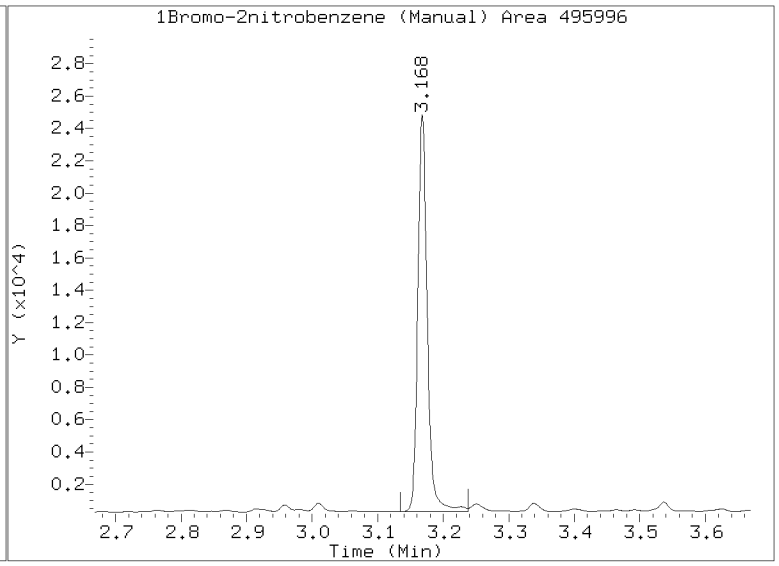


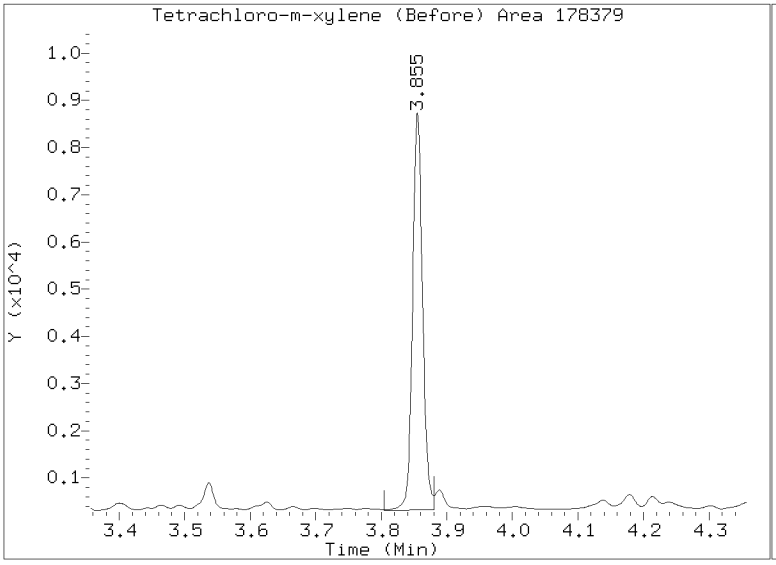
CLP-2 Manual Integration: YES

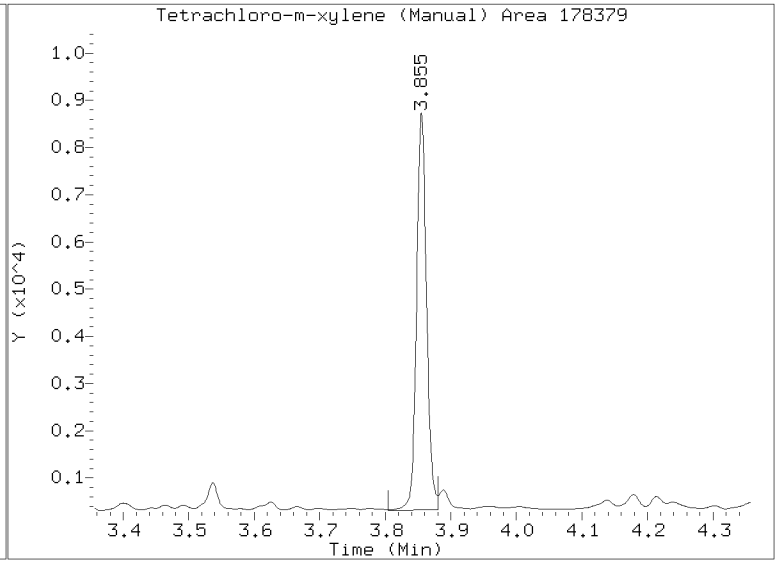
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031440.D
Injection Date: 15-MAR-2023 03:04
Lab ID:23A0467-05 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1204

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-06 A	File ID:	23031441.D
Sampled:	01/23/23 11:11	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 03:22
% Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.5 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9881*	*7.58*	*94.9*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9881*	*7.04*	*88.1*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9881*	*4.87*	*61.0*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9881*	*5.61*	*70.2*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031441.D
Data file 2: /20230314.b/B20230314.b/23031441.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-06
Client ID:
Injection Date: 15-MAR-2023 03:22
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.855	-0.003	183812	4.176	-0.002	284246	24.40	28.09	14.1	Tetrachloro-m-xylene MN
9.415	0.001	125000	10.374	0.001	149188	37.94	35.24	7.4	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

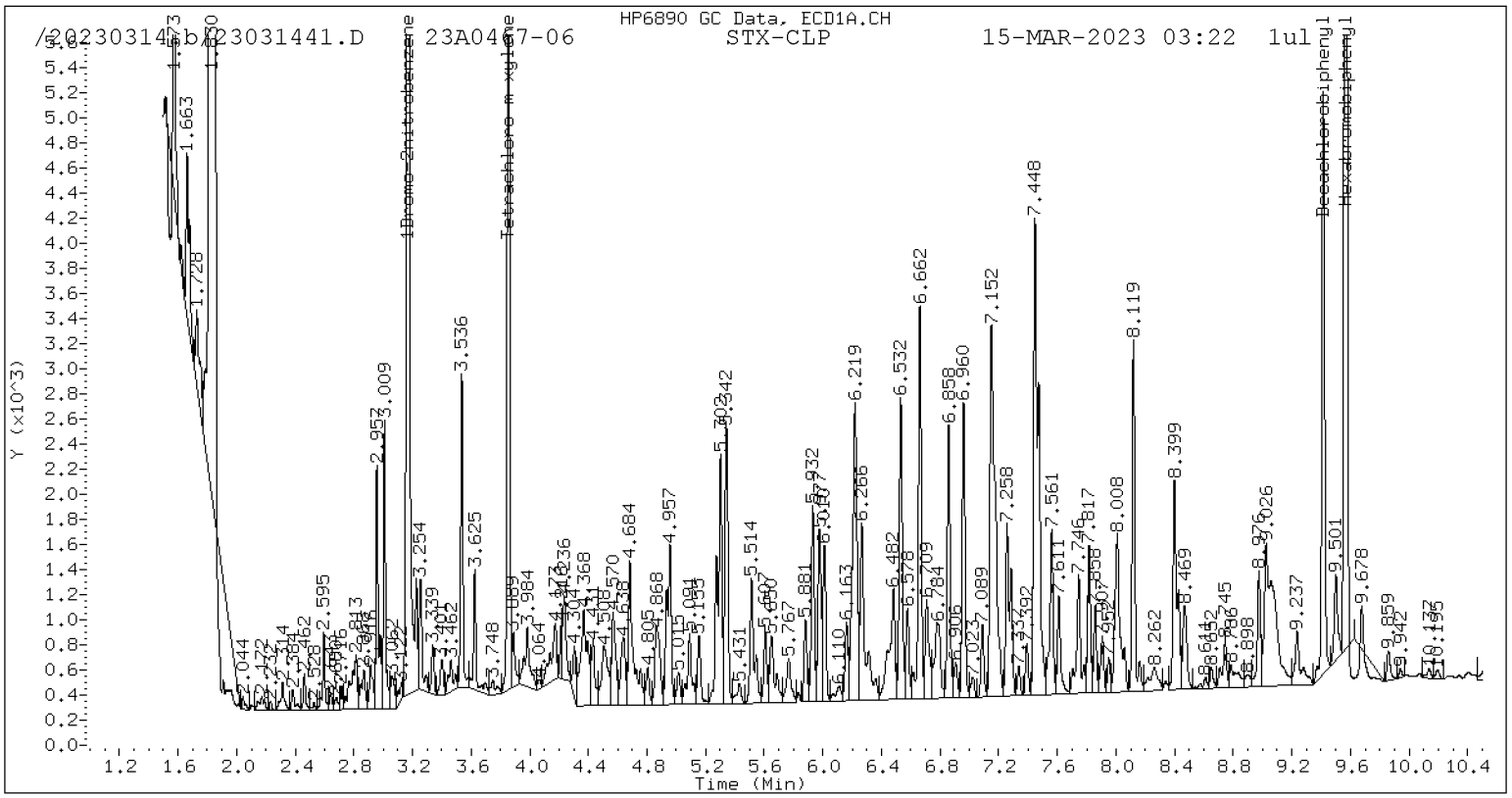
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	553835	-17.6
Hexabromobiphenyl	609723	325142	-46.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	718788	-28.6
Hexabromobiphenyl	769764	382996	-50.2 <-

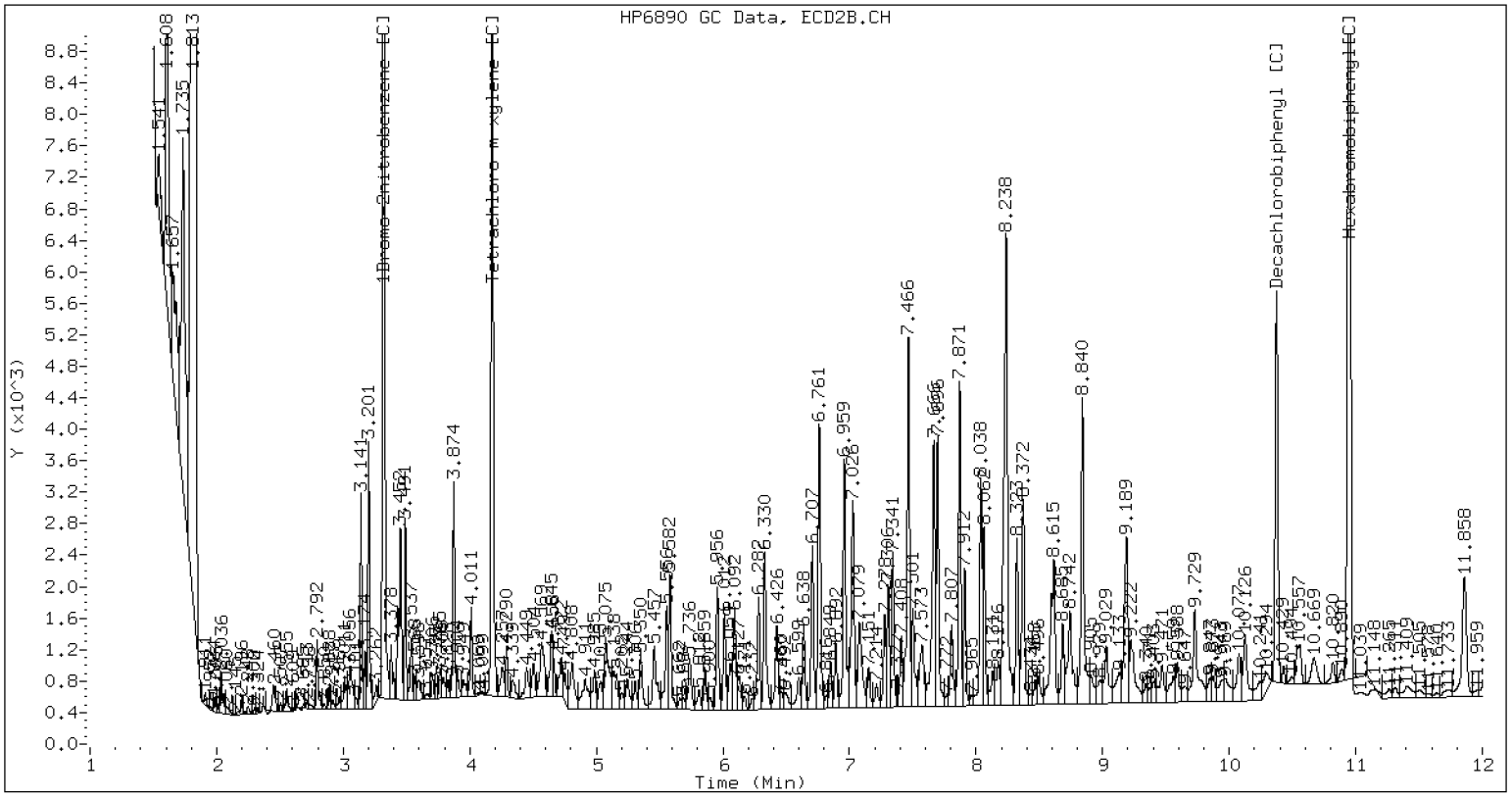
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

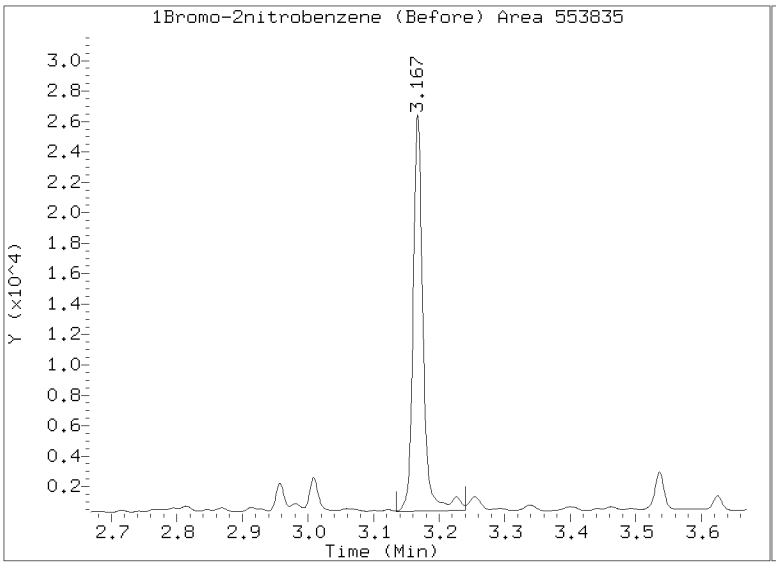
/20230314.b/B20230314.b/23031441.D 23A0467-06 CLP2

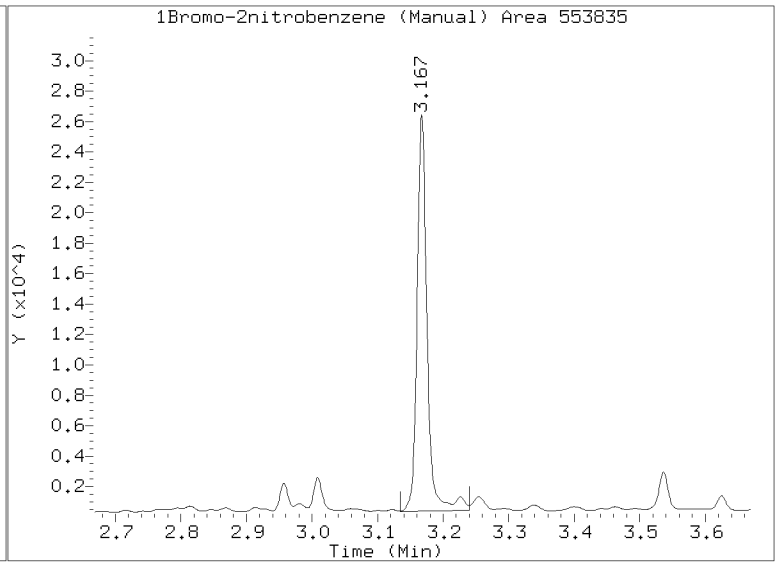


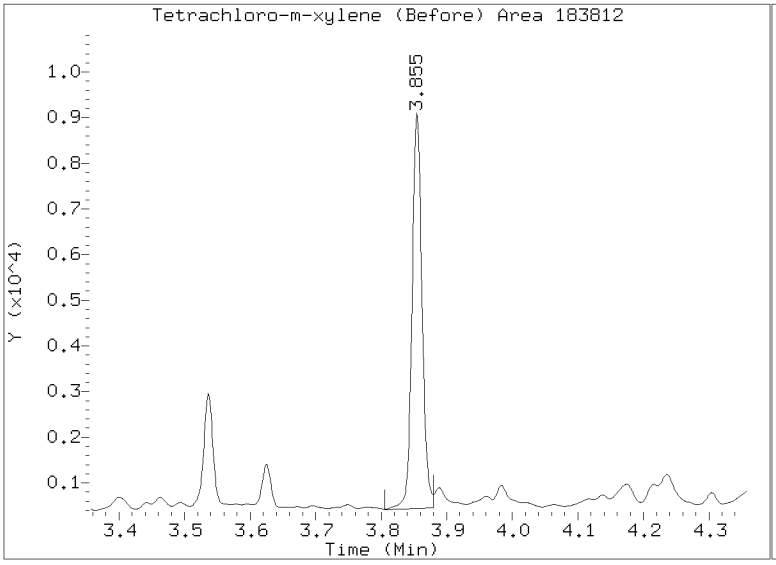
CLP-2 Manual Integration: YES

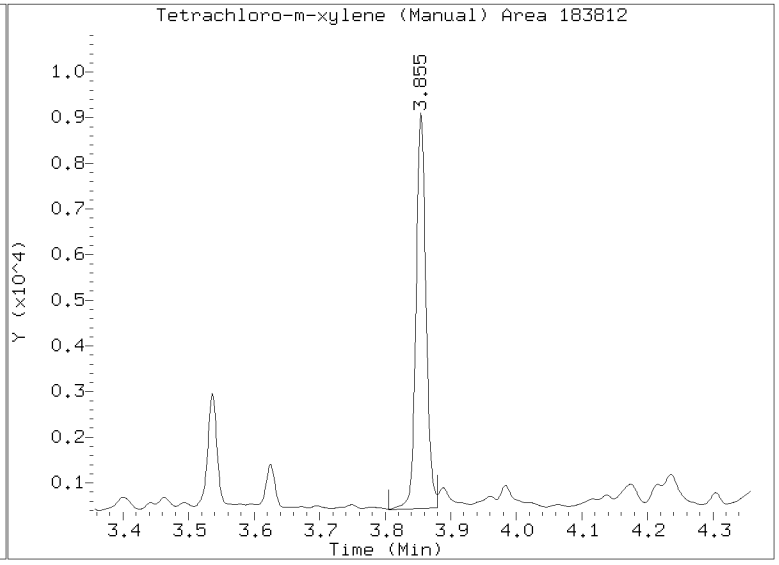
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031441.D
Injection Date: 15-MAR-2023 03:22
Lab ID:23A0467-06 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1238

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-07 A	File ID:	23031442.D
Sampled:	01/23/23 11:35	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 03:39
% Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.74 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9666*	*6.92*	*86.9*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9666*	*8.12*	*102*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9666*	*5.35*	*67.2*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9666*	*5.77*	*72.5*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031442.D
Data file 2: /20230314.b/B20230314.b/23031442.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-07
Client ID:
Injection Date: 15-MAR-2023 03:39
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.855	-0.003	182670	4.176	-0.003	288562	26.86	29.00	7.6	Tetrachloro-m-xylene MN
9.413	-0.001	119872	10.374	0.001	175568	34.76	40.75	15.9	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

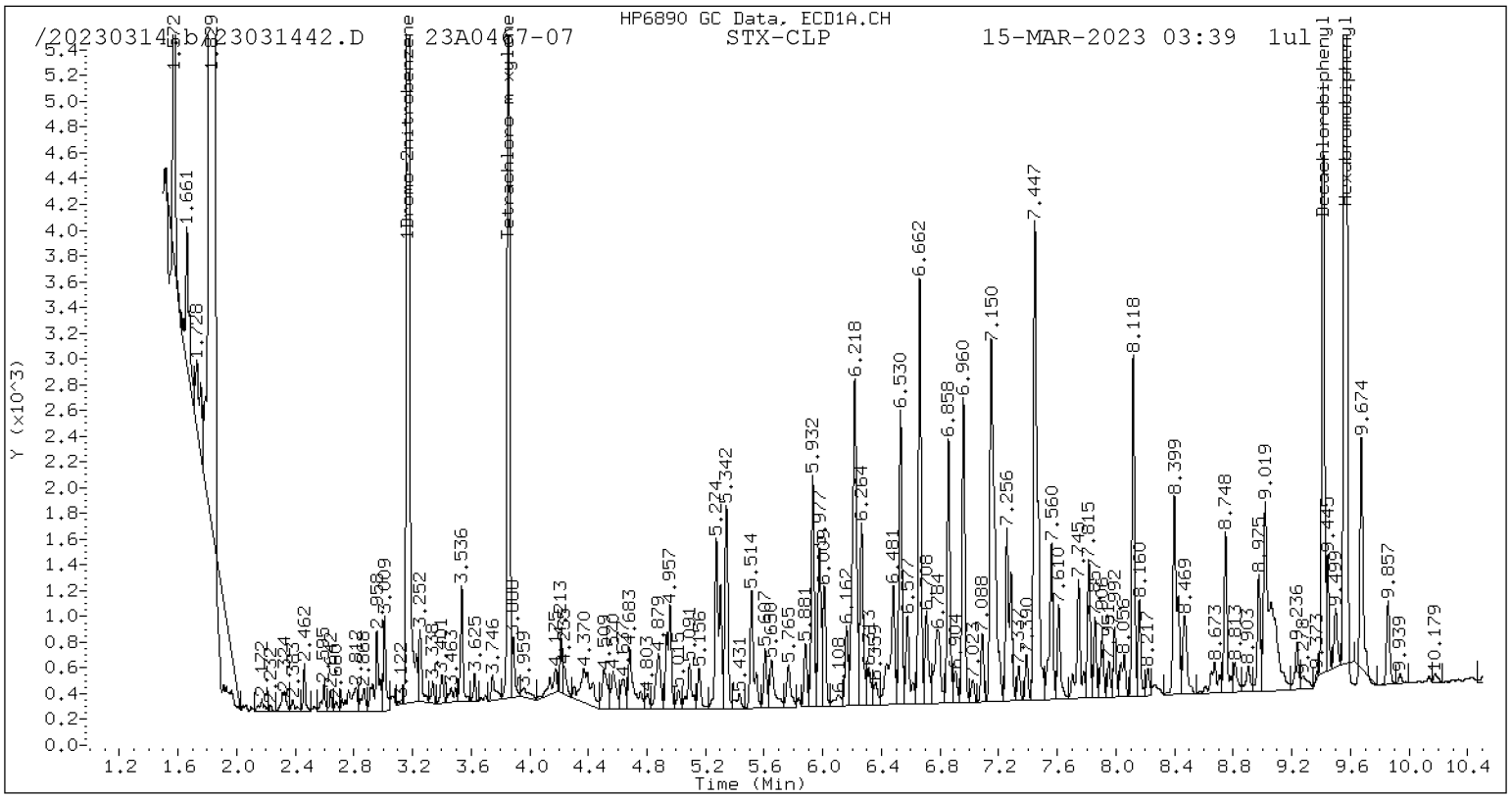
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	500020	-25.6
Hexabromobiphenyl	609723	340375	-44.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	706983	-29.8
Hexabromobiphenyl	769764	389800	-49.4

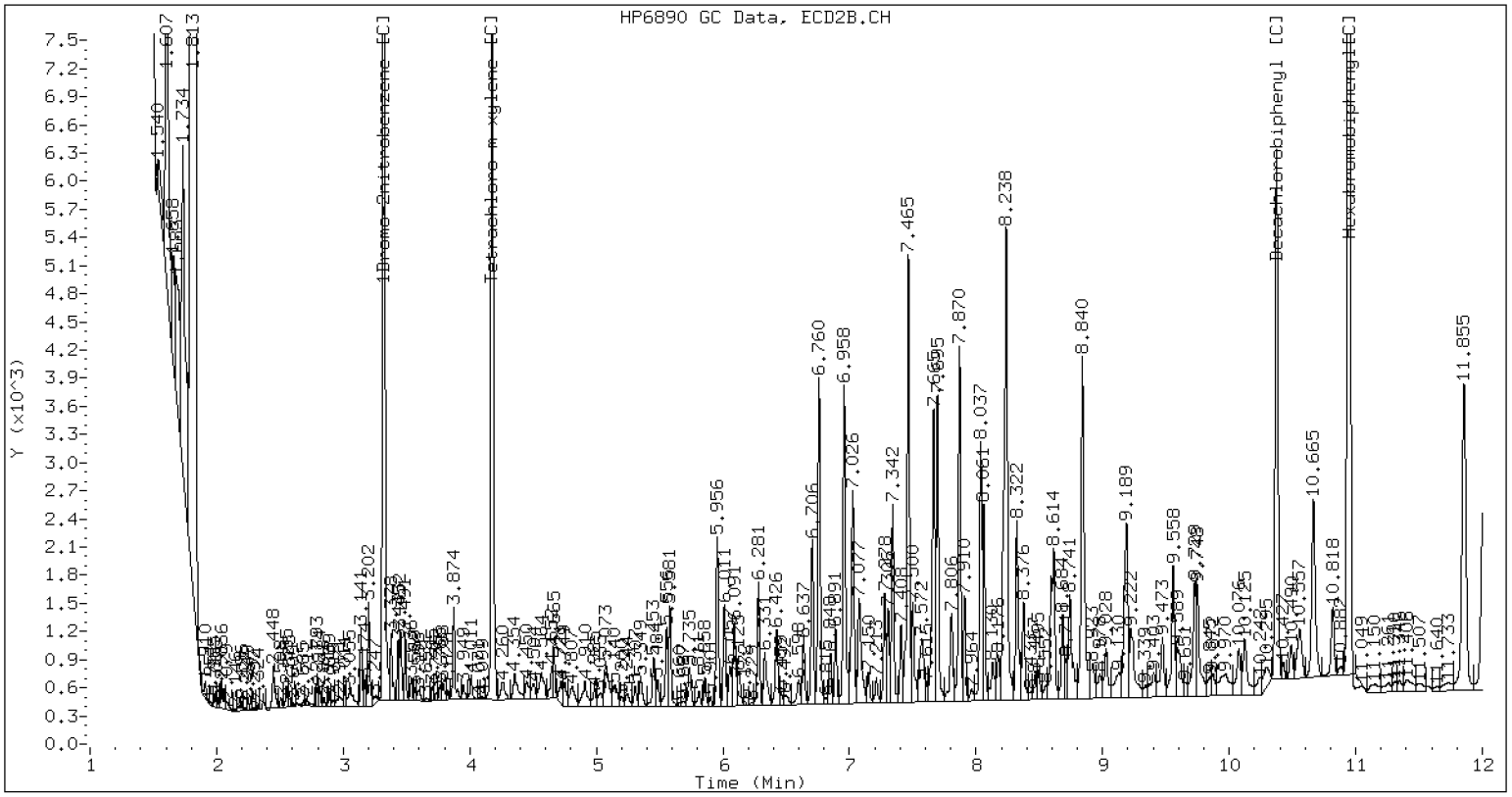
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

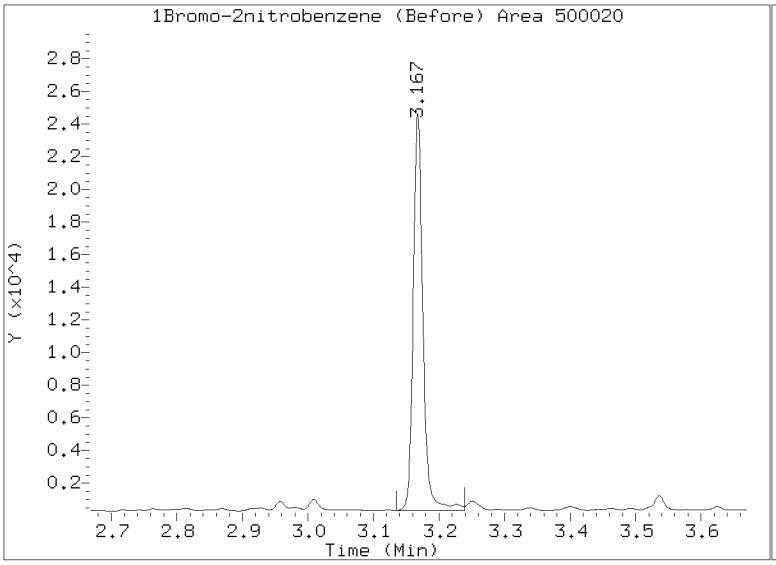
/20230314.b/B20230314.b/23031442.D 23A0467-07 CLP2

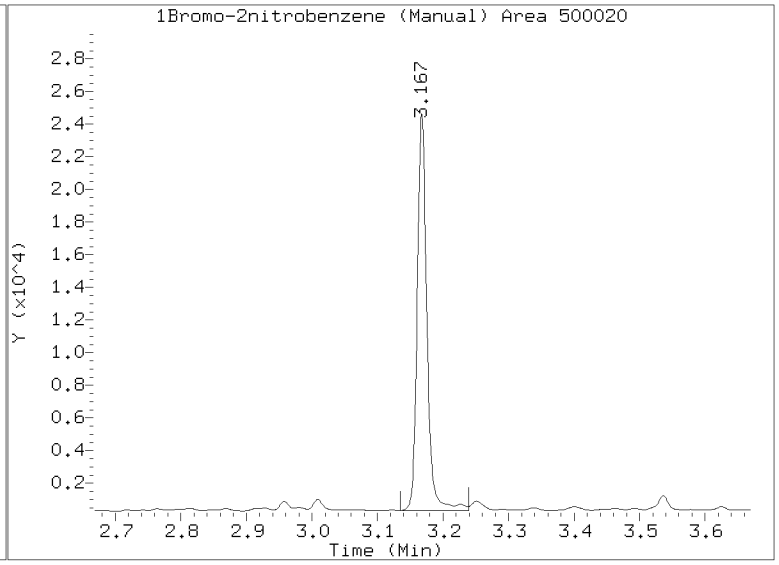


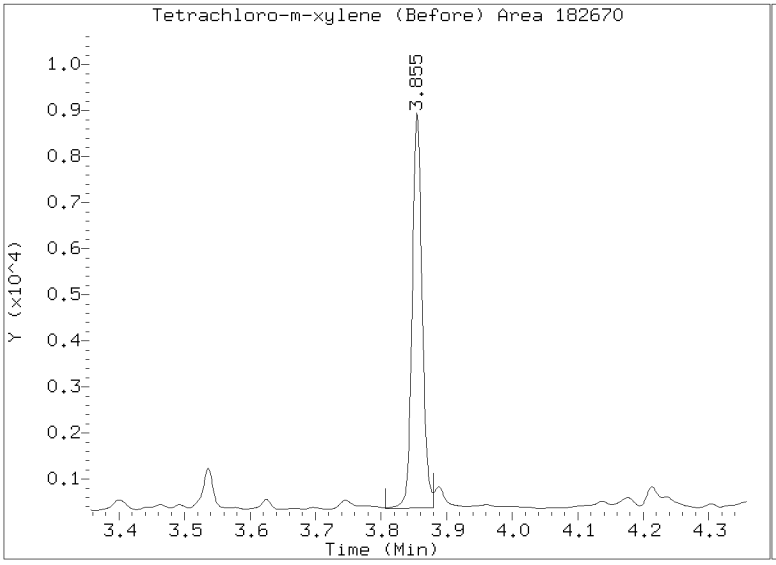
CLP-2 Manual Integration: YES

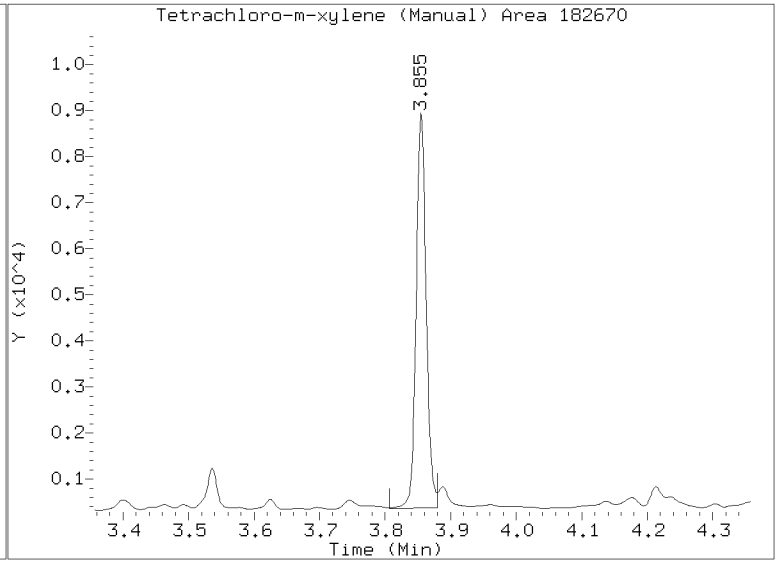
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031442.D
Injection Date: 15-MAR-2023 03:39
Lab ID:23A0467-07 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1013

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-08 A	File ID:	23031443.D
Sampled:	01/23/23 12:07	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 03:57
% Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.92 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.14	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9744*	*6.79*	*85.1*	*30 - 160*	
Decachlorobiphenyl	*2*	*7.9744*	*7.03*	*88.1*	*30 - 160*	
Tetrachlorometaxylene	*1*	*7.9744*	*4.84*	*60.7*	*30 - 160*	
Tetrachlorometaxylene	*2*	*7.9744*	*5.32*	*66.8*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031443.D
Data file 2: /20230314.b/B20230314.b/23031443.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-08
Client ID:
Injection Date: 15-MAR-2023 03:57
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.853	-0.005	317861	4.174	-0.004	501685	24.28	26.70	9.5	Tetrachloro-m-xylene MN
9.417	0.002	211561	10.376	0.003	278917	34.05	35.25	3.5	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

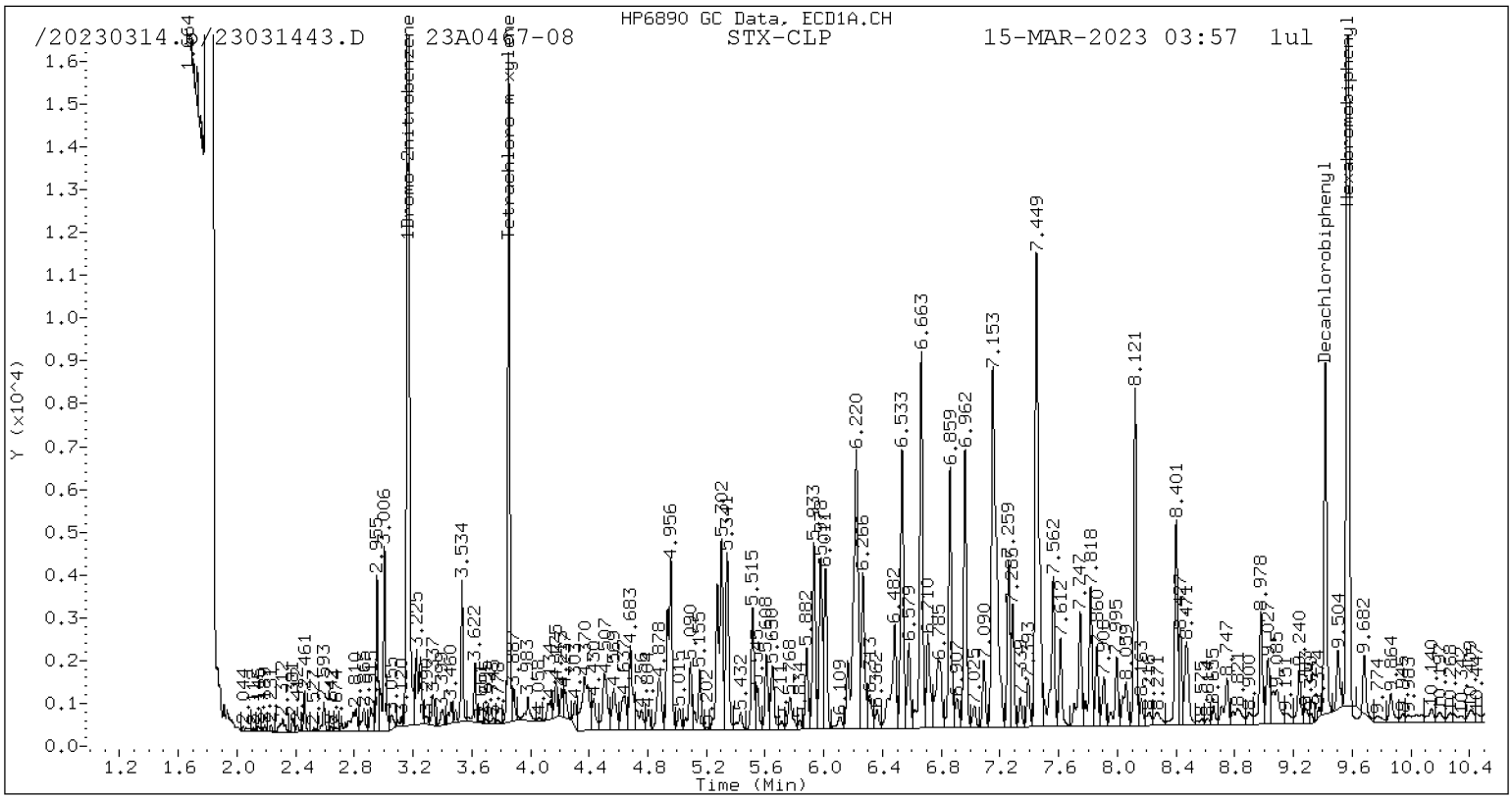
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	962740	43.2
Hexabromobiphenyl	609723	613129	0.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1334716	32.6
Hexabromobiphenyl	769764	715881	-7.0

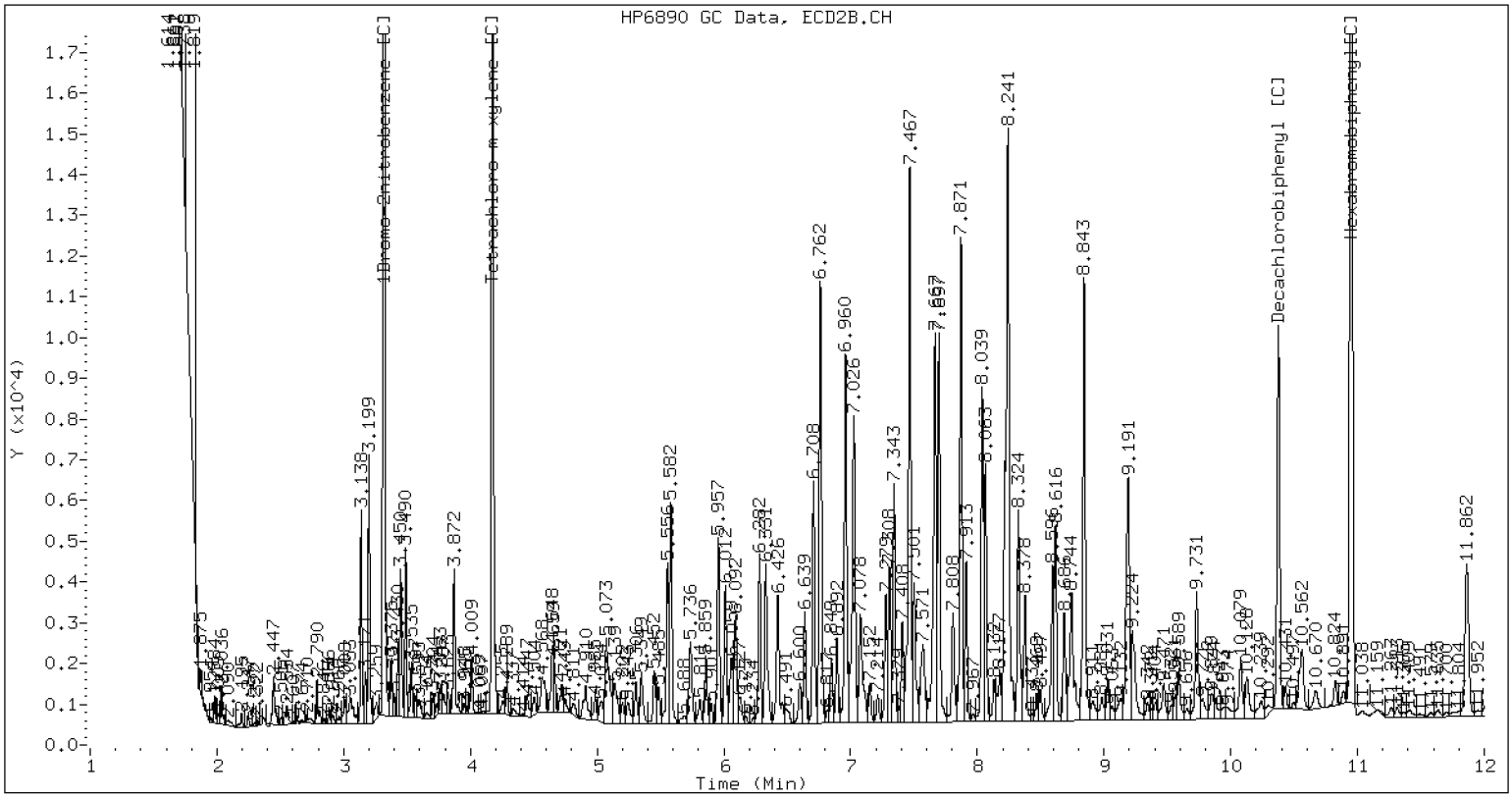
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

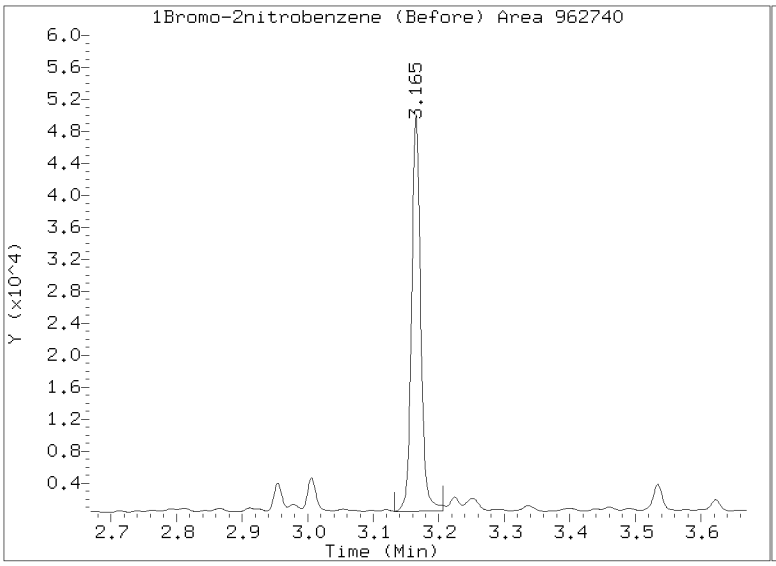
/20230314.b/B20230314.b/23031443.D 23A0467-08 CLP2

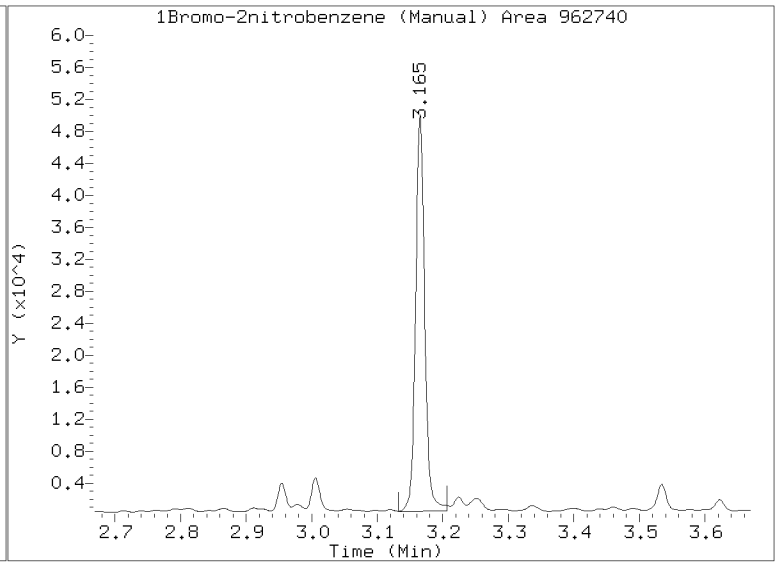


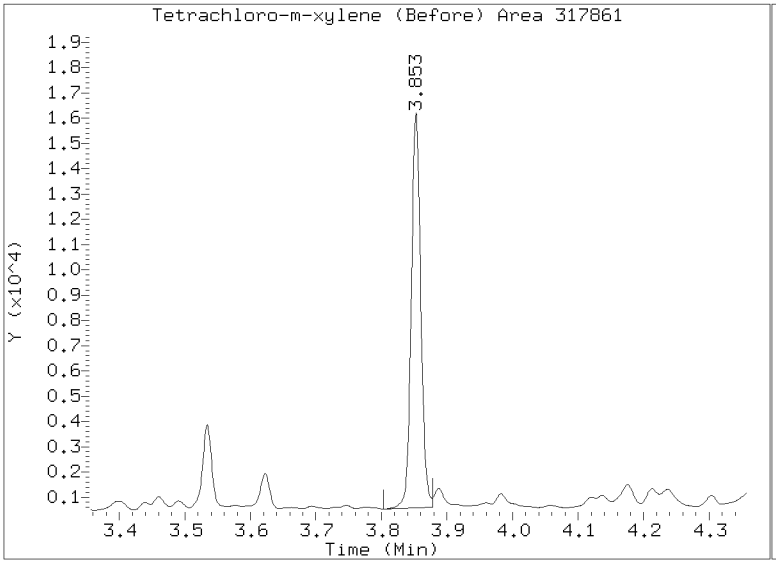
CLP-2 Manual Integration: YES

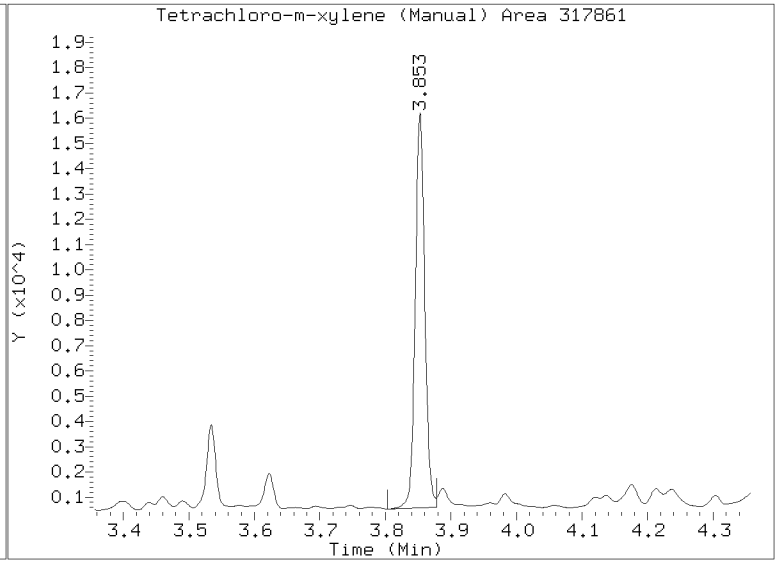
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031443.D
Injection Date: 15-MAR-2023 03:57
Lab ID:23A0467-08 Client ID:
Report Date: 03/22/2023 15:59









Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1014

ORGANIC ANALYSIS DATA SHEET
EPA 8081B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-09 A	File ID:	23031444.D
Sampled:	01/23/23 12:26	Prepared:	02/22/23 12:28	Analyzed:	03/15/23 04:15
% Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.58 g Wet / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column 1:	STX-CLP	Column 2:	STX-CLPII

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
118-74-1	Hexachlorobenzene	1	1	0.50	0.15	0.50	U

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*8.0013*	*6.84*	*85.5*	*30 - 160*	
Decachlorobiphenyl	*2*	*8.0013*	*6.58*	*82.2*	*30 - 160*	
Tetrachlorometaxylene	*1*	*8.0013*	*5.14*	*64.2*	*30 - 160*	
Tetrachlorometaxylene	*2*	*8.0013*	*5.74*	*71.7*	*30 - 160*	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031444.D
Data file 2: /20230314.b/B20230314.b/23031444.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: 23A0467-09
Client ID:
Injection Date: 15-MAR-2023 04:15
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.855	-0.002	168351	4.176	-0.003	273358	25.67	28.69	11.1	Tetrachloro-m-xylene MN
9.413	-0.001	112188	10.372	-0.001	138938	34.21	32.89	3.9	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

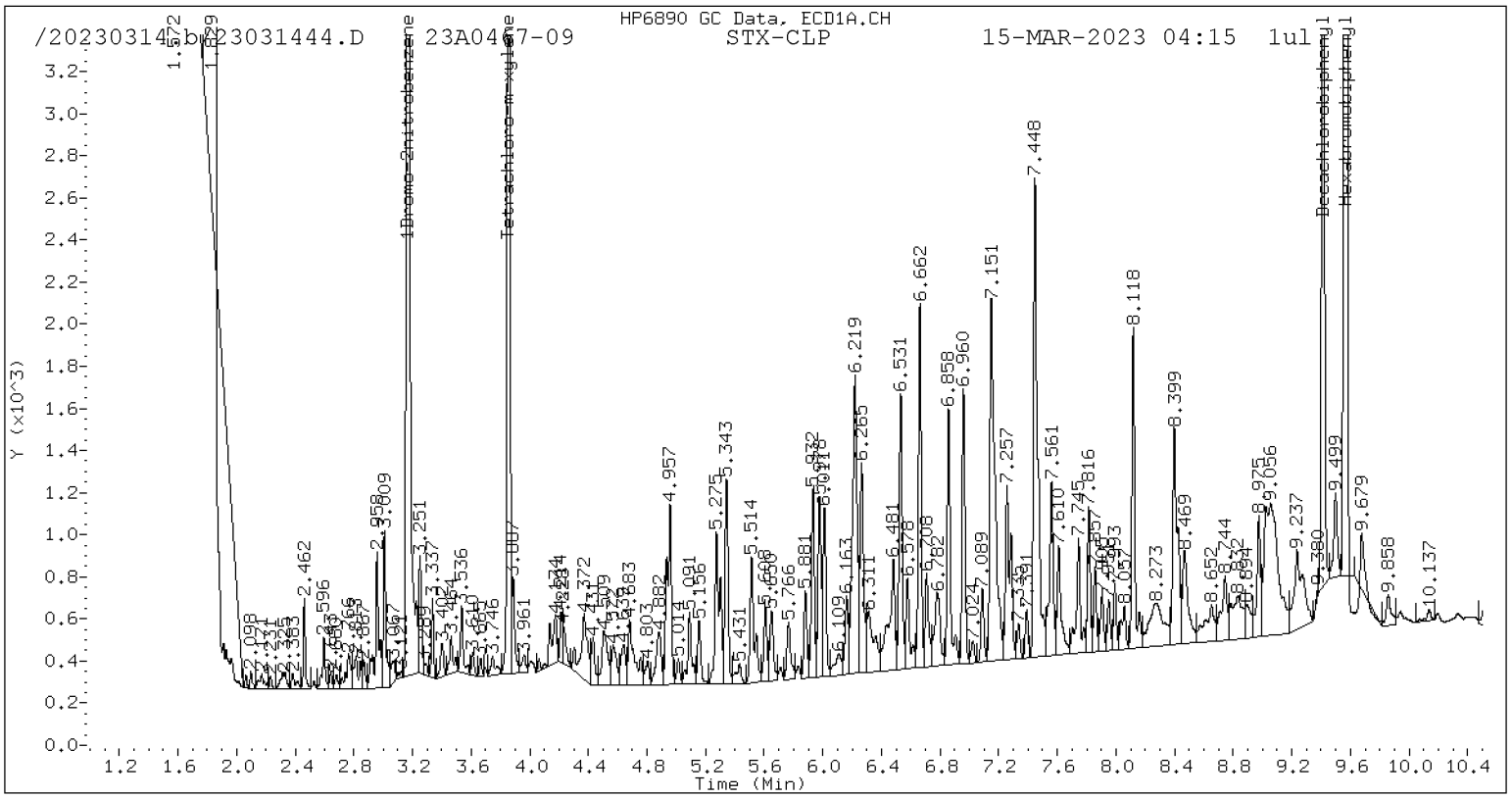
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	482190	-28.3
Hexabromobiphenyl	609723	323618	-46.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	676935	-32.7
Hexabromobiphenyl	769764	382189	-50.3 <-

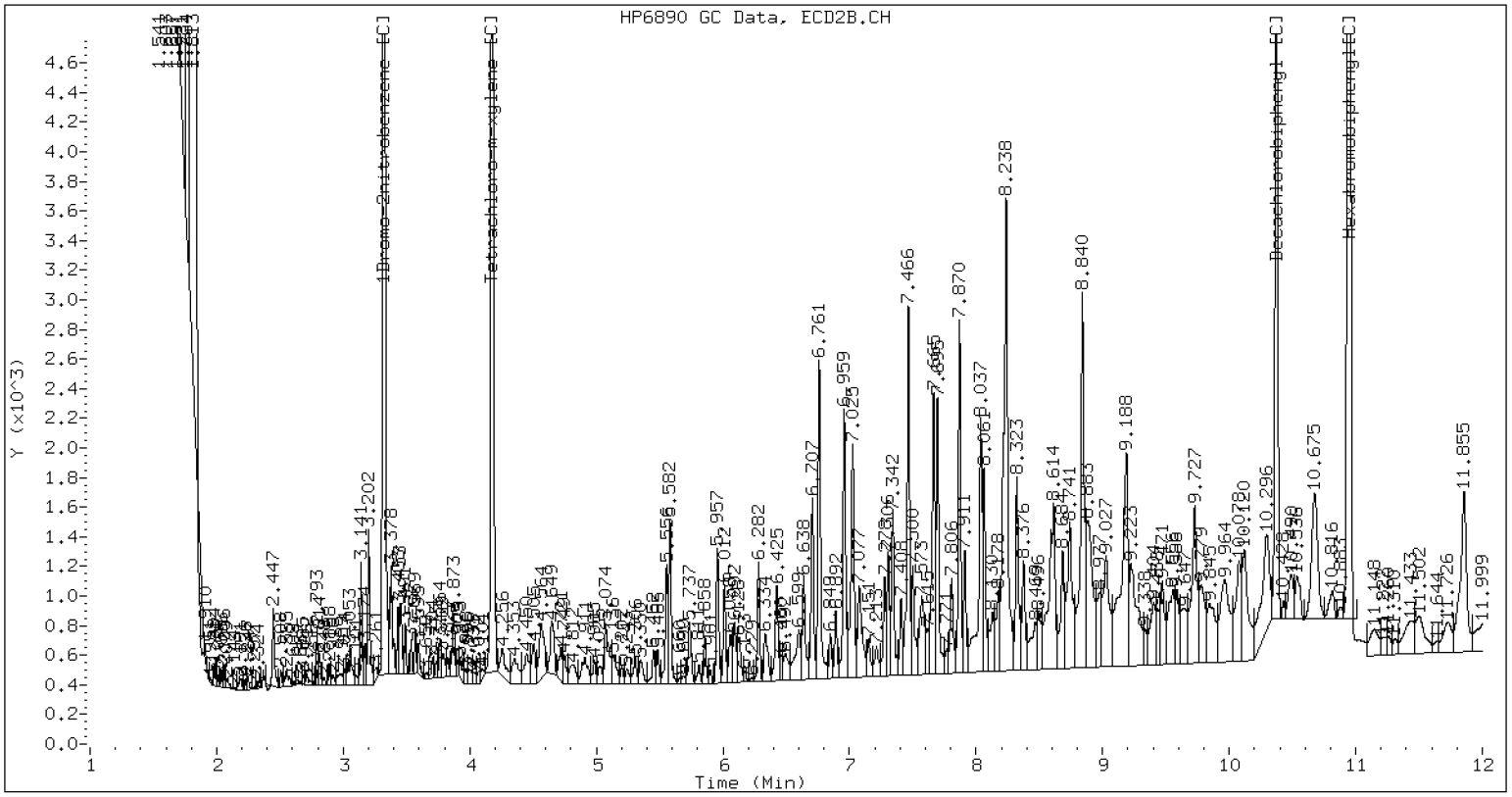
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

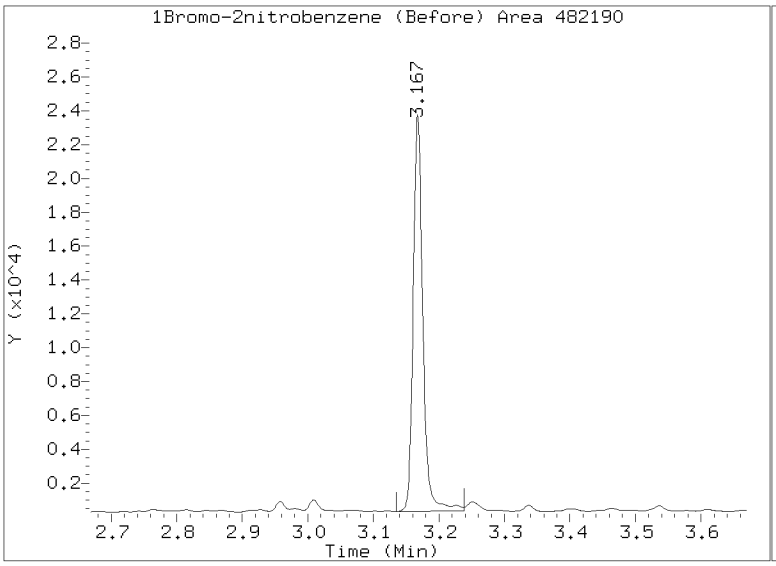
/20230314.b/B20230314.b/23031444.D 23A0467-09 CLP2

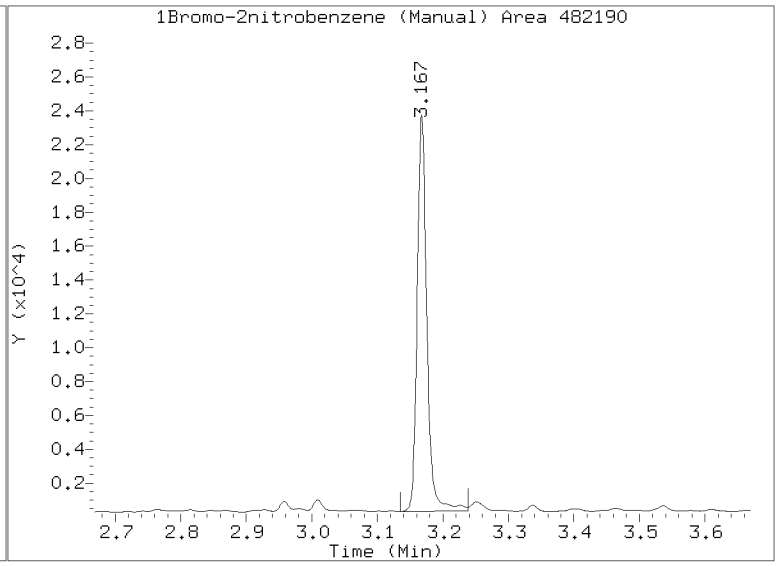


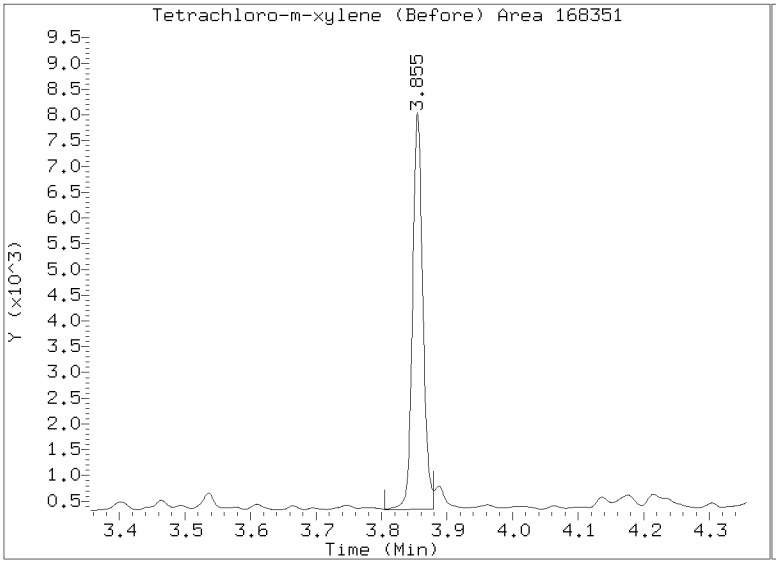
CLP-2 Manual Integration: YES

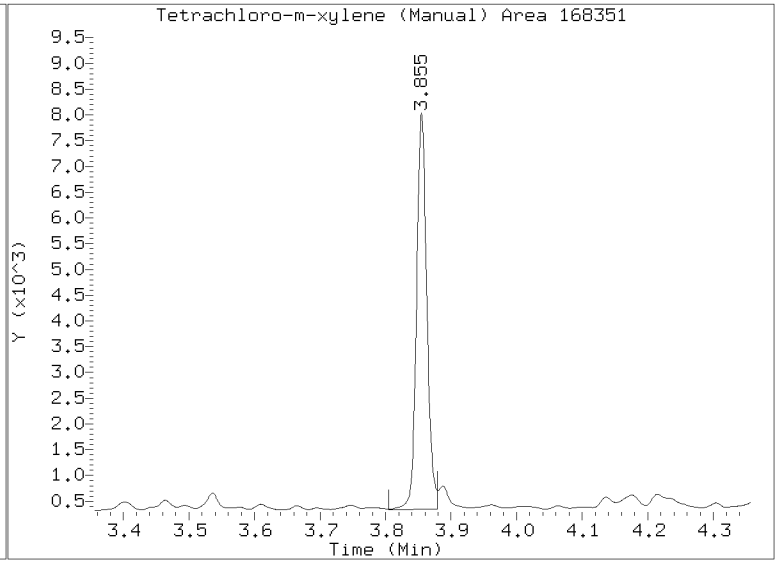
Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031444.D
Injection Date: 15-MAR-2023 04:15
Lab ID:23A0467-09 Client ID:
Report Date: 03/22/2023 15:59









PREPARATION BATCH SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0554 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	23031436.D	02/22/23 12:28	
LDW23-SS1005	23A0467-02	23031437.D	02/22/23 12:28	
LDW23-SS1006	23A0467-03	23031438.D	02/22/23 12:28	
LDW23-SS1003	23A0467-04	23031439.D	02/22/23 12:28	
LDW23-SS1004	23A0467-05	23031440.D	02/22/23 12:28	
LDW23-SS1204	23A0467-06	23031441.D	02/22/23 12:28	
LDW23-SS1238	23A0467-07	23031442.D	02/22/23 12:28	
LDW23-SS1013	23A0467-08	23031443.D	02/22/23 12:28	
LDW23-SS1014	23A0467-09	23031444.D	02/22/23 12:28	
Blank	BLB0554-BLK1	23031429.D	02/22/23 12:28	
LCS	BLB0554-BS1	23031430.D	02/22/23 12:28	
LCS Dup	BLB0554-BSD1	23031431.D	02/22/23 12:28	
LDW23-SS1014	BLB0554-MS1	23031432.D	02/22/23 12:28	
LDW23-SS1014	BLB0554-MSD1	23031433.D	02/22/23 12:28	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0554

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

Matrix: Solid **Date Prepared:** 2/22/23 **Balance ID:** B139298002 **Set Up By:** CTO 2/21/23

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
62	Toxaphene
44	WND
QLS 10	QLS Spike

Analysis: 8081B Pest (PSDDA)

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) GPC (1:1) 1 (2) 3	(Yes) / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0467-01 A	49.9	(25.05)	25.10	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-02 A	46.9	(26.65)	26.88	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-03 A	48.0	(26.06)	26.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-04 A	47.1	(26.53)	26.60	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-05 A	55.1	(22.67)	22.87	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-06 A	47.2	(26.46)	26.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-07 A	55.2	(22.65)	22.74	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-08 A	48.4	(25.84)	25.92	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
23A0467-09 A	63.8	(19.58)	19.58	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet)	Actual	(REQ) GPC (1:1) 1 (2) 3	(Yes) / No) Acid Clean 5mL	(REQ) Sulfur C/U 4.5mL+0.5 mL ~~Ethyl Acetate~~	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0554-BLK1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0554-BS1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0554-BSD1	100.0	(12.50)	12.50	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	
BLB0554-MS1	63.8	(19.58)	19.58	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0467-09
BLB0554-MSD1	63.8	(19.58)	19.58	(1:1)	5mL	5mL	(2:5) 2mL	2.5	1.0	Use 23A0467-09

Client ID verified By	Date	Preparation Reviewed By	Date	Extraction Date and Time	
CR	2/22/23	LJ	3/1/23	2/22/23	12:28

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0554

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 2 3
Analyst/Date: CT 2/23/23

Pre GPC KD
100°C
(No Exchange)
4 3 4 5 6
Analyst/Date: LO 2-24

TurboVap
Pre GPC
1 2 3 4 5
Analyst/Date: SH 2/24/23

Post GPC KD
80 - 85°C
Hexane Exchange
(2 X 20 mL)
100°C
1 2 3 4 5 6
Analyst/Date: LO 2-27

TurboVap
Pre-Cleanups
1 2 3 4 5
Analyst/Date: AK3 2/28/23

TurboVap
Post-Cleanups
1 2 3 4 5
Analyst/Date: LJ 3/1/23

Vialing
Analyst/Date: LJ 3/1/23

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT Date: 2/23/23	
Hexane	L000889
80:20 Hexane/Acetone	L001221
1:1 Hexane/Acetone	L001220
Neutral Glass Wool	L000350
Anhydrous Sodium Sulfate	L001285
Pre GPC KD Analyst: LO Date: 2-24-23	
Hexane	L000889
Anhydrous Sodium Sulfate	
Neutral Glass Wool SH 2/24/23	
GPC Filter Prep Analyst: SH Date: 2/24/23	
Methylene Chloride	K005158
GPC Filter	L001799
GPC Analyst: SH Date: 2/24/23	
Methylene Chloride	K005158
GPC Calibration File	CLB#32-GPC2
Post GPC KD Analyst: LO Date: 2-27-23	
Methylene Chloride	K011477
Hexane L000889 &	K005169
Vialing Analyst: ~~AK3~~ LJ 3/1/23 Date: 3/1/23	
Hexane	L000889
Sulfuric Acid	L001033
Ethyl Acetate	N/A
Tetrabutylammonium hydrogensulfate (TBAS)	L001601
Sodium Sulfite	K000363
Silica Gel (SPE) Darts	L001084

switch LO 2-27

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 Exp Date: 7/21/23	50µL	LR	CD
Spike (Freezer) 0.5/1/5µg/mL	3 K011471 Exp Date: 6/10/23	100µL	LR	CD

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0554

Prepared using: EPA 3546 (Microwave)

8081B Pest (PSDDA) in Solid (Version:HCB Only)

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PEST Extraction Batch: BLB0554

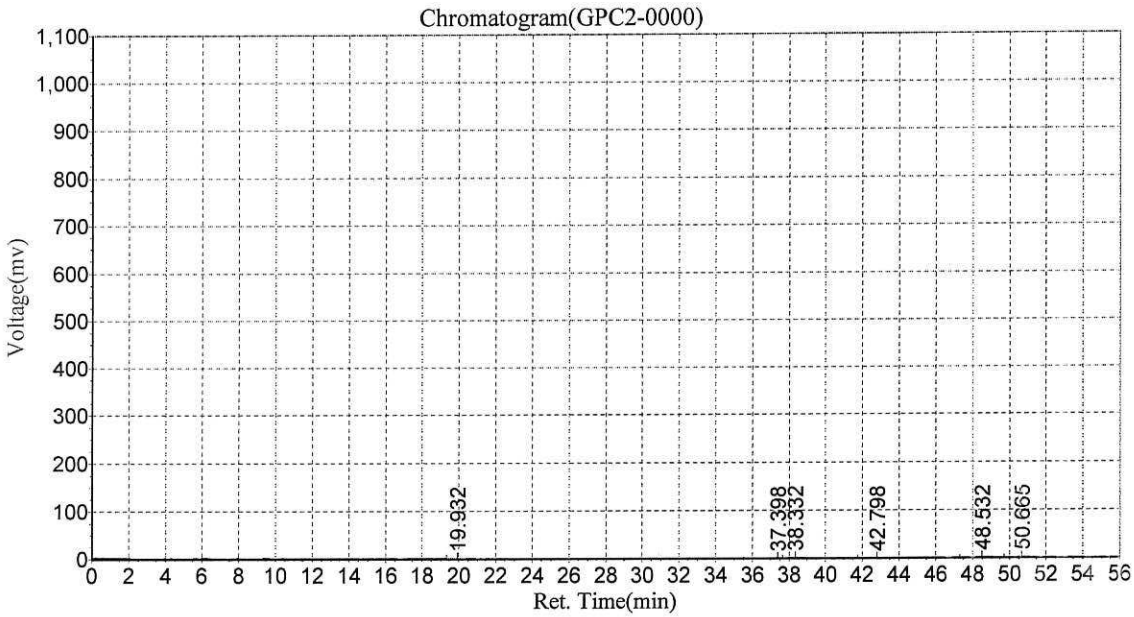
Total Solids Batch: BLB0378 Work Order(s): 23A0467

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-05	CR 2/20/23
☒ Standing Water Decanted (Not shared)= 01-09	CR 2/20/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/(sulfur) odors= 06,07,08,09	CR 2/20/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-09	CR 2/20/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☒ Share Samples Y / (N)	CR 2/20/23
☒ Multiple Jars Y / (N)	CR 2/20/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-24,10:47:53 PM
Data File:c:\n2000\data\gpc2\022423\GPC2-0000
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-24,10:47:54 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		19.932	2182.585	202150.328	13.7341
2		37.398	3060.463	248637.578	16.8925
3		38.332	3630.194	352671.750	23.9606
4		42.798	1822.481	178393.375	12.1201
5		48.532	2707.116	271008.875	18.4124
6		50.665	2466.074	219023.031	14.8804
Total			15868.914	1471884.938	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-24,11:45:36 PM
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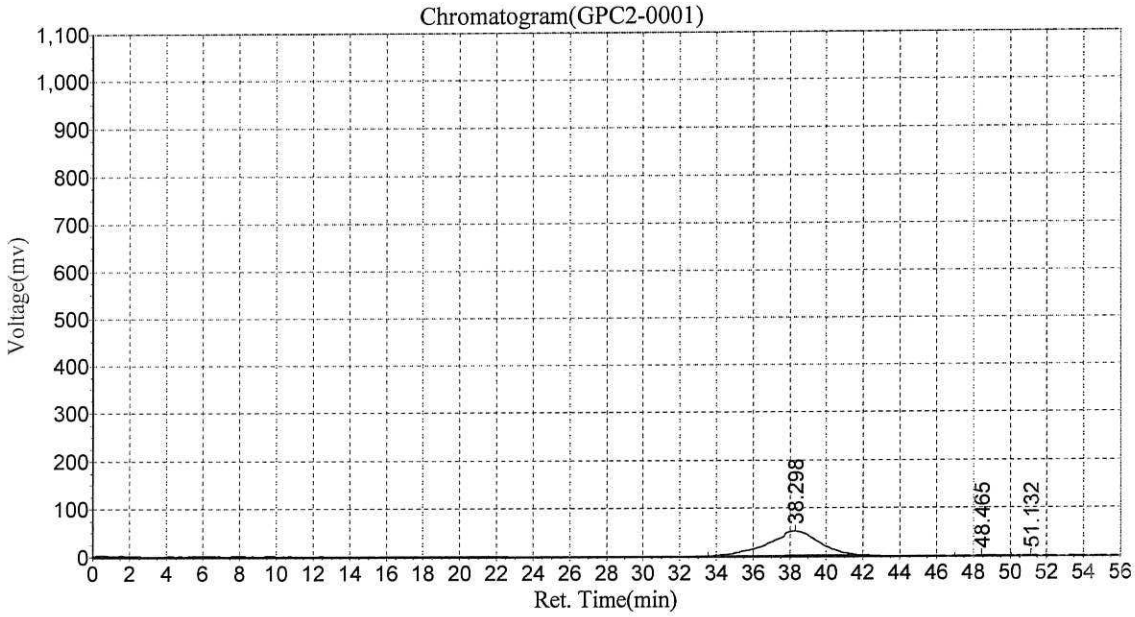
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-24,11:45:36 PM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		38.298	51996.086	10410894.000	96.1289
2		48.465	2439.024	240225.359	2.2181
3		51.132	2025.976	179023.141	1.6530
Total			56461.086	10830142.500	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,12:43:18 AM
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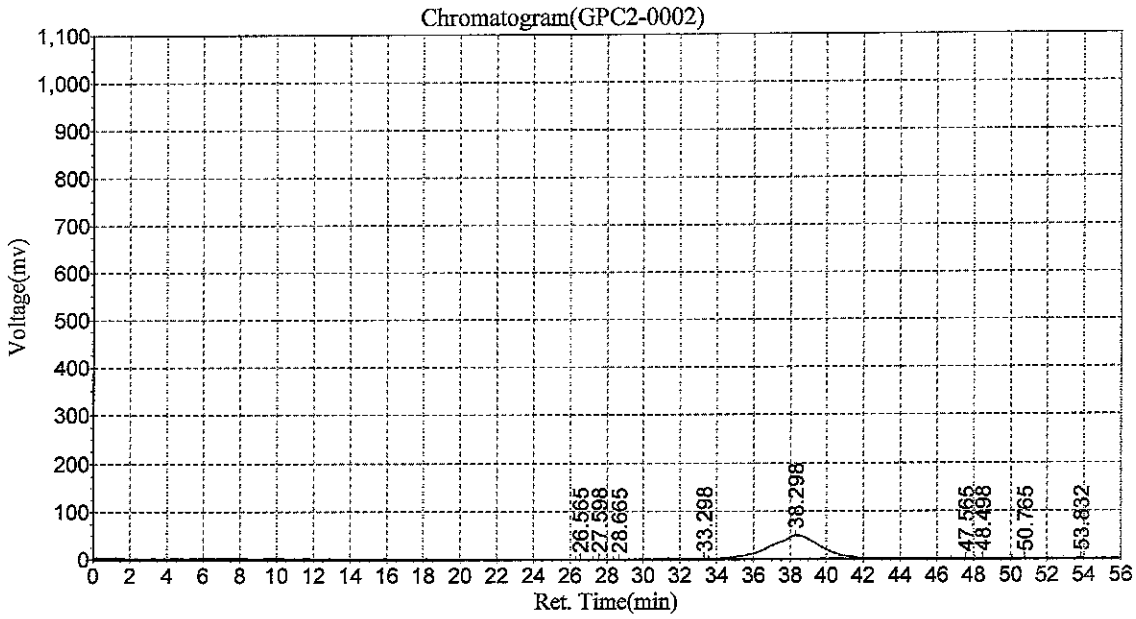
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,12:43:18 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		26.565	2415.472	129576.938	1.0218
2		27.598	2824.956	140757.297	1.1099
3		28.665	2722.165	143125.875	1.1286
4		33.298	4031.088	322053.781	2.5395
5		38.298	51637.219	11323470.000	89.2895
6		47.565	2296.792	116684.469	0.9201
7		48.498	2459.483	191944.141	1.5135
8		50.765	2451.875	164989.766	1.3010
9		53.832	1807.288	149145.188	1.1761
Total			72646.339	12681747.453	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,1:41:06 AM
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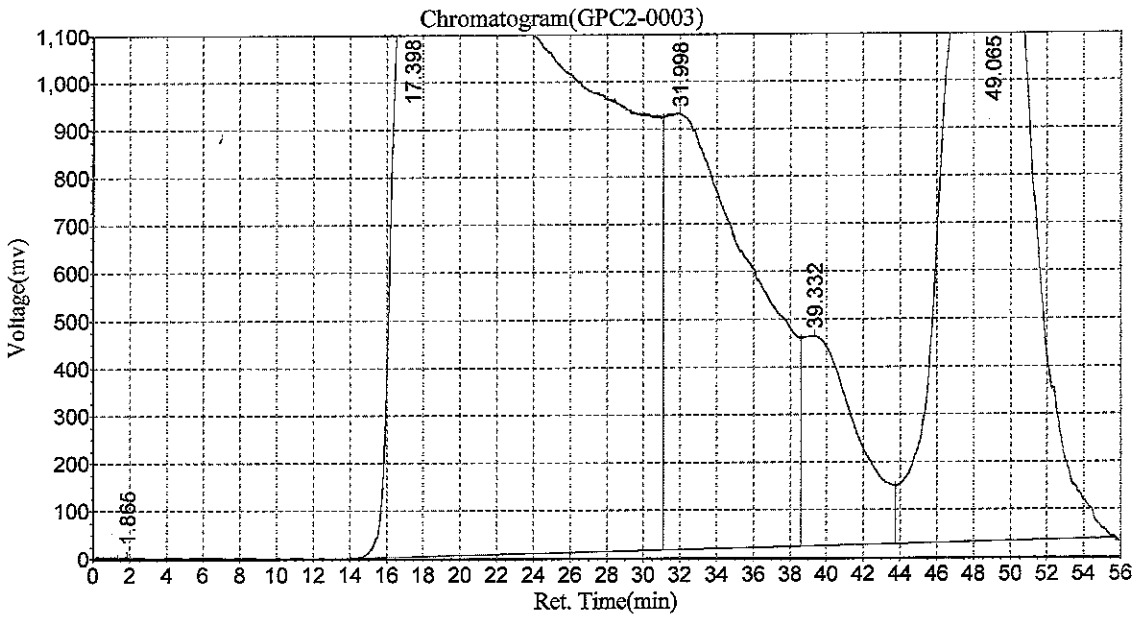
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,1:41:06 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		1.865	1975.833	121520.336	0.0067
2		17.398	1246381.750	979570944.000	53.9691
3		31.998	912987.000	308205376.000	16.9805
4		39.332	437671.469	88716968.000	4.8878
5		49.065	1213978.250	438442592.000	24.1559
Total			3812994.302	1815057400.336	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,2:38:48 AM
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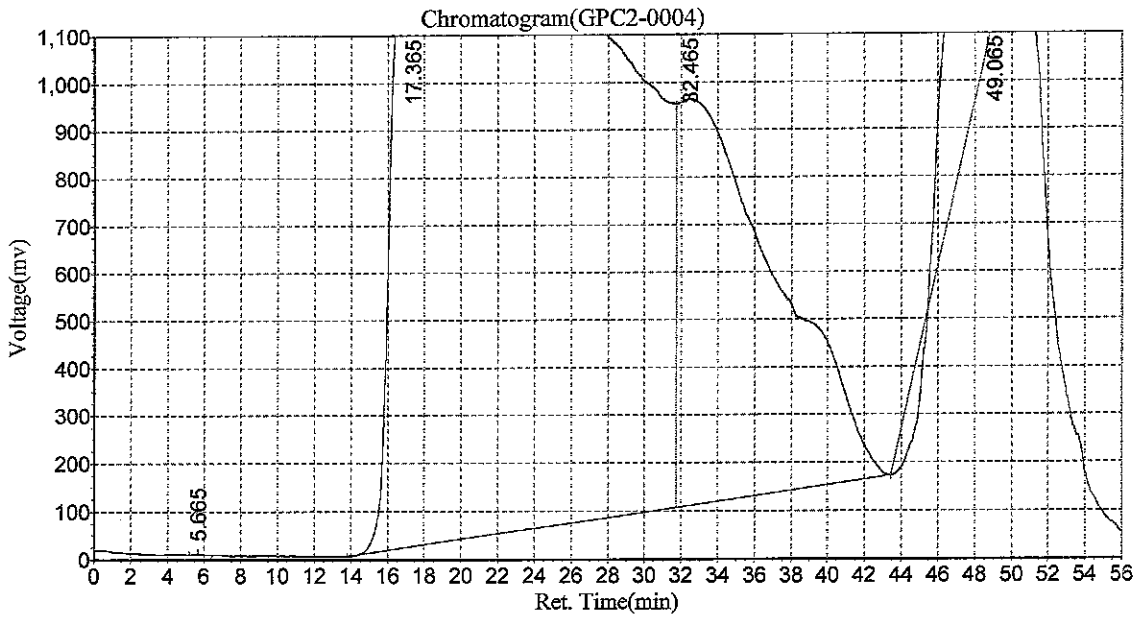
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,2:38:48 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		5.665	2372.434	114771.016	0.0081
2		17.365	1224327.625	1048562432.000	73.8022
3		32.465	852847.375	312782656.000	22.0150
4		49.065	115211.883	59313224.000	4.1747
Total			2194759.316	1420773083.016	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,3:36:35 AM
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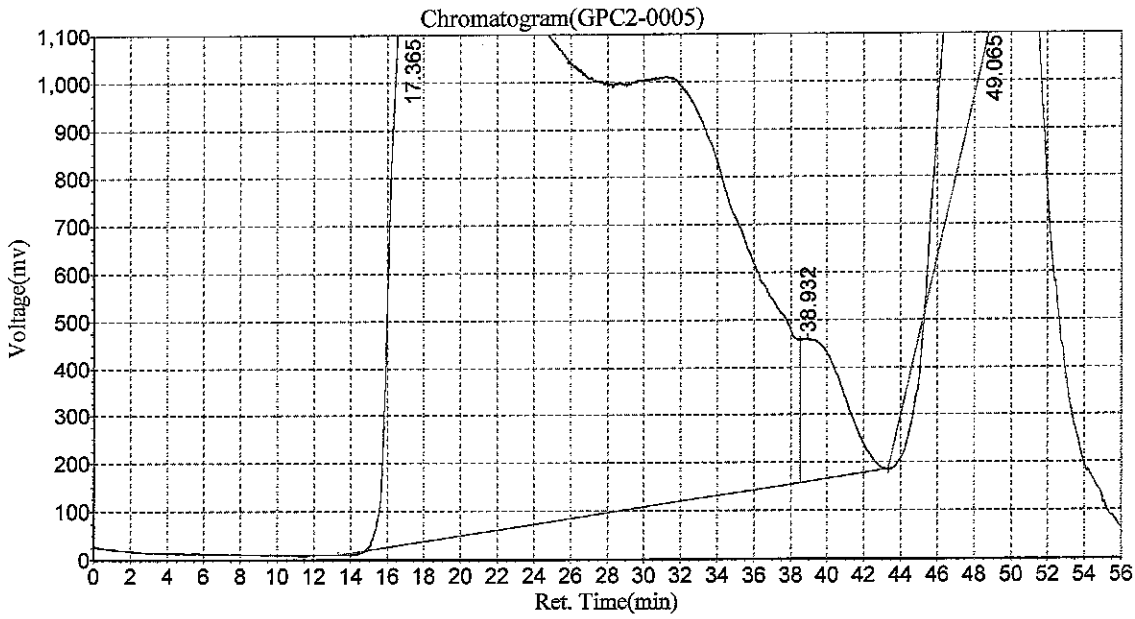
Analyst£°SH
Date/Time2023-02-25,3:36:35 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1217628.625	1231546240.000	92.1066
2		38.932	300394.344	47011780.000	3.5160
3		49.065	111588.977	58530228.000	4.3774
Total			1629611.945	1337088248.000	100.000

Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,4:34:16 AM
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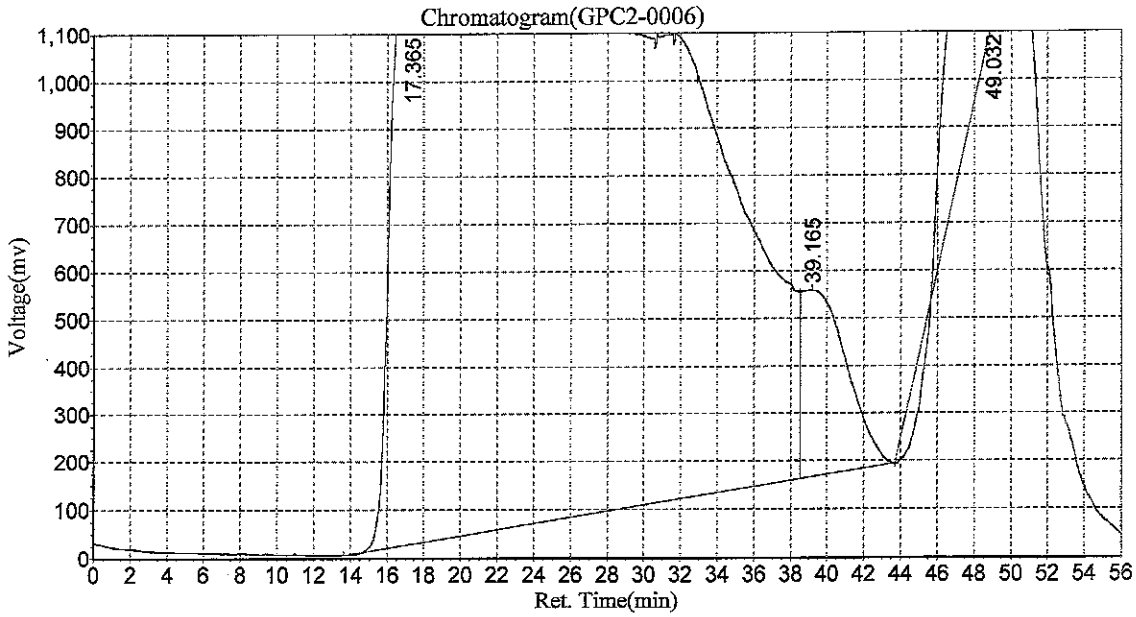
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,4:34:17 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.365	1220693.250	1322963840.000	91.7149
2		39.165	393189.969	66206468.000	4.5898
3		49.032	117970.133	53304224.000	3.6953
Total			1731853.352	1442474532.000	100.000

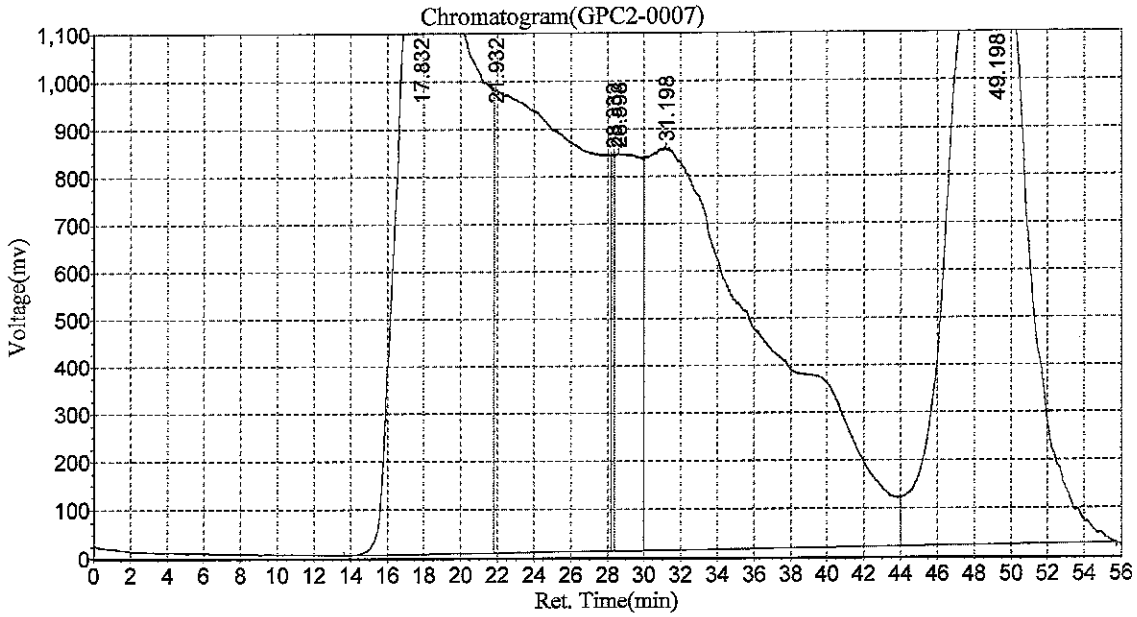
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,5:32:00 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0007
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,5:32:00 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.832	1241423.125	384773120.000	24.3936
2		21.932	971198.688	341100320.000	21.6248
3		28.332	829918.000	9949105.000	0.6307
4		28.598	831506.250	79432944.000	5.0358
5		31.198	842907.813	387488000.000	24.5657
6		49.198	1221638.500	374612352.000	23.7494
Total			5938592.375	1577355841.000	100.000

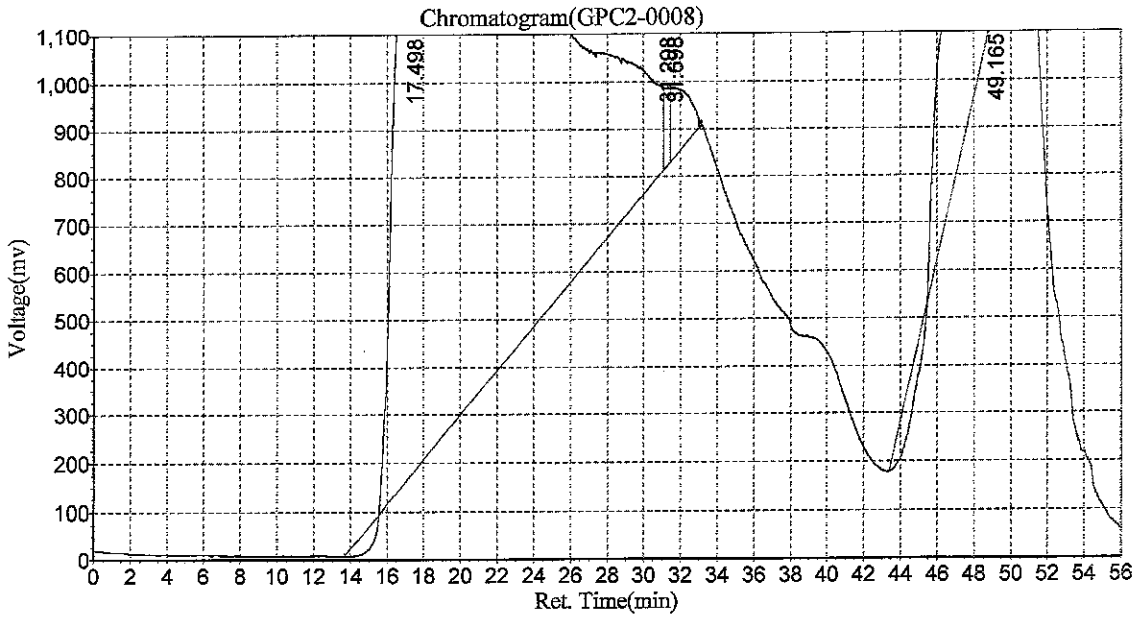
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,6:29:41 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0008
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,6:29:41 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.498	1066151.750	623465856.000	88.9663
2		31.298	164274.344	3305196.000	0.4716
3		31.698	147051.375	9930980.000	1.4171
4		49.165	91798.883	64086624.000	9.1449
Total			1469276.352	700788656.000	100.000

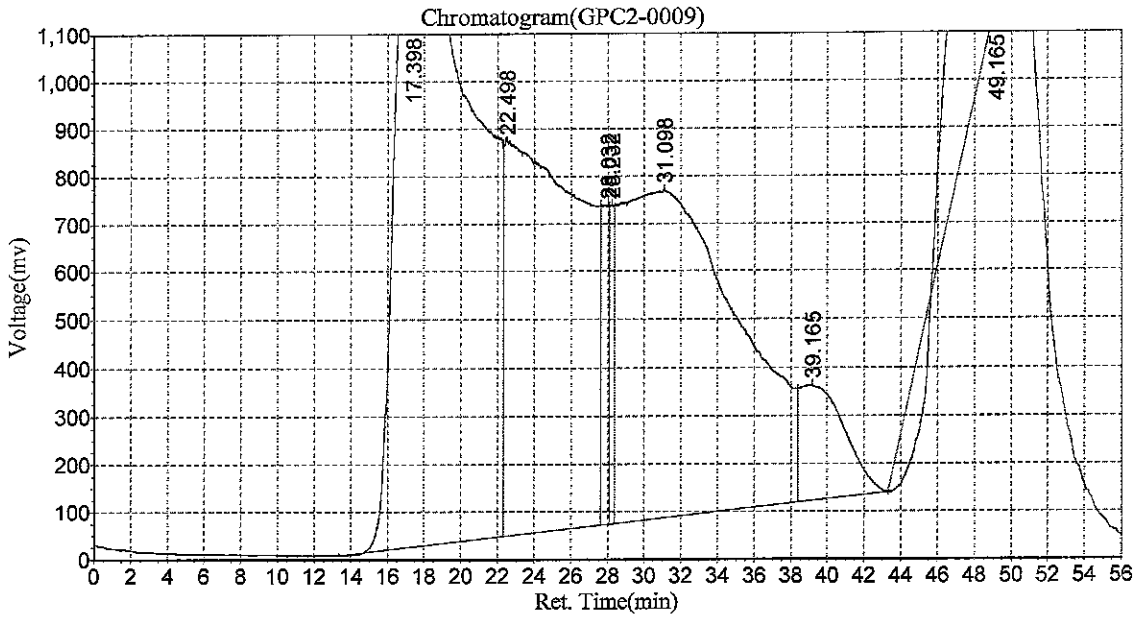
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,7:27:23 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0009
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,7:27:24 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1224108.375	392327360.000	37.5076
2		22.498	828759.813	235196288.000	22.4854
3		28.032	665072.063	18632424.000	1.7813
4		28.232	664556.688	10624025.000	1.0157
5		31.098	684647.625	303153792.000	28.9824
6		39.165	238693.328	40649744.000	3.8862
7		49.165	93053.727	45410216.000	4.3413
Total			4398891.617	1045993849.000	100.000

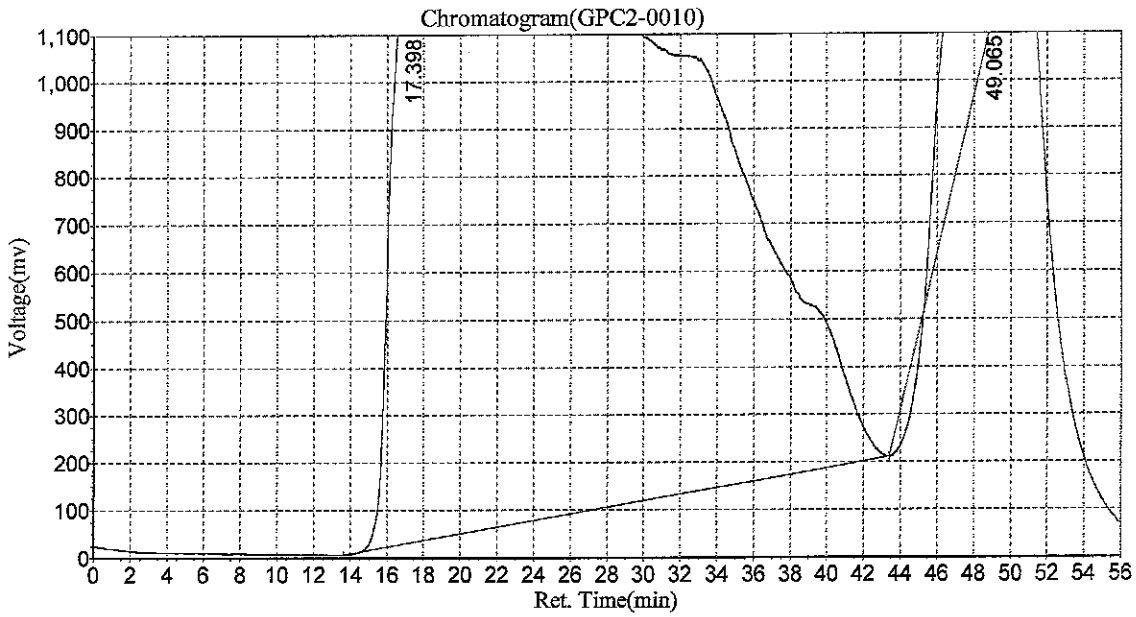
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,8:25:05 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0010
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,8:25:06 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.398	1216777.750	1393335936.000	95.8352
2		49.065	109823.313	60551024.000	4.1648
Total			1326601.063	1453886960.000	100.000

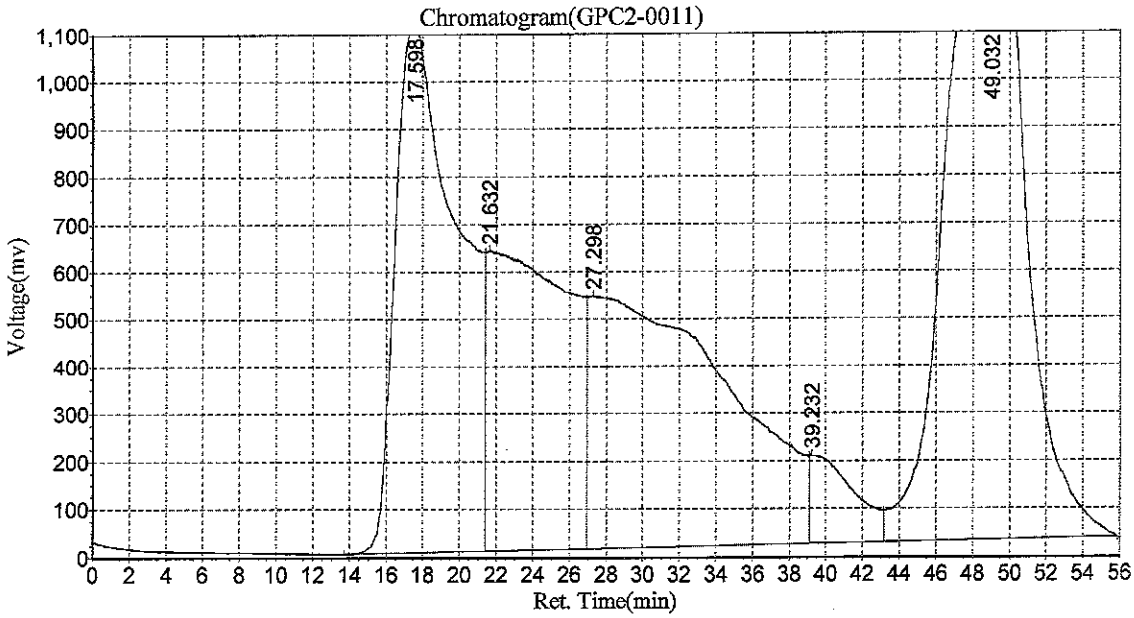
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,9:22:54 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0011
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,9:22:54 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.598	1125833.750	261680672.000	22.6700
2		21.632	629307.500	192577856.000	16.6834
3		27.298	529330.563	278638944.000	24.1391
4		39.232	183813.844	30526466.000	2.6446
5		49.032	1213780.750	390880960.000	33.8629
Total			3682066.406	1154304898.000	100.000

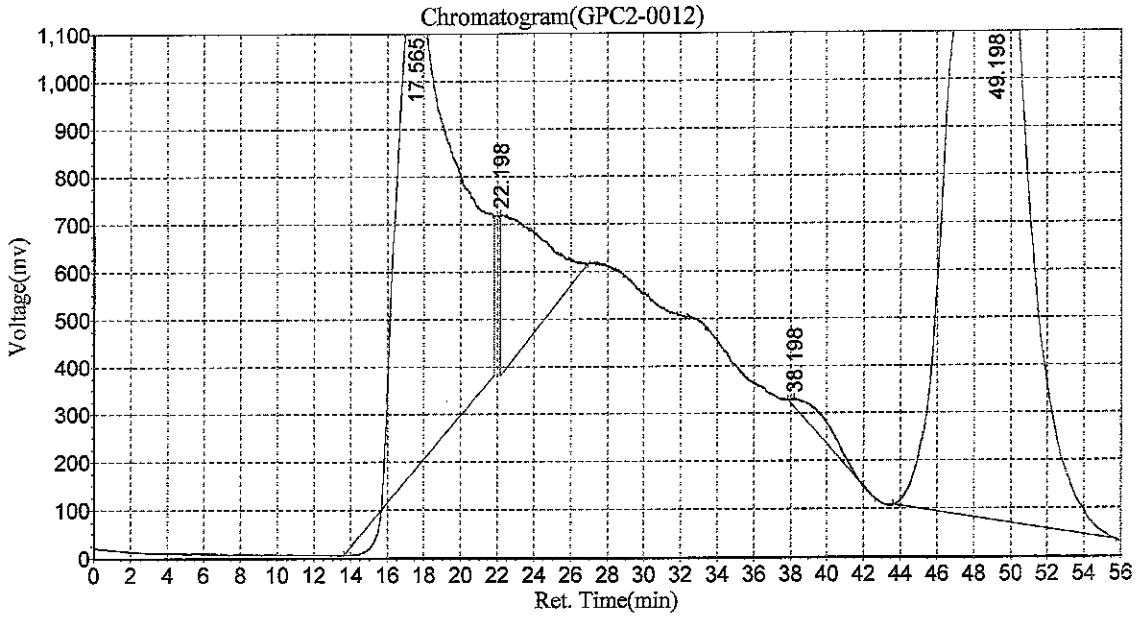
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,10:20:35 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0012
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,10:20:36 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.565	1039425.000	221850160.000	33.9687
2		22.198	320062.656	45967484.000	7.0383
3		38.198	14453.223	5886381.000	0.9013
4		49.198	1174543.250	379398240.000	58.0917
Total			2548484.129	653102265.000	100.000

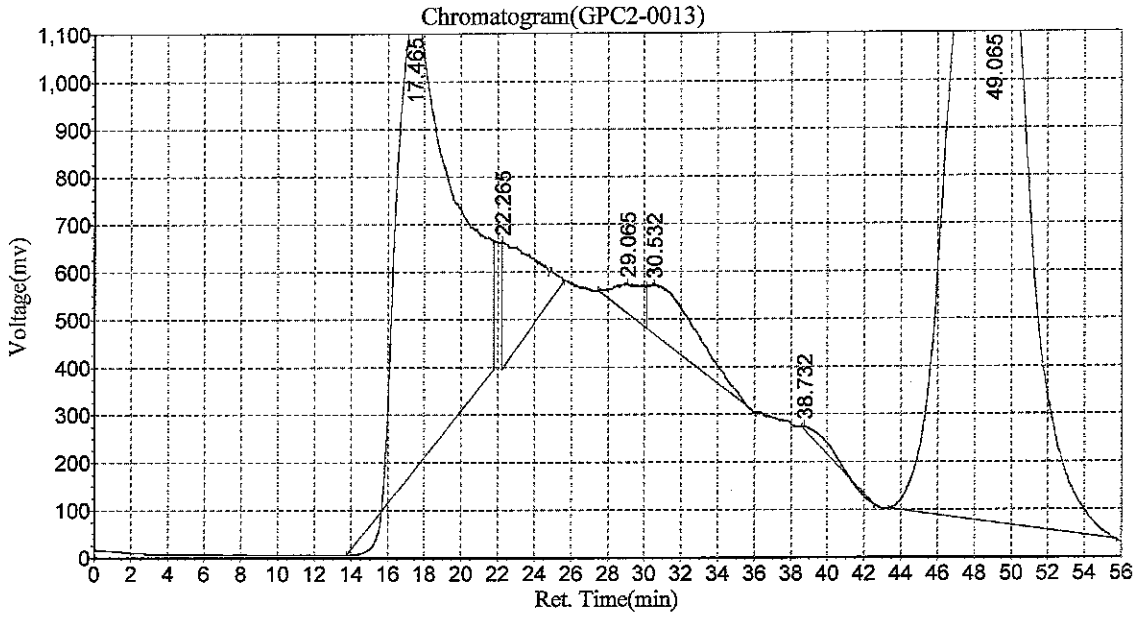
Ingredient Table

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

BLB0554 23A0467 Pest BLB0430 23B0296 PCB

Date:2023-02-25,11:18:22 AM
Data File:c:\n2000\data\gpc2\022423\GPC2-0013
Method File:E:\GPC2_InHouse.mtd

Analyst£°SH
Date/Time2023-02-25,11:18:23 AM



Results

Peak No.	Peak ID	Ret Time	Height	Area	Conc
1		17.465	965360.688	196248112.000	30.8261
2		22.265	241801.797	24917248.000	3.9139
3		29.065	61431.906	7561141.000	1.1877
4		30.532	103853.492	21559802.000	3.3865
5		38.732	5945.288	1789766.000	0.2811
6		49.065	1176682.500	384554400.000	60.4046
Total			2555075.671	636630469.000	100.000

Ingredient Table

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

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0004	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1006	23A0467-03	23031438.D	03/01/2023	
LCS Dup	BLB0554-BSD1	23031431.D	03/01/2023	
LCS	BLB0554-BS1	23031430.D	03/01/2023	
Blank	BLB0554-BLK1	23031429.D	03/01/2023	
LDW23-SS1010	23A0467-01	23031436.D	03/01/2023	
LDW23-SS1013	23A0467-08	23031443.D	03/01/2023	
LDW23-SS1005	23A0467-02	23031437.D	03/01/2023	
LDW23-SS1014	23A0467-09	23031444.D	03/01/2023	
LDW23-SS1204	23A0467-06	23031441.D	03/01/2023	
Matrix Spike	BLB0554-MS1	23031432.D	03/01/2023	
Matrix Spike Dup	BLB0554-MSD1	23031433.D	03/01/2023	
LDW23-SS1003	23A0467-04	23031439.D	03/01/2023	
LDW23-SS1004	23A0467-05	23031440.D	03/01/2023	
LDW23-SS1238	23A0467-07	23031442.D	03/01/2023	

Analytical Resources, LLC
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CLEANUP BENCH SHEET

CLC0004

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 3/1/2023 1:28:35PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
BLB0554-BLK1	-	Blank	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BS1	-	LCS	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BSD1	-	LCS Dup	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MS1	-	Matrix Spike	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/1/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0005	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1204	23A0467-06	23031441.D	03/01/2023	
LDW23-SS1238	23A0467-07	23031442.D	03/01/2023	
LCS	BLB0554-BS1	23031430.D	03/01/2023	
LDW23-SS1013	23A0467-08	23031443.D	03/01/2023	
LDW23-SS1010	23A0467-01	23031436.D	03/01/2023	
Blank	BLB0554-BLK1	23031429.D	03/01/2023	
LDW23-SS1014	23A0467-09	23031444.D	03/01/2023	
LCS Dup	BLB0554-BSD1	23031431.D	03/01/2023	
Matrix Spike Dup	BLB0554-MSD1	23031433.D	03/01/2023	
LDW23-SS1003	23A0467-04	23031439.D	03/01/2023	
LDW23-SS1005	23A0467-02	23031437.D	03/01/2023	
LDW23-SS1006	23A0467-03	23031438.D	03/01/2023	
LDW23-SS1004	23A0467-05	23031440.D	03/01/2023	
Matrix Spike	BLB0554-MS1	23031432.D	03/01/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0005

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 3/1/2023 1:29:03PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
BLB0554-BLK1	-	Blank	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BS1	-	LCS	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BSD1	-	LCS Dup	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MS1	-	Matrix Spike	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/1/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0006	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LCS Dup	BLB0554-BSD1	23031431.D	03/01/2023	
Matrix Spike Dup	BLB0554-MSD1	23031433.D	03/01/2023	
Matrix Spike	BLB0554-MS1	23031432.D	03/01/2023	
Blank	BLB0554-BLK1	23031429.D	03/01/2023	
LCS	BLB0554-BS1	23031430.D	03/01/2023	
LDW23-SS1238	23A0467-07	23031442.D	03/01/2023	
LDW23-SS1006	23A0467-03	23031438.D	03/01/2023	
LDW23-SS1010	23A0467-01	23031436.D	03/01/2023	
LDW23-SS1013	23A0467-08	23031443.D	03/01/2023	
LDW23-SS1005	23A0467-02	23031437.D	03/01/2023	
LDW23-SS1003	23A0467-04	23031439.D	03/01/2023	
LDW23-SS1004	23A0467-05	23031440.D	03/01/2023	
LDW23-SS1014	23A0467-09	23031444.D	03/01/2023	
LDW23-SS1204	23A0467-06	23031441.D	03/01/2023	

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CLEANUP BENCH SHEET

CLC0006

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 3/1/2023 1:29:27PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
BLB0554-BLK1	-	Blank	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BS1	-	LCS	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BSD1	-	LCS Dup	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MS1	-	Matrix Spike	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/1/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0007	Cleanup Type:	GPC
Cleanup Method:	EPA 3640A GPC Cleanup 1:1	Analysis:	EPA 8081B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike	BLB0554-MS1	23031432.D	03/01/2023	
Matrix Spike Dup	BLB0554-MSD1	23031433.D	03/01/2023	
LCS Dup	BLB0554-BSD1	23031431.D	03/01/2023	
LCS	BLB0554-BS1	23031430.D	03/01/2023	
Blank	BLB0554-BLK1	23031429.D	03/01/2023	
LDW23-SS1004	23A0467-05	23031440.D	03/01/2023	
LDW23-SS1006	23A0467-03	23031438.D	03/01/2023	
LDW23-SS1013	23A0467-08	23031443.D	03/01/2023	
LDW23-SS1005	23A0467-02	23031437.D	03/01/2023	
LDW23-SS1238	23A0467-07	23031442.D	03/01/2023	
LDW23-SS1204	23A0467-06	23031441.D	03/01/2023	
LDW23-SS1014	23A0467-09	23031444.D	03/01/2023	
LDW23-SS1003	23A0467-04	23031439.D	03/01/2023	
LDW23-SS1010	23A0467-01	23031436.D	03/01/2023	

Analytical Resources, LLC
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CLEANUP BENCH SHEET

CLC0007

Matrix: Solid **Cleanup using: Organics - EPA 3640A GPC Cleanup 1:1** **Check Standard: CLB0132-GPC2** **Printed: 3/1/2023 1:30:03PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 01	2.5	2.5	8081B Pest (PSDDA)	3/1/2023	LMJ	
BLB0554-BLK1	-	Blank	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BS1	-	LCS	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-BSD1	-	LCS Dup	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MS1	-	Matrix Spike	-	2.5	2.5	-	3/1/2023	LMJ	
BLB0554-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	3/1/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8081B

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0554-BLK1	File ID:	23031429.D
Sampled:	N/A	Prepared:	02/22/23 12:28	Analyzed:	03/14/23 23:46
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLB0554	Sequence:	SLC0273	Calibration:	FL00041
Instrument:	ECD6	Column:	STX-CLP	Cleanups:	GPC, Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
118-74-1	Hexachlorobenzene	1	0.50	U	0.15	0.50

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	6.50	81.2	30 - 160	
Decachlorobiphenyl [2C]	8.0000	6.80	85.0	30 - 160	
Tetrachlorometaxylene	8.0000	5.81	72.7	30 - 160	
Tetrachlorometaxylene [2C]	8.0000	5.65	70.6	30 - 160	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031429.D
Data file 2: /20230314.b/B20230314.b/23031429.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0554-BLK1
Client ID:
Injection Date: 14-MAR-2023 23:46
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			----			0.00	0.00	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			----			0.00	0.00	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			----			0.00	0.00	---	Endosulfan II
----			----			0.00	0.00	---	4,4'-DDD
----			----			0.00	0.00	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			----			0.00	0.00	---	Methoxychlor
----			----			0.00	0.00	---	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			----			0.00	0.00	---	trans-Chlordane
----			----			0.00	0.00	---	cis-Chlordane
----			----			0.00	0.00	---	Hexachlorobutadiene
----			----			0.00	0.00	---	Hexachlorobenzene
3.854	-0.003	375527	4.176	-0.002	564822	29.07	28.25	2.9	Tetrachloro-m-xylene
9.413	-0.002	225559	10.373	-0.000	281569	32.49	34.00	4.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

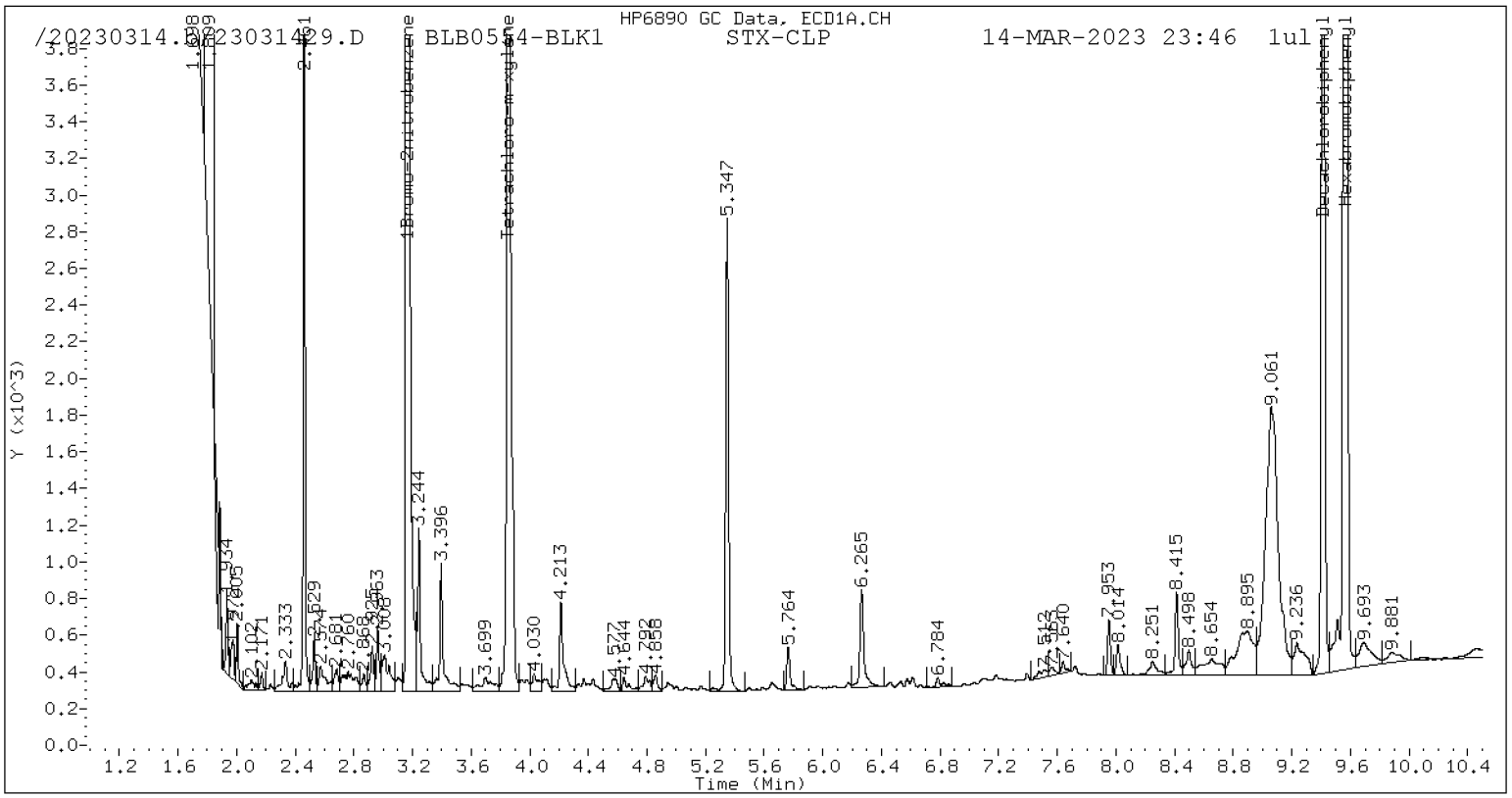
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	949751	41.2
Hexabromobiphenyl	609723	685177	12.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1420428	41.1
Hexabromobiphenyl	769764	749298	-2.7

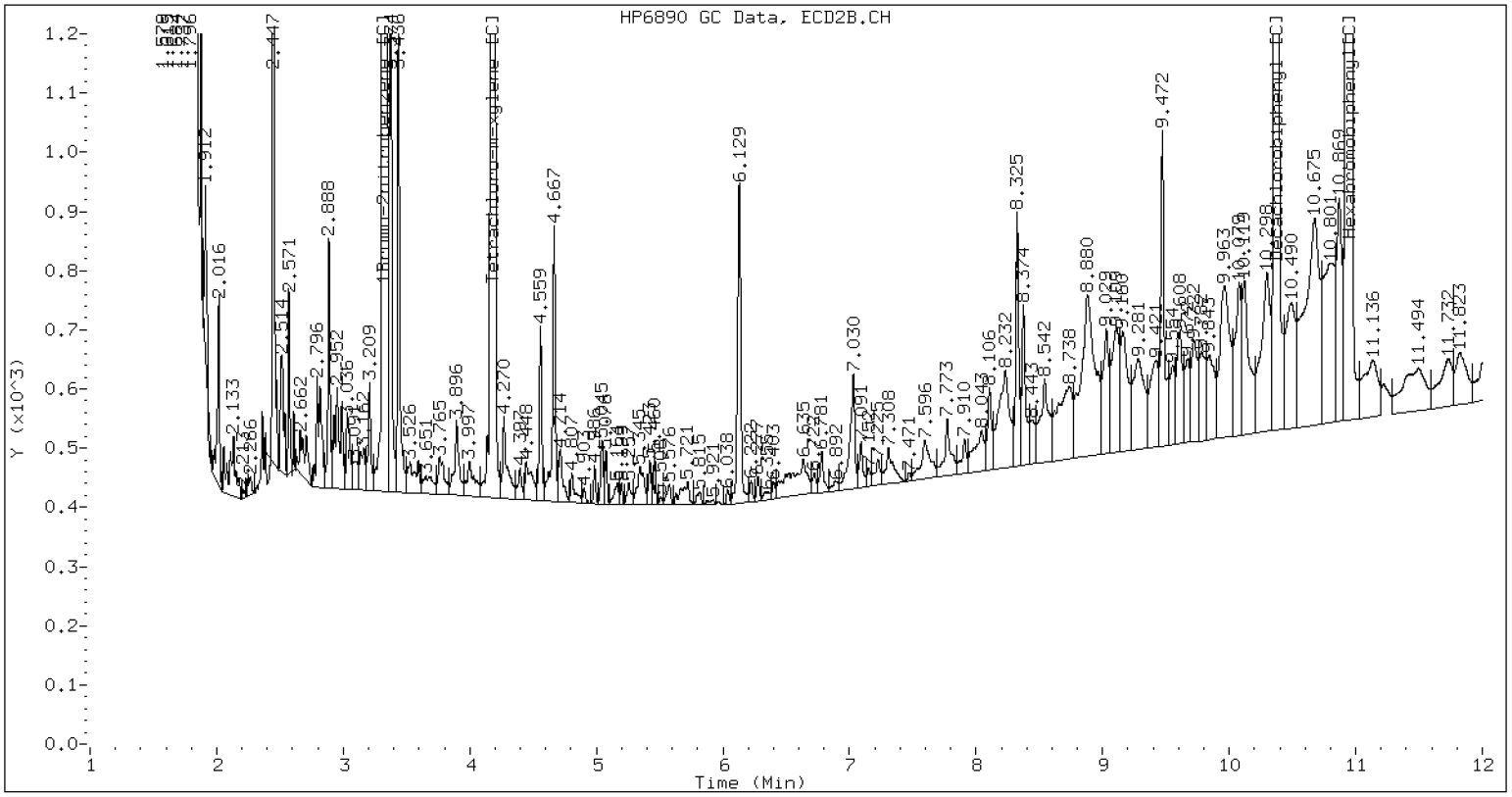
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031429.D BLB0554-BLK1 CLP2



CLP-2 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/15/23 00:04
Batch:	BLB0554	Laboratory ID:	BLB0554-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	2.80		70.0	26 - 128

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.91		72.7	3.87	30	26 - 128

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031430.D
Data file 2: /20230314.b/B20230314.b/23031430.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0554-BS1
Client ID:
Injection Date: 15-MAR-2023 00:04
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.373	-0.001	142051	4.808	-0.001	202718	14.40	13.23	8.5	alpha-BHC
4.761	-0.002	61703	5.280	-0.001	88077	16.25	15.12	7.2	beta-BHC
4.946	-0.002	133689	5.630	-0.002	184875	16.59	14.65	12.4	delta-BHC
4.679	-0.002	132964	5.201	-0.001	189223	15.55	14.55	6.7	gamma-BHC (Lindane)
5.169	-0.002	115188	5.725	-0.001	155446	15.14	13.20	13.7	Heptachlor
5.496	-0.001	126313	6.126	-0.001	158866	14.82	11.81	22.6	Aldrin
6.174	-0.001	116637	6.782	-0.001	145794	15.78	13.11	18.5	Heptachlor epoxide b
6.617	-0.001	181167	7.225	-0.002	215712	26.71	22.01	19.3	Endosulfan I
----			7.527	0.007	709	0.00	0.07	---	Dieldrin
6.537	-0.003	221978	7.308	-0.002	260960	32.80	26.27	22.1	4,4'-DDE
----			7.849	0.006	3302	0.00	0.56	---	Endrin
7.363	-0.003	43243	8.053	-0.002	51798	9.62	8.59	11.3	Endosulfan II
7.184	-0.003	176821	7.913	-0.002	214788	39.29	37.53	4.6	4,4'-DDD
8.225	-0.001	123952	8.650	-0.001	146956	29.03	27.75	4.5	Endosulfan sulfate
7.477	-0.003	169095	8.231	-0.001	193898	37.18	35.10	5.8	4,4'-DDT
7.960	-0.005	15848	8.870	-0.002	18087	7.86	7.40	6.1	Methoxychlor
8.500	-0.001	122082	9.172	-0.001	138804	24.96	24.26	2.8	Endrin ketone
7.791	-0.002	6254	8.382	-0.003	11680	1.74	2.75	44.6*	Endrin aldehyde
6.316	-0.003	126068	6.993	-0.002	150253	16.79	13.55	21.4	trans-Chlordane
6.462	-0.002	118765	7.152	-0.002	140989	15.77	12.99	19.3	cis-Chlordane
2.332	-0.001	128863	2.477	-0.001	169123	12.47	11.62	7.1	Hexachlorobutadiene
4.215	-0.001	128100	4.669	-0.001	180023	13.99	12.91	8.1	Hexachlorobenzene
3.856	-0.001	197557	4.177	-0.001	295299	28.36	27.44	3.3	Tetrachloro-m-xylene
9.413	-0.001	125402	10.373	0.000	161032	32.48	35.21	8.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

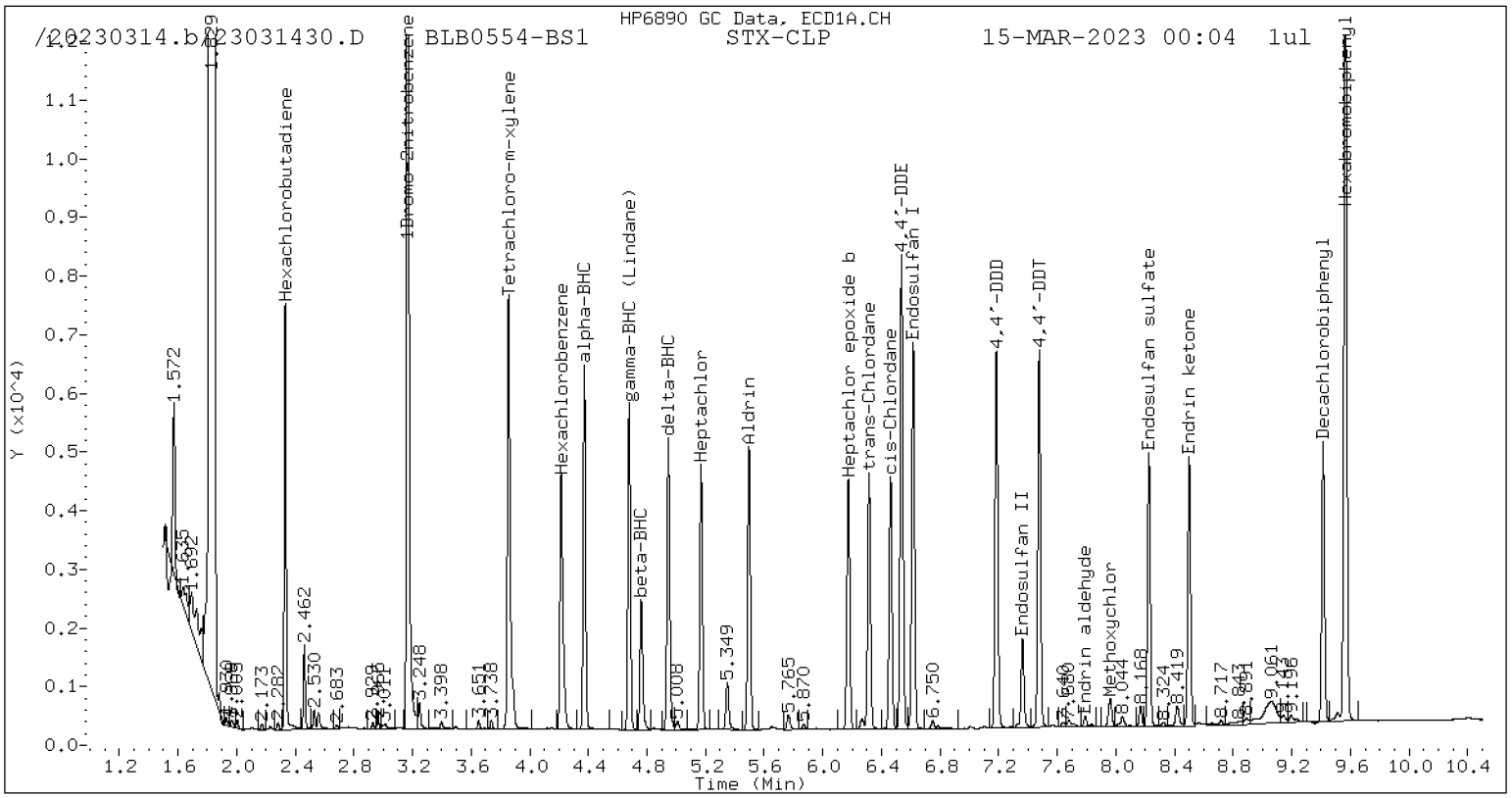
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	512232	-23.8
Hexabromobiphenyl	609723	381056	-37.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	764652	-24.0
Hexabromobiphenyl	769764	413841	-46.2

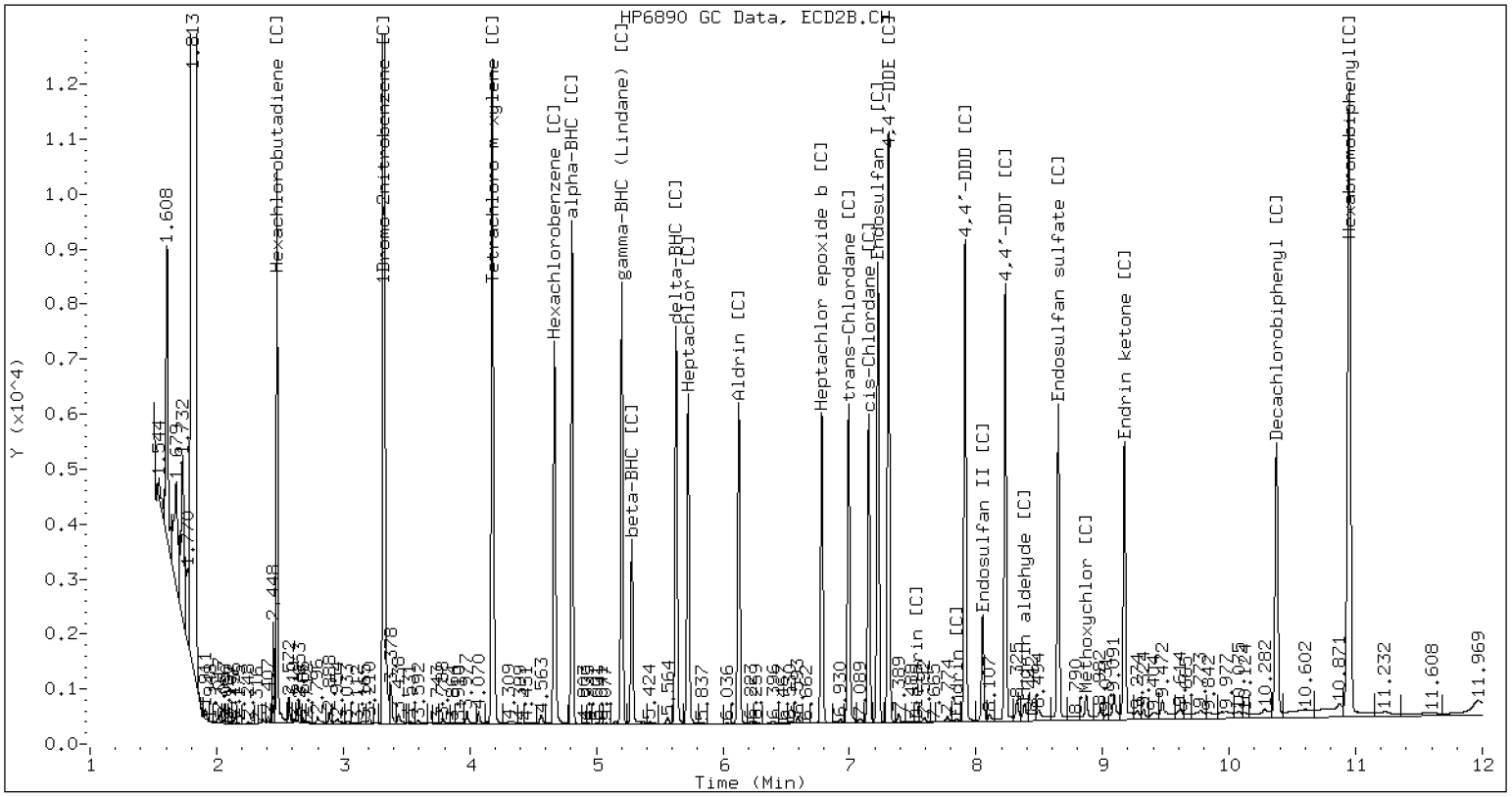
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031430.D BLB0554-BS1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031431.D
Data file 2: /20230314.b/B20230314.b/23031431.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0554-BSD1
Client ID:
Injection Date: 15-MAR-2023 00:22
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.371	-0.003	290496	4.806	-0.002	430204	15.84	14.77	7.0	alpha-BHC
4.759	-0.004	120948	5.279	-0.003	177027	17.13	15.99	6.9	beta-BHC
4.944	-0.004	272952	5.629	-0.003	397031	18.21	16.55	9.5	delta-BHC
4.677	-0.003	269308	5.199	-0.002	397976	16.94	16.10	5.0	gamma-BHC (Lindane)
5.169	-0.003	239075	5.724	-0.002	339434	16.90	15.16	10.8	Heptachlor
5.496	-0.002	255604	6.125	-0.001	313652	16.12	12.27	27.1	Aldrin
6.173	-0.002	233695	6.781	-0.001	308103	17.00	14.58	15.3	Heptachlor epoxide b
6.615	-0.003	351372	7.224	-0.003	441801	27.85	23.72	16.0	Endosulfan I
----			7.526	0.006	1098	0.00	0.05	---	Dieldrin
6.536	-0.004	442629	7.308	-0.003	556333	35.17	29.47	17.6	4,4'-DDE
7.105	-0.023	2145	7.848	0.005	2945	0.22	0.26	15.0	Endrin
7.362	-0.004	94900	8.052	-0.003	115587	10.79	9.77	9.9	Endosulfan II
7.183	-0.004	355263	7.913	-0.002	477278	40.37	42.51	5.2	4,4'-DDD
8.224	-0.002	255916	8.649	-0.002	298338	30.65	28.72	6.5	Endosulfan sulfate
7.476	-0.003	364520	8.230	-0.002	420486	40.99	38.80	5.5	4,4'-DDT
7.961	-0.004	25174	8.870	-0.002	29586	6.39	6.17	3.5	Methoxychlor
8.499	-0.002	257952	9.172	-0.001	284588	26.97	25.36	6.1	Endrin ketone
7.790	-0.003	13114	8.382	-0.003	15703	1.87	1.88	0.6	Endrin aldehyde
6.315	-0.004	241517	6.992	-0.003	306618	17.30	14.55	17.3	trans-Chlordane
6.462	-0.003	237585	7.152	-0.002	291848	16.96	14.15	18.1	cis-Chlordane
2.330	-0.003	249442	2.475	-0.003	342657	12.98	12.39	4.7	Hexachlorobutadiene
4.213	-0.004	247654	4.667	-0.003	366776	14.54	13.84	5.0	Hexachlorobenzene
3.854	-0.004	373417	4.175	-0.003	574638	28.82	28.09	2.6	Tetrachloro-m-xylene
9.413	-0.002	247582	10.373	-0.000	306611	32.80	34.17	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

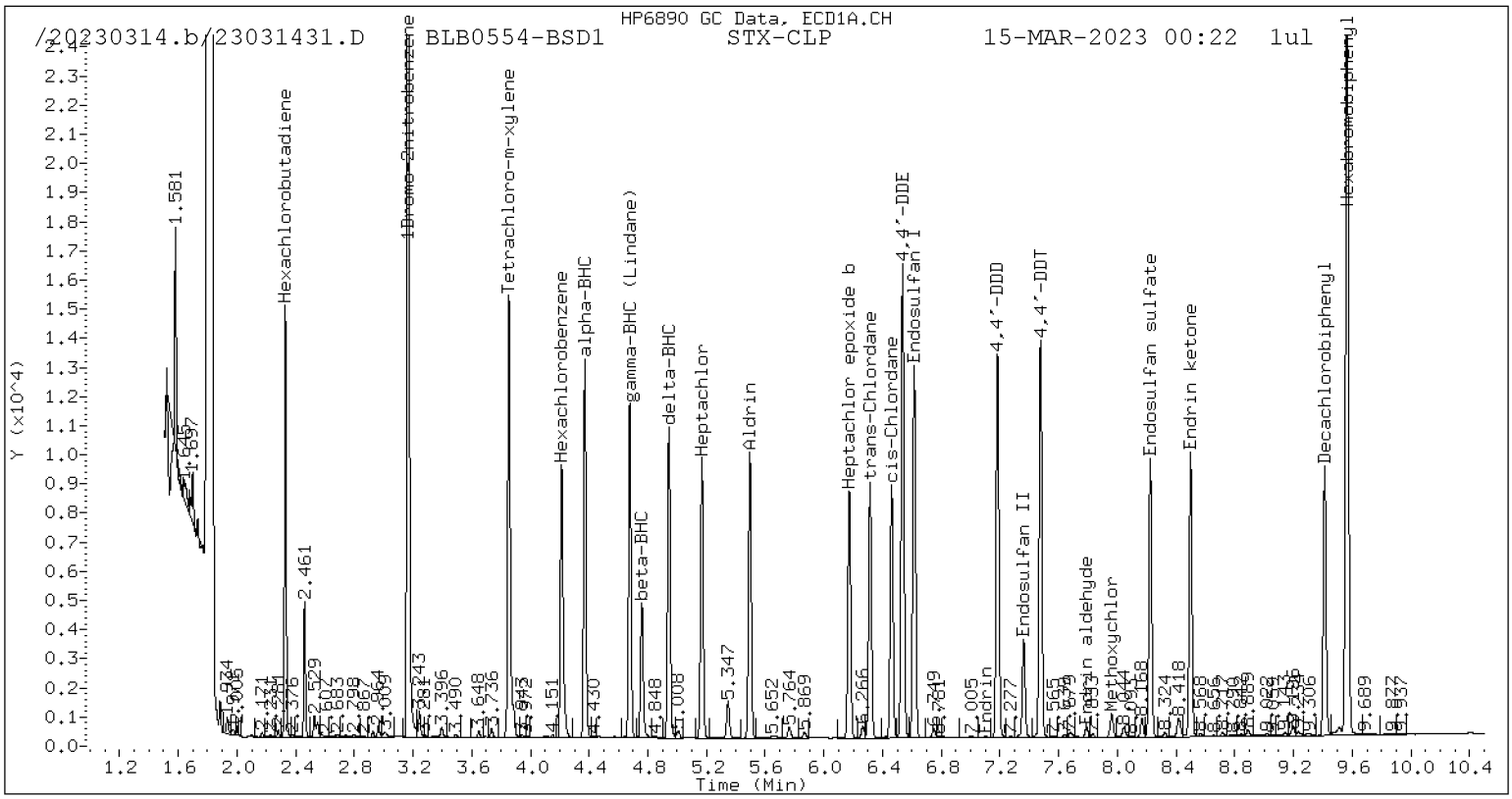
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	952686	41.7
Hexabromobiphenyl	609723	745057	22.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1453151	44.4
Hexabromobiphenyl	769764	811782	5.5

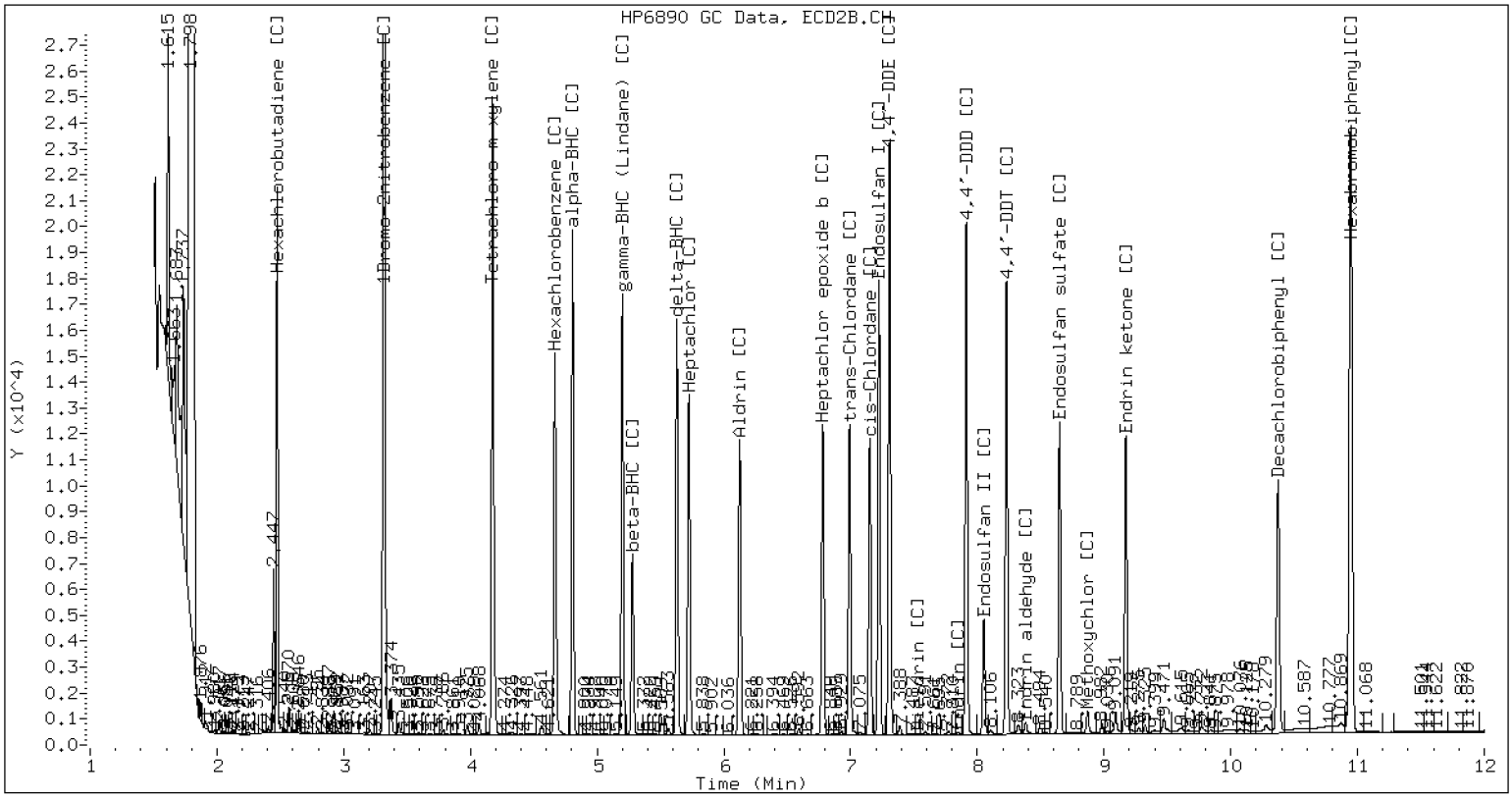
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031431.D BLB0554-BSD1 CLP2



CLP-2 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/15/23 00:40
Batch:	BLB0554	Laboratory ID:	BLB0554-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	19.58 g / 2.5 mL	Source Sample:	LDW23-SS1014

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Hexachlorobenzene	4.00	ND	U	3.00		74.9	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/15/23 00:58
Batch:	BLB0554	Laboratory ID:	BLB0554-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	19.58 g / 2.5 mL	Source Sample:	LDW23-SS1014

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	4.00	2.95		73.8	1.61	30	26 - 128

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031432.D
Data file 2: /20230314.b/B20230314.b/23031432.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0554-MS1
Client ID:
Injection Date: 15-MAR-2023 00:40
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.372	-0.002	154066	4.807	-0.002	202716	13.99	13.13	6.3	alpha-BHC MN
4.760	-0.003	59384	5.279	-0.003	83442	14.00	14.22	1.5	beta-BHC MN
4.944	-0.004	155279	5.628	-0.004	165779	17.25	13.04	27.8	delta-BHC N
4.678	-0.002	155718	5.200	-0.001	175519	16.30	13.40	19.6	gamma-BHC (Lindane) MN
5.169	-0.002	119177	5.724	-0.002	162865	14.02	13.72	2.2	Heptachlor N
5.496	-0.002	128963	6.125	-0.001	162233	13.54	11.97	12.3	Aldrin N
6.173	-0.002	116517	6.780	-0.002	206959	14.11	18.47	26.8	Heptachlor epoxide b N
6.615	-0.003	155922	7.225	-0.002	205216	20.58	20.78	1.0	Endosulfan I MN
6.858	-0.020	46029	7.500	-0.019	22601	5.65	2.07	92.8*	Dieldrin MN
6.535	-0.006	249499	7.308	-0.002	311640	33.01	31.14	5.8	4,4'-DDE MN
----			7.870	0.027	77997	0.00	13.68	---	Endrin
7.361	-0.004	47449	8.053	-0.002	133389	11.49	22.82	66.1*	Endosulfan II N
7.182	-0.005	259346	7.912	-0.003	236181	62.75	42.59	38.3	4,4'-DDD
8.224	-0.002	118770	8.649	-0.002	150179	30.29	29.26	3.4	Endosulfan sulfate N
7.475	-0.004	271620	8.231	-0.001	336683	65.04	62.90	3.3	4,4'-DDT N
7.955	-0.011	13516	----			7.30	0.00	---	Methoxychlor
8.499	-0.002	132763	9.171	-0.002	191223	29.56	34.50	15.4	Endrin ketone N
7.816	0.023	33605	8.376	-0.009	28935	10.20	7.02	37.0	Endrin aldehyde N
6.314	-0.004	112651	6.992	-0.002	140626	13.43	12.59	6.5	trans-Chlordane N
6.461	-0.003	126453	7.152	-0.002	140312	15.03	12.84	15.8	cis-Chlordane MN
2.332	-0.001	131022	2.478	-0.001	179546	11.35	12.25	7.6	Hexachlorobutadiene M
4.213	-0.004	153235	4.667	-0.003	210692	14.98	15.00	0.1	Hexachlorobenzene MN
3.855	-0.003	195975	4.176	-0.002	313602	25.19	28.92	13.8	Tetrachloro-m-xylene MN
9.414	-0.001	130695	10.373	-0.000	163809	36.86	36.96	0.3	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

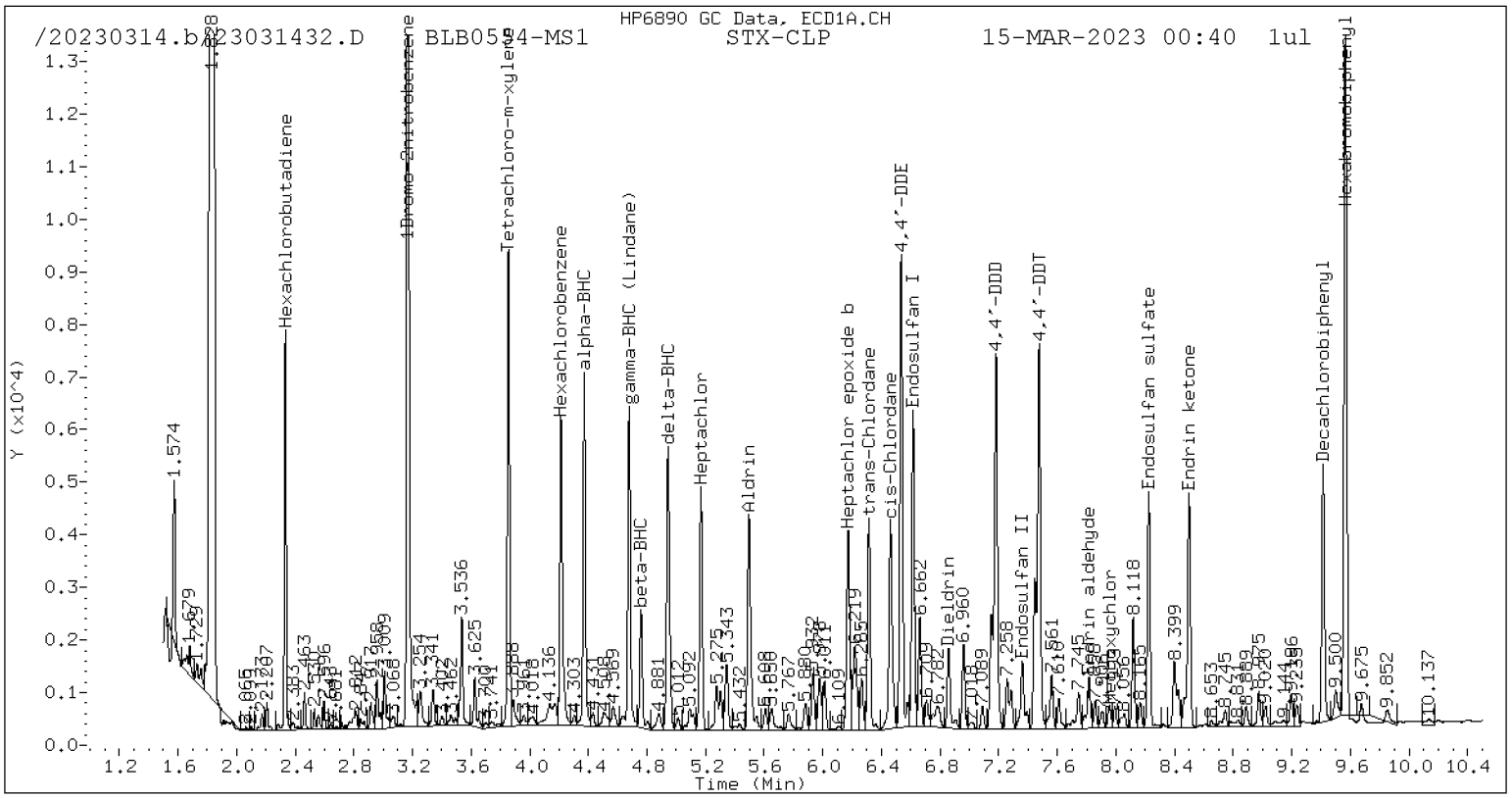
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	572177	-14.9
Hexabromobiphenyl	609723	349900	-42.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	770342	-23.5
Hexabromobiphenyl	769764	400988	-47.9

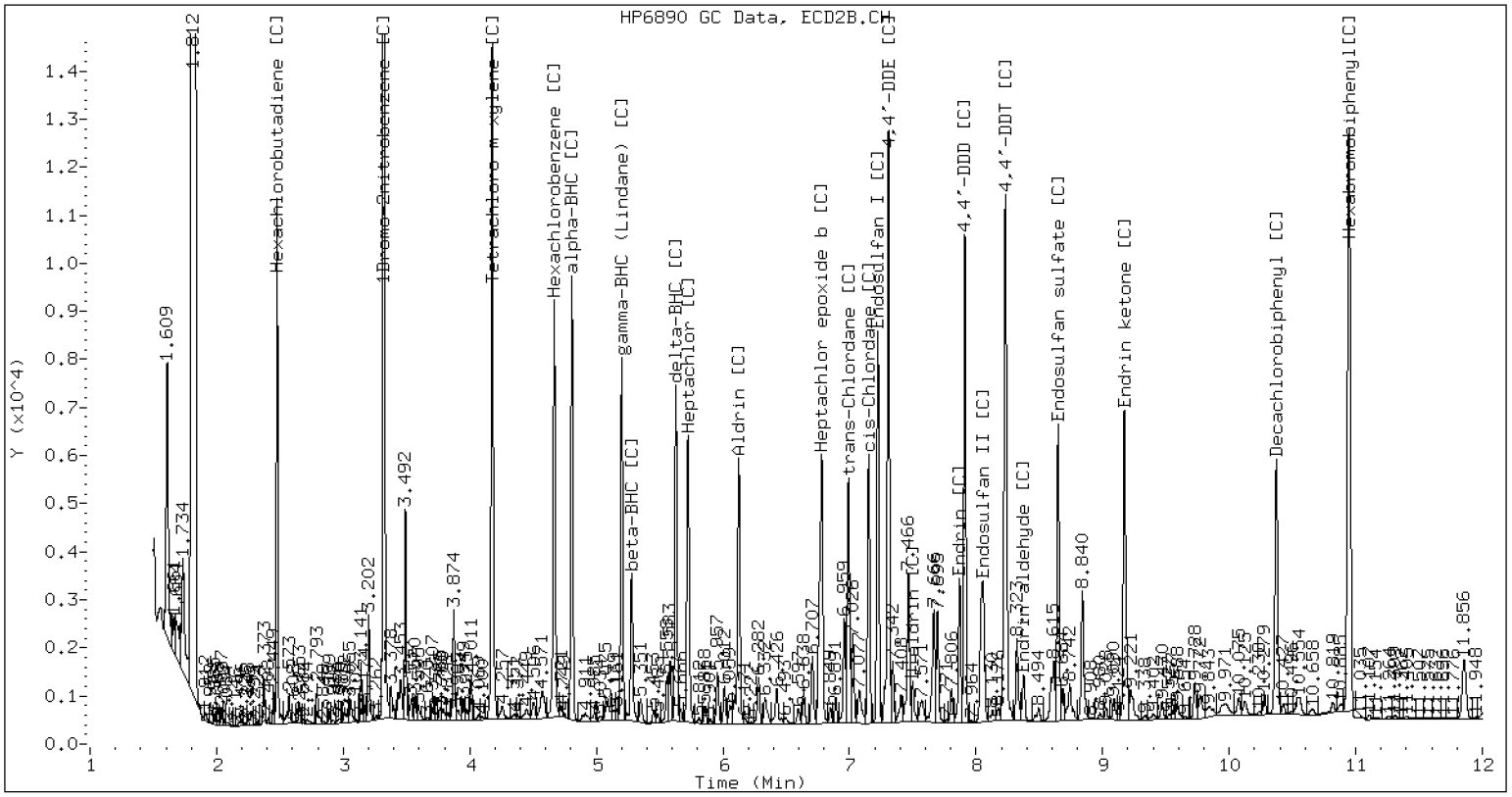
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

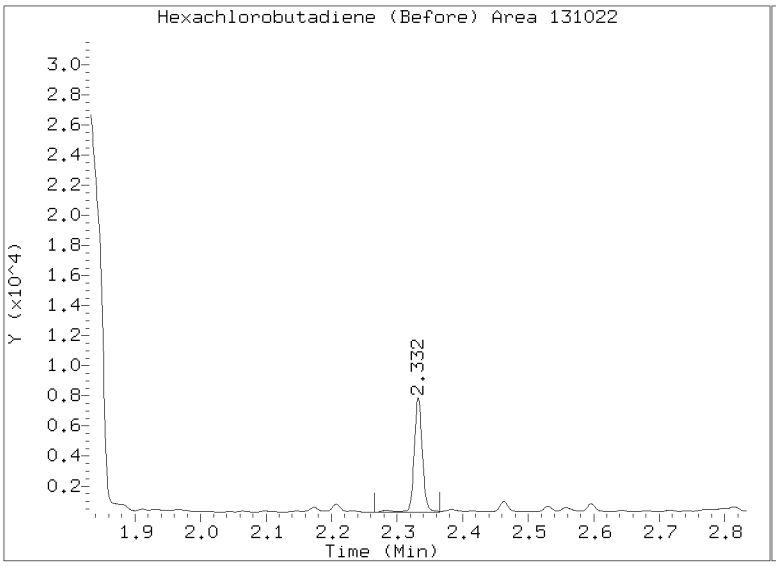
/20230314.b/B20230314.b/23031432.D BLB0554-MS1 CLP2

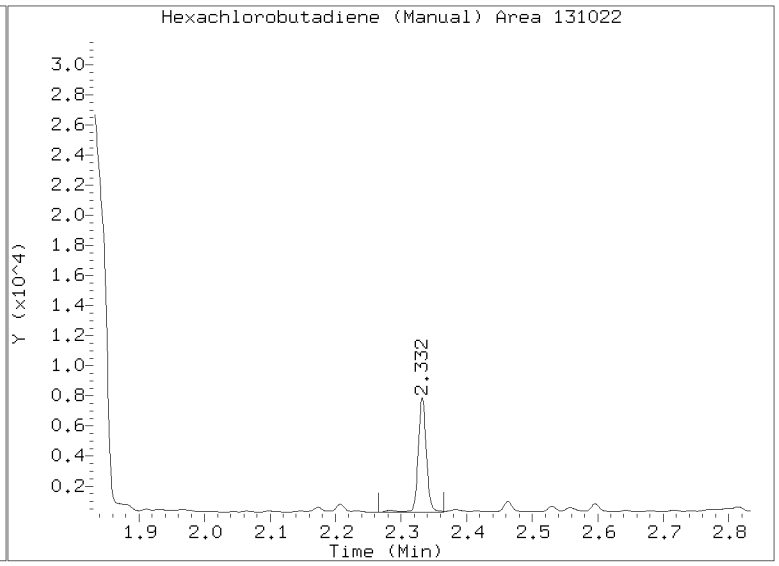


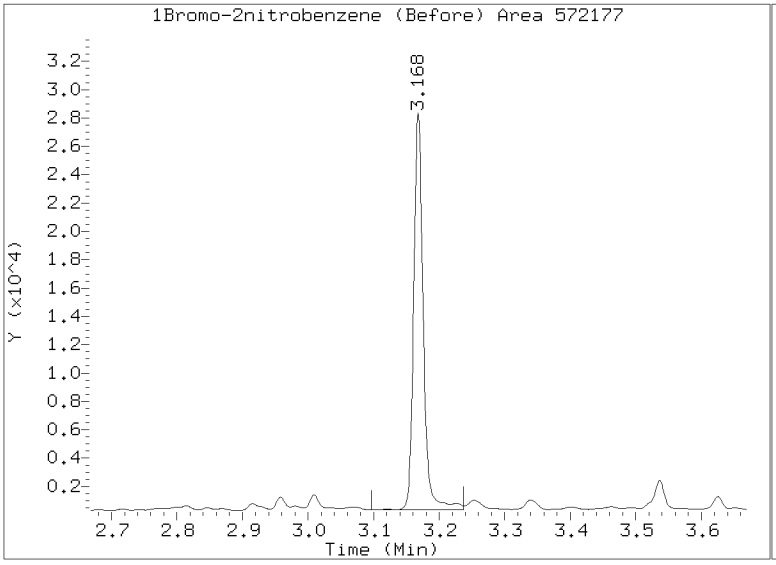
CLP-2 Manual Integration: YES

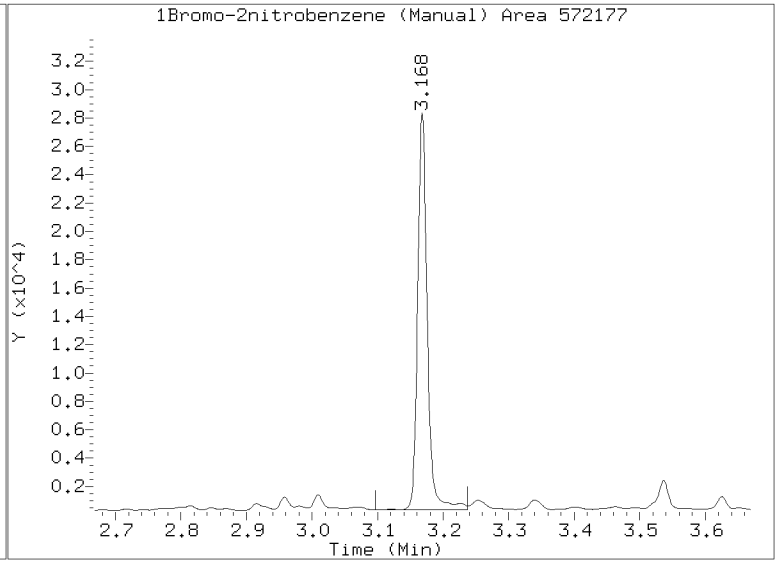
Manual Peak Adjustment Report, STX-CLP

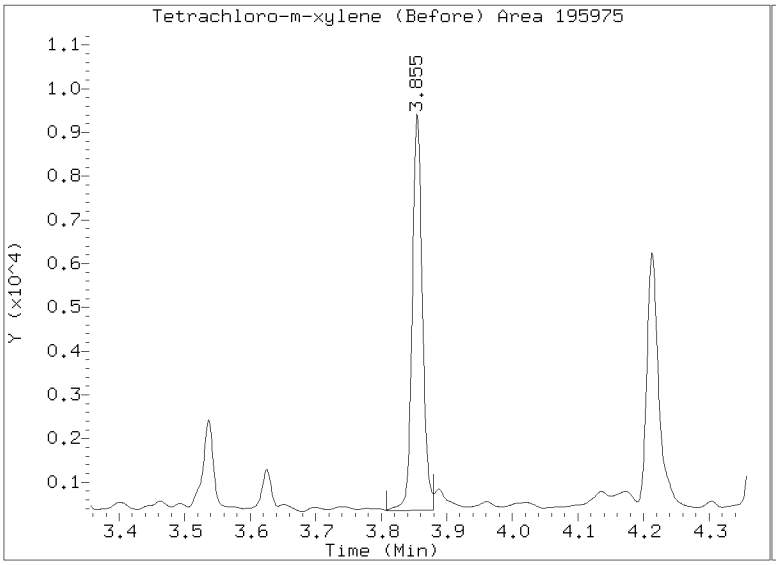
Datafile: /20230314.b/23031432.D
Injection Date: 15-MAR-2023 00:40
Lab ID:BLB0554-MS1 Client ID:
Report Date: 03/22/2023 15:58

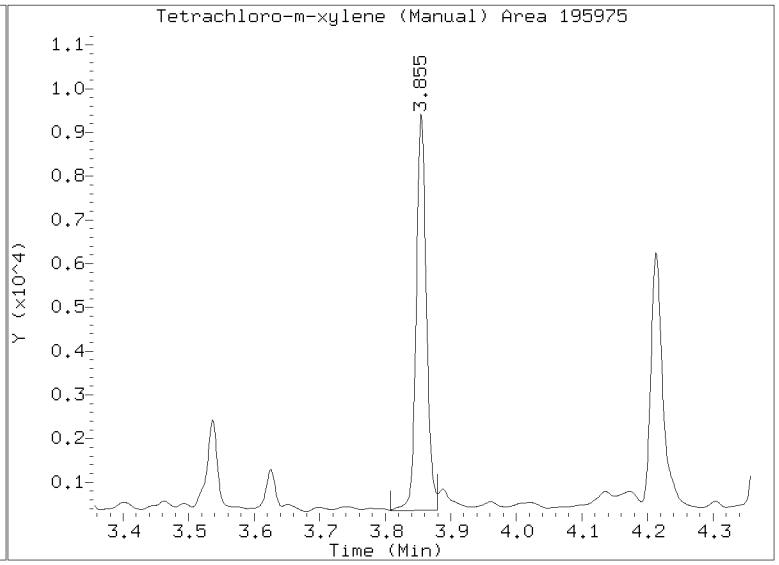






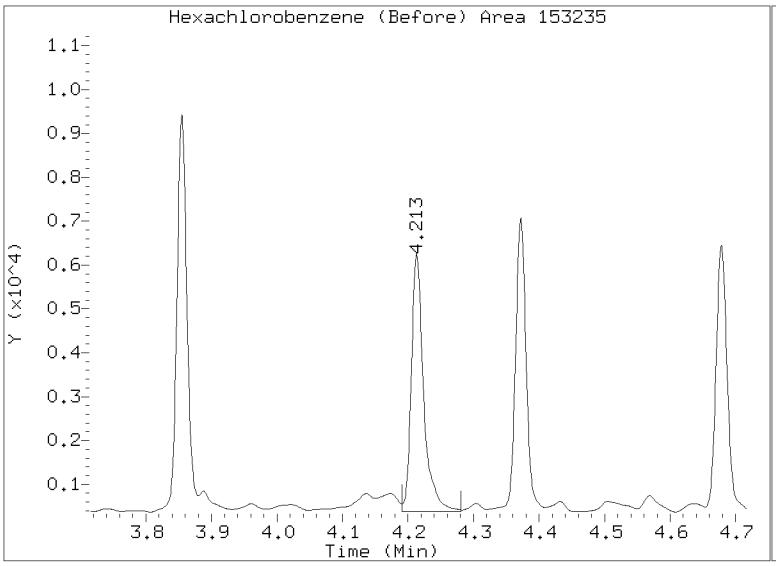


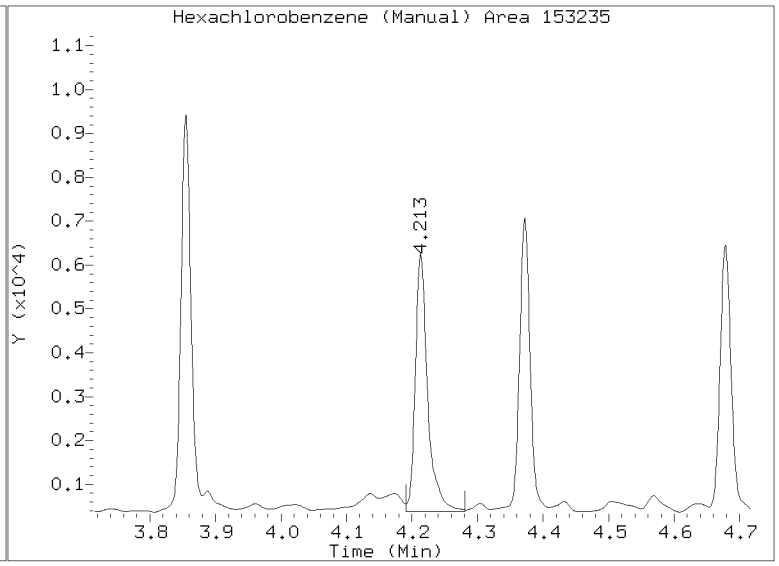


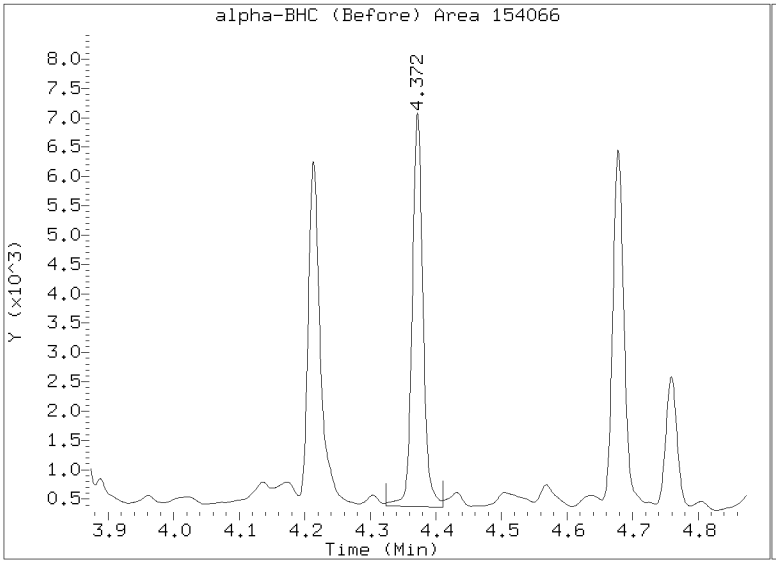


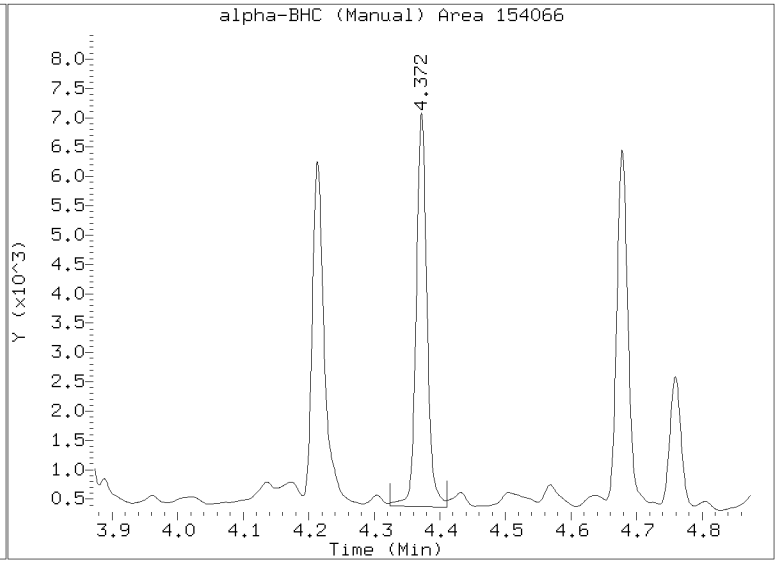
Manual Peak Adjustment Report, STX-CLP

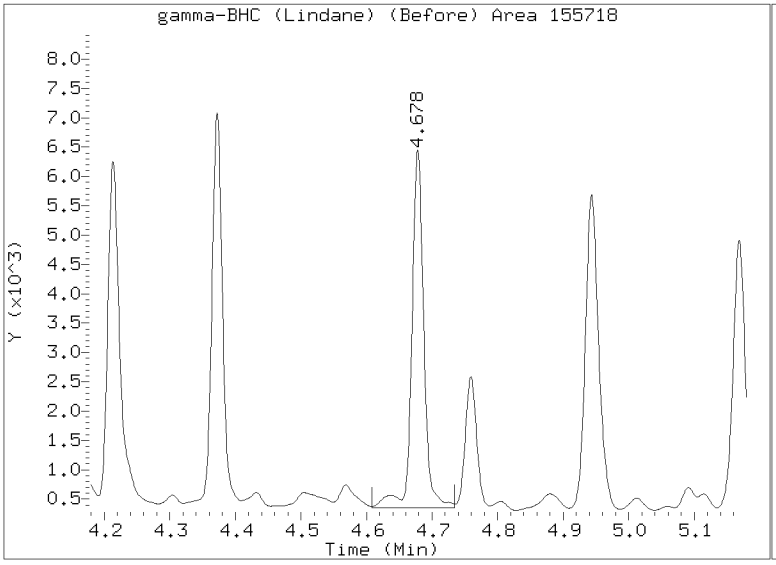
Datafile: /20230314.b/23031432.D
Injection Date: 15-MAR-2023 00:40
Lab ID:BLB0554-MS1 Client ID:
Report Date: 03/22/2023 15:58

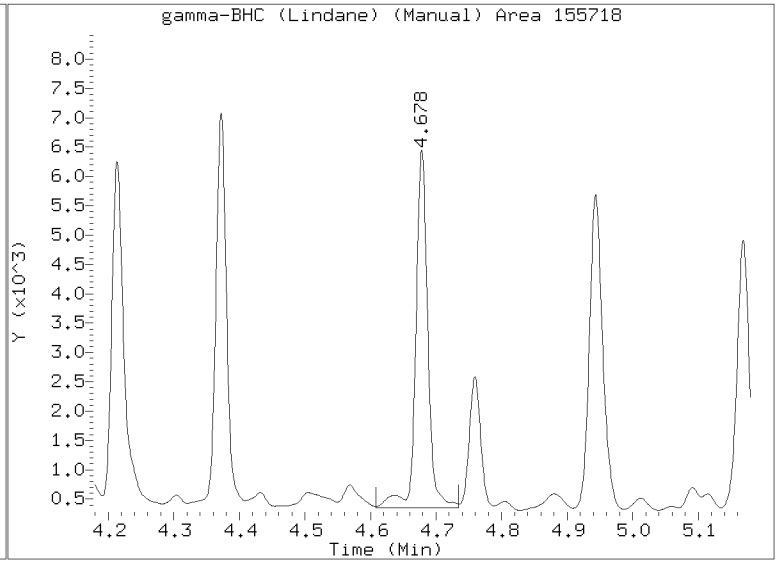






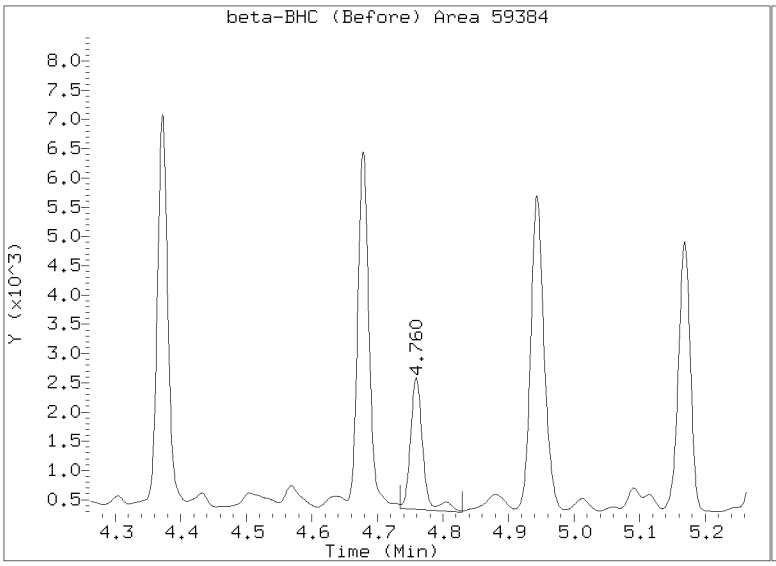


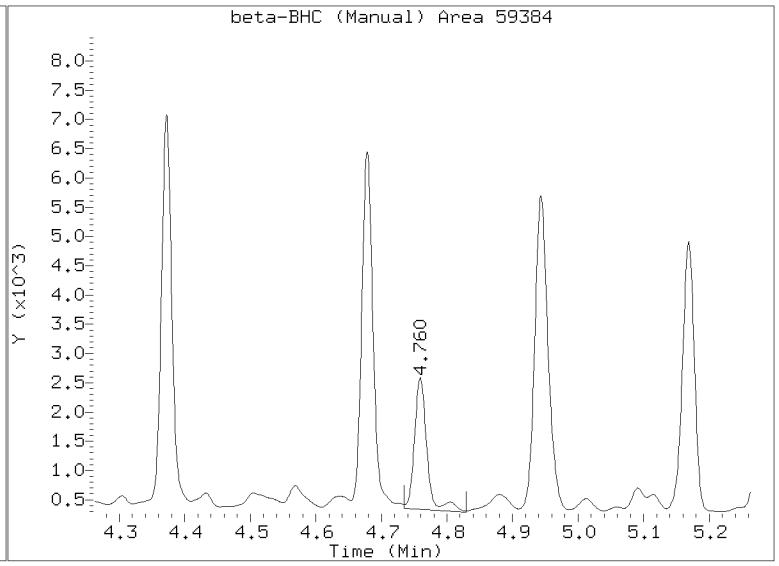


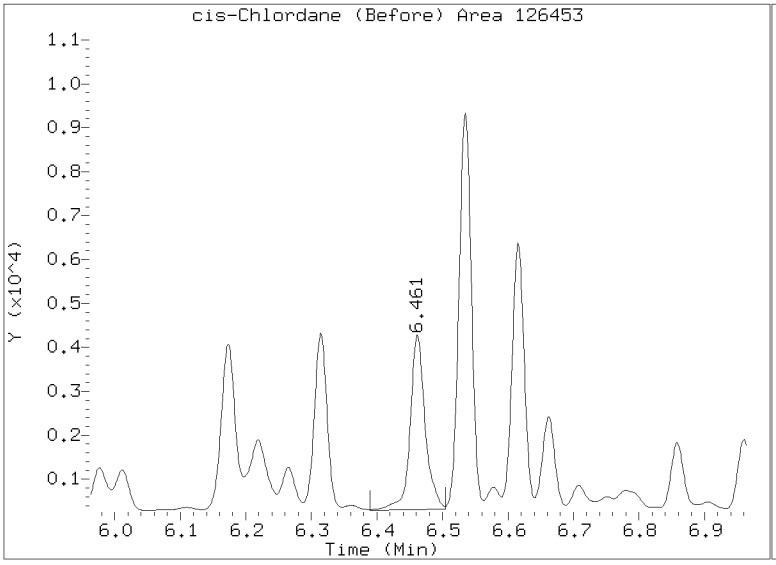


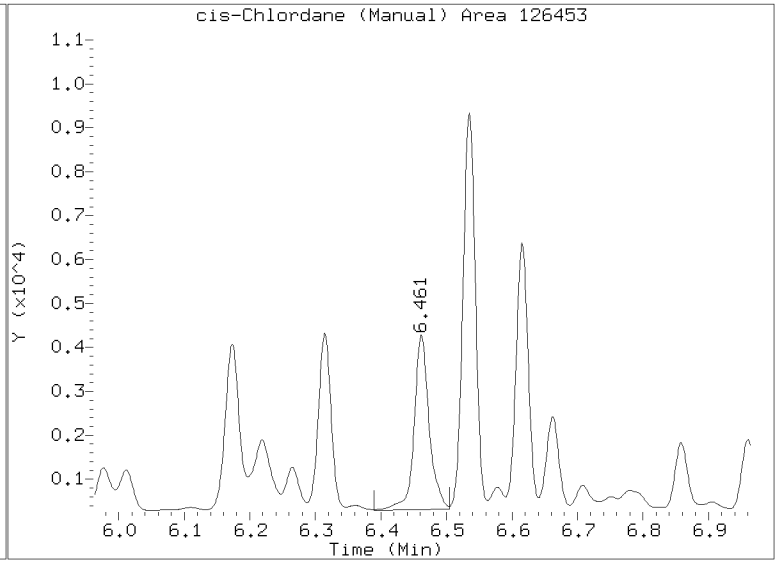
Manual Peak Adjustment Report, STX-CLP

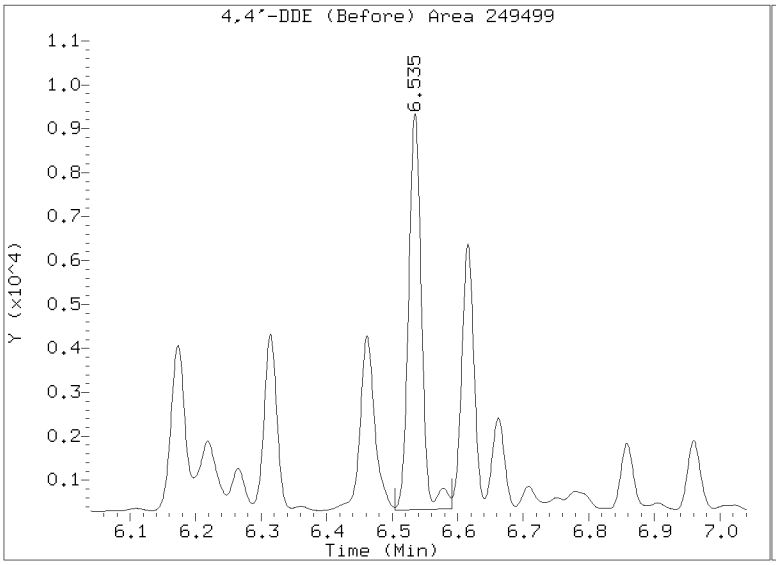
Datafile: /20230314.b/23031432.D
Injection Date: 15-MAR-2023 00:40
Lab ID:BLB0554-MS1 Client ID:
Report Date: 03/22/2023 15:58

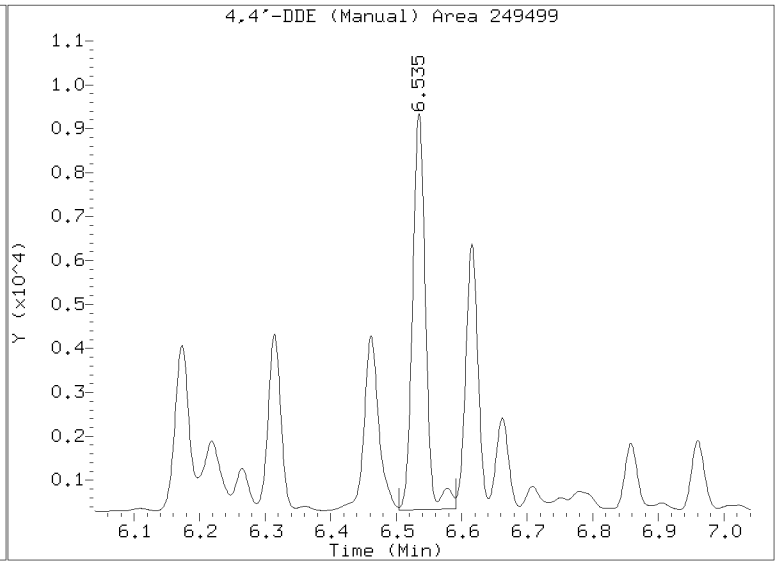












Manual Peak Adjustment Report, STX-CLP

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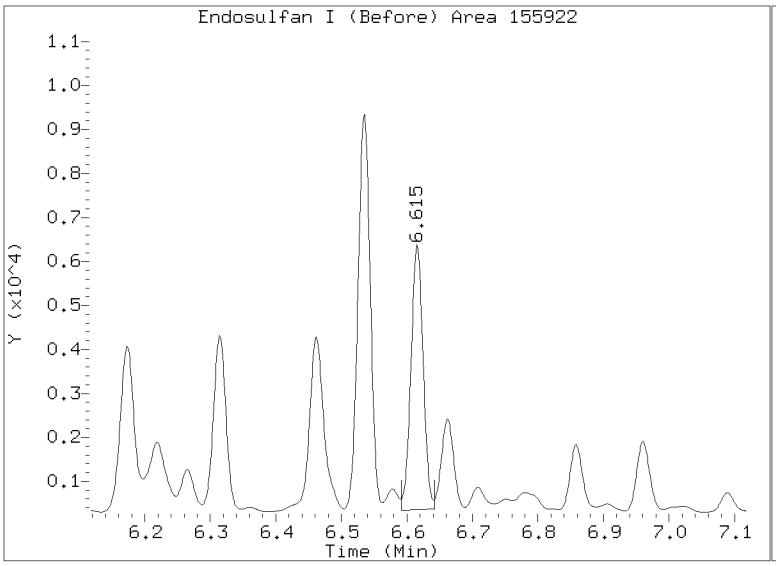
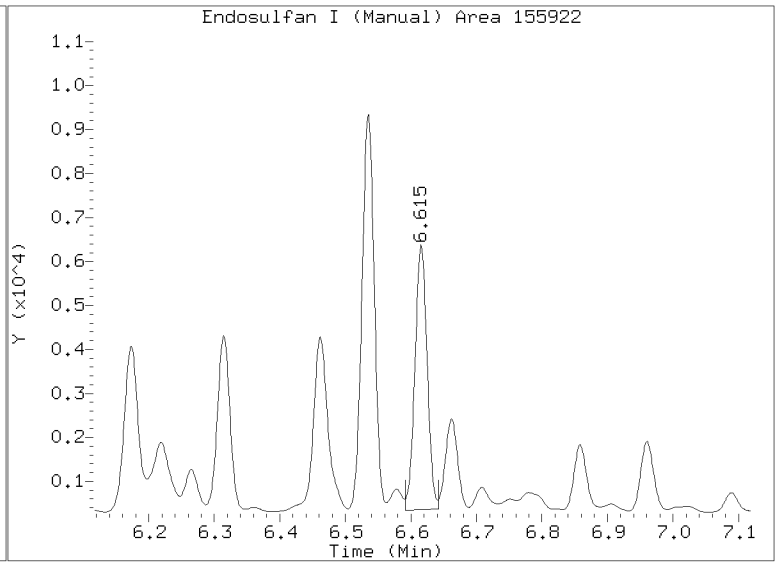
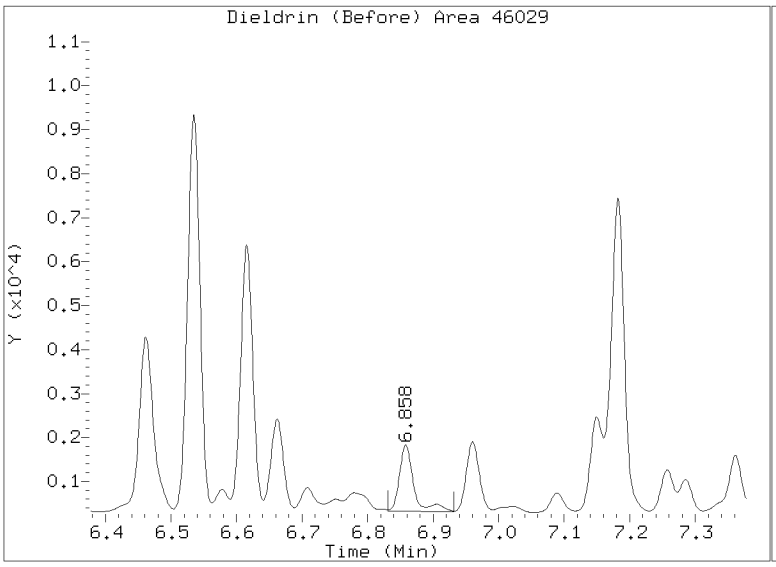
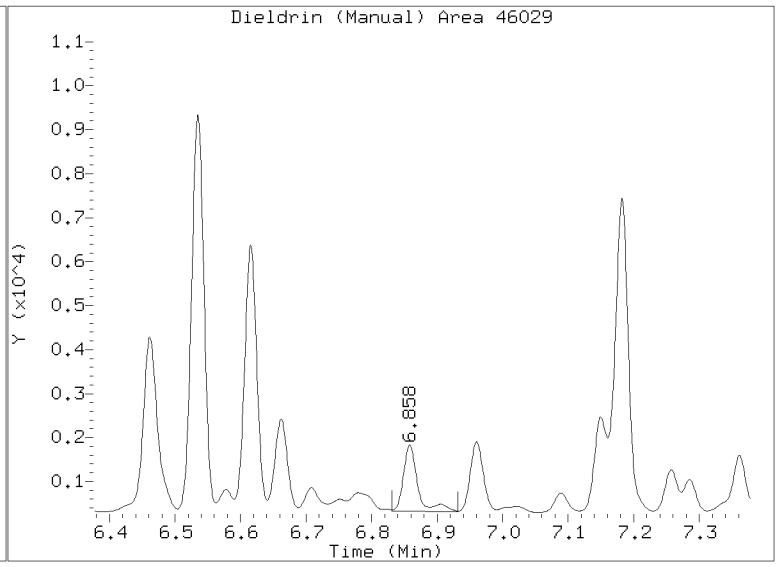
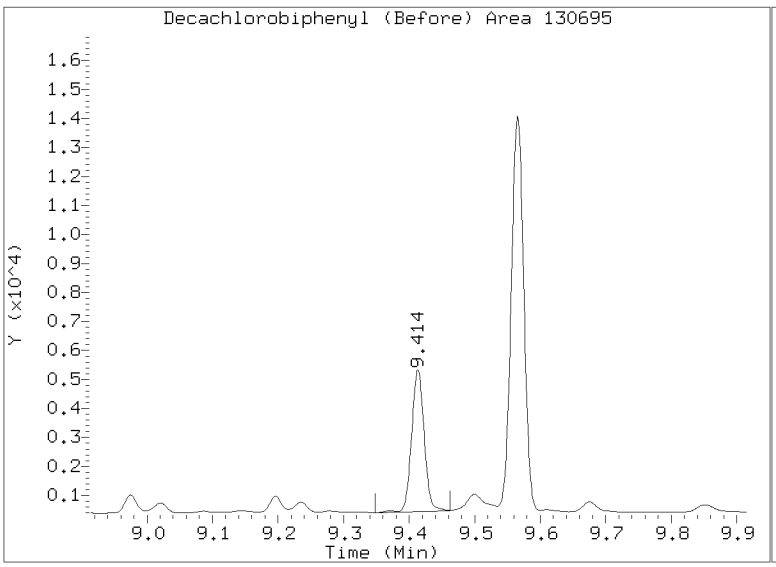
Injection Date: 15-MAR-2023 00:40
Lab ID:BLB0554-MS1 Client ID:
Report Date: 03/22/2023 15:58

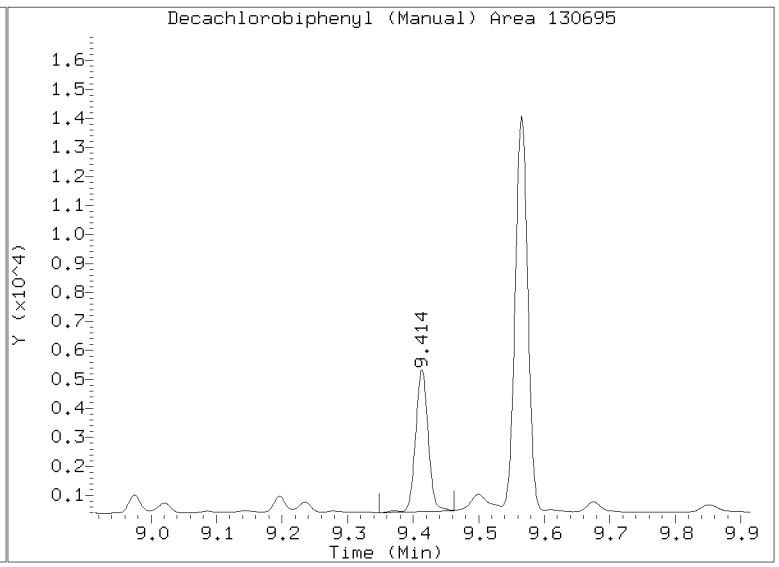






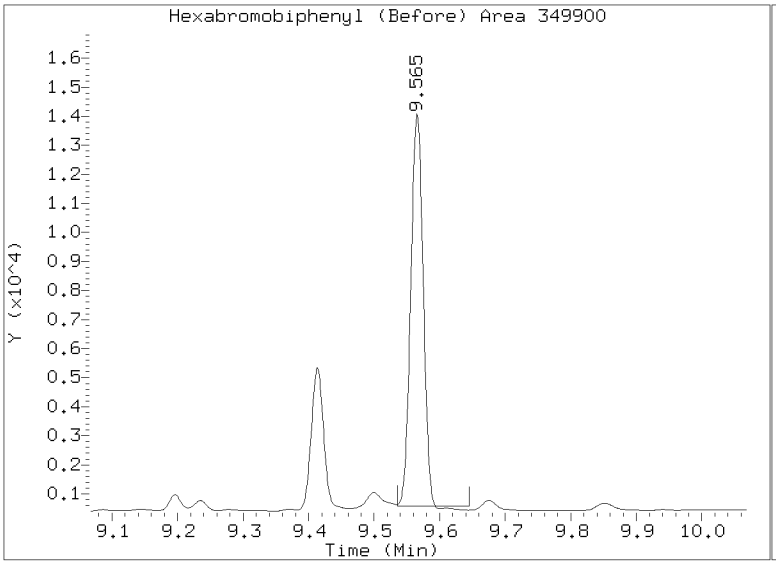


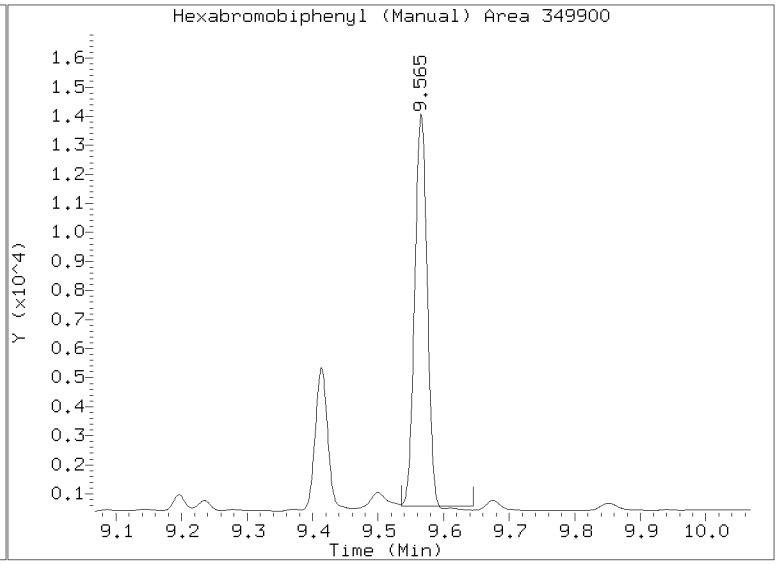




Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031432.D
Injection Date: 15-MAR-2023 00:40
Lab ID:BLB0554-MS1 Client ID:
Report Date: 03/22/2023 15:58





Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031433.D
Data file 2: /20230314.b/B20230314.b/23031433.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: BLB0554-MSD1
Client ID:
Injection Date: 15-MAR-2023 00:58
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.370	-0.004	258847	4.805	-0.003	347574	14.56	12.59	14.5	alpha-BHC MN
4.758	-0.005	98673	5.278	-0.004	136759	14.42	13.03	10.1	beta-BHC MN
4.943	-0.005	262309	5.628	-0.004	285109	18.05	12.54	36.0	delta-BHC N
4.677	-0.003	241694	5.199	-0.002	298978	15.68	12.77	20.5	gamma-BHC (Lindane) MN
5.168	-0.003	199465	5.724	-0.002	281782	14.54	13.28	9.1	Heptachlor N
5.496	-0.002	215580	6.125	-0.001	275346	14.03	11.37	20.9	Aldrin N
6.172	-0.003	197678	6.780	-0.002	362065	14.83	18.08	19.7	Heptachlor epoxide b N
6.615	-0.003	259301	7.225	-0.002	342887	21.20	19.42	8.8	Endosulfan I N
6.858	-0.020	88766	7.501	-0.019	41175	6.76	2.11	104.8*	Dieldrin N
6.535	-0.005	443181	7.308	-0.002	543794	36.33	30.40	17.8	4,4'-DDE N
----			7.870	0.027	136898	0.00	13.22	---	Endrin
7.361	-0.005	85593	8.054	-0.001	255730	11.45	24.08	71.1*	Endosulfan II N
7.181	-0.006	442222	7.912	-0.003	399706	59.10	39.67	39.4	4,4'-DDD N
8.224	-0.002	195439	8.649	-0.002	244525	27.53	26.23	4.9	Endosulfan sulfate N
7.476	-0.004	458985	8.232	-0.001	602582	60.71	61.96	2.0	4,4'-DDT N
7.953	-0.012	24307	8.840	-0.032	148622	7.26	34.53	130.6*	Methoxychlor N
8.499	-0.002	211027	9.173	-0.001	309765	25.95	30.76	17.0	Endrin ketone N
7.816	0.023	53042	8.377	-0.008	47042	8.90	6.28	34.5	Endrin aldehyde N
6.314	-0.004	189029	6.992	-0.002	244667	13.97	12.25	13.1	trans-Chlordane N
6.462	-0.002	219030	7.153	-0.001	234122	16.14	11.98	29.6	cis-Chlordane N
2.331	-0.002	231087	2.476	-0.003	320031	12.41	12.21	1.6	Hexachlorobutadiene
4.211	-0.006	243337	4.666	-0.004	349335	14.74	13.91	5.8	Hexachlorobenzene MN
3.853	-0.005	332663	4.174	-0.004	555764	26.49	28.67	7.9	Tetrachloro-m-xylene MN
9.414	-0.000	218888	10.374	0.001	277869	34.10	34.51	1.2	Decachlorobiphenyl MN

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

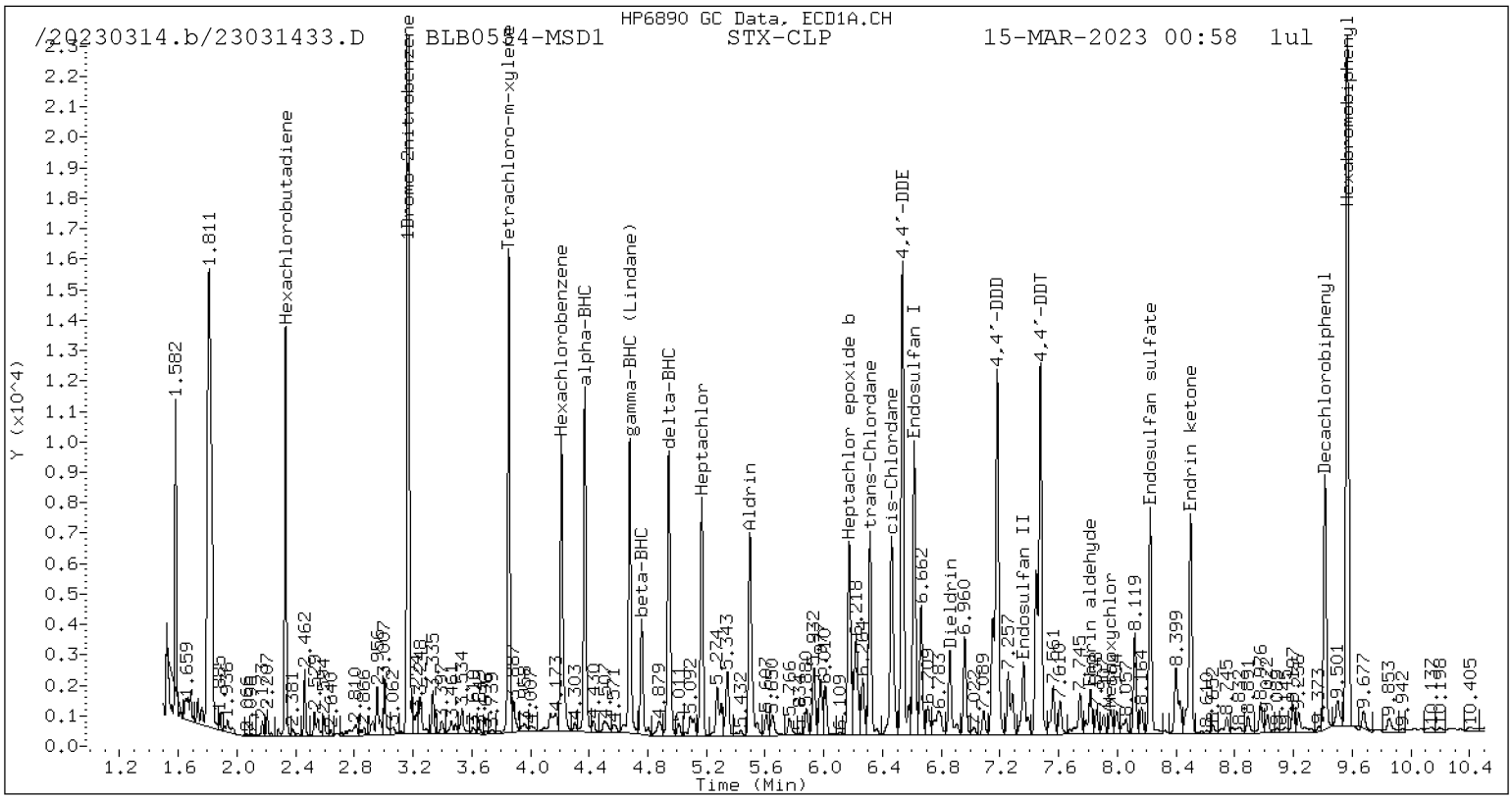
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	923383	37.3
Hexabromobiphenyl	609723	633471	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1377069	36.8
Hexabromobiphenyl	769764	728542	-5.4

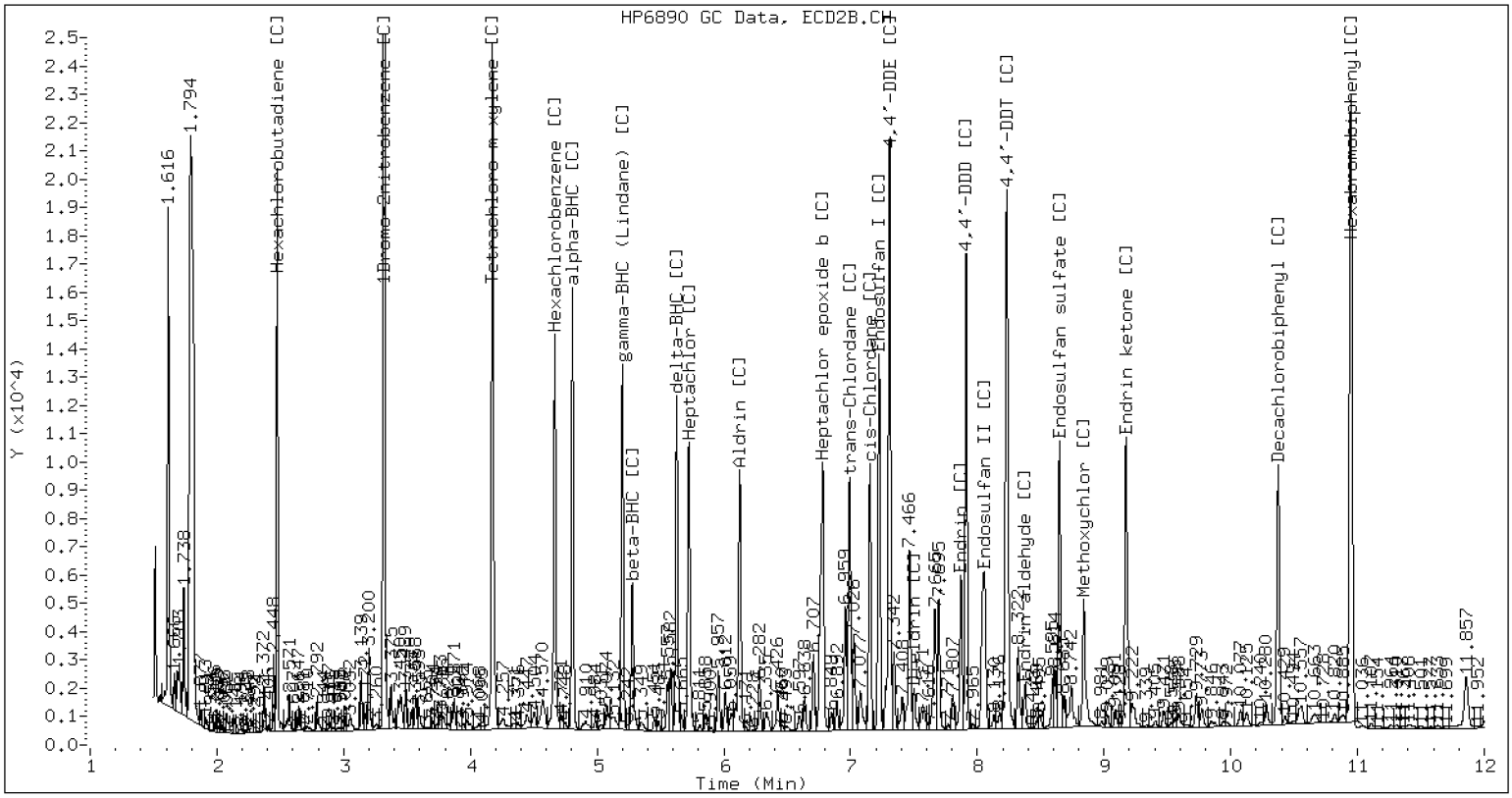
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: YES

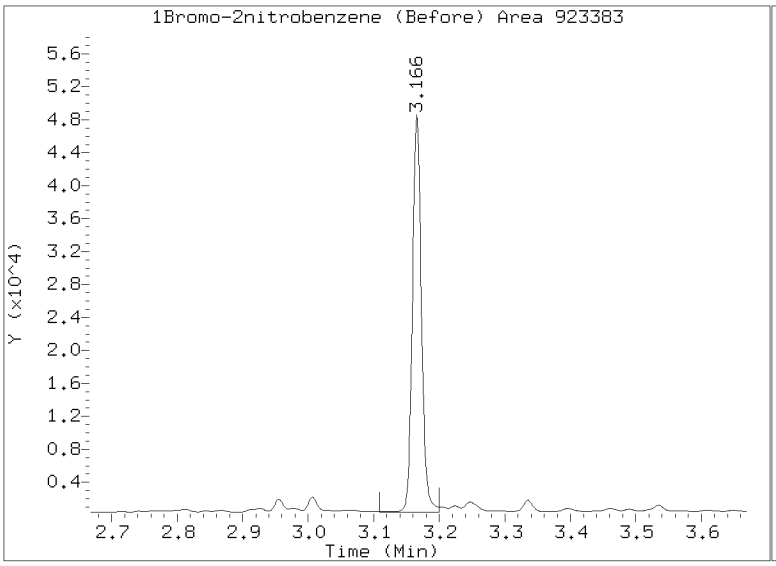
/20230314.b/B20230314.b/23031433.D BLB0554-MSD1 CLP2

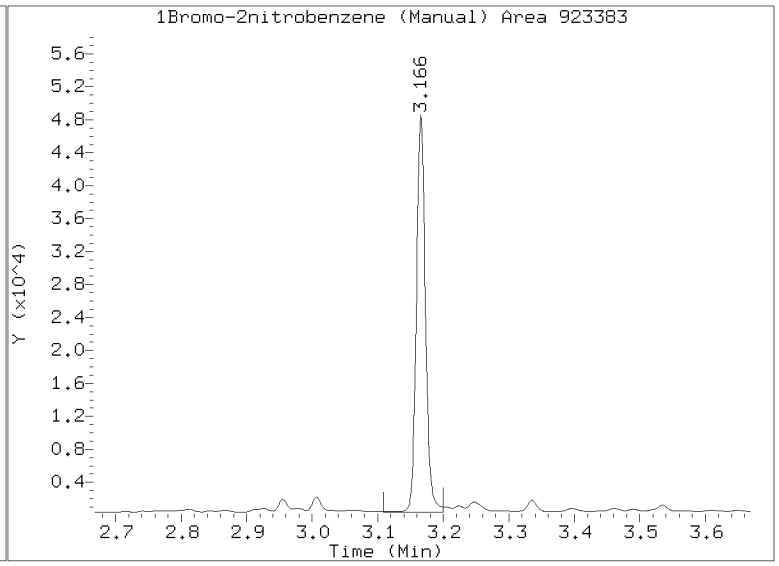


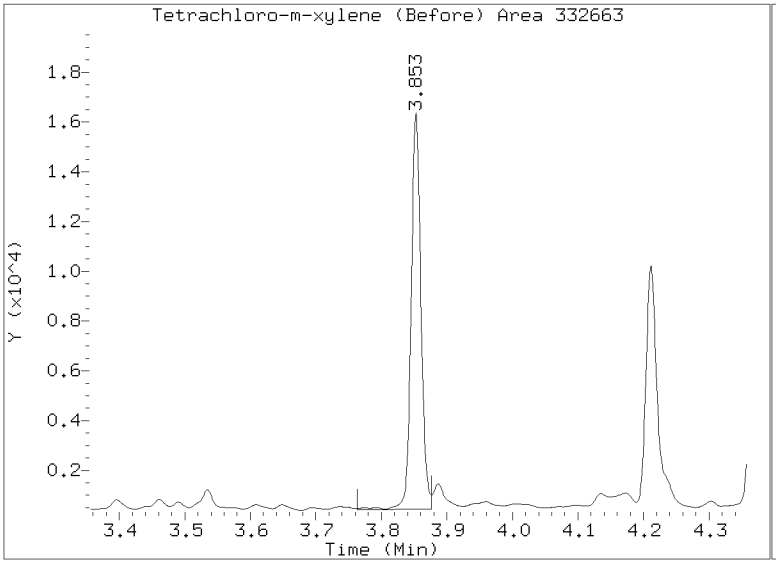
CLP-2 Manual Integration: YES

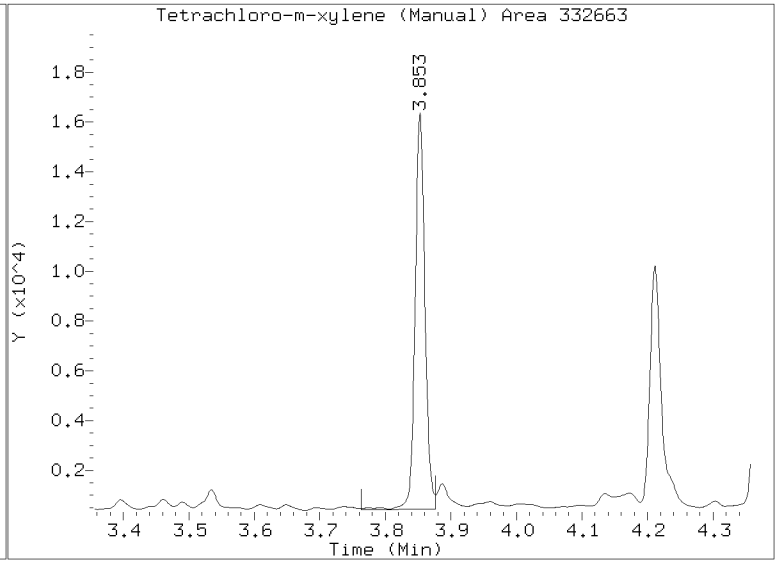
Manual Peak Adjustment Report, STX-CLP

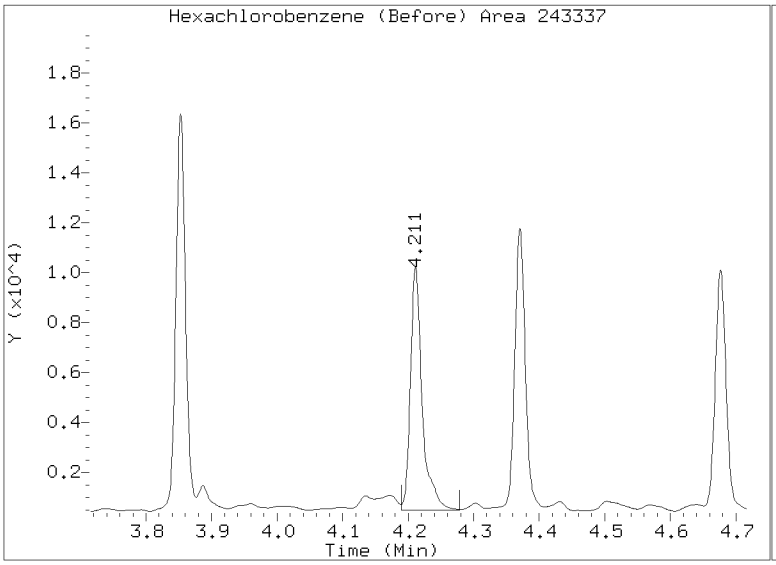
Datafile: /20230314.b/23031433.D
Injection Date: 15-MAR-2023 00:58
Lab ID:BLB0554-MSD1 Client ID:
Report Date: 03/22/2023 15:58

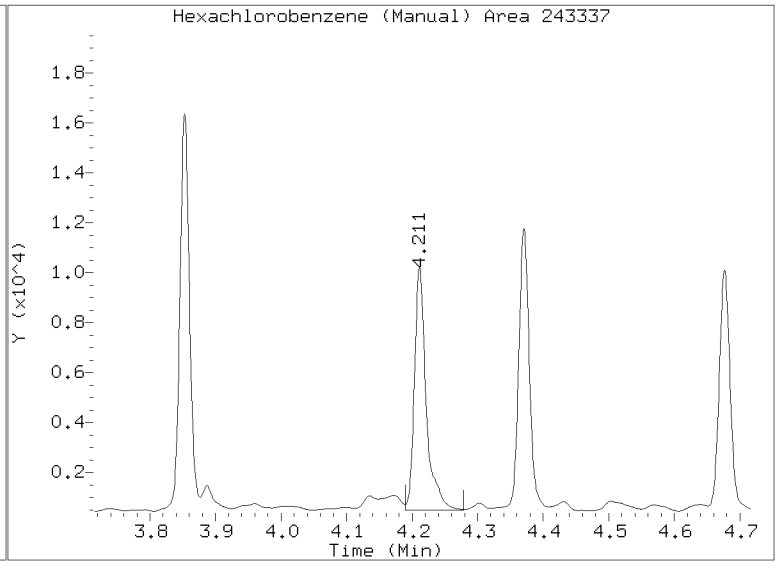












Manual Peak Adjustment Report, STX-CLP

Datafile: /20230314.b/23031433.D
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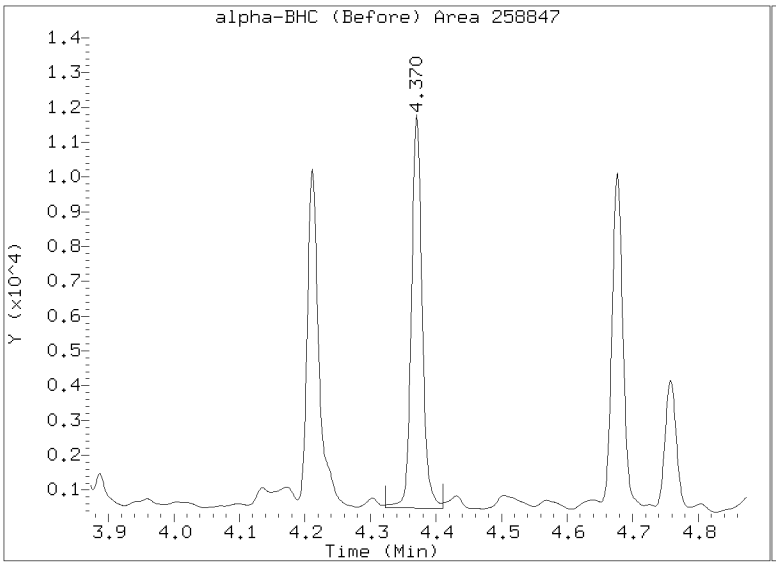
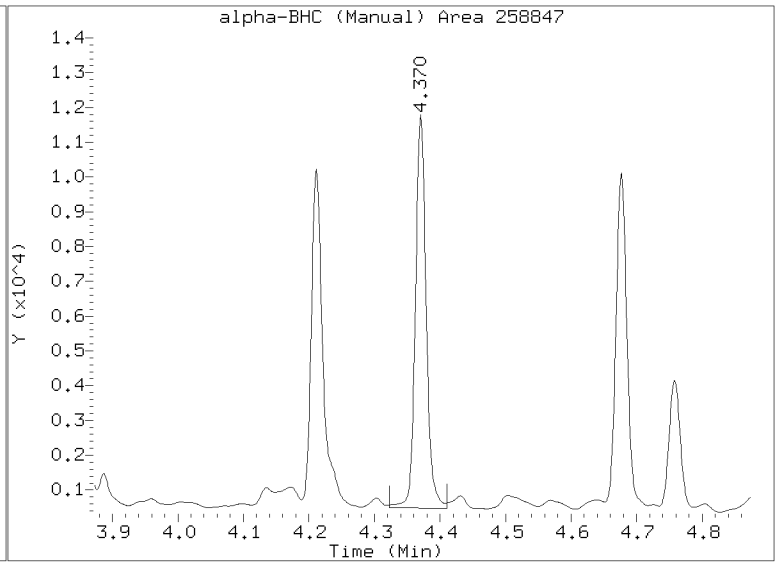
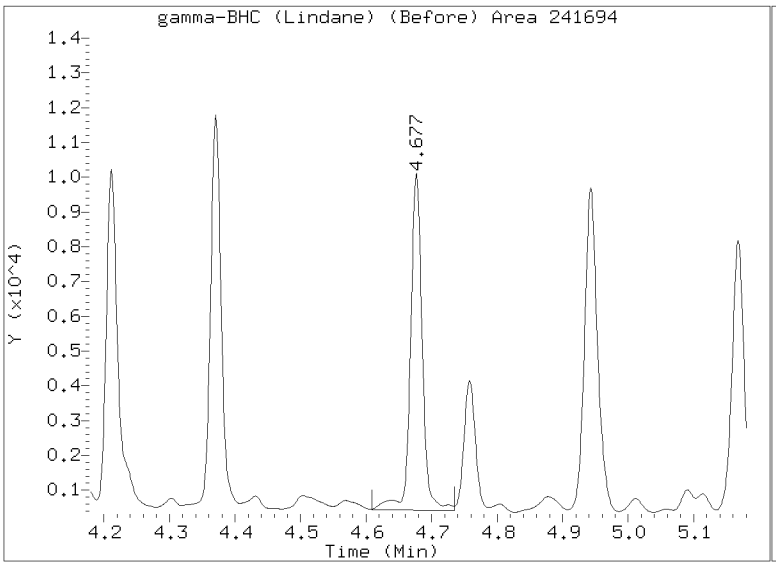
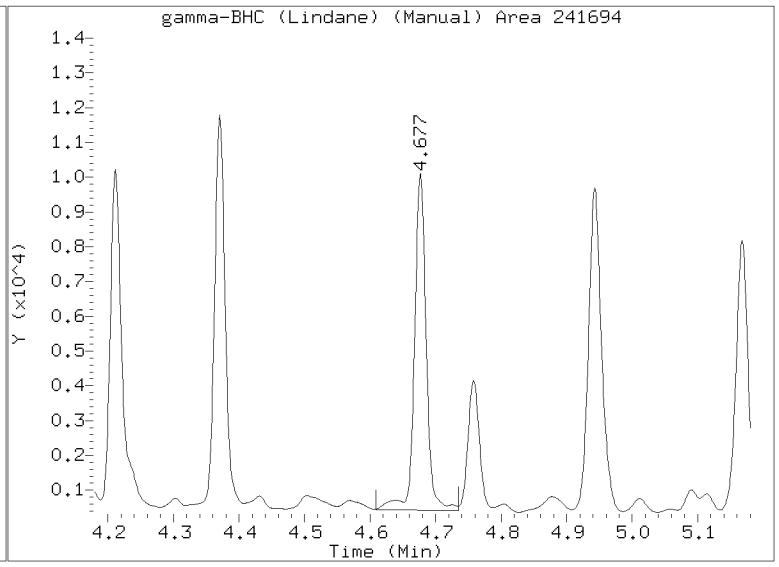
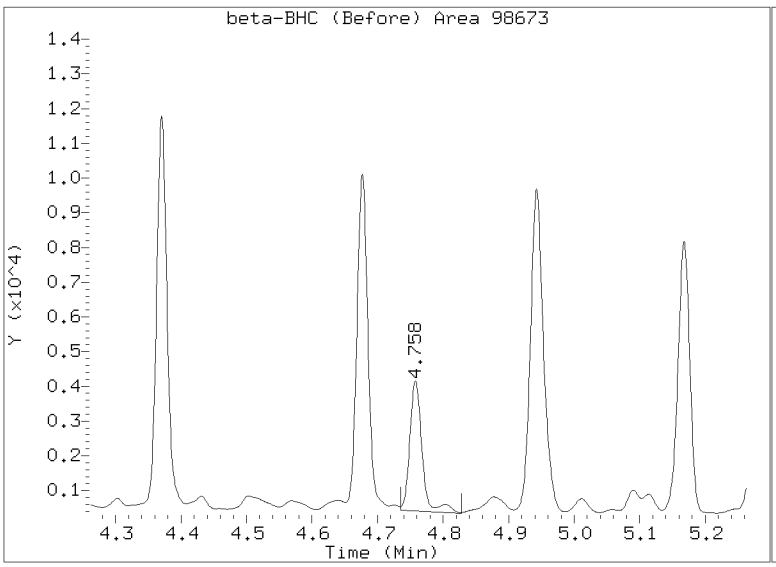
Lab ID:BLB0554-MSD1 Client ID:
Report Date: 03/22/2023 15:58

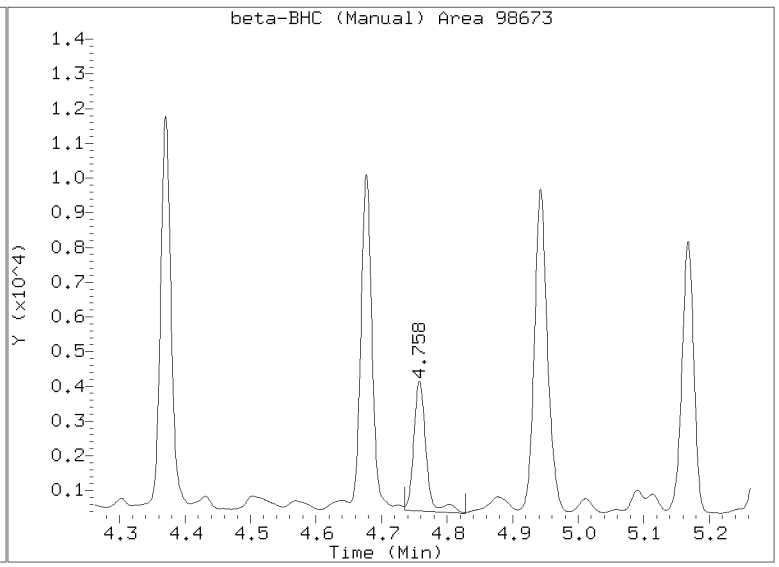












Manual Peak Adjustment Report, STX-CLP

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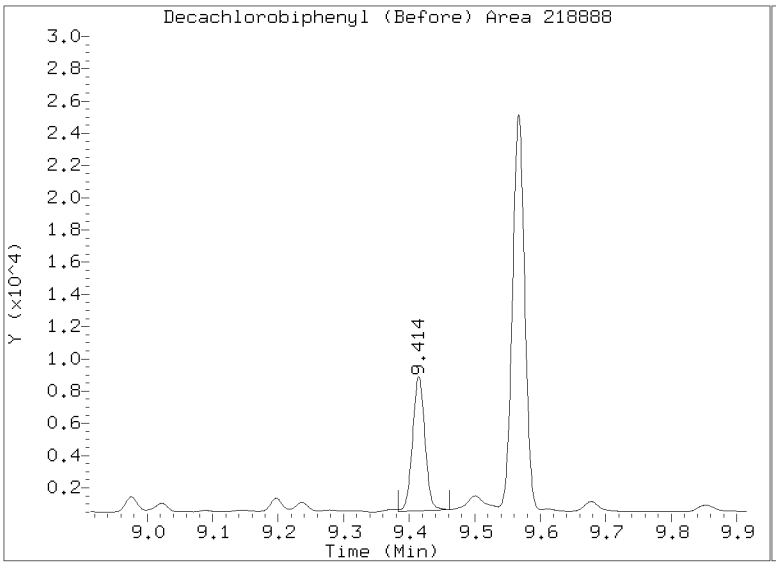
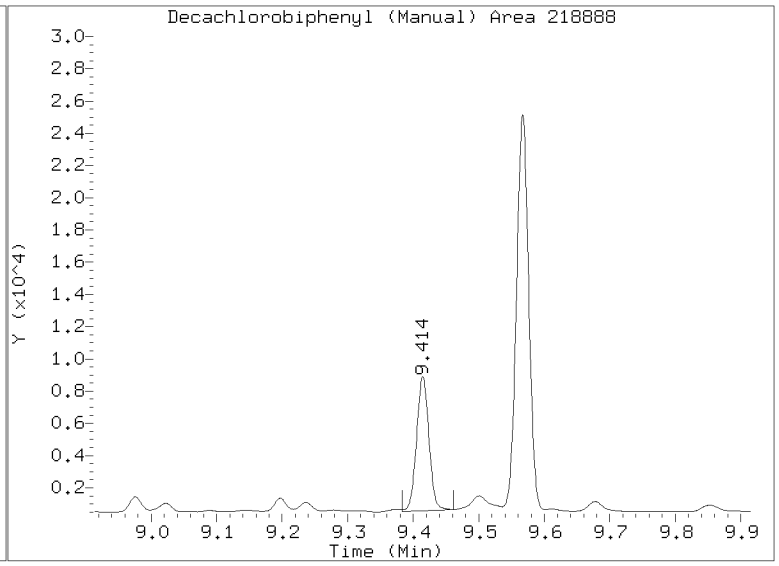
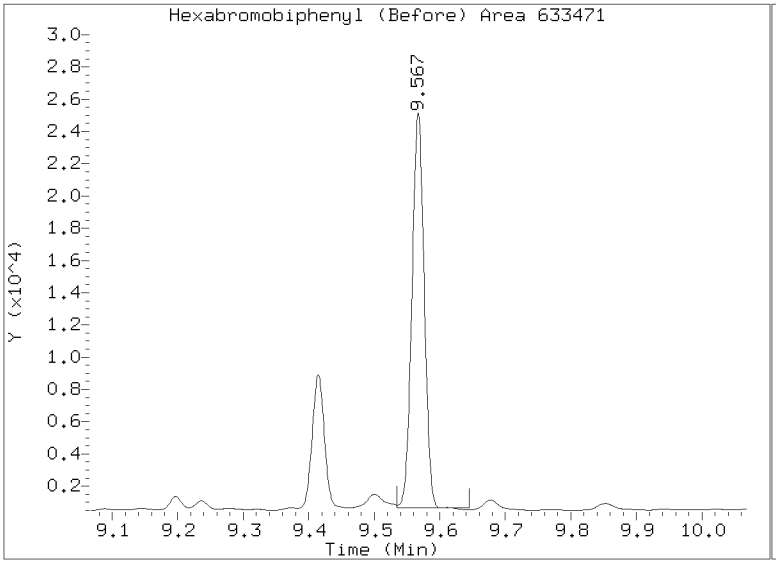
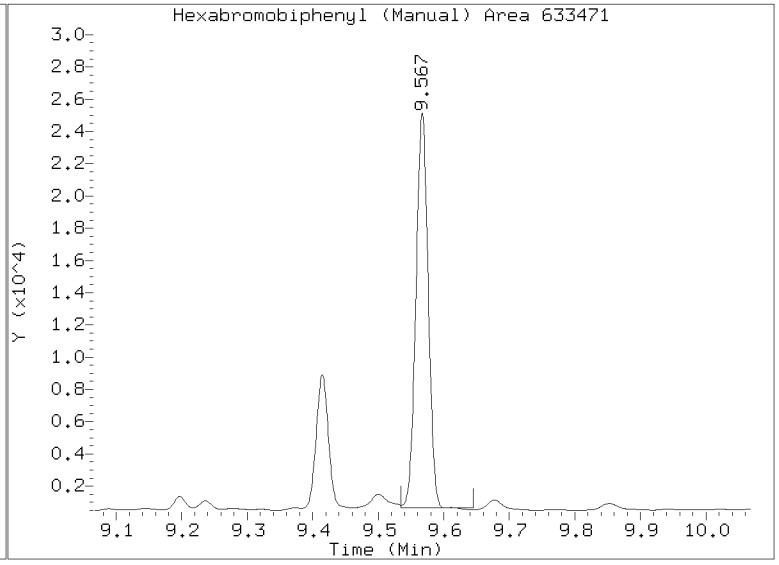
Injection Date: 15-MAR-2023 00:58
Lab ID:BLB0554-MSD1 Client ID:
Report Date: 03/22/2023 15:58









INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC			2.5	1.564682	5	1.558115	10	1.57359	20	1.566596	40	1.528219
beta-BHC			2.5	0.6501672	5	0.6116678	10	0.6049898	20	0.5910241	40	0.567415
gamma-BHC (Lindane)			2.5	1.364013	5	1.359107	10	1.367627	20	1.357913	40	1.317203
delta-BHC			2.5	1.267737	5	1.264366	10	1.278672	20	1.286232	40	1.255792
Heptachlor			2.5	1.26903	5	1.222902	10	1.218715	20	1.207966	40	1.145438
Aldrin			2.5	1.349967	5	1.349283	10	1.40535	20	1.372547	40	1.307197
Heptachlor Epoxide			2.5	1.231126	5	1.189593	10	1.20792	20	1.178021	40	1.104377
trans-Chlordane (beta-Chlordane)			2.5	1.262297	5	1.202181	10	1.202336	20	1.19062	40	1.128117
cis-Chlordane (alpha-chlordane)			2.5	1.308183	5	1.222582	10	1.200602	20	1.177182	40	1.111332
Endosulfan I			2.5	1.143813	5	1.097776	10	1.093658	20	1.076133	40	1.011287
4,4'-DDE			5	1.141182	10	1.108491	20	1.098369	40	1.077225	80	0.9961189
Dieldrin			5	1.225418	10	1.190449	20	1.185191	40	1.155764	80	1.077517
Endrin			5	1.158191	10	1.117563	20	1.079508	40	1.061387	80	0.9725989
Endosulfan II			5	0.9400399	10	0.9913797	20	1.005265	40	0.925043	80	0.9337917
4,4'-DDD			5	1.004568	10	0.9927897	20	0.9803235	40	0.9586353	80	0.8937077
Endrin Aldehyde			5	0.8167784	10	0.7834798	20	0.7706241	40	0.7573308	80	0.7147756
4,4'-DDT			5	1.007054	10	0.9936998	20	0.9768522	40	0.9722874	80	0.9123228
Endosulfan Sulfate			5	0.9534179	10	0.9413755	20	0.9158457	40	0.9056998	80	0.8542021
Endrin Ketone			5	1.134866	10	1.083274	20	1.043162	40	1.021136	80	0.9645492
Methoxychlor			25	0.4887243	50	0.4567517	100	0.4291758	200	0.4123964	400	0.380531
Hexachlorobutadiene			2.5	1.967135	5	1.727858	10	1.608612	20	1.550898	40	1.457962
Hexachlorobenzene			2.5	1.583946	5	1.509865	10	1.463674	20	1.414258	40	1.348389
Decachlorobiphenyl			5	0.9567749	10	0.8690419	20	0.8114883	40	0.7853665	80	0.7399881
Tetrachlorometaxylene			5	1.223478	10	1.154628	20	1.122612	40	1.064313	80	1.018952

INITIAL CALIBRATION DATA
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC	80	1.449687										
beta-BHC	80	0.5324503										
gamma-BHC (Lindane)	80	1.246178										
delta-BHC	80	1.199667										
Heptachlor	80	1.064858										
Aldrin	80	1.204866										
Heptachlor Epoxide	80	1.016142										
trans-Chlordane (beta-Chlordane)	80	1.050129										
cis-Chlordane (alpha-chlordane)	80	1.036345										
Endosulfan I	80	0.9344351										
4,4'-DDE	160	0.9196699										
Dieldrin	160	0.9953457										
Endrin	160	0.903669										
Endosulfan II	160	0.8694106										
4,4'-DDD	160	0.8394108										
Endrin Aldehyde	160	0.6754471										
4,4'-DDT	160	0.8666848										
Endosulfan Sulfate	160	0.808554										
Endrin Ketone	160	0.9150773										
Methoxychlor	800	0.3710888										
Hexachlorobutadiene	80	1.368623										
Hexachlorobenzene	80	1.259233										
2,4'-DDE					5	0.8703192	10	0.8471901	20	0.8231684	40	0.7887622
2,4'-DDD					5	0.761682	10	0.7418629	20	0.7301989	40	0.7053717
2,4'-DDT					5	0.8194572	10	0.8004965	20	0.7842725	40	0.7616258
Oxychlordane					5	1.016746	10	1.011016	20	0.9890796	40	0.9530961
cis-Nonachlor					5	1.323191	10	1.277938	20	1.243982	40	1.217703

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor					5	1.347777	10	1.328677	20	1.28535	40	1.249062
Mirex					5	0.8317764	10	0.8043457	20	0.7641487	40	0.7481553
Decachlorobiphenyl	160	0.7008722										
Tetrachlorometaxylene	160	0.9437243										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE	80	0.7262802	160	0.6559468								
2,4'-DDD	80	0.6522807	160	0.6001736								
2,4'-DDT	80	0.7135595	160	0.6495601								
Oxychlordane	80	0.9018234	160	0.8351028								
cis-Nonachlor	80	1.140435	160	1.065099								
trans-Nonachlor	80	1.167639	160	1.085646								
Mirex	80	0.706171	160	0.6667706								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (1):	STX-CLP

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC	1.540148	3.1			RSD (20)	
beta-BHC	0.5929524	6.8			RSD (20)	
gamma-BHC (Lindane)	1.33534	3.5			RSD (20)	
delta-BHC	1.258744	2.5			RSD (20)	
Heptachlor	1.188151	6.1			RSD (20)	
Aldrin	1.331535	5.2			RSD (20)	
Heptachlor Epoxide	1.15453	6.9			RSD (20)	
trans-Chlordane (beta-Chlordane)	1.172613	6.3			RSD (20)	
cis-Chlordane (alpha-chlordane)	1.176038	8.0			RSD (20)	
Endosulfan I	1.059517	7.1			RSD (20)	
4,4'-DDE	1.056843	7.9			RSD (20)	
Dieldrin	1.138281	7.6			RSD (20)	
Endrin	1.048819	9.0			RSD (20)	
Endosulfan II	0.944155	5.2			RSD (20)	
4,4'-DDD	0.9449058	6.9			RSD (20)	
Endrin Aldehyde	0.7530726	6.7			RSD (20)	
4,4'-DDT	0.9548168	5.7			RSD (20)	
Endosulfan Sulfate	0.8965158	6.2			RSD (20)	
Endrin Ketone	1.027011	7.7			RSD (20)	
Methoxychlor	0.4231113	10.6			RSD (20)	
Hexachlorobutadiene	1.613515	13.2			RSD (20)	
Hexachlorobenzene	1.429894	8.1			RSD (20)	
2,4'-DDE	0.7852778	10.3			RSD (20)	
2,4'-DDD	0.698595	8.8			RSD (20)	
2,4'-DDT	0.7548286	8.4			RSD (20)	
Oxychlordane	0.951144	7.5			RSD (20)	
cis-Nonachlor	1.211391	7.8			RSD (20)	
trans-Nonachlor	1.244025	8.1			RSD (20)	
Mirex	0.7535613	8.1			RSD (20)	
Decachlorobiphenyl	0.8105886	11.4			RSD (20)	
Tetrachlorometaxylene	1.087951	9.2			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
alpha-BHC [2C]			2.5	1.582358	5	1.586238	10	1.633164	20	1.640486	40	1.615441
beta-BHC [2C]			2.5	0.652782	5	0.6172948	10	0.6184608	20	0.6125812	40	0.5918008
gamma-BHC (Lindane) [2C]			2.5	1.355071	5	1.348783	10	1.381456	20	1.392772	40	1.366606
delta-BHC [2C]			2.5	1.323764	5	1.307234	10	1.339425	20	1.328433	40	1.331977
Heptachlor [2C]			2.5	1.270249	5	1.234236	10	1.258409	20	1.272245	40	1.215755
Aldrin [2C]			2.5	1.511397	5	1.416724	10	1.432636	20	1.430376	40	1.370917
Heptachlor Epoxide [2C]			2.5	1.2977	5	1.174596	10	1.174288	20	1.174706	40	1.114434
trans-Chlordane (beta-Chlordane) [2C]			2.5	1.25449	5	1.176102	10	1.164843	20	1.168848	40	1.125534
cis-Chlordane (alpha-chlordane) [2C]			2.5	1.258498	5	1.153199	10	1.135052	20	1.136251	40	1.089792
Endosulfan I [2C]			2.5	1.118263	5	1.044155	10	1.035412	20	1.034697	40	0.9885012
4,4'-DDE [2C]			5	1.120237	10	1.069625	20	1.064387	40	1.055415	80	0.9897135
Dieldrin [2C]			5	1.270008	10	1.162844	20	1.139359	40	1.136098	80	1.071389
Endrin [2C]			5	1.256912	10	1.17909	20	1.159477	40	1.149599	80	1.066056
Endosulfan II [2C]			5	1.296819	10	1.202961	20	1.188491	40	1.160501	80	1.099056
4,4'-DDD [2C]			5	1.234482	10	1.121556	20	1.117792	40	1.112003	80	1.04628
Endrin Aldehyde [2C]			5	0.9430111	10	0.8430348	20	0.8249196	40	0.8129946	80	0.7727701
4,4'-DDT [2C]			5	1.175911	10	1.077825	20	1.067612	40	1.073272	80	1.019364
Endosulfan Sulfate [2C]			5	1.137768	10	1.042553	20	1.030373	40	1.023023	80	0.9721732
Endrin Ketone [2C]			5	1.235631	10	1.119988	20	1.114405	40	1.100852	80	1.047659
Methoxychlor [2C]			25	0.5184064	50	0.4866753	100	0.4751666	200	0.4681736	400	0.4433957
Hexachlorobutadiene [2C]			2.5	1.975612	5	1.648845	10	1.492482	20	1.376096	40	1.341211
Hexachlorobenzene [2C]			2.5	1.602215	5	1.520618	10	1.491402	20	1.450251	40	1.385947
Decachlorobiphenyl [2C]			5	1.087142	10	0.9391597	20	0.8562421	40	0.8499592	80	0.8013928
Tetrachlorometaxylene [2C]			5	1.220863	10	1.179368	20	1.164832	40	1.127982	80	1.06878

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
alpha-BHC [2C]	80	1.561903										
beta-BHC [2C]	80	0.5642956										
gamma-BHC (Lindane) [2C]	80	1.31891										
delta-BHC [2C]	80	1.29291										
Heptachlor [2C]	80	1.144118										
Aldrin [2C]	80	1.281263										
Heptachlor Epoxide [2C]	80	1.046144										
trans-Chlordane (beta-Chlordane) [2C]	80	1.072685										
cis-Chlordane (alpha-chlordane) [2C]	80	1.03859										
Endosulfan I [2C]	80	0.9325836										
4,4'-DDE [2C]	160	0.9356313										
Dieldrin [2C]	160	1.019365										
Endrin [2C]	160	1.013782										
Endosulfan II [2C]	160	1.047801										
4,4'-DDD [2C]	160	1.006382										
Endrin Aldehyde [2C]	160	0.7380269										
4,4'-DDT [2C]	160	0.9933936										
Endosulfan Sulfate [2C]	160	0.9372514										
Endrin Ketone [2C]	160	1.016567										
Methoxychlor [2C]	800	0.4436418										
Hexachlorobutadiene [2C]	80	1.300813										
Hexachlorobenzene [2C]	80	1.304223										
2,4'-DDE [2C]					5	0.8343307	10	0.8052418	20	0.7431295	40	0.7258871
2,4'-DDD [2C]					5	0.9097548	10	0.8797099	20	0.8273813	40	0.8164191
2,4'-DDT [2C]					5	0.9400077	10	0.8804604	20	0.8502582	40	0.8485216
Oxychlordane [2C]					5	0.9644685	10	0.9467754	20	0.9033255	40	0.8966281
cis-Nonachlor [2C]					5	1.449238	10	1.407074	20	1.376474	40	1.372123

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
trans-Nonachlor [2C]					5	1.488853	10	1.51762	20	1.451789	40	1.447663
Mirex [2C]					5	0.9331395	10	0.8115521	20	0.7946205	40	0.762682
Decachlorobiphenyl [2C]	160	0.7711875										
Tetrachlorometaxylene [2C]	160	0.9948184										

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
2,4'-DDE [2C]	80	0.6667087	160	0.6020159								
2,4'-DDD [2C]	80	0.76623	160	0.7136982								
2,4'-DDT [2C]	80	0.7977257	160	0.7424898								
Oxychlordane [2C]	80	0.8433342	160	0.7909247								
cis-Nonachlor [2C]	80	1.313286	160	1.248174								
trans-Nonachlor [2C]	80	1.376815	160	1.306683								
Mirex [2C]	80	0.7399752	160	0.7075065								

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

Compound	Level 25		Level 26		Level 27		Level 28		Level 29		Level 30	
	Conc		Conc		Conc		Conc		Conc		Conc	

INITIAL CALIBRATION DATA

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FL00041	Instrument:	ECD6
Calibration Date:	12/14/2022	Column (2):	STX-CLPII

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
alpha-BHC [2C]	1.603265	1.9			RSD (20)	
beta-BHC [2C]	0.6095359	4.9			RSD (20)	
gamma-BHC (Lindane) [2C]	1.3606	1.9			RSD (20)	
delta-BHC [2C]	1.320624	1.3			RSD (20)	
Heptachlor [2C]	1.232502	3.9			RSD (20)	
Aldrin [2C]	1.407219	5.4			RSD (20)	
Heptachlor Epoxide [2C]	1.163645	7.1			RSD (20)	
trans-Chlordane (beta-Chlordane) [2C]	1.160417	5.2			RSD (20)	
cis-Chlordane (alpha-chlordane) [2C]	1.13523	6.5			RSD (20)	
Endosulfan I [2C]	1.025602	6.0			RSD (20)	
4,4'-DDE [2C]	1.039168	6.3			RSD (20)	
Dieldrin [2C]	1.133177	7.5			RSD (20)	
Endrin [2C]	1.137486	7.6			RSD (20)	
Endosulfan II [2C]	1.165938	7.4			RSD (20)	
4,4'-DDD [2C]	1.106416	7.0			RSD (20)	
Endrin Aldehyde [2C]	0.8224595	8.5			RSD (20)	
4,4'-DDT [2C]	1.067896	5.9			RSD (20)	
Endosulfan Sulfate [2C]	1.023857	6.7			RSD (20)	
Endrin Ketone [2C]	1.10585	6.8			RSD (20)	
Methoxychlor [2C]	0.4725766	6.0			RSD (20)	
Hexachlorobutadiene [2C]	1.52251	16.8			RSD (20)	
Hexachlorobenzene [2C]	1.459109	7.2			RSD (20)	
2,4'-DDE [2C]	0.7295523	11.8			RSD (20)	
2,4'-DDD [2C]	0.8188656	8.8			RSD (20)	
2,4'-DDT [2C]	0.8432439	8.1			RSD (20)	
Oxychlordane [2C]	0.8909094	7.3			RSD (20)	
cis-Nonachlor [2C]	1.361061	5.2			RSD (20)	
trans-Nonachlor [2C]	1.43157	5.4			RSD (20)	
Mirex [2C]	0.7915793	9.9			RSD (20)	
Decachlorobiphenyl [2C]	0.8841805	13.0			RSD (20)	
Tetrachlorometaxylene [2C]	1.126107	7.3			RSD (20)	

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121428.D
Level 2: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121429.D
Level 3: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121430.D
Level 4: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121431.D
Level 5: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121432.D
Level 6: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121433.D
Level 7: \\target\share\chem4\ecd6.i\20221214.b\20221214.b\22121434.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
1 Hexachlorobutadiene [C]	+++++	1.97561	1.64885	1.49248	1.37610	1.34121	1.30081	1.52251	16.761
5 Hexachlorobenzene [C]	+++++	1.60221	1.52062	1.49140	1.45025	1.38595	1.30422	1.45911	7.170
6 alpha-BHC [C]	+++++	1.58236	1.58624	1.63316	1.64049	1.61544	1.56190	1.60327	1.946
7 gamma-BHC (Lindane) [C]	+++++	1.35507	1.34878	1.38146	1.39277	1.36661	1.31891	1.36060	1.921
8 beta-BHC [C]	+++++	0.65278	0.61729	0.61846	0.61258	0.59180	0.56430	0.60954	4.856
9 delta-BHC [C]	+++++	1.32376	1.30723	1.33943	1.32843	1.33198	1.29291	1.32062	1.312
10 Heptachlor [C]	+++++	1.27025	1.23424	1.25841	1.27225	1.21576	1.14412	1.23250	3.937
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	RRF	% RSD
12 Aldrin [C]	+++++	1.51140	1.41672	1.43264	1.43038	1.37092	1.28126	1.40722	5.441
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b [C]	+++++	1.29770	1.17460	1.17429	1.17471	1.11443	1.04614	1.16364	7.144
15 cis-Chlordane [C]	+++++	1.25850	1.15320	1.13505	1.13625	1.08979	1.03859	1.13523	6.464
16 trans-Chlordane [C]	+++++	1.25449	1.17610	1.16484	1.16885	1.12553	1.07269	1.16042	5.185
17 Endosulfan I [C]	+++++	1.11826	1.04415	1.03541	1.03470	0.98850	0.93258	1.02560	6.032
18 4,4'-DDE [C]	+++++	1.12024	1.06963	1.06439	1.05541	0.98971	0.93563	1.03917	6.320
19 Dieldrin [C]	+++++	1.27001	1.16284	1.13936	1.13610	1.07139	1.01937	1.13318	7.532
20 Endrin [C]	+++++	1.25691	1.17909	1.15948	1.14960	1.06606	1.01378	1.13749	7.566
21 4,4'-DDD [C]	+++++	1.23448	1.12156	1.11779	1.11200	1.04628	1.00638	1.10642	7.049
22 Endosulfan II [C]	+++++	1.29682	1.20296	1.18849	1.16050	1.09906	1.04780	1.16594	7.425

ARI Labs, Inc.

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Target Version : 4.14
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Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT [C]	+++++	1.17591	1.07782	1.06761	1.07327	1.01936	0.99339	1.06790	5.878
24 Endrin aldehyde [C]	+++++	0.94301	0.84303	0.82492	0.81299	0.77277	0.73803	0.82246	8.537
25 Endosulfan sulfate [C]	+++++	1.13777	1.04255	1.03037	1.02302	0.97217	0.93725	1.02386	6.702
26 Methoxychlor [C]	+++++	0.51841	0.48668	0.47517	0.46817	0.44340	0.44364	0.47258	5.996
27 Endrin ketone [C]	+++++	1.23563	1.11999	1.11440	1.10085	1.04766	1.01657	1.10585	6.827
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
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Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
31 Aroclor-1232(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
32 Aroclor-1242(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
35 Aroclor-1260(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####
36 Aroclor-1262(1)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(2)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(3)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(4)	#####	#####	#####	#####	#####	#####	#####	#####	#####
(5)	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2022 20:38
End Cal Date : 15-DEC-2022 05:16
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene [C](1)	0.01492	0.01529	0.01573	0.01558	0.01527	0.01455	0.01387	0.01503	4.285
(2)	0.03524	0.03538	0.03581	0.03480	0.03351	0.03170	0.03010	0.03379	6.368
(3)	0.02615	0.02659	0.02671	0.02640	0.02571	0.02464	0.02387	0.02572	4.197
(4)	0.08868	0.08690	0.08740	0.08502	0.08225	0.07926	0.07782	0.08390	5.022
(5)	0.04138	0.04124	0.04193	0.04145	0.04102	0.04046	0.04062	0.04116	1.227
39 2,4-DDE [C]	*****	0.83433	0.80524	0.74313	0.72589	0.66671	0.60202	0.72955	11.810

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
40 2,4-DDD [C]	+++++	0.90975	0.87971	0.82738	0.81642	0.76623	0.71370	0.81887	8.785
41 2,4-DDT [C]	+++++	0.94001	0.88046	0.85026	0.84852	0.79773	0.74249	0.84324	8.052
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane [C]	+++++	0.96447	0.94678	0.90333	0.89663	0.84333	0.79092	0.89091	7.271
44 trans-Nonachlor [C]	+++++	1.48885	1.51762	1.45179	1.44766	1.37681	1.30668	1.43157	5.406
45 cis-Nonachlor [C]	+++++	1.44924	1.40707	1.37647	1.37212	1.31329	1.24817	1.36106	5.224
46 Mirex [C]	+++++	0.93314	0.81155	0.79462	0.76268	0.73998	0.70751	0.79158	9.949
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS) [C](1)	0.03877	0.03690	0.03764	0.03840	0.03761	0.03805	0.03764	0.03786	1.615
(2)	0.04647	0.04439	0.04416	0.04357	0.04103	0.03978	0.03825	0.04252	6.844
(3)	0.14135	0.14252	0.14927	0.15059	0.14418	0.14081	0.13812	0.14383	3.173

ARI Labs, Inc.

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Last Edit : 15-Dec-2022 08:33 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 4 Tetrachloro-m-xylene [C]	+++++	1.22086	1.17937	1.16483	1.12798	1.06878	0.99482	1.12611	7.306
$ 28 Decachlorobiphenyl [C]	+++++	1.08714	0.93916	0.85624	0.84996	0.80139	0.77119	0.88418	12.973

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd6.i\20220809.b\22080909.D
Level 2: \\target\share\chem4\ecd6.i\20220809.b\22080910.D
Level 3: \\target\share\chem4\ecd6.i\20220809.b\22080911.D
Level 4: \\target\share\chem4\ecd6.i\20220809.b\22080912.D
Level 5: \\target\share\chem4\ecd6.i\20220809.b\22080913.D
Level 6: \\target\share\chem4\ecd6.i\20220809.b\22080914.D
Level 7: \\target\share\chem4\ecd6.i\20220809.b\22080915.D

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7							
1 Hexachlorobutadiene	+++++	1.64215	1.55667	1.51049	1.47308	1.40536		
	1.30292						1.48178	7.988
5 Hexachlorobenzene	+++++	1.48647	1.40778	1.36481	1.31957	1.25458		
	1.15582						1.33150	8.750
6 alpha-BHC	+++++	1.41183	1.40802	1.42270	1.42790	1.37811		
	1.29587						1.39074	3.567
7 gamma-BHC (Lindane)	+++++	1.20108	1.18733	1.20704	1.21598	1.18532		
	1.11861						1.18589	2.948
8 beta-BHC	+++++	0.65244	0.60612	0.58927	0.57533	0.54649		
	0.50588						0.57925	8.684
9 delta-BHC	+++++	1.15252	1.13315	1.18185	1.21952	1.21492		
	1.16159						1.17726	2.950
10 Heptachlor	+++++	1.18674	1.12881	1.11527	1.09009	1.03076		
	0.94214						1.08230	7.897
11 Aldrin	+++++	1.14505	1.10493	1.10576	1.09698	1.04621		
	0.96536						1.07738	5.877

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
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Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
14 Heptachlor epoxide b	+++++	1.05278	0.99602	0.98316	0.95413	0.89408	0.81733	0.94959	8.751
15 cis-Chlordane	+++++	1.00217	0.95563	0.94931	0.93343	0.89233	0.82943	0.92705	6.424
16 trans-Chlordane	+++++	1.02223	0.96054	0.95840	0.94631	0.90606	0.84267	0.93937	6.420
17 Endosulfan I	+++++	1.10444	1.01004	0.97510	0.92642	0.86761	0.77363	0.94287	12.207
18 4,4'-DDE	+++++	0.85783	0.84618	0.86175	0.85068	0.80349	0.73346	0.82557	6.027
19 Dieldrin	+++++	1.02112	0.97469	0.96064	0.93395	0.87876	0.79720	0.92773	8.553
20 Endrin	+++++	1.03359	0.99258	1.01493	1.03951	0.95184	0.92125	0.99228	4.755
21 4,4'-DDD	+++++	1.26749	1.21690	1.21140	1.19455	1.09258	1.02286	1.16763	7.815
22 Endosulfan II	+++++	1.32213	1.30831	1.28817	1.25191	1.14300	1.05695	1.22841	8.614

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
23 4,4'-DDT	+++++	1.20278	1.19912	1.21231	1.21971	1.13284	1.06544	1.17203	5.186
24 Endrin aldehyde	+++++	1.05042	1.01673	1.00197	0.99460	0.91340	0.84575	0.97048	7.836
25 Methoxychlor	+++++	0.56408	0.54010	0.51985	0.50693	0.45626	0.43428	0.50358	9.854
26 Endosulfan sulfate	+++++	1.14290	1.11216	1.09802	1.09968	1.00734	0.94888	1.06816	6.922
27 Endrin ketone	+++++	1.47959	1.40243	1.34455	1.31335	1.19489	1.12695	1.31029	9.966
29 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
31 Aroclor-1232(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
32 Aroclor-1242(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(6)	*****	*****	*****	*****	*****	*****	*****	*****	*****
33 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
34 Aroclor-1254(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
35 Aroclor-1260(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
36 Aroclor-1262(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
37 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(2)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(3)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(4)	*****	*****	*****	*****	*****	*****	*****	*****	*****
(5)	*****	*****	*****	*****	*****	*****	*****	*****	*****
38 Toxaphene(1)	0.02824	0.03896	0.03693	0.03480	0.03418	0.02891	0.02792	0.03285	13.645
(2)	0.08343	0.10636	0.10204	0.09499	0.09608	0.08394	0.08263	0.09278	10.362
(3)	0.04776	0.06283	0.06069	0.06020	0.06090	0.05141	0.05119	0.05643	10.755
(4)	0.05098	0.07225	0.07089	0.06844	0.06847	0.06296	0.06388	0.06541	11.021
(5)	0.04955	0.06896	0.06748	0.06372	0.06603	0.05846	0.05934	0.06194	10.880

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
39 2,4-DDE	+++++	1.14103	1.08072	1.09005	1.06169	0.88466	0.89319	1.02522	10.614
40 2,4-DDD	+++++	1.08881	1.01841	0.99599	0.98400	0.85150	0.85318	0.96531	9.816
41 2,4-DDT	+++++	0.97799	0.97179	0.97332	0.98841	0.88743	0.88215	0.94685	5.117
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 Oxychlordane	+++++	1.32927	1.24890	1.22496	1.20236	1.04785	1.05015	1.18392	9.540
44 trans-Nonachlor	+++++	1.68629	1.57989	1.58456	1.55669	1.34437	1.36253	1.51906	8.949
45 cis-Nonachlor	+++++	1.62941	1.55213	1.53413	1.52347	1.34758	1.35527	1.49033	7.639
46 Mirex	+++++	1.20478	1.11168	1.05006	1.00932	0.85381	0.85786	1.01459	13.749
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 Chlordane (NOS)(1)	0.06029	0.05735	0.05369	0.05005	0.04581	0.04808	0.04531	0.05151	11.230
(2)	0.15038	0.14213	0.13501	0.13074	0.12020	0.12674	0.12030	0.13221	8.482

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
(3)	0.17221	0.15459	0.13623	0.13893	0.12753	0.13518	0.13160	0.14232	11.024
49 Trifluralin	*****	*****	*****	*****	*****	*****	*****	*****	*****
50 Dacthal	*****	*****	*****	*****	*****	*****	*****	*****	*****
51 Oxadiazon	*****	*****	*****	*****	*****	*****	*****	*****	*****
52 Kelthane	*****	*****	*****	*****	*****	*****	*****	*****	*****
53 Chlorpyrifos	*****	*****	*****	*****	*****	*****	*****	*****	*****
54 Methyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
55 Ethyl Parathion	*****	*****	*****	*****	*****	*****	*****	*****	*****
56 Kepone	*****	*****	*****	*****	*****	*****	*****	*****	*****
57 1-Chloropyrene	*****	*****	*****	*****	*****	*****	*****	*****	*****
$ 4 Tetrachloro-m-xylene	*****	1.10401	1.05839	1.02629	0.99588	0.93352	0.85040	0.99475	9.166

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-AUG-2022 11:03
End Cal Date : 13-DEC-2022 22:43
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Last Edit : 14-Dec-2022 10:32
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	80.000 Level 7	___ RRF	% RSD
$ 28 Decachlorobiphenyl	+++++	0.99444	0.96249	0.90111	0.87014	0.79161	0.75653	0.87939	10.607

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.323	2.323	2.324	2.323	2.324	2.324	2.324	2.324	2.294-2.354	2.323	0.000
* 2 1Bromo-2nitrobenzene	3.151	3.151	3.152	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
* 3 Hexabromobiphenyl	9.504	9.503	9.504	9.505	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.001
$ 4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
5 Hexachlorobenzene	4.182	4.182	4.183	4.183	4.182	4.183	4.182	4.182	4.152-4.212	4.183	0.000
6 alpha-BHC	4.342	4.342	4.343	4.343	4.342	4.342	4.342	4.342	4.312-4.372	4.342	0.000
7 gamma-BHC (Lindane)	4.645	4.645	4.646	4.646	4.645	4.646	4.645	4.645	4.615-4.675	4.645	0.000
8 beta-BHC	4.726	4.726	4.727	4.726	4.726	4.726	4.726	4.726	4.696-4.756	4.726	0.000
9 delta-BHC	4.909	4.909	4.910	4.910	4.909	4.910	4.910	4.909	4.879-4.939	4.910	0.000
10 Heptachlor	5.130	5.129	5.130	5.130	5.130	5.130	5.130	5.130	5.100-5.160	5.130	0.000
11 Aldrin	5.453	5.453	5.455	5.454	5.454	5.454	5.454	5.454	5.424-5.484	5.454	0.000
12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
14 Heptachlor epoxide b	6.130	6.130	6.132	6.131	6.130	6.130	6.130	6.130	6.100-6.160	6.131	0.001
15 cis-Chlordane	6.417	6.417	6.417	6.418	6.417	6.417	6.417	6.417	6.387-6.447	6.417	0.000
16 trans-Chlordane	6.270	6.271	6.271	6.271	6.271	6.271	6.271	6.271	6.241-6.301	6.271	0.000
17 Endosulfan I	6.572	6.572	6.573	6.573	6.572	6.572	6.573	6.572	6.542-6.602	6.573	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	6.489	6.489	6.490	6.490	6.489	6.489	6.490	6.489	6.459-6.519	6.489	0.000
	19 Dieldrin	6.831	6.832	6.832	6.832	6.831	6.832	6.832	6.831	6.801-6.861	6.832	0.000
	20 Endrin	7.081	7.081	7.082	7.082	7.081	7.082	7.082	7.081	7.051-7.111	7.082	0.000
	21 4,4'-DDD	7.135	7.136	7.136	7.136	7.135	7.136	7.135	7.135	7.105-7.165	7.136	0.000
	22 Endosulfan II	7.318	7.317	7.318	7.318	7.317	7.317	7.317	7.317	7.287-7.347	7.317	0.000
	23 4,4'-DDT	7.427	7.427	7.428	7.428	7.427	7.427	7.428	7.427	7.397-7.457	7.428	0.000
	24 Endrin aldehyde	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.746	7.716-7.776	7.746	0.000
	25 Methoxychlor	7.912	7.912	7.913	7.912	7.912	7.912	7.912	7.912	7.882-7.942	7.912	0.000
	26 Endosulfan sulfate	8.180	8.179	8.180	8.180	8.180	8.179	8.180	8.180	8.150-8.210	8.180	0.000
	27 Endrin ketone	8.453	8.452	8.454	8.453	8.453	8.453	8.454	8.453	8.423-8.483	8.453	0.001
$	28 Decachlorobiphenyl	9.355	9.354	9.355	9.355	9.355	9.355	9.356	9.355	9.325-9.385	9.355	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121405	22121406	22121407	22121408	22121409	22121410	22121411
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022
INJ.TIME:	20:38	20:56	21:14	21:31	21:49	22:07	22:25

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C	2.500	2.500	2.500	2.500	2.500	2.500	2.501	2.501	2.471-2.531	2.500	0.000
* 2 1Bromo-2nitrobenzene [	3.350	3.350	3.351	3.351	3.350	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.054	11.053	11.054	11.054	11.053	11.053	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.220	4.220	4.220	4.220	4.220	4.221	4.220	4.220	4.190-4.250	4.220	0.000
5 Hexachlorobenzene [C]	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.718	4.688-4.748	4.718	0.000
6 alpha-BHC [C]	4.860	4.859	4.860	4.860	4.860	4.860	4.861	4.861	4.831-4.891	4.860	0.000
7 gamma-BHC (Lindane) [C	5.257	5.257	5.258	5.258	5.258	5.258	5.258	5.258	5.228-5.288	5.258	0.000
8 beta-BHC [C]	5.337	5.337	5.338	5.337	5.337	5.337	5.337	5.337	5.307-5.367	5.337	0.000
9 delta-BHC [C]	5.690	5.691	5.691	5.691	5.690	5.691	5.691	5.691	5.661-5.721	5.691	0.000
10 Heptachlor [C]	5.786	5.787	5.787	5.787	5.787	5.787	5.787	5.787	5.757-5.817	5.787	0.000
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	6.190	6.190	6.191	6.191	6.191	6.190	6.191	6.191	6.161-6.221	6.191	0.000
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	6.845	6.845	6.845	6.846	6.845	6.846	6.845	6.845	6.815-6.875	6.845	0.000
15 cis-Chlordane [C]	7.215	7.215	7.216	7.216	7.216	7.215	7.216	7.216	7.186-7.246	7.215	0.000
16 trans-Chlordane [C]	7.056	7.055	7.056	7.056	7.056	7.056	7.056	7.056	7.026-7.086	7.056	0.000
17 Endosulfan I [C]	7.288	7.288	7.289	7.289	7.289	7.288	7.289	7.289	7.259-7.319	7.288	0.000

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	7.370	7.370	7.371	7.371	7.370	7.371	7.371	7.371	7.341-7.401	7.371	0.000
	19 Dieldrin [C]	7.582	7.582	7.583	7.583	7.582	7.582	7.583	7.583	7.553-7.613	7.582	0.000
	20 Endrin [C]	7.906	7.906	7.906	7.907	7.907	7.907	7.907	7.907	7.877-7.937	7.907	0.000
	21 4,4'-DDD [C]	7.976	7.976	7.976	7.977	7.976	7.976	7.976	7.976	7.946-8.006	7.976	0.000
	22 Endosulfan II [C]	8.117	8.116	8.117	8.117	8.117	8.117	8.117	8.117	8.087-8.147	8.117	0.000
	23 4,4'-DDT [C]	8.294	8.294	8.294	8.295	8.295	8.295	8.295	8.295	8.265-8.325	8.295	0.000
	24 Endrin aldehyde [C]	8.448	8.447	8.448	8.448	8.448	8.448	8.448	8.448	8.418-8.478	8.448	0.000
	25 Endosulfan sulfate [C]	8.715	8.714	8.715	8.715	8.715	8.715	8.715	8.715	8.685-8.745	8.715	0.000
	26 Methoxychlor [C]	8.935	8.934	8.935	8.936	8.935	8.935	8.936	8.936	8.906-8.966	8.935	0.001
	27 Endrin ketone [C]	9.239	9.239	9.239	9.240	9.239	9.239	9.240	9.240	9.210-9.270	9.239	0.000
$	28 Decachlorobiphenyl [C]	10.466	10.465	10.466	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.001
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.504	9.504	9.504	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	3.800	3.800	3.800	3.828	3.798-3.858	3.800	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.355	9.325-9.385	+++++	+++++
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.106	6.076-6.136	6.106	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.681	6.681	6.681	6.681	6.681	6.681	6.680	6.681	6.651-6.711	6.681	0.000
41 2,4-DDT	6.956	6.957	6.956	6.956	6.957	6.956	6.956	6.957	6.927-6.987	6.956	0.000
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	6.014	6.015	6.014	6.015	6.014	6.014	6.014	6.014	5.984-6.044	6.015	0.000
44 trans-Nonachlor	6.397	6.398	6.398	6.398	6.397	6.397	6.397	6.397	6.367-6.427	6.398	0.000
45 cis-Nonachlor	7.112	7.112	7.111	7.112	7.112	7.112	7.112	7.112	7.082-7.142	7.112	0.000
46 Mirex	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.082	8.052-8.112	8.082	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121412	22121413	22121414	22121415	22121416	22121417	22121418
INJ.DATE:	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	14-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	22:43	23:01	23:19	23:36	23:54	00:12	00:30

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	+++++	+++++
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	10.471	10.467	10.437-10.497	10.471	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
	39 2,4-DDE [C]	7.036	7.036	7.035	7.036	7.036	7.036	7.036	7.036	7.006-7.066	7.036	0.000

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	7.591	7.590	7.590	7.591	7.590	7.591	7.591	7.591	7.561-7.621	7.591	0.000
41 2,4-DDT [C]	7.913	7.914	7.913	7.913	7.913	7.914	7.913	7.913	7.883-7.943	7.913	0.000
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.741	6.711-6.771	6.741	0.000
44 trans-Nonachlor [C]	7.154	7.154	7.154	7.155	7.154	7.155	7.155	7.155	7.125-7.185	7.154	0.000
45 cis-Nonachlor [C]	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.975	7.945-8.005	7.975	0.000
46 Mirex [C]	9.223	9.223	9.222	9.223	9.222	9.223	9.223	9.223	9.193-9.253	9.223	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.504	9.504	9.505	9.504	9.504	9.504	9.505	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.828	3.798-3.858	+++++	+++++
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	9.380	9.355	9.325-9.385	9.380	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.931	6.901-6.961	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	5.593	5.593	5.593	5.593	5.593	5.592	5.593	5.593	5.563-5.623	5.593	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121421	22121422	22121423	22121424	22121425	22121426	22121427
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	01:24	01:42	01:59	02:17	02:35	02:53	03:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
*	2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
*	3 Hexabromobiphenyl[C]	11.054	11.055	11.054	11.054	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$	4 Tetrachloro-m-xylene [	4.215	+++++	+++++	+++++	+++++	+++++	+++++	4.220	4.190-4.250	4.215	0.000
	5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
	6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
	7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
	8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
	9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
	10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
	11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
	12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
	14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
	15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
	16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
	17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$ 28 Decachlorobiphenyl [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.467	10.437-10.497	+++++	+++++
29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
38 Toxaphene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.126	7.096-7.156	+++++	+++++
39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	5.612	5.612	5.612	5.611	5.612	5.612	5.612	5.612	5.582-5.642	5.612	0.000
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.324	2.294-2.354	+++++	+++++
*	2 1Bromo-2nitrobenzene	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.151	3.121-3.181	3.151	0.000
*	3 Hexabromobiphenyl	9.505	9.504	9.504	9.504	9.505	9.504	9.504	9.505	9.475-9.535	9.504	0.000
$	4 Tetrachloro-m-xylene	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.828	3.798-3.858	3.828	0.000
	5 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.182	4.152-4.212	+++++	+++++
	6 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.342	4.312-4.372	+++++	+++++
	7 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.645	4.615-4.675	+++++	+++++
	8 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.726	4.696-4.756	+++++	+++++
	9 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.909	4.879-4.939	+++++	+++++
	10 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.130	5.100-5.160	+++++	+++++
	11 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.454	5.424-5.484	+++++	+++++
	12 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.597-13.657	+++++	+++++
	13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.839-10.899	+++++	+++++
	14 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.130	6.100-6.160	+++++	+++++
	15 cis-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.417	6.387-6.447	+++++	+++++
	16 trans-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.271	6.241-6.301	+++++	+++++
	17 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.572	6.542-6.602	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.489	6.459-6.519	+++++	+++++
	19 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.831	6.801-6.861	+++++	+++++
	20 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.081	7.051-7.111	+++++	+++++
	21 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.135	7.105-7.165	+++++	+++++
	22 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.317	7.287-7.347	+++++	+++++
	23 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.427	7.397-7.457	+++++	+++++
	24 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.746	7.716-7.776	+++++	+++++
	25 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.912	7.882-7.942	+++++	+++++
	26 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.180	8.150-8.210	+++++	+++++
	27 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.453	8.423-8.483	+++++	+++++
$	28 Decachlorobiphenyl	9.355	9.355	9.355	9.355	9.356	9.356	9.355	9.355	9.325-9.385	9.356	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.851-4.911	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.329-5.389	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.735-3.795	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.388-4.448	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.227-5.287	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	6.015-6.075	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.271-8.331	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.229-11.289	+++++	+++++
	38 Toxaphene	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.931	6.901-6.961	6.931	0.000
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.106	6.076-6.136	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.681	6.651-6.711	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.957	6.927-6.987	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.774	1.744-1.804	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.014	5.984-6.044	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.397	6.367-6.427	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.112	7.082-7.142	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.082	8.052-8.112	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.126-20.186	+++++	+++++
48 Chlordane (NOS)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.593	5.563-5.623	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.289-6.349	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.906-9.966	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.861-11.921	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.797-14.857	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.720-9.780	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.077-9.137	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.221-10.281	+++++	+++++
56 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.588	6.558-6.618	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.923-6.983	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	22121428	22121429	22121430	22121431	22121432	22121433	22121434
INJ.DATE:	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022	15-DEC-2022
INJ.TIME:	03:29	03:46	04:04	04:22	04:40	04:58	05:16

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.501	2.471-2.531	+++++	+++++
* 2 1Bromo-2nitrobenzene [	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.351	3.321-3.381	3.351	0.000
* 3 Hexabromobiphenyl[C]	11.055	11.054	11.054	11.055	11.054	11.054	11.054	11.054	11.024-11.084	11.054	0.000
$ 4 Tetrachloro-m-xylene [	4.221	4.220	4.220	4.221	4.221	4.221	4.221	4.220	4.190-4.250	4.221	0.000
5 Hexachlorobenzene [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.718	4.688-4.748	+++++	+++++
6 alpha-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.861	4.831-4.891	+++++	+++++
7 gamma-BHC (Lindane) [C	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.258	5.228-5.288	+++++	+++++
8 beta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.337	5.307-5.367	+++++	+++++
9 delta-BHC [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.691	5.661-5.721	+++++	+++++
10 Heptachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.757-5.817	+++++	+++++
11 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.558-14.618	+++++	+++++
12 Aldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.191	6.161-6.221	+++++	+++++
13 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.650-12.710	+++++	+++++
14 Heptachlor epoxide b [	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.845	6.815-6.875	+++++	+++++
15 cis-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.216	7.186-7.246	+++++	+++++
16 trans-Chlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.056	7.026-7.086	+++++	+++++
17 Endosulfan I [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.289	7.259-7.319	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 4,4'-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.371	7.341-7.401	+++++	+++++
	19 Dieldrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.583	7.553-7.613	+++++	+++++
	20 Endrin [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.907	7.877-7.937	+++++	+++++
	21 4,4'-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.976	7.946-8.006	+++++	+++++
	22 Endosulfan II [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.117	8.087-8.147	+++++	+++++
	23 4,4'-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.295	8.265-8.325	+++++	+++++
	24 Endrin aldehyde [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.448	8.418-8.478	+++++	+++++
	25 Endosulfan sulfate [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.715	8.685-8.745	+++++	+++++
	26 Methoxychlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.936	8.906-8.966	+++++	+++++
	27 Endrin ketone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.240	9.210-9.270	+++++	+++++
$	28 Decachlorobiphenyl [C]	10.467	10.467	10.467	10.466	10.466	10.466	10.467	10.467	10.437-10.497	10.466	0.000
	29 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.150-4.210	+++++	+++++
	30 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.021-5.081	+++++	+++++
	31 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.141-5.201	+++++	+++++
	32 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.940-5.000	+++++	+++++
	33 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.255-5.315	+++++	+++++
	34 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.938-5.998	+++++	+++++
	35 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.737-6.797	+++++	+++++
	36 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.684-9.744	+++++	+++++
	37 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.761-11.821	+++++	+++++
	38 Toxaphene [C]	7.125	7.125	7.125	7.125	7.126	7.126	7.126	7.126	7.096-7.156	7.125	0.000
	39 2,4-DDE [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.036	7.006-7.066	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd6.i\20221214.b\PEST.m\PESTB.m
Batch File: \\target\share\chem4\ecd6.i\20221214.b\B20221214.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.591	7.561-7.621	+++++	+++++
41 2,4-DDT [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.883-7.943	+++++	+++++
42 Hexachloroethane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.676	1.646-1.706	+++++	+++++
43 Oxychlordane [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.741	6.711-6.771	+++++	+++++
44 trans-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.155	7.125-7.185	+++++	+++++
45 cis-Nonachlor [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.975	7.945-8.005	+++++	+++++
46 Mirex [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.193-9.253	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.469-21.529	+++++	+++++
48 Chlordane (NOS) [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.612	5.582-5.642	+++++	+++++
49 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.841-4.901	+++++	+++++
50 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.610-6.670	+++++	+++++
51 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.085-8.145	+++++	+++++
52 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.256-11.316	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.497-6.557	+++++	+++++
54 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.312-6.372	+++++	+++++
55 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.811-6.871	+++++	+++++
56 Kepone [C]	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.306-7.366	+++++	+++++
57 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.715-7.775	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	alpha-BHC
----			----			0.00	0.00	---	beta-BHC
----			----			0.00	0.00	---	delta-BHC
----			----			0.00	0.00	---	gamma-BHC (Lindane)
----			----			0.00	0.00	---	Heptachlor
----			----			0.00	0.00	---	Aldrin
----			6.824	-0.021	2291	0.00	0.14	---	Heptachlor epoxide b
----			----			0.00	0.00	---	Endosulfan I
----			7.597	0.015	1696	0.00	0.11	---	Dieldrin
----			----			0.00	0.00	---	4,4'-DDE
----			----			0.00	0.00	---	Endrin
----			8.135	0.018	285	0.00	0.02	---	Endosulfan II
----			7.975	-0.002	1369	0.00	0.12	---	4,4'-DDD
----			8.720	0.005	243	0.00	0.02	---	Endosulfan sulfate
----			----			0.00	0.00	---	4,4'-DDT
----			8.924	-0.013	546	0.00	0.11	---	Methoxychlor
8.444	-0.009	1962	9.226	-0.013	2888	0.23	0.25	10.1	Endrin ketone
----			----			0.00	0.00	---	Endrin aldehyde
----			7.070	0.014	4708	0.00	0.30	---	trans-Chlordane
----			7.219	0.003	810	0.00	0.05	---	cis-Chlordane
2.351	0.028	6378	2.512	0.012	33421	0.42	1.60	116.6*	Hexachlorobutadiene
4.183	0.001	4869	4.721	0.003	421	0.36	0.02	178.1*	Hexachlorobenzene
3.828	0.000	375293	4.220	-0.000	579767	36.70	37.46	2.1	Tetrachloro-m-xylene
9.356	0.001	243291	10.467	0.000	323668	35.86	35.40	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

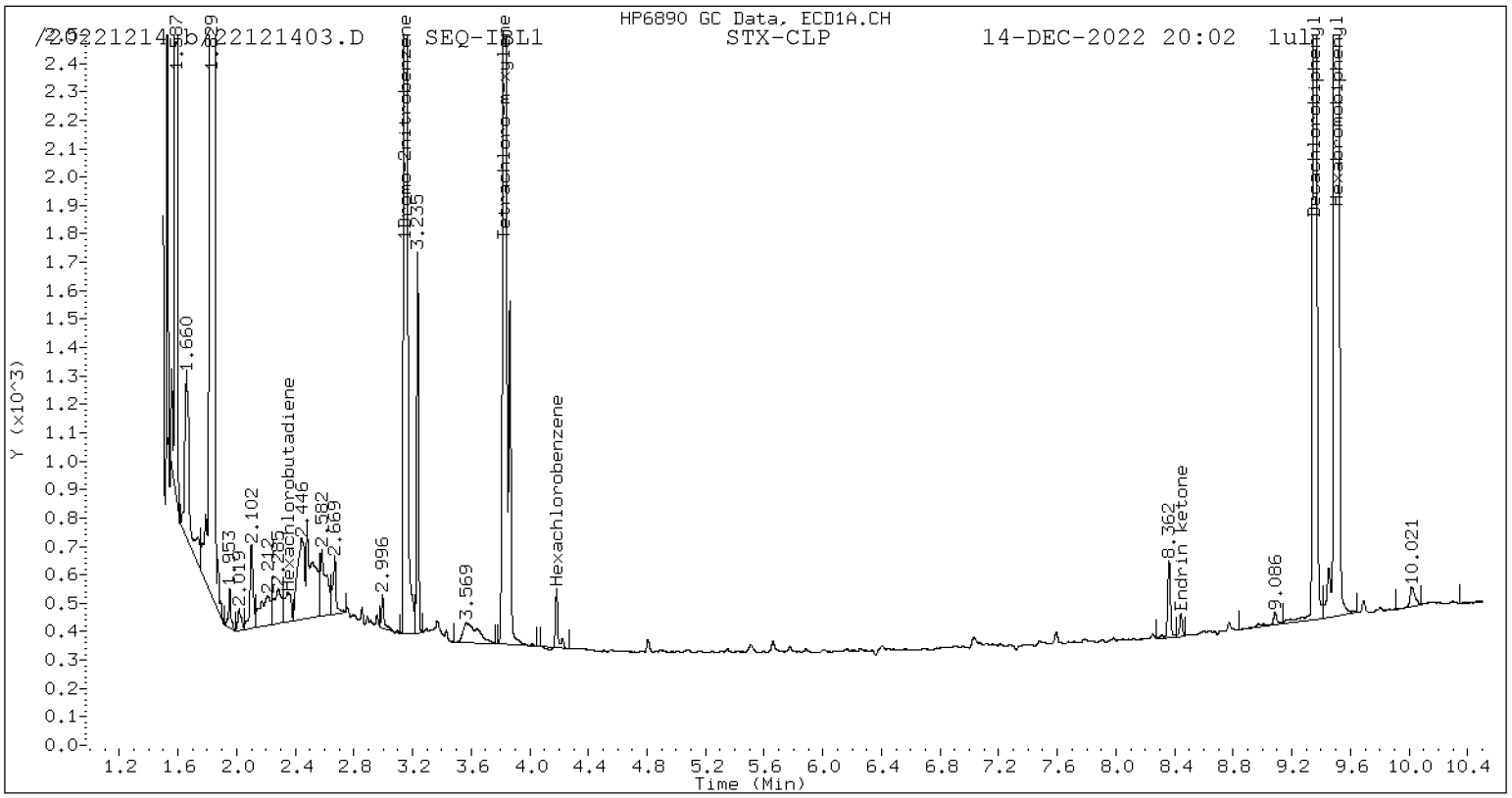
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	751998	5.8
Hexabromobiphenyl	641833	669495	4.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1099555	3.8
Hexabromobiphenyl	797125	827325	3.8

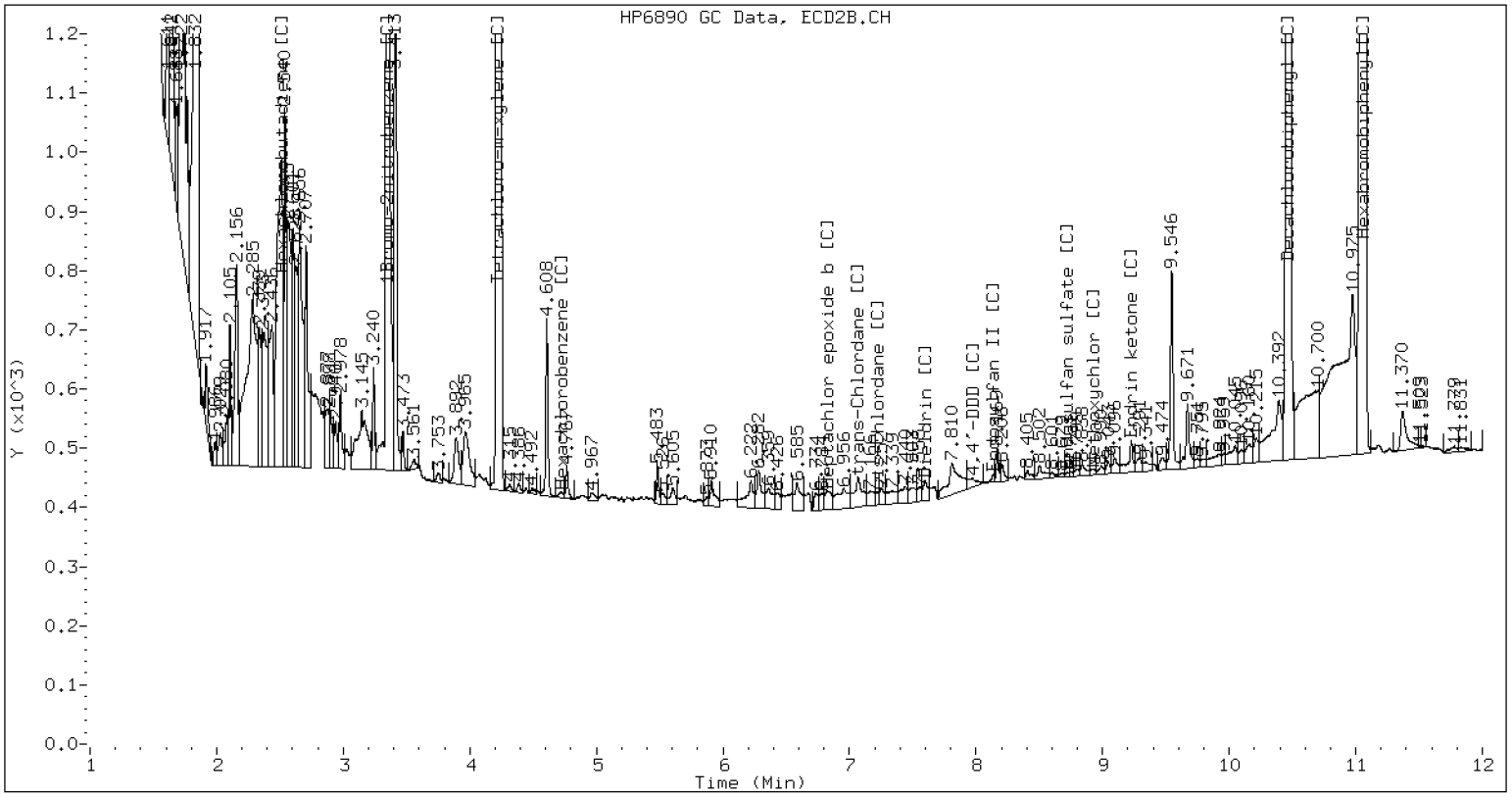
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121403.D SEQ-IBL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121403.D
Data file 2: /20221214.b/B20221214.b/22121403.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-IBL1
Client ID:
Injection Date: 14-DEC-2022 20:02
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

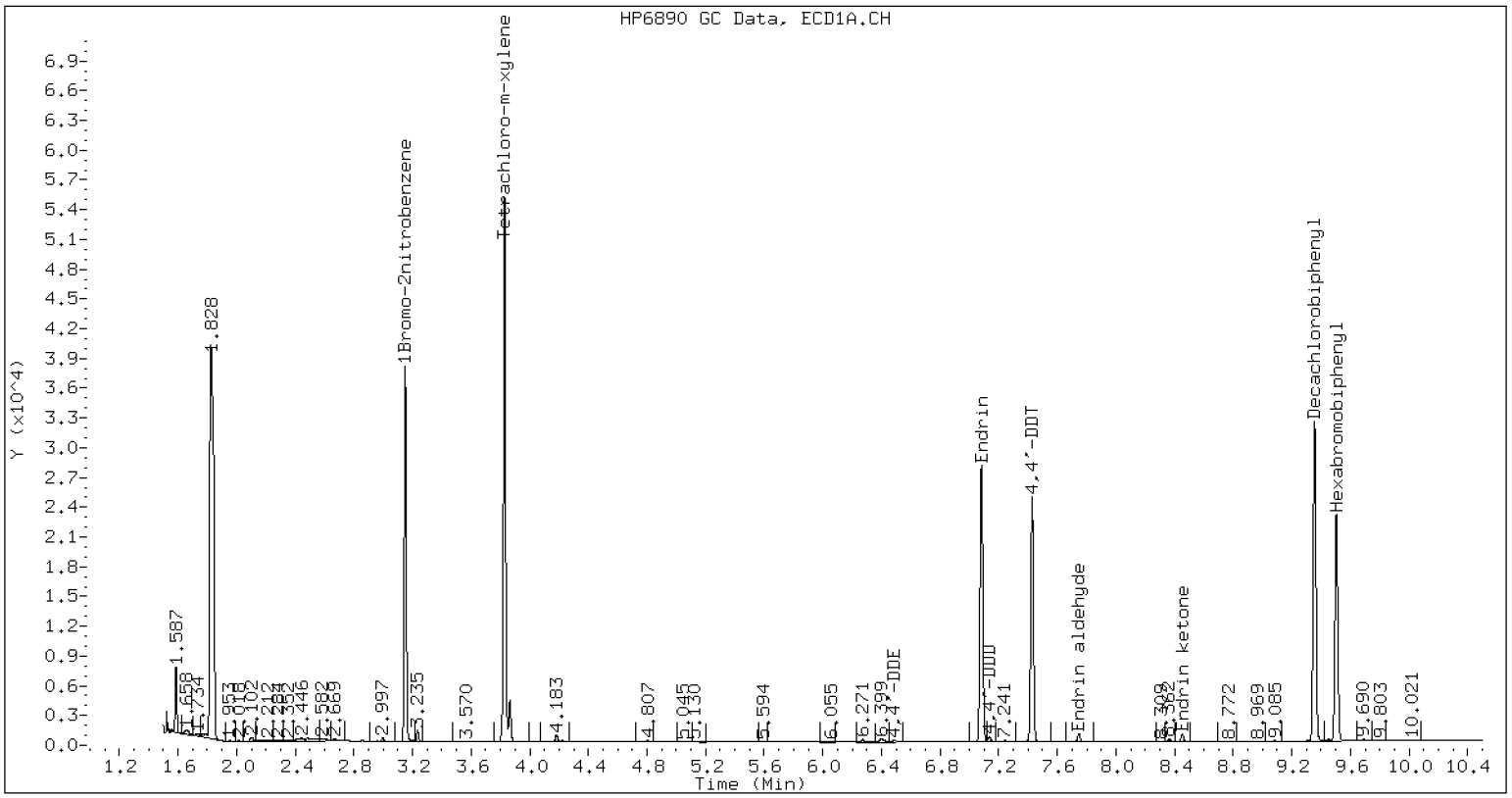
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

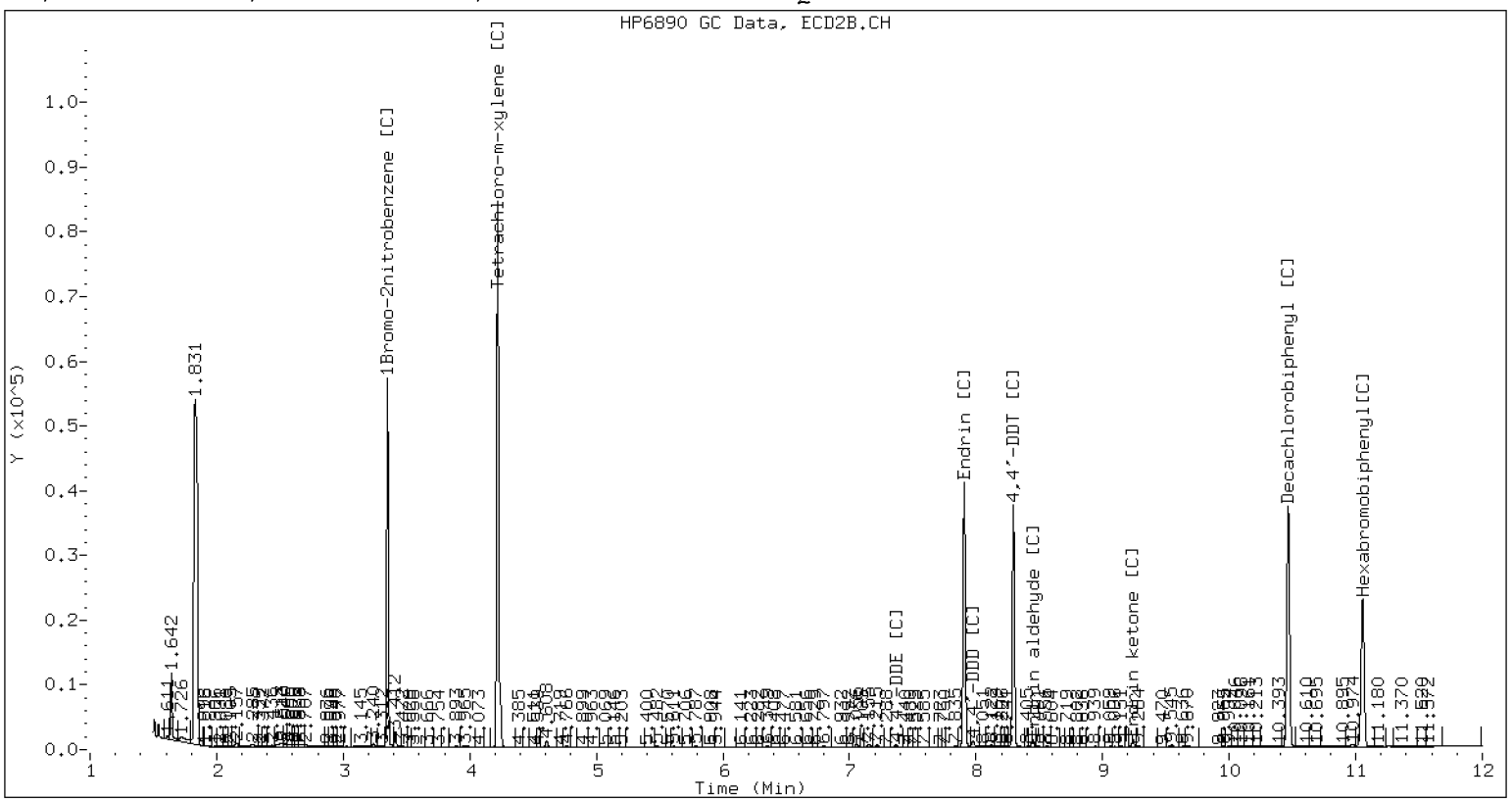
DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



/20221214.b/B20221214.b/22121404.D SEQ-PEM1 CLP2 14-DEC-2022



7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	17720	4.860	-0.001	25579	1.30	1.22	6.4	alpha-BHC
4.726	-0.000	7513	5.337	-0.000	10927	1.43	1.37	4.4	beta-BHC
4.909	-0.000	14050	5.690	-0.000	21188	1.26	1.23	2.8	delta-BHC
4.645	-0.000	15329	5.257	-0.001	21981	1.30	1.24	4.9	gamma-BHC (Lindane)
5.130	-0.000	14540	5.786	-0.000	20395	1.38	1.27	8.9	Heptachlor
5.453	-0.001	15026	6.190	-0.001	24413	1.28	1.33	3.9	Aldrin
6.130	0.000	13937	6.845	-0.000	21959	1.37	1.44	5.6	Heptachlor epoxide b
6.572	-0.000	13220	7.288	-0.000	19257	1.41	1.44	1.8	Endosulfan I
6.831	0.000	27285	7.582	-0.001	43580	2.71	2.94	8.2	Dieldrin
6.489	0.000	25951	7.370	-0.001	37722	2.78	2.78	0.0	4,4'-DDE
7.081	0.000	24429	7.906	-0.001	31381	2.94	2.78	5.3	Endrin
7.318	0.001	19827	8.117	-0.000	30675	2.65	2.66	0.3	Endosulfan II
7.135	0.000	20434	7.976	-0.000	28995	2.73	2.65	3.0	4,4'-DDD
8.180	-0.000	19661	8.715	-0.000	26689	2.76	2.63	4.9	Endosulfan sulfate
7.427	0.000	20071	8.294	-0.001	26950	2.65	2.55	3.9	4,4'-DDT
7.912	-0.000	52385	8.935	-0.001	65896	15.60	14.07	10.3	Methoxychlor
8.453	-0.001	24276	9.239	-0.000	30129	2.98	2.75	8.0	Endrin ketone
7.746	-0.000	17209	8.448	-0.000	21218	2.88	2.60	10.1	Endrin aldehyde
6.270	-0.001	14829	7.056	-0.000	22517	1.43	1.48	3.7	trans-Chlordane
6.417	0.000	15767	7.215	-0.000	22150	1.52	1.49	1.6	cis-Chlordane
2.323	-0.001	27320	2.500	-0.001	42655	1.92	2.14	11.3	Hexachlorobutadiene
4.182	0.000	18555	4.718	-0.000	27377	1.47	1.44	2.2	Hexachlorobenzene
3.828	-0.000	28792	4.220	-0.001	41270	2.99	2.80	6.5	Tetrachloro-m-xylene
9.355	-0.000	21954	10.466	-0.000	30646	3.41	3.50	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

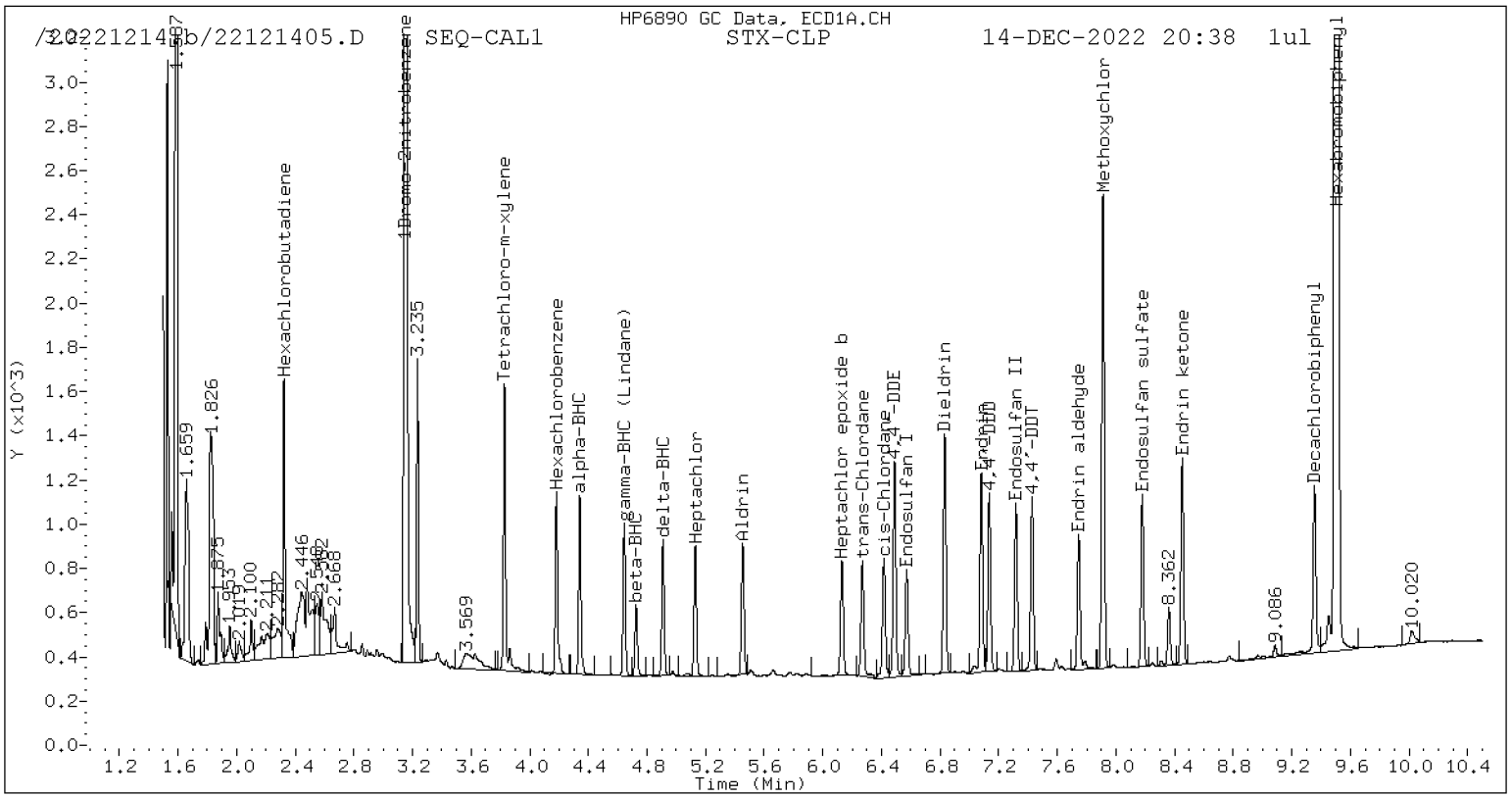
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	707324	-0.5
Hexabromobiphenyl	641833	634819	-1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1045524	-1.3
Hexabromobiphenyl	797125	792558	-0.6

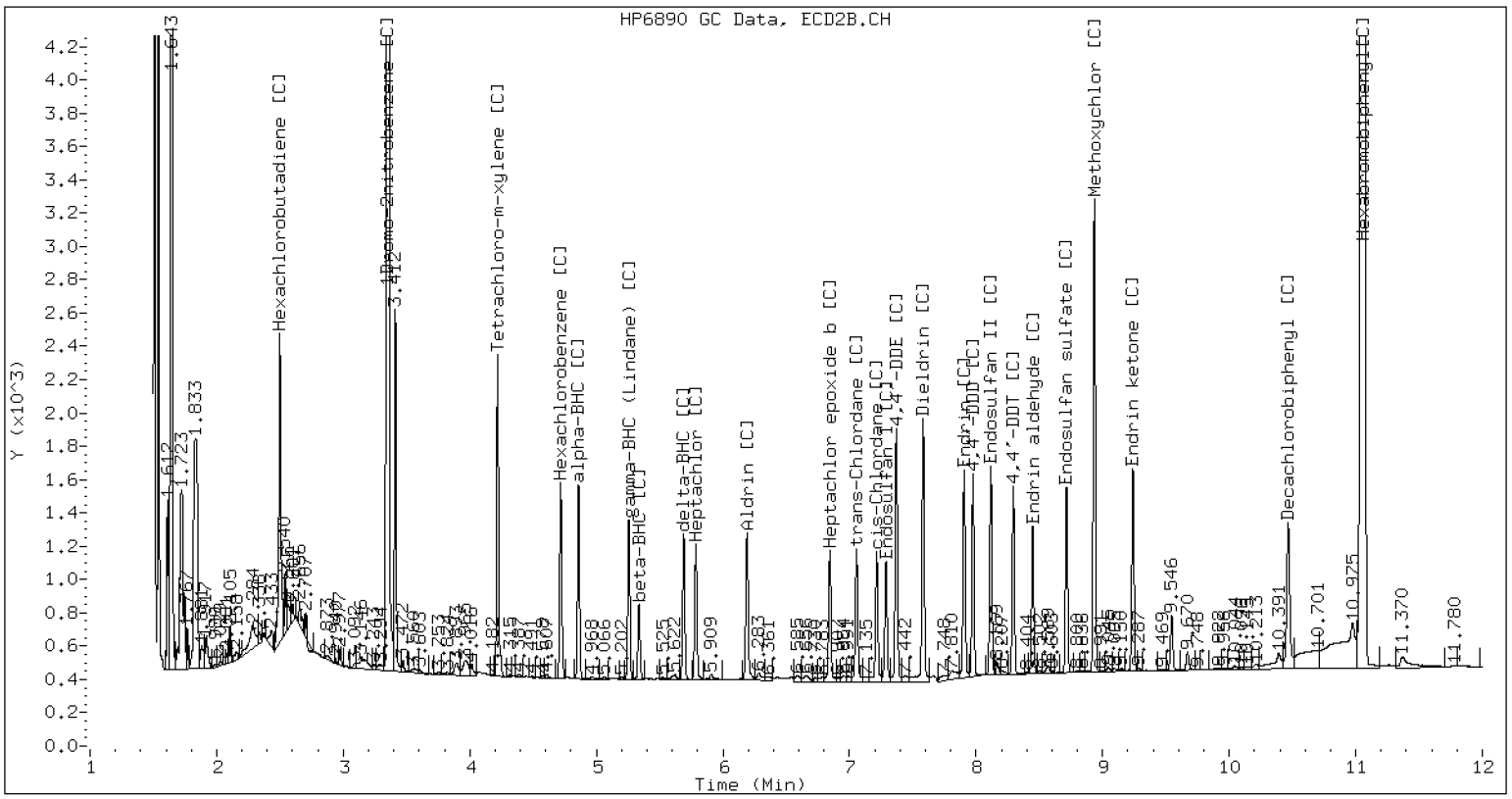
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121405.D SEQ-CAL1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121405.D
Data file 2: /20221214.b/B20221214.b/22121405.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1
Client ID:
Injection Date: 14-DEC-2022 20:38
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	-0.000	35088	4.859	-0.001	52514	2.54	2.47	2.9	alpha-BHC
4.726	-0.000	14580	5.337	-0.000	21664	2.74	2.68	2.4	beta-BHC
4.909	-0.000	28429	5.691	-0.000	43932	2.52	2.51	0.5	delta-BHC
4.645	0.000	30588	5.257	-0.001	44971	2.55	2.49	2.5	gamma-BHC (Lindane)
5.129	-0.001	28458	5.787	-0.000	42156	2.67	2.58	3.6	Heptachlor
5.453	-0.001	30273	6.190	-0.001	50159	2.53	2.69	5.8	Aldrin
6.130	-0.001	27608	6.845	-0.001	43067	2.67	2.79	4.5	Heptachlor epoxide b
6.572	-0.000	25650	7.288	-0.001	37112	2.70	2.73	1.0	Endosulfan I
6.832	0.000	54960	7.582	-0.001	84296	5.38	5.60	4.0	Dieldrin
6.489	-0.000	51182	7.370	-0.001	74355	5.40	5.39	0.2	4,4'-DDE
7.081	0.000	46577	7.906	-0.001	63434	5.52	5.52	0.1	Endrin
7.317	0.001	37804	8.116	-0.001	65448	4.98	5.56	11.1	Endosulfan II
7.136	0.001	40399	7.976	-0.001	62302	5.32	5.58	4.8	4,4'-DDD
8.179	-0.001	38342	8.714	-0.001	57421	5.32	5.56	4.4	Endosulfan sulfate
7.427	-0.000	40499	8.294	-0.001	59346	5.27	5.51	4.3	4,4'-DDT
7.912	-0.000	98271	8.934	-0.002	130815	28.88	27.42	5.2	Methoxychlor
8.452	-0.001	45639	9.239	-0.001	62360	5.53	5.59	1.1	Endrin ketone
7.746	0.000	32847	8.447	-0.001	47592	5.42	5.73	5.6	Endrin aldehyde
6.271	0.000	28307	7.055	-0.001	41633	2.69	2.70	0.4	trans-Chlordane
6.417	0.000	29336	7.215	-0.000	41766	2.78	2.77	0.3	cis-Chlordane
2.323	-0.001	44113	2.500	-0.001	65565	3.05	3.24	6.2	Hexachlorobutadiene
4.182	-0.000	35520	4.718	-0.000	53173	2.77	2.75	0.9	Hexachlorobenzene
3.828	-0.000	54873	4.220	-0.001	81034	5.62	5.42	3.7	Tetrachloro-m-xylene
9.354	-0.001	38477	10.465	-0.001	54866	5.90	6.15	4.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

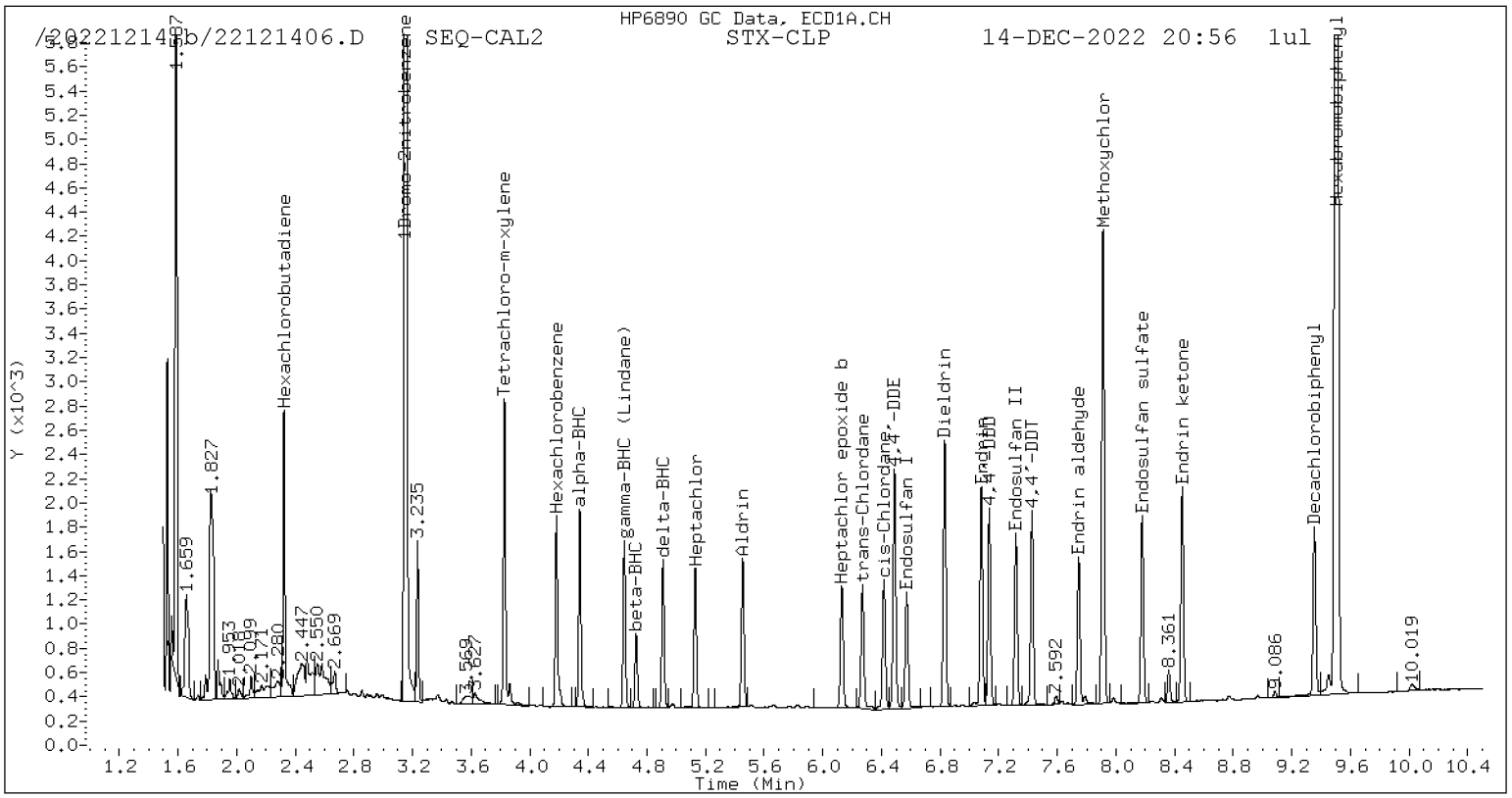
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	717600	1.0
Hexabromobiphenyl	641833	643445	0.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1061990	0.3
Hexabromobiphenyl	797125	807490	1.3

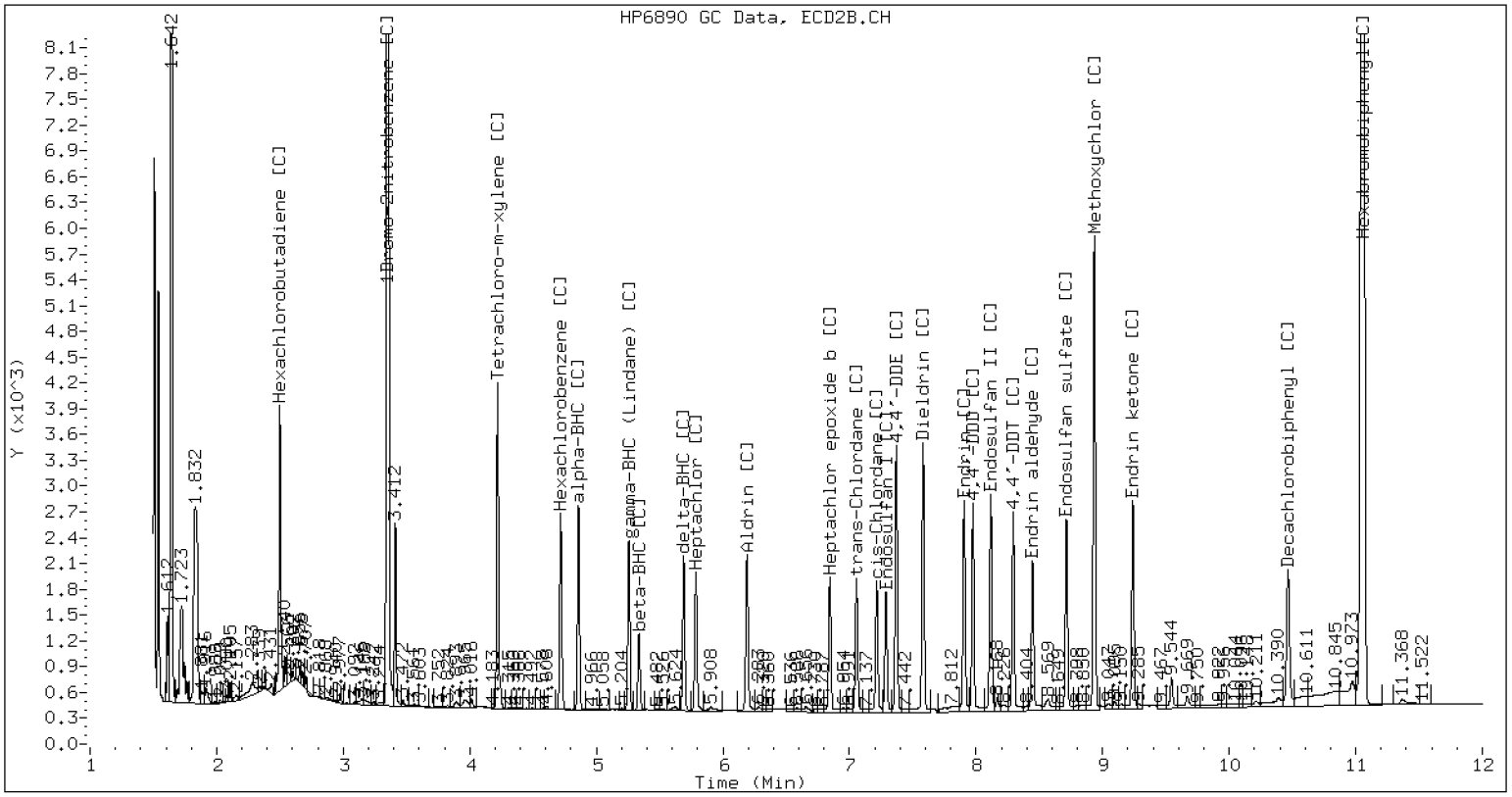
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121406.D SEQ-CAL2 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121406.D
Data file 2: /20221214.b/B20221214.b/22121406.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2
Client ID:
Injection Date: 14-DEC-2022 20:56
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.001	68202	4.860	-0.000	103195	5.06	4.95	2.2	alpha-BHC
4.727	0.000	26774	5.338	0.000	40159	5.16	5.06	1.8	beta-BHC
4.910	0.001	55344	5.691	0.000	85044	5.02	4.95	1.5	delta-BHC
4.646	0.001	59491	5.258	0.000	87747	5.09	4.96	2.6	gamma-BHC (Lindane)
5.130	0.000	53529	5.787	0.000	80295	5.15	5.01	2.7	Heptachlor
5.455	0.001	59061	6.191	0.000	92167	5.07	5.03	0.7	Aldrin
6.132	0.001	52071	6.845	-0.000	76415	5.15	5.05	2.1	Heptachlor epoxide b
6.573	0.001	48052	7.289	-0.000	67929	5.18	5.09	1.8	Endosulfan I
6.832	0.001	104217	7.583	-0.000	151301	10.46	10.26	1.9	Dieldrin
6.490	0.001	97042	7.371	0.000	139172	10.49	10.29	1.9	4,4'-DDE
7.082	0.001	87185	7.906	-0.001	115830	10.66	10.37	2.8	Endrin
7.318	0.001	77341	8.117	0.000	118175	10.50	10.32	1.8	Endosulfan II
7.136	0.001	77451	7.976	0.000	110178	10.51	10.14	3.6	4,4'-DDD
8.180	0.001	73440	8.715	0.000	102417	10.50	10.18	3.1	Endosulfan sulfate
7.428	0.001	77522	8.294	-0.001	105882	10.41	10.09	3.1	4,4'-DDT
7.913	0.001	178164	8.935	-0.001	239047	53.98	51.49	4.7	Methoxychlor
8.454	0.000	84510	9.239	-0.000	110024	10.55	10.13	4.1	Endrin ketone
7.746	0.001	61122	8.448	-0.000	82817	10.40	10.25	1.5	Endrin aldehyde
6.271	0.001	52622	7.056	-0.000	76513	5.13	5.07	1.1	trans-Chlordane
6.417	0.001	53515	7.216	0.000	75023	5.20	5.08	2.3	cis-Chlordane
2.324	-0.000	75632	2.500	-0.000	107268	5.35	5.41	1.1	Hexachlorobutadiene
4.183	0.001	66090	4.718	-0.000	98926	5.28	5.21	1.3	Hexachlorobenzene
3.828	0.000	101081	4.220	-0.000	153451	10.61	10.47	1.3	Tetrachloro-m-xylene
9.355	-0.000	67797	10.466	-0.000	92260	10.72	10.62	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

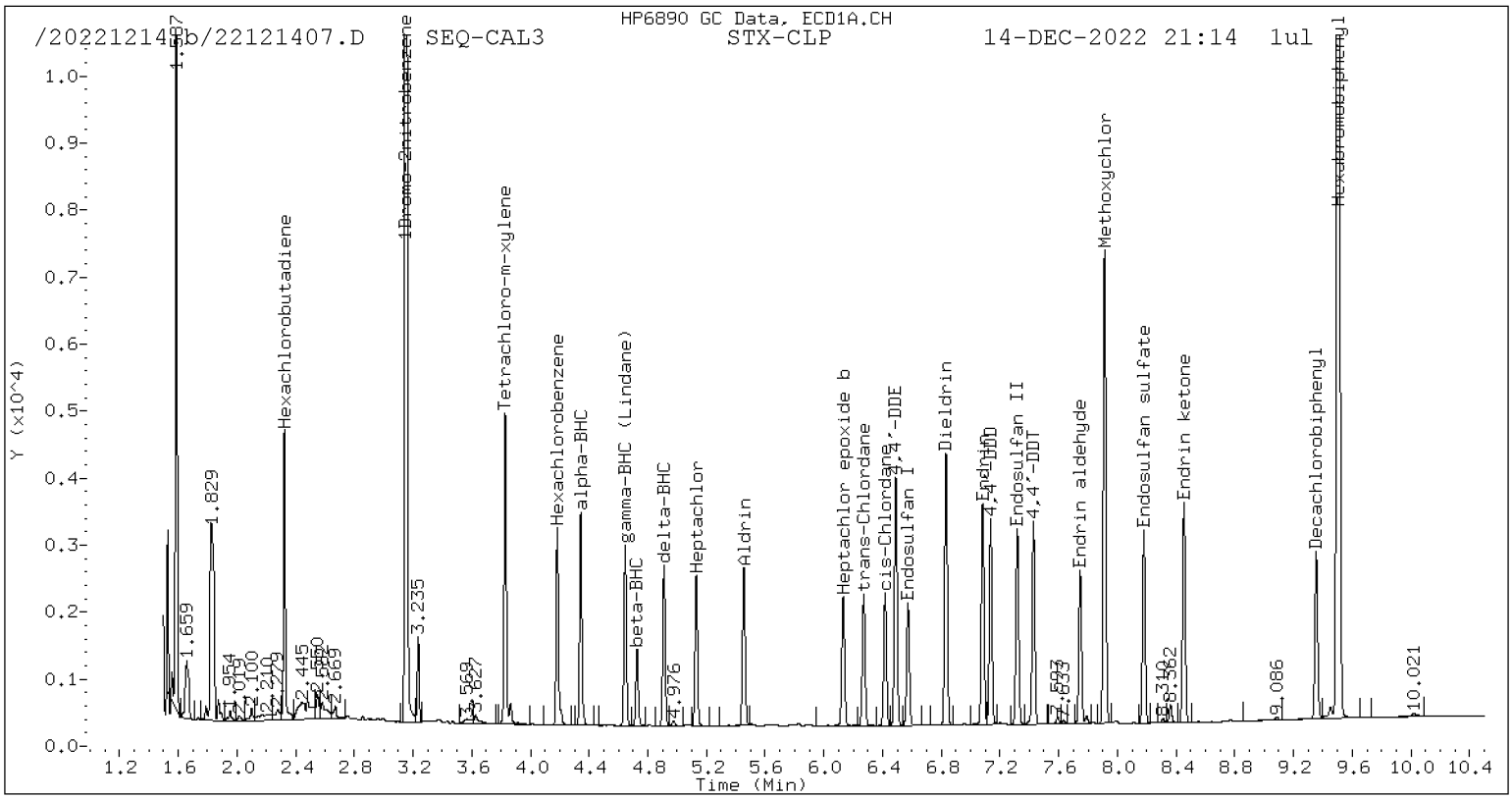
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	700354	-1.4
Hexabromobiphenyl	641833	624108	-2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1040903	-1.7
Hexabromobiphenyl	797125	785894	-1.4

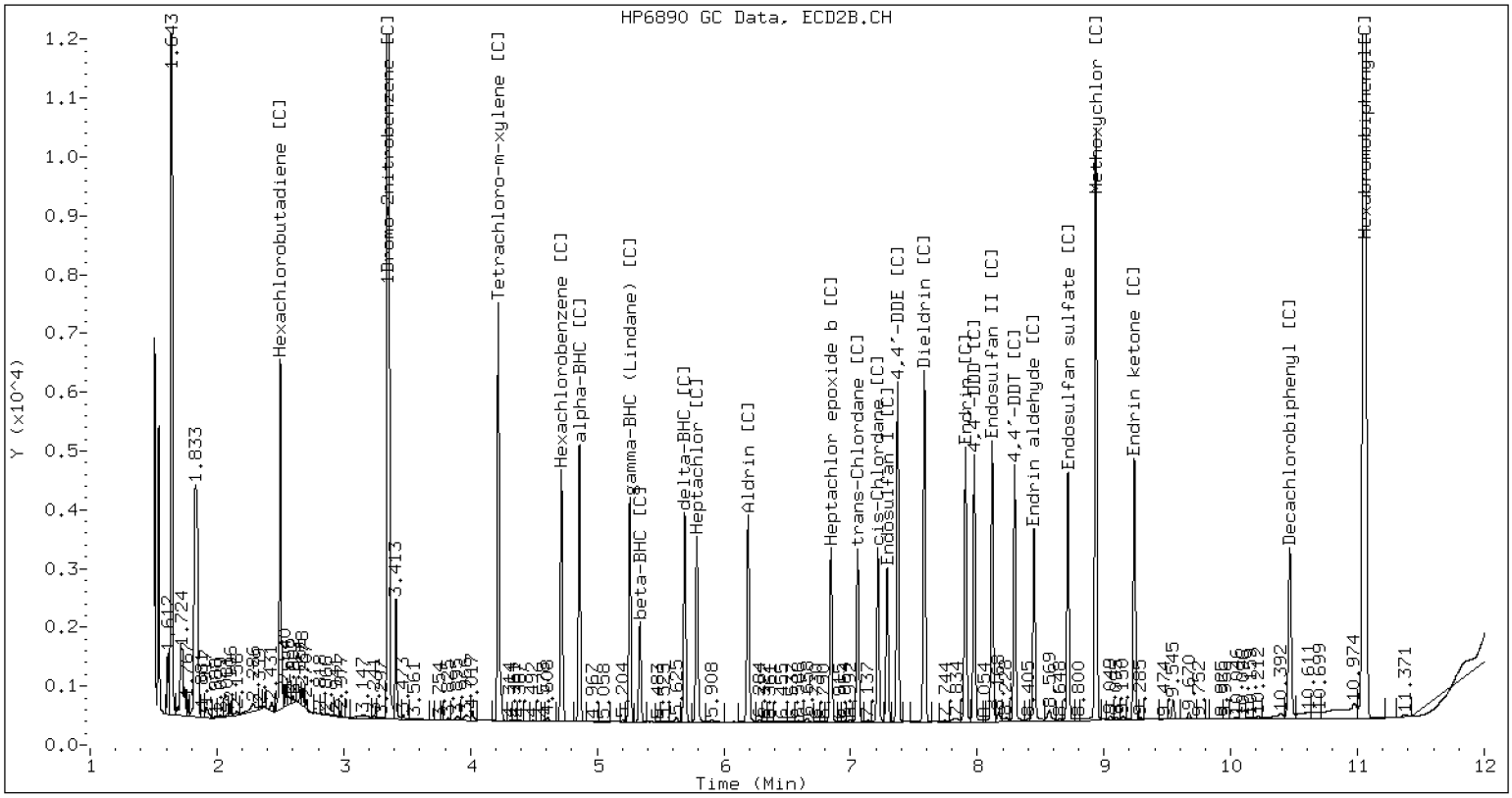
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121407.D SEQ-CAL3 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121407.D
Data file 2: /20221214.b/B20221214.b/22121407.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3
Client ID:
Injection Date: 14-DEC-2022 21:14
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.343	0.000	139784	4.860	-0.000	216159	10.22	10.19	0.3	alpha-BHC
4.726	0.000	53742	5.337	0.000	81857	10.20	10.15	0.6	beta-BHC
4.910	0.001	113586	5.691	0.000	177281	10.16	10.14	0.2	delta-BHC
4.646	0.000	121488	5.258	0.000	182844	10.24	10.15	0.9	gamma-BHC (Lindane)
5.130	0.000	108260	5.787	-0.000	166558	10.26	10.21	0.5	Heptachlor
5.454	0.000	124839	6.191	0.000	189618	10.55	10.18	3.6	Aldrin
6.131	0.001	107301	6.846	0.001	155424	10.46	10.09	3.6	Heptachlor epoxide b
6.573	0.000	97151	7.289	0.000	137043	10.32	10.10	2.2	Endosulfan I
6.832	0.001	210564	7.583	0.000	301602	20.82	20.11	3.5	Dieldrin
6.490	0.001	195139	7.371	0.000	281756	20.79	20.49	1.5	4,4'-DDE
7.082	0.001	173216	7.907	-0.000	231062	20.59	20.39	1.0	Endrin
7.318	0.001	161303	8.117	0.001	236844	21.29	20.39	4.4	Endosulfan II
7.136	0.001	157301	7.977	0.001	222755	20.75	20.21	2.7	4,4'-DDD
8.180	0.000	146955	8.715	0.000	205334	20.43	20.13	1.5	Endosulfan sulfate
7.428	0.001	156744	8.295	-0.000	212755	20.46	19.99	2.3	4,4'-DDT
7.912	0.001	344324	8.936	-0.001	473459	101.43	100.55	0.9	Methoxychlor
8.453	-0.000	167384	9.240	0.000	222080	20.31	20.15	0.8	Endrin ketone
7.746	0.000	123653	8.448	0.000	164391	20.47	20.06	2.0	Endrin aldehyde
6.271	0.001	106805	7.056	0.000	154174	10.25	10.04	2.1	trans-Chlordane
6.418	0.001	106651	7.216	0.001	150231	10.21	10.00	2.1	cis-Chlordane
2.323	-0.000	142895	2.500	-0.001	197539	9.97	9.80	1.7	Hexachlorobutadiene
4.183	0.000	130020	4.718	0.000	197396	10.24	10.22	0.1	Hexachlorobenzene
3.828	0.000	199446	4.220	-0.000	308345	20.64	20.69	0.2	Tetrachloro-m-xylene
9.355	0.000	130210	10.466	-0.000	170633	20.02	19.37	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

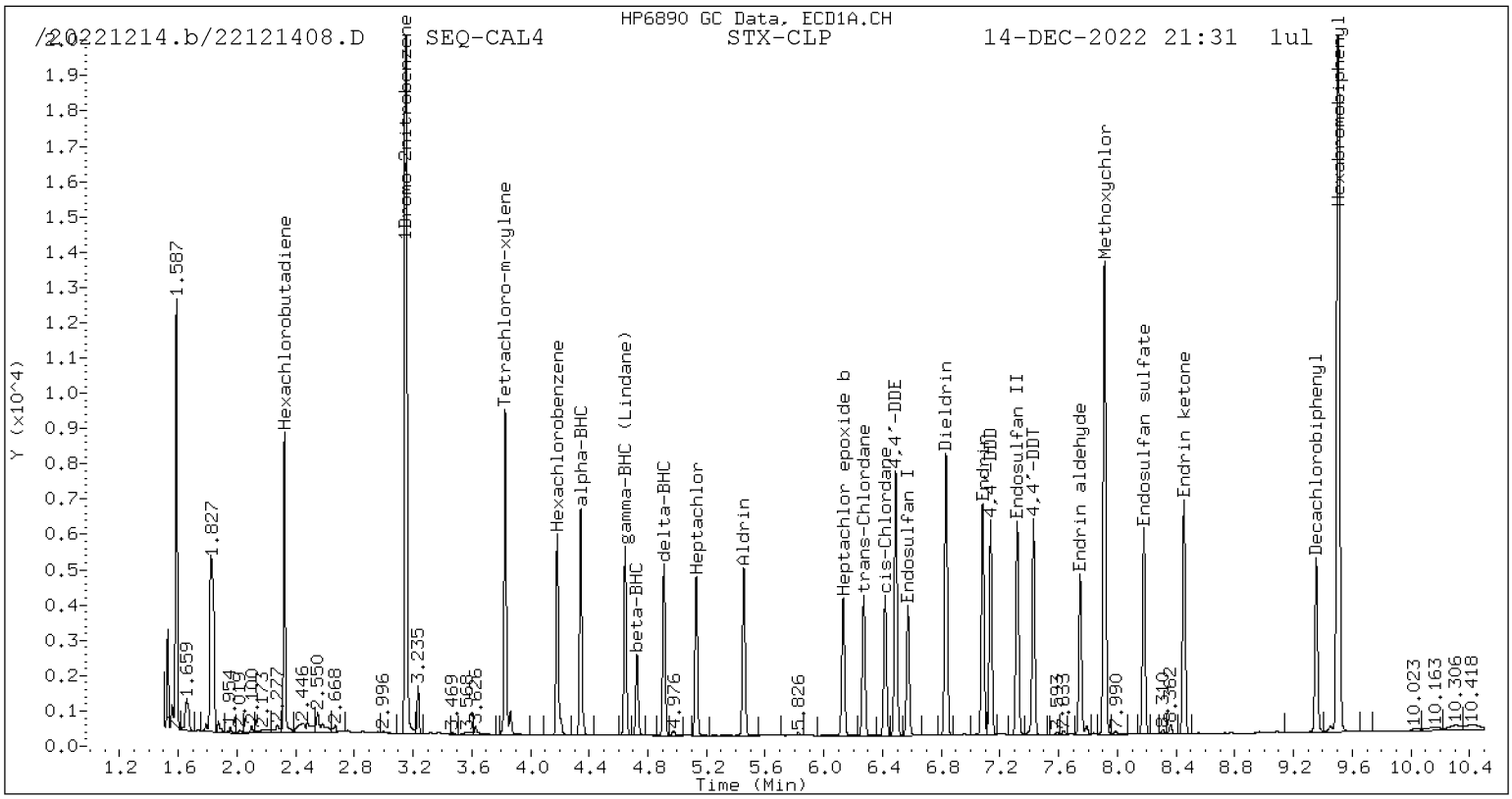
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	710650	0.0
Hexabromobiphenyl	641833	641833	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1058848	0.0
Hexabromobiphenyl	797125	797125	0.0

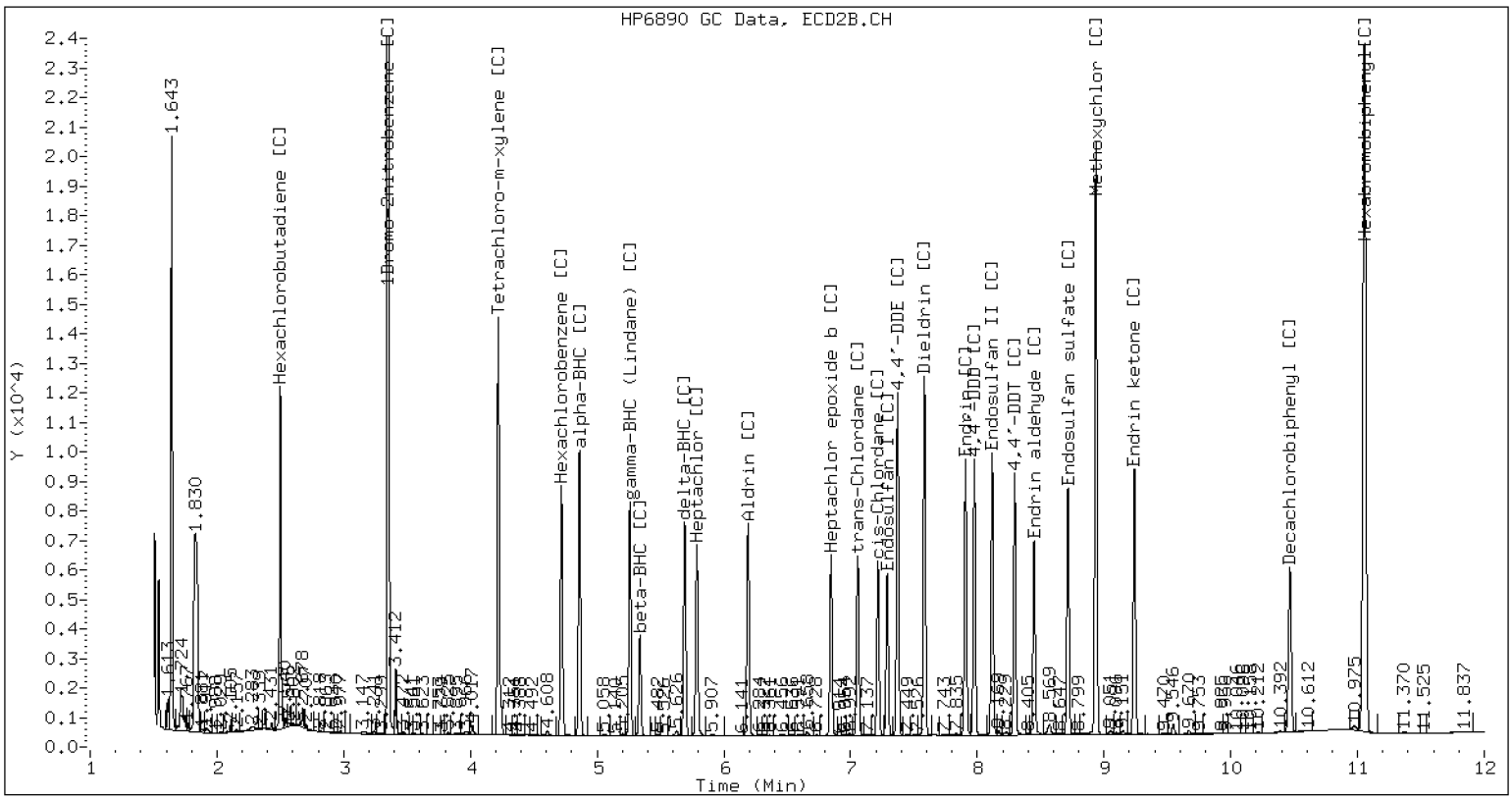
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121408.D SEQ-CAL4 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121408.D
Data file 2: /20221214.b/B20221214.b/22121408.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4
Client ID:
Injection Date: 14-DEC-2022 21:31
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/16/2022 15:30
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	263355	4.860	-0.001	412780	20.34	20.46	0.6	alpha-BHC
4.726	0.000	99355	5.337	-0.000	154138	19.93	20.10	0.8	beta-BHC
4.909	0.000	216224	5.690	-0.000	334261	20.44	20.12	1.6	delta-BHC
4.645	0.000	228274	5.258	-0.000	350450	20.34	20.47	0.7	gamma-BHC (Lindane)
5.130	0.000	203067	5.787	-0.000	320123	20.33	20.64	1.5	Heptachlor
5.454	0.000	230734	6.191	-0.000	359912	20.62	20.33	1.4	Aldrin
6.130	0.000	198033	6.845	-0.000	295580	20.41	20.19	1.1	Heptachlor epoxide b
6.572	0.000	180905	7.289	-0.000	260351	20.31	20.18	0.7	Endosulfan I
6.831	0.000	388583	7.582	-0.000	571731	40.61	40.10	1.3	Dieldrin
6.489	0.000	362177	7.370	-0.000	531128	40.77	40.63	0.4	4,4'-DDE
7.081	0.000	323576	7.907	-0.000	442460	40.48	40.43	0.1	Endrin
7.317	0.000	282010	8.117	-0.000	446656	39.19	39.81	1.6	Endosulfan II
7.135	0.000	292251	7.976	-0.000	427990	40.58	40.20	0.9	4,4'-DDD
8.180	0.000	276113	8.715	0.000	393743	40.41	39.97	1.1	Endosulfan sulfate
7.427	0.000	296413	8.295	-0.000	413083	40.73	40.20	1.3	4,4'-DDT
7.912	0.000	628619	8.935	-0.001	900958	194.94	198.14	1.6	Methoxychlor
8.453	0.000	311305	9.239	-0.000	423698	39.77	39.82	0.1	Endrin ketone
7.746	0.000	230881	8.448	0.000	312907	40.23	39.54	1.7	Endrin aldehyde
6.271	0.000	200151	7.056	-0.000	294106	20.31	20.15	0.8	trans-Chlordane
6.417	0.000	197892	7.216	-0.000	285904	20.02	20.02	0.0	cis-Chlordane
2.324	0.000	260716	2.500	-0.000	346254	19.22	18.08	6.2	Hexachlorobutadiene
4.182	0.000	237746	4.718	-0.000	364913	19.78	19.88	0.5	Hexachlorobenzene
3.828	0.000	357836	4.220	-0.000	567647	39.13	40.07	2.4	Tetrachloro-m-xylene
9.355	0.000	239428	10.466	-0.001	327134	38.76	38.45	0.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

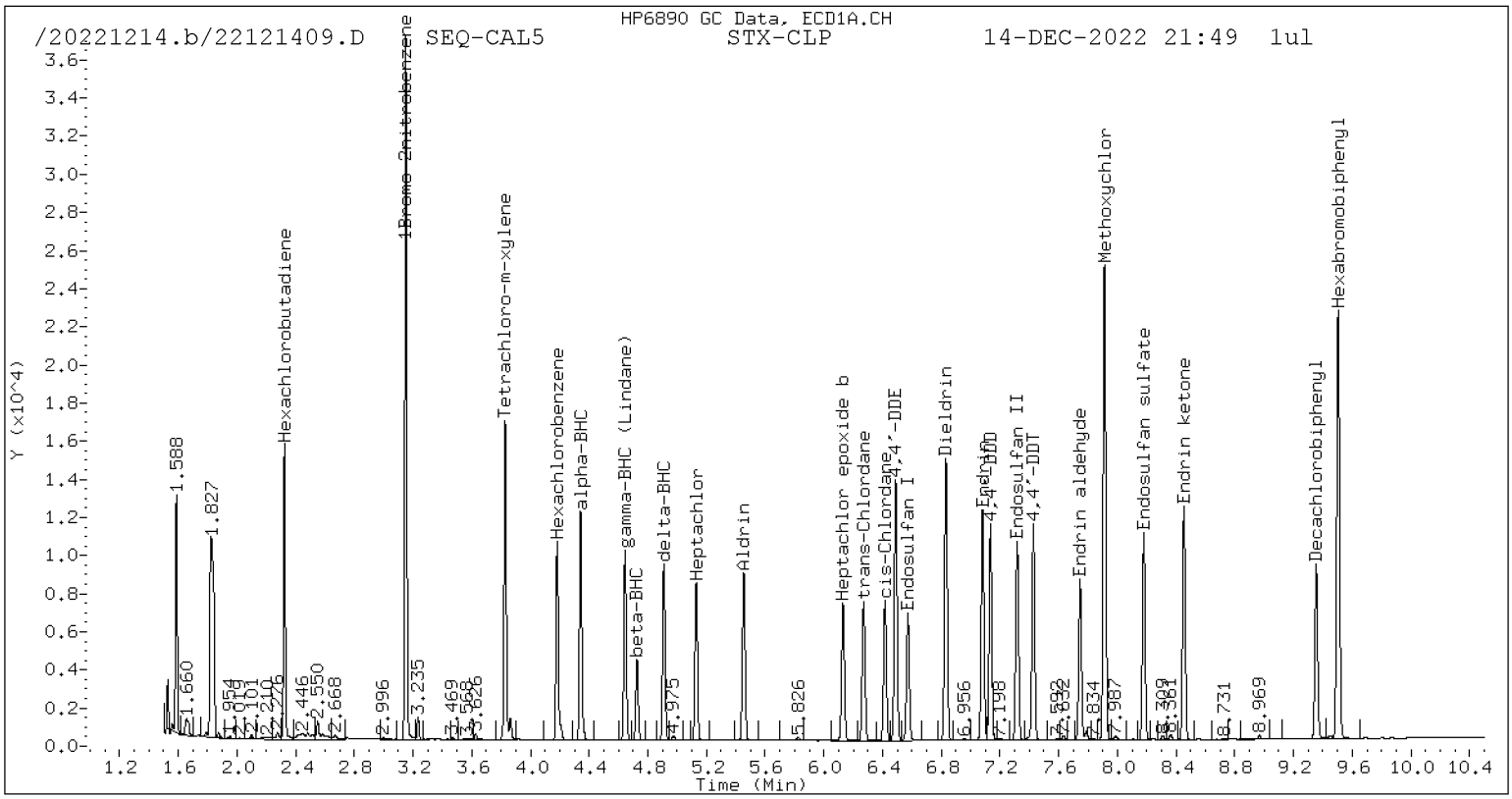
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	672426	0.0
Hexabromobiphenyl	609723	609723	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1006482	0.0
Hexabromobiphenyl	769764	769764	0.0

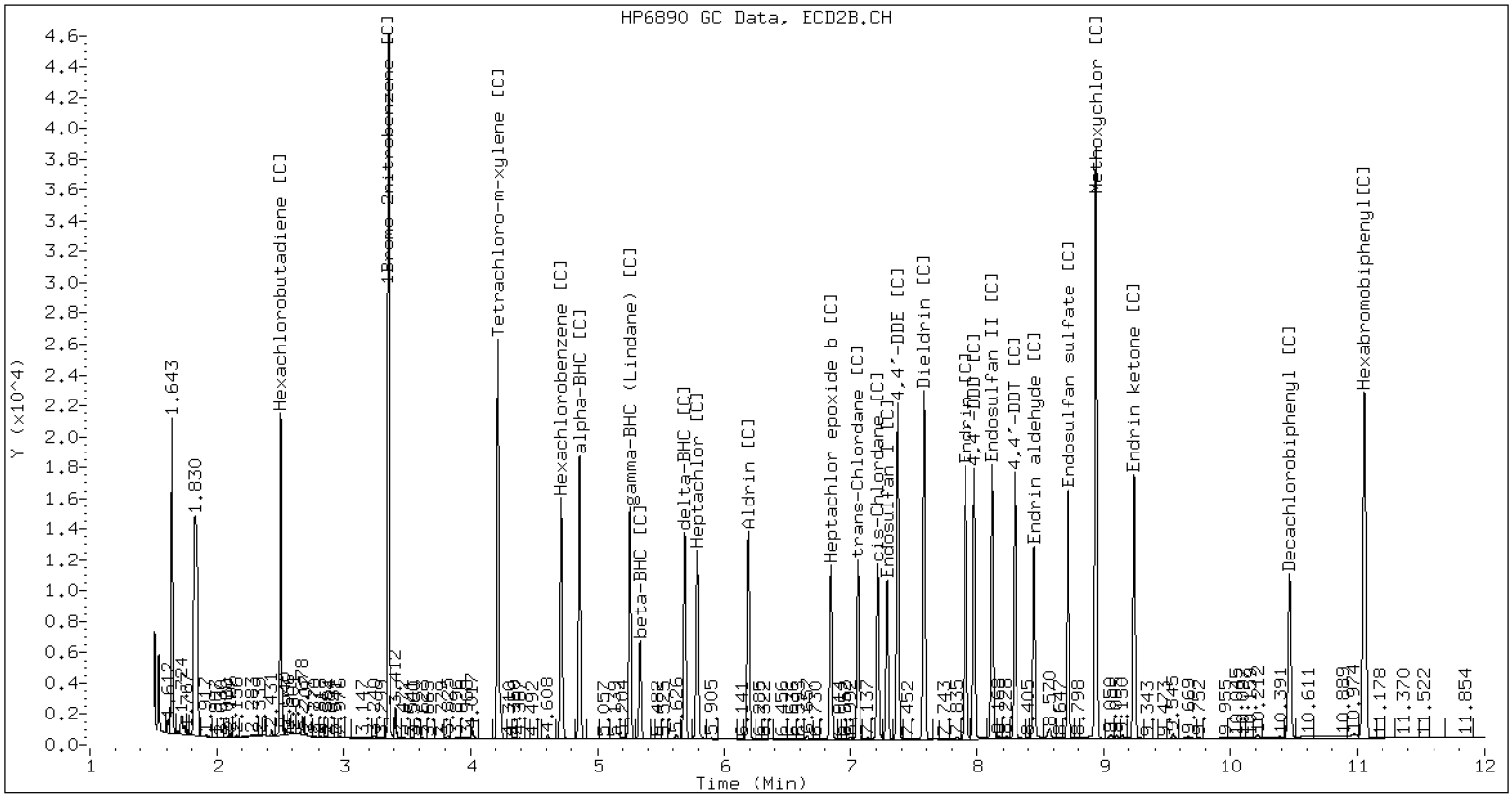
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121409.D SEQ-CAL5 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121409.D
Data file 2: /20221214.b/B20221214.b/22121409.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5
Client ID:
Injection Date: 14-DEC-2022 21:49
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	535902	4.860	-0.000	849533	39.69	40.30	1.5	alpha-BHC
4.726	0.000	198976	5.337	-0.000	311218	38.28	38.84	1.4	beta-BHC
4.910	0.000	440370	5.691	0.000	700464	39.91	40.34	1.1	delta-BHC
4.646	0.000	461905	5.258	0.000	718675	39.46	40.18	1.8	gamma-BHC (Lindane)
5.130	0.000	401672	5.787	0.000	639345	38.56	39.46	2.3	Heptachlor
5.454	0.000	458396	6.190	-0.000	720942	39.27	38.97	0.8	Aldrin
6.130	0.000	387273	6.846	0.000	586062	38.26	38.31	0.1	Heptachlor epoxide b
6.572	-0.000	354629	7.288	-0.001	519836	38.18	38.55	1.0	Endosulfan I
6.832	0.000	755708	7.582	-0.000	1126850	75.73	75.64	0.1	Dieldrin
6.489	0.000	698620	7.371	-0.000	1040947	75.40	76.19	1.0	4,4'-DDE
7.082	0.000	615481	7.907	-0.000	858461	74.19	74.98	1.1	Endrin
7.317	0.000	590923	8.117	-0.000	885035	79.12	75.41	4.8	Endosulfan II
7.136	0.000	565557	7.976	-0.000	842536	75.67	75.65	0.0	4,4'-DDD
8.179	-0.001	540557	8.715	0.000	782860	76.22	75.96	0.3	Endosulfan sulfate
7.427	0.000	577337	8.295	-0.000	820861	76.44	76.36	0.1	4,4'-DDT
7.912	-0.000	1204040	8.935	-0.001	1785262	359.75	375.30	4.2	Methoxychlor
8.453	-0.001	610387	9.239	-0.000	843646	75.13	75.79	0.9	Endrin ketone
7.746	-0.000	452325	8.448	0.000	622287	75.93	75.17	1.0	Endrin aldehyde
6.271	0.000	395598	7.056	-0.000	591899	38.48	38.80	0.8	trans-Chlordane
6.417	0.001	389712	7.215	-0.000	573103	37.80	38.40	1.6	cis-Chlordane
2.324	0.000	511265	2.500	-0.000	705320	36.14	35.24	2.5	Hexachlorobutadiene
4.183	0.001	472841	4.718	0.000	728846	37.72	37.99	0.7	Hexachlorobenzene
3.828	-0.000	714634	4.221	0.000	1124106	74.93	75.93	1.3	Tetrachloro-m-xylene
9.355	-0.000	468280	10.466	-0.001	645336	73.03	72.51	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

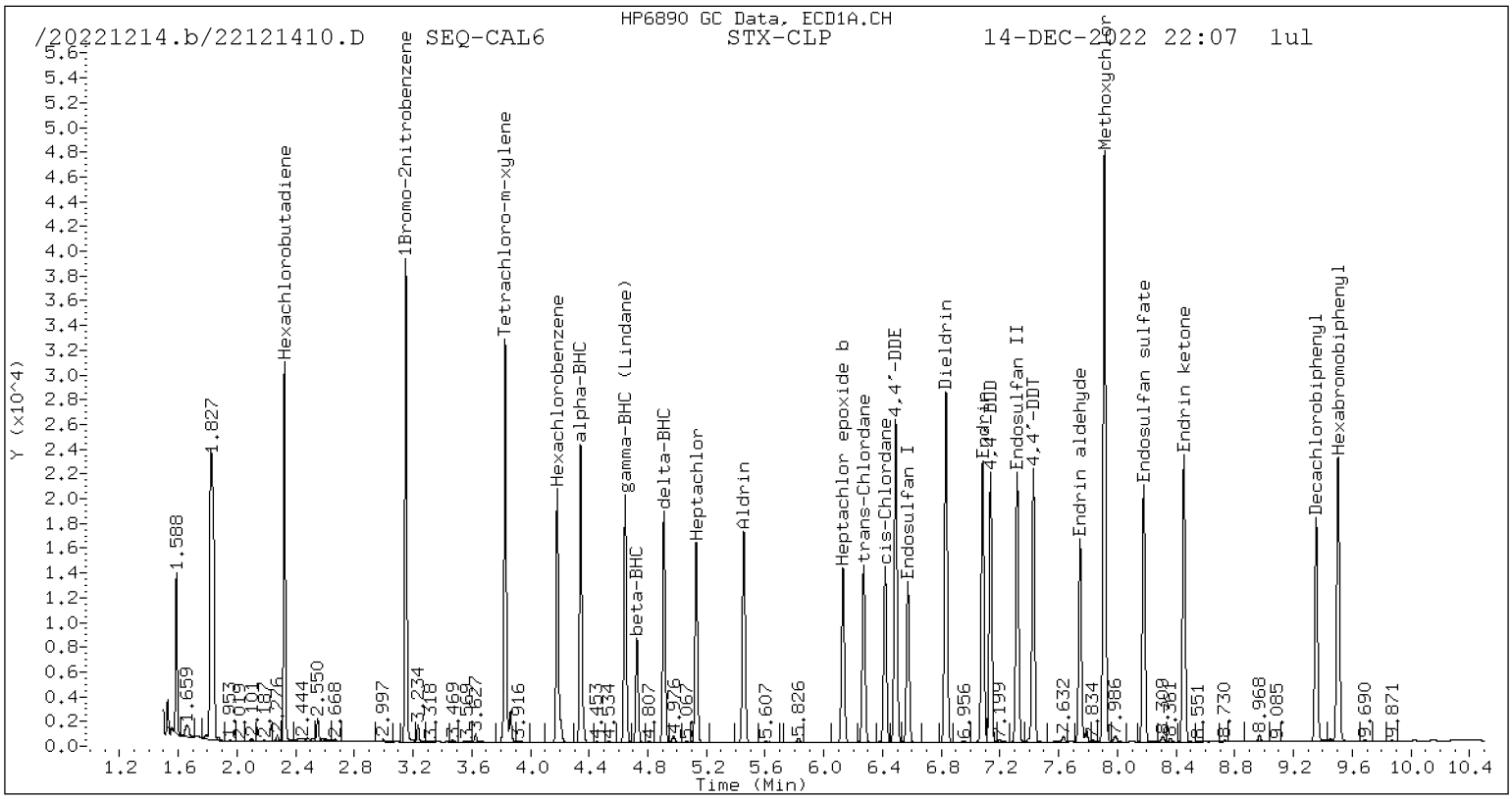
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	701342	-1.3
Hexabromobiphenyl	641833	632821	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1051766	-0.7
Hexabromobiphenyl	797125	805268	1.0

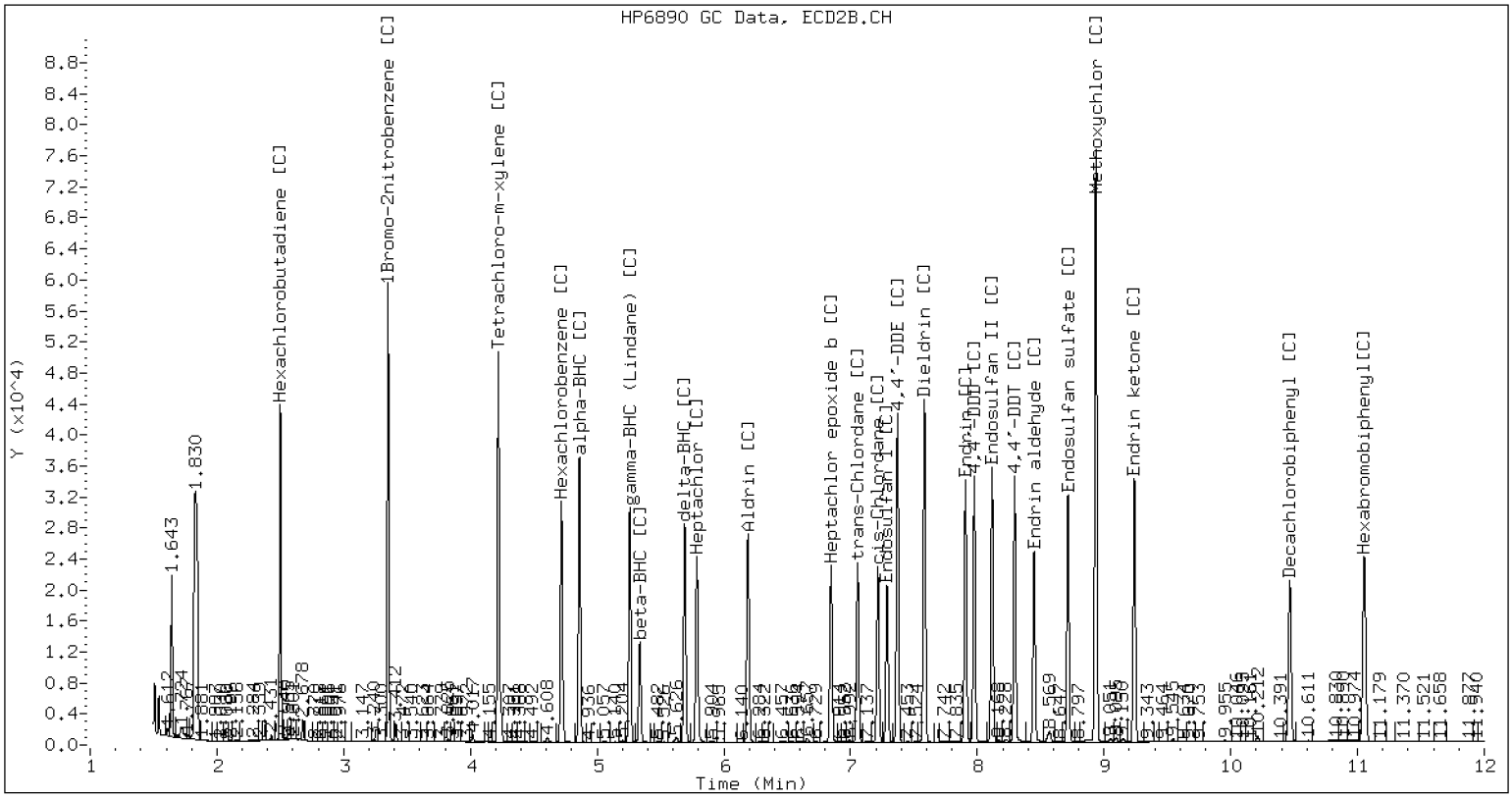
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121410.D SEQ-CAL6 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121410.D
Data file 2: /20221214.b/B20221214.b/22121410.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6
Client ID:
Injection Date: 14-DEC-2022 22:07
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	1012605	4.861	0.000	1623058	75.30	77.94	3.4	alpha-BHC
4.726	0.000	371916	5.337	0.000	586390	71.84	74.06	3.1	beta-BHC
4.910	0.000	837966	5.691	0.000	1343533	76.25	78.32	2.7	delta-BHC
4.645	-0.000	870454	5.258	0.000	1370551	74.66	77.55	3.8	gamma-BHC (Lindane)
5.130	0.000	743802	5.787	0.000	1188915	71.70	74.26	3.5	Heptachlor
5.454	0.000	841598	6.191	0.000	1331430	72.39	72.84	0.6	Aldrin
6.130	-0.000	709774	6.845	0.000	1087105	70.41	71.92	2.1	Heptachlor epoxide b
6.573	0.000	652702	7.289	0.000	969098	70.56	72.74	3.1	Endosulfan I
6.832	0.000	1390496	7.583	0.000	2118555	139.91	143.93	2.8	Dieldrin
6.490	0.001	1284777	7.371	0.000	1944530	139.23	144.06	3.4	4,4'-DDE
7.082	0.001	1132487	7.907	0.000	1618631	137.86	142.60	3.4	Endrin
7.317	0.000	1089554	8.117	0.000	1672946	147.33	143.79	2.4	Endosulfan II
7.135	0.000	1051958	7.976	0.000	1606815	142.14	145.53	2.4	4,4'-DDD
8.180	0.000	1013288	8.715	0.000	1496440	144.30	146.47	1.5	Endosulfan sulfate
7.428	0.001	1086138	8.295	0.000	1586078	145.23	148.84	2.5	4,4'-DDT
7.912	0.001	2325261	8.936	0.000	3541650	701.64	751.02	6.8	Methoxychlor
8.454	0.000	1146784	9.240	0.000	1623077	142.56	147.08	3.1	Endrin ketone
7.746	-0.000	846477	8.448	0.000	1178353	143.51	143.57	0.0	Endrin aldehyde
6.271	0.000	733514	7.056	0.000	1114685	71.64	73.95	3.2	trans-Chlordane
6.417	0.001	723886	7.216	0.000	1079255	70.50	73.19	3.7	cis-Chlordane
2.324	0.000	955982	2.501	0.000	1351745	67.86	68.35	0.7	Hexachlorobutadiene
4.182	0.000	879573	4.718	0.000	1355289	70.45	71.51	1.5	Hexachlorobenzene
3.828	0.000	1318381	4.220	0.000	2067539	138.79	141.35	1.8	Tetrachloro-m-xylene
9.356	0.000	878340	10.467	0.000	1231298	138.34	139.55	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

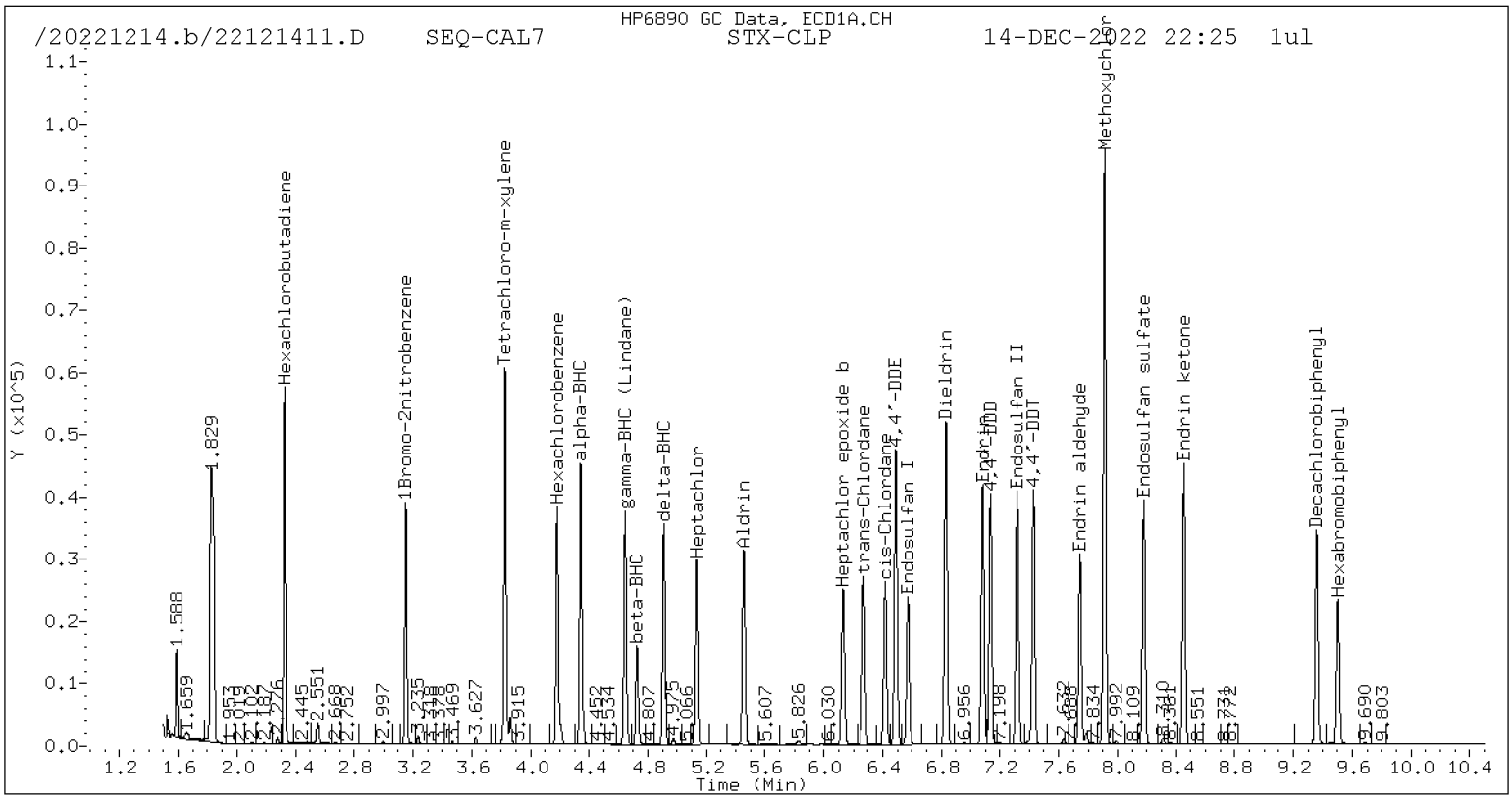
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	698499	-1.7
Hexabromobiphenyl	641833	626605	-2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1039154	-1.9
Hexabromobiphenyl	797125	798313	0.1

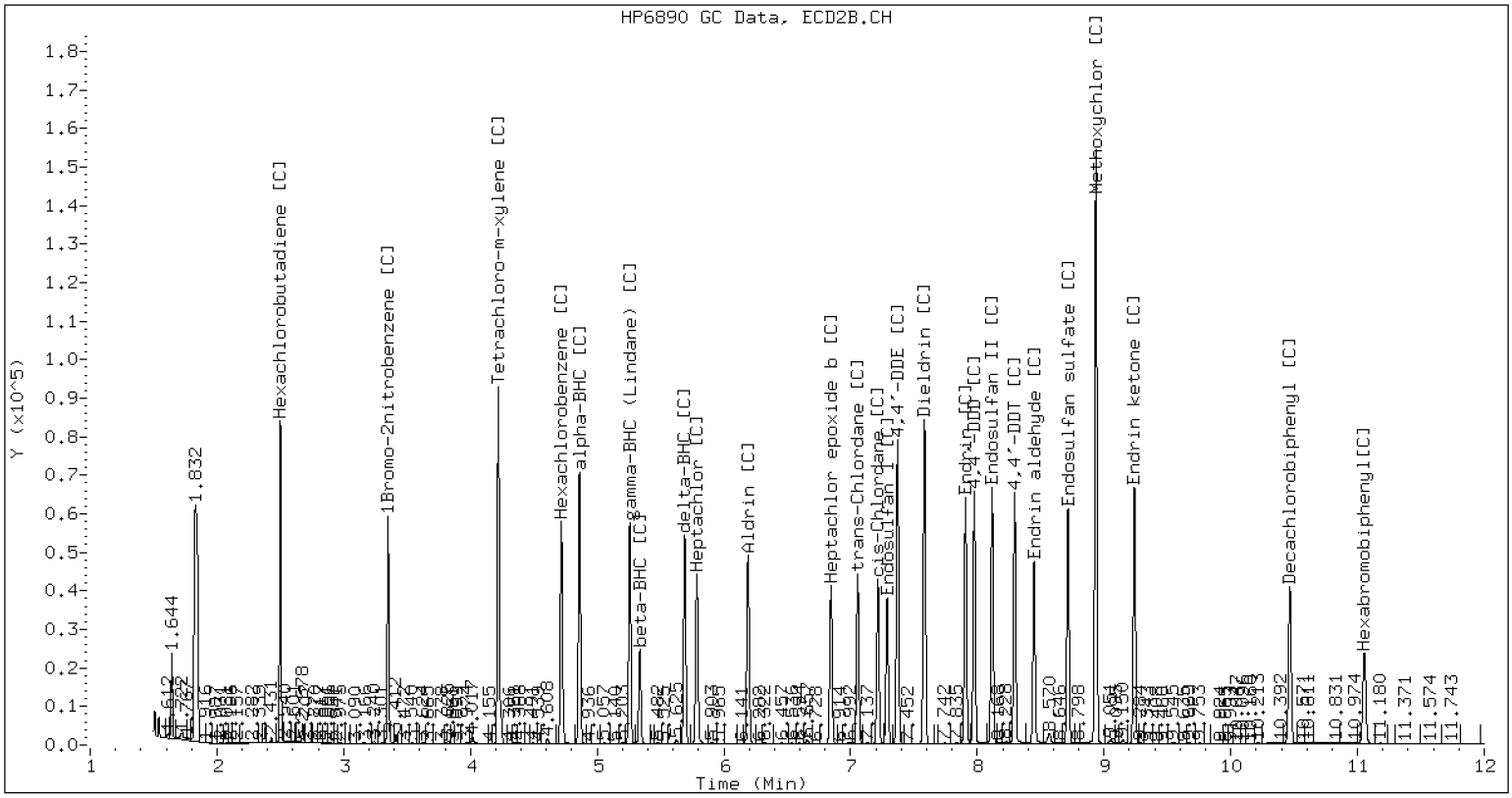
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121411.D SEQ-CAL7 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121411.D
Data file 2: /20221214.b/B20221214.b/22121411.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7
Client ID:
Injection Date: 14-DEC-2022 22:25
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	22184	6.741	-0.000	34211	2.89	2.85	1.2	Oxychlordane
6.106	-0.000	18661	7.036	-0.000	30817	2.94	3.14	6.5	2,4-DDE
6.397	-0.000	30616	7.154	-0.001	41466	3.05	2.82	7.5	trans-Nonachlor
6.681	0.000	16263	7.591	0.000	26177	2.88	3.12	7.9	2,4-DDD
6.956	-0.001	17569	7.913	-0.000	24398	2.88	2.82	2.1	2,4-DDT
7.112	-0.000	29417	7.975	-0.000	37972	3.01	2.72	9.9	cis-Nonachlor
8.082	-0.000	18819	9.223	-0.000	24312	3.09	3.00	3.1	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

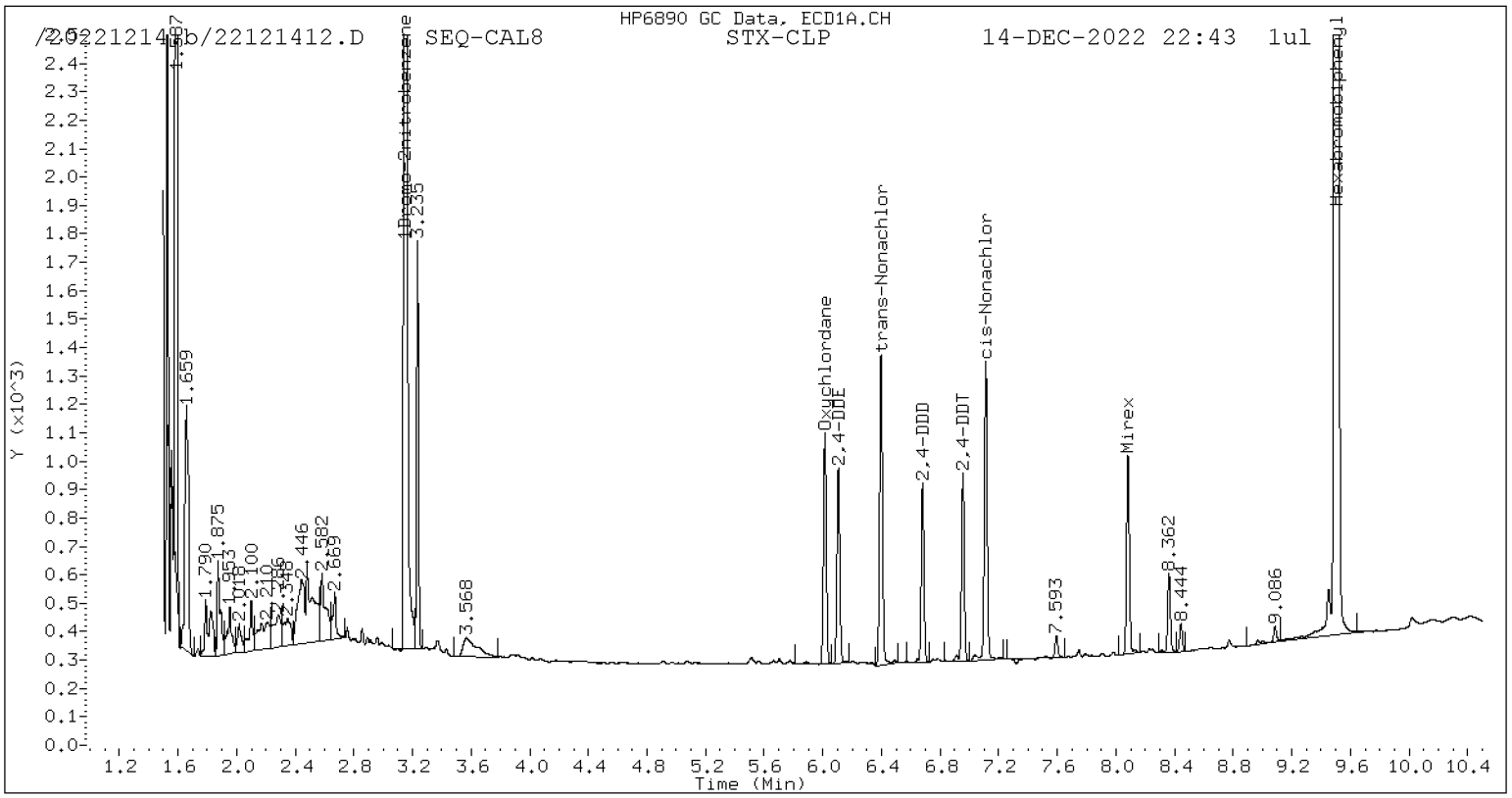
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713898	0.5
Hexabromobiphenyl	641833	646441	0.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1076864	1.7
Hexabromobiphenyl	797125	820275	2.9

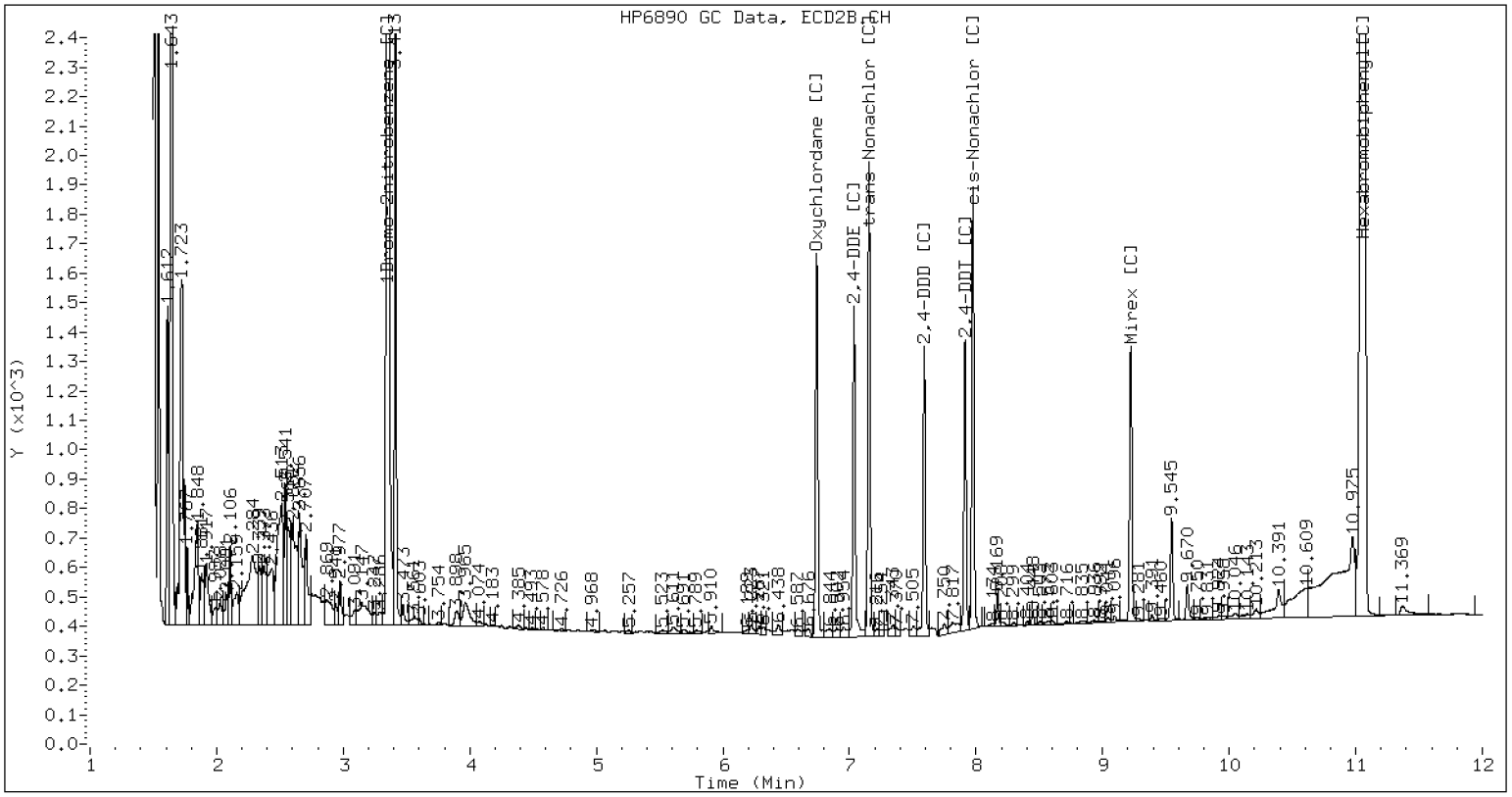
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121412.D SEQ-CAL8 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121412.D
Data file 2: /20221214.b/B20221214.b/22121412.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8
Client ID:
Injection Date: 14-DEC-2022 22:43
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.000	39121	6.741	-0.000	61505	5.34	5.41	1.3	Oxychlordane
6.106	0.000	33487	7.036	-0.000	53206	5.54	5.72	3.1	2,4-DDE
6.398	0.000	51858	7.154	-0.001	72836	5.42	5.20	4.1	trans-Nonachlor
6.681	0.000	29307	7.590	-0.000	44506	5.45	5.55	1.9	2,4-DDD
6.957	-0.000	31530	7.914	0.000	45986	5.43	5.57	2.6	2,4-DDT
7.112	-0.000	50912	7.975	0.000	70898	5.46	5.32	2.6	cis-Nonachlor
8.082	-0.000	32004	9.223	-0.000	45650	5.52	5.89	6.6	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

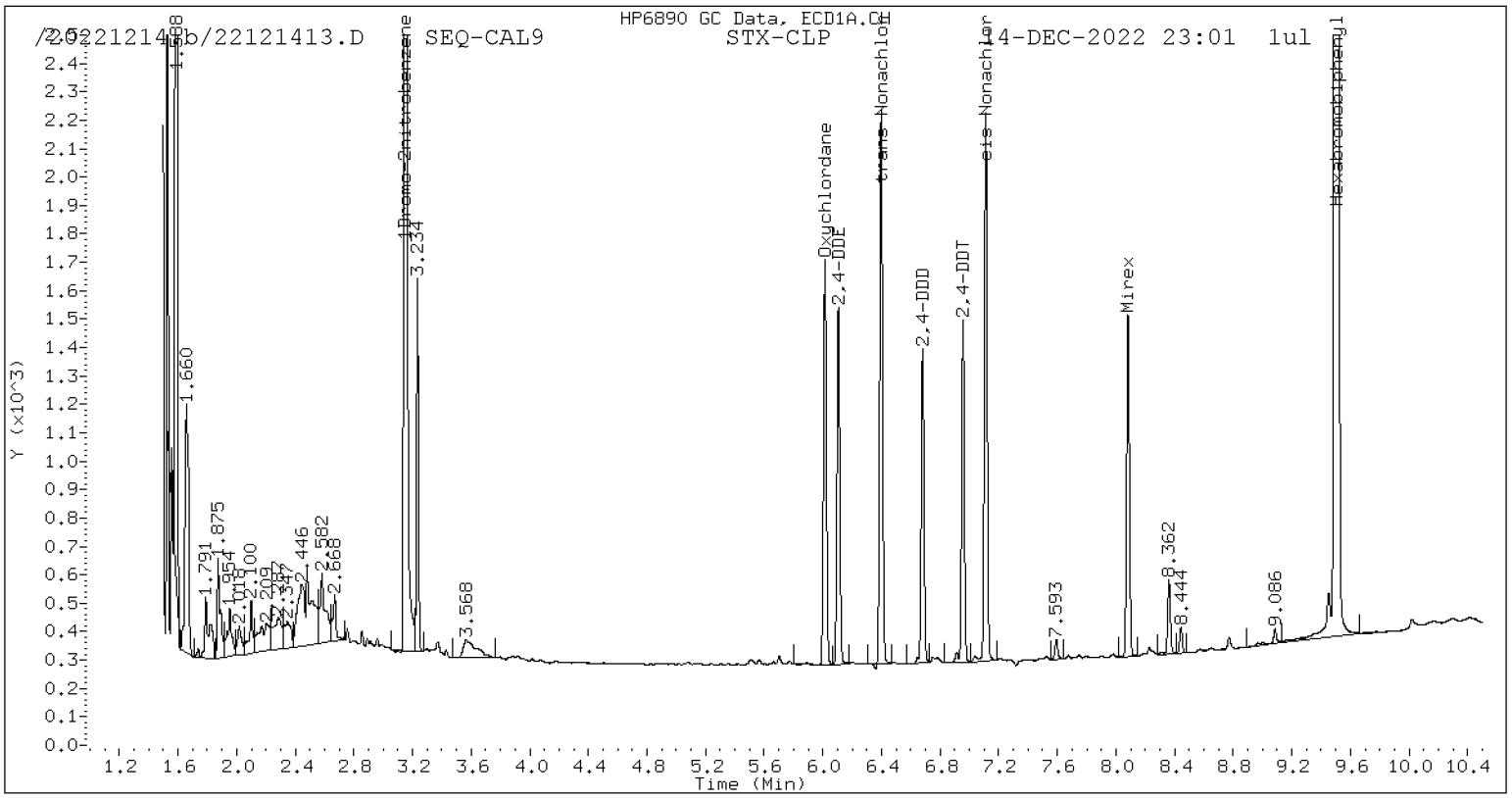
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672507	-5.4
Hexabromobiphenyl	641833	615627	-4.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020334	-3.6
Hexabromobiphenyl	797125	782734	-1.8

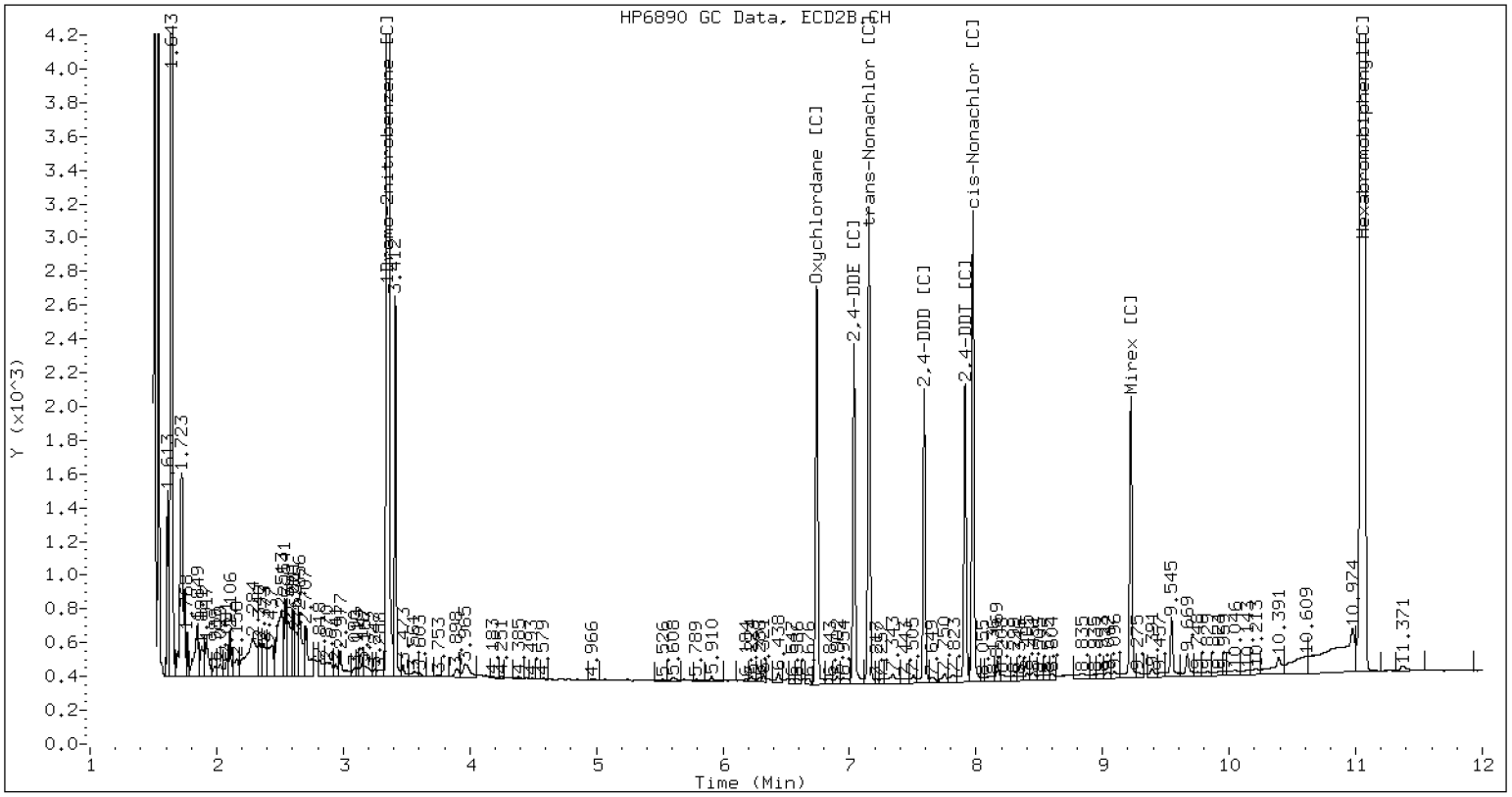
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121413.D SEQ-CAL9 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121413.D
Data file 2: /20221214.b/B20221214.b/22121413.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9
Client ID:
Injection Date: 14-DEC-2022 23:01
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	82473	6.741	-0.001	127500	10.63	10.63	0.0	Oxychlordane
6.106	-0.000	69109	7.035	-0.001	108440	10.79	11.04	2.3	2,4-DDE
6.398	0.000	108386	7.154	-0.001	157712	10.68	10.60	0.7	trans-Nonachlor
6.681	0.000	60517	7.590	-0.000	91420	10.62	10.74	1.2	2,4-DDD
6.956	-0.001	65300	7.913	0.000	91498	10.61	10.44	1.6	2,4-DDT
7.111	-0.001	104247	7.975	-0.000	146224	10.55	10.34	2.0	cis-Nonachlor
8.082	-0.000	65614	9.222	-0.000	84337	10.67	10.25	4.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

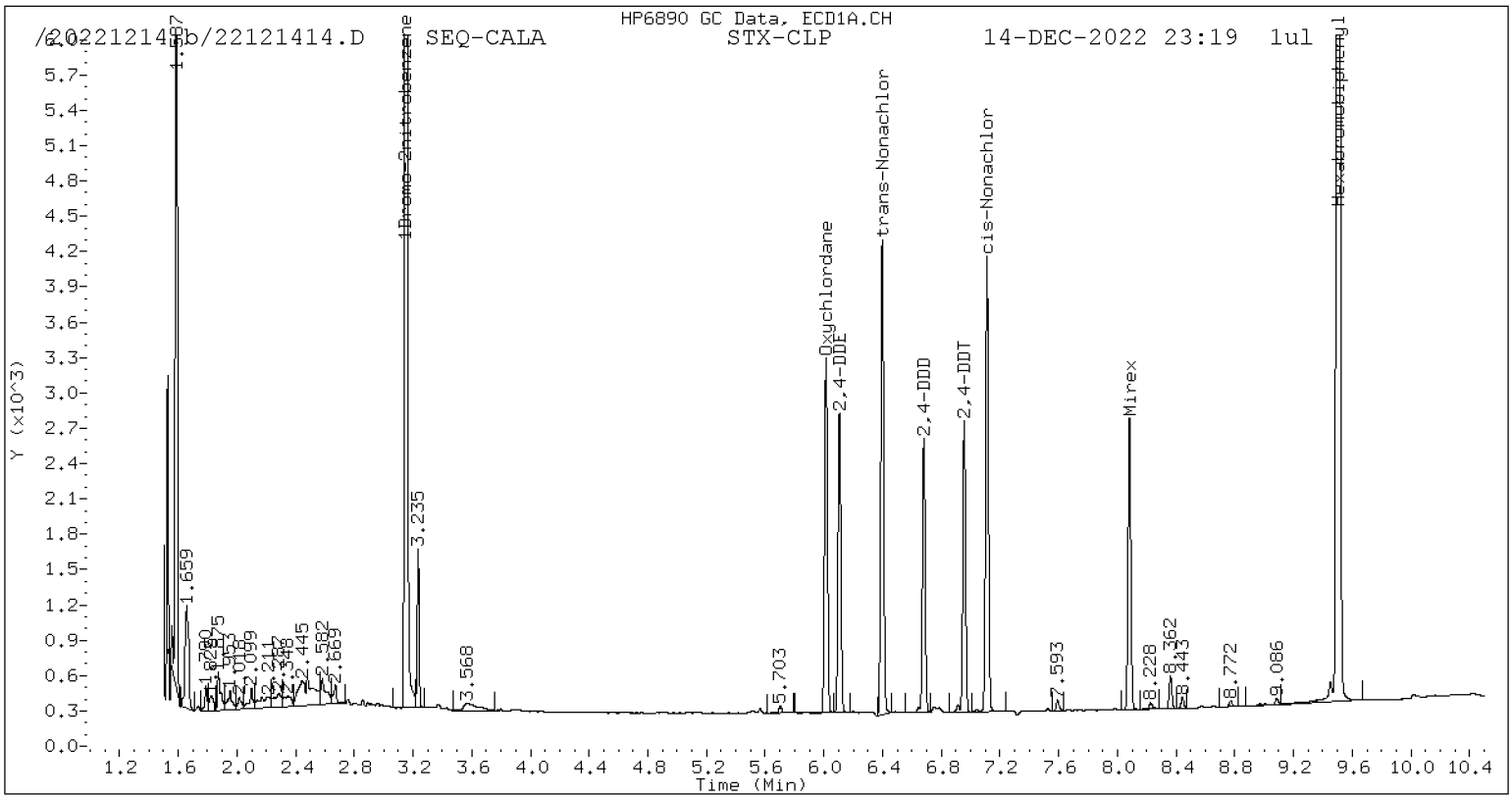
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	712122	0.2
Hexabromobiphenyl	641833	652595	1.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1077341	1.7
Hexabromobiphenyl	797125	831365	4.3

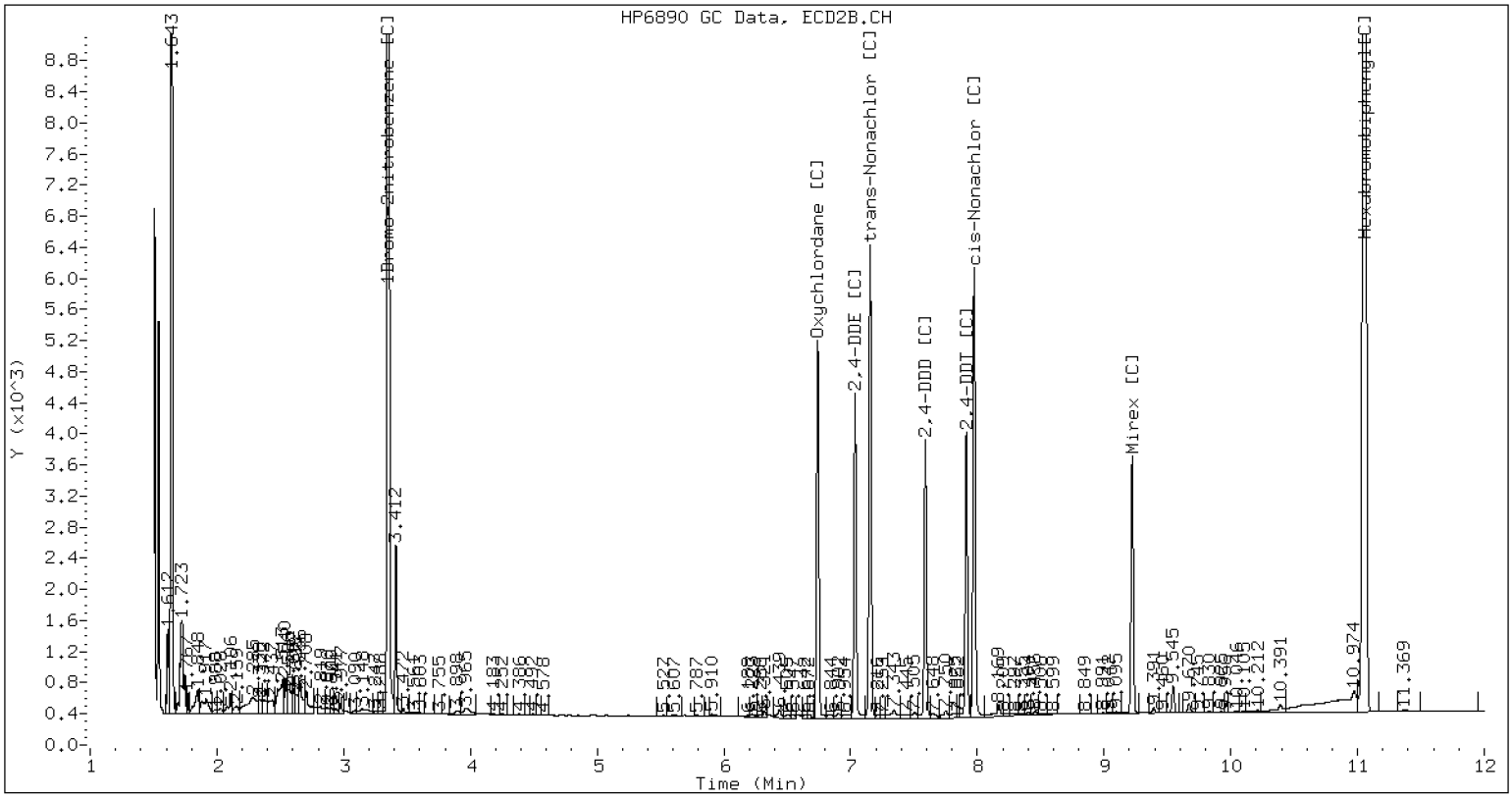
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121414.D SEQ-CALA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121414.D
Data file 2: /20221214.b/B20221214.b/22121414.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALA
Client ID:
Injection Date: 14-DEC-2022 23:19
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.015	0.001	154379	6.741	-0.000	238017	20.80	20.28	2.5	Oxychlordane
6.106	-0.000	128483	7.036	-0.000	195807	20.97	20.37	2.9	2,4-DDE
6.398	0.000	200622	7.155	-0.000	289952	20.66	20.28	1.9	trans-Nonachlor
6.681	0.000	113972	7.591	0.000	165245	20.90	20.21	3.4	2,4-DDD
6.956	-0.001	122412	7.913	0.000	169814	20.78	20.17	3.0	2,4-DDT
7.112	-0.000	194165	7.975	-0.000	274910	20.54	20.23	1.5	cis-Nonachlor
8.082	-0.000	119271	9.223	0.000	158702	20.28	20.08	1.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

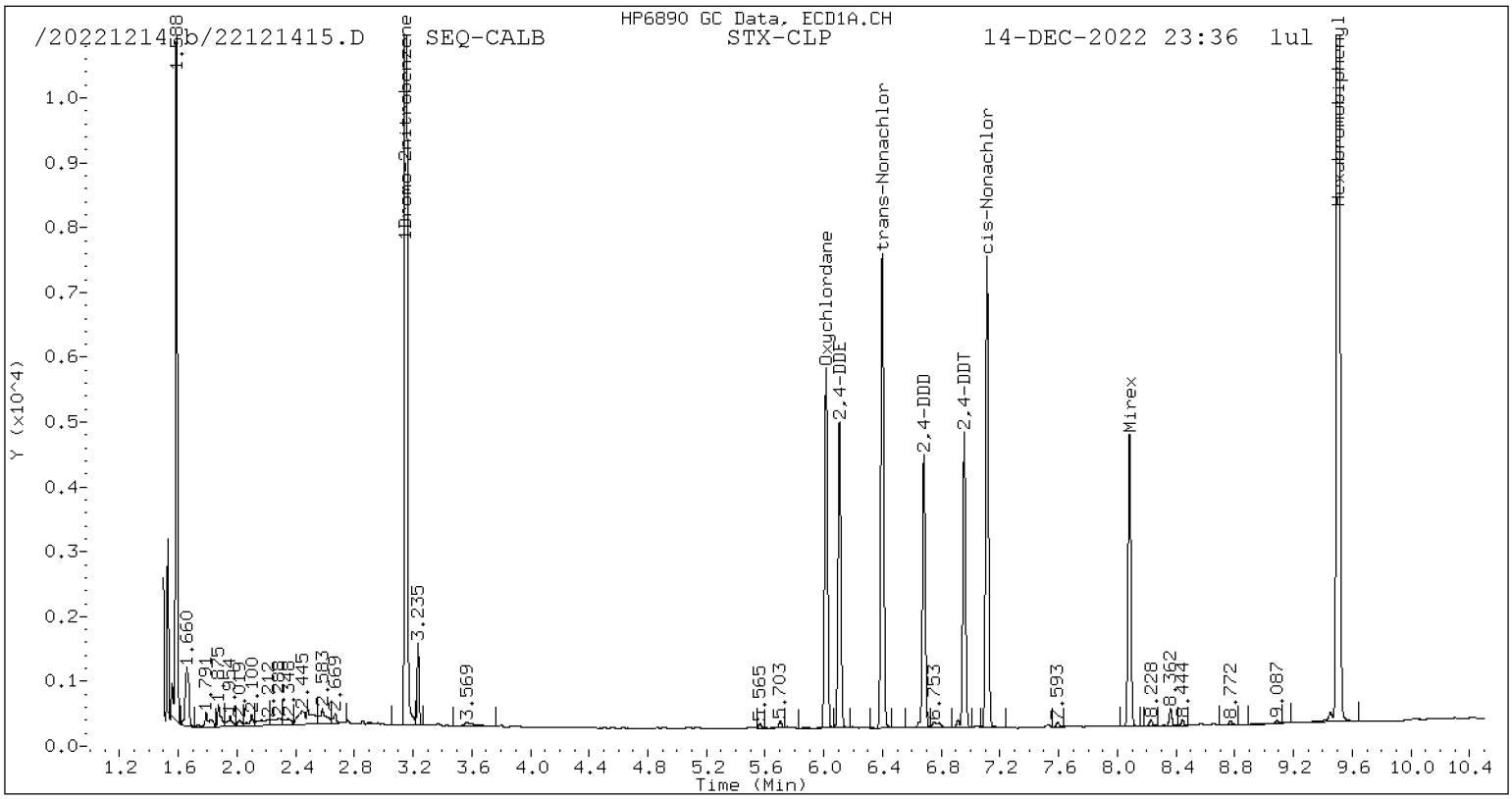
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	693450	-2.4
Hexabromobiphenyl	641833	624334	-2.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1053959	-0.5
Hexabromobiphenyl	797125	798882	0.2

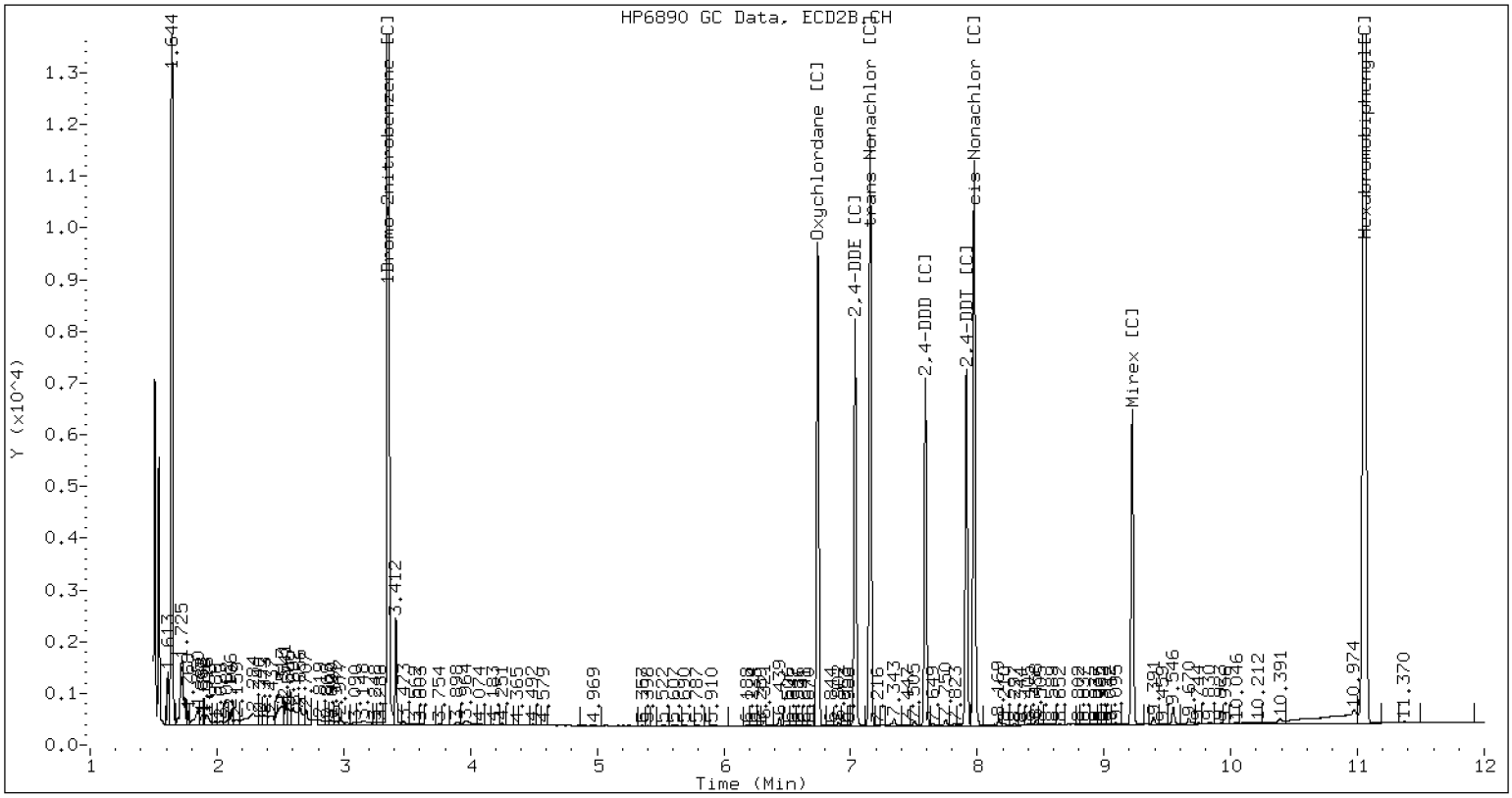
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121415.D SEQ-CALB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121415.D
Data file 2: /20221214.b/B20221214.b/22121415.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALB
Client ID:
Injection Date: 14-DEC-2022 23:36
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	292499	6.741	-0.000	460731	40.08	40.26	0.4	Oxychlordane
6.106	0.000	242066	7.036	-0.000	372996	40.18	39.80	0.9	2,4-DDE
6.397	0.000	383329	7.154	-0.001	567971	40.16	40.45	0.7	trans-Nonachlor
6.681	0.000	216474	7.590	-0.000	320311	40.39	39.88	1.3	2,4-DDD
6.957	0.000	233738	7.913	-0.000	332906	40.36	40.25	0.3	2,4-DDT
7.112	0.000	373705	7.975	-0.000	538334	40.21	40.33	0.3	cis-Nonachlor
8.082	0.000	229604	9.222	-0.000	299228	39.71	38.54	3.0	Mirex
3.800	-0.028	1151	----			0.13	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

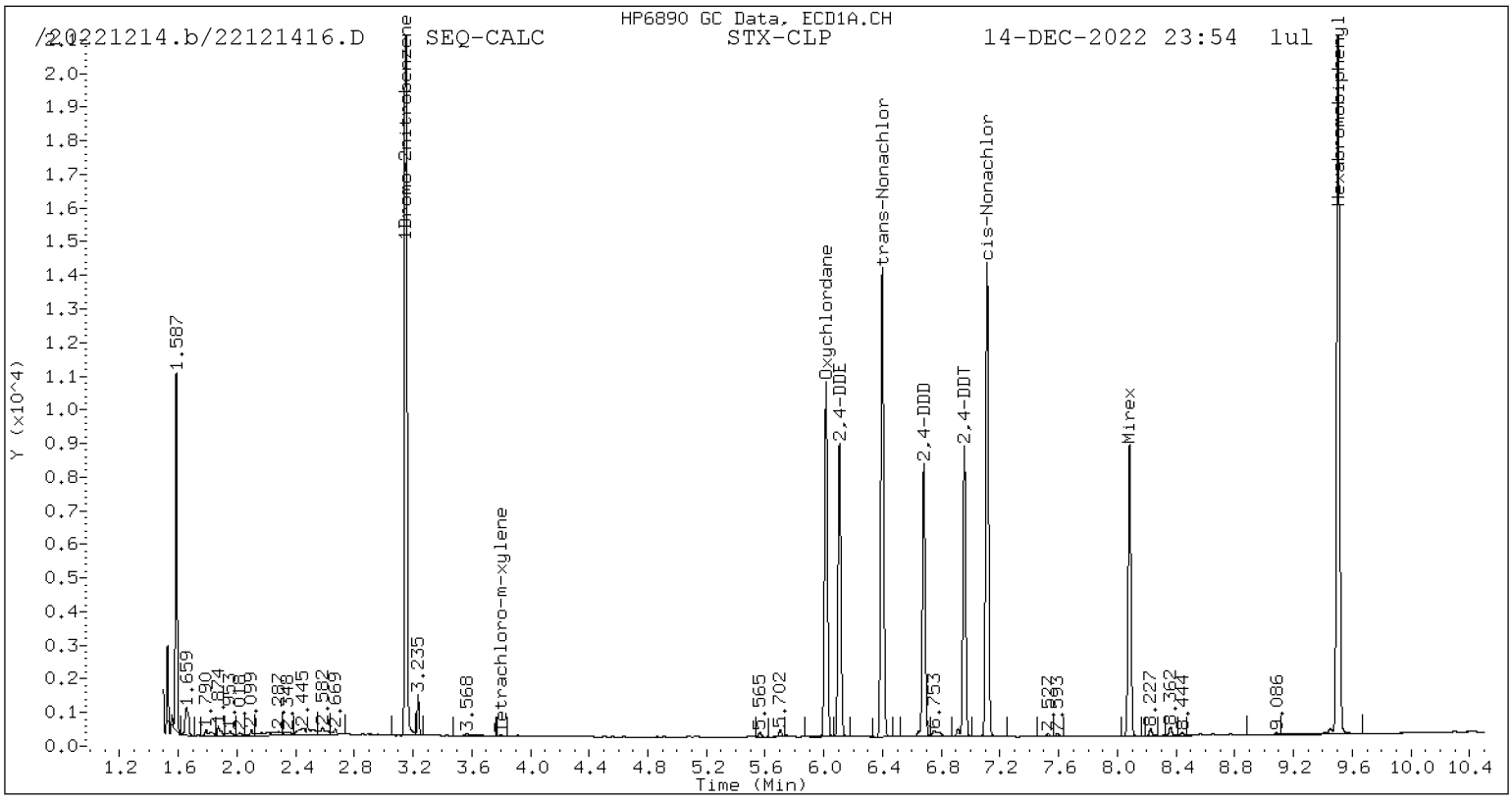
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	674573	-5.1
Hexabromobiphenyl	641833	613787	-4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1027697	-2.9
Hexabromobiphenyl	797125	784673	-1.6

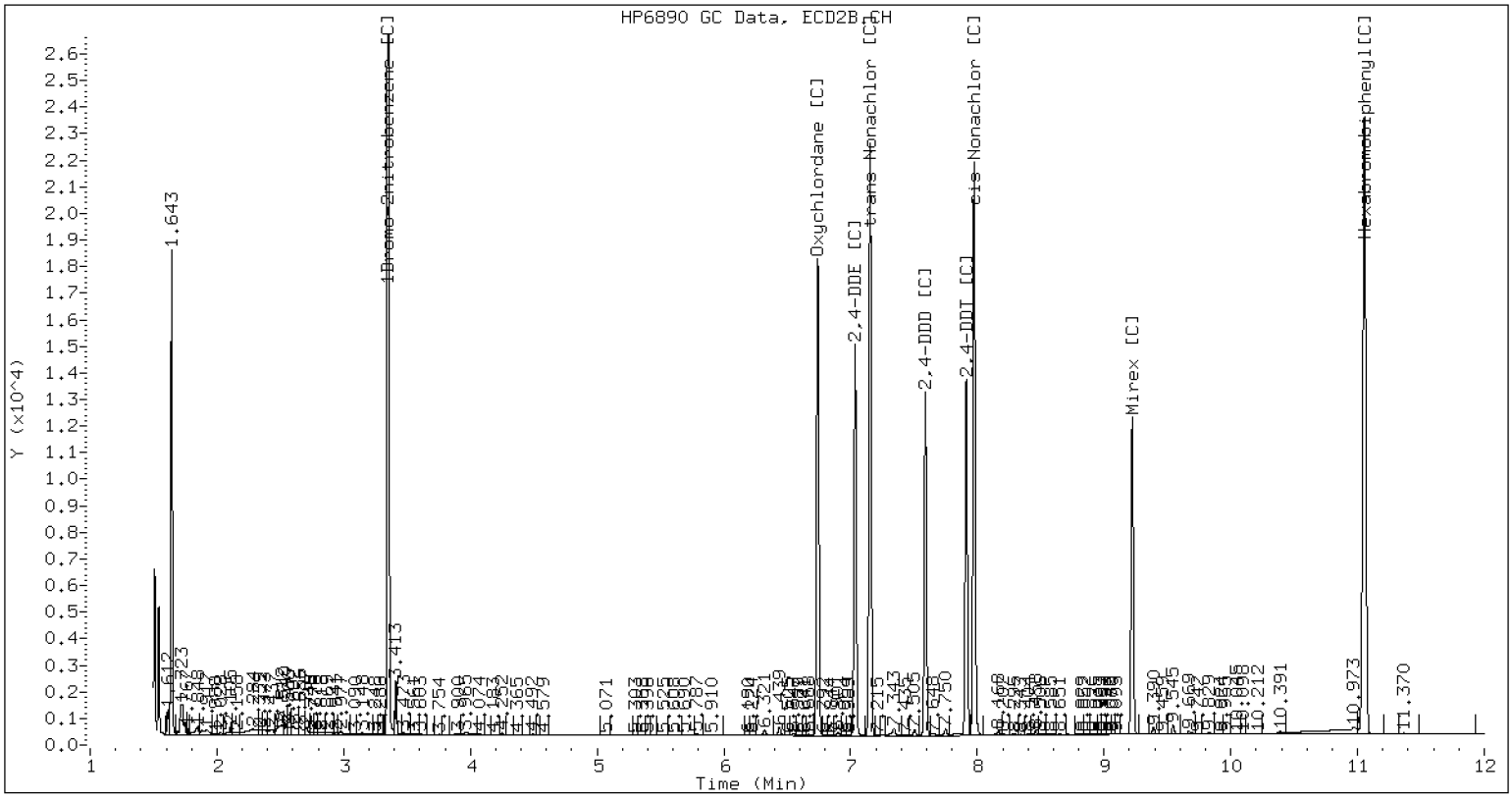
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121416.D SEQ-CALC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121416.D
Data file 2: /20221214.b/B20221214.b/22121416.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALC
Client ID:
Injection Date: 14-DEC-2022 23:54
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	544254	6.741	-0.000	856443	75.85	75.73	0.2	Oxychlordane
6.106	-0.000	438313	7.036	-0.000	677072	73.99	73.11	1.2	2,4-DDE
6.397	-0.000	704675	7.155	0.000	1067899	75.09	76.94	2.4	trans-Nonachlor
6.681	0.000	393654	7.591	0.000	594311	74.70	74.86	0.2	2,4-DDD
6.956	-0.001	430636	7.914	0.000	618740	75.63	75.68	0.1	2,4-DDT
7.112	-0.000	688257	7.975	0.000	1018624	75.31	77.19	2.5	cis-Nonachlor
8.082	-0.001	426177	9.223	0.000	573947	74.97	74.78	0.2	Mirex
3.800	-0.028	2109	----			0.23	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

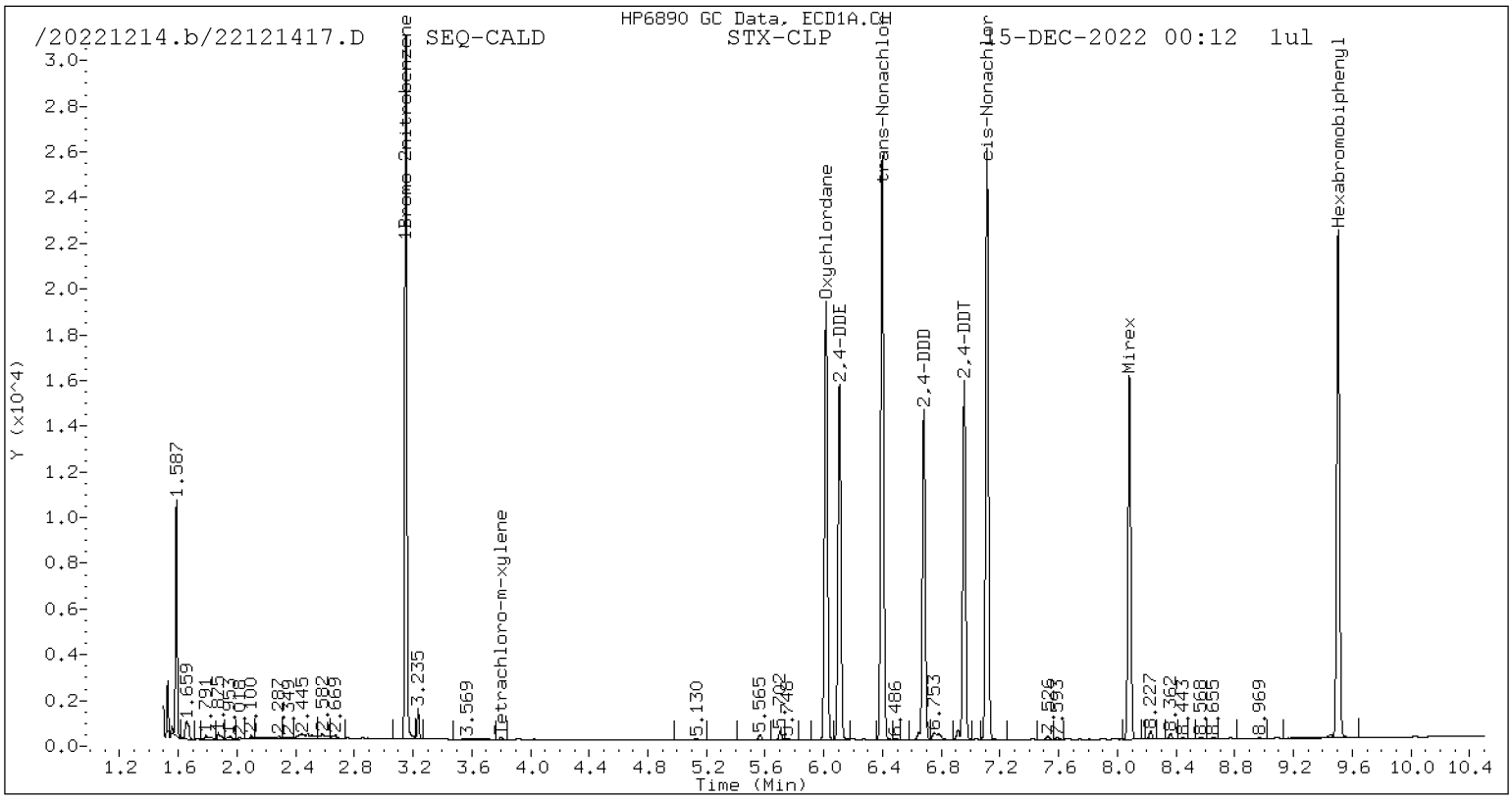
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	664375	-6.5
Hexabromobiphenyl	641833	603504	-6.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1015544	-4.1
Hexabromobiphenyl	797125	775630	-2.7

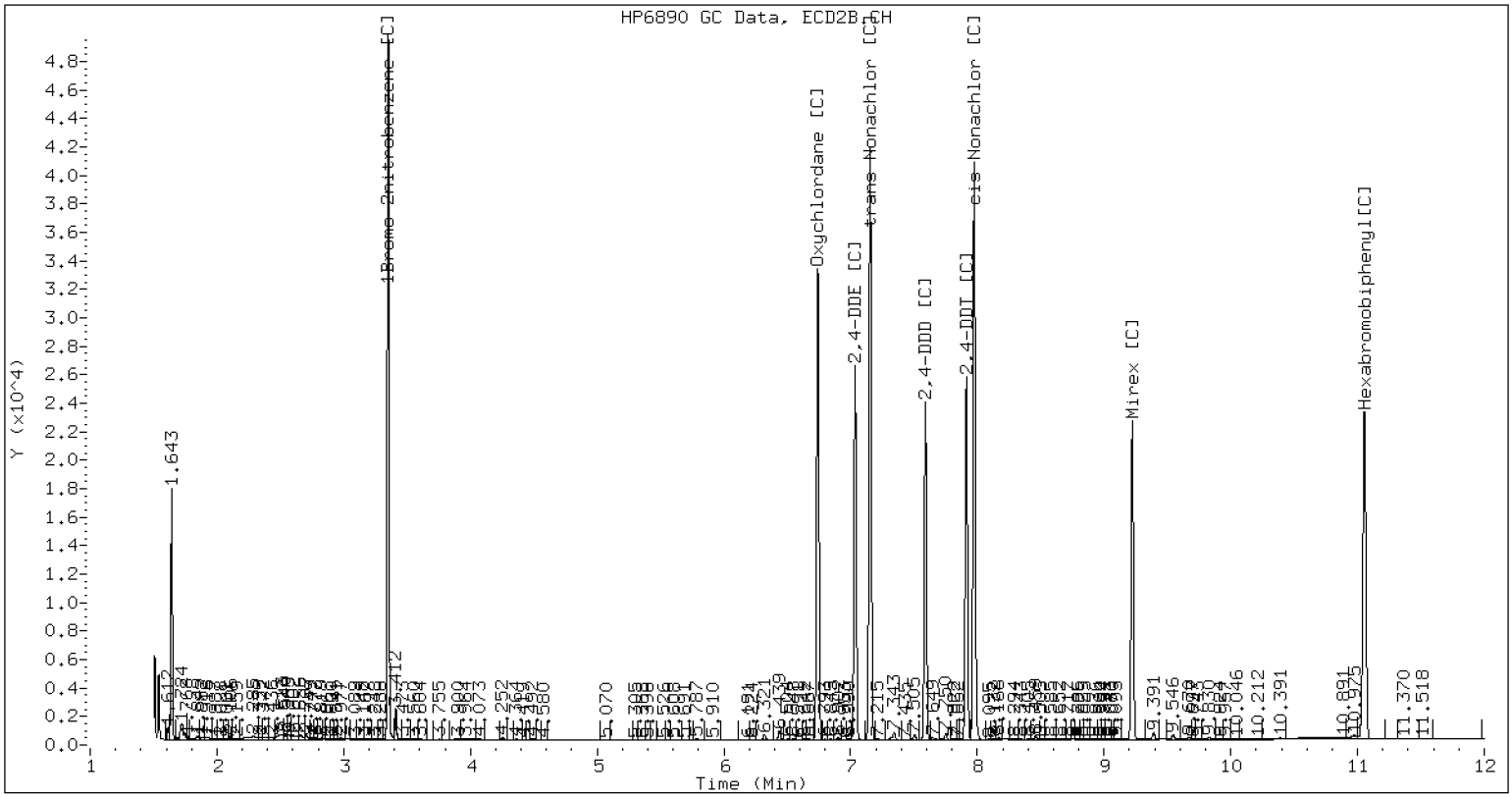
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121417.D SEQ-CALD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121417.D
Data file 2: /20221214.b/B20221214.b/22121417.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALD
Client ID:
Injection Date: 15-DEC-2022 00:12
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	0.000	1020828	6.741	0.000	1630330	140.48	142.04	1.1	Oxychlordane
6.106	-0.000	801828	7.036	0.000	1240933	133.65	132.03	1.2	2,4-DDE
6.397	0.000	1327091	7.155	0.000	2047915	139.63	146.04	4.5	trans-Nonachlor
6.680	-0.000	733651	7.591	0.000	1118552	137.46	139.45	1.4	2,4-DDD
6.956	-0.001	794021	7.913	0.000	1163676	137.69	140.88	2.3	2,4-DDT
7.112	-0.000	1301975	7.975	0.000	1956215	140.68	146.73	4.2	cis-Nonachlor
8.082	-0.001	815059	9.223	0.000	1108848	141.57	143.01	1.0	Mirex
3.800	-0.028	3997	----			0.43	0.00	---	Tetrachloro-m-xylene
----			10.471	0.004	3393	0.00	0.39	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

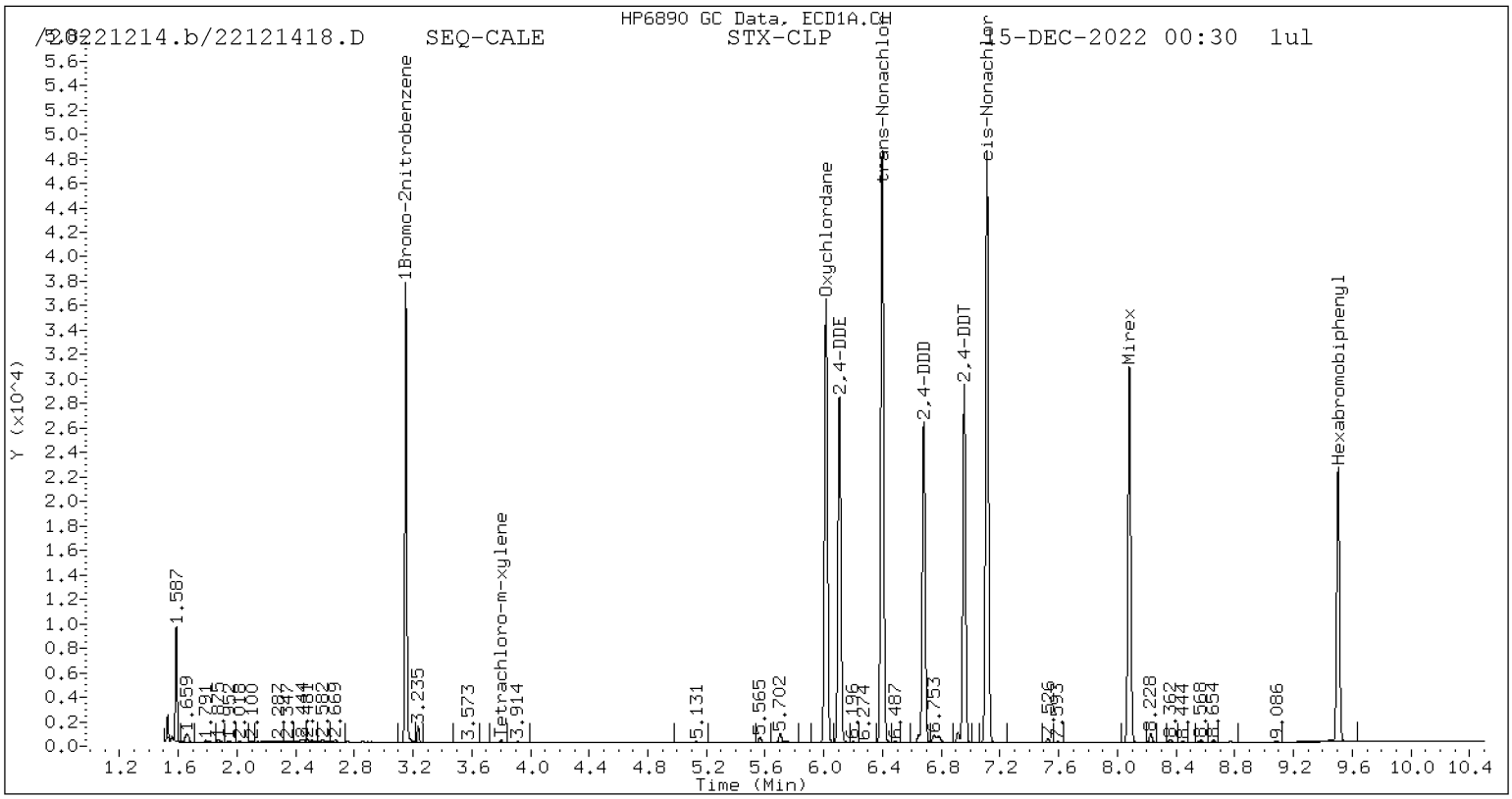
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	675789	-4.9
Hexabromobiphenyl	641833	611199	-4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1030648	-2.7
Hexabromobiphenyl	797125	783631	-1.7

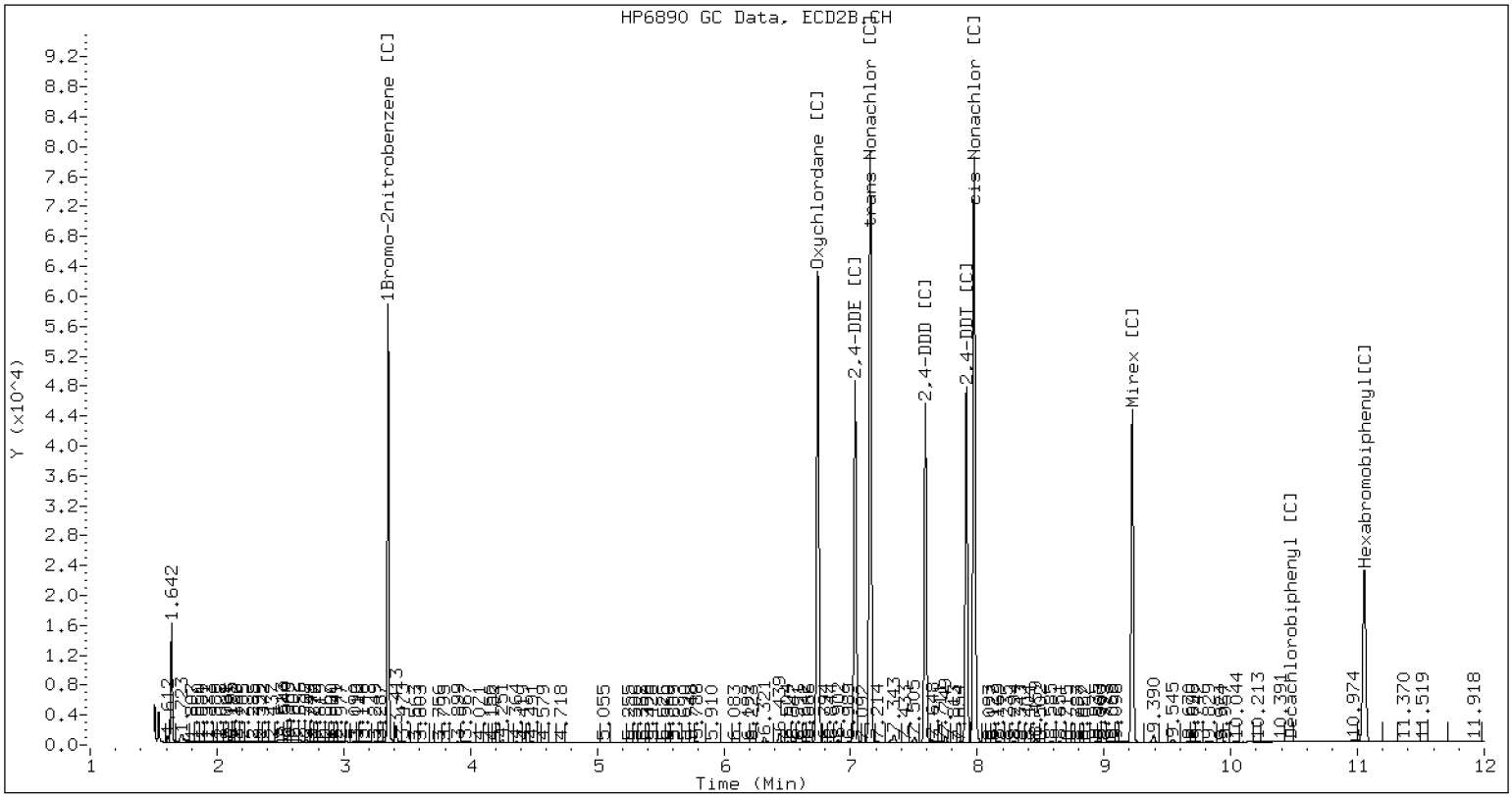
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121418.D SEQ-CALE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121418.D
Data file 2: /20221214.b/B20221214.b/22121418.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALE
Client ID:
Injection Date: 15-DEC-2022 00:30
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/16/2022 15:19
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.342	0.000	643235	4.860	-0.000	1047709	49.66	51.22	3.1	alpha-BHC
4.726	-0.000	242617	5.337	0.000	386388	48.66	49.69	2.1	beta-BHC
4.909	0.000	554797	5.692	0.001	897343	52.41	53.26	1.6	delta-BHC
4.646	0.001	573983	5.258	0.000	915596	51.11	52.75	3.1	gamma-BHC (Lindane)
5.130	0.000	495138	5.788	0.001	804002	49.55	51.13	3.1	Heptachlor
5.454	0.000	526615	6.191	0.000	842909	47.03	46.95	0.2	Aldrin
6.130	0.000	469481	6.846	0.000	724932	48.36	48.83	1.0	Heptachlor epoxide b
6.573	0.000	423102	7.289	-0.000	632890	47.49	48.37	1.8	Endosulfan I
6.832	0.000	478299	7.583	0.000	724854	49.97	50.14	0.3	Dieldrin
6.489	0.000	448741	7.371	0.000	670346	50.49	50.56	0.1	4,4'-DDE
7.082	0.001	396143	7.907	0.000	551004	50.36	50.73	0.7	Endrin
7.318	0.001	350431	8.118	0.001	537104	49.49	48.24	2.6	Endosulfan II
7.136	0.001	355688	7.977	0.001	525927	50.19	49.78	0.8	4,4'-DDD
8.180	0.000	347949	8.716	0.001	502438	51.75	51.39	0.7	Endosulfan sulfate
7.428	0.001	368644	8.295	-0.000	524685	51.48	51.45	0.1	4,4'-DDT
7.913	0.001	174306	8.935	-0.001	238791	54.93	52.91	3.7	Methoxychlor
8.454	0.000	394474	9.240	-0.000	540431	51.21	51.18	0.1	Endrin ketone
7.746	0.001	316262	8.448	0.000	449269	56.00	57.20	2.1	Endrin aldehyde
6.271	0.000	490842	7.056	0.000	748350	49.78	50.55	1.5	trans-Chlordane
6.417	0.001	469513	7.216	0.000	700871	47.47	48.39	1.9	cis-Chlordane
----			2.512	0.011	11364	0.00	0.59	---	Hexachlorobutadiene
----			4.719	0.001	634	0.00	0.03	---	Hexachlorobenzene
----			4.220	-0.000	1724	0.00	0.12	---	Tetrachloro-m-xylene
----			10.468	0.001	643	0.00	0.08	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

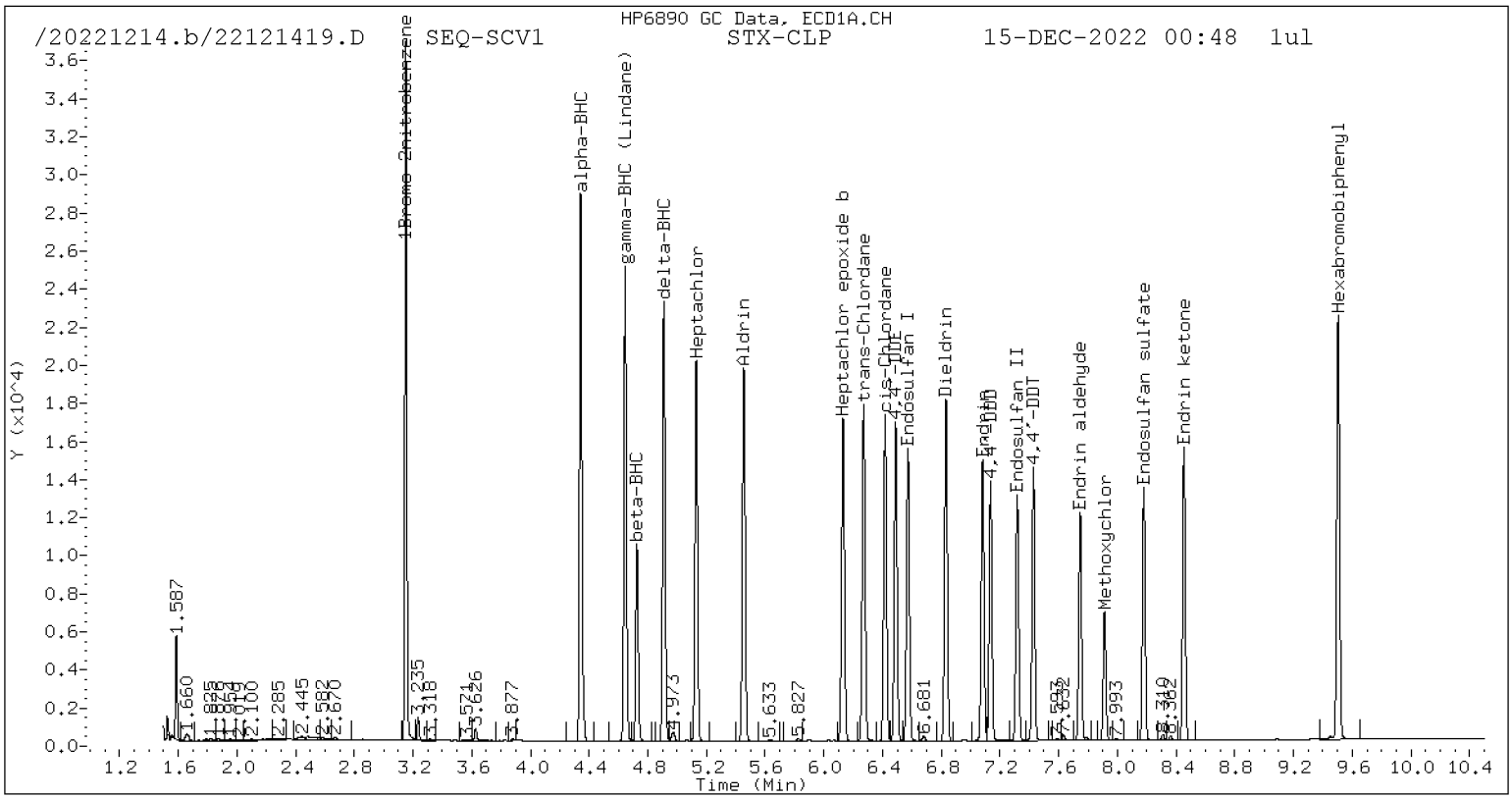
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672755	-5.3
Hexabromobiphenyl	641833	599983	-6.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1020655	-3.6
Hexabromobiphenyl	797125	763949	-4.2

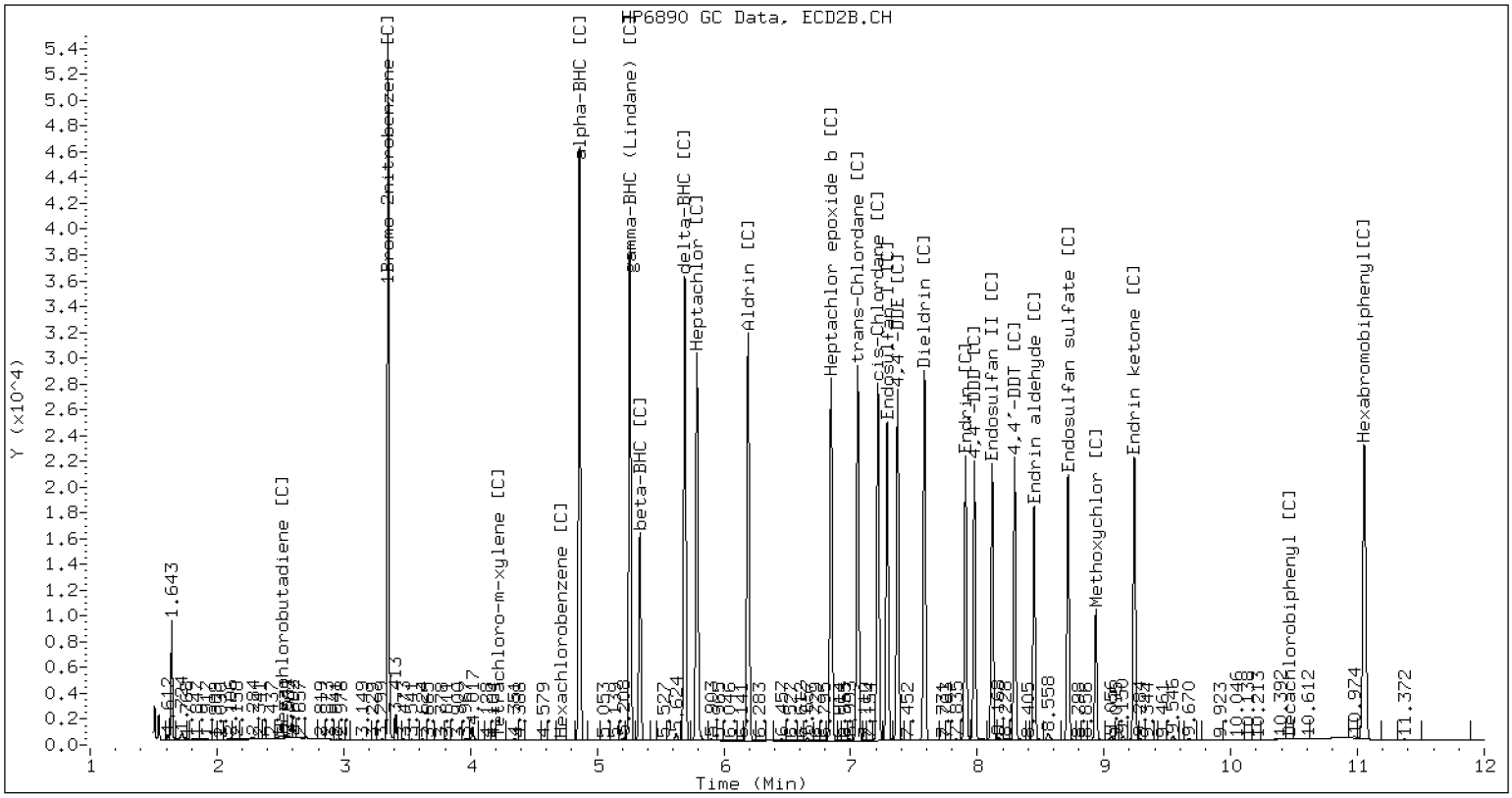
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121419.D SEQ-SCV1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121419.D
Data file 2: /20221214.b/B20221214.b/22121419.D
Method: \20221214.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV1
Client ID:
Injection Date: 15-DEC-2022 00:48
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
6.014	-0.000	374516	6.741	0.000	591348	51.08	50.07	2.0	Oxychlordane
6.106	-0.000	261097	7.036	-0.000	403824	43.13	41.76	3.2	2,4-DDE
6.397	-0.000	444133	7.155	-0.000	657777	46.31	45.91	0.9	trans-Nonachlor
6.681	0.000	222534	7.591	0.000	334706	41.32	40.84	1.2	2,4-DDD
6.956	-0.001	262722	7.914	0.000	382016	45.15	45.26	0.2	2,4-DDT
7.111	-0.001	455894	7.975	0.000	655718	48.82	48.13	1.4	cis-Nonachlor
8.081	-0.001	256593	9.223	0.000	343173	44.17	43.31	2.0	Mirex
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

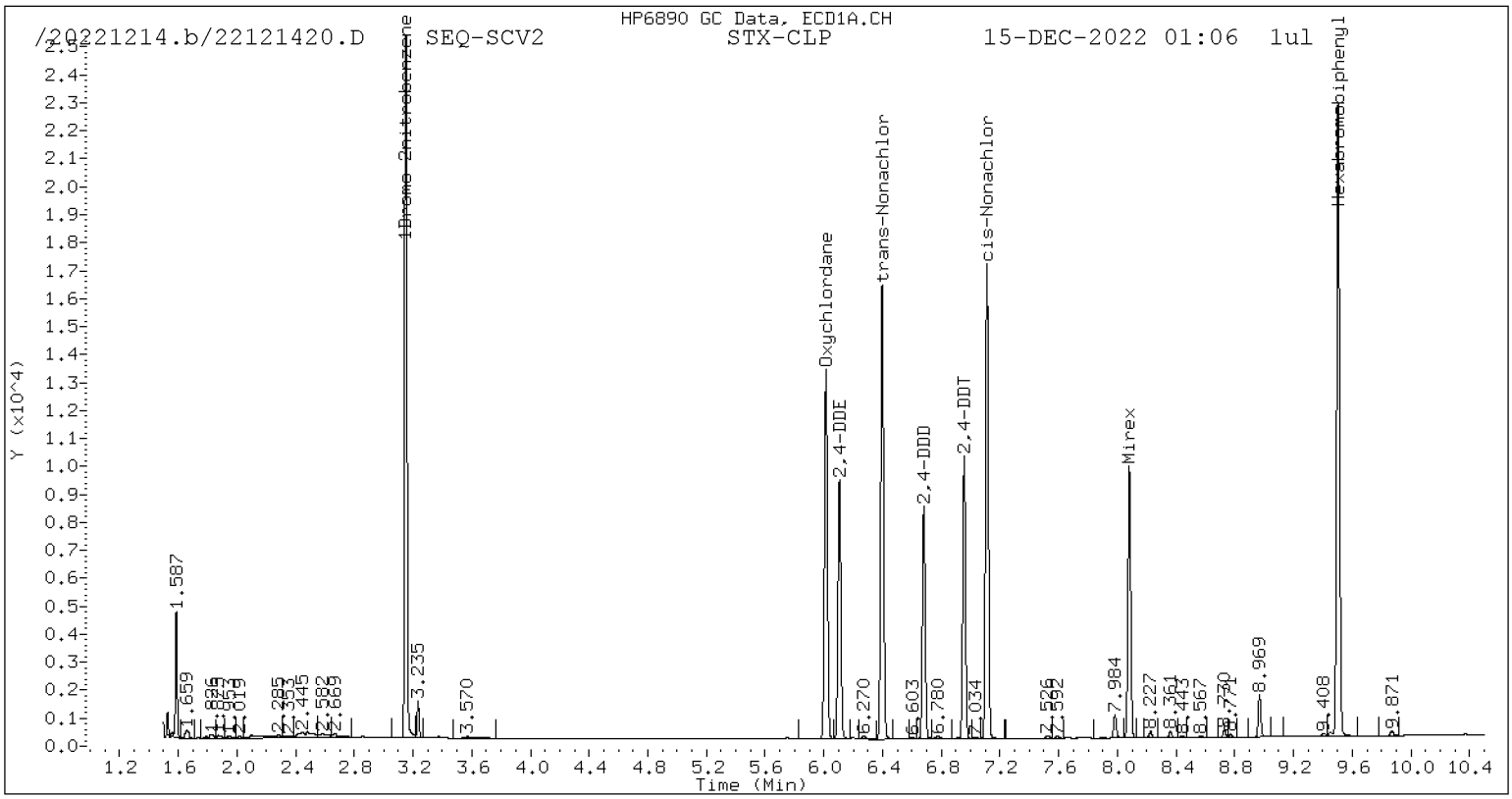
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	687052	-3.3
Hexabromobiphenyl	641833	616730	-3.9

Column 2

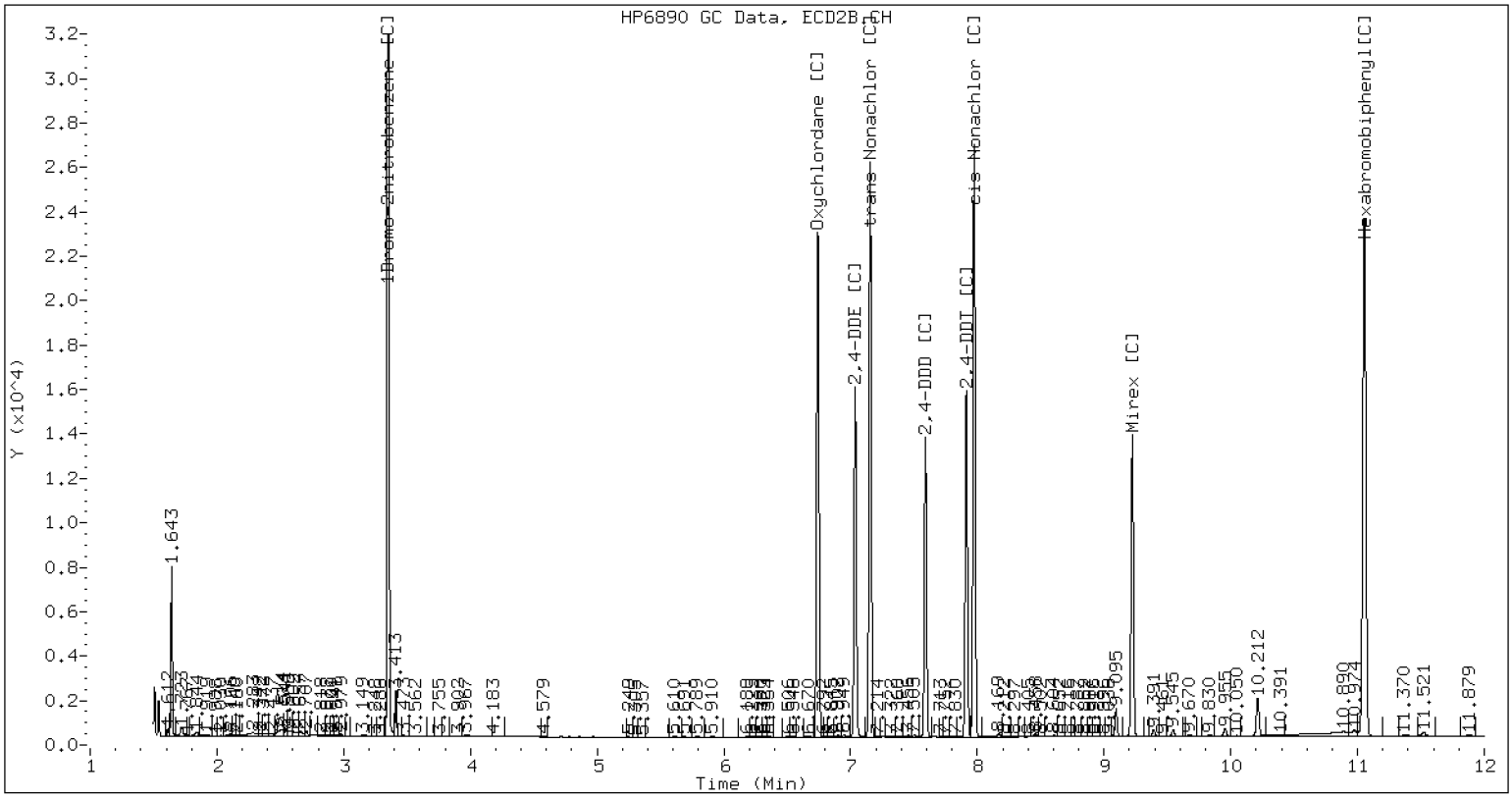
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1060438	0.2
Hexabromobiphenyl	797125	800740	0.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121420.D
Data file 2: /20221214.b/B20221214.b/22121420.D
Method: \20221214.b\PEST.m
Compound Sublist: WND.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-SCV2
Client ID:
Injection Date: 15-DEC-2022 01:06
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			4.215	-0.006	361	0.00	0.02	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	601512	-15.4
Hexabromobiphenyl	641833	690103	7.5

Column 2

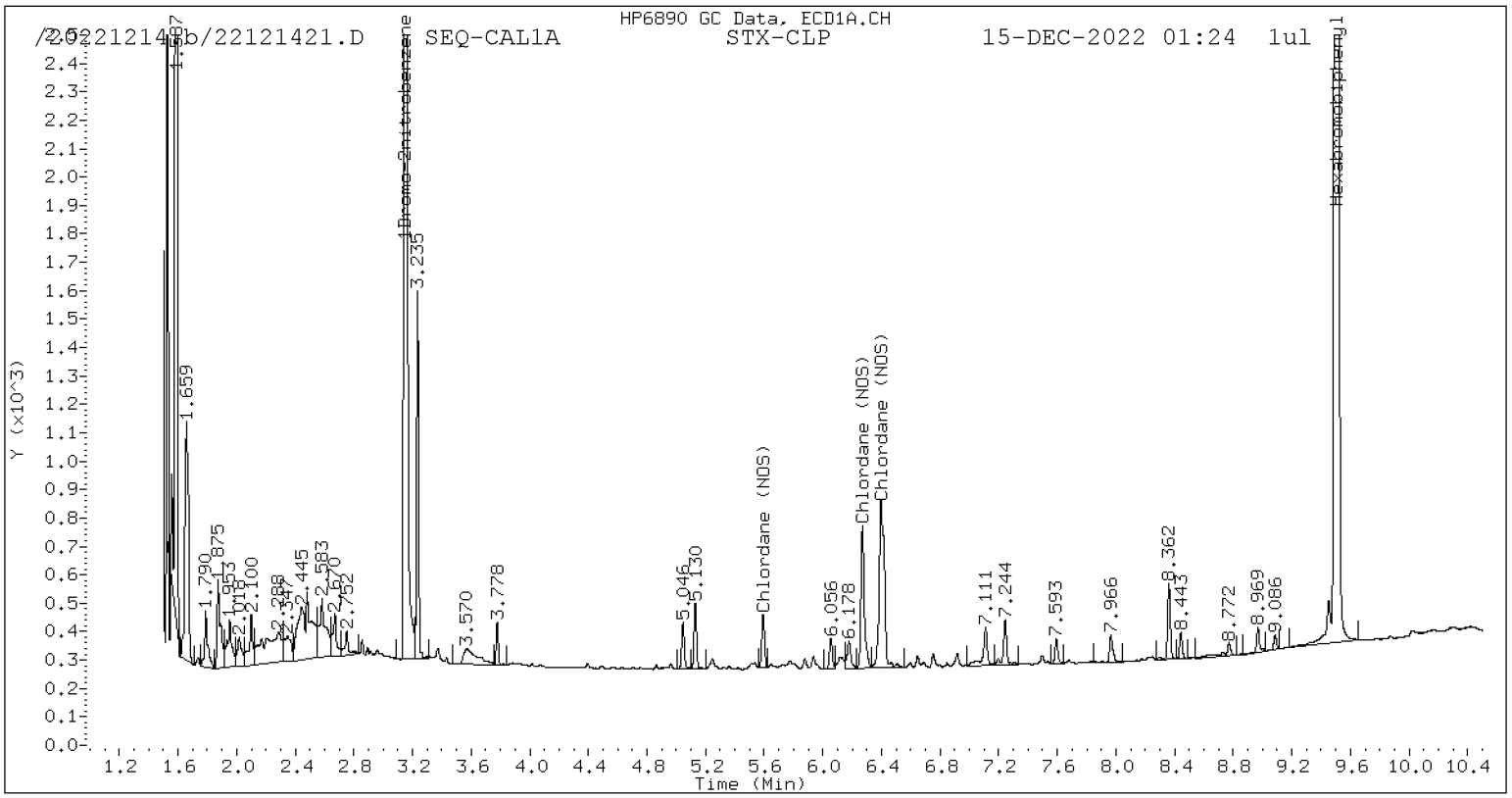
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	776759	-26.6
Hexabromobiphenyl	797125	1058847	32.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	5054	13.1	1	5.612	-0.000	6415	12.8
Chlordane (NOS)	2	6.271	-0.000	15913	12.4	2	6.349	-0.000	7689	13.7
Chlordane (NOS)	3	6.399	0.000	29332	13.1	3	7.155	-0.001	23386	12.3

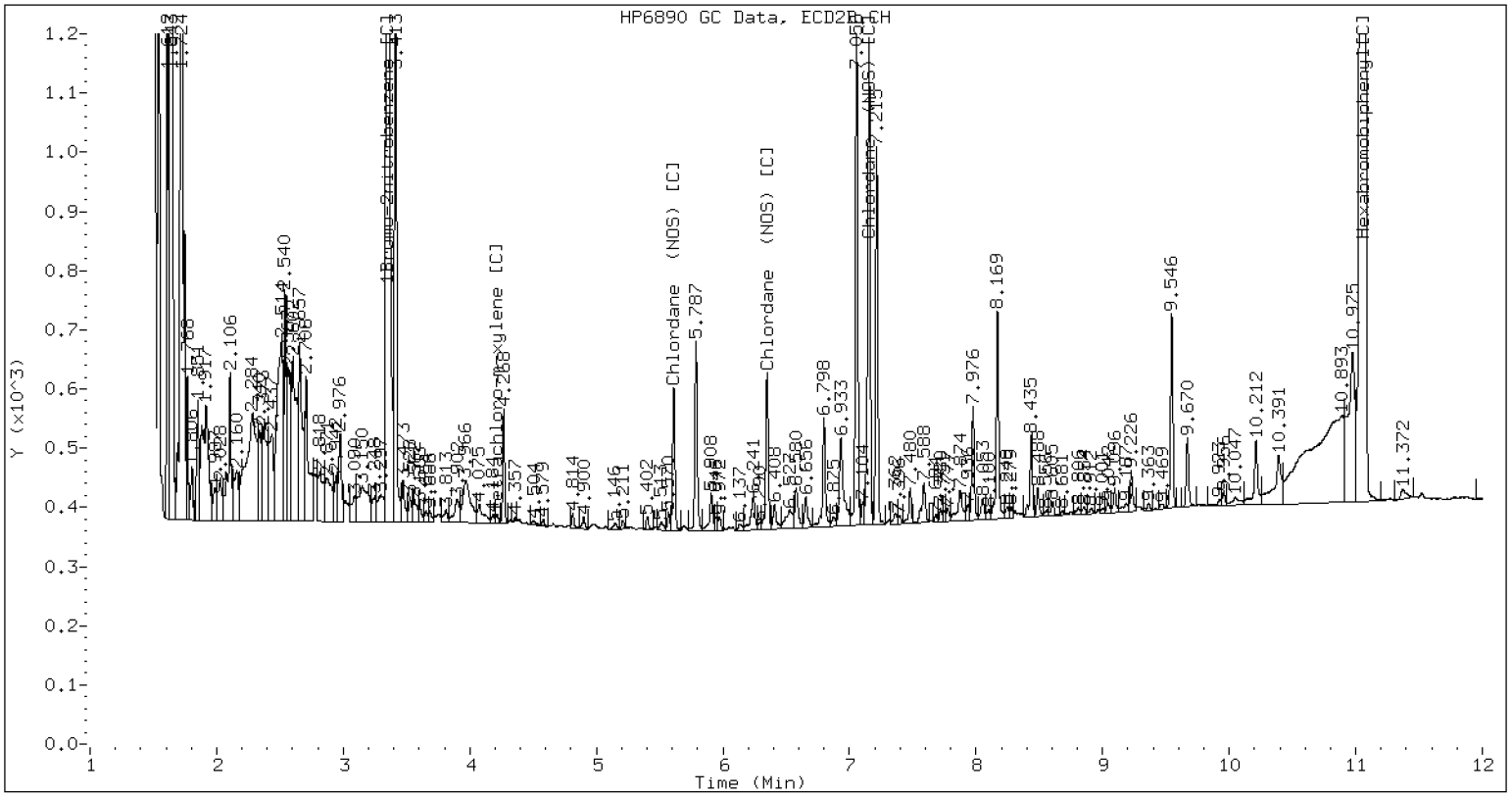
Total STX-CLPAve (3 peaks): 12.882 Total CLP2Ave (3 peaks): 12.916 RPD = 0
Corrected Ave (3 peaks): 12.882 Corrected Ave (3 peaks): 12.916 RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121421.D SEQ-CAL1A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121421.D
Data file 2: /20221214.b/B20221214.b/22121421.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL1A
Client ID:
Injection Date: 15-DEC-2022 01:24
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	611280	-14.0
Hexabromobiphenyl	641833	704720	9.8

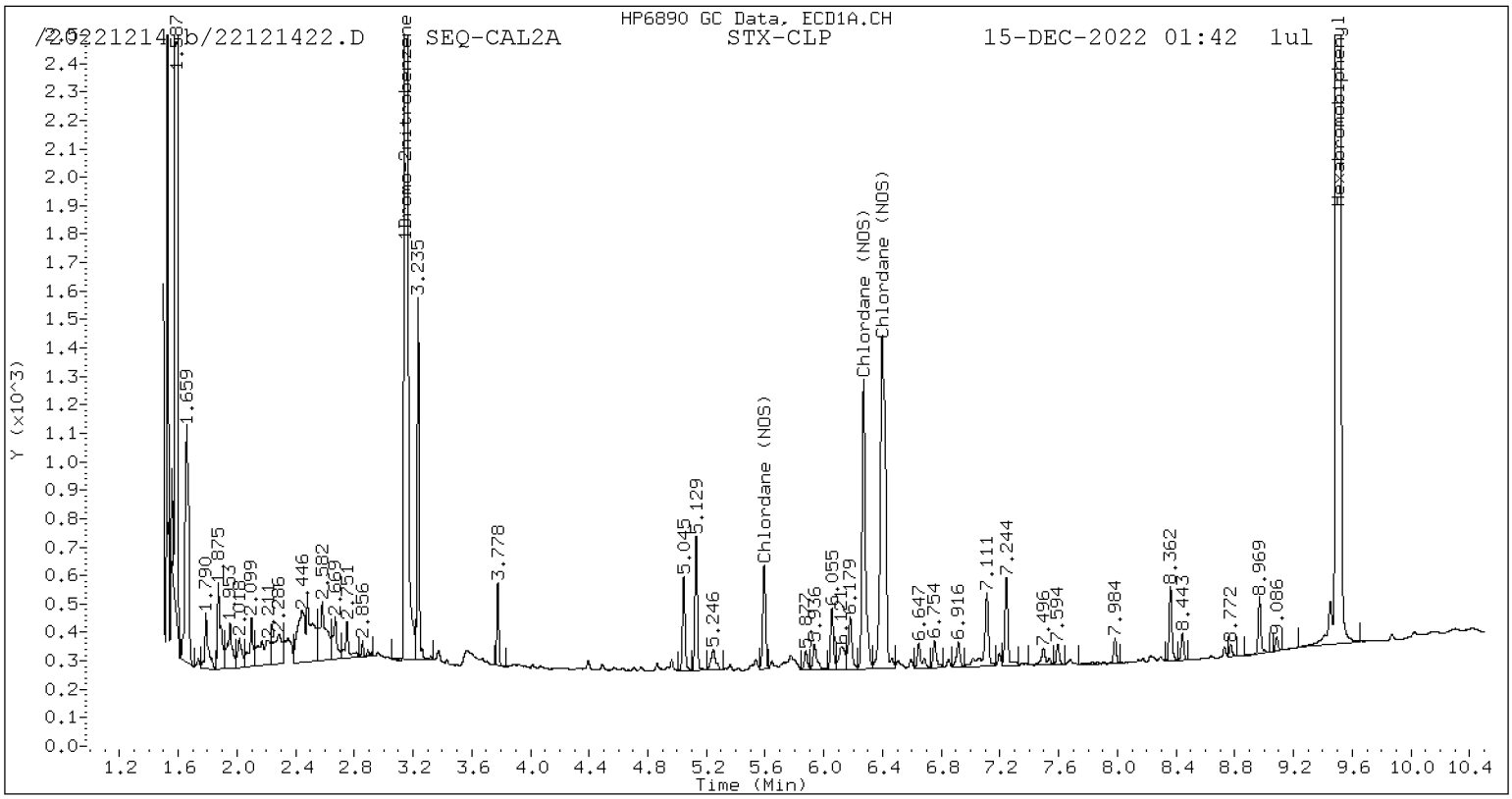
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	793365	-25.1
Hexabromobiphenyl	797125	1083049	35.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

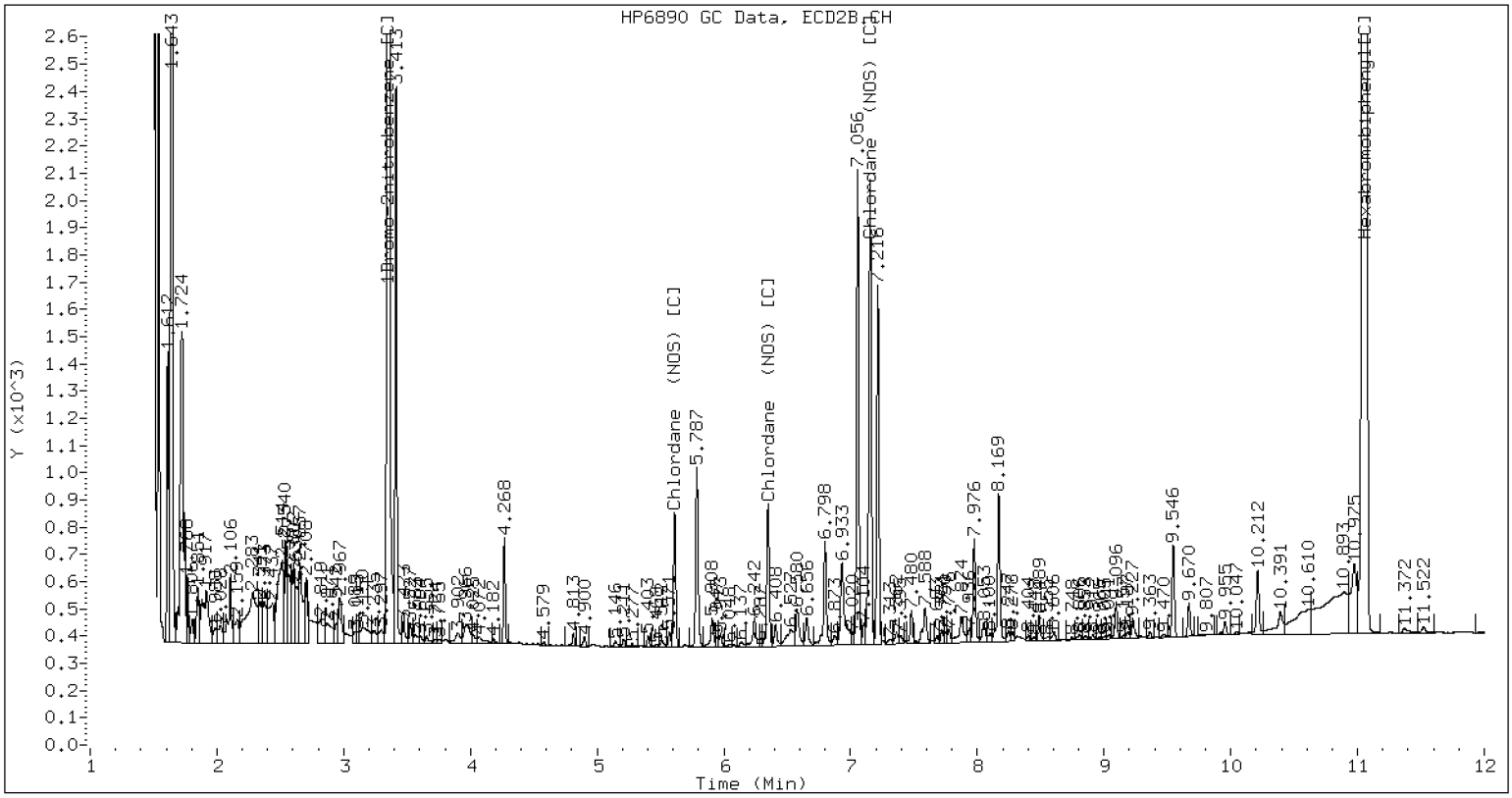
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.000	10046	25.5	1	5.612	-0.000	12488	24.4	
Chlordane (NOS)	2	6.271	-0.000	32715	25.0	2	6.348	-0.001	15023	26.1	
Chlordane (NOS)	3	6.399	0.000	58016	25.4	3	7.155	-0.000	48236	24.8	
Total STX-CLPAve (3 peaks): 25.309						Total CLP2Ave (3 peaks): 25.077				RPD = 1	
Corrected Ave (3 peaks): 25.309						Corrected Ave (3 peaks): 25.077				RPD = 1	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121422.D SEQ-CAL2A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121422.D
Data file 2: /20221214.b/B20221214.b/22121422.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL2A
Client ID:
Injection Date: 15-DEC-2022 01:42
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	592438	-16.6
Hexabromobiphenyl	641833	685225	6.8

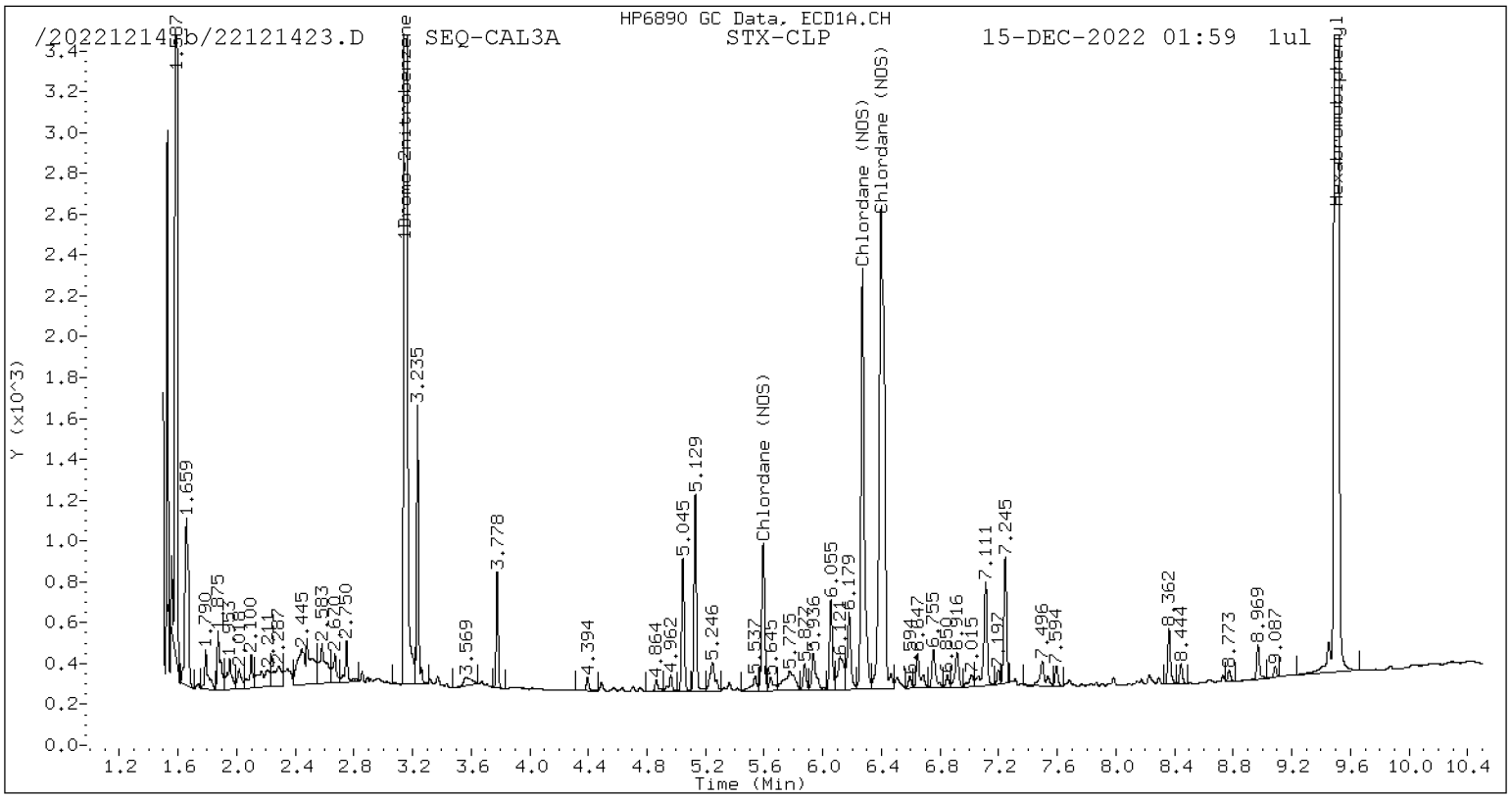
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	769029	-27.4
Hexabromobiphenyl	797125	1054742	32.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

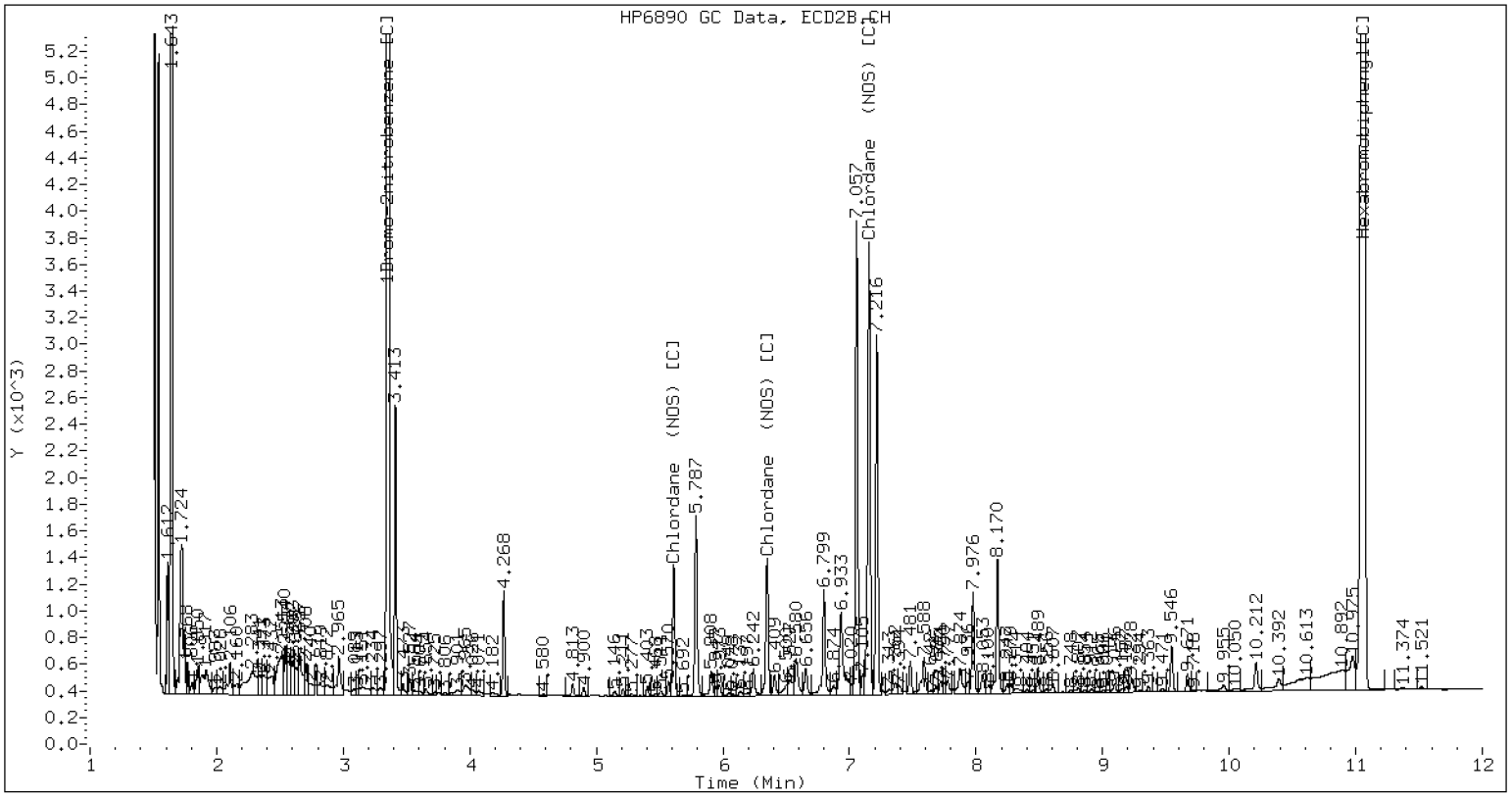
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	20502	53.5	1	5.612	-0.000	24816	49.7	
Chlordane (NOS)	2	6.271	-0.000	66320	52.2	2	6.349	0.000	29114	51.9	
Chlordane (NOS)	3	6.399	0.000	116820	52.6	3	7.155	-0.000	98401	51.9	
Total STX-CLPAve (3 peaks): 52.767						Total CLP2Ave (3 peaks): 51.179				RPD = 3	
Corrected Ave (3 peaks): 52.767						Corrected Ave (3 peaks): 51.179				RPD = 3	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121423.D SEQ-CAL3A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121423.D
Data file 2: /20221214.b/B20221214.b/22121423.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL3A
Client ID:
Injection Date: 15-DEC-2022 01:59
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	584808	-17.7
Hexabromobiphenyl	641833	675665	5.3

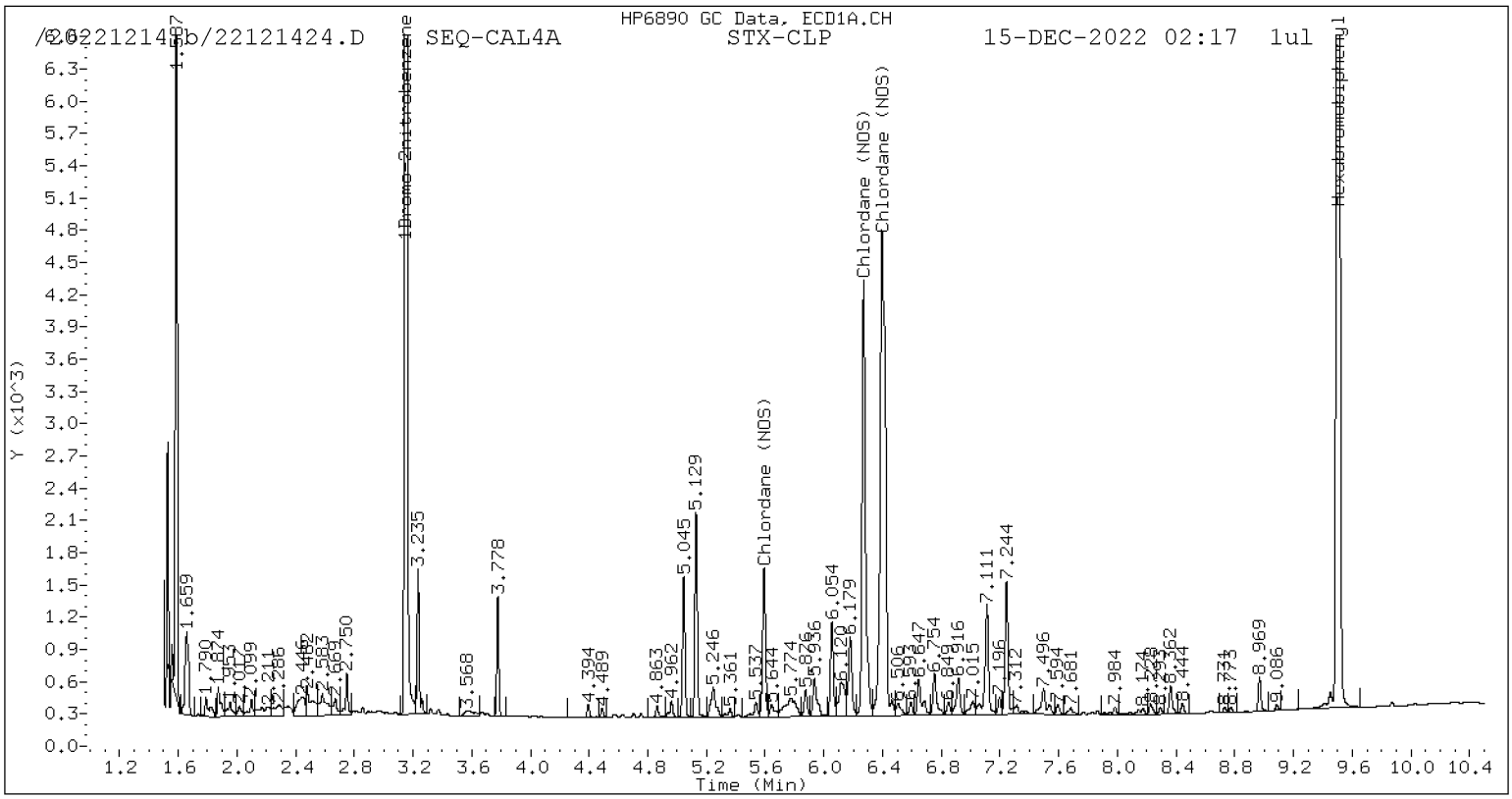
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	758204	-28.4
Hexabromobiphenyl	797125	1039488	30.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

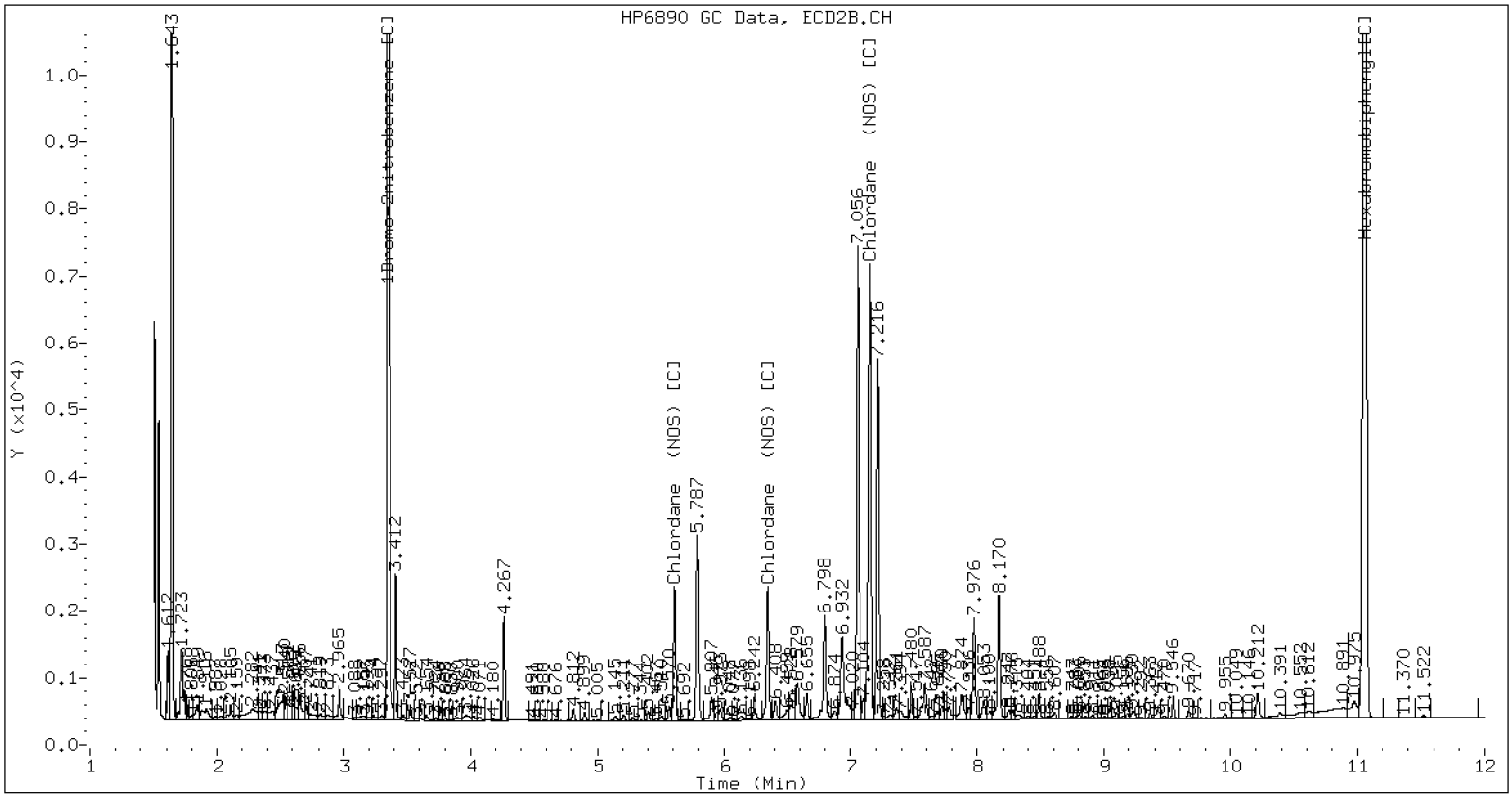
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	-0.000	39696	105.0	1	5.611	-0.001	49889	101.4	
Chlordane (NOS)	2	6.271	-0.000	131726	105.2	2	6.348	-0.001	56608	102.5	
Chlordane (NOS)	3	6.398	-0.001	229050	104.6	3	7.155	-0.000	195665	104.7	
Total STX-CLPAve (3 peaks): 104.931						Total CLP2Ave (3 peaks): 102.854				RPD = 2	
Corrected Ave (3 peaks): 104.931						Corrected Ave (3 peaks): 102.854				RPD = 2	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121424.D SEQ-CAL4A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121424.D
Data file 2: /20221214.b/B20221214.b/22121424.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL4A
Client ID:
Injection Date: 15-DEC-2022 02:17
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	612592	-13.8
Hexabromobiphenyl	641833	705251	9.9

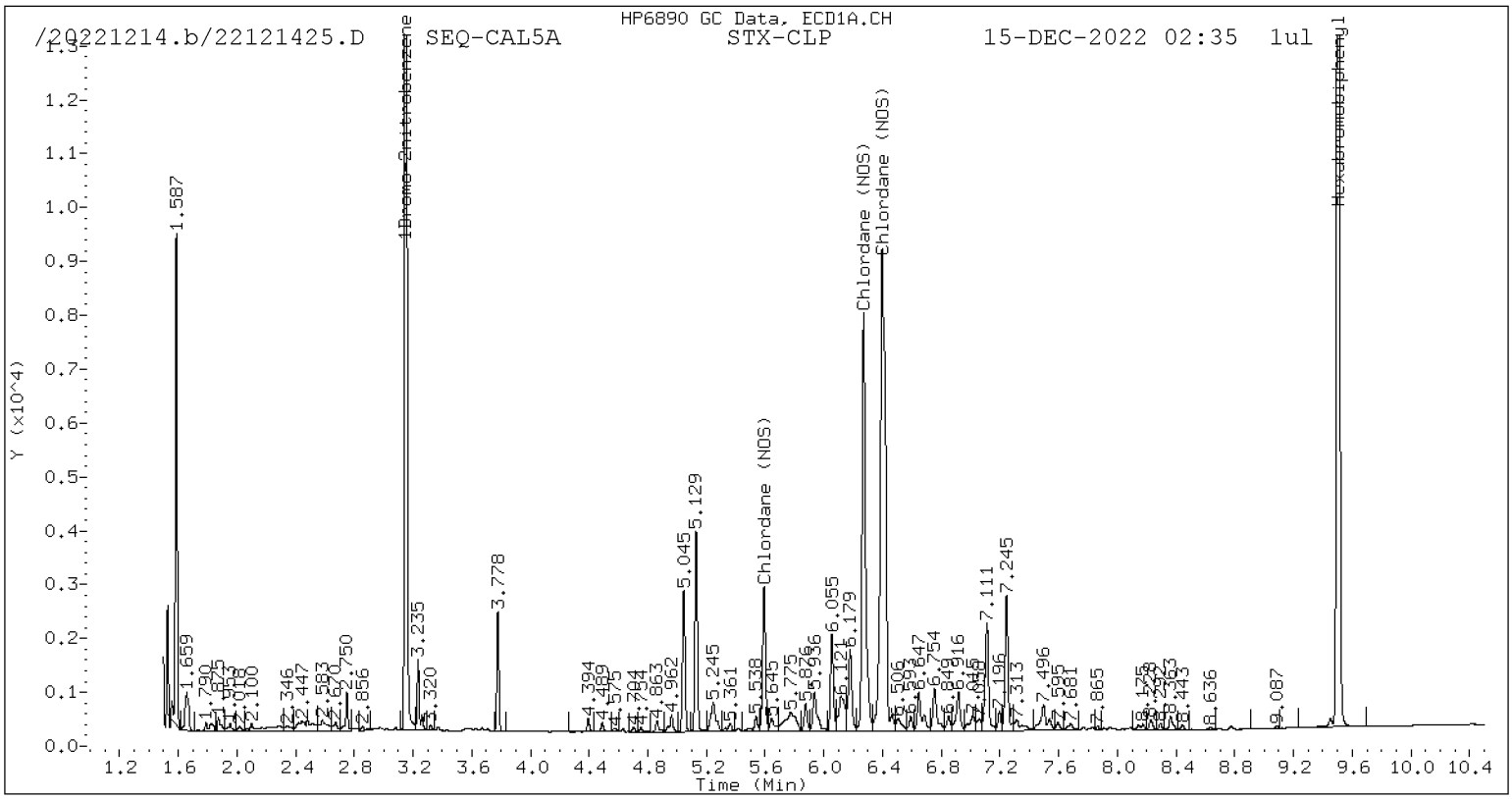
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	792856	-25.1
Hexabromobiphenyl	797125	1079718	35.5

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

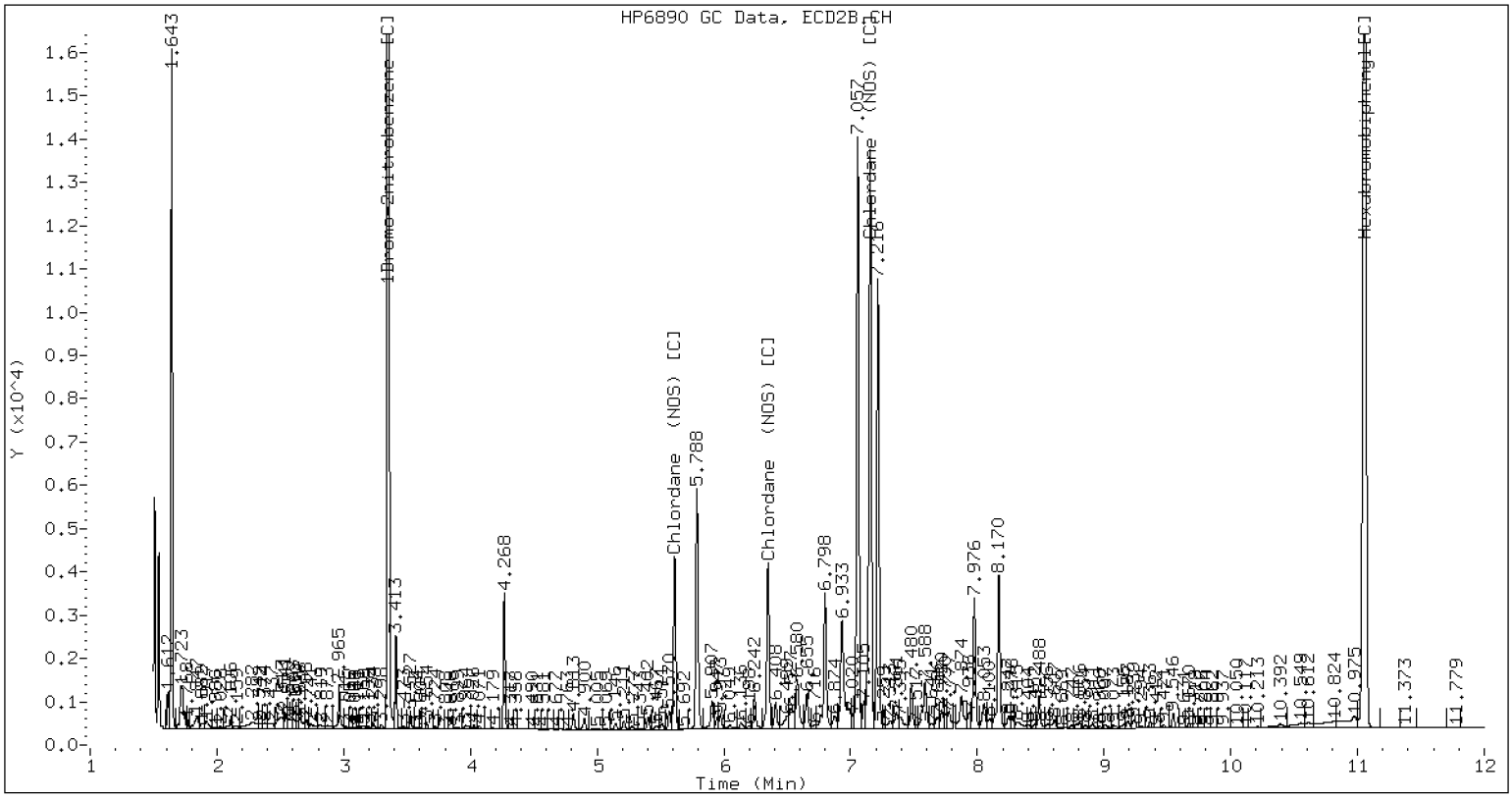
	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Chlordane (NOS)	1	5.593	0.000	77307	196.0	1	5.612	-0.000	101527	198.7
Chlordane (NOS)	2	6.271	0.000	261078	199.7	2	6.349	-0.001	110757	193.0
Chlordane (NOS)	3	6.399	0.000	449301	196.5	3	7.155	-0.000	389197	200.5
Total STX-CLPAve (3 peaks): 197.408						Total CLP2Ave (3 peaks): 197.390				RPD = 0
Corrected Ave (3 peaks): 197.408						Corrected Ave (3 peaks): 197.390				RPD = 0

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121425.D SEQ-CAL5A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121425.D
Data file 2: /20221214.b/B20221214.b/22121425.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL5A
Client ID:
Injection Date: 15-DEC-2022 02:35
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
----			----			0.00	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	603526	-15.1
Hexabromobiphenyl	641833	699031	8.9

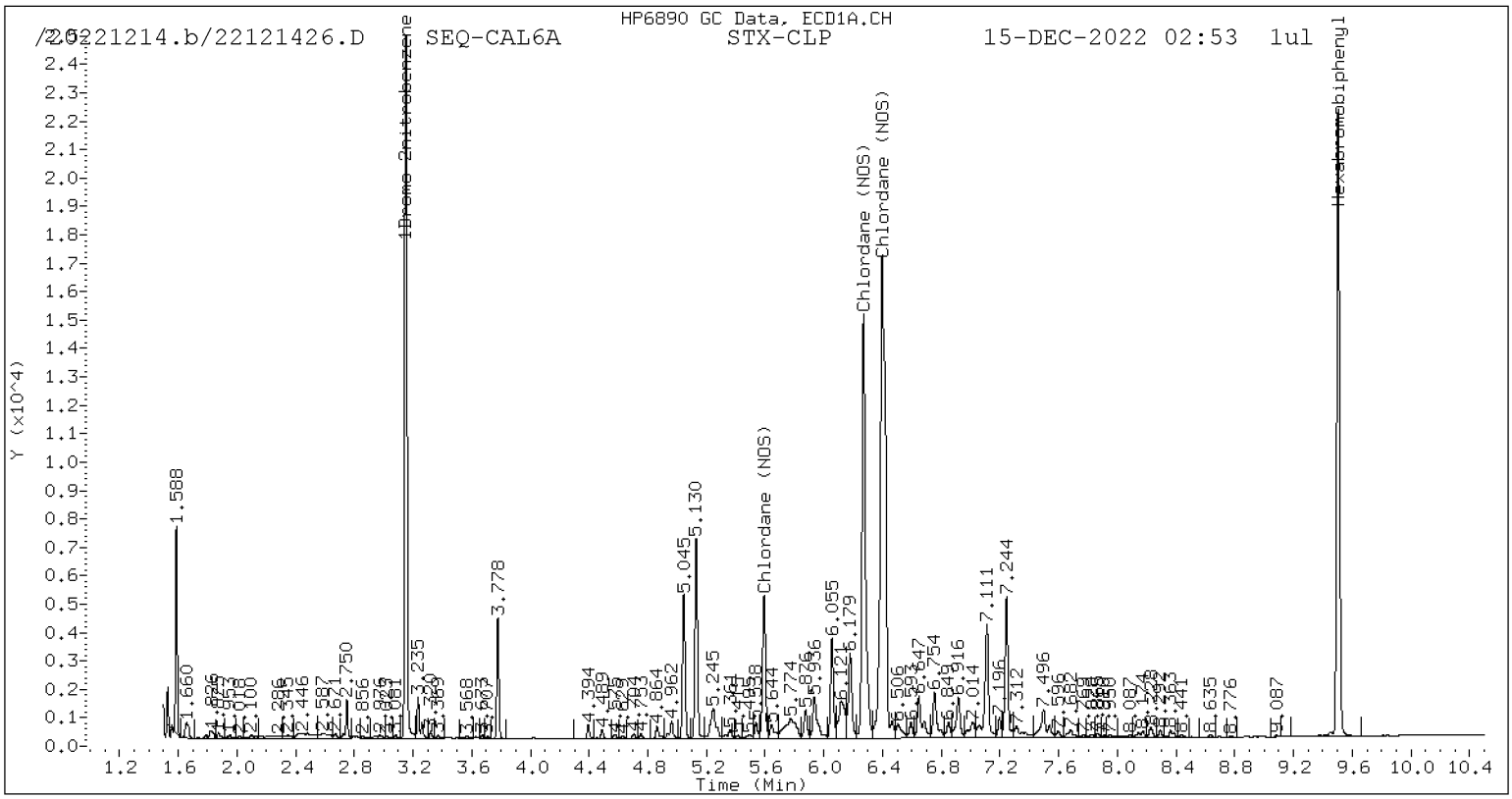
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	779405	-26.4
Hexabromobiphenyl	797125	1068976	34.1

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

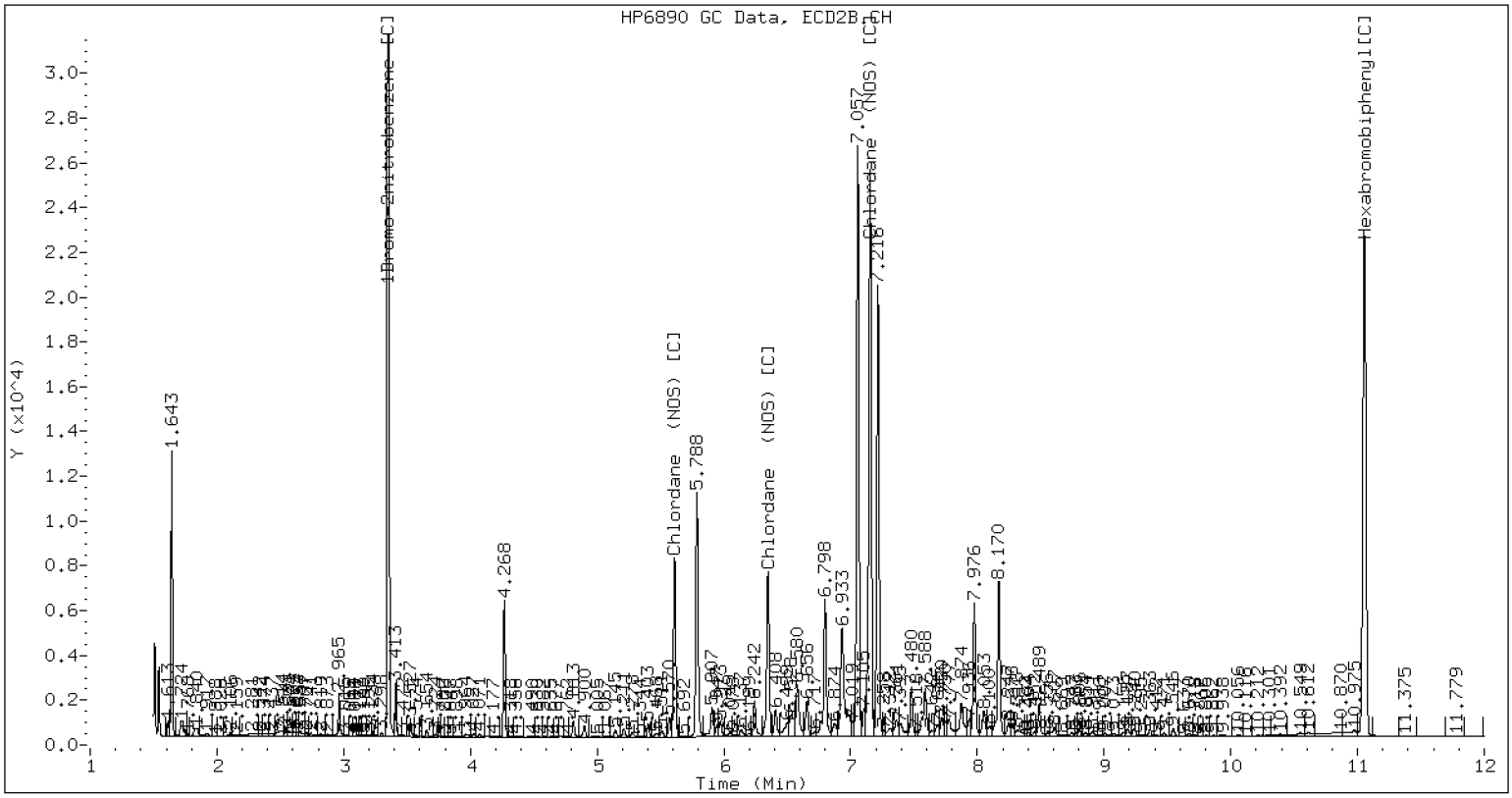
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.592	-0.000	146950	375.8	1	5.612	-0.000	203386	402.0	
Chlordane (NOS)	2	6.271	-0.000	503310	388.5	2	6.349	-0.000	212637	374.2	
Chlordane (NOS)	3	6.399	0.000	857451	378.4	3	7.155	-0.000	752631	391.6	
Total STX-CLPAve (3 peaks): 380.894						Total CLP2Ave (3 peaks): 389.290					RPD = 2
Corrected Ave (3 peaks): 380.894						Corrected Ave (3 peaks): 389.290					RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121426.D SEQ-CAL6A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121426.D
Data file 2: /20221214.b/B20221214.b/22121426.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL6A
Client ID:
Injection Date: 15-DEC-2022 02:53
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
----			----			0.00	0.00	---	Tetrachloro-m-xylene
9.380	0.025	1930	----			0.31	0.00	---	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	610159	-14.1
Hexabromobiphenyl	641833	692215	7.8

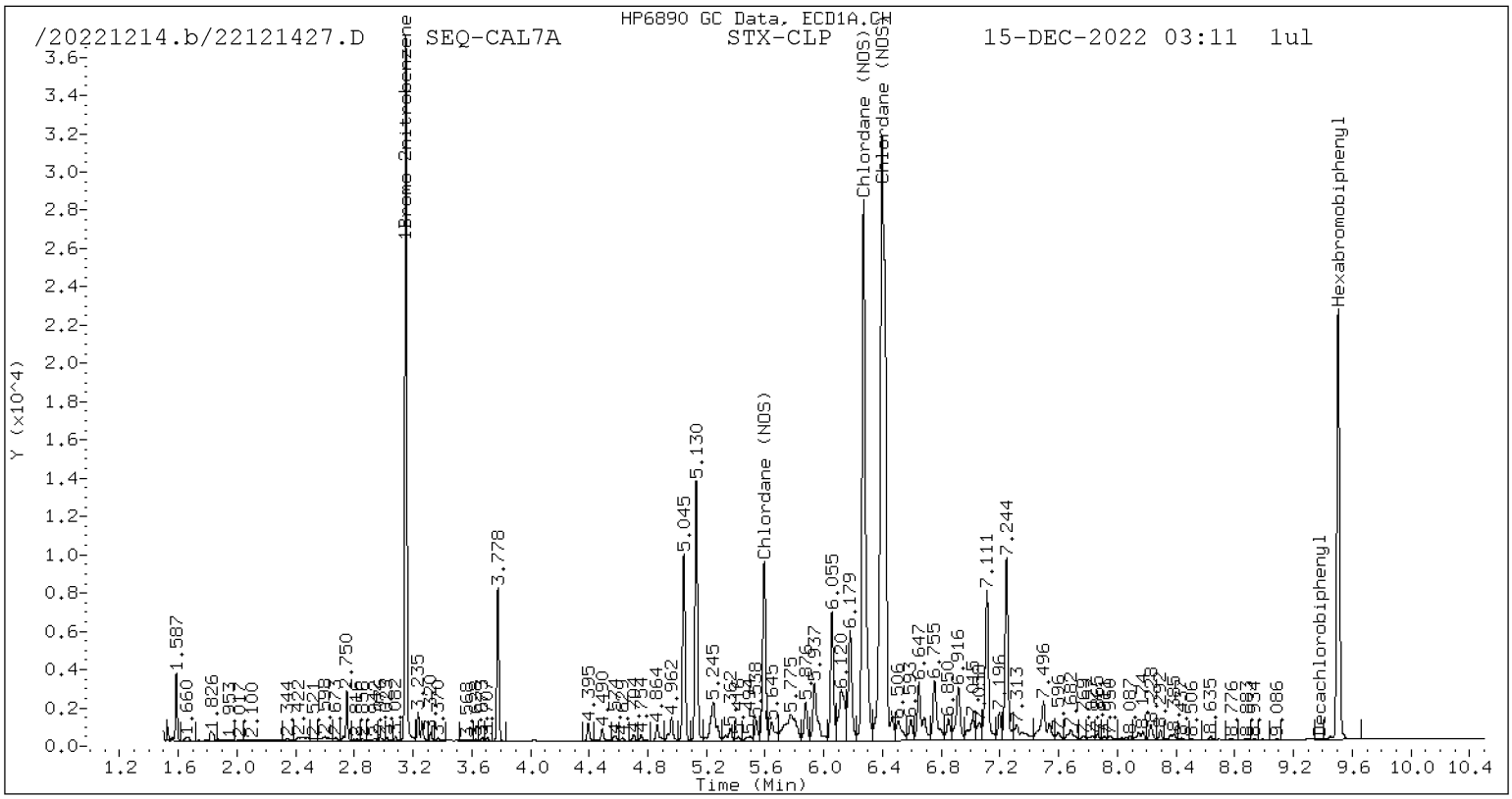
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	790388	-25.4
Hexabromobiphenyl	797125	1059143	32.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

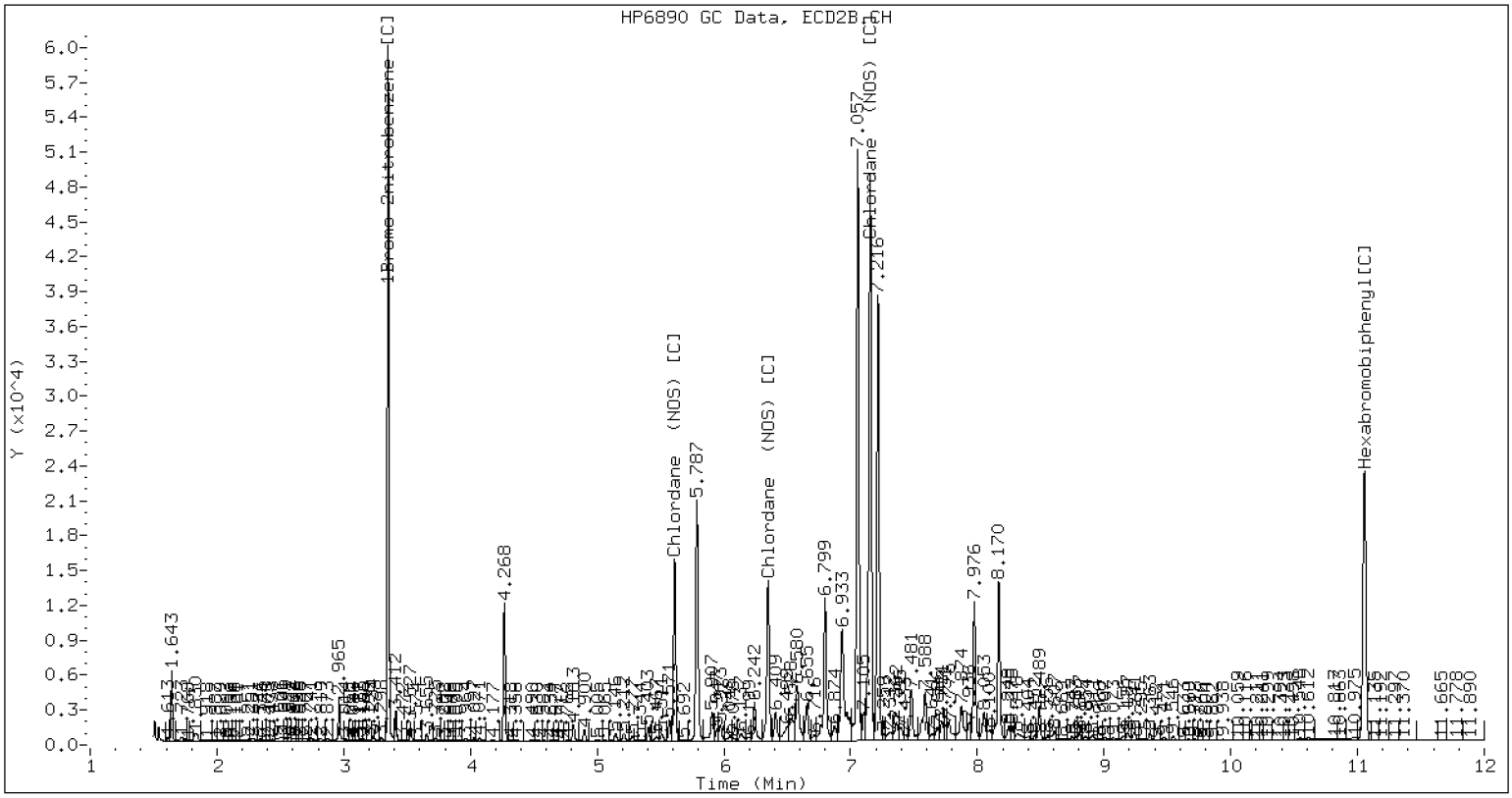
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Chlordane (NOS)	1	5.593	0.001	276980	715.3	1	5.612	0.000	398620	795.3	
Chlordane (NOS)	2	6.271	-0.000	961368	749.3	2	6.349	0.000	405170	719.7	
Chlordane (NOS)	3	6.399	-0.000	1631241	727.0	3	7.155	0.000	1462876	768.2	
Total STX-CLPAve (3 peaks): 730.539						Total CLP2Ave (3 peaks): 761.064				RPD = 4	
Corrected Ave (3 peaks): 730.539						Corrected Ave (3 peaks): 761.064				RPD = 4	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121427.D SEQ-CAL7A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121427.D
Data file 2: /20221214.b/B20221214.b/22121427.D
Method: \20221214.b\PEST.m
Compound Sublist: TECHCHLOR.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL7A
Client ID:
Injection Date: 15-DEC-2022 03:11
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	8893	4.221	0.000	14795	0.95	0.98	4.0	Tetrachloro-m-xylene
9.355	0.000	15511	10.467	0.000	24896	2.54	2.86	11.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	691781	-2.7
Hexabromobiphenyl	641833	602865	-6.1

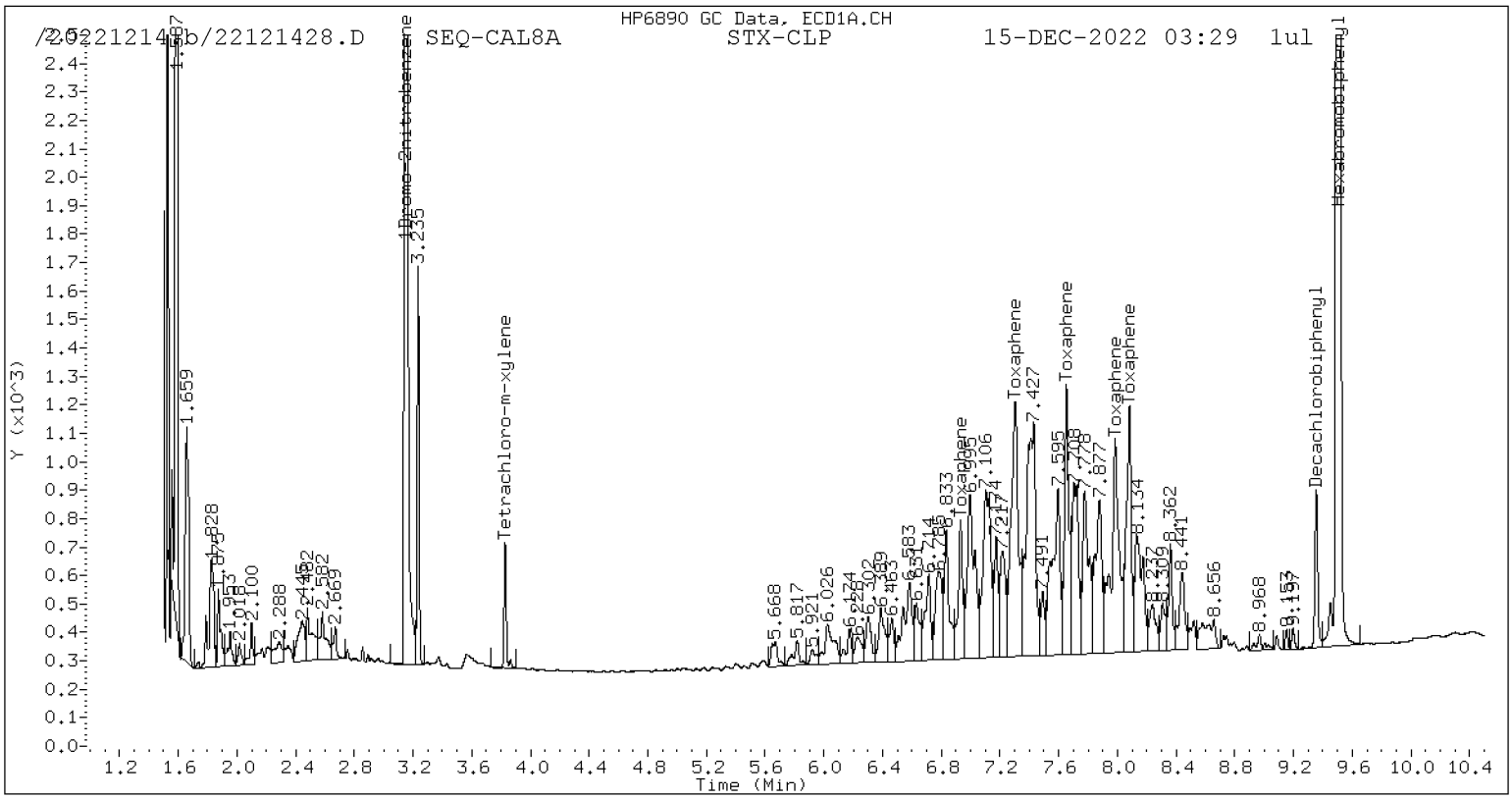
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1068328	0.9
Hexabromobiphenyl	797125	788806	-1.0

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

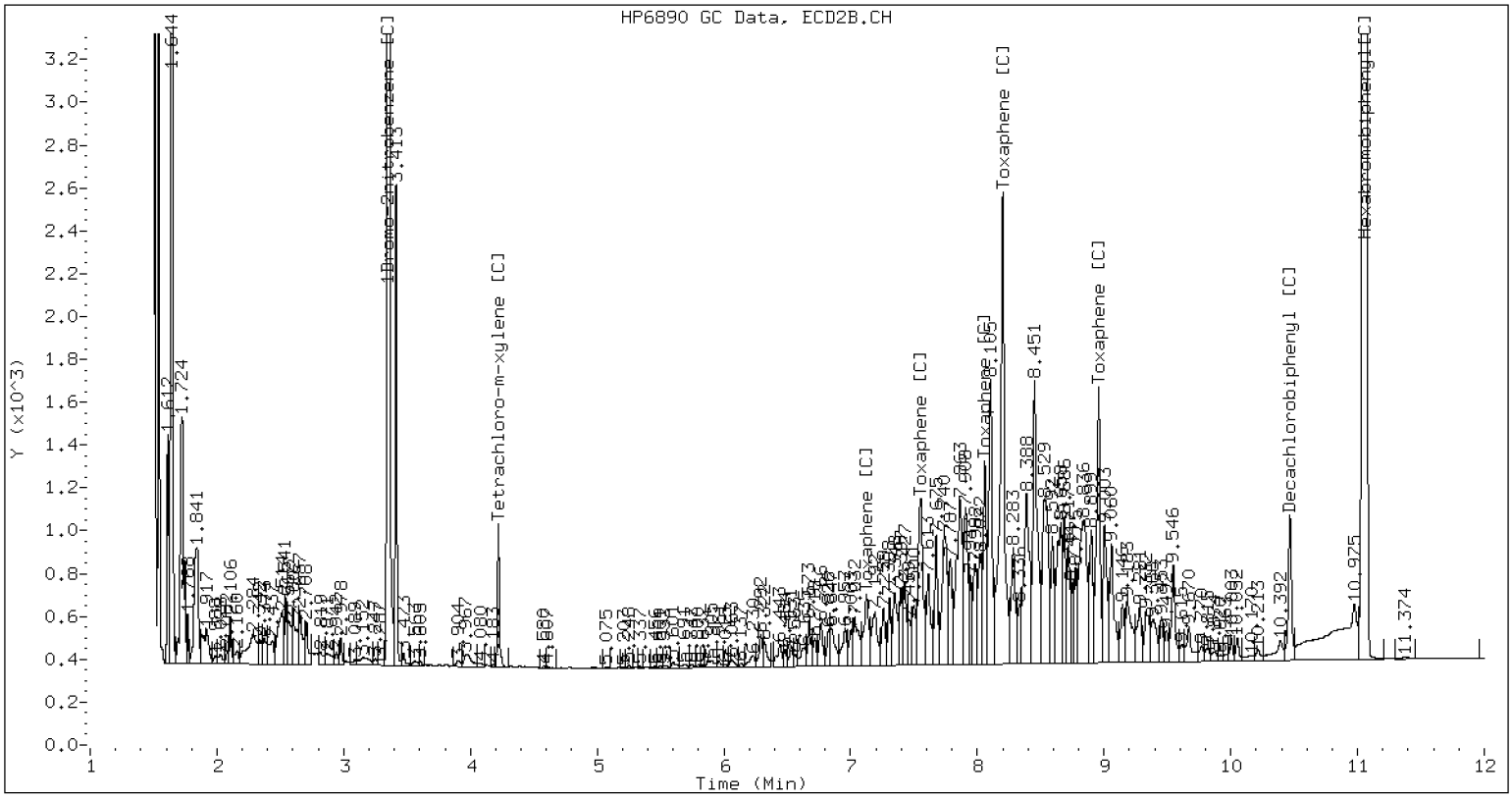
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	20939	118.9	1	7.125	-0.000	18390	124.1	
Toxaphene	2	7.304	0.000	62921	127.5	2	7.553	-0.000	43437	130.4	
Toxaphene	3	7.653	-0.000	40147	126.2	3	8.059	-0.001	32235	127.1	
Toxaphene	4	7.985	-0.001	56816	133.6	4	8.201	-0.001	109296	132.1	
Toxaphene	5	8.082	-0.000	39643	123.4	5	8.958	-0.001	50997	125.7	
Total STX-CLPAve (5 peaks): 125.907						Total CLP2Ave (5 peaks): 127.865					RPD = 2
Corrected Ave (5 peaks): 125.907						Corrected Ave (5 peaks): 127.865					RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121428.D SEQ-CAL8A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121428.D
Data file 2: /20221214.b/B20221214.b/22121428.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL8A
Client ID:
Injection Date: 15-DEC-2022 03:29
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	18632	4.220	-0.000	29829	1.92	1.92	0.1	Tetrachloro-m-xylene
9.355	0.000	29179	10.467	0.000	44716	4.64	4.98	7.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	713620	0.4
Hexabromobiphenyl	641833	620026	-3.4

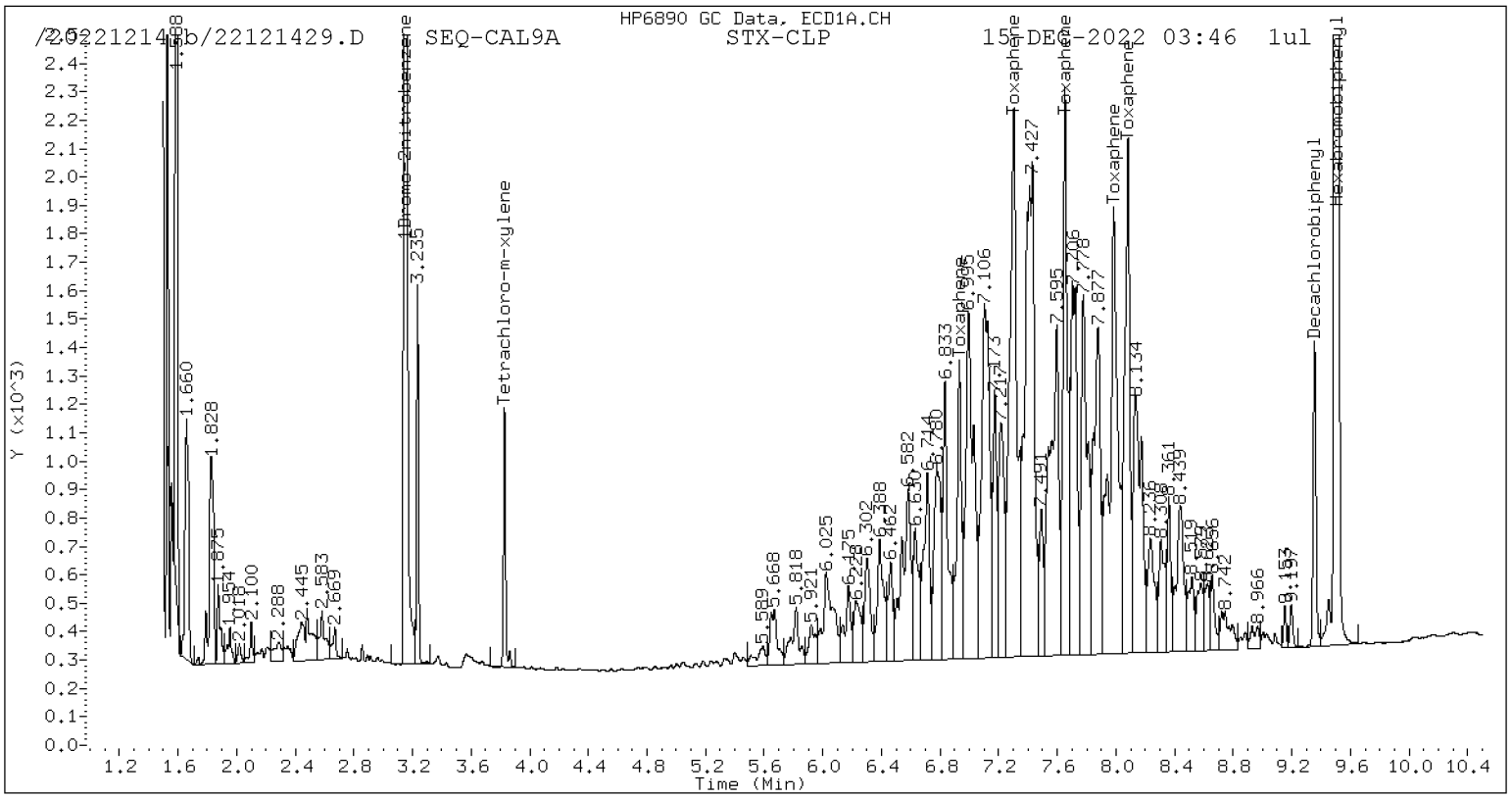
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1104488	4.3
Hexabromobiphenyl	797125	811719	1.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

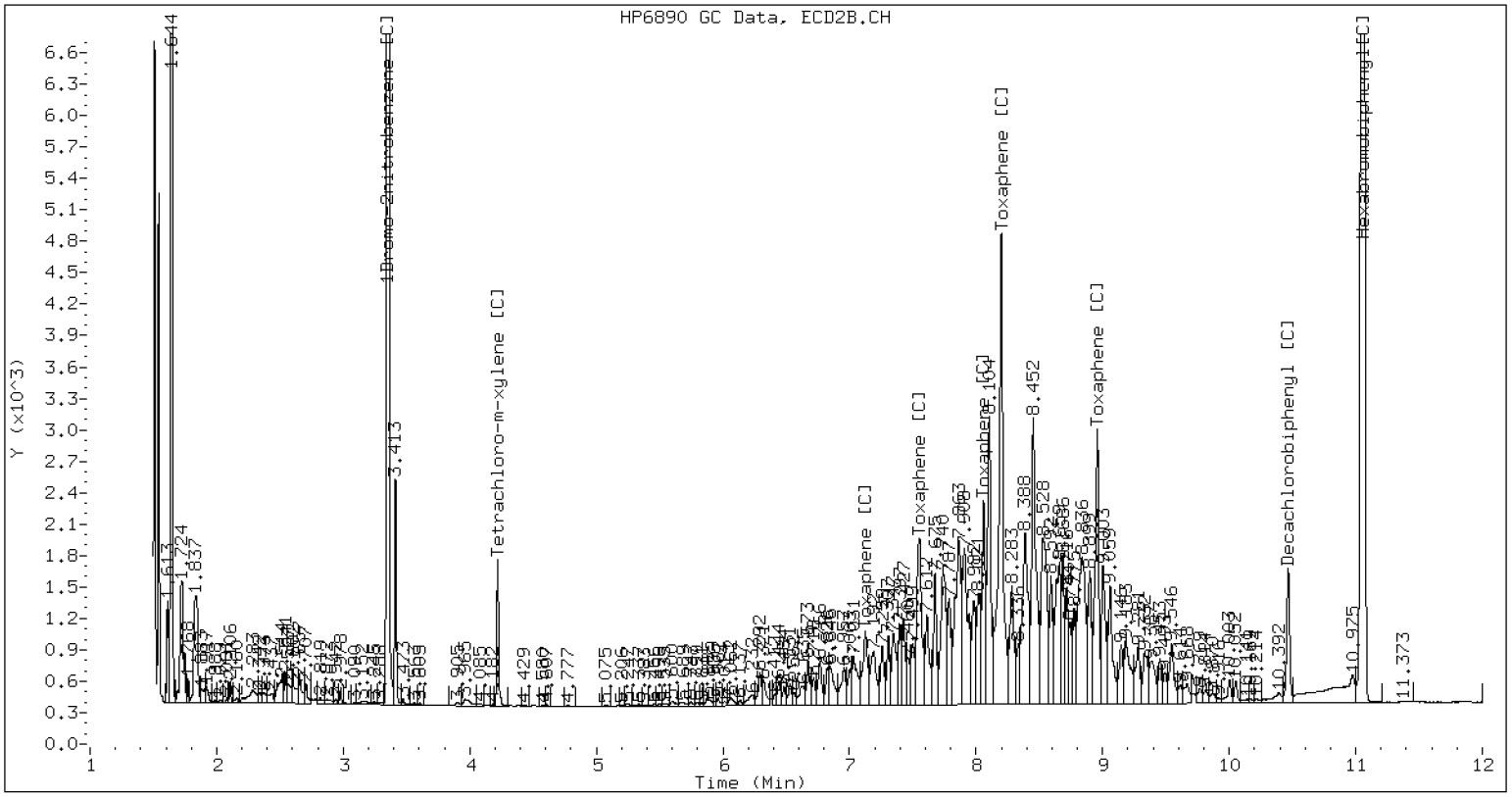
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	47415	261.8	1	7.125	-0.001	38790	254.4	
Toxaphene	2	7.302	-0.001	134642	265.2	2	7.552	-0.001	89754	261.8	
Toxaphene	3	7.652	-0.001	86679	264.9	3	8.059	-0.001	67442	258.4	
Toxaphene	4	7.985	-0.001	125891	287.7	4	8.200	-0.001	220426	258.9	
Toxaphene	5	8.081	-0.000	85903	260.0	5	8.958	-0.001	104601	250.5	
Total STX-CLPAve (5 peaks): 267.939						Total CLP2Ave (5 peaks): 256.784				RPD = 4	
Corrected Ave (5 peaks): 267.939						Corrected Ave (5 peaks): 256.784				RPD = 4	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121429.D SEQ-CAL9A CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121429.D
Data file 2: /20221214.b/B20221214.b/22121429.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CAL9A
Client ID:
Injection Date: 15-DEC-2022 03:46
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	37717	4.220	0.000	60469	3.98	3.98	0.0	Tetrachloro-m-xylene
9.355	0.000	57106	10.467	0.000	82418	9.20	9.32	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696179	-2.0
Hexabromobiphenyl	641833	612804	-4.5

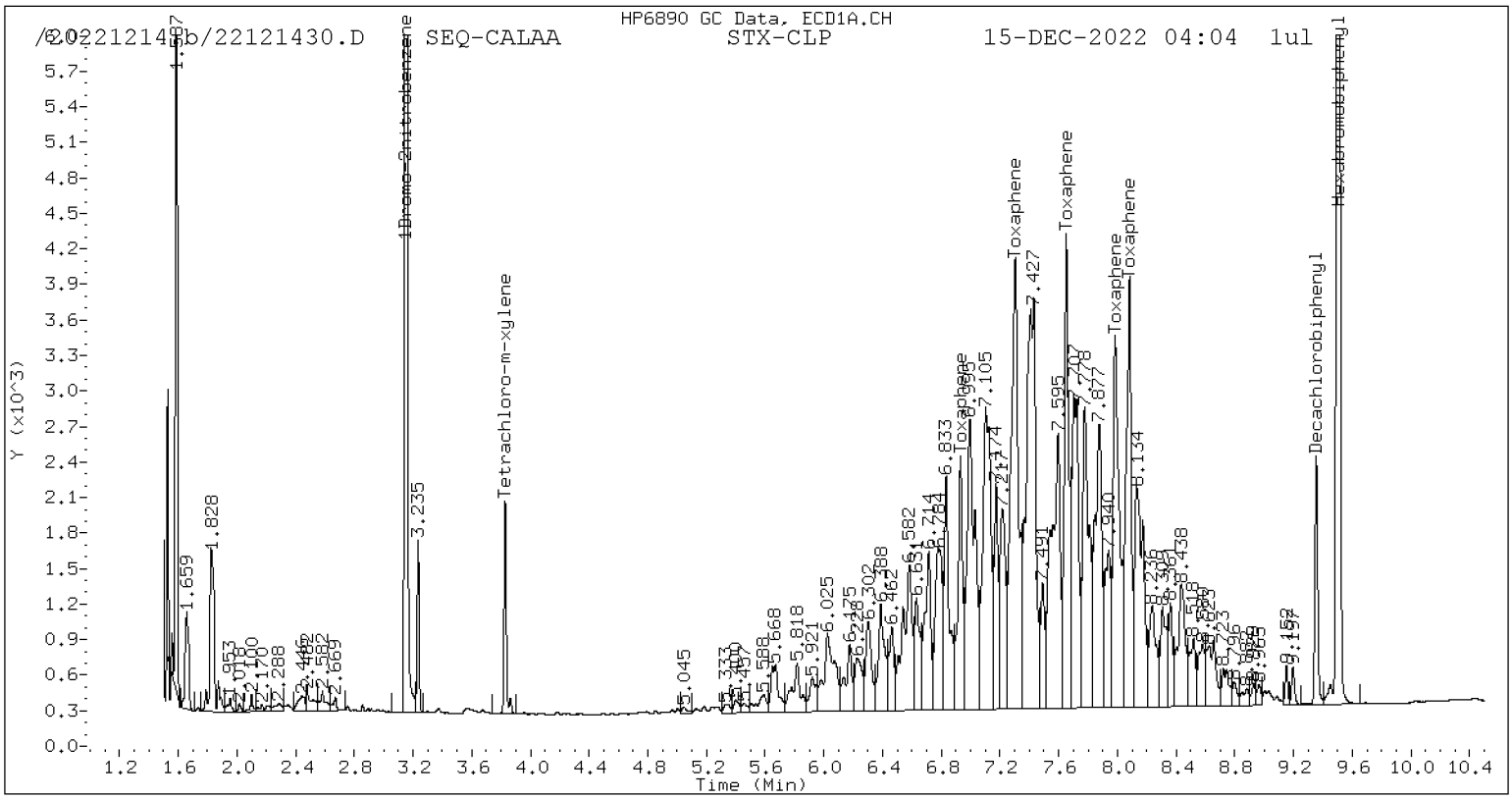
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1078803	1.9
Hexabromobiphenyl	797125	800071	0.4

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

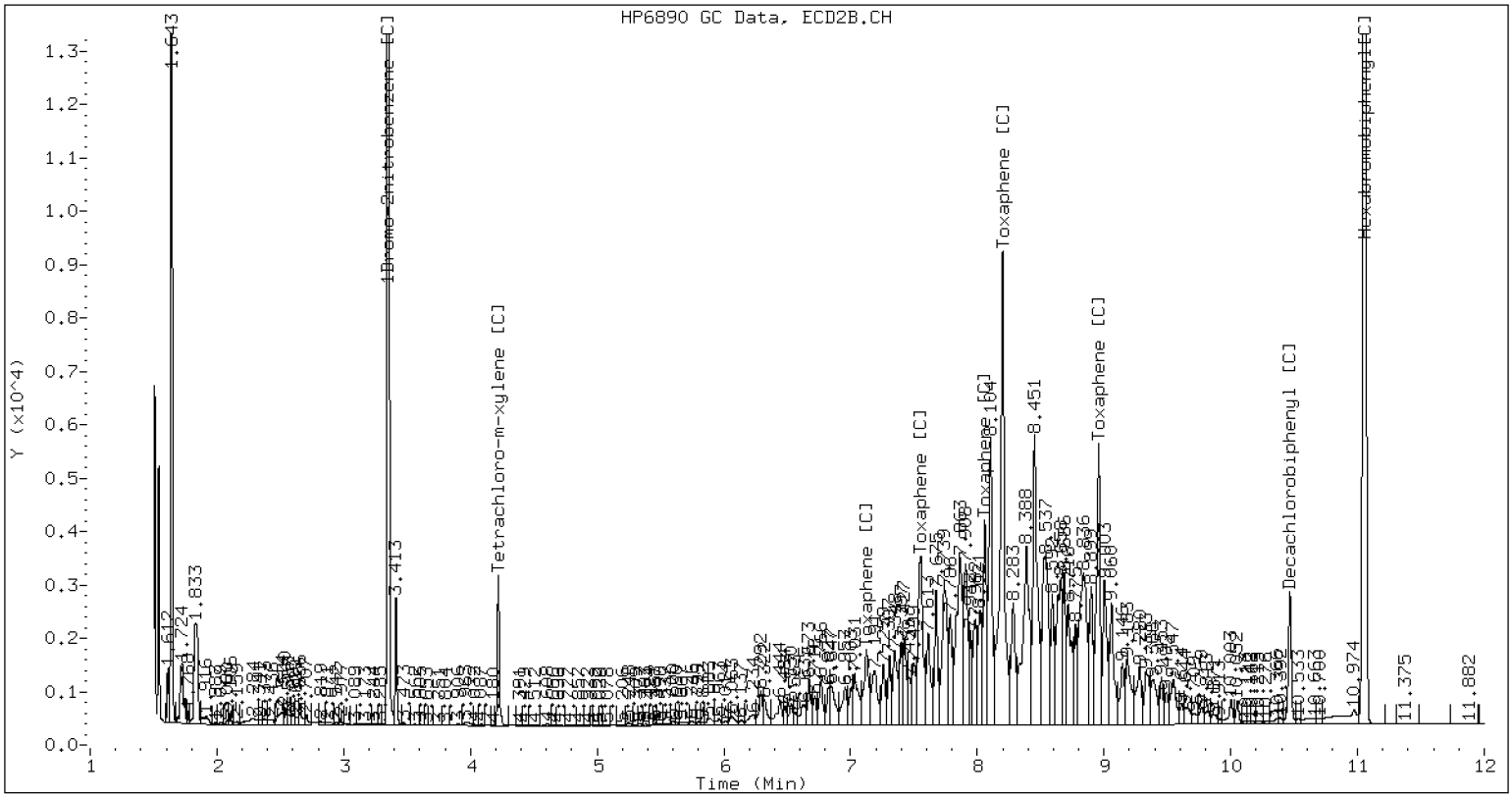
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	-0.000	96535	539.4	1	7.125	-0.001	78635	523.1	
Toxaphene	2	7.304	0.000	273576	545.2	2	7.553	-0.001	179081	529.9	
Toxaphene	3	7.652	-0.001	177095	547.7	3	8.059	-0.001	133547	519.1	
Toxaphene	4	7.985	-0.001	190443	440.4	4	8.200	-0.001	437035	520.8	
Toxaphene	5	8.082	-0.000	175009	535.8	5	8.958	-0.001	209659	509.4	
Total STX-CLPAve (5 peaks): 521.711						Total CLP2Ave (5 peaks): 520.468				RPD = 0	
Corrected Ave (5 peaks): 521.711						Corrected Ave (5 peaks): 520.468				RPD = 0	

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121430.D SEQ-CALAA CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121430.D
Data file 2: /20221214.b/B20221214.b/22121430.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAA
Client ID:
Injection Date: 15-DEC-2022 04:04
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	74347	4.221	0.000	119694	7.73	7.77	0.5	Tetrachloro-m-xylene
9.355	-0.000	107024	10.466	-0.000	151970	17.00	17.11	0.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	706924	-0.5
Hexabromobiphenyl	641833	621486	-3.2

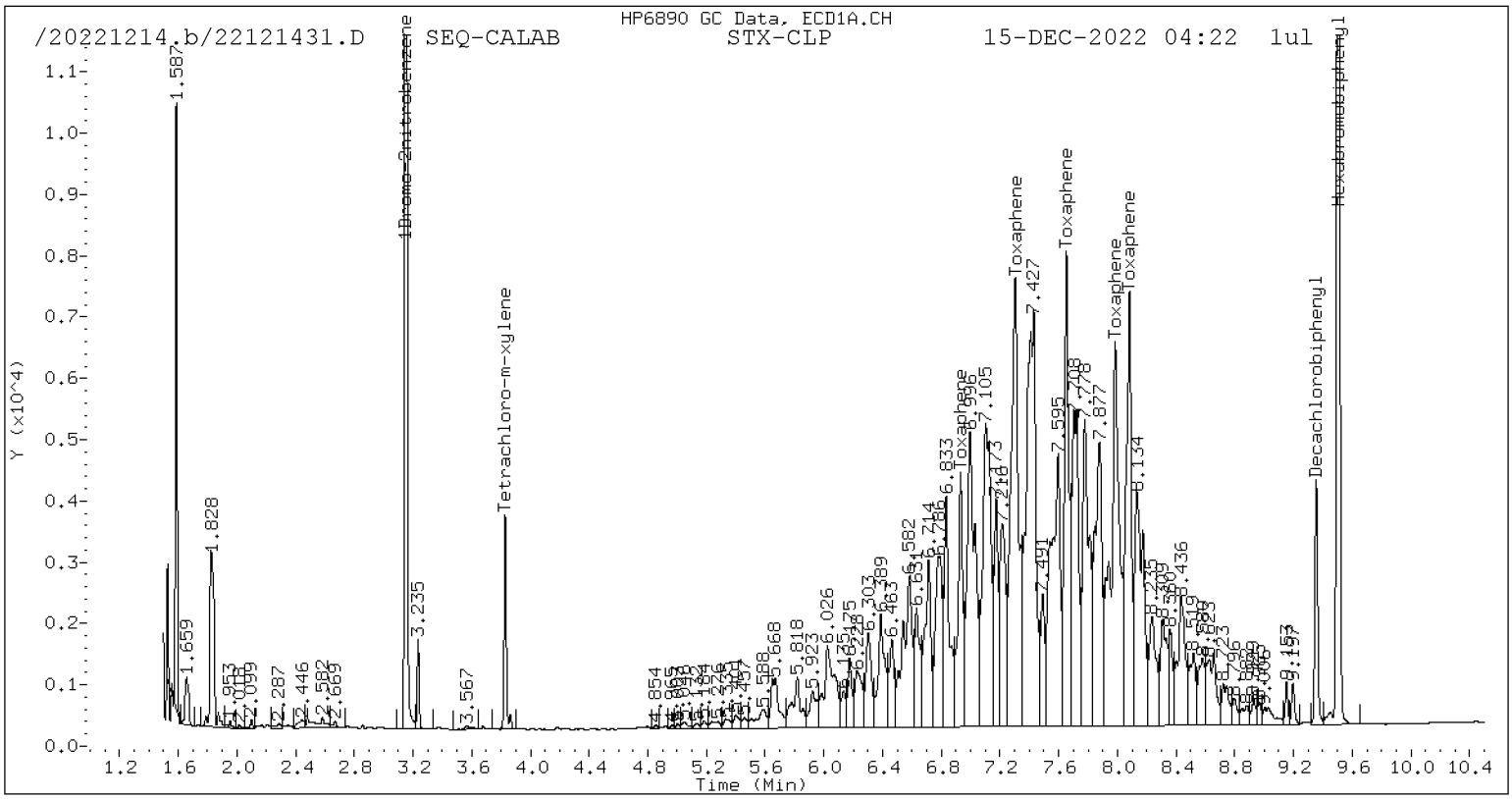
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1093936	3.3
Hexabromobiphenyl	797125	803782	0.8

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

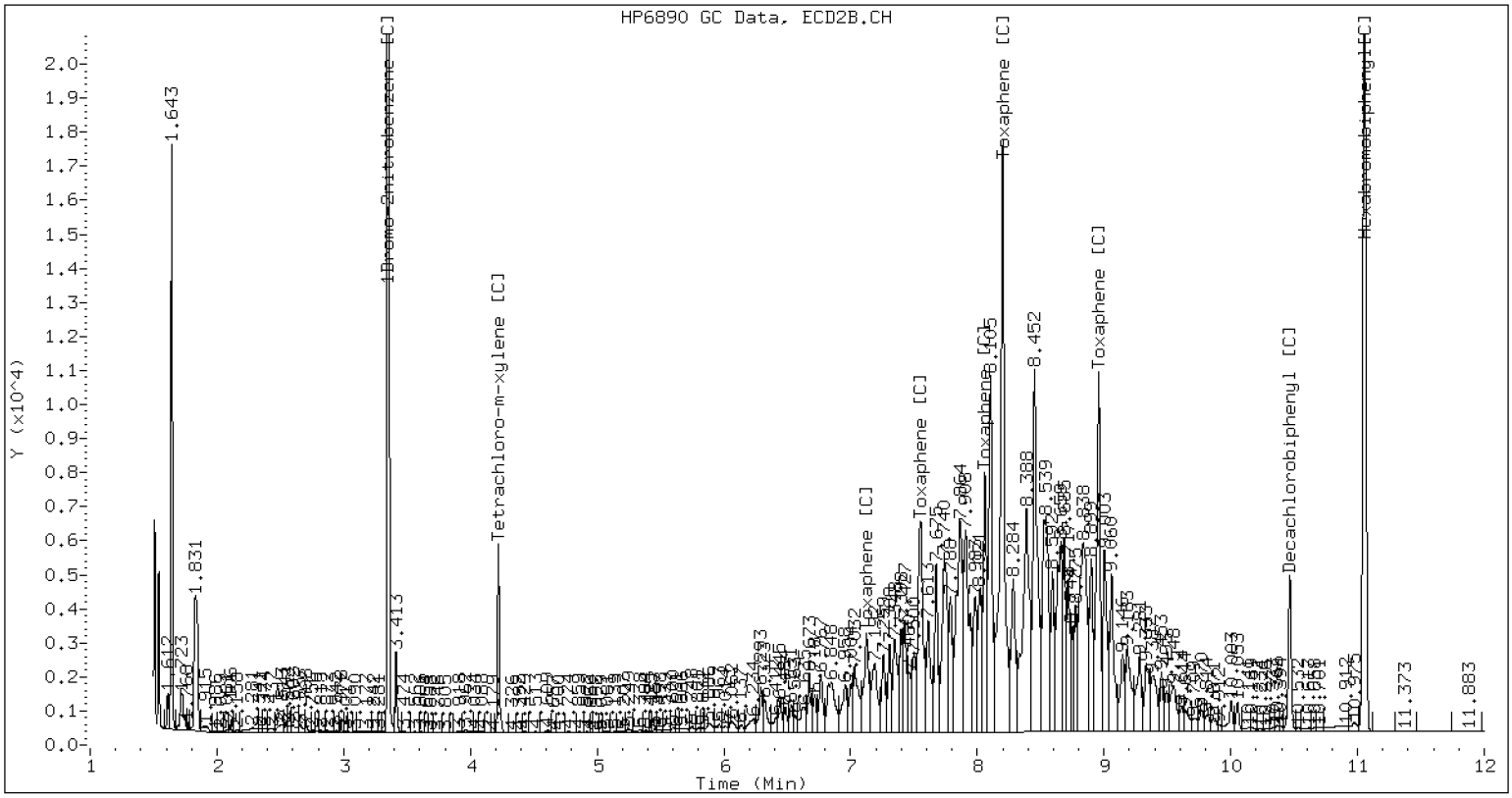
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	192757	1062.0	1	7.125	-0.000	156515	1036.5	
Toxaphene	2	7.303	-0.000	530863	1043.2	2	7.553	-0.001	349637	1029.8	
Toxaphene	3	7.653	-0.000	344194	1049.6	3	8.059	-0.000	265296	1026.5	
Toxaphene	4	7.986	-0.000	522105	1190.6	4	8.201	-0.001	854255	1013.3	
Toxaphene	5	8.082	-0.000	345477	1043.0	5	8.958	-0.001	416452	1007.1	
Total STX-CLPAve (5 peaks): 1077.665						Total CLP2Ave (5 peaks): 1022.630					RPD = 5
Corrected Ave (5 peaks): 1077.665						Corrected Ave (5 peaks): 1022.630					RPD = 5

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121431.D SEQ-CALAB CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121431.D
Data file 2: /20221214.b/B20221214.b/22121431.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAB
Client ID:
Injection Date: 15-DEC-2022 04:22
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	0.000	169388	4.221	0.000	273030	18.51	18.69	1.0	Tetrachloro-m-xylene
9.356	0.001	234532	10.466	-0.000	332716	40.53	40.11	1.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	672958	-5.3
Hexabromobiphenyl	641833	571112	-11.0

Column 2

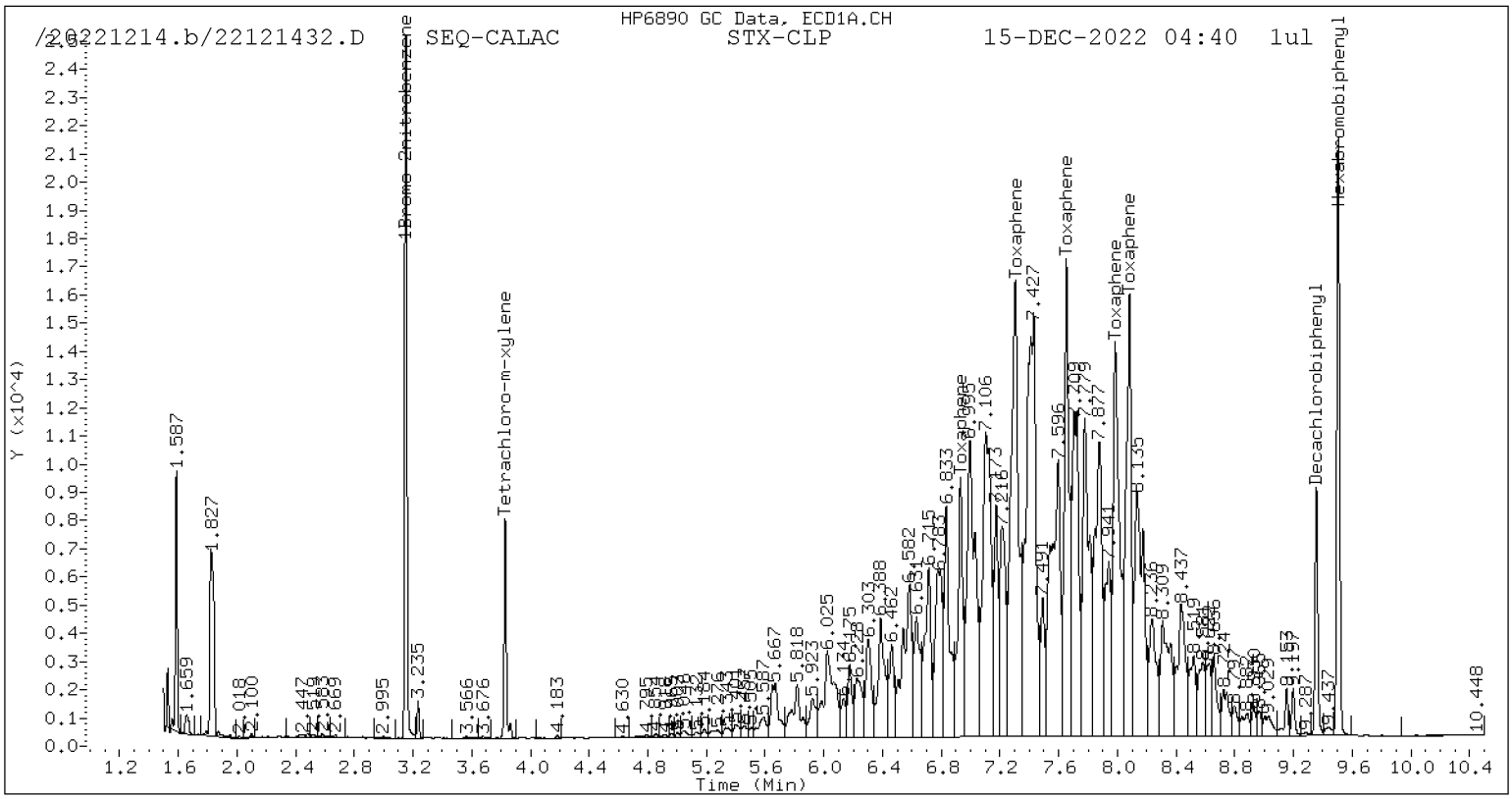
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1037593	-2.0
Hexabromobiphenyl	797125	750492	-5.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	432250	2591.5	1	7.126	-0.000	358061	2539.5
Toxaphene	2	7.303	0.000	1180375	2524.1	2	7.553	0.000	785942	2479.1
Toxaphene	3	7.653	0.000	762221	2529.4	3	8.059	-0.000	602985	2498.7
Toxaphene	4	7.986	0.000	863552	2142.9	4	8.201	-0.001	1929083	2450.8
Toxaphene	5	8.082	0.000	777497	2554.3	5	8.958	-0.001	962132	2492.0

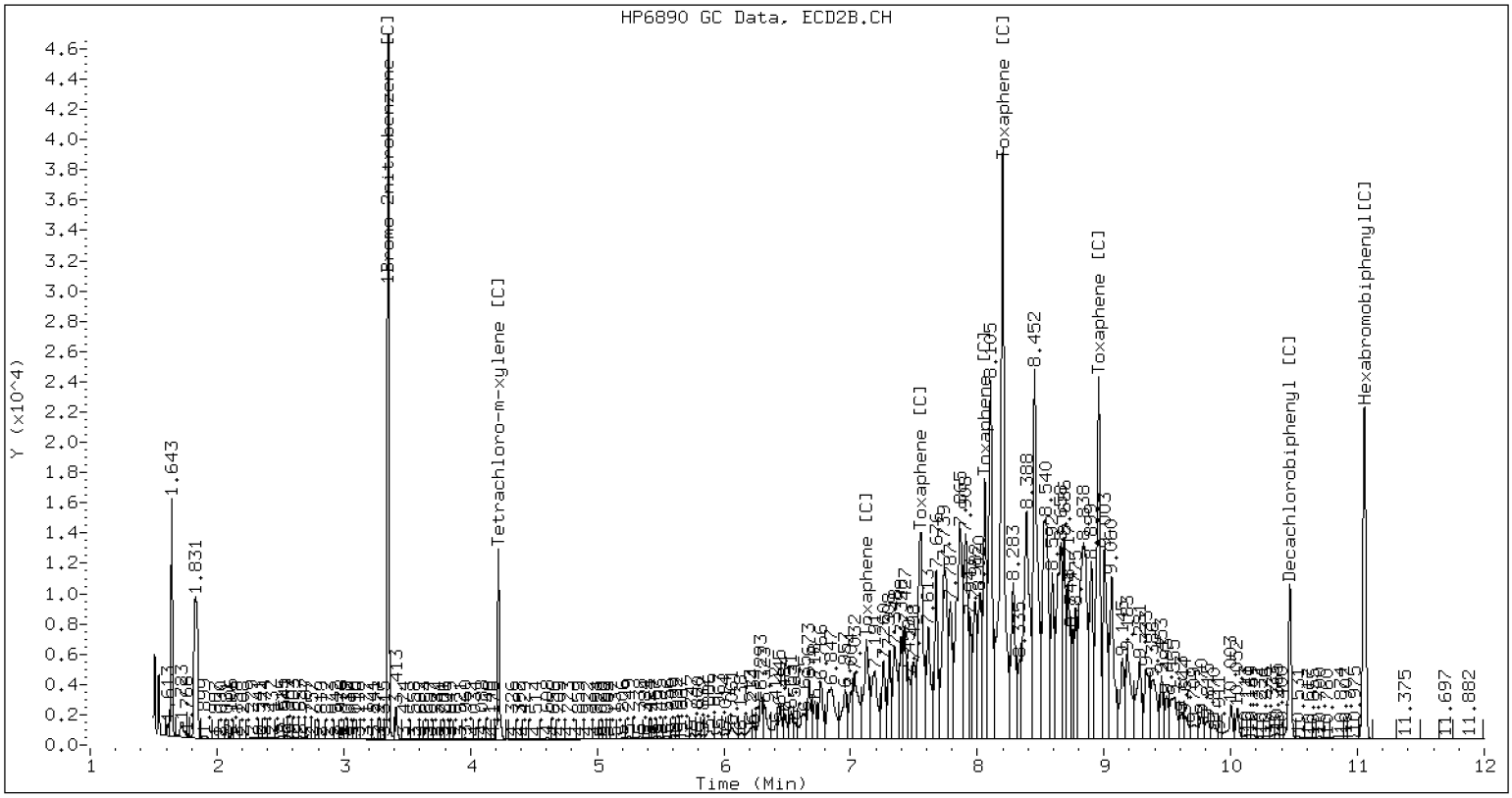
Total STX-CLPAve (5 peaks): 2468.427 Total CLP2Ave (5 peaks): 2492.024 RPD = 1
Corrected Ave (5 peaks): 2468.427 Corrected Ave (5 peaks): 2492.024 RPD = 1

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121432.D SEQ-CALAC CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121432.D
Data file 2: /20221214.b/B20221214.b/22121432.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAC
Client ID:
Injection Date: 15-DEC-2022 04:40
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	329284	4.221	0.000	536251	34.78	35.63	2.4	Tetrachloro-m-xylene
9.356	0.000	464116	10.466	-0.000	660536	76.95	77.19	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

˜ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	696178	-2.0
Hexabromobiphenyl	641833	595287	-7.3

Column 2

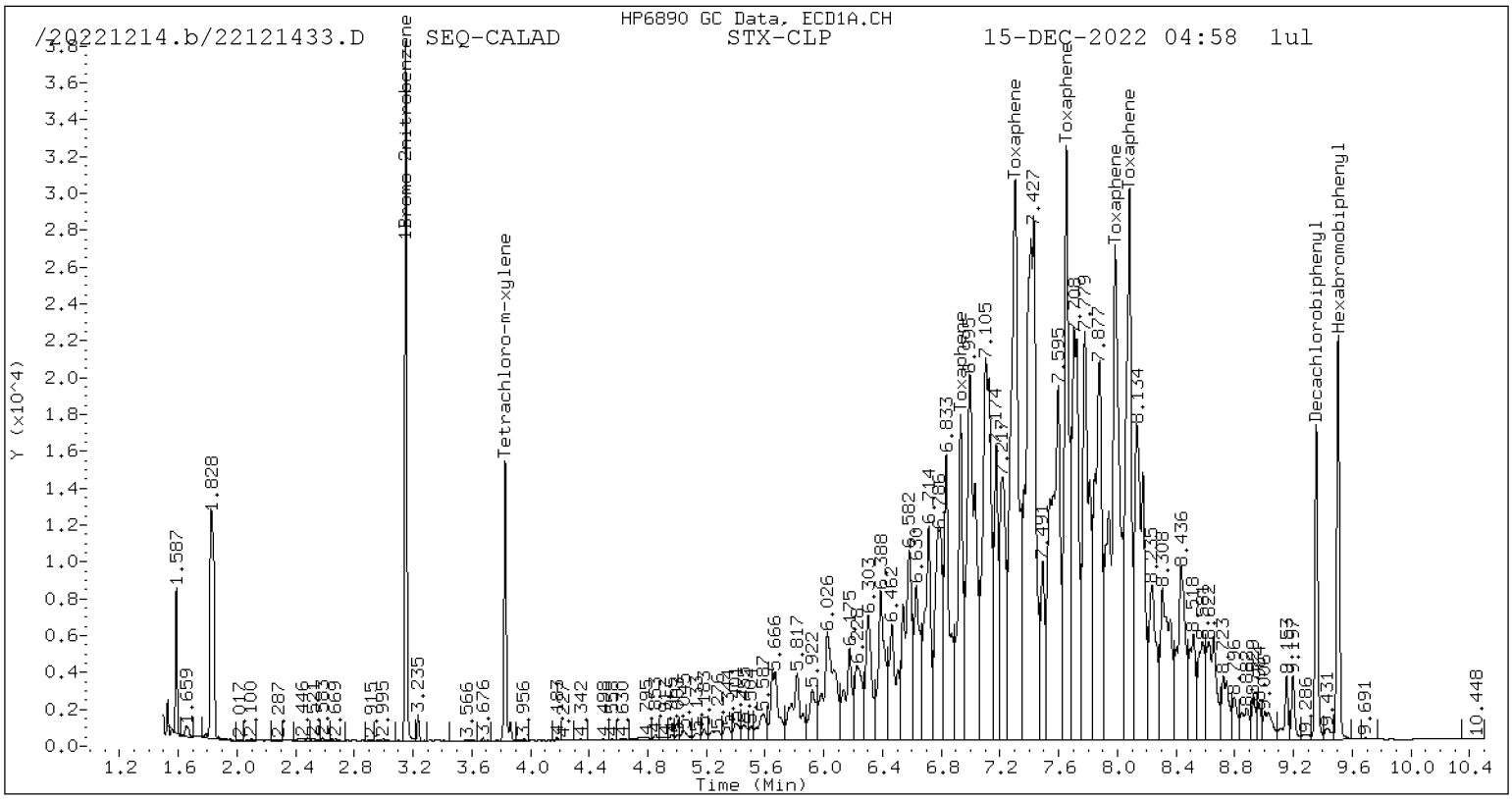
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069205	1.0
Hexabromobiphenyl	797125	774218	-2.9

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.931	0.000	828531	4765.6	1	7.126	-0.000	704213	4841.5
Toxaphene	2	7.303	-0.000	2275106	4667.4	2	7.554	0.000	1533921	4690.3
Toxaphene	3	7.653	-0.000	1493693	4755.4	3	8.059	-0.001	1192086	4788.5
Toxaphene	4	7.986	0.000	2318449	5519.5	4	8.201	-0.001	3835448	4723.4
Toxaphene	5	8.081	-0.000	1509568	4758.0	5	8.958	-0.000	1957568	4914.8

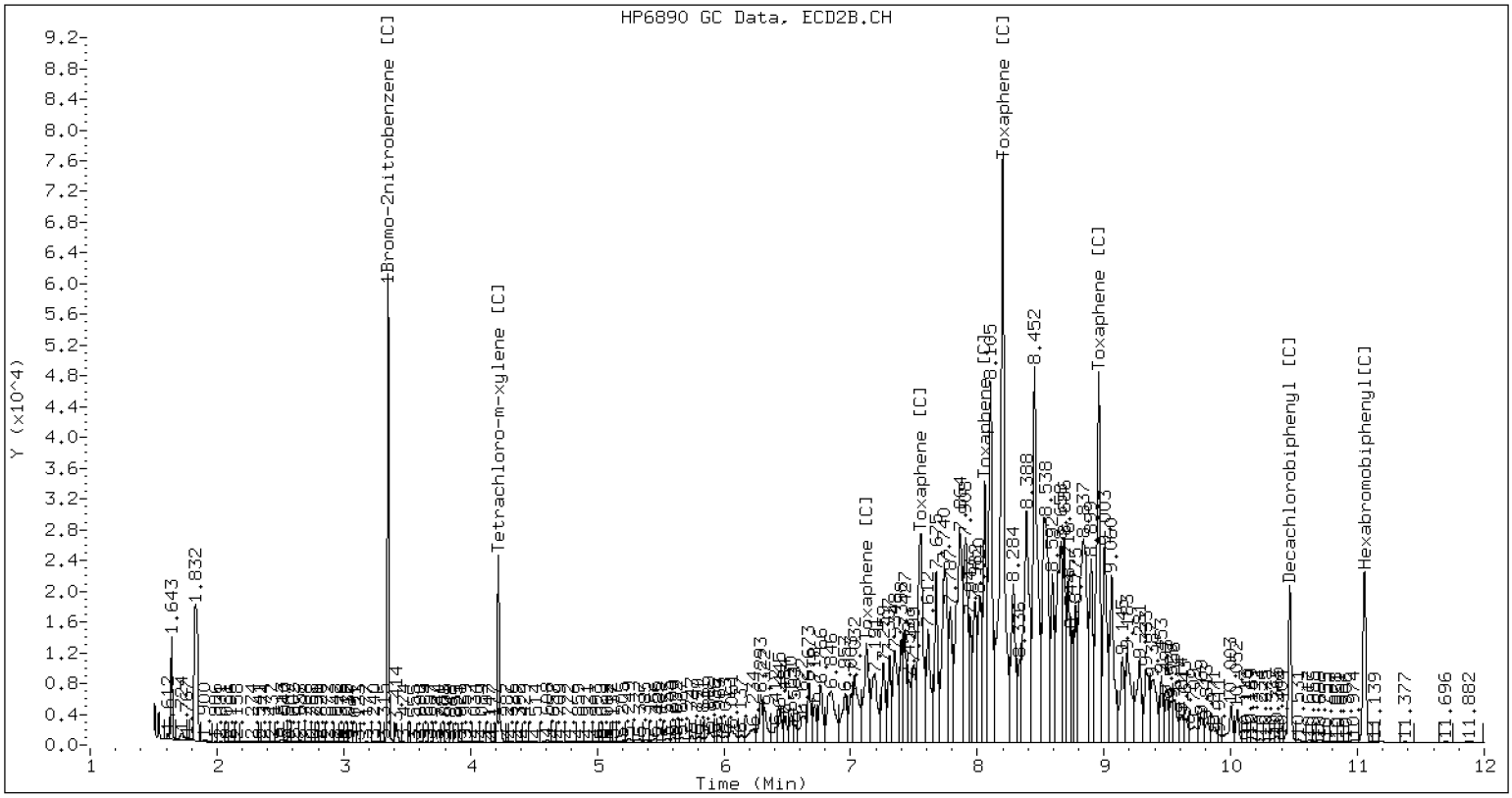
Total STX-CLPAve (5 peaks): 4893.192 Total CLP2Ave (5 peaks): 4791.694 RPD = 2
Corrected Ave (5 peaks): 4893.192 Corrected Ave (5 peaks): 4791.694 RPD = 2

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121433.D SEQ-CALAD CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121433.D
Data file 2: /20221214.b/B20221214.b/22121433.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAD
Client ID:
Injection Date: 15-DEC-2022 04:58
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D
Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/16/2022 15:20
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.828	-0.000	626937	4.221	0.000	1016753	65.66	67.54	2.8	Tetrachloro-m-xylene
9.355	0.000	899917	10.467	0.000	1293767	145.37	151.89	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	710650	702143	-1.2
Hexabromobiphenyl	641833	610983	-4.8

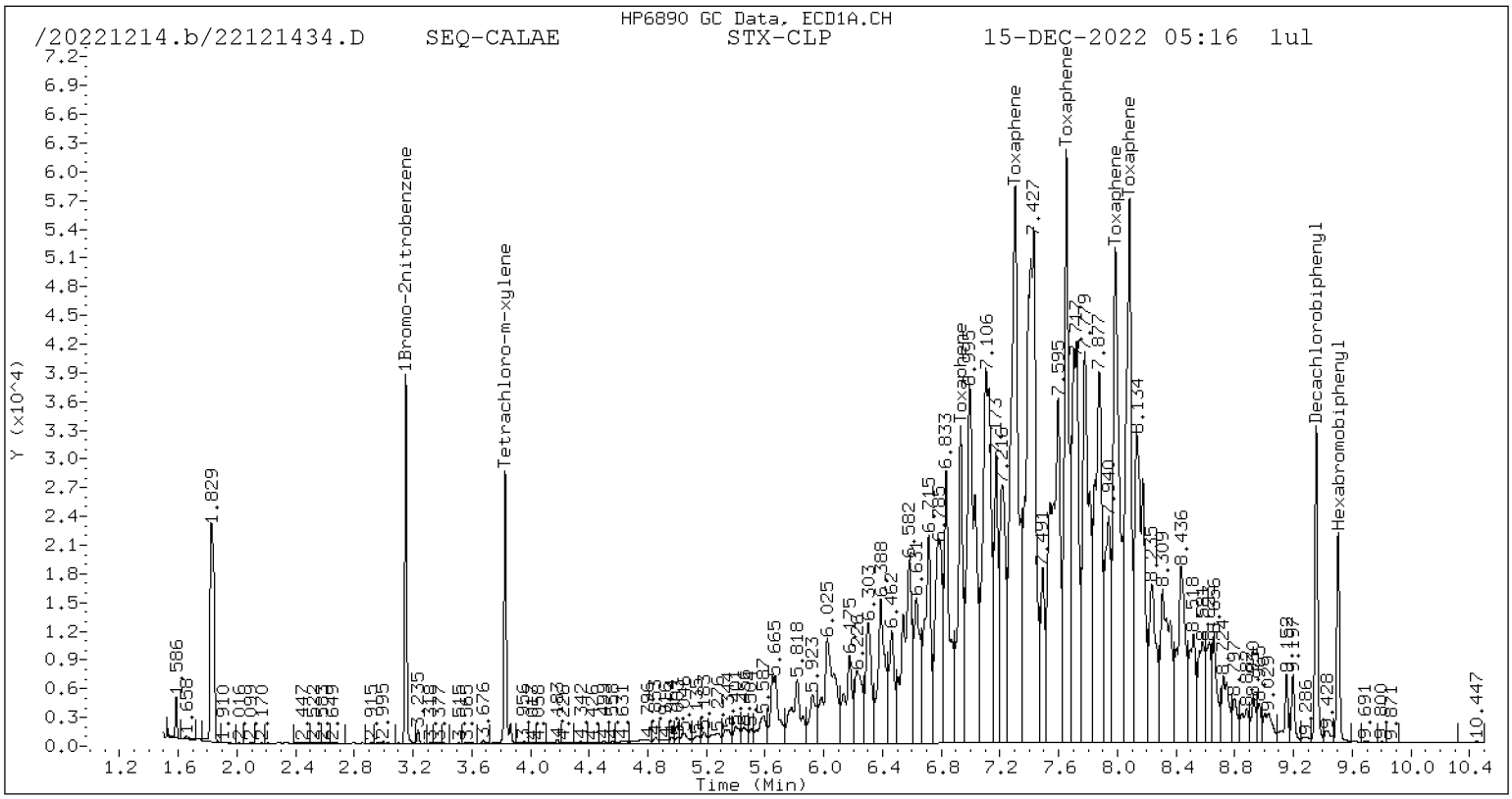
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1058848	1069521	1.0
Hexabromobiphenyl	797125	770702	-3.3

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

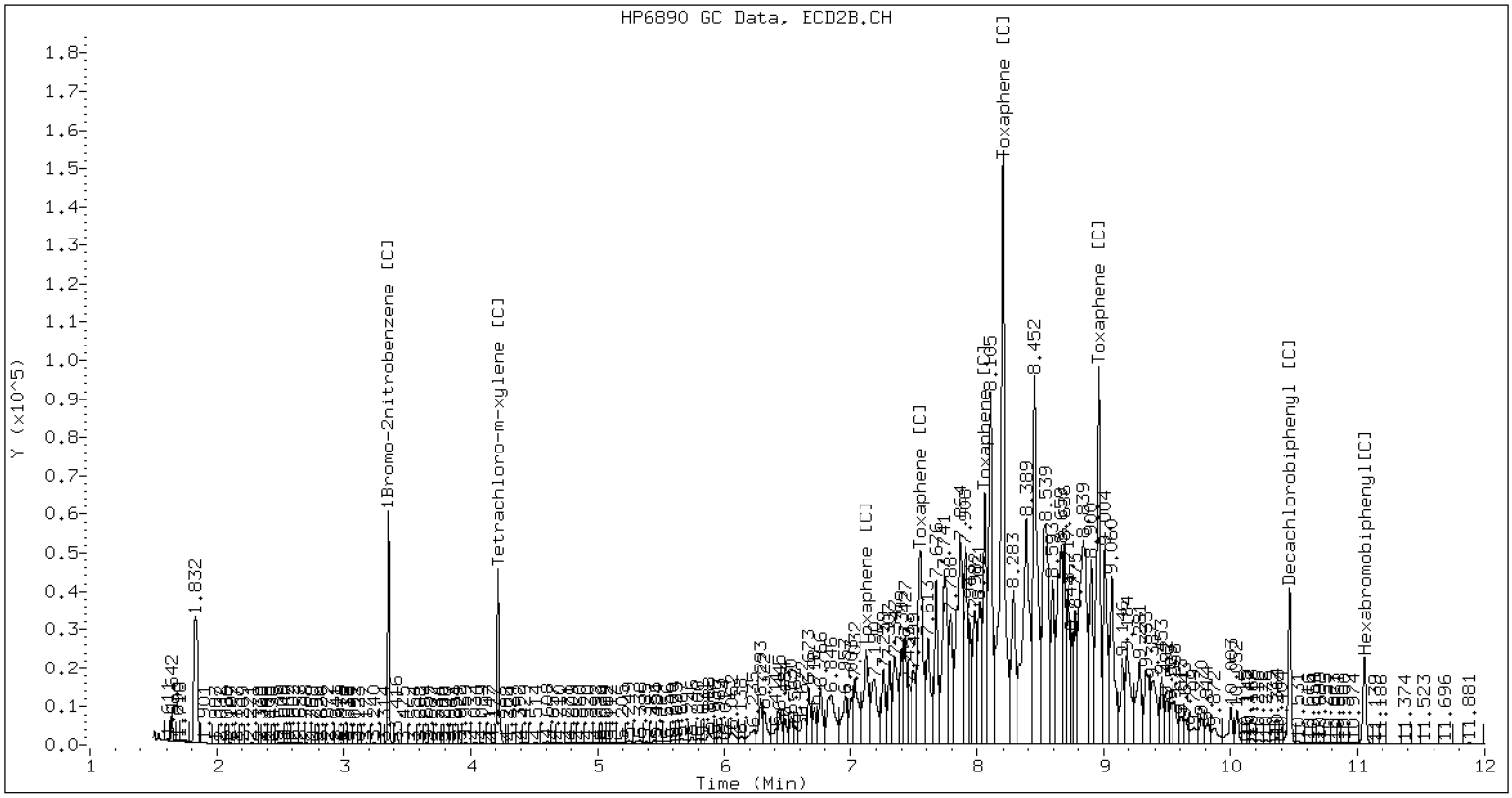
		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.931	0.000	1553785	8707.6	1	7.126	0.000	1336419	9229.8	
Toxaphene	2	7.303	-0.000	4216546	8428.1	2	7.553	0.000	2900195	8908.4	
Toxaphene	3	7.653	-0.000	2652265	8227.0	3	8.060	0.000	2299294	9278.2	
Toxaphene	4	7.987	0.001	3225164	7480.8	4	8.201	0.000	7496819	9274.6	
Toxaphene	5	8.082	-0.000	2882252	8851.2	5	8.959	0.000	3913616	9870.7	
Total STX-CLPAve (5 peaks): 8338.950						Total CLP2Ave (5 peaks): 9312.318					RPD = 11
Corrected Ave (5 peaks): 8338.950						Corrected Ave (5 peaks): 9312.318					RPD = 11

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20221214.b/B20221214.b/22121434.D SEQ-CALAE CLP2



CLP-2 Manual Integration: NO

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20221214.b/22121434.D
Data file 2: /20221214.b/B20221214.b/22121434.D
Method: \20221214.b\PEST.m
Compound Sublist: TOXAPH.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: JGR

ARI ID: SEQ-CALAE
Client ID:
Injection Date: 15-DEC-2022 05:16
Report Date: 12/15/2022 09:09
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23031403.D	Calibration Date:	12/14/2022
Sequence:	SLC0273	Injection Date:	03/14/23
Lab Sample ID:	SLC0273-ICV1	Injection Time:	15:57
Sequence Name:	INDAE1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Hexachlorobenzene	A	20.000	19.8	1.4298940	1.4125680		-1.0	+/-20
Hexachlorobenzene [2C]	A	20.000	19.1	1.4591090	1.3931650		-4.5	+/-20
Decachlorobiphenyl	A	40.000	37.8	0.8105886	0.7654576		-5.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.5	0.8841805	0.8285009		-6.3	+/-20
Tetrachlorometaxylene	A	40.000	38.2	1.0879510	1.0390270		-4.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.9	1.1261070	1.0673220		-5.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031403.D
Data file 2: /20230314.b/B20230314.b/23031403.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-ICV1INDA1
Client ID:
Injection Date: 14-MAR-2023 15:57
Report Date: 03/21/2023 12:49
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.372	-0.002	335185	4.807	-0.002	500127	20.31	19.84	2.3	alpha-BHC
4.760	-0.003	134231	5.280	-0.002	191658	21.12	20.00	5.5	beta-BHC
4.946	-0.002	288855	5.630	-0.002	405563	21.41	19.53	9.2	delta-BHC
4.678	-0.003	293356	5.200	-0.001	434250	20.50	20.30	1.0	gamma-BHC (Lindane)
5.169	-0.002	270176	5.725	-0.001	379493	21.22	19.58	8.0	Heptachlor
5.496	-0.002	295096	6.126	-0.001	419158	20.68	18.94	8.8	Aldrin
6.174	-0.001	250016	6.782	-0.000	334098	20.21	18.26	10.1	Heptachlor epoxide b
6.617	-0.001	232016	7.226	-0.001	293773	20.43	18.22	11.5	Endosulfan I
6.877	-0.001	499756	7.519	-0.001	644606	40.97	36.18	12.4	Dieldrin
6.539	-0.002	471523	7.309	-0.001	609456	41.63	37.30	11.0	4,4'-DDE
7.126	-0.001	405886	7.842	-0.001	501434	44.49	47.21	5.9	Endrin
7.363	-0.002	398043	8.053	-0.002	515399	48.46	47.34	2.4	Endosulfan II
7.185	-0.002	380017	7.914	-0.001	510179	46.23	49.38	6.6	4,4'-DDD
8.226	-0.001	343352	8.650	-0.001	447874	44.03	46.84	6.2	Endosulfan sulfate
7.478	-0.001	391446	8.231	-0.001	469825	47.13	47.11	0.0	4,4'-DDT
7.965	-0.001	840258	8.871	-0.001	1024717	228.29	232.20	1.7	Methoxychlor
8.500	-0.001	406675	9.172	-0.001	472683	45.52	45.77	0.6	Endrin ketone
7.791	-0.002	289032	8.384	-0.001	348966	44.12	45.44	2.9	Endrin aldehyde
6.316	-0.002	255643	6.993	-0.001	332756	20.34	18.24	10.9	trans-Chlordane
6.463	-0.002	251104	7.153	-0.001	324634	19.92	18.19	9.1	cis-Chlordane
2.331	-0.002	345261	2.476	-0.002	449001	19.97	18.75	6.3	Hexachlorobutadiene
4.214	-0.003	302748	4.668	-0.002	438130	19.76	19.10	3.4	Hexachlorobenzene
3.854	-0.003	445378	4.176	-0.002	671314	38.20	37.91	0.8	Tetrachloro-m-xylene
9.413	-0.001	266349	10.373	0.000	309472	37.77	37.48	0.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

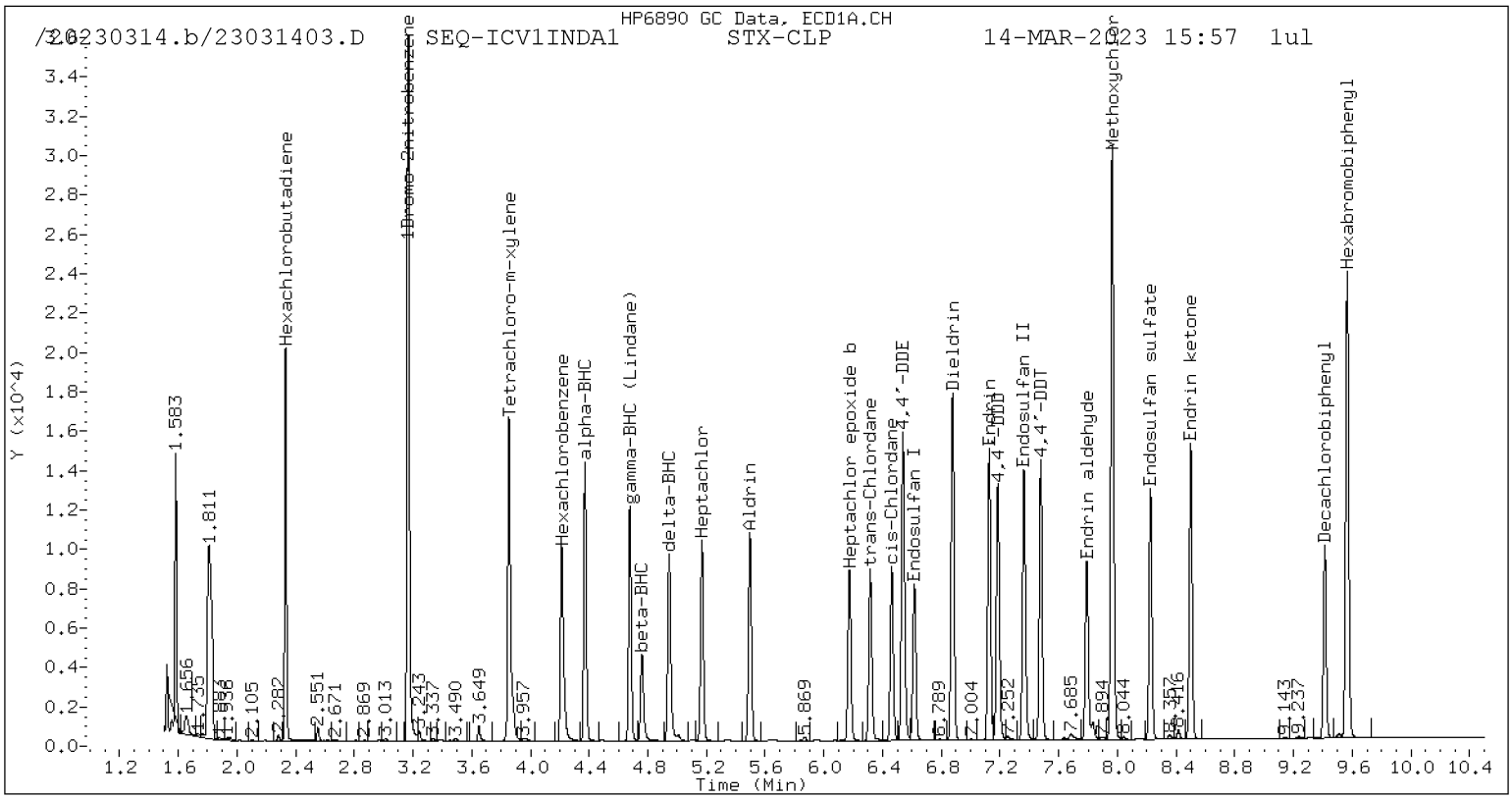
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	857298	27.5
Hexabromobiphenyl	609723	695921	14.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1257941	25.0
Hexabromobiphenyl	769764	747065	-2.9

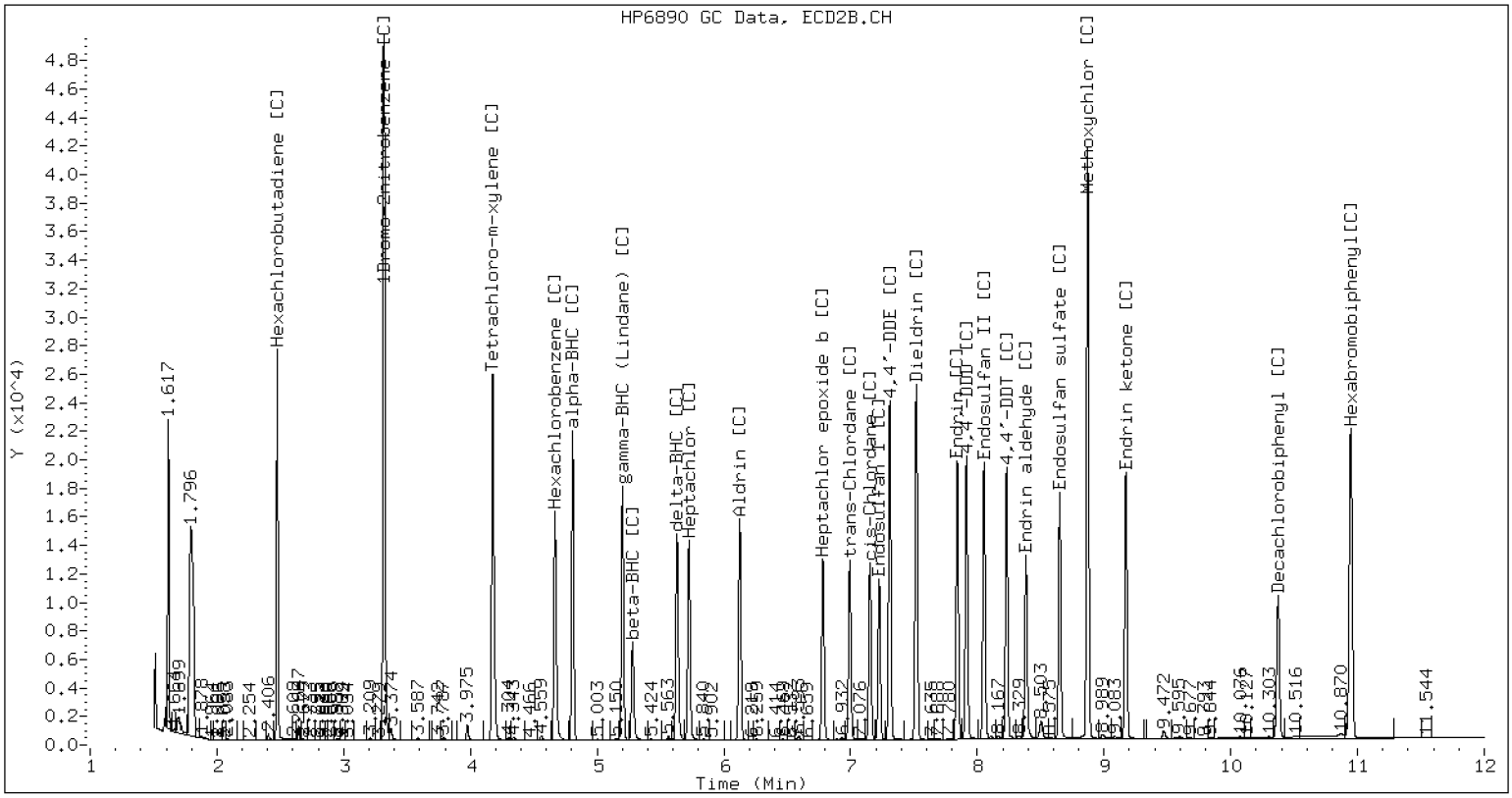
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031403.D SEQ-ICV1INDA1 CLP2



CLP-2 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23031420.D	Calibration Date:	12/14/2022
Sequence:	SLC0273	Injection Date:	03/14/23
Lab Sample ID:	SLC0273-CCV1	Injection Time:	21:04
Sequence Name:	INDAE2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.3	1.4298940	1.4494110		1.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.8	1.4591090	1.3688250		-6.0	+/-20
Decachlorobiphenyl	A	40.000	37.7	0.8105886	0.7645870		-5.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	38.1	0.8841805	0.8419510		-4.8	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.0879510	1.0664790		-2.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.3	1.1261070	1.0500930		-6.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031420.D
Data file 2: /20230314.b/B20230314.b/23031420.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-CCV1INDA2
Client ID:
Injection Date: 14-MAR-2023 21:04
Report Date: 03/22/2023 15:58
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.372	-0.002	351954	4.807	-0.002	511641	21.09	19.62	7.2	alpha-BHC
4.760	-0.003	140854	5.280	-0.002	196921	21.92	19.87	9.8	beta-BHC
4.945	-0.003	308293	5.630	-0.002	419424	22.60	19.53	14.6	delta-BHC
4.678	-0.002	307390	5.200	-0.002	446767	21.25	20.19	5.1	gamma-BHC (Lindane)
5.169	-0.002	278949	5.724	-0.001	390784	21.67	19.50	10.5	Heptachlor
5.496	-0.002	302593	6.126	-0.001	422471	20.97	18.46	12.7	Aldrin
6.174	-0.002	256030	6.782	-0.000	331214	20.47	17.50	15.6	Heptachlor epoxide b
6.616	-0.001	236350	7.226	-0.001	282781	20.59	16.96	19.3	Endosulfan I
6.877	-0.001	501814	7.519	-0.000	614041	40.69	33.32	19.9	Dieldrin
6.539	-0.002	476160	7.309	-0.001	578472	41.58	34.23	19.4	4,4'-DDE
7.127	-0.001	333208	7.843	-0.001	385139	38.45	39.98	3.9	Endrin
7.364	-0.002	399517	8.054	-0.001	472603	51.21	47.87	6.7	Endosulfan II N
7.185	-0.002	369953	7.915	-0.000	474506	47.38	50.64	6.7	4,4'-DDD N
8.226	-0.000	327405	8.650	-0.001	404276	44.19	46.63	5.4	Endosulfan sulfate N
7.478	-0.001	380295	8.231	-0.001	434354	48.20	48.03	0.4	4,4'-DDT N
7.965	-0.000	788582	8.871	-0.001	927659	225.55	231.80	2.7	Methoxychlor N
8.500	-0.000	399933	9.172	-0.001	455706	47.13	48.66	3.2	Endrin ketone N
7.792	-0.001	297708	8.384	-0.001	344860	47.84	49.51	3.4	Endrin aldehyde N
6.316	-0.002	260244	6.993	-0.001	325187	20.48	17.23	17.2	trans-Chlordane
6.463	-0.001	255865	7.153	-0.001	312345	20.08	16.92	17.1	cis-Chlordane
2.331	-0.002	345795	2.476	-0.003	460555	19.78	18.60	6.1	Hexachlorobutadiene
4.214	-0.003	314092	4.668	-0.002	445176	20.27	18.76	7.7	Hexachlorobenzene
3.854	-0.003	462219	4.176	-0.003	683033	39.21	37.30	5.0	Tetrachloro-m-xylene
9.414	-0.001	252722	10.374	0.001	285197	37.73	38.09	0.9	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

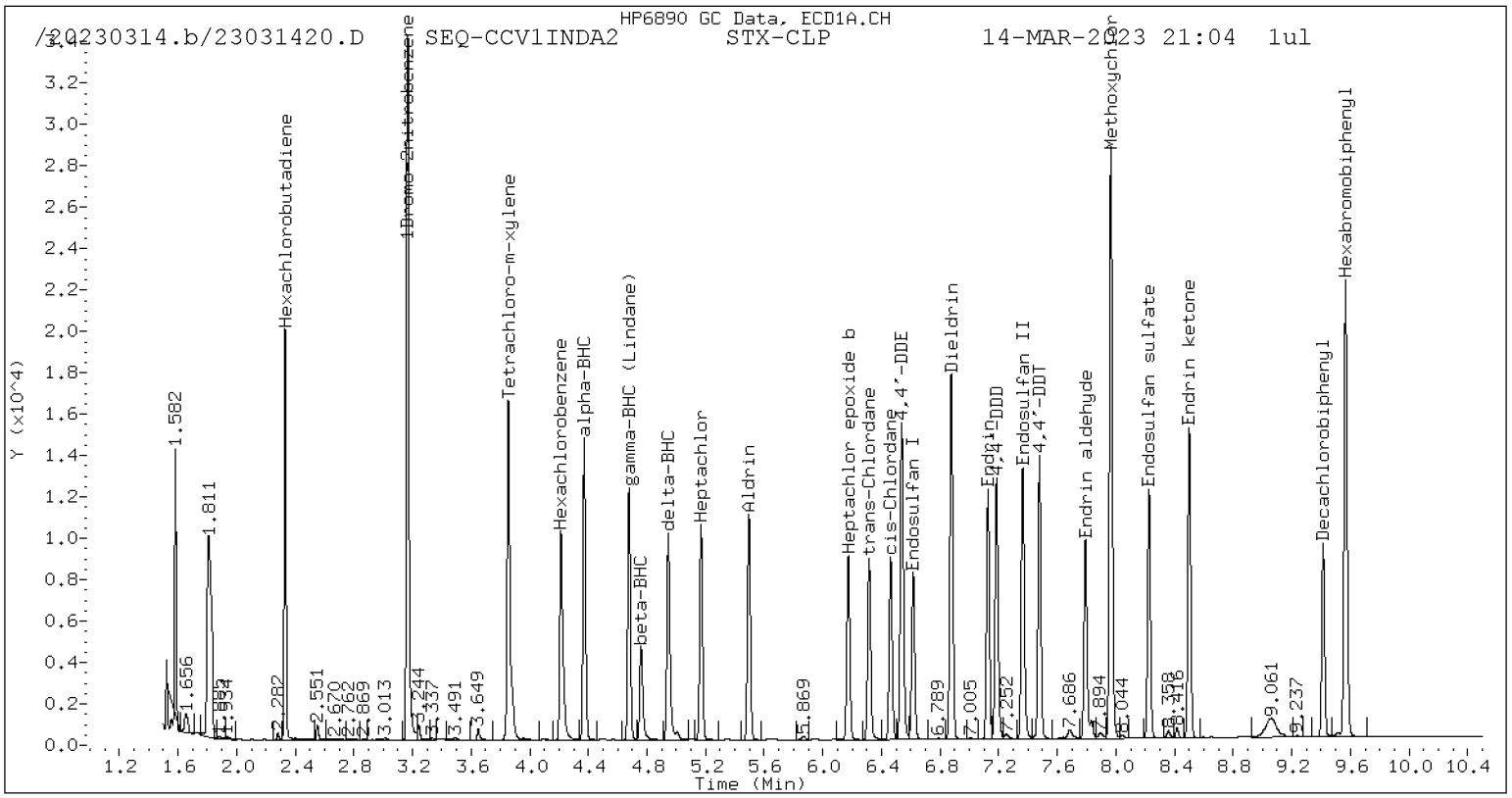
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	866813	28.9
Hexabromobiphenyl	609723	661068	8.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	1300900	29.3
Hexabromobiphenyl	769764	677467	-12.0

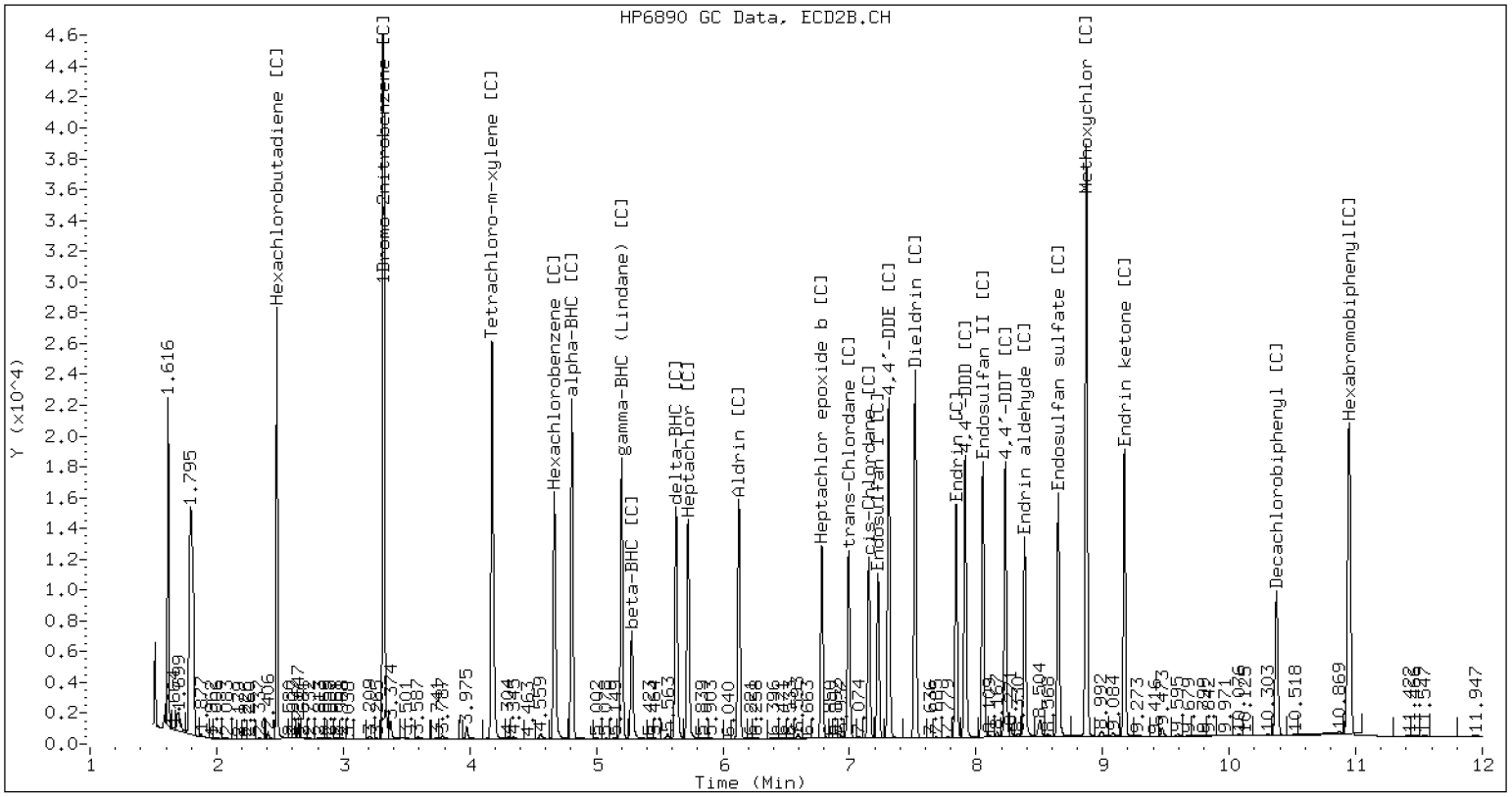
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031420.D SEQ-CCV1INDA2 CLP2



CLP-2 Manual Integration: YES

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23031435.D	Calibration Date:	12/14/2022
Sequence:	SLC0273	Injection Date:	03/15/23
Lab Sample ID:	SLC0273-CCV2	Injection Time:	01:34
Sequence Name:	INDAE3		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.0	1.4298940	1.4306080		0.0	+/-20
Hexachlorobenzene [2C]	A	20.000	18.5	1.4591090	1.3520790		-7.5	+/-20
Decachlorobiphenyl	A	40.000	38.3	0.8105886	0.7769111		-4.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.1	0.8841805	0.8650052		-2.3	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.0879510	1.0704680		-1.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.1	1.1261070	1.0439360		-7.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031435.D
Data file 2: /20230314.b/B20230314.b/23031435.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-CCV2INDA3
Client ID:
Injection Date: 15-MAR-2023 01:34
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.374	-0.000	185944	4.809	-0.000	270349	20.33	18.65	8.6	alpha-BHC
4.763	-0.000	76342	5.281	-0.000	106472	21.68	19.32	11.5	beta-BHC
4.948	-0.000	160356	5.632	-0.000	218337	21.45	18.29	15.9	delta-BHC
4.680	0.000	162412	5.201	-0.000	235868	20.48	19.17	6.6	gamma-BHC (Lindane)
5.171	0.000	146341	5.725	-0.000	205381	20.74	18.43	11.8	Heptachlor
5.497	-0.000	163360	6.127	0.000	231316	20.66	18.18	12.8	Aldrin
6.175	-0.000	140840	6.783	0.000	183286	20.54	17.42	16.4	Heptachlor epoxide b
6.618	0.000	130403	7.227	-0.000	158330	20.73	17.07	19.3	Endosulfan I
6.877	-0.001	277973	7.520	0.000	343310	41.12	33.51	20.4	Dieldrin
6.540	-0.000	259751	7.310	0.000	323716	41.39	34.45	18.3	4,4'-DDE
7.127	-0.000	143011	7.843	-0.001	165661	29.12	29.72	2.0	Endrin N
7.365	-0.000	227135	8.054	-0.001	268637	51.38	47.02	8.9	Endosulfan II N
7.187	0.000	208061	7.915	0.000	260313	47.02	48.01	2.1	4,4'-DDD N
8.226	0.000	183089	8.651	0.000	232164	43.61	46.27	5.9	Endosulfan sulfate N
7.479	-0.000	200409	8.232	-0.001	232782	44.82	44.48	0.8	4,4'-DDT N
7.965	-0.000	418622	8.872	-0.001	489936	211.29	211.56	0.1	Methoxychlor N
8.501	-0.000	233150	9.173	0.000	268196	48.48	49.49	2.1	Endrin ketone N
7.793	-0.000	181155	8.385	0.000	211466	51.37	52.47	2.1	Endrin aldehyde N
6.318	-0.000	141591	6.994	0.000	180971	20.33	17.25	16.4	trans-Chlordane
6.464	-0.000	139664	7.154	0.000	174823	20.00	17.03	16.0	cis-Chlordane
2.333	-0.000	187676	2.478	-0.001	252677	19.59	18.36	6.5	Hexachlorobutadiene
4.216	-0.001	169908	4.670	0.000	244492	20.01	18.53	7.7	Hexachlorobenzene
3.857	-0.000	254271	4.178	-0.000	377543	39.36	37.08	6.0	Tetrachloro-m-xylene
9.415	0.000	145517	10.373	0.000	169554	38.34	39.13	2.1	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

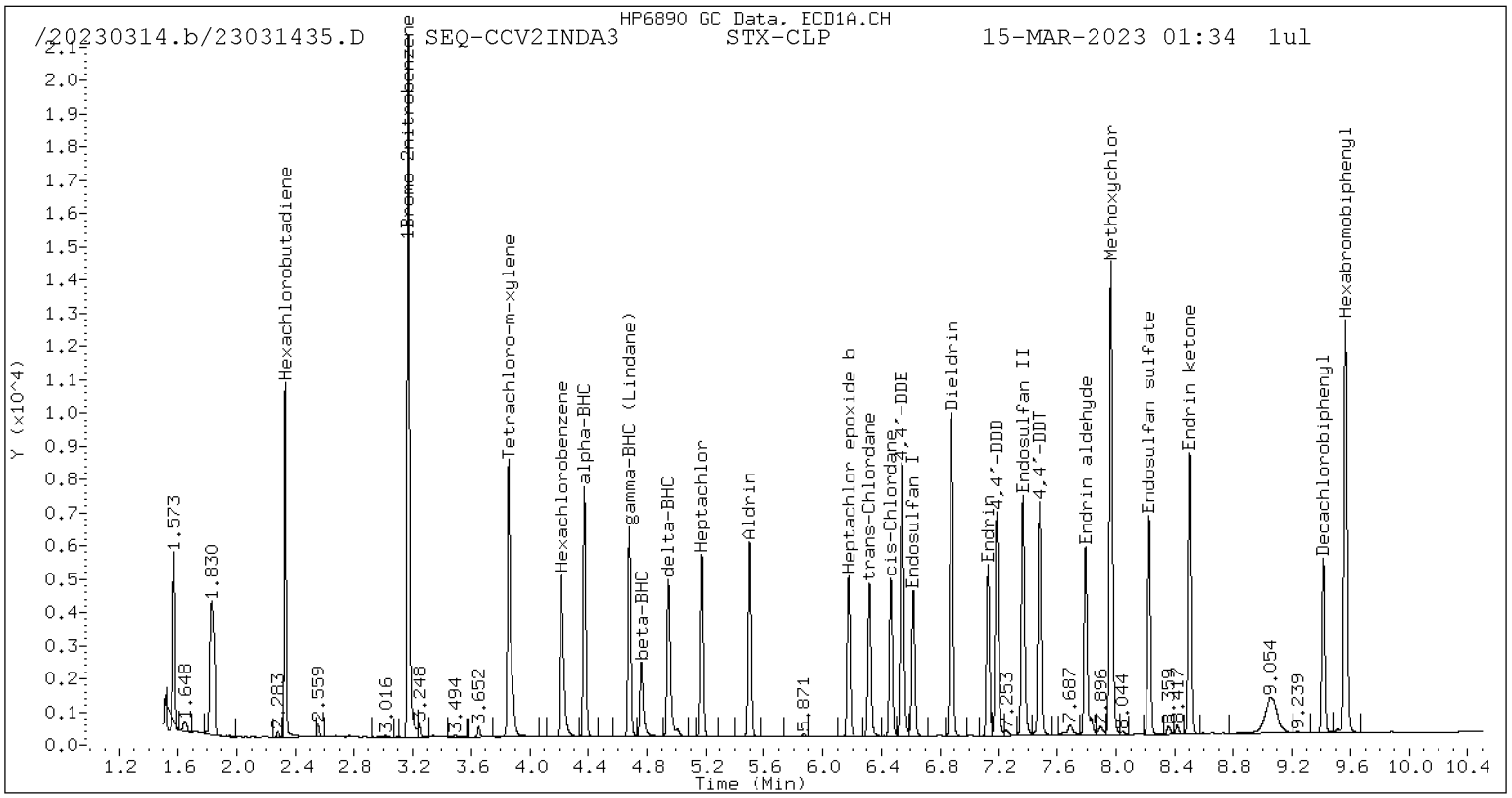
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	475065	-29.4
Hexabromobiphenyl	609723	374604	-38.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	723307	-28.1
Hexabromobiphenyl	769764	392030	-49.1

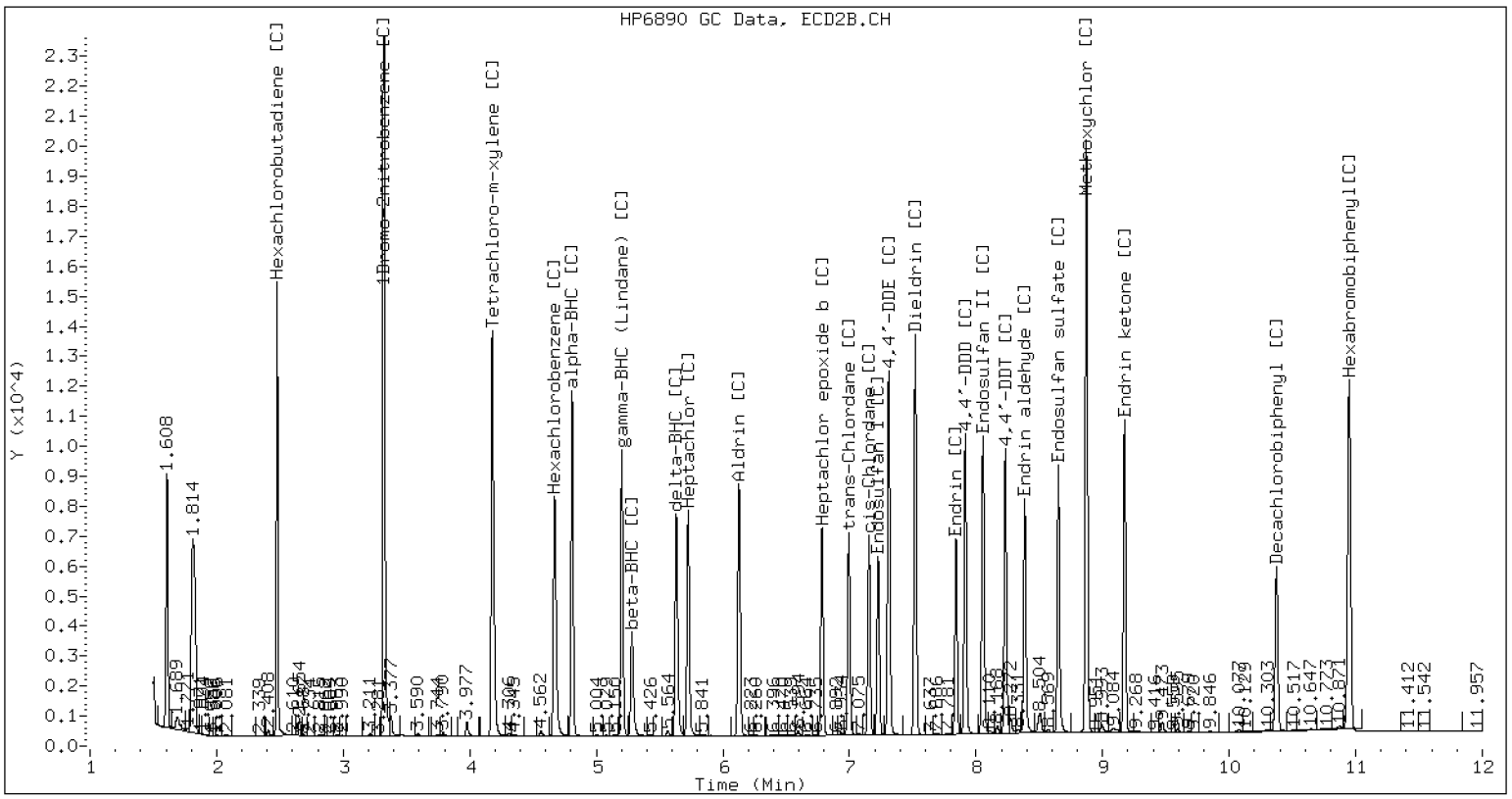
* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

/20230314.b/B20230314.b/23031435.D SEQ-CCV2INDA3 CLP2



CLP-2 Manual Integration: YES

CONTINUING CALIBRATION CHECK

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD6	Calibration:	FL00041
Lab File ID:	23031446.D	Calibration Date:	12/14/2022
Sequence:	SLC0273	Injection Date:	03/15/23
Lab Sample ID:	SLC0273-CCV3	Injection Time:	04:51
Sequence Name:	INDAE4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Hexachlorobenzene	A	20.000	20.1	1.4298940	1.4403390		0.5	+/-20
Hexachlorobenzene [2C]	A	20.000	18.4	1.4591090	1.3458400		-8.0	+/-20
Decachlorobiphenyl	A	40.000	38.2	0.8105886	0.7740959		-4.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.2	0.8841805	0.8895109		0.5	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.0879510	1.0663890		-2.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.1	1.1261070	1.0442740		-7.3	+/-20

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /20230314.b/23031446.D
Data file 2: /20230314.b/B20230314.b/23031446.D
Method: \20230314.b\PEST.m
Compound Sublist: INDA.sub
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: AA

ARI ID: SEQ-CCV3INDA4
Client ID:
Injection Date: 15-MAR-2023 04:51
Report Date: 03/22/2023 15:59
Units: ng/mL
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.374	0.000	190203	4.809	0.000	275143	20.36	18.57	9.2	alpha-BHC
4.763	0.000	77565	5.281	0.000	108061	21.56	19.18	11.7	beta-BHC
4.948	0.000	163135	5.632	0.000	218434	21.36	17.89	17.7	delta-BHC
4.680	0.000	165405	5.202	0.000	238217	20.42	18.94	7.5	gamma-BHC (Lindane)
5.171	0.000	148379	5.726	0.000	204587	20.58	17.96	13.6	Heptachlor
5.498	0.000	166549	6.127	0.000	232937	20.62	17.91	14.1	Aldrin
6.175	0.000	143835	6.782	0.000	184429	20.54	17.15	18.0	Heptachlor epoxide b
6.618	0.000	132707	7.227	0.000	158404	20.65	16.71	21.1	Endosulfan I
6.878	0.000	281831	7.520	0.000	346487	40.81	33.08	20.9	Dieldrin N
6.541	0.000	262790	7.310	0.000	323907	40.99	33.72	19.4	4,4'-DDE
7.128	0.000	134152	7.843	0.000	149482	26.74	27.76	3.7	Endrin N
7.366	0.000	231744	8.055	0.000	263515	51.32	47.75	7.2	Endosulfan II N
7.187	0.000	211834	7.915	0.000	256324	46.87	48.94	4.3	4,4'-DDD N
8.226	0.000	186137	8.651	0.000	234148	43.41	48.31	10.7	Endosulfan sulfate N
7.479	0.000	201603	8.232	0.000	230737	44.14	45.65	3.3	4,4'-DDT N
7.966	0.000	412578	8.872	0.000	480511	203.86	214.80	5.2	Methoxychlor N
8.501	0.000	238772	9.173	0.000	273155	48.61	52.18	7.1	Endrin ketone N
7.793	0.000	185451	8.385	0.000	216516	51.48	55.61	7.7	Endrin aldehyde N
6.318	0.000	143478	6.994	0.000	181521	20.17	16.92	17.5	trans-Chlordane
6.464	0.000	141245	7.154	0.000	174736	19.80	16.65	17.3	cis-Chlordane
2.333	0.000	189558	2.478	0.000	258430	19.37	18.36	5.3	Hexachlorobutadiene
4.217	0.000	174761	4.670	0.000	248794	20.15	18.45	8.8	Hexachlorobenzene
3.857	0.000	258777	4.178	0.000	386092	39.21	37.09	5.5	Tetrachloro-m-xylene
9.415	0.000	148107	10.373	0.000	168424	38.20	40.24	5.2	Decachlorobiphenyl N

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

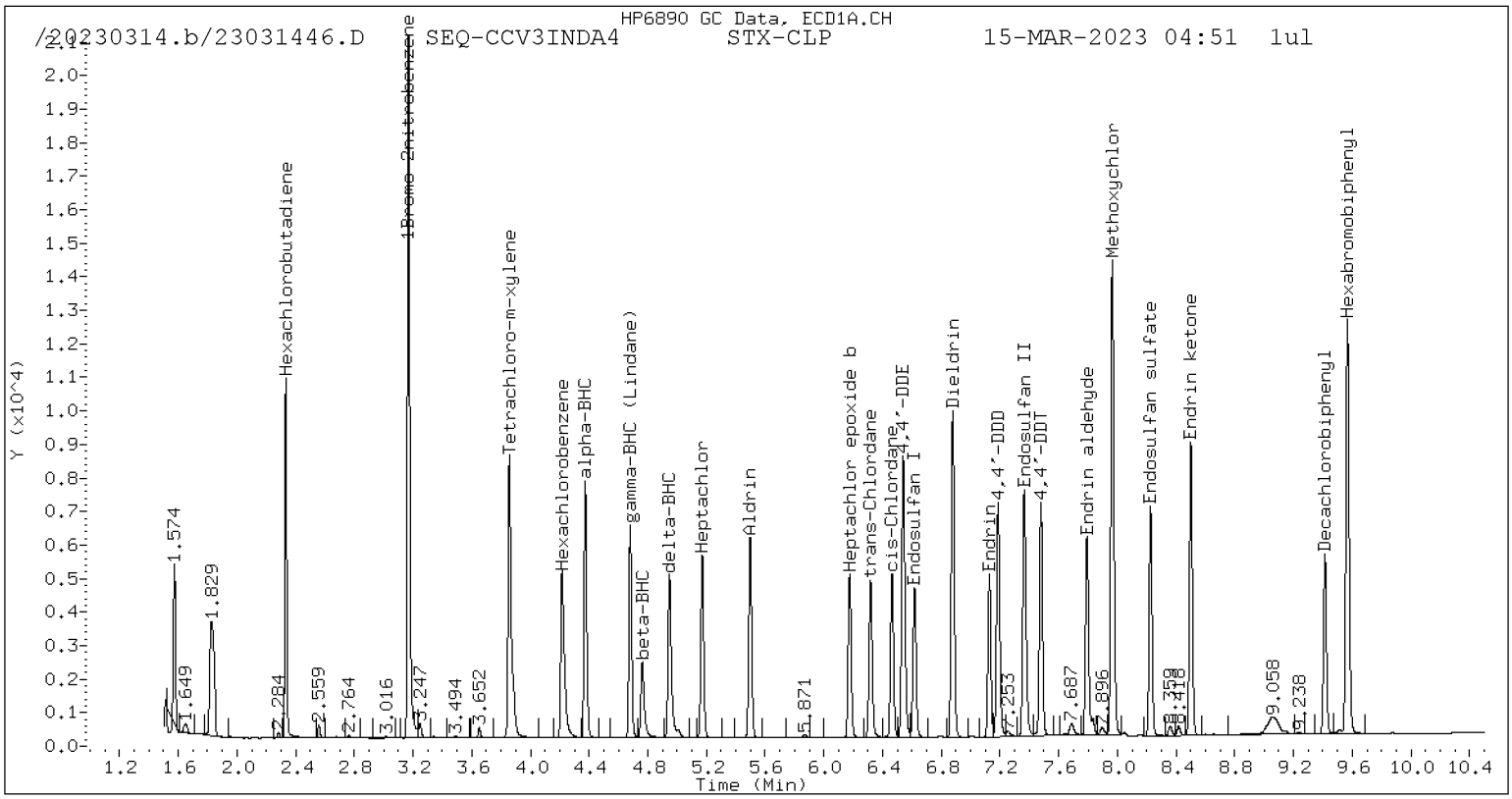
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	672426	485333	-27.8
Hexabromobiphenyl	609723	382658	-37.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	1006482	739446	-26.5
Hexabromobiphenyl	769764	378689	-50.8 <-

* Standard Areas taken from Initial Cal Level 5
Initial Calibration Date: 14-DEC-2022
<- Indicates standard response outside Limits (-50 to +100%)

Pesticide Dual Column Chromatograms



STX-CLP Manual Integration: NO

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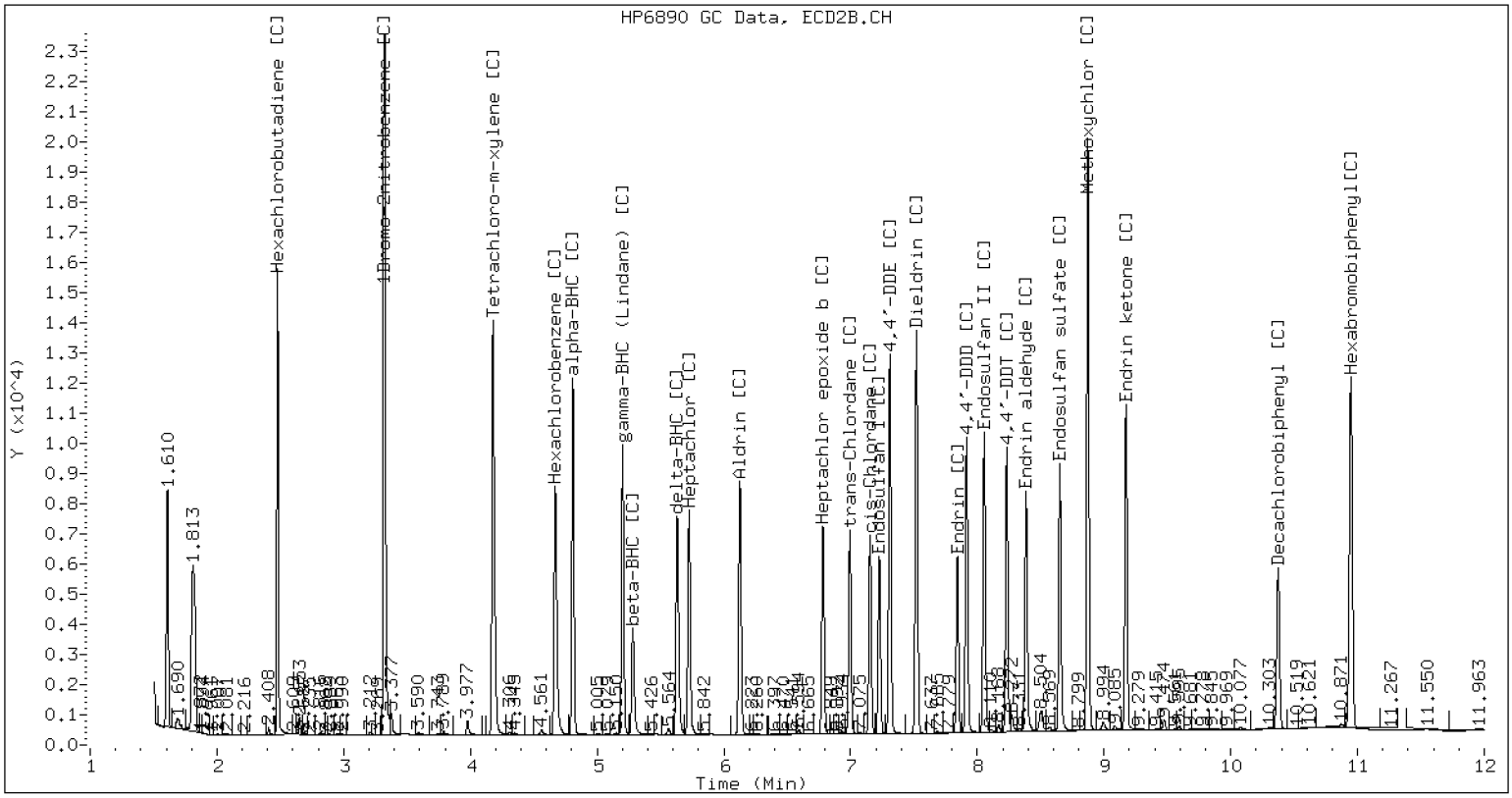


CLP-2 Manual Integration: YES

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23A0467	Calibration:	FL00041	Column:	1

PEM COMPOUND	RT	Response
4,4'-DDE	6.49	6258
Endrin	7.08	745471
4,4'-DDD	7.14	15566
Endrin Aldehyde	7.75	21328
4,4'-DDT	7.43	629664
Endrin Ketone	8.45	19276

4,4'-DDT %Breakdown (1): 3.3

Endrin %Breakdown (1): 5.2

Analytical Resources, LLC
Analytical Chemists and Consultants

PERFORMANCE EVAUATION DATA SHEET

DS1

EPA 8081B

Laboratory:	Analytical Resources, LLC	Laboratory ID:	SKL0233-PEM1	File ID:	22121404.D
Client:	Anchor QEA, LLC	Matrix:	Water	Instrument:	ECD6
Project:	AOC5 MR Phase 1	Analyzed:	12/14/2022	Sequence:	SKL0233
SDG:	23A0467	Calibration:	FL00041	Column:	2

PEM COMPOUND	RT	Response
4,4'-DDE	7.37	11906
Endrin	7.91	1029194
4,4'-DDD	7.98	32697
Endrin Aldehyde	8.45	31426
4,4'-DDT	8.30	890195
Endrin Ketone	9.24	28268

4,4'-DDT %Breakdown (1): 4.8

Endrin %Breakdown (1): 5.5

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

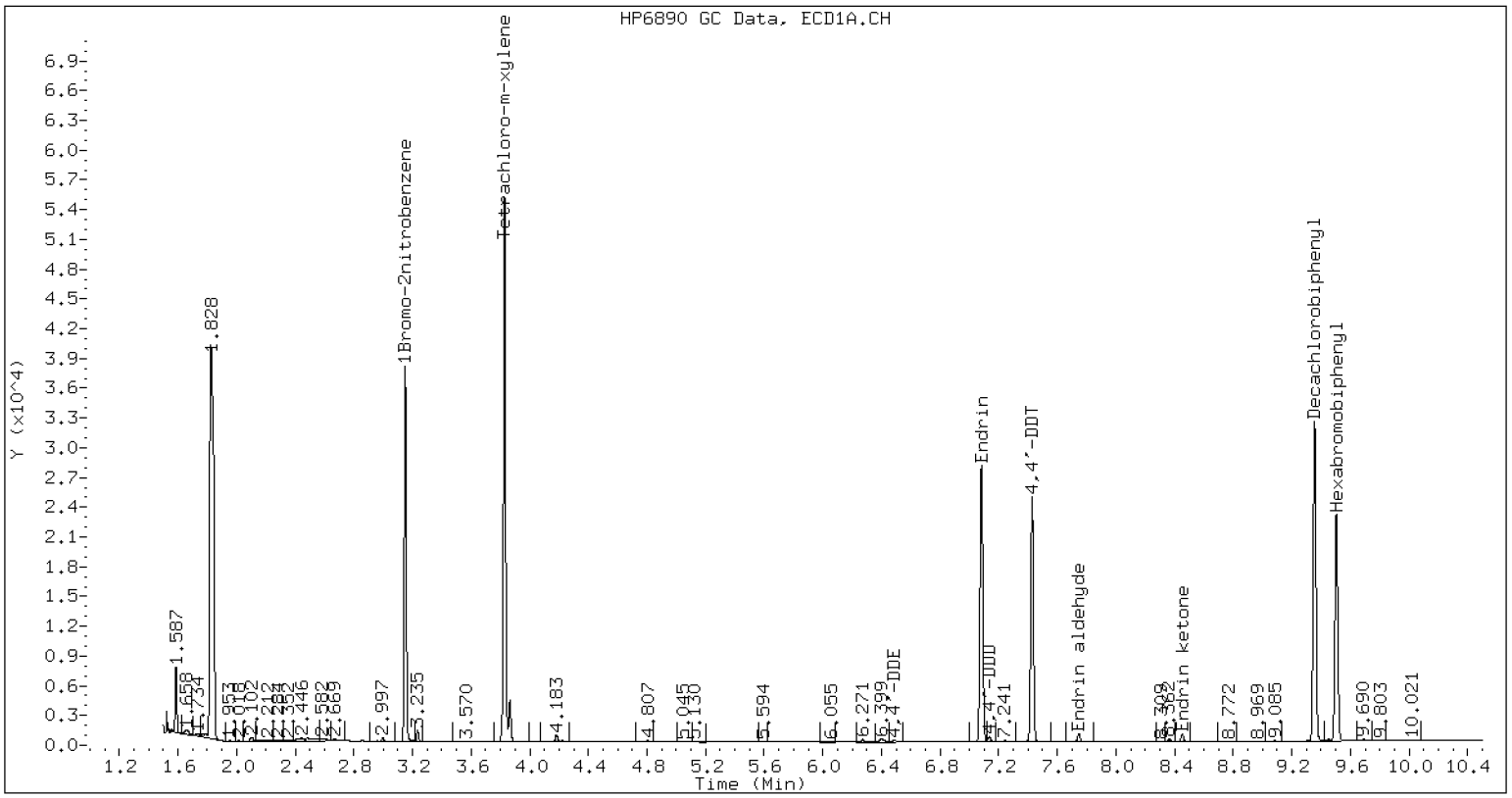
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene [C]	3.350	1005375
4,4'-DDE [C]	7.370	11906
Endrin [C]	7.907	1029194
4,4'-DDD [C]	7.977	32697
4,4'-DDT [C]	8.295	890195
Endrin ketone [C]	9.239	28268
Endrin aldehyde [C]	8.448	31426
Hexabromobiphenyl[C]	11.054	772586
Tetrachloro-m-xylene [C]	4.220	1890294
Decachlorobiphenyl [C]	10.467	1140978

DDT Percent Breakdown = 4.8 %
((11906+32697) * 100)/(11906+32697+890195)

Endrin Percent Breakdown = 5.5 %
((31426+28268) * 100)/(31426+28268+1029194)

/20221214.b/22121404.D SEQ-PEM1 STX-CLP 14-DEC-2022 20:20 1ul



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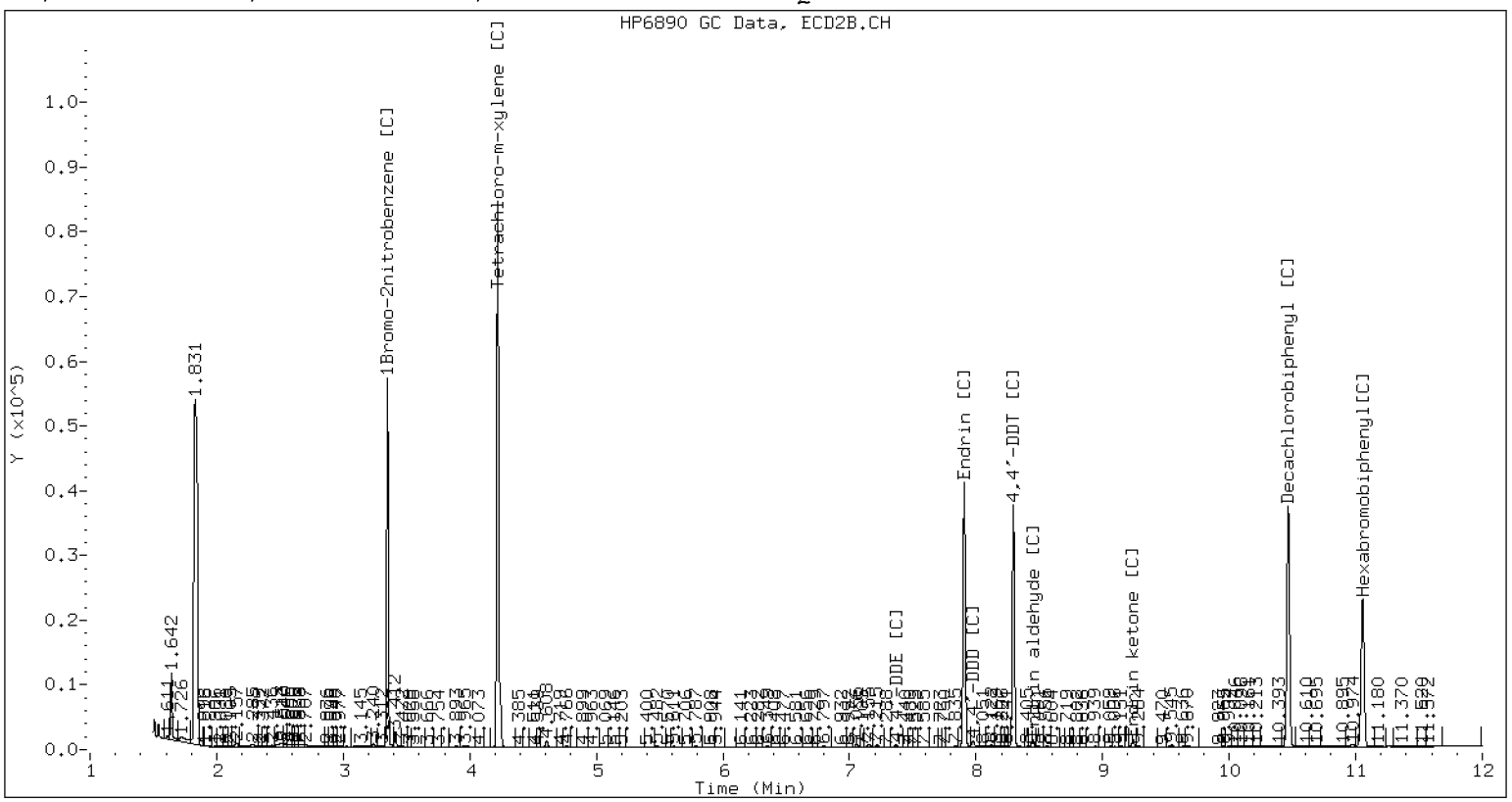

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: SEQ-PEM1 InstID,Data File: ecd6.i, 22121404.D

Analysis Date: 14-DEC-2022 20:20 Init. Calib. Date: 14-DEC-2022

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
1Bromo-2nitrobenzene	3.151	683485
4,4'-DDE	6.490	6258
Endrin	7.082	745471
4,4'-DDD	7.136	15566
4,4'-DDT	7.428	629664
Endrin ketone	8.453	19276
Endrin aldehyde	7.747	21328
Hexabromobiphenyl	9.504	619012
Tetrachloro-m-xylene	3.828	1161664
Decachlorobiphenyl	9.355	833312

DDT Percent Breakdown = 3.3 %
((6258+15566) * 100)/(6258+15566+629664)

Endrin Percent Breakdown = 5.2 %
((21328+19276) * 100)/(21328+19276+745471)

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312
Decachlorobiphenyl	9.355	833312

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SKL0233
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Performance Mix	SKL0233-PEM1	22121404.D	22121404.D	NA	12/14/22 20:20
Cal Standard	SKL0233-CAL1	22121405.D	22121405.D	NA	12/14/22 20:38
Cal Standard	SKL0233-CAL2	22121406.D	22121406.D	NA	12/14/22 20:56
Cal Standard	SKL0233-CAL3	22121407.D	22121407.D	NA	12/14/22 21:14
Cal Standard	SKL0233-CAL4	22121408.D	22121408.D	NA	12/14/22 21:31
Cal Standard	SKL0233-CAL5	22121409.D	22121409.D	NA	12/14/22 21:49
Cal Standard	SKL0233-CAL6	22121410.D	22121410.D	NA	12/14/22 22:07
Cal Standard	SKL0233-CAL7	22121411.D	22121411.D	NA	12/14/22 22:25
Cal Standard	SKL0233-CAL8	22121412.D	22121412.D	NA	12/14/22 22:43
Cal Standard	SKL0233-CAL9	22121413.D	22121413.D	NA	12/14/22 23:01
Cal Standard	SKL0233-CALA	22121414.D	22121414.D	NA	12/14/22 23:19
Cal Standard	SKL0233-CALB	22121415.D	22121415.D	NA	12/14/22 23:36
Cal Standard	SKL0233-CALC	22121416.D	22121416.D	NA	12/14/22 23:54
Cal Standard	SKL0233-CALD	22121417.D	22121417.D	NA	12/15/22 00:12
Cal Standard	SKL0233-CALE	22121418.D	22121418.D	NA	12/15/22 00:30

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-PEM1	DS1	QC		1	K007286	K006953		
SKL0233-CAL1	INDAA	QC		2	K011594	K006953		
SKL0233-CAL2	INDAB	QC		3	K011593	K006953		
SKL0233-CAL3	INDAC	QC		4	K011592	K006953		
SKL0233-CAL4	INDAD	QC		5	K011591	K006953		
SKL0233-CAL5	INDAE	QC		6	K011590	K006953		
SKL0233-CAL6	INDAF	QC		7	K011589	K006953		
SKL0233-CAL7	INDAG	QC		8	K011463	K006953		
SKL0233-CAL8	WNDA	QC		9	K011595	K006953		
SKL0233-CAL9	WNDB	QC		10	K007148	K006953		
SKL0233-CALA	WNDC	QC		11	K007147	K006953		
SKL0233-CALB	WNDD	QC		12	K007146	K006953		
SKL0233-CALC	WNDE	QC		13	K007145	K006953		
SKL0233-CALD	WNDF	QC		14	K007144	K006953		
SKL0233-CALE	WNDG	QC		15	K007093	K006953		
SKL0233-CALM	NOS1	QC		16	K007375	K006953		
SKL0233-CALN	NOS2	QC		17	K007374	K006953		
SKL0233-CALO	NOS3	QC		18	K007373	K006953		
SKL0233-CALP	NOS4	QC		19	K007372	K006953		
SKL0233-CALQ	NOS5	QC		20	K007371	K006953		
SKL0233-CALR	NOS6	QC		21	K007370	K006953		
SKL0233-CALS	NOS7	QC		22	K007287	K006953		

Printed: 12/17/2022 10:57:45AM

ANALYSIS SEQUENCE

SKL0233

Instrument: ECD6 Element Column ID:
Calibration ID: FL00041

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	Comments
SKL0233-CALF	TOXAPH1	QC		23	K011601	K006953		
SKL0233-CALG	TOXAPH2	QC		24	K011600	K006953		
SKL0233-CALH	TOXAPH3	QC		25	K011599	K006953		
SKL0233-CALI	TOXAPH4	QC		26	K011598	K006953		
SKL0233-CALJ	TOXAPH5	QC		27	K011597	K006953		
SKL0233-CALK	TOXAPH6	QC		28	K011596	K006953		
SKL0233-CALL	TOXAPH7	QC		29	K008546	K006953		

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-DEC-2022 19:27	22121401.D	1	RINSE	
2	14-DEC-2022 19:44	22121402.D	1	RINSE	
3	14-DEC-2022 20:02	22121403.D	1	SEQ-IBL1	
4	14-DEC-2022 20:20	22121404.D	1	SEQ-PEM1	
5	14-DEC-2022 20:38	22121405.D	1	SEQ-CAL1	
6	14-DEC-2022 20:56	22121406.D	1	SEQ-CAL2	
7	14-DEC-2022 21:14	22121407.D	1	SEQ-CAL3	
8	14-DEC-2022 21:31	22121408.D	1	SEQ-CAL4	
9	14-DEC-2022 21:49	22121409.D	1	SEQ-CAL5	
10	14-DEC-2022 22:07	22121410.D	1	SEQ-CAL6	
11	14-DEC-2022 22:25	22121411.D	1	SEQ-CAL7	
12	14-DEC-2022 22:43	22121412.D	1	SEQ-CAL8	
13	14-DEC-2022 23:01	22121413.D	1	SEQ-CAL9	
14	14-DEC-2022 23:19	22121414.D	1	SEQ-CALA	
15	14-DEC-2022 23:36	22121415.D	1	SEQ-CALB	
16	14-DEC-2022 23:54	22121416.D	1	SEQ-CALC	
17	15-DEC-2022 00:12	22121417.D	1	SEQ-CALD	
18	15-DEC-2022 00:30	22121418.D	1	SEQ-CALE	
19	15-DEC-2022 00:48	22121419.D	1	SEQ-SCV1	
20	15-DEC-2022 01:06	22121420.D	1	SEQ-SCV2	
21	15-DEC-2022 01:24	22121421.D	1	SEQ-CAL1A	
22	15-DEC-2022 01:42	22121422.D	1	SEQ-CAL2A	
23	15-DEC-2022 01:59	22121423.D	1	SEQ-CAL3A	
24	15-DEC-2022 02:17	22121424.D	1	SEQ-CAL4A	
25	15-DEC-2022 02:35	22121425.D	1	SEQ-CAL5A	
26	15-DEC-2022 02:53	22121426.D	1	SEQ-CAL6A	
27	15-DEC-2022 03:11	22121427.D	1	SEQ-CAL7A	
28	15-DEC-2022 03:29	22121428.D	1	SEQ-CAL8A	
29	15-DEC-2022 03:46	22121429.D	1	SEQ-CAL9A	
30	15-DEC-2022 04:04	22121430.D	1	SEQ-CALAA	
31	15-DEC-2022 04:22	22121431.D	1	SEQ-CALAB	
32	15-DEC-2022 04:40	22121432.D	1	SEQ-CALAC	
33	15-DEC-2022 04:58	22121433.D	1	SEQ-CALAD	
34	15-DEC-2022 05:16	22121434.D	1	SEQ-CALAE	
35	15-DEC-2022 05:33	22121435.D	1	SEQ-PEM2	
36	15-DEC-2022 05:51	22121436.D	1	SEQ-ICV1	
37	15-DEC-2022 06:09	22121437.D	1	SEQ-ICV2	
38	15-DEC-2022 06:27	22121438.D	1	SEQ-ICV3	
39	15-DEC-2022 06:45	22121439.D	1	SEQ-ICV4	
40	15-DEC-2022 07:03	22121440.D	1	BKK0688-BLK1	
41	15-DEC-2022 07:21	22121441.D	1	BKK0688-BS1	
42	15-DEC-2022 07:39	22121442.D	1	BKK0688-BS2	
43	15-DEC-2022 07:57	22121443.D	1	BKK0688-BS3	
44	15-DEC-2022 08:15	22121444.D	1	BKK0688-BSD1	
45	15-DEC-2022 08:32	22121445.D	1	BKK0142-BLK1	
46	15-DEC-2022 08:50	22121446.D	1	BKK0142-BS1	
47	15-DEC-2022 09:08	22121447.D	1	BKK0142-BS2	
48	15-DEC-2022 09:26	22121448.D	1	BKK0142-BSD1	
49	15-DEC-2022 09:44	22121449.D	1	BKK0142-MS1	
50	15-DEC-2022 10:02	22121450.D	1	BKK0142-MSD1	

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b p

	Inject Date/Time	Filename	DF	LabID	ClientID
51	15-DEC-2022 10:20	22121451.D	1	22J0513-01	
52	15-DEC-2022 10:38	22121452.D	1	22J0513-04	
53	15-DEC-2022 10:55	22121453.D	1	22J0535-01	
54	15-DEC-2022 11:13	22121454.D	1	22K0429-01	
55	15-DEC-2022 11:31	22121455.D	1	22K0429-02	
56	15-DEC-2022 11:49	22121456.D	1	22K0429-03	
57	15-DEC-2022 12:07	22121457.D	1	SEQ-PEM3	
58	15-DEC-2022 12:25	22121458.D	1	SEQ-CCV1	
59	15-DEC-2022 12:43	22121459.D	1	SEQ-CCV2	
60	15-DEC-2022 13:01	22121460.D	1	SEQ-CCV3	
61	15-DEC-2022 13:19	22121461.D	1	SEQ-CCV4	
62	15-DEC-2022 13:36	22121462.D	1	BKK0380-BLK1	
63	15-DEC-2022 13:54	22121463.D	1	BKK0380-BS1	
64	15-DEC-2022 14:12	22121464.D	1	BKK0380-BSD1	
65	15-DEC-2022 14:30	22121465.D	1	22K0157-01	
66	15-DEC-2022 14:48	22121466.D	1	22K0230-01	
67	15-DEC-2022 15:06	22121467.D	1	22K0231-01	
68	15-DEC-2022 15:24	22121468.D	1	BKK0382-BLK1	
69	15-DEC-2022 15:42	22121469.D	1	BKK0382-BS1	
70	15-DEC-2022 16:00	22121470.D	1	BKK0382-BS2	
71	15-DEC-2022 16:18	22121471.D	1	BKK0382-BSD1	
72	15-DEC-2022 16:35	22121472.D	1	22K0075-01	
73	15-DEC-2022 16:53	22121473.D	1	SEQ-PEM4	
74	15-DEC-2022 17:11	22121474.D	1	SEQ-CCV5	
75	15-DEC-2022 17:29	22121475.D	1	SEQ-CCV6	
76	15-DEC-2022 17:47	22121476.D	1	SEQ-CCV7	
77	15-DEC-2022 18:05	22121477.D	1	SEQ-CCV8	
78	15-DEC-2022 18:23	22121478.D	1	BKK0537-BLK1	
79	15-DEC-2022 18:40	22121479.D	1	BKK0537-BS1	
80	15-DEC-2022 18:58	22121480.D	1	BKK0537-BS2	
81	15-DEC-2022 19:16	22121481.D	1	22K0194-01	
82	15-DEC-2022 19:34	22121482.D	1	22K0194-01RE1	10
83	15-DEC-2022 19:52	22121483.D	1	SEQ-PEM5	
84	15-DEC-2022 20:09	22121484.D	1	SEQ-CCV9	
85	15-DEC-2022 20:27	22121485.D	1	SEQ-CCVA	
86	15-DEC-2022 20:45	22121486.D	1	SEQ-CCVB	
87	15-DEC-2022 21:03	22121487.D	1	SEQ-CCVC	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-DEC-2022

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1113	22121454.D	22K0429-01		1	Heptachlor epoxide b,
1131	22121455.D	22K0429-02		1	Heptachlor epoxide b,
1149	22121456.D	22K0429-03		1	Hexachlorobenzene,
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2009	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION
1927	22121401.D	RINSE		1	NO MANUAL INTEGRATION
1944	22121402.D	RINSE		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2002	22121403.D	SEQ-IBL1		1	NO MANUAL INTEGRATION
2020	22121404.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
2038	22121405.D	SEQ-CAL1		1	NO MANUAL INTEGRATION
2056	22121406.D	SEQ-CAL2		1	NO MANUAL INTEGRATION
2114	22121407.D	SEQ-CAL3		1	NO MANUAL INTEGRATION
2131	22121408.D	SEQ-CAL4		1	NO MANUAL INTEGRATION
2149	22121409.D	SEQ-CAL5		1	NO MANUAL INTEGRATION
2207	22121410.D	SEQ-CAL6		1	NO MANUAL INTEGRATION
2225	22121411.D	SEQ-CAL7		1	NO MANUAL INTEGRATION
2243	22121412.D	SEQ-CAL8		1	NO MANUAL INTEGRATION
2301	22121413.D	SEQ-CAL9		1	NO MANUAL INTEGRATION
2319	22121414.D	SEQ-CALA		1	NO MANUAL INTEGRATION
2336	22121415.D	SEQ-CALB		1	NO MANUAL INTEGRATION
2354	22121416.D	SEQ-CALC		1	NO MANUAL INTEGRATION
0012	22121417.D	SEQ-CALD		1	NO MANUAL INTEGRATION
0030	22121418.D	SEQ-CALE		1	NO MANUAL INTEGRATION
0048	22121419.D	SEQ-SCV1		1	NO MANUAL INTEGRATION
0106	22121420.D	SEQ-SCV2		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0124	22121421.D	SEQ-CAL1A		1	NO MANUAL INTEGRATION
0142	22121422.D	SEQ-CAL2A		1	NO MANUAL INTEGRATION
0159	22121423.D	SEQ-CAL3A		1	NO MANUAL INTEGRATION
0217	22121424.D	SEQ-CAL4A		1	NO MANUAL INTEGRATION
0235	22121425.D	SEQ-CAL5A		1	NO MANUAL INTEGRATION
0253	22121426.D	SEQ-CAL6A		1	NO MANUAL INTEGRATION
0311	22121427.D	SEQ-CAL7A		1	NO MANUAL INTEGRATION
0329	22121428.D	SEQ-CAL8A		1	NO MANUAL INTEGRATION
0346	22121429.D	SEQ-CAL9A		1	NO MANUAL INTEGRATION
0404	22121430.D	SEQ-CALAA		1	NO MANUAL INTEGRATION
0422	22121431.D	SEQ-CALAB		1	NO MANUAL INTEGRATION
0440	22121432.D	SEQ-CALAC		1	NO MANUAL INTEGRATION
0458	22121433.D	SEQ-CALAD		1	NO MANUAL INTEGRATION
0516	22121434.D	SEQ-CALAE		1	NO MANUAL INTEGRATION
0533	22121435.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
0551	22121436.D	SEQ-ICV1		1	NO MANUAL INTEGRATION
0609	22121437.D	SEQ-ICV2		1	NO MANUAL INTEGRATION
0627	22121438.D	SEQ-ICV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0645	22121439.D	SEQ-ICV4		1	NO MANUAL INTEGRATION
0703	22121440.D	BKK0688-BLK1		1	NO MANUAL INTEGRATION
0721	22121441.D	BKK0688-BS1		1	NO MANUAL INTEGRATION
0739	22121442.D	BKK0688-BS2		1	NO MANUAL INTEGRATION
0757	22121443.D	BKK0688-BS3		1	NO MANUAL INTEGRATION
0815	22121444.D	BKK0688-BSD1		1	NO MANUAL INTEGRATION
0832	22121445.D	BKK0142-BLK1		1	NO MANUAL INTEGRATION
0850	22121446.D	BKK0142-BS1		1	NO MANUAL INTEGRATION
0908	22121447.D	BKK0142-BS2		1	NO MANUAL INTEGRATION
0926	22121448.D	BKK0142-BSD1		1	NO MANUAL INTEGRATION
0944	22121449.D	BKK0142-MS1		1	NO MANUAL INTEGRATION
1002	22121450.D	BKK0142-MSD1		1	NO MANUAL INTEGRATION
1020	22121451.D	22J0513-01		1	NO MANUAL INTEGRATION
1038	22121452.D	22J0513-04		1	NO MANUAL INTEGRATION
1055	22121453.D	22J0535-01		1	trans-Chlordane [C],
1113	22121454.D	22K0429-01		1	NO MANUAL INTEGRATION
1131	22121455.D	22K0429-02		1	Aldrin [C], Heptachlor epoxide b [C], trans-Chlordane [C],
1149	22121456.D	22K0429-03		1	Aldrin [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1207	22121457.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
1225	22121458.D	SEQ-CCV1		1	NO MANUAL INTEGRATION
1243	22121459.D	SEQ-CCV2		1	NO MANUAL INTEGRATION
1301	22121460.D	SEQ-CCV3		1	NO MANUAL INTEGRATION
1319	22121461.D	SEQ-CCV4		1	NO MANUAL INTEGRATION
1336	22121462.D	BKK0380-BLK1		1	NO MANUAL INTEGRATION
1354	22121463.D	BKK0380-BS1		1	NO MANUAL INTEGRATION
1412	22121464.D	BKK0380-BSD1		1	NO MANUAL INTEGRATION
1430	22121465.D	22K0157-01		1	NO MANUAL INTEGRATION
1448	22121466.D	22K0230-01		1	NO MANUAL INTEGRATION
1506	22121467.D	22K0231-01		1	NO MANUAL INTEGRATION
1524	22121468.D	BKK0382-BLK1		1	NO MANUAL INTEGRATION
1542	22121469.D	BKK0382-BS1		1	NO MANUAL INTEGRATION
1600	22121470.D	BKK0382-BS2		1	NO MANUAL INTEGRATION
1618	22121471.D	BKK0382-BSD1		1	NO MANUAL INTEGRATION
1635	22121472.D	22K0075-01		1	NO MANUAL INTEGRATION
1653	22121473.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
1711	22121474.D	SEQ-CCV5		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20221214.b\B20221214.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1729	22121475.D	SEQ-CCV6		1	NO MANUAL INTEGRATION
1747	22121476.D	SEQ-CCV7		1	NO MANUAL INTEGRATION
1805	22121477.D	SEQ-CCV8		1	NO MANUAL INTEGRATION
1823	22121478.D	BKK0537-BLK1		1	NO MANUAL INTEGRATION
1840	22121479.D	BKK0537-BS1		1	NO MANUAL INTEGRATION
1858	22121480.D	BKK0537-BS2		1	NO MANUAL INTEGRATION
1916	22121481.D	22K0194-01		1	NO MANUAL INTEGRATION
1934	22121482.D	22K0194-01RE1	10	1	NO MANUAL INTEGRATION
1952	22121483.D	SEQ-PEM5		1	NO MANUAL INTEGRATION
2010	22121484.D	SEQ-CCV9		1	NO MANUAL INTEGRATION
2027	22121485.D	SEQ-CCVA		1	NO MANUAL INTEGRATION
2045	22121486.D	SEQ-CCVB		1	NO MANUAL INTEGRATION
2103	22121487.D	SEQ-CCVC		1	NO MANUAL INTEGRATION

Security Status Report

Date: 17-Dec-2022 10:57

22121401.D	Data Locked	jrains, 17-Dec-2022 10:57
22121402.D	Data Locked	jrains, 17-Dec-2022 10:57
22121403.D	Data Locked	jrains, 17-Dec-2022 10:57
22121404.D	Data Locked	jrains, 17-Dec-2022 10:57
22121405.D	Data Locked	jrains, 17-Dec-2022 10:57
22121406.D	Data Locked	jrains, 17-Dec-2022 10:57
22121407.D	Data Locked	jrains, 17-Dec-2022 10:57
22121408.D	Data Locked	jrains, 17-Dec-2022 10:57
22121409.D	Data Locked	jrains, 17-Dec-2022 10:57
22121410.D	Data Locked	jrains, 17-Dec-2022 10:57
22121411.D	Data Locked	jrains, 17-Dec-2022 10:57
22121412.D	Data Locked	jrains, 17-Dec-2022 10:57
22121413.D	Data Locked	jrains, 17-Dec-2022 10:57
22121414.D	Data Locked	jrains, 17-Dec-2022 10:57
22121415.D	Data Locked	jrains, 17-Dec-2022 10:57
22121416.D	Data Locked	jrains, 17-Dec-2022 10:57
22121417.D	Data Locked	jrains, 17-Dec-2022 10:57
22121418.D	Data Locked	jrains, 17-Dec-2022 10:57
22121419.D	Data Locked	jrains, 17-Dec-2022 10:57
22121420.D	Data Locked	jrains, 17-Dec-2022 10:57
22121421.D	Data Locked	jrains, 17-Dec-2022 10:57
22121422.D	Data Locked	jrains, 17-Dec-2022 10:57
22121423.D	Data Locked	jrains, 17-Dec-2022 10:57
22121424.D	Data Locked	jrains, 17-Dec-2022 10:57
22121425.D	Data Locked	jrains, 17-Dec-2022 10:57
22121426.D	Data Locked	jrains, 17-Dec-2022 10:57
22121427.D	Data Locked	jrains, 17-Dec-2022 10:57
22121428.D	Data Locked	jrains, 17-Dec-2022 10:57
22121429.D	Data Locked	jrains, 17-Dec-2022 10:57
22121430.D	Data Locked	jrains, 17-Dec-2022 10:57
22121431.D	Data Locked	jrains, 17-Dec-2022 10:57
22121432.D	Data Locked	jrains, 17-Dec-2022 10:57
22121433.D	Data Locked	jrains, 17-Dec-2022 10:57
22121434.D	Data Locked	jrains, 17-Dec-2022 10:57

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0273
Instrument: ECD6
Calibration: FL00041

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0273-ICV1	23031403.D	23031403.D	NA	03/14/23 15:57
Calibration Check	SLC0273-CCV1	23031420.D	23031420.D	NA	03/14/23 21:04
Blank	BLB0554-BLK1	23031429.D	23031429.D	Solid	03/14/23 23:46
LCS	BLB0554-BS1	23031430.D	23031430.D	Solid	03/15/23 00:04
LCS Dup	BLB0554-BSD1	23031431.D	23031431.D	Solid	03/15/23 00:22
LDW23-SS1014	BLB0554-MS1	23031432.D	23031432.D	Solid	03/15/23 00:40
LDW23-SS1014	BLB0554-MSD1	23031433.D	23031433.D	Solid	03/15/23 00:58
Calibration Check	SLC0273-CCV2	23031435.D	23031435.D	NA	03/15/23 01:34
LDW23-SS1010	23A0467-01	23031436.D	23031436.D	Solid	03/15/23 01:52
LDW23-SS1005	23A0467-02	23031437.D	23031437.D	Solid	03/15/23 02:10
LDW23-SS1006	23A0467-03	23031438.D	23031438.D	Solid	03/15/23 02:28
LDW23-SS1003	23A0467-04	23031439.D	23031439.D	Solid	03/15/23 02:46
LDW23-SS1004	23A0467-05	23031440.D	23031440.D	Solid	03/15/23 03:04
LDW23-SS1204	23A0467-06	23031441.D	23031441.D	Solid	03/15/23 03:22
LDW23-SS1238	23A0467-07	23031442.D	23031442.D	Solid	03/15/23 03:39
LDW23-SS1013	23A0467-08	23031443.D	23031443.D	Solid	03/15/23 03:57
LDW23-SS1014	23A0467-09	23031444.D	23031444.D	Solid	03/15/23 04:15
Calibration Check	SLC0273-CCV3	23031446.D	23031446.D	NA	03/15/23 04:51

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0273

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/21/2023 1:07:42PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0273-PEM1	QC		1		L002116	L000844		
SLC0273-ICV1	QC		2		L000845	L000844		
BLB0497-BLK1	QC		3			L000844		
BLB0497-BS1	QC		4			L000844		
BLB0497-BSD1	QC		5			L000844		
BLB0497-MS1	QC		6			L000844		
BLB0497-MSD1	QC		7			L000844		
23A0455-01	8081B Pest (PSDDA)	A 04	8			L000844	Anchor QEA, LLC	
23A0455-02	8081B Pest (PSDDA)	A 04	9			L000844	Anchor QEA, LLC	
23A0455-03	8081B Pest (PSDDA)	A 04	10			L000844	Anchor QEA, LLC	
23A0455-04	8081B Pest (PSDDA)	A 04	11			L000844	Anchor QEA, LLC	
23A0455-05	8081B Pest (PSDDA)	A 04	12			L000844	Anchor QEA, LLC	
23A0455-06	8081B Pest (PSDDA)	A 04	13			L000844	Anchor QEA, LLC	
23A0455-07	8081B Pest (PSDDA)	A 04	14			L000844	Anchor QEA, LLC	
23A0455-08	8081B Pest (PSDDA)	A 04	15			L000844	Anchor QEA, LLC	
23A0455-09	8081B Pest (PSDDA)	A 04	16			L000844	Anchor QEA, LLC	
23A0455-10	8081B Pest (PSDDA)	A 04	17			L000844	Anchor QEA, LLC	
SLC0273-PEM2	QC		18		L002116	L000844		
SLC0273-CCV1	QC		19		L000845	L000844		
23A0455-11	8081B Pest (PSDDA)	A 04	20			L000844	Anchor QEA, LLC	
23A0455-12	8081B Pest (PSDDA)	A 04	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0273

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/21/2023 1:07:42PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0455-13	8081B Pest (PSDDA)	A 04	22			L000844	Anchor QEA, LLC	
23A0455-14	8081B Pest (PSDDA)	A 04	23			L000844	Anchor QEA, LLC	
23A0455-15	8081B Pest (PSDDA)	A 04	24			L000844	Anchor QEA, LLC	
23A0455-16	8081B Pest (PSDDA)	A 04	25			L000844	Anchor QEA, LLC	
23A0455-17	8081B Pest (PSDDA)	A 04	26			L000844	Anchor QEA, LLC	
23A0455-18	8081B Pest (PSDDA)	A 04	27			L000844	Anchor QEA, LLC	
BLB0554-BLK1	QC		28			L000844		
BLB0554-BS1	QC		29			L000844		
BLB0554-BSD1	QC		30			L000844		
BLB0554-MS1	QC		31			L000844		
BLB0554-MSD1	QC		32			L000844		
SLC0273-PEM3	QC		33		L002116	L000844		
SLC0273-CCV2	QC		34		L000845	L000844		
23A0467-01	8081B Pest (PSDDA)	A 04	35			L000844	Anchor QEA, LLC	
23A0467-02	8081B Pest (PSDDA)	A 04	36			L000844	Anchor QEA, LLC	
23A0467-03	8081B Pest (PSDDA)	A 04	37			L000844	Anchor QEA, LLC	
23A0467-04	8081B Pest (PSDDA)	A 04	38			L000844	Anchor QEA, LLC	
23A0467-05	8081B Pest (PSDDA)	A 04	39			L000844	Anchor QEA, LLC	
23A0467-06	8081B Pest (PSDDA)	A 04	40			L000844	Anchor QEA, LLC	
23A0467-07	8081B Pest (PSDDA)	A 04	41			L000844	Anchor QEA, LLC	
23A0467-08	8081B Pest (PSDDA)	A 04	42			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0273

Instrument: ECD6
Calibration ID: FL00041

Printed: 3/21/2023 1:07:42PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0467-09	8081B Pest (PSDDA)	A 04	43			L000844	Anchor QEA, LLC	
SLC0273-PEM4	QC		44		L002116	L000844		
SLC0273-CCV3	QC		45		L000845	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \ecd6.i\20230314.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	14-MAR-2023 15:21	23031401.D	1	RINSE	
2	14-MAR-2023 15:39	23031402.D	1	SEQ-PEM1	
3	14-MAR-2023 15:57	23031403.D	1	SEQ-ICV1INDA1	
4	14-MAR-2023 16:16	23031404.D	1	BLB0497-BLK1	
5	14-MAR-2023 16:34	23031405.D	1	BLB0497-BS1	
6	14-MAR-2023 16:52	23031406.D	1	BLB0497-BSD1	
7	14-MAR-2023 17:10	23031407.D	1	BLB0497-MS1	
8	14-MAR-2023 17:28	23031408.D	1	BLB0497-MSD1	
9	14-MAR-2023 17:46	23031409.D	1	23A0455-01	
10	14-MAR-2023 18:04	23031410.D	1	23A0455-02	
11	14-MAR-2023 18:22	23031411.D	1	23A0455-03	
12	14-MAR-2023 18:40	23031412.D	1	23A0455-04	
13	14-MAR-2023 18:58	23031413.D	1	23A0455-05	
14	14-MAR-2023 19:16	23031414.D	1	23A0455-06	
15	14-MAR-2023 19:34	23031415.D	1	23A0455-07	
16	14-MAR-2023 19:52	23031416.D	1	23A0455-08	
17	14-MAR-2023 20:10	23031417.D	1	23A0455-09	
18	14-MAR-2023 20:28	23031418.D	1	23A0455-10	
19	14-MAR-2023 20:46	23031419.D	1	SEQ-PEM2	
20	14-MAR-2023 21:04	23031420.D	1	SEQ-CCV1INDA2	
21	14-MAR-2023 21:22	23031421.D	1	23A0455-11	
22	14-MAR-2023 21:40	23031422.D	1	23A0455-12	
23	14-MAR-2023 21:58	23031423.D	1	23A0455-13	
24	14-MAR-2023 22:16	23031424.D	1	23A0455-14	
25	14-MAR-2023 22:34	23031425.D	1	23A0455-15	
26	14-MAR-2023 22:52	23031426.D	1	23A0455-16	
27	14-MAR-2023 23:10	23031427.D	1	23A0455-17	
28	14-MAR-2023 23:28	23031428.D	1	23A0455-18	
29	14-MAR-2023 23:46	23031429.D	1	BLB0554-BLK1	
30	15-MAR-2023 00:04	23031430.D	1	BLB0554-BS1	
31	15-MAR-2023 00:22	23031431.D	1	BLB0554-BSD1	
32	15-MAR-2023 00:40	23031432.D	1	BLB0554-MS1	
33	15-MAR-2023 00:58	23031433.D	1	BLB0554-MSD1	
34	15-MAR-2023 01:16	23031434.D	1	SEQ-PEM3	
35	15-MAR-2023 01:34	23031435.D	1	SEQ-CCV2INDA3	
36	15-MAR-2023 01:52	23031436.D	1	23A0467-01	
37	15-MAR-2023 02:10	23031437.D	1	23A0467-02	
38	15-MAR-2023 02:28	23031438.D	1	23A0467-03	
39	15-MAR-2023 02:46	23031439.D	1	23A0467-04	
40	15-MAR-2023 03:04	23031440.D	1	23A0467-05	
41	15-MAR-2023 03:22	23031441.D	1	23A0467-06	
42	15-MAR-2023 03:39	23031442.D	1	23A0467-07	
43	15-MAR-2023 03:57	23031443.D	1	23A0467-08	
44	15-MAR-2023 04:15	23031444.D	1	23A0467-09	
45	15-MAR-2023 04:33	23031445.D	1	SEQ-PEM4	
46	15-MAR-2023 04:51	23031446.D	1	SEQ-CCV3INDA4	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b

ARI Job No.: RINS Method: PEST.m Instrument: ecd6.i Date: 14-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1521	23031401.D	RINSE		1	NO MANUAL INTEGRATION
1539	23031402.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1557	23031403.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1616	23031404.D	BLB0497-BLK1		1	NO MANUAL INTEGRATION
1634	23031405.D	BLB0497-BS1		1	1Bromo-2nitrobenzene, alpha-BHC, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1652	23031406.D	BLB0497-BSD1		1	1Bromo-2nitrobenzene, alpha-BHC, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1710	23031407.D	BLB0497-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1728	23031408.D	BLB0497-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, delta-BHC, gamma-BHC (Lindane), Heptachlor, Aldrin, Heptachlor epoxide b, Endosulfan I, 4,4'-DDD, 4,4'-DDT, cis-Chlordane, Hexachlorobutadiene, Hexachlorobenzene, Tetrachloro-m-xylene,
1746	23031409.D	23A0455-01		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1804	23031410.D	23A0455-02		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1822	23031411.D	23A0455-03		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1840	23031412.D	23A0455-04		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1858	23031413.D	23A0455-05		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1916	23031414.D	23A0455-06		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1934	23031415.D	23A0455-07		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
1952	23031416.D	23A0455-08		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2010	23031417.D	23A0455-09		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2028	23031418.D	23A0455-10		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2046	23031419.D	SEQ-PEM2		1	NO MANUAL INTEGRATION
2104	23031420.D	SEQ-CCV1INDA2		1	NO MANUAL INTEGRATION
2122	23031421.D	23A0455-11		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2140	23031422.D	23A0455-12		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2158	23031423.D	23A0455-13		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Hexachlorobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2216	23031424.D	23A0455-14		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2234	23031425.D	23A0455-15		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Hexachlorobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2252	23031426.D	23A0455-16		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2310	23031427.D	23A0455-17		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
2328	23031428.D	23A0455-18		1	1Bromo-2nitrobenzene, Tetrachloro-m-xylene,
2346	23031429.D	BLB0554-BLK1		1	NO MANUAL INTEGRATION
0004	23031430.D	BLB0554-BS1		1	NO MANUAL INTEGRATION
0022	23031431.D	BLB0554-BSD1		1	NO MANUAL INTEGRATION
0040	23031432.D	BLB0554-MS1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, gamma-BHC (Lindane), Endosulfan I, Dieldrin, 4,4'-DDE, cis-Chlordane, Hexachlorobutadiene, Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0058	23031433.D	BLB0554-MSD1		1	1Bromo-2nitrobenzene, alpha-BHC, beta-BHC, gamma-BHC (Lindane), Hexachlorobenzene, Hexabromobiphenyl, Tetrachloro-m-xylene, Decachlorobiphenyl,
0116	23031434.D	SEQ-PEM3		1	NO MANUAL INTEGRATION
0134	23031435.D	SEQ-CCV2INDA3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0152	23031436.D	23A0467-01		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0210	23031437.D	23A0467-02		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0228	23031438.D	23A0467-03		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0246	23031439.D	23A0467-04		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0304	23031440.D	23A0467-05		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0322	23031441.D	23A0467-06		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0339	23031442.D	23A0467-07		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0357	23031443.D	23A0467-08		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0415	23031444.D	23A0467-09		1	Hexabromobiphenyl, 1Bromo-2nitrobenzene, Decachlorobiphenyl, Tetrachloro-m-xylene,
0433	23031445.D	SEQ-PEM4		1	NO MANUAL INTEGRATION
0451	23031446.D	SEQ-CCV3INDA4		1	NO MANUAL INTEGRATION
1521	23031401.D	RINSE		1	NO MANUAL INTEGRATION
1539	23031402.D	SEQ-PEM1		1	NO MANUAL INTEGRATION
1557	23031403.D	SEQ-ICV1INDA1		1	NO MANUAL INTEGRATION
1616	23031404.D	BLB0497-BLK1		1	NO MANUAL INTEGRATION
1634	23031405.D	BLB0497-BS1		1	NO MANUAL INTEGRATION
1652	23031406.D	BLB0497-BSD1		1	NO MANUAL INTEGRATION
1710	23031407.D	BLB0497-MS1		1	1Bromo-2nitrobenzene [C], Methoxychlor [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b\B20230314.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1728	23031408.D	BLB0497-MSD1		1	1Bromo-2nitrobenzene [C], Methoxychlor [C], Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobip
1746	23031409.D	23A0455-01		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1804	23031410.D	23A0455-02		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1822	23031411.D	23A0455-03		1	Hexachlorobenzene [C], 1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1840	23031412.D	23A0455-04		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1858	23031413.D	23A0455-05		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1916	23031414.D	23A0455-06		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1934	23031415.D	23A0455-07		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
1952	23031416.D	23A0455-08		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2010	23031417.D	23A0455-09		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2028	23031418.D	23A0455-10		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2046	23031419.D	SEQ-PEM2		1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
2104	23031420.D	SEQ-CCV1INDA2		1	Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
2122	23031421.D	23A0455-11		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2140	23031422.D	23A0455-12		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2158	23031423.D	23A0455-13		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2216	23031424.D	23A0455-14		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2234	23031425.D	23A0455-15		1	Hexachlorobenzene [C], 1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b\B20230314.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2252	23031426.D	23A0455-16		1	Hexachlorobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2310	23031427.D	23A0455-17		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2328	23031428.D	23A0455-18		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
2346	23031429.D	BLB0554-BLK1		1	NO MANUAL INTEGRATION
0004	23031430.D	BLB0554-BS1		1	NO MANUAL INTEGRATION
0022	23031431.D	BLB0554-BSD1		1	NO MANUAL INTEGRATION
0040	23031432.D	BLB0554-MS1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endosulfan II [C], Endosulfan sulfate [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], trans-Chlordane [C], cis-Chlordane [C], Hexachlorobe
0058	23031433.D	BLB0554-MSD1		1	1Bromo-2nitrobenzene [C], alpha-BHC [C], beta-BHC [C], delta-BHC [C], gamma-BHC (Lindane) [C], Heptachlor [C], Aldrin [C], Heptachlor epoxide b [C], Endosulfan I [C], Dieldrin [C], 4,4'-DDE [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], t
0116	23031434.D	SEQ-PEM3		1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0134	23031435.D	SEQ-CCV2INDA3		1	Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0152	23031436.D	23A0467-01		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0210	23031437.D	23A0467-02		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0228	23031438.D	23A0467-03		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0246	23031439.D	23A0467-04		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0304	23031440.D	23A0467-05		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0322	23031441.D	23A0467-06		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0339	23031442.D	23A0467-07		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0357	23031443.D	23A0467-08		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd6.i\20230314.b\B20230314.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0415	23031444.D	23A0467-09		1	1Bromo-2nitrobenzene [C], Hexabromobiphenyl[C], Tetrachloro-m-xylene [C], Decachlorobiphenyl [C],
0433	23031445.D	SEQ-PEM4		1	4,4'-DDE [C], Endrin [C], 4,4'-DDD [C], 4,4'-DDT [C], Endrin ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],
0451	23031446.D	SEQ-CCV3INDA4		1	Dieldrin [C], Endrin [C], Endosulfan II [C], 4,4'-DDD [C], Endosulfan sulfate [C], 4,4'-DDT [C], Methoxychlor [C], Endrir ketone [C], Endrin aldehyde [C], Hexabromobiphenyl[C], Decachlorobiphenyl [C],

Security Status Report

Date: 21-Mar-2023 12:59

23031401.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031402.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031403.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031404.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031405.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031406.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031407.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031408.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031409.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031410.D	Data Locked	alfonso, 21-Mar-2023 12:59
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23031445.D	Data Locked	alfonso, 21-Mar-2023 12:59
23031446.D	Data Locked	alfonso, 21-Mar-2023 12:59

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SKL0233-PEM1 (Water)				Lab File ID: 22121404.D			Analyzed: 12/14/22 20:20	
Decachlorobiphenyl	160.00	83.0	0 - 200	9.355	9.354666	0.0003	+/-0.1	
Decachlorobiphenyl [2C]	160.00	83.5	0 - 200	10.466	10.4655	0.0005	+/-0.1	
Tetrachlorometaxylene	160.00	78.1	0 - 200	3.828	3.827833	0.0002	+/-0.1	
Tetrachlorometaxylene [2C]	160.00	83.5	0 - 200	4.22	4.219666	0.0003	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0273
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/14/2022

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0273-ICV1 (Solid)				Lab File ID: 23031403.D			Analyzed: 03/14/23 15:57	
Decachlorobiphenyl	40.000	94.5	80 - 120	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	40.000	93.8	80 - 120	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	40.000	95.5	80 - 120	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	94.8	80 - 120	4.175	4.219666	-0.0447	+/-0.1	
SLC0273-CCV1 (Solid)				Lab File ID: 23031420.D			Analyzed: 03/14/23 21:04	
Decachlorobiphenyl	40.000	94.3	80 - 120	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	40.000	95.3	80 - 120	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	40.000	98.0	80 - 120	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	93.3	80 - 120	4.175	4.219666	-0.0447	+/-0.1	
BLB0554-BLK1 (Solid)				Lab File ID: 23031429.D			Analyzed: 03/14/23 23:46	
Decachlorobiphenyl	8.0000	81.2	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	85.0	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	8.0000	72.7	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	70.6	30 - 160	4.176	4.219666	-0.0437	+/-0.1	
BLB0554-BS1 (Solid)				Lab File ID: 23031430.D			Analyzed: 03/15/23 00:04	
Decachlorobiphenyl	8.0000	81.2	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	88.0	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	8.0000	70.9	30 - 160	3.856	3.827833	0.0282	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	68.6	30 - 160	4.177	4.219666	-0.0427	+/-0.1	
BLB0554-BSD1 (Solid)				Lab File ID: 23031431.D			Analyzed: 03/15/23 00:22	
Decachlorobiphenyl	8.0000	82.0	30 - 160	9.412	9.354666	0.0573	+/-0.1	
Decachlorobiphenyl [2C]	8.0000	85.4	30 - 160	10.372	10.4655	-0.0935	+/-0.1	
Tetrachlorometaxylene	8.0000	72.1	30 - 160	3.853	3.827833	0.0252	+/-0.1	
Tetrachlorometaxylene [2C]	8.0000	70.2	30 - 160	4.175	4.219666	-0.0447	+/-0.1	
BLB0554-MS1 (Solid)				Lab File ID: 23031432.D			Analyzed: 03/15/23 00:40	
Decachlorobiphenyl	8.0013	92.2	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	8.0013	92.4	30 - 160	10.372	10.4655	-0.0935	+/-0.1	
Tetrachlorometaxylene	8.0013	63.0	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	8.0013	72.3	30 - 160	4.176	4.219666	-0.0437	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0273	Instrument:	ECD6
Calibration:	FL00041	Calibration Date:	12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
BLB0554-MSD1 (Solid)				Lab File ID: 23031433.D			Analyzed: 03/15/23 00:58	
Decachlorobiphenyl	8.0013	85.3	30 - 160	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	8.0013	86.3	30 - 160	10.374	10.4655	-0.0915	+/-0.1	
Tetrachlorometaxylene	8.0013	66.2	30 - 160	3.852	3.827833	0.0242	+/-0.1	
Tetrachlorometaxylene [2C]	8.0013	71.7	30 - 160	4.174	4.219666	-0.0457	+/-0.1	
SLC0273-CCV2 (Solid)				Lab File ID: 23031435.D			Analyzed: 03/15/23 01:34	
Decachlorobiphenyl	40.000	95.8	80 - 120	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	40.000	97.8	80 - 120	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	40.000	98.5	80 - 120	3.857	3.827833	0.0292	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	92.8	80 - 120	4.177	4.219666	-0.0427	+/-0.1	
23A0467-01 (Solid)				Lab File ID: 23031436.D			Analyzed: 03/15/23 01:52	
Decachlorobiphenyl	7.9825	87.7	30 - 160	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	7.9825	88.4	30 - 160	10.374	10.4655	-0.0915	+/-0.1	
Tetrachlorometaxylene	7.9825	60.0	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	7.9825	70.7	30 - 160	4.175	4.219666	-0.0447	+/-0.1	
23A0467-02 (Solid)				Lab File ID: 23031437.D			Analyzed: 03/15/23 02:10	
Decachlorobiphenyl	7.9323	94.7	30 - 160	9.415	9.354666	0.0603	+/-0.1	
Decachlorobiphenyl [2C]	7.9323	87.2	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	7.9323	60.1	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	7.9323	68.3	30 - 160	4.176	4.219666	-0.0437	+/-0.1	
23A0467-03 (Solid)				Lab File ID: 23031438.D			Analyzed: 03/15/23 02:28	
Decachlorobiphenyl	7.8682	92.7	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	7.8682	89.0	30 - 160	10.374	10.4655	-0.0915	+/-0.1	
Tetrachlorometaxylene	7.8682	64.5	30 - 160	3.855	3.827833	0.0272	+/-0.1	
Tetrachlorometaxylene [2C]	7.8682	70.2	30 - 160	4.175	4.219666	-0.0447	+/-0.1	
23A0467-04 (Solid)				Lab File ID: 23031439.D			Analyzed: 03/15/23 02:46	
Decachlorobiphenyl	7.9784	86.5	30 - 160	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	7.9784	89.7	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	7.9784	57.9	30 - 160	3.853	3.827833	0.0252	+/-0.1	
Tetrachlorometaxylene [2C]	7.9784	67.7	30 - 160	4.175	4.219666	-0.0447	+/-0.1	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0273
Instrument: ECD6
Calibration: FL00041
Calibration Date: 12/15/2022

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-05 (Solid)				Lab File ID: 23031440.D			Analyzed: 03/15/23 03:04	
Decachlorobiphenyl	7.9313	94.3	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	7.9313	87.4	30 - 160	10.372	10.4655	-0.0935	+/-0.1	
Tetrachlorometaxylene	7.9313	66.1	30 - 160	3.855	3.827833	0.0272	+/-0.1	
Tetrachlorometaxylene [2C]	7.9313	70.5	30 - 160	4.176	4.219666	-0.0437	+/-0.1	
23A0467-06 (Solid)				Lab File ID: 23031441.D			Analyzed: 03/15/23 03:22	
Decachlorobiphenyl	7.9881	94.9	30 - 160	9.415	9.354666	0.0603	+/-0.1	
Decachlorobiphenyl [2C]	7.9881	88.1	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	7.9881	61.0	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	7.9881	70.2	30 - 160	4.176	4.219666	-0.0437	+/-0.1	
23A0467-07 (Solid)				Lab File ID: 23031442.D			Analyzed: 03/15/23 03:39	
Decachlorobiphenyl	7.9666	86.9	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	7.9666	102	30 - 160	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	7.9666	67.2	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	7.9666	72.5	30 - 160	4.175	4.219666	-0.0447	+/-0.1	
23A0467-08 (Solid)				Lab File ID: 23031443.D			Analyzed: 03/15/23 03:57	
Decachlorobiphenyl	7.9744	85.1	30 - 160	9.416	9.354666	0.0613	+/-0.1	
Decachlorobiphenyl [2C]	7.9744	88.1	30 - 160	10.375	10.4655	-0.0905	+/-0.1	
Tetrachlorometaxylene	7.9744	60.7	30 - 160	3.852	3.827833	0.0242	+/-0.1	
Tetrachlorometaxylene [2C]	7.9744	66.8	30 - 160	4.174	4.219666	-0.0457	+/-0.1	
23A0467-09 (Solid)				Lab File ID: 23031444.D			Analyzed: 03/15/23 04:15	
Decachlorobiphenyl	8.0013	85.5	30 - 160	9.413	9.354666	0.0583	+/-0.1	
Decachlorobiphenyl [2C]	8.0013	82.2	30 - 160	10.372	10.4655	-0.0935	+/-0.1	
Tetrachlorometaxylene	8.0013	64.2	30 - 160	3.854	3.827833	0.0262	+/-0.1	
Tetrachlorometaxylene [2C]	8.0013	71.7	30 - 160	4.175	4.219666	-0.0447	+/-0.1	
SLC0273-CCV3 (Solid)				Lab File ID: 23031446.D			Analyzed: 03/15/23 04:51	
Decachlorobiphenyl	40.000	95.5	80 - 120	9.414	9.354666	0.0593	+/-0.1	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	10.373	10.4655	-0.0925	+/-0.1	
Tetrachlorometaxylene	40.000	98.0	80 - 120	3.857	3.827833	0.0292	+/-0.1	
Tetrachlorometaxylene [2C]	40.000	92.8	80 - 120	4.178	4.219666	-0.0417	+/-0.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKL0233	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Performance Mix (SKL0233-PEM1)		(Water)		Lab File ID: 22121404.D				Analyzed: 12/14/22 20:20	
1-Bromo-2-Nitrobenzene	683485	3.15	672426	3.15	102	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	619012	9.503	609723	9.504	102	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1005375	3.35	1006482	3.35	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	772586	11.054	769764	11.053	100	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0273
Instrument: ECD6
Calibration: FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0273-ICV1)		(Solid)		Lab File ID: 23031403.D			Analyzed: 03/14/23 15:57		
1-Bromo-2-Nitrobenzene	857298	3.166	857298	3.166	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	695921	9.566	695921	9.566	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1257941	3.318	1257941	3.318	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	747065	10.946	747065	10.946	100	50 - 200	0.000	+/-0.50	
Blank (BLB0554-BLK1)		(Solid)		Lab File ID: 23031429.D			Analyzed: 03/14/23 23:46		
1-Bromo-2-Nitrobenzene	949751	3.166	857298	3.166	111	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	685177	9.564	695921	9.566	98	50 - 200	-0.002	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1420428	3.317	1257941	3.318	113	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	749298	10.946	747065	10.946	100	50 - 200	0.000	+/-0.50	
LCS (BLB0554-BS1)		(Solid)		Lab File ID: 23031430.D			Analyzed: 03/15/23 00:04		
1-Bromo-2-Nitrobenzene	512232	3.167	857298	3.166	60	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	381056	9.565	695921	9.566	55	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	764652	3.319	1257941	3.318	61	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	413841	10.947	747065	10.946	55	50 - 200	0.001	+/-0.50	
LCS Dup (BLB0554-BSD1)		(Solid)		Lab File ID: 23031431.D			Analyzed: 03/15/23 00:22		
1-Bromo-2-Nitrobenzene	952686	3.165	857298	3.166	111	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	745057	9.565	695921	9.566	107	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1453151	3.317	1257941	3.318	116	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	811782	10.946	747065	10.946	109	50 - 200	0.000	+/-0.50	
Matrix Spike (BLB0554-MS1)		(Solid)		Lab File ID: 23031432.D			Analyzed: 03/15/23 00:40		
1-Bromo-2-Nitrobenzene	572177	3.167	857298	3.166	67	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	349900	9.565	695921	9.566	50	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	770342	3.319	1257941	3.318	61	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	400988	10.946	747065	10.946	54	50 - 200	0.000	+/-0.50	
Matrix Spike Dup (BLB0554-MSD1)		(Solid)		Lab File ID: 23031433.D			Analyzed: 03/15/23 00:58		
1-Bromo-2-Nitrobenzene	923383	3.166	857298	3.166	108	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	633471	9.566	695921	9.566	91	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1377069	3.317	1257941	3.318	109	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	728542	10.947	747065	10.946	98	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0273	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1010 (23A0467-01)		(Solid)		Lab File ID: 23031436.D			Analyzed: 03/15/23 01:52		
1-Bromo-2-Nitrobenzene	581437	3.168	857298	3.166	68	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	349333	9.567	695921	9.566	50	50 - 200	0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	747666	3.318	1257941	3.318	59	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	395734	10.946	747065	10.946	53	50 - 200	0.000	+/-0.50	
LDW23-SS1005 (23A0467-02)		(Solid)		Lab File ID: 23031437.D			Analyzed: 03/15/23 02:10		
1-Bromo-2-Nitrobenzene	537902	3.167	857298	3.166	63	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	330835	9.567	695921	9.566	48	50 - 200	0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	723875	3.319	1257941	3.318	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	401489	10.947	747065	10.946	54	50 - 200	0.001	+/-0.50	
LDW23-SS1006 (23A0467-03)		(Solid)		Lab File ID: 23031438.D			Analyzed: 03/15/23 02:28		
1-Bromo-2-Nitrobenzene	514915	3.167	857298	3.166	60	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	325389	9.566	695921	9.566	47	50 - 200	0.000	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	707678	3.319	1257941	3.318	56	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	385480	10.946	747065	10.946	52	50 - 200	0.000	+/-0.50	
LDW23-SS1003 (23A0467-04)		(Solid)		Lab File ID: 23031439.D			Analyzed: 03/15/23 02:46		
1-Bromo-2-Nitrobenzene	572567	3.167	857298	3.166	67	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	329274	9.567	695921	9.566	47	50 - 200	0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	719439	3.318	1257941	3.318	57	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	382436	10.948	747065	10.946	51	50 - 200	0.002	+/-0.50	
LDW23-SS1004 (23A0467-05)		(Solid)		Lab File ID: 23031440.D			Analyzed: 03/15/23 03:04		
1-Bromo-2-Nitrobenzene	495996	3.167	857298	3.166	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	329428	9.566	695921	9.566	47	50 - 200	0.000	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	699875	3.319	1257941	3.318	56	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	380936	10.946	747065	10.946	51	50 - 200	0.000	+/-0.50	
LDW23-SS1204 (23A0467-06)		(Solid)		Lab File ID: 23031441.D			Analyzed: 03/15/23 03:22		
1-Bromo-2-Nitrobenzene	553835	3.167	857298	3.166	65	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	325142	9.567	695921	9.566	47	50 - 200	0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	718788	3.318	1257941	3.318	57	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	382996	10.947	747065	10.946	51	50 - 200	0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8081B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0273	Instrument:	ECD6
		Calibration:	FL00041

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1238 (23A0467-07)		(Solid)		Lab File ID: 23031442.D			Analyzed: 03/15/23 03:39		
1-Bromo-2-Nitrobenzene	500020	3.167	857298	3.166	58	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	340375	9.565	695921	9.566	49	50 - 200	-0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	706983	3.318	1257941	3.318	56	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	389800	10.945	747065	10.946	52	50 - 200	-0.001	+/-0.50	
LDW23-SS1013 (23A0467-08)		(Solid)		Lab File ID: 23031443.D			Analyzed: 03/15/23 03:57		
1-Bromo-2-Nitrobenzene	962740	3.165	857298	3.166	112	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl	613129	9.57	695921	9.566	88	50 - 200	0.004	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	1334716	3.317	1257941	3.318	106	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	715881	10.949	747065	10.946	96	50 - 200	0.003	+/-0.50	
LDW23-SS1014 (23A0467-09)		(Solid)		Lab File ID: 23031444.D			Analyzed: 03/15/23 04:15		
1-Bromo-2-Nitrobenzene	482190	3.167	857298	3.166	56	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	323618	9.565	695921	9.566	47	50 - 200	-0.001	+/-0.50	*
1-Bromo-2-Nitrobenzene [2C]	676935	3.319	1257941	3.318	54	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	382189	10.945	747065	10.946	51	50 - 200	-0.001	+/-0.50	

HOLDING TIME SUMMARY

Analysis: EPA 8081B

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 01:52	21	40	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 02:10	21	40	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 02:28	21	40	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 02:46	21	40	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 03:04	21	40	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 03:22	21	40	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 03:39	21	40	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 03:57	21	40	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 04:15	21	40	
Matrix Spike BLB0554-MS1	01/23/23 12:26	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 00:40	21	40	
Matrix Spike Dup BLB0554-MSD1	01/23/23 12:26	01/23/23 13:30	02/22/23 12:28	30	365	03/15/23 00:58	21	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8081B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD6

Analyte	MDL	RL	Units
Hexachlorobenzene	0.15	0.50	ug/kg
Hexachlorobenzene [2C]	0.15	0.50	ug/kg

125 Market Street
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CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

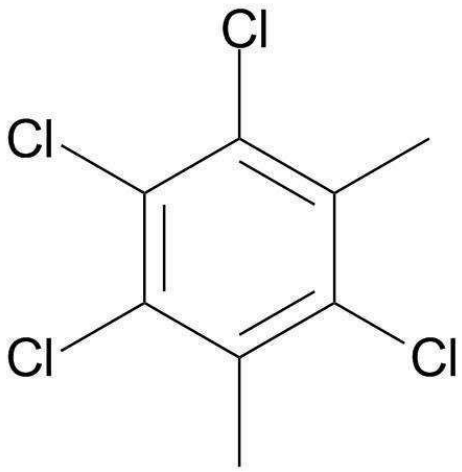
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

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CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

I007970
Mirex 2d source
Solvent / Lot: MeOH
Prep: 9/7/2020 by JR
Exp: 6/5/2024
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

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CERTIFICATE OF ANALYSIS

Catalog No: P-026S
Description: o,p'-DDE
Lot: 218021093-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Feb 10, 2020
Expiration: Feb 10, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
o,p'-DDE	3424-82-6	99.9	100.4	100.3

I7971

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 822-275872-11

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 218011470
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jan 30, 2018
Expiration: Jan 30, 2028
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

I 7974

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 822-275872-11

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 27, 2020
Expiration: Jun 27, 2022
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

I010773
o,p-DDD
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7 **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 218101131
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Oct 8, 2018
Expiration: Nov 8, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	97.7	102.4*	100.0

I010795
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 6/20/2022
Location:

* Weight compensated to 100% purity.

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 217121240
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 13, 2017
Expiration: Dec 13, 2020
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1] (µg/mL)	Certified Analyte Concentration[2] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	100.4	99.0

I010796
cis-Nonochlor-Accustd-100ug/ml
Solvent / Lot: methanol
Prep: 11/20/2020 by VS
Exp: 11/27/2022
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] All weights are traceable through NIST, Test No. 822-275872-11

[2] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 11.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this CRM.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: APP-9-112-D-20X
Description: Hexachlorobenzene in Dichloromethane
Lot: 219051389
Solvent: Dichloromethane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobenzene	118-74-1	99.0	2002	1982

J006504
Hexachlorobenzene
Solvent / Lot: Dichloromethane
Prep: 6/21/2021 by YZ
Exp: 5/13/2029
Location:

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2 **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7

3 **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this .

4 **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5 **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6 **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7 **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-028S
Description: o,p'-DDT
Lot: 221071322
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 21, 2021
Expiration: Aug 21, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDT	789-02-6	99.9	100.1	100.0

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-024S
Description: o,p'-DDD
Lot: 220051307-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jul 6, 2021
Expiration: Aug 6, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
o,p'-DDD	53-19-0	100.0	100.2	100.2

K 0448

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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CERTIFICATE OF ANALYSIS

Catalog No: P-331S
Description: Oxychlordane Isomer
Lot: 221051706
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 28, 2021
Expiration: Jun 28, 2023
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Oxychlordane Isomer	27304-13-8	99.2	100.1	99.3

K000449
Oxychlordane isomer
Solvent / Lot: methanol
Prep: 1/13/2022 by YZ
Exp: 6/28/2023
Location:

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

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1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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CERTIFICATE OF ANALYSIS

Catalog No: P-297S
Description: cis-Nonachlor
Lot: 221041461
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 22, 2021
Expiration: Apr 22, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
cis-Nonachlor	5103-73-1	98.6	101.1	99.7

K 000450

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By:
Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: P-184S
Description: trans-Nonachlor
Lot: 220091107
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Sep 11, 2020
Expiration: Sep 11, 2030
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB AR-1463 ANAB AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
trans-Nonachlor	39765-80-5	99.0	100.2	99.2

K 0045 1

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

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Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

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CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 219051741-01
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Jun 5, 2020
Expiration: Jun 5, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463
ANAB ACCREDITED TESTING LABORATORY AT-1339
ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.2	98.4

K 000452

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

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USA

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K 000 452

CERTIFICATE OF ANALYSIS

Catalog No: P-066S
Description: Mirex
Lot: 221121451
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Dec 27, 2021
Expiration: Dec 27, 2025
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Mirex	2385-85-5	98.2	100.0	98.2

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 7/20

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USA

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CERTIFICATE OF ANALYSIS

Catalog No: M-8081-DS
Description: 4,4'-DDT & Endrin
Lot: 221031488-04
Solvent: Hexane
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Apr 8, 2022
Expiration: May 8, 2023
Sample Size: 1 mL
Components: 2
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
4,4'-DDT	50-29-3	100.0	200.9	200.9
Endrin	72-20-8	99.8	200.0	199.6

K7002

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 32292 **Lot No.:** A0185477

Description : Organochlorine Pesticide Mix AB # 2

Organochlorine Pesticide Mix AB # 2 8-80 µg/mL, Hexane/Toluene(1:1), 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : May 31, 2026 **Storage:** 10°C or colder

Ship: Ambient

C E R T I F I E D V A L U E S

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	alpha-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-84-6 (Lot 12307600)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
2	gamma-BHC (Lindane)	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 58-89-9 (Lot 13087200)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
3	beta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-85-7 (Lot 0588007-4)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
4	delta-BHC	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 319-86-8 (Lot 13112400)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed
5	Heptachlor	8.0 µg/mL	+/- 0.0654 µg/mL	Gravimetric
	CAS # 76-44-8 (Lot 803759)		+/- 0.3672 µg/mL	Unstressed
	Purity 99%		+/- 0.5281 µg/mL	Stressed
6	Aldrin	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 309-00-2 (Lot 12983100)		+/- 0.3702 µg/mL	Unstressed
	Purity 96%		+/- 0.5323 µg/mL	Stressed
7	Heptachlor epoxide (isomer B)	8.1 µg/mL	+/- 0.0660 µg/mL	Gravimetric
	CAS # 1024-57-3 (Lot 13168200)		+/- 0.3703 µg/mL	Unstressed
	Purity 99%		+/- 0.5325 µg/mL	Stressed

8	trans-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-74-2	(Lot 32943)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
9	cis-Chlordane		8.0	µg/mL	+/-	0.0657	µg/mL	Gravimetric
	CAS # 5103-71-9	(Lot 31766)			+/-	0.3689	µg/mL	Unstressed
	Purity 98%				+/-	0.5305	µg/mL	Stressed
10	Endosulfan I		8.0	µg/mL	+/-	0.0654	µg/mL	Gravimetric
	CAS # 959-98-8	(Lot BCCF4060)			+/-	0.3672	µg/mL	Unstressed
	Purity 99%				+/-	0.5281	µg/mL	Stressed
11	4,4'-DDE		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 72-55-9	(Lot GHYQG)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
12	Dieldrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 60-57-1	(Lot 11129900)			+/-	0.7408	µg/mL	Unstressed
	Purity 98%				+/-	1.0653	µg/mL	Stressed
13	Endrin		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-20-8	(Lot 13157400)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
14	4,4'-DDD		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 72-54-8	(Lot HAN02)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
15	Endosulfan II		16.0	µg/mL	+/-	0.1309	µg/mL	Gravimetric
	CAS # 33213-65-9	(Lot 12448900)			+/-	0.7345	µg/mL	Unstressed
	Purity 99%				+/-	1.0562	µg/mL	Stressed
16	4,4'-DDT		16.1	µg/mL	+/-	0.1315	µg/mL	Gravimetric
	CAS # 50-29-3	(Lot 220428JLM)			+/-	0.7378	µg/mL	Unstressed
	Purity 98%				+/-	1.0610	µg/mL	Stressed
17	Endrin aldehyde		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 7421-93-4	(Lot 30720)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed
18	Endosulfan sulfate		16.1	µg/mL	+/-	0.1320	µg/mL	Gravimetric
	CAS # 1031-07-8	(Lot BCCB0424)			+/-	0.7406	µg/mL	Unstressed
	Purity 99%				+/-	1.0650	µg/mL	Stressed
19	Methoxychlor		80.2	µg/mL	+/-	0.5781	µg/mL	Gravimetric
	CAS # 72-43-5	(Lot 13027000)			+/-	3.6697	µg/mL	Unstressed
	Purity 98%				+/-	5.2871	µg/mL	Stressed
20	Endrin ketone		16.1	µg/mL	+/-	0.1314	µg/mL	Gravimetric
	CAS # 53494-70-5	(Lot 13026800)			+/-	0.7375	µg/mL	Unstressed
	Purity 99%				+/-	1.0606	µg/mL	Stressed

Solvent: Hexane/Toluene (50:50)
CAS # 110-54-3/108-88-3
Purity 99%

Column:
30m x .25mm x .2um
Rtx-CLP II (cat.# 11323)

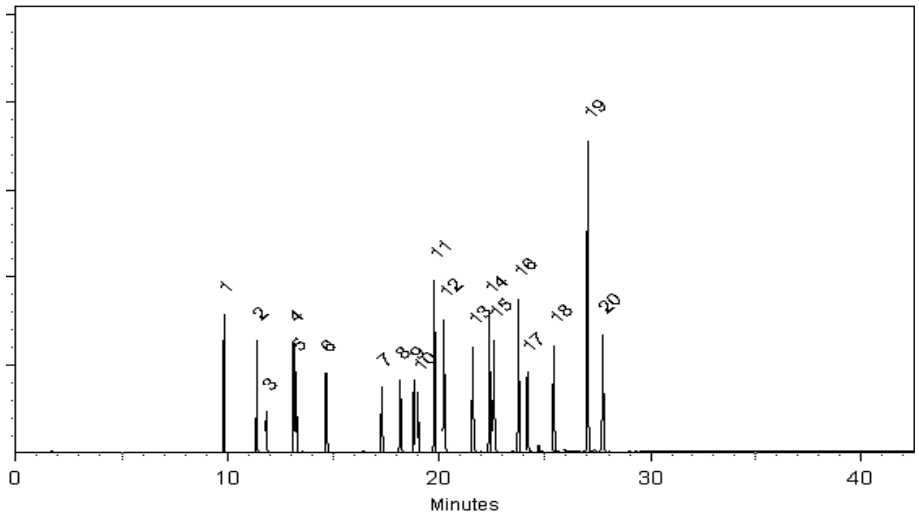
Carrier Gas:
helium-constant pressure 20 psi.

Temp. Program:
150°C to 300°C
@ 4°C/min. (hold 5 min.)

Inj. Temp:
200°C

Det. Temp:
300°C

Det. Type:
ECD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Morgan Craighead - Mix Technician

Date Mixed: 19-May-2022 **Balance:** B442140311

Fang-Yun Lo - QC Analyst

Date Passed: 26-May-2022

Manufactured under Restek's ISO 9001:2015 Registered Quality System Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

- Expiration date valid for unopened ampul stored in compliance with the recommended conditions.
- Uncertainty, concentration, and expiration of the CRM are based on the unopened product being stored according to the recommended condition found in the storage field.

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k\sqrt{U^2_{gravimetric} + U^2_{homogeneity} + U^2_{storage\ stability} + U^2_{shipping\ stability}}$$

k is a coverage factor of 2, which gives a level of confidence of approximately 95%.

- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer) -20°C or colder (Deep Freezer)	< 25°C	≥ 25°C up to 7 days

- Separate (not combined) uncertainty values for gravimetric uncertainty are also displayed on the certificate, if needed, separate homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty values are available by contacting Restek Technical Service at www.restek.com/Contact-Us.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- Concentration is based upon gravimetric preparation using either a balance whose calibration has been verified daily using NIST traceable weights, and/or dilutions with Class A glassware.

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.

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USA

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

1. **Quality Standards:**

   ISO 17034:2016 – General Requirements for the Competence of Reference Material Producers

   ISO/IEC 17025:2017 – General Requirements for the Competence of Testing And Calibration Laboratories

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: M-502-36-10X
Description: Hexachlorobutadiene
Lot: 222031188
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: Mar 11, 2022
Expiration: Apr 11, 2024
Sample Size: 1 mL
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

ANAB ACCREDITED REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/MS)	Prepared Concentration² (µg/mL)	Certified Analyte Concentration¹ (µg/mL)
Hexachlorobutadiene	87-68-3	98.0	2002	1962

K011468

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

² All weights are traceable through NIST, Test No. 684/289871-17

¹ Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1010

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-01 A	File ID:	03022353ECD7.D
Sampled:	01/23/23 08:26	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:15
% Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.05 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	35.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	50.3	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	42.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9984*	*6.44*	*80.5*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9984*	*4.94*	*61.8*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9984*	*6.15*	*76.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9984*	*5.20*	*65.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022353ECD7.D
Data file 2: /230302.b/230302.b/03022353ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-01
Client ID:
Injection Date: 03-MAR-2023 11:15
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.004	161117	5.682	-0.006	140832	24.7	26.0	5.1	Tetrachloro-m-xylene
13.886	-0.009	136581	14.111	-0.007	178614	32.2	30.8	4.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	436568	-35.2
Hexabromobiphenyl	1429847	430586	-69.9 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	369071	17.1
Hexabromobiphenyl	513946	381164	-25.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.011	31212	146.5	1	8.298	-0.010	27912	158.4
Aroclor-1248	2	8.565	-0.017	27814	102.7	2	8.704	-0.010	25671	140.9
Aroclor-1248	3	8.982	-0.016	74602	146.1	3	9.138	-0.030	40434	192.8
Aroclor-1248	4	9.285	-0.010	80333	308.9	4	9.531	-0.060	30647	121.7
	Total Col1Ave (4 peaks):				176.1	Total Col2Ave (4 peaks):				153.5 RPD = 14
	Corrected Ave (3 peaks):				131.8	Corrected Ave (3 peaks):				140.3 RPD = 6
										164.03
Aroclor-1254	1	9.285	-0.014	80333	183.2	1	9.436	-0.014	64077	228.4
Aroclor-1254	2	9.361	-0.016	32585	165.3	2	9.955	-0.015	38461	170.4
Aroclor-1254	3	9.658	-0.010	72207	256.2	3	10.104	-0.020	111648	228.7
Aroclor-1254	4	9.785	-0.022	113149	206.5	4	10.348	-0.025	148895	312.8
Aroclor-1254	5	10.120	-0.056	140747	409.8	5	10.553	-0.016	91947	317.3
	Total Col1Ave (5 peaks):				244.2	Total Col2Ave (5 peaks):				251.5 RPD = 3
	Corrected Ave (4 peaks):				202.8	Corrected Ave (4 peaks):				235.1 RPD = 15
Aroclor-1260	1	11.032	-0.012	38063	245.7	1	11.641	-0.011	55040	245.6
Aroclor-1260	2	11.348	-0.014	35035	216.5	2	11.903	-0.015	93481	163.4
Aroclor-1260	3	11.718	-0.016	95911	223.4	3	12.421	-0.014	40038	263.8
Aroclor-1260	4	12.119	-0.020	48310	223.5	4	12.485	-0.016	67425	174.9
Aroclor-1260	5	12.235	-0.009	23786	255.6	NS	---			----
	Total Col1Ave (5 peaks):				233.0	Total Col2Ave (4 peaks):				211.9 RPD = 9
	Corrected Ave (4 peaks):				227.3	Corrected Ave (3 peaks):				194.6 RPD = 15
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.795) = 2132771 Col1 Total PCB = 0.4 ppm*

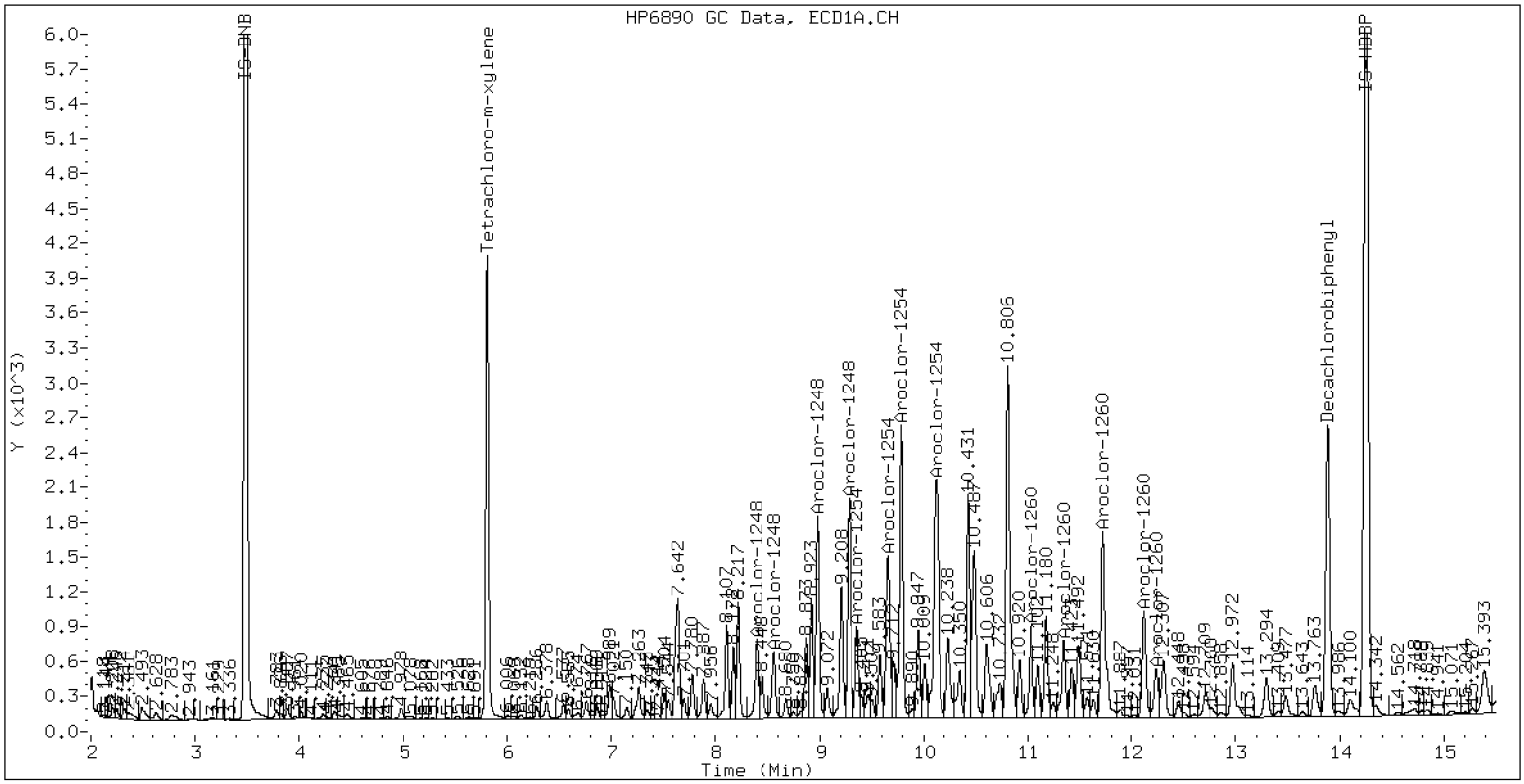
Total PCB Area Col2 (5.788 - 14.018) = 1963766 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

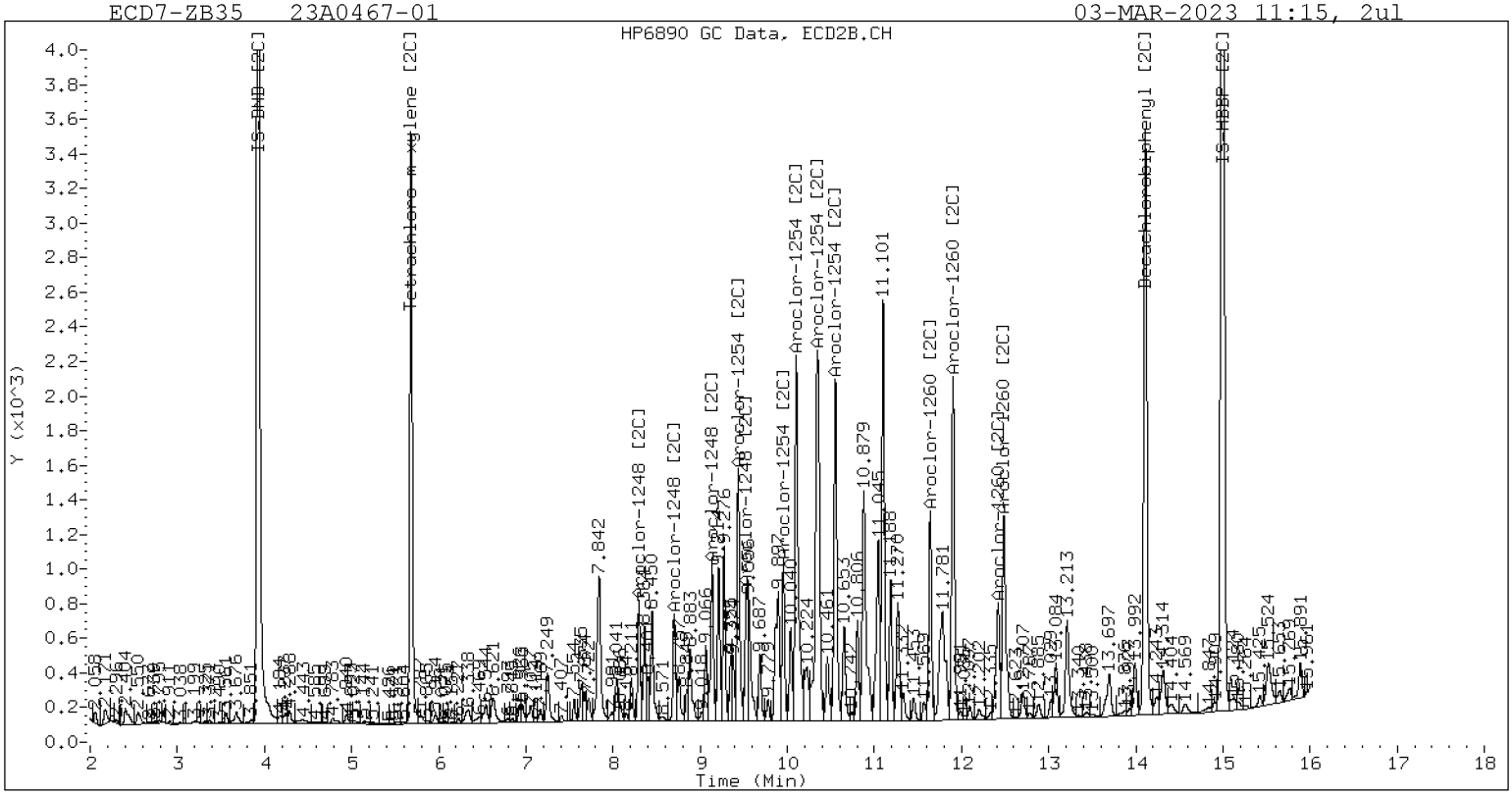
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-01 03-MAR-2023 11:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0467-01 03-MAR-2023 11:15, 2ul

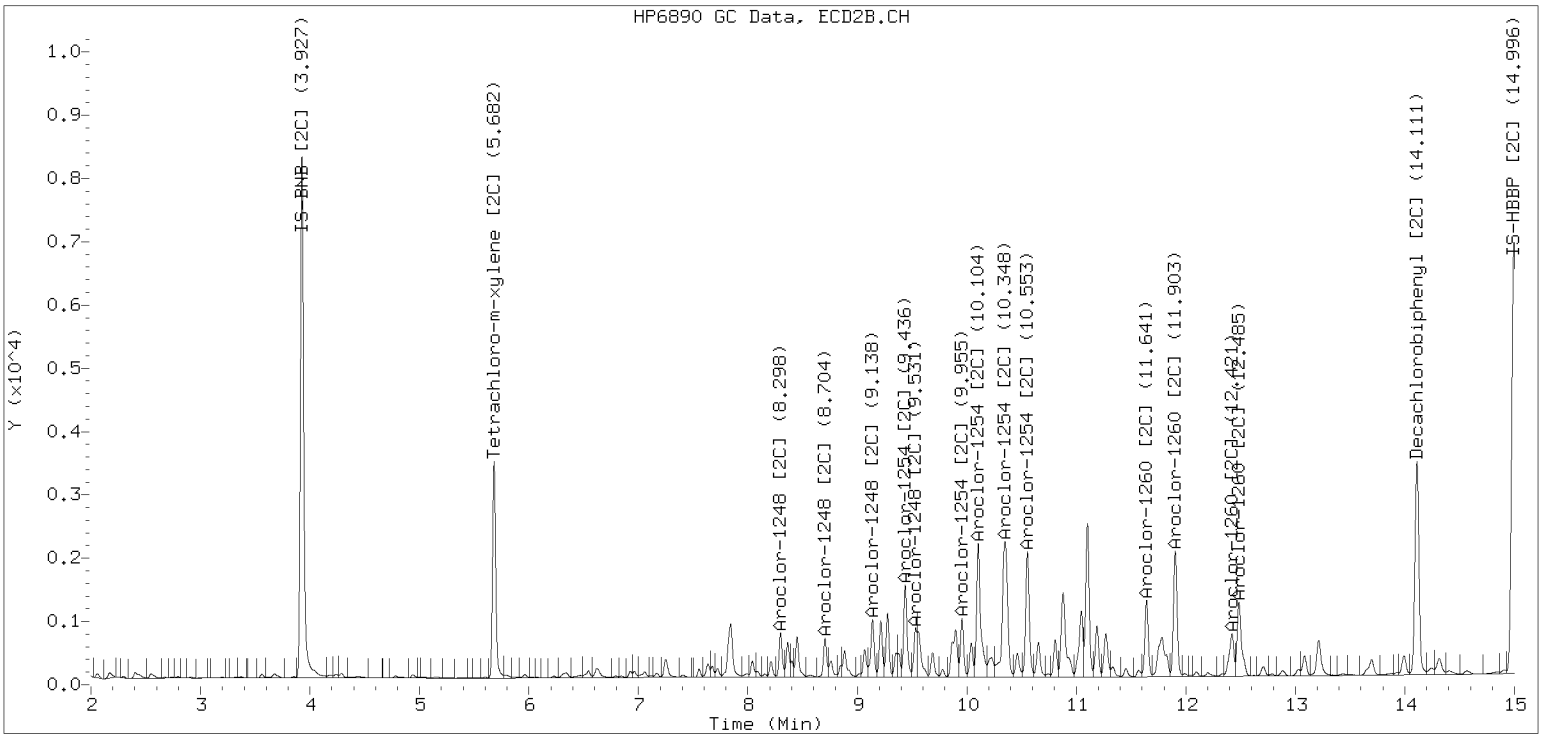


ZB-35 Manual Integration: YES

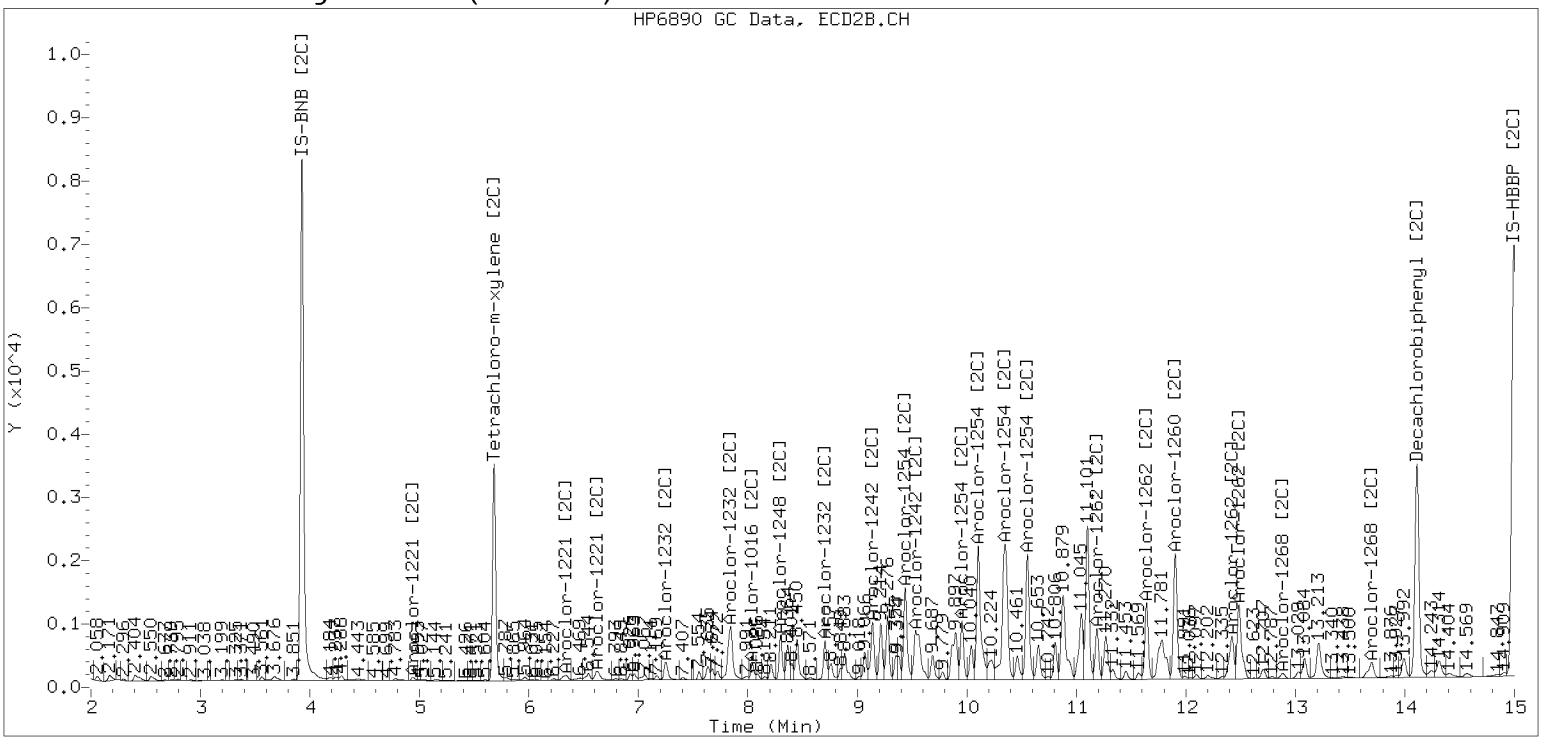
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022353ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1005

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-02 A	File ID:	03022354ECD7.D
Sampled:	01/23/23 08:39	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:36
% Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.66 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	36.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	53.9	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	46.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9977*	*6.49*	*81.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9977*	*4.99*	*62.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9977*	*6.25*	*78.1*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9977*	*5.39*	*67.4*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022354ECD7.D
Data file 2: /230302.b/230302.b/03022354ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-02
Client ID:
Injection Date: 03-MAR-2023 11:36
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.004	161438	5.681	-0.007	141693	24.9	27.0	7.8	Tetrachloro-m-xylene
13.885	-0.010	131993	14.111	-0.007	174442	32.5	31.3	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	433381	-35.7
Hexabromobiphenyl	1429847	412807	-71.1 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	358117	13.6
Hexabromobiphenyl	513946	366451	-28.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.011	30709	145.2	1	8.298	-0.010	29128	170.4
Aroclor-1248	2	8.565	-0.017	27438	102.1	2	8.704	-0.010	26909	152.2
Aroclor-1248	3	8.983	-0.016	77249	152.3	3	9.138	-0.029	41978	206.3
Aroclor-1248	4	9.286	-0.010	83710	324.3	4	9.532	-0.060	33558	137.4
	Total Col1Ave (4 peaks):				181.0	Total Col2Ave (4 peaks):				166.6 RPD = 8
	Corrected Ave (3 peaks):				133.2	Corrected Ave (3 peaks):				153.3 RPD = 14
Aroclor-1254	1	9.286	-0.013	83710	192.4	1	9.437	-0.014	66248	243.4
Aroclor-1254	2	9.361	-0.016	33526	171.3	2	9.955	-0.015	40088	183.1
Aroclor-1254	3	9.657	-0.011	73125	261.4	3	10.104	-0.020	116619	246.1
Aroclor-1254	4	9.786	-0.021	116831	214.8	4	10.348	-0.025	154927	335.4
Aroclor-1254	5	10.122	-0.054	74393	210.2	5	10.553	-0.017	95805	340.7
	Total Col1Ave (5 peaks):				211.6	Total Col2Ave (5 peaks):				269.7 RPD = 24
	Corrected Ave (4 peaks):				199.1	Corrected Ave (4 peaks):				252.0 RPD = 23
Aroclor-1260	1	11.032	-0.012	38843	261.6	1	11.641	-0.011	57604	267.3
Aroclor-1260	2	11.347	-0.014	33850	218.2	2	11.903	-0.015	99029	180.1
Aroclor-1260	3	11.718	-0.016	96776	235.2	3	12.421	-0.014	43702	299.5
Aroclor-1260	4	12.117	-0.022	54164	261.4	4	12.486	-0.015	70736	190.8
Aroclor-1260	5	12.234	-0.010	23468	263.1	NS	---			----
	Total Col1Ave (5 peaks):				247.9	Total Col2Ave (4 peaks):				234.4 RPD = 6
	Corrected Ave (4 peaks):				244.1	Corrected Ave (3 peaks):				212.7 RPD = 14
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.795) = 2172495 Col1 Total PCB = 0.4 ppm*

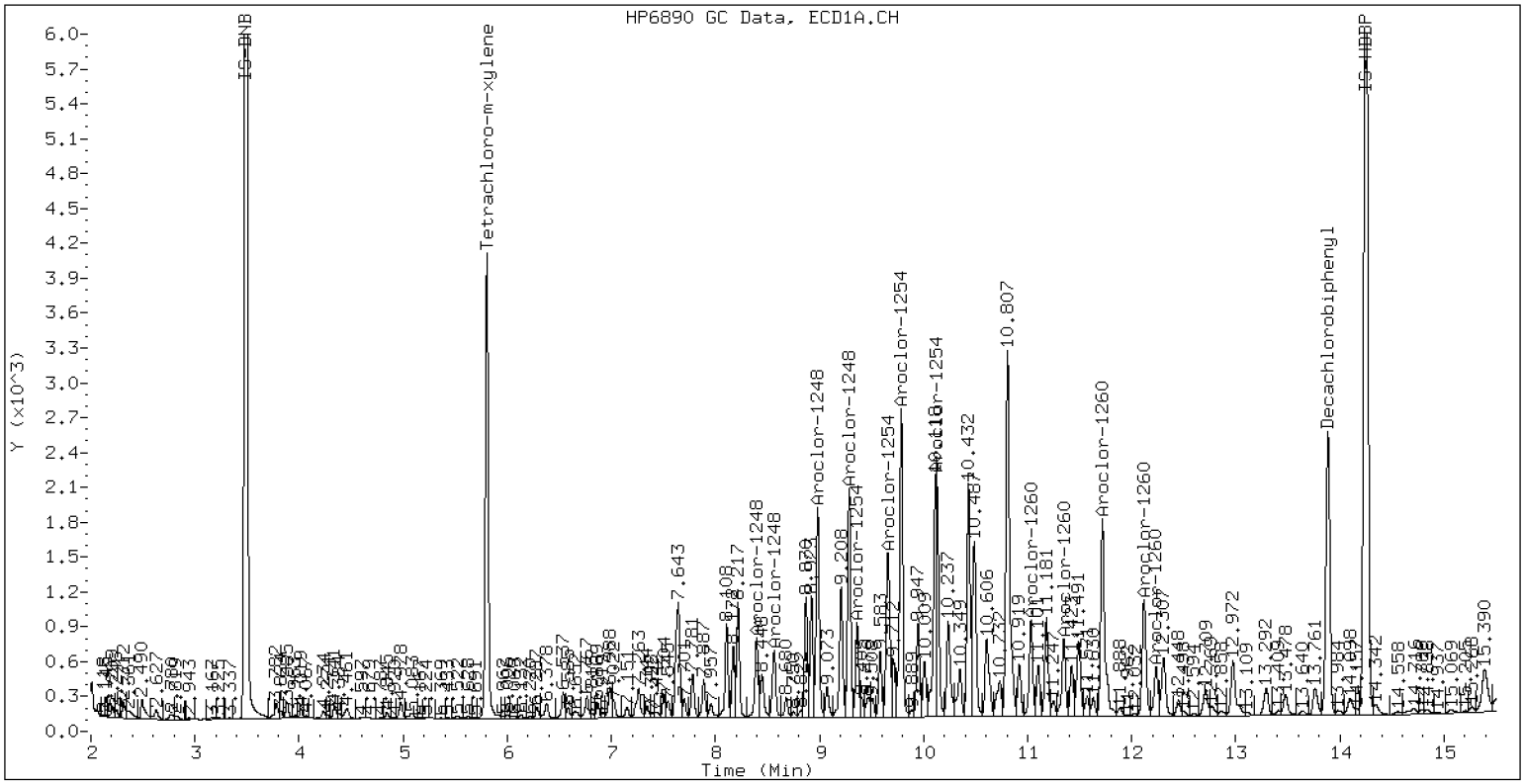
Total PCB Area Col2 (5.788 - 14.018) = 2060888 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

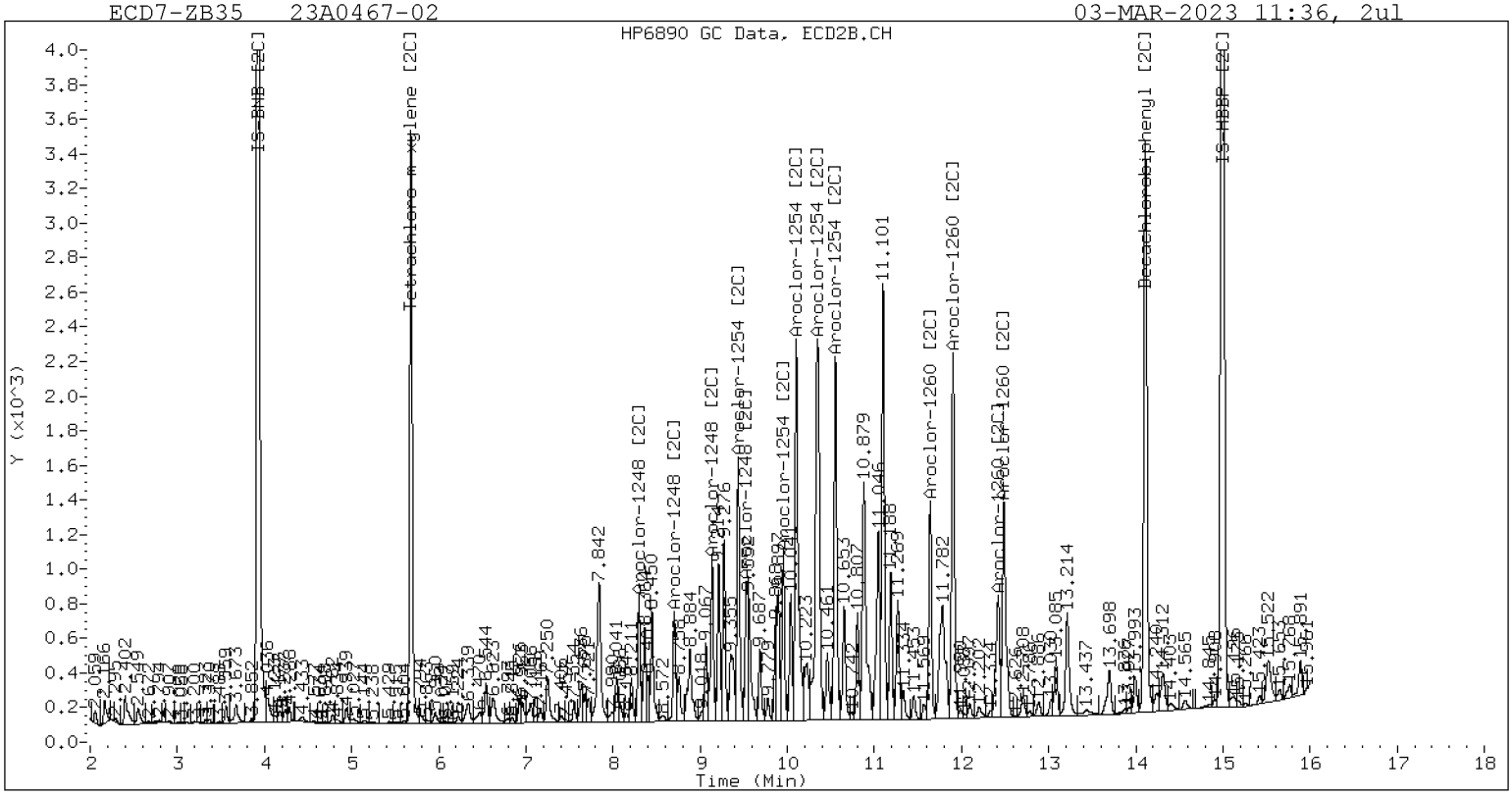
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-02 03-MAR-2023 11:36, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-02 03-MAR-2023 11:36, 2ul

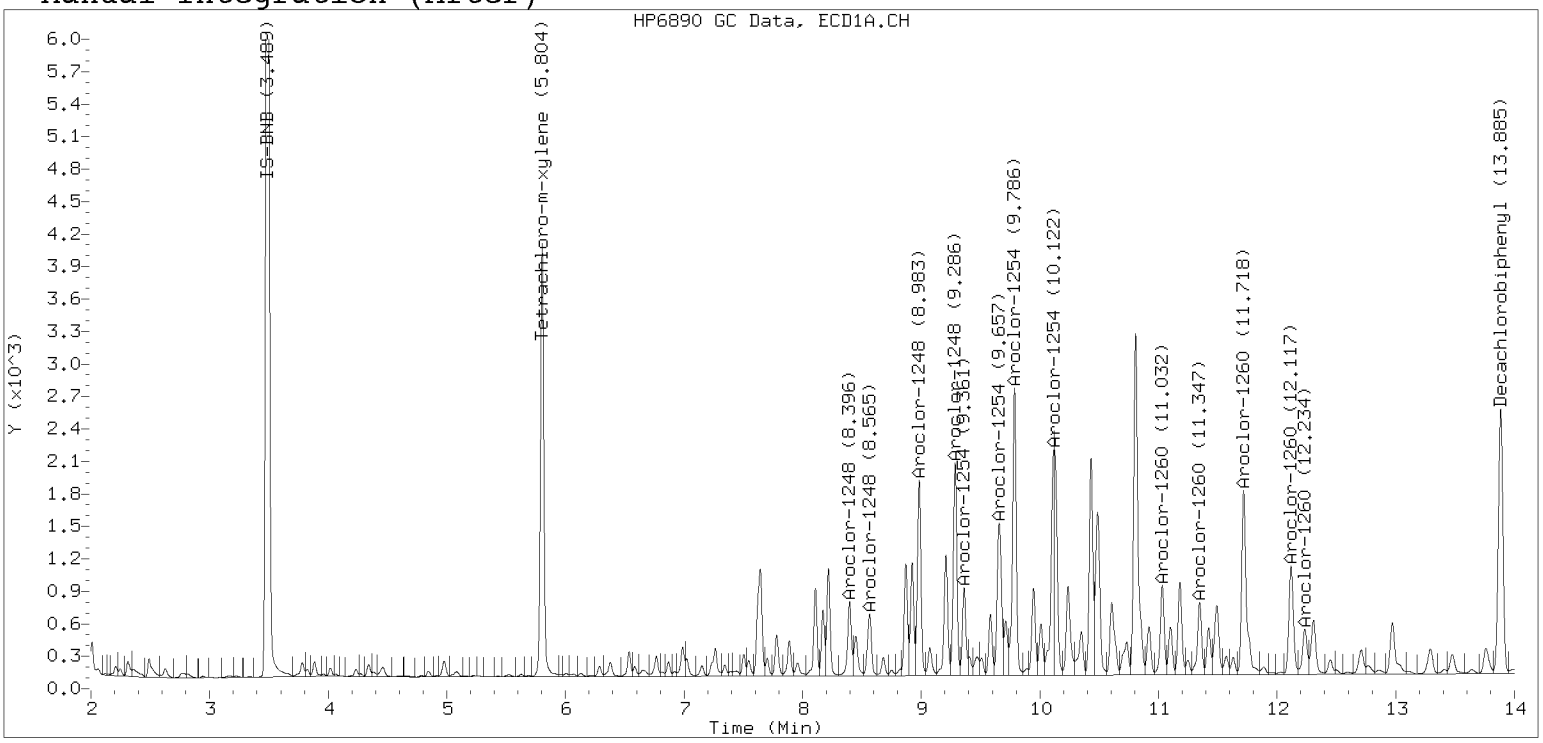


ZB-35 Manual Integration: YES

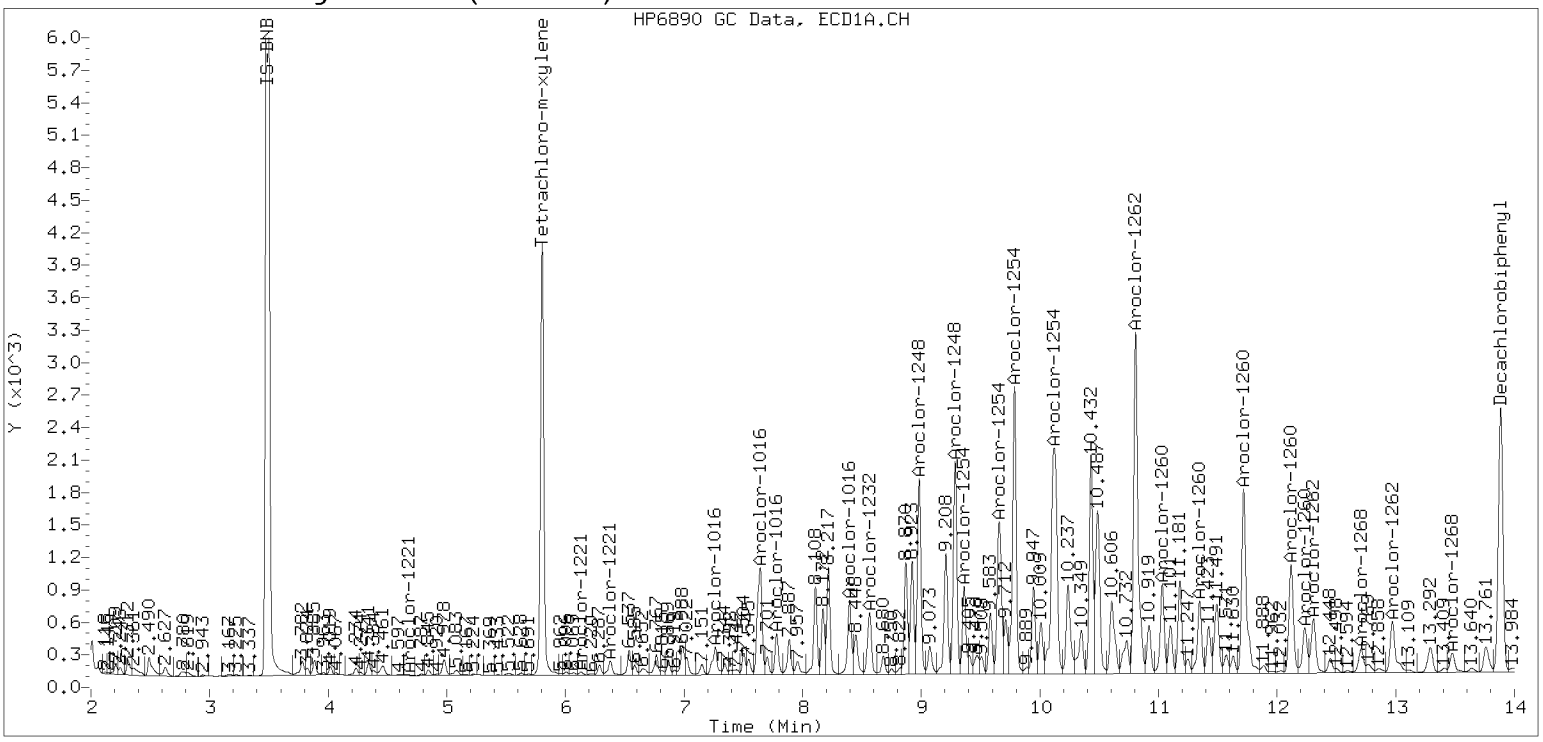
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022354ECD7.D Injection Date: 03-MAR-2023 11:36

Manual Integration (After)



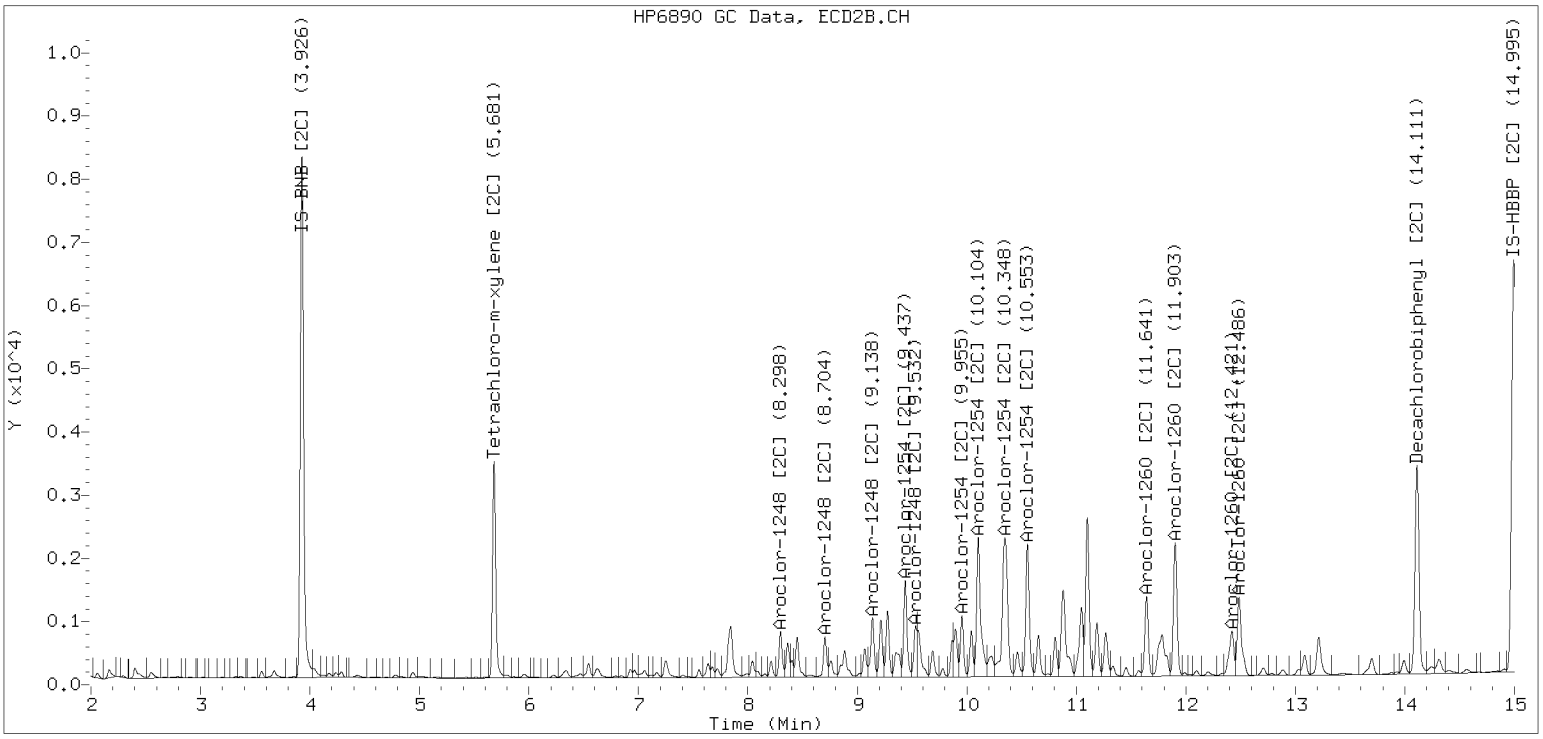
Processed Integration (Before)



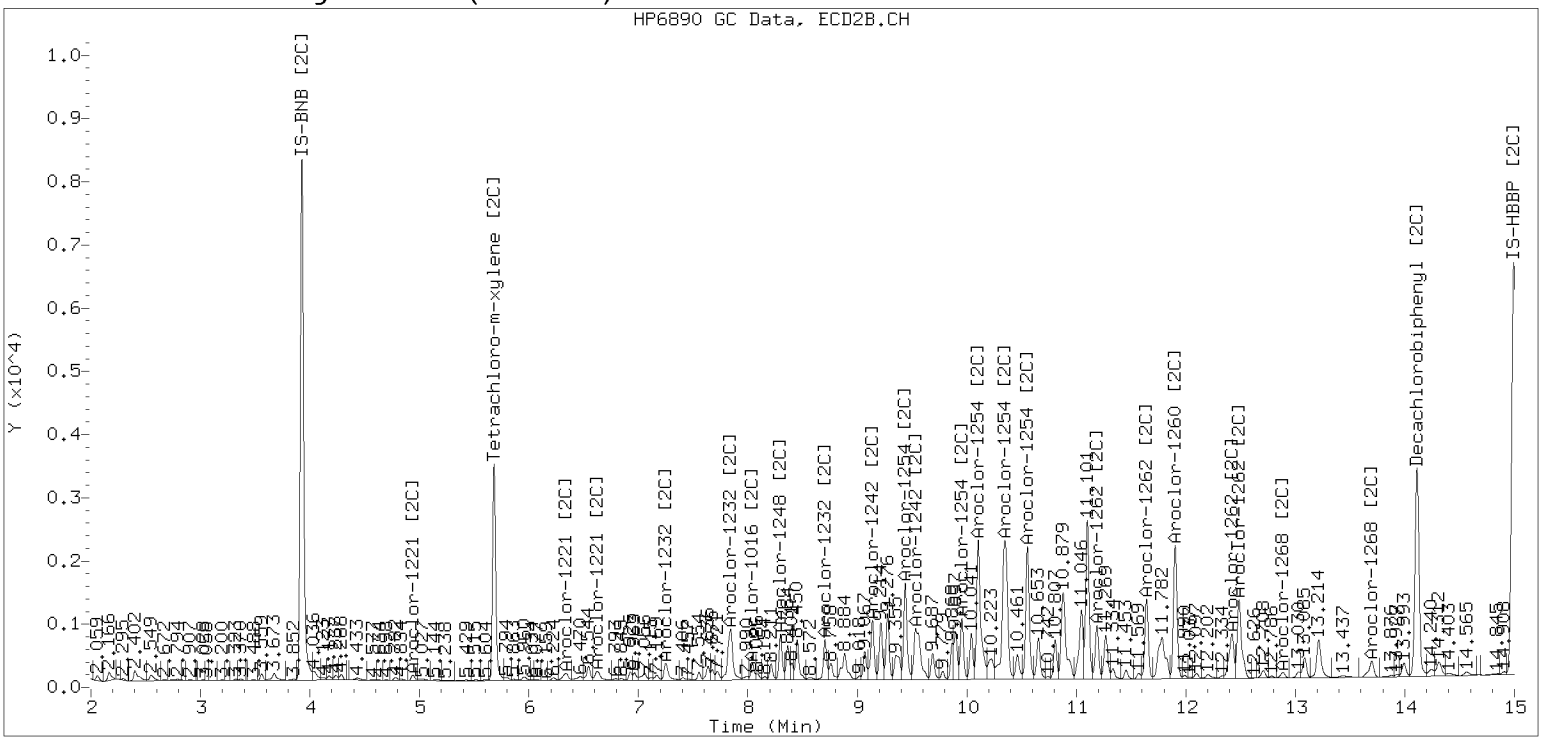
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022354ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1006

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-03 A	File ID:	03022355ECD7.D
Sampled:	01/23/23 08:50	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:57
% Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.1 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	39.8	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	59.7	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	53.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9888*	*6.37*	*79.7*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9888*	*4.95*	*62.0*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9888*	*6.13*	*76.8*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9888*	*5.37*	*67.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022355ECD7.D
Data file 2: /230302.b/230302.b/03022355ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-03
Client ID:
Injection Date: 03-MAR-2023 11:57
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.004	157697	5.682	-0.006	139751	24.8	26.9	8.0	Tetrachloro-m-xylene
13.886	-0.009	128927	14.113	-0.005	171304	31.9	30.7	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	425758	-36.8
Hexabromobiphenyl	1429847	410474	-71.3 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	354562	12.5
Hexabromobiphenyl	513946	366361	-28.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.011	32766	157.7	1	8.298	-0.010	31941	188.7
Aroclor-1248	2	8.565	-0.017	30463	115.4	2	8.704	-0.010	28875	165.0
Aroclor-1248	3	8.982	-0.016	82876	166.4	3	9.138	-0.029	44763	222.2
Aroclor-1248	4	9.286	-0.010	90516	356.9	4	9.532	-0.060	35504	146.8
	Total Col1Ave (4 peaks):				199.1	Total Col2Ave (4 peaks):				180.7 RPD = 10
	Corrected Ave (3 peaks):				146.5	Corrected Ave (3 peaks):				166.8 RPD = 13
										191.97
Aroclor-1254	1	9.286	-0.013	90516	211.7	1	9.437	-0.013	71861	266.7
Aroclor-1254	2	9.361	-0.016	35329	183.7	2	9.955	-0.015	43170	199.1
Aroclor-1254	3	9.658	-0.010	77157	280.7	3	10.104	-0.020	128016	272.9
Aroclor-1254	4	9.786	-0.021	125030	233.9	4	10.349	-0.024	168921	369.4
Aroclor-1254	5	10.121	-0.055	82249	245.5	5	10.553	-0.016	107362	385.6
	Total Col1Ave (5 peaks):				231.1	Total Col2Ave (5 peaks):				298.7 RPD = 26
	Corrected Ave (4 peaks):				218.7	Corrected Ave (4 peaks):				277.0 RPD = 24
										227.5
Aroclor-1260	1	11.033	-0.012	45428	307.7	1	11.642	-0.010	65628	304.6
Aroclor-1260	2	11.348	-0.013	39921	258.8	2	11.904	-0.014	117191	213.2
Aroclor-1260	3	11.718	-0.015	115913	283.3	3	12.422	-0.013	48777	334.3
Aroclor-1260	4	12.120	-0.019	57702	280.0	4	12.486	-0.015	83896	226.4
Aroclor-1260	5	12.235	-0.009	28473	321.0	NS	---			----
	Total Col1Ave (5 peaks):				290.1	Total Col2Ave (4 peaks):				269.6 RPD = 7
	Corrected Ave (4 peaks):				282.4	Corrected Ave (3 peaks):				248.1 RPD = 13
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.795) = 2391751 Col1 Total PCB = 0.5 ppm*

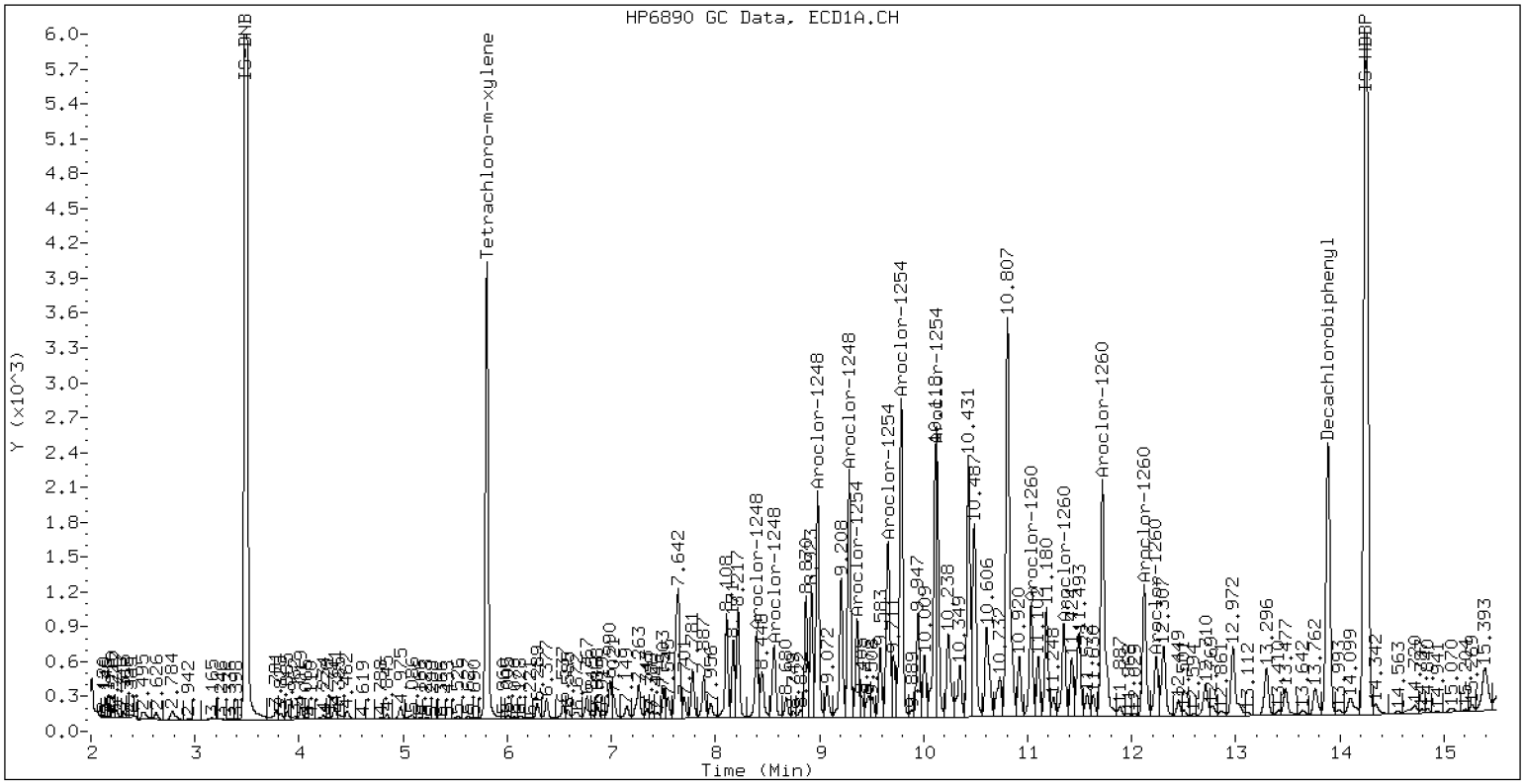
Total PCB Area Col2 (5.788 - 14.018) = 2263608 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

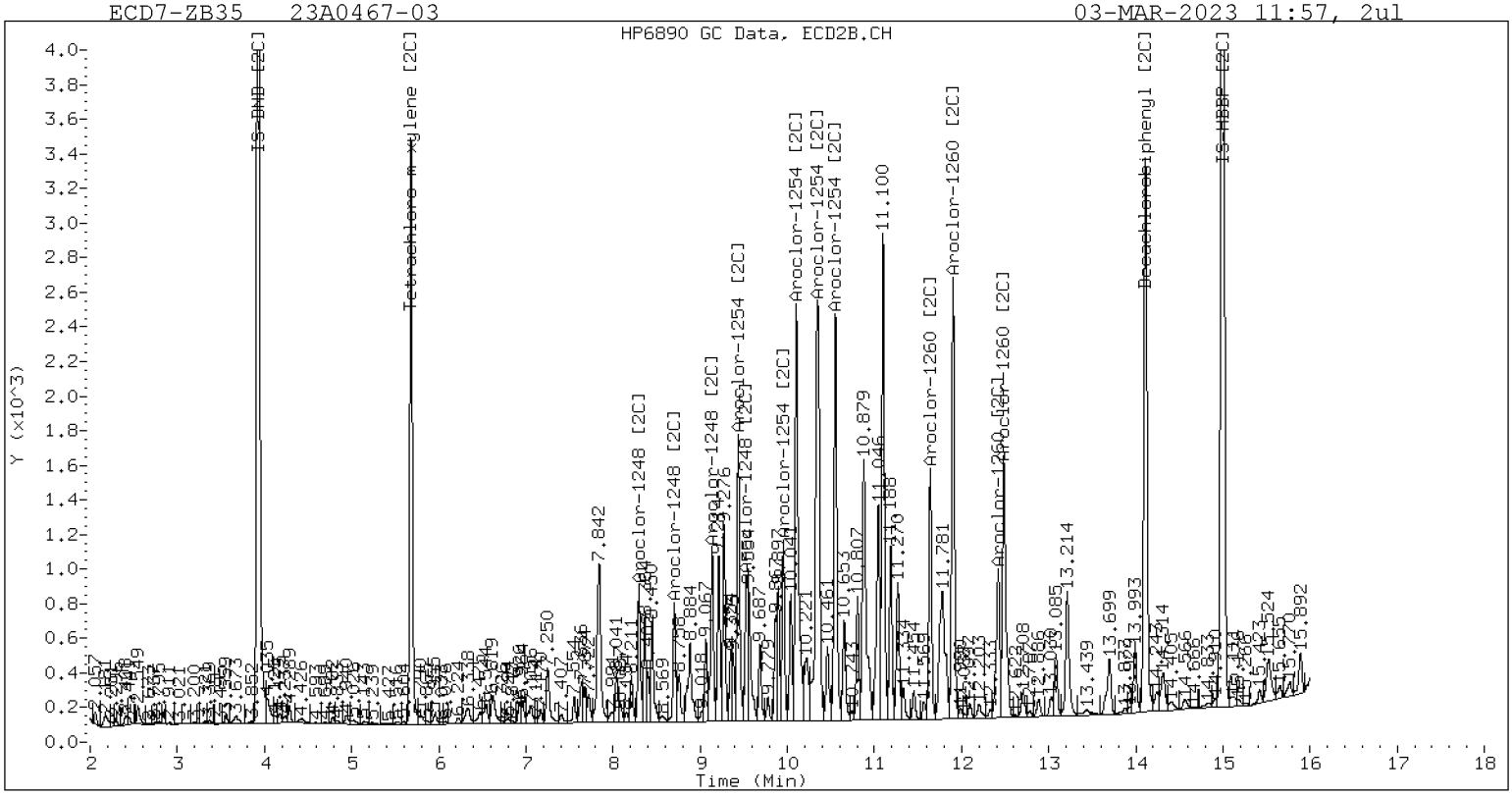
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-03 03-MAR-2023 11:57, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-03 03-MAR-2023 11:57, 2ul

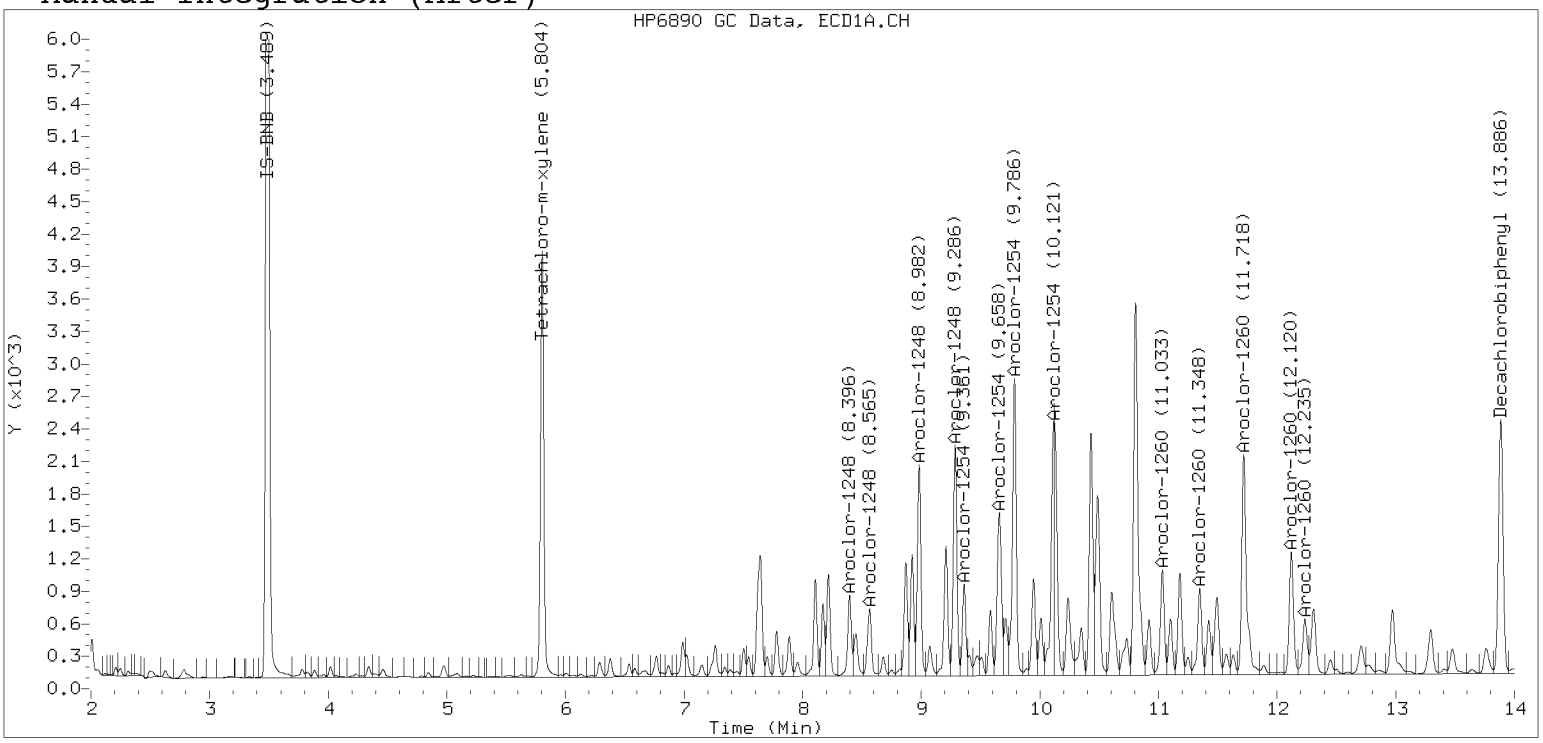


ZB-35 Manual Integration: YES

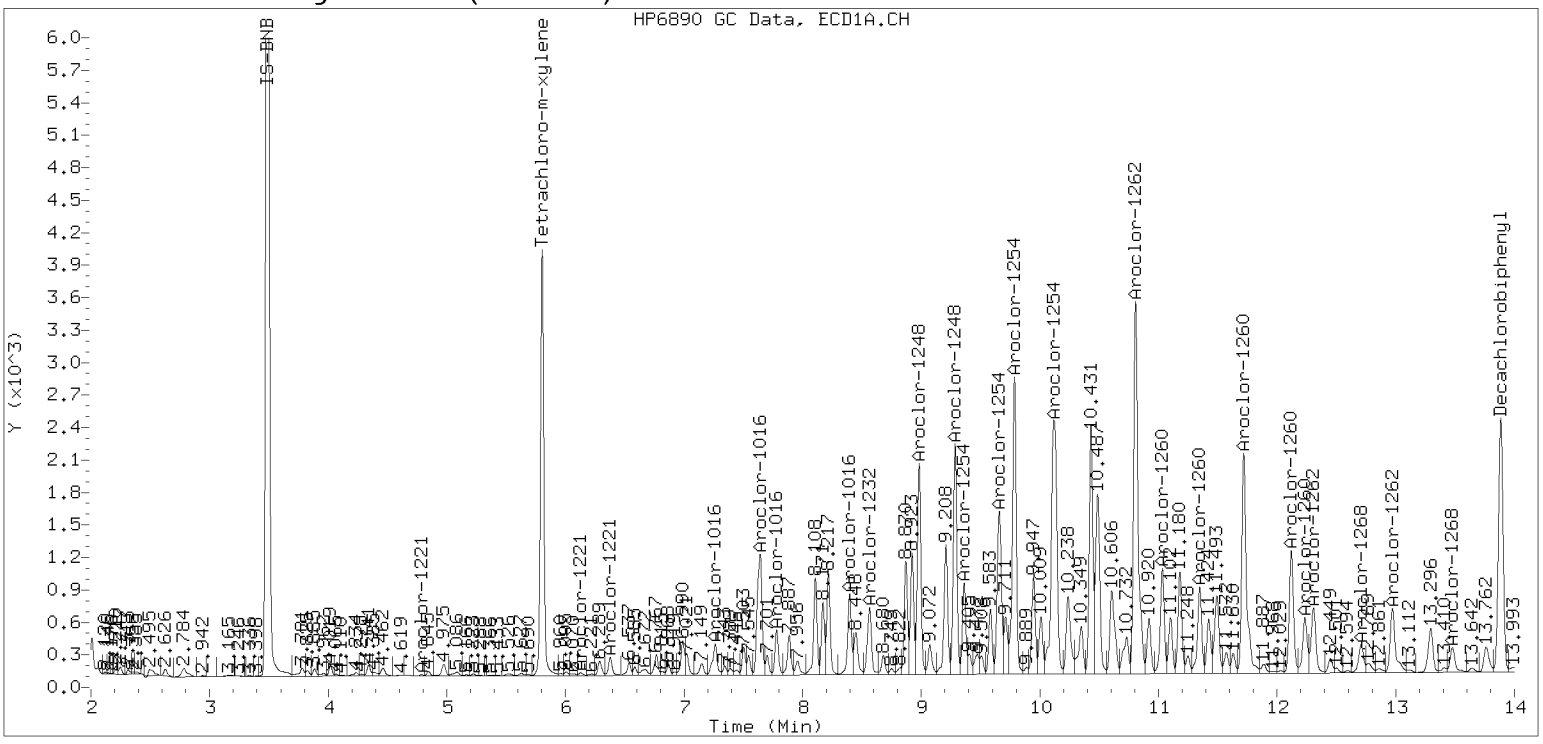
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022355ECD7.D Injection Date: 03-MAR-2023 11:57

Manual Integration (After)



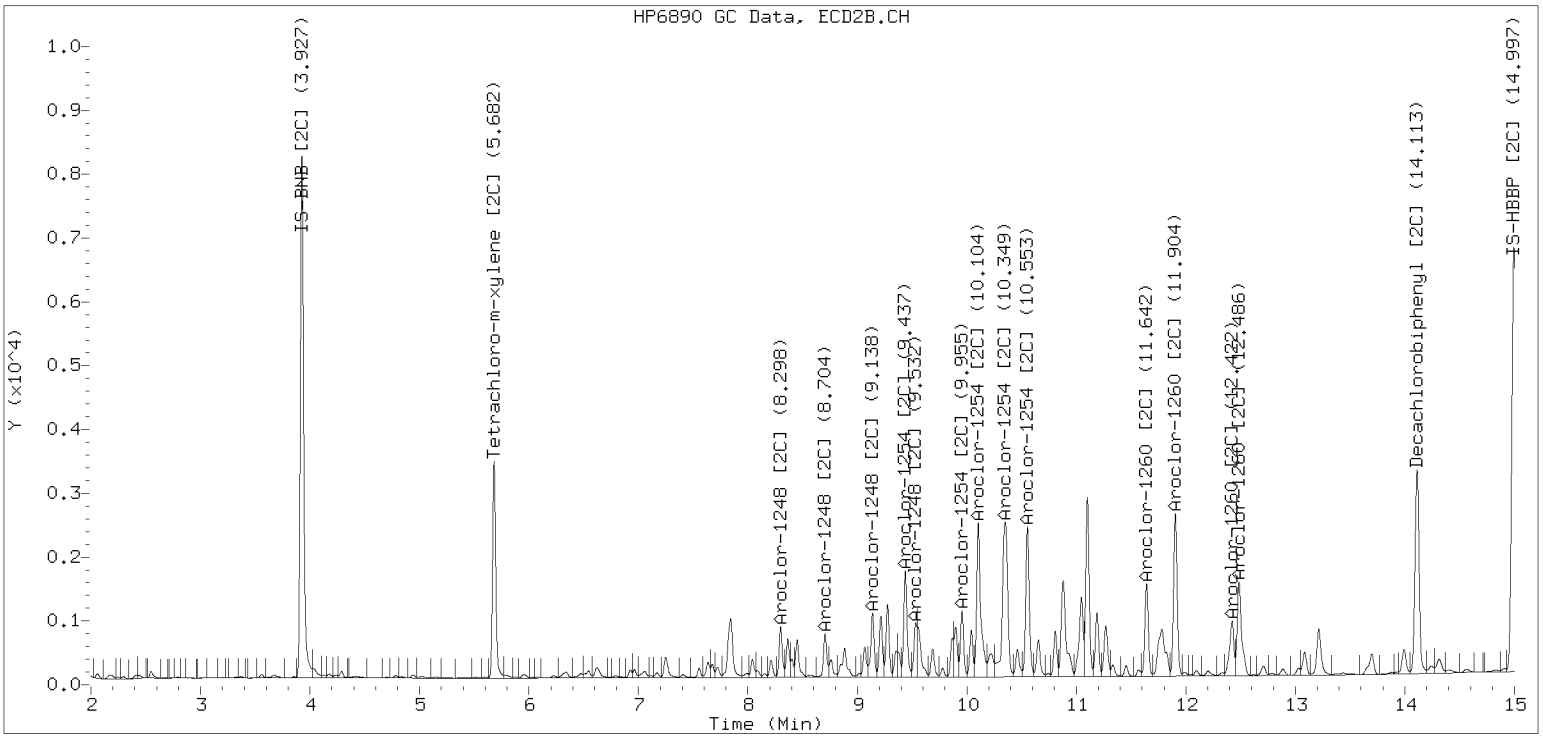
Processed Integration (Before)



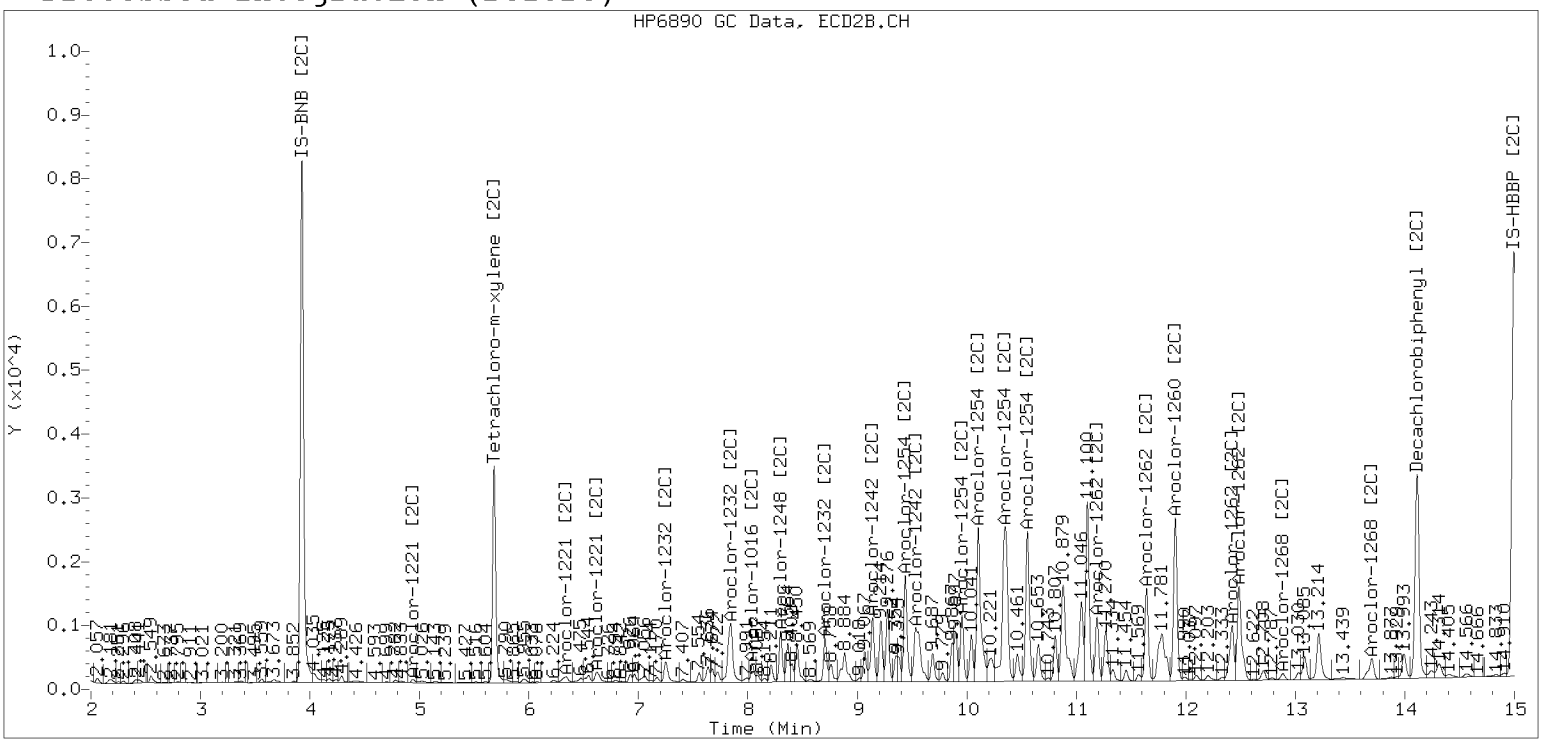
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022355ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1003

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-04 A	File ID:	03022356ECD7.D
Sampled:	01/23/23 09:03	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 12:18
% Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.53 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	48.3	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	69.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	59.1	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9994*	*6.15*	*76.9*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9994*	*4.70*	*58.7*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9994*	*6.06*	*75.8*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9994*	*4.94*	*61.8*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022356ECD7.D
Data file 2: /230302.b/230302.b/03022356ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-04
Client ID:
Injection Date: 03-MAR-2023 12:18
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	152481	5.682	-0.006	134428	23.5	24.7	5.1	Tetrachloro-m-xylene
13.885	-0.010	124628	14.112	-0.006	169772	30.8	30.3	1.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	434960	-35.4
Hexabromobiphenyl	1429847	411284	-71.2 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	370903	17.7
Hexabromobiphenyl	513946	367729	-28.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.396	-0.011	39776	187.4	1	8.298	-0.010	38419	216.9
Aroclor-1248	2	8.564	-0.018	36335	134.7	2	8.704	-0.011	35912	196.1
Aroclor-1248	3	8.982	-0.017	104097	204.5	3	9.137	-0.030	56202	266.7
Aroclor-1248	4	9.285	-0.011	113906	439.6	4	9.532	-0.060	46734	184.7
		Total Col1Ave (4 peaks):			241.6		Total Col2Ave (4 peaks):			216.1 RPD = 11
		Corrected Ave (3 peaks):			175.6		Corrected Ave (3 peaks):			199.3 RPD = 13
									226.57	
Aroclor-1254	1	9.285	-0.014	113906	260.8	1	9.437	-0.013	89477	317.4
Aroclor-1254	2	9.361	-0.016	44806	228.1	2	9.955	-0.015	57305	252.7
Aroclor-1254	3	9.657	-0.011	97492	347.2	3	10.104	-0.020	159585	325.2
Aroclor-1254	4	9.785	-0.022	155756	285.3	4	10.346	-0.027	197672	413.2
Aroclor-1254	5	10.123	-0.053	99420	290.5	5	10.552	-0.017	125347	430.4
		Total Col1Ave (5 peaks):			282.4		Total Col2Ave (5 peaks):			347.8 RPD = 21
		Corrected Ave (4 peaks):			266.2		Corrected Ave (4 peaks):			327.1 RPD = 21
					280.35					
Aroclor-1260	1	11.032	-0.013	48389	327.1	1	11.641	-0.011	76828	355.3
Aroclor-1260	2	11.347	-0.014	45730	295.8	2	11.903	-0.015	127113	230.3
Aroclor-1260	3	11.718	-0.016	123467	301.1	3	12.421	-0.014	50800	346.9
Aroclor-1260	4	12.118	-0.021	64705	313.4	4	12.486	-0.015	92982	250.0
Aroclor-1260	5	12.235	-0.009	32128	361.5	NS	---			----
		Total Col1Ave (5 peaks):			319.8		Total Col2Ave (4 peaks):			295.6 RPD = 8
		Corrected Ave (4 peaks):			309.4		Corrected Ave (3 peaks):			275.7 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.795) = 2774777 Col1 Total PCB = 0.5 ppm*

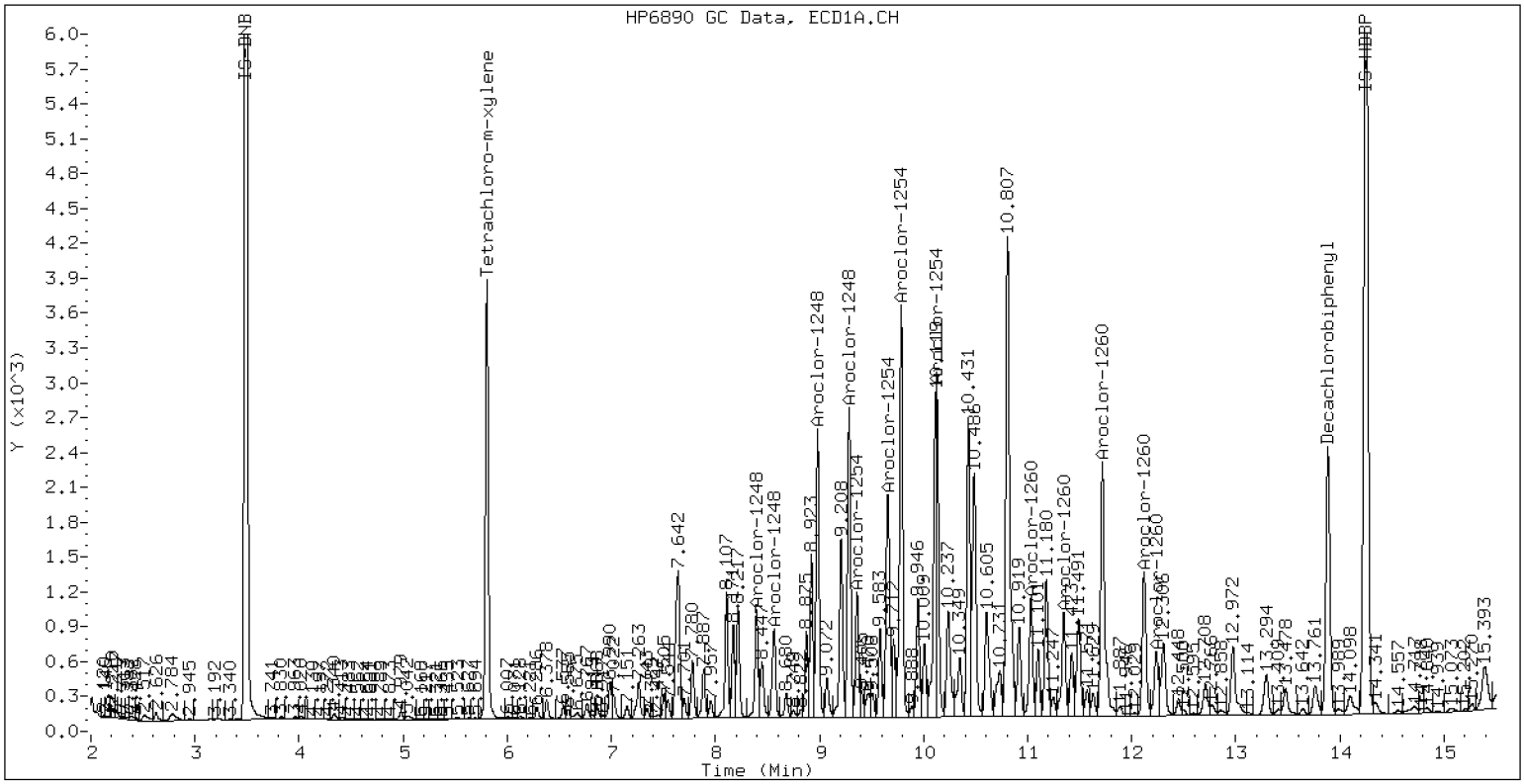
Total PCB Area Col2 (5.788 - 14.018) = 2643421 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

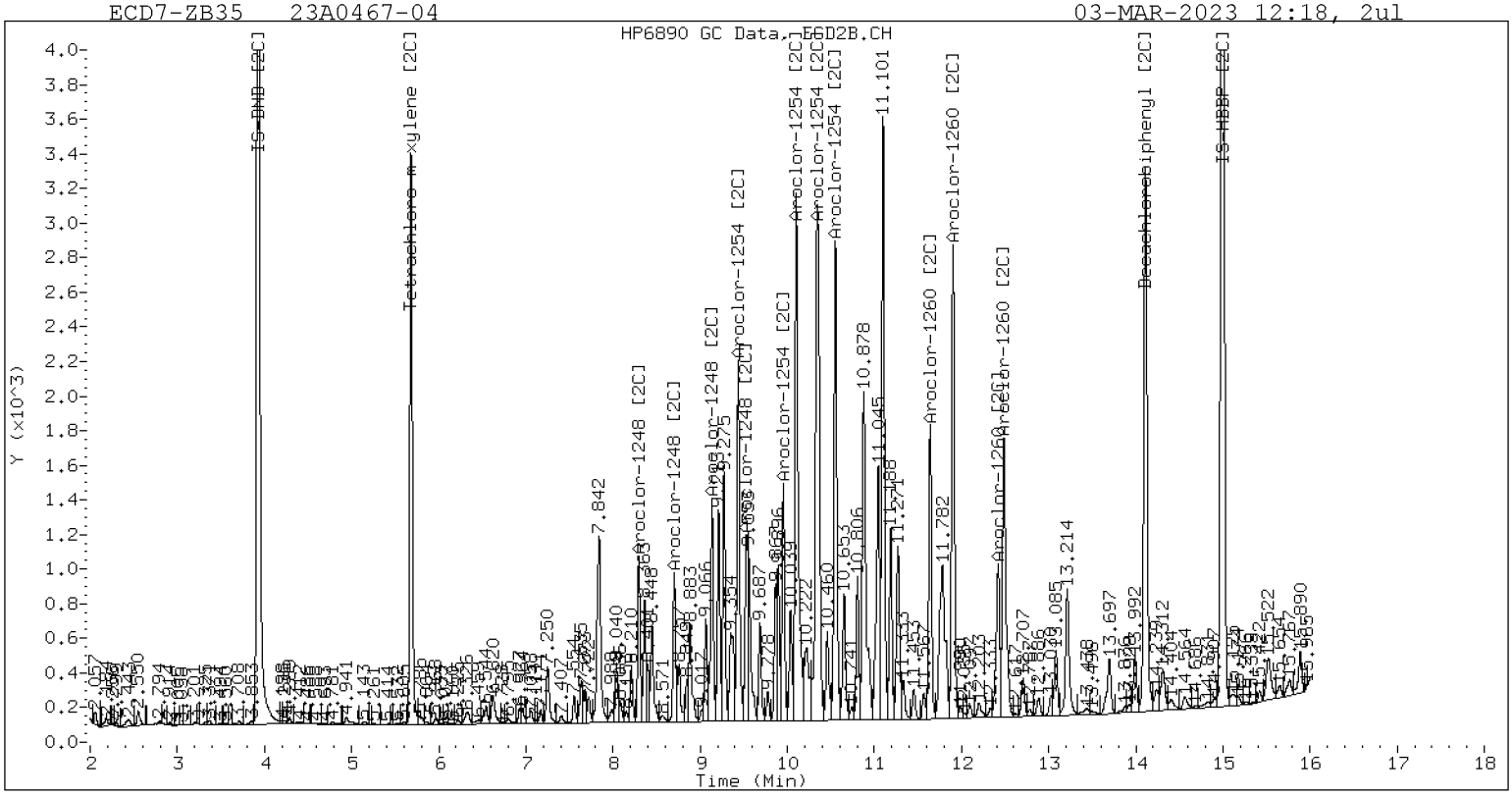
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-04 03-MAR-2023 12:18, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-04 03-MAR-2023 12:18, 2ul

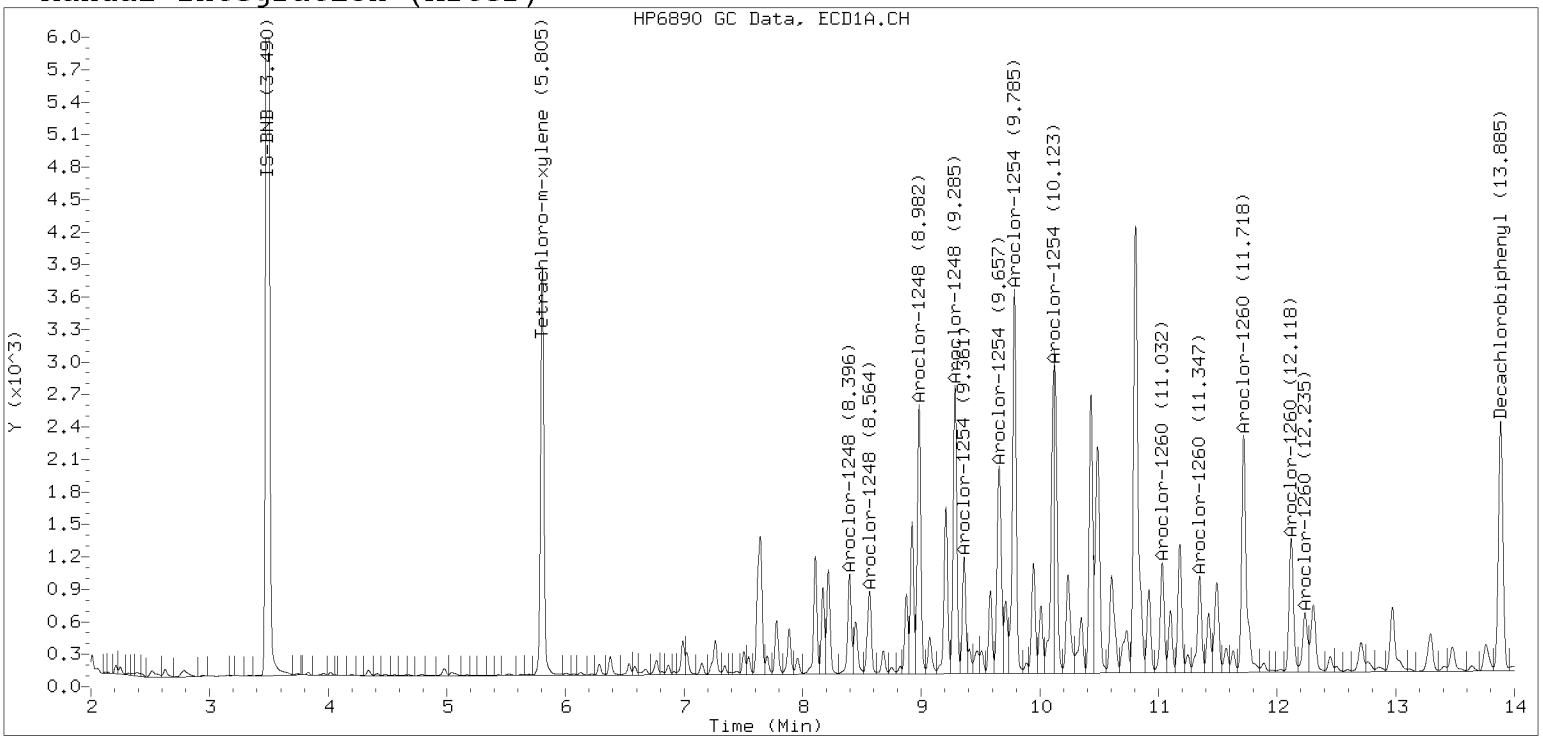


ZB-35 Manual Integration: YES

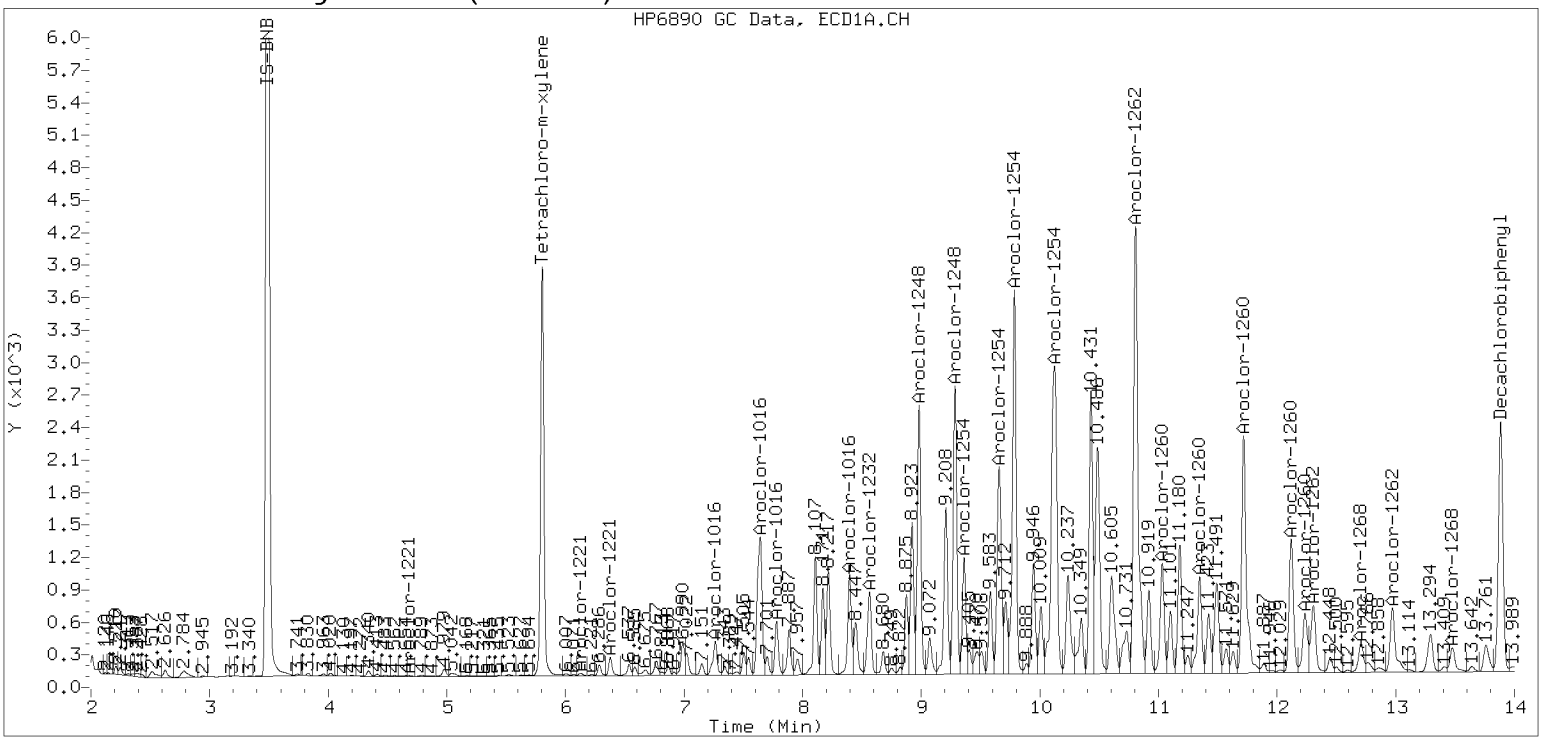
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022356ECD7.D Injection Date: 03-MAR-2023 12:18

Manual Integration (After)



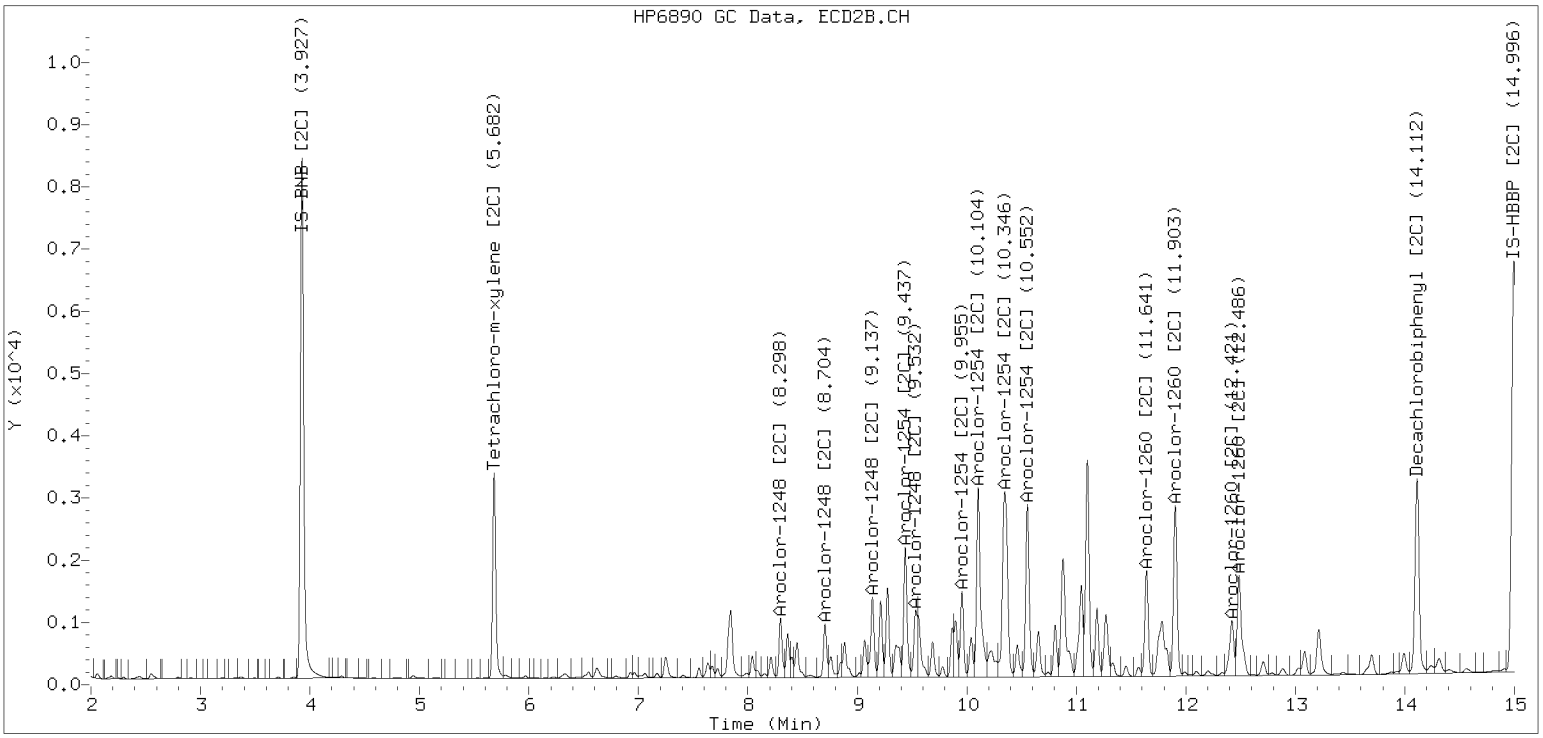
Processed Integration (Before)



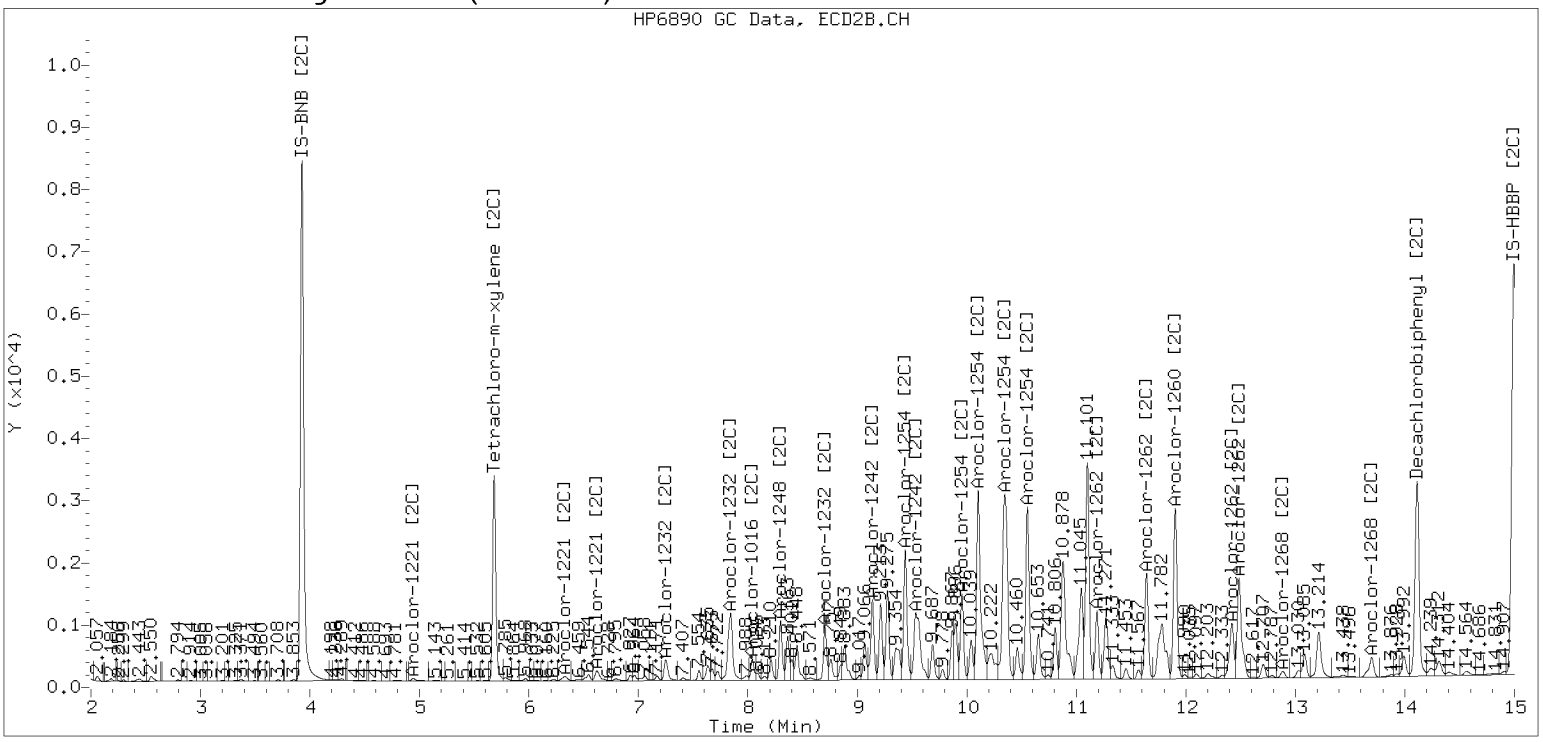
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022356ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1004

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-05 A	File ID:	03022357ECD7.D
Sampled:	01/23/23 09:42	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 12:40
% Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.68 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	2	1	37.5	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	49.2	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	42.6	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9978*	*6.58*	*82.3*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9978*	*5.15*	*64.4*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9978*	*6.46*	*80.8*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9978*	*5.65*	*70.7*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022357ECD7.D
Data file 2: /230302.b/230302.b/03022357ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-05
Client ID:
Injection Date: 03-MAR-2023 12:40
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.003	167944	5.683	-0.006	149177	25.8	28.3	9.2	Tetrachloro-m-xylene
13.886	-0.009	134870	14.111	-0.007	180640	32.9	32.3	1.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	436353	-35.2
Hexabromobiphenyl	1429847	415851	-70.9 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	359672	14.1
Hexabromobiphenyl	513946	367030	-28.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.011	34179	160.5	1	8.298	-0.010	30913	180.0
Aroclor-1248	2	8.565	-0.017	31666	117.0	2	8.705	-0.010	29568	166.5
Aroclor-1248	3	8.983	-0.016	75232	147.4	3	9.139	-0.029	44122	215.9
Aroclor-1248	4	9.286	-0.010	76826	295.6	4	9.534	-0.058	29316	119.5
	Total Col1Ave (4 peaks):				180.1	Total Col2Ave (4 peaks):				170.5 RPD = 5
	Corrected Ave (3 peaks):				141.6	Corrected Ave (3 peaks):				155.3 RPD = 9
										187.47
Aroclor-1254	1	9.286	-0.013	76826	175.3	1	9.437	-0.013	60332	220.7
Aroclor-1254	2	9.361	-0.016	30822	156.4	2	9.956	-0.015	37314	169.7
Aroclor-1254	3	9.657	-0.011	65520	232.6	3	10.105	-0.019	108279	227.6
Aroclor-1254	4	9.787	-0.020	104448	190.7	4	10.350	-0.023	141479	305.0
Aroclor-1254	5	10.126	-0.051	62403	181.8	5	10.553	-0.016	86946	307.9
	Total Col1Ave (5 peaks):				187.4	Total Col2Ave (5 peaks):				246.2 RPD = 27
	Corrected Ave (4 peaks):				176.0	Corrected Ave (4 peaks):				230.7 RPD = 27
										188.75
Aroclor-1260	1	11.033	-0.012	35988	240.6	1	11.642	-0.010	53706	248.9
Aroclor-1260	2	11.349	-0.013	32505	208.0	2	11.904	-0.013	91300	165.8
Aroclor-1260	3	11.719	-0.015	90481	218.3	3	12.422	-0.014	37628	257.4
Aroclor-1260	4	12.119	-0.020	46573	223.1	4	12.487	-0.014	66563	179.3
Aroclor-1260	5	12.234	-0.010	21041	234.2	NS	---			----
	Total Col1Ave (5 peaks):				224.8	Total Col2Ave (4 peaks):				212.8 RPD = 5
	Corrected Ave (4 peaks):				220.9	Corrected Ave (3 peaks):				198.0 RPD = 11
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.795) = 2155061 Col1 Total PCB = 0.4 ppm*

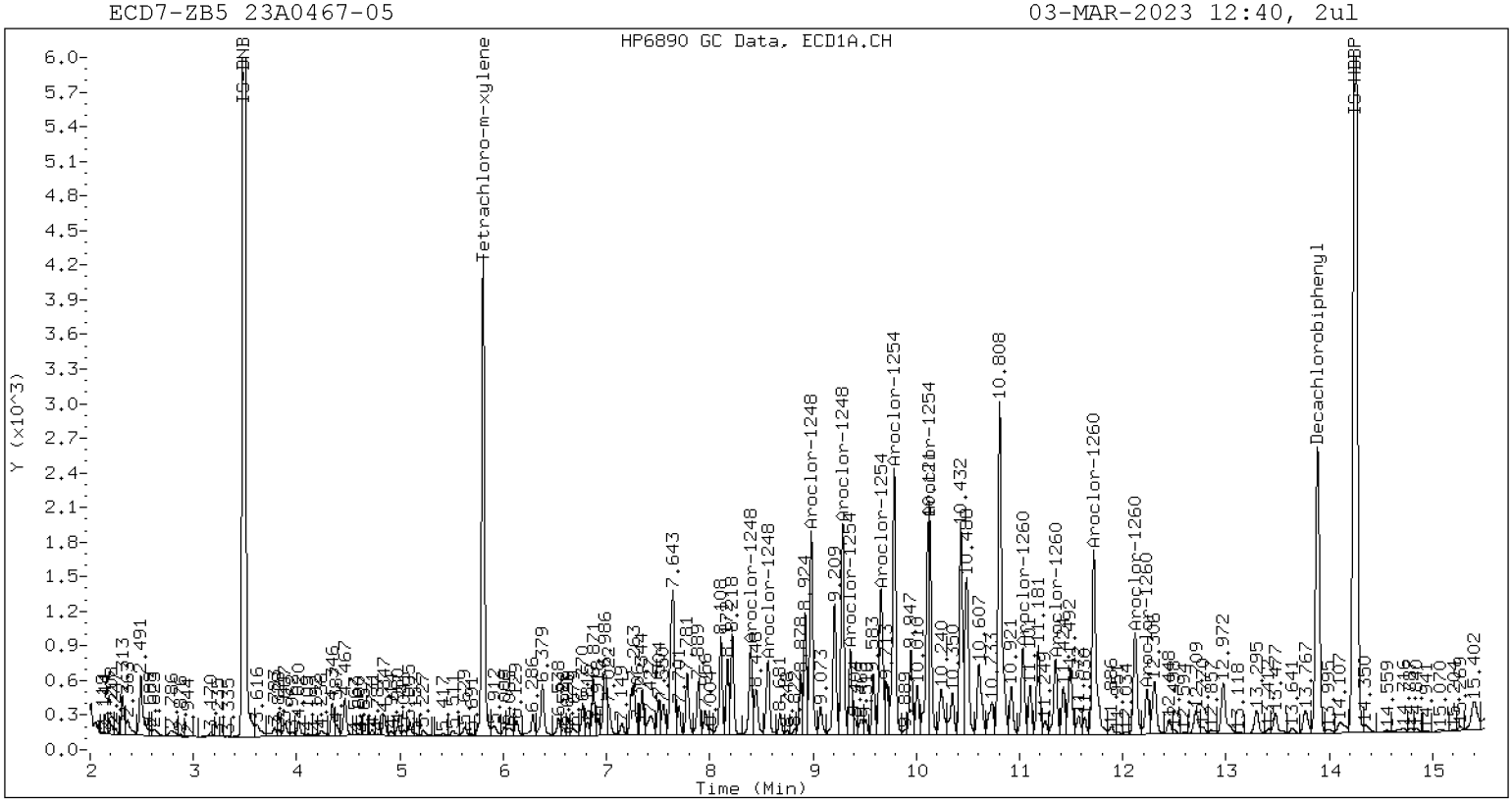
Total PCB Area Col2 (5.788 - 14.018) = 2078140 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

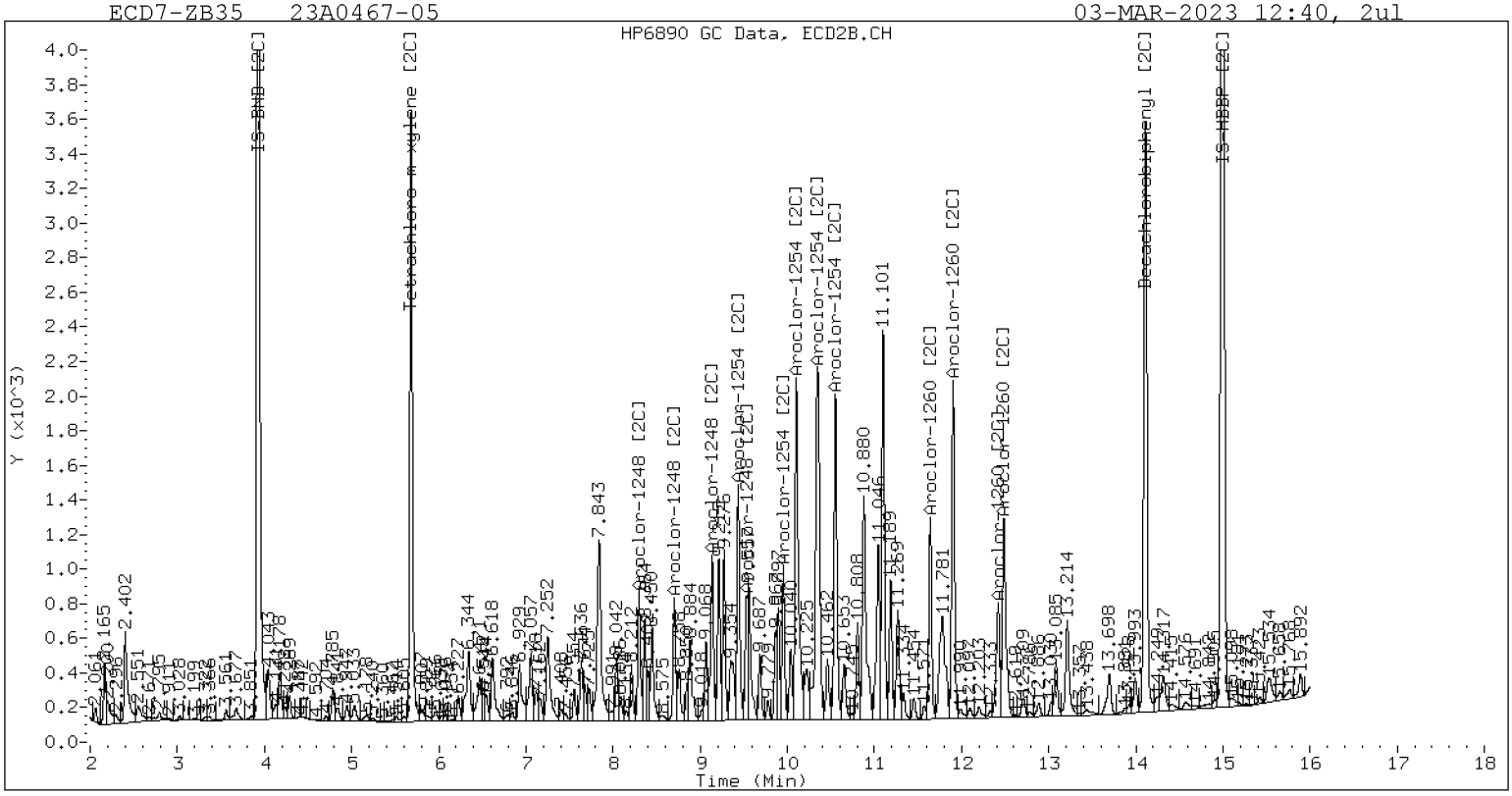
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-05 03-MAR-2023 12:40, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-05 03-MAR-2023 12:40, 2ul

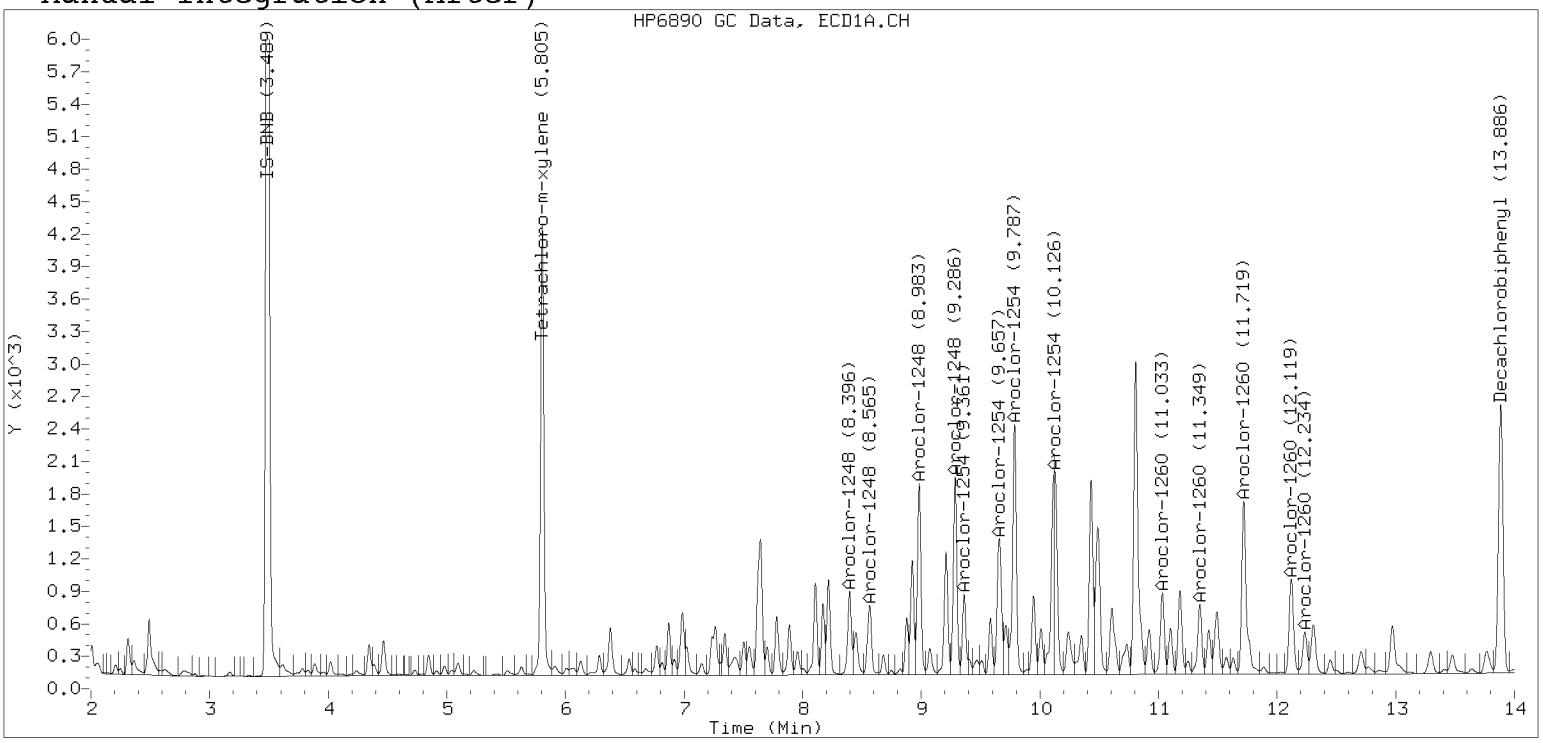


ZB-35 Manual Integration: YES

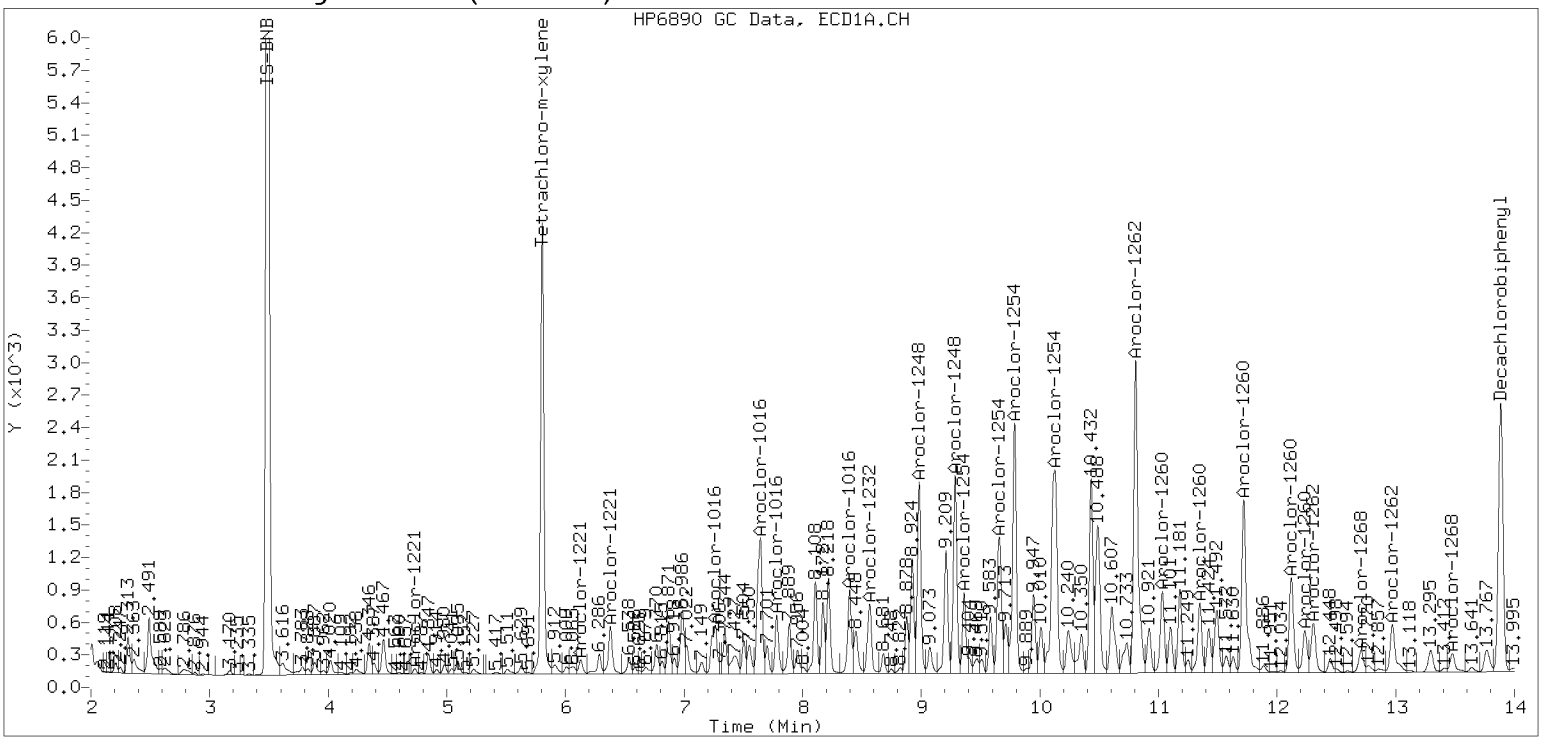
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022357ECD7.D Injection Date: 03-MAR-2023 12:40

Manual Integration (After)



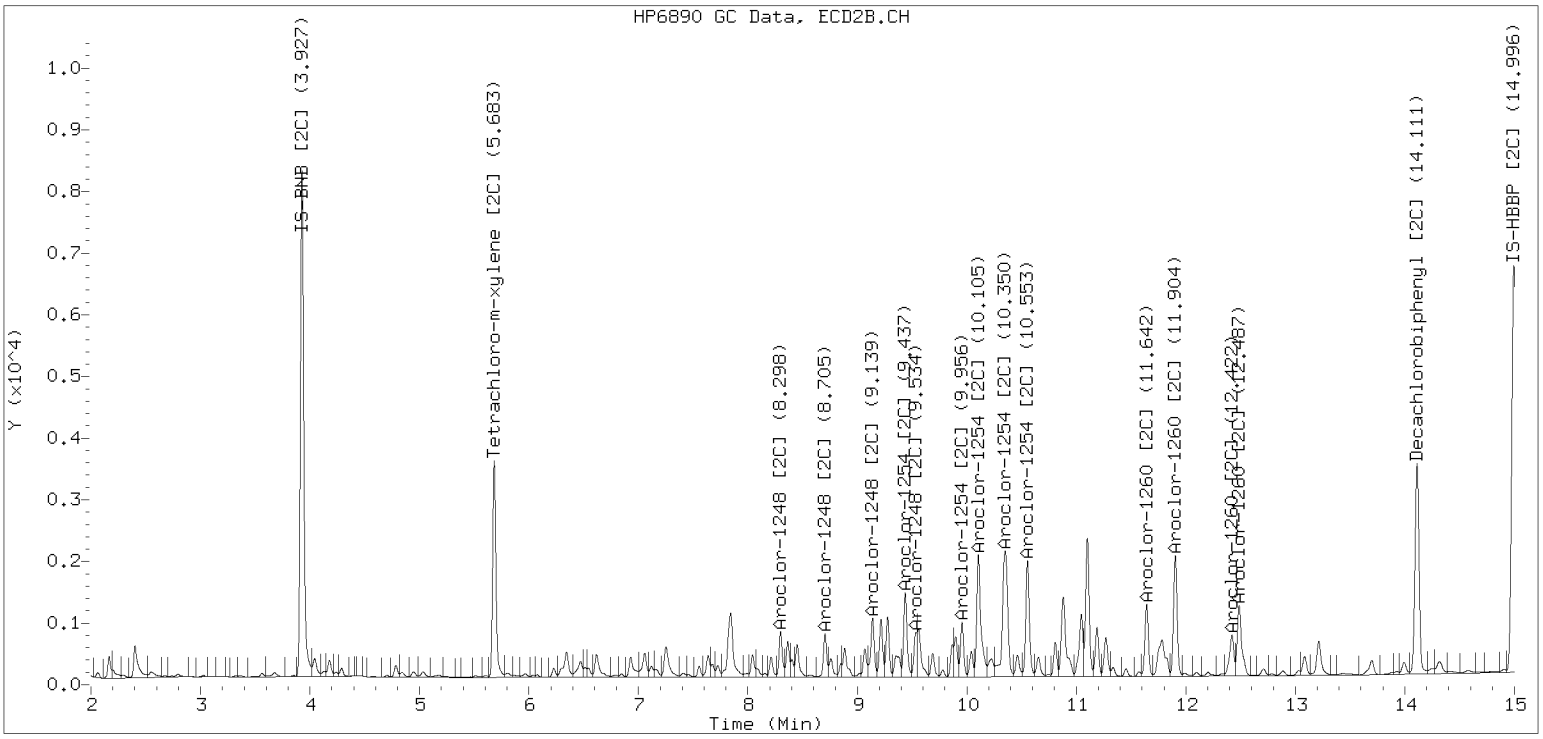
Processed Integration (Before)



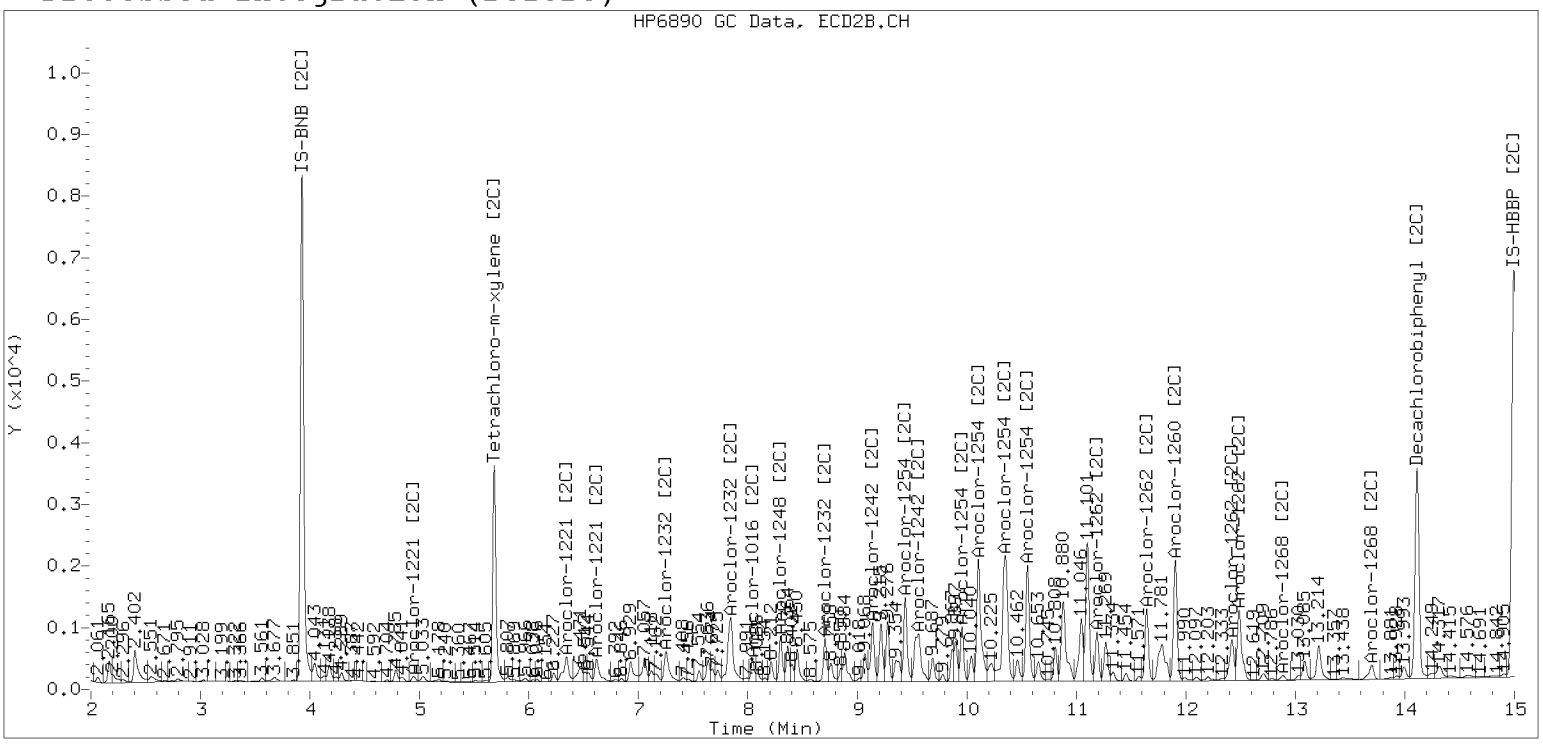
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022357ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1204

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-06 A	File ID:	03022358ECD7.D
Sampled:	01/23/23 11:11	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:01
% Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Initial/Final:	26.54 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	27.2	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	38.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	34.8	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9761*	*6.35*	*79.7*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9761*	*4.96*	*62.2*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9761*	*6.06*	*75.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9761*	*5.16*	*64.7*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022358ECD7.D
Data file 2: /230302.b/230302.b/03022358ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-06
Client ID:
Injection Date: 03-MAR-2023 13:01
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.004	159291	5.682	-0.006	141134	24.9	25.9	4.0	Tetrachloro-m-xylene
13.886	-0.009	132119	14.112	-0.006	172610	31.9	30.4	4.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	428901	-36.3
Hexabromobiphenyl	1429847	420992	-70.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	371679	17.9
Hexabromobiphenyl	513946	373158	-27.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.395	-0.012	22893	109.4	1	8.297	-0.011	22075	124.4
Aroclor-1248	2	8.563	-0.019	22967	86.3	2	8.704	-0.011	19694	107.3
Aroclor-1248	3	8.982	-0.016	55363	110.3	3	9.138	-0.030	30321	143.6
Aroclor-1248	4	9.285	-0.010	60984	238.7	4	9.531	-0.060	25661	1~~01.~~2
		Total Col1Ave (4 peaks):			136.2		Total Col2Ave (4 peaks):			119.1 RPD = 13
		Corrected Ave (3 peaks):			102.0		Corrected Ave (3 peaks):			111.0 RPD = 8
										125.1
Aroclor-1254	1	9.285	-0.014	60984	141.6	1	9.437	-0.014	50433	178.5
Aroclor-1254	2	9.361	-0.016	25053	129.3	2	9.956	-0.015	28374	124.9
Aroclor-1254	3	9.659	-0.009	55633	200.9	3	10.103	-0.020	84940	172.7
Aroclor-1254	4	9.786	-0.021	86064	159.9	4	10.347	-0.026	116946	244.0
Aroclor-1254	5	10.121	-0.055	108334	3~~21.~~0	5	10.554	-0.016	72541	248.6
		Total Col1Ave (5 peaks):			~~190~~.5		Total Col2Ave (5 peaks):			193.7 RPD = 2
		Corrected Ave (4 peaks):			157.9		Corrected Ave (4 peaks):			180.0 RPD = 13
Aroclor-1260	1	11.032	-0.012	30847	203.7	1	11.643	-0.010	43727	199.3
Aroclor-1260	2	11.347	-0.014	26586	168.0	2	11.903	-0.014	74984	133.9
Aroclor-1260	3	11.719	-0.015	79205	188.7	3	12.421	-0.015	33544	225.7
Aroclor-1260	4	12.118	-0.021	38619	182.7	4	12.485	-0.016	52738	139.7
Aroclor-1260	5	12.233	-0.011	17747	195.1	NS	---			----
		Total Col1Ave (5 peaks):			187.7		Total Col2Ave (4 peaks):			174.7 RPD = 7
		Corrected Ave (4 peaks):			183.6		Corrected Ave (3 peaks):			157.6 RPD = 15
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.908 - 13.795) = 1646717 Col1 Total PCB = 0.3 ppm*

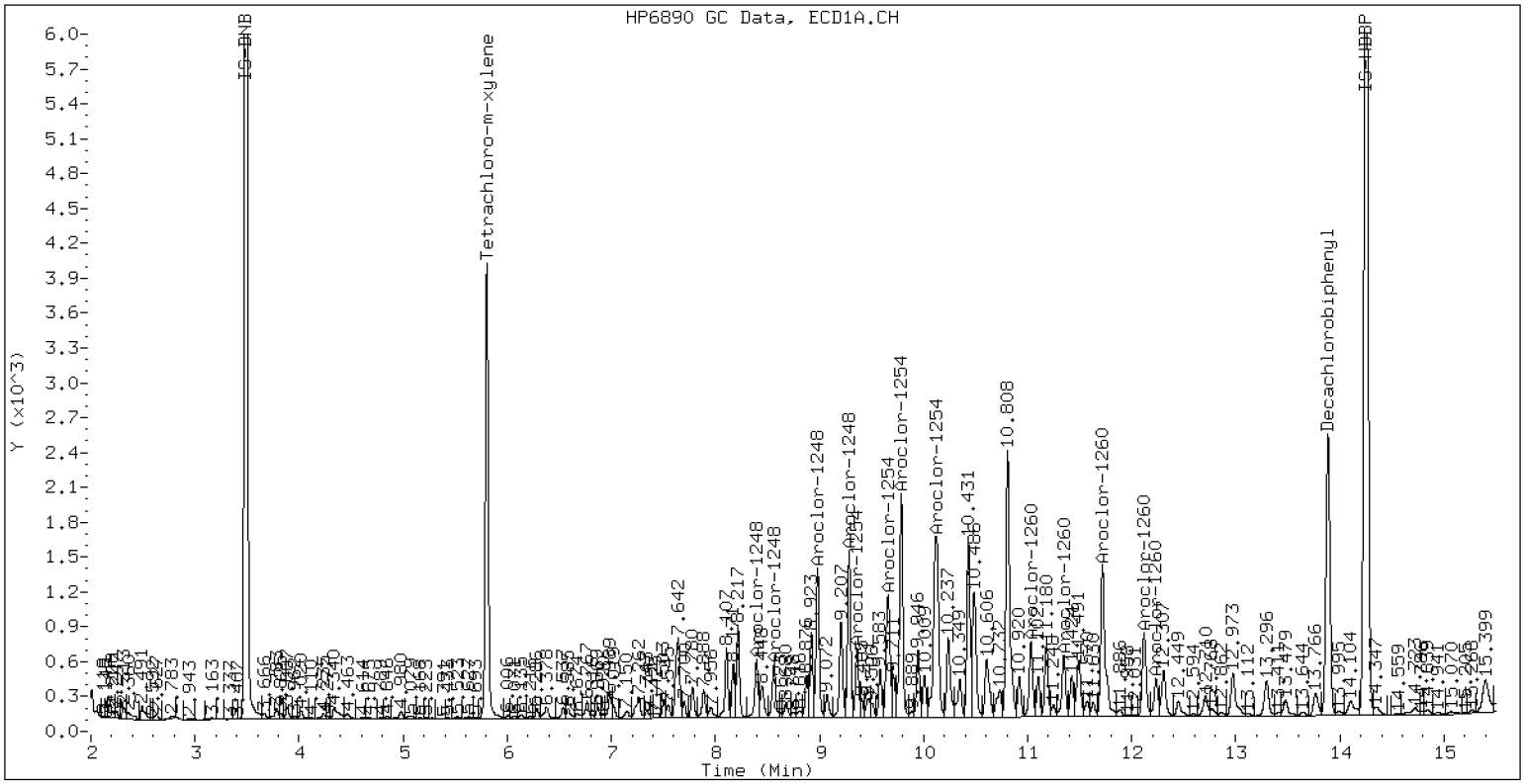
Total PCB Area Col2 (5.788 - 14.018) = 1560856 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

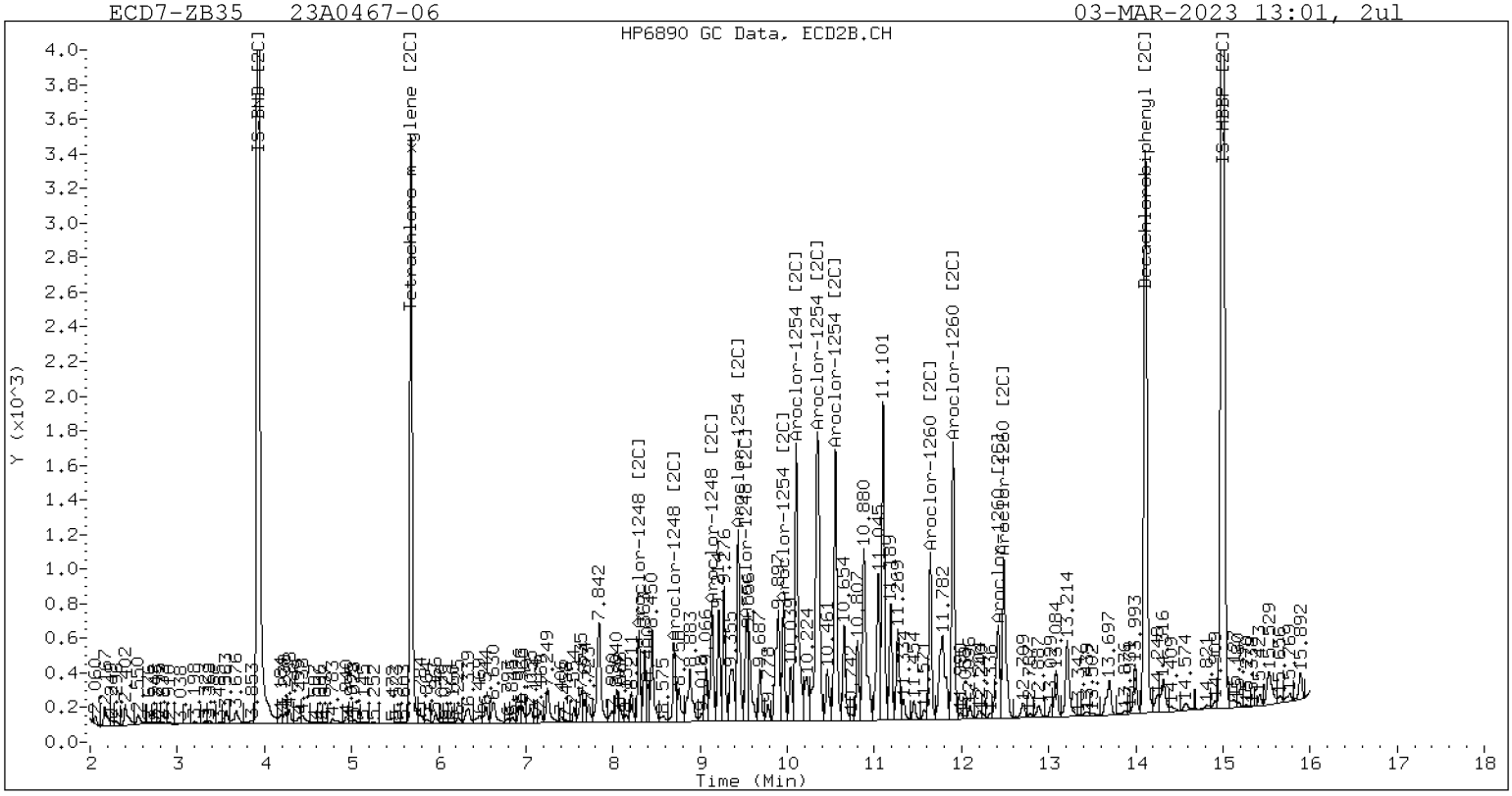
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-06 03-MAR-2023 13:01, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 23A0467-06 03-MAR-2023 13:01, 2ul

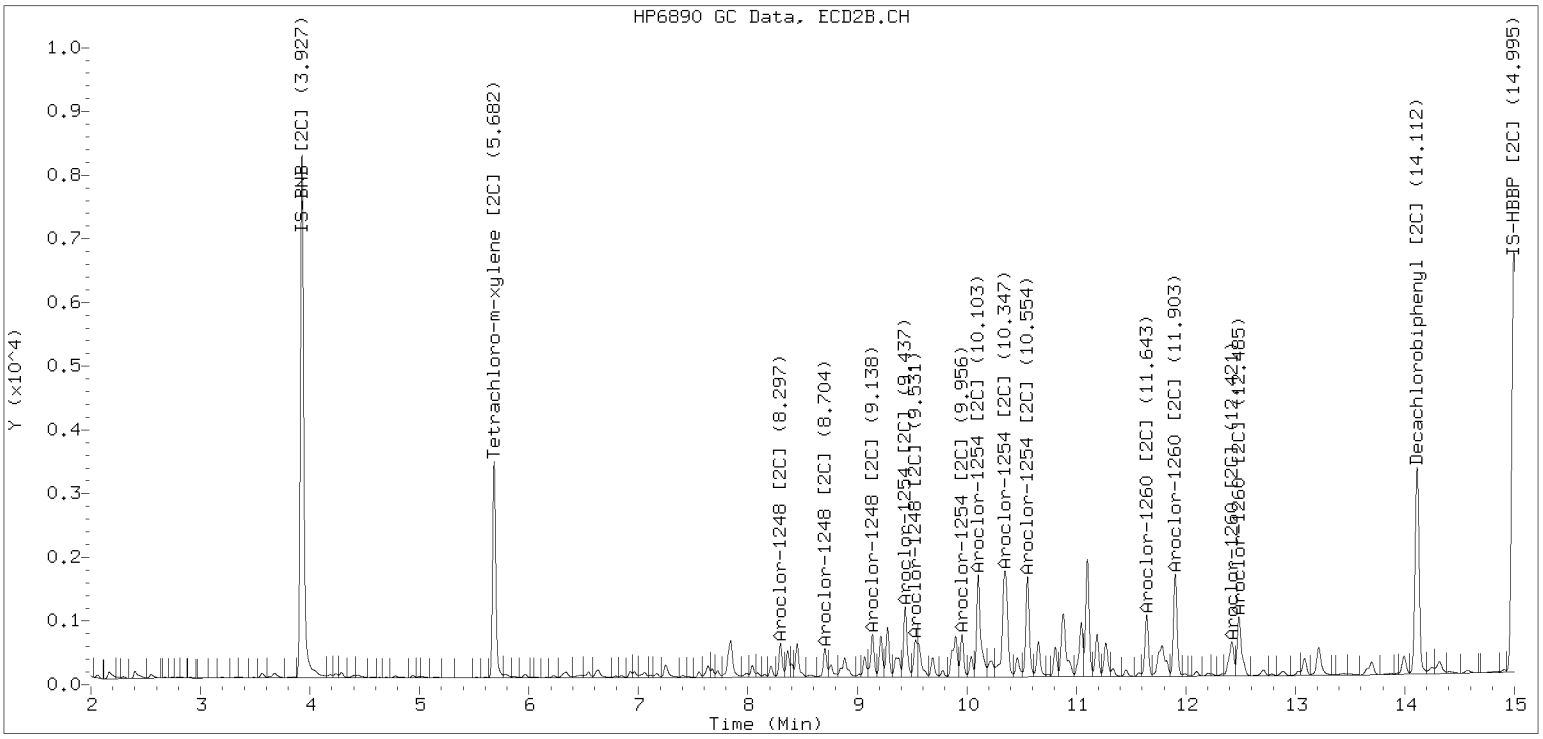


ZB-35 Manual Integration: YES

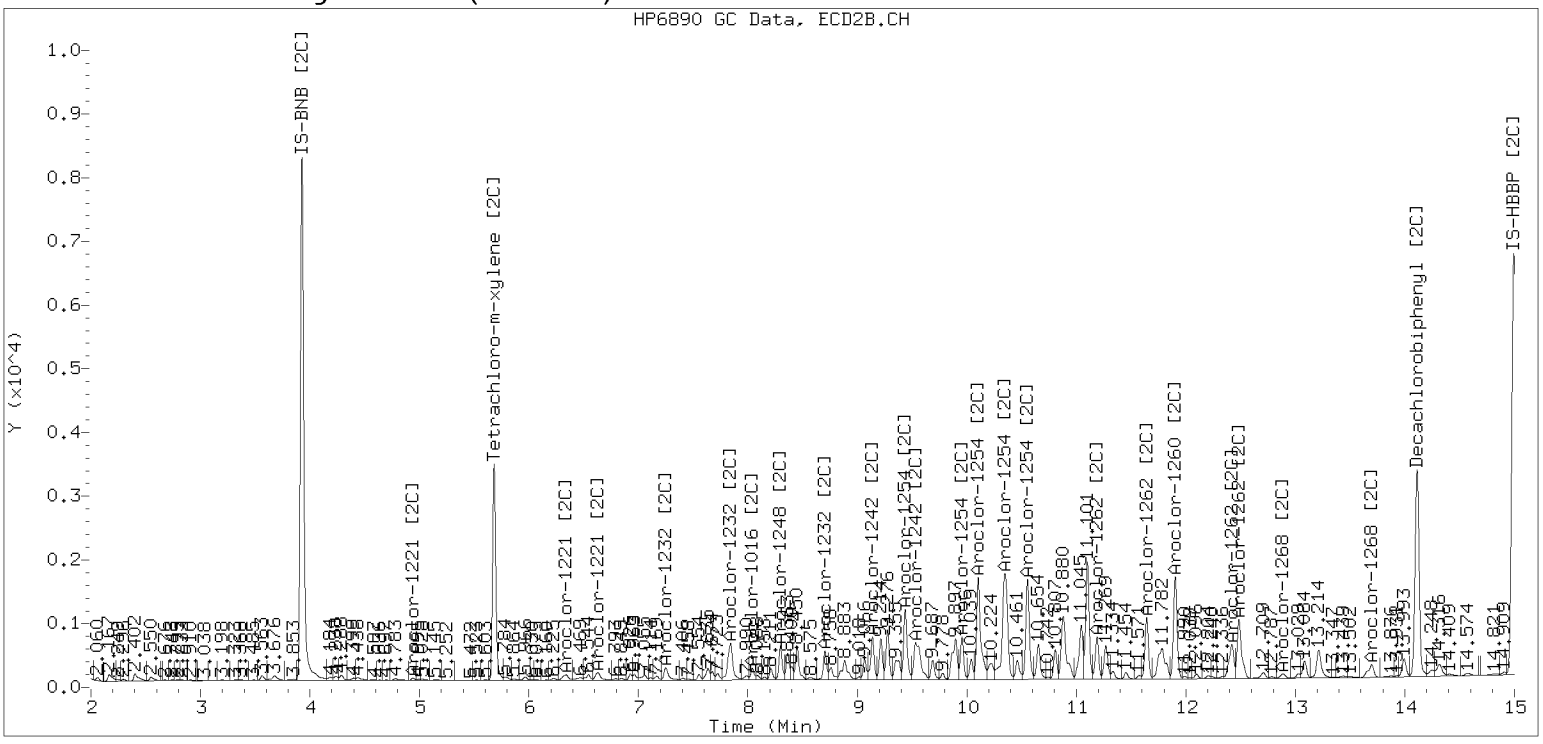
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022358ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1238

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-07 A	File ID:	03022359ECD7.D
Sampled:	01/23/23 11:35	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:22
% Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Initial/Final:	22.66 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	20.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	32.6	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	29.4	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9947*	*6.25*	*78.2*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9947*	*5.09*	*63.6*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9947*	*6.01*	*75.2*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9947*	*5.53*	*69.2*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022359ECD7.D
Data file 2: /230302.b/230302.b/03022359ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-07
Client ID:
Injection Date: 03-MAR-2023 13:22
Report Date: 03/06/2023 11:02
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.002	171014	5.682	-0.003	151794	25.5	27.7	8.3	Tetrachloro-m-xylene
13.887	-0.006	138300	14.113	-0.006	179899	31.3	30.1	4.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	449914	-33.2
Hexabromobiphenyl	1429847	448961	-68.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	373916	18.6
Hexabromobiphenyl	513946	392963	-23.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.397	-0.008	17954	81.8	1	8.299	-0.009	20177	113.0
Aroclor-1248	2	8.566	-0.015	14626	52.4	2	8.705	-0.009	15981	86.6
Aroclor-1248	3	8.984	-0.014	44121	83.8	3	9.141	-0.025	22805	107.4
Aroclor-1248	4	9.286	-0.008	52506	195.9	4	9.532	-0.058	20916	~~82.~~0
		Total Col1Ave (4 peaks):			103.5		Total Col2Ave (4 peaks):			97.2 RPD = 6
		Corrected Ave (3 peaks):			72.7		Corrected Ave (3 peaks):			92.0 RPD = 23
										102.33
Aroclor-1254	1	9.286	-0.012	52506	116.2	1	9.439	-0.010	43332	152.5
Aroclor-1254	2	9.362	-0.016	20855	102.6	2	9.956	-0.014	24101	105.4
Aroclor-1254	3	9.659	-0.009	43381	149.4	3	10.105	-0.018	74178	150.0
Aroclor-1254	4	9.788	-0.020	75952	134.5	4	10.352	-0.020	96377	199.9
Aroclor-1254	5	10.120	-0.055	45767	12~~9.~~3	5	10.554	-0.014	60771	207.0
		Total Col1Ave (5 peaks):			126.4		Total Col2Ave (5 peaks):			162.9 RPD = 25
		Corrected Ave (4 peaks):			120.7		Corrected Ave (4 peaks):			151.9 RPD = 23
					125.675					
Aroclor-1260	1	11.034	-0.011	26599	164.7	1	11.643	-0.009	37761	163.4
Aroclor-1260	2	11.349	-0.012	22089	130.9	2	11.904	-0.013	66064	112.0
Aroclor-1260	3	11.719	-0.014	64940	145.1	3	12.423	-0.013	29788	190.3
Aroclor-1260	4	12.120	-0.019	31458	139.6	4	12.488	-0.014	48339	121.6
Aroclor-1260	5	12.234	-0.010	16460	169.7	NS	---			----
		Total Col1Ave (5 peaks):			150.0		Total Col2Ave (4 peaks):			146.9 RPD = 2
		Corrected Ave (4 peaks):			145.1		Corrected Ave (3 peaks):			132.4 RPD = 9
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.906 - 13.793) = 1568454 Col1 Total PCB = 0.3 ppm*

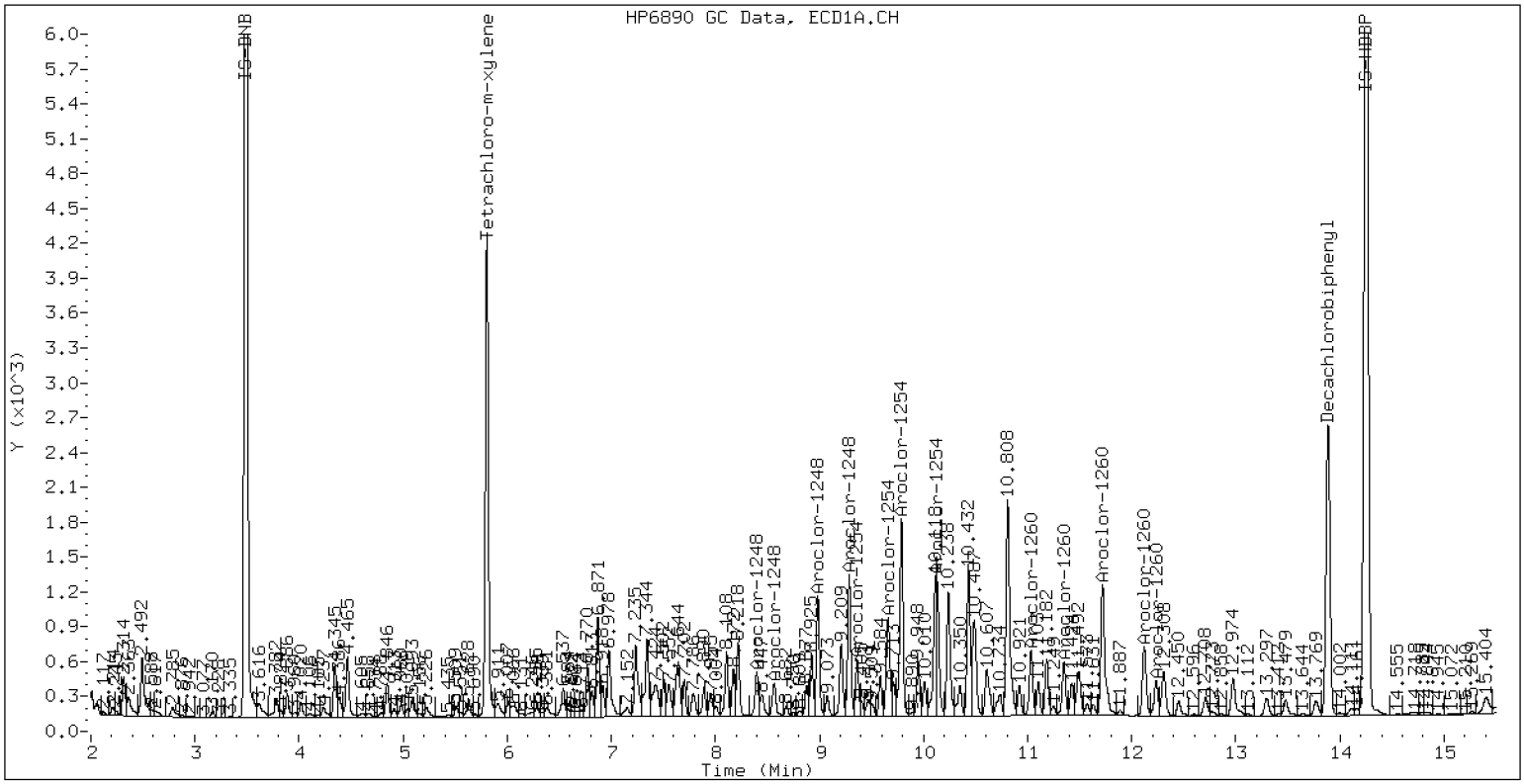
Total PCB Area Col2 (5.785 - 14.019) = 1548130 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

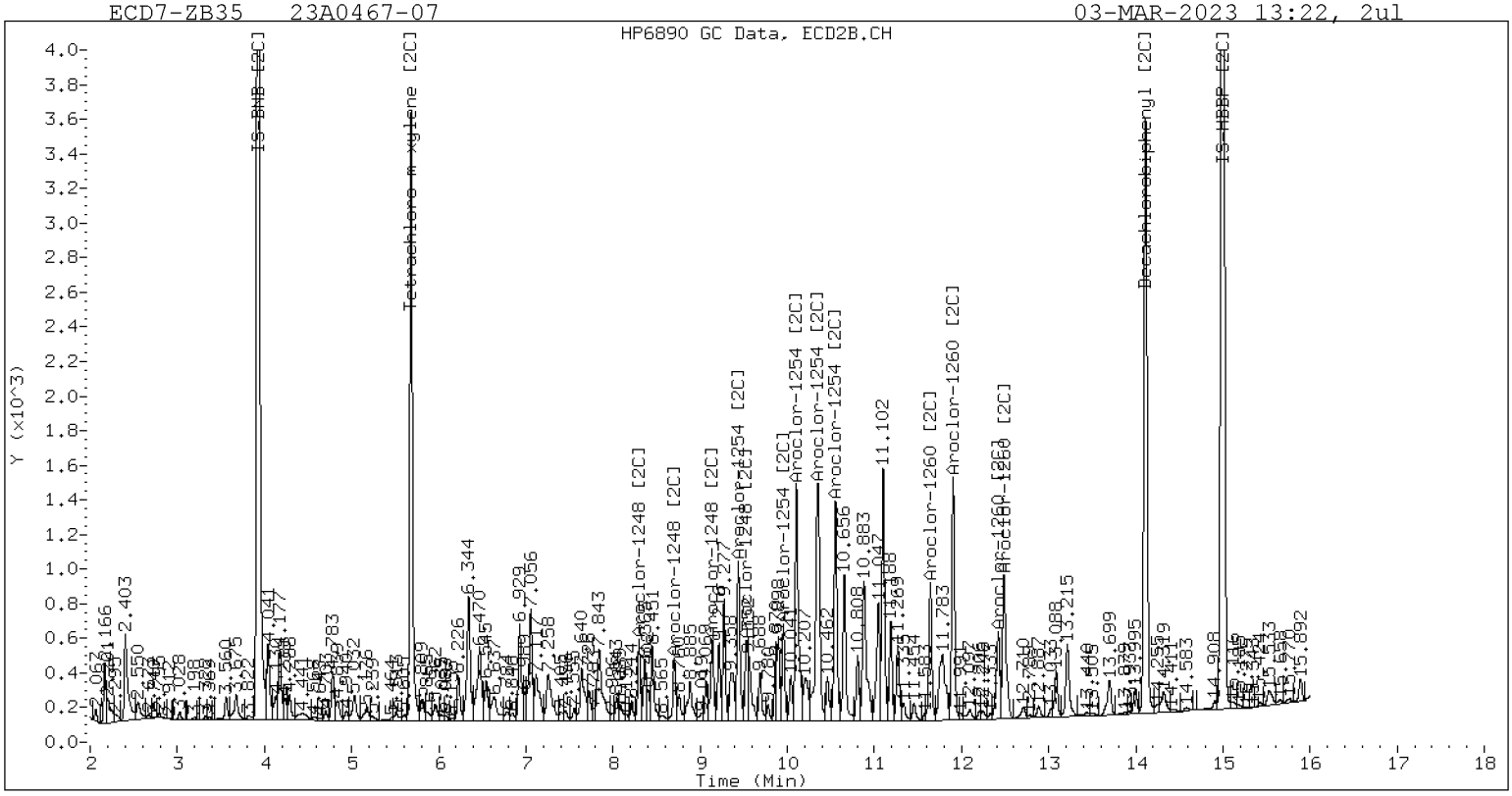
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-07 03-MAR-2023 13:22, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-07 03-MAR-2023 13:22, 2ul

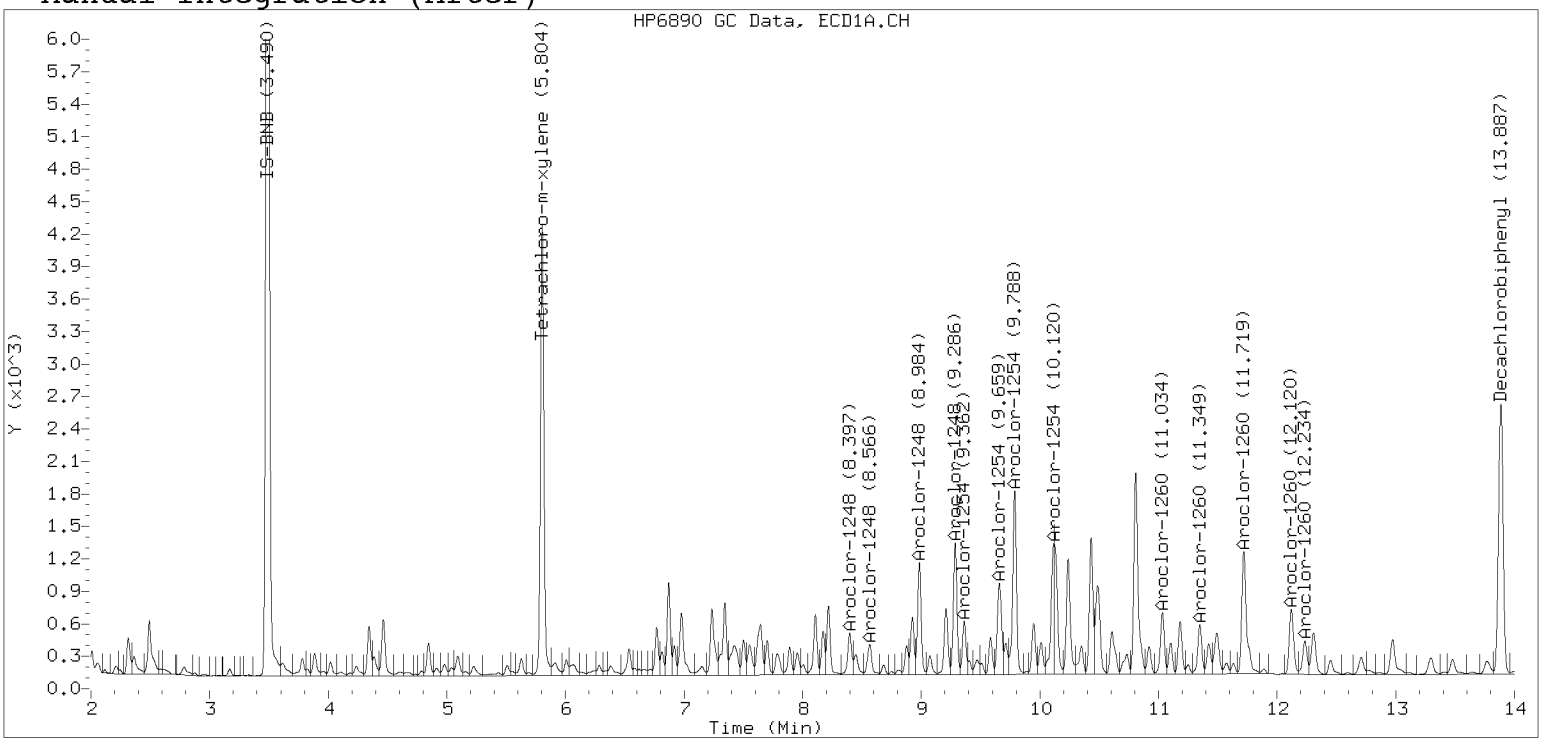


ZB-35 Manual Integration: YES

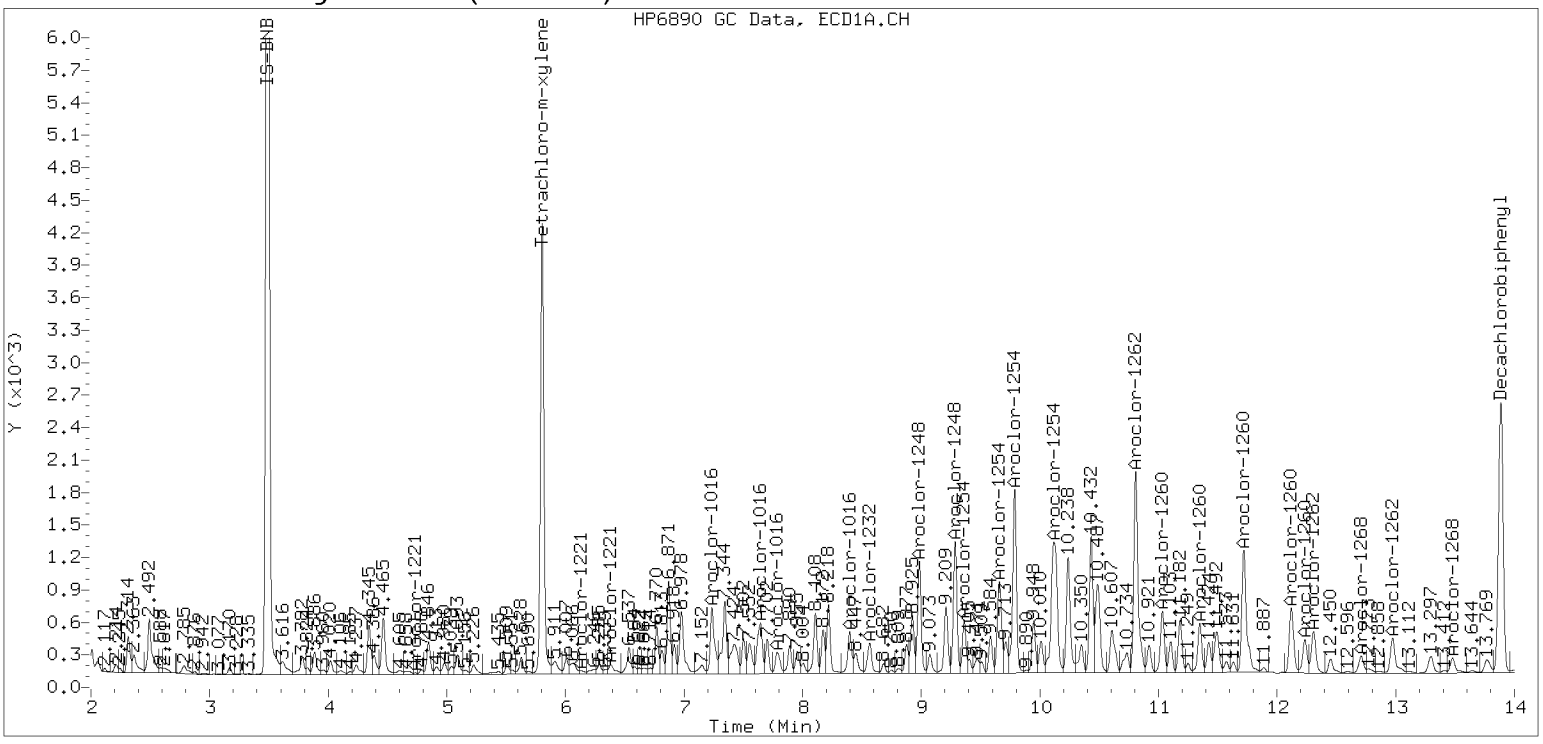
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022359ECD7.D Injection Date: 03-MAR-2023 13:22

Manual Integration (After)



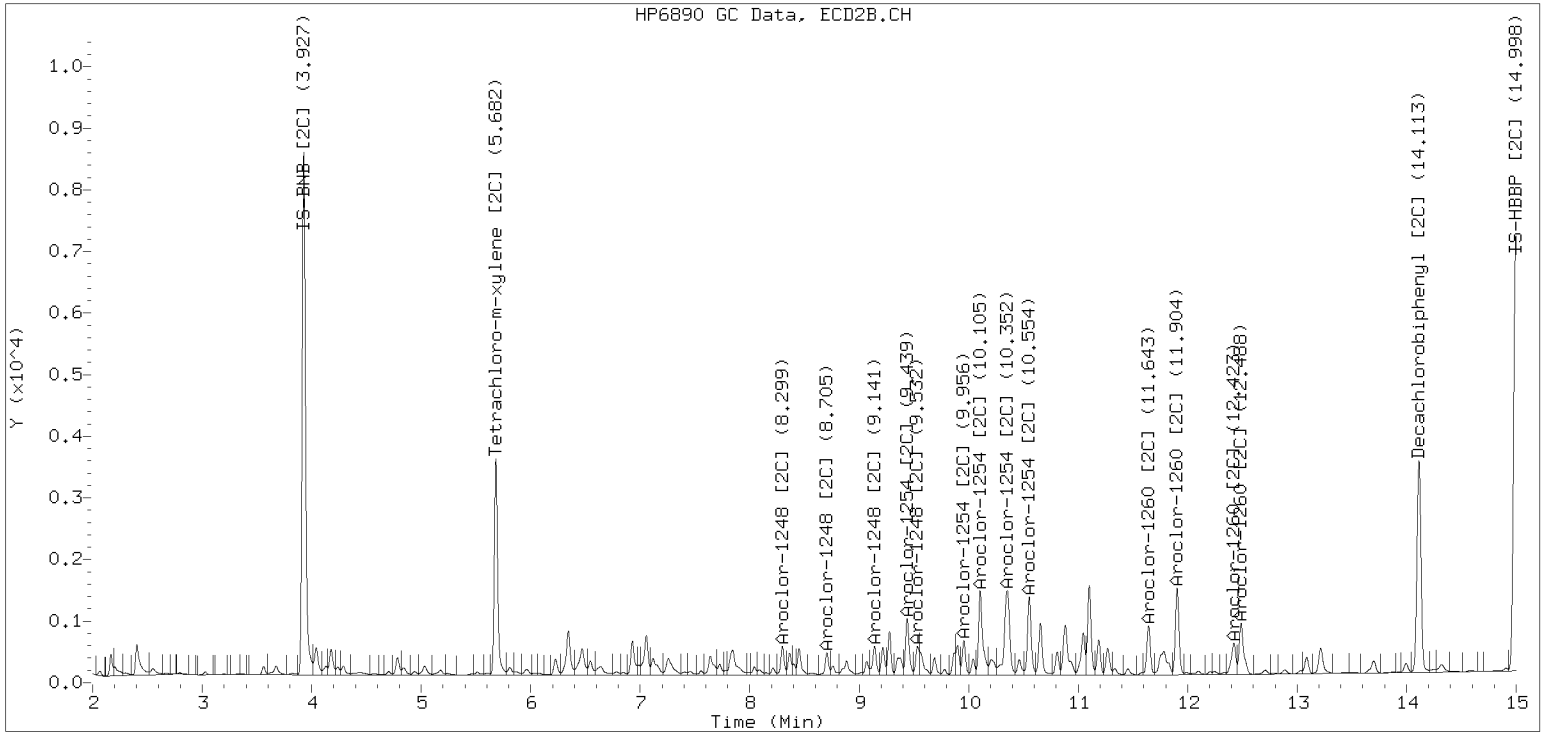
Processed Integration (Before)



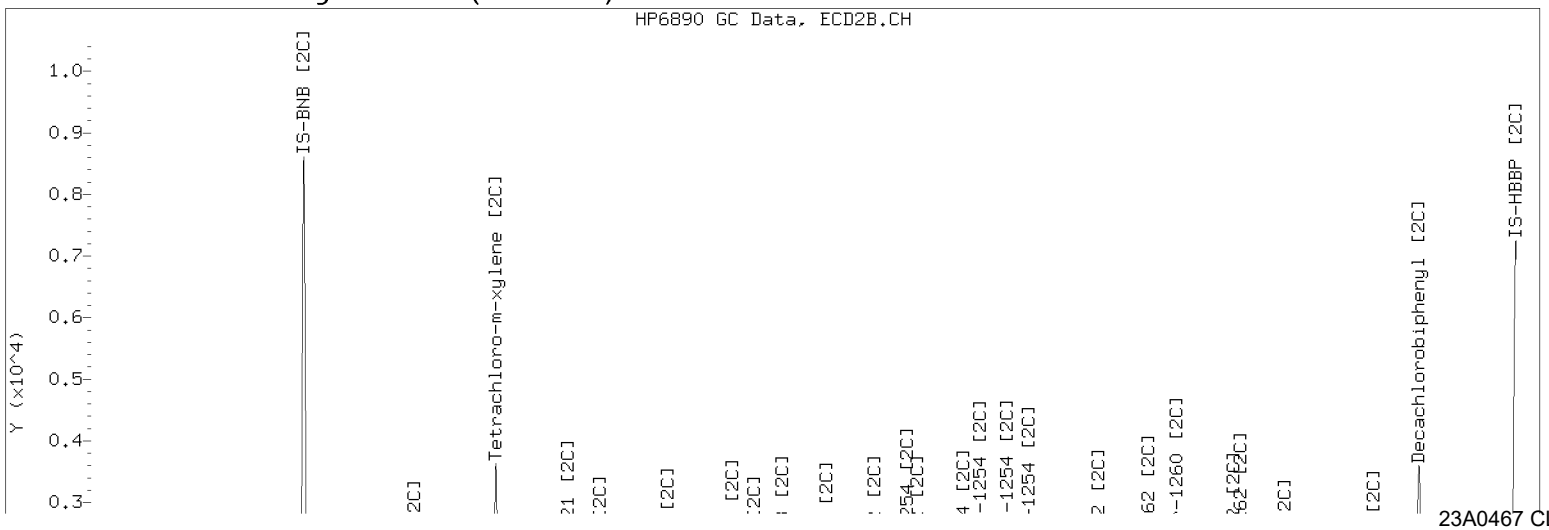
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022359ECD7.D Injection Date: 03-MAR-2023 13:22

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1013

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-08 A	File ID:	03022360ECD7.D
Sampled:	01/23/23 12:07	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:43
% Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Initial/Final:	25.87 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	42.7	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	60.5	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	52.9	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9898*	*6.20*	*77.6*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9898*	*4.70*	*58.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9898*	*5.98*	*74.9*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9898*	*5.01*	*62.6*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022360ECD7.D
Data file 2: /230302.b/230302.b/03022360ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-08
Client ID:
Injection Date: 03-MAR-2023 13:43
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.804	-0.003	153480	5.682	-0.006	136544	23.5	25.1	6.2	Tetrachloro-m-xylene
13.885	-0.009	128387	14.112	-0.006	172525	31.1	29.9	3.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	436493	-35.2
Hexabromobiphenyl	1429847	419744	-70.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	371423	17.8
Hexabromobiphenyl	513946	378341	-26.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	8.396	-0.011	36871	173.1	1	8.298	-0.010	34780	196.1
Aroclor-1248	2	8.564	-0.018	34156	126.2	2	8.704	-0.010	32733	178.5
Aroclor-1248	3	8.982	-0.016	92030	180.2	3	9.138	-0.030	49810	236.1
Aroclor-1248	4	9.285	-0.010	97401	374.6	4	9.532	-0.059	39497	155.9
	Total Col1Ave (4 peaks):				213.5	Total Col2Ave (4 peaks):				191.6 RPD = 11
	Corrected Ave (3 peaks):				159.8	Corrected Ave (3 peaks):				176.8 RPD = 10
Aroclor-1254	1	9.285	-0.013	97401	222.2	1	9.437	-0.014	75488	267.4
Aroclor-1254	2	9.361	-0.017	39215	198.9	2	9.956	-0.015	46450	204.5
Aroclor-1254	3	9.657	-0.011	84059	298.3	3	10.104	-0.020	135470	275.7
Aroclor-1254	4	9.786	-0.021	143728	262.3	4	10.348	-0.025	180808	377.5
Aroclor-1254	5	10.121	-0.056	87784	255.6	5	10.554	-0.016	113278	388.4
	Total Col1Ave (5 peaks):				247.5	Total Col2Ave (5 peaks):				302.7 RPD = 20
	Corrected Ave (4 peaks):				234.8	Corrected Ave (4 peaks):				281.3 RPD = 18
Aroclor-1260	1	11.032	-0.012	46705	309.3	1	11.642	-0.010	69076	310.5
Aroclor-1260	2	11.347	-0.014	41026	260.0	2	11.903	-0.015	118578	208.9
Aroclor-1260	3	11.718	-0.016	114496	273.6	3	12.421	-0.014	47428	314.8
Aroclor-1260	4	12.119	-0.020	60578	287.5	4	12.486	-0.015	85850	224.3
Aroclor-1260	5	12.234	-0.010	27960	308.3	NS	---			----
	Total Col1Ave (5 peaks):				287.7	Total Col2Ave (4 peaks):				264.6 RPD = 8
	Corrected Ave (4 peaks):				282.4	Corrected Ave (3 peaks):				247.9 RPD = 13
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

203.57

245.425

Total PCB Area Col1 (5.908 - 13.795) = 2532783 Col1 Total PCB = 0.5 ppm*

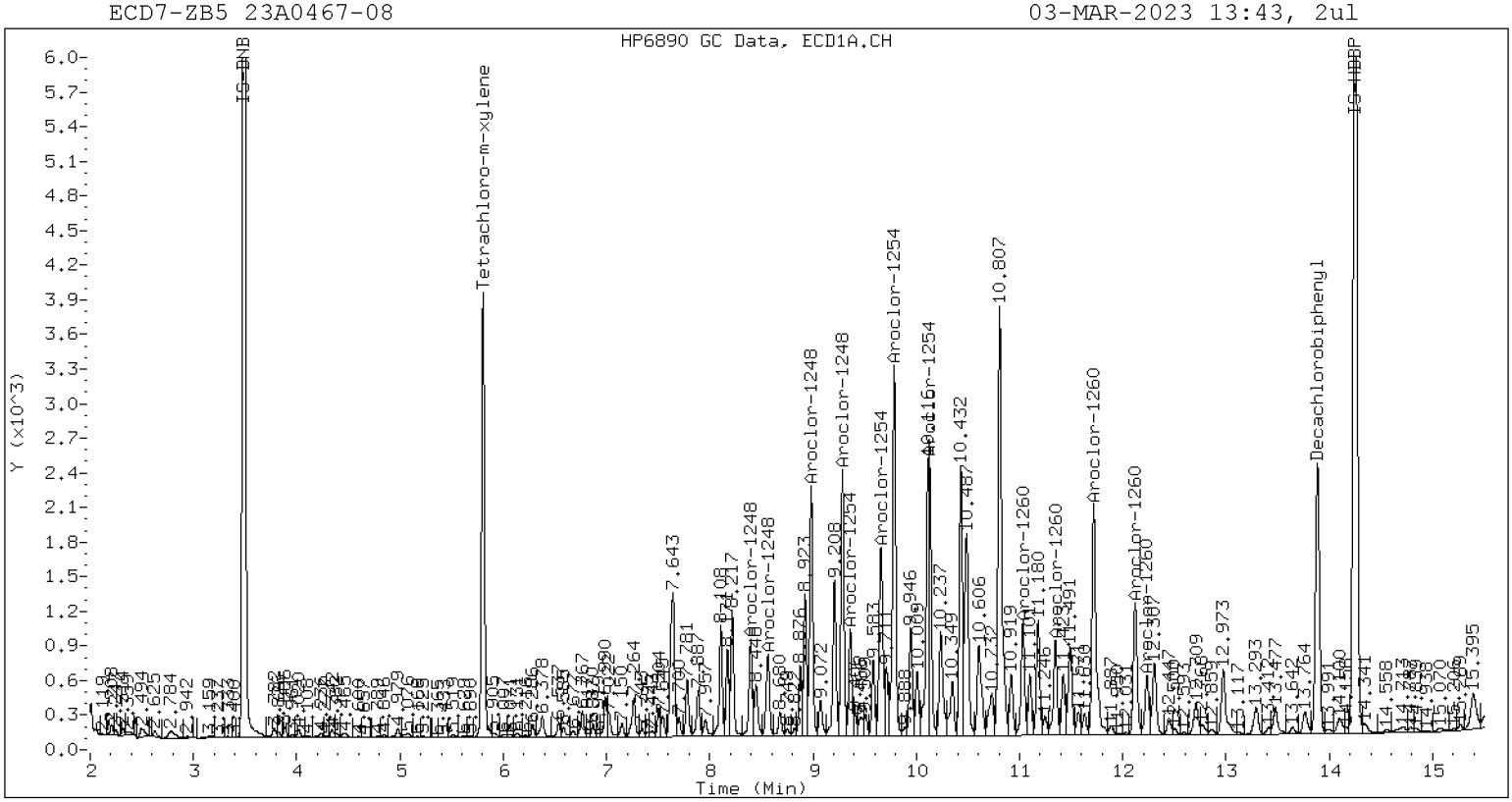
Total PCB Area Col2 (5.788 - 14.018) = 2407630 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

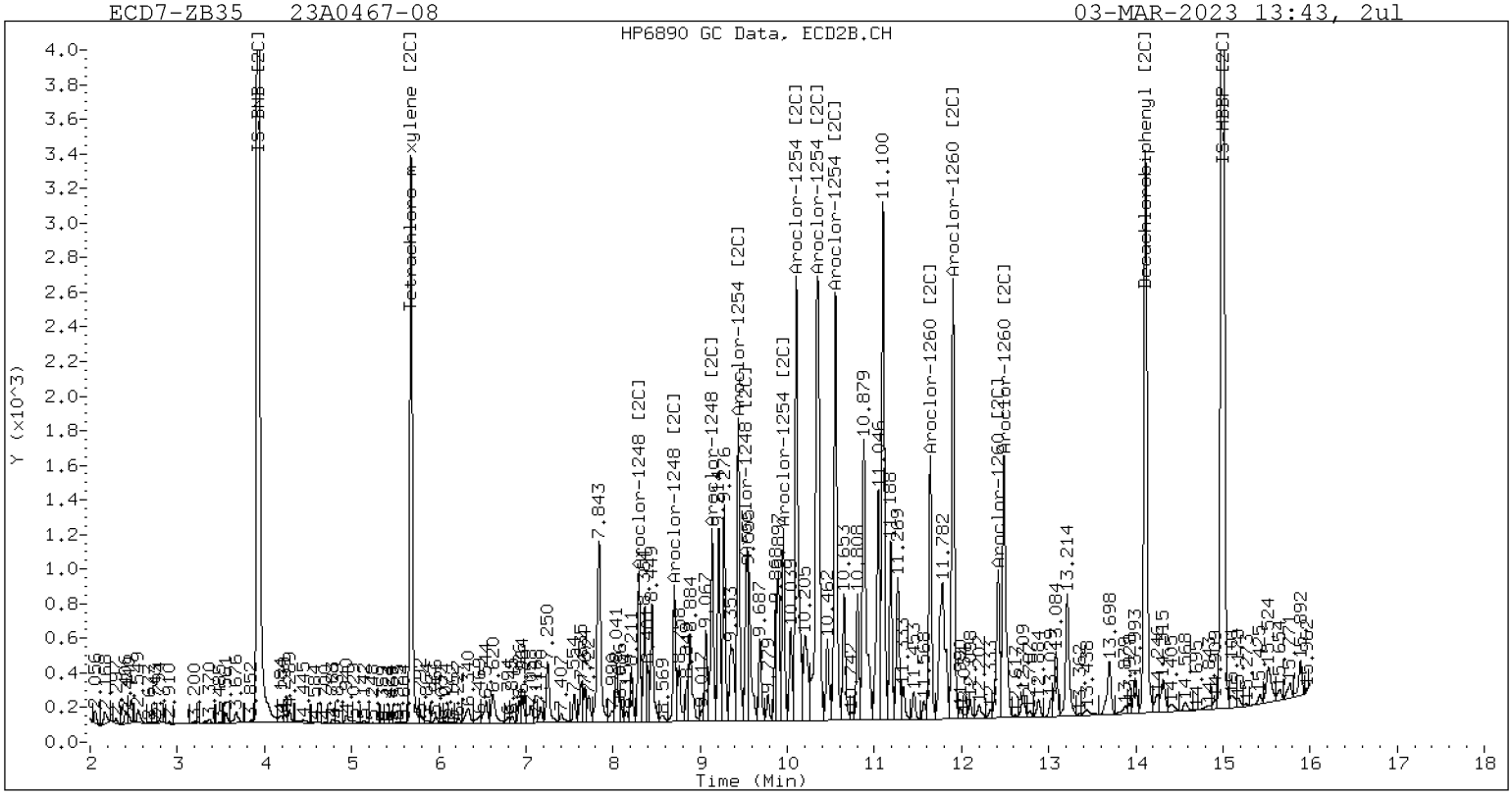
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-08 03-MAR-2023 13:43, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-08 03-MAR-2023 13:43, 2ul

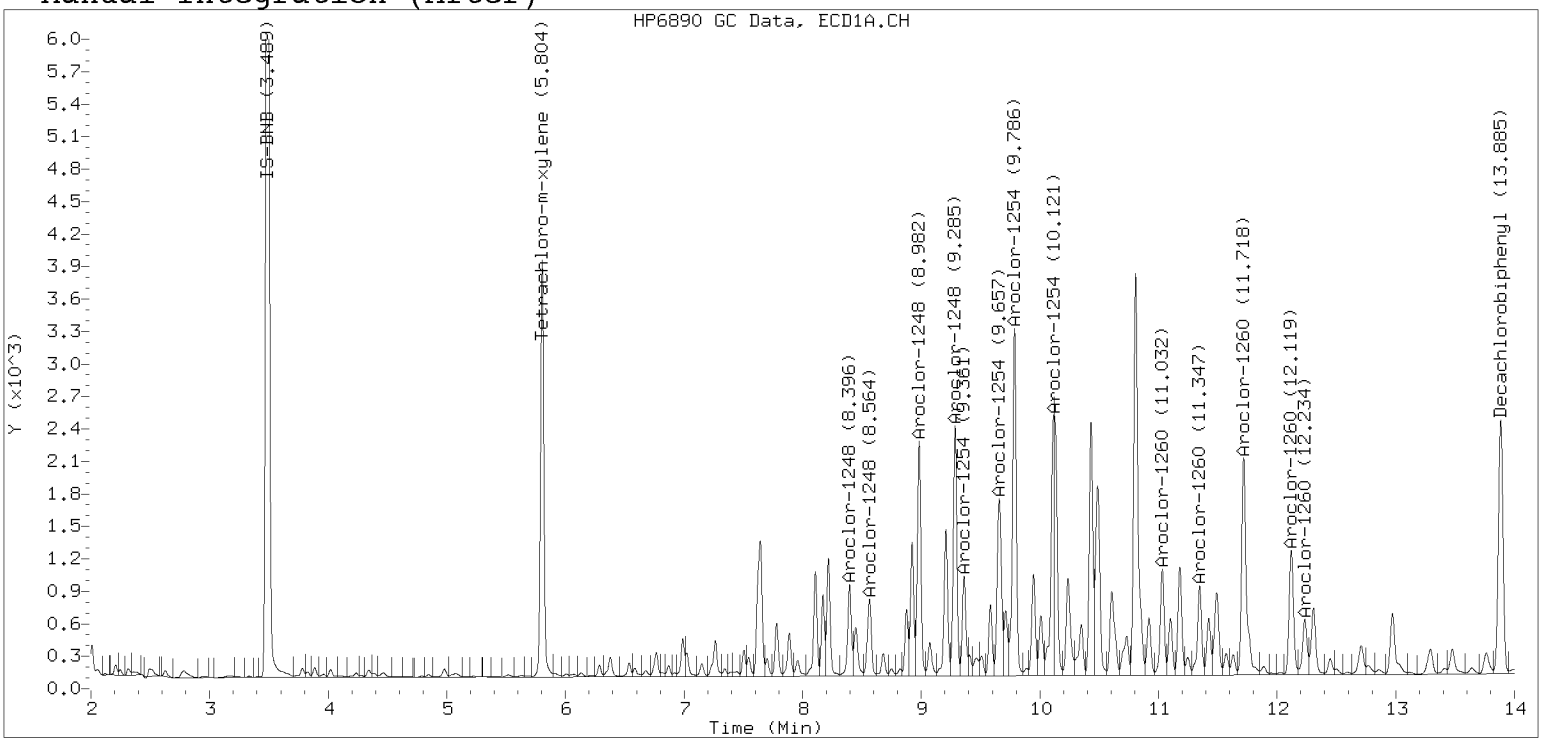


ZB-35 Manual Integration: YES

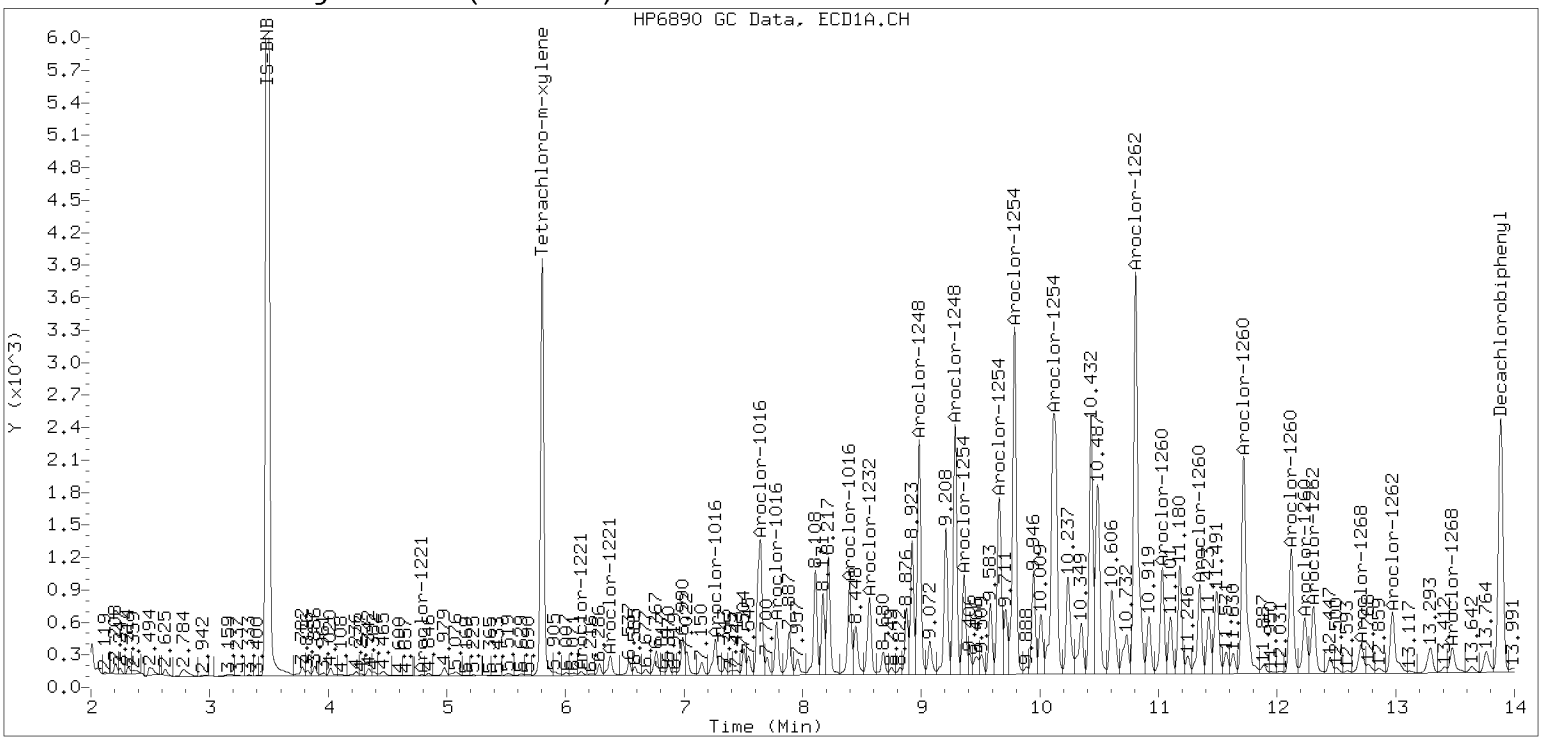
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022360ECD7.D Injection Date: 03-MAR-2023 13:43

Manual Integration (After)



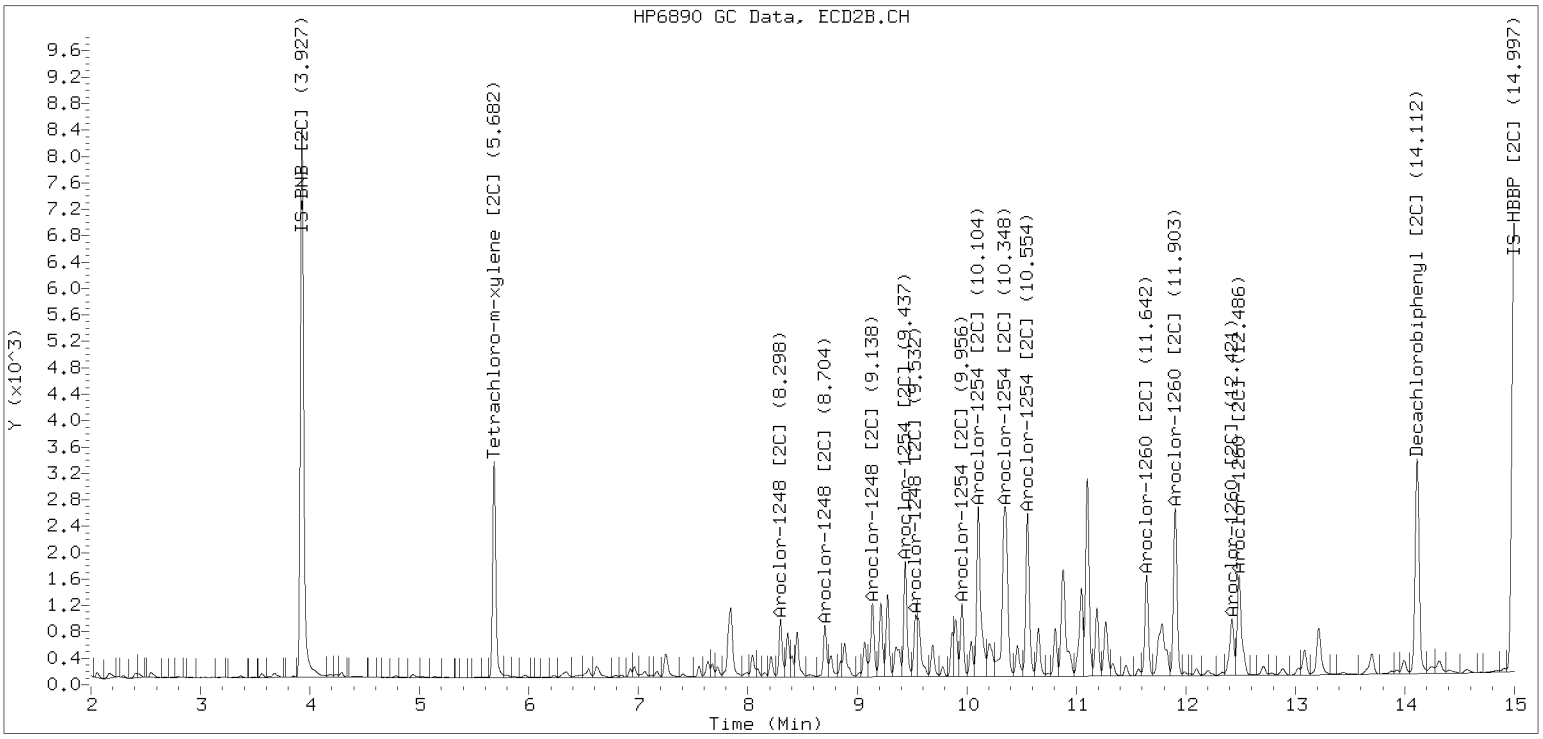
Processed Integration (Before)



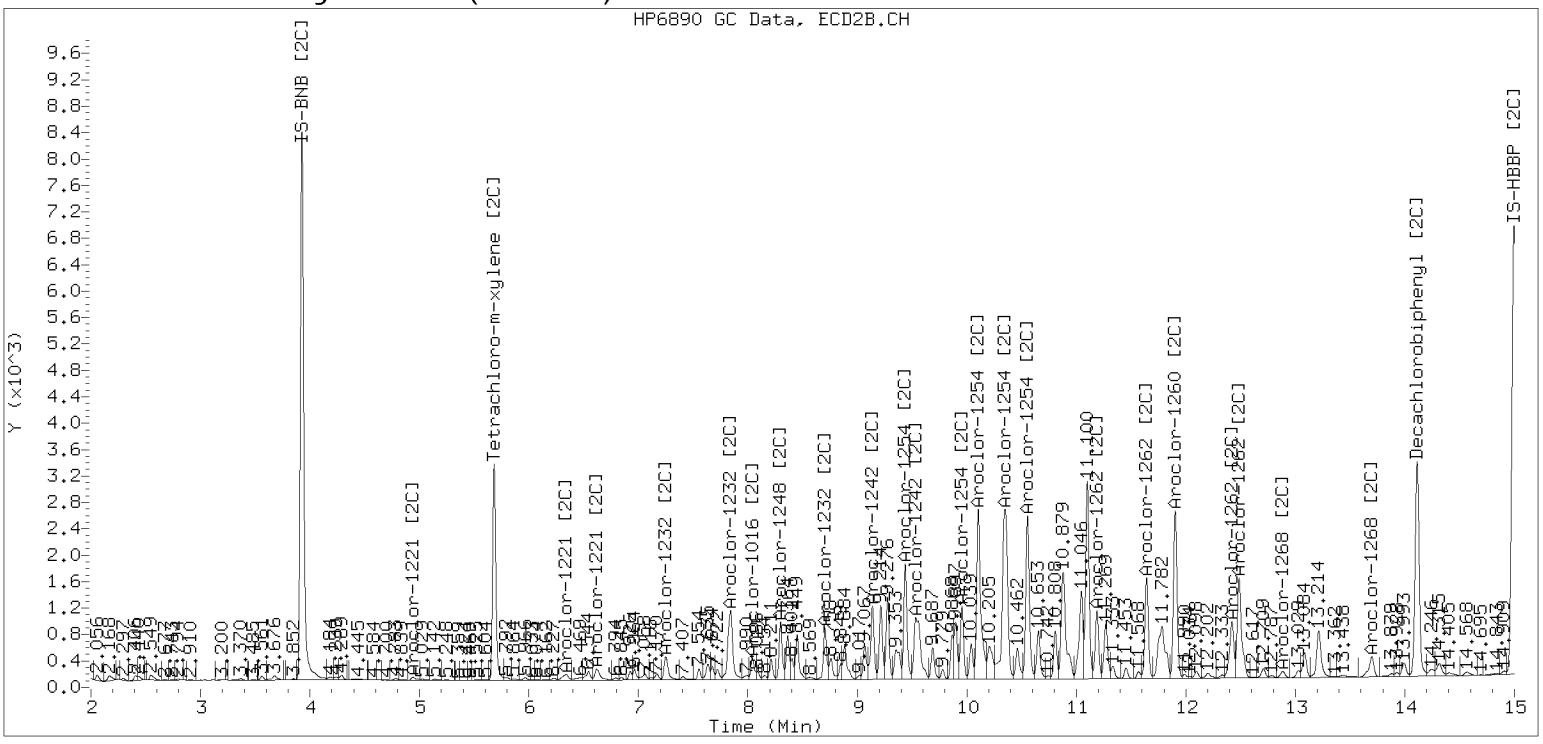
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022360ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

Dual Column

LDW23-SS1014

ORGANIC ANALYSIS DATA SHEET
EPA 8082A

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Solid	Laboratory ID:	23A0467-09 A	File ID:	03022361ECD7.D
Sampled:	01/23/23 12:26	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 14:04
% Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Initial/Final:	19.59 g Wet / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column 1:	ZB5	Column 2:	ZB35

CAS NO.	COMPOUND	Col #	DILUTION	CONC. (ug/kg dry)	MDL	MRL	Q
12674-11-2	Aroclor 1016	1	1	4.0	1.6	4.0	U
11104-28-2	Aroclor 1221	1	1	4.0	1.6	4.0	U
11141-16-5	Aroclor 1232	1	1	4.0	1.6	4.0	U
53469-21-9	Aroclor 1242	1	1	4.0	1.6	4.0	U
12672-29-6	Aroclor 1248	1	1	19.9	1.6	4.0	
11097-69-1	Aroclor 1254	2	1	29.5	1.6	4.0	
11096-82-5	Aroclor 1260	2	1	25.0	0.6	4.0	

SURROGATES	Col #	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Decachlorobiphenyl	*1*	*7.9973*	*7.18*	*89.8*	*40 - 126*	
Tetrachlorometaxylene	*1*	*7.9973*	*5.51*	*68.9*	*44 - 120*	
Decachlorobiphenyl	*2*	*7.9973*	*6.92*	*86.6*	*40 - 126*	
Tetrachlorometaxylene	*2*	*7.9973*	*5.60*	*70.0*	*44 - 120*	

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022361ECD7.D
Data file 2: /230302.b/230302.b/03022361ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 23A0467-09
Client ID:
Injection Date: 03-MAR-2023 14:04
Report Date: 03/06/2023 11:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.001	181277	5.683	-0.002	157238	27.6	28.0	1.5	Tetrachloro-m-xylene
13.887	-0.006	157419	14.113	-0.004	206418	35.9	34.6	3.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	440272	-34.7
Hexabromobiphenyl	1429847	444892	-68.9 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	382866	21.4
Hexabromobiphenyl	513946	391433	-23.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1248	1	8.397	-0.009	16608	77.3	1	8.299	-0.009	15803	86.4
Aroclor-1248	2	8.565	-0.015	15936	58.4	2	8.705	-0.009	14191	75.1
Aroclor-1248	3	8.984	-0.014	42565	82.6	3	9.140	-0.027	21955	100.9
Aroclor-1248	4	9.286	-0.007	47149	179.8	4	9.535	-0.056	19097	73.1
		Total Col1Ave (4 peaks):			99.5		Total Col2Ave (4 peaks):			83.9 RPD = 17
		Corrected Ave (3 peaks):			72.8		Corrected Ave (3 peaks):			78.2 RPD = 7
										87.47
Aroclor-1254	1	9.286	-0.012	47149	106.6	1	9.438	-0.012	37294	128.2
Aroclor-1254	2	9.363	-0.015	24734	124.4	2	9.957	-0.014	23542	100.6
Aroclor-1254	3	9.660	-0.008	42602	149.9	3	10.106	-0.018	69887	138.0
Aroclor-1254	4	9.787	-0.020	67473	122.1	4	10.350	-0.022	90407	183.1
Aroclor-1254	5	10.120	-0.055	48936	141.3	5	10.554	-0.015	56681	188.5
		Total Col1Ave (5 peaks):			128.9		Total Col2Ave (5 peaks):			147.7 RPD = 14
		Corrected Ave (4 peaks):			123.6		Corrected Ave (4 peaks):			137.4 RPD = 11
										125.75
Aroclor-1260	1	11.033	-0.011	24252	151.5	1	11.643	-0.009	34318	149.1
Aroclor-1260	2	11.348	-0.012	26638	159.3	2	11.905	-0.013	56939	96.9
Aroclor-1260	3	11.720	-0.013	57873	130.5	3	12.423	-0.011	22727	145.8
Aroclor-1260	4	12.121	-0.017	30618	137.1	4	12.488	-0.014	42719	107.9
Aroclor-1260	5	12.236	-0.008	14824	154.2	NS	---			----
		Total Col1Ave (5 peaks):			146.5		Total Col2Ave (4 peaks):			124.9 RPD = 16
		Corrected Ave (4 peaks):			143.3		Corrected Ave (3 peaks):			116.9 RPD = 20
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
		Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks			

Total PCB Area Col1 (5.906 - 13.793) = 1279296 Col1 Total PCB = 0.2 ppm*

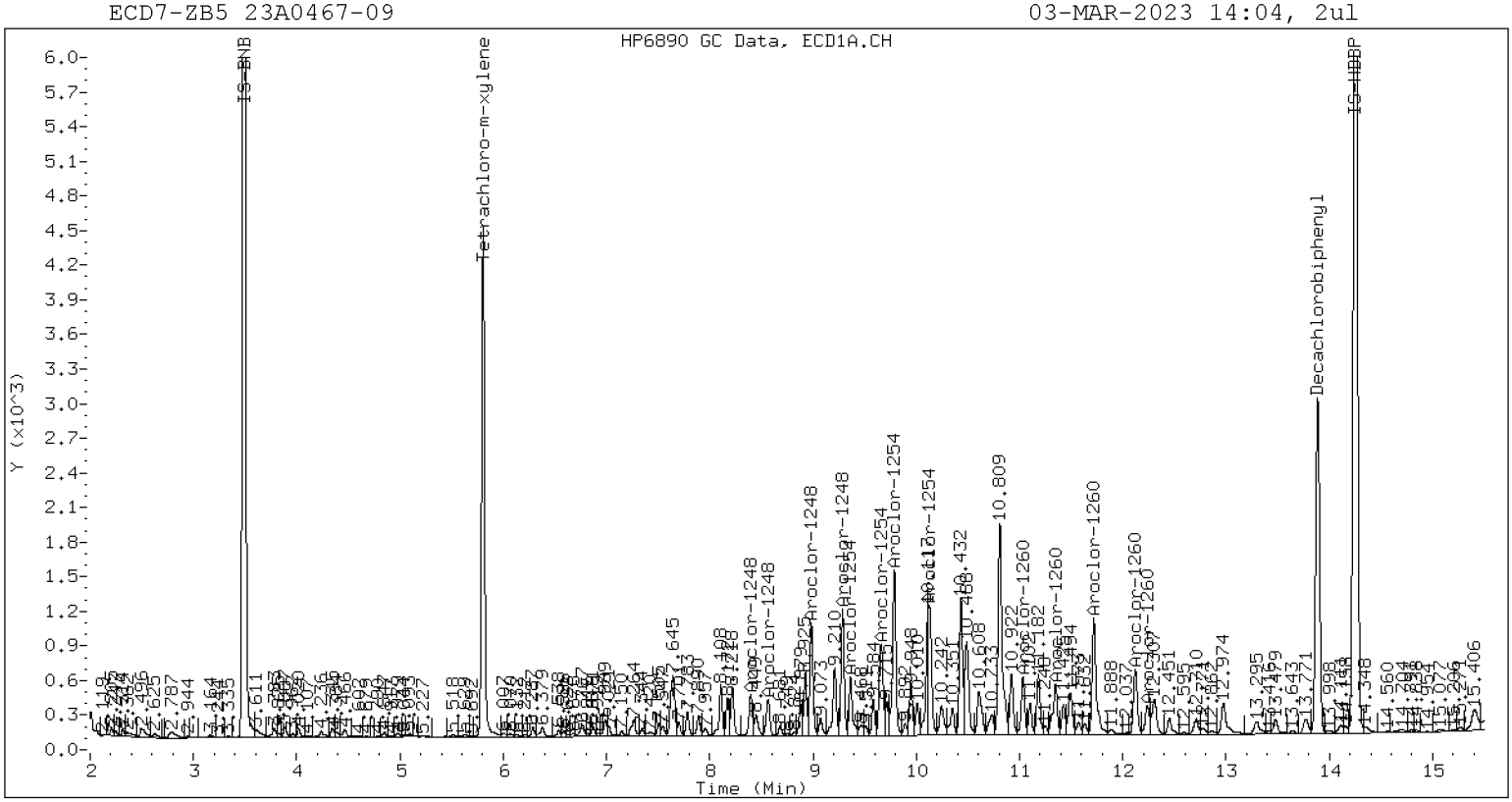
Total PCB Area Col2 (5.786 - 14.017) = 1208492 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

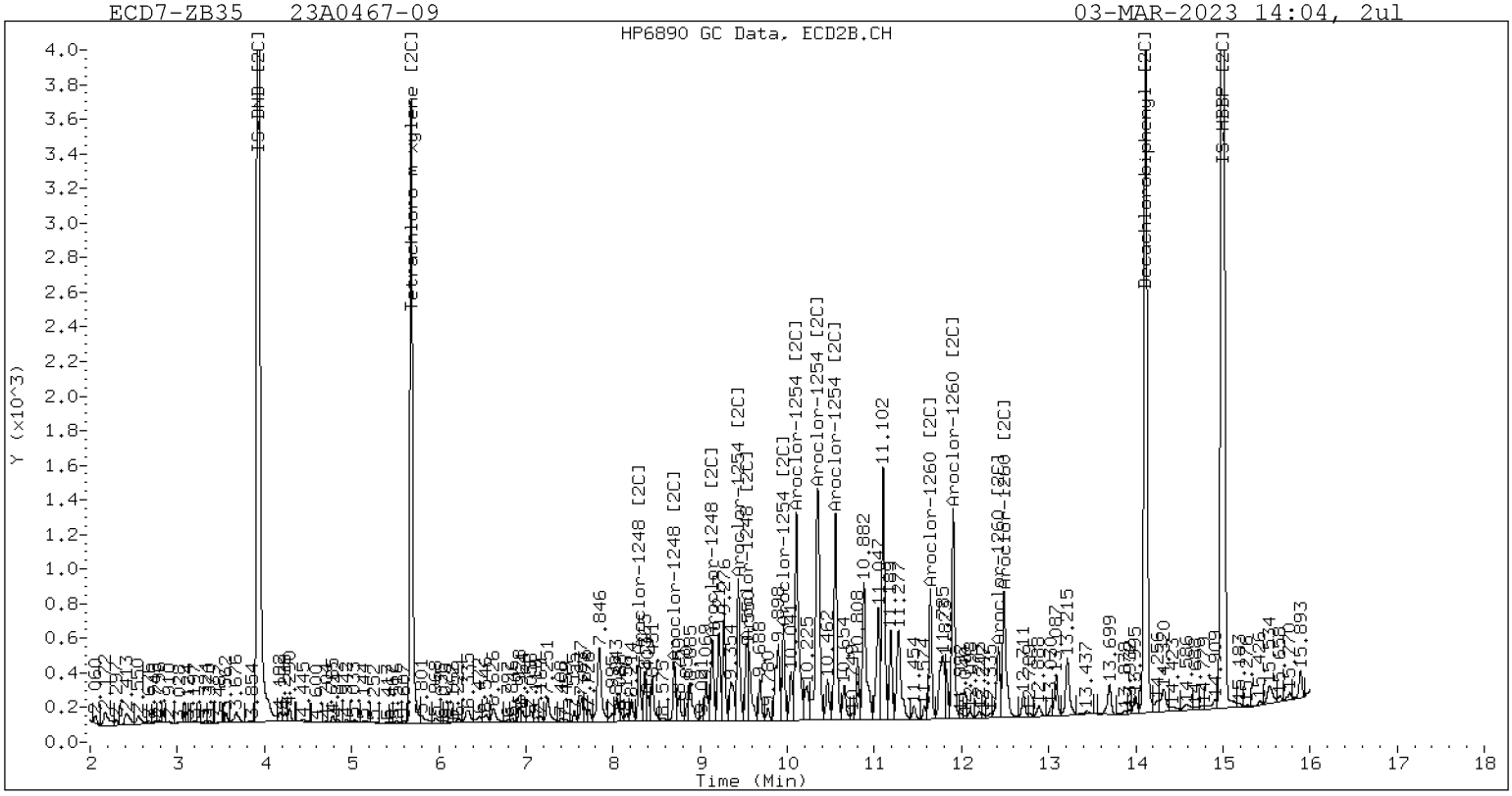
PCB Dual Column Chromatograms

ECD7-ZB5 23A0467-09 03-MAR-2023 14:04, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 23A0467-09 03-MAR-2023 14:04, 2ul

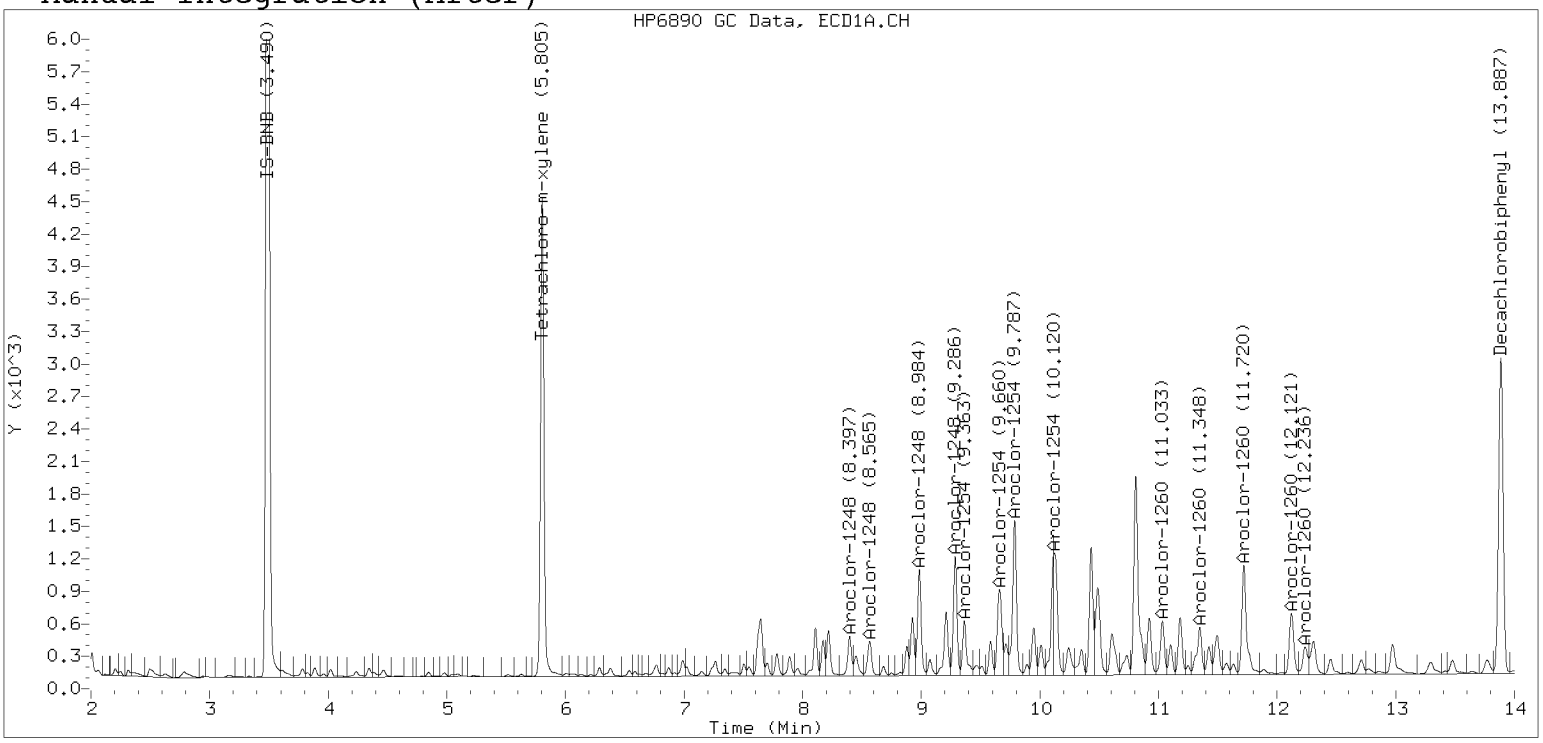


ZB-35 Manual Integration: YES

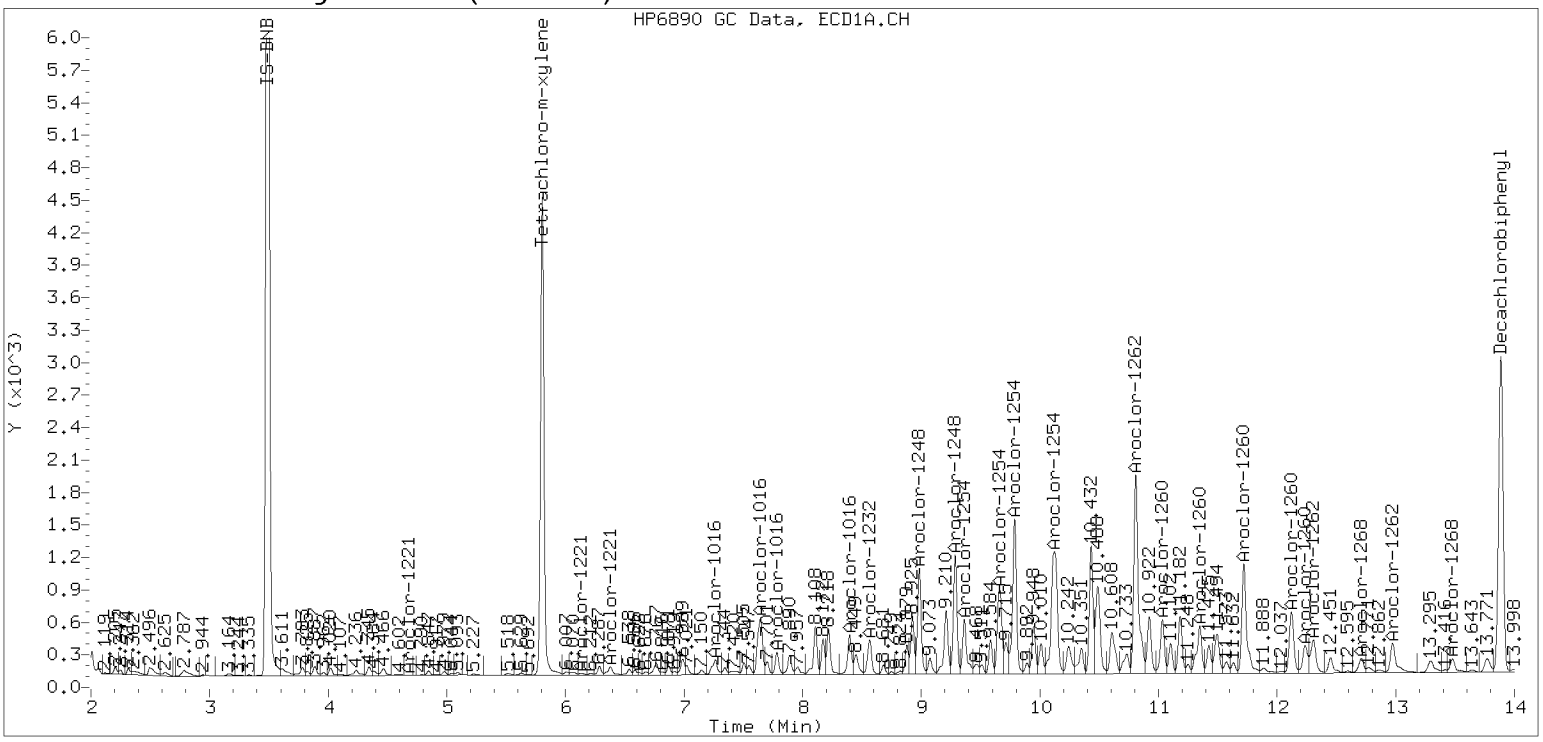
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022361ECD7.D Injection Date: 03-MAR-2023 14:04

Manual Integration (After)



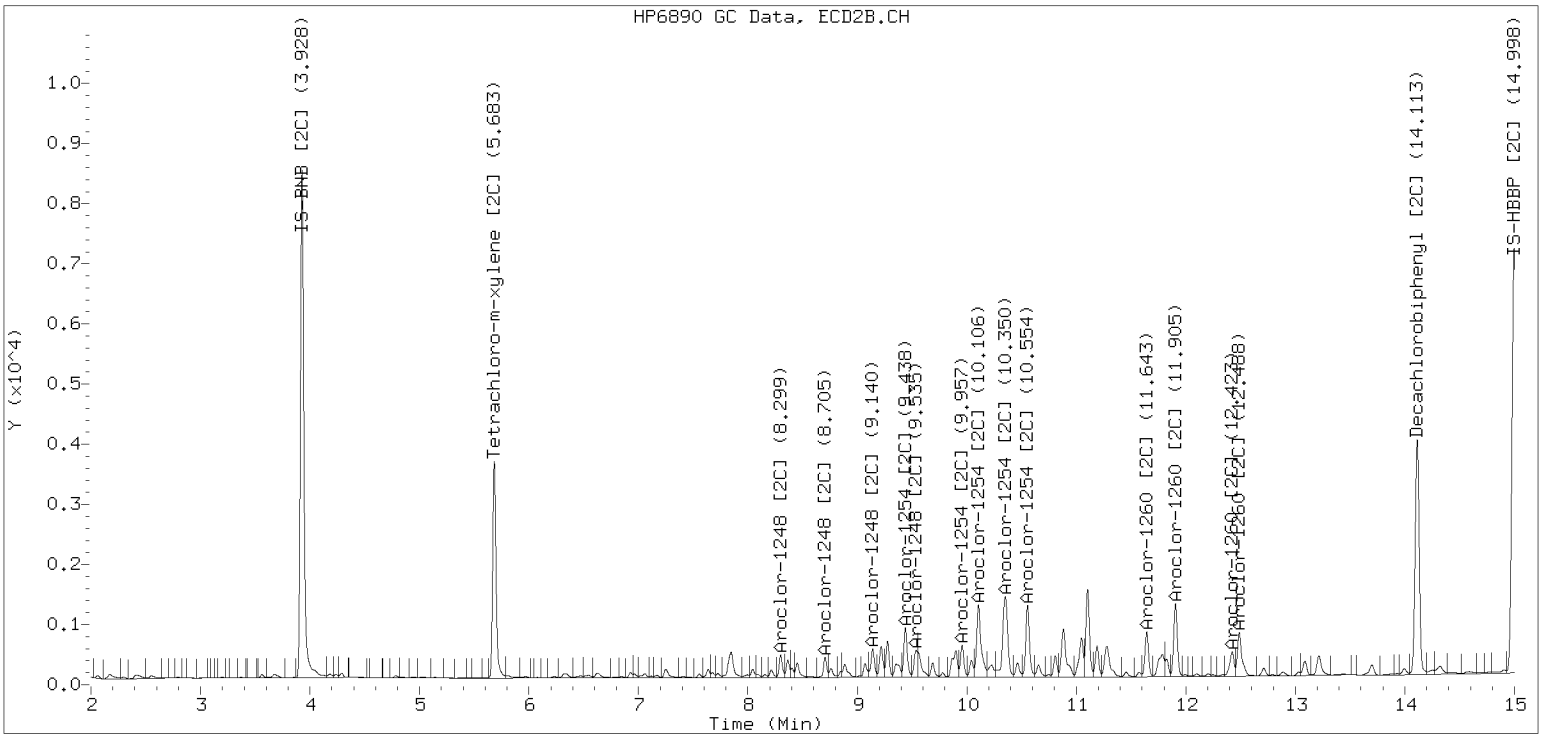
Processed Integration (Before)



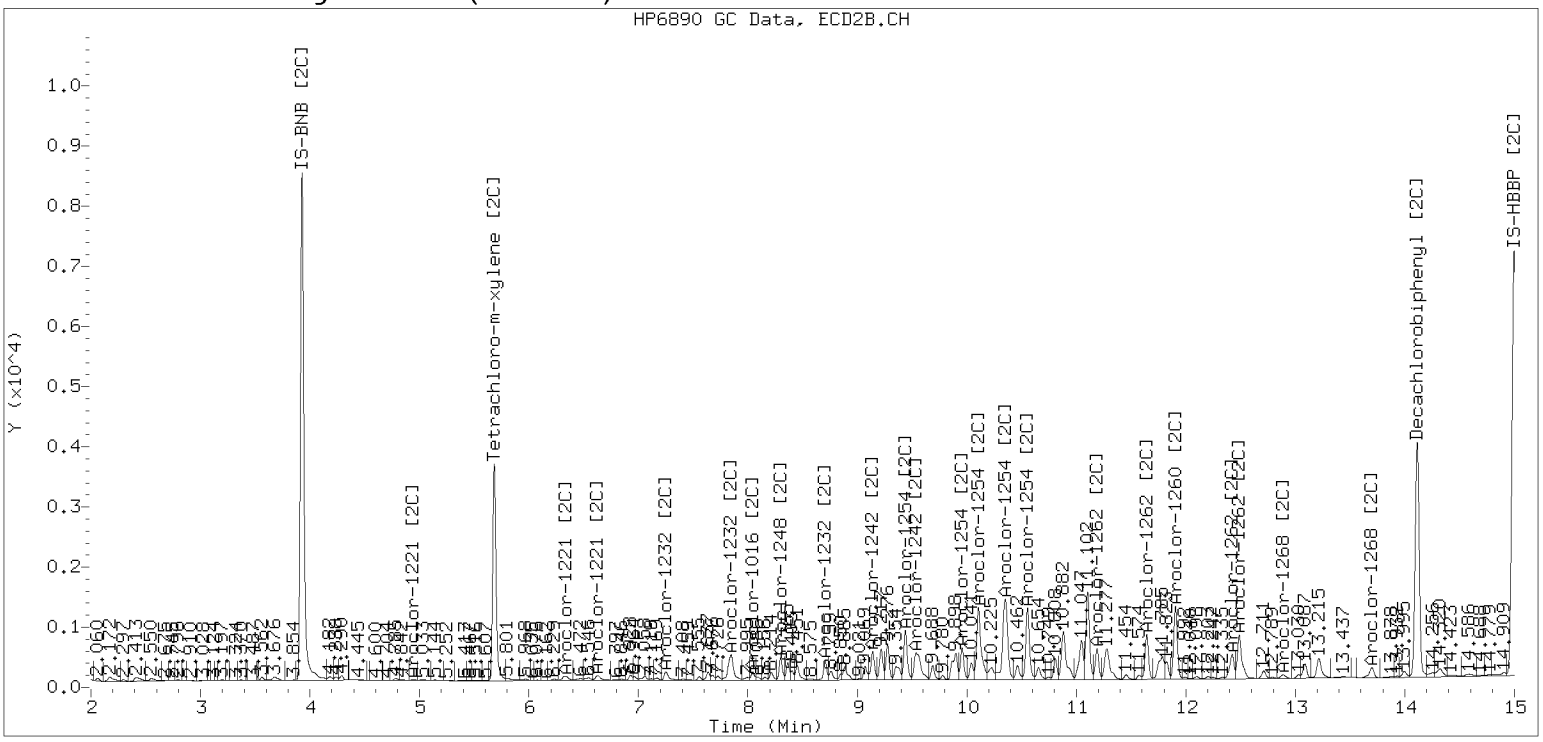
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022361ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



PREPARATION BATCH SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLB0580 Batch Matrix: Solid
Preparation: EPA 3546 (Microwave)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	03022353ECD7.D	02/23/23 11:54	
LDW23-SS1005	23A0467-02	03022354ECD7.D	02/23/23 11:54	
LDW23-SS1006	23A0467-03	03022355ECD7.D	02/23/23 11:54	
LDW23-SS1003	23A0467-04	03022356ECD7.D	02/23/23 11:54	
LDW23-SS1004	23A0467-05	03022357ECD7.D	02/23/23 11:54	
LDW23-SS1204	23A0467-06	03022358ECD7.D	02/23/23 11:54	
LDW23-SS1238	23A0467-07	03022359ECD7.D	02/23/23 11:54	
LDW23-SS1013	23A0467-08	03022360ECD7.D	02/23/23 11:54	
LDW23-SS1014	23A0467-09	03022361ECD7.D	02/23/23 11:54	
Blank	BLB0580-BLK1	03022349ECD7.D	02/23/23 11:54	
LCS	BLB0580-BS1	03022350ECD7.D	02/23/23 11:54	
LCS Dup	BLB0580-BSD1	03022351ECD7.D	02/23/23 11:54	
LDW23-SS1014	BLB0580-MS1	03022362ECD7.D	02/23/23 11:54	
LDW23-SS1014	BLB0580-MSD1	03022363ECD7.D	02/23/23 11:54	
Reference	BLB0580-SRM1	03022352ECD7.D	02/23/23 11:54	

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0580

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

Matrix: Solid **Date Prepared:** 02/23/23 **Balance ID:** B1464626l4 **Set Up By:** CTO 2/22/23

WO Comments
23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

The following standards may be missing from this batch!

Designator	Description
QLS 5	QLS Spike

Analysis: 8082A PCB Solid 4

Lab Number & Container	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
23A0467-01 A	49.9	(25.05) 25.05	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-02 A	46.9	(26.65) 26.11	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-03 A	48.0	(26.06) 26.16	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-04 A	47.1	(26.53) 26.53	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-05 A	55.1	(22.67) 22.68	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-06 A	47.2	(26.46) 26.54	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-07 A	55.2	(22.65) 22.66	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-08 A	48.4	(25.84) 25.87	5mL	5mL	2mL	2.5 ____	1.0 ____	
23A0467-09 A	63.8	(19.58) 19.59	5mL	5mL	2mL	2.5 ____	1.0 ____	

Batch QC

Lab Number	% Solids	Initial (g) Target Dry: 12.5 (Wet) Actual	(REQ) Acid C/U (5mL)	(REQ) Sulfur C/U (5mL) 1 2 3	(REQ) Silica Gel C/U (2:5)	Final Effective Vol (mL)	Vol (mL) to Lab	Extraction Comments
BLB0580-BLK1	100.0	(12.50) 12.54	5mL	5mL	2mL	2.5 ____	1.0 ____	(10g Actual Wt.)
BLB0580-BS1	100.0	(12.50) 12.54	5mL	5mL	2mL	2.5 ____	1.0 ____	(10g Actual Wt.)
BLB0580-BSD1	100.0	(12.50) 12.54	5mL	5mL	2mL	2.5 ____	1.0 ____	(10g Actual Wt.)
BLB0580-MS1	63.8	(19.58) 19.58	5mL	5mL	2mL	2.5 ____	1.0 ____	Use 23A0467-09
BLB0580-MSD1	63.8	(19.58) 19.58	5mL	5mL	2mL	2.5 ____	1.0 ____	Use 23A0467-09
BLB0580-SRM1	100.0	~~(12.50)~~ (2.50) 2.54 +1g DI WATER	5mL	5mL	2mL	2.5 ____	1.0 ____	Use K003528 ~~K003528~~ K003527

N 02/23/23
Client ID verified By Date

LJ 2/28/23
Preparation Reviewed By Date

02/23/23 11:54
Extraction Date and Time

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0580

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Steps

Microwave
1 (2) 3
CT 2/23/23
Analyst/Date

KD
100°C
Hexane Exchange
(2 X 20 mL)
1 2 3 4 (5) 6
LO 2-27
Analyst/Date

TurboVap
Pre Cleanups
1 2 3 (4) 5
LJ 2/28/23
Analyst/Date

TurboVap
Post Cleanups
1 2 (3) 4 5
LO 2/28/23
Analyst/Date

Vialing
LJ 2/28/23
Analyst/Date

Reagents Used

Station/Reagent	Standard ID
Microwave Analyst: CT/JM Date: 2/23/23	
Neutral Glass Wool	L000354
1:1 Hexane/Acetone	L000122
Hexane	L000889
Anhydrous Sodium Sulfate	L001285
KD Analyst: LO Date: 2-27-23	
Anhydrous Sodium Sulfate	
Hexane	L000889
Vialing Analyst: LJ Date: 2/28/23	
Hexane	L000889
Concentrated Sulfuric Acid	L001033
Silica Gel (SPE) Darts	L001684
Sodium Sulfite	K010363
Tetrabutylammonium hydrogensulfate (TBAS)	L001601

Surrogates & Spike Standards Used

Type	Vial ID / Standard ID	Vol uL	Analyst	Witness
Surrogate 2µg/mL	N L000773 V4 Exp Date: 7/21/2023	50µL	CT	JM
Spike 20µg/mL	1 L001587 V4 Exp Date: 8/13/2023	63µL	CT	JM

MANUALLY ENTER EXPIRATION DATES!

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

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

Analytical Resources, LLC
Analytical Chemists and Consultants

ORGANICS PREPARATION BENCH SHEET

Batch: BLB0580

Prepared using: EPA 3546 (Microwave)

8082A PCB Solid 4 in Solid (Version:7 Aroclors)

WO Comments

23A0467: <C>BPR SRM, MS, DUP </C> <M>BPR PS, MS/MSD </M> <E>BPR 8270E RM K000591, SIM PAH RM I009127 PCB RM J006840-43, 7935-36,K011477-79, MS/MSD </E>
<H>BPR J006840-43, 7935-36, K011477-79, Dup </H> Store in freezer (except GS)

Prep Instructions	
SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3 inches above the soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then cool vessels in R-05 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into Erlenmeyer flask with sodium sulfate in bottom and funnel with neutral glasswool plug. 8. Re-homogenize and rinse with 1:1 Hexane/Acetone. 9. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 10. KD on 100° bath. 11. Exchange (2 X with 20mL) Hexane. 12. TurboVap. 13. Clean-ups. 14. TurboVap. 15. Vial with Hexane. A. Need Total Solids Y / (N) B. Archive/Freeze (Y) N	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: PCB Extraction Batch: BLB0580

Total Solids Batch: BLB0378 Work Order(s): 23A0467

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☒ No Anomalies (standard soil/wet sediment/sand/gravel)= 01-05	CR 2/20/23
☒ Standing Water Decanted (Not shared)= 01-09	CR 2/20/23
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☒ Oily, obvious fuel/(sulfur) odors= 06,07,08,09	CR 2/20/23
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☒ Previously Frozen = 01-09	CR 2/20/23
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
467-06 spilled small amount before acid cleanup	LO 2/23/23
☒ Share Samples Y / (N)	CR 2/20/23
☒ Multiple Jars Y / (N)	CR 2/20/23
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0259	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1006	23A0467-03	03022355ECD7.D	02/28/2023	
LDW23-SS1014	23A0467-09	03022361ECD7.D	02/28/2023	
LDW23-SS1004	23A0467-05	03022357ECD7.D	02/28/2023	
Blank	BLB0580-BLK1	03022349ECD7.D	02/28/2023	
LDW23-SS1005	23A0467-02	03022354ECD7.D	02/28/2023	
LDW23-SS1010	23A0467-01	03022353ECD7.D	02/28/2023	
LDW23-SS1013	23A0467-08	03022360ECD7.D	02/28/2023	
LDW23-SS1204	23A0467-06	03022358ECD7.D	02/28/2023	
LDW23-SS1238	23A0467-07	03022359ECD7.D	02/28/2023	
Reference	BLB0580-SRM1	03022352ECD7.D	02/28/2023	
Matrix Spike Dup	BLB0580-MSD1	03022363ECD7.D	02/28/2023	
Matrix Spike	BLB0580-MS1	03022362ECD7.D	02/28/2023	
LCS	BLB0580-BS1	03022350ECD7.D	02/28/2023	
LDW23-SS1003	23A0467-04	03022356ECD7.D	02/28/2023	
LCS Dup	BLB0580-BSD1	03022351ECD7.D	02/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0259

Matrix: Solid **Cleanup using: Organics - EPA 3630C Silica Gel Cleanup - uL** **Printed: 2/28/2023 1:25:55PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
BLB0580-BLK1	-	Blank	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BS1	-	LCS	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BSD1	-	LCS Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MS1	-	Matrix Spike	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-SRM1	-	Reference	-	2.5	2.5	-	2/28/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0260	Cleanup Type:	Sulfur
Cleanup Method:	EPA 3660B Sulfur Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1004	23A0467-05	03022357ECD7.D	02/28/2023	
LDW23-SS1005	23A0467-02	03022354ECD7.D	02/28/2023	
LDW23-SS1013	23A0467-08	03022360ECD7.D	02/28/2023	
LDW23-SS1003	23A0467-04	03022356ECD7.D	02/28/2023	
Matrix Spike Dup	BLB0580-MSD1	03022363ECD7.D	02/28/2023	
Matrix Spike	BLB0580-MS1	03022362ECD7.D	02/28/2023	
LCS Dup	BLB0580-BSD1	03022351ECD7.D	02/28/2023	
LCS	BLB0580-BS1	03022350ECD7.D	02/28/2023	
Blank	BLB0580-BLK1	03022349ECD7.D	02/28/2023	
Reference	BLB0580-SRM1	03022352ECD7.D	02/28/2023	
LDW23-SS1238	23A0467-07	03022359ECD7.D	02/28/2023	
LDW23-SS1006	23A0467-03	03022355ECD7.D	02/28/2023	
LDW23-SS1010	23A0467-01	03022353ECD7.D	02/28/2023	
LDW23-SS1204	23A0467-06	03022358ECD7.D	02/28/2023	
LDW23-SS1014	23A0467-09	03022361ECD7.D	02/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0260

Matrix: Solid **Cleanup using: Organics - EPA 3660B Sulfur Cleanup - uL** **Printed: 2/28/2023 1:26:30PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
BLB0580-BLK1	-	Blank	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BS1	-	LCS	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BSD1	-	LCS Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MS1	-	Matrix Spike	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-SRM1	-	Reference	-	2.5	2.5	-	2/28/2023	LMJ	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLB0261	Cleanup Type:	Sulfuric Acid
Cleanup Method:	EPA 3665 Sulfuric Acid Cleanup - uL	Analysis:	EPA 8082A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Matrix Spike Dup	BLB0580-MSD1	03022363ECD7.D	02/28/2023	
LDW23-SS1014	23A0467-09	03022361ECD7.D	02/28/2023	
Reference	BLB0580-SRM1	03022352ECD7.D	02/28/2023	
LDW23-SS1003	23A0467-04	03022356ECD7.D	02/28/2023	
LDW23-SS1238	23A0467-07	03022359ECD7.D	02/28/2023	
LDW23-SS1204	23A0467-06	03022358ECD7.D	02/28/2023	
LDW23-SS1013	23A0467-08	03022360ECD7.D	02/28/2023	
LDW23-SS1006	23A0467-03	03022355ECD7.D	02/28/2023	
LDW23-SS1010	23A0467-01	03022353ECD7.D	02/28/2023	
LDW23-SS1004	23A0467-05	03022357ECD7.D	02/28/2023	
Matrix Spike	BLB0580-MS1	03022362ECD7.D	02/28/2023	
Blank	BLB0580-BLK1	03022349ECD7.D	02/28/2023	
LCS	BLB0580-BS1	03022350ECD7.D	02/28/2023	
LCS Dup	BLB0580-BSD1	03022351ECD7.D	02/28/2023	
LDW23-SS1005	23A0467-02	03022354ECD7.D	02/28/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLB0261

Matrix: Solid **Cleanup using: Organics - EPA 3665 Sulfuric Acid Cleanup - uL** **Printed: 2/28/2023 1:26:56PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-01	A	LDW23-SS1010	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-02	A	LDW23-SS1005	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-03	A	LDW23-SS1006	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-04	A	LDW23-SS1003	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-05	A	LDW23-SS1004	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-06	A	LDW23-SS1204	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-07	A	LDW23-SS1238	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-08	A	LDW23-SS1013	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
23A0467-09	A	LDW23-SS1014	A 03	2.5	2.5	8082A PCB Solid 4	2/28/2023	LMJ	
BLB0580-BLK1	-	Blank	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BS1	-	LCS	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-BSD1	-	LCS Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MS1	-	Matrix Spike	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-MSD1	-	Matrix Spike Dup	-	2.5	2.5	-	2/28/2023	LMJ	
BLB0580-SRM1	-	Reference	-	2.5	2.5	-	2/28/2023	LMJ	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I

METHOD BLANK DATA SHEET

EPA 8082A

Blank

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0580-BLK1	File ID:	03022349ECD7.D
Sampled:	N/A	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 09:51
Solids:		Preparation:	EPA 3546 (Microwave)	Initial/Final:	12.5 g / 2.5 mL
Batch:	BLB0580	Sequence:	SLC0051	Calibration:	GB00069
Instrument:	ECD7	Column:	ZB5	Cleanups:	Silica Gel, Sulfur, Sulfuric Acid

CAS NO.	COMPOUND	DILUTION	CONC: (ug/kg wet)	Q	DL	RL
12674-11-2	Aroclor 1016	1	4.0	U	1.6	4.0
11104-28-2	Aroclor 1221	1	4.0	U	1.6	4.0
11141-16-5	Aroclor 1232	1	4.0	U	1.6	4.0
53469-21-9	Aroclor 1242	1	4.0	U	1.6	4.0
12672-29-6	Aroclor 1248	1	4.0	U	1.6	4.0
11097-69-1	Aroclor 1254	1	4.0	U	1.6	4.0
11096-82-5	Aroclor 1260	1	4.0	U	0.6	4.0

SURROGATES	ADDED: (ug/kg wet)	FOUND: (ug/kg wet)	% REC	QC LIMITS	Q
Decachlorobiphenyl	8.0000	7.65	95.6	40 - 126	
Tetrachlorometaxylene	8.0000	6.09	76.1	44 - 120	
Decachlorobiphenyl [2C]	8.0000	7.82	97.7	40 - 126	
Tetrachlorometaxylene [2C]	8.0000	5.90	73.8	44 - 120	

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022349ECD7.D
Data file 2: /230302.b/230302.b/03022349ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-BLK
Client ID:
Injection Date: 03-MAR-2023 09:51
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	218293	5.685	-0.003	180002	30.4	29.5	3.1	Tetrachloro-m-xylene
13.892	-0.002	215255	14.117	-0.001	253378	38.3	39.1	2.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	480425	-28.7
Hexabromobiphenyl	1429847	571392	-60.0 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	415857	31.9
Hexabromobiphenyl	513946	425619	-17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---			0.0	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	---			0.0	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.908 - 13.795) = 172187 Col1 Total PCB = 0.0 ppm*

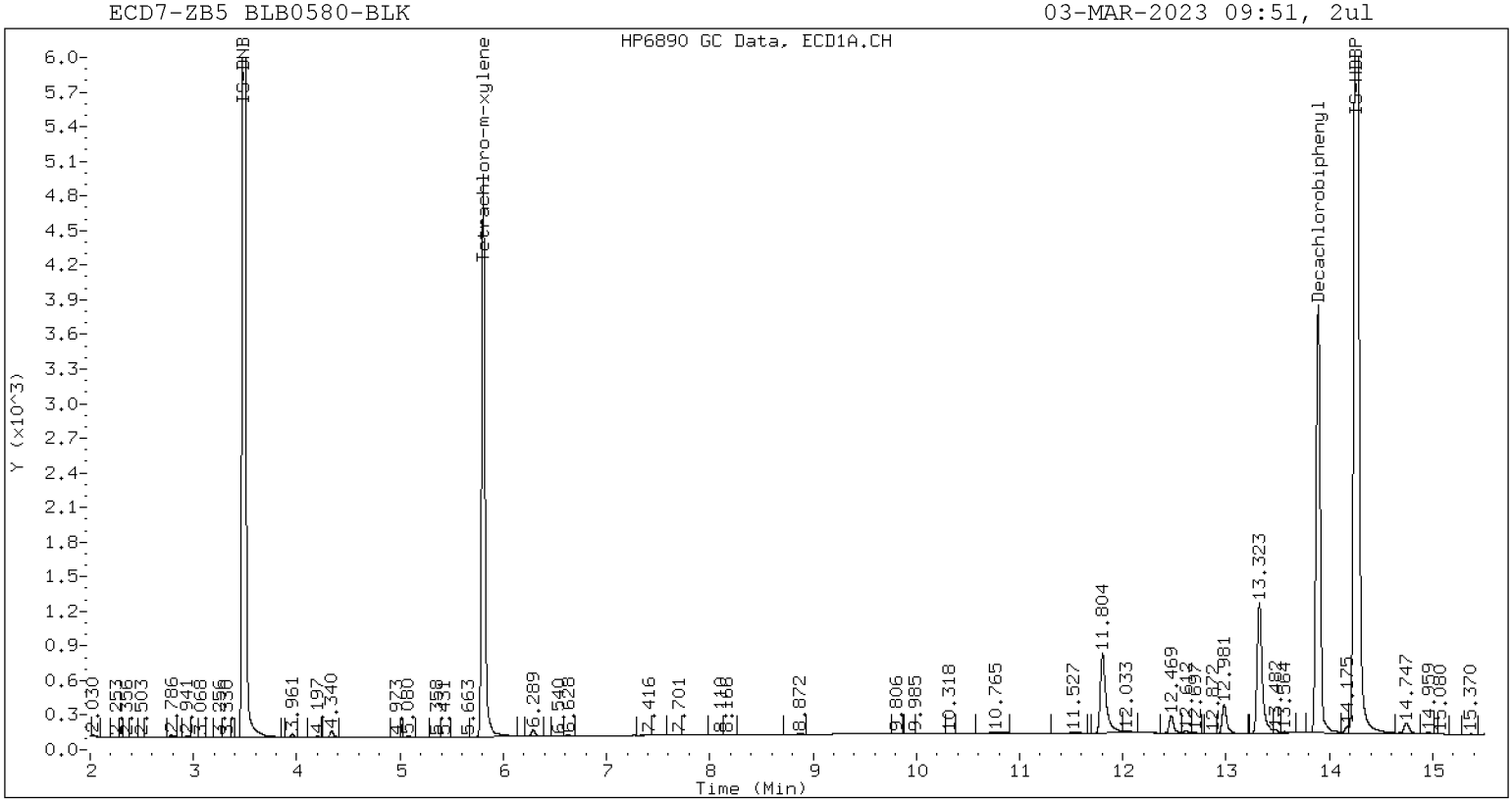
Total PCB Area Col2 (5.788 - 14.018) = 75007 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

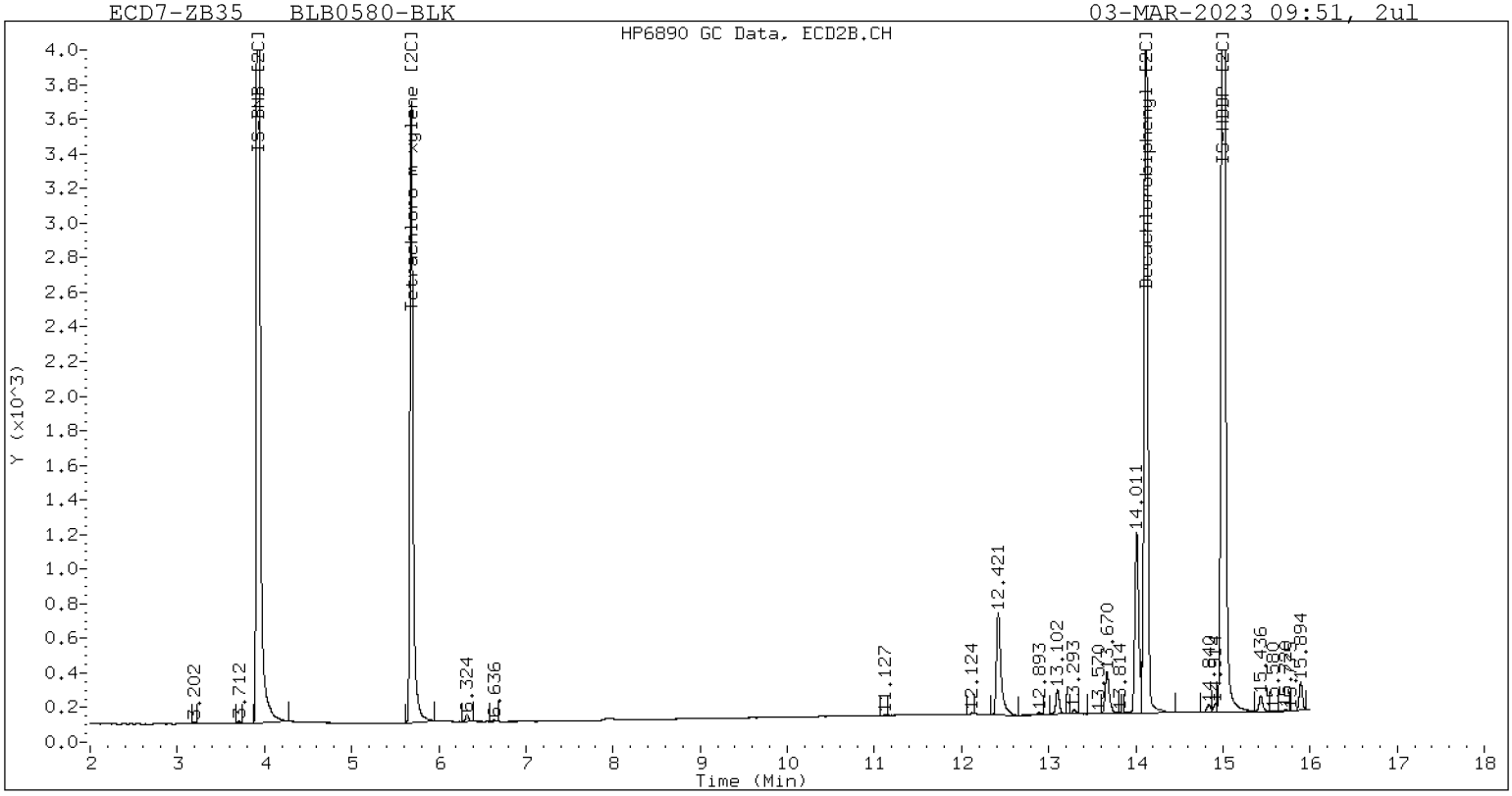
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-BLK 03-MAR-2023 09:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0580-BLK 03-MAR-2023 09:51, 2ul



ZB-35 Manual Integration: NO

LCS / LCS DUPLICATE RECOVERY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/03/23 10:12
Batch:	BLB0580	Laboratory ID:	BLB0580-BS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	LCS
Initial/Final:	12.5 g / 2.5 mL		

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	Q	LCS % REC. #		QC LIMITS REC.
Aroclor 1016	101	15.9	*	15.8	*	56 - 120
Aroclor 1260	101	23.9	*	23.7	*	58 - 120

* Indicates values outside of QC limits

COMPOUND	SPIKE ADDED (ug/kg wet)	LCSD CONCENTRATION (ug/kg wet)	Q	LCSD % REC. #	% RPD #		QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	76.4	*	75.8	131	*	30	56 - 120
Aroclor 1260	101	115	*	114	131	*	30	58 - 120

* Indicates values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022350ECD7.D
Data file 2: /230302.b/230302.b/03022350ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-BS1
Client ID:
Injection Date: 03-MAR-2023 10:12
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	219005	5.687	-0.002	177263	30.7	29.5	3.9	Tetrachloro-m-xylene
13.893	-0.002	225533	14.118	0.000	256560	37.8	39.0	3.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	477215	-29.2
Hexabromobiphenyl	1429847	606235	-57.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	408875	29.7
Hexabromobiphenyl	513946	431652	-16.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	15138	83.5	1	7.254	-0.001	18078	75.5
Aroclor-1016	2	7.656	0.002	44181	80.0	2	7.857	-0.003	40211	82.8
Aroclor-1016	3	7.792	0.002	21015	77.9	3	8.057	-0.000	17310	79.0
Aroclor-1016	4	8.405	-0.001	13406	76.9	4	8.307	-0.001	13753	80.0
Total Col1Ave (4 peaks):					79.6	Total Col2Ave (4 peaks):				79.3 RPD = 0
Corrected Ave (3 peaks):					78.3	Corrected Ave (3 peaks):				78.2 RPD = 0
Aroclor-1221	1	4.735	0.004	119	2.8	1	---			0.0
Aroclor-1221	2	6.130	-0.002	1721	22.5	2	6.325	0.029	3368	46.0
Aroclor-1221	3	6.382	-0.000	9033	50.9	3	6.623	0.001	7281	61.1
Total Col1Ave (3 peaks):					25.4	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.735	0.005	119	4.7	1	---			0.0
Aroclor-1232	2	6.130	-0.001	1721	33.9	2	7.254	-0.000	18078	173.9
Aroclor-1232	3	7.656	-0.000	44181	192.5	3	7.857	-0.004	40211	193.4
Aroclor-1232	4	8.578	-0.003	16152	165.6	4	8.713	-0.002	12445	208.0
Total Col1Ave (4 peaks):					99.2	Total Col2Ave (3 peaks):				191.8 RPD = 64*
Corrected Ave (3 peaks):					68.1	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.269	-0.002	15138	102.4	1	7.254	-0.000	18078	95.2
Aroclor-1242	2	7.656	-0.000	44181	98.4	2	7.857	-0.001	40211	100.7
Aroclor-1242	3	8.405	-0.001	13406	95.9	3	9.164	-0.006	2190	17.6
Aroclor-1242	4	8.578	-0.001	16152	78.2	4	9.585	-0.009	602	4.0
Total Col1Ave (4 peaks):					93.7	Total Col2Ave (4 peaks):				54.4 RPD = 53*
Corrected Ave (3 peaks):					90.8	Corrected Ave (3 peaks):				38.9 RPD = 80*
Aroclor-1248	1	8.405	-0.003	13406	57.6	1	8.307	-0.001	13753	70.4
Aroclor-1248	2	8.578	-0.004	16152	54.6	2	8.713	-0.001	12445	61.7
Aroclor-1248	3	8.993	-0.005	16014	28.7	3	9.164	-0.004	2190	9.4
Aroclor-1248	4	9.299	0.004	14303	50.3	4	9.585	-0.006	602	2.2
Total Col1Ave (4 peaks):					47.8	Total Col2Ave (4 peaks):				35.9 RPD = 28
Corrected Ave (3 peaks):					44.5	Corrected Ave (3 peaks):				24.4 RPD = 58*
Aroclor-1254	1	9.299	0.001	14303	29.8	1	9.450	-0.001	11621	37.4
Aroclor-1254	2	---			0.0	2	9.971	0.000	2373	9.5
Aroclor-1254	3	9.668	-0.000	2423	7.9	3	10.146	0.022	25558	47.2
Aroclor-1254	4	9.806	-0.002	7597	12.7	4	10.370	-0.003	33135	62.8
Aroclor-1254	5	10.119	-0.058	37993	101.2	5	10.568	-0.002	44420	138.4
Total Col1Ave (4 peaks):					37.9	Total Col2Ave (5 peaks):				59.1 RPD = 44*
Corrected Ave (3 peaks):					16.8	Corrected Ave (4 peaks):				39.2 RPD = 80*
Aroclor-1260	1	11.043	-0.001	27962	128.2	1	11.652	0.000	32532	128.2
Aroclor-1260	2	11.360	-0.001	27501	120.7	2	11.918	0.000	79805	123.2
Aroclor-1260	3	11.734	0.001	71462	118.2	3	12.434	-0.001	19600	114.0
Aroclor-1260	4	12.138	-0.001	35768	117.5	4	12.502	0.001	47257	108.2
Aroclor-1260	5	12.243	-0.001	14848	113.3	NS	---			----
Total Col1Ave (5 peaks):					119.6	Total Col2Ave (4 peaks):				118.4 RPD = 1
Corrected Ave (4 peaks):					117.5	Corrected Ave (3 peaks):				115.2 RPD = 2
Aroclor-1262	1	10.825	-0.004	55163	296.6	1	11.199	-0.001	30486	82.7
Aroclor-1262	2	12.243	-0.001	14848	49.1	2	11.652	0.001	32532	103.6
Aroclor-1262	3	12.318	-0.000	17764	54.6	3	12.434	0.001	19600	55.0
Aroclor-1262	4	12.987	-0.001	15778	53.1	4	12.502	-0.000	47257	84.7
Total Col1Ave (4 peaks):					113.3	Total Col2Ave (4 peaks):				81.5 RPD = 33
Corrected Ave (3 peaks):					52.2	Corrected Ave (3 peaks):				74.1 RPD = 35
Aroclor-1268	1	12.243	-0.003	14848	19.1	1	12.434	0.002	19600	22.5
Aroclor-1268	2	12.318	0.002	17764	23.1	2	12.502	0.002	47257	50.6
Aroclor-1268	3	12.721	0.022	8011	12.2	3	12.891	-0.000	2078	2.6
Aroclor-1268	4	13.488	-0.002	4884	2.3	4	13.707	-0.001	6518	2.6
Total Col1Ave (4 peaks):					14.2	Total Col2Ave (4 peaks):				19.6 RPD = 32
Corrected Ave (3 peaks):					11.2	Corrected Ave (3 peaks):				9.2 RPD = 19

Total PCB Area Col1 (5.908 - 13.795) = 805698 Col1 Total PCB = 0.1 ppm*

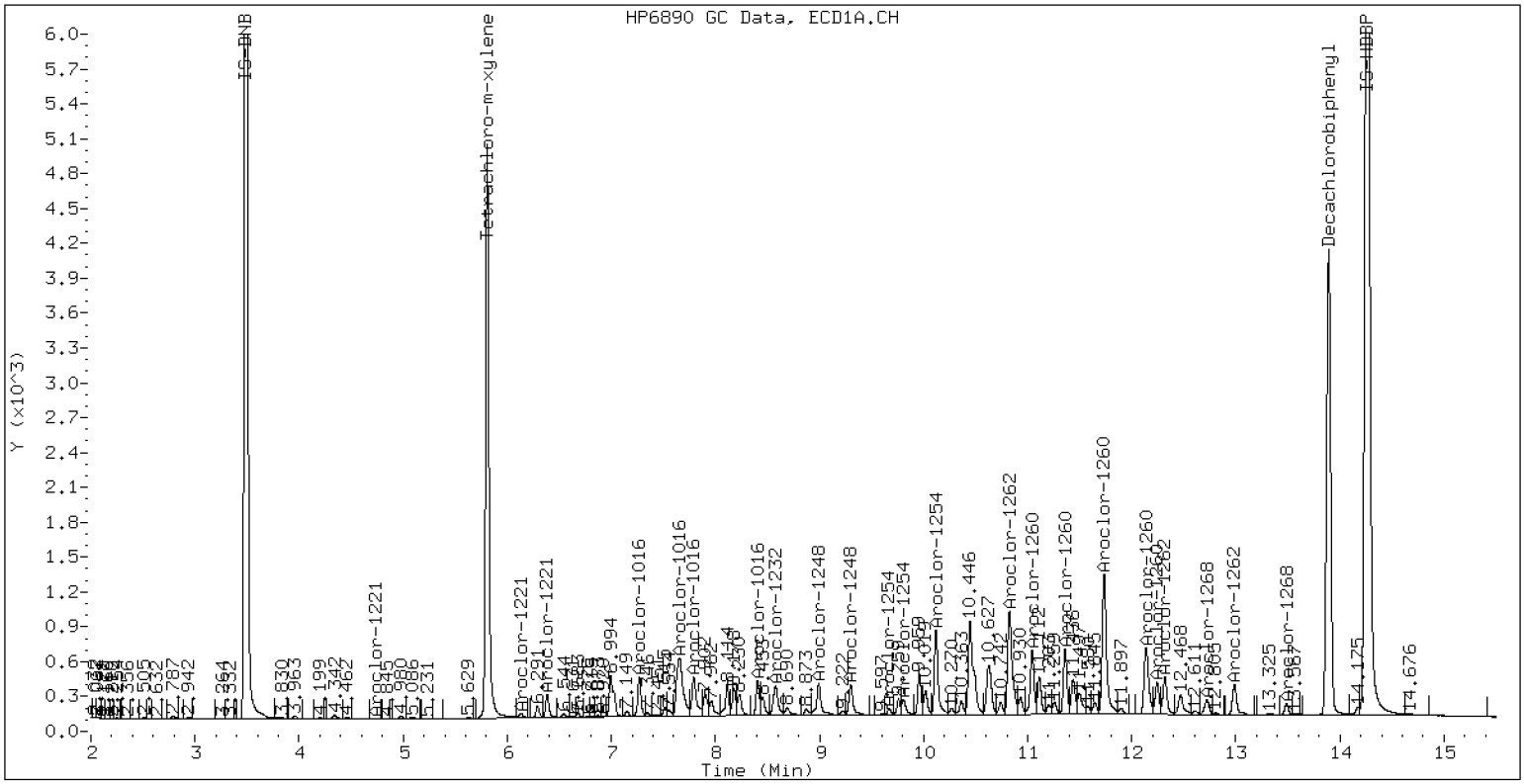
Total PCB Area Col2 (5.788 - 14.018) = 767363 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

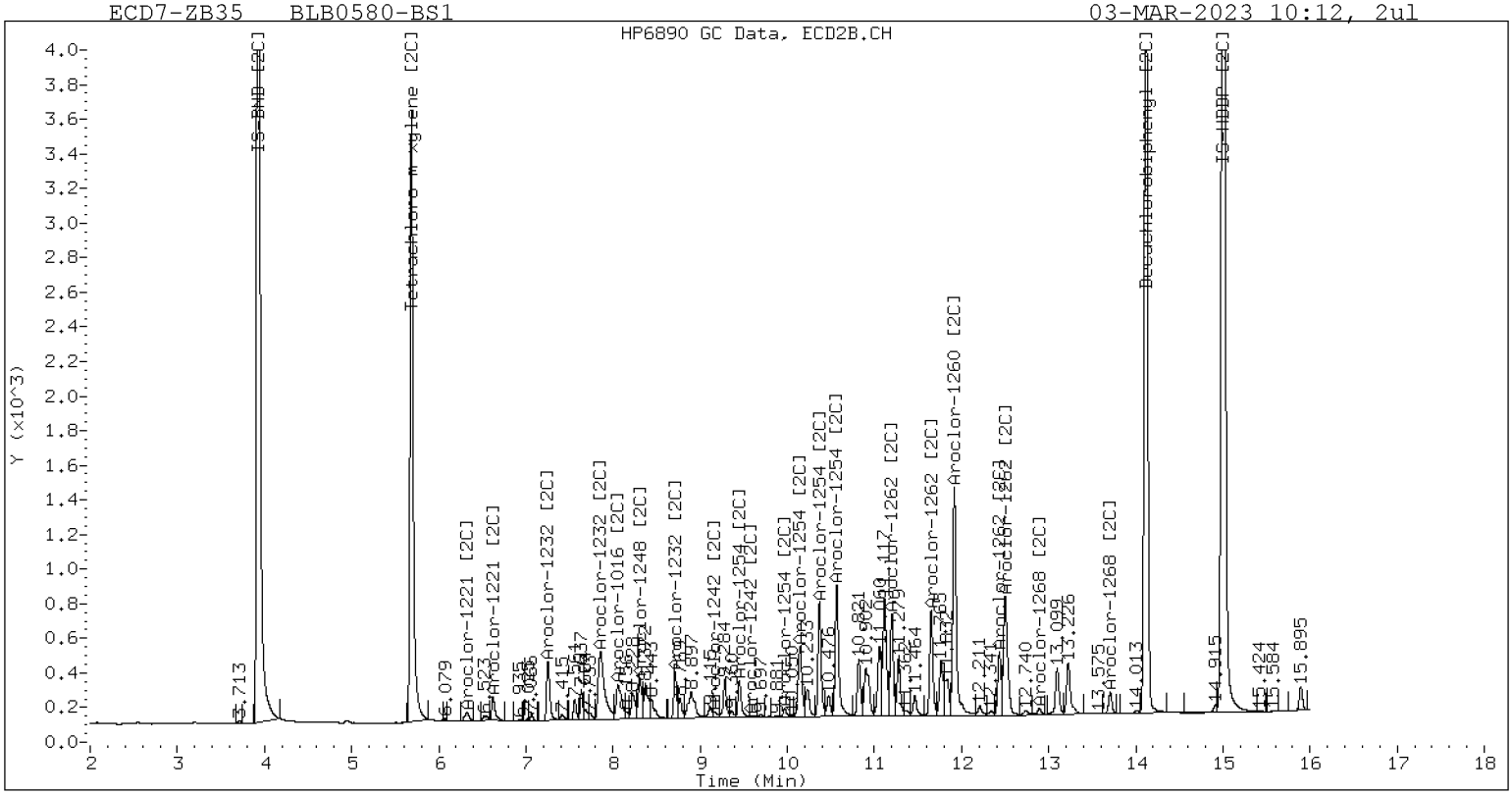
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-BS1 03-MAR-2023 10:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0580-BS1 03-MAR-2023 10:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022351ECD7.D
Data file 2: /230302.b/230302.b/03022351ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-BSD1
Client ID:
Injection Date: 03-MAR-2023 10:33
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	211577	5.687	-0.001	167807	30.5	28.4	6.9	Tetrachloro-m-xylene
13.893	-0.002	220457	14.118	-0.000	250852	36.1	37.8	4.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	464843	-31.0
Hexabromobiphenyl	1429847	620264	-56.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	402027	27.5
Hexabromobiphenyl	513946	436185	-15.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.268	-0.002	67753	383.8	1	7.253	-0.002	83897	356.5
Aroclor-1016	2	7.650	-0.004	215633	400.6	2	7.852	-0.008	192014	402.3
Aroclor-1016	3	7.789	-0.002	91762	349.2	3	8.052	-0.006	80272	372.4
Aroclor-1016	4	8.403	-0.002	67123	395.2	4	8.305	-0.003	60970	360.5
Total Col1Ave (4 peaks):					382.2	Total Col2Ave (4 peaks):				372.9 RPD = 2
Corrected Ave (3 peaks):					376.1	Corrected Ave (3 peaks):				363.1 RPD = 3
Aroclor-1221	1	4.732	0.001	407	9.8	1	---			0.0
Aroclor-1221	2	6.129	-0.003	8683	116.6	2	6.297	0.000	8336	115.7
Aroclor-1221	3	6.381	-0.001	42692	247.0	3	6.621	-0.001	37184	317.1
Total Col1Ave (3 peaks):					124.5	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.732	0.001	407	16.3	1	---			0.0
Aroclor-1232	2	6.129	-0.002	8683	175.8	2	7.253	-0.001	83897	820.8
Aroclor-1232	3	7.650	-0.006	215633	964.5	3	7.852	-0.009	192014	939.5
Aroclor-1232	4	8.576	-0.005	85211	896.8	4	8.712	-0.003	60775	1033.2
Total Col1Ave (4 peaks):					513.4	Total Col2Ave (3 peaks):				931.2 RPD = 58*
Corrected Ave (3 peaks):					363.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.268	-0.002	67753	470.3	1	7.253	-0.001	83897	449.2
Aroclor-1242	2	7.650	-0.006	215633	492.9	2	7.852	-0.007	192014	489.0
Aroclor-1242	3	8.403	-0.002	67123	493.1	3	9.158	-0.012	11758	96.2
Aroclor-1242	4	8.576	-0.003	85211	423.5	4	9.583	-0.012	5365	36.0
Total Col1Ave (4 peaks):					470.0	Total Col2Ave (4 peaks):				267.6 RPD = 55*
Corrected Ave (3 peaks):					462.2	Corrected Ave (3 peaks):				193.8 RPD = 82*
Aroclor-1248	1	8.403	-0.004	67123	296.0	1	8.305	-0.003	60970	317.6
Aroclor-1248	2	8.576	-0.006	85211	295.6	2	8.712	-0.003	60775	306.2
Aroclor-1248	3	8.991	-0.007	88019	161.8	3	9.158	-0.010	11758	51.5
Aroclor-1248	4	9.297	0.002	74256	268.2	4	9.583	-0.009	5365	19.6
Total Col1Ave (4 peaks):					255.4	Total Col2Ave (4 peaks):				173.7 RPD = 38
Corrected Ave (3 peaks):					241.9	Corrected Ave (3 peaks):				125.8 RPD = 63*
Aroclor-1254	1	9.297	-0.002	74256	159.1	1	9.447	-0.003	55873	182.9
Aroclor-1254	2	---			0.0	2	9.967	-0.003	12749	51.9
Aroclor-1254	3	9.665	-0.003	14877	49.6	3	10.144	0.020	119139	224.0
Aroclor-1254	4	9.802	-0.005	40910	70.1	4	10.368	-0.005	151099	291.4
Aroclor-1254	5	10.118	-0.059	181531	496.4	5	10.565	-0.005	202838	642.5
Total Col1Ave (4 peaks):					193.8	Total Col2Ave (5 peaks):				278.5 RPD = 36
Corrected Ave (3 peaks):					92.9	Corrected Ave (4 peaks):				187.5 RPD = 67*
Aroclor-1260	1	11.042	-0.003	136891	613.5	1	11.651	-0.001	146906	572.8
Aroclor-1260	2	11.360	-0.002	136384	585.0	2	11.916	-0.001	367719	561.8
Aroclor-1260	3	11.732	-0.002	341722	552.6	3	12.433	-0.002	94622	544.7
Aroclor-1260	4	12.136	-0.003	177935	571.5	4	12.499	-0.002	221501	502.0
Aroclor-1260	5	12.243	-0.001	72453	540.6	NS	---			----
Total Col1Ave (5 peaks):					572.6	Total Col2Ave (4 peaks):				545.3 RPD = 5
Corrected Ave (4 peaks):					562.4	Corrected Ave (3 peaks):				536.2 RPD = 5
Aroclor-1262	1	10.822	-0.007	272209	1430.6	1	11.197	-0.003	139790	375.3
Aroclor-1262	2	12.243	-0.001	72453	234.0	2	11.651	-0.000	146906	463.1
Aroclor-1262	3	12.317	-0.002	87262	262.2	3	12.433	-0.001	94622	262.9
Aroclor-1262	4	12.985	-0.002	73410	241.3	4	12.499	-0.003	221501	392.9
Total Col1Ave (4 peaks):					542.0	Total Col2Ave (4 peaks):				373.6 RPD = 37
Corrected Ave (3 peaks):					245.8	Corrected Ave (3 peaks):				343.7 RPD = 33
Aroclor-1268	1	12.243	-0.004	72453	91.2	1	12.433	0.001	94622	107.7
Aroclor-1268	2	12.317	-0.000	87262	110.9	2	12.499	-0.001	221501	234.6
Aroclor-1268	3	12.722	0.022	38396	57.0	3	12.890	-0.002	6908	8.6
Aroclor-1268	4	13.486	-0.004	18996	8.6	4	13.707	-0.002	25376	9.8
Total Col1Ave (4 peaks):					66.9	Total Col2Ave (4 peaks):				90.2 RPD = 30
Corrected Ave (3 peaks):					52.2	Corrected Ave (3 peaks):				42.0 RPD = 22

Total PCB Area Col1 (5.908 - 13.795) = 3913778 Col1 Total PCB = 0.7 ppm*

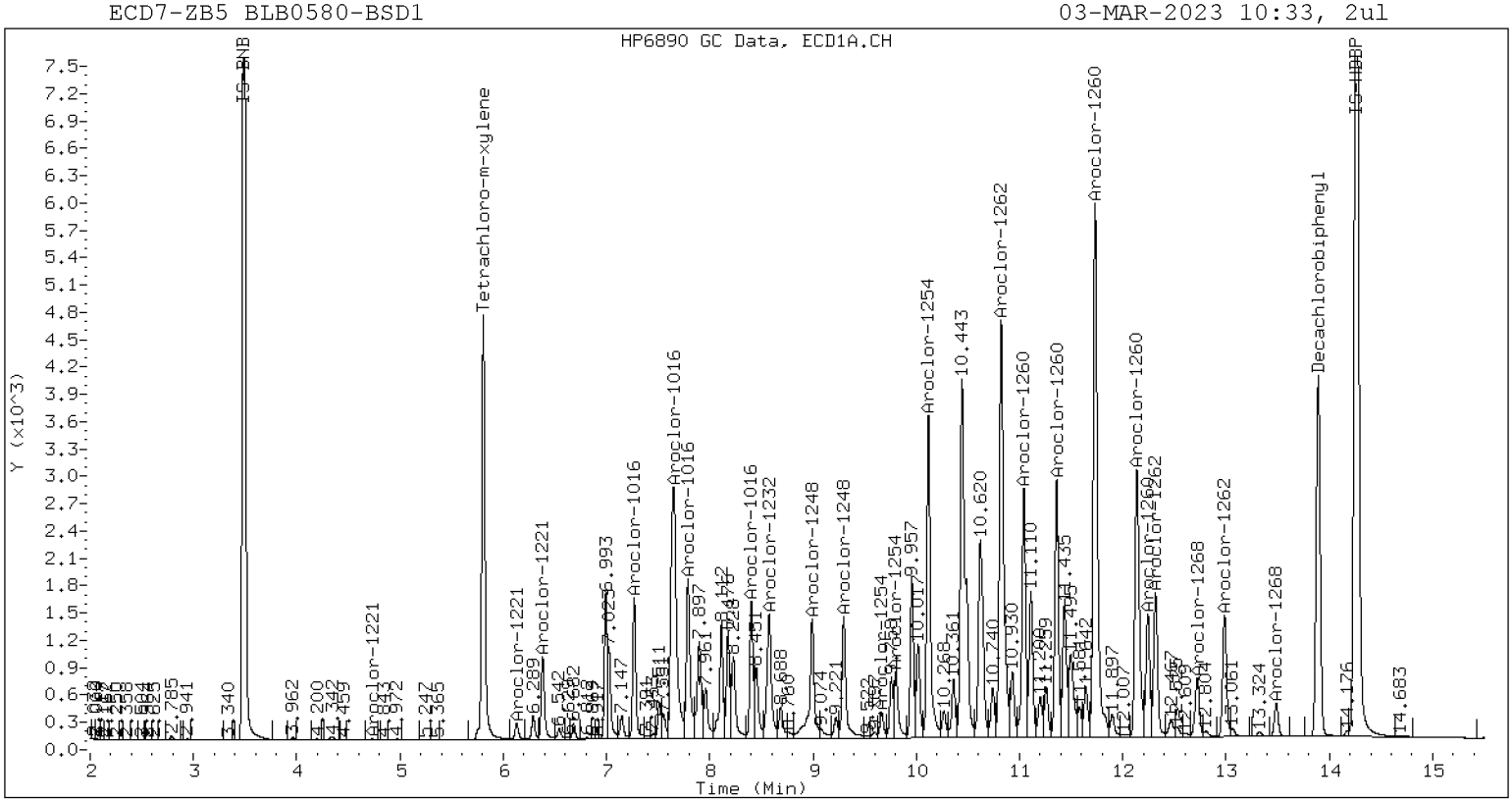
Total PCB Area Col2 (5.788 - 14.018) = 3545278 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

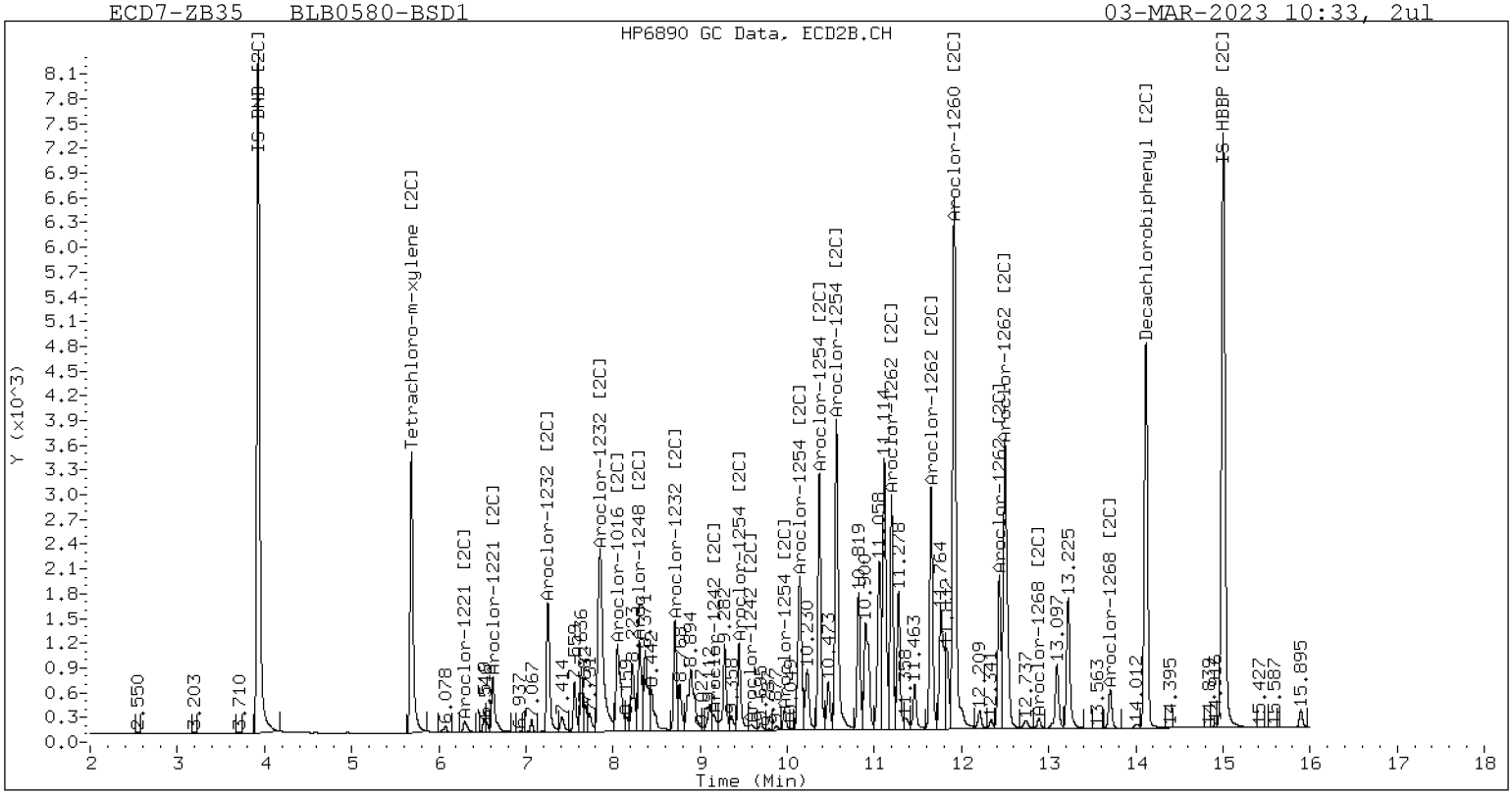
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-BSD1 03-MAR-2023 10:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0580-BSD1 03-MAR-2023 10:33, 2ul



ZB-35 Manual Integration: NO

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/03/23 14:25
Batch:	BLB0580	Laboratory ID:	BLB0580-MS1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike
Initial/Final:	19.58 g / 2.5 mL	Source Sample:	LDW23-SS1014

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	Q	MS CONCENTRATION (ug/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Aroclor 1016	101	ND	U	66.7		66.0	56 - 120
Aroclor 1260 [2C]	101	25.0		98.3		72.8	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

MS / MS DUPLICATE RECOVERY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/03/23 14:46
Batch:	BLB0580	Laboratory ID:	BLB0580-MSD1
Preparation:	EPA 3546 (Microwave)	Sequence Name:	Matrix Spike Dup
Initial/Final:	19.58 g / 2.5 mL	Source Sample:	LDW23-SS1014

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor 1016	101	72.3		71.7	8.06	30	56 - 120
Aroclor 1260 [2C]	101	101		75.4	2.62	30	58 - 120

* Values outside of QC limits

[2C] indicates second-column analyte, present if quantification on any batch samples used second column data.

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022362ECD7.D
Data file 2: /230302.b/230302.b/03022362ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-MS1
Client ID:
Injection Date: 03-MAR-2023 14:25
Report Date: 03/06/2023 11:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.001	184871	5.683	-0.003	160299	27.5	28.4	3.0	Tetrachloro-m-xylene
13.886	-0.006	144958	14.113	-0.005	189071	33.3	32.0	3.8	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	450184	-33.2
Hexabromobiphenyl	1429847	442326	-69.1 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	385386	22.2
Hexabromobiphenyl	513946	387626	-24.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.266	-0.003	55018	321.8	1	7.249	-0.004	72171	319.9
Aroclor-1016	2	7.643	-0.011	194564	373.3	2	7.843	-0.016	163907	358.3
Aroclor-1016	3	7.782	-0.010	68699	270.0	3	8.042	-0.015	60971	295.1
Aroclor-1016	4	8.397	-0.008	60689	369.0	4	8.299	-0.007	53599	330.6
Total Col1Ave (4 peaks):					333.5	Total Col2Ave (4 peaks):				326.0 RPD = 2
Corrected Ave (3 peaks):					320.2	Corrected Ave (3 peaks):				315.2 RPD = 2
Aroclor-1221	1	4.730	-0.001	263	6.5	1	4.946	-0.011	1671	45.8
Aroclor-1221	2	6.128	-0.004	6887	95.5	2	6.295	-0.002	10462	151.5
Aroclor-1221	3	6.379	-0.003	37125	221.8	3	6.618	-0.004	35120	312.4
Total Col1Ave (3 peaks):					107.9	Total Col2Ave (3 peaks):				169.9 RPD = 45*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.730	-0.000	263	10.9	1	4.946	-0.011	1671	84.7
Aroclor-1232	2	6.128	-0.003	6887	144.0	2	7.249	-0.005	72171	736.5
Aroclor-1232	3	7.643	-0.012	194564	898.6	3	7.843	-0.018	163907	836.6
Aroclor-1232	4	8.566	-0.015	63596	691.1	4	8.704	-0.011	55561	985.4
Total Col1Ave (4 peaks):					436.1	Total Col2Ave (4 peaks):				660.8 RPD = 41*
Corrected Ave (3 peaks):					282.0	Corrected Ave (3 peaks):				552.6 RPD = 65*
Aroclor-1242	1	7.266	-0.004	55018	394.4	1	7.249	-0.004	72171	403.1
Aroclor-1242	2	7.643	-0.014	194564	459.2	2	7.843	-0.018	163907	435.5
Aroclor-1242	3	8.397	-0.008	60689	460.4	3	9.139	-0.033	38579	329.4
Aroclor-1242	4	8.566	-0.014	63596	326.4	4	9.556	-0.042	21995	154.1
Total Col1Ave (4 peaks):					410.1	Total Col2Ave (4 peaks):				330.5 RPD = 21
Corrected Ave (3 peaks):					393.3	Corrected Ave (3 peaks):				295.5 RPD = 28
Aroclor-1248	1	8.397	-0.008	60689	276.3	1	8.299	-0.009	53599	291.3
Aroclor-1248	2	8.566	-0.014	63596	227.8	2	8.704	-0.010	55561	292.0
Aroclor-1248	3	8.984	-0.014	75508	143.4	3	9.139	-0.028	38579	176.2
Aroclor-1248	4	9.286	-0.007	84047	313.4	4	9.556	-0.035	21995	83.7
Total Col1Ave (4 peaks):					240.2	Total Col2Ave (4 peaks):				210.8 RPD = 13
Corrected Ave (3 peaks):					215.8	Corrected Ave (3 peaks):				183.7 RPD = 16
Aroclor-1254	1	9.286	-0.011	84047	185.9	1	9.437	-0.014	69288	236.5
Aroclor-1254	2	9.362	-0.015	24155	118.8	2	9.955	-0.015	30468	129.3
Aroclor-1254	3	9.657	-0.011	49496	170.3	3	10.107	-0.017	137660	270.0
Aroclor-1254	4	9.787	-0.021	104211	184.4	4	10.358	-0.015	174179	350.4
Aroclor-1254	5	10.239	0.064	52536	148.3	5	10.553	-0.016	169558	560.3
Total Col1Ave (5 peaks):					161.6	Total Col2Ave (5 peaks):				309.3 RPD = 63*
Corrected Ave (4 peaks):					155.5	Corrected Ave (4 peaks):				246.6 RPD = 45*
Aroclor-1260	1	11.033	-0.011	98048	616.2	1	11.642	-0.010	115653	507.4
Aroclor-1260	2	11.349	-0.011	95482	574.3	2	11.904	-0.014	265043	455.6
Aroclor-1260	3	11.719	-0.014	248640	563.9	3	12.423	-0.011	85273	552.4
Aroclor-1260	4	12.120	-0.018	130274	586.7	4	12.487	-0.015	176886	451.1
Aroclor-1260	5	12.234	-0.010	51211	535.8	NS	---			----
Total Col1Ave (5 peaks):					575.4	Total Col2Ave (4 peaks):				491.6 RPD = 16
Corrected Ave (4 peaks):					565.2	Corrected Ave (3 peaks):				471.4 RPD = 18
Aroclor-1262	1	10.808	-0.021	249989	1842.4	1	11.189	-0.011	95636	289.0
Aroclor-1262	2	12.234	-0.010	51211	231.9	2	11.642	-0.009	115653	410.3
Aroclor-1262	3	12.307	-0.011	62044	261.4	3	12.423	-0.010	85273	266.6
Aroclor-1262	4	12.974	-0.013	58880	271.4	4	12.487	-0.015	176886	353.0
Total Col1Ave (4 peaks):					651.8	Total Col2Ave (4 peaks):				329.7 RPD = 66*
Corrected Ave (3 peaks):					254.9	Corrected Ave (3 peaks):				302.9 RPD = 17
Aroclor-1268	1	12.234	-0.013	51211	90.4	1	12.423	-0.009	85273	109.2
Aroclor-1268	2	12.307	-0.009	62044	110.5	2	12.487	-0.013	176886	210.8
Aroclor-1268	3	12.710	0.011	29889	62.2	3	12.885	-0.006	7229	10.1
Aroclor-1268	4	13.478	-0.011	22096	14.0	4	13.699	-0.010	26054	11.4
Total Col1Ave (4 peaks):					69.3	Total Col2Ave (4 peaks):				85.4 RPD = 21

Corrected Ave (3 peaks): 55.5 Corrected Ave (3 peaks): 43.6 RPD = 24

Total PCB Area Col1 (5.906 - 13.793) = 3499195 Col1 Total PCB = 0.7 ppm*

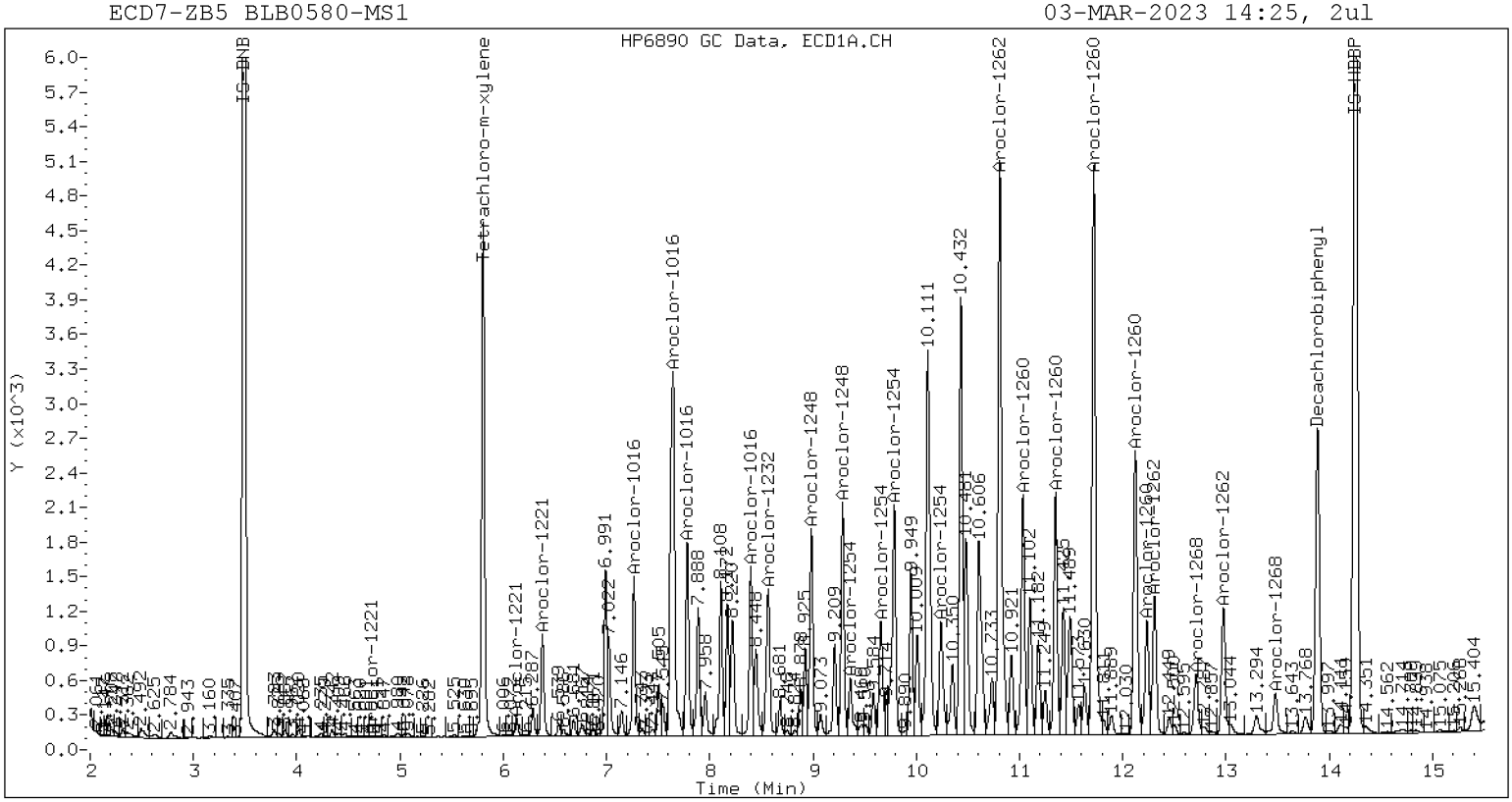
Total PCB Area Col2 (5.786 - 14.017) = 3319106 Col2 Total PCB = 0.7 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

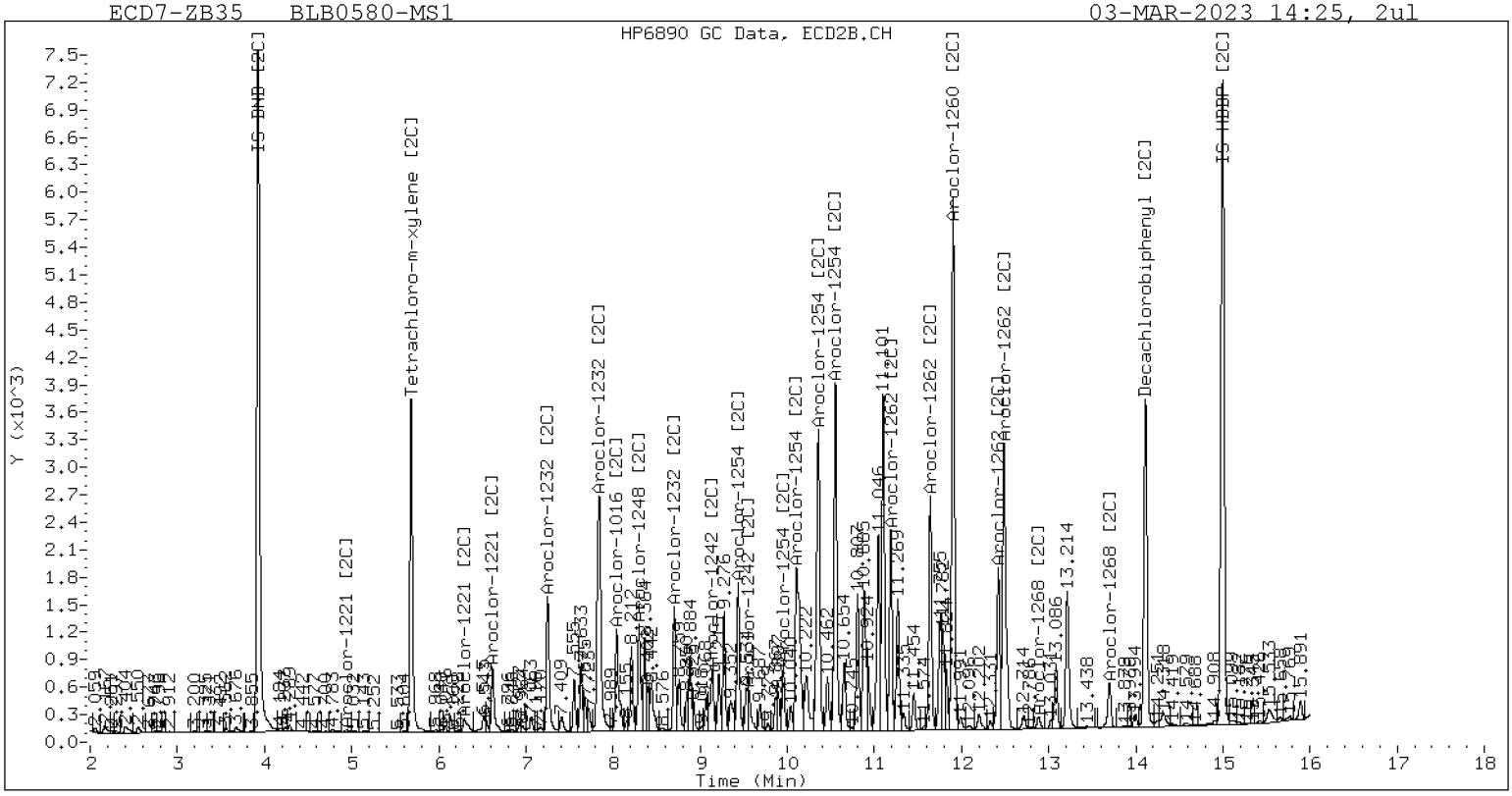
PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-MS1 03-MAR-2023 14:25, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 BLB0580-MS1 03-MAR-2023 14:25, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022363ECD7.D
Data file 2: /230302.b/230302.b/03022363ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-MSD1
Client ID:
Injection Date: 03-MAR-2023 14:46
Report Date: 03/06/2023 11:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.805	-0.001	182451	5.683	-0.003	157523	26.6	28.1	5.6	Tetrachloro-m-xylene
13.886	-0.006	144033	14.112	-0.005	187441	32.4	30.8	5.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	459066	-31.9
Hexabromobiphenyl	1429847	451074	-68.5 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	381522	21.0
Hexabromobiphenyl	513946	399032	-22.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.265	-0.004	68226	391.3	1	7.250	-0.003	82063	367.4
Aroclor-1016	2	7.643	-0.011	192825	362.8	2	7.843	-0.016	172660	381.2
Aroclor-1016	3	7.782	-0.010	71831	276.8	3	8.043	-0.015	63575	310.8
Aroclor-1016	4	8.397	-0.008	69634	415.1	4	8.299	-0.007	66188	412.4
Total Col1Ave (4 peaks):					361.5	Total Col2Ave (4 peaks):				368.0 RPD = 2
Corrected Ave (3 peaks):					343.6	Corrected Ave (3 peaks):				353.2 RPD = 3
Aroclor-1221	1	4.732	0.001	604	14.7	1	4.943	-0.013	1846	51.1
Aroclor-1221	2	6.127	-0.005	7569	102.9	2	6.297	0.001	6574	96.2
Aroclor-1221	3	6.379	-0.004	39542	231.6	3	6.617	-0.004	39095	351.3
Total Col1Ave (3 peaks):					116.4	Total Col2Ave (3 peaks):				166.2 RPD = 35
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.732	0.002	604	24.6	1	4.943	-0.013	1846	94.6
Aroclor-1232	2	6.127	-0.004	7569	155.2	2	7.250	-0.004	82063	846.0
Aroclor-1232	3	7.643	-0.012	192825	873.3	3	7.843	-0.018	172660	890.2
Aroclor-1232	4	8.566	-0.015	69838	744.2	4	8.705	-0.010	63537	1138.2
Total Col1Ave (4 peaks):					449.3	Total Col2Ave (4 peaks):				742.2 RPD = 49*
Corrected Ave (3 peaks):					308.0	Corrected Ave (3 peaks):				610.2 RPD = 66*
Aroclor-1242	1	7.265	-0.005	68226	479.6	1	7.250	-0.004	82063	463.0
Aroclor-1242	2	7.643	-0.014	192825	446.3	2	7.843	-0.018	172660	463.4
Aroclor-1242	3	8.397	-0.008	69634	518.0	3	9.140	-0.033	50976	439.7
Aroclor-1242	4	8.566	-0.014	69838	351.5	4	9.532	-0.066	57175	404.7
Total Col1Ave (4 peaks):					448.8	Total Col2Ave (4 peaks):				442.7 RPD = 1
Corrected Ave (3 peaks):					425.8	Corrected Ave (3 peaks):				435.8 RPD = 2
Aroclor-1248	1	8.397	-0.008	69634	310.9	1	8.299	-0.009	66188	363.3
Aroclor-1248	2	8.566	-0.014	69838	245.3	2	8.705	-0.009	63537	337.3
Aroclor-1248	3	8.985	-0.013	103732	193.1	3	9.140	-0.028	50976	235.2
Aroclor-1248	4	9.286	-0.007	127696	467.0	4	9.532	-0.059	57175	219.7
Total Col1Ave (4 peaks):					304.1	Total Col2Ave (4 peaks):				288.9 RPD = 5
Corrected Ave (3 peaks):					249.8	Corrected Ave (3 peaks):				264.1 RPD = 6
Aroclor-1254	1	9.286	-0.011	127696	277.0	1	9.437	-0.013	99463	343.0
Aroclor-1254	2	9.362	-0.015	38587	186.1	2	9.956	-0.015	54003	231.5
Aroclor-1254	3	9.655	-0.013	79235	267.4	3	10.106	-0.018	191519	379.4
Aroclor-1254	4	9.787	-0.020	159675	277.1	4	10.356	-0.017	234541	476.7
Aroclor-1254	5	10.112	-0.063	244802	677.8	5	10.554	-0.016	196290	655.2
Total Col1Ave (5 peaks):					337.1	Total Col2Ave (5 peaks):				417.2 RPD = 21
Corrected Ave (4 peaks):					251.9	Corrected Ave (4 peaks):				357.6 RPD = 35
Aroclor-1260	1	11.033	-0.012	101096	623.0	1	11.642	-0.010	130995	558.3
Aroclor-1260	2	11.349	-0.012	98480	580.9	2	11.904	-0.014	277847	464.0
Aroclor-1260	3	11.719	-0.014	256643	570.7	3	12.424	-0.011	85698	539.3
Aroclor-1260	4	12.121	-0.018	138469	611.5	4	12.487	-0.015	184549	457.2
Aroclor-1260	5	12.234	-0.010	51421	527.6	NS	---			----
Total Col1Ave (5 peaks):					582.7	Total Col2Ave (4 peaks):				504.7 RPD = 14
Corrected Ave (4 peaks):					572.7	Corrected Ave (3 peaks):				486.8 RPD = 16
Aroclor-1262	1	10.808	-0.021	313137	2263.0	1	11.189	-0.012	99323	291.5
Aroclor-1262	2	12.234	-0.009	51421	228.4	2	11.642	-0.009	130995	451.4
Aroclor-1262	3	12.307	-0.011	62255	257.2	3	12.424	-0.010	85698	260.3
Aroclor-1262	4	12.973	-0.014	59223	267.7	4	12.487	-0.015	184549	357.8
Total Col1Ave (4 peaks):					754.1	Total Col2Ave (4 peaks):				340.3 RPD = 76*
Corrected Ave (3 peaks):					251.1	Corrected Ave (3 peaks):				303.2 RPD = 19
Aroclor-1268	1	12.234	-0.012	51421	89.0	1	12.424	-0.008	85698	106.7
Aroclor-1268	2	12.307	-0.010	62255	108.8	2	12.487	-0.013	184549	213.6
Aroclor-1268	3	12.710	0.011	29808	60.9	3	12.885	-0.007	7171	9.7
Aroclor-1268	4	13.478	-0.012	21388	13.3	4	13.699	-0.010	26364	11.2
Total Col1Ave (4 peaks):					68.0	Total Col2Ave (4 peaks):				85.3 RPD = 23

Corrected Ave (3 peaks): 54.4 Corrected Ave (3 peaks): 42.5 RPD = 24

Total PCB Area Col1 (5.906 - 13.793) = 4161842 Col1 Total PCB = 0.8 ppm*

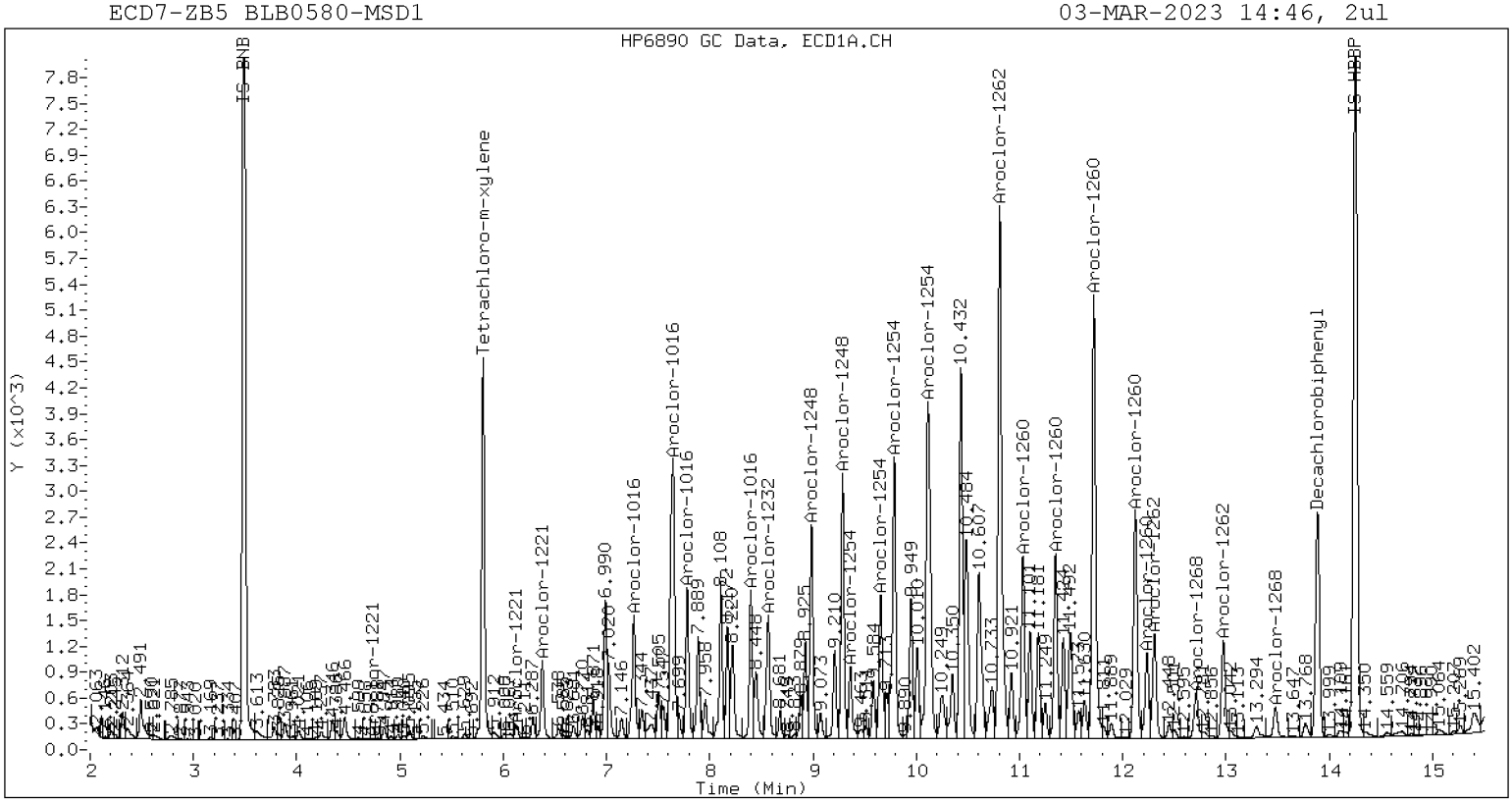
Total PCB Area Col2 (5.786 - 14.017) = 3944658 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-MSD1 03-MAR-2023 14:46, 2ul



ZB-5 Manual Integration: NO

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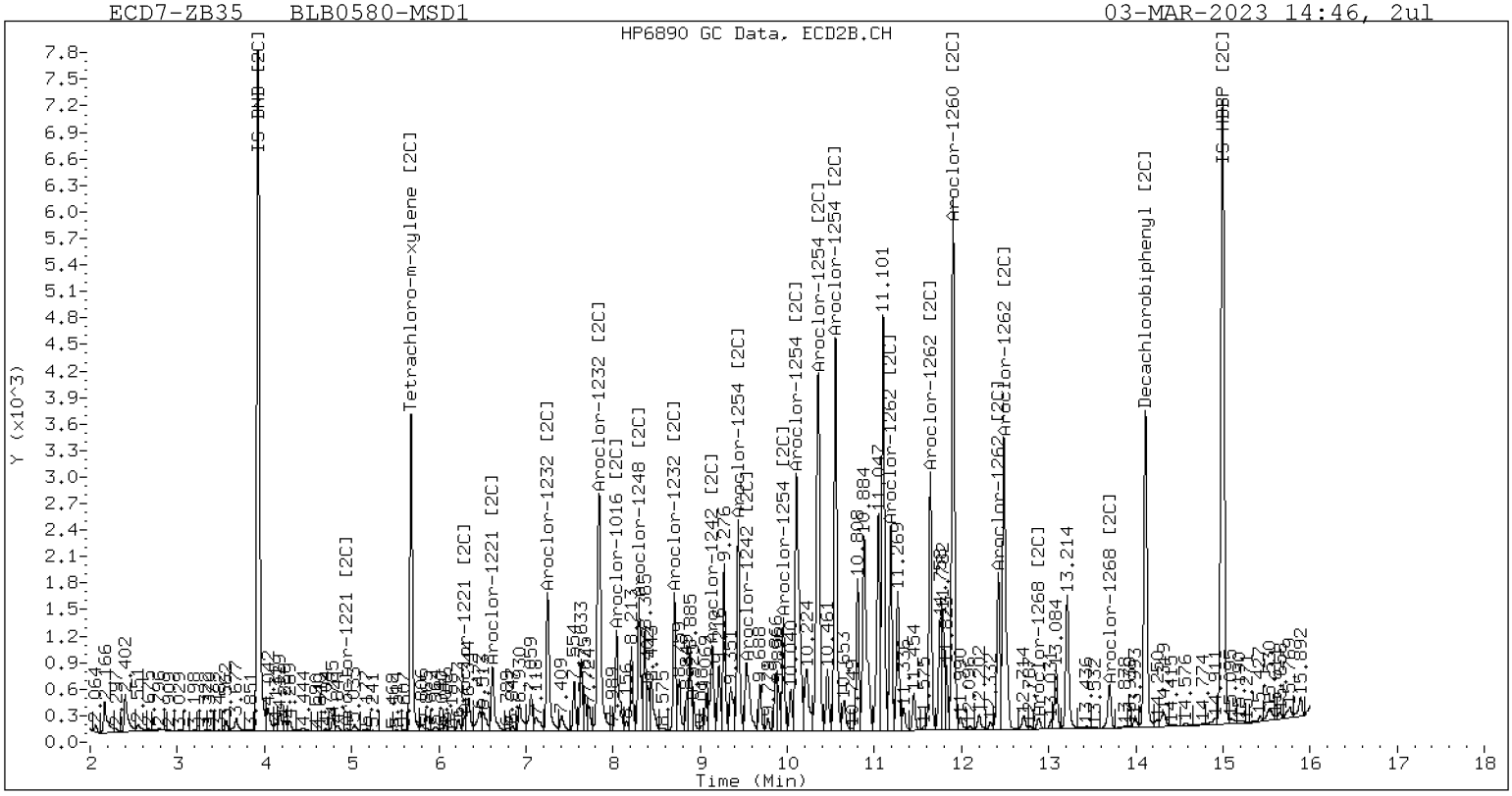


ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0580-SRM1
Batch: BLB0580
Initial/Final: 2.5 g / 2.5 mL
Preparation: EPA 3546 (Microwave)
Analyzed: 03/03/2023 10:54
Standard ID: K003528
Expires: 04/12/2023
Standard Lot#: PSRM0151
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ug/kg wet)	FOUND (ug/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Aroclor 1260	108.00	134	2.9	20.0		124	38 - 167
Aroclor 1260 [2C]	108.00	135	2.9	20.0		125	38 - 167

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022352ECD7.D
Data file 2: /230302.b/230302.b/03022352ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: BLB0580-SRM1
Client ID:
Injection Date: 03-MAR-2023 10:54
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.002	196364	5.685	-0.003	163455	27.9	28.3	1.4	Tetrachloro-m-xylene
13.887	-0.008	188490	14.115	-0.004	216211	32.8	31.7	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	472191	-29.9
Hexabromobiphenyl	1429847	582774	-59.2 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	394367	25.1
Hexabromobiphenyl	513946	447231	-13.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.238	-0.032	8798	49.1	1	7.260	0.005	6437	27.9
Aroclor-1016	2	7.649	-0.005	7080	12.9	2	7.850	-0.010	11310	24.2
Aroclor-1016	3	7.793	0.003	3840	14.4	3	8.048	-0.009	2165	10.2
Aroclor-1016	4	8.401	-0.004	6100	35.4	4	8.302	-0.006	7166	43.2
Total Col1Ave (4 peaks):					27.9	Total Col2Ave (4 peaks):				26.4 RPD = 6
Corrected Ave (3 peaks):					20.9	Corrected Ave (3 peaks):				20.8 RPD = 1
Aroclor-1221	1	4.784	0.053	169	4.0	1	4.942	-0.014	765	20.5
Aroclor-1221	2	6.159	0.028	389	5.1	2	6.345	0.049	9986	141.3
Aroclor-1221	3	6.392	0.010	1611	9.2	3	6.637	0.015	2866	24.9
Total Col1Ave (3 peaks):					6.1	Total Col2Ave (3 peaks):				62.2 RPD = 164*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.784	0.053	169	6.7	1	4.942	-0.014	765	37.9
Aroclor-1232	2	6.159	0.029	389	7.8	2	7.260	0.006	6437	64.2
Aroclor-1232	3	7.649	-0.006	7080	31.2	3	7.850	-0.011	11310	56.4
Aroclor-1232	4	8.571	-0.010	5243	54.3	4	8.709	-0.006	5326	92.3
Total Col1Ave (4 peaks):					25.0	Total Col2Ave (4 peaks):				62.7 RPD = 86*
Corrected Ave (3 peaks):					15.2	Corrected Ave (3 peaks):				52.8 RPD = 111*
Aroclor-1242	1	7.238	-0.032	8798	60.1	1	7.260	0.006	6437	35.1
Aroclor-1242	2	7.649	-0.007	7080	15.9	2	7.850	-0.009	11310	29.4
Aroclor-1242	3	8.401	-0.004	6100	44.1	3	9.149	-0.021	6828	57.0
Aroclor-1242	4	8.571	-0.008	5243	25.7	4	9.570	-0.024	5642	38.6
Total Col1Ave (4 peaks):					36.5	Total Col2Ave (4 peaks):				40.0 RPD = 9
Corrected Ave (3 peaks):					28.6	Corrected Ave (3 peaks):				34.4 RPD = 18
Aroclor-1248	1	8.401	-0.006	6100	26.5	1	8.302	-0.006	7166	38.1
Aroclor-1248	2	8.571	-0.011	5243	17.9	2	8.709	-0.006	5326	27.4
Aroclor-1248	3	8.989	-0.009	18282	33.1	3	9.149	-0.019	6828	30.5
Aroclor-1248	4	9.291	-0.005	25097	89.2	4	9.570	-0.021	5642	21.0
Total Col1Ave (4 peaks):					41.7	Total Col2Ave (4 peaks):				29.2 RPD = 35
Corrected Ave (3 peaks):					25.8	Corrected Ave (3 peaks):				26.3 RPD = 2
Aroclor-1254	1	9.291	-0.008	25097	52.9	1	9.443	-0.008	20353	67.9
Aroclor-1254	2	9.366	-0.011	9242	43.3	2	9.961	-0.010	9958	41.3
Aroclor-1254	3	9.663	-0.005	15365	50.4	3	10.117	-0.007	41314	79.2
Aroclor-1254	4	9.793	-0.014	34511	58.2	4	10.362	-0.011	51428	101.1
Aroclor-1254	5	10.114	-0.063	55224	148.6	5	10.559	-0.011	52642	170.0
Total Col1Ave (5 peaks):					70.7	Total Col2Ave (5 peaks):				91.9 RPD = 26
Corrected Ave (4 peaks):					51.2	Corrected Ave (4 peaks):				72.4 RPD = 34
Aroclor-1260	1	11.037	-0.007	32342	154.3	1	11.646	-0.006	38006	144.5
Aroclor-1260	2	11.351	-0.011	26388	120.5	2	11.908	-0.010	83298	124.1
Aroclor-1260	3	11.723	-0.011	78426	135.0	3	12.426	-0.009	27258	153.0
Aroclor-1260	4	12.125	-0.014	40012	136.8	4	12.491	-0.010	53485	118.2
Aroclor-1260	5	12.238	-0.006	15770	125.2	NS	---			----
Total Col1Ave (5 peaks):					134.3	Total Col2Ave (4 peaks):				135.0 RPD = 0
Corrected Ave (4 peaks):					129.4	Corrected Ave (3 peaks):				129.0 RPD = 0
Aroclor-1262	1	10.814	-0.015	71791	401.6	1	11.193	-0.008	33580	87.9
Aroclor-1262	2	12.238	-0.006	15770	54.2	2	11.646	-0.005	38006	116.9
Aroclor-1262	3	12.310	-0.008	19638	62.8	3	12.426	-0.008	27258	73.9
Aroclor-1262	4	12.978	-0.010	21220	74.2	4	12.491	-0.011	53485	92.5
Total Col1Ave (4 peaks):					148.2	Total Col2Ave (4 peaks):				92.8 RPD = 46*
Corrected Ave (3 peaks):					63.8	Corrected Ave (3 peaks):				84.8 RPD = 28
Aroclor-1268	1	12.238	-0.009	15770	21.1	1	12.426	-0.006	27258	30.3
Aroclor-1268	2	12.310	-0.007	19638	26.6	2	12.491	-0.009	53485	55.2
Aroclor-1268	3	12.715	0.015	9850	15.6	3	12.888	-0.004	2230	2.7
Aroclor-1268	4	13.480	-0.010	4785	2.3	4	13.701	-0.008	8294	3.1
Total Col1Ave (4 peaks):					16.4	Total Col2Ave (4 peaks):				22.8 RPD = 33

Corrected Ave (3 peaks): 13.0 Corrected Ave (3 peaks): 12.0 RPD = 8

Total PCB Area Col1 (5.908 - 13.795) = 931689 Col1 Total PCB = 0.2 ppm*

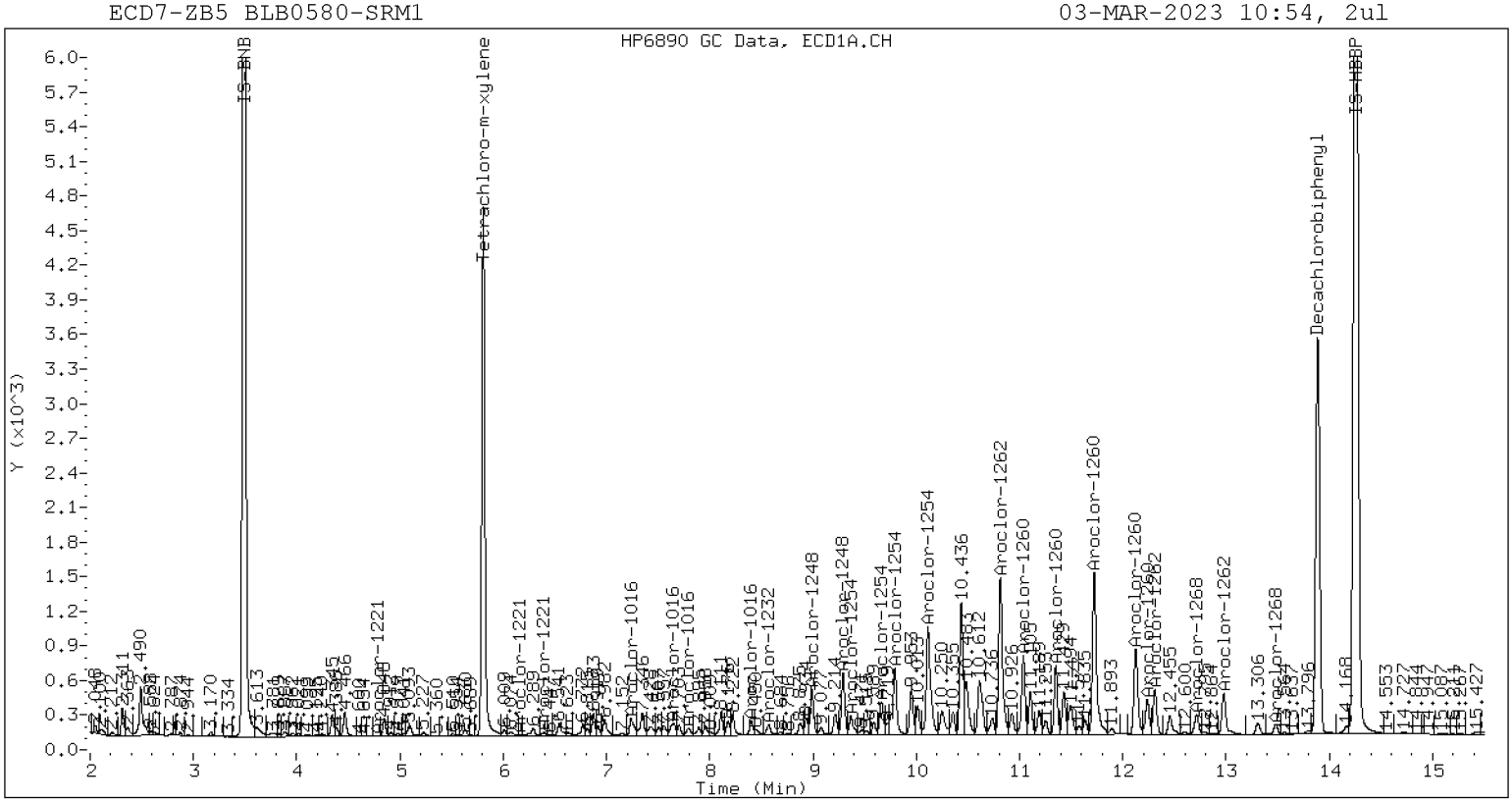
Total PCB Area Col2 (5.788 - 14.018) = 917957 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms

ECD7-ZB5 BLB0580-SRM1 03-MAR-2023 10:54, 2ul



ZB-5 Manual Integration: NO

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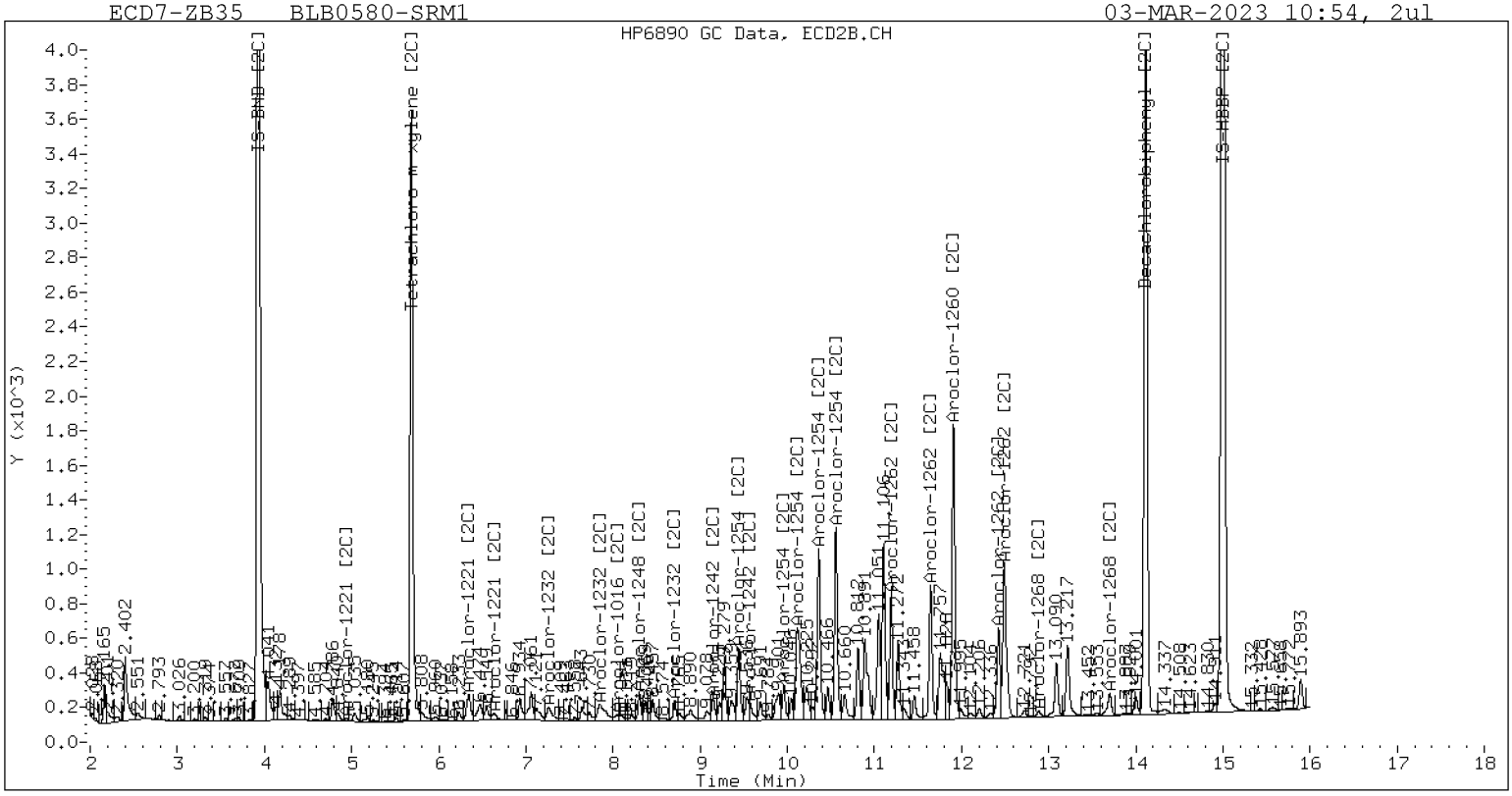


ZB-35 Manual Integration: NO

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016	250	0.0511017	20	0.0514466	50	5.107478E-02	1000	4.502727E-02	100	5.036259E-02	500	0.0471841
Aroclor-1016 (1)	250	0.031405	20	3.172321E-02	50	3.253176E-02	1000	2.667138E-02	100	3.141686E-02	500	2.856283E-02
Aroclor-1016 (2)	250	9.848704E-02	20	9.239415E-02	50	9.245774E-02	1000	8.848657E-02	100	9.221759E-02	500	0.0917416
Aroclor-1016 (3)	250	4.393471E-02	20	5.165382E-02	50	5.037363E-02	1000	3.720718E-02	100	4.822959E-02	500	3.990906E-02
Aroclor-1016 (4)	250	3.058004E-02	20	3.001523E-02	50	2.893599E-02	1000	2.774395E-02	100	2.958631E-02	500	2.852291E-02
Aroclor 1260	250	4.264611E-02	20	3.933745E-02	50	3.914748E-02	1000	0.0377098	100	3.888069E-02	500	3.753326E-02
Aroclor-1260 (1)	250	3.096387E-02	20	2.926415E-02	50	2.920486E-02	1000	2.746159E-02	100	2.841034E-02	500	2.736642E-02
Aroclor-1260 (2)	250	3.291004E-02	20	2.966791E-02	50	3.006192E-02	1000	2.856573E-02	100	3.010757E-02	500	2.910054E-02
Aroclor-1260 (3)	250	8.575373E-02	20	8.087657E-02	50	8.045158E-02	1000	7.674417E-02	100	7.953737E-02	500	7.514663E-02
Aroclor-1260 (4)	250	4.484933E-02	20	3.904963E-02	50	3.886754E-02	1000	3.922291E-02	100	3.955346E-02	500	3.941669E-02
Aroclor-1260 (5)	250	1.875356E-02	20	1.782901E-02	50	1.715148E-02	1000	1.655457E-02	100	1.679471E-02	500	1.663603E-02
Decachlorobiphenyl	40	0.7880759	3.2	0.8290115	8	0.8055828	160	0.797423	16	0.7758675	80	0.7312517
Tetrachlorometaxylene	40	1.205085	3.2	1.168271	8	1.244015	160	1.241136	16	1.185465	80	1.122954

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221							250	1.657582E-02				
Aroclor-1221 (1)							250	7.164712E-03				
Aroclor-1221 (2)							250	0.0128135				
Aroclor-1221 (3)							250	2.974924E-02				
Aroclor 1232									250	1.690391E-02		
Aroclor-1232 (1)									250	4.285984E-03		
Aroclor-1232 (2)									250	8.499602E-03		
Aroclor-1232 (3)									250	3.847671E-02		
Aroclor-1232 (4)									250	1.635336E-02		
Aroclor 1242	250	3.953397E-02										
Aroclor-1242 (1)	250	2.479209E-02										
Aroclor-1242 (2)	250	7.528986E-02										
Aroclor-1242 (3)	250	2.342574E-02										
Aroclor-1242 (4)	250	3.462819E-02										
Aroclor 1248			250	5.747549E-02								
Aroclor-1248 (1)			250	3.903293E-02								
Aroclor-1248 (2)			250	0.0496149								
Aroclor-1248 (3)			250	9.360202E-02								
Aroclor-1248 (4)			250	4.765213E-02								
Aroclor 1254					250	6.629494E-02						
Aroclor-1254 (1)					250	8.033306E-02						
Aroclor-1254 (2)					250	0.0361302						
Aroclor-1254 (3)					250	5.164705E-02						
Aroclor-1254 (4)					250	0.100423						
Aroclor-1254 (5)					250	6.294139E-02						
Aroclor 1262							250	3.665955E-02				
Aroclor-1262 (1)							250	2.454122E-02				
Aroclor-1262 (2)							250	3.993338E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3)							250	4.292945E-02				
Aroclor-1262 (4)							250	3.923413E-02				
Aroclor 1268									250	0.1442124		
Aroclor-1268 (1)									250	0.102504		
Aroclor-1268 (2)									250	0.1015072		
Aroclor-1268 (3)									250	8.685666E-02		
Aroclor-1268 (4)									250	0.2859818		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016	4.936617E-02	5.3			RSD (20)	
Aroclor-1016 (1)	3.038517E-02	7.4			RSD (20)	
Aroclor-1016 (2)	9.263078E-02	3.5			RSD (20)	
Aroclor-1016 (3)	0.045218	12.9			RSD (20)	
Aroclor-1016 (4)	2.923074E-02	3.5			RSD (20)	
Aroclor 1221		0.0			RSD (20)	
Aroclor-1221 (1)		0.0			RSD (20)	
Aroclor-1221 (2)		0.0			RSD (20)	
Aroclor-1221 (3)		0.0			RSD (20)	
Aroclor 1232		0.0			RSD (20)	
Aroclor-1232 (1)		0.0			RSD (20)	
Aroclor-1232 (2)		0.0			RSD (20)	
Aroclor-1232 (3)		0.0			RSD (20)	
Aroclor-1232 (4)		0.0			RSD (20)	
Aroclor 1242		0.0			RSD (20)	
Aroclor-1242 (1)		0.0			RSD (20)	
Aroclor-1242 (2)		0.0			RSD (20)	
Aroclor-1242 (3)		0.0			RSD (20)	
Aroclor-1242 (4)		0.0			RSD (20)	
Aroclor 1248		0.0			RSD (20)	
Aroclor-1248 (1)		0.0			RSD (20)	
Aroclor-1248 (2)		0.0			RSD (20)	
Aroclor-1248 (3)		0.0			RSD (20)	
Aroclor-1248 (4)		0.0			RSD (20)	
Aroclor 1254		0.0			RSD (20)	
Aroclor-1254 (1)		0.0			RSD (20)	
Aroclor-1254 (2)		0.0			RSD (20)	
Aroclor-1254 (3)		0.0			RSD (20)	
Aroclor-1254 (4)		0.0			RSD (20)	
Aroclor-1254 (5)		0.0			RSD (20)	
Aroclor 1260	3.920913E-02	4.7			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (1):	ZB5

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1)	2.877854E-02	4.7			RSD (20)	
Aroclor-1260 (2)	3.006895E-02	5.0			RSD (20)	
Aroclor-1260 (3)	7.975167E-02	4.6			RSD (20)	
Aroclor-1260 (4)	4.015993E-02	5.8			RSD (20)	
Aroclor-1260 (5)	1.728656E-02	5.0			RSD (20)	
Aroclor 1262		0.0			RSD (20)	
Aroclor-1262 (1)		0.0			RSD (20)	
Aroclor-1262 (2)		0.0			RSD (20)	
Aroclor-1262 (3)		0.0			RSD (20)	
Aroclor-1262 (4)		0.0			RSD (20)	
Aroclor 1268		0.0			RSD (20)	
Aroclor-1268 (1)		0.0			RSD (20)	
Aroclor-1268 (2)		0.0			RSD (20)	
Aroclor-1268 (3)		0.0			RSD (20)	
Aroclor-1268 (4)		0.0			RSD (20)	
Decachlorobiphenyl	0.7878687	4.2			RSD (20)	
Tetrachlorometaxylene	1.194488	3.9			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1016 [2C]	250	0.0571297	20	5.099991E-02	50	0.0573721	1000	5.075893E-02	100	5.836783E-02	500	5.288542E-02
Aroclor-1016 (1) [2C]	250	4.732763E-02	20	5.070692E-02	50	5.021603E-02	1000	4.080107E-02	100	4.868029E-02	500	4.325569E-02
Aroclor-1016 (2) [2C]	250	0.1025919	20	8.142537E-02	50	9.407053E-02	1000	9.361548E-02	100	0.1015897	500	9.651233E-02
Aroclor-1016 (3) [2C]	250	4.410181E-02	20	4.005508E-02	50	4.718351E-02	1000	3.925581E-02	100	4.613223E-02	500	4.062487E-02
Aroclor-1016 (4) [2C]	250	3.449742E-02	20	3.181228E-02	50	3.801833E-02	1000	0.0293633	100	0.0370691	500	3.114879E-02
Aroclor 1260 [2C]	250	7.266587E-02	20	0.0760446	50	7.181489E-02	1000	0.0636872	100	6.942709E-02	500	6.617305E-02
Aroclor-1260 (1) [2C]	250	4.801376E-02	20	5.286013E-02	50	4.911343E-02	1000	4.201242E-02	100	4.695569E-02	500	4.328842E-02
Aroclor-1260 (2) [2C]	250	0.1266443	20	0.1297611	50	0.1243096	1000	0.1054494	100	0.1209452	500	0.1132043
Aroclor-1260 (3) [2C]	250	3.207621E-02	20	3.524009E-02	50	3.146502E-02	1000	0.0319805	100	2.936945E-02	500	3.102287E-02
Aroclor-1260 (4) [2C]	250	8.392913E-02	20	8.631709E-02	50	8.237154E-02	1000	7.530648E-02	100	0.080438	500	7.717658E-02
Decachlorobiphenyl [2C]	40	1.310398	3.2	1.170661	8	1.20406	160	1.207975	16	1.205489	80	1.211045
Tetrachlorometaxylene [2C]	40	1.219073	3.2	1.21526	8	1.195453	160	1.111394	16	1.175548	80	1.125598

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor 1221 [2C]							250	1.507982E-02				
Aroclor-1221 (1) [2C]							250	7.573277E-03				
Aroclor-1221 (2) [2C]							250	0.0143332				
Aroclor-1221 (3) [2C]							250	2.333296E-02				
Aroclor 1232 [2C]									250	1.920227E-02		
Aroclor-1232 (1) [2C]									250	4.09321E-03		
Aroclor-1232 (2) [2C]									250	2.034072E-02		
Aroclor-1232 (3) [2C]									250	4.067023E-02		
Aroclor-1232 (4) [2C]									250	1.170493E-02		
Aroclor 1242 [2C]	250	4.230924E-02										
Aroclor-1242 (1) [2C]	250	3.716893E-02										
Aroclor-1242 (2) [2C]	250	7.813249E-02										
Aroclor-1242 (3) [2C]	250	2.431205E-02										
Aroclor-1242 (4) [2C]	250	0.0296235										
Aroclor 1248 [2C]			250	4.442703E-02								
Aroclor-1248 (1) [2C]			250	3.819713E-02								
Aroclor-1248 (2) [2C]			250	3.949349E-02								
Aroclor-1248 (3) [2C]			250	4.544987E-02								
Aroclor-1248 (4) [2C]			250	5.456762E-02								
Aroclor 1254 [2C]					250	0.0763106						
Aroclor-1254 (1) [2C]					250	6.080523E-02						
Aroclor-1254 (2) [2C]					250	4.891616E-02						
Aroclor-1254 (3) [2C]					250	0.1058376						
Aroclor-1254 (4) [2C]					250	0.103175						
Aroclor-1254 (5) [2C]					250	6.281905E-02						
Aroclor 1262 [2C]							250	7.397596E-02				
Aroclor-1262 (1) [2C]							250	6.830764E-02				
Aroclor-1262 (2) [2C]							250	5.817803E-02				

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF	Conc	RRF
Aroclor-1262 (3) [2C]							250	6.600951E-02				
Aroclor-1262 (4) [2C]							250	0.1034087				
Aroclor 1268 [2C]									250	0.2386862		
Aroclor-1268 (1) [2C]									250	0.1610947		
Aroclor-1268 (2) [2C]									250	0.1731794		
Aroclor-1268 (3) [2C]									250	0.1478672		
Aroclor-1268 (4) [2C]									250	0.4726034		

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor 1016 [2C]	5.458565E-02	6.3			RSD (20)	
Aroclor-1016 (1) [2C]	4.683127E-02	8.5			RSD (20)	
Aroclor-1016 (2) [2C]	9.496755E-02	8.0			RSD (20)	
Aroclor-1016 (3) [2C]	4.289222E-02	7.9			RSD (20)	
Aroclor-1016 (4) [2C]	3.365154E-02	10.3			RSD (20)	
Aroclor 1221 [2C]		0.0			RSD (20)	
Aroclor-1221 (1) [2C]		0.0			RSD (20)	
Aroclor-1221 (2) [2C]		0.0			RSD (20)	
Aroclor-1221 (3) [2C]		0.0			RSD (20)	
Aroclor 1232 [2C]		0.0			RSD (20)	
Aroclor-1232 (1) [2C]		0.0			RSD (20)	
Aroclor-1232 (2) [2C]		0.0			RSD (20)	
Aroclor-1232 (3) [2C]		0.0			RSD (20)	
Aroclor-1232 (4) [2C]		0.0			RSD (20)	
Aroclor 1242 [2C]		0.0			RSD (20)	
Aroclor-1242 (1) [2C]		0.0			RSD (20)	
Aroclor-1242 (2) [2C]		0.0			RSD (20)	
Aroclor-1242 (3) [2C]		0.0			RSD (20)	
Aroclor-1242 (4) [2C]		0.0			RSD (20)	
Aroclor 1248 [2C]		0.0			RSD (20)	
Aroclor-1248 (1) [2C]		0.0			RSD (20)	
Aroclor-1248 (2) [2C]		0.0			RSD (20)	
Aroclor-1248 (3) [2C]		0.0			RSD (20)	
Aroclor-1248 (4) [2C]		0.0			RSD (20)	
Aroclor 1254 [2C]		0.0			RSD (20)	
Aroclor-1254 (1) [2C]		0.0			RSD (20)	
Aroclor-1254 (2) [2C]		0.0			RSD (20)	
Aroclor-1254 (3) [2C]		0.0			RSD (20)	
Aroclor-1254 (4) [2C]		0.0			RSD (20)	
Aroclor-1254 (5) [2C]		0.0			RSD (20)	
Aroclor 1260 [2C]	6.996878E-02	6.4			RSD (20)	

INITIAL CALIBRATION DATA

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GB00069	Instrument:	ECD7
Calibration Date:	02/24/2023	Column (2):	ZB35

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
Aroclor-1260 (1) [2C]	4.704064E-02	8.4			RSD (20)	
Aroclor-1260 (2) [2C]	0.1200523	7.6			RSD (20)	
Aroclor-1260 (3) [2C]	3.185902E-02	6.0			RSD (20)	
Aroclor-1260 (4) [2C]	8.092314E-02	5.1			RSD (20)	
Aroclor 1262 [2C]		0.0			RSD (20)	
Aroclor-1262 (1) [2C]		0.0			RSD (20)	
Aroclor-1262 (2) [2C]		0.0			RSD (20)	
Aroclor-1262 (3) [2C]		0.0			RSD (20)	
Aroclor-1262 (4) [2C]		0.0			RSD (20)	
Aroclor 1268 [2C]		0.0			RSD (20)	
Aroclor-1268 (1) [2C]		0.0			RSD (20)	
Aroclor-1268 (2) [2C]		0.0			RSD (20)	
Aroclor-1268 (3) [2C]		0.0			RSD (20)	
Aroclor-1268 (4) [2C]		0.0			RSD (20)	
Decachlorobiphenyl [2C]	1.218271	3.9			RSD (20)	
Tetrachlorometaxylene [2C]	1.173721	3.9			RSD (20)	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0342

Instrument: ECD7
Calibration ID: GB00069

Printed: 2/28/2023 9:54:44AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0342-CAL1	QC		1		L000856	L000844		
SLB0342-CAL2	QC		2		L000859	L000844		
SLB0342-CAL3	QC		3		L000858	L000844		
SLB0342-CAL4	QC		4		L000731	L000844		
SLB0342-CAL5	QC		5		L000857	L000844		
SLB0342-CAL6	QC		6		L000855	L000844		
SLB0342-CAL7	QC		7		L000860	L000844		
SLB0342-CAL8	QC		8		L000861	L000844		
SLB0342-CAL9	QC		9		L000862	L000844		
SLB0342-CALA	QC		10		L000863	L000844		
SLB0342-CALB	QC		11		L000864	L000844		
SLB0342-SCV1	QC		12		L002065	L000844		
SLB0342-SCV2	QC		13		K007656	L000844		
SLB0342-SCV3	QC		14		L002066	L000844		
SLB0342-SCV4	QC		15		L002067	L000844		
SLB0342-SCV5	QC		16		L002068	L000844		
SLB0342-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-FEB-2023 10:51	02242301ECD7.D	1	IB	
2	24-FEB-2023 11:12	02242302ECD7.D	1	0.25PPMAR1660	
3	24-FEB-2023 11:33	02242303ECD7.D	1	0.02PPMAR1660	
4	24-FEB-2023 11:54	02242304ECD7.D	1	0.05PPMAR1660	
5	24-FEB-2023 12:15	02242305ECD7.D	1	1.0PPMAR1660	
6	24-FEB-2023 12:36	02242306ECD7.D	1	0.1PPMAR1660	
7	24-FEB-2023 12:57	02242307ECD7.D	1	0.5PPMAR1660	
8	24-FEB-2023 13:18	02242308ECD7.D	1	0.25PPMAR1242	
9	24-FEB-2023 13:39	02242309ECD7.D	1	0.25PPMAR1248	
10	24-FEB-2023 14:00	02242310ECD7.D	1	0.25PPMAR1254	
11	24-FEB-2023 14:21	02242311ECD7.D	1	0.25PPMAR2162	
12	24-FEB-2023 14:42	02242312ECD7.D	1	0.25PPMAR3268	
13	24-FEB-2023 15:03	02242313ECD7.D	1	AR1660SCV	
14	24-FEB-2023 15:24	02242314ECD7.D	1	AR1242SCV	
15	24-FEB-2023 15:45	02242315ECD7.D	1	AR1248SCV	
16	24-FEB-2023 16:06	02242316ECD7.D	1	AR1254SCV	
17	24-FEB-2023 16:27	02242317ECD7.D	1	AR2162SCV	
18	24-FEB-2023 16:48	02242318ECD7.D	1	AR3268SCV	
19	24-FEB-2023 17:09	02242319ECD7.D	1	DDTS	
20	24-FEB-2023 17:30	02242320ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2039	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2038	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION

Security Status Report

Date: 28-Feb-2023 09:27

02242301ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242302ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242303ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242304ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242305ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242306ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242307ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242308ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242309ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242310ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242311ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242312ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242313ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242314ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242315ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242316ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242317ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242318ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242319ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27
02242320ECD7.D	Data Locked	richardl, 28-Feb-2023 09:27

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00716	0.00716	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01281	0.01281	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02975	0.02975	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02479	0.02479	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07529	0.07529	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02343	0.02343	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03463	0.03463	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00429	0.00429	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.00850							0.00850	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.03848							0.03848	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.01635							0.01635	0.000
7 Aroclor-1016(1)	0.03172	0.03253	0.03142	0.03141	0.02856	0.02667			
	*****							0.03039	7.449
(2)	0.09239	0.09246	0.09222	0.09849	0.09174	0.08849			
	*****							0.09263	3.499
(3)	0.05165	0.05037	0.04823	0.04393	0.03991	0.03721			
	*****							0.04522	12.936
(4)	0.03002	0.02894	0.02959	0.03058	0.02852	0.02774			
	*****							0.02923	3.542
6 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****			
	0.03903							0.03903	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.04961							0.04961	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.09360							0.09360	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.04765							0.04765	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08033	0.08033	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03613	0.03613	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05165	0.05165	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10042	0.10042	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06294	0.06294	0.000
9 Aroclor-1260(1)	0.02926	0.02920	0.02841	0.03096	0.02737	0.02746	+++++	0.02878	4.677
(2)	0.02967	0.03006	0.03011	0.03291	0.02910	0.02857	+++++	0.03007	5.029
(3)	0.08088	0.08045	0.07954	0.08575	0.07515	0.07674	+++++	0.07975	4.627
(4)	0.03905	0.03887	0.03955	0.04485	0.03942	0.03922	+++++	0.04016	5.753
(5)	0.01783	0.01715	0.01679	0.01875	0.01664	0.01655	+++++	0.01729	4.953
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02454	0.02454	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.03993							0.03993	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.04293							0.04293	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.03923							0.03923	0.000
11 Aroclor-1268(1)	*****	*****	*****	*****	*****	*****			
	0.10250							0.10250	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.10151							0.10151	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.08686							0.08686	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.28598							0.28598	0.000
42 2,4-DDE	*****	*****	*****	*****	*****	*****			
	*****							*****	*****
43 2,4-DDD	*****	*****	*****	*****	*****	*****			
	*****							*****	*****
44 2,4-DDT	*****	*****	*****	*****	*****	*****			
	*****							*****	*****
46 4,4-DDE	*****	*****	*****	*****	*****	*****			
	*****							*****	*****

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.16827	1.24402	1.18546	1.20509	1.12295	1.24114	+++++	1.19449	3.860
$ 13 Decachlorobiphenyl	0.82901	0.80558	0.77587	0.78808	0.73125	0.79742	+++++	0.78787	4.189

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00757	0.00757	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01433	0.01433	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02333	0.02333	0.000
4 Aroclor-1232 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00409	0.00409	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.02034	0.02034	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04067	0.04067	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.01170	0.01170	0.000
3 Aroclor-1242 [2C](1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03717	0.03717	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.07813							0.07813	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.02431							0.02431	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.02962							0.02962	0.000
6 Aroclor-1248 [2C](1)	*****	*****	*****	*****	*****	*****			
	0.03820							0.03820	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.03949							0.03949	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.04545							0.04545	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.05457							0.05457	0.000
7 Aroclor-1016 [2C](1)	0.05071	0.05022	0.04868	0.04733	0.04326	0.04080			
	*****							0.04683	8.503
(2)	0.08143	0.09407	0.10159	0.10259	0.09651	0.09362			
	*****							0.09497	8.025
(3)	0.04006	0.04718	0.04613	0.04410	0.04062	0.03926			
	*****							0.04289	7.857
(4)	0.03181	0.03802	0.03707	0.03450	0.03115	0.02936			
	*****							0.03365	10.251

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****	0.06081	0.06081	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04892	0.04892	0.000
(3)	*****	*****	*****	*****	*****	*****	0.10584	0.10584	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10317	0.10317	0.000
(5)	*****	*****	*****	*****	*****	*****	0.06282	0.06282	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****	0.06831	0.06831	0.000
(2)	*****	*****	*****	*****	*****	*****	0.05818	0.05818	0.000
(3)	*****	*****	*****	*****	*****	*****	0.06601	0.06601	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10341	0.10341	0.000
9 Aroclor-1260 [2C](1)	0.05286	0.04911	0.04696	0.04801	0.04329	0.04201	*****	0.04704	8.422
(2)	0.12976	0.12431	0.12095	0.12664	0.11320	0.10545	*****	0.12005	7.605

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(3)	0.03524	0.03147	0.02937	0.03208	0.03102	0.03198	#####	0.03186	6.045
(4)	0.08632	0.08237	0.08044	0.08393	0.07718	0.07531	#####	0.08092	5.126
11 Aroclor-1268 [2C](1)	#####	#####	#####	#####	#####	#####	0.16109	0.16109	0.000
(2)	#####	#####	#####	#####	#####	#####	0.17318	0.17318	0.000
(3)	#####	#####	#####	#####	#####	#####	0.14787	0.14787	0.000
(4)	#####	#####	#####	#####	#####	#####	0.47260	0.47260	0.000
41 2,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
42 2,4-DDD [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
44 4,4-DDE [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
45 4,4-DDD/2,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####
46 4,4-DDT [2C]	#####	#####	#####	#####	#####	#####	#####	#####	#####

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.21526	1.19545	1.17555	1.21907	1.12560	1.11139	+++++	1.17372	3.897
$ 13 Decachlorobiphenyl [2C]	1.17066	1.20406	1.20549	1.31040	1.21104	1.20797	+++++	1.21827	3.898

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.491	3.491	3.493	3.393-3.593	3.492	0.001
$ 1 Tetrachloro-m-xylene	5.811	5.809	5.809	5.813	5.809	5.810	5.811	5.711-5.911	5.810	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.269	7.169-7.369	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.272	7.270	7.271	7.270	7.272	7.172-7.372	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.403	8.303-8.503	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.295	9.195-9.395	+++++	+++++
9 Aroclor-1260	11.046	11.047	11.046	11.044	11.045	11.044	11.046	10.946-11.146	11.045	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.824	10.724-10.924	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.243	12.143-12.343	+++++	+++++
$ 13 Decachlorobiphenyl	13.897	13.893	13.893	13.899	13.892	13.898	13.897	13.797-13.997	13.895	0.003
* 12 IS-HBBP	14.269	14.268	14.268	14.267	14.268	14.268	14.269	14.169-14.369	14.268	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.260	9.210-9.310	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.801	9.751-9.851	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.683	9.583-9.783	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.254	10.154-10.354	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.754	10.654-10.854	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.928	3.828-4.028	3.929	0.000
$ 2 Tetrachloro-m-xylene [	5.687	5.688	5.688	5.688	5.688	5.688	5.687	5.587-5.787	5.688	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.858-5.058	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.859-5.059	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.254	7.154-7.354	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.256	7.256	7.254	7.255	7.256	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.447	9.347-9.547	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.198	11.098-11.298	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.656	11.655	11.652	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.431	12.331-12.531	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.120	14.119	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.008	15.008	15.007	15.008	15.008	14.908-15.108	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.861-9.961	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.536	9.486-9.586	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.209	10.109-10.309	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.667	10.567-10.767	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.092	10.992-11.192	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242301ECD7.D
Data file 2: /230224.b/230224.b/02242301ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-FEB-2023 10:51
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.826	0.019	382217	5.683	-0.002	180378	33.8	36.5	7.7	Tetrachloro-m-xylene
13.904	0.011	534110	14.120	0.001	295605	35.3	37.2	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	756896	12.3
Hexabromobiphenyl	1429847	1534275	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	336543	6.8
Hexabromobiphenyl	513946	521508	1.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.321	0.025	1873	31.1
Aroclor-1221	3	---			0.0	3	6.633	0.012	314	3.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	7.698	0.043	2193	6.0	3	---			0.0
Aroclor-1232	4	8.505	-0.076	11525	74.5	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	7.698	0.042	2193	3.1	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	8.505	-0.074	11525	35.2	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.596	-0.072	31424	64.3	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	10.167	-0.010	18361	30.8	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.098	0.054	6994	12.7	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	11.706	-0.027	7806	5.1	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.824	-0.005	16873	35.8	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	13.040	0.053	14031	18.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.709	0.009	6037	3.6	3	12.891	-0.001	659	0.7
Aroclor-1268	4	13.499	0.010	12396	2.3	4	13.710	0.001	1848	0.6
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.906 - 13.793) = 260205 Col1 Total PCB = 0.0 ppm*

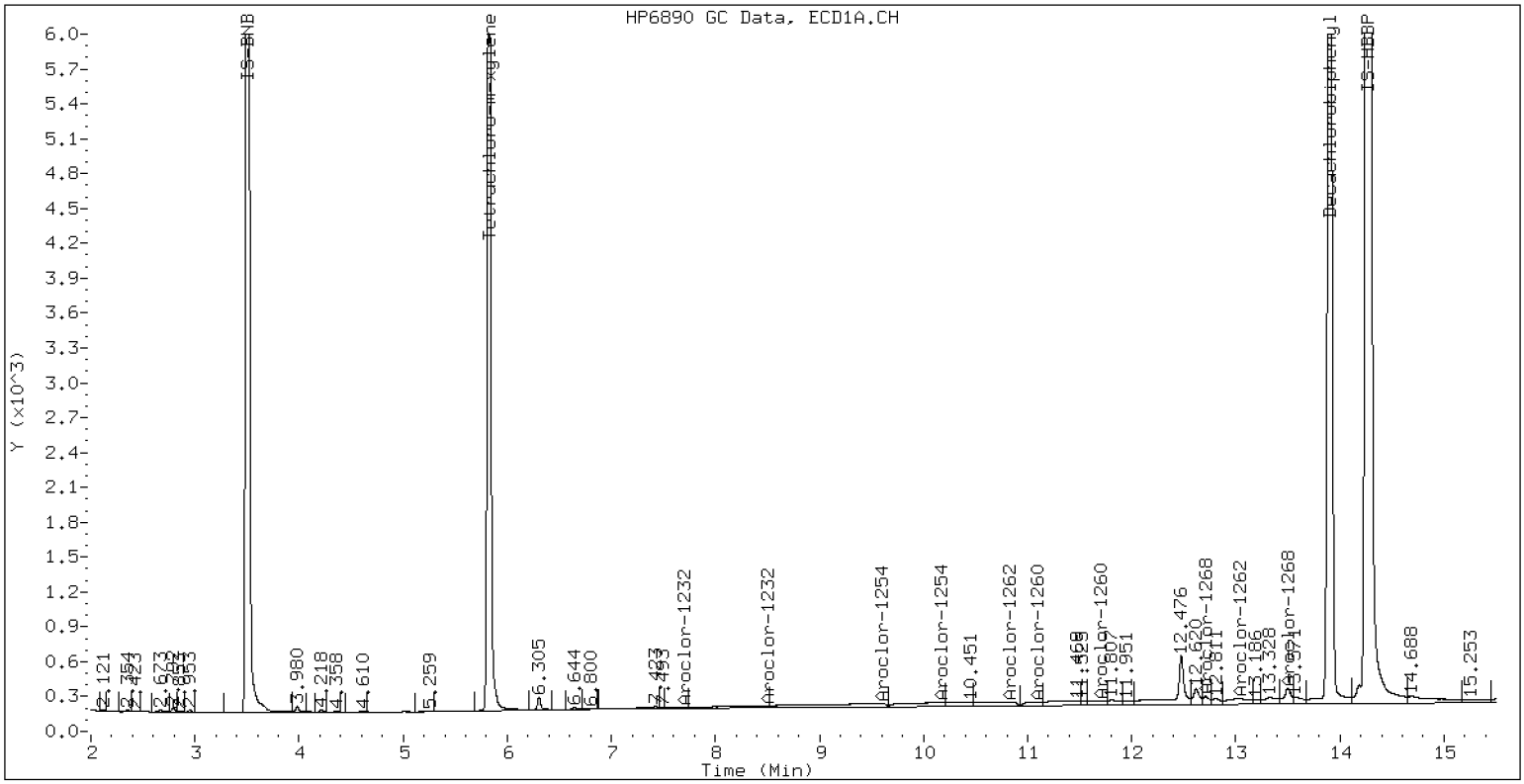
Total PCB Area Col2 (5.785 - 14.019) = 18252 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

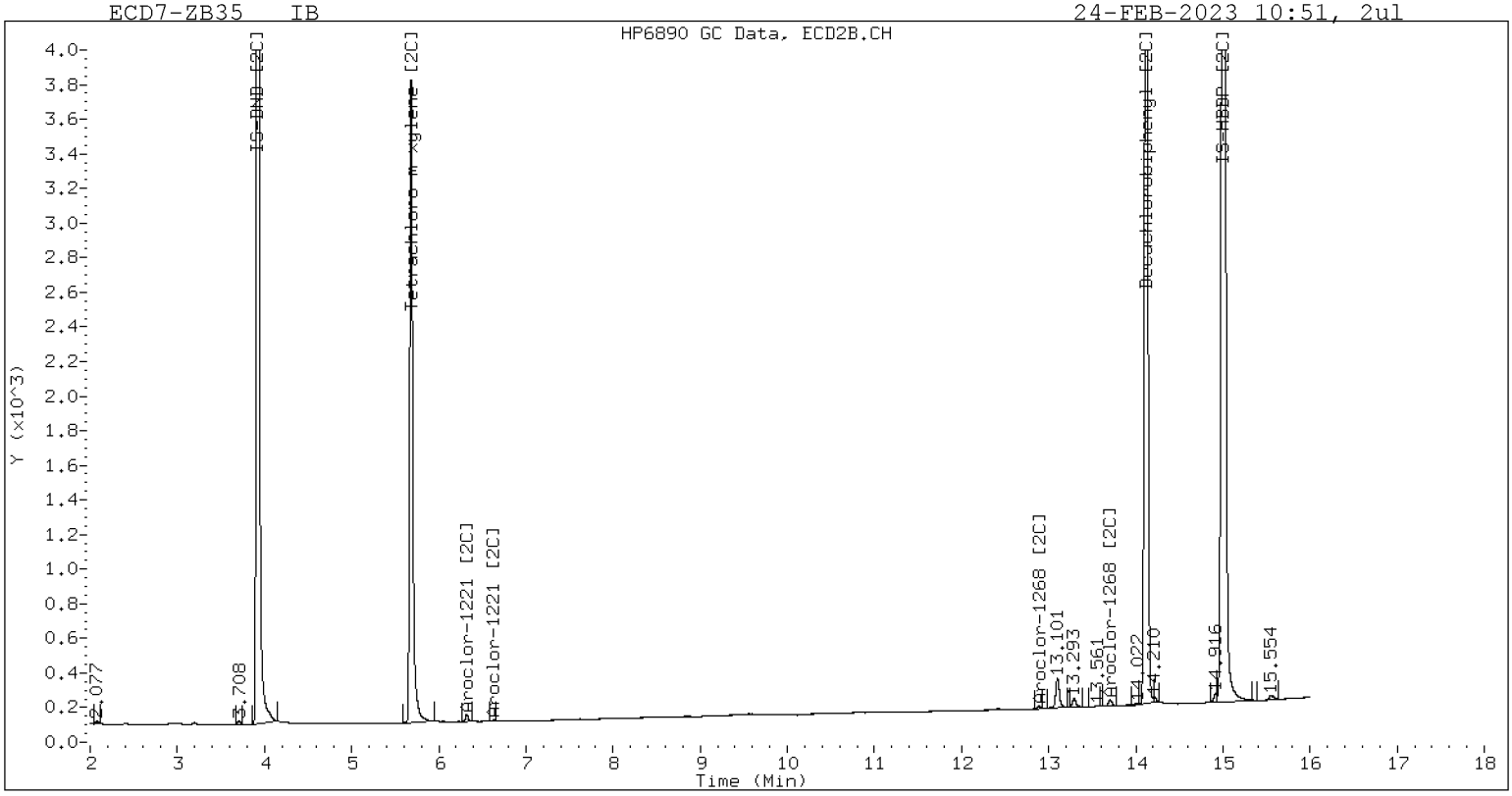
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-FEB-2023 10:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-FEB-2023 10:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242302ECD7.D
Data file 2: /230224.b/230224.b/02242302ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:12
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.811	0.005	405980	5.687	0.002	192160	40.4	41.5	2.9	Tetrachloro-m-xylene
13.897	0.004	563414	14.120	0.001	336737	40.0	43.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	673778	0.0
Hexabromobiphenyl	1429847	1429847	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	315256	0.0
Hexabromobiphenyl	513946	513946	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.272	0.001	66125	258.4	1	7.255	-0.001	46626	252.6
Aroclor-1016	2	7.654	-0.000	207370	265.8	2	7.855	-0.001	101071	270.1
Aroclor-1016	3	7.792	0.002	92507	242.9	3	8.055	0.001	43448	257.1
Aroclor-1016	4	8.406	0.001	64388	261.5	4	8.306	-0.000	33986	256.3
	Total Col1Ave (4 peaks):				257.2	Total Col2Ave (4 peaks):				259.0 RPD = 1
	Corrected Ave (3 peaks):				254.3	Corrected Ave (3 peaks):				255.3 RPD = 0
			CalAmt %D:		2.9			CalAmt %D:		3.6
Aroclor-1260	1	11.046	0.001	138355	269.0	1	11.653	0.001	77114	255.2
Aroclor-1260	2	11.363	0.002	147051	273.6	2	11.918	0.001	203401	263.7
Aroclor-1260	3	11.736	0.003	383171	268.8	3	12.435	-0.000	51517	251.7
Aroclor-1260	4	12.141	0.002	200399	279.2	4	12.502	0.001	134797	259.3
Aroclor-1260	5	12.247	0.003	83796	271.2	NS	---			----
	Total Col1Ave (5 peaks):				272.4	Total Col2Ave (4 peaks):				257.5 RPD = 6
	Corrected Ave (4 peaks):				270.7	Corrected Ave (3 peaks):				255.4 RPD = 6
			CalAmt %D:		8.9			CalAmt %D:		3.0

Total PCB Area Col1 (5.906 - 13.793) = 4024419 Col1 Total PCB = 0.5 ppm*

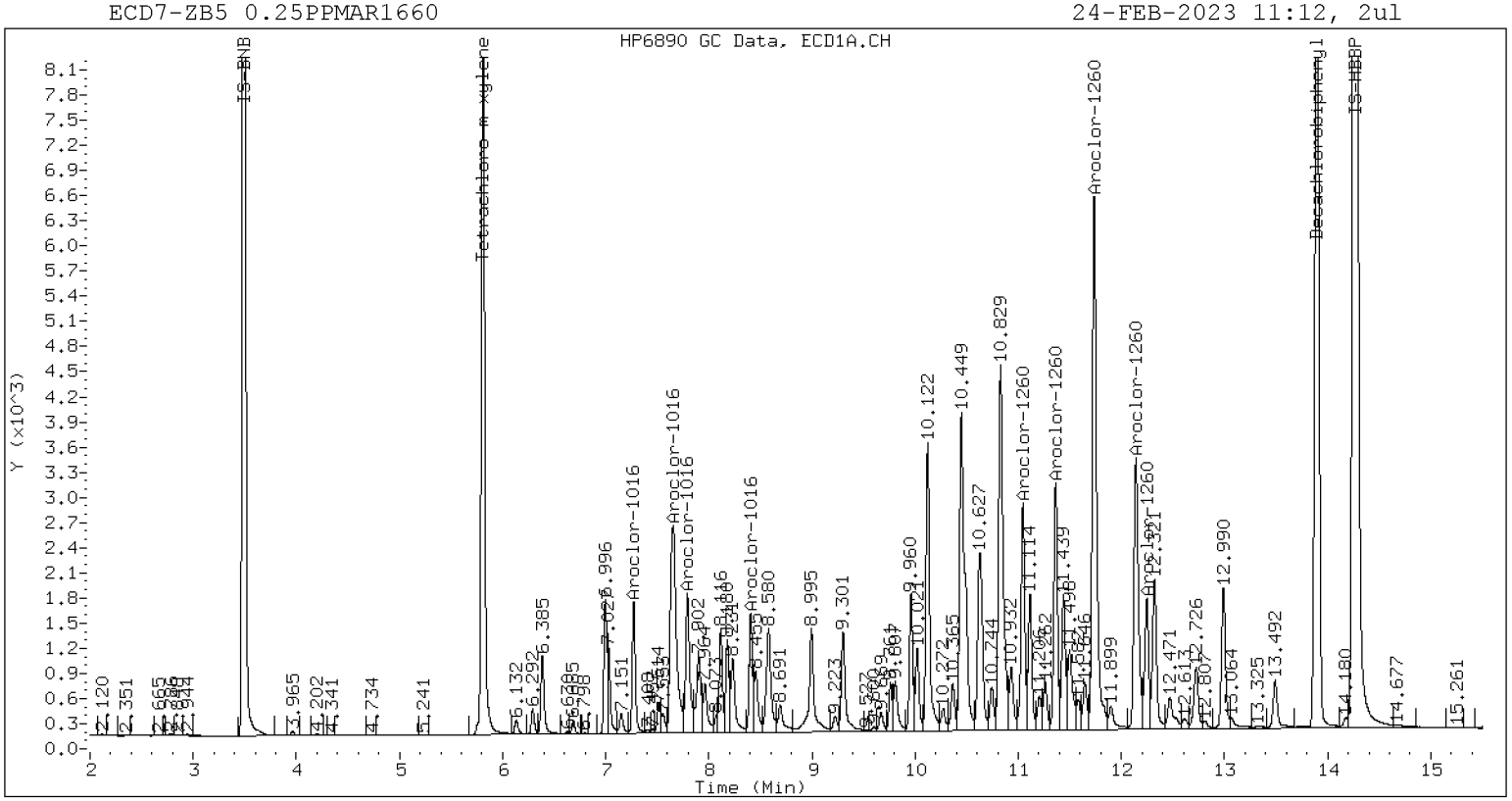
Total PCB Area Col2 (5.785 - 14.019) = 1889311 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

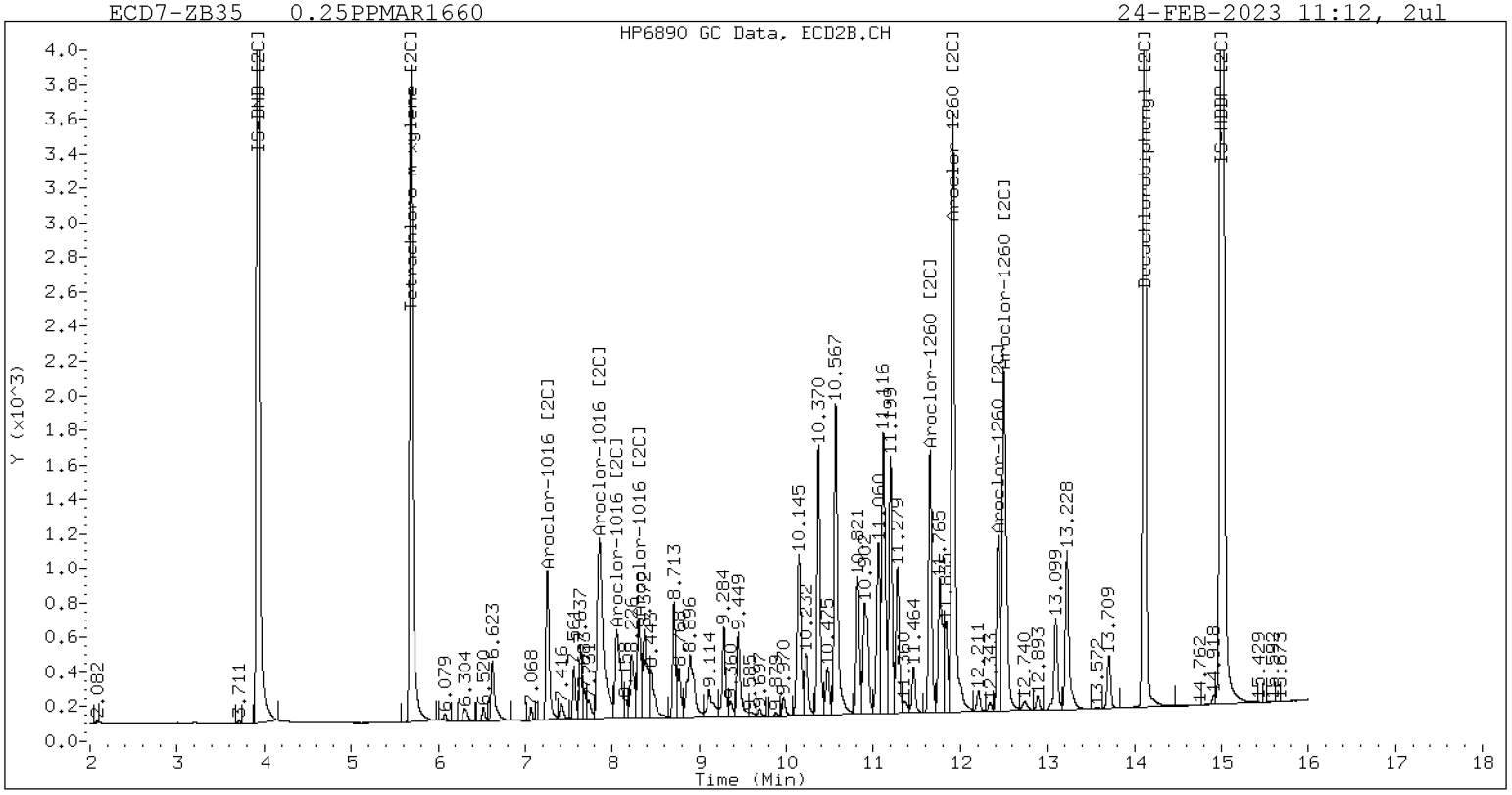
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242303ECD7.D
Data file 2: /230224.b/230224.b/02242303ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:33
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	29768	5.688	0.003	14932	3.1	3.3	5.7	Tetrachloro-m-xylene
13.893	0.000	45992	14.120	0.000	23950	3.4	3.1	9.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	637010	-5.5
Hexabromobiphenyl	1429847	1386953	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307177	-2.6
Hexabromobiphenyl	513946	511463	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.001	5052	20.9	1	7.256	0.000	3894	21.7
Aroclor-1016	2	7.659	0.005	14714	19.9	2	7.864	0.008	6253	17.1
Aroclor-1016	3	7.795	0.005	8226	22.8	3	8.060	0.006	3076	18.7
Aroclor-1016	4	8.407	0.002	4780	20.5	4	8.309	0.002	2443	18.9
Total Col1Ave (4 peaks):					21.1	Total Col2Ave (4 peaks):				19.1 RPD = 10
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				18.2 RPD = 11
CalAmt %D:					5.3	CalAmt %D:				-4.5
Aroclor-1260	1	11.047	0.003	10147	20.3	1	11.656	0.003	6759	22.5
Aroclor-1260	2	11.364	0.003	10287	19.7	2	11.922	0.005	16592	21.6
Aroclor-1260	3	11.740	0.006	28043	20.3	3	12.438	0.002	4506	22.1
Aroclor-1260	4	12.145	0.006	13540	19.4	4	12.505	0.004	11037	21.3
Aroclor-1260	5	12.246	0.002	6182	20.6	NS	---			----
Total Col1Ave (5 peaks):					20.1	Total Col2Ave (4 peaks):				21.9 RPD = 9
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.7 RPD = 8
CalAmt %D:					0.4	CalAmt %D:				9.4

Total PCB Area Col1 (5.906 - 13.793) = 324832 Col1 Total PCB = 0.0 ppm*

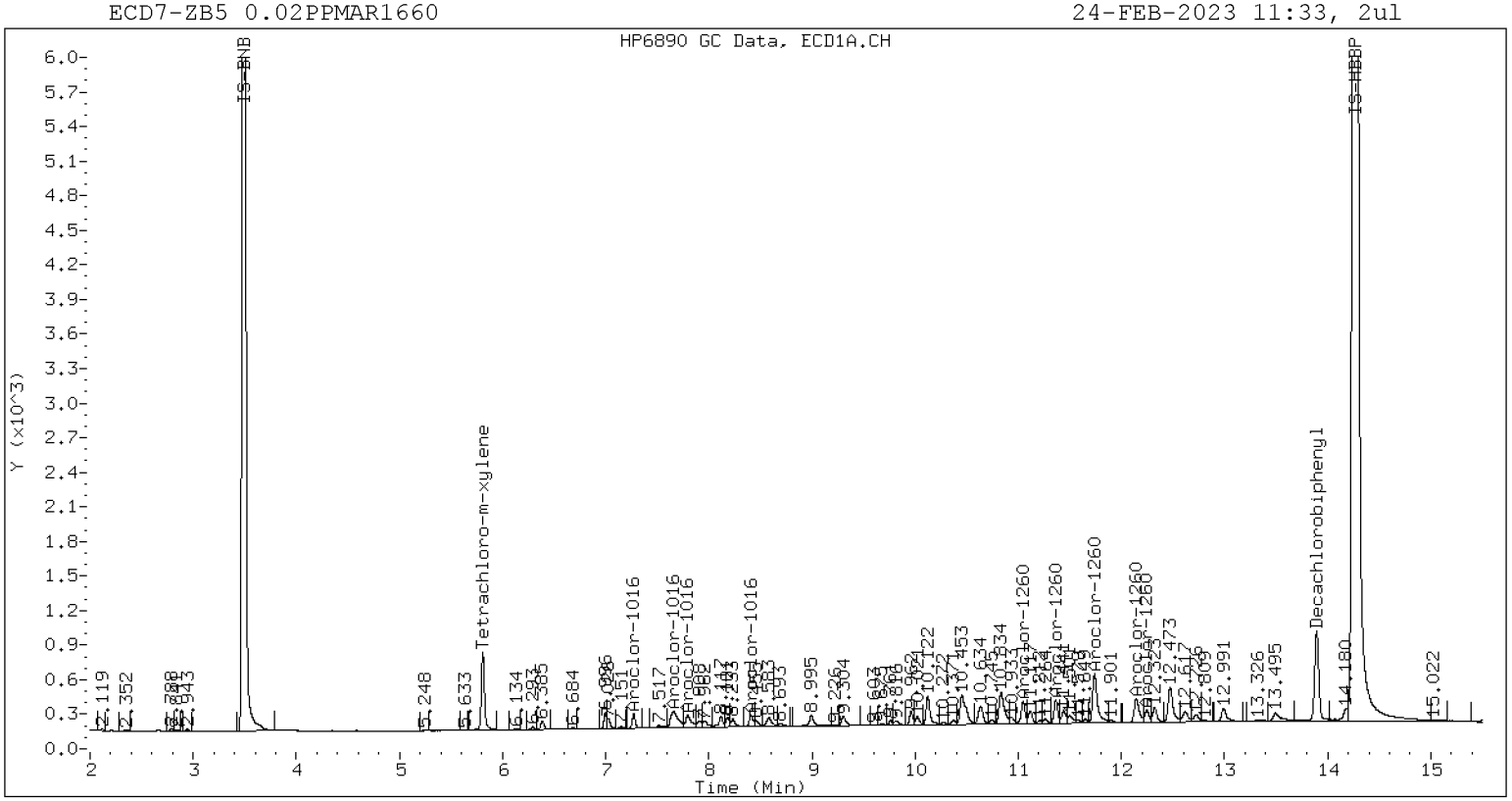
Total PCB Area Col2 (5.785 - 14.019) = 157149 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

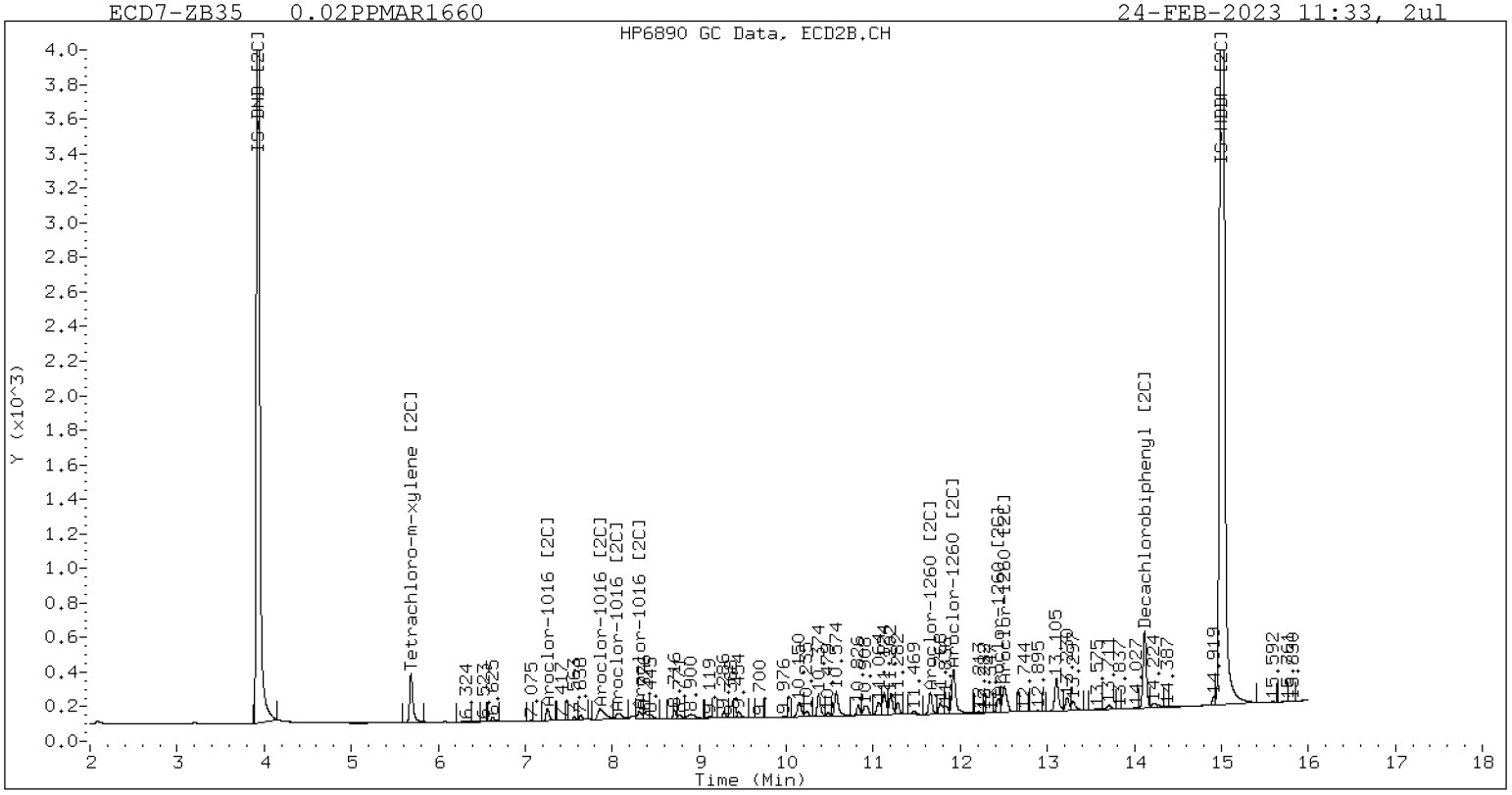
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 24-FEB-2023 11:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 24-FEB-2023 11:33, 2ul

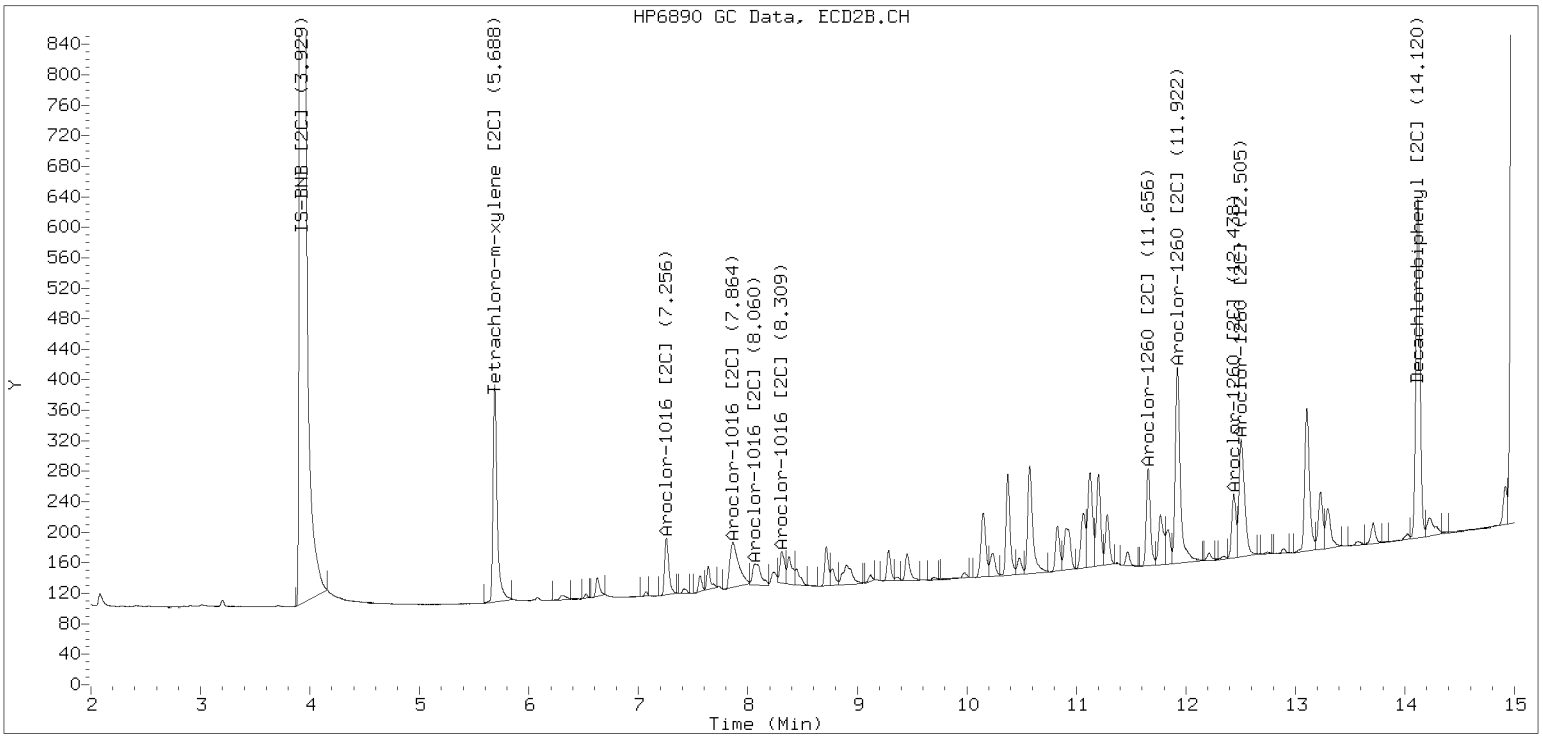


ZB-35 Manual Integration: YES

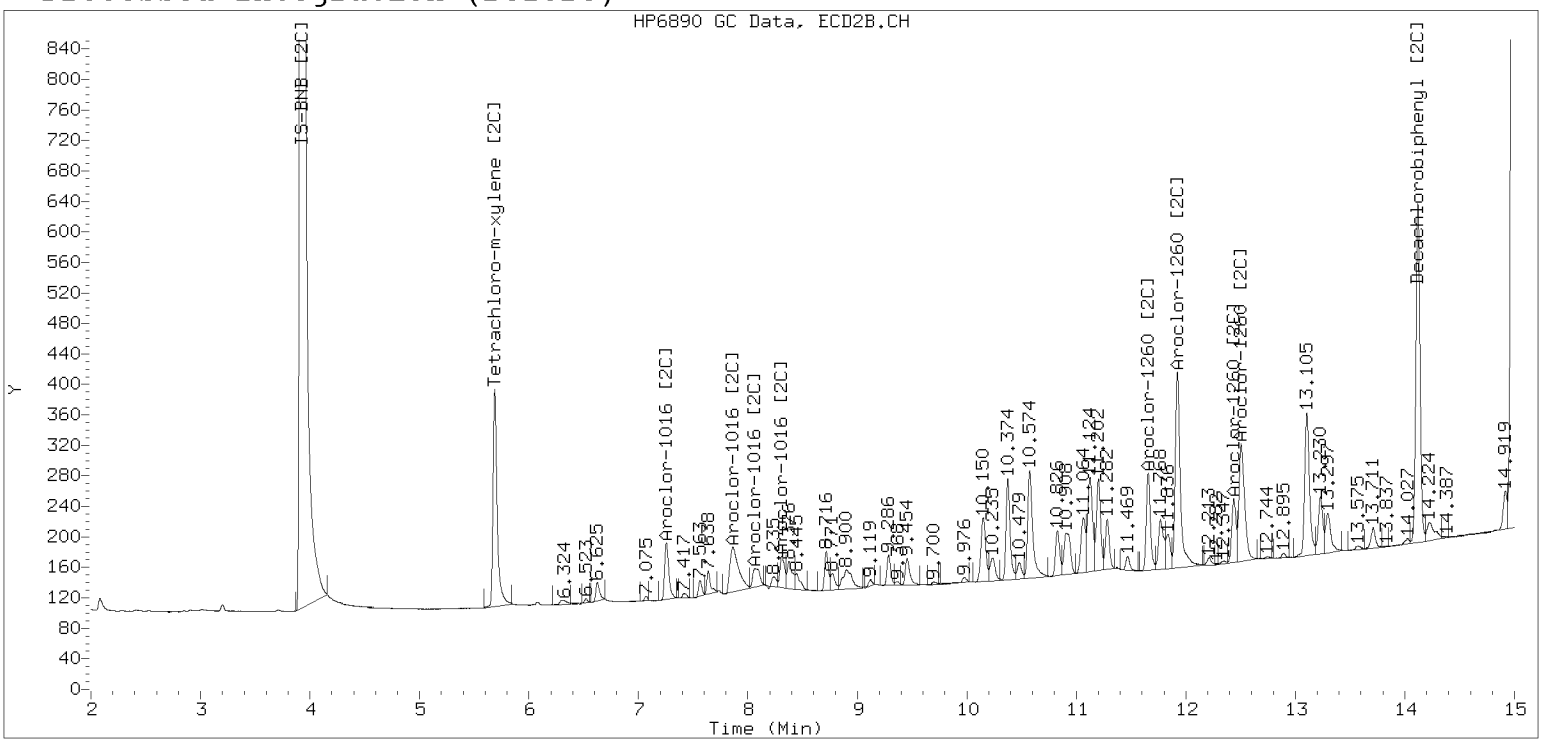
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230224.b/230224.b/02242303ECD7.D Injection Date: 24-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242304ECD7.D
Data file 2: /230224.b/230224.b/02242304ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:54
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	78493	5.688	0.003	36772	8.3	8.1	2.2	Tetrachloro-m-xylene
13.893	-0.000	113544	14.119	-0.000	62745	8.2	7.9	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	630965	-6.4
Hexabromobiphenyl	1429847	1409464	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307599	-2.4
Hexabromobiphenyl	513946	521112	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	7.272	0.002	12829	53.5	1	7.256	0.000	9654	53.6
Aroclor-1016	2	7.660	0.006	36461	49.9	2	7.864	0.008	18085	49.5
Aroclor-1016	3	7.795	0.005	19865	55.7	3	8.063	0.008	9071	55.0
Aroclor-1016	4	8.408	0.003	11411	49.5	4	8.310	0.003	7309	56.5
Total Col1Ave (4 peaks):					52.2	Total Col2Ave (4 peaks):				53.7 RPD = 3
Corrected Ave (3 peaks):					51.0	Corrected Ave (3 peaks):				52.7 RPD = 3
CalAmt %D:					4.3	CalAmt %D:				7.3
Aroclor-1260	1	11.046	0.002	25727	50.7	1	11.655	0.002	15996	52.2
Aroclor-1260	2	11.363	0.002	26482	50.0	2	11.922	0.004	40487	51.8
Aroclor-1260	3	11.739	0.005	70871	50.4	3	12.437	0.002	10248	49.4
Aroclor-1260	4	12.143	0.004	34239	48.4	4	12.506	0.004	26828	50.9
Aroclor-1260	5	12.246	0.002	15109	49.6	NS	---			----
Total Col1Ave (5 peaks):					49.8	Total Col2Ave (4 peaks):				51.1 RPD = 2
Corrected Ave (4 peaks):					49.6	Corrected Ave (3 peaks):				50.7 RPD = 2
CalAmt %D:					-0.3	CalAmt %D:				2.1

Total PCB Area Col1 (5.906 - 13.793) = 758292 Col1 Total PCB = 0.1 ppm*

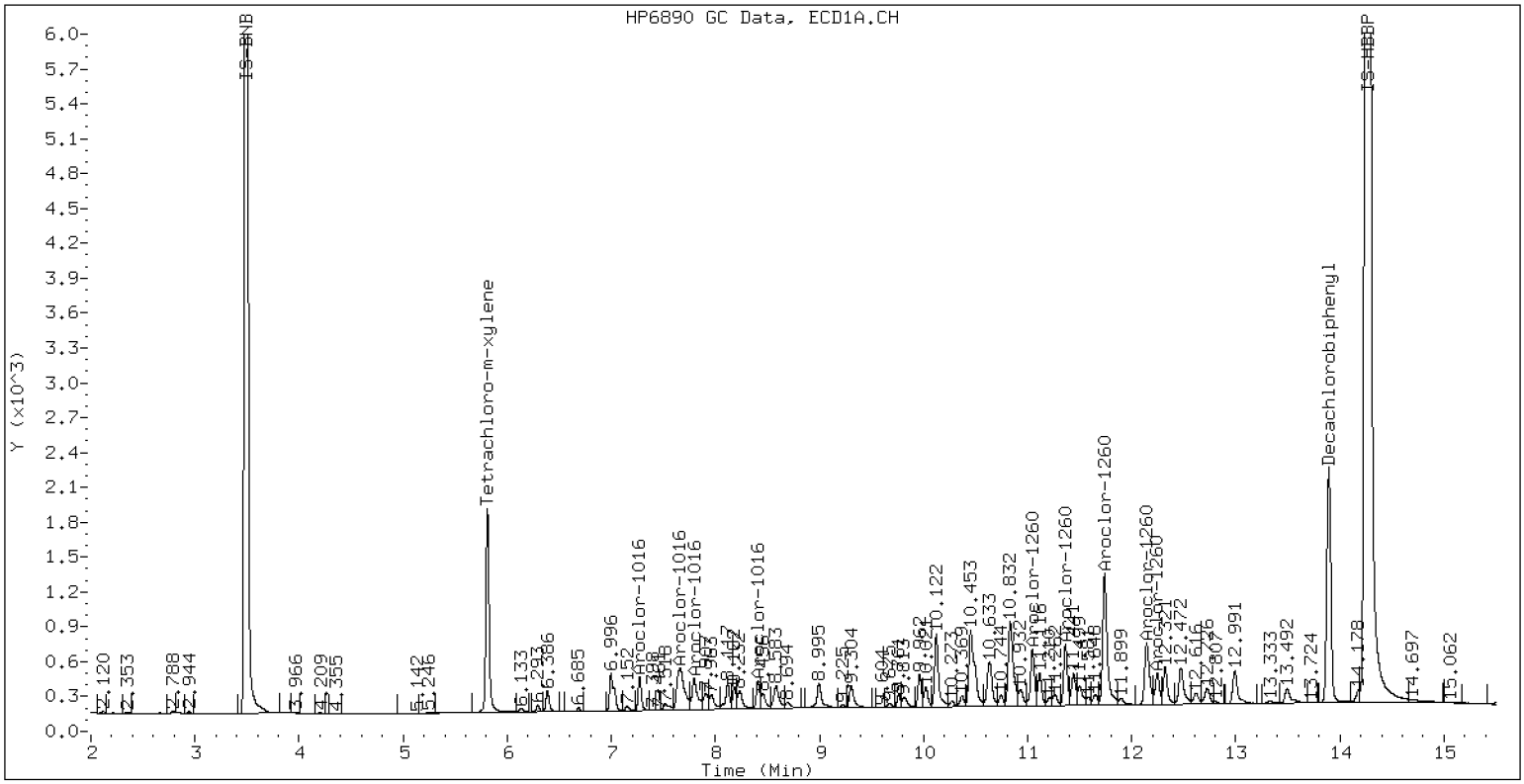
Total PCB Area Col2 (5.785 - 14.019) = 386383 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

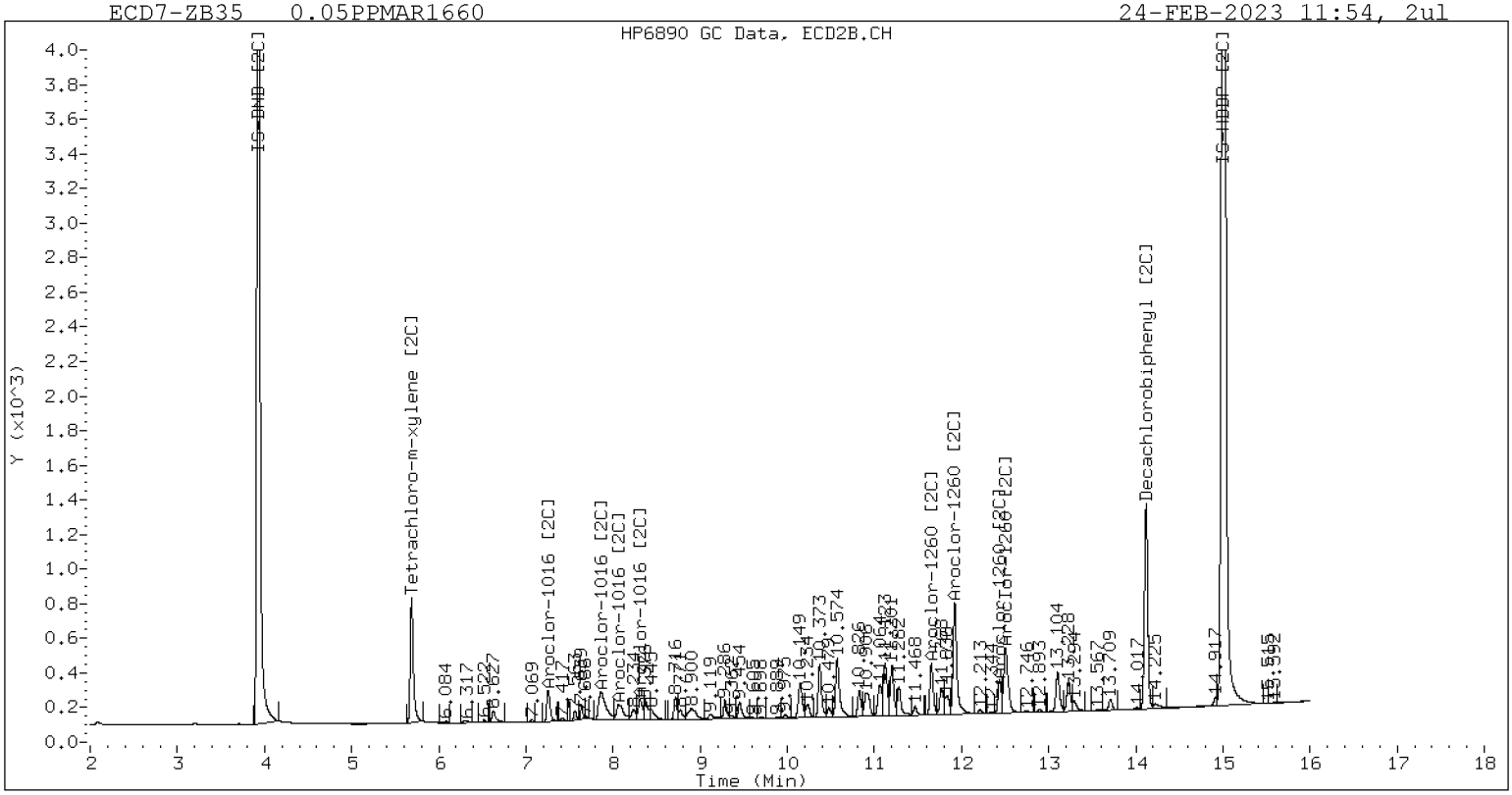
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242305ECD7.D
Data file 2: /230224.b/230224.b/02242305ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:15
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.813	0.006	1641874	5.688	0.003	709674	166.2	151.5	9.3	Tetrachloro-m-xylene
13.899	0.006	2344583	14.122	0.002	1300114	161.9	158.6	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661440	-1.8
Hexabromobiphenyl	1429847	1470100	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319272	1.3
Hexabromobiphenyl	513946	538138	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	220519	877.8	1	7.254	-0.001	162833	871.2
Aroclor-1016	2	7.652	-0.002	731607	955.3	2	7.852	-0.004	373610	985.8
Aroclor-1016	3	7.789	-0.001	307629	822.8	3	8.051	-0.003	156666	915.2
Aroclor-1016	4	8.404	-0.001	229387	949.1	4	8.305	-0.002	117186	872.6
Total Col1Ave (4 peaks):					901.3	Total Col2Ave (4 peaks):				911.2 RPD = 1
Corrected Ave (3 peaks):					883.3	Corrected Ave (3 peaks):				886.3 RPD = 0
CalAmt %D:					-9.9	CalAmt %D:				-8.9
Aroclor-1260	1	11.044	-0.000	504641	954.2	1	11.652	-0.000	282606	893.1
Aroclor-1260	2	11.360	-0.001	524931	950.0	2	11.917	-0.000	709329	878.4
Aroclor-1260	3	11.734	-0.000	1410270	962.3	3	12.434	-0.001	215124	1003.8
Aroclor-1260	4	12.137	-0.002	720770	976.7	4	12.501	-0.001	506566	930.6
Aroclor-1260	5	12.243	-0.001	304211	957.7	NS	---			----
Total Col1Ave (5 peaks):					960.2	Total Col2Ave (4 peaks):				926.5 RPD = 4
Corrected Ave (4 peaks):					956.0	Corrected Ave (3 peaks):				900.7 RPD = 6
CalAmt %D:					-4.0	CalAmt %D:				-7.4

Total PCB Area Col1 (5.906 - 13.793) = 14454279 Col1 Total PCB = 1.8 ppm*

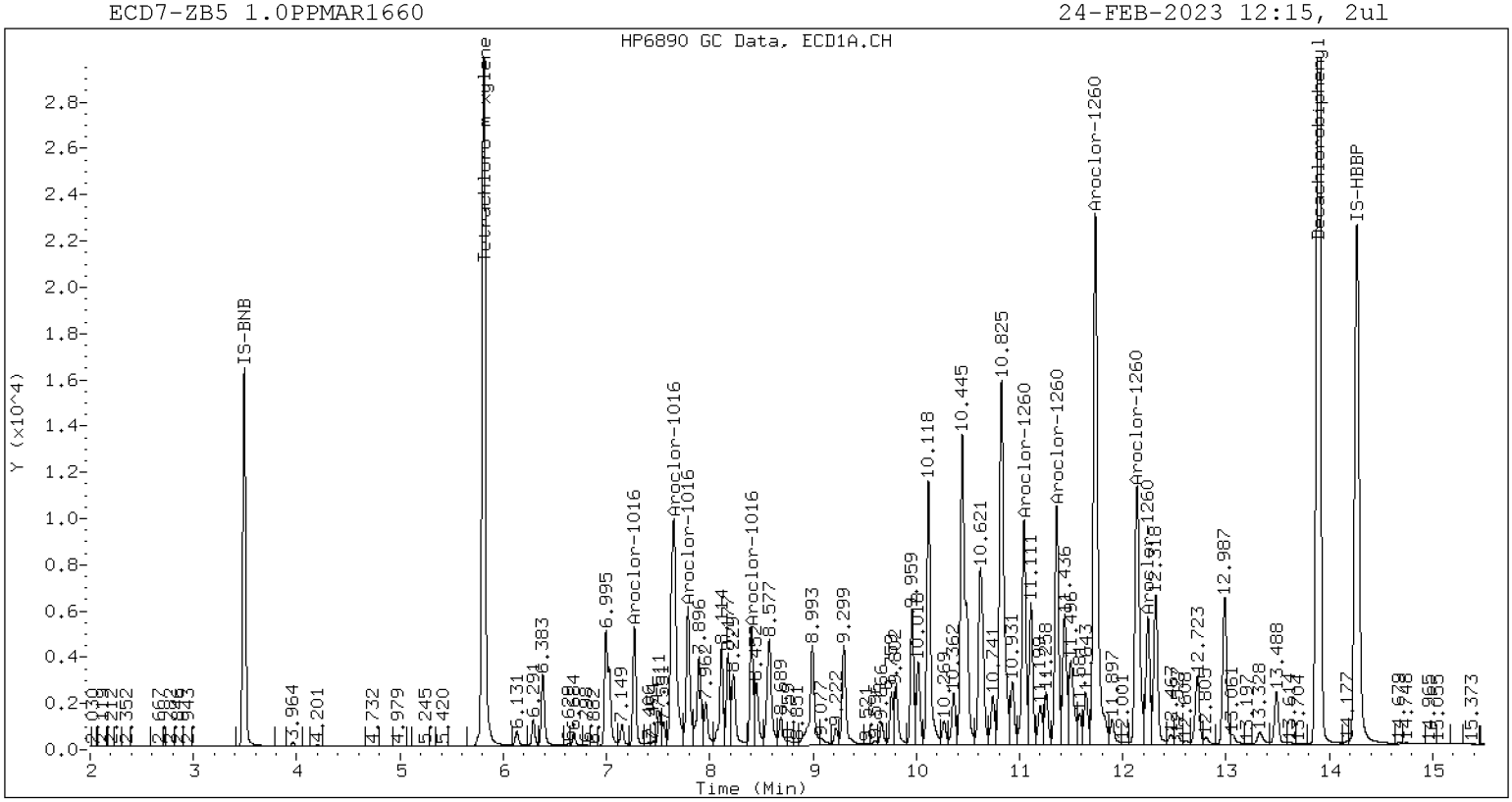
Total PCB Area Col2 (5.785 - 14.019) = 7029563 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

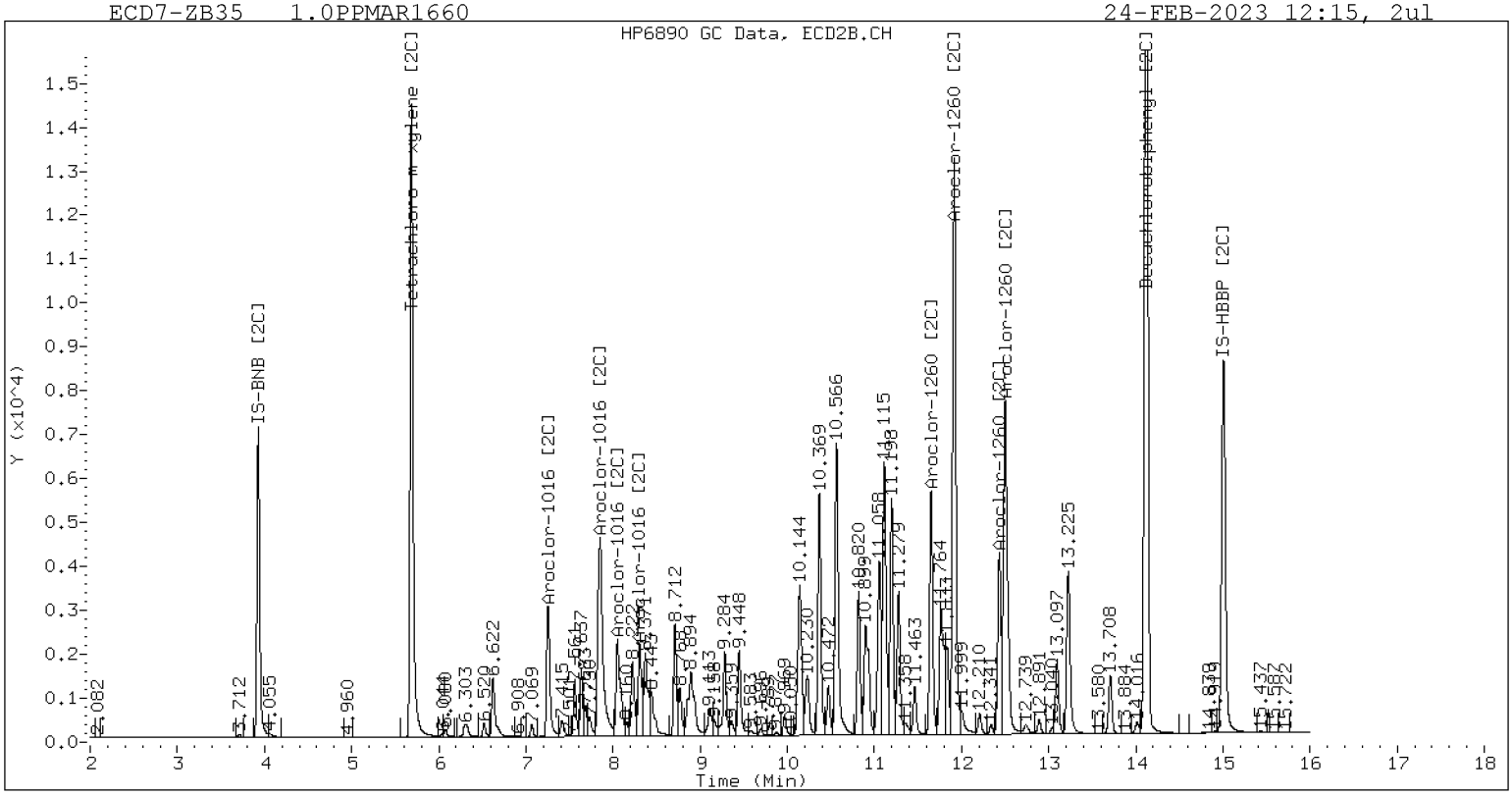
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242306ECD7.D
Data file 2: /230224.b/230224.b/02242306ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:36
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	155528	5.688	0.003	74628	15.9	16.0	0.9	Tetrachloro-m-xylene
13.892	-0.001	227253	14.119	-0.000	128496	15.8	15.8	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	655979	-2.6
Hexabromobiphenyl	1429847	1464509	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317418	0.7
Hexabromobiphenyl	513946	532962	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	25761	103.4	1	7.255	-0.000	19315	103.9
Aroclor-1016	2	7.657	0.003	75616	99.6	2	7.863	0.007	40308	107.0
Aroclor-1016	3	7.794	0.004	39547	106.7	3	8.059	0.005	18304	107.6
Aroclor-1016	4	8.406	0.001	24260	101.2	4	8.309	0.002	14708	110.2
Total Col1Ave (4 peaks):					102.7	Total Col2Ave (4 peaks):				107.2 RPD = 4
Corrected Ave (3 peaks):					101.4	Corrected Ave (3 peaks):				106.2 RPD = 5
CalAmt %D:					2.7	CalAmt %D:				7.2
Aroclor-1260	1	11.045	0.000	52009	98.7	1	11.655	0.002	31282	99.8
Aroclor-1260	2	11.362	0.001	55116	100.1	2	11.920	0.003	80574	100.7
Aroclor-1260	3	11.738	0.004	145604	99.7	3	12.437	0.002	19566	92.2
Aroclor-1260	4	12.141	0.002	72408	98.5	4	12.503	0.001	53588	99.4
Aroclor-1260	5	12.245	0.001	30745	97.2	NS	---			----
Total Col1Ave (5 peaks):					98.8	Total Col2Ave (4 peaks):				98.0 RPD = 1
Corrected Ave (4 peaks):					98.5	Corrected Ave (3 peaks):				97.1 RPD = 1
CalAmt %D:					-1.2	CalAmt %D:				-2.0

Total PCB Area Col1 (5.906 - 13.793) = 1555762 Col1 Total PCB = 0.2 ppm*

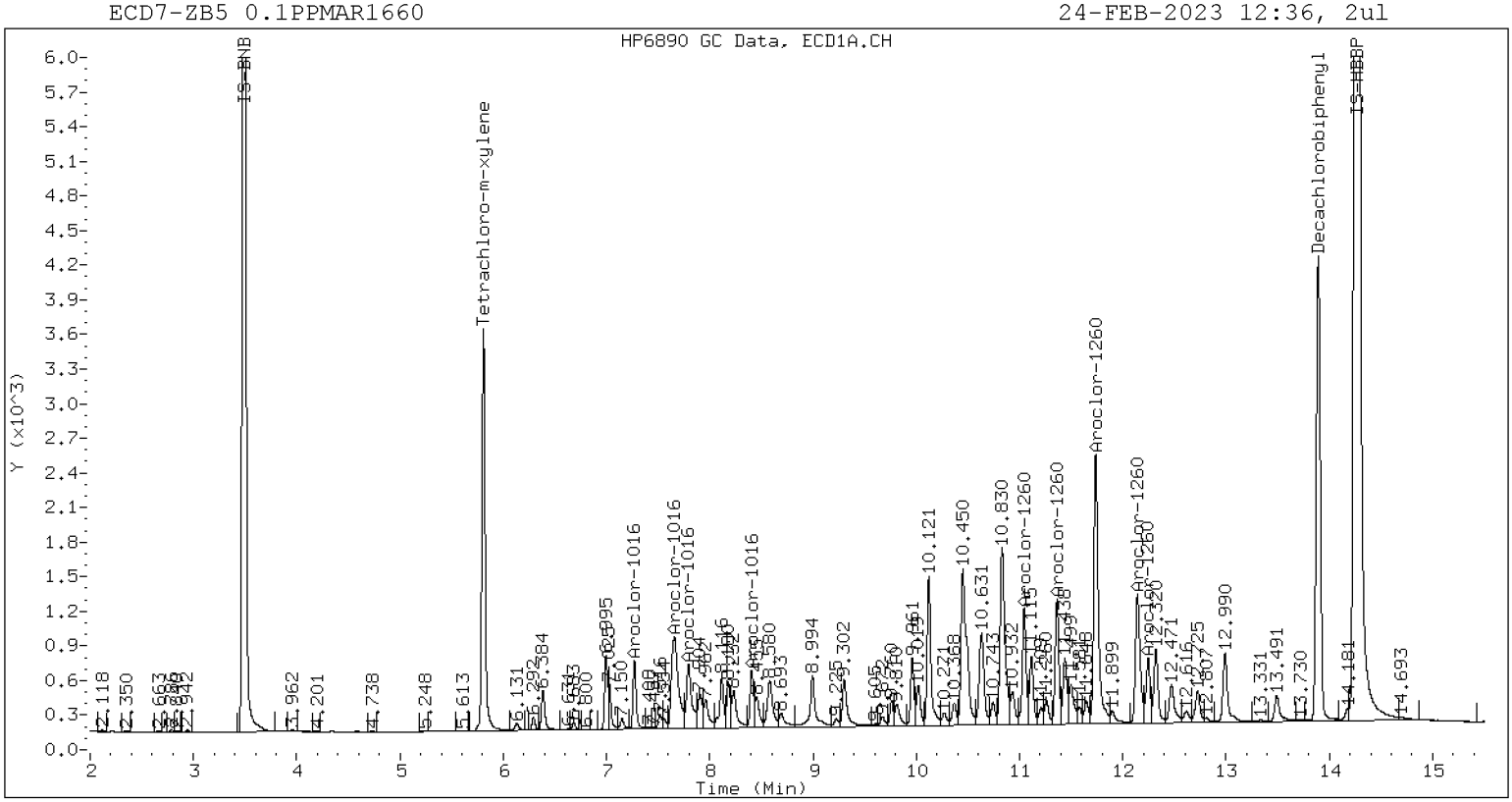
Total PCB Area Col2 (5.785 - 14.019) = 764924 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

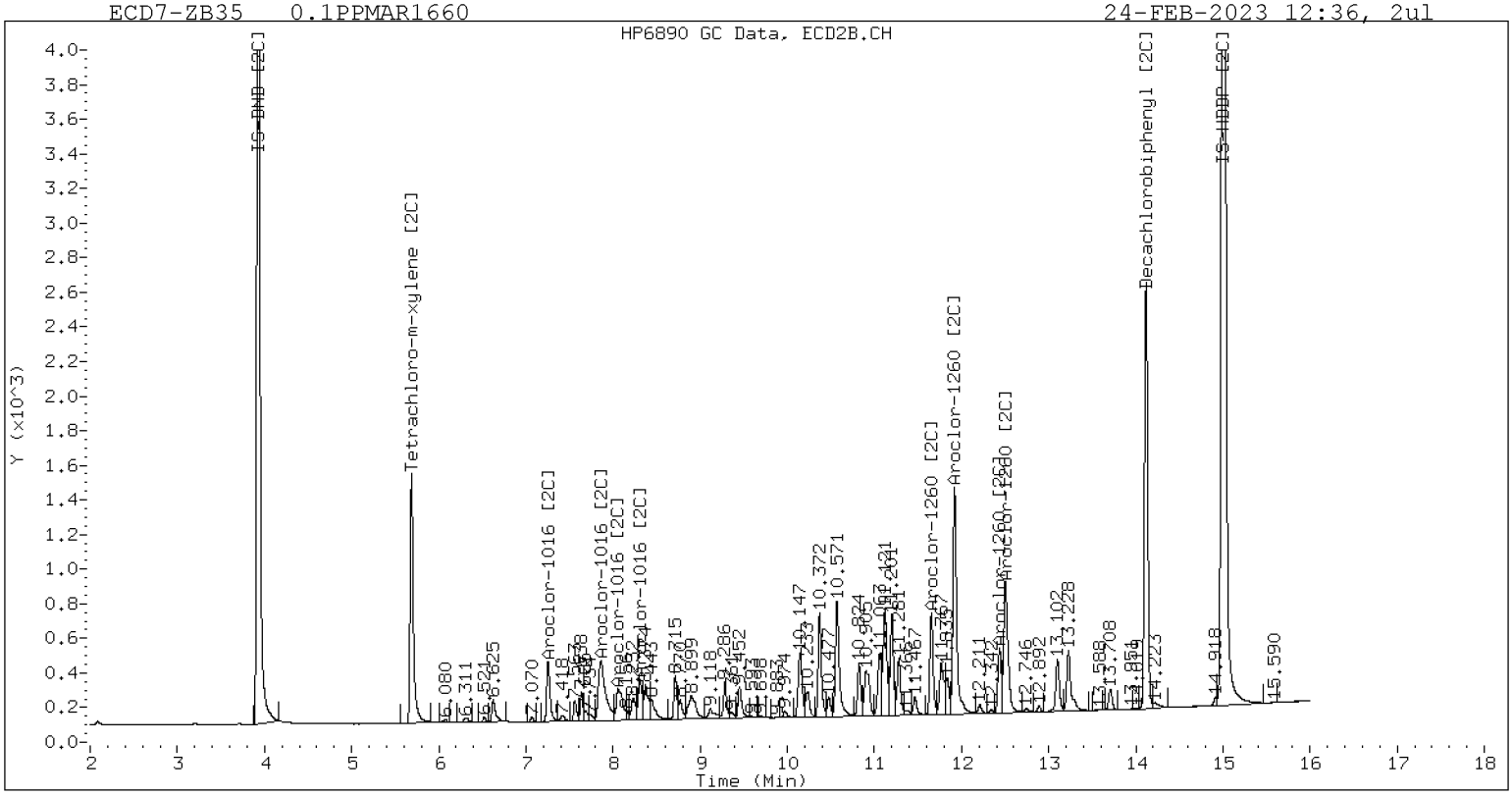
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242307ECD7.D
Data file 2: /230224.b/230224.b/02242307ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:57
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.004	724614	5.688	0.003	359257	75.2	76.7	2.0	Tetrachloro-m-xylene
13.898	0.005	1056911	14.120	0.000	650153	74.3	79.5	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645275	-4.2
Hexabromobiphenyl	1429847	1445345	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319170	1.2
Hexabromobiphenyl	513946	536853	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	115193	470.0	1	7.256	0.000	86287	461.8
Aroclor-1016	2	7.654	0.000	369991	495.2	2	7.856	0.000	192524	508.1
Aroclor-1016	3	7.790	0.000	160952	441.3	3	8.055	0.000	81039	473.6
Aroclor-1016	4	8.405	0.000	115032	487.9	4	8.307	0.000	62136	462.8
Total Col1Ave (4 peaks):					473.6	Total Col2Ave (4 peaks):				476.6 RPD = 1
Corrected Ave (3 peaks):					466.4	Corrected Ave (3 peaks):				466.1 RPD = 0
CalAmt %D:					-5.3	CalAmt %D:				-4.7
Aroclor-1260	1	11.044	0.000	247212	475.5	1	11.653	0.000	145247	460.1
Aroclor-1260	2	11.361	0.000	262877	483.9	2	11.918	0.000	379838	471.5
Aroclor-1260	3	11.734	0.000	678830	471.1	3	12.436	0.000	104092	486.9
Aroclor-1260	4	12.139	0.000	356067	490.7	4	12.502	0.000	258953	476.9
Aroclor-1260	5	12.244	0.000	150280	481.2	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				473.8 RPD = 1
Corrected Ave (4 peaks):					477.9	Corrected Ave (3 peaks):				469.5 RPD = 2
CalAmt %D:					-3.9	CalAmt %D:				-5.2

Total PCB Area Col1 (5.906 - 13.793) = 7134169 Col1 Total PCB = 0.9 ppm*

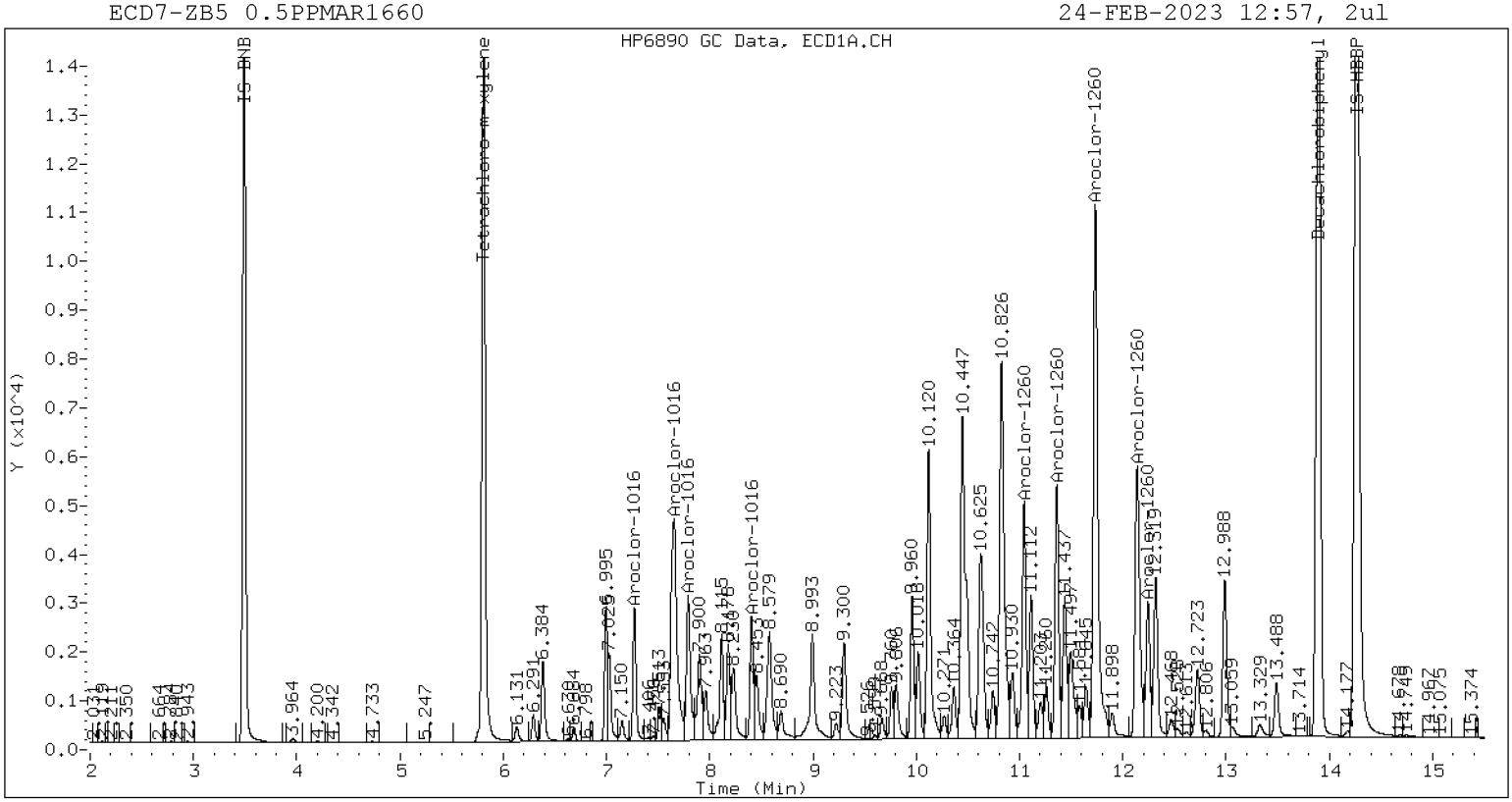
Total PCB Area Col2 (5.785 - 14.019) = 3589735 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

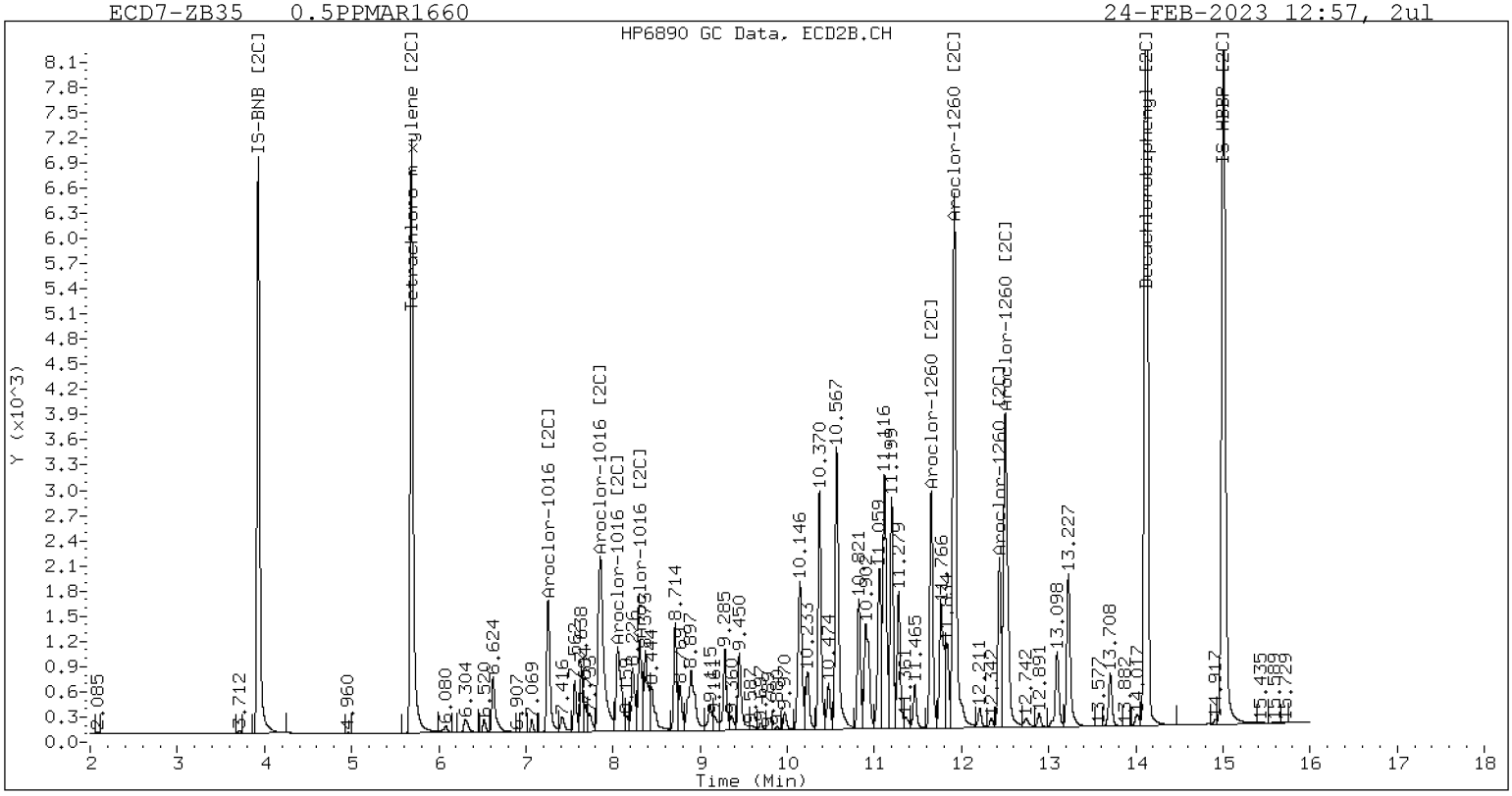
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242308ECD7.D
Data file 2: /230224.b/230224.b/02242308ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 24-FEB-2023 13:18
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	434187	5.688	0.003	214306	46.0	46.5	1.1	Tetrachloro-m-xylene
13.894	0.000	515867	14.119	-0.001	312943	35.6	38.5	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632576	-6.1
Hexabromobiphenyl	1429847	1469715	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314129	-0.4
Hexabromobiphenyl	513946	534294	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	49009	250.0	1	7.255	0.000	36487	250.0
Aroclor-1242	2	7.656	0.000	148833	250.0	2	7.858	0.000	76699	250.0
Aroclor-1242	3	8.405	0.000	46308	250.0	3	9.167	0.000	23866	250.0
Aroclor-1242	4	8.579	0.000	68453	250.0	4	9.597	0.000	29080	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1221467 Col1 Total PCB = 0.2 ppm*

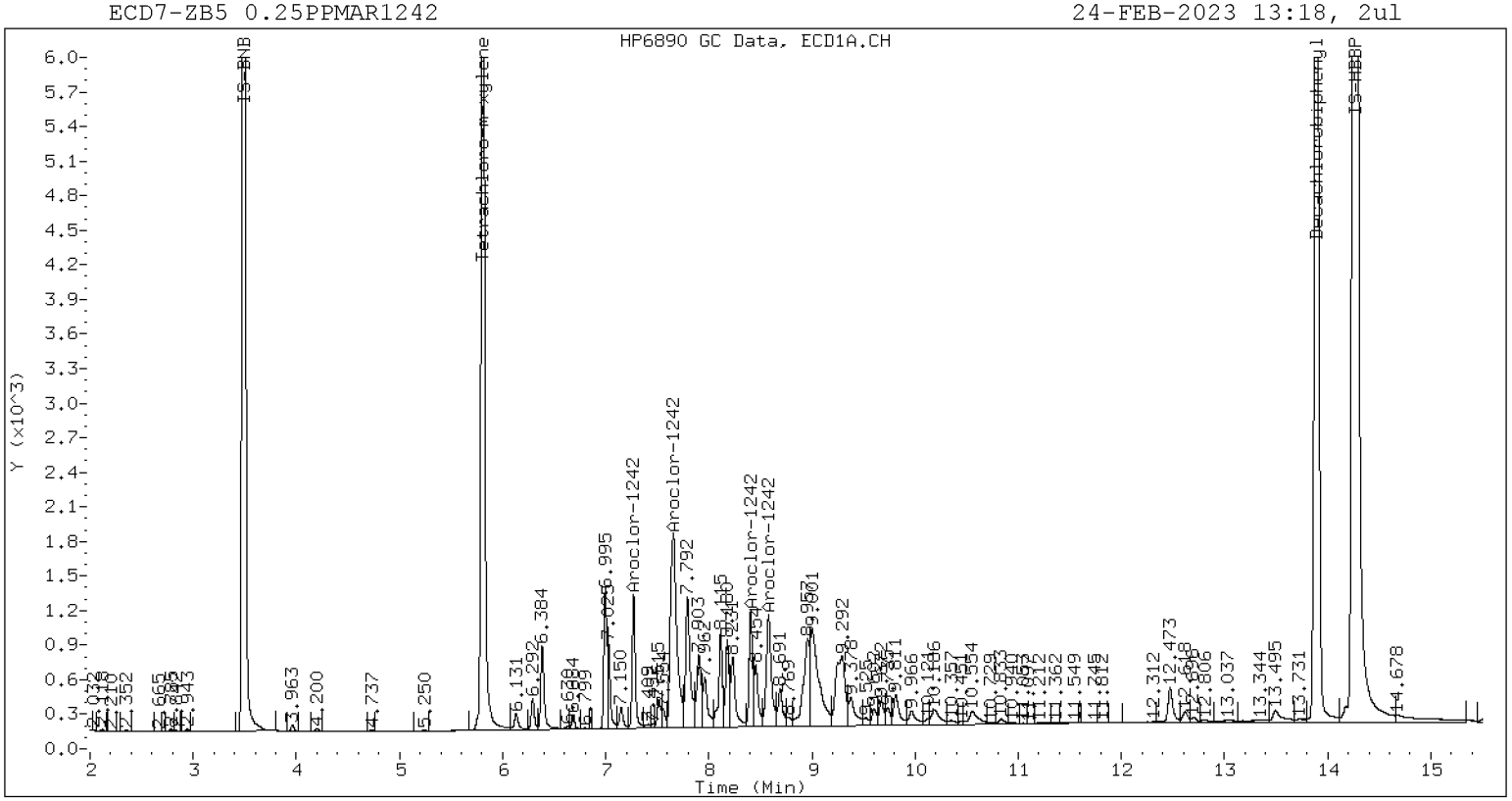
Total PCB Area Col2 (5.785 - 14.019) = 572067 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

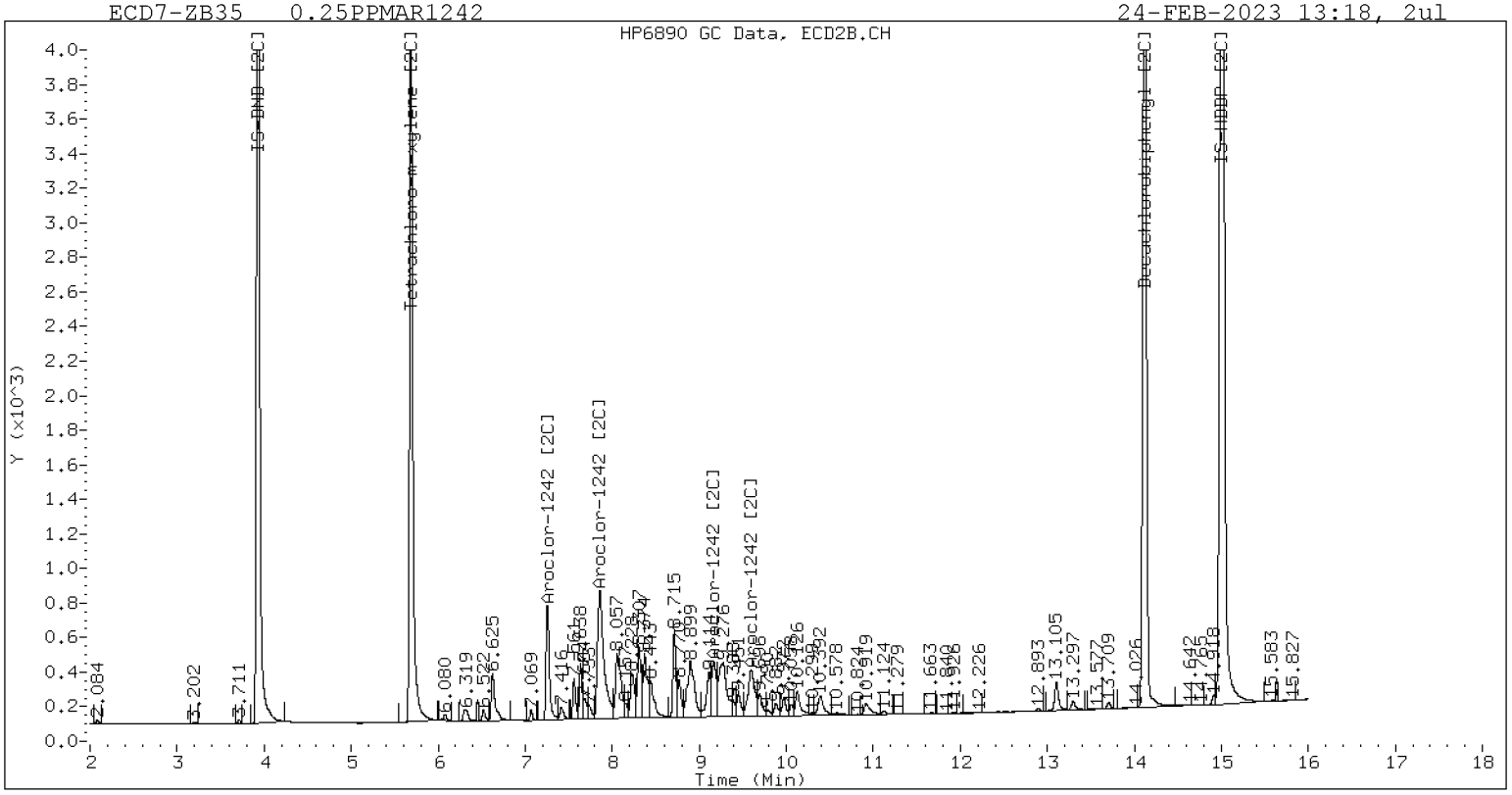
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242309ECD7.D
Data file 2: /230224.b/230224.b/02242309ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 24-FEB-2023 13:39
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	349513	5.688	0.003	176615	36.6	37.9	3.4	Tetrachloro-m-xylene
13.894	0.001	523008	14.121	0.001	322054	36.4	39.3	7.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	639911	-5.0
Hexabromobiphenyl	1429847	1458696	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317938	0.9
Hexabromobiphenyl	513946	538760	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.405	0.000	78055	250.0	1	8.308	0.000	37951	250.0
Aroclor-1248	2	8.580	0.000	99216	250.0	2	8.714	0.000	39239	250.0
Aroclor-1248	3	8.999	0.000	187178	250.0	3	9.166	0.000	45157	250.0
Aroclor-1248	4	9.295	0.000	95291	250.0	4	9.590	0.000	54216	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1565180 Col1 Total PCB = 0.2 ppm*

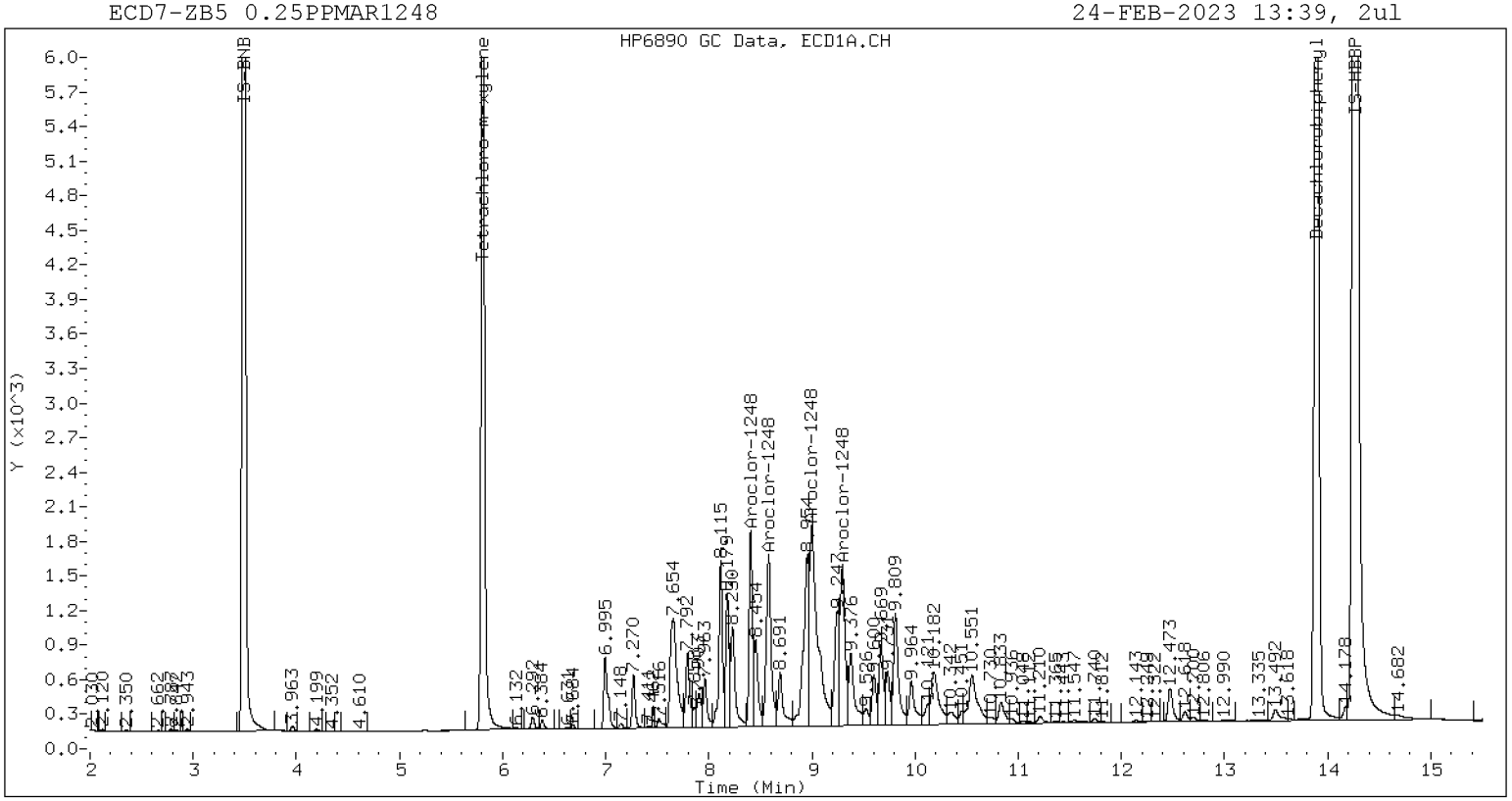
Total PCB Area Col2 (5.785 - 14.019) = 754991 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

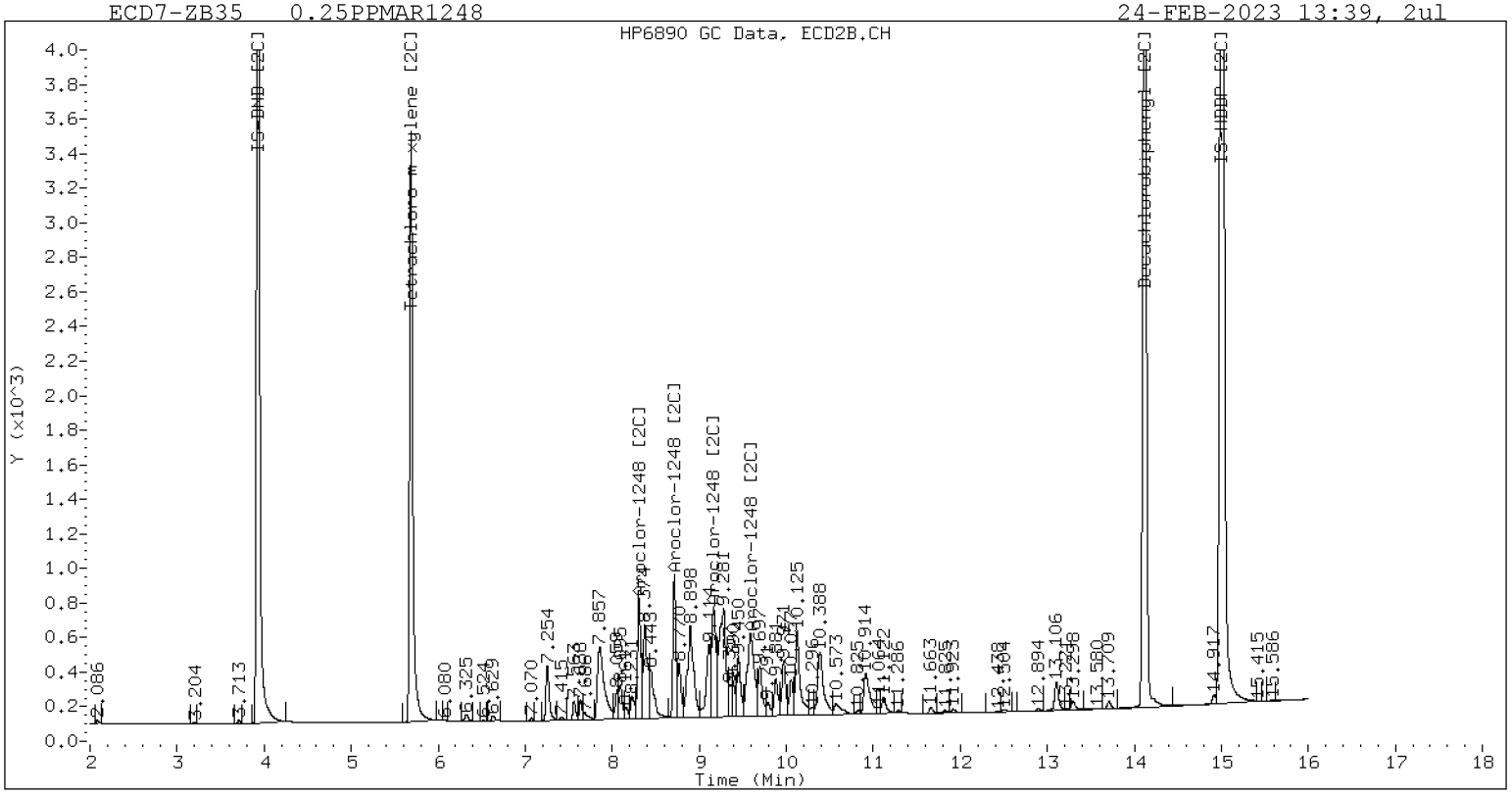
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1248 24-FEB-2023 13:39, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242310ECD7.D
Data file 2: /230224.b/230224.b/02242310ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 24-FEB-2023 14:00
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	352587	5.687	0.002	177502	37.3	38.6	3.4	Tetrachloro-m-xylene
13.895	0.002	532500	14.119	0.000	325903	37.0	40.2	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	633407	-6.0
Hexabromobiphenyl	1429847	1460265	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	313673	-0.5
Hexabromobiphenyl	513946	532442	3.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	159011	250.0	1	9.449	0.000	59603	250.0
Aroclor-1254	2	9.377	0.000	71516	250.0	2	9.970	0.000	47949	250.0
Aroclor-1254	3	9.668	0.000	102230	250.0	3	10.124	0.000	103745	250.0
Aroclor-1254	4	9.807	0.000	198777	250.0	4	10.373	0.000	101135	250.0
Aroclor-1254	5	10.176	0.000	124586	250.0	5	10.569	0.000	61577	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 2179224 Col1 Total PCB = 0.3 ppm*

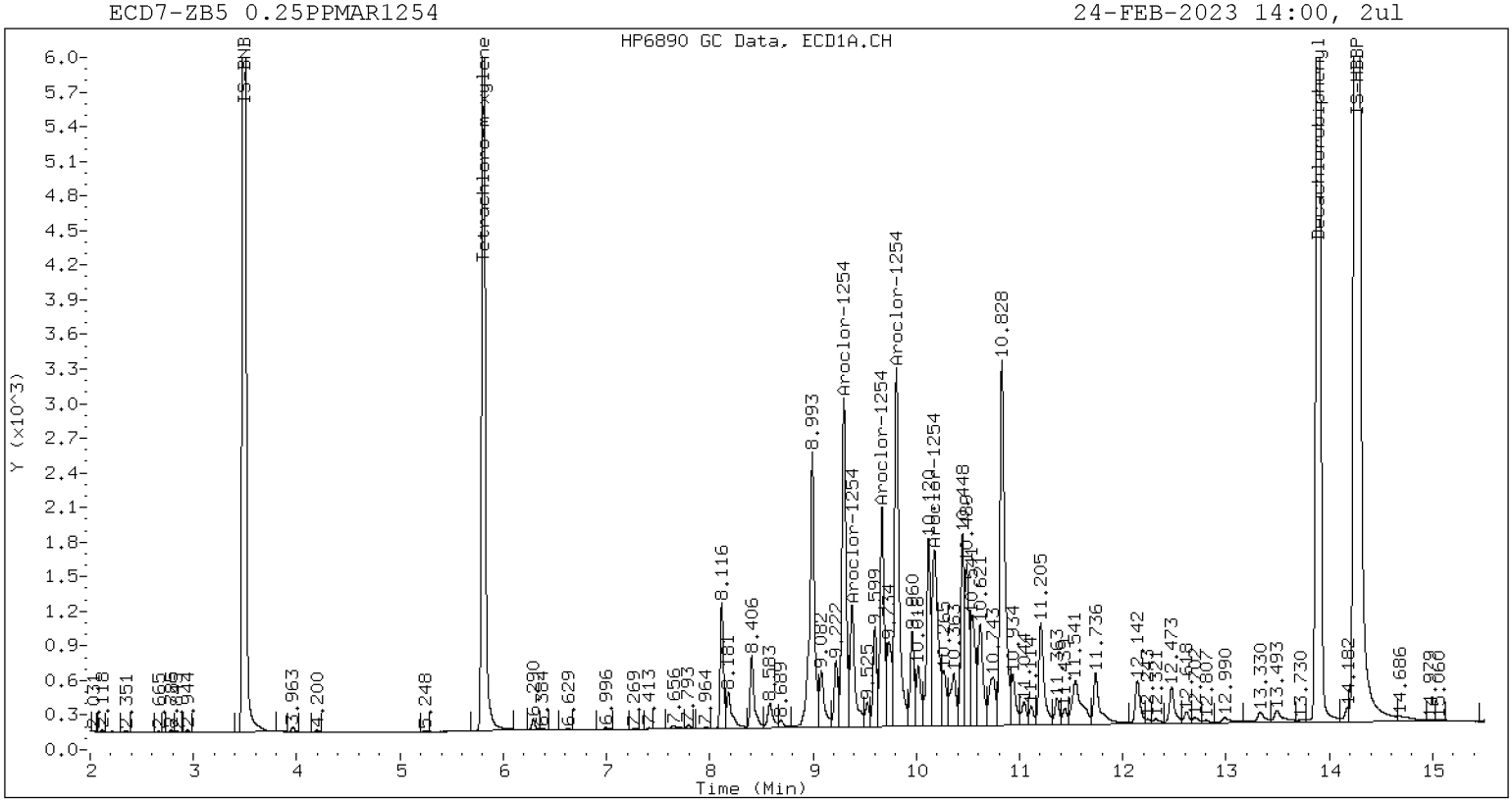
Total PCB Area Col2 (5.785 - 14.019) = 1022156 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

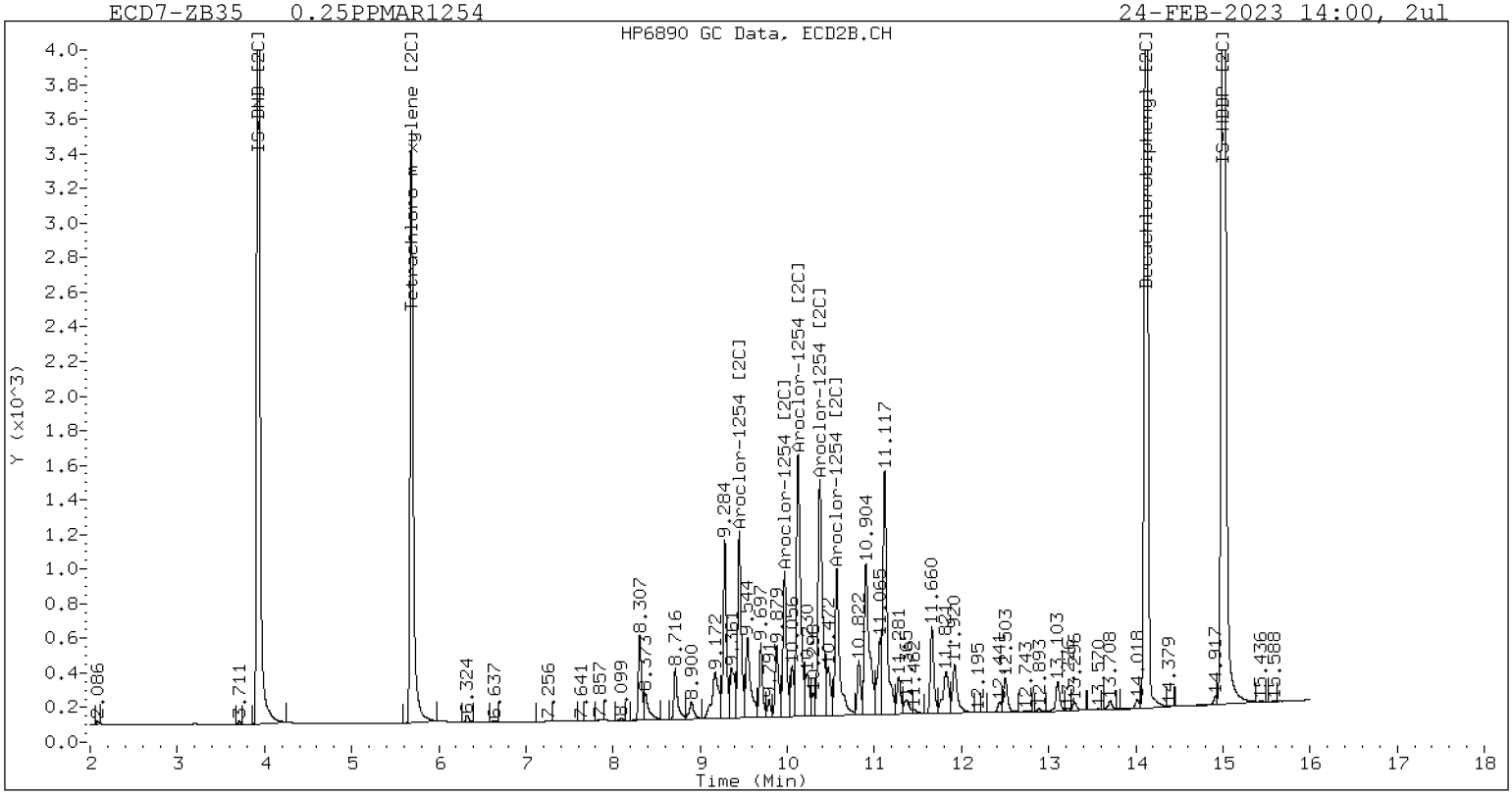
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242311ECD7.D
Data file 2: /230224.b/230224.b/02242311ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 24-FEB-2023 14:21
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	362236	5.686	0.000	177349	38.4	39.2	2.1	Tetrachloro-m-xylene
13.894	0.001	523254	14.119	-0.000	321034	36.0	39.2	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632433	-6.1
Hexabromobiphenyl	1429847	1474039	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	308453	-2.2
Hexabromobiphenyl	513946	538177	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.731	0.000	14160	250.0	1	4.956	0.000	7300	250.0
Aroclor-1221	2	6.132	0.000	25324	250.0	2	6.296	0.000	13816	250.0
Aroclor-1221	3	6.382	0.000	58795	250.0	3	6.622	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.829	0.000	113046	250.0	1	11.200	0.000	114880	250.0
Aroclor-1262	2	12.244	0.000	183948	250.0	2	11.652	0.000	97844	250.0
Aroclor-1262	3	12.319	0.000	197749	250.0	3	12.434	0.000	111015	250.0
Aroclor-1262	4	12.987	0.000	180727	250.0	4	12.502	0.000	173913	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3105316 Col1 Total PCB = 0.4 ppm*

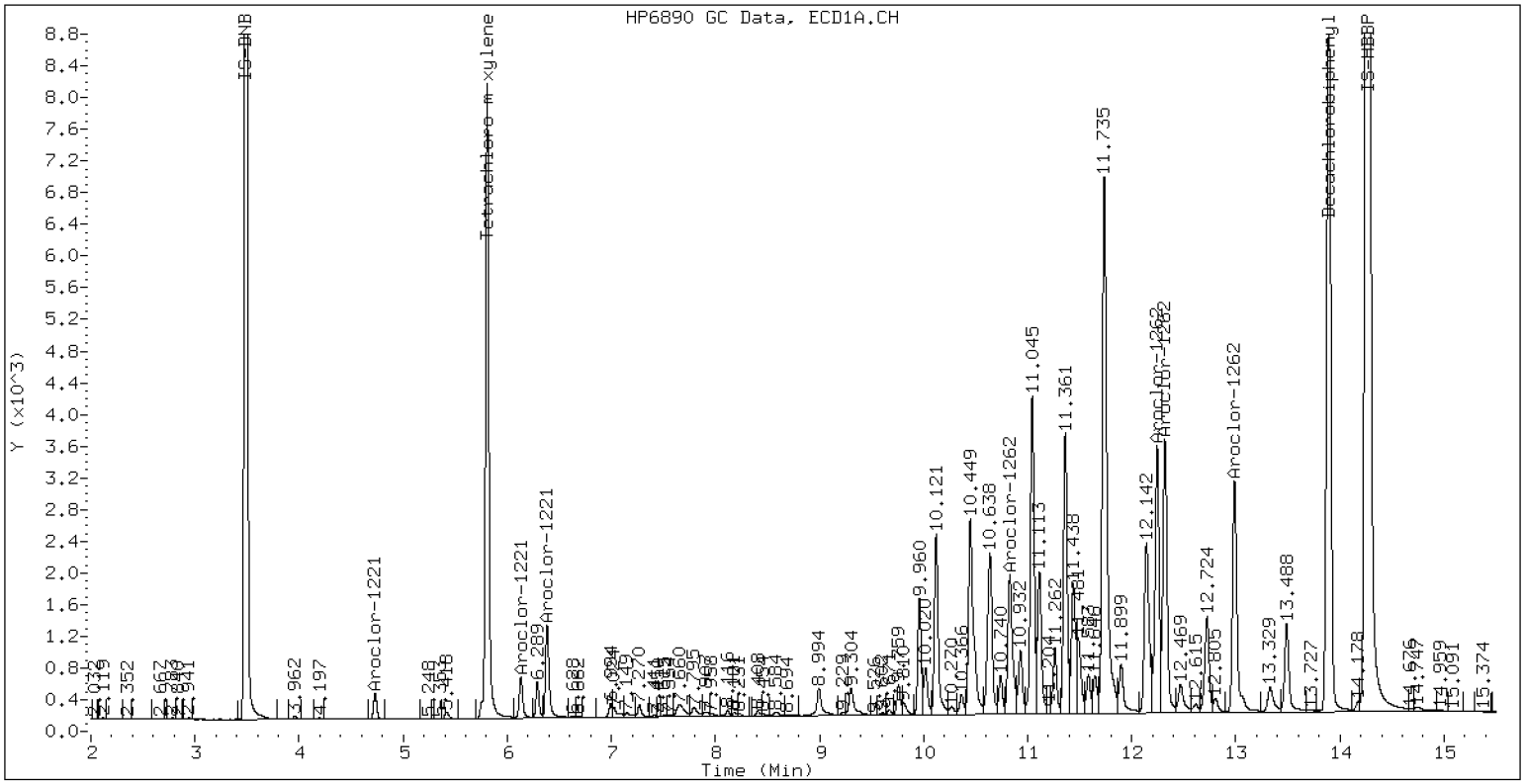
Total PCB Area Col2 (5.785 - 14.019) = 1573107 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

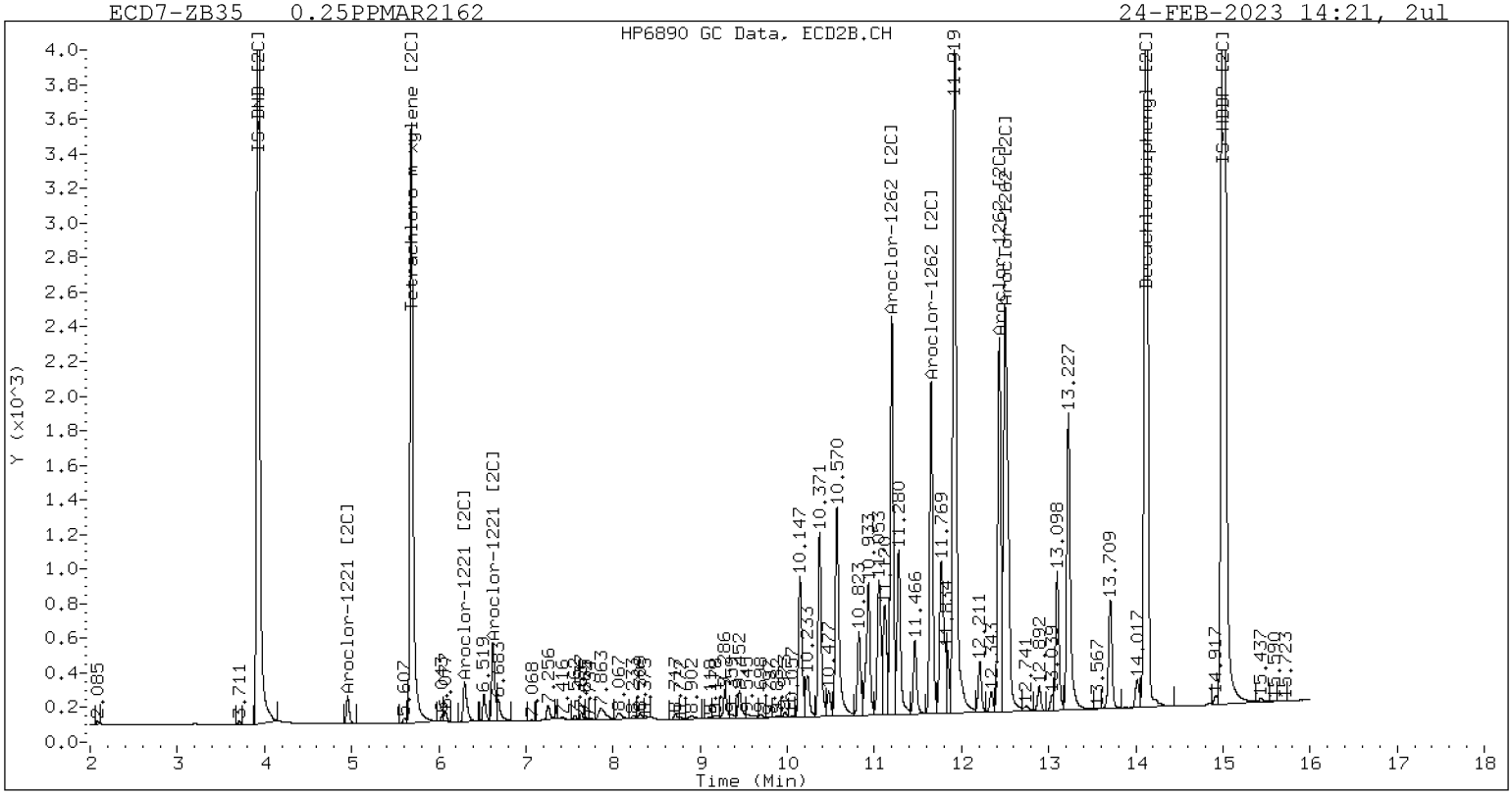
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242312ECD7.D
Data file 2: /230224.b/230224.b/02242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 24-FEB-2023 14:42
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	366416	5.685	0.000	179450	38.0	38.9	2.4	Tetrachloro-m-xylene
13.893	0.000	778191	14.119	0.000	477889	53.0	57.5	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645602	-4.2
Hexabromobiphenyl	1429847	1492154	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314042	-0.4
Hexabromobiphenyl	513946	545458	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1232	1	4.730	0.000	8647	250.0	1	4.956	0.000	4017	250.0
Aroclor-1232	2	6.131	0.000	17148	250.0	2	7.254	0.000	19962	250.0
Aroclor-1232	3	7.656	0.000	77627	250.0	3	7.861	0.000	39913	250.0
Aroclor-1232	4	8.581	0.000	32993	250.0	4	8.715	0.000	11487	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.247	0.000	477974	250.0	1	12.432	0.000	274595	250.0
Aroclor-1268	2	12.317	0.000	473326	250.0	2	12.500	0.000	295194	250.0
Aroclor-1268	3	12.699	0.000	405011	250.0	3	12.892	0.000	252048	250.0
Aroclor-1268	4	13.490	0.000	1333528	250.0	4	13.709	0.000	805579	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3998414 Col1 Total PCB = 0.5 ppm*

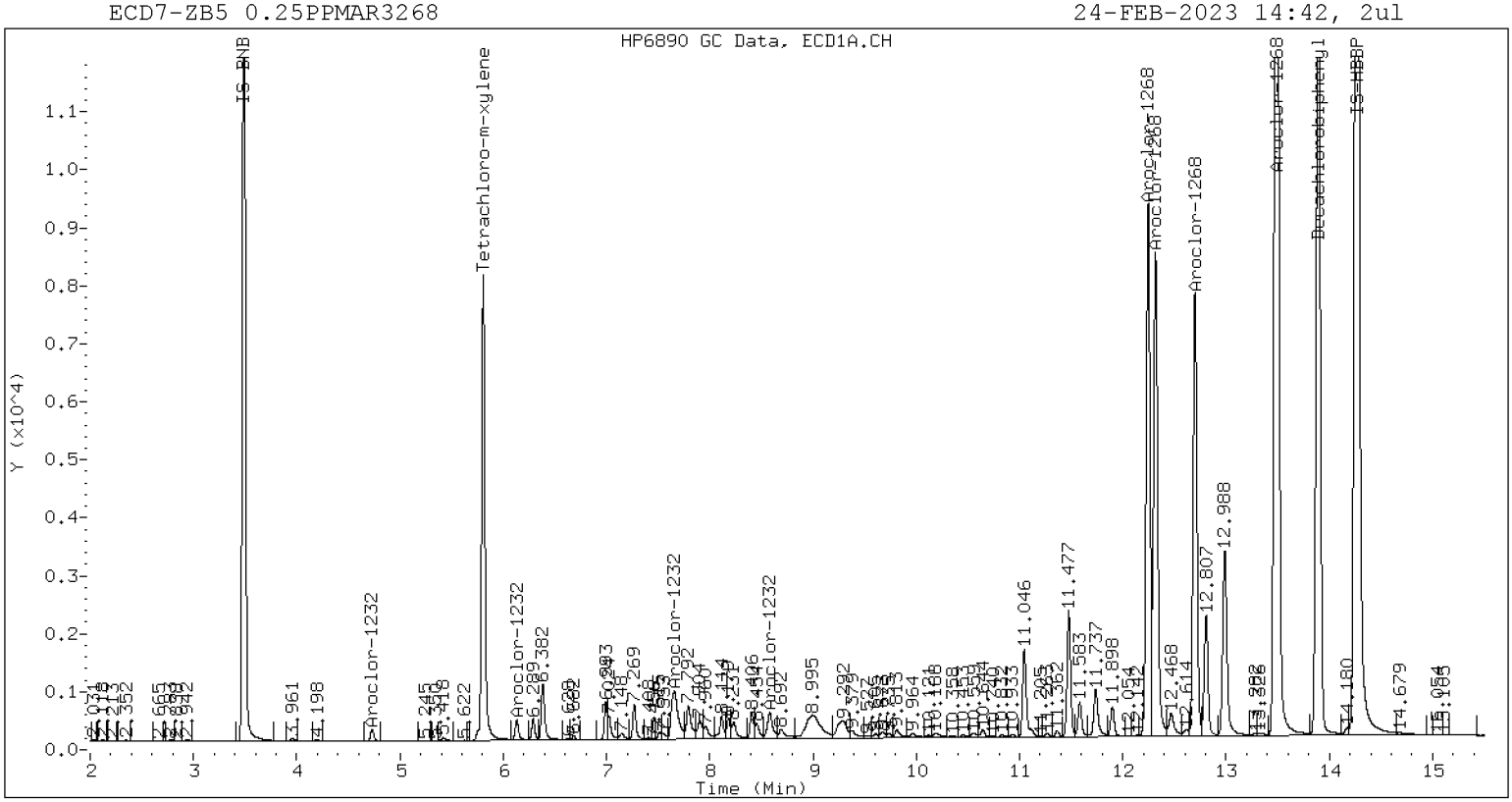
Total PCB Area Col2 (5.785 - 14.019) = 2300029 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

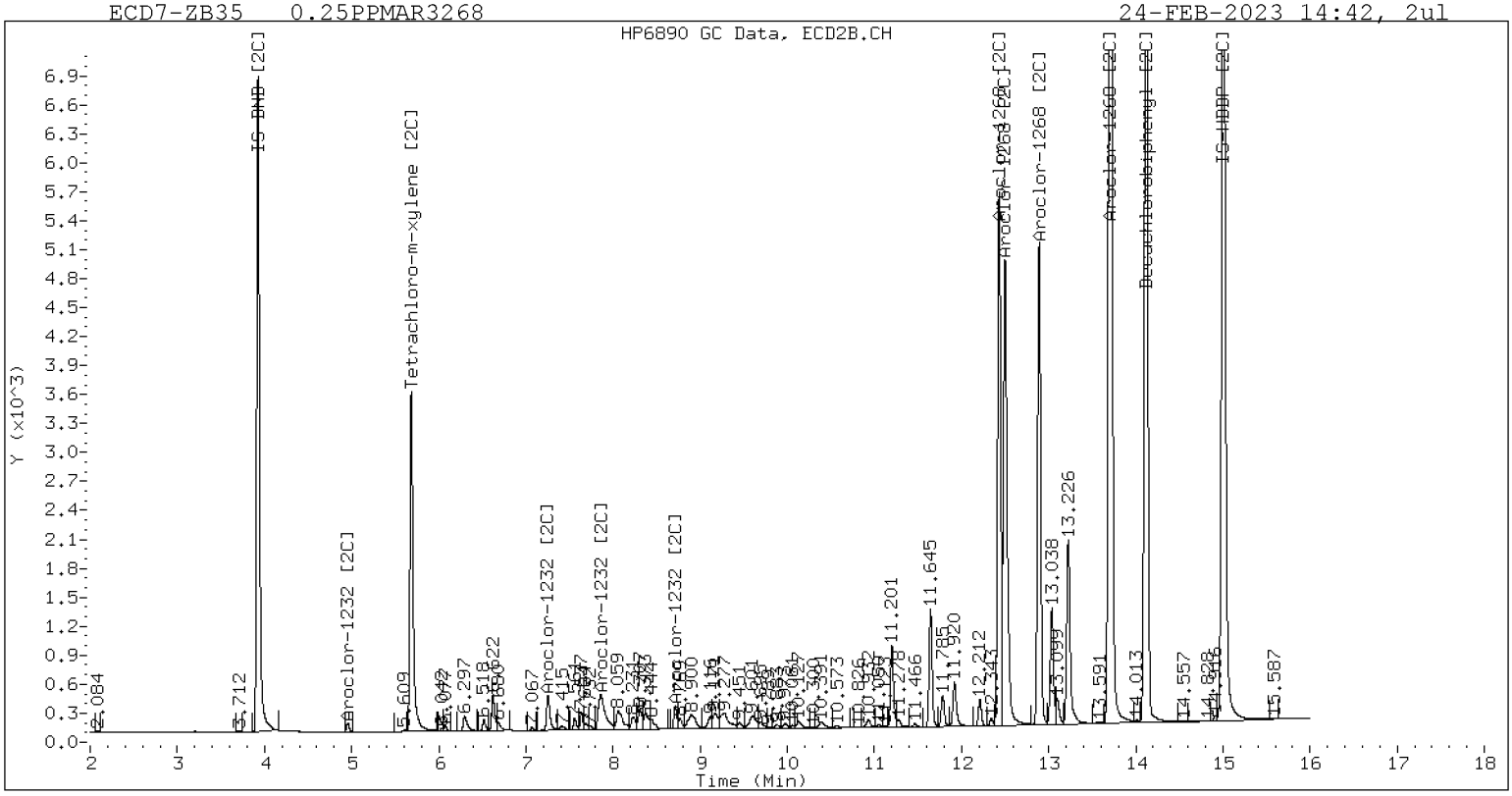
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242313ECD7.D
Data file 2: /230224.b/230224.b/02242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 24-FEB-2023 15:03
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	337070	5.686	0.001	165848	34.9	35.8	2.3	Tetrachloro-m-xylene
13.895	0.002	515407	14.119	-0.000	316730	34.3	37.3	8.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645975	-4.1
Hexabromobiphenyl	1429847	1524245	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316115	0.3
Hexabromobiphenyl	513946	556950	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.002	59491	242.5	1	7.254	-0.002	44576	240.9
Aroclor-1016	2	7.655	0.001	181090	242.1	2	7.857	0.002	95386	254.2
Aroclor-1016	3	7.790	0.000	88470	242.3	3	8.056	0.002	42160	248.8
Aroclor-1016	4	8.404	-0.001	57980	245.6	4	8.307	0.000	32197	242.1
Total Col1Ave (4 peaks):					243.1	Total Col2Ave (4 peaks):				246.5 RPD = 1
Corrected Ave (3 peaks):					242.3	Corrected Ave (3 peaks):				243.9 RPD = 1
Aroclor-1221	1	4.731	0.000	464	8.0	1	---			0.0
Aroclor-1221	2	6.130	-0.002	9233	89.2	2	6.300	0.004	5379	95.0
Aroclor-1221	3	6.382	-0.001	42570	177.2	3	6.623	0.001	20952	227.2
Total Col1Ave (3 peaks):					91.5	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.731	0.001	464	13.4	1	---			0.0
Aroclor-1232	2	6.130	-0.001	9233	134.5	2	7.254	-0.000	44576	554.6
Aroclor-1232	3	7.655	-0.001	181090	582.9	3	7.857	-0.003	95386	593.5
Aroclor-1232	4	8.580	-0.001	79916	605.2	4	8.713	-0.002	29795	644.2
Total Col1Ave (4 peaks):					334.0	Total Col2Ave (3 peaks):				597.4 RPD = 57*
Corrected Ave (3 peaks):					243.6	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.269	-0.002	59491	297.2	1	7.254	-0.002	44576	303.5
Aroclor-1242	2	7.655	-0.001	181090	297.9	2	7.857	-0.000	95386	309.0
Aroclor-1242	3	8.404	-0.001	57980	306.5	3	9.115	-0.052	18754	195.2
Aroclor-1242	4	8.580	0.000	79916	285.8	4	9.697	0.100	1355	11.6
Total Col1Ave (4 peaks):					296.8	Total Col2Ave (4 peaks):				204.8 RPD = 37
Corrected Ave (3 peaks):					293.6	Corrected Ave (3 peaks):				170.1 RPD = 53*
Aroclor-1248	1	8.404	-0.001	57980	184.0	1	8.307	-0.001	32197	213.3
Aroclor-1248	2	8.580	-0.001	79916	199.5	2	8.713	-0.001	29795	190.9
Aroclor-1248	3	8.993	-0.006	71805	95.0	3	9.115	-0.050	18754	104.4
Aroclor-1248	4	9.300	0.006	47348	123.1	4	---			0.0
Total Col1Ave (4 peaks):					150.4	Total Col2Ave (3 peaks):				169.6 RPD = 12
Corrected Ave (3 peaks):					134.0	Corrected Ave: < 3 Peaks				
Aroclor-1254	1	9.300	0.002	47348	73.0	1	9.451	0.001	22438	93.4
Aroclor-1254	2	---			0.0	2	9.972	0.001	2694	13.9
Aroclor-1254	3	9.670	0.002	5461	13.1	3	10.147	0.024	52914	126.5
Aroclor-1254	4	9.807	-0.000	18944	23.4	4	10.370	-0.003	70430	172.8
Aroclor-1254	5	10.121	-0.056	154170	303.3	5	10.568	-0.000	98525	396.9
Total Col1Ave (4 peaks):					103.2	Total Col2Ave (5 peaks):				160.7 RPD = 44*
Corrected Ave (3 peaks):					36.5	Corrected Ave (4 peaks):				101.7 RPD = 94*
Aroclor-1260	1	11.044	0.000	149195	272.1	1	11.653	0.000	82210	251.0
Aroclor-1260	2	11.361	-0.000	153832	268.5	2	11.919	0.001	222226	265.9
Aroclor-1260	3	11.736	0.002	396660	261.0	3	12.435	-0.000	59148	266.7
Aroclor-1260	4	12.140	0.001	190448	248.9	4	12.504	0.002	147180	261.2
Aroclor-1260	5	12.244	-0.000	91385	277.5	NS	---			----
Total Col1Ave (5 peaks):					265.6	Total Col2Ave (4 peaks):				261.2 RPD = 2
Corrected Ave (4 peaks):					262.6	Corrected Ave (3 peaks):				259.4 RPD = 1
Aroclor-1262	1	10.827	-0.002	220238	471.0	1	11.199	-0.001	84479	177.6
Aroclor-1262	2	12.244	0.000	91385	120.1	2	11.653	0.002	82210	203.0
Aroclor-1262	3	12.320	0.001	113066	138.2	3	12.435	0.002	59148	128.7
Aroclor-1262	4	12.988	0.001	102156	136.7	4	12.504	0.002	147180	204.4
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				178.4 RPD = 19
Corrected Ave (3 peaks):					131.7	Corrected Ave (3 peaks):				169.8 RPD = 25
Aroclor-1268	1	12.244	-0.003	91385	46.8	1	12.435	0.003	59148	52.7
Aroclor-1268	2	12.320	0.003	113066	58.5	2	12.504	0.004	147180	122.1
Aroclor-1268	3	12.726	0.027	46633	28.2	3	12.893	0.001	2874	2.8
Aroclor-1268	4	13.489	-0.000	25567	4.7	4	13.709	-0.000	13041	4.0
Total Col1Ave (4 peaks):					34.5	Total Col2Ave (4 peaks):				45.4 RPD = 27
Corrected Ave (3 peaks):					26.6	Corrected Ave (3 peaks):				19.8 RPD = 29

Total PCB Area Col1 (5.906 - 13.793) = 3743076 Col1 Total PCB = 0.5 ppm*

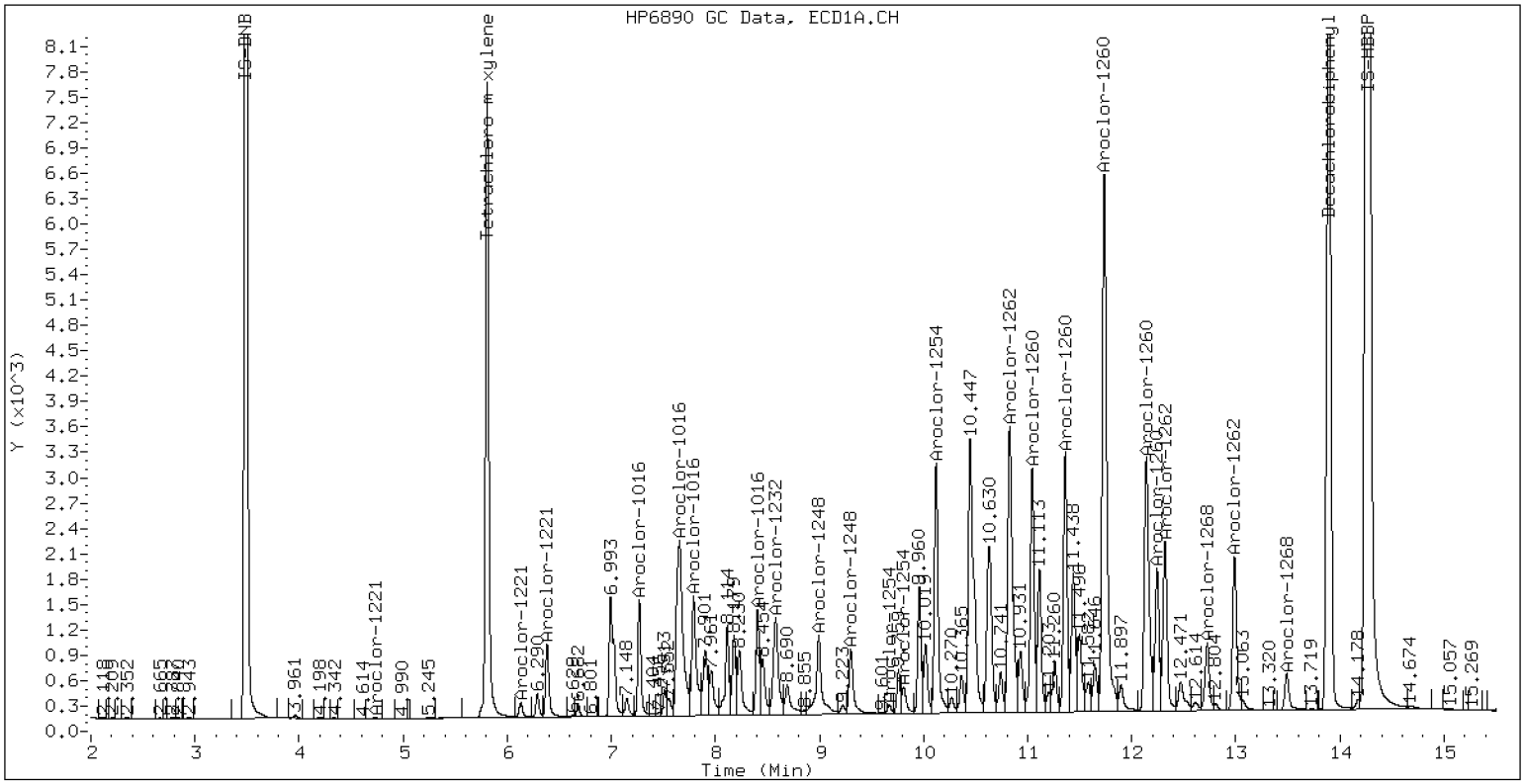
Total PCB Area Col2 (5.785 - 14.019) = 1897008 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

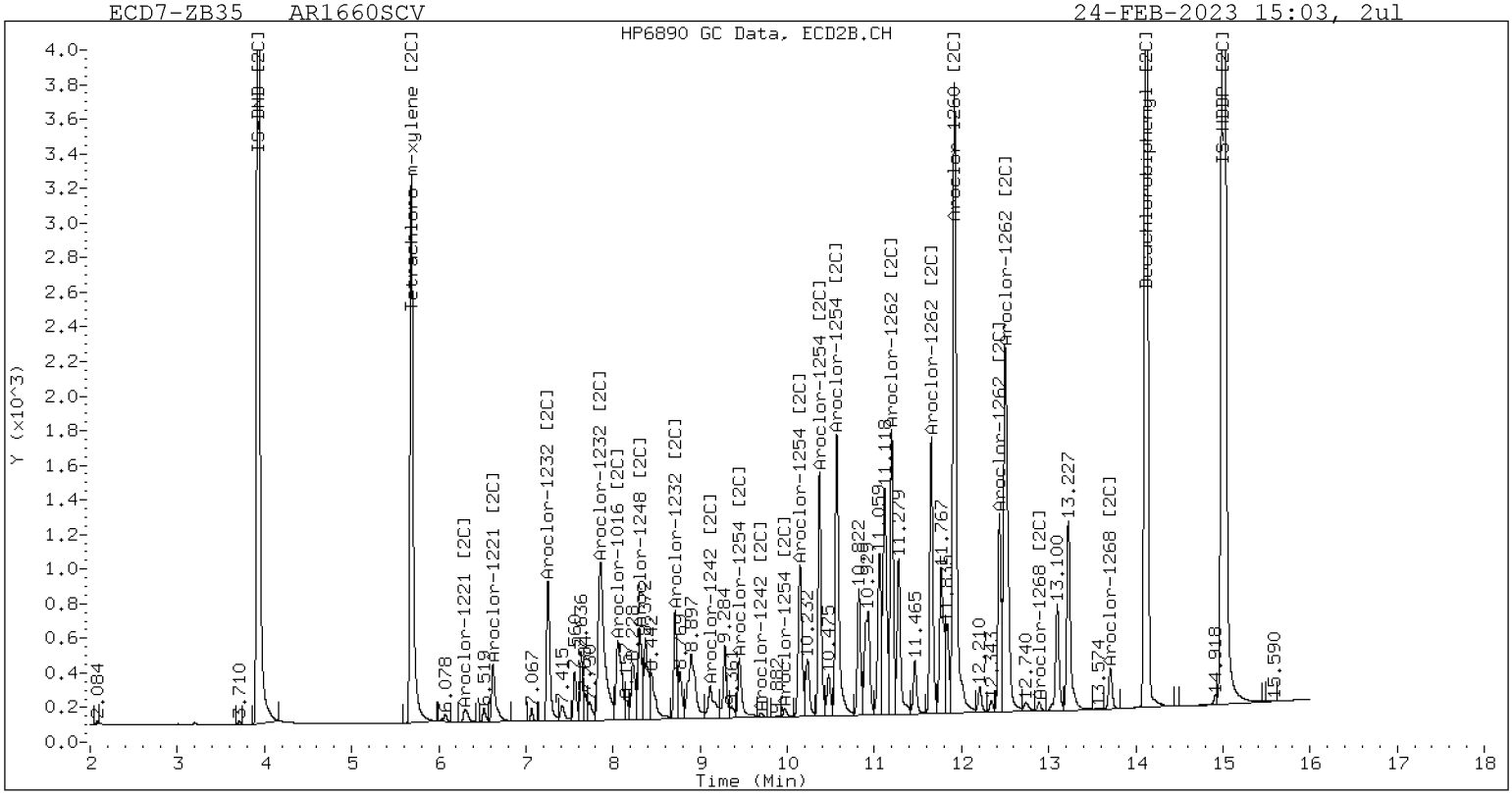
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242314ECD7.D
Data file 2: /230224.b/230224.b/02242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 24-FEB-2023 15:24
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	354283	5.686	0.001	172455	33.6	34.5	2.6	Tetrachloro-m-xylene
13.895	0.002	567088	14.120	0.001	347430	37.0	40.3	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	705650	4.7
Hexabromobiphenyl	1429847	1555683	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	340433	8.0
Hexabromobiphenyl	513946	565609	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	39927	149.0	1	7.256	0.000	32417	162.7
Aroclor-1016	2	7.653	-0.001	132339	162.0	2	7.856	0.001	69235	171.3
Aroclor-1016	3	7.791	0.001	59310	148.7	3	8.055	0.000	29473	161.5
Aroclor-1016	4	8.405	0.000	42537	165.0	4	8.307	-0.000	22792	159.2
Total Col1Ave (4 peaks): 156.2						Total Col2Ave (4 peaks): 163.7			RPD = 5	
Corrected Ave (3 peaks): 153.2						Corrected Ave (3 peaks): 161.1			RPD = 5	
Aroclor-1221	1	4.733	0.002	319	5.0	1	---			0.0
Aroclor-1221	2	6.131	-0.001	6534	57.8	2	6.319	0.022	4365	71.6
Aroclor-1221	3	6.384	0.001	29664	113.0	3	6.624	0.002	14916	150.2
Total Col1Ave (3 peaks): 58.6						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.733	0.003	319	8.4	1	---			0.0
Aroclor-1232	2	6.131	0.000	6534	87.2	2	7.256	0.002	32417	374.5
Aroclor-1232	3	7.653	-0.003	132339	389.9	3	7.856	-0.004	69235	400.0
Aroclor-1232	4	8.579	-0.002	69445	481.4	4	8.714	-0.001	22167	445.0
Total Col1Ave (4 peaks): 241.7						Total Col2Ave (3 peaks): 406.5			RPD = 51*	
Corrected Ave (3 peaks): 161.8						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.270	-0.001	39927	182.6	1	7.256	0.000	32417	205.0
Aroclor-1242	2	7.653	-0.003	132339	199.3	2	7.856	-0.002	69235	208.2
Aroclor-1242	3	8.405	-0.000	42537	205.9	3	9.164	-0.004	23068	223.0
Aroclor-1242	4	8.579	-0.000	69445	227.4	4	9.587	-0.010	31021	246.1
Total Col1Ave (4 peaks): 203.8						Total Col2Ave (4 peaks): 220.6			RPD = 8	
Corrected Ave (3 peaks): 195.9						Corrected Ave (3 peaks): 212.1			RPD = 8	
Aroclor-1248	1	8.405	0.000	42537	123.5	1	8.307	-0.001	22792	140.2
Aroclor-1248	2	8.579	-0.001	69445	158.7	2	8.714	-0.000	22167	131.9
Aroclor-1248	3	9.001	0.003	91942	111.4	3	9.164	-0.002	23068	119.3
Aroclor-1248	4	9.294	-0.000	38711	92.1	4	9.587	-0.003	31021	133.6
Total Col1Ave (4 peaks): 121.4						Total Col2Ave (4 peaks): 131.2			RPD = 8	
Corrected Ave (3 peaks): 109.0						Corrected Ave (3 peaks): 128.3			RPD = 16	
Aroclor-1254	1	9.294	-0.005	38711	54.6	1	9.450	0.001	13131	50.7
Aroclor-1254	2	9.377	-0.000	17371	54.5	2	9.970	0.000	8340	40.1
Aroclor-1254	3	9.668	-0.000	16373	35.9	3	10.123	-0.000	16364	36.3
Aroclor-1254	4	9.807	-0.001	27490	31.0	4	10.382	0.009	16062	36.6
Aroclor-1254	5	10.175	-0.001	20494	36.9	5	10.572	0.004	4818	18.0
Total Col1Ave (5 peaks): 42.6						Total Col2Ave (5 peaks): 36.4			RPD = 16	
Corrected Ave (4 peaks): 39.6						Corrected Ave (4 peaks): 32.8			RPD = 19	
Aroclor-1260	1	11.048	0.003	794	1.4	1	11.665	0.012	1652	5.0
Aroclor-1260	2	11.366	0.005	814	1.4	2	11.926	0.008	842	1.0
Aroclor-1260	3	11.739	0.006	1848	1.2	3	12.438	0.002	483	2.1
Aroclor-1260	4	12.145	0.006	1372	1.8	4	12.506	0.004	790	1.4
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.4						Total Col2Ave (4 peaks): 2.4			RPD = 49*	
Corrected Ave (3 peaks): 1.3						Corrected Ave (3 peaks): 1.5			RPD = 12	
Aroclor-1262	1	10.832	0.003	13157	27.6	1	11.121	-0.079	6113	12.7
Aroclor-1262	2	12.145	-0.098	1372	1.8	2	11.665	0.013	1652	4.0
Aroclor-1262	3	---			0.0	3	12.438	0.004	483	1.0
Aroclor-1262	4	13.038	0.051	842	1.1	4	12.506	0.004	790	1.1
Total Col1Ave (3 peaks): 10.1						Total Col2Ave (4 peaks): 4.7			RPD = 73*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 2.0				
Aroclor-1268	1	---			0.0	1	12.438	0.006	483	0.4
Aroclor-1268	2	---			0.0	2	12.506	0.006	790	0.6
Aroclor-1268	3	12.617	-0.082	5851	3.5	3	12.899	0.007	491	0.5
Aroclor-1268	4	13.500	0.010	1745	0.3	4	13.714	0.005	379	0.1
Col1Ave: <3 Quant Peaks						Col2Ave: 0.4				

Total PCB Area Col1 (5.906 - 13.793) = 1149784 Col1 Total PCB = 0.1 ppm*

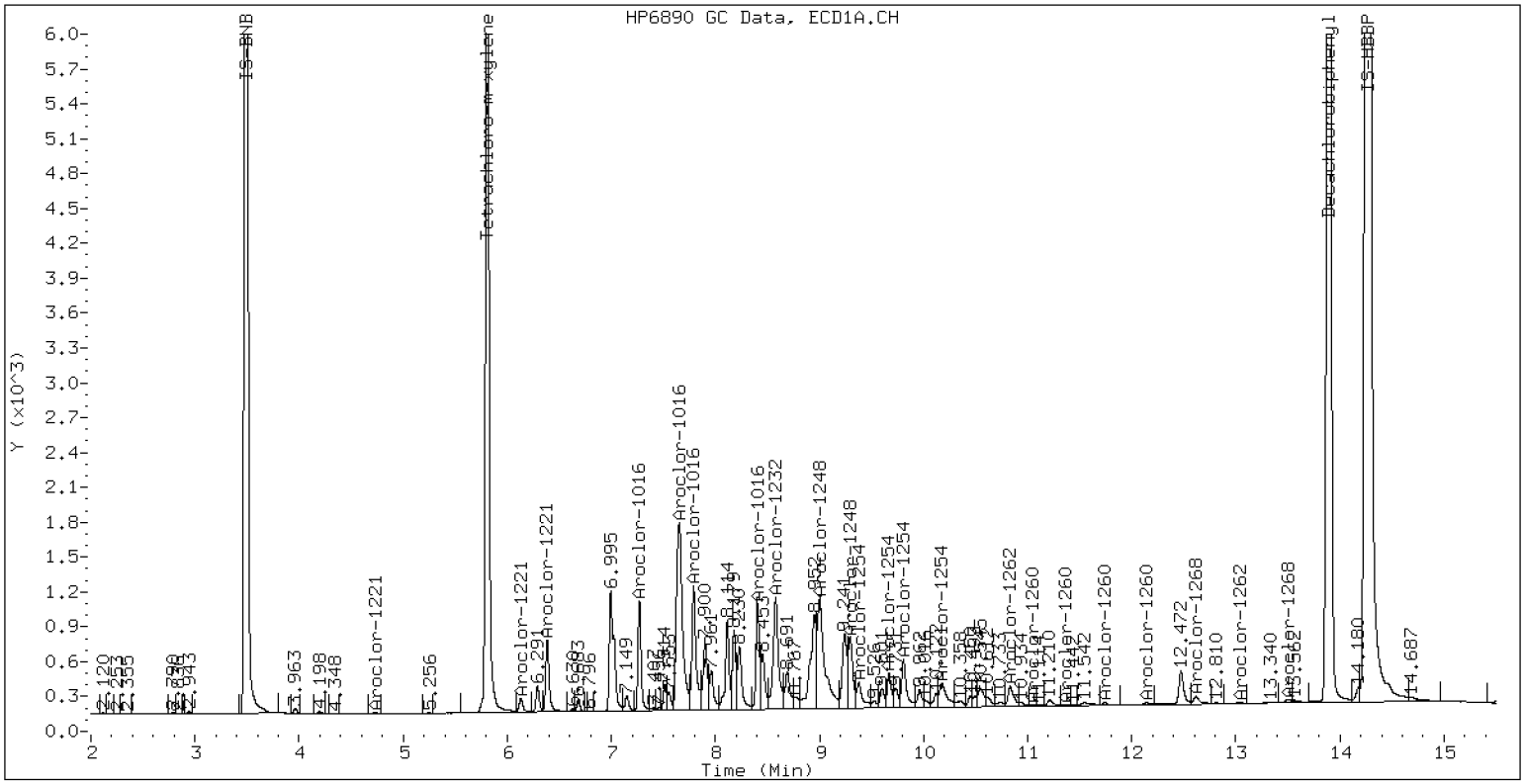
Total PCB Area Col2 (5.785 - 14.019) = 572210 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

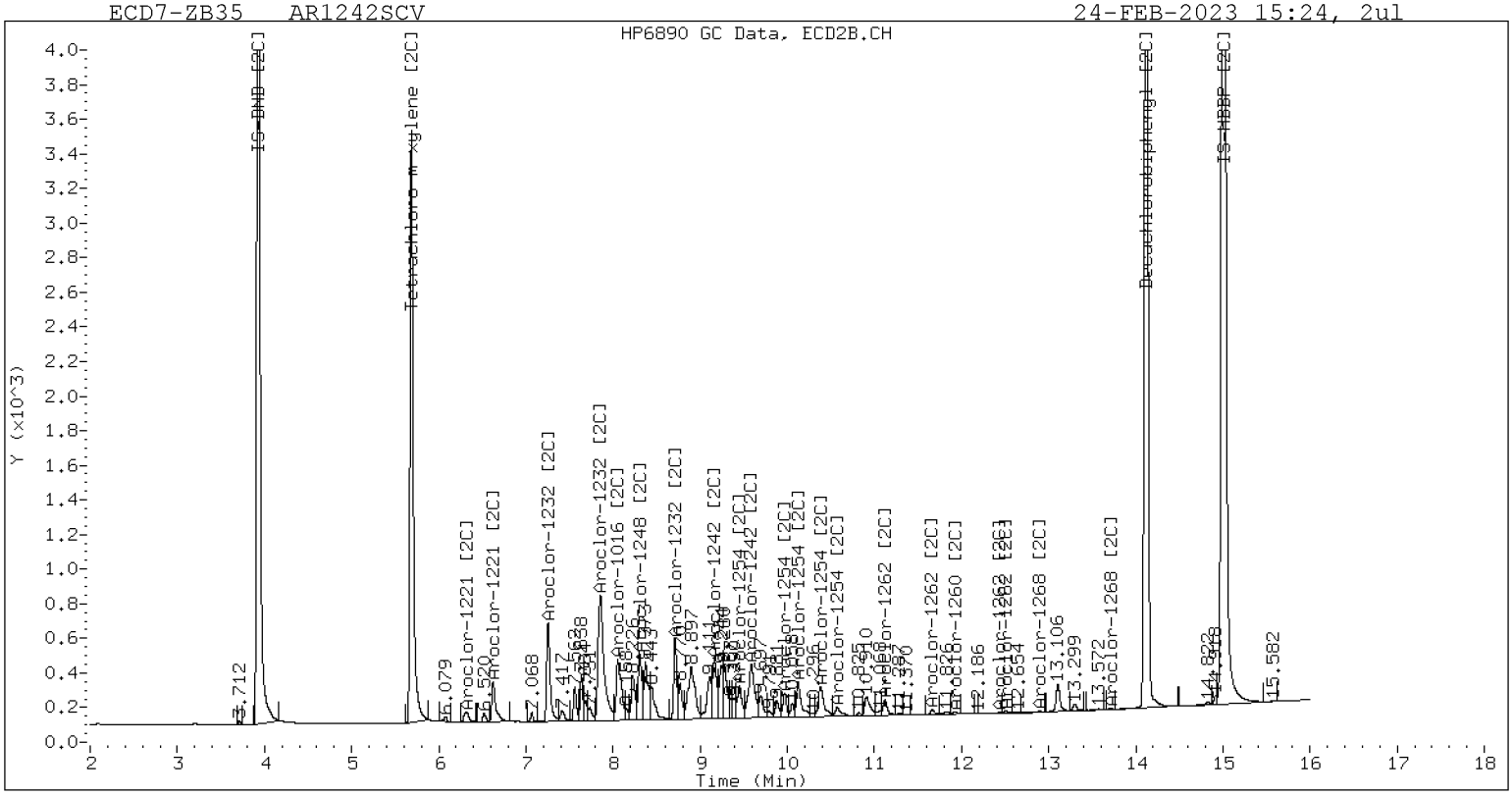
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242315ECD7.D
Data file 2: /230224.b/230224.b/02242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 24-FEB-2023 15:45
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	336655	5.687	0.002	168719	34.9	36.4	4.2	Tetrachloro-m-xylene
13.894	0.001	499162	14.118	-0.001	308317	33.1	36.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	646554	-4.0
Hexabromobiphenyl	1429847	1529451	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316066	0.3
Hexabromobiphenyl	513946	557213	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	19773	80.5	1	7.254	-0.002	16926	91.5
Aroclor-1016	2	7.653	-0.001	88099	117.7	2	7.857	0.001	45733	121.9
Aroclor-1016	3	7.794	0.003	35915	98.3	3	8.060	0.005	8078	47.7
Aroclor-1016	4	8.406	0.001	77842	329.5	4	8.307	0.000	37348	280.9
Total Col1Ave (4 peaks):					156.5	Total Col2Ave (4 peaks):				135.5 RPD = 14
Corrected Ave (3 peaks):					98.8	Corrected Ave (3 peaks):				87.0 RPD = 13
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	0.001	680	6.6	2	6.326	0.030	1966	34.7
Aroclor-1221	3	6.384	0.002	3390	14.1	3	6.631	0.009	1571	17.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	0.002	680	9.9	2	7.254	-0.000	16926	210.6
Aroclor-1232	3	7.653	-0.002	88099	283.3	3	7.857	-0.004	45733	284.6
Aroclor-1232	4	8.581	-0.000	99572	753.4	4	8.714	-0.001	38224	826.6
Total Col1Ave (3 peaks):					348.9	Total Col2Ave (3 peaks):				440.6 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	19773	98.7	1	7.254	-0.002	16926	115.3
Aroclor-1242	2	7.653	-0.003	88099	144.8	2	7.857	-0.001	45733	148.2
Aroclor-1242	3	8.406	0.000	77842	411.2	3	9.165	-0.002	45021	468.7
Aroclor-1242	4	8.581	0.001	99572	355.8	4	9.590	-0.008	53613	458.1
Total Col1Ave (4 peaks):					252.6	Total Col2Ave (4 peaks):				297.6 RPD = 16
Corrected Ave (3 peaks):					199.8	Corrected Ave (3 peaks):				240.5 RPD = 19
Aroclor-1248	1	8.406	0.000	77842	246.8	1	8.307	-0.001	37348	247.5
Aroclor-1248	2	8.581	0.000	99572	248.3	2	8.714	-0.000	38224	245.0
Aroclor-1248	3	8.998	-0.000	186857	247.0	3	9.165	-0.000	45021	250.7
Aroclor-1248	4	9.294	-0.000	98398	255.5	4	9.590	-0.001	53613	248.7
Total Col1Ave (4 peaks):					249.4	Total Col2Ave (4 peaks):				248.0 RPD = 1
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				247.0 RPD = 0
Aroclor-1254	1	9.294	-0.004	98398	151.6	1	9.450	0.001	21823	90.8
Aroclor-1254	2	9.377	-0.001	49616	169.9	2	9.971	0.001	19450	100.6
Aroclor-1254	3	9.669	0.001	40230	96.4	3	10.124	0.000	36574	87.5
Aroclor-1254	4	9.808	0.001	68500	84.4	4	10.389	0.016	35100	86.1
Aroclor-1254	5	10.183	0.007	47365	93.1	5	10.573	0.004	5676	22.9
Total Col1Ave (5 peaks):					119.1	Total Col2Ave (5 peaks):				77.6 RPD = 42*
Corrected Ave (4 peaks):					106.4	Corrected Ave (4 peaks):				71.8 RPD = 39
Aroclor-1260	1	11.047	0.003	1670	3.0	1	11.662	0.009	2055	6.3
Aroclor-1260	2	11.362	0.001	1111	1.9	2	11.924	0.007	1466	1.8
Aroclor-1260	3	11.739	0.005	2107	1.4	3	12.434	-0.002	573	2.6
Aroclor-1260	4	12.144	0.005	1379	1.8	4	12.505	0.003	1003	1.8
Aroclor-1260	5	12.251	0.006	698	2.1	NS	---			----
Total Col1Ave (5 peaks):					2.1	Total Col2Ave (4 peaks):				3.1 RPD = 41*
Corrected Ave (4 peaks):					1.8	Corrected Ave (3 peaks):				2.0 RPD = 12
Aroclor-1262	1	10.833	0.005	15355	32.7	1	11.122	-0.079	7225	15.2
Aroclor-1262	2	12.251	0.007	698	0.9	2	11.662	0.011	2055	5.1
Aroclor-1262	3	12.321	0.002	836	1.0	3	12.434	0.000	573	1.2
Aroclor-1262	4	12.991	0.004	1043	1.4	4	12.505	0.003	1003	1.4
Total Col1Ave (4 peaks):					9.0	Total Col2Ave (4 peaks):				5.7 RPD = 45*
Corrected Ave (3 peaks):					1.1	Corrected Ave (3 peaks):				2.6 RPD = 80*
Aroclor-1268	1	12.251	0.004	698	0.4	1	12.434	0.002	573	0.5
Aroclor-1268	2	12.321	0.004	836	0.4	2	12.505	0.005	1003	0.8
Aroclor-1268	3	12.700	0.001	2449	1.5	3	12.892	0.001	721	0.7
Aroclor-1268	4	13.493	0.003	7547	1.4	4	13.708	-0.001	2265	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 29
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 13

Total PCB Area Col1 (5.906 - 13.793) = 1574335 Col1 Total PCB = 0.2 ppm*

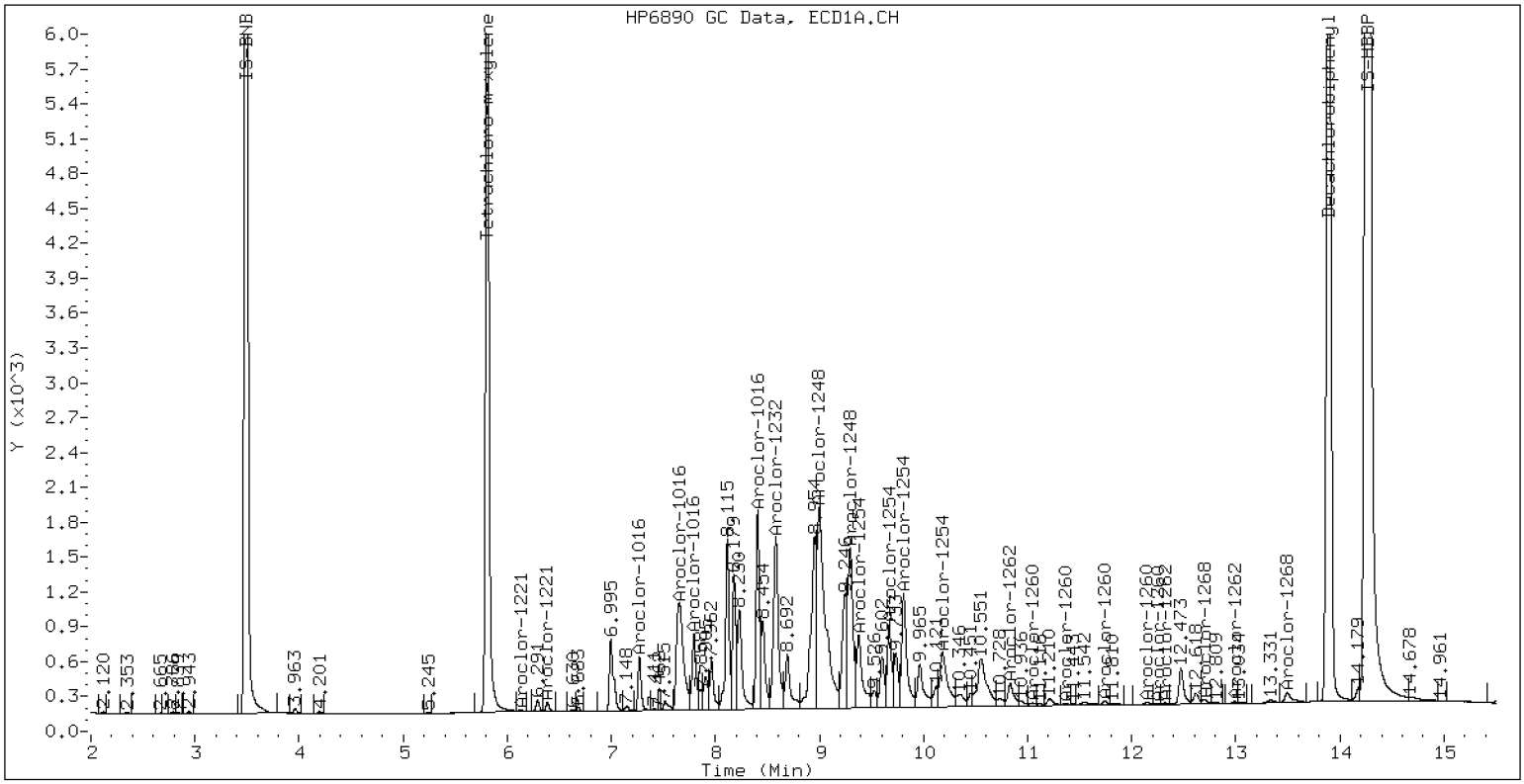
Total PCB Area Col2 (5.785 - 14.019) = 746330 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

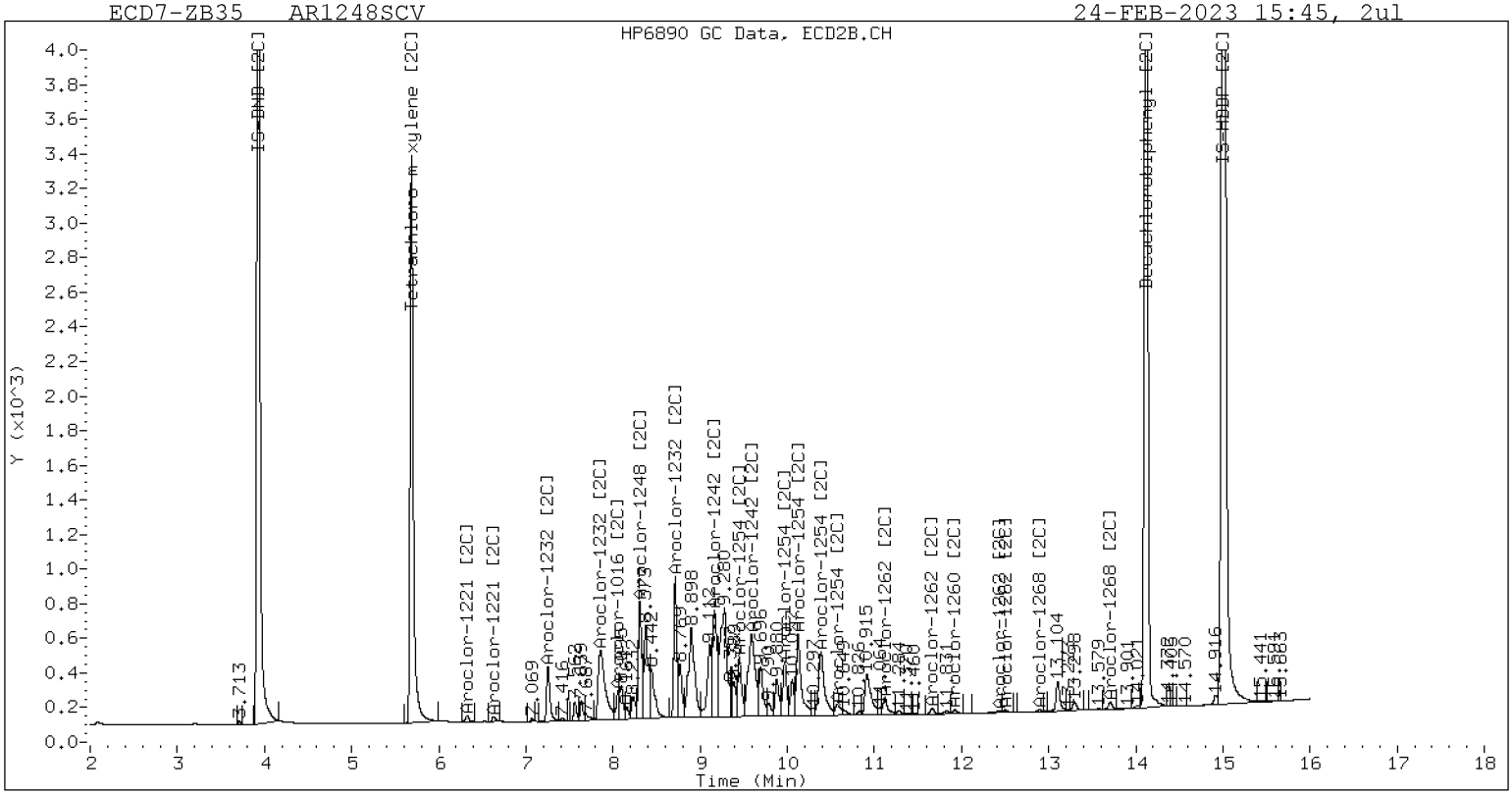
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242316ECD7.D
Data file 2: /230224.b/230224.b/02242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 24-FEB-2023 16:06
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.000	354312	5.686	0.001	174604	36.1	37.1	2.6	Tetrachloro-m-xylene
13.895	0.002	540961	14.119	-0.000	329134	34.6	37.9	9.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656887	-2.5
Hexabromobiphenyl	1429847	1585505	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	320936	1.8
Hexabromobiphenyl	513946	570006	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	565	2.3	1	7.255	-0.001	387	2.1
Aroclor-1016	2	7.656	0.002	1875	2.5	2	7.854	-0.002	860	2.3
Aroclor-1016	3	7.792	0.002	1106	3.0	3	8.098	0.043	578	3.4
Aroclor-1016	4	8.405	0.000	29924	124.7	4	8.307	0.000	21985	162.9
	Total Col1Ave (4 peaks):				33.1	Total Col2Ave (4 peaks):				42.6 RPD = 25
	Corrected Ave (3 peaks):				2.6	Corrected Ave (3 peaks):				2.6 RPD = 0
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.028	1947	33.9
Aroclor-1221	3	---			0.0	3	6.637	0.015	368	3.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.255	0.001	387	4.7
Aroclor-1232	3	7.656	0.000	1875	5.9	3	7.854	-0.007	860	5.3
Aroclor-1232	4	8.583	0.002	12327	91.8	4	8.715	0.000	15013	319.7
	Col1Ave: <3 Quant Peaks					Col2Ave: 109.9				
Aroclor-1242	1	7.270	-0.000	565	2.8	1	7.255	-0.001	387	2.6
Aroclor-1242	2	7.656	0.000	1875	3.0	2	7.854	-0.004	860	2.7
Aroclor-1242	3	8.405	-0.000	29924	155.6	3	9.169	0.002	21933	224.9
Aroclor-1242	4	8.583	0.003	12327	43.4	4	9.545	-0.053	34065	286.6
	Total Col1Ave (4 peaks):				51.2	Total Col2Ave (4 peaks):				129.2 RPD = 87*
	Corrected Ave (3 peaks):				16.4	Corrected Ave (3 peaks):				76.7 RPD = 130*
Aroclor-1248	1	8.405	0.000	29924	93.4	1	8.307	-0.001	21985	143.5
Aroclor-1248	2	8.583	0.002	12327	30.3	2	8.715	0.001	15013	94.8
Aroclor-1248	3	8.992	-0.007	145580	189.4	3	9.169	0.004	21933	120.3
Aroclor-1248	4	9.298	0.003	155450	397.3	4	9.545	-0.046	34065	155.6
	Total Col1Ave (4 peaks):				177.6	Total Col2Ave (4 peaks):				128.5 RPD = 32
	Corrected Ave (3 peaks):				104.3	Corrected Ave (3 peaks):				119.5 RPD = 14
Aroclor-1254	1	9.298	-0.001	155450	235.7	1	9.450	0.001	58639	240.4
Aroclor-1254	2	9.377	-0.001	69801	235.3	2	9.971	0.000	47008	239.5
Aroclor-1254	3	9.668	-0.000	100839	237.8	3	10.124	0.000	100062	235.7
Aroclor-1254	4	9.807	0.000	190544	231.1	4	10.373	0.000	99535	240.5
Aroclor-1254	5	10.176	-0.000	122321	236.7	5	10.570	0.001	61549	244.2
	Total Col1Ave (5 peaks):				235.3	Total Col2Ave (5 peaks):				240.1 RPD = 2
	Corrected Ave (4 peaks):				234.7	Corrected Ave (4 peaks):				239.0 RPD = 2
Aroclor-1260	1	11.043	-0.002	12288	21.5	1	11.661	0.008	29062	86.7
Aroclor-1260	2	11.361	-0.001	13660	22.9	2	11.921	0.003	22238	26.0
Aroclor-1260	3	11.736	0.002	37632	23.8	3	12.441	0.005	3555	15.7
Aroclor-1260	4	12.141	0.002	27105	34.1	4	12.503	0.001	13126	22.8
Aroclor-1260	5	12.320	0.076	2381	6.9	NS	---			----
	Total Col1Ave (5 peaks):				21.9	Total Col2Ave (4 peaks):				37.8 RPD = 53*
	Corrected Ave (4 peaks):				18.8	Corrected Ave (3 peaks):				21.5 RPD = 13
Aroclor-1262	1	10.827	-0.002	220626	453.6	1	11.281	0.081	13562	27.9
Aroclor-1262	2	12.320	0.076	2381	3.0	2	11.661	0.009	29062	70.1
Aroclor-1262	3	---			0.0	3	12.441	0.007	3555	7.6
Aroclor-1262	4	12.989	0.002	3225	4.1	4	12.503	0.001	13126	17.8
	Total Col1Ave (3 peaks):				153.6	Total Col2Ave (4 peaks):				30.8 RPD = 133*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				17.7
Aroclor-1268	1	12.320	0.074	2381	1.2	1	12.441	0.009	3555	3.1
Aroclor-1268	2	---			0.0	2	12.503	0.003	13126	10.6
Aroclor-1268	3	12.701	0.002	2939	1.7	3	12.892	0.000	772	0.7
Aroclor-1268	4	13.493	0.003	9164	1.6	4	13.707	-0.002	2801	0.8
	Total Col1Ave (3 peaks):				1.5	Total Col2Ave (4 peaks):				3.8 RPD = 87*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				1.6

Total PCB Area Col1 (5.906 - 13.793) = 2118645 Col1 Total PCB = 0.3 ppm*

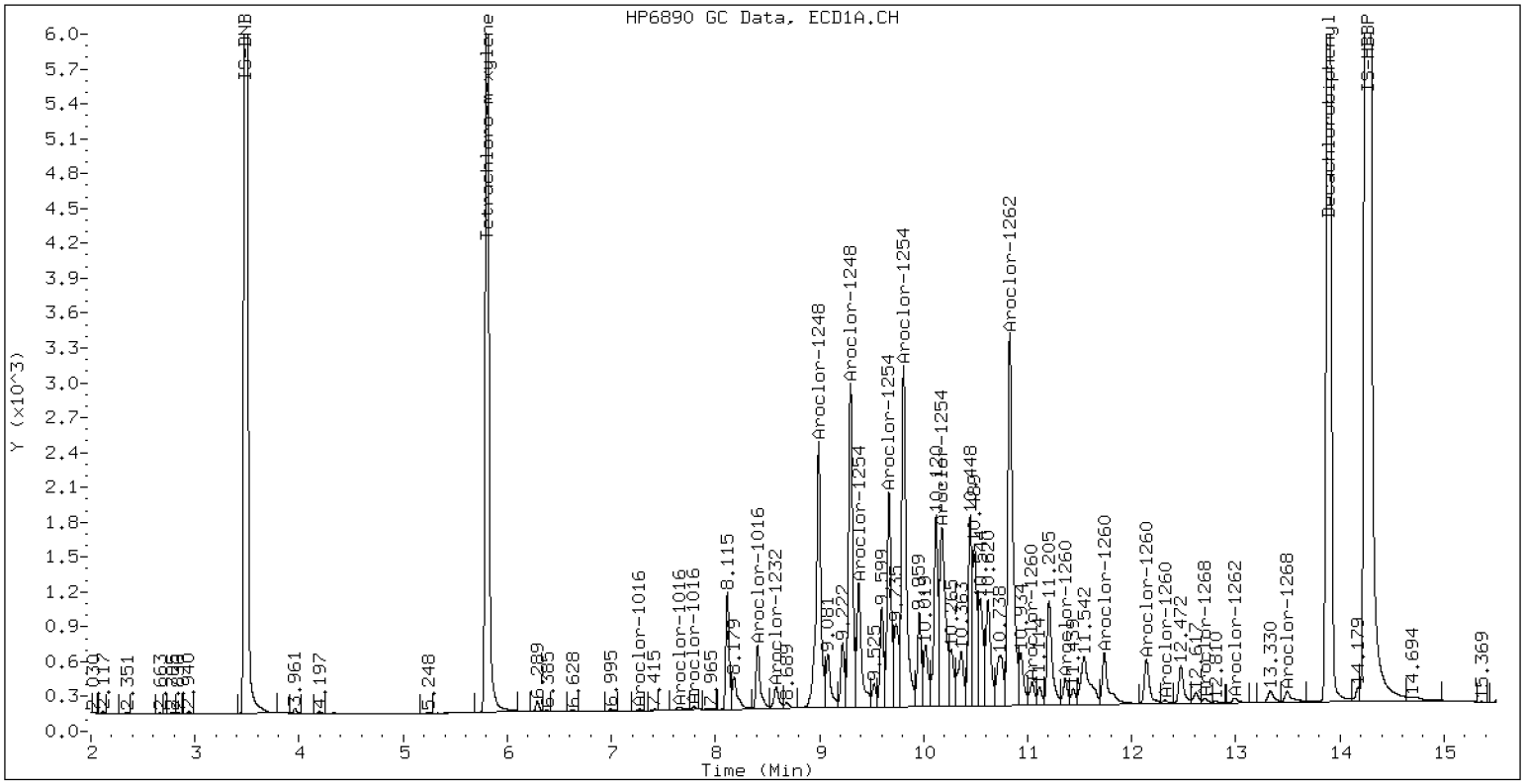
Total PCB Area Col2 (5.785 - 14.019) = 1007601 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

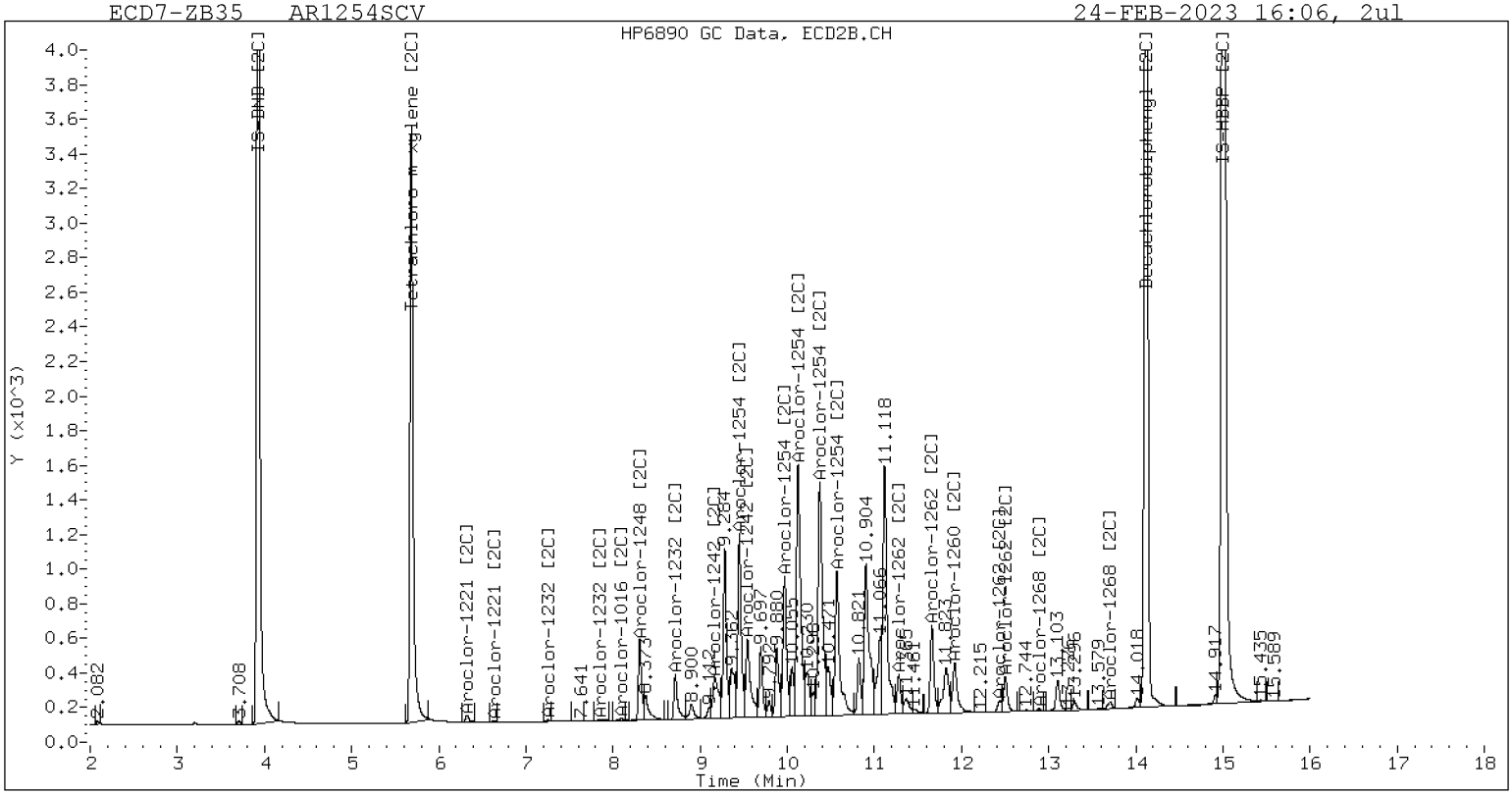
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242317ECD7.D
Data file 2: /230224.b/230224.b/02242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 24-FEB-2023 16:27
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.000	356001	5.685	0.000	170882	36.0	36.6	1.7	Tetrachloro-m-xylene
13.895	0.002	533971	14.119	0.000	326235	34.4	37.9	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661953	-1.8
Hexabromobiphenyl	1429847	1574993	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317807	0.8
Hexabromobiphenyl	513946	565951	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	7175	28.5	1	7.256	0.000	3727	20.0
Aroclor-1016	2	7.659	0.005	12893	16.8	2	7.863	0.007	5834	15.5
Aroclor-1016	3	7.794	0.004	6936	18.5	3	8.063	0.009	2963	17.4
Aroclor-1016	4	8.408	0.003	3610	14.9	4	8.308	0.002	2045	15.3
Total Col1Ave (4 peaks):					19.7	Total Col2Ave (4 peaks):				17.0 RPD = 14
Corrected Ave (3 peaks):					16.8	Corrected Ave (3 peaks):				16.1 RPD = 4
Aroclor-1221	1	4.730	-0.000	15803	266.6	1	4.955	-0.001	7909	262.9
Aroclor-1221	2	6.131	-0.001	26946	254.1	2	6.296	-0.000	14303	251.2
Aroclor-1221	3	6.382	-0.000	62477	253.8	3	6.622	0.000	23612	254.7
Total Col1Ave (3 peaks):					258.2	Total Col2Ave (3 peaks):				256.3 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.730	0.000	15803	445.6	1	4.955	-0.001	7909	486.4
Aroclor-1232	2	6.131	0.000	26946	383.1	2	7.256	0.002	3727	46.1
Aroclor-1232	3	7.659	0.003	12893	40.5	3	7.863	0.002	5834	36.1
Aroclor-1232	4	8.583	0.003	2684	19.8	4	8.716	0.002	1189	25.6
Total Col1Ave (4 peaks):					222.3	Total Col2Ave (4 peaks):				148.5 RPD = 40
Corrected Ave (3 peaks):					147.8	Corrected Ave (3 peaks):				35.9 RPD = 122*
Aroclor-1242	1	7.269	-0.001	7175	35.0	1	7.256	0.000	3727	25.2
Aroclor-1242	2	7.659	0.003	12893	20.7	2	7.863	0.005	5834	18.8
Aroclor-1242	3	8.408	0.002	3610	18.6	3	9.175	0.008	1082	11.2
Aroclor-1242	4	8.583	0.004	2684	9.4	4	9.543	-0.054	1390	11.8
Total Col1Ave (4 peaks):					20.9	Total Col2Ave (4 peaks):				16.8 RPD = 22
Corrected Ave (3 peaks):					16.2	Corrected Ave (3 peaks):				13.9 RPD = 15
Aroclor-1248	1	8.408	0.002	3610	11.2	1	8.308	0.001	2045	13.5
Aroclor-1248	2	8.583	0.003	2684	6.5	2	8.716	0.002	1189	7.6
Aroclor-1248	3	8.994	-0.005	24440	31.6	3	9.175	0.009	1082	6.0
Aroclor-1248	4	9.302	0.008	26328	66.8	4	9.543	-0.048	1390	6.4
Total Col1Ave (4 peaks):					29.0	Total Col2Ave (4 peaks):				8.4 RPD = 110*
Corrected Ave (3 peaks):					16.4	Corrected Ave (3 peaks):				6.7 RPD = 85*
Aroclor-1254	1	9.302	0.004	26328	39.6	1	9.452	0.003	9571	39.6
Aroclor-1254	2	---			0.0	2	9.972	0.002	1733	8.9
Aroclor-1254	3	9.670	0.002	3721	8.7	3	10.147	0.023	49218	117.1
Aroclor-1254	4	9.808	0.000	9653	11.6	4	10.370	-0.002	59603	145.4
Aroclor-1254	5	10.120	-0.056	131179	251.9	5	10.569	0.001	79533	318.7
Total Col1Ave (4 peaks):					78.0	Total Col2Ave (5 peaks):				125.9 RPD = 47*
Corrected Ave (3 peaks):					20.0	Corrected Ave (4 peaks):				77.8 RPD = 118*
Aroclor-1260	1	11.044	-0.000	223208	394.0	1	11.652	-0.001	104071	312.7
Aroclor-1260	2	11.361	-0.001	190166	321.2	2	11.919	0.002	251579	296.2
Aroclor-1260	3	11.737	0.003	458281	291.9	3	12.435	-0.001	113645	504.2
Aroclor-1260	4	12.141	0.002	149720	189.4	4	12.501	-0.001	182951	319.6
Aroclor-1260	5	12.244	0.000	196033	576.0	NS	---			----
Total Col1Ave (5 peaks):					354.5	Total Col2Ave (4 peaks):				358.2 RPD = 1
Corrected Ave (4 peaks):					299.1	Corrected Ave (3 peaks):				309.5 RPD = 3
Aroclor-1262	1	10.828	-0.001	121431	251.3	1	11.201	0.000	121335	251.1
Aroclor-1262	2	12.244	0.000	196033	249.3	2	11.652	0.000	104071	252.9
Aroclor-1262	3	12.319	0.001	211092	249.8	3	12.435	0.001	113645	243.4
Aroclor-1262	4	12.988	0.001	183455	237.5	4	12.501	-0.001	182951	250.1
Total Col1Ave (4 peaks):					247.0	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					245.5	Corrected Ave (3 peaks):				248.2 RPD = 1
Aroclor-1268	1	12.244	-0.002	196033	97.1	1	12.435	0.003	113645	99.7
Aroclor-1268	2	12.319	0.002	211092	105.6	2	12.501	0.001	182951	149.3
Aroclor-1268	3	12.723	0.024	77240	45.2	3	12.891	-0.000	7755	7.4
Aroclor-1268	4	13.488	-0.002	65479	11.6	4	13.709	0.000	35146	10.5
Total Col1Ave (4 peaks):					64.9	Total Col2Ave (4 peaks):				66.7 RPD = 3

Corrected Ave (3 peaks): 51.3 Corrected Ave (3 peaks): 39.2 RPD = 27

Total PCB Area Col1 (5.906 - 13.793) = 3239932 Col1 Total PCB = 0.4 ppm*

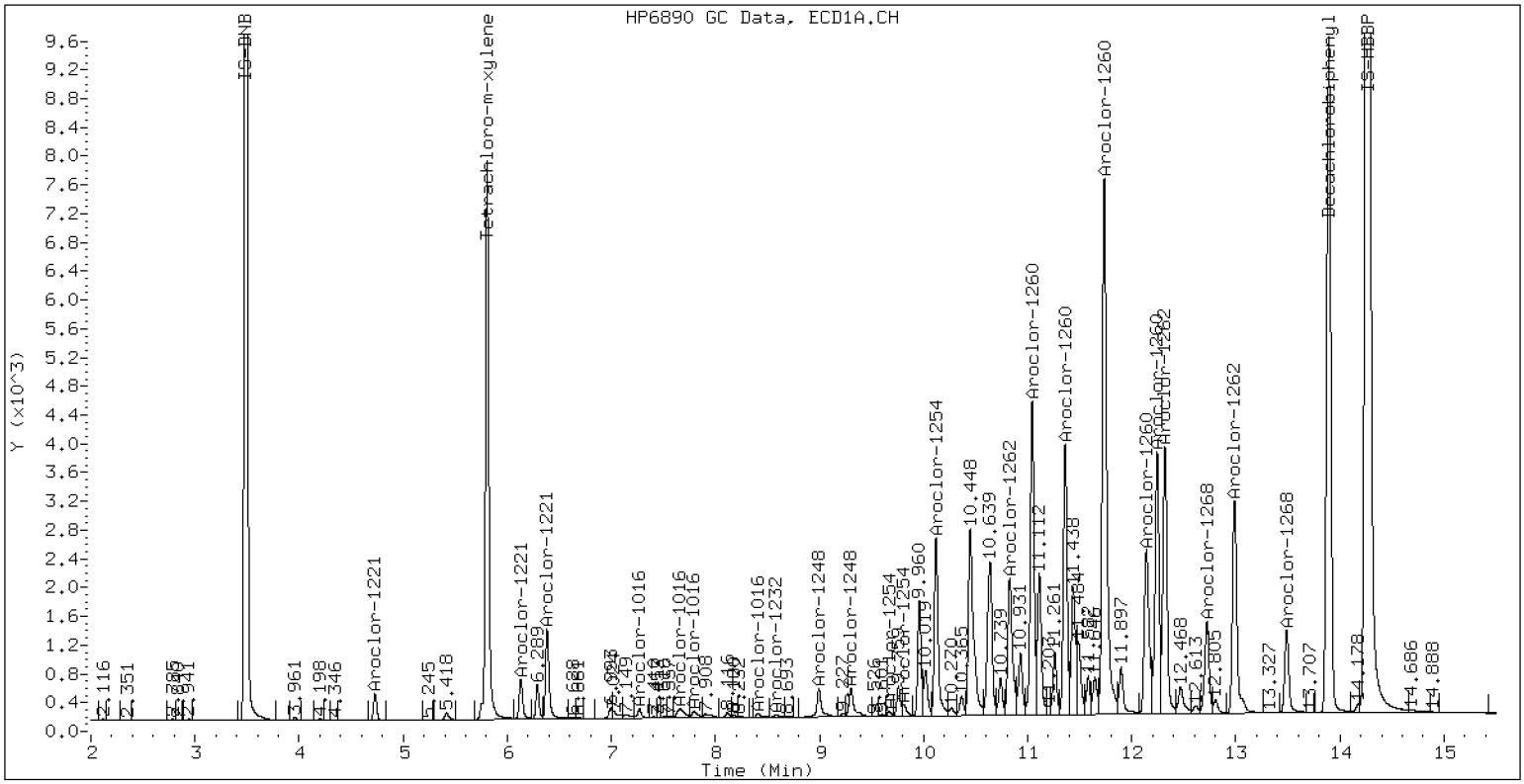
Total PCB Area Col2 (5.785 - 14.019) = 1655522 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

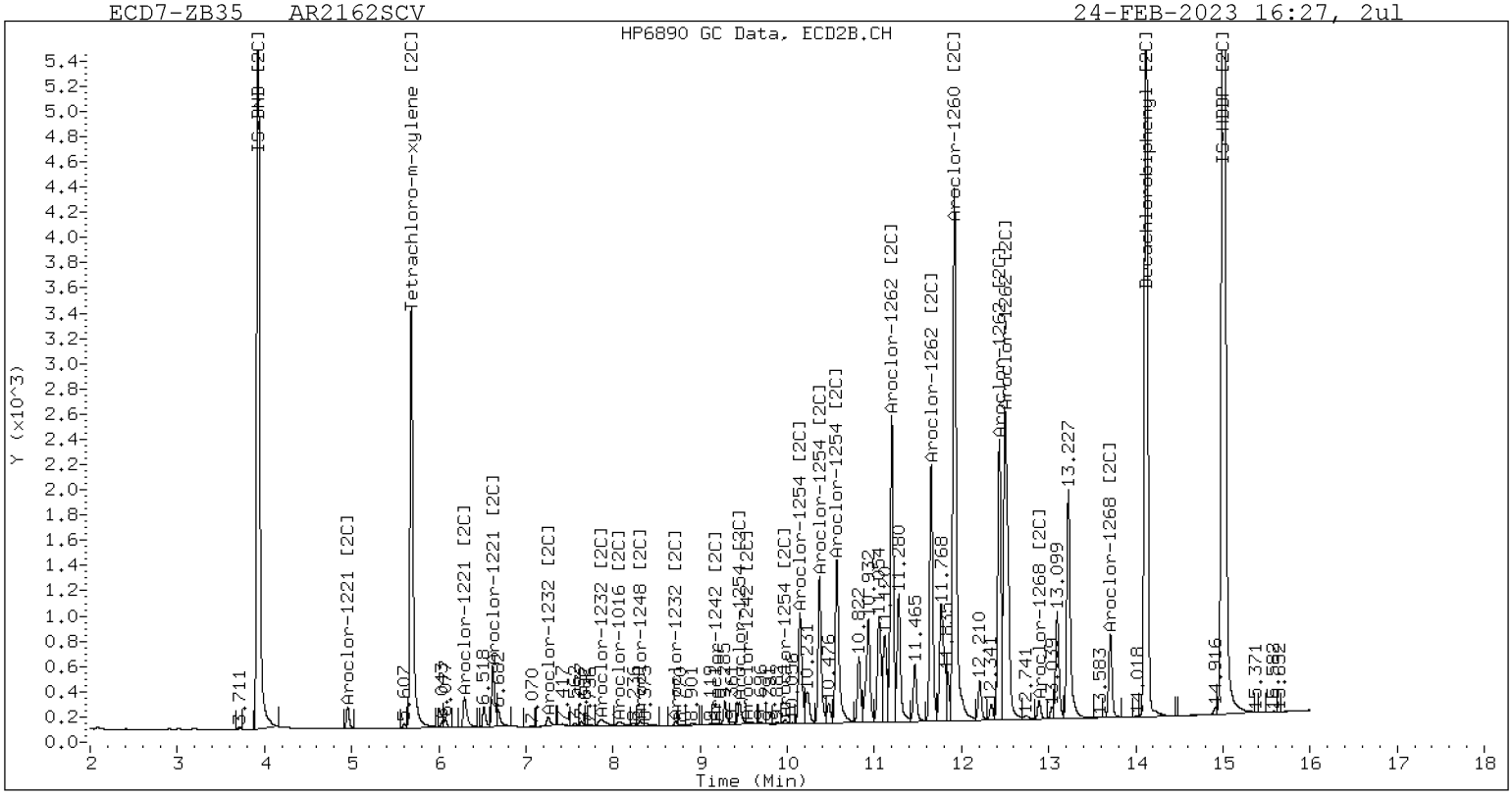
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242318ECD7.D
Data file 2: /230224.b/230224.b/02242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 24-FEB-2023 16:48
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	363331	5.685	0.000	176204	37.1	38.2	2.9	Tetrachloro-m-xylene
13.894	0.001	800845	14.118	-0.001	488290	51.3	56.4	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656592	-2.6
Hexabromobiphenyl	1429847	1584453	10.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314741	-0.2
Hexabromobiphenyl	513946	568346	10.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	28327	113.6	1	7.254	-0.001	20651	112.1
Aroclor-1016	2	7.657	0.003	80668	106.1	2	7.861	0.005	41326	110.6
Aroclor-1016	3	7.793	0.003	40661	109.6	3	8.060	0.005	20446	121.2
Aroclor-1016	4	8.407	0.002	24680	102.9	4	8.308	0.001	13576	102.5
Total Col1Ave (4 peaks):					108.0	Total Col2Ave (4 peaks):				111.6 RPD = 3
Corrected Ave (3 peaks):					106.2	Corrected Ave (3 peaks):				108.4 RPD = 2
Aroclor-1221	1	4.729	-0.001	8535	145.1	1	4.956	-0.000	3965	133.1
Aroclor-1221	2	6.132	-0.000	15523	147.6	2	6.297	0.001	8689	154.1
Aroclor-1221	3	6.382	-0.000	45872	187.9	3	6.622	0.001	22272	242.6
Total Col1Ave (3 peaks):					160.2	Total Col2Ave (3 peaks):				176.6 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.729	-0.001	8535	242.6	1	4.956	0.000	3965	246.2
Aroclor-1232	2	6.132	0.001	15523	222.5	2	7.254	0.000	20651	258.1
Aroclor-1232	3	7.657	0.001	80668	255.4	3	7.861	0.001	41326	258.3
Aroclor-1232	4	8.582	0.001	34784	259.2	4	8.714	-0.001	12504	271.5
Total Col1Ave (4 peaks):					244.9	Total Col2Ave (4 peaks):				258.5 RPD = 5
Corrected Ave (3 peaks):					240.2	Corrected Ave (3 peaks):				254.2 RPD = 6
Aroclor-1242	1	7.270	-0.001	28327	139.2	1	7.254	-0.001	20651	141.2
Aroclor-1242	2	7.657	0.001	80668	130.5	2	7.861	0.003	41326	134.4
Aroclor-1242	3	8.407	0.001	24680	128.4	3	9.170	0.003	12830	134.1
Aroclor-1242	4	8.582	0.003	34784	122.4	4	9.600	0.003	14836	127.3
Total Col1Ave (4 peaks):					130.1	Total Col2Ave (4 peaks):				134.3 RPD = 3
Corrected Ave (3 peaks):					127.1	Corrected Ave (3 peaks):				132.0 RPD = 4
Aroclor-1248	1	8.407	0.001	24680	77.0	1	8.308	0.000	13576	90.3
Aroclor-1248	2	8.582	0.001	34784	85.4	2	8.714	-0.000	12504	80.5
Aroclor-1248	3	8.996	-0.003	83592	108.8	3	9.170	0.004	12830	71.8
Aroclor-1248	4	9.292	-0.003	39603	101.3	4	9.600	0.010	14836	69.1
Total Col1Ave (4 peaks):					93.1	Total Col2Ave (4 peaks):				77.9 RPD = 18
Corrected Ave (3 peaks):					87.9	Corrected Ave (3 peaks):				73.8 RPD = 17
Aroclor-1254	1	9.292	-0.007	39603	60.1	1	9.452	0.003	4590	19.2
Aroclor-1254	2	9.377	-0.000	11450	38.6	2	9.973	0.003	2892	15.0
Aroclor-1254	3	9.674	0.005	6387	15.1	3	10.131	0.007	6052	14.5
Aroclor-1254	4	9.813	0.006	10162	12.3	4	10.390	0.017	5324	13.1
Aroclor-1254	5	10.189	0.012	6862	13.3	5	10.572	0.004	1891	7.7
Total Col1Ave (5 peaks):					27.9	Total Col2Ave (5 peaks):				13.9 RPD = 67*
Corrected Ave (4 peaks):					19.8	Corrected Ave (4 peaks):				12.6 RPD = 45*
Aroclor-1260	1	11.046	0.002	87033	152.7	1	11.645	-0.008	62543	187.1
Aroclor-1260	2	11.362	0.001	6300	10.6	2	11.920	0.003	28552	33.5
Aroclor-1260	3	11.738	0.004	54524	34.5	3	12.432	-0.004	285450	1261.2
Aroclor-1260	4	12.144	0.005	1727	2.2	4	12.499	-0.002	306992	534.0
Aroclor-1260	5	12.246	0.002	502931	1469.0	NS	---			----
Total Col1Ave (5 peaks):					333.8	Total Col2Ave (4 peaks):				503.9 RPD = 41*
Corrected Ave (4 peaks):					50.0	Corrected Ave (3 peaks):				251.5 RPD = 134*
Aroclor-1262	1	10.832	0.004	3395	7.0	1	11.201	0.001	44255	91.2
Aroclor-1262	2	12.246	0.002	502931	635.9	2	11.645	-0.007	62543	151.3
Aroclor-1262	3	12.318	-0.000	497006	584.5	3	12.432	-0.002	285450	608.7
Aroclor-1262	4	12.987	-0.000	202197	260.2	4	12.499	-0.003	306992	417.9
Total Col1Ave (4 peaks):					371.9	Total Col2Ave (4 peaks):				317.3 RPD = 16
Corrected Ave (3 peaks):					283.9	Corrected Ave (3 peaks):				220.1 RPD = 25
Aroclor-1268	1	12.246	-0.001	502931	247.7	1	12.432	-0.000	285450	249.4
Aroclor-1268	2	12.318	0.002	497006	247.2	2	12.499	-0.001	306992	249.5
Aroclor-1268	3	12.699	-0.000	422793	245.8	3	12.892	0.000	260893	248.4
Aroclor-1268	4	13.490	0.000	1386953	244.9	4	13.709	-0.000	829733	247.1
Total Col1Ave (4 peaks):					246.4	Total Col2Ave (4 peaks):				248.6 RPD = 1

Corrected Ave (3 peaks): 246.0 Corrected Ave (3 peaks): 248.3 RPD = 1

Total PCB Area Col1 (5.906 - 13.793) = 4180607 Col1 Total PCB = 0.5 ppm*

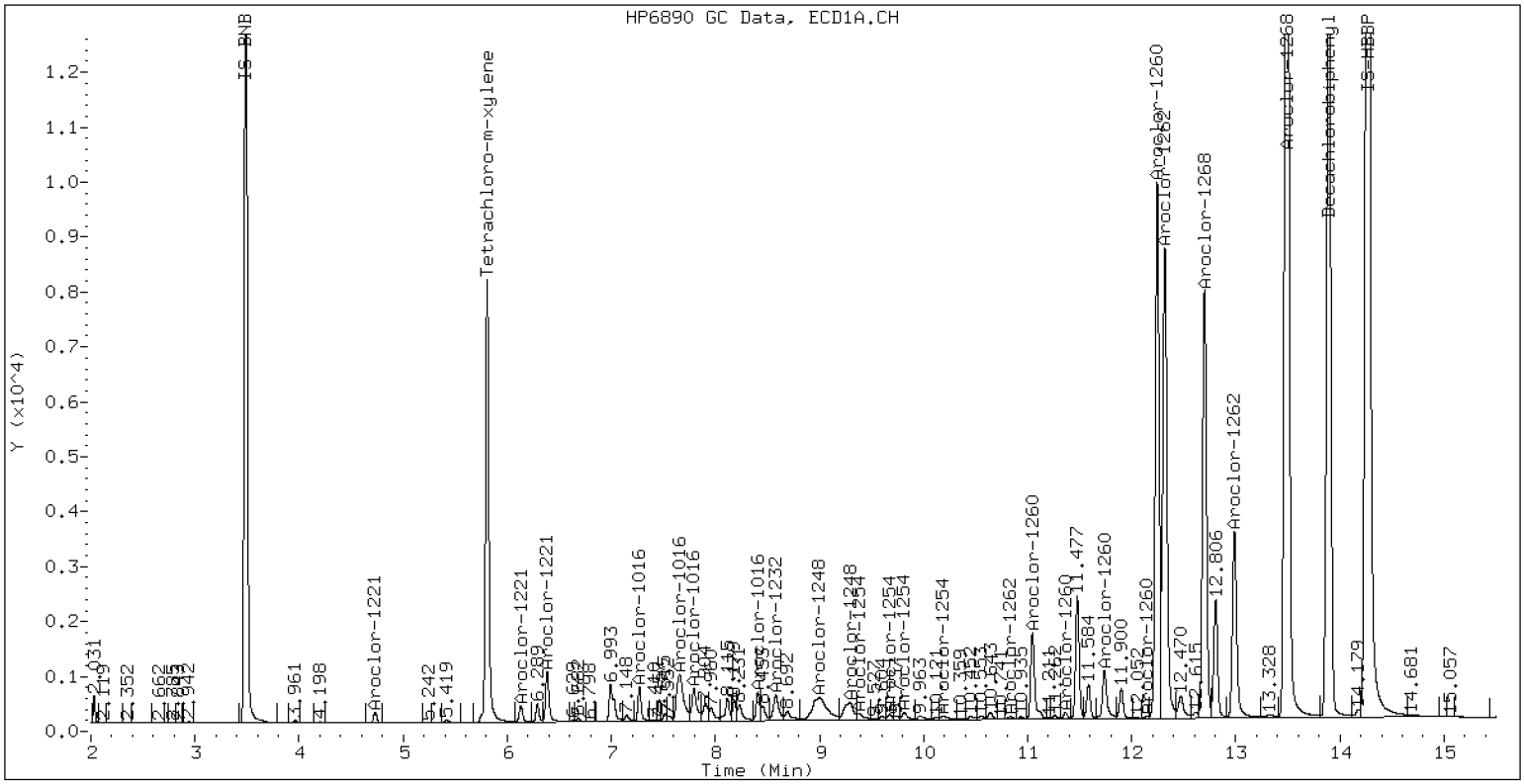
Total PCB Area Col2 (5.785 - 14.019) = 2376912 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

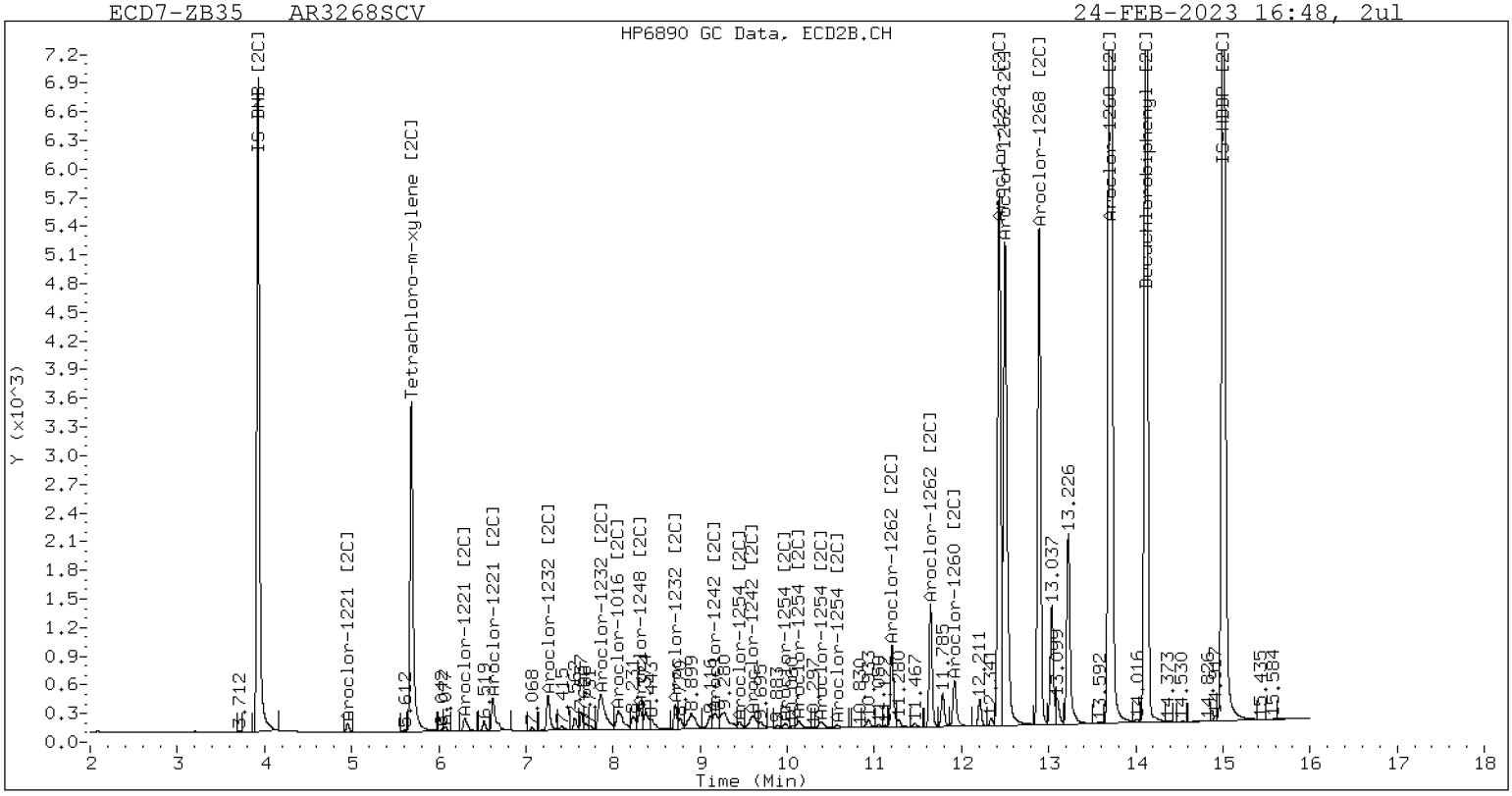
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242319ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.261	0.000	694353	9.912	0.000	580269	0.100	0.100	0.0	2,4-DDE
0.000	-10.293	0	10.672	0.000	673479	0.000	0.200#	----	2,4-DDT
9.686	0.000	1191406	10.212	0.000	433373	0.100	0.100	0.0	4,4-DDE
10.259	0.000	1721760	10.672	0.000	673479	0.100	0.200#	66.7*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242320ECD7.D ARI ID: DDT BD

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.285	0.023	4923	9.921	0.009	9972	0.001	0.002	84.3*	2,4-DDE
0.000	-10.293	0	10.677	0.004	249094	0.000	0.074#	----	2,4-DDT
9.692	0.006	12128	10.221	0.009	528	0.001	0.000	156.7*	4,4-DDE
10.265	0.006	410017	10.677	0.004	249094	0.023	0.074#	103.6*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLB0342

Instrument: ECD7
Calibration ID: GB00069

Printed: 2/28/2023 9:54:44AM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLB0342-CAL1	QC		1		L000856	L000844		
SLB0342-CAL2	QC		2		L000859	L000844		
SLB0342-CAL3	QC		3		L000858	L000844		
SLB0342-CAL4	QC		4		L000731	L000844		
SLB0342-CAL5	QC		5		L000857	L000844		
SLB0342-CAL6	QC		6		L000855	L000844		
SLB0342-CAL7	QC		7		L000860	L000844		
SLB0342-CAL8	QC		8		L000861	L000844		
SLB0342-CAL9	QC		9		L000862	L000844		
SLB0342-CALA	QC		10		L000863	L000844		
SLB0342-CALB	QC		11		L000864	L000844		
SLB0342-SCV1	QC		12		L002065	L000844		
SLB0342-SCV2	QC		13		K007656	L000844		
SLB0342-SCV3	QC		14		L002066	L000844		
SLB0342-SCV4	QC		15		L002067	L000844		
SLB0342-SCV5	QC		16		L002068	L000844		
SLB0342-SCV6	QC		17		L002069	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-FEB-2023 10:51	02242301ECD7.D	1	IB	
2	24-FEB-2023 11:12	02242302ECD7.D	1	0.25PPMAR1660	
3	24-FEB-2023 11:33	02242303ECD7.D	1	0.02PPMAR1660	
4	24-FEB-2023 11:54	02242304ECD7.D	1	0.05PPMAR1660	
5	24-FEB-2023 12:15	02242305ECD7.D	1	1.0PPMAR1660	
6	24-FEB-2023 12:36	02242306ECD7.D	1	0.1PPMAR1660	
7	24-FEB-2023 12:57	02242307ECD7.D	1	0.5PPMAR1660	
8	24-FEB-2023 13:18	02242308ECD7.D	1	0.25PPMAR1242	
9	24-FEB-2023 13:39	02242309ECD7.D	1	0.25PPMAR1248	
10	24-FEB-2023 14:00	02242310ECD7.D	1	0.25PPMAR1254	
11	24-FEB-2023 14:21	02242311ECD7.D	1	0.25PPMAR2162	
12	24-FEB-2023 14:42	02242312ECD7.D	1	0.25PPMAR3268	
13	24-FEB-2023 15:03	02242313ECD7.D	1	AR1660SCV	
14	24-FEB-2023 15:24	02242314ECD7.D	1	AR1242SCV	
15	24-FEB-2023 15:45	02242315ECD7.D	1	AR1248SCV	
16	24-FEB-2023 16:06	02242316ECD7.D	1	AR1254SCV	
17	24-FEB-2023 16:27	02242317ECD7.D	1	AR2162SCV	
18	24-FEB-2023 16:48	02242318ECD7.D	1	AR3268SCV	
19	24-FEB-2023 17:09	02242319ECD7.D	1	DDTS	
20	24-FEB-2023 17:30	02242320ECD7.D	1	DDT BD	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

ARI Job No.: IB Method: PCB.m Instrument: ecd7.i Date: 24-FEB-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	NO MANUAL INTEGRATION
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2039	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION
1051	02242301ECD7.D	IB		1	NO MANUAL INTEGRATION
1112	02242302ECD7.D	0.25PPMAR1660		1	NO MANUAL INTEGRATION
1133	02242303ECD7.D	0.02PPMAR1660		1	Aroclor-1016 [2C],
1154	02242304ECD7.D	0.05PPMAR1660		1	NO MANUAL INTEGRATION
1215	02242305ECD7.D	1.0PPMAR1660		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1236	02242306ECD7.D	0.1PPMAR1660		1	NO MANUAL INTEGRATION
1257	02242307ECD7.D	0.5PPMAR1660		1	NO MANUAL INTEGRATION
1318	02242308ECD7.D	0.25PPMAR1242		1	NO MANUAL INTEGRATION
1339	02242309ECD7.D	0.25PPMAR1248		1	NO MANUAL INTEGRATION
1400	02242310ECD7.D	0.25PPMAR1254		1	NO MANUAL INTEGRATION
1421	02242311ECD7.D	0.25PPMAR2162		1	NO MANUAL INTEGRATION
1442	02242312ECD7.D	0.25PPMAR3268		1	NO MANUAL INTEGRATION
1503	02242313ECD7.D	AR1660SCV		1	NO MANUAL INTEGRATION
1524	02242314ECD7.D	AR1242SCV		1	NO MANUAL INTEGRATION
1545	02242315ECD7.D	AR1248SCV		1	NO MANUAL INTEGRATION
1606	02242316ECD7.D	AR1254SCV		1	NO MANUAL INTEGRATION
1627	02242317ECD7.D	AR2162SCV		1	NO MANUAL INTEGRATION
1648	02242318ECD7.D	AR3268SCV		1	NO MANUAL INTEGRATION
1709	02242319ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1730	02242320ECD7.D	DDT BD		1	NO MANUAL INTEGRATION
1751	02242321ECD7.D			1	NO MANUAL INTEGRATION
1812	02242322ECD7.D			1	NO MANUAL INTEGRATION
1833	02242323ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1854	02242324ECD7.D			1	NO MANUAL INTEGRATION
1915	02242325ECD7.D			1	NO MANUAL INTEGRATION
1936	02242326ECD7.D			1	NO MANUAL INTEGRATION
1957	02242327ECD7.D			1	NO MANUAL INTEGRATION
2018	02242328ECD7.D			1	NO MANUAL INTEGRATION
2038	02242329ECD7.D			1	NO MANUAL INTEGRATION
2059	02242330ECD7.D			1	NO MANUAL INTEGRATION
2120	02242331ECD7.D			1	NO MANUAL INTEGRATION
2141	02242332ECD7.D			1	NO MANUAL INTEGRATION
2202	02242333ECD7.D			1	NO MANUAL INTEGRATION
2223	02242334ECD7.D			1	NO MANUAL INTEGRATION
2244	02242335ECD7.D			1	NO MANUAL INTEGRATION
2305	02242336ECD7.D			1	NO MANUAL INTEGRATION
2326	02242337ECD7.D			1	NO MANUAL INTEGRATION
2347	02242338ECD7.D			1	NO MANUAL INTEGRATION
0008	02242339ECD7.D			1	NO MANUAL INTEGRATION
0029	02242340ECD7.D			1	NO MANUAL INTEGRATION
0050	02242341ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0111	02242342ECD7.D			1	NO MANUAL INTEGRATION
0132	02242343ECD7.D			1	NO MANUAL INTEGRATION
0153	02242344ECD7.D			1	NO MANUAL INTEGRATION
0214	02242345ECD7.D			1	NO MANUAL INTEGRATION
0235	02242346ECD7.D			1	NO MANUAL INTEGRATION
0256	02242347ECD7.D			1	NO MANUAL INTEGRATION
0317	02242348ECD7.D			1	NO MANUAL INTEGRATION
0338	02242349ECD7.D			1	NO MANUAL INTEGRATION
0359	02242350ECD7.D			1	NO MANUAL INTEGRATION
0420	02242351ECD7.D			1	NO MANUAL INTEGRATION
0441	02242352ECD7.D			1	NO MANUAL INTEGRATION
0502	02242353ECD7.D			1	NO MANUAL INTEGRATION
0523	02242354ECD7.D			1	NO MANUAL INTEGRATION
0544	02242355ECD7.D			1	NO MANUAL INTEGRATION
0605	02242356ECD7.D			1	NO MANUAL INTEGRATION
0626	02242357ECD7.D			1	NO MANUAL INTEGRATION
0647	02242358ECD7.D			1	NO MANUAL INTEGRATION
0708	02242359ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0729	02242360ECD7.D			1	NO MANUAL INTEGRATION
0750	02242361ECD7.D			1	NO MANUAL INTEGRATION
0811	02242362ECD7.D			1	NO MANUAL INTEGRATION
0832	02242363ECD7.D			1	NO MANUAL INTEGRATION
0853	02242364ECD7.D			1	NO MANUAL INTEGRATION
0914	02242365ECD7.D			1	NO MANUAL INTEGRATION
0935	02242366ECD7.D			1	NO MANUAL INTEGRATION
0956	02242367ECD7.D			1	NO MANUAL INTEGRATION
1017	02242368ECD7.D			1	NO MANUAL INTEGRATION
1038	02242369ECD7.D			1	NO MANUAL INTEGRATION
1059	02242370ECD7.D			1	NO MANUAL INTEGRATION
1120	02242371ECD7.D			1	NO MANUAL INTEGRATION
1141	02242372ECD7.D			1	NO MANUAL INTEGRATION
1202	02242373ECD7.D			1	NO MANUAL INTEGRATION
1223	02242374ECD7.D			1	NO MANUAL INTEGRATION
1244	02242375ECD7.D			1	NO MANUAL INTEGRATION
1305	02242376ECD7.D			1	NO MANUAL INTEGRATION
1326	02242377ECD7.D			1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230224.b\230224.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1347	02242378ECD7.D			1	NO MANUAL INTEGRATION
1408	02242379ECD7.D			1	NO MANUAL INTEGRATION
1429	02242380ECD7.D			1	NO MANUAL INTEGRATION
1450	02242381ECD7.D			1	NO MANUAL INTEGRATION
1511	02242382ECD7.D			1	NO MANUAL INTEGRATION
1532	02242383ECD7.D			1	NO MANUAL INTEGRATION
1553	02242384ECD7.D			1	NO MANUAL INTEGRATION

Security Status Report

Date: 28-Feb-2023 10:53

02242301ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242302ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242303ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242304ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242305ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242306ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242307ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242308ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242309ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242310ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242311ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242312ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242313ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242314ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242315ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242316ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242317ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242318ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242319ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53
02242320ECD7.D	Data Locked	richardl, 28-Feb-2023 10:53

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00716	0.00716	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01281	0.01281	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02975	0.02975	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02479	0.02479	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07529	0.07529	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.02343	0.02343	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.03463	0.03463	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00429	0.00429	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.00850							0.00850	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.03848							0.03848	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.01635							0.01635	0.000
7 Aroclor-1016(1)	0.03172	0.03253	0.03142	0.03141	0.02856	0.02667			
	*****							0.03039	7.449
(2)	0.09239	0.09246	0.09222	0.09849	0.09174	0.08849			
	*****							0.09263	3.499
(3)	0.05165	0.05037	0.04823	0.04393	0.03991	0.03721			
	*****							0.04522	12.936
(4)	0.03002	0.02894	0.02959	0.03058	0.02852	0.02774			
	*****							0.02923	3.542
6 Aroclor-1248(1)	*****	*****	*****	*****	*****	*****			
	0.03903							0.03903	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.04961							0.04961	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.09360							0.09360	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.04765							0.04765	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.08033	0.08033	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.03613	0.03613	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.05165	0.05165	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.10042	0.10042	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.06294	0.06294	0.000
9 Aroclor-1260(1)	0.02926	0.02920	0.02841	0.03096	0.02737	0.02746	+++++	0.02878	4.677
(2)	0.02967	0.03006	0.03011	0.03291	0.02910	0.02857	+++++	0.03007	5.029
(3)	0.08088	0.08045	0.07954	0.08575	0.07515	0.07674	+++++	0.07975	4.627
(4)	0.03905	0.03887	0.03955	0.04485	0.03942	0.03922	+++++	0.04016	5.753
(5)	0.01783	0.01715	0.01679	0.01875	0.01664	0.01655	+++++	0.01729	4.953
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02454	0.02454	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
(2)	+++++ / 0.03993	+++++	+++++	+++++	+++++	+++++	0.03993	0.000
(3)	+++++ / 0.04293	+++++	+++++	+++++	+++++	+++++	0.04293	0.000
(4)	+++++ / 0.03923	+++++	+++++	+++++	+++++	+++++	0.03923	0.000
11 Aroclor-1268(1)	+++++ / 0.10250	+++++	+++++	+++++	+++++	+++++	0.10250	0.000
(2)	+++++ / 0.10151	+++++	+++++	+++++	+++++	+++++	0.10151	0.000
(3)	+++++ / 0.08686	+++++	+++++	+++++	+++++	+++++	0.08686	0.000
(4)	+++++ / 0.28598	+++++	+++++	+++++	+++++	+++++	0.28598	0.000
42 2,4-DDE	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 2,4-DDD	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 2,4-DDT	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDE	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m
Last Edit : 24-Feb-2023 15:31 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 1 Tetrachloro-m-xylene	1.16827	1.24402	1.18546	1.20509	1.12295	1.24114	+++++	1.19449	3.860
$ 13 Decachlorobiphenyl	0.82901	0.80558	0.77587	0.78808	0.73125	0.79742	+++++	0.78787	4.189

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Calibration File Names:
Level 1: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242303ECD7.D
Level 2: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242304ECD7.D
Level 3: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242306ECD7.D
Level 4: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242302ECD7.D
Level 5: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242307ECD7.D
Level 6: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242305ECD7.D
Level 7: \\target\share\chem4\ecd7.i\230224.b\230224.b\02242312ECD7.D

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
1 Aroclor-1221 [2C](1)	*****	*****	*****	*****	*****	*****	0.00757	0.00757	0.000
(2)	*****	*****	*****	*****	*****	*****	0.01433	0.01433	0.000
(3)	*****	*****	*****	*****	*****	*****	0.02333	0.02333	0.000
4 Aroclor-1232 [2C](1)	*****	*****	*****	*****	*****	*****	0.00409	0.00409	0.000
(2)	*****	*****	*****	*****	*****	*****	0.02034	0.02034	0.000
(3)	*****	*****	*****	*****	*****	*****	0.04067	0.04067	0.000
(4)	*****	*****	*****	*****	*****	*****	0.01170	0.01170	0.000
3 Aroclor-1242 [2C](1)	*****	*****	*****	*****	*****	*****	0.03717	0.03717	0.000

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
(2)	*****	*****	*****	*****	*****	*****			
	0.07813							0.07813	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.02431							0.02431	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.02962							0.02962	0.000
6 Aroclor-1248 [2C](1)	*****	*****	*****	*****	*****	*****			
	0.03820							0.03820	0.000
(2)	*****	*****	*****	*****	*****	*****			
	0.03949							0.03949	0.000
(3)	*****	*****	*****	*****	*****	*****			
	0.04545							0.04545	0.000
(4)	*****	*****	*****	*****	*****	*****			
	0.05457							0.05457	0.000
7 Aroclor-1016 [2C](1)	0.05071	0.05022	0.04868	0.04733	0.04326	0.04080			
	*****							0.04683	8.503
(2)	0.08143	0.09407	0.10159	0.10259	0.09651	0.09362			
	*****							0.09497	8.025
(3)	0.04006	0.04718	0.04613	0.04410	0.04062	0.03926			
	*****							0.04289	7.857
(4)	0.03181	0.03802	0.03707	0.03450	0.03115	0.02936			
	*****							0.03365	10.251

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	RRF	% RSD
8 Aroclor-1254 [2C](1)	*****	*****	*****	*****	*****	*****	0.06081	0.06081	0.000
(2)	*****	*****	*****	*****	*****	*****	0.04892	0.04892	0.000
(3)	*****	*****	*****	*****	*****	*****	0.10584	0.10584	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10317	0.10317	0.000
(5)	*****	*****	*****	*****	*****	*****	0.06282	0.06282	0.000
10 Aroclor-1262 [2C](1)	*****	*****	*****	*****	*****	*****	0.06831	0.06831	0.000
(2)	*****	*****	*****	*****	*****	*****	0.05818	0.05818	0.000
(3)	*****	*****	*****	*****	*****	*****	0.06601	0.06601	0.000
(4)	*****	*****	*****	*****	*****	*****	0.10341	0.10341	0.000
9 Aroclor-1260 [2C](1)	0.05286	0.04911	0.04696	0.04801	0.04329	0.04201	*****	0.04704	8.422
(2)	0.12976	0.12431	0.12095	0.12664	0.11320	0.10545	*****	0.12005	7.605

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1 / 250.000 Level 7	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
(3)	0.03524 / +++++	0.03147	0.02937	0.03208	0.03102	0.03198	0.03186	6.045
(4)	0.08632 / +++++	0.08237	0.08044	0.08393	0.07718	0.07531	0.08092	5.126
11 Aroclor-1268 [2C](1)	+++++ / 0.16109	+++++	+++++	+++++	+++++	+++++	0.16109	0.000
(2)	+++++ / 0.17318	+++++	+++++	+++++	+++++	+++++	0.17318	0.000
(3)	+++++ / 0.14787	+++++	+++++	+++++	+++++	+++++	0.14787	0.000
(4)	+++++ / 0.47260	+++++	+++++	+++++	+++++	+++++	0.47260	0.000
41 2,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 2,4-DDD [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 4,4-DDE [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 4,4-DDT [2C]	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

ARI Labs, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 24-FEB-2023 11:12
End Cal Date : 24-FEB-2023 14:42
Quant Method : ISTD
Origin : Disabled
Target Version : 4.14
Integrator : HP Genie
Method file : \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Last Edit : 24-Feb-2023 15:29 richardl
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	___ RRF	% RSD
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 2 Tetrachloro-m-xylene [2C]	1.21526 +++++	1.19545	1.17555	1.21907	1.12560	1.11139		1.17372	3.897
$ 13 Decachlorobiphenyl [2C]	1.17066 +++++	1.20406	1.20549	1.31040	1.21104	1.20797		1.21827	3.898

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	3.493	3.492	3.492	3.492	3.491	3.491	3.493	3.393-3.593	3.492	0.001
$ 1 Tetrachloro-m-xylene	5.811	5.809	5.809	5.813	5.809	5.810	5.811	5.711-5.911	5.810	0.002
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	7.269	7.169-7.369	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.732	4.632-4.832	+++++	+++++
7 Aroclor-1016	7.272	7.272	7.272	7.270	7.271	7.270	7.272	7.172-7.372	7.271	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	8.403	8.303-8.503	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	9.295	9.195-9.395	+++++	+++++
9 Aroclor-1260	11.046	11.047	11.046	11.044	11.045	11.044	11.046	10.946-11.146	11.045	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.824	10.724-10.924	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	12.243	12.143-12.343	+++++	+++++
$ 13 Decachlorobiphenyl	13.897	13.893	13.893	13.899	13.892	13.898	13.897	13.797-13.997	13.895	0.003
* 12 IS-HBBP	14.269	14.268	14.268	14.267	14.268	14.268	14.269	14.169-14.369	14.268	0.001
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.260	9.210-9.310	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.801	9.751-9.851	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.293	10.243-10.343	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	9.683	9.583-9.783	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Batch File: \\target\share\chem4\ecd7.i\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	10.254	10.154-10.354	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.754	10.654-10.854	+++++	+++++
49 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.842	1.742-1.942	+++++	+++++
50 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	6.708	6.608-6.808	+++++	+++++

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	02242302ECD7	02242303ECD7	02242304ECD7	02242305ECD7	02242306ECD7	02242307ECD7
INJ.DATE:	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023	24-FEB-2023
INJ.TIME:	11:12	11:33	11:54	12:15	12:36	12:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB [2C]	3.928	3.929	3.929	3.929	3.928	3.929	3.928	3.828-4.028	3.929	0.000
$ 2 Tetrachloro-m-xylene [	5.687	5.688	5.688	5.688	5.688	5.688	5.687	5.587-5.787	5.688	0.001
1 Aroclor-1221 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.858-5.058	+++++	+++++
4 Aroclor-1232 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	4.958	4.859-5.059	+++++	+++++
3 Aroclor-1242 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	7.254	7.154-7.354	+++++	+++++
6 Aroclor-1248 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	8.305	8.205-8.405	+++++	+++++
7 Aroclor-1016 [2C]	7.255	7.256	7.256	7.254	7.255	7.256	7.255	7.155-7.355	7.255	0.001
8 Aroclor-1254 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.447	9.347-9.547	+++++	+++++
10 Aroclor-1262 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.198	11.098-11.298	+++++	+++++
9 Aroclor-1260 [2C]	11.653	11.656	11.655	11.652	11.655	11.653	11.653	11.553-11.753	11.654	0.001
11 Aroclor-1268 [2C]	+++++	+++++	+++++	+++++	+++++	+++++	12.431	12.331-12.531	+++++	+++++
$ 13 Decachlorobiphenyl [2C	14.120	14.120	14.119	14.122	14.119	14.120	14.120	14.020-14.220	14.120	0.001
* 12 IS-HBBP [2C]	15.008	15.008	15.008	15.008	15.007	15.008	15.008	14.908-15.108	15.008	0.000
41 2,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.861-9.961	+++++	+++++
42 2,4-DDD [2C]	+++++	+++++	+++++	+++++	+++++	+++++	9.536	9.486-9.586	+++++	+++++
44 4,4-DDE [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.209	10.109-10.309	+++++	+++++
45 4,4-DDD/2,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	10.667	10.567-10.767	+++++	+++++

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

ARI Labs, Inc.
RETENTION TIME SUMMARY REPORT

Method File: \\target\share\chem4\ecd7.i\230224.b\PCB.m\PCB2.m
Batch File: \\target\share\chem4\ecd7.i\230224.b\230224.b
Inst ID: ecd7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT [2C]	+++++	+++++	+++++	+++++	+++++	+++++	11.092	10.992-11.192	+++++	+++++
48 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	1.703	1.603-1.803	+++++	+++++
49 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	7.178	7.078-7.278	+++++	+++++

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242301ECD7.D
Data file 2: /230224.b/230224.b/02242301ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 24-FEB-2023 10:51
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.826	0.019	382217	5.683	-0.002	180378	33.8	36.5	7.7	Tetrachloro-m-xylene
13.904	0.011	534110	14.120	0.001	295605	35.3	37.2	5.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	756896	12.3
Hexabromobiphenyl	1429847	1534275	7.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	336543	6.8
Hexabromobiphenyl	513946	521508	1.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	---			0.0	1	---			0.0
Aroclor-1016	2	---			0.0	2	---			0.0
Aroclor-1016	3	---			0.0	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.321	0.025	1873	31.1
Aroclor-1221	3	---			0.0	3	6.633	0.012	314	3.2
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	7.698	0.043	2193	6.0	3	---			0.0
Aroclor-1232	4	8.505	-0.076	11525	74.5	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	7.698	0.042	2193	3.1	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	8.505	-0.074	11525	35.2	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	9.596	-0.072	31424	64.3	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	10.167	-0.010	18361	30.8	5	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	11.098	0.054	6994	12.7	1	---			0.0
Aroclor-1260	2	---			0.0	2	---			0.0
Aroclor-1260	3	11.706	-0.027	7806	5.1	3	---			0.0
Aroclor-1260	4	---			0.0	4	---			0.0
Aroclor-1260	5	---			0.0	NS	---			----
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.824	-0.005	16873	35.8	1	---			0.0
Aroclor-1262	2	---			0.0	2	---			0.0
Aroclor-1262	3	---			0.0	3	---			0.0
Aroclor-1262	4	13.040	0.053	14031	18.6	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	12.709	0.009	6037	3.6	3	12.891	-0.001	659	0.7
Aroclor-1268	4	13.499	0.010	12396	2.3	4	13.710	0.001	1848	0.6
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (5.906 - 13.793) = 260205 Col1 Total PCB = 0.0 ppm*

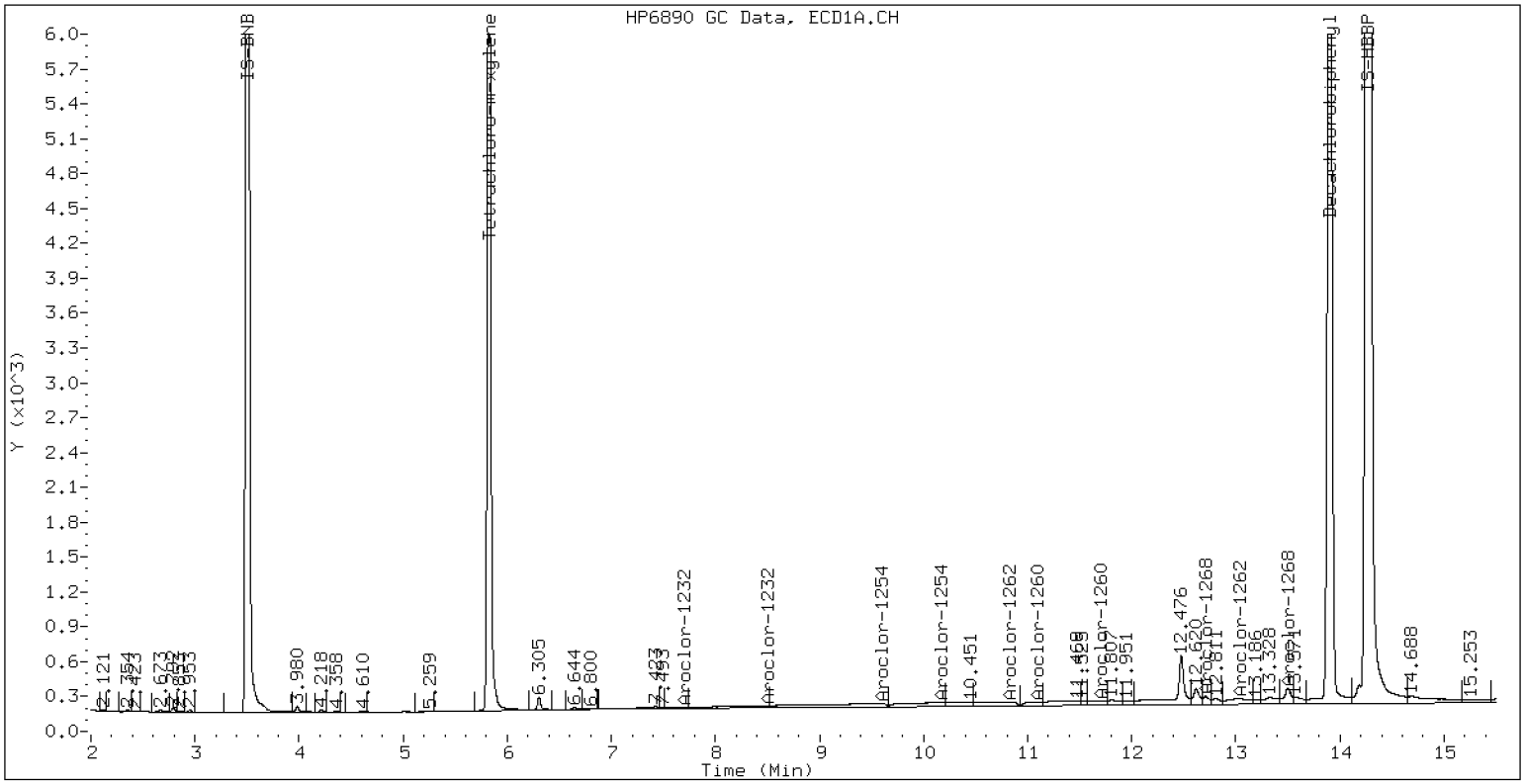
Total PCB Area Col2 (5.785 - 14.019) = 18252 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

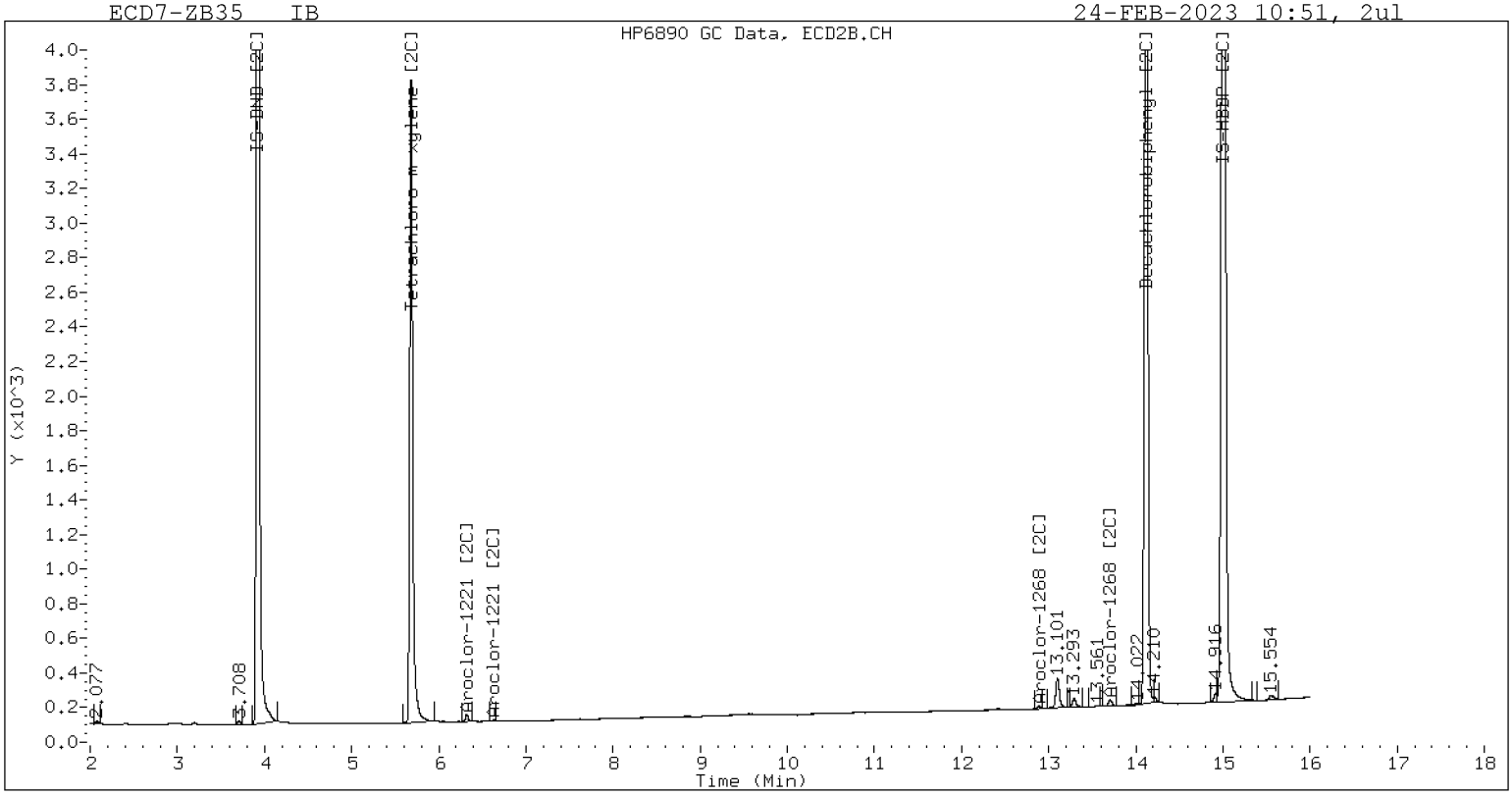
PCB Dual Column Chromatograms

ECD7-ZB5 IB 24-FEB-2023 10:51, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 IB 24-FEB-2023 10:51, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242302ECD7.D
Data file 2: /230224.b/230224.b/02242302ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:12
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.811	0.005	405980	5.687	0.002	192160	40.4	41.5	2.9	Tetrachloro-m-xylene
13.897	0.004	563414	14.120	0.001	336737	40.0	43.0	7.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	673778	0.0
Hexabromobiphenyl	1429847	1429847	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	315256	0.0
Hexabromobiphenyl	513946	513946	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.272	0.001	66125	258.4	1	7.255	-0.001	46626	252.6
Aroclor-1016	2	7.654	-0.000	207370	265.8	2	7.855	-0.001	101071	270.1
Aroclor-1016	3	7.792	0.002	92507	242.9	3	8.055	0.001	43448	257.1
Aroclor-1016	4	8.406	0.001	64388	261.5	4	8.306	-0.000	33986	256.3
Total Col1Ave (4 peaks):					257.2	Total Col2Ave (4 peaks):				259.0 RPD = 1
Corrected Ave (3 peaks):					254.3	Corrected Ave (3 peaks):				255.3 RPD = 0
CalAmt %D:					2.9	CalAmt %D:				3.6
Aroclor-1260	1	11.046	0.001	138355	269.0	1	11.653	0.001	77114	255.2
Aroclor-1260	2	11.363	0.002	147051	273.6	2	11.918	0.001	203401	263.7
Aroclor-1260	3	11.736	0.003	383171	268.8	3	12.435	-0.000	51517	251.7
Aroclor-1260	4	12.141	0.002	200399	279.2	4	12.502	0.001	134797	259.3
Aroclor-1260	5	12.247	0.003	83796	271.2	NS	---			----
Total Col1Ave (5 peaks):					272.4	Total Col2Ave (4 peaks):				257.5 RPD = 6
Corrected Ave (4 peaks):					270.7	Corrected Ave (3 peaks):				255.4 RPD = 6
CalAmt %D:					8.9	CalAmt %D:				3.0

Total PCB Area Col1 (5.906 - 13.793) = 4024419 Col1 Total PCB = 0.5 ppm*

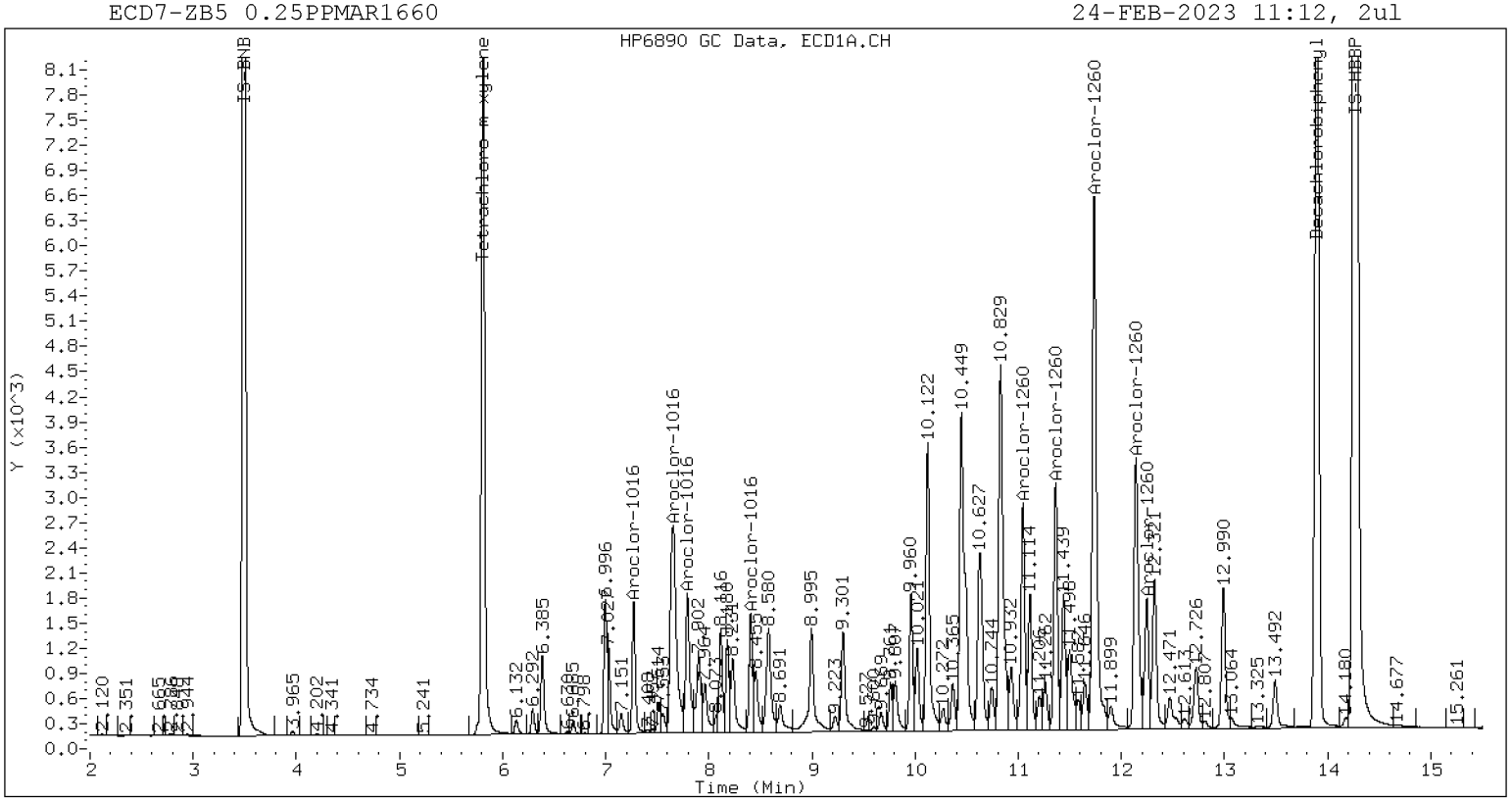
Total PCB Area Col2 (5.785 - 14.019) = 1889311 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

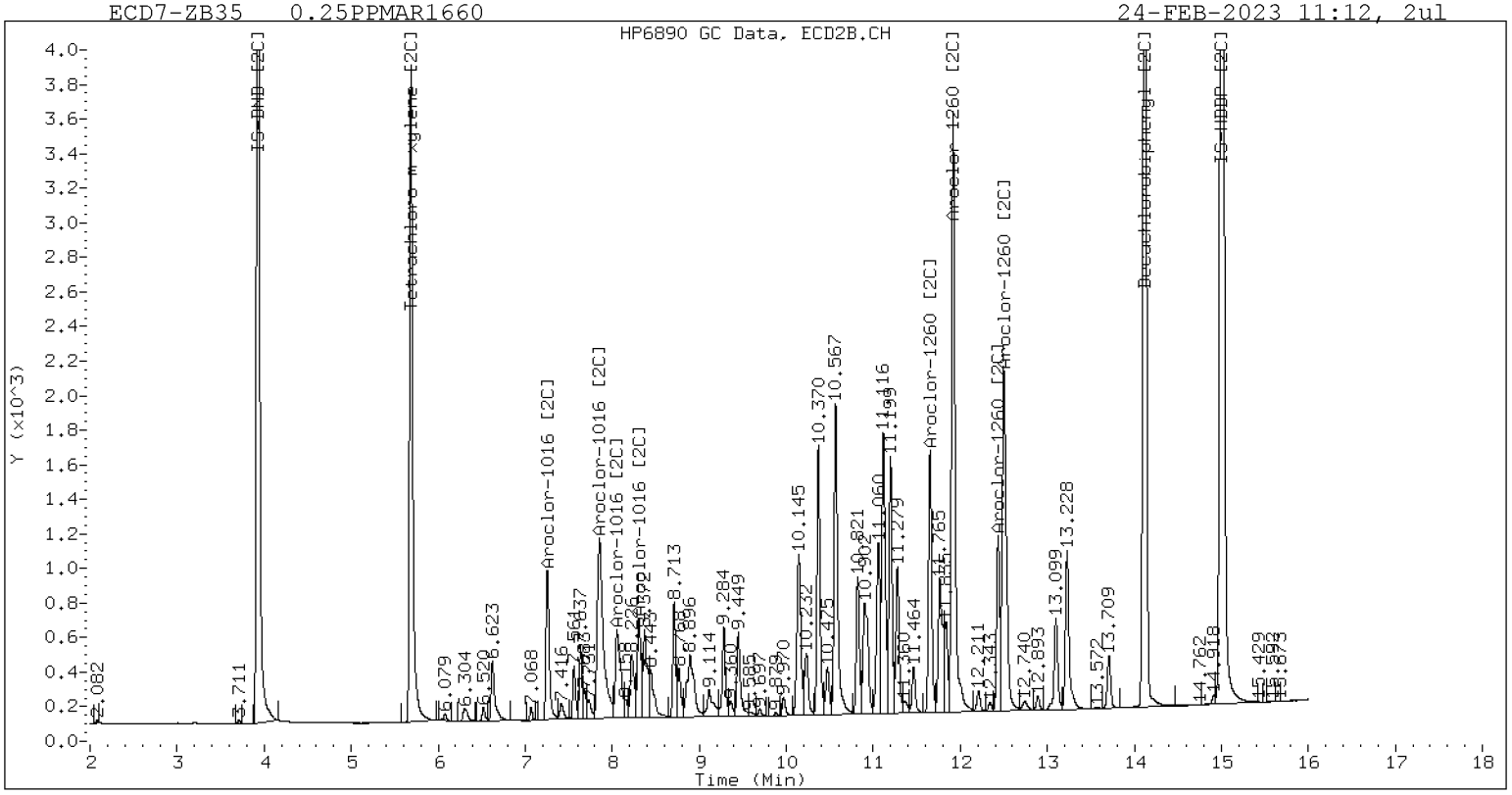
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1660 24-FEB-2023 11:12, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242303ECD7.D
Data file 2: /230224.b/230224.b/02242303ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:33
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	29768	5.688	0.003	14932	3.1	3.3	5.7	Tetrachloro-m-xylene
13.893	0.000	45992	14.120	0.000	23950	3.4	3.1	9.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	637010	-5.5
Hexabromobiphenyl	1429847	1386953	-3.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307177	-2.6
Hexabromobiphenyl	513946	511463	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.001	5052	20.9	1	7.256	0.000	3894	21.7
Aroclor-1016	2	7.659	0.005	14714	19.9	2	7.864	0.008	6253	17.1
Aroclor-1016	3	7.795	0.005	8226	22.8	3	8.060	0.006	3076	18.7
Aroclor-1016	4	8.407	0.002	4780	20.5	4	8.309	0.002	2443	18.9
Total Col1Ave (4 peaks):					21.1	Total Col2Ave (4 peaks):				19.1 RPD = 10
Corrected Ave (3 peaks):					20.5	Corrected Ave (3 peaks):				18.2 RPD = 11
CalAmt %D:					5.3	CalAmt %D:				-4.5
Aroclor-1260	1	11.047	0.003	10147	20.3	1	11.656	0.003	6759	22.5
Aroclor-1260	2	11.364	0.003	10287	19.7	2	11.922	0.005	16592	21.6
Aroclor-1260	3	11.740	0.006	28043	20.3	3	12.438	0.002	4506	22.1
Aroclor-1260	4	12.145	0.006	13540	19.4	4	12.505	0.004	11037	21.3
Aroclor-1260	5	12.246	0.002	6182	20.6	NS	---			----
Total Col1Ave (5 peaks):					20.1	Total Col2Ave (4 peaks):				21.9 RPD = 9
Corrected Ave (4 peaks):					19.9	Corrected Ave (3 peaks):				21.7 RPD = 8
CalAmt %D:					0.4	CalAmt %D:				9.4

Total PCB Area Col1 (5.906 - 13.793) = 324832 Col1 Total PCB = 0.0 ppm*

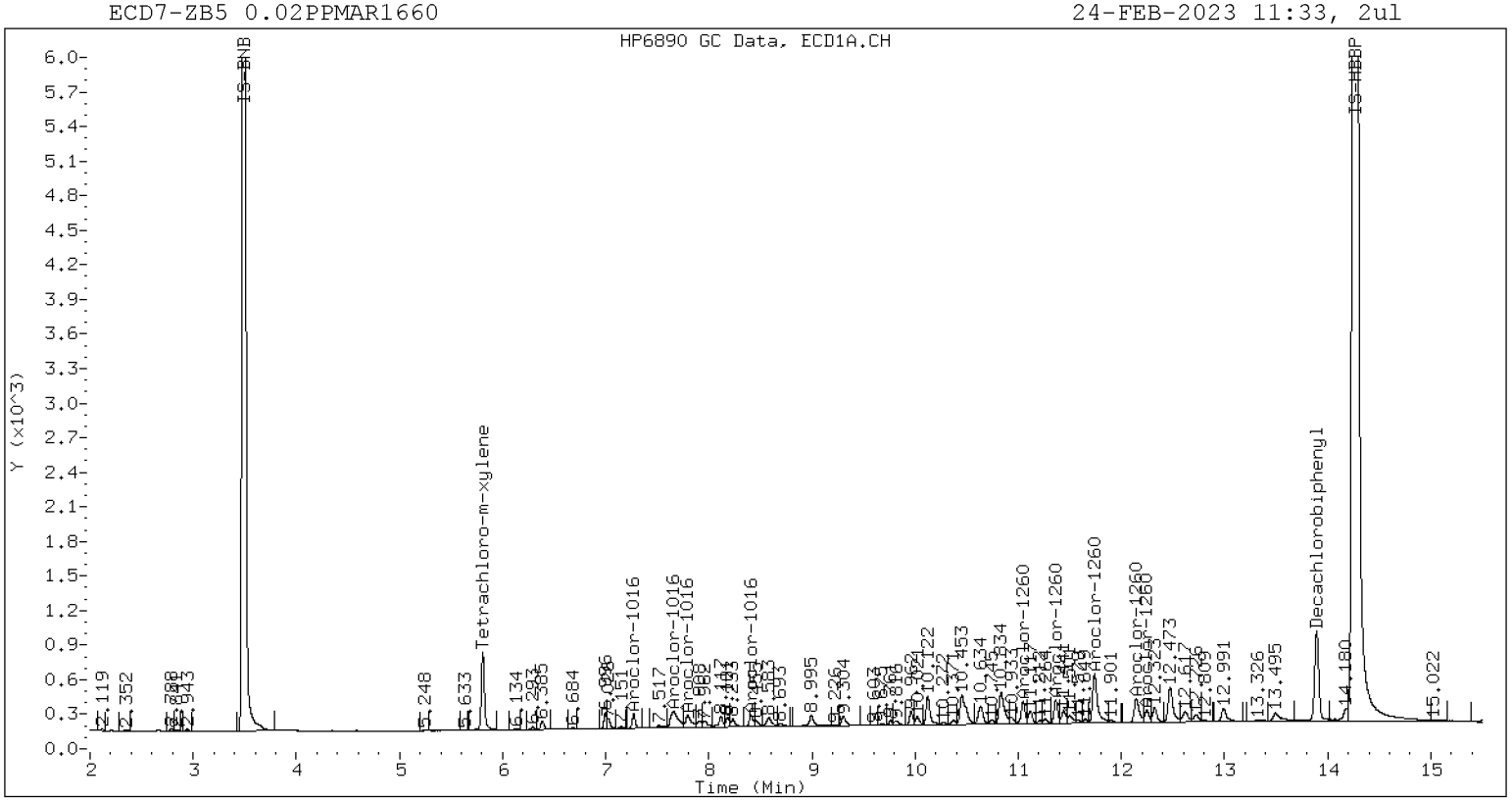
Total PCB Area Col2 (5.785 - 14.019) = 157149 Col2 Total PCB = 0.0 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

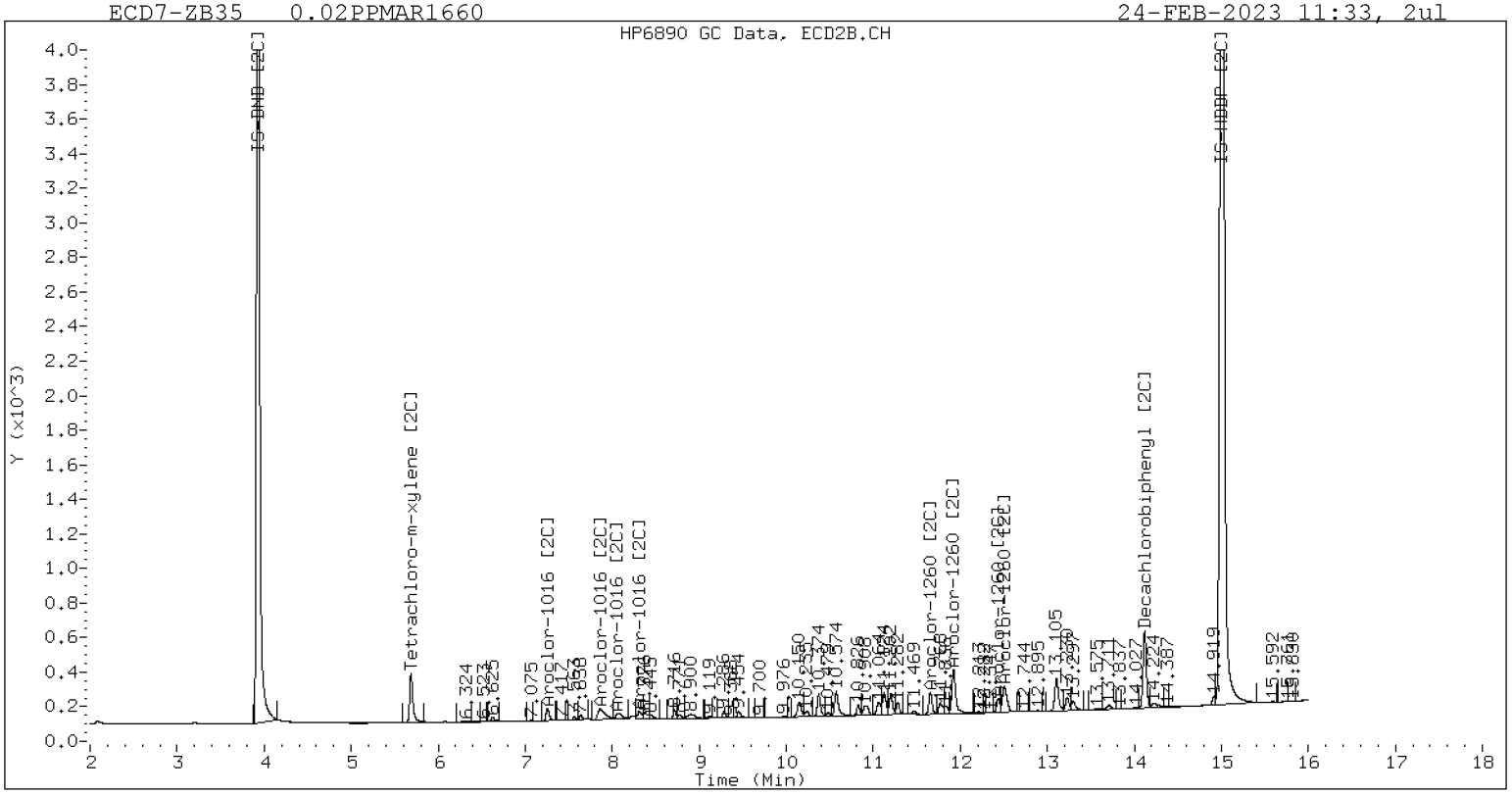
PCB Dual Column Chromatograms

ECD7-ZB5 0.02PPMAR1660 24-FEB-2023 11:33, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.02PPMAR1660 24-FEB-2023 11:33, 2ul

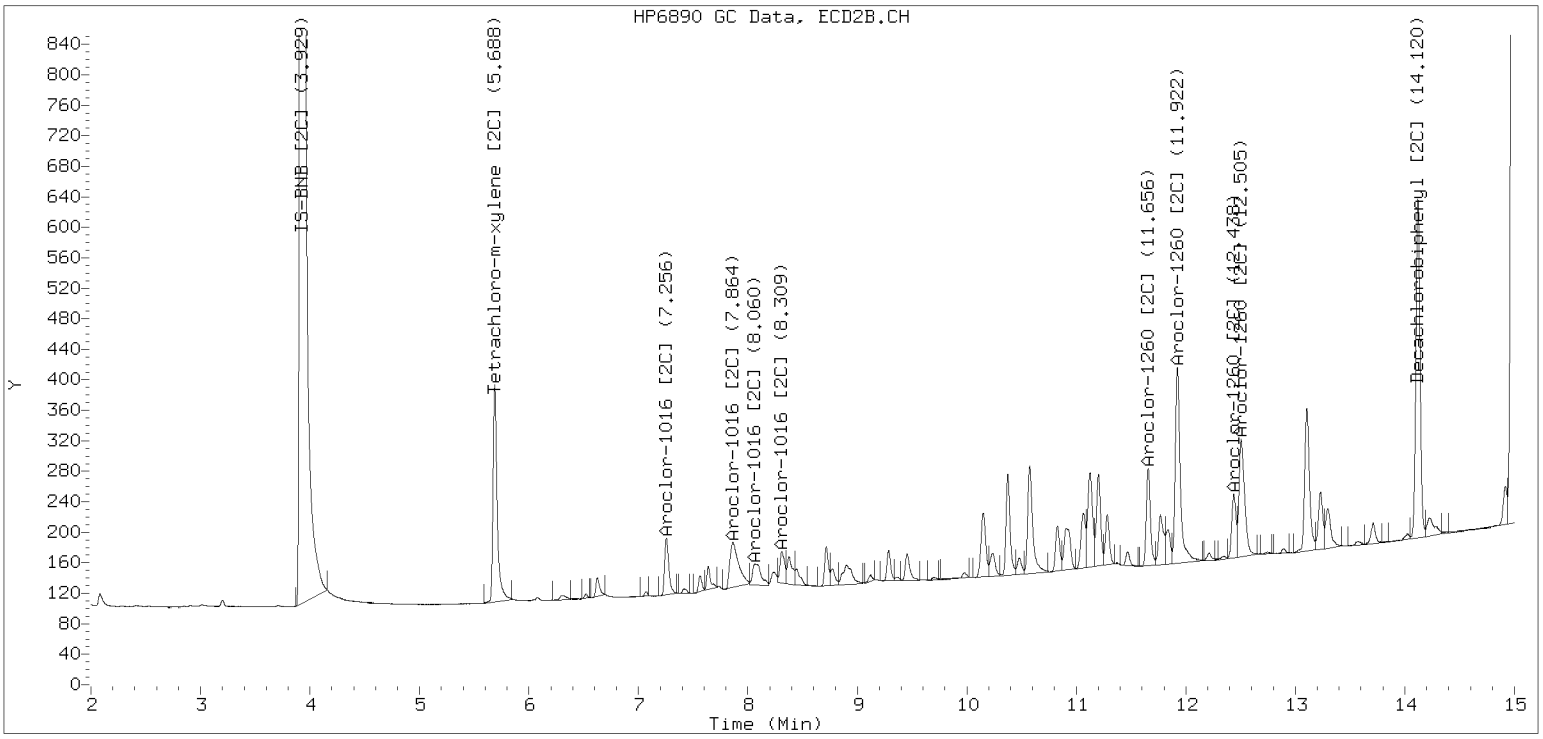


ZB-35 Manual Integration: YES

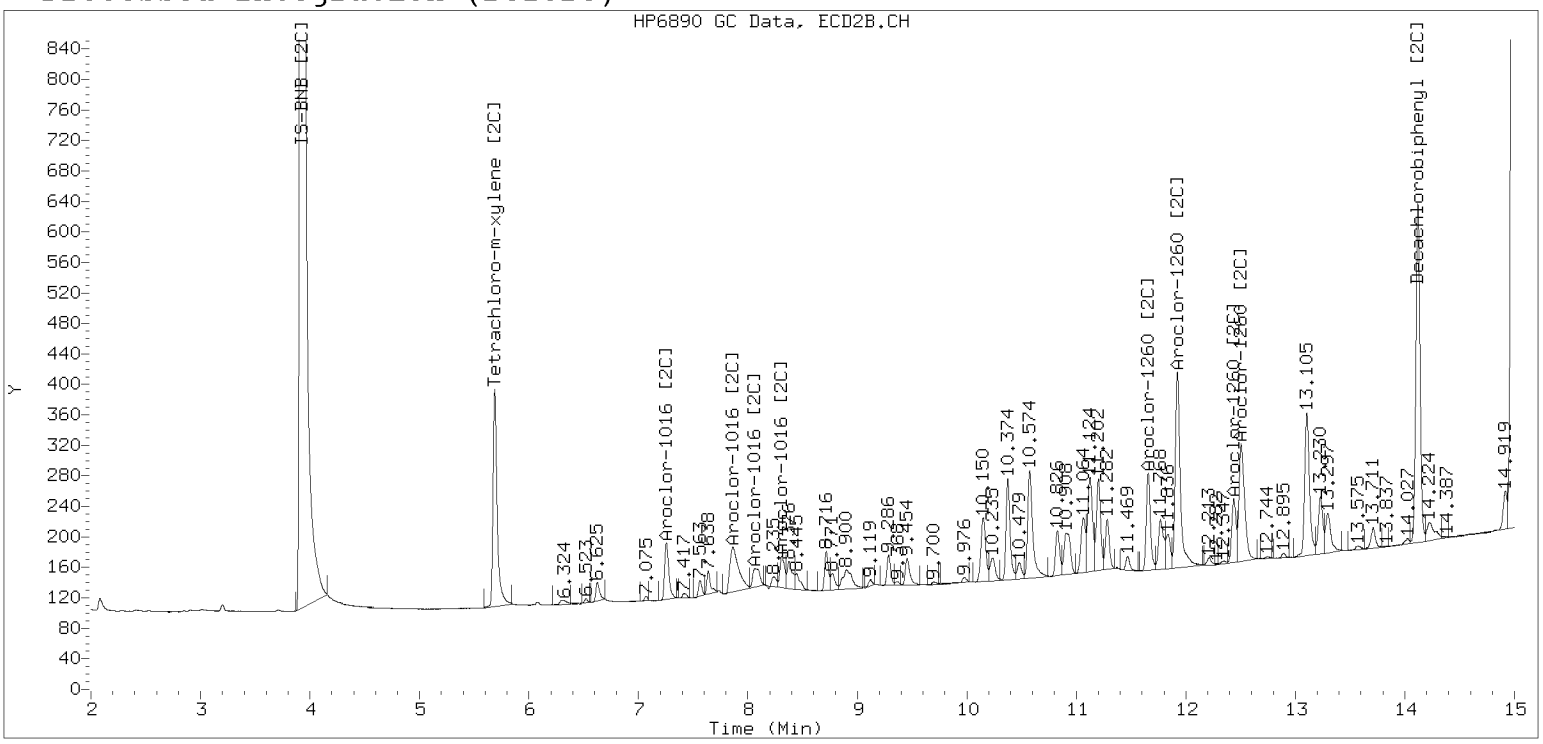
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230224.b/230224.b/02242303ECD7.D Injection Date: 24-FEB-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242304ECD7.D
Data file 2: /230224.b/230224.b/02242304ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 11:54
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	78493	5.688	0.003	36772	8.3	8.1	2.2	Tetrachloro-m-xylene
13.893	-0.000	113544	14.119	-0.000	62745	8.2	7.9	3.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	630965	-6.4
Hexabromobiphenyl	1429847	1409464	-1.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307599	-2.4
Hexabromobiphenyl	513946	521112	1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.272	0.002	12829	53.5	1	7.256	0.000	9654	53.6
Aroclor-1016	2	7.660	0.006	36461	49.9	2	7.864	0.008	18085	49.5
Aroclor-1016	3	7.795	0.005	19865	55.7	3	8.063	0.008	9071	55.0
Aroclor-1016	4	8.408	0.003	11411	49.5	4	8.310	0.003	7309	56.5
Total Col1Ave (4 peaks):					52.2	Total Col2Ave (4 peaks):				53.7 RPD = 3
Corrected Ave (3 peaks):					51.0	Corrected Ave (3 peaks):				52.7 RPD = 3
CalAmt %D:					4.3	CalAmt %D:				7.3
Aroclor-1260	1	11.046	0.002	25727	50.7	1	11.655	0.002	15996	52.2
Aroclor-1260	2	11.363	0.002	26482	50.0	2	11.922	0.004	40487	51.8
Aroclor-1260	3	11.739	0.005	70871	50.4	3	12.437	0.002	10248	49.4
Aroclor-1260	4	12.143	0.004	34239	48.4	4	12.506	0.004	26828	50.9
Aroclor-1260	5	12.246	0.002	15109	49.6	NS	---			----
Total Col1Ave (5 peaks):					49.8	Total Col2Ave (4 peaks):				51.1 RPD = 2
Corrected Ave (4 peaks):					49.6	Corrected Ave (3 peaks):				50.7 RPD = 2
CalAmt %D:					-0.3	CalAmt %D:				2.1

Total PCB Area Col1 (5.906 - 13.793) = 758292 Col1 Total PCB = 0.1 ppm*

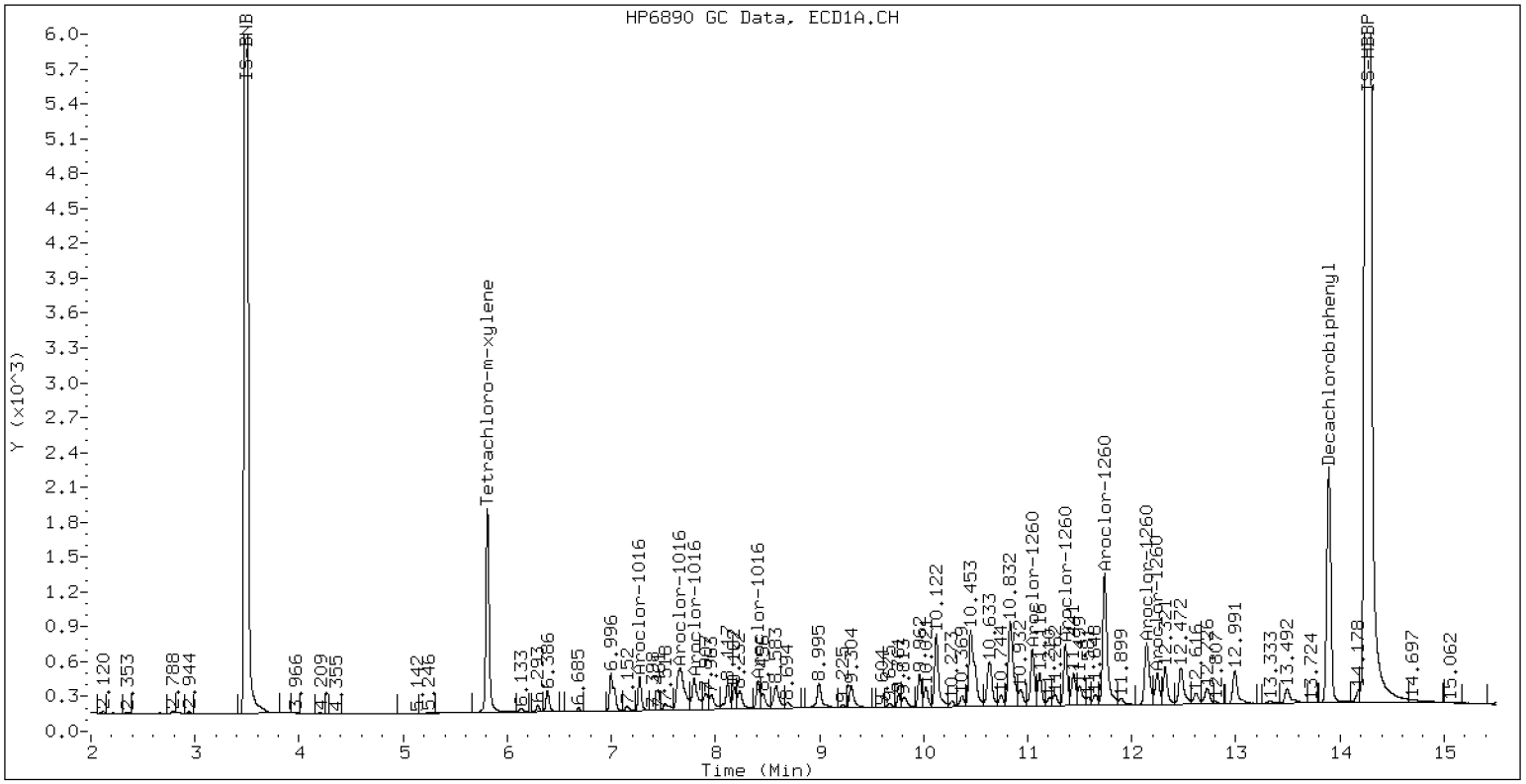
Total PCB Area Col2 (5.785 - 14.019) = 386383 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

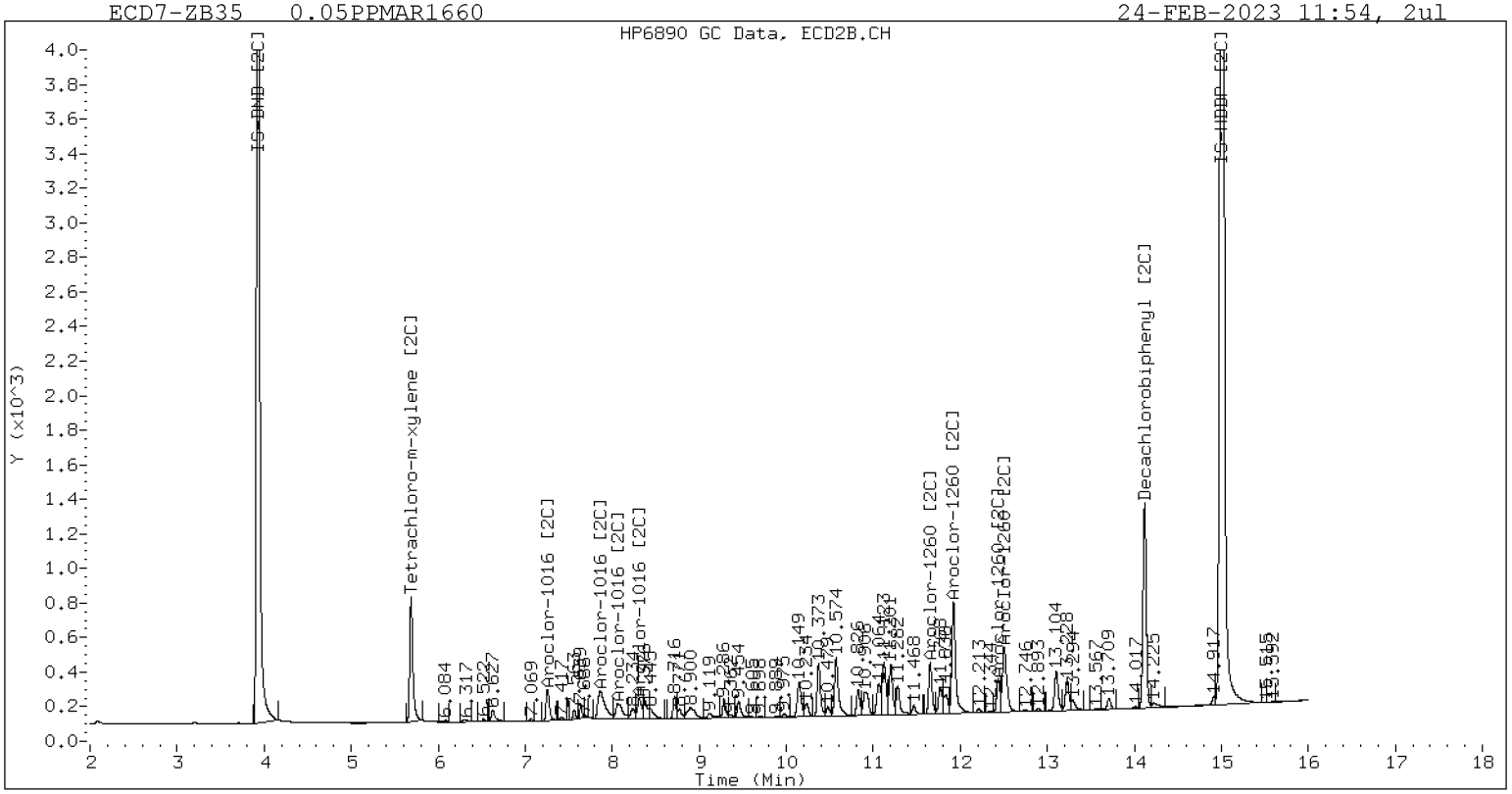
PCB Dual Column Chromatograms

ECD7-ZB5 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.05PPMAR1660 24-FEB-2023 11:54, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242305ECD7.D
Data file 2: /230224.b/230224.b/02242305ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 1.0PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:15
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.813	0.006	1641874	5.688	0.003	709674	166.2	151.5	9.3	Tetrachloro-m-xylene
13.899	0.006	2344583	14.122	0.002	1300114	161.9	158.6	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661440	-1.8
Hexabromobiphenyl	1429847	1470100	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319272	1.3
Hexabromobiphenyl	513946	538138	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	220519	877.8	1	7.254	-0.001	162833	871.2
Aroclor-1016	2	7.652	-0.002	731607	955.3	2	7.852	-0.004	373610	985.8
Aroclor-1016	3	7.789	-0.001	307629	822.8	3	8.051	-0.003	156666	915.2
Aroclor-1016	4	8.404	-0.001	229387	949.1	4	8.305	-0.002	117186	872.6
Total Col1Ave (4 peaks):					901.3	Total Col2Ave (4 peaks):				911.2 RPD = 1
Corrected Ave (3 peaks):					883.3	Corrected Ave (3 peaks):				886.3 RPD = 0
CalAmt %D:					-9.9	CalAmt %D:				-8.9
Aroclor-1260	1	11.044	-0.000	504641	954.2	1	11.652	-0.000	282606	893.1
Aroclor-1260	2	11.360	-0.001	524931	950.0	2	11.917	-0.000	709329	878.4
Aroclor-1260	3	11.734	-0.000	1410270	962.3	3	12.434	-0.001	215124	1003.8
Aroclor-1260	4	12.137	-0.002	720770	976.7	4	12.501	-0.001	506566	930.6
Aroclor-1260	5	12.243	-0.001	304211	957.7	NS	---			----
Total Col1Ave (5 peaks):					960.2	Total Col2Ave (4 peaks):				926.5 RPD = 4
Corrected Ave (4 peaks):					956.0	Corrected Ave (3 peaks):				900.7 RPD = 6
CalAmt %D:					-4.0	CalAmt %D:				-7.4

Total PCB Area Col1 (5.906 - 13.793) = 14454279 Col1 Total PCB = 1.8 ppm*

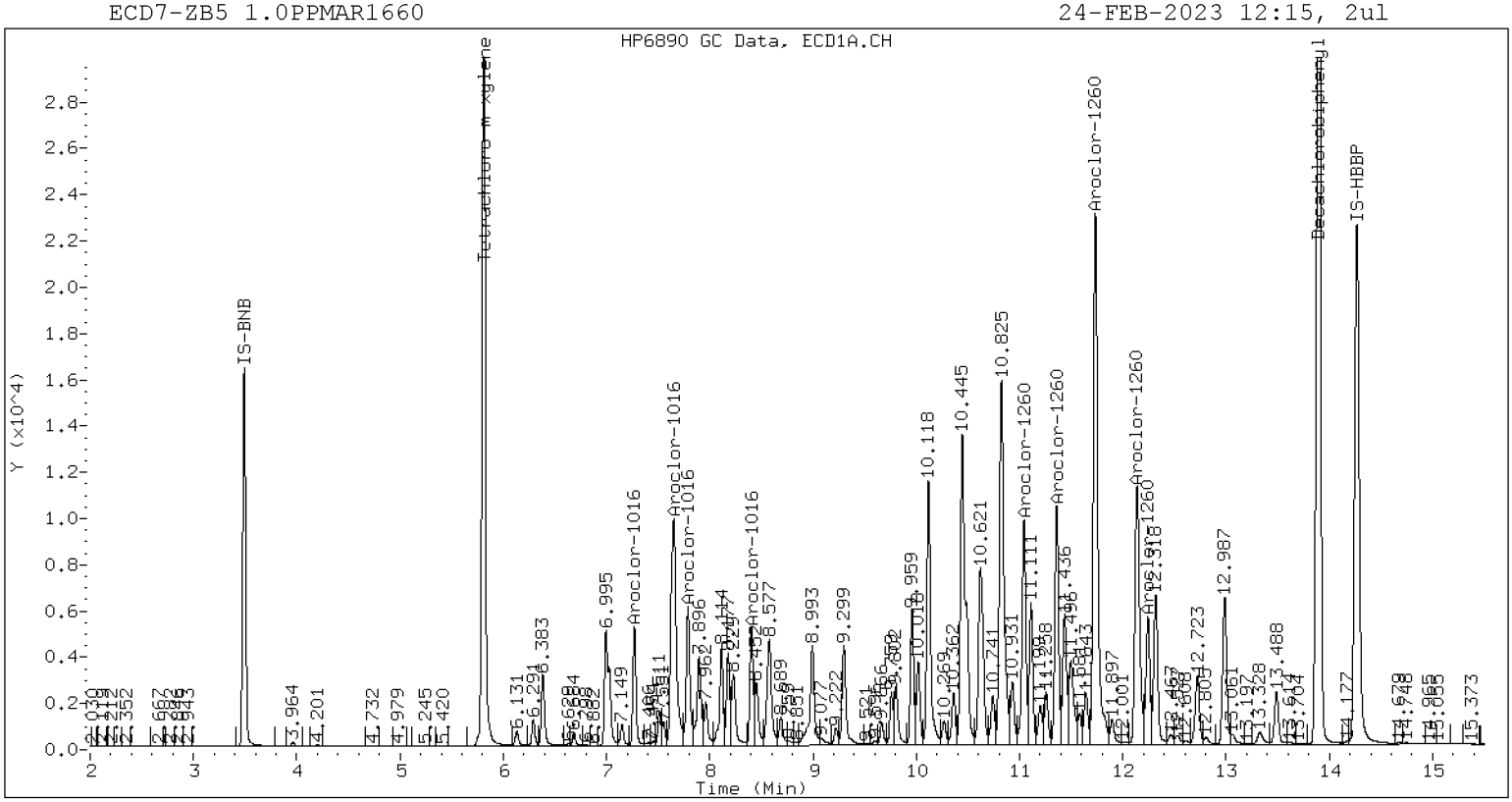
Total PCB Area Col2 (5.785 - 14.019) = 7029563 Col2 Total PCB = 1.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

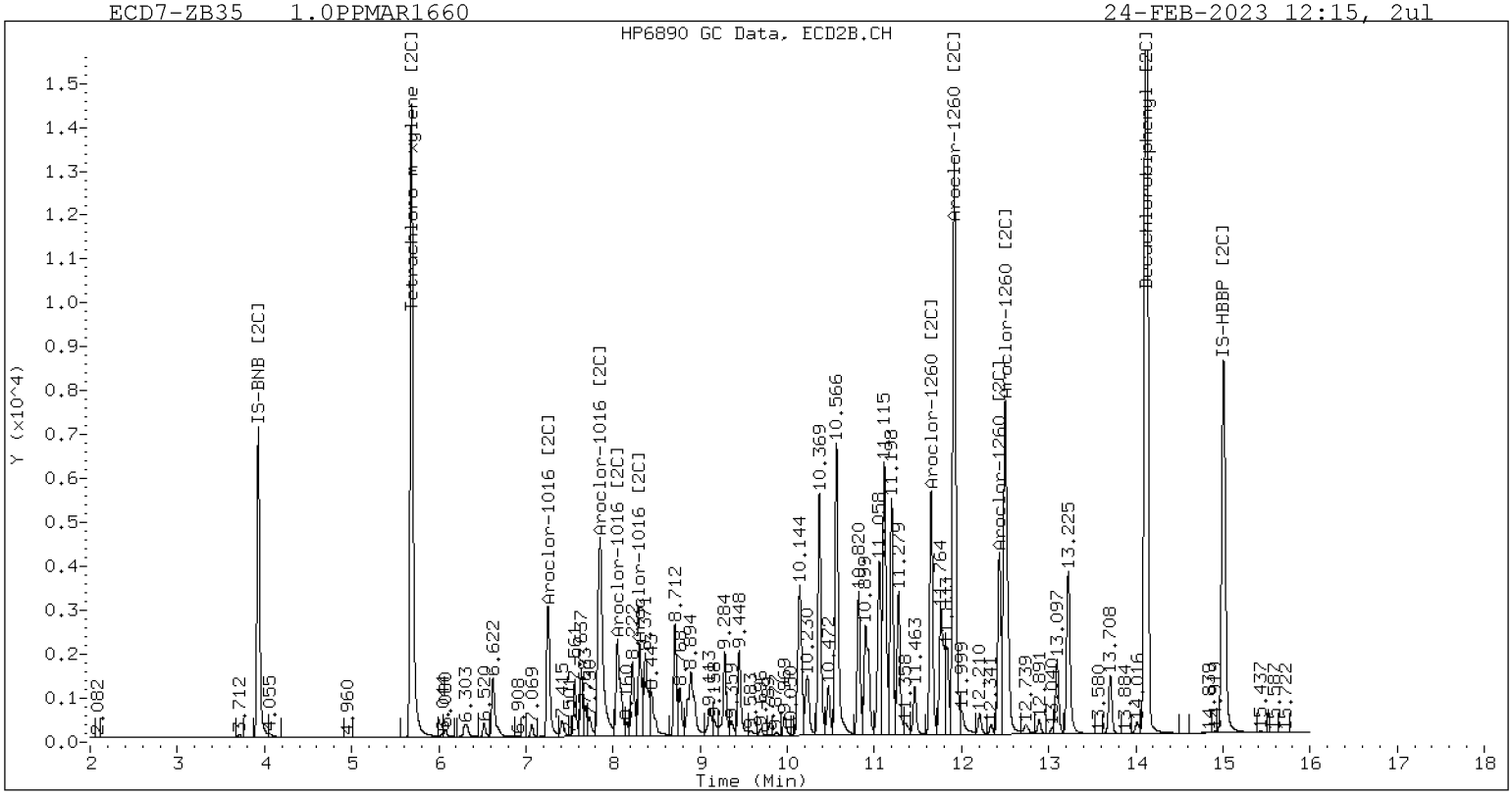
PCB Dual Column Chromatograms

ECD7-ZB5 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 1.0PPMAR1660 24-FEB-2023 12:15, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242306ECD7.D
Data file 2: /230224.b/230224.b/02242306ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:36
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	155528	5.688	0.003	74628	15.9	16.0	0.9	Tetrachloro-m-xylene
13.892	-0.001	227253	14.119	-0.000	128496	15.8	15.8	0.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	655979	-2.6
Hexabromobiphenyl	1429847	1464509	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317418	0.7
Hexabromobiphenyl	513946	532962	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.271	0.000	25761	103.4	1	7.255	-0.000	19315	103.9
Aroclor-1016	2	7.657	0.003	75616	99.6	2	7.863	0.007	40308	107.0
Aroclor-1016	3	7.794	0.004	39547	106.7	3	8.059	0.005	18304	107.6
Aroclor-1016	4	8.406	0.001	24260	101.2	4	8.309	0.002	14708	110.2
Total Col1Ave (4 peaks):					102.7	Total Col2Ave (4 peaks):				107.2 RPD = 4
Corrected Ave (3 peaks):					101.4	Corrected Ave (3 peaks):				106.2 RPD = 5
CalAmt %D:					2.7	CalAmt %D:				7.2
Aroclor-1260	1	11.045	0.000	52009	98.7	1	11.655	0.002	31282	99.8
Aroclor-1260	2	11.362	0.001	55116	100.1	2	11.920	0.003	80574	100.7
Aroclor-1260	3	11.738	0.004	145604	99.7	3	12.437	0.002	19566	92.2
Aroclor-1260	4	12.141	0.002	72408	98.5	4	12.503	0.001	53588	99.4
Aroclor-1260	5	12.245	0.001	30745	97.2	NS	---			----
Total Col1Ave (5 peaks):					98.8	Total Col2Ave (4 peaks):				98.0 RPD = 1
Corrected Ave (4 peaks):					98.5	Corrected Ave (3 peaks):				97.1 RPD = 1
CalAmt %D:					-1.2	CalAmt %D:				-2.0

Total PCB Area Col1 (5.906 - 13.793) = 1555762 Col1 Total PCB = 0.2 ppm*

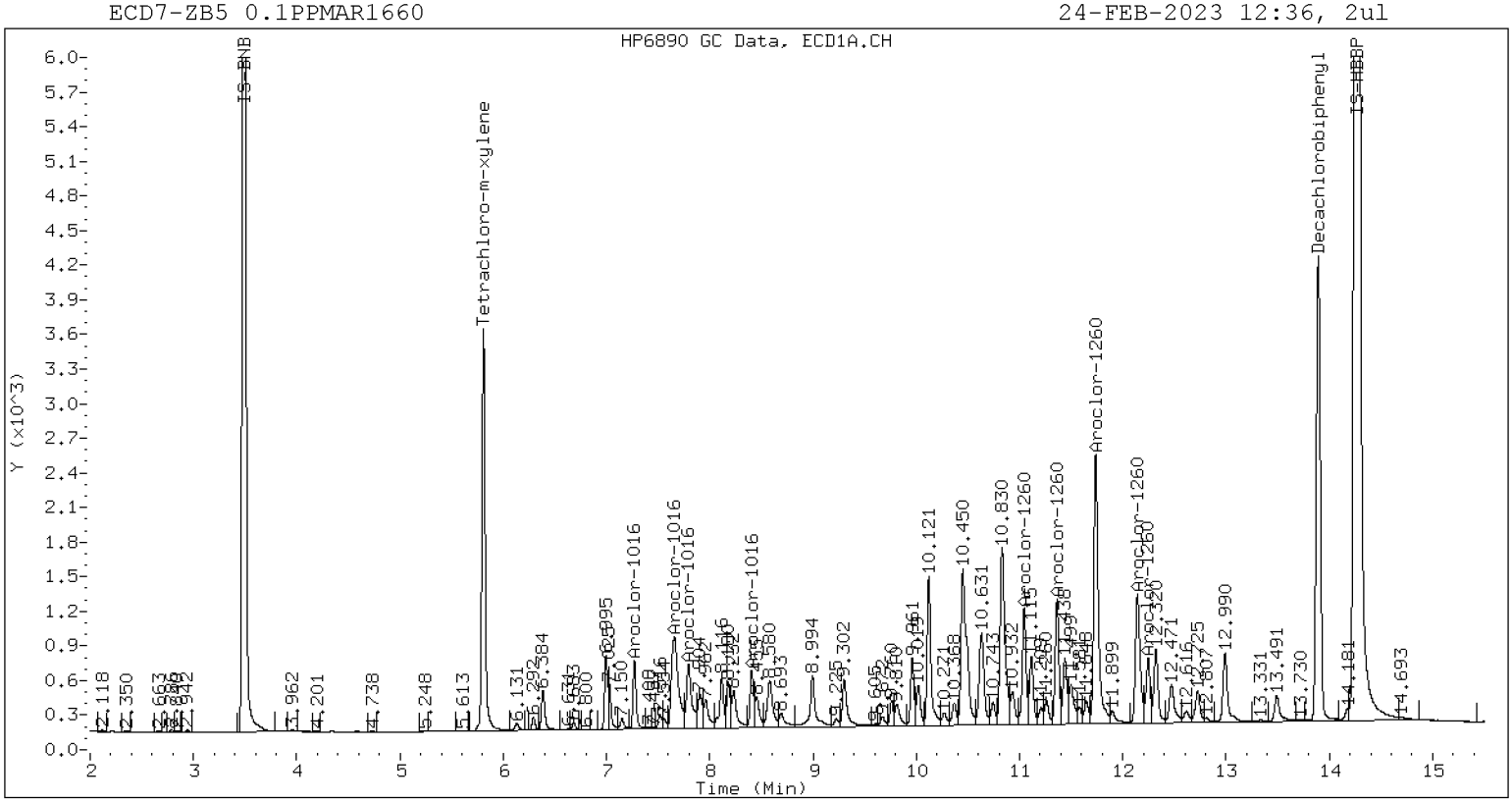
Total PCB Area Col2 (5.785 - 14.019) = 764924 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

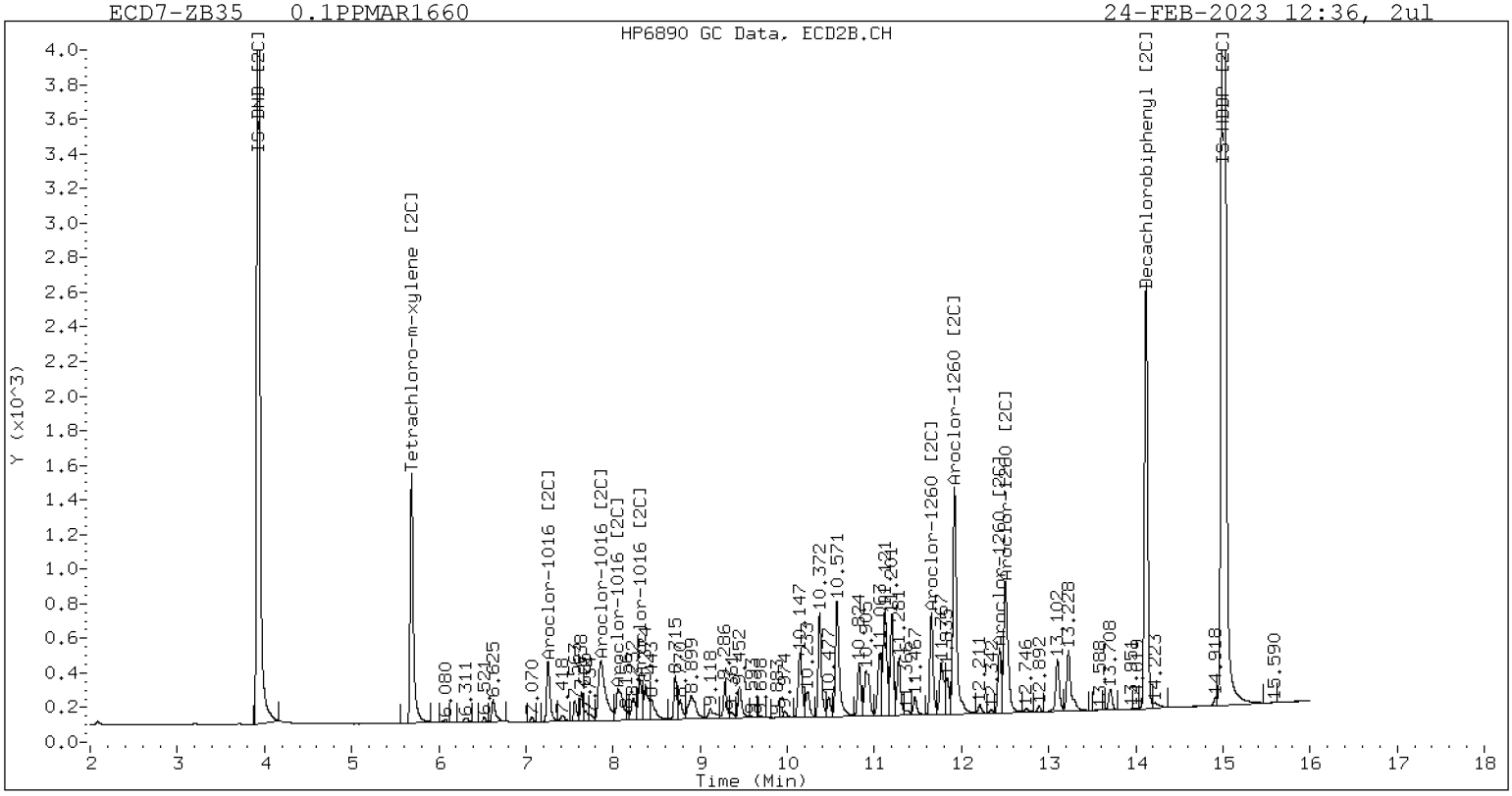
PCB Dual Column Chromatograms

ECD7-ZB5 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.1PPMAR1660 24-FEB-2023 12:36, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242307ECD7.D
Data file 2: /230224.b/230224.b/02242307ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660
Client ID:
Injection Date: 24-FEB-2023 12:57
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.810	0.004	724614	5.688	0.003	359257	75.2	76.7	2.0	Tetrachloro-m-xylene
13.898	0.005	1056911	14.120	0.000	650153	74.3	79.5	6.9	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645275	-4.2
Hexabromobiphenyl	1429847	1445345	1.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	319170	1.2
Hexabromobiphenyl	513946	536853	4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1016	1	7.270	0.000	115193	470.0	1	7.256	0.000	86287	461.8
Aroclor-1016	2	7.654	0.000	369991	495.2	2	7.856	0.000	192524	508.1
Aroclor-1016	3	7.790	0.000	160952	441.3	3	8.055	0.000	81039	473.6
Aroclor-1016	4	8.405	0.000	115032	487.9	4	8.307	0.000	62136	462.8
Total Col1Ave (4 peaks):					473.6	Total Col2Ave (4 peaks):				476.6 RPD = 1
Corrected Ave (3 peaks):					466.4	Corrected Ave (3 peaks):				466.1 RPD = 0
CalAmt %D:					-5.3	CalAmt %D:				-4.7
Aroclor-1260	1	11.044	0.000	247212	475.5	1	11.653	0.000	145247	460.1
Aroclor-1260	2	11.361	0.000	262877	483.9	2	11.918	0.000	379838	471.5
Aroclor-1260	3	11.734	0.000	678830	471.1	3	12.436	0.000	104092	486.9
Aroclor-1260	4	12.139	0.000	356067	490.7	4	12.502	0.000	258953	476.9
Aroclor-1260	5	12.244	0.000	150280	481.2	NS	---			----
Total Col1Ave (5 peaks):					480.5	Total Col2Ave (4 peaks):				473.8 RPD = 1
Corrected Ave (4 peaks):					477.9	Corrected Ave (3 peaks):				469.5 RPD = 2
CalAmt %D:					-3.9	CalAmt %D:				-5.2

Total PCB Area Col1 (5.906 - 13.793) = 7134169 Col1 Total PCB = 0.9 ppm*

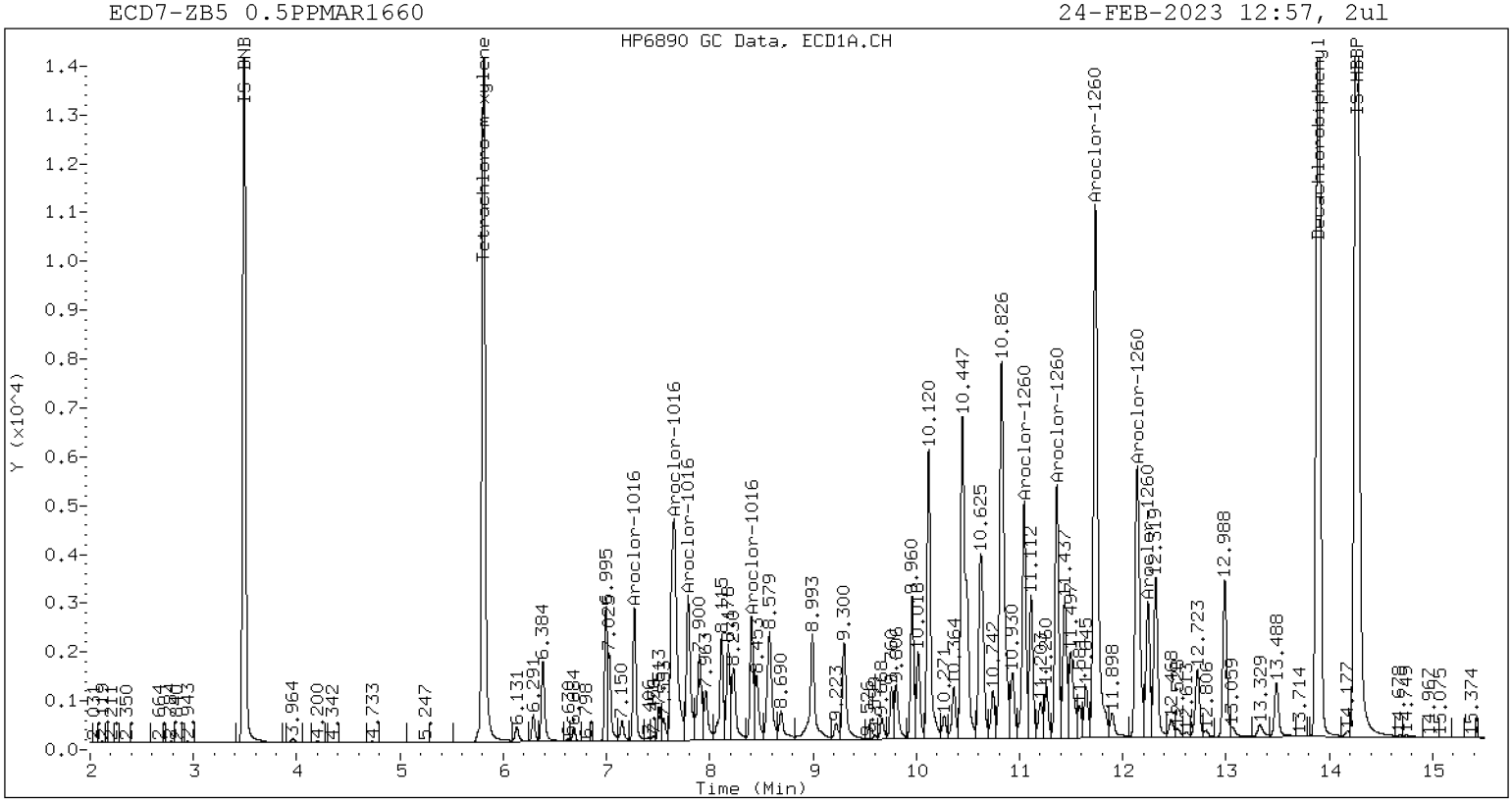
Total PCB Area Col2 (5.785 - 14.019) = 3589735 Col2 Total PCB = 0.9 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

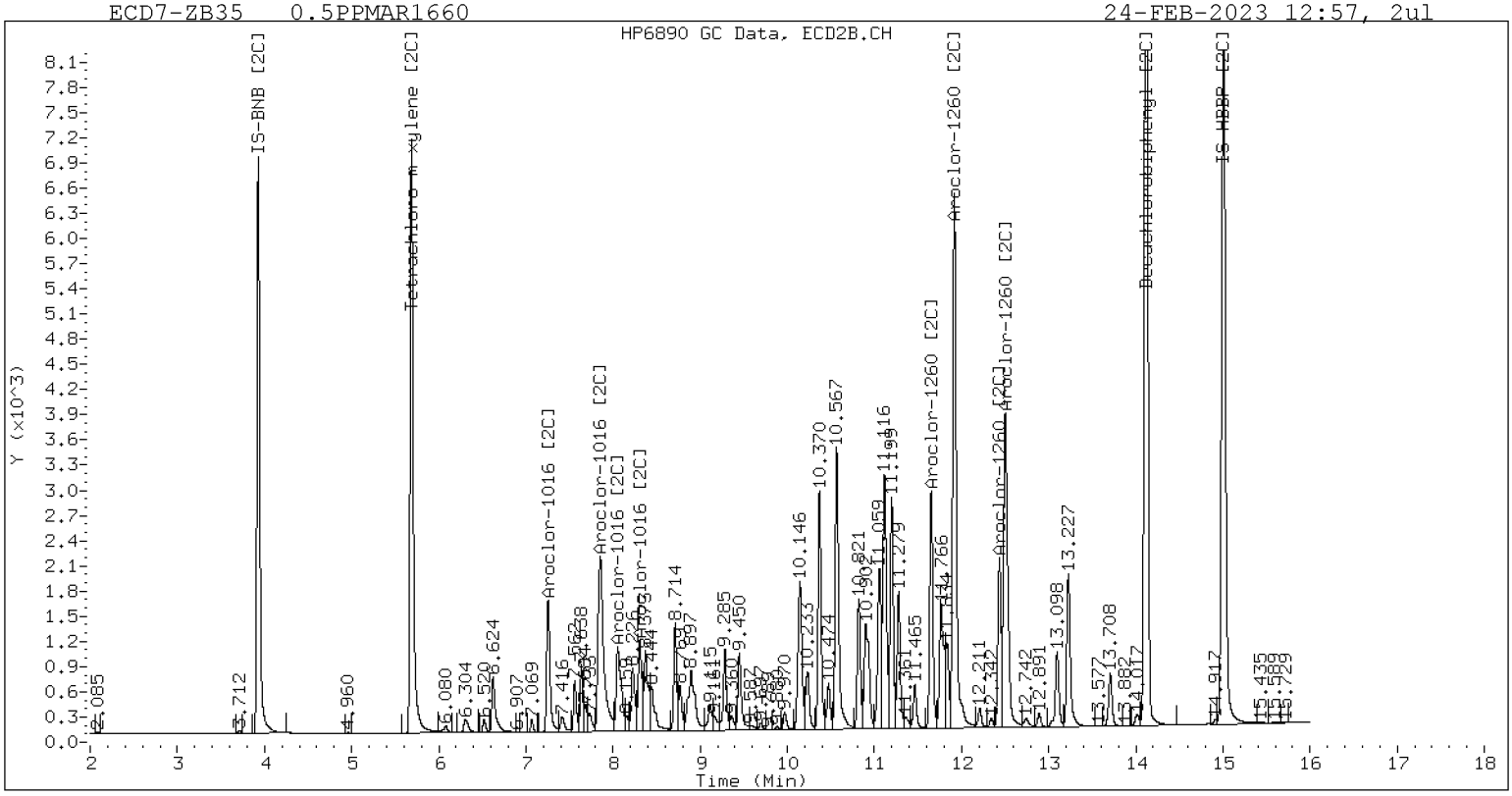
PCB Dual Column Chromatograms

ECD7-ZB5 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.5PPMAR1660 24-FEB-2023 12:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242308ECD7.D
Data file 2: /230224.b/230224.b/02242308ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1242
Client ID:
Injection Date: 24-FEB-2023 13:18
Report Date: 02/28/2023 09:50
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	434187	5.688	0.003	214306	46.0	46.5	1.1	Tetrachloro-m-xylene
13.894	0.000	515867	14.119	-0.001	312943	35.6	38.5	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632576	-6.1
Hexabromobiphenyl	1429847	1469715	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314129	-0.4
Hexabromobiphenyl	513946	534294	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.271	0.000	49009	250.0	1	7.255	0.000	36487	250.0
Aroclor-1242	2	7.656	0.000	148833	250.0	2	7.858	0.000	76699	250.0
Aroclor-1242	3	8.405	0.000	46308	250.0	3	9.167	0.000	23866	250.0
Aroclor-1242	4	8.579	0.000	68453	250.0	4	9.597	0.000	29080	250.0

Total Col1Ave (4 peaks): 250.0 Total Col2Ave (4 peaks): 250.0 RPD = 0

Corrected Ave (3 peaks): 250.0 Corrected Ave (3 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 1221467 Col1 Total PCB = 0.2 ppm*

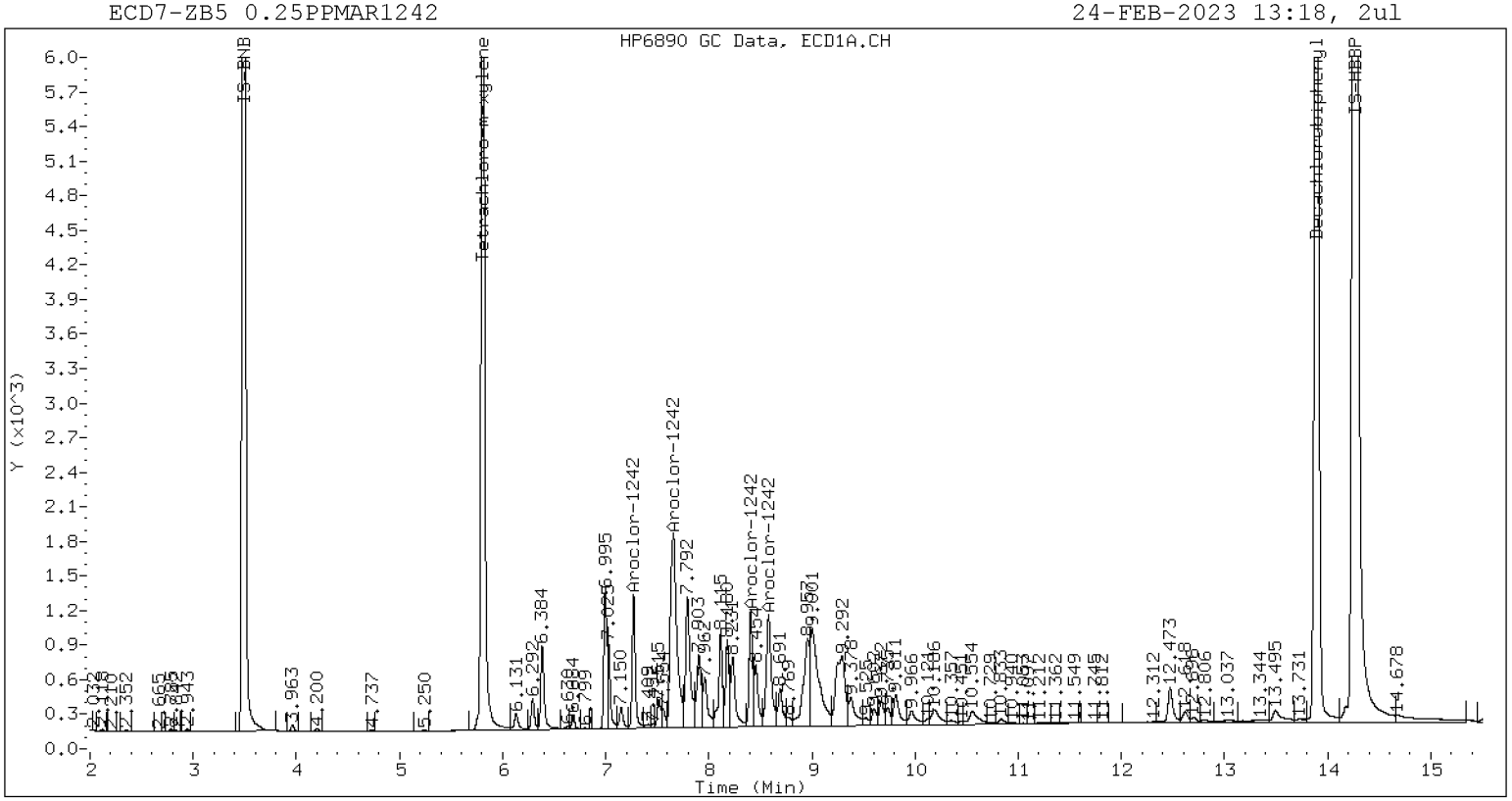
Total PCB Area Col2 (5.785 - 14.019) = 572067 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

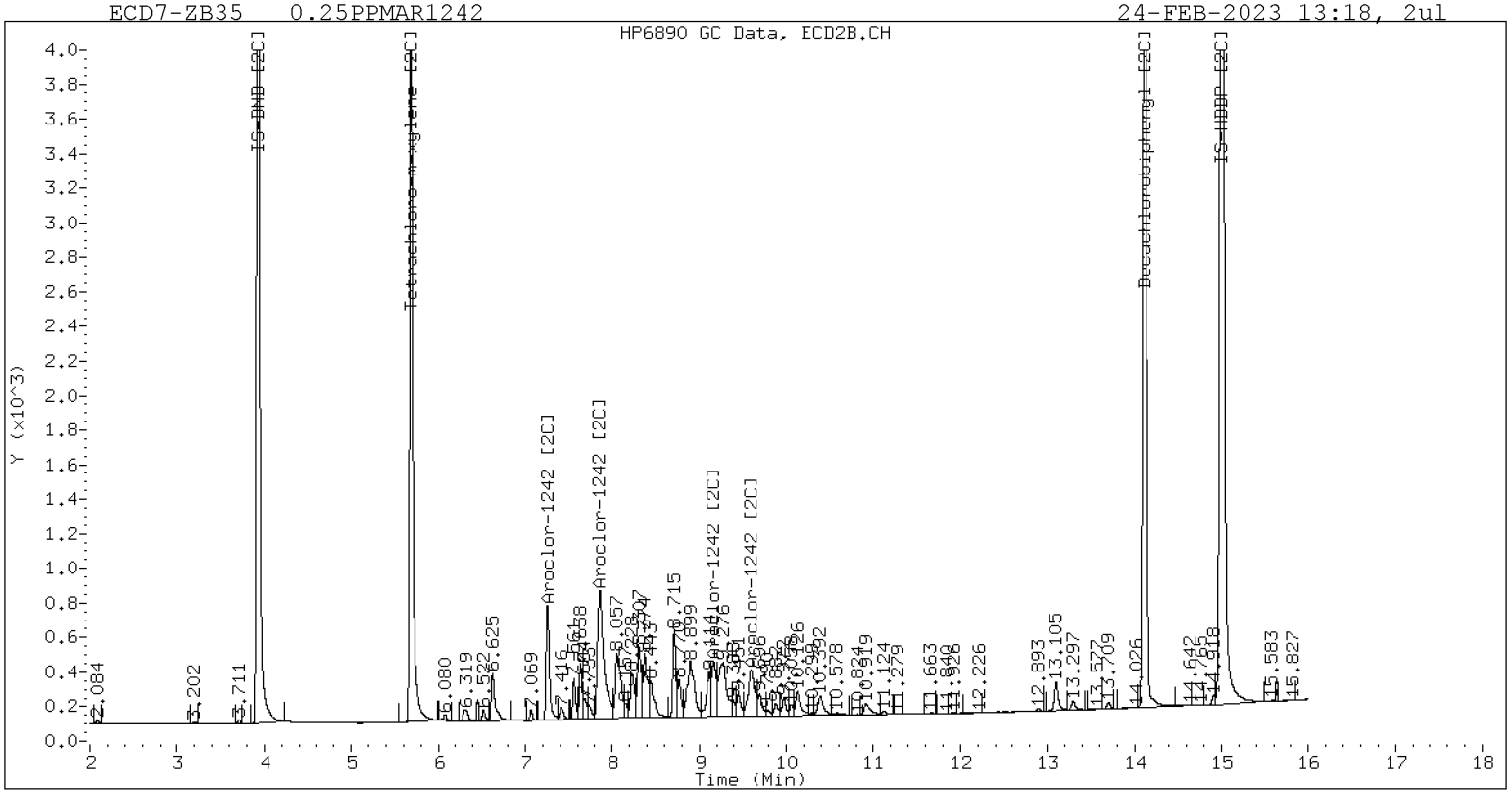
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1242 24-FEB-2023 13:18, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242309ECD7.D
Data file 2: /230224.b/230224.b/02242309ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1248
Client ID:
Injection Date: 24-FEB-2023 13:39
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.003	349513	5.688	0.003	176615	36.6	37.9	3.4	Tetrachloro-m-xylene
13.894	0.001	523008	14.121	0.001	322054	36.4	39.3	7.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	639911	-5.0
Hexabromobiphenyl	1429847	1458696	2.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317938	0.9
Hexabromobiphenyl	513946	538760	4.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	8.405	0.000	78055	250.0	1	8.308	0.000	37951	250.0
Aroclor-1248	2	8.580	0.000	99216	250.0	2	8.714	0.000	39239	250.0
Aroclor-1248	3	8.999	0.000	187178	250.0	3	9.166	0.000	45157	250.0
Aroclor-1248	4	9.295	0.000	95291	250.0	4	9.590	0.000	54216	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

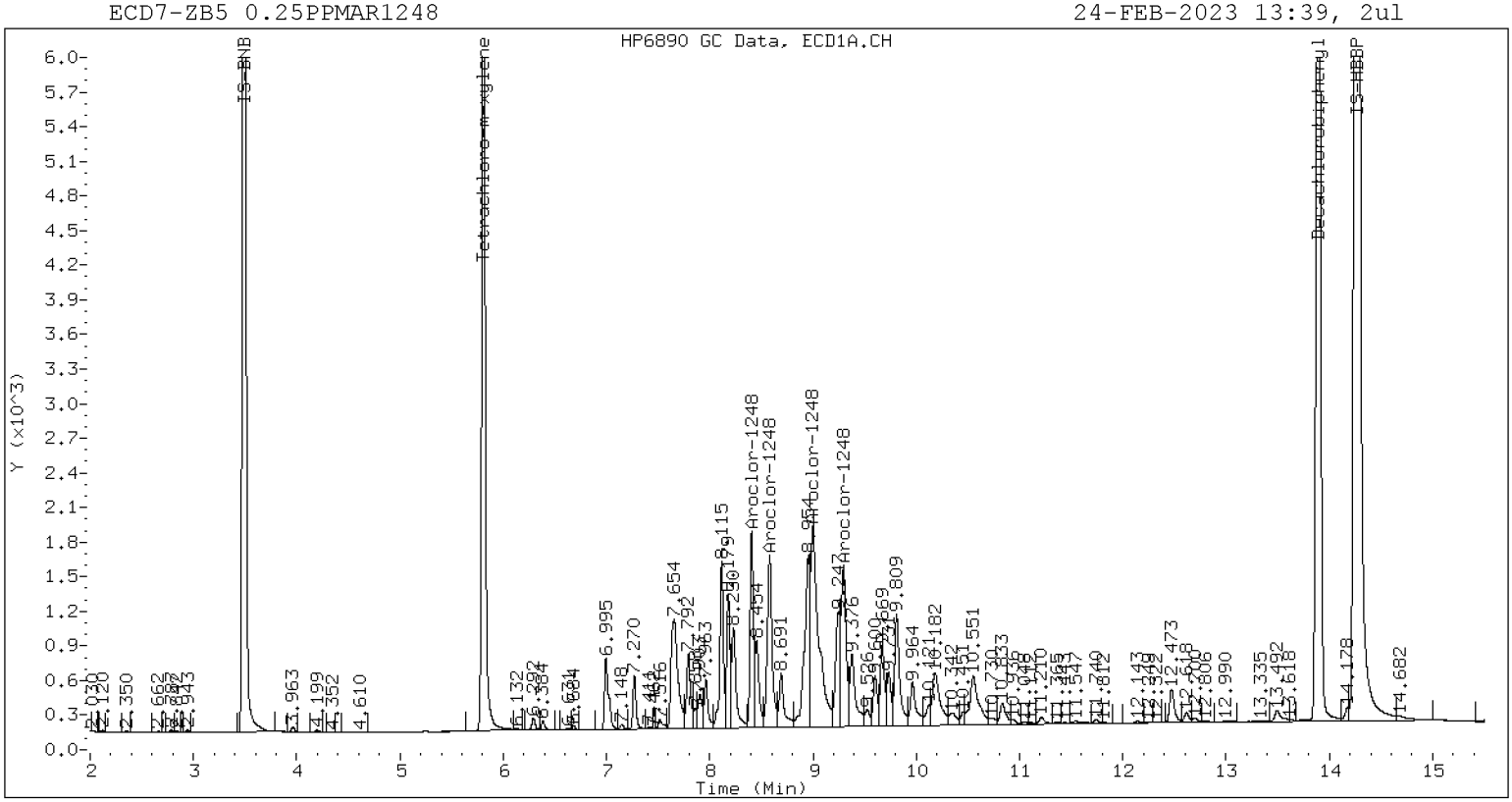
Total PCB Area Col1 (5.906 - 13.793) = 1565180 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (5.785 - 14.019) = 754991 Col2 Total PCB = 0.2 ppm*

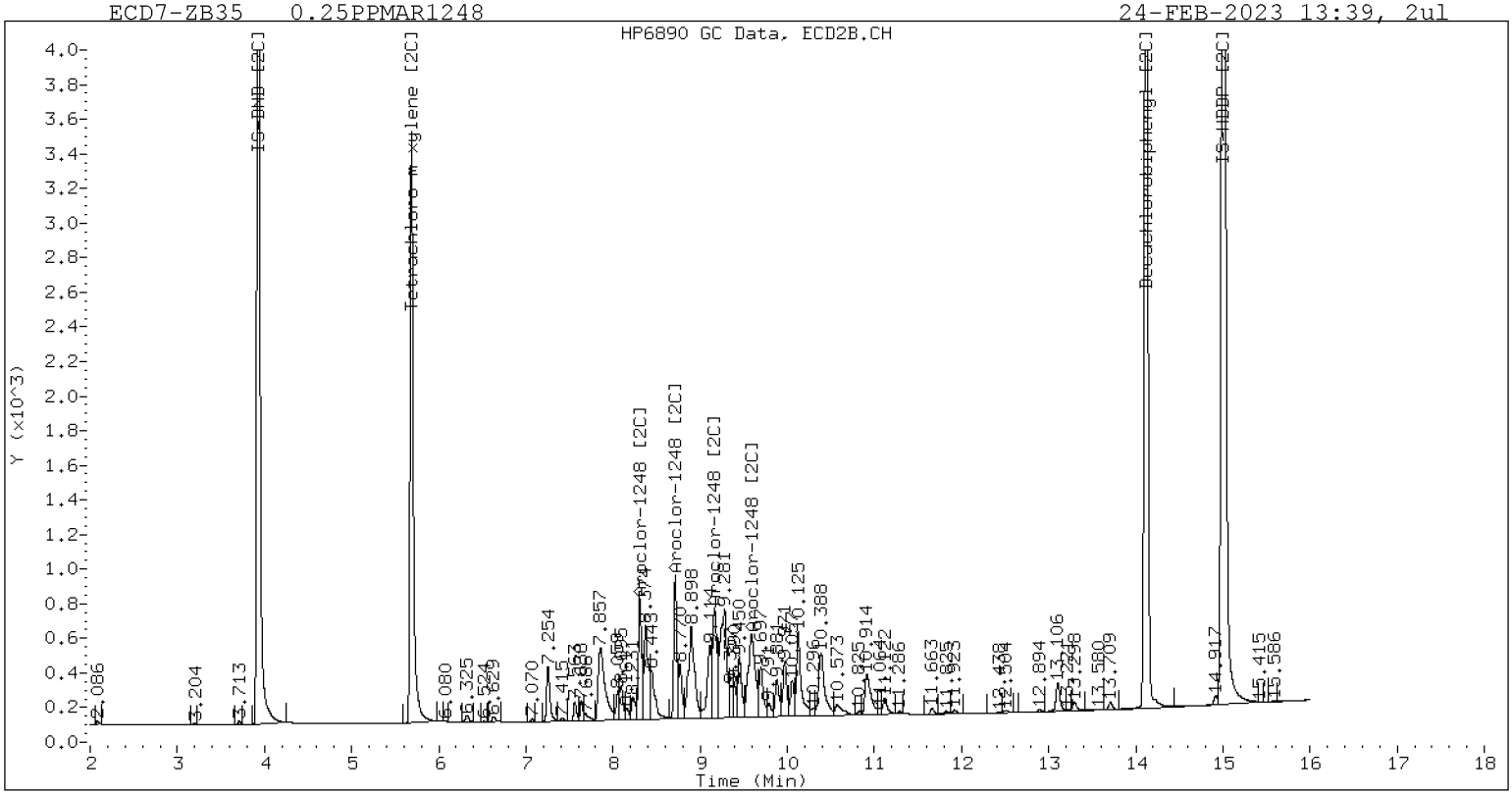
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

PCB Dual Column Chromatograms



ZB-5 Manual Integration: NO



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242310ECD7.D
Data file 2: /230224.b/230224.b/02242310ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR1254
Client ID:
Injection Date: 24-FEB-2023 14:00
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	352587	5.687	0.002	177502	37.3	38.6	3.4	Tetrachloro-m-xylene
13.895	0.002	532500	14.119	0.000	325903	37.0	40.2	8.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	633407	-6.0
Hexabromobiphenyl	1429847	1460265	2.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	313673	-0.5
Hexabromobiphenyl	513946	532442	3.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.299	0.000	159011	250.0	1	9.449	0.000	59603	250.0
Aroclor-1254	2	9.377	0.000	71516	250.0	2	9.970	0.000	47949	250.0
Aroclor-1254	3	9.668	0.000	102230	250.0	3	10.124	0.000	103745	250.0
Aroclor-1254	4	9.807	0.000	198777	250.0	4	10.373	0.000	101135	250.0
Aroclor-1254	5	10.176	0.000	124586	250.0	5	10.569	0.000	61577	250.0

Total Col1Ave (5 peaks): 250.0 Total Col2Ave (5 peaks): 250.0 RPD = 0

Corrected Ave (4 peaks): 250.0 Corrected Ave (4 peaks): 250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 2179224 Col1 Total PCB = 0.3 ppm*

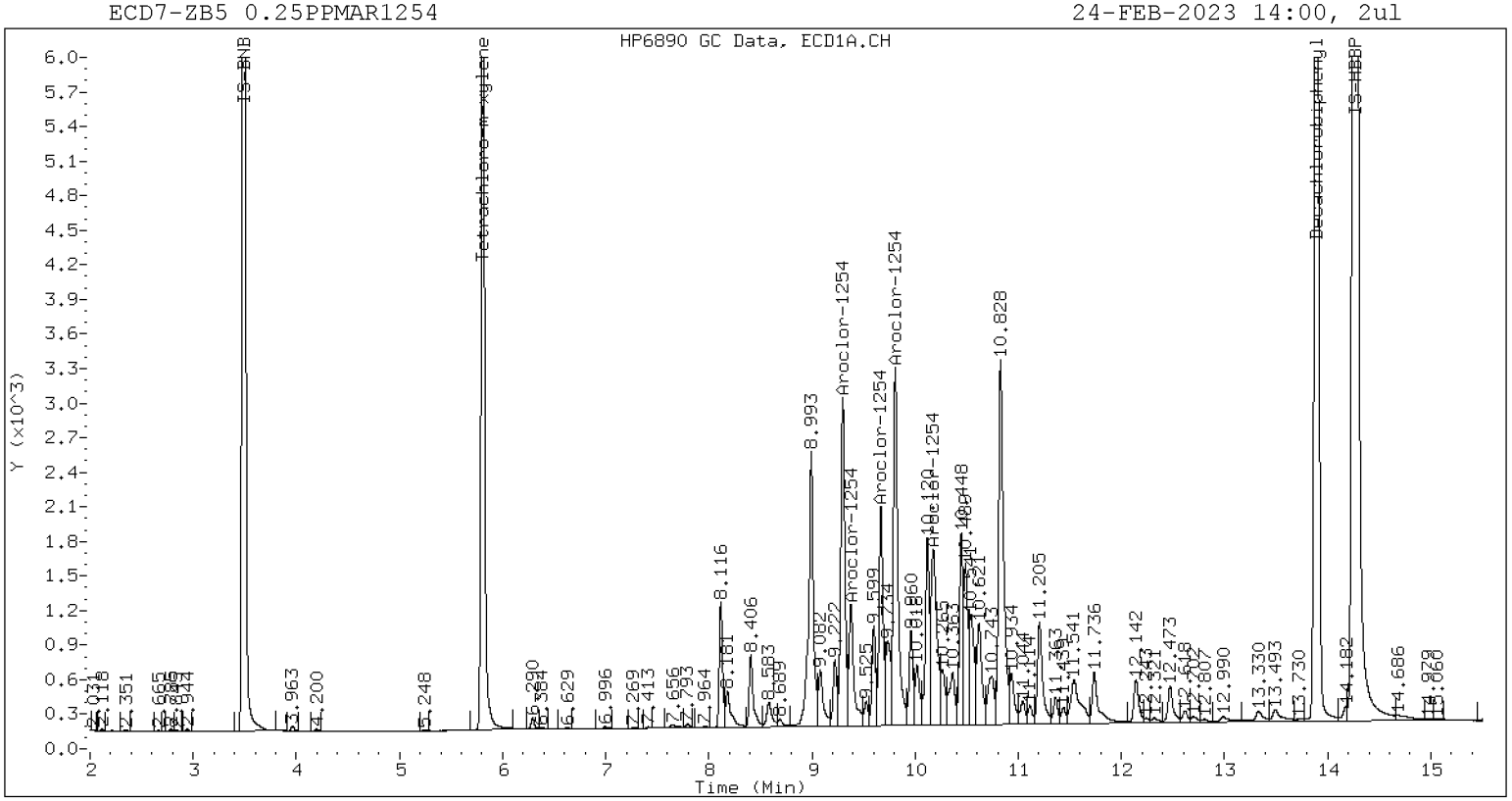
Total PCB Area Col2 (5.785 - 14.019) = 1022156 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

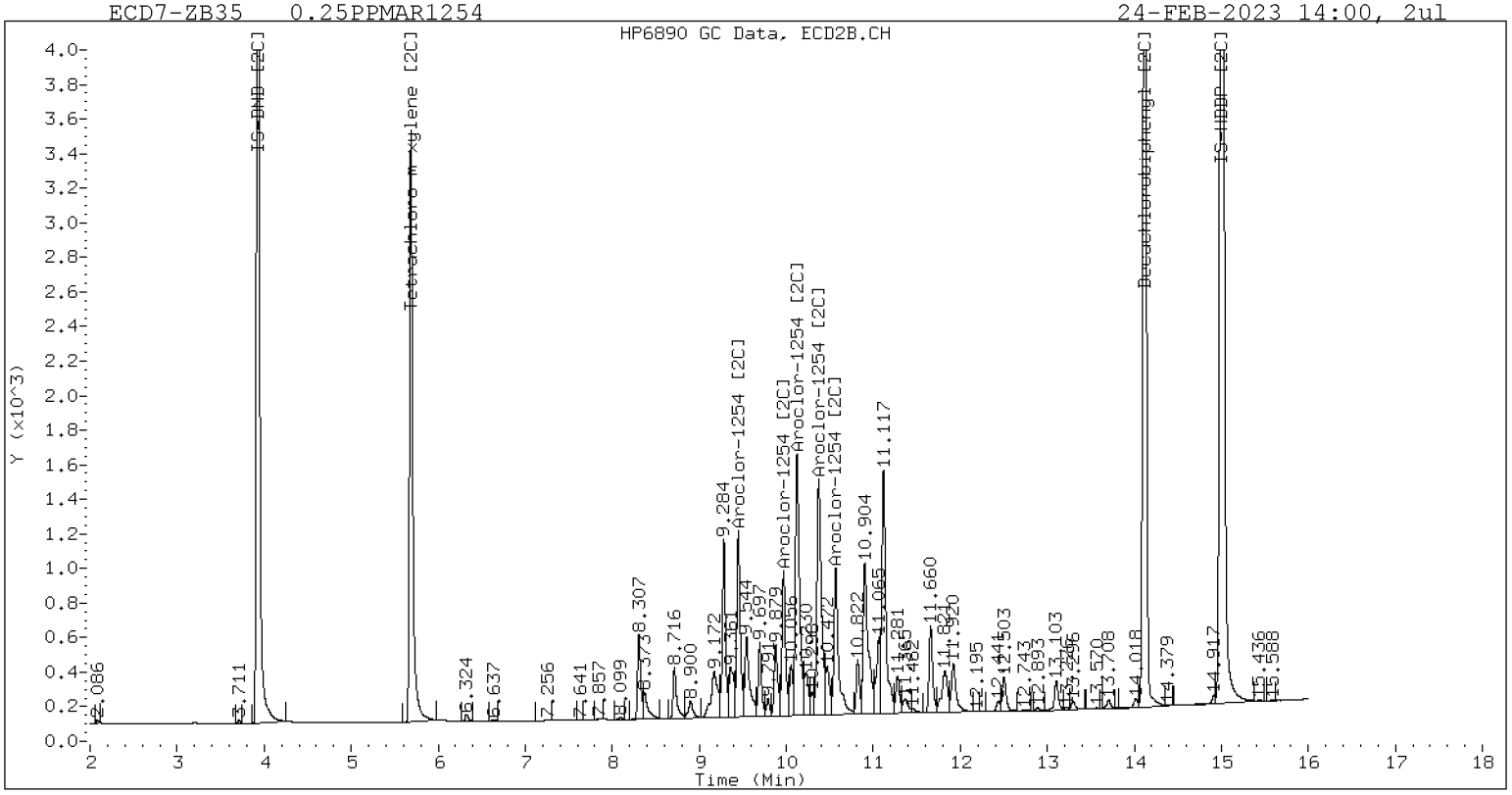
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR1254 24-FEB-2023 14:00, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242311ECD7.D
Data file 2: /230224.b/230224.b/02242311ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR2162.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR2162
Client ID:
Injection Date: 24-FEB-2023 14:21
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	362236	5.686	0.000	177349	38.4	39.2	2.1	Tetrachloro-m-xylene
13.894	0.001	523254	14.119	-0.000	321034	36.0	39.2	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	632433	-6.1
Hexabromobiphenyl	1429847	1474039	3.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	308453	-2.2
Hexabromobiphenyl	513946	538177	4.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1221	1	4.731	0.000	14160	250.0	1	4.956	0.000	7300	250.0
Aroclor-1221	2	6.132	0.000	25324	250.0	2	6.296	0.000	13816	250.0
Aroclor-1221	3	6.382	0.000	58795	250.0	3	6.622	0.000	22491	250.0
Total Col1Ave (3 peaks):					250.0	Total Col2Ave (3 peaks):				250.0 RPD = 0
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1262	1	10.829	0.000	113046	250.0	1	11.200	0.000	114880	250.0
Aroclor-1262	2	12.244	0.000	183948	250.0	2	11.652	0.000	97844	250.0
Aroclor-1262	3	12.319	0.000	197749	250.0	3	12.434	0.000	111015	250.0
Aroclor-1262	4	12.987	0.000	180727	250.0	4	12.502	0.000	173913	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3105316 Col1 Total PCB = 0.4 ppm*

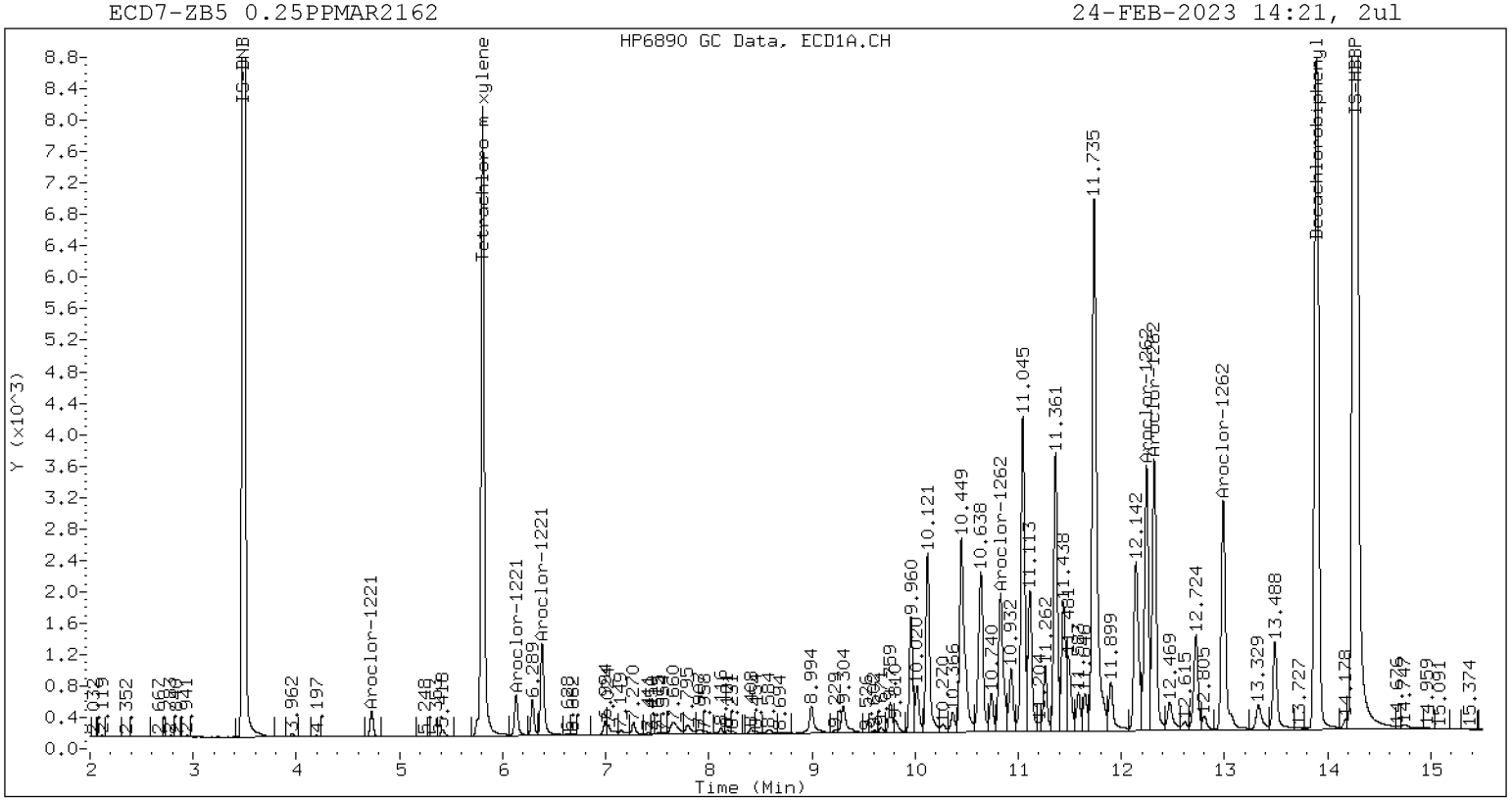
Total PCB Area Col2 (5.785 - 14.019) = 1573107 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

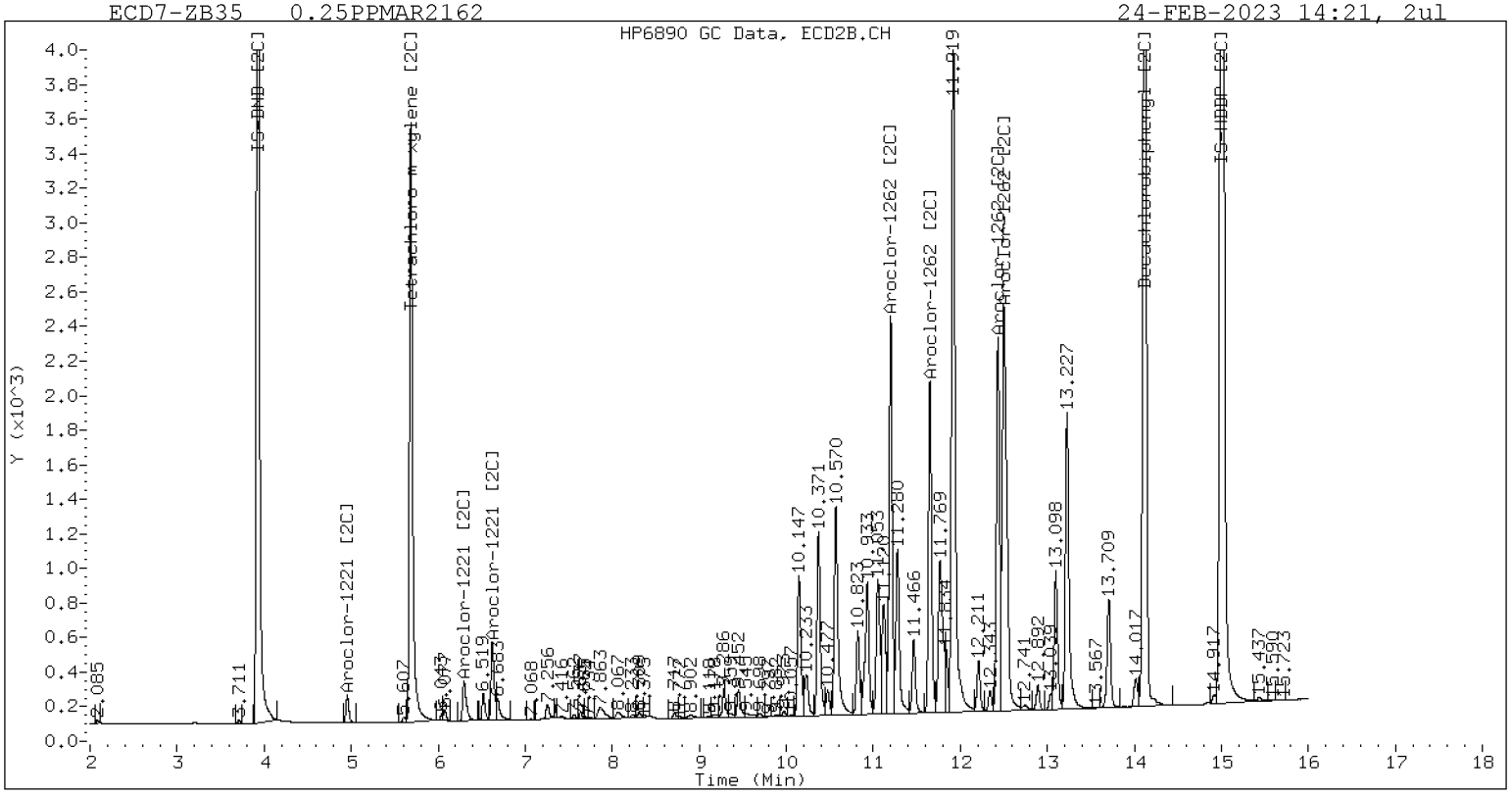
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR2162 24-FEB-2023 14:21, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242312ECD7.D
Data file 2: /230224.b/230224.b/02242312ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: AR3268.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPMAR3268
Client ID:
Injection Date: 24-FEB-2023 14:42
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	366416	5.685	0.000	179450	38.0	38.9	2.4	Tetrachloro-m-xylene
13.893	0.000	778191	14.119	0.000	477889	53.0	57.5	8.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645602	-4.2
Hexabromobiphenyl	1429847	1492154	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314042	-0.4
Hexabromobiphenyl	513946	545458	6.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1232	1	4.730	0.000	8647	250.0	1	4.956	0.000	4017	250.0
Aroclor-1232	2	6.131	0.000	17148	250.0	2	7.254	0.000	19962	250.0
Aroclor-1232	3	7.656	0.000	77627	250.0	3	7.861	0.000	39913	250.0
Aroclor-1232	4	8.581	0.000	32993	250.0	4	8.715	0.000	11487	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	12.247	0.000	477974	250.0	1	12.432	0.000	274595	250.0
Aroclor-1268	2	12.317	0.000	473326	250.0	2	12.500	0.000	295194	250.0
Aroclor-1268	3	12.699	0.000	405011	250.0	3	12.892	0.000	252048	250.0
Aroclor-1268	4	13.490	0.000	1333528	250.0	4	13.709	0.000	805579	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

Total PCB Area Col1 (5.906 - 13.793) = 3998414 Col1 Total PCB = 0.5 ppm*

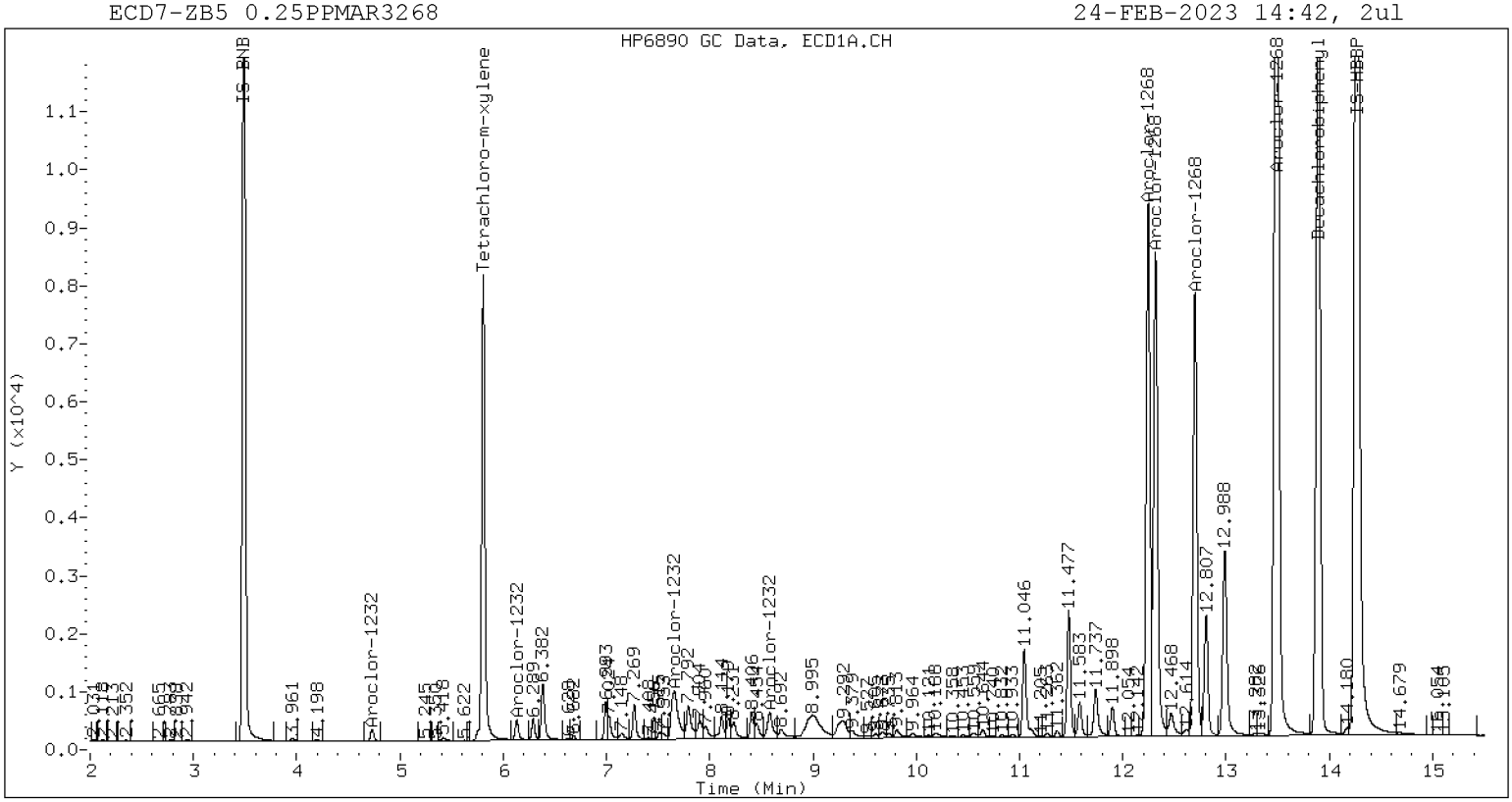
Total PCB Area Col2 (5.785 - 14.019) = 2300029 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

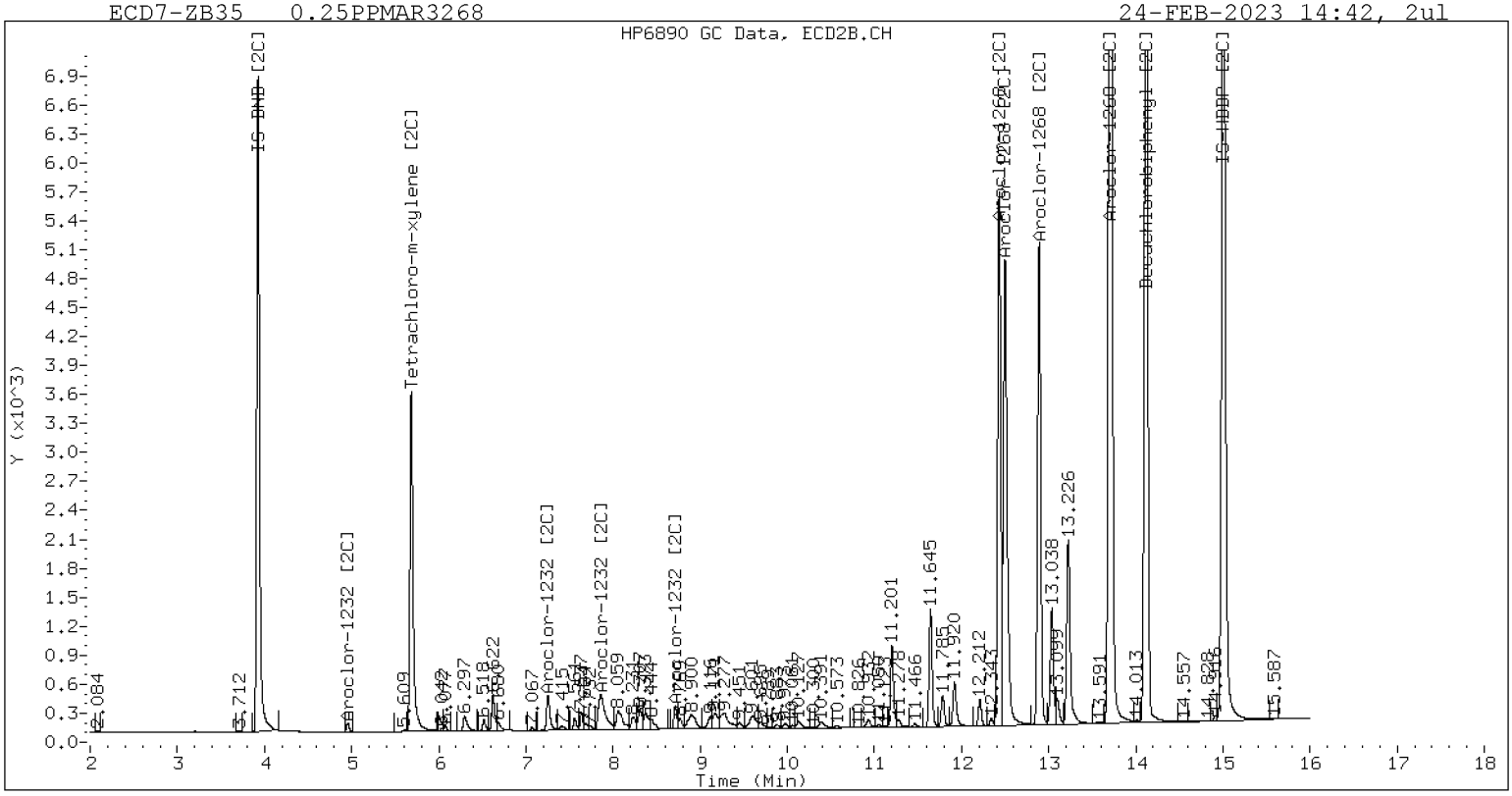
PCB Dual Column Chromatograms

ECD7-ZB5 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 0.25PPMAR3268 24-FEB-2023 14:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242313ECD7.D
Data file 2: /230224.b/230224.b/02242313ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660SCV
Client ID:
Injection Date: 24-FEB-2023 15:03
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	337070	5.686	0.001	165848	34.9	35.8	2.3	Tetrachloro-m-xylene
13.895	0.002	515407	14.119	-0.000	316730	34.3	37.3	8.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	645975	-4.1
Hexabromobiphenyl	1429847	1524245	6.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316115	0.3
Hexabromobiphenyl	513946	556950	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.002	59491	242.5	1	7.254	-0.002	44576	240.9
Aroclor-1016	2	7.655	0.001	181090	242.1	2	7.857	0.002	95386	254.2
Aroclor-1016	3	7.790	0.000	88470	242.3	3	8.056	0.002	42160	248.8
Aroclor-1016	4	8.404	-0.001	57980	245.6	4	8.307	0.000	32197	242.1
Total Col1Ave (4 peaks):					243.1	Total Col2Ave (4 peaks):				246.5 RPD = 1
Corrected Ave (3 peaks):					242.3	Corrected Ave (3 peaks):				243.9 RPD = 1
Aroclor-1221	1	4.731	0.000	464	8.0	1	---			0.0
Aroclor-1221	2	6.130	-0.002	9233	89.2	2	6.300	0.004	5379	95.0
Aroclor-1221	3	6.382	-0.001	42570	177.2	3	6.623	0.001	20952	227.2
Total Col1Ave (3 peaks):					91.5	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.731	0.001	464	13.4	1	---			0.0
Aroclor-1232	2	6.130	-0.001	9233	134.5	2	7.254	-0.000	44576	554.6
Aroclor-1232	3	7.655	-0.001	181090	582.9	3	7.857	-0.003	95386	593.5
Aroclor-1232	4	8.580	-0.001	79916	605.2	4	8.713	-0.002	29795	644.2
Total Col1Ave (4 peaks):					334.0	Total Col2Ave (3 peaks):				597.4 RPD = 57*
Corrected Ave (3 peaks):					243.6	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.269	-0.002	59491	297.2	1	7.254	-0.002	44576	303.5
Aroclor-1242	2	7.655	-0.001	181090	297.9	2	7.857	-0.000	95386	309.0
Aroclor-1242	3	8.404	-0.001	57980	306.5	3	9.115	-0.052	18754	195.2
Aroclor-1242	4	8.580	0.000	79916	285.8	4	9.697	0.100	1355	11.6
Total Col1Ave (4 peaks):					296.8	Total Col2Ave (4 peaks):				204.8 RPD = 37
Corrected Ave (3 peaks):					293.6	Corrected Ave (3 peaks):				170.1 RPD = 53*
Aroclor-1248	1	8.404	-0.001	57980	184.0	1	8.307	-0.001	32197	213.3
Aroclor-1248	2	8.580	-0.001	79916	199.5	2	8.713	-0.001	29795	190.9
Aroclor-1248	3	8.993	-0.006	71805	95.0	3	9.115	-0.050	18754	104.4
Aroclor-1248	4	9.300	0.006	47348	123.1	4	---			0.0
Total Col1Ave (4 peaks):					150.4	Total Col2Ave (3 peaks):				169.6 RPD = 12
Corrected Ave (3 peaks):					134.0	Corrected Ave: < 3 Peaks				
Aroclor-1254	1	9.300	0.002	47348	73.0	1	9.451	0.001	22438	93.4
Aroclor-1254	2	---			0.0	2	9.972	0.001	2694	13.9
Aroclor-1254	3	9.670	0.002	5461	13.1	3	10.147	0.024	52914	126.5
Aroclor-1254	4	9.807	-0.000	18944	23.4	4	10.370	-0.003	70430	172.8
Aroclor-1254	5	10.121	-0.056	154170	303.3	5	10.568	-0.000	98525	396.9
Total Col1Ave (4 peaks):					103.2	Total Col2Ave (5 peaks):				160.7 RPD = 44*
Corrected Ave (3 peaks):					36.5	Corrected Ave (4 peaks):				101.7 RPD = 94*
Aroclor-1260	1	11.044	0.000	149195	272.1	1	11.653	0.000	82210	251.0
Aroclor-1260	2	11.361	-0.000	153832	268.5	2	11.919	0.001	222226	265.9
Aroclor-1260	3	11.736	0.002	396660	261.0	3	12.435	-0.000	59148	266.7
Aroclor-1260	4	12.140	0.001	190448	248.9	4	12.504	0.002	147180	261.2
Aroclor-1260	5	12.244	-0.000	91385	277.5	NS	---			----
Total Col1Ave (5 peaks):					265.6	Total Col2Ave (4 peaks):				261.2 RPD = 2
Corrected Ave (4 peaks):					262.6	Corrected Ave (3 peaks):				259.4 RPD = 1
Aroclor-1262	1	10.827	-0.002	220238	471.0	1	11.199	-0.001	84479	177.6
Aroclor-1262	2	12.244	0.000	91385	120.1	2	11.653	0.002	82210	203.0
Aroclor-1262	3	12.320	0.001	113066	138.2	3	12.435	0.002	59148	128.7
Aroclor-1262	4	12.988	0.001	102156	136.7	4	12.504	0.002	147180	204.4
Total Col1Ave (4 peaks):					216.5	Total Col2Ave (4 peaks):				178.4 RPD = 19
Corrected Ave (3 peaks):					131.7	Corrected Ave (3 peaks):				169.8 RPD = 25
Aroclor-1268	1	12.244	-0.003	91385	46.8	1	12.435	0.003	59148	52.7
Aroclor-1268	2	12.320	0.003	113066	58.5	2	12.504	0.004	147180	122.1
Aroclor-1268	3	12.726	0.027	46633	28.2	3	12.893	0.001	2874	2.8
Aroclor-1268	4	13.489	-0.000	25567	4.7	4	13.709	-0.000	13041	4.0
Total Col1Ave (4 peaks):					34.5	Total Col2Ave (4 peaks):				45.4 RPD = 27
Corrected Ave (3 peaks):					26.6	Corrected Ave (3 peaks):				19.8 RPD = 29

Total PCB Area Col1 (5.906 - 13.793) = 3743076 Col1 Total PCB = 0.5 ppm*

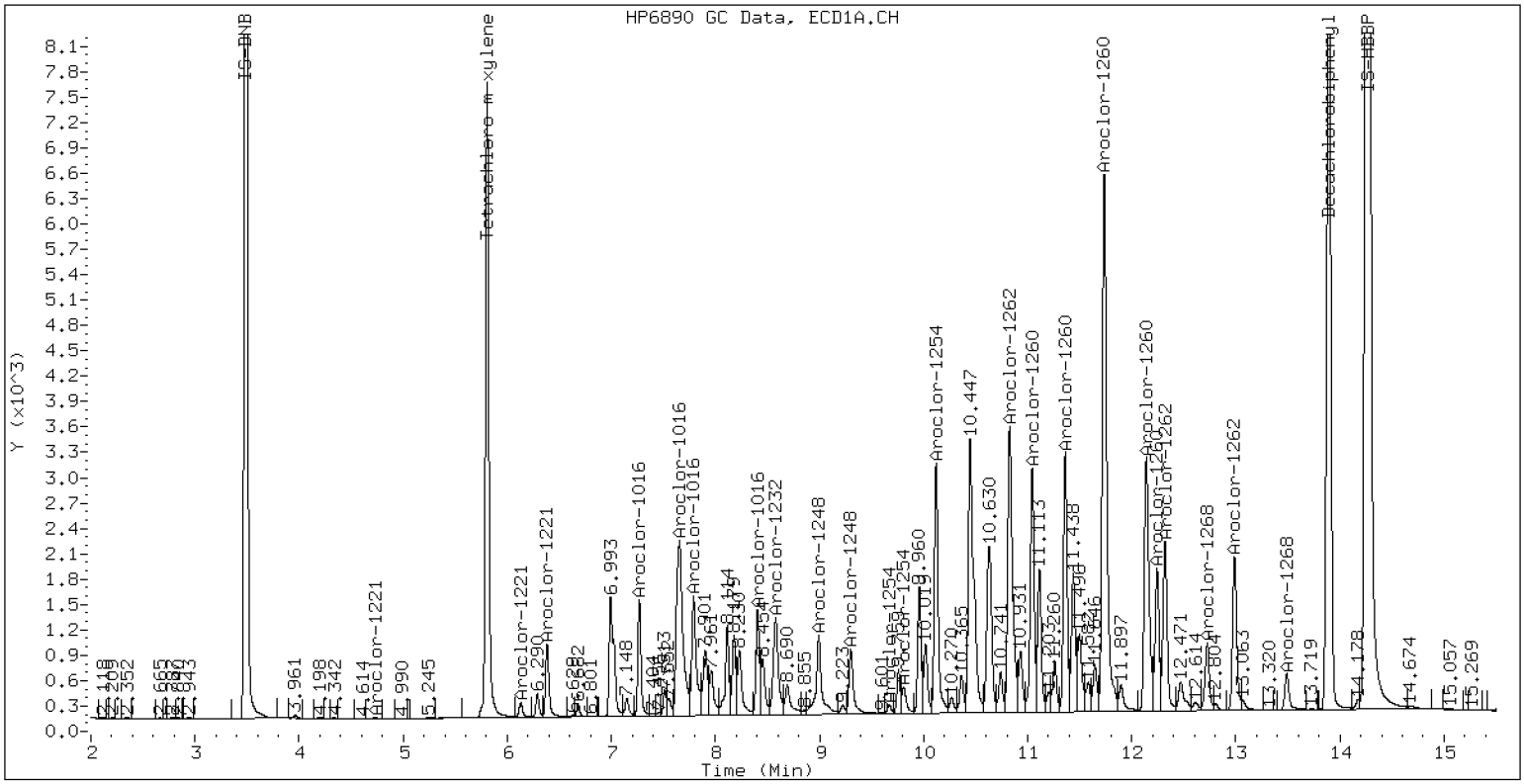
Total PCB Area Col2 (5.785 - 14.019) = 1897008 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

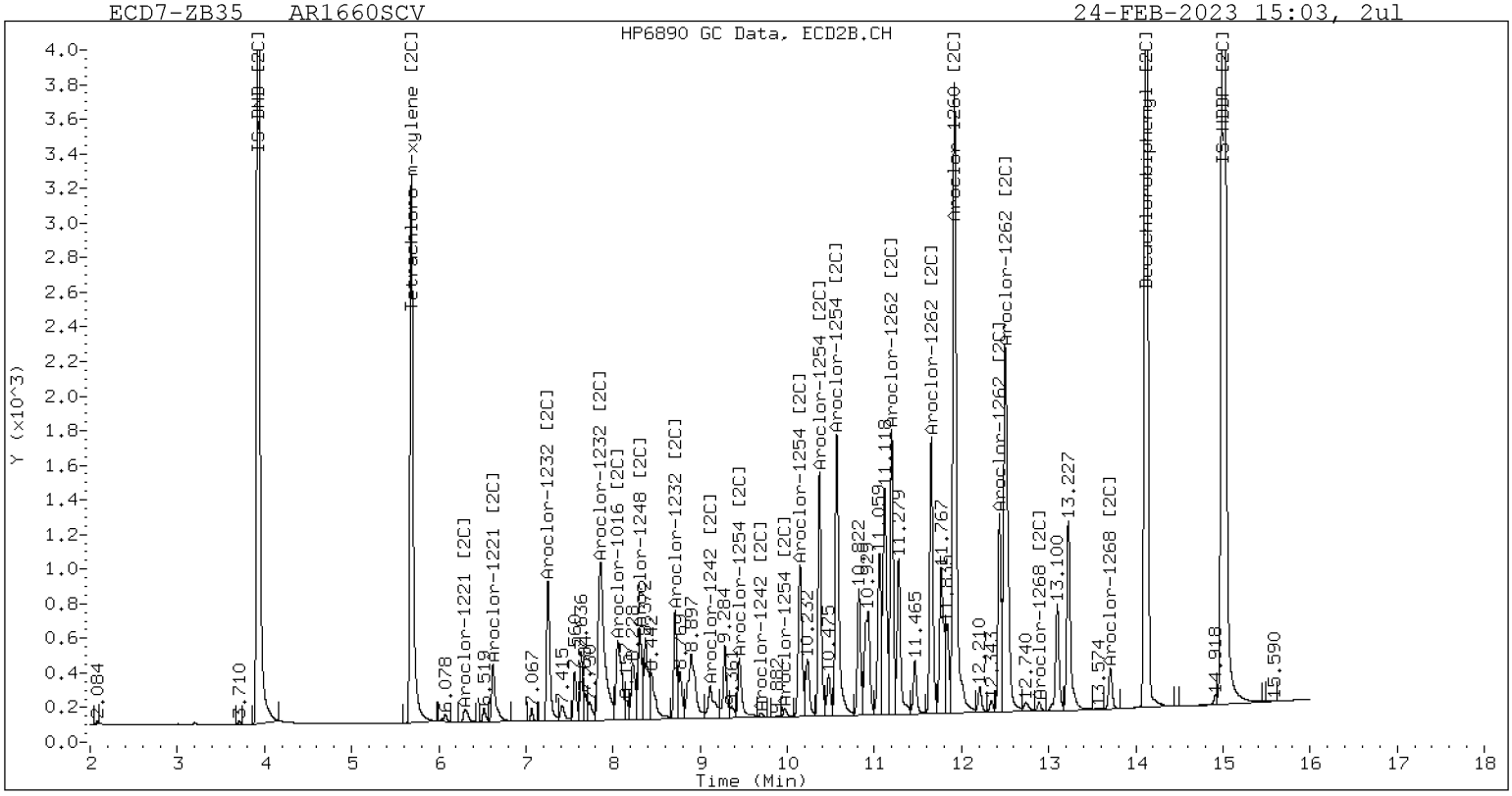
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660SCV 24-FEB-2023 15:03, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242314ECD7.D
Data file 2: /230224.b/230224.b/02242314ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242SCV
Client ID:
Injection Date: 24-FEB-2023 15:24
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	354283	5.686	0.001	172455	33.6	34.5	2.6	Tetrachloro-m-xylene
13.895	0.002	567088	14.120	0.001	347430	37.0	40.3	8.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	705650	4.7
Hexabromobiphenyl	1429847	1555683	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	340433	8.0
Hexabromobiphenyl	513946	565609	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.000	39927	149.0	1	7.256	0.000	32417	162.7
Aroclor-1016	2	7.653	-0.001	132339	162.0	2	7.856	0.001	69235	171.3
Aroclor-1016	3	7.791	0.001	59310	148.7	3	8.055	0.000	29473	161.5
Aroclor-1016	4	8.405	0.000	42537	165.0	4	8.307	-0.000	22792	159.2
Total Col1Ave (4 peaks): 156.2						Total Col2Ave (4 peaks): 163.7			RPD = 5	
Corrected Ave (3 peaks): 153.2						Corrected Ave (3 peaks): 161.1			RPD = 5	
Aroclor-1221	1	4.733	0.002	319	5.0	1	---			0.0
Aroclor-1221	2	6.131	-0.001	6534	57.8	2	6.319	0.022	4365	71.6
Aroclor-1221	3	6.384	0.001	29664	113.0	3	6.624	0.002	14916	150.2
Total Col1Ave (3 peaks): 58.6						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	4.733	0.003	319	8.4	1	---			0.0
Aroclor-1232	2	6.131	0.000	6534	87.2	2	7.256	0.002	32417	374.5
Aroclor-1232	3	7.653	-0.003	132339	389.9	3	7.856	-0.004	69235	400.0
Aroclor-1232	4	8.579	-0.002	69445	481.4	4	8.714	-0.001	22167	445.0
Total Col1Ave (4 peaks): 241.7						Total Col2Ave (3 peaks): 406.5			RPD = 51*	
Corrected Ave (3 peaks): 161.8						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.270	-0.001	39927	182.6	1	7.256	0.000	32417	205.0
Aroclor-1242	2	7.653	-0.003	132339	199.3	2	7.856	-0.002	69235	208.2
Aroclor-1242	3	8.405	-0.000	42537	205.9	3	9.164	-0.004	23068	223.0
Aroclor-1242	4	8.579	-0.000	69445	227.4	4	9.587	-0.010	31021	246.1
Total Col1Ave (4 peaks): 203.8						Total Col2Ave (4 peaks): 220.6			RPD = 8	
Corrected Ave (3 peaks): 195.9						Corrected Ave (3 peaks): 212.1			RPD = 8	
Aroclor-1248	1	8.405	0.000	42537	123.5	1	8.307	-0.001	22792	140.2
Aroclor-1248	2	8.579	-0.001	69445	158.7	2	8.714	-0.000	22167	131.9
Aroclor-1248	3	9.001	0.003	91942	111.4	3	9.164	-0.002	23068	119.3
Aroclor-1248	4	9.294	-0.000	38711	92.1	4	9.587	-0.003	31021	133.6
Total Col1Ave (4 peaks): 121.4						Total Col2Ave (4 peaks): 131.2			RPD = 8	
Corrected Ave (3 peaks): 109.0						Corrected Ave (3 peaks): 128.3			RPD = 16	
Aroclor-1254	1	9.294	-0.005	38711	54.6	1	9.450	0.001	13131	50.7
Aroclor-1254	2	9.377	-0.000	17371	54.5	2	9.970	0.000	8340	40.1
Aroclor-1254	3	9.668	-0.000	16373	35.9	3	10.123	-0.000	16364	36.3
Aroclor-1254	4	9.807	-0.001	27490	31.0	4	10.382	0.009	16062	36.6
Aroclor-1254	5	10.175	-0.001	20494	36.9	5	10.572	0.004	4818	18.0
Total Col1Ave (5 peaks): 42.6						Total Col2Ave (5 peaks): 36.4			RPD = 16	
Corrected Ave (4 peaks): 39.6						Corrected Ave (4 peaks): 32.8			RPD = 19	
Aroclor-1260	1	11.048	0.003	794	1.4	1	11.665	0.012	1652	5.0
Aroclor-1260	2	11.366	0.005	814	1.4	2	11.926	0.008	842	1.0
Aroclor-1260	3	11.739	0.006	1848	1.2	3	12.438	0.002	483	2.1
Aroclor-1260	4	12.145	0.006	1372	1.8	4	12.506	0.004	790	1.4
Aroclor-1260	5	---			0.0	NS	---			----
Total Col1Ave (4 peaks): 1.4						Total Col2Ave (4 peaks): 2.4			RPD = 49*	
Corrected Ave (3 peaks): 1.3						Corrected Ave (3 peaks): 1.5			RPD = 12	
Aroclor-1262	1	10.832	0.003	13157	27.6	1	11.121	-0.079	6113	12.7
Aroclor-1262	2	12.145	-0.098	1372	1.8	2	11.665	0.013	1652	4.0
Aroclor-1262	3	---			0.0	3	12.438	0.004	483	1.0
Aroclor-1262	4	13.038	0.051	842	1.1	4	12.506	0.004	790	1.1
Total Col1Ave (3 peaks): 10.1						Total Col2Ave (4 peaks): 4.7			RPD = 73*	
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks): 2.0				
Aroclor-1268	1	---			0.0	1	12.438	0.006	483	0.4
Aroclor-1268	2	---			0.0	2	12.506	0.006	790	0.6
Aroclor-1268	3	12.617	-0.082	5851	3.5	3	12.899	0.007	491	0.5
Aroclor-1268	4	13.500	0.010	1745	0.3	4	13.714	0.005	379	0.1
Col1Ave: <3 Quant Peaks						Col2Ave: 0.4				

Total PCB Area Col1 (5.906 - 13.793) = 1149784 Col1 Total PCB = 0.1 ppm*

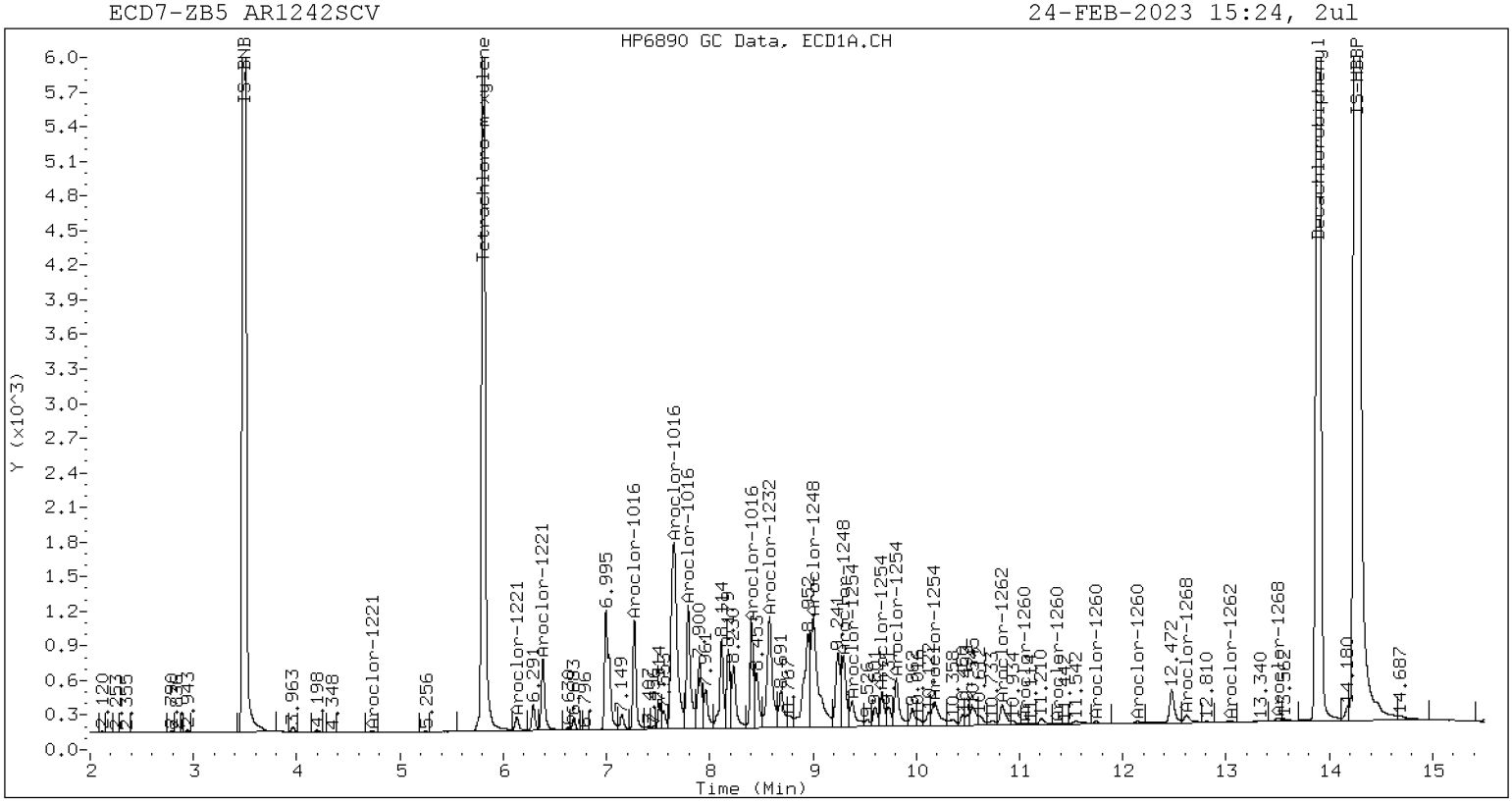
Total PCB Area Col2 (5.785 - 14.019) = 572210 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

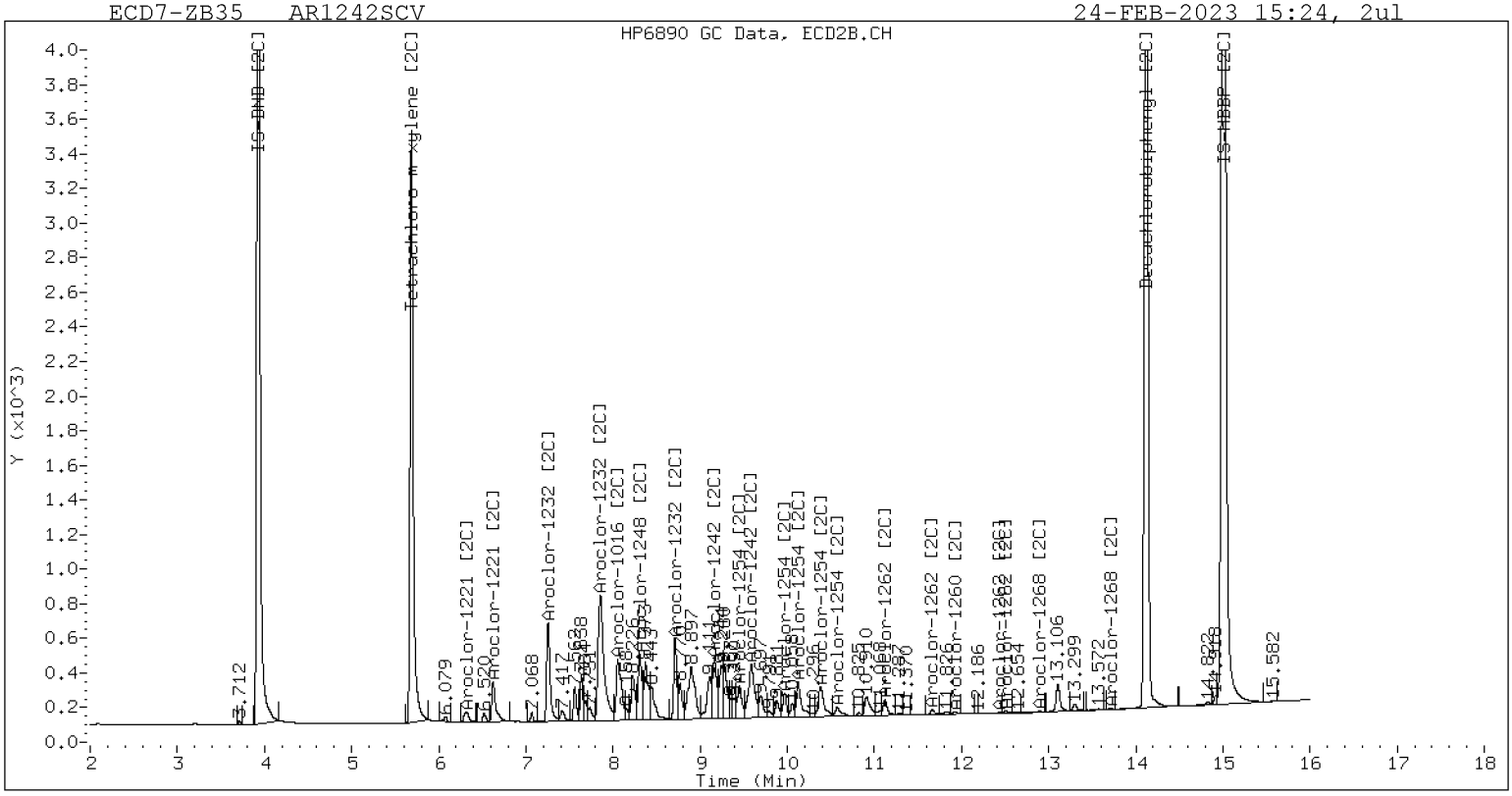
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242SCV 24-FEB-2023 15:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242315ECD7.D
Data file 2: /230224.b/230224.b/02242315ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248SCV
Client ID:
Injection Date: 24-FEB-2023 15:45
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	336655	5.687	0.002	168719	34.9	36.4	4.2	Tetrachloro-m-xylene
13.894	0.001	499162	14.118	-0.001	308317	33.1	36.3	9.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	646554	-4.0
Hexabromobiphenyl	1429847	1529451	7.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	316066	0.3
Hexabromobiphenyl	513946	557213	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.271	0.000	19773	80.5	1	7.254	-0.002	16926	91.5
Aroclor-1016	2	7.653	-0.001	88099	117.7	2	7.857	0.001	45733	121.9
Aroclor-1016	3	7.794	0.003	35915	98.3	3	8.060	0.005	8078	47.7
Aroclor-1016	4	8.406	0.001	77842	329.5	4	8.307	0.000	37348	280.9
Total Col1Ave (4 peaks):					156.5	Total Col2Ave (4 peaks):				135.5 RPD = 14
Corrected Ave (3 peaks):					98.8	Corrected Ave (3 peaks):				87.0 RPD = 13
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	6.133	0.001	680	6.6	2	6.326	0.030	1966	34.7
Aroclor-1221	3	6.384	0.002	3390	14.1	3	6.631	0.009	1571	17.0
Col1Ave: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	6.133	0.002	680	9.9	2	7.254	-0.000	16926	210.6
Aroclor-1232	3	7.653	-0.002	88099	283.3	3	7.857	-0.004	45733	284.6
Aroclor-1232	4	8.581	-0.000	99572	753.4	4	8.714	-0.001	38224	826.6
Total Col1Ave (3 peaks):					348.9	Total Col2Ave (3 peaks):				440.6 RPD = 23
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1242	1	7.271	-0.000	19773	98.7	1	7.254	-0.002	16926	115.3
Aroclor-1242	2	7.653	-0.003	88099	144.8	2	7.857	-0.001	45733	148.2
Aroclor-1242	3	8.406	0.000	77842	411.2	3	9.165	-0.002	45021	468.7
Aroclor-1242	4	8.581	0.001	99572	355.8	4	9.590	-0.008	53613	458.1
Total Col1Ave (4 peaks):					252.6	Total Col2Ave (4 peaks):				297.6 RPD = 16
Corrected Ave (3 peaks):					199.8	Corrected Ave (3 peaks):				240.5 RPD = 19
Aroclor-1248	1	8.406	0.000	77842	246.8	1	8.307	-0.001	37348	247.5
Aroclor-1248	2	8.581	0.000	99572	248.3	2	8.714	-0.000	38224	245.0
Aroclor-1248	3	8.998	-0.000	186857	247.0	3	9.165	-0.000	45021	250.7
Aroclor-1248	4	9.294	-0.000	98398	255.5	4	9.590	-0.001	53613	248.7
Total Col1Ave (4 peaks):					249.4	Total Col2Ave (4 peaks):				248.0 RPD = 1
Corrected Ave (3 peaks):					247.4	Corrected Ave (3 peaks):				247.0 RPD = 0
Aroclor-1254	1	9.294	-0.004	98398	151.6	1	9.450	0.001	21823	90.8
Aroclor-1254	2	9.377	-0.001	49616	169.9	2	9.971	0.001	19450	100.6
Aroclor-1254	3	9.669	0.001	40230	96.4	3	10.124	0.000	36574	87.5
Aroclor-1254	4	9.808	0.001	68500	84.4	4	10.389	0.016	35100	86.1
Aroclor-1254	5	10.183	0.007	47365	93.1	5	10.573	0.004	5676	22.9
Total Col1Ave (5 peaks):					119.1	Total Col2Ave (5 peaks):				77.6 RPD = 42*
Corrected Ave (4 peaks):					106.4	Corrected Ave (4 peaks):				71.8 RPD = 39
Aroclor-1260	1	11.047	0.003	1670	3.0	1	11.662	0.009	2055	6.3
Aroclor-1260	2	11.362	0.001	1111	1.9	2	11.924	0.007	1466	1.8
Aroclor-1260	3	11.739	0.005	2107	1.4	3	12.434	-0.002	573	2.6
Aroclor-1260	4	12.144	0.005	1379	1.8	4	12.505	0.003	1003	1.8
Aroclor-1260	5	12.251	0.006	698	2.1	NS	---			----
Total Col1Ave (5 peaks):					2.1	Total Col2Ave (4 peaks):				3.1 RPD = 41*
Corrected Ave (4 peaks):					1.8	Corrected Ave (3 peaks):				2.0 RPD = 12
Aroclor-1262	1	10.833	0.005	15355	32.7	1	11.122	-0.079	7225	15.2
Aroclor-1262	2	12.251	0.007	698	0.9	2	11.662	0.011	2055	5.1
Aroclor-1262	3	12.321	0.002	836	1.0	3	12.434	0.000	573	1.2
Aroclor-1262	4	12.991	0.004	1043	1.4	4	12.505	0.003	1003	1.4
Total Col1Ave (4 peaks):					9.0	Total Col2Ave (4 peaks):				5.7 RPD = 45*
Corrected Ave (3 peaks):					1.1	Corrected Ave (3 peaks):				2.6 RPD = 80*
Aroclor-1268	1	12.251	0.004	698	0.4	1	12.434	0.002	573	0.5
Aroclor-1268	2	12.321	0.004	836	0.4	2	12.505	0.005	1003	0.8
Aroclor-1268	3	12.700	0.001	2449	1.5	3	12.892	0.001	721	0.7
Aroclor-1268	4	13.493	0.003	7547	1.4	4	13.708	-0.001	2265	0.7
Total Col1Ave (4 peaks):					0.9	Total Col2Ave (4 peaks):				0.7 RPD = 29
Corrected Ave (3 peaks):					0.7	Corrected Ave (3 peaks):				0.6 RPD = 13

Total PCB Area Col1 (5.906 - 13.793) = 1574335 Col1 Total PCB = 0.2 ppm*

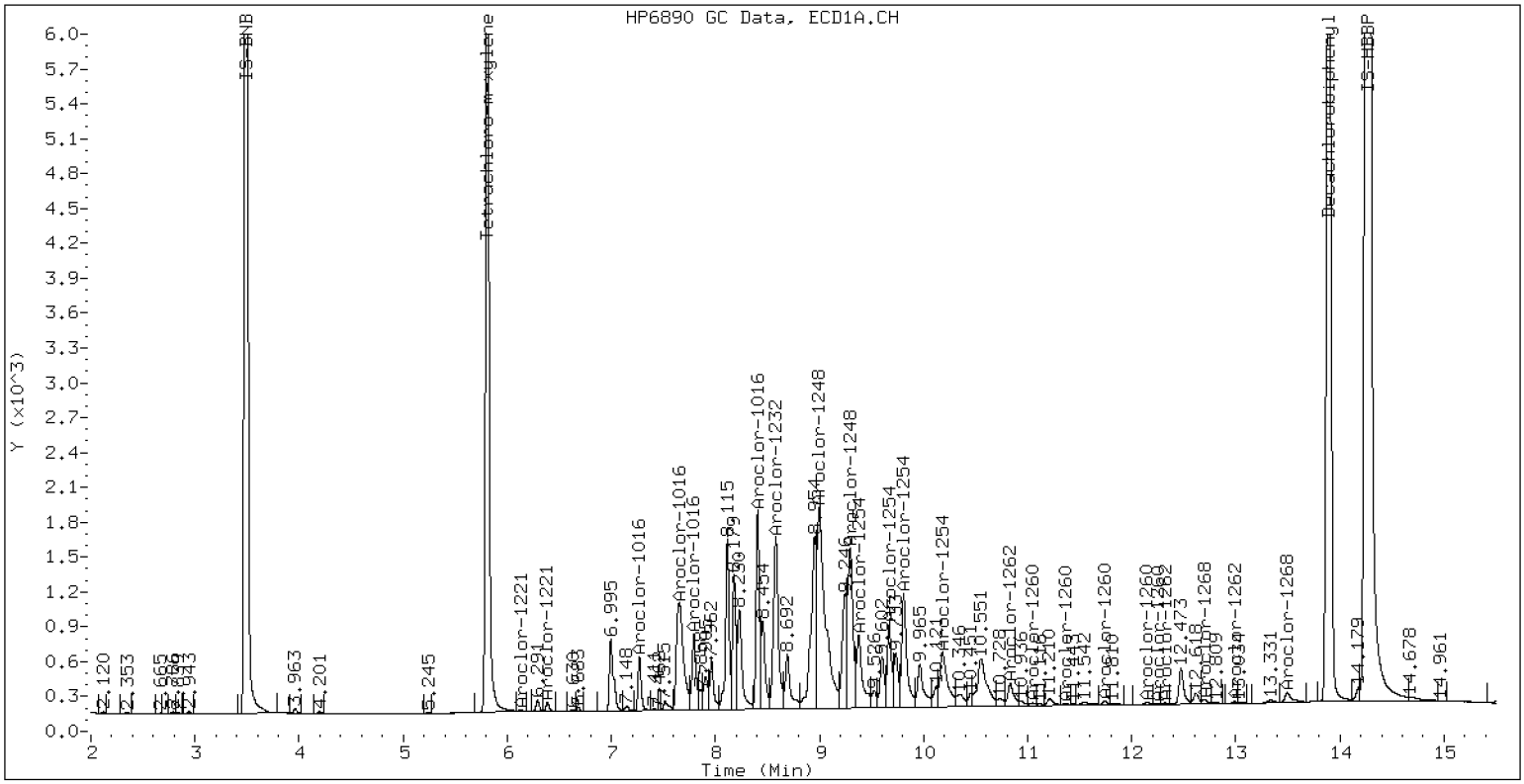
Total PCB Area Col2 (5.785 - 14.019) = 746330 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

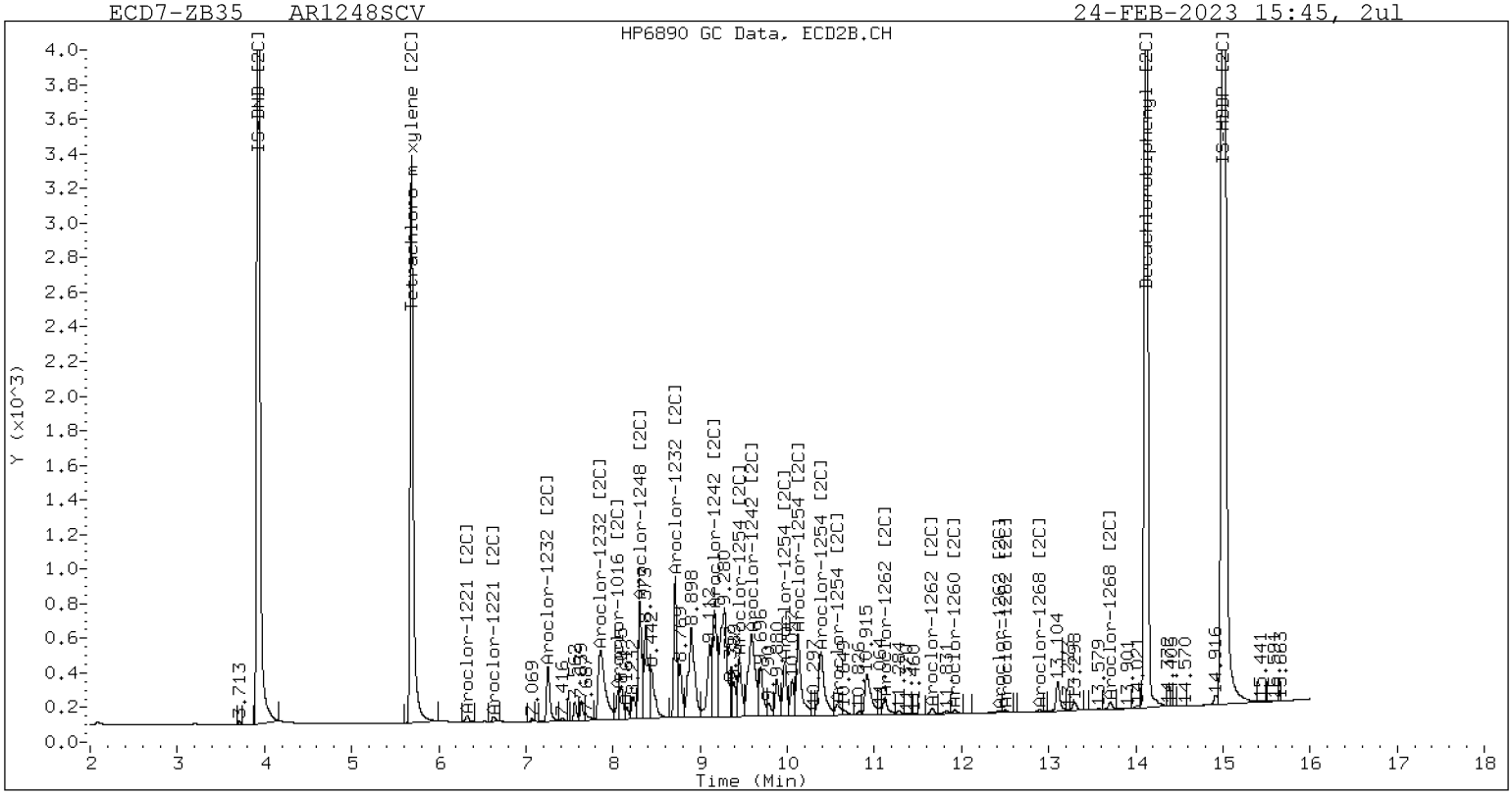
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248SCV 24-FEB-2023 15:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242316ECD7.D
Data file 2: /230224.b/230224.b/02242316ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254SCV
Client ID:
Injection Date: 24-FEB-2023 16:06
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	-0.000	354312	5.686	0.001	174604	36.1	37.1	2.6	Tetrachloro-m-xylene
13.895	0.002	540961	14.119	-0.000	329134	34.6	37.9	9.0	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656887	-2.5
Hexabromobiphenyl	1429847	1585505	10.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	320936	1.8
Hexabromobiphenyl	513946	570006	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.000	565	2.3	1	7.255	-0.001	387	2.1
Aroclor-1016	2	7.656	0.002	1875	2.5	2	7.854	-0.002	860	2.3
Aroclor-1016	3	7.792	0.002	1106	3.0	3	8.098	0.043	578	3.4
Aroclor-1016	4	8.405	0.000	29924	124.7	4	8.307	0.000	21985	162.9
	Total Col1Ave (4 peaks):				33.1	Total Col2Ave (4 peaks):				42.6 RPD = 25
	Corrected Ave (3 peaks):				2.6	Corrected Ave (3 peaks):				2.6 RPD = 0
Aroclor-1221	1	---			0.0	1	---			0.0
Aroclor-1221	2	---			0.0	2	6.325	0.028	1947	33.9
Aroclor-1221	3	---			0.0	3	6.637	0.015	368	3.9
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	7.255	0.001	387	4.7
Aroclor-1232	3	7.656	0.000	1875	5.9	3	7.854	-0.007	860	5.3
Aroclor-1232	4	8.583	0.002	12327	91.8	4	8.715	0.000	15013	319.7
	Col1Ave: <3 Quant Peaks					Col2Ave: 109.9				
Aroclor-1242	1	7.270	-0.000	565	2.8	1	7.255	-0.001	387	2.6
Aroclor-1242	2	7.656	0.000	1875	3.0	2	7.854	-0.004	860	2.7
Aroclor-1242	3	8.405	-0.000	29924	155.6	3	9.169	0.002	21933	224.9
Aroclor-1242	4	8.583	0.003	12327	43.4	4	9.545	-0.053	34065	286.6
	Total Col1Ave (4 peaks):				51.2	Total Col2Ave (4 peaks):				129.2 RPD = 87*
	Corrected Ave (3 peaks):				16.4	Corrected Ave (3 peaks):				76.7 RPD = 130*
Aroclor-1248	1	8.405	0.000	29924	93.4	1	8.307	-0.001	21985	143.5
Aroclor-1248	2	8.583	0.002	12327	30.3	2	8.715	0.001	15013	94.8
Aroclor-1248	3	8.992	-0.007	145580	189.4	3	9.169	0.004	21933	120.3
Aroclor-1248	4	9.298	0.003	155450	397.3	4	9.545	-0.046	34065	155.6
	Total Col1Ave (4 peaks):				177.6	Total Col2Ave (4 peaks):				128.5 RPD = 32
	Corrected Ave (3 peaks):				104.3	Corrected Ave (3 peaks):				119.5 RPD = 14
Aroclor-1254	1	9.298	-0.001	155450	235.7	1	9.450	0.001	58639	240.4
Aroclor-1254	2	9.377	-0.001	69801	235.3	2	9.971	0.000	47008	239.5
Aroclor-1254	3	9.668	-0.000	100839	237.8	3	10.124	0.000	100062	235.7
Aroclor-1254	4	9.807	0.000	190544	231.1	4	10.373	0.000	99535	240.5
Aroclor-1254	5	10.176	-0.000	122321	236.7	5	10.570	0.001	61549	244.2
	Total Col1Ave (5 peaks):				235.3	Total Col2Ave (5 peaks):				240.1 RPD = 2
	Corrected Ave (4 peaks):				234.7	Corrected Ave (4 peaks):				239.0 RPD = 2
Aroclor-1260	1	11.043	-0.002	12288	21.5	1	11.661	0.008	29062	86.7
Aroclor-1260	2	11.361	-0.001	13660	22.9	2	11.921	0.003	22238	26.0
Aroclor-1260	3	11.736	0.002	37632	23.8	3	12.441	0.005	3555	15.7
Aroclor-1260	4	12.141	0.002	27105	34.1	4	12.503	0.001	13126	22.8
Aroclor-1260	5	12.320	0.076	2381	6.9	NS	---			----
	Total Col1Ave (5 peaks):				21.9	Total Col2Ave (4 peaks):				37.8 RPD = 53*
	Corrected Ave (4 peaks):				18.8	Corrected Ave (3 peaks):				21.5 RPD = 13
Aroclor-1262	1	10.827	-0.002	220626	453.6	1	11.281	0.081	13562	27.9
Aroclor-1262	2	12.320	0.076	2381	3.0	2	11.661	0.009	29062	70.1
Aroclor-1262	3	---			0.0	3	12.441	0.007	3555	7.6
Aroclor-1262	4	12.989	0.002	3225	4.1	4	12.503	0.001	13126	17.8
	Total Col1Ave (3 peaks):				153.6	Total Col2Ave (4 peaks):				30.8 RPD = 133*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				17.7
Aroclor-1268	1	12.320	0.074	2381	1.2	1	12.441	0.009	3555	3.1
Aroclor-1268	2	---			0.0	2	12.503	0.003	13126	10.6
Aroclor-1268	3	12.701	0.002	2939	1.7	3	12.892	0.000	772	0.7
Aroclor-1268	4	13.493	0.003	9164	1.6	4	13.707	-0.002	2801	0.8
	Total Col1Ave (3 peaks):				1.5	Total Col2Ave (4 peaks):				3.8 RPD = 87*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				1.6

Total PCB Area Col1 (5.906 - 13.793) = 2118645 Col1 Total PCB = 0.3 ppm*

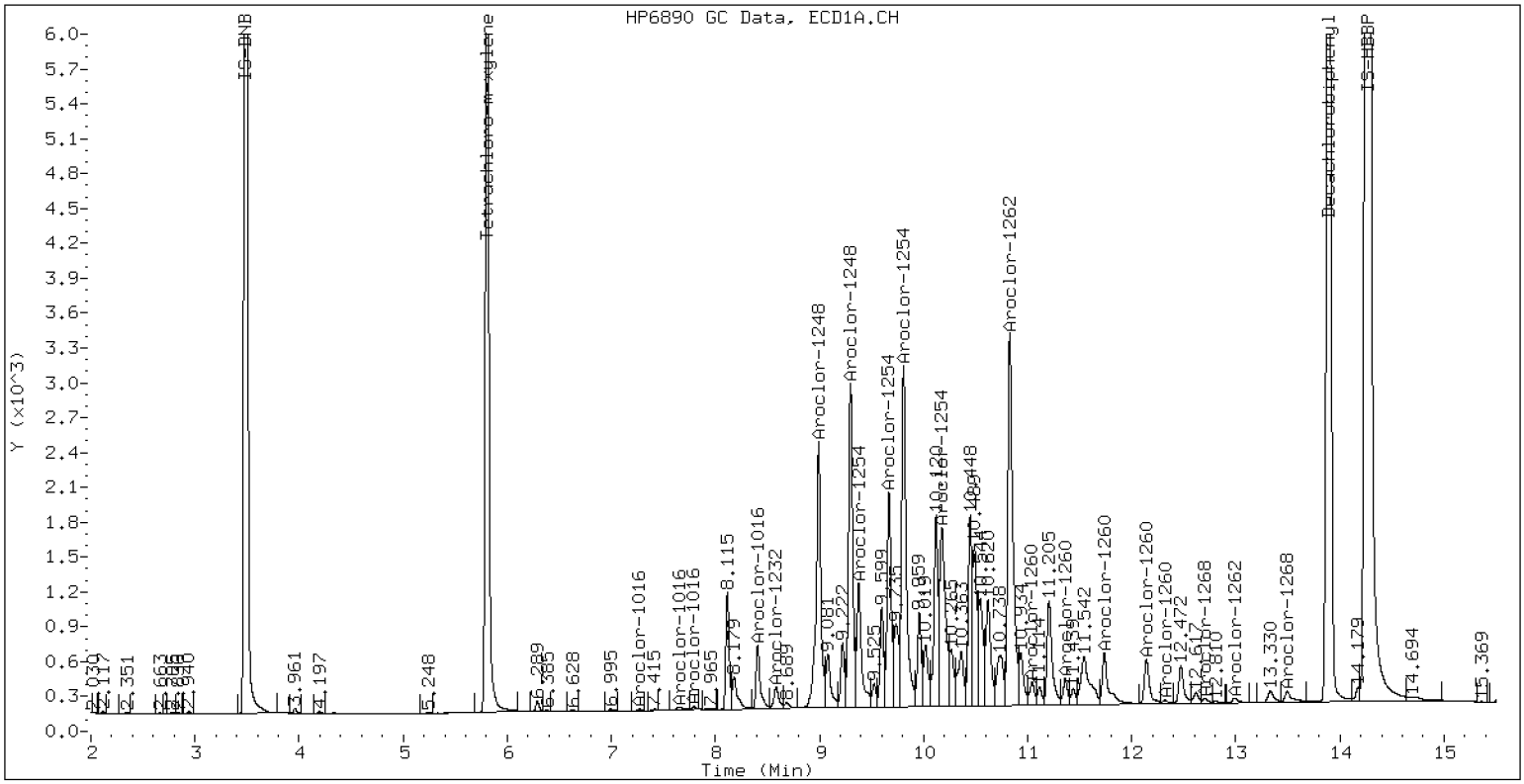
Total PCB Area Col2 (5.785 - 14.019) = 1007601 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

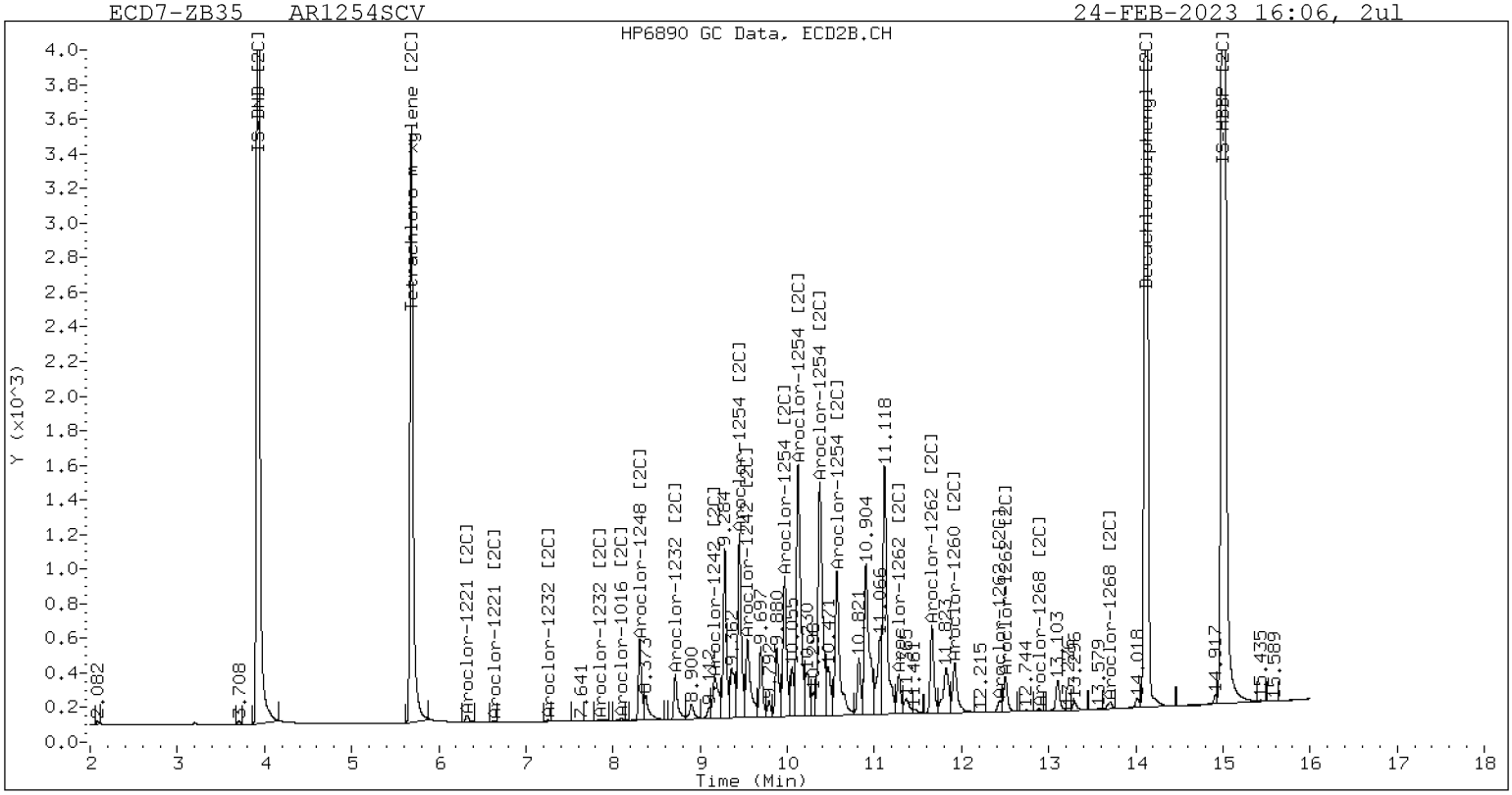
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254SCV 24-FEB-2023 16:06, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242317ECD7.D
Data file 2: /230224.b/230224.b/02242317ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162SCV
Client ID:
Injection Date: 24-FEB-2023 16:27
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.000	356001	5.685	0.000	170882	36.0	36.6	1.7	Tetrachloro-m-xylene
13.895	0.002	533971	14.119	0.000	326235	34.4	37.9	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	661953	-1.8
Hexabromobiphenyl	1429847	1574993	10.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317807	0.8
Hexabromobiphenyl	513946	565951	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	7175	28.5	1	7.256	0.000	3727	20.0
Aroclor-1016	2	7.659	0.005	12893	16.8	2	7.863	0.007	5834	15.5
Aroclor-1016	3	7.794	0.004	6936	18.5	3	8.063	0.009	2963	17.4
Aroclor-1016	4	8.408	0.003	3610	14.9	4	8.308	0.002	2045	15.3
Total Col1Ave (4 peaks):					19.7	Total Col2Ave (4 peaks):				17.0 RPD = 14
Corrected Ave (3 peaks):					16.8	Corrected Ave (3 peaks):				16.1 RPD = 4
Aroclor-1221	1	4.730	-0.000	15803	266.6	1	4.955	-0.001	7909	262.9
Aroclor-1221	2	6.131	-0.001	26946	254.1	2	6.296	-0.000	14303	251.2
Aroclor-1221	3	6.382	-0.000	62477	253.8	3	6.622	0.000	23612	254.7
Total Col1Ave (3 peaks):					258.2	Total Col2Ave (3 peaks):				256.3 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.730	0.000	15803	445.6	1	4.955	-0.001	7909	486.4
Aroclor-1232	2	6.131	0.000	26946	383.1	2	7.256	0.002	3727	46.1
Aroclor-1232	3	7.659	0.003	12893	40.5	3	7.863	0.002	5834	36.1
Aroclor-1232	4	8.583	0.003	2684	19.8	4	8.716	0.002	1189	25.6
Total Col1Ave (4 peaks):					222.3	Total Col2Ave (4 peaks):				148.5 RPD = 40
Corrected Ave (3 peaks):					147.8	Corrected Ave (3 peaks):				35.9 RPD = 122*
Aroclor-1242	1	7.269	-0.001	7175	35.0	1	7.256	0.000	3727	25.2
Aroclor-1242	2	7.659	0.003	12893	20.7	2	7.863	0.005	5834	18.8
Aroclor-1242	3	8.408	0.002	3610	18.6	3	9.175	0.008	1082	11.2
Aroclor-1242	4	8.583	0.004	2684	9.4	4	9.543	-0.054	1390	11.8
Total Col1Ave (4 peaks):					20.9	Total Col2Ave (4 peaks):				16.8 RPD = 22
Corrected Ave (3 peaks):					16.2	Corrected Ave (3 peaks):				13.9 RPD = 15
Aroclor-1248	1	8.408	0.002	3610	11.2	1	8.308	0.001	2045	13.5
Aroclor-1248	2	8.583	0.003	2684	6.5	2	8.716	0.002	1189	7.6
Aroclor-1248	3	8.994	-0.005	24440	31.6	3	9.175	0.009	1082	6.0
Aroclor-1248	4	9.302	0.008	26328	66.8	4	9.543	-0.048	1390	6.4
Total Col1Ave (4 peaks):					29.0	Total Col2Ave (4 peaks):				8.4 RPD = 110*
Corrected Ave (3 peaks):					16.4	Corrected Ave (3 peaks):				6.7 RPD = 85*
Aroclor-1254	1	9.302	0.004	26328	39.6	1	9.452	0.003	9571	39.6
Aroclor-1254	2	---			0.0	2	9.972	0.002	1733	8.9
Aroclor-1254	3	9.670	0.002	3721	8.7	3	10.147	0.023	49218	117.1
Aroclor-1254	4	9.808	0.000	9653	11.6	4	10.370	-0.002	59603	145.4
Aroclor-1254	5	10.120	-0.056	131179	251.9	5	10.569	0.001	79533	318.7
Total Col1Ave (4 peaks):					78.0	Total Col2Ave (5 peaks):				125.9 RPD = 47*
Corrected Ave (3 peaks):					20.0	Corrected Ave (4 peaks):				77.8 RPD = 118*
Aroclor-1260	1	11.044	-0.000	223208	394.0	1	11.652	-0.001	104071	312.7
Aroclor-1260	2	11.361	-0.001	190166	321.2	2	11.919	0.002	251579	296.2
Aroclor-1260	3	11.737	0.003	458281	291.9	3	12.435	-0.001	113645	504.2
Aroclor-1260	4	12.141	0.002	149720	189.4	4	12.501	-0.001	182951	319.6
Aroclor-1260	5	12.244	0.000	196033	576.0	NS	---			----
Total Col1Ave (5 peaks):					354.5	Total Col2Ave (4 peaks):				358.2 RPD = 1
Corrected Ave (4 peaks):					299.1	Corrected Ave (3 peaks):				309.5 RPD = 3
Aroclor-1262	1	10.828	-0.001	121431	251.3	1	11.201	0.000	121335	251.1
Aroclor-1262	2	12.244	0.000	196033	249.3	2	11.652	0.000	104071	252.9
Aroclor-1262	3	12.319	0.001	211092	249.8	3	12.435	0.001	113645	243.4
Aroclor-1262	4	12.988	0.001	183455	237.5	4	12.501	-0.001	182951	250.1
Total Col1Ave (4 peaks):					247.0	Total Col2Ave (4 peaks):				249.3 RPD = 1
Corrected Ave (3 peaks):					245.5	Corrected Ave (3 peaks):				248.2 RPD = 1
Aroclor-1268	1	12.244	-0.002	196033	97.1	1	12.435	0.003	113645	99.7
Aroclor-1268	2	12.319	0.002	211092	105.6	2	12.501	0.001	182951	149.3
Aroclor-1268	3	12.723	0.024	77240	45.2	3	12.891	-0.000	7755	7.4
Aroclor-1268	4	13.488	-0.002	65479	11.6	4	13.709	0.000	35146	10.5
Total Col1Ave (4 peaks):					64.9	Total Col2Ave (4 peaks):				66.7 RPD = 3

Corrected Ave (3 peaks): 51.3 Corrected Ave (3 peaks): 39.2 RPD = 27

Total PCB Area Col1 (5.906 - 13.793) = 3239932 Col1 Total PCB = 0.4 ppm*

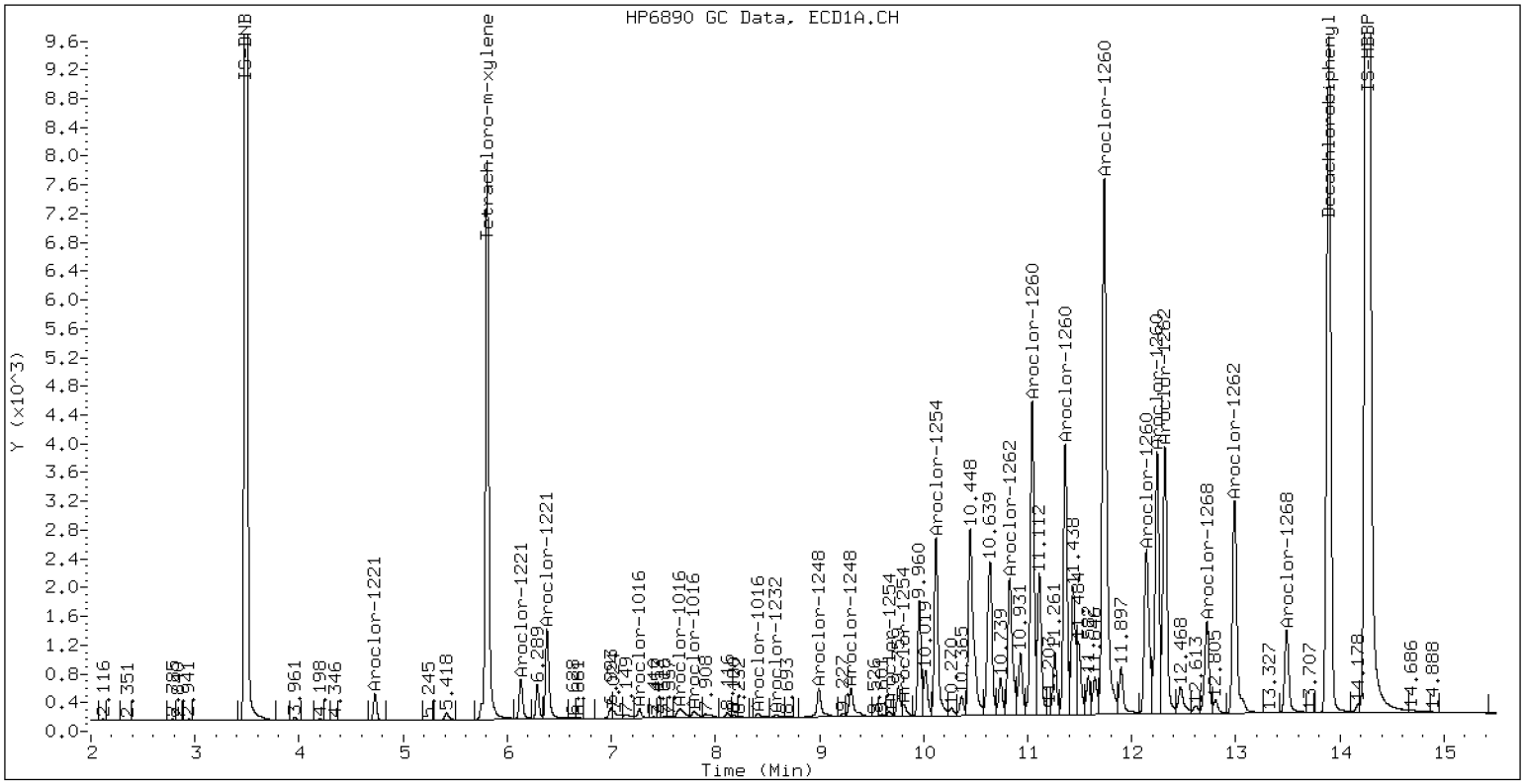
Total PCB Area Col2 (5.785 - 14.019) = 1655522 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

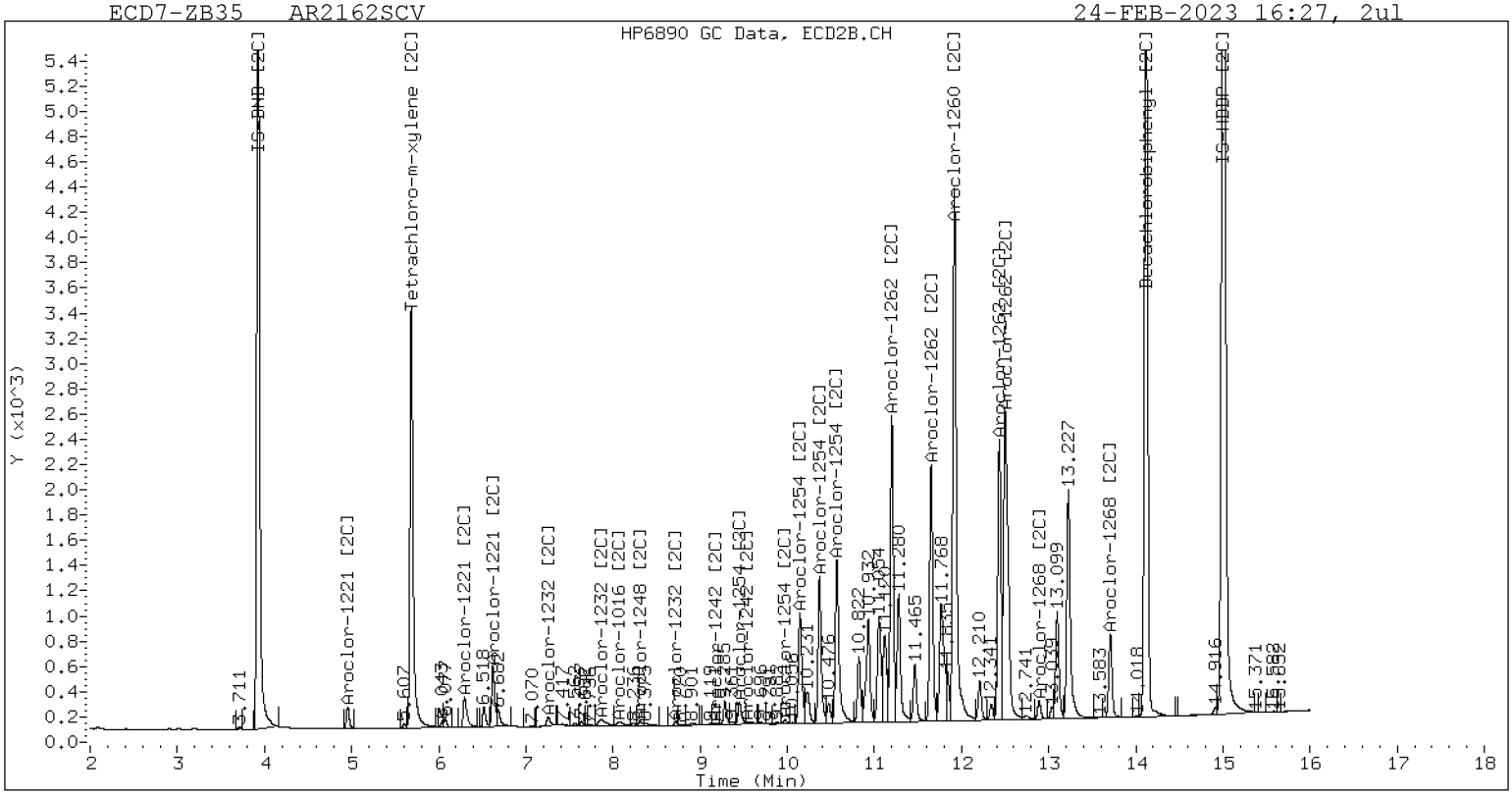
PCB Dual Column Chromatograms

ECD7-ZB5 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR2162SCV 24-FEB-2023 16:27, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230224.b/02242318ECD7.D
Data file 2: /230224.b/230224.b/02242318ECD7.D
Method: \\target\share\chem4\ecd7.i\230224.b\PCB.m
Compound Sublist: PCB.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268SCV
Client ID:
Injection Date: 24-FEB-2023 16:48
Report Date: 02/28/2023 09:51
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	363331	5.685	0.000	176204	37.1	38.2	2.9	Tetrachloro-m-xylene
13.894	0.001	800845	14.118	-0.001	488290	51.3	56.4	9.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	656592	-2.6
Hexabromobiphenyl	1429847	1584453	10.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314741	-0.2
Hexabromobiphenyl	513946	568346	10.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	28327	113.6	1	7.254	-0.001	20651	112.1
Aroclor-1016	2	7.657	0.003	80668	106.1	2	7.861	0.005	41326	110.6
Aroclor-1016	3	7.793	0.003	40661	109.6	3	8.060	0.005	20446	121.2
Aroclor-1016	4	8.407	0.002	24680	102.9	4	8.308	0.001	13576	102.5
Total Col1Ave (4 peaks):					108.0	Total Col2Ave (4 peaks):				111.6 RPD = 3
Corrected Ave (3 peaks):					106.2	Corrected Ave (3 peaks):				108.4 RPD = 2
Aroclor-1221	1	4.729	-0.001	8535	145.1	1	4.956	-0.000	3965	133.1
Aroclor-1221	2	6.132	-0.000	15523	147.6	2	6.297	0.001	8689	154.1
Aroclor-1221	3	6.382	-0.000	45872	187.9	3	6.622	0.001	22272	242.6
Total Col1Ave (3 peaks):					160.2	Total Col2Ave (3 peaks):				176.6 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	4.729	-0.001	8535	242.6	1	4.956	0.000	3965	246.2
Aroclor-1232	2	6.132	0.001	15523	222.5	2	7.254	0.000	20651	258.1
Aroclor-1232	3	7.657	0.001	80668	255.4	3	7.861	0.001	41326	258.3
Aroclor-1232	4	8.582	0.001	34784	259.2	4	8.714	-0.001	12504	271.5
Total Col1Ave (4 peaks):					244.9	Total Col2Ave (4 peaks):				258.5 RPD = 5
Corrected Ave (3 peaks):					240.2	Corrected Ave (3 peaks):				254.2 RPD = 6
Aroclor-1242	1	7.270	-0.001	28327	139.2	1	7.254	-0.001	20651	141.2
Aroclor-1242	2	7.657	0.001	80668	130.5	2	7.861	0.003	41326	134.4
Aroclor-1242	3	8.407	0.001	24680	128.4	3	9.170	0.003	12830	134.1
Aroclor-1242	4	8.582	0.003	34784	122.4	4	9.600	0.003	14836	127.3
Total Col1Ave (4 peaks):					130.1	Total Col2Ave (4 peaks):				134.3 RPD = 3
Corrected Ave (3 peaks):					127.1	Corrected Ave (3 peaks):				132.0 RPD = 4
Aroclor-1248	1	8.407	0.001	24680	77.0	1	8.308	0.000	13576	90.3
Aroclor-1248	2	8.582	0.001	34784	85.4	2	8.714	-0.000	12504	80.5
Aroclor-1248	3	8.996	-0.003	83592	108.8	3	9.170	0.004	12830	71.8
Aroclor-1248	4	9.292	-0.003	39603	101.3	4	9.600	0.010	14836	69.1
Total Col1Ave (4 peaks):					93.1	Total Col2Ave (4 peaks):				77.9 RPD = 18
Corrected Ave (3 peaks):					87.9	Corrected Ave (3 peaks):				73.8 RPD = 17
Aroclor-1254	1	9.292	-0.007	39603	60.1	1	9.452	0.003	4590	19.2
Aroclor-1254	2	9.377	-0.000	11450	38.6	2	9.973	0.003	2892	15.0
Aroclor-1254	3	9.674	0.005	6387	15.1	3	10.131	0.007	6052	14.5
Aroclor-1254	4	9.813	0.006	10162	12.3	4	10.390	0.017	5324	13.1
Aroclor-1254	5	10.189	0.012	6862	13.3	5	10.572	0.004	1891	7.7
Total Col1Ave (5 peaks):					27.9	Total Col2Ave (5 peaks):				13.9 RPD = 67*
Corrected Ave (4 peaks):					19.8	Corrected Ave (4 peaks):				12.6 RPD = 45*
Aroclor-1260	1	11.046	0.002	87033	152.7	1	11.645	-0.008	62543	187.1
Aroclor-1260	2	11.362	0.001	6300	10.6	2	11.920	0.003	28552	33.5
Aroclor-1260	3	11.738	0.004	54524	34.5	3	12.432	-0.004	285450	1261.2
Aroclor-1260	4	12.144	0.005	1727	2.2	4	12.499	-0.002	306992	534.0
Aroclor-1260	5	12.246	0.002	502931	1469.0	NS	---			----
Total Col1Ave (5 peaks):					333.8	Total Col2Ave (4 peaks):				503.9 RPD = 41*
Corrected Ave (4 peaks):					50.0	Corrected Ave (3 peaks):				251.5 RPD = 134*
Aroclor-1262	1	10.832	0.004	3395	7.0	1	11.201	0.001	44255	91.2
Aroclor-1262	2	12.246	0.002	502931	635.9	2	11.645	-0.007	62543	151.3
Aroclor-1262	3	12.318	-0.000	497006	584.5	3	12.432	-0.002	285450	608.7
Aroclor-1262	4	12.987	-0.000	202197	260.2	4	12.499	-0.003	306992	417.9
Total Col1Ave (4 peaks):					371.9	Total Col2Ave (4 peaks):				317.3 RPD = 16
Corrected Ave (3 peaks):					283.9	Corrected Ave (3 peaks):				220.1 RPD = 25
Aroclor-1268	1	12.246	-0.001	502931	247.7	1	12.432	-0.000	285450	249.4
Aroclor-1268	2	12.318	0.002	497006	247.2	2	12.499	-0.001	306992	249.5
Aroclor-1268	3	12.699	-0.000	422793	245.8	3	12.892	0.000	260893	248.4
Aroclor-1268	4	13.490	0.000	1386953	244.9	4	13.709	-0.000	829733	247.1
Total Col1Ave (4 peaks):					246.4	Total Col2Ave (4 peaks):				248.6 RPD = 1

Corrected Ave (3 peaks): 246.0 Corrected Ave (3 peaks): 248.3 RPD = 1

Total PCB Area Col1 (5.906 - 13.793) = 4180607 Col1 Total PCB = 0.5 ppm*

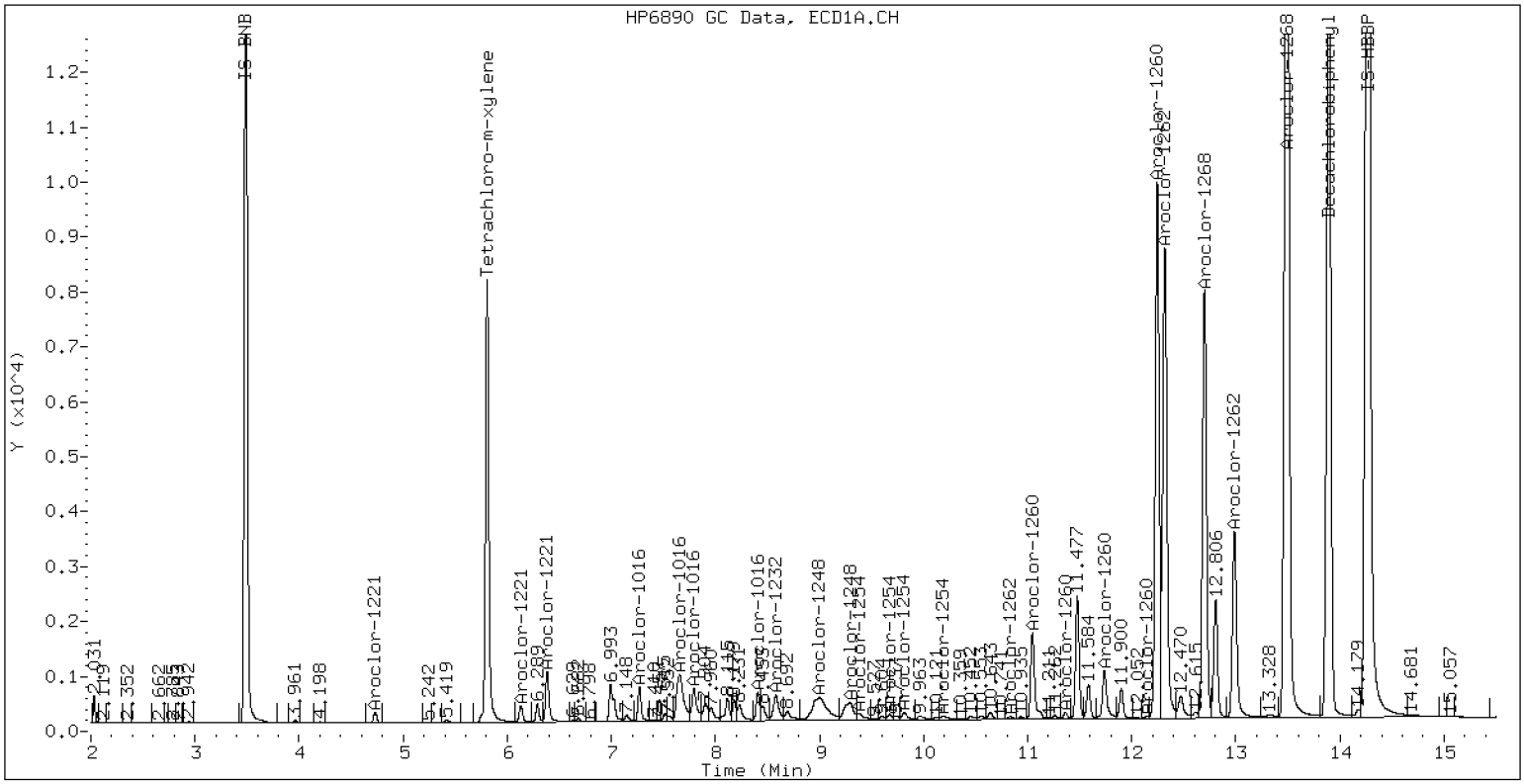
Total PCB Area Col2 (5.785 - 14.019) = 2376912 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

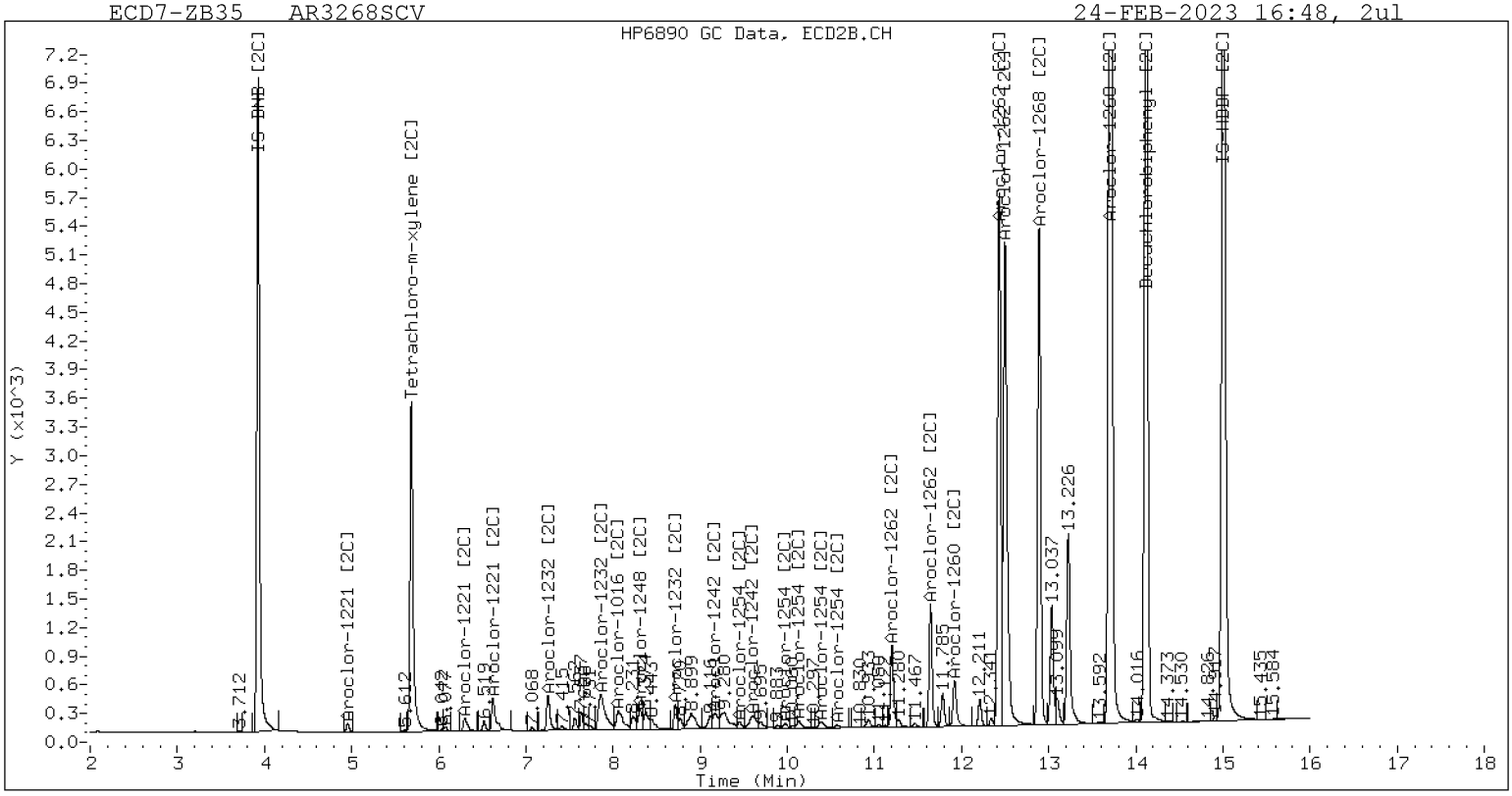
PCB Dual Column Chromatograms

ECD7-ZB5 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR3268SCV 24-FEB-2023 16:48, 2ul



ZB-35 Manual Integration: NO

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242319ECD7.D ARI ID: DDTS

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.261	0.000	694353	9.912	0.000	580269	0.100	0.100	0.0	2,4-DDE
0.000	-10.293	0	10.672	0.000	673479	0.000	0.200#	----	2,4-DDT
9.686	0.000	1191406	10.212	0.000	433373	0.100	0.100	0.0	4,4-DDE
10.259	0.000	1721760	10.672	0.000	673479	0.100	0.200#	66.7*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: /230224.b/02242320ECD7.D ARI ID: DDT BD

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
9.285	0.023	4923	9.921	0.009	9972	0.001	0.002	84.3*	2,4-DDE
0.000	-10.293	0	10.677	0.004	249094	0.000	0.074#	----	2,4-DDT
9.692	0.006	12128	10.221	0.009	528	0.001	0.000	156.7*	4,4-DDE
10.265	0.006	410017	10.677	0.004	249094	0.023	0.074#	103.6*	4,4-DDD

# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV1
Sequence: SLB0342
Sequence Name: AR1660SCV1
Standard ID: L002065

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1016	250.00	243	-2.7	20.00
Aroclor 1016 [2C]	250.00	246	-1.4	20.00
Aroclor 1260	250.00	266	6.2	20.00
Aroclor 1260 [2C]	250.00	261	4.5	20.00
Decachlorobiphenyl	40.000	34.3	-14.2	20.00
Tetrachlorometaxylene	40.000	34.9	-12.6	20.00
Decachlorobiphenyl [2C]	40.000	37.3	-6.6	20.00
Tetrachlorometaxylene [2C]	40.000	35.8	-10.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV2
Sequence: SLB0342
Sequence Name: AR1242SCV2
Standard ID: K007656

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1242	250.00	204	-18.5	20.00
Aroclor 1242 [2C]	250.00	221	-11.8	20.00
Decachlorobiphenyl	40.000	37.0	-7.5	20.00
Tetrachlorometaxylene	40.000	33.6	-15.9	20.00
Decachlorobiphenyl [2C]	40.000	40.3	0.8	20.00
Tetrachlorometaxylene [2C]	40.000	34.5	-13.7	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV3
Sequence: SLB0342
Sequence Name: AR1248SCV3
Standard ID: L002066

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1248	250.00	249	-0.2	20.00
Aroclor 1248 [2C]	250.00	248	-0.8	20.00
Decachlorobiphenyl	40.000	33.1	-17.2	20.00
Tetrachlorometaxylene	40.000	34.9	-12.8	20.00
Decachlorobiphenyl [2C]	40.000	36.3	-9.2	20.00
Tetrachlorometaxylene [2C]	40.000	36.4	-9.0	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV4
Sequence: SLB0342
Sequence Name: AR1254SCV4
Standard ID: L002067

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1254	250.00	235	-5.9	20.00
Aroclor 1254 [2C]	250.00	240	-4.0	20.00
Decachlorobiphenyl	40.000	34.6	-13.4	20.00
Tetrachlorometaxylene	40.000	36.1	-9.7	20.00
Decachlorobiphenyl [2C]	40.000	37.9	-5.2	20.00
Tetrachlorometaxylene [2C]	40.000	37.1	-7.3	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV5
Sequence: SLB0342
Sequence Name: AR2162SCV5
Standard ID: L002068

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1221	250.00	258	3.3	20.00
Aroclor 1221 [2C]	250.00	256	2.5	20.00
Aroclor 1262	250.00	247	-1.2	20.00
Aroclor 1262 [2C]	250.00	249	-0.3	20.00
Decachlorobiphenyl	40.000	34.4	-13.9	20.00
Tetrachlorometaxylene	40.000	36.0	-10.0	20.00
Decachlorobiphenyl [2C]	40.000	37.9	-5.4	20.00
Tetrachlorometaxylene [2C]	40.000	36.6	-8.4	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GB00069
Laboratory ID: SLB0342-SCV6
Sequence: SLB0342
Sequence Name: AR3268SCV6
Standard ID: L002069

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Aroclor 1232	250.00	245	-2.0	20.00
Aroclor 1232 [2C]	250.00	259	3.4	20.00
Aroclor 1268	250.00	246	-1.4	20.00
Aroclor 1268 [2C]	250.00	249	-0.6	20.00
Decachlorobiphenyl	40.000	51.3	28.3	20.00
Tetrachlorometaxylene	40.000	37.1	-7.3	20.00
Decachlorobiphenyl [2C]	40.000	56.4	41.0	20.00
Tetrachlorometaxylene [2C]	40.000	38.2	-4.6	20.00

* Indicates values outside of QC limits
[2C] indicates second-column analyte.

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022302ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/02/23
Lab Sample ID:	SLC0051-ICV1	Injection Time:	17:24
Sequence Name:	AR1254ICV1		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
Aroclor 1254	A	250.00	247	0.0662949	0.0650716		-1.3	+/-20
Aroclor-1254 (1)	A	250.00	243	0.0803331	0.0782063			
Aroclor-1254 (2)	A	250.00	254	0.0361302	0.0367226			
Aroclor-1254 (3)	A	250.00	247	0.0516471	0.0510031			
Aroclor-1254 (4)	A	250.00	240	0.1004230	0.0963753			
Aroclor-1254 (5)	A	250.00	250	0.0629414	0.0630507			
Aroclor 1254 [2C]	A	250.00	251	0.0763106	0.0765880		0.6	+/-20
Aroclor-1254 (1) [2C]	A	250.00	254	0.0608052	0.0616743			
Aroclor-1254 (2) [2C]	A	250.00	254	0.0489162	0.0498013			
Aroclor-1254 (3) [2C]	A	250.00	255	0.1058376	0.1078895			
Aroclor-1254 (4) [2C]	A	250.00	244	0.1031750	0.1007531			
Aroclor-1254 (5) [2C]	A	250.00	250	0.0628191	0.0628218			
Decachlorobiphenyl	A	40.000	41.1	0.7878687	0.8103973		2.8	+/-20
Tetrachlorometaxylene	A	40.000	39.1	1.1944880	1.1669900		-2.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	41.8	1.2182710	1.2748900		4.5	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.4	1.1737210	1.1562850		-1.5	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022302ECD7.D
Data file 2: /230302.b/230302.b/03022302ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV1
Client ID:
Injection Date: 02-MAR-2023 17:24
Report Date: 03/03/2023 15:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	215504	5.687	-0.001	181546	39.1	39.4	0.8	Tetrachloro-m-xylene
13.895	0.001	264974	14.119	0.001	297335	41.1	41.9	1.7	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	369333	-45.2
Hexabromobiphenyl	1429847	653936	-54.3 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	314016	-0.4
Hexabromobiphenyl	513946	466448	-9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.301	0.002	90263	243.4	1	9.452	0.001	60521	253.6
Aroclor-1254	2	9.380	0.003	42384	254.1	2	9.972	0.002	48870	254.5
Aroclor-1254	3	9.672	0.004	58866	246.9	3	10.127	0.003	105872	254.8
Aroclor-1254	4	9.811	0.004	111233	239.9	4	10.376	0.003	98869	244.1
Aroclor-1254	5	10.180	0.003	72771	250.4	5	10.572	0.003	61647	250.0

Total Col1Ave (5 peaks): 246.9 Total Col2Ave (5 peaks): 251.4 RPD = 2

Corrected Ave (4 peaks): 245.2 Corrected Ave (4 peaks): 250.6 RPD = 2

CalAmt %D: -1.2 CalAmt %D: 0.6

Total PCB Area Col1 (5.908 - 13.795) = 1247773 Col1 Total PCB = 0.3 ppm*

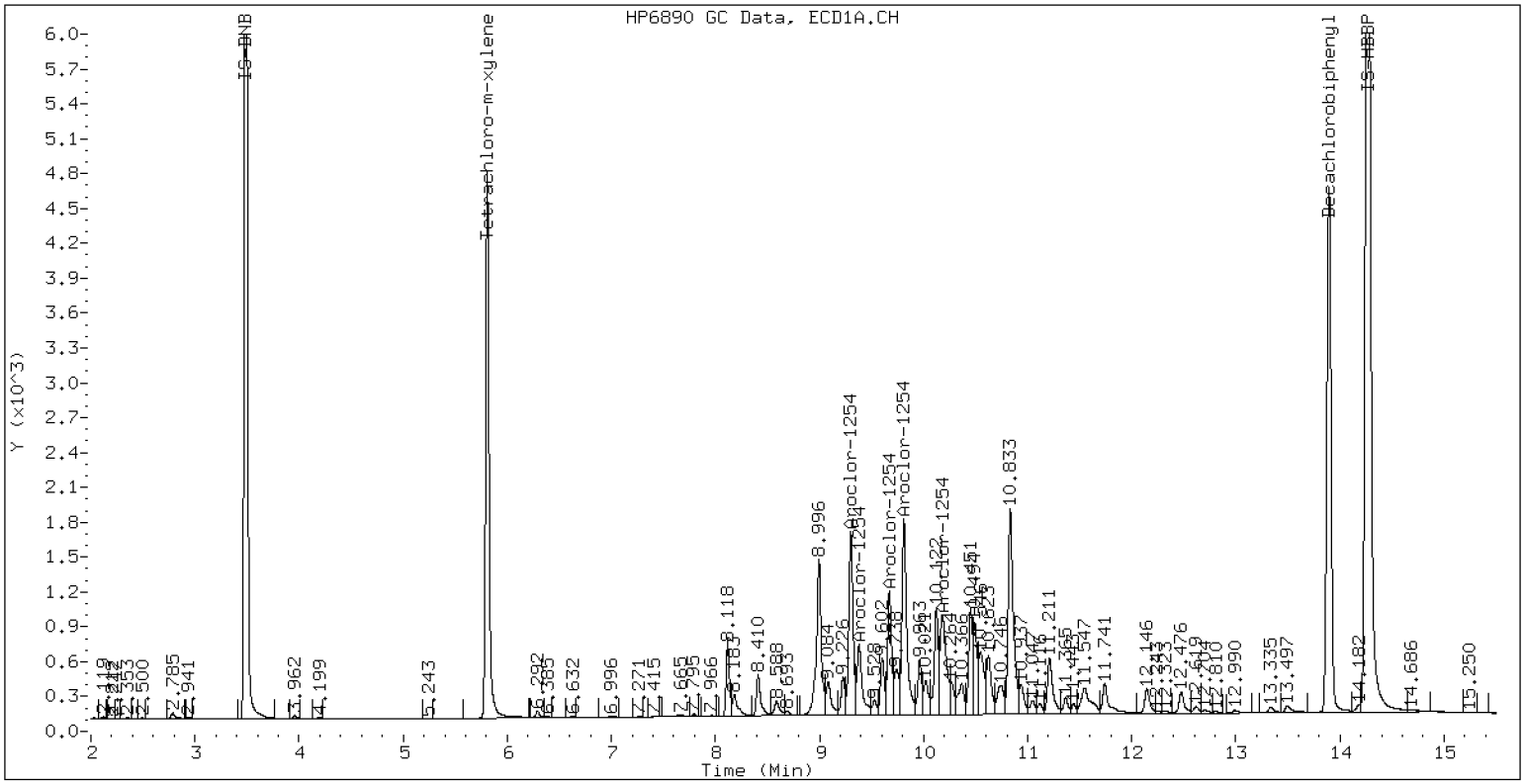
Total PCB Area Col2 (5.788 - 14.018) = 1022769 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

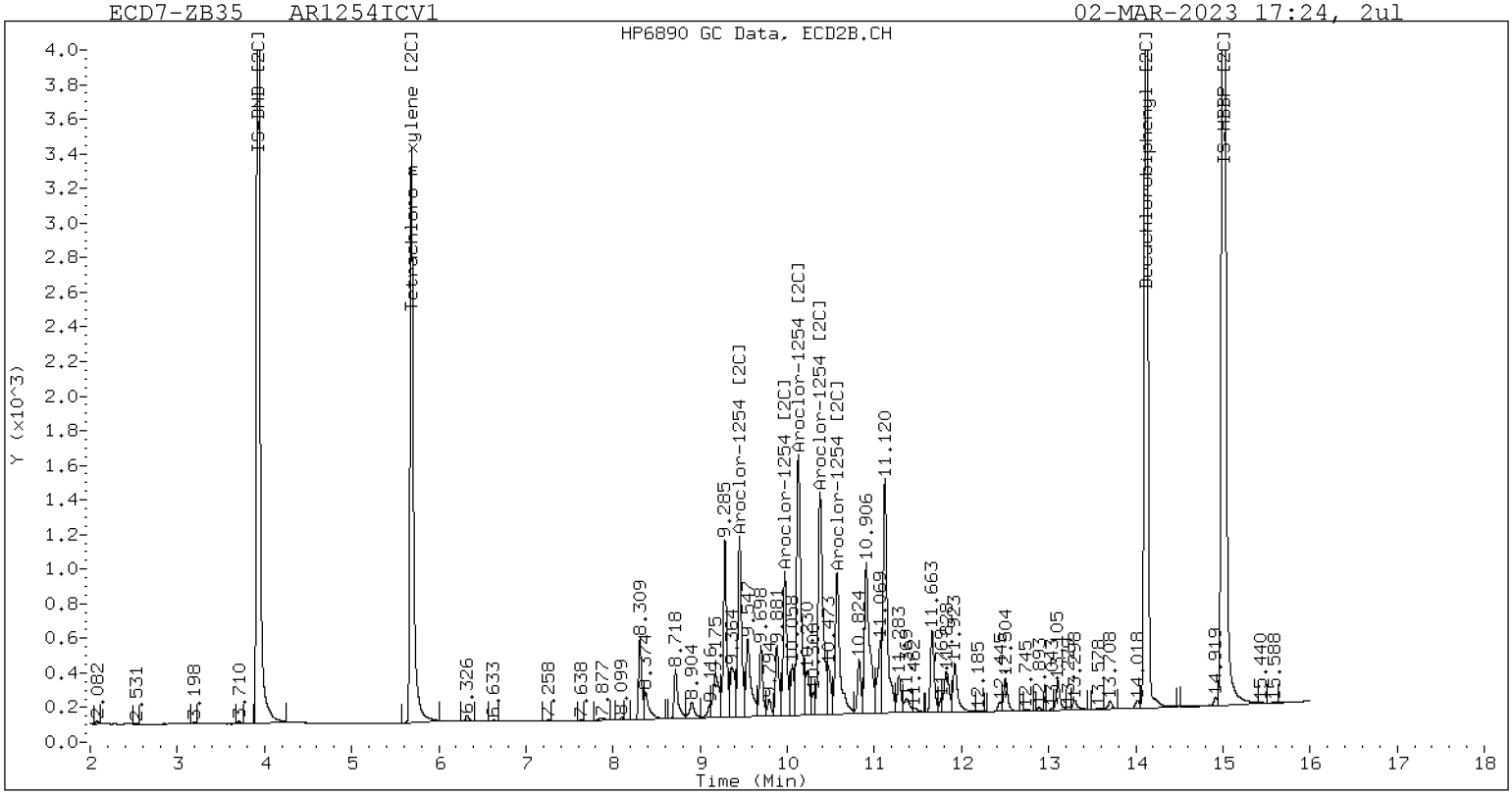
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254ICV1 02-MAR-2023 17:24, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254ICV1 02-MAR-2023 17:24, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022303ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/02/23
Lab Sample ID:	SLC0051-ICV2	Injection Time:	17:45
Sequence Name:	AR1660ICV2		

		CONC. (ug/L)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
Aroclor 1016	A	250.00	272	0.0493662	0.0535323		8.6	+/-20	
Aroclor-1016 (1)	A	250.00	270	0.0303852	0.0328172		8.0		
Aroclor-1016 (2)	A	250.00	269	0.0926308	0.0997152		7.6		
Aroclor-1016 (3)	A	250.00	277	0.0452180	0.0500851		10.8		
Aroclor-1016 (4)	A	250.00	270	0.0292307	0.0315117		8.0		
Aroclor 1016 [2C]	A	250.00	263	0.0545857	0.0579999		5.0	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	252	0.0468313	0.0472032		0.8		
Aroclor-1016 (2) [2C]	A	250.00	277	0.0949676	0.1053074		10.8		
Aroclor-1016 (3) [2C]	A	250.00	253	0.0428922	0.0433690		1.2		
Aroclor-1016 (4) [2C]	A	250.00	268	0.0336515	0.0361199		7.2		
Aroclor 1260	A	250.00	316	0.0392091	0.0496707		26.5	+/-20	*
Aroclor-1260 (1)	A	250.00	310	0.0287785	0.0357140		24.0		
Aroclor-1260 (2)	A	250.00	329	0.0300690	0.0396229		31.6		
Aroclor-1260 (3)	A	250.00	316	0.0797517	0.1006890		26.4		
Aroclor-1260 (4)	A	250.00	316	0.0401599	0.0508571		26.4		
Aroclor-1260 (5)	A	250.00	310	0.0172866	0.0214706		24.0		
Aroclor 1260 [2C]	A	250.00	242	0.0699688	0.0694037		-3.3	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	227	0.0470406	0.0427286		-9.2		
Aroclor-1260 (2) [2C]	A	250.00	261	0.1200523	0.1253491		4.4		
Aroclor-1260 (3) [2C]	A	250.00	232	0.0318590	0.0295720		-7.2		
Aroclor-1260 (4) [2C]	A	250.00	247	0.0809231	0.0799652		-1.2		
Decachlorobiphenyl	A	40.000	44.0	0.7878687	0.8661676		10.0	+/-20	
Tetrachlorometaxylene	A	40.000	41.3	1.1944880	1.2341040		3.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	40.1	1.2182710	1.2202880		0.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.4	1.1737210	1.2428790		6.0	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022303ECD7.D
Data file 2: /230302.b/230302.b/03022303ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV2
Client ID:
Injection Date: 02-MAR-2023 17:45
Report Date: 03/03/2023 15:56
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	211294	5.687	-0.001	178777	41.3	42.4	2.5	Tetrachloro-m-xylene
13.894	-0.001	258357	14.119	0.001	259778	44.0	40.1	9.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	342425	-49.2
Hexabromobiphenyl	1429847	596552	-58.3 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	287682	-8.7
Hexabromobiphenyl	513946	425765	-17.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	35117	270.0	1	7.255	0.000	42436	252.0
Aroclor-1016	2	7.659	0.004	106703	269.1	2	7.863	0.003	94672	277.2
Aroclor-1016	3	7.793	0.002	53595	276.9	3	8.059	0.002	38989	252.8
Aroclor-1016	4	8.407	0.002	33720	269.5	4	8.309	0.001	32472	268.3
Total Col1Ave (4 peaks):					271.4	Total Col2Ave (4 peaks):				262.6 RPD = 3
Corrected Ave (3 peaks):					269.5	Corrected Ave (3 peaks):				257.7 RPD = 4
CalAmt %D:					8.6	CalAmt %D:				5.0
Aroclor-1260	1	11.046	0.002	66579	310.2	1	11.653	0.001	56851	227.1
Aroclor-1260	2	11.362	0.001	73866	329.4	2	11.919	0.002	166779	261.0
Aroclor-1260	3	11.735	0.001	187707	315.6	3	12.436	0.001	39346	232.1
Aroclor-1260	4	12.140	0.001	94809	316.6	4	12.502	0.001	106395	247.0
Aroclor-1260	5	12.245	0.001	40026	310.5	NS	---			----
Total Col1Ave (5 peaks):					316.5	Total Col2Ave (4 peaks):				241.8 RPD = 27
Corrected Ave (4 peaks):					313.2	Corrected Ave (3 peaks):				235.4 RPD = 28
CalAmt %D:					26.6	CalAmt %D:				-3.3

Total PCB Area Col1 (5.908 - 13.795) = 2085078 Col1 Total PCB = 0.5 ppm*

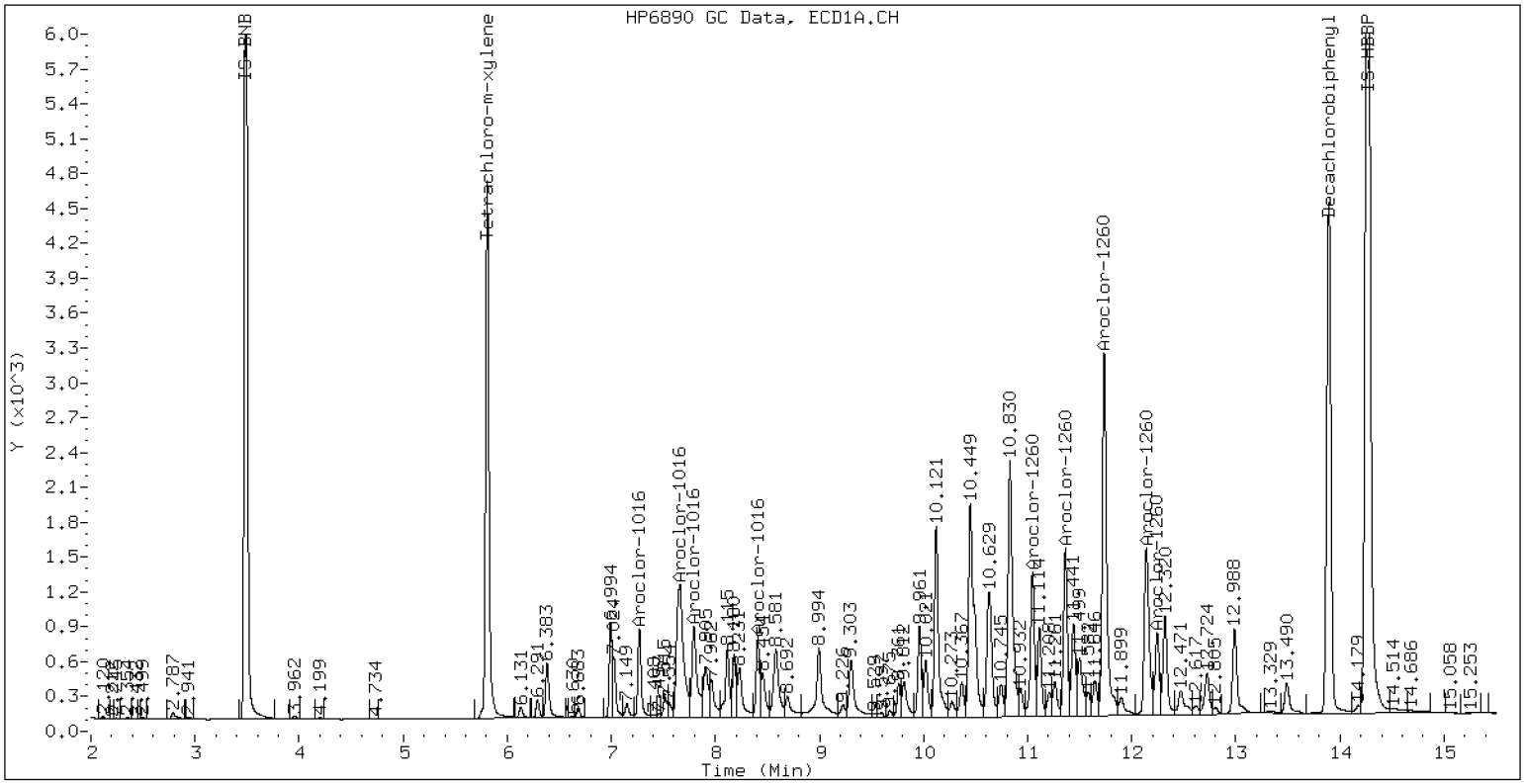
Total PCB Area Col2 (5.788 - 14.018) = 1586702 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

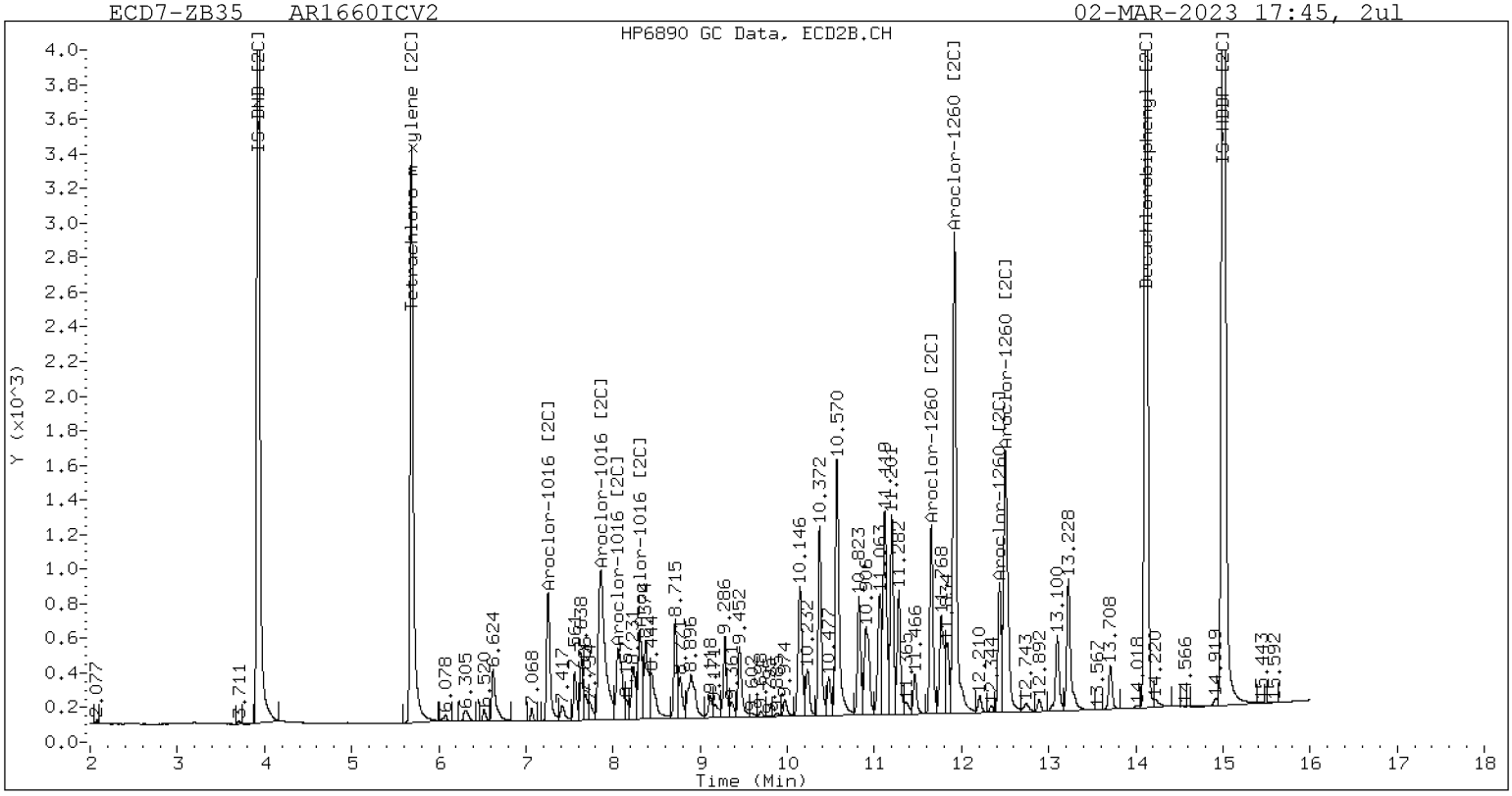
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660ICV2 02-MAR-2023 17:45, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660ICV2 02-MAR-2023 17:45, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242313ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV1	Injection Time:	15:03
Sequence Name:	AR1660SCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1016	A	250.00	243	0.0493662	0.0479314		-2.7	+/-20
Aroclor 1016 [2C]	A	250.00	246	0.0545857	0.0542382		-1.4	+/-20
Aroclor 1260	A	250.00	266	0.0392091	0.0412121		6.2	+/-20
Aroclor 1260 [2C]	A	250.00	261	0.0699688	0.0733659		4.5	+/-20
Decachlorobiphenyl	A	40.000	34.3	0.7878687	0.6762784		-14.2	+/-20
Tetrachlorometaxylene	A	40.000	34.9	1.1944880	1.0436010		-12.6	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.3	1.2182710	1.1373730		-6.6	+/-20
Tetrachlorometaxylene [2C]	A	40.000	35.8	1.1737210	1.0492890		-10.6	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242314ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV2	Injection Time:	15:24
Sequence Name:	AR1242SCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	204	0.0395340	0.0322254		-18.5	+/-20
Aroclor 1242 [2C]	A	250.00	221	0.0423092	0.0365983		-11.8	+/-20
Decachlorobiphenyl	A	40.000	37.0	0.7878687	0.7290534		-7.5	+/-20
Tetrachlorometaxylene	A	40.000	33.6	1.1944880	1.0041320		-15.9	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.3	1.2182710	1.2285170		0.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	34.5	1.1737210	1.0131510		-13.7	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242315ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV3	Injection Time:	15:45
Sequence Name:	AR1248SCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	249	0.0574755	0.0572474		-0.2	+/-20
Aroclor 1248 [2C]	A	250.00	248	0.0444270	0.0440936		-0.8	+/-20
Decachlorobiphenyl	A	40.000	33.1	0.7878687	0.6527336		-17.2	+/-20
Tetrachlorometaxylene	A	40.000	34.9	1.1944880	1.0413820		-12.8	+/-20
Decachlorobiphenyl [2C]	A	40.000	36.3	1.2182710	1.1066400		-9.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.4	1.1737210	1.0676190		-9.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242316ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV4	Injection Time:	16:06
Sequence Name:	AR1254SCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	235	0.0662949	0.0622529		-5.9	+/-20
Aroclor 1254 [2C]	A	250.00	240	0.0763106	0.0731447		-4.0	+/-20
Decachlorobiphenyl	A	40.000	34.6	0.7878687	0.6823832		-13.4	+/-20
Tetrachlorometaxylene	A	40.000	36.1	1.1944880	1.0787610		-9.7	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2182710	1.1548440		-5.2	+/-20
Tetrachlorometaxylene [2C]	A	40.000	37.1	1.1737210	1.0880920		-7.3	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242317ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV5	Injection Time:	16:27
Sequence Name:	AR2162SCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1221	A	250.00	258	0.0165758	0.0169561		3.3	+/-20
Aroclor 1221 [2C]	A	250.00	256	0.0150798	0.0153801		2.5	+/-20
Aroclor 1262	A	250.00	247	0.0366596	0.0361658		-1.2	+/-20
Aroclor 1262 [2C]	A	250.00	249	0.0739760	0.0737876		-0.3	+/-20
Decachlorobiphenyl	A	40.000	34.4	0.7878687	0.6780614		-13.9	+/-20
Tetrachlorometaxylene	A	40.000	36.0	1.1944880	1.0756080		-10.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	37.9	1.2182710	1.1528740		-5.4	+/-20
Tetrachlorometaxylene [2C]	A	40.000	36.6	1.1737210	1.0753820		-8.4	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	02242318ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLB0342	Injection Date:	02/24/23
Lab Sample ID:	SLB0342-SCV6	Injection Time:	16:48
Sequence Name:	AR3268SCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1232	A	250.00	245	0.0169039	0.0169981		-2.0	+/-20
Aroclor 1232 [2C]	A	250.00	259	0.0192023	0.0199392		3.4	+/-20
Aroclor 1268	A	250.00	246	0.1442124	0.1418626		-1.4	+/-20
Aroclor 1268 [2C]	A	250.00	249	0.2386862	0.2369075		-0.6	+/-20
Decachlorobiphenyl	A	40.000	51.3	0.7878687	1.0108790		28.3	+/-20
Tetrachlorometaxylene	A	40.000	37.1	1.1944880	1.1067180		-7.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	56.4	1.2182710	1.7182840		41.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	38.2	1.1737210	1.1196760		-4.6	+/-20

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022319ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/02/23
Lab Sample ID:	SLC0051-CCV1	Injection Time:	23:21
Sequence Name:	AR1248CCV1		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	262	0.0574755	0.0606653		4.7	+/-20
Aroclor-1248 (1)	A	250.00	256		0.0400418			
Aroclor-1248 (2)	A	250.00	260		0.0516057			
Aroclor-1248 (3)	A	250.00	270		0.1012015			
Aroclor-1248 (4)	A	250.00	261		0.0498121			
Aroclor 1248 [2C]	A	250.00	259	0.0444270	0.0458918		3.5	+/-20
Aroclor-1248 (1) [2C]	A	250.00	260		0.0396674			
Aroclor-1248 (2) [2C]	A	250.00	260		0.0410612			
Aroclor-1248 (3) [2C]	A	250.00	261		0.0473873			
Aroclor-1248 (4) [2C]	A	250.00	254		0.0554512			
Decachlorobiphenyl	A	40.000	40.4	0.7878687	0.7967681		1.0	+/-20
Tetrachlorometaxylene	A	40.000	39.2	1.1944880	1.1721320		-2.0	+/-20
Decachlorobiphenyl [2C]	A	40.000	39.6	1.2182710	1.2058980		-1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.2	1.1737210	1.1495930		-2.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022319ECD7.D
Data file 2: /230302.b/230302.b/03022319ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV1
Client ID:
Injection Date: 02-MAR-2023 23:21
Report Date: 03/03/2023 15:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.000	221990	5.688	-0.000	184485	39.3	39.2	0.2	Tetrachloro-m-xylene
13.895	0.000	264086	14.120	0.002	309452	40.5	39.6	2.1	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	378780	-43.8
Hexabromobiphenyl	1429847	662893	-53.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	320957	1.8
Hexabromobiphenyl	513946	513231	-0.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	8.407	0.000	47397	256.5	1	8.309	0.001	39786	259.6
Aroclor-1248	2	8.582	0.000	61085	260.0	2	8.716	0.002	41184	259.9
Aroclor-1248	3	8.999	0.000	119791	270.3	3	9.171	0.003	47529	260.7
Aroclor-1248	4	9.295	0.000	58962	261.3	4	9.596	0.004	55617	254.0
Total Col1Ave (4 peaks):					262.0	Total Col2Ave (4 peaks):				258.6 RPD = 1
Corrected Ave (3 peaks):					259.3	Corrected Ave (3 peaks):				257.9 RPD = 1
CalAmt %D:					4.8	CalAmt %D:				3.4

Total PCB Area Col1 (5.908 - 13.795) = 961219 Col1 Total PCB = 0.2 ppm*

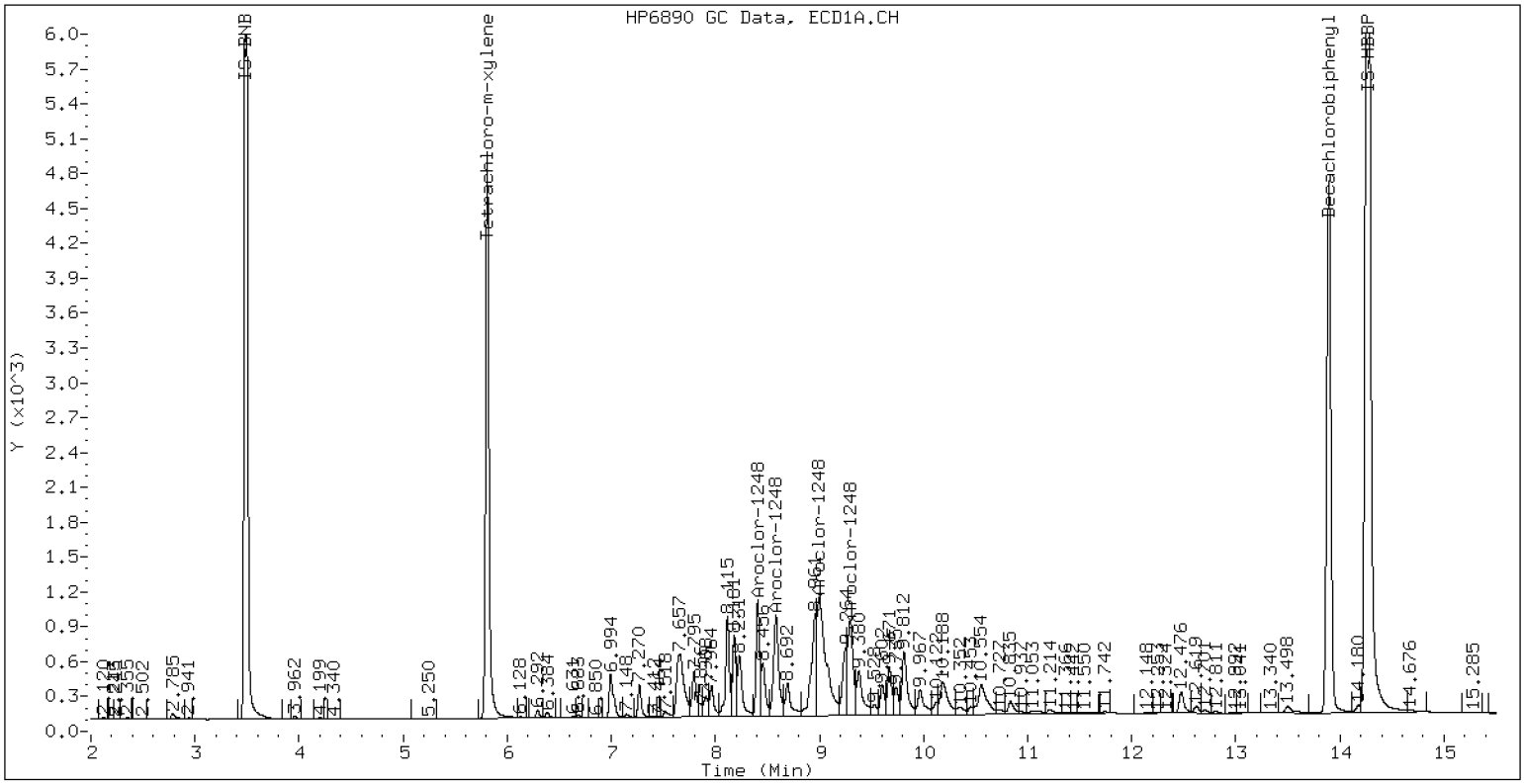
Total PCB Area Col2 (5.788 - 14.018) = 788416 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

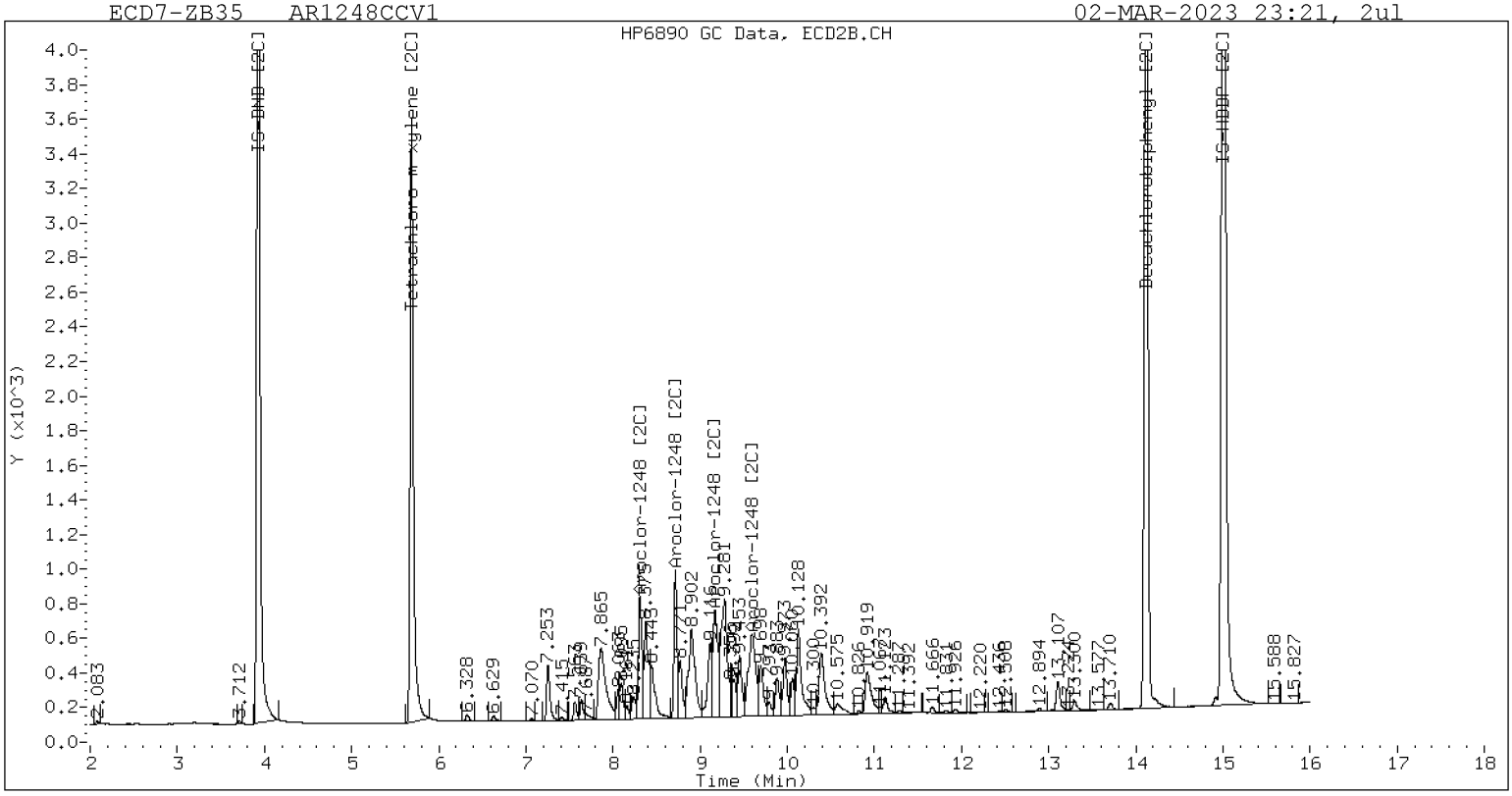
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV1 02-MAR-2023 23:21, 2ul



ZB-5 Manual Integration: YES

ECD7-ZB35 AR1248CCV1 02-MAR-2023 23:21, 2ul

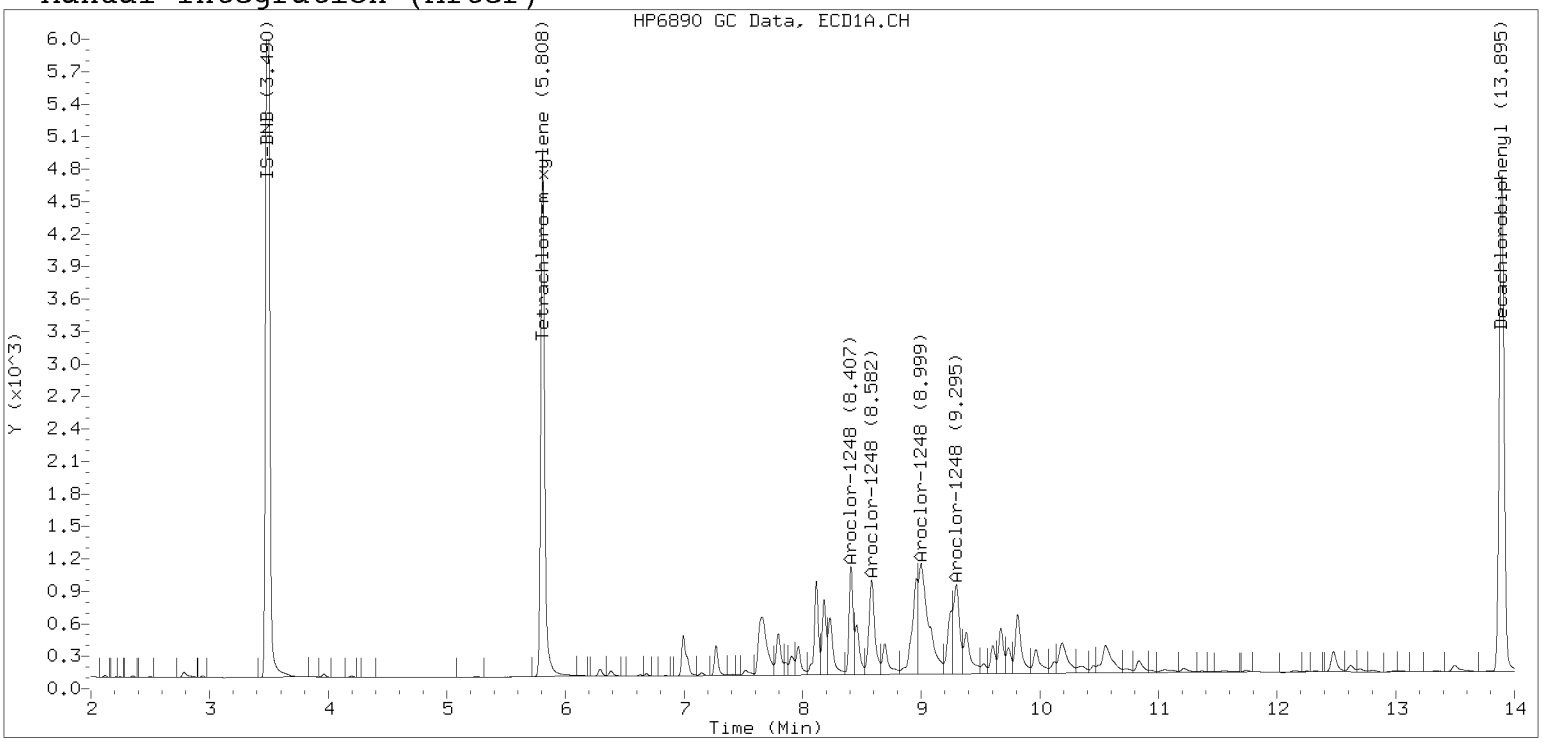


ZB-35 Manual Integration: NO

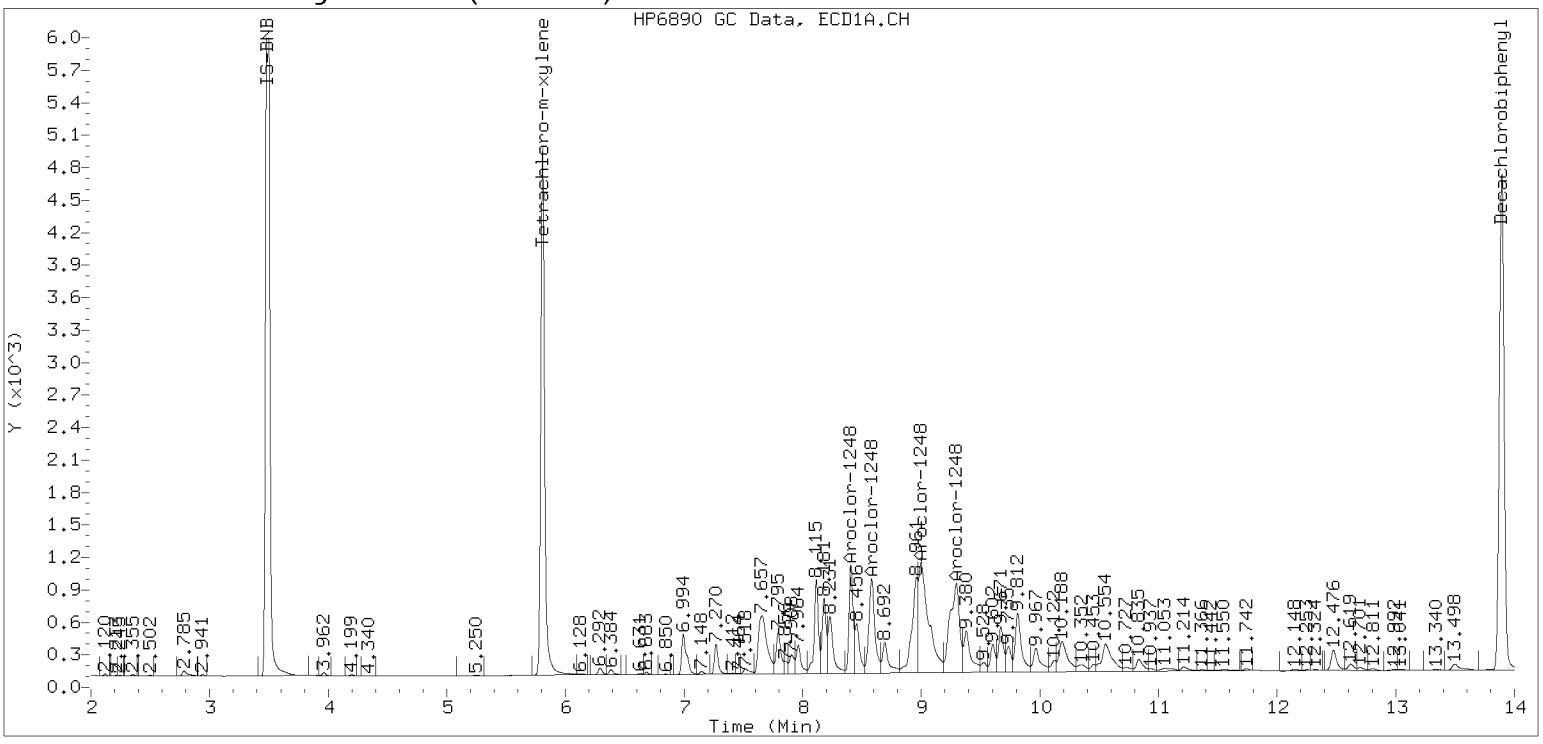
Manual Peak Adjustment, ZB-5

Datafile: ecd7.i/230302.b/03022319ECD7.D Injection Date: 02-MAR-2023 23:21

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022320ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/02/23
Lab Sample ID:	SLC0051-CCV2	Injection Time:	23:42
Sequence Name:	AR1660CCV2		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	274	0.0493662	0.0540562		9.4	+/-20	
Aroclor-1016 (1)	A	250.00	271	0.0303852	0.0329837		8.4		
Aroclor-1016 (2)	A	250.00	272	0.0926308	0.1009697		8.8		
Aroclor-1016 (3)	A	250.00	279	0.0452180	0.0504871		11.6		
Aroclor-1016 (4)	A	250.00	272	0.0292307	0.0317845		8.8		
Aroclor 1016 [2C]	A	250.00	258	0.0545857	0.0572942		3.3	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	250	0.0468313	0.0468712		0.0		
Aroclor-1016 (2) [2C]	A	250.00	276	0.0949676	0.1050336		10.4		
Aroclor-1016 (3) [2C]	A	250.00	245	0.0428922	0.0420286		-2.0		
Aroclor-1016 (4) [2C]	A	250.00	262	0.0336515	0.0352432		4.8		
Aroclor 1260	A	250.00	325	0.0392091	0.0508572		30.0	+/-20	*
Aroclor-1260 (1)	A	250.00	316	0.0287785	0.0364146		26.4		
Aroclor-1260 (2)	A	250.00	333	0.0300690	0.0400068		33.2		
Aroclor-1260 (3)	A	250.00	321	0.0797517	0.1025346		28.4		
Aroclor-1260 (4)	A	250.00	328	0.0401599	0.0527198		31.2		
Aroclor-1260 (5)	A	250.00	327	0.0172866	0.0226104		30.8		
Aroclor 1260 [2C]	A	250.00	231	0.0699688	0.0660448		-7.7	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	219	0.0470406	0.0411606		-12.4		
Aroclor-1260 (2) [2C]	A	250.00	246	0.1200523	0.1184070		-1.6		
Aroclor-1260 (3) [2C]	A	250.00	222	0.0318590	0.0283214		-11.2		
Aroclor-1260 (4) [2C]	A	250.00	236	0.0809231	0.0762900		-5.6		
Decachlorobiphenyl	A	40.000	44.3	0.7878687	0.8734208		10.8	+/-20	
Tetrachlorometaxylene	A	40.000	42.1	1.1944880	1.2574730		5.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	38.8	1.2182710	1.1832940		-3.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.9	1.1737210	1.2302010		4.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022320ECD7.D
Data file 2: /230302.b/230302.b/03022320ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV2
Client ID:
Injection Date: 02-MAR-2023 23:42
Report Date: 03/03/2023 15:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	223468	5.687	-0.001	184086	42.1	41.9	0.4	Tetrachloro-m-xylene
13.893	-0.002	270491	14.118	-0.000	273200	44.3	38.9	13.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	355424	-47.2
Hexabromobiphenyl	1429847	619383	-56.7 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	299278	-5.1
Hexabromobiphenyl	513946	461762	-10.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	-0.001	36635	271.4	1	7.254	-0.001	43836	250.2
Aroclor-1016	2	7.657	0.002	112147	272.5	2	7.861	0.002	98232	276.5
Aroclor-1016	3	7.793	0.003	56076	279.1	3	8.060	0.002	39307	245.0
Aroclor-1016	4	8.406	0.001	35303	271.8	4	8.309	0.001	32961	261.8
Total Col1Ave (4 peaks):					273.7	Total Col2Ave (4 peaks):				258.4 RPD = 6
Corrected Ave (3 peaks):					271.9	Corrected Ave (3 peaks):				252.3 RPD = 7
CalAmt %D:					9.5	CalAmt %D:				3.4
Aroclor-1260	1	11.046	0.001	70483	316.3	1	11.654	0.002	59395	218.8
Aroclor-1260	2	11.361	-0.000	77436	332.6	2	11.918	0.001	170862	246.6
Aroclor-1260	3	11.735	0.002	198463	321.4	3	12.437	0.001	40868	222.2
Aroclor-1260	4	12.140	0.001	102043	328.2	4	12.502	0.000	110087	235.7
Aroclor-1260	5	12.245	0.001	43764	327.0	NS	---			----
Total Col1Ave (5 peaks):					325.1	Total Col2Ave (4 peaks):				230.8 RPD = 34
Corrected Ave (4 peaks):					323.2	Corrected Ave (3 peaks):				225.6 RPD = 36
CalAmt %D:					30.0	CalAmt %D:				-7.7

Total PCB Area Col1 (5.908 - 13.795) = 2224518 Col1 Total PCB = 0.5 ppm*

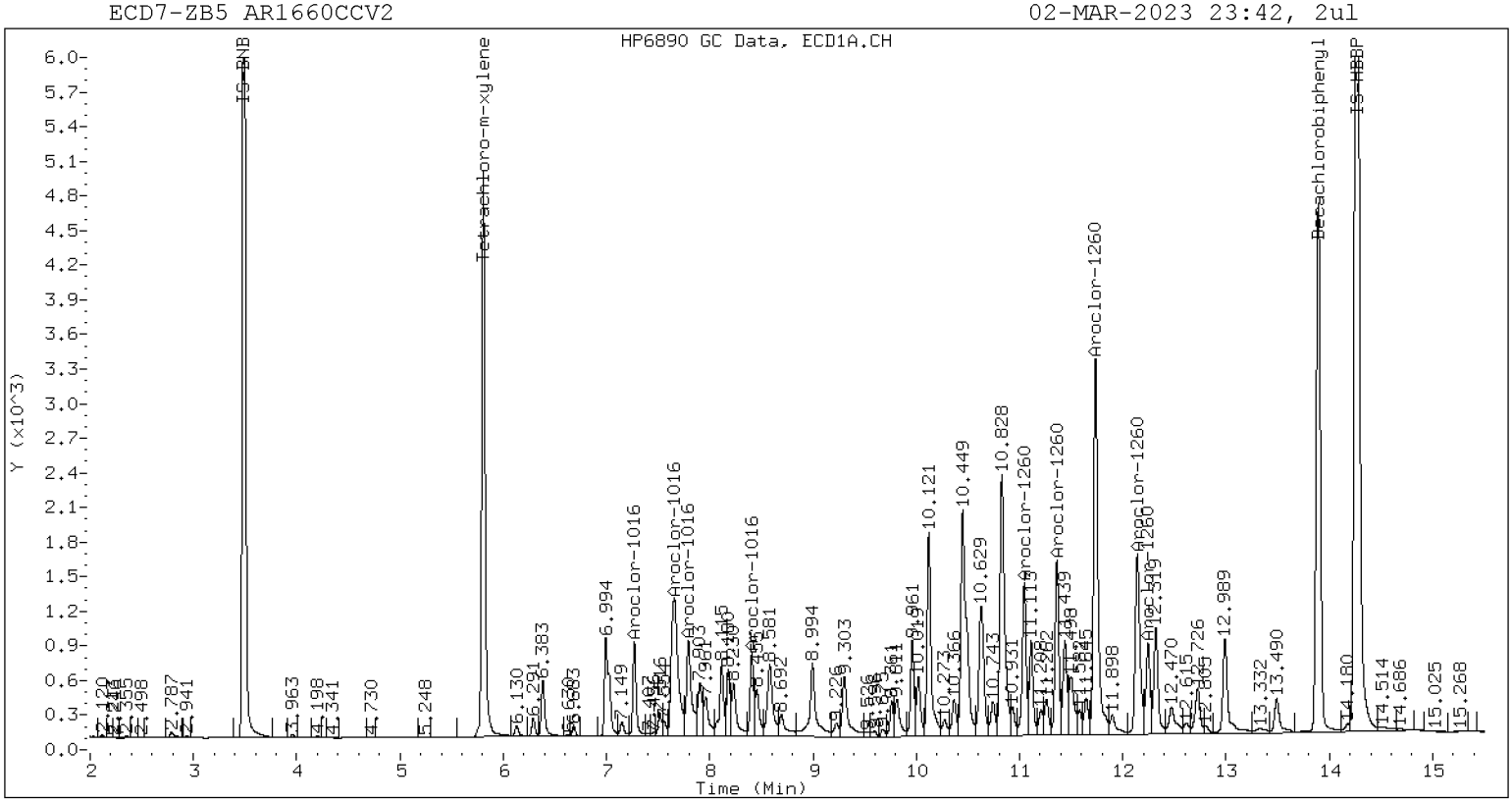
Total PCB Area Col2 (5.788 - 14.018) = 1627422 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

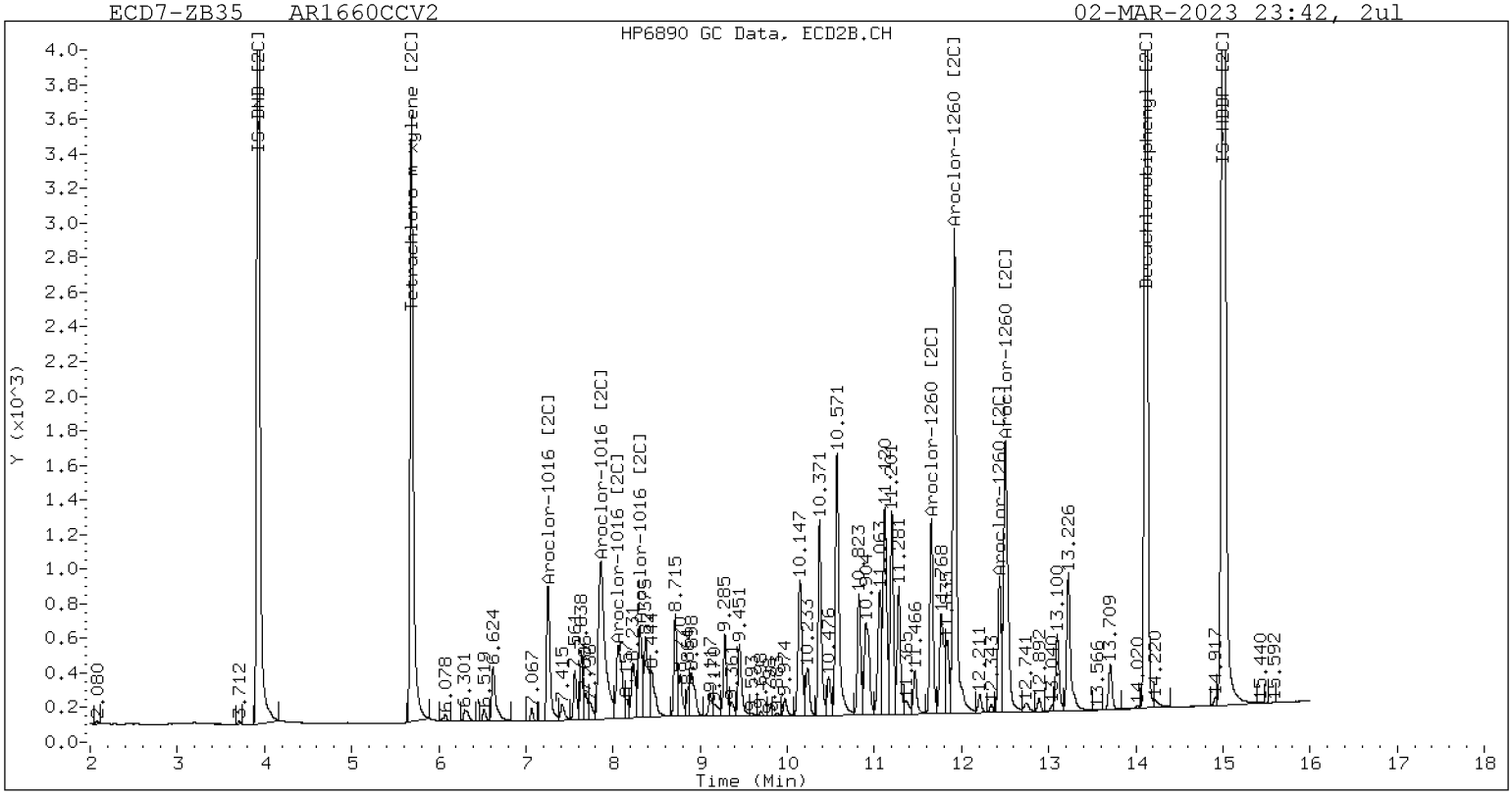
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV2 02-MAR-2023 23:42, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV2 02-MAR-2023 23:42, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022335ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV3	Injection Time:	04:57
Sequence Name:	AR1242CCV3		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1242	A	250.00	250	0.0395340	0.0398707		0.1	+/-20	
Aroclor-1242 (1)	A	250.00	259		0.0256712				
Aroclor-1242 (2)	A	250.00	257		0.0774395				
Aroclor-1242 (3)	A	250.00	243		0.0227702				
Aroclor-1242 (4)	A	250.00	242		0.0336021				
Aroclor 1242 [2C]	A	250.00	243	0.0423092	0.0418346		-2.9	+/-20	
Aroclor-1242 (1) [2C]	A	250.00	254		0.0377139				
Aroclor-1242 (2) [2C]	A	250.00	255		0.0798263				
Aroclor-1242 (3) [2C]	A	250.00	232		0.0225708				
Aroclor-1242 (4) [2C]	A	250.00	230		0.0272274				
Decachlorobiphenyl	A	40.000	40.8	0.7878687	0.8033480		2.0	+/-20	
Tetrachlorometaxylene	A	40.000	48.1	1.1944880	1.4364130		20.3	+/-20	
Decachlorobiphenyl [2C]	A	40.000	44.0	1.2182710	1.3397810		10.0	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	48.7	1.1737210	1.4303070		21.8	+/-20	*

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022335ECD7.D
Data file 2: /230302.b/230302.b/03022335ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV3
Client ID:
Injection Date: 03-MAR-2023 04:57
Report Date: 03/03/2023 15:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	-0.000	263818	5.686	-0.002	225282	48.1	48.7	1.3	Tetrachloro-m-xylene
13.893	-0.002	148145	14.119	0.000	202049	40.8	44.0	7.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	367329	-45.5
Hexabromobiphenyl	1429847	368819	-74.2 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	315012	-0.1
Hexabromobiphenyl	513946	301615	-41.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.270	-0.001	29468	258.9	1	7.254	0.000	37126	253.7
Aroclor-1242	2	7.657	0.001	88893	257.1	2	7.858	0.000	78582	255.4
Aroclor-1242	3	8.406	0.000	26138	243.0	3	9.169	0.000	22219	232.1
Aroclor-1242	4	8.581	0.001	38572	242.6	4	9.595	0.000	26803	229.8
Total Col1Ave (4 peaks):					250.4	Total Col2Ave (4 peaks):				242.7 RPD = 3
Corrected Ave (3 peaks):					247.6	Corrected Ave (3 peaks):				238.5 RPD = 4
CalAmt %D:					0.2	CalAmt %D:				-2.9

Total PCB Area Col1 (5.908 - 13.795) = 671207 Col1 Total PCB = 0.2 ppm*

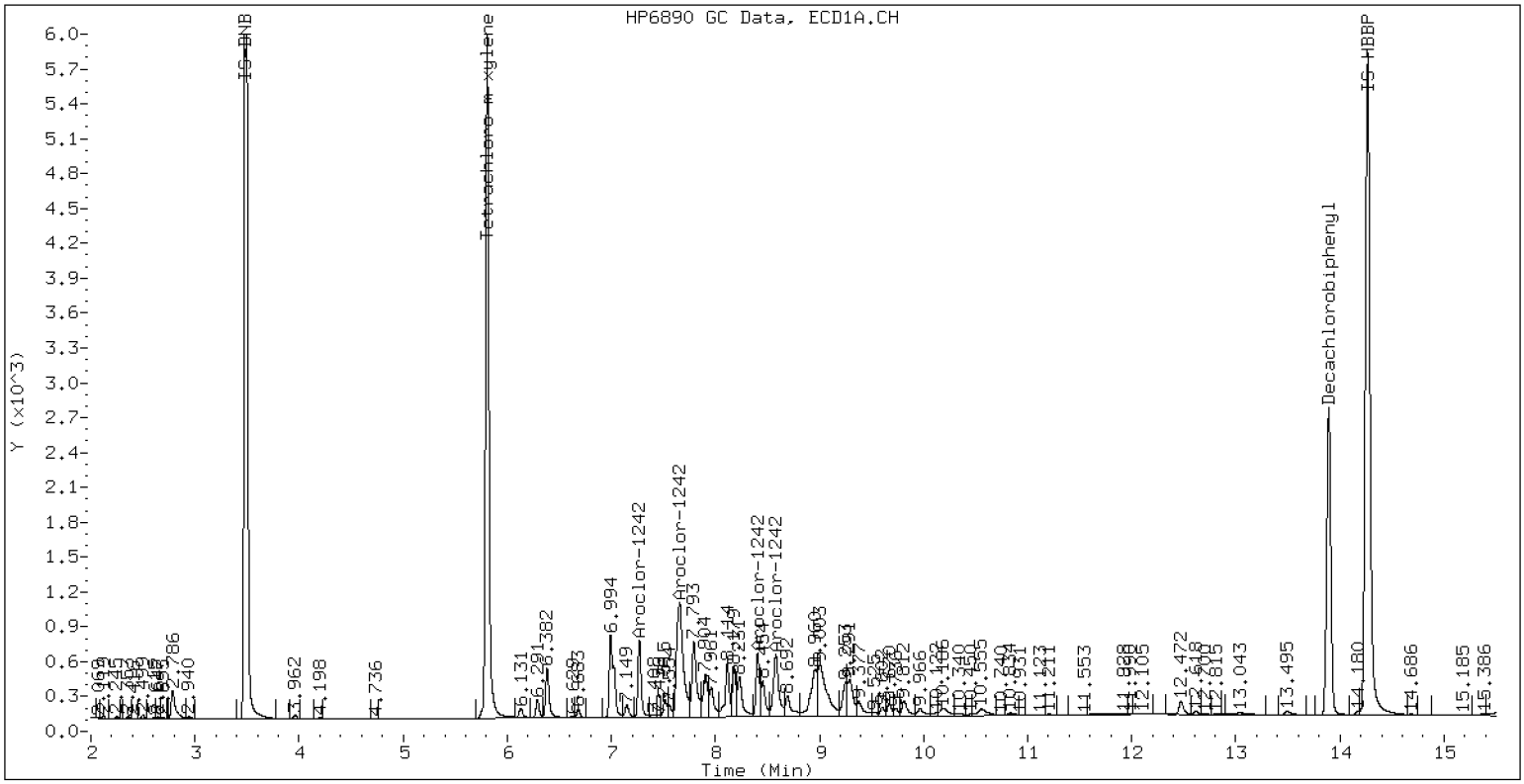
Total PCB Area Col2 (5.788 - 14.018) = 548138 Col2 Total PCB = 0.1 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

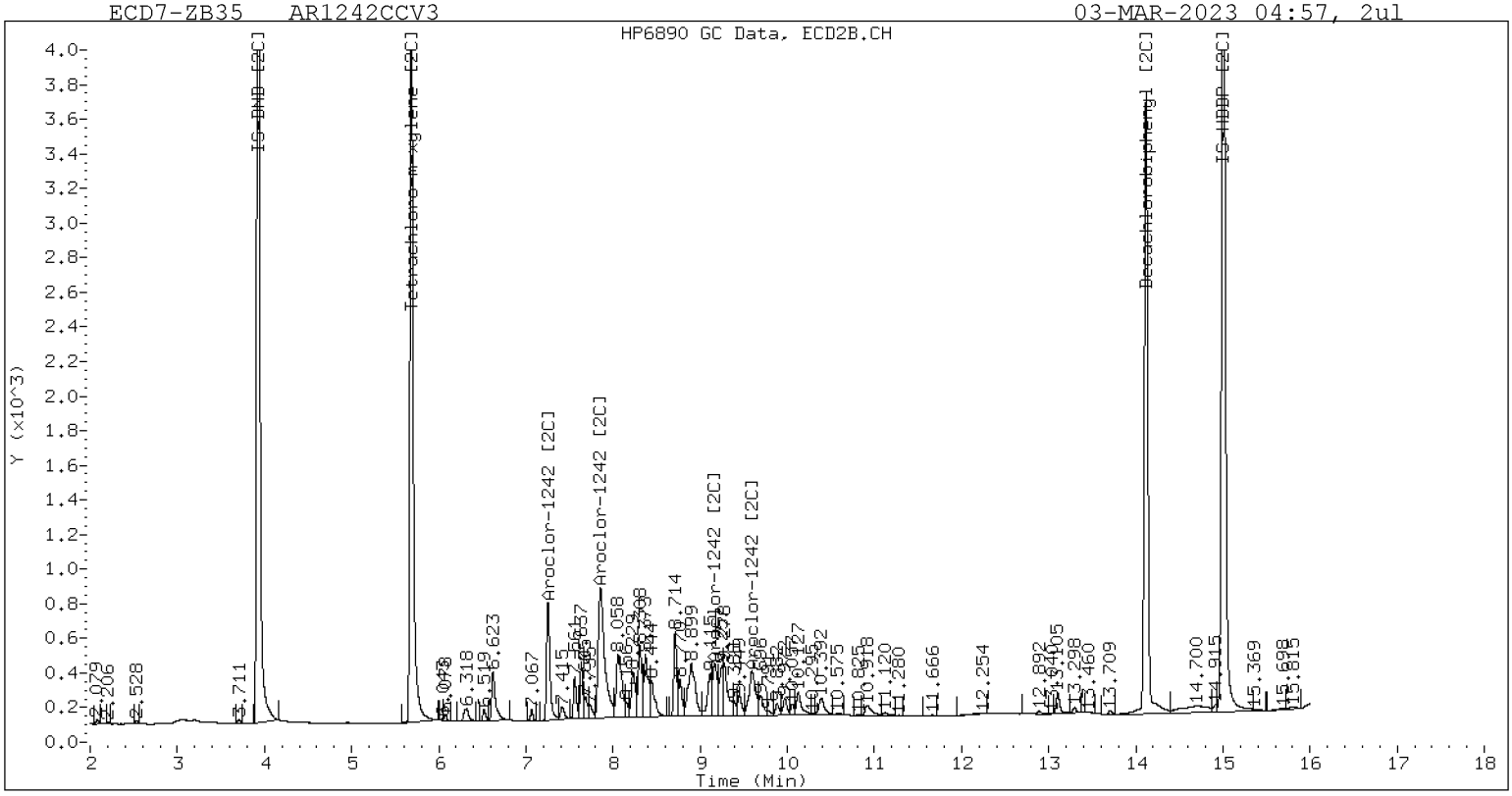
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV3 03-MAR-2023 04:57, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV3 03-MAR-2023 04:57, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022336ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV4	Injection Time:	05:18
Sequence Name:	AR1660CCV4		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	272	0.0493662	0.0539375		8.8	+/-20	
Aroclor-1016 (1)	A	250.00	270	0.0303852	0.0327771		8.0		
Aroclor-1016 (2)	A	250.00	276	0.0926308	0.1021793		10.4		
Aroclor-1016 (3)	A	250.00	272	0.0452180	0.0492459		8.8		
Aroclor-1016 (4)	A	250.00	270	0.0292307	0.0315479		8.0		
Aroclor 1016 [2C]	A	250.00	264	0.0545857	0.0585065		5.5	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	254	0.0468313	0.0474980		1.6		
Aroclor-1016 (2) [2C]	A	250.00	283	0.0949676	0.1074580		13.2		
Aroclor-1016 (3) [2C]	A	250.00	251	0.0428922	0.0430981		0.4		
Aroclor-1016 (4) [2C]	A	250.00	267	0.0336515	0.0359718		6.8		
Aroclor 1260	A	250.00	410	0.0392091	0.0640173		64.0	+/-20	*
Aroclor-1260 (1)	A	250.00	431	0.0287785	0.0495944		72.4		
Aroclor-1260 (2)	A	250.00	446	0.0300690	0.0536712		78.4		
Aroclor-1260 (3)	A	250.00	400	0.0797517	0.1275197		60.0		
Aroclor-1260 (4)	A	250.00	391	0.0401599	0.0628704		56.4		
Aroclor-1260 (5)	A	250.00	382	0.0172866	0.0264308		52.8		
Aroclor 1260 [2C]	A	250.00	282	0.0699688	0.0792604		12.6	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	284	0.0470406	0.0533444		13.6		
Aroclor-1260 (2) [2C]	A	250.00	288	0.1200523	0.1384044		15.2		
Aroclor-1260 (3) [2C]	A	250.00	275	0.0318590	0.0349949		10.0		
Aroclor-1260 (4) [2C]	A	250.00	279	0.0809231	0.0902980		11.6		
Decachlorobiphenyl	A	40.000	46.1	0.7878687	0.9072998		15.3	+/-20	
Tetrachlorometaxylene	A	40.000	42.7	1.1944880	1.2744940		6.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	41.1	1.2182710	1.2520290		2.8	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.7	1.1737210	1.2521020		6.8	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022336ECD7.D
Data file 2: /230302.b/230302.b/03022336ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV4
Client ID:
Injection Date: 03-MAR-2023 05:18
Report Date: 03/03/2023 15:57
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	228773	5.687	-0.002	192234	42.7	42.7	0.0	Tetrachloro-m-xylene
13.893	-0.002	184665	14.119	0.001	202197	46.1	41.1	11.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	359002	-46.7
Hexabromobiphenyl	1429847	407065	-71.5 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	307058	-2.6
Hexabromobiphenyl	513946	322991	-37.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	-0.001	36772	269.7	1	7.254	-0.001	45577	253.6
Aroclor-1016	2	7.656	0.002	114633	275.8	2	7.858	-0.002	103112	282.9
Aroclor-1016	3	7.792	0.002	55248	272.3	3	8.057	-0.000	41355	251.2
Aroclor-1016	4	8.405	-0.000	35393	269.8	4	8.307	-0.000	34517	267.2
Total Col1Ave (4 peaks):					271.9	Total Col2Ave (4 peaks):				263.7 RPD = 3
Corrected Ave (3 peaks):					270.6	Corrected Ave (3 peaks):				257.3 RPD = 5
CalAmt %D:					8.8	CalAmt %D:				5.5
Aroclor-1260	1	11.044	-0.000	63088	430.8	1	11.652	0.000	53843	283.5
Aroclor-1260	2	11.361	-0.001	68274	446.2	2	11.917	-0.000	139698	288.2
Aroclor-1260	3	11.734	0.000	162215	399.7	3	12.435	-0.000	35322	274.6
Aroclor-1260	4	12.139	0.000	79976	391.4	4	12.501	-0.000	91142	279.0
Aroclor-1260	5	12.244	0.000	33622	382.2	NS	---			----
Total Col1Ave (5 peaks):					410.1	Total Col2Ave (4 peaks):				281.3 RPD = 37
Corrected Ave (4 peaks):					401.0	Corrected Ave (3 peaks):				279.0 RPD = 36
CalAmt %D:					64.0	CalAmt %D:				12.5

Total PCB Area Col1 (5.908 - 13.795) = 1974592 Col1 Total PCB = 0.5 ppm*

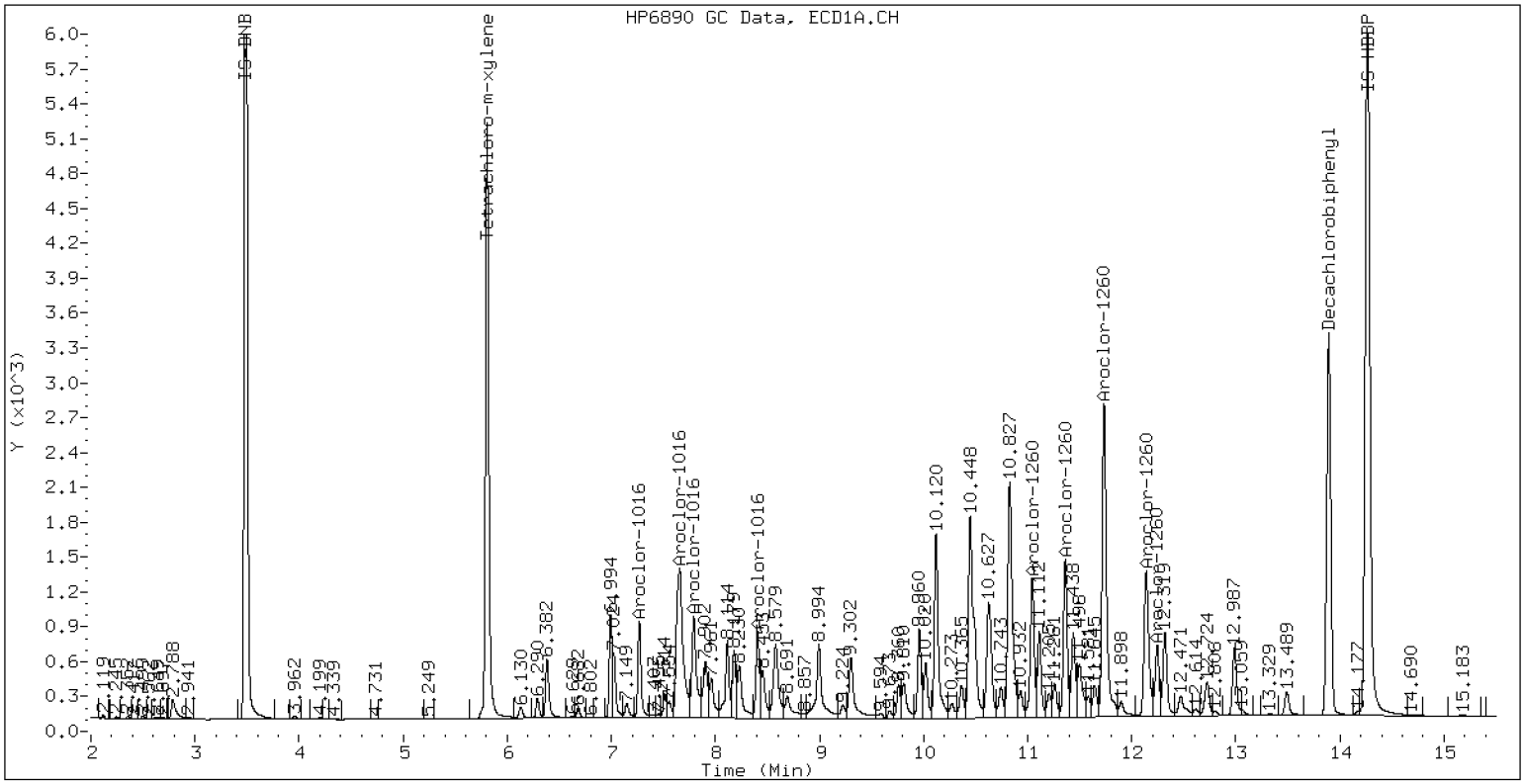
Total PCB Area Col2 (5.788 - 14.018) = 1570266 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

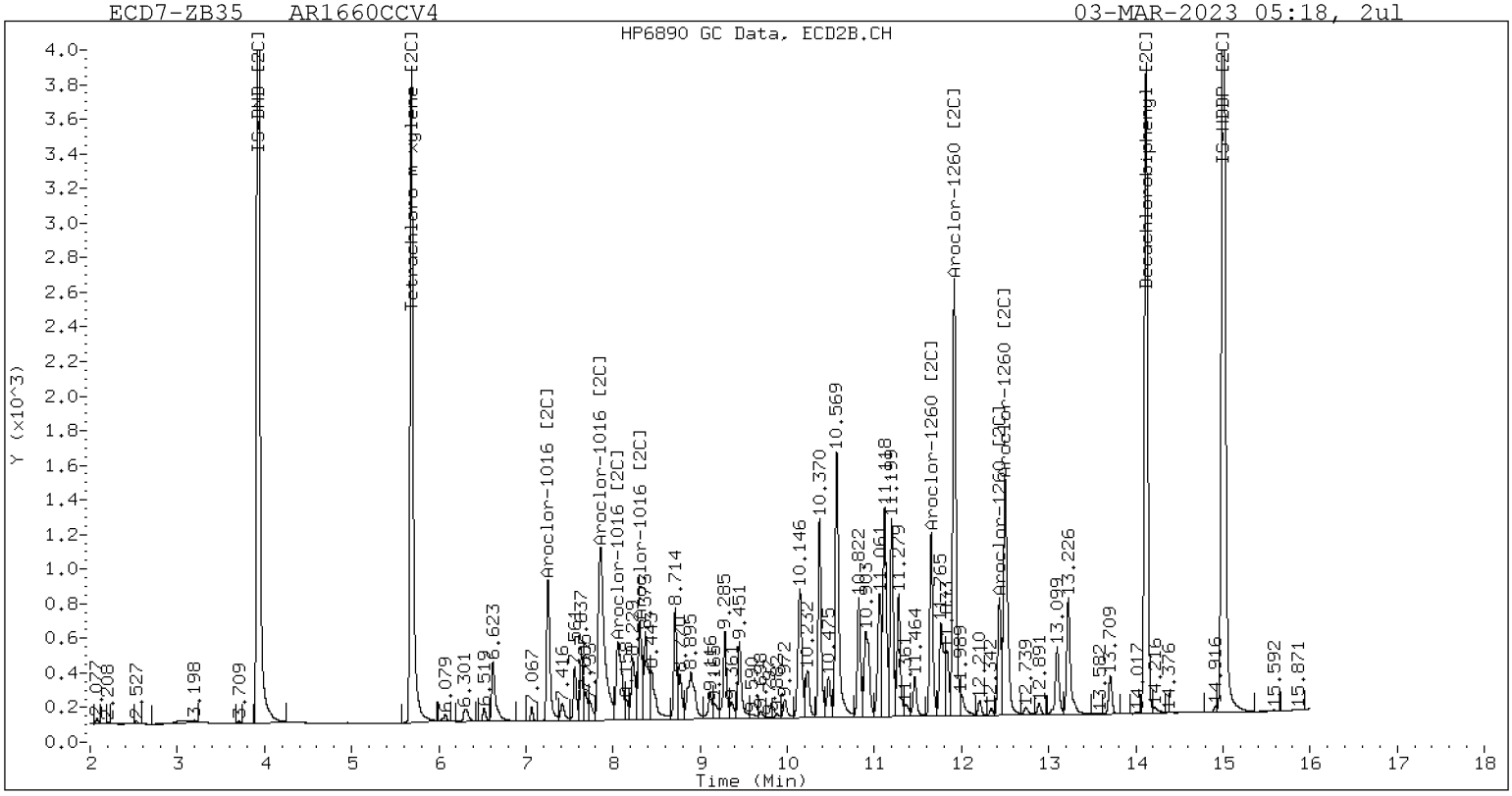
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV4 03-MAR-2023 05:18, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV4 03-MAR-2023 05:18, 2ul

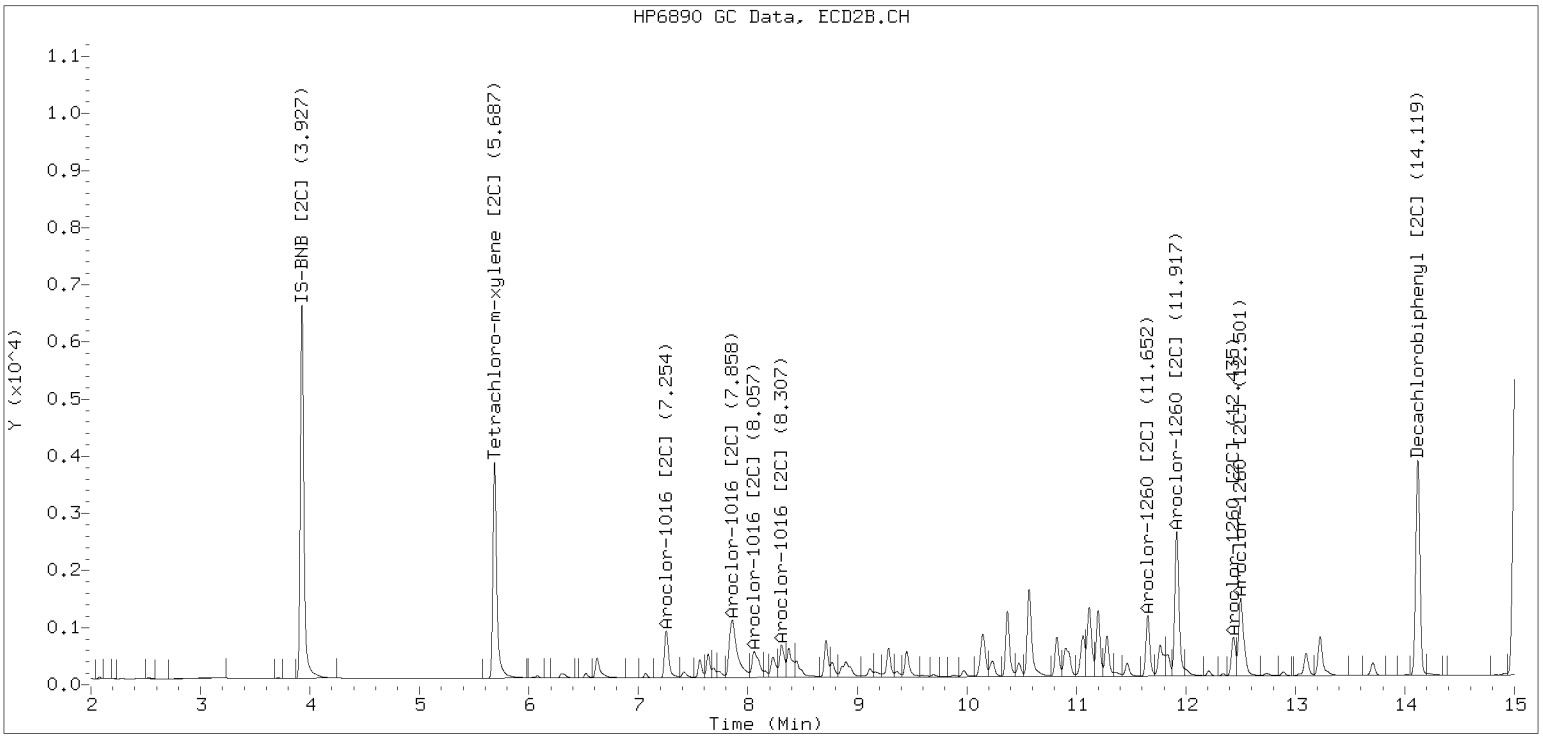


ZB-35 Manual Integration: YES

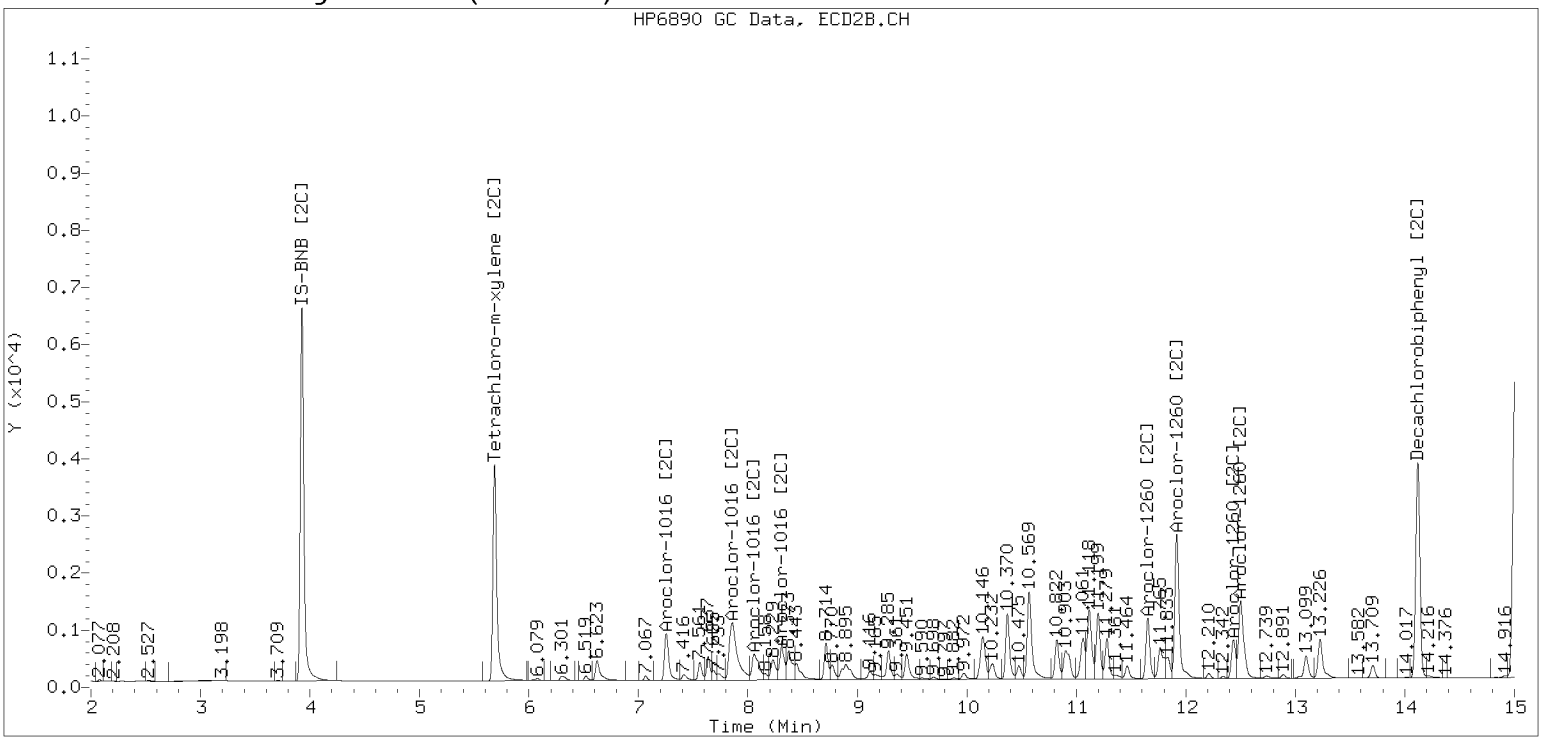
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022336ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022347ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV5	Injection Time:	09:09
Sequence Name:	AR1254CCV5		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1254	A	250.00	233	0.0662949	0.0614415		-6.7	+/-20
Aroclor-1254 (1)	A	250.00	237		0.0762189			
Aroclor-1254 (2)	A	250.00	240		0.0346491			
Aroclor-1254 (3)	A	250.00	234		0.0483076			
Aroclor-1254 (4)	A	250.00	225		0.0902255			
Aroclor-1254 (5)	A	250.00	230		0.0578062			
Aroclor 1254 [2C]	A	250.00	253	0.0763106	0.0768016		1.0	+/-20
Aroclor-1254 (1) [2C]	A	250.00	257		0.0624155			
Aroclor-1254 (2) [2C]	A	250.00	257		0.0502332			
Aroclor-1254 (3) [2C]	A	250.00	255		0.1079861			
Aroclor-1254 (4) [2C]	A	250.00	243		0.1003944			
Aroclor-1254 (5) [2C]	A	250.00	251		0.0629788			
Decachlorobiphenyl	A	40.000	43.9	0.7878687	0.8639933		9.8	+/-20
Tetrachlorometaxylene	A	40.000	39.4	1.1944880	1.1780220		-1.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.7	1.2182710	1.3014910		6.8	+/-20
Tetrachlorometaxylene [2C]	A	40.000	40.0	1.1737210	1.1730150		0.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022347ECD7.D
Data file 2: /230302.b/230302.b/03022347ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1254.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254CCV5
Client ID:
Injection Date: 03-MAR-2023 09:09
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	225778	5.686	-0.002	192931	39.4	40.0	1.3	Tetrachloro-m-xylene
13.894	-0.001	187563	14.118	-0.000	217416	43.9	42.7	2.6	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	383317	-43.1
Hexabromobiphenyl	1429847	434177	-69.6 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	328949	4.3
Hexabromobiphenyl	513946	334103	-35.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	9.298	-0.001	91300	237.2	1	9.450	0.000	64161	256.6
Aroclor-1254	2	9.378	0.000	41505	239.8	2	9.970	0.000	51638	256.7
Aroclor-1254	3	9.668	-0.000	57866	233.8	3	10.124	0.000	111006	255.1
Aroclor-1254	4	9.807	0.000	108078	224.6	4	10.373	0.000	103202	243.3
Aroclor-1254	5	10.175	-0.001	69244	229.6	5	10.569	0.000	64740	250.6

Total Col1Ave (5 peaks): 233.0 Total Col2Ave (5 peaks): 252.5 RPD = 8

Corrected Ave (4 peaks): 231.3 Corrected Ave (4 peaks): 251.4 RPD = 8

CalAmt %D: -6.8 CalAmt %D: 1.0

Total PCB Area Col1 (5.908 - 13.795) = 1188867 Col1 Total PCB = 0.3 ppm*

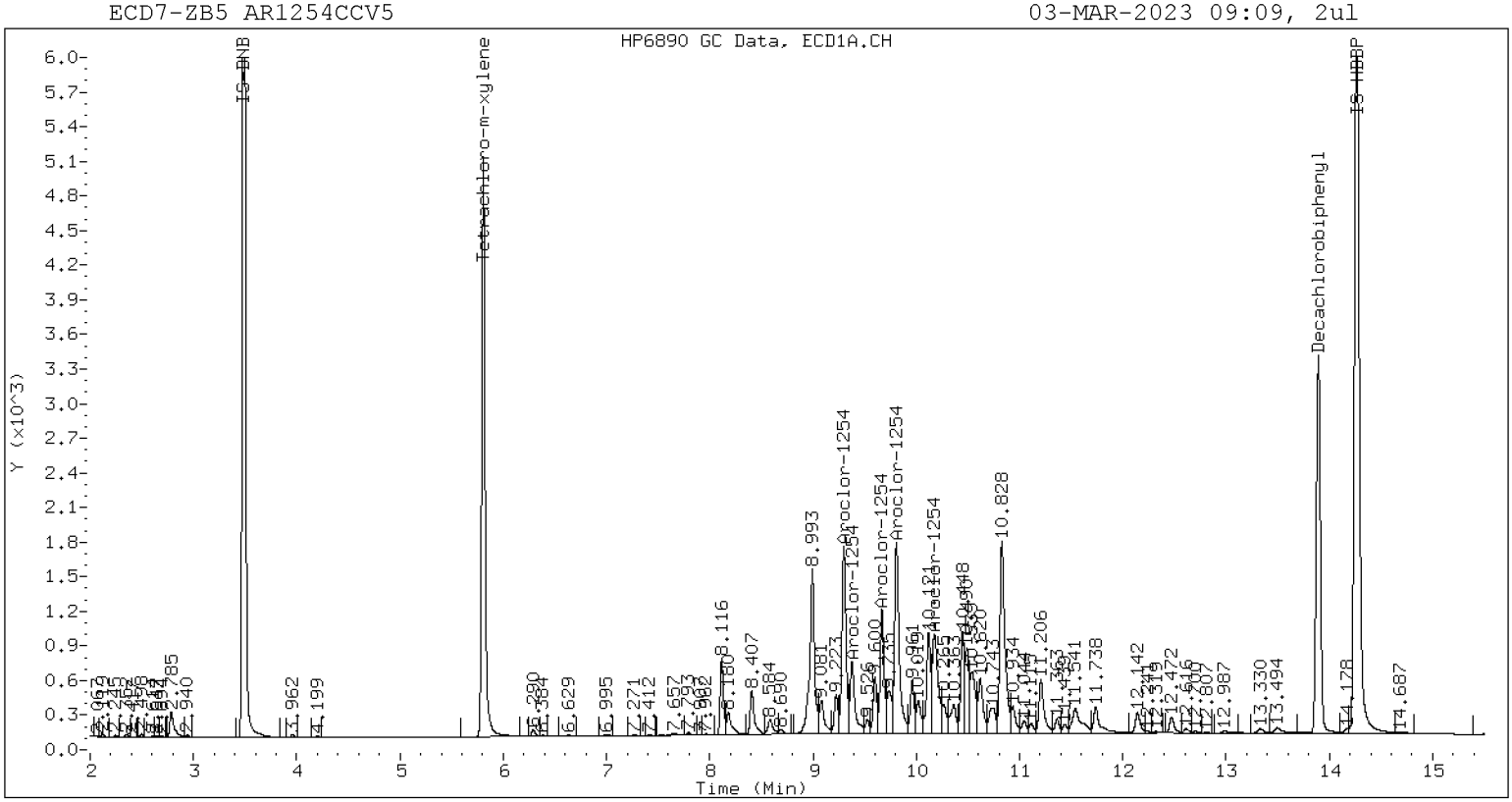
Total PCB Area Col2 (5.788 - 14.018) = 1061350 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

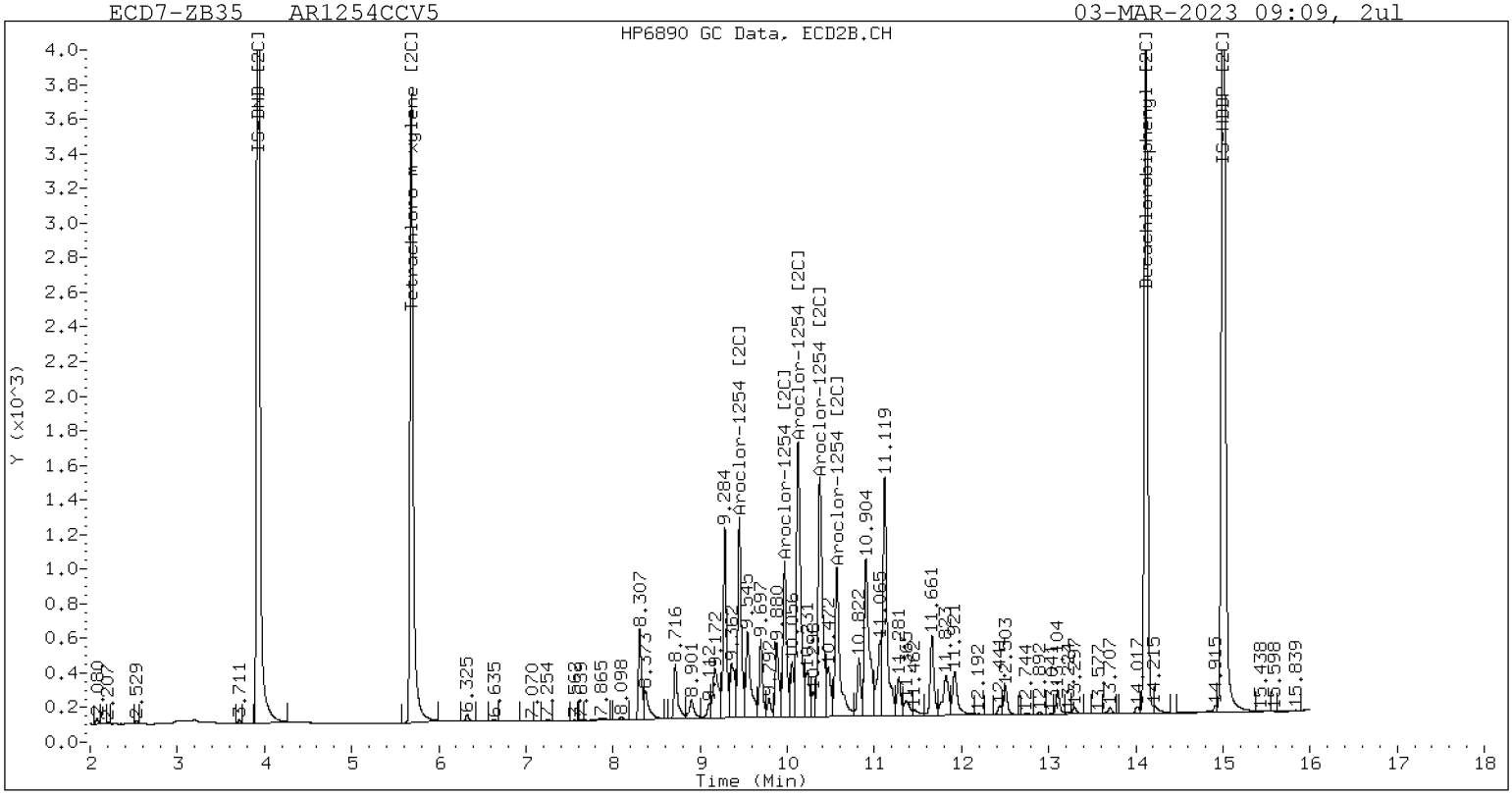
PCB Dual Column Chromatograms

ECD7-ZB5 AR1254CCV5 03-MAR-2023 09:09, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1254CCV5 03-MAR-2023 09:09, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022348ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV6	Injection Time:	09:30
Sequence Name:	AR1660CCV6		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	274	0.0493662	0.0542699		9.5	+/-20	
Aroclor-1016 (1)	A	250.00	270	0.0303852	0.0328226		8.0		
Aroclor-1016 (2)	A	250.00	276	0.0926308	0.1024607		10.4		
Aroclor-1016 (3)	A	250.00	276	0.0452180	0.0498667		10.4		
Aroclor-1016 (4)	A	250.00	273	0.0292307	0.0319297		9.2		
Aroclor 1016 [2C]	A	250.00	264	0.0545857	0.0586551		5.7	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	252	0.0468313	0.0472386		0.8		
Aroclor-1016 (2) [2C]	A	250.00	284	0.0949676	0.1080260		13.6		
Aroclor-1016 (3) [2C]	A	250.00	251	0.0428922	0.0430618		0.4		
Aroclor-1016 (4) [2C]	A	250.00	270	0.0336515	0.0362939		8.0		
Aroclor 1260	A	250.00	401	0.0392091	0.0630215		60.3	+/-20	*
Aroclor-1260 (1)	A	250.00	408	0.0287785	0.0470257		63.2		
Aroclor-1260 (2)	A	250.00	428	0.0300690	0.0515238		71.2		
Aroclor-1260 (3)	A	250.00	400	0.0797517	0.1275977		60.0		
Aroclor-1260 (4)	A	250.00	391	0.0401599	0.0628704		56.4		
Aroclor-1260 (5)	A	250.00	377	0.0172866	0.0260896		50.8		
Aroclor 1260 [2C]	A	250.00	290	0.0699688	0.0820735		16.0	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	288	0.0470406	0.0541983		15.2		
Aroclor-1260 (2) [2C]	A	250.00	302	0.1200523	0.1447994		20.8		
Aroclor-1260 (3) [2C]	A	250.00	282	0.0318590	0.0359937		12.8		
Aroclor-1260 (4) [2C]	A	250.00	288	0.0809231	0.0933024		15.2		
Decachlorobiphenyl	A	40.000	46.2	0.7878687	0.9106867		15.5	+/-20	
Tetrachlorometaxylene	A	40.000	42.4	1.1944880	1.2652050		6.0	+/-20	
Decachlorobiphenyl [2C]	A	40.000	42.5	1.2182710	1.2938270		6.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	42.8	1.1737210	1.2555650		7.0	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022348ECD7.D
Data file 2: /230302.b/230302.b/03022348ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV6
Client ID:
Injection Date: 03-MAR-2023 09:30
Report Date: 03/03/2023 15:58
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	-0.001	237374	5.686	-0.002	199557	42.4	42.8	1.0	Tetrachloro-m-xylene
13.893	-0.001	208973	14.117	-0.001	224688	46.2	42.5	8.5	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	375234	-44.3
Hexabromobiphenyl	1429847	458935	-67.9 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	317876	0.8
Hexabromobiphenyl	513946	347323	-32.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col					ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	7.269	-0.001	38488	270.1	1	7.254	-0.001	46925	252.2	
Aroclor-1016	2	7.656	0.002	120146	276.5	2	7.858	-0.002	107309	284.4	
Aroclor-1016	3	7.792	0.002	58474	275.7	3	8.057	-0.001	42776	251.0	
Aroclor-1016	4	8.405	0.000	37441	273.1	4	8.307	-0.000	36053	269.6	
Total Col1Ave (4 peaks):					273.8	Total Col2Ave (4 peaks):				264.3	RPD = 4
Corrected Ave (3 peaks):					272.9	Corrected Ave (3 peaks):				257.6	RPD = 6
CalAmt %D:					9.5	CalAmt %D:				5.7	
Aroclor-1260	1	11.044	0.000	67443	408.5	1	11.652	-0.000	58826	288.0	
Aroclor-1260	2	11.360	-0.001	73894	428.4	2	11.917	-0.001	157163	301.5	
Aroclor-1260	3	11.734	-0.000	182997	400.0	3	12.436	0.000	39067	282.4	
Aroclor-1260	4	12.138	-0.001	90167	391.4	4	12.501	-0.000	101269	288.2	
Aroclor-1260	5	12.244	0.000	37417	377.3	NS	---			----	
Total Col1Ave (5 peaks):					401.1	Total Col2Ave (4 peaks):				290.1	RPD = 32
Corrected Ave (4 peaks):					394.3	Corrected Ave (3 peaks):				286.2	RPD = 32
CalAmt %D:					60.4	CalAmt %D:				16.0	

Total PCB Area Col1 (5.908 - 13.795) = 2166551 Col1 Total PCB = 0.5 ppm*

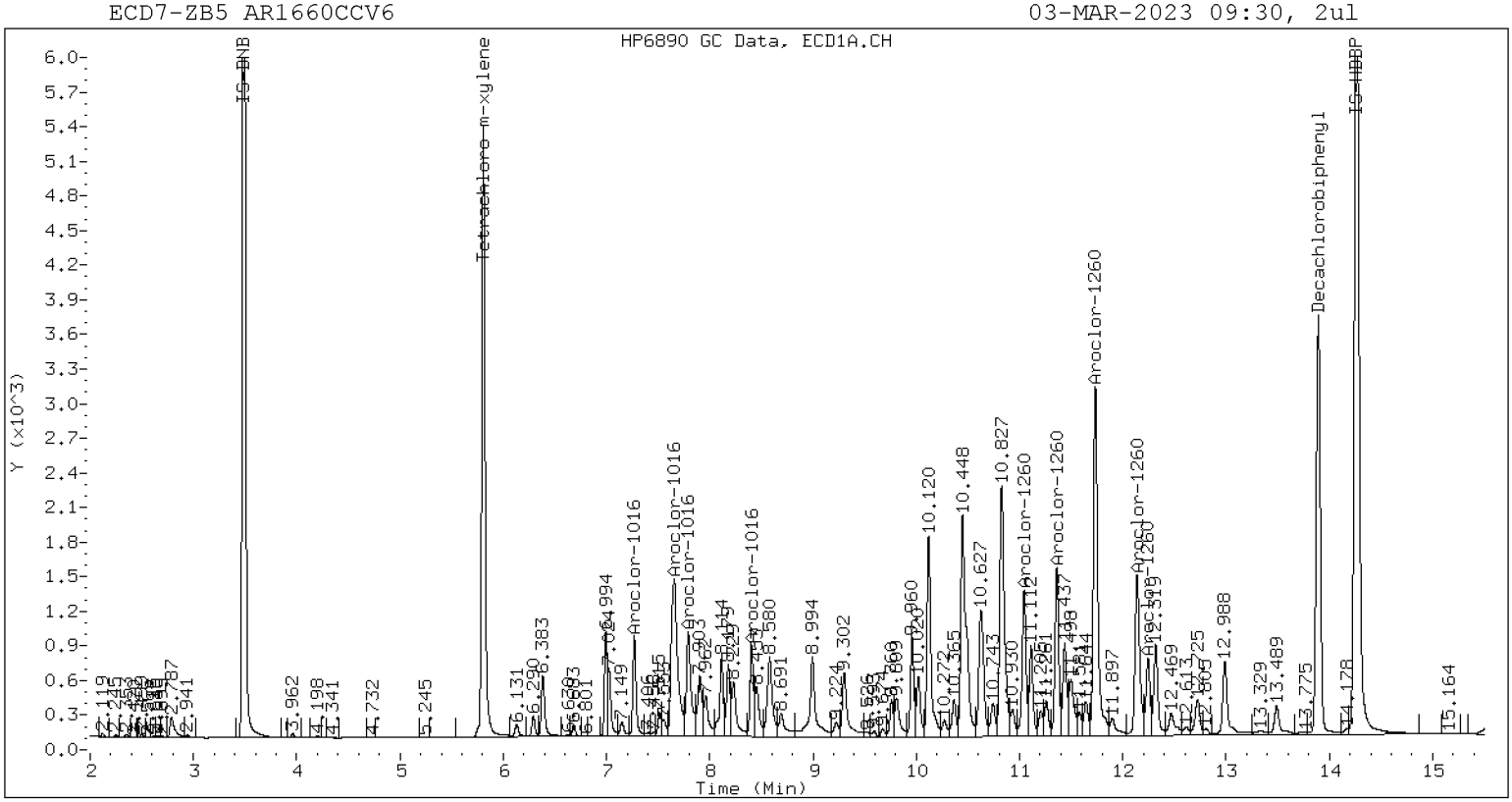
Total PCB Area Col2 (5.788 - 14.018) = 1688947 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

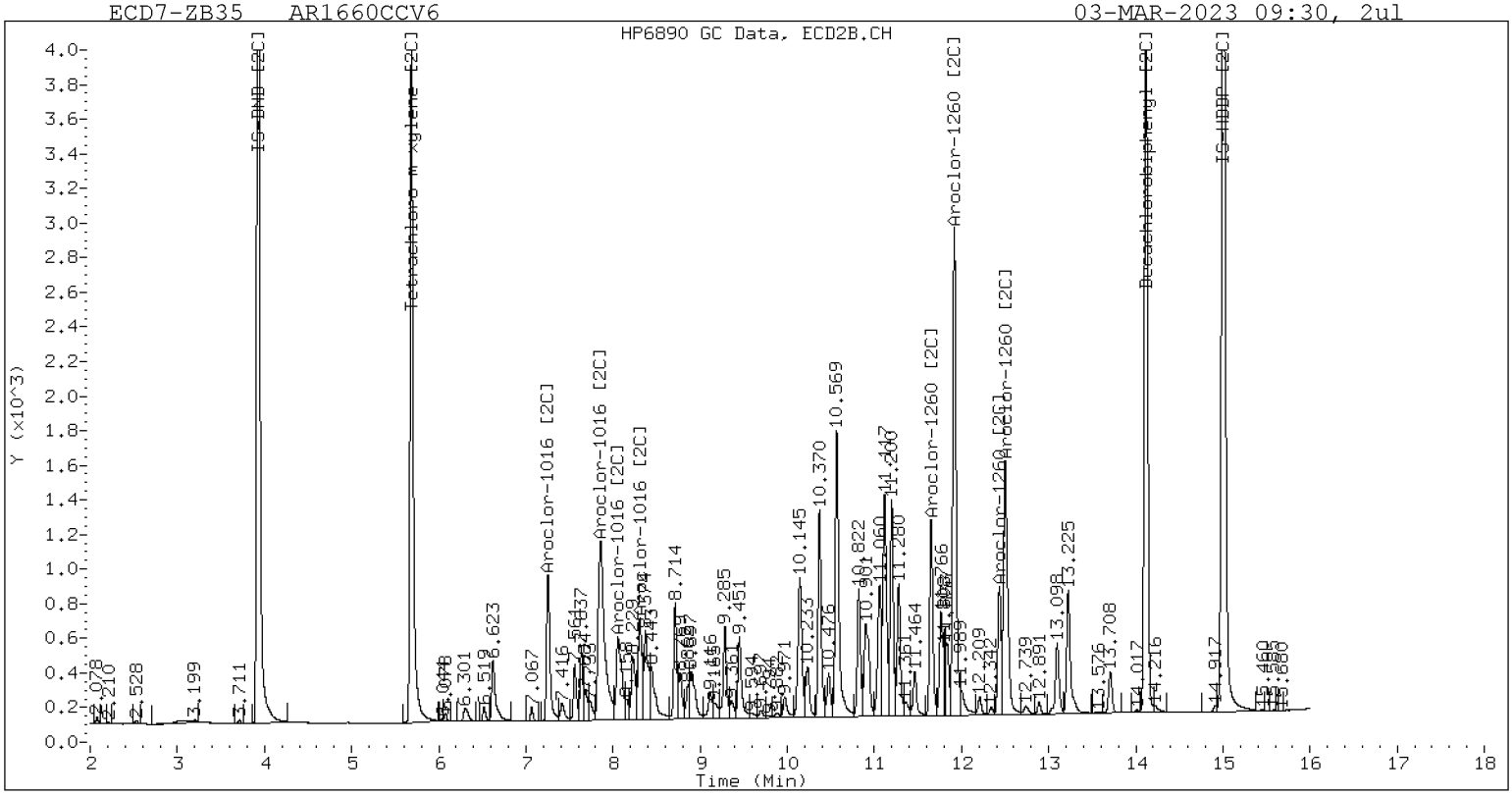
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV6 03-MAR-2023 09:30, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV6 03-MAR-2023 09:30, 2ul

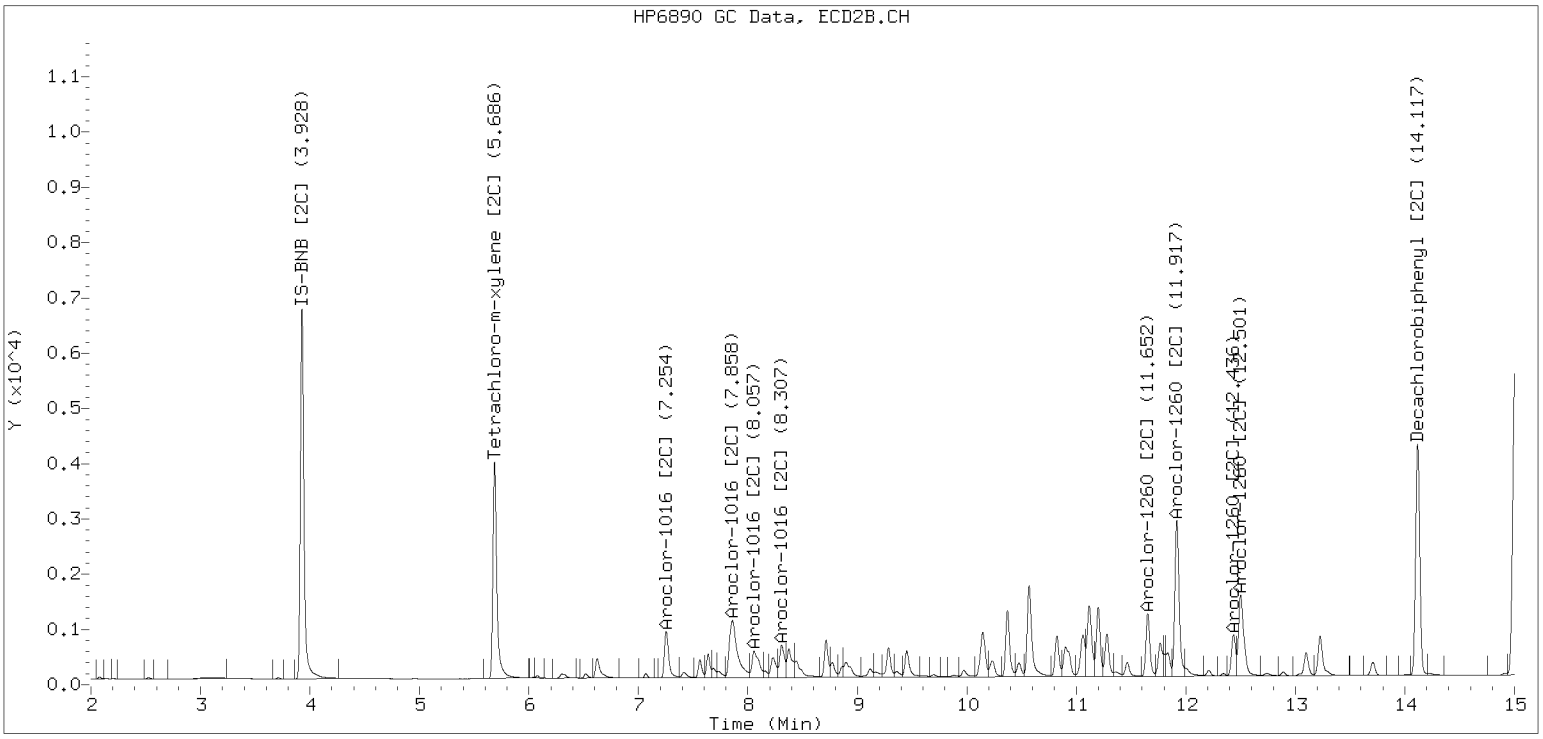


ZB-35 Manual Integration: YES

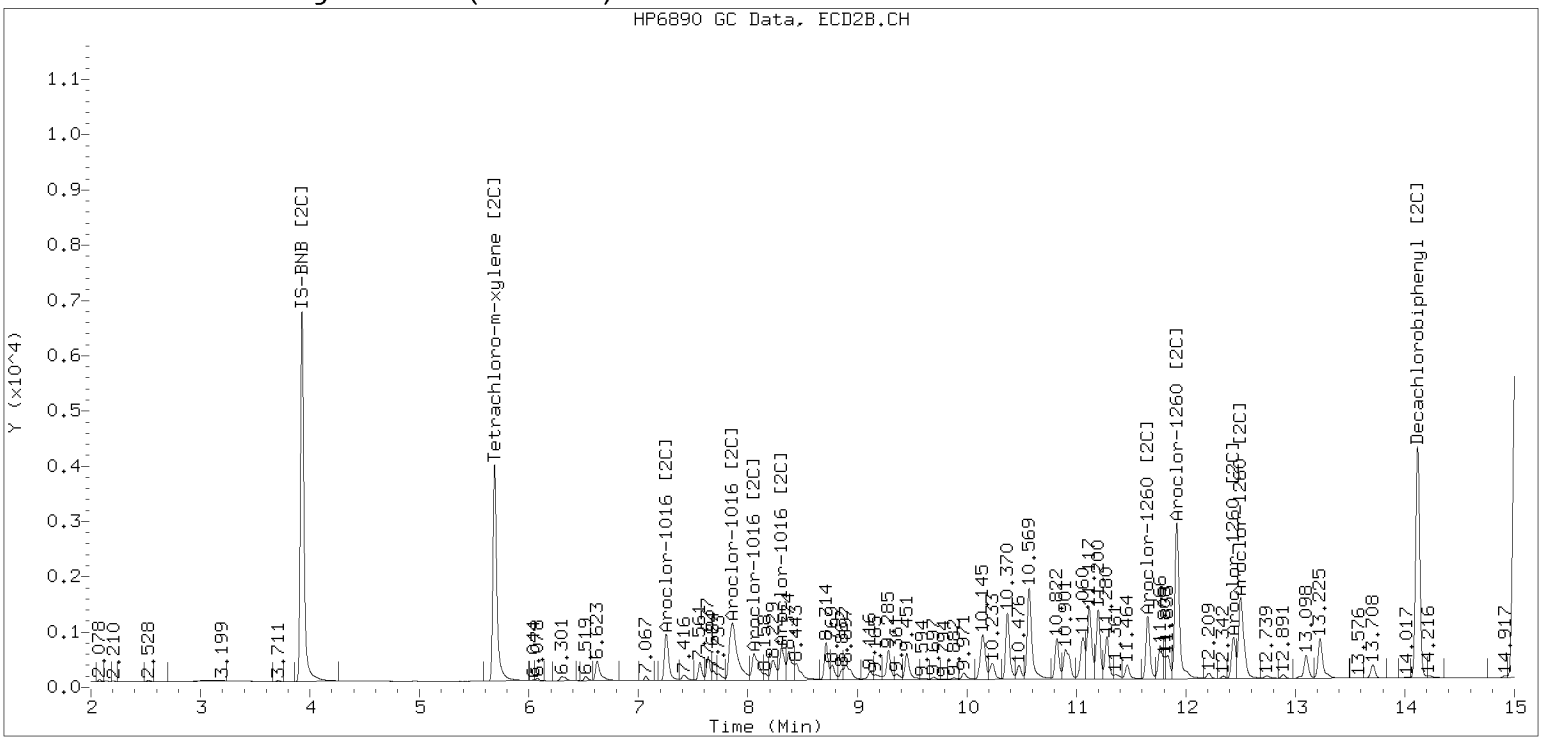
Manual Peak Adjustment, ZB-35

Datafile: ecd7.i/230302.b/230302.b/03022348ECD7.D Injection Date: 03-MAR-2023

Manual Integration (After)



Processed Integration (Before)



Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022364ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV7	Injection Time:	15:07
Sequence Name:	AR1248CCV7		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1248	A	250.00	252	0.0574755	0.0582181		0.8	+/-20
Aroclor-1248 (1)	A	250.00	251		0.0392526			
Aroclor-1248 (2)	A	250.00	254		0.0503312			
Aroclor-1248 (3)	A	250.00	259		0.0968305			
Aroclor-1248 (4)	A	250.00	244		0.0464581			
Aroclor 1248 [2C]	A	250.00	254	0.0444270	0.0450606		1.7	+/-20
Aroclor-1248 (1) [2C]	A	250.00	256		0.0390478			
Aroclor-1248 (2) [2C]	A	250.00	256		0.0403991			
Aroclor-1248 (3) [2C]	A	250.00	257		0.0467470			
Aroclor-1248 (4) [2C]	A	250.00	248		0.0540487			
Decachlorobiphenyl	A	40.000	40.6	0.7878687	0.8003708		1.5	+/-20
Tetrachlorometaxylene	A	40.000	39.0	1.1944880	1.1643150		-2.5	+/-20
Decachlorobiphenyl [2C]	A	40.000	42.0	1.2182710	1.2778830		5.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	39.7	1.1737210	1.1662310		-0.8	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022364ECD7.D
Data file 2: /230302.b/230302.b/03022364ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1248.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248CCV7
Client ID:
Injection Date: 03-MAR-2023 15:07
Report Date: 03/06/2023 11:07
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.808	0.002	230202	5.688	0.002	197594	39.0	39.7	1.9	Tetrachloro-m-xylene
13.894	0.001	192993	14.118	0.001	244528	40.6	42.0	3.2	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	395429	-41.3
Hexabromobiphenyl	1429847	482259	-66.3 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	338859	7.5
Hexabromobiphenyl	513946	382708	-25.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
		ZB5 Col					ZB35 Col			
Aroclor-1248	1	8.405	0.000	48505	251.4	1	8.308	0.000	41349	255.6
Aroclor-1248	2	8.580	0.000	62195	253.6	2	8.714	0.000	42780	255.7
Aroclor-1248	3	8.998	0.000	119655	258.6	3	9.167	0.000	49502	257.1
Aroclor-1248	4	9.293	0.000	57409	243.7	4	9.591	0.000	57234	247.6
Total Col1Ave (4 peaks):					251.8	Total Col2Ave (4 peaks):				254.0 RPD = 1
Corrected Ave (3 peaks):					249.6	Corrected Ave (3 peaks):				253.0 RPD = 1
CalAmt %D:					0.7	CalAmt %D:				1.6

Total PCB Area Col1 (5.906 - 13.793) = 950611 Col1 Total PCB = 0.2 ppm*

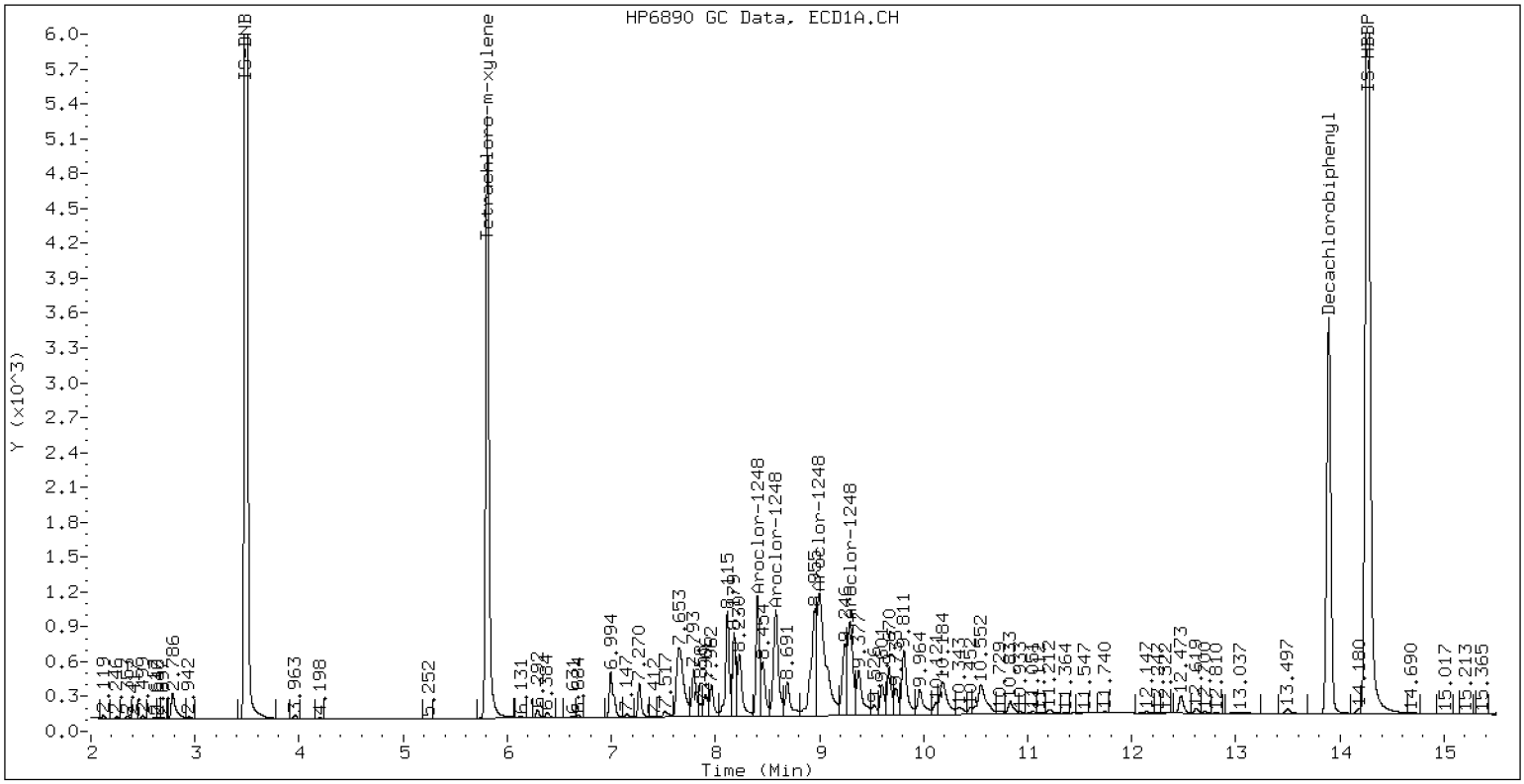
Total PCB Area Col2 (5.786 - 14.017) = 804795 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

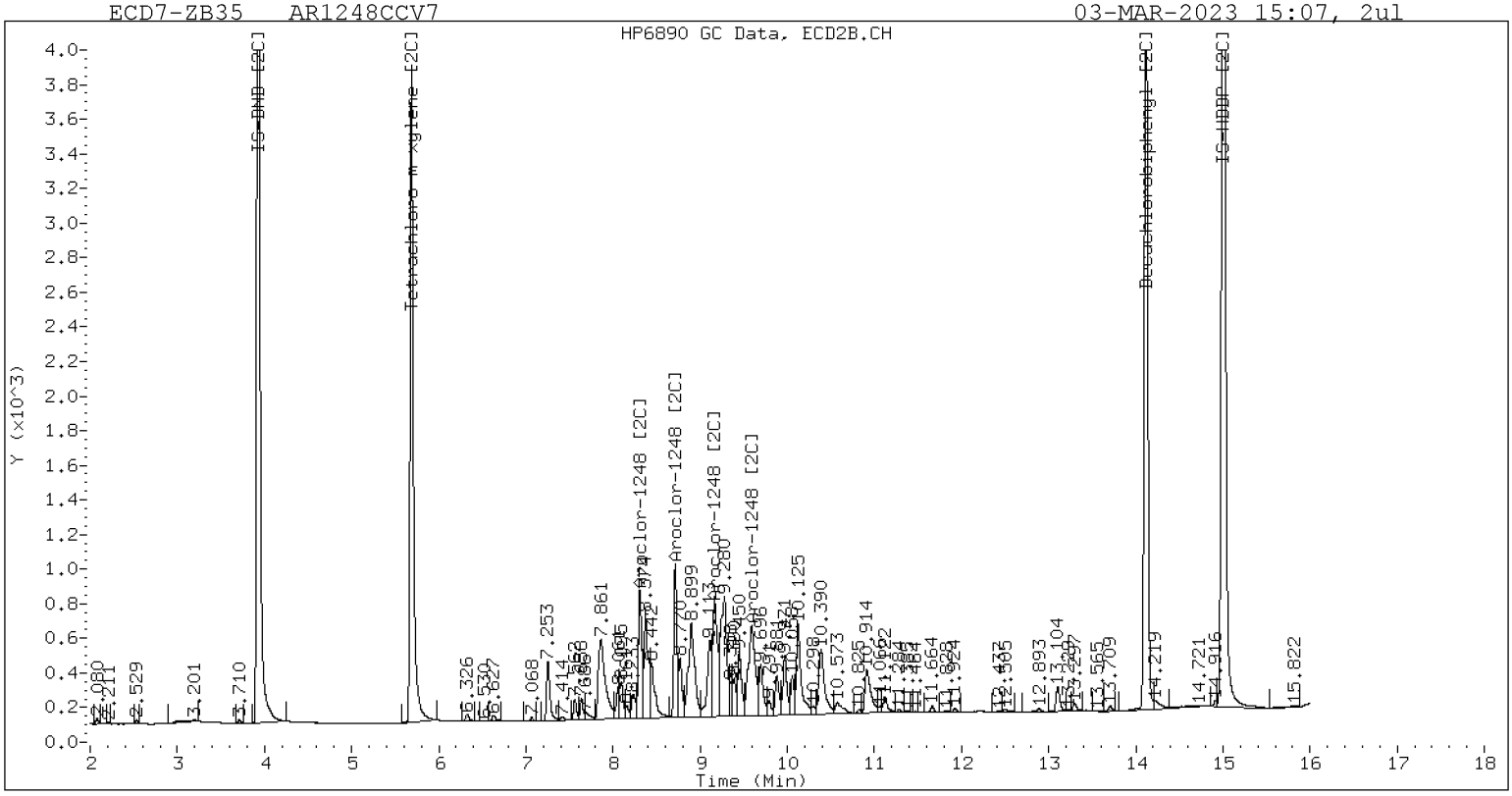
PCB Dual Column Chromatograms

ECD7-ZB5 AR1248CCV7 03-MAR-2023 15:07, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1248CCV7 03-MAR-2023 15:07, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022365ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV8	Injection Time:	15:28
Sequence Name:	AR1660CCV8		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	277	0.0493662	0.0548275		10.7	+/-20	
Aroclor-1016 (1)	A	250.00	272	0.0303852	0.0331060		8.8		
Aroclor-1016 (2)	A	250.00	279	0.0926308	0.1035040		11.6		
Aroclor-1016 (3)	A	250.00	278	0.0452180	0.0502041		11.2		
Aroclor-1016 (4)	A	250.00	278	0.0292307	0.0324958		11.2		
Aroclor 1016 [2C]	A	250.00	264	0.0545857	0.0587281		5.7	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	252	0.0468313	0.0472811		0.8		
Aroclor-1016 (2) [2C]	A	250.00	286	0.0949676	0.1085076		14.4		
Aroclor-1016 (3) [2C]	A	250.00	249	0.0428922	0.0428029		-0.4		
Aroclor-1016 (4) [2C]	A	250.00	270	0.0336515	0.0363210		8.0		
Aroclor 1260	A	250.00	391	0.0392091	0.0613203		56.4	+/-20	*
Aroclor-1260 (1)	A	250.00	395	0.0287785	0.0454486		58.0		
Aroclor-1260 (2)	A	250.00	412	0.0300690	0.0494939		64.8		
Aroclor-1260 (3)	A	250.00	388	0.0797517	0.1239042		55.2		
Aroclor-1260 (4)	A	250.00	384	0.0401599	0.0617162		53.6		
Aroclor-1260 (5)	A	250.00	376	0.0172866	0.0260385		50.4		
Aroclor 1260 [2C]	A	250.00	276	0.0699688	0.0790206		10.3	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	260	0.0470406	0.0489347		4.0		
Aroclor-1260 (2) [2C]	A	250.00	299	0.1200523	0.1434354		19.6		
Aroclor-1260 (3) [2C]	A	250.00	267	0.0318590	0.0339954		6.8		
Aroclor-1260 (4) [2C]	A	250.00	277	0.0809231	0.0897170		10.8		
Decachlorobiphenyl	A	40.000	44.0	0.7878687	0.8663303		10.0	+/-20	
Tetrachlorometaxylene	A	40.000	42.7	1.1944880	1.2748920		6.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	41.3	1.2182710	1.2568840		3.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	43.3	1.1737210	1.2697190		8.3	+/-20	

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022365ECD7.D
Data file 2: /230302.b/230302.b/03022365ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCV8
Client ID:
Injection Date: 03-MAR-2023 15:28
Report Date: 03/06/2023 11:08
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.809	0.002	246035	5.688	0.002	207361	42.7	43.3	1.3	Tetrachloro-m-xylene
13.892	-0.001	226457	14.118	0.001	253286	44.0	41.3	6.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	385970	-42.7
Hexabromobiphenyl	1429847	522796	-63.4 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	326625	3.6
Hexabromobiphenyl	513946	403038	-21.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.270	0.001	39931	272.4	1	7.255	0.002	48260	252.4
Aroclor-1016	2	7.657	0.002	124842	279.3	2	7.860	0.000	110754	285.6
Aroclor-1016	3	7.793	0.002	60554	277.6	3	8.057	0.000	43689	249.5
Aroclor-1016	4	8.406	0.001	39195	277.9	4	8.308	0.002	37073	269.8
Total Col1Ave (4 peaks):					276.8	Total Col2Ave (4 peaks):				264.3 RPD = 5
Corrected Ave (3 peaks):					276.0	Corrected Ave (3 peaks):				257.2 RPD = 7
CalAmt %D:					10.7	CalAmt %D:				5.7
Aroclor-1260	1	11.045	0.001	74251	394.8	1	11.652	0.001	61633	260.1
Aroclor-1260	2	11.361	0.000	80860	411.5	2	11.918	0.000	180656	298.7
Aroclor-1260	3	11.734	0.001	202427	388.4	3	12.435	0.001	42817	266.8
Aroclor-1260	4	12.139	0.001	100828	384.2	4	12.501	-0.000	112998	277.2
Aroclor-1260	5	12.243	-0.001	42540	376.6	NS	---			----
Total Col1Ave (5 peaks):					391.1	Total Col2Ave (4 peaks):				275.7 RPD = 35
Corrected Ave (4 peaks):					386.0	Corrected Ave (3 peaks):				268.0 RPD = 36
CalAmt %D:					56.4	CalAmt %D:				10.3

Total PCB Area Col1 (5.906 - 13.793) = 2326090 Col1 Total PCB = 0.5 ppm*

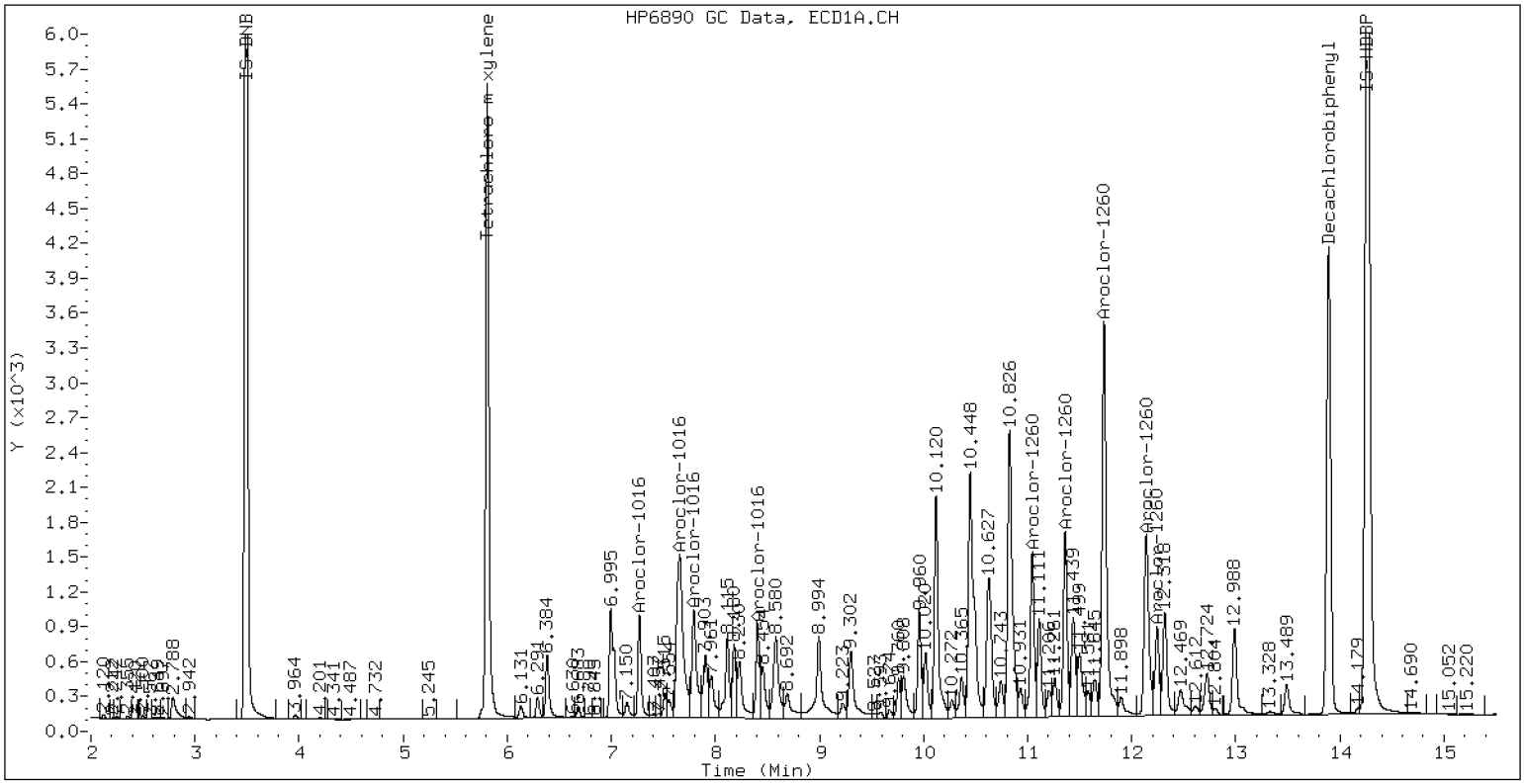
Total PCB Area Col2 (5.786 - 14.017) = 1760009 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

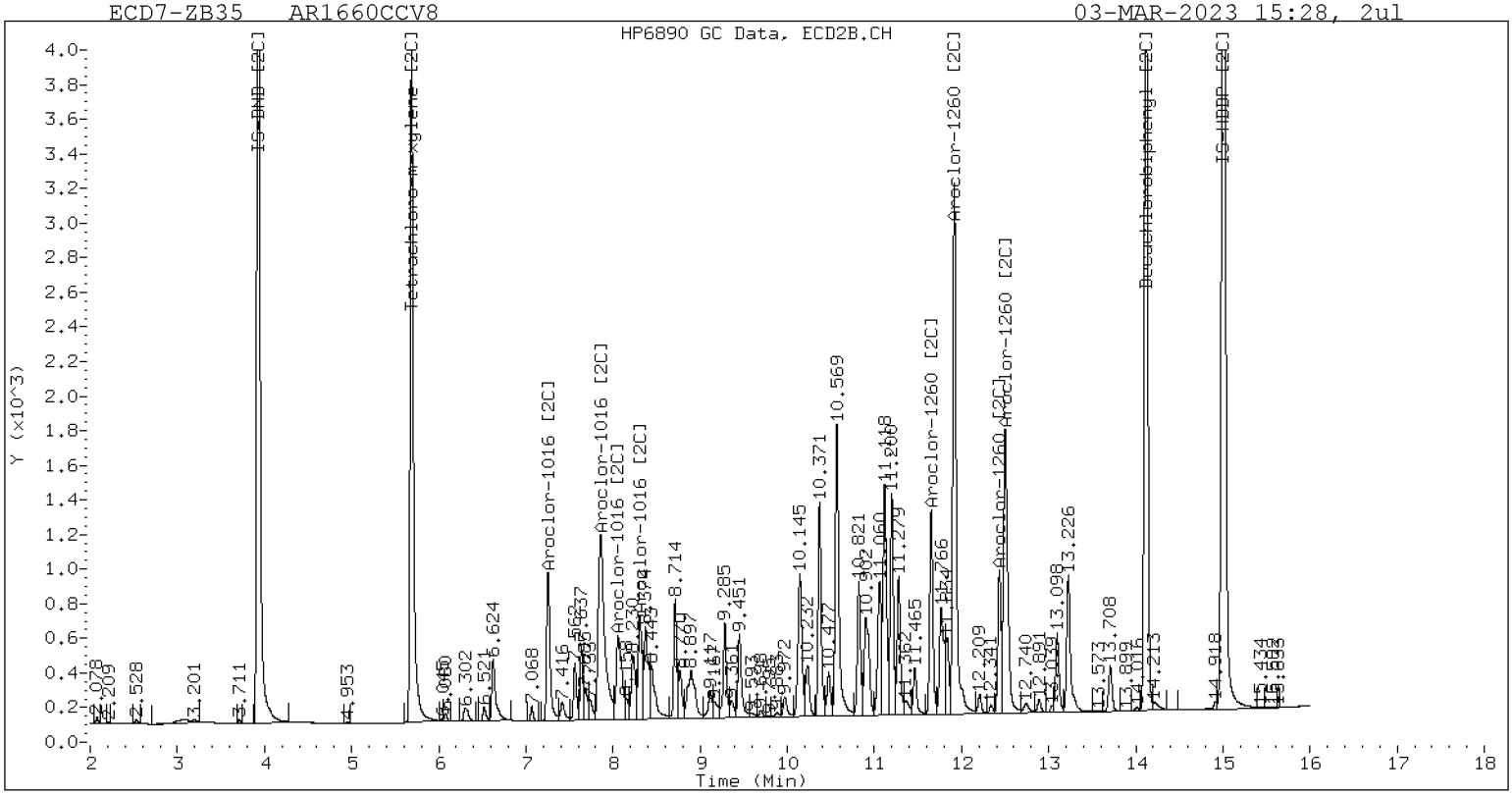
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCV8 03-MAR-2023 15:28, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCV8 03-MAR-2023 15:28, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022379ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCV9	Injection Time:	20:22
Sequence Name:	AR1242CCV9		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
Aroclor 1242	A	250.00	249	0.0395340	0.0394088		-0.5	+/-20
Aroclor-1242 (1)	A	250.00	251		0.0248635			
Aroclor-1242 (2)	A	250.00	250		0.0752969			
Aroclor-1242 (3)	A	250.00	245		0.0229758			
Aroclor-1242 (4)	A	250.00	249		0.0344988			
Aroclor 1242 [2C]	A	250.00	254	0.0423092	0.0433225		1.7	+/-20
Aroclor-1242 (1) [2C]	A	250.00	254		0.0377032			
Aroclor-1242 (2) [2C]	A	250.00	261		0.0814711			
Aroclor-1242 (3) [2C]	A	250.00	252		0.0245410			
Aroclor-1242 (4) [2C]	A	250.00	250		0.0295749			
Decachlorobiphenyl	A	40.000	40.3	0.7878687	0.7933842		0.8	+/-20
Tetrachlorometaxylene	A	40.000	46.9	1.1944880	1.4016620		17.3	+/-20
Decachlorobiphenyl [2C]	A	40.000	40.4	1.2182710	1.2318270		1.0	+/-20
Tetrachlorometaxylene [2C]	A	40.000	46.8	1.1737210	1.3730560		17.0	+/-20

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022379ECD7.D
Data file 2: /230302.b/230302.b/03022379ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1242.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242CCV9
Client ID:
Injection Date: 03-MAR-2023 20:22
Report Date: 03/06/2023 11:08
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.807	0.001	287382	5.686	0.000	236143	46.9	46.8	0.3	Tetrachloro-m-xylene
13.893	0.001	264429	14.117	0.000	306662	40.3	40.4	0.4	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	410059	-39.1
Hexabromobiphenyl	1429847	666585	-53.4 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	343967	9.1
Hexabromobiphenyl	513946	497898	-3.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

	ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	7.270	0.000	31861	250.7	1	7.254	0.000	40527	253.6
Aroclor-1242	2	7.657	0.000	96488	250.0	2	7.861	0.000	87573	260.7
Aroclor-1242	3	8.405	0.000	29442	245.2	3	9.172	0.000	26379	252.4
Aroclor-1242	4	8.580	0.000	44208	249.1	4	9.598	0.000	31790	249.6
Total Col1Ave (4 peaks):					248.8	Total Col2Ave (4 peaks):				254.1 RPD = 2
Corrected Ave (3 peaks):					248.1	Corrected Ave (3 peaks):				251.8 RPD = 2
CalAmt %D:					-0.5	CalAmt %D:				1.6

Total PCB Area Col1 (5.906 - 13.793) = 769107 Col1 Total PCB = 0.2 ppm*

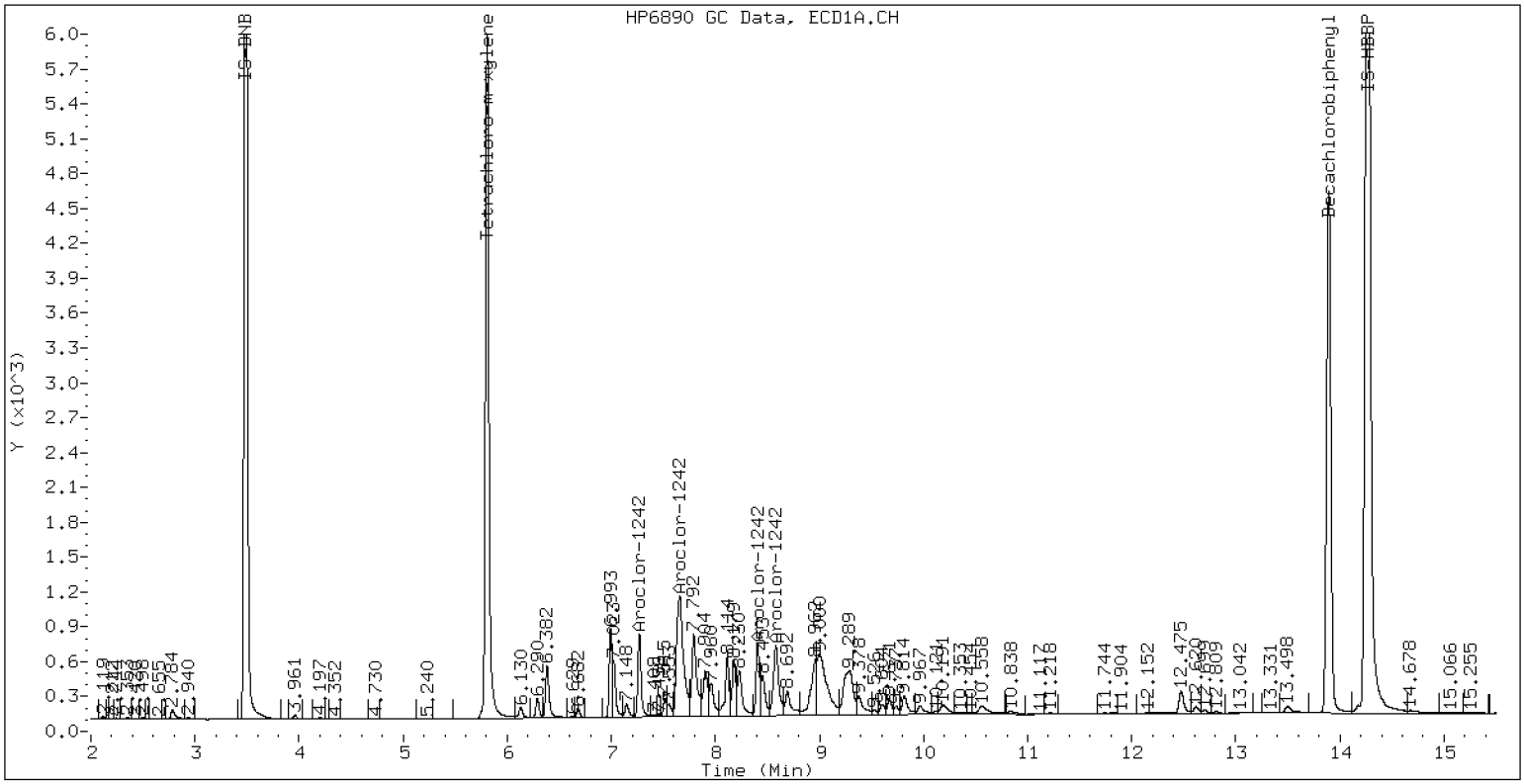
Total PCB Area Col2 (5.786 - 14.017) = 635351 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

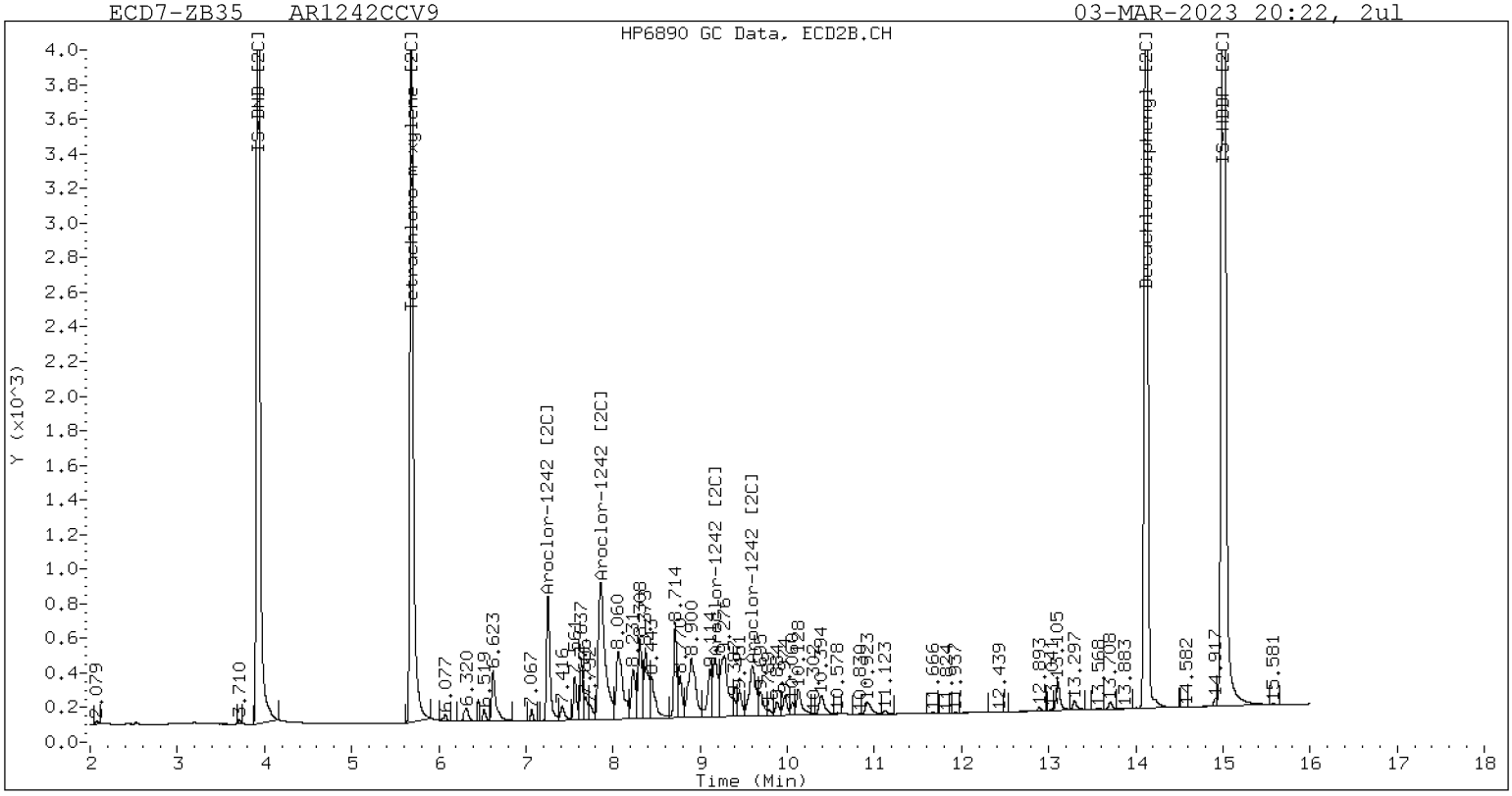
PCB Dual Column Chromatograms

ECD7-ZB5 AR1242CCV9 03-MAR-2023 20:22, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1242CCV9 03-MAR-2023 20:22, 2ul



ZB-35 Manual Integration: NO

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	ECD7	Calibration:	GB00069
Lab File ID:	03022380ECD7.D	Calibration Date:	02/24/2023
Sequence:	SLC0051	Injection Date:	03/03/23
Lab Sample ID:	SLC0051-CCVA	Injection Time:	20:43
Sequence Name:	AR1660CCVA		

		CONC. (ug/L)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
Aroclor 1016	A	250.00	270	0.0493662	0.0535448		7.9	+/-20	
Aroclor-1016 (1)	A	250.00	266	0.0303852	0.0323833		6.4		
Aroclor-1016 (2)	A	250.00	273	0.0926308	0.1012203		9.2		
Aroclor-1016 (3)	A	250.00	271	0.0452180	0.0490841		8.4		
Aroclor-1016 (4)	A	250.00	269	0.0292307	0.0314916		7.6		
Aroclor 1016 [2C]	A	250.00	253	0.0545857	0.0562544		1.1	+/-20	
Aroclor-1016 (1) [2C]	A	250.00	242	0.0468313	0.0453645		-3.2		
Aroclor-1016 (2) [2C]	A	250.00	274	0.0949676	0.1042404		9.6		
Aroclor-1016 (3) [2C]	A	250.00	236	0.0428922	0.0405664		-5.6		
Aroclor-1016 (4) [2C]	A	250.00	259	0.0336515	0.0348462		3.6		
Aroclor 1260	A	250.00	351	0.0392091	0.0551351		40.6	+/-20	*
Aroclor-1260 (1)	A	250.00	338	0.0287785	0.0389511		35.2		
Aroclor-1260 (2)	A	250.00	364	0.0300690	0.0438451		45.6		
Aroclor-1260 (3)	A	250.00	351	0.0797517	0.1119406		40.4		
Aroclor-1260 (4)	A	250.00	353	0.0401599	0.0566941		41.2		
Aroclor-1260 (5)	A	250.00	351	0.0172866	0.0242448		40.4		
Aroclor 1260 [2C]	A	250.00	243	0.0699688	0.0697313		-2.8	+/-20	
Aroclor-1260 (1) [2C]	A	250.00	227	0.0470406	0.0427688		-9.2		
Aroclor-1260 (2) [2C]	A	250.00	262	0.1200523	0.1259767		4.8		
Aroclor-1260 (3) [2C]	A	250.00	235	0.0318590	0.0299780		-6.0		
Aroclor-1260 (4) [2C]	A	250.00	248	0.0809231	0.0802015		-0.8		
Decachlorobiphenyl	A	40.000	45.3	0.7878687	0.8925842		13.3	+/-20	
Tetrachlorometaxylene	A	40.000	41.5	1.1944880	1.2395580		3.8	+/-20	
Decachlorobiphenyl [2C]	A	40.000	40.1	1.2182710	1.2201580		0.3	+/-20	
Tetrachlorometaxylene [2C]	A	40.000	41.6	1.1737210	1.2217220		4.0	+/-20	

* Values outside of QC limits

Analytical Resources Inc.
Dual Column 608/8082 PCB Quantitation Report

Data file 1: /230302.b/03022380ECD7.D
Data file 2: /230302.b/230302.b/03022380ECD7.D
Method: \\target\share\chem4\ecd7.i\230302.b\PCB.m
Compound Sublist: AR1660.sub
Instrument, Inj. Vol.: ecd7.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660CCVA
Client ID:
Injection Date: 03-MAR-2023 20:43
Report Date: 03/06/2023 11:08
Matrix: NONE
Dilution Factor: 1.0

SURROGATES

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
5.806	0.000	261556	5.686	0.000	214334	41.5	41.6	0.3	Tetrachloro-m-xylene
13.893	0.000	305121	14.117	0.000	303258	45.3	40.1	12.3	Decachlorobiphenyl

* Indicates RPD > 40%

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	673778	422015	-37.4
Hexabromobiphenyl	1429847	683680	-52.2 <-

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	315256	350872	11.3
Hexabromobiphenyl	513946	497080	-3.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 24-FEB-2023
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	7.269	0.000	42707	266.4	1	7.253	0.000	49741	242.2
Aroclor-1016	2	7.655	0.000	133489	273.2	2	7.859	0.000	114297	274.4
Aroclor-1016	3	7.791	0.000	64732	271.4	3	8.057	0.000	44480	236.4
Aroclor-1016	4	8.405	0.000	41531	269.3	4	8.306	0.000	38208	258.9
Total Col1Ave (4 peaks):					270.1	Total Col2Ave (4 peaks):				253.0 RPD = 7
Corrected Ave (3 peaks):					269.1	Corrected Ave (3 peaks):				245.8 RPD = 9
CalAmt %D:					8.0	CalAmt %D:				1.2
Aroclor-1260	1	11.044	0.000	83219	338.4	1	11.652	0.000	66436	227.3
Aroclor-1260	2	11.360	0.000	93675	364.5	2	11.918	0.000	195689	262.3
Aroclor-1260	3	11.733	0.000	239161	350.9	3	12.435	0.000	46567	235.2
Aroclor-1260	4	12.138	0.000	121127	352.9	4	12.502	0.000	124583	247.8
Aroclor-1260	5	12.244	0.000	51799	350.6	NS	---			----
Total Col1Ave (5 peaks):					351.5	Total Col2Ave (4 peaks):				243.2 RPD = 36
Corrected Ave (4 peaks):					348.2	Corrected Ave (3 peaks):				236.8 RPD = 38
CalAmt %D:					40.6	CalAmt %D:				-2.7

Total PCB Area Col1 (5.906 - 13.793) = 2627329 Col1 Total PCB = 0.5 ppm*

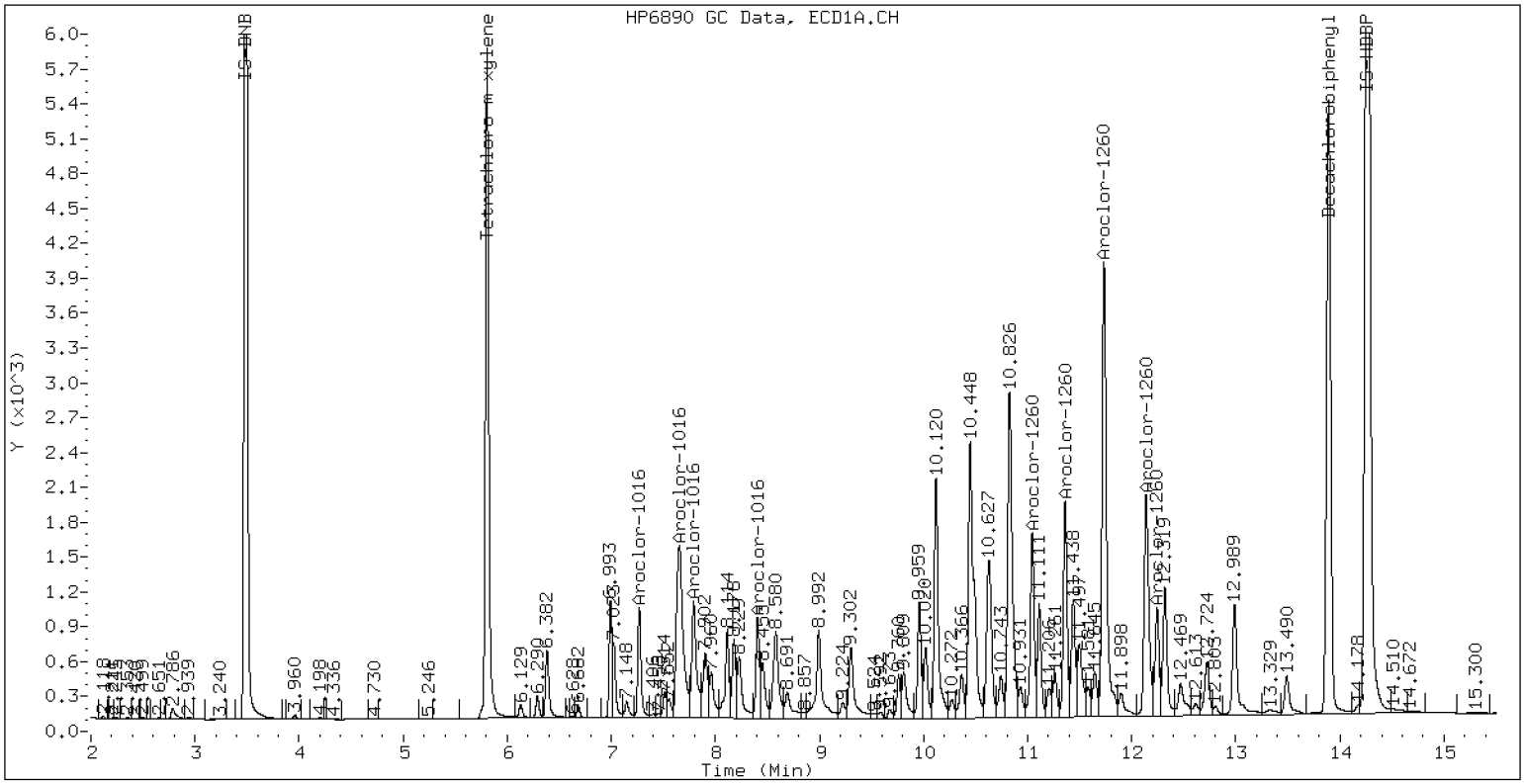
Total PCB Area Col2 (5.786 - 14.017) = 1862935 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

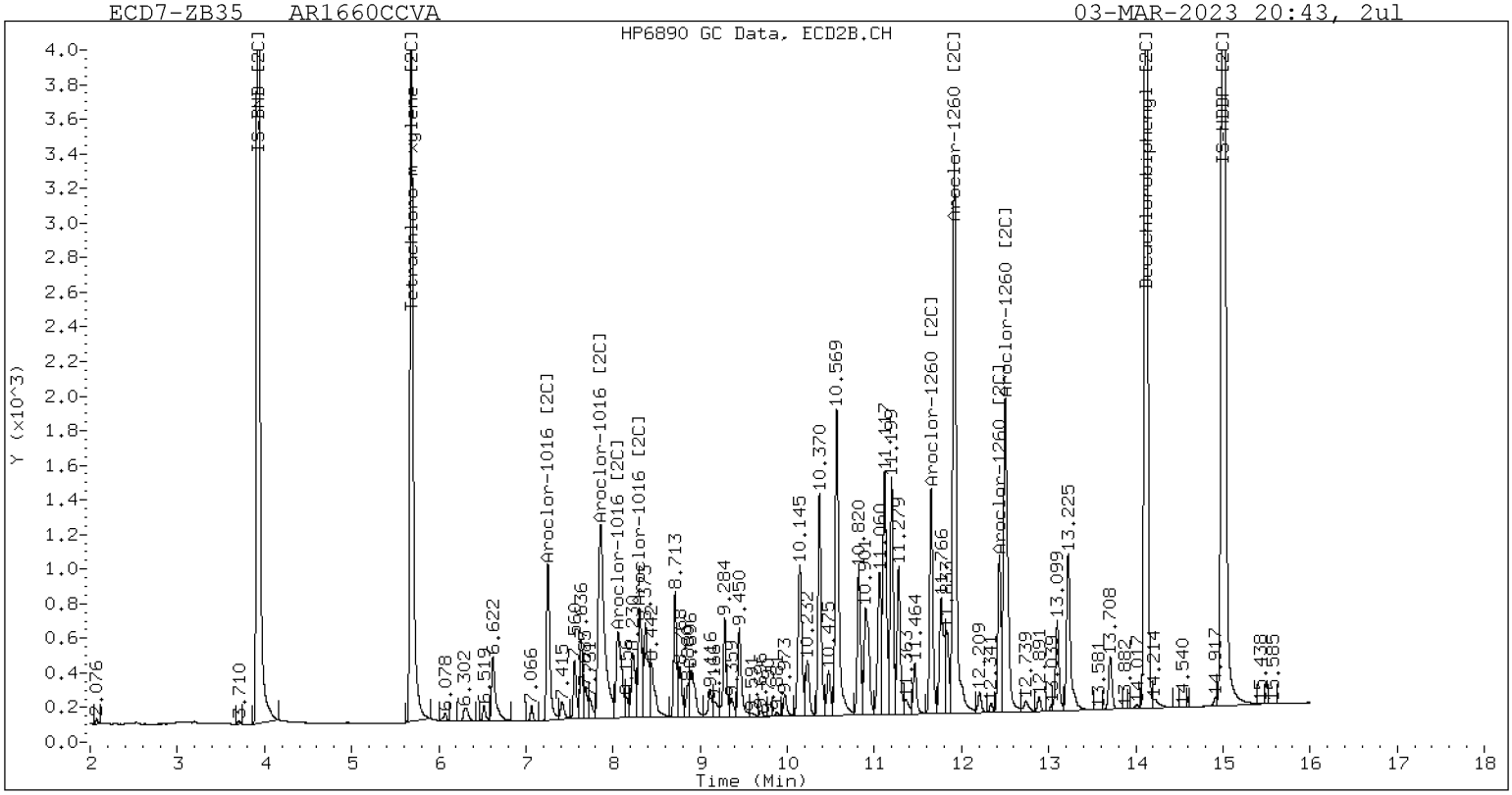
PCB Dual Column Chromatograms

ECD7-ZB5 AR1660CCVA 03-MAR-2023 20:43, 2ul



ZB-5 Manual Integration: NO

ECD7-ZB35 AR1660CCVA 03-MAR-2023 20:43, 2ul



ZB-35 Manual Integration: NO

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0342
Instrument: ECD7
Calibration: GB00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Cal Standard	SLB0342-CAL1	02242302ECD7.D	02242302ECD7.D	NA	02/24/23 11:12
Cal Standard	SLB0342-CAL2	02242303ECD7.D	02242303ECD7.D	NA	02/24/23 11:33
Cal Standard	SLB0342-CAL3	02242304ECD7.D	02242304ECD7.D	NA	02/24/23 11:54
Cal Standard	SLB0342-CAL4	02242305ECD7.D	02242305ECD7.D	NA	02/24/23 12:15
Cal Standard	SLB0342-CAL5	02242306ECD7.D	02242306ECD7.D	NA	02/24/23 12:36
Cal Standard	SLB0342-CAL6	02242307ECD7.D	02242307ECD7.D	NA	02/24/23 12:57
Cal Standard	SLB0342-CAL7	02242308ECD7.D	02242308ECD7.D	NA	02/24/23 13:18
Cal Standard	SLB0342-CAL8	02242309ECD7.D	02242309ECD7.D	NA	02/24/23 13:39
Cal Standard	SLB0342-CAL9	02242310ECD7.D	02242310ECD7.D	NA	02/24/23 14:00
Cal Standard	SLB0342-CALA	02242311ECD7.D	02242311ECD7.D	NA	02/24/23 14:21
Cal Standard	SLB0342-CALB	02242312ECD7.D	02242312ECD7.D	NA	02/24/23 14:42
Secondary Cal Check	SLB0342-SCV1	02242313ECD7.D	02242313ECD7.D	NA	02/24/23 15:03
Secondary Cal Check	SLB0342-SCV2	02242314ECD7.D	02242314ECD7.D	NA	02/24/23 15:24
Secondary Cal Check	SLB0342-SCV3	02242315ECD7.D	02242315ECD7.D	NA	02/24/23 15:45
Secondary Cal Check	SLB0342-SCV4	02242316ECD7.D	02242316ECD7.D	NA	02/24/23 16:06
Secondary Cal Check	SLB0342-SCV5	02242317ECD7.D	02242317ECD7.D	NA	02/24/23 16:27
Secondary Cal Check	SLB0342-SCV6	02242318ECD7.D	02242318ECD7.D	NA	02/24/23 16:48

Dual Column

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0051	Instrument:	ECD7
		Calibration:	GB00069

Sample Name	Lab Sample ID	Column 1 File ID	Column 2 File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLC0051-ICV1	03022302ECD7.D	03022302ECD7.D	NA	03/02/23 17:24
Initial Cal Check	SLC0051-ICV2	03022303ECD7.D	03022303ECD7.D	NA	03/02/23 17:45
Calibration Check	SLC0051-CCV1	03022319ECD7.D	03022319ECD7.D	NA	03/02/23 23:21
Calibration Check	SLC0051-CCV2	03022320ECD7.D	03022320ECD7.D	NA	03/02/23 23:42
Calibration Check	SLC0051-CCV3	03022335ECD7.D	03022335ECD7.D	NA	03/03/23 04:57
Calibration Check	SLC0051-CCV4	03022336ECD7.D	03022336ECD7.D	NA	03/03/23 05:18
Calibration Check	SLC0051-CCV5	03022347ECD7.D	03022347ECD7.D	NA	03/03/23 09:09
Calibration Check	SLC0051-CCV6	03022348ECD7.D	03022348ECD7.D	NA	03/03/23 09:30
Blank	BLB0580-BLK1	03022349ECD7.D	03022349ECD7.D	Solid	03/03/23 09:51
LCS	BLB0580-BS1	03022350ECD7.D	03022350ECD7.D	Solid	03/03/23 10:12
LCS Dup	BLB0580-BSD1	03022351ECD7.D	03022351ECD7.D	Solid	03/03/23 10:33
Reference	BLB0580-SRM1	03022352ECD7.D	03022352ECD7.D	Solid	03/03/23 10:54
LDW23-SS1010	23A0467-01	03022353ECD7.D	03022353ECD7.D	Solid	03/03/23 11:15
LDW23-SS1005	23A0467-02	03022354ECD7.D	03022354ECD7.D	Solid	03/03/23 11:36
LDW23-SS1006	23A0467-03	03022355ECD7.D	03022355ECD7.D	Solid	03/03/23 11:57
LDW23-SS1003	23A0467-04	03022356ECD7.D	03022356ECD7.D	Solid	03/03/23 12:18
LDW23-SS1004	23A0467-05	03022357ECD7.D	03022357ECD7.D	Solid	03/03/23 12:40
LDW23-SS1204	23A0467-06	03022358ECD7.D	03022358ECD7.D	Solid	03/03/23 13:01
LDW23-SS1238	23A0467-07	03022359ECD7.D	03022359ECD7.D	Solid	03/03/23 13:22
LDW23-SS1013	23A0467-08	03022360ECD7.D	03022360ECD7.D	Solid	03/03/23 13:43
LDW23-SS1014	23A0467-09	03022361ECD7.D	03022361ECD7.D	Solid	03/03/23 14:04
LDW23-SS1014	BLB0580-MS1	03022362ECD7.D	03022362ECD7.D	Solid	03/03/23 14:25
LDW23-SS1014	BLB0580-MSD1	03022363ECD7.D	03022363ECD7.D	Solid	03/03/23 14:46
Calibration Check	SLC0051-CCV7	03022364ECD7.D	03022364ECD7.D	NA	03/03/23 15:07
Calibration Check	SLC0051-CCV8	03022365ECD7.D	03022365ECD7.D	NA	03/03/23 15:28
Calibration Check	SLC0051-CCV9	03022379ECD7.D	03022379ECD7.D	NA	03/03/23 20:22
Calibration Check	SLC0051-CCVA	03022380ECD7.D	03022380ECD7.D	NA	03/03/23 20:43

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0051

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/3/2023 3:36:23PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0051-ICV1	QC		1		L000862	L000844		
SLC0051-ICV2	QC		2		L000856	L000844		
BLB0718-BLK1	QC		3			L000844		
BLB0718-BS1	QC		4			L000844		
BLB0718-BSD1	QC		5			L000844		
BLB0718-SRM1	QC		6			L000844		
BLB0718-MS1	QC		7			L000844		
BLB0718-MSD1	QC		8			L000844		
23B0494-04	8082A PCB Solid 4	A 01	9			L000844	Anchor QEA, LLC	
BLB0401-BLK1	QC		10			L000844		
BLB0401-BS1	QC		11			L000844		
BLB0401-BSD1	QC		12			L000844		
23B0217-01	PCB (20 ug/kg) or (MTCA 0.	A 01	13			L000844	Nisqually Environmental	Use for waters
23B0293-01	PCB (20 ug/kg) or (MTCA 0.	A 01	14			L000844	The Boeing Company [NBF - Central Puget S	
SLC0051-CCV1	QC		15		L000861	L000844		
SLC0051-CCV2	QC		16		L000856	L000844		
BLB0499-BLK1	QC		17			L000844		
BLB0499-BS1	QC		18			L000844		
BLB0499-BSD1	QC		19			L000844		
BLB0499-SRM1	QC		20			L000844		
23A0455-01	8082A PCB Solid 4	A 03	21			L000844	Anchor QEA, LLC	

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0051

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/3/2023 3:36:23PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
23A0455-02	8082A PCB Solid 4	A 03	22			L000844	Anchor QEA, LLC	
23A0455-03	8082A PCB Solid 4	A 03	23			L000844	Anchor QEA, LLC	
23A0455-04	8082A PCB Solid 4	A 03	24			L000844	Anchor QEA, LLC	
23A0455-05	8082A PCB Solid 4	A 03	25			L000844	Anchor QEA, LLC	
23A0455-06	8082A PCB Solid 4	A 03	26			L000844	Anchor QEA, LLC	
23A0455-07	8082A PCB Solid 4	A 03	27			L000844	Anchor QEA, LLC	
23A0455-08	8082A PCB Solid 4	A 03	28			L000844	Anchor QEA, LLC	
23A0455-09	8082A PCB Solid 4	A 03	29			L000844	Anchor QEA, LLC	
23A0455-10	8082A PCB Solid 4	A 03	30			L000844	Anchor QEA, LLC	
SLC0051-CCV3	QC		31		L000860	L000844		
SLC0051-CCV4	QC		32		L000856	L000844		
23A0455-11	8082A PCB Solid 4	A 03	33			L000844	Anchor QEA, LLC	
23A0455-12	8082A PCB Solid 4	A 03	34			L000844	Anchor QEA, LLC	
23A0455-13	8082A PCB Solid 4	A 03	35			L000844	Anchor QEA, LLC	
23A0455-14	8082A PCB Solid 4	A 03	36			L000844	Anchor QEA, LLC	
23A0455-15	8082A PCB Solid 4	A 03	37			L000844	Anchor QEA, LLC	
23A0455-16	8082A PCB Solid 4	A 03	38			L000844	Anchor QEA, LLC	
23A0455-17	8082A PCB Solid 4	A 03	39			L000844	Anchor QEA, LLC	
23A0455-18	8082A PCB Solid 4	A 03	40			L000844	Anchor QEA, LLC	
BLB0499-MS1	QC		41			L000844		
BLB0499-MSD1	QC		42			L000844		

Samples Loaded By Date

Data Processed By Date

ANALYSIS SEQUENCE

SLC0051

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/3/2023 3:36:23PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
SLC0051-CCV5	QC		43		L000862	L000844		
SLC0051-CCV6	QC		44		L000856	L000844		
BLB0580-BLK1	QC		45			L000844		
BLB0580-BS1	QC		46			L000844		
BLB0580-BSD1	QC		47			L000844		
BLB0580-SRM1	QC		48			L000844		
23A0467-01	8082A PCB Solid 4	A 03	49			L000844	Anchor QEA, LLC	
23A0467-02	8082A PCB Solid 4	A 03	50			L000844	Anchor QEA, LLC	
23A0467-03	8082A PCB Solid 4	A 03	51			L000844	Anchor QEA, LLC	
23A0467-04	8082A PCB Solid 4	A 03	52			L000844	Anchor QEA, LLC	
23A0467-05	8082A PCB Solid 4	A 03	53			L000844	Anchor QEA, LLC	
23A0467-06	8082A PCB Solid 4	A 03	54			L000844	Anchor QEA, LLC	
23A0467-07	8082A PCB Solid 4	A 03	55			L000844	Anchor QEA, LLC	
23A0467-08	8082A PCB Solid 4	A 03	56			L000844	Anchor QEA, LLC	
23A0467-09	8082A PCB Solid 4	A 03	57			L000844	Anchor QEA, LLC	
BLB0580-MS1	QC		58			L000844		
BLB0580-MSD1	QC		59			L000844		
SLC0051-CCV7	QC		60		L000861	L000844		
SLC0051-CCV8	QC		61		L000856	L000844		
BLB0599-BLK1	QC		62			L000844		
BLB0599-BS1	QC		63			L000844		

Samples Loaded By Date

Data Processed By Date

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS SEQUENCE

SLC0051

Instrument: ECD7
Calibration ID: GB00069

Printed: 3/3/2023 3:36:23PM

Lab Number	Analysis	Container	Order	Position	STD ID	ISTD ID	Client	Comments
BLB0599-BSD1	QC		64			L000844		
23B0314-01	PCB (20 ug/kg) or (MTCA 0.	A 01	65			L000844	Integral Consulting, Inc.	Use this one
BLB0599-MS1	QC		66			L000844		
BLB0599-MSD1	QC		67			L000844		
23B0314-02	PCB (20 ug/kg) or (MTCA 0.	A 01	68			L000844	Integral Consulting, Inc.	Use this one
23B0494-01	8082A PCB Solid 4	A 01	69			L000844	Anchor QEA, LLC	
23B0494-02	8082A PCB Solid 4	A 01	70			L000844	Anchor QEA, LLC	
23B0494-03	8082A PCB Solid 4	A 01	71			L000844	Anchor QEA, LLC	
BLC0033-BLK1	QC		72			L000844		
BLC0033-BS1	QC		73			L000844		
23B0579-01	8082A PCB Water 0.01	A 01	74			L000844	The Boeing Company [North Boeing Field]	
SLC0051-CCV9	QC		75		L000860	L000844		
SLC0051-CCVA	QC		76		L000856	L000844		

Samples Loaded By Date

Data Processed By Date

GC LOG SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	02-MAR-2023 17:03	03022301ECD7.D	1	DDTS	
2	02-MAR-2023 17:24	03022302ECD7.D	1	AR1254ICV1	
3	02-MAR-2023 17:45	03022303ECD7.D	1	AR1660ICV2	
4	02-MAR-2023 18:06	03022304ECD7.D	1	BLB0718-BLK1	
5	02-MAR-2023 18:27	03022305ECD7.D	1	BLB0718-BS1	
6	02-MAR-2023 18:48	03022306ECD7.D	1	BLB0718-BSD1	
7	02-MAR-2023 19:09	03022307ECD7.D	1	BLB0718-SRM1	
8	02-MAR-2023 19:30	03022308ECD7.D	1	23B0494-01	
9	02-MAR-2023 19:51	03022309ECD7.D	1	23B0494-02	
10	02-MAR-2023 20:12	03022310ECD7.D	1	BLB0718-MS1	
11	02-MAR-2023 20:33	03022311ECD7.D	1	BLB0718-MSD1	
12	02-MAR-2023 20:54	03022312ECD7.D	1	23B0494-03	
13	02-MAR-2023 21:15	03022313ECD7.D	1	23B0494-04	
14	02-MAR-2023 21:36	03022314ECD7.D	1	BLB0401-BLK1	
15	02-MAR-2023 21:57	03022315ECD7.D	1	BLB0401-BS1	
16	02-MAR-2023 22:18	03022316ECD7.D	1	BLB0401-BSD1	
17	02-MAR-2023 22:39	03022317ECD7.D	1	23B0217-01	
18	02-MAR-2023 23:00	03022318ECD7.D	1	23B0293-01	
19	02-MAR-2023 23:21	03022319ECD7.D	1	AR1248CCV1	
20	02-MAR-2023 23:42	03022320ECD7.D	1	AR1660CCV2	
21	03-MAR-2023 00:03	03022321ECD7.D	1	BLB0499-BLK1	
22	03-MAR-2023 00:24	03022322ECD7.D	1	BLB0499-BS1	
23	03-MAR-2023 00:45	03022323ECD7.D	1	BLB0499-BSD1	
24	03-MAR-2023 01:06	03022324ECD7.D	1	BLB0499-SRM1	
25	03-MAR-2023 01:27	03022325ECD7.D	1	23S0455-01	
26	03-MAR-2023 01:48	03022326ECD7.D	1	23S0455-02	
27	03-MAR-2023 02:09	03022327ECD7.D	1	23S0455-03	
28	03-MAR-2023 02:30	03022328ECD7.D	1	23S0455-04	
29	03-MAR-2023 02:51	03022329ECD7.D	1	23S0455-05	
30	03-MAR-2023 03:12	03022330ECD7.D	1	23S0455-06	
31	03-MAR-2023 03:33	03022331ECD7.D	1	23S0455-07	
32	03-MAR-2023 03:54	03022332ECD7.D	1	23S0455-08	
33	03-MAR-2023 04:15	03022333ECD7.D	1	23S0455-09	
34	03-MAR-2023 04:36	03022334ECD7.D	1	23S0455-10	
35	03-MAR-2023 04:57	03022335ECD7.D	1	AR1242CCV3	
36	03-MAR-2023 05:18	03022336ECD7.D	1	AR1660CCV4	
37	03-MAR-2023 05:39	03022337ECD7.D	1	23S0455-11	
38	03-MAR-2023 06:00	03022338ECD7.D	1	23S0455-12	
39	03-MAR-2023 06:21	03022339ECD7.D	1	23S0455-13	
40	03-MAR-2023 06:42	03022340ECD7.D	1	23S0455-14	
41	03-MAR-2023 07:03	03022341ECD7.D	1	23S0455-15	
42	03-MAR-2023 07:24	03022342ECD7.D	1	23S0455-16	
43	03-MAR-2023 07:45	03022343ECD7.D	1	23S0455-17	
44	03-MAR-2023 08:06	03022344ECD7.D	1	23S0455-18	
45	03-MAR-2023 08:27	03022345ECD7.D	1	BLB0499-MS1	
46	03-MAR-2023 08:48	03022346ECD7.D	1	BLB0499-MSD1	
47	03-MAR-2023 09:09	03022347ECD7.D	1	AR1254CCV5	
48	03-MAR-2023 09:30	03022348ECD7.D	1	AR1660CCV6	
49	03-MAR-2023 09:51	03022349ECD7.D	1	BLB0580-BLK	
50	03-MAR-2023 10:12	03022350ECD7.D	1	BLB0580-BS1	

	Inject Date/Time	Filename	DF	LabID	ClientID
51	03-MAR-2023 10:33	03022351ECD7.D	1	BLB0580-BSD1	
52	03-MAR-2023 10:54	03022352ECD7.D	1	BLB0580-SRM1	
53	03-MAR-2023 11:15	03022353ECD7.D	1	23A0467-01	
54	03-MAR-2023 11:36	03022354ECD7.D	1	23A0467-02	
55	03-MAR-2023 11:57	03022355ECD7.D	1	23A0467-03	
56	03-MAR-2023 12:18	03022356ECD7.D	1	23A0467-04	
57	03-MAR-2023 12:40	03022357ECD7.D	1	23A0467-05	
58	03-MAR-2023 13:01	03022358ECD7.D	1	23A0467-06	
59	03-MAR-2023 13:22	03022359ECD7.D	1	23A0467-07	
60	03-MAR-2023 13:43	03022360ECD7.D	1	23A0467-08	
61	03-MAR-2023 14:04	03022361ECD7.D	1	23A0467-09	
62	03-MAR-2023 14:25	03022362ECD7.D	1	BLB0580-MS1	
63	03-MAR-2023 14:46	03022363ECD7.D	1	BLB0580-MSD1	
64	03-MAR-2023 15:07	03022364ECD7.D	1	AR1248CCV7	
65	03-MAR-2023 15:28	03022365ECD7.D	1	AR1660CCV8	
66	03-MAR-2023 15:49	03022366ECD7.D	1	BLB0599-BLK1	
67	03-MAR-2023 16:10	03022367ECD7.D	1	BLB0599-BS1	
68	03-MAR-2023 16:31	03022368ECD7.D	1	BLB0599-BSD1	
69	03-MAR-2023 16:52	03022369ECD7.D	1	23B0314-01	
70	03-MAR-2023 17:13	03022370ECD7.D	1	BLB0599-MS1	
71	03-MAR-2023 17:34	03022371ECD7.D	1	BLB0599-MSD1	
72	03-MAR-2023 17:55	03022372ECD7.D	1	23B0314-02	
73	03-MAR-2023 18:16	03022373ECD7.D	10	23B0494-01RE1	
74	03-MAR-2023 18:37	03022374ECD7.D	5	23B0494-02RE1	
75	03-MAR-2023 18:58	03022375ECD7.D	5	23B0494-03RE1	
76	03-MAR-2023 19:19	03022376ECD7.D	1	BLC0033-BLK1	
77	03-MAR-2023 19:40	03022377ECD7.D	1	BLC0033-BS1	
78	03-MAR-2023 20:01	03022378ECD7.D	1	23B0579-01	
79	03-MAR-2023 20:22	03022379ECD7.D	1	AR1242CCV9	
80	03-MAR-2023 20:43	03022380ECD7.D	1	AR1660CCVA	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

ARI Job No.: DDTS Method: PCB.m Instrument: ecd7.i Date: 02-MAR-2023

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1703	03022301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1724	03022302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1745	03022303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1806	03022304ECD7.D	BLB0718-BLK1		1	NO MANUAL INTEGRATION
1827	03022305ECD7.D	BLB0718-BS1		1	NO MANUAL INTEGRATION
1848	03022306ECD7.D	BLB0718-BSD1		1	NO MANUAL INTEGRATION
1909	03022307ECD7.D	BLB0718-SRM1		1	NO MANUAL INTEGRATION
1930	03022308ECD7.D	23B0494-01		1	NO MANUAL INTEGRATION
1951	03022309ECD7.D	23B0494-02		1	NO MANUAL INTEGRATION
2012	03022310ECD7.D	BLB0718-MS1		1	NO MANUAL INTEGRATION
2033	03022311ECD7.D	BLB0718-MSD1		1	NO MANUAL INTEGRATION
2054	03022312ECD7.D	23B0494-03		1	NO MANUAL INTEGRATION
2115	03022313ECD7.D	23B0494-04		1	NO MANUAL INTEGRATION
2136	03022314ECD7.D	BLB0401-BLK1		1	NO MANUAL INTEGRATION
2157	03022315ECD7.D	BLB0401-BS1		1	NO MANUAL INTEGRATION
2218	03022316ECD7.D	BLB0401-BSD1		1	NO MANUAL INTEGRATION
2239	03022317ECD7.D	23B0217-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2300	03022318ECD7.D	23B0293-01		1	NO MANUAL INTEGRATION
2321	03022319ECD7.D	AR1248CCV1		1	Aroclor-1248,
2342	03022320ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0003	03022321ECD7.D	BLB0499-BLK1		1	NO MANUAL INTEGRATION
0024	03022322ECD7.D	BLB0499-BS1		1	NO MANUAL INTEGRATION
0045	03022323ECD7.D	BLB0499-BSD1		1	NO MANUAL INTEGRATION
0106	03022324ECD7.D	BLB0499-SRM1		1	NO MANUAL INTEGRATION
0127	03022325ECD7.D	23S0455-01		1	Aroclor-1254,
0148	03022326ECD7.D	23S0455-02		1	Aroclor-1254,
0209	03022327ECD7.D	23S0455-03		1	Aroclor-1254,
0230	03022328ECD7.D	23S0455-04		1	Aroclor-1254,
0251	03022329ECD7.D	23S0455-05		1	NO MANUAL INTEGRATION
0312	03022330ECD7.D	23S0455-06		1	Aroclor-1254,
0333	03022331ECD7.D	23S0455-07		1	Aroclor-1254,
0354	03022332ECD7.D	23S0455-08		1	Aroclor-1254,
0415	03022333ECD7.D	23S0455-09		1	NO MANUAL INTEGRATION
0436	03022334ECD7.D	23S0455-10		1	NO MANUAL INTEGRATION
0457	03022335ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0518	03022336ECD7.D	AR1660CCV4		1	NO MANUAL INTEGRATION
0539	03022337ECD7.D	23S0455-11		1	Aroclor-1254,
0600	03022338ECD7.D	23S0455-12		1	Aroclor-1254,
0621	03022339ECD7.D	23S0455-13		1	Aroclor-1254,
0642	03022340ECD7.D	23S0455-14		1	Aroclor-1254,
0703	03022341ECD7.D	23S0455-15		1	Aroclor-1254,
0724	03022342ECD7.D	23S0455-16		1	Aroclor-1254,
0745	03022343ECD7.D	23S0455-17		1	NO MANUAL INTEGRATION
0806	03022344ECD7.D	23S0455-18		1	Aroclor-1254,
0827	03022345ECD7.D	BLB0499-MS1		1	NO MANUAL INTEGRATION
0848	03022346ECD7.D	BLB0499-MSD1		1	NO MANUAL INTEGRATION
0909	03022347ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0930	03022348ECD7.D	AR1660CCV6		1	NO MANUAL INTEGRATION
0951	03022349ECD7.D	BLB0580-BLK		1	NO MANUAL INTEGRATION
1012	03022350ECD7.D	BLB0580-BS1		1	NO MANUAL INTEGRATION
1033	03022351ECD7.D	BLB0580-BSD1		1	NO MANUAL INTEGRATION
1054	03022352ECD7.D	BLB0580-SRM1		1	NO MANUAL INTEGRATION
1115	03022353ECD7.D	23A0467-01		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1136	03022354ECD7.D	23A0467-02		1	Aroclor-1254,
1157	03022355ECD7.D	23A0467-03		1	Aroclor-1254,
1218	03022356ECD7.D	23A0467-04		1	Aroclor-1254,
1240	03022357ECD7.D	23A0467-05		1	Aroclor-1254,
1301	03022358ECD7.D	23A0467-06		1	NO MANUAL INTEGRATION
1322	03022359ECD7.D	23A0467-07		1	Aroclor-1254,
1343	03022360ECD7.D	23A0467-08		1	Aroclor-1254,
1404	03022361ECD7.D	23A0467-09		1	Aroclor-1254,
1425	03022362ECD7.D	BLB0580-MS1		1	NO MANUAL INTEGRATION
1446	03022363ECD7.D	BLB0580-MSD1		1	NO MANUAL INTEGRATION
1507	03022364ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
1528	03022365ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
1549	03022366ECD7.D	BLB0599-BLK1		1	NO MANUAL INTEGRATION
1610	03022367ECD7.D	BLB0599-BS1		1	NO MANUAL INTEGRATION
1631	03022368ECD7.D	BLB0599-BSD1		1	NO MANUAL INTEGRATION
1652	03022369ECD7.D	23B0314-01		1	NO MANUAL INTEGRATION
1713	03022370ECD7.D	BLB0599-MS1		1	NO MANUAL INTEGRATION
1734	03022371ECD7.D	BLB0599-MSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1755	03022372ECD7.D	23B0314-02		1	NO MANUAL INTEGRATION
1816	03022373ECD7.D	23B0494-01RE1		10	NO MANUAL INTEGRATION
1837	03022374ECD7.D	23B0494-02RE1		5	Aroclor-1254,
1858	03022375ECD7.D	23B0494-03RE1		5	NO MANUAL INTEGRATION
1919	03022376ECD7.D	BLC0033-BLK1		1	NO MANUAL INTEGRATION
1940	03022377ECD7.D	BLC0033-BS1		1	NO MANUAL INTEGRATION
2001	03022378ECD7.D	23B0579-01		1	NO MANUAL INTEGRATION
2022	03022379ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
2043	03022380ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION
1703	03022301ECD7.D	DDTS		1	NO MANUAL INTEGRATION
1724	03022302ECD7.D	AR1254ICV1		1	NO MANUAL INTEGRATION
1745	03022303ECD7.D	AR1660ICV2		1	NO MANUAL INTEGRATION
1806	03022304ECD7.D	BLB0718-BLK1		1	NO MANUAL INTEGRATION
1827	03022305ECD7.D	BLB0718-BS1		1	NO MANUAL INTEGRATION
1848	03022306ECD7.D	BLB0718-BSD1		1	NO MANUAL INTEGRATION
1909	03022307ECD7.D	BLB0718-SRM1		1	NO MANUAL INTEGRATION
1930	03022308ECD7.D	23B0494-01		1	NO MANUAL INTEGRATION
1951	03022309ECD7.D	23B0494-02		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2012	03022310ECD7.D	BLB0718-MS1		1	NO MANUAL INTEGRATION
2033	03022311ECD7.D	BLB0718-MSD1		1	NO MANUAL INTEGRATION
2054	03022312ECD7.D	23B0494-03		1	NO MANUAL INTEGRATION
2115	03022313ECD7.D	23B0494-04		1	NO MANUAL INTEGRATION
2136	03022314ECD7.D	BLB0401-BLK1		1	NO MANUAL INTEGRATION
2157	03022315ECD7.D	BLB0401-BS1		1	NO MANUAL INTEGRATION
2218	03022316ECD7.D	BLB0401-BSD1		1	NO MANUAL INTEGRATION
2239	03022317ECD7.D	23B0217-01		1	NO MANUAL INTEGRATION
2300	03022318ECD7.D	23B0293-01		1	NO MANUAL INTEGRATION
2321	03022319ECD7.D	AR1248CCV1		1	NO MANUAL INTEGRATION
2342	03022320ECD7.D	AR1660CCV2		1	NO MANUAL INTEGRATION
0003	03022321ECD7.D	BLB0499-BLK1		1	NO MANUAL INTEGRATION
0024	03022322ECD7.D	BLB0499-BS1		1	NO MANUAL INTEGRATION
0045	03022323ECD7.D	BLB0499-BSD1		1	NO MANUAL INTEGRATION
0106	03022324ECD7.D	BLB0499-SRM1		1	NO MANUAL INTEGRATION
0127	03022325ECD7.D	23S0455-01		1	Aroclor-1248 [2C],
0148	03022326ECD7.D	23S0455-02		1	Aroclor-1248 [2C],
0209	03022327ECD7.D	23S0455-03		1	Aroclor-1248 [2C],

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0230	03022328ECD7.D	23S0455-04		1	Aroclor-1248 [2C],
0251	03022329ECD7.D	23S0455-05		1	Aroclor-1248 [2C],
0312	03022330ECD7.D	23S0455-06		1	Aroclor-1248 [2C],
0333	03022331ECD7.D	23S0455-07		1	Aroclor-1248 [2C],
0354	03022332ECD7.D	23S0455-08		1	Aroclor-1248 [2C],
0415	03022333ECD7.D	23S0455-09		1	Aroclor-1248 [2C],
0436	03022334ECD7.D	23S0455-10		1	Aroclor-1248 [2C],
0457	03022335ECD7.D	AR1242CCV3		1	NO MANUAL INTEGRATION
0518	03022336ECD7.D	AR1660CCV4		1	Aroclor-1260 [2C],
0539	03022337ECD7.D	23S0455-11		1	Aroclor-1248 [2C],
0600	03022338ECD7.D	23S0455-12		1	Aroclor-1248 [2C],
0621	03022339ECD7.D	23S0455-13		1	Aroclor-1248 [2C],
0642	03022340ECD7.D	23S0455-14		1	Aroclor-1248 [2C],
0703	03022341ECD7.D	23S0455-15		1	NO MANUAL INTEGRATION
0724	03022342ECD7.D	23S0455-16		1	Aroclor-1248 [2C],
0745	03022343ECD7.D	23S0455-17		1	NO MANUAL INTEGRATION
0806	03022344ECD7.D	23S0455-18		1	NO MANUAL INTEGRATION
0827	03022345ECD7.D	BLB0499-MS1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0848	03022346ECD7.D	BLB0499-MSD1		1	NO MANUAL INTEGRATION
0909	03022347ECD7.D	AR1254CCV5		1	NO MANUAL INTEGRATION
0930	03022348ECD7.D	AR1660CCV6		1	Aroclor-1260 [2C],
0951	03022349ECD7.D	BLB0580-BLK		1	NO MANUAL INTEGRATION
1012	03022350ECD7.D	BLB0580-BS1		1	NO MANUAL INTEGRATION
1033	03022351ECD7.D	BLB0580-BSD1		1	NO MANUAL INTEGRATION
1054	03022352ECD7.D	BLB0580-SRM1		1	NO MANUAL INTEGRATION
1115	03022353ECD7.D	23A0467-01		1	Aroclor-1248 [2C],
1136	03022354ECD7.D	23A0467-02		1	Aroclor-1248 [2C],
1157	03022355ECD7.D	23A0467-03		1	Aroclor-1248 [2C],
1218	03022356ECD7.D	23A0467-04		1	Aroclor-1248 [2C],
1240	03022357ECD7.D	23A0467-05		1	Aroclor-1248 [2C],
1301	03022358ECD7.D	23A0467-06		1	Aroclor-1248 [2C],
1322	03022359ECD7.D	23A0467-07		1	Aroclor-1248 [2C],
1343	03022360ECD7.D	23A0467-08		1	Aroclor-1248 [2C],
1404	03022361ECD7.D	23A0467-09		1	Aroclor-1248 [2C],
1425	03022362ECD7.D	BLB0580-MS1		1	NO MANUAL INTEGRATION
1446	03022363ECD7.D	BLB0580-MSD1		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - \\target\share\chem4\ecd7.i\230302.b\230302.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1507	03022364ECD7.D	AR1248CCV7		1	NO MANUAL INTEGRATION
1528	03022365ECD7.D	AR1660CCV8		1	NO MANUAL INTEGRATION
1549	03022366ECD7.D	BLB0599-BLK1		1	NO MANUAL INTEGRATION
1610	03022367ECD7.D	BLB0599-BS1		1	NO MANUAL INTEGRATION
1631	03022368ECD7.D	BLB0599-BSD1		1	NO MANUAL INTEGRATION
1652	03022369ECD7.D	23B0314-01		1	NO MANUAL INTEGRATION
1713	03022370ECD7.D	BLB0599-MS1		1	NO MANUAL INTEGRATION
1734	03022371ECD7.D	BLB0599-MSD1		1	NO MANUAL INTEGRATION
1755	03022372ECD7.D	23B0314-02		1	NO MANUAL INTEGRATION
1816	03022373ECD7.D	23B0494-01RE1		10	Aroclor-1248 [2C],
1837	03022374ECD7.D	23B0494-02RE1		5	Aroclor-1248 [2C],
1858	03022375ECD7.D	23B0494-03RE1		5	NO MANUAL INTEGRATION
1919	03022376ECD7.D	BLC0033-BLK1		1	NO MANUAL INTEGRATION
1940	03022377ECD7.D	BLC0033-BS1		1	NO MANUAL INTEGRATION
2001	03022378ECD7.D	23B0579-01		1	NO MANUAL INTEGRATION
2022	03022379ECD7.D	AR1242CCV9		1	NO MANUAL INTEGRATION
2043	03022380ECD7.D	AR1660CCVA		1	NO MANUAL INTEGRATION

Security Status Report

Date: 06-Mar-2023 10:30

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03022379ECD7.D	Data Locked	richardl, 06-Mar-2023 10:30
03022380ECD7.D	Data Locked	richardl, 06-Mar-2023 10:30

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLB0342
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLB0342-SCV1 (Water)			Lab File ID: 02242313ECD7.D			Analyzed: 02/24/23 15:03		
Decachlorobiphenyl	40.000	85.8	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	87.4	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	93.4	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	89.4	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV2 (Water)			Lab File ID: 02242314ECD7.D			Analyzed: 02/24/23 15:24		
Decachlorobiphenyl	40.000	92.5	80 - 120	13.895	13.89483	0.0002	N/A	
Tetrachlorometaxylene	40.000	84.1	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.12	14.11917	0.0008	N/A	
Tetrachlorometaxylene [2C]	40.000	86.3	80 - 120	5.686	5.687167	-0.0012	N/A	
SLB0342-SCV3 (Water)			Lab File ID: 02242315ECD7.D			Analyzed: 02/24/23 15:45		
Decachlorobiphenyl	40.000	82.8	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	87.2	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	90.8	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	91.0	80 - 120	5.687	5.687167	-0.0002	N/A	
SLB0342-SCV4 (Water)			Lab File ID: 02242316ECD7.D			Analyzed: 02/24/23 16:06		
Decachlorobiphenyl	40.000	86.6	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	90.3	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	94.8	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	92.7	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV5 (Water)			Lab File ID: 02242317ECD7.D			Analyzed: 02/24/23 16:27		
Decachlorobiphenyl	40.000	86.1	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	90.0	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	94.6	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	91.6	80 - 120	5.685	5.687167	-0.0022	N/A	
SLB0342-SCV6 (Water)			Lab File ID: 02242318ECD7.D			Analyzed: 02/24/23 16:48		
Decachlorobiphenyl	40.000	128	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	92.7	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	141	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	95.4	80 - 120	5.685	5.687167	-0.0022	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0051
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0051-ICV1 (Solid)			Lab File ID: 03022302ECD7.D			Analyzed: 03/02/23 17:24		
Decachlorobiphenyl	40.000	103	80 - 120	13.895	13.89483	0.0002	N/A	
Tetrachlorometaxylene	40.000	97.8	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	98.5	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0051-ICV2 (Solid)			Lab File ID: 03022303ECD7.D			Analyzed: 03/02/23 17:45		
Decachlorobiphenyl	40.000	110	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	103	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	106	80 - 120	5.687	5.687167	-0.0002	N/A	
SLC0051-CCV1 (Solid)			Lab File ID: 03022319ECD7.D			Analyzed: 03/02/23 23:21		
Decachlorobiphenyl	40.000	101	80 - 120	13.894	13.89483	-0.0008	N/A	
Tetrachlorometaxylene	40.000	98.0	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	99.0	80 - 120	14.119	14.11917	-0.0002	N/A	
Tetrachlorometaxylene [2C]	40.000	98.0	80 - 120	5.687	5.687167	-0.0002	N/A	
SLC0051-CCV2 (Solid)			Lab File ID: 03022320ECD7.D			Analyzed: 03/02/23 23:42		
Decachlorobiphenyl	40.000	111	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	105	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	97.0	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	105	80 - 120	5.687	5.687167	-0.0002	N/A	
SLC0051-CCV3 (Solid)			Lab File ID: 03022335ECD7.D			Analyzed: 03/03/23 04:57		
Decachlorobiphenyl	40.000	102	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	120	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	110	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	122	80 - 120	5.686	5.687167	-0.0012	N/A	*
SLC0051-CCV4 (Solid)			Lab File ID: 03022336ECD7.D			Analyzed: 03/03/23 05:18		
Decachlorobiphenyl	40.000	115	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.686	5.687167	-0.0012	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0051	Instrument:	ECD7
Calibration:	GB00069	Calibration Date:	02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0051-CCV5 (Solid)			Lab File ID: 03022347ECD7.D			Analyzed: 03/03/23 09:09		
Decachlorobiphenyl	40.000	110	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	98.5	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	107	80 - 120	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	100	80 - 120	5.686	5.687167	-0.0012	N/A	
SLC0051-CCV6 (Solid)			Lab File ID: 03022348ECD7.D			Analyzed: 03/03/23 09:30		
Decachlorobiphenyl	40.000	116	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	106	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	106	80 - 120	14.116	14.11917	-0.0032	N/A	
Tetrachlorometaxylene [2C]	40.000	107	80 - 120	5.686	5.687167	-0.0012	N/A	
BLB0580-BLK1 (Solid)			Lab File ID: 03022349ECD7.D			Analyzed: 03/03/23 09:51		
Decachlorobiphenyl	8.0000	95.6	40 - 126	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	8.0000	76.1	44 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	8.0000	97.7	40 - 126	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	8.0000	73.8	44 - 120	5.685	5.687167	-0.0022	N/A	
BLB0580-BS1 (Solid)			Lab File ID: 03022350ECD7.D			Analyzed: 03/03/23 10:12		
Decachlorobiphenyl	8.0000	94.4	40 - 126	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	8.0000	76.8	44 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	8.0000	97.6	40 - 126	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	8.0000	73.9	44 - 120	5.686	5.687167	-0.0012	N/A	
BLB0580-BSD1 (Solid)			Lab File ID: 03022351ECD7.D			Analyzed: 03/03/23 10:33		
Decachlorobiphenyl	8.0000	90.2	40 - 126	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	8.0000	76.2	44 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	8.0000	94.4	40 - 126	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	8.0000	71.1	44 - 120	5.686	5.687167	-0.0012	N/A	
BLB0580-SRM1 (Solid)			Lab File ID: 03022352ECD7.D			Analyzed: 03/03/23 10:54		
Decachlorobiphenyl	40.000	82.1	40 - 126	13.887	13.89483	-0.0078	N/A	
Tetrachlorometaxylene	40.000	69.6	44 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	79.4	40 - 126	14.114	14.11917	-0.0052	N/A	
Tetrachlorometaxylene [2C]	40.000	70.6	44 - 120	5.685	5.687167	-0.0022	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0051
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-01 (Solid)			Lab File ID: 03022353ECD7.D			Analyzed: 03/03/23 11:15		
Decachlorobiphenyl	7.9984	80.5	40 - 126	13.885	13.89483	-0.0098	N/A	
Tetrachlorometaxylene	7.9984	61.8	44 - 120	5.803	5.8095	-0.0065	N/A	
Decachlorobiphenyl [2C]	7.9984	76.9	40 - 126	14.111	14.11917	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9984	65.0	44 - 120	5.682	5.687167	-0.0052	N/A	
23A0467-02 (Solid)			Lab File ID: 03022354ECD7.D			Analyzed: 03/03/23 11:36		
Decachlorobiphenyl	7.9977	81.2	40 - 126	13.884	13.89483	-0.0108	N/A	
Tetrachlorometaxylene	7.9977	62.4	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9977	78.1	40 - 126	14.111	14.11917	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9977	67.4	44 - 120	5.681	5.687167	-0.0062	N/A	
23A0467-03 (Solid)			Lab File ID: 03022355ECD7.D			Analyzed: 03/03/23 11:57		
Decachlorobiphenyl	7.9888	79.7	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	7.9888	62.0	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9888	76.8	40 - 126	14.112	14.11917	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9888	67.2	44 - 120	5.681	5.687167	-0.0062	N/A	
23A0467-04 (Solid)			Lab File ID: 03022356ECD7.D			Analyzed: 03/03/23 12:18		
Decachlorobiphenyl	7.9994	76.9	40 - 126	13.884	13.89483	-0.0108	N/A	
Tetrachlorometaxylene	7.9994	58.7	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9994	75.8	40 - 126	14.112	14.11917	-0.0072	N/A	
Tetrachlorometaxylene [2C]	7.9994	61.8	44 - 120	5.682	5.687167	-0.0052	N/A	
23A0467-05 (Solid)			Lab File ID: 03022357ECD7.D			Analyzed: 03/03/23 12:40		
Decachlorobiphenyl	7.9978	82.3	40 - 126	13.885	13.89483	-0.0098	N/A	
Tetrachlorometaxylene	7.9978	64.4	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9978	80.8	40 - 126	14.111	14.11917	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9978	70.7	44 - 120	5.682	5.687167	-0.0052	N/A	
23A0467-06 (Solid)			Lab File ID: 03022358ECD7.D			Analyzed: 03/03/23 13:01		
Decachlorobiphenyl	7.9761	79.7	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	7.9761	62.2	44 - 120	5.803	5.8095	-0.0065	N/A	
Decachlorobiphenyl [2C]	7.9761	75.9	40 - 126	14.111	14.11917	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9761	64.7	44 - 120	5.681	5.687167	-0.0062	N/A	

SURROGATE RECOVERY AND RT SUMMARY
EPA 8082A

Laboratory: Analytical Resources, LLC
SDG/WO: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLC0051
Instrument: ECD7
Calibration: GB00069
Calibration Date: 02/24/2023

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
23A0467-07 (Solid)			Lab File ID: 03022359ECD7.D			Analyzed: 03/03/23 13:22		
Decachlorobiphenyl	7.9947	78.2	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	7.9947	63.6	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9947	75.2	40 - 126	14.113	14.11917	-0.0062	N/A	
Tetrachlorometaxylene [2C]	7.9947	69.2	44 - 120	5.682	5.687167	-0.0052	N/A	
23A0467-08 (Solid)			Lab File ID: 03022360ECD7.D			Analyzed: 03/03/23 13:43		
Decachlorobiphenyl	7.9898	77.6	40 - 126	13.885	13.89483	-0.0098	N/A	
Tetrachlorometaxylene	7.9898	58.9	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9898	74.9	40 - 126	14.111	14.11917	-0.0082	N/A	
Tetrachlorometaxylene [2C]	7.9898	62.6	44 - 120	5.682	5.687167	-0.0052	N/A	
23A0467-09 (Solid)			Lab File ID: 03022361ECD7.D			Analyzed: 03/03/23 14:04		
Decachlorobiphenyl	7.9973	89.8	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	7.9973	68.9	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	7.9973	86.6	40 - 126	14.113	14.11917	-0.0062	N/A	
Tetrachlorometaxylene [2C]	7.9973	70.0	44 - 120	5.683	5.687167	-0.0042	N/A	
BLB0580-MS1 (Solid)			Lab File ID: 03022362ECD7.D			Analyzed: 03/03/23 14:25		
Decachlorobiphenyl	8.0013	83.2	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	8.0013	68.8	44 - 120	5.805	5.8095	-0.0045	N/A	
Decachlorobiphenyl [2C]	8.0013	80.1	40 - 126	14.112	14.11917	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0013	70.9	44 - 120	5.683	5.687167	-0.0042	N/A	
BLB0580-MSD1 (Solid)			Lab File ID: 03022363ECD7.D			Analyzed: 03/03/23 14:46		
Decachlorobiphenyl	8.0013	81.1	40 - 126	13.886	13.89483	-0.0088	N/A	
Tetrachlorometaxylene	8.0013	66.5	44 - 120	5.804	5.8095	-0.0055	N/A	
Decachlorobiphenyl [2C]	8.0013	77.1	40 - 126	14.112	14.11917	-0.0072	N/A	
Tetrachlorometaxylene [2C]	8.0013	70.4	44 - 120	5.682	5.687167	-0.0052	N/A	
SLC0051-CCV7 (Solid)			Lab File ID: 03022364ECD7.D			Analyzed: 03/03/23 15:07		
Decachlorobiphenyl	40.000	102	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	97.5	80 - 120	5.807	5.8095	-0.0025	N/A	
Decachlorobiphenyl [2C]	40.000	105	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	99.3	80 - 120	5.687	5.687167	-0.0002	N/A	

SURROGATE RECOVERY AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG/WO:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0051	Instrument:	ECD7
Calibration:	GB00069	Calibration Date:	02/24/2023

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
SLC0051-CCV8 (Solid)			Lab File ID: 03022365ECD7.D			Analyzed: 03/03/23 15:28		
Decachlorobiphenyl	40.000	110	80 - 120	13.891	13.89483	-0.0038	N/A	
Tetrachlorometaxylene	40.000	107	80 - 120	5.808	5.8095	-0.0015	N/A	
Decachlorobiphenyl [2C]	40.000	103	80 - 120	14.118	14.11917	-0.0012	N/A	
Tetrachlorometaxylene [2C]	40.000	108	80 - 120	5.688	5.687167	0.0008	N/A	
SLC0051-CCV9 (Solid)			Lab File ID: 03022379ECD7.D			Analyzed: 03/03/23 20:22		
Decachlorobiphenyl	40.000	101	80 - 120	13.893	13.89483	-0.0018	N/A	
Tetrachlorometaxylene	40.000	117	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	101	80 - 120	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	117	80 - 120	5.685	5.687167	-0.0022	N/A	
SLC0051-CCVA (Solid)			Lab File ID: 03022380ECD7.D			Analyzed: 03/03/23 20:43		
Decachlorobiphenyl	40.000	113	80 - 120	13.892	13.89483	-0.0028	N/A	
Tetrachlorometaxylene	40.000	104	80 - 120	5.806	5.8095	-0.0035	N/A	
Decachlorobiphenyl [2C]	40.000	100	80 - 120	14.117	14.11917	-0.0022	N/A	
Tetrachlorometaxylene [2C]	40.000	104	80 - 120	5.685	5.687167	-0.0022	N/A	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLB0342	Instrument:	ECD7
		Calibration:	GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Secondary Cal Check (SLB0342-SCV1)		(Water)	Lab File ID: 02242313ECD7.D				Analyzed: 02/24/23 15:03		
1-Bromo-2-Nitrobenzene	645975	3.489	673778	3.493	96	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1524245	14.268	1429847	14.268	107	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	316115	3.927	315256	3.928	100	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	556950	15.007	513946	15.008	108	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV2)		(Water)	Lab File ID: 02242314ECD7.D				Analyzed: 02/24/23 15:24		
1-Bromo-2-Nitrobenzene	705650	3.493	673778	3.493	105	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	1555683	14.267	1429847	14.268	109	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	340433	3.929	315256	3.928	108	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl [2C]	565609	15.008	513946	15.008	110	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLB0342-SCV3)		(Water)	Lab File ID: 02242315ECD7.D				Analyzed: 02/24/23 15:45		
1-Bromo-2-Nitrobenzene	646554	3.49	673778	3.493	96	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl	1529451	14.268	1429847	14.268	107	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	316066	3.928	315256	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	557213	15.008	513946	15.008	108	50 - 200	0.000	+/-0.50	
Secondary Cal Check (SLB0342-SCV4)		(Water)	Lab File ID: 02242316ECD7.D				Analyzed: 02/24/23 16:06		
1-Bromo-2-Nitrobenzene	656887	3.488	673778	3.493	97	50 - 200	-0.005	+/-0.50	
Hexabromobiphenyl	1585505	14.267	1429847	14.268	111	50 - 200	-0.001	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	320936	3.925	315256	3.928	102	50 - 200	-0.003	+/-0.50	
Hexabromobiphenyl [2C]	570006	15.007	513946	15.008	111	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV5)		(Water)	Lab File ID: 02242317ECD7.D				Analyzed: 02/24/23 16:27		
1-Bromo-2-Nitrobenzene	661953	3.489	673778	3.493	98	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1574993	14.268	1429847	14.268	110	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	317807	3.926	315256	3.928	101	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	565951	15.007	513946	15.008	110	50 - 200	-0.001	+/-0.50	
Secondary Cal Check (SLB0342-SCV6)		(Water)	Lab File ID: 02242318ECD7.D				Analyzed: 02/24/23 16:48		
1-Bromo-2-Nitrobenzene	656592	3.489	673778	3.493	97	50 - 200	-0.004	+/-0.50	
Hexabromobiphenyl	1584453	14.268	1429847	14.268	111	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	314741	3.926	315256	3.928	100	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	568346	15.007	513946	15.008	111	50 - 200	-0.001	+/-0.50	

Analytical Resources, LLC
Analytical Chemists and Consultants

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0051	Instrument:	ECD7
		Calibration:	GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Initial Cal Check (SLC0051-ICV1)		(Solid)	Lab File ID: 03022302ECD7.D				Analyzed: 03/02/23 17:24		
1-Bromo-2-Nitrobenzene	369333	3.489	369333	3.489	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	653936	14.268	653936	14.268	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	314016	3.926	314016	3.926	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	466448	15.009	466448	15.009	100	50 - 200	0.000	+/-0.50	
Initial Cal Check (SLC0051-ICV2)		(Solid)	Lab File ID: 03022303ECD7.D				Analyzed: 03/02/23 17:45		
1-Bromo-2-Nitrobenzene	342425	3.488	342425	3.488	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	596552	14.268	596552	14.268	100	50 - 200	0.000	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	287682	3.928	287682	3.928	100	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	425765	15.007	425765	15.007	100	50 - 200	0.000	+/-0.50	
Blank (BLB0580-BLK1)		(Solid)	Lab File ID: 03022349ECD7.D				Analyzed: 03/03/23 09:51		
1-Bromo-2-Nitrobenzene	480425	3.488	342425	3.488	140	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	571392	14.262	596552	14.268	96	50 - 200	-0.006	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	415857	3.927	287682	3.928	145	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	425619	15.004	425765	15.007	100	50 - 200	-0.003	+/-0.50	
LCS (BLB0580-BS1)		(Solid)	Lab File ID: 03022350ECD7.D				Analyzed: 03/03/23 10:12		
1-Bromo-2-Nitrobenzene	477215	3.49	342425	3.488	139	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	606235	14.263	596552	14.268	102	50 - 200	-0.005	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	408875	3.928	287682	3.928	142	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	431652	15.005	425765	15.007	101	50 - 200	-0.002	+/-0.50	
LCS Dup (BLB0580-BSD1)		(Solid)	Lab File ID: 03022351ECD7.D				Analyzed: 03/03/23 10:33		
1-Bromo-2-Nitrobenzene	464843	3.489	342425	3.488	136	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	620264	14.261	596552	14.268	104	50 - 200	-0.007	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	402027	3.928	287682	3.928	140	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	436185	15.004	425765	15.007	102	50 - 200	-0.003	+/-0.50	
Reference (BLB0580-SRM1)		(Solid)	Lab File ID: 03022352ECD7.D				Analyzed: 03/03/23 10:54		
1-Bromo-2-Nitrobenzene	472191	3.49	342425	3.488	138	50 - 200	0.002	+/-0.50	
Hexabromobiphenyl	582774	14.255	596552	14.268	98	50 - 200	-0.013	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	394367	3.928	287682	3.928	137	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl [2C]	447231	15	425765	15.007	105	50 - 200	-0.007	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLC0051

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ECD7
Calibration: GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1010 (23A0467-01)		(Solid)	Lab File ID: 03022353ECD7.D				Analyzed: 03/03/23 11:15		
1-Bromo-2-Nitrobenzene	436568	3.488	342425	3.488	127	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	430586	14.25	596552	14.268	72	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	369071	3.927	287682	3.928	128	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	381164	14.996	425765	15.007	90	50 - 200	-0.011	+/-0.50	
LDW23-SS1005 (23A0467-02)		(Solid)	Lab File ID: 03022354ECD7.D				Analyzed: 03/03/23 11:36		
1-Bromo-2-Nitrobenzene	433381	3.488	342425	3.488	127	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	412807	14.25	596552	14.268	69	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	358117	3.926	287682	3.928	124	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	366451	14.994	425765	15.007	86	50 - 200	-0.013	+/-0.50	
LDW23-SS1006 (23A0467-03)		(Solid)	Lab File ID: 03022355ECD7.D				Analyzed: 03/03/23 11:57		
1-Bromo-2-Nitrobenzene	425758	3.488	342425	3.488	124	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	410474	14.25	596552	14.268	69	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	354562	3.927	287682	3.928	123	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	366361	14.996	425765	15.007	86	50 - 200	-0.011	+/-0.50	
LDW23-SS1003 (23A0467-04)		(Solid)	Lab File ID: 03022356ECD7.D				Analyzed: 03/03/23 12:18		
1-Bromo-2-Nitrobenzene	434960	3.489	342425	3.488	127	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	411284	14.25	596552	14.268	69	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	370903	3.927	287682	3.928	129	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	367729	14.996	425765	15.007	86	50 - 200	-0.011	+/-0.50	
LDW23-SS1004 (23A0467-05)		(Solid)	Lab File ID: 03022357ECD7.D				Analyzed: 03/03/23 12:40		
1-Bromo-2-Nitrobenzene	436353	3.489	342425	3.488	127	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	415851	14.251	596552	14.268	70	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	359672	3.927	287682	3.928	125	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	367030	14.995	425765	15.007	86	50 - 200	-0.012	+/-0.50	
LDW23-SS1204 (23A0467-06)		(Solid)	Lab File ID: 03022358ECD7.D				Analyzed: 03/03/23 13:01		
1-Bromo-2-Nitrobenzene	428901	3.489	342425	3.488	125	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	420992	14.251	596552	14.268	71	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	371679	3.927	287682	3.928	129	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	373158	14.995	425765	15.007	88	50 - 200	-0.012	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY

EPA 8082A

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0051	Instrument:	ECD7
		Calibration:	GB00069

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LDW23-SS1238 (23A0467-07)		(Solid)		Lab File ID: 03022359ECD7.D				Analyzed: 03/03/23 13:22	
1-Bromo-2-Nitrobenzene	449914	3.489	342425	3.488	131	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	448961	14.251	596552	14.268	75	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	373916	3.927	287682	3.928	130	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	392963	14.997	425765	15.007	92	50 - 200	-0.010	+/-0.50	
LDW23-SS1013 (23A0467-08)		(Solid)		Lab File ID: 03022360ECD7.D				Analyzed: 03/03/23 13:43	
1-Bromo-2-Nitrobenzene	436493	3.488	342425	3.488	127	50 - 200	0.000	+/-0.50	
Hexabromobiphenyl	419744	14.25	596552	14.268	70	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	371423	3.926	287682	3.928	129	50 - 200	-0.002	+/-0.50	
Hexabromobiphenyl [2C]	378341	14.996	425765	15.007	89	50 - 200	-0.011	+/-0.50	
LDW23-SS1014 (23A0467-09)		(Solid)		Lab File ID: 03022361ECD7.D				Analyzed: 03/03/23 14:04	
1-Bromo-2-Nitrobenzene	440272	3.489	342425	3.488	129	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	444892	14.252	596552	14.268	75	50 - 200	-0.016	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	382866	3.927	287682	3.928	133	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	391433	14.997	425765	15.007	92	50 - 200	-0.010	+/-0.50	
Matrix Spike (BLB0580-MS1)		(Solid)		Lab File ID: 03022362ECD7.D				Analyzed: 03/03/23 14:25	
1-Bromo-2-Nitrobenzene	450184	3.489	342425	3.488	131	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	442326	14.251	596552	14.268	74	50 - 200	-0.017	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	385386	3.927	287682	3.928	134	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	387626	14.996	425765	15.007	91	50 - 200	-0.011	+/-0.50	
Matrix Spike Dup (BLB0580-MSD1)		(Solid)		Lab File ID: 03022363ECD7.D				Analyzed: 03/03/23 14:46	
1-Bromo-2-Nitrobenzene	459066	3.489	342425	3.488	134	50 - 200	0.001	+/-0.50	
Hexabromobiphenyl	451074	14.25	596552	14.268	76	50 - 200	-0.018	+/-0.50	
1-Bromo-2-Nitrobenzene [2C]	381522	3.927	287682	3.928	133	50 - 200	-0.001	+/-0.50	
Hexabromobiphenyl [2C]	399032	14.997	425765	15.007	94	50 - 200	-0.010	+/-0.50	

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-01	File ID:	03022353ECD7.D
Sampled:	01/23/23 08:26	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:15
Solids:	49.91	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	53490.25	35.2	7.1
	2	8.298	8.307	0.009	31166	32.8	
Aroclor 1254	1	9.284	9.298	0.014	87804.2	40.6	21.3
	* 2	9.436	9.449	0.013	91005.6	50.3	
Aroclor 1260	1	11.032	11.04467	0.0127	48221	46.6	9.4
	* 2	11.641	11.6535	0.0125	63996	42.4	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-02	File ID:	03022354ECD7.D
Sampled:	01/23/23 08:39	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:36
Solids:	46.90	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	54776.5	36.2	2.5
	2	8.298	8.307	0.009	32893.25	35.3	
Aroclor 1254	1	9.285	9.298	0.013	76317	42.0	24.8
	* 2	9.436	9.449	0.013	94737.4	53.9	
Aroclor 1260	1	11.032	11.04467	0.0127	49420.2	49.6	5.6
	* 2	11.641	11.6535	0.0125	67767.75	46.9	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-03	File ID:	03022355ECD7.D
Sampled:	01/23/23 08:50	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 11:57
Solids:	47.96	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	59155.25	39.8	3.8
	2	8.298	8.307	0.009	35270.75	38.3	
Aroclor 1254	1	9.285	9.298	0.013	82056.2	45.4	27.2
	* 2	9.437	9.449	0.012	103866	59.7	
Aroclor 1260	1	11.032	11.04467	0.0127	57487.4	57.9	7.3
	* 2	11.641	11.6535	0.0125	78873	53.8	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-04	File ID:	03022356ECD7.D
Sampled:	01/23/23 09:03	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 12:18
Solids:	47.12	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	73528.5	48.3	6.4
	2	8.297	8.307	0.01	44316.75	45.3	
Aroclor 1254	1	9.284	9.298	0.014	102276	56.1	21.5
	* 2	9.437	9.449	0.012	125877.2	69.6	
Aroclor 1260	1	11.031	11.04467	0.0137	62883.8	64.0	8.
	* 2	11.641	11.6535	0.0125	86930.75	59.1	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-05	File ID:	03022357ECD7.D
Sampled:	01/23/23 09:42	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 12:40
Solids:	55.13	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	1	8.396	8.405	0.009	54475.75	36.0	4.1
	* 2	8.298	8.307	0.009	33479.75	37.5	
Aroclor 1254	1	9.285	9.298	0.013	68003.8	37.7	26.5
	* 2	9.437	9.449	0.012	86870	49.2	
Aroclor 1260	1	11.032	11.04467	0.0127	45317.6	44.9	5.3
	* 2	11.641	11.6535	0.0125	62299.25	42.6	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-06	File ID:	03022358ECD7.D
Sampled:	01/23/23 11:11	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:01
Solids:	47.24	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.395	8.405	0.01	40551.75	27.2	8.8
	2	8.297	8.307	0.01	24437.75	24.9	
Aroclor 1254	1	9.284	9.298	0.014	67213.6	31.5	20.3
	* 2	9.436	9.449	0.013	70646.8	38.6	
Aroclor 1260	1	11.032	11.04467	0.0127	38600.8	37.4	7.2
	* 2	11.642	11.6535	0.0115	51248.25	34.8	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-07	File ID:	03022359ECD7.D
Sampled:	01/23/23 11:35	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:22
Solids:	55.20	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	32301.75	20.7	1.
	2	8.298	8.307	0.009	19969.75	20.5	
Aroclor 1254	1	9.285	9.298	0.013	47692.2	25.1	26.
	* 2	9.438	9.449	0.011	59751.8	32.6	
Aroclor 1260	1	11.033	11.04467	0.0117	32309.2	30.0	2.
	* 2	11.643	11.6535	0.0105	45488	29.4	

* Column used for quantitation

Analytical Resources, LLC
Analytical Chemists and Consultants

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-08	File ID:	03022360ECD7.D
Sampled:	01/23/23 12:07	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 13:43
Solids:	48.38	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	65114.5	42.7	4.8
	2	8.298	8.307	0.009	39205	40.7	
Aroclor 1254	1	9.285	9.298	0.013	90437.4	49.0	21.
	* 2	9.436	9.449	0.013	110298.8	60.5	
Aroclor 1260	1	11.032	11.04467	0.0127	58153	57.5	8.3
	* 2	11.641	11.6535	0.0125	80233	52.9	

* Column used for quantitation

DUAL COLUMN CONFIRMATION SUMMARY

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-09	File ID:	03022361ECD7.D
Sampled:	01/23/23 12:26	Prepared:	02/23/23 11:54	Analyzed:	03/03/23 14:04
Solids:	63.83	Preparation:	EPA 3546 (Microwave)	Instrument:	ECD7
Batch:	BLB0580	Sequence:	SLC0051		
GC Column(1):	ZB5			GC Column(2):	ZB35

COMPOUND	COL	RT	EXP RT	RT DIFF	AREA	CONC	RPD
Aroclor 1248	* 1	8.396	8.405	0.009	30564.5	19.9	12.8
	2	8.299	8.307	0.008	17761.5	17.5	
Aroclor 1254	1	9.286	9.298	0.012	46178.8	25.1	16.1
	* 2	9.438	9.449	0.011	55562.2	29.5	
Aroclor 1260	1	11.033	11.04467	0.0117	30841	29.3	15.8
	* 2	11.643	11.6535	0.0105	39175.75	25.0	

* Column used for quantitation

HOLDING TIME SUMMARY

Analysis: EPA 8082A

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 11:15	8	40	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 11:36	8	40	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 11:57	8	40	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 12:18	8	40	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 12:40	8	40	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 13:01	8	40	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	02/23/23 11:54	31	365	03/03/23 13:22	8	40	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	02/23/23 11:54	30	365	03/03/23 13:43	8	40	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	02/23/23 11:54	30	365	03/03/23 14:04	8	40	
Matrix Spike BLB0580-MS1	01/23/23 12:26	01/23/23 13:30	02/23/23 11:54	30	365	03/03/23 14:25	8	40	
Matrix Spike Dup BLB0580-MSD1	01/23/23 12:26	01/23/23 13:30	02/23/23 11:54	30	365	03/03/23 14:46	8	40	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 8082A

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ECD7

Analyte	MDL	RL	Units
Aroclor 1016	1.6	4.0	ug/kg
Aroclor 1016 [2C]	1.6	4.0	ug/kg
Aroclor 1221	1.6	4.0	ug/kg
Aroclor 1221 [2C]	1.6	4.0	ug/kg
Aroclor 1232	1.6	4.0	ug/kg
Aroclor 1232 [2C]	1.6	4.0	ug/kg
Aroclor 1242	1.6	4.0	ug/kg
Aroclor 1242 [2C]	1.6	4.0	ug/kg
Aroclor 1248	1.6	4.0	ug/kg
Aroclor 1248 [2C]	1.6	4.0	ug/kg
Aroclor 1254	1.6	4.0	ug/kg
Aroclor 1254 [2C]	1.6	4.0	ug/kg
Aroclor 1260	0.6	4.0	ug/kg
Aroclor 1260 [2C]	0.6	4.0	ug/kg

125 Market Street
New Haven, CT 06513
USA

AccuStandard® Inc.

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

CERTIFICATE OF ANALYSIS

Catalog No: S-279N
Description: Tetrachloro-m-xylene
Lot: 0052481B-1
Solvent: N/A
Hazards: *Refer to SDS for complete safety information*

Signal Word: Warning

Date Certified: Jul 28, 2005
Expiration: Jul 28, 2015
Sample Size: 100 mg
Components: 1
Storage Condition: Ambient (>5 °C)

Certified Reference Material

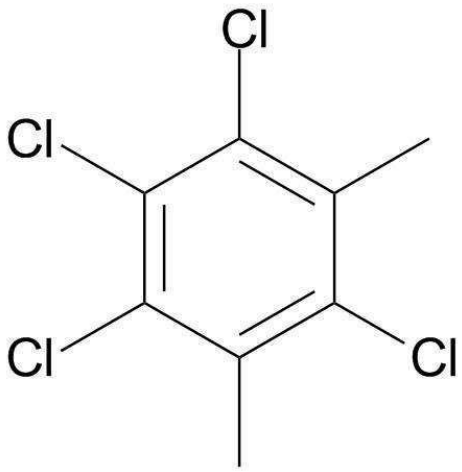
ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER AR-1463

ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration	Certified Analyte Concentration[1]
Tetrachloro-meta-xylene	877-09-8	96.0	N/A	N/A

Identification:

Molecular formula: C8H6Cl4
Molecular weight: 243.94



C000147
tetrachlormetaxylene
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

This Certified Reference Material was verified in accordance with ISO/IEC 17025

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[1] The Uncertainty calculated for this product is ±2.4%. These values are the expanded uncertainty and represent an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Metrological traceability is established through in-house validated methods.

Purity, if stated, is equal to 100% minus found impurity components. Impurity components have not been identified.

Hazard Information: Please refer to the SDS for information regarding the hazards associated with using this material.

This product was prepared according to in-house procedures and is guaranteed to be homogeneous.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

AccuStandard is accredited to ISO 17034, ISO/IEC 17025 and certified to ISO 9001:2015

QR-ORG/INO-001
Rev. 5/18

AccuStandard
125 Market Street
New Haven, CT 06513
(203) 786-5290

CERTIFICATE OF PRODUCT DATA

PRODUCT: C-209N
DESCRIPTION: 2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl
LOT #: 990521LB-AC
SOLVENT: N/A

EXPIRATION: Jul 28, 2015

This product is guaranteed accurate to ±0.5% of the Certified Analyte concentration through the Expiration Date on the Label.

Component	CAS #	Purity % (GC/MS)	Prepared Concentration[1]	Certified Analyte Concentration[2]
2,2',3,3',4,4',5,5',6,6'-Decachlorobiphenyl	2051-24-3	100	N/A	N/A

C000148
decachlorbiphenyl
Expires 1/15/2020
Prepared By Joshua Rains 1/15/2014

* I1768A

Certified by: R. Cooper

1. All weights are traceable through National Institute of Standards & Technology, Test No. 822/254480
2. Certified Analyte Concentration = Purity x Prepared Concentration. The Uncertainty calculated for this product is ±4% which is the Combined Uncertainty uc(y). It represents an estimated standard deviation equal to the positive square root of the total variance of the uncertainty of components. The Expanded Uncertainty is U which is Uc(y) *K where K is the coverage factor at the 95% confidence level (K=2).
3. A product with a suffix (-1A, -2B, etc.) on its lot# has had its expiration date extended and is identical to the same lot# without the suffix.

Please note: AccuStandard follows the U.S. conventions in reporting numerical values, on both certificates and labels.

A comma (,) is used to separate units of one-thousand or greater.
A period (.) is used as a decimal place marker.

This product was manufactured in accordance to quality system requirements of ISO 9001:2000 and ISO 17025

* Recertified 2 4-6-09 JS

Analytical Standard Record

Standard ID: C000148 **Printed: 4/23/2015 11:54:44AM**

Description:	decachlorbiphenyl	Expires:	15-Jan-2020
Standard Type:	Other	Prepared:	15-Jan-2014
Solvent:	na/a	Prepared By:	Joshua Rains
Final Volume (mls):	1	Department:	Organics
Vials:	1	Last Edit:	27-Feb-2015 13:03 by JGR
Vendor:	Accustandard	Lot #:	990521lb-ac
Vendor Catalog #:			

Comments

see i1768a
SOM calibrations added 06/12/14 sdrd

Analyte	CAS Number	Concentration	Units
Decachlorobiphenyl [2C]	2051-24-3	1000000	ug/mL
Decachlorobiphenyl	2051-24-3	1000000	ug/mL
DCB 1660 [2C]	2051-24-3	1000000	ug/mL
DCB 1660	2051-24-3	1000000	ug/mL
DCB [2C]	2051-24-3	1000000	ug/mL
DCB (A) [2C]	2051-24-3	1000000	ug/mL
DCB (A)	2051-24-3	1000000	ug/mL
DCB	2051-24-3	1000000	ug/mL

Reviewed By Date

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ■ Tel: 310-212-0555 ■ Fax: 310-328-7768 ■ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101461
Description: Aroclor 1254
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL13053
Certification Date: November 29, 2018
Expiration Date: November 30, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1254	11097-69-1	1000	± 0.246%

I09808
Recd. JP
02/24/20

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova Certified Reference Materials
Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101468
Description: Aroclor 1221
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14017
Certification Date: August 20, 2019
Expiration Date: August 31, 2027

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1221	11104-28-2	1000	± 0.553%

J004466
Rec'd
06/18/21

ACCREDITED
Reference Material Producer
Certicate No. 2427.02

phenova Certified Reference Materials | A Phenomenex Company

Phenova is an accredited ISO/IEC 17034 Reference Material Producer and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ACCREDITED
Chemical Testing Laboratory
Certicate No. 2427.03

IL64691018_us

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at www.phenova.com/documents.

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101469
Description: Aroclor 1232
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL14914
Certification Date: January 31, 2020
Expiration Date: January 31, 2028

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1232	11141-16-5	1000	± 0.738%

J006467 JR
read
06/18/21

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Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101470	**Lot Number:**	CL14018
Description:	Aroclor 1242	**Certification Date:**	August 20, 2019
Storage:	4 °C	**Expiration Date:**	August 31, 2027
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1242	53469-21-9	1000	± 0.553%

J006468
Read JR
06/18/21

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Certicate No. 2427.02

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

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[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
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Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.:	AL0-101471	**Lot Number:**	CL15384
Description:	Aroclor 1248	**Certification Date:**	June 19, 2020
Storage:	4 °C	**Expiration Date:**	June 30, 2028
Provided As:	1 mL in 2 mL Ampoule in Isooctane		

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1248	12672-29-6	1000	± 0.520%

JJ06469
Reed, JR
06/18/21

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101474
Description: Aroclor 1262
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL11330
Certification Date: May 15, 2015
Expiration Date: April 30, 2023
Revision Date: April 2, 2018

Andrea L Gill
Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1262	37324-23-5	1000	± 0.516%

J 00647
Rec'd JK
06/18/21

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.:	AL0-101475	**Lot Number:**	CL11331
Description:	Aroclor 1268	**Certification Date:**	May 15, 2015
Storage:	4 °C	**Expiration Date:**	April 30, 2023
Provided As:	1 mL in 2 mL Ampoule in Isooctane	**Revision Date:**	April 2, 2018

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1268	11100-14-4	1000	± 0.516%

J006472
Rec'd
06/18/21

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1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

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Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

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Certificate of Analysis

Agilent

Aroclor 1016 Solution

Product Number: PP-282 **Page:** 1 of 1

Lot Number: CR-0761 **Lot Issue Date:** 28-Feb-2017 **Expiration Date:** 31-Mar-2025

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1016	012674-11-2	NT01016	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1254 Reed JR 02/05/22

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
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Certificate of Analysis

Product Name: Aroclor 1260 Standard

Product Number: PP-362-1 **Lot Issue Date:** 20-Jan-2021

Lot Number: 0006582048 **Expiration Date:** 28-Feb-2025

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1260	011096-82-5	NT01023	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K 1255

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

MJBourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert
No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert
No. AT-1937

Agilent

Certificate of Analysis
ISO Guide 34

Aroclor 1242 Solution

Product Number: PP-312 **Page:** 1 of 1

Lot Number: CS-6293 **Lot Issue Date:** 04-Jan-2019 **Expiration Date:** 31-Jan-2023

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1242	053469-21-9	NT01020	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1256

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO Guide 34 Cert No.
AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026
registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No.
AT-1937

ISO 17034

Agilent
Trusted Answers

Reference Material Certificate

Product Name:	Aroclor 1248 Standard	**Lot Number:**	0006626997
Product Number:	PP-342-1	**Lot Issue Date:**	17-Aug-2021
Storage Conditions:	Store at Room Temperature (15° to 30°C).	**Expiration Date:**	30-Sep-2025

	CERTIFIED VALUES				
Component Name	Concentration		Expanded Uncertainty	CAS#	Analyte Lot
Aroclor 1248	100.3	±	0.5 µg/mL	012672-29-6	NT01582

Matrix: isooctane (2,2,4-trimethylpentane)

K1257

Description:
This document is prepared in accordance with ISO 17034 and Guide 31. This analytical reference material standard was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed above.

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This analytical reference standard was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Safety:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this analytical reference material.

Intended Use:
This analytical reference standard is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Expiration of Certification:
The certification of this analytical reference standard is valid until the expiration date specified above, provided the material is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the material is damaged, contaminated, or otherwise modified.

Certificate of Analysis

Agilent

Aroclor 1254 Solution

Product Number: PP-352 **Page:** 1 of 1

Lot Number: CS-2321 **Lot Issue Date:** 04-May-2018 **Expiration Date:** 31-May-2026

This ISO Guide 34 Reference Material (RM) was manufactured and verified in accordance with ULTRA's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1254	011097-69-1	RM00922	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1258

ULTRA uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

John Russo
President

Monica Bourgeois
Director of QA/RA

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 9001
Registered
TUV USA, Inc.

Agilent

Certificate of Analysis

Product Name: Aroclor 1221 Standard

Product Number: PP-292-1 **Lot Issue Date:** 28-Apr-2020

Lot Number: 0006535333 **Expiration Date:** 31-May-2024

Description:

This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system, and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1221	011104-28-2	RM04278	100.2 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1259

Traceability:

The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:

This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:

This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:

Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:

Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:

The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:

If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026

www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY

ISO 17025 Cert No. AT-1937

250 Smith Street North Kingstown, Rhode Island 02852 www.agilent.com/quality

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1262 Standard

Product Number: PP-372-1 **Page:** 1 of 1

Lot Number: 0006499800 **Lot Issue Date:** 04-Nov-2019 **Expiration Date:** 30-Nov-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent Technologies ISO 9001 registered quality system. A review of the gravimetric preparation data by our ISO 17025 accredited laboratory serves to verify the concentration of each analyte. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1262	037324-23-5	RM14263	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1260

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Agilent

Certificate of Analysis
ISO 17034

Aroclor 1232 Standard

Product Number: PP-302-1 **Page:** 1 of 1

Lot Number: CF-2197A **Lot Issue Date:** 05-Jul-2016 **Expiration Date:** 31-Aug-2023

This ISO 17034 Reference Material (RM) was manufactured and verified in accordance with Agilent's ISO 9001 registered quality system, and the analyte concentrations were verified by our ISO 17025 accredited laboratory. The true value and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	True Value
Aroclor 1232	011141-16-5	NT01717	100.4 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage: Store at Room Temperature (15° to 30°C).

K1261

Agilent uses balances calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z-540-1 and ISO 9001, and calibrated Class A glassware in the manufacturing of these standards.

M Bourgeois

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO GUIDE 34 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

Produced in accordance with TUV USA Inc 56 100 18560026 registered ISO 9001 Quality Management System

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO17025 Cert No. AT-1937

Agilent

Certificate of Analysis

Product Name: Aroclor 1268 Standard

Product Number: PP-382-1 **Lot Issue Date:** 09-Feb-2021

Lot Number: 0006587800 **Expiration Date:** 31-Mar-2029

Description:
This analytical reference material (RM) was manufactured and verified in accordance with an ISO 9001 registered quality system and analyte concentrations were verified by an ISO 17025 accredited laboratory. The concentration and uncertainty value at the 95% confidence level for each analyte, determined gravimetrically, is listed below.

Analyte	CAS#	Analyte Lot	Concentration ± Uncertainty
Aroclor 1268	011100-14-4	RM00937	100.0 ± 0.5 µg/mL

Matrix: isooctane (2,2,4-trimethylpentane)

Storage Conditions: Store at Room Temperature (15° to 30°C).

K1262

Traceability:
The balances used for these measurements are calibrated with weights traceable to NIST in compliance with ANSI/NCSL Z540.3, ISO 9001, ISO 17025, and ISO 17034. Calibrated Class A glassware is used for volumetric measurements. Thermometers are calibrated against a NIST traceable thermometer in accordance with NIST Special Publication 1088.

Homogeneity:
This RM was unitized according to an in-house procedure and is guaranteed to be homogeneous. There is no minimum sub-sample size required.

Intended Use:
This RM is intended for the preparation of working reference samples for use in routine laboratory analyses, calibration of instruments, validation of analytical methods, assessments of measurement methods, and continuing calibration verification.

Instructions for Use:
Sample aliquots for analysis should be withdrawn at 20°C to 25°C immediately after opening the container and should be processed without delay for the certified values to be valid within the stated uncertainties.

Hazards:
Refer to the Safety Data Sheet on www.agilent.com for information regarding this RM.

Expiration of Certification:
The certification of this RM is valid until the expiration date specified above, provided the RM is handled and stored in accordance with the instructions given in this certificate. This certification is nullified if the RM is damaged, contaminated, or otherwise modified.

Maintenance of Certification:
If substantive changes are noted that affect the certification before the expiration of this certificate, Agilent will notify the purchaser.

Sample lot approver:

Monica Bourgeois
QMS Representative

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER
ISO 17034 Cert No. AR-1936

RM was produced in accordance with TUV USA Inc registered ISO 9001 Quality Management System. Cert # 56 100 18560026
Page: 1 of 1
www.agilent.com/quality/
CSD-QA-015.1

ANAB ACCREDITED ISO/IEC 17025 TESTING LABORATORY
ISO 17025 Cert No. AT-1937

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15350

Order Number: CB014765 Date Shipped: 4/11/2022 AirBill No(s): 519204140444

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: Kelly Bottem
Analytical Resources, Inc.
4611 S. 134th Place SUITE 100
Tukwila WA 98168
206-695-6211

K003525
K003528

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0148	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0149	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0150	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0151	1	PUGET SOUND SEDIMENT RM	PS-SRM

4/11/2022

BOEING PLANT 2

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time 1400 4/11/2022	Received by: (Signature)	Date/Time 0955 04/12/22
Custody Seal(s): Present/Absent PRESENT	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

PUGET SOUND SEDIMENT REFERENCE MATERIAL
QATS LABORATORY INSTRUCTIONS FOR
HRGC/HRMS CDD/CDF/CB CONGENER AND GC/ECD AROCLOR ANALYSIS

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocols or your contract, disregard these instructions.

APPLICATION: For the analysis of CDD/CDF and CB Congener analytes using project-specified HRGC/HRMS methods, and Aroclors using project-specified GC/ECD methods.

CAUTION: Read instructions carefully before opening bottles and proceeding with the analyses.

Contains CDD/CDF, CB Congener, and/or Aroclors
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a Puget Sound (Washington State) Sediment Reference Material (SRM) set for chlorinated dibenzo-p-dioxins/chlorinated dibenzofurans (CDD/CDF), and/or chlorinated biphenyl (CB) congener analysis using project-specified high resolution gas chromatography/ high resolution mass spectrometry (HRGC/HRMS) methods. This SRM is also suitable for Aroclors analysis using project-specified gas chromatography/electron capture detection (GC/ECD) methods. This set consists of one (1) or more bottles, each with approximately 30 grams of Puget Sound SRM containing CDD/CDF, CB Congener, and/or Aroclor analytes. Check the chain-of-custody record to determine the number of bottles provided for CDD/CDF, CB Congener, and/or Aroclor analysis. None of the bottles are to be opened until SRM preparation/analysis is to occur.

CAUTION: The SRM could contain compounds that are light sensitive and should be protected from light during storage. Store the SRM at ≤ 6° C, preferably at < 0° C, until SRM preparation and analysis is to occur. Allow the bottle(s) to reach ambient temperature before opening.

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Refer to the enclosed chain-of-custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS REQUIREMENTS*

The SRM is to be analyzed as described in the project-specified methods employed for the analysis of CDD/CDF and/or CB Congener analytes using HRGC/HRMS instrumentation and/or Aroclors using GC/ECD instrumentation. These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the project-specified methods, or your contract, disregard these instructions.

(D) *SAMPLE ANALYSIS*

General Instructions

The SRM contains CDD/CDF, CB Congener, and Aroclor analytes which are known or suspected to have severe health effects. Employing appropriate safety precautions, this SRM is to be handled, prepared, and analyzed exactly as you would process samples received from a known or suspected hazardous waste site. The SRM should be handled only by trained and experienced analysts in facilities expressly designed to handle such materials. When calculating the concentrations of analytes, use 0% as the soil moisture content.

Allow the bottle(s) to reach ambient temperature before opening and removing gravimetric amounts for sample preparation. To begin the extraction and analysis procedure, break the seal and open the bottle carefully. Weigh out the appropriate aliquot for extraction and analysis as prescribed in the project-specified methods (typically 10 grams for HRGC/HRMS methods and 30 grams for GC/ECD methods), or in accordance with your contract.

Proceed immediately with the extraction and analysis as described in the project-specified methods or your contract.

(E) *REPORTING*

Report the results for the prepared SRM as received.

Report the analytical results for the SRM to EPA or other appropriate Agency, using the format and other instructions for submission of data packages as specified in your contract.

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at **www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards**

Certified Reference Material

This product is included in Phenova's ISO/IEC 17025 and ISO Guide 34 Scopes of Accreditation

Catalog No.: AL0-101467
Description: Aroclor 1016
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Isooctane

Lot Number: CL12975
Certification Date: November 19, 2018
Expiration Date: October 31, 2026

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1016	12674-11-2	1000	± 0.553%

K5829

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.

Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

IL11110613_us

Certificate of Analysis

Phenova Certified Reference Materials are sold by Phenomenex.
411 Madrid Ave., Torrance, CA 90501 USA ▪ Tel: 310-212-0555 ▪ Fax: 310-328-7768 ▪ info@phenomenex.com
Access your MSDS and digital C of A at www.phenomenex.com/mysupport. Re-order at www.phenomenex.com/standards

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO Guide 34[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in the calibration and calibration verification of chromatographic instrumentation performed in routine laboratory analysis.

4. Instruction: Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all certified analytes in the mixture.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Material Safety Data Sheet (MSDS) is available at www.phenomenex.com/mysupport.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

   $$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

   Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO Guide 34. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO Guide 34.

12. Period of Validity: The Certified Values and their uncertainties are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31:2000(E) – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35:2006(E) – Reference Material – General and Statistical Principles for Certification.
[3] ISO Guide 34:2009(E) – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025:2005(E) – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

ACCREDITED
Reference Material Producer
Certificate No. 2427.02

phenova® Certified Reference Materials

Manufactured by Phenova, Inc.
Phenova's testing and calibration results are internationally recognized through the ILAC MRA. Phenova is an accredited ISO Guide 34 Reference Material Provider and ISO/IEC 17025 accredited Chemical Testing Laboratory.

ilac-MRA ACCREDITED
Chemical Testing Laboratory
Certificate No. 2427.03

ILT1116613_US

Certificate of Analysis

phenova Certified Reference Materials | A Phenomenex Company

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

Certified Reference Material

This product is certified in accordance with Phenova's ISO 17034 accreditation and supported by Phenova's ISO/IEC 17025 chemical testing accreditation

Catalog No.: AL0-101462
Description: Aroclor 1260
Storage: 4 °C
Provided As: 1 mL in 2 mL Ampoule in Hexane

Lot Number: CL18021
Certification Date: February 14, 2022
Expiration Date: February 28, 2030

Andrea L Gill

Andrea Gill, Certified Reference Materials Manager

Component	CAS #	Certified Value µg/mL	Expanded Uncertainty
Aroclor 1260	11096-82-5	1000	± 0.553%

K005830

Certificate of Analysis

Produced by Phenova
6390 Joyce Drive STE 100, Golden, CO 80403 USA ▪ Tel: 303-940-0033 ▪ Fax: 303-940-0043 ▪ info@phenova.com
Access your Safety Data Sheets and digital Certificates at **www.phenova.com/documents.**

1. Quality Document: This Certificate of Analysis has been created in accordance with ISO Guide 31[1] and ISO Guide 35.[2]

2. Quality Standards: Phenova is accredited by A2LA to ISO 17034[3] and ISO/IEC 17025[4] as a producer of Certified Reference Materials and Reference Materials. This ensures that our manufacturing processes have been accredited to and meet strict international standards.

3. Intended Use: The product is manufactured for use in calibration, calibration verification, quantification, identification and other appropriate analytical control applications. The product is intended for routine laboratory analysis and research purposes only. Only trained personnel should handle this product.

4. Handling and Usage Notes: Store according to recommended conditions listed and avoid prolonged exposure to light. Visually inspect the solution inside the ampoule for any un-dissolved material. If particulate is visible, sonicate the unopened ampoule until material is fully dissolved. Dilute as required, use only class A glassware and diluents compatible with all analytes in the mixture. Considerations should be made related to repeated use of the opened product. Once opened, exposure to light, air, heat, objects, and additional transfer vessels may cause evaporation, degradation or contamination resulting in changes in concentration, uncertainty and stability duration. Store opened standards in a clean, tightly capped vessel under the recommended temperature. Appropriate controls, such as the use of additional verification standards should be used to confirm the opened product is fit for purpose under repeated use conditions.

5. Hazardous Situation: The product is intended for use by experienced professional personnel. A Safety Data Sheet (SDS) is available at www.phenova.com/documents.

6. Level of Homogeneity: The product has been certified to guarantee the certified values and their uncertainties at a volume of 2 µL.

7. Certified Value: Certified Value is based upon gravimetric and volumetric preparation using calibrated balances and Class A glassware.

8. Raw Materials and Purity: Phenova reference standard products are prepared from the highest quality starting materials. The purity of this material was verified using an ISO/IEC 17025 methodology.

9. Expanded Uncertainty: The expanded uncertainty (uCRM) as stated is determined in accordance with ISO/IEC Guide 98[5] and ISO Guide 35 incorporating Type A standard uncertainty at a 95% confidence level. The uncertainty contains elements of manufacturing (uM), homogeneity analysis (uH) and long-term stability testing (uLTS). The uncertainty is calculated based on the root-sum-of-squares equation times a coverage factor (k=2).

$$uCRM = k\sqrt{uM^2 + uH^2 + uLTS^2}$$

Transport conditions (short-term stability) have been tested such that there is no contribution to the uncertainty reported. The expanded uncertainty applies to the product as received.

10. Metrological Traceability: The property value (certified value and its uncertainty) are traceable through an unbroken chain of calibration to the SI base unit kg through a NIST traceable weight in accordance with ISO 17034. This is achieved through calibration of balances, verification of weights, use of national methodology for glassware calibration and product homogeneity and stability testing utilizing an ISO/IEC 17025 methodology.

11. Values Obtained During Product Testing: This product is subjected to verification, homogeneity and stability testing using an ISO/IEC 17025 chromatographic methodology. All values obtained during testing meet criteria in accordance with ISO 17034.

12. Period of Validity: The Certified Values, Uncertainties and Expiration Date are based on the unopened product being stored according to the recommended storage condition listed and are guaranteed until the expiration date. This product will be monitored during the period of validity and customers notified of any significant changes in stability.

References:

[1] ISO Guide 31 – Reference Materials – Contents of Certificates and Labels.
[2] ISO Guide 35 – Reference Material – General and Statistical Principles for Certification.
[3] ISO 17034 – General Requirements for the Competence of Reference Material Producers.
[4] ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.
[5] ISO/IEC Guide 98-3:2008(E) – Uncertainty of Measurement – Part 3: Guide to Expression of Uncertainty in Measurement (GUM: 1995)

Analytical Resources, LLC
Analytical Chemists and Consultants

LDW23-SS1004

Form 1
ORGANIC ANALYSIS DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 C	File ID:	23031013
Sampled:	01/23/23 09:42	Prepared:	02/28/23 14:27	Analyzed:	03/10/23 20:19
% Solids:	57.20	Preparation:	EPA 1613	Initial/Final:	17.49 g Wet / 20 uL
Result Basis:	Dry	Sequence:	SLC0124	Calibration:	GC00015
Batch:	BLB0270	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.682	0.655-0.886	0.105	1.00	0.757	ng/kg	J
1746-01-6	2,3,7,8-TCDD	1	0.610	0.655-0.886	0.086	1.00	0.283	ng/kg	EMPC, J
57117-41-6	1,2,3,7,8-PeCDF	1	1.747	1.318-1.783	0.180	1.00	0.676	ng/kg	J
57117-31-4	2,3,4,7,8-PeCDF	1	1.632	1.318-1.783	0.158	1.00	1.54	ng/kg	
40321-76-4	1,2,3,7,8-PeCDD	1	1.460	1.318-1.783	0.139	1.00	1.19	ng/kg	
70648-26-9	1,2,3,4,7,8-HxCDF	1	1.232	1.054-1.426	0.065	1.00	5.68	ng/kg	
57117-44-9	1,2,3,6,7,8-HxCDF	1	1.252	1.054-1.426	0.066	1.00	1.62	ng/kg	
60851-34-5	2,3,4,6,7,8-HxCDF	1	1.313	1.054-1.426	0.069	1.00	2.37	ng/kg	
72918-21-9	1,2,3,7,8,9-HxCDF	1	1.341	1.054-1.426	0.072	1.00	1.31	ng/kg	
39227-28-6	1,2,3,4,7,8-HxCDD	1	1.120	1.054-1.426	0.109	1.00	1.47	ng/kg	
57653-85-7	1,2,3,6,7,8-HxCDD	1	1.185	1.054-1.426	0.108	1.00	6.03	ng/kg	
19408-74-3	1,2,3,7,8,9-HxCDD	1	1.286	1.054-1.426	0.119	1.00	3.69	ng/kg	
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.978	0.893-1.208	0.148	1.00	38.6	ng/kg	
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	1.101	0.893-1.208	0.194	1.00	3.62	ng/kg	
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	1.016	0.893-1.208	0.244	2.50	188	ng/kg	B
39001-02-0	OCDF	1	0.865	0.757-1.024	0.243	2.50	123	ng/kg	
3268-87-9	OCDD	1	0.860	0.757-1.024	0.367	10.0	1550	ng/kg	B

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	16.6	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	2.60	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	23.5	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	4.69	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	57.9	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	51.1	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	157	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	426	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 7.05
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 7.05

LDW23-SS1004

Form 2

ORGANIC ANALYSIS DATA SHEET

EPA 1613B

Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Sediment	Laboratory ID:	23A0467-05	File ID:	23031013
Sampled:	01/23/23 09:42	Prepared:	02/28/23 14:27	Analyzed:	03/10/23 20:19
Solids Wt%:	57.20	Preparation:	EPA 1613	Initial/Final:	17.49 g / 20 uL
Result Basis:	Dry	Sequence:	SLC0124	Calibration:	GC00015
Batch:	BLB0270	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF		0.767	0.655-0.886	0.093	102	24 - 169 %	
13C12-2,3,7,8-TCDD		0.775	0.655-0.886	0.141	110	25 - 164 %	
13C12-1,2,3,7,8-PeCDF		1.512	1.318-1.783	0.157	97.7	24 - 185 %	
13C12-2,3,4,7,8-PeCDF		1.503	1.318-1.783	0.175	106	21 - 178 %	
13C12-1,2,3,7,8-PeCDD		1.582	1.318-1.783	0.127	108	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF		0.505	0.434-0.587	0.126	104	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF		0.512	0.434-0.587	0.106	92.5	26 - 123 %	
13C12-2,3,4,6,7,8-HxCDF		0.508	0.434-0.587	0.131	103	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF		0.513	0.434-0.587	0.158	116	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD		1.284	1.054-1.426	0.147	108	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD		1.271	1.054-1.426	0.126	101	28 - 130 %	
13C12-1,2,3,4,6,7,8-HpCDF		0.435	0.374-0.506	0.161	88.0	28 - 143 %	
13C12-1,2,3,4,7,8,9-HpCDF		0.429	0.374-0.506	0.187	94.5	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD		1.063	0.893-1.208	0.132	96.2	23 - 140 %	
13C12-OCDD		0.893	0.757-1.024	0.161	82.3	17 - 157 %	
37Cl4-2,3,7,8-TCDD		328.000		0.034	83.3	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:14 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: 23A0467-05, Name: 23031013, Date: 10-Mar-2023, Time: 20:19:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.591	1.000	1.054e3	1.546e3	0.702	0.682	0.770	1084	806	1.80e4	2.76e4	16.6	34.3	NO	bd	bd	0.379
12378-PeCDF	29.758	1.000	1.045e3	5.982e2	0.679	1.747	1.550	1061	1184	1.35e4	8.80e3	12.7	7.4	NO	bb	bb	0.338
23478-PeCDF	31.095	1.000	2.617e3	1.604e3	0.786	1.632	1.550	1061	1184	3.65e4	2.59e4	34.4	21.9	NO	db	dd	0.769
123478-HxCDF	34.738	1.001	1.431e4	1.161e4	1.166	1.232	1.240	778	755	2.35e5	1.80e5	302.6	238.0	NO	dd	dd	2.840
234678-HxCDF	35.707	0.999	5.766e3	4.393e3	1.140	1.313	1.240	778	755	5.68e4	4.45e4	73.0	58.9	NO	bd	bb	1.185
123678-HxCDF	34.872	1.000	4.065e3	3.246e3	1.091	1.252	1.240	778	755	6.03e4	4.95e4	77.5	65.6	NO	dd	db	0.810
123789-HxCDF	36.743	1.000	2.966e3	2.212e3	1.137	1.341	1.240	778	755	3.88e4	3.22e4	49.9	42.6	NO	bb	bb	0.654
1234678-HpCDF	38.626	1.000	4.859e4	4.971e4	1.003	0.978	1.050	1183	979	7.98e5	8.25e5	674.7	842.0	NO	bb	bb	19.308
1234789-HpCDF	40.843	1.000	4.240e3	3.852e3	0.953	1.101	1.050	1183	979	6.24e4	6.30e4	52.7	64.3	NO	bb	bb	1.810
OCDF	45.048	1.005	9.011e4	1.041e5	0.778	0.865	0.890	842	725	1.08e6	1.26e6	1282.8	1737.5	NO	bb	bb	61.365
2378-TCDD	26.240	1.001	4.614e2	7.569e2	1.149	0.610	0.770	1023	915	6.97e3	1.20e4	6.8	13.1	YES	bb	bd	0.142
12378-PeCDD	31.351	1.001	1.906e3	1.305e3	1.022	1.460	1.550	1156	752	2.65e4	1.95e4	22.9	26.0	NO	bb	bb	0.593
123478-HxCDD	35.875	1.001	2.687e3	2.400e3	0.996	1.120	1.240	839	1263	4.79e4	3.87e4	57.1	30.6	NO	bd	bd	0.737
123678-HxCDD	35.986	1.000	1.236e4	1.044e4	1.001	1.185	1.240	839	1263	2.08e5	1.65e5	248.3	130.7	NO	dd	dd	3.018
123789-HxCDD	36.376	1.011	6.828e3	5.308e3	0.907	1.286	1.240	839	1263	1.10e5	8.33e4	130.7	66.0	NO	bb	bb	1.848
1234678-HpCDD	40.119	1.000	2.572e5	2.531e5	1.039	1.016	1.050	1742	1646	4.14e6	4.05e6	2376.5	2463.0	NO	bb	bb	94.264
OCDD	44.819	1.000	1.344e6	1.563e6	0.920	0.860	0.890	1635	1162	1.71e7	1.98e7	10459.7	17049.6	NO	bb	bb	776.613
13C-2378-TCDF	25.577	1.007	4.246e5	5.533e5	1.620	0.767	0.770	1378	974	6.71e6	8.81e6	4869.1	9044.0	NO	bb	bb	102.253
13C-12378-PeCDF	29.747	1.171	4.304e5	2.847e5	1.240	1.512	1.550	1753	1288	6.62e6	4.38e6	3775.7	3403.5	NO	bb	bb	97.655
13C-23478-PeCDF	31.084	1.223	4.190e5	2.788e5	1.118	1.503	1.550	1753	1288	6.49e6	4.30e6	3705.1	3341.9	NO	bb	bb	105.754
13C-123478-HxCDF	34.716	0.955	2.626e5	5.203e5	1.168	0.505	0.510	1013	1597	4.09e6	8.19e6	4035.3	5126.8	NO	bd	bd	103.976
13C-123678-HxCDF	34.861	0.959	2.800e5	5.470e5	1.386	0.512	0.510	1013	1597	4.33e6	8.44e6	4272.9	5283.6	NO	dd	dd	92.547
13C-234678-HxCDF	35.741	0.983	2.532e5	4.989e5	1.129	0.508	0.510	1013	1597	3.96e6	7.75e6	3903.9	4855.7	NO	bb	bb	103.340
13C-123789-HxCDF	36.755	1.011	2.362e5	4.602e5	0.932	0.513	0.510	1013	1597	3.81e6	7.50e6	3762.8	4698.0	NO	bb	bb	115.968
13C-1234678-HpCDF	38.615	1.062	1.540e5	3.536e5	0.895	0.435	0.440	1263	1291	2.66e6	6.16e6	2104.7	4771.8	NO	bb	bb	87.980
13C-1234789-HpCDF	40.832	1.123	1.408e5	3.282e5	0.770	0.429	0.440	1263	1291	2.11e6	4.91e6	1671.5	3802.5	NO	bb	bb	94.525
13C-1234-TCDD	25.407	0.000	2.591e5	3.312e5	1.000	0.782	0.770	1684	848	4.10e6	5.22e6	2433.8	6158.9	NO	bb	bb	100.000
13C-2378-TCDD	26.212	1.032	3.267e5	4.216e5	1.152	0.775	0.770	1684	848	5.15e6	6.65e6	3058.9	7844.1	NO	bb	bb	110.004
13C-12378-PeCDD	31.329	1.233	3.245e5	2.051e5	0.829	1.582	1.550	835	802	4.93e6	3.16e6	5909.9	3939.7	NO	bb	bb	108.268
13C-123478-HxCDD	35.852	0.986	3.896e5	3.035e5	0.995	1.284	1.240	1179	1409	6.51e6	5.03e6	5521.8	3571.3	NO	bd	bd	108.079
13C-123678-HxCDD	35.975	0.990	4.224e5	3.323e5	1.157	1.271	1.240	1179	1409	6.54e6	5.12e6	5548.3	3630.3	NO	dd	dd	101.232
13C-1234678-HpCDD	40.108	1.103	2.685e5	2.525e5	0.840	1.063	1.050	1086	870	4.13e6	3.91e6	3803.3	4498.8	NO	bb	bb	96.226
13C-OCDD	44.810	1.233	3.839e5	4.300e5	0.767	0.893	0.890	1175	1012	4.69e6	5.30e6	3992.5	5233.9	NO	bb	bb	164.541
13C-123789-HxCDD	36.354	0.000	3.622e5	2.822e5	1.000	1.283	1.240	1179	1409	5.96e6	4.68e6	5057.7	3318.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.240	1.033	2.533e5		1.288			686		4.00e6		5837.0			bb		33.326

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:14 Pacific Daylight Time

ID: 23A0467-05, Name: 23031013, Date: 10-Mar-2023, Time: 20:19:20, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.102	0.864	6.272e2	6.901e2	0.802	0.909	0.770	1084	806	6.88e3	1.06e4	6.3	13.1	YES	dd	bb	0.168
1289-TCDF					0.678		0.770	1084	806								
13468-PECDF					1.246		1.550	636	732								
12389-PECDF					0.496		1.550	1061	1184								
123468-HXCDF	33.067	0.952	1.057e4	8.320e3	1.169	1.271	1.240	778	755	1.66e5	1.36e5	213.3	180.6	NO	bb	bb	2.064
1368-TCDD	23.359	0.891	1.725e3	2.427e3	1.015	0.711	0.770	1023	915	3.00e4	3.90e4	29.3	42.6	NO	bb	bb	0.547
1289-TCDD	26.834	1.024	1.865e2	1.512e2	0.909	1.233	0.770	1023	915	2.61e3	2.30e3	2.6	2.5	YES	bb	bb	0.050
12479-PECDD	28.666	0.915	3.704e3	2.607e3	2.301	1.421	1.550	1156	752	3.97e4	2.60e4	34.4	34.6	NO	MM	MM	0.518
12389-PECDD					1.184		1.550	1156	752								
124679-HXCDD	33.847	0.944	3.210e4	2.674e4	1.115	1.200	1.240	839	1263	4.94e5	4.23e5	588.7	334.7	NO	bd	bb	7.611
1234679-HPCDD	39.072	0.974	3.564e5	3.476e5	1.137	1.025	1.050	1742	1646	5.86e6	5.77e6	3363.6	3503.1	NO	bb	bb	118.861
Total-tetrafurans			2.451e4		0.727			1084		3.57e5							8.286
Total-penta1			1.903e4					636		2.91e5							4.703
Total-pentafurans			1.987e4		0.654			1061		2.53e5							7.056
Total-hexafurans			1.414e5		1.141			778		2.17e6							28.944
Total-heptafurans			1.870e5		0.978			1183		3.02e6							78.632
Total-Furans			4.820e5		0.922			1084		7.17e6							189.016
Total-tetradioxins			4.188e3		1.024			1023		6.84e4							1.298
Total-pentadioxins			1.142e4		1.502			1156		1.56e5							2.345
Total-hexadioxins			1.039e5		1.005			839		1.45e6							25.570
Total-heptadioxins			6.136e5		1.088			1742		1.00e7							213.124
Total-Dioxins			2.077e6		1.130			1023		2.88e7							1018.951
Total-TEQ			2.559e6					1023		3.59e7							1207.967
FUNCTION1 PFK			3.007e7					327112		7.97e6							
FUNCTION2 PFK			9.404e5					177410		4.38e6							0.000
FUNCTION3 PFK			7.620e5					307409		4.77e6							0.000
FUNCTION4 PFK			7.552e4					178242		1.04e6							
FUNCTION5 PFK			1.421e6					115370		4.87e6							
FUNCTION1 HXCD...			1.365e3					612		1.97e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			6.189e2					658		9.58e3							0.000
FUNCTION3 OCDPE			0.000e0					503		0.00e0							
FUNCTION4 NCDPE			2.478e4					807		4.32e5							0.000
FUNCTION5 DCDPE			3.404e2					498		3.76e3							0.000

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: 23A0467-05, Name: 23031013, Date: 10-Mar-2023, Time: 20:19:20, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.06	1.080e3	1.623e3	0.727	0.67	0.77	15.4	YES	NO	dd	dd	0.380
2	Total-tetrafurans	22.94	2.041e3	2.479e3	0.727	0.82	0.77	24.6	YES	NO	bd	bd	0.636
3	Total-tetrafurans	22.36	7.289e2	1.091e3	0.727	0.67	0.77	11.0	YES	NO	db	bb	0.256
4	2378-TCDF	25.59	1.054e3	1.546e3	0.702	0.68	0.77	16.6	YES	NO	bd	bd	0.379
5	Total-tetrafurans	25.36	4.064e3	6.026e3	0.727	0.67	0.77	45.3	YES	NO	db	db	1.419
6	Total-tetrafurans	25.11	4.185e2	6.283e2	0.727	0.67	0.77	6.5	YES	NO	bb	bd	0.147
7	Total-tetrafurans	24.69	1.170e3	1.474e3	0.727	0.79	0.77	19.1	YES	NO	bb	db	0.372
8	Total-tetrafurans	24.36	8.115e2	1.137e3	0.727	0.71	0.77	12.3	YES	NO	dd	dd	0.274
9	Total-tetrafurans	24.26	2.119e3	2.978e3	0.727	0.71	0.77	24.1	YES	NO	bd	dd	0.717
10	Total-tetrafurans	23.70	7.902e2	1.031e3	0.727	0.77	0.77	11.4	YES	NO	dd	db	0.256
11	Total-tetrafurans	23.60	1.547e3	2.152e3	0.727	0.72	0.77	22.0	YES	NO	dd	bd	0.520
12	Total-tetrafurans	23.34	2.457e3	3.005e3	0.727	0.82	0.77	37.2	YES	NO	dd	dd	0.768
13	Total-tetrafurans	23.25	4.670e3	6.988e3	0.727	0.67	0.77	61.9	YES	NO	dd	dd	1.640
14	Total-tetrafurans	27.22	3.817e2	4.866e2	0.727	0.78	0.77	5.1	YES	NO	dd	bb	0.122
15	Total-tetrafurans	25.83	1.176e3	1.663e3	0.727	0.71	0.77	16.4	YES	NO	dd	dd	0.399

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.03	1.903e4	1.181e4		1.61	1.55	457.7	YES	NO	bb	bb	4.703

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.09	2.617e3	1.604e3	0.786	1.63	1.55	34.4	YES	NO	db	dd	0.769
2	Total-pentafurans	30.95	1.572e3	1.115e3	0.654	1.41	1.55	21.8	YES	NO	dd	dd	0.582
3	Total-pentafurans	30.84	9.736e2	7.241e2	0.654	1.34	1.55	16.5	YES	NO	bd	bd	0.368
4	12378-PeCDF	29.76	1.045e3	5.982e2	0.679	1.75	1.55	12.7	YES	NO	bb	bb	0.338
5	Total-pentafurans	29.43	2.876e3	1.922e3	0.654	1.50	1.55	28.5	YES	NO	db	bb	1.039
6	Total-pentafurans	28.70	8.026e3	5.784e3	0.654	1.39	1.55	91.3	YES	NO	dd	MM	2.990
7	Total-pentafurans	28.50	2.449e3	1.492e3	0.654	1.64	1.55	27.2	YES	NO	dd	dd	0.853
8	Total-pentafurans	28.41	3.143e2	2.313e2	0.654	1.36	1.55	6.0	YES	NO	bd	bd	0.118

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.74	2.966e3	2.212e3	1.137	1.34	1.24	49.9	YES	NO	bb	bb	0.654
2	234678-HxCDF	35.71	5.766e3	4.393e3	1.140	1.31	1.24	73.0	YES	NO	bd	bb	1.185
3	123678-HxCDF	34.87	4.065e3	3.246e3	1.091	1.25	1.24	77.5	YES	NO	dd	db	0.810
4	123478-HxCDF	34.74	1.431e4	1.161e4	1.166	1.23	1.24	302.6	YES	NO	dd	dd	2.840
5	Total-hexafurans	34.58	1.867e3	1.483e3	1.141	1.26	1.24	40.2	YES	NO	bd	bd	0.384
6	Total-hexafurans	34.11	6.563e4	5.264e4	1.141	1.25	1.24	1317.9	YES	NO	bb	bb	13.563
7	Total-hexafurans	33.80	9.789e2	7.800e2	1.141	1.26	1.24	19.9	YES	NO	bb	bb	0.202
8	Total-hexafurans	33.28	3.528e4	2.788e4	1.141	1.27	1.24	694.2	YES	NO	bb	bb	7.242
9	123468-HXCDF	33.07	1.057e4	8.320e3	1.169	1.27	1.24	213.3	YES	NO	bb	bb	2.064

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.84	4.240e3	3.852e3	0.953	1.10	1.05	52.7	YES	NO	bb	bb	1.810
2	Total-heptafurans	39.28	1.341e5	1.405e5	0.978	0.95	1.05	1822.1	YES	NO	bb	bb	57.513
3	1234678-HpCDF	38.63	4.859e4	4.971e4	1.003	0.98	1.05	674.7	YES	NO	bb	bb	19.308

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.06	1.080e3	1.623e3	0.727	0.67	0.77	15.4	YES	NO	dd	dd	0.380
2	Total-tetrafurans	22.94	2.041e3	2.479e3	0.727	0.82	0.77	24.6	YES	NO	bd	bd	0.636
3	Total-tetrafurans	22.36	7.289e2	1.091e3	0.727	0.67	0.77	11.0	YES	NO	db	bb	0.256
4	Total-Furans	21.11	1.181e2	1.431e2	0.922	0.83	0.77	1.8	NO	NO	bd	bb	0.029
5	2378-TCDF	25.59	1.054e3	1.546e3	0.702	0.68	0.77	16.6	YES	NO	bd	bd	0.379
6	Total-tetrafurans	25.36	4.064e3	6.026e3	0.727	0.67	0.77	45.3	YES	NO	db	db	1.419
7	Total-tetrafurans	25.11	4.185e2	6.283e2	0.727	0.67	0.77	6.5	YES	NO	bb	bd	0.147
8	Total-tetrafurans	24.69	1.170e3	1.474e3	0.727	0.79	0.77	19.1	YES	NO	bb	db	0.372
9	Total-tetrafurans	24.36	8.115e2	1.137e3	0.727	0.71	0.77	12.3	YES	NO	dd	dd	0.274
10	Total-tetrafurans	24.26	2.119e3	2.978e3	0.727	0.71	0.77	24.1	YES	NO	bd	dd	0.717
11	Total-tetrafurans	23.70	7.902e2	1.031e3	0.727	0.77	0.77	11.4	YES	NO	dd	db	0.256
12	Total-tetrafurans	23.60	1.547e3	2.152e3	0.727	0.72	0.77	22.0	YES	NO	dd	bd	0.520
13	Total-tetrafurans	23.34	2.457e3	3.005e3	0.727	0.82	0.77	37.2	YES	NO	dd	dd	0.768
14	Total-tetrafurans	23.25	4.670e3	6.988e3	0.727	0.67	0.77	61.9	YES	NO	dd	dd	1.640
15	Total-tetrafurans	27.22	3.817e2	4.866e2	0.727	0.78	0.77	5.1	YES	NO	dd	bb	0.122
16	Total-tetrafurans	25.83	1.176e3	1.663e3	0.727	0.71	0.77	16.4	YES	NO	dd	dd	0.399
17	23478-PeCDF	31.09	2.617e3	1.604e3	0.786	1.63	1.55	34.4	YES	NO	db	dd	0.769
18	Total-pentafurans	30.95	1.572e3	1.115e3	0.654	1.41	1.55	21.8	YES	NO	dd	dd	0.582
19	Total-pentafurans	30.84	9.736e2	7.241e2	0.654	1.34	1.55	16.5	YES	NO	bd	bd	0.368
20	12378-PeCDF	29.76	1.045e3	5.982e2	0.679	1.75	1.55	12.7	YES	NO	bb	bb	0.338
21	Total-pentafurans	29.43	2.876e3	1.922e3	0.654	1.50	1.55	28.5	YES	NO	db	bb	1.039
22	Total-pentafurans	28.70	8.026e3	5.784e3	0.654	1.39	1.55	91.3	YES	NO	dd	MM	2.990
23	Total-pentafurans	28.50	2.449e3	1.492e3	0.654	1.64	1.55	27.2	YES	NO	dd	dd	0.853
24	Total-pentafurans	28.41	3.143e2	2.313e2	0.654	1.36	1.55	6.0	YES	NO	bd	bd	0.118
25	123789-HxCDF	36.74	2.966e3	2.212e3	1.137	1.34	1.24	49.9	YES	NO	bb	bb	0.654
26	234678-HxCDF	35.71	5.766e3	4.393e3	1.140	1.31	1.24	73.0	YES	NO	bd	bb	1.185
27	123678-HxCDF	34.87	4.065e3	3.246e3	1.091	1.25	1.24	77.5	YES	NO	dd	db	0.810
28	123478-HxCDF	34.74	1.431e4	1.161e4	1.166	1.23	1.24	302.6	YES	NO	dd	dd	2.840
29	Total-hexafurans	34.58	1.867e3	1.483e3	1.141	1.26	1.24	40.2	YES	NO	bd	bd	0.384
30	Total-hexafurans	34.11	6.563e4	5.264e4	1.141	1.25	1.24	1317.9	YES	NO	bb	bb	13.563
31	Total-hexafurans	33.80	9.789e2	7.800e2	1.141	1.26	1.24	19.9	YES	NO	bb	bb	0.202
32	Total-hexafurans	33.28	3.528e4	2.788e4	1.141	1.27	1.24	694.2	YES	NO	bb	bb	7.242
33	123468-HXCDF	33.07	1.057e4	8.320e3	1.169	1.27	1.24	213.3	YES	NO	bb	bb	2.064
34	1234789-HpCDF	40.84	4.240e3	3.852e3	0.953	1.10	1.05	52.7	YES	NO	bb	bb	1.810
35	Total-heptafurans	39.28	1.341e5	1.405e5	0.978	0.95	1.05	1822.1	YES	NO	bb	bb	57.513
36	1234678-HpCDF	38.63	4.859e4	4.971e4	1.003	0.98	1.05	674.7	YES	NO	bb	bb	19.308
37	OCDF	45.05	9.011e4	1.041e5	0.778	0.87	0.89	1282.8	YES	NO	bb	bb	61.365

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-penta1	27.03	1.903e4	1.181e4		1.61	1.55	457.7	YES	NO	bb	bb	4.703

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.36	1.725e3	2.427e3	1.015	0.71	0.77	29.3	YES	NO	bb	bb	0.547
2	Total-tetradioxins	25.22	2.014e2	2.517e2	1.024	0.80	0.77	3.8	YES	NO	db	bb	0.059
3	Total-tetradioxins	24.36	1.097e3	1.493e3	1.024	0.73	0.77	16.9	YES	NO	bd	bb	0.338
4	Total-tetradioxins	23.64	1.164e3	1.555e3	1.024	0.75	0.77	16.9	YES	NO	bb	bd	0.355

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.35	1.906e3	1.305e3	1.022	1.46	1.55	22.9	YES	NO	bb	bb	0.593
2	Total-pentadioxins	30.10	1.292e3	9.692e2	1.502	1.33	1.55	18.8	YES	NO	db	MM	0.284
3	Total-pentadioxins	29.97	1.495e3	1.132e3	1.502	1.32	1.55	21.1	YES	NO	bd	MM	0.330
4	Total-pentadioxins	29.76	2.022e3	1.252e3	1.502	1.62	1.55	24.0	YES	NO	bb	bb	0.411
5	Total-pentadioxins	29.13	9.963e2	6.620e2	1.502	1.51	1.55	13.8	YES	NO	bb	bb	0.208
6	12479-PECDD	28.67	3.704e3	2.607e3	2.301	1.42	1.55	34.4	YES	NO	MM	MM	0.518

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	34.98	3.688e4	2.908e4	1.005	1.27	1.24	465.1	YES	NO	bd	bd	9.069
2	Total-hexadioxins	34.62	6.808e3	5.393e3	1.005	1.26	1.24	131.2	YES	NO	bb	bb	1.678
3	124679-HXCDD	33.85	3.210e4	2.674e4	1.115	1.20	1.24	588.7	YES	NO	bd	bb	7.611
4	123789-HxCDD	36.38	6.828e3	5.308e3	0.907	1.29	1.24	130.7	YES	NO	bb	bb	1.848
5	Total-hexadioxins	36.15	2.614e3	2.176e3	1.005	1.20	1.24	41.5	YES	NO	db	db	0.659
6	123678-HxCDD	35.99	1.236e4	1.044e4	1.001	1.18	1.24	248.3	YES	NO	dd	dd	3.018
7	123478-HxCDD	35.87	2.687e3	2.400e3	0.996	1.12	1.24	57.1	YES	NO	bd	bd	0.737
8	Total-hexadioxins	35.09	3.592e3	3.317e3	1.005	1.08	1.24	70.6	YES	NO	db	db	0.950

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.12	2.572e5	2.531e5	1.039	1.02	1.05	2376.5	YES	NO	bb	bb	94.264
2	1234679-HPCDD	39.07	3.564e5	3.476e5	1.137	1.03	1.05	3363.6	YES	NO	bb	bb	118.861

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:14 Pacific Daylight Time

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.36	1.725e3	2.427e3	1.015	0.71	0.77	29.3	YES	NO	bb	bb	0.547
2	Total-tetradioxins	25.22	2.014e2	2.517e2	1.024	0.80	0.77	3.8	YES	NO	db	bb	0.059
3	Total-tetradioxins	24.36	1.097e3	1.493e3	1.024	0.73	0.77	16.9	YES	NO	bd	bb	0.338
4	Total-tetradioxins	23.64	1.164e3	1.555e3	1.024	0.75	0.77	16.9	YES	NO	bb	bd	0.355
5	12378-PeCDD	31.35	1.906e3	1.305e3	1.022	1.46	1.55	22.9	YES	NO	bb	bb	0.593
6	Total-pentadioxins	30.10	1.292e3	9.692e2	1.502	1.33	1.55	18.8	YES	NO	db	MM	0.284
7	Total-pentadioxins	29.97	1.495e3	1.132e3	1.502	1.32	1.55	21.1	YES	NO	bd	MM	0.330
8	Total-pentadioxins	29.76	2.022e3	1.252e3	1.502	1.62	1.55	24.0	YES	NO	bb	bb	0.411
9	Total-pentadioxins	29.13	9.963e2	6.620e2	1.502	1.51	1.55	13.8	YES	NO	bb	bb	0.208
10	Total-hexadioxins	34.98	3.688e4	2.908e4	1.005	1.27	1.24	465.1	YES	NO	bd	bd	9.069
11	Total-hexadioxins	34.62	6.808e3	5.393e3	1.005	1.26	1.24	131.2	YES	NO	bb	bb	1.678
12	124679-HXCDD	33.85	3.210e4	2.674e4	1.115	1.20	1.24	588.7	YES	NO	bd	bb	7.611
13	123789-HxCDD	36.38	6.828e3	5.308e3	0.907	1.29	1.24	130.7	YES	NO	bb	bb	1.848
14	Total-hexadioxins	36.15	2.614e3	2.176e3	1.005	1.20	1.24	41.5	YES	NO	db	db	0.659
15	123678-HxCDD	35.99	1.236e4	1.044e4	1.001	1.18	1.24	248.3	YES	NO	dd	dd	3.018
16	123478-HxCDD	35.87	2.687e3	2.400e3	0.996	1.12	1.24	57.1	YES	NO	bd	bd	0.737
17	Total-hexadioxins	35.09	3.592e3	3.317e3	1.005	1.08	1.24	70.6	YES	NO	db	db	0.950
18	1234678-HpCDD	40.12	2.572e5	2.531e5	1.039	1.02	1.05	2376.5	YES	NO	bb	bb	94.264
19	1234679-HPCDD	39.07	3.564e5	3.476e5	1.137	1.03	1.05	3363.6	YES	NO	bb	bb	118.861
20	OCDD	44.82	1.344e6	1.563e6	0.920	0.86	0.89	10459.7	YES	NO	bb	bb	776.613
21	12479-PECDD	28.67	3.704e3	2.607e3	2.301	1.42	1.55	34.4	YES	NO	MM	MM	0.518

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	23.06	1.080e3	1.623e3	0.727	0.67	0.77	15.4	YES	NO	dd	dd	0.380
2	Total-tetrafurans	22.94	2.041e3	2.479e3	0.727	0.82	0.77	24.6	YES	NO	bd	bd	0.636
3	Total-tetrafurans	22.36	7.289e2	1.091e3	0.727	0.67	0.77	11.0	YES	NO	db	bb	0.256
4	Total-Furans	21.11	1.181e2	1.431e2	0.922	0.83	0.77	1.8	NO	NO	bd	bb	0.029
5	2378-TCDF	25.59	1.054e3	1.546e3	0.702	0.68	0.77	16.6	YES	NO	bd	bd	0.379
6	Total-tetrafurans	25.36	4.064e3	6.026e3	0.727	0.67	0.77	45.3	YES	NO	db	db	1.419
7	Total-tetrafurans	25.11	4.185e2	6.283e2	0.727	0.67	0.77	6.5	YES	NO	bb	bd	0.147
8	Total-tetrafurans	24.69	1.170e3	1.474e3	0.727	0.79	0.77	19.1	YES	NO	bb	db	0.372
9	Total-tetrafurans	24.36	8.115e2	1.137e3	0.727	0.71	0.77	12.3	YES	NO	dd	dd	0.274
10	Total-tetrafurans	24.26	2.119e3	2.978e3	0.727	0.71	0.77	24.1	YES	NO	bd	dd	0.717
11	Total-tetrafurans	23.70	7.902e2	1.031e3	0.727	0.77	0.77	11.4	YES	NO	dd	db	0.256
12	Total-tetrafurans	23.60	1.547e3	2.152e3	0.727	0.72	0.77	22.0	YES	NO	dd	bd	0.520
13	Total-tetrafurans	23.34	2.457e3	3.005e3	0.727	0.82	0.77	37.2	YES	NO	dd	dd	0.768
14	Total-tetrafurans	23.25	4.670e3	6.988e3	0.727	0.67	0.77	61.9	YES	NO	dd	dd	1.640
15	Total-tetrafurans	27.22	3.817e2	4.866e2	0.727	0.78	0.77	5.1	YES	NO	dd	bb	0.122
16	Total-tetrafurans	25.83	1.176e3	1.663e3	0.727	0.71	0.77	16.4	YES	NO	dd	dd	0.399
17	23478-PeCDF	31.09	2.617e3	1.604e3	0.786	1.63	1.55	34.4	YES	NO	db	dd	0.769
18	Total-pentafurans	30.95	1.572e3	1.115e3	0.654	1.41	1.55	21.8	YES	NO	dd	dd	0.582
19	Total-pentafurans	30.84	9.736e2	7.241e2	0.654	1.34	1.55	16.5	YES	NO	bd	bd	0.368
20	12378-PeCDF	29.76	1.045e3	5.982e2	0.679	1.75	1.55	12.7	YES	NO	bb	bb	0.338
21	Total-pentafurans	29.43	2.876e3	1.922e3	0.654	1.50	1.55	28.5	YES	NO	db	bb	1.039
22	Total-pentafurans	28.70	8.026e3	5.784e3	0.654	1.39	1.55	91.3	YES	NO	dd	MM	2.990
23	Total-pentafurans	28.50	2.449e3	1.492e3	0.654	1.64	1.55	27.2	YES	NO	dd	dd	0.853
24	Total-pentafurans	28.41	3.143e2	2.313e2	0.654	1.36	1.55	6.0	YES	NO	bd	bd	0.118
25	123789-HxCDF	36.74	2.966e3	2.212e3	1.137	1.34	1.24	49.9	YES	NO	bb	bb	0.654
26	234678-HxCDF	35.71	5.766e3	4.393e3	1.140	1.31	1.24	73.0	YES	NO	bd	bb	1.185
27	123678-HxCDF	34.87	4.065e3	3.246e3	1.091	1.25	1.24	77.5	YES	NO	dd	db	0.810
28	123478-HxCDF	34.74	1.431e4	1.161e4	1.166	1.23	1.24	302.6	YES	NO	dd	dd	2.840
29	Total-hexafurans	34.58	1.867e3	1.483e3	1.141	1.26	1.24	40.2	YES	NO	bd	bd	0.384
30	Total-hexafurans	34.11	6.563e4	5.264e4	1.141	1.25	1.24	1317.9	YES	NO	bb	bb	13.563
31	Total-hexafurans	33.80	9.789e2	7.800e2	1.141	1.26	1.24	19.9	YES	NO	bb	bb	0.202
32	Total-hexafurans	33.28	3.528e4	2.788e4	1.141	1.27	1.24	694.2	YES	NO	bb	bb	7.242
33	123468-HXCDF	33.07	1.057e4	8.320e3	1.169	1.27	1.24	213.3	YES	NO	bb	bb	2.064
34	1234789-HpCDF	40.84	4.240e3	3.852e3	0.953	1.10	1.05	52.7	YES	NO	bb	bb	1.810
35	Total-heptafurans	39.28	1.341e5	1.405e5	0.978	0.95	1.05	1822.1	YES	NO	bb	bb	57.513
36	1234678-HpCDF	38.63	4.859e4	4.971e4	1.003	0.98	1.05	674.7	YES	NO	bb	bb	19.308
37	OCDF	45.05	9.011e4	1.041e5	0.778	0.87	0.89	1282.8	YES	NO	bb	bb	61.365

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-penta1	27.03	1.903e4	1.181e4		1.61	1.55	457.7	YES	NO	bb	bb	4.703
39	1368-TCDD	23.36	1.725e3	2.427e3	1.015	0.71	0.77	29.3	YES	NO	bb	bb	0.547
40	Total-tetradioxins	25.22	2.014e2	2.517e2	1.024	0.80	0.77	3.8	YES	NO	db	bb	0.059
41	Total-tetradioxins	24.36	1.097e3	1.493e3	1.024	0.73	0.77	16.9	YES	NO	bd	bb	0.338
42	Total-tetradioxins	23.64	1.164e3	1.555e3	1.024	0.75	0.77	16.9	YES	NO	bb	bd	0.355
43	12378-PeCDD	31.35	1.906e3	1.305e3	1.022	1.46	1.55	22.9	YES	NO	bb	bb	0.593
44	Total-pentadioxins	30.10	1.292e3	9.692e2	1.502	1.33	1.55	18.8	YES	NO	db	MM	0.284
45	Total-pentadioxins	29.97	1.495e3	1.132e3	1.502	1.32	1.55	21.1	YES	NO	bd	MM	0.330
46	Total-pentadioxins	29.76	2.022e3	1.252e3	1.502	1.62	1.55	24.0	YES	NO	bb	bb	0.411
47	Total-pentadioxins	29.13	9.963e2	6.620e2	1.502	1.51	1.55	13.8	YES	NO	bb	bb	0.208
48	Total-hexadioxins	34.98	3.688e4	2.908e4	1.005	1.27	1.24	465.1	YES	NO	bd	bd	9.069
49	Total-hexadioxins	34.62	6.808e3	5.393e3	1.005	1.26	1.24	131.2	YES	NO	bb	bb	1.678
50	124679-HXCDD	33.85	3.210e4	2.674e4	1.115	1.20	1.24	588.7	YES	NO	bd	bb	7.611
51	123789-HxCDD	36.38	6.828e3	5.308e3	0.907	1.29	1.24	130.7	YES	NO	bb	bb	1.848
52	Total-hexadioxins	36.15	2.614e3	2.176e3	1.005	1.20	1.24	41.5	YES	NO	db	db	0.659
53	123678-HxCDD	35.99	1.236e4	1.044e4	1.001	1.18	1.24	248.3	YES	NO	dd	dd	3.018
54	123478-HxCDD	35.87	2.687e3	2.400e3	0.996	1.12	1.24	57.1	YES	NO	bd	bd	0.737
55	Total-hexadioxins	35.09	3.592e3	3.317e3	1.005	1.08	1.24	70.6	YES	NO	db	db	0.950
56	1234678-HpCDD	40.12	2.572e5	2.531e5	1.039	1.02	1.05	2376.5	YES	NO	bb	bb	94.264
57	1234679-HPCDD	39.07	3.564e5	3.476e5	1.137	1.03	1.05	3363.6	YES	NO	bb	bb	118.861
58	OCDD	44.82	1.344e6	1.563e6	0.920	0.86	0.89	10459.7	YES	NO	bb	bb	776.613
59	12479-PECDD	28.67	3.704e3	2.607e3	2.301	1.42	1.55	34.4	YES	NO	MM	MM	0.518

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.89	3.007e7					24.3	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.02	1.539e3					0.8	NO		bb		0.000
2	FUNCTION2 PFK	29.20	4.008e4					4.2	YES		bb		0.000
3	FUNCTION2 PFK	29.01	8.988e5					19.7	YES		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.82	3.482e5					7.4	YES		bb		0.000
2	FUNCTION3 PFK	36.55	3.880e5					5.9	YES		bb		0.000
3	FUNCTION3 PFK	32.76	2.573e4					2.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.66	7.552e4					5.8	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.59	1.069e5					0.7	NO		bb		
2	FUNCTION5 PFK	44.16	5.876e4					7.1	YES		db		
3	FUNCTION5 PFK	43.89	3.319e5					7.3	YES		bd		
4	FUNCTION5 PFK	43.21	2.842e4					3.1	YES		bb		
5	FUNCTION5 PFK	42.60	8.948e5					24.1	YES		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.96	8.291e1					2.8	NO		bb		0.000
2	FUNCTION1 HXCD...	25.75	9.693e2					20.9	YES		bb		0.000
3	FUNCTION1 HXCD...	23.60	1.050e2					2.8	NO		bb		0.000
4	FUNCTION1 HXCD...	22.13	1.211e2					3.0	NO		db		0.000
5	FUNCTION1 HXCD...	21.99	8.692e1					2.8	NO		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.04	8.493e1					2.7	NO		bb		0.000
2	FUNCTION2 HPCD...	29.71	3.218e2					5.9	YES		bb		0.000
3	FUNCTION2 HPCD...	28.79	1.339e2					4.1	YES		bb		0.000
4	FUNCTION2 HPCD...	32.15	7.830e1					1.8	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.26	2.478e4					534.8	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.85	2.470e2					4.7	YES		bb		0.000
2	FUNCTION5 DCDPE	43.71	9.340e1					2.9	NO		bb		0.000

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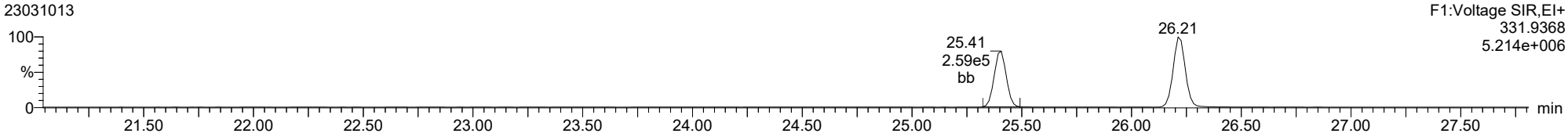
13C-1234-TCDD



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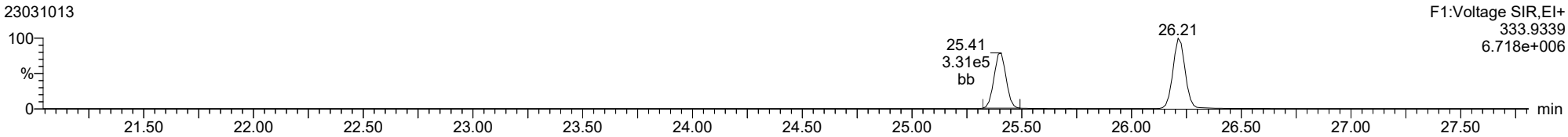

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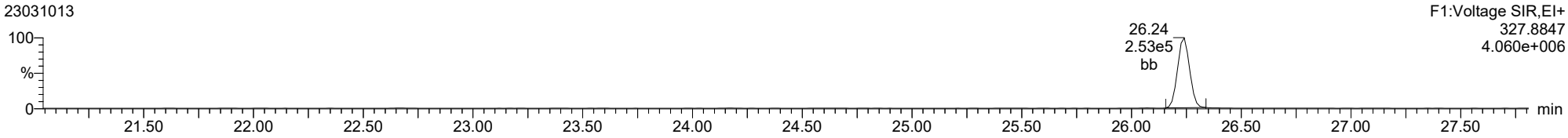

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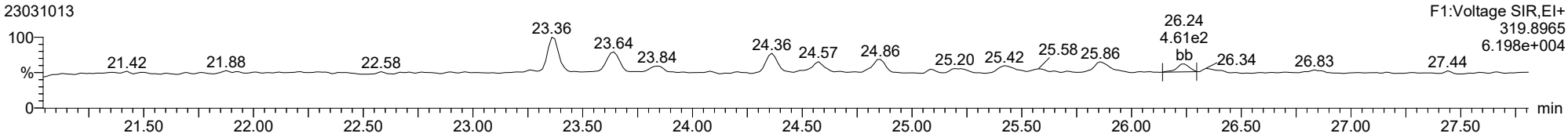

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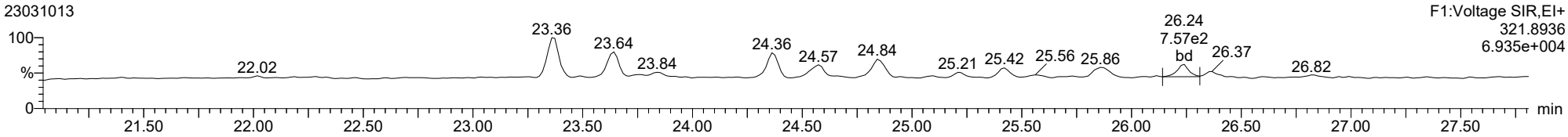

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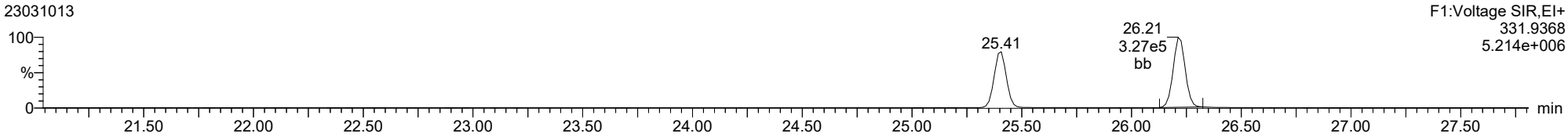

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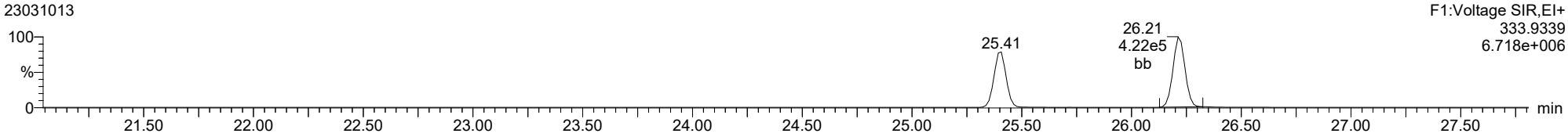

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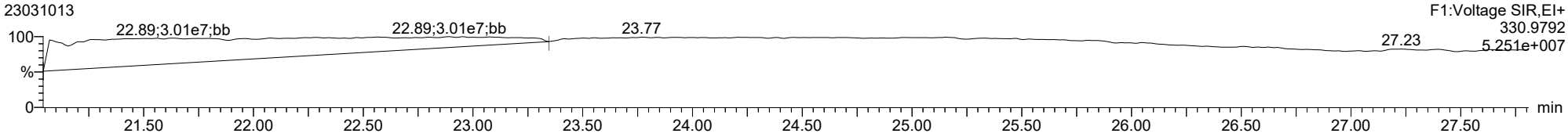

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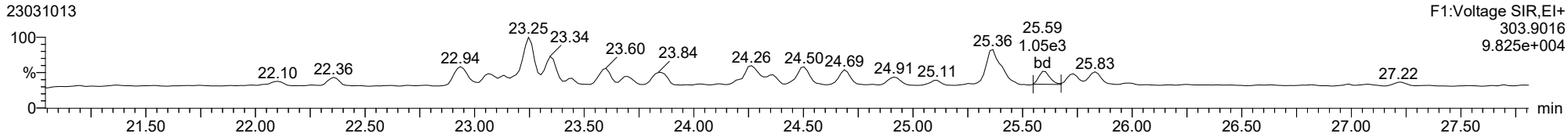

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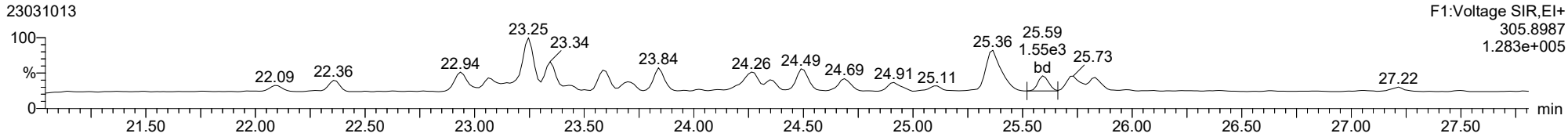

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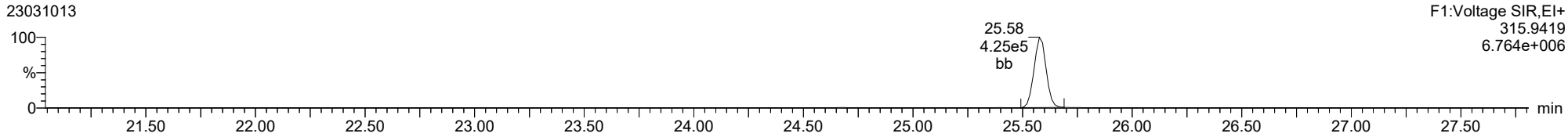

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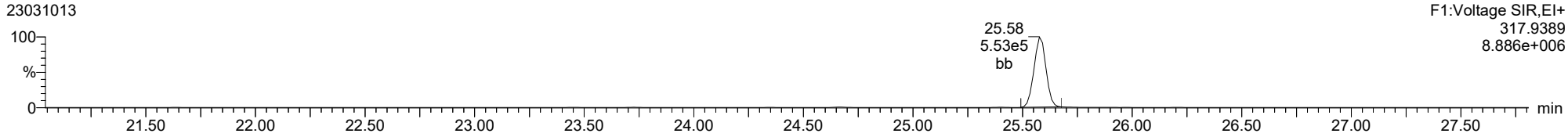

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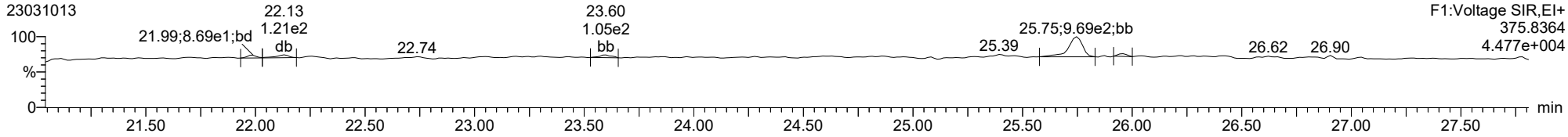

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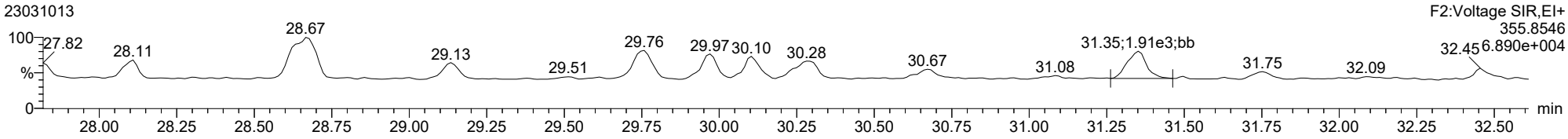
12378-PeCDD



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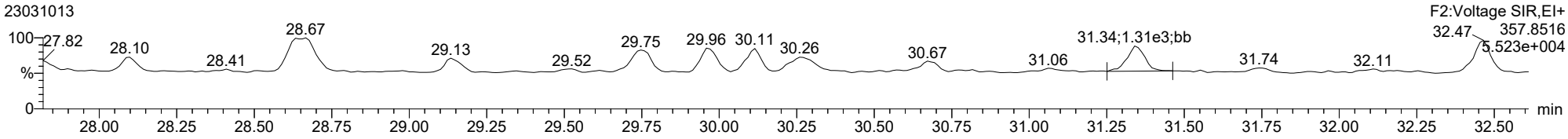

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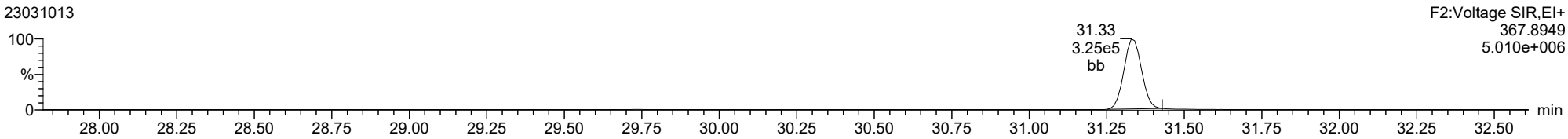

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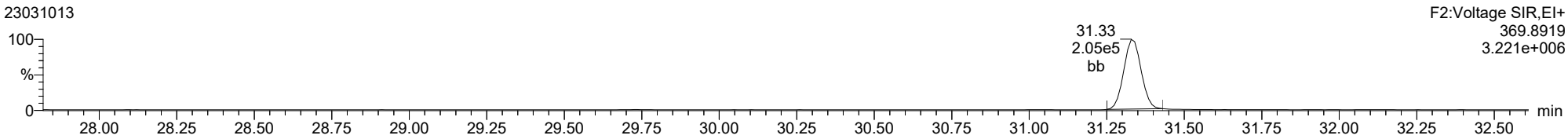

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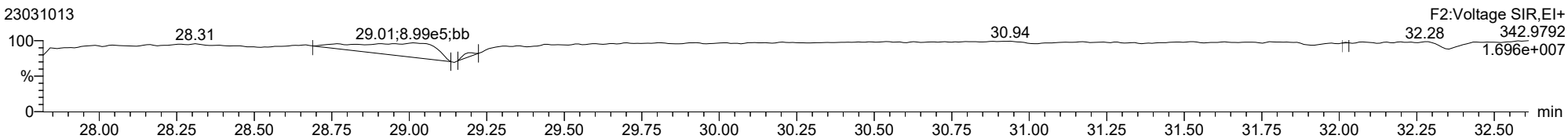

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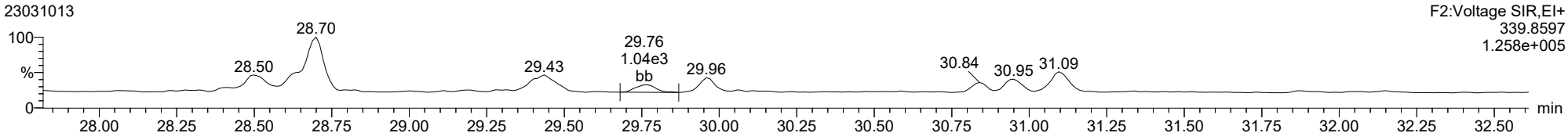

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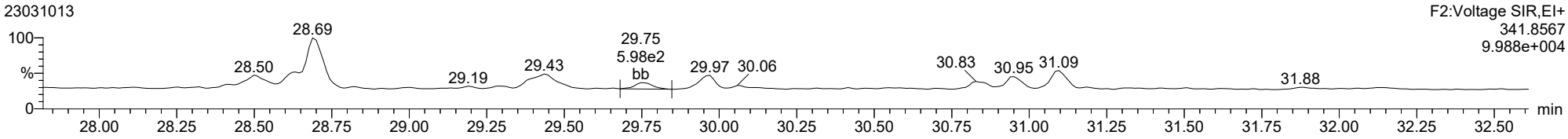

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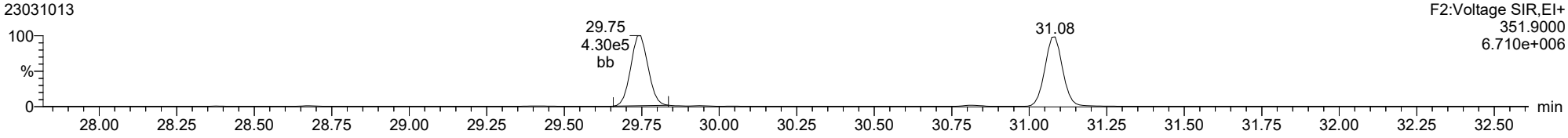

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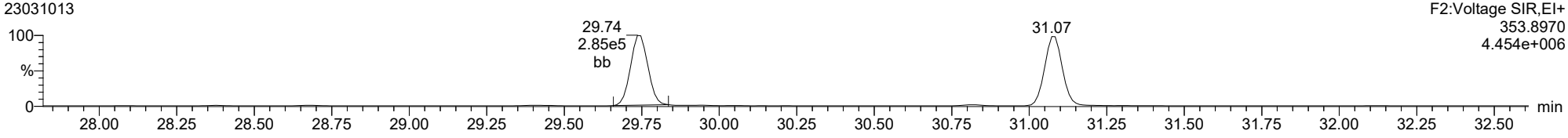

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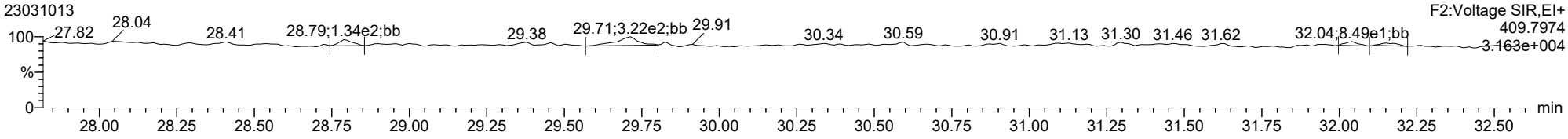

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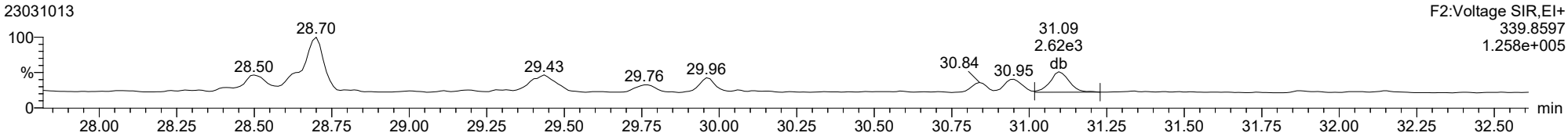
23478-PeCDF



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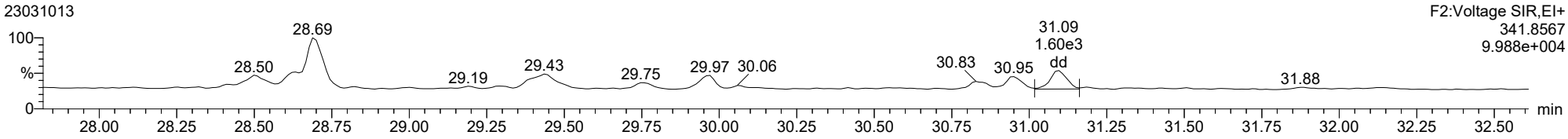

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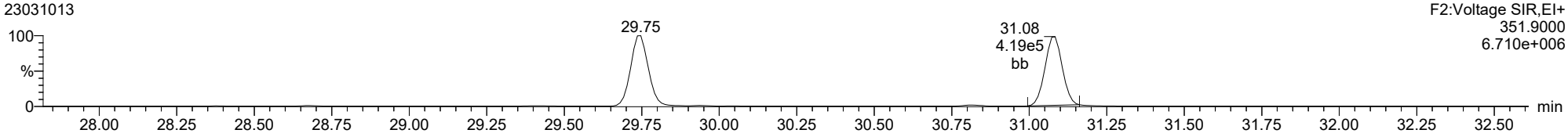

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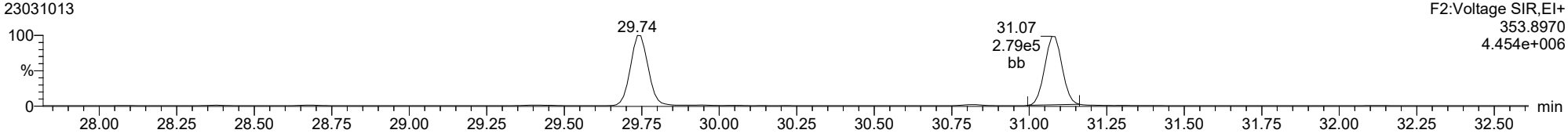

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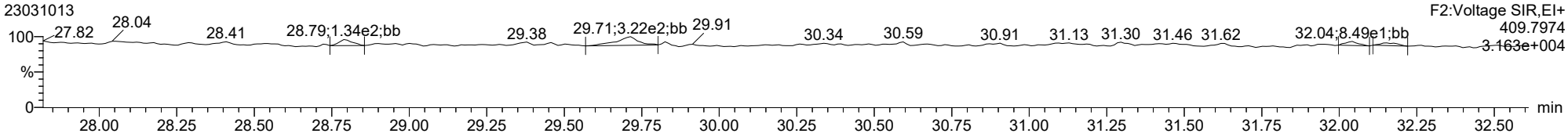

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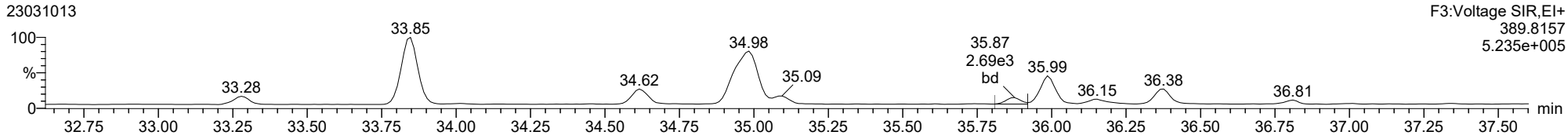
123478-HxCDD



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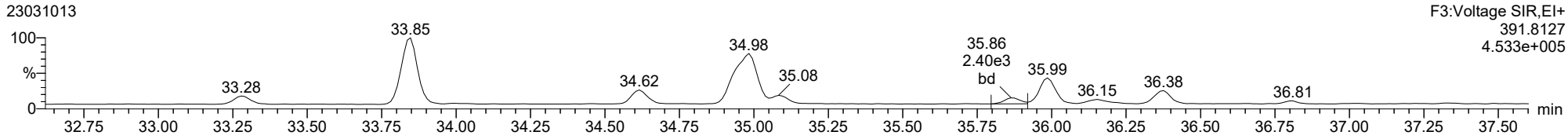

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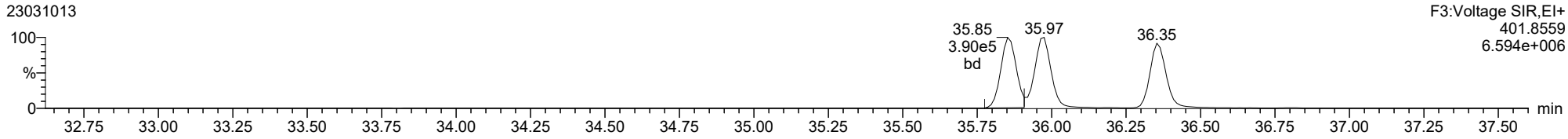

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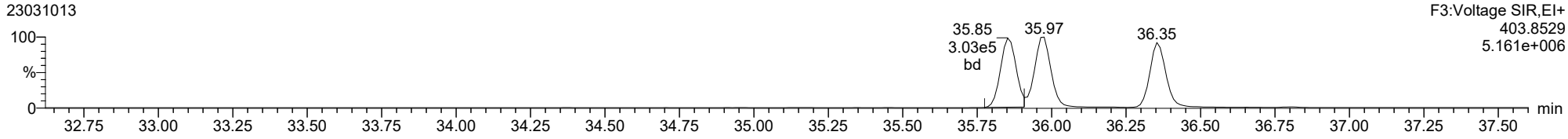

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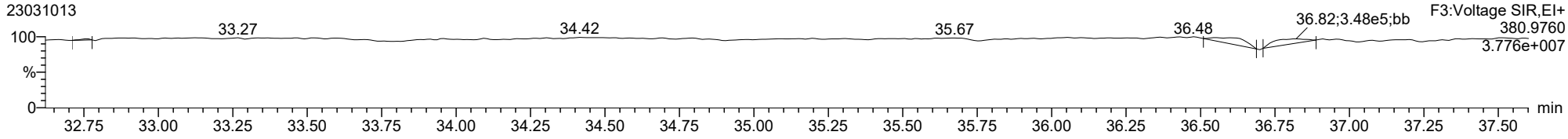

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ID: 23A0467-05, Name: 23031013, Date: 10-Mar-2023, Time: 20:19:20, Conditions: AUTOSPEC01, User: pk

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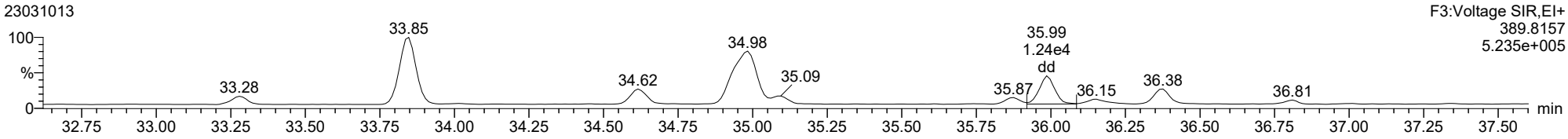

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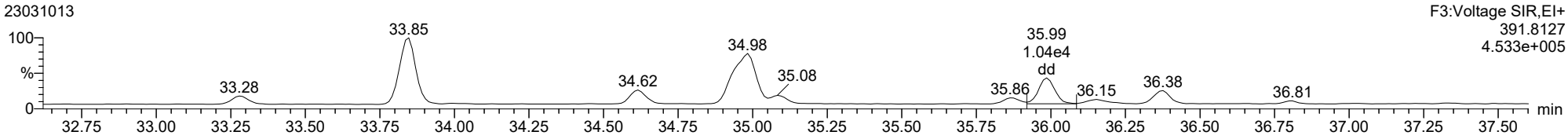

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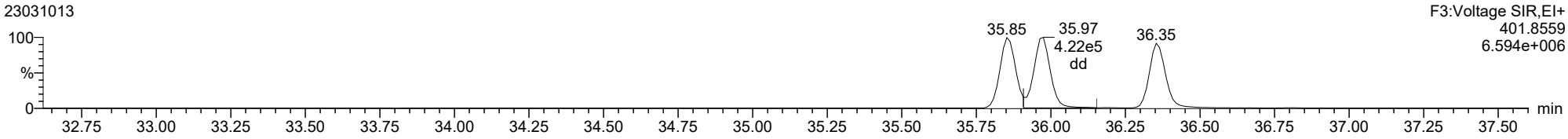

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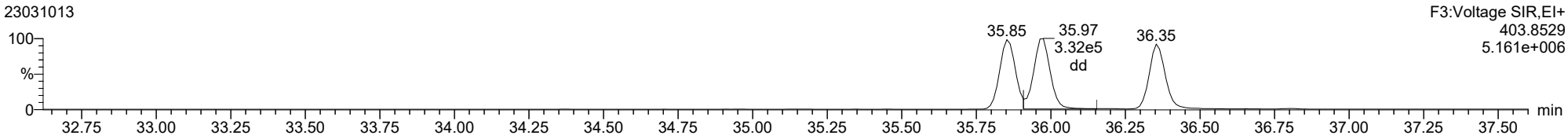

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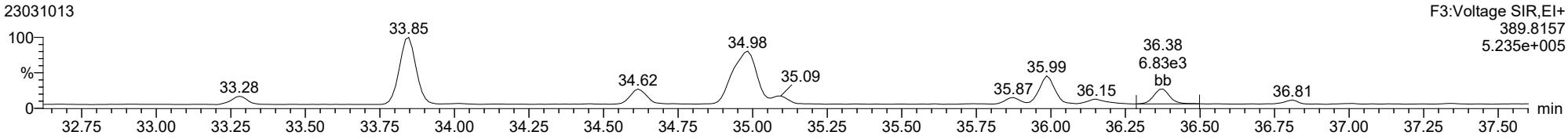

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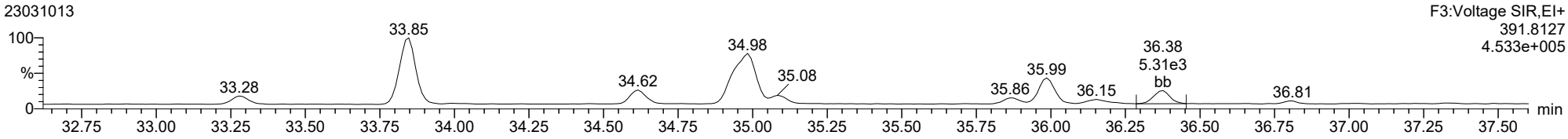

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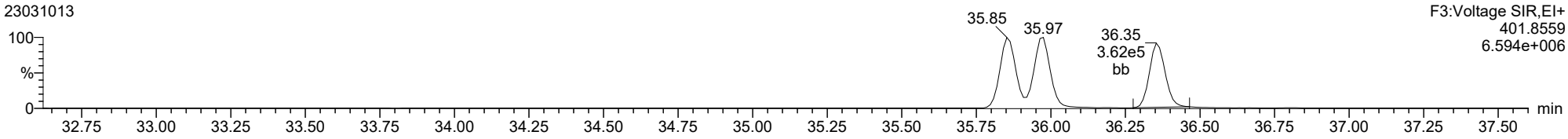

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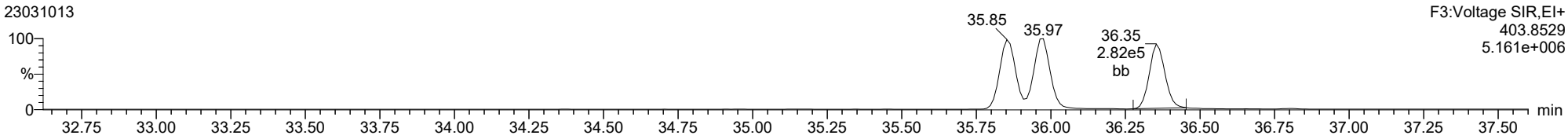

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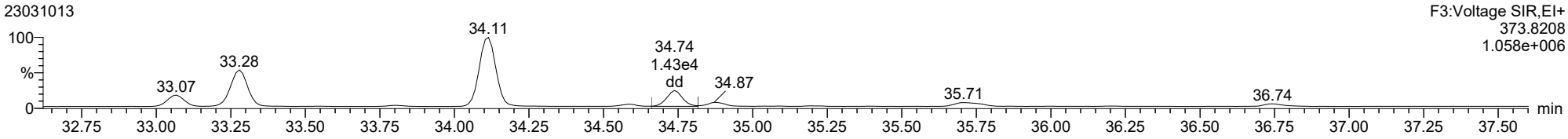

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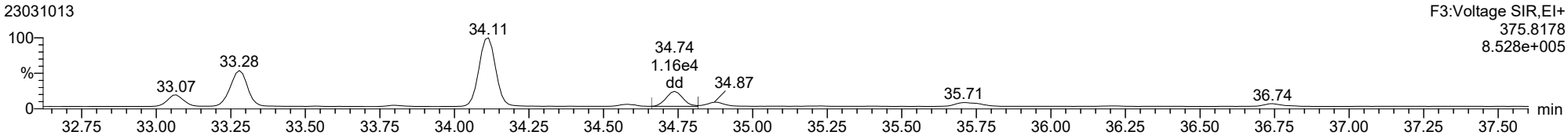

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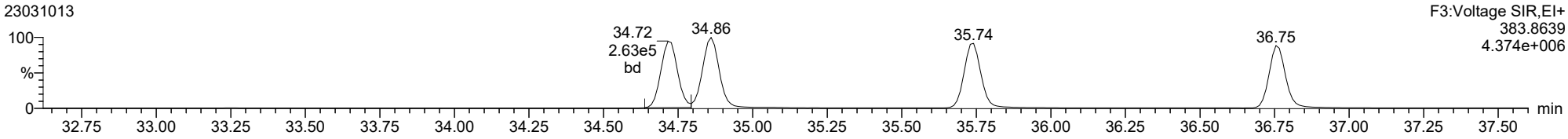

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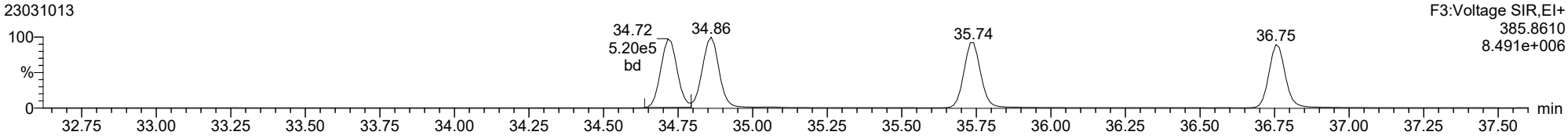

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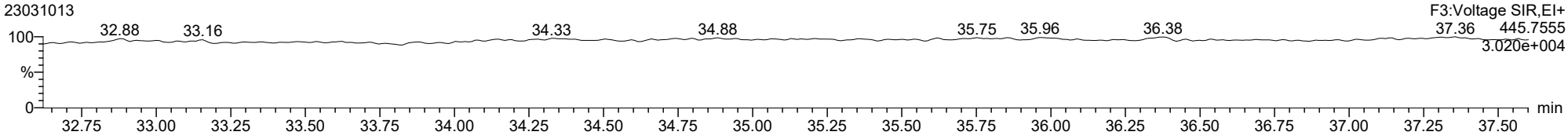

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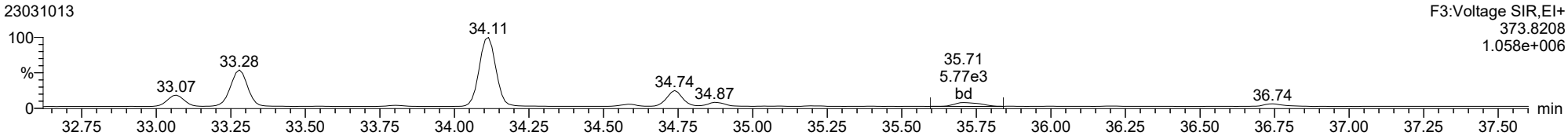

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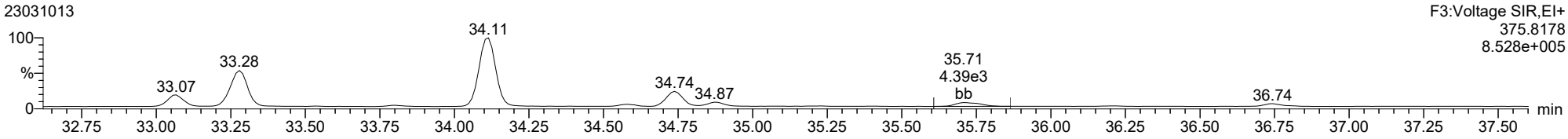

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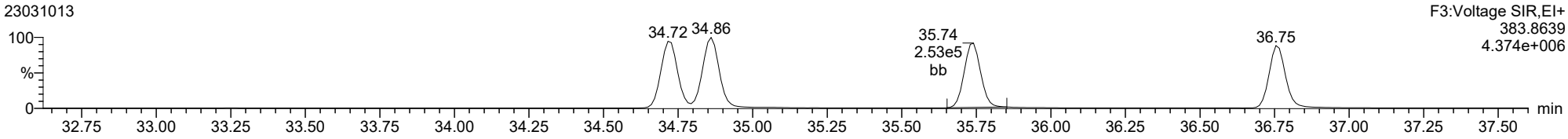

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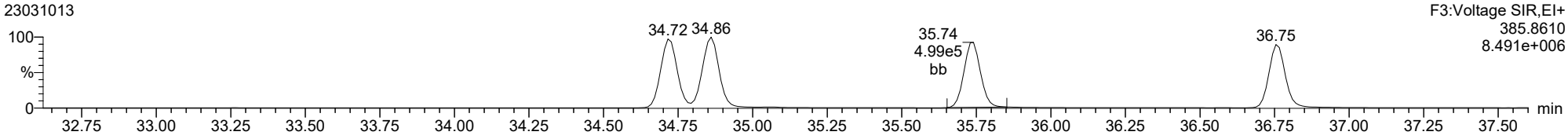

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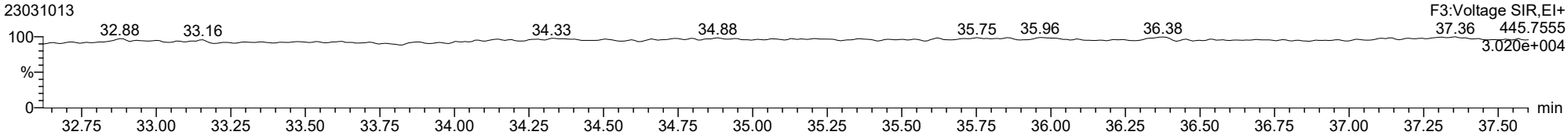

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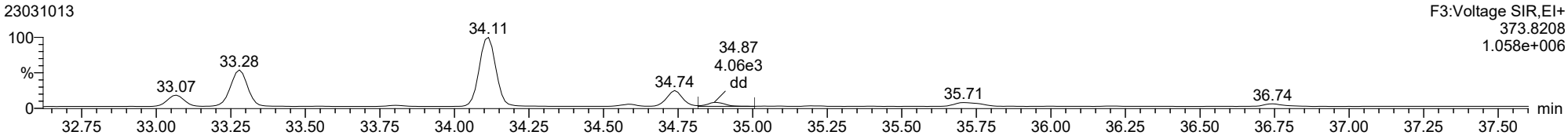

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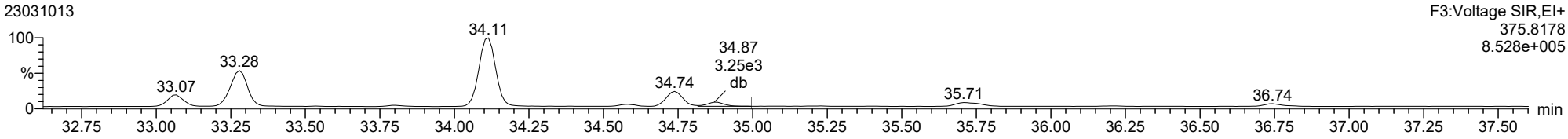

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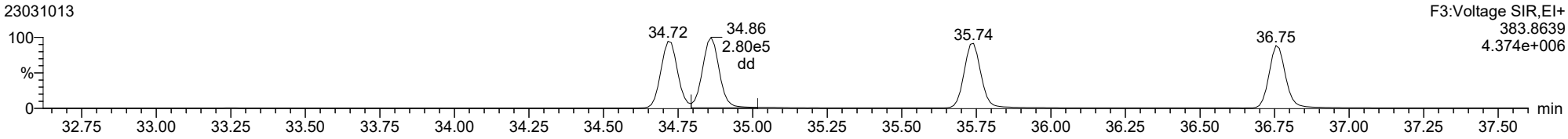

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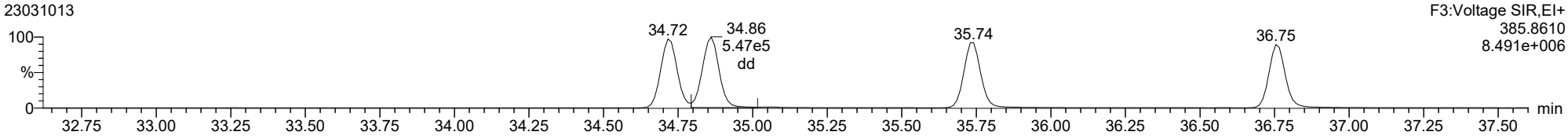

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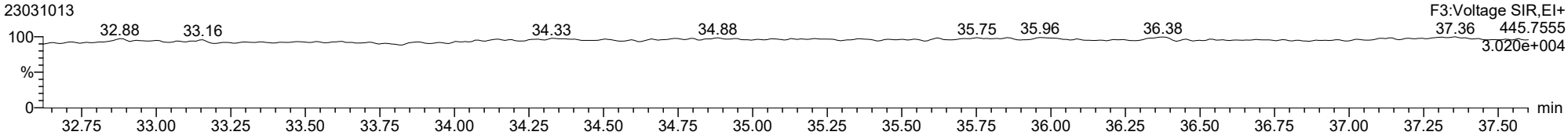

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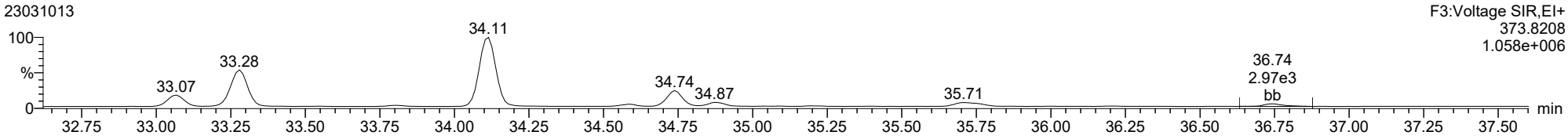

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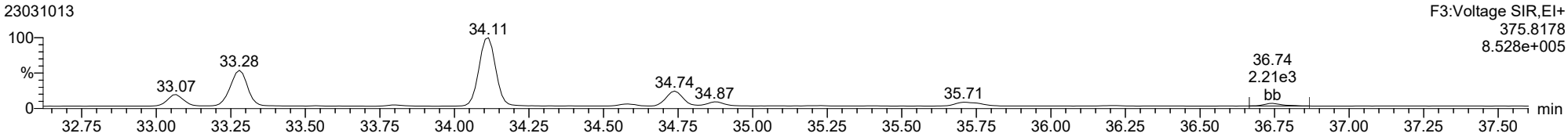

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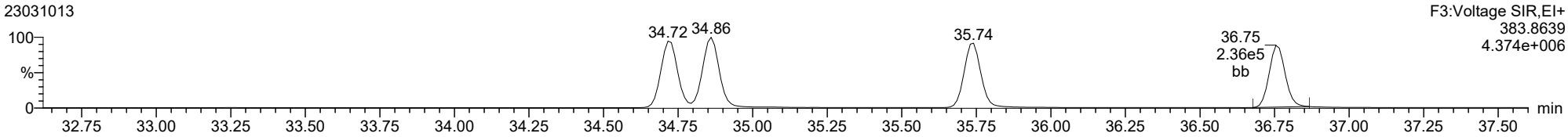

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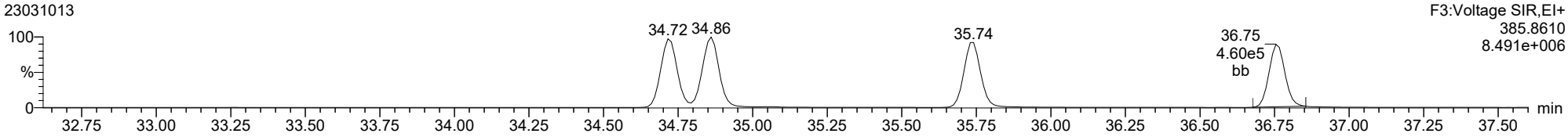

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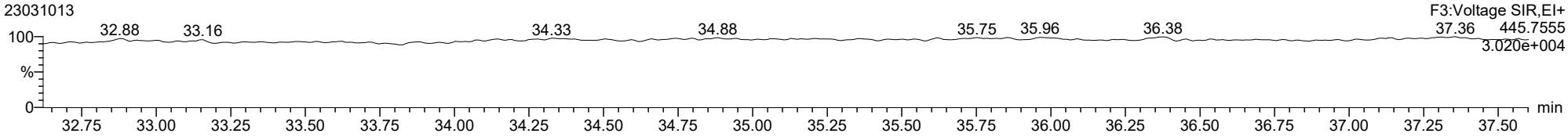

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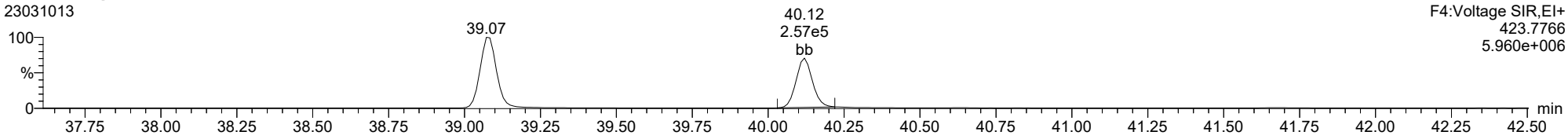

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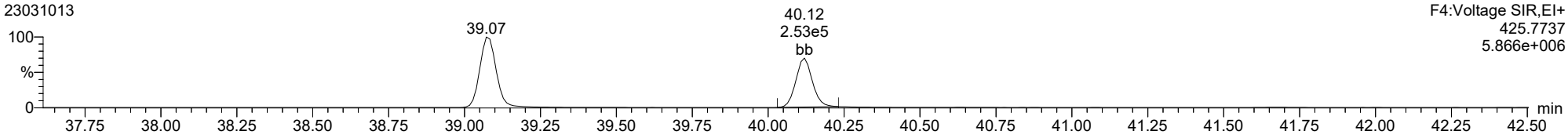

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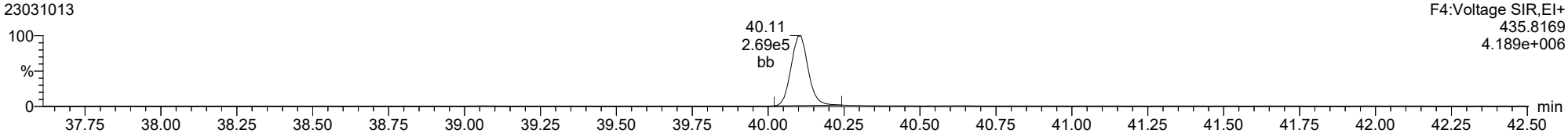

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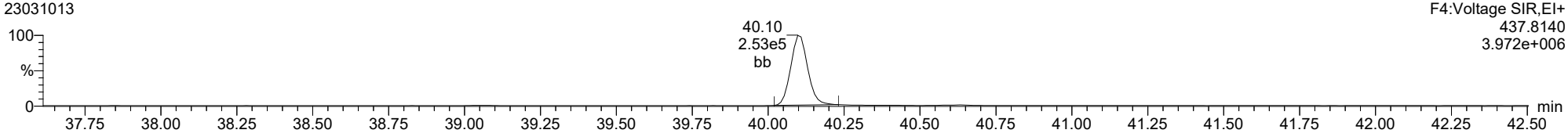

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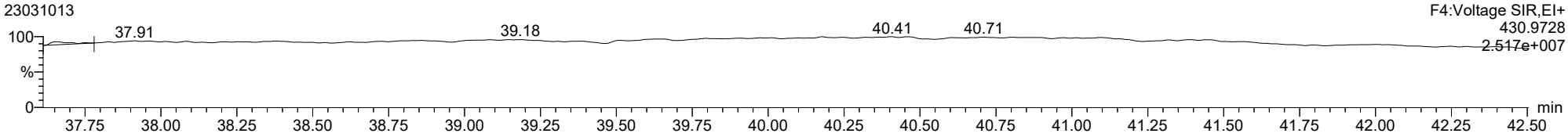

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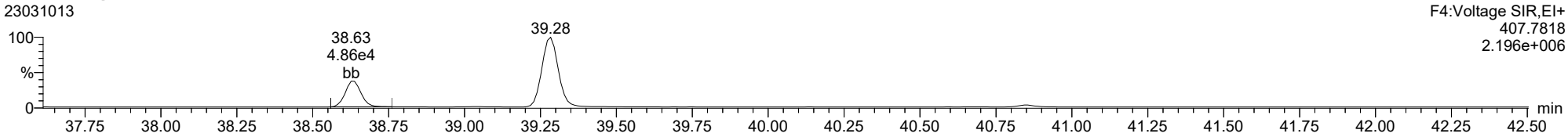

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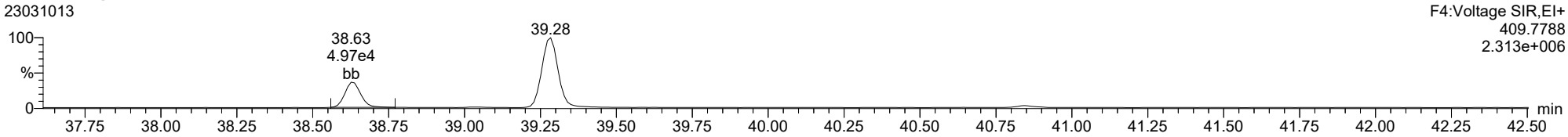

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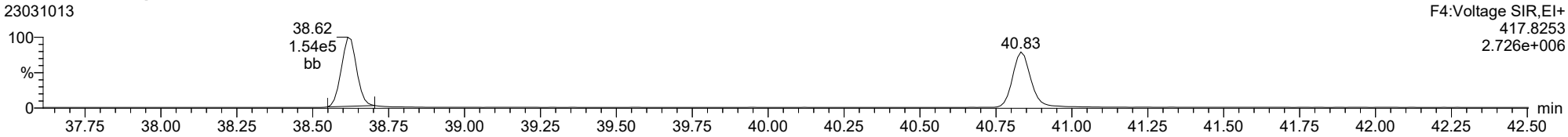

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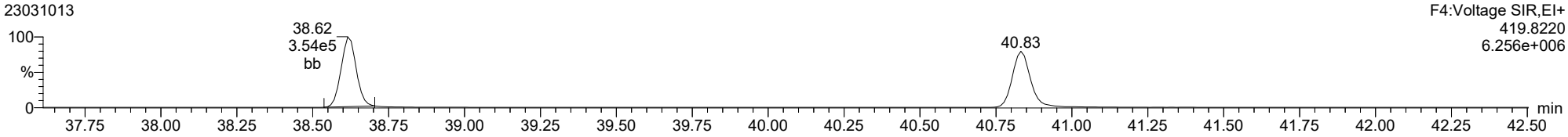

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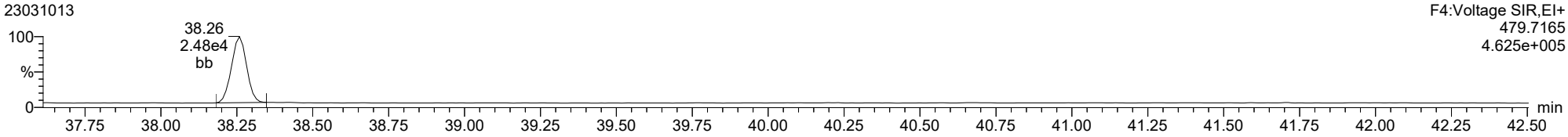

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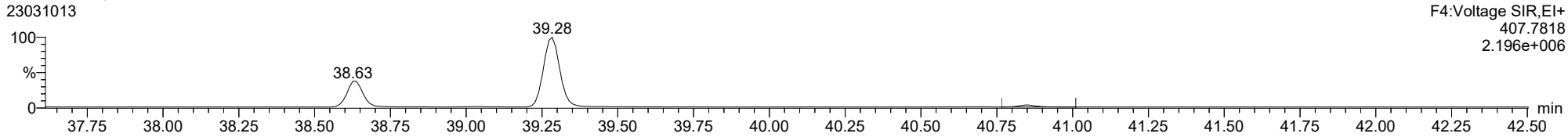

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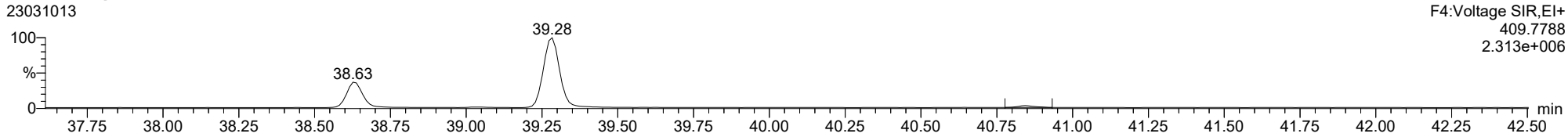

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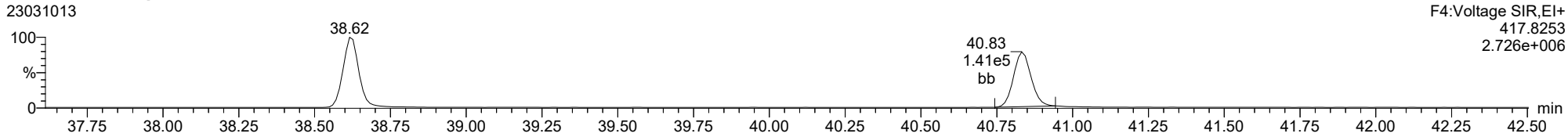

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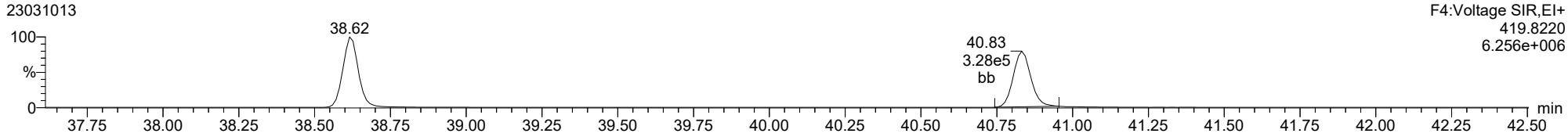

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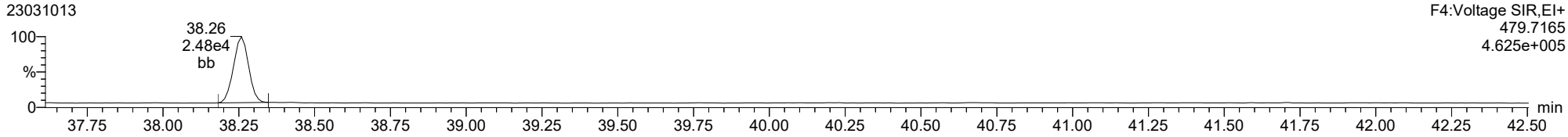

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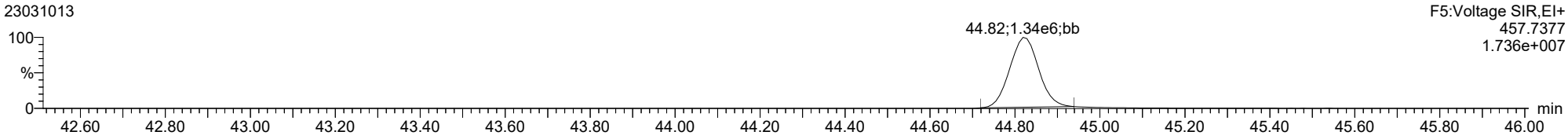

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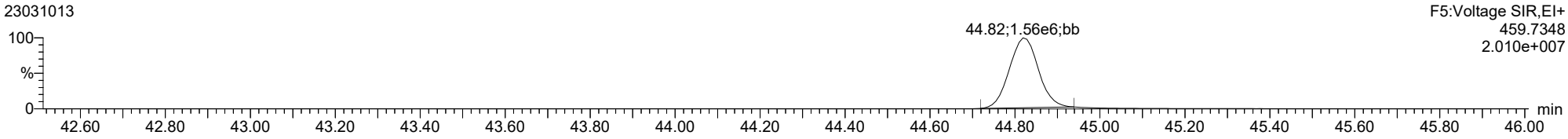

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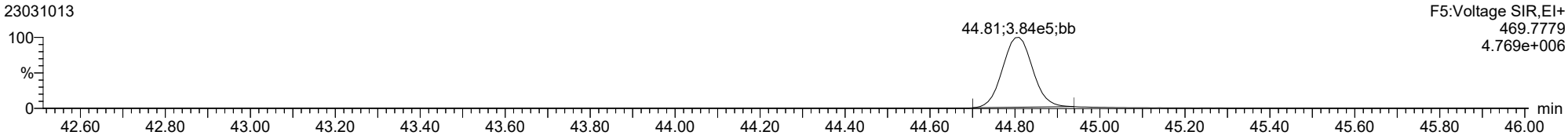
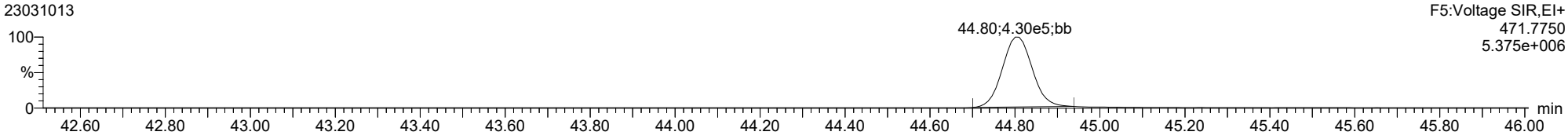


13C-OCDD



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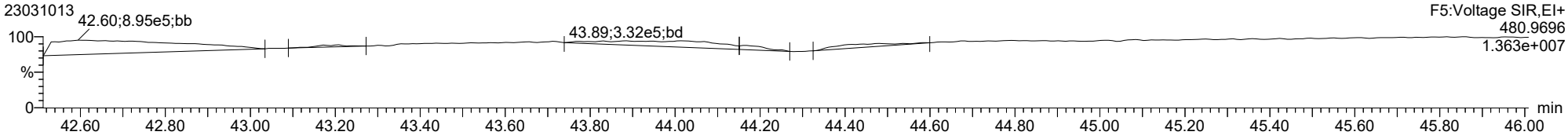

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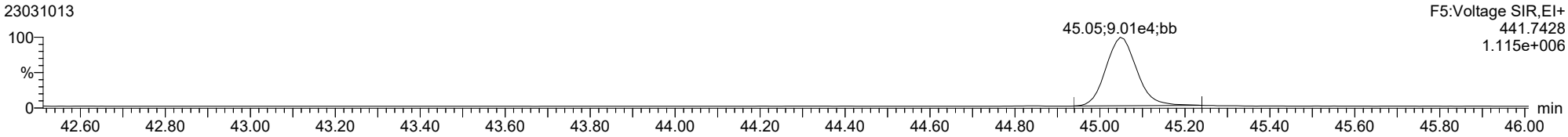

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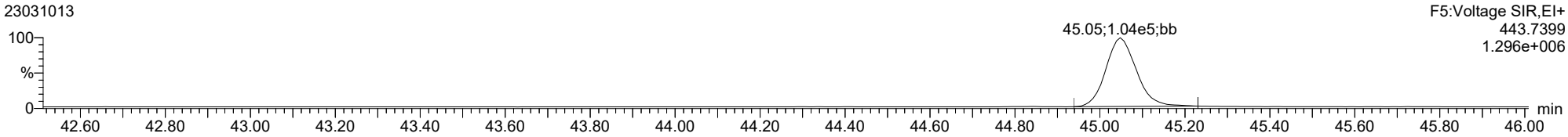

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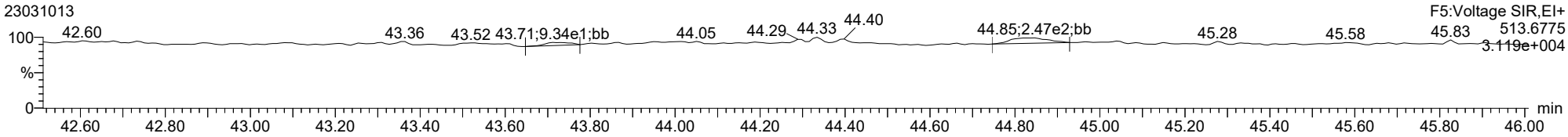

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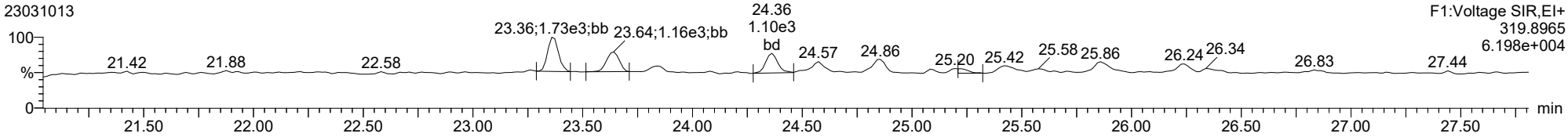

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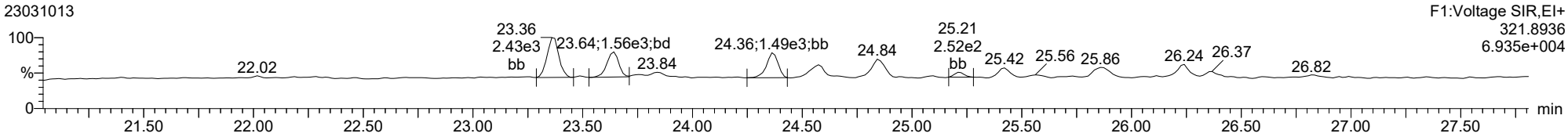

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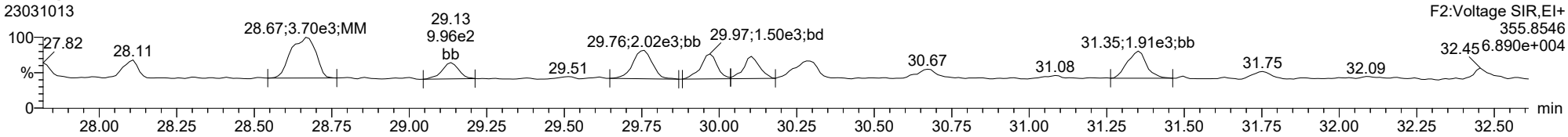

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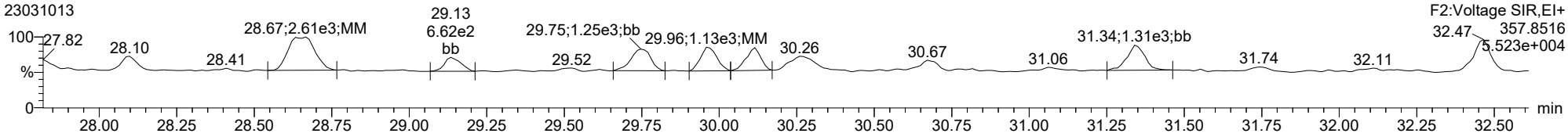

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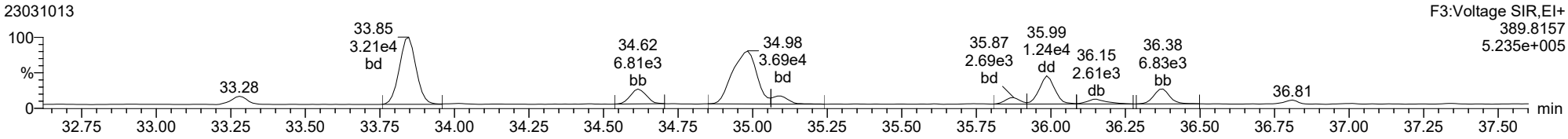
Total-hexadioxins



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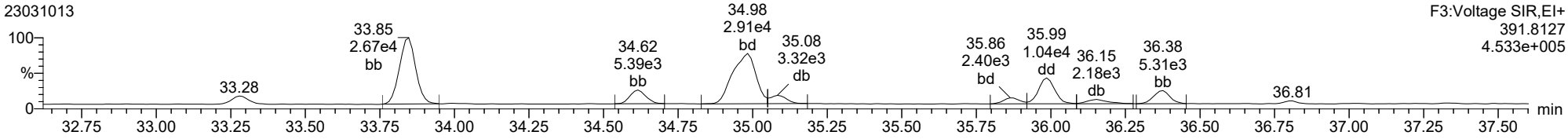

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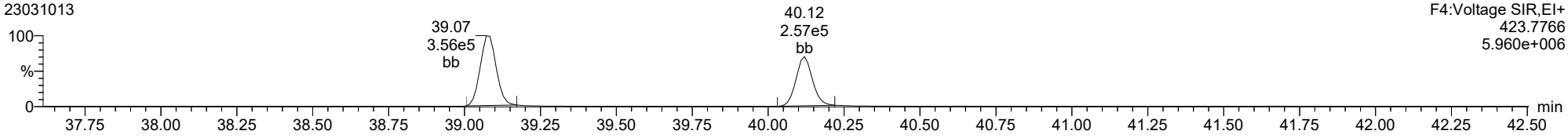

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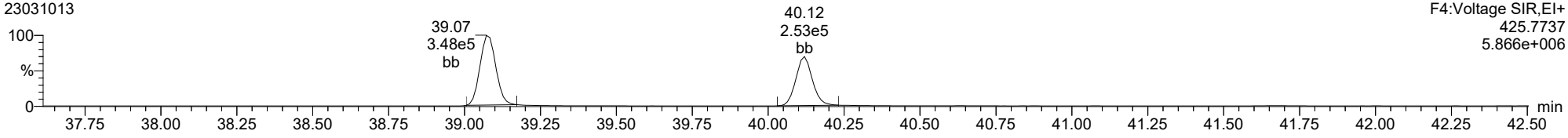

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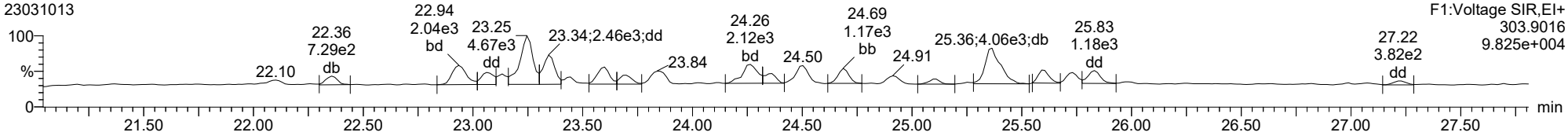
Total-tetrafurans



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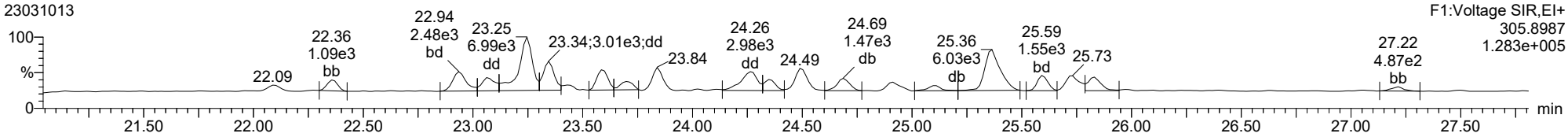

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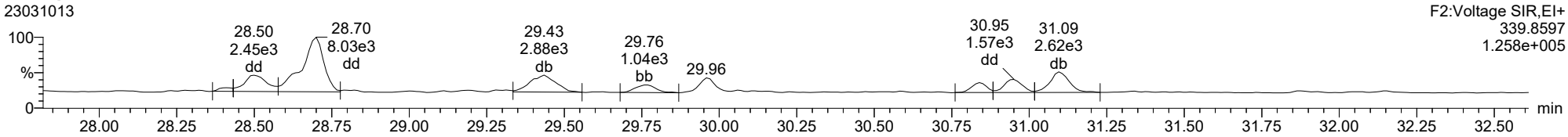
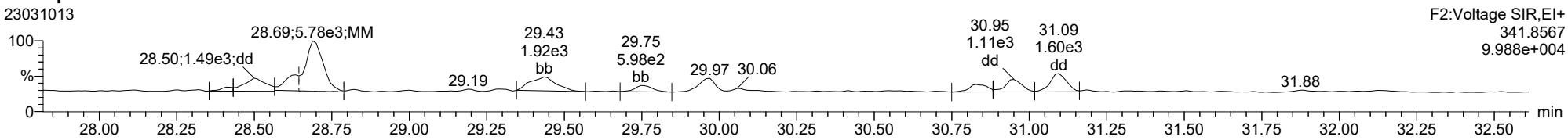


Total-pentafurans



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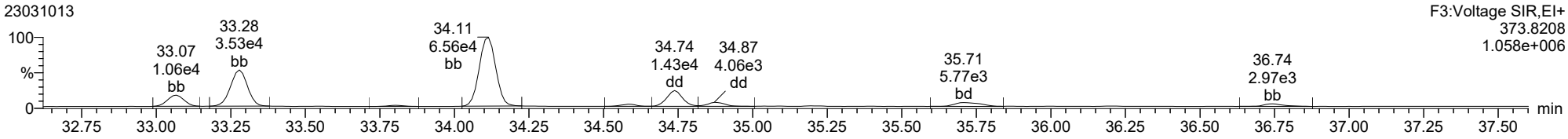
Total-hexafurans



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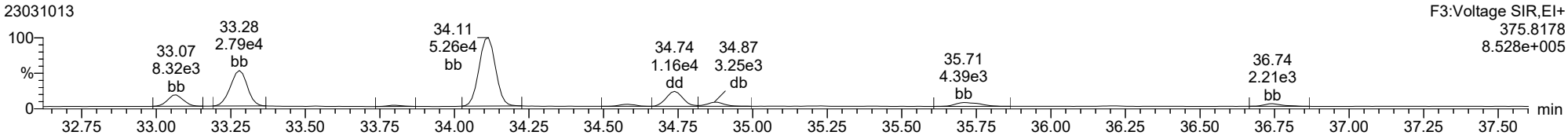

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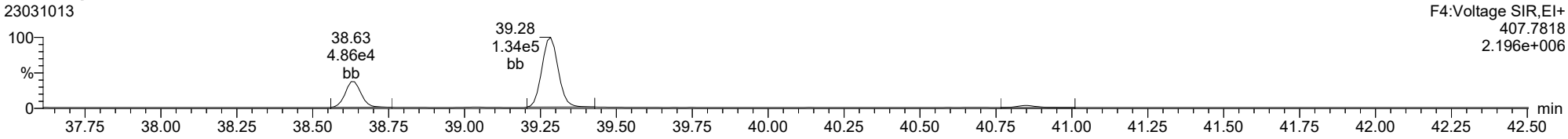

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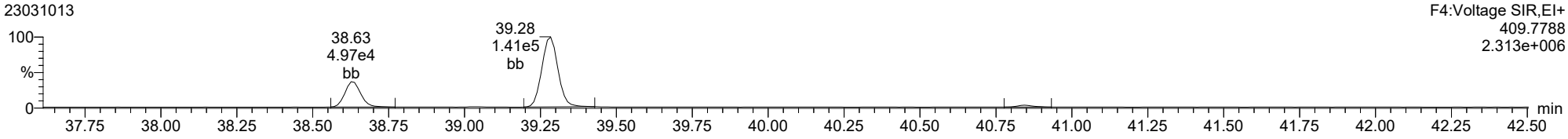


PREPARATION BATCH SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Batch:	BLB0270	Batch Matrix:	Solid	Preparation:	EPA 1613

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1004	23A0467-05	23031013	02/28/23 14:27	
Blank	BLB0270-BLK1	23030806	02/28/23 14:27	
LCS	BLB0270-BS1	23030807	02/28/23 14:27	
Reference	BLB0270-SRM1	23030808	02/28/23 14:27	

Analytical Resources, LLC
Analytical Chemists and Consultants

HRGCMS Dioxin/Furan Preparation Bench Sheet EPA Methods 8290A or 1613B

Batch: BLB0270

Solid Samples

ARI Work Orders: 23A0572,23B0054,23A0467,23B0077

Matrix (circle one)	[Soil]	Sediment	Oil Tissue
Extraction Method	Start Date/Time:	End Date/Time:	
[Soxhlet] **SepF Shake out**	2/28/23 14:27	3/1/23 0645	

Reagents/Equipment Used	NA	ID / Lot Number	Initials	Date
Glasswool		JQ12850	TW	3/2/23
Basic Silica		L0007/16	TW	3/2/23
Acid Silica		K011012	TW	3/2/23
Activated Florisil		K005756	TW	3/2/23
Balance		24650344	TW	2/28/23
Toluene		K011233	TW	2/28/23
Hexane		L001957	TW	3/1/23
CH2Cl2		K005158	TW	3/2/23
H2SO4		L001033	TW	3/2/23
Na2SO4		L001285	TW	2/28/23
Other (RM)		L001273	TW	2/28/23
0% Silica		K011054	TW	3/2/23
Nonane		K006033	TW	3/3/23

Lab Number & Container	Sample Name	% Solids	Sample Weight Equal to dry (g) (Target Dry)	Actual	RotoVap 45 °C	Water Trap Vol (mL)	Final Vol. (uL)
23A0467-05 C	LDW23-SS1004	57.2	(17.48)	17.49	(1) / 2	7.0	20
23A0572-01 M	Composite Ash	44.47	(22.49)	22.49	1 / (2)	6.0	20
23B0054-01 A	DM-19-S	56.1	(17.83)	17.85	(1) / 2	7.0	20
23B0054-02 A	DM-15-S	52.99	(18.87)	18.88	1 / (2)	7.0	20
23B0054-03 A	DM-20-C-0-1	42.04	(23.79)	23.84	(1) / 2	11.5	20
23B0054-04 A	DM-20-C-1-3	65.12	(15.36)	15.40	1 / (2)	5.0	20
23B0054-05 A	DM-11-C-0-1	33.14	(30.18)	30.23	(1) / 2	14.0	20
23B0054-06 A	DM-11-C-1-3	45.61	(21.93)	21.94	1 / (2)	11.5	20
23B0054-07 A	DM-11-C-3-5	22.44	(44.56)	44.57	(1) / 2	30.0	20
23B0054-08 A	DM-24-C-3-5	36.12	(27.69)	27.71	1 / (2)	16.0	20
23B0054-09 A	DM-06-C-0-1	54.05	(18.50)	18.51	(1) / 2	7.0	20
23B0054-10 A	DM-06-C-1-3	31.58	(31.67)	31.67	1 / (2)	19.0	20
23B0054-11 A	DM-06-C-3-5	29.39	(34.03)	34.05	(1) / 2	21.5	20
23B0077-05 A	SW-3-Z	79.14	(12.64)	12.64	1 / (2)	2.5	20
BLB0270-BLK1	Blank	100	()	10.00	(1) / 2	0.0	20
BLB0270-BS1	LCS	100	()	10.00	1 / (2)	0.0	20
BLB0270-DUP1	23B0054-01A Duplicate	56.1	(17.83)	17.85	(1) / 2	7.0	20
BLB0270-SRM1	Reference	100	()	10.02	1 / (2)	0.0	20
Prep Analyst / Date:			TW 2/28/23		TW 3/1/23		

Standards Used	Vol	ID / Lot Number	Concentration	Expiration Date	Analyst	Witness	Date
Recovery Standard	1.0 mL	K011158	2/4 ng/mL	12/2/23	TW	M	2/28/23
OPR	1.0 mL	K006003	0.2/1.0/2.0 ng/mL	6/30/23	TW	M	2/28/23
~~QLS Standard~~	~~1.0 mL~~		~~0.1/0.05/0.1 ng/mL ng/L~~				
Cleanu-up Standard	1.0 mL	L001332	0.8 ng/mL	2/8/24	TW	DL	3/2/23

Verify Client ID
Analyst / Date: TW 2/28/23

Acid Clean [Y] N
Analyst / Date: TW 3/2/23

Silica-Florisil Clean [Y] N
Analyst / Date: TW 3/2/23

Supervisor Review By 3/8/23 Date

Printed: 2/21/2023 6:43:34AM

3083F
Page 1 of 1

23A0467 CLPLIKE (Rev0) - Page 3349 of 5253

TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLB0074
Date:	
Analyst:	TW
Drying Oven:	018
Analytical Balance:	2465344

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	02/09/23	12:12	112
Date/time out:	02/10/23	0505	112
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	112
End Temp:	112

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0572-01 M	0.79	11.09	5.37			No
23B0054-01 A	0.80	11.21	6.64			No
23B0054-02	0.80	11.33	6.38			No
23B0054-03	0.80	11.60	5.34			No
23B0054-04	0.80	11.81	7.97			No
23B0054-05	0.81	11.22	4.26			No
23B0054-06	0.81	11.48	5.64			No
23B0054-07	0.80	11.54	3.21			No
23B0054-08	0.80	11.68	4.73			No
23B0054-09	0.80	11.16	6.40			No
23B0054-10	0.79	11.05	4.03			No
23B0054-11	0.80	11.79	4.03			No

TOTAL SOLIDS BENCHSHEET	Batch:	BLB0074
Method HRSM01.2	Date:	2/10/2023 5:05
(dry at 110 C)	Analyst:	TW
Instrumentation	Drying Oven:	15
	Analytical Balance:	24650344

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	2/9/2023 12:12	112	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	112
Date/time out:	2/10/2023 5:05	112	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	112
Elapsed hrs:	16.9				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0572-01	0.7900	11.0900	5.3700	4.58	**44.47%**	No
23B0054-01	0.8000	11.2100	6.6400	5.84	**56.10%**	No
23B0054-02	0.8000	11.3300	6.3800	5.58	**52.99%**	No
23B0054-03	0.8000	11.6000	5.3400	4.54	**42.04%**	No
23B0054-04	0.8000	11.8100	7.9700	7.17	**65.12%**	No
23B0054-05	0.8100	11.2200	4.2600	3.45	**33.14%**	No
23B0054-06	0.8100	11.4000	5.6400	4.83	**45.61%**	No
23B0054-07	0.8000	11.5400	3.2100	2.41	**22.44%**	No
23B0054-08	0.8000	11.6800	4.7300	3.93	**36.12%**	No
23B0054-09	0.8000	11.1600	6.4000	5.60	**54.05%**	No
23B0054-10	0.7900	11.0500	4.0300	3.24	**31.58%**	No
23B0054-11	0.8000	11.7900	4.0300	3.23	**29.39%**	No

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: DIOXIN Extraction Batch BLB0270

Total Solids Batch: BLB0074 Work Order(s): 23A0572, 23B0054

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☑ Standing Water Homogenized (Shared samples)= 23B0054-01,02,05	TW 2/9/23
☑ Clay/Clumps (Difficult to homogenize)= ~~23B0054-01,02~~ TW 2/9/23 54-01,03,04,05,08	TW 2/9/23
☐ Rocks (%+size)?	
☑ Organics (Leaves/sticks/grass)= 572-01 = 100% fine black woodchips, 54-03, 05-11 = <50% organics	TW 2/9/23
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☑ Other (Details)= 23B0054-05 = ~20% loss, burnt on Retsch #1	TW 3/1/23
54-6,7,8,10,11 = Acid clean generated a viscous extract, carefully added DI water to clear	TW 3/2/23
Aqueous:	
☑ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

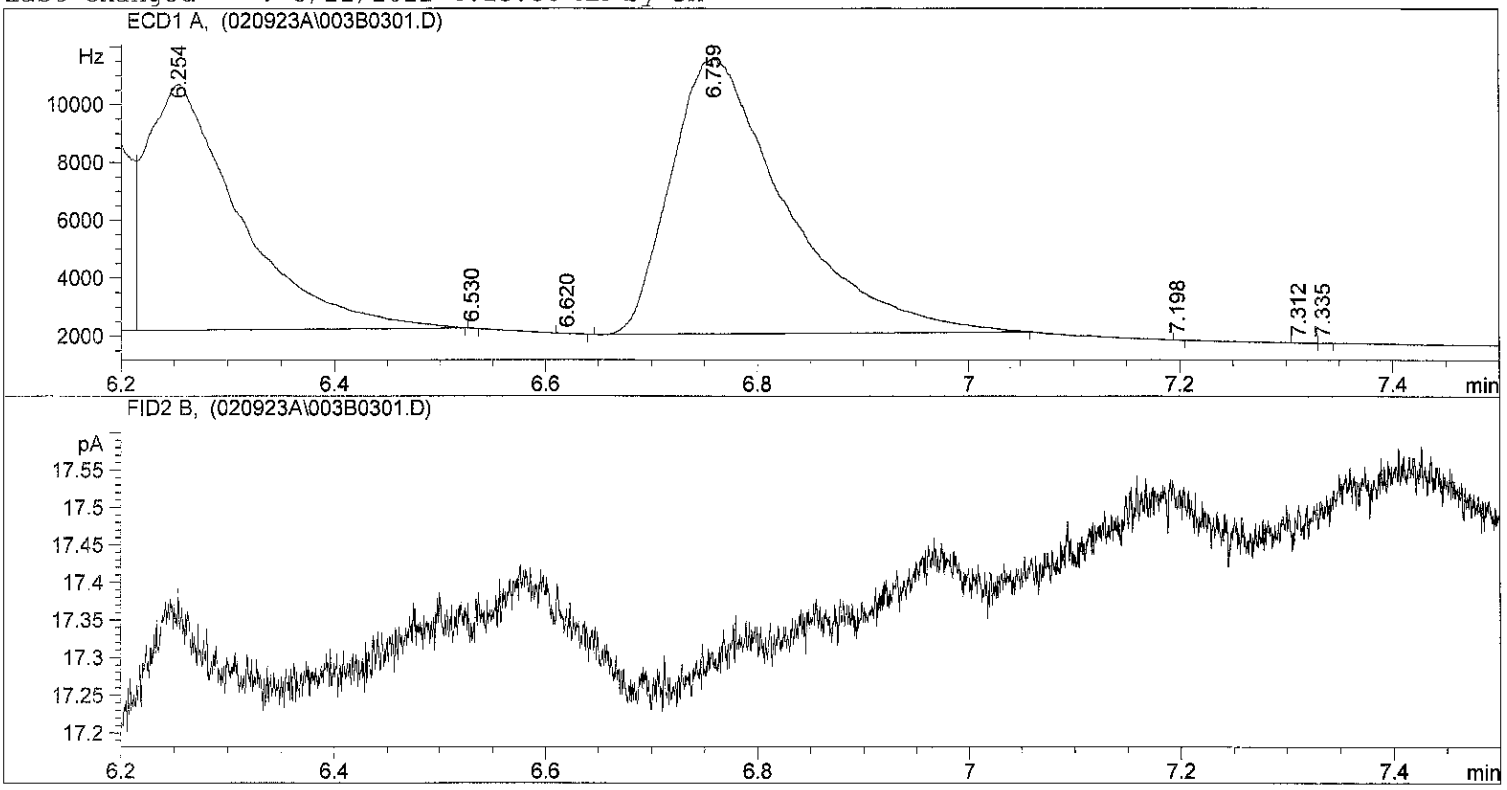
Dioxin Extraction Laboratory – Glassware

Batch ID: BLB0270 Work Order: 23A0572, 23B0054, 23A0467, 23B0077 Extraction Parameter: Dioxin ARI Analyst TW

ARI Sample ID		300 mL Flat Bottom	Small Soxhlet	Large Soxhlet	250 mL Beaker	Funnel	Column	Florisil Column	Turbo Tube	Sep Funnel	Erlenmeyer Flask	Centrifuge Bottle	Turbo-Vap	Vortex Mixer	Heating Mantle
BLB0270	- BLK1	30	57		256	1	34	163	1				4	4	A1
	- BS1	40	62		52	88	28	142	42				4	4	A2
	- DUP1	70		62	29	65	13	57	37				4	4	A3
	- SRM1	15 ~~17~~	31		1	28	11	121	17				4	4	A5
23A0467	- 05	56		52	2	6	29	168	57				4	4	A6
23A0572	- 01	63		47	35	54	220	21	31				4	4	B1
23B0054	- 01	31		68	6	64	70	19	47				4	4	B2
	- 02	38		24	18	35	27	164	21				4	4	B3
	- 03	39		60	34	58	18	49	35 ~~45~~				4	4	B4
	- 04	TW 2/15/23 ~~15~~ 17	~~3~~ 3		48	~~3~~	19	137	55				4	4	B5
	- 05	24		32	11	52	44	36	56				4	4	B6
	- 06	5		66	88	43	48	17	80				4	4	C1
	- 07	18		45	16	91	64	47	44				4	4	C2
	- 08	53		58	259	122	72	46	18				4	4	C3
	- 09	19		61	37	57	229	143	28				4	4	C4
	- 10	28		33	41	33	121	139	81				4	4	C5
	- 11	32		63	45	62	47	54	65				4	4	C6
23B0077	- 05	67	80		245	10	17	104	45				4	4	D1
													4	4	
													4	4	
													4	4	
													4	4	
													4	4	

Injection Date : 2/9/2023 2:07:14 PM Seq. Line : 3
Sample Name : CS4 STD Location : Vial 3
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\020923A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.426	BP	0.0000	11.84946	39.23861	0.00143
2	5.550	BV S	0.0419	1.63619e5	5.22907e4	19.72078
3	5.645	VV S	0.0643	2.54368e5	6.58859e4	30.65858
4	5.705	VV S	0.1002	1.75297e5	2.91479e4	21.12833
5	6.011	VV S	0.0716	7.37869e4	1.71694e4	8.89343
6	6.173	VV S	0.0704	3.96304e4	9386.51758	4.77660
7	6.254	VB S	0.1003	5.11622e4	8501.59570	6.16650
8	6.530	BB	2.85e-3	3.52439	18.25173	0.00042
9	6.620	PP	7.10e-3	8.99704	16.14134	0.00108
10	6.759	BB S	0.0885	7.17241e4	9516.55176	8.64480
11	7.198	PP	4.15e-3	3.65457	12.73845	0.00044
12	7.312	BP	6.99e-3	4.23108	7.97215	0.00051
13	7.335	VB	5.30e-3	3.35974	10.06259	0.00040
14	7.661	BV	4.35e-3	6.14718	19.11187	0.00074
15	7.676	VB	0.0197	49.27546	30.70844	0.00594

Totals : 8.29679e5 1.92053e5

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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*** End of Report ***

```
Injection Date  : 2/9/2023 2:40:55 PM          Seq. Line :   6
Sample Name     : 23A0572 01                   Location : Vial 4
Acq. Operator   : TW                              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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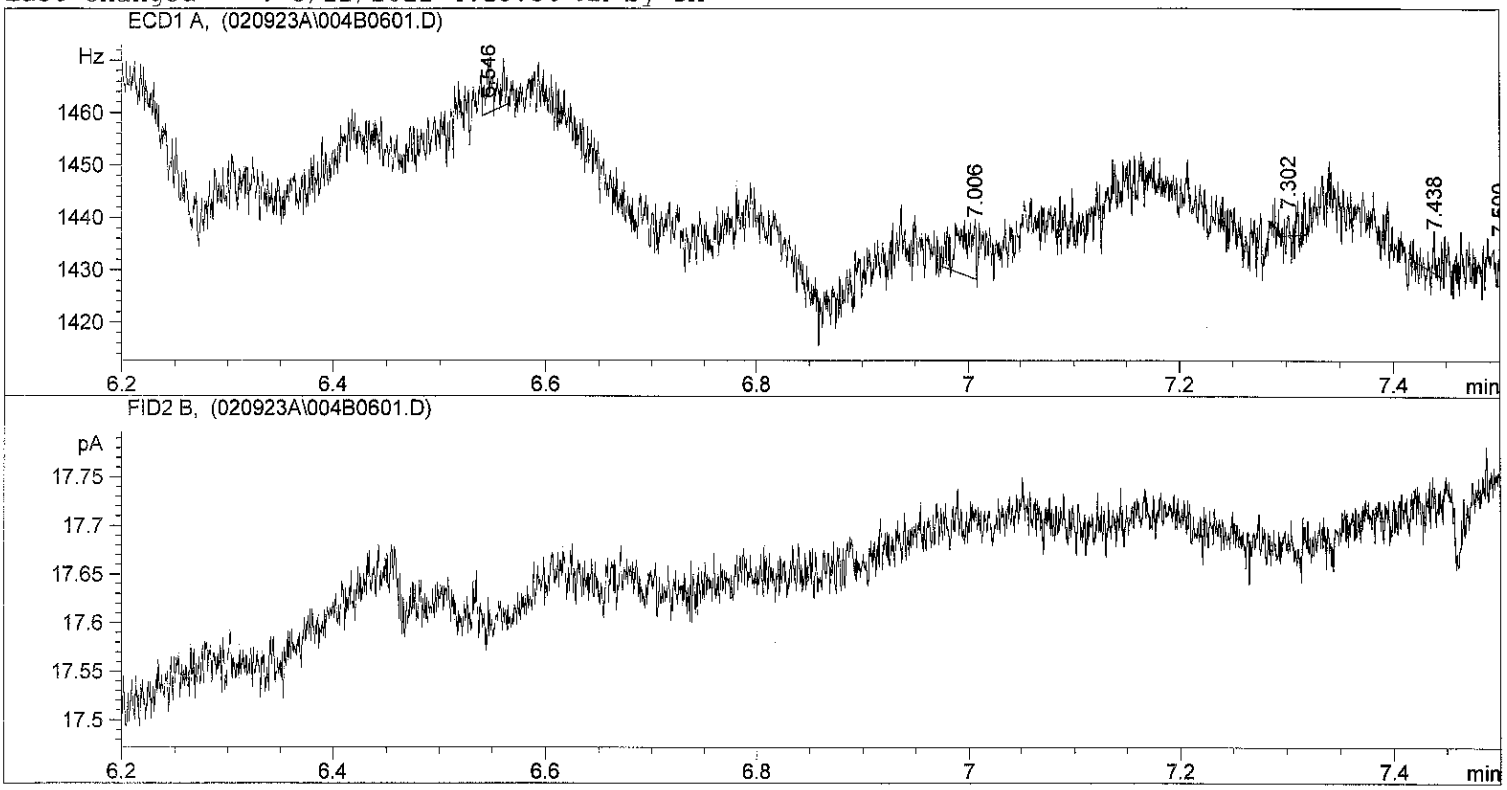

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.428	BP	0.0000	1.78611e-1	3.78539	0.29832
2	6.070	BB	0.0199	38.38476	23.22440	64.11039
3	6.546	BP	7.94e-3	6.30728	10.02664	10.53445
4	7.006	PP	0.0131	11.25975	10.49343	18.80607
5	7.302	BP	4.83e-3	1.36426	3.94512	2.27860
6	7.438	PP	2.52e-3	1.05508	7.16123	1.76220
7	7.500	BP	2.23e-3	1.32318	8.44125	2.20997
Totals :				59.87292	67.07746	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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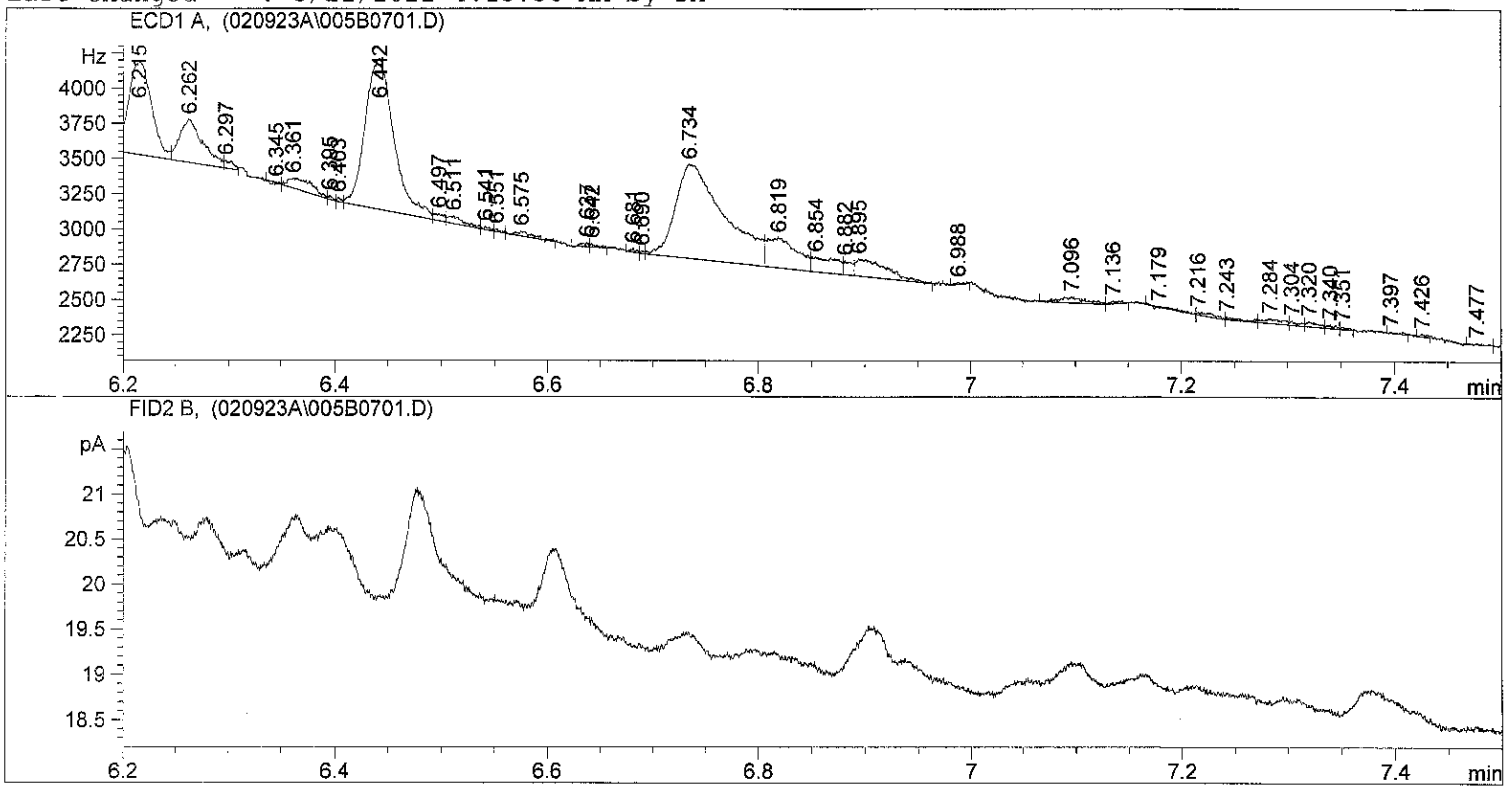
*** End of Report ***

Injection Date : 2/9/2023 2:52:10 PM Seq. Line : 7
Sample Name : 23B0054 01 Location : Vial 5
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\020923A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.223	BV	7.03e-3	156.71165	284.37918	0.48764
2	5.229	VV	3.87e-3	72.88708	277.16800	0.22680
3	5.255	VV	0.0162	961.71625	747.62537	2.99255
4	5.263	VV	0.0139	832.58936	733.05981	2.59075
5	5.302	VV	0.0186	372.78671	247.51366	1.15999
6	5.322	VV	7.28e-3	106.73618	181.10312	0.33213
7	5.342	VV	0.0163	351.92633	265.53366	1.09508
8	5.365	VV	6.85e-3	73.29984	178.46109	0.22809
9	5.373	VV	0.0157	277.00534	226.50439	0.86195
10	5.435	VV	0.0229	1053.41357	546.88403	3.27788
11	5.444	VV	0.0108	427.70612	541.54822	1.33088
12	5.477	VV	0.0155	738.09668	636.66156	2.29672
13	5.487	VV	0.0159	819.25928	626.29041	2.54927
14	5.514	VV	0.0234	1091.06775	559.45007	3.39505
15	5.587	VV	0.0274	1523.83423	674.00360	4.74168
16	5.611	VV	0.0144	435.97229	504.26230	1.35660
17	5.632	VV	6.73e-3	212.82115	405.21295	0.66223

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.643	VV	7.94e-3	270.96640	442.52872	0.84316
19	5.648	VV	0.0118	426.15125	435.85254	1.32605
20	5.697	VV	0.0364	3012.27588	1010.92999	9.37323
21	5.759	VV	0.0199	2172.60547	1310.42078	6.76045
22	5.788	VV	7.65e-3	204.49315	348.05383	0.63632
23	5.814	VV	0.0301	1128.54065	455.57693	3.51165
24	5.874	VV	0.0189	966.90668	614.78027	3.00870
25	5.892	VV	4.49e-3	151.61520	455.14441	0.47178
26	5.896	VV	0.0136	532.37384	472.01532	1.65658
27	5.948	VV	0.0237	2629.37329	1364.86182	8.18176
28	5.989	VV	0.0123	517.38110	517.02942	1.60992
29	5.997	VV	0.0108	475.15555	554.98468	1.47853
30	6.023	VV	0.0268	1619.10229	721.89758	5.03812
31	6.066	VV	0.0140	347.13373	301.78943	1.08017
32	6.093	VV	0.0225	401.06146	219.32039	1.24797
33	6.126	VV	7.88e-3	121.77851	206.55540	0.37894
34	6.138	VV	0.0189	305.90417	199.08339	0.95187
35	6.175	VB	0.0132	129.98291	119.96420	0.40446
36	6.215	BV	0.0203	1046.87341	659.02240	3.25753
37	6.262	VV	0.0191	467.17938	304.64468	1.45371
38	6.297	VB	7.46e-3	31.95209	54.37336	0.09942
39	6.345	PP	0.0000	4.63601	5.18679	0.01443
40	6.361	VV	0.0228	126.09827	70.85776	0.39238
41	6.395	VP	3.94e-3	6.42928	25.54021	0.02001
42	6.403	VV	3.41e-3	6.86240	28.53502	0.02135
43	6.442	VV	0.0232	2010.43286	1074.42004	6.25582
44	6.497	VV	9.39e-3	32.61198	50.15712	0.10148
45	6.511	VB	0.0128	53.16455	52.44053	0.16543
46	6.541	BP	4.96e-3	8.54491	21.87418	0.02659
47	6.551	VB	4.13e-3	5.17196	19.25187	0.01609
48	6.575	BB	0.0122	31.64317	31.92478	0.09846
49	6.637	PV	6.30e-3	10.98818	28.46176	0.03419
50	6.642	VP	4.49e-3	8.32904	23.78057	0.02592
51	6.681	PP	5.09e-3	8.25144	23.52962	0.02568
52	6.690	VV	2.93e-3	3.70895	17.13666	0.01154
53	6.734	VV	0.0396	2166.92749	665.85767	6.74278
54	6.819	VV	0.0237	418.58633	210.02151	1.30251
55	6.854	VV	0.0202	172.37393	102.71324	0.53637
56	6.882	VV	6.82e-3	53.55270	97.32971	0.16664
57	6.895	VP	0.0250	250.33876	119.90221	0.77897
58	6.988	PB	6.93e-3	6.22215	11.84543	0.01936
59	7.096	PP	0.0219	68.38879	38.21589	0.21280
60	7.136	VP	8.11e-3	10.89408	17.87923	0.03390
61	7.179	BP	0.0242	10.25526	5.15140	0.03191
62	7.216	VP	0.0144	23.36646	19.77308	0.07271
63	7.243	VV	0.0123	15.98002	15.65075	0.04972
64	7.284	VV	0.0159	41.08970	32.13670	0.12786
65	7.304	VV	9.63e-3	16.30169	28.21330	0.05073
66	7.320	VV	8.98e-3	24.91623	34.70760	0.07753
67	7.340	VV	6.41e-3	12.64965	24.55415	0.03936
68	7.351	VB	5.98e-3	7.46541	16.18198	0.02323
69	7.397	BB	7.14e-3	4.40561	8.10326	0.01371
70	7.426	PB	6.35e-3	8.21685	17.28088	0.02557
71	7.477	PP	1.82e-3	8.14702e-1	7.78741	0.00254
72	7.508	BB	0.0103	11.39278	13.48138	0.03545
73	7.625	PV	4.91e-3	4.27130	13.43148	0.01329
74	7.631	VB	4.07e-3	5.57771	18.75030	0.01736
75	7.642	BB	4.91e-3	6.15285	17.47247	0.01915
76	7.655	BB	6.36e-3	6.38446	12.49585	0.01987
77	7.704	BP	3.81e-3	3.05438	11.82266	0.00950
78	7.739	BP	4.31e-3	2.44604	7.68585	0.00761
79	7.787	BP	2.81e-3	1.47662	8.55474	0.00459
Totals :				3.21370e4	2.14546e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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*** End of Report ***

```
Injection Date  : 2/9/2023 3:03:24 PM          Seq. Line :   8
Sample Name     : 23B0054 02                   Location : Vial 6
Acq. Operator   : TW                              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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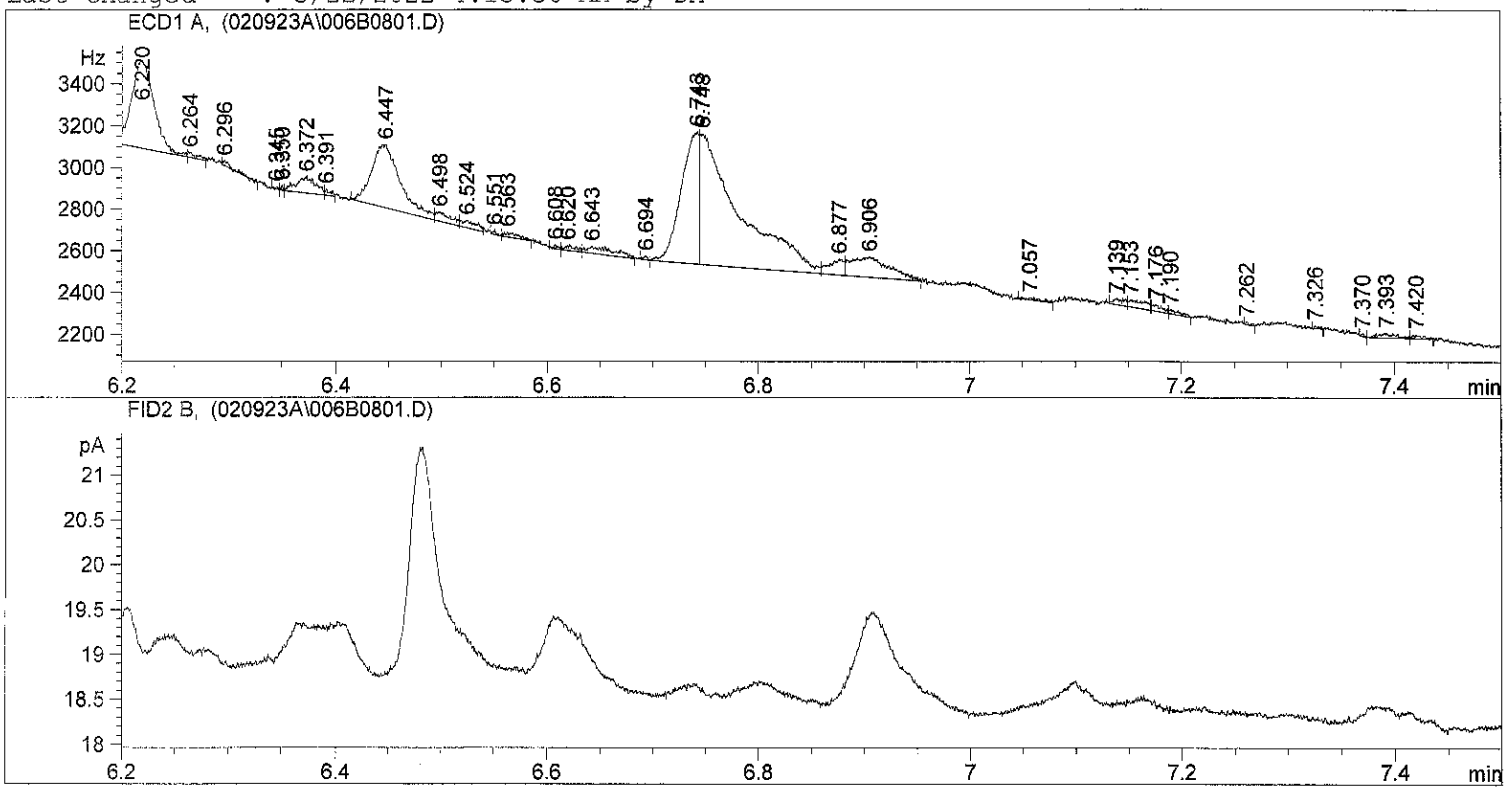

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.209	BV	7.78e-3	41.66154	69.63545	0.35142
2	5.219	VV	4.25e-3	20.49066	69.34950	0.17284
3	5.227	VB	6.59e-3	35.50491	69.19704	0.29949
4	5.273	BV	0.0153	396.38962	314.79950	3.34363
5	5.277	VV	0.0157	293.01962	310.51239	2.47168
6	5.315	VV	0.0148	215.74950	182.21092	1.81989
7	5.345	VV	0.0104	275.65195	327.09363	2.32518
8	5.349	VV	0.0102	253.03516	335.95056	2.13440
9	5.382	VP	0.0144	266.92603	232.99777	2.25157
10	5.434	VV	0.0124	213.20454	211.00354	1.79842
11	5.440	VV	5.93e-3	92.55544	202.77251	0.78072
12	5.453	VV	0.0123	207.58676	207.07848	1.75104
13	5.490	VV	0.0167	283.19858	205.12749	2.38884
14	5.504	VV	9.20e-3	90.40015	163.78661	0.76254
15	5.521	VP	0.0219	361.37473	209.39429	3.04827
16	5.596	VV	0.0287	588.41351	255.52472	4.96339
17	5.641	VV	8.38e-3	86.75352	130.01631	0.73178

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.658	VV	0.0148	176.21140	144.36870	1.48638
19	5.670	VV	6.00e-3	57.68236	134.53503	0.48656
20	5.702	VV	0.0211	844.55042	484.96277	7.12395
21	5.722	VB	0.0154	435.64212	347.47989	3.67473
22	5.763	BV	0.0224	836.46246	473.07748	7.05573
23	5.792	VV	0.0101	115.79702	142.69992	0.97677
24	5.822	VV	0.0158	152.91296	117.04421	1.28985
25	5.840	VV	0.0126	81.54757	82.22856	0.68787
26	5.875	VV	0.0197	210.51926	132.69846	1.77577
27	5.915	VP	2.46e-3	3.87993	24.35915	0.03273
28	5.946	VV	0.0209	509.68408	292.53693	4.29929
29	5.981	VV	7.27e-3	52.64245	89.42337	0.44405
30	5.989	VV	0.0132	80.83362	74.79301	0.68185
31	6.012	VV	0.0149	53.08474	59.39577	0.44778
32	6.029	VB	5.32e-3	15.44922	38.17471	0.13032
33	6.086	PP	4.19e-3	4.90392	15.91738	0.04137
34	6.114	BV	3.43e-3	5.14107	24.68783	0.04337
35	6.124	VV	5.40e-3	10.96502	30.45656	0.09249
36	6.138	VB	0.0144	40.15918	33.88107	0.33875
37	6.165	BP	6.75e-3	6.17019	12.09086	0.05205
38	6.220	VV	0.0197	658.31122	419.52878	5.55299
39	6.264	VP	7.75e-3	13.35623	23.09171	0.11266
40	6.296	BP	4.70e-3	7.87692	22.42070	0.06644
41	6.345	BP	1.29e-3	5.64291e-1	9.51571	0.00476
42	6.350	VP	2.06e-3	2.81516	22.53371	0.02375
43	6.372	VV	0.0151	96.33023	78.48489	0.81256
44	6.391	VB	4.48e-3	9.89689	29.73562	0.08348
45	6.447	BV	0.0238	575.35101	302.89487	4.85320
46	6.498	VB	0.0126	44.26738	43.87936	0.37340
47	6.524	BB	0.0120	34.86383	36.31183	0.29408
48	6.551	BP	3.09e-3	4.23823	19.89422	0.03575
49	6.563	VP	0.0104	20.70844	24.25890	0.17468
50	6.608	PP	3.68e-3	4.57130	17.34003	0.03856
51	6.620	VV	8.95e-3	16.78634	24.61936	0.14160
52	6.643	VB	0.0214	62.19741	34.62293	0.52465
53	6.694	BP	3.74e-3	4.33619	18.47779	0.03658
54	6.743	VV	0.0143	748.06628	635.63208	6.31009
55	6.748	VV	0.0302	1608.03333	628.80933	13.56409
56	6.877	VV	0.0117	72.64367	75.05856	0.61276
57	6.906	VP	0.0298	243.12009	97.00785	2.05077
58	7.057	PP	9.34e-3	6.98205	9.53527	0.05890
59	7.139	BB	0.0103	22.13437	27.70654	0.18671
60	7.153	BV	0.0141	39.88449	34.51165	0.33643
61	7.176	VV	9.07e-3	21.10553	30.50532	0.17803
62	7.190	VP	0.0101	14.05839	17.22281	0.11859
63	7.262	BP	3.39e-3	2.68502	12.11174	0.02265
64	7.326	PP	3.82e-3	3.54875	12.85351	0.02993
65	7.370	BP	3.62e-3	2.59359	12.49372	0.02188
66	7.393	VB	0.0145	25.47505	22.31743	0.21489
67	7.420	BB	7.99e-3	10.90616	19.29362	0.09200
68	7.533	BB	0.0328	37.55679	13.67197	0.31680
69	7.670	PV	6.35e-3	7.22399	14.17172	0.06094
70	7.683	VP	7.26e-3	5.29951	9.28365	0.04470
71	7.713	PP	4.24e-3	4.08160	14.70416	0.03443
72	7.761	PP	2.97e-3	2.48966	13.36427	0.02100
73	7.789	BPA	6.51e-3	4.56682	9.32354	0.03852
Totals :				1.18551e4	9088.45151	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

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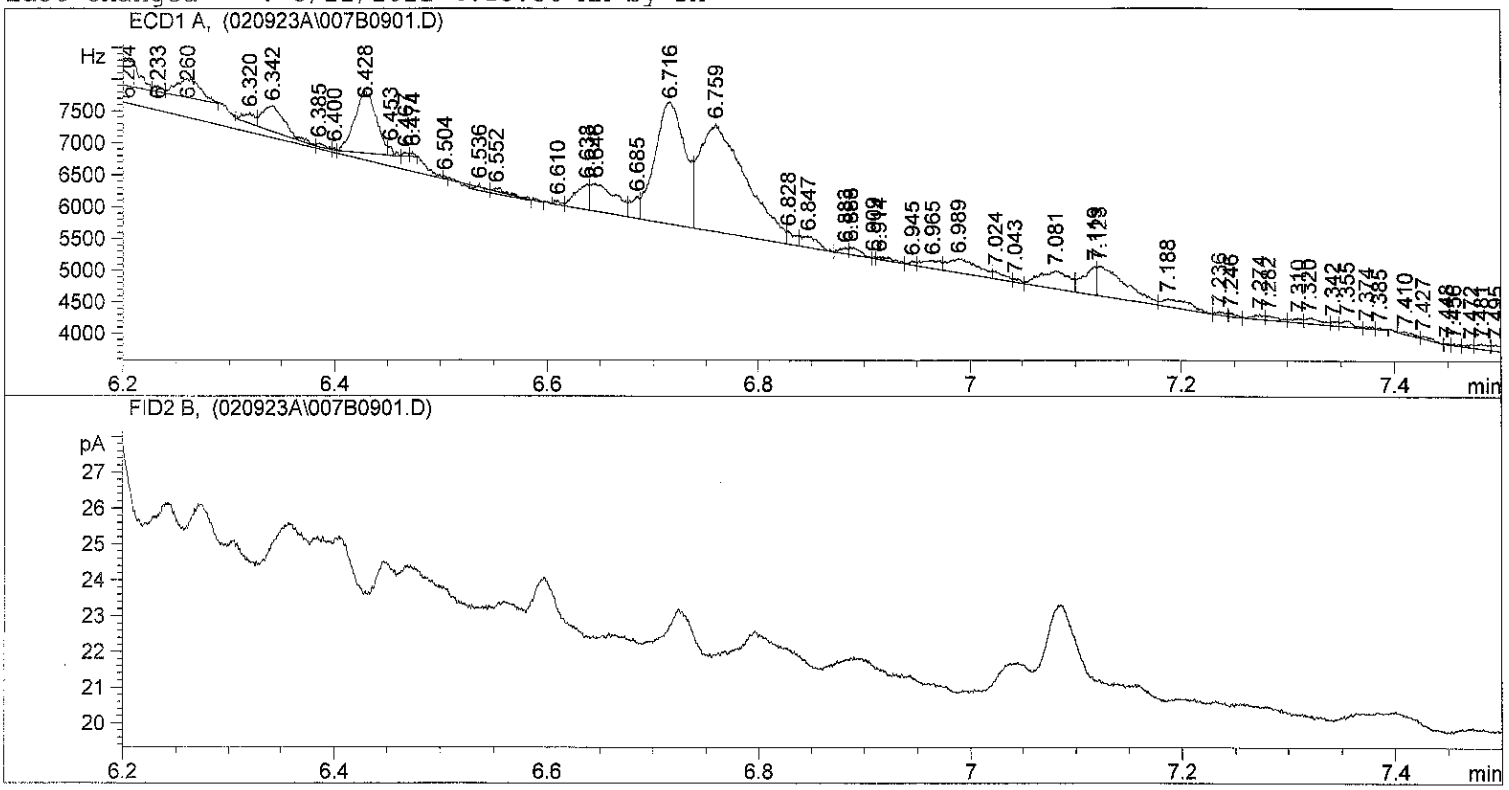
*** End of Report ***

Injection Date : 2/9/2023 3:14:23 PM Seq. Line : 9
Sample Name : 23B0054 03 Location : Vial 7
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\020923A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.223	BV S	0.1160	2.89731e4	2934.49072	25.13540
2	5.273	BV T	4.22e-3	54.34624	196.70641	0.04715
3	5.289	VB X	0.0128	661.45129	630.57550	0.57384
4	5.336	PV T	7.97e-3	180.10794	284.93811	0.15625
5	5.369	PV T	0.0142	471.10696	404.96429	0.40871
6	5.383	PV T	6.47e-3	116.34274	299.53479	0.10093
7	5.399	PV T	0.0110	478.31448	557.17065	0.41496
8	5.435	PV T	0.0185	3347.64282	2256.36011	2.90422
9	5.470	VV T	0.0123	1287.14880	1260.93005	1.11666
10	5.480	VV T	0.0117	912.95819	1295.40894	0.79203
11	5.501	VV T	5.16e-3	377.75732	1170.64063	0.32772
12	5.563	PV T	0.0000	250.05695	574.07422	0.21694
13	5.591	VV T	0.0136	985.78204	924.15668	0.85521
14	5.609	VB T	7.75e-3	154.58276	332.29742	0.13411
15	5.674	PB S	0.0920	3.63398e4	4787.72363	31.52633
16	5.753	BV T	0.0223	4460.82471	2447.53296	3.86996
17	5.817	PV T	0.0168	730.95166	559.90833	0.63413

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.831	PV T	9.59e-3	350.00528	498.80133	0.30364
19	5.867	PV T	0.0156	1868.23315	1455.26636	1.62077
20	5.903	PV T	0.0251	5389.76758	2582.49854	4.67586
21	5.946	PV T	0.0190	3073.05054	2008.92737	2.66600
22	5.982	PV T	0.0251	4308.32080	2050.83569	3.73765
23	6.008	PV T	0.0136	1383.36328	1276.31812	1.20013
24	6.039	PV T	6.45e-3	68.20415	176.30067	0.05917
25	6.047	PB T	5.51e-3	46.55619	140.93814	0.04039
26	6.072	BV T	4.37e-3	24.35311	92.95936	0.02113
27	6.083	PV T	7.82e-3	47.86864	102.00095	0.04153
28	6.089	PB T	0.0111	97.36375	146.62396	0.08447
29	6.158	BV T	0.0107	171.53667	214.51172	0.14882
30	6.204	PV T	0.0181	642.17072	428.10101	0.55711
31	6.233	PV T	8.29e-3	47.44460	95.36874	0.04116
32	6.260	PB T	0.0191	463.44955	301.54364	0.40206
33	6.320	BV T	9.35e-3	125.03880	166.79196	0.10848
34	6.342	PV T	0.0183	578.19006	398.77579	0.50160
35	6.385	PV T	7.95e-3	28.07807	58.86761	0.02436
36	6.400	PV T	1.98e-3	5.01300	42.21498	0.00435
37	6.428	PV T	0.0180	1374.66479	967.77142	1.19258
38	6.453	PV T	5.55e-3	47.52691	142.65369	0.04123
39	6.467	PV T	5.50e-3	20.34686	61.62741	0.01765
40	6.474	PB T	3.22e-3	17.95734	74.34197	0.01558
41	6.504	BB T	2.84e-3	5.38304	31.62679	0.00467
42	6.536	BV T	5.97e-3	47.94989	104.11771	0.04160
43	6.552	PB T	0.0205	110.40253	89.91396	0.09578
44	6.610	BV	5.27e-3	29.88253	74.67941	0.02592
45	6.638	VV	0.0106	339.68259	403.13330	0.29469
46	6.646	VV	0.0210	737.25281	438.91885	0.63960
47	6.685	VV	7.53e-3	193.17352	334.64633	0.16759
48	6.716	VV	0.0246	3772.74316	1910.53198	3.27302
49	6.759	VV	0.0363	5135.29004	1680.53992	4.45509
50	6.828	VB	8.14e-3	119.07716	200.18745	0.10330
51	6.847	BV	0.0184	200.24835	181.37859	0.17372
52	6.883	VV	6.85e-3	47.44059	91.50063	0.04116
53	6.888	VV	9.14e-3	86.32991	115.19744	0.07489
54	6.909	VV	2.02e-3	3.16722	26.07126	0.00275
55	6.914	VV	0.0221	49.10764	37.03317	0.04260
56	6.945	VV	5.04e-3	25.62666	64.44752	0.02223
57	6.965	VV	0.0149	149.08714	128.54442	0.12934
58	6.989	VV	0.0249	450.54166	218.07909	0.39086
59	7.024	VV	0.0118	90.37511	127.68347	0.07840
60	7.043	VP	6.71e-3	27.20836	51.97386	0.02360
61	7.081	VV	0.0232	546.59711	287.17953	0.47420
62	7.119	VV	0.0109	389.99280	450.83636	0.33834
63	7.123	VV	0.0222	876.73816	474.10681	0.76061
64	7.188	VP	0.0223	245.10402	130.76511	0.21264
65	7.236	VV	7.52e-3	33.07724	57.45559	0.02870
66	7.246	VP	5.95e-3	24.76579	54.02265	0.02149
67	7.274	VV	8.54e-3	56.44472	82.91950	0.04897
68	7.282	VV	0.0105	61.50229	73.73170	0.05336
69	7.310	VV	8.97e-3	47.33043	74.91693	0.04106
70	7.320	VV	0.0131	93.62163	92.97412	0.08122
71	7.342	VV	5.75e-3	31.02046	67.61320	0.02691
72	7.355	VV	9.34e-3	66.77556	93.43575	0.05793
73	7.374	VV	4.83e-3	13.58777	35.82346	0.01179
74	7.385	VB	5.31e-3	9.59970	25.97873	0.00833
75	7.410	PV	0.0104	36.19352	44.84768	0.03140
76	7.427	VP	9.82e-3	35.39299	45.79401	0.03070
77	7.448	VV	3.23e-3	5.89814	26.11825	0.00512
78	7.456	VV	4.71e-3	10.92461	31.04131	0.00948
79	7.472	VV	6.30e-3	25.19341	53.46799	0.02186
80	7.481	VV	9.53e-3	65.32645	85.31689	0.05667
81	7.495	VV	6.45e-3	50.45604	104.18566	0.04377
82	7.505	VV	6.24e-3	65.35281	130.61441	0.05670

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.512	VP	0.0226	279.94116	147.24211	0.24286
84	7.564	VP	2.00e-3	3.91308	28.62030	0.00339
85	7.595	VV	0.0176	126.45324	88.94579	0.10970
86	7.614	VV	6.53e-3	42.96109	101.60983	0.03727
87	7.623	VV	0.0156	156.60466	121.93781	0.13586
88	7.653	VV	9.61e-3	58.80758	81.62606	0.05102
89	7.665	VV	4.91e-3	13.60377	46.15717	0.01180
90	7.670	VB	5.10e-3	11.56297	29.98522	0.01003
91	7.679	BV	7.38e-3	24.72361	41.32743	0.02145
92	7.689	VV	8.19e-3	28.77530	45.42590	0.02496
93	7.703	VV	5.24e-3	18.88741	47.44465	0.01639
94	7.716	VV	0.0118	53.47114	54.59311	0.04639
95	7.737	VV	0.0122	35.70882	36.04856	0.03098
96	7.763	VV	6.32e-3	16.78473	34.26337	0.01456
97	7.771	VP	5.61e-3	13.99082	35.42299	0.01214
98	7.782	VP	7.88e-3	10.23817	16.39799	0.00888
Totals :				1.15268e5	4.41919e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 2/9/2023 3:25:36 PM          Seq. Line :  10
Sample Name     : 23B0054 04                   Location : Vial 8
Acq. Operator   : TW                               Inj :  1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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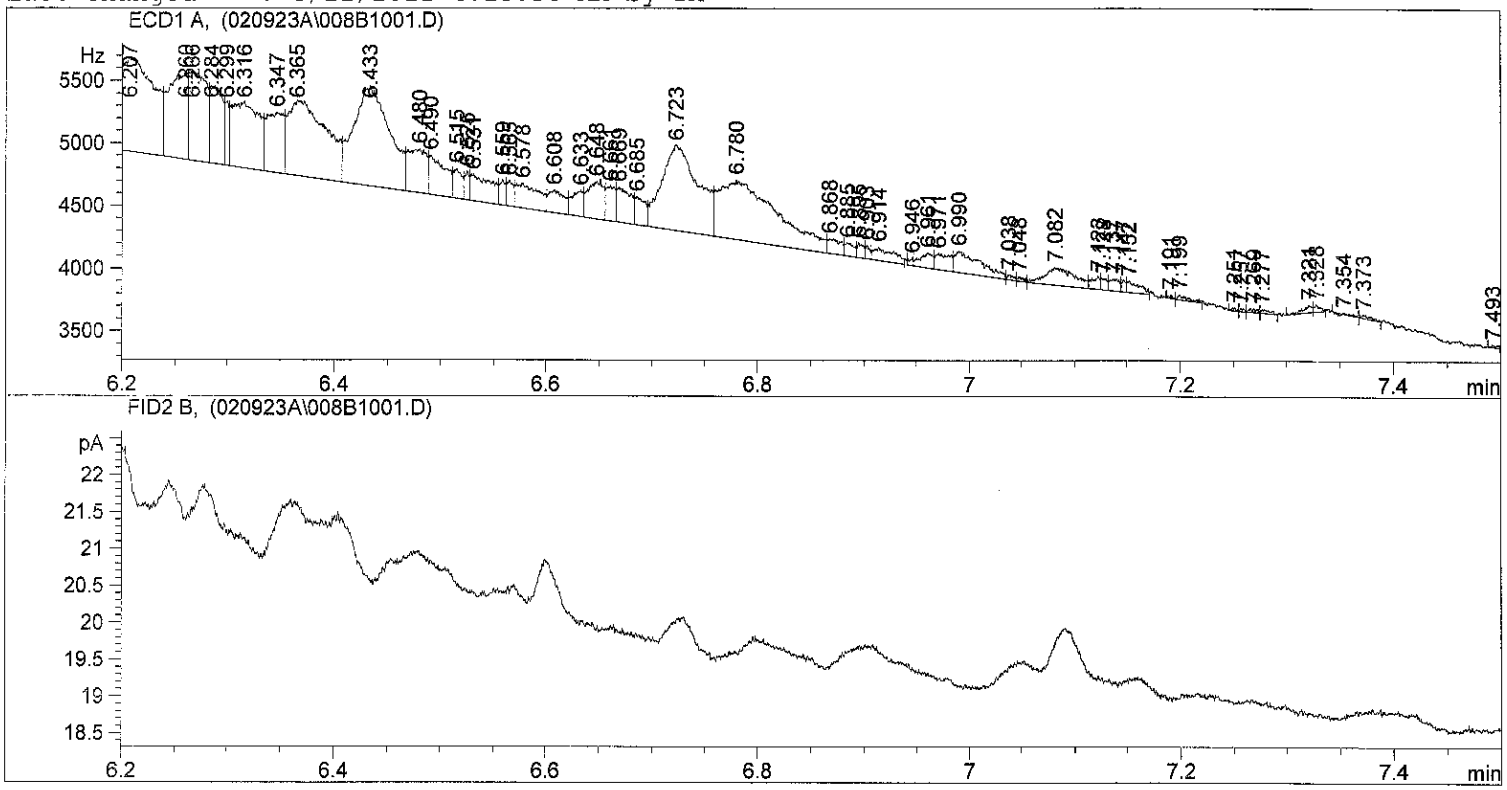

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.256	BV	0.0304	1523.00256	604.37207	2.18609
2	5.290	VV	4.12e-3	39.32914	130.31531	0.05645
3	5.298	VV	4.72e-3	66.68741	188.61732	0.09572
4	5.302	VB	6.54e-3	102.13748	200.64111	0.14661
5	5.318	BV	0.0115	170.02545	179.48470	0.24405
6	5.342	VV	0.0120	236.59796	256.16440	0.33961
7	5.360	VV	7.58e-3	164.67596	283.31927	0.23637
8	5.369	VV	8.00e-3	221.48820	348.99582	0.31792
9	5.380	VV	0.0124	333.18668	360.73575	0.47825
10	5.409	VV	9.10e-3	356.70432	513.70490	0.51201
11	5.437	VV	0.0248	2370.26318	1152.38318	3.40224
12	5.477	VV	0.0214	2507.13623	1408.69116	3.59870
13	5.510	VV	0.0225	2707.82910	1500.40210	3.88677
14	5.555	VV	0.0108	678.49933	777.24316	0.97391
15	5.569	VV	9.34e-3	604.33466	845.34448	0.86745
16	5.595	VV	0.0298	3121.43921	1238.21411	4.48046
17	5.636	VV	0.0161	1375.87671	1032.49414	1.97491

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.648	VV	0.0104	796.34052	952.16858	1.14305
19	5.687	VV	0.0357	4557.97266	1532.92505	6.54244
20	5.756	VV	0.0318	4507.02930	1727.99011	6.46931
21	5.814	VV	0.0148	1165.95154	945.43457	1.67359
22	5.832	VV	0.0179	1441.66235	972.65894	2.06934
23	5.848	VV	5.38e-3	336.20755	821.08044	0.48259
24	5.873	VV	0.0235	2566.10278	1368.10364	3.68334
25	5.925	VV	0.0218	2219.61304	1283.01782	3.18600
26	5.945	VV	0.0208	2971.53931	1714.36975	4.26530
27	5.989	VV	0.0238	3847.04297	1952.90479	5.52198
28	6.004	VV	5.56e-3	726.30078	1709.76819	1.04252
29	6.018	VV	0.0410	5868.59082	1713.06104	8.42368
30	6.089	VV	0.0187	1360.90100	898.51837	1.95341
31	6.117	VV	0.0142	930.85889	834.02533	1.33614
32	6.136	VV	0.0215	1340.13062	747.85229	1.92360
33	6.166	VV	0.0103	405.98065	655.98560	0.58274
34	6.180	VV	8.74e-3	427.93631	613.69763	0.61425
35	6.189	VV	5.01e-3	183.97331	612.54340	0.26407
36	6.207	VV	0.0291	1807.76086	744.21661	2.59483
37	6.260	VV	0.0150	869.51288	694.06732	1.24808
38	6.266	VV	0.0141	818.76508	717.87726	1.17524
39	6.284	VV	9.99e-3	508.76135	618.63538	0.73027
40	6.299	VV	3.92e-3	135.38617	506.87997	0.19433
41	6.316	VV	0.0221	945.99188	527.49426	1.35786
42	6.347	VV	0.0136	513.69592	482.93585	0.73735
43	6.365	VV	0.0296	1510.30579	603.28223	2.16787
44	6.433	VV	0.0298	1860.17664	798.39630	2.67007
45	6.480	VV	0.0146	417.39529	352.53271	0.59912
46	6.490	VV	0.0132	340.76300	314.39587	0.48913
47	6.515	VV	7.36e-3	133.96149	238.10364	0.19229
48	6.525	VV	4.12e-3	67.75770	224.50471	0.09726
49	6.531	VB	0.0165	285.84793	209.83183	0.41030
50	6.559	BV	5.13e-3	76.43771	196.81122	0.10972
51	6.565	VV	6.02e-3	87.02688	202.12624	0.12492
52	6.578	VV	0.0184	297.76636	195.16072	0.42741
53	6.608	VV	0.0129	188.38046	179.20314	0.27040
54	6.633	VV	9.29e-3	150.49825	206.78014	0.21602
55	6.648	VV	0.0130	305.85809	297.84659	0.43902
56	6.661	VV	7.82e-3	164.78664	273.80203	0.23653
57	6.669	VV	0.0109	250.80586	278.73282	0.36000
58	6.685	VV	8.24e-3	145.32288	222.05212	0.20859
59	6.723	VV	0.0294	1654.59485	678.73096	2.37498
60	6.780	VV	0.0466	1828.20581	473.84363	2.62418
61	6.868	VV	0.0142	97.64773	114.69701	0.14016
62	6.885	VV	7.81e-3	63.25834	102.33992	0.09080
63	6.895	VV	5.46e-3	47.51221	114.13514	0.06820
64	6.903	VV	3.66e-3	28.00641	106.84730	0.04020
65	6.914	VB	0.0158	138.34537	104.84652	0.19858
66	6.946	BV	4.02e-3	15.48617	56.19012	0.02223
67	6.961	VV	0.0105	98.61654	118.01942	0.14155
68	6.971	VV	0.0124	120.82372	125.61091	0.17343
69	6.990	VV	0.0218	300.52460	166.98949	0.43137
70	7.038	VV	6.15e-3	16.56356	36.10036	0.02378
71	7.048	VP	5.22e-3	12.94744	34.19057	0.01858
72	7.082	VV	0.0238	270.41333	138.52440	0.38815
73	7.123	VV	6.93e-3	52.32838	96.39589	0.07511
74	7.128	VV	6.73e-3	35.31837	87.43789	0.05070
75	7.137	VV	7.85e-3	59.51472	93.23309	0.08543
76	7.147	VV	3.40e-3	22.77181	94.99194	0.03269
77	7.152	VB	0.0110	72.97817	83.62538	0.10475
78	7.191	PP	3.90e-3	5.48760	23.47431	0.00788
79	7.199	VB	8.34e-3	26.09738	39.32894	0.03746
80	7.251	BV	3.75e-3	6.65113	24.59760	0.00955
81	7.257	VV	3.77e-3	6.39438	22.13402	0.00918
82	7.269	VV	7.04e-3	13.16051	29.31562	0.01889

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.277	VP	7.11e-3	17.74178	31.81365	0.02547
84	7.321	PV	7.91e-3	31.89508	53.84826	0.04578
85	7.328	VB	5.14e-3	21.87479	56.26222	0.03140
86	7.354	BP	2.12e-3	1.10887	8.51807	0.00159
87	7.373	VP	8.37e-3	16.78026	27.28910	0.02409
88	7.493	PB	5.54e-3	7.83695	18.50719	0.01125
89	7.511	BV	0.0101	36.56673	47.89353	0.05249
90	7.530	VB	0.0133	23.17496	29.08451	0.03326
91	7.571	PP	1.80e-3	2.02092	16.88376	0.00290
92	7.577	VV	2.23e-3	2.35369	16.84585	0.00338
93	7.596	VV	9.03e-3	41.67376	65.46522	0.05982
94	7.616	VV	0.0127	73.37697	71.99846	0.10532
95	7.626	VV	0.0110	62.44285	71.39433	0.08963
96	7.644	VV	4.01e-3	13.31637	48.46100	0.01911
97	7.650	VV	4.96e-3	14.83322	45.96415	0.02129
98	7.656	VV	4.23e-3	13.00670	46.91162	0.01867
99	7.664	VV	0.0107	32.44551	38.08603	0.04657
100	7.687	VV	6.42e-3	10.80432	28.52485	0.01551
101	7.694	VV	6.24e-3	12.04857	26.24590	0.01729
102	7.708	VB	0.0231	73.10464	37.83947	0.10493
103	7.754	BP	0.0107	17.69584	24.29681	0.02540
104	7.782	VV	9.05e-3	24.26099	36.07235	0.03482
105	7.791	VPA	3.90e-3	7.47786	30.10204	0.01073
Totals :				6.96678e4	4.50068e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 2/9/2023 3:36:34 PM          Seq. Line :  11
Sample Name     : 23B0054 05                   Location : Vial 9
Acq. Operator   : TW                               Inj :  1
                                             Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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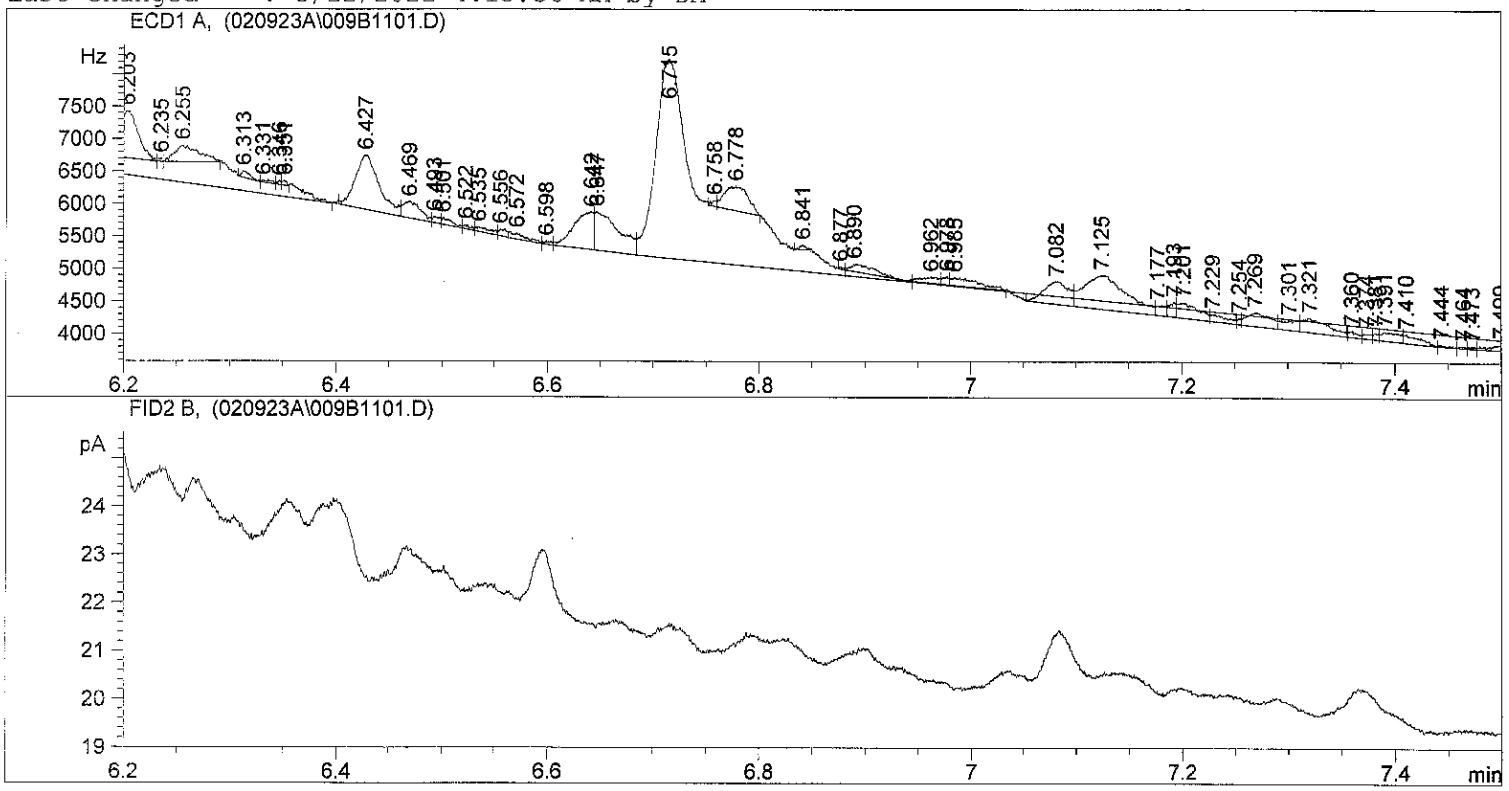

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.222	BV S	0.0184	4786.88184	3102.70386	4.16492
2	5.260	VV S	0.0260	4094.16040	2626.95166	3.56221
3	5.283	VV S	0.0590	3481.59814	983.15656	3.02924
4	5.342	BV T	5.58e-3	36.32067	92.59000	0.03160
5	5.362	PV T	0.0000	42.99169	6.38218	0.03741
6	5.371	PV T	0.0212	202.44540	115.49723	0.17614
7	5.401	PV T	0.0000	94.72789	168.67798	0.08242
8	5.431	VV S	0.0207	5478.21143	3488.28027	4.76643
9	5.478	VV S	0.0715	2.05392e4	3594.90869	17.87052
10	5.559	BV X	0.0187	1645.46741	1138.48230	1.43167
11	5.586	VV X	0.0231	1908.86584	982.15155	1.66085
12	5.631	VV X	0.0172	1290.48486	966.72925	1.12281
13	5.677	VB S	0.1431	4.14000e4	3443.81299	36.02094
14	5.752	BV T	0.0122	1480.84375	1564.24402	1.28844
15	5.811	PV T	0.4394	1187.44702	31.57347	1.03316
16	5.866	PV T	0.0000	618.71802	13.00708	0.53833
17	5.907	PV T	0.0000	263.58224	76.16592	0.22934

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.945	PV T	0.0167	1109.85596	804.25879	0.96565
19	5.982	VV T	0.0171	991.26117	709.26416	0.86247
20	6.003	VB T	7.10e-3	141.63014	332.68494	0.12323
21	6.059	BV T	5.51e-3	41.42446	102.65540	0.03604
22	6.086	PV T	4.53e-3	29.99388	99.93295	0.02610
23	6.092	PV T	6.89e-3	71.37099	136.69974	0.06210
24	6.105	PB T	3.30e-3	12.65491	54.72256	0.01101
25	6.132	BV T	0.0116	95.94015	105.68468	0.08347
26	6.151	PV T	7.23e-3	15.93799	36.75089	0.01387
27	6.162	PV T	4.90e-3	14.34848	48.75988	0.01248
28	6.203	PV T	0.0181	1028.02698	727.56702	0.89446
29	6.235	PV T	3.00e-3	9.00199	52.54817	0.00783
30	6.255	PB T	0.0198	400.51013	251.31378	0.34847
31	6.313	BV T	7.67e-3	57.56444	103.81068	0.05009
32	6.331	PV T	8.23e-3	23.23433	35.52642	0.02022
33	6.346	PV T	3.29e-3	13.02799	56.60268	0.01134
34	6.351	PB T	4.20e-3	17.51155	69.52963	0.01524
35	6.427	BV	0.0204	1320.79382	838.06195	1.14918
36	6.469	VV	0.0147	290.43063	252.14761	0.25270
37	6.493	VV	5.87e-3	44.23381	94.28314	0.03849
38	6.501	VV	8.83e-3	69.77199	98.95315	0.06071
39	6.522	VV	5.67e-3	29.19263	64.66038	0.02540
40	6.535	VV	0.0171	73.06575	71.02690	0.06357
41	6.556	VB	7.12e-3	56.09981	103.52403	0.04881
42	6.572	BP	0.0119	89.82034	92.38104	0.07815
43	6.598	VV	6.08e-3	24.22786	51.59669	0.02108
44	6.642	VV	0.0159	747.38287	578.42102	0.65028
45	6.647	VV	0.0200	981.82440	597.77374	0.85426
46	6.715	VBAS	0.0486	1.25412e4	3089.84839	10.91175
47	6.758	BV T	4.81e-3	28.61740	87.68220	0.02490
48	6.778	VB T	0.0206	580.11926	376.98941	0.50474
49	6.841	BB T	5.79e-3	28.05197	71.33852	0.02441
50	6.877	BV T	4.25e-3	8.06126	31.62132	0.00701
51	6.890	PV T	0.0197	178.29861	111.31588	0.15513
52	6.962	PV T	0.0140	108.53958	93.13356	0.09444
53	6.978	PV T	5.39e-3	50.06958	121.91490	0.04356
54	6.985	PB T	0.0311	228.42270	122.45119	0.19874
55	7.082	PV T	0.0201	578.64081	342.85077	0.50346
56	7.125	PV T	0.0337	1451.27991	518.31390	1.26272
57	7.177	PV T	0.0115	99.53047	143.90179	0.08660
58	7.193	PV T	6.26e-3	104.21824	222.63335	0.09068
59	7.201	PV T	0.0168	326.17575	232.25786	0.28380
60	7.229	PV T	0.0131	121.72468	111.51041	0.10591
61	7.254	PV T	4.08e-3	22.03986	89.93507	0.01918
62	7.269	PV T	0.0189	326.72919	205.73582	0.28428
63	7.301	PV T	0.0130	165.68558	153.77867	0.14416
64	7.321	PV T	0.0215	377.90158	215.25458	0.32880
65	7.360	PV T	8.26e-3	53.33034	85.72333	0.04640
66	7.374	PV T	6.41e-3	36.59790	71.00104	0.03184
67	7.381	PV T	5.66e-3	33.86501	99.75009	0.02946
68	7.391	PV T	0.0141	155.89273	134.29379	0.13564
69	7.410	PP T	0.0187	149.07442	132.59402	0.12971
70	7.444	PV T	7.10e-3	14.60920	34.29036	0.01271
71	7.464	PV T	5.79e-3	9.76980	28.55784	0.00850
72	7.473	PV T	4.94e-3	12.93711	34.81173	0.01126
73	7.499	PV T	0.0264	200.20126	92.01472	0.17419
74	7.538	PB T	4.64e-3	6.96856	25.04074	0.00606
75	7.614	PV T	0.0326	387.82715	142.49638	0.33744
76	7.652	PB T	2.76e-3	3.28078	19.81459	0.00285
77	7.680	BV T	0.0227	64.56673	33.71891	0.05618
78	7.710	PV T	7.05e-3	19.22675	45.48185	0.01673
79	7.719	PV T	3.20e-3	5.83398	30.39544	0.00508
80	7.724	PP T	0.0130	20.88188	26.78320	0.01817
81	7.748	PV T	0.0181	49.90595	32.82851	0.04342
82	7.776	PV T	0.0130	31.05198	39.72148	0.02702

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
Totals :				1.14933e5	3.64182e4	

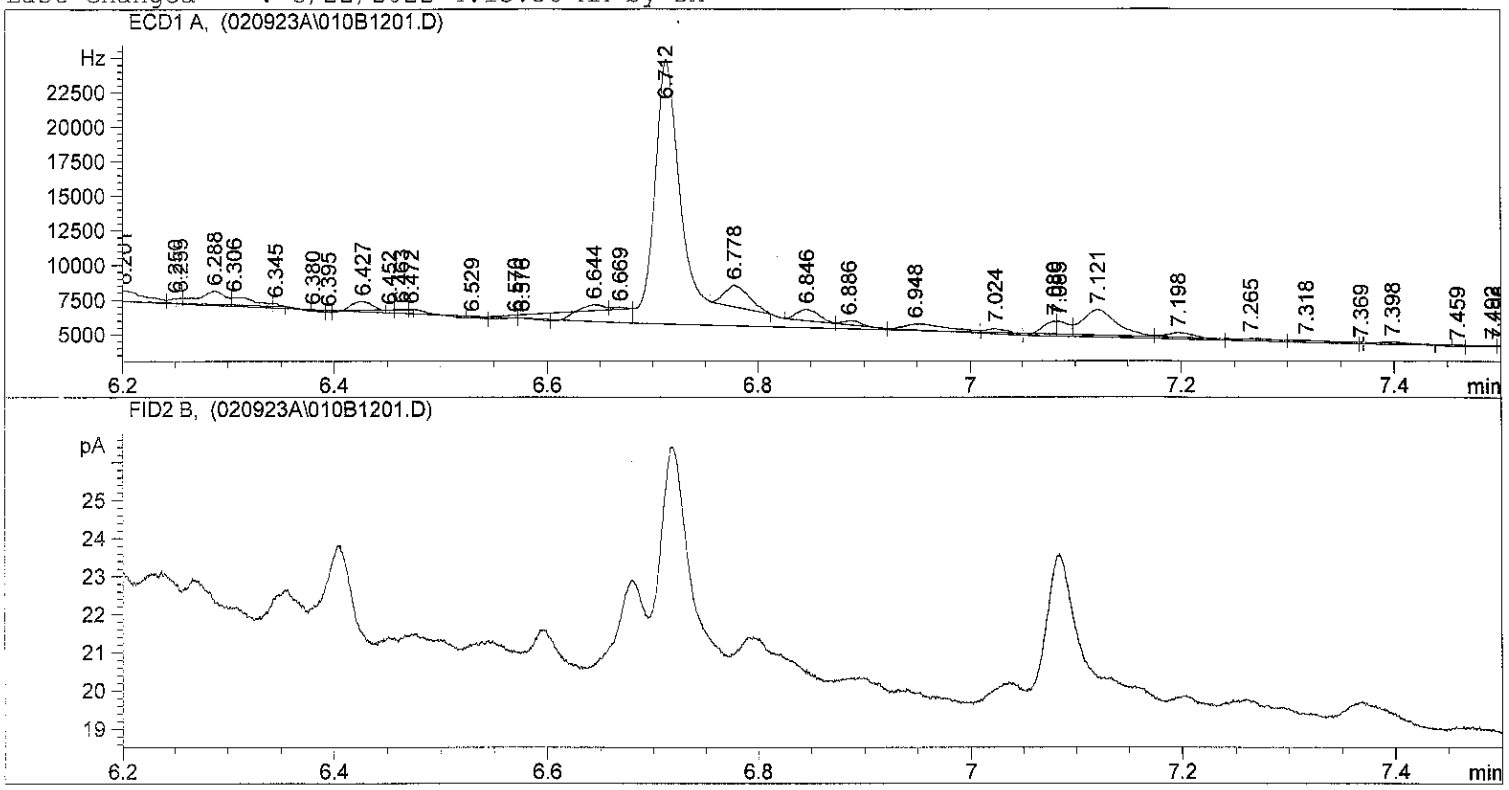
Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

Injection Date : 2/9/2023 3:47:51 PM Seq. Line : 12
Sample Name : 23B0054 06 Location : Vial 10
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\020923A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.223	BV S	0.0205	9998.47656	6239.09326	5.17620
2	5.291	VV S	0.0470	7479.77148	2654.48120	3.87227
3	5.338	BV T	4.88e-4	1.66360e-1	22.11297	8.612e-5
4	5.342	PV T	0.1080	122.27914	18.86489	0.06330
5	5.356	PP T	5.54e-3	113.48273	341.51001	0.05875
6	5.366	PV T	8.99e-3	219.68031	298.48743	0.11373
7	5.389	PV T	0.0000	79.45560	250.05055	0.04113
8	5.422	VV S	0.0229	1.33553e4	7457.23145	6.91405
9	5.480	VV S	0.0351	1.45158e4	5353.80518	7.51483
10	5.611	PV S	0.0641	2.43329e4	6322.12402	12.59713
11	5.674	VV S	0.0271	1.19215e4	5818.04590	6.17176
12	5.719	BV T	9.22e-3	101.15920	133.87674	0.05237
13	5.754	PV S	0.0400	1.74472e4	5496.59863	9.03241
14	5.784	BV T	0.0000	62.47043	48.95379	0.03234
15	5.812	PV T	2.89e-3	68.46381	320.37888	0.03544
16	5.820	PV T	0.0000	243.86507	269.76199	0.12625
17	5.868	PV T	3.21e-3	65.45449	755.04401	0.03389

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.901	PV T	0.0000	95.85594	100.16027	0.04962
19	5.912	PV T	3.07e-3	13.66833	74.15763	0.00708
20	5.948	PV S	0.0894	3.31524e4	4465.85596	17.16298
21	5.987	BB T	0.0118	537.31079	559.49500	0.27817
22	6.052	BV T	0.0168	513.07446	373.63278	0.26562
23	6.092	PV T	0.0194	555.18494	348.04282	0.28742
24	6.138	PV T	0.0146	152.42952	173.62102	0.07891
25	6.159	PV T	8.48e-3	118.59529	175.52640	0.06140
26	6.201	PV T	0.0243	1556.08936	767.34180	0.80559
27	6.250	PV T	6.60e-3	139.45830	299.40060	0.07220
28	6.255	PV T	5.13e-3	130.05489	367.52719	0.06733
29	6.288	PV T	0.0206	1599.91772	949.96558	0.82828
30	6.306	PV T	0.0257	830.51825	538.03162	0.42996
31	6.345	PB T	5.20e-3	76.86576	213.62061	0.03979
32	6.380	BV T	0.0000	45.01661	37.54251	0.02331
33	6.395	PP T	6.57e-3	37.40993	94.85739	0.01937
34	6.427	PV T	0.0146	740.84229	625.28821	0.38353
35	6.452	PV T	0.0140	11.01544	13.07668	0.00570
36	6.463	PV T	4.59e-3	15.93046	62.06430	0.00825
37	6.472	PB T	2.41e-3	5.15889	35.69579	0.00267
38	6.529	BP T	0.0000	59.27893	6.43599	0.03069
39	6.570	PV T	0.0202	310.75867	184.58041	0.16088
40	6.576	PP T	0.0560	705.92389	210.00331	0.36546
41	6.644	PV T	0.0000	15.20068	435.12817	0.00787
42	6.669	PV T	0.0112	142.03410	168.77226	0.07353
43	6.712	PB S	0.0260	3.51811e4	1.91581e4	18.21323
44	6.778	BB T	0.0203	2565.58179	1564.86755	1.32820
45	6.846	BV T	0.0173	1168.06616	816.34192	0.60471
46	6.886	PV T	0.0135	342.82895	306.44492	0.17748
47	6.948	PV T	0.0373	1410.77393	448.50317	0.73036
48	7.024	PV T	0.0174	556.00500	405.53912	0.28784
49	7.080	PV T	0.0119	965.61877	1053.74060	0.49990
50	7.085	PV T	0.0106	867.35492	1071.89001	0.44903
51	7.121	PV T	0.0283	4688.76172	1988.97510	2.42737
52	7.198	PV T	0.0252	977.19958	467.80121	0.50590
53	7.265	PV T	0.0277	430.20715	186.36180	0.22272
54	7.318	PV T	0.0250	375.57172	187.18684	0.19443
55	7.369	PV T	2.07e-3	2.71798	21.90557	0.00141
56	7.398	PB T	0.0260	410.70630	201.68231	0.21262
57	7.459	BV T	6.92e-3	11.39031	27.43196	0.00590
58	7.492	PV T	0.0127	94.48822	95.96593	0.04892
59	7.498	PB T	0.0268	176.22382	109.61897	0.09123
60	7.598	BV T	0.0112	180.46754	198.90547	0.09343
61	7.627	PV T	0.0291	775.79181	315.60944	0.40163
62	7.657	PB T	0.0162	119.36652	122.95772	0.06180
63	7.701	BP	3.86e-3	5.15883	18.44100	0.00267
64	7.774	PBA	0.0199	169.42923	102.56237	0.08771
Totals :				1.93162e5	8.19511e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 2/9/2023 3:59:04 PM          Seq. Line :  13
Sample Name     : 23B0054 07                   Location : Vial 11
Acq. Operator   : TW                               Inj :  1
                                             Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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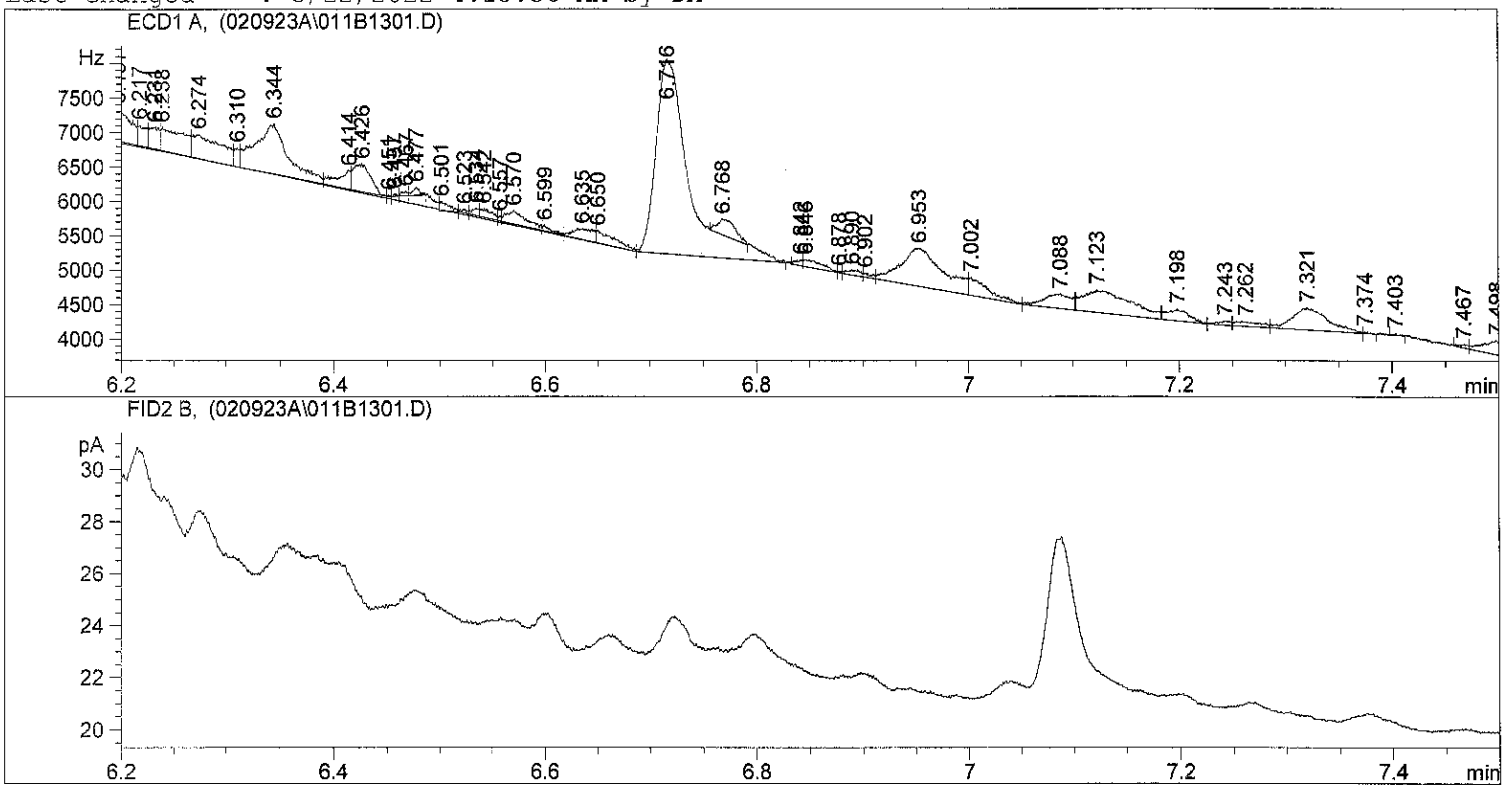

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.231	BV	0.0230	2499.62964	1299.35754	2.38958
2	5.263	VV	6.49e-3	227.05603	435.25314	0.21706
3	5.274	VV	4.74e-3	146.68593	413.13312	0.14023
4	5.294	VV	0.0177	1722.72620	1176.74963	1.64688
5	5.317	VV	0.0133	946.18842	867.43927	0.90453
6	5.335	VV	8.96e-3	522.75519	765.82642	0.49974
7	5.366	VV	0.0258	4016.71973	1877.36804	3.83988
8	5.391	VV	3.15e-3	315.60718	1446.61877	0.30171
9	5.429	VV S	0.0295	1.05959e4	4731.08154	10.12938
10	5.480	VV S	0.1954	2.34258e4	1997.97290	22.39448
11	5.518	BV T	3.55e-3	12.57379	57.63367	0.01202
12	5.527	VV T	0.0000	13.46555	59.81278	0.01287
13	5.538	VV T	7.78e-3	62.39750	110.69453	0.05965
14	5.556	VV T	0.0000	104.28063	130.04396	0.09969
15	5.590	VV T	0.0142	1106.33691	1054.29797	1.05763
16	5.611	VB T	0.0113	591.60272	648.00134	0.56556
17	5.674	BV T	0.0149	901.69647	790.07977	0.86200

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.691	PV T	4.56e-3	146.08751	534.23065	0.13966
19	5.706	PV T	0.0148	961.29431	839.09991	0.91897
20	5.756	VV S	0.0390	9297.37988	2918.01538	8.88807
21	5.813	BV T	7.07e-3	319.90088	577.03284	0.30582
22	5.823	PV T	9.70e-3	430.11035	551.64606	0.41117
23	5.832	PV T	5.57e-3	109.37224	327.32562	0.10456
24	5.869	PV S	0.0691	2.41673e4	4238.21875	23.10331
25	5.904	BV T	0.0195	771.75201	477.23590	0.73778
26	5.947	PV T	0.0120	185.78603	189.53960	0.17761
27	5.964	PV T	0.0139	75.44034	90.68982	0.07212
28	5.986	PV T	0.0116	188.59055	208.12170	0.18029
29	5.998	PV T	0.0125	190.83858	255.34720	0.18244
30	6.019	PV T	7.86e-3	121.91932	258.52234	0.11655
31	6.039	PV T	0.0175	712.98547	485.12158	0.68160
32	6.067	PV T	4.32e-3	65.09280	203.89287	0.06223
33	6.072	PV T	5.35e-3	74.32410	231.52283	0.07105
34	6.078	PV T	5.43e-3	93.25217	286.04324	0.08915
35	6.091	PV T	0.0159	544.46075	426.50806	0.52049
36	6.111	PB T	9.17e-3	132.16893	240.17886	0.12635
37	6.164	BP T	9.50e-3	132.38919	186.03526	0.12656
38	6.197	PV T	0.0174	685.42822	476.07721	0.65525
39	6.217	PV T	9.79e-3	183.54575	312.32440	0.17547
40	6.231	PV T	0.0104	201.83539	323.07642	0.19295
41	6.238	PV T	0.0274	560.69769	340.97104	0.53601
42	6.274	PV T	0.0244	706.50708	355.49200	0.67540
43	6.310	PV T	5.27e-3	88.21717	279.09155	0.08433
44	6.344	PV T	0.0265	1502.63892	716.98138	1.43649
45	6.414	PV T	0.0112	232.17851	261.09299	0.22196
46	6.426	PV T	0.0141	445.93478	397.85248	0.42630
47	6.451	PV T	2.35e-3	2.40562	17.07495	0.00230
48	6.457	PV T	2.69e-3	5.73564	35.50996	0.00548
49	6.467	PV T	6.77e-3	25.76126	60.49109	0.02463
50	6.477	PB T	6.30e-3	54.38302	119.65646	0.05199
51	6.501	BV T	0.0104	85.62582	137.49173	0.08186
52	6.523	PV T	5.16e-3	17.94800	48.04754	0.01716
53	6.534	PV T	5.67e-3	44.60743	106.84676	0.04264
54	6.542	PV T	0.0135	98.82965	122.34577	0.09448
55	6.557	PV T	3.47e-3	13.70054	65.80002	0.01310
56	6.570	PV T	0.0166	253.86162	189.66225	0.24269
57	6.599	PV T	9.39e-3	40.69299	72.19210	0.03890
58	6.635	PV T	0.0163	203.64587	153.33328	0.19468
59	6.650	PP T	0.0221	228.53166	172.39267	0.21847
60	6.716	PB S	0.0271	6167.92529	2817.85303	5.89638
61	6.768	BB T	0.0155	287.44571	225.56566	0.27479
62	6.842	BV	5.57e-3	36.38337	85.34137	0.03478
63	6.846	VP	0.0165	131.35149	97.51329	0.12557
64	6.878	VV	2.77e-3	4.83928	23.82948	0.00463
65	6.890	VV	0.0103	61.26957	73.94794	0.05857
66	6.902	VV	9.03e-3	33.05324	61.00904	0.03160
67	6.953	VV	0.0343	1557.32410	551.45831	1.48876
68	7.002	VP	0.0151	315.01758	253.75485	0.30115
69	7.088	VV	0.0220	364.64584	206.27650	0.34859
70	7.123	VV	0.0376	1021.14771	320.22830	0.97619
71	7.198	VP	0.0176	237.55690	170.62111	0.22710
72	7.243	VV	0.0110	49.85413	57.93609	0.04766
73	7.262	VV	0.0197	111.89230	68.45432	0.10697
74	7.321	VV	0.0284	735.45496	320.21338	0.70308
75	7.374	VP	2.99e-3	4.77261	21.49818	0.00456
76	7.403	BB	4.82e-3	5.14393	15.71939	0.00492
77	7.467	BV	7.76e-3	28.43073	46.29518	0.02718
78	7.498	VV	0.0156	260.14371	202.39194	0.24869
79	7.509	VP	0.0307	544.88190	213.92470	0.52089
80	7.622	VV	0.0231	414.99435	214.77290	0.39672
81	7.630	VB	0.0218	366.85663	202.10533	0.35071
82	7.671	BV	0.0144	90.81766	105.40581	0.08682

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.683	VV	8.14e-3	48.71987	75.37151	0.04657
84	7.698	VV	6.72e-3	21.58511	42.52224	0.02063
85	7.711	VV	4.30e-3	11.40947	34.11996	0.01091
86	7.720	VB	7.27e-3	18.18736	33.82883	0.01739
87	7.744	BP	6.59e-3	9.44592	19.70208	0.00903
88	7.771	VV	5.84e-3	18.15533	40.43586	0.01736
89	7.793	VBA	0.0131	32.01324	31.82862	0.03060
Totals :				1.04605e5	4.27834e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.291	PB	0.0177	98.98818	84.19662	52.32424
2	5.464	BB	0.0203	46.45383	33.27243	24.55507
3	5.511	BB	0.0175	43.74026	37.80805	23.12070
Totals :				189.18227	155.27710	

Results obtained with enhanced integrator!

*** End of Report ***

```
Injection Date  : 2/9/2023 4:10:04 PM          Seq. Line :  14
Sample Name     : 23B0054 08                   Location : Vial 12
Acq. Operator   : TW                              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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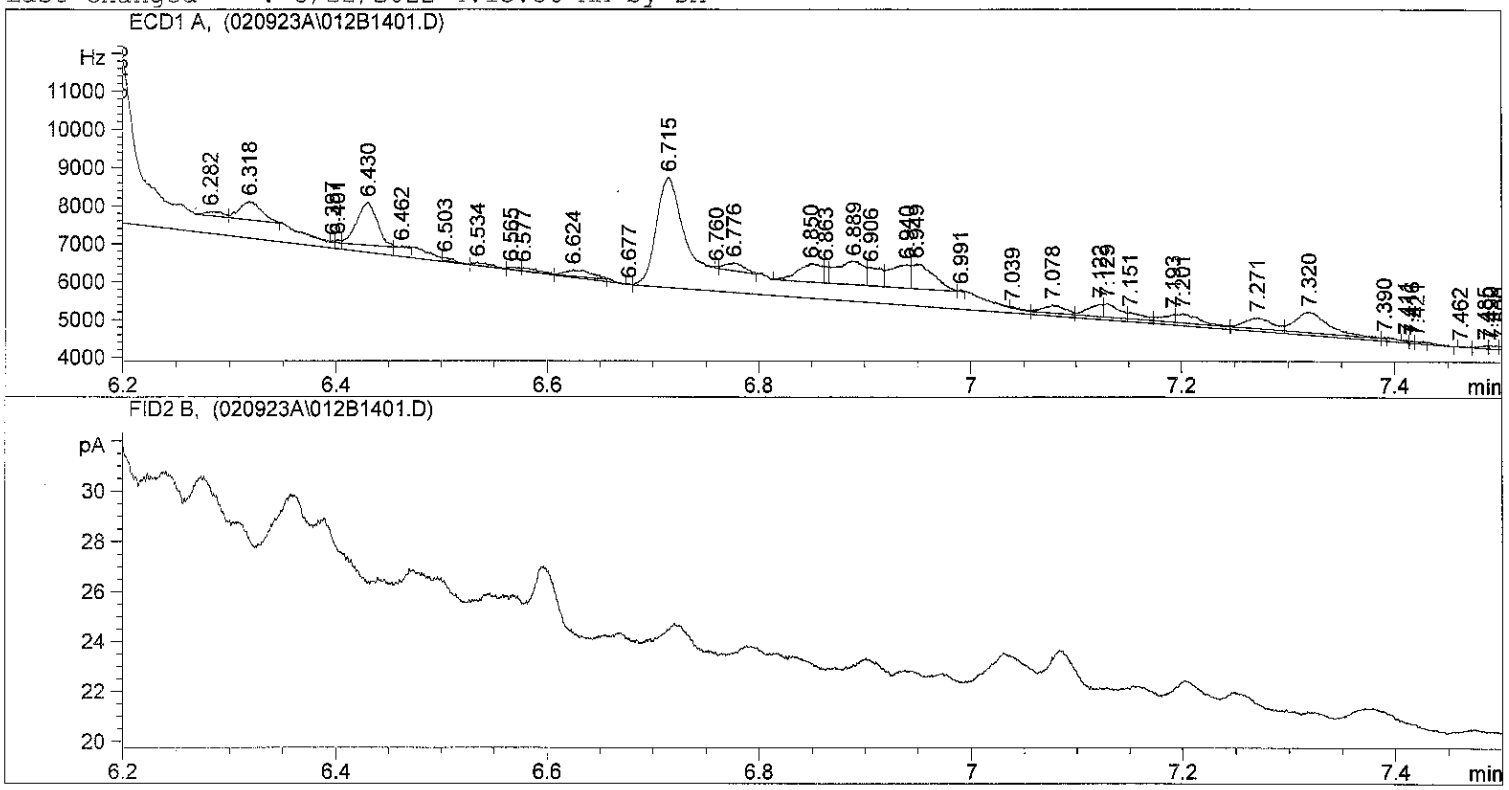

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.227	BV	0.0231	2729.31616	1412.13196	2.16944
2	5.286	VV	0.0113	1001.72540	1114.55762	0.79624
3	5.290	VV	3.50e-3	279.32272	1122.32080	0.22202
4	5.294	VV	0.0144	1297.97791	1096.98901	1.03172
5	5.339	VV	9.07e-3	488.33398	688.49615	0.38816
6	5.344	VV	3.72e-3	208.26433	778.01257	0.16554
7	5.365	VV	0.0340	5643.28857	1995.20862	4.48565
8	5.433	VV	0.0194	2432.59814	1562.91650	1.93359
9	5.464	VV	0.0139	1715.40918	1485.51660	1.36352
10	5.478	VV	6.92e-3	880.06500	1624.90906	0.69953
11	5.484	VV	5.30e-3	660.23602	1712.47595	0.52480
12	5.495	VV	0.0203	3225.56494	1945.79333	2.56389
13	5.524	VV	6.59e-3	511.14810	963.62811	0.40629
14	5.552	VV S	0.0201	4898.69434	3153.14185	3.89380
15	5.589	VV S	0.2492	4.65916e4	2264.86719	37.03399
16	5.676	BV T	0.0176	1974.81018	1374.12854	1.56971
17	5.707	VV T	0.0166	2178.07764	1644.95520	1.73128

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.755	PV T	0.0215	2242.96729	1251.85352	1.78286
19	5.780	PV T	2.38e-3	9.62092	67.41790	0.00765
20	5.808	PV T	0.0159	1083.28931	838.74506	0.86107
21	5.829	PV T	0.0128	552.08569	537.68091	0.43883
22	5.867	PV T	0.0166	1522.62012	1201.01782	1.21028
23	5.906	PV T	0.0245	1779.24963	867.14526	1.41426
24	5.950	PV T	0.0113	339.02939	369.41257	0.26948
25	5.964	PV T	5.19e-3	110.28474	268.62781	0.08766
26	5.973	PB T	8.18e-3	109.04411	222.26913	0.08668
27	6.016	BV T	0.0101	195.98573	245.35123	0.15578
28	6.038	PV T	0.0138	240.05969	216.14494	0.19081
29	6.067	PB T	0.0127	349.11942	352.96646	0.27750
30	6.128	BV T	0.0236	585.42133	413.00916	0.46533
31	6.198	PV S	0.0378	1.34622e4	4464.97656	10.70061
32	6.282	BV T	0.0147	135.79170	112.68062	0.10794
33	6.318	PB T	0.0168	685.25769	492.86383	0.54469
34	6.397	BV T	2.82e-3	7.88304	46.62370	0.00627
35	6.401	PV T	5.59e-3	25.48288	76.00672	0.02026
36	6.430	PV T	0.0165	1480.34167	1115.05261	1.17667
37	6.462	PB T	7.92e-3	17.17842	36.16421	0.01365
38	6.503	BV T	0.0124	59.32706	80.02111	0.04716
39	6.534	PV T	0.0125	94.40062	92.69135	0.07504
40	6.565	PV T	8.56e-3	46.32783	66.24400	0.03682
41	6.577	PV T	0.0178	93.77566	87.73549	0.07454
42	6.624	PB T	0.0208	297.65887	170.31015	0.23660
43	6.677	PV T	4.23e-3	6.60768	26.05633	0.00525
44	6.715	PB S	0.0616	1.49660e4	2901.59229	11.89595
45	6.760	BV T	3.88e-3	10.90077	46.86549	0.00866
46	6.776	PB T	0.0145	259.83115	215.69875	0.20653
47	6.850	BV T	0.0198	772.25641	480.41788	0.61384
48	6.863	PV T	4.49e-3	117.88432	437.59357	0.09370
49	6.889	PV T	0.0221	1107.71313	618.62097	0.88048
50	6.906	PV T	0.0155	452.40451	486.14355	0.35960
51	6.940	PV T	0.0157	790.71466	611.36951	0.62851
52	6.949	PV T	0.0238	934.04938	653.12671	0.74244
53	6.991	PB T	3.48e-3	8.96229	42.90487	0.00712
54	7.039	BV T	6.18e-3	14.92553	40.25478	0.01186
55	7.078	PV T	0.0165	299.22488	220.10851	0.23784
56	7.122	PV T	0.0120	314.86765	329.28888	0.25028
57	7.129	PV T	0.0126	346.59717	353.61084	0.27550
58	7.151	PV T	0.0174	172.70886	165.90323	0.13728
59	7.193	PV T	0.0108	163.04715	201.42058	0.12960
60	7.201	PV T	0.0172	354.64011	249.90540	0.28189
61	7.271	PV T	0.0209	511.07971	290.31851	0.40624
62	7.320	PV T	0.0270	1154.68762	539.91888	0.91782
63	7.390	PB T	2.39e-3	5.35129	31.42161	0.00425
64	7.411	BV T	4.22e-3	7.72974	26.35045	0.00614
65	7.416	PV T	2.31e-3	3.83064	27.63711	0.00304
66	7.421	PB T	8.99e-3	9.77225	18.11684	0.00777
67	7.462	BV	6.36e-3	7.72702	15.13391	0.00614
68	7.485	VV	7.54e-3	40.64142	74.75986	0.03230
69	7.490	VV	6.63e-3	46.70218	90.35764	0.03712
70	7.500	VV	4.96e-3	33.72502	94.64013	0.02681
71	7.519	VB	0.0216	262.00824	148.24586	0.20826
72	7.603	PV	7.88e-3	38.37113	61.49278	0.03050
73	7.617	VV	0.0239	181.56247	90.88718	0.14432
74	7.659	VB	7.97e-3	28.49183	47.68708	0.02265
75	7.680	BV	0.0154	40.87788	32.13741	0.03249
76	7.712	VP	0.0138	33.14168	31.59623	0.02634
77	7.732	VV	5.52e-3	16.97142	38.68773	0.01349
78	7.745	VV	4.53e-3	8.97814	29.65950	0.00714
79	7.753	VP	3.23e-3	4.38894	21.07709	0.00349
80	7.777	VV	8.30e-3	22.42778	33.96408	0.01783
81	7.787	VV	2.87e-3	5.43577	30.67825	0.00432
82	7.792	VV	3.55e-3	5.46662	25.05494	0.00435

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.798	VPA	2.36e-3	4.09394	27.17397	0.00325
Totals :				1.25808e5	4.95409e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 2/9/2023 4:21:16 PM          Seq. Line :  15
Sample Name     : 23B0054 09                   Location : Vial 13
Acq. Operator   : TW                               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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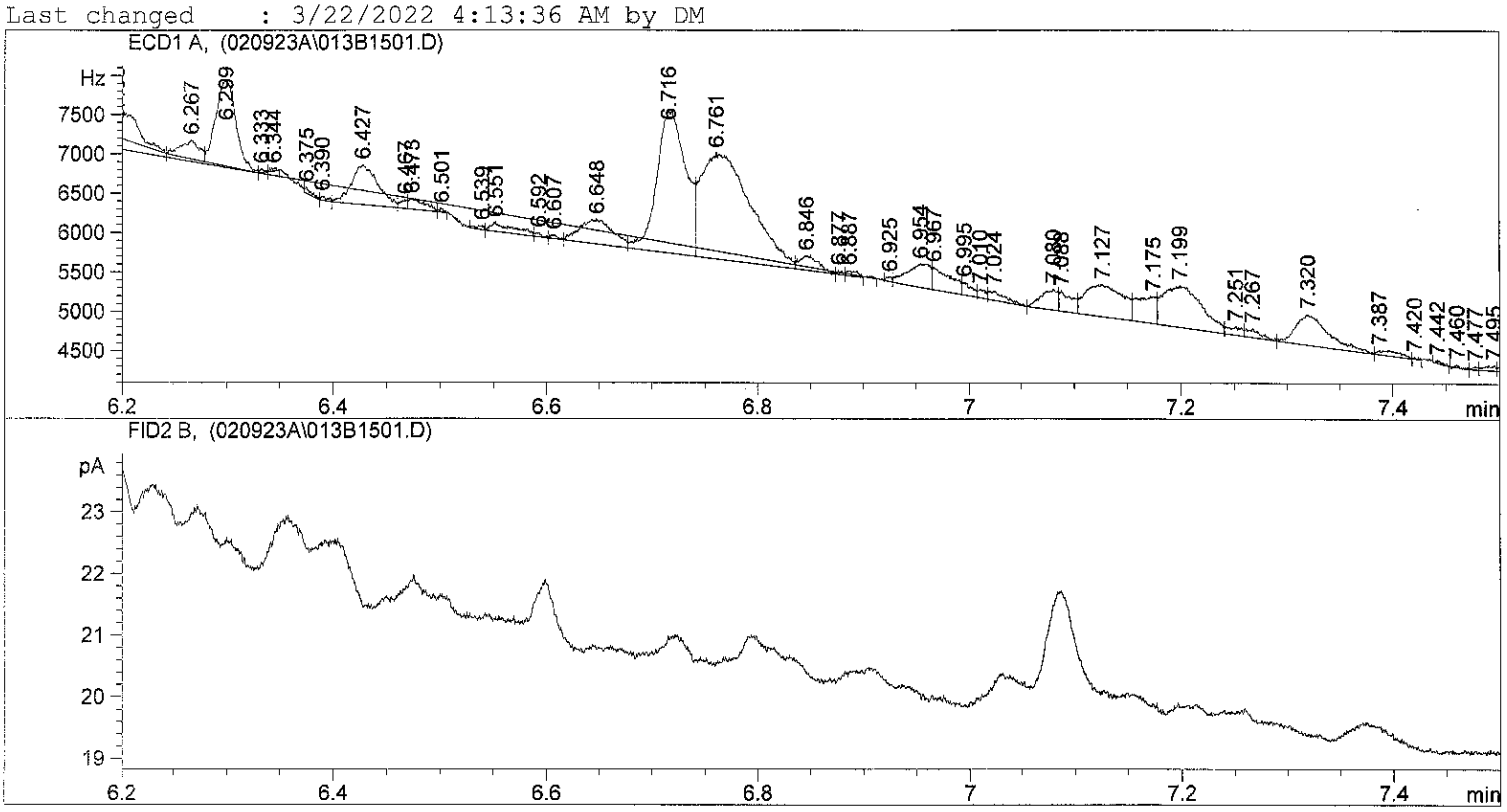

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.223	BV S	0.0474	1.59597e4	4102.83887	19.20842
2	5.284	BV T	3.00e-3	26.15975	127.04314	0.03148
3	5.296	PV T	0.0105	225.72696	264.89087	0.27168
4	5.313	VB T	4.26e-3	33.72700	132.05273	0.04059
5	5.345	PV T	6.47e-3	82.36852	169.54088	0.09914
6	5.361	PV T	0.0179	816.95746	576.82324	0.98325
7	5.394	PV T	0.0111	284.64011	350.27191	0.34258
8	5.402	PV T	3.44e-3	61.79128	298.94357	0.07437
9	5.407	PV T	4.56e-3	80.30647	293.47116	0.09665
10	5.432	PV T	0.0188	1807.80017	1240.10205	2.17579
11	5.483	PV T	0.0166	1010.78394	747.88422	1.21654
12	5.488	VV T	6.49e-3	365.73184	749.27246	0.44018
13	5.505	VV T	0.0137	998.19208	878.01678	1.20138
14	5.562	PV T	0.0175	2476.11792	1859.67078	2.98015
15	5.587	VV T	0.0163	1595.78149	1219.96960	1.92061
16	5.629	VV T	0.0197	1484.61792	907.54596	1.78682
17	5.675	VV S	0.0287	9623.78516	4506.03809	11.58277

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.754	VB S	0.0792	1.99898e4	3053.25586	24.05887
19	5.820	BV T	0.0106	592.36511	692.89099	0.71294
20	5.825	PV T	4.88e-3	200.61983	685.58429	0.24146
21	5.829	PV T	0.0128	522.22522	679.08661	0.62853
22	5.871	PV T	0.0163	1028.42444	816.06726	1.23777
23	5.904	PV T	0.0261	2075.58350	958.82483	2.49808
24	5.936	PV T	5.20e-3	244.00006	618.63501	0.29367
25	5.943	PV T	0.0120	697.99207	700.58099	0.84007
26	5.966	PV T	5.61e-3	121.13034	293.76941	0.14579
27	5.984	PB T	0.0196	930.13239	569.66022	1.11947
28	6.046	BV T	6.92e-3	99.17888	183.04222	0.11937
29	6.050	PB T	4.59e-3	39.73160	144.28897	0.04782
30	6.081	BV T	4.65e-3	19.53484	70.04884	0.02351
31	6.092	PB T	0.0137	172.01399	155.90927	0.20703
32	6.164	BV T	0.0136	541.33130	500.31918	0.65152
33	6.195	PV T	0.0222	591.87805	320.28543	0.71236
34	6.267	PV T	0.0154	290.76138	239.24895	0.34995
35	6.299	PV T	0.0175	1441.36060	1085.04187	1.73476
36	6.333	PV T	3.98e-3	11.31229	47.41795	0.01361
37	6.344	PB T	5.79e-3	13.74039	33.45604	0.01654
38	6.375	BV T	6.91e-3	31.81819	76.75795	0.03829
39	6.390	PV T	7.37e-3	21.64767	48.93121	0.02605
40	6.427	PV T	0.0205	868.86090	508.64651	1.04572
41	6.467	PV T	6.27e-3	51.29903	109.36610	0.06174
42	6.473	PV T	0.0175	142.28661	135.17889	0.17125
43	6.501	PB T	4.17e-3	13.11953	45.41977	0.01579
44	6.539	BV T	7.41e-3	22.04436	49.61538	0.02653
45	6.551	PV T	0.0195	172.89781	107.85598	0.20809
46	6.592	PV T	6.23e-3	20.12642	46.68217	0.02422
47	6.607	PV T	5.91e-3	21.10241	48.16323	0.02540
48	6.648	PV T	0.0271	672.99011	310.90564	0.80998
49	6.716	PV T	0.0232	3483.66797	1810.88098	4.19279
50	6.761	PV T	0.0393	4368.26123	1344.11047	5.25745
51	6.846	PV T	0.0163	234.88083	181.09279	0.28269
52	6.877	PV T	4.21e-3	14.48157	46.84724	0.01743
53	6.887	PB T	0.0118	45.57037	64.10568	0.05485
54	6.925	BV	4.59e-3	18.22969	56.09023	0.02194
55	6.954	VV	0.0178	442.48917	296.04596	0.53256
56	6.967	VV	0.0151	352.96451	280.81671	0.42481
57	6.995	VV	7.63e-3	99.07182	159.93996	0.11924
58	7.010	VV	6.52e-3	54.97758	108.30907	0.06617
59	7.024	VP	0.0145	124.68153	118.45866	0.15006
60	7.080	VV	0.0135	272.03131	261.56815	0.32740
61	7.088	VV	0.0110	212.40604	247.48059	0.25564
62	7.127	VV	0.0295	988.94489	402.57919	1.19025
63	7.175	VV	0.0156	438.89658	337.61200	0.52824
64	7.199	VV	0.0290	1302.51978	531.35474	1.56766
65	7.251	VV	0.0109	93.52645	105.46693	0.11256
66	7.267	VP	0.0106	96.27315	109.78043	0.11587
67	7.320	VV	0.0260	823.80798	383.97885	0.99150
68	7.387	VV	0.0217	90.94930	50.18872	0.10946
69	7.420	VP	5.12e-3	7.88524	25.66138	0.00949
70	7.442	PP	6.69e-3	15.03198	29.79031	0.01809
71	7.460	BP	3.07e-3	7.43548	32.47146	0.00895
72	7.477	VV	4.46e-3	13.40908	38.52199	0.01614
73	7.495	VV	7.68e-3	41.99624	69.22108	0.05054
74	7.507	VB	0.0121	82.02222	84.80470	0.09872
75	7.614	PV	0.0158	193.84068	149.21548	0.23330
76	7.617	VV	3.13e-3	33.09977	152.55678	0.03984
77	7.624	VV	0.0347	313.41693	150.43428	0.37721
78	7.675	VB	7.38e-3	34.07975	58.66035	0.04102
79	7.700	BV	7.12e-3	23.13396	42.70168	0.02784
80	7.708	VV	9.21e-3	34.80057	47.13546	0.04188
81	7.722	VV	6.07e-3	17.28901	47.49830	0.02081
82	7.728	VV	2.68e-3	4.98450	31.02937	0.00600

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.733	VP	6.37e-3	12.46708	24.37541	0.01500
84	7.746	VV	2.00e-3	2.44101	20.30877	0.00294
85	7.769	VV	0.0156	66.72308	54.11711	0.08030
86	7.785	VV	3.14e-3	8.85828	40.63251	0.01066
87	7.791	VBA	6.13e-3	20.01673	43.81385	0.02409
Totals :				8.30871e4	3.97990e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

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Injection Date  : 2/9/2023 4:32:16 PM          Seq. Line :  16
Sample Name     : 23B0054 10                   Location : Vial 14
Acq. Operator   : TW                              Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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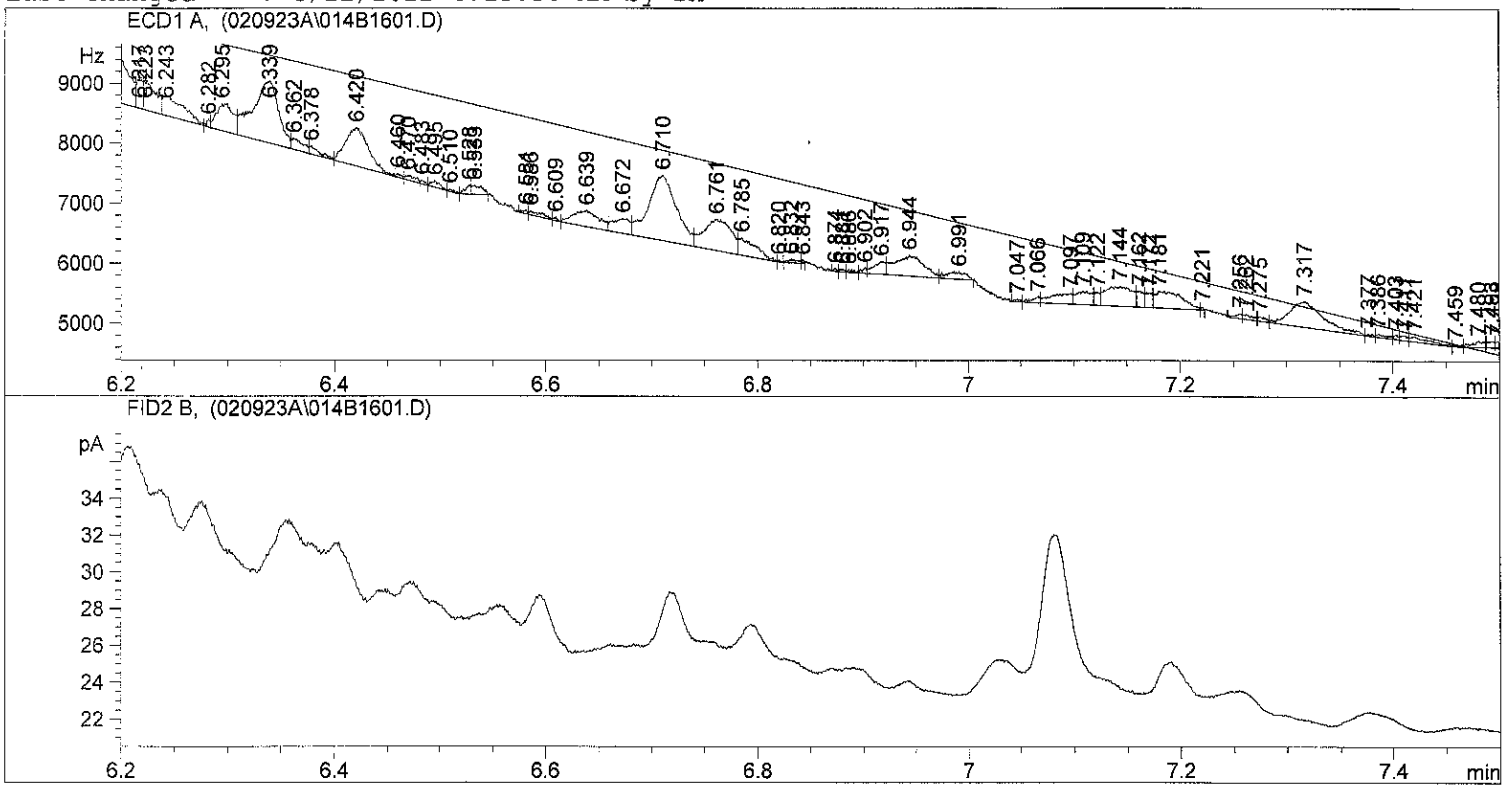

Area Percent Report

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Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
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Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.237	BV	0.0165	1615.22900	1197.15759	0.85113
2	5.249	VP	9.56e-3	961.81500	1252.51892	0.50682
3	5.294	VV S	0.0216	1.11927e4	6963.30322	5.89794
4	5.362	VV S	0.0289	1.66676e4	9605.16699	8.78286
5	5.427	VV S	0.0408	1.28647e4	5258.45703	6.77897
6	5.475	VV S	0.0363	4369.11133	2007.49524	2.30227
7	5.498	BV T	8.16e-3	181.99399	288.65668	0.09590
8	5.525	PV S	0.0219	5817.59521	3336.42065	3.06554
9	5.563	BV T	6.71e-3	112.12544	207.41280	0.05908
10	5.587	VV S	0.0356	1.19268e4	4025.38550	6.28472
11	5.646	BV T	7.58e-3	151.25685	245.87111	0.07970
12	5.674	PV T	0.0130	1105.96997	1043.19299	0.58278
13	5.698	PV T	0.0163	1790.64941	1366.14429	0.94357
14	5.728	PV T	5.60e-3	58.00657	135.24545	0.03057
15	5.756	PV S	0.0197	4052.56079	2605.67456	2.13547
16	5.784	BP T	0.0000	115.57220	55.39476	0.06090
17	5.813	PV T	0.0000	150.39700	35.39228	0.07925

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.834	PV S	0.0176	4262.64209	3363.09229	2.24617
19	5.864	PV S	0.0184	5357.43311	4065.48364	2.82306
20	5.905	BV T	0.0154	1611.74731	1302.87878	0.84930
21	5.950	PB S	0.0000	8.55979e4	4703.35889	45.10521
22	6.036	BV T	0.0210	660.44373	377.55310	0.34802
23	6.072	PV T	0.0328	2037.27295	746.69550	1.07353
24	6.120	PV T	9.42e-3	720.51459	975.52441	0.37967
25	6.126	PB T	0.0123	739.75366	1002.07697	0.38981
26	6.194	BV T	0.0179	1425.56702	970.50092	0.75119
27	6.217	PV T	6.21e-3	179.86803	482.88065	0.09478
28	6.223	PV T	0.0137	412.56360	502.93661	0.21740
29	6.243	PV T	0.0222	455.54782	341.31647	0.24005
30	6.282	PV T	3.51e-3	31.10183	124.74007	0.01639
31	6.295	PV T	0.0137	515.33923	452.96698	0.27155
32	6.339	PV T	0.0220	1698.62134	1034.34106	0.89508
33	6.362	PV T	9.18e-3	140.22423	186.24887	0.07389
34	6.378	PV T	0.0115	88.63132	127.91117	0.04670
35	6.420	PV T	0.0179	949.47186	641.73853	0.50032
36	6.460	PV T	4.00e-3	20.75468	67.24404	0.01094
37	6.470	PV T	9.75e-3	55.43842	73.92307	0.02921
38	6.483	PV T	4.56e-3	17.70675	64.66518	0.00933
39	6.495	PV T	6.75e-3	57.15792	108.40318	0.03012
40	6.510	PV T	4.45e-3	12.16827	45.55633	0.00641
41	6.528	PV T	5.40e-3	57.59690	146.18805	0.03035
42	6.533	PB T	8.43e-3	98.32272	146.52504	0.05181
43	6.581	BV T	4.34e-3	19.85619	65.41085	0.01046
44	6.586	PV T	0.0152	64.10995	70.24892	0.03378
45	6.609	PV T	4.17e-3	14.31980	57.29229	0.00755
46	6.639	PV T	0.0205	451.40845	267.35336	0.23787
47	6.672	PV T	0.0132	270.24832	251.22632	0.14241
48	6.710	PV T	0.0220	2002.20508	1089.51636	1.05505
49	6.761	PV T	0.0220	936.69086	519.36633	0.49358
50	6.785	PV T	0.0187	325.43842	290.15945	0.17149
51	6.820	PV T	2.41e-3	4.24919	29.43048	0.00224
52	6.832	PV T	7.46e-3	31.93700	54.28996	0.01683
53	6.843	PB T	2.83e-3	8.13359	47.90800	0.00429
54	6.874	BV T	3.09e-3	9.45016	48.19912	0.00498
55	6.881	PV T	4.31e-3	13.74718	45.73215	0.00724
56	6.886	PV T	4.53e-3	15.55452	43.92784	0.00820
57	6.902	PV T	4.18e-3	25.78022	89.07764	0.01358
58	6.917	PV T	9.59e-3	159.00687	211.15298	0.08379
59	6.944	PV T	0.0228	652.25751	343.07990	0.34370
60	6.991	PB T	0.0153	147.22992	122.11420	0.07758
61	7.047	BV T	5.21e-3	13.21980	42.27491	0.00697
62	7.066	PV T	7.57e-3	49.73175	94.05780	0.02621
63	7.097	PV T	0.0167	231.11264	169.12488	0.12178
64	7.109	PV T	0.0122	219.38046	220.27933	0.11560
65	7.122	PV T	5.75e-3	73.07026	211.65202	0.03850
66	7.144	PV T	0.0210	577.80701	330.70291	0.30447
67	7.162	PV T	7.12e-3	113.86171	266.44122	0.06000
68	7.172	PV T	5.61e-3	99.39462	240.96690	0.05238
69	7.181	PV T	0.0219	489.12238	267.33246	0.25774
70	7.221	PB T	1.98e-3	6.28146	52.77736	0.00331
71	7.256	BV T	6.02e-3	37.02215	82.79315	0.01951
72	7.262	PV T	9.79e-3	52.31799	89.09607	0.02757
73	7.275	PV T	8.50e-3	37.36856	73.25694	0.01969
74	7.317	PV T	0.0262	924.29626	421.32111	0.48705
75	7.377	PV T	4.30e-3	11.29871	33.83122	0.00595
76	7.386	PV T	8.37e-3	36.99767	54.15670	0.01950
77	7.403	PV T	5.00e-3	22.06944	73.50412	0.01163
78	7.411	PV T	7.18e-3	35.14198	81.52861	0.01852
79	7.421	PV T	0.0151	103.57497	84.63539	0.05458
80	7.459	PV T	9.19e-3	12.00129	21.76793	0.00632
81	7.480	PV T	9.95e-3	75.60107	98.54439	0.03984
82	7.493	PV T	5.78e-3	49.47578	107.20740	0.02607

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.498	PB T	0.0132	85.81082	108.34349	0.04522
84	7.599	BV	0.0208	367.68042	212.78879	0.19375
85	7.624	VV	0.0211	312.49677	176.52988	0.16467
86	7.660	VV	7.69e-3	58.14687	95.72549	0.03064
87	7.681	VV	0.0120	83.86141	85.92920	0.04419
88	7.693	VV	3.77e-3	16.80409	65.95468	0.00885
89	7.698	VV	0.0125	47.80398	63.93898	0.02519
90	7.722	VP	7.77e-3	25.89232	43.32891	0.01364
91	7.745	VV	6.51e-3	15.72325	30.00914	0.00829
Totals :				1.89774e5	6.93289e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.291	PB	0.0181	116.00646	98.43300	49.03900
2	5.464	BV	0.0198	85.48250	63.01331	36.13571
3	5.510	VB	0.0193	35.07065	27.45353	14.82529
Totals :				236.55961	188.89984	

Results obtained with enhanced integrator!

*** End of Report ***

```
==============================================================================
Injection Date  : 2/9/2023 4:43:14 PM          Seq. Line :  17
Sample Name     : 23B0054 11                    Location : Vial 15
Acq. Operator   : TW                               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\020923A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 3/22/2022 4:13:36 AM by DM
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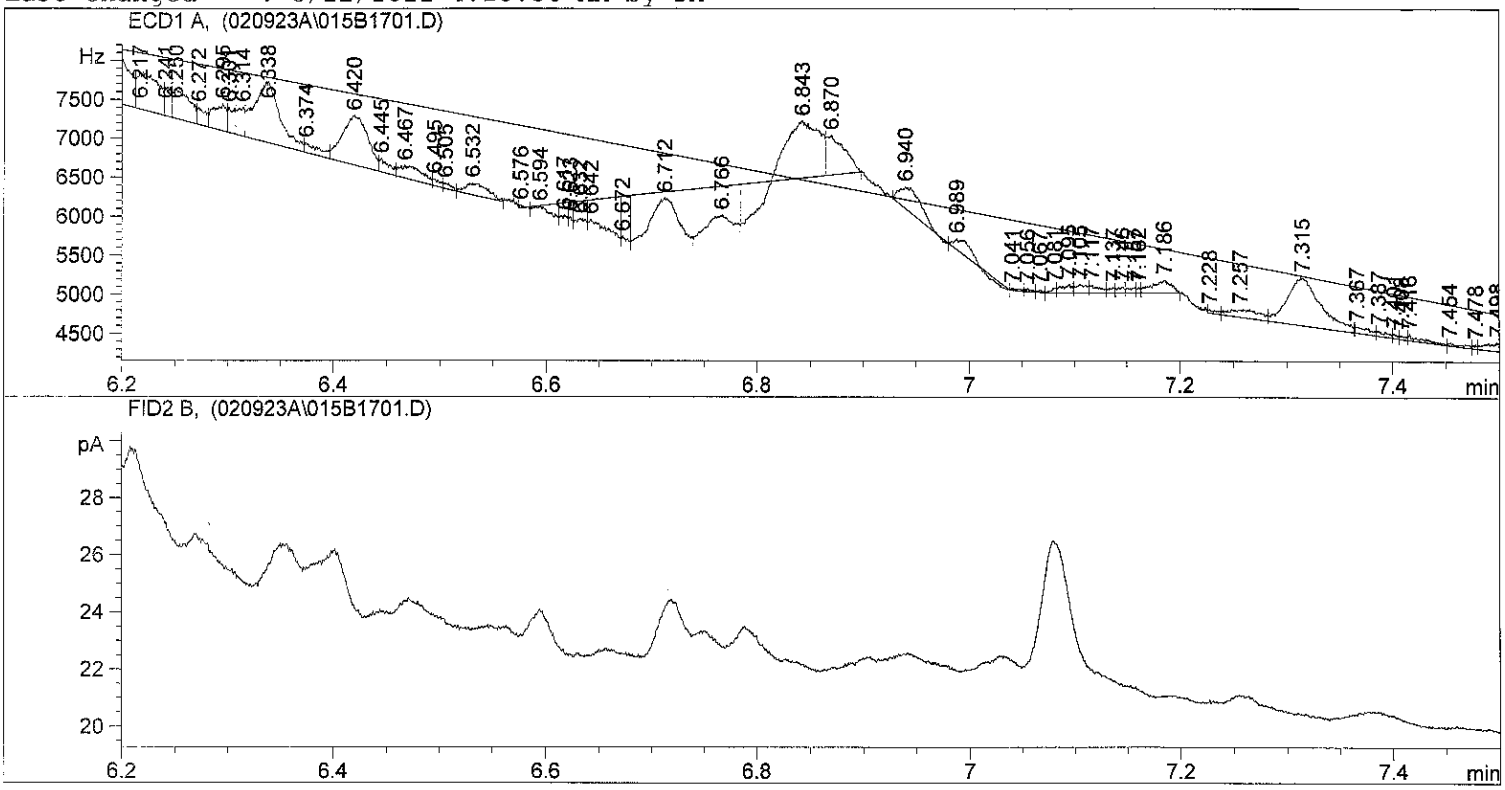



```
==============================================================================
                          Area Percent Report
==============================================================================

Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000

Signal 1: ECD1 A,
```

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.238	BV	0.0252	2605.44629	1290.69360	2.30643
2	5.269	VV	6.54e-3	208.72591	424.27994	0.18477
3	5.279	VV	4.89e-3	188.32732	536.95728	0.16671
4	5.290	VV	9.91e-3	555.29810	710.76495	0.49157
5	5.298	VV	5.96e-3	307.94473	670.32001	0.27260
6	5.334	VV	0.0282	5154.31201	2278.49121	4.56277
7	5.422	VV	0.0210	5880.97119	3361.25073	5.20604
8	5.425	VV	0.0137	3606.34668	3379.34302	3.19246
9	5.456	VV	8.02e-3	961.02686	1598.14404	0.85073
10	5.466	VV	9.80e-3	1201.29590	1709.50720	1.06343
11	5.474	VV	0.0100	1437.60461	1739.08423	1.27262
12	5.487	VV	5.63e-3	676.22113	1568.32568	0.59861
13	5.495	VV	0.0215	2047.62048	1587.42273	1.81262
14	5.522	VV	0.0132	1048.35925	954.71790	0.92804
15	5.554	VV	0.0175	1980.66736	1386.20642	1.75335
16	5.582	VV S	0.0806	1.69953e4	2522.84888	15.04481
17	5.607	BB T	4.32e-3	24.17305	75.82014	0.02140

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	5.633	BV T	3.27e-3	29.88454	130.59821	0.02645
19	5.641	PV T	7.41e-3	141.31029	235.03304	0.12509
20	5.650	PV T	9.26e-3	154.91208	278.95905	0.13713
21	5.675	PV T	0.0174	1052.35693	722.92535	0.93158
22	5.697	PV T	0.0144	845.20123	734.33636	0.74820
23	5.731	PV T	7.12e-3	126.06559	225.71072	0.11160
24	5.756	PV T	0.0159	1331.58923	1031.40613	1.17877
25	5.788	PV T	4.75e-3	21.99000	64.95591	0.01947
26	5.812	PV T	0.0116	381.72357	411.85104	0.33791
27	5.823	PV T	0.0112	204.78644	304.63599	0.18128
28	5.864	PBAS	0.1429	4.30084e4	3557.28174	38.07254
29	5.905	BV T	0.0189	1771.91858	1166.63965	1.56856
30	5.939	PV T	0.0142	343.04916	295.01196	0.30368
31	5.966	PV T	0.0187	555.49768	374.42523	0.49175
32	6.001	PV T	0.0138	267.12128	251.62674	0.23646
33	6.036	PV T	0.0148	639.89392	527.23120	0.56646
34	6.059	PV T	7.26e-3	137.72133	256.64828	0.12192
35	6.081	PB T	0.0154	695.75775	563.03607	0.61591
36	6.159	BP T	9.47e-3	71.14622	125.20084	0.06298
37	6.193	PV T	0.0200	1036.78271	696.23956	0.91780
38	6.217	PV T	0.0167	657.36420	469.40955	0.58192
39	6.241	PV T	6.79e-3	148.19849	363.96118	0.13119
40	6.250	PV T	0.0195	429.33383	367.51102	0.38006
41	6.272	PV T	7.18e-3	127.32162	219.22728	0.11271
42	6.295	PV T	0.0103	285.05685	341.49384	0.25234
43	6.301	PV T	7.30e-3	140.57889	320.95490	0.12445
44	6.314	PV T	7.30e-3	179.67621	367.73730	0.15906
45	6.338	PV T	0.0215	1312.34570	777.69519	1.16173
46	6.374	PV T	0.0176	133.12151	125.71036	0.11784
47	6.420	PV T	0.0202	1044.68298	629.83954	0.92479
48	6.445	PV T	8.43e-3	115.04886	171.51659	0.10185
49	6.467	PV T	0.0190	252.42715	158.65446	0.22346
50	6.495	PV T	8.18e-3	41.38960	84.37846	0.03664
51	6.505	PV T	8.27e-3	33.87259	68.28194	0.02999
52	6.532	PB T	0.0193	229.74997	156.42198	0.20338
53	6.576	BV T	1.47e-3	3.15445	35.82729	0.00279
54	6.594	PV T	0.1401	120.83159	10.10714	0.10696
55	6.617	PV T	9.99e-3	95.07356	158.58078	0.08416
56	6.623	PV T	5.43e-3	60.48275	185.64700	0.05354
57	6.632	PV T	0.0152	206.99963	227.57582	0.18324
58	6.642	PV T	0.0333	701.92645	253.52058	0.62137
59	6.672	PP T	0.0100	311.73611	518.13129	0.27596
60	6.712	PV T	0.1979	1349.50452	79.73102	1.19463
61	6.766	PV T	0.0414	1289.77173	372.56207	1.14175
62	6.843	PV T	0.0159	956.10461	728.82068	0.84638
63	6.870	PB T	0.0202	616.05347	507.61087	0.54535
64	6.940	BV T	0.0183	426.71695	277.75876	0.37774
65	6.989	PV T	0.0119	130.32803	136.50076	0.11537
66	7.041	PV T	0.0103	13.84410	22.38461	0.01226
67	7.056	PV T	5.56e-3	13.14355	39.37440	0.01164
68	7.067	PV T	4.18e-3	9.60153	31.25709	0.00850
69	7.081	PV T	5.11e-3	21.83630	61.98987	0.01933
70	7.095	PV T	7.95e-3	69.71066	110.65759	0.06171
71	7.105	PV T	9.22e-3	77.44160	104.83340	0.06855
72	7.117	PV T	0.0110	63.47054	96.44243	0.05619
73	7.137	PV T	5.84e-3	24.66567	64.83681	0.02183
74	7.146	PV T	6.62e-3	31.57961	73.40401	0.02796
75	7.157	PV T	7.23e-3	34.68954	62.97227	0.03071
76	7.162	PV T	3.67e-3	14.41977	65.49294	0.01276
77	7.186	PB T	0.0152	197.06068	159.32707	0.17444
78	7.228	BV T	9.76e-3	23.65971	40.40257	0.02094
79	7.257	PV T	0.0250	198.41016	96.35572	0.17564
80	7.315	PV T	0.0271	1345.45947	605.18781	1.19105
81	7.367	PV T	0.0164	75.39937	76.78104	0.06675
82	7.387	PV T	7.45e-3	41.85558	69.30423	0.03705

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
83	7.401	PV T	4.85e-3	16.43167	56.51072	0.01455
84	7.408	PV T	7.56e-3	18.42529	40.62698	0.01631
85	7.416	PV T	0.0145	60.31392	69.52123	0.05339
86	7.454	PV T	0.0160	31.65138	32.95116	0.02802
87	7.478	PV T	4.22e-3	12.85808	50.73943	0.01138
88	7.498	PV T	0.0128	111.33553	110.05093	0.09856
89	7.507	PV T	0.0115	81.43262	118.18501	0.07209
90	7.524	PB T	7.96e-3	71.29626	113.04517	0.06311
91	7.606	PV T	0.0414	668.50598	190.98578	0.59178
92	7.654	PV T	8.09e-3	69.11667	142.43535	0.06118
93	7.662	PV T	3.79e-3	39.00296	142.79663	0.03453
94	7.667	PV T	0.0218	176.41644	134.87062	0.15617
95	7.703	PV T	8.88e-3	62.77017	90.59919	0.05557
96	7.716	PV T	9.06e-3	59.52475	80.23437	0.05269
97	7.727	PV T	0.0137	94.52881	82.61911	0.08368
98	7.759	PV T	4.68e-3	9.66525	34.43806	0.00856
99	7.768	PV T	4.37e-3	7.21011	23.55508	0.00638
100	7.782	PP T	6.41e-3	15.14718	29.38064	0.01341
101	7.797	PP T	4.44e-3	6.96305	22.61760	0.00616
Totals :				1.12964e5	4.92103e4	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

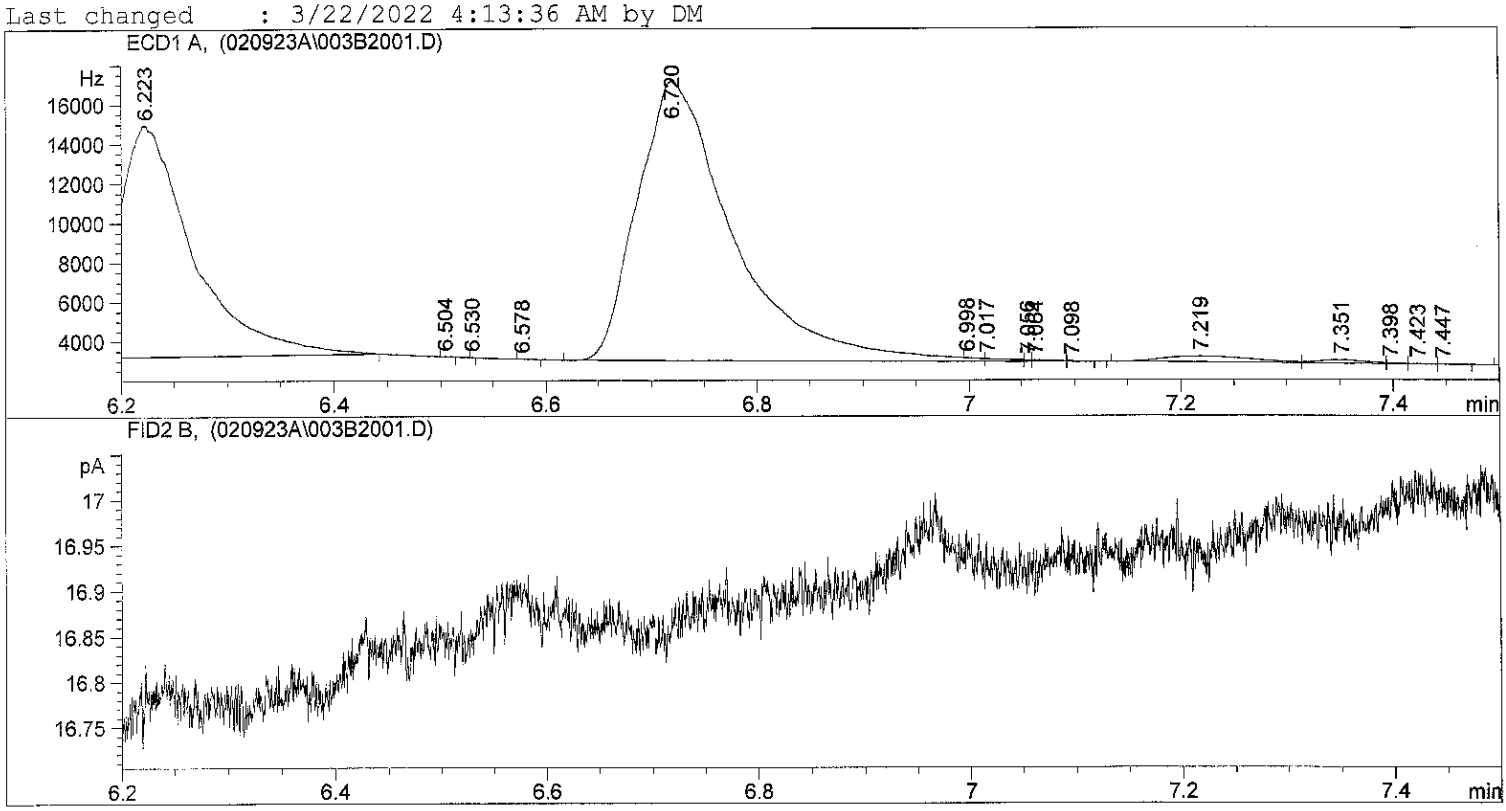
Peak #	RetTime [min]	Type	Width [min]	Area [pA*s]	Height [pA]	Area %
1	5.289	PB	0.0180	78.10464	65.13884	1.000e2
Totals :				78.10464	65.13884	

Results obtained with enhanced integrator!

*** End of Report ***

Injection Date : 2/9/2023 5:16:51 PM Seq. Line : 20
Sample Name : CS4 STD Location : Vial 3
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\020923A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 3/22/2022 4:13:36 AM by DM



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.374	BB	0.0120	24.63139	34.09444	0.00257
2	5.418	BP	0.0227	214.43439	112.42252	0.02239
3	5.534	VV S	0.0344	1.98753e5	6.90736e4	20.75415
4	5.630	VV S	0.0539	2.87269e5	8.88817e4	29.99717
5	5.693	VV S	0.0430	9.02324e4	3.49591e4	9.42223
6	5.744	VV S	0.0739	1.06435e5	2.40152e4	11.11413
7	5.987	VV S	0.0594	8.07167e4	2.26351e4	8.42859
8	6.136	VV S	0.0582	4.62872e4	1.32459e4	4.83340
9	6.223	VB S	0.0800	5.62219e4	1.17129e4	5.87080
10	6.504	BP	8.64e-3	7.24581	11.46088	0.00076
11	6.530	BP	1.56e-3	2.66971	26.79133	0.00028
12	6.578	BB	0.0111	6.91092	8.01139	0.00072
13	6.720	PB S	0.0735	8.88277e4	1.42604e4	9.27556
14	6.998	BV X	6.74e-3	19.59775	37.25804	0.00205
15	7.017	VV T	0.0142	24.16054	21.33925	0.00252
16	7.056	PV T	4.35e-3	5.28676	20.25902	0.00055
17	7.064	PV T	0.0223	25.66829	19.21612	0.00268

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	7.098	PB T	0.0144	13.01775	15.03255	0.00136
19	7.219	BV	0.0656	1691.40979	302.46277	0.17662
20	7.351	VV	0.0354	518.66034	175.74541	0.05416
21	7.398	VB	0.0110	39.42345	46.89114	0.00412
22	7.423	BB	0.0141	38.09755	32.44274	0.00398
23	7.447	BP	9.70e-3	19.40440	24.88397	0.00203
24	7.516	PV	8.07e-3	9.73478	15.19650	0.00102
25	7.558	BV	3.62e-3	4.79094	19.85225	0.00050
26	7.564	VB	5.61e-3	8.36628	19.48649	0.00087
27	7.586	BV	0.0171	32.05782	22.68906	0.00335
28	7.632	VV	9.36e-3	27.85410	37.08054	0.00291
29	7.652	VV	0.0240	128.92151	66.09552	0.01346
30	7.686	VV	0.0137	29.59636	26.28144	0.00309
31	7.724	VP	7.90e-3	10.08228	21.26885	0.00105
32	7.787	BP	6.32e-3	9.00696	17.74312	0.00094
Totals :				9.57654e5	2.79918e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

TOTAL SOLIDS BENCHSHEET						Batch:	BLA0650
Method HRSM01.2						Date:	2/21/2023 5:13
(dry at 110 C)						Analyst:	TW
Instrumentation						Drying Oven:	18
						Analytical Balance:	24650344

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	2/20/2023 12:04	110	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	110
Date/time out:	2/21/2023 5:13	111	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	111
Elapsed hrs:	17.2				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0467-05	0.8000	11.2900	6.8000	6.00	57.20%	No

TOTAL SOLIDS BENCHSHEET

Method HRSM01.2

(dry at 110 C)

Batch:	BLA0650
Date:	
Analyst:	TW
Drying Oven:	18
Analytical Balance:	24650344

Instrumentation

Batch drying time

Record times as mm/dd/yy hh:mm

			Oven Temp, C
Date/time in oven:	02/20/23	12:04	110
Date/time out:	02/21/23	0513	111
Elapsed hrs:	0.0		

TS (%) calculated as:

Final dry wt (g) = (Dry Wt - Tare Wt)

TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)

Oven Temps, °C	
Start Temp:	110
End Temp:	111

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0467-05 C	0.80	11.29	0.89			No

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

Extraction Parameter: Dioxin Extraction Batch: _____

Total Solids Batch: BLA0656 Work Order(s): 23A0467, 23B0077

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☑ No Anomalies (standard soil/wet sediment/sand/gravel)= 77-05	TW 2/20/23
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☑ Clay/Clumps (Difficult to homogenize)= 467-05 = clump	TW 2/20/23
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Received in 32oz jar(s)=Homogenized in Pyrex dish=	
☐ Previously Frozen =	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
☐ Received in 1.0L Bottle(s)=No Bottle Rinse=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
☐ Share Samples Y / N	
☐ Multiple Jars Y / N	
☐ Sample Pre-Screens indicate analyte activity=	
☐ Sample weights/volumes reduced based on Pre-Screen=	

```
Injection Date  : 2/20/2023 12:24:40 PM        Seq. Line :   3
Sample Name     : CS4 STD                     Location : Vial 3
Acq. Operator   : TW                             Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\022023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 2/13/2023 8:23:37 AM by ZH
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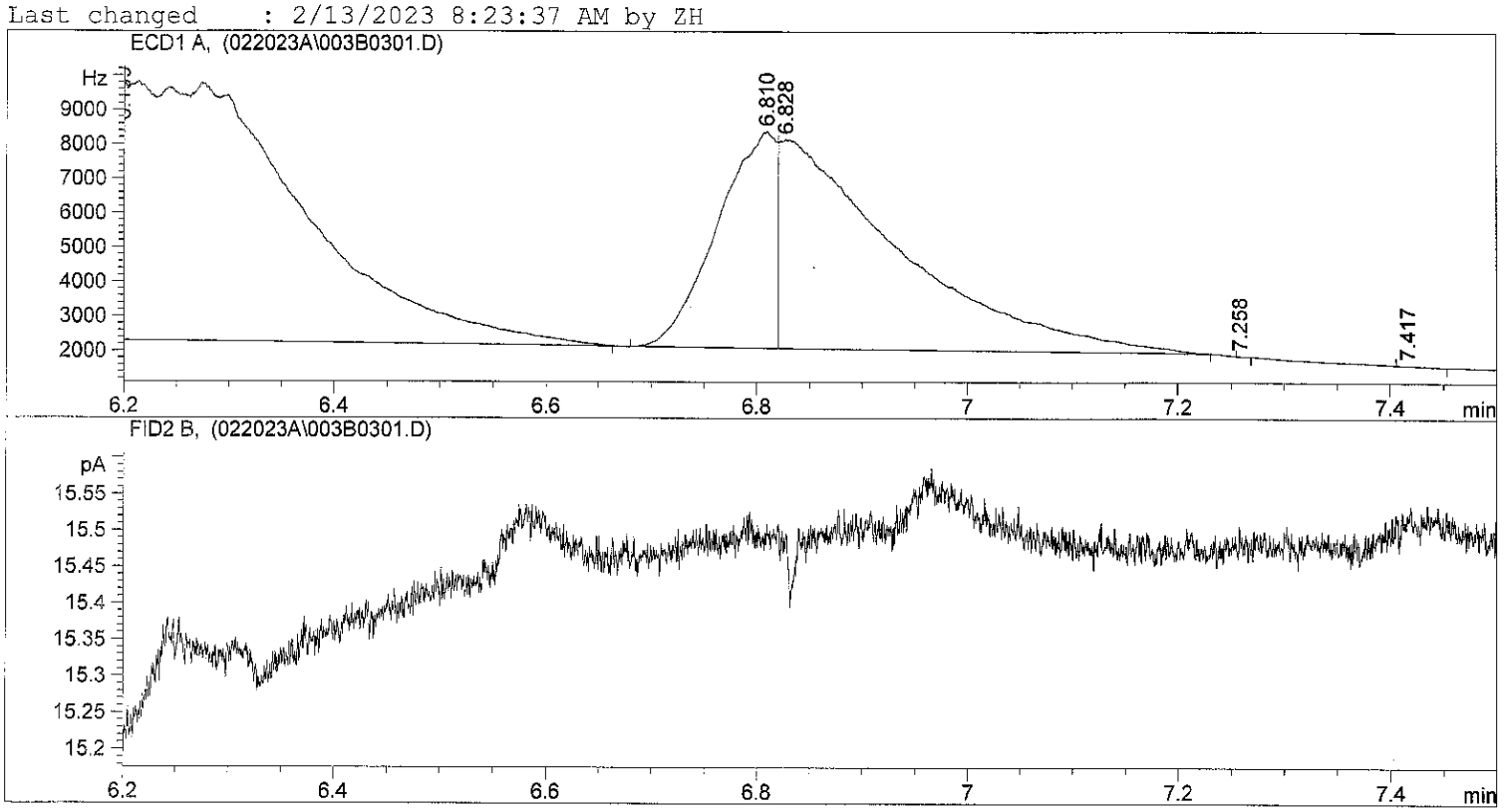


Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.570	BV S	0.0429	1.76780e5	4.91870e4	18.20837
2	5.668	VV S	0.1371	5.23063e5	6.35777e4	53.87564
3	6.043	VV S	0.1037	9.02057e4	1.44993e4	9.29122
4	6.199	VB S	0.2401	1.08435e5	7527.09326	11.16889
5	6.810	PV	0.0465	2.41431e4	6296.30566	2.48674
6	6.828	VB	0.0932	4.82285e4	6078.80273	4.96755
7	7.258	PB	3.18e-3	1.22605	5.54402	0.00013
8	7.417	PP	0.0173	14.17308	9.91050	0.00146
Totals :				9.70871e5	1.47182e5	

Results obtained with enhanced integrator!

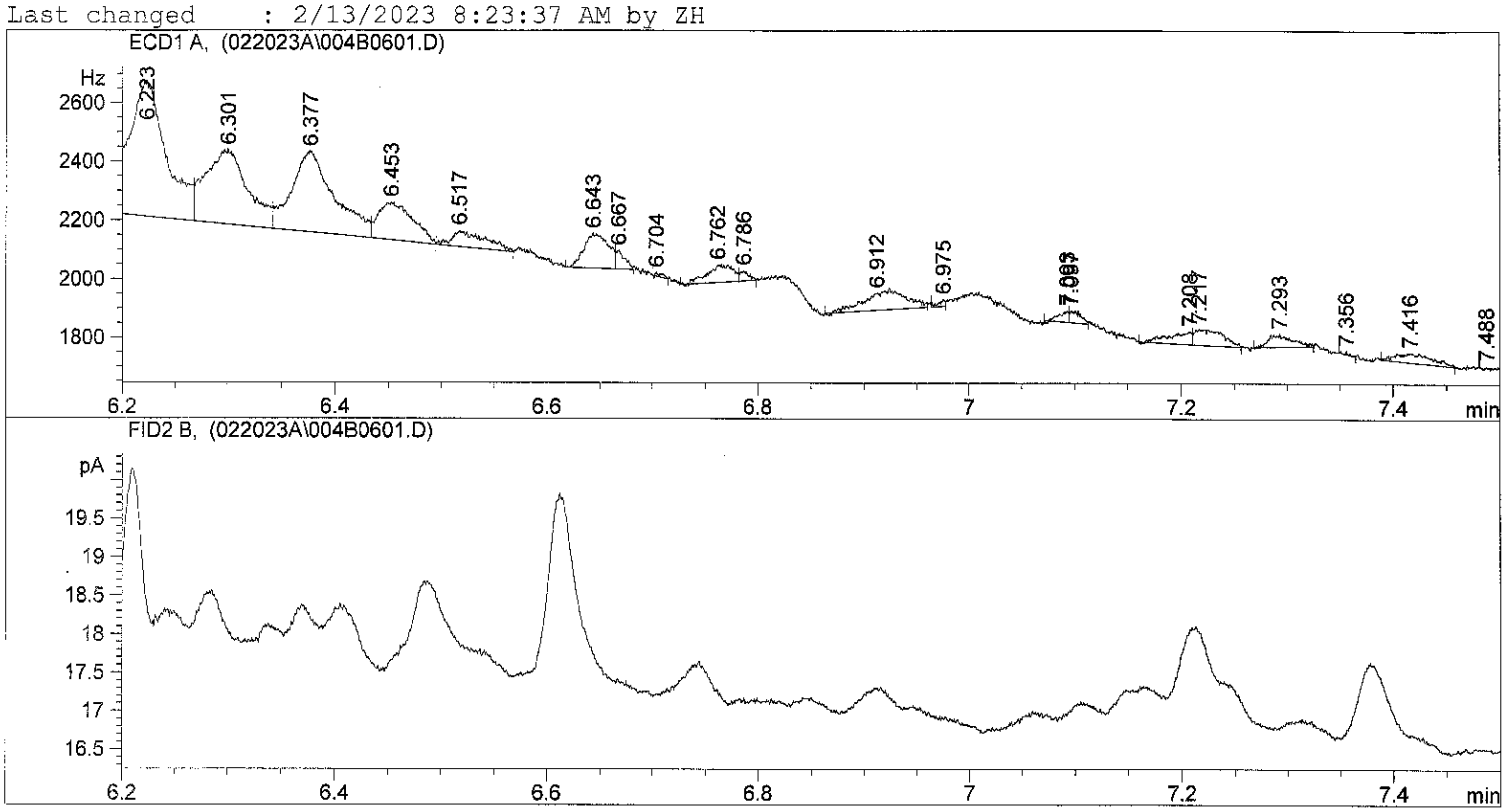
Signal 2: FID2 B,

==========

*** End of Report ***

Injection Date : 2/20/2023 12:58:11 PM Seq. Line : 6
Sample Name : 23A0467 05 Location : Vial 4
Acq. Operator : TW Inj : 1
Inj Volume : 1 µl

Sequence File : C:\HPCHEM\2\SEQUENCE\022023A.S
Method : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed : 2/13/2023 8:23:37 AM by ZH



Area Percent Report

Sorted By : Signal
Multiplier : 1.0000
Dilution : 1.0000

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.246	BV	0.0173	170.17390	119.01566	0.99851
2	5.276	VB	0.0190	267.95276	177.41832	1.57223
3	5.346	PV	0.0113	94.82790	103.43472	0.55641
4	5.379	VV	0.0197	394.43289	243.60417	2.31436
5	5.411	VV	0.0210	213.04359	123.25201	1.25005
6	5.482	VV	0.0193	903.33154	594.96906	5.30037
7	5.519	VV	0.0239	754.69867	395.68063	4.42825
8	5.614	VV	0.0321	661.63873	246.70403	3.88222
9	5.652	VV	0.0224	444.13257	235.92908	2.60598
10	5.702	VV	0.0255	1320.65454	619.60968	7.74904
11	5.760	VV	0.0296	1123.78320	462.04269	6.59388
12	5.800	VV	0.0192	502.08920	315.42963	2.94605
13	5.827	VV	0.0232	684.94305	357.41681	4.01896
14	5.878	VV	0.0309	1402.97327	566.39447	8.23205
15	5.947	VV	0.0292	968.18170	397.94232	5.68088
16	5.987	VV	0.0173	384.28415	265.40662	2.25482
17	6.056	VV	0.0469	1842.60938	470.39984	10.81165

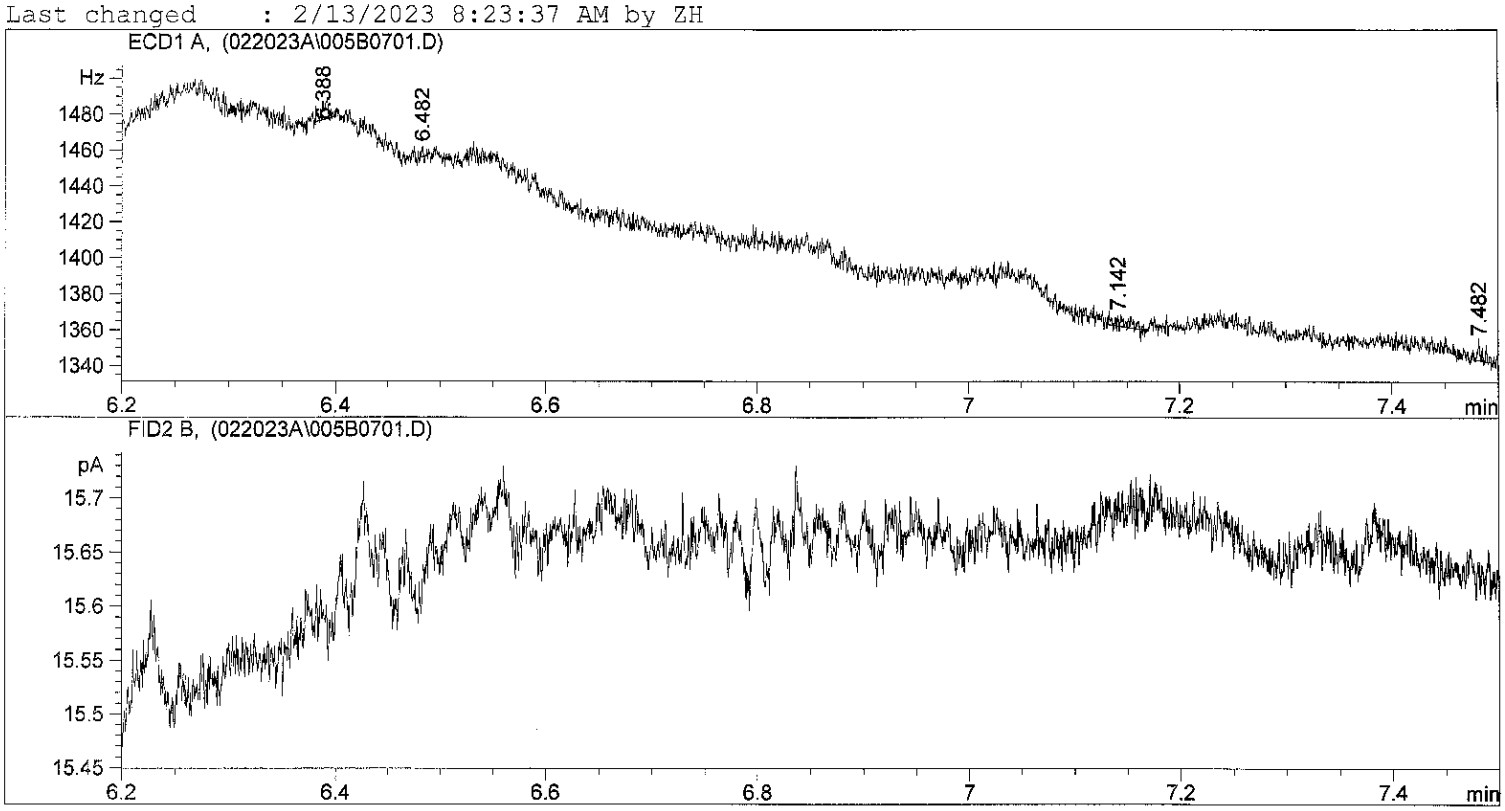
Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
18	6.135	VV	0.0277	486.16849	207.46713	2.85263
19	6.223	VV	0.0381	1495.13098	462.95612	8.77279
20	6.301	VV	0.0323	686.51459	250.98940	4.02818
21	6.377	VV	0.0331	753.29749	272.18414	4.42003
22	6.453	VV	0.0269	288.41528	127.15130	1.69230
23	6.517	VP	0.0265	118.12619	53.65073	0.69311
24	6.643	PV	0.0193	188.20990	116.19217	1.10434
25	6.667	VB	8.17e-3	36.92525	61.79689	0.21666
26	6.704	PB	6.71e-3	5.48684	10.48290	0.03219
27	6.762	PV	0.0201	98.00684	58.74875	0.57506
28	6.786	VP	9.21e-3	18.94355	34.29888	0.11115
29	6.912	PB	0.0383	184.77408	58.10171	1.08418
30	6.975	BV	5.64e-3	10.31532	22.97098	0.06053
31	7.093	PV	8.49e-3	22.57754	37.15599	0.13248
32	7.097	VB	8.98e-3	28.61151	38.92042	0.16788
33	7.208	PV	0.0184	63.47529	43.12407	0.37245
34	7.217	VB	0.0223	100.59801	54.11753	0.59027
35	7.293	BB	0.0187	66.04904	42.17012	0.38755
36	7.356	BB	2.78e-3	1.46205	8.77352	0.00858
37	7.416	BB	0.0294	76.94588	31.14875	0.45149
38	7.488	BP	2.08e-3	6.21111e-1	4.90290	0.00364
39	7.549	PP	0.0000	3.57343e-1	2.48534	0.00210
40	7.638	PB	0.0360	171.49228	56.26636	1.00624
41	7.708	BP	7.83e-3	6.55824	11.20641	0.03848
Totals :				1.70428e4	7761.91223	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

```
Injection Date  : 2/20/2023 1:09:13 PM          Seq. Line :   7
Sample Name     : 23B0077 05                    Location : Vial 5
Acq. Operator   : TW                               Inj :   1
                                              Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\022023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 2/13/2023 8:23:37 AM by ZH
```



Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.664	BB	5.33e-3	4.48195	12.07891	8.43735
2	5.880	BB	0.0126	14.25146	14.13473	26.82865
3	5.928	PB	2.34e-3	1.24393	8.35848	2.34172
4	5.970	BP	0.0116	18.44204	19.61717	34.71749
5	6.037	BP	3.05e-3	2.29652	10.91793	4.32325
6	6.102	BP	3.12e-3	8.41640e-1	5.72452	1.58440
7	6.388	PB	5.61e-3	4.44519	9.94681	8.36816
8	6.482	PB	1.40e-3	3.80368e-1	5.53243	0.71605
9	7.142	PP	0.0119	3.82742	5.35287	7.20518
10	7.482	PP	3.29e-3	2.45453	10.64510	4.62069
11	7.798	BPA	2.29e-3	4.55267e-1	3.31424	0.85705
Totals :				53.12031	105.62320	

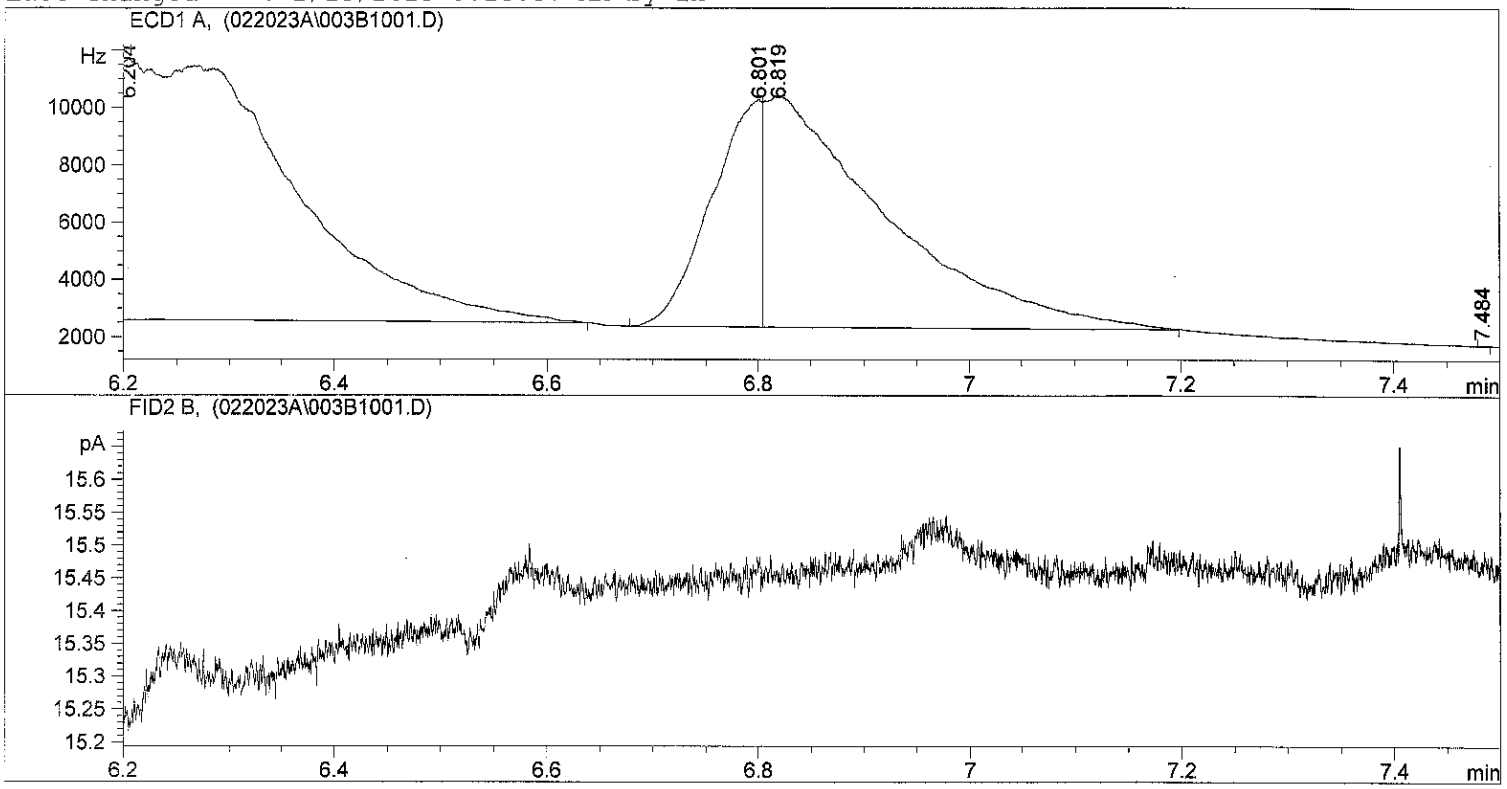
Results obtained with enhanced integrator!

Signal 2: FID2 B,

==========

*** End of Report ***

```
Injection Date  : 2/20/2023 1:42:56 PM          Seq. Line :  10
Sample Name     : CS4 STD                      Location : Vial 3
Acq. Operator   : TW                               Inj :   1
                                               Inj Volume : 1 µl
Sequence File   : C:\HPCHEM\2\SEQUENCE\022023A.S
Method          : C:\HPCHEM\2\METHODS\DIOXIN.M
Last changed    : 2/13/2023 8:23:37 AM by ZH
```



Area Percent Report

```
Sorted By             :      Signal
Multiplier            :      1.0000
Dilution              :      1.0000
```

Signal 1: ECD1 A,

Peak #	RetTime [min]	Type	Width [min]	Area [Hz*s]	Height [Hz]	Area %
1	5.566	BV S	0.0421	1.99056e5	5.78447e4	17.82205
2	5.655	VV S	0.0796	4.73519e5	7.30041e4	42.39554
3	5.789	VV S	0.0842	1.22898e5	2.43298e4	11.00341
4	6.029	VV S	0.0738	1.04075e5	1.69915e4	9.31813
5	6.204	VB S	0.1832	1.26344e5	9116.68262	11.31192
6	6.801	BV	0.0392	2.61589e4	7952.71533	2.34209
7	6.819	VB	0.0942	6.48547e4	8068.79639	5.80663
8	7.484	PB	3.30e-3	2.31114	9.97661	0.00021
9	7.567	PB	0.0000	1.91212e-1	8.11539	1.712e-5
Totals :				1.11691e6	1.97326e5	

Results obtained with enhanced integrator!

Signal 2: FID2 B,

*** End of Report ***

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0029	Cleanup Type:	Silica Gel
Cleanup Method:	EPA 3630C Silica Gel Cleanup - uL	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	BLB0270-BLK1	23030806	03/02/2023	
LCS	BLB0270-BS1	23030807	03/02/2023	
Reference	BLB0270-SRM1	23030808	03/02/2023	
LDW23-SS1004	23A0467-05	23031013	03/02/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0029

Matrix: Solid **Cleanup using: HRGCMS - EPA 3630C Silica Gel Cleanup - uL** **Printed: 3/3/2023 12:35:51PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-05	C	LDW23-SS1004	C 01	20	20	1613B Dioxin	3/2/2023	TW	
23A0572-01	M	Composite Ash Samples	M 01	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-01	A	DM-19-S	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-02	A	DM-15-S	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-03	A	DM-20-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-04	A	DM-20-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-05	A	DM-11-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-06	A	DM-11-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-07	A	DM-11-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-08	A	DM-24-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-09	A	DM-06-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-10	A	DM-06-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-11	A	DM-06-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0077-05	A	SW-3-Z	A 01	20	20	1613B Dioxin	3/2/2023	TW	
BLB0270-BLK1	-	Blank	-	20	20	-	3/2/2023	TW	
BLB0270-BS1	-	LCS	-	20	20	-	3/2/2023	TW	
BLB0270-DUP1	-	Duplicate	-	20	20	-	3/2/2023	TW	
BLB0270-SRM1	-	Reference	-	20	20	-	3/2/2023	TW	

CLEANUP BATCH SUMMARY

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Cleanup Batch:	CLC0030	Cleanup Type:	Florisil
Cleanup Method:	EPA 3620B Florisil Cleanup (uL)	Analysis:	EPA 1613B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1004	23A0467-05	23031013	03/02/2023	
Blank	BLB0270-BLK1	23030806	03/02/2023	
LCS	BLB0270-BS1	23030807	03/02/2023	
Reference	BLB0270-SRM1	23030808	03/02/2023	

Analytical Resources, LLC
Analytical Chemists and Consultants

CLEANUP BENCH SHEET

CLC0030

Matrix: Solid **Cleanup using: HRGCMS - EPA 3620B Florisil Cleanup (uL)** **Check Standard: CKK0015-FLO1** **Printed: 3/3/2023 12:36:32PM**

Lab Number	Sample Container	Sample Name	Extract Container	Initial (uL)	Final (uL)	Analysis	Clean Up Date	Cleaned By	Cleanup Comments
23A0467-05	C	LDW23-SS1004	C 01	20	20	1613B Dioxin	3/2/2023	TW	
23A0572-01	M	Composite Ash Samples	M 01	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-01	A	DM-19-S	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-02	A	DM-15-S	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-03	A	DM-20-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-04	A	DM-20-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-05	A	DM-11-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-06	A	DM-11-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-07	A	DM-11-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-08	A	DM-24-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-09	A	DM-06-C-0-1	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-10	A	DM-06-C-1-3	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0054-11	A	DM-06-C-3-5	A 03	20	20	1613B Dioxin	3/2/2023	TW	
23B0077-05	A	SW-3-Z	A 01	20	20	1613B Dioxin	3/2/2023	TW	
BLB0270-BLK1	-	Blank	-	20	20	-	3/2/2023	TW	
BLB0270-BS1	-	LCS	-	20	20	-	3/2/2023	TW	
BLB0270-DUP1	-	Duplicate	-	20	20	-	3/2/2023	TW	
BLB0270-SRM1	-	Reference	-	20	20	-	3/2/2023	TW	

Analytical Resources, LLC
Analytical Chemists and Consultants

Blank

Form 1
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0270-BLK1	File ID:	23030806
Sampled:	N/A	Prepared:	02/28/23 14:27	Analyzed:	03/08/23 13:59
Solids Wt%:		Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLC0101	Calibration:	GC00015
Batch:	BLB0270	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

CAS NO.	COMPOUND	DF/Split	Ion Ratio	Ratio Limits	EDL	RL	Result	Units	Q
51207-31-9	2,3,7,8-TCDF	1	0.000	0.655-0.886	0.122	1.00	ND	ng/kg	U
1746-01-6	2,3,7,8-TCDD	1	0.000	0.655-0.886	0.096	1.00	ND	ng/kg	U
57117-41-6	1,2,3,7,8-PeCDF	1	0.000	1.318-1.783	0.119	1.00	ND	ng/kg	U
57117-31-4	2,3,4,7,8-PeCDF	1	0.000	1.318-1.783	0.119	1.00	ND	ng/kg	U
40321-76-4	1,2,3,7,8-PeCDD	1	0.000	1.318-1.783	0.094	1.00	ND	ng/kg	U
70648-26-9	1,2,3,4,7,8-HxCDF	1	0.000	1.054-1.426	0.093	1.00	ND	ng/kg	U
57117-44-9	1,2,3,6,7,8-HxCDF	1	0.000	1.054-1.426	0.088	1.00	ND	ng/kg	U
60851-34-5	2,3,4,6,7,8-HxCDF	1	0.000	1.054-1.426	0.104	1.00	ND	ng/kg	U
72918-21-9	1,2,3,7,8,9-HxCDF	1	0.000	1.054-1.426	0.134	1.00	ND	ng/kg	U
39227-28-6	1,2,3,4,7,8-HxCDD	1	0.000	1.054-1.426	0.122	1.00	ND	ng/kg	U
57653-85-7	1,2,3,6,7,8-HxCDD	1	0.000	1.054-1.426	0.119	1.00	ND	ng/kg	U
19408-74-3	1,2,3,7,8,9-HxCDD	1	0.000	1.054-1.426	0.132	1.00	ND	ng/kg	U
67562-39-4	1,2,3,4,6,7,8-HpCDF	1	0.000	0.893-1.208	0.109	1.00	ND	ng/kg	U
55673-89-7	1,2,3,4,7,8,9-HpCDF	1	0.000	0.893-1.208	0.188	1.00	ND	ng/kg	U
35822-46-9	1,2,3,4,6,7,8-HpCDD	1	0.573	0.893-1.208	0.153	2.50	0.234	ng/kg	EMPC, J
39001-02-0	OCDF	1	0.000	0.757-1.024	0.348	2.50	ND	ng/kg	U
3268-87-9	OCDD	1	0.595	0.757-1.024	0.280	10.0	0.932	ng/kg	EMPC, J

Homologue Groups

55722-27-5	Total TCDF	1	0.000			1.00	ND	ng/kg
41903-57-5	Total TCDD	1	0.000			1.00	ND	ng/kg
30402-15-4	Total PeCDF	1	0.000			1.00	ND	ng/kg
36088-22-9	Total PeCDD	1	0.000			1.00	ND	ng/kg
55684-94-1	Total HxCDF	1	0.000			1.00	ND	ng/kg
34465-46-8	Total HxCDD	1	0.000			1.00	ND	ng/kg
38998-75-3	Total HpCDF	1	0.000			1.00	ND	ng/kg
37871-00-4	Total HpCDD	1	0.000			1.00	ND	ng/kg

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.003
Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.165

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Blank

Form 2
METHOD BLANK DATA SHEET
EPA 1613B
Dioxins/Furans by HRGC/HRMS

Laboratory:	Analytical Resources, LLC			SDG:	23A0467
Client:	Anchor QEA, LLC			Project:	AOC5 MR Phase 1
Matrix:	Solid	Laboratory ID:	BLB0270-BLK1	File ID:	23030806
Sampled:	N/A	Prepared:	02/28/23 14:27	Analyzed:	03/08/23 13:59
Solids Wt%:	0.00	Preparation:	EPA 1613	Initial/Final:	10 g / 20 uL
Result Basis:	Dry	Sequence:	SLC0101	Calibration:	GC00015
Batch:	BLB0270	Instrument:	AUTOSPEC01	Column:	RTX-Dioxin2

Labels	DF/Split	Ion Ratio	Ratio Limits	EDL	% REC	QC LIMITS	Q
13C12-2,3,7,8-TCDF	1	0.767	0.655-0.886	0.23	132	24 - 169 %	
13C12-2,3,7,8-TCDD	1	0.804	0.655-0.886	0.20	134	25 - 164 %	
13C12-1,2,3,7,8-PeCDF	1	1.559	1.318-1.783	0.29	161	24 - 185 %	
13C12-2,3,4,7,8-PeCDF	1	1.518	1.318-1.783	0.32	146	21 - 178 %	
13C12-1,2,3,7,8-PeCDD	1	1.617	1.318-1.783	0.24	136	25 - 181 %	
13C12-1,2,3,4,7,8-HxCDF	1	0.514	0.434-0.587	0.36	140	26 - 152 %	
13C12-1,2,3,6,7,8-HxCDF	1	0.474	0.434-0.587	0.30	136	26 - 123 %	*
13C12-2,3,4,6,7,8-HxCDF	1	0.511	0.434-0.587	0.37	131	28 - 136 %	
13C12-1,2,3,7,8,9-HxCDF	1	0.514	0.434-0.587	0.45	126	29 - 147 %	
13C12-1,2,3,4,7,8-HxCDD	1	1.317	1.054-1.426	0.38	131	32 - 141 %	
13C12-1,2,3,6,7,8-HxCDD	1	1.338	1.054-1.426	0.33	131	28 - 130 %	*
13C12-1,2,3,4,6,7,8-HpCDF	1	0.411	0.374-0.506	0.57	154	28 - 143 %	*
13C12-1,2,3,4,7,8,9-HpCDF	1	0.412	0.374-0.506	0.66	131	26 - 138 %	
13C12-1,2,3,4,6,7,8-HpCDD	1	1.073	0.893-1.208	0.37	130	23 - 140 %	
13C12-OCDD	1	0.904	0.757-1.024	0.44	120	17 - 157 %	
37Cl4-2,3,7,8-TCDD	1	328.000		0.08	112	35 - 197 %	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:07:24 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.702		0.770	683	1248								
12378-PeCDF					0.679		1.550	667	952								
23478-PeCDF					0.786		1.550	667	952								
123478-HxCDF					1.166		1.240	783	554								
234678-HxCDF					1.140		1.240	783	554								
123678-HxCDF					1.091		1.240	783	554								
123789-HxCDF					1.137		1.240	783	554								
1234678-HpCDF					1.003		1.050	516	685								
1234789-HpCDF					0.953		1.050	516	685								
OCDF					0.778		0.890	660	664								
2378-TCDD					1.149		0.770	988	775								
12378-PeCDD					1.022		1.550	578	579								
123478-HxCDD					0.996		1.240	662	601								
123678-HxCDD					1.001		1.240	662	601								
123789-HxCDD					0.907		1.240	662	601								
1234678-HpCDD	40.250	1.000	1.458e2	2.544e2	1.039	0.573	1.050	621	610	2.21e3	3.23e3	3.6	5.3	YES	bd	bb	0.117
OCDD	45.018	1.001	4.428e2	7.441e2	0.920	0.595	0.890	615	645	7.06e3	8.47e3	11.5	13.1	YES	bb	bb	0.466
13C-2378-TCDF	25.746	1.007	3.962e5	5.163e5	1.620	0.767	0.770	2820	1390	5.87e6	7.53e6	2082.4	5421.3	NO	bb	bb	131.922
13C-12378-PeCDF	29.911	1.169	5.206e5	3.340e5	1.240	1.559	1.550	1638	2317	7.29e6	4.80e6	4450.6	2073.0	NO	bd	bd	161.398
13C-23478-PeCDF	31.248	1.222	4.192e5	2.761e5	1.118	1.518	1.550	1638	2317	6.26e6	4.17e6	3819.1	1798.8	NO	bb	bb	145.706
13C-123478-HxCDF	34.880	0.956	1.667e5	3.243e5	1.168	0.514	0.510	1392	1780	2.52e6	4.85e6	1807.6	2723.1	NO	bd	bd	139.852
13C-123678-HxCDF	35.014	0.959	1.828e5	3.857e5	1.386	0.474	0.510	1392	1780	2.68e6	5.21e6	1922.9	2928.4	NO	db	db	136.477
13C-234678-HxCDF	35.883	0.983	1.506e5	2.951e5	1.129	0.511	0.510	1392	1780	2.28e6	4.40e6	1635.1	2471.5	NO	bb	bb	131.351
13C-123789-HxCDF	36.908	1.011	1.195e5	2.325e5	0.932	0.514	0.510	1392	1780	1.78e6	3.48e6	1280.8	1957.2	NO	bb	bb	125.713
13C-1234678-HpCDF	38.758	1.062	1.208e5	2.943e5	0.895	0.411	0.440	1674	2142	1.92e6	4.43e6	1149.1	2066.1	NO	bb	bd	154.314
13C-1234789-HpCDF	40.986	1.123	8.832e4	2.146e5	0.770	0.412	0.440	1674	2142	1.17e6	2.71e6	700.7	1263.5	NO	bb	bb	130.972
13C-1234-TCDD	25.577	0.000	1.914e5	2.355e5	1.000	0.813	0.770	1522	1047	2.99e6	3.67e6	1965.3	3505.9	NO	bb	bb	100.000
13C-2378-TCDD	26.382	1.031	2.937e5	3.652e5	1.152	0.804	0.770	1522	1047	4.27e6	5.39e6	2804.2	5147.5	NO	bb	bb	133.940
13C-12378-PeCDD	31.504	1.232	2.980e5	1.843e5	0.829	1.617	1.550	1107	1117	4.45e6	2.69e6	4019.7	2408.7	NO	bb	bb	136.315
13C-123478-HxCDD	35.995	0.986	2.223e5	1.688e5	0.995	1.317	1.240	1589	1283	3.56e6	2.71e6	2239.5	2112.5	NO	bd	bd	130.797
13C-123678-HxCDD	36.106	0.989	2.603e5	1.946e5	1.157	1.338	1.240	1589	1283	3.63e6	2.79e6	2287.4	2175.3	NO	dd	db	130.885
13C-1234678-HpCDD	40.250	1.103	1.701e5	1.586e5	0.840	1.073	1.050	1021	1345	2.40e6	2.23e6	2355.1	1659.6	NO	bb	bb	130.186
13C-OCDD	44.991	1.233	2.628e5	2.908e5	0.767	0.904	0.890	1545	1012	2.78e6	3.05e6	1802.0	3019.1	NO	bd	bd	240.074
13C-123789-HxCDD	36.496	0.000	1.678e5	1.327e5	1.000	1.264	1.240	1589	1283	2.52e6	1.99e6	1585.9	1554.6	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	2.470e5		1.288			1173		3.67e6		3126.9			bb		44.927

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Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:07:24 Pacific Standard Time

ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	683	1248								
1289-TCDF					0.678		0.770	683	1248								
13468-PECDF					1.246		1.550	557	696								
12389-PECDF					0.496		1.550	667	952								
123468-HXCDF					1.169		1.240	783	554								
1368-TCDD					1.015		0.770	988	775								
1289-TCDD					0.909		0.770	988	775								
12479-PECDD					2.301		1.550	578	579								
12389-PECDD					1.184		1.550	578	579								
124679-HXCDD					1.115		1.240	662	601								
1234679-HPCDD					1.137		1.050	621	610								
Total-tetrafurans			0.000e0		0.727			683		0.00e0							
Total-penta1			0.000e0					557		0.00e0							
Total-pentafurans			0.000e0		0.654			667		0.00e0							
Total-hexafurans			0.000e0		1.141			783		0.00e0							
Total-heptafurans			0.000e0		0.978			516		0.00e0							
Total-Furans			0.000e0		0.922			683		0.00e0							
Total-tetradioxins			0.000e0		1.024			988		0.00e0							
Total-pentadioxins			0.000e0		1.502			578		0.00e0							
Total-hexadioxins			0.000e0		1.005			662		0.00e0							
Total-heptadioxins			0.000e0		1.088			621		0.00e0							
Total-Dioxins			0.000e0		1.130			988		0.00e0							
Total-TEQ			0.000e0					988		0.00e0							
FUNCTION1 PFK			2.305e4					369092		7.09e5							
FUNCTION2 PFK			6.944e6					405301		8.04e6							0.000
FUNCTION3 PFK			5.958e5					378303		1.45e7							0.000
FUNCTION4 PFK			2.227e6					293984		1.37e7							
FUNCTION5 PFK			9.975e4					208948		3.47e6							
FUNCTION1 HXCD...			2.943e2					609		2.96e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.901e2					770		2.31e3							0.000
FUNCTION3 OCDPE			0.000e0					589		0.00e0							
FUNCTION4 NCDPE			9.206e1					753		2.43e3							0.000
FUNCTION5 DCDPE			0.000e0					796		0.00e0							

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Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.22	2.305e4					1.9	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	29.83	5.103e5					5.1	YES		db		0.000
2	FUNCTION2 PFK	28.25	6.231e6					8.5	YES		dd		0.000
3	FUNCTION2 PFK	28.13	2.032e5					6.2	YES		bd		0.000

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ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.72	1.275e4					1.2	NO		bb		0.000
2	FUNCTION3 PFK	33.64	9.218e3					1.1	NO		bb		0.000
3	FUNCTION3 PFK	33.53	1.932e4					1.4	NO		db		0.000
4	FUNCTION3 PFK	33.48	1.171e4					1.1	NO		dd		0.000
5	FUNCTION3 PFK	33.43	5.439e3					0.6	NO		bd		0.000
6	FUNCTION3 PFK	33.20	1.867e3					0.4	NO		bb		0.000
7	FUNCTION3 PFK	32.90	1.854e5					4.8	YES		bb		0.000
8	FUNCTION3 PFK	35.93	1.752e3					0.4	NO		bb		0.000
9	FUNCTION3 PFK	35.58	3.603e3					0.6	NO		bb		0.000
10	FUNCTION3 PFK	35.53	7.498e3					0.8	NO		bb		0.000
11	FUNCTION3 PFK	35.42	4.014e4					1.5	NO		bb		0.000
12	FUNCTION3 PFK	35.31	6.194e3					0.9	NO		bb		0.000
13	FUNCTION3 PFK	35.10	1.152e4					0.8	NO		bb		0.000
14	FUNCTION3 PFK	35.05	8.504e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	34.74	4.497e4					1.6	NO		db		0.000
16	FUNCTION3 PFK	34.69	4.244e3					0.6	NO		bd		0.000
17	FUNCTION3 PFK	34.60	1.186e4					1.0	NO		bb		0.000
18	FUNCTION3 PFK	34.51	1.356e4					1.3	NO		bb		0.000
19	FUNCTION3 PFK	34.38	2.102e4					1.5	NO		bb		0.000
20	FUNCTION3 PFK	34.19	4.301e3					0.8	NO		db		0.000
21	FUNCTION3 PFK	34.16	7.083e3					0.8	NO		bd		0.000
22	FUNCTION3 PFK	34.11	1.600e3					0.4	NO		bb		0.000
23	FUNCTION3 PFK	34.01	1.326e4					1.4	NO		bb		0.000
24	FUNCTION3 PFK	37.77	2.252e4					1.3	NO		bb		0.000
25	FUNCTION3 PFK	37.47	9.858e3					0.9	NO		db		0.000
26	FUNCTION3 PFK	37.41	1.578e4					1.3	NO		bd		0.000
27	FUNCTION3 PFK	36.97	6.083e3					0.9	NO		bb		0.000
28	FUNCTION3 PFK	36.93	7.565e3					0.8	NO		bb		0.000
29	FUNCTION3 PFK	36.77	9.504e3					0.9	NO		bb		0.000
30	FUNCTION3 PFK	36.62	1.192e4					1.1	NO		bb		0.000
31	FUNCTION3 PFK	36.51	3.645e3					0.5	NO		bb		0.000
32	FUNCTION3 PFK	36.47	6.969e3					0.8	NO		db		0.000
33	FUNCTION3 PFK	36.42	2.466e4					2.0	NO		dd		0.000
34	FUNCTION3 PFK	36.38	2.510e4					1.7	NO		bd		0.000
35	FUNCTION3 PFK	36.22	5.376e3					0.7	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.60	1.150e4					1.6	NO		bd		
2	FUNCTION4 PFK	38.33	1.189e6					2.8	NO		db		
3	FUNCTION4 PFK	37.89	8.648e5					23.9	YES		bd		
4	FUNCTION4 PFK	42.37	1.070e4					1.3	NO		bb		
5	FUNCTION4 PFK	42.23	4.467e3					0.7	NO		bb		
6	FUNCTION4 PFK	41.72	3.289e4					2.1	NO		db		
7	FUNCTION4 PFK	41.62	1.527e4					1.6	NO		bd		
8	FUNCTION4 PFK	41.16	6.814e3					1.0	NO		bb		
9	FUNCTION4 PFK	41.08	1.731e4					1.3	NO		bb		
10	FUNCTION4 PFK	40.94	8.292e3					1.4	NO		bb		
11	FUNCTION4 PFK	40.90	4.042e3					0.9	NO		bb		
12	FUNCTION4 PFK	40.12	8.484e3					1.2	NO		bb		
13	FUNCTION4 PFK	39.83	1.321e4					1.5	NO		bb		
14	FUNCTION4 PFK	39.56	1.111e4					1.6	NO		bb		
15	FUNCTION4 PFK	39.46	4.957e3					0.9	NO		bb		
16	FUNCTION4 PFK	39.09	1.196e4					1.6	NO		bb		
17	FUNCTION4 PFK	38.68	1.197e4					1.1	NO		db		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.57	8.525e3					1.6	NO		bb		
2	FUNCTION5 PFK	45.74	5.024e3					0.0	NO		bb		
3	FUNCTION5 PFK	45.65	6.328e3					1.7	NO		bb		
4	FUNCTION5 PFK	44.83	9.606e2					0.5	NO		bb		
5	FUNCTION5 PFK	44.58	2.244e3					0.7	NO		bb		
6	FUNCTION5 PFK	44.51	1.111e4					1.6	NO		bb		
7	FUNCTION5 PFK	44.36	1.208e4					1.6	NO		bb		
8	FUNCTION5 PFK	43.98	3.020e3					0.9	NO		bb		
9	FUNCTION5 PFK	43.74	2.200e4					1.4	NO		bb		
10	FUNCTION5 PFK	43.50	9.093e3					1.7	NO		bb		
11	FUNCTION5 PFK	43.35	4.339e3					1.1	NO		bb		
12	FUNCTION5 PFK	43.23	6.618e3					1.1	NO		bb		
13	FUNCTION5 PFK	42.89	1.362e3					0.7	NO		bb		
14	FUNCTION5 PFK	42.69	5.911e3					1.3	NO		bb		
15	FUNCTION5 PFK	42.63	1.137e3					0.6	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.20	1.567e2					2.4	NO		bd		0.000
2	FUNCTION1 HXCD...	27.41	1.377e2					2.5	NO		db		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.91	8.427e1					1.5	NO		bb		0.000
2	FUNCTION2 HPCD...	28.56	1.059e2					1.5	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	38.55	9.206e1					3.2	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
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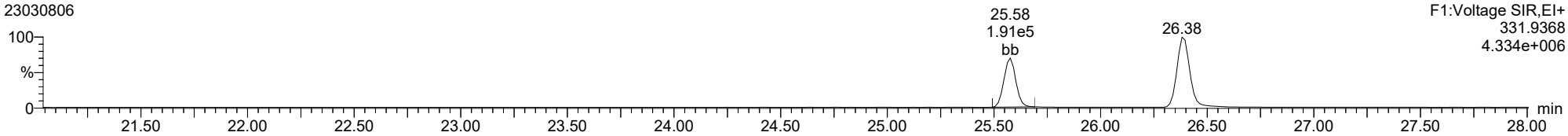
13C-1234-TCDD



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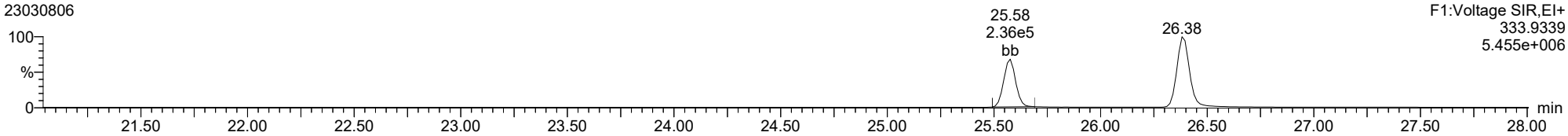
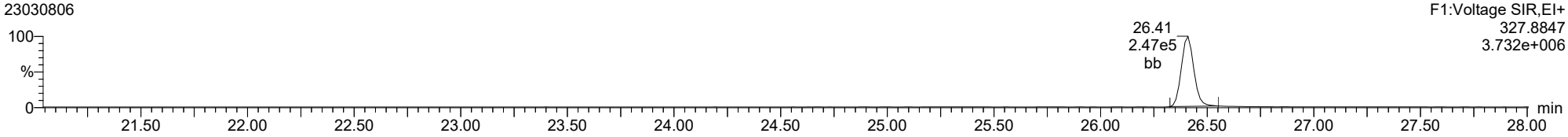


37CL-2378-TCDD



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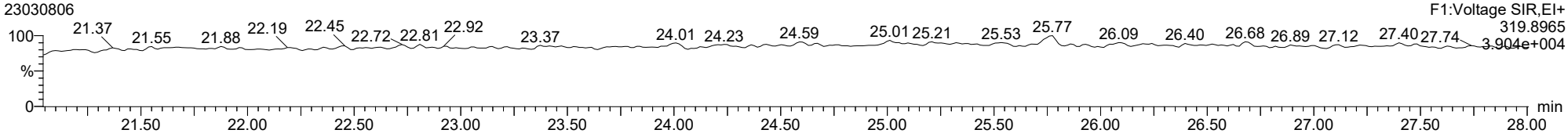
2378-TCDD



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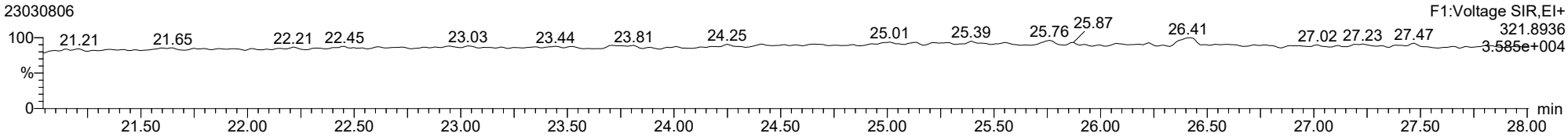

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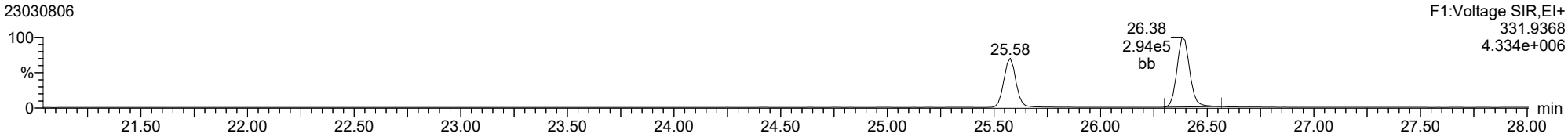

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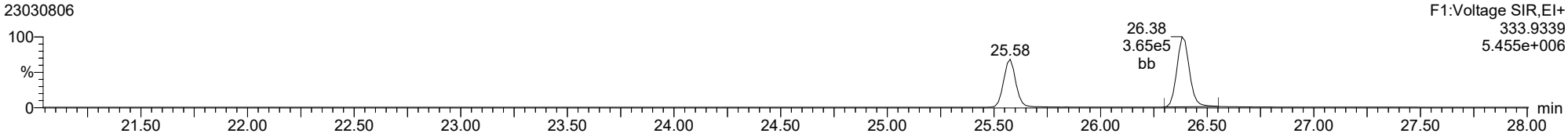
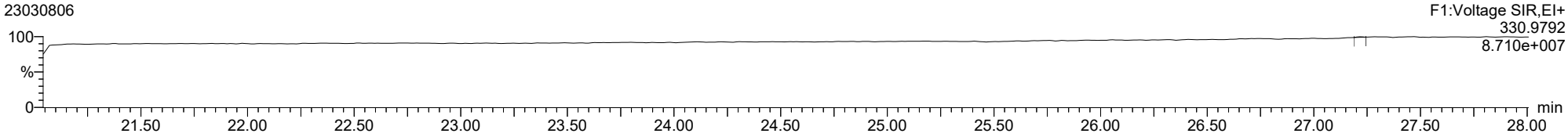


FUNCTION1 PFK



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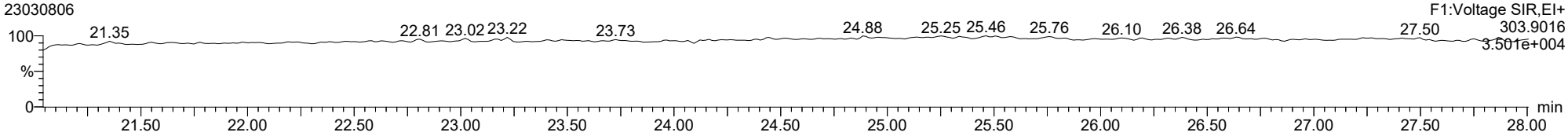
2378-TCDF



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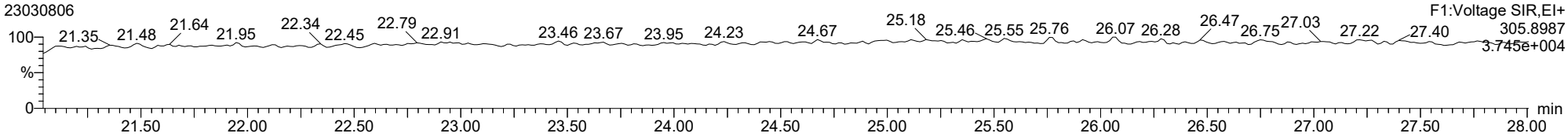

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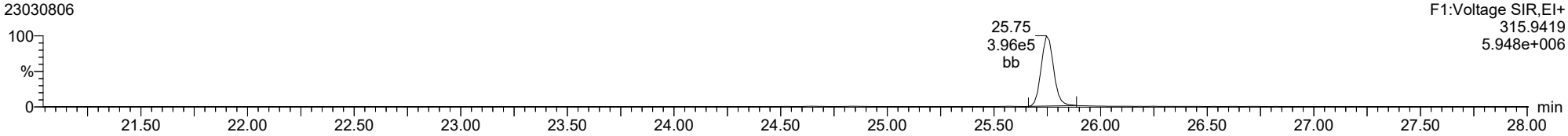

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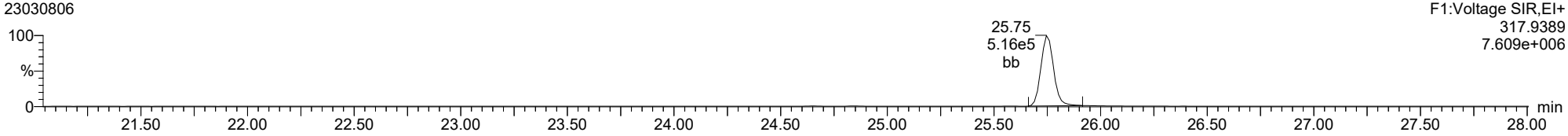
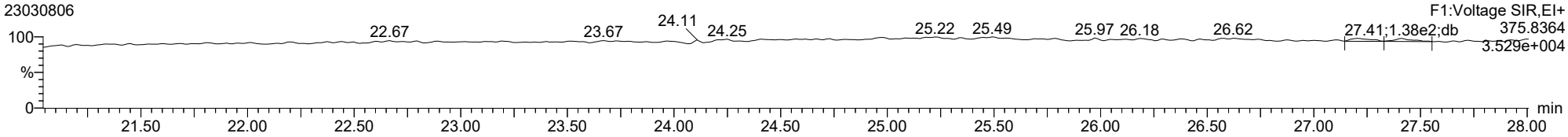


FUNCTION1 HXCDPE



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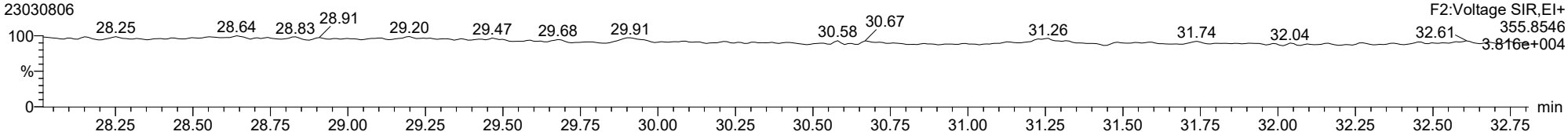
12378-PeCDD



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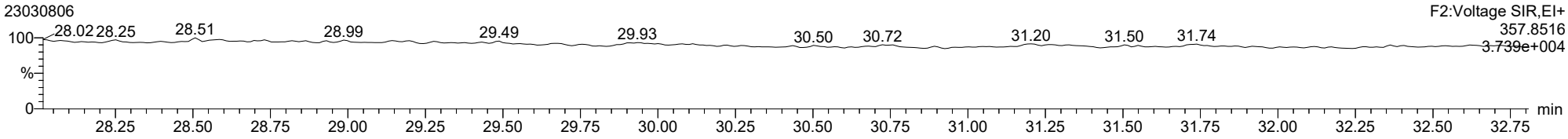

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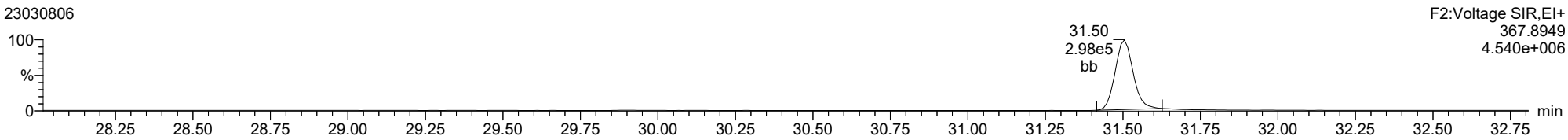

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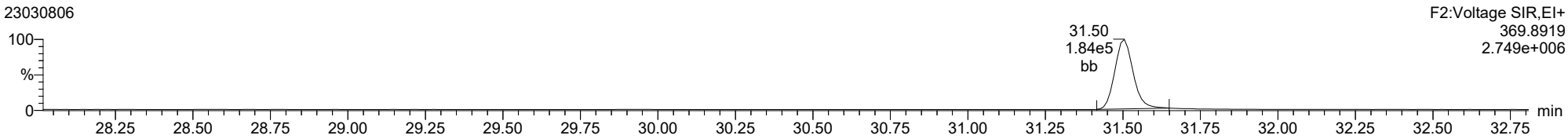

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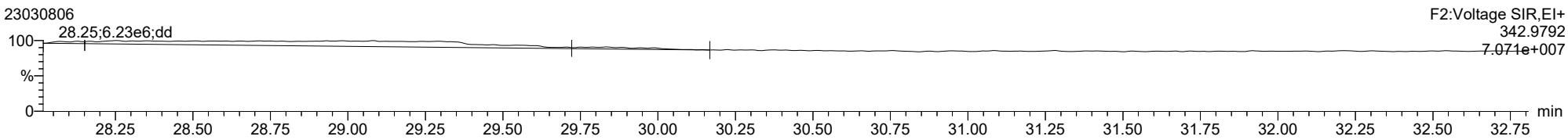

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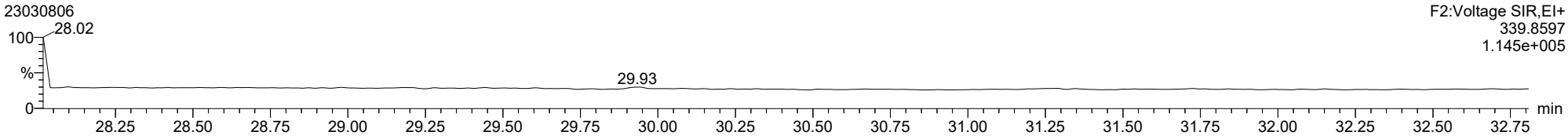

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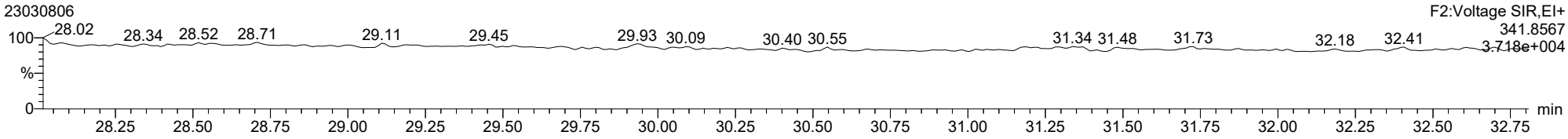

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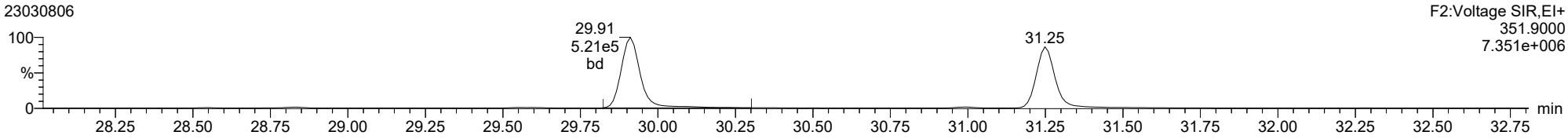

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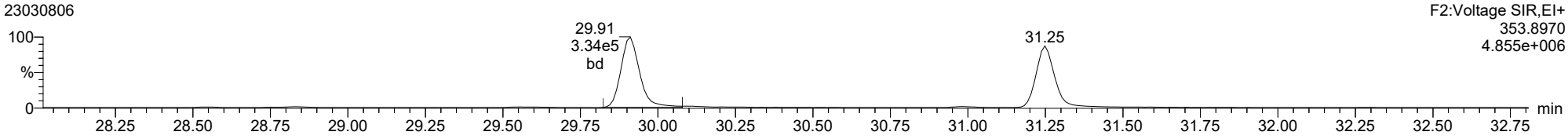

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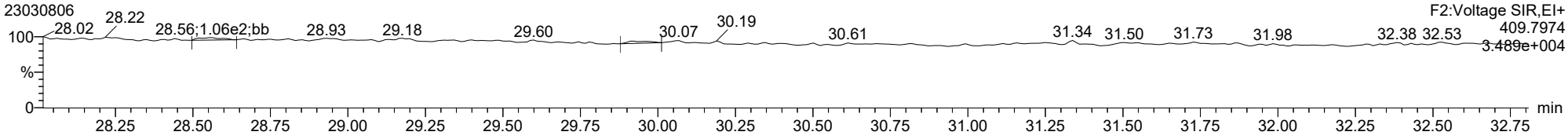

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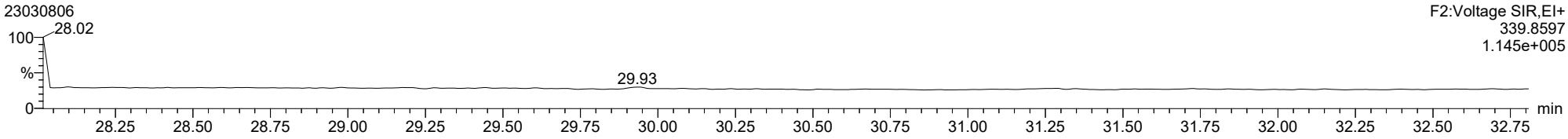
23478-PeCDF



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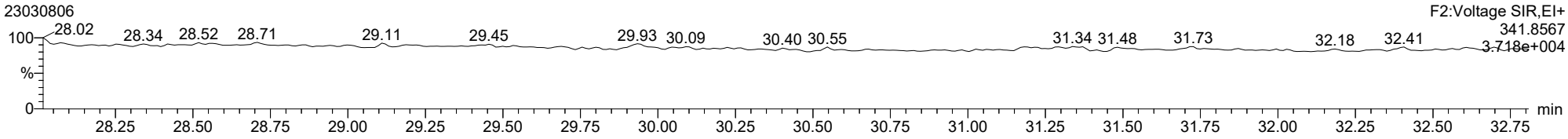

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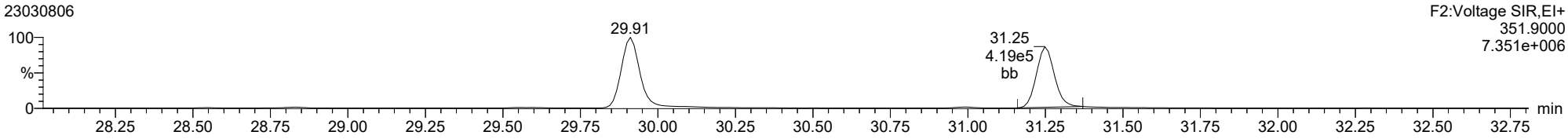

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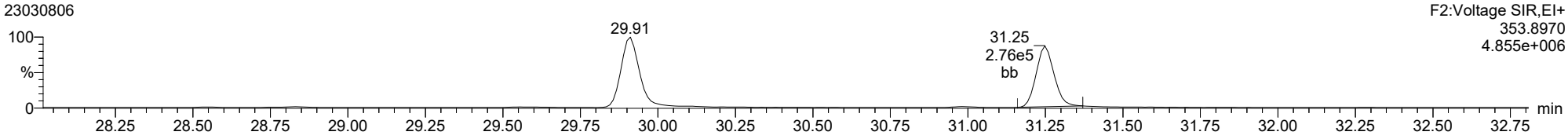

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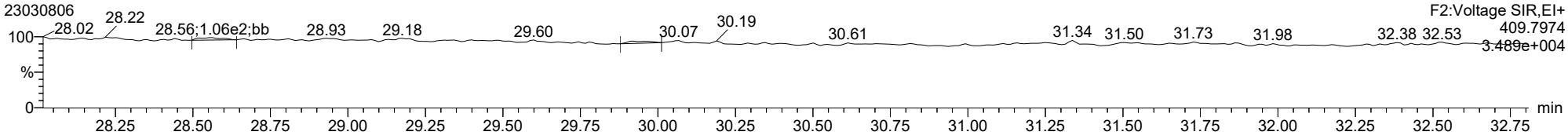

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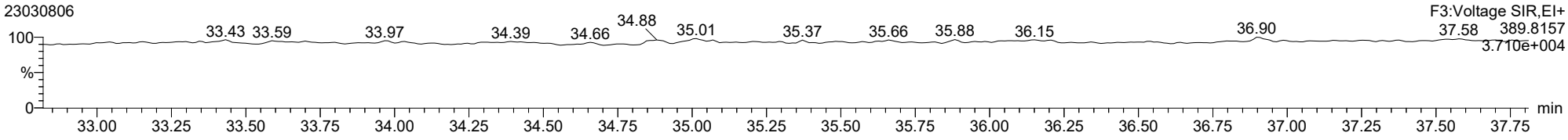

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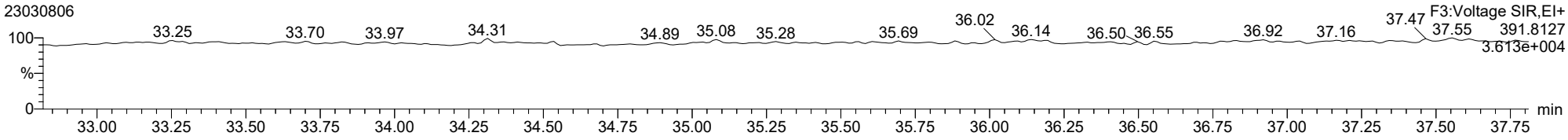

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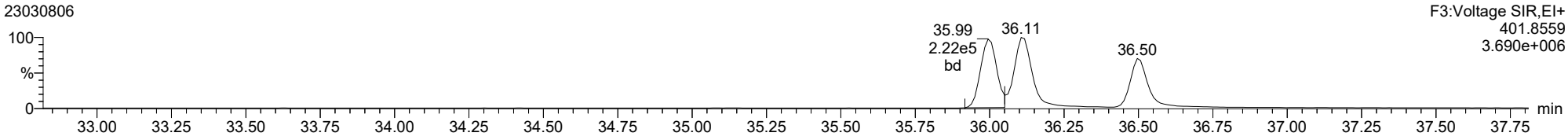

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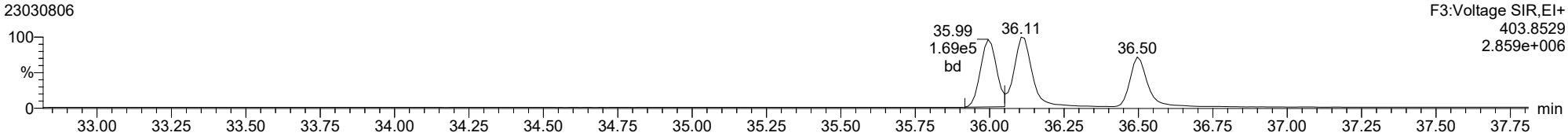

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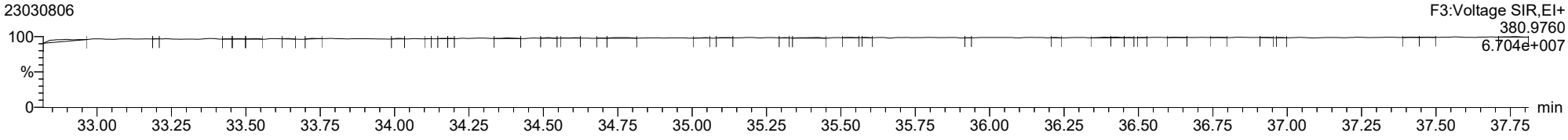

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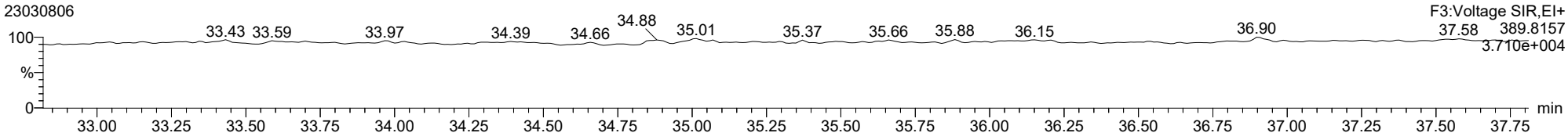

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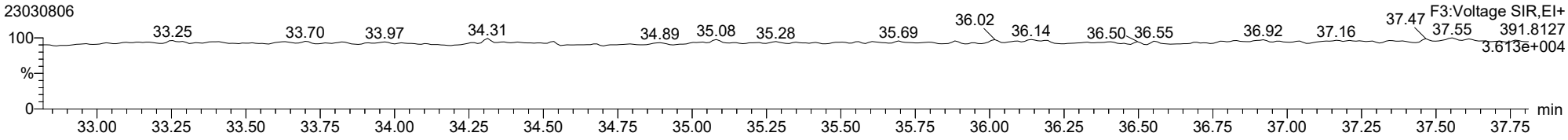

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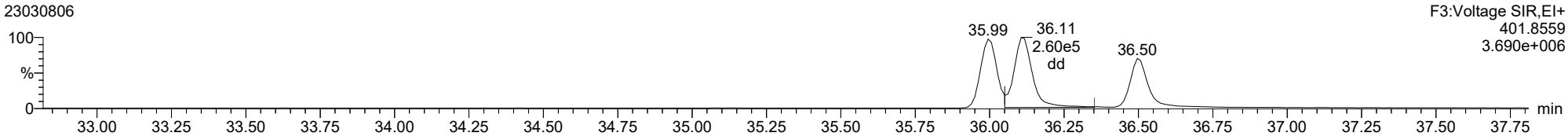

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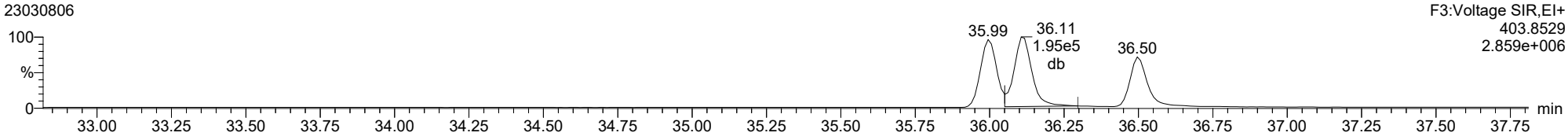

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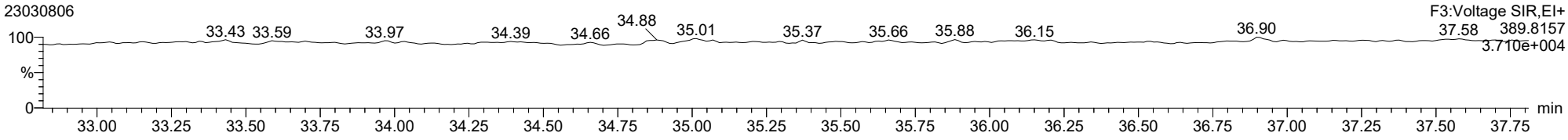

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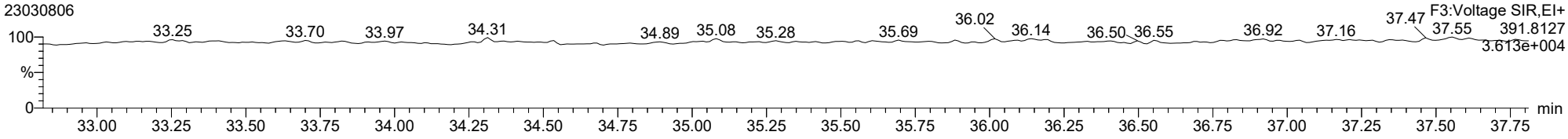

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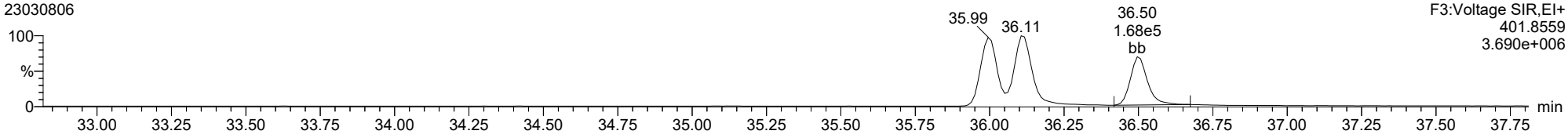

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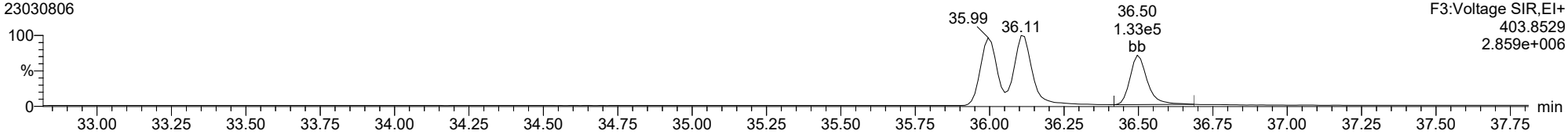

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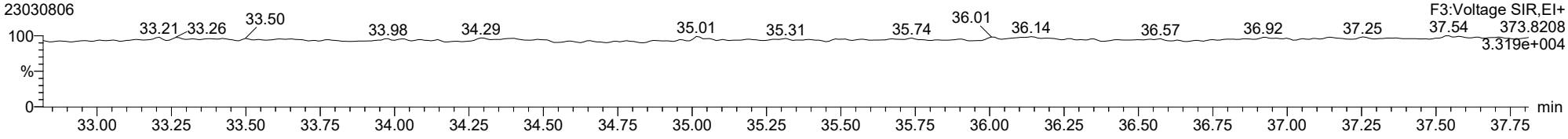

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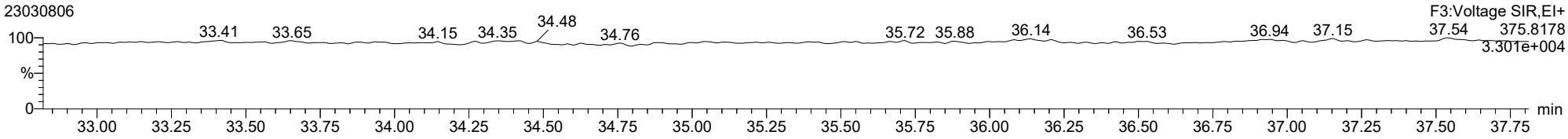

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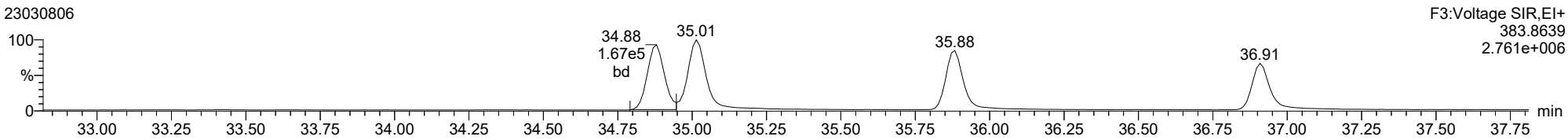

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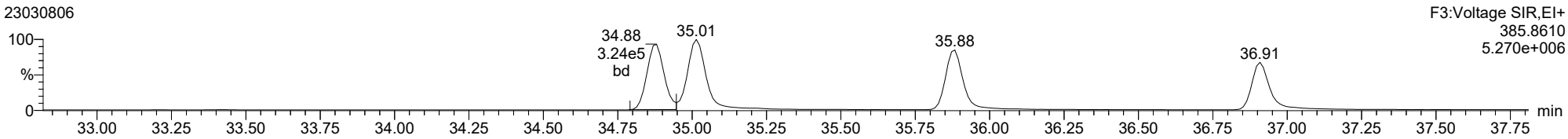
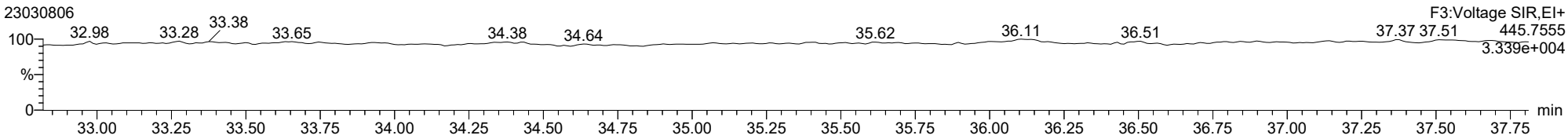


FUNCTION3 OCDPE



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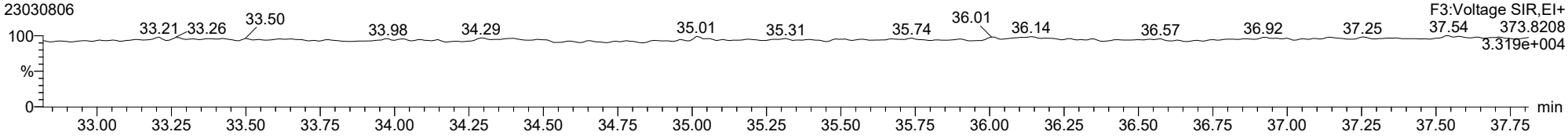
234678-HxCDF



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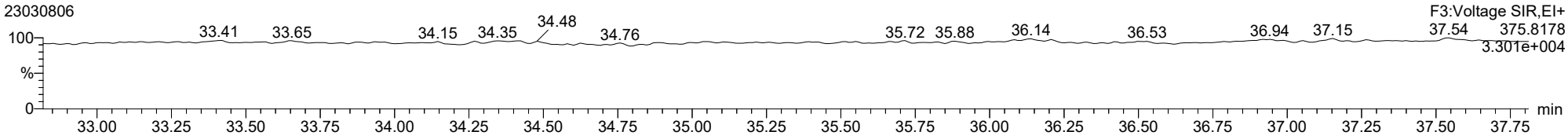

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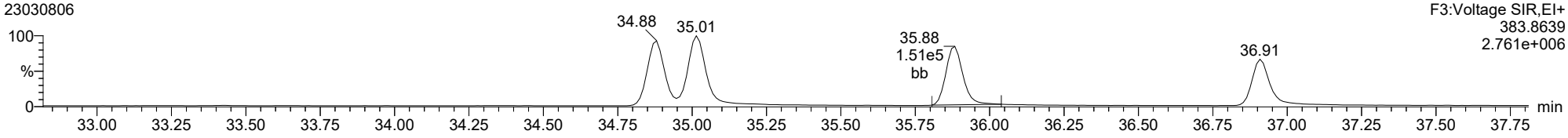

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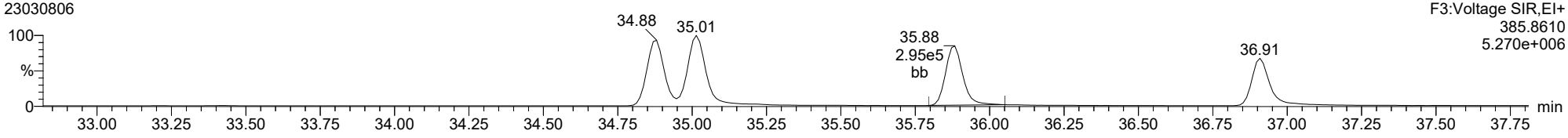

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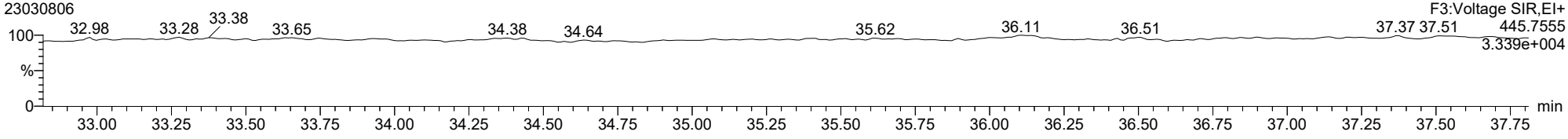

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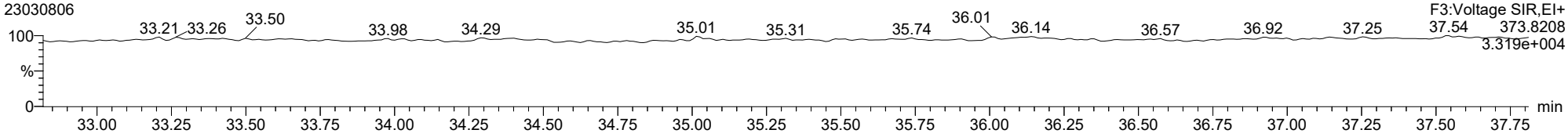
123678-HxCDF



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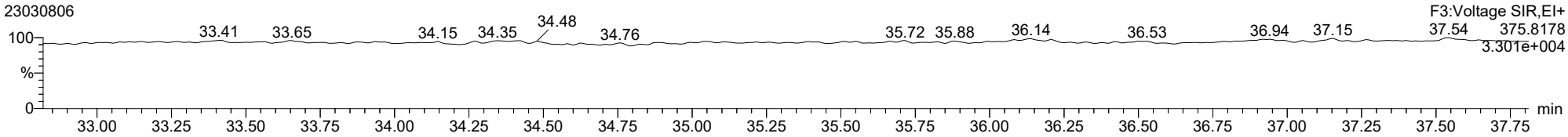

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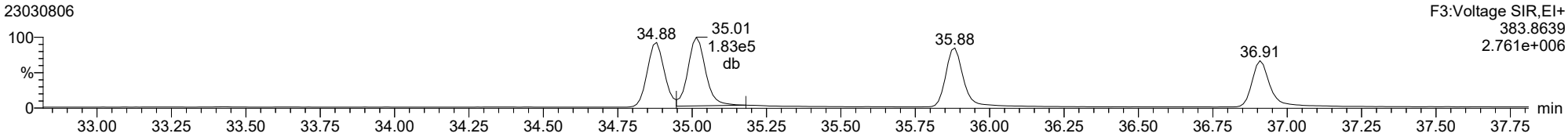

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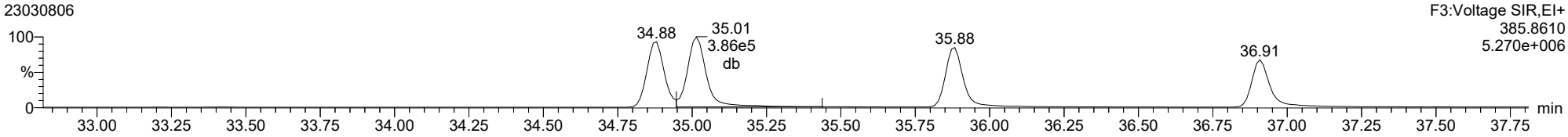
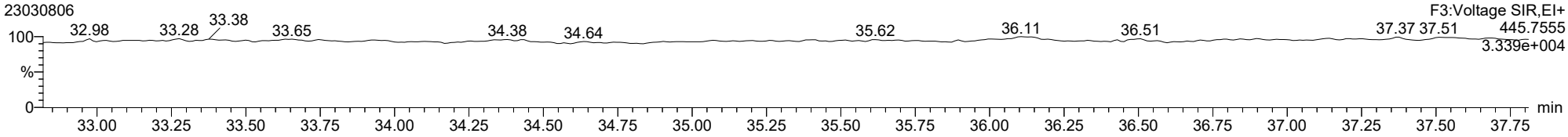


FUNCTION3 OCDPE



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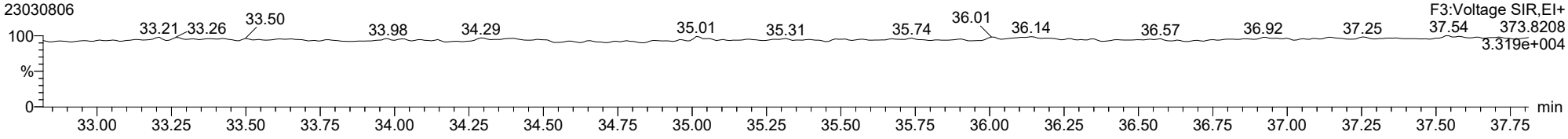
123789-HxCDF



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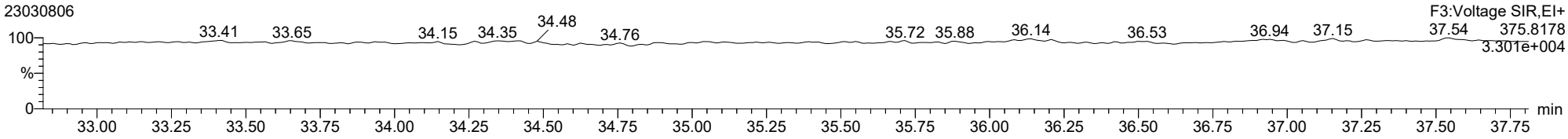

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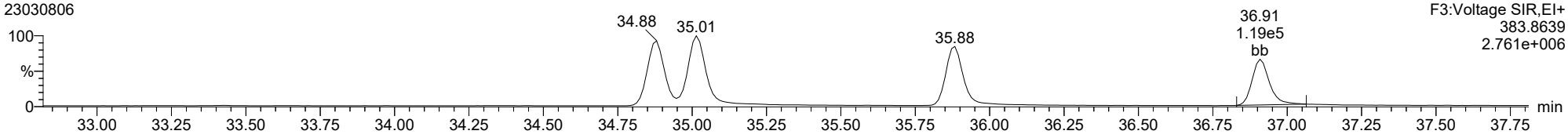

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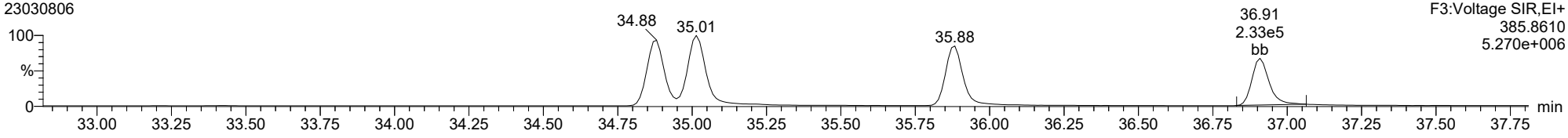
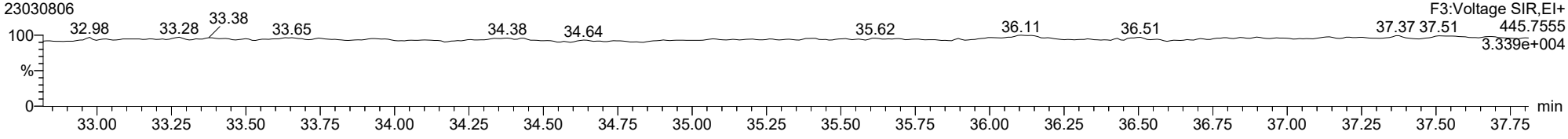
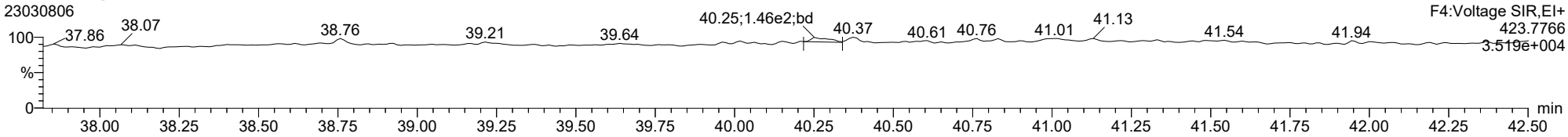


FUNCTION3 OCDPE



ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

1234678-HpCDD



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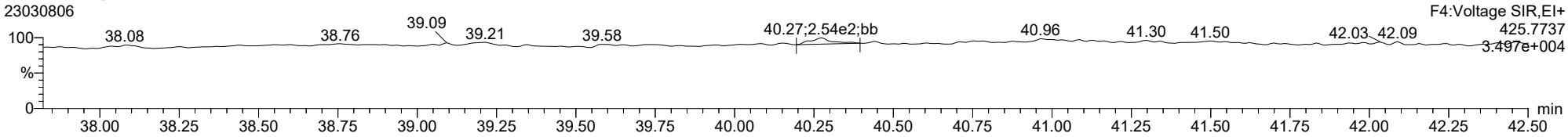

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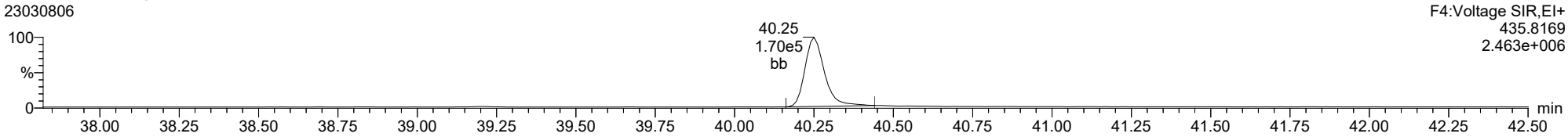

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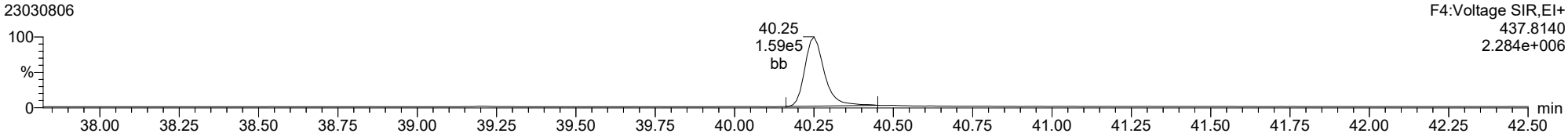
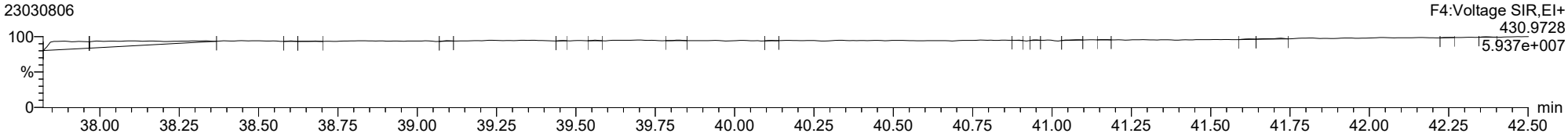
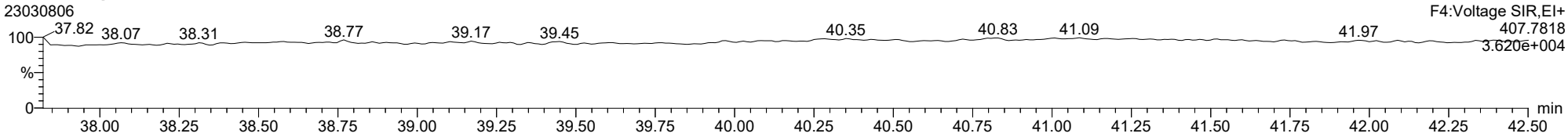


FUNCTION4 PFK



ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

1234678-HpCDF



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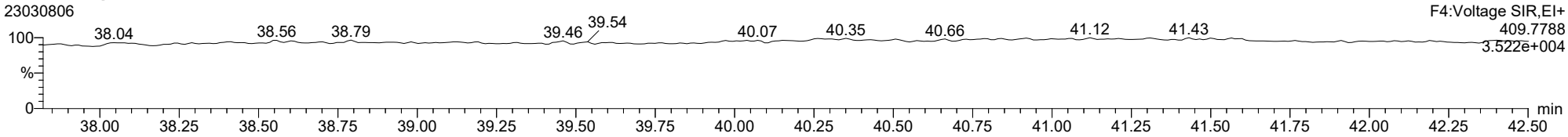

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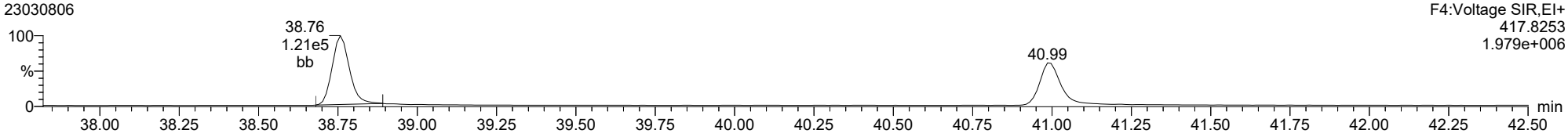

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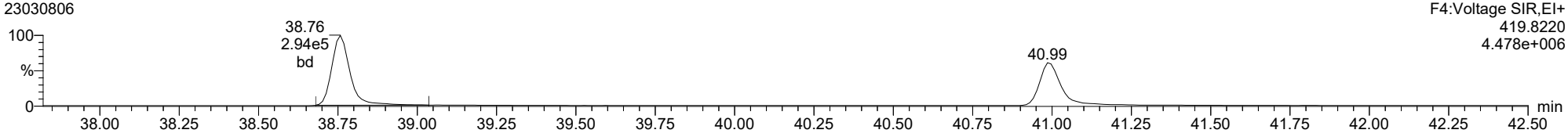
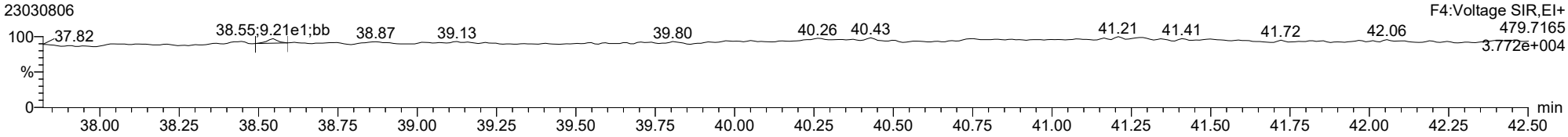
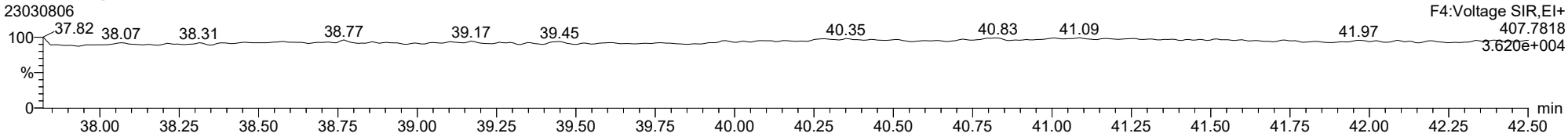


FUNCTION4 NCDPE

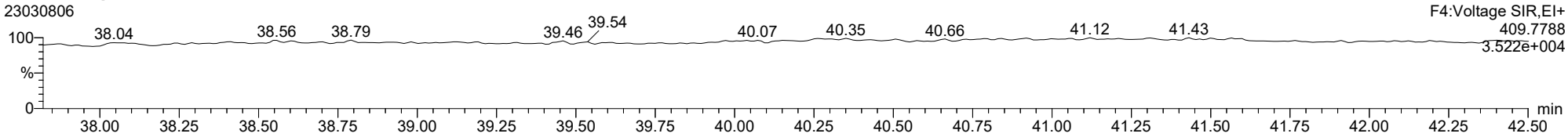


ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



1234789-HpCDF



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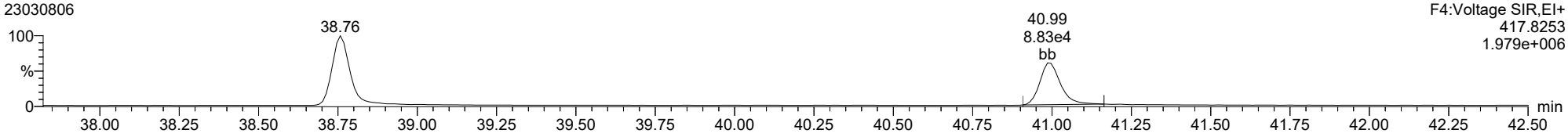

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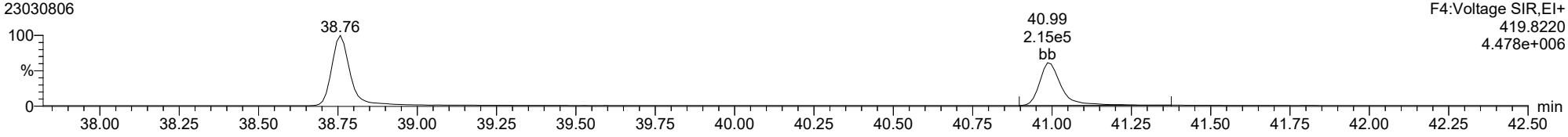
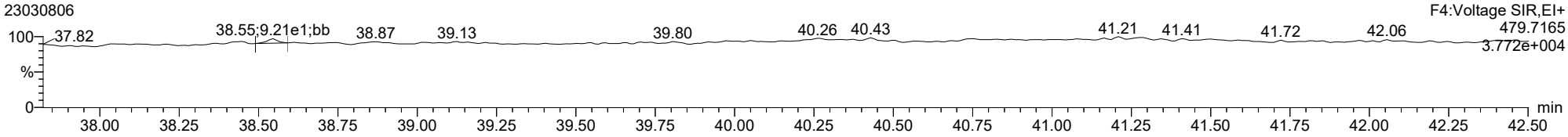
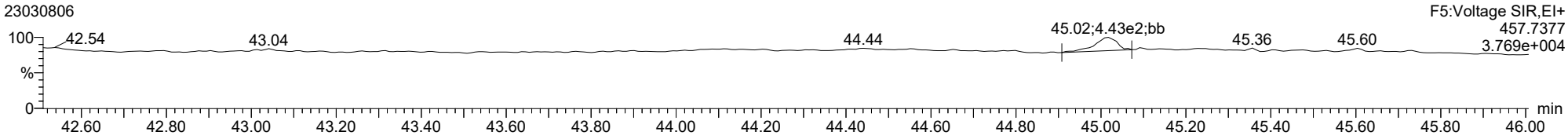


FUNCTION4 NCDPE



ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

OCDD



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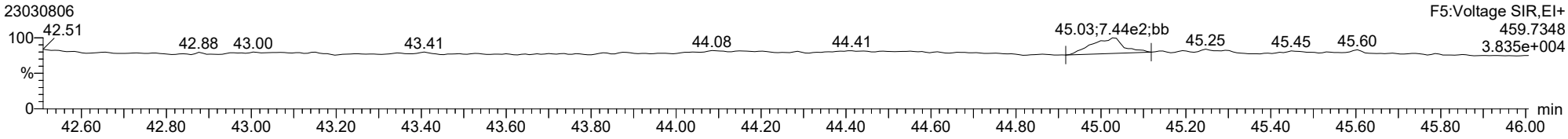

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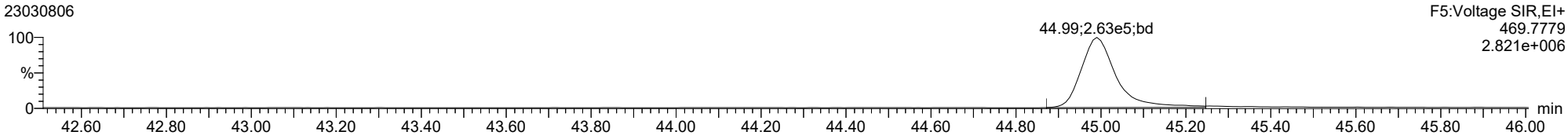

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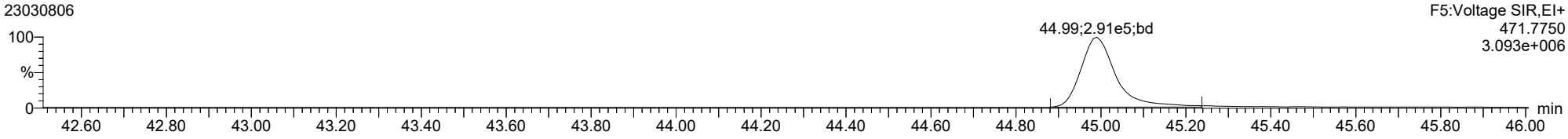
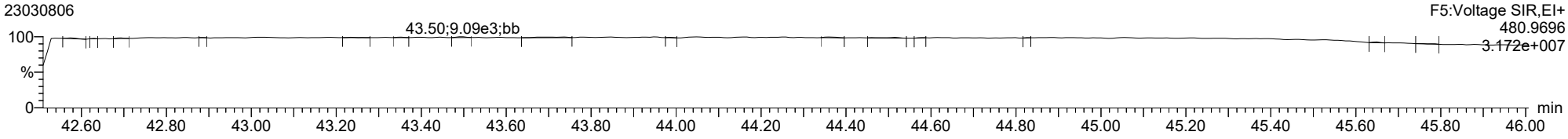


FUNCTION5 PFK



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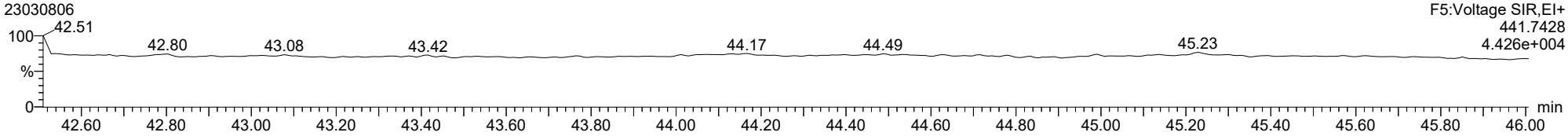
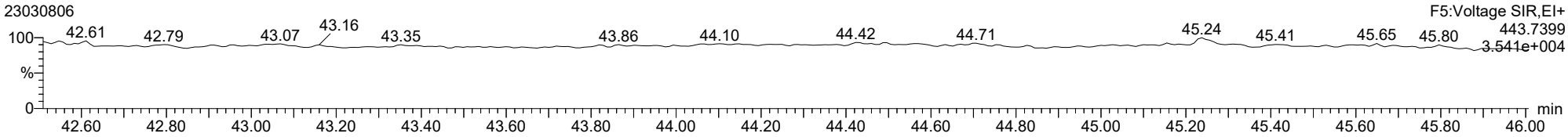
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:07:24 Pacific Standard Time

ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

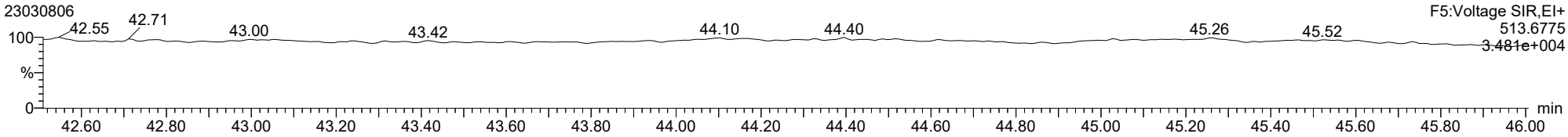
OCDF



OCDF

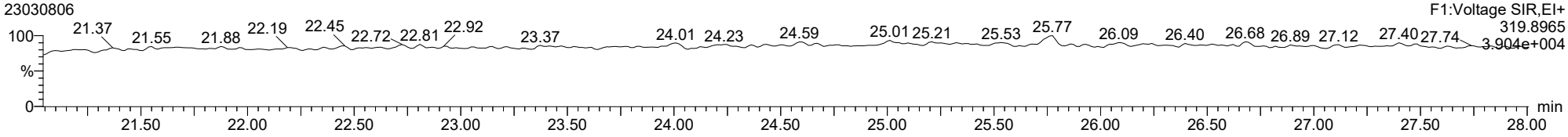


FUNCTION5 DCDPE

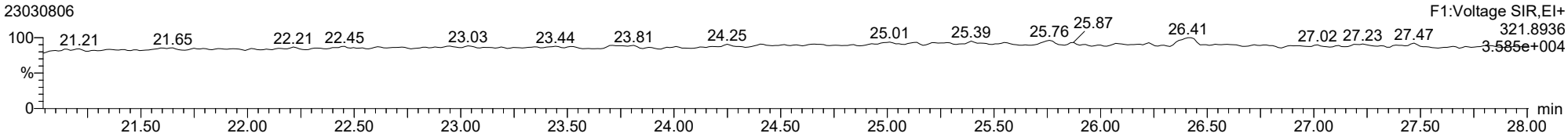


ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

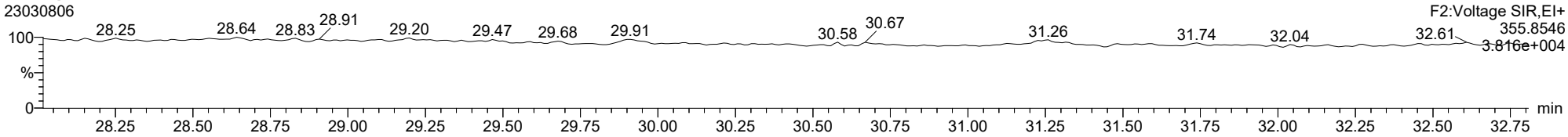
Total-tetradioxins



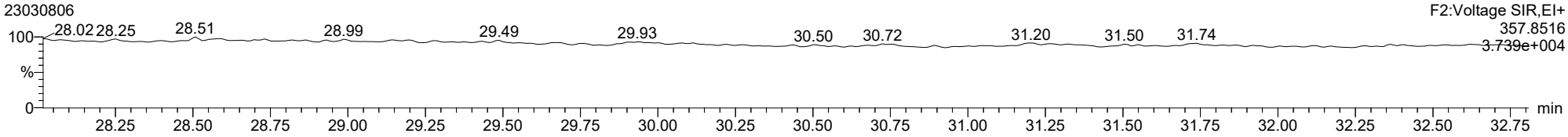
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
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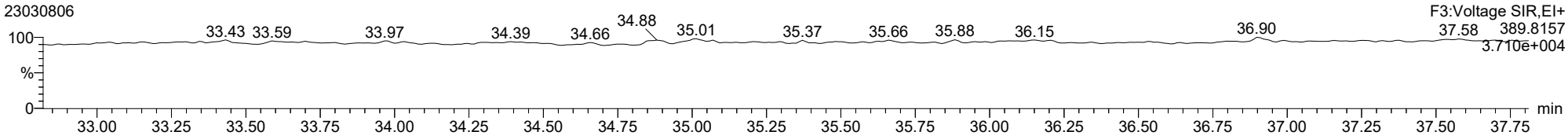
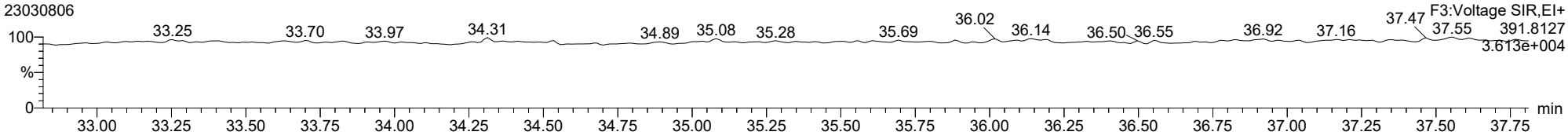
ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

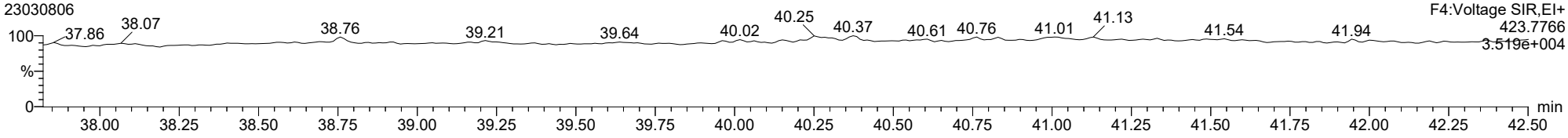
Total-hexadioxins



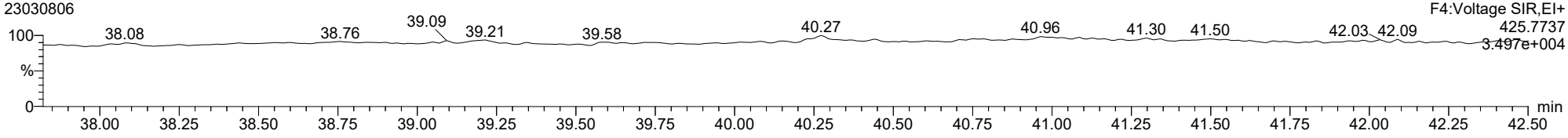
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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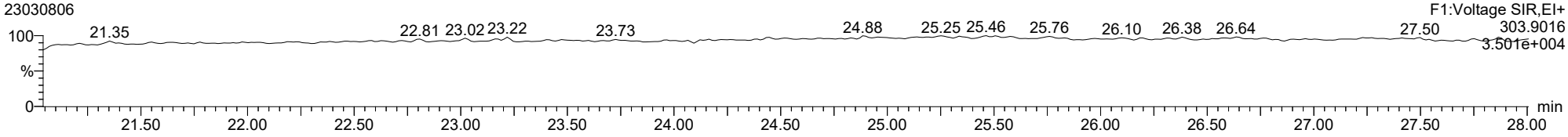
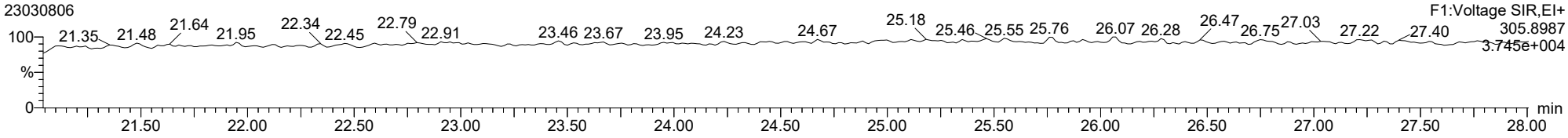
ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

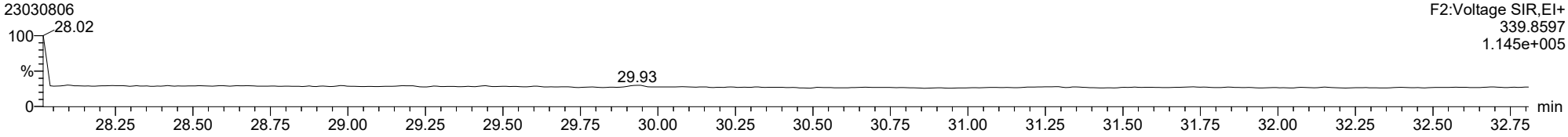
Total-tetrafurans



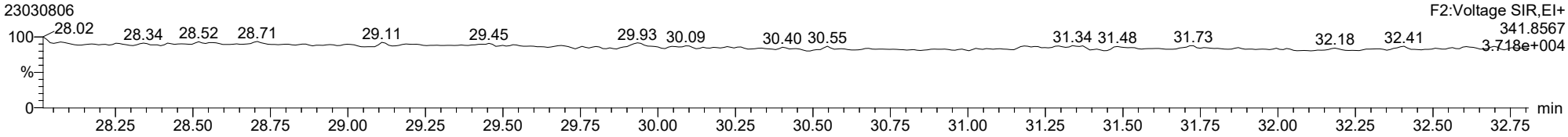
Total-tetrafurans



Total-pentafurans

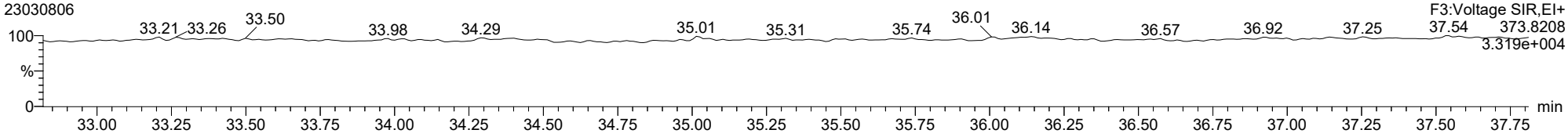


Total-pentafurans



ID: BLB0270-BLK1, Name: 23030806, Date: 08-Mar-2023, Time: 13:59:36, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



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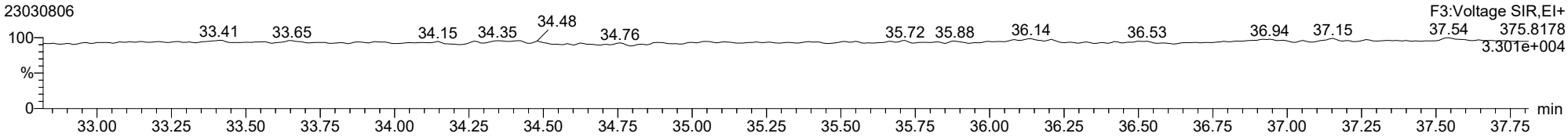
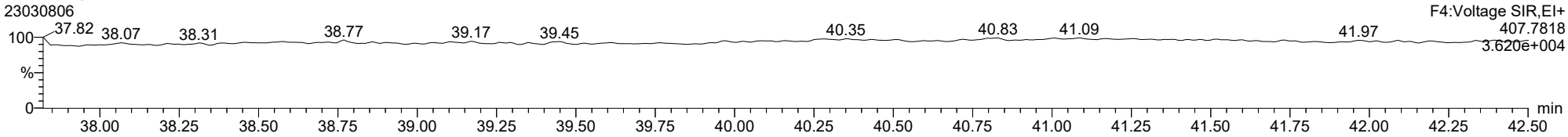
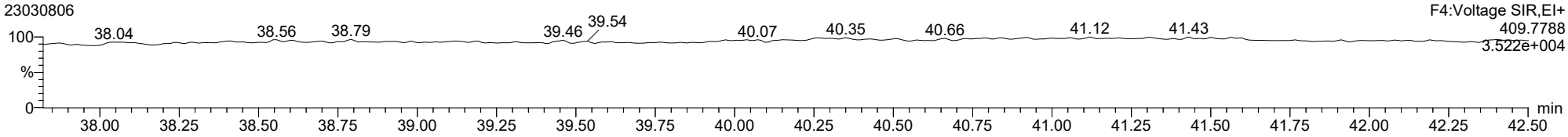


Total-heptafurans



Total-heptafurans



LCS RECOVERY
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	03/08/23 14:49
Batch:	BLB0270	Laboratory ID:	BLB0270-BS1
Preparation:	EPA 1613	Sequence Name:	LCS
Initial/Final:	10 g / 20 uL		

COMPOUND	SPIKE ADDED (ng/kg wet)	LCS CONCENTRATION (ng/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
2,3,7,8-TCDF	20.0	20.5		103	75 - 158
2,3,7,8-TCDD	20.0	20.3		101	67 - 158
1,2,3,7,8-PeCDF	100	106		106	80 - 134
2,3,4,7,8-PeCDF	100	104		104	68 - 160
1,2,3,7,8-PeCDD	100	110		110	70 - 142
1,2,3,4,7,8-HxCDF	100	104		104	72 - 134
1,2,3,6,7,8-HxCDF	100	109		109	84 - 130
2,3,4,6,7,8-HxCDF	100	106		106	70 - 156
1,2,3,7,8,9-HxCDF	100	106		106	78 - 130
1,2,3,4,7,8-HxCDD	100	100		100	70 - 164
1,2,3,6,7,8-HxCDD	100	100		100	76 - 134
1,2,3,7,8,9-HxCDD	100	108		108	64 - 162
1,2,3,4,6,7,8-HpCDF	100	103		103	82 - 122
1,2,3,4,7,8,9-HpCDF	100	111		111	78 - 138
1,2,3,4,6,7,8-HpCDD	100	104	B	104	70 - 140
OCDF	200	210		105	63 - 170
OCDD	200	191	B	95.6	78 - 144

* Indicates values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:07:36 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	2.456e4	3.310e4	0.702	0.742	0.770	636	1118	3.79e5	5.19e5	596.3	464.5	NO	bb	bb	10.260
12378-PeCDF	29.934	1.001	1.738e5	1.143e5	0.679	1.521	1.550	1837	1833	2.62e6	1.71e6	1425.7	934.7	NO	bb	bb	52.858
23478-PeCDF	31.271	1.000	1.762e5	1.142e5	0.786	1.544	1.550	1837	1833	2.61e6	1.74e6	1419.6	950.4	NO	bb	bb	52.019
123478-HxCDF	34.903	1.001	1.790e5	1.417e5	1.166	1.264	1.240	2053	1503	2.80e6	2.18e6	1361.5	1451.5	NO	bd	bd	51.935
234678-HxCDF	35.905	1.001	1.741e5	1.355e5	1.140	1.285	1.240	2053	1503	2.61e6	2.06e6	1272.0	1370.0	NO	bb	bb	53.167
123678-HxCDF	35.036	1.000	1.940e5	1.543e5	1.091	1.258	1.240	2053	1503	2.88e6	2.29e6	1405.3	1525.3	NO	db	db	54.349
123789-HxCDF	36.930	1.000	1.427e5	1.210e5	1.137	1.179	1.240	2053	1503	2.15e6	1.74e6	1048.5	1159.8	NO	bb	bd	53.005
1234678-HpCDF	38.780	1.000	1.241e5	1.223e5	1.003	1.015	1.050	1168	1838	1.95e6	1.95e6	1669.5	1059.7	NO	bb	bb	51.690
1234789-HpCDF	41.008	1.000	8.885e4	9.748e4	0.953	0.911	1.050	1168	1838	1.25e6	1.24e6	1071.8	673.7	NO	bb	bd	55.503
OCDF	45.246	1.005	1.113e5	1.239e5	0.778	0.899	0.890	1191	1390	1.19e6	1.35e6	1001.4	968.7	NO	bd	bd	104.906
2378-TCDD	26.410	1.000	2.664e4	3.406e4	1.149	0.782	0.770	1189	742	4.09e5	5.28e5	344.0	711.6	NO	bb	bb	10.138
12378-PeCDD	31.527	1.001	1.670e5	1.127e5	1.022	1.482	1.550	1271	987	2.57e6	1.68e6	2023.9	1705.3	NO	bb	bd	55.090
123478-HxCDD	36.017	1.000	1.282e5	1.027e5	0.996	1.248	1.240	1216	1277	2.10e6	1.66e6	1724.6	1299.0	NO	bd	bd	50.153
123678-HxCDD	36.128	1.000	1.440e5	1.182e5	1.001	1.218	1.240	1216	1277	2.15e6	1.78e6	1768.3	1392.8	NO	db	db	50.229
123789-HxCDD	36.518	1.011	1.338e5	1.064e5	0.907	1.257	1.240	1216	1277	1.96e6	1.59e6	1615.5	1245.7	NO	bb	bb	53.833
1234678-HpCDD	40.273	1.000	1.140e5	1.105e5	1.039	1.031	1.050	1548	1293	1.62e6	1.56e6	1048.1	1207.6	NO	bd	bd	52.005
OCDD	45.009	1.000	1.175e5	1.362e5	0.920	0.863	0.890	1332	1303	1.45e6	1.59e6	1085.6	1222.7	NO	bb	bb	95.640
13C-2378-TCDF	25.760	1.007	3.493e5	4.518e5	1.620	0.773	0.770	2649	1532	5.18e6	6.67e6	1957.2	4357.9	NO	bb	bb	111.388
13C-12378-PeCDF	29.911	1.169	4.800e5	3.223e5	1.240	1.489	1.550	2868	2026	6.80e6	4.65e6	2371.9	2293.4	NO	bd	bd	145.711
13C-23478-PeCDF	31.259	1.222	4.248e5	2.852e5	1.118	1.490	1.550	2868	2026	6.24e6	4.16e6	2174.3	2055.5	NO	bb	bb	143.090
13C-123478-HxCDF	34.880	0.955	1.826e5	3.470e5	1.168	0.526	0.510	1187	2340	2.82e6	5.51e6	2379.8	2354.7	NO	bd	bd	115.083
13C-123678-HxCDF	35.025	0.959	2.030e5	3.845e5	1.386	0.528	0.510	1187	2340	2.94e6	5.65e6	2474.0	2414.8	NO	db	db	107.586
13C-234678-HxCDF	35.883	0.983	1.759e5	3.350e5	1.129	0.525	0.510	1187	2340	2.66e6	5.11e6	2239.6	2182.1	NO	bb	bb	114.874
13C-123789-HxCDF	36.919	1.011	1.495e5	2.880e5	0.932	0.519	0.510	1187	2340	2.27e6	4.38e6	1914.9	1873.5	NO	bb	bb	119.212
13C-1234678-HpCDF	38.769	1.062	1.441e5	3.313e5	0.895	0.435	0.440	1622	2208	2.27e6	5.18e6	1397.3	2347.4	NO	bb	bb	134.815
13C-1234789-HpCDF	40.997	1.123	1.095e5	2.427e5	0.770	0.451	0.440	1622	2208	1.52e6	3.40e6	937.8	1542.0	NO	bb	bb	116.176
13C-1234-TCDD	25.576	0.000	1.998e5	2.441e5	1.000	0.819	0.770	1417	929	3.13e6	3.86e6	2210.0	4155.1	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.032	2.307e5	2.905e5	1.152	0.794	0.770	1417	929	3.48e6	4.30e6	2456.7	4623.0	NO	bb	bb	101.890
13C-12378-PeCDD	31.504	1.232	3.069e5	1.900e5	0.829	1.615	1.550	988	885	4.64e6	2.86e6	4699.1	3232.6	NO	bb	bb	135.055
13C-123478-HxCDD	36.006	0.986	2.614e5	2.010e5	0.995	1.301	1.240	1410	1378	4.07e6	3.08e6	2886.8	2233.7	NO	bd	bd	117.985
13C-123678-HxCDD	36.117	0.989	2.926e5	2.287e5	1.157	1.279	1.240	1410	1378	4.24e6	3.29e6	3008.0	2389.0	NO	dd	db	114.442
13C-1234678-HpCDD	40.262	1.103	2.156e5	1.999e5	0.840	1.078	1.050	1385	1312	2.94e6	2.72e6	2122.9	2075.5	NO	bd	bb	125.555
13C-OCDD	45.000	1.233	2.755e5	3.010e5	0.767	0.915	0.890	2033	1436	3.16e6	3.46e6	1556.0	2408.4	NO	bb	bb	190.705
13C-123789-HxCDD	36.507	0.000	2.250e5	1.688e5	1.000	1.333	1.240	1410	1378	3.25e6	2.49e6	2304.2	1810.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	1.908e5		1.288			1261		2.92e6		2318.2			bb		33.371

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	636	1118								
1289-TCDF					0.678		0.770	636	1118								
13468-PECDF					1.246		1.550	547	795								
12389-PECDF	32.296	1.080	1.280e3	6.847e2	0.496	1.869	1.550	1837	1833	1.71e4	9.50e3	9.3	5.2	YES	bb	bb	0.493
123468-HXCDF					1.169		1.240	2053	1503								
1368-TCDD					1.015		0.770	1189	742								
1289-TCDD					0.909		0.770	1189	742								
12479-PECDD					2.301		1.550	1271	987								
12389-PECDD					1.184		1.550	1271	987								
124679-HXCDD					1.115		1.240	1216	1277								
1234679-HPCDD	39.225	0.974	9.641e2	1.081e3	1.137	0.892	1.050	1548	1293	1.32e4	1.50e4	8.5	11.6	YES	bb	bd	0.433
Total-tetrafurans			2.456e4		0.727			636		3.79e5							10.260
Total-penta1			0.000e0					547		0.00e0							
Total-pentafurans			3.500e5		0.654			1837		5.23e6							104.877
Total-hexafurans			6.898e5		1.141			2053		1.04e7							212.456
Total-heptafurans			2.130e5		0.978			1168		3.20e6							107.193
Total-Furans			1.389e6		0.922			636		2.04e7							539.692
Total-tetradioxins			2.664e4		1.024			1189		4.09e5							10.138
Total-pentadioxins			1.670e5		1.502			1271		2.57e6							55.090
Total-hexadioxins			4.059e5		1.005			1216		6.21e6							154.215
Total-heptadioxins			1.140e5		1.088			1548		1.62e6							52.005
Total-Dioxins			8.310e5		1.130			1189		1.23e7							367.088
Total-TEQ			2.220e6					1189		3.27e7							906.781
FUNCTION1 PFK			1.435e7					347183		3.56e7							
FUNCTION2 PFK			1.321e6					356730		3.30e7							0.000
FUNCTION3 PFK			1.622e7					357621		1.53e6							0.000
FUNCTION4 PFK			3.202e7					328246		2.10e7							
FUNCTION5 PFK			1.510e6					195700		1.40e7							
FUNCTION1 HXCD...			2.873e2					464		3.54e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			3.162e2					859		5.55e3							0.000
FUNCTION3 OCDPE			9.147e2					611		1.20e4							0.000
FUNCTION4 NCDPE			7.642e1					463		1.67e3							0.000
FUNCTION5 DCDPE			0.000e0					649		0.00e0							

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	2.456e4	3.310e4	0.702	0.74	0.77	596.3	YES	NO	bb	bb	10.260

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	1.762e5	1.142e5	0.786	1.54	1.55	1419.6	YES	NO	bb	bb	52.019
2	12378-PeCDF	29.93	1.738e5	1.143e5	0.679	1.52	1.55	1425.7	YES	NO	bb	bb	52.858

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.93	1.427e5	1.210e5	1.137	1.18	1.24	1048.5	YES	NO	bb	bd	53.005
2	234678-HxCDF	35.91	1.741e5	1.355e5	1.140	1.28	1.24	1272.0	YES	NO	bb	bb	53.167
3	123678-HxCDF	35.04	1.940e5	1.543e5	1.091	1.26	1.24	1405.3	YES	NO	db	db	54.349
4	123478-HxCDF	34.90	1.790e5	1.417e5	1.166	1.26	1.24	1361.5	YES	NO	bd	bd	51.935

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.78	1.241e5	1.223e5	1.003	1.01	1.05	1669.5	YES	NO	bb	bb	51.690
2	1234789-HpCDF	41.01	8.885e4	9.748e4	0.953	0.91	1.05	1071.8	YES	NO	bb	bd	55.503

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	2.456e4	3.310e4	0.702	0.74	0.77	596.3	YES	NO	bb	bb	10.260
2	23478-PeCDF	31.27	1.762e5	1.142e5	0.786	1.54	1.55	1419.6	YES	NO	bb	bb	52.019
3	12378-PeCDF	29.93	1.738e5	1.143e5	0.679	1.52	1.55	1425.7	YES	NO	bb	bb	52.858
4	123789-HxCDF	36.93	1.427e5	1.210e5	1.137	1.18	1.24	1048.5	YES	NO	bb	bd	53.005
5	234678-HxCDF	35.91	1.741e5	1.355e5	1.140	1.28	1.24	1272.0	YES	NO	bb	bb	53.167
6	123678-HxCDF	35.04	1.940e5	1.543e5	1.091	1.26	1.24	1405.3	YES	NO	db	db	54.349
7	123478-HxCDF	34.90	1.790e5	1.417e5	1.166	1.26	1.24	1361.5	YES	NO	bd	bd	51.935
8	1234678-HpCDF	38.78	1.241e5	1.223e5	1.003	1.01	1.05	1669.5	YES	NO	bb	bb	51.690
9	1234789-HpCDF	41.01	8.885e4	9.748e4	0.953	0.91	1.05	1071.8	YES	NO	bb	bd	55.503
10	OCDF	45.25	1.113e5	1.239e5	0.778	0.90	0.89	1001.4	YES	NO	bd	bd	104.906

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.41	2.664e4	3.406e4	1.149	0.78	0.77	344.0	YES	NO	bb	bb	10.138

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	1.670e5	1.127e5	1.022	1.48	1.55	2023.9	YES	NO	bb	bd	55.090

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.52	1.338e5	1.064e5	0.907	1.26	1.24	1615.5	YES	NO	bb	bb	53.833
2	123678-HxCDD	36.13	1.440e5	1.182e5	1.001	1.22	1.24	1768.3	YES	NO	db	db	50.229
3	123478-HxCDD	36.02	1.282e5	1.027e5	0.996	1.25	1.24	1724.6	YES	NO	bd	bd	50.153

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.140e5	1.105e5	1.039	1.03	1.05	1048.1	YES	NO	bd	bd	52.005

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	1.670e5	1.127e5	1.022	1.48	1.55	2023.9	YES	NO	bb	bd	55.090
2	2378-TCDD	26.41	2.664e4	3.406e4	1.149	0.78	0.77	344.0	YES	NO	bb	bb	10.138
3	123789-HxCDD	36.52	1.338e5	1.064e5	0.907	1.26	1.24	1615.5	YES	NO	bb	bb	53.833
4	123678-HxCDD	36.13	1.440e5	1.182e5	1.001	1.22	1.24	1768.3	YES	NO	db	db	50.229
5	123478-HxCDD	36.02	1.282e5	1.027e5	0.996	1.25	1.24	1724.6	YES	NO	bd	bd	50.153
6	1234678-HpCDD	40.27	1.140e5	1.105e5	1.039	1.03	1.05	1048.1	YES	NO	bd	bd	52.005
7	OCDD	45.01	1.175e5	1.362e5	0.920	0.86	0.89	1085.6	YES	NO	bb	bb	95.640

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	2.456e4	3.310e4	0.702	0.74	0.77	596.3	YES	NO	bb	bb	10.260
2	23478-PeCDF	31.27	1.762e5	1.142e5	0.786	1.54	1.55	1419.6	YES	NO	bb	bb	52.019
3	12378-PeCDF	29.93	1.738e5	1.143e5	0.679	1.52	1.55	1425.7	YES	NO	bb	bb	52.858
4	123789-HxCDF	36.93	1.427e5	1.210e5	1.137	1.18	1.24	1048.5	YES	NO	bb	bd	53.005
5	234678-HxCDF	35.91	1.741e5	1.355e5	1.140	1.28	1.24	1272.0	YES	NO	bb	bb	53.167
6	123678-HxCDF	35.04	1.940e5	1.543e5	1.091	1.26	1.24	1405.3	YES	NO	db	db	54.349
7	123478-HxCDF	34.90	1.790e5	1.417e5	1.166	1.26	1.24	1361.5	YES	NO	bd	bd	51.935
8	1234678-HpCDF	38.78	1.241e5	1.223e5	1.003	1.01	1.05	1669.5	YES	NO	bb	bb	51.690
9	1234789-HpCDF	41.01	8.885e4	9.748e4	0.953	0.91	1.05	1071.8	YES	NO	bb	bd	55.503
10	OCDF	45.25	1.113e5	1.239e5	0.778	0.90	0.89	1001.4	YES	NO	bd	bd	104.906
11	12378-PeCDD	31.53	1.670e5	1.127e5	1.022	1.48	1.55	2023.9	YES	NO	bb	bd	55.090
12	2378-TCDD	26.41	2.664e4	3.406e4	1.149	0.78	0.77	344.0	YES	NO	bb	bb	10.138
13	123789-HxCDD	36.52	1.338e5	1.064e5	0.907	1.26	1.24	1615.5	YES	NO	bb	bb	53.833
14	123678-HxCDD	36.13	1.440e5	1.182e5	1.001	1.22	1.24	1768.3	YES	NO	db	db	50.229
15	123478-HxCDD	36.02	1.282e5	1.027e5	0.996	1.25	1.24	1724.6	YES	NO	bd	bd	50.153
16	1234678-HpCDD	40.27	1.140e5	1.105e5	1.039	1.03	1.05	1048.1	YES	NO	bd	bd	52.005
17	OCDD	45.01	1.175e5	1.362e5	0.920	0.86	0.89	1085.6	YES	NO	bb	bb	95.640

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.29	2.111e5					2.6	NO		bb		
2	FUNCTION1 PFK	24.29	8.975e5					7.0	YES		bb		
3	FUNCTION1 PFK	23.87	4.179e6					15.6	YES		db		
4	FUNCTION1 PFK	23.05	3.338e6					19.9	YES		bd		
5	FUNCTION1 PFK	22.55	1.116e6					21.1	YES		bb		
6	FUNCTION1 PFK	22.14	2.599e6					21.0	YES		bb		
7	FUNCTION1 PFK	21.73	2.013e6					15.2	YES		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.47	1.870e4					1.7	NO		bb		0.000
2	FUNCTION2 PFK	28.32	4.632e4					1.8	NO		db		0.000
3	FUNCTION2 PFK	28.24	4.321e4					3.0	NO		dd		0.000
4	FUNCTION2 PFK	28.22	2.371e4					2.2	NO		dd		0.000
5	FUNCTION2 PFK	28.16	3.433e4					2.9	NO		dd		0.000
6	FUNCTION2 PFK	28.12	1.346e5					3.9	YES		bd		0.000
7	FUNCTION2 PFK	29.66	1.966e4					1.7	NO		bd		0.000
8	FUNCTION2 PFK	29.59	2.138e4					1.2	NO		db		0.000
9	FUNCTION2 PFK	29.51	6.155e3					0.6	NO		bd		0.000
10	FUNCTION2 PFK	29.37	1.898e3					0.3	NO		bb		0.000
11	FUNCTION2 PFK	29.32	6.386e3					0.6	NO		bb		0.000
12	FUNCTION2 PFK	29.25	2.237e4					1.4	NO		db		0.000
13	FUNCTION2 PFK	29.16	1.588e4					1.3	NO		bd		0.000
14	FUNCTION2 PFK	29.10	6.818e3					0.9	NO		db		0.000
15	FUNCTION2 PFK	29.08	9.895e3					1.2	NO		bd		0.000
16	FUNCTION2 PFK	29.02	1.360e4					0.9	NO		bb		0.000
17	FUNCTION2 PFK	28.92	2.874e4					1.8	NO		db		0.000
18	FUNCTION2 PFK	28.85	1.907e4					1.5	NO		bd		0.000
19	FUNCTION2 PFK	28.79	1.377e4					0.9	NO		db		0.000
20	FUNCTION2 PFK	28.72	1.478e4					1.5	NO		dd		0.000
21	FUNCTION2 PFK	28.65	2.564e4					1.7	NO		dd		0.000
22	FUNCTION2 PFK	28.57	1.830e4					1.5	NO		bd		0.000
23	FUNCTION2 PFK	30.98	3.484e4					2.2	NO		dd		0.000
24	FUNCTION2 PFK	30.94	1.347e4					1.3	NO		bd		0.000
25	FUNCTION2 PFK	30.84	1.284e4					1.0	NO		db		0.000
26	FUNCTION2 PFK	30.80	1.521e4					1.2	NO		dd		0.000
27	FUNCTION2 PFK	30.76	2.477e4					2.0	NO		dd		0.000
28	FUNCTION2 PFK	30.70	9.447e3					0.8	NO		dd		0.000
29	FUNCTION2 PFK	30.64	7.861e3					1.0	NO		bd		0.000
30	FUNCTION2 PFK	30.59	1.527e3					0.3	NO		bb		0.000
31	FUNCTION2 PFK	30.49	2.681e3					0.4	NO		bb		0.000
32	FUNCTION2 PFK	30.41	2.936e4					2.6	NO		bb		0.000
33	FUNCTION2 PFK	30.22	3.235e4					1.7	NO		db		0.000
34	FUNCTION2 PFK	30.16	9.659e3					0.9	NO		bd		0.000
35	FUNCTION2 PFK	30.05	6.527e3					0.8	NO		bb		0.000
36	FUNCTION2 PFK	29.96	2.354e4					1.6	NO		db		0.000
37	FUNCTION2 PFK	29.88	3.338e4					1.9	NO		bd		0.000

ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	29.71	2.075e4					1.5	NO		db		0.000
39	FUNCTION2 PFK	32.08	4.075e4					2.2	NO		dd		0.000
40	FUNCTION2 PFK	31.99	4.501e4					2.7	NO		dd		0.000
41	FUNCTION2 PFK	31.89	4.827e4					2.4	NO		dd		0.000
42	FUNCTION2 PFK	31.84	2.713e4					2.6	NO		dd		0.000
43	FUNCTION2 PFK	31.78	3.549e4					2.7	NO		dd		0.000
44	FUNCTION2 PFK	31.72	3.161e4					2.4	NO		dd		0.000
45	FUNCTION2 PFK	31.65	3.379e4					2.5	NO		bd		0.000
46	FUNCTION2 PFK	31.58	6.927e3					0.9	NO		db		0.000
47	FUNCTION2 PFK	31.54	2.520e4					1.4	NO		dd		0.000
48	FUNCTION2 PFK	31.45	1.933e4					1.0	NO		bd		0.000
49	FUNCTION2 PFK	31.34	5.408e3					0.9	NO		db		0.000
50	FUNCTION2 PFK	31.30	3.248e4					2.0	NO		dd		0.000
51	FUNCTION2 PFK	31.19	2.687e4					1.4	NO		dd		0.000
52	FUNCTION2 PFK	31.15	1.206e4					1.1	NO		dd		0.000
53	FUNCTION2 PFK	31.10	1.290e4					1.4	NO		dd		0.000
54	FUNCTION2 PFK	31.06	8.009e3					0.8	NO		dd		0.000
55	FUNCTION2 PFK	32.72	4.282e3					0.5	NO		bb		0.000
56	FUNCTION2 PFK	32.65	6.910e3					0.8	NO		bb		0.000
57	FUNCTION2 PFK	32.52	4.838e3					0.5	NO		bb		0.000
58	FUNCTION2 PFK	32.37	3.735e3					0.5	NO		db		0.000
59	FUNCTION2 PFK	32.33	2.092e4					2.0	NO		bd		0.000
60	FUNCTION2 PFK	32.24	9.978e3					1.0	NO		db		0.000
61	FUNCTION2 PFK	32.17	1.496e4					1.0	NO		dd		0.000
62	FUNCTION2 PFK	32.11	2.094e4					2.0	NO		dd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.69	3.012e6					2.3	NO		bb		0.000
2	FUNCTION3 PFK	35.38	1.321e7					2.0	NO		bb		0.000

ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.71	6.874e5					11.0	YES		db		
2	FUNCTION4 PFK	41.03	4.016e6					25.6	YES		dd		
3	FUNCTION4 PFK	40.31	2.732e7					27.3	YES		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.48	3.822e3					0.9	NO		bb		
2	FUNCTION5 PFK	45.26	2.821e3					0.9	NO		bb		
3	FUNCTION5 PFK	45.07	6.094e3					1.5	NO		db		
4	FUNCTION5 PFK	45.02	5.505e3					1.1	NO		bd		
5	FUNCTION5 PFK	44.72	9.330e2					0.5	NO		bb		
6	FUNCTION5 PFK	44.59	2.819e3					0.8	NO		bb		
7	FUNCTION5 PFK	44.52	8.081e3					1.3	NO		bb		
8	FUNCTION5 PFK	44.04	1.484e3					0.6	NO		bb		
9	FUNCTION5 PFK	43.72	5.545e3					1.1	NO		bb		
10	FUNCTION5 PFK	43.48	1.164e3					0.6	NO		bb		
11	FUNCTION5 PFK	43.01	8.816e4					6.4	YES		db		
12	FUNCTION5 PFK	42.81	7.857e5					14.1	YES		dd		
13	FUNCTION5 PFK	42.64	1.986e5					19.7	YES		dd		
14	FUNCTION5 PFK	42.56	3.998e5					21.9	YES		bd		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.44	1.939e2					5.1	YES		bd		0.000
2	FUNCTION1 HXCD...	21.51	9.345e1					2.6	NO		db		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.53	1.473e2					2.1	NO		bb		0.000
2	FUNCTION2 HPCD...	30.50	8.948e1					2.0	NO		bb		0.000
3	FUNCTION2 HPCD...	29.34	7.948e1					2.3	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.91	1.132e2					1.8	NO		bb		0.000
2	FUNCTION3 OCDPE	36.50	1.643e2					3.7	YES		bb		0.000
3	FUNCTION3 OCDPE	36.12	1.566e2					3.7	YES		bb		0.000
4	FUNCTION3 OCDPE	35.99	1.279e2					3.0	YES		db		0.000
5	FUNCTION3 OCDPE	35.88	1.269e2					3.0	NO		bd		0.000
6	FUNCTION3 OCDPE	35.03	9.974e1					2.2	NO		db		0.000
7	FUNCTION3 OCDPE	34.94	1.261e2					2.2	NO		bd		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.41	7.642e1					3.6	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

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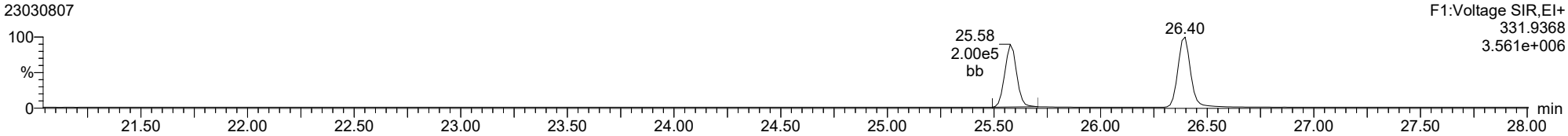

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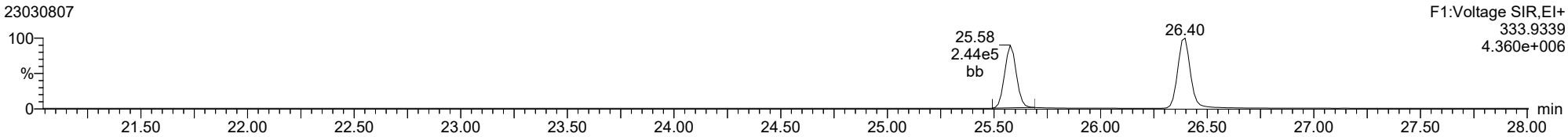

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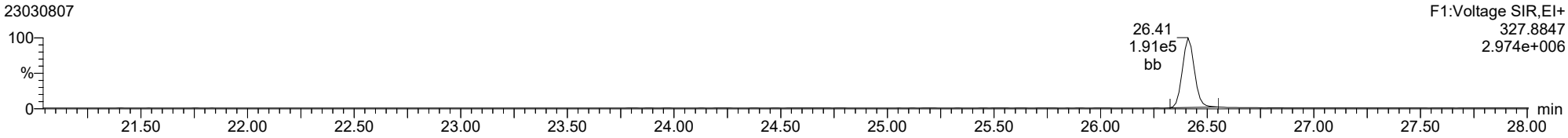

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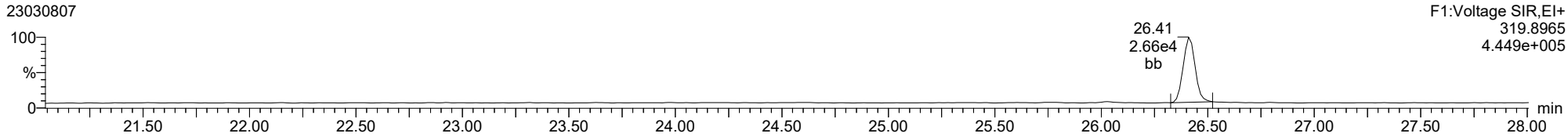

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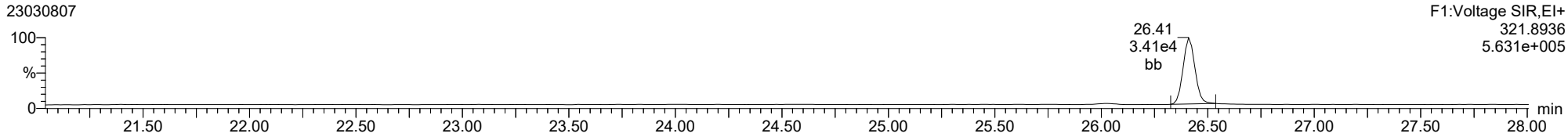

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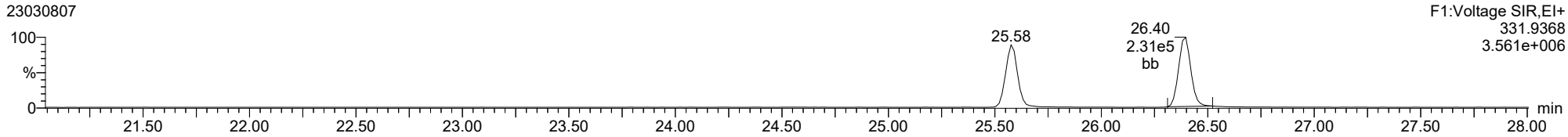

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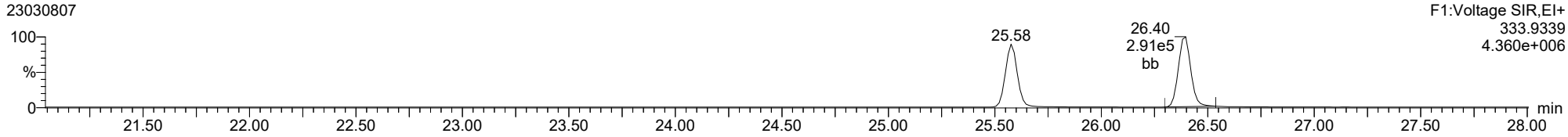

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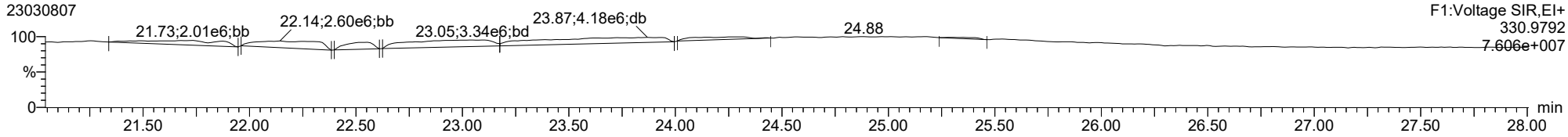

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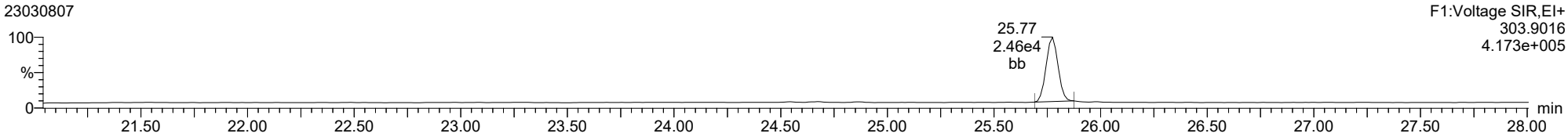

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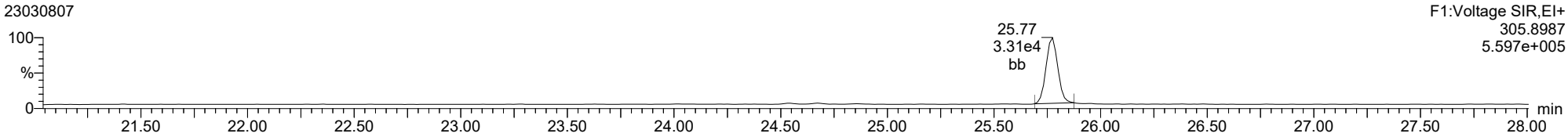

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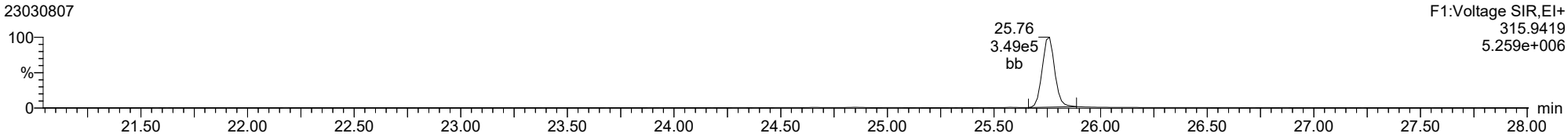

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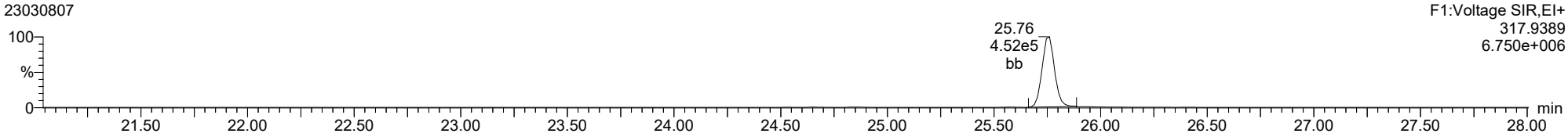
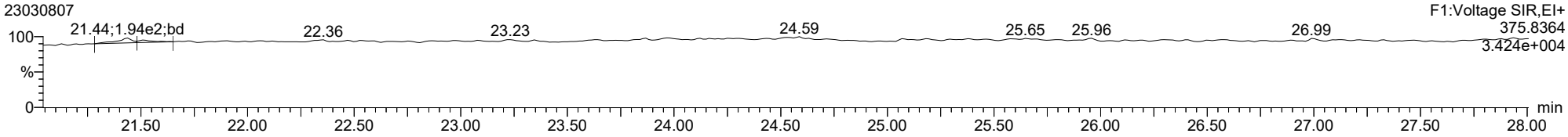


FUNCTION1 HXCDPE



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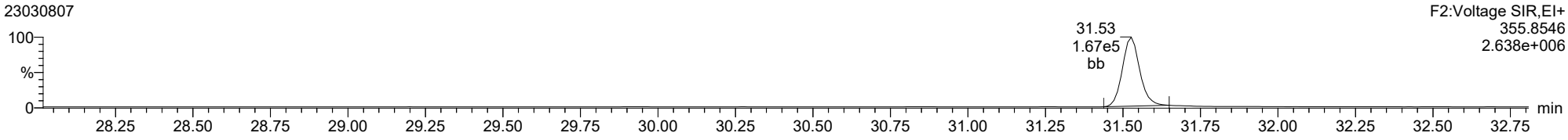

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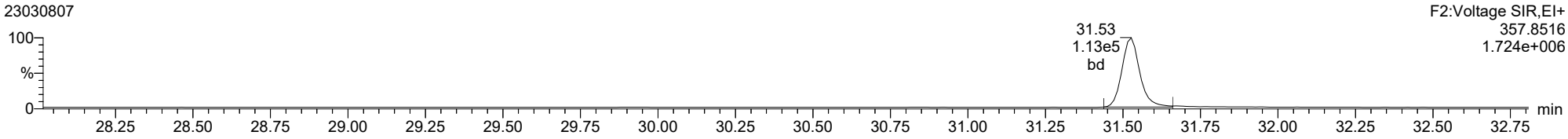

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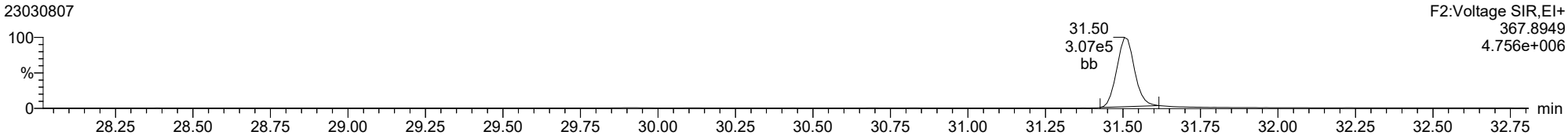

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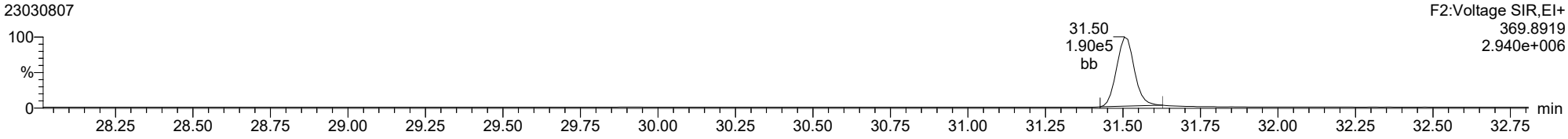

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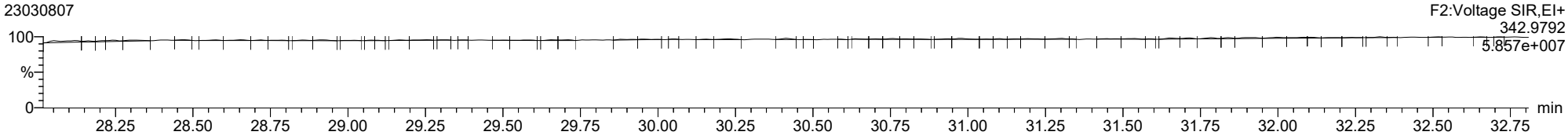

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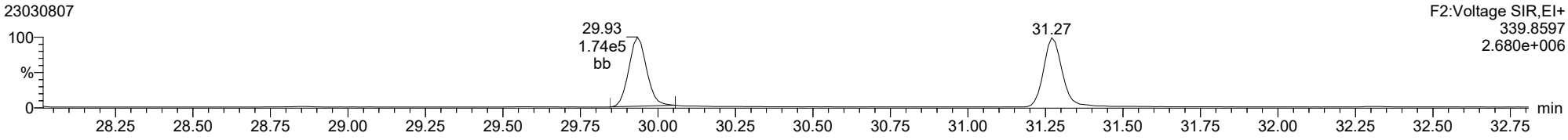

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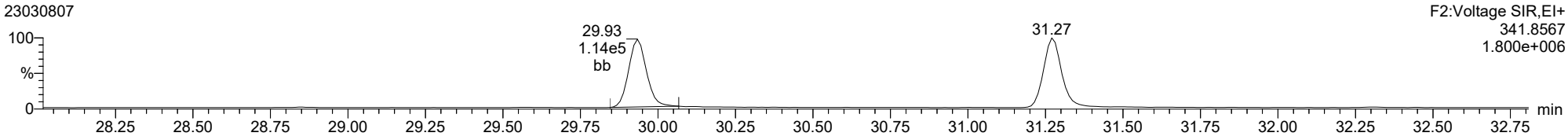

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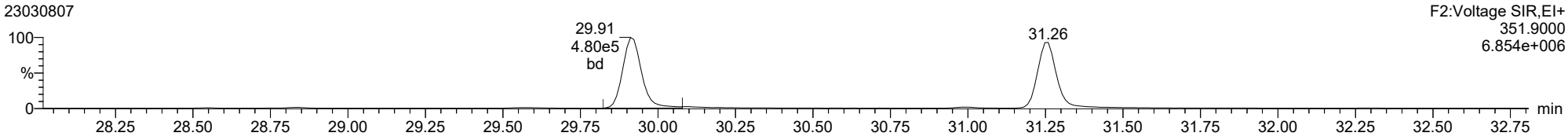

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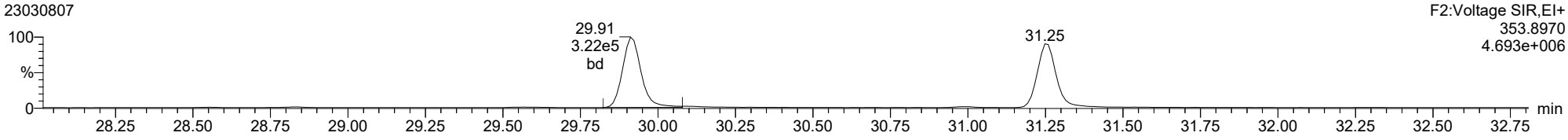
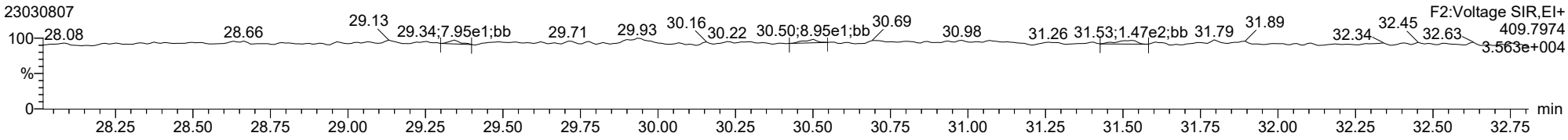


FUNCTION2 HPCDPE



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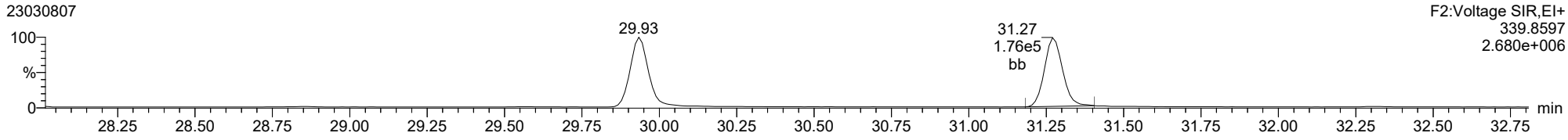
23478-PeCDF



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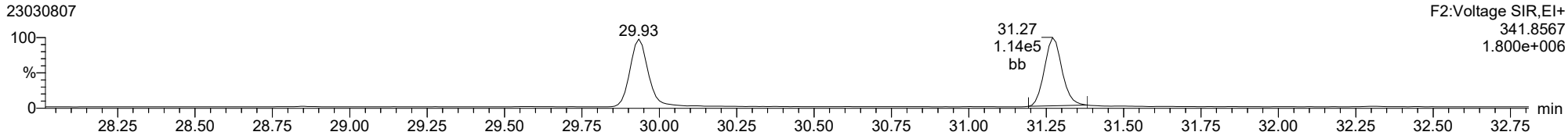

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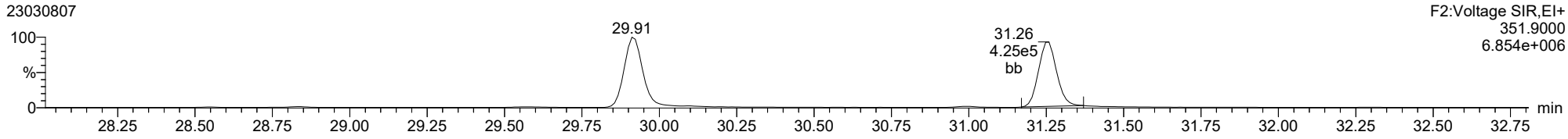

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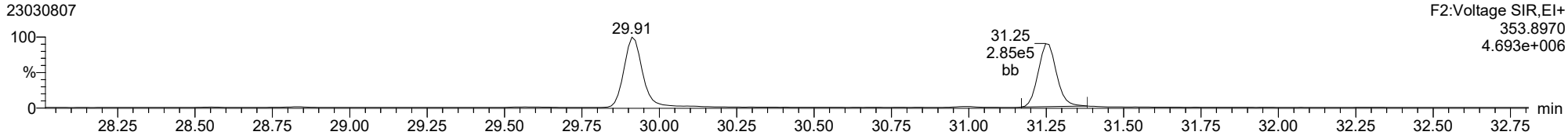
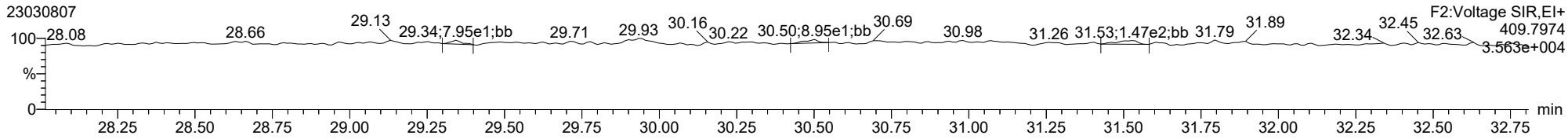


FUNCTION2 HPCDPE



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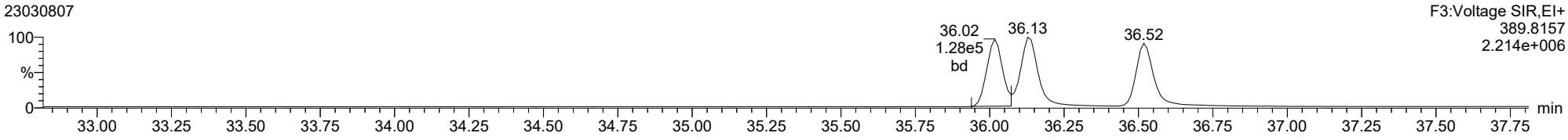

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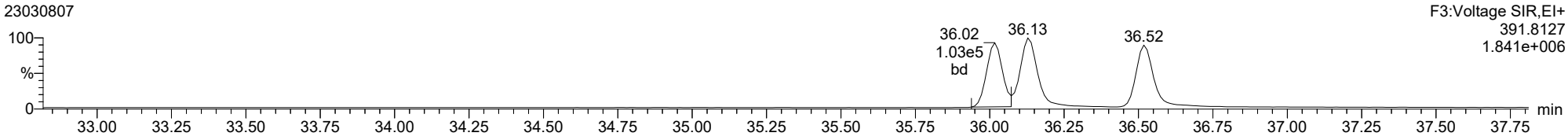

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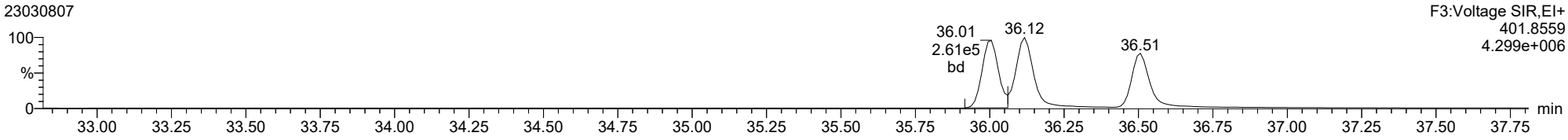

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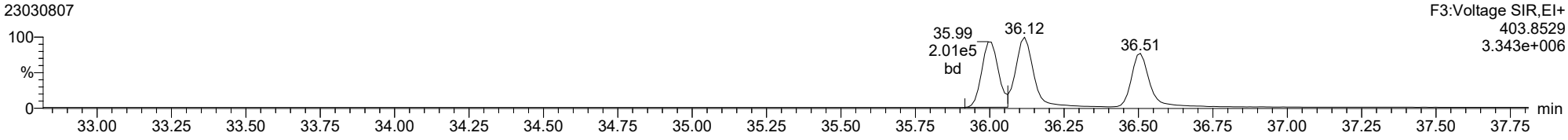

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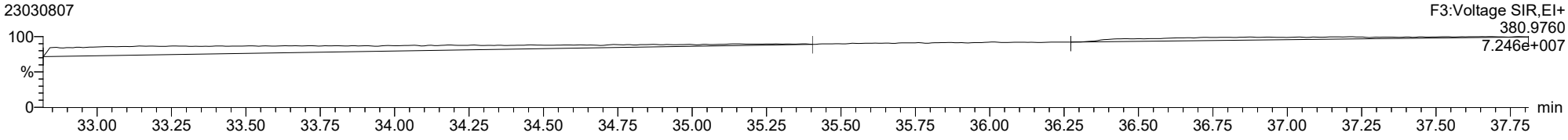

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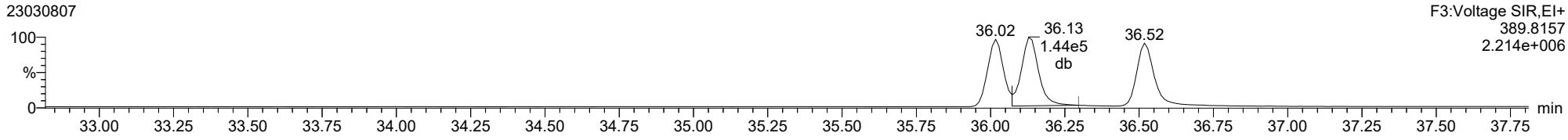

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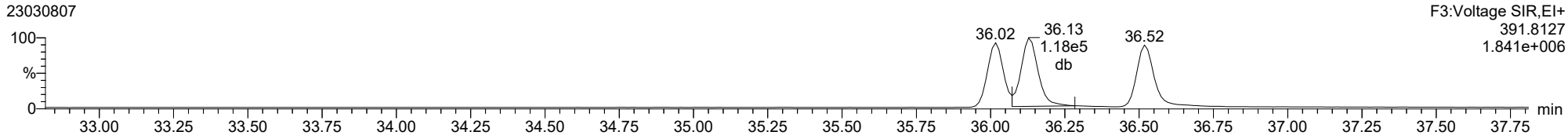

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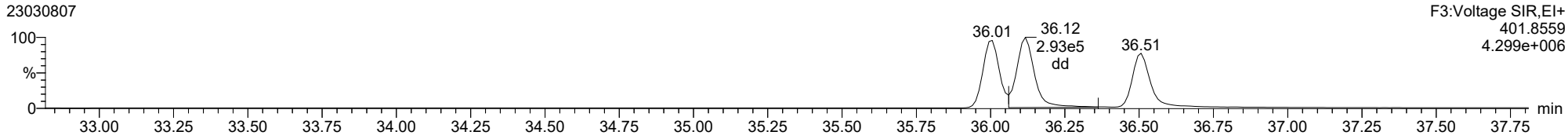

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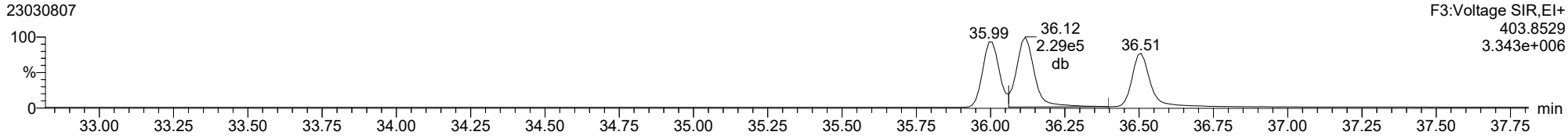

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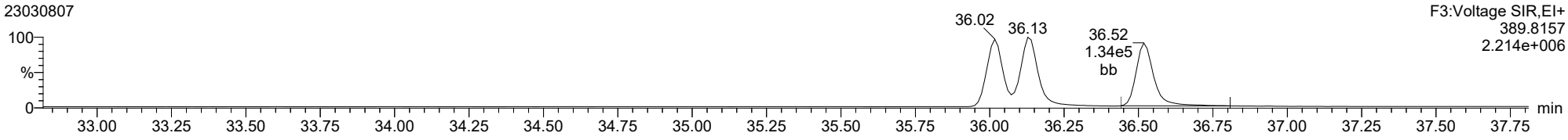

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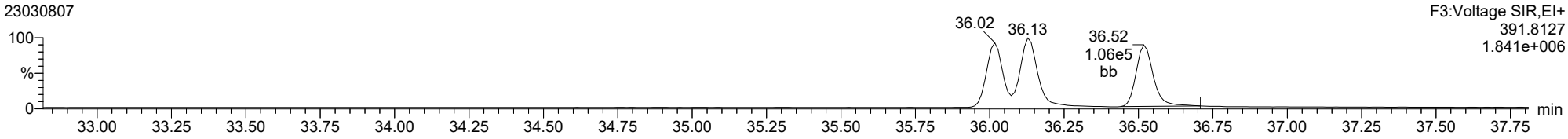

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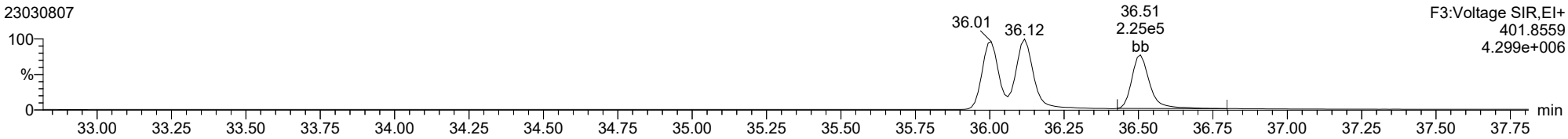

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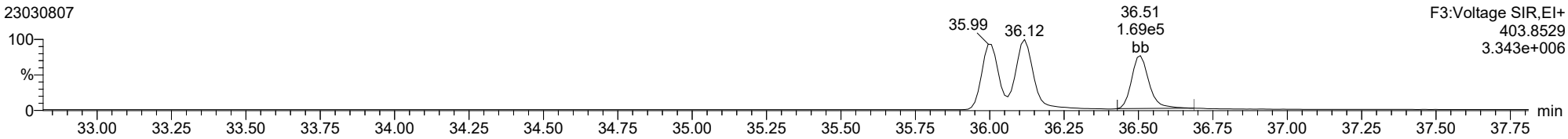

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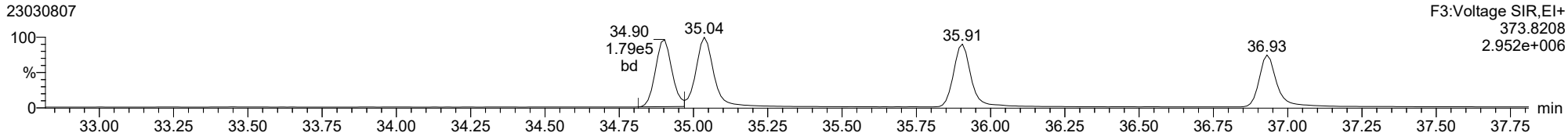

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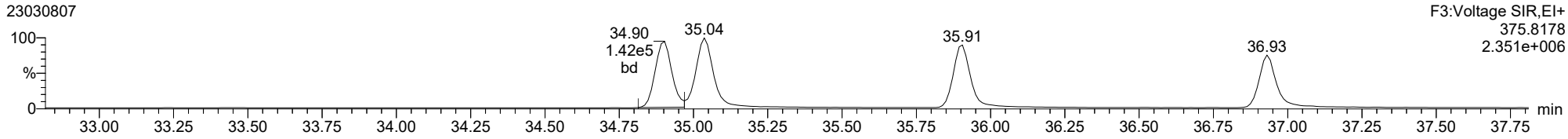

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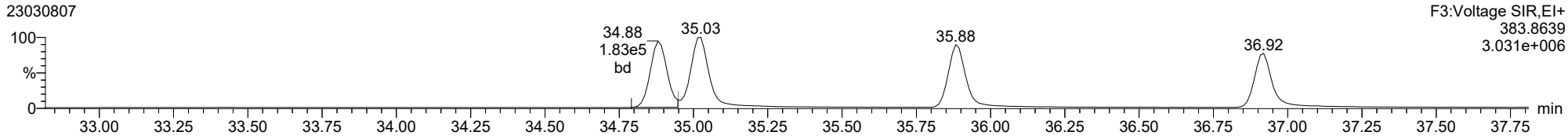

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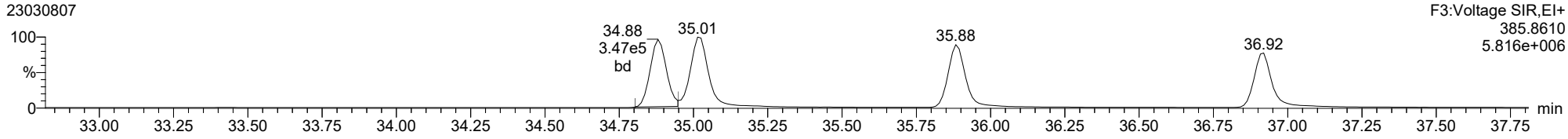

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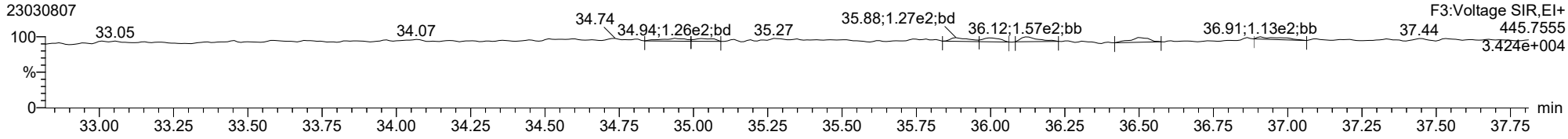

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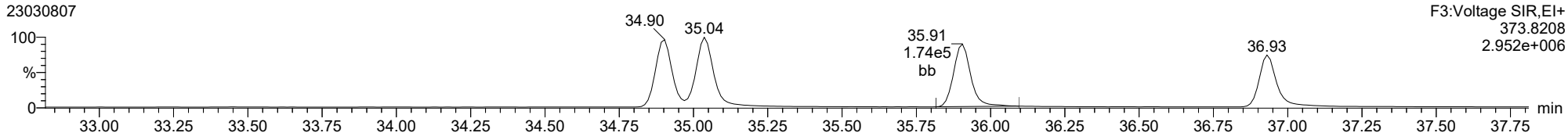
234678-HxCDF



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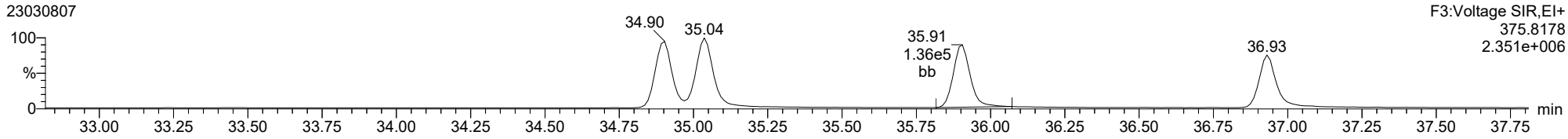

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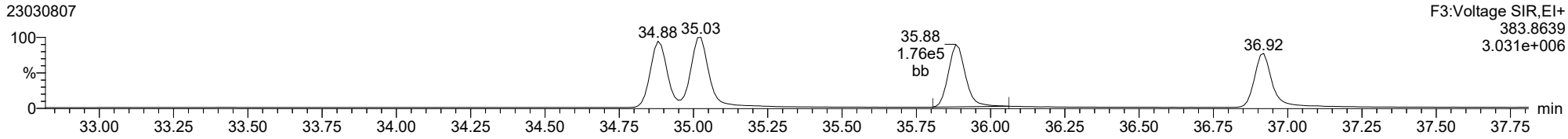

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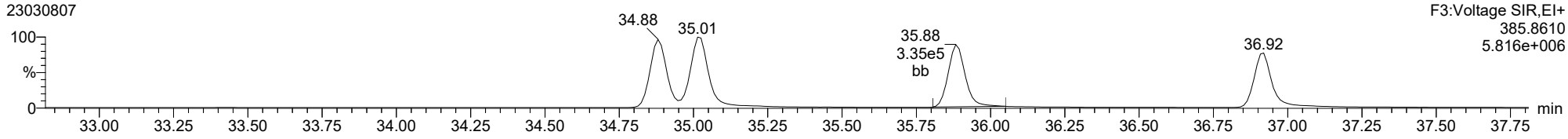
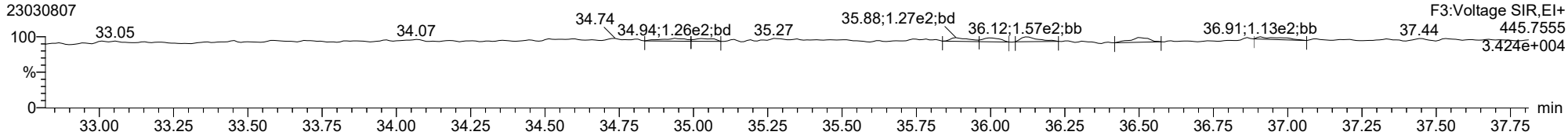


FUNCTION3 OCDPE



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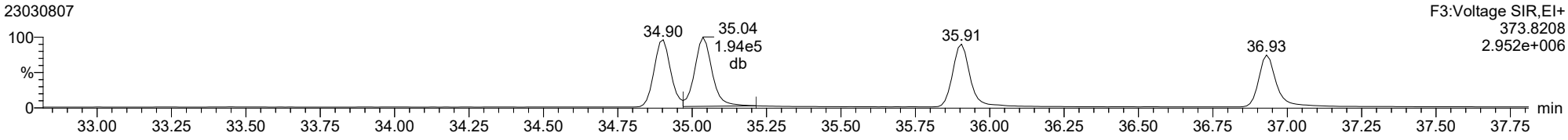

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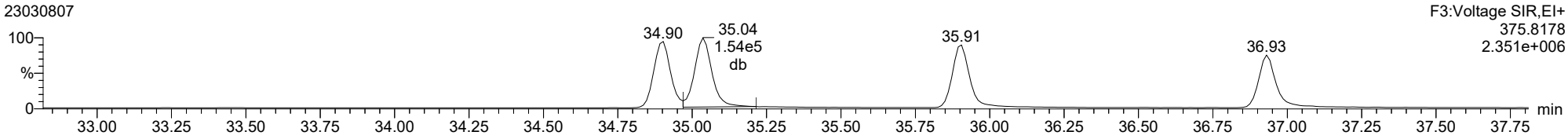

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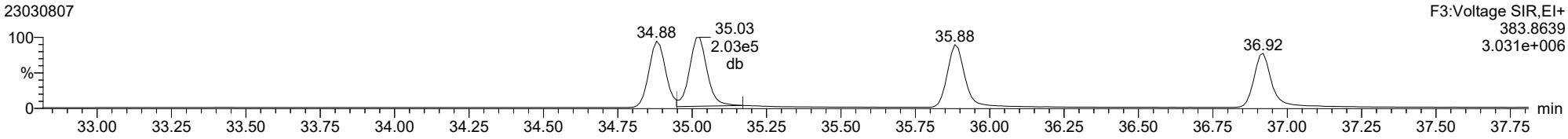

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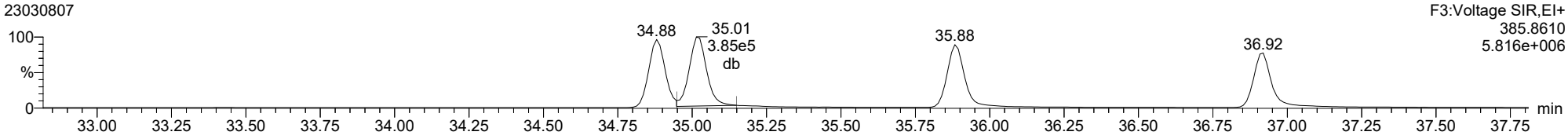

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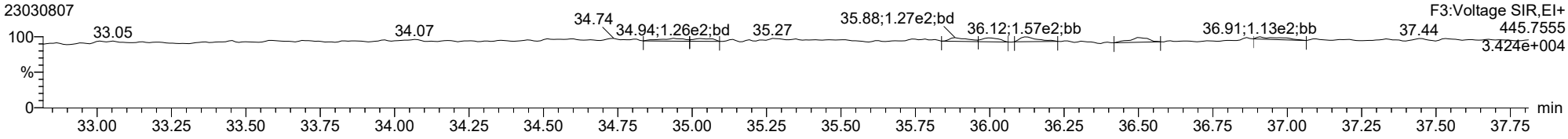

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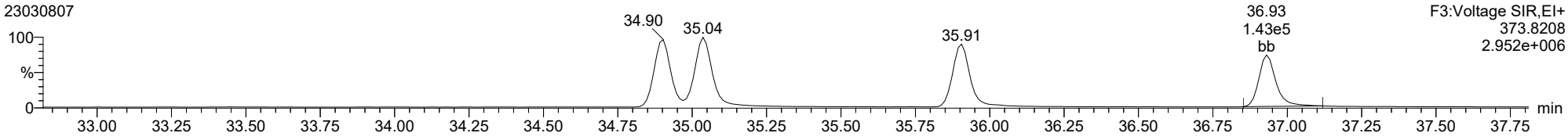

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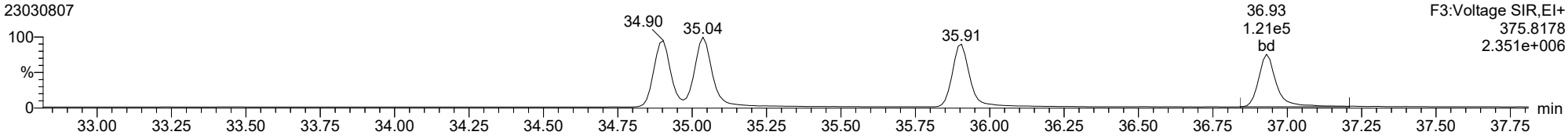

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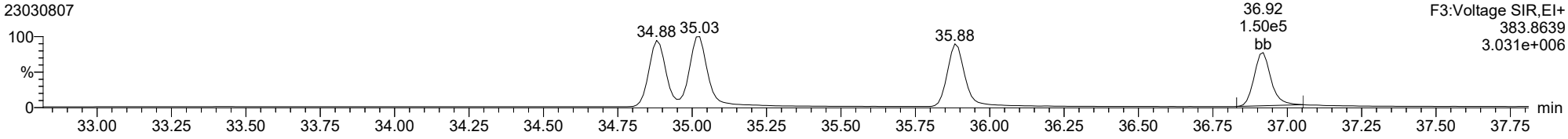

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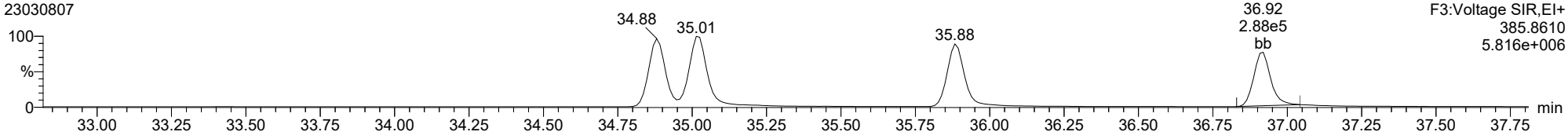
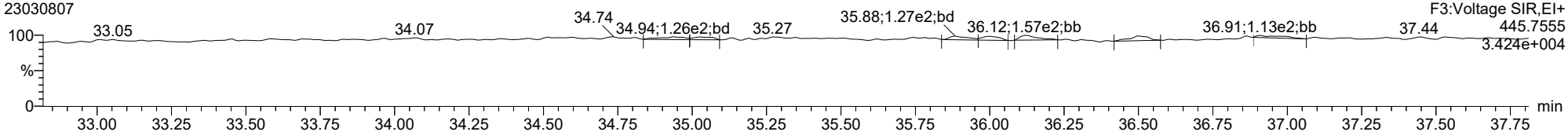


FUNCTION3 OCDPE



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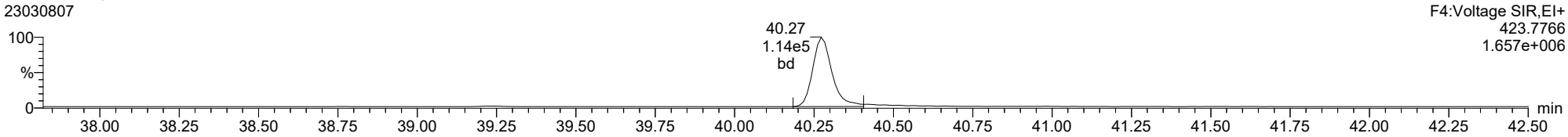
1234678-HpCDD



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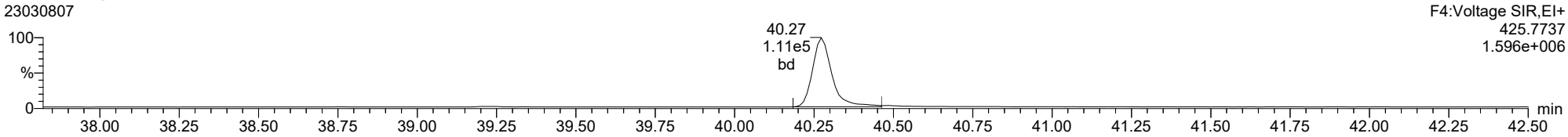

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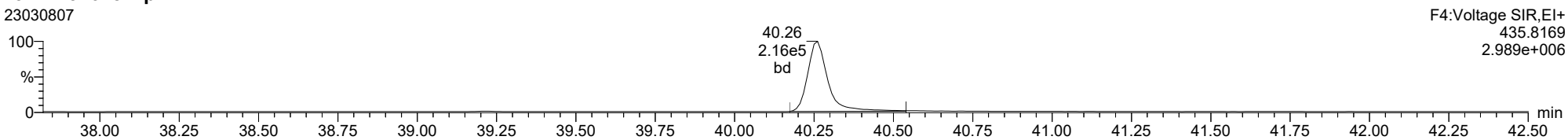

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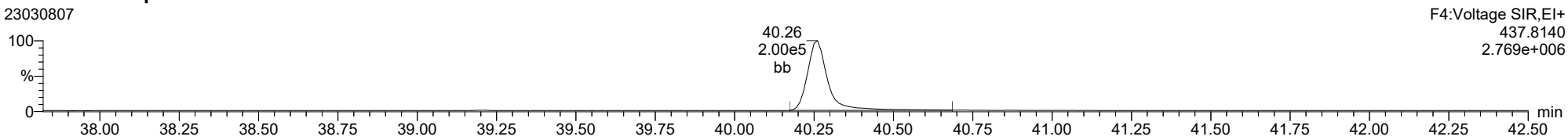

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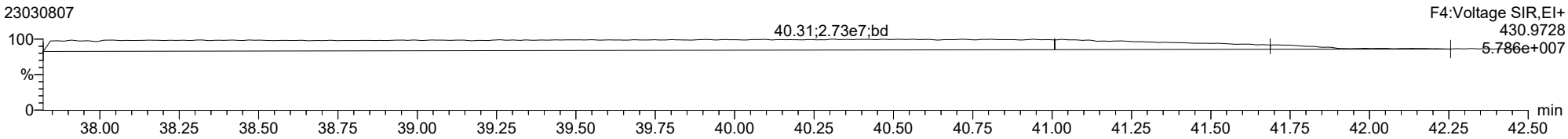

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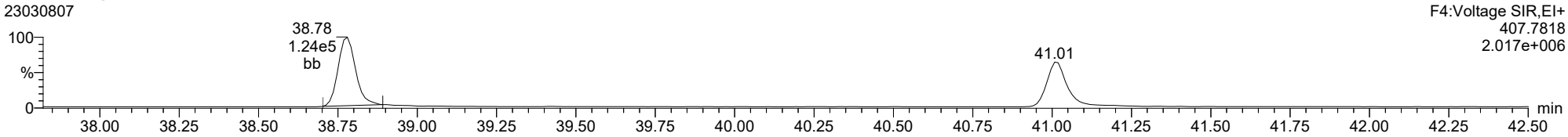

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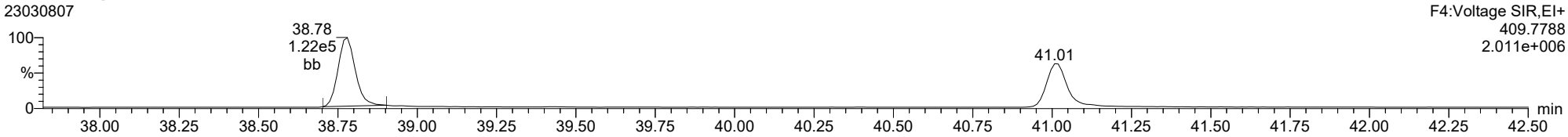

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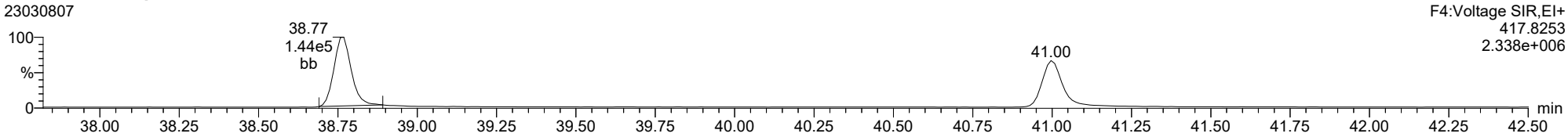

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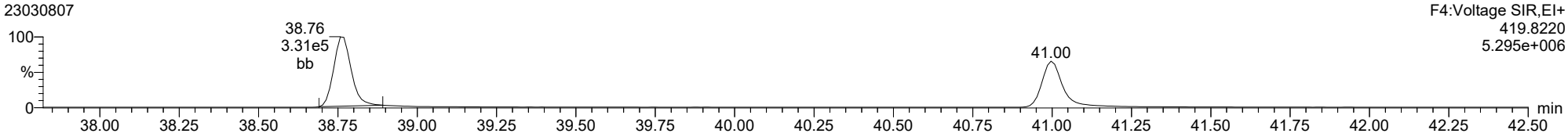
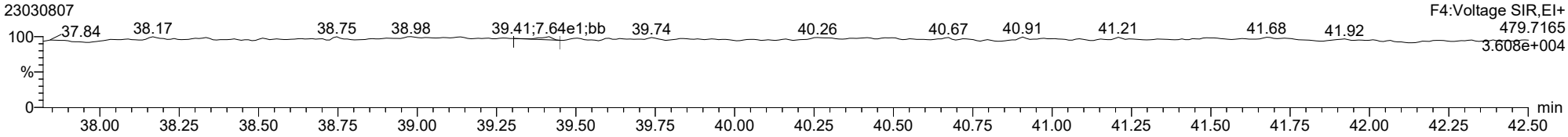


FUNCTION4 NCDPE



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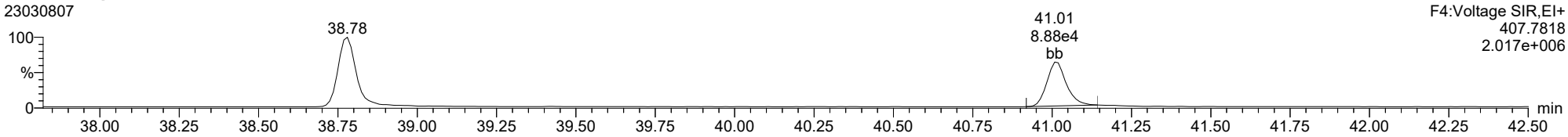

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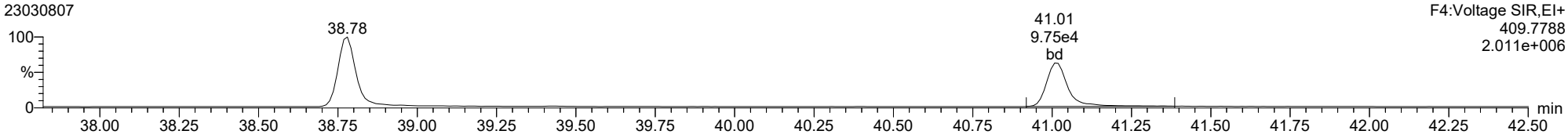

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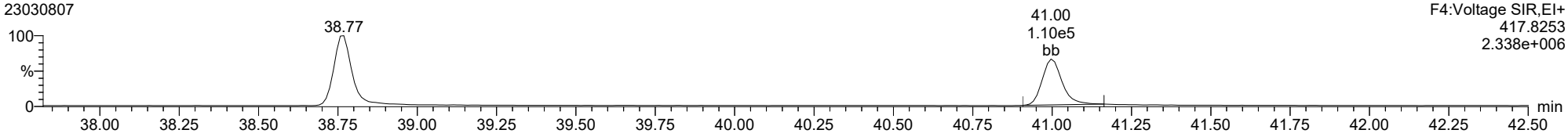

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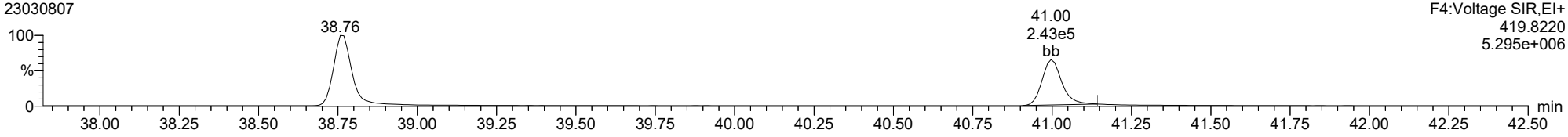
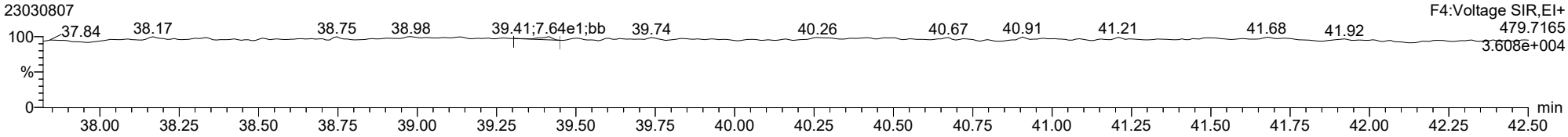
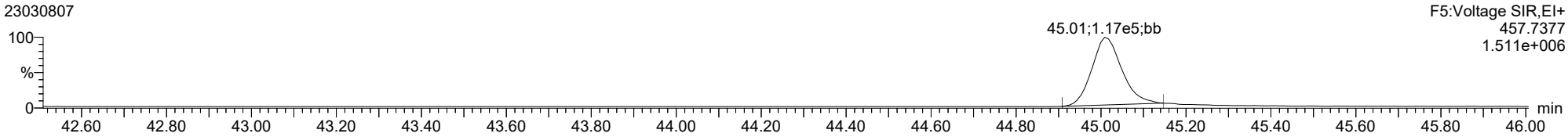


FUNCTION4 NCDPE



ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

OCDD



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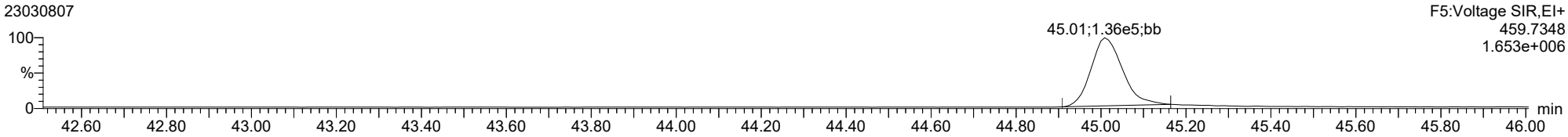

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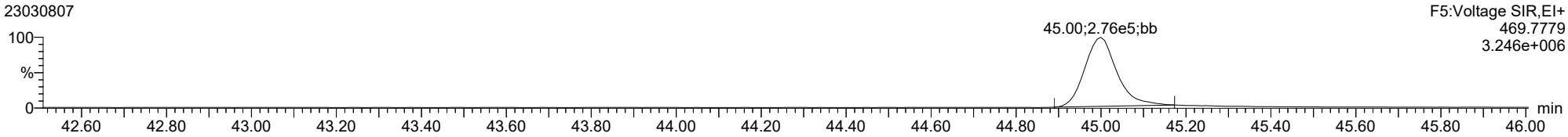

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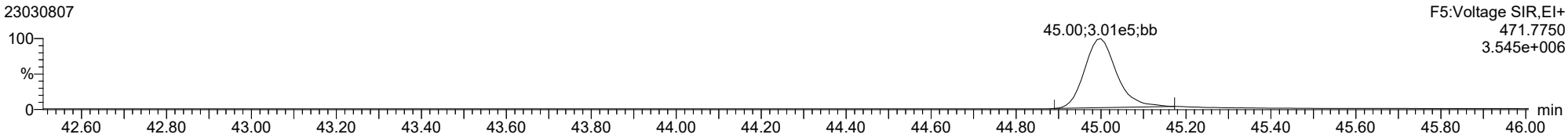
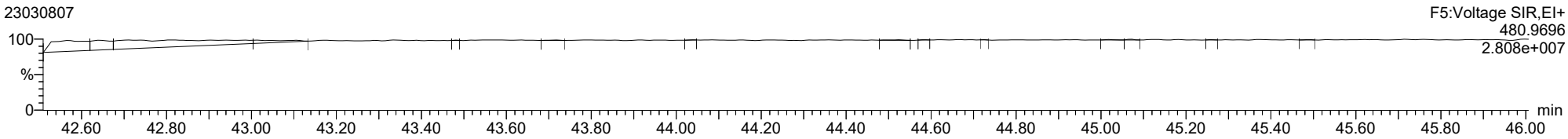


FUNCTION5 PFK



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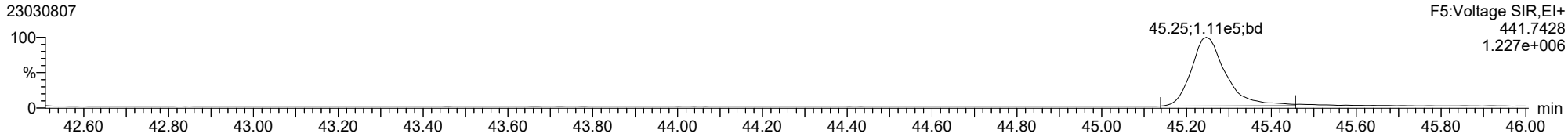
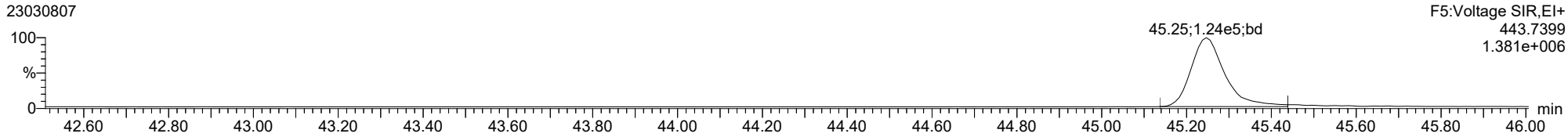
Printed: Thursday, March 09, 2023 12:07:36 Pacific Standard Time

ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

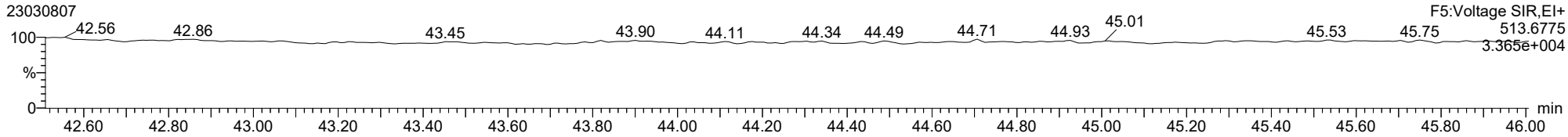
OCDF



OCDF

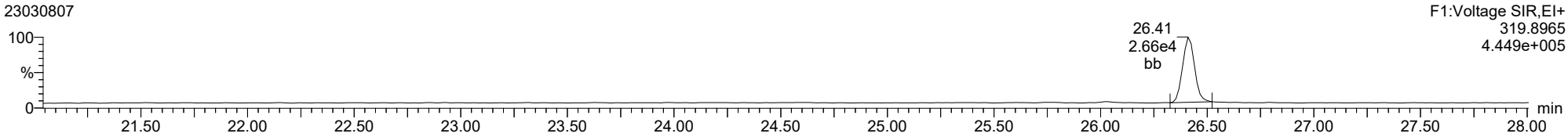


FUNCTION5 DCDPE

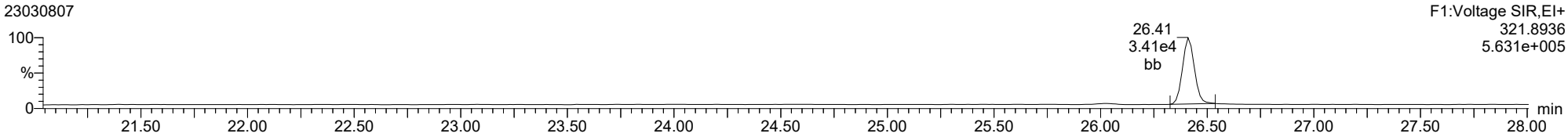


ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

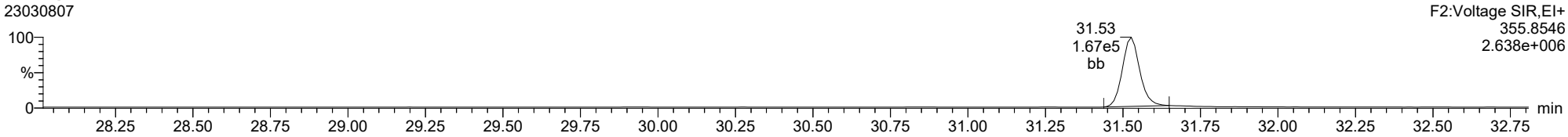
Total-tetradioxins



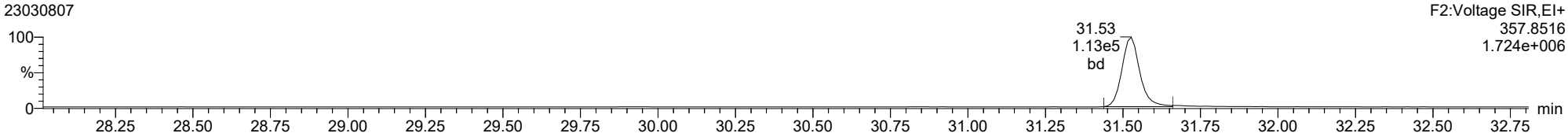
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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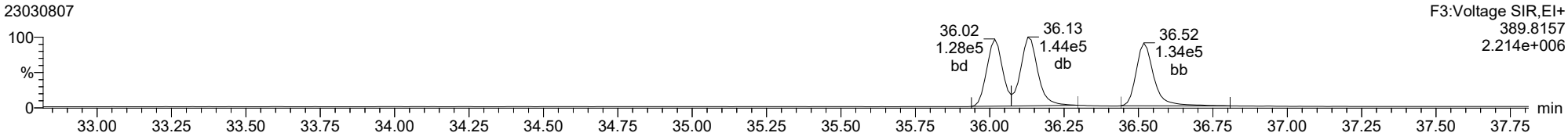
Total-hexadioxins



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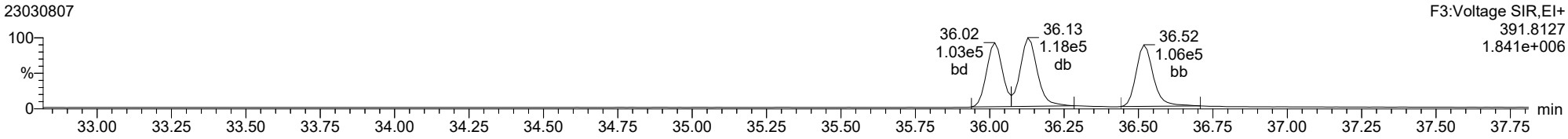

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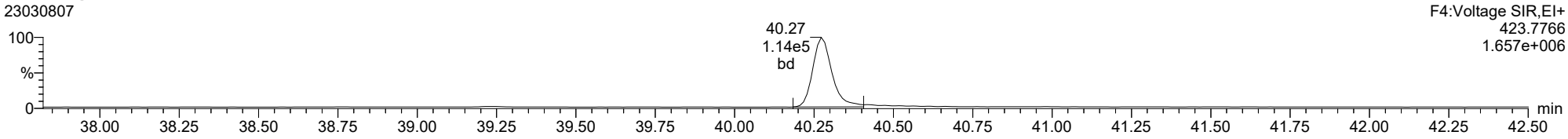

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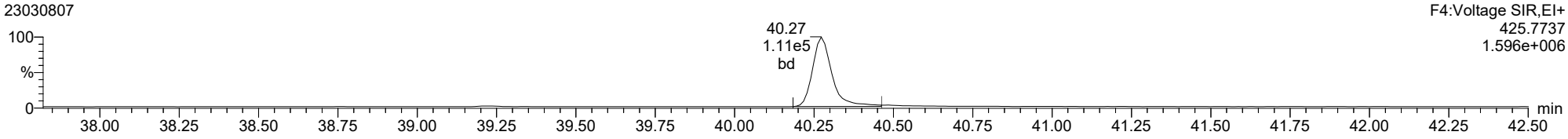
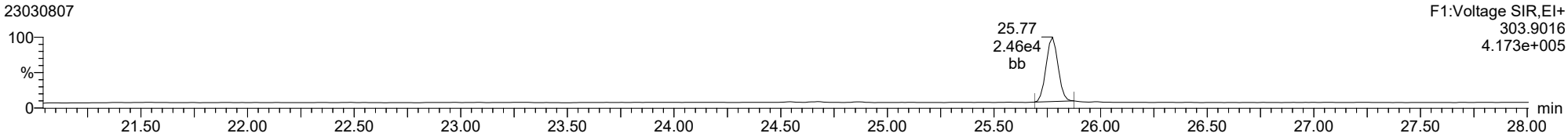


ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



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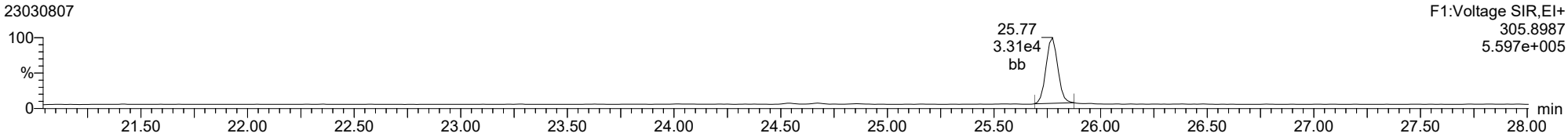

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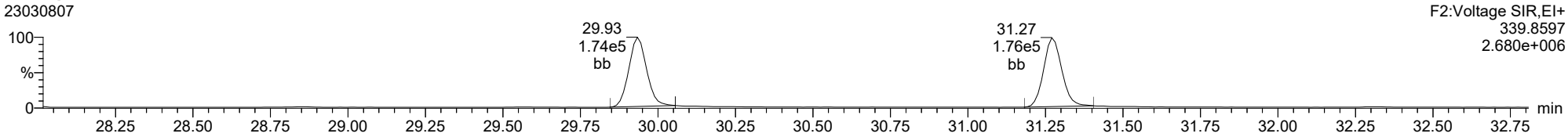
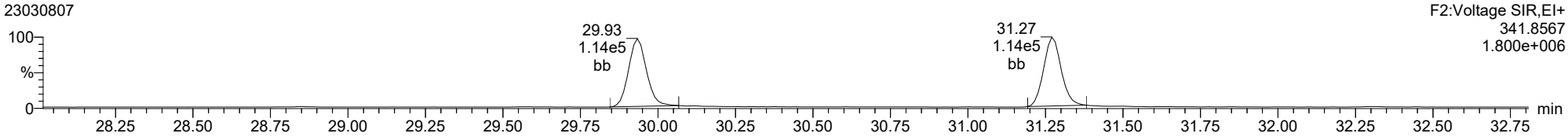


Total-pentafurans



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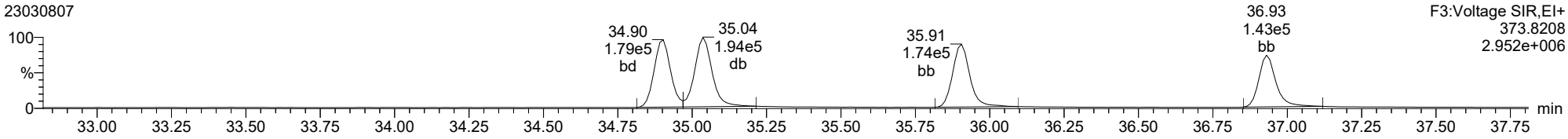
ID: BLB0270-BS1, Name: 23030807, Date: 08-Mar-2023, Time: 14:49:19, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



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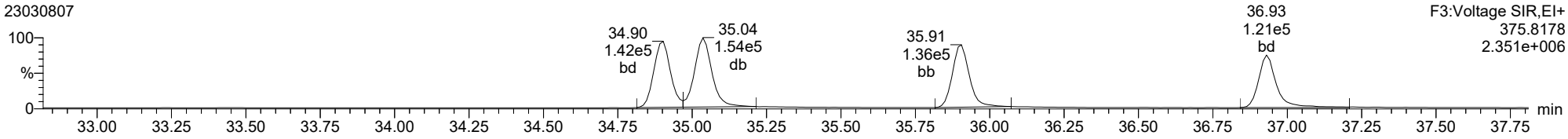

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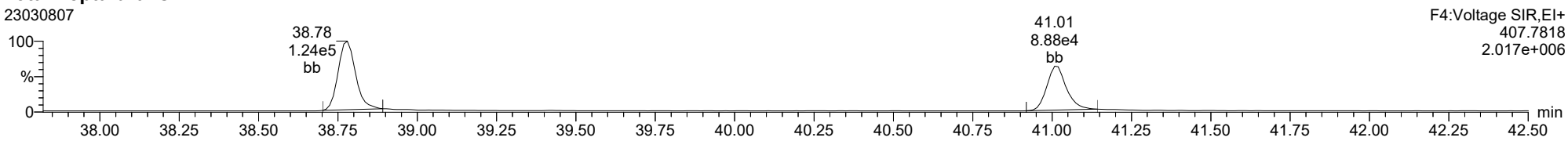
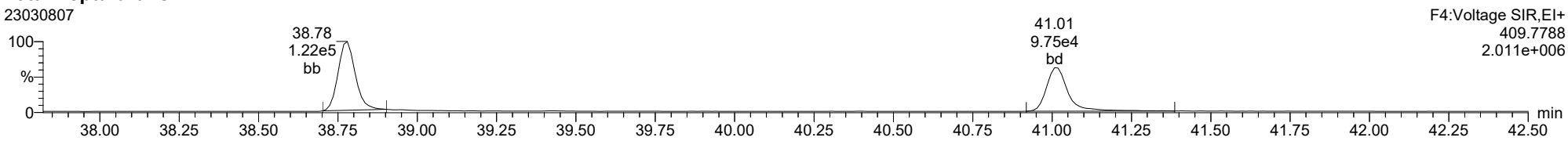


Total-heptafurans



STANDARD REFERENCE MATERIAL RECOVERY

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLB0270-SRM1
Batch: BLB0270
Initial/Final: 10.02 g / 20 uL
Preparation: EPA 1613
Analyzed: 03/08/2023 15:37
Standard ID: L001273
Expires: 08/05/2023
Standard Lot#: PSRM0172
Description: Puget Sound reference-SRM

ANALYTE	TRUE (ng/kg wet)	FOUND (ng/kg wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
2,3,7,8-TCDF	1.1100	0.786	0.244	0.998	J	70.8	50 - 150
2,3,7,8-TCDD	1.0500	0.816	0.150	0.998	EMPC, J	77.7	50 - 150
1,2,3,7,8-PeCDF	1.2300	1.11	0.240	0.998		90.4	50 - 150
2,3,4,7,8-PeCDF	1.0700	0.908	0.220	0.998	J	84.9	50 - 150
1,2,3,7,8-PeCDD	1.0800	1.11	0.180	0.998		102	50 - 150
1,2,3,4,7,8-HxCDF	3.0200	2.62	0.279	0.998		86.6	50 - 150
1,2,3,6,7,8-HxCDF	1.0900	1.02	0.200	0.998		93.5	50 - 150
2,3,4,6,7,8-HxCDF	1.8300	1.94	0.170	0.998		106	50 - 150
1,2,3,7,8,9-HxCDF	0.51100	0.830	0.190	0.998	*, J	162 *	50 - 150
1,2,3,4,7,8-HxCDD	1.5900	1.59	0.170	0.998		100	50 - 150
1,2,3,6,7,8-HxCDD	3.8800	3.36	0.180	0.998		86.7	50 - 150
1,2,3,7,8,9-HxCDD	3.0400	2.80	0.220	0.998		91.9	50 - 150
1,2,3,4,6,7,8-HpCDF	18.700	17.6	0.210	0.998		94.1	50 - 150
1,2,3,4,7,8,9-HpCDF	1.6300	1.68	0.240	0.998		103	50 - 150
1,2,3,4,6,7,8-HpCDD	90.600	96.6	0.559	2.50	B	107	50 - 150
OCDF	58.400	53.4	1.10	2.50		91.4	50 - 150
OCDD	811.00	771	4.59	9.98	B	95.1	50 - 150

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:07:51 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	9.089e2	1.334e3	0.702	0.682	0.770	1216	2239	1.51e4	2.26e4	12.4	10.1	NO	bd	bd	0.394
12378-PeCDF	29.934	1.001	1.933e3	1.401e3	0.679	1.380	1.550	1152	1781	2.86e4	2.13e4	24.8	12.0	NO	bb	bb	0.557
23478-PeCDF	31.271	1.000	1.721e3	1.253e3	0.786	1.374	1.550	1152	1781	2.87e4	1.98e4	24.9	11.1	NO	db	db	0.455
123478-HxCDF	34.903	1.001	5.719e3	4.201e3	1.166	1.361	1.240	1145	919	8.97e4	6.76e4	78.4	73.5	NO	bd	bd	1.310
234678-HxCDF	35.906	1.000	4.097e3	2.990e3	1.140	1.370	1.240	1145	919	4.47e4	3.56e4	39.1	38.7	NO	bb	bb	0.974
123678-HxCDF	35.037	1.000	2.391e3	1.722e3	1.091	1.389	1.240	1145	919	3.49e4	2.88e4	30.5	31.3	NO	db	db	0.510
123789-HxCDF	36.897	1.000	1.413e3	1.178e3	1.137	1.200	1.240	1145	919	1.75e4	1.52e4	15.3	16.6	NO	bb	bb	0.416
1234678-HpCDF	38.780	1.000	2.084e4	2.026e4	1.003	1.028	1.050	927	1052	3.59e5	3.29e5	386.7	312.4	NO	bb	bb	8.818
1234789-HpCDF	41.020	1.000	1.606e3	1.453e3	0.953	1.105	1.050	927	1052	2.13e4	1.76e4	23.0	16.7	NO	bb	bb	0.842
OCDF	45.256	1.006	3.192e4	3.594e4	0.778	0.888	0.890	651	871	3.61e5	4.09e5	555.0	469.7	NO	bd	bd	26.741
2378-TCDD	26.424	1.001	1.006e3	1.715e3	1.149	0.587	0.770	974	688	1.53e4	2.23e4	15.7	32.4	YES	bb	bd	0.409
12378-PeCDD	31.527	1.001	1.995e3	1.229e3	1.022	1.623	1.550	1266	1355	2.86e4	1.72e4	22.6	12.7	NO	bb	bb	0.554
123478-HxCDD	36.017	1.000	2.286e3	2.030e3	0.996	1.126	1.240	1157	996	3.85e4	3.22e4	33.3	32.3	NO	bd	bd	0.798
123678-HxCDD	36.140	1.001	5.550e3	4.671e3	1.001	1.188	1.240	1157	996	8.63e4	7.72e4	74.6	77.5	NO	dd	dd	1.685
123789-HxCDD	36.530	1.011	4.176e3	3.122e3	0.907	1.337	1.240	1157	996	6.45e4	4.97e4	55.7	49.9	NO	bb	bb	1.400
1234678-HpCDD	40.273	1.000	1.012e5	9.607e4	1.039	1.054	1.050	2045	2340	1.56e6	1.48e6	765.3	633.7	NO	bb	bb	48.409
OCDD	45.009	1.000	5.378e5	6.219e5	0.920	0.865	0.890	1677	1571	6.52e6	7.58e6	3887.2	4826.0	NO	bb	bb	386.380
13C-2378-TCDF	25.760	1.007	3.525e5	4.597e5	1.620	0.767	0.770	1960	1602	5.24e6	6.80e6	2674.5	4245.2	NO	bb	bb	112.979
13C-12378-PeCDF	29.912	1.169	5.255e5	3.551e5	1.240	1.480	1.550	2379	2460	7.77e6	5.26e6	3264.5	2136.5	NO	bb	bb	160.010
13C-23478-PeCDF	31.260	1.222	5.001e5	3.314e5	1.118	1.509	1.550	2379	2460	7.52e6	5.01e6	3159.6	2037.2	NO	bb	bb	167.660
13C-123478-HxCDF	34.881	0.955	2.209e5	4.284e5	1.168	0.516	0.510	1742	1829	3.50e6	6.72e6	2006.2	3673.2	NO	bd	bd	110.662
13C-123678-HxCDF	35.026	0.959	2.401e5	4.986e5	1.386	0.482	0.510	1742	1829	3.55e6	6.83e6	2038.3	3736.8	NO	db	db	106.104
13C-234678-HxCDF	35.895	0.983	2.179e5	4.208e5	1.129	0.518	0.510	1742	1829	3.25e6	6.28e6	1864.5	3436.6	NO	bb	bb	112.621
13C-123789-HxCDF	36.909	1.011	1.852e5	3.628e5	0.932	0.510	0.510	1742	1829	2.97e6	5.75e6	1704.9	3143.0	NO	bb	bb	117.127
13C-1234678-HpCDF	38.769	1.062	1.401e5	3.246e5	0.895	0.432	0.440	1769	2366	2.27e6	5.31e6	1285.7	2243.7	NO	bb	bb	103.361
13C-1234789-HpCDF	40.998	1.123	1.161e5	2.650e5	0.770	0.438	0.440	1769	2366	1.69e6	3.79e6	954.4	1601.6	NO	bb	bb	98.598
13C-1234-TCDD	25.577	0.000	1.975e5	2.462e5	1.000	0.802	0.770	1525	1047	3.14e6	3.92e6	2061.6	3742.8	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.032	2.593e5	3.201e5	1.152	0.810	0.770	1525	1047	3.88e6	4.73e6	2543.2	4514.2	NO	bb	bb	113.321
13C-12378-PeCDD	31.505	1.232	3.495e5	2.197e5	0.829	1.591	1.550	1123	999	5.25e6	3.30e6	4671.1	3303.2	NO	bb	bb	154.784
13C-123478-HxCDD	36.006	0.986	3.060e5	2.370e5	0.995	1.291	1.240	1351	1235	5.03e6	3.84e6	3724.2	3111.3	NO	bd	bd	108.666
13C-123678-HxCDD	36.118	0.989	3.487e5	2.574e5	1.157	1.354	1.240	1351	1235	5.03e6	3.96e6	3720.7	3208.7	NO	db	db	104.349
13C-1234678-HpCDD	40.262	1.103	2.032e5	1.891e5	0.840	1.075	1.050	1499	1447	3.04e6	2.81e6	2027.5	1942.0	NO	bb	bb	92.983
13C-OCDD	45.000	1.233	3.074e5	3.451e5	0.767	0.891	0.890	1499	1510	3.71e6	4.15e6	2473.4	2747.9	NO	bb	bb	169.314
13C-123789-HxCDD	36.507	0.000	2.815e5	2.206e5	1.000	1.276	1.240	1351	1235	4.52e6	3.52e6	3345.5	2847.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	2.189e5		1.288			1051		3.26e6		3106.3			bb		38.307

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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.257	0.864	3.945e2	3.838e2	0.802	1.028	0.770	1216	2239	5.09e3	5.27e3	4.2	2.4	YES	bb	bb	0.120
1289-TCDF					0.678		0.770	1216	2239								
13468-PECDF					1.246		1.550	561	813								
12389-PECDF					0.496		1.550	1152	1781								
123468-HXCDF	33.232	0.953	4.955e3	3.852e3	1.169	1.286	1.240	1145	919	7.57e4	5.95e4	66.1	64.7	NO	bb	bb	1.160
1368-TCDD	23.542	0.892	9.301e2	1.173e3	1.015	0.793	0.770	974	688	1.56e4	1.75e4	16.0	25.5	NO	bb	bb	0.357
1289-TCDD					0.909		0.770	974	688								
12479-PECDD	28.842	0.915	3.287e3	2.198e3	2.301	1.495	1.550	1266	1355	3.28e4	2.66e4	25.9	19.7	NO	bb	bb	0.419
12389-PECDD					1.184		1.550	1266	1355								
124679-HXCDD	34.012	0.945	1.446e4	1.187e4	1.115	1.218	1.240	1157	996	2.22e5	1.83e5	191.9	183.9	NO	bb	bb	4.348
1234679-HPCDD	39.226	0.974	1.471e5	1.441e5	1.137	1.020	1.050	2045	2340	2.42e6	2.36e6	1181.1	1009.2	NO	bb	bb	65.290
Total-tetrafurans			1.059e4		0.727			1216		1.64e5							4.175
Total-penta1			8.768e3					561		1.25e5							1.796
Total-pentafurans			9.926e3		0.654			1152		1.45e5							2.836
Total-hexafurans			5.769e4		1.141			1145		8.63e5							13.962
Total-heptafurans			6.247e4		0.978			927		1.03e6							28.856
Total-Furans			1.815e5		0.922			1216		2.69e6							78.422
Total-tetradioxins			3.592e3		1.024			974		5.82e4							1.410
Total-pentadioxins			9.345e3		1.502			1266		1.29e5							1.750
Total-hexadioxins			4.801e4		1.005			1157		6.58e5							15.011
Total-heptadioxins			2.483e5		1.088			2045		3.98e6							113.699
Total-Dioxins			8.471e5		1.130			974		1.13e7							518.287
Total-TEQ			1.029e6					974		1.40e7							596.709
FUNCTION1 PFK			5.095e6					334963		4.96e6							
FUNCTION2 PFK			1.641e6					380101		9.21e6							0.000
FUNCTION3 PFK			3.189e7					424296		6.57e6							0.000
FUNCTION4 PFK			0.000e0					216287		0.00e0							
FUNCTION5 PFK			1.984e4					187120		7.62e5							
FUNCTION1 HXCD...			1.266e3					468		1.95e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.448e2					816		4.47e3							0.000
FUNCTION3 OCDPE			2.904e2					454		5.00e3							0.000
FUNCTION4 NCDPE			7.602e3					774		1.30e5							0.000
FUNCTION5 DCDPE			0.000e0					500		0.00e0							

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.52	2.372e3	3.020e3	0.727	0.79	0.77	29.4	YES	NO	dd	dd	0.913
2	Total-tetrafurans	24.45	5.706e2	7.852e2	0.727	0.73	0.77	8.5	YES	NO	bd	dd	0.230
3	Total-tetrafurans	24.02	9.858e2	1.470e3	0.727	0.67	0.77	11.9	YES	NO	bb	dd	0.416
4	Total-tetrafurans	23.58	3.304e2	4.096e2	0.727	0.81	0.77	4.2	YES	NO	db	db	0.125
5	Total-tetrafurans	23.51	6.891e2	9.341e2	0.727	0.74	0.77	11.0	YES	NO	dd	dd	0.275
6	Total-tetrafurans	23.10	1.042e3	1.418e3	0.727	0.74	0.77	14.3	YES	NO	bb	bb	0.417
7	Total-tetrafurans	22.53	4.602e2	5.268e2	0.727	0.87	0.77	5.2	YES	NO	bb	bb	0.167
8	Total-tetrafurans	25.90	7.939e2	9.290e2	0.727	0.85	0.77	9.8	YES	NO	dd	dd	0.292
9	2378-TCDF	25.77	9.089e2	1.334e3	0.702	0.68	0.77	12.4	YES	NO	bd	bd	0.394
10	Total-tetrafurans	25.53	9.264e2	1.371e3	0.727	0.68	0.77	8.0	YES	NO	bb	bb	0.389
11	Total-tetrafurans	24.87	1.509e3	1.782e3	0.727	0.85	0.77	19.8	YES	NO	db	bb	0.557

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-penta1	27.20	8.768e3	5.734e3		1.53	1.55	223.1	YES	NO	bb	bb	1.796

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	28.86	4.324e3	2.602e3	0.654	1.66	1.55	50.9	YES	NO	dd	dd	1.237
2	Total-pentafurans	28.21	5.496e2	3.436e2	0.654	1.60	1.55	7.4	YES	NO	bb	bd	0.160
3	23478-PeCDF	31.27	1.721e3	1.253e3	0.786	1.37	1.55	24.9	YES	NO	db	db	0.455
4	Total-pentafurans	30.15	1.166e3	8.319e2	0.654	1.40	1.55	13.6	YES	NO	bd	bd	0.357
5	12378-PeCDF	29.93	1.933e3	1.401e3	0.679	1.38	1.55	24.8	YES	NO	bb	bb	0.557
6	Total-pentafurans	28.99	2.317e2	1.610e2	0.654	1.44	1.55	4.6	NO	NO	db	db	0.070

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HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.04	2.391e3	1.722e3	1.091	1.39	1.24	30.5	YES	NO	db	db	0.510
2	123478-HxCDF	34.90	5.719e3	4.201e3	1.166	1.36	1.24	78.4	YES	NO	bd	bd	1.310
3	Total-hexafurans	34.28	2.170e4	1.733e4	1.141	1.25	1.24	297.8	YES	NO	bb	bb	5.317
4	Total-hexafurans	33.60	1.145e2	8.691e1	1.141	1.32	1.24	2.7	NO	NO	db	bb	0.027
5	Total-hexafurans	33.44	1.729e4	1.388e4	1.141	1.25	1.24	224.2	YES	NO	bd	bb	4.247
6	123468-HXCDF	33.23	4.955e3	3.852e3	1.169	1.29	1.24	66.1	YES	NO	bb	bb	1.160
7	123789-HxCDF	36.90	1.413e3	1.178e3	1.137	1.20	1.24	15.3	YES	NO	bb	bb	0.416
8	234678-HxCDF	35.91	4.097e3	2.990e3	1.140	1.37	1.24	39.1	YES	NO	bb	bb	0.974

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	1.606e3	1.453e3	0.953	1.11	1.05	23.0	YES	NO	bb	bb	0.842
2	Total-heptafurans	39.44	4.003e4	3.937e4	0.978	1.02	1.05	705.1	YES	NO	bb	bb	19.196
3	1234678-HpCDF	38.78	2.084e4	2.026e4	1.003	1.03	1.05	386.7	YES	NO	bb	bb	8.818

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.52	2.372e3	3.020e3	0.727	0.79	0.77	29.4	YES	NO	dd	dd	0.913
2	Total-tetrafurans	24.45	5.706e2	7.852e2	0.727	0.73	0.77	8.5	YES	NO	bd	dd	0.230
3	Total-tetrafurans	24.02	9.858e2	1.470e3	0.727	0.67	0.77	11.9	YES	NO	bb	dd	0.416
4	Total-tetrafurans	23.58	3.304e2	4.096e2	0.727	0.81	0.77	4.2	YES	NO	db	db	0.125
5	Total-tetrafurans	23.51	6.891e2	9.341e2	0.727	0.74	0.77	11.0	YES	NO	dd	dd	0.275
6	Total-tetrafurans	23.10	1.042e3	1.418e3	0.727	0.74	0.77	14.3	YES	NO	bb	bb	0.417
7	Total-tetrafurans	22.53	4.602e2	5.268e2	0.727	0.87	0.77	5.2	YES	NO	bb	bb	0.167
8	Total-Furans	21.20	1.884e2	2.287e2	0.922	0.82	0.77	2.2	NO	NO	bd	dd	0.056
9	Total-tetrafurans	25.90	7.939e2	9.290e2	0.727	0.85	0.77	9.8	YES	NO	dd	dd	0.292
10	2378-TCDF	25.77	9.089e2	1.334e3	0.702	0.68	0.77	12.4	YES	NO	bd	bd	0.394
11	Total-tetrafurans	25.53	9.264e2	1.371e3	0.727	0.68	0.77	8.0	YES	NO	bb	bb	0.389
12	Total-tetrafurans	24.87	1.509e3	1.782e3	0.727	0.85	0.77	19.8	YES	NO	db	bb	0.557
13	Total-pentafurans	28.86	4.324e3	2.602e3	0.654	1.66	1.55	50.9	YES	NO	dd	dd	1.237
14	Total-pentafurans	28.21	5.496e2	3.436e2	0.654	1.60	1.55	7.4	YES	NO	bb	bd	0.160
15	23478-PeCDF	31.27	1.721e3	1.253e3	0.786	1.37	1.55	24.9	YES	NO	db	db	0.455
16	Total-pentafurans	30.15	1.166e3	8.319e2	0.654	1.40	1.55	13.6	YES	NO	bd	bd	0.357
17	12378-PeCDF	29.93	1.933e3	1.401e3	0.679	1.38	1.55	24.8	YES	NO	bb	bb	0.557
18	Total-pentafurans	28.99	2.317e2	1.610e2	0.654	1.44	1.55	4.6	NO	NO	db	db	0.070
19	123678-HxCDF	35.04	2.391e3	1.722e3	1.091	1.39	1.24	30.5	YES	NO	db	db	0.510
20	123478-HxCDF	34.90	5.719e3	4.201e3	1.166	1.36	1.24	78.4	YES	NO	bd	bd	1.310
21	Total-hexafurans	34.28	2.170e4	1.733e4	1.141	1.25	1.24	297.8	YES	NO	bb	bb	5.317
22	Total-hexafurans	33.60	1.145e2	8.691e1	1.141	1.32	1.24	2.7	NO	NO	db	bb	0.027
23	Total-hexafurans	33.44	1.729e4	1.388e4	1.141	1.25	1.24	224.2	YES	NO	bd	bb	4.247
24	123468-HXCDF	33.23	4.955e3	3.852e3	1.169	1.29	1.24	66.1	YES	NO	bb	bb	1.160
25	123789-HxCDF	36.90	1.413e3	1.178e3	1.137	1.20	1.24	15.3	YES	NO	bb	bb	0.416
26	234678-HxCDF	35.91	4.097e3	2.990e3	1.140	1.37	1.24	39.1	YES	NO	bb	bb	0.974
27	1234789-HpCDF	41.02	1.606e3	1.453e3	0.953	1.11	1.05	23.0	YES	NO	bb	bb	0.842
28	Total-heptafurans	39.44	4.003e4	3.937e4	0.978	1.02	1.05	705.1	YES	NO	bb	bb	19.196
29	1234678-HpCDF	38.78	2.084e4	2.026e4	1.003	1.03	1.05	386.7	YES	NO	bb	bb	8.818
30	OCDF	45.26	3.192e4	3.594e4	0.778	0.89	0.89	555.0	YES	NO	bd	bd	26.741
31	Total-penta1	27.20	8.768e3	5.734e3		1.53	1.55	223.1	YES	NO	bb	bb	1.796

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.59	9.796e2	1.224e3	1.024	0.80	0.77	15.5	YES	NO	bd	dd	0.371
2	Total-tetradioxins	25.03	6.617e2	9.181e2	1.024	0.72	0.77	10.9	YES	NO	bb	bb	0.266
3	Total-tetradioxins	24.74	2.406e2	3.597e2	1.024	0.67	0.77	4.3	YES	NO	bb	db	0.101
4	Total-tetradioxins	24.53	7.798e2	1.084e3	1.024	0.72	0.77	13.1	YES	NO	bb	bd	0.314
5	1368-TCDD	23.54	9.301e2	1.173e3	1.015	0.79	0.77	16.0	YES	NO	bb	bb	0.357

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	1.995e3	1.229e3	1.022	1.62	1.55	22.6	YES	NO	bb	bb	0.554
2	Total-pentadioxins	30.15	1.698e3	1.130e3	1.502	1.50	1.55	21.5	YES	NO	bd	bd	0.331
3	Total-pentadioxins	29.92	1.434e3	9.263e2	1.502	1.55	1.55	17.3	YES	NO	bb	bb	0.276
4	Total-pentadioxins	29.31	9.310e2	5.235e2	1.502	1.78	1.55	14.9	YES	NO	bb	bb	0.170
5	12479-PECDD	28.84	3.287e3	2.198e3	2.301	1.50	1.55	25.9	YES	NO	bb	bb	0.419

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	35.24	1.643e3	1.504e3	1.005	1.09	1.24	23.6	YES	NO	db	db	0.545
2	Total-hexadioxins	35.14	1.675e4	1.378e4	1.005	1.22	1.24	151.2	YES	NO	bd	bd	5.289
3	Total-hexadioxins	34.78	3.140e3	2.321e3	1.005	1.35	1.24	38.7	YES	NO	bb	bb	0.946
4	124679-HXCDD	34.01	1.446e4	1.187e4	1.115	1.22	1.24	191.9	YES	NO	bb	bb	4.348
5	123789-HxCDD	36.53	4.176e3	3.122e3	0.907	1.34	1.24	55.7	YES	NO	bb	bb	1.400
6	123678-HxCDD	36.14	5.550e3	4.671e3	1.001	1.19	1.24	74.6	YES	NO	dd	dd	1.685
7	123478-HxCDD	36.02	2.286e3	2.030e3	0.996	1.13	1.24	33.3	YES	NO	bd	bd	0.798

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.012e5	9.607e4	1.039	1.05	1.05	765.3	YES	NO	bb	bb	48.409
2	1234679-HPCDD	39.23	1.471e5	1.441e5	1.137	1.02	1.05	1181.1	YES	NO	bb	bb	65.290

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.59	9.796e2	1.224e3	1.024	0.80	0.77	15.5	YES	NO	bd	dd	0.371
2	Total-tetradioxins	25.03	6.617e2	9.181e2	1.024	0.72	0.77	10.9	YES	NO	bb	bb	0.266
3	Total-tetradioxins	24.74	2.406e2	3.597e2	1.024	0.67	0.77	4.3	YES	NO	bb	db	0.101
4	Total-tetradioxins	24.53	7.798e2	1.084e3	1.024	0.72	0.77	13.1	YES	NO	bb	bd	0.314
5	1368-TCDD	23.54	9.301e2	1.173e3	1.015	0.79	0.77	16.0	YES	NO	bb	bb	0.357
6	Total-Dioxins	21.82	1.114e2	1.278e2	1.130	0.87	0.77	2.9	NO	NO	bb	bd	0.037
7	12378-PeCDD	31.53	1.995e3	1.229e3	1.022	1.62	1.55	22.6	YES	NO	bb	bb	0.554
8	Total-pentadioxins	30.15	1.698e3	1.130e3	1.502	1.50	1.55	21.5	YES	NO	bd	bd	0.331
9	Total-pentadioxins	29.92	1.434e3	9.263e2	1.502	1.55	1.55	17.3	YES	NO	bb	bb	0.276
10	Total-pentadioxins	29.31	9.310e2	5.235e2	1.502	1.78	1.55	14.9	YES	NO	bb	bb	0.170
11	12479-PECDD	28.84	3.287e3	2.198e3	2.301	1.50	1.55	25.9	YES	NO	bb	bb	0.419
12	Total-hexadioxins	35.24	1.643e3	1.504e3	1.005	1.09	1.24	23.6	YES	NO	db	db	0.545
13	Total-hexadioxins	35.14	1.675e4	1.378e4	1.005	1.22	1.24	151.2	YES	NO	bd	bd	5.289
14	Total-hexadioxins	34.78	3.140e3	2.321e3	1.005	1.35	1.24	38.7	YES	NO	bb	bb	0.946
15	124679-HXCDD	34.01	1.446e4	1.187e4	1.115	1.22	1.24	191.9	YES	NO	bb	bb	4.348
16	123789-HxCDD	36.53	4.176e3	3.122e3	0.907	1.34	1.24	55.7	YES	NO	bb	bb	1.400
17	123678-HxCDD	36.14	5.550e3	4.671e3	1.001	1.19	1.24	74.6	YES	NO	dd	dd	1.685
18	123478-HxCDD	36.02	2.286e3	2.030e3	0.996	1.13	1.24	33.3	YES	NO	bd	bd	0.798
19	1234678-HpCDD	40.27	1.012e5	9.607e4	1.039	1.05	1.05	765.3	YES	NO	bb	bb	48.409
20	1234679-HPCDD	39.23	1.471e5	1.441e5	1.137	1.02	1.05	1181.1	YES	NO	bb	bb	65.290
21	OCDD	45.01	5.378e5	6.219e5	0.920	0.86	0.89	3887.2	YES	NO	bb	bb	386.380

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetrafurans	24.52	2.372e3	3.020e3	0.727	0.79	0.77	29.4	YES	NO	dd	dd	0.913
2	Total-tetrafurans	24.45	5.706e2	7.852e2	0.727	0.73	0.77	8.5	YES	NO	bd	dd	0.230
3	Total-tetrafurans	24.02	9.858e2	1.470e3	0.727	0.67	0.77	11.9	YES	NO	bb	dd	0.416
4	Total-tetrafurans	23.58	3.304e2	4.096e2	0.727	0.81	0.77	4.2	YES	NO	db	db	0.125
5	Total-tetrafurans	23.51	6.891e2	9.341e2	0.727	0.74	0.77	11.0	YES	NO	dd	dd	0.275
6	Total-tetrafurans	23.10	1.042e3	1.418e3	0.727	0.74	0.77	14.3	YES	NO	bb	bb	0.417
7	Total-tetrafurans	22.53	4.602e2	5.268e2	0.727	0.87	0.77	5.2	YES	NO	bb	bb	0.167
8	Total-Furans	21.20	1.884e2	2.287e2	0.922	0.82	0.77	2.2	NO	NO	bd	dd	0.056
9	Total-tetrafurans	25.90	7.939e2	9.290e2	0.727	0.85	0.77	9.8	YES	NO	dd	dd	0.292
10	2378-TCDF	25.77	9.089e2	1.334e3	0.702	0.68	0.77	12.4	YES	NO	bd	bd	0.394
11	Total-tetrafurans	25.53	9.264e2	1.371e3	0.727	0.68	0.77	8.0	YES	NO	bb	bb	0.389
12	Total-tetrafurans	24.87	1.509e3	1.782e3	0.727	0.85	0.77	19.8	YES	NO	db	bb	0.557
13	Total-pentafurans	28.86	4.324e3	2.602e3	0.654	1.66	1.55	50.9	YES	NO	dd	dd	1.237
14	Total-pentafurans	28.21	5.496e2	3.436e2	0.654	1.60	1.55	7.4	YES	NO	bb	bd	0.160
15	23478-PeCDF	31.27	1.721e3	1.253e3	0.786	1.37	1.55	24.9	YES	NO	db	db	0.455
16	Total-pentafurans	30.15	1.166e3	8.319e2	0.654	1.40	1.55	13.6	YES	NO	bd	bd	0.357
17	12378-PeCDF	29.93	1.933e3	1.401e3	0.679	1.38	1.55	24.8	YES	NO	bb	bb	0.557
18	Total-pentafurans	28.99	2.317e2	1.610e2	0.654	1.44	1.55	4.6	NO	NO	db	db	0.070
19	123678-HxCDF	35.04	2.391e3	1.722e3	1.091	1.39	1.24	30.5	YES	NO	db	db	0.510
20	123478-HxCDF	34.90	5.719e3	4.201e3	1.166	1.36	1.24	78.4	YES	NO	bd	bd	1.310
21	Total-hexafurans	34.28	2.170e4	1.733e4	1.141	1.25	1.24	297.8	YES	NO	bb	bb	5.317
22	Total-hexafurans	33.60	1.145e2	8.691e1	1.141	1.32	1.24	2.7	NO	NO	db	bb	0.027
23	Total-hexafurans	33.44	1.729e4	1.388e4	1.141	1.25	1.24	224.2	YES	NO	bd	bb	4.247
24	123468-HXCDF	33.23	4.955e3	3.852e3	1.169	1.29	1.24	66.1	YES	NO	bb	bb	1.160
25	123789-HxCDF	36.90	1.413e3	1.178e3	1.137	1.20	1.24	15.3	YES	NO	bb	bb	0.416
26	234678-HxCDF	35.91	4.097e3	2.990e3	1.140	1.37	1.24	39.1	YES	NO	bb	bb	0.974
27	1234789-HpCDF	41.02	1.606e3	1.453e3	0.953	1.11	1.05	23.0	YES	NO	bb	bb	0.842
28	Total-heptafurans	39.44	4.003e4	3.937e4	0.978	1.02	1.05	705.1	YES	NO	bb	bb	19.196
29	1234678-HpCDF	38.78	2.084e4	2.026e4	1.003	1.03	1.05	386.7	YES	NO	bb	bb	8.818
30	OCDF	45.26	3.192e4	3.594e4	0.778	0.89	0.89	555.0	YES	NO	bd	bd	26.741
31	Total-penta1	27.20	8.768e3	5.734e3		1.53	1.55	223.1	YES	NO	bb	bb	1.796
32	Total-tetradioxins	25.59	9.796e2	1.224e3	1.024	0.80	0.77	15.5	YES	NO	bd	dd	0.371
33	Total-tetradioxins	25.03	6.617e2	9.181e2	1.024	0.72	0.77	10.9	YES	NO	bb	bb	0.266
34	Total-tetradioxins	24.74	2.406e2	3.597e2	1.024	0.67	0.77	4.3	YES	NO	bb	db	0.101
35	Total-tetradioxins	24.53	7.798e2	1.084e3	1.024	0.72	0.77	13.1	YES	NO	bb	bd	0.314
36	1368-TCDD	23.54	9.301e2	1.173e3	1.015	0.79	0.77	16.0	YES	NO	bb	bb	0.357
37	Total-Dioxins	21.82	1.114e2	1.278e2	1.130	0.87	0.77	2.9	NO	NO	bb	bd	0.037

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	12378-PeCDD	31.53	1.995e3	1.229e3	1.022	1.62	1.55	22.6	YES	NO	bb	bb	0.554
39	Total-pentadioxins	30.15	1.698e3	1.130e3	1.502	1.50	1.55	21.5	YES	NO	bd	bd	0.331
40	Total-pentadioxins	29.92	1.434e3	9.263e2	1.502	1.55	1.55	17.3	YES	NO	bb	bb	0.276
41	Total-pentadioxins	29.31	9.310e2	5.235e2	1.502	1.78	1.55	14.9	YES	NO	bb	bb	0.170
42	12479-PECDD	28.84	3.287e3	2.198e3	2.301	1.50	1.55	25.9	YES	NO	bb	bb	0.419
43	Total-hexadioxins	35.24	1.643e3	1.504e3	1.005	1.09	1.24	23.6	YES	NO	db	db	0.545
44	Total-hexadioxins	35.14	1.675e4	1.378e4	1.005	1.22	1.24	151.2	YES	NO	bd	bd	5.289
45	Total-hexadioxins	34.78	3.140e3	2.321e3	1.005	1.35	1.24	38.7	YES	NO	bb	bb	0.946
46	124679-HXCDD	34.01	1.446e4	1.187e4	1.115	1.22	1.24	191.9	YES	NO	bb	bb	4.348
47	123789-HxCDD	36.53	4.176e3	3.122e3	0.907	1.34	1.24	55.7	YES	NO	bb	bb	1.400
48	123678-HxCDD	36.14	5.550e3	4.671e3	1.001	1.19	1.24	74.6	YES	NO	dd	dd	1.685
49	123478-HxCDD	36.02	2.286e3	2.030e3	0.996	1.13	1.24	33.3	YES	NO	bd	bd	0.798
50	1234678-HpCDD	40.27	1.012e5	9.607e4	1.039	1.05	1.05	765.3	YES	NO	bb	bb	48.409
51	1234679-HPCDD	39.23	1.471e5	1.441e5	1.137	1.02	1.05	1181.1	YES	NO	bb	bb	65.290
52	OCDD	45.01	5.378e5	6.219e5	0.920	0.86	0.89	3887.2	YES	NO	bb	bb	386.380

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.44	5.095e6					14.8	YES		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.60	1.699e5					5.5	YES		bb		0.000
2	FUNCTION2 PFK	29.43	1.128e5					1.9	NO		bb		0.000
3	FUNCTION2 PFK	29.17	1.159e6					11.3	YES		bb		0.000
4	FUNCTION2 PFK	28.57	1.998e5					5.6	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.78	3.189e7					15.5	YES		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	44.19	4.922e3					1.4	NO		bb		
2	FUNCTION5 PFK	42.63	1.492e4					2.6	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.35	1.315e2					4.8	YES		bb		0.000
2	FUNCTION1 HXCD...	26.14	1.664e2					5.1	YES		bb		0.000
3	FUNCTION1 HXCD...	25.93	5.904e2					22.1	YES		bb		0.000
4	FUNCTION1 HXCD...	22.31	2.650e2					5.7	YES		bb		0.000
5	FUNCTION1 HXCD...	21.62	1.125e2					4.0	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.88	1.396e2					3.6	YES		bb		0.000
2	FUNCTION2 HPCD...	29.52	1.052e2					1.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.12	9.857e1					3.3	YES		db		0.000
2	FUNCTION3 OCDPE	36.01	1.141e2					4.1	YES		bd		0.000
3	FUNCTION3 OCDPE	34.89	7.769e1					3.6	YES		bb		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.49	1.128e2					4.6	YES		bb		0.000
2	FUNCTION4 NCDPE	38.42	7.489e3					163.1	YES		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Thursday, March 09, 2023 12:07:51 Pacific Standard Time

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ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

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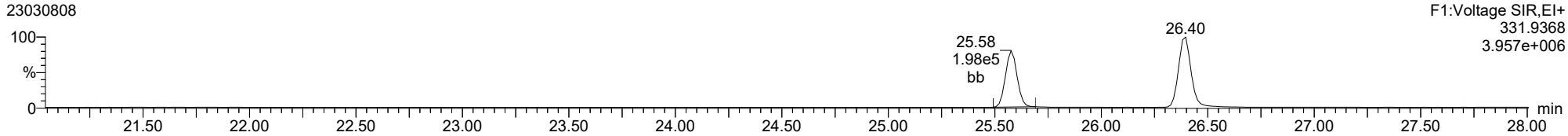

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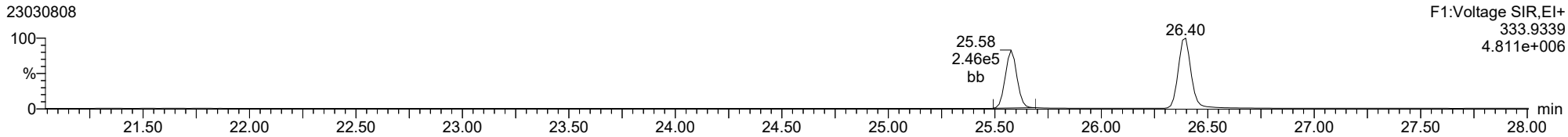

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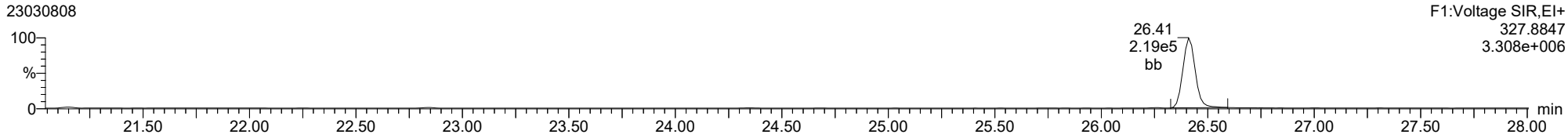

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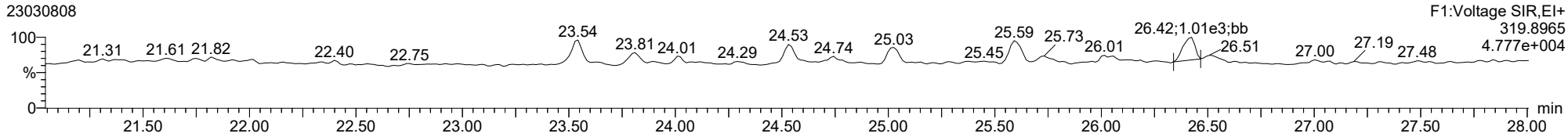

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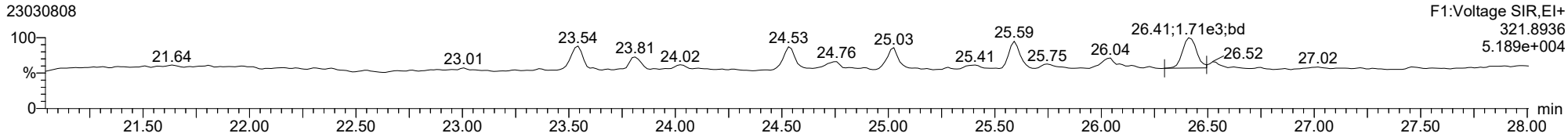

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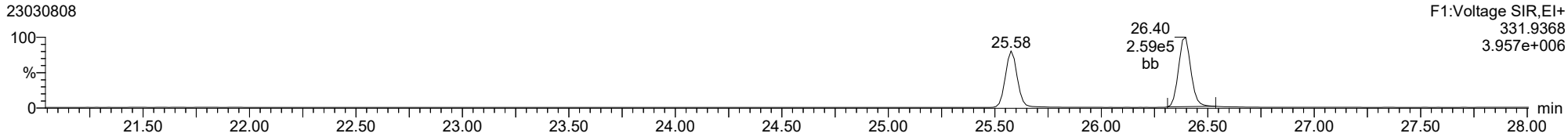

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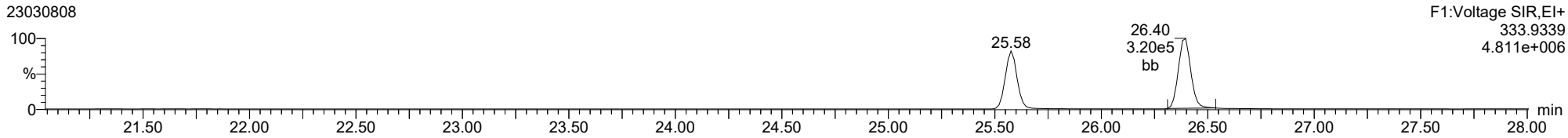
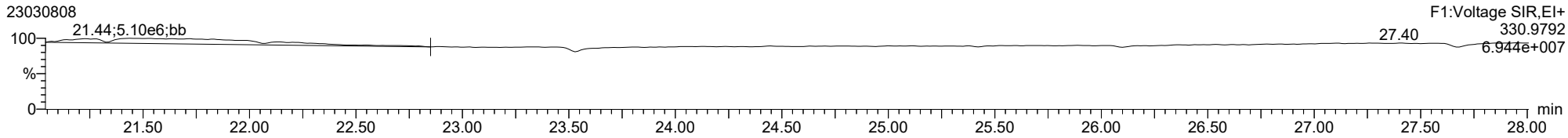


FUNCTION1 PFK



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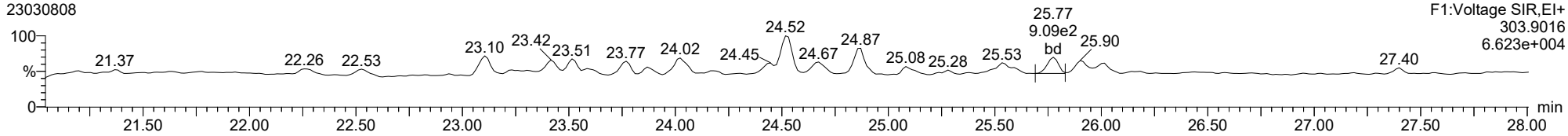

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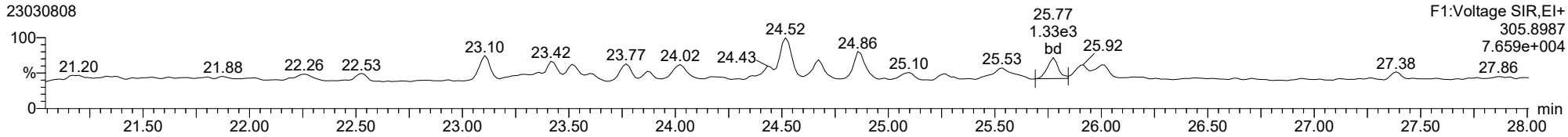

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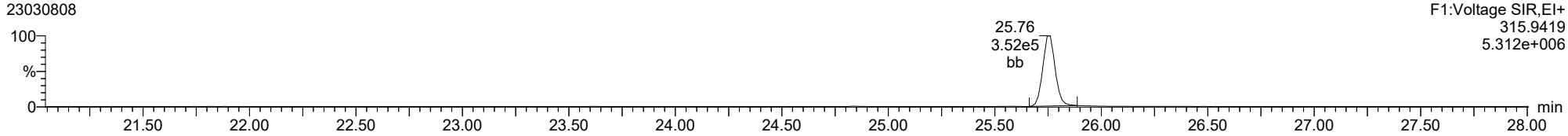

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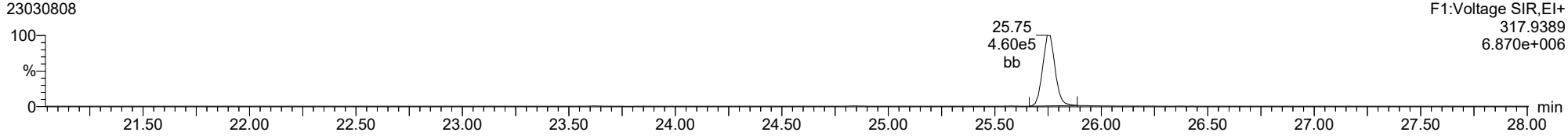
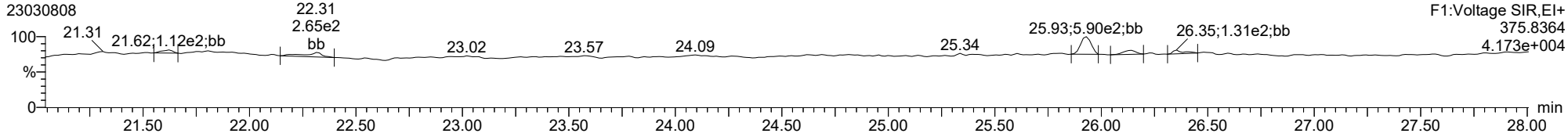


FUNCTION1 HXCDPE



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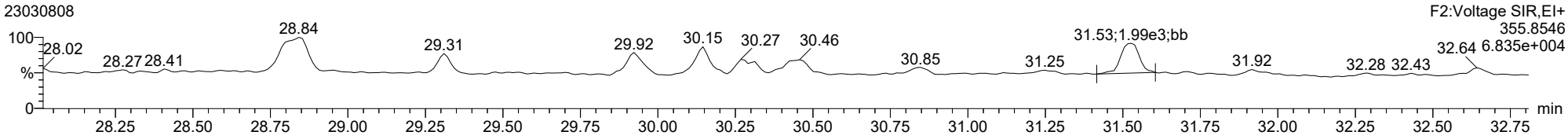
12378-PeCDD



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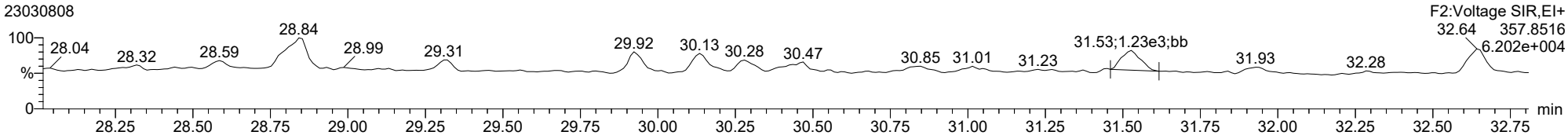

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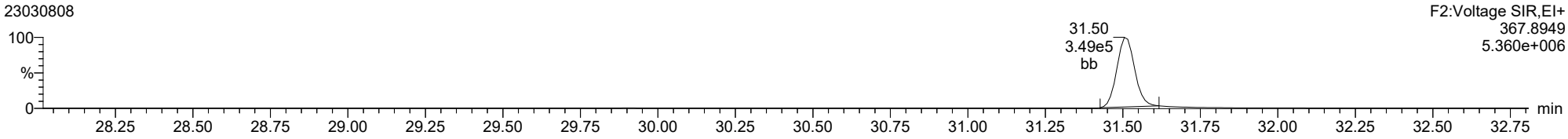

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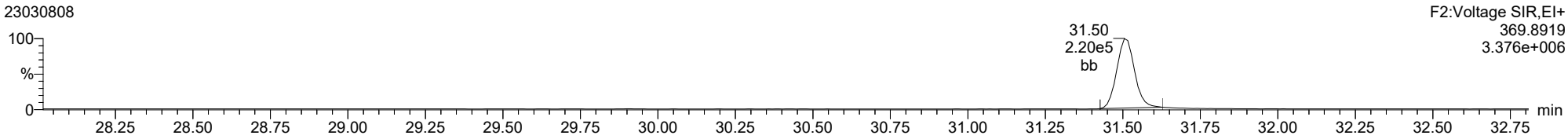
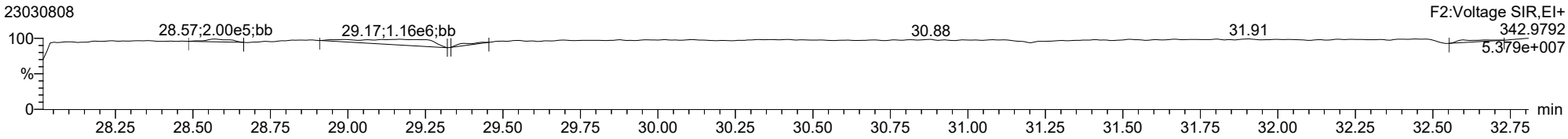


FUNCTION2 PFK



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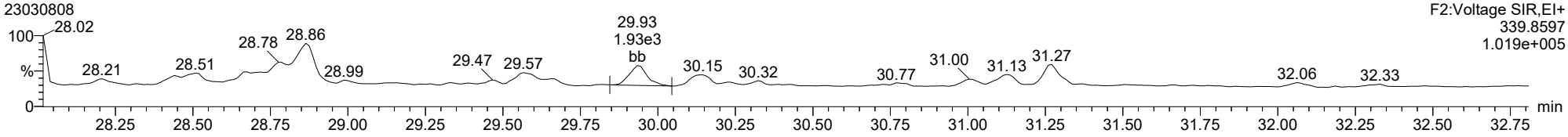
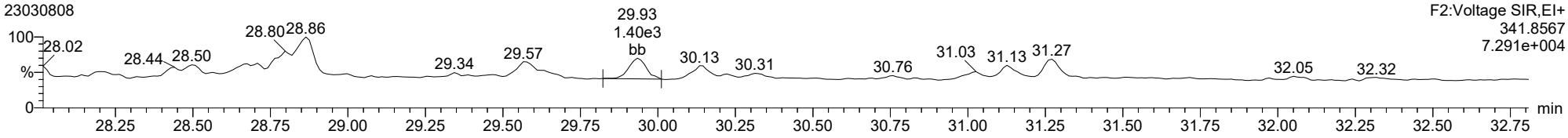
12378-PeCDF



12378-PeCDF



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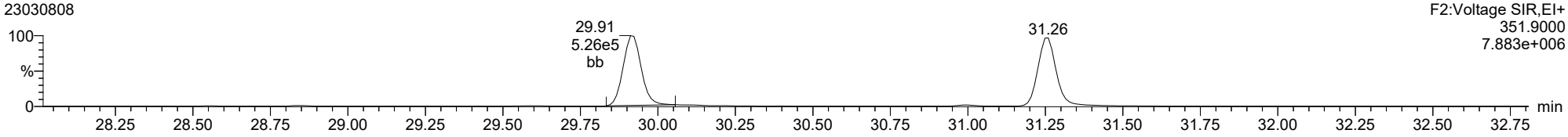

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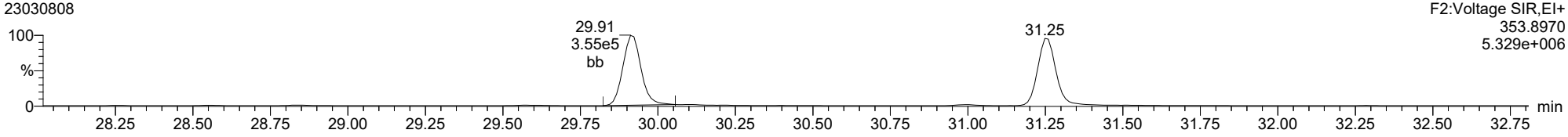

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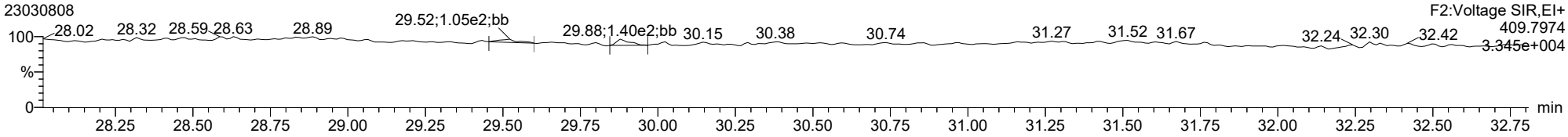

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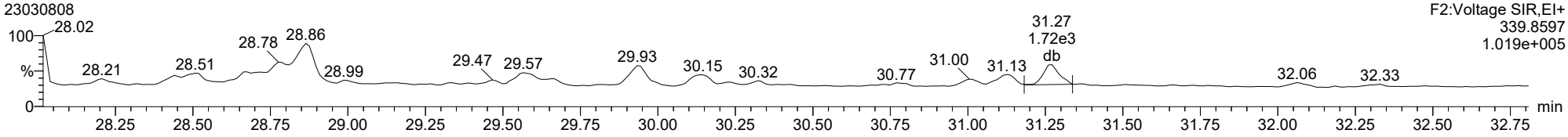

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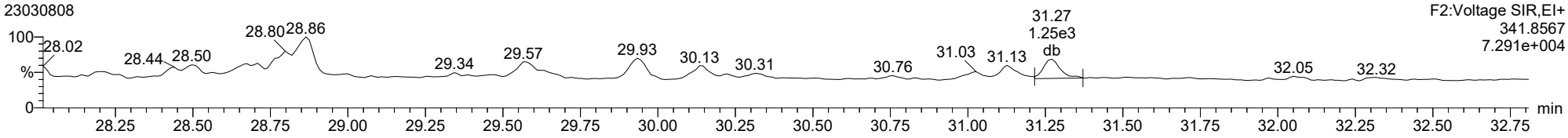

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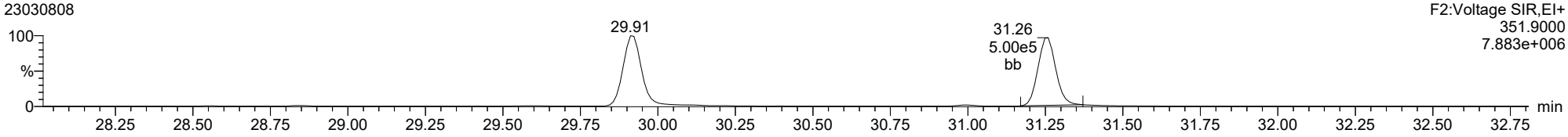

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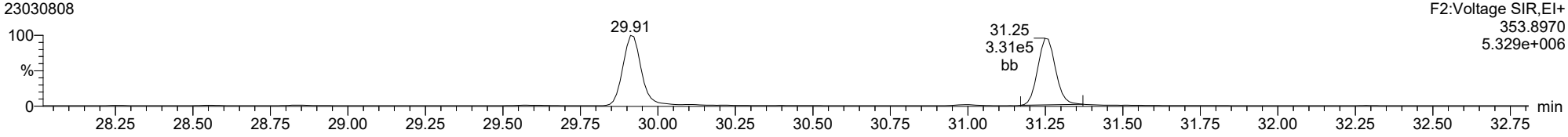

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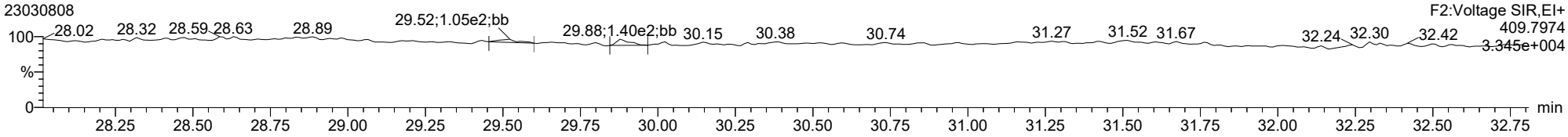

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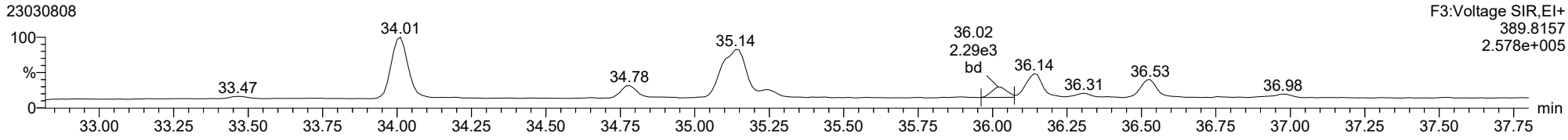

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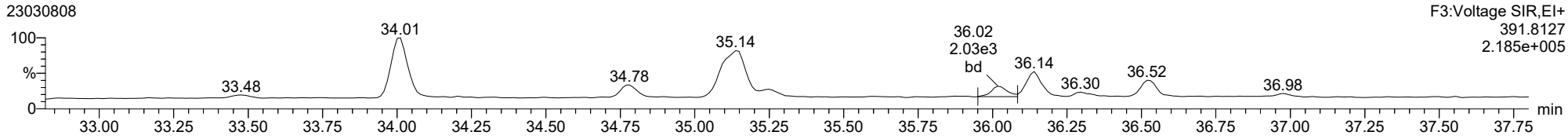

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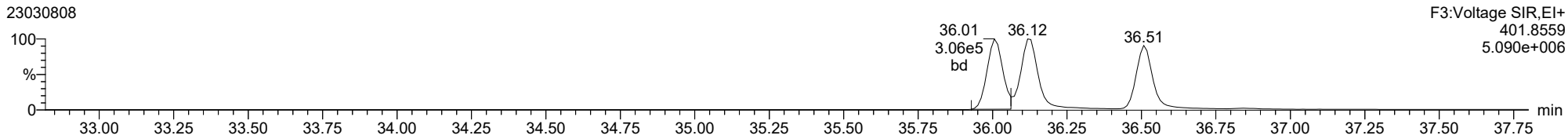

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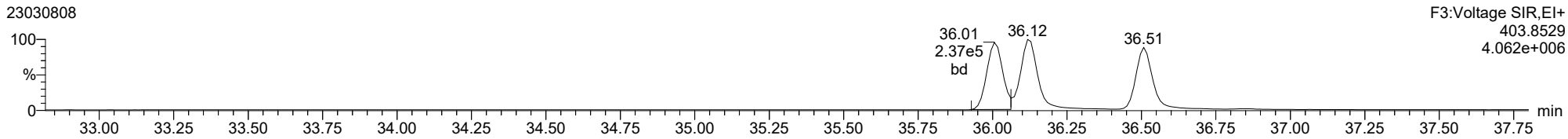

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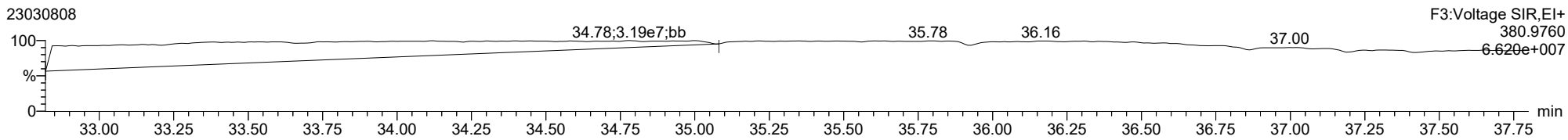

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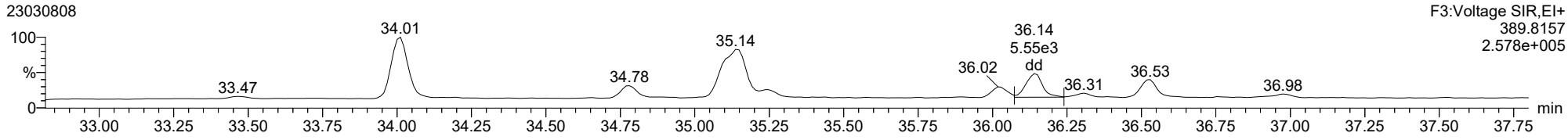

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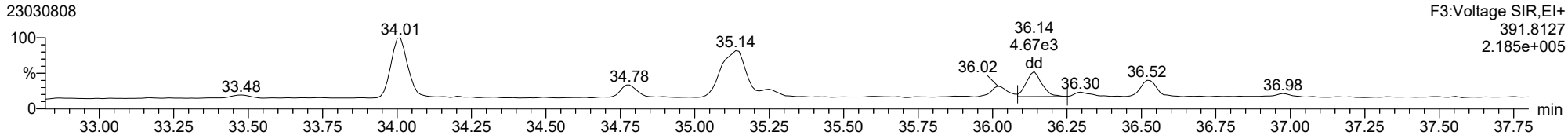

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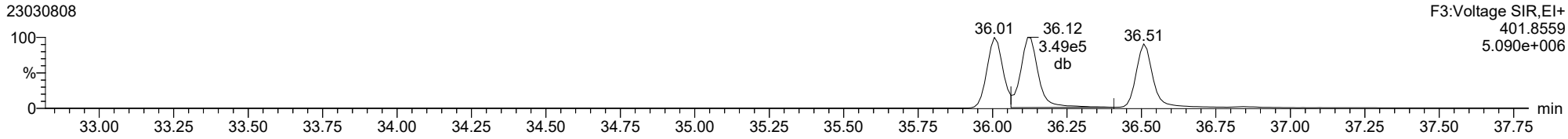

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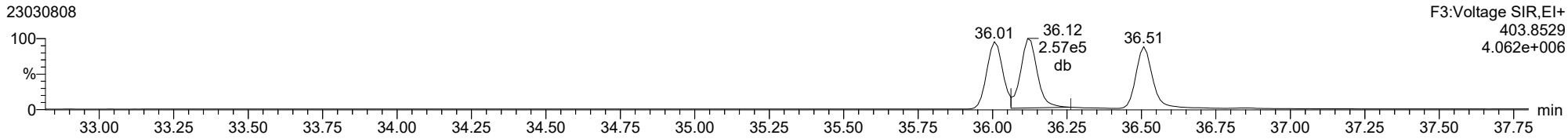

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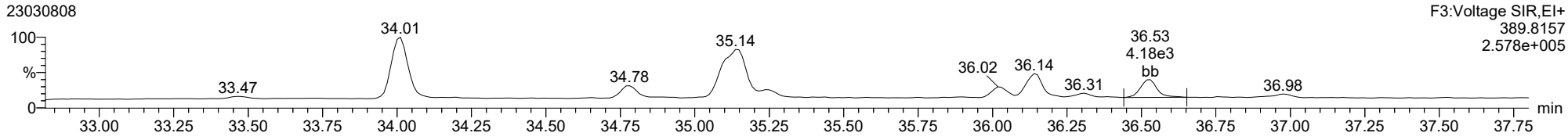

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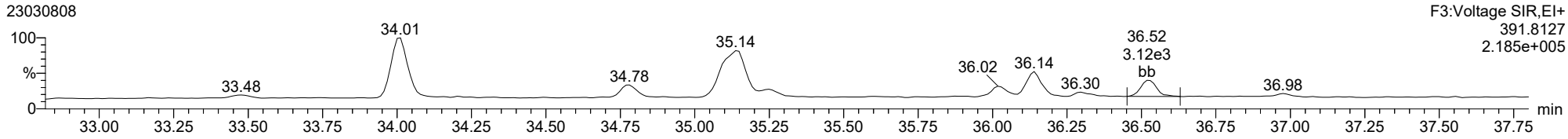

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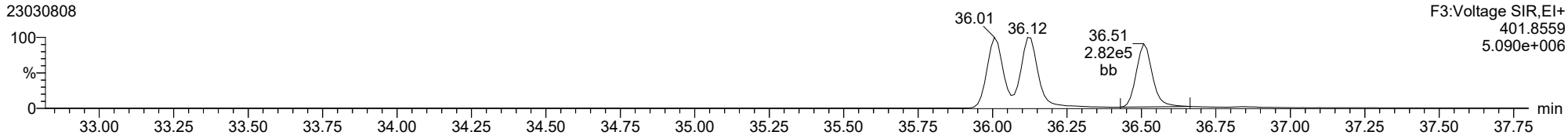

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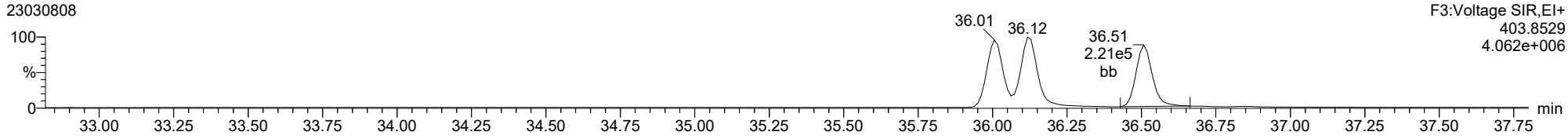

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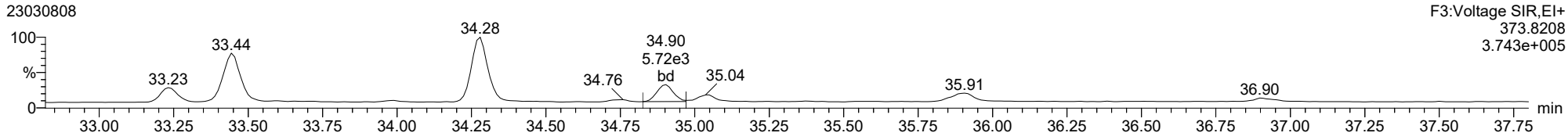

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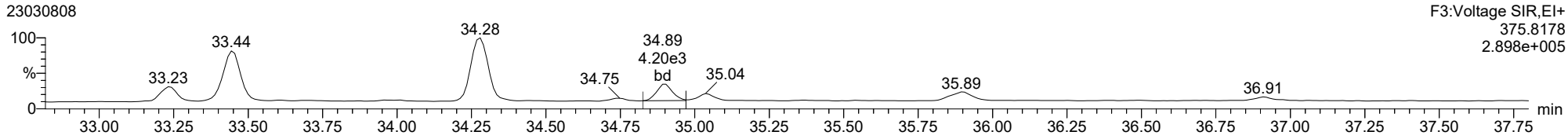

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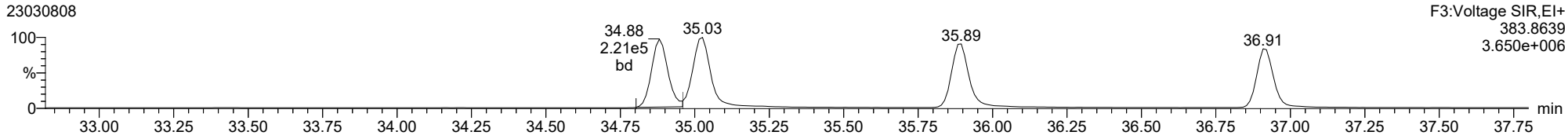

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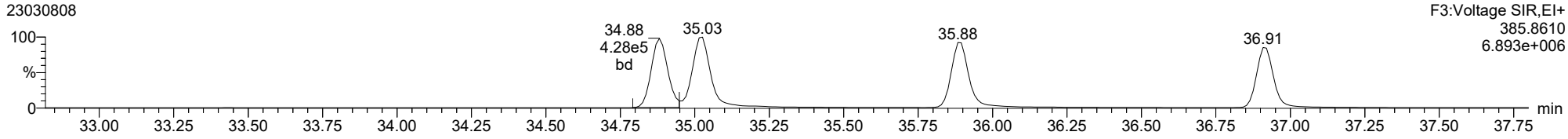

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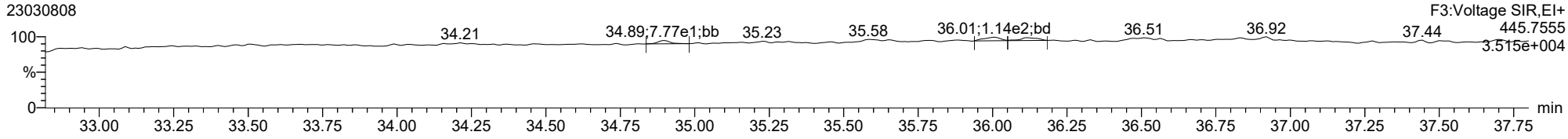

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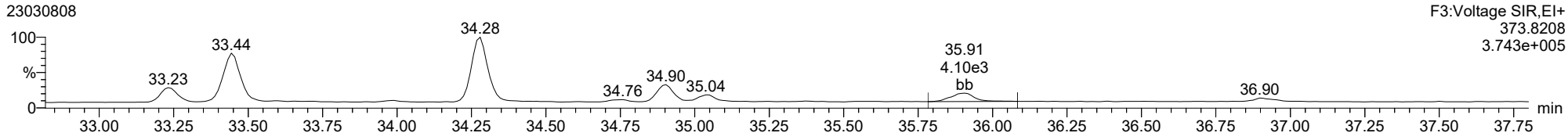

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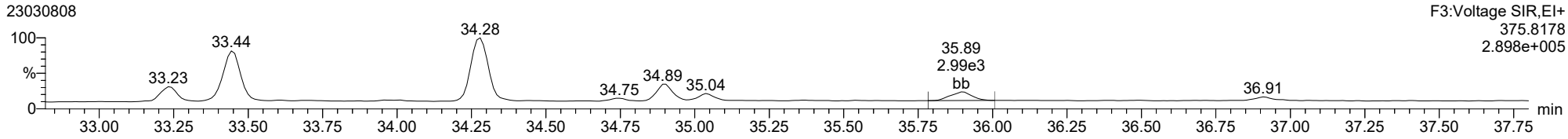

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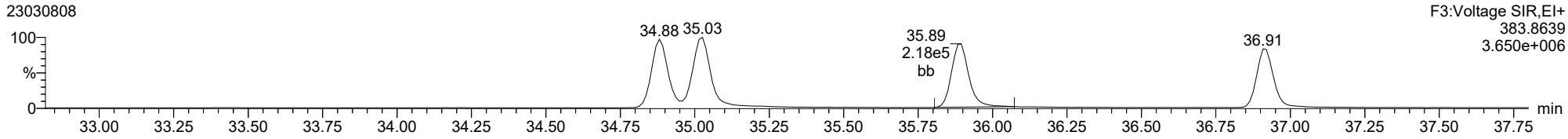

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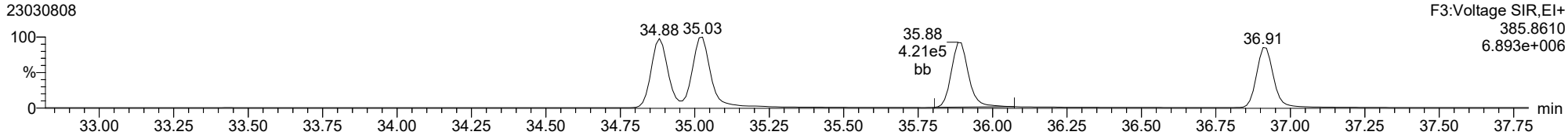

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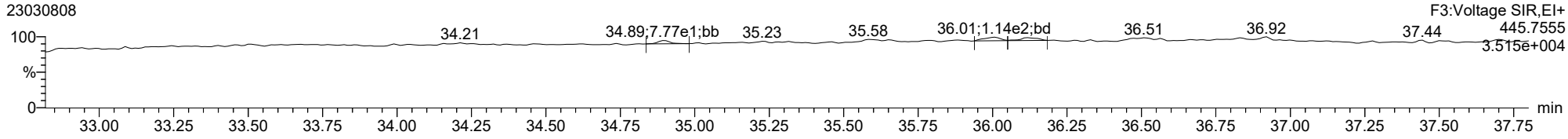

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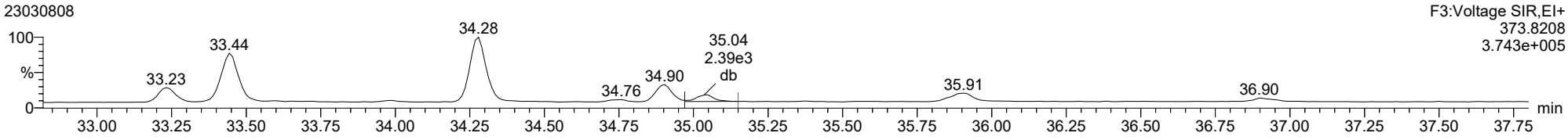

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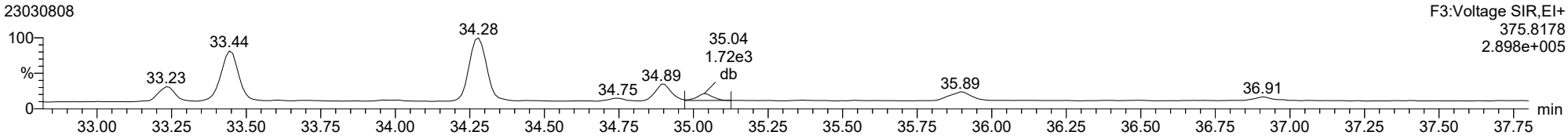

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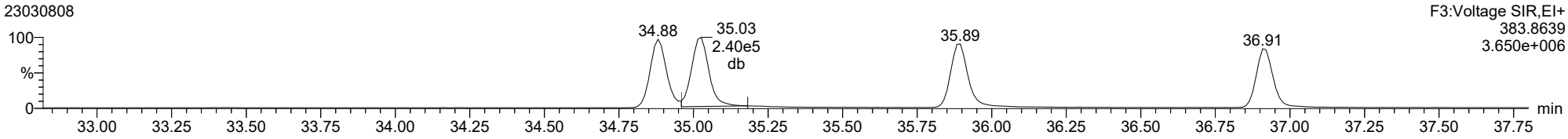

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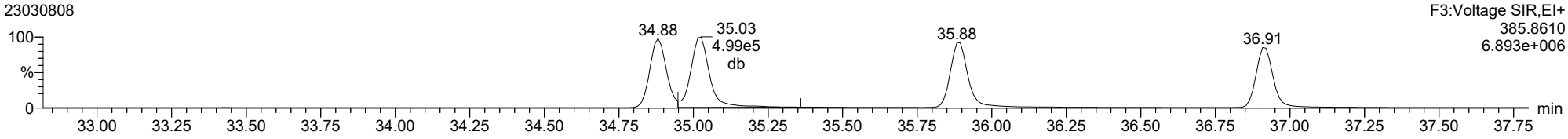

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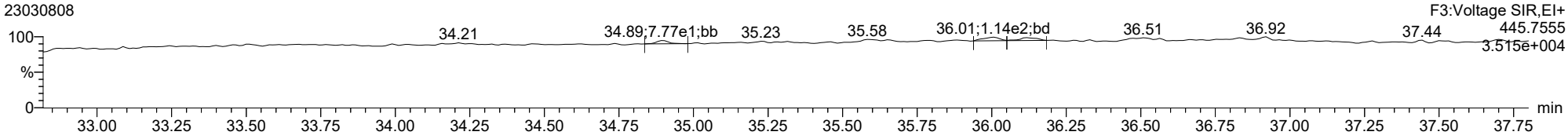

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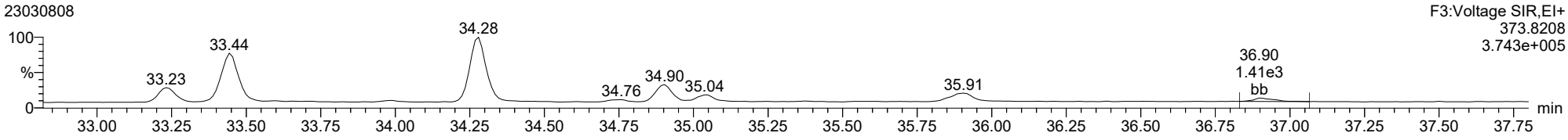

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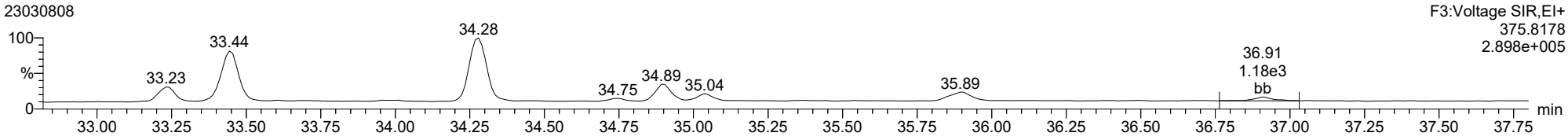

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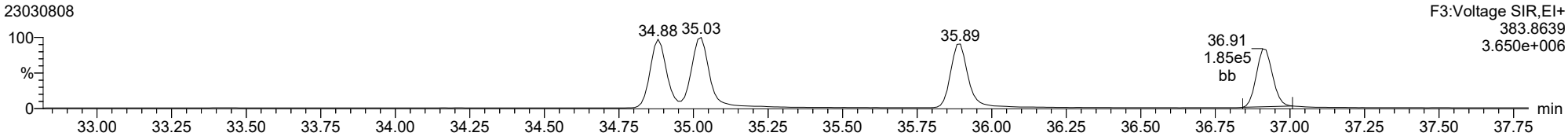

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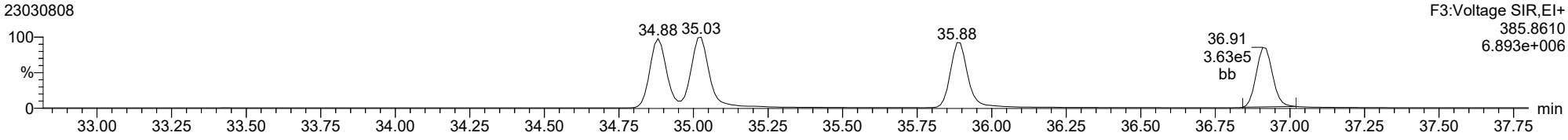
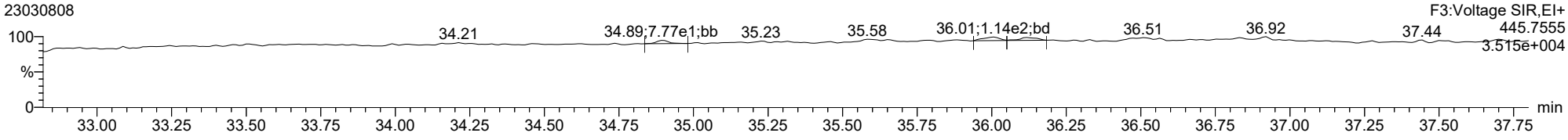


FUNCTION3 OCDPE



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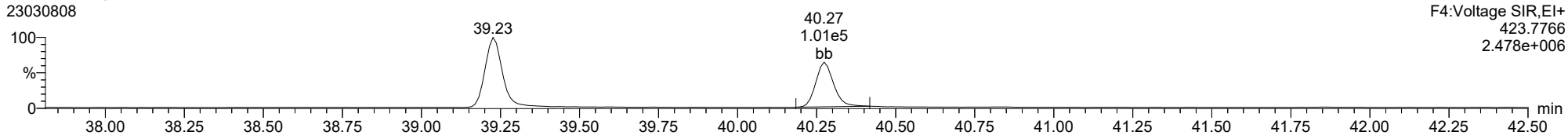
1234678-HpCDD



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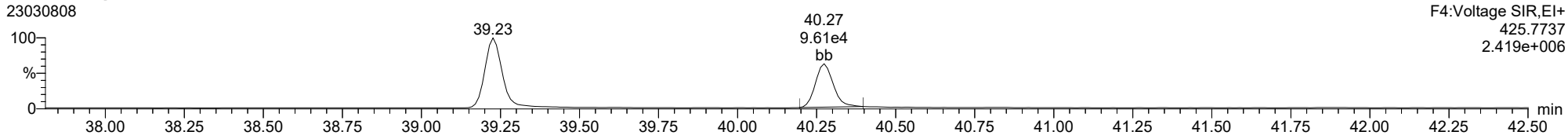

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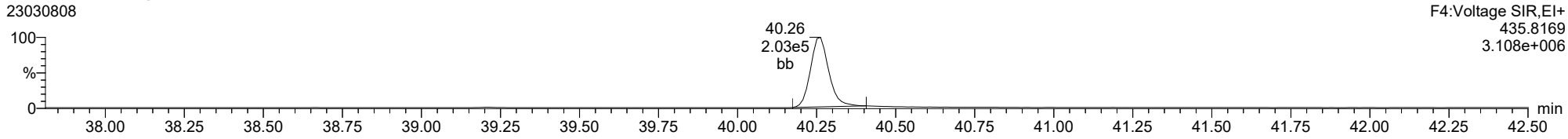

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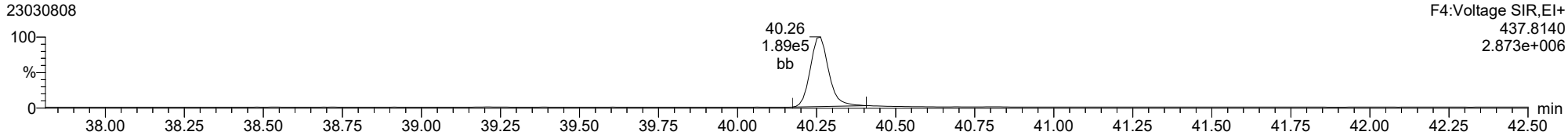
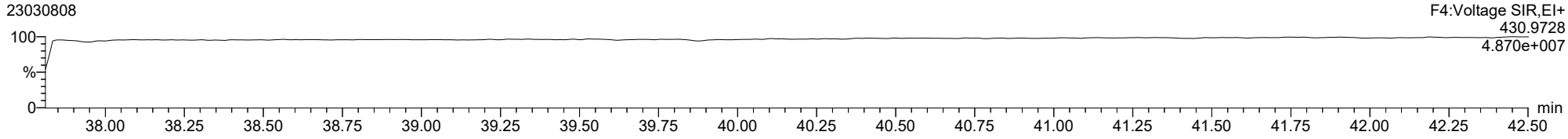


FUNCTION4 PFK



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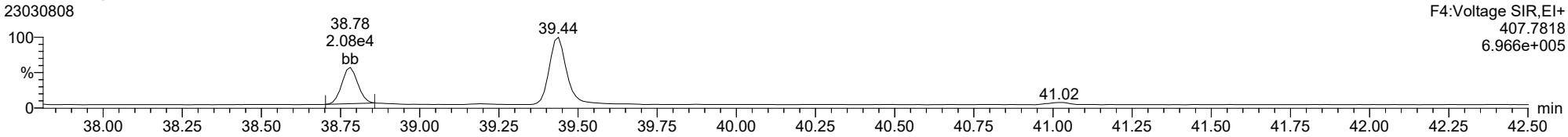
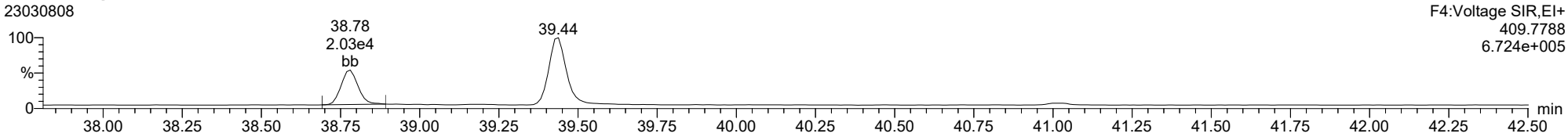
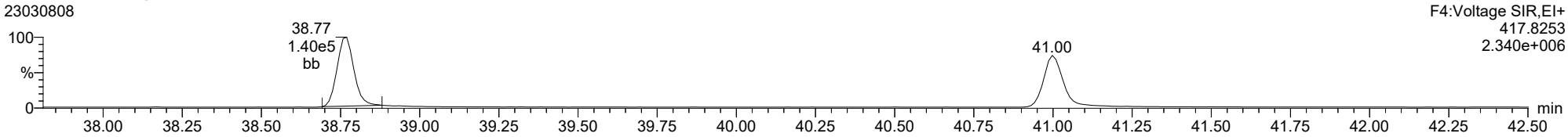
1234678-HpCDF



1234678-HpCDF



13C-1234678-HpCDF



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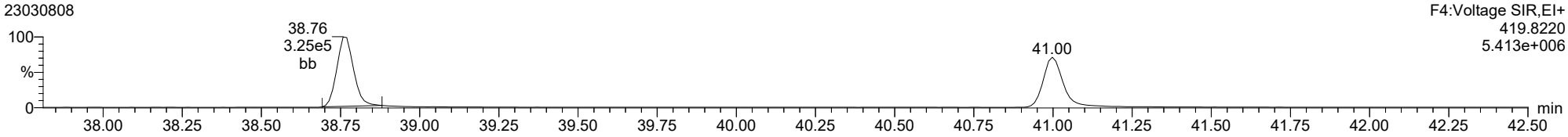
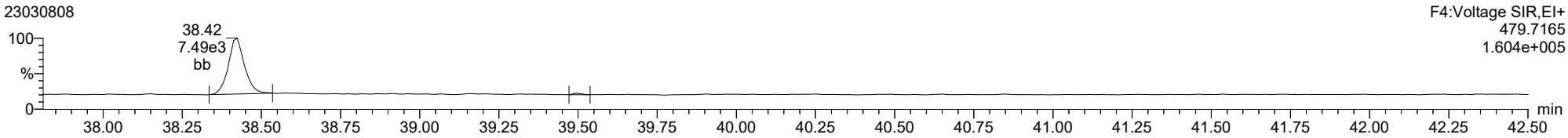
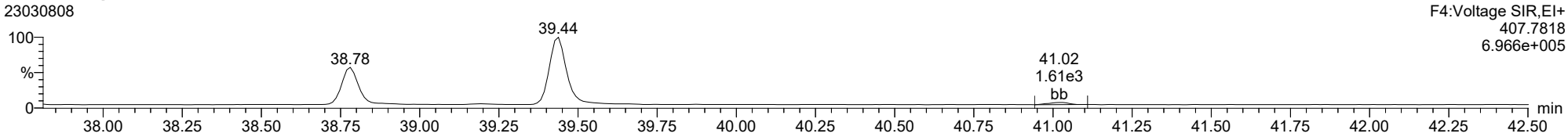


FUNCTION4 NCDPE



ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

1234789-HpCDF



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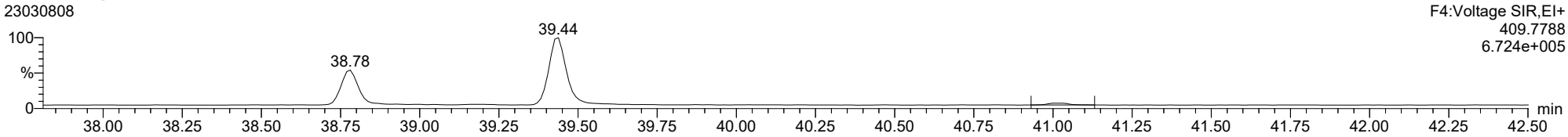

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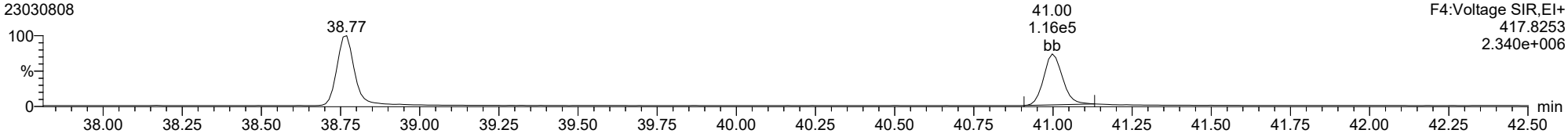

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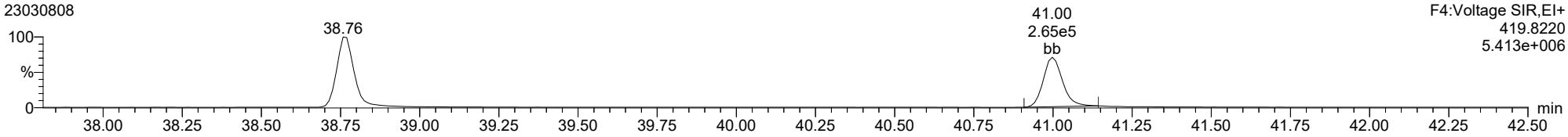
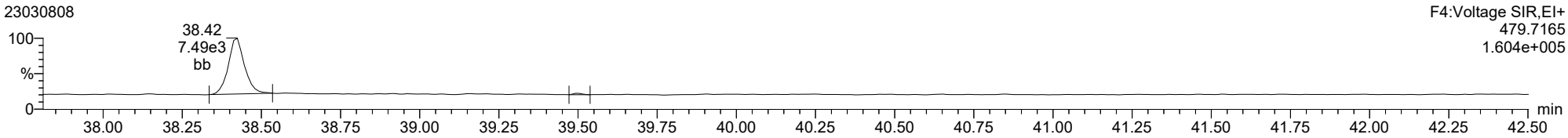
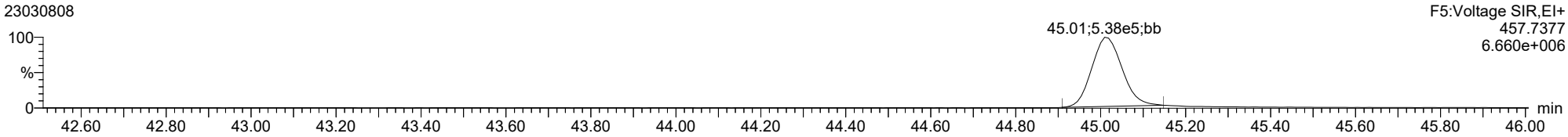


FUNCTION4 NCDPE

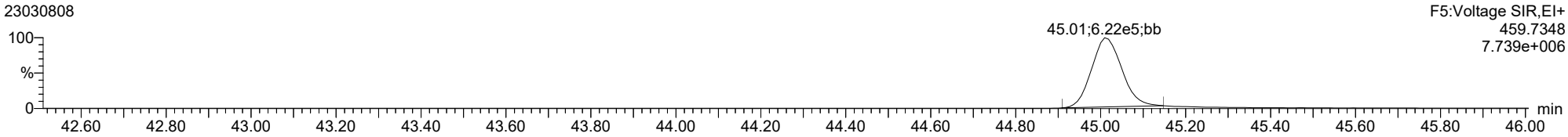


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

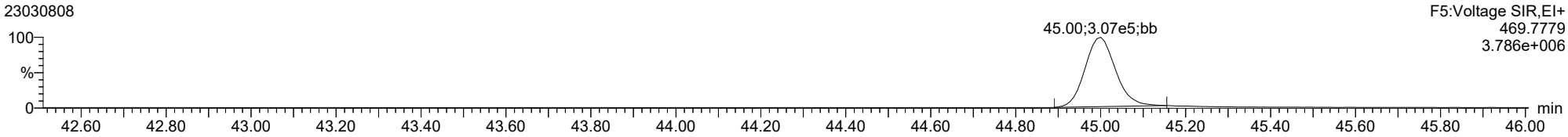
OCDD



OCDD



13C-OCDD



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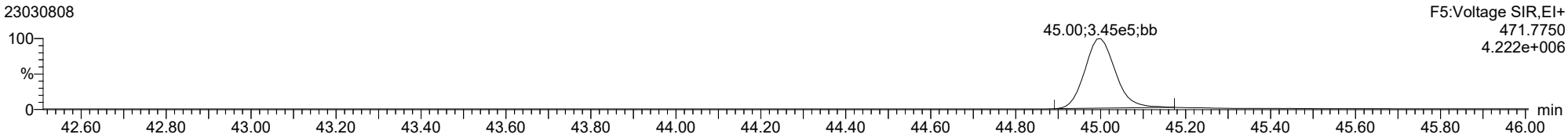
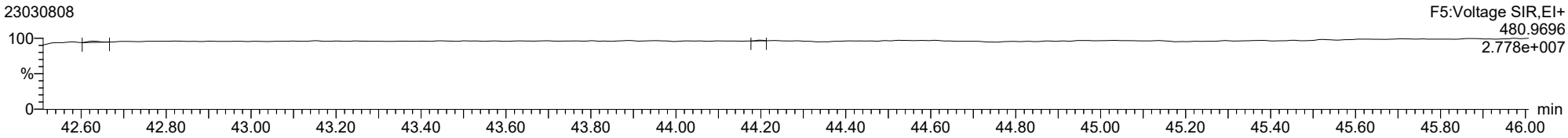
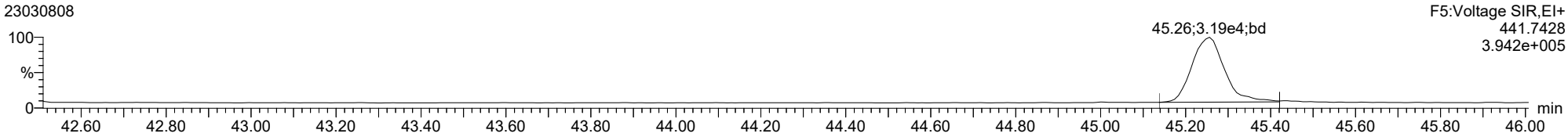


FUNCTION5 PFK

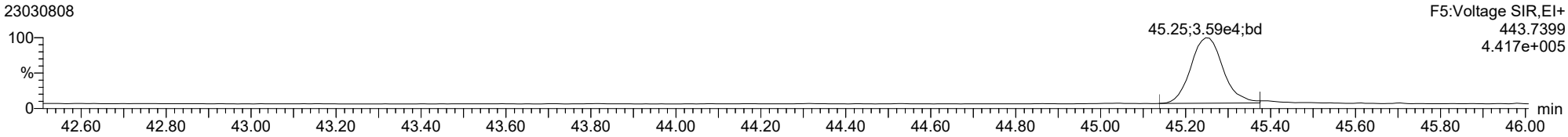


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

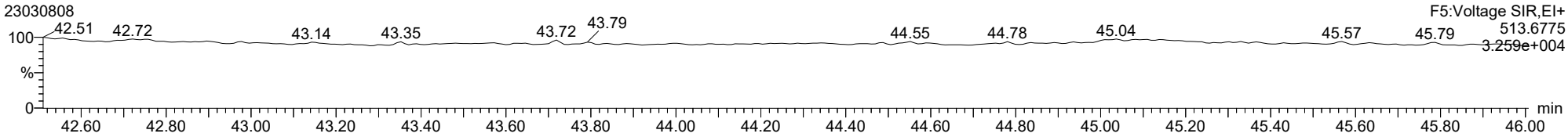
OCDF



OCDF

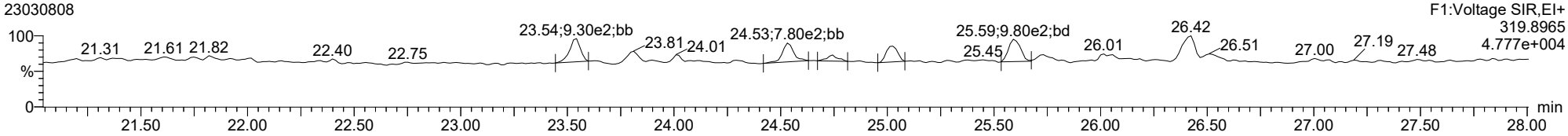


FUNCTION5 DCDPE

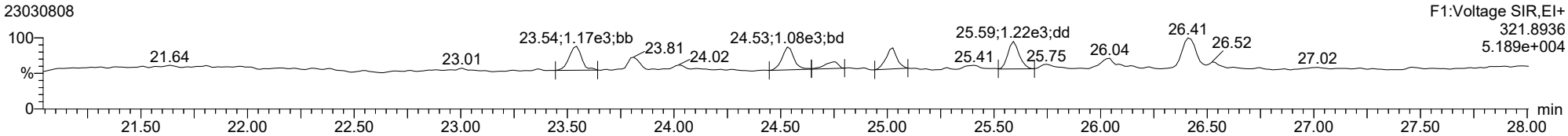


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

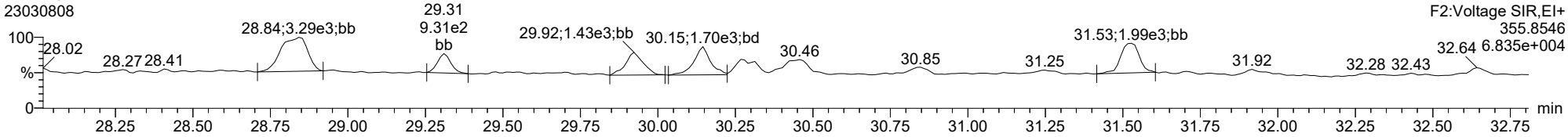
Total-tetradioxins



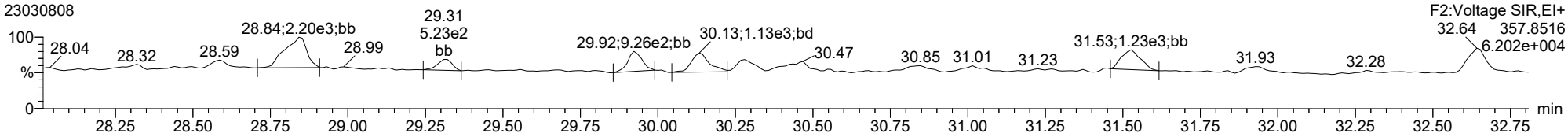
Total-tetradioxins



Total-pentadioxins

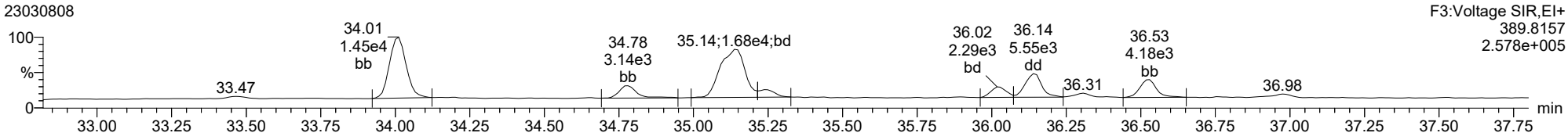


Total-pentadioxins

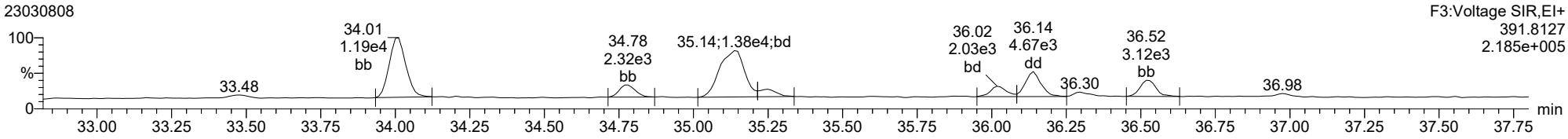


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

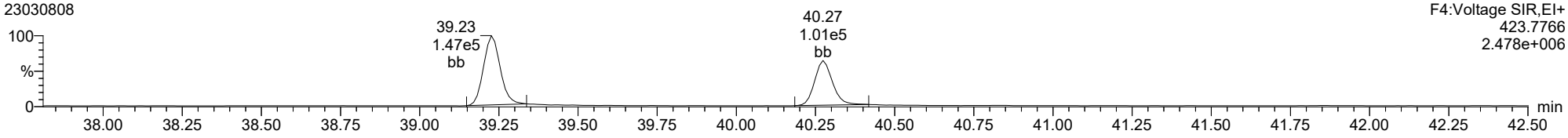
Total-hexadioxins



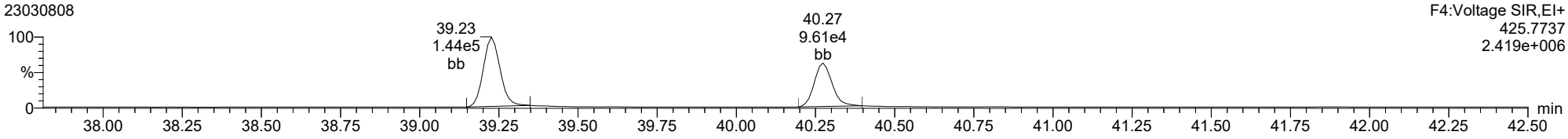
Total-hexadioxins



Total-heptadioxins

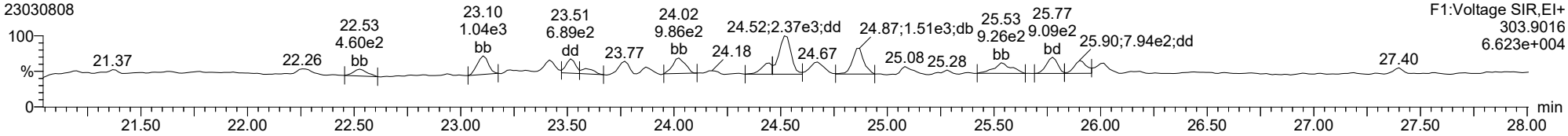


Total-heptadioxins

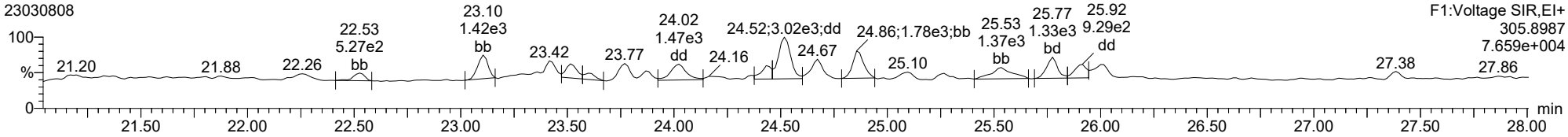


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

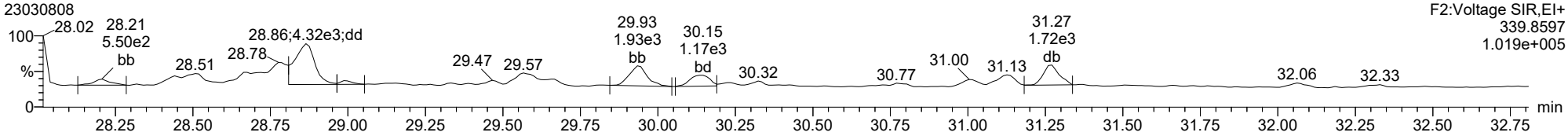
Total-tetrafurans



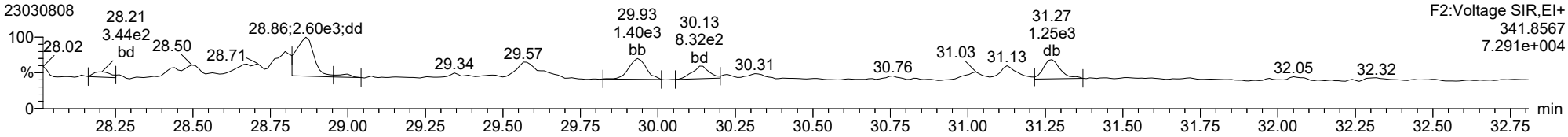
Total-tetrafurans



Total-pentafurans

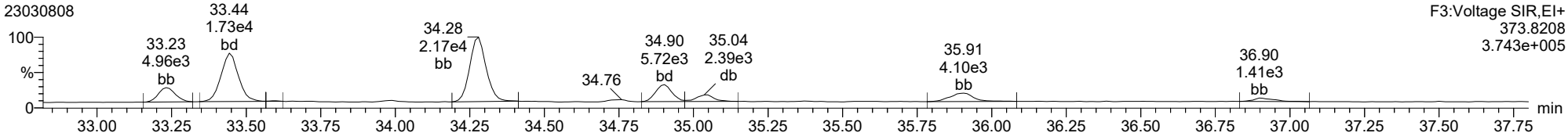


Total-pentafurans

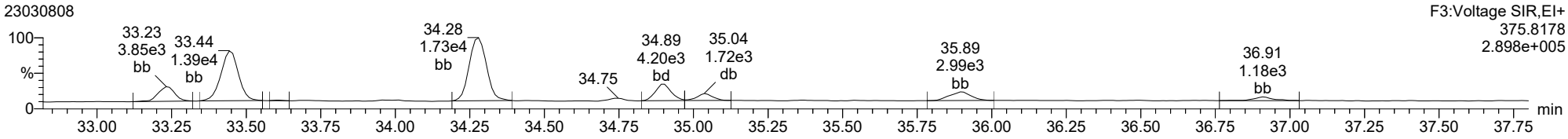


ID: BLB0270-SRM1, Name: 23030808, Date: 08-Mar-2023, Time: 15:37:30, Conditions: AUTOSPEC01, User: pk

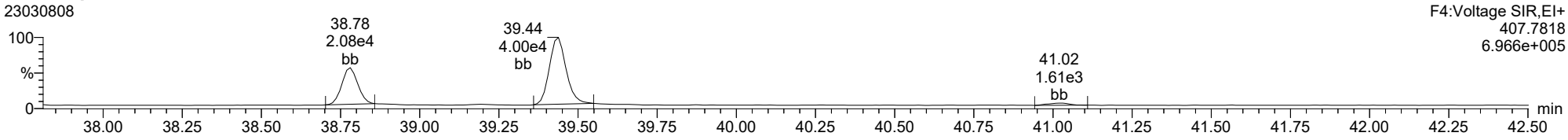
Total-hexafurans



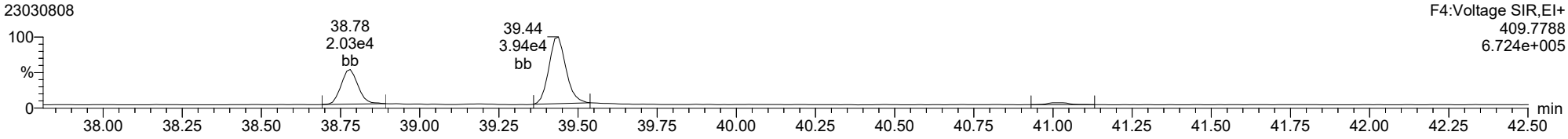
Total-hexafurans



Total-heptafurans



Total-heptafurans



INITIAL CALIBRATION DATA
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
2,3,7,8-TCDF			0.5	0.6926363	2	0.6813224	10	0.7107923	40	0.719723	200	0.7031621
2,3,7,8-TCDD			0.5	1.116738	2	1.187915	10	1.134128	40	1.147736	200	1.156792
1,2,3,7,8-PeCDF	0.5	0.7064839	2.5	0.5889757	10	0.710829	50	0.6668491	200	0.6891968	1000	0.7130453
2,3,4,7,8-PeCDF	0.5	0.7979673	2.5	0.750268	10	0.8092124	50	0.7777683	200	0.7907891	1000	0.7910175
1,2,3,7,8-PeCDD	0.5	1.103364	2.5	0.959607	10	1.01992	50	1.019473	200	1.01999	1000	1.008719
1,2,3,4,7,8-HxCDF	0.5	1.217557	2.5	1.181192	10	1.149885	50	1.142227	200	1.15269	1000	1.152678
1,2,3,6,7,8-HxCDF	0.5	1.080855	2.5	1.053928	10	1.175308	50	1.102076	200	1.035098	1000	1.097184
2,3,4,6,7,8-HxCDF	0.5	1.045907	2.5	1.140857	10	1.199347	50	1.11691	200	1.197861	1000	1.13731
1,2,3,7,8,9-HxCDF	0.5	1.190403	2.5	1.119796	10	1.130872	50	1.147742	200	1.139146	1000	1.094601
1,2,3,4,7,8-HxCDD	0.5	1.079554	2.5	0.961704	10	0.973768	50	0.967789	200	0.9862736	1000	1.004325
1,2,3,6,7,8-HxCDD	0.5	0.9586431	2.5	0.9983677	10	0.9838912	50	1.030566	200	1.022077	1000	1.012084
1,2,3,7,8,9-HxCDD	0.5	0.930997	2.5	0.8854269	10	0.8092562	50	0.9267543	200	0.9251392	1000	0.9651099
1,2,3,4,6,7,8-HpCDF	0.5	0.934103	2.5	1.075239	10	1.011687	50	0.9661089	200	1.026311	1000	1.004508
1,2,3,4,7,8,9-HpCDF	0.5	0.8861422	2.5	0.8930411	10	1.006144	50	0.9387033	200	0.9934576	1000	1.001203
1,2,3,4,6,7,8-HpCDD	0.5	1.103772	2.5	0.971421	10	1.040117	50	1.038088	200	1.030577	1000	1.050103
OCDF	1	0.8118871	5	0.7091624	20	0.7657645	100	0.7266152	400	0.8162858	2000	0.8371317
OCDD			5	1.012935	20	0.8906655	100	0.878436	400	0.9061913	2000	0.9115405
13C12-2,3,7,8-TCDF	100	1.631571	100	1.588495	100	1.670669	100	1.492829	100	1.645068	100	1.692541
13C12-2,3,7,8-TCDD	100	1.103543	100	1.165686	100	1.103763	100	1.147762	100	1.181831	100	1.211872
13C12-1,2,3,7,8-PeCDF	100	1.373516	100	0.8861478	100	1.254697	100	1.157546	100	1.425701	100	1.345107
13C12-2,3,4,7,8-PeCDF	100	1.219579	100	0.8983995	100	1.113808	100	0.8611233	100	1.32733	100	1.286474
13C12-1,2,3,7,8-PeCDD	100	0.9177021	100	0.7002528	100	0.8365419	100	0.5962156	100	0.9821822	100	0.939983
13C12-1,2,3,4,7,8-HxCDF	100	1.152029	100	1.095885	100	1.513935	100	1.121285	100	1.094572	100	1.032122
13C12-1,2,3,6,7,8-HxCDF	100	1.353853	100	1.348693	100	1.689158	100	1.367383	100	1.37092	100	1.188788
13C12-2,3,4,6,7,8-HxCDF	100	1.092029	100	1.127896	100	1.240354	100	1.126074	100	1.087409	100	1.101774
13C12-1,2,3,7,8,9-HxCDF	100	0.8958406	100	0.9493947	100	0.9152119	100	0.9630403	100	0.8996667	100	0.9673701
13C12-1,2,3,4,7,8-HxCDD	100	0.9718531	100	0.9656819	100	1.113686	100	0.9864835	100	0.9766715	100	0.95586
13C12-1,2,3,6,7,8-HxCDD	100	1.184228	100	1.157253	100	1.278683	100	1.163318	100	1.111106	100	1.045546

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RRF	Conc	**RRF**	Conc	RRF	Conc	RRF	Conc	**RRF**	Conc	**RRF**
13C12-1,2,3,4,6,7,8-HpCDF	100	0.7396157	100	0.9023055	100	1.063192	100	0.9589237	100	0.7622694	100	0.9449039
13C12-1,2,3,4,7,8,9-HpCDF	100	0.6488087	100	0.8119515	100	0.8176949	100	0.8667001	100	0.665459	100	0.8078955
13C12-1,2,3,4,6,7,8-HpCDD	100	0.724191	100	0.8737196	100	0.9555336	100	0.9094052	100	0.7229358	100	0.8549505
13C12-OCDD	200	0.701507	200	0.6312376	200	0.823691	200	0.8980531	200	0.7066522	200	0.8436876
37Cl4-2,3,7,8-TCDD	0.1	1.576039	0.5	1.320077	2	1.177166	10	1.132717	40	1.2366	200	1.284223
13C12-1,2,3,4-TCDD	100	1	100	1	100	1	100	1	100	1	100	1
13C12-1,2,3,7,8,9-HxCDD	100	1	100	1	100	1	100	1	100	1	100	1

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
2,3,7,8-TCDF	0.7015272	2.1			RSD ()	
2,3,7,8-TCDD	1.148662	2.3			RSD ()	
1,2,3,7,8-PeCDF	0.67923	7.0			RSD ()	
2,3,4,7,8-PeCDF	0.7861704	2.6			RSD ()	
1,2,3,7,8-PeCDD	1.021845	4.5			RSD ()	
1,2,3,4,7,8-HxCDF	1.166038	2.4			RSD ()	
1,2,3,6,7,8-HxCDF	1.090741	4.5			RSD ()	
2,3,4,6,7,8-HxCDF	1.139699	5.0			RSD ()	
1,2,3,7,8,9-HxCDF	1.137093	2.8			RSD ()	
1,2,3,4,7,8-HxCDD	0.9955689	4.4			RSD ()	
1,2,3,6,7,8-HxCDD	1.000938	2.7			RSD ()	
1,2,3,7,8,9-HxCDD	0.9071139	6.0			RSD ()	
1,2,3,4,6,7,8-HpCDF	1.002993	4.9			RSD ()	
1,2,3,4,7,8,9-HpCDF	0.9531152	5.8			RSD ()	
1,2,3,4,6,7,8-HpCDD	1.039013	4.1			RSD ()	
OCDF	0.7778078	6.7			RSD ()	
OCDD	0.9199537	5.8			RSD ()	
13C12-2,3,7,8-TCDF	1.620196	4.4			RSD ()	
13C12-2,3,7,8-TCDD	1.152409	3.8			RSD ()	
13C12-1,2,3,7,8-PeCDF	1.240452	15.9			RSD ()	
13C12-2,3,4,7,8-PeCDF	1.117786	17.7			RSD ()	
13C12-1,2,3,7,8-PeCDD	0.8288129	18.3			RSD ()	
13C12-1,2,3,4,7,8-HxCDF	1.168305	14.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDF	1.386466	11.8			RSD ()	
13C12-2,3,4,6,7,8-HxCDF	1.129256	5.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDF	0.9317541	3.4			RSD ()	
13C12-1,2,3,4,7,8-HxCDD	0.9950393	5.9			RSD ()	
13C12-1,2,3,6,7,8-HxCDD	1.156689	6.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDF	0.8952017	13.8			RSD ()	
13C12-1,2,3,4,7,8,9-HpCDF	0.7697516	11.7			RSD ()	
13C12-1,2,3,4,6,7,8-HpCDD	0.8401226	11.5			RSD ()	

INITIAL CALIBRATION DATA

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GC00015	Instrument:	AUTOSPEC01
Calibration Date:	03/03/2023	Column (1):	RTX-Dioxin2

COMPOUND	Mean RRF	RRF RSD	Linear COD	Quad COD	Limit Type & Limit	Q
13C12-OCDD	0.7674714	13.4			RSD ()	
37Cl4-2,3,7,8-TCDD	1.287804	12.2			RSD ()	
13C12-1,2,3,4-TCDD	1	0.0			RSD ()	
13C12-1,2,3,7,8,9-HxCDD	1	0.0			RSD ()	

ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 10:58:44 Pacific Standard Time

3/6/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030304, Compound:TD, RT:26.410	1
Peak deleted	Sample:23030304, Compound:OD, RT:44.990	1
Peak deleted	Sample:23030304, Compound:TF, RT:25.774	1
Pre modification peak	Sample:23030305, Compound:TF, RT:25.774	2
Peak modified	Sample:23030305, Compound:TF, RT:25.774	2
Pre modification peak	Sample:23030304, Compound:HPD, RT:40.261	1
Peak modified	Sample:23030304, Compound:HPD, RT:40.261	1
Peak deleted	Sample:23030308, Compound:PF, RT:32.328	5
Peak deleted	Sample:23030309, Compound:PF, RT:32.307	6
Peak deleted	Sample:23030309, Compound:HF, RT:33.220	6
Peak deleted	Sample:23030309, Compound:TD, RT:27.017	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.995	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.917	6
Peak deleted	Sample:23030308, Compound:HD, RT:34.000	5
Peak deleted	Sample:23030308, Compound:HPD, RT:39.225	5
Peak deleted	Sample:23030309, Compound:HPD, RT:39.214	6
Pre modification peak	Sample:23030305, Compound:OF, RT:45.237	2
Peak modified	Sample:23030305, Compound:OF, RT:45.237	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230303ICIH.qld'	

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld
Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time
Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	4.469e4	5.839e4	0.702	0.765	0.770	894	1638	6.87e5	9.09e5	769.3	554.8	NO	bb	bb	9.550
12378-PeCDF	29.956	1.001	2.355e5	1.540e5	0.679	1.529	1.550	2187	1572	3.61e6	2.40e6	1652.4	1526.9	NO	bb	bb	49.641
23478-PeCDF	31.293	1.001	2.214e5	1.482e5	0.786	1.494	1.550	2187	1572	3.41e6	2.30e6	1560.8	1464.8	NO	bb	bb	47.528
123478-HxCDF	34.914	1.001	2.600e5	2.102e5	1.166	1.237	1.240	1592	1910	4.13e6	3.31e6	2594.2	1730.9	NO	bd	bd	47.118
234678-HxCDF	35.917	1.001	2.733e5	2.175e5	1.140	1.257	1.240	1592	1910	4.33e6	3.47e6	2719.2	1818.9	NO	bb	bb	49.341
123678-HxCDF	35.048	1.000	2.727e5	2.151e5	1.091	1.268	1.240	1592	1910	4.23e6	3.33e6	2659.9	1743.3	NO	db	db	49.569
123789-HxCDF	36.941	1.000	2.420e5	1.912e5	1.137	1.266	1.240	1592	1910	3.95e6	3.13e6	2482.2	1637.3	NO	bb	bb	46.959
1234678-HpCDF	38.780	1.000	1.767e5	1.776e5	1.003	0.995	1.050	1849	2300	2.99e6	3.02e6	1618.0	1311.0	NO	bb	bb	47.490
1234789-HpCDF	41.019	1.000	1.595e5	1.575e5	0.953	1.013	1.050	1849	2300	2.36e6	2.33e6	1274.2	1012.6	NO	bb	bb	50.221
OCDF	45.246	1.005	2.326e5	2.612e5	0.778	0.891	0.890	910	1225	2.82e6	3.14e6	3100.2	2559.9	NO	bb	bb	88.591
2378-TCDD	26.438	1.001	5.709e4	7.150e4	1.149	0.798	0.770	1506	757	9.09e5	1.12e6	603.1	1485.0	NO	bb	bb	9.450
12378-PeCDD	31.549	1.001	2.156e5	1.424e5	1.022	1.514	1.550	2044	1419	3.32e6	2.17e6	1626.0	1530.4	NO	bb	bb	49.654
123478-HxCDD	36.028	1.000	2.225e5	1.815e5	0.996	1.226	1.240	1845	1377	3.65e6	2.93e6	1979.4	2130.4	NO	bd	bd	50.053
123678-HxCDD	36.150	1.000	2.361e5	1.995e5	1.001	1.184	1.240	1845	1377	3.83e6	3.15e6	2076.5	2285.7	NO	db	db	49.648
123789-HxCDD	36.529	1.011	2.267e5	1.883e5	0.907	1.204	1.240	1845	1377	3.65e6	3.02e6	1979.8	2191.3	NO	bb	bb	54.229
1234678-HpCDD	40.284	1.001	1.918e5	1.891e5	1.039	1.015	1.050	2026	1655	2.99e6	2.92e6	1477.4	1764.9	NO	bb	bb	47.619
OCDD	45.008	1.000	3.015e5	3.475e5	0.920	0.868	0.890	1418	1100	3.70e6	4.29e6	2606.9	3904.9	NO	bb	bb	98.432
13C-2378-TCDF	25.774	1.007	6.611e5	8.775e5	1.620	0.753	0.770	2458	1918	1.00e7	1.34e7	4080.0	6997.2	NO	bb	bb	94.015
13C-12378-PeCDF	29.934	1.169	6.937e5	4.618e5	1.240	1.502	1.550	2176	1857	1.07e7	7.10e6	4925.2	3826.5	NO	bb	bb	92.213
13C-23478-PeCDF	31.271	1.221	5.928e5	3.963e5	1.118	1.496	1.550	2176	1857	9.20e6	6.25e6	4229.1	3368.5	NO	bb	bb	87.601
13C-123478-HxCDF	34.891	0.955	2.871e5	5.687e5	1.168	0.505	0.510	1657	1593	4.56e6	9.04e6	2750.7	5674.1	NO	bd	bd	84.013
13C-123678-HxCDF	35.036	0.959	3.069e5	5.954e5	1.386	0.515	0.510	1657	1593	4.75e6	9.14e6	2868.0	5738.5	NO	db	db	74.642
13C-234678-HxCDF	35.894	0.983	2.954e5	5.775e5	1.129	0.512	0.510	1657	1593	4.85e6	9.48e6	2926.1	5951.0	NO	bb	bb	88.651
13C-123789-HxCDF	36.930	1.011	2.724e5	5.390e5	0.932	0.505	0.510	1657	1593	4.39e6	8.57e6	2648.2	5379.8	NO	bb	bb	99.871
13C-1234678-HpCDF	38.769	1.062	2.262e5	5.177e5	0.895	0.437	0.440	2036	2545	3.83e6	8.70e6	1881.8	3416.5	NO	bb	bb	95.295
13C-1234789-HpCDF	41.008	1.123	1.995e5	4.627e5	0.770	0.431	0.440	2036	2545	2.95e6	6.70e6	1450.8	2632.3	NO	bb	bb	98.667
13C-1234-TCDD	25.605	0.000	4.500e5	5.601e5	1.000	0.803	0.770	1910	1117	7.08e6	8.81e6	3705.2	7891.1	NO	bb	bb	100.000
13C-2378-TCDD	26.424	1.032	5.241e5	6.605e5	1.152	0.794	0.770	1910	1117	7.92e6	9.96e6	4144.8	8917.7	NO	bb	bb	101.762
13C-12378-PeCDD	31.527	1.231	4.348e5	2.708e5	0.829	1.606	1.550	951	872	6.72e6	4.16e6	7062.4	4771.1	NO	bb	bb	84.283
13C-123478-HxCDD	36.017	0.986	4.575e5	3.533e5	0.995	1.295	1.240	1714	1036	7.67e6	5.90e6	4475.1	5696.2	NO	bd	bd	93.458
13C-123678-HxCDD	36.139	0.990	4.929e5	3.835e5	1.157	1.285	1.240	1714	1036	7.72e6	6.07e6	4504.9	5859.4	NO	db	db	86.905
13C-1234678-HpCDD	40.262	1.103	3.870e5	3.828e5	0.840	1.011	1.050	1736	1260	5.92e6	5.62e6	3411.3	4462.2	NO	bb	bb	105.085
13C-OCDD	44.999	1.232	6.781e5	7.554e5	0.767	0.898	0.890	1440	1232	8.22e6	9.13e6	5710.3	7413.0	NO	bb	bb	214.218
13C-123789-HxCDD	36.518	0.000	4.889e5	3.830e5	1.000	1.277	1.240	1714	1036	7.91e6	6.13e6	4618.2	5918.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.438	1.033	1.177e5		1.288			2053		1.80e6		877.6			bb		9.046

Dataset: T:\Autospec\Processed Data Batch\230303IHOP.qld
Last Altered: Monday, March 06, 2023 11:36:30 Pacific Standard Time
Printed: Monday, March 06, 2023 11:37:17 Pacific Standard Time

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.285	0.865	4.825e4	6.619e4	0.802	0.729	0.770	894	1638	7.69e5	1.08e6	860.8	657.5	NO	bb	bb	9.280
1289-TCDF	27.286	1.059	4.233e4	5.922e4	0.678	0.715	0.770	894	1638	6.48e5	8.96e5	725.0	547.0	NO	db	db	9.735
13468-PECDF	27.145	0.907	4.529e5	2.964e5	1.246	1.528	1.550	639	866	7.07e6	4.64e6	11052.6	5356.5	NO	bb	bb	52.031
12389-PECDF	32.329	1.080	1.727e5	1.137e5	0.496	1.519	1.550	2187	1572	2.66e6	1.70e6	1217.2	1080.5	NO	bb	bb	49.938
123468-HXCDF	33.243	0.953	2.450e5	1.964e5	1.169	1.248	1.240	1592	1910	3.71e6	2.99e6	2333.1	1567.3	NO	bb	bb	44.113
1368-TCDD	23.571	0.892	5.082e4	6.674e4	1.015	0.761	0.770	1506	757	8.30e5	1.09e6	551.2	1438.0	NO	bb	bb	9.774
1289-TCDD	27.031	1.023	4.817e4	6.482e4	0.909	0.743	0.770	1506	757	7.39e5	9.76e5	490.7	1289.2	NO	bb	bb	10.496
12479-PECDD	28.831	0.914	4.117e5	2.743e5	2.301	1.501	1.550	2044	1419	3.99e6	2.64e6	1950.7	1862.6	NO	bb	bb	42.238
12389-PECDD	31.939	1.013	2.280e5	1.502e5	1.184	1.518	1.550	2044	1419	3.50e6	2.32e6	1711.4	1633.6	NO	bb	bb	45.288
124679-HXCDD	34.022	0.945	2.111e5	1.738e5	1.115	1.214	1.240	1845	1377	3.36e6	2.72e6	1819.4	1971.8	NO	bb	bb	42.563
1234679-HPCDD	39.236	0.975	2.063e5	2.043e5	1.137	1.010	1.050	2026	1655	3.38e6	3.38e6	1668.0	2041.4	NO	bb	bb	46.924
Total-tetrafurans			1.368e5		0.727			894		2.13e6							28.888
Total-penta1			4.529e5					639		7.07e6							52.031
Total-pentafurans			6.685e5		0.654			2187		1.03e7							156.333
Total-hexafurans			1.293e6		1.141			1592		2.04e7							237.100
Total-heptafurans			3.381e5		0.978			1849		5.38e6							98.217
Total-Furans			3.122e6		0.922			894		4.80e7							661.160
Total-tetradioxins			2.626e5		1.024			1506		3.74e6							49.711
Total-pentadioxins			8.563e5		1.502			2044		1.08e7							137.339
Total-hexadioxins			8.975e5		1.005			1845		1.45e7							196.701
Total-heptadioxins			3.982e5		1.088			2026		6.38e6							94.566
Total-Dioxins			2.716e6		1.130			1506		3.92e7							576.750
Total-TEQ			5.838e6					1506		8.72e7							1237.909
FUNCTION1 PFK			0.000e0					705807		0.00e0							
FUNCTION2 PFK			1.098e6					272509		2.65e6							0.000
FUNCTION3 PFK			8.030e5					419872		3.44e6							0.000
FUNCTION4 PFK			2.346e5					346452		6.90e6							
FUNCTION5 PFK			5.429e4					176842		2.44e6							
FUNCTION1 HXCD...			8.708e2					511		1.38e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.374e3					1181		2.70e4							0.000
FUNCTION3 OCDPE			4.232e2					570		6.10e3							0.000
FUNCTION4 NCDPE			7.938e2					683		4.57e3							0.000
FUNCTION5 DCDPE			0.000e0					526		0.00e0							

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
2	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
3	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
4	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
2	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
3	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
4	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
5	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
2	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
3	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
4	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
5	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280
7	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
8	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
9	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
10	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528
11	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
12	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
13	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
14	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
15	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113
16	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
17	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
18	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
19	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
20	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490
21	OCDF	45.25	2.326e5	2.612e5	0.778	0.89	0.89	3100.2	YES	NO	bb	bb	88.591
22	13468-PECDF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
2	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
3	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
4	Total-tetradioxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
5	Total-tetradioxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
2	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
3	Total-pentadioxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
4	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
2	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
3	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
4	Total-hexadioxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
5	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924
2	Total-heptadioxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
3	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
2	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
3	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
4	Total-tetradioxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
5	Total-tetradioxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660
6	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
7	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
8	Total-pentadioxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
9	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238
10	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
11	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
12	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
13	Total-hexadioxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
14	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563
15	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924
16	Total-heptadioxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
17	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619
18	OCDD	45.01	3.015e5	3.475e5	0.920	0.87	0.89	2606.9	YES	NO	bb	bb	98.432

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.233e4	5.922e4	0.678	0.71	0.77	725.0	YES	NO	db	db	9.735
2	Total-tetrafurans	27.16	6.976e2	1.059e3	0.727	0.66	0.77	14.1	YES	NO	bd	bd	0.157
3	2378-TCDF	25.79	4.469e4	5.839e4	0.702	0.77	0.77	769.3	YES	NO	bb	bb	9.550
4	Total-tetrafurans	24.88	4.805e2	5.664e2	0.727	0.85	0.77	7.5	YES	NO	bb	bb	0.094
5	Total-tetrafurans	24.57	3.491e2	4.664e2	0.727	0.75	0.77	6.2	YES	NO	bd	bd	0.073
6	1368-TCDF	22.29	4.825e4	6.619e4	0.802	0.73	0.77	860.8	YES	NO	bb	bb	9.280
7	12378-PeCDF	29.96	2.355e5	1.540e5	0.679	1.53	1.55	1652.4	YES	NO	bb	bb	49.641
8	Total-pentafurans	28.81	3.891e4	2.579e4	0.654	1.51	1.55	273.1	YES	NO	bb	bb	9.226
9	12389-PECDF	32.33	1.727e5	1.137e5	0.496	1.52	1.55	1217.2	YES	NO	bb	bb	49.938
10	23478-PeCDF	31.29	2.214e5	1.482e5	0.786	1.49	1.55	1560.8	YES	NO	bb	bb	47.528
11	123789-HxCDF	36.94	2.420e5	1.912e5	1.137	1.27	1.24	2482.2	YES	NO	bb	bb	46.959
12	234678-HxCDF	35.92	2.733e5	2.175e5	1.140	1.26	1.24	2719.2	YES	NO	bb	bb	49.341
13	123678-HxCDF	35.05	2.727e5	2.151e5	1.091	1.27	1.24	2659.9	YES	NO	db	db	49.569
14	123478-HxCDF	34.91	2.600e5	2.102e5	1.166	1.24	1.24	2594.2	YES	NO	bd	bd	47.118
15	123468-HXCDF	33.24	2.450e5	1.964e5	1.169	1.25	1.24	2333.1	YES	NO	bb	bb	44.113
16	Total-heptafurans	41.38	1.097e2	1.037e2	0.978	1.06	1.05	1.8	NO	NO	bb	bb	0.031
17	1234789-HpCDF	41.02	1.595e5	1.575e5	0.953	1.01	1.05	1274.2	YES	NO	bb	bb	50.221
18	Total-heptafurans	39.45	1.654e3	1.420e3	0.978	1.17	1.05	14.3	YES	NO	bb	bb	0.447
19	Total-heptafurans	39.28	9.725e1	9.433e1	0.978	1.03	1.05	1.5	NO	NO	bb	bb	0.028
20	1234678-HpCDF	38.78	1.767e5	1.776e5	1.003	1.00	1.05	1618.0	YES	NO	bb	bb	47.490
21	OCDF	45.25	2.326e5	2.612e5	0.778	0.89	0.89	3100.2	YES	NO	bb	bb	88.591
22	13468-PECDF	27.14	4.529e5	2.964e5	1.246	1.53	1.55	11052.6	YES	NO	bb	bb	52.031
23	1368-TCDD	23.57	5.082e4	6.674e4	1.015	0.76	0.77	551.2	YES	NO	bb	bb	9.774
24	1289-TCDD	27.03	4.817e4	6.482e4	0.909	0.74	0.77	490.7	YES	NO	bb	bb	10.496
25	2378-TCDD	26.44	5.709e4	7.150e4	1.149	0.80	0.77	603.1	YES	NO	bb	bb	9.450
26	Total-tetradioxins	26.11	8.149e4	1.045e5	1.024	0.78	0.77	583.1	YES	NO	bb	bb	15.330
27	Total-tetradioxins	25.62	2.499e4	3.156e4	1.024	0.79	0.77	257.1	YES	NO	bb	bb	4.660
28	12389-PECDD	31.94	2.280e5	1.502e5	1.184	1.52	1.55	1711.4	YES	NO	bb	bb	45.288
29	12378-PeCDD	31.55	2.156e5	1.424e5	1.022	1.51	1.55	1626.0	YES	NO	bb	bb	49.654
30	Total-pentadioxins	30.87	1.016e3	6.817e2	1.502	1.49	1.55	7.9	YES	NO	bb	bb	0.160
31	12479-PECDD	28.83	4.117e5	2.743e5	2.301	1.50	1.55	1950.7	YES	NO	bb	bb	42.238
32	123789-HxCDD	36.53	2.267e5	1.883e5	0.907	1.20	1.24	1979.8	YES	NO	bb	bb	54.229
33	123678-HxCDD	36.15	2.361e5	1.995e5	1.001	1.18	1.24	2076.5	YES	NO	db	db	49.648
34	123478-HxCDD	36.03	2.225e5	1.815e5	0.996	1.23	1.24	1979.4	YES	NO	bd	bd	50.053
35	Total-hexadioxins	35.14	9.946e2	7.755e2	1.005	1.28	1.24	9.3	YES	NO	db	bd	0.209
36	124679-HXCDD	34.02	2.111e5	1.738e5	1.115	1.21	1.24	1819.4	YES	NO	bb	bb	42.563
37	1234679-HPCDD	39.24	2.063e5	2.043e5	1.137	1.01	1.05	1668.0	YES	NO	bb	bb	46.924

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	Total-heptadioxins	40.58	1.040e2	8.729e1	1.088	1.19	1.05	2.1	NO	NO	bb	bb	0.023
39	1234678-HpCDD	40.28	1.918e5	1.891e5	1.039	1.01	1.05	1477.4	YES	NO	bb	bb	47.619
40	OCDD	45.01	3.015e5	3.475e5	0.920	0.87	0.89	2606.9	YES	NO	bb	bb	98.432

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.96	1.058e5					1.1	NO		bb		0.000
2	FUNCTION2 PFK	30.15	5.471e5					3.7	YES		bb		0.000
3	FUNCTION2 PFK	28.28	4.455e5					4.9	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.89	2.667e5					4.7	YES		bb		0.000
2	FUNCTION3 PFK	33.03	5.362e5					3.5	YES		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.07	4.905e4					2.0	NO		db		
2	FUNCTION4 PFK	37.96	1.071e4					1.3	NO		bd		
3	FUNCTION4 PFK	37.89	4.848e3					0.7	NO		bb		
4	FUNCTION4 PFK	42.18	1.359e4					1.2	NO		bb		
5	FUNCTION4 PFK	41.91	8.056e3					0.9	NO		db		
6	FUNCTION4 PFK	41.83	2.292e4					1.6	NO		bd		
7	FUNCTION4 PFK	41.77	1.673e4					1.5	NO		bb		
8	FUNCTION4 PFK	41.48	1.418e4					1.4	NO		bb		
9	FUNCTION4 PFK	41.32	2.104e3					0.5	NO		bb		
10	FUNCTION4 PFK	41.13	8.695e3					1.0	NO		bb		
11	FUNCTION4 PFK	40.63	8.163e3					0.8	NO		bb		
12	FUNCTION4 PFK	40.08	1.008e4					1.1	NO		db		
13	FUNCTION4 PFK	40.04	1.572e4					1.4	NO		bd		
14	FUNCTION4 PFK	39.51	7.181e3					1.0	NO		bb		
15	FUNCTION4 PFK	39.44	5.021e3					0.7	NO		bb		
16	FUNCTION4 PFK	38.96	9.511e3					1.3	NO		db		
17	FUNCTION4 PFK	38.92	2.806e4					1.5	NO		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.57	1.411e3					0.9	NO		bb		
2	FUNCTION5 PFK	45.95	2.307e4					3.9	YES		bb		
3	FUNCTION5 PFK	45.69	1.018e3					0.6	NO		bb		
4	FUNCTION5 PFK	45.54	1.146e3					0.7	NO		bb		
5	FUNCTION5 PFK	45.12	9.805e3					2.3	NO		bb		
6	FUNCTION5 PFK	44.83	5.276e3					1.3	NO		bb		
7	FUNCTION5 PFK	44.58	5.554e3					1.4	NO		bb		
8	FUNCTION5 PFK	44.38	2.760e3					0.9	NO		db		
9	FUNCTION5 PFK	44.35	3.252e3					1.1	NO		bd		
10	FUNCTION5 PFK	42.99	9.959e2					0.6	NO		bb		

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	25.01	7.970e1					3.2	YES		bb		0.000
2	FUNCTION1 HXCD...	23.47	8.919e1					3.0	YES		db		0.000
3	FUNCTION1 HXCD...	23.40	8.065e1					2.9	NO		dd		0.000
4	FUNCTION1 HXCD...	23.32	1.305e2					3.4	YES		dd		0.000
5	FUNCTION1 HXCD...	23.22	1.146e2					2.8	NO		bd		0.000
6	FUNCTION1 HXCD...	22.41	7.936e1					4.3	YES		bb		0.000
7	FUNCTION1 HXCD...	27.40	7.698e1					2.2	NO		bb		0.000
8	FUNCTION1 HXCD...	27.14	1.376e2					3.3	YES		bb		0.000
9	FUNCTION1 HXCD...	25.79	8.222e1					1.9	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.53	2.999e2					2.9	NO		bb		0.000
2	FUNCTION2 HPCD...	31.17	3.219e2					4.5	YES		bb		0.000
3	FUNCTION2 HPCD...	29.58	8.369e1					1.2	NO		db		0.000
4	FUNCTION2 HPCD...	29.50	8.185e1					1.4	NO		bd		0.000
5	FUNCTION2 HPCD...	29.43	9.066e1					2.2	NO		bb		0.000
6	FUNCTION2 HPCD...	28.26	1.049e2					2.5	NO		db		0.000
7	FUNCTION2 HPCD...	28.22	1.658e2					2.8	NO		bd		0.000
8	FUNCTION2 HPCD...	28.15	1.360e2					3.3	YES		db		0.000
9	FUNCTION2 HPCD...	28.11	8.921e1					2.1	NO		bd		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.53	2.562e2					6.2	YES		bb		0.000
2	FUNCTION3 OCDPE	36.14	1.671e2					4.5	YES		bb		0.000

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	8.282e1					2.4	NO		bb		0.000
2	FUNCTION4 NCDPE	38.07	5.777e2					4.3	YES		bb		0.000
3	FUNCTION4 NCDPE	37.82	1.333e2					0.0	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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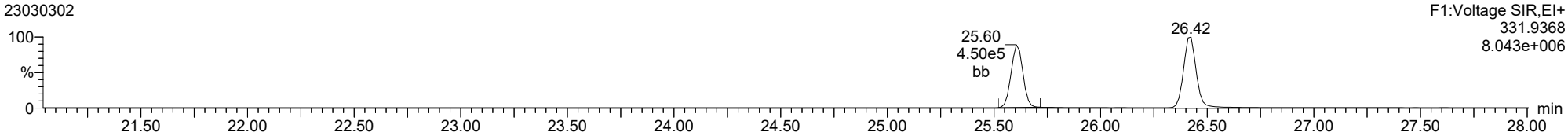
ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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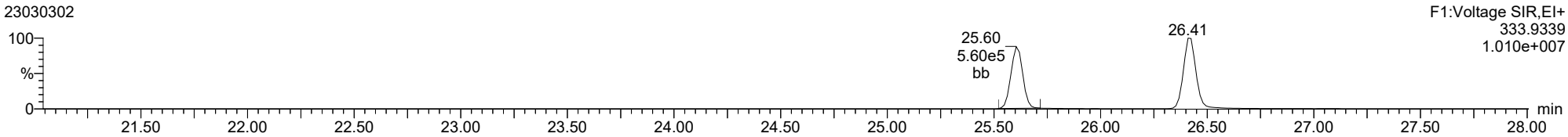
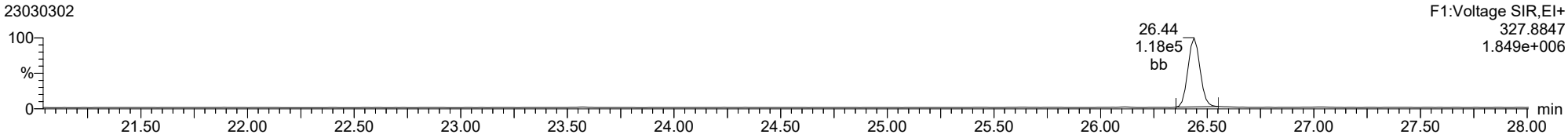


37CL-2378-TCDD



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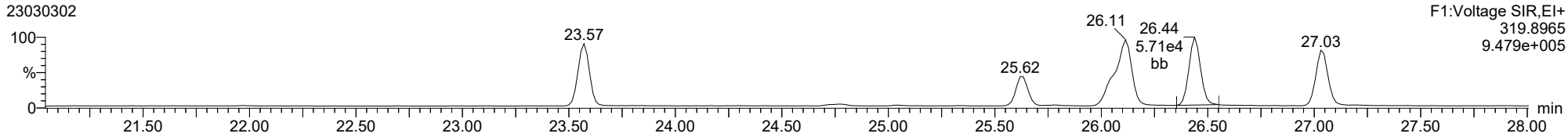
ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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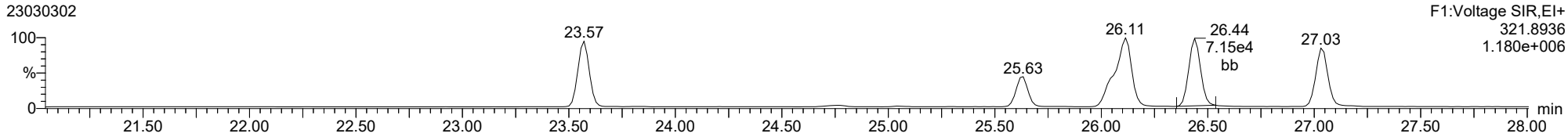

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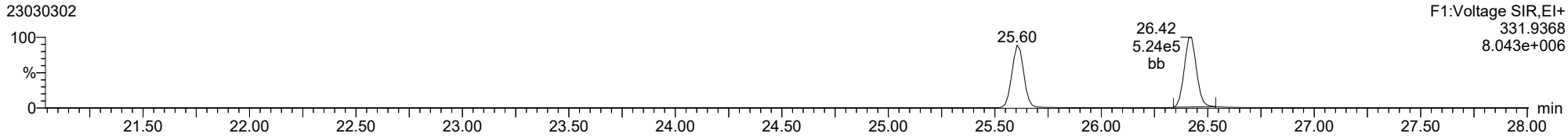

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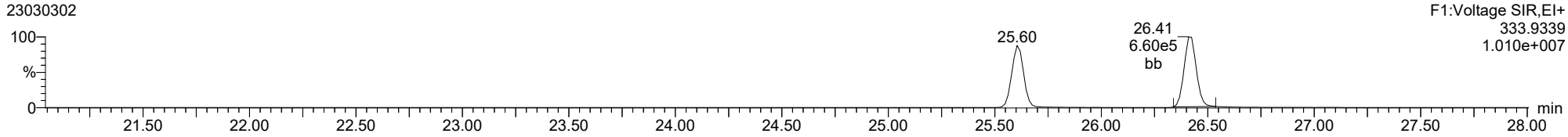

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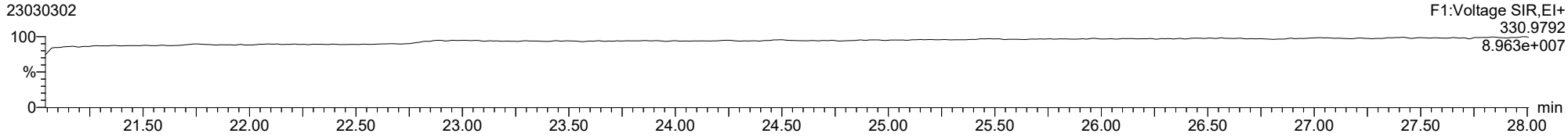

ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

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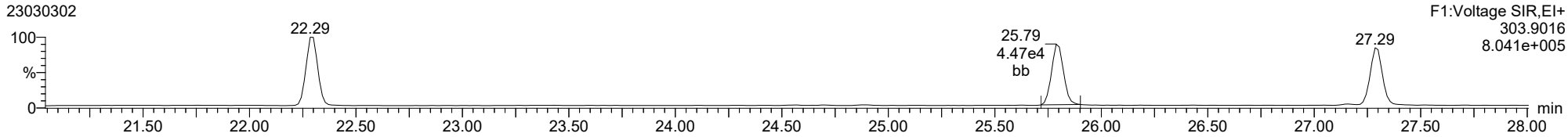

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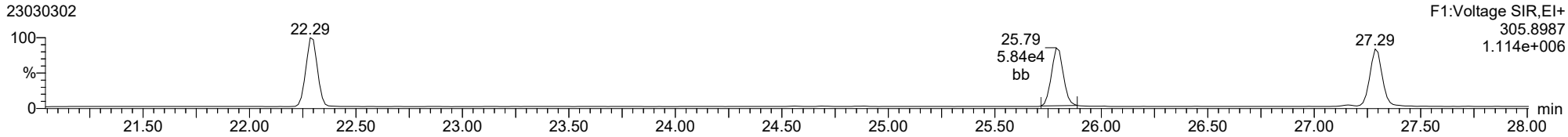

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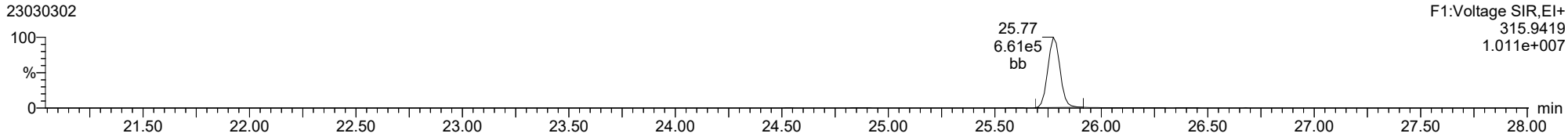

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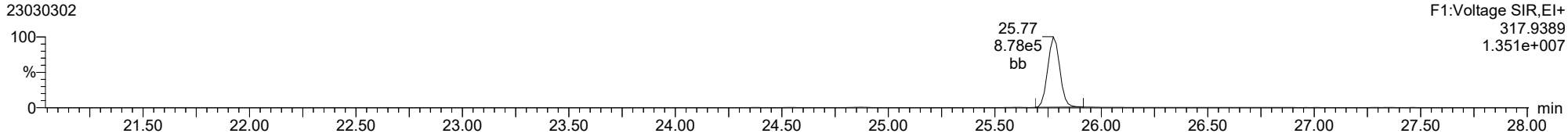
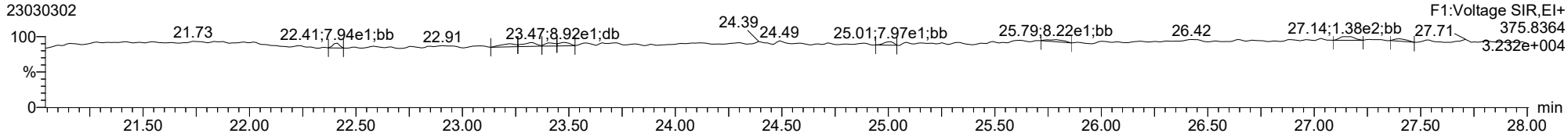
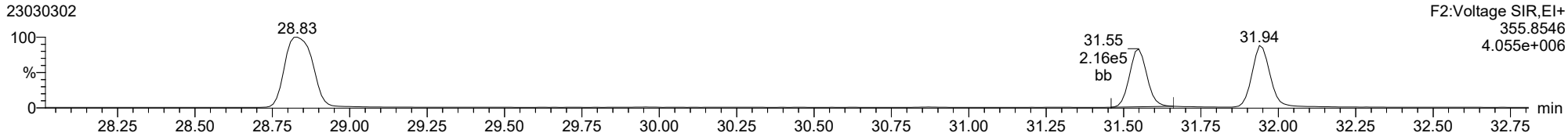


FUNCTION1 HXCDPE

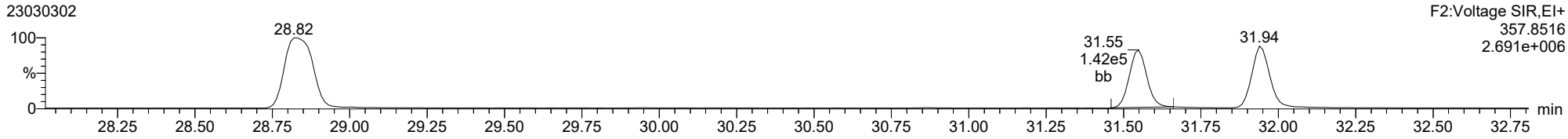


ID: CS3W1, Name: 23030302, Date: 03-Mar-2023, Time: 09:51:40, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



12378-PeCDD



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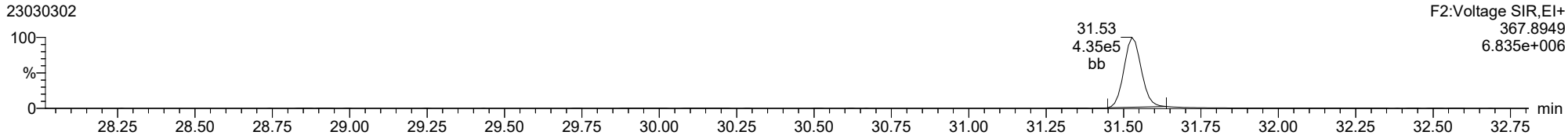

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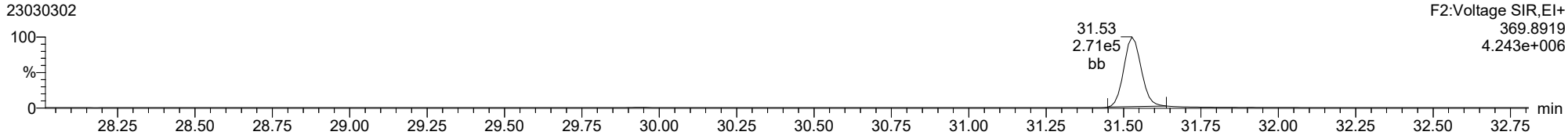
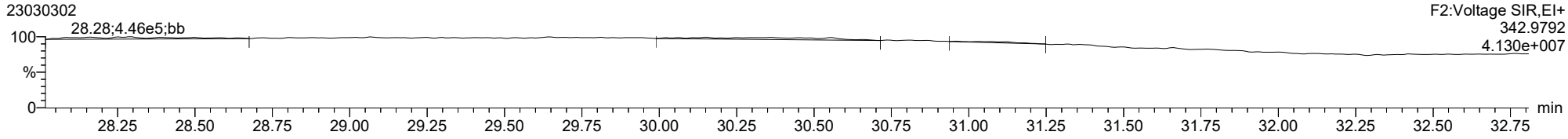


FUNCTION2 PFK



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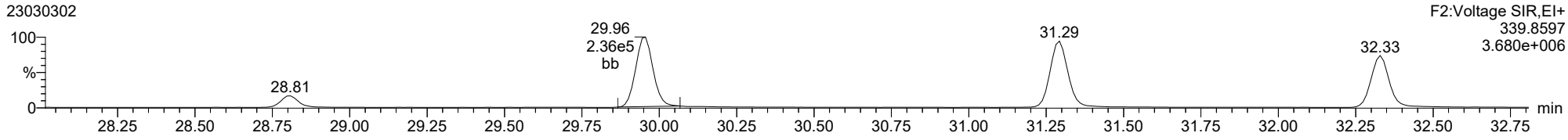
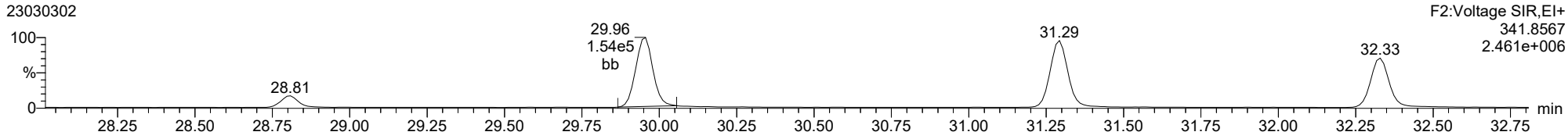


12378-PeCDF



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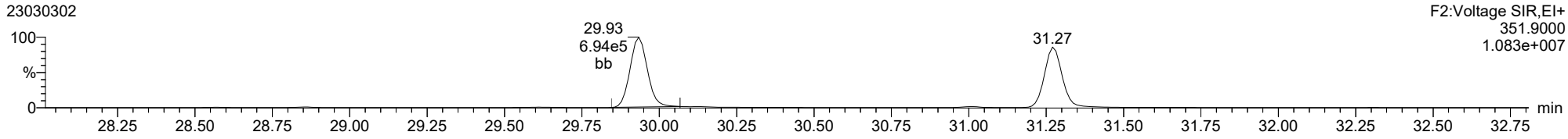

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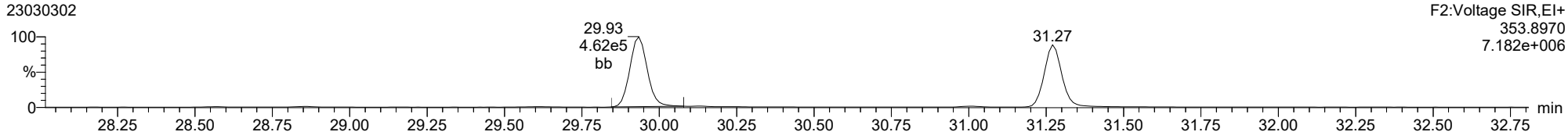
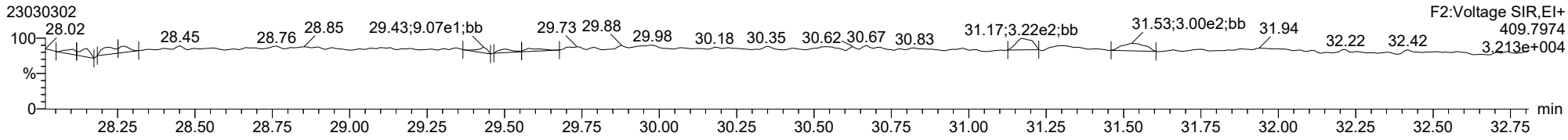


FUNCTION2 HPCDPE



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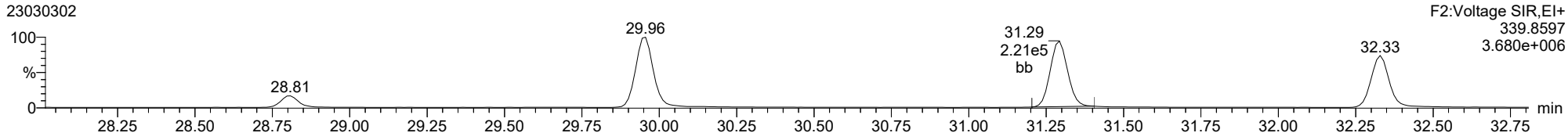
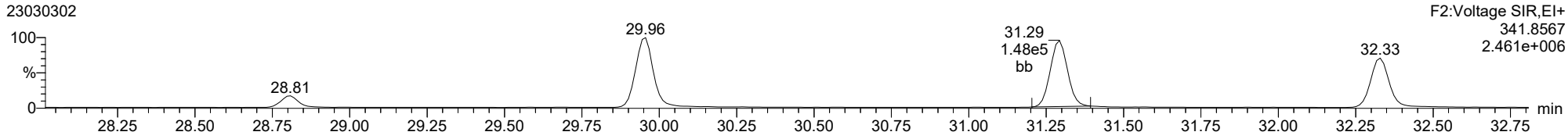
23478-PeCDF



23478-PeCDF



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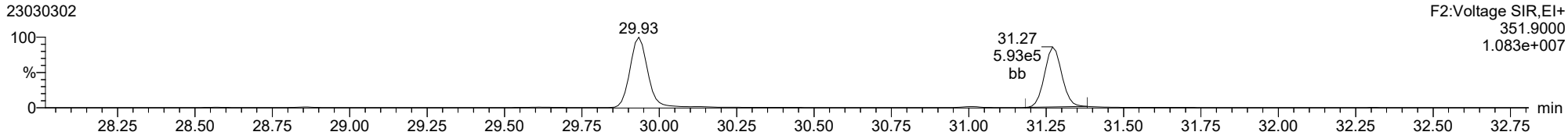

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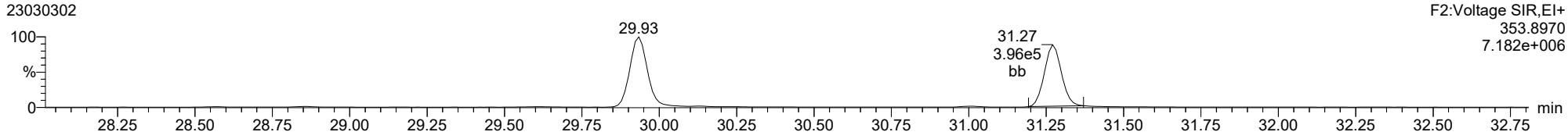
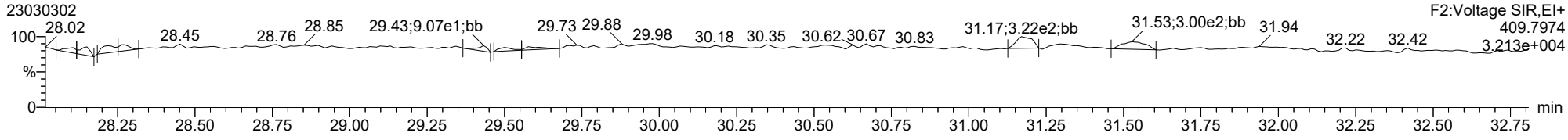


FUNCTION2 HPCDPE



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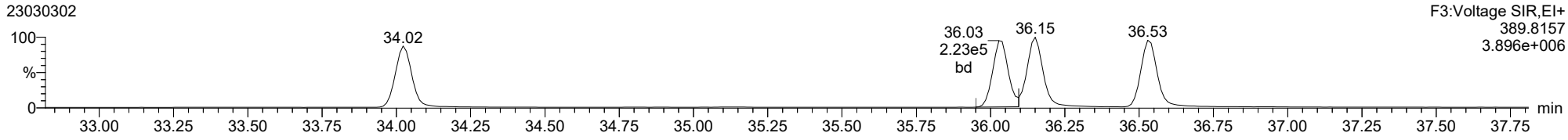
123478-HxCDD



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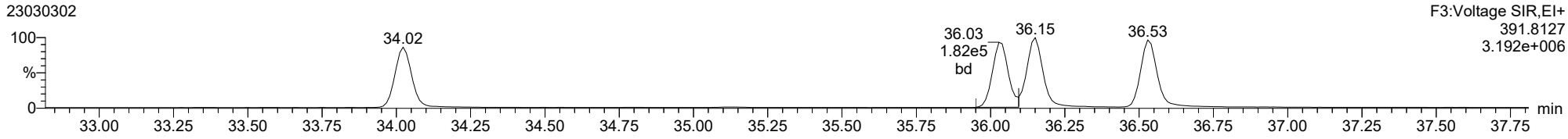

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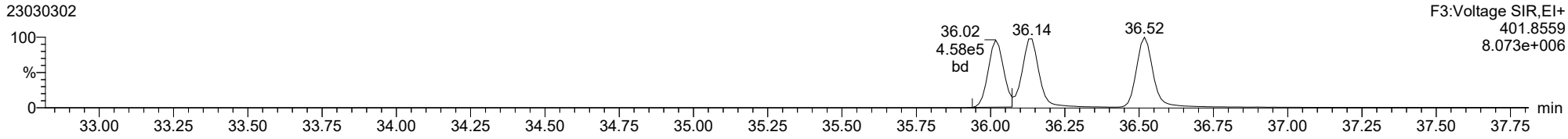

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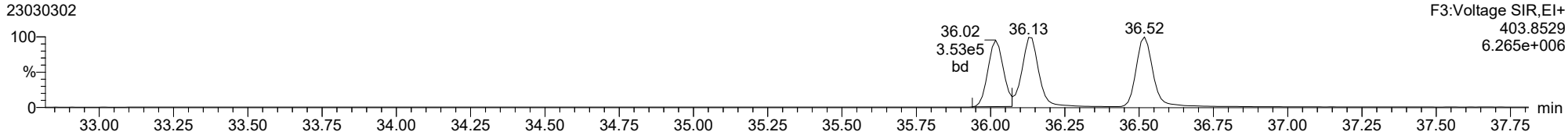

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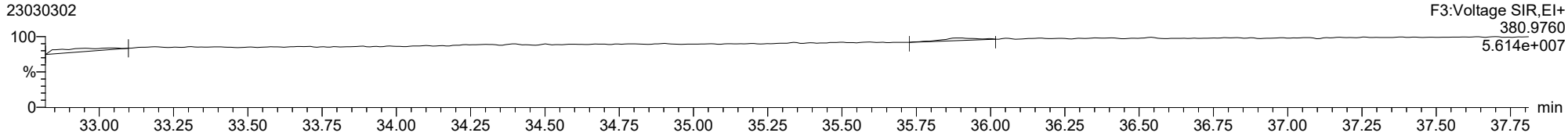

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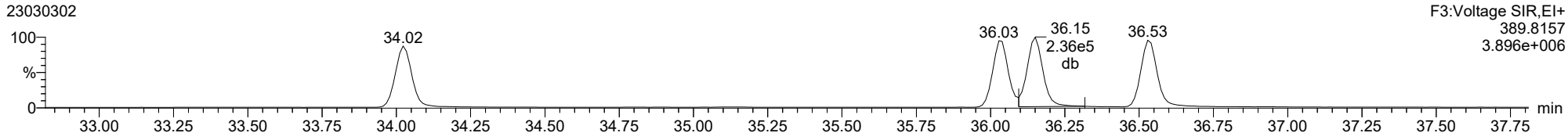

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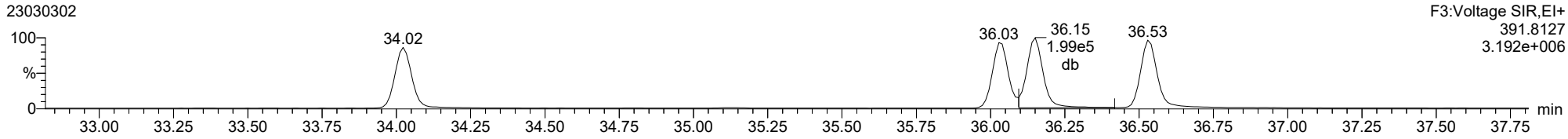

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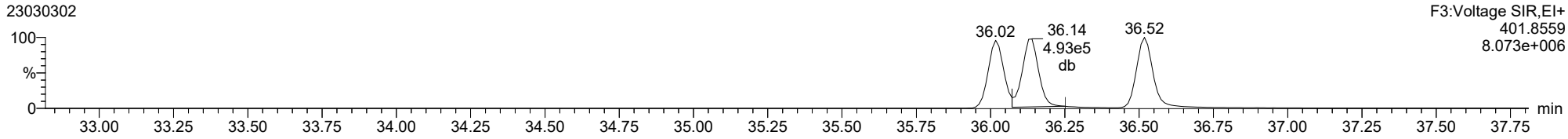

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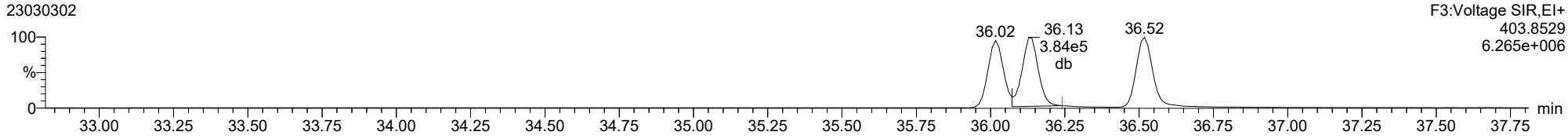

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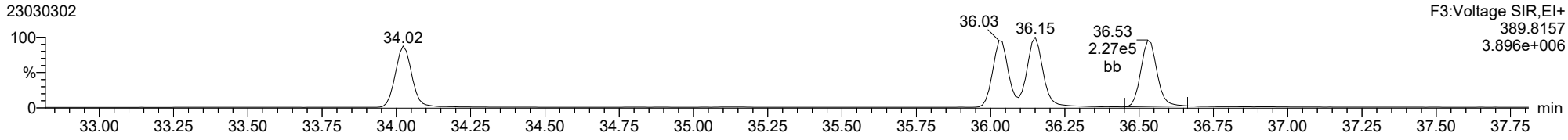

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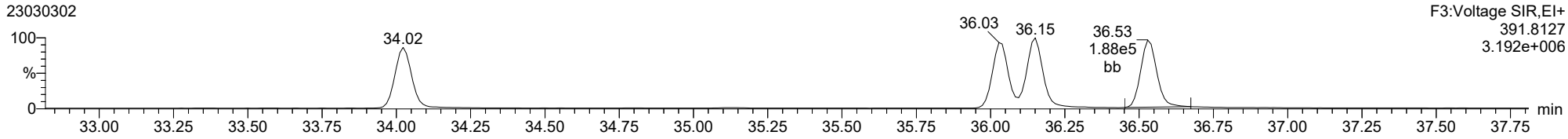

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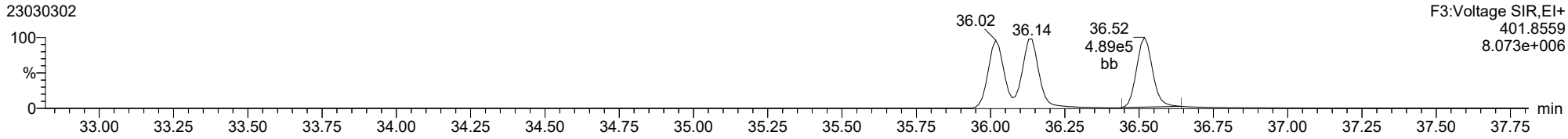

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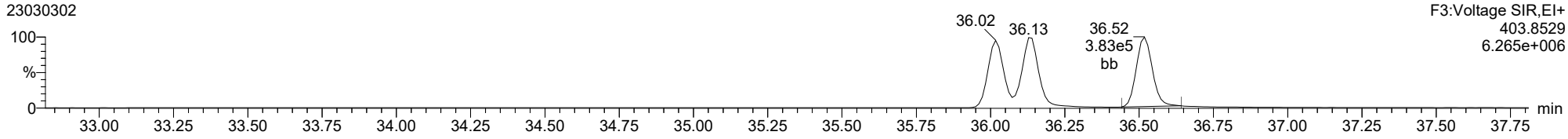

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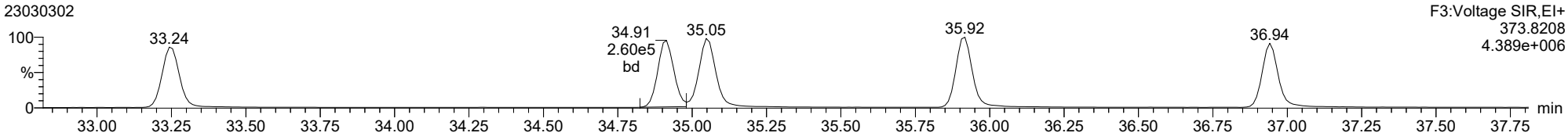

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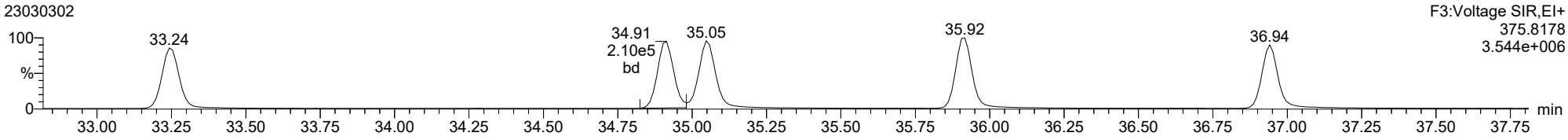

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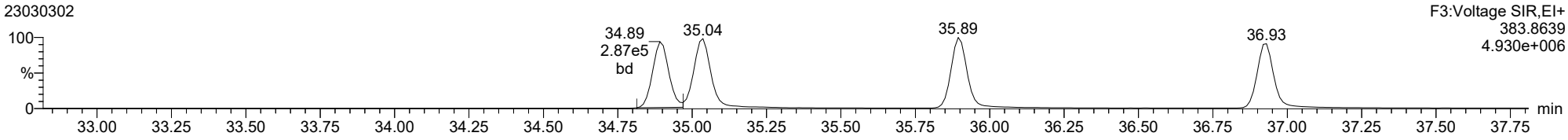

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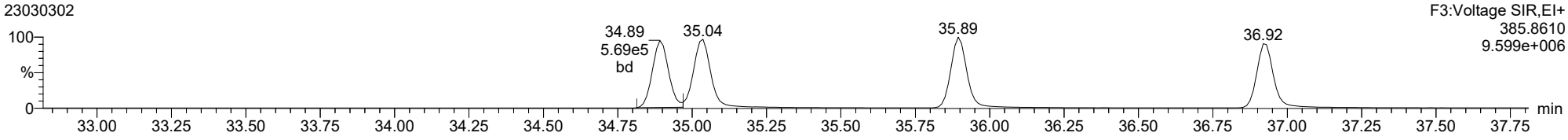

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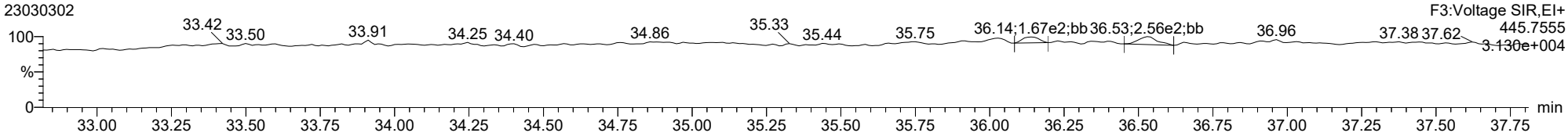

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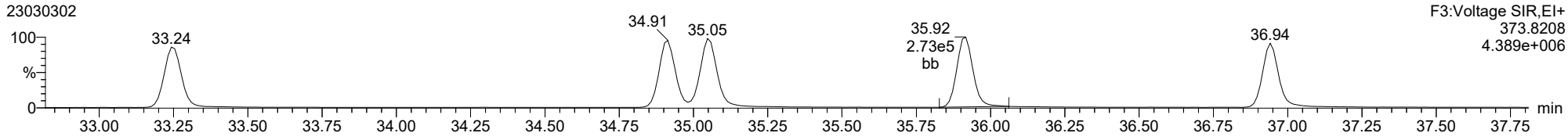
234678-HxCDF



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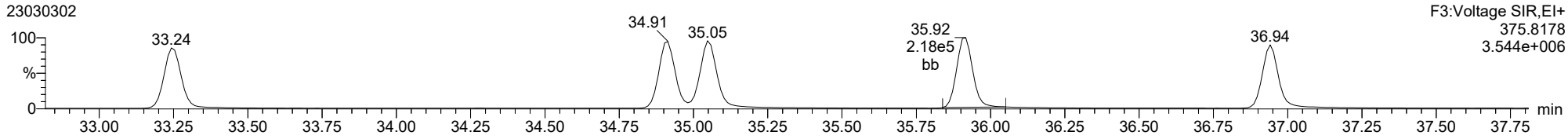

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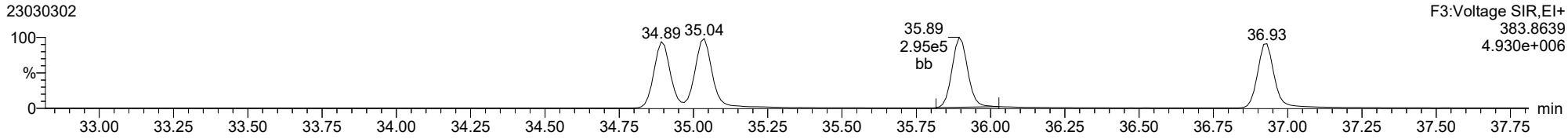

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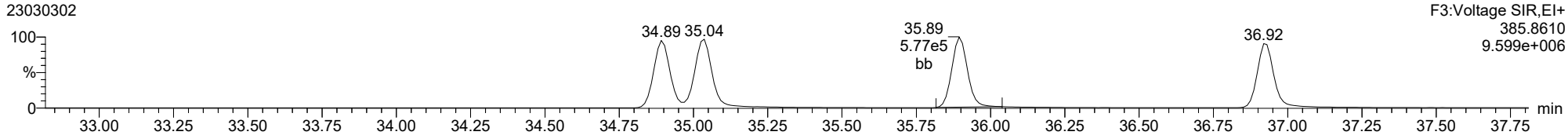

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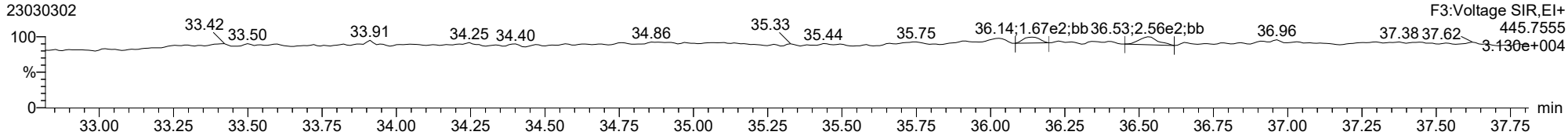

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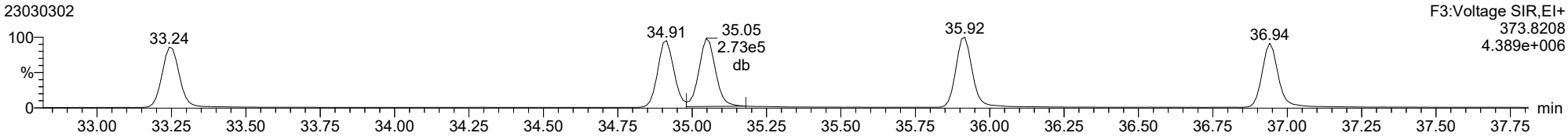

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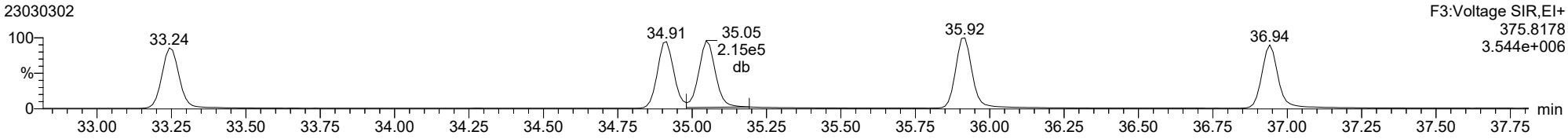

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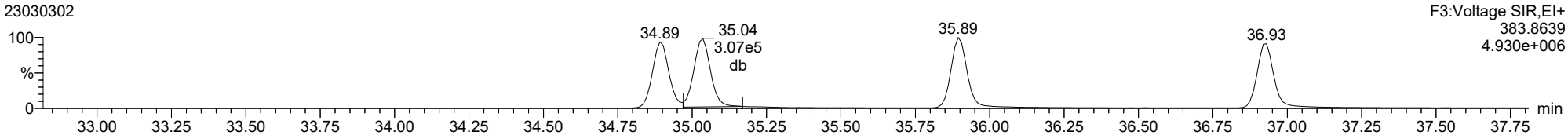

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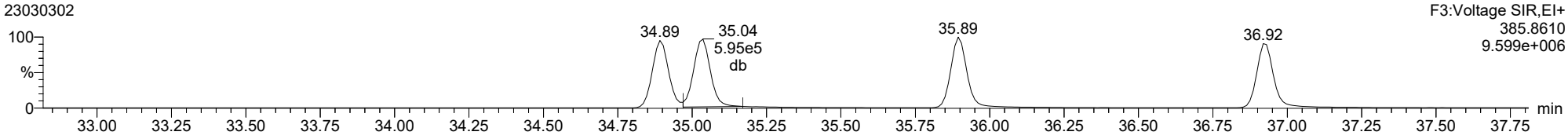

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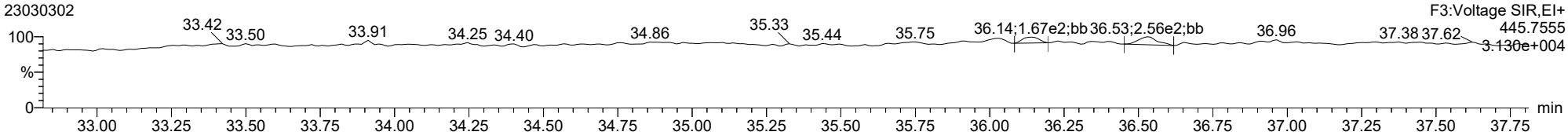

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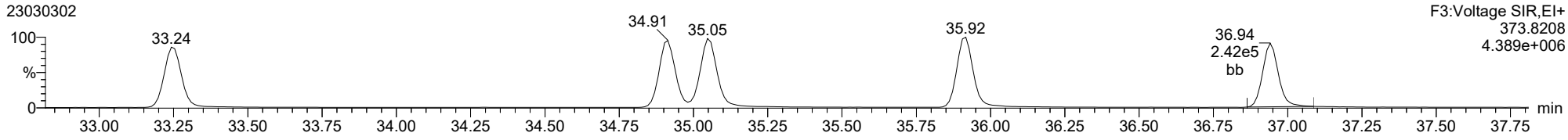

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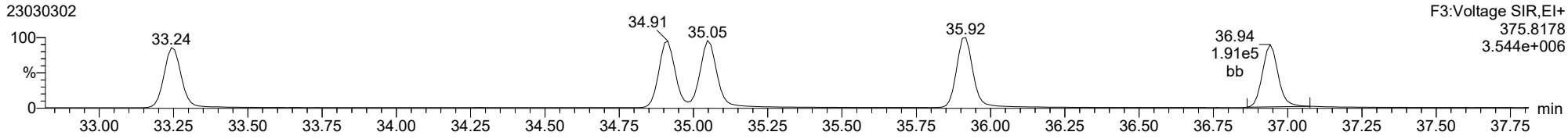

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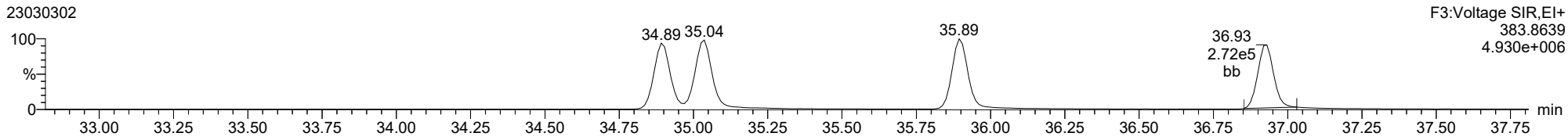

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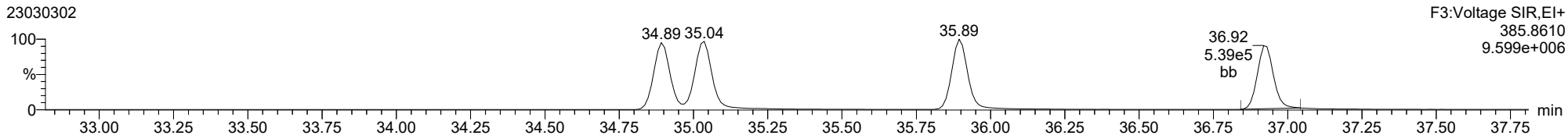
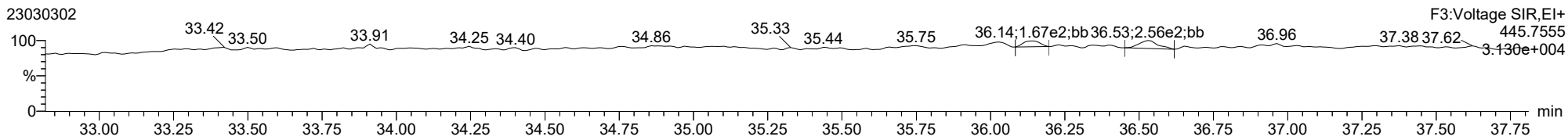


FUNCTION3 OCDPE



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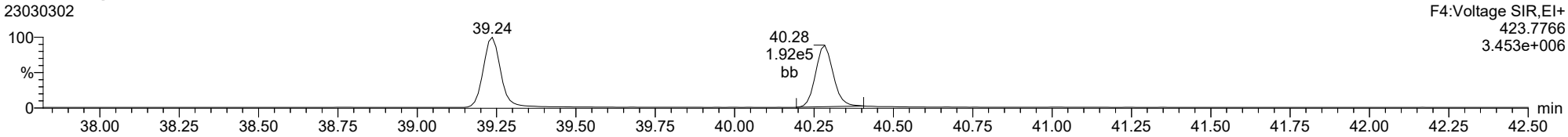
1234678-HpCDD



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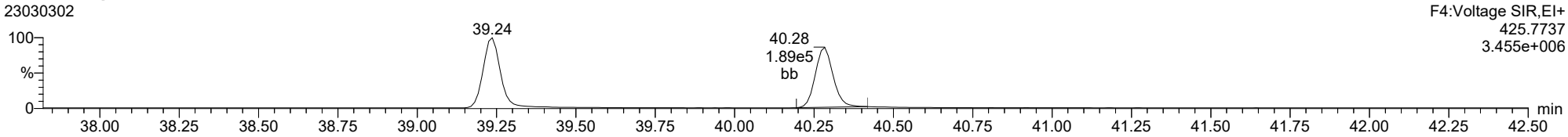

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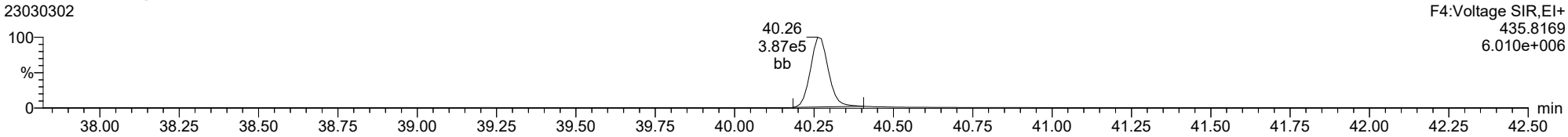

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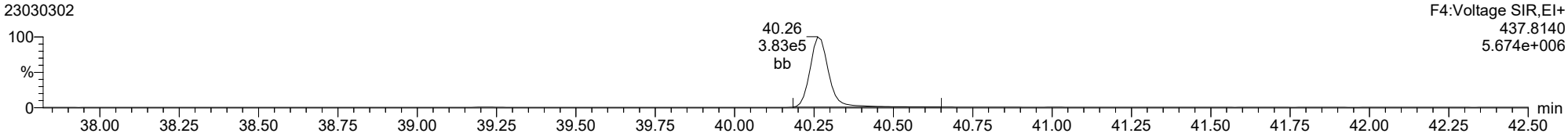
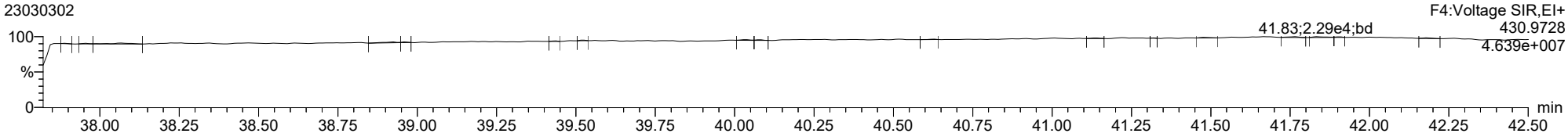


FUNCTION4 PFK



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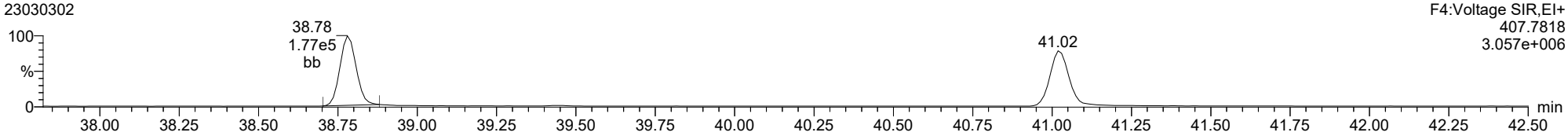

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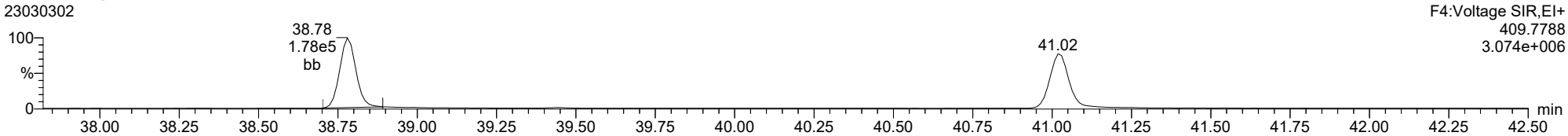

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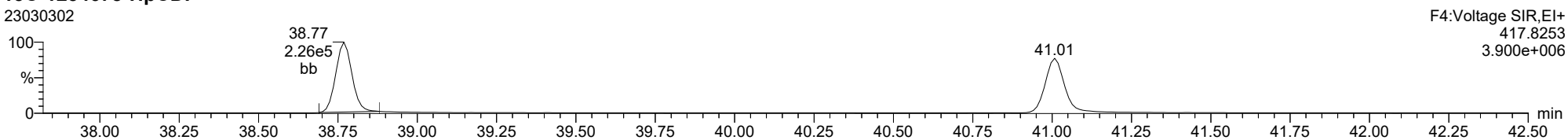

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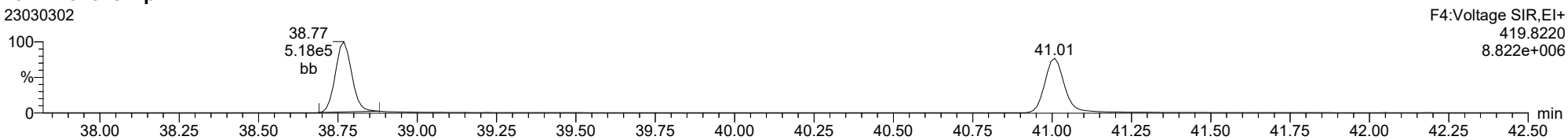
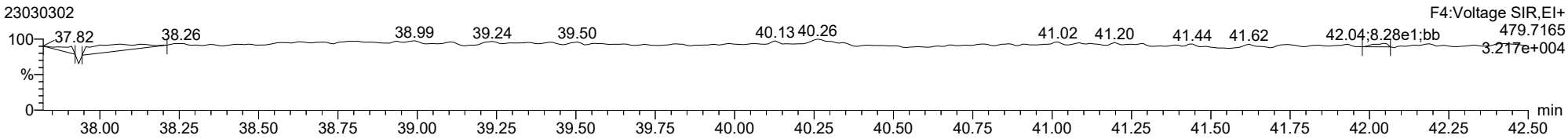


FUNCTION4 NCDPE



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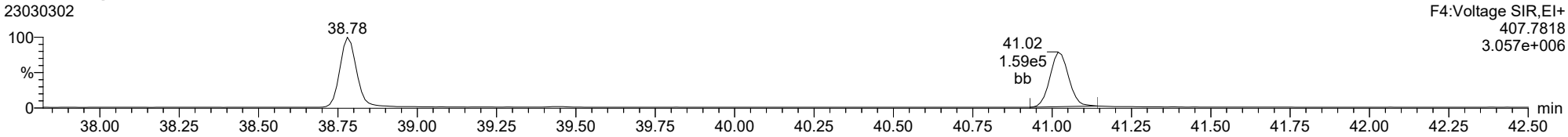

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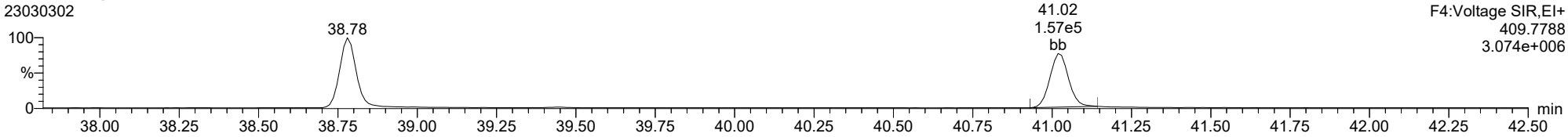

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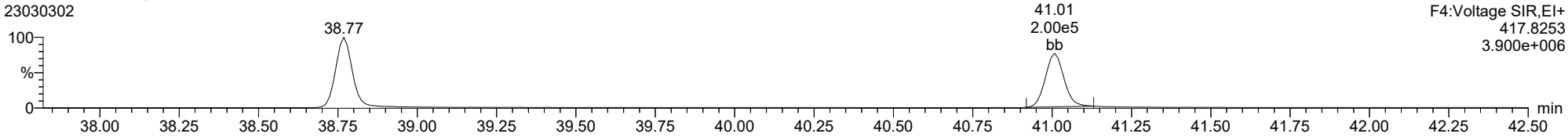

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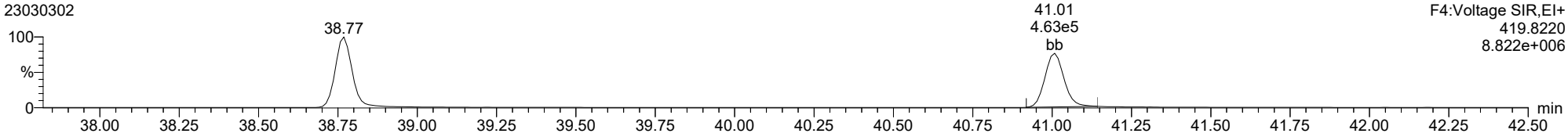

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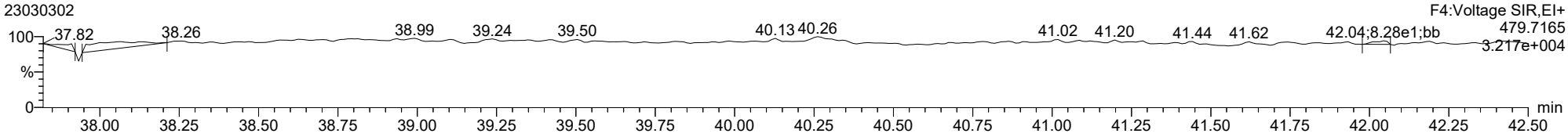

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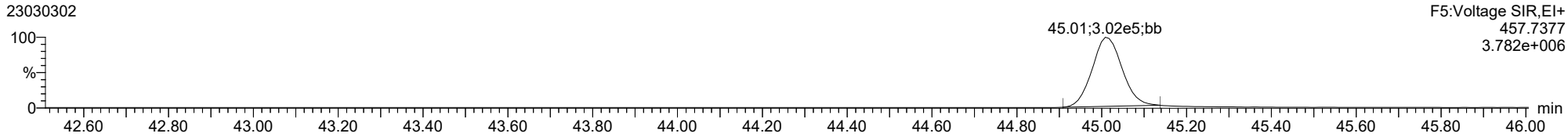
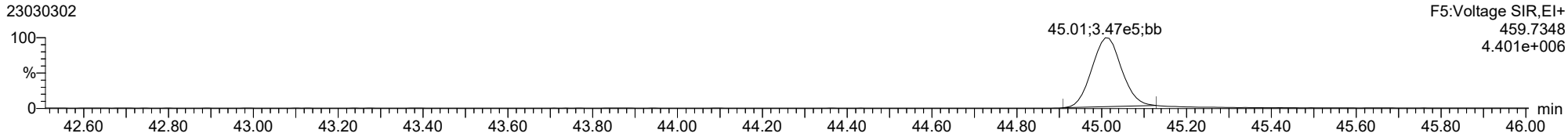
OCDD



OCDD



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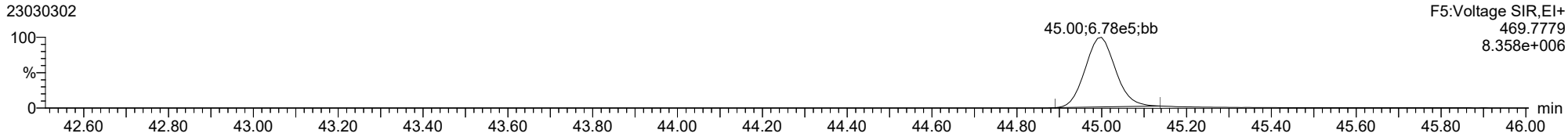

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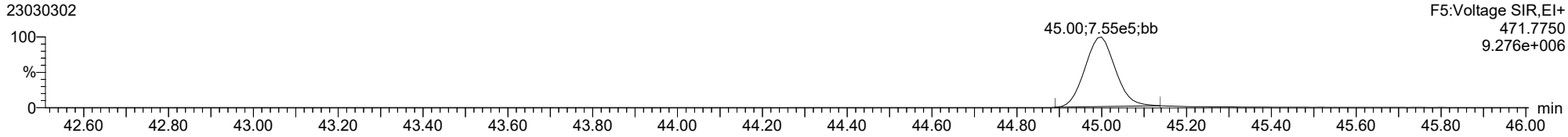
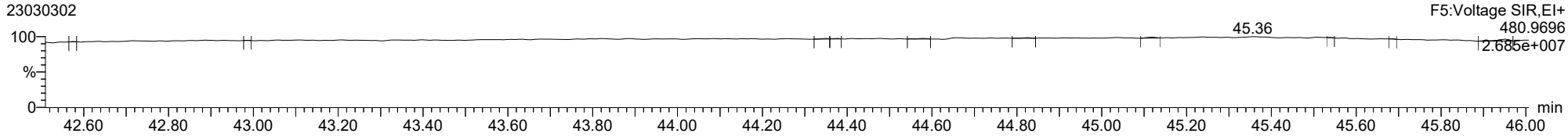


FUNCTION5 PFK



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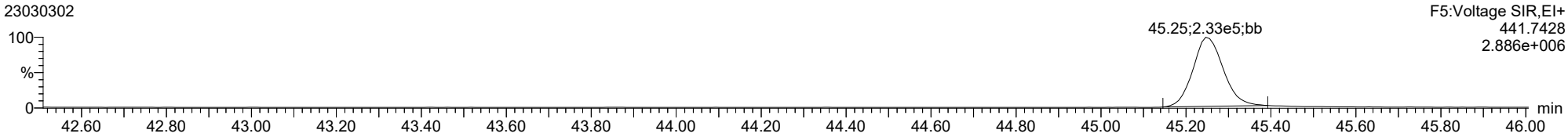

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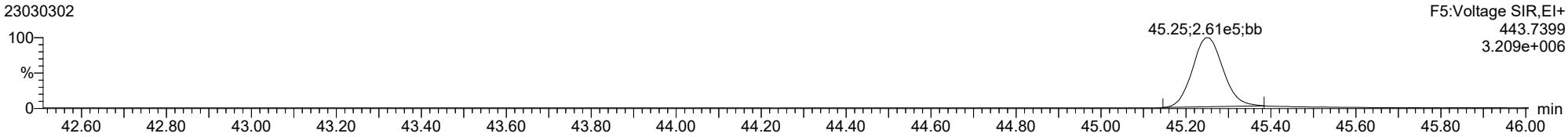
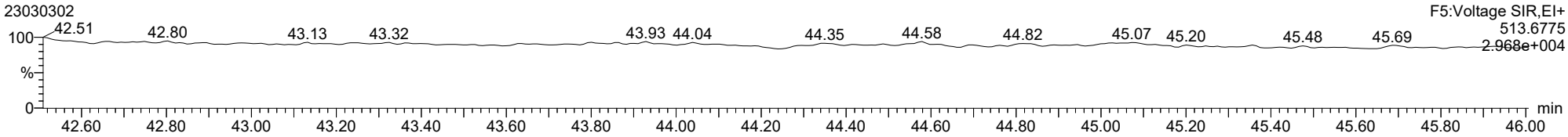


FUNCTION5 DCDPE



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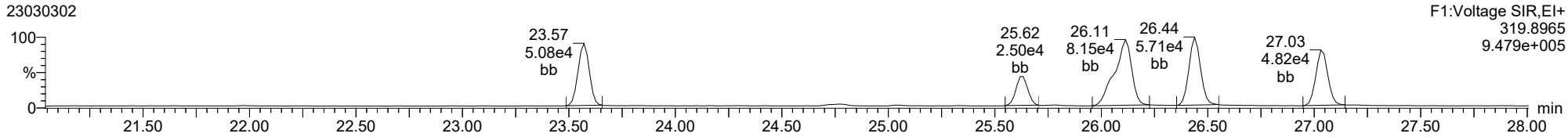
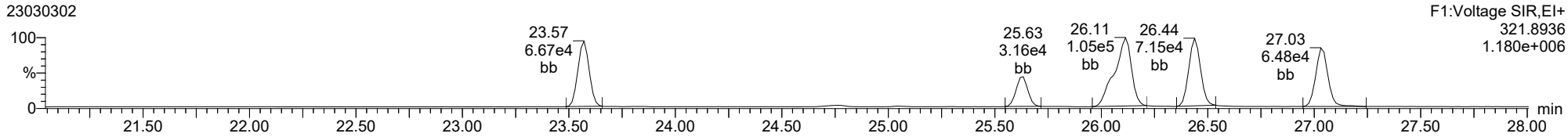
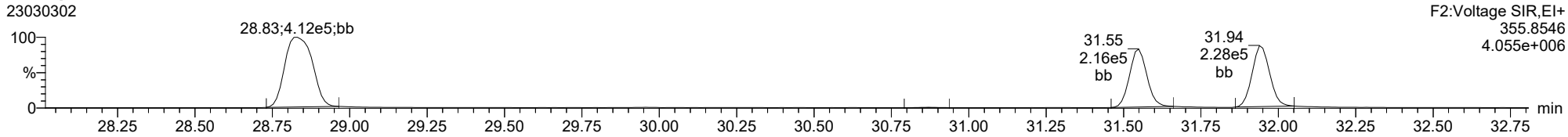
Total-tetradioxins



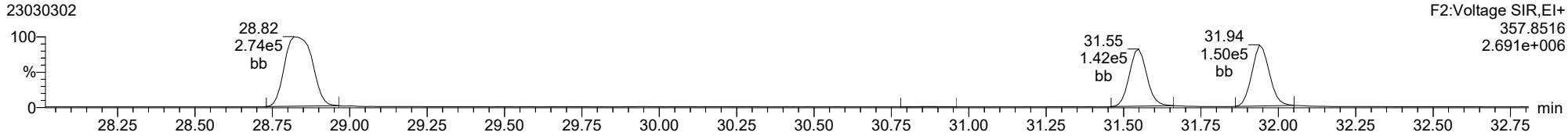
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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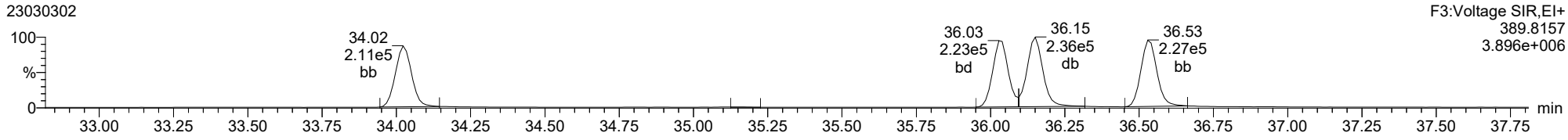
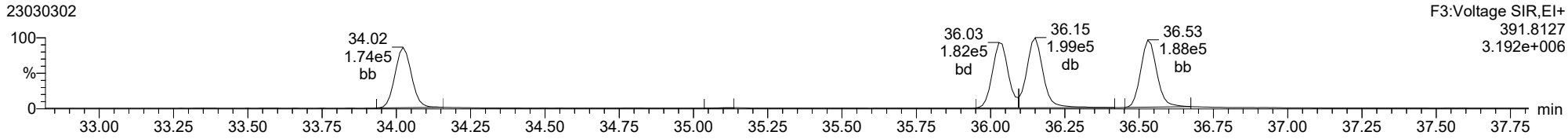
Total-hexadioxins



Total-hexadioxins



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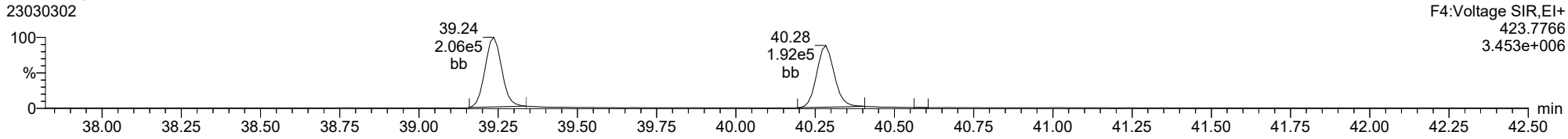

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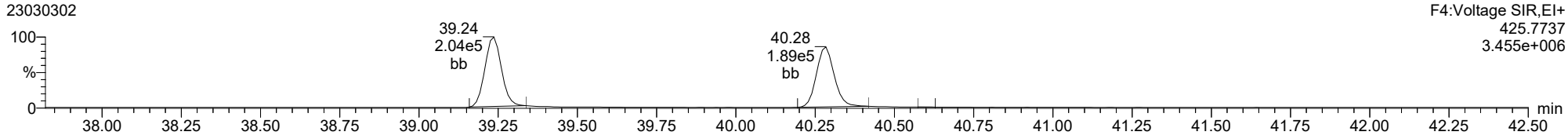

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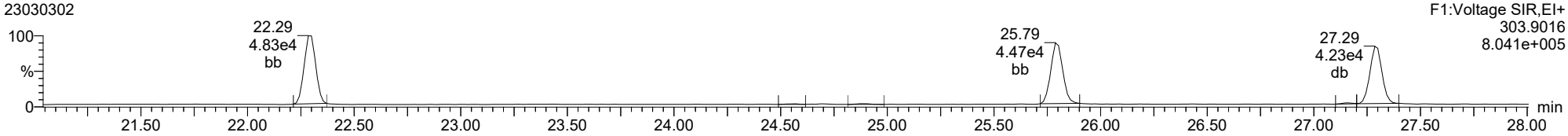
Total-tetrafurans



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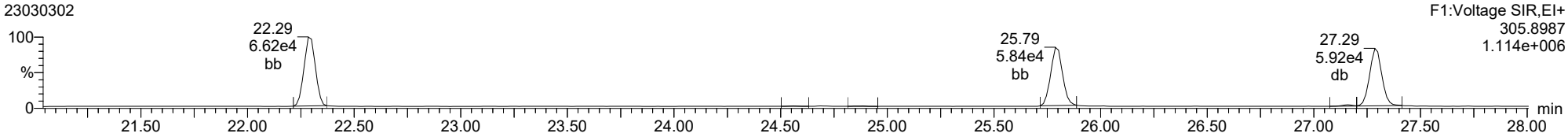

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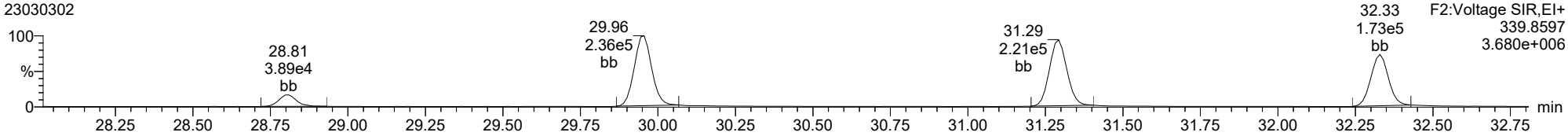

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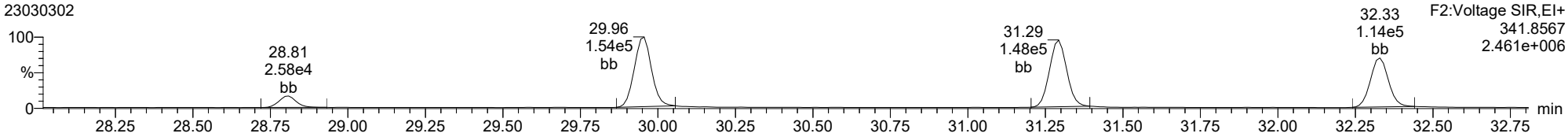

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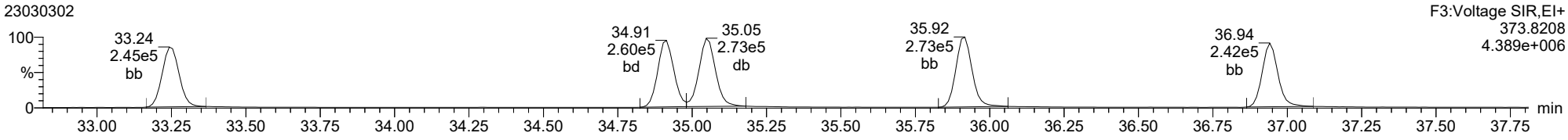
Total-hexafurans



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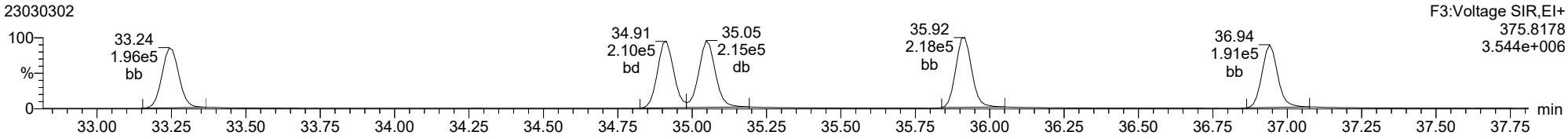

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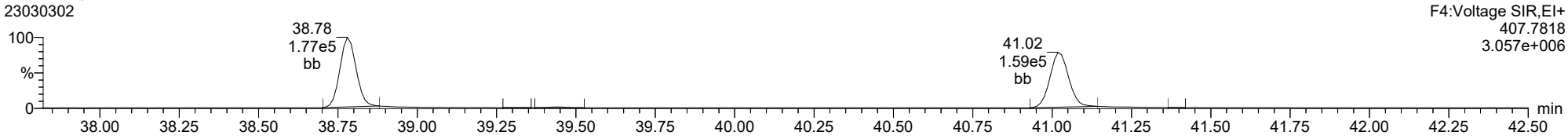

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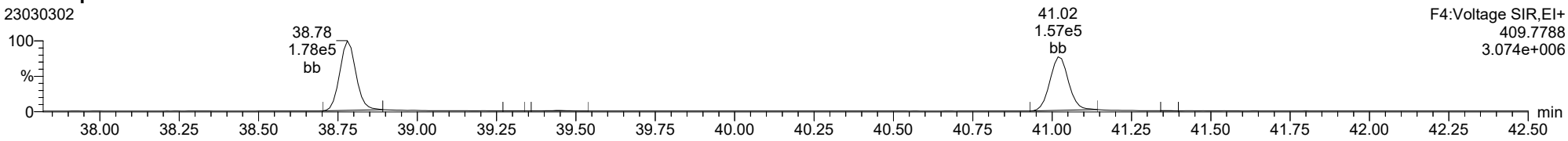

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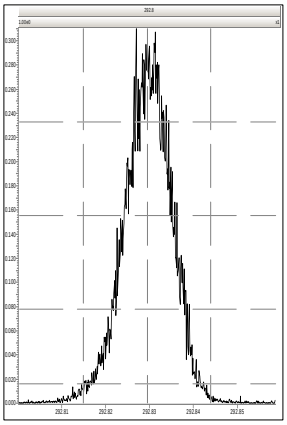
M 292.9824 R 11554



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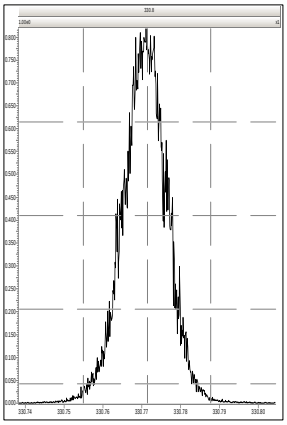
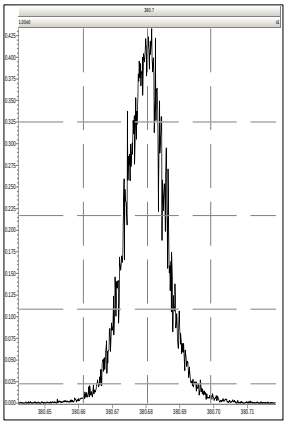


M 380.9760 R 13750



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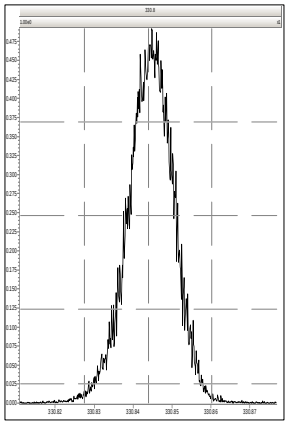

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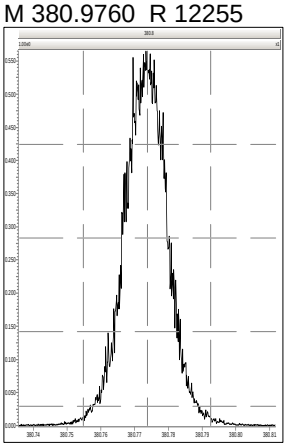

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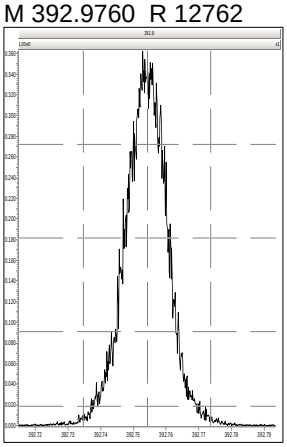

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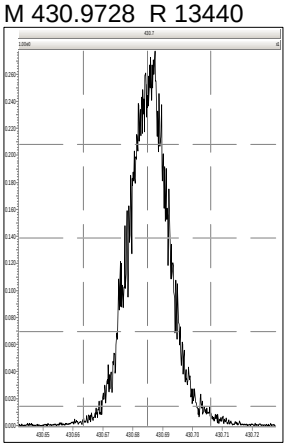

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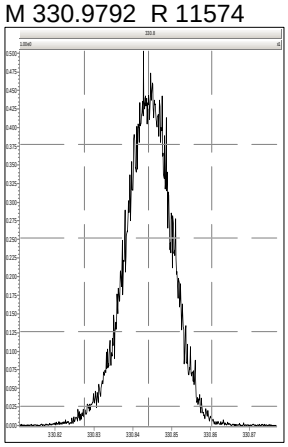

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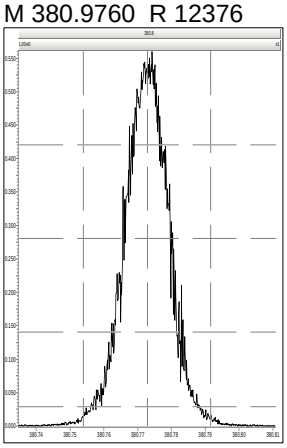

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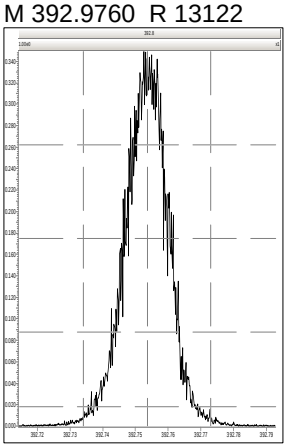

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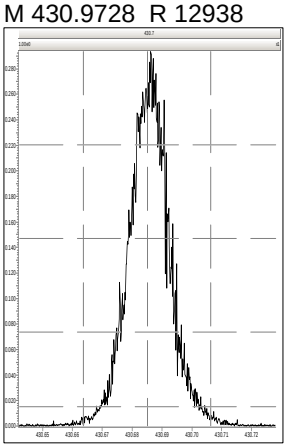

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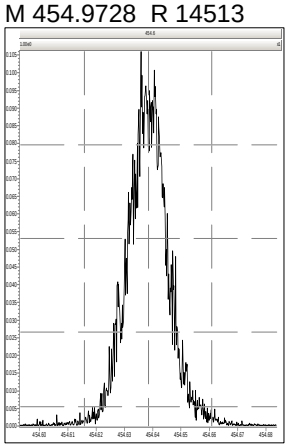

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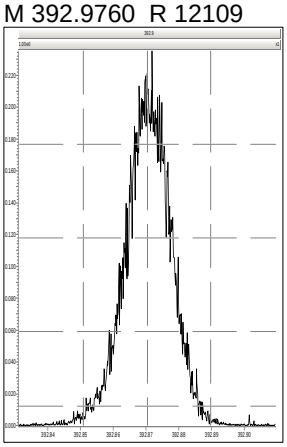

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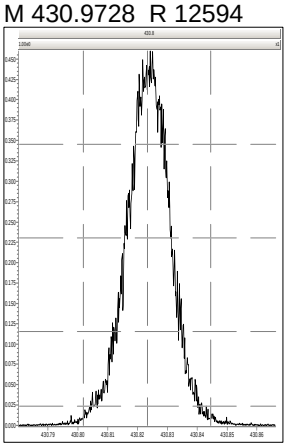
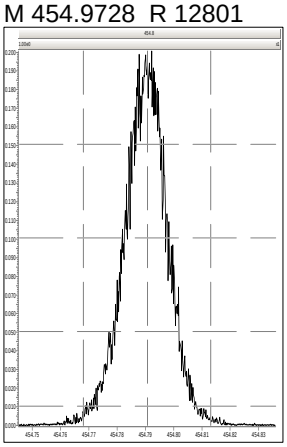


M 454.9728 R 12801



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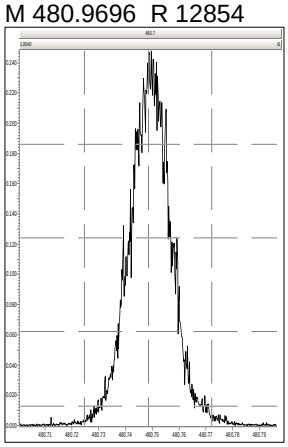

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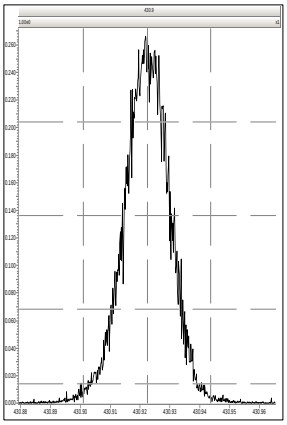
M 430.9728 R 12109



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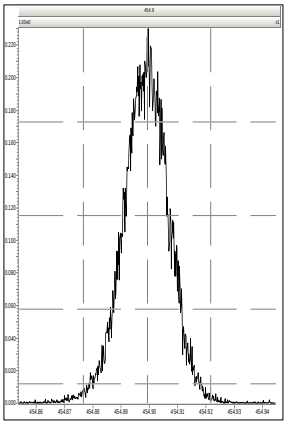

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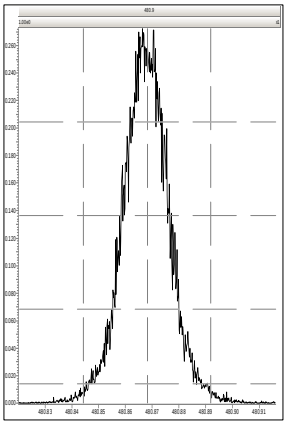
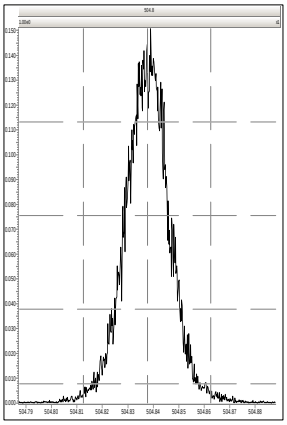
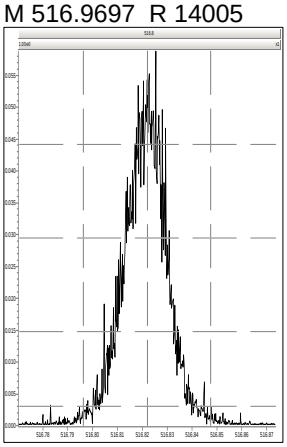
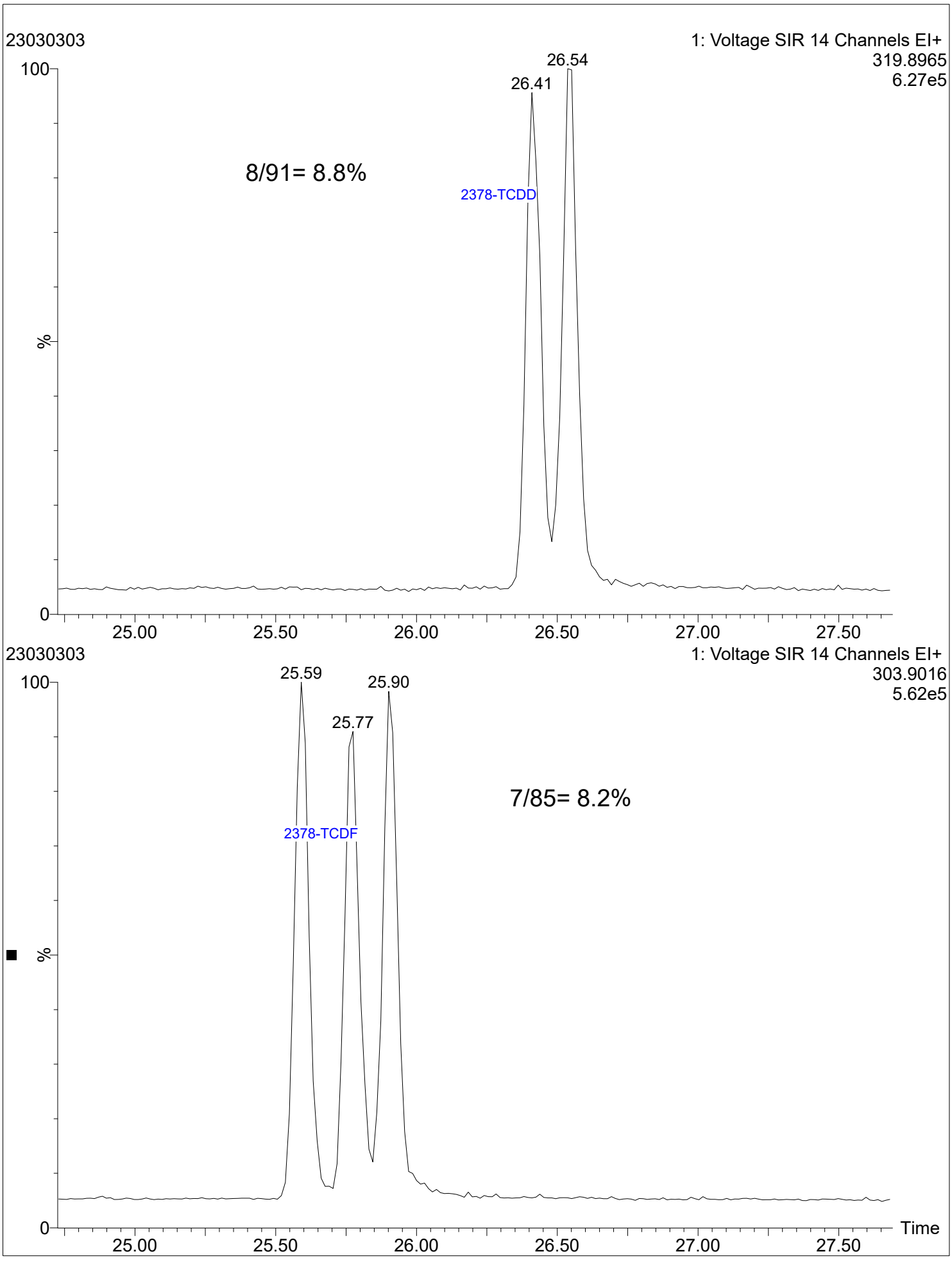


M 504.9696 R 12722



M 516.9697 R 14005

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6.27e5
100
26.54
26.41
8/91= 8.8%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23030303
1: Voltage SIR 14 Channels EI+
303.9016
5.62e5
100
25.59
25.90
25.77
7/85= 8.2%
2378-TCDF
%
0
Time
25.00
25.50
26.00
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Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

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ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF					0.702		0.770	1141	1568								
12378-PeCDF	29.922	1.000	2.331e3	1.631e3	0.679	1.429	1.550	717	1165	3.89e4	2.49e4	54.3	21.4	NO	bb	bd	0.520
23478-PeCDF	31.270	1.001	2.446e3	1.527e3	0.786	1.602	1.550	717	1165	3.60e4	2.25e4	50.1	19.4	NO	bb	bb	0.508
123478-HxCDF	34.891	1.001	2.740e3	2.578e3	1.166	1.063	1.240	675	706	4.36e4	3.63e4	64.6	51.5	NO	bd	bd	0.522
234678-HxCDF	35.894	1.001	2.363e3	1.967e3	1.140	1.201	1.240	675	706	3.52e4	3.17e4	52.2	44.9	NO	bb	bb	0.459
123678-HxCDF	35.025	1.000	2.955e3	2.593e3	1.091	1.140	1.240	675	706	3.97e4	3.71e4	58.8	52.6	NO	db	dd	0.495
123789-HxCDF	36.919	1.000	2.292e3	1.751e3	1.137	1.309	1.240	675	706	3.51e4	2.45e4	52.0	34.7	NO	bd	bb	0.523
1234678-HpCDF	38.769	1.001	1.264e3	1.356e3	1.003	0.932	1.050	1176	1150	2.17e4	2.11e4	18.4	18.3	NO	bd	bb	0.466
1234789-HpCDF	40.997	1.000	1.144e3	1.036e3	0.953	1.105	1.050	1176	1150	1.78e4	1.51e4	15.1	13.1	NO	bb	bd	0.465
OCDF	45.228	1.006	2.105e3	2.214e3	0.778	0.951	0.890	762	984	2.31e4	2.16e4	30.2	22.0	NO	bb	bb	1.044
2378-TCDD					1.149		0.770	1186	741								
12378-PeCDD	31.527	1.001	2.628e3	1.506e3	1.022	1.745	1.550	935	615	3.66e4	1.58e4	39.1	25.7	NO	bb	bb	0.540
123478-HxCDD	36.016	1.001	2.113e3	1.865e3	0.996	1.133	1.240	725	812	3.30e4	2.93e4	45.6	36.1	NO	dd	bd	0.542
123678-HxCDD	36.128	1.001	2.428e3	1.876e3	1.001	1.294	1.240	725	812	3.70e4	2.39e4	51.1	29.5	NO	db	db	0.479
123789-HxCDD	36.507	1.011	2.154e3	1.651e3	0.907	1.304	1.240	725	812	3.30e4	2.34e4	45.5	28.9	NO	bd	bb	0.513
1234678-HpCDD	40.261	1.000	1.634e3	1.397e3	1.039	1.170	1.050	985	1205	2.31e4	2.24e4	23.5	18.6	NO	MM	bb	0.531
OCDD					0.920		0.890	1090	941								
13C-2378-TCDF	25.746	1.007	5.730e5	7.592e5	1.620	0.755	0.770	2498	2006	8.42e6	1.11e7	3371.3	5556.4	NO	bb	bb	100.702
13C-12378-PeCDF	29.911	1.169	6.805e5	4.409e5	1.240	1.543	1.550	2678	2220	9.20e6	6.10e6	3433.8	2749.3	NO	bb	bd	110.727
13C-23478-PeCDF	31.248	1.222	6.001e5	3.956e5	1.118	1.517	1.550	2678	2220	8.66e6	5.74e6	3235.2	2585.6	NO	bb	bb	109.107
13C-123478-HxCDF	34.869	0.955	2.965e5	5.770e5	1.168	0.514	0.510	1558	3112	4.38e6	8.54e6	2813.2	2745.5	NO	bd	bd	98.607
13C-123678-HxCDF	35.014	0.959	3.446e5	6.820e5	1.386	0.505	0.510	1558	3112	4.56e6	9.02e6	2927.1	2898.6	NO	db	dd	97.648
13C-234678-HxCDF	35.872	0.983	2.821e5	5.460e5	1.129	0.517	0.510	1558	3112	4.13e6	8.00e6	2652.6	2572.0	NO	bb	bb	96.703
13C-123789-HxCDF	36.908	1.011	2.282e5	4.511e5	0.932	0.506	0.510	1558	3112	3.31e6	6.47e6	2122.2	2079.8	NO	bb	bb	96.146
13C-1234678-HpCDF	38.746	1.062	1.794e5	3.814e5	0.895	0.470	0.440	2435	3572	2.60e6	5.93e6	1069.0	1659.1	NO	bd	bb	82.620
13C-1234789-HpCDF	40.986	1.123	1.404e5	3.516e5	0.770	0.399	0.440	2435	3572	1.98e6	4.51e6	813.8	1262.1	NO	bb	bb	84.288
13C-1234-TCDD	25.576	0.000	3.640e5	4.524e5	1.000	0.805	0.770	1931	1352	5.55e6	6.91e6	2875.2	5114.0	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.032	4.012e5	4.998e5	1.152	0.803	0.770	1931	1352	5.75e6	7.10e6	2979.4	5249.9	NO	bb	bb	95.760
13C-12378-PeCDD	31.504	1.232	4.613e5	2.880e5	0.829	1.602	1.550	1401	1533	6.70e6	4.14e6	4781.1	2700.1	NO	bb	bb	110.725
13C-123478-HxCDD	35.994	0.986	4.133e5	3.236e5	0.995	1.277	1.240	1744	1461	6.55e6	5.10e6	3756.0	3493.2	NO	bd	bd	97.670
13C-123678-HxCDD	36.106	0.989	5.195e5	3.785e5	1.157	1.372	1.240	1744	1461	6.84e6	5.29e6	3920.0	3622.3	NO	db	db	102.381
13C-1234678-HpCDD	40.250	1.103	2.785e5	2.707e5	0.840	1.029	1.050	1497	2275	3.82e6	3.65e6	2553.8	1605.5	NO	bb	bd	86.201
13C-OCDD	44.972	1.232	5.210e5	5.429e5	0.767	0.960	0.890	2989	1436	5.87e6	6.48e6	1964.2	4513.5	NO	bd	bb	182.810
13C-123789-HxCDD	36.496	0.000	4.181e5	3.402e5	1.000	1.229	1.240	1744	1461	6.11e6	4.85e6	3503.9	3317.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	1.287e3		1.288			1959		1.53e4		7.8			db		0.122

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1141	1568								
1289-TCDF					0.678		0.770	1141	1568								
13468-PECDF					1.246		1.550	669	893								
12389-PECDF					0.496		1.550	717	1165								
123468-HXCDF					1.169		1.240	675	706								
1368-TCDD					1.015		0.770	1186	741								
1289-TCDD					0.909		0.770	1186	741								
12479-PECDD					2.301		1.550	935	615								
12389-PECDD					1.184		1.550	935	615								
124679-HXCDD					1.115		1.240	725	812								
1234679-HPCDD					1.137		1.050	985	1205								
Total-tetrafurans			0.000e0		0.727			1141		0.00e0							
Total-penta1			0.000e0					669		0.00e0							
Total-pentafurans			4.777e3		0.654			717		7.49e4							1.028
Total-hexafurans			1.035e4		1.141			675		1.54e5							2.000
Total-heptafurans			2.408e3		0.978			1176		3.94e4							0.931
Total-Furans			1.971e4		0.922			1141		2.93e5							5.016
Total-tetradioxins			0.000e0		1.024			1186		0.00e0							
Total-pentadioxins			2.628e3		1.502			935		3.66e4							0.540
Total-hexadioxins			6.694e3		1.005			725		1.03e5							1.534
Total-heptadioxins			1.634e3		1.088			985		2.31e4							0.531
Total-Dioxins			1.096e4		1.130			1186		1.63e5							2.605
Total-TEQ			3.067e4					1186		4.55e5							7.621
FUNCTION1 PFK			3.116e6					620464		1.62e6							
FUNCTION2 PFK			1.698e6					301200		2.24e6							0.000
FUNCTION3 PFK			5.380e7					450736		2.93e7							0.000
FUNCTION4 PFK			1.391e7					291095		1.60e7							
FUNCTION5 PFK			7.208e4					238350		2.59e6							
FUNCTION1 HXCD...			4.809e2					559		5.84e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.084e2					933		1.50e4							0.000
FUNCTION3 OCDPE			0.000e0					494		0.00e0							
FUNCTION4 NCDPE			6.931e2					845		1.26e4							0.000
FUNCTION5 DCDPE			7.511e2					821		1.86e4							0.000

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Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
2	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
2	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
3	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
4	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
2	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.68	7.033e1	1.021e2	0.922	0.69	0.77	1.5	NO	NO	bb	bb	0.014
2	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
3	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
4	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
5	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522
6	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
7	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520
8	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
9	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465
10	OCDF	45.23	2.105e3	2.214e3	0.778	0.95	0.89	30.2	YES	NO	bb	bb	1.044

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
2	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
3	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540
2	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
3	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
4	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542
5	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-Furans	21.68	7.033e1	1.021e2	0.922	0.69	0.77	1.5	NO	NO	bb	bb	0.014
2	123789-HxCDF	36.92	2.292e3	1.751e3	1.137	1.31	1.24	52.0	YES	NO	bd	bb	0.523
3	234678-HxCDF	35.89	2.363e3	1.967e3	1.140	1.20	1.24	52.2	YES	NO	bb	bb	0.459
4	123678-HxCDF	35.03	2.955e3	2.593e3	1.091	1.14	1.24	58.8	YES	NO	db	dd	0.495
5	123478-HxCDF	34.89	2.740e3	2.578e3	1.166	1.06	1.24	64.6	YES	NO	bd	bd	0.522
6	23478-PeCDF	31.27	2.446e3	1.527e3	0.786	1.60	1.55	50.1	YES	NO	bb	bb	0.508
7	12378-PeCDF	29.92	2.331e3	1.631e3	0.679	1.43	1.55	54.3	YES	NO	bb	bd	0.520
8	1234678-HpCDF	38.77	1.264e3	1.356e3	1.003	0.93	1.05	18.4	YES	NO	bd	bb	0.466
9	1234789-HpCDF	41.00	1.144e3	1.036e3	0.953	1.10	1.05	15.1	YES	NO	bb	bd	0.465
10	OCDF	45.23	2.105e3	2.214e3	0.778	0.95	0.89	30.2	YES	NO	bb	bb	1.044
11	12378-PeCDD	31.53	2.628e3	1.506e3	1.022	1.75	1.55	39.1	YES	NO	bb	bb	0.540
12	123789-HxCDD	36.51	2.154e3	1.651e3	0.907	1.30	1.24	45.5	YES	NO	bd	bb	0.513
13	123678-HxCDD	36.13	2.428e3	1.876e3	1.001	1.29	1.24	51.1	YES	NO	db	db	0.479
14	123478-HxCDD	36.02	2.113e3	1.865e3	0.996	1.13	1.24	45.6	YES	NO	dd	bd	0.542
15	1234678-HpCDD	40.26	1.634e3	1.397e3	1.039	1.17	1.05	23.5	YES	NO	MM	bb	0.531

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.18	3.116e6					2.6	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.19	1.560e6					3.1	YES		bb		0.000
2	FUNCTION2 PFK	28.13	1.376e5					4.3	YES		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.12	2.560e6					15.7	YES		db		0.000
2	FUNCTION3 PFK	36.37	7.058e6					24.4	YES		dd		0.000
3	FUNCTION3 PFK	36.11	4.418e7					24.8	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.43	1.404e5					1.6	NO		bb		
2	FUNCTION4 PFK	37.89	1.377e7					53.2	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.15	7.152e3					1.1	NO		bb		
2	FUNCTION5 PFK	45.07	1.178e3					0.5	NO		bb		
3	FUNCTION5 PFK	44.98	1.177e3					0.5	NO		bb		
4	FUNCTION5 PFK	44.19	7.772e3					0.8	NO		bb		
5	FUNCTION5 PFK	43.72	7.921e3					1.3	NO		bb		
6	FUNCTION5 PFK	43.60	4.474e3					0.7	NO		bb		
7	FUNCTION5 PFK	43.17	6.636e3					1.2	NO		bb		
8	FUNCTION5 PFK	43.01	5.001e3					0.7	NO		bb		
9	FUNCTION5 PFK	42.76	1.253e4					1.4	NO		bb		
10	FUNCTION5 PFK	45.91	8.220e3					0.4	NO		bb		
11	FUNCTION5 PFK	45.75	6.523e3					1.4	NO		bb		
12	FUNCTION5 PFK	45.25	3.501e3					0.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.60	9.542e1					2.4	NO		bb		0.000
2	FUNCTION1 HXCD...	26.42	7.837e1					1.9	NO		bb		0.000
3	FUNCTION1 HXCD...	25.58	1.709e2					3.5	YES		bb		0.000
4	FUNCTION1 HXCD...	23.40	1.362e2					2.7	NO		bb		0.000

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.36	1.308e2					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	31.75	8.377e1					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.30	1.170e2					2.2	NO		db		0.000
4	FUNCTION2 HPCD...	31.24	1.138e2					2.6	NO		bd		0.000
5	FUNCTION2 HPCD...	30.92	1.786e2					3.2	YES		bb		0.000
6	FUNCTION2 HPCD...	30.04	8.034e1					1.7	NO		bb		0.000
7	FUNCTION2 HPCD...	29.47	1.041e2					2.9	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.04	9.826e1					2.2	NO		bb		0.000
2	FUNCTION4 NCDPE	41.83	1.085e2					2.1	NO		bb		0.000
3	FUNCTION4 NCDPE	41.67	8.318e1					2.8	NO		db		0.000
4	FUNCTION4 NCDPE	41.58	1.047e2					2.5	NO		bd		0.000
5	FUNCTION4 NCDPE	41.32	1.741e2					2.4	NO		bb		0.000
6	FUNCTION4 NCDPE	41.15	1.244e2					2.8	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	43.53	7.557e1					1.5	NO		bb		0.000
2	FUNCTION5 DCDPE	43.39	1.767e2					2.9	NO		bb		0.000
3	FUNCTION5 DCDPE	43.31	8.303e1					2.9	NO		db		0.000
4	FUNCTION5 DCDPE	43.27	1.217e2					4.5	YES		bd		0.000
5	FUNCTION5 DCDPE	43.04	1.550e2					3.9	YES		bb		0.000
6	FUNCTION5 DCDPE	42.73	1.390e2					7.0	YES		bb		0.000

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:33:58 Pacific Standard Time

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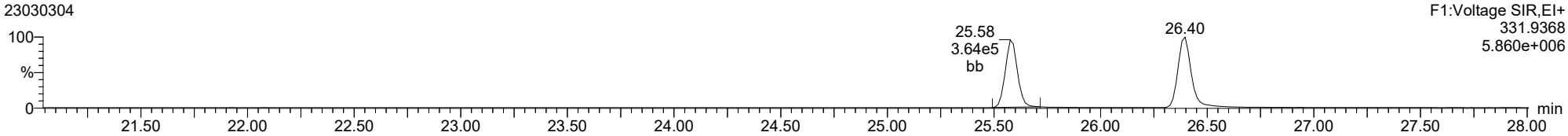
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CSLCW, Name: 23030304, Date: 03-Mar-2023, Time: 11:28:13, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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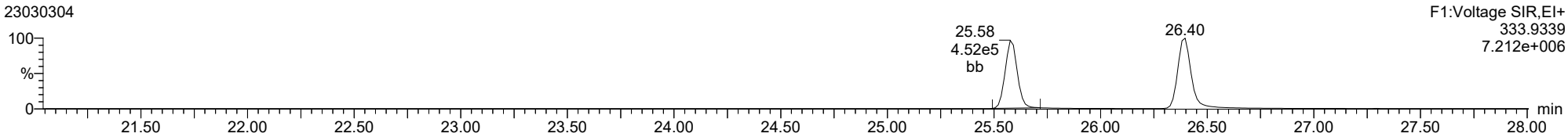

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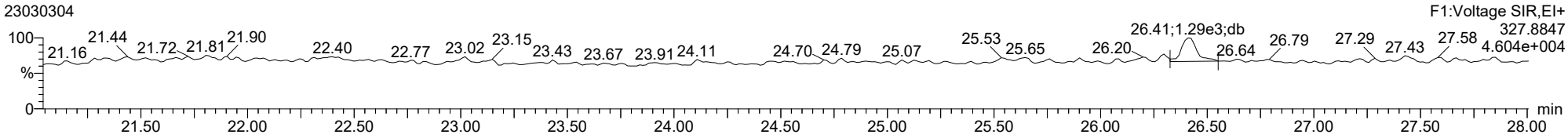

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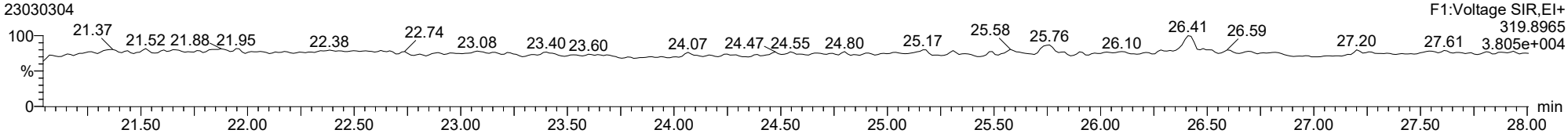
2378-TCDD



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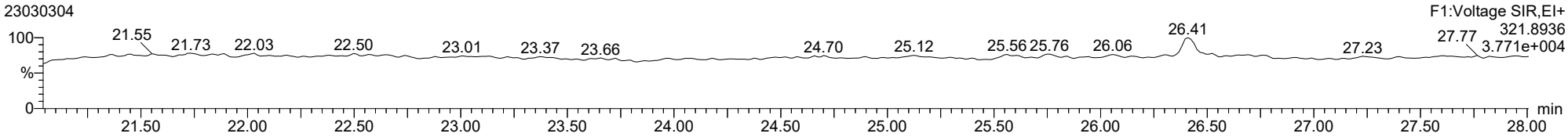

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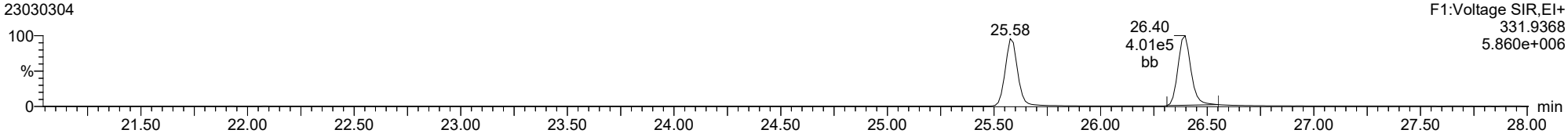

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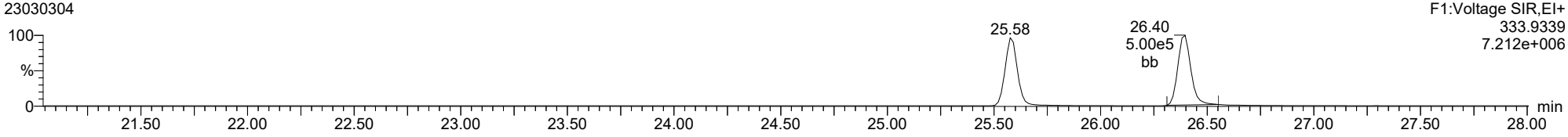
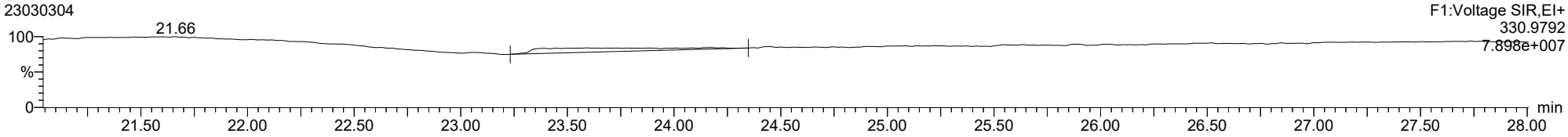


FUNCTION1 PFK



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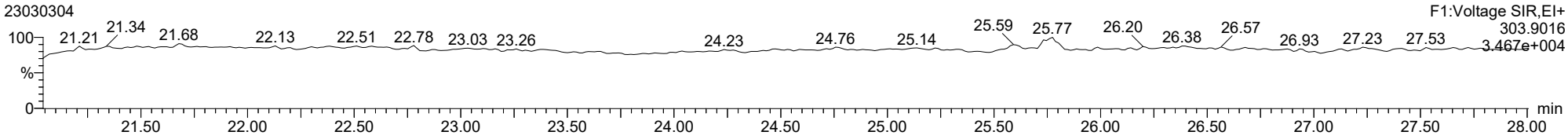
2378-TCDF



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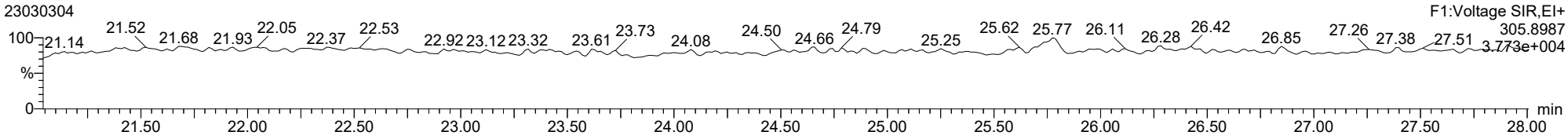

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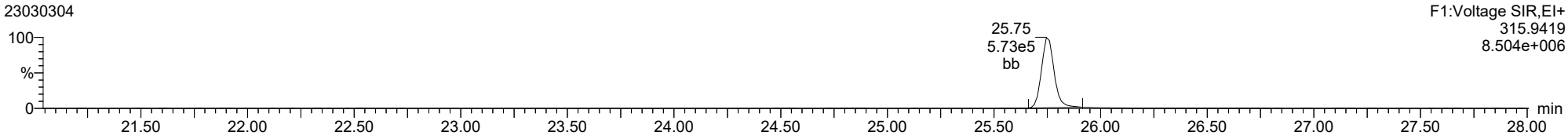

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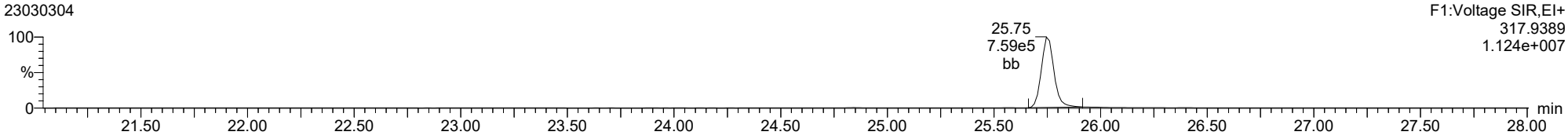

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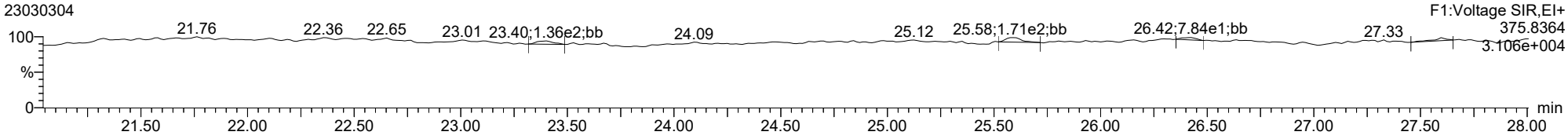

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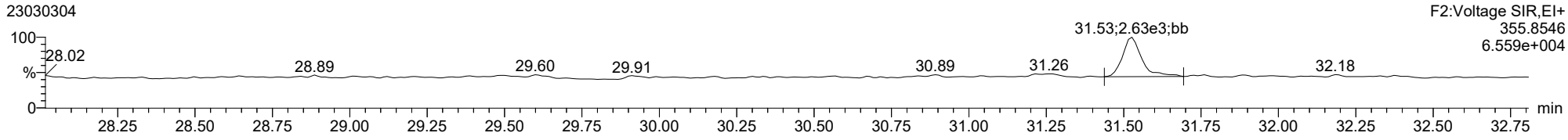

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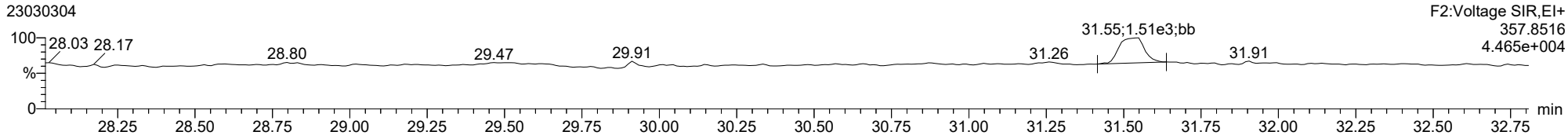

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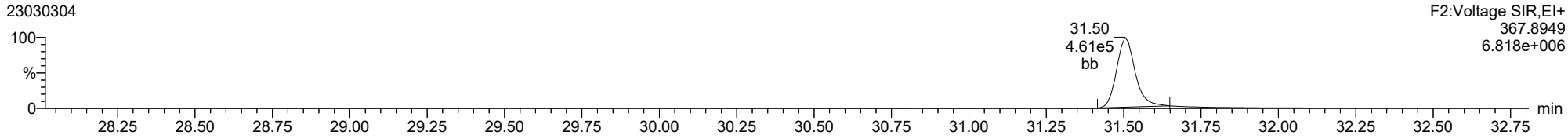

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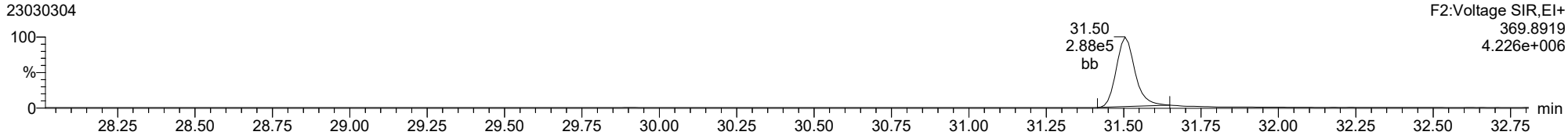

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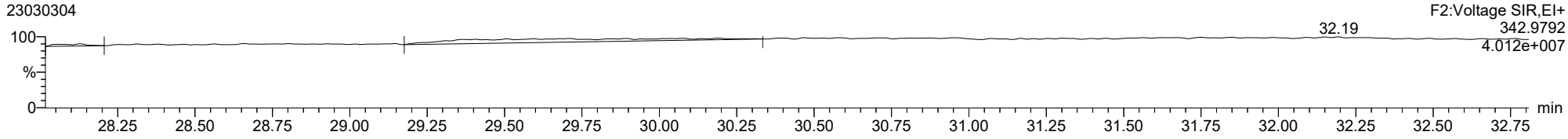

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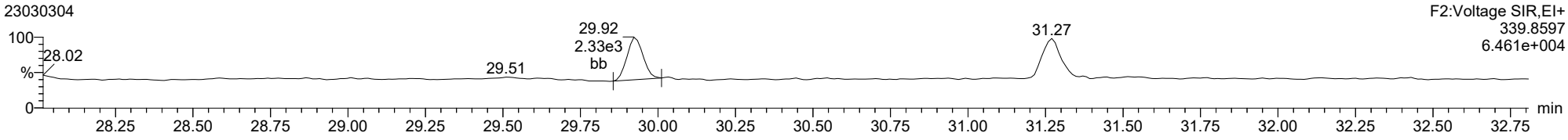
12378-PeCDF



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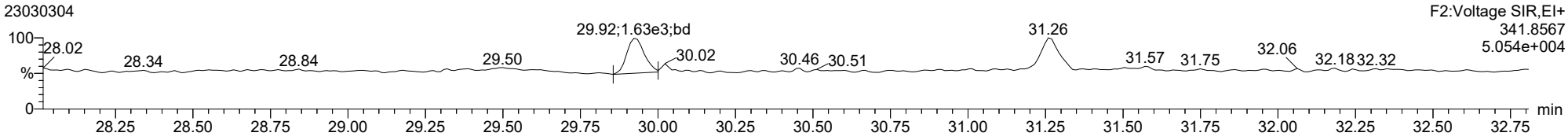

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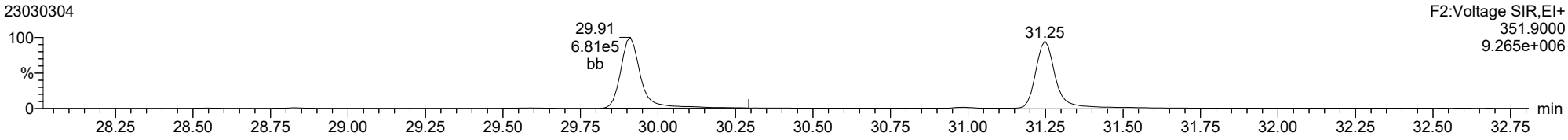

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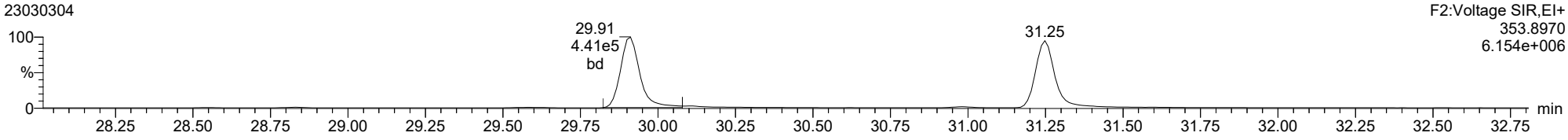
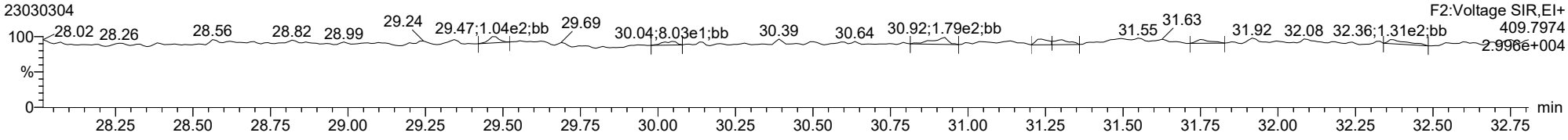


FUNCTION2 HPCDPE



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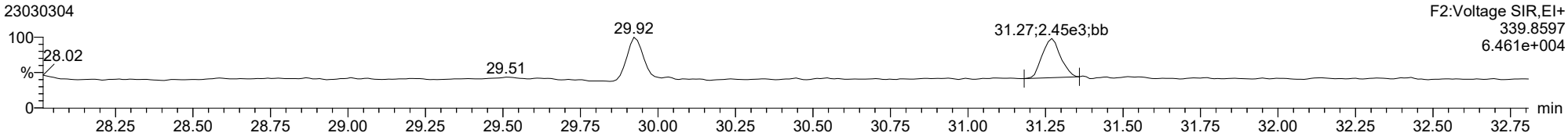

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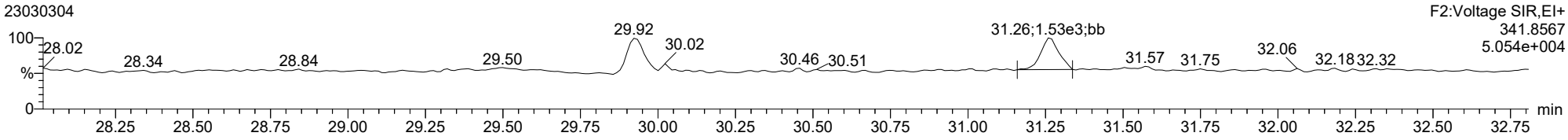

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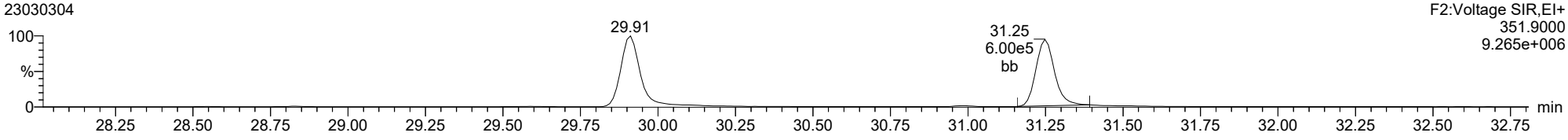

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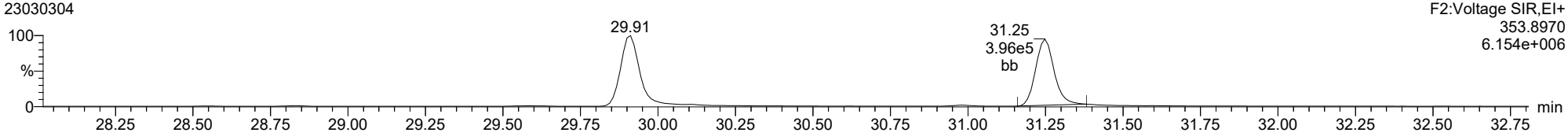

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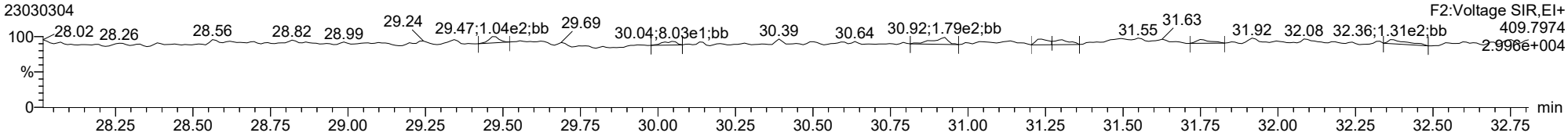

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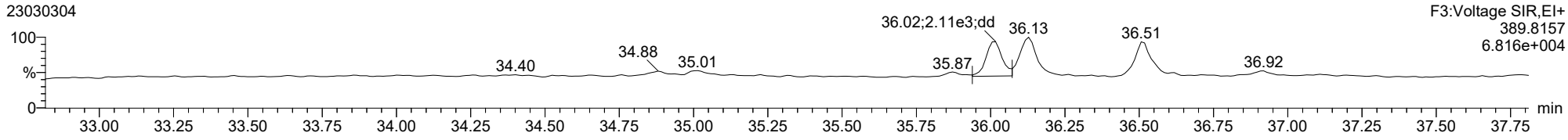

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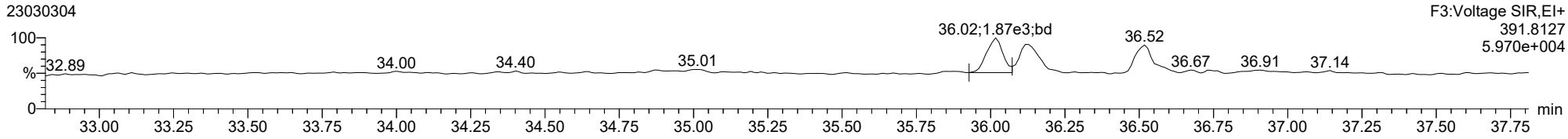

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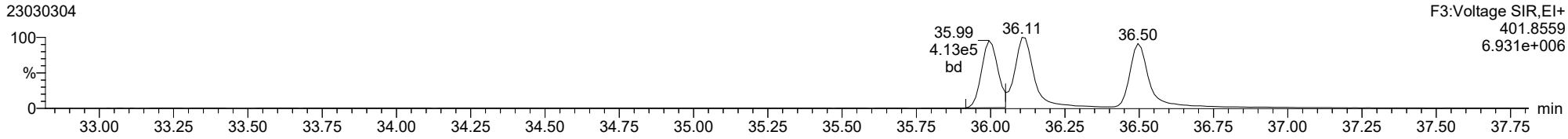

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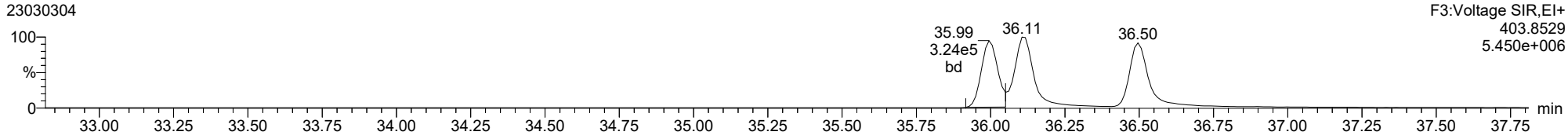

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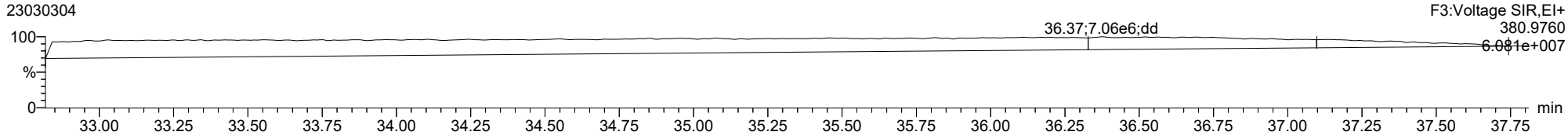

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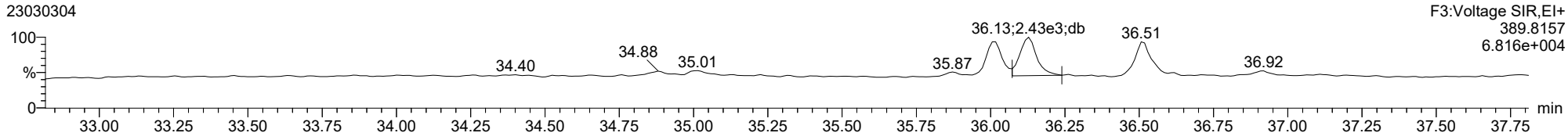

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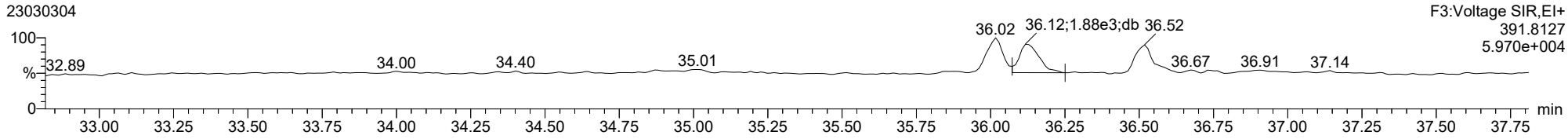

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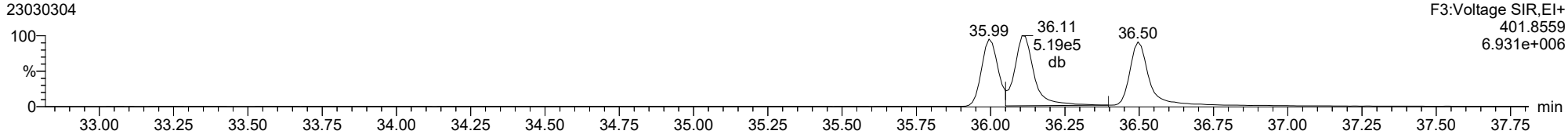

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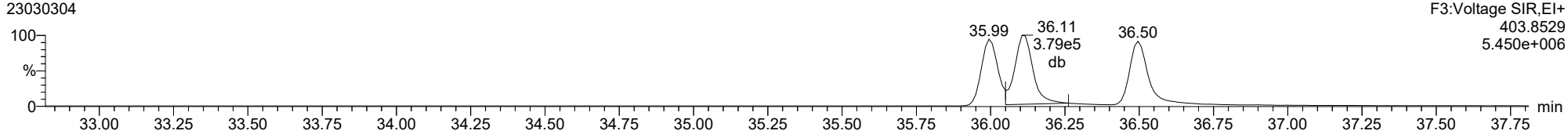

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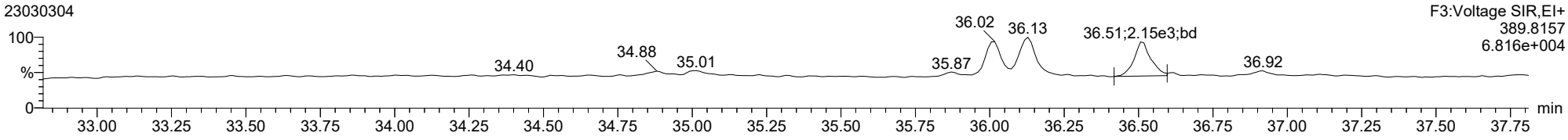

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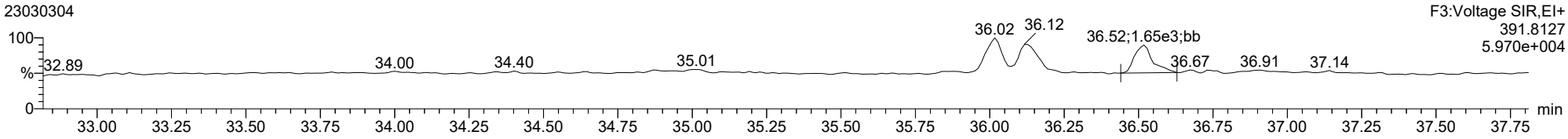

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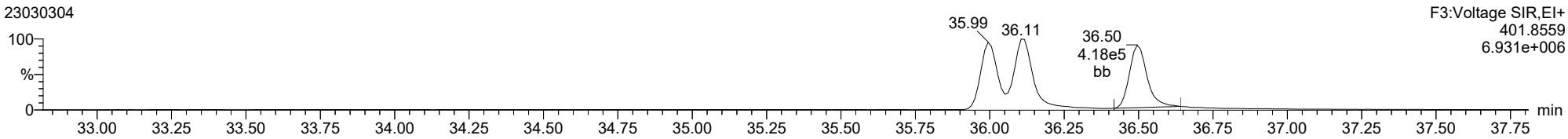

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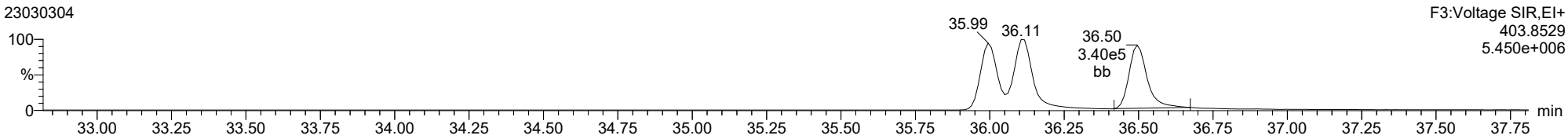

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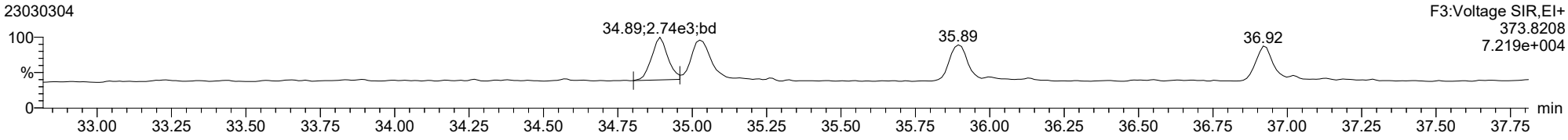

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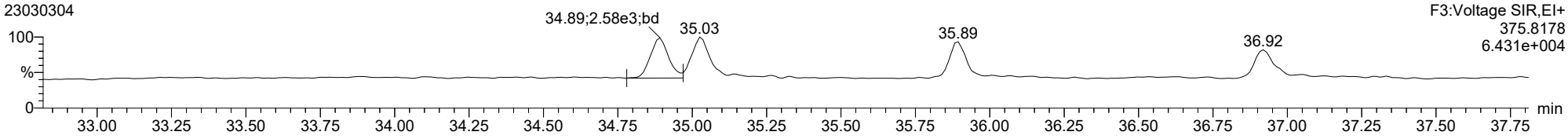

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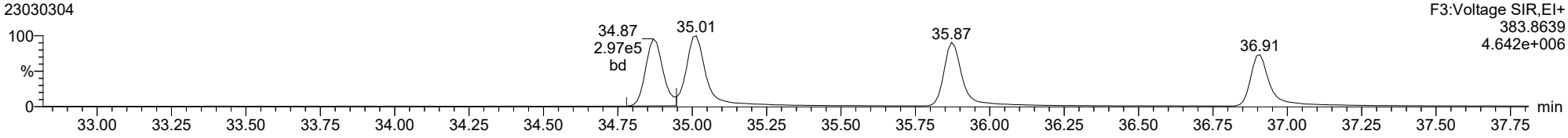

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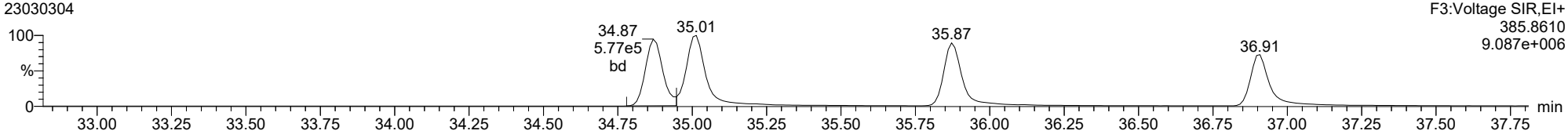

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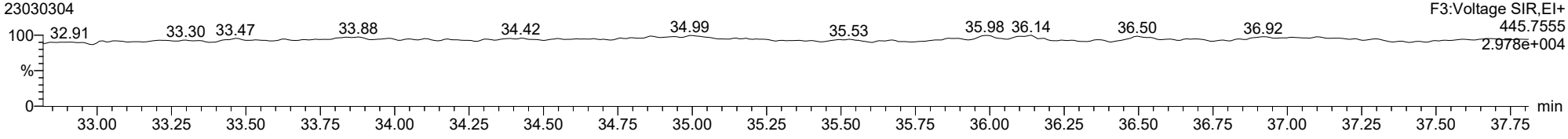

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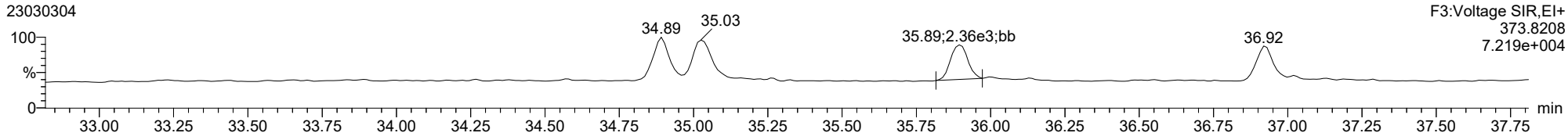

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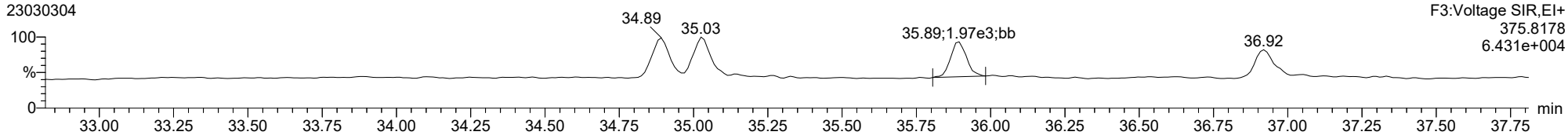

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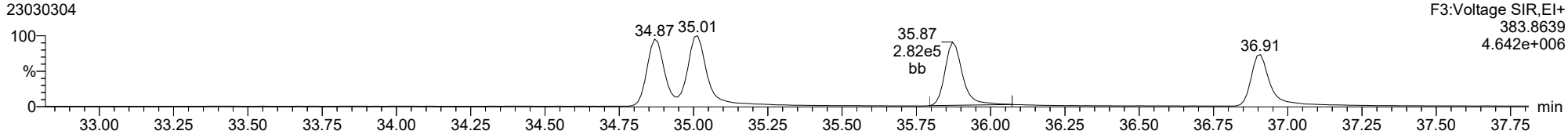

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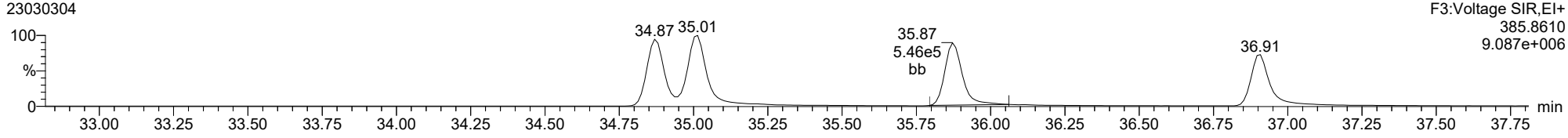

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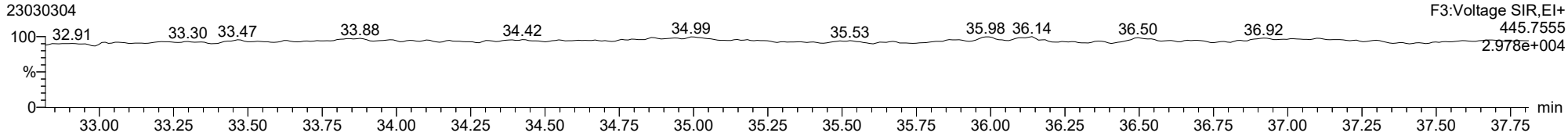

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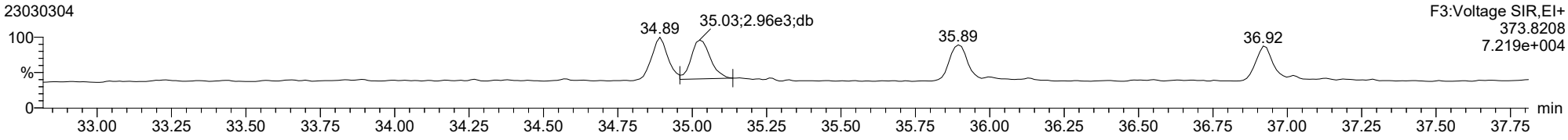

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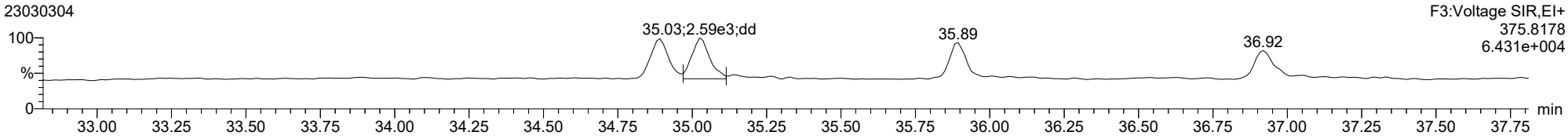

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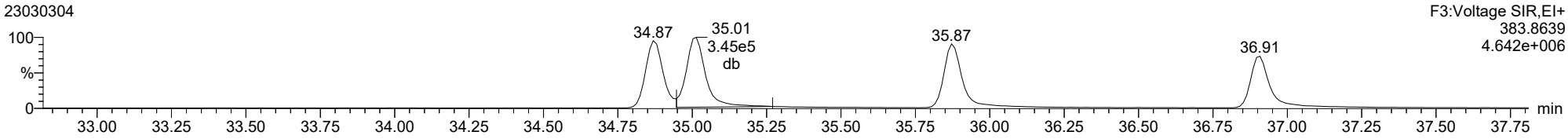

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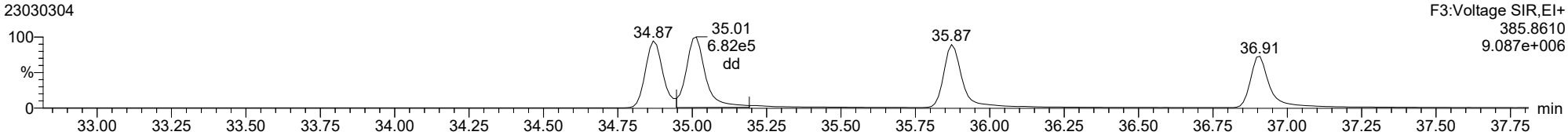
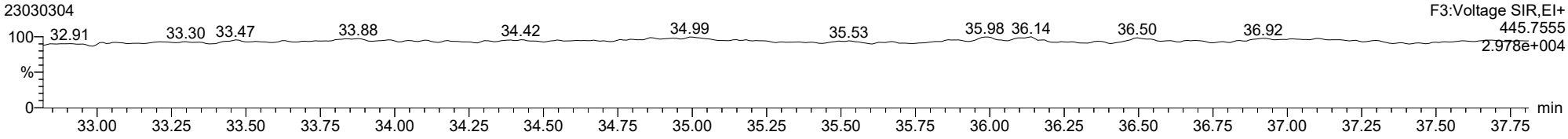


FUNCTION3 OCDPE



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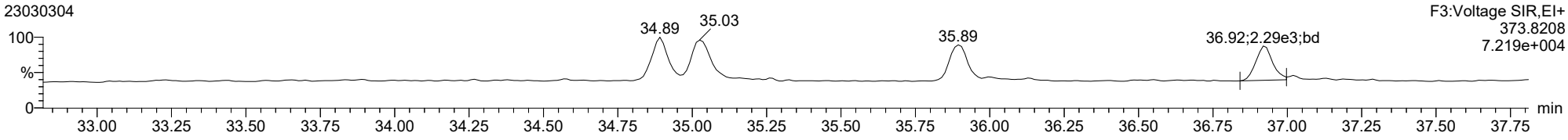

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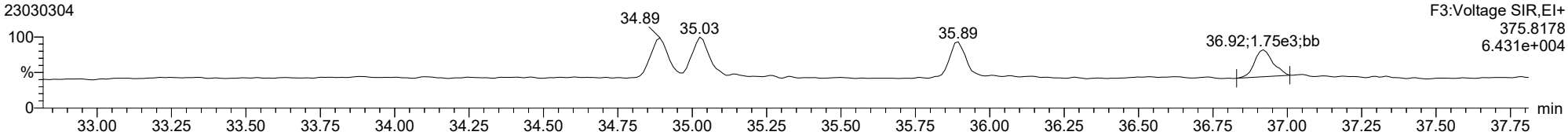

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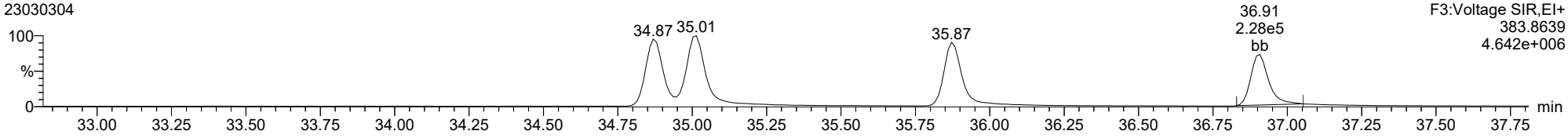

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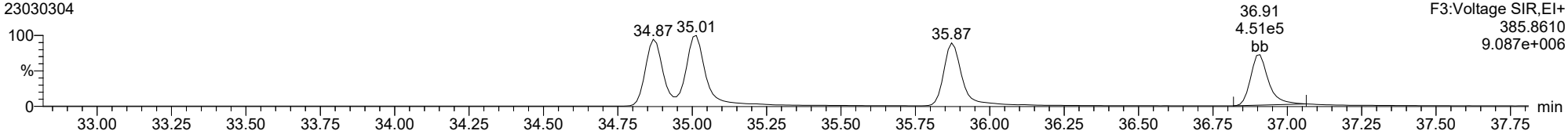

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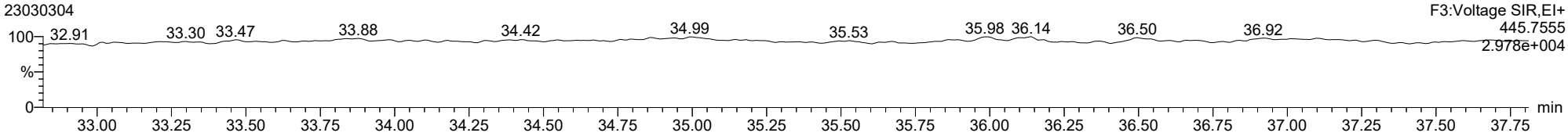

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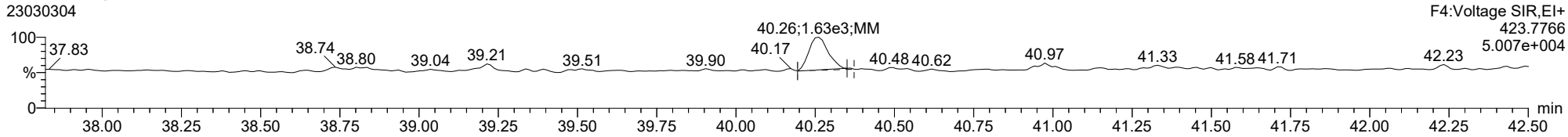

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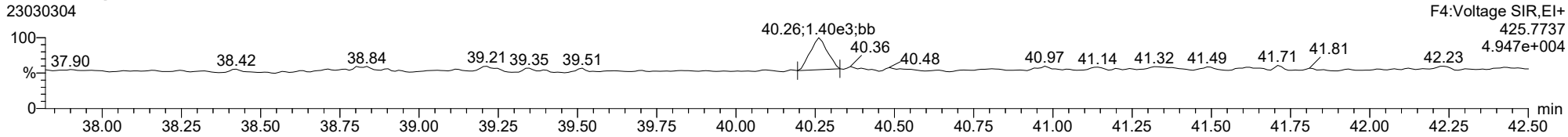

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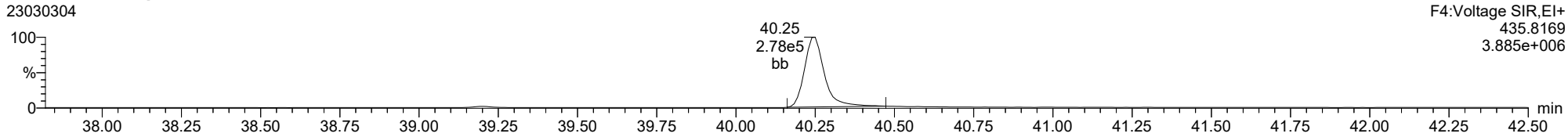

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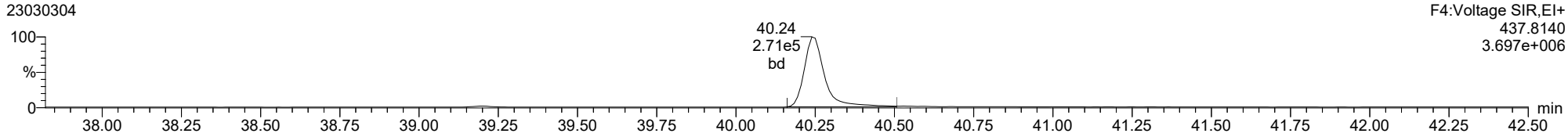

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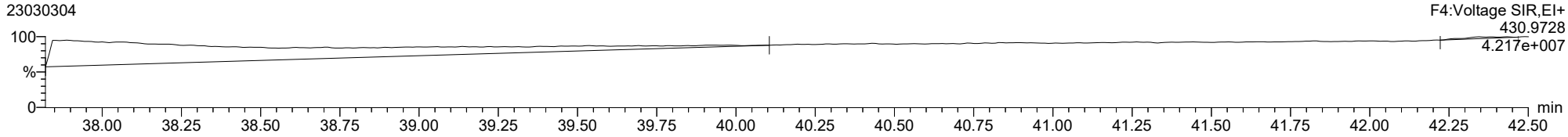

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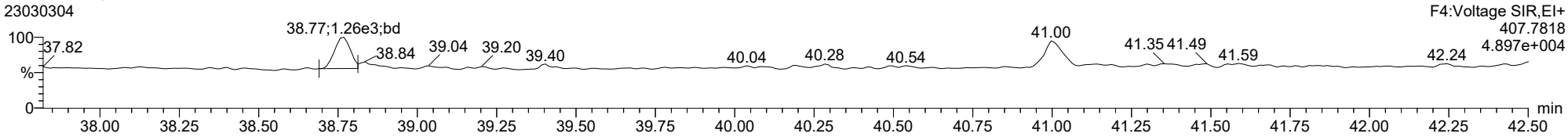

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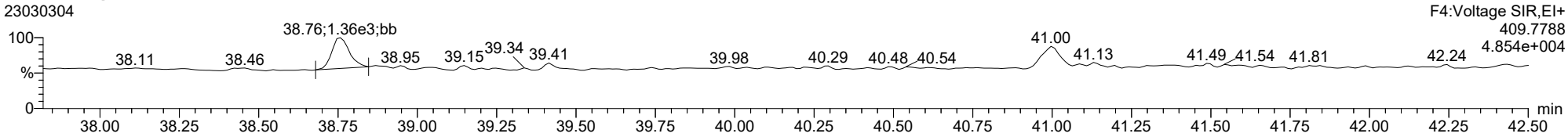

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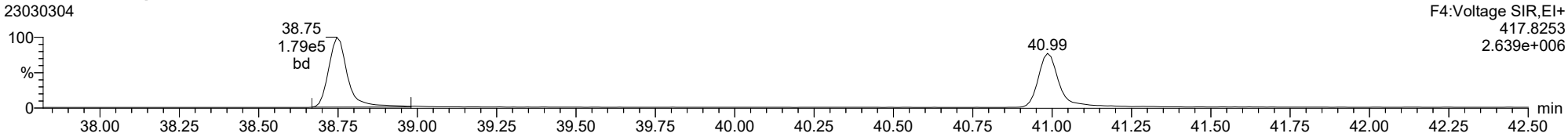

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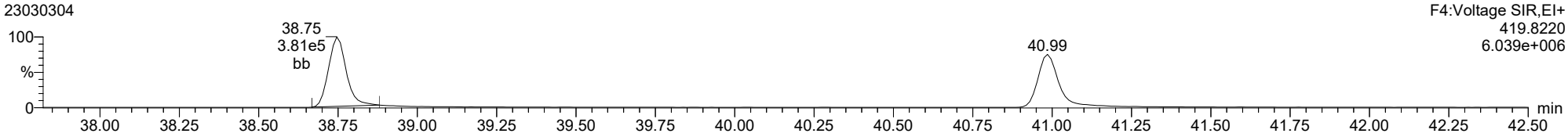

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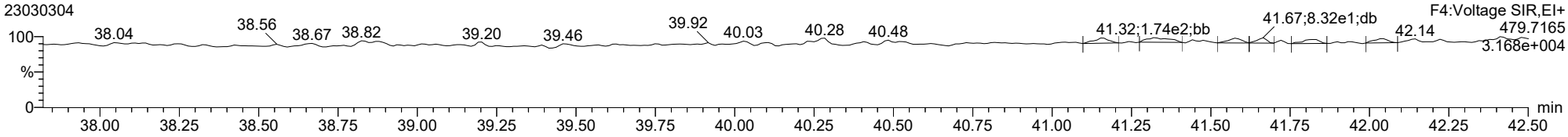

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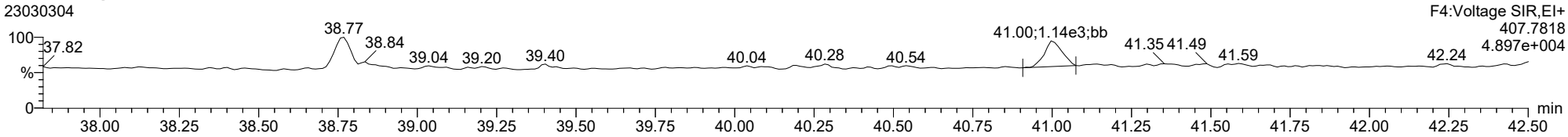

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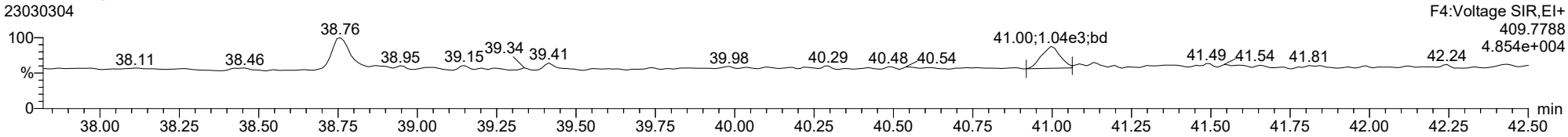

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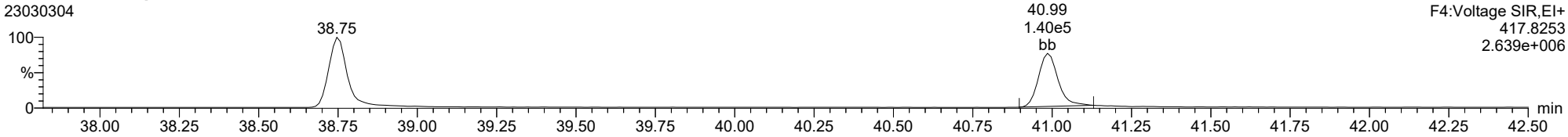

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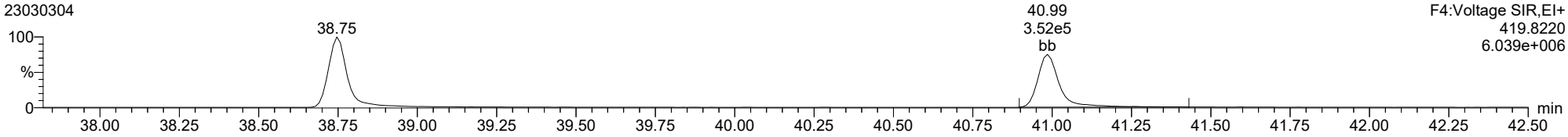

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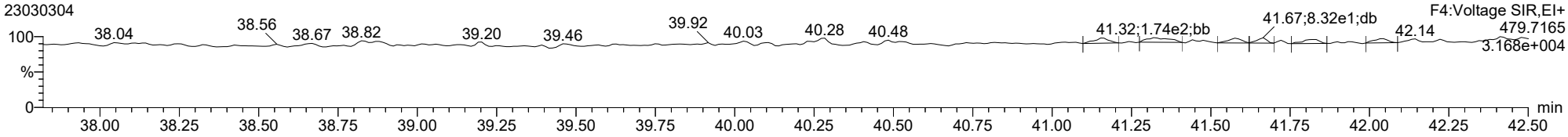

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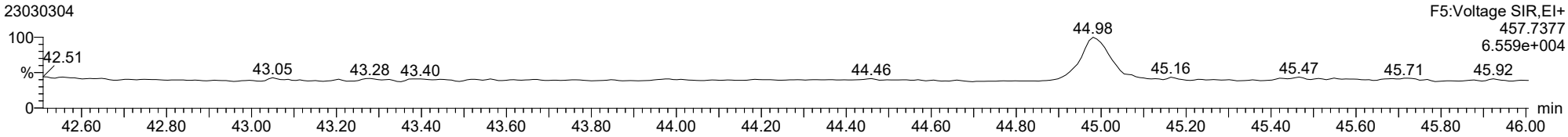

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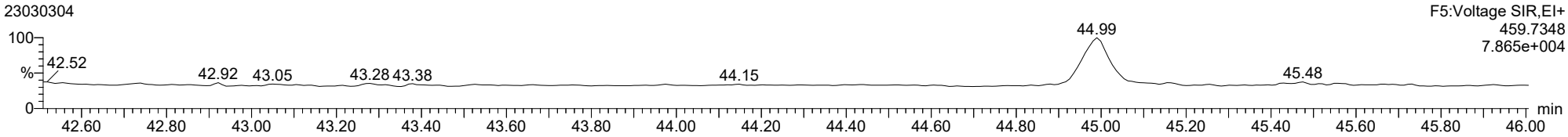

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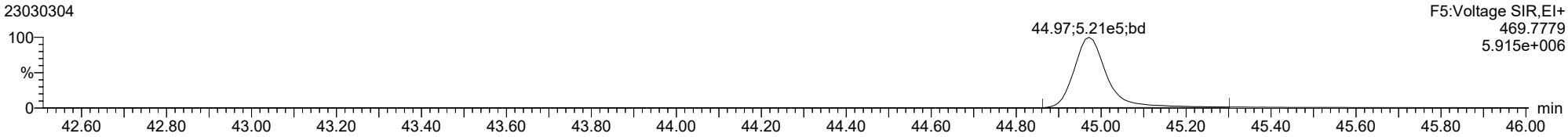

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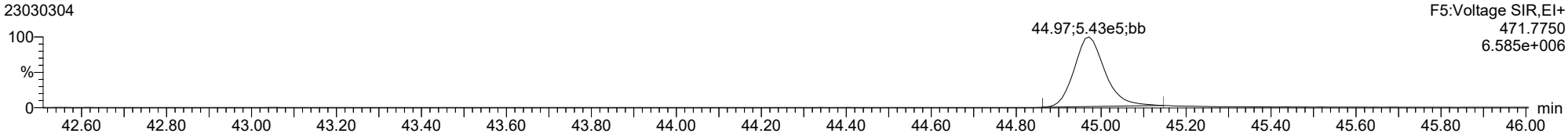
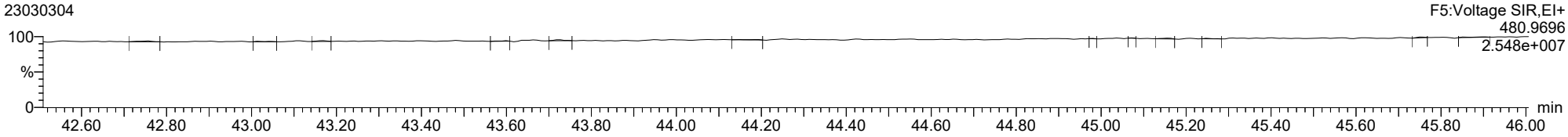


FUNCTION5 PFK



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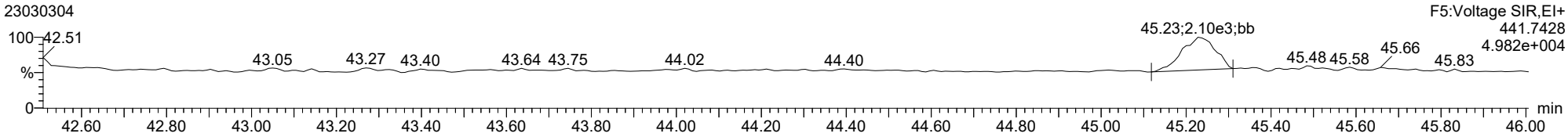
OCDF



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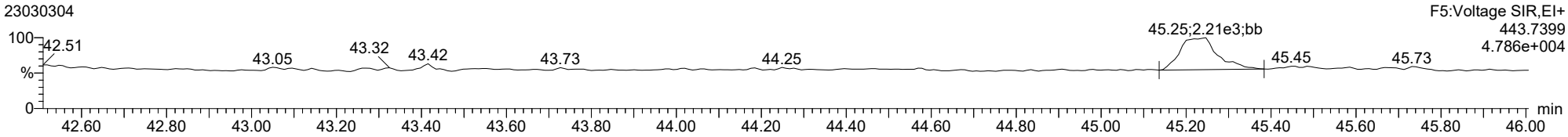
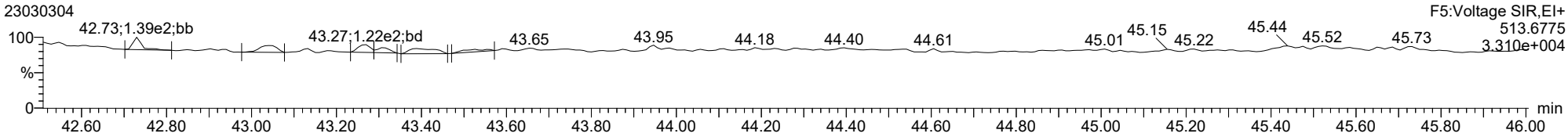


FUNCTION5 DCDPE



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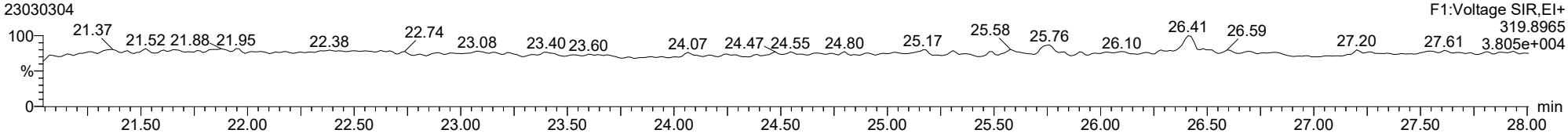
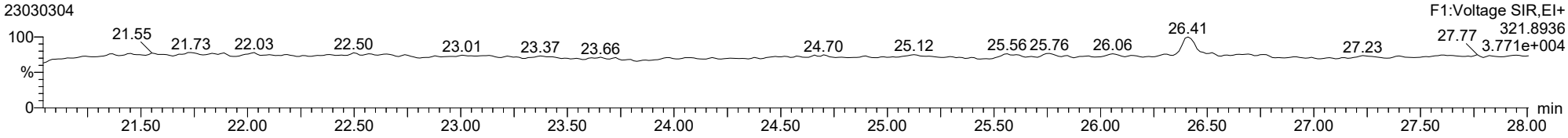
Total-tetradioxins



Total-tetradioxins



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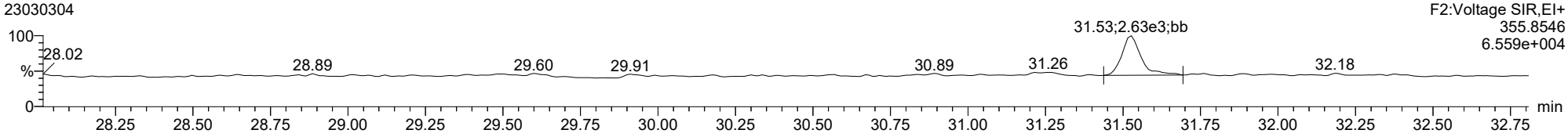

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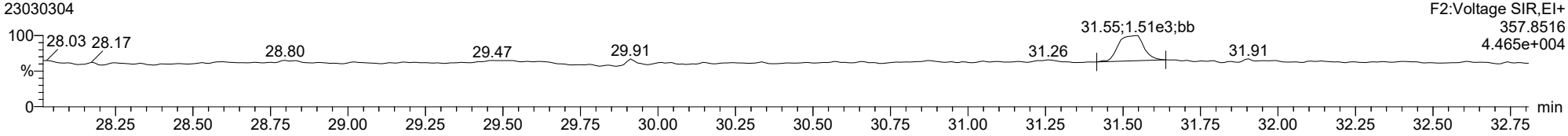

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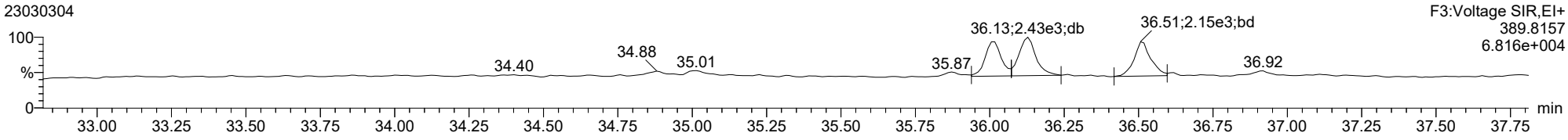

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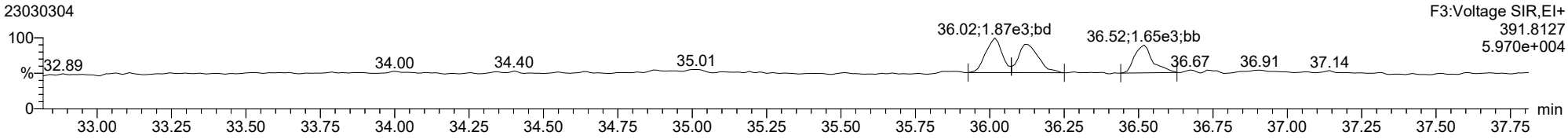

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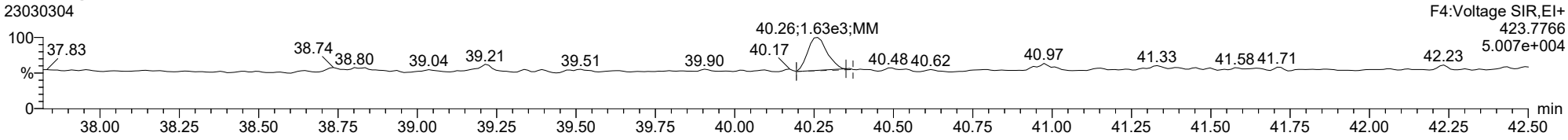

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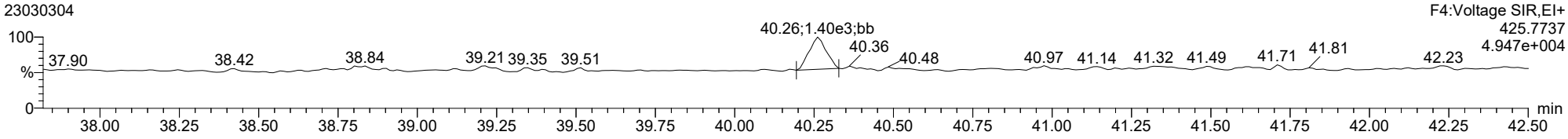

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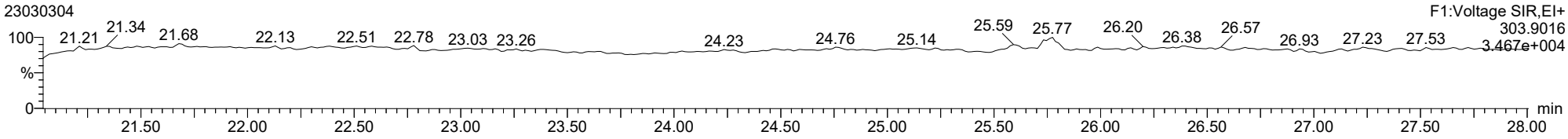
Total-tetrafurans



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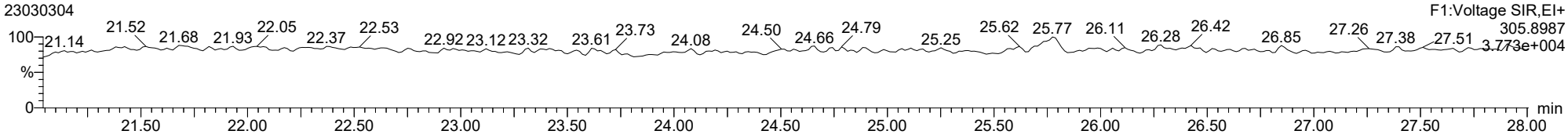

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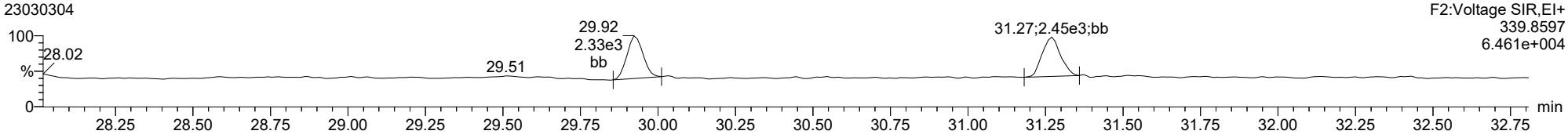

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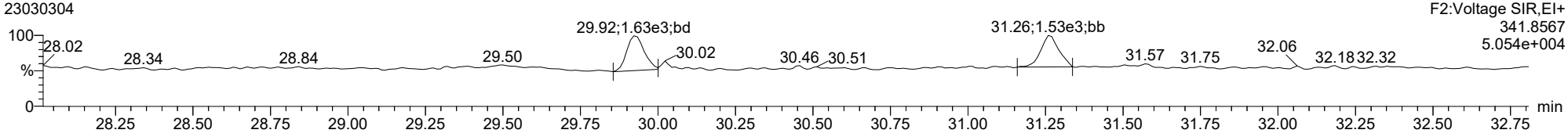

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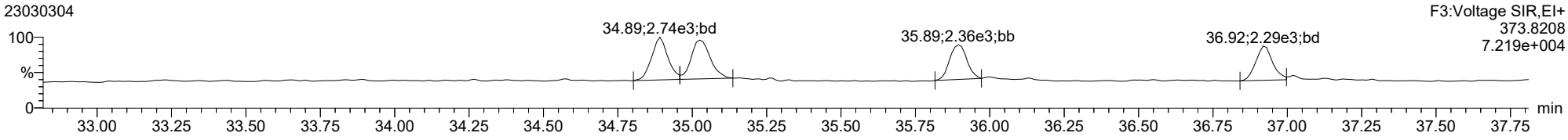
Total-hexafurans



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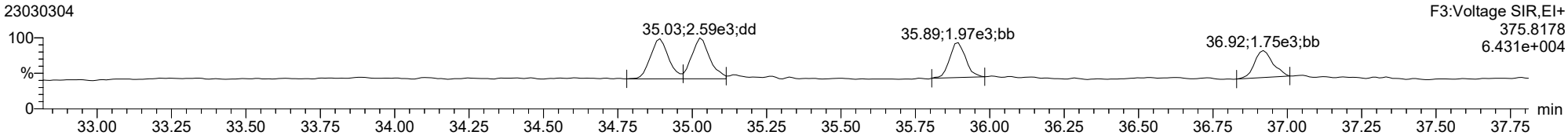
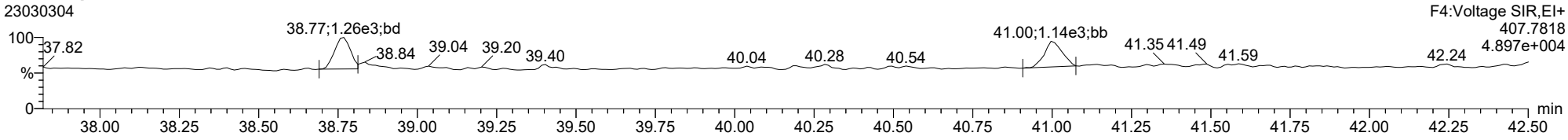
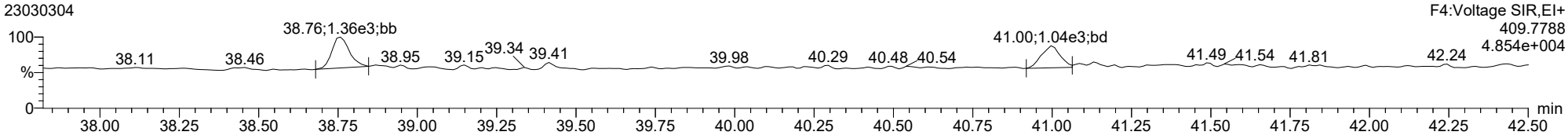


Total-heptafurans



Total-heptafurans



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ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	1.705e3	2.516e3	0.702	0.678	0.770	886	1799	2.34e4	3.87e4	26.4	21.5	NO	bb	MM	0.494
12378-PeCDF	29.933	1.000	5.914e3	4.099e3	0.679	1.442	1.550	1151	1276	9.10e4	6.48e4	79.1	50.8	NO	bb	bb	2.168
23478-PeCDF	31.270	1.000	7.974e3	4.958e3	0.786	1.608	1.550	1151	1276	1.22e5	6.97e4	106.1	54.6	NO	bb	bb	2.386
123478-HxCDF	34.891	1.000	1.063e4	7.851e3	1.166	1.354	1.240	1046	1170	1.58e5	1.17e5	151.4	100.1	NO	bd	bd	2.532
234678-HxCDF	35.894	1.000	1.057e4	7.802e3	1.140	1.354	1.240	1046	1170	1.51e5	1.18e5	143.9	100.6	NO	bb	bb	2.503
123678-HxCDF	35.036	1.001	1.161e4	8.676e3	1.091	1.339	1.240	1046	1170	1.53e5	1.27e5	146.1	108.8	NO	dd	dd	2.416
123789-HxCDF	36.930	1.001	8.482e3	6.693e3	1.137	1.267	1.240	1046	1170	1.18e5	8.92e4	112.7	76.2	NO	bd	bb	2.462
1234678-HpCDF	38.768	1.000	7.253e3	6.596e3	1.003	1.100	1.050	811	627	1.05e5	9.73e4	128.9	155.1	NO	bb	bb	2.680
1234789-HpCDF	41.008	1.000	5.116e3	5.234e3	0.953	0.978	1.050	811	627	7.22e4	7.17e4	89.0	114.3	NO	bb	bb	2.342
OCDF	45.237	1.006	5.981e3	6.798e3	0.778	0.880	0.890	709	890	6.92e4	8.13e4	97.6	91.3	NO	MM	bd	4.559
2378-TCDD	26.424	1.001	2.272e3	2.723e3	1.149	0.834	0.770	1286	820	3.35e4	3.73e4	26.0	45.5	NO	bb	bb	0.486
12378-PeCDD	31.538	1.001	7.831e3	5.061e3	1.022	1.548	1.550	902	618	1.00e5	7.05e4	111.4	114.0	NO	bb	bd	2.348
123478-HxCDD	36.016	1.000	7.381e3	5.875e3	0.996	1.256	1.240	655	843	1.17e5	9.68e4	178.2	114.9	NO	bd	bd	2.415
123678-HxCDD	36.139	1.001	9.152e3	7.340e3	1.001	1.247	1.240	655	843	1.26e5	9.90e4	192.8	117.4	NO	db	dd	2.494
123789-HxCDD	36.518	1.011	7.480e3	5.936e3	0.907	1.260	1.240	655	843	1.06e5	8.62e4	162.4	102.3	NO	bd	bd	2.440
1234678-HpCDD	40.272	1.001	6.283e3	5.832e3	1.039	1.077	1.050	694	917	8.98e4	8.16e4	129.4	89.0	NO	bb	bd	2.337
OCDD	44.999	1.000	8.578e3	9.676e3	0.920	0.887	0.890	635	634	9.84e4	1.12e5	154.9	175.9	NO	bd	bb	5.505
13C-2378-TCDF	25.760	1.007	5.230e5	6.960e5	1.620	0.752	0.770	2566	1723	7.68e6	1.02e7	2994.2	5911.4	NO	bb	bb	98.043
13C-12378-PeCDF	29.922	1.169	4.082e5	2.718e5	1.240	1.502	1.550	3092	2294	5.44e6	3.64e6	1758.1	1584.9	NO	bd	bb	71.437
13C-23478-PeCDF	31.259	1.222	4.106e5	2.788e5	1.118	1.473	1.550	3092	2294	5.91e6	4.02e6	1912.5	1751.3	NO	bb	bb	80.373
13C-123478-HxCDF	34.880	0.955	2.117e5	4.140e5	1.168	0.511	0.510	1778	2186	3.18e6	6.21e6	1786.5	2841.3	NO	bd	bd	93.801
13C-123678-HxCDF	35.014	0.959	2.754e5	4.947e5	1.386	0.557	0.510	1778	2186	3.40e6	6.43e6	1911.3	2941.0	NO	db	db	97.276
13C-234678-HxCDF	35.882	0.983	2.122e5	4.318e5	1.129	0.491	0.510	1778	2186	3.04e6	5.98e6	1709.4	2734.1	NO	bb	bd	99.880
13C-123789-HxCDF	36.908	1.011	1.853e5	3.568e5	0.932	0.519	0.510	1778	2186	2.62e6	5.01e6	1471.0	2293.6	NO	bb	bb	101.893
13C-1234678-HpCDF	38.757	1.062	1.579e5	3.573e5	0.895	0.442	0.440	2049	3174	2.36e6	5.45e6	1151.3	1718.3	NO	bb	bb	100.794
13C-1234789-HpCDF	40.997	1.123	1.372e5	3.264e5	0.770	0.420	0.440	2049	3174	1.74e6	3.92e6	851.0	1236.7	NO	bd	bd	105.482
13C-1234-TCDD	25.591	0.000	3.429e5	4.245e5	1.000	0.808	0.770	2519	1748	5.22e6	6.49e6	2072.6	3712.2	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	3.982e5	4.964e5	1.152	0.802	0.770	2519	1748	5.51e6	6.93e6	2188.2	3962.8	NO	bb	bb	101.152
13C-12378-PeCDD	31.515	1.232	3.242e5	2.131e5	0.829	1.521	1.550	1586	877	4.46e6	2.78e6	2809.5	3168.1	NO	bb	bd	84.489
13C-123478-HxCDD	36.005	0.986	3.100e5	2.413e5	0.995	1.285	1.240	2517	1649	4.83e6	3.77e6	1920.9	2283.3	NO	bd	bd	97.050
13C-123678-HxCDD	36.117	0.989	3.700e5	2.908e5	1.157	1.273	1.240	2517	1649	5.06e6	4.03e6	2012.2	2442.3	NO	db	db	100.049
13C-1234678-HpCDD	40.250	1.102	2.556e5	2.433e5	0.840	1.051	1.050	2183	1602	3.48e6	3.29e6	1594.9	2052.3	NO	bb	bb	103.999
13C-OCDD	44.980	1.232	3.386e5	3.823e5	0.767	0.886	0.890	3187	1733	3.80e6	4.27e6	1193.7	2462.5	NO	bb	bb	164.498
13C-123789-HxCDD	36.507	0.000	3.194e5	2.515e5	1.000	1.270	1.240	2517	1649	4.46e6	3.59e6	1770.5	2177.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	5.065e3		1.288			2040		7.28e4		35.7			bb		0.513

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:34:10 Pacific Standard Time

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	886	1799								
1289-TCDF					0.678		0.770	886	1799								
13468-PECDF					1.246		1.550	811	1221								
12389-PECDF					0.496		1.550	1151	1276								
123468-HXCDF					1.169		1.240	1046	1170								
1368-TCDD					1.015		0.770	1286	820								
1289-TCDD					0.909		0.770	1286	820								
12479-PECDD					2.301		1.550	902	618								
12389-PECDD					1.184		1.550	902	618								
124679-HXCDD					1.115		1.240	655	843								
1234679-HPCDD					1.137		1.050	694	917								
Total-tetrafurans			1.705e3		0.727			886		2.34e4							0.494
Total-penta1			0.000e0					811		0.00e0							
Total-pentafurans			1.389e4		0.654			1151		2.13e5							4.554
Total-hexafurans			4.139e4		1.141			1046		5.82e5							9.938
Total-heptafurans			1.237e4		0.978			811		1.77e5							5.023
Total-Furans			7.533e4		0.922			886		1.06e6							24.566
Total-tetradioxins			2.272e3		1.024			1286		3.35e4							0.486
Total-pentadioxins			7.831e3		1.502			902		1.00e5							2.348
Total-hexadioxins			2.401e4		1.005			655		3.49e5							7.349
Total-heptadioxins			6.283e3		1.088			694		8.98e4							2.337
Total-Dioxins			4.898e4		1.130			1286		6.72e5							18.025
Total-TEQ			1.243e5					1286		1.74e6							42.592
FUNCTION1 PFK			0.000e0					501375		0.00e0							
FUNCTION2 PFK			7.687e6					300953		7.99e6							0.000
FUNCTION3 PFK			1.081e7					473463		1.95e7							0.000
FUNCTION4 PFK			1.035e7					332160		2.87e6							
FUNCTION5 PFK			6.101e5					195111		8.38e5							
FUNCTION1 HXCD...			6.739e2					611		6.36e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			7.361e2					923		1.83e4							0.000
FUNCTION3 OCDPE			2.008e2					596		2.61e3							0.000
FUNCTION4 NCDPE			9.397e1					539		1.40e3							0.000
FUNCTION5 DCDPE			1.677e2					561		3.39e3							0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
2	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
3	Total-hexafurans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
4	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
5	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
2	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168
3	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494
4	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
5	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
6	Total-hexafurans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
7	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
8	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532
9	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
10	OCDF	45.24	5.981e3	6.798e3	0.778	0.88	0.89	97.6	YES	NO	MM	bd	4.559
11	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
2	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
3	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486
2	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
3	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
4	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415
5	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348
6	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337
7	OCDD	45.00	8.578e3	9.676e3	0.920	0.89	0.89	154.9	YES	NO	bd	bb	5.505

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	7.974e3	4.958e3	0.786	1.61	1.55	106.1	YES	NO	bb	bb	2.386
2	12378-PeCDF	29.93	5.914e3	4.099e3	0.679	1.44	1.55	79.1	YES	NO	bb	bb	2.168
3	2378-TCDF	25.79	1.705e3	2.516e3	0.702	0.68	0.77	26.4	YES	NO	bb	MM	0.494
4	123789-HxCDF	36.93	8.482e3	6.693e3	1.137	1.27	1.24	112.7	YES	NO	bd	bb	2.462
5	234678-HxCDF	35.89	1.057e4	7.802e3	1.140	1.35	1.24	143.9	YES	NO	bb	bb	2.503
6	Total-hexafurans	35.23	1.011e2	8.523e1	1.141	1.19	1.24	2.2	NO	NO	db	db	0.025
7	123678-HxCDF	35.04	1.161e4	8.676e3	1.091	1.34	1.24	146.1	YES	NO	dd	dd	2.416
8	123478-HxCDF	34.89	1.063e4	7.851e3	1.166	1.35	1.24	151.4	YES	NO	bd	bd	2.532
9	1234678-HpCDF	38.77	7.253e3	6.596e3	1.003	1.10	1.05	128.9	YES	NO	bb	bb	2.680
10	OCDF	45.24	5.981e3	6.798e3	0.778	0.88	0.89	97.6	YES	NO	MM	bd	4.559
11	1234789-HpCDF	41.01	5.116e3	5.234e3	0.953	0.98	1.05	89.0	YES	NO	bb	bb	2.342
12	2378-TCDD	26.42	2.272e3	2.723e3	1.149	0.83	0.77	26.0	YES	NO	bb	bb	0.486
13	123789-HxCDD	36.52	7.480e3	5.936e3	0.907	1.26	1.24	162.4	YES	NO	bd	bd	2.440
14	123678-HxCDD	36.14	9.152e3	7.340e3	1.001	1.25	1.24	192.8	YES	NO	db	dd	2.494
15	123478-HxCDD	36.02	7.381e3	5.875e3	0.996	1.26	1.24	178.2	YES	NO	bd	bd	2.415
16	12378-PeCDD	31.54	7.831e3	5.061e3	1.022	1.55	1.55	111.4	YES	NO	bb	bd	2.348
17	1234678-HpCDD	40.27	6.283e3	5.832e3	1.039	1.08	1.05	129.4	YES	NO	bb	bd	2.337
18	OCDD	45.00	8.578e3	9.676e3	0.920	0.89	0.89	154.9	YES	NO	bd	bb	5.505

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	30.41	6.929e5					4.3	YES		bb		0.000
2	FUNCTION2 PFK	28.05	6.994e6					22.3	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.60	1.788e4					1.3	NO		bb		0.000
2	FUNCTION3 PFK	36.61	1.585e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	36.53	6.942e3					0.8	NO		bb		0.000
4	FUNCTION3 PFK	33.99	9.502e3					0.9	NO		bb		0.000
5	FUNCTION3 PFK	33.78	4.298e6					7.0	YES		db		0.000
6	FUNCTION3 PFK	33.15	6.467e6					29.8	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.85	1.035e7					8.6	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.97	6.101e5					4.3	YES		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.27	8.033e1					1.9	NO		bb		0.000
2	FUNCTION1 HXCD...	24.98	2.706e2					3.4	YES		bb		0.000
3	FUNCTION1 HXCD...	22.17	1.286e2					2.0	NO		bb		0.000
4	FUNCTION1 HXCD...	21.47	8.089e1					1.9	NO		bb		0.000
5	FUNCTION1 HXCD...	21.17	1.135e2					1.3	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.66	1.045e2					4.3	YES		db		0.000
2	FUNCTION2 HPCD...	32.58	1.134e2					3.0	NO		bd		0.000
3	FUNCTION2 HPCD...	31.88	7.272e1					1.9	NO		bb		0.000
4	FUNCTION2 HPCD...	30.71	7.070e1					1.8	NO		bb		0.000
5	FUNCTION2 HPCD...	30.13	1.134e2					2.5	NO		bb		0.000
6	FUNCTION2 HPCD...	28.92	7.142e1					2.0	NO		bb		0.000
7	FUNCTION2 HPCD...	28.66	9.983e1					2.2	NO		bb		0.000
8	FUNCTION2 HPCD...	28.24	9.016e1					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.50	2.008e2					4.4	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.59	9.397e1					2.6	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.72	7.355e1					2.5	NO		bb		0.000
2	FUNCTION5 DCDPE	44.30	9.416e1					3.6	YES		bb		0.000

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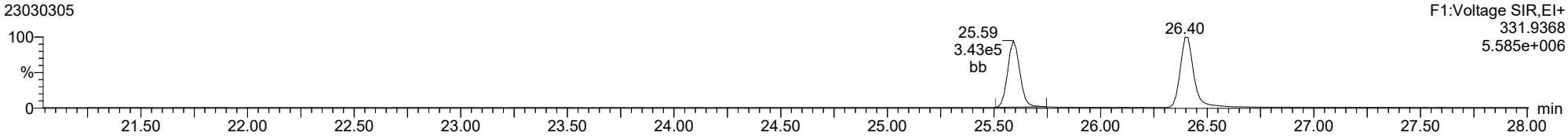
13C-1234-TCDD



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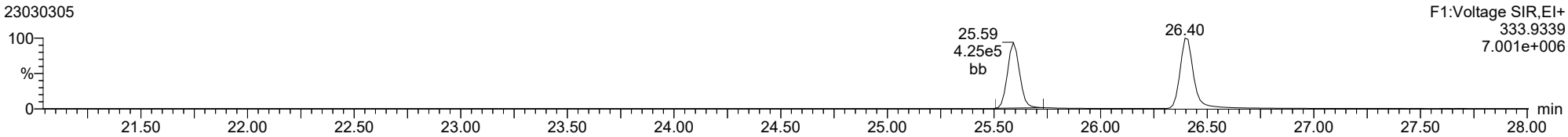

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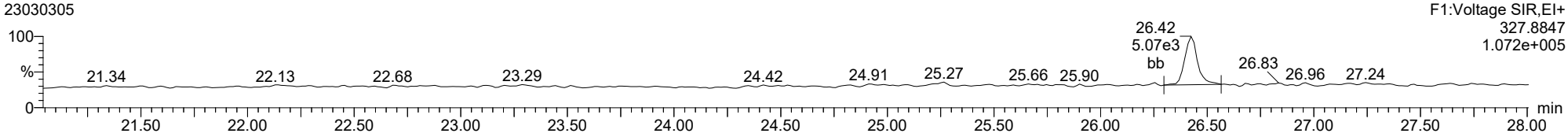

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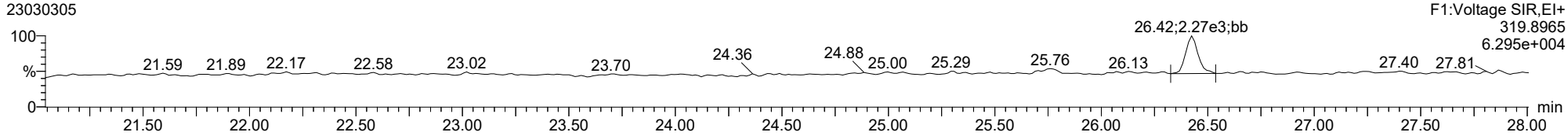

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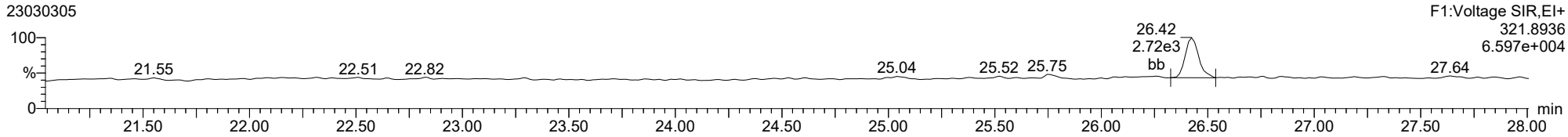

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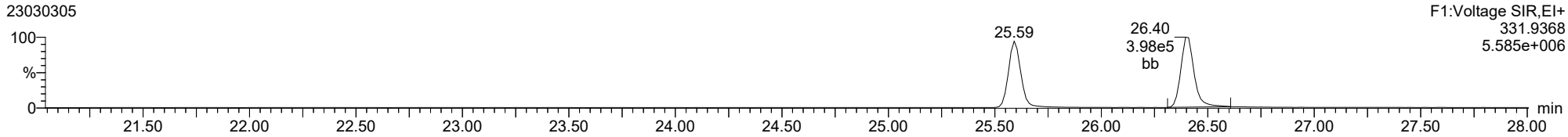

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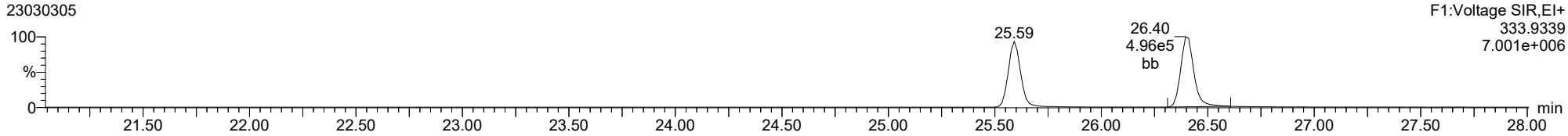

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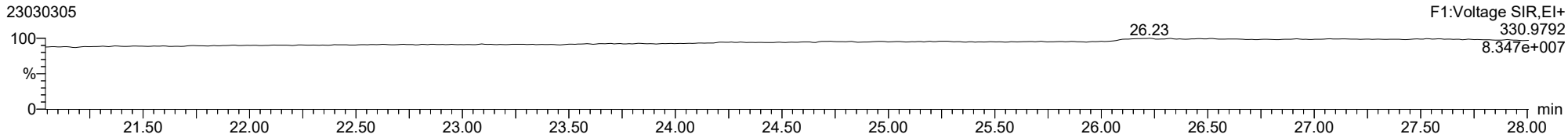

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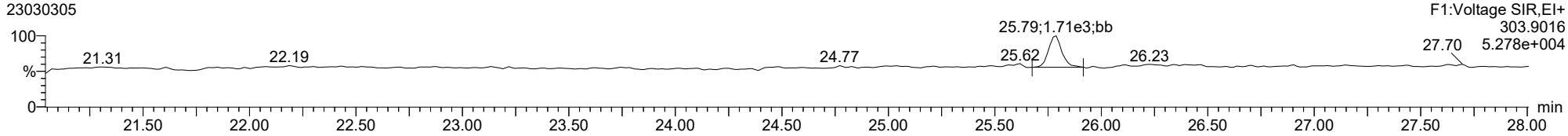

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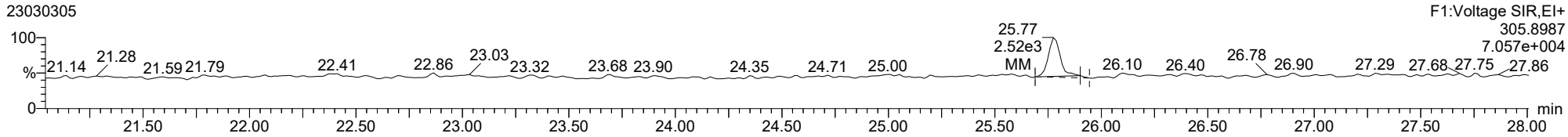

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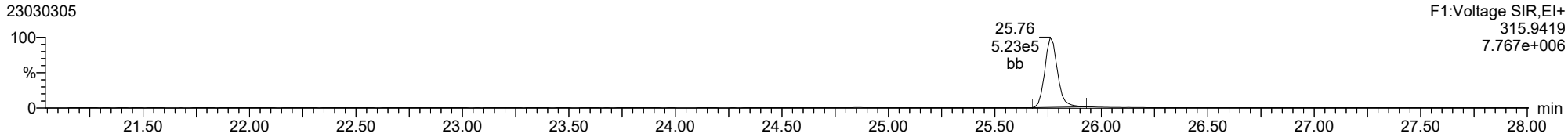

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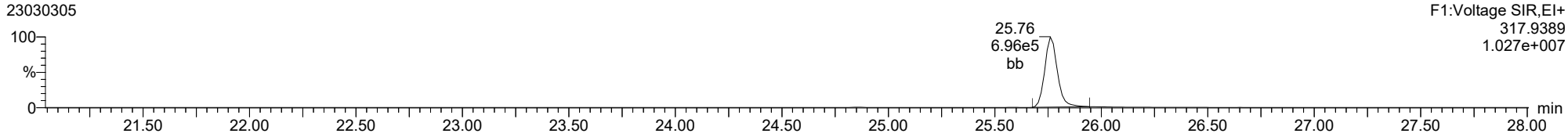

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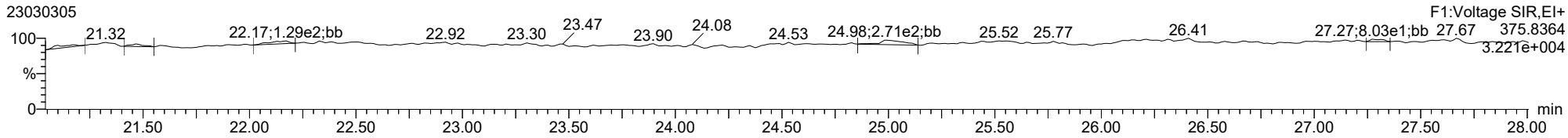

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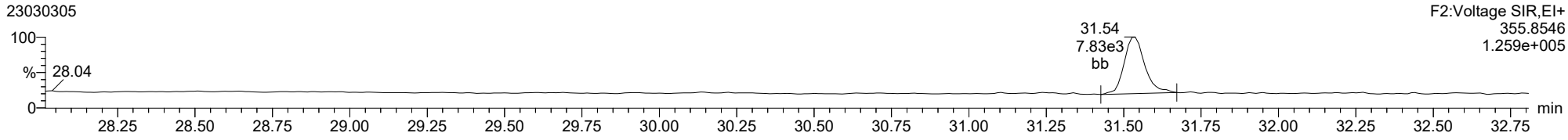

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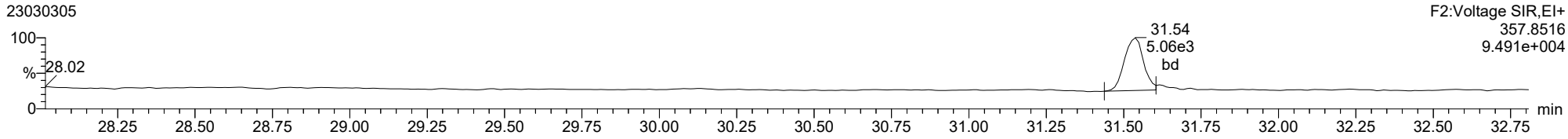

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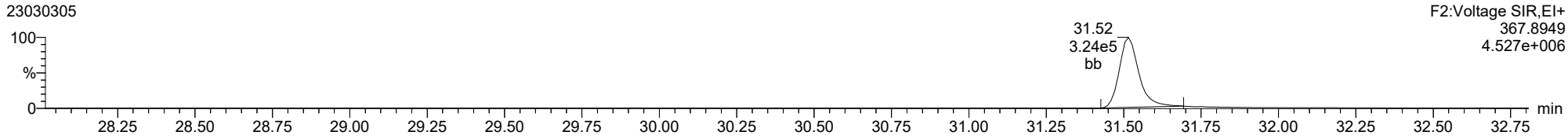

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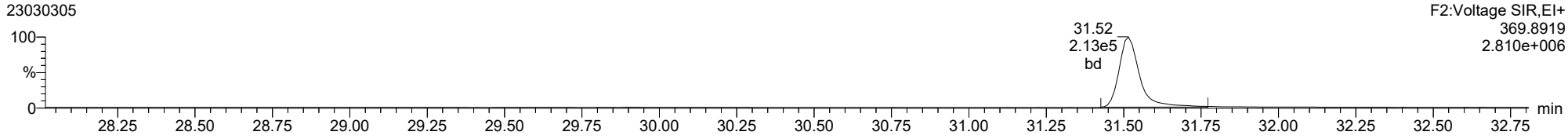

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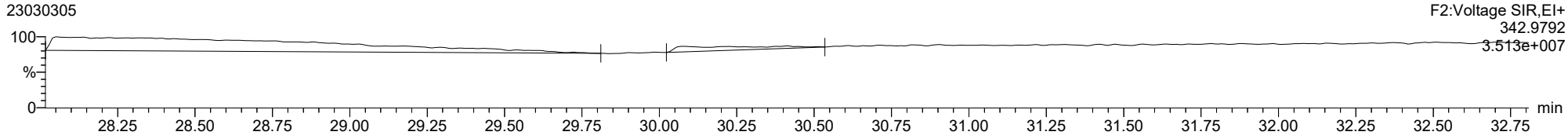

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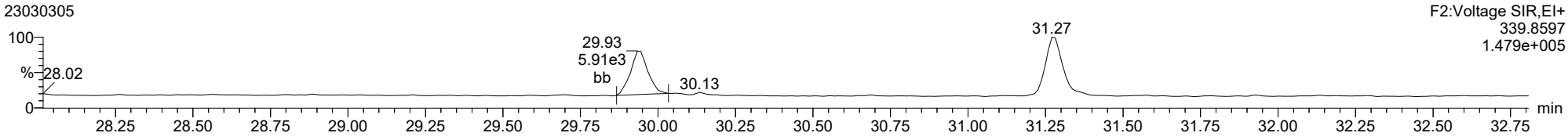

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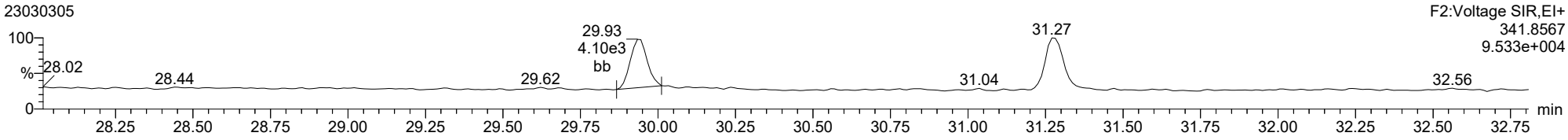

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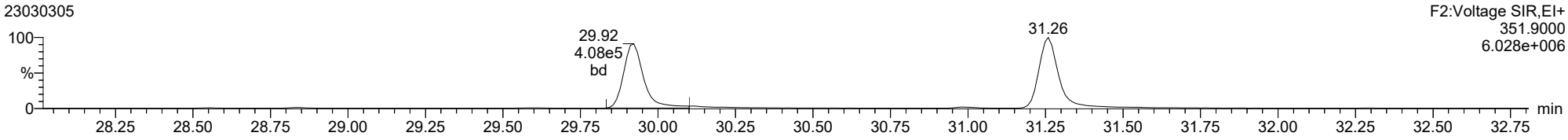

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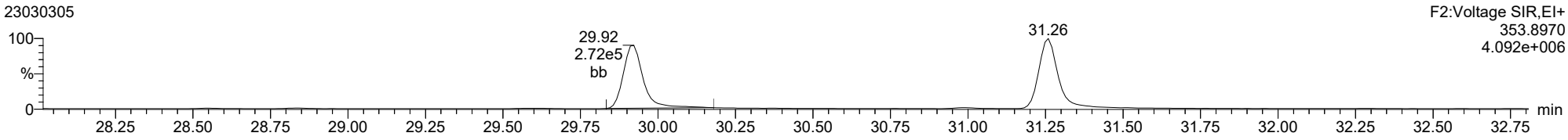

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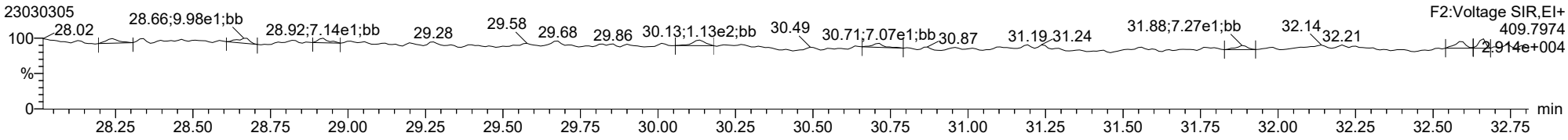

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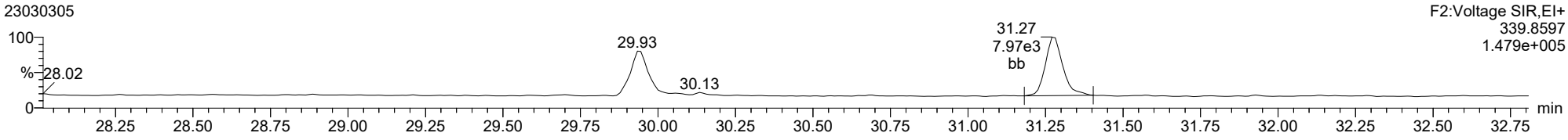

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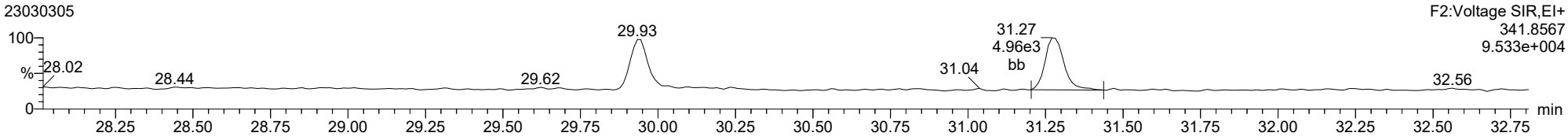

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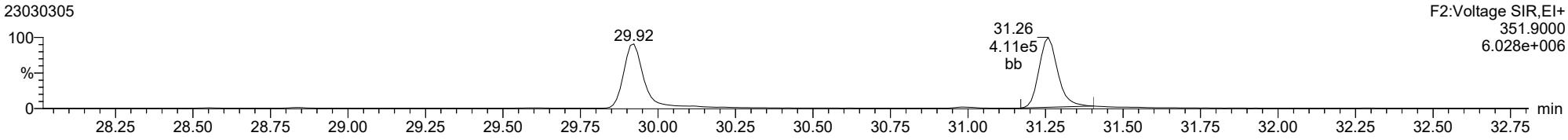

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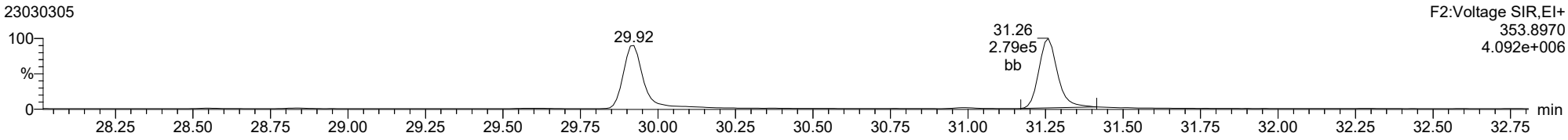

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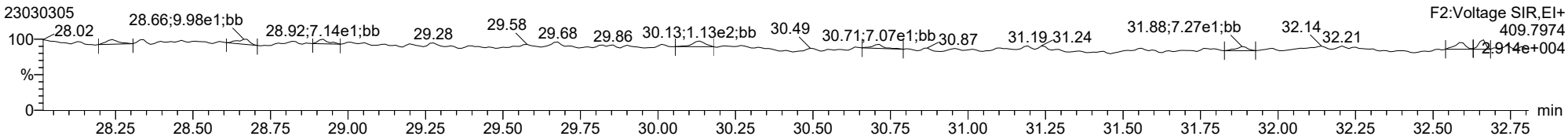

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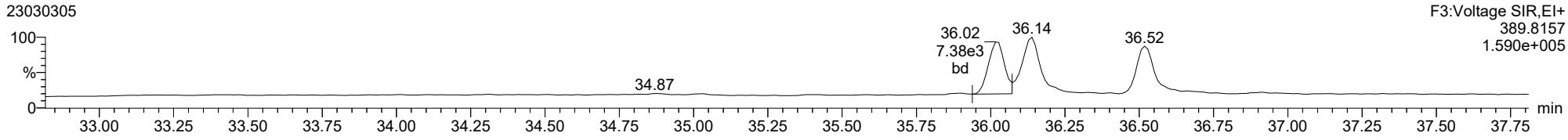

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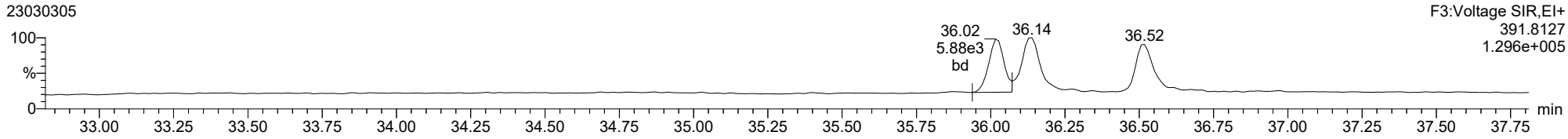

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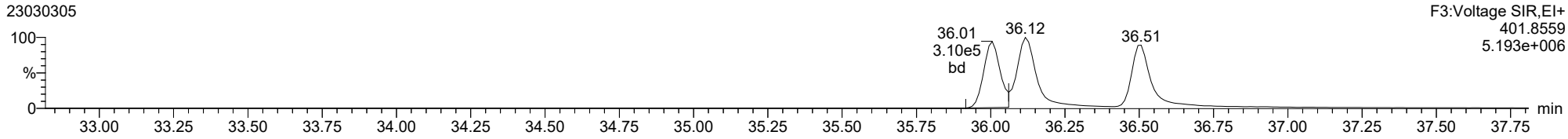

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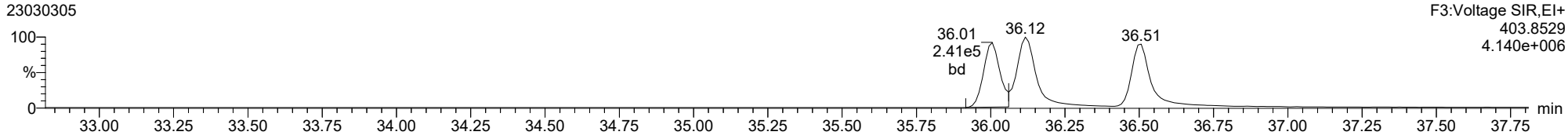

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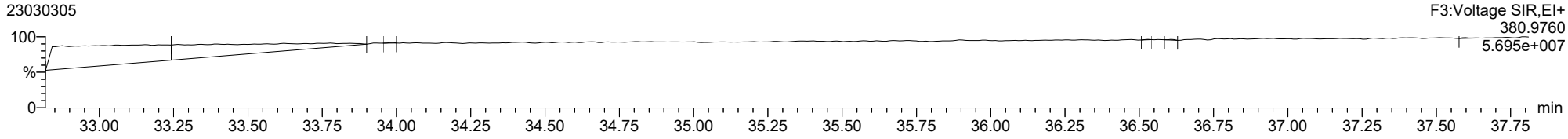

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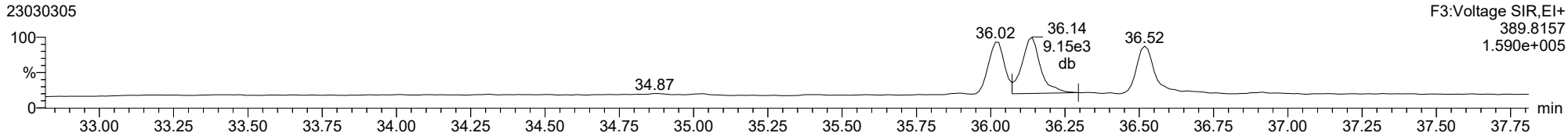

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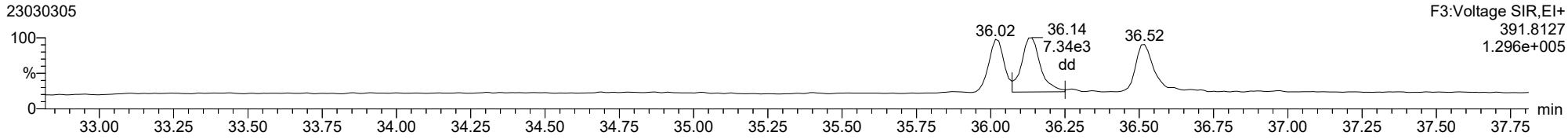

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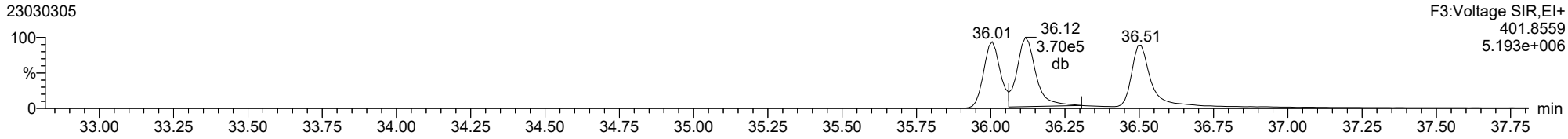

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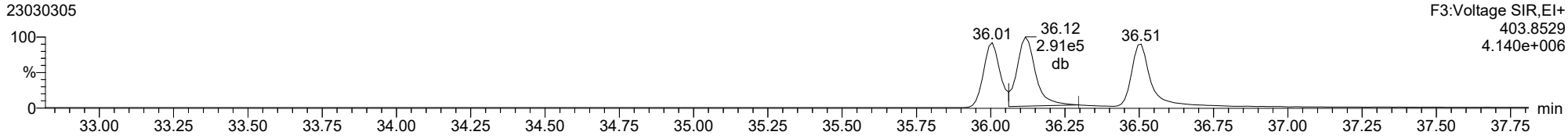

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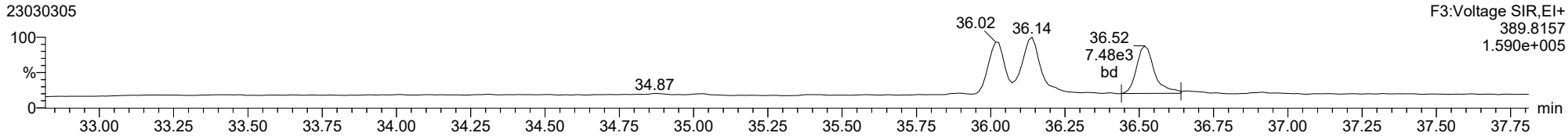

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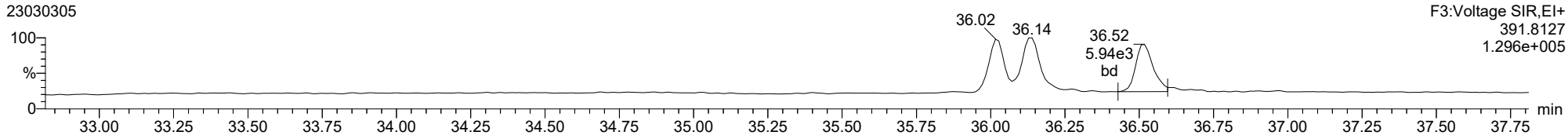

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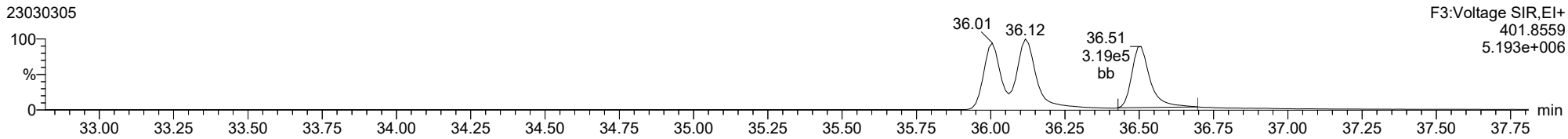

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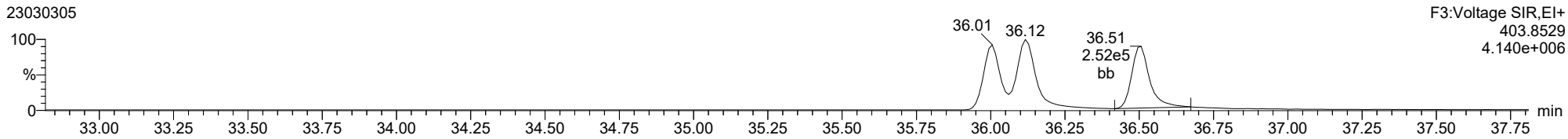

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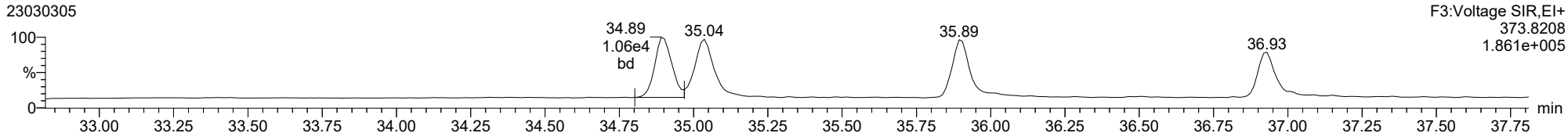

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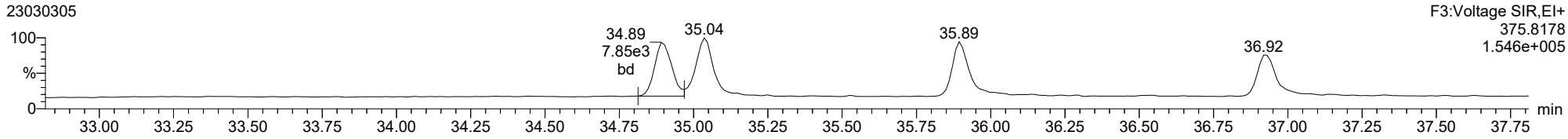

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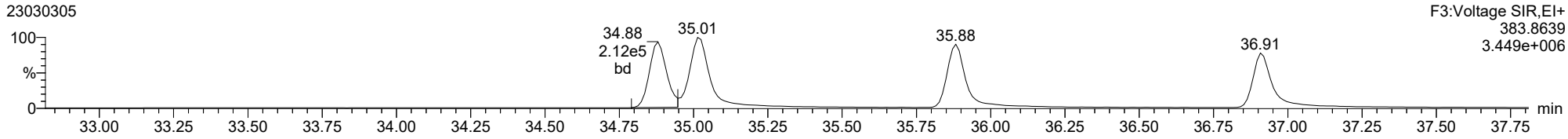

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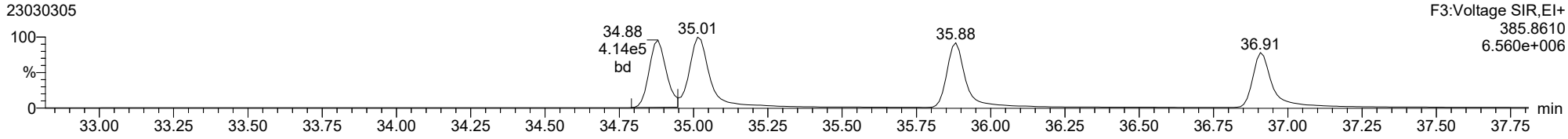

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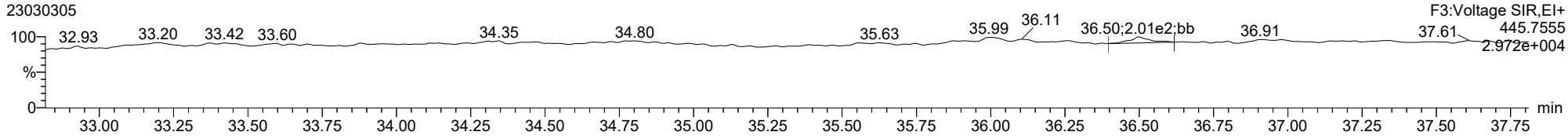

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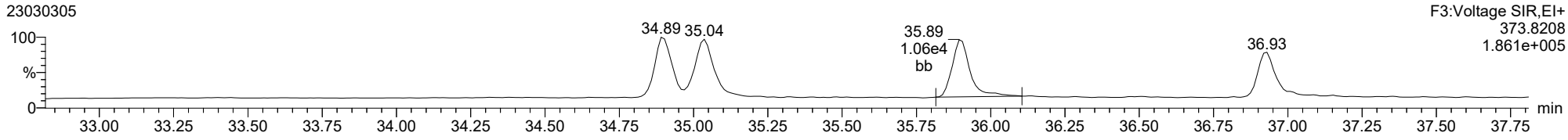

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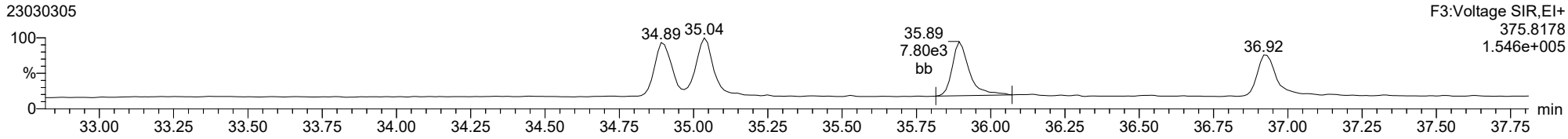

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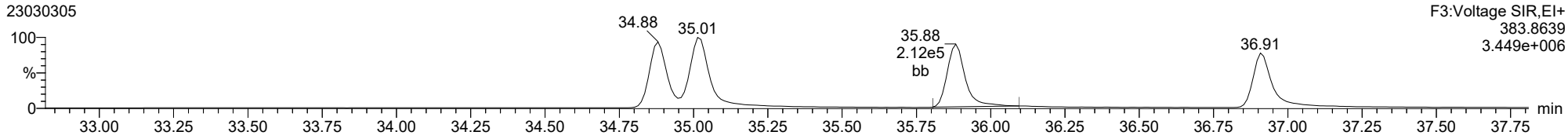

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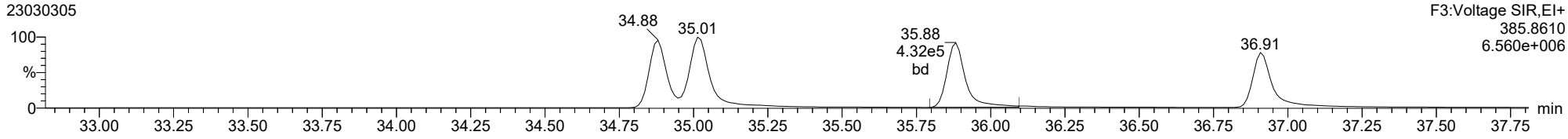

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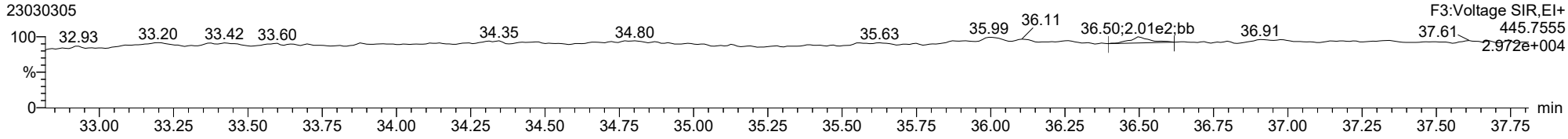

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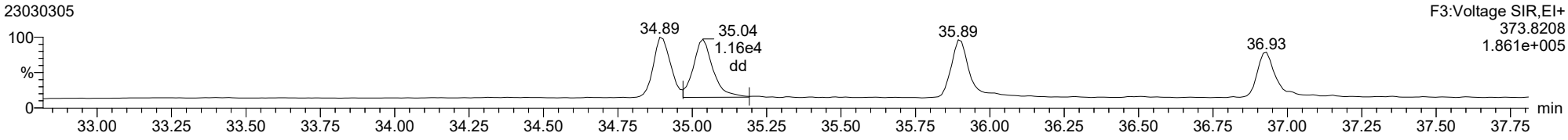

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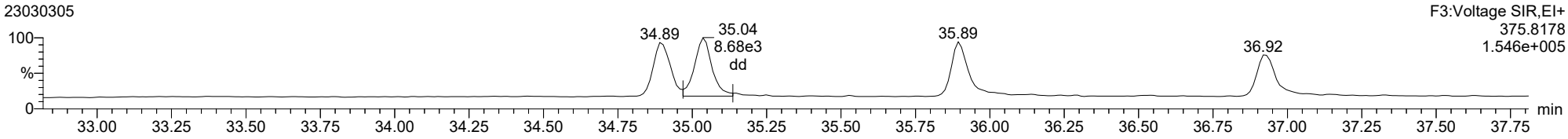

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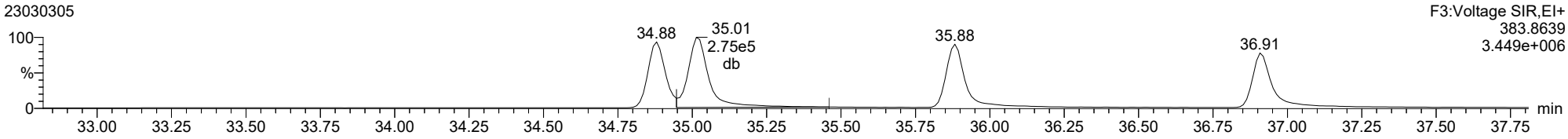

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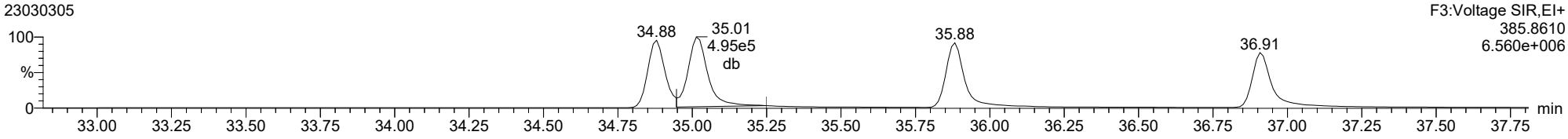

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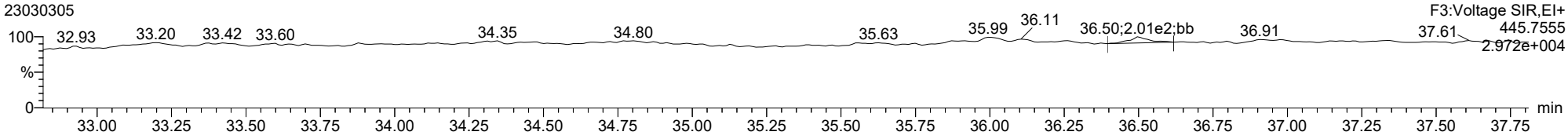

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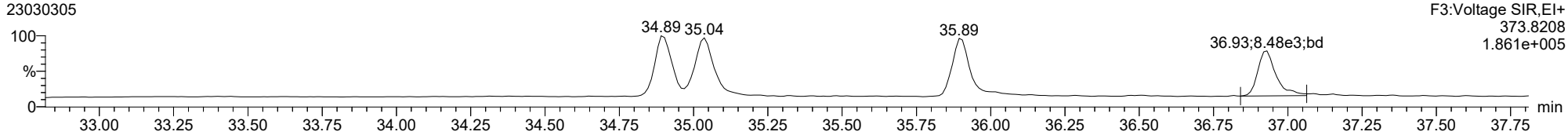

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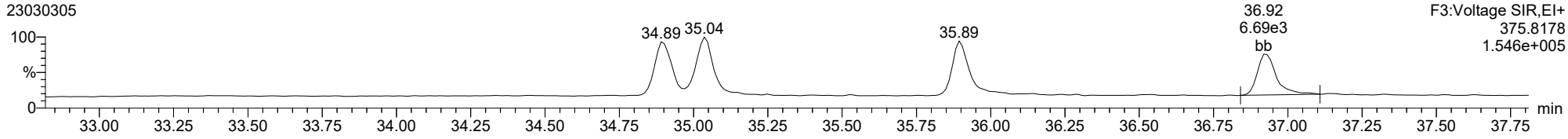

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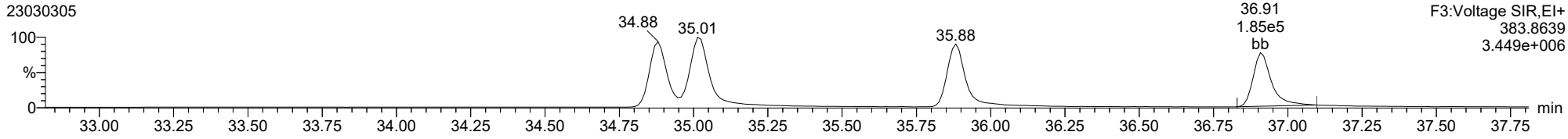

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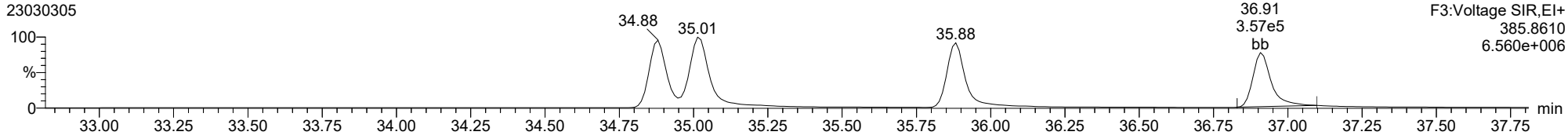

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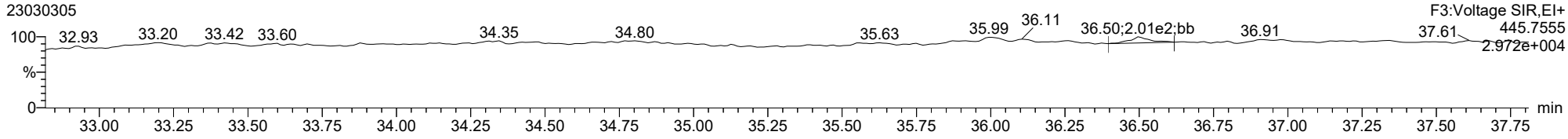

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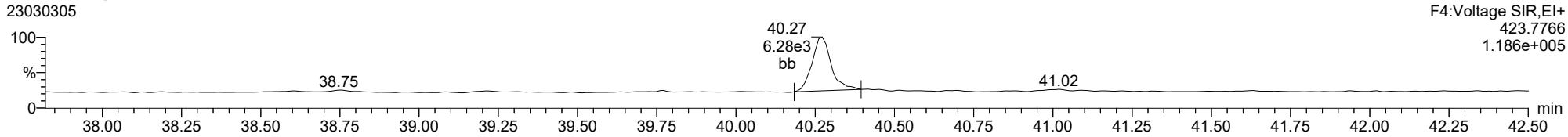

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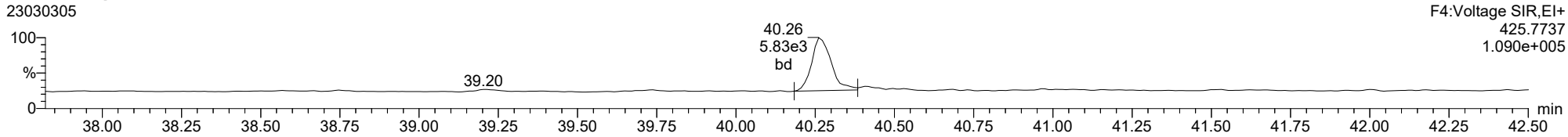

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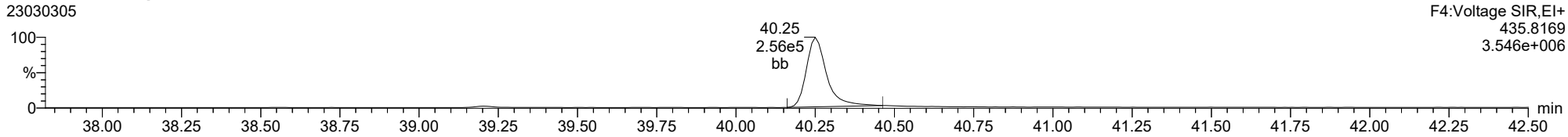

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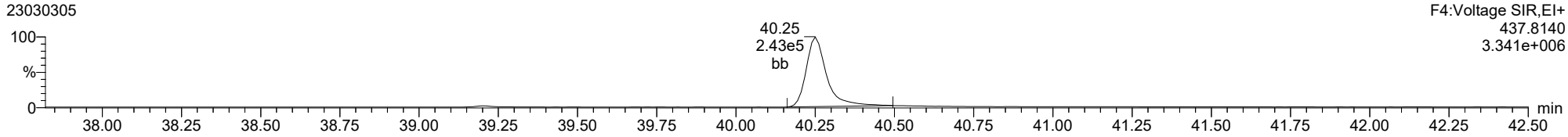

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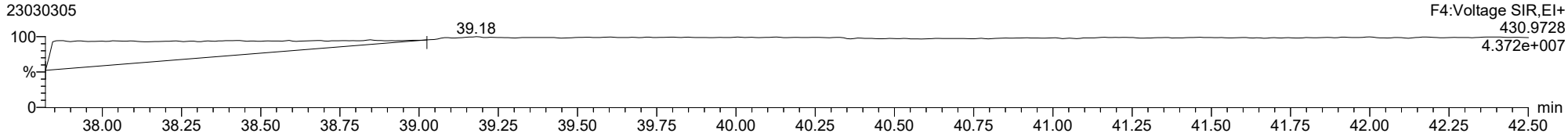

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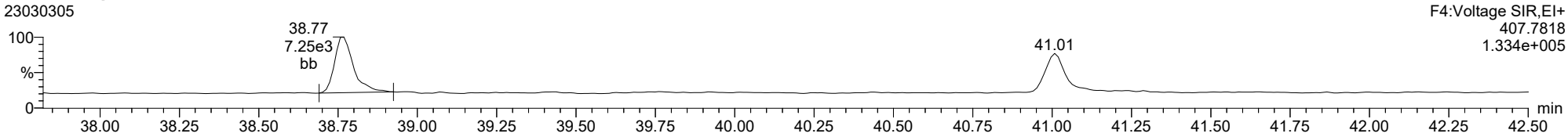

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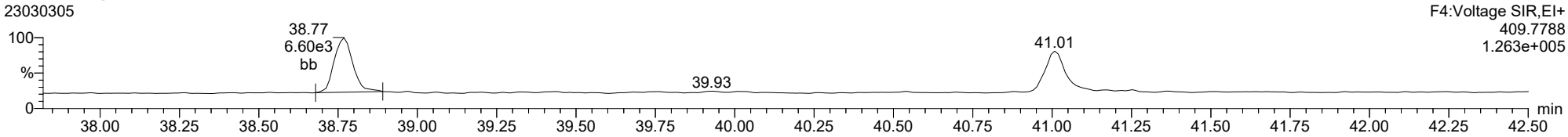

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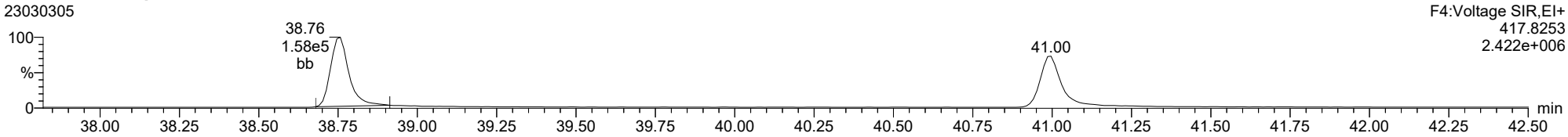

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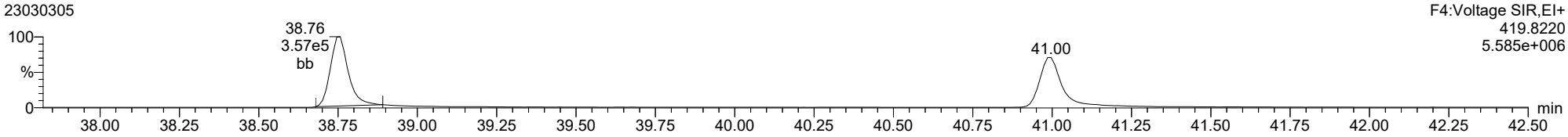

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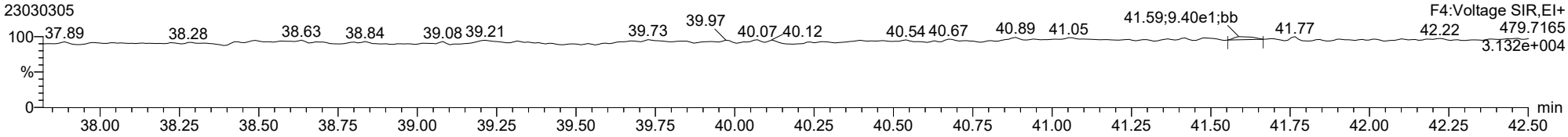

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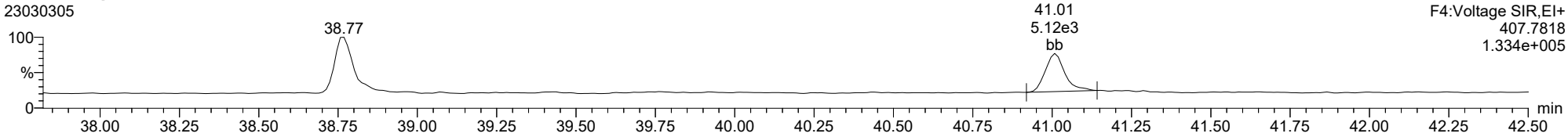

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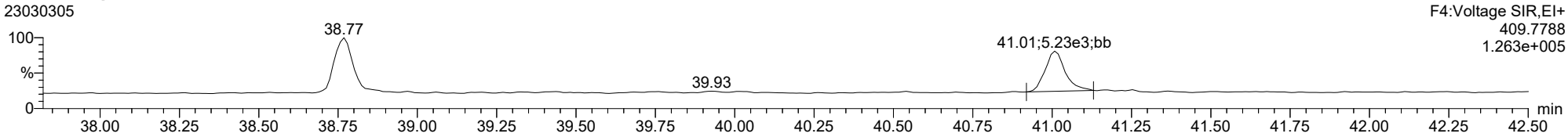

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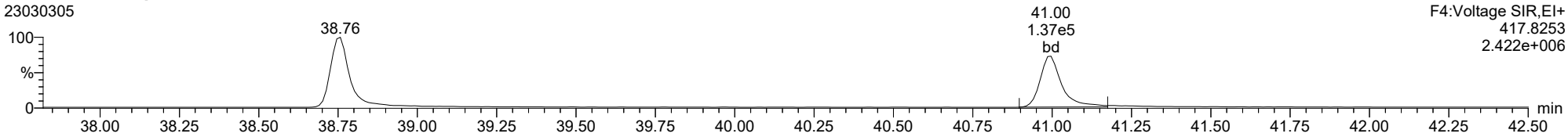

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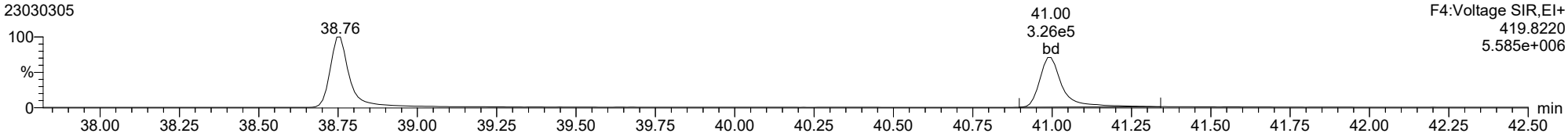

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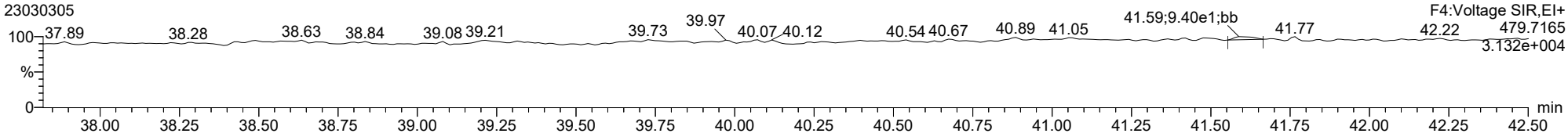

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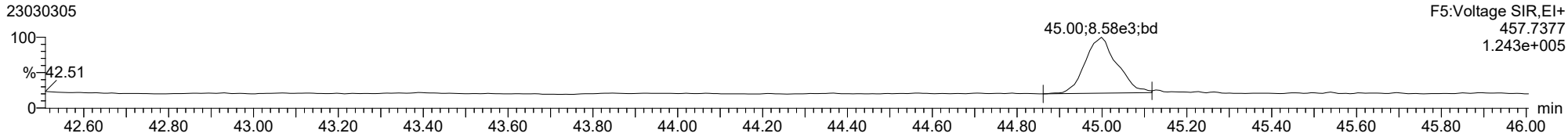

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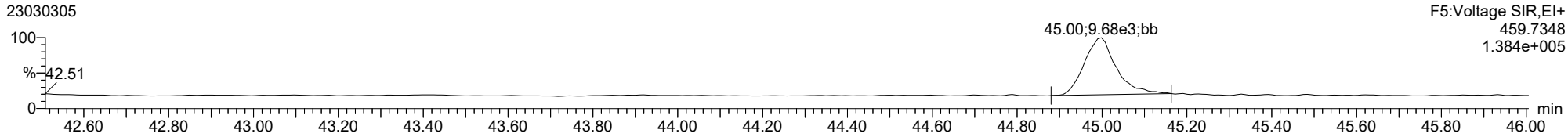

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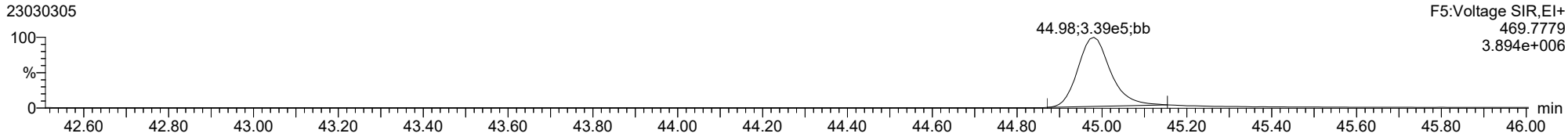

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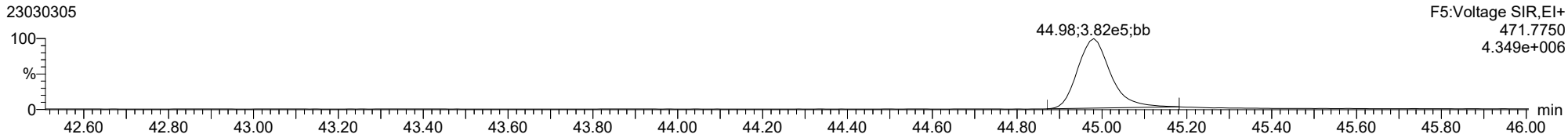

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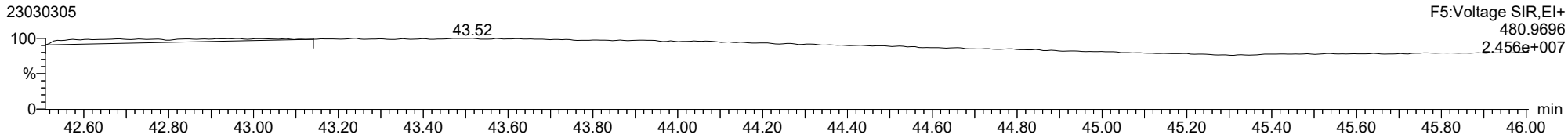

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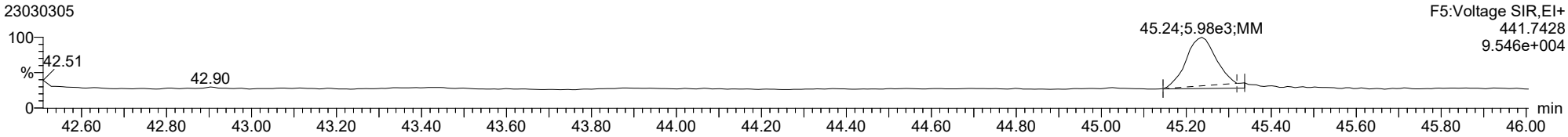
ID: CS1CW, Name: 23030305, Date: 03-Mar-2023, Time: 12:23:58, Conditions: AUTOSPEC01, User: pk

OCDF



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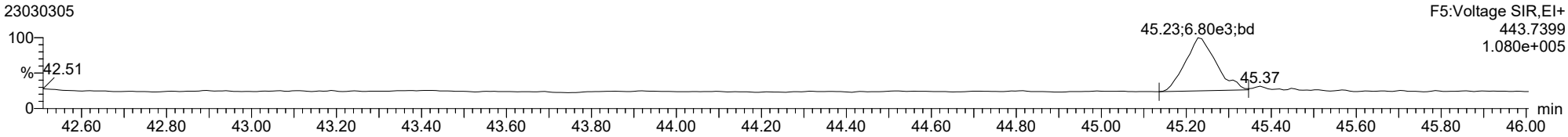

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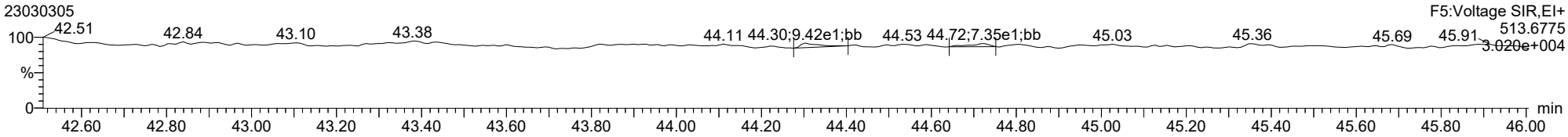

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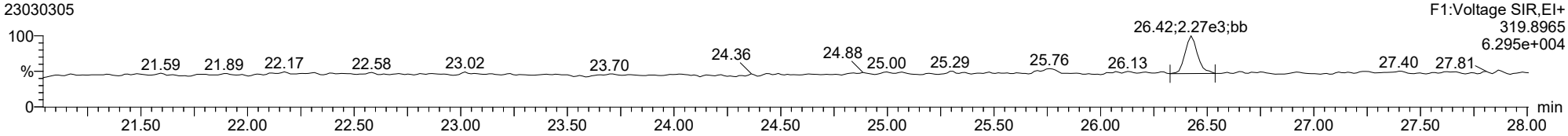

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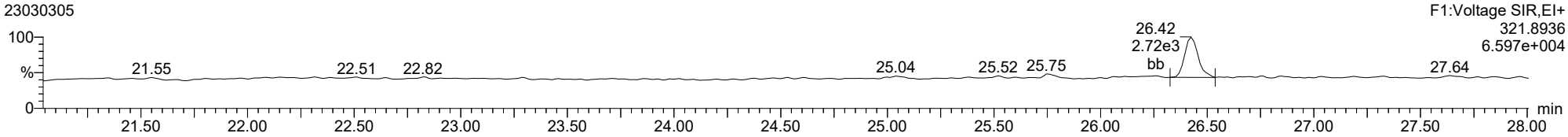

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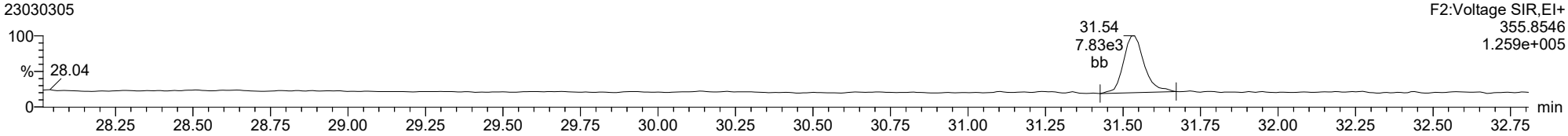

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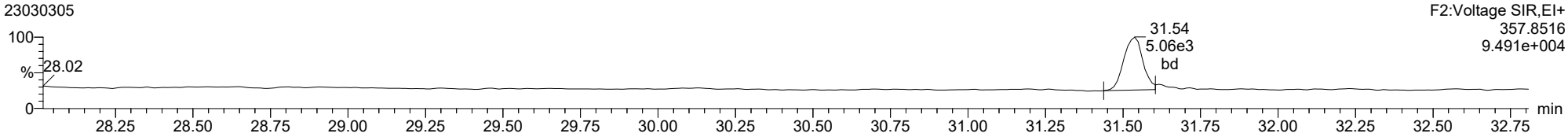

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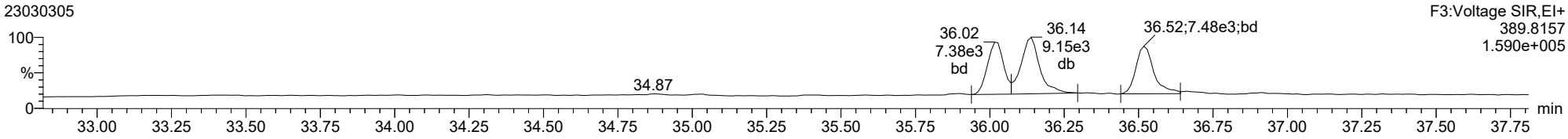
Total-hexadioxins



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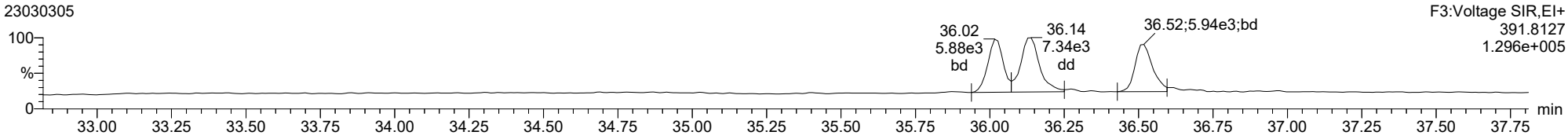

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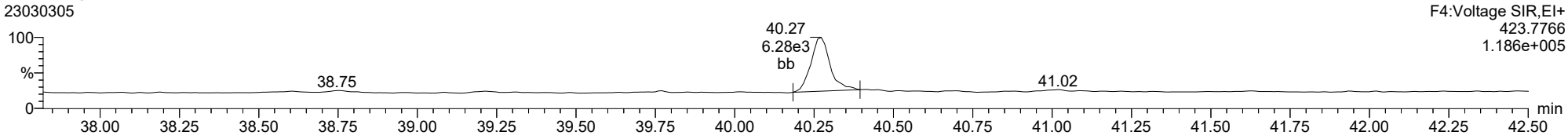
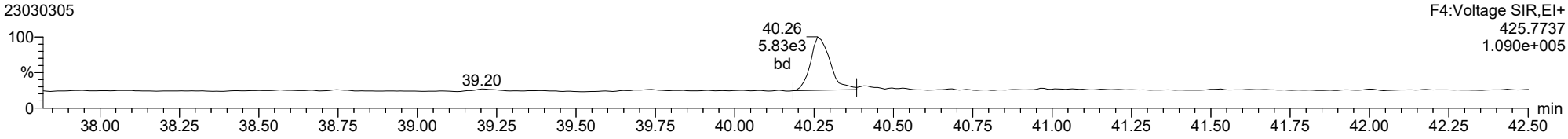


Total-heptadioxins



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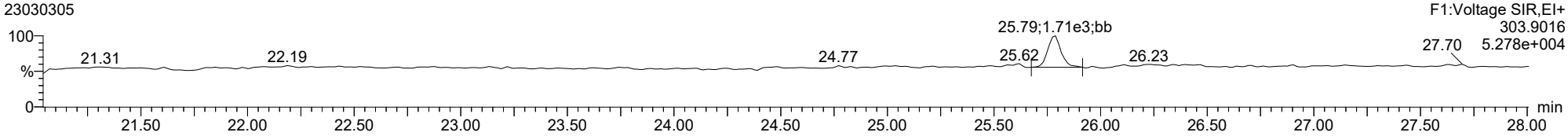
Total-tetrafurans



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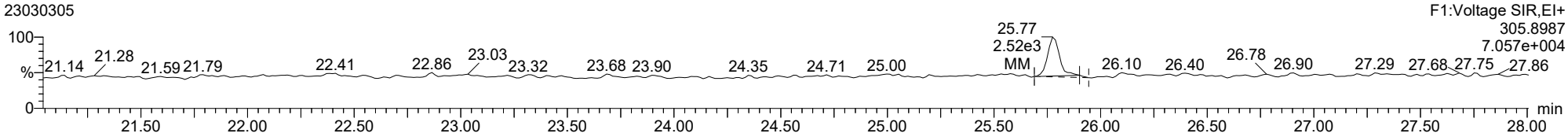

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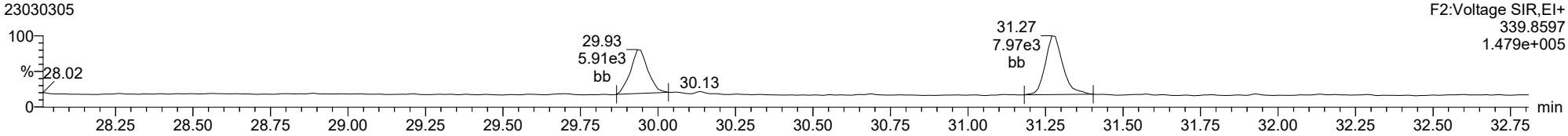

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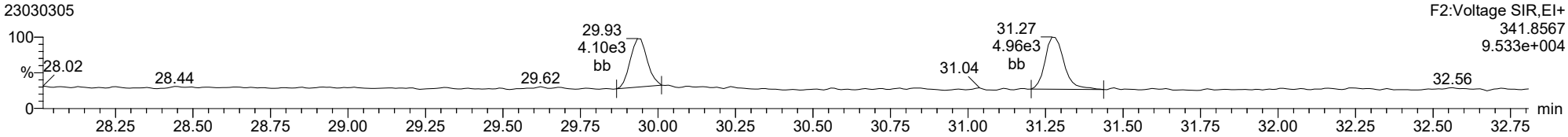

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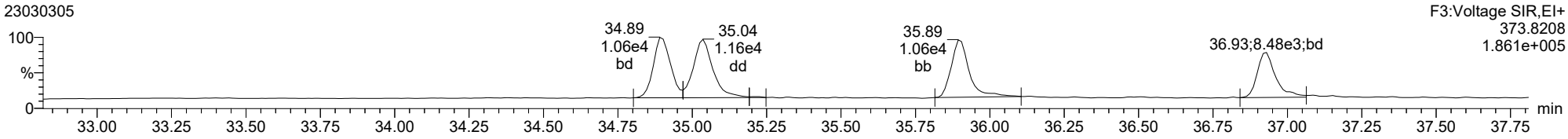
Total-hexafurans



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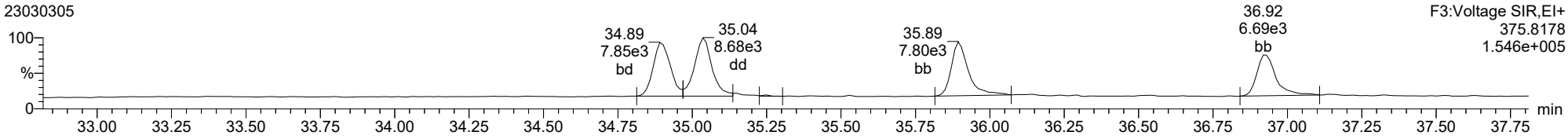

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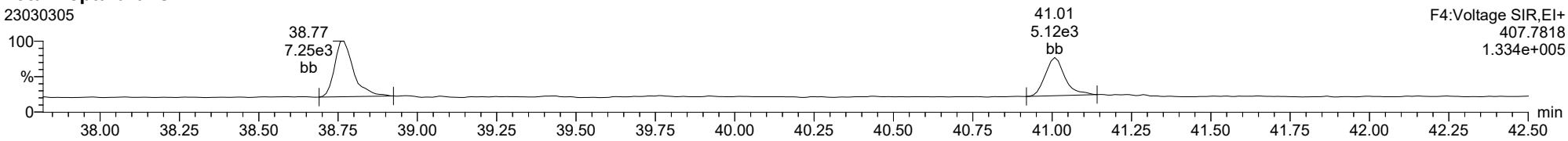

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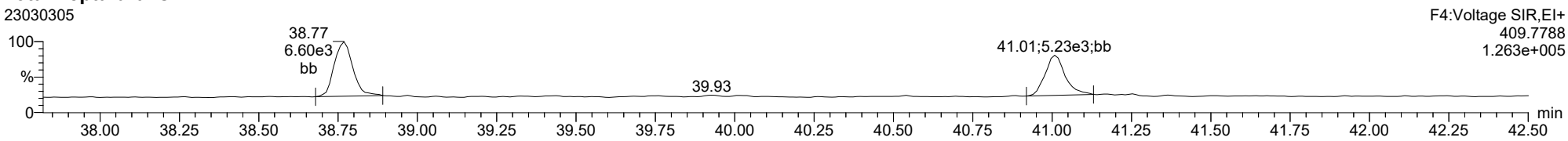

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
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Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.789	1.001	8.311e3	1.080e4	0.702	0.769	0.770	1017	2375	1.17e5	1.59e5	114.9	67.2	NO	bd	bb	1.942
12378-PeCDF	29.945	1.001	4.669e4	2.820e4	0.679	1.656	1.550	1114	1452	6.51e5	4.26e5	583.9	293.2	NO	bd	bb	10.465
23478-PeCDF	31.282	1.000	4.676e4	2.892e4	0.786	1.617	1.550	1114	1452	6.63e5	4.21e5	595.0	289.8	NO	bb	bb	10.293
123478-HxCDF	34.903	1.000	5.097e4	3.855e4	1.166	1.322	1.240	1081	974	7.67e5	5.88e5	709.2	604.2	NO	bd	bd	9.861
234678-HxCDF	35.906	1.000	4.287e4	3.364e4	1.140	1.274	1.240	1081	974	6.16e5	4.95e5	570.0	508.0	NO	bd	bb	10.523
123678-HxCDF	35.048	1.001	5.830e4	4.380e4	1.091	1.331	1.240	1081	974	7.78e5	6.16e5	719.4	632.0	NO	dd	db	10.775
123789-HxCDF	36.942	1.001	3.050e4	2.273e4	1.137	1.342	1.240	1081	974	4.14e5	3.24e5	383.3	332.2	NO	bb	bb	9.945
1234678-HpCDF	38.780	1.001	2.871e4	2.660e4	1.003	1.079	1.050	1234	1299	4.33e5	4.29e5	350.5	330.3	NO	bd	bb	10.087
1234789-HpCDF	41.020	1.000	2.198e4	2.032e4	0.953	1.082	1.050	1234	1299	3.09e5	2.76e5	250.5	212.3	NO	bb	bb	10.556
OCDF	45.247	1.006	3.160e4	3.327e4	0.778	0.950	0.890	832	1108	3.53e5	3.88e5	424.8	350.5	NO	bd	bb	19.690
2378-TCDD	26.438	1.001	9.033e3	1.299e4	1.149	0.696	0.770	1078	937	1.34e5	1.84e5	124.1	196.6	NO	bb	bb	2.068
12378-PeCDD	31.538	1.000	4.287e4	2.877e4	1.022	1.490	1.550	1012	882	6.26e5	3.88e5	618.4	440.6	NO	bb	bb	9.981
123478-HxCDD	36.028	1.001	3.011e4	2.566e4	0.996	1.173	1.240	1087	1355	4.81e5	4.17e5	442.1	307.5	NO	bd	bd	9.781
123678-HxCDD	36.140	1.000	3.660e4	2.810e4	1.001	1.303	1.240	1087	1355	5.13e5	3.98e5	471.9	293.4	NO	dd	db	9.830
123789-HxCDD	36.530	1.011	2.694e4	2.285e4	0.907	1.179	1.240	1087	1355	3.87e5	3.22e5	355.7	237.4	NO	bb	bb	8.921
1234678-HpCDD	40.273	1.000	2.448e4	2.664e4	1.039	0.919	1.050	853	881	3.43e5	3.58e5	402.1	405.9	NO	bb	bd	10.011
OCDD	45.009	1.000	3.531e4	4.015e4	0.920	0.879	0.890	1050	1012	4.08e5	4.99e5	388.3	492.6	NO	bb	bb	19.363
13C-2378-TCDF	25.774	1.007	6.035e5	7.993e5	1.620	0.755	0.770	2457	1835	8.64e6	1.14e7	3516.1	6186.3	NO	bb	bb	103.115
13C-12378-PeCDF	29.923	1.169	6.526e5	4.010e5	1.240	1.628	1.550	3002	2090	8.73e6	5.82e6	2907.1	2783.7	NO	bb	bb	101.148
13C-23478-PeCDF	31.271	1.221	5.554e5	3.799e5	1.118	1.462	1.550	3002	2090	8.01e6	5.41e6	2667.8	2586.4	NO	bb	bb	99.644
13C-123478-HxCDF	34.892	0.956	2.641e5	5.144e5	1.168	0.513	0.510	1857	2488	3.90e6	7.62e6	2100.8	3063.0	NO	bd	bd	129.584
13C-123678-HxCDF	35.026	0.959	2.932e5	5.755e5	1.386	0.510	0.510	1857	2488	4.18e6	8.13e6	2249.4	3269.5	NO	db	db	121.832
13C-234678-HxCDF	35.895	0.983	2.180e5	4.199e5	1.129	0.519	0.510	1857	2488	3.14e6	6.08e6	1689.2	2442.9	NO	bb	bb	109.838
13C-123789-HxCDF	36.920	1.011	1.570e5	3.137e5	0.932	0.501	0.510	1857	2488	2.29e6	4.45e6	1232.1	1790.1	NO	bb	bb	98.225
13C-1234678-HpCDF	38.758	1.062	1.644e5	3.823e5	0.895	0.430	0.440	2012	3375	2.57e6	5.95e6	1277.0	1763.6	NO	bb	bb	118.766
13C-1234789-HpCDF	40.998	1.123	1.271e5	2.934e5	0.770	0.433	0.440	2012	3375	1.71e6	4.02e6	850.7	1191.4	NO	bb	bb	106.228
13C-1234-TCDD	25.605	0.000	3.763e5	4.634e5	1.000	0.812	0.770	2552	2183	5.75e6	7.05e6	2254.8	3231.1	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	4.085e5	5.183e5	1.152	0.788	0.770	2552	2183	5.98e6	7.56e6	2342.4	3461.2	NO	bb	bb	95.779
13C-12378-PeCDD	31.527	1.231	4.337e5	2.688e5	0.829	1.614	1.550	1077	1542	6.15e6	3.74e6	5715.6	2425.2	NO	bb	bb	100.933
13C-123478-HxCDD	36.006	0.986	3.223e5	2.505e5	0.995	1.287	1.240	2237	1883	4.87e6	3.76e6	2175.2	1999.6	NO	bd	bd	111.924
13C-123678-HxCDD	36.129	0.990	3.608e5	2.967e5	1.157	1.216	1.240	2237	1883	5.10e6	4.02e6	2277.5	2137.4	NO	db	db	110.547
13C-1234678-HpCDD	40.262	1.103	2.573e5	2.341e5	0.840	1.099	1.050	2349	1481	3.41e6	3.22e6	1450.8	2172.3	NO	bd	bb	113.737
13C-OCDD	44.991	1.232	4.017e5	4.455e5	0.767	0.902	0.890	2278	1800	4.53e6	5.05e6	1990.6	2807.7	NO	bb	bb	214.651
13C-123789-HxCDD	36.507	0.000	2.902e5	2.240e5	1.000	1.296	1.240	2237	1883	4.20e6	3.27e6	1878.6	1737.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.032	1.977e4		1.288			2484		2.93e5		117.9			bb		1.828

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:34:24 Pacific Standard Time

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1017	2375								
1289-TCDF					0.678		0.770	1017	2375								
13468-PECDF					1.246		1.550	633	1159								
12389-PECDF					0.496		1.550	1114	1452								
123468-HXCDF					1.169		1.240	1081	974								
1368-TCDD					1.015		0.770	1078	937								
1289-TCDD					0.909		0.770	1078	937								
12479-PECDD					2.301		1.550	1012	882								
12389-PECDD					1.184		1.550	1012	882								
124679-HXCDD					1.115		1.240	1087	1355								
1234679-HPCDD					1.137		1.050	853	881								
Total-tetrafurans			8.311e3		0.727			1017		1.17e5							1.942
Total-penta1			0.000e0					633		0.00e0							
Total-pentafurans			9.345e4		0.654			1114		1.31e6							20.758
Total-hexafurans			1.826e5		1.141			1081		2.58e6							41.105
Total-heptafurans			5.070e4		0.978			1234		7.42e5							20.643
Total-Furans			3.667e5		0.922			1017		5.10e6							104.140
Total-tetradioxins			9.033e3		1.024			1078		1.34e5							2.068
Total-pentadioxins			4.287e4		1.502			1012		6.26e5							9.981
Total-hexadioxins			9.364e4		1.005			1087		1.38e6							28.532
Total-heptadioxins			2.448e4		1.088			853		3.43e5							10.011
Total-Dioxins			2.053e5		1.130			1078		2.89e6							69.955
Total-TEQ			5.720e5					1078		7.99e6							174.095
FUNCTION1 PFK			1.995e6					567717		7.69e6							
FUNCTION2 PFK			1.258e5					282093		4.74e6							0.000
FUNCTION3 PFK			4.711e7					382868		3.34e7							0.000
FUNCTION4 PFK			2.092e7					278389		1.32e7							
FUNCTION5 PFK			6.777e4					239180		2.68e6							
FUNCTION1 HXCD...			0.000e0					613		0.00e0							
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.408e2					965		2.85e3							0.000
FUNCTION3 OCDPE			0.000e0					571		0.00e0							
FUNCTION4 NCDPE			3.810e2					638		4.39e3							0.000
FUNCTION5 DCDPE			0.000e0					603		0.00e0							

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
2	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
3	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
4	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
2	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465
3	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942
4	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
5	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
6	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
7	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861
8	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
9	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087
10	OCDF	45.25	3.160e4	3.327e4	0.778	0.95	0.89	424.8	YES	NO	bd	bb	19.690

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
2	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
3	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011

ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981
2	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068
3	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
4	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
5	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781
6	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011
7	OCDD	45.01	3.531e4	4.015e4	0.920	0.88	0.89	388.3	YES	NO	bb	bb	19.363

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.28	4.676e4	2.892e4	0.786	1.62	1.55	595.0	YES	NO	bb	bb	10.293
2	12378-PeCDF	29.94	4.669e4	2.820e4	0.679	1.66	1.55	583.9	YES	NO	bd	bb	10.465
3	2378-TCDF	25.79	8.311e3	1.080e4	0.702	0.77	0.77	114.9	YES	NO	bd	bb	1.942
4	123789-HxCDF	36.94	3.050e4	2.273e4	1.137	1.34	1.24	383.3	YES	NO	bb	bb	9.945
5	234678-HxCDF	35.91	4.287e4	3.364e4	1.140	1.27	1.24	570.0	YES	NO	bd	bb	10.523
6	123678-HxCDF	35.05	5.830e4	4.380e4	1.091	1.33	1.24	719.4	YES	NO	dd	db	10.775
7	123478-HxCDF	34.90	5.097e4	3.855e4	1.166	1.32	1.24	709.2	YES	NO	bd	bd	9.861
8	1234789-HpCDF	41.02	2.198e4	2.032e4	0.953	1.08	1.05	250.5	YES	NO	bb	bb	10.556
9	1234678-HpCDF	38.78	2.871e4	2.660e4	1.003	1.08	1.05	350.5	YES	NO	bd	bb	10.087
10	OCDF	45.25	3.160e4	3.327e4	0.778	0.95	0.89	424.8	YES	NO	bd	bb	19.690
11	12378-PeCDD	31.54	4.287e4	2.877e4	1.022	1.49	1.55	618.4	YES	NO	bb	bb	9.981
12	2378-TCDD	26.44	9.033e3	1.299e4	1.149	0.70	0.77	124.1	YES	NO	bb	bb	2.068
13	123789-HxCDD	36.53	2.694e4	2.285e4	0.907	1.18	1.24	355.7	YES	NO	bb	bb	8.921
14	123678-HxCDD	36.14	3.660e4	2.810e4	1.001	1.30	1.24	471.9	YES	NO	dd	db	9.830
15	123478-HxCDD	36.03	3.011e4	2.566e4	0.996	1.17	1.24	442.1	YES	NO	bd	bd	9.781
16	1234678-HpCDD	40.27	2.448e4	2.664e4	1.039	0.92	1.05	402.1	YES	NO	bb	bd	10.011
17	OCDD	45.01	3.531e4	4.015e4	0.920	0.88	0.89	388.3	YES	NO	bb	bb	19.363

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.73	8.333e5					6.7	YES		bb		
2	FUNCTION1 PFK	21.10	1.162e6					6.9	YES		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.61	1.110e4					1.3	NO		bb		0.000
2	FUNCTION2 PFK	28.31	1.183e4					1.5	NO		bb		0.000
3	FUNCTION2 PFK	31.85	7.066e3					1.3	NO		bb		0.000
4	FUNCTION2 PFK	31.75	1.168e4					1.4	NO		bb		0.000
5	FUNCTION2 PFK	30.95	1.613e4					2.1	NO		bb		0.000
6	FUNCTION2 PFK	30.06	7.806e3					1.3	NO		bb		0.000
7	FUNCTION2 PFK	29.77	1.198e4					1.4	NO		bb		0.000
8	FUNCTION2 PFK	29.47	1.476e4					2.1	NO		bb		0.000
9	FUNCTION2 PFK	29.28	1.360e4					2.0	NO		db		0.000
10	FUNCTION2 PFK	29.22	1.980e4					2.4	NO		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.30	3.856e7					44.6	YES		db		0.000
2	FUNCTION3 PFK	33.18	8.558e6					42.7	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.24	1.285e7					8.2	YES		db		
2	FUNCTION4 PFK	38.41	8.070e6					39.3	YES		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.68	1.647e4					1.8	NO		bb		
2	FUNCTION5 PFK	45.75	3.282e3					1.0	NO		bb		
3	FUNCTION5 PFK	45.28	6.957e3					1.1	NO		bb		
4	FUNCTION5 PFK	44.90	6.364e3					1.0	NO		bb		
5	FUNCTION5 PFK	44.84	1.531e3					0.5	NO		bb		
6	FUNCTION5 PFK	44.40	6.282e3					1.0	NO		bb		
7	FUNCTION5 PFK	44.21	4.626e3					1.1	NO		bb		
8	FUNCTION5 PFK	44.03	7.842e3					1.2	NO		bb		
9	FUNCTION5 PFK	43.96	6.415e3					1.4	NO		bb		
10	FUNCTION5 PFK	43.84	7.992e3					1.2	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.54	1.408e2					3.0	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.65	1.069e2					1.9	NO		bb		0.000
2	FUNCTION4 NCDPE	40.25	1.358e2					2.2	NO		bb		0.000
3	FUNCTION4 NCDPE	41.02	1.383e2					2.8	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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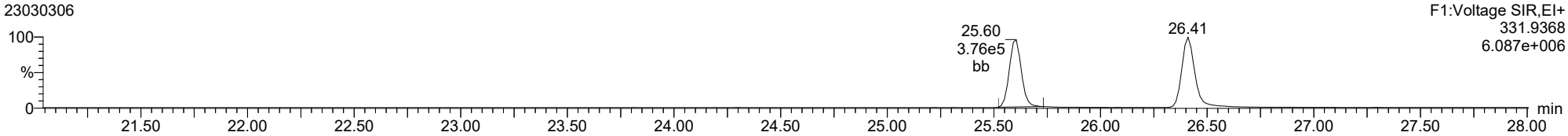
ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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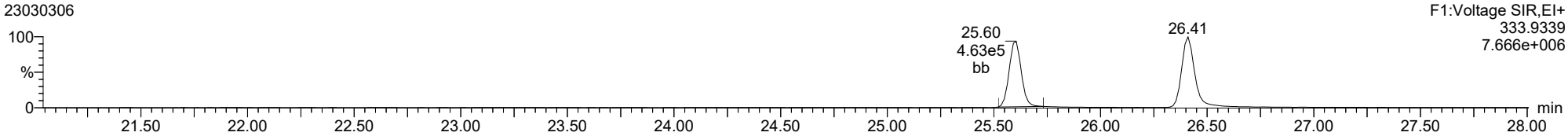
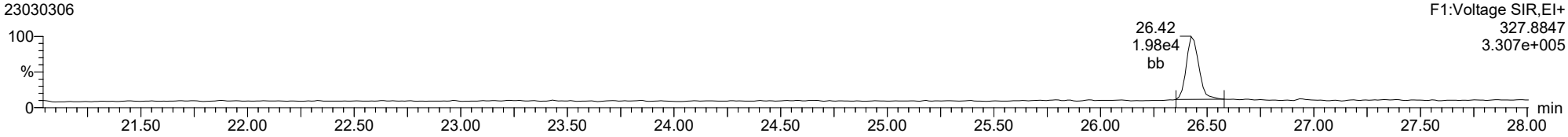


37CL-2378-TCDD



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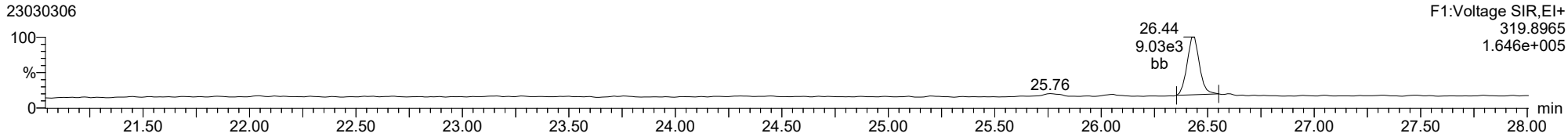

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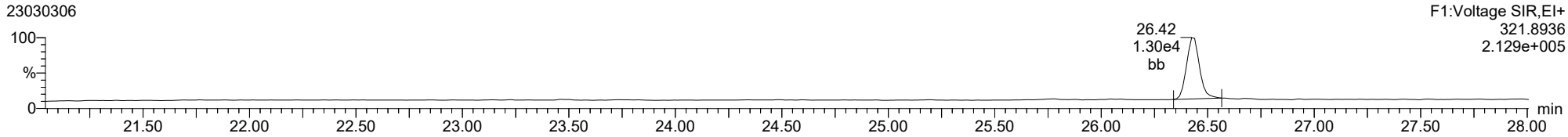

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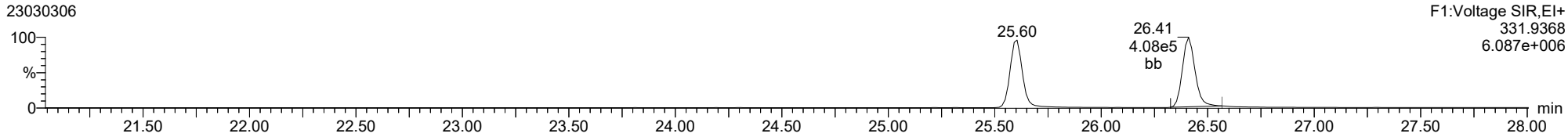

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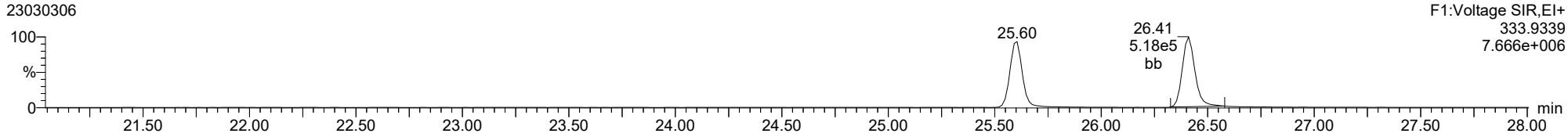
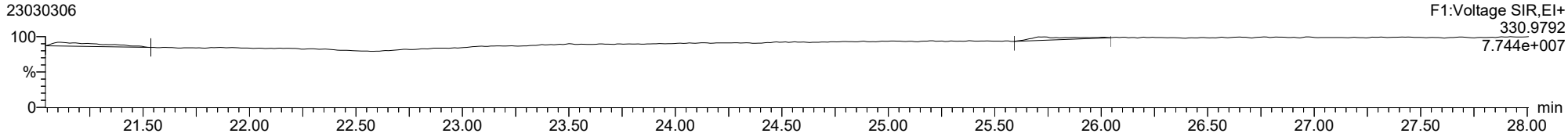


FUNCTION1 PFK



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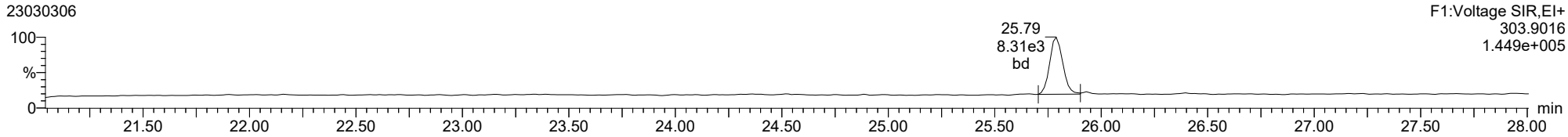

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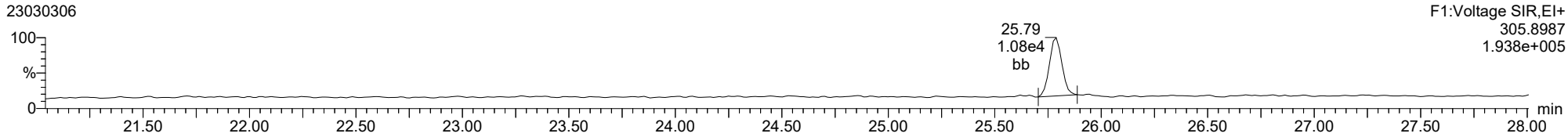

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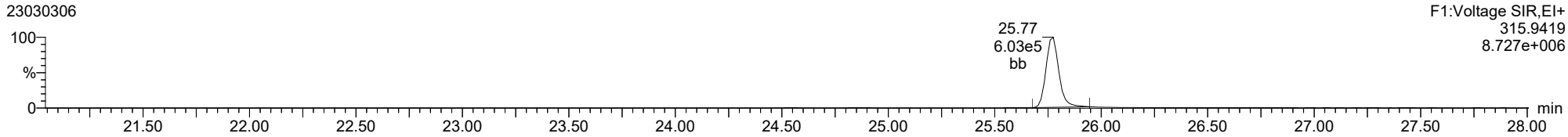

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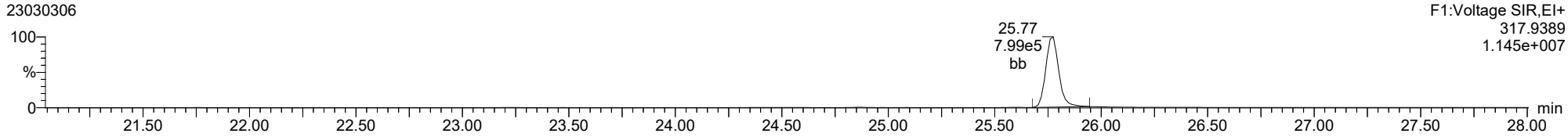
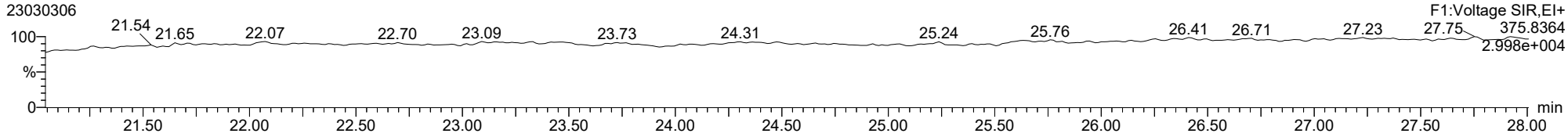


FUNCTION1 HXCDPE



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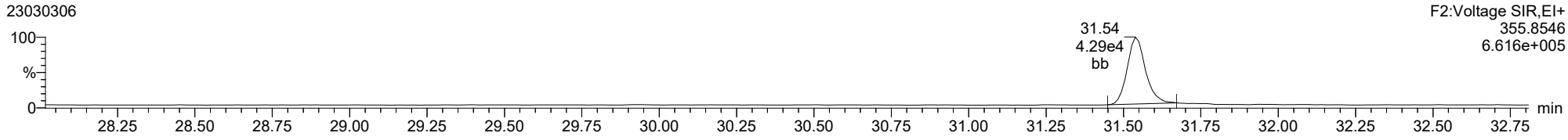
12378-PeCDD



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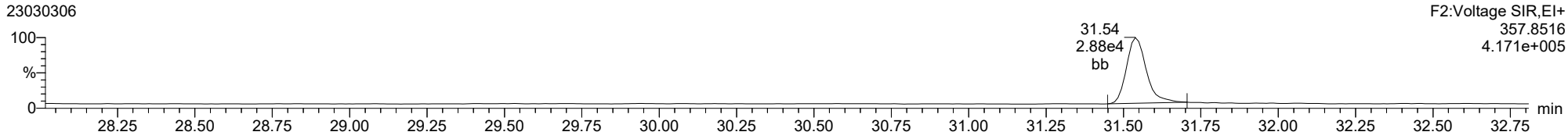

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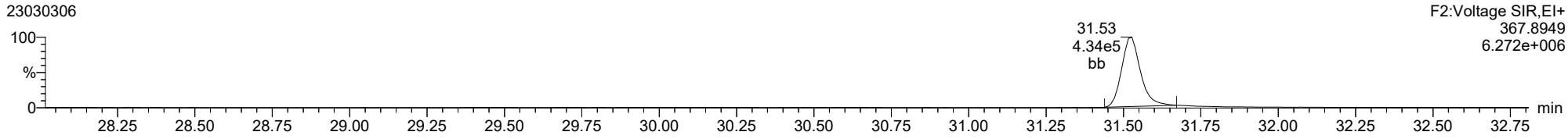

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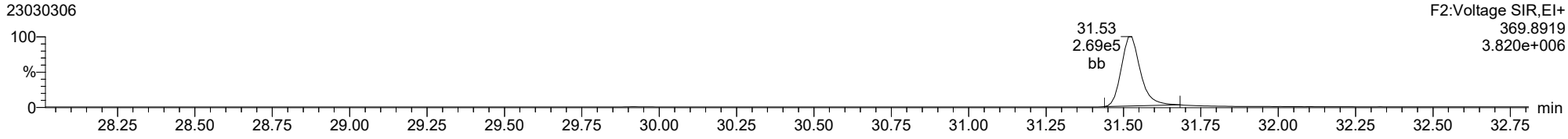
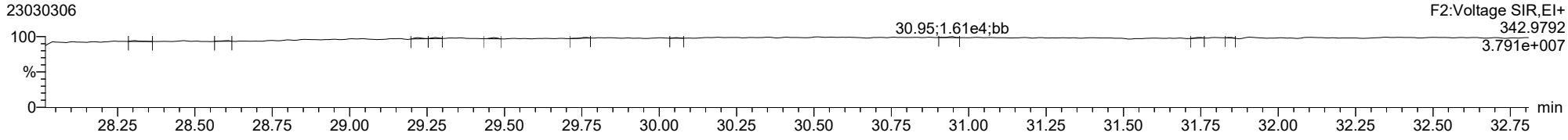


FUNCTION2 PFK



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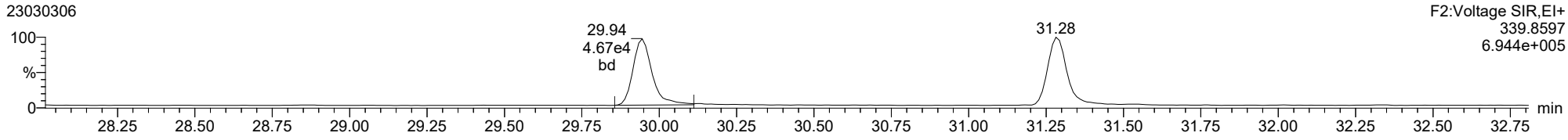

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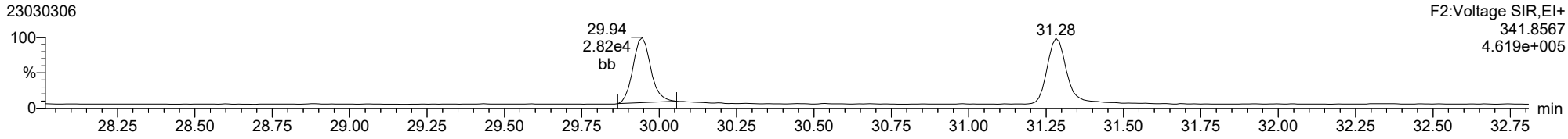

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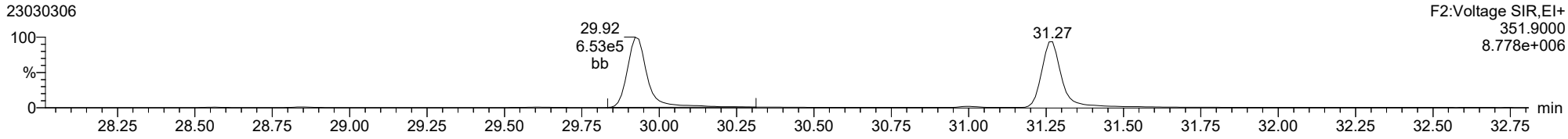

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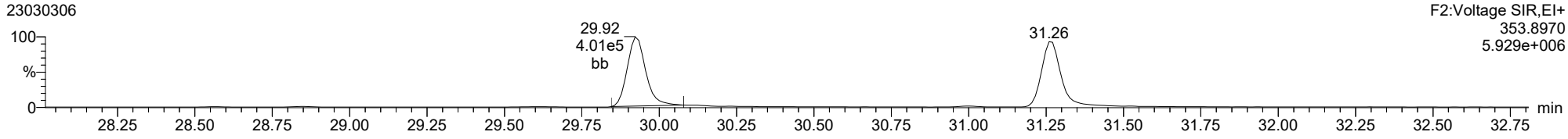
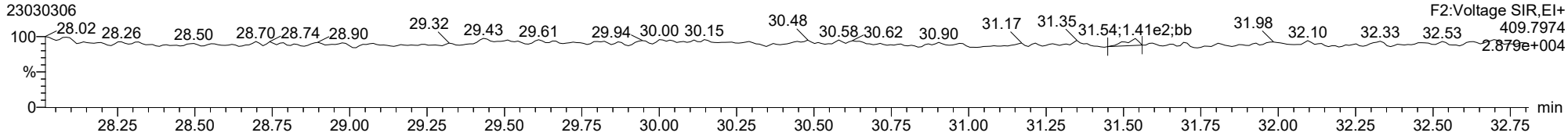


FUNCTION2 HPCDPE



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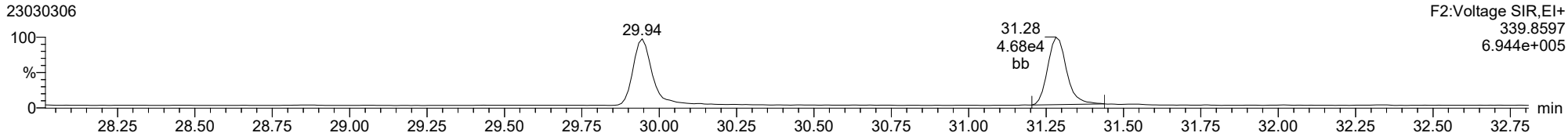

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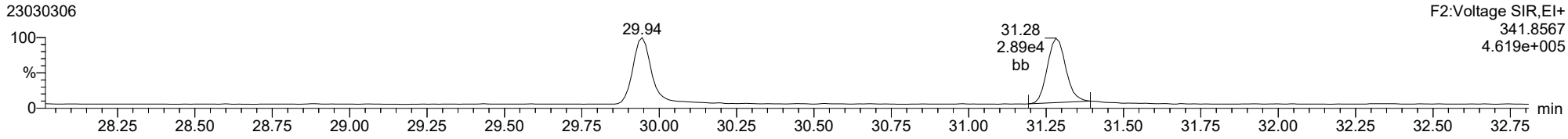

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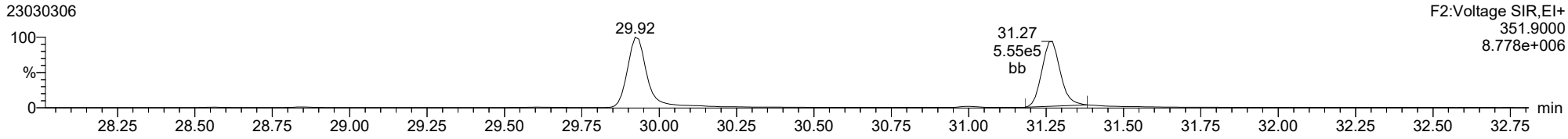

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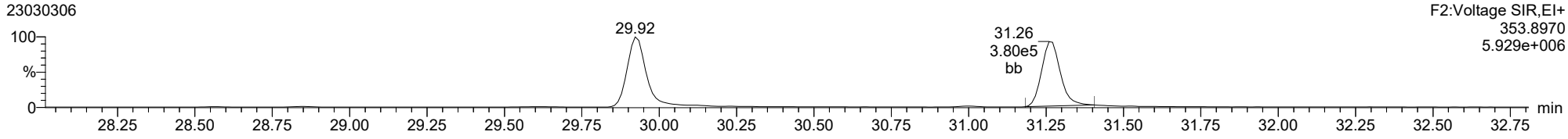

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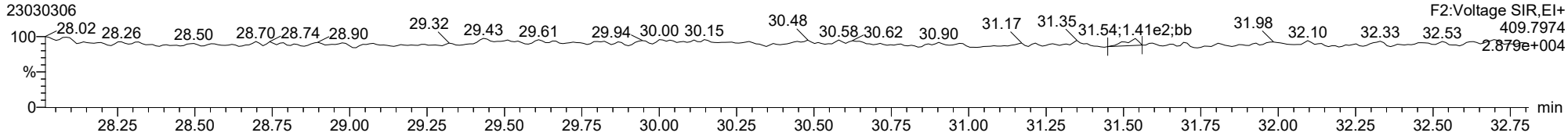

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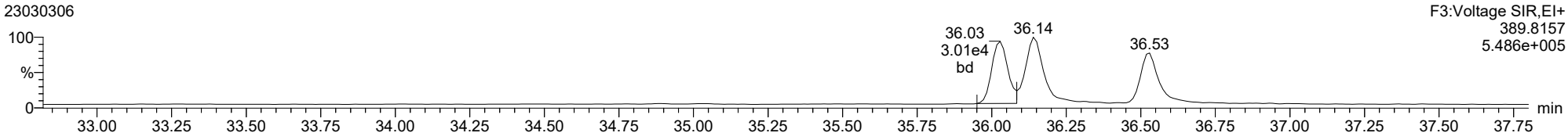
123478-HxCDD



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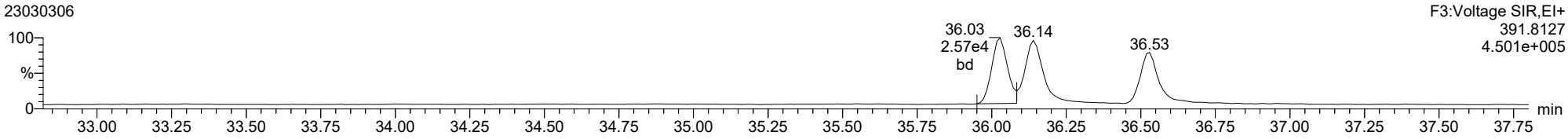

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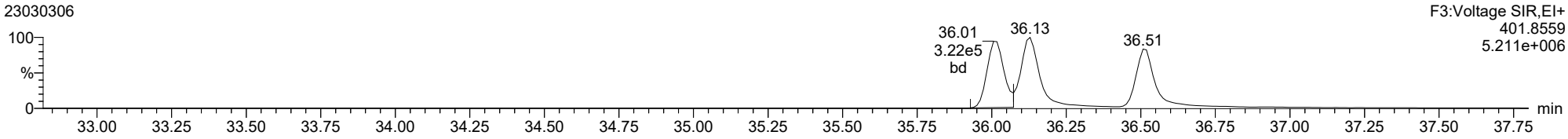

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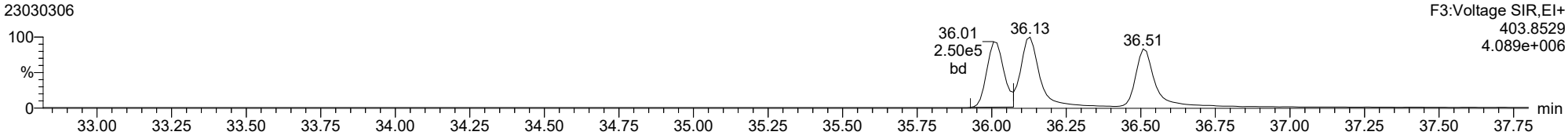
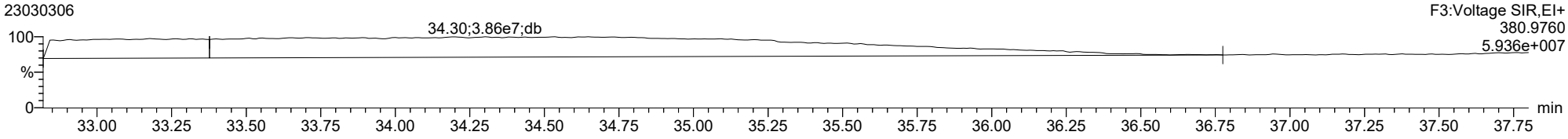


FUNCTION3 PFK



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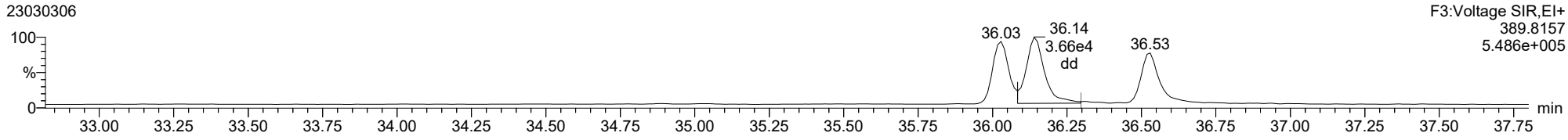

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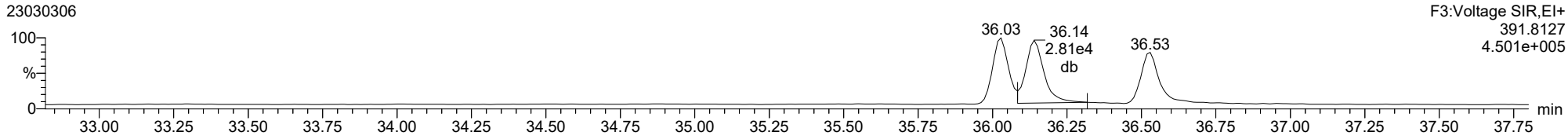

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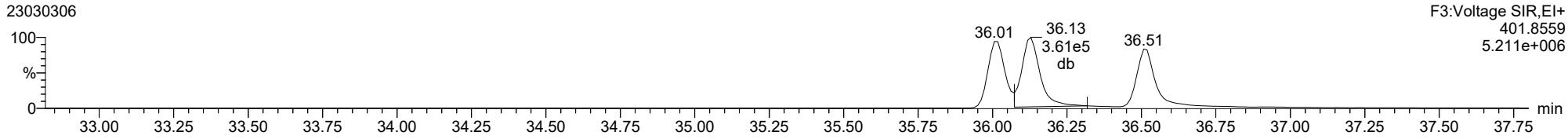

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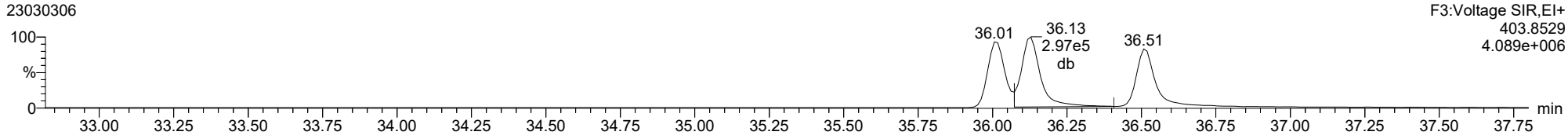

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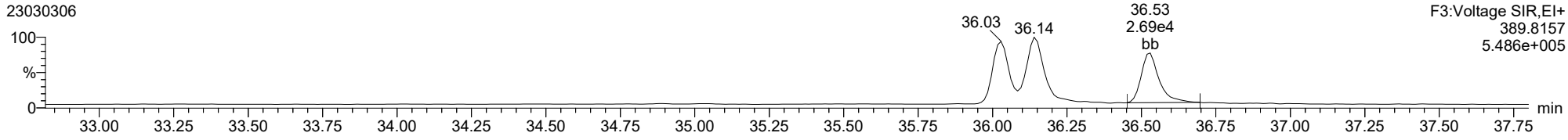

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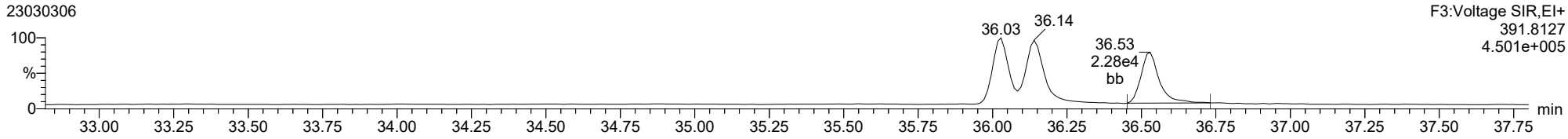

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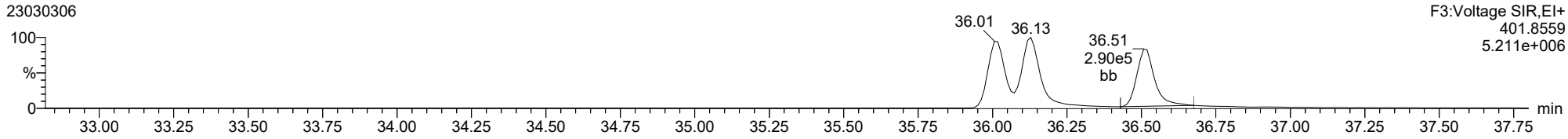

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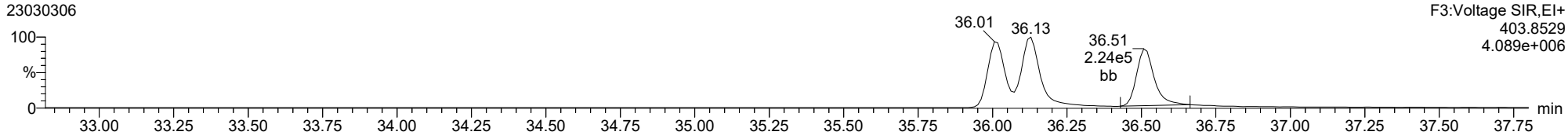

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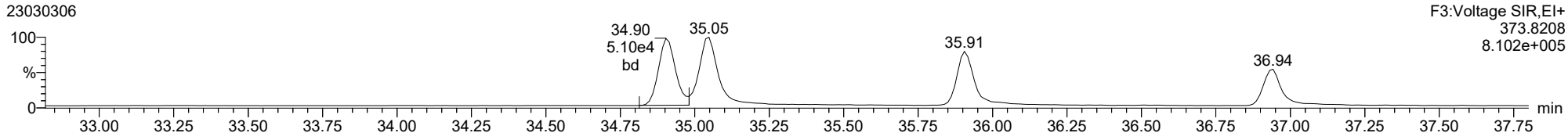

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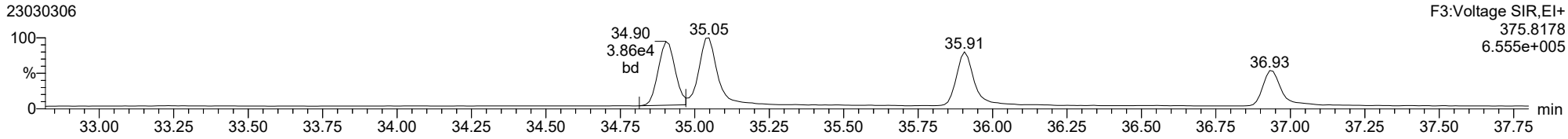

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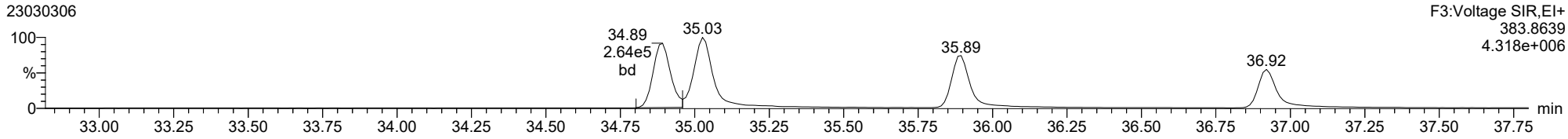

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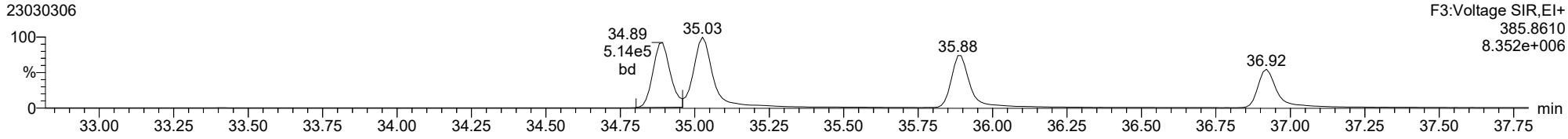

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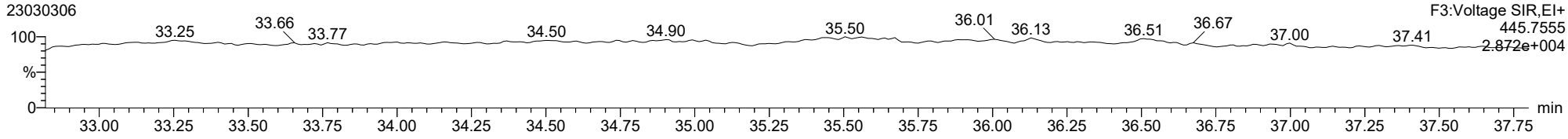

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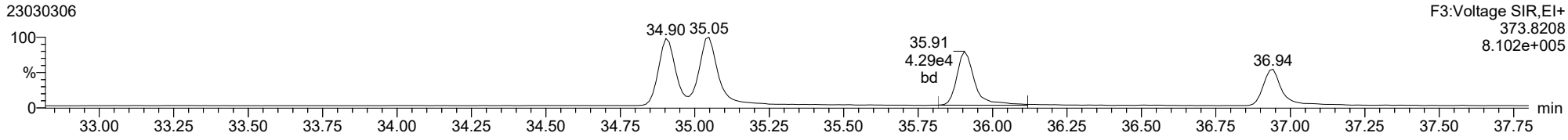

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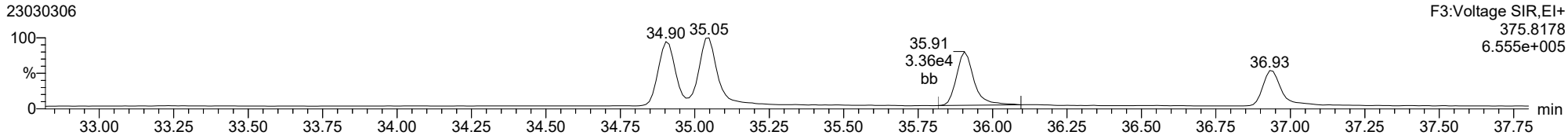

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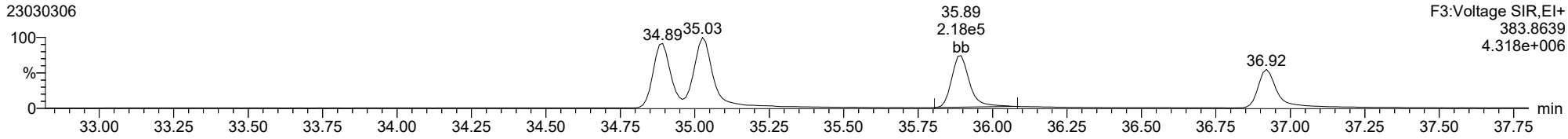

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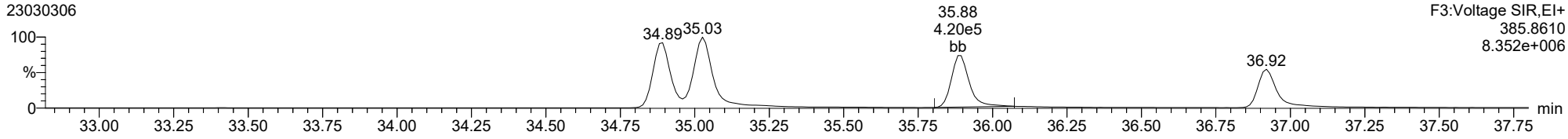

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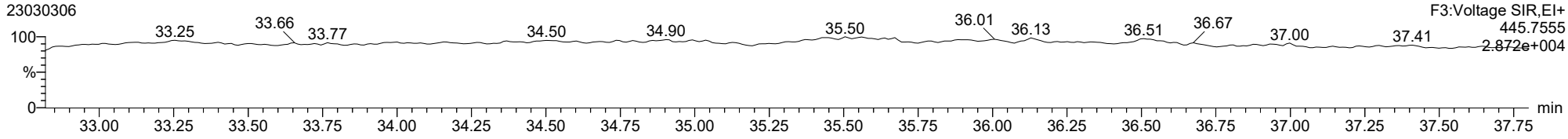

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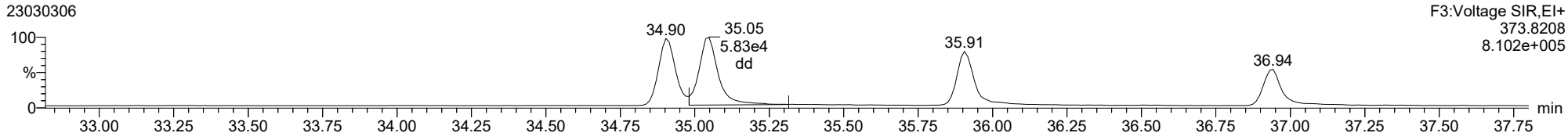

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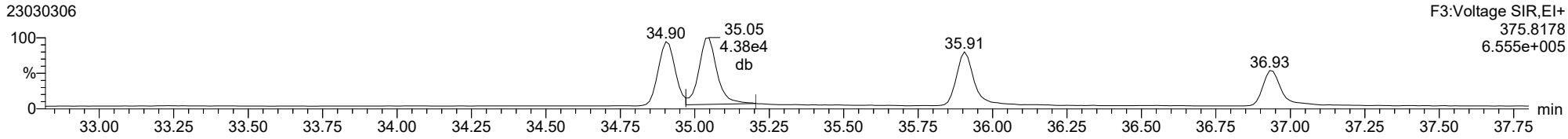

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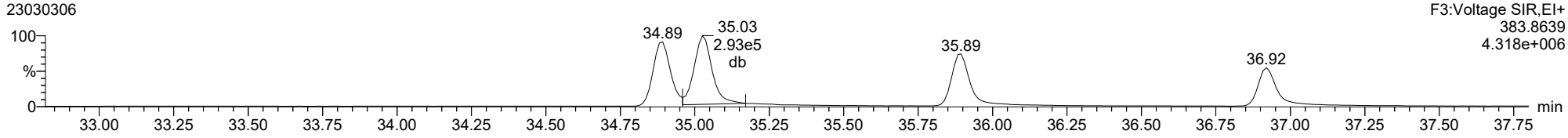

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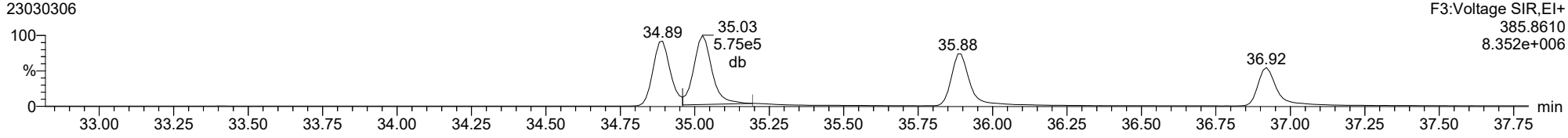

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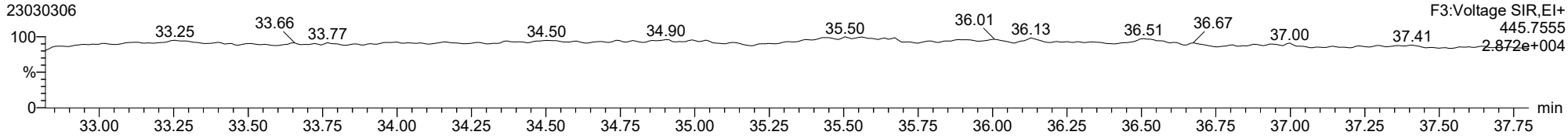

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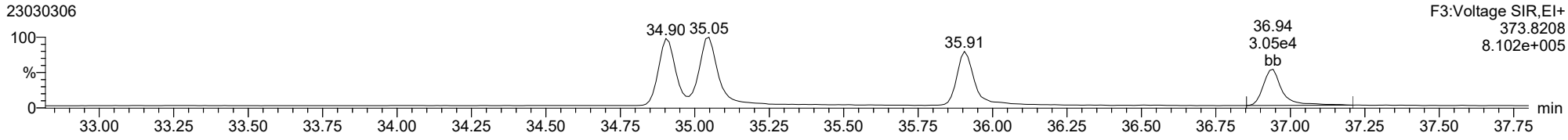

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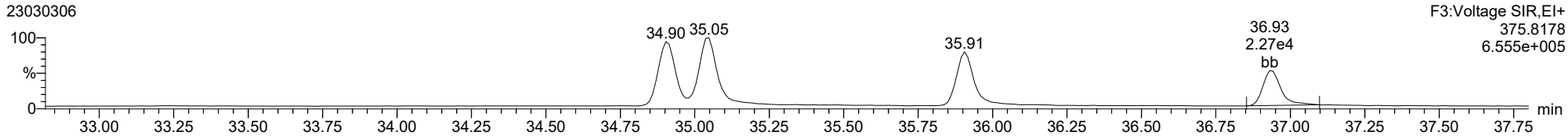

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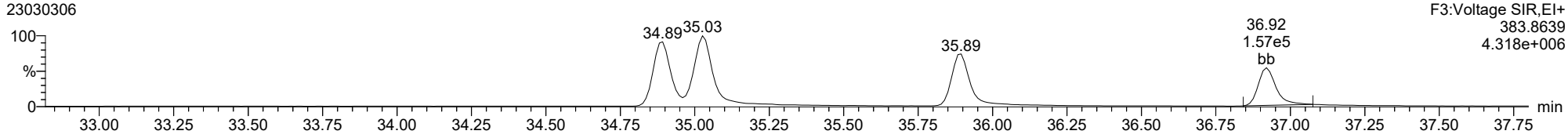

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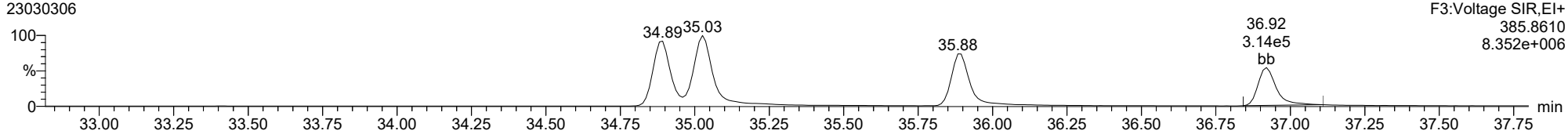

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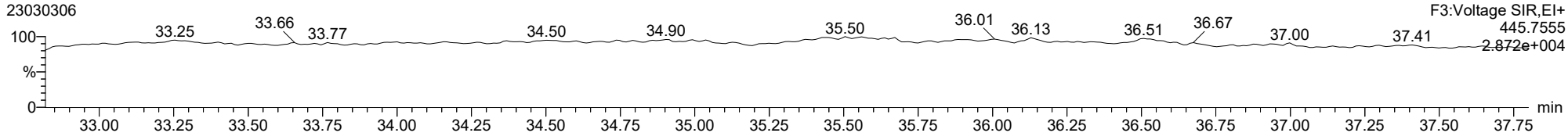

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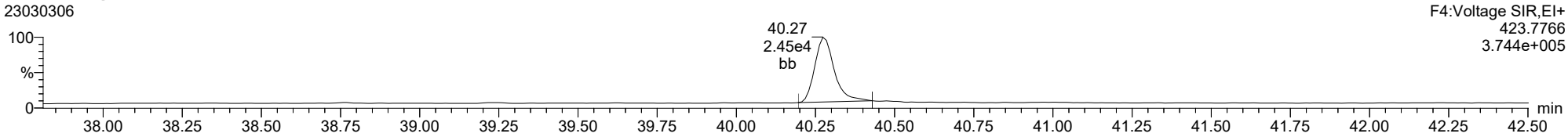

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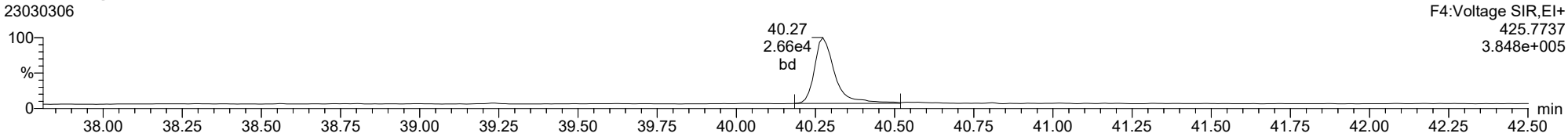

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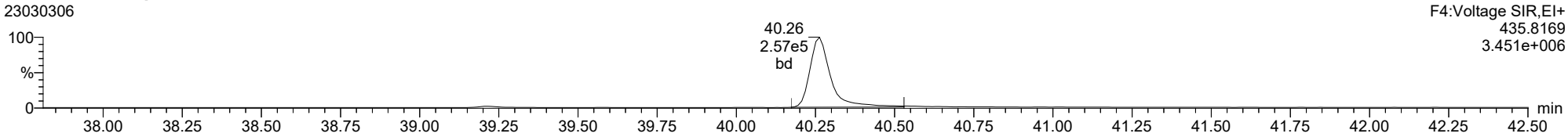

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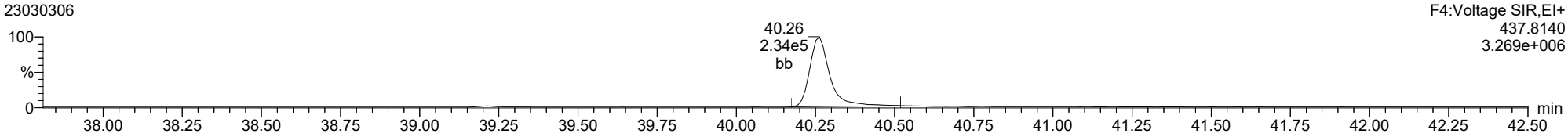
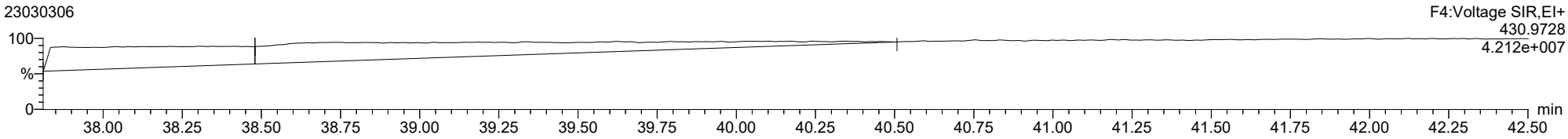


FUNCTION4 PFK



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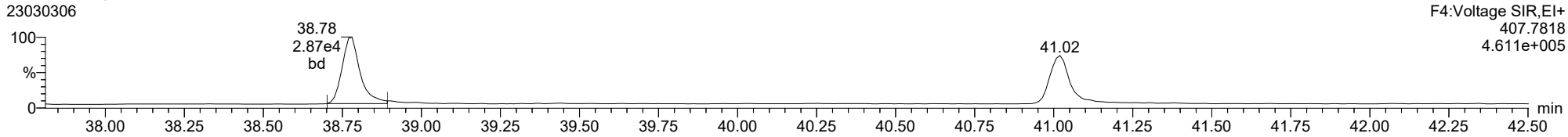

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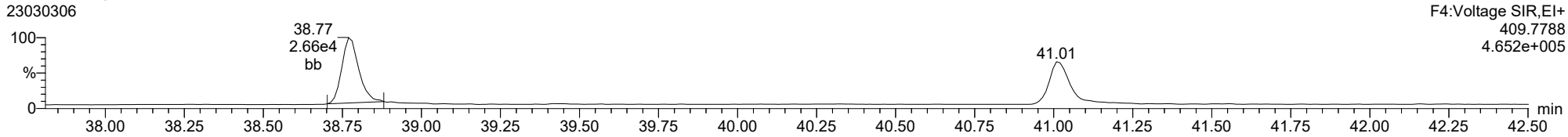

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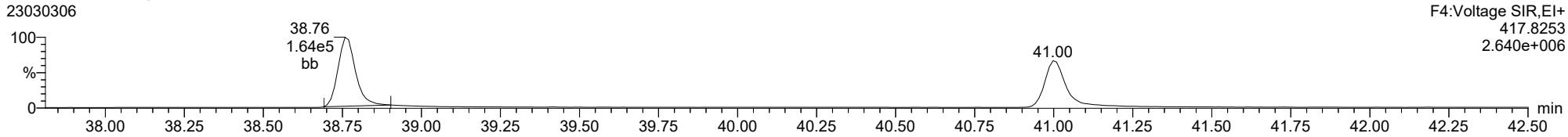

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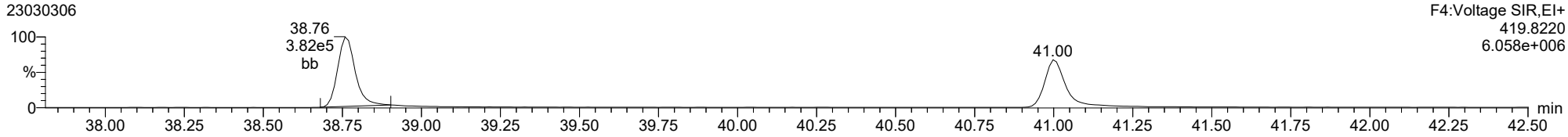
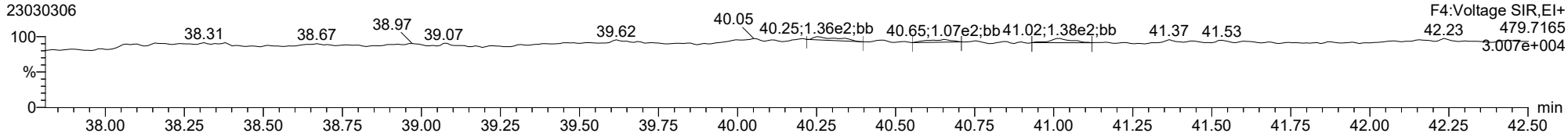


FUNCTION4 NCDPE



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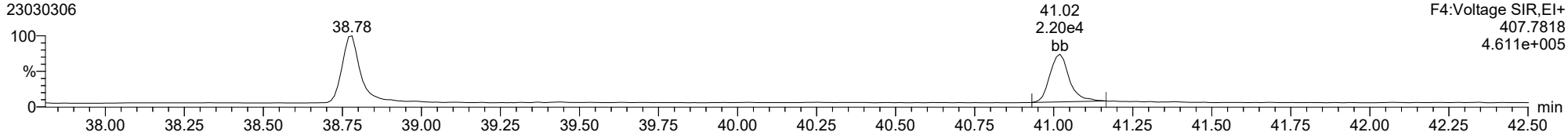

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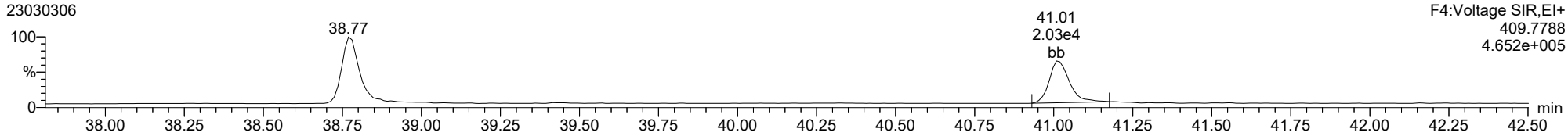

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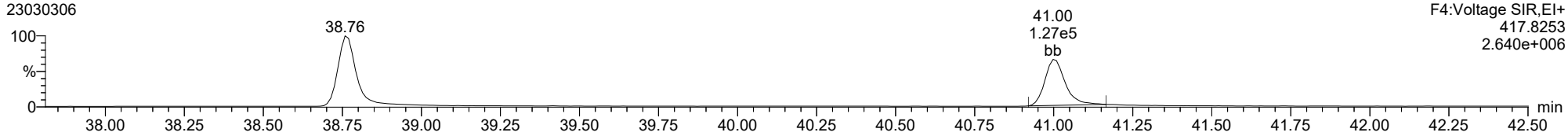

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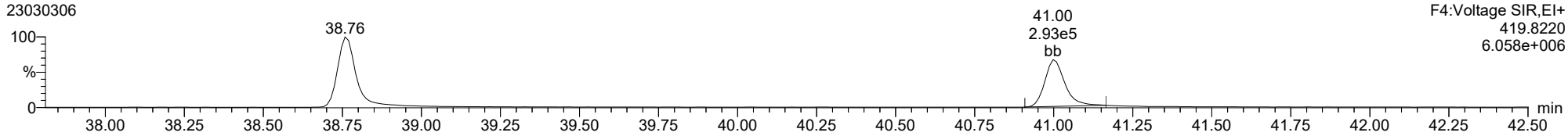
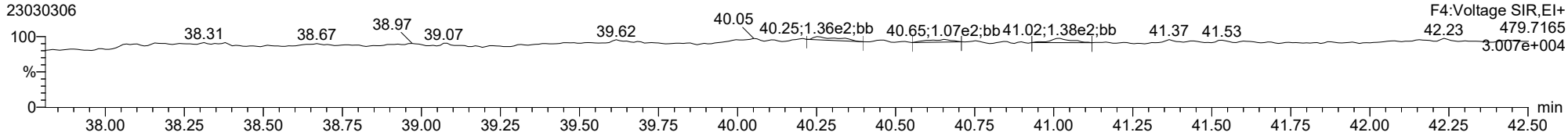


FUNCTION4 NCDPE



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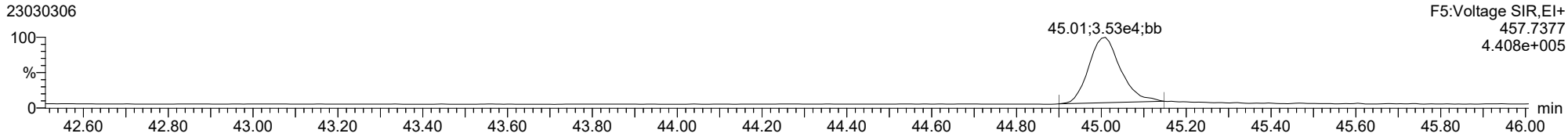
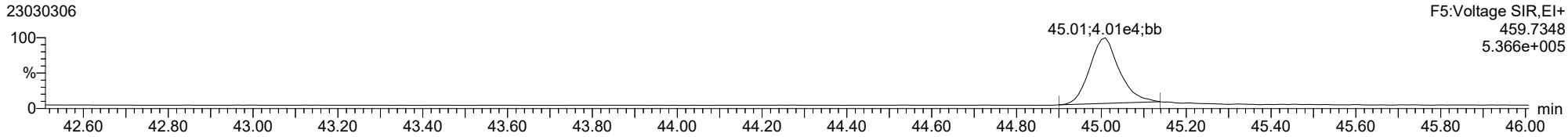
OCDD



OCDD



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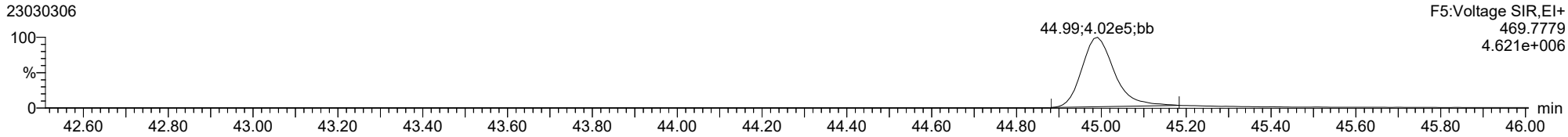

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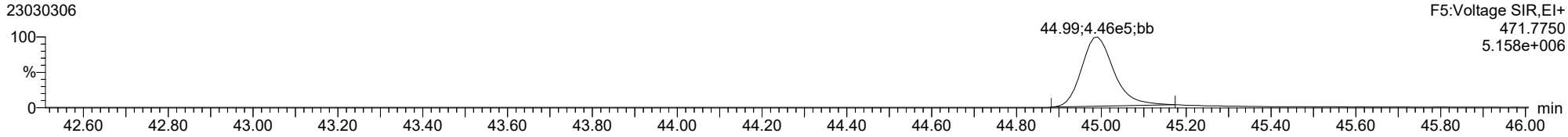
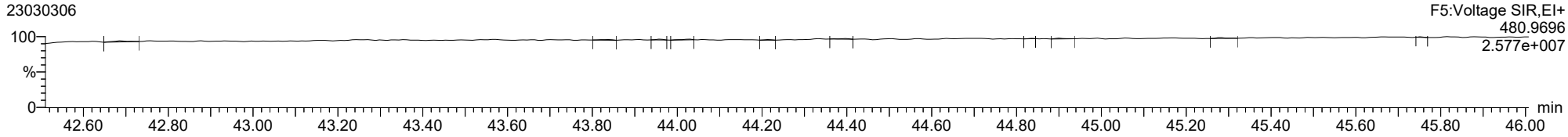


FUNCTION5 PFK



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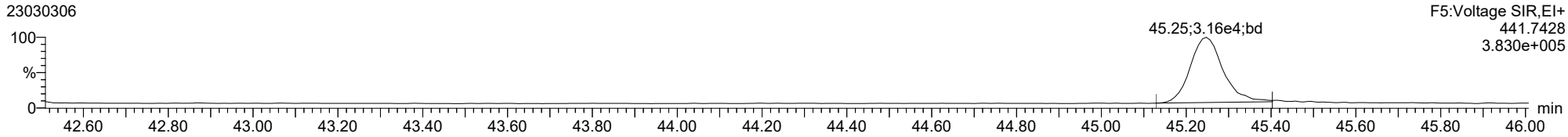
ID: CS2CW, Name: 23030306, Date: 03-Mar-2023, Time: 13:16:24, Conditions: AUTOSPEC01, User: pk

OCDF



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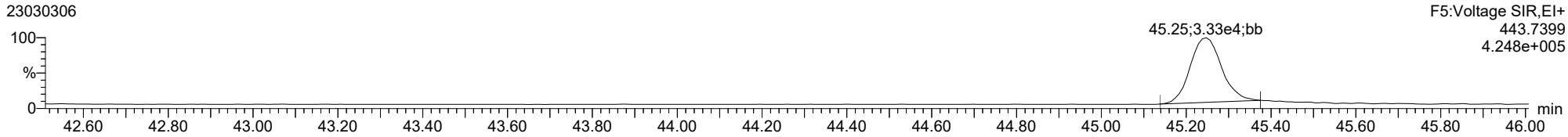
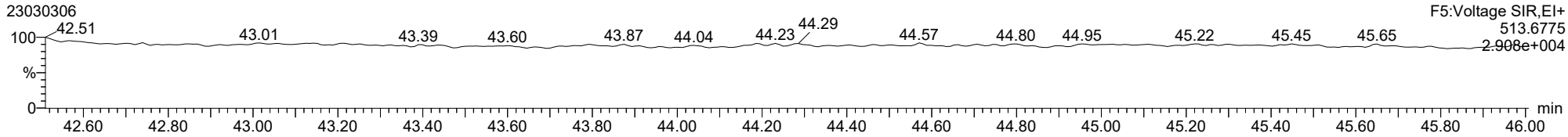


FUNCTION5 DCDPE



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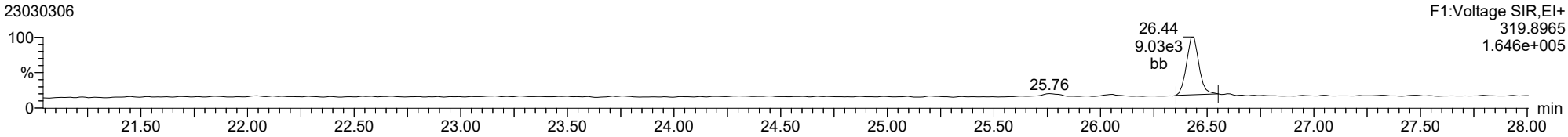
Total-tetradioxins



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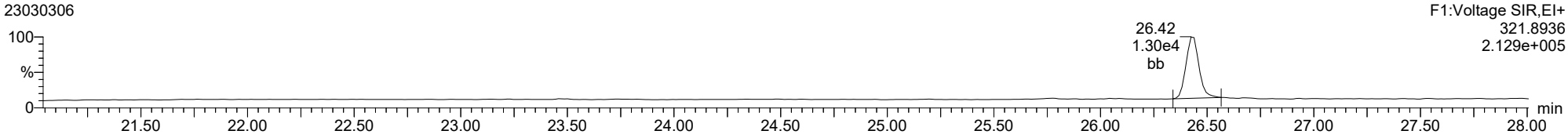
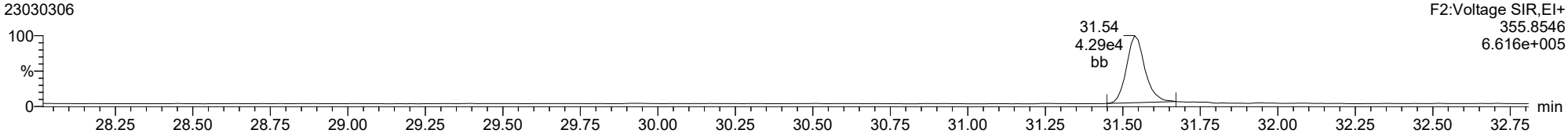
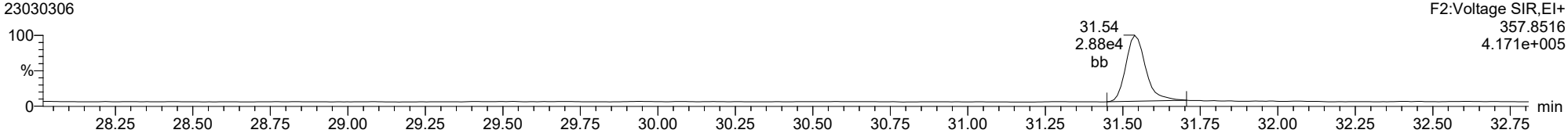


Total-pentadioxins



Total-pentadioxins



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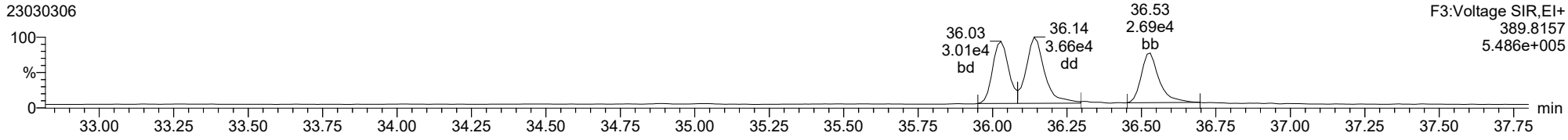
Total-hexadioxins



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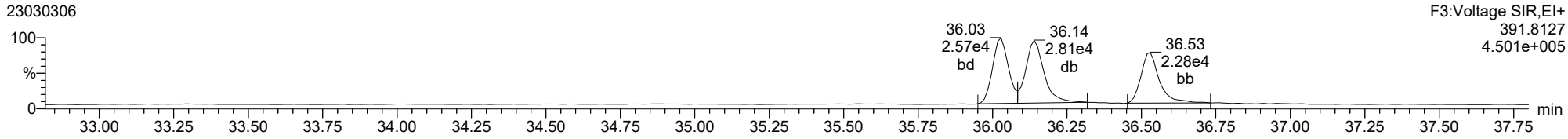

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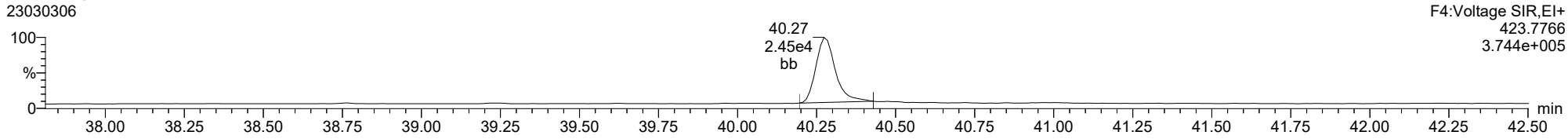

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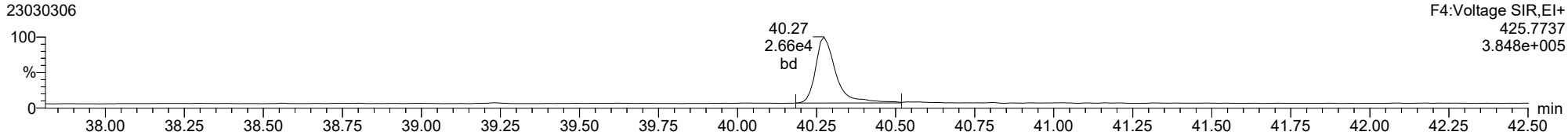

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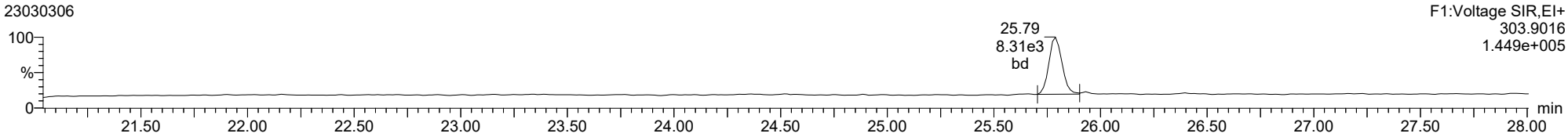
Total-tetrafurans



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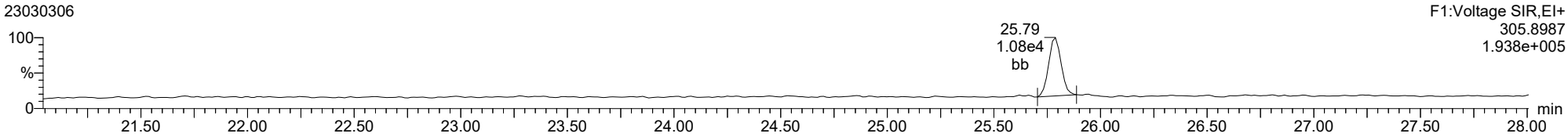

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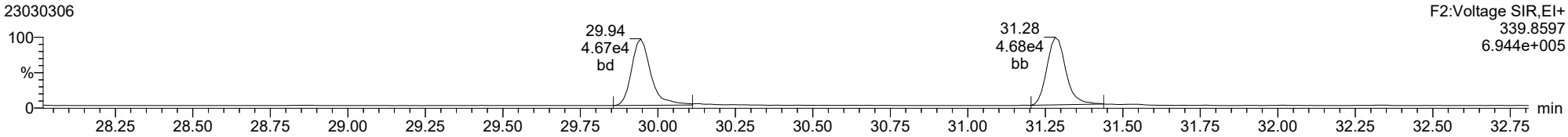

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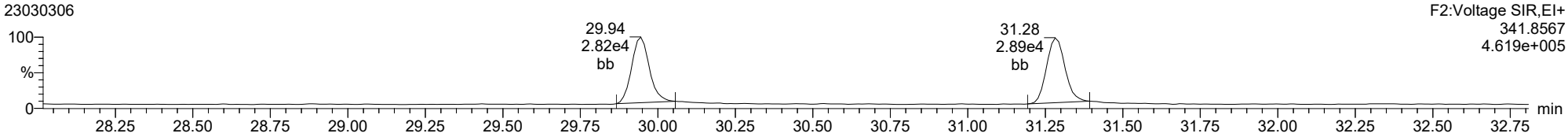

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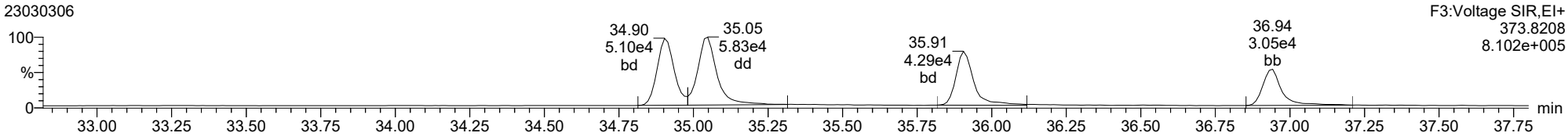
Total-hexafurans



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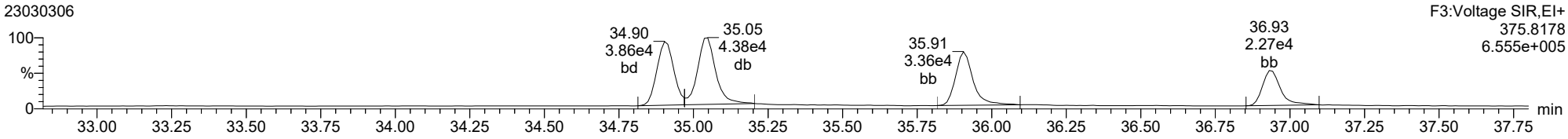

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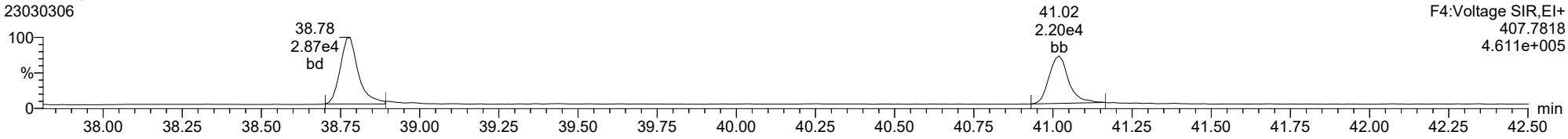

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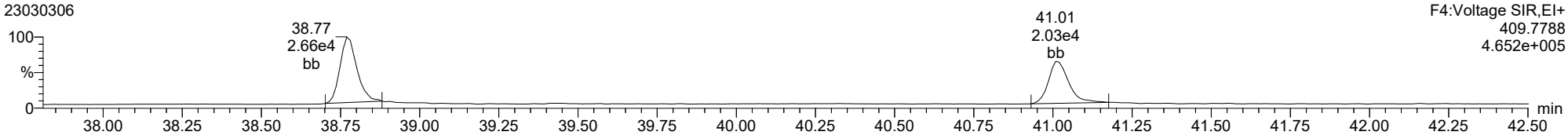

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Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	4.563e4	6.298e4	0.702	0.724	0.770	1455	2151	7.03e5	9.46e5	483.4	440.0	NO	bb	bb	10.132
12378-PeCDF	29.945	1.001	2.374e5	1.577e5	0.679	1.505	1.550	2714	2519	3.51e6	2.28e6	1294.3	903.8	NO	bb	bb	49.089
23478-PeCDF	31.282	1.001	2.063e5	1.364e5	0.786	1.512	1.550	2714	2519	3.03e6	1.99e6	1118.0	788.5	NO	bb	bb	49.466
123478-HxCDF	34.903	1.000	2.473e5	1.941e5	1.166	1.275	1.240	3008	2708	3.76e6	2.98e6	1248.4	1099.9	NO	bd	bd	48.979
234678-HxCDF	35.905	1.000	2.404e5	1.930e5	1.140	1.246	1.240	3008	2708	3.53e6	2.85e6	1172.2	1053.8	NO	bb	bb	49.000
123678-HxCDF	35.048	1.001	2.970e5	2.223e5	1.091	1.336	1.240	3008	2708	3.95e6	3.09e6	1312.5	1142.3	NO	db	db	50.520
123789-HxCDF	36.942	1.001	2.103e5	1.706e5	1.137	1.233	1.240	3008	2708	2.89e6	2.30e6	959.2	849.3	NO	bd	bd	50.468
1234678-HpCDF	38.780	1.000	1.592e5	1.601e5	1.003	0.994	1.050	2672	2189	2.51e6	2.53e6	939.2	1157.5	NO	bb	bb	48.161
1234789-HpCDF	41.019	1.000	1.361e5	1.443e5	0.953	0.943	1.050	2672	2189	1.84e6	1.86e6	689.1	851.7	NO	bb	bd	49.244
OCDF	45.247	1.006	2.019e5	2.478e5	0.778	0.815	0.890	1393	1380	2.32e6	2.62e6	1663.0	1900.3	NO	bb	bd	93.418
2378-TCDD	26.424	1.000	5.877e4	7.446e4	1.149	0.789	0.770	1483	1021	8.00e5	1.03e6	539.5	1013.7	NO	bd	bb	9.873
12378-PeCDD	31.538	1.000	1.890e5	1.221e5	1.022	1.548	1.550	1651	2172	2.74e6	1.77e6	1662.3	815.6	NO	bb	bb	49.884
123478-HxCDD	36.028	1.000	1.812e5	1.479e5	0.996	1.225	1.240	1690	2600	2.90e6	2.38e6	1717.5	913.7	NO	bd	bd	48.605
123678-HxCDD	36.139	1.000	2.270e5	1.862e5	1.001	1.219	1.240	1690	2600	3.05e6	2.54e6	1803.3	977.3	NO	db	db	51.480
123789-HxCDD	36.529	1.011	1.887e5	1.546e5	0.907	1.221	1.240	1690	2600	2.71e6	2.20e6	1606.4	846.3	NO	bb	bb	51.083
1234678-HpCDD	40.273	1.000	1.573e5	1.681e5	1.039	0.936	1.050	2523	2313	2.21e6	2.22e6	874.4	957.9	NO	bb	bd	49.956
OCDD	45.009	1.000	2.508e5	2.930e5	0.920	0.856	0.890	1279	1652	2.91e6	3.41e6	2272.5	2065.6	NO	bb	bb	95.487
13C-2378-TCDF	25.774	1.007	6.575e5	8.705e5	1.620	0.755	0.770	2127	1667	9.70e6	1.27e7	4562.2	7600.8	NO	bb	bb	92.139
13C-12378-PeCDF	29.922	1.169	7.106e5	4.742e5	1.240	1.498	1.550	3150	3257	9.76e6	6.54e6	3098.5	2009.5	NO	bd	bd	93.316
13C-23478-PeCDF	31.259	1.221	5.241e5	3.573e5	1.118	1.467	1.550	3150	3257	7.68e6	5.27e6	2437.6	1617.5	NO	bb	bb	77.038
13C-123478-HxCDF	34.891	0.956	2.605e5	5.124e5	1.168	0.508	0.510	2130	2302	3.94e6	7.71e6	1851.1	3349.5	NO	bd	bd	95.975
13C-123678-HxCDF	35.025	0.959	3.029e5	6.396e5	1.386	0.474	0.510	2130	2302	4.25e6	8.39e6	1994.1	3646.7	NO	db	db	98.624
13C-234678-HxCDF	35.894	0.983	2.705e5	5.057e5	1.129	0.535	0.510	2130	2302	3.77e6	7.17e6	1772.4	3115.7	NO	bd	bb	99.718
13C-123789-HxCDF	36.919	1.011	2.253e5	4.385e5	0.932	0.514	0.510	2130	2302	3.30e6	6.48e6	1548.0	2814.2	NO	bb	bb	103.358
13C-1234678-HpCDF	38.769	1.062	2.032e5	4.578e5	0.895	0.444	0.440	2209	3025	3.15e6	7.13e6	1428.1	2357.0	NO	bb	bb	107.118
13C-1234789-HpCDF	41.008	1.123	1.757e5	4.217e5	0.770	0.417	0.440	2209	3025	2.29e6	5.20e6	1036.4	1717.4	NO	bb	bb	112.595
13C-1234-TCDD	25.605	0.000	4.555e5	5.681e5	1.000	0.802	0.770	2485	1606	6.85e6	8.57e6	2757.9	5335.2	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	5.228e5	6.520e5	1.152	0.802	0.770	2485	1606	7.70e6	9.63e6	3097.5	5999.3	NO	bb	bb	99.597
13C-12378-PeCDD	31.527	1.231	3.747e5	2.356e5	0.829	1.590	1.550	1413	1348	5.28e6	3.29e6	3736.6	2437.5	NO	bb	bb	71.936
13C-123478-HxCDD	36.017	0.986	3.837e5	2.963e5	0.995	1.295	1.240	1796	1719	5.91e6	4.54e6	3293.9	2638.3	NO	bd	bd	99.140
13C-123678-HxCDD	36.128	0.989	4.675e5	3.344e5	1.157	1.398	1.240	1796	1719	6.38e6	4.87e6	3554.2	2831.4	NO	db	db	100.573
13C-1234678-HpCDD	40.262	1.102	3.210e5	3.059e5	0.840	1.049	1.050	2165	1959	4.38e6	4.15e6	2024.2	2117.7	NO	bb	bb	108.247
13C-OCDD	44.990	1.232	6.075e5	6.305e5	0.767	0.963	0.890	2629	1930	6.50e6	7.26e6	2473.3	3761.0	NO	bd	bb	234.029
13C-123789-HxCDD	36.518	0.000	3.849e5	3.043e5	1.000	1.265	1.240	1796	1719	5.52e6	4.36e6	3076.5	2537.0	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.032	1.159e5		1.288			2383		1.68e6		703.2			bb		8.796

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ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.285	0.865	5.143e4	7.104e4	0.802	0.724	0.770	1455	2151	8.64e5	1.17e6	593.7	544.2	NO	bb	bb	10.000
1289-TCDF	27.286	1.059	4.449e4	5.910e4	0.678	0.753	0.770	1455	2151	6.41e5	8.65e5	440.8	402.3	NO	bb	db	10.000
13468-PECDF	27.144	0.907	4.471e5	2.913e5	1.246	1.535	1.550	765	1431	6.85e6	4.42e6	8952.4	3092.4	NO	bb	bb	50.000
12389-PECDF	32.318	1.080	1.756e5	1.185e5	0.496	1.482	1.550	2714	2519	2.46e6	1.67e6	905.1	663.5	NO	bb	bb	50.000
123468-HXCDF	33.243	0.953	2.474e5	2.044e5	1.169	1.210	1.240	3008	2708	3.57e6	2.89e6	1187.3	1066.9	NO	bb	bd	50.000
1368-TCDD	23.557	0.892	5.333e4	6.596e4	1.015	0.808	0.770	1483	1021	8.25e5	1.09e6	556.5	1064.4	NO	bb	bb	10.000
1289-TCDD	27.031	1.023	4.649e4	6.027e4	0.909	0.771	0.770	1483	1021	6.71e5	8.87e5	452.4	868.9	NO	bb	bb	10.000
12479-PECDD	28.830	0.914	4.152e5	2.870e5	2.301	1.447	1.550	1651	2172	3.89e6	2.64e6	2354.1	1214.5	NO	bb	bd	50.000
12389-PECDD	31.939	1.013	2.202e5	1.409e5	1.184	1.563	1.550	1651	2172	2.97e6	1.93e6	1798.8	887.7	NO	bd	bd	50.000
124679-HXCDD	34.011	0.944	2.133e5	1.659e5	1.115	1.286	1.240	1690	2600	2.98e6	2.42e6	1762.3	930.8	NO	bd	bb	50.000
1234679-HPCDD	39.225	0.974	1.868e5	1.696e5	1.137	1.101	1.050	2523	2313	2.68e6	2.60e6	1062.7	1125.2	NO	bd	bb	50.000
Total-tetrafurans			1.415e5		0.727			1455		2.21e6							30.132
Total-penta1			4.471e5					765		6.85e6							50.000
Total-pentafurans			6.595e5		0.654			2714		9.58e6							158.378
Total-hexafurans			1.243e6		1.141			3008		1.77e7							249.074
Total-heptafurans			2.965e5		0.978			2672		4.37e6							97.824
Total-Furans			2.990e6		0.922			1455		4.30e7							678.826
Total-tetradioxins			2.666e5		1.024			1483		3.52e6							50.252
Total-pentadioxins			8.253e5		1.502			1651		9.61e6							150.025
Total-hexadioxins			8.102e5		1.005			1690		1.16e7							201.167
Total-heptadioxins			3.440e5		1.088			2523		4.89e6							99.956
Total-Dioxins			2.497e6		1.130			1483		3.26e7							596.887
Total-TEQ			5.487e6					1483		7.56e7							1275.713
FUNCTION1 PFK			2.078e5					640846		4.44e6							
FUNCTION2 PFK			1.544e7					302960		1.17e7							0.000
FUNCTION3 PFK			6.335e6					441696		3.43e7							0.000
FUNCTION4 PFK			1.606e7					302692		2.36e6							
FUNCTION5 PFK			3.357e4					240421		1.60e6							
FUNCTION1 HXCD...			1.444e3					587		1.68e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			9.034e2					1003		1.66e4							0.000
FUNCTION3 OCDPE			5.560e2					494		8.57e3							0.000
FUNCTION4 NCDPE			9.205e2					776		1.78e4							0.000
FUNCTION5 DCDPE			9.291e1					548		1.29e3							0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
2	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
3	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
4	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
5	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
2	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
3	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
4	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
5	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
6	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
2	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
3	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000
4	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
5	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
6	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
7	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
8	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712
9	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
10	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
11	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
12	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
13	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
14	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000
15	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
16	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
17	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161
18	OCDF	45.25	2.019e5	2.478e5	0.778	0.81	0.89	1663.0	YES	NO	bb	bd	93.418
19	13468-PECDF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
2	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
3	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
4	Total-tetradioxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
5	Total-tetradioxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
6	Total-tetradioxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
2	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
3	Total-pentadioxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
4	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
2	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
3	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
4	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
2	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
2	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
3	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
4	Total-tetradioxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
5	Total-tetradioxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
6	Total-tetradioxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108
7	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
8	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
9	Total-pentadioxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
10	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000
11	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
12	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
13	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
14	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000
15	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
16	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000
17	OCDD	45.01	2.508e5	2.930e5	0.920	0.86	0.89	2272.5	YES	NO	bb	bb	95.487

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.29	4.449e4	5.910e4	0.678	0.75	0.77	440.8	YES	NO	bb	db	10.000
2	2378-TCDF	25.79	4.563e4	6.298e4	0.702	0.72	0.77	483.4	YES	NO	bb	bb	10.132
3	1368-TCDF	22.29	5.143e4	7.104e4	0.802	0.72	0.77	593.7	YES	NO	bb	bb	10.000
4	12389-PECDF	32.32	1.756e5	1.185e5	0.496	1.48	1.55	905.1	YES	NO	bb	bb	50.000
5	23478-PeCDF	31.28	2.063e5	1.364e5	0.786	1.51	1.55	1118.0	YES	NO	bb	bb	49.466
6	Total-pentafurans	30.13	4.319e2	3.264e2	0.654	1.32	1.55	1.8	NO	NO	bb	bb	0.112
7	12378-PeCDF	29.94	2.374e5	1.577e5	0.679	1.51	1.55	1294.3	YES	NO	bb	bb	49.089
8	Total-pentafurans	28.80	3.978e4	2.583e4	0.654	1.54	1.55	212.5	YES	NO	bb	bb	9.712
9	Total-hexafurans	37.33	5.073e2	4.522e2	1.141	1.12	1.24	4.2	YES	NO	db	dd	0.107
10	123789-HxCDF	36.94	2.103e5	1.706e5	1.137	1.23	1.24	959.2	YES	NO	bd	bd	50.468
11	234678-HxCDF	35.91	2.404e5	1.930e5	1.140	1.25	1.24	1172.2	YES	NO	bb	bb	49.000
12	123678-HxCDF	35.05	2.970e5	2.223e5	1.091	1.34	1.24	1312.5	YES	NO	db	db	50.520
13	123478-HxCDF	34.90	2.473e5	1.941e5	1.166	1.27	1.24	1248.4	YES	NO	bd	bd	48.979
14	123468-HXCDF	33.24	2.474e5	2.044e5	1.169	1.21	1.24	1187.3	YES	NO	bb	bd	50.000
15	1234789-HpCDF	41.02	1.361e5	1.443e5	0.953	0.94	1.05	689.1	YES	NO	bb	bd	49.244
16	Total-heptafurans	39.44	1.302e3	1.273e3	0.978	1.02	1.05	8.5	YES	NO	bb	bb	0.418
17	1234678-HpCDF	38.78	1.592e5	1.601e5	1.003	0.99	1.05	939.2	YES	NO	bb	bb	48.161
18	OCDF	45.25	2.019e5	2.478e5	0.778	0.81	0.89	1663.0	YES	NO	bb	bd	93.418
19	13468-PECDF	27.14	4.471e5	2.913e5	1.246	1.53	1.55	8952.4	YES	NO	bb	bb	50.000
20	1368-TCDD	23.56	5.333e4	6.596e4	1.015	0.81	0.77	556.5	YES	NO	bb	bb	10.000
21	1289-TCDD	27.03	4.649e4	6.027e4	0.909	0.77	0.77	452.4	YES	NO	bb	bb	10.000
22	2378-TCDD	26.42	5.877e4	7.446e4	1.149	0.79	0.77	539.5	YES	NO	bd	bb	9.873
23	Total-tetradioxins	26.10	8.105e4	1.035e5	1.024	0.78	0.77	553.1	YES	NO	bb	bb	15.333
24	Total-tetradioxins	25.62	2.642e4	3.299e4	1.024	0.80	0.77	267.0	YES	NO	bd	bb	4.937
25	Total-tetradioxins	25.04	5.856e2	7.161e2	1.024	0.82	0.77	7.0	YES	NO	bb	bb	0.108
26	12389-PECDD	31.94	2.202e5	1.409e5	1.184	1.56	1.55	1798.8	YES	NO	bd	bd	50.000
27	12378-PeCDD	31.54	1.890e5	1.221e5	1.022	1.55	1.55	1662.3	YES	NO	bb	bb	49.884
28	Total-pentadioxins	30.88	8.263e2	4.657e2	1.502	1.77	1.55	8.6	YES	NO	bb	bb	0.141
29	12479-PECDD	28.83	4.152e5	2.870e5	2.301	1.45	1.55	2354.1	YES	NO	bb	bd	50.000
30	123789-HxCDD	36.53	1.887e5	1.546e5	0.907	1.22	1.24	1606.4	YES	NO	bb	bb	51.083
31	123678-HxCDD	36.14	2.270e5	1.862e5	1.001	1.22	1.24	1803.3	YES	NO	db	db	51.480
32	123478-HxCDD	36.03	1.812e5	1.479e5	0.996	1.23	1.24	1717.5	YES	NO	bd	bd	48.605
33	124679-HXCDD	34.01	2.133e5	1.659e5	1.115	1.29	1.24	1762.3	YES	NO	bd	bb	50.000
34	1234678-HpCDD	40.27	1.573e5	1.681e5	1.039	0.94	1.05	874.4	YES	NO	bb	bd	49.956
35	1234679-HPCDD	39.23	1.868e5	1.696e5	1.137	1.10	1.05	1062.7	YES	NO	bd	bb	50.000
36	OCDD	45.01	2.508e5	2.930e5	0.920	0.86	0.89	2272.5	YES	NO	bb	bb	95.487

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.24	1.621e5					3.0	YES		bb		
2	FUNCTION1 PFK	26.04	7.004e3					0.8	NO		bb		
3	FUNCTION1 PFK	25.20	1.505e4					1.0	NO		bb		
4	FUNCTION1 PFK	24.33	1.235e4					0.8	NO		bb		
5	FUNCTION1 PFK	23.94	5.589e3					0.6	NO		bb		
6	FUNCTION1 PFK	23.61	5.711e3					0.6	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.40	1.216e5					2.2	NO		bb		0.000
2	FUNCTION2 PFK	29.43	1.324e7					19.8	YES		db		0.000
3	FUNCTION2 PFK	28.41	2.080e6					16.6	YES		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.64	4.177e4					1.9	NO		bb		0.000
2	FUNCTION3 PFK	33.49	1.199e5					5.0	YES		db		0.000
3	FUNCTION3 PFK	33.44	2.654e6					7.0	YES		dd		0.000
4	FUNCTION3 PFK	33.06	2.958e6					23.7	YES		bd		0.000
5	FUNCTION3 PFK	35.38	2.169e4					1.0	NO		bb		0.000
6	FUNCTION3 PFK	35.25	5.928e3					0.6	NO		bb		0.000
7	FUNCTION3 PFK	35.11	7.037e3					0.7	NO		bb		0.000
8	FUNCTION3 PFK	34.99	1.627e4					1.0	NO		bb		0.000
9	FUNCTION3 PFK	34.92	1.103e4					1.1	NO		db		0.000
10	FUNCTION3 PFK	34.86	1.305e4					1.0	NO		bd		0.000
11	FUNCTION3 PFK	34.80	9.642e3					0.9	NO		bb		0.000
12	FUNCTION3 PFK	34.66	1.233e4					0.9	NO		db		0.000
13	FUNCTION3 PFK	34.64	7.688e3					0.8	NO		bd		0.000
14	FUNCTION3 PFK	34.57	9.132e3					0.8	NO		bb		0.000
15	FUNCTION3 PFK	34.47	7.208e3					0.8	NO		bb		0.000
16	FUNCTION3 PFK	34.31	1.503e4					1.0	NO		bb		0.000
17	FUNCTION3 PFK	34.22	2.675e4					1.4	NO		bb		0.000
18	FUNCTION3 PFK	34.01	3.007e4					2.1	NO		db		0.000
19	FUNCTION3 PFK	33.97	1.328e4					1.1	NO		bd		0.000
20	FUNCTION3 PFK	33.91	6.249e3					0.6	NO		bb		0.000
21	FUNCTION3 PFK	36.99	2.219e4					1.1	NO		bd		0.000
22	FUNCTION3 PFK	36.87	2.133e3					0.4	NO		bb		0.000
23	FUNCTION3 PFK	36.83	5.225e3					0.6	NO		bb		0.000
24	FUNCTION3 PFK	36.70	4.929e4					1.7	NO		bb		0.000
25	FUNCTION3 PFK	36.43	1.980e4					1.2	NO		bb		0.000
26	FUNCTION3 PFK	36.38	7.184e3					0.9	NO		bb		0.000
27	FUNCTION3 PFK	36.27	4.220e3					0.5	NO		bb		0.000
28	FUNCTION3 PFK	36.24	2.102e3					0.4	NO		bb		0.000
29	FUNCTION3 PFK	36.19	3.748e3					0.5	NO		bb		0.000
30	FUNCTION3 PFK	35.87	3.133e4					1.6	NO		db		0.000
31	FUNCTION3 PFK	35.83	1.912e4					1.5	NO		bd		0.000
32	FUNCTION3 PFK	35.78	2.675e3					0.4	NO		db		0.000
33	FUNCTION3 PFK	35.74	3.023e4					1.5	NO		dd		0.000
34	FUNCTION3 PFK	35.67	1.673e4					1.4	NO		bd		0.000
35	FUNCTION3 PFK	35.58	2.145e4					1.4	NO		db		0.000
36	FUNCTION3 PFK	35.53	1.268e4					1.1	NO		bd		0.000
37	FUNCTION3 PFK	37.67	2.243e4					1.6	NO		bb		0.000

ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	37.45	8.583e3					0.7	NO		db		0.000
39	FUNCTION3 PFK	37.43	4.891e3					0.7	NO		bd		0.000
40	FUNCTION3 PFK	37.30	6.956e3					0.6	NO		bb		0.000
41	FUNCTION3 PFK	37.23	5.682e3					0.7	NO		db		0.000
42	FUNCTION3 PFK	37.20	9.815e3					0.9	NO		dd		0.000
43	FUNCTION3 PFK	37.15	5.475e3					0.6	NO		dd		0.000
44	FUNCTION3 PFK	37.11	7.631e3					0.8	NO		bd		0.000
45	FUNCTION3 PFK	37.06	2.709e4					1.4	NO		db		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.40	1.889e5					2.4	NO		bb		
2	FUNCTION4 PFK	39.68	1.587e7					5.4	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.63	9.422e3					1.5	NO		bb		
2	FUNCTION5 PFK	43.24	1.576e3					0.7	NO		bb		
3	FUNCTION5 PFK	43.00	1.263e4					1.7	NO		bb		
4	FUNCTION5 PFK	45.90	6.371e3					1.4	NO		bb		
5	FUNCTION5 PFK	45.34	1.310e3					0.6	NO		bb		
6	FUNCTION5 PFK	43.79	2.270e3					0.7	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.16	2.360e2					3.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.52	1.410e2					3.2	YES		db		0.000
3	FUNCTION1 HXCD...	26.41	1.480e2					3.3	YES		bd		0.000
4	FUNCTION1 HXCD...	26.16	8.707e1					1.9	NO		db		0.000
5	FUNCTION1 HXCD...	26.10	7.515e1					2.1	NO		bd		0.000
6	FUNCTION1 HXCD...	25.79	8.971e1					2.2	NO		bb		0.000
7	FUNCTION1 HXCD...	25.63	1.156e2					2.5	NO		bb		0.000
8	FUNCTION1 HXCD...	24.52	1.119e2					2.7	NO		db		0.000
9	FUNCTION1 HXCD...	24.43	1.844e2					3.5	YES		bd		0.000
10	FUNCTION1 HXCD...	23.75	1.728e2					2.1	NO		bb		0.000
11	FUNCTION1 HXCD...	21.31	8.251e1					1.7	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.95	1.010e2					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	31.18	4.333e2					5.6	YES		bb		0.000
3	FUNCTION2 HPCD...	30.70	7.244e1					2.1	NO		bb		0.000
4	FUNCTION2 HPCD...	30.31	7.131e1					1.6	NO		bb		0.000
5	FUNCTION2 HPCD...	29.76	7.422e1					1.6	NO		bb		0.000
6	FUNCTION2 HPCD...	29.04	7.307e1					1.9	NO		bb		0.000
7	FUNCTION2 HPCD...	28.55	7.813e1					2.1	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	1.400e2					5.4	YES		bb		0.000
2	FUNCTION3 OCDPE	35.04	1.909e2					5.6	YES		db		0.000
3	FUNCTION3 OCDPE	34.94	2.251e2					6.4	YES		bd		0.000

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ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.60	9.374e1					3.5	YES		bb		0.000
2	FUNCTION4 NCDPE	40.25	1.903e2					3.2	YES		bb		0.000
3	FUNCTION4 NCDPE	39.09	7.390e1					1.9	NO		bb		0.000
4	FUNCTION4 NCDPE	38.97	7.768e1					2.4	NO		bb		0.000
5	FUNCTION4 NCDPE	41.21	8.604e1					3.3	YES		bb		0.000
6	FUNCTION4 NCDPE	41.01	1.089e2					3.1	YES		bb		0.000
7	FUNCTION4 NCDPE	40.86	1.930e2					2.9	NO		db		0.000
8	FUNCTION4 NCDPE	40.74	9.692e1					2.6	NO		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.90	9.291e1					2.4	NO		bb		0.000

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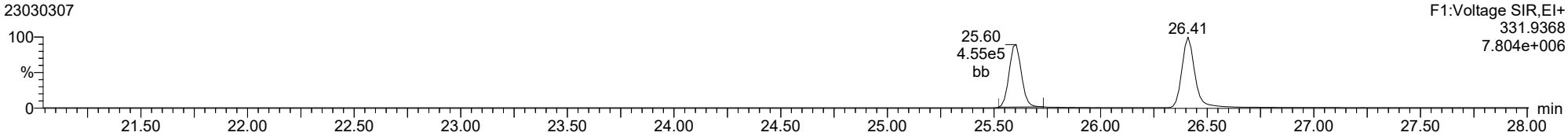

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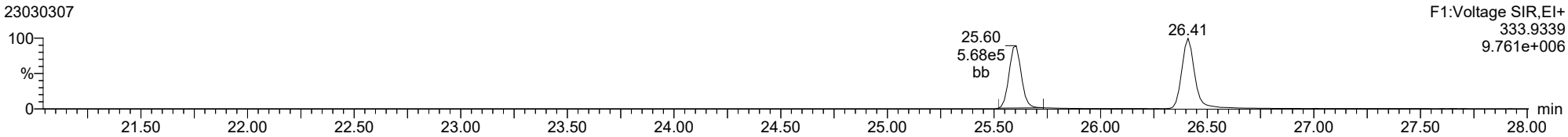

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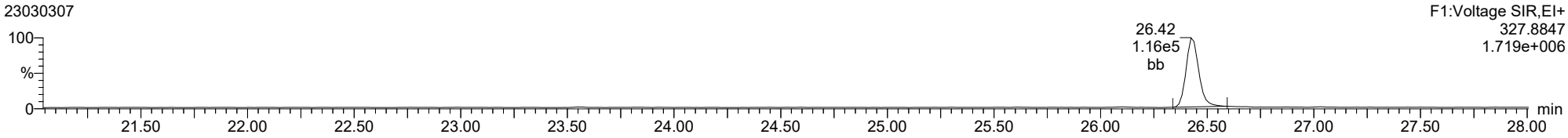

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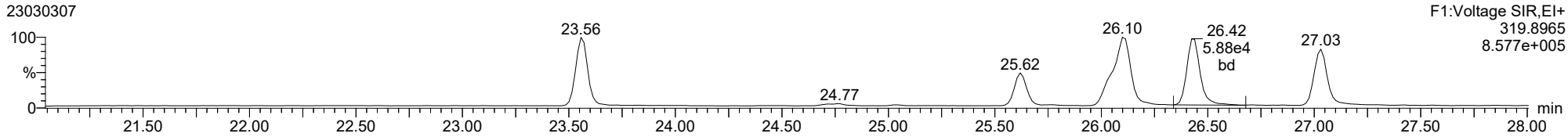

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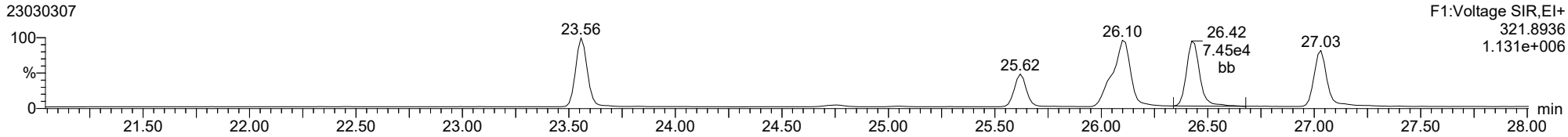

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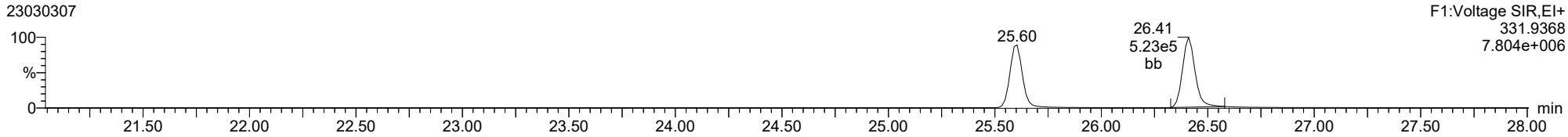

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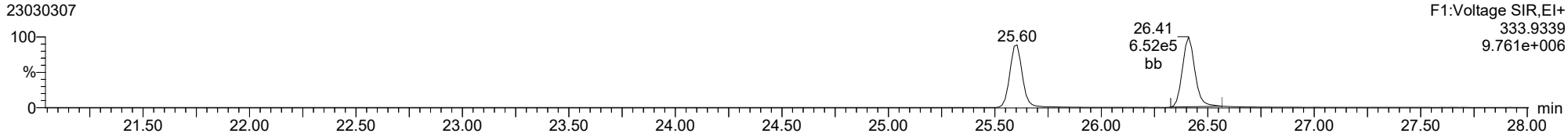

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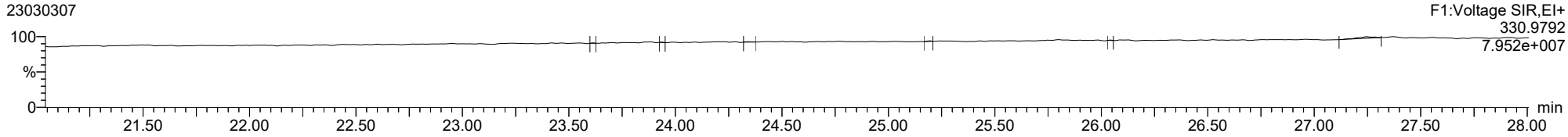

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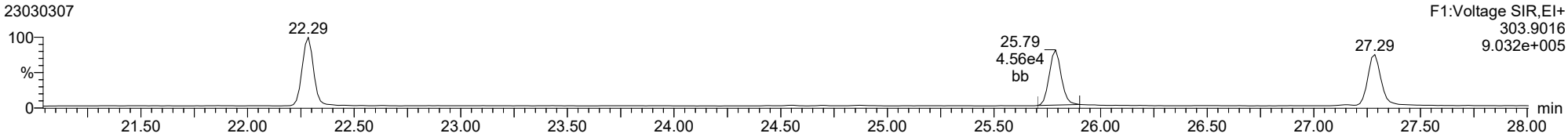

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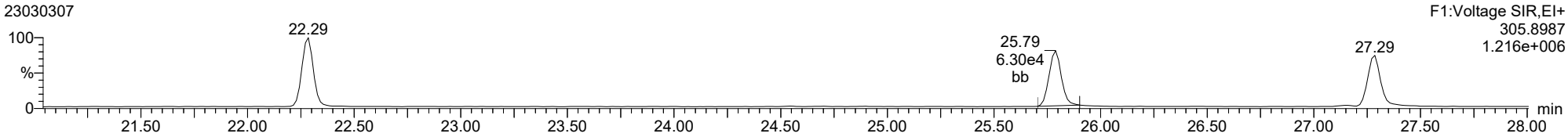

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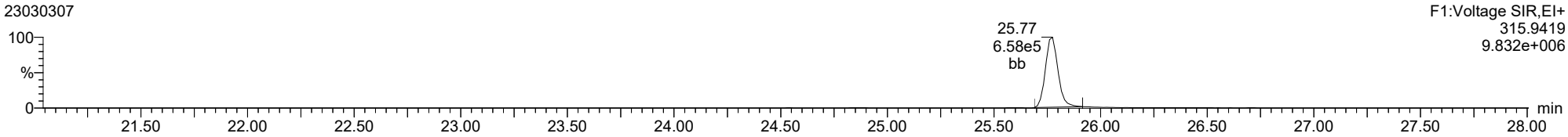

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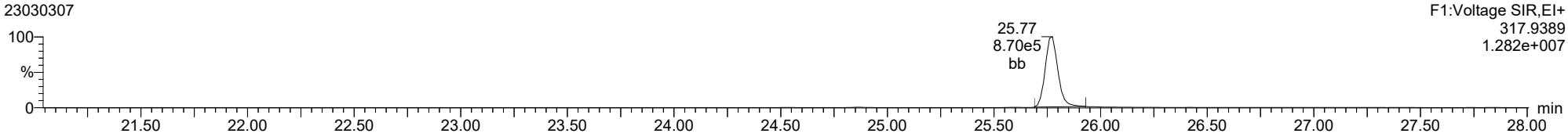

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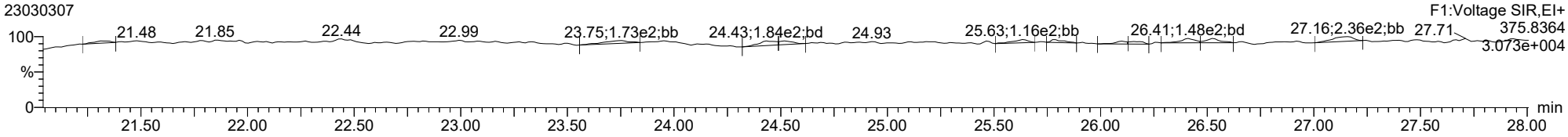

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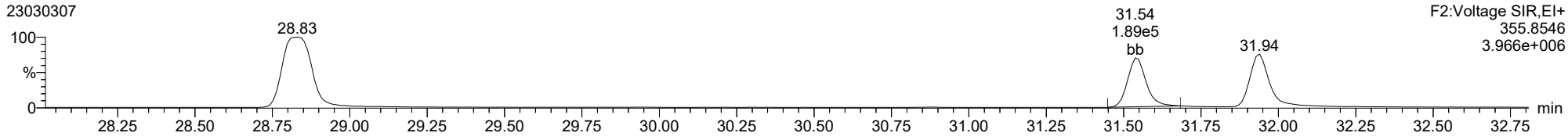

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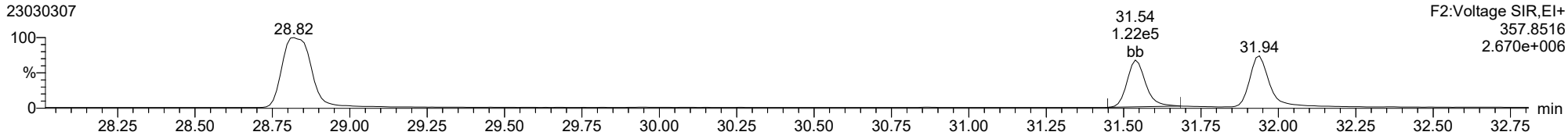

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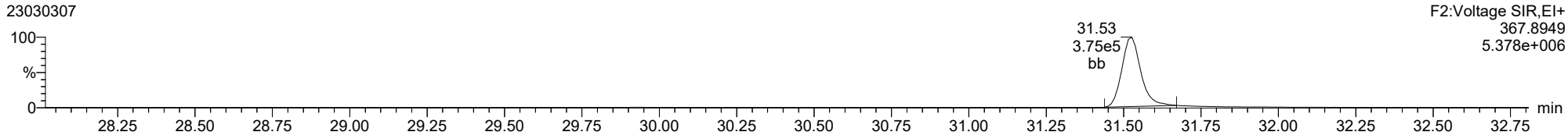

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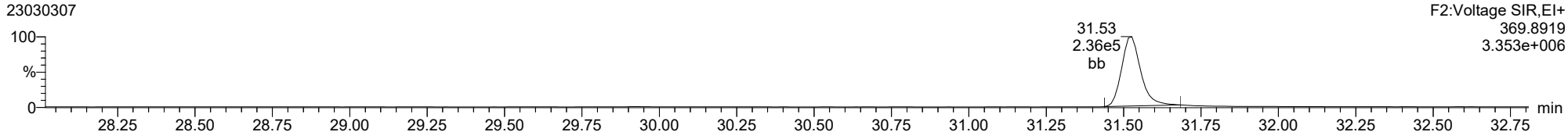

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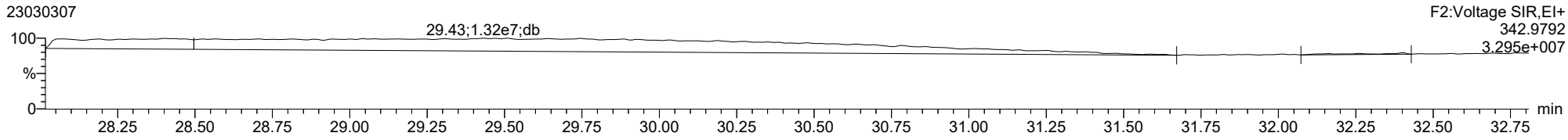

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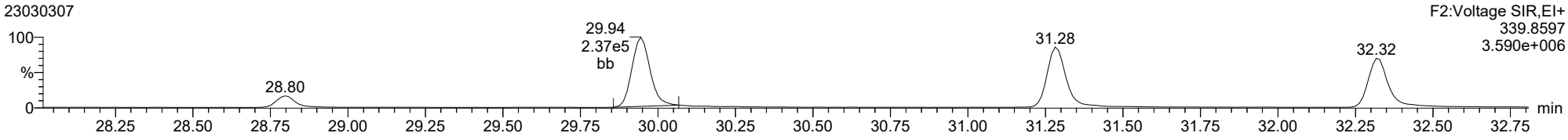

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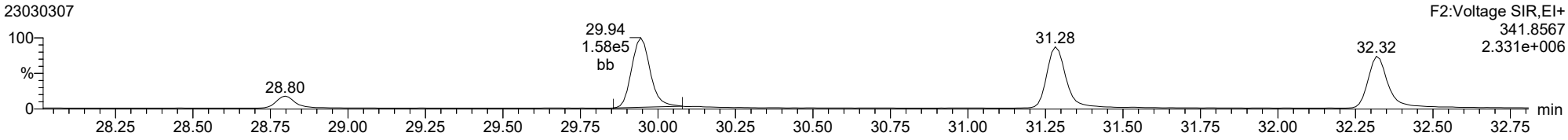

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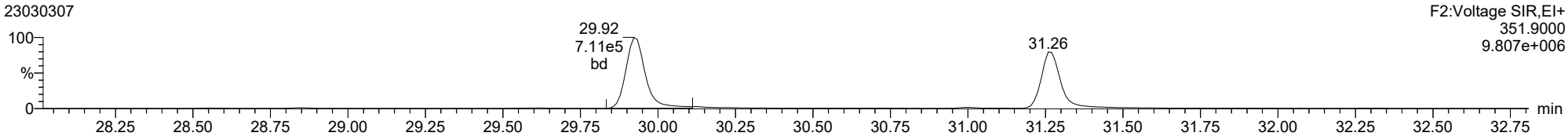

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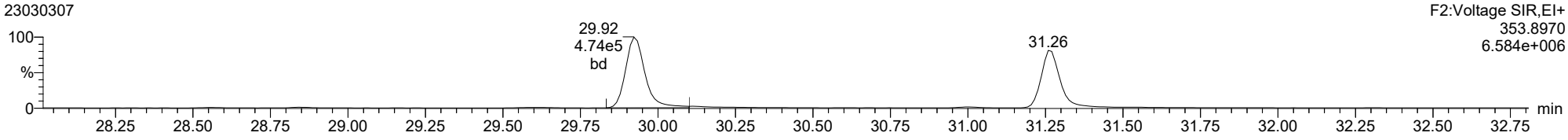
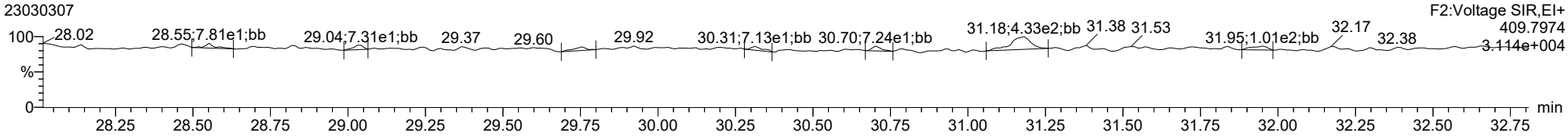


FUNCTION2 HPCDPE



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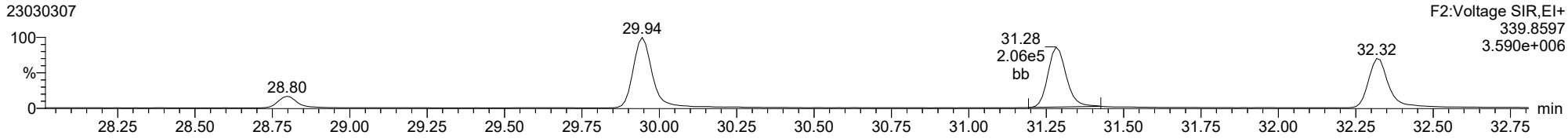

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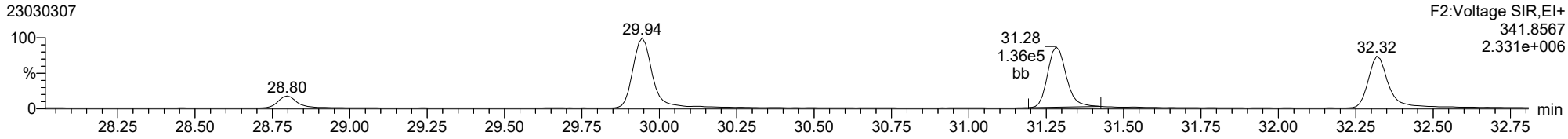

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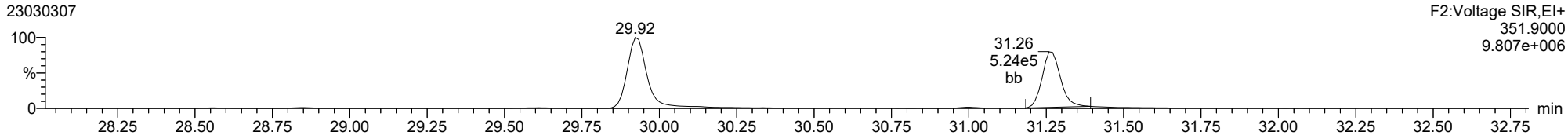

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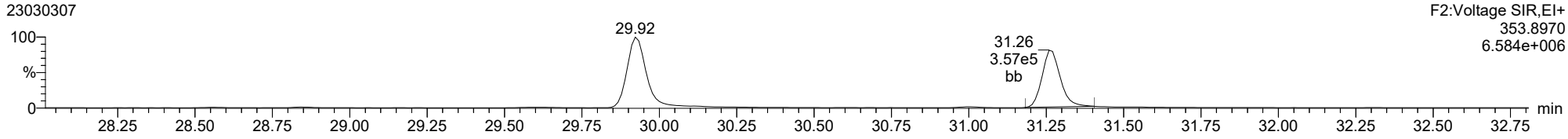

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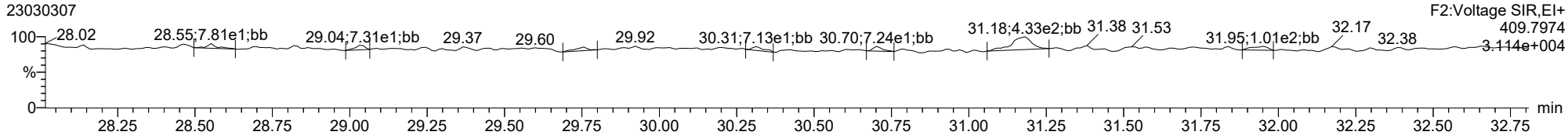

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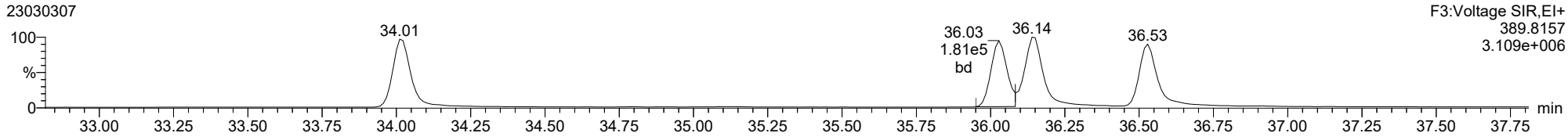

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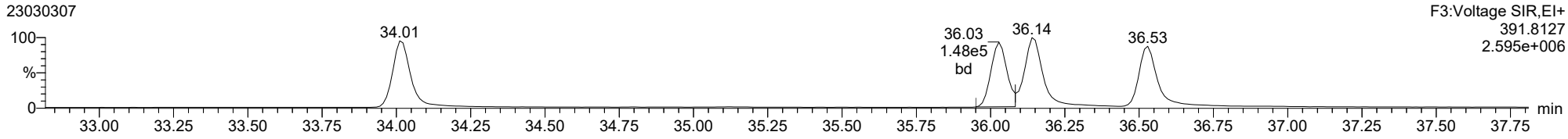

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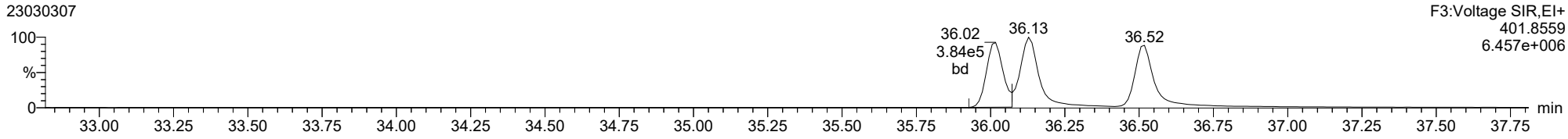

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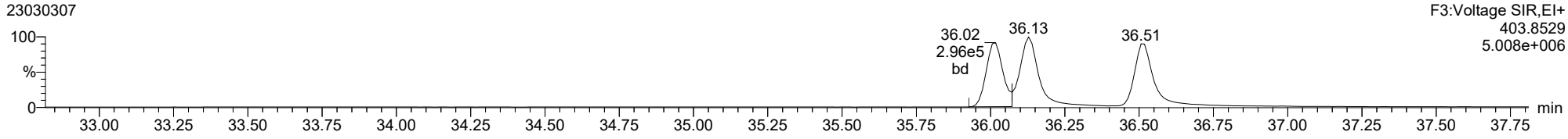

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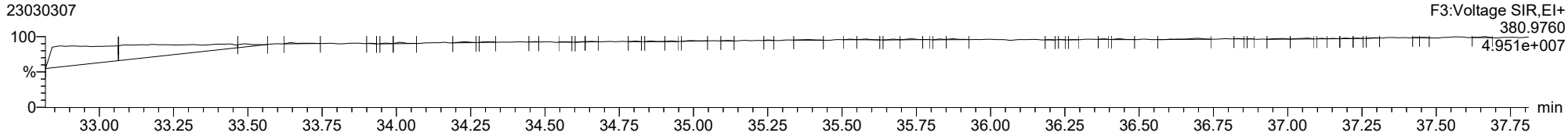

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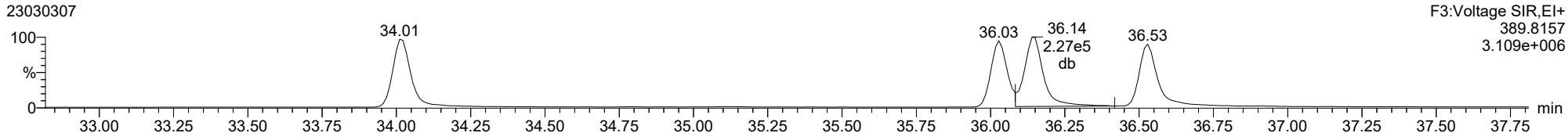

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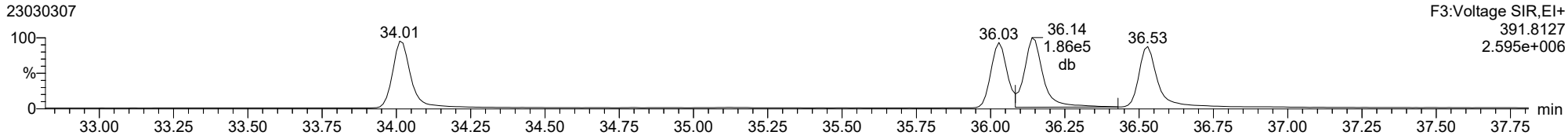

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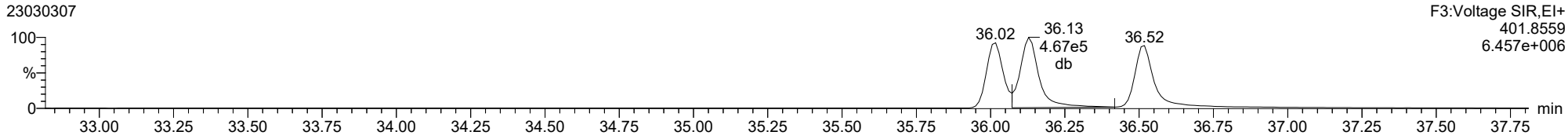

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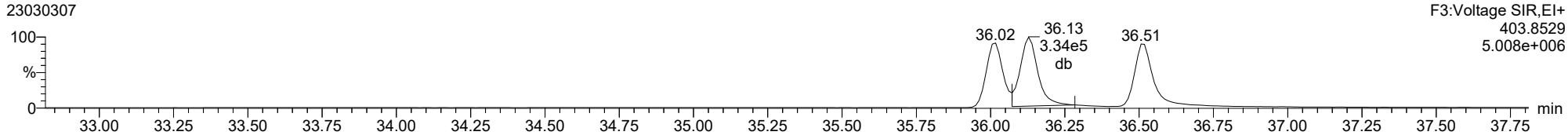

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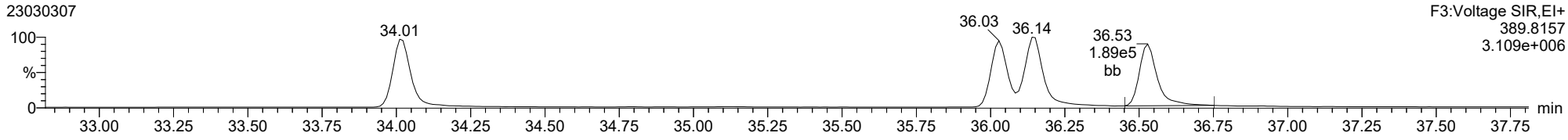

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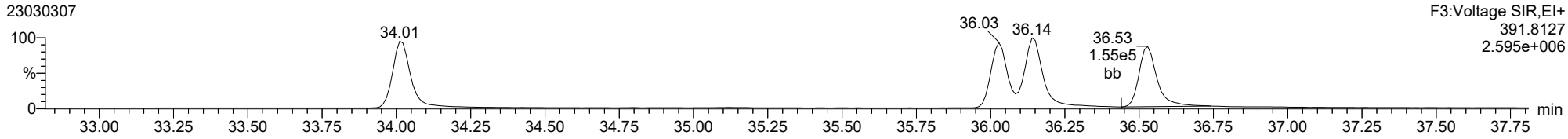

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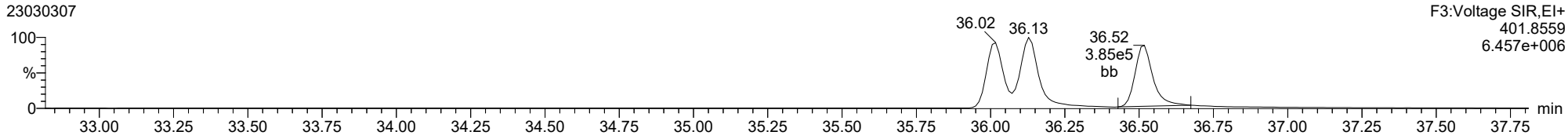

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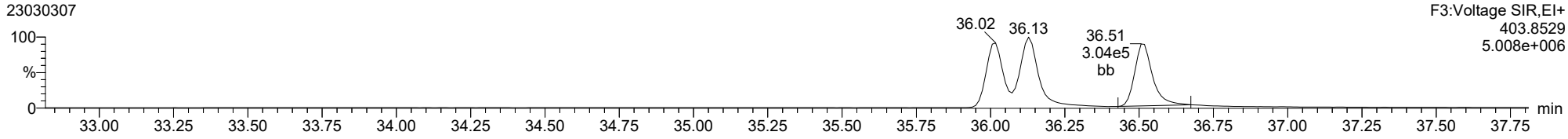

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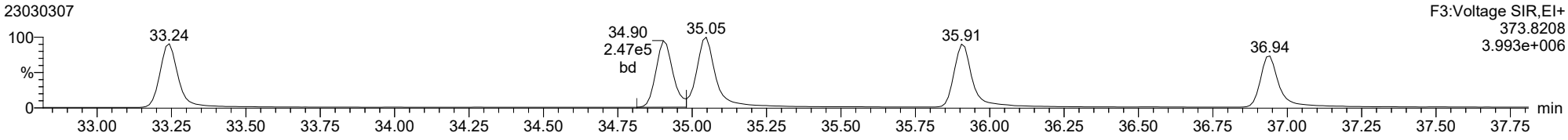

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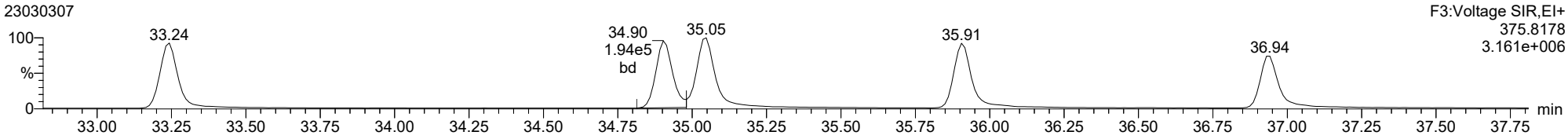

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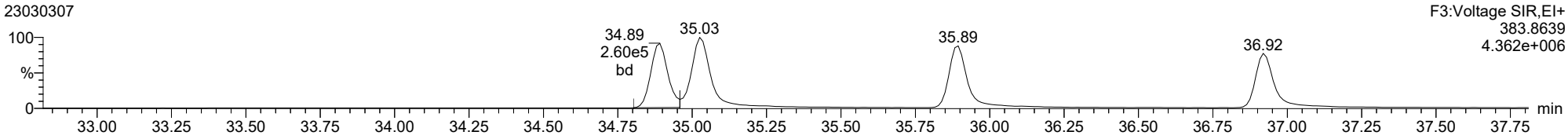

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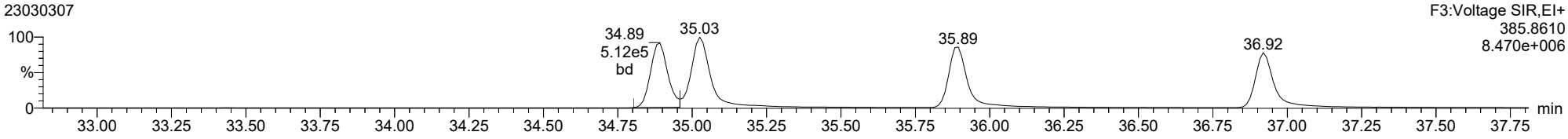

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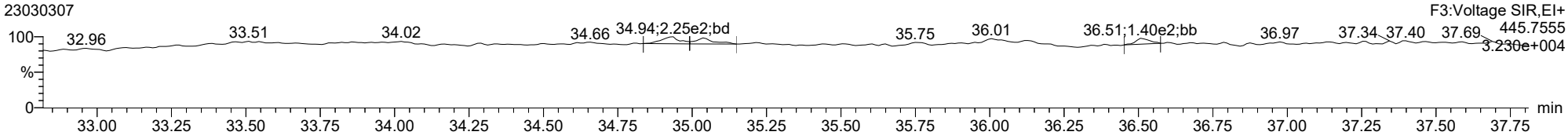

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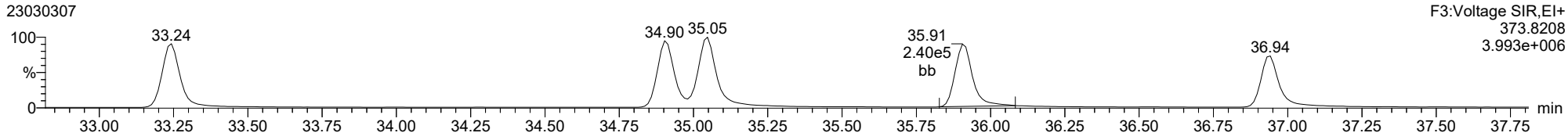

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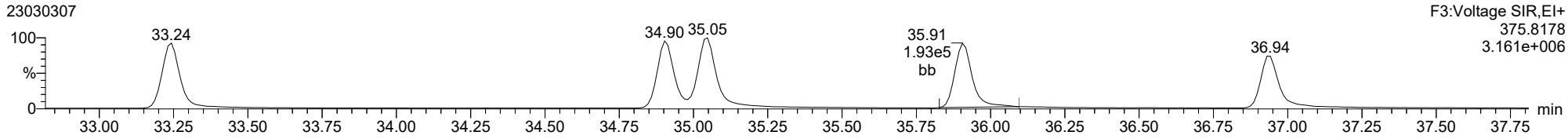

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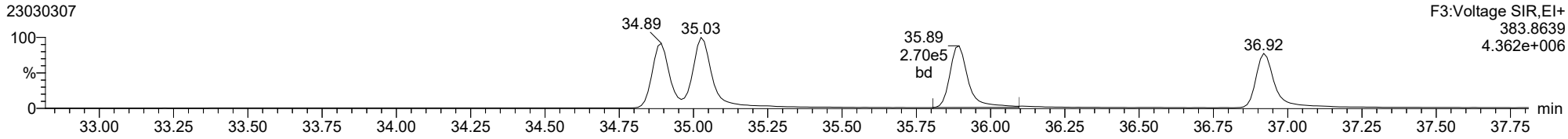

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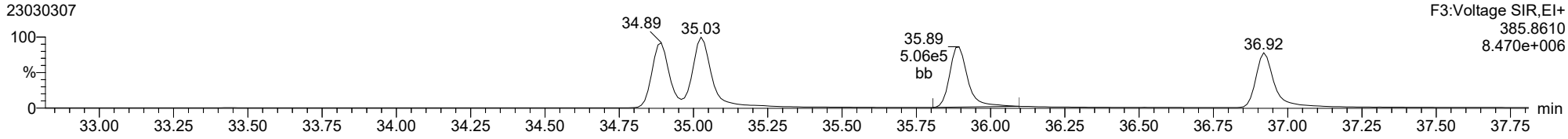

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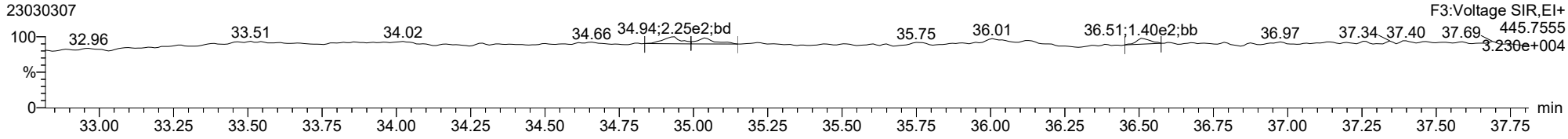

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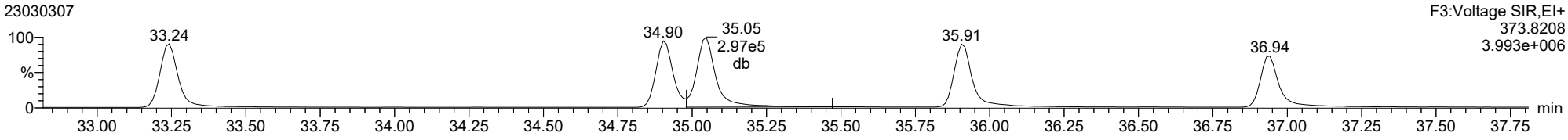

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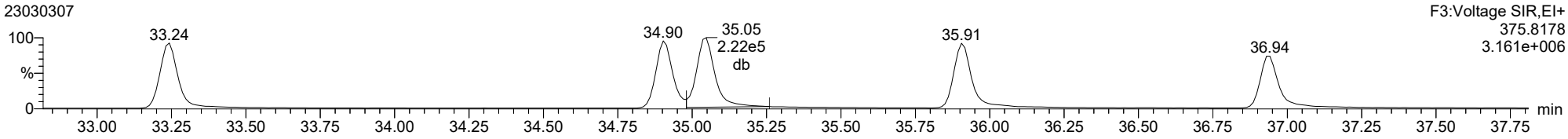

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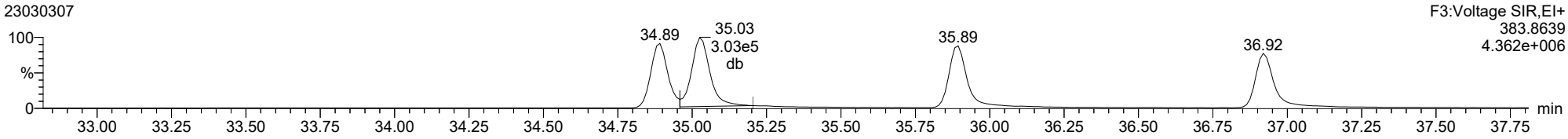

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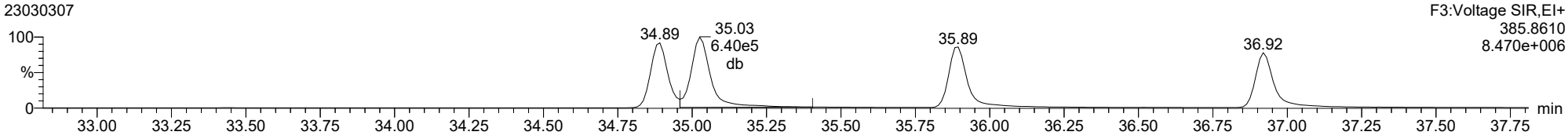
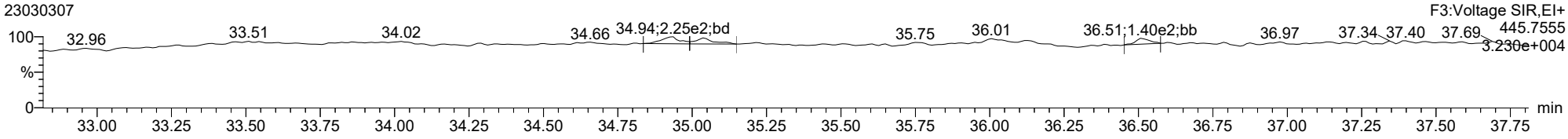


FUNCTION3 OCDPE



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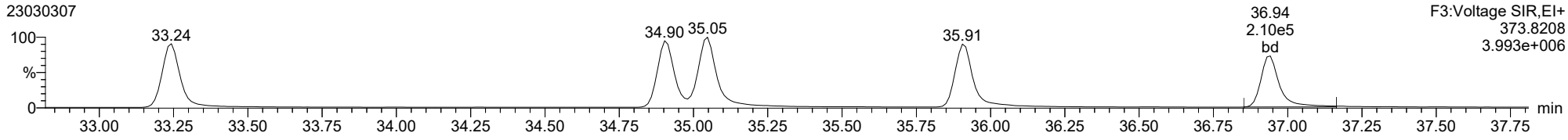

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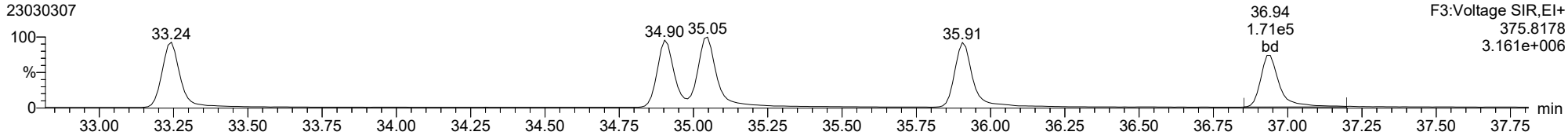

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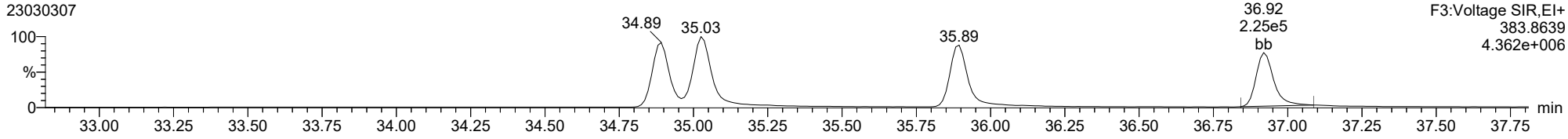

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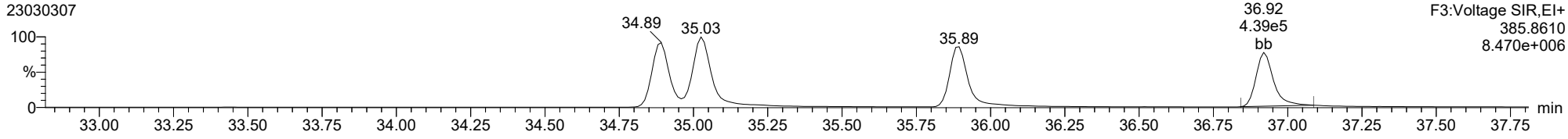

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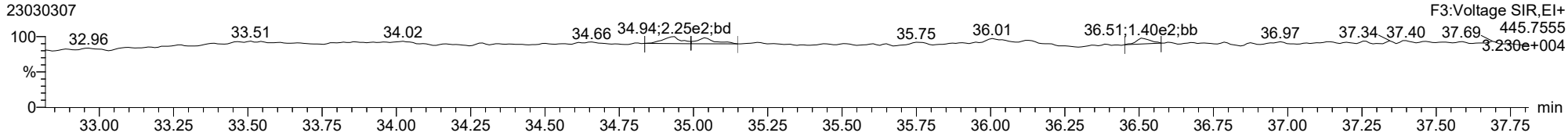

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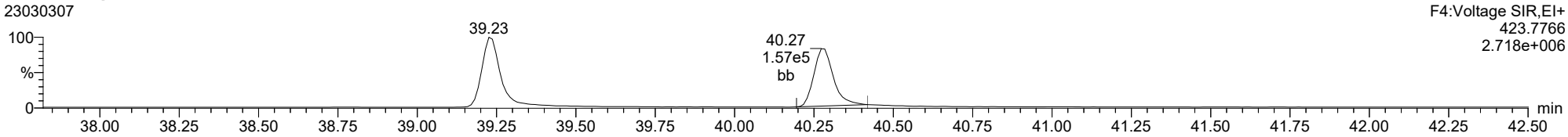

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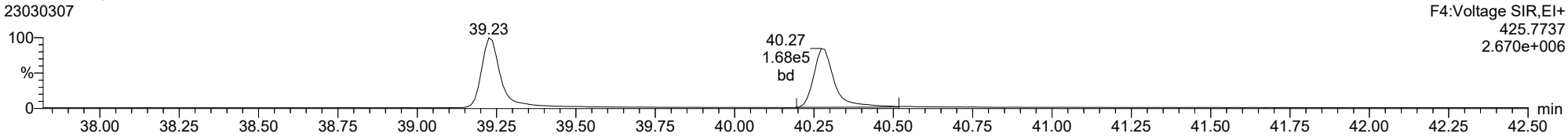

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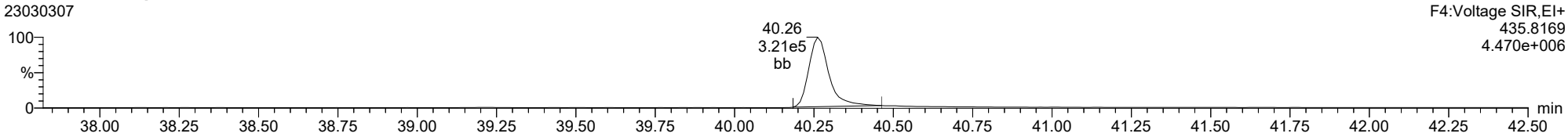

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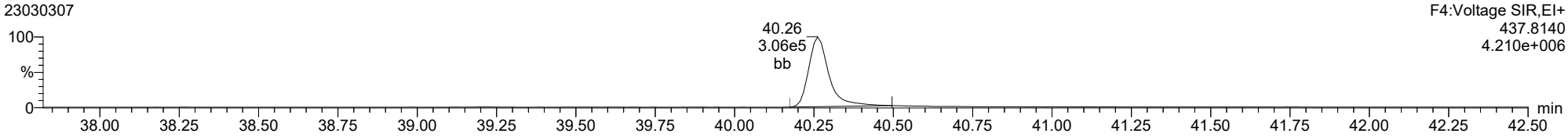
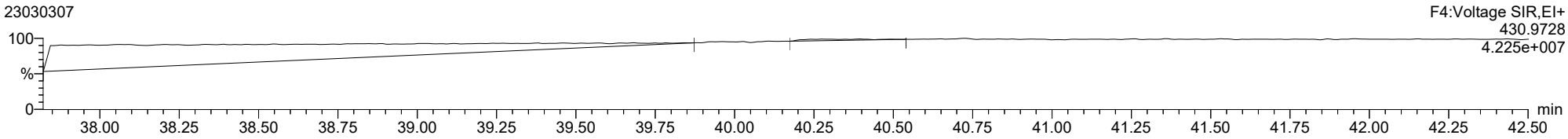


FUNCTION4 PFK



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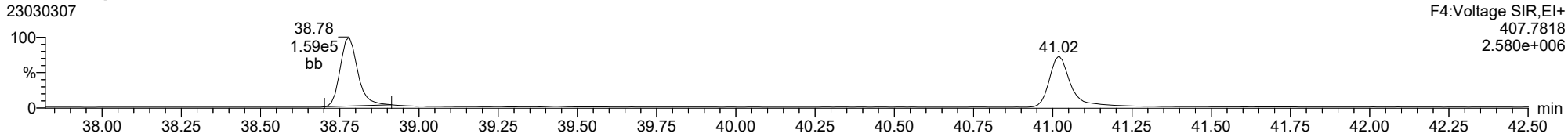

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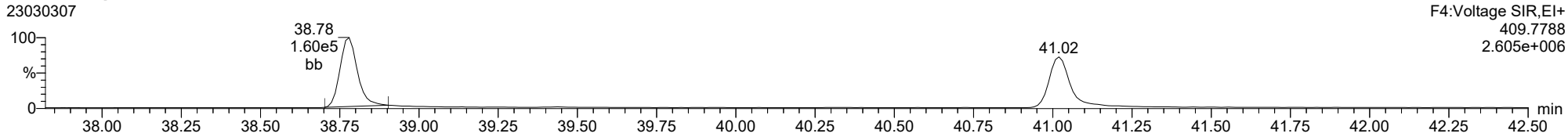

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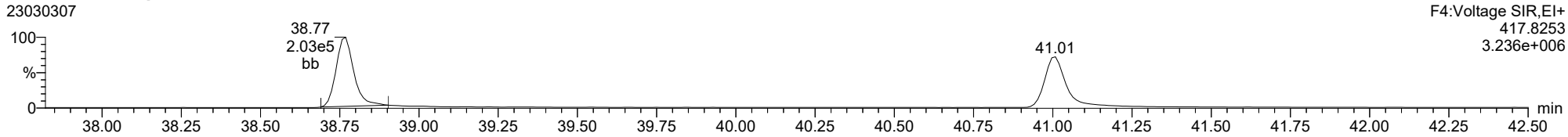

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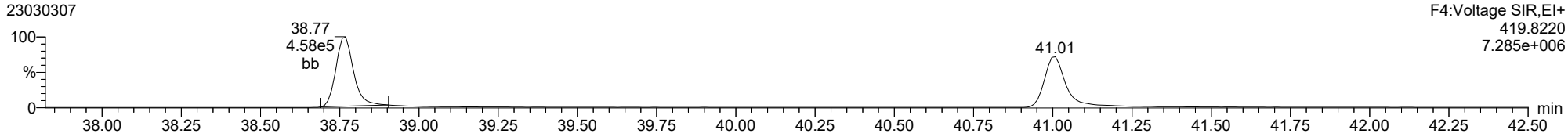
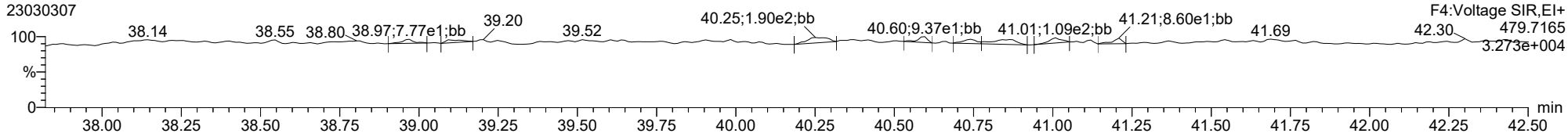


FUNCTION4 NCDPE



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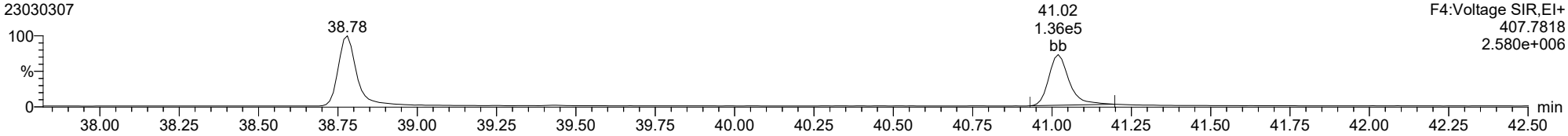

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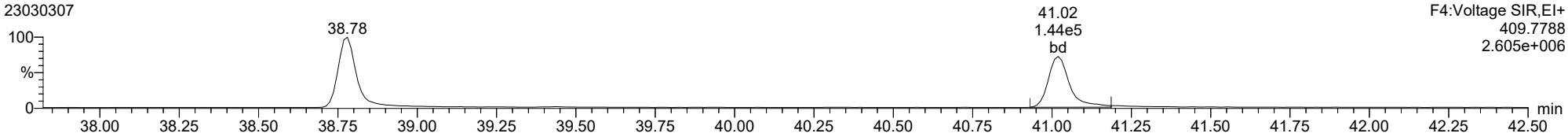

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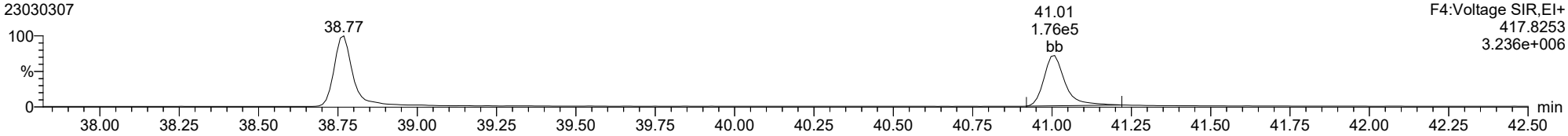

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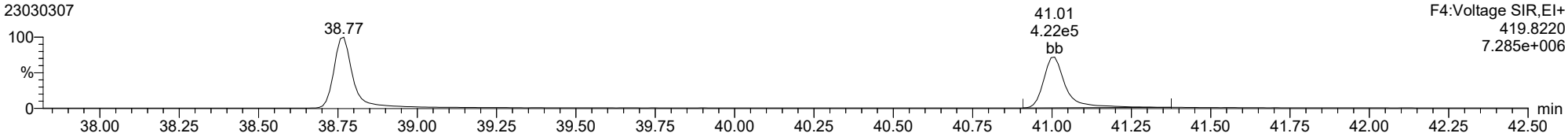
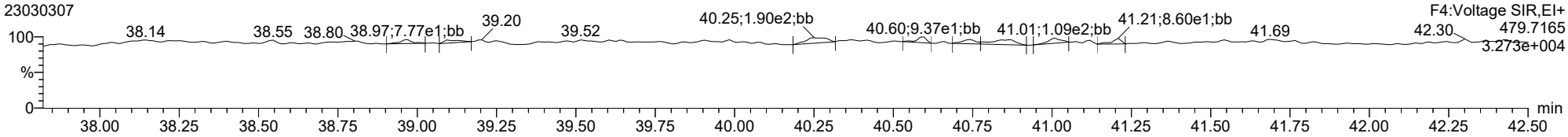


FUNCTION4 NCDPE



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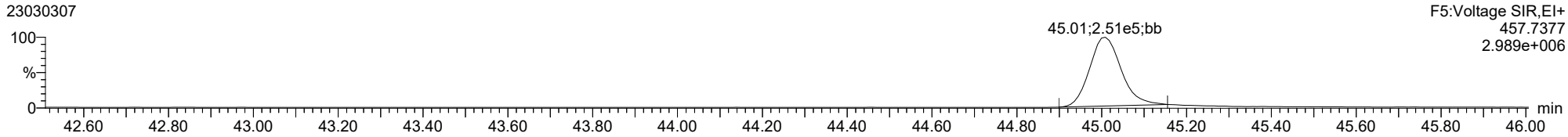
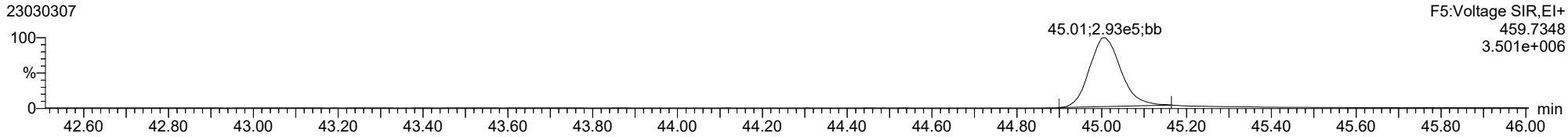
OCDD



OCDD



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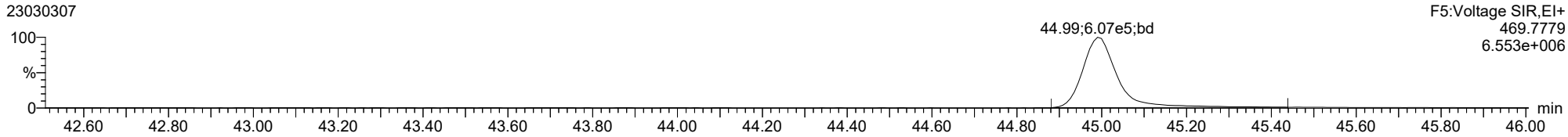

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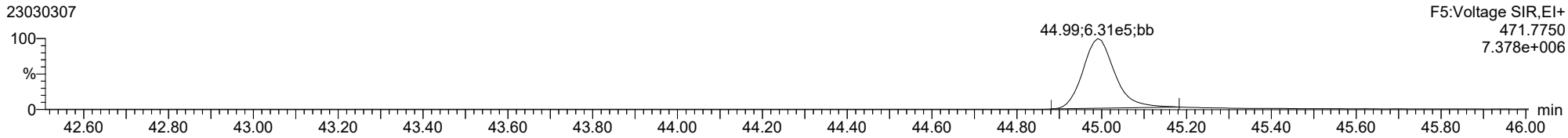
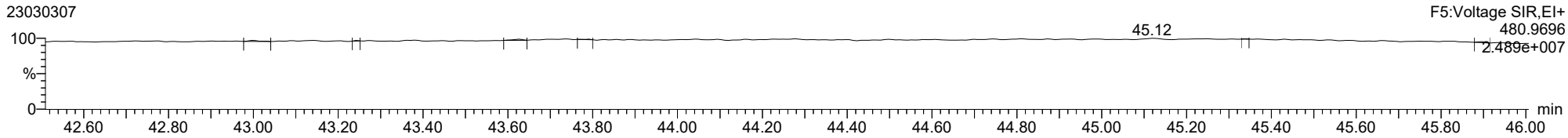


FUNCTION5 PFK



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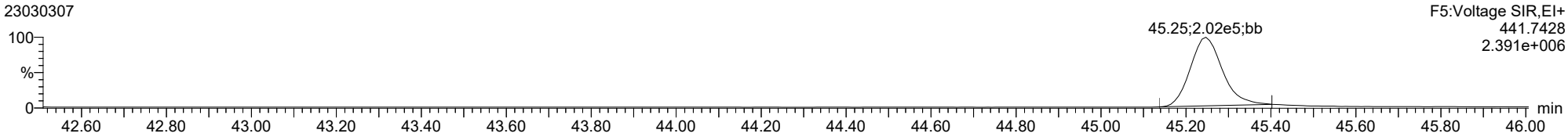
OCDF



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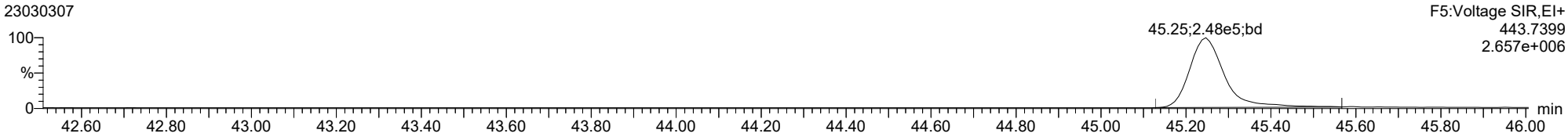
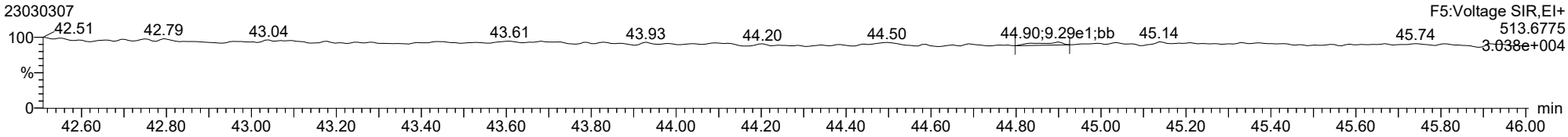
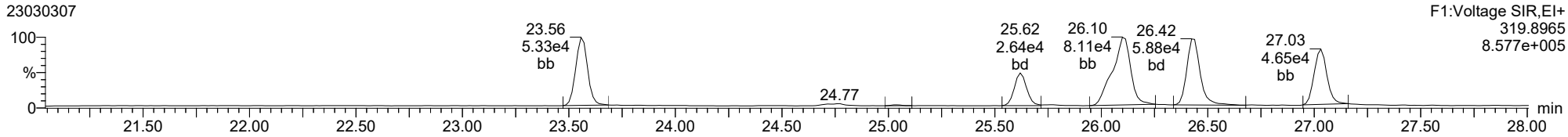


FUNCTION5 DCDPE



ID: CS3CW, Name: 23030307, Date: 03-Mar-2023, Time: 14:06:39, Conditions: AUTOSPEC01, User: pk

Total-tetradioxins



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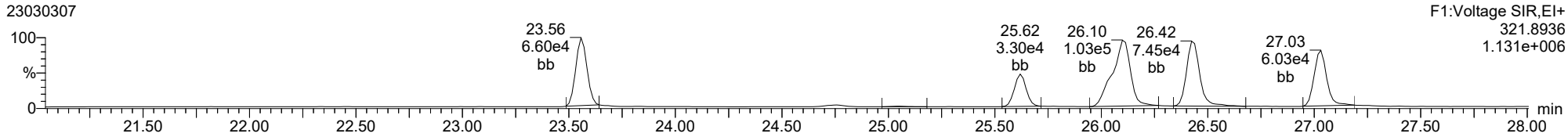

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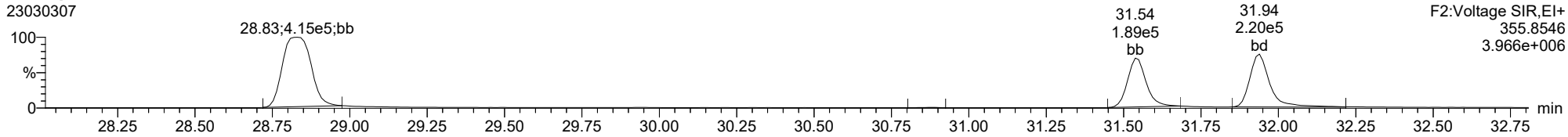

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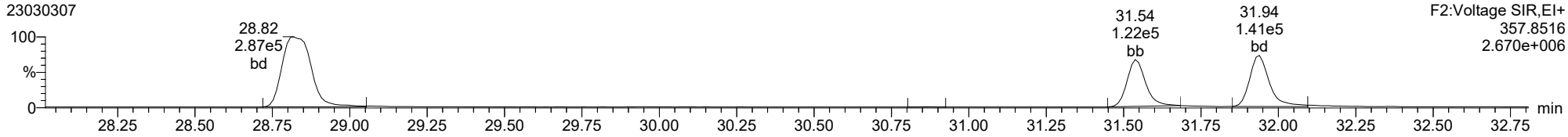

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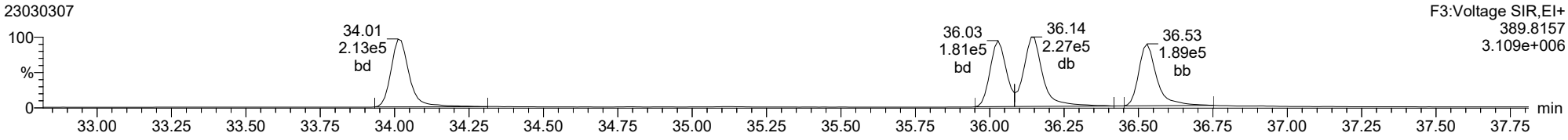
Total-hexadioxins



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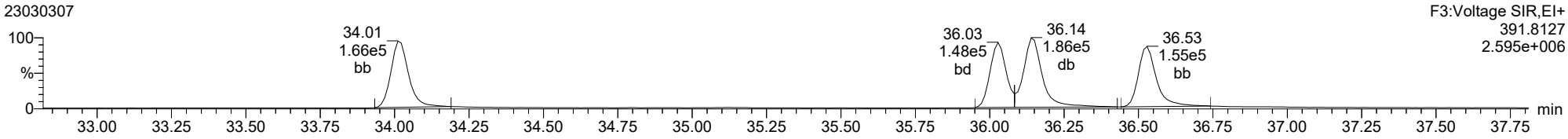

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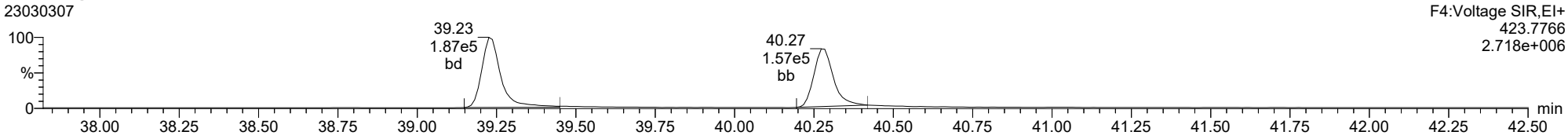

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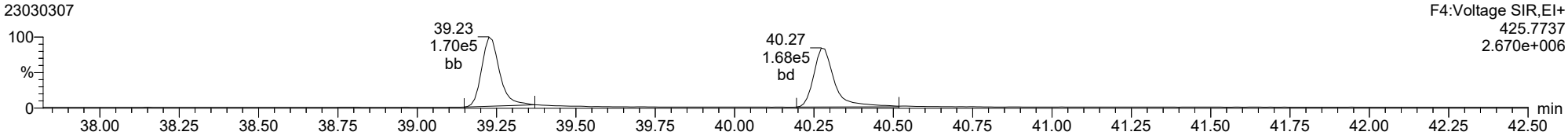

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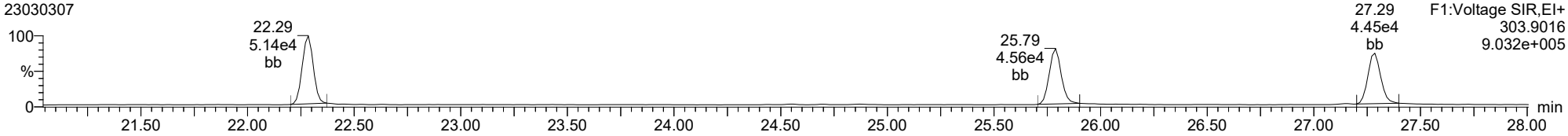
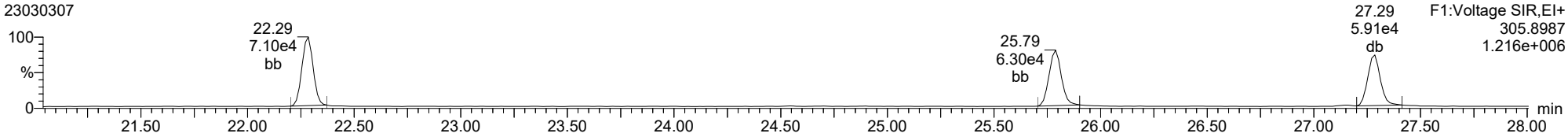
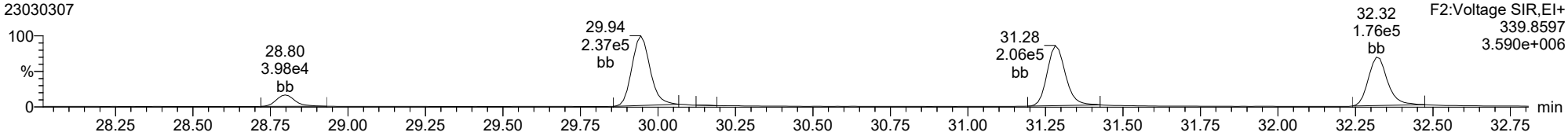
Total-tetrafurans



Total-tetrafurans



Total-pentafurans



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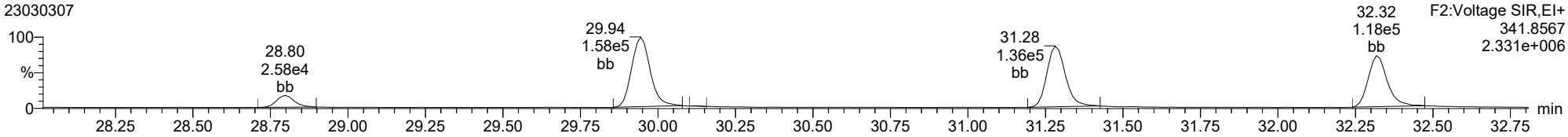

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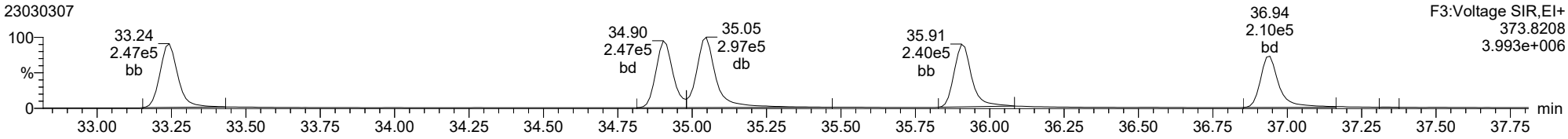
Total-hexafurans



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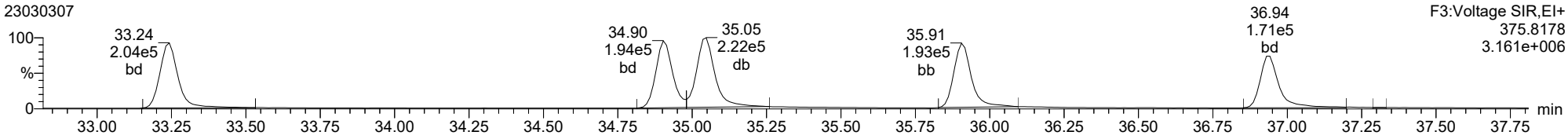

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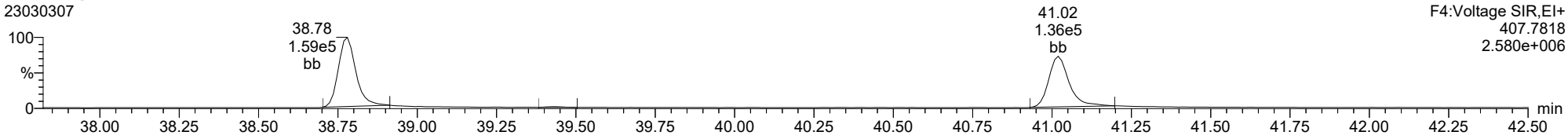
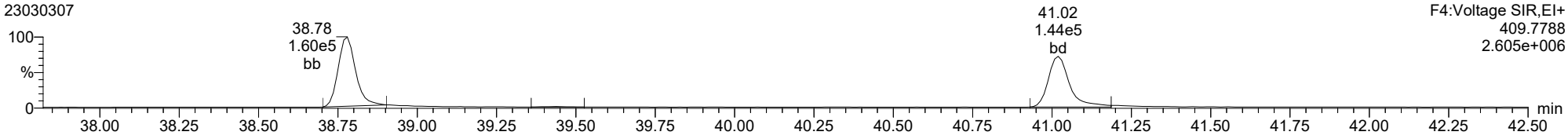


Total-heptafurans



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Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

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Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.788	1.001	2.145e5	2.910e5	0.702	0.737	0.770	1085	2356	3.19e6	4.36e6	2939.3	1849.8	NO	bb	bb	41.038
12378-PeCDF	29.944	1.000	1.256e6	8.416e5	0.679	1.492	1.550	4273	3650	1.86e7	1.25e7	4360.5	3425.9	NO	bb	bb	202.935
23478-PeCDF	31.292	1.001	1.346e6	8.943e5	0.786	1.505	1.550	4273	3650	2.02e7	1.34e7	4738.5	3680.0	NO	bb	bb	201.175
123478-HxCDF	34.913	1.001	1.546e6	1.218e6	1.166	1.269	1.240	1919	2508	2.36e7	1.86e7	12323.4	7421.9	NO	bd	bd	197.711
234678-HxCDF	35.916	1.001	1.547e6	1.307e6	1.140	1.184	1.240	1919	2508	2.33e7	1.85e7	12125.4	7387.3	NO	bb	bd	210.207
123678-HxCDF	35.047	1.000	1.740e6	1.369e6	1.091	1.271	1.240	1919	2508	2.57e7	2.04e7	13394.0	8153.6	NO	db	db	189.797
123789-HxCDF	36.941	1.000	1.209e6	1.036e6	1.137	1.167	1.240	1919	2508	1.81e7	1.44e7	9441.6	5749.5	NO	bb	bd	200.361
1234678-HpCDF	38.779	1.000	8.720e5	8.418e5	1.003	1.036	1.050	3326	3780	1.44e7	1.42e7	4339.3	3745.4	NO	bb	bb	204.650
1234789-HpCDF	41.019	1.000	7.221e5	7.262e5	0.953	0.994	1.050	3326	3780	1.01e7	1.02e7	3041.3	2689.4	NO	bb	bb	208.465
OCDF	45.255	1.006	1.195e6	1.333e6	0.778	0.897	0.890	1809	2070	1.43e7	1.59e7	7923.8	7701.9	NO	bb	bb	419.788
2378-TCDD	26.438	1.001	2.573e5	3.218e5	1.149	0.799	0.770	1559	1107	3.81e6	4.84e6	2446.0	4371.1	NO	bb	bb	39.968
12378-PeCDD	31.549	1.001	1.294e6	8.446e5	1.022	1.532	1.550	1566	1736	1.89e7	1.24e7	12077.0	7164.9	NO	bb	bb	199.637
123478-HxCDD	36.027	1.000	1.162e6	9.482e5	0.996	1.225	1.240	1816	1276	1.93e7	1.57e7	10622.2	12327.7	NO	bd	bd	198.133
123678-HxCDD	36.150	1.001	1.363e6	1.125e6	1.001	1.212	1.240	1816	1276	1.97e7	1.61e7	10823.8	12618.8	NO	db	db	204.224
123789-HxCDD	36.528	1.011	1.168e6	9.477e5	0.907	1.232	1.240	1816	1276	1.77e7	1.44e7	9764.9	11291.0	NO	bb	bb	203.974
1234678-HpCDD	40.283	1.001	8.284e5	8.038e5	1.039	1.031	1.050	3177	2938	1.22e7	1.19e7	3841.2	4046.8	NO	bb	bb	198.376
OCDD	45.008	1.000	1.293e6	1.512e6	0.920	0.855	0.890	1475	2373	1.59e7	1.85e7	10744.0	7810.6	NO	bb	bb	394.016
13C-2378-TCDF	25.774	1.007	7.645e5	9.914e5	1.620	0.771	0.770	1843	2282	1.15e7	1.49e7	6238.3	6526.6	NO	bb	bb	101.535
13C-12378-PeCDF	29.933	1.169	9.119e5	6.098e5	1.240	1.495	1.550	3738	4574	1.28e7	8.50e6	3418.3	1857.5	NO	bd	bd	114.934
13C-23478-PeCDF	31.270	1.221	8.522e5	5.645e5	1.118	1.510	1.550	3738	4574	1.28e7	8.47e6	3423.2	1851.3	NO	bb	bb	118.746
13C-123478-HxCDF	34.891	0.956	4.043e5	7.946e5	1.168	0.509	0.510	3379	2646	6.26e6	1.23e7	1851.5	4643.3	NO	bd	bd	93.689
13C-123678-HxCDF	35.036	0.959	5.122e5	9.895e5	1.386	0.518	0.510	3379	2646	6.72e6	1.32e7	1988.7	4975.1	NO	db	dd	98.879
13C-234678-HxCDF	35.894	0.983	4.066e5	7.845e5	1.129	0.518	0.510	3379	2646	6.03e6	1.18e7	1785.1	4452.3	NO	bb	bb	96.294
13C-123789-HxCDF	36.930	1.011	3.312e5	6.542e5	0.932	0.506	0.510	3379	2646	4.85e6	9.52e6	1434.9	3598.2	NO	bb	bb	96.556
13C-1234678-HpCDF	38.768	1.062	2.524e5	5.825e5	0.895	0.433	0.440	1935	3511	4.16e6	9.49e6	2148.5	2703.4	NO	bb	bb	85.151
13C-1234789-HpCDF	41.007	1.123	2.205e5	5.084e5	0.770	0.434	0.440	1935	3511	3.02e6	6.92e6	1559.8	1971.4	NO	bb	bb	86.451
13C-1234-TCDD	25.605	0.000	4.743e5	5.931e5	1.000	0.800	0.770	2271	1813	7.33e6	9.12e6	3228.4	5028.5	NO	bb	bb	100.000
13C-2378-TCDD	26.410	1.031	5.640e5	6.974e5	1.152	0.809	0.770	2271	1813	8.09e6	1.01e7	3563.4	5571.0	NO	bb	bb	102.553
13C-12378-PeCDD	31.526	1.231	6.480e5	4.003e5	0.829	1.619	1.550	1212	1529	9.47e6	5.85e6	7814.9	3827.1	NO	bb	bb	118.505
13C-123478-HxCDD	36.016	0.986	6.052e5	4.646e5	0.995	1.303	1.240	1807	1475	9.78e6	7.54e6	5412.5	5108.2	NO	bd	bd	98.154
13C-123678-HxCDD	36.127	0.989	6.753e5	5.418e5	1.157	1.246	1.240	1807	1475	1.01e7	8.01e6	5594.1	5426.8	NO	db	db	96.059
13C-1234678-HpCDD	40.261	1.102	3.968e5	3.950e5	0.840	1.005	1.050	2357	2248	5.68e6	5.37e6	2408.3	2387.8	NO	bb	bb	86.051
13C-OCDD	44.999	1.232	7.332e5	8.149e5	0.767	0.900	0.890	1459	1173	8.67e6	9.61e6	5943.8	8191.6	NO	bb	bb	184.151
13C-123789-HxCDD	36.518	0.000	6.173e5	4.781e5	1.000	1.291	1.240	1807	1475	9.34e6	7.24e6	5171.1	4908.4	NO	bb	bb	100.000
37CL-2378-TCDD	26.438	1.033	5.280e5		1.288			2576		7.74e6		3003.1			bb		38.410

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1085	2356								
1289-TCDF					0.678		0.770	1085	2356								
13468-PECDF					1.246		1.550	728	1112								
12389-PECDF					0.496		1.550	4273	3650								
123468-HXCDF					1.169		1.240	1919	2508								
1368-TCDD					1.015		0.770	1559	1107								
1289-TCDD					0.909		0.770	1559	1107								
12479-PECDD					2.301		1.550	1566	1736								
12389-PECDD					1.184		1.550	1566	1736								
124679-HXCDD					1.115		1.240	1816	1276								
1234679-HPCDD					1.137		1.050	3177	2938								
Total-tetrafurans			2.178e5		0.727			1085		3.24e6							41.692
Total-penta1			0.000e0					728		0.00e0							
Total-pentafurans			2.604e6		0.654			4273		3.89e7							404.382
Total-hexafurans			6.043e6		1.141			1919		9.07e7							798.266
Total-heptafurans			1.594e6		0.978			3326		2.45e7							413.115
Total-Furans			1.165e7		0.922			1085		1.72e8							2077.243
Total-tetradioxins			2.634e5		1.024			1559		3.88e6							41.026
Total-pentadioxins			1.295e6		1.502			1566		1.89e7							199.743
Total-hexadioxins			3.693e6		1.005			1816		5.67e7							606.331
Total-heptadioxins			8.286e5		1.088			3177		1.22e7							198.425
Total-Dioxins			7.373e6		1.130			1559		1.08e8							1439.540
Total-TEQ			1.903e7					1559		2.79e8							3516.783
FUNCTION1 PFK			2.654e6					566854		2.19e6							
FUNCTION2 PFK			2.398e5					242860		6.75e6							0.000
FUNCTION3 PFK			5.441e7					394639		2.11e7							0.000
FUNCTION4 PFK			0.000e0					306708		0.00e0							
FUNCTION5 PFK			3.395e4					230570		1.65e6							
FUNCTION1 HXCD...			4.934e2					625		6.74e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.574e3					915		2.35e4							0.000
FUNCTION3 OCDPE			8.696e2					844		1.47e4							0.000
FUNCTION4 NCDPE			3.767e2					925		5.85e3							0.000
FUNCTION5 DCDPE			0.000e0					629		0.00e0							

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Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
2	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
3	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
2	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
3	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
4	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
5	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
6	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
2	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352
4	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
5	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
6	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175
7	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
8	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
9	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
10	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
11	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
12	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169
13	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
14	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465
15	OCDF	45.26	1.195e6	1.333e6	0.778	0.90	0.89	7923.8	YES	NO	bb	bb	419.788

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
2	Total-tetradioxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
2	Total-pentadioxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
2	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
3	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133

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HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptadioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
2	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
2	Total-tetradioxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059
3	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
4	Total-pentadioxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106
5	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
6	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
7	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133
8	Total-heptadioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
9	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376
10	OCDD	45.01	1.293e6	1.512e6	0.920	0.86	0.89	10744.0	YES	NO	bb	bb	394.016

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.79	2.145e5	2.910e5	0.702	0.74	0.77	2939.3	YES	NO	bb	bb	41.038
2	Total-tetrafurans	24.88	1.531e3	2.327e3	0.727	0.66	0.77	20.3	YES	NO	bb	bb	0.302
3	Total-tetrafurans	24.56	1.778e3	2.714e3	0.727	0.66	0.77	29.5	YES	NO	bb	bb	0.352
4	Total-pentafurans	31.01	1.644e3	9.764e2	0.654	1.68	1.55	5.6	YES	NO	db	bd	0.273
5	12378-PeCDF	29.94	1.256e6	8.416e5	0.679	1.49	1.55	4360.5	YES	NO	bb	bb	202.935
6	23478-PeCDF	31.29	1.346e6	8.943e5	0.786	1.51	1.55	4738.5	YES	NO	bb	bb	201.175
7	123789-HxCDF	36.94	1.209e6	1.036e6	1.137	1.17	1.24	9441.6	YES	NO	bb	bd	200.361
8	234678-HxCDF	35.92	1.547e6	1.307e6	1.140	1.18	1.24	12125.4	YES	NO	bb	bd	210.207
9	Total-hexafurans	35.77	1.562e2	1.389e2	1.141	1.12	1.24	3.4	NO	NO	bb	bb	0.021
10	123678-HxCDF	35.05	1.740e6	1.369e6	1.091	1.27	1.24	13394.0	YES	NO	db	db	189.797
11	123478-HxCDF	34.91	1.546e6	1.218e6	1.166	1.27	1.24	12323.4	YES	NO	bd	bd	197.711
12	Total-hexafurans	34.76	1.255e3	1.100e3	1.141	1.14	1.24	11.9	YES	NO	bb	bb	0.169
13	1234678-HpCDF	38.78	8.720e5	8.418e5	1.003	1.04	1.05	4339.3	YES	NO	bb	bb	204.650
14	1234789-HpCDF	41.02	7.221e5	7.262e5	0.953	0.99	1.05	3041.3	YES	NO	bb	bb	208.465
15	OCDF	45.26	1.195e6	1.333e6	0.778	0.90	0.89	7923.8	YES	NO	bb	bb	419.788
16	2378-TCDD	26.44	2.573e5	3.218e5	1.149	0.80	0.77	2446.0	YES	NO	bb	bb	39.968
17	Total-tetradioxins	26.06	6.115e3	7.563e3	1.024	0.81	0.77	45.2	YES	NO	bb	bb	1.059
18	12378-PeCDD	31.55	1.294e6	8.446e5	1.022	1.53	1.55	12077.0	YES	NO	bb	bb	199.637
19	Total-pentadioxins	29.94	9.896e2	6.778e2	1.502	1.46	1.55	7.8	YES	NO	bb	bb	0.106
20	123789-HxCDD	36.53	1.168e6	9.477e5	0.907	1.23	1.24	9764.9	YES	NO	bb	bb	203.974
21	123678-HxCDD	36.15	1.363e6	1.125e6	1.001	1.21	1.24	10823.8	YES	NO	db	db	204.224
22	123478-HxCDD	36.03	1.162e6	9.482e5	0.996	1.23	1.24	10622.2	YES	NO	bd	bd	198.133
23	Total-heptadioxins	40.57	2.148e2	2.026e2	1.088	1.06	1.05	2.3	NO	NO	bb	bb	0.048
24	1234678-HpCDD	40.28	8.284e5	8.038e5	1.039	1.03	1.05	3841.2	YES	NO	bb	bb	198.376
25	OCDD	45.01	1.293e6	1.512e6	0.920	0.86	0.89	10744.0	YES	NO	bb	bb	394.016

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	26.75	1.219e6					0.4	NO		bb		
2	FUNCTION1 PFK	21.17	1.435e6					3.4	YES		bb		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.26	4.048e3					0.9	NO		bb		0.000
2	FUNCTION2 PFK	28.22	4.511e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	28.09	1.180e4					1.6	NO		bb		0.000
4	FUNCTION2 PFK	32.40	7.400e3					1.4	NO		bd		0.000
5	FUNCTION2 PFK	31.78	3.780e3					0.8	NO		db		0.000
6	FUNCTION2 PFK	31.75	1.880e3					0.6	NO		bd		0.000
7	FUNCTION2 PFK	31.70	9.648e3					1.7	NO		db		0.000
8	FUNCTION2 PFK	31.63	2.054e4					2.2	NO		bd		0.000
9	FUNCTION2 PFK	31.52	5.247e4					2.4	NO		db		0.000
10	FUNCTION2 PFK	31.37	1.454e4					1.4	NO		bd		0.000
11	FUNCTION2 PFK	31.10	7.031e3					1.1	NO		bb		0.000
12	FUNCTION2 PFK	30.32	1.036e4					1.3	NO		bb		0.000
13	FUNCTION2 PFK	30.01	2.058e3					0.8	NO		bb		0.000
14	FUNCTION2 PFK	29.82	6.711e3					1.2	NO		db		0.000
15	FUNCTION2 PFK	29.78	1.288e4					1.7	NO		bd		0.000
16	FUNCTION2 PFK	29.02	5.997e3					0.8	NO		bb		0.000
17	FUNCTION2 PFK	28.82	2.827e4					1.7	NO		bb		0.000
18	FUNCTION2 PFK	28.47	4.519e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	28.42	5.823e3					1.1	NO		bb		0.000
20	FUNCTION2 PFK	32.71	1.137e4					1.6	NO		bb		0.000
21	FUNCTION2 PFK	32.44	1.418e4					1.8	NO		db		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	36.64	7.406e6					25.3	YES		db		0.000
2	FUNCTION3 PFK	36.25	4.701e7					28.1	YES		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.68	7.516e3					1.5	NO		bb		
2	FUNCTION5 PFK	45.50	5.255e3					1.2	NO		bb		
3	FUNCTION5 PFK	43.66	5.108e3					1.2	NO		bb		
4	FUNCTION5 PFK	43.06	3.867e3					1.1	NO		bb		
5	FUNCTION5 PFK	42.63	1.220e4					2.1	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.64	8.072e1					1.8	NO		bb		0.000
2	FUNCTION1 HXCD...	21.44	1.165e2					2.1	NO		db		0.000
3	FUNCTION1 HXCD...	21.34	7.544e1					2.3	NO		bd		0.000
4	FUNCTION1 HXCD...	26.42	1.399e2					2.7	NO		bb		0.000
5	FUNCTION1 HXCD...	21.99	8.086e1					2.0	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.18	1.574e3					25.7	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.15	3.227e2					5.7	YES		db		0.000
2	FUNCTION3 OCDPE	36.03	2.331e2					4.4	YES		bd		0.000
3	FUNCTION3 OCDPE	35.36	1.234e2					4.0	YES		bb		0.000
4	FUNCTION3 OCDPE	35.06	1.904e2					3.3	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	39.00	2.677e2					3.2	YES		bb		0.000
2	FUNCTION4 NCDPE	38.18	1.090e2					3.1	YES		bb		0.000

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Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:34:51 Pacific Standard Time

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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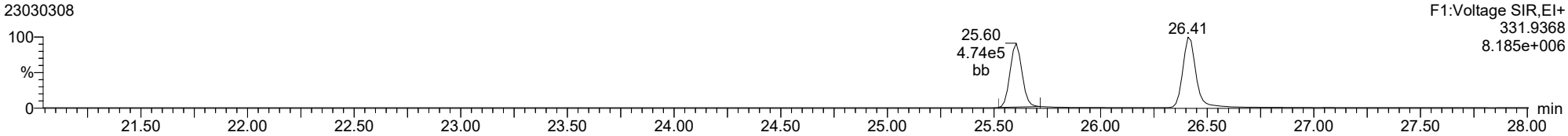
ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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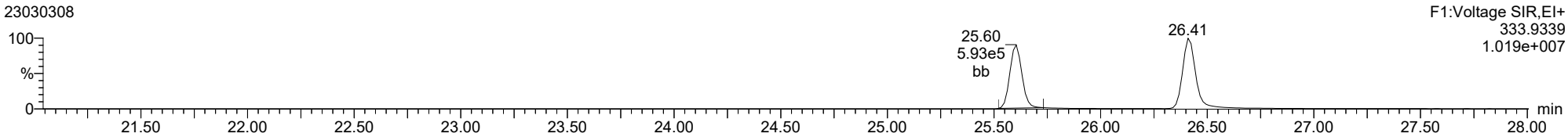

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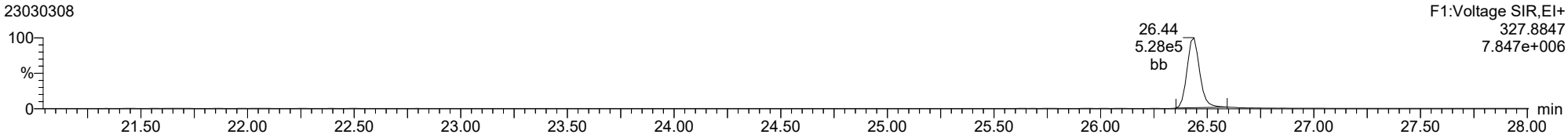

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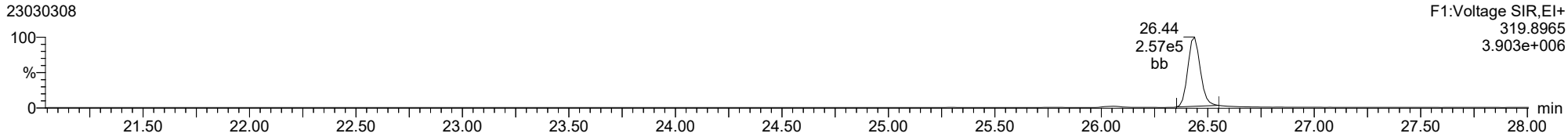
2378-TCDD



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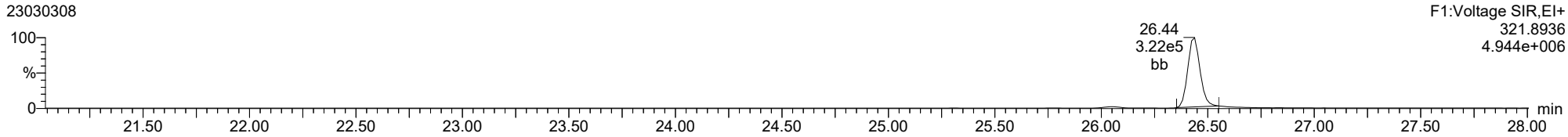

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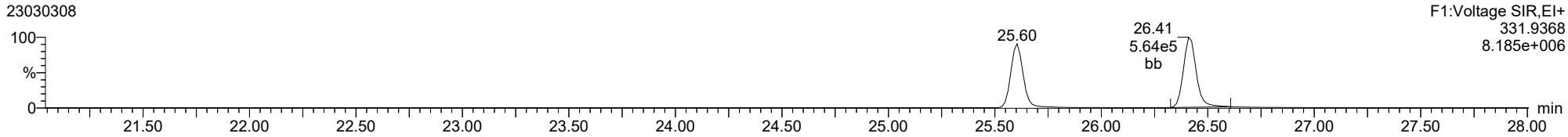

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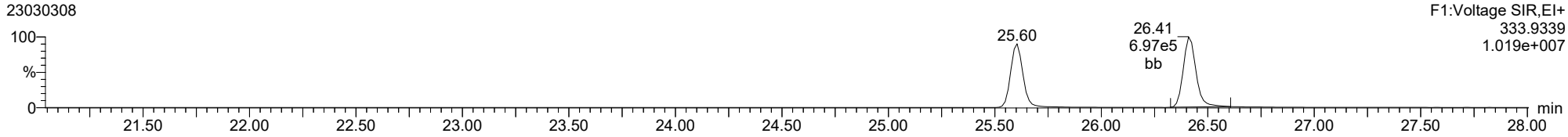
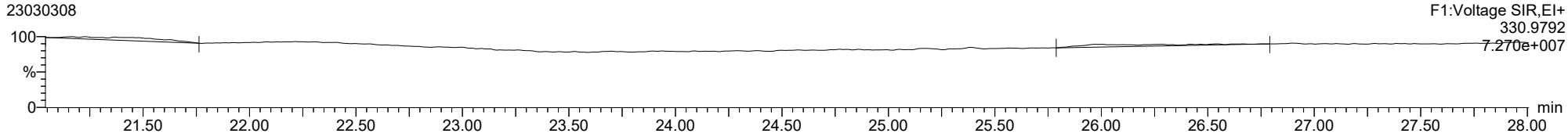
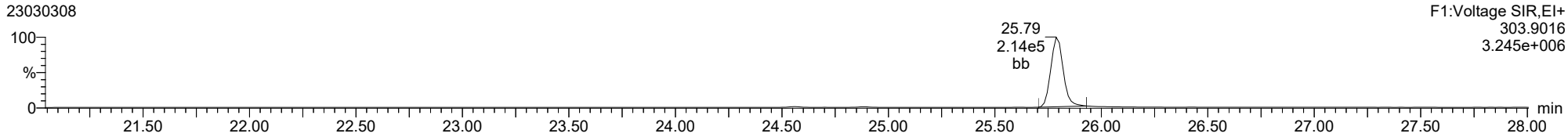


FUNCTION1 PFK



ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

2378-TCDF



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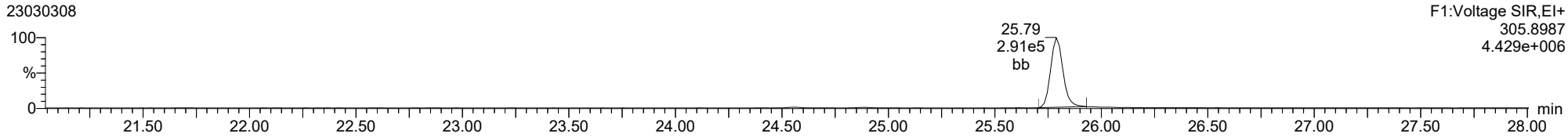
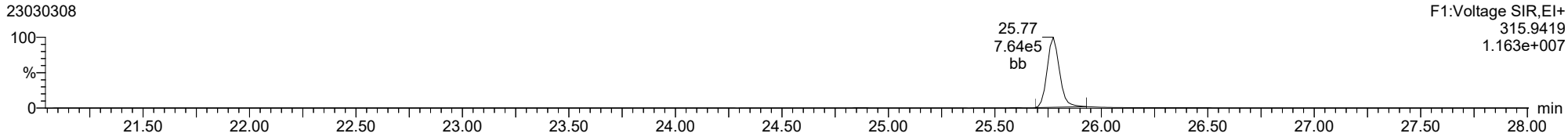


13C-2378-TCDF



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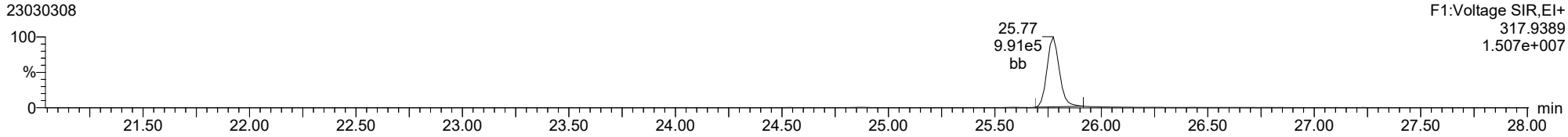
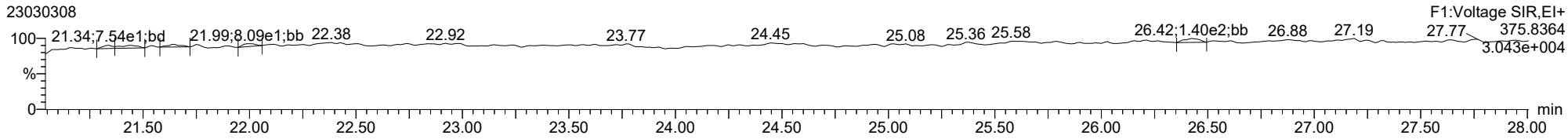


FUNCTION1 HXCDPE



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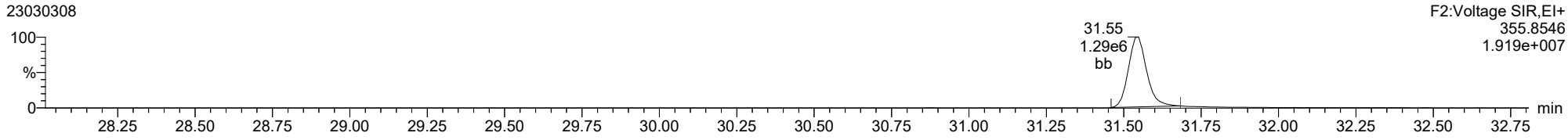
12378-PeCDD



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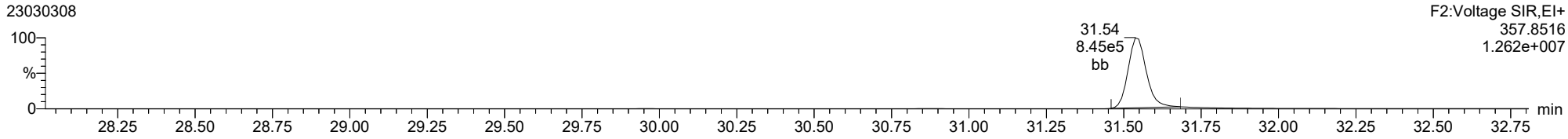

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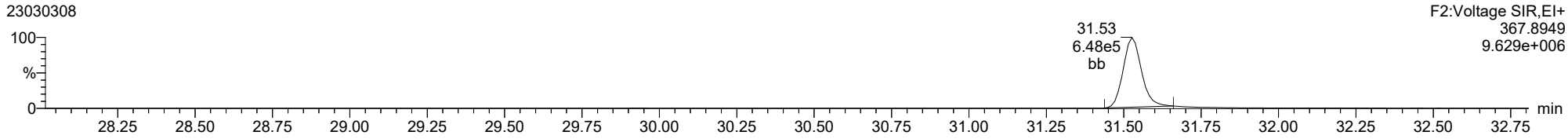

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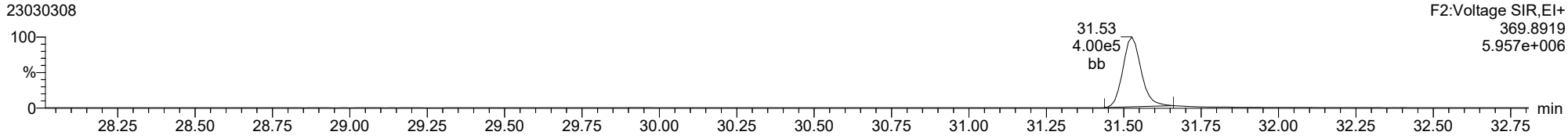

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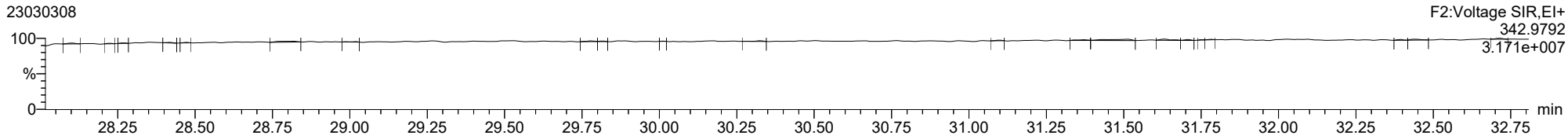

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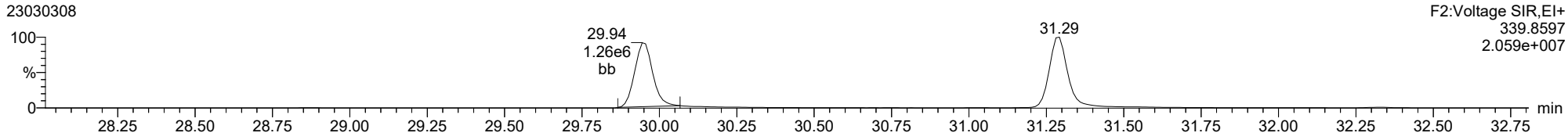
12378-PeCDF



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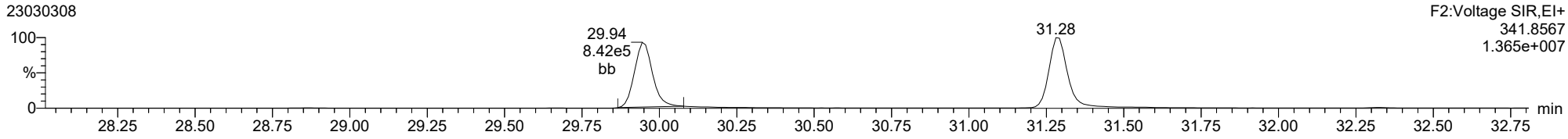

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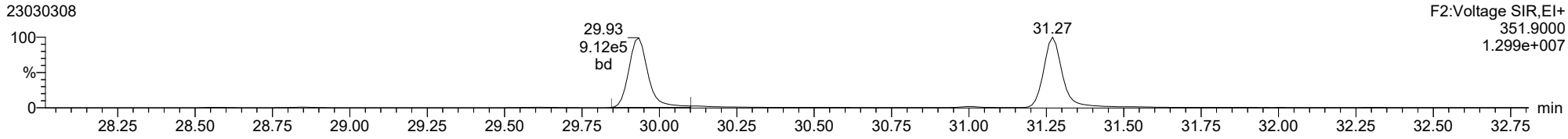

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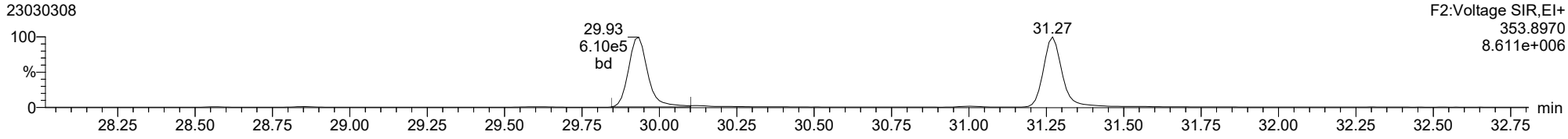

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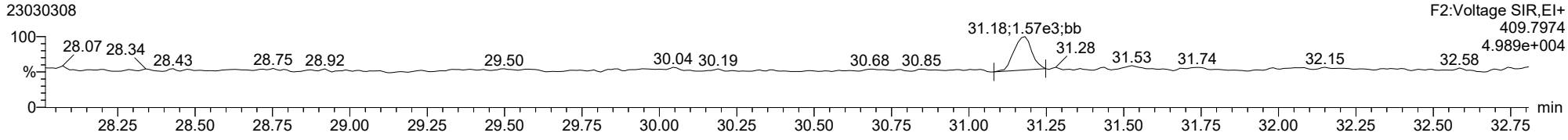

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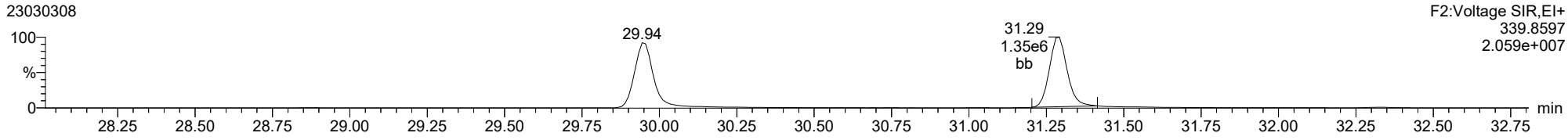
23478-PeCDF



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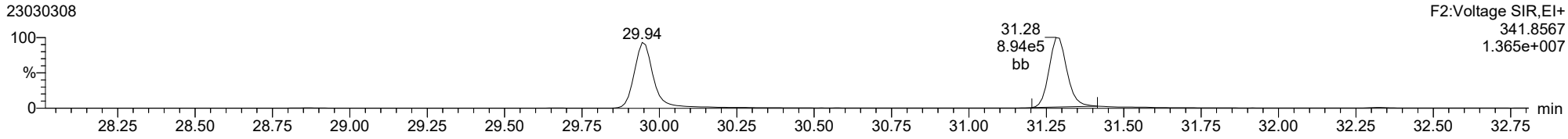

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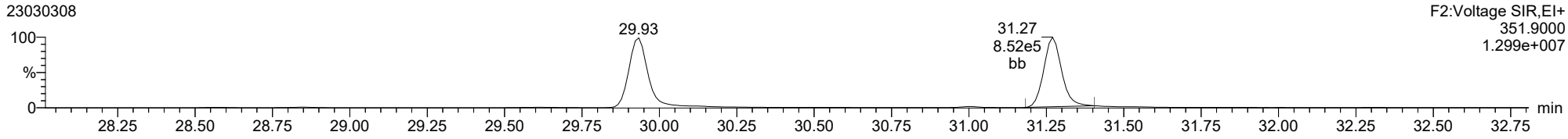

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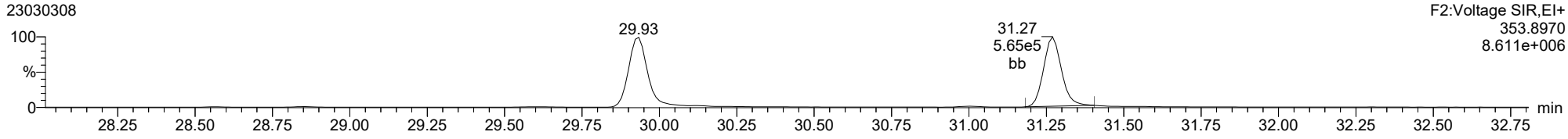

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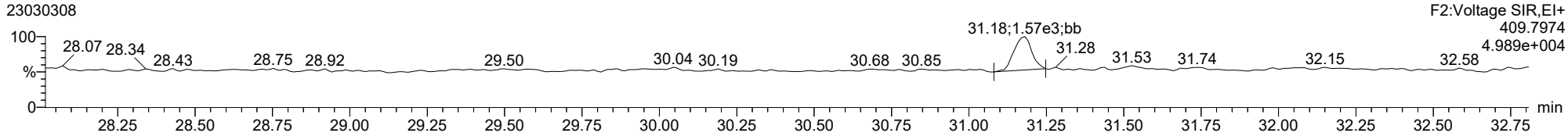

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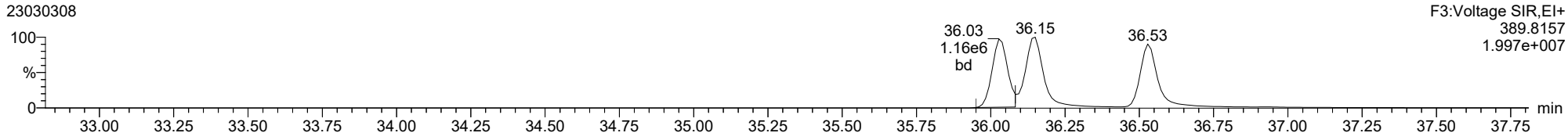

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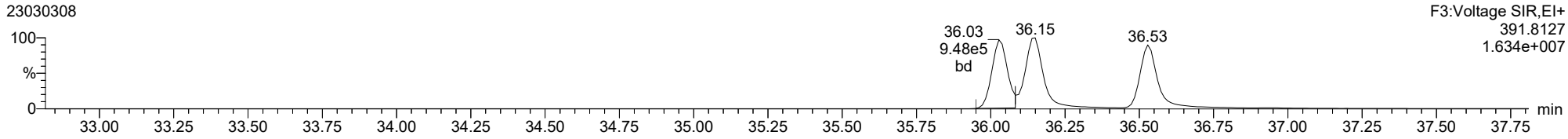

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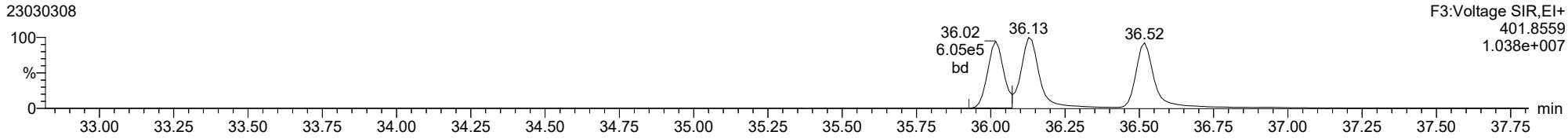

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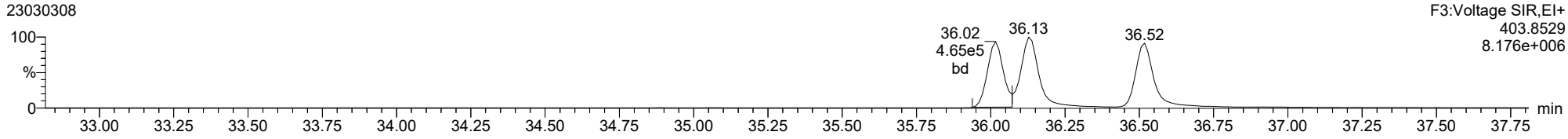

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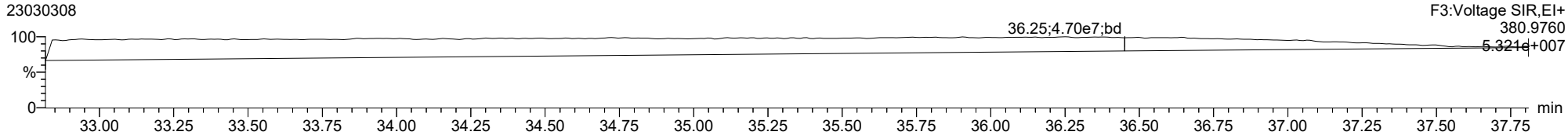

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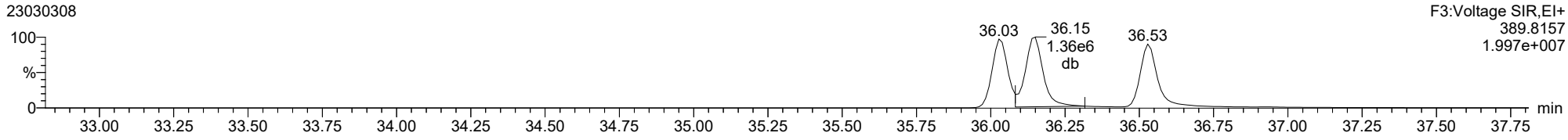

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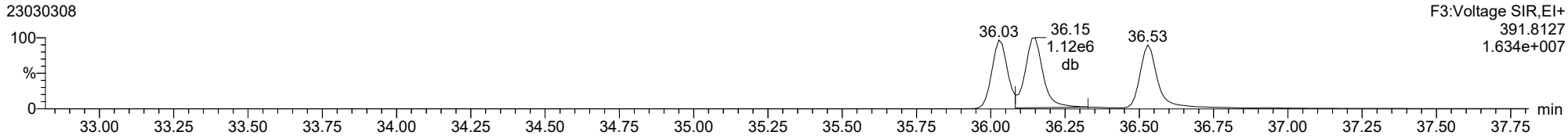

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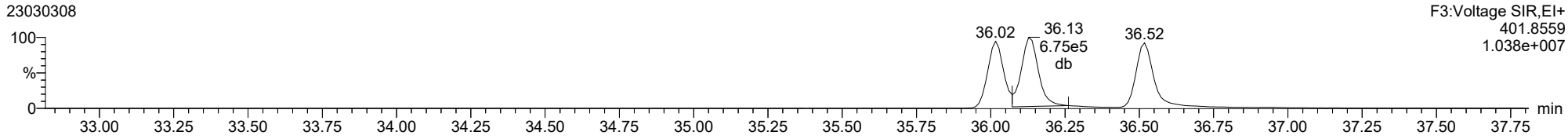

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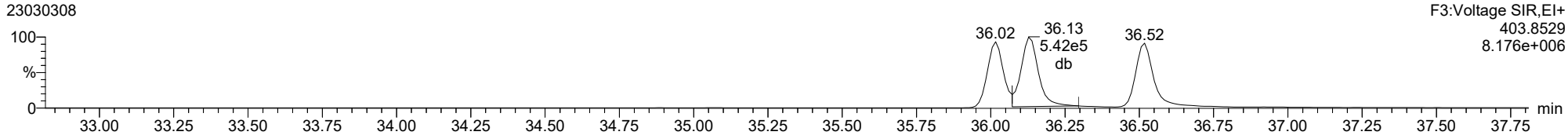

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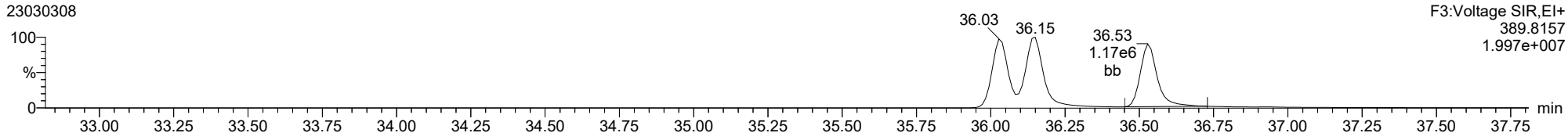

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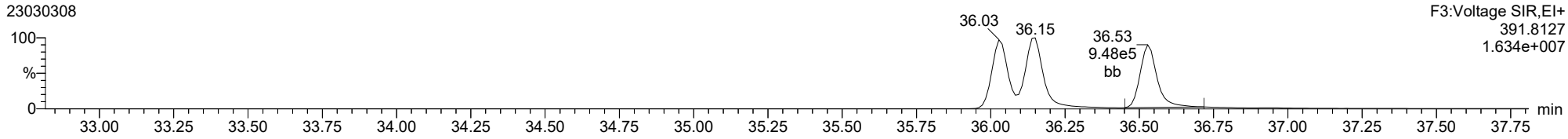

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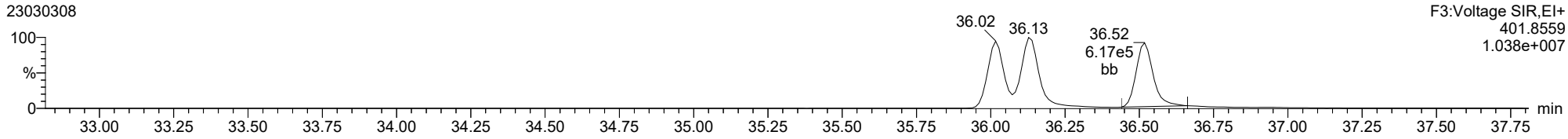

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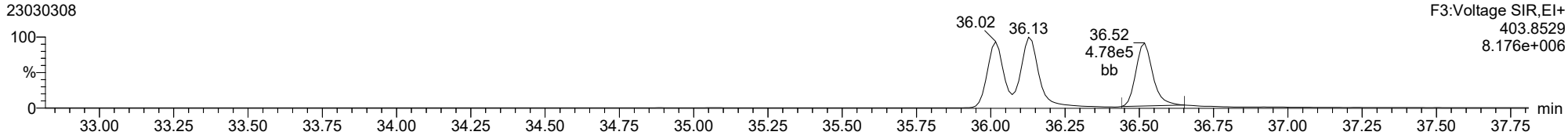

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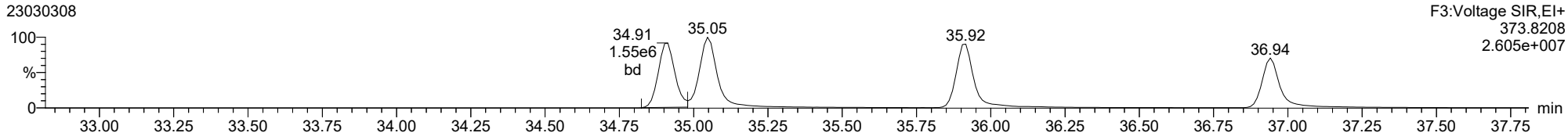

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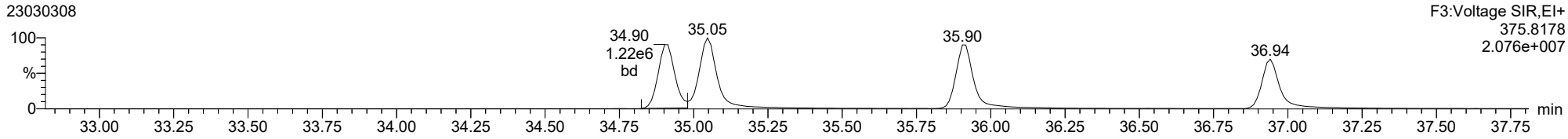

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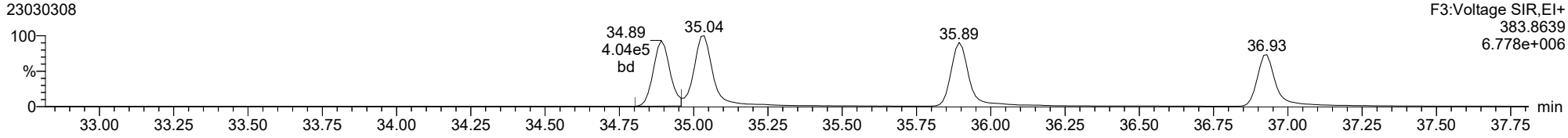

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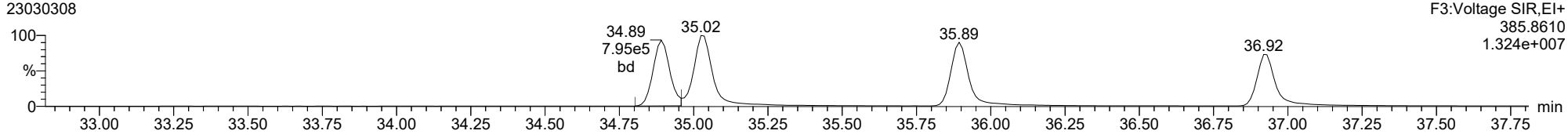
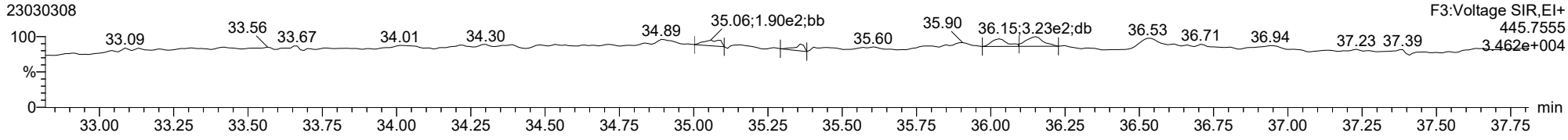


FUNCTION3 OCDPE



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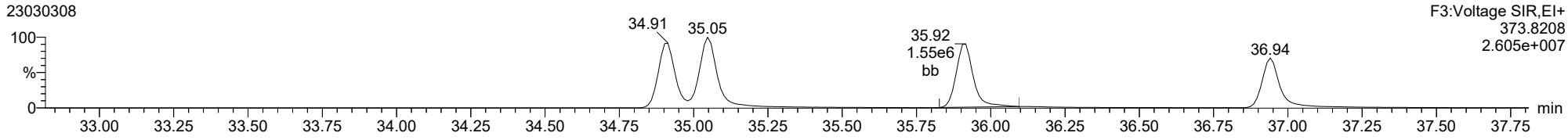
234678-HxCDF



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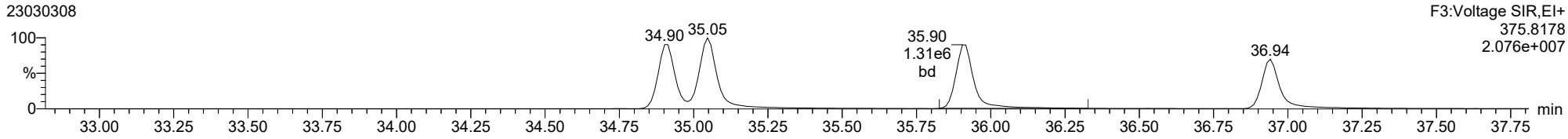

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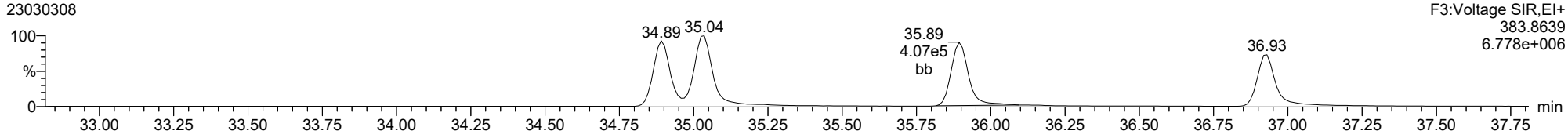

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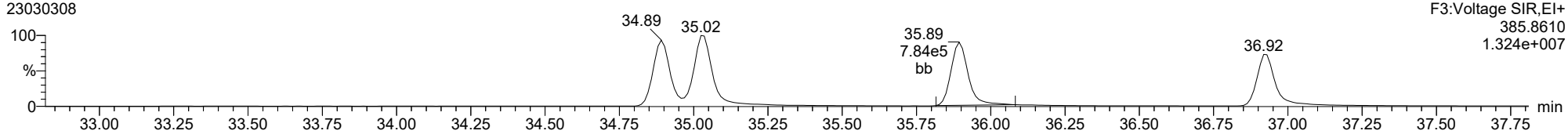

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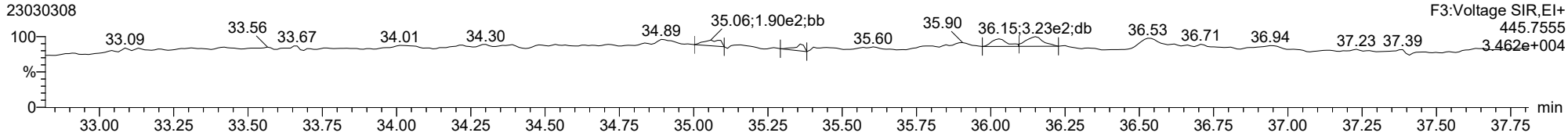

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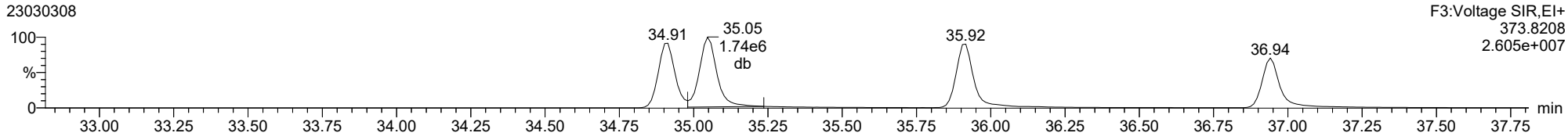

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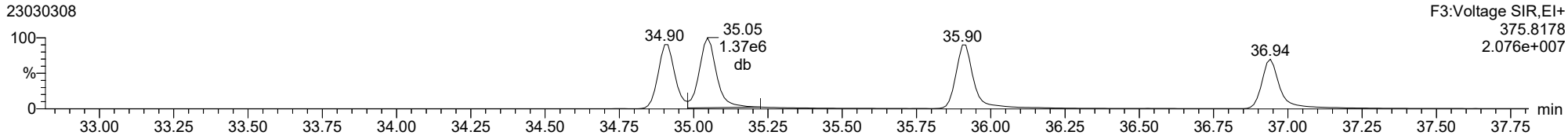

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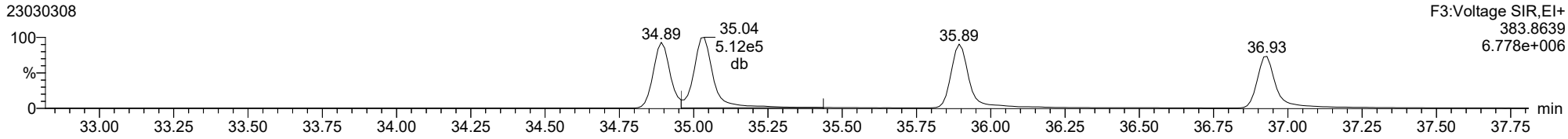

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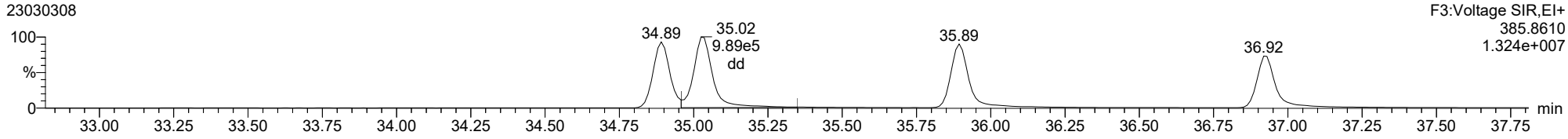
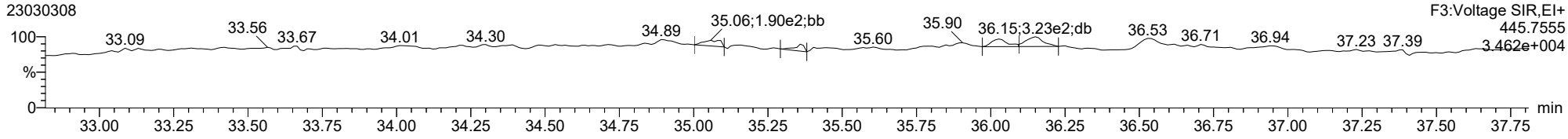


FUNCTION3 OCDPE



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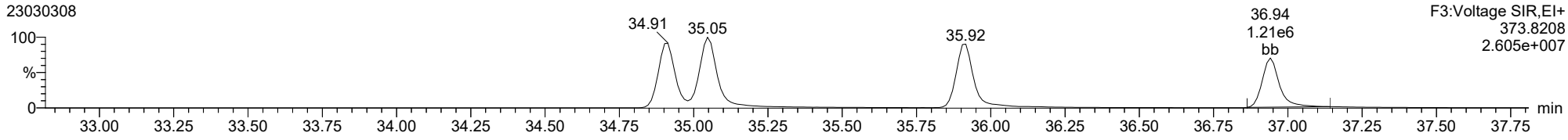

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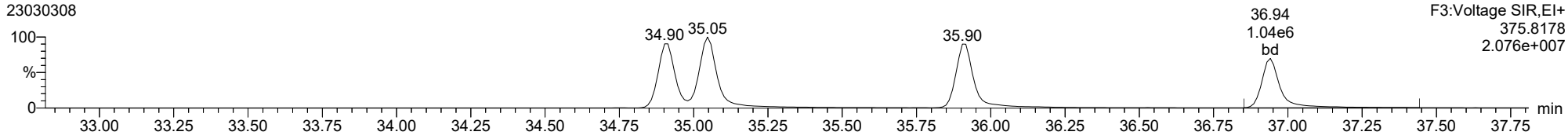

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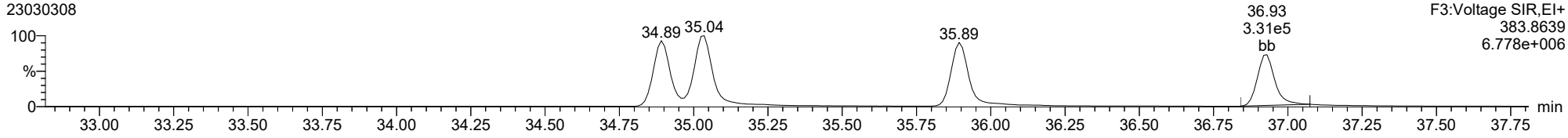

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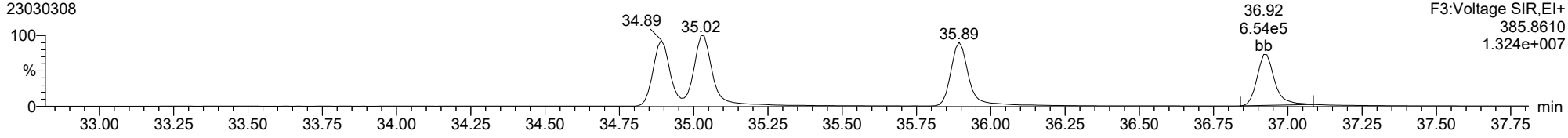
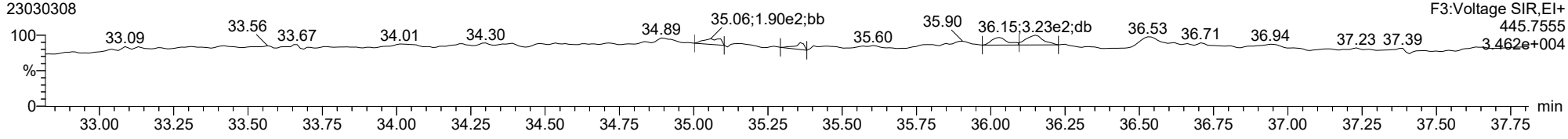


FUNCTION3 OCDPE



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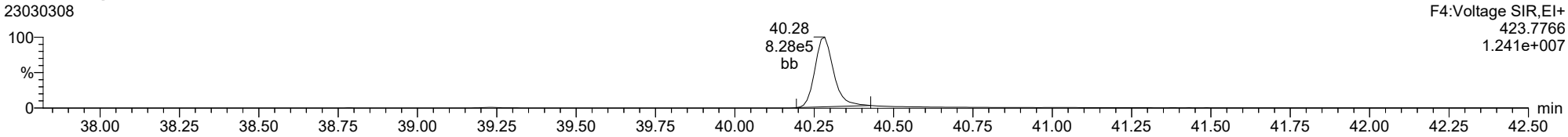

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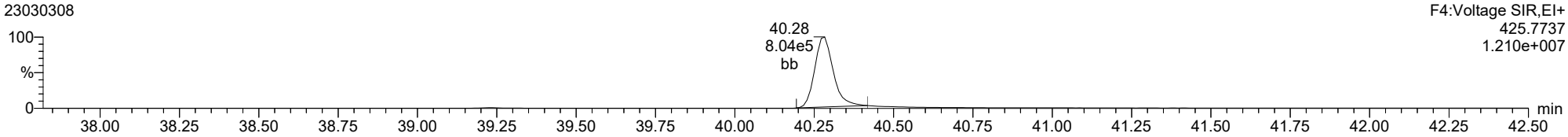

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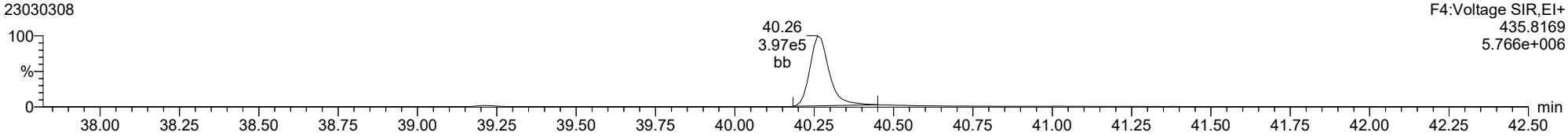

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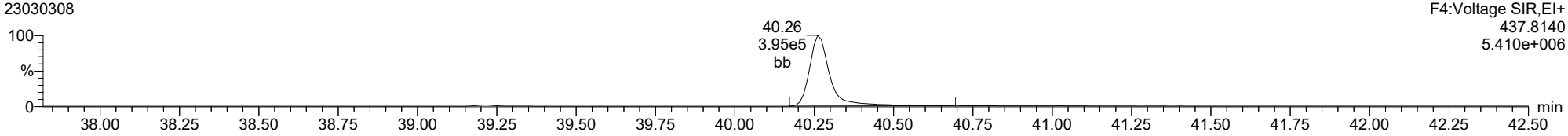
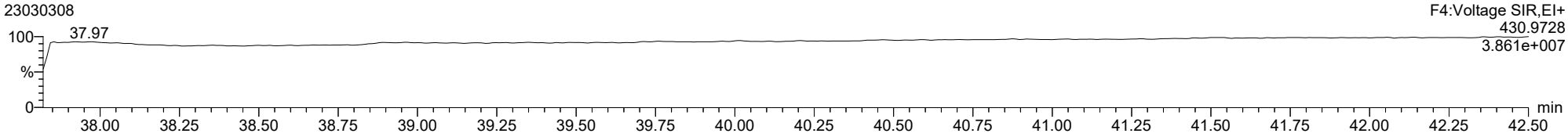


FUNCTION4 PFK



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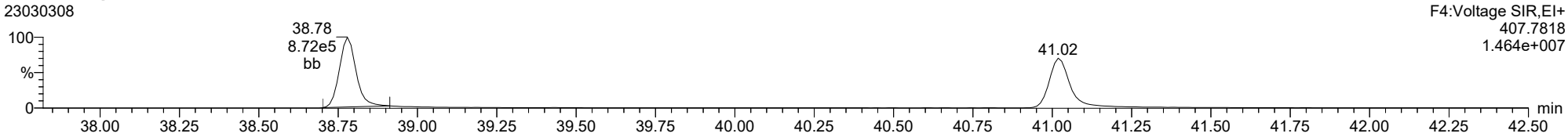

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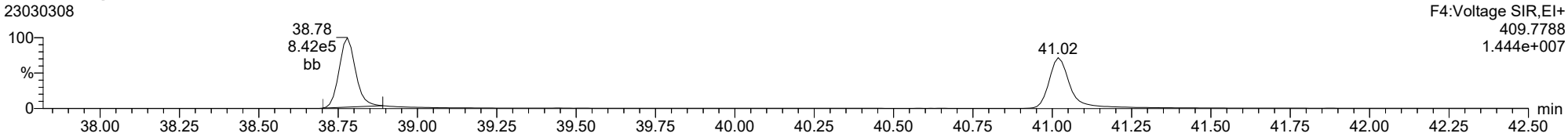

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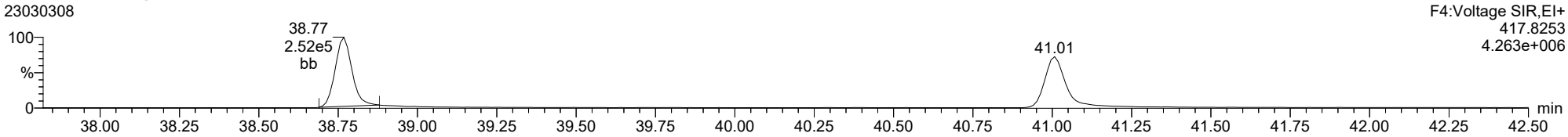

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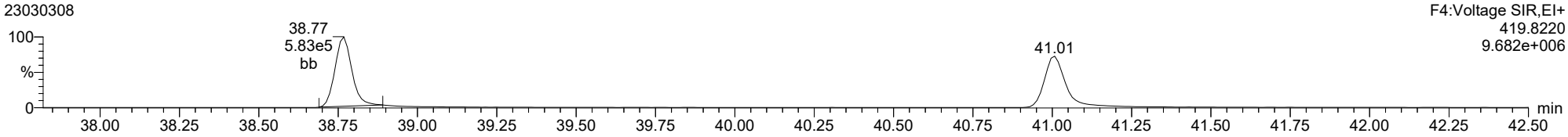

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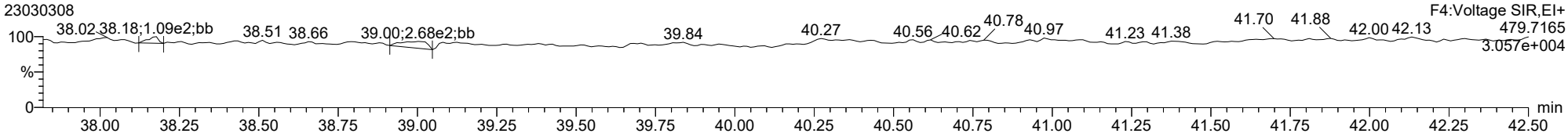

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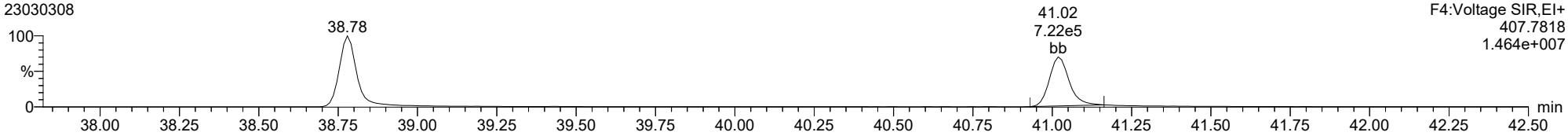

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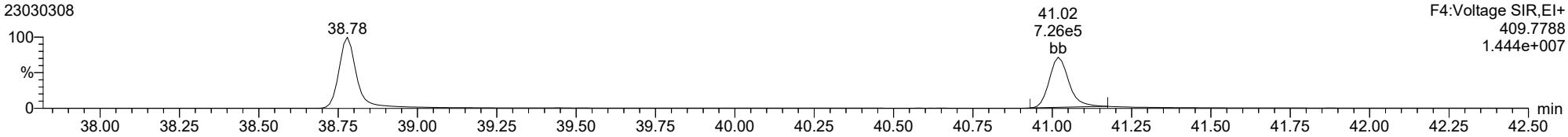

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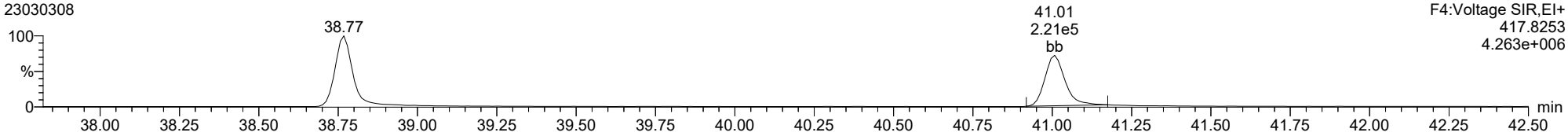

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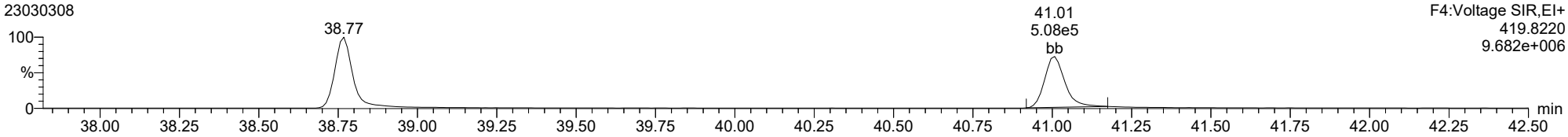
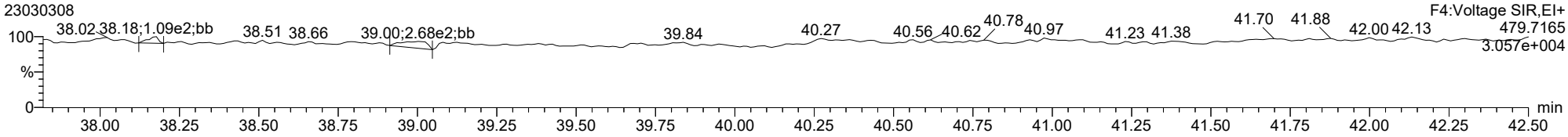


FUNCTION4 NCDPE



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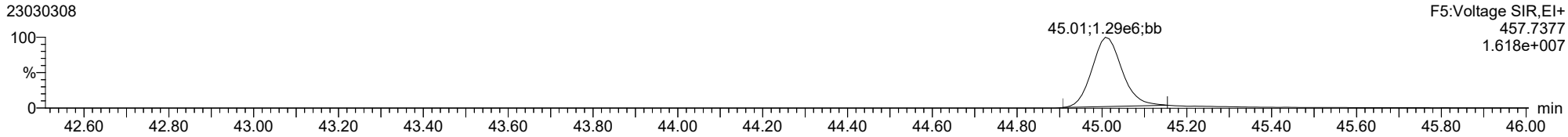

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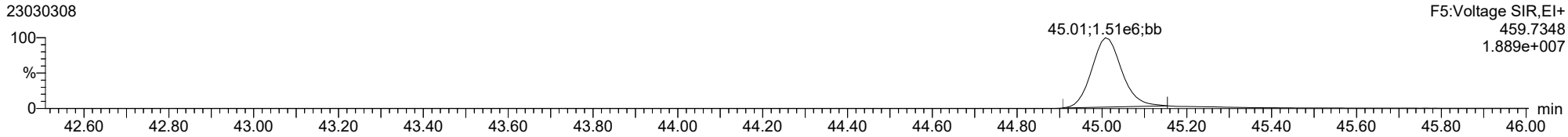

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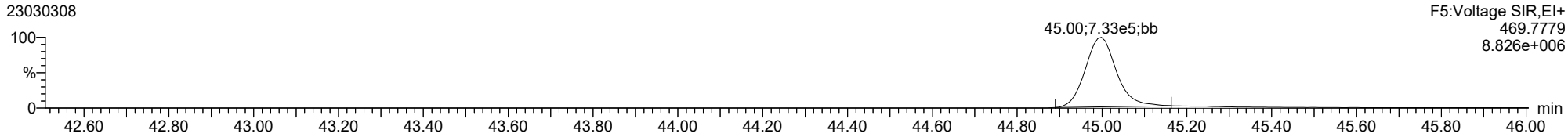

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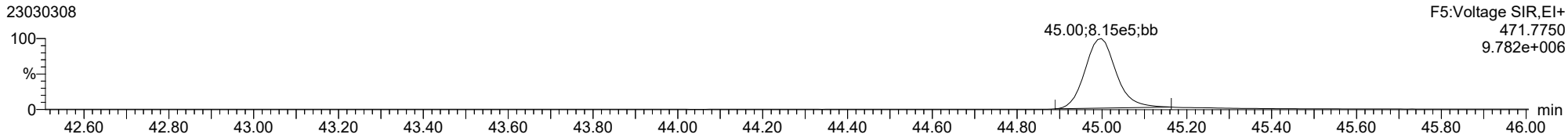

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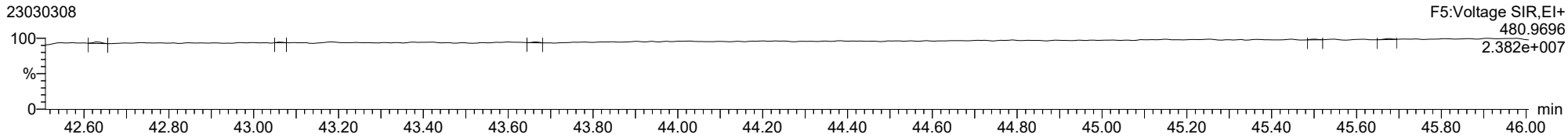

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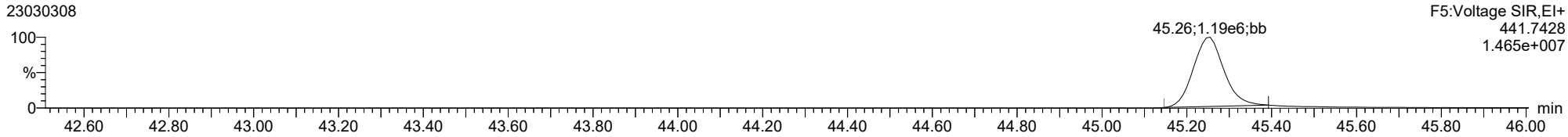

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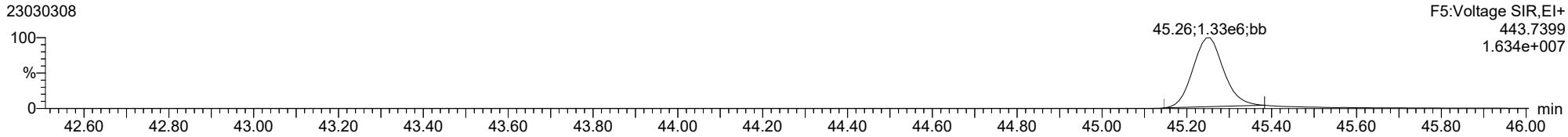

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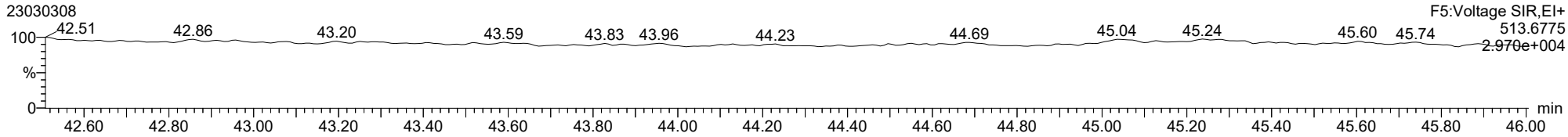

ID: CS4CW, Name: 23030308, Date: 03-Mar-2023, Time: 14:59:53, Conditions: AUTOSPEC01, User: pk

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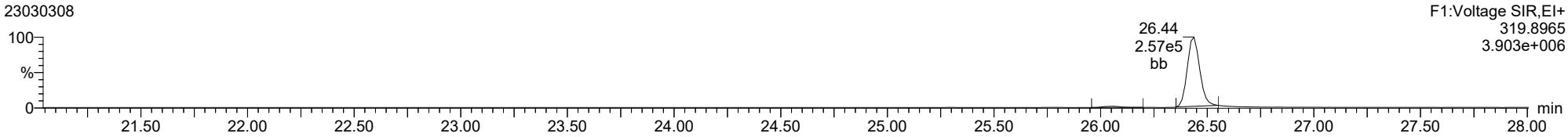
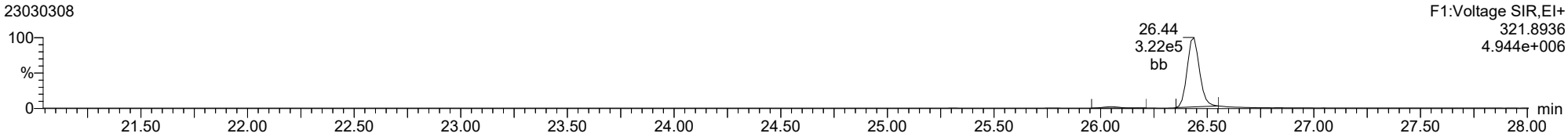
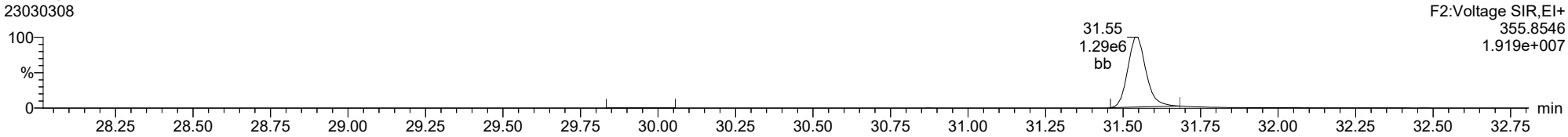


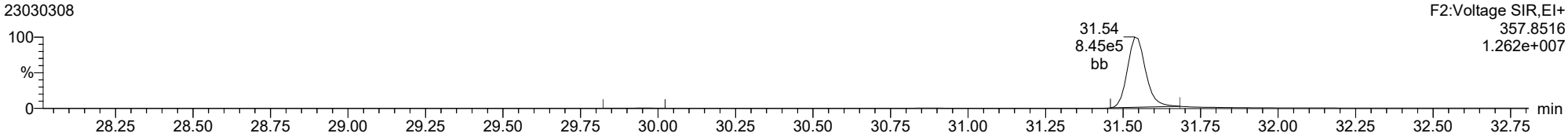
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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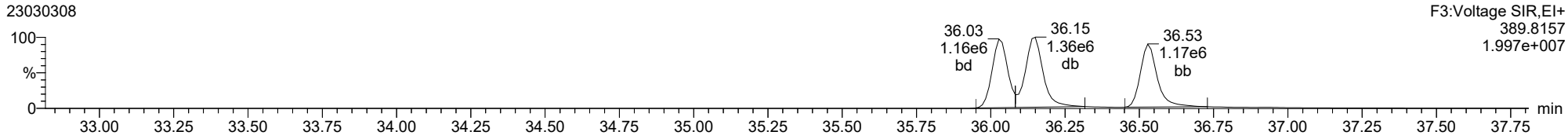
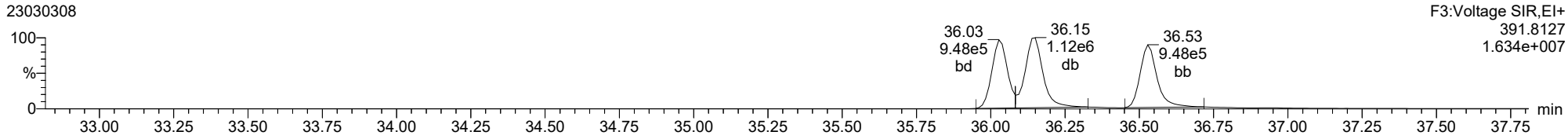
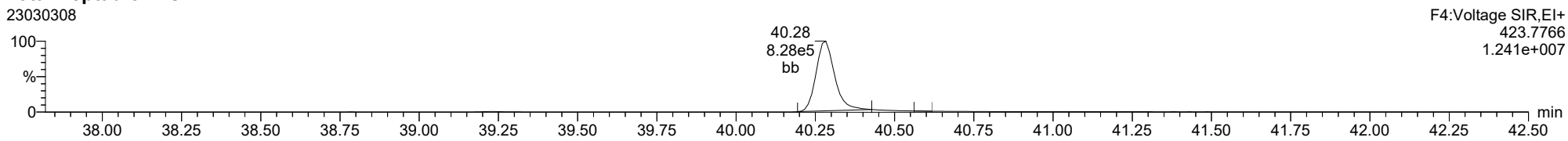
Total-hexadioxins



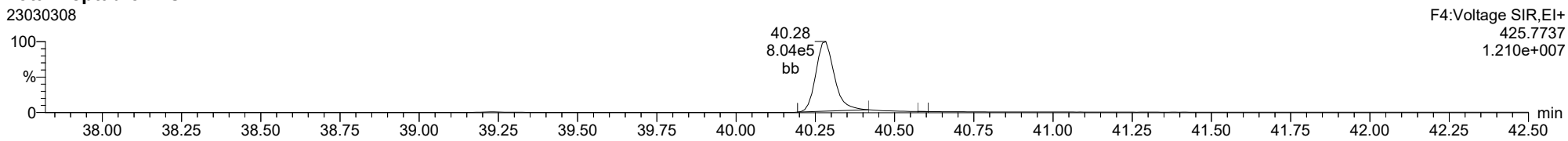
Total-hexadioxins



Total-heptadioxins



Total-heptadioxins



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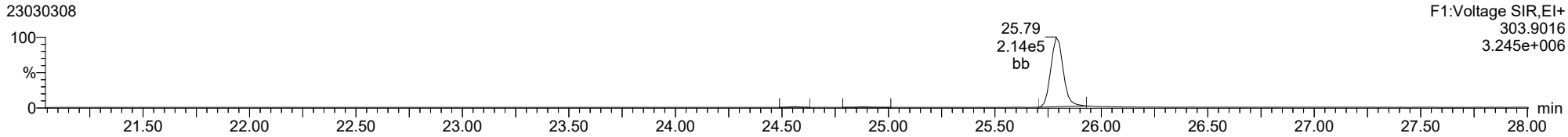
Total-tetrafurans



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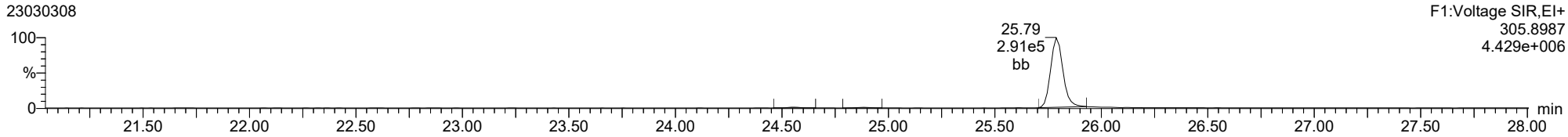

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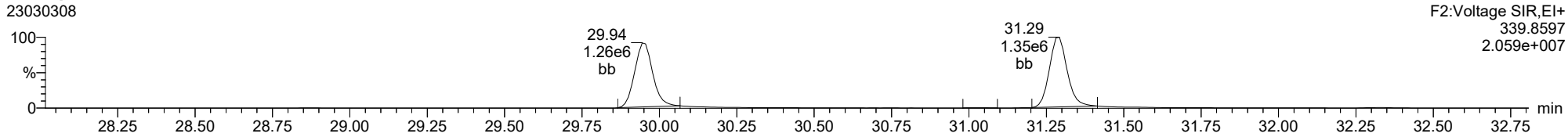

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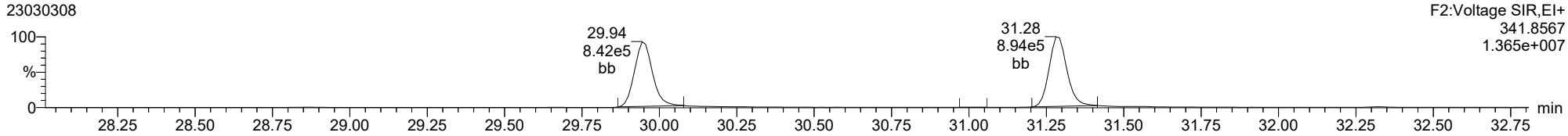

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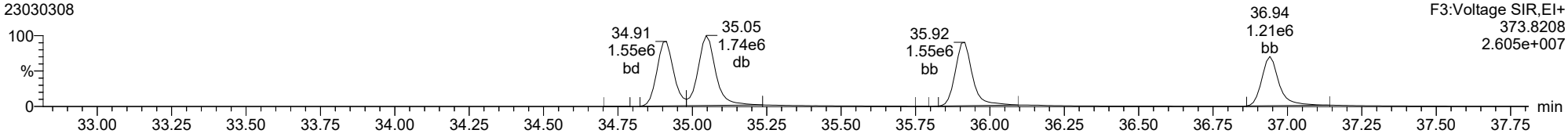
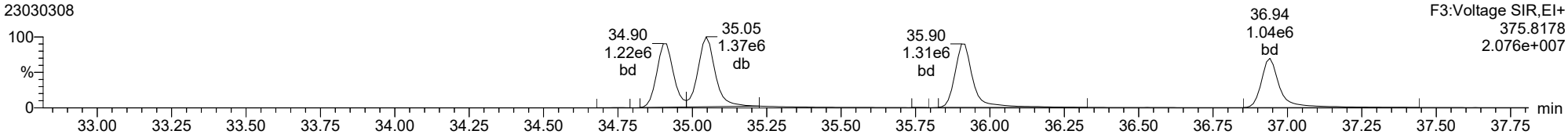
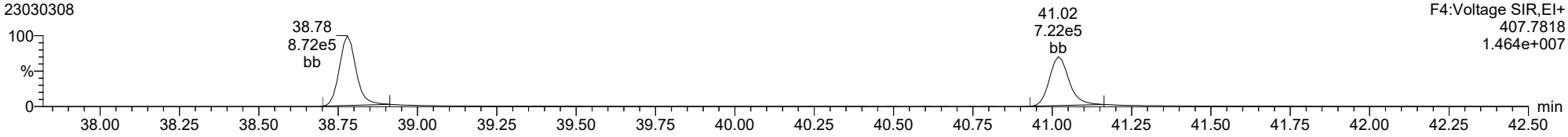
Total-hexafurans



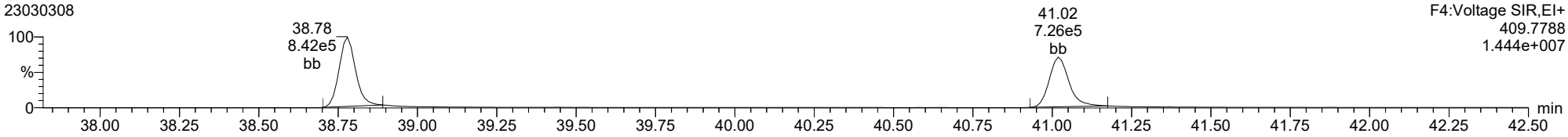
Total-hexafurans



Total-heptafurans



Total-heptafurans



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Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
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ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	1.334e6	1.787e6	0.702	0.746	0.770	1816	2705	2.07e7	2.78e7	11389.3	10270.6	NO	bb	bb	200.466
12378-PeCDF	29.934	1.000	7.598e6	4.979e6	0.679	1.526	1.550	4787	5694	1.20e8	7.84e7	24983.0	13764.4	NO	bb	bb	1049.785
23478-PeCDF	31.271	1.000	8.034e6	5.310e6	0.786	1.513	1.550	4787	5694	1.23e8	8.18e7	25734.3	14361.4	NO	bb	bb	1006.165
123478-HxCDF	34.903	1.001	7.954e6	6.371e6	1.166	1.248	1.240	1657	3079	1.28e8	1.02e8	76946.6	33145.2	NO	bd	bd	988.542
234678-HxCDF	35.894	1.000	8.440e6	6.648e6	1.140	1.270	1.240	1657	3079	1.32e8	1.04e8	79492.3	33730.7	NO	bd	bd	997.904
123678-HxCDF	35.036	1.000	8.729e6	6.976e6	1.091	1.251	1.240	1657	3079	1.37e8	1.09e8	82564.4	35544.8	NO	db	db	1005.907
123789-HxCDF	36.930	1.000	7.107e6	5.643e6	1.137	1.259	1.240	1657	3079	1.15e8	9.05e7	69330.3	29396.1	NO	bb	bb	962.631
1234678-HpCDF	38.769	1.000	5.729e6	5.700e6	1.003	1.005	1.050	5984	6276	9.87e7	9.77e7	16498.3	15567.0	NO	bb	bb	1001.511
1234789-HpCDF	41.008	1.000	4.891e6	4.848e6	0.953	1.009	1.050	5984	6276	7.31e7	7.29e7	12213.8	11617.0	NO	bb	bb	1050.453
OCDF	45.246	1.006	8.007e6	9.001e6	0.778	0.890	0.890	617	1698	1.01e8	1.14e8	163878.0	67066.1	NO	bb	bb	2152.541
2378-TCDD	26.424	1.001	1.623e6	2.053e6	1.149	0.791	0.770	1583	1421	2.49e7	3.15e7	15719.4	22173.2	NO	bb	bb	201.416
12378-PeCDD	31.527	1.000	7.500e6	4.933e6	1.022	1.520	1.550	3207	3258	1.15e8	7.59e7	35906.6	23308.0	NO	bb	bb	987.154
123478-HxCDD	36.017	1.000	6.446e6	5.113e6	0.996	1.261	1.240	1269	1319	1.05e8	8.63e7	82869.7	65420.3	NO	bd	bd	1008.795
123678-HxCDD	36.139	1.001	6.944e6	5.798e6	1.001	1.198	1.240	1269	1319	1.11e8	8.98e7	87214.8	68064.1	NO	db	db	1011.135
123789-HxCDD	36.518	1.011	6.387e6	5.242e6	0.907	1.218	1.240	1269	1319	1.04e8	8.52e7	81996.1	64539.0	NO	bb	bb	1063.935
1234678-HpCDD	40.273	1.000	5.468e6	5.342e6	1.039	1.023	1.050	4639	3285	8.81e7	8.56e7	19002.3	26055.7	NO	bb	bb	1010.673
OCDD	45.008	1.000	8.523e6	9.997e6	0.920	0.853	0.890	1224	2738	1.09e8	1.28e8	89206.2	46574.8	NO	bb	bb	1981.710
13C-2378-TCDF	25.760	1.007	9.657e5	1.254e6	1.620	0.770	0.770	2759	1757	1.47e7	1.88e7	5325.4	10693.5	NO	bb	bb	104.465
13C-12378-PeCDF	29.923	1.169	1.058e6	7.059e5	1.240	1.499	1.550	2137	2181	1.59e7	1.06e7	7426.1	4845.6	NO	bb	bb	108.437
13C-23478-PeCDF	31.259	1.222	1.010e6	6.768e5	1.118	1.492	1.550	2137	2181	1.54e7	1.03e7	7192.1	4709.7	NO	bb	bb	115.091
13C-123478-HxCDF	34.880	0.955	4.197e5	8.230e5	1.168	0.510	0.510	2074	3087	6.86e6	1.33e7	3308.7	4323.9	NO	bd	bd	88.344
13C-123678-HxCDF	35.025	0.959	4.843e5	9.471e5	1.386	0.511	0.510	2074	3087	7.37e6	1.42e7	3551.0	4614.4	NO	db	db	85.742
13C-234678-HxCDF	35.883	0.983	4.483e5	8.783e5	1.129	0.510	0.510	2074	3087	6.95e6	1.37e7	3352.7	4438.0	NO	bd	bd	97.566
13C-123789-HxCDF	36.919	1.011	3.958e5	7.690e5	0.932	0.515	0.510	2074	3087	6.35e6	1.23e7	3061.9	3979.7	NO	bb	bb	103.822
13C-1234678-HpCDF	38.757	1.062	3.445e5	7.933e5	0.895	0.434	0.440	2404	3556	5.77e6	1.33e7	2401.1	3732.0	NO	bb	bb	105.552
13C-1234789-HpCDF	40.997	1.123	2.963e5	6.765e5	0.770	0.438	0.440	2404	3556	4.35e6	9.96e6	1811.4	2800.3	NO	bb	bb	104.955
13C-1234-TCDD	25.591	0.000	5.845e5	7.267e5	1.000	0.804	0.770	2994	1335	8.98e6	1.11e7	2999.9	8316.3	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	7.030e5	8.860e5	1.152	0.794	0.770	2994	1335	1.05e7	1.32e7	3492.1	9847.6	NO	bb	bb	105.160
13C-12378-PeCDD	31.515	1.232	7.626e5	4.699e5	0.829	1.623	1.550	1207	1205	1.17e7	7.16e6	9657.3	5939.7	NO	bb	bb	113.413
13C-123478-HxCDD	36.006	0.986	6.492e5	5.017e5	0.995	1.294	1.240	1422	1281	1.08e7	8.26e6	7562.7	6444.6	NO	bd	bd	96.063
13C-123678-HxCDD	36.117	0.989	7.072e5	5.517e5	1.157	1.282	1.240	1422	1281	1.11e7	8.74e6	7828.3	6824.3	NO	db	db	90.391
13C-1234678-HpCDD	40.262	1.103	5.341e5	4.953e5	0.840	1.078	1.050	2026	1583	8.10e6	7.45e6	3998.5	4702.7	NO	bb	bb	101.765
13C-OCDD	44.990	1.232	9.650e5	1.067e6	0.767	0.905	0.890	1467	1005	1.21e7	1.35e7	8264.7	13401.8	NO	bb	bb	219.862
13C-123789-HxCDD	36.507	0.000	6.722e5	5.319e5	1.000	1.264	1.240	1422	1281	1.10e7	8.62e6	7719.2	6727.3	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	3.368e6		1.288			2667		5.07e7		19022.1			bb		199.444

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 11:35:04 Pacific Standard Time

ID: CS5CW, Name: 23030309, Date: 03-Mar-2023, Time: 15:47:43, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF					0.802		0.770	1816	2705								
1289-TCDF					0.678		0.770	1816	2705								
13468-PECDF					1.246		1.550	665	1133								
12389-PECDF					0.496		1.550	4787	5694								
123468-HXCDF					1.169		1.240	1657	3079								
1368-TCDD					1.015		0.770	1583	1421								
1289-TCDD					0.909		0.770	1583	1421								
12479-PECDD					2.301		1.550	3207	3258								
12389-PECDD					1.184		1.550	3207	3258								
124679-HXCDD					1.115		1.240	1269	1319								
1234679-HPCDD					1.137		1.050	4639	3285								
Total-tetrafurans			1.355e6		0.727			1816		2.10e7							203.619
Total-penta1			0.000e0					665		0.00e0							
Total-pentafurans			1.567e7		0.654			4787		2.43e8							2061.969
Total-hexafurans			3.237e7		1.141			1657		5.13e8							3971.633
Total-heptafurans			1.063e7		0.978			5984		1.72e8							2053.620
Total-Furans			6.803e7		0.922			1816		1.05e9							10443.382
Total-tetradioxins			1.660e6		1.024			1583		2.53e7							206.551
Total-pentadioxins			7.518e6		1.502			3207		1.15e8							988.757
Total-hexadioxins			1.981e7		1.005			1269		3.20e8							3089.249
Total-heptadioxins			5.468e6		1.088			4639		8.81e7							1010.701
Total-Dioxins			4.298e7		1.130			1583		6.58e8							7276.969
Total-TEQ			1.110e8					1583		1.71e9							17720.350
FUNCTION1 PFK			8.364e4					590794		3.29e6							
FUNCTION2 PFK			1.452e7					287139		1.24e7							0.000
FUNCTION3 PFK			2.904e5					447834		7.86e6							0.000
FUNCTION4 PFK			1.983e5					258971		5.49e6							
FUNCTION5 PFK			1.360e5					213310		3.56e6							
FUNCTION1 HXCD...			9.848e2					660		1.37e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			9.974e3					875		1.52e5							0.000
FUNCTION3 OCDPE			5.118e3					487		5.72e4							0.000
FUNCTION4 NCDPE			1.842e3					616		1.81e4							0.000
FUNCTION5 DCDPE			3.423e3					534		2.47e4							0.000

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
2	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
3	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
4	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
5	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
6	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
2	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
3	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
4	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
5	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
6	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
7	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
8	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
2	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
3	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731
5	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
6	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
7	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
8	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
9	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
10	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415
11	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
12	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
13	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
14	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
15	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
16	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
17	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
18	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904
19	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
20	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
21	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...
22	OCDF	45.25	8.007e6	9.001e6	0.778	0.89	0.89	16387...	YES	NO	bb	bb	2152.5...

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
2	Total-tetradioxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
3	Total-tetradioxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
4	Total-tetradioxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199

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PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-pentadioxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
2	Total-pentadioxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
3	Total-pentadioxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
4	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
5	Total-pentadioxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-hexadioxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
2	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
3	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
4	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-heptadioxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
2	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
2	Total-tetradioxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
3	Total-tetradioxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
4	Total-tetradioxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199
5	Total-pentadioxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
6	Total-pentadioxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
7	Total-pentadioxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
8	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
9	Total-pentadioxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776
10	Total-hexadioxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
11	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
12	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
13	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...
14	Total-heptadioxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
15	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...
16	OCDD	45.01	8.523e6	9.997e6	0.920	0.85	0.89	89206.2	YES	NO	bb	bb	1981.7...

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDF	25.77	1.334e6	1.787e6	0.702	0.75	0.77	11389.3	YES	NO	bb	bb	200.466
2	Total-tetrafurans	24.87	8.544e3	1.186e4	0.727	0.72	0.77	70.8	YES	NO	bb	bb	1.264
3	Total-tetrafurans	24.67	1.054e3	1.493e3	0.727	0.71	0.77	9.1	YES	NO	db	db	0.158
4	Total-tetrafurans	24.55	1.152e4	1.641e4	0.727	0.70	0.77	91.4	YES	NO	bd	bd	1.731
5	23478-PeCDF	31.27	8.034e6	5.310e6	0.786	1.51	1.55	25734.3	YES	NO	bb	bb	1006.1...
6	Total-pentafurans	31.00	7.155e3	5.348e3	0.654	1.34	1.55	24.5	YES	NO	bb	bb	1.108
7	Total-pentafurans	30.22	6.707e3	3.991e3	0.654	1.68	1.55	18.6	YES	NO	bb	bb	0.948
8	12378-PeCDF	29.93	7.598e6	4.979e6	0.679	1.53	1.55	24983.0	YES	NO	bb	bb	1049.7...
9	Total-pentafurans	29.57	3.743e3	2.429e3	0.654	1.54	1.55	12.5	YES	NO	bd	bd	0.547
10	Total-pentafurans	28.85	2.348e4	1.505e4	0.654	1.56	1.55	59.4	YES	NO	bb	bb	3.415
11	123678-HxCDF	35.04	8.729e6	6.976e6	1.091	1.25	1.24	82564.4	YES	NO	db	db	1005.9...
12	123478-HxCDF	34.90	7.954e6	6.371e6	1.166	1.25	1.24	76946.6	YES	NO	bd	bd	988.542
13	Total-hexafurans	34.75	7.748e3	5.706e3	1.141	1.36	1.24	87.3	YES	NO	bb	bb	0.913
14	Total-hexafurans	33.44	5.026e3	3.534e3	1.141	1.42	1.24	38.8	YES	NO	db	bb	0.581
15	123789-HxCDF	36.93	7.107e6	5.643e6	1.137	1.26	1.24	69330.3	YES	NO	bb	bb	962.631
16	Total-hexafurans	36.53	1.628e4	1.267e4	1.141	1.29	1.24	124.4	YES	NO	dd	bd	1.966
17	Total-hexafurans	36.13	1.100e5	8.424e4	1.141	1.31	1.24	706.6	YES	NO	dd	dd	13.189
18	234678-HxCDF	35.89	8.440e6	6.648e6	1.140	1.27	1.24	79492.3	YES	NO	bd	bd	997.904
19	1234789-HpCDF	41.01	4.891e6	4.848e6	0.953	1.01	1.05	12213.8	YES	NO	bb	bb	1050.4...
20	Total-heptafurans	39.43	9.256e3	7.833e3	0.978	1.18	1.05	24.5	YES	NO	bb	bb	1.656
21	1234678-HpCDF	38.77	5.729e6	5.700e6	1.003	1.01	1.05	16498.3	YES	NO	bb	bb	1001.5...
22	OCDF	45.25	8.007e6	9.001e6	0.778	0.89	0.89	16387...	YES	NO	bb	bb	2152.5...
23	2378-TCDD	26.42	1.623e6	2.053e6	1.149	0.79	0.77	15719.4	YES	NO	bb	bb	201.416
24	Total-tetradioxins	26.03	3.492e4	4.469e4	1.024	0.78	0.77	261.5	YES	NO	bb	bb	4.891
25	Total-tetradioxins	25.59	3.088e2	4.283e2	1.024	0.72	0.77	3.2	YES	NO	bb	bb	0.045
26	Total-tetradioxins	25.29	1.293e3	1.946e3	1.024	0.66	0.77	15.2	YES	NO	bb	bb	0.199
27	Total-pentadioxins	30.29	1.049e3	6.224e2	1.502	1.68	1.55	4.4	YES	NO	dd	db	0.090
28	Total-pentadioxins	30.15	1.847e3	1.302e3	1.502	1.42	1.55	8.1	YES	NO	dd	dd	0.170
29	Total-pentadioxins	29.93	6.137e3	4.352e3	1.502	1.41	1.55	24.1	YES	NO	bd	bd	0.567
30	12378-PeCDD	31.53	7.500e6	4.933e6	1.022	1.52	1.55	35906.6	YES	NO	bb	bb	987.154
31	Total-pentadioxins	30.86	8.777e3	5.596e3	1.502	1.57	1.55	39.8	YES	NO	bd	bb	0.776
32	Total-hexadioxins	36.92	3.612e4	2.906e4	1.005	1.24	1.24	377.1	YES	NO	bb	bb	5.383
33	123789-HxCDD	36.52	6.387e6	5.242e6	0.907	1.22	1.24	81996.1	YES	NO	bb	bb	1063.9...
34	123678-HxCDD	36.14	6.944e6	5.798e6	1.001	1.20	1.24	87214.8	YES	NO	db	db	1011.1...
35	123478-HxCDD	36.02	6.446e6	5.113e6	0.996	1.26	1.24	82869.7	YES	NO	bd	bd	1008.7...
36	Total-heptadioxins	40.66	1.670e2	1.486e2	1.088	1.12	1.05	0.0	NO	NO	bb	bb	0.028
37	1234678-HpCDD	40.27	5.468e6	5.342e6	1.039	1.02	1.05	19002.3	YES	NO	bb	bb	1010.6...

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	OCDD	45.01	8.523e6	9.997e6	0.920	0.85	0.89	89206.2	YES	NO	bb	bb	1981.7...

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.64	6.068e3					0.7	NO		bb		
2	FUNCTION1 PFK	21.78	2.376e4					1.4	NO		bb		
3	FUNCTION1 PFK	26.65	6.322e3					0.8	NO		bb		
4	FUNCTION1 PFK	26.20	6.018e3					0.7	NO		bb		
5	FUNCTION1 PFK	24.62	4.147e4					1.9	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.96	1.329e6					11.3	YES		db		0.000
2	FUNCTION2 PFK	29.68	9.729e6					13.1	YES		dd		0.000
3	FUNCTION2 PFK	29.12	3.197e6					12.0	YES		dd		0.000
4	FUNCTION2 PFK	28.11	2.639e5					6.8	YES		bd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.58	5.268e3					0.6	NO		bb		0.000
2	FUNCTION3 PFK	35.20	2.459e4					1.4	NO		bb		0.000
3	FUNCTION3 PFK	34.94	1.904e4					1.3	NO		bb		0.000
4	FUNCTION3 PFK	34.64	1.893e4					1.6	NO		bb		0.000
5	FUNCTION3 PFK	34.45	3.091e4					1.7	NO		bb		0.000
6	FUNCTION3 PFK	34.20	2.876e3					0.6	NO		bb		0.000
7	FUNCTION3 PFK	34.01	8.291e4					2.8	NO		bb		0.000
8	FUNCTION3 PFK	37.45	2.878e4					1.5	NO		bb		0.000
9	FUNCTION3 PFK	37.14	1.025e4					1.2	NO		bb		0.000
10	FUNCTION3 PFK	36.92	2.201e4					1.4	NO		bb		0.000
11	FUNCTION3 PFK	36.82	6.882e3					0.7	NO		bb		0.000
12	FUNCTION3 PFK	36.27	2.697e4					1.6	NO		bb		0.000
13	FUNCTION3 PFK	35.83	1.096e4					1.2	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.36	1.487e4					2.2	NO		db		
2	FUNCTION4 PFK	40.28	5.399e4					2.8	NO		bd		
3	FUNCTION4 PFK	39.84	7.632e3					1.3	NO		bb		
4	FUNCTION4 PFK	39.63	5.817e3					1.3	NO		bb		
5	FUNCTION4 PFK	39.58	2.233e4					2.4	NO		bb		
6	FUNCTION4 PFK	39.26	1.840e3					0.6	NO		bb		
7	FUNCTION4 PFK	39.15	1.821e4					2.0	NO		bb		
8	FUNCTION4 PFK	38.75	4.539e3					0.9	NO		bb		
9	FUNCTION4 PFK	38.40	3.735e3					0.9	NO		bb		
10	FUNCTION4 PFK	42.22	2.101e4					1.9	NO		bb		
11	FUNCTION4 PFK	41.91	9.871e3					1.2	NO		bb		
12	FUNCTION4 PFK	41.56	2.609e4					2.3	NO		bb		
13	FUNCTION4 PFK	40.96	8.343e3					1.4	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.55	1.986e4					1.8	NO		bb		
2	FUNCTION5 PFK	44.84	1.038e4					2.0	NO		bb		
3	FUNCTION5 PFK	44.32	5.641e3					1.1	NO		bb		
4	FUNCTION5 PFK	44.16	5.508e3					1.3	NO		bb		
5	FUNCTION5 PFK	43.92	3.533e3					1.2	NO		bb		
6	FUNCTION5 PFK	43.74	1.099e4					1.6	NO		bb		
7	FUNCTION5 PFK	43.65	5.197e4					3.3	YES		db		
8	FUNCTION5 PFK	43.53	1.828e4					2.1	NO		bd		
9	FUNCTION5 PFK	42.94	8.618e3					1.5	NO		bb		
10	FUNCTION5 PFK	42.73	1.271e3					0.6	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.02	8.181e1					1.9	NO		bb		0.000
2	FUNCTION1 HXCD...	26.42	2.971e2					5.1	YES		bb		0.000
3	FUNCTION1 HXCD...	25.83	8.848e1					2.3	NO		db		0.000
4	FUNCTION1 HXCD...	25.77	1.170e2					2.5	NO		dd		0.000
5	FUNCTION1 HXCD...	25.59	1.285e2					2.6	NO		bd		0.000
6	FUNCTION1 HXCD...	24.84	1.183e2					1.2	NO		bb		0.000
7	FUNCTION1 HXCD...	24.11	7.501e1					1.5	NO		bb		0.000
8	FUNCTION1 HXCD...	22.26	7.865e1					3.6	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.55	8.739e2					12.4	YES		bb		0.000
2	FUNCTION2 HPCD...	31.16	9.100e3					161.2	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.02	1.011e3					23.2	YES		dd		0.000
2	FUNCTION3 OCDPE	35.92	4.171e2					12.8	YES		bd		0.000
3	FUNCTION3 OCDPE	35.05	6.001e2					12.0	YES		db		0.000
4	FUNCTION3 OCDPE	34.90	4.386e2					11.4	YES		bd		0.000
5	FUNCTION3 OCDPE	36.94	5.713e2					12.4	YES		bb		0.000
6	FUNCTION3 OCDPE	36.52	9.647e2					21.7	YES		bb		0.000
7	FUNCTION3 OCDPE	36.14	1.116e3					24.0	YES		db		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.03	4.935e2					7.5	YES		bb		0.000
2	FUNCTION4 NCDPE	40.28	7.486e2					12.2	YES		bb		0.000
3	FUNCTION4 NCDPE	38.78	6.004e2					9.6	YES		bb		0.000

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ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.26	1.761e3					22.2	YES		db		0.000
2	FUNCTION5 DCDPE	45.02	1.661e3					24.0	YES		bd		0.000

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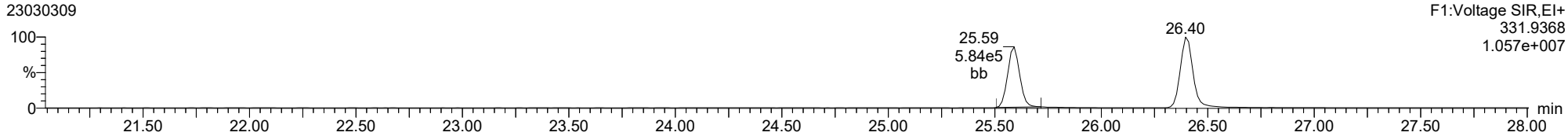

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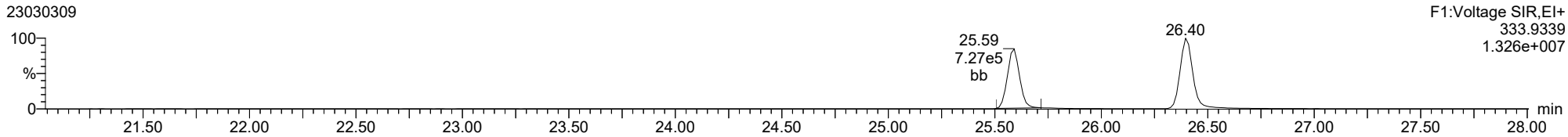
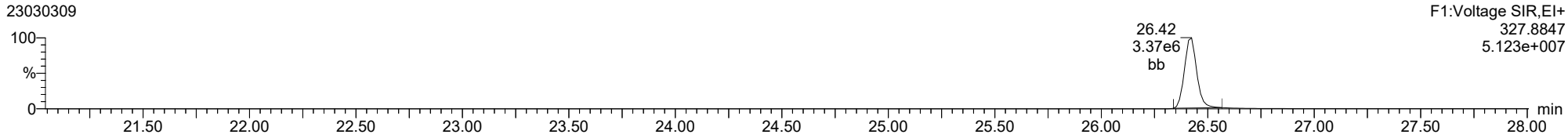


37CL-2378-TCDD



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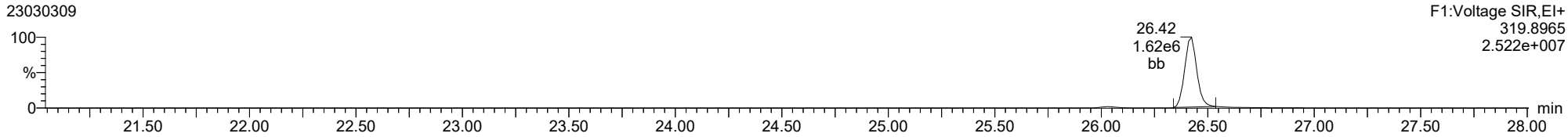
2378-TCDD



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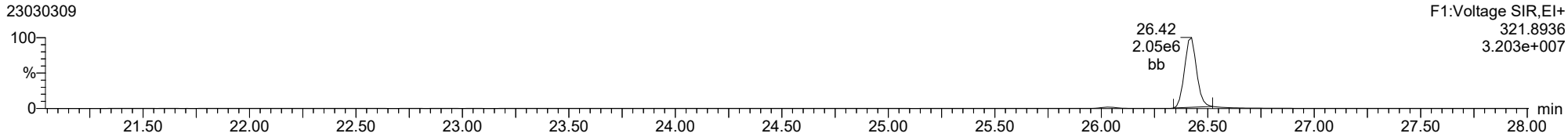

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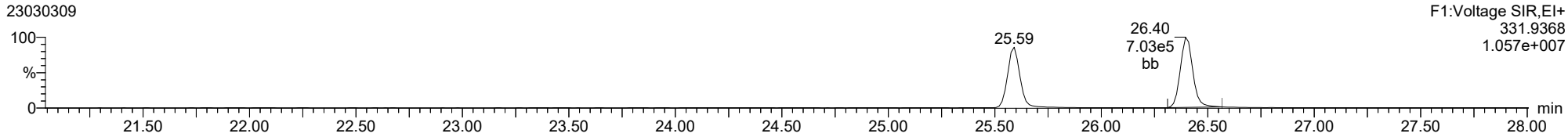

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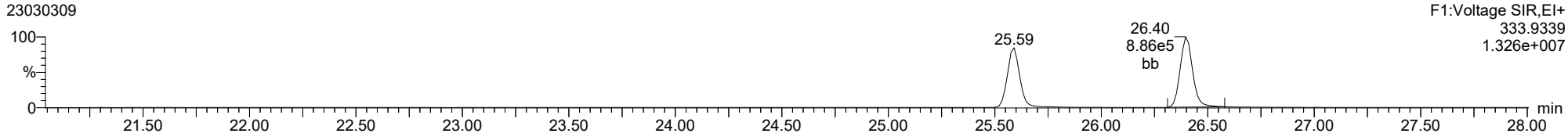

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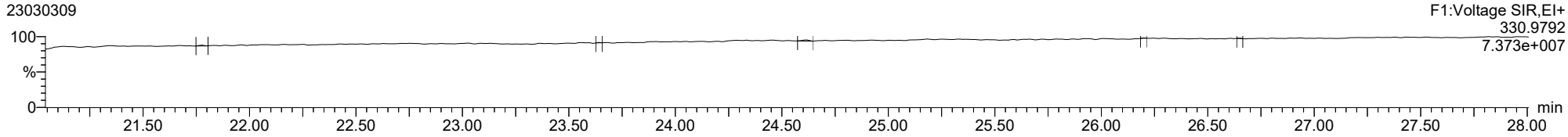

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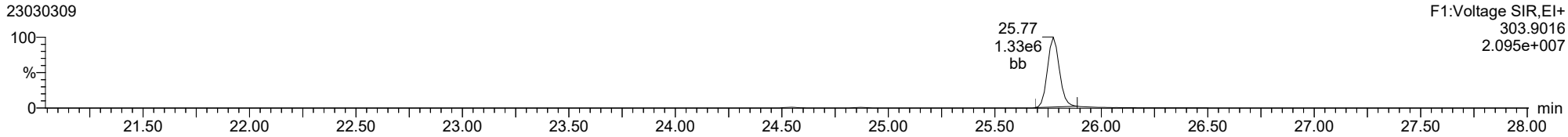
2378-TCDF



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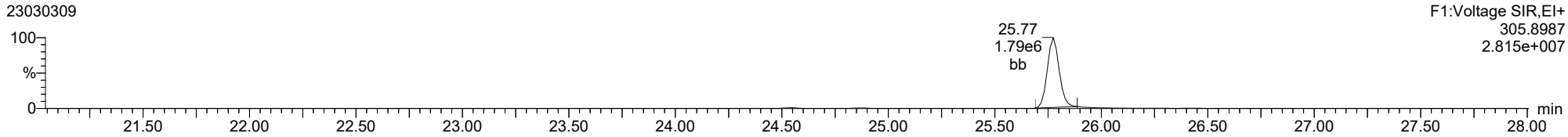

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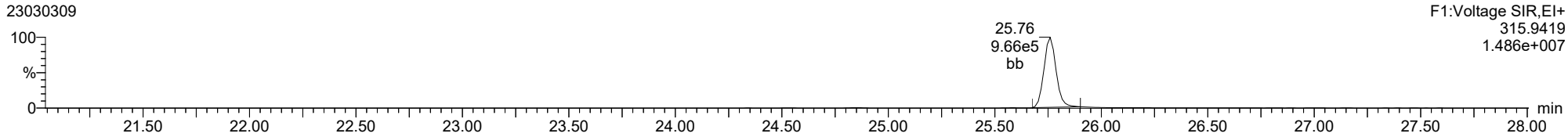

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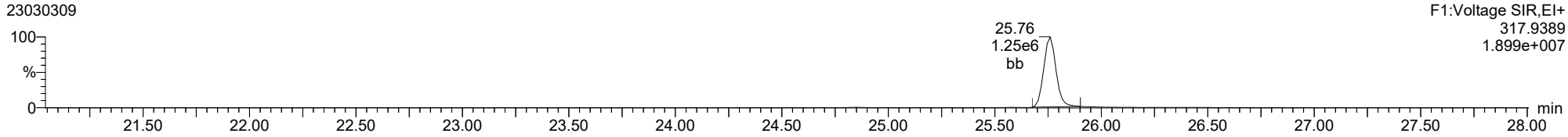

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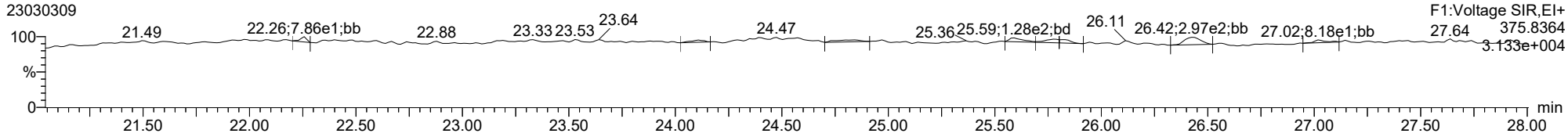

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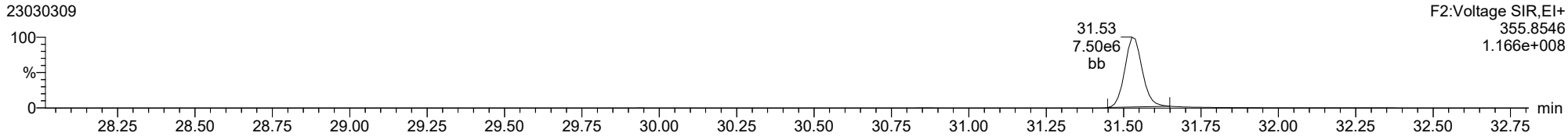
12378-PeCDD



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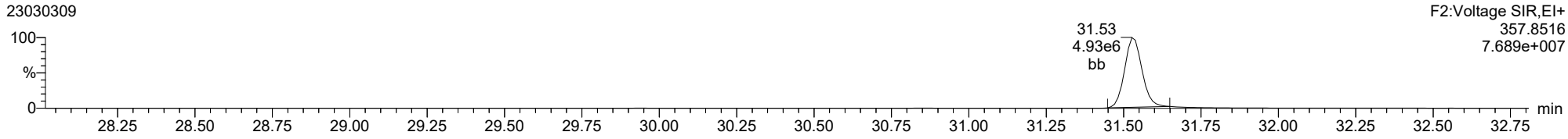

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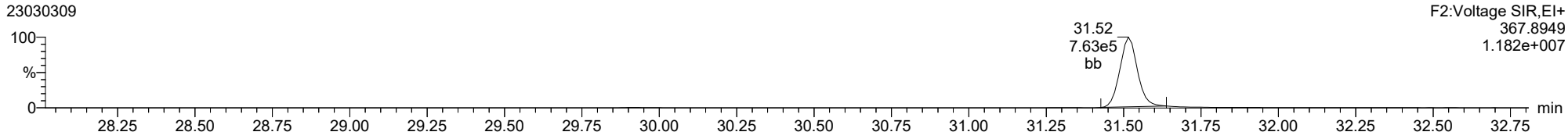

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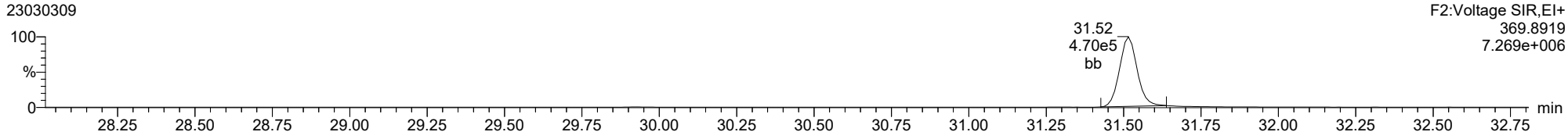
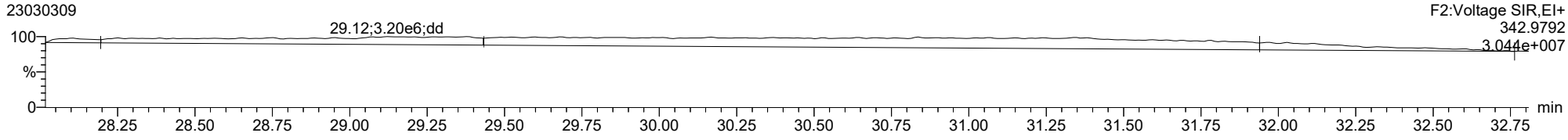


FUNCTION2 PFK



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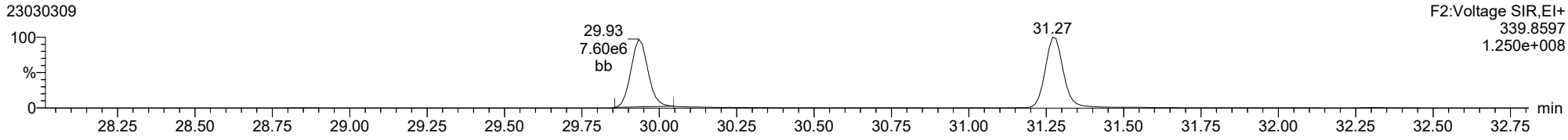
12378-PeCDF



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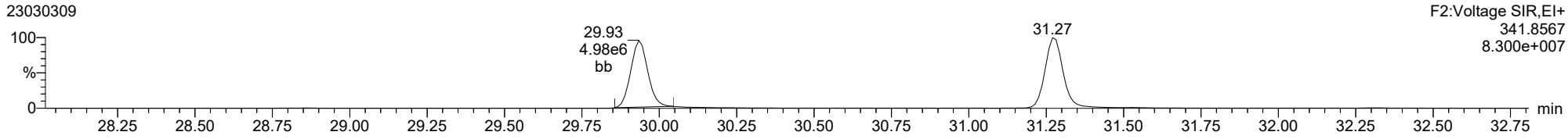

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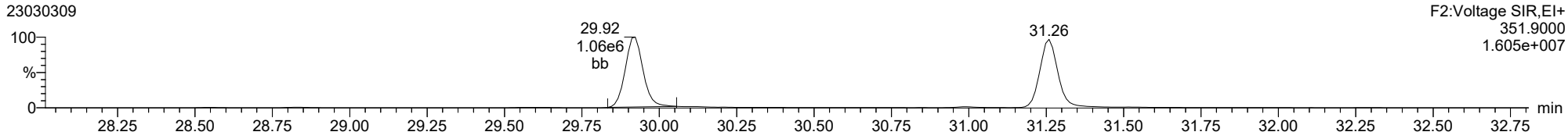

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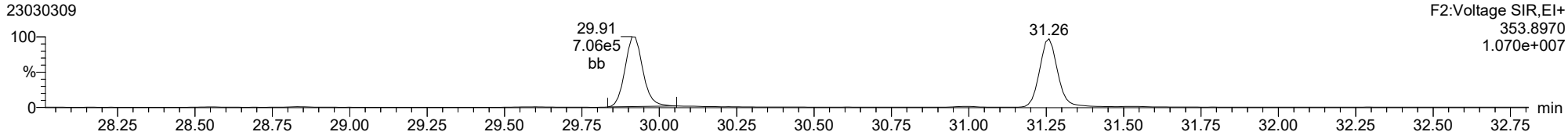

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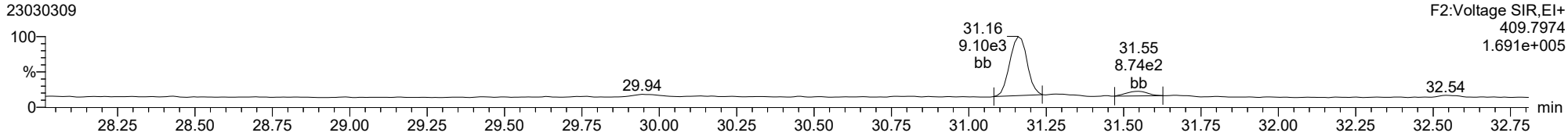

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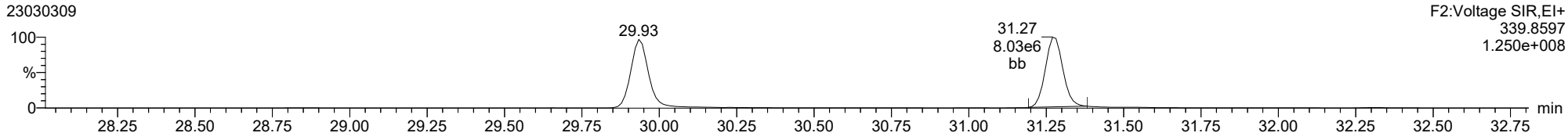
23478-PeCDF



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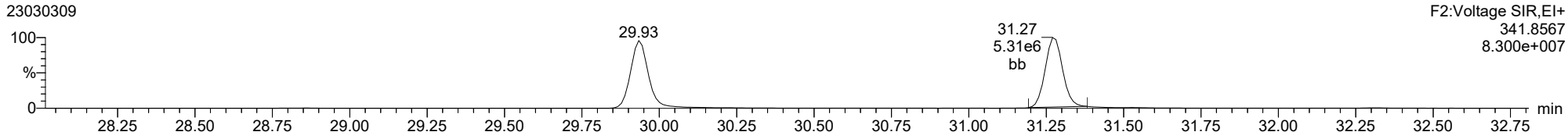

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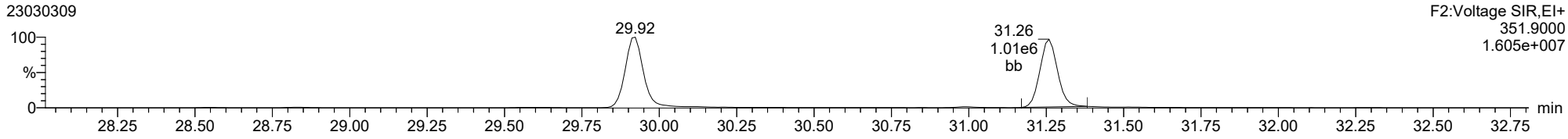

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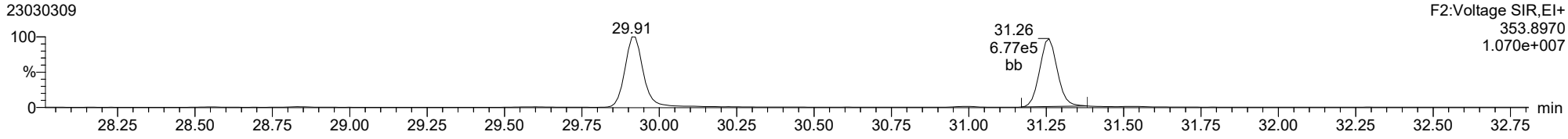

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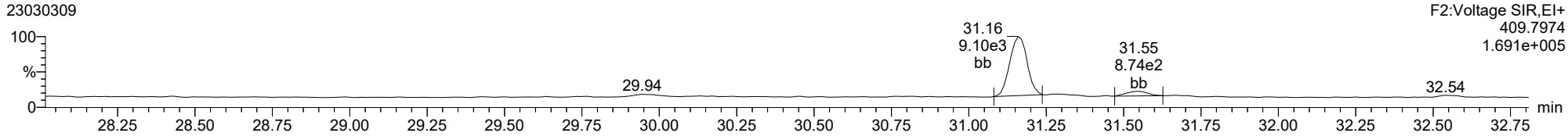

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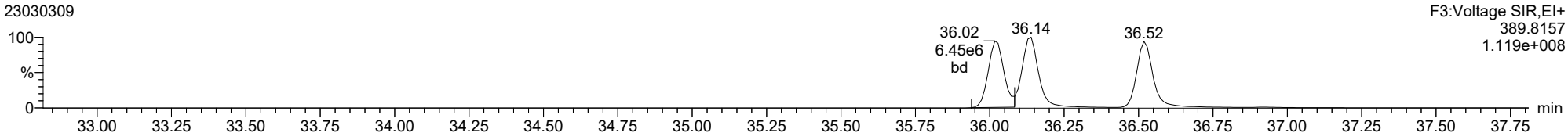

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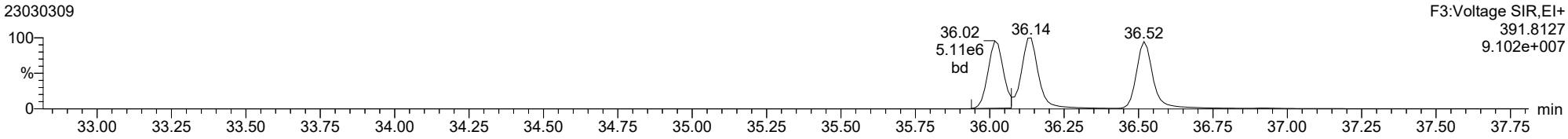

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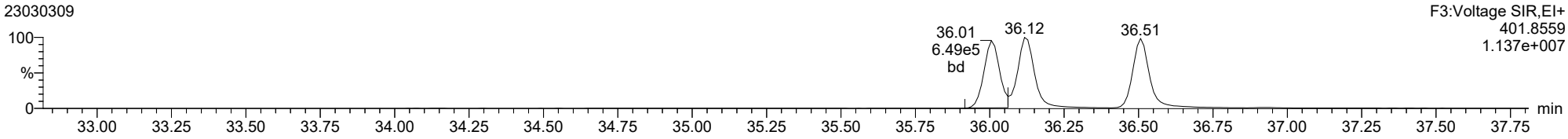

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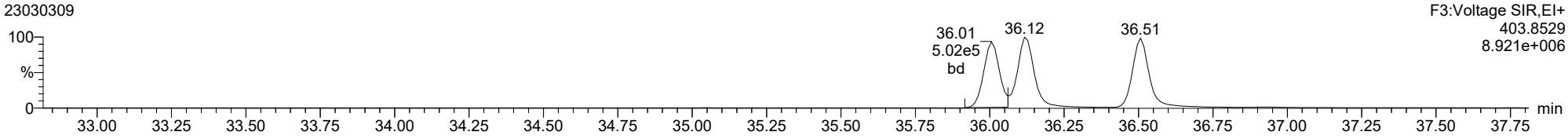
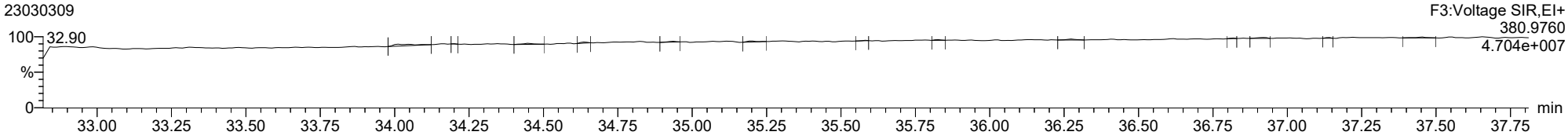


FUNCTION3 PFK



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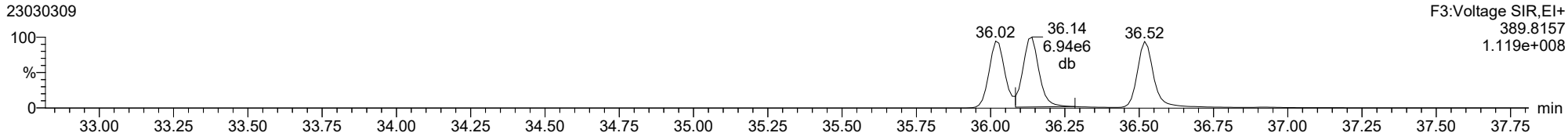

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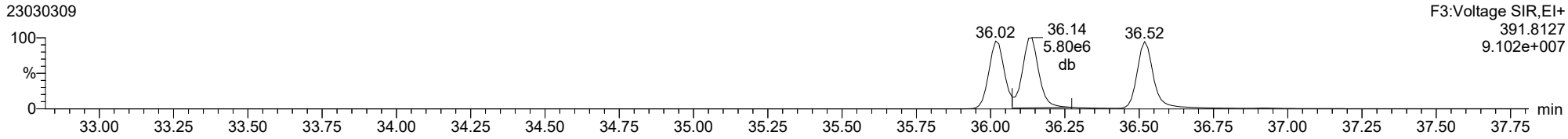

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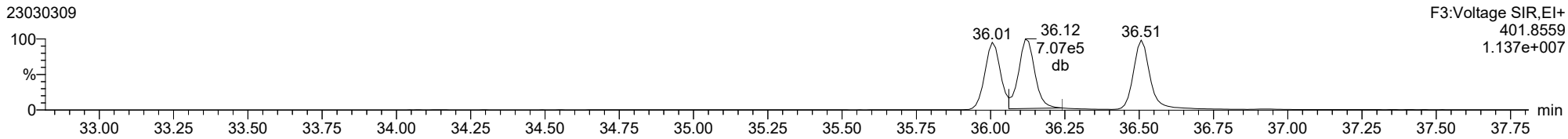

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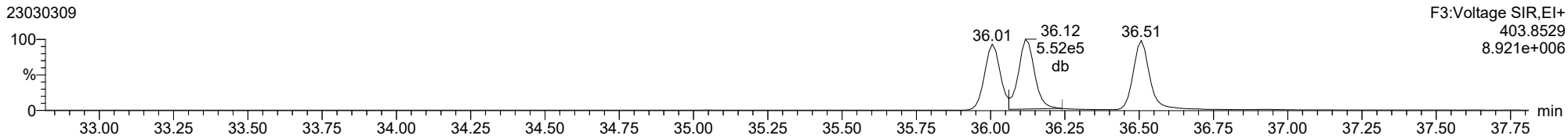

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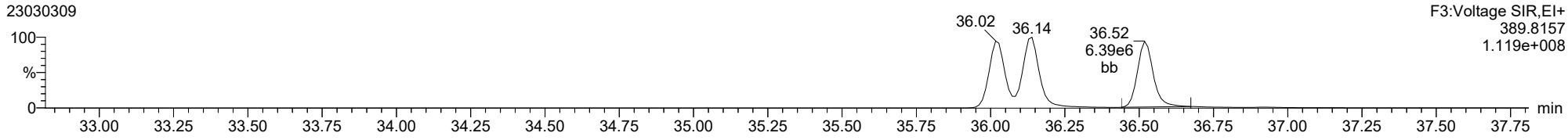

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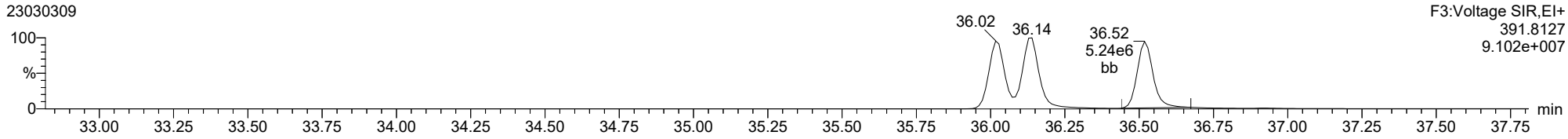

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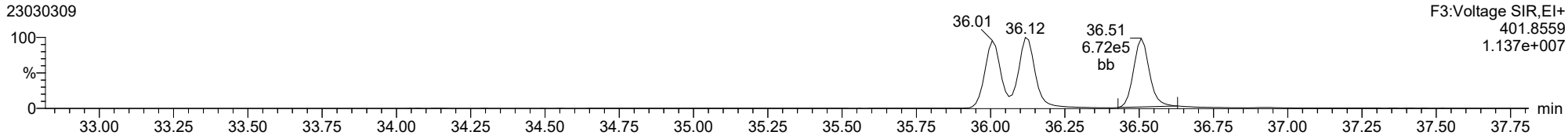

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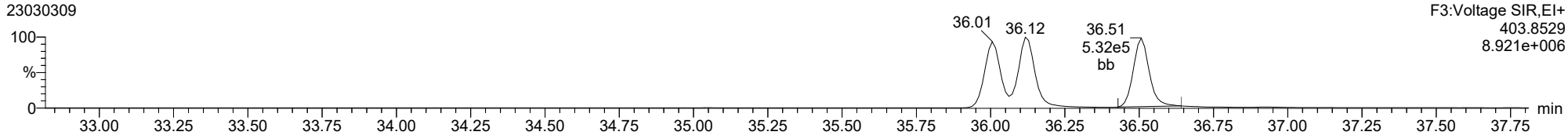

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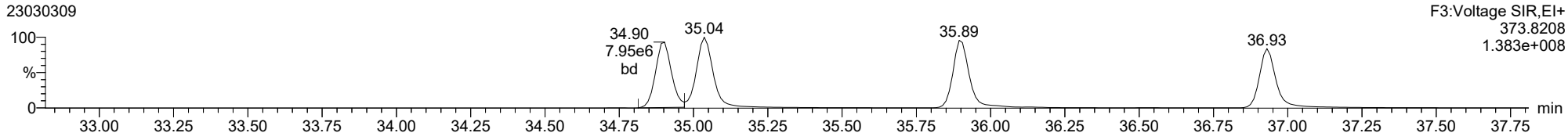
123478-HxCDF



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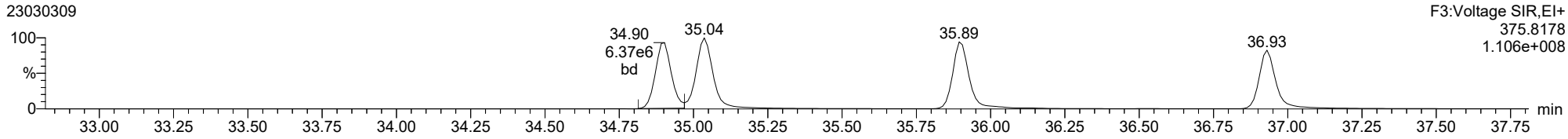

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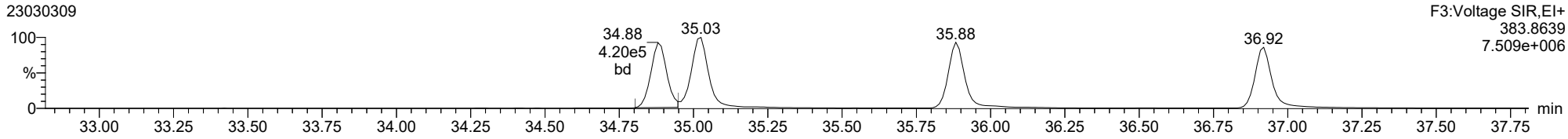

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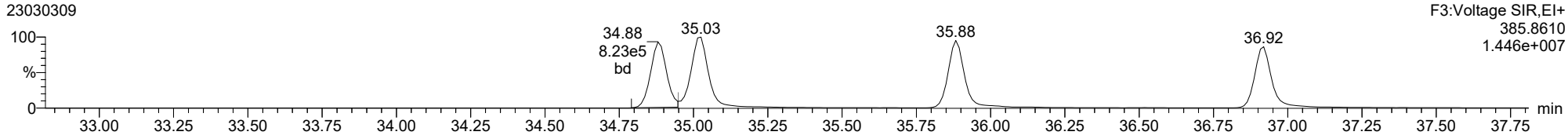
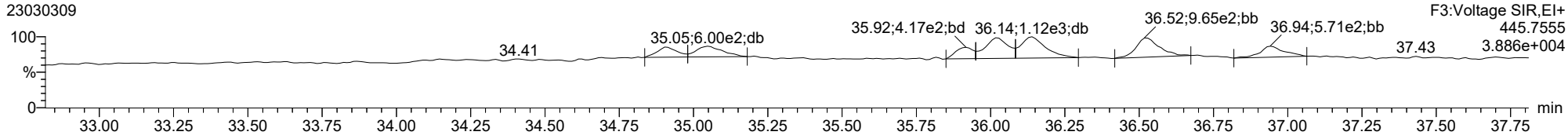


FUNCTION3 OCDPE



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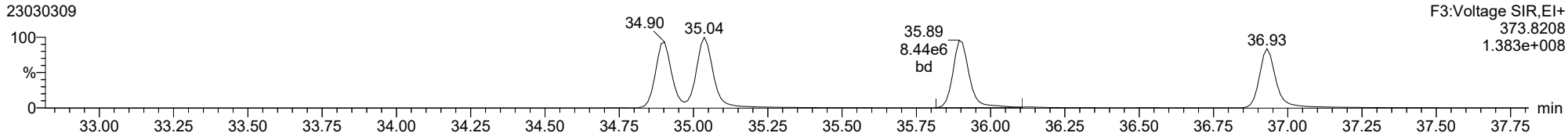
234678-HxCDF



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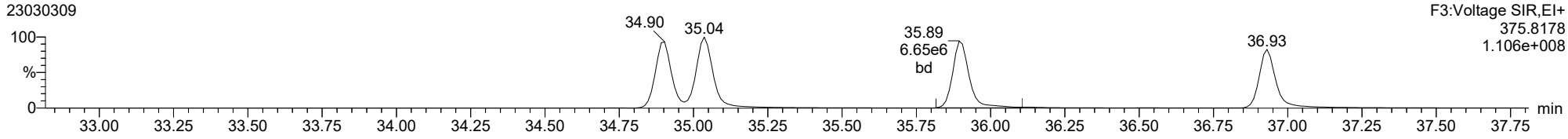

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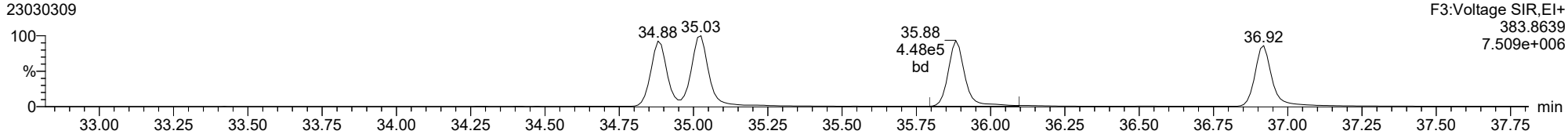

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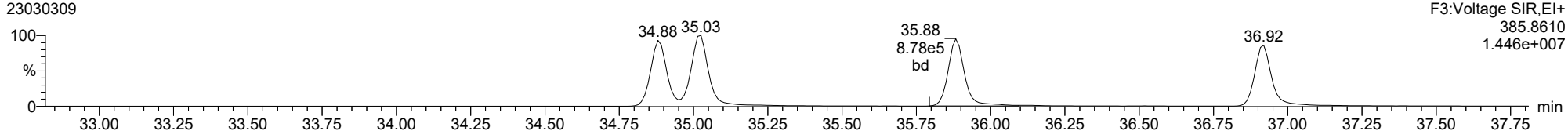

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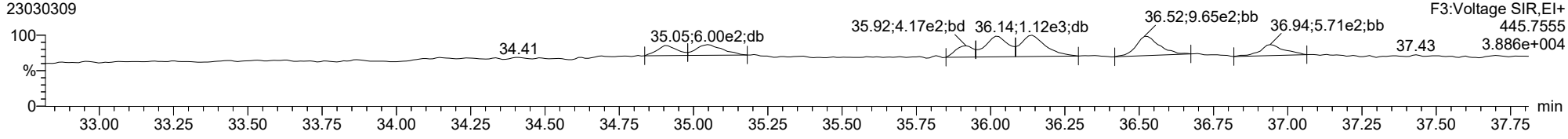

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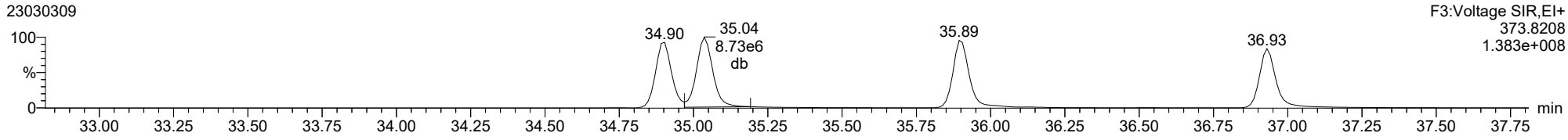
123678-HxCDF



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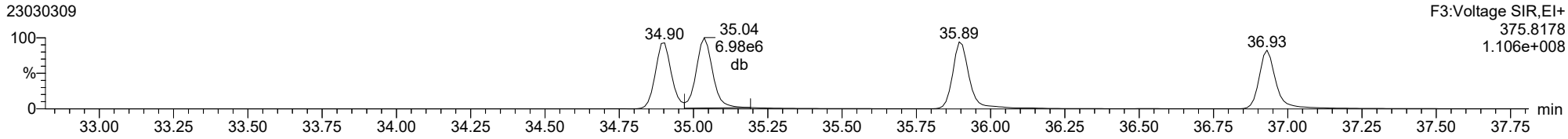

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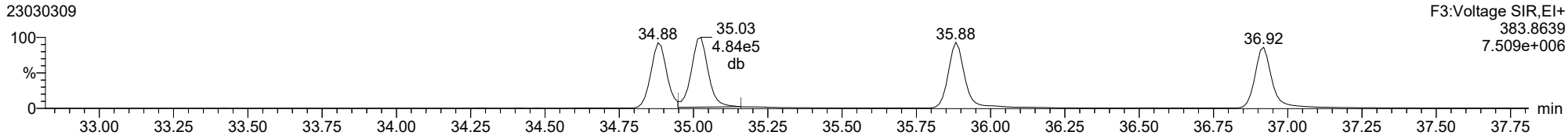

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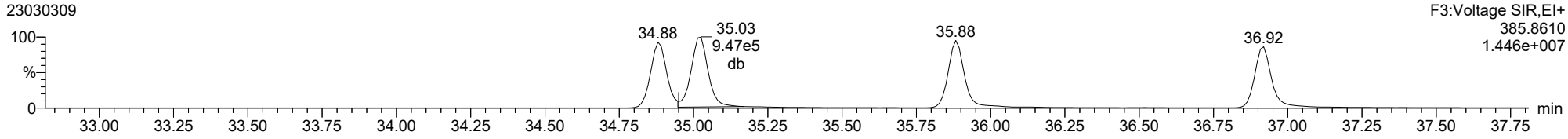
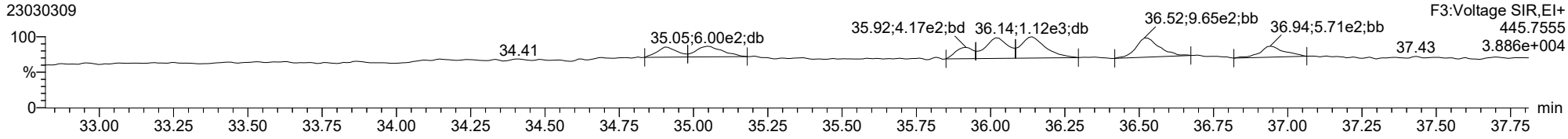


FUNCTION3 OCDPE



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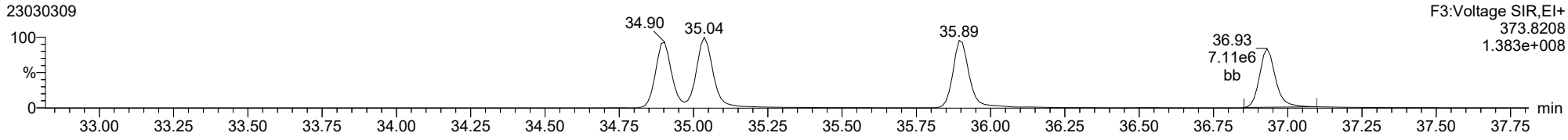

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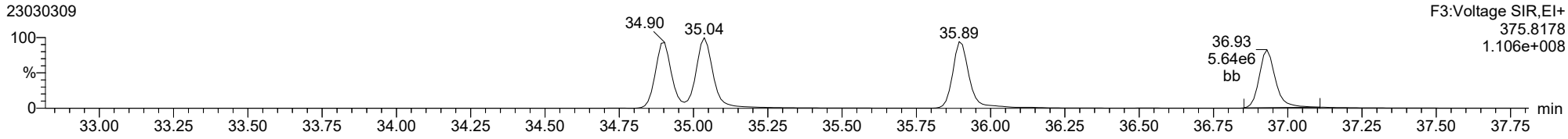

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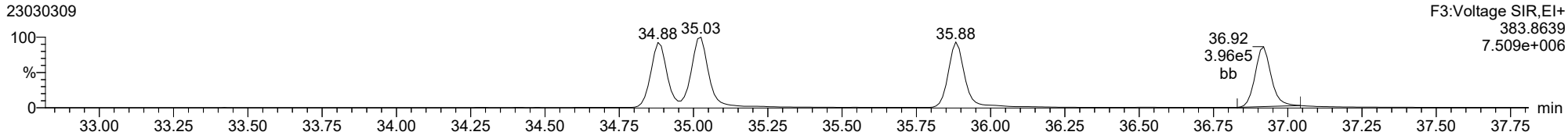

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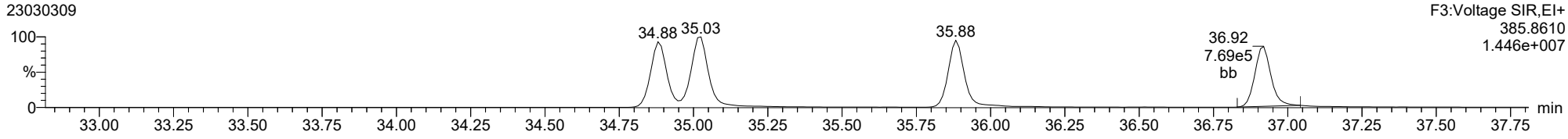
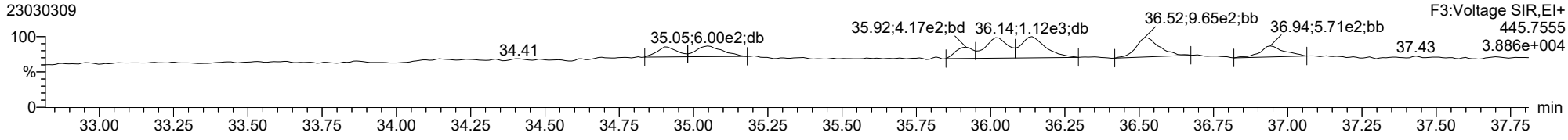


FUNCTION3 OCDPE



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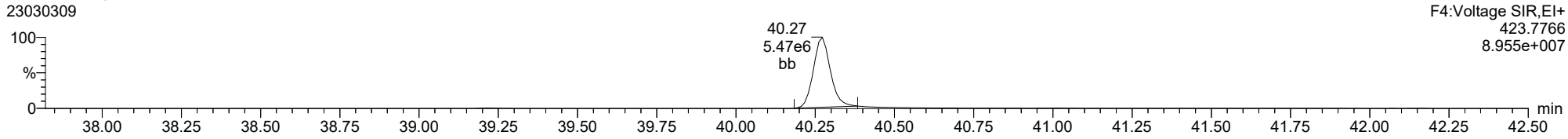
1234678-HpCDD



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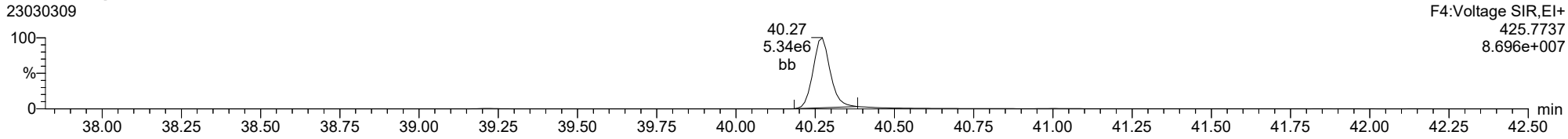

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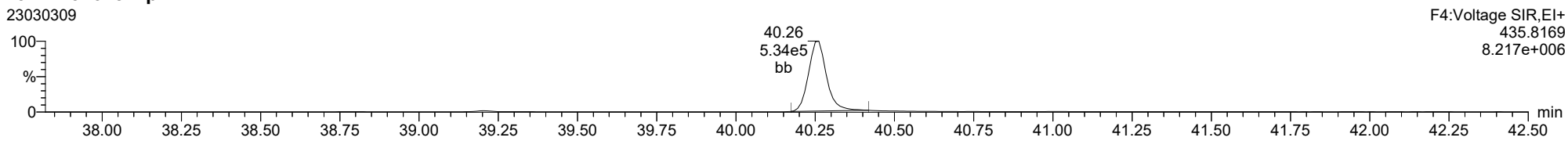

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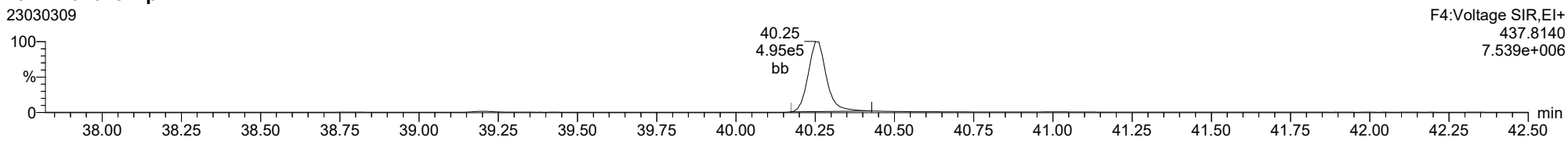
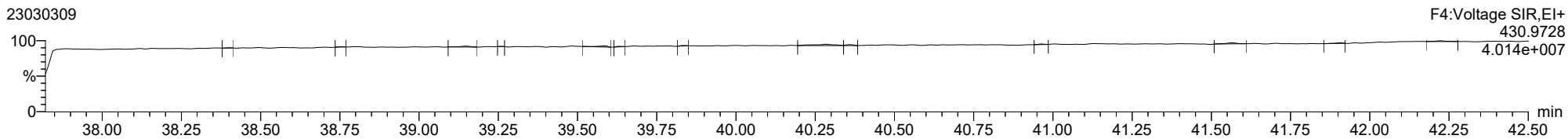


FUNCTION4 PFK



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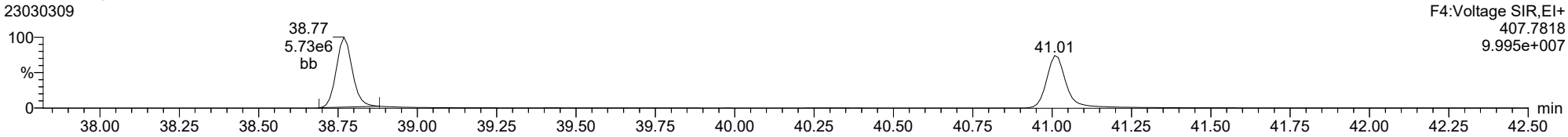

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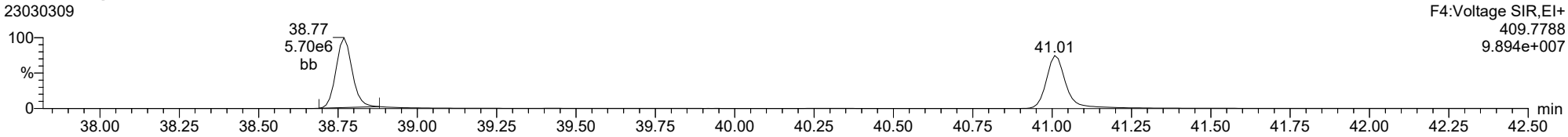

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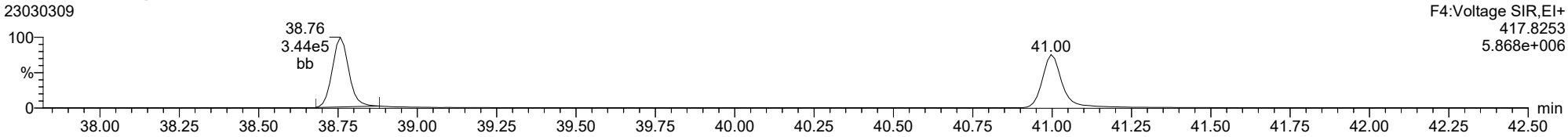

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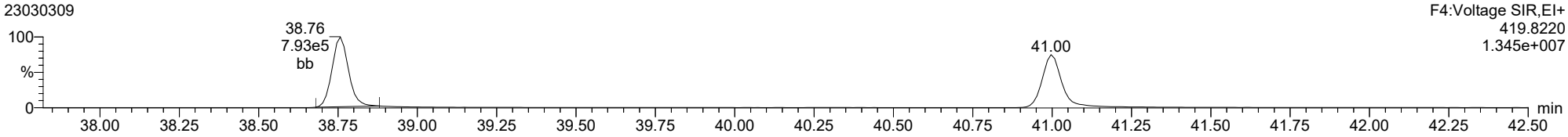
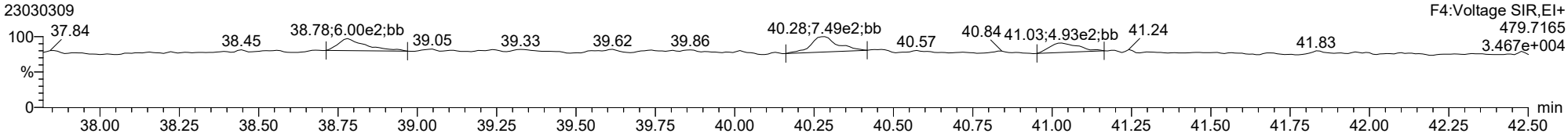


FUNCTION4 NCDPE



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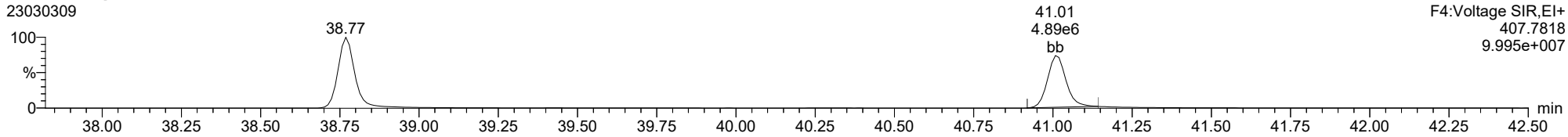

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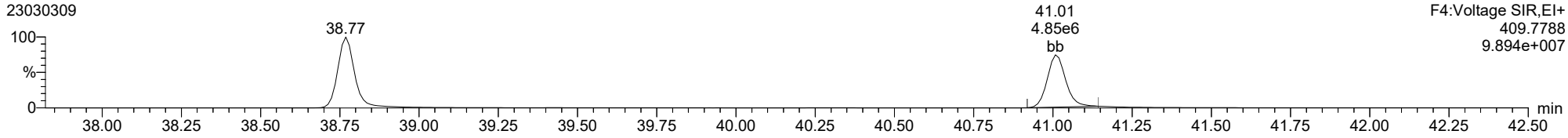

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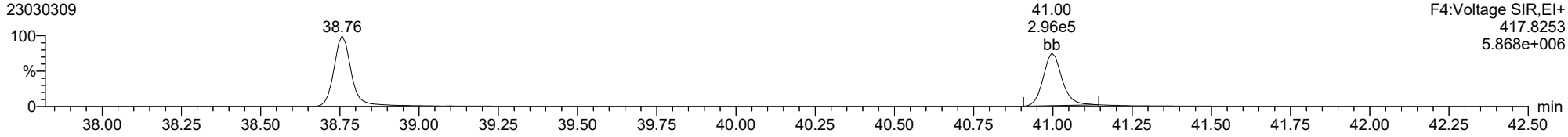

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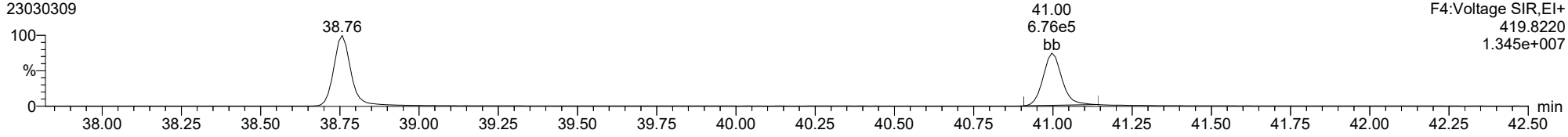
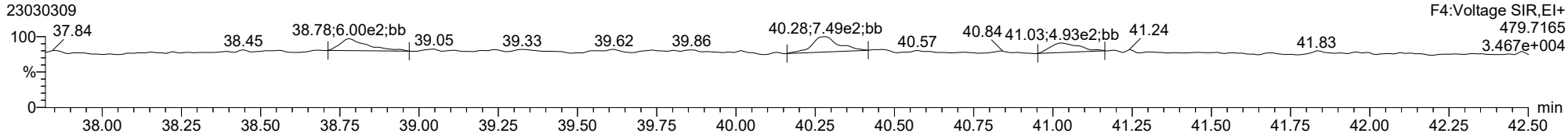


FUNCTION4 NCDPE



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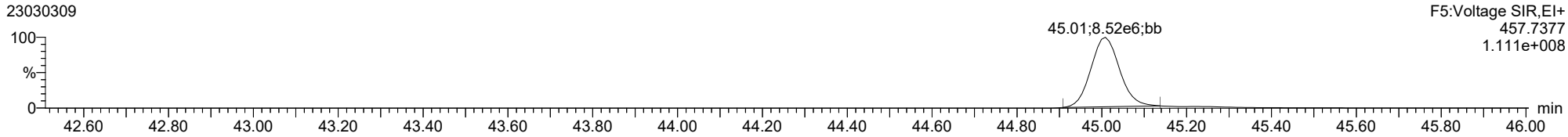

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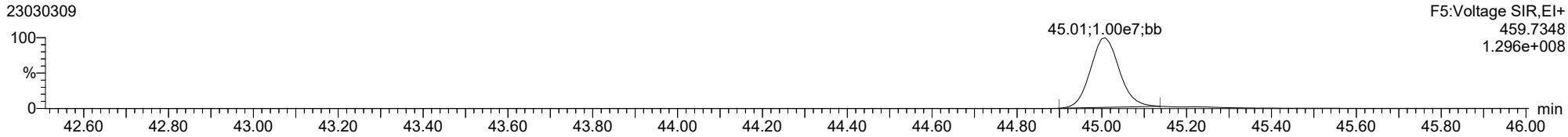

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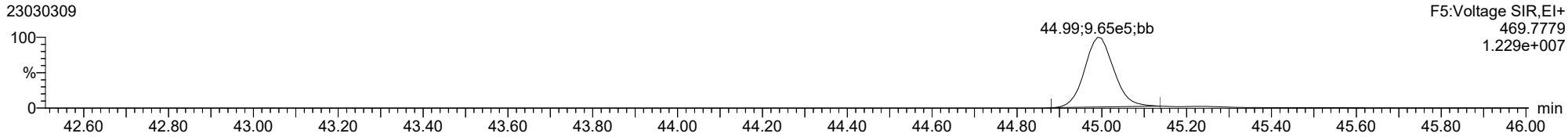

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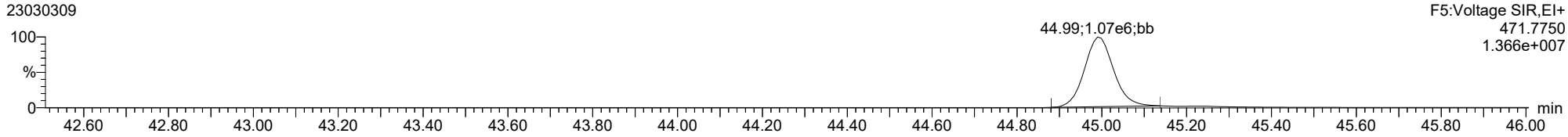
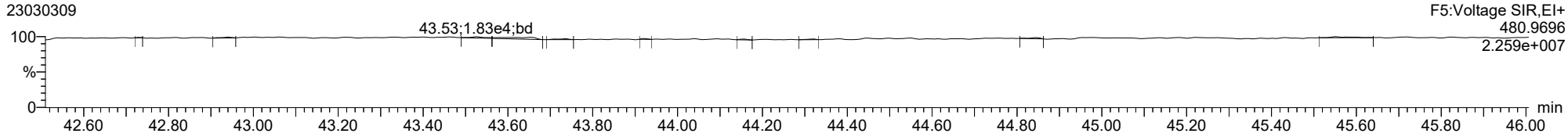


FUNCTION5 PFK



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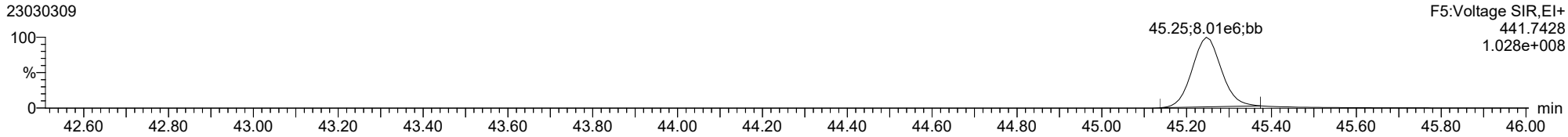

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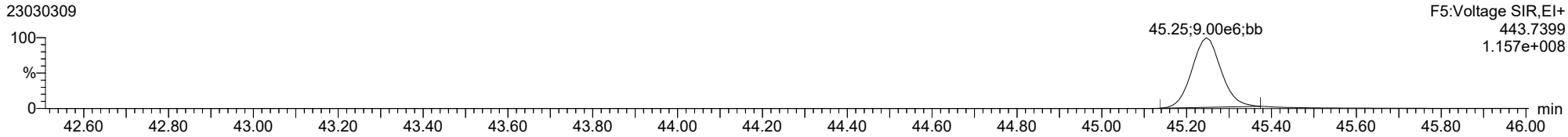
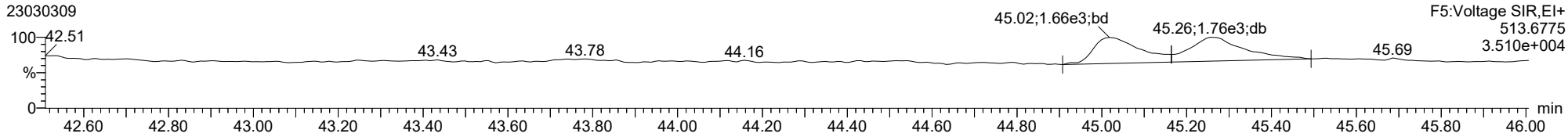


FUNCTION5 DCDPE



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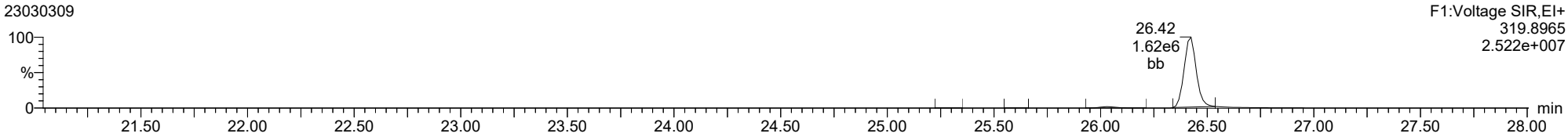

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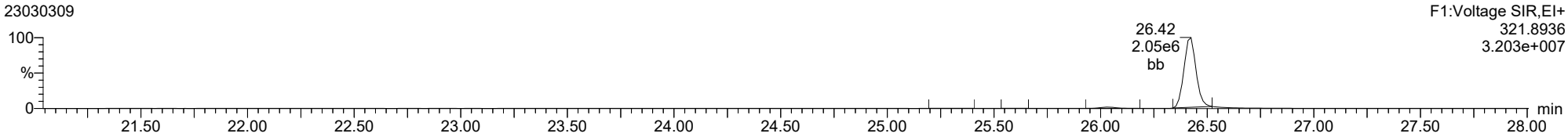

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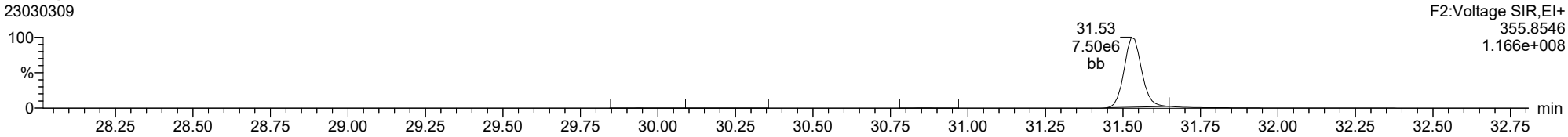

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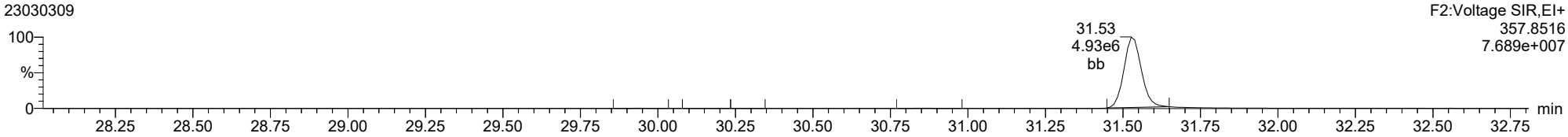

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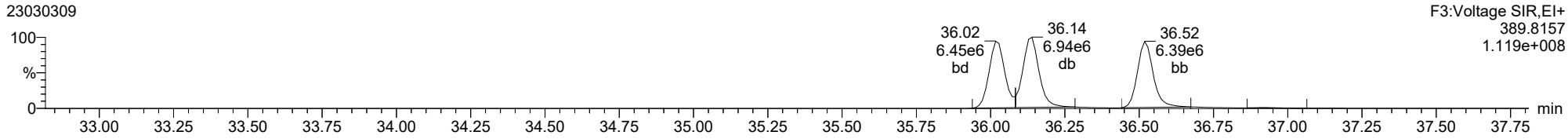

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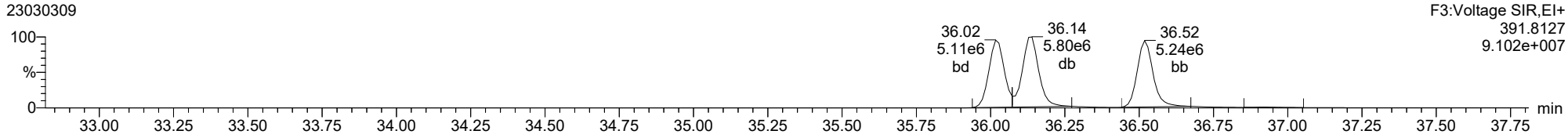

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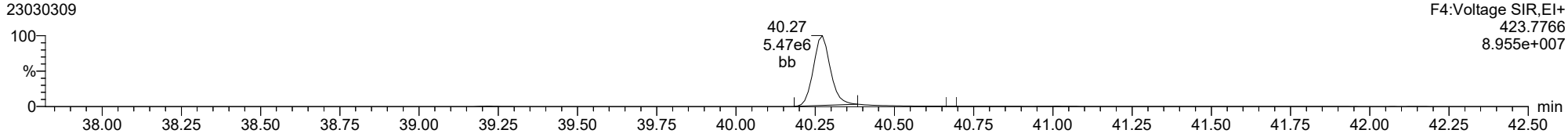

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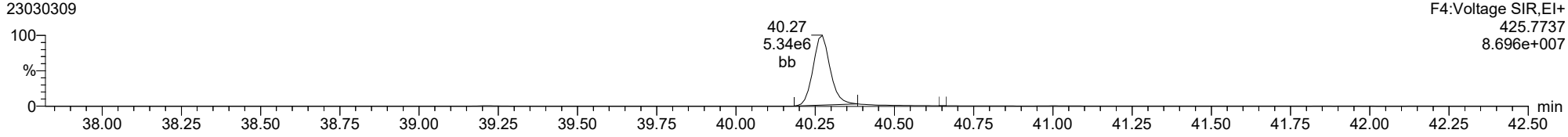

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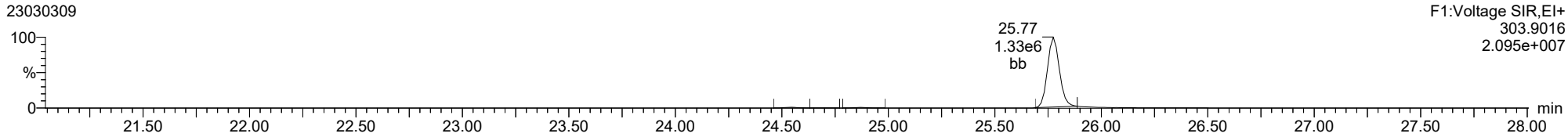
Total-tetrafurans



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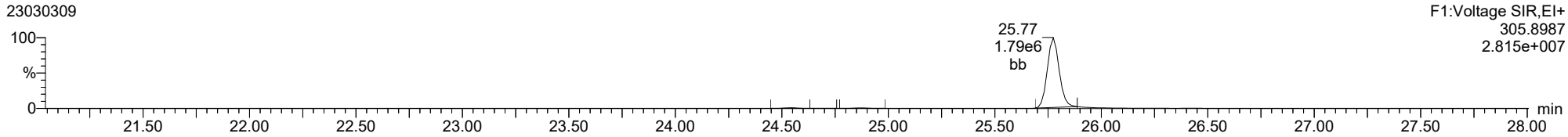

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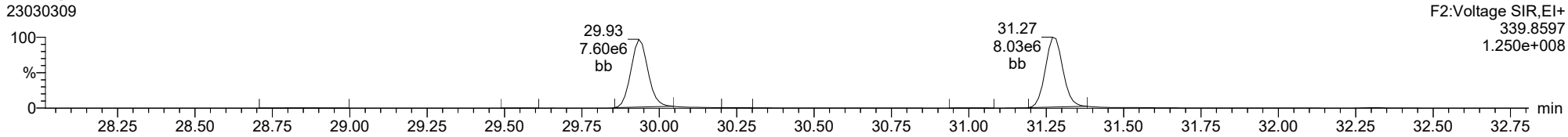

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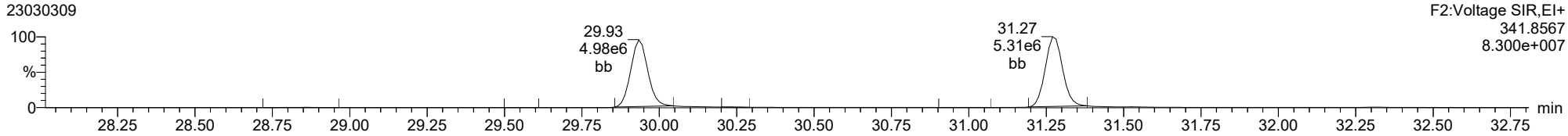

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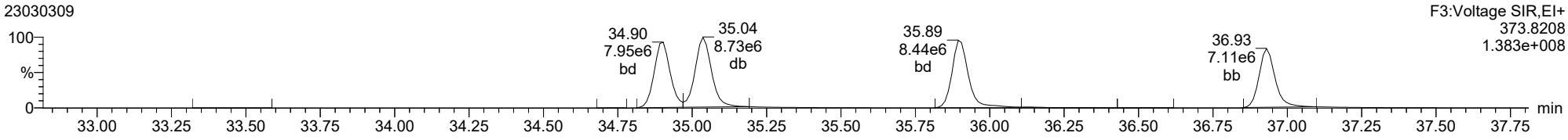

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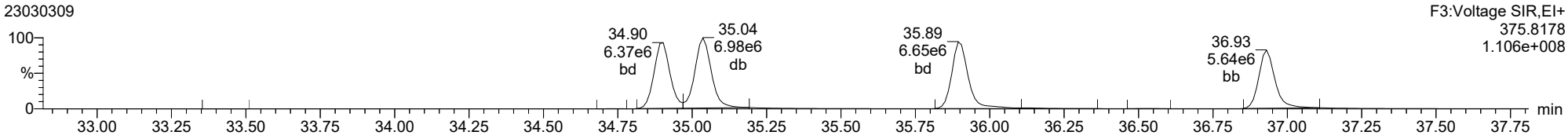

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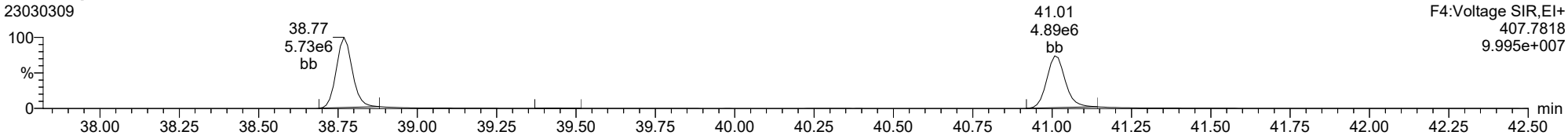

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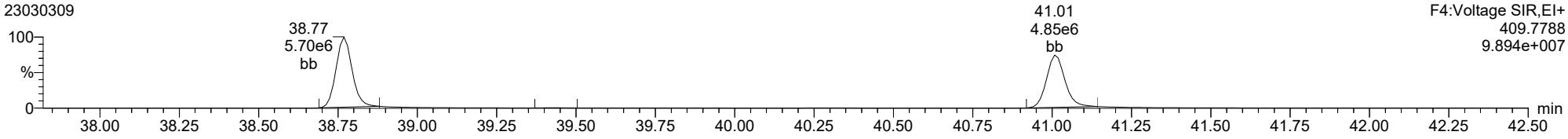

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Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time
Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

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ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	5.338e4	7.452e4	0.702	0.716	0.770	1163	2029	8.36e5	1.13e6	718.7	556.3	NO	bb	bb	9.838
12378-PeCDF	29.934	1.000	2.214e5	1.526e5	0.679	1.451	1.550	3022	2812	3.24e6	2.15e6	1073.8	764.7	NO	bb	bd	51.391
23478-PeCDF	31.271	1.000	2.350e5	1.508e5	0.786	1.559	1.550	3022	2812	3.42e6	2.23e6	1131.6	792.3	NO	bb	bb	48.980
123478-HxCDF	34.903	1.001	2.903e5	2.325e5	1.166	1.248	1.240	3142	2543	4.30e6	3.42e6	1370.1	1344.7	NO	bd	bd	48.245
234678-HxCDF	35.905	1.001	2.873e5	2.291e5	1.140	1.254	1.240	3142	2543	4.27e6	3.38e6	1358.7	1330.7	NO	bb	bb	50.224
123678-HxCDF	35.036	1.001	3.271e5	2.812e5	1.091	1.163	1.240	3142	2543	4.70e6	3.76e6	1497.0	1479.3	NO	db	db	47.992
123789-HxCDF	36.930	1.001	2.403e5	1.952e5	1.137	1.231	1.240	3142	2543	3.49e6	2.77e6	1110.7	1088.1	NO	bb	bb	49.077
1234678-HpCDF	38.769	1.000	2.051e5	2.017e5	1.003	1.017	1.050	2774	2508	3.29e6	3.29e6	1185.4	1309.8	NO	bb	bb	51.838
1234789-HpCDF	41.008	1.000	1.584e5	1.578e5	0.953	1.004	1.050	2774	2508	2.19e6	2.22e6	790.9	884.0	NO	bb	bb	48.461
OCDF	45.237	1.006	2.094e5	2.177e5	0.778	0.962	0.890	1876	1660	2.24e6	2.46e6	1194.3	1483.7	NO	bd	bb	103.506
2378-TCDD	26.424	1.001	6.583e4	8.225e4	1.149	0.800	0.770	1514	1206	9.92e5	1.24e6	654.9	1028.2	NO	bb	bb	9.815
12378-PeCDD	31.538	1.001	2.257e5	1.459e5	1.022	1.547	1.550	2000	2144	3.28e6	2.13e6	1638.2	994.7	NO	bb	bb	48.547
123478-HxCDD	36.016	1.000	2.316e5	1.815e5	0.996	1.276	1.240	2983	1710	3.62e6	3.01e6	1214.5	1762.3	NO	bd	bd	50.799
123678-HxCDD	36.139	1.001	2.694e5	2.159e5	1.001	1.248	1.240	2983	1710	3.76e6	3.05e6	1260.5	1785.9	NO	db	db	50.174
123789-HxCDD	36.518	1.011	2.330e5	1.844e5	0.907	1.263	1.240	2983	1710	3.29e6	2.69e6	1104.0	1571.7	NO	bd	bb	51.608
1234678-HpCDD	40.272	1.001	1.962e5	1.803e5	1.039	1.088	1.050	2922	2339	2.72e6	2.60e6	932.5	1113.0	NO	bd	bb	49.199
OCDD	44.999	1.000	2.234e5	2.618e5	0.920	0.853	0.890	1774	1393	2.65e6	3.06e6	1496.5	2199.2	NO	bb	bb	99.422
13C-2378-TCDF	25.760	1.007	7.988e5	1.054e6	1.620	0.758	0.770	2799	1492	1.21e7	1.60e7	4320.8	10737.9	NO	bb	bb	96.925
13C-12378-PeCDF	29.923	1.169	6.425e5	4.290e5	1.240	1.498	1.550	3398	4585	8.78e6	5.86e6	2583.4	1278.4	NO	bd	bd	73.193
13C-23478-PeCDF	31.259	1.222	6.035e5	3.982e5	1.118	1.515	1.550	3398	4585	8.73e6	5.79e6	2568.3	1261.6	NO	bb	bb	75.943
13C-123478-HxCDF	34.880	0.955	3.186e5	6.107e5	1.168	0.522	0.510	2913	2215	4.74e6	9.25e6	1627.4	4175.4	NO	bd	bd	92.972
13C-123678-HxCDF	35.014	0.959	3.885e5	7.735e5	1.386	0.502	0.510	2913	2215	5.29e6	1.03e7	1816.0	4636.7	NO	dd	db	97.958
13C-234678-HxCDF	35.883	0.983	3.009e5	6.013e5	1.129	0.500	0.510	2913	2215	4.56e6	8.94e6	1567.0	4037.6	NO	bb	bb	93.371
13C-123789-HxCDF	36.908	1.011	2.634e5	5.171e5	0.932	0.509	0.510	2913	2215	3.83e6	7.41e6	1313.2	3346.2	NO	bb	bb	97.906
13C-1234678-HpCDF	38.757	1.062	2.395e5	5.428e5	0.895	0.441	0.440	2666	4327	3.79e6	8.70e6	1422.6	2009.5	NO	bb	bb	102.148
13C-1234789-HpCDF	40.997	1.123	1.971e5	4.875e5	0.770	0.404	0.440	2666	4327	2.64e6	6.15e6	990.0	1422.1	NO	bb	bb	103.953
13C-1234-TCDD	25.591	0.000	5.239e5	6.562e5	1.000	0.798	0.770	2541	1448	8.13e6	1.01e7	3200.8	6994.1	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	5.859e5	7.277e5	1.152	0.805	0.770	2541	1448	8.48e6	1.06e7	3338.5	7327.1	NO	bb	bb	96.583
13C-12378-PeCDD	31.515	1.232	4.640e5	2.850e5	0.829	1.628	1.550	1690	813	6.82e6	4.16e6	4037.7	5122.1	NO	bb	bb	76.570
13C-123478-HxCDD	36.005	0.986	4.566e5	3.601e5	0.995	1.268	1.240	2230	1571	7.33e6	5.72e6	3288.3	3642.7	NO	bd	bd	95.938
13C-123678-HxCDD	36.117	0.989	5.277e5	4.388e5	1.157	1.203	1.240	2230	1571	7.53e6	5.98e6	3378.3	3806.0	NO	db	db	97.660
13C-1234678-HpCDD	40.250	1.102	3.788e5	3.578e5	0.840	1.059	1.050	1327	2781	5.06e6	4.73e6	3813.0	1700.4	NO	bd	bb	102.476
13C-OCDD	44.981	1.232	5.015e5	5.594e5	0.767	0.896	0.890	2228	1562	5.65e6	6.37e6	2536.4	4080.5	NO	bb	bb	161.563
13C-123789-HxCDD	36.507	0.000	4.814e5	3.742e5	1.000	1.287	1.240	2230	1571	7.02e6	5.48e6	3149.1	3490.5	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	1.324e5		1.288			2249		1.92e6		853.0			bb		8.714

Dataset: T:\Autospec\Processed Data Batch\230303IHICV.qld
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Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.271	0.865	6.666e4	8.755e4	0.802	0.761	0.770	1163	2029	1.09e6	1.45e6	933.7	713.4	NO	bb	bb	10.382
1289-TCDF	27.272	1.059	5.306e4	7.400e4	0.678	0.717	0.770	1163	2029	8.00e5	1.11e6	688.3	549.0	NO	bb	db	10.112
13468-PECDF	27.130	0.907	5.428e5	3.536e5	1.246	1.535	1.550	921	1306	8.56e6	5.56e6	9287.8	4254.6	NO	bb	bb	67.124
12389-PECDF	32.307	1.080	2.363e5	1.551e5	0.496	1.524	1.550	3022	2812	3.29e6	2.19e6	1088.1	777.6	NO	bb	bb	73.589
123468-HXCDF	33.231	0.953	3.102e5	2.472e5	1.169	1.255	1.240	3142	2543	4.60e6	3.67e6	1465.3	1443.2	NO	bb	bb	51.304
1368-TCDD	23.557	0.892	6.641e4	8.365e4	1.015	0.794	0.770	1514	1206	1.07e6	1.32e6	704.3	1092.4	NO	bb	bb	11.251
1289-TCDD	27.017	1.023	6.055e4	8.062e4	0.909	0.751	0.770	1514	1206	8.59e5	1.12e6	567.6	932.6	NO	bd	bd	11.826
12479-PECDD	28.819	0.914	4.776e5	3.067e5	2.301	1.557	1.550	2000	2144	4.46e6	2.89e6	2227.8	1348.6	NO	bb	bb	45.504
12389-PECDD	31.928	1.013	2.675e5	1.746e5	1.184	1.532	1.550	2000	2144	3.96e6	2.51e6	1980.6	1171.6	NO	bb	bb	49.870
124679-HXCDD	34.011	0.945	2.545e5	2.054e5	1.115	1.239	1.240	2983	1710	3.72e6	3.05e6	1245.7	1780.9	NO	bb	bb	50.484
1234679-HPCDD	39.225	0.975	2.082e5	2.022e5	1.137	1.029	1.050	2922	2339	3.21e6	3.09e6	1099.8	1322.5	NO	bb	bb	49.010
Total-tetrafurans			1.731e5		0.727			1163		2.72e6							30.332
Total-penta1			5.428e5					921		8.56e6							67.124
Total-pentafurans			7.375e5		0.654			3022		1.06e7							184.995
Total-hexafurans			1.455e6		1.141			3142		2.14e7							246.841
Total-heptafurans			3.635e5		0.978			2774		5.48e6							100.299
Total-Furans			3.482e6		0.922			1163		5.10e7							733.097
Total-tetradioxins			3.292e5		1.024			1514		4.53e6							56.345
Total-pentadioxins			9.708e5		1.502			2000		1.17e7							143.922
Total-hexadioxins			9.885e5		1.005			2983		1.44e7							203.065
Total-heptadioxins			4.044e5		1.088			2922		5.94e6							98.208
Total-Dioxins			2.916e6		1.130			1514		3.92e7							600.962
Total-TEQ			6.398e6					1514		9.02e7							1334.059
FUNCTION1 PFK			0.000e0					539943		0.00e0							
FUNCTION2 PFK			2.253e6					228820		1.84e6							0.000
FUNCTION3 PFK			3.977e4					386595		8.75e5							0.000
FUNCTION4 PFK			7.296e4					280107		2.70e6							
FUNCTION5 PFK			1.323e3					209307		1.46e5							
FUNCTION1 HXCD...			6.633e2					708		9.34e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			5.152e2					1165		9.44e3							0.000
FUNCTION3 OCDPE			5.246e2					459		6.83e3							0.000
FUNCTION4 NCDPE			4.889e2					641		6.04e3							0.000
FUNCTION5 DCDPE			0.000e0					644		0.00e0							

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
2	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
3	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
4	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
2	123468-HXCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
3	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
4	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
5	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
2	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382
4	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
5	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
6	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
7	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035
8	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
9	123468-HXCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
10	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
11	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
12	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992
13	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
14	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461
15	OCDF	45.24	2.094e5	2.177e5	0.778	0.96	0.89	1194.3	YES	NO	bd	bb	103.506
16	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
2	Total-tetradioxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
3	Total-tetradioxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
4	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
5	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
6	Total-tetradioxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
7	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
8	Total-tetradioxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
2	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
3	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
2	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
3	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
4	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
2	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	Total-tetradioxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
2	Total-tetradioxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
3	Total-tetradioxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
4	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
5	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
6	Total-tetradioxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
7	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
8	Total-tetradioxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347
9	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
10	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
11	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504
12	124679-HXCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
13	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
14	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
15	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799
16	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
17	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199
18	OCDD	45.00	2.234e5	2.618e5	0.920	0.85	0.89	1496.5	YES	NO	bb	bb	99.422

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	5.306e4	7.400e4	0.678	0.72	0.77	688.3	YES	NO	bb	db	10.112
2	2378-TCDF	25.77	5.338e4	7.452e4	0.702	0.72	0.77	718.7	YES	NO	bb	bb	9.838
3	1368-TCDF	22.27	6.666e4	8.755e4	0.802	0.76	0.77	933.7	YES	NO	bb	bb	10.382
4	12389-PECDF	32.31	2.363e5	1.551e5	0.496	1.52	1.55	1088.1	YES	NO	bb	bb	73.589
5	23478-PeCDF	31.27	2.350e5	1.508e5	0.786	1.56	1.55	1131.6	YES	NO	bb	bb	48.980
6	12378-PeCDF	29.93	2.214e5	1.526e5	0.679	1.45	1.55	1073.8	YES	NO	bb	bd	51.391
7	Total-pentafurans	28.79	4.479e4	3.002e4	0.654	1.49	1.55	225.2	YES	NO	bb	bb	11.035
8	123478-HxCDF	34.90	2.903e5	2.325e5	1.166	1.25	1.24	1370.1	YES	NO	bd	bd	48.245
9	123468-HXCDF	33.23	3.102e5	2.472e5	1.169	1.26	1.24	1465.3	YES	NO	bb	bb	51.304
10	123789-HxCDF	36.93	2.403e5	1.952e5	1.137	1.23	1.24	1110.7	YES	NO	bb	bb	49.077
11	234678-HxCDF	35.91	2.873e5	2.291e5	1.140	1.25	1.24	1358.7	YES	NO	bb	bb	50.224
12	123678-HxCDF	35.04	3.271e5	2.812e5	1.091	1.16	1.24	1497.0	YES	NO	db	db	47.992
13	1234678-HpCDF	38.77	2.051e5	2.017e5	1.003	1.02	1.05	1185.4	YES	NO	bb	bb	51.838
14	1234789-HpCDF	41.01	1.584e5	1.578e5	0.953	1.00	1.05	790.9	YES	NO	bb	bb	48.461
15	OCDF	45.24	2.094e5	2.177e5	0.778	0.96	0.89	1194.3	YES	NO	bd	bb	103.506
16	13468-PECDF	27.13	5.428e5	3.536e5	1.246	1.54	1.55	9287.8	YES	NO	bb	bb	67.124
17	Total-tetradioxins	25.60	3.327e4	3.983e4	1.024	0.84	0.77	333.8	YES	NO	bd	bb	5.433
18	Total-tetradioxins	25.04	8.004e2	1.202e3	1.024	0.67	0.77	7.4	YES	NO	bb	db	0.149
19	Total-tetradioxins	24.74	2.704e3	4.097e3	1.024	0.66	0.77	17.7	YES	NO	bb	bd	0.506
20	1368-TCDD	23.56	6.641e4	8.365e4	1.015	0.79	0.77	704.3	YES	NO	bb	bb	11.251
21	1289-TCDD	27.02	6.055e4	8.062e4	0.909	0.75	0.77	567.6	YES	NO	bd	bd	11.826
22	Total-tetradioxins	26.76	1.054e2	1.391e2	1.024	0.76	0.77	2.1	NO	NO	bb	bb	0.018
23	2378-TCDD	26.42	6.583e4	8.225e4	1.149	0.80	0.77	654.9	YES	NO	bb	bb	9.815
24	Total-tetradioxins	26.10	9.949e4	1.339e5	1.024	0.74	0.77	703.4	YES	NO	bb	bb	17.347
25	12389-PECDD	31.93	2.675e5	1.746e5	1.184	1.53	1.55	1980.6	YES	NO	bb	bb	49.870
26	12378-PeCDD	31.54	2.257e5	1.459e5	1.022	1.55	1.55	1638.2	YES	NO	bb	bb	48.547
27	12479-PECDD	28.82	4.776e5	3.067e5	2.301	1.56	1.55	2227.8	YES	NO	bb	bb	45.504
28	124679-HXCDD	34.01	2.545e5	2.054e5	1.115	1.24	1.24	1245.7	YES	NO	bb	bb	50.484
29	123789-HxCDD	36.52	2.330e5	1.844e5	0.907	1.26	1.24	1104.0	YES	NO	bd	bb	51.608
30	123678-HxCDD	36.14	2.694e5	2.159e5	1.001	1.25	1.24	1260.5	YES	NO	db	db	50.174
31	123478-HxCDD	36.02	2.316e5	1.815e5	0.996	1.28	1.24	1214.5	YES	NO	bd	bd	50.799
32	1234679-HPCDD	39.23	2.082e5	2.022e5	1.137	1.03	1.05	1099.8	YES	NO	bb	bb	49.010
33	1234678-HpCDD	40.27	1.962e5	1.803e5	1.039	1.09	1.05	932.5	YES	NO	bd	bb	49.199
34	OCDD	45.00	2.234e5	2.618e5	0.920	0.85	0.89	1496.5	YES	NO	bb	bb	99.422

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.14	2.253e6					8.0	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.08	3.977e4					2.3	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.32	4.162e3					0.8	NO		bb		
2	FUNCTION4 PFK	40.68	1.340e4					1.2	NO		bb		
3	FUNCTION4 PFK	40.50	1.024e4					1.3	NO		bb		
4	FUNCTION4 PFK	40.07	1.056e4					1.2	NO		bb		
5	FUNCTION4 PFK	39.50	1.007e4					1.4	NO		bb		
6	FUNCTION4 PFK	42.14	1.085e4					1.0	NO		bb		
7	FUNCTION4 PFK	42.10	6.400e3					1.1	NO		bb		
8	FUNCTION4 PFK	41.87	1.885e3					0.6	NO		bb		
9	FUNCTION4 PFK	41.61	5.389e3					0.9	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.23	1.323e3					0.7	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	26.55	1.589e2					2.0	NO		db		0.000
2	FUNCTION1 HXCD...	26.42	1.755e2					3.2	YES		bd		0.000
3	FUNCTION1 HXCD...	25.59	9.854e1					1.9	NO		bb		0.000
4	FUNCTION1 HXCD...	23.87	7.096e1					1.9	NO		bb		0.000
5	FUNCTION1 HXCD...	23.56	8.003e1					2.4	NO		bb		0.000
6	FUNCTION1 HXCD...	22.40	7.940e1					1.8	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.33	1.101e2					1.7	NO		bb		0.000
2	FUNCTION2 HPCD...	28.89	7.875e1					1.7	NO		bb		0.000
3	FUNCTION2 HPCD...	31.17	3.263e2					4.7	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	1.586e2					5.0	YES		bb		0.000
2	FUNCTION3 OCDPE	36.13	1.909e2					4.9	YES		db		0.000
3	FUNCTION3 OCDPE	35.99	1.751e2					5.1	YES		bd		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	41.06	1.247e2					2.2	NO		db		0.000
2	FUNCTION4 NCDPE	40.94	7.187e1					1.7	NO		bd		0.000
3	FUNCTION4 NCDPE	40.37	7.003e1					1.7	NO		db		0.000
4	FUNCTION4 NCDPE	40.26	2.223e2					3.8	YES		bd		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Monday, March 06, 2023 14:47:19 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
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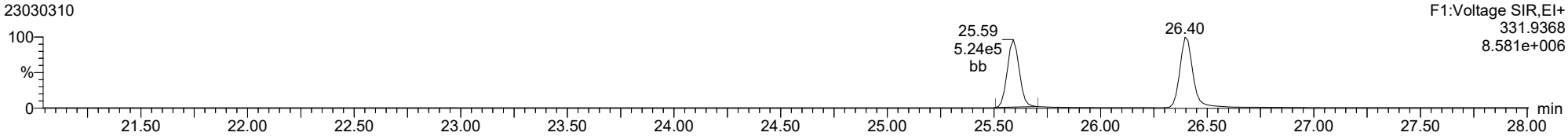
ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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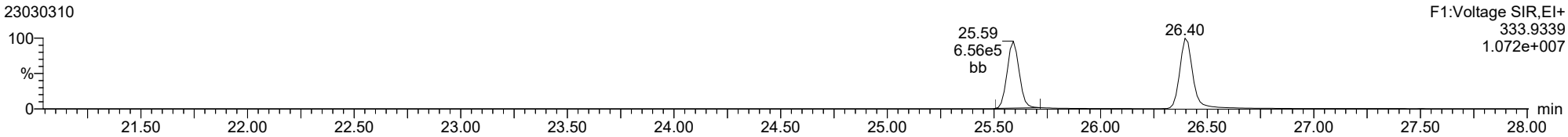
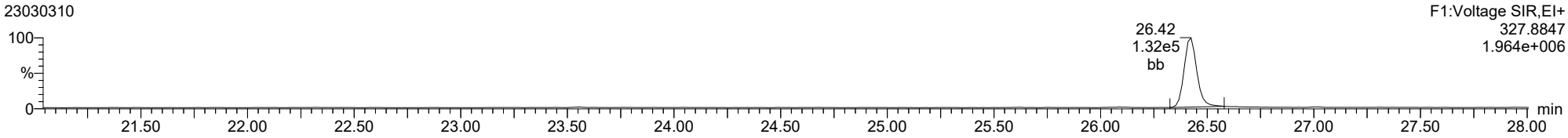


37CL-2378-TCDD



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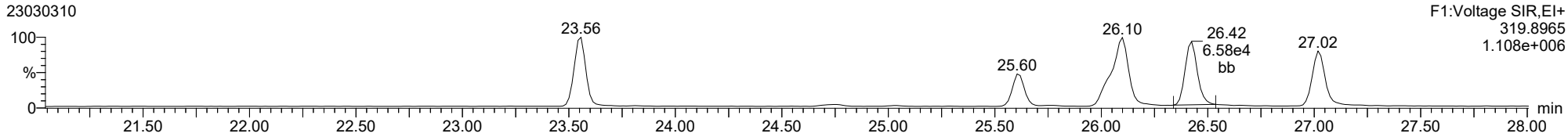

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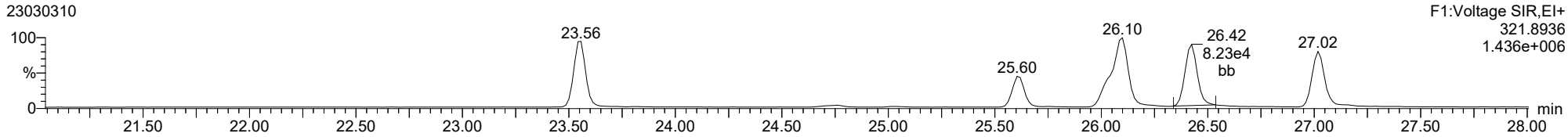

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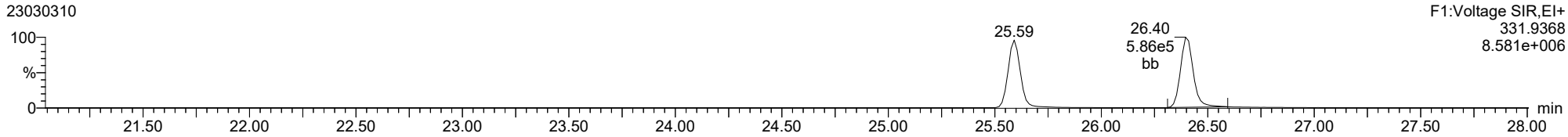

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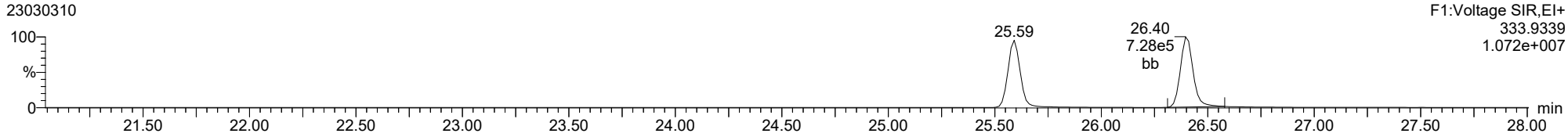

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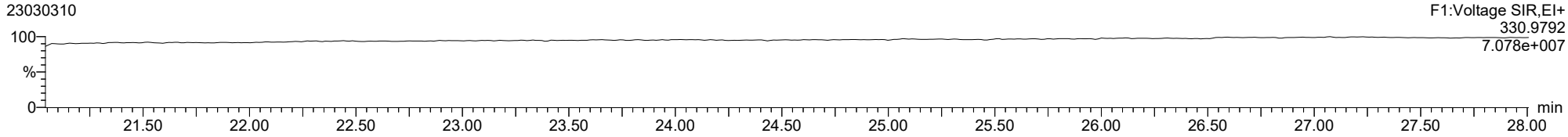

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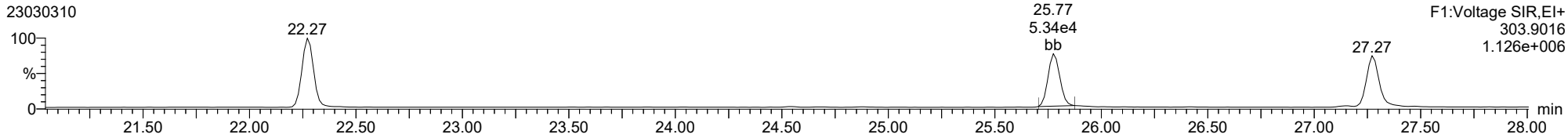

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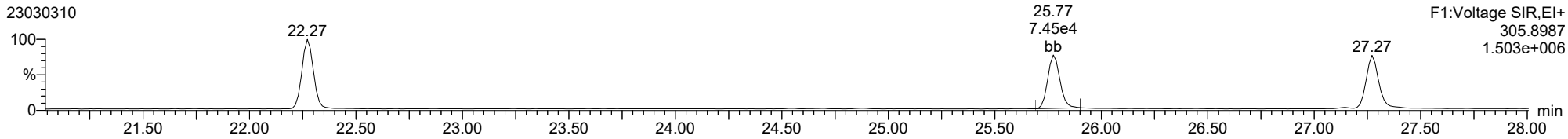

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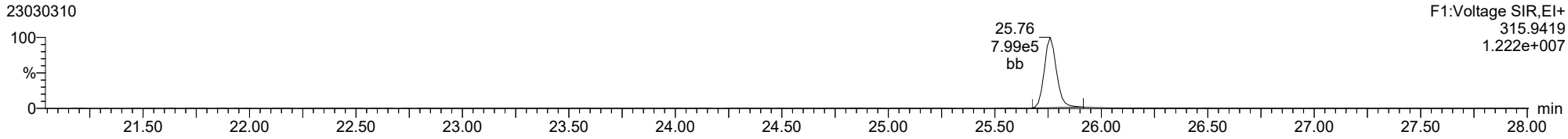

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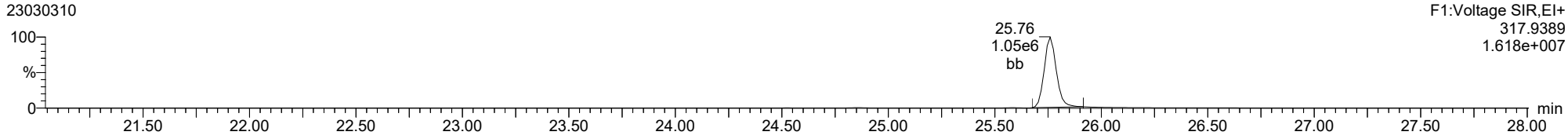
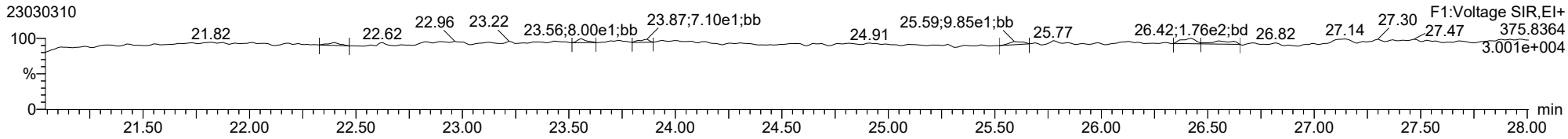


FUNCTION1 HXCDPE



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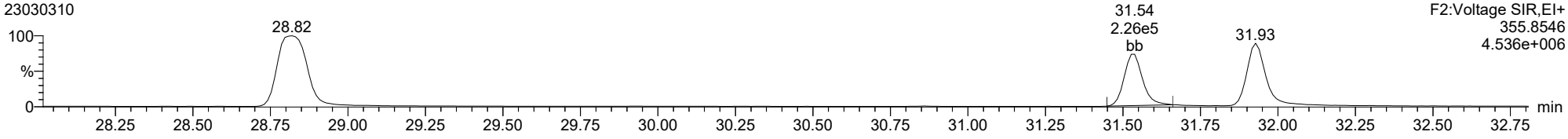

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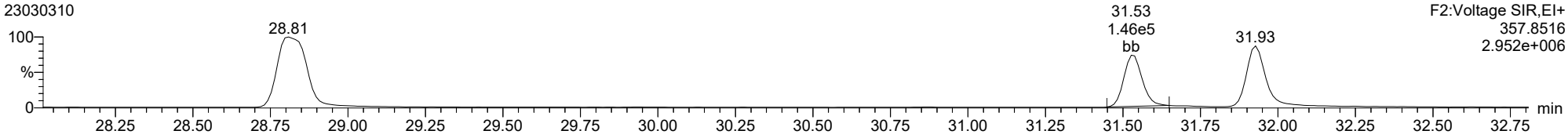

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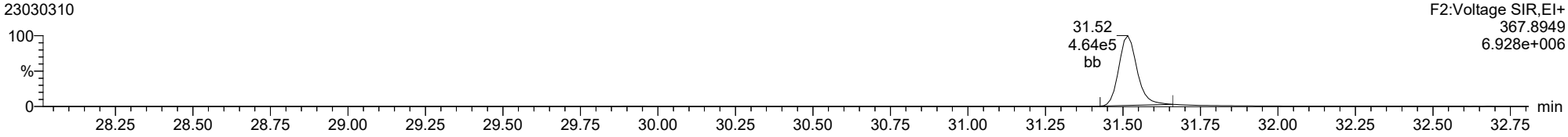

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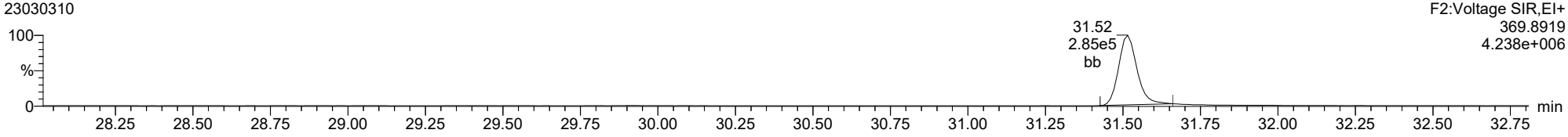

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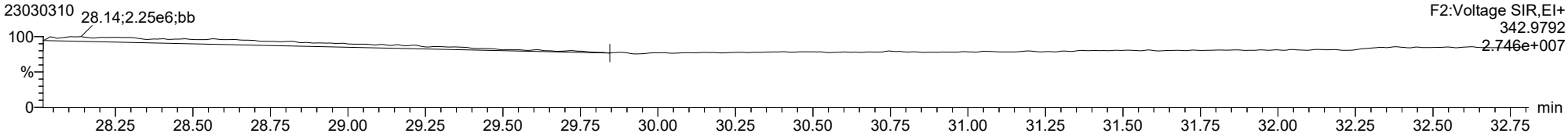

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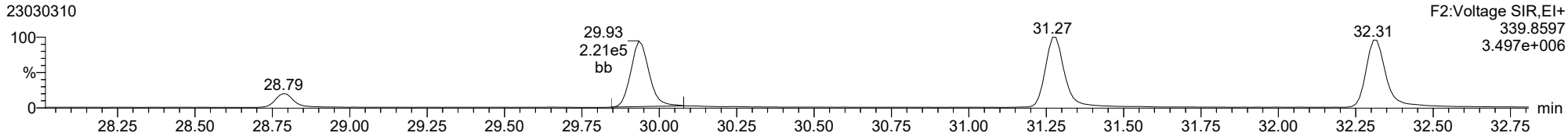

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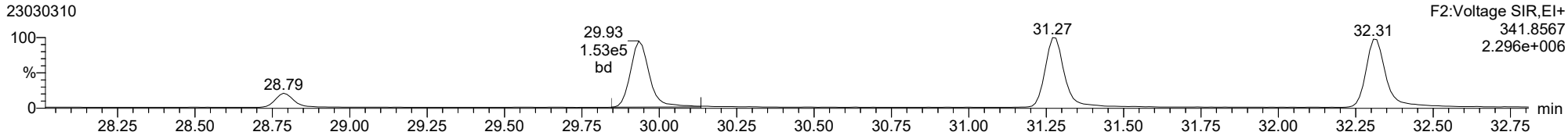

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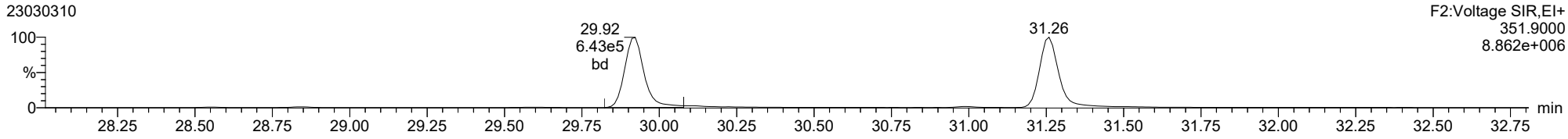

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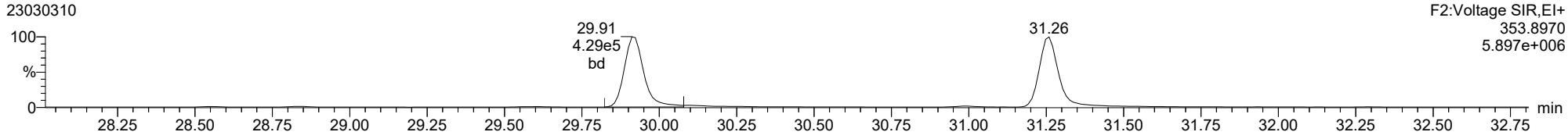
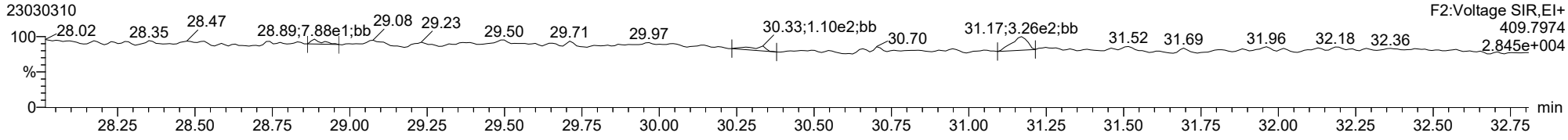


FUNCTION2 HPCDPE



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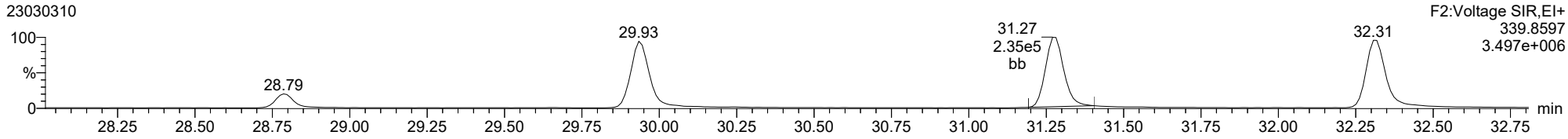
23478-PeCDF



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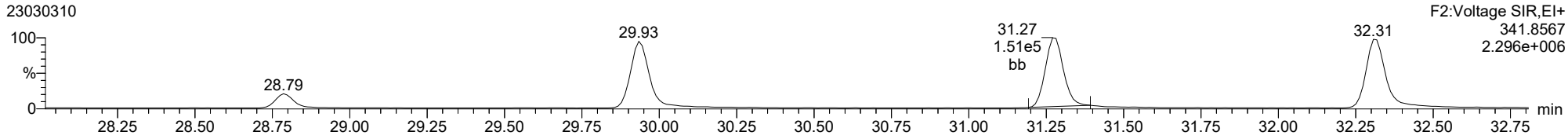

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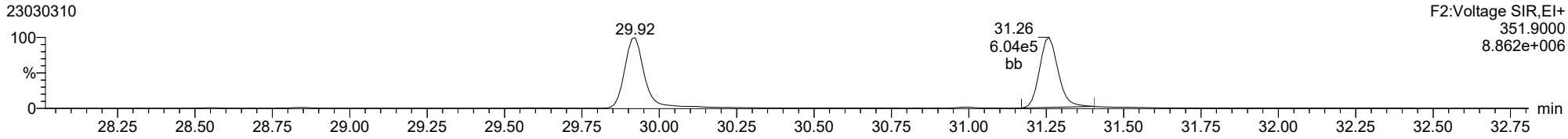

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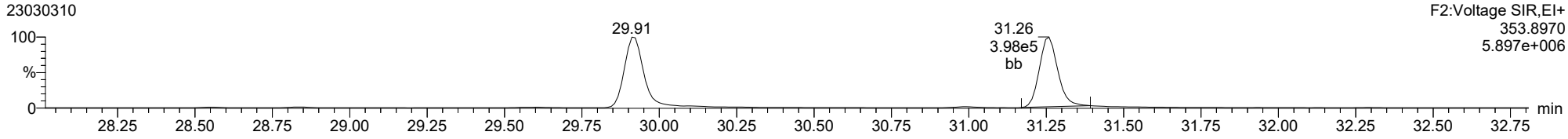
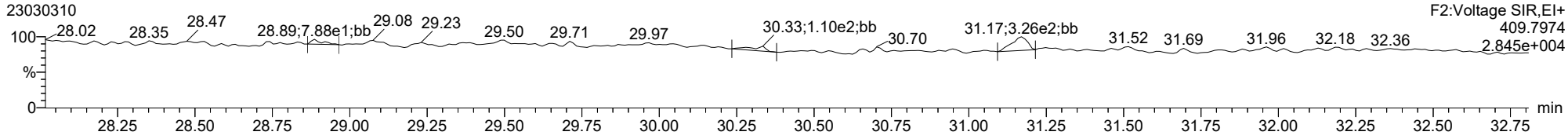


FUNCTION2 HPCDPE



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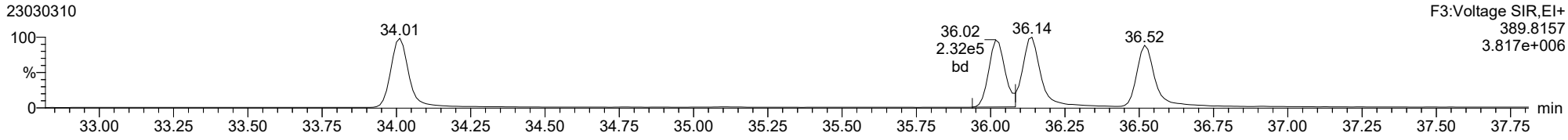
123478-HxCDD



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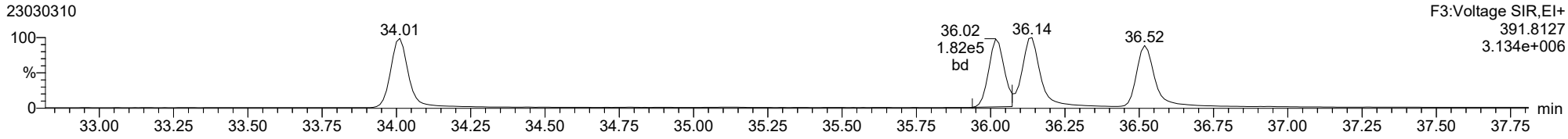

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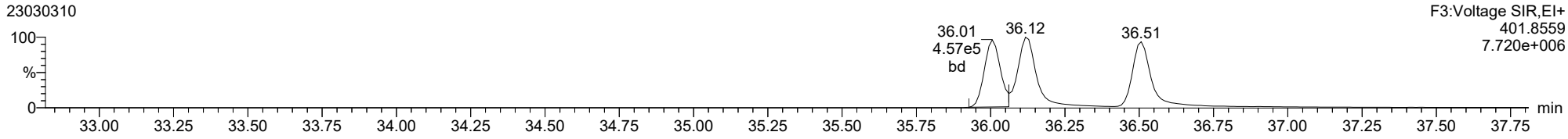

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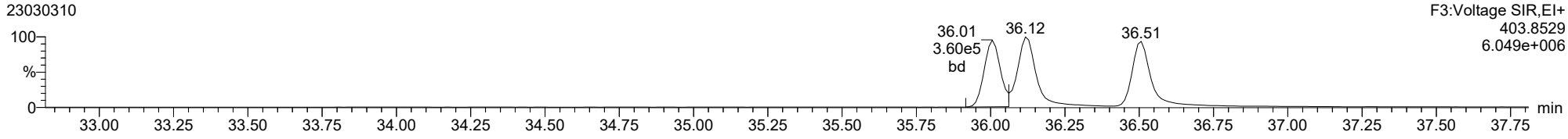
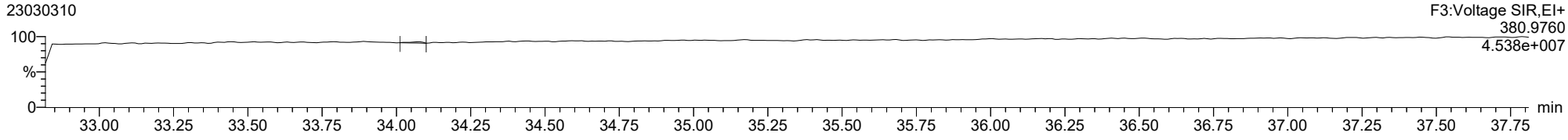


FUNCTION3 PFK



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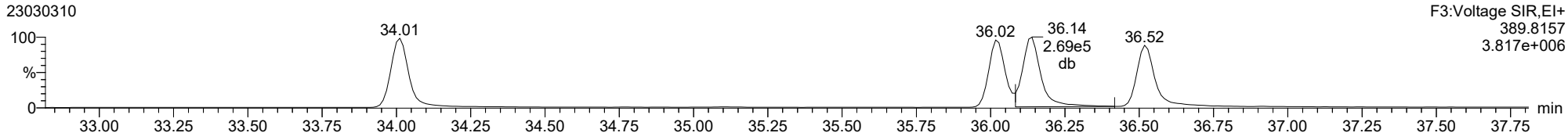

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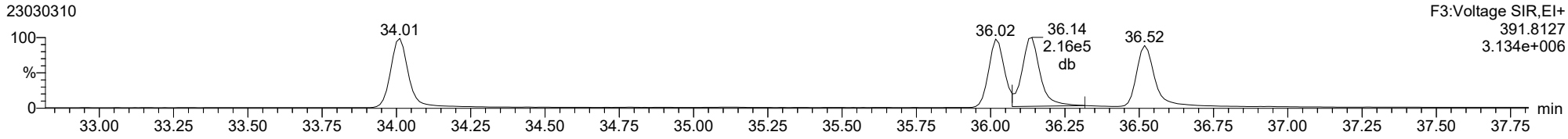

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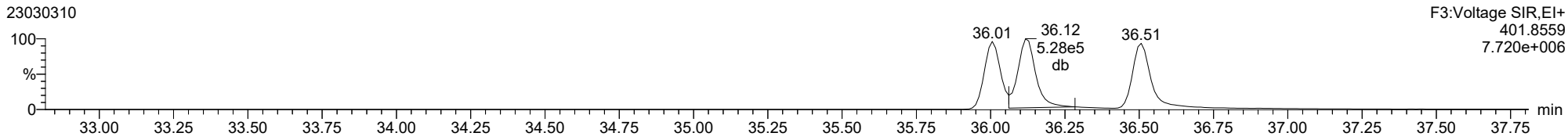

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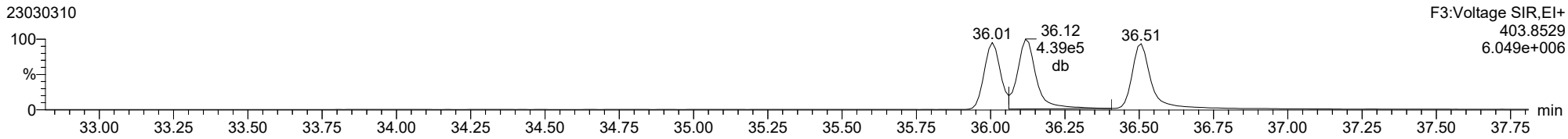

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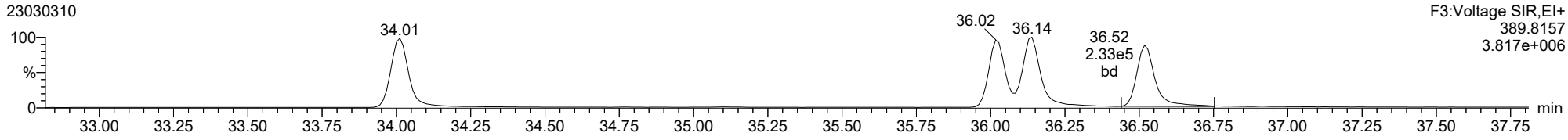

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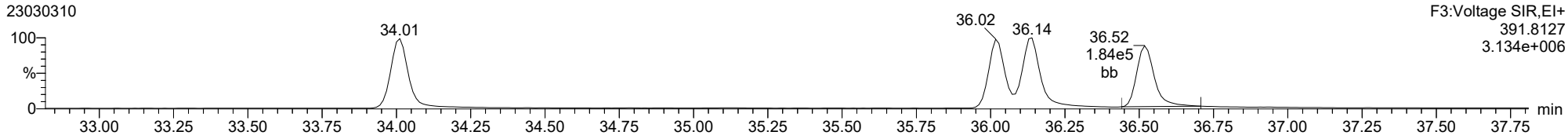

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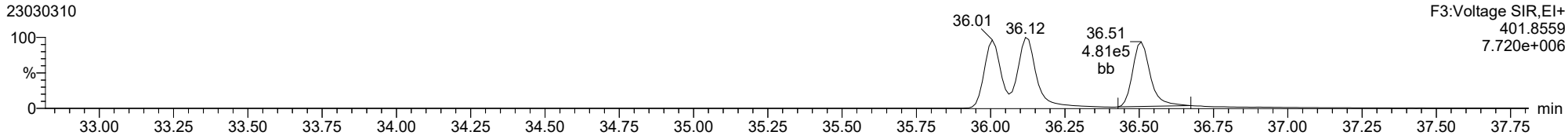

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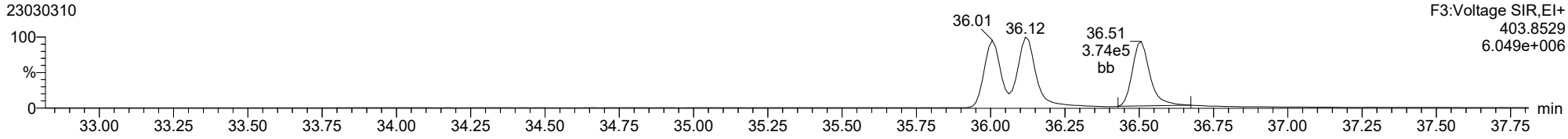

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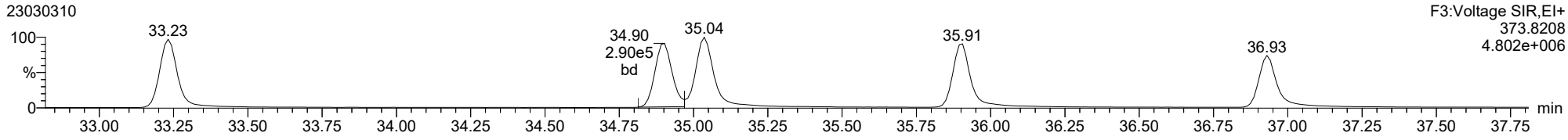

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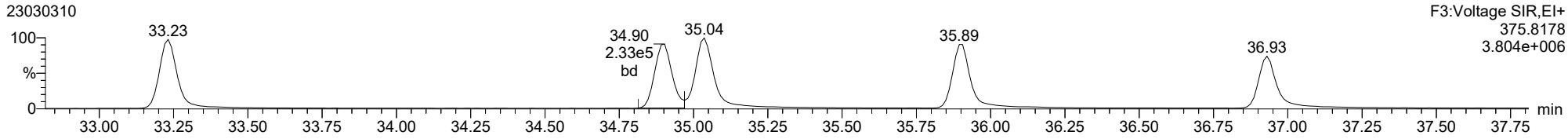

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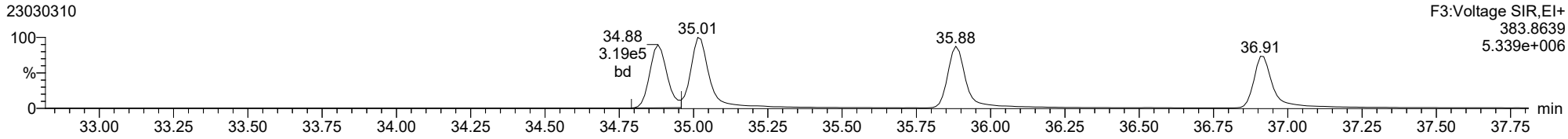

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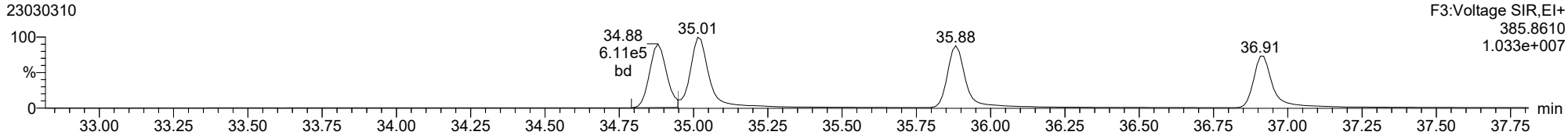

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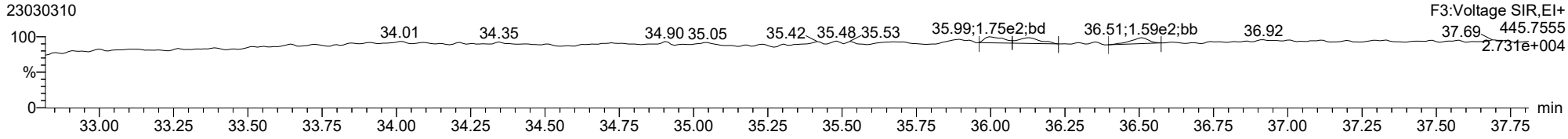

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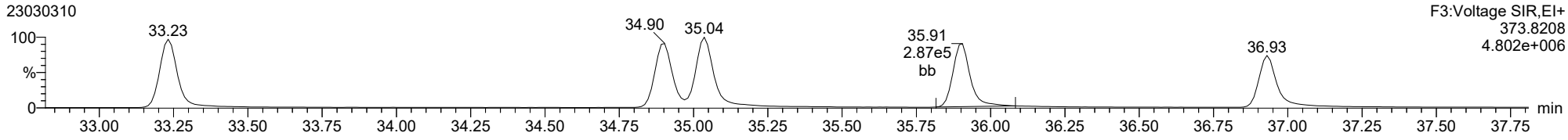

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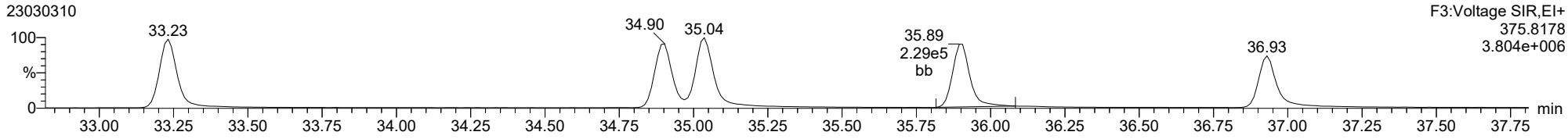

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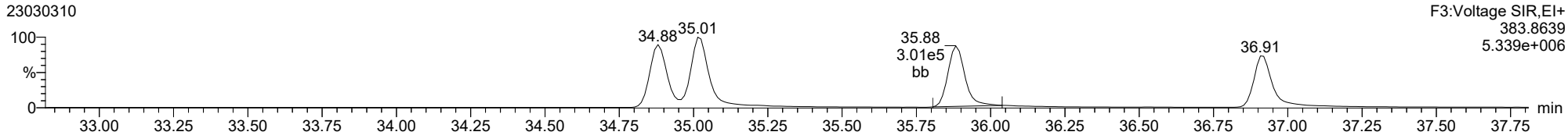

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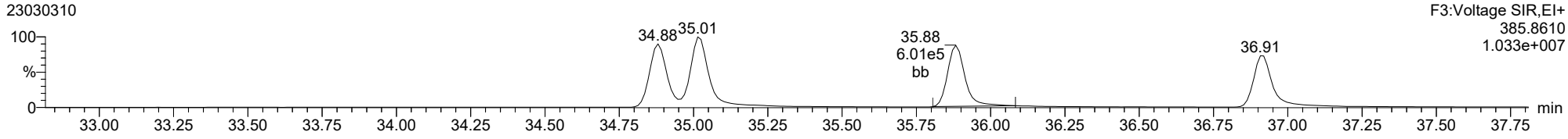

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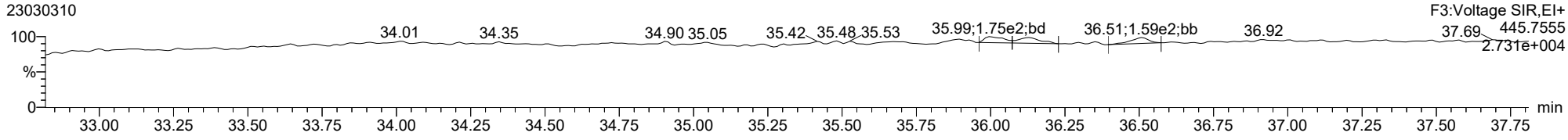

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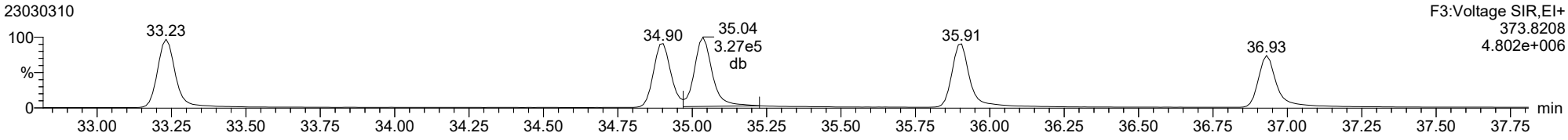

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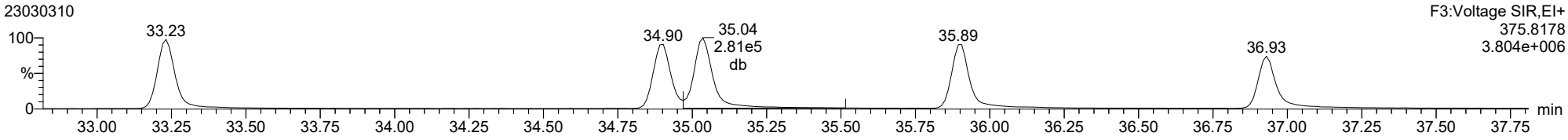

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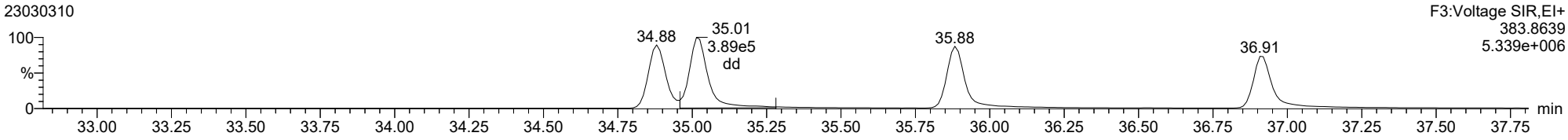

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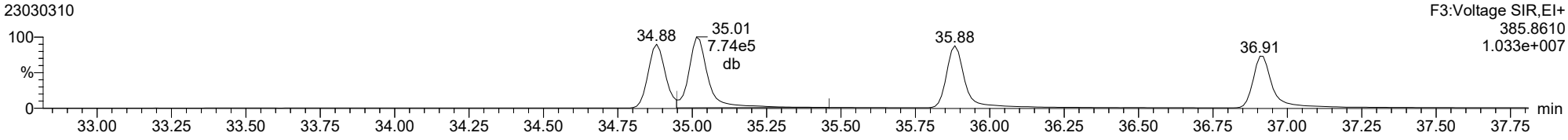

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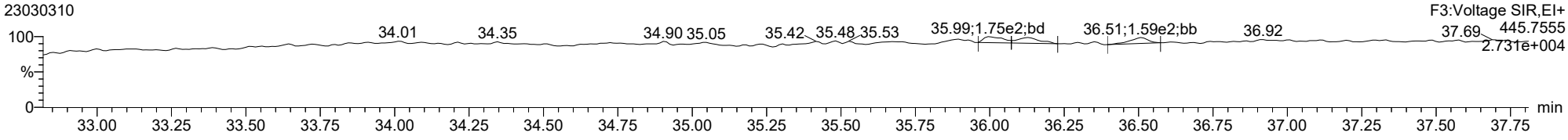

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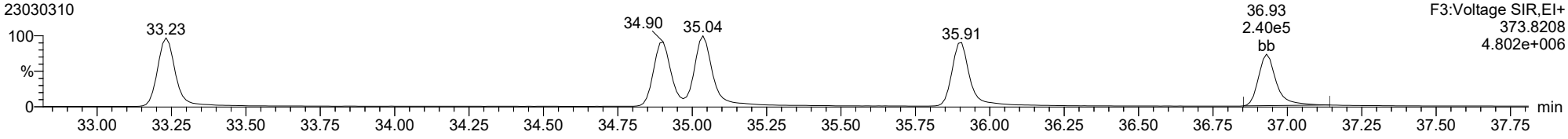

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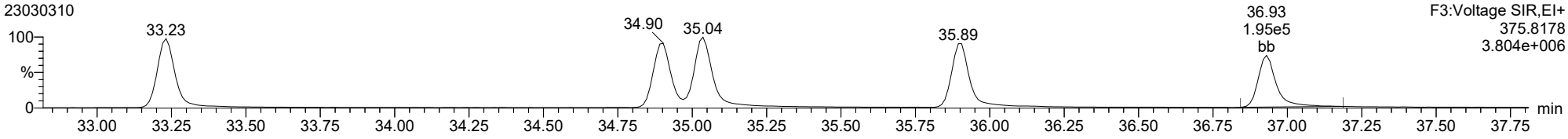

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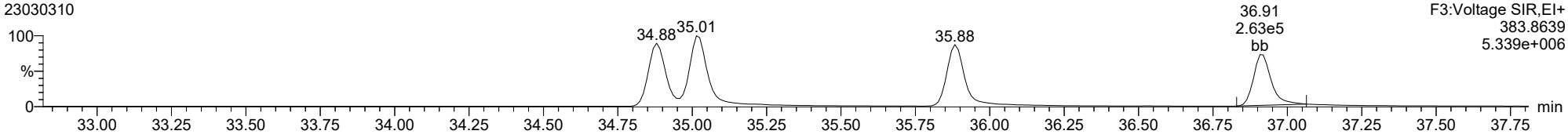

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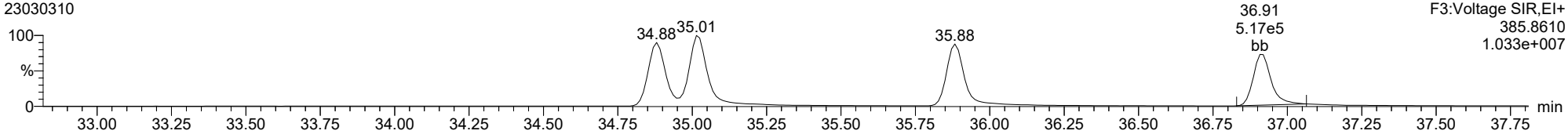

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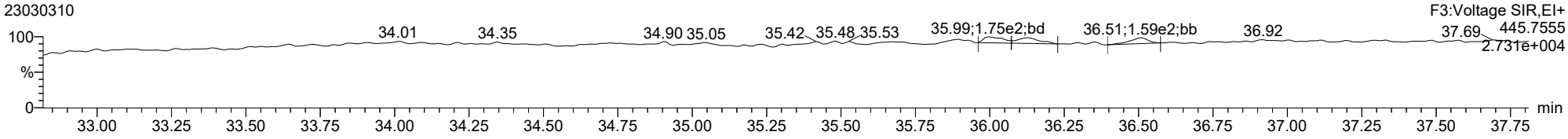

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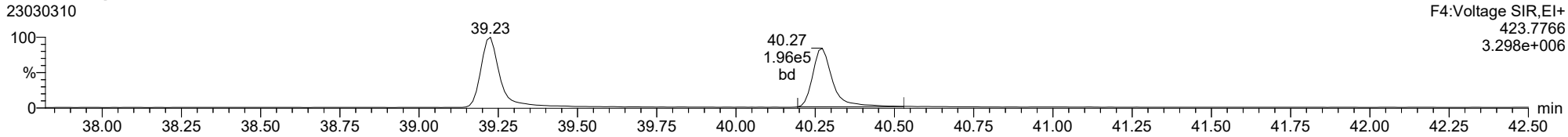

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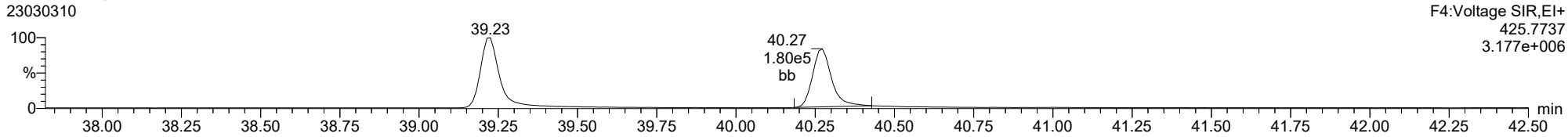

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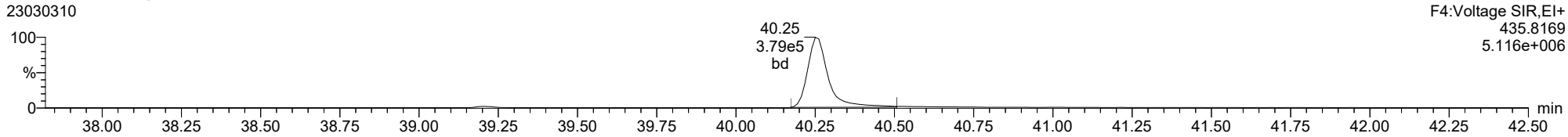

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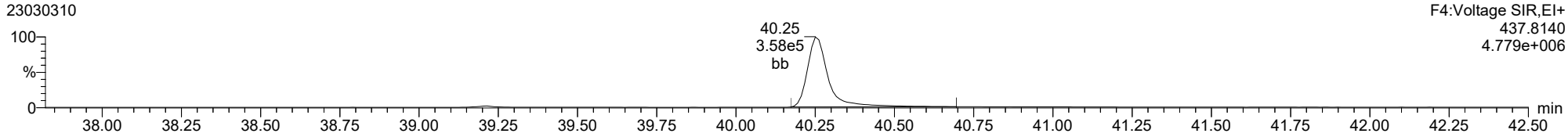

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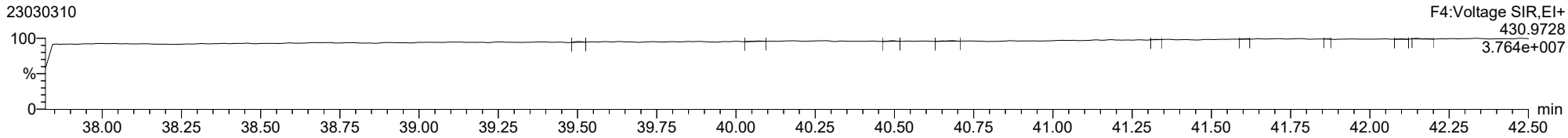

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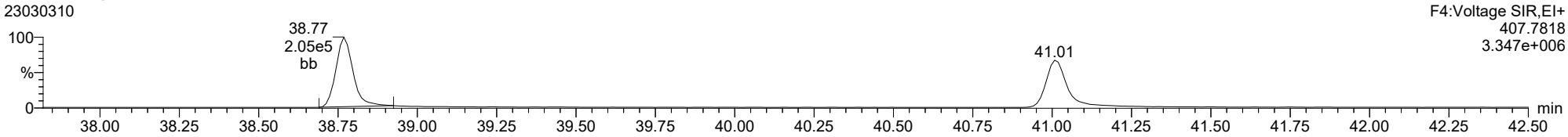

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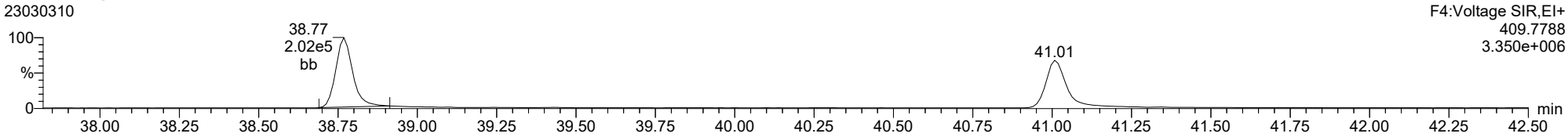

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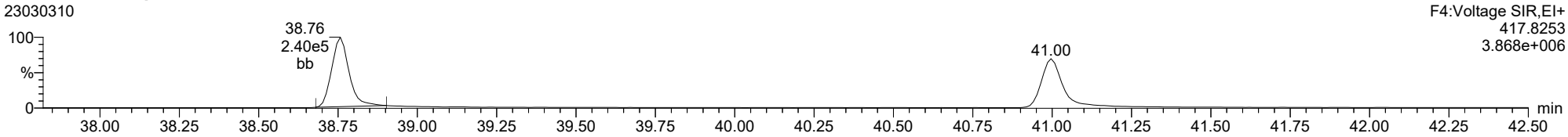

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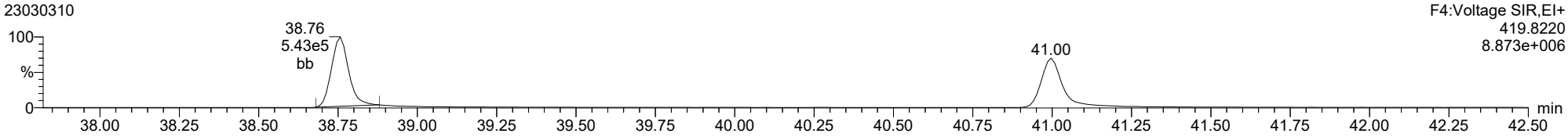

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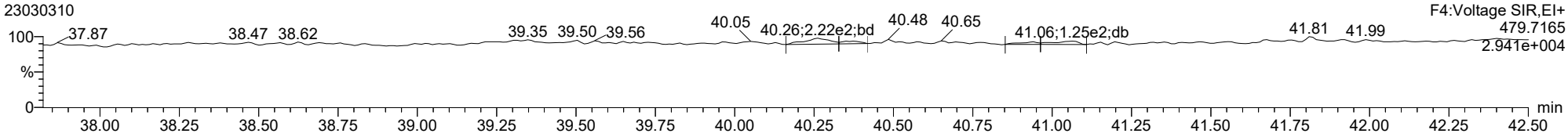

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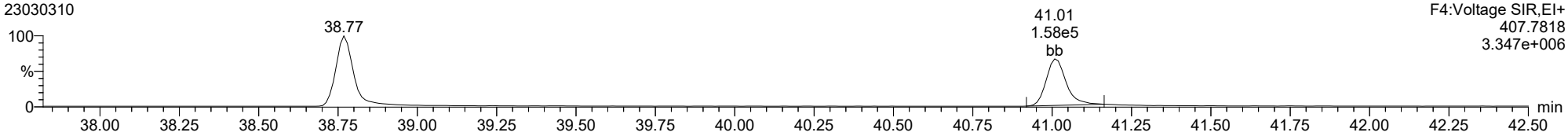

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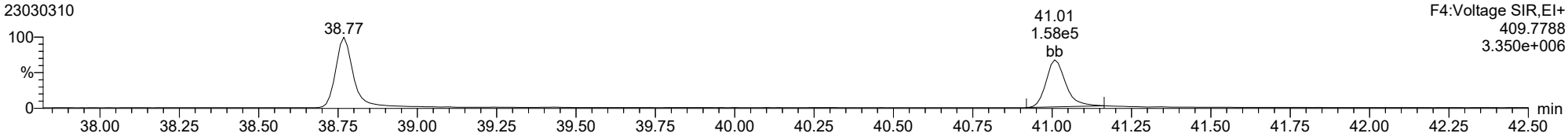

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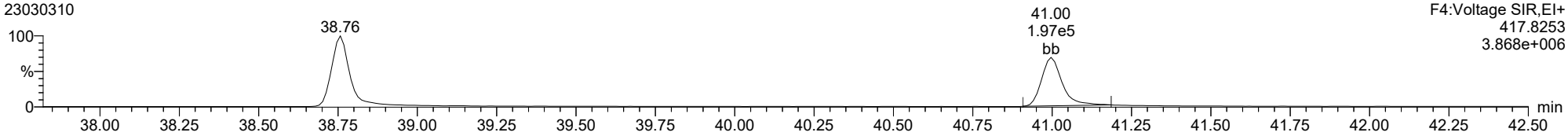

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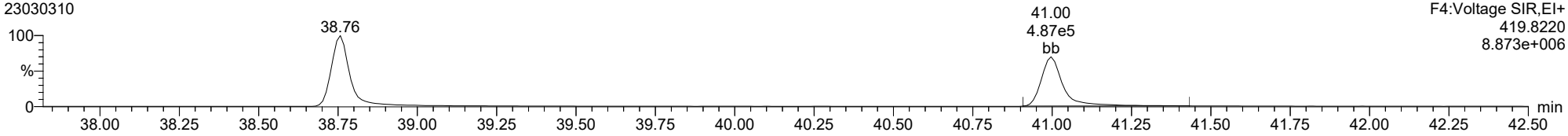

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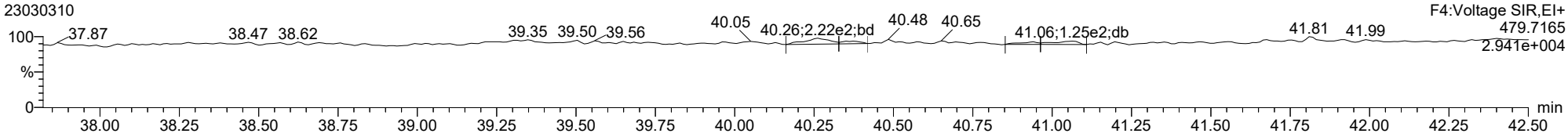

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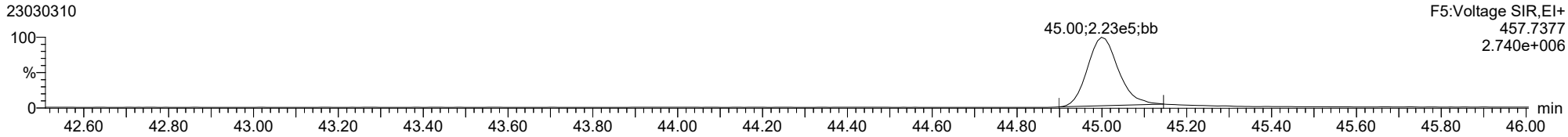

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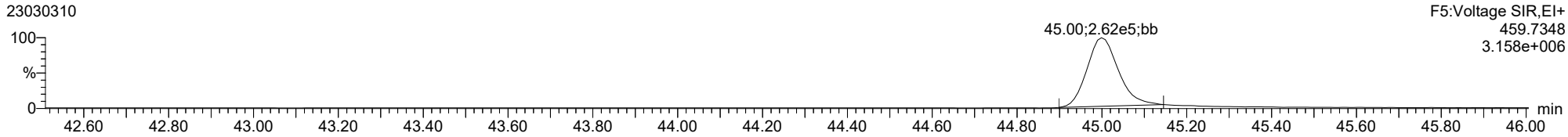

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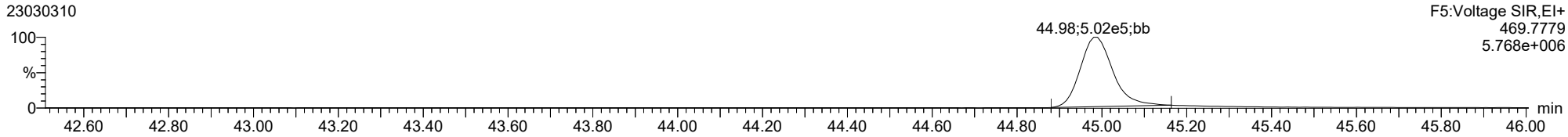

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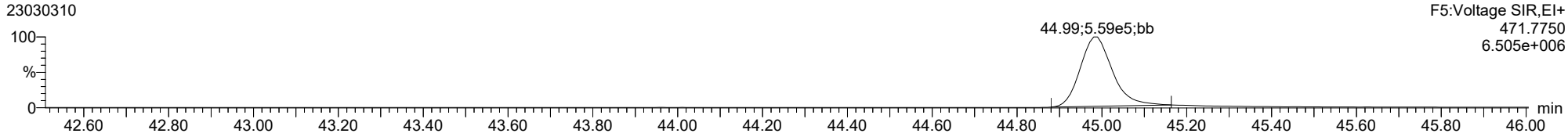
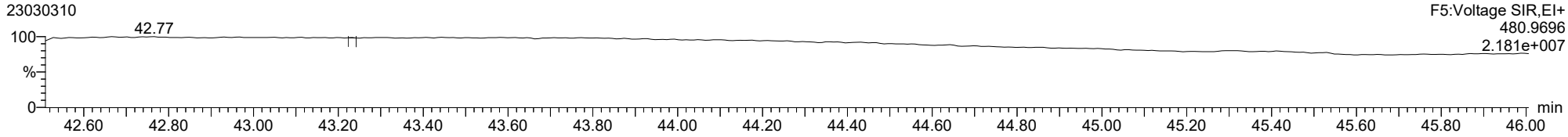
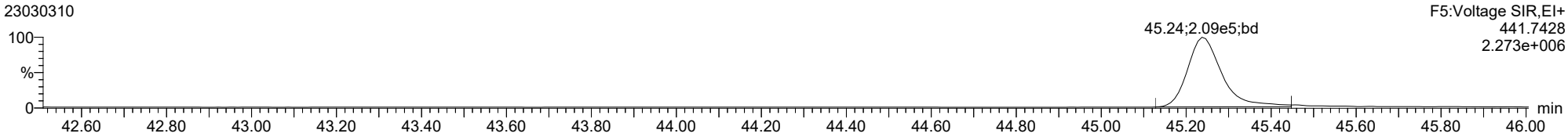


FUNCTION5 PFK

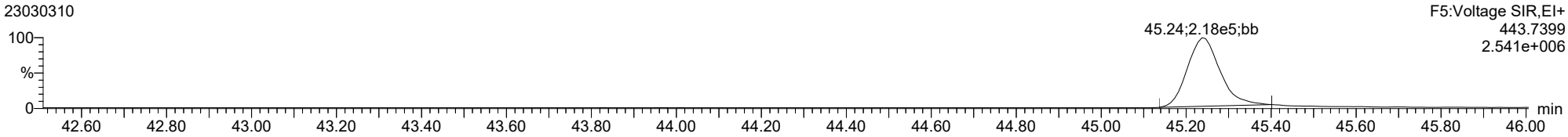


ID: ICVCW, Name: 23030310, Date: 03-Mar-2023, Time: 16:36:24, Conditions: AUTOSPEC01, User: pk

OCDF



OCDF



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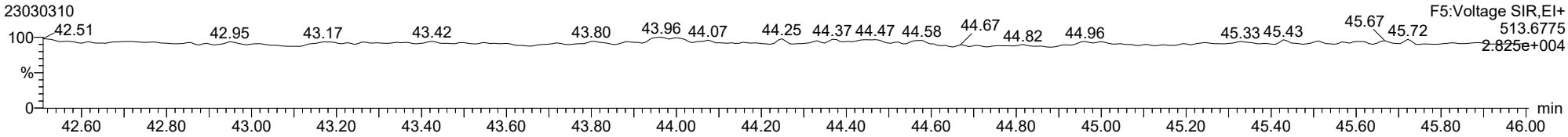

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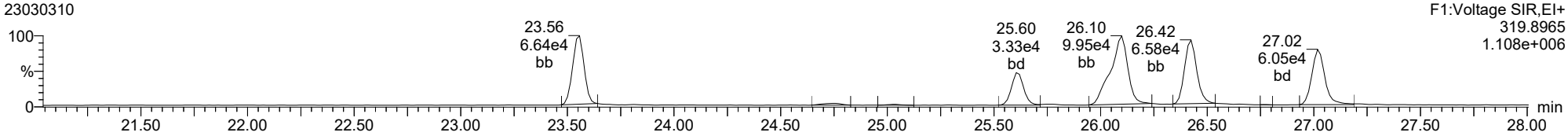
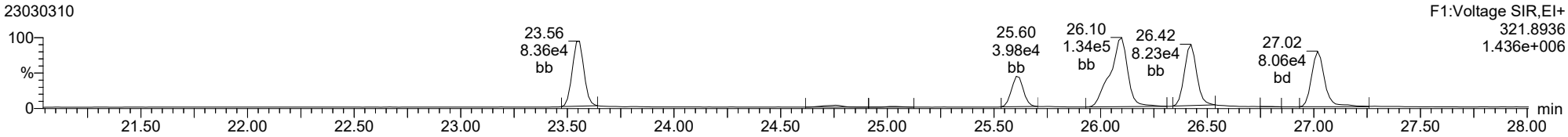
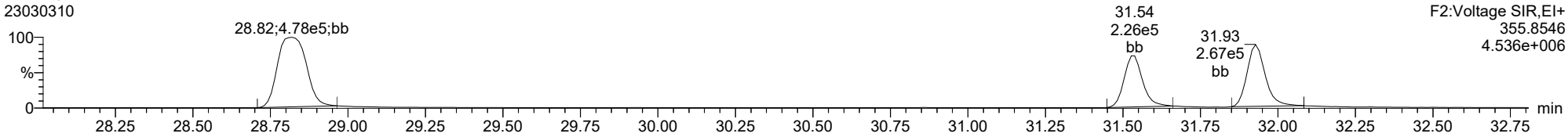
Total-tetradioxins



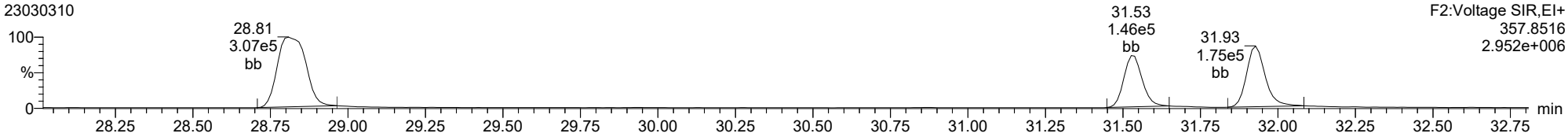
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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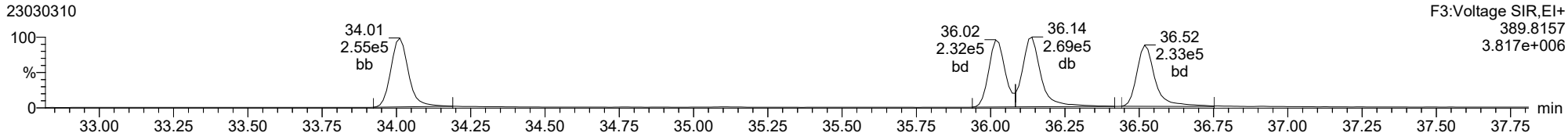
Total-hexadioxins



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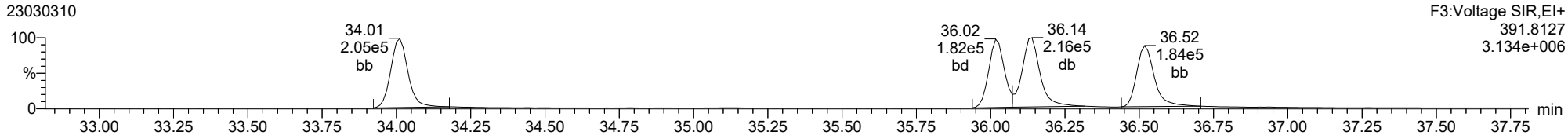

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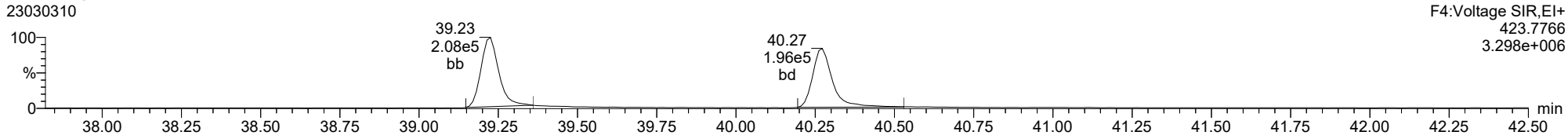

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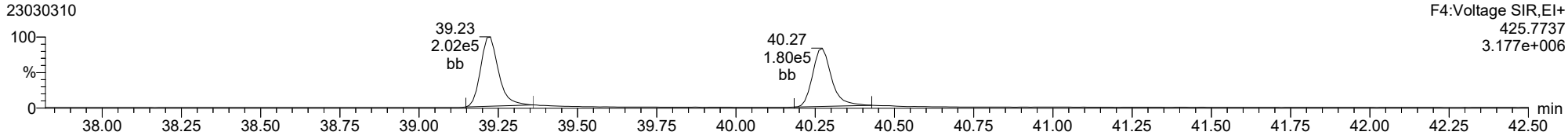

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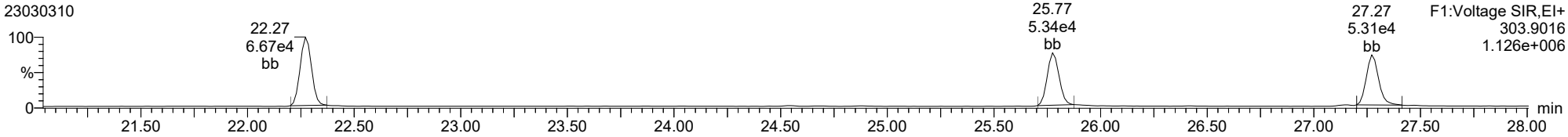
Total-tetrafurans



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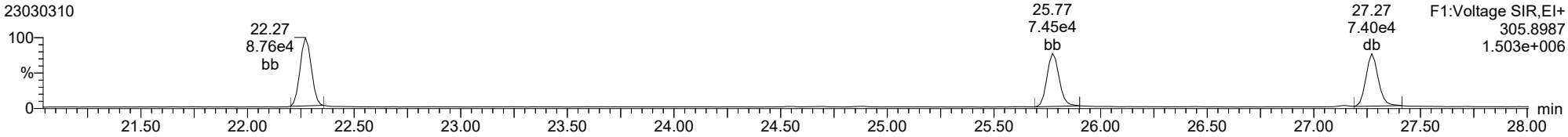

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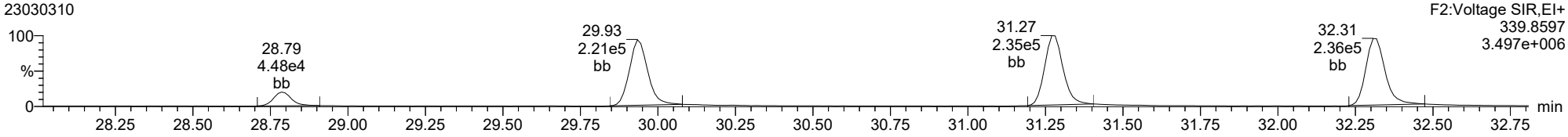

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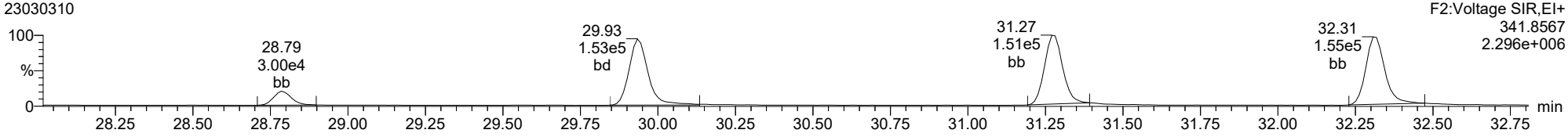

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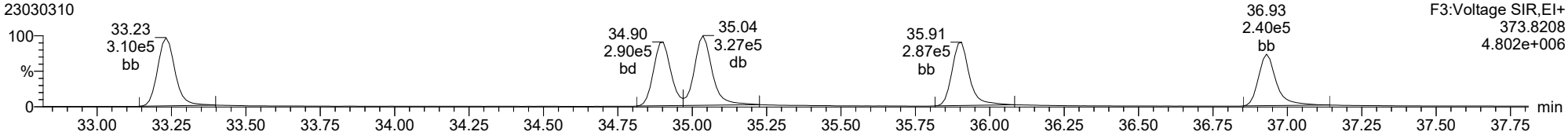

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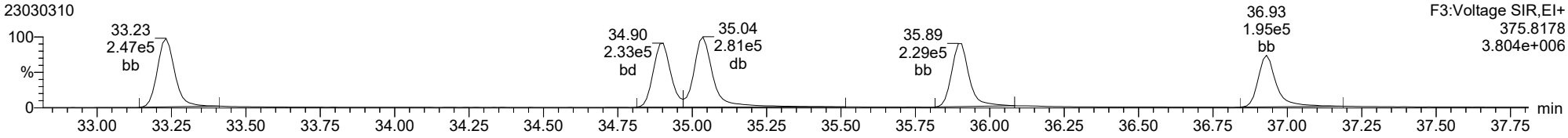

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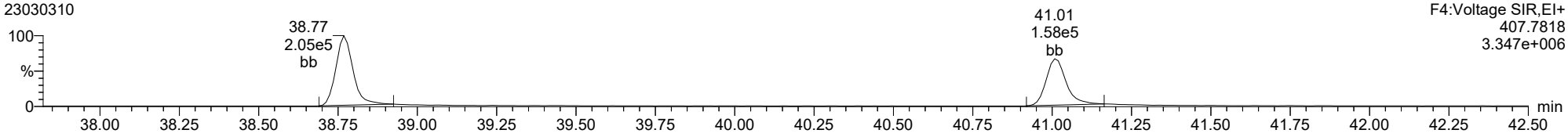
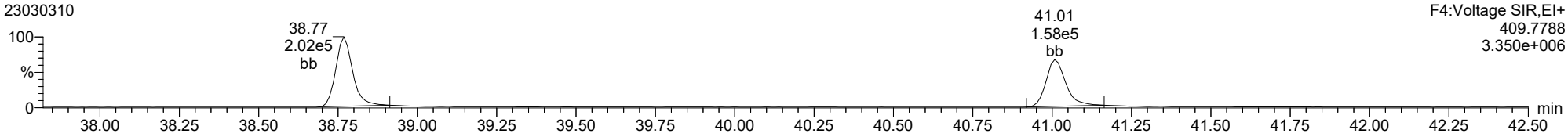


Total-heptafurans



Dataset: T:\Autospec\Processed Data Batch\230303IHICV.qld
Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time
Printed: Monday, March 06, 2023 14:47:33 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	4.131e4	5.488e4	0.702	0.753	0.770	1493	2220	6.02e5	8.13e5	403.0	366.2	NO	bb	bb	10.126
12378-PeCDF	29.934	1.000	2.094e5	1.387e5	0.679	1.510	1.550	3237	2768	3.10e6	2.08e6	956.2	750.8	NO	bb	bb	47.721
23478-PeCDF	31.282	1.001	2.189e5	1.466e5	0.786	1.493	1.550	3237	2768	3.25e6	2.13e6	1004.6	769.0	NO	bb	bb	48.580
123478-HxCDF	34.903	1.001	2.702e5	2.168e5	1.166	1.247	1.240	2948	2161	4.14e6	3.34e6	1404.3	1544.7	NO	bd	bd	47.304
234678-HxCDF	35.905	1.001	2.808e5	2.345e5	1.140	1.198	1.240	2948	2161	4.05e6	3.23e6	1375.6	1495.3	NO	bb	bd	52.050
123678-HxCDF	35.036	1.000	3.125e5	2.496e5	1.091	1.252	1.240	2948	2161	4.44e6	3.55e6	1506.3	1641.4	NO	db	db	51.387
123789-HxCDF	36.931	1.000	2.304e5	1.857e5	1.137	1.240	1.240	2948	2161	3.37e6	2.68e6	1143.7	1240.6	NO	bb	bb	48.904
1234678-HpCDF	38.769	1.000	1.725e5	1.737e5	1.003	0.993	1.050	2044	2260	2.71e6	2.74e6	1326.3	1210.9	NO	bb	bb	47.690
1234789-HpCDF	41.008	1.000	1.395e5	1.236e5	0.953	1.128	1.050	2044	2260	1.71e6	1.64e6	836.3	725.6	NO	bd	bb	53.601
OCDF	45.237	1.005	1.863e5	1.970e5	0.778	0.946	0.890	1162	1746	2.03e6	2.27e6	1745.6	1302.8	NO	bd	bb	95.021
2378-TCDD	26.424	1.001	4.111e4	5.488e4	1.149	0.749	0.770	1210	797	6.31e5	8.06e5	521.2	1010.5	NO	bb	bb	9.017
12378-PeCDD	31.538	1.001	2.212e5	1.442e5	1.022	1.534	1.550	2794	1649	3.14e6	2.05e6	1124.1	1244.9	NO	bb	bb	50.849
123478-HxCDD	36.017	1.000	2.147e5	1.744e5	0.996	1.231	1.240	3133	1871	3.31e6	2.68e6	1055.8	1434.4	NO	bd	bd	50.696
123678-HxCDD	36.139	1.001	2.532e5	2.091e5	1.001	1.211	1.240	3133	1871	3.49e6	2.85e6	1112.6	1520.4	NO	db	db	51.126
123789-HxCDD	36.518	1.011	2.114e5	1.814e5	0.907	1.166	1.240	3133	1871	3.08e6	2.54e6	982.1	1355.5	NO	bb	bd	51.723
1234678-HpCDD	40.273	1.000	1.700e5	1.663e5	1.039	1.022	1.050	1948	2105	2.22e6	2.15e6	1138.4	1022.1	NO	bd	bd	52.721
OCDD	45.000	1.000	2.152e5	2.483e5	0.920	0.867	0.890	885	1554	2.46e6	2.84e6	2785.0	1828.9	NO	bb	bb	97.150
13C-2378-TCDF	25.760	1.007	5.853e5	7.688e5	1.620	0.761	0.770	1921	2018	8.54e6	1.13e7	4445.5	5599.2	NO	bb	bb	89.420
13C-12378-PeCDF	29.923	1.169	6.466e5	4.272e5	1.240	1.513	1.550	2442	3390	8.85e6	5.90e6	3622.7	1739.1	NO	bb	bd	92.612
13C-23478-PeCDF	31.259	1.222	5.702e5	3.869e5	1.118	1.474	1.550	2442	3390	8.42e6	5.62e6	3447.3	1659.1	NO	bb	bb	91.616
13C-123478-HxCDF	34.881	0.955	2.992e5	5.837e5	1.168	0.513	0.510	2430	2952	4.46e6	8.67e6	1835.4	2935.2	NO	bd	bd	95.179
13C-123678-HxCDF	35.025	0.959	3.347e5	6.682e5	1.386	0.501	0.510	2430	2952	4.76e6	9.19e6	1958.9	3111.9	NO	db	db	91.102
13C-234678-HxCDF	35.883	0.983	2.956e5	5.730e5	1.129	0.516	0.510	2430	2952	4.27e6	8.35e6	1756.5	2829.2	NO	bb	bb	96.885
13C-123789-HxCDF	36.919	1.011	2.519e5	4.965e5	0.932	0.507	0.510	2430	2952	3.69e6	7.15e6	1518.9	2421.6	NO	bb	bb	101.167
13C-1234678-HpCDF	38.758	1.062	2.307e5	4.931e5	0.895	0.468	0.440	2487	3339	3.35e6	7.56e6	1347.2	2263.7	NO	bd	bb	101.839
13C-1234789-HpCDF	40.997	1.123	1.602e5	3.548e5	0.770	0.452	0.440	2487	3339	2.05e6	4.72e6	823.7	1413.6	NO	bb	bb	84.268
13C-1234-TCDD	25.591	0.000	4.152e5	5.195e5	1.000	0.799	0.770	2224	1360	6.53e6	8.14e6	2938.6	5984.1	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	4.083e5	5.184e5	1.152	0.788	0.770	2224	1360	5.76e6	7.36e6	2588.5	5411.0	NO	bb	bb	86.032
13C-12378-PeCDD	31.516	1.232	4.323e5	2.709e5	0.829	1.595	1.550	1217	913	6.32e6	3.99e6	5187.9	4362.9	NO	bb	bb	90.774
13C-123478-HxCDD	36.006	0.986	4.338e5	3.372e5	0.995	1.286	1.240	3851	1371	6.85e6	5.33e6	1778.6	3884.7	NO	bd	bd	97.589
13C-123678-HxCDD	36.117	0.989	5.114e5	3.919e5	1.157	1.305	1.240	3851	1371	7.20e6	5.65e6	1870.4	4120.3	NO	db	db	98.370
13C-1234678-HpCDD	40.262	1.103	3.166e5	2.972e5	0.840	1.065	1.050	1699	1520	4.20e6	3.95e6	2473.2	2598.3	NO	bb	bb	92.030
13C-OCDD	44.990	1.232	5.160e5	5.214e5	0.767	0.990	0.890	2001	1870	5.29e6	5.84e6	2645.0	3123.1	NO	bd	bb	170.247
13C-123789-HxCDD	36.507	0.000	4.452e5	3.487e5	1.000	1.277	1.240	3851	1371	6.49e6	5.07e6	1686.5	3694.9	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	9.071e4		1.288			1721		1.34e6		776.4			bb		7.536

Dataset: T:\Autospec\Processed Data Batch\230303IHICV.qld
Last Altered: Monday, March 06, 2023 11:49:27 Pacific Standard Time
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ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.271	0.865	5.764e4	7.805e4	0.802	0.738	0.770	1493	2220	9.22e5	1.25e6	617.6	564.2	NO	bb	bb	12.503
1289-TCDF	27.272	1.059	3.446e4	4.665e4	0.678	0.739	0.770	1493	2220	5.07e5	6.62e5	339.5	298.3	NO	bb	db	8.835
13468-PECDF	27.130	0.907	3.611e5	2.330e5	1.246	1.550	1.550	743	1090	5.44e6	3.55e6	7323.2	3255.0	NO	bb	bb	44.390
12389-PECDF	32.318	1.080	2.101e5	1.516e5	0.496	1.387	1.550	3237	2768	2.95e6	1.97e6	910.6	713.0	NO	bb	bd	67.866
123468-HXCDF	33.231	0.953	2.880e5	2.384e5	1.169	1.208	1.240	2948	2161	4.12e6	3.25e6	1397.4	1503.0	NO	bb	bb	51.002
1368-TCDD	23.557	0.892	5.668e4	7.180e4	1.015	0.789	0.770	1210	797	9.15e5	1.16e6	755.8	1460.4	NO	bb	bb	13.654
1289-TCDD	27.017	1.023	3.648e4	4.783e4	0.909	0.763	0.770	1210	797	5.40e5	6.90e5	445.8	865.4	NO	bb	bb	10.012
12479-PECDD	28.819	0.914	3.593e5	2.367e5	2.301	1.518	1.550	2794	1649	3.42e6	2.21e6	1224.5	1341.7	NO	bb	bb	36.832
12389-PECDD	31.928	1.013	2.423e5	1.700e5	1.184	1.426	1.550	2794	1649	3.48e6	2.31e6	1246.0	1399.4	NO	bb	bd	49.543
124679-HXCDD	34.011	0.945	2.330e5	1.909e5	1.115	1.220	1.240	3133	1871	3.38e6	2.76e6	1078.1	1473.6	NO	bb	bb	49.292
1234679-HPCDD	39.225	0.974	2.020e5	1.832e5	1.137	1.103	1.050	1948	2105	2.83e6	2.72e6	1451.0	1293.3	NO	bd	bb	55.196
Total-tetrafurans			1.346e5		0.727			1493		2.05e6							31.724
Total-penta1			3.611e5					743		5.44e6							44.390
Total-pentafurans			6.730e5		0.654			3237		9.80e6							172.856
Total-hexafurans			1.382e6		1.141			2948		2.01e7							250.647
Total-heptafurans			3.120e5		0.978			2044		4.42e6							101.291
Total-Furans			3.049e6		0.922			1493		4.39e7							695.930
Total-tetradioxins			2.249e5		1.024			1210		3.13e6							54.516
Total-pentadioxins			8.229e5		1.502			2794		1.00e7							137.223
Total-hexadioxins			9.123e5		1.005			3133		1.32e7							202.837
Total-heptadioxins			3.720e5		1.088			1948		5.04e6							107.918
Total-Dioxins			2.547e6		1.130			1210		3.39e7							599.643
Total-TEQ			5.596e6					1210		7.78e7							1295.573
FUNCTION1 PFK			7.521e6					557945		8.00e6							
FUNCTION2 PFK			4.110e5					226700		1.13e7							0.000
FUNCTION3 PFK			8.443e6					414812		2.82e6							0.000
FUNCTION4 PFK			2.598e7					304689		2.22e7							
FUNCTION5 PFK			7.163e4					189891		2.74e6							
FUNCTION1 HXCD...			3.794e2					593		5.61e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.042e2					818		1.73e4							0.000
FUNCTION3 OCDPE			9.563e1					429		1.87e3							0.000
FUNCTION4 NCDPE			0.000e0					545		0.00e0							
FUNCTION5 DCDPE			0.000e0					542		0.00e0							

Method: T:\Autospec\Methods\Dioxin230303.mdb 03 Mar 2023 14:58:50
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
2	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
3	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
4	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
2	123468-HXCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
3	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
4	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
5	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
2	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503
6	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
7	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
8	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
9	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688
10	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
11	123468-HXCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
12	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
13	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
14	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387
15	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
16	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690
17	OCDF	45.24	1.863e5	1.970e5	0.778	0.95	0.89	1745.6	YES	NO	bd	bb	95.021
18	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
2	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
3	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
4	Total-tetradioxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
5	Total-tetradioxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
2	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
3	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
2	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
3	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
4	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
2	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
2	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
3	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
4	Total-tetradioxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
5	Total-tetradioxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591
6	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
7	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
8	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832
9	124679-HXCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
10	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
11	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
12	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696
13	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
14	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196
15	OCDD	45.00	2.152e5	2.483e5	0.920	0.87	0.89	2785.0	YES	NO	bb	bb	97.150

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.446e4	4.665e4	0.678	0.74	0.77	339.5	YES	NO	bb	db	8.835
2	2378-TCDF	25.77	4.131e4	5.488e4	0.702	0.75	0.77	403.0	YES	NO	bb	bb	10.126
3	Total-tetrafurans	24.86	6.389e2	7.978e2	0.727	0.80	0.77	6.2	YES	NO	bb	bb	0.146
4	Total-tetrafurans	24.55	5.238e2	5.981e2	0.727	0.88	0.77	6.0	YES	NO	bb	bb	0.114
5	1368-TCDF	22.27	5.764e4	7.805e4	0.802	0.74	0.77	617.6	YES	NO	bb	bb	12.503
6	12389-PECDF	32.32	2.101e5	1.516e5	0.496	1.39	1.55	910.6	YES	NO	bb	bd	67.866
7	23478-PeCDF	31.28	2.189e5	1.466e5	0.786	1.49	1.55	1004.6	YES	NO	bb	bb	48.580
8	12378-PeCDF	29.93	2.094e5	1.387e5	0.679	1.51	1.55	956.2	YES	NO	bb	bb	47.721
9	Total-pentafurans	28.80	3.458e4	2.311e4	0.654	1.50	1.55	155.8	YES	NO	bb	bb	8.688
10	123478-HxCDF	34.90	2.702e5	2.168e5	1.166	1.25	1.24	1404.3	YES	NO	bd	bd	47.304
11	123468-HXCDF	33.23	2.880e5	2.384e5	1.169	1.21	1.24	1397.4	YES	NO	bb	bb	51.002
12	123789-HxCDF	36.93	2.304e5	1.857e5	1.137	1.24	1.24	1143.7	YES	NO	bb	bb	48.904
13	234678-HxCDF	35.91	2.808e5	2.345e5	1.140	1.20	1.24	1375.6	YES	NO	bb	bd	52.050
14	123678-HxCDF	35.04	3.125e5	2.496e5	1.091	1.25	1.24	1506.3	YES	NO	db	db	51.387
15	1234789-HpCDF	41.01	1.395e5	1.236e5	0.953	1.13	1.05	836.3	YES	NO	bd	bb	53.601
16	1234678-HpCDF	38.77	1.725e5	1.737e5	1.003	0.99	1.05	1326.3	YES	NO	bb	bb	47.690
17	OCDF	45.24	1.863e5	1.970e5	0.778	0.95	0.89	1745.6	YES	NO	bd	bb	95.021
18	13468-PECDF	27.13	3.611e5	2.330e5	1.246	1.55	1.55	7323.2	YES	NO	bb	bb	44.390
19	1368-TCDD	23.56	5.668e4	7.180e4	1.015	0.79	0.77	755.8	YES	NO	bb	bb	13.654
20	1289-TCDD	27.02	3.648e4	4.783e4	0.909	0.76	0.77	445.8	YES	NO	bb	bb	10.012
21	2378-TCDD	26.42	4.111e4	5.488e4	1.149	0.75	0.77	521.2	YES	NO	bb	bb	9.017
22	Total-tetradioxins	26.10	6.719e4	8.697e4	1.024	0.77	0.77	561.8	YES	NO	bb	bb	16.242
23	Total-tetradioxins	25.60	2.343e4	2.963e4	1.024	0.79	0.77	301.6	YES	NO	bb	bb	5.591
24	12389-PECDD	31.93	2.423e5	1.700e5	1.184	1.43	1.55	1246.0	YES	NO	bb	bd	49.543
25	12378-PeCDD	31.54	2.212e5	1.442e5	1.022	1.53	1.55	1124.1	YES	NO	bb	bb	50.849
26	12479-PECDD	28.82	3.593e5	2.367e5	2.301	1.52	1.55	1224.5	YES	NO	bb	bb	36.832
27	124679-HXCDD	34.01	2.330e5	1.909e5	1.115	1.22	1.24	1078.1	YES	NO	bb	bb	49.292
28	123789-HxCDD	36.52	2.114e5	1.814e5	0.907	1.17	1.24	982.1	YES	NO	bb	bd	51.723
29	123678-HxCDD	36.14	2.532e5	2.091e5	1.001	1.21	1.24	1112.6	YES	NO	db	db	51.126
30	123478-HxCDD	36.02	2.147e5	1.744e5	0.996	1.23	1.24	1055.8	YES	NO	bd	bd	50.696
31	1234678-HpCDD	40.27	1.700e5	1.663e5	1.039	1.02	1.05	1138.4	YES	NO	bd	bd	52.721
32	1234679-HPCDD	39.23	2.020e5	1.832e5	1.137	1.10	1.05	1451.0	YES	NO	bd	bb	55.196
33	OCDD	45.00	2.152e5	2.483e5	0.920	0.87	0.89	2785.0	YES	NO	bb	bb	97.150

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	22.45	3.397e6					9.1	YES		db		
2	FUNCTION1 PFK	22.00	4.124e6					5.2	YES		bd		

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	28.25	2.674e4					2.5	NO		db		0.000
2	FUNCTION2 PFK	28.20	5.558e3					1.1	NO		dd		0.000
3	FUNCTION2 PFK	28.15	1.333e4					1.7	NO		bd		0.000
4	FUNCTION2 PFK	28.11	4.408e3					0.8	NO		bb		0.000
5	FUNCTION2 PFK	30.52	5.287e3					0.9	NO		bd		0.000
6	FUNCTION2 PFK	30.38	1.568e4					1.4	NO		bb		0.000
7	FUNCTION2 PFK	30.23	2.380e4					1.5	NO		db		0.000
8	FUNCTION2 PFK	30.10	2.694e4					1.7	NO		bd		0.000
9	FUNCTION2 PFK	29.99	2.076e3					0.5	NO		bb		0.000
10	FUNCTION2 PFK	29.89	7.421e3					1.2	NO		bb		0.000
11	FUNCTION2 PFK	29.80	6.022e3					0.5	NO		bb		0.000
12	FUNCTION2 PFK	29.62	1.101e4					1.2	NO		bb		0.000
13	FUNCTION2 PFK	29.52	2.200e4					2.0	NO		bb		0.000
14	FUNCTION2 PFK	29.42	7.036e3					1.0	NO		bb		0.000
15	FUNCTION2 PFK	29.29	2.309e4					2.2	NO		bb		0.000
16	FUNCTION2 PFK	29.03	1.036e4					1.7	NO		db		0.000
17	FUNCTION2 PFK	29.00	8.382e3					1.3	NO		bd		0.000
18	FUNCTION2 PFK	28.80	5.680e3					0.9	NO		bb		0.000
19	FUNCTION2 PFK	28.70	1.413e4					1.3	NO		bb		0.000
20	FUNCTION2 PFK	28.60	2.690e3					0.7	NO		bb		0.000
21	FUNCTION2 PFK	32.35	9.362e3					1.3	NO		bd		0.000
22	FUNCTION2 PFK	32.28	5.282e3					0.9	NO		bb		0.000
23	FUNCTION2 PFK	31.94	5.478e3					0.6	NO		bb		0.000
24	FUNCTION2 PFK	31.86	9.539e3					1.3	NO		bb		0.000
25	FUNCTION2 PFK	31.70	8.598e3					0.9	NO		bb		0.000
26	FUNCTION2 PFK	31.56	1.164e4					1.5	NO		bb		0.000
27	FUNCTION2 PFK	31.44	9.870e3					1.2	NO		bb		0.000
28	FUNCTION2 PFK	31.37	5.651e3					1.2	NO		bb		0.000
29	FUNCTION2 PFK	31.16	3.906e3					0.7	NO		db		0.000
30	FUNCTION2 PFK	31.10	5.259e3					1.0	NO		bd		0.000
31	FUNCTION2 PFK	31.00	2.220e3					0.5	NO		bb		0.000
32	FUNCTION2 PFK	30.93	4.197e3					0.6	NO		bb		0.000
33	FUNCTION2 PFK	30.84	1.813e4					1.7	NO		bb		0.000
34	FUNCTION2 PFK	30.68	6.046e3					1.3	NO		db		0.000
35	FUNCTION2 PFK	30.64	6.706e3					1.2	NO		dd		0.000
36	FUNCTION2 PFK	30.58	1.475e4					1.4	NO		dd		0.000
37	FUNCTION2 PFK	32.74	9.704e3					1.1	NO		bb		0.000

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PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION2 PFK	32.61	1.975e3					0.6	NO		bb		0.000
39	FUNCTION2 PFK	32.55	1.171e3					0.5	NO		bb		0.000
40	FUNCTION2 PFK	32.51	7.325e3					1.0	NO		db		0.000
41	FUNCTION2 PFK	32.45	9.340e3					1.3	NO		dd		0.000
42	FUNCTION2 PFK	32.41	1.322e4					1.9	NO		dd		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	37.70	5.175e4					1.9	NO		bb		0.000
2	FUNCTION3 PFK	35.52	3.681e5					3.3	YES		bb		0.000
3	FUNCTION3 PFK	34.42	8.023e6					1.5	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	40.67	5.668e6					23.1	YES		db		
2	FUNCTION4 PFK	39.84	1.814e7					26.9	YES		dd		
3	FUNCTION4 PFK	38.09	2.173e6					22.8	YES		bd		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.82	4.953e3					1.4	NO		bb		
2	FUNCTION5 PFK	45.79	4.078e3					1.3	NO		db		
3	FUNCTION5 PFK	45.76	2.296e3					0.8	NO		bd		
4	FUNCTION5 PFK	45.37	1.499e4					1.8	NO		bb		
5	FUNCTION5 PFK	45.31	3.040e3					1.0	NO		bb		
6	FUNCTION5 PFK	44.94	1.866e3					0.7	NO		bb		
7	FUNCTION5 PFK	44.62	4.342e3					1.3	NO		bb		
8	FUNCTION5 PFK	43.85	4.909e3					1.2	NO		bb		
9	FUNCTION5 PFK	43.55	9.698e3					1.7	NO		bb		
10	FUNCTION5 PFK	43.31	1.818e4					2.2	NO		bb		
11	FUNCTION5 PFK	43.18	3.274e3					1.0	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.14	7.703e1					2.6	NO		bb		0.000
2	FUNCTION1 HXCD...	25.58	1.369e2					3.0	NO		bb		0.000
3	FUNCTION1 HXCD...	24.29	7.654e1					1.4	NO		bb		0.000
4	FUNCTION1 HXCD...	23.49	8.895e1					2.4	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.41	1.026e2					2.4	NO		db		0.000
2	FUNCTION2 HPCD...	32.32	1.299e2					2.2	NO		bd		0.000
3	FUNCTION2 HPCD...	31.19	1.035e2					3.9	YES		db		0.000
4	FUNCTION2 HPCD...	31.15	2.274e2					6.9	YES		bd		0.000
5	FUNCTION2 HPCD...	29.21	1.504e2					2.9	NO		bb		0.000
6	FUNCTION2 HPCD...	28.77	9.035e1					2.8	NO		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.51	9.563e1					4.4	YES		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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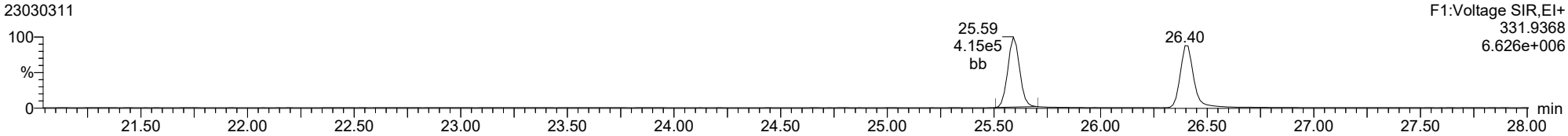
ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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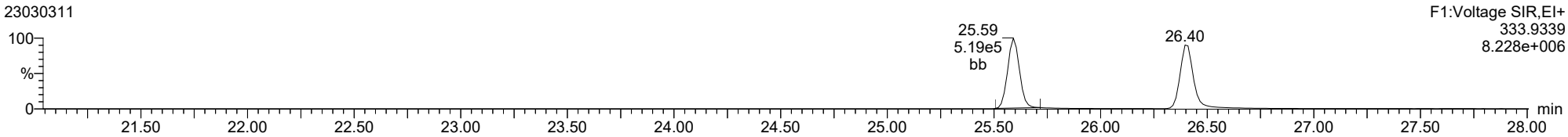
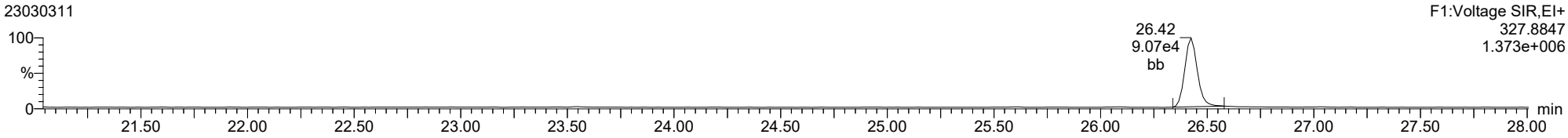


37CL-2378-TCDD



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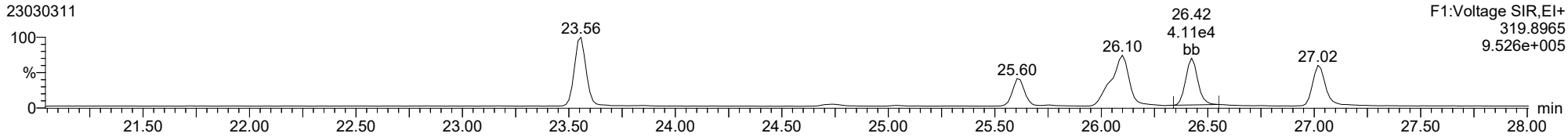

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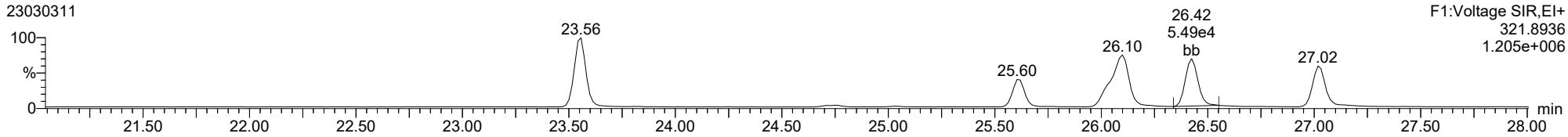

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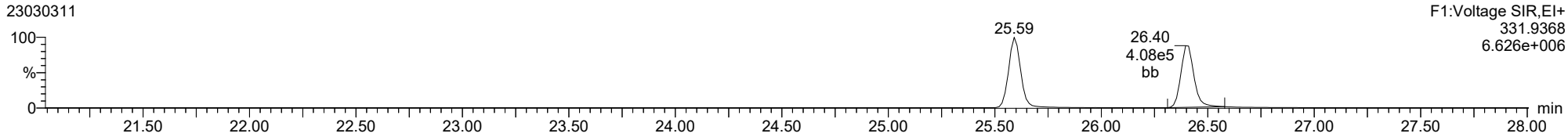

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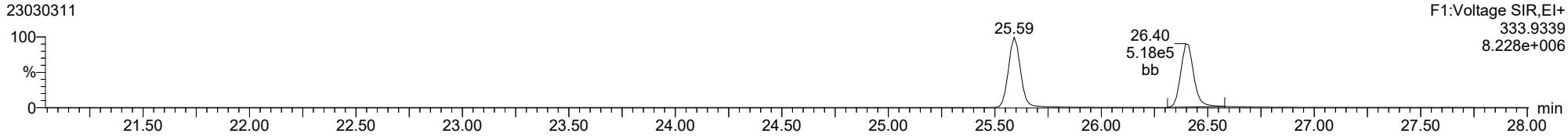

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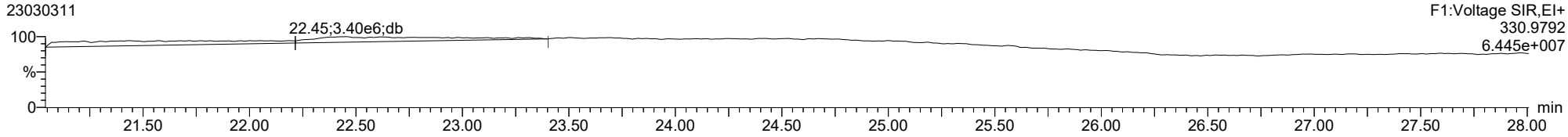

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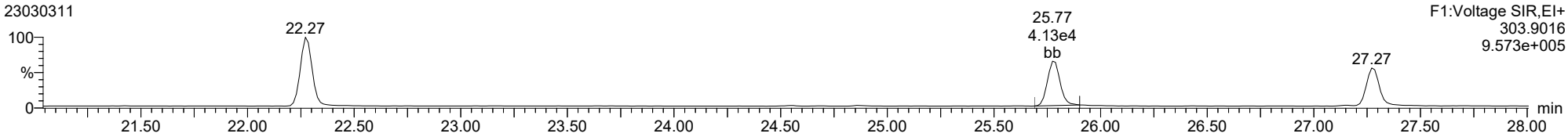

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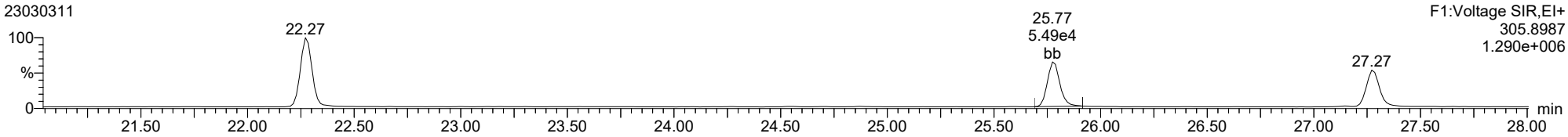

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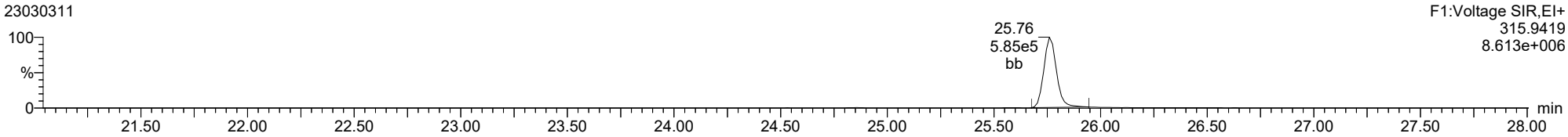

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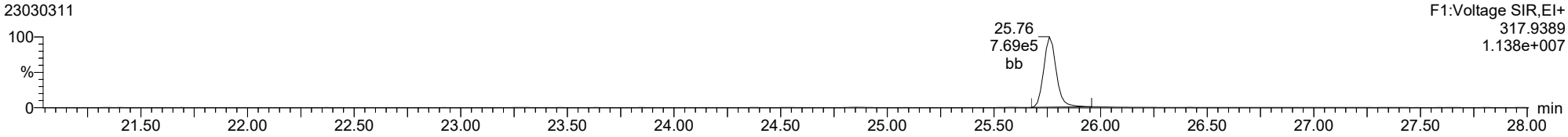

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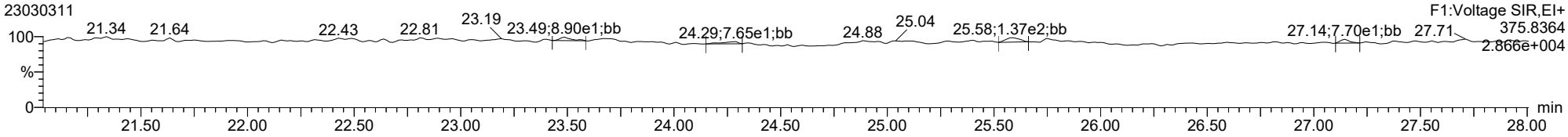

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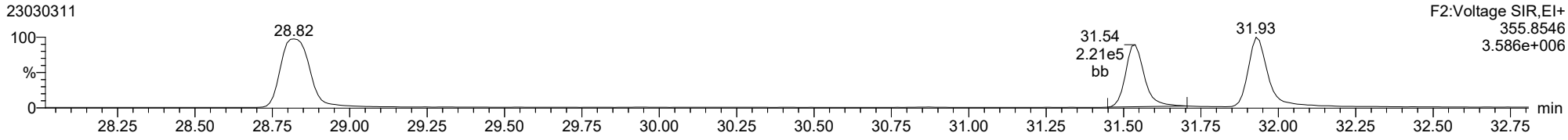
12378-PeCDD



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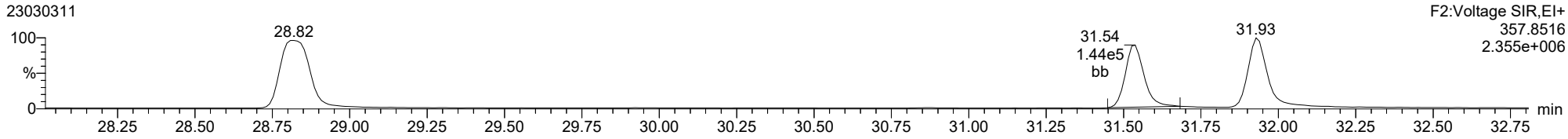

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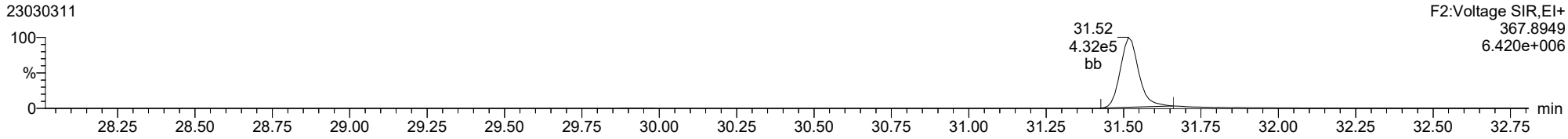

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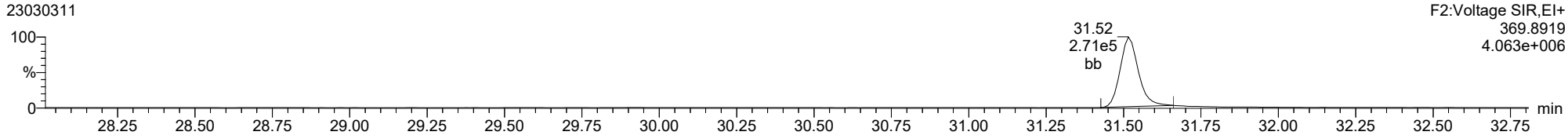

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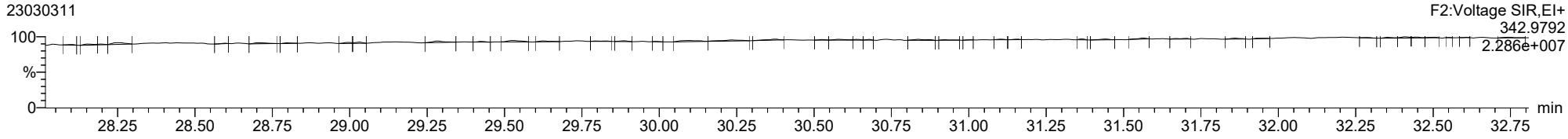

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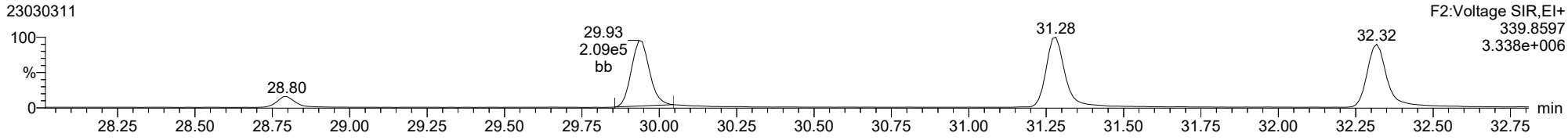

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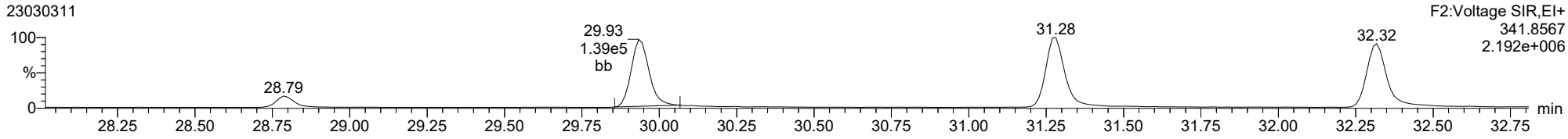

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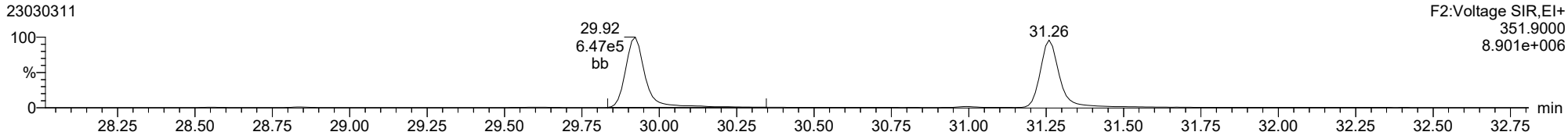

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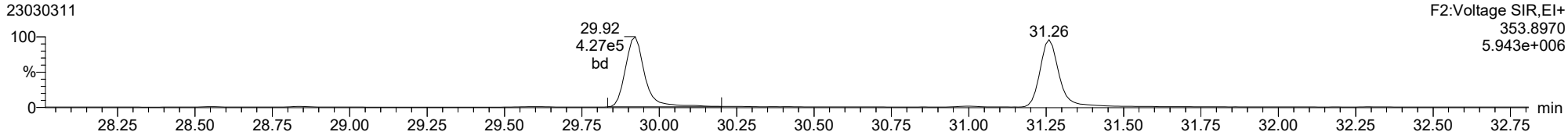
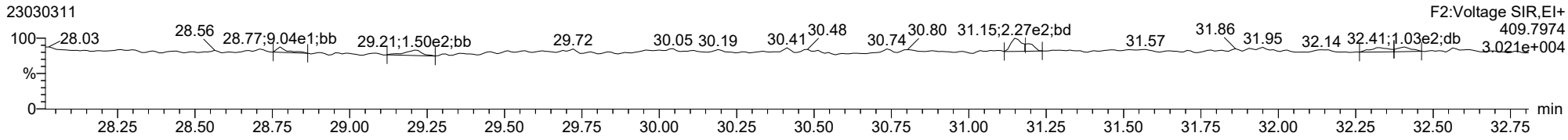


FUNCTION2 HPCDPE



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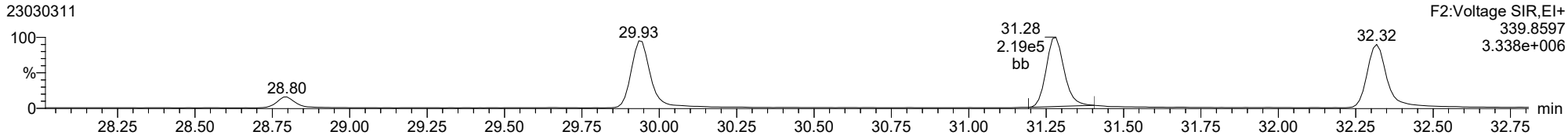
23478-PeCDF



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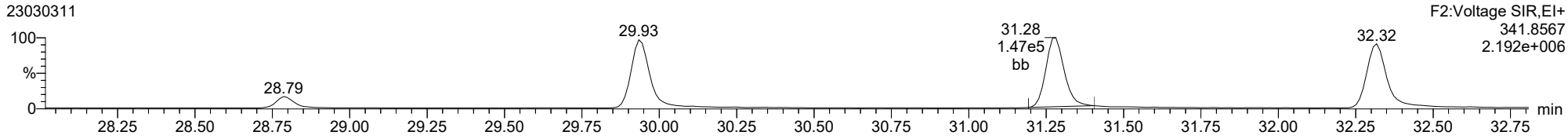

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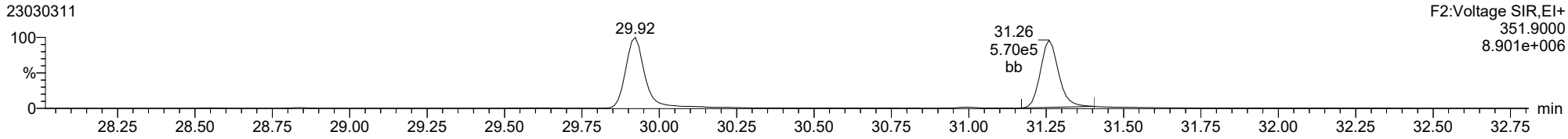

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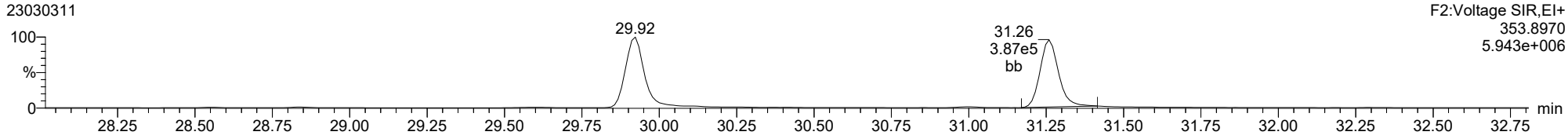
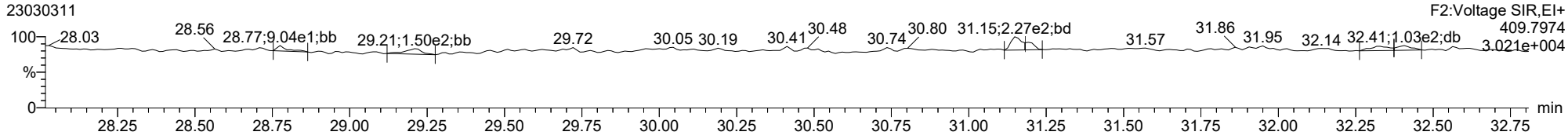


FUNCTION2 HPCDPE



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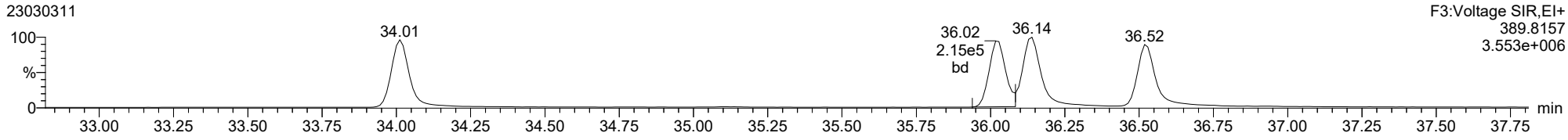
123478-HxCDD



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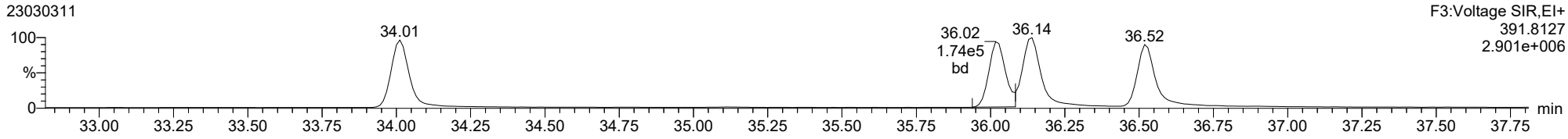

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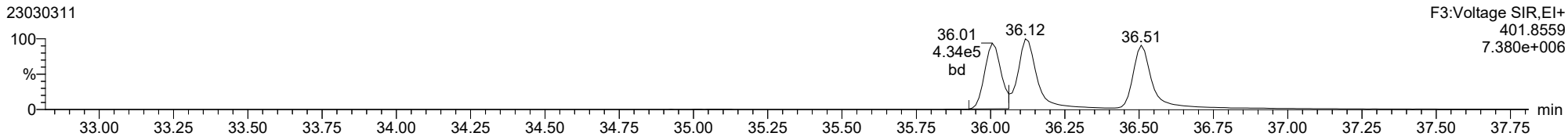

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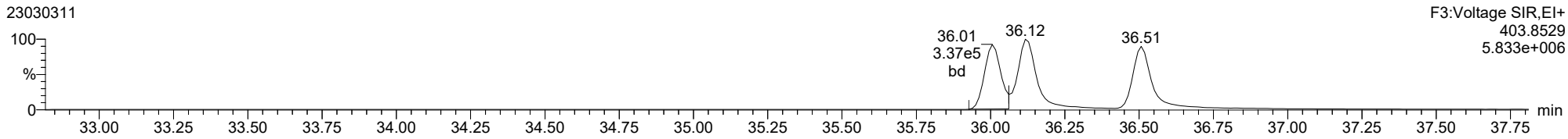

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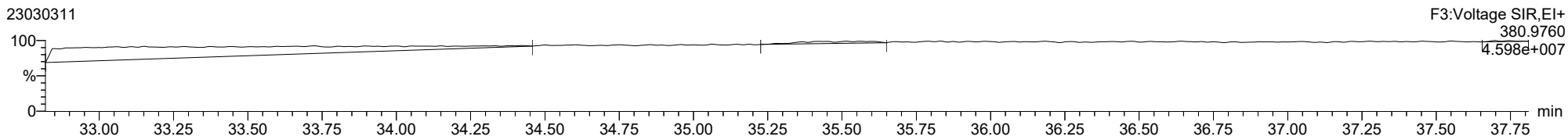

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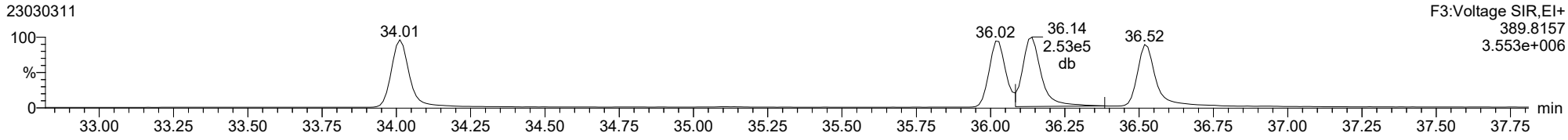

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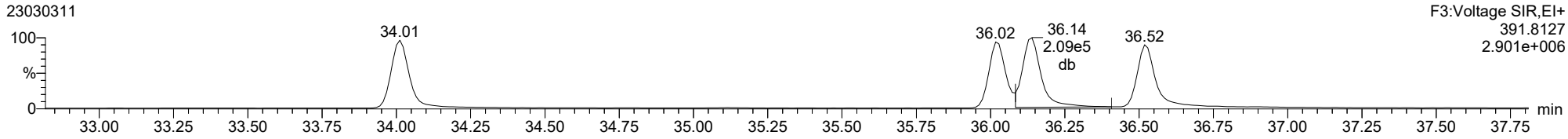

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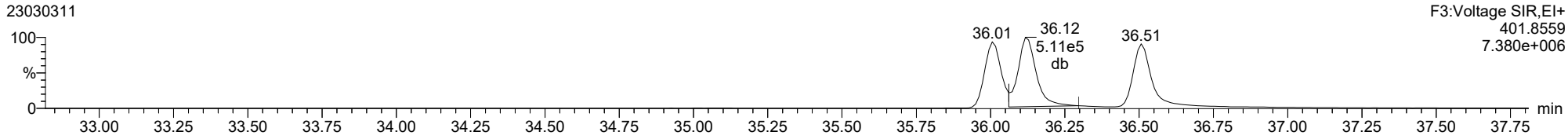

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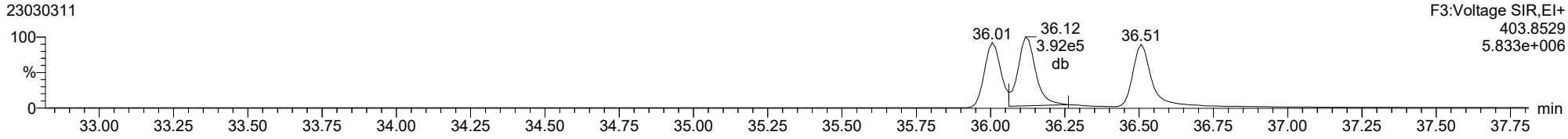

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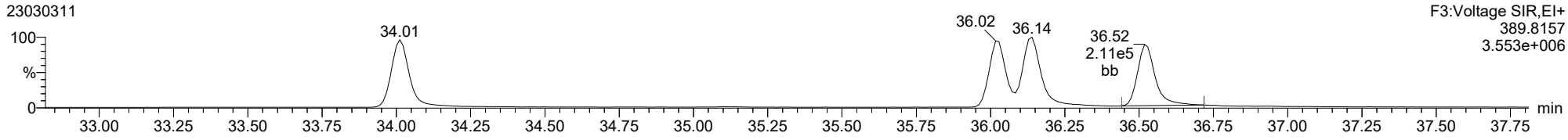

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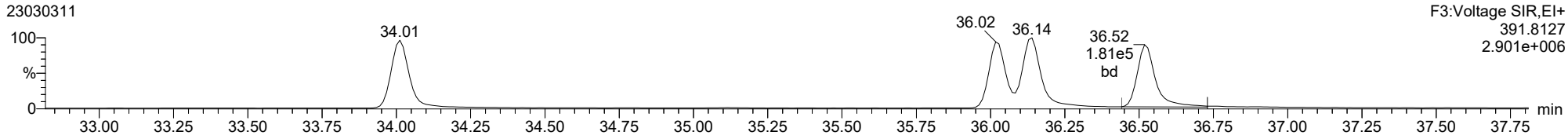

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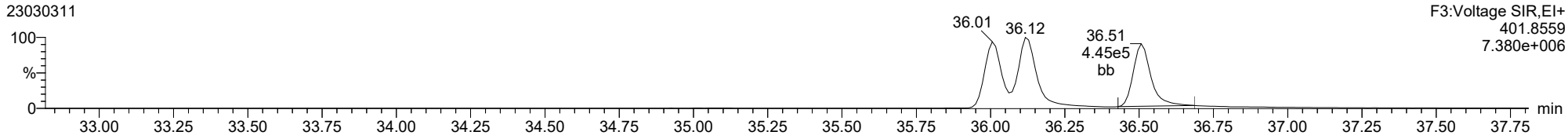

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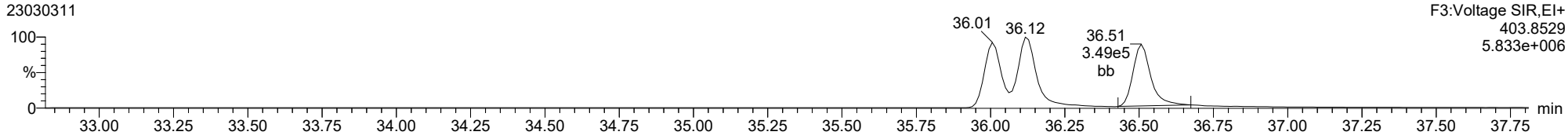

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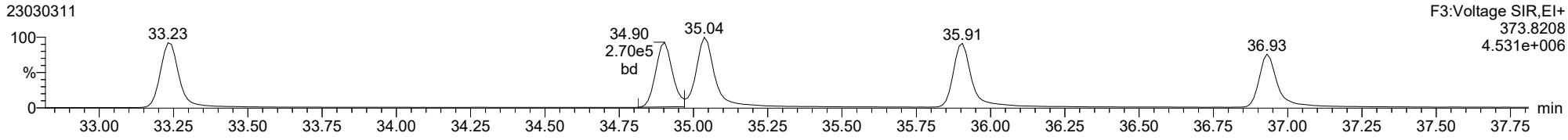

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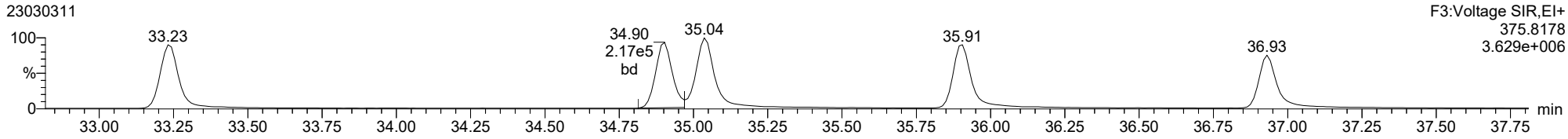

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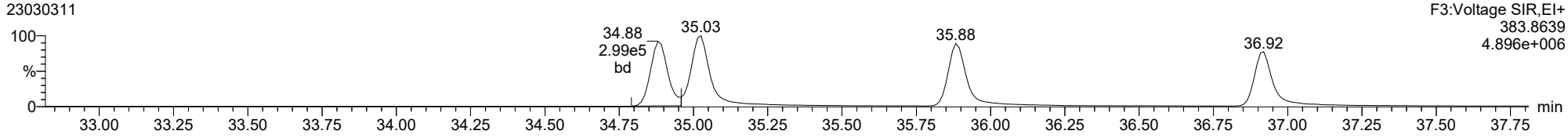

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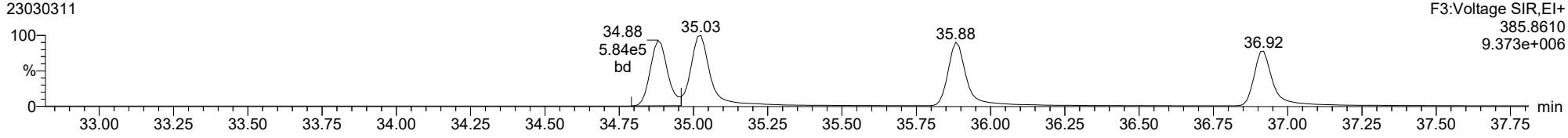

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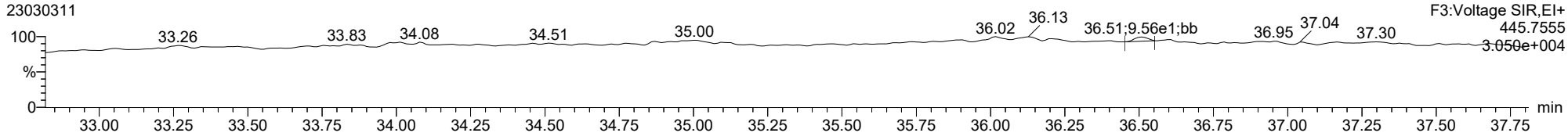

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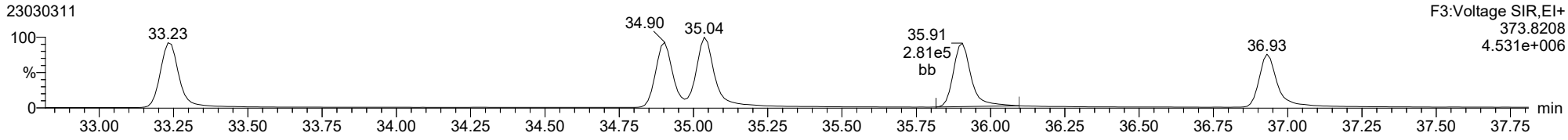

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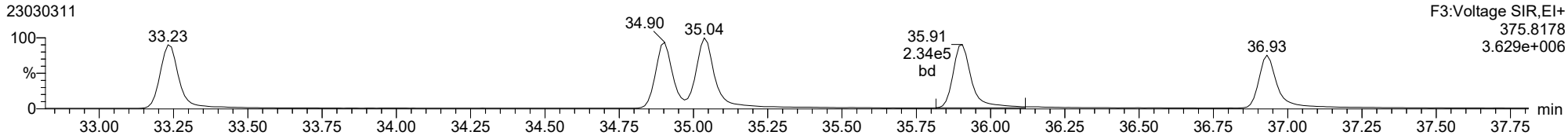

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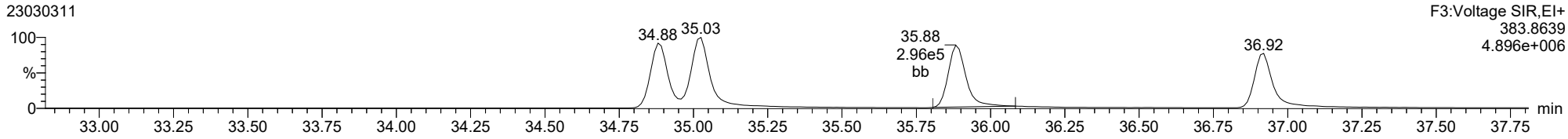

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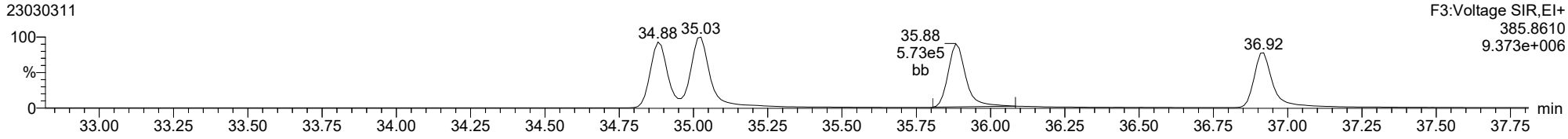

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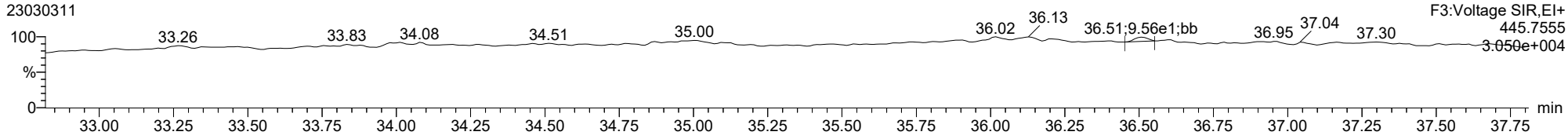

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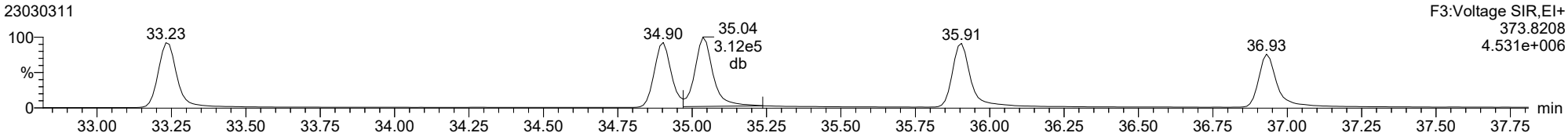

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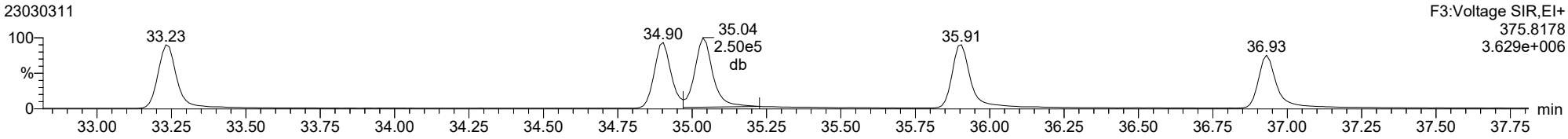

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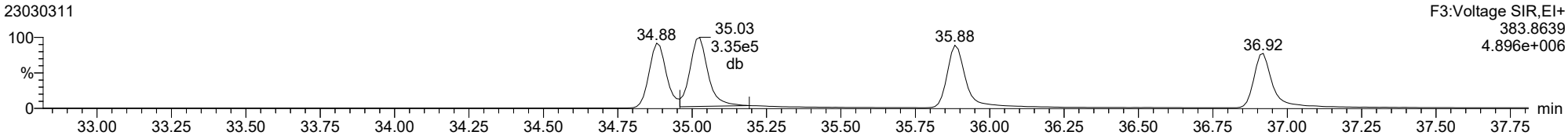

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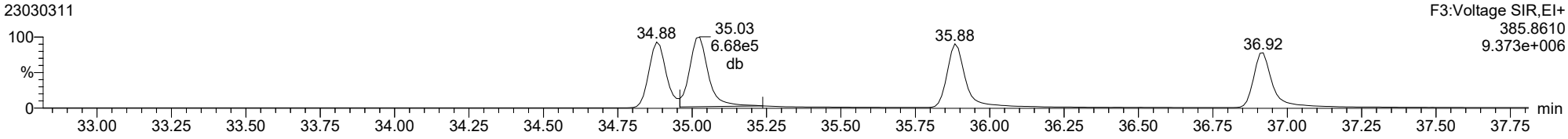

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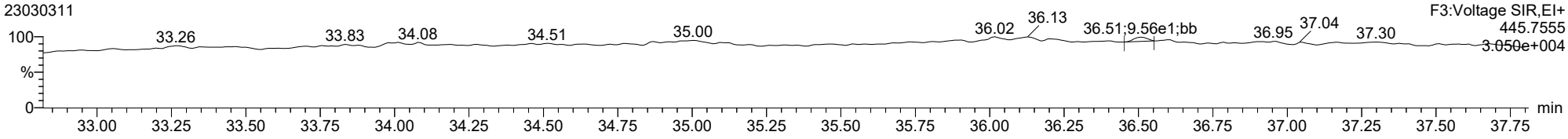

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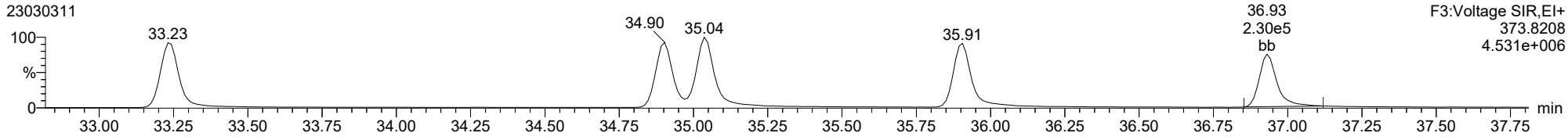

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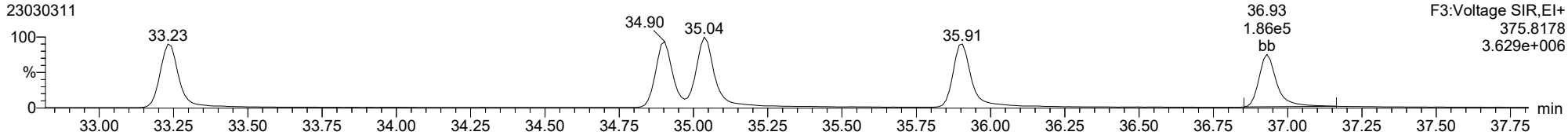

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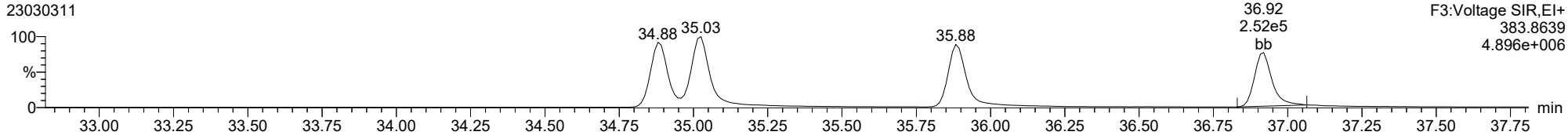

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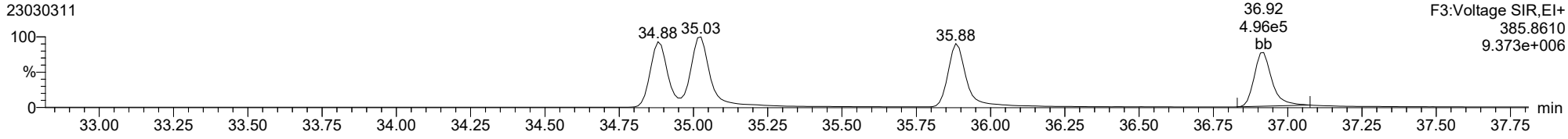

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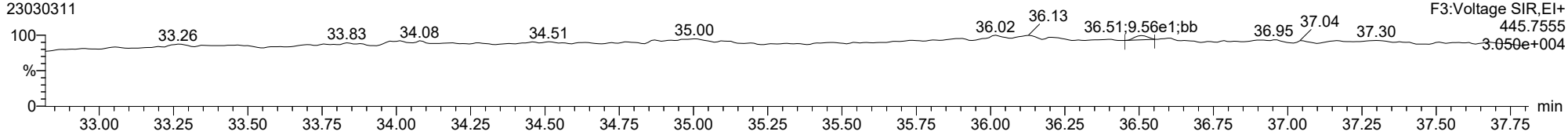

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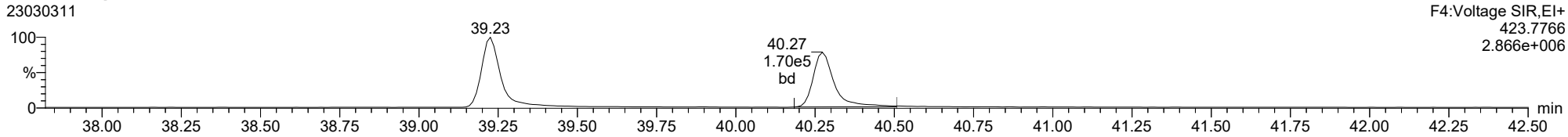

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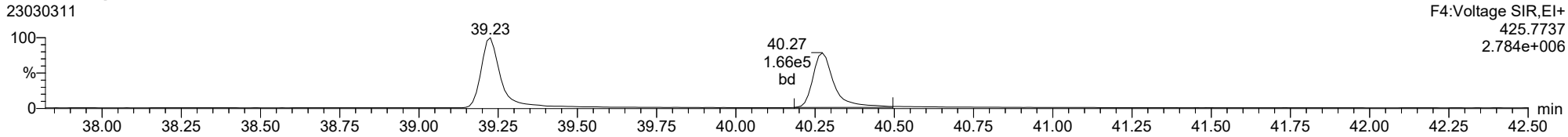

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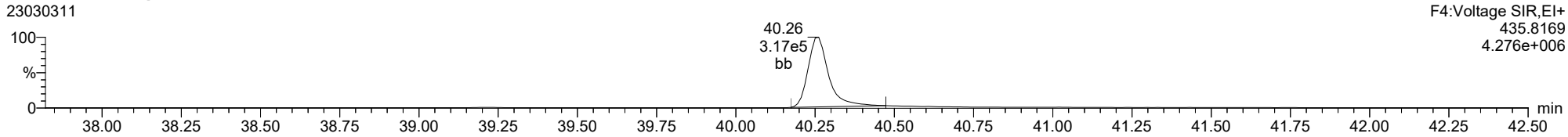

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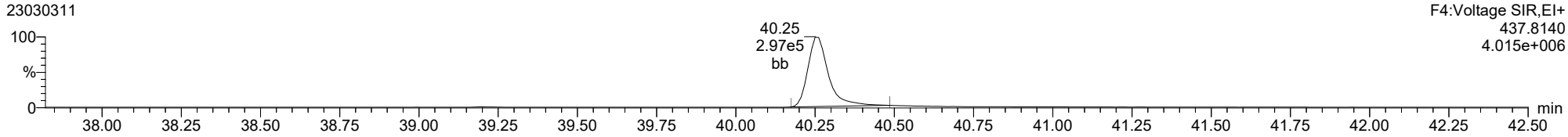

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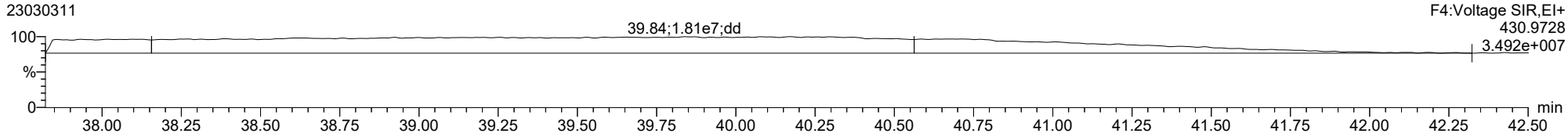

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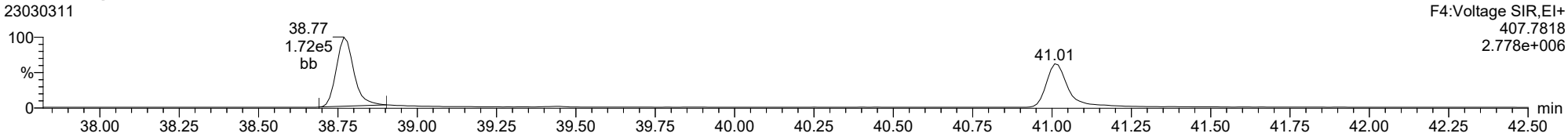

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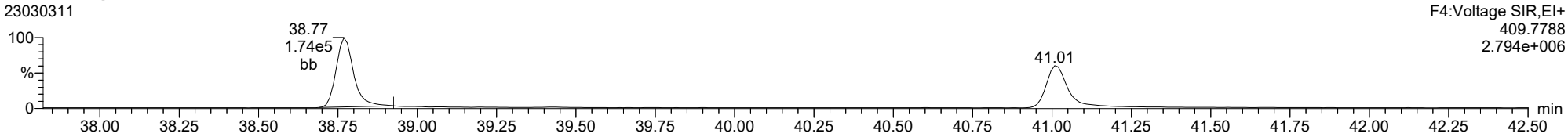

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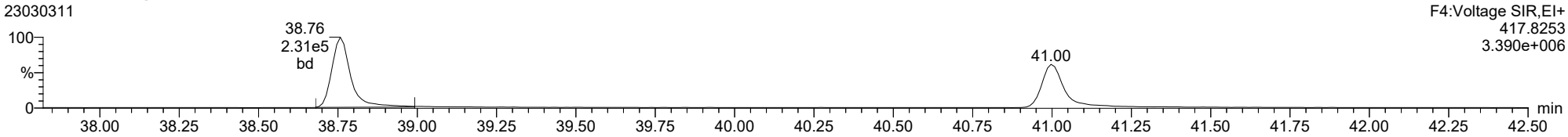

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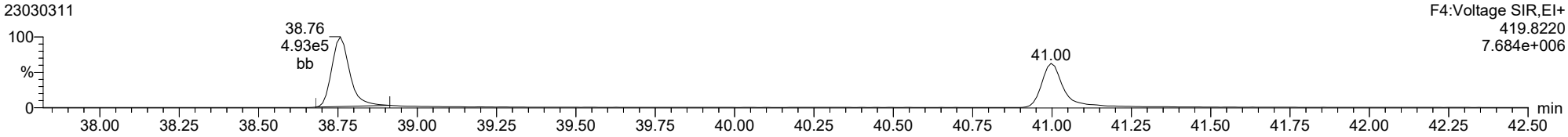

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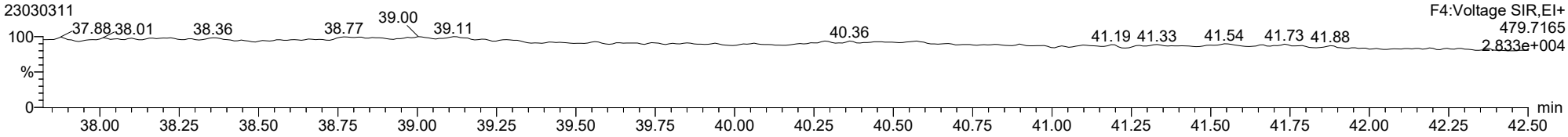

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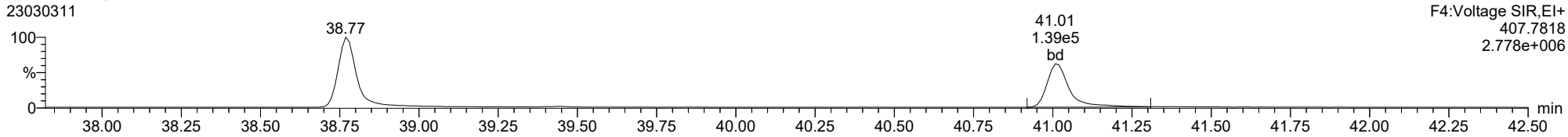

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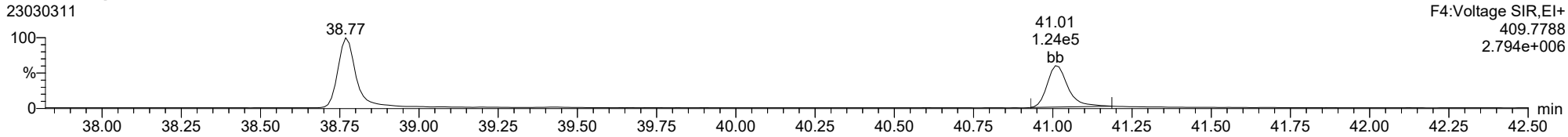

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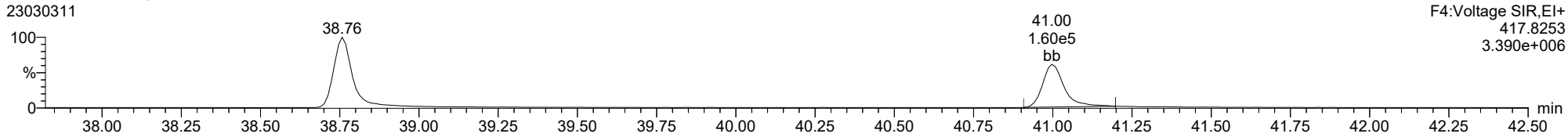

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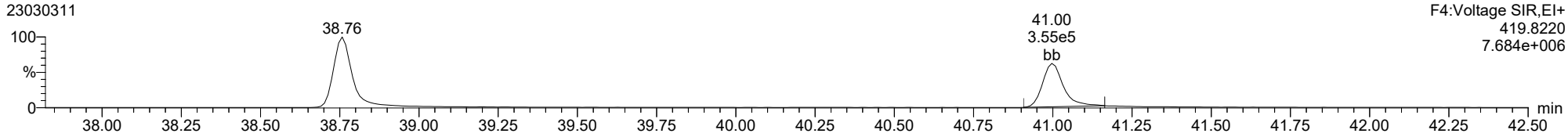

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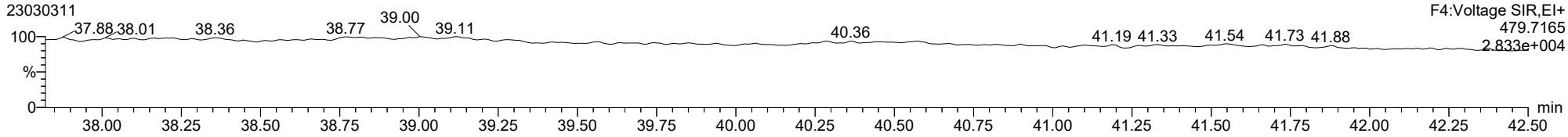

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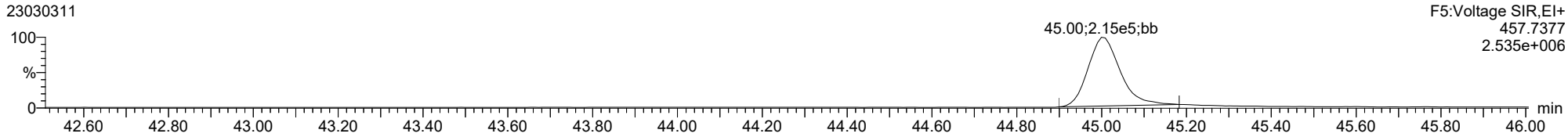

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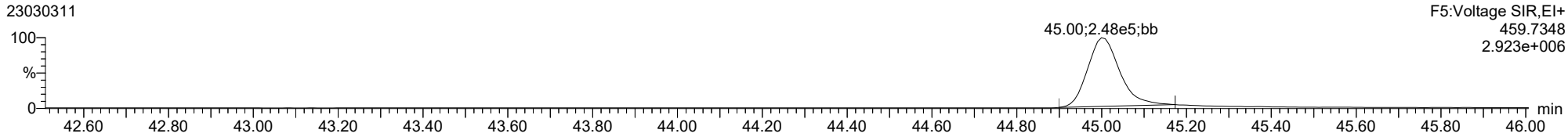

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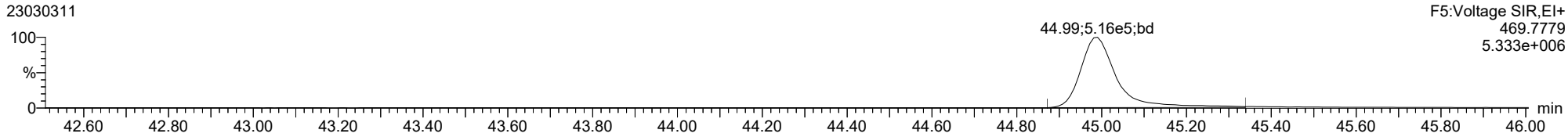

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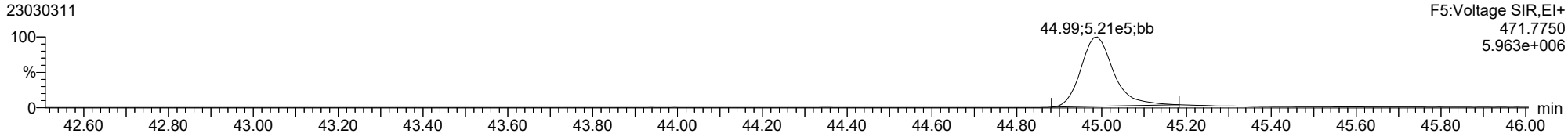
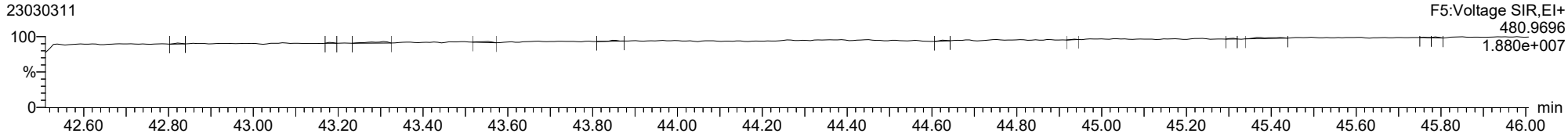


FUNCTION5 PFK



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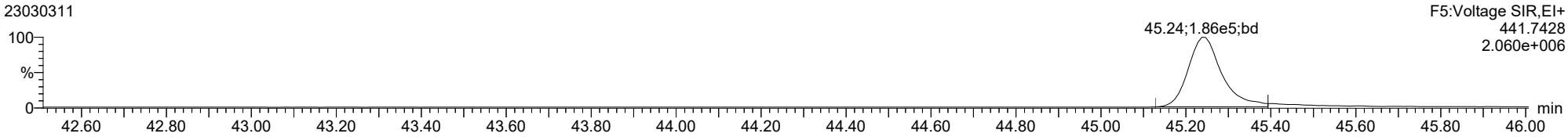

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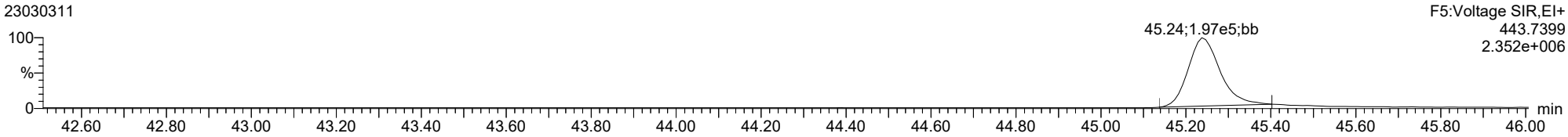

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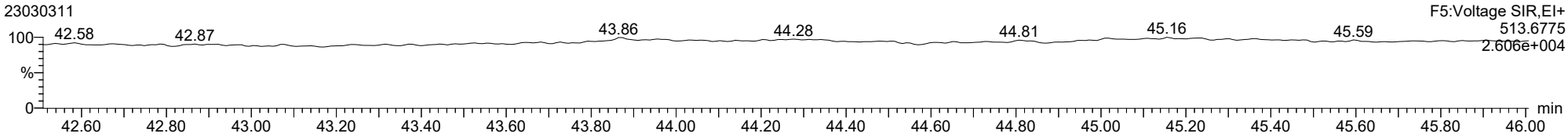

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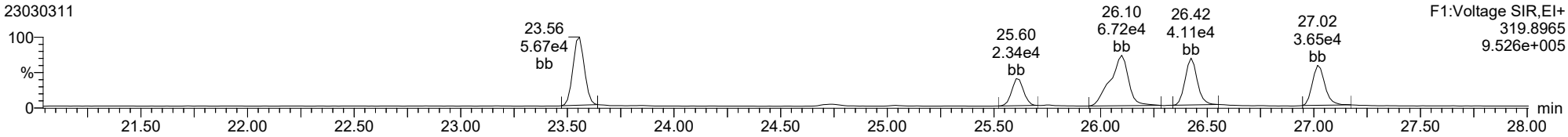
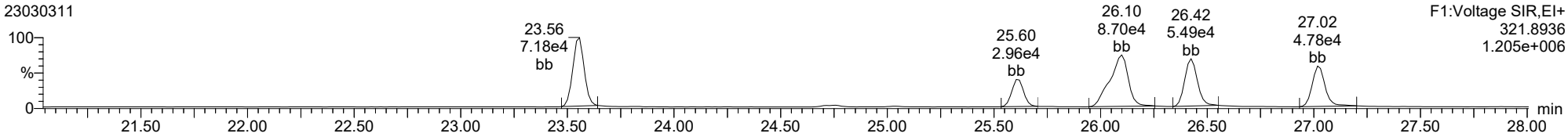
Total-tetradioxins



Total-tetradioxins



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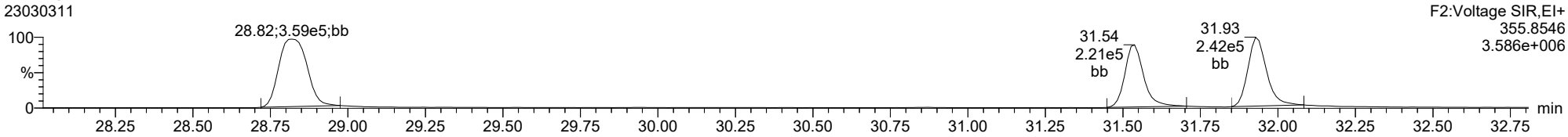
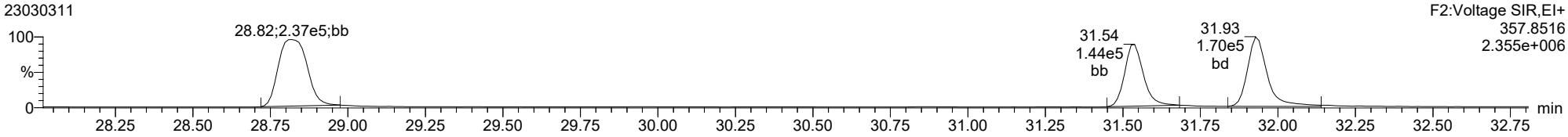


Total-pentadioxins



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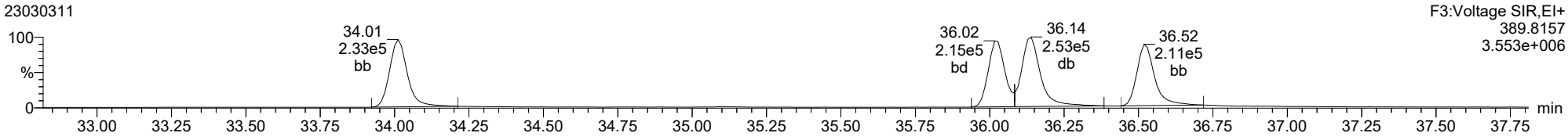
Total-hexadioxins



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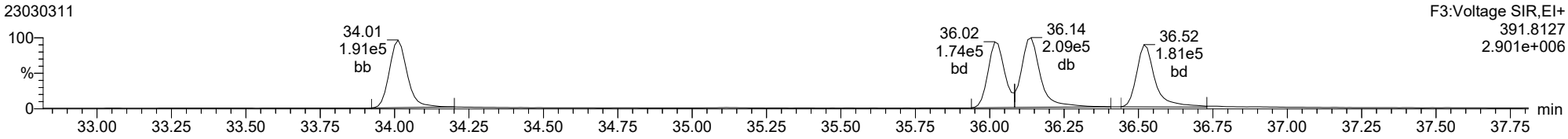
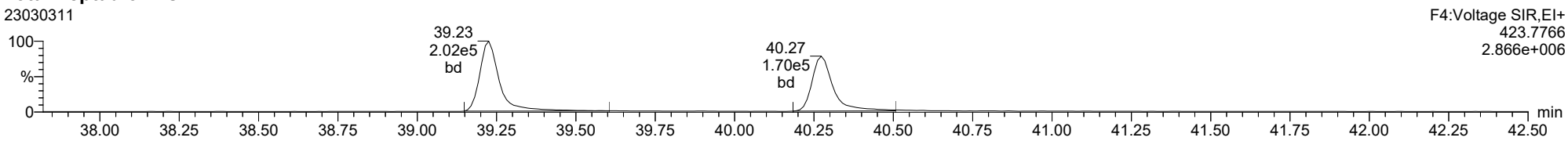
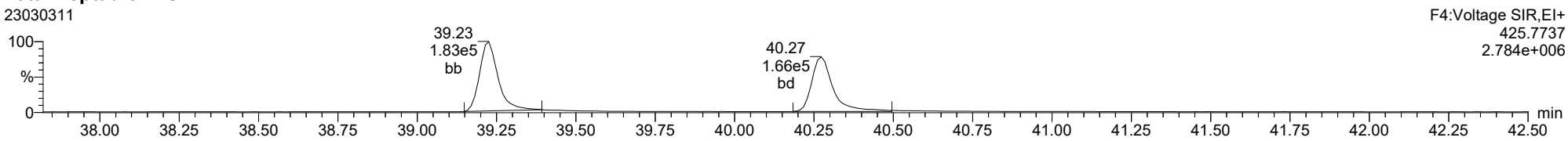


Total-heptadioxins



Total-heptadioxins



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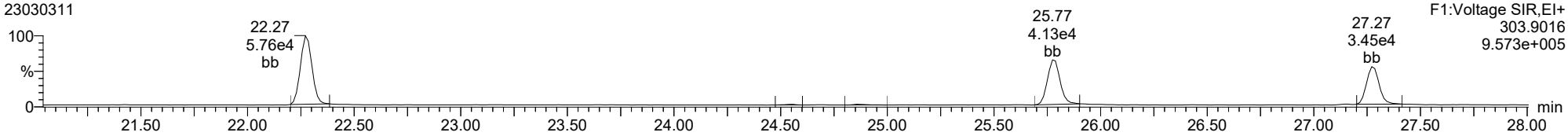
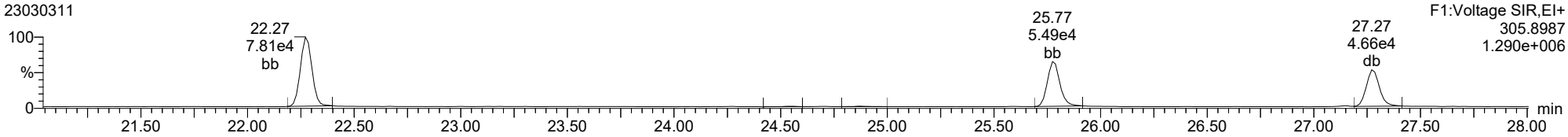
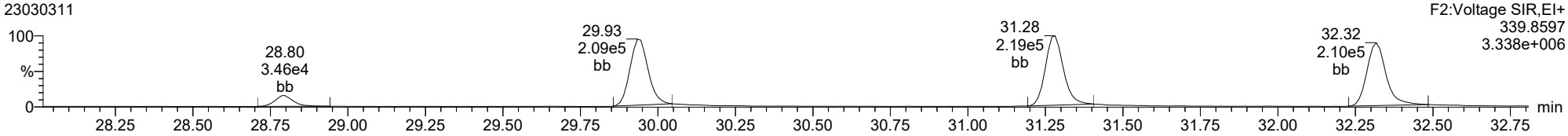
Total-tetrafurans



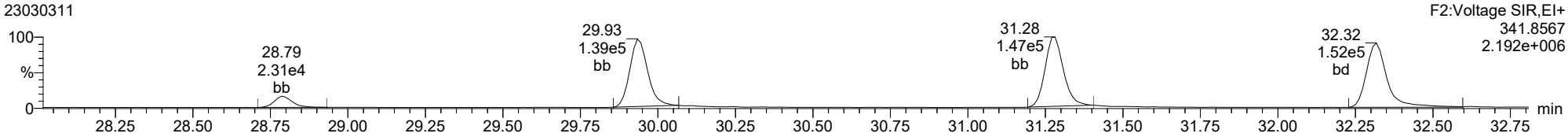
Total-tetrafurans



Total-pentafurans

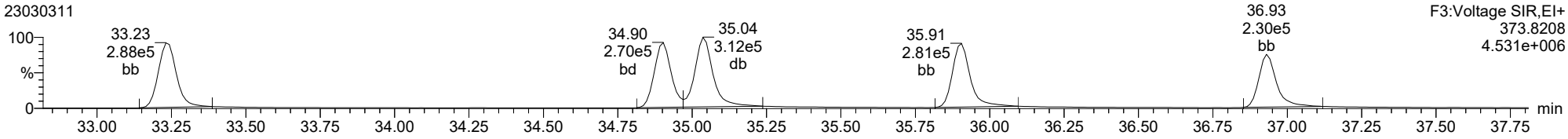


Total-pentafurans

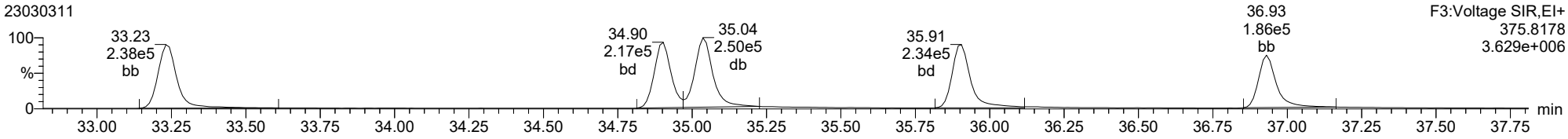


ID: CS3W2, Name: 23030311, Date: 03-Mar-2023, Time: 17:25:01, Conditions: AUTOSPEC01, User: pk

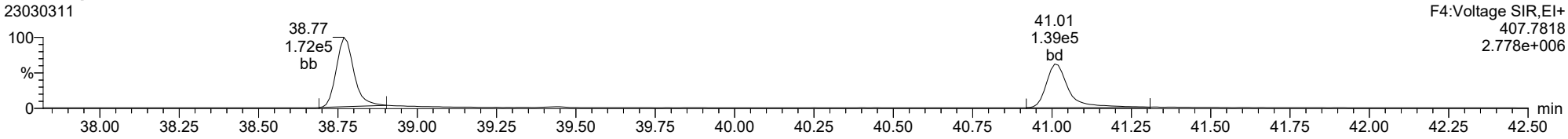
Total-hexafurans



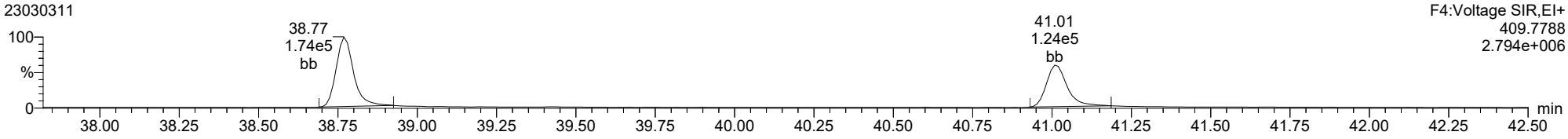
Total-hexafurans



Total-heptafurans



Total-heptafurans



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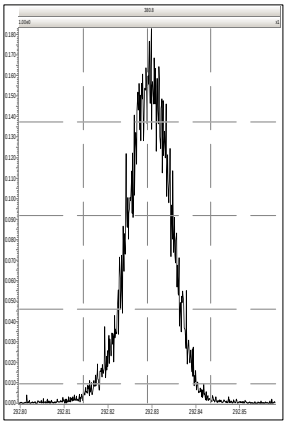
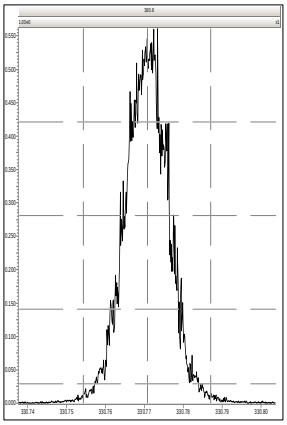
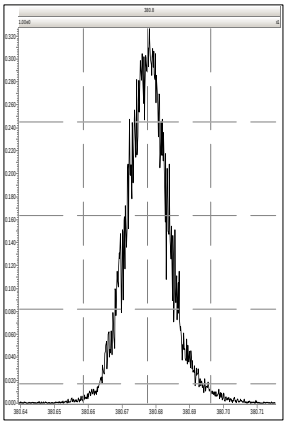
M 292.9824 R 13158



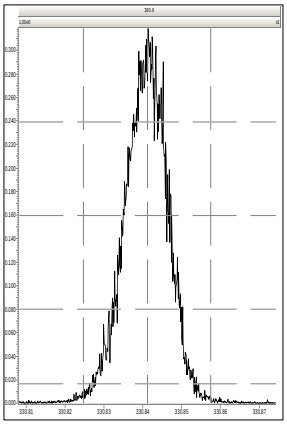
M 330.9792 R 12771



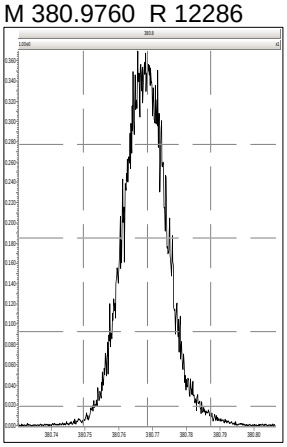
M 380.9760 R 12507



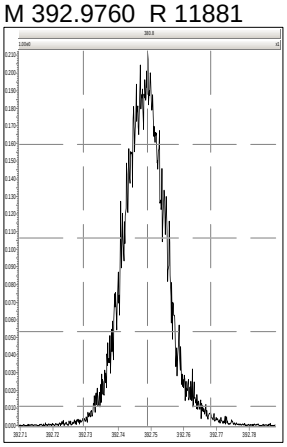
M 330.9792 R 13122



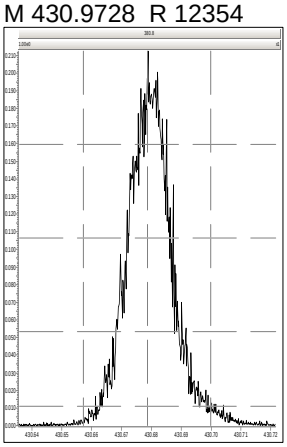
M 380.9760 R 12286



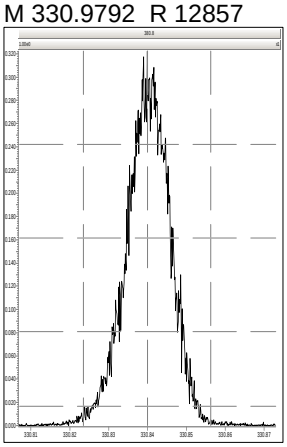
M 392.9760 R 11881



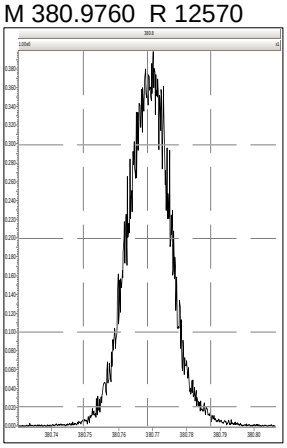
M 430.9728 R 12354



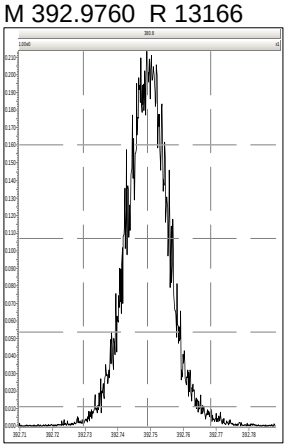
M 330.9792 R 12857



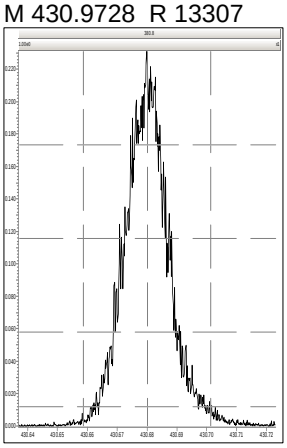
M 380.9760 R 12570



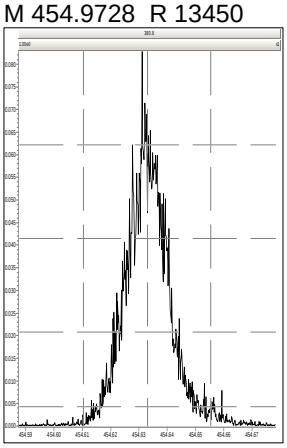
M 392.9760 R 13166



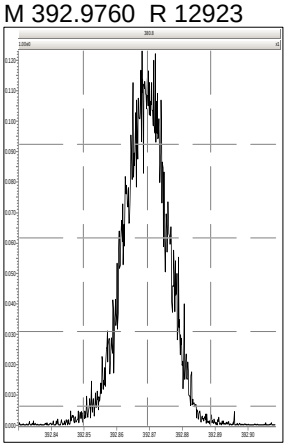
M 430.9728 R 13307



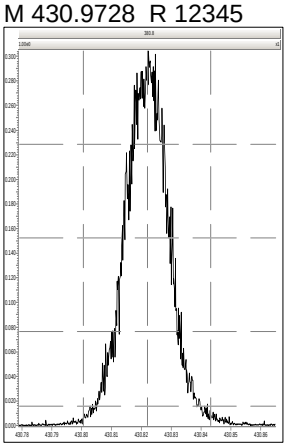
M 454.9728 R 13450



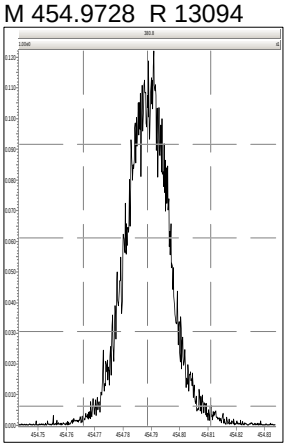
M 392.9760 R 12923



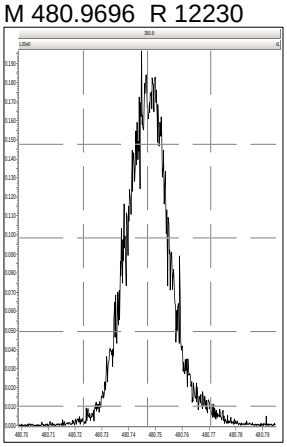
M 430.9728 R 12345



M 454.9728 R 13094

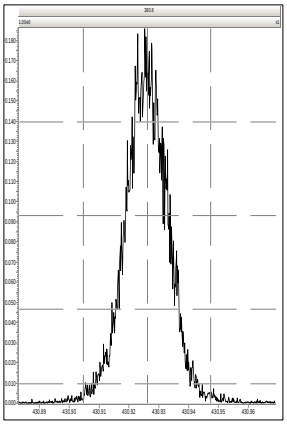


M 480.9696 R 12230

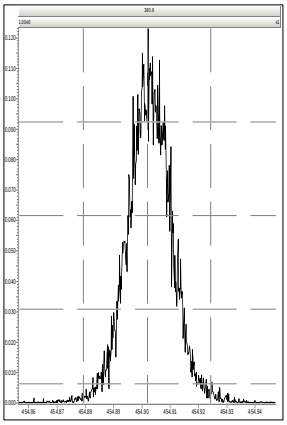


Printed: Friday, March 03, 2023 18:18:18 Pacific Standard Time

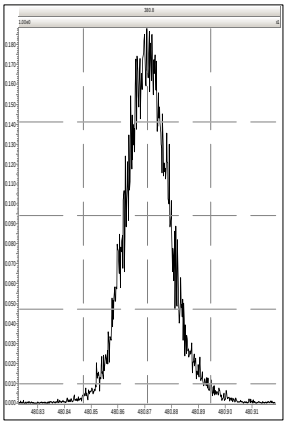
M 430.9728 R 12854



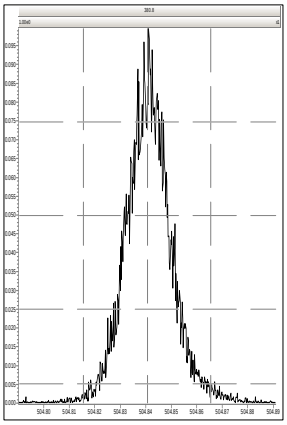
M 454.9728 R 13400



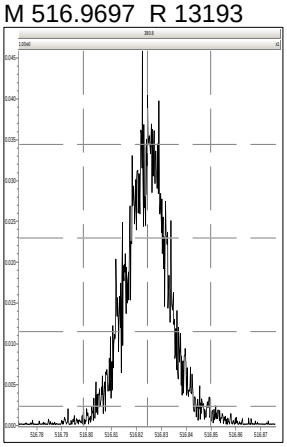
M 480.9696 R 11904

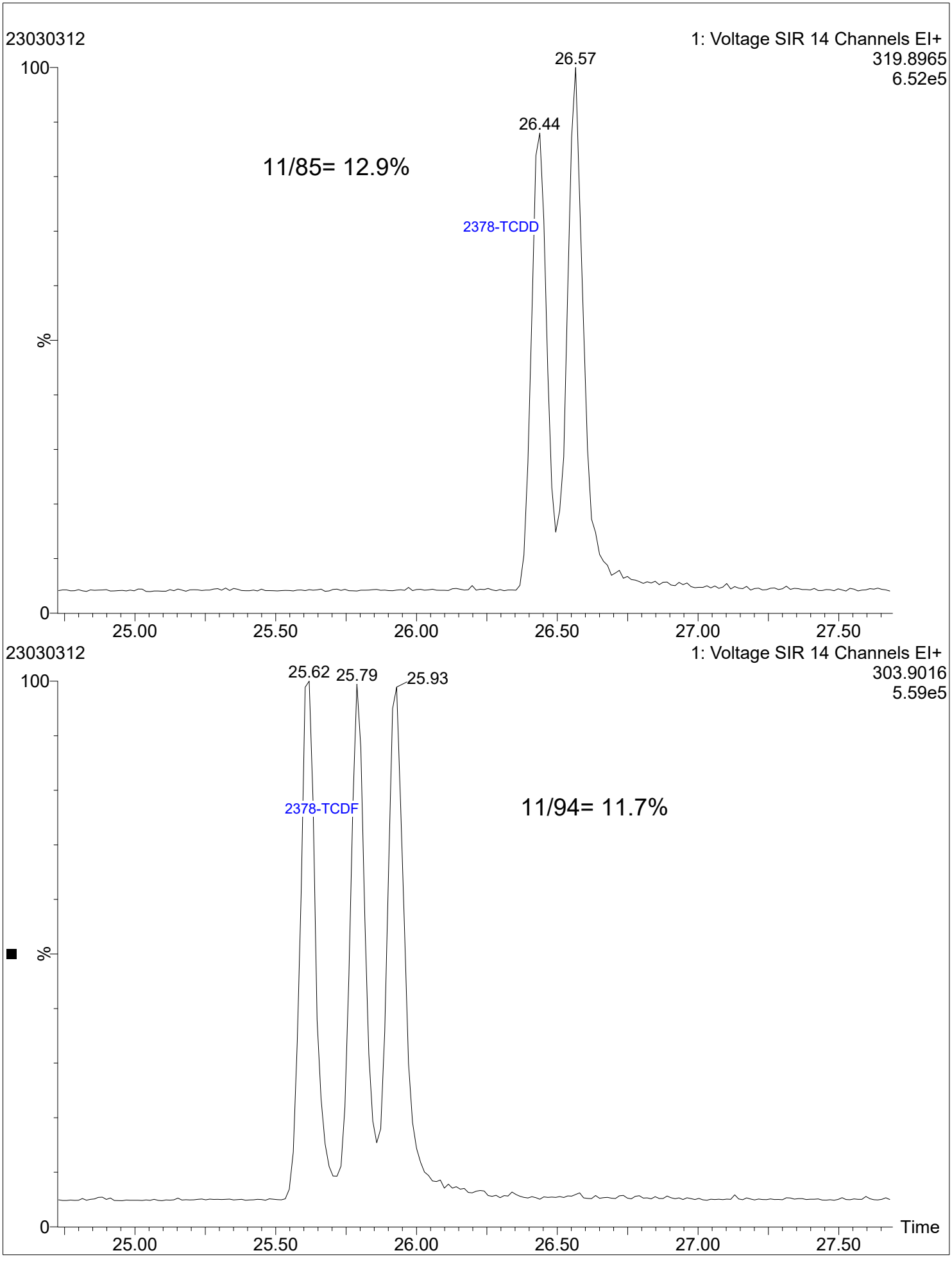


M 504.9696 R 12168



M 516.9697 R 13193




23030312
1: Voltage SIR 14 Channels EI+
319.8965
6.52e5
26.57
26.44
11/85= 12.9%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23030312
1: Voltage SIR 14 Channels EI+
303.9016
5.59e5
25.62
25.79
25.93
2378-TCDF
11/94= 11.7%
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00015
Laboratory ID: SLC0045-SCV1
Sequence: SLC0045
Sequence Name: ICVCW
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
2,3,7,8-TCDF	10.000	9.84	-1.6	
2,3,7,8-TCDD	10.000	9.81	-1.9	
1,2,3,7,8-PeCDF	50.000	51.4	2.8	
2,3,4,7,8-PeCDF	50.000	49.0	-2.0	
1,2,3,7,8-PeCDD	50.000	48.5	-2.9	
1,2,3,4,7,8-HxCDF	50.000	48.2	-3.5	
1,2,3,6,7,8-HxCDF	50.000	48.0	-4.0	
2,3,4,6,7,8-HxCDF	50.000	50.2	0.4	
1,2,3,7,8,9-HxCDF	50.000	49.1	-1.8	
1,2,3,4,7,8-HxCDD	50.000	50.8	1.6	
1,2,3,6,7,8-HxCDD	50.000	50.2	0.3	
1,2,3,7,8,9-HxCDD	50.000	51.6	3.2	
1,2,3,4,6,7,8-HpCDF	50.000	51.8	3.7	
1,2,3,4,7,8,9-HpCDF	50.000	48.5	-3.1	
1,2,3,4,6,7,8-HpCDD	50.000	49.2	-1.6	
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory:	Analytical Resources, LLC	**SDG:**	23A0467
Client:	Anchor QEA, LLC	**Project:**	AOC5 MR Phase 1
Calibration:	GC00015	**Laboratory ID:**	SLC0045-SCV1
Sequence:	SLC0045	**Sequence Name:**	ICVCW
		Standard ID:	H008219

* Indicates values outside of QC limits

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GC00015
Laboratory ID: SLC0045-SCV1
Sequence: SLC0045
Standard ID: H008219

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
OCDF	100.00	104	3.5	
OCDD	100.00	99.4	-0.6	
13C12-2,3,7,8-TCDF	100.00	96.9	-3.1	
13C12-2,3,7,8-TCDD	100.00	96.6	-3.4	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	-26.8	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	-24.1	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	-23.4	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	-7.0	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	-2.0	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	-6.6	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	-2.1	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	-4.1	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	2.1	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	4.0	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	2.5	
13C12-OCDD	200.00	162	-19.2	
37Cl4-2,3,7,8-TCDD	10.000	8.71	-12.9	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030302	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-ICV1	Injection Time:	09:51
Sequence Name:	CS3W1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	9.55	0.7015272	0.6699659		-4.5	+/-16
2,3,7,8-TCDD	A	10.000	9.45	1.1486620	1.0855020		-5.5	+/-22
1,2,3,7,8-PeCDF	A	50.000	49.6	0.6792300	0.6743560		-0.7	+/-18
2,3,4,7,8-PeCDF	A	50.000	47.5	0.7861704	0.7472986		-4.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	49.7	1.0218450	1.0147700		-0.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.1	1.1660380	1.0988190		-5.8	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	49.6	1.0907410	1.0813380		-0.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.3	1.1396990	1.1246750		-1.3	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	47.0	1.1370930	1.0679460		-6.1	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.1	0.9955689	0.9966266		0.1	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	49.6	1.0009380	0.9938861		-0.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	54.2	0.9071139	0.9838286		8.5	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.5	1.0029930	0.9526502		-5.0	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	50.2	0.9531152	0.9573187		0.4	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	47.6	1.0390130	0.9895371		-4.8	+/-14
OCDF	A	100.00	88.6	0.7778078	0.6890651		-11.4	+/-37
OCDD	A	100.00	98.4	0.9199537	0.9055309		-1.6	+/-21
13C12-2,3,7,8-TCDF	A	100.00	94.0	1.6201960	1.5232274		-6.0	+/-29
13C12-2,3,7,8-TCDD	A	100.00	102	1.1524090	1.1727116		1.8	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.2	1.2404520	1.1438587		-7.8	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	87.6	1.1177860	0.9791895		-12.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	84.3	0.8288129	0.6985475		-15.7	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	84.0	1.1683050	0.9815313		-16.0	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	74.6	1.3864660	1.0348865		-25.4	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.1292560	1.0010969		-11.3	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	99.9	0.9317541	0.9305560		-0.1	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.5	0.9950393	0.9299453		-6.5	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.9	1.1566890	1.0052205		-13.1	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	95.3	0.8952017	0.8530837		-4.7	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	98.7	0.7697516	0.7594900		-1.3	+/-23

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030302	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-ICV1	Injection Time:	09:51
Sequence Name:	CS3W1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	105	0.8401226	0.8828452		5.1	+/-28
13C12-OCDD	A	200.00	214	0.7674714	0.8220320		7.1	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.05	1.2878040	1.1649542		-9.5	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030802	Calibration Date:	03/03/2023
Sequence:	SLC0101	Injection Date:	03/08/23
Lab Sample ID:	SLC0101-ICV1	Injection Time:	10:35
Sequence Name:	CS3Y1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
2,3,7,8-TCDF	A	10.000	10.3	0.7015272	0.7258142		3.5	+/-16
2,3,7,8-TCDD	A	10.000	9.74	1.1486620	1.1190010		-2.6	+/-22
1,2,3,7,8-PeCDF	A	50.000	52.4	0.6792300	0.7122581		4.9	+/-18
2,3,4,7,8-PeCDF	A	50.000	50.5	0.7861704	0.7939976		1.0	+/-18
1,2,3,7,8-PeCDD	A	50.000	52.6	1.0218450	1.0739970		5.1	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	50.2	1.1660380	1.1718410		0.5	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	54.0	1.0907410	1.1772060		7.9	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	54.0	1.1396990	1.2309070		8.0	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	49.7	1.1370930	1.1299720		-0.6	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	54.1	0.9955689	1.0763390		8.1	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	54.6	1.0009380	1.0935400		9.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	59.3	0.9071139	1.0754970		18.6	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	48.5	1.0029930	0.9735427		-2.9	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	51.9	0.9531152	0.9884118		3.7	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	50.3	1.0390130	1.0456180		0.6	+/-14
OCDF	A	100.00	95.5	0.7778078	0.7431673		-4.5	+/-37
OCDD	A	100.00	101	0.9199537	0.9287803		1.0	+/-21
13C12-2,3,7,8-TCDF	A	100.00	103	1.6201960	1.6624420		2.6	+/-29
13C12-2,3,7,8-TCDD	A	100.00	100	1.1524090	1.1571279		0.4	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	107	1.2404520	1.3240365		6.7	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	112	1.1177860	1.2465786		11.5	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	104	0.8288129	0.8641937		4.3	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	101	1.1683050	1.1815984		1.1	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	94.4	1.3864660	1.3089717		-5.6	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	100	1.1292560	1.1337360		0.4	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	111	0.9317541	1.0297495		10.5	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.8	0.9950393	0.9334185		-6.2	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	91.5	1.1566890	1.0583794		-8.5	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	124	0.8952017	1.1059054		23.5	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	102	0.7697516	0.7855730		2.1	+/-23

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030802	Calibration Date:	03/03/2023
Sequence:	SLC0101	Injection Date:	03/08/23
Lab Sample ID:	SLC0101-ICV1	Injection Time:	10:35
Sequence Name:	CS3Y1		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	98.8	0.8401226	0.8299396		-1.2	+/-28
13C12-OCDD	A	200.00	216	0.7674714	0.8269882		7.8	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.96	1.2878040	1.1535670		-10.4	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230308RE.qld
Last Altered: Wednesday, March 08, 2023 14:08:06 Pacific Standard Time
Printed: Wednesday, March 08, 2023 14:09:47 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.001	5.083e4	7.120e4	0.702	0.714	0.770	1353	1558	7.71e5	1.06e6	569.6	682.8	NO	bb	bb	10.346
12378-PeCDF	29.945	1.001	2.876e5	1.893e5	0.679	1.519	1.550	1851	2183	4.22e6	2.81e6	2279.8	1288.9	NO	bb	bb	52.431
23478-PeCDF	31.281	1.001	3.027e5	1.978e5	0.786	1.531	1.550	1851	2183	4.56e6	2.99e6	2462.9	1367.7	NO	bb	bb	50.498
123478-HxCDF	34.903	1.001	3.310e5	2.591e5	1.166	1.278	1.240	2496	2309	5.22e6	4.08e6	2091.3	1767.9	NO	bd	bd	50.249
234678-HxCDF	35.905	1.001	3.224e5	2.724e5	1.140	1.184	1.240	2496	2309	5.02e6	4.02e6	2011.5	1742.4	NO	bb	bb	54.001
123678-HxCDF	35.036	1.000	3.802e5	2.764e5	1.091	1.375	1.240	2496	2309	5.38e6	4.14e6	2153.8	1794.2	NO	dd	db	53.964
123789-HxCDF	36.930	1.000	2.804e5	2.154e5	1.137	1.302	1.240	2496	2309	4.33e6	3.39e6	1736.6	1467.7	NO	bb	bb	49.687
1234678-HpCDF	38.780	1.001	2.320e5	2.268e5	1.003	1.023	1.050	1765	1455	3.68e6	3.61e6	2082.5	2480.9	NO	bb	bb	48.532
1234789-HpCDF	41.008	1.000	1.644e5	1.665e5	0.953	0.988	1.050	1765	1455	2.30e6	2.36e6	1305.3	1621.6	NO	bb	bb	51.852
OCDF	45.246	1.005	2.317e5	2.921e5	0.778	0.793	0.890	1566	932	2.73e6	3.19e6	1743.8	3422.0	NO	bb	bd	95.546
2378-TCDD	26.424	1.001	5.747e4	7.347e4	1.149	0.782	0.770	1392	1419	8.72e5	1.11e6	626.6	785.9	NO	bb	bb	9.742
12378-PeCDD	31.527	1.000	2.835e5	1.858e5	1.022	1.526	1.550	2125	2258	4.38e6	2.83e6	2061.0	1254.4	NO	bb	bb	52.552
123478-HxCDD	36.017	1.000	2.392e5	1.889e5	0.996	1.266	1.240	1630	1951	3.96e6	3.13e6	2428.3	1602.0	NO	bd	bd	54.056
123678-HxCDD	36.128	1.000	2.783e5	2.149e5	1.001	1.295	1.240	1630	1951	3.99e6	3.24e6	2445.2	1659.0	NO	db	db	54.626
123789-HxCDD	36.518	1.011	2.570e5	1.994e5	0.907	1.289	1.240	1630	1951	3.90e6	3.14e6	2394.4	1611.6	NO	bd	bb	59.281
1234678-HpCDD	40.272	1.000	1.888e5	1.810e5	1.039	1.043	1.050	2384	1785	2.83e6	2.69e6	1188.7	1509.1	NO	bb	bb	50.318
OCDD	45.008	1.000	3.066e5	3.480e5	0.920	0.881	0.890	1208	2440	3.59e6	4.12e6	2969.4	1686.4	NO	bb	bb	100.959
13C-2378-TCDF	25.760	1.007	7.289e5	9.523e5	1.620	0.765	0.770	2981	1951	1.09e7	1.43e7	3655.2	7325.4	NO	bb	bb	102.607
13C-12378-PeCDF	29.922	1.169	7.952e5	5.438e5	1.240	1.462	1.550	2583	3209	1.19e7	7.92e6	4618.4	2468.1	NO	bb	bd	106.738
13C-23478-PeCDF	31.259	1.222	7.630e5	4.976e5	1.118	1.533	1.550	2583	3209	1.16e7	7.52e6	4485.8	2343.9	NO	bb	bb	111.522
13C-123478-HxCDF	34.880	0.955	3.454e5	6.616e5	1.168	0.522	0.510	2082	2489	5.33e6	1.02e7	2559.0	4117.7	NO	bd	bd	101.138
13C-123678-HxCDF	35.025	0.959	4.011e5	7.146e5	1.386	0.561	0.510	2082	2489	5.68e6	1.07e7	2726.0	4285.6	NO	db	db	94.411
13C-234678-HxCDF	35.883	0.983	3.324e5	6.339e5	1.129	0.524	0.510	2082	2489	5.02e6	9.56e6	2409.7	3839.0	NO	bb	bb	100.397
13C-123789-HxCDF	36.919	1.011	3.012e5	5.765e5	0.932	0.522	0.510	2082	2489	4.59e6	8.79e6	2204.0	3529.7	NO	bb	bb	110.517
13C-1234678-HpCDF	38.757	1.062	2.831e5	6.594e5	0.895	0.429	0.440	1906	3929	4.48e6	1.05e7	2348.2	2663.9	NO	bb	bb	123.537
13C-1234789-HpCDF	40.997	1.123	2.073e5	4.623e5	0.770	0.448	0.440	1906	3929	2.85e6	6.54e6	1496.6	1663.6	NO	bb	bb	102.055
13C-1234-TCDD	25.591	0.000	4.549e5	5.564e5	1.000	0.818	0.770	2005	1525	6.97e6	8.49e6	3476.0	5567.3	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.031	5.231e5	6.471e5	1.152	0.808	0.770	2005	1525	7.81e6	9.71e6	3896.0	6369.1	NO	bb	bb	100.409
13C-12378-PeCDD	31.515	1.232	5.482e5	3.257e5	0.829	1.683	1.550	1386	919	8.22e6	5.01e6	5928.4	5454.1	NO	bb	bb	104.269
13C-123478-HxCDD	36.006	0.986	4.521e5	3.434e5	0.995	1.316	1.240	2647	3157	7.37e6	5.58e6	2783.5	1767.8	NO	bd	bd	93.807
13C-123678-HxCDD	36.117	0.989	5.129e5	3.892e5	1.157	1.318	1.240	2647	3157	7.81e6	5.95e6	2951.7	1883.1	NO	db	db	91.501
13C-1234678-HpCDD	40.261	1.103	3.780e5	3.294e5	0.840	1.148	1.050	1903	1825	5.27e6	4.70e6	2768.3	2575.7	NO	bd	bb	98.788
13C-OCDD	44.999	1.233	6.385e5	7.712e5	0.767	0.828	0.890	1582	1838	7.27e6	8.26e6	4593.8	4492.8	NO	bb	bd	215.510
13C-123789-HxCDD	36.507	0.000	4.844e5	3.679e5	1.000	1.316	1.240	2647	3157	7.54e6	5.77e6	2849.2	1826.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.424	1.033	1.167e5		1.288			1468		1.73e6		1179.3			bb		8.958

Dataset: T:\Autospec\Processed Data Batch\230308RE.qld
Last Altered: Wednesday, March 08, 2023 14:08:06 Pacific Standard Time
Printed: Wednesday, March 08, 2023 14:09:47 Pacific Standard Time

ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.271	0.865	7.159e4	9.994e4	0.802	0.716	0.770	1353	1558	1.18e6	1.60e6	868.4	1028.8	NO	bb	bb	12.729
1289-TCDF	27.271	1.059	4.831e4	6.748e4	0.678	0.716	0.770	1353	1558	7.08e5	9.96e5	523.0	639.5	NO	bb	db	10.159
13468-PECDF	27.130	0.907	4.114e5	2.589e5	1.246	1.589	1.550	595	1053	6.34e6	3.96e6	10655.4	3766.5	NO	bb	bb	40.167
12389-PECDF	32.318	1.080	2.852e5	1.879e5	0.496	1.518	1.550	1851	2183	4.07e6	2.66e6	2198.8	1220.5	NO	bb	bb	71.173
123468-HXCDF	33.243	0.953	3.377e5	2.647e5	1.169	1.276	1.240	2496	2309	4.94e6	3.89e6	1977.7	1684.8	NO	bb	bb	51.158
1368-TCDD	23.542	0.892	6.792e4	8.546e4	1.015	0.795	0.770	1392	1419	1.08e6	1.33e6	773.5	937.2	NO	bb	bb	12.909
1289-TCDD	27.017	1.024	4.998e4	6.343e4	0.909	0.788	0.770	1392	1419	7.54e5	9.20e5	541.7	648.2	NO	bb	bb	10.666
12479-PECDD	28.830	0.915	4.705e5	3.017e5	2.301	1.560	1.550	2125	2258	4.40e6	2.82e6	2069.9	1248.4	NO	bb	bb	38.394
12389-PECDD	31.928	1.013	3.206e5	2.093e5	1.184	1.532	1.550	2125	2258	4.75e6	3.10e6	2234.0	1373.6	NO	bb	bb	51.222
124679-HXCDD	34.011	0.945	2.588e5	2.095e5	1.115	1.235	1.240	1630	1951	3.86e6	3.10e6	2368.4	1590.9	NO	bb	bb	52.766
1234679-HPCDD	39.225	0.974	2.371e5	2.245e5	1.137	1.056	1.050	2384	1785	3.70e6	3.50e6	1551.6	1963.3	NO	bb	bb	57.404
Total-tetrafurans			1.712e5		0.727			1353		2.66e6							33.319
Total-penta1			4.114e5					595		6.34e6							40.167
Total-pentafurans			9.230e5		0.654			1851		1.36e7							183.427
Total-hexafurans			1.652e6		1.141			2496		2.49e7							259.059
Total-heptafurans			3.985e5		0.978			1765		6.01e6							100.866
Total-Furans			3.787e6		0.922			1353		5.62e7							712.383
Total-tetradioxins			2.900e5		1.024			1392		4.03e6							54.831
Total-pentadioxins			1.076e6		1.502			2125		1.35e7							142.321
Total-hexadioxins			1.036e6		1.005			1630		1.57e7							221.351
Total-heptadioxins			4.259e5		1.088			2384		6.53e6							107.722
Total-Dioxins			3.134e6		1.130			1392		4.34e7							627.185
Total-TEQ			6.922e6					1392		9.96e7							1339.568
FUNCTION1 PFK			1.287e8					480939		7.78e7							
FUNCTION2 PFK			2.294e5					368071		7.90e6							0.000
FUNCTION3 PFK			4.670e6					441569		4.16e7							0.000
FUNCTION4 PFK			6.522e6					268404		5.42e6							
FUNCTION5 PFK			1.422e4					172767		4.74e5							
FUNCTION1 HXCD...			1.781e2					551		4.49e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			7.882e2					649		1.16e4							0.000
FUNCTION3 OCDPE			1.028e3					525		1.83e4							0.000
FUNCTION4 NCDPE			1.148e2					561		1.62e3							0.000
FUNCTION5 DCDPE			2.013e2					535		3.46e3							0.000

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	4.831e4	6.748e4	0.678	0.72	0.77	523.0	YES	NO	bb	db	10.159
2	2378-TCDF	25.77	5.083e4	7.120e4	0.702	0.71	0.77	569.6	YES	NO	bb	bb	10.346
3	Total-tetrafurans	24.69	4.425e2	5.894e2	0.727	0.75	0.77	4.9	YES	NO	dd	db	0.084
4	1368-TCDF	22.27	7.159e4	9.994e4	0.802	0.72	0.77	868.4	YES	NO	bb	bb	12.729

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	4.114e5	2.589e5	1.246	1.59	1.55	10655.4	YES	NO	bb	bb	40.167

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.32	2.852e5	1.879e5	0.496	1.52	1.55	2198.8	YES	NO	bb	bb	71.173
2	23478-PeCDF	31.28	3.027e5	1.978e5	0.786	1.53	1.55	2462.9	YES	NO	bb	bb	50.498
3	12378-PeCDF	29.94	2.876e5	1.893e5	0.679	1.52	1.55	2279.8	YES	NO	bb	bb	52.431
4	Total-pentafurans	28.79	4.758e4	3.167e4	0.654	1.50	1.55	386.5	YES	NO	bb	bb	9.324

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	234678-HxCDF	35.91	3.224e5	2.724e5	1.140	1.18	1.24	2011.5	YES	NO	bb	bb	54.001
2	123678-HxCDF	35.04	3.802e5	2.764e5	1.091	1.38	1.24	2153.8	YES	NO	dd	db	53.964
3	123478-HxCDF	34.90	3.310e5	2.591e5	1.166	1.28	1.24	2091.3	YES	NO	bd	bd	50.249
4	123468-HXCDF	33.24	3.377e5	2.647e5	1.169	1.28	1.24	1977.7	YES	NO	bb	bb	51.158
5	123789-HxCDF	36.93	2.804e5	2.154e5	1.137	1.30	1.24	1736.6	YES	NO	bb	bb	49.687

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.01	1.644e5	1.665e5	0.953	0.99	1.05	1305.3	YES	NO	bb	bb	51.852
2	Total-heptafurans	39.44	1.997e3	1.803e3	0.978	1.11	1.05	17.7	YES	NO	bb	bb	0.482
3	1234678-HpCDF	38.78	2.320e5	2.268e5	1.003	1.02	1.05	2082.5	YES	NO	bb	bb	48.532

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	4.831e4	6.748e4	0.678	0.72	0.77	523.0	YES	NO	bb	db	10.159
2	2378-TCDF	25.77	5.083e4	7.120e4	0.702	0.71	0.77	569.6	YES	NO	bb	bb	10.346
3	Total-tetrafurans	24.69	4.425e2	5.894e2	0.727	0.75	0.77	4.9	YES	NO	dd	db	0.084
4	1368-TCDF	22.27	7.159e4	9.994e4	0.802	0.72	0.77	868.4	YES	NO	bb	bb	12.729
5	12389-PECDF	32.32	2.852e5	1.879e5	0.496	1.52	1.55	2198.8	YES	NO	bb	bb	71.173
6	23478-PeCDF	31.28	3.027e5	1.978e5	0.786	1.53	1.55	2462.9	YES	NO	bb	bb	50.498
7	12378-PeCDF	29.94	2.876e5	1.893e5	0.679	1.52	1.55	2279.8	YES	NO	bb	bb	52.431
8	Total-pentafurans	28.79	4.758e4	3.167e4	0.654	1.50	1.55	386.5	YES	NO	bb	bb	9.324
9	234678-HxCDF	35.91	3.224e5	2.724e5	1.140	1.18	1.24	2011.5	YES	NO	bb	bb	54.001
10	123678-HxCDF	35.04	3.802e5	2.764e5	1.091	1.38	1.24	2153.8	YES	NO	dd	db	53.964
11	123478-HxCDF	34.90	3.310e5	2.591e5	1.166	1.28	1.24	2091.3	YES	NO	bd	bd	50.249
12	123468-HXCDF	33.24	3.377e5	2.647e5	1.169	1.28	1.24	1977.7	YES	NO	bb	bb	51.158
13	123789-HxCDF	36.93	2.804e5	2.154e5	1.137	1.30	1.24	1736.6	YES	NO	bb	bb	49.687
14	1234789-HpCDF	41.01	1.644e5	1.665e5	0.953	0.99	1.05	1305.3	YES	NO	bb	bb	51.852
15	Total-heptafurans	39.44	1.997e3	1.803e3	0.978	1.11	1.05	17.7	YES	NO	bb	bb	0.482
16	1234678-HpCDF	38.78	2.320e5	2.268e5	1.003	1.02	1.05	2082.5	YES	NO	bb	bb	48.532
17	OCDF	45.25	2.317e5	2.921e5	0.778	0.79	0.89	1743.8	YES	NO	bb	bd	95.546
18	13468-PECDF	27.13	4.114e5	2.589e5	1.246	1.59	1.55	10655.4	YES	NO	bb	bb	40.167

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.02	4.998e4	6.343e4	0.909	0.79	0.77	541.7	YES	NO	bb	bb	10.666
2	2378-TCDD	26.42	5.747e4	7.347e4	1.149	0.78	0.77	626.6	YES	NO	bb	bb	9.742
3	Total-tetradioxins	26.10	8.701e4	1.068e5	1.024	0.81	0.77	642.2	YES	NO	bb	bb	16.174
4	Total-tetradioxins	25.60	2.699e4	3.554e4	1.024	0.76	0.77	304.7	YES	NO	bb	bb	5.217
5	Total-tetradioxins	25.03	6.443e2	8.383e2	1.024	0.77	0.77	5.1	YES	NO	db	bb	0.124
6	1368-TCDD	23.54	6.792e4	8.546e4	1.015	0.79	0.77	773.5	YES	NO	bb	bb	12.909

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.53	2.835e5	1.858e5	1.022	1.53	1.55	2061.0	YES	NO	bb	bb	52.552
2	Total-pentadioxins	30.86	1.204e3	8.057e2	1.502	1.49	1.55	8.3	YES	NO	bb	bb	0.153
3	12479-PECDD	28.83	4.705e5	3.017e5	2.301	1.56	1.55	2069.9	YES	NO	bb	bb	38.394
4	12389-PECDD	31.93	3.206e5	2.093e5	1.184	1.53	1.55	2234.0	YES	NO	bb	bb	51.222

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	124679-HXCDD	34.01	2.588e5	2.095e5	1.115	1.24	1.24	2368.4	YES	NO	bb	bb	52.766
2	123789-HxCDD	36.52	2.570e5	1.994e5	0.907	1.29	1.24	2394.4	YES	NO	bd	bb	59.281
3	123678-HxCDD	36.13	2.783e5	2.149e5	1.001	1.29	1.24	2445.2	YES	NO	db	db	54.626
4	123478-HxCDD	36.02	2.392e5	1.889e5	0.996	1.27	1.24	2428.3	YES	NO	bd	bd	54.056
5	Total-hexadioxins	35.11	2.219e3	1.924e3	1.005	1.15	1.24	12.7	YES	NO	db	db	0.486
6	Total-hexadioxins	34.77	6.030e2	5.595e2	1.005	1.08	1.24	6.5	YES	NO	bd	bb	0.136

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	1.888e5	1.810e5	1.039	1.04	1.05	1188.7	YES	NO	bb	bb	50.318
2	1234679-HPCDD	39.23	2.371e5	2.245e5	1.137	1.06	1.05	1551.6	YES	NO	bb	bb	57.404

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.02	4.998e4	6.343e4	0.909	0.79	0.77	541.7	YES	NO	bb	bb	10.666
2	2378-TCDD	26.42	5.747e4	7.347e4	1.149	0.78	0.77	626.6	YES	NO	bb	bb	9.742
3	Total-tetradioxins	26.10	8.701e4	1.068e5	1.024	0.81	0.77	642.2	YES	NO	bb	bb	16.174
4	Total-tetradioxins	25.60	2.699e4	3.554e4	1.024	0.76	0.77	304.7	YES	NO	bb	bb	5.217
5	Total-tetradioxins	25.03	6.443e2	8.383e2	1.024	0.77	0.77	5.1	YES	NO	db	bb	0.124
6	1368-TCDD	23.54	6.792e4	8.546e4	1.015	0.79	0.77	773.5	YES	NO	bb	bb	12.909
7	12378-PeCDD	31.53	2.835e5	1.858e5	1.022	1.53	1.55	2061.0	YES	NO	bb	bb	52.552
8	Total-pentadioxins	30.86	1.204e3	8.057e2	1.502	1.49	1.55	8.3	YES	NO	bb	bb	0.153
9	12479-PECDD	28.83	4.705e5	3.017e5	2.301	1.56	1.55	2069.9	YES	NO	bb	bb	38.394
10	124679-HXCDD	34.01	2.588e5	2.095e5	1.115	1.24	1.24	2368.4	YES	NO	bb	bb	52.766
11	12389-PECDD	31.93	3.206e5	2.093e5	1.184	1.53	1.55	2234.0	YES	NO	bb	bb	51.222
12	123789-HxCDD	36.52	2.570e5	1.994e5	0.907	1.29	1.24	2394.4	YES	NO	bd	bb	59.281
13	123678-HxCDD	36.13	2.783e5	2.149e5	1.001	1.29	1.24	2445.2	YES	NO	db	db	54.626
14	123478-HxCDD	36.02	2.392e5	1.889e5	0.996	1.27	1.24	2428.3	YES	NO	bd	bd	54.056
15	Total-hexadioxins	35.11	2.219e3	1.924e3	1.005	1.15	1.24	12.7	YES	NO	db	db	0.486
16	Total-hexadioxins	34.77	6.030e2	5.595e2	1.005	1.08	1.24	6.5	YES	NO	bd	bb	0.136
17	1234678-HpCDD	40.27	1.888e5	1.810e5	1.039	1.04	1.05	1188.7	YES	NO	bb	bb	50.318
18	1234679-HPCDD	39.23	2.371e5	2.245e5	1.137	1.06	1.05	1551.6	YES	NO	bb	bb	57.404
19	OCDD	45.01	3.066e5	3.480e5	0.920	0.88	0.89	2969.4	YES	NO	bb	bb	100.959

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	4.831e4	6.748e4	0.678	0.72	0.77	523.0	YES	NO	bb	db	10.159
2	2378-TCDF	25.77	5.083e4	7.120e4	0.702	0.71	0.77	569.6	YES	NO	bb	bb	10.346
3	Total-tetrafurans	24.69	4.425e2	5.894e2	0.727	0.75	0.77	4.9	YES	NO	dd	db	0.084
4	1368-TCDF	22.27	7.159e4	9.994e4	0.802	0.72	0.77	868.4	YES	NO	bb	bb	12.729
5	12389-PECDF	32.32	2.852e5	1.879e5	0.496	1.52	1.55	2198.8	YES	NO	bb	bb	71.173
6	23478-PeCDF	31.28	3.027e5	1.978e5	0.786	1.53	1.55	2462.9	YES	NO	bb	bb	50.498
7	12378-PeCDF	29.94	2.876e5	1.893e5	0.679	1.52	1.55	2279.8	YES	NO	bb	bb	52.431
8	Total-pentafurans	28.79	4.758e4	3.167e4	0.654	1.50	1.55	386.5	YES	NO	bb	bb	9.324
9	234678-HxCDF	35.91	3.224e5	2.724e5	1.140	1.18	1.24	2011.5	YES	NO	bb	bb	54.001
10	123678-HxCDF	35.04	3.802e5	2.764e5	1.091	1.38	1.24	2153.8	YES	NO	dd	db	53.964
11	123478-HxCDF	34.90	3.310e5	2.591e5	1.166	1.28	1.24	2091.3	YES	NO	bd	bd	50.249
12	123468-HXCDF	33.24	3.377e5	2.647e5	1.169	1.28	1.24	1977.7	YES	NO	bb	bb	51.158
13	123789-HxCDF	36.93	2.804e5	2.154e5	1.137	1.30	1.24	1736.6	YES	NO	bb	bb	49.687
14	1234789-HpCDF	41.01	1.644e5	1.665e5	0.953	0.99	1.05	1305.3	YES	NO	bb	bb	51.852
15	Total-heptafurans	39.44	1.997e3	1.803e3	0.978	1.11	1.05	17.7	YES	NO	bb	bb	0.482
16	1234678-HpCDF	38.78	2.320e5	2.268e5	1.003	1.02	1.05	2082.5	YES	NO	bb	bb	48.532
17	OCDF	45.25	2.317e5	2.921e5	0.778	0.79	0.89	1743.8	YES	NO	bb	bd	95.546
18	13468-PECDF	27.13	4.114e5	2.589e5	1.246	1.59	1.55	10655.4	YES	NO	bb	bb	40.167
19	1289-TCDD	27.02	4.998e4	6.343e4	0.909	0.79	0.77	541.7	YES	NO	bb	bb	10.666
20	2378-TCDD	26.42	5.747e4	7.347e4	1.149	0.78	0.77	626.6	YES	NO	bb	bb	9.742
21	Total-tetradioxins	26.10	8.701e4	1.068e5	1.024	0.81	0.77	642.2	YES	NO	bb	bb	16.174
22	Total-tetradioxins	25.60	2.699e4	3.554e4	1.024	0.76	0.77	304.7	YES	NO	bb	bb	5.217
23	Total-tetradioxins	25.03	6.443e2	8.383e2	1.024	0.77	0.77	5.1	YES	NO	db	bb	0.124
24	1368-TCDD	23.54	6.792e4	8.546e4	1.015	0.79	0.77	773.5	YES	NO	bb	bb	12.909
25	12378-PeCDD	31.53	2.835e5	1.858e5	1.022	1.53	1.55	2061.0	YES	NO	bb	bb	52.552
26	Total-pentadioxins	30.86	1.204e3	8.057e2	1.502	1.49	1.55	8.3	YES	NO	bb	bb	0.153
27	12479-PECDD	28.83	4.705e5	3.017e5	2.301	1.56	1.55	2069.9	YES	NO	bb	bb	38.394
28	124679-HXCDD	34.01	2.588e5	2.095e5	1.115	1.24	1.24	2368.4	YES	NO	bb	bb	52.766
29	12389-PECDD	31.93	3.206e5	2.093e5	1.184	1.53	1.55	2234.0	YES	NO	bb	bb	51.222
30	123789-HxCDD	36.52	2.570e5	1.994e5	0.907	1.29	1.24	2394.4	YES	NO	bd	bb	59.281
31	123678-HxCDD	36.13	2.783e5	2.149e5	1.001	1.29	1.24	2445.2	YES	NO	db	db	54.626
32	123478-HxCDD	36.02	2.392e5	1.889e5	0.996	1.27	1.24	2428.3	YES	NO	bd	bd	54.056
33	Total-hexadioxins	35.11	2.219e3	1.924e3	1.005	1.15	1.24	12.7	YES	NO	db	db	0.486
34	Total-hexadioxins	34.77	6.030e2	5.595e2	1.005	1.08	1.24	6.5	YES	NO	bd	bb	0.136
35	1234678-HpCDD	40.27	1.888e5	1.810e5	1.039	1.04	1.05	1188.7	YES	NO	bb	bb	50.318
36	1234679-HPCDD	39.23	2.371e5	2.245e5	1.137	1.06	1.05	1551.6	YES	NO	bb	bb	57.404
37	OCDD	45.01	3.066e5	3.480e5	0.920	0.88	0.89	2969.4	YES	NO	bb	bb	100.959

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	24.77	2.150e7					37.5	YES		db		
2	FUNCTION1 PFK	24.05	1.528e7					52.7	YES		dd		
3	FUNCTION1 PFK	21.82	9.197e7					71.6	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.16	3.646e4					1.7	NO		bb		0.000
2	FUNCTION2 PFK	30.45	7.458e3					0.9	NO		bb		0.000
3	FUNCTION2 PFK	30.18	4.955e3					0.7	NO		bb		0.000
4	FUNCTION2 PFK	29.23	2.125e3					0.5	NO		bb		0.000
5	FUNCTION2 PFK	29.11	2.139e3					0.5	NO		bb		0.000
6	FUNCTION2 PFK	29.00	1.391e4					1.1	NO		bb		0.000
7	FUNCTION2 PFK	28.63	7.963e3					1.2	NO		bb		0.000
8	FUNCTION2 PFK	28.59	1.234e4					1.2	NO		bb		0.000
9	FUNCTION2 PFK	28.24	1.820e4					1.6	NO		bb		0.000
10	FUNCTION2 PFK	28.14	3.183e4					2.3	NO		db		0.000
11	FUNCTION2 PFK	28.10	1.737e4					1.8	NO		bd		0.000
12	FUNCTION2 PFK	32.77	9.513e3					1.2	NO		bb		0.000
13	FUNCTION2 PFK	32.66	9.904e3					1.3	NO		bb		0.000
14	FUNCTION2 PFK	32.62	2.695e3					0.7	NO		bb		0.000
15	FUNCTION2 PFK	31.89	4.702e3					0.7	NO		bb		0.000
16	FUNCTION2 PFK	31.73	9.810e3					1.3	NO		bb		0.000
17	FUNCTION2 PFK	31.48	3.477e3					0.8	NO		bb		0.000
18	FUNCTION2 PFK	31.38	3.452e4					1.8	NO		bb		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	33.88	1.781e4					1.5	NO		bd		0.000
2	FUNCTION3 PFK	33.81	7.269e3					0.9	NO		db		0.000
3	FUNCTION3 PFK	33.78	2.381e4					1.4	NO		dd		0.000
4	FUNCTION3 PFK	33.71	3.212e3					0.5	NO		bd		0.000
5	FUNCTION3 PFK	33.48	4.156e5					3.3	YES		db		0.000
6	FUNCTION3 PFK	33.22	1.463e6					12.3	YES		dd		0.000
7	FUNCTION3 PFK	33.03	1.532e6					19.3	YES		dd		0.000
8	FUNCTION3 PFK	32.87	7.239e5					24.8	YES		bd		0.000
9	FUNCTION3 PFK	36.12	2.242e3					0.5	NO		bb		0.000
10	FUNCTION3 PFK	35.96	1.252e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	35.88	1.933e4					1.1	NO		bb		0.000
12	FUNCTION3 PFK	35.72	1.564e4					1.1	NO		bb		0.000
13	FUNCTION3 PFK	35.62	8.677e3					0.8	NO		bb		0.000
14	FUNCTION3 PFK	35.55	2.371e3					0.4	NO		bb		0.000
15	FUNCTION3 PFK	35.50	3.922e3					0.5	NO		bb		0.000
16	FUNCTION3 PFK	35.13	5.215e3					0.6	NO		bb		0.000
17	FUNCTION3 PFK	35.08	7.941e3					0.7	NO		db		0.000
18	FUNCTION3 PFK	35.05	5.125e3					0.8	NO		bd		0.000
19	FUNCTION3 PFK	34.68	3.000e4					1.9	NO		bb		0.000
20	FUNCTION3 PFK	34.49	1.546e4					0.9	NO		bb		0.000
21	FUNCTION3 PFK	34.31	7.893e3					0.7	NO		db		0.000
22	FUNCTION3 PFK	34.26	2.005e4					1.1	NO		dd		0.000
23	FUNCTION3 PFK	34.20	2.089e3					0.4	NO		bd		0.000
24	FUNCTION3 PFK	33.92	9.311e3					0.8	NO		db		0.000
25	FUNCTION3 PFK	37.77	6.892e3					0.7	NO		bb		0.000
26	FUNCTION3 PFK	37.70	2.011e4					1.4	NO		bb		0.000
27	FUNCTION3 PFK	37.35	4.647e3					0.4	NO		bb		0.000
28	FUNCTION3 PFK	37.28	3.070e4					1.7	NO		db		0.000
29	FUNCTION3 PFK	37.23	1.847e4					1.0	NO		dd		0.000
30	FUNCTION3 PFK	37.14	1.913e4					1.2	NO		bd		0.000
31	FUNCTION3 PFK	37.10	3.339e3					0.7	NO		bb		0.000
32	FUNCTION3 PFK	37.05	8.492e3					0.8	NO		bb		0.000
33	FUNCTION3 PFK	36.70	1.206e4					0.7	NO		bb		0.000
34	FUNCTION3 PFK	36.58	4.220e4					1.8	NO		db		0.000
35	FUNCTION3 PFK	36.50	1.679e4					1.3	NO		bd		0.000
36	FUNCTION3 PFK	36.44	8.448e4					2.2	NO		db		0.000
37	FUNCTION3 PFK	36.25	3.418e4					2.0	NO		dd		0.000

ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	FUNCTION3 PFK	36.19	1.423e4					1.1	NO		bd		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.79	6.374e6					16.5	YES		bb		
2	FUNCTION4 PFK	40.70	1.483e5					3.7	YES		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	43.08	1.422e4					2.7	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.92	1.029e2					4.3	YES		bb		0.000
2	FUNCTION1 HXCD...	21.13	7.520e1					3.8	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.32	1.241e2					2.1	NO		bb		0.000
2	FUNCTION2 HPCD...	31.50	1.913e2					4.3	YES		bb		0.000
3	FUNCTION2 HPCD...	31.14	2.761e2					7.2	YES		bb		0.000
4	FUNCTION2 HPCD...	29.72	8.300e1					1.4	NO		bb		0.000
5	FUNCTION2 HPCD...	28.80	1.137e2					2.9	NO		bb		0.000

ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	35.06	1.071e2					9.1	YES		bb		0.000
2	FUNCTION3 OCDPE	34.92	7.553e1					2.2	NO		bb		0.000
3	FUNCTION3 OCDPE	33.15	7.277e1					3.1	YES		bb		0.000
4	FUNCTION3 OCDPE	36.93	1.177e2					2.8	NO		bb		0.000
5	FUNCTION3 OCDPE	36.50	1.514e2					4.6	YES		bb		0.000
6	FUNCTION3 OCDPE	36.12	2.259e2					5.3	YES		db		0.000
7	FUNCTION3 OCDPE	35.99	1.845e2					5.0	YES		dd		0.000
8	FUNCTION3 OCDPE	35.91	9.354e1					2.8	NO		bd		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.28	1.148e2					2.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	45.26	7.104e1					2.5	NO		bb		0.000
2	FUNCTION5 DCDPE	45.02	1.303e2					4.0	YES		bb		0.000

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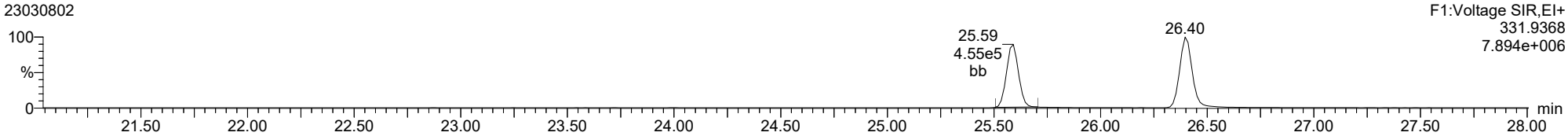
ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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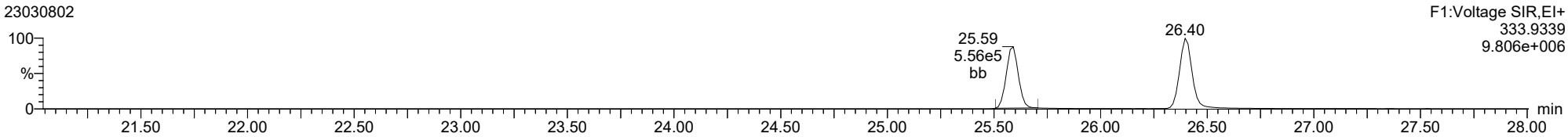
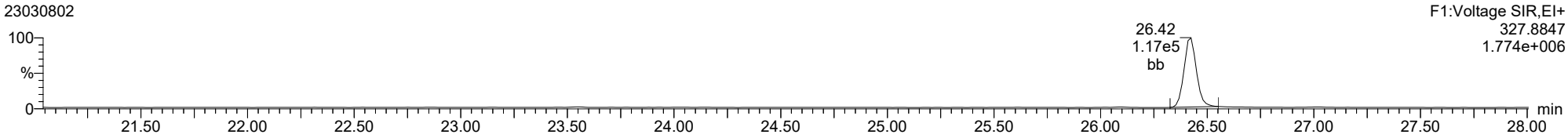


37CL-2378-TCDD



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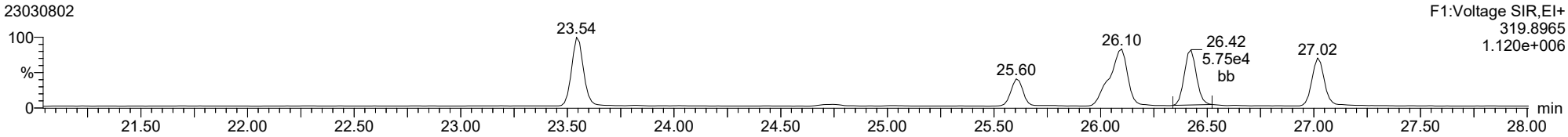

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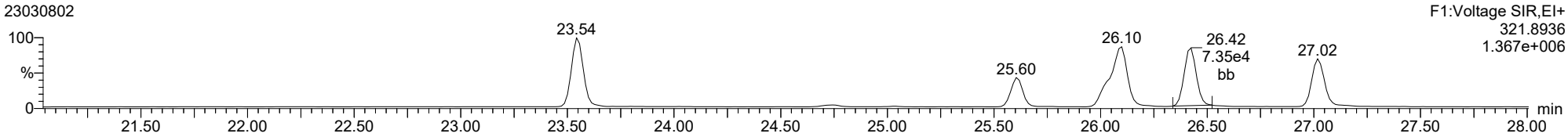

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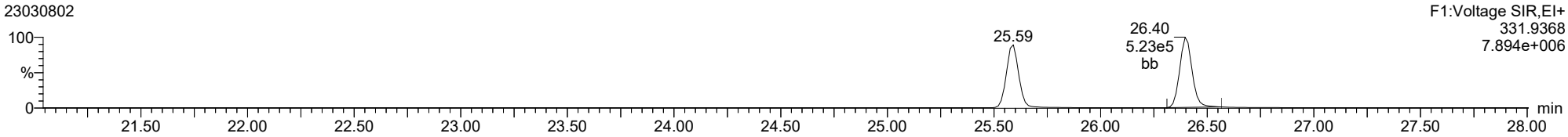

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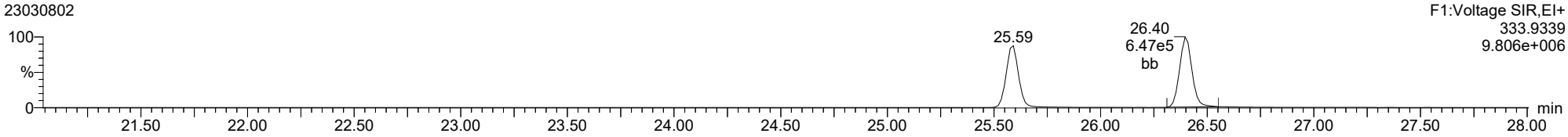

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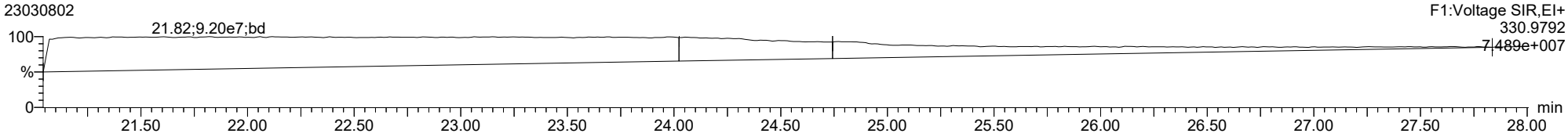

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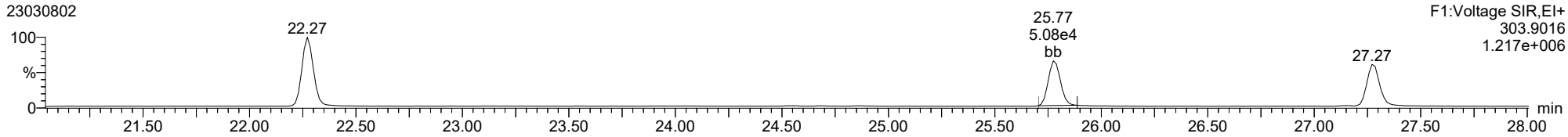

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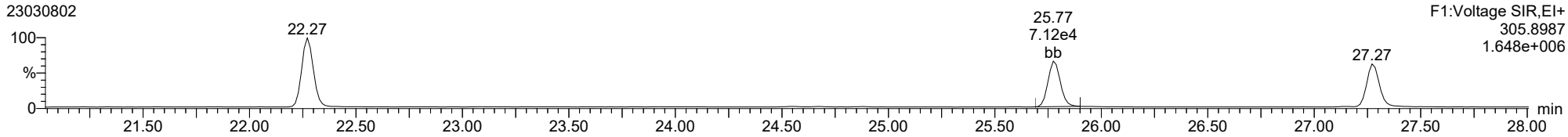

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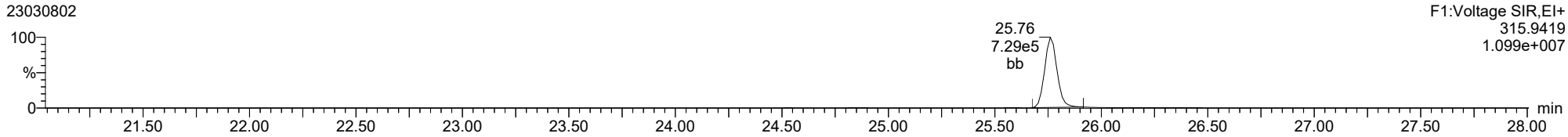

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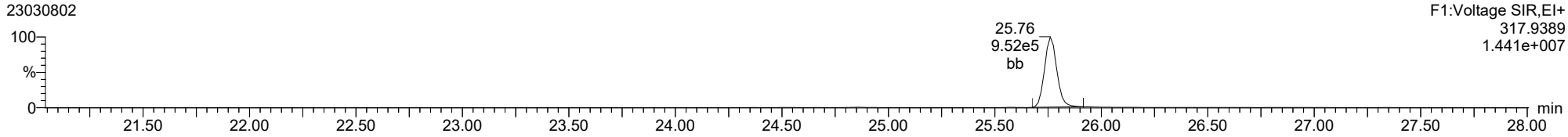
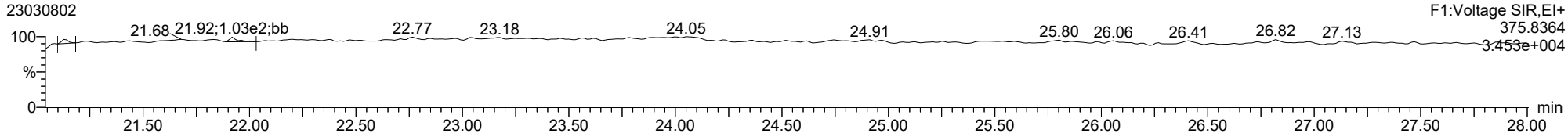


FUNCTION1 HXCDPE



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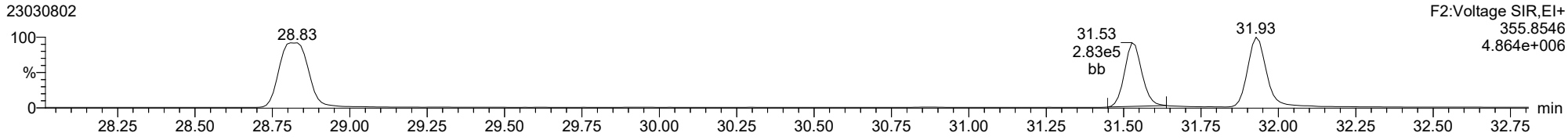

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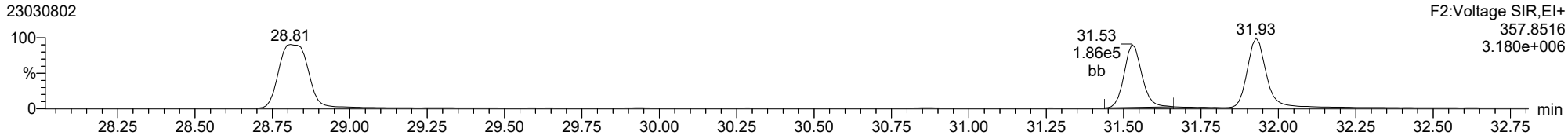

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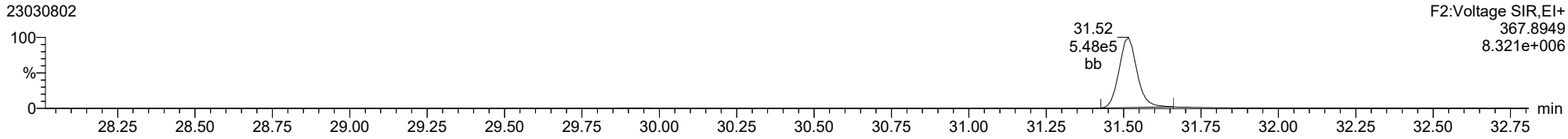

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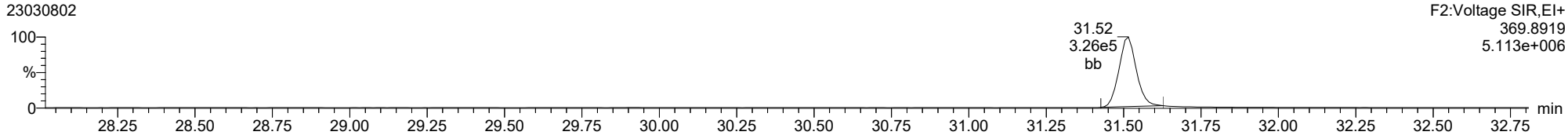

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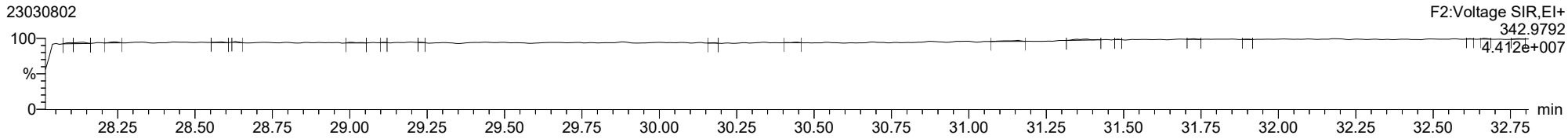

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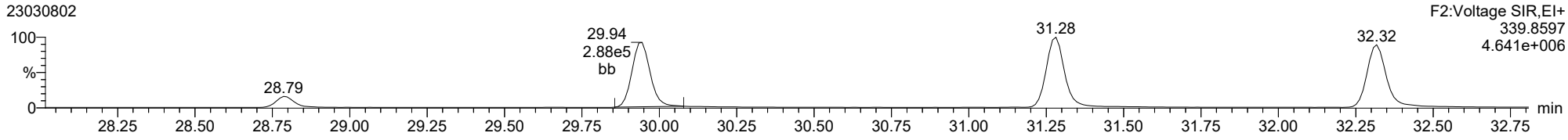

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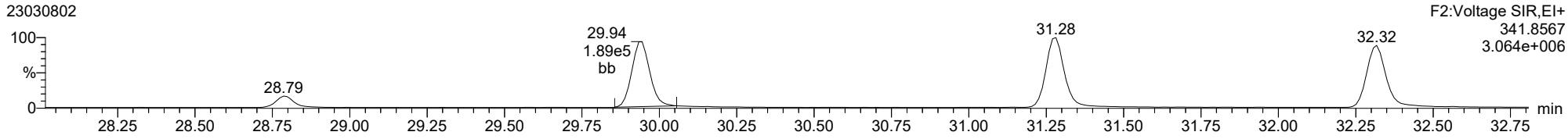

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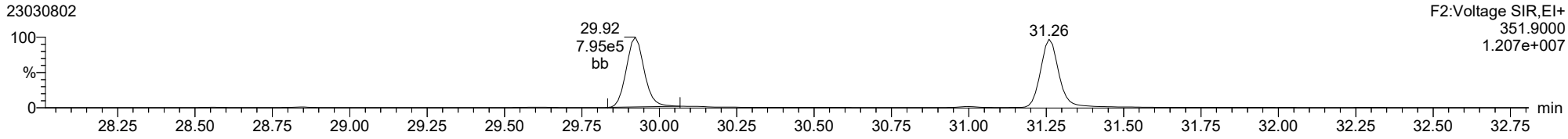

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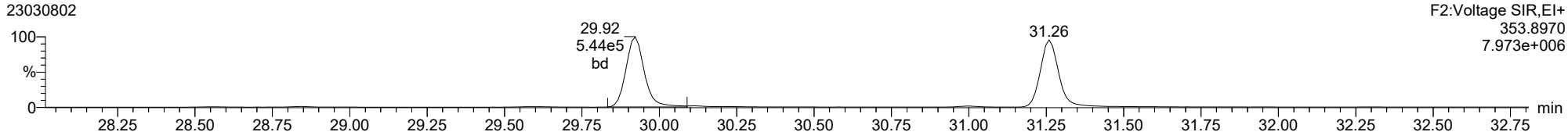
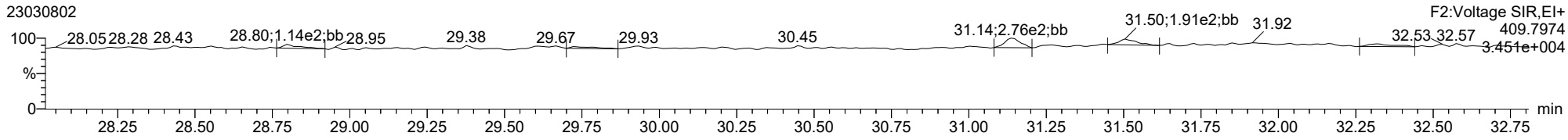


FUNCTION2 HPCDPE



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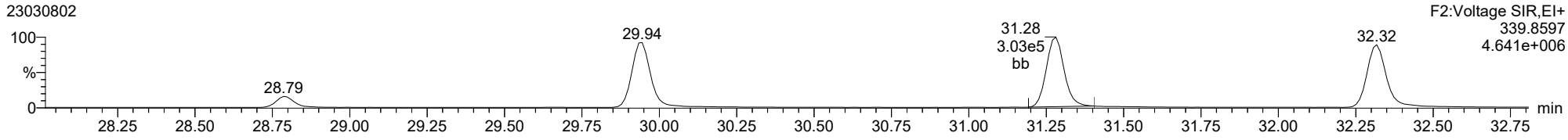
23478-PeCDF



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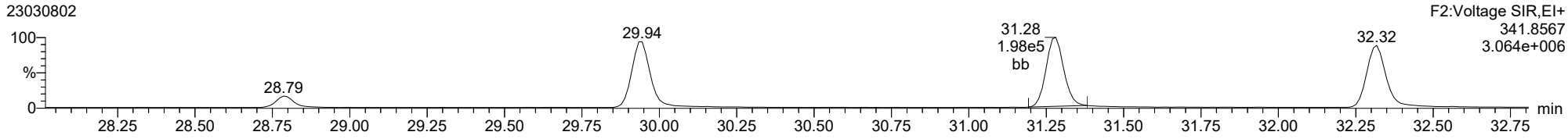

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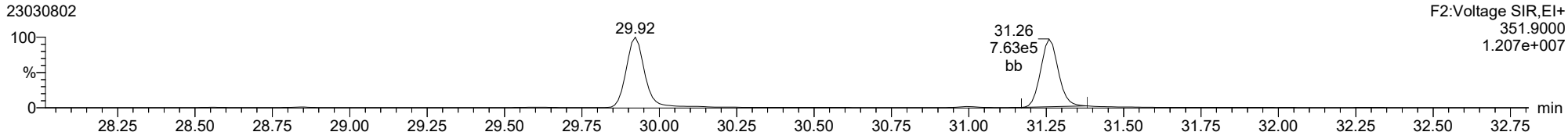

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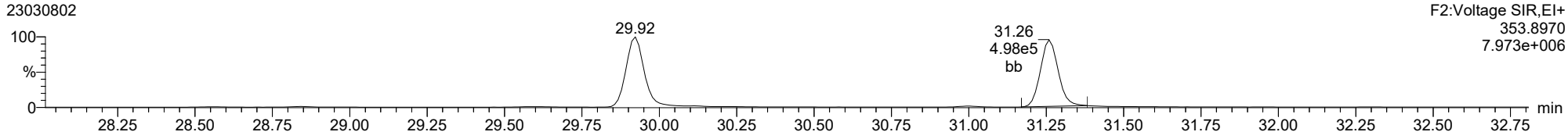

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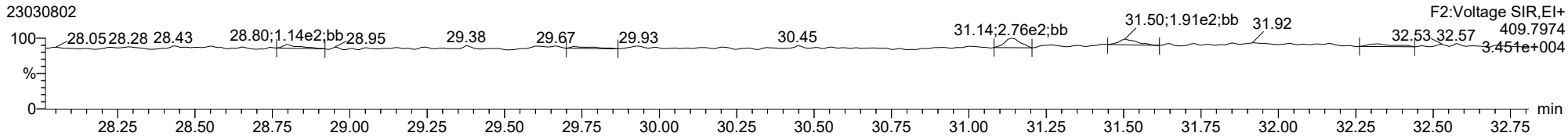

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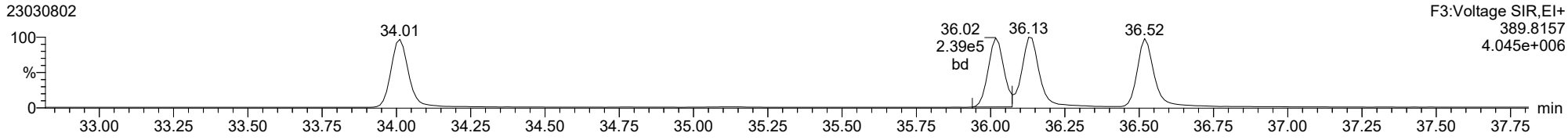
123478-HxCDD



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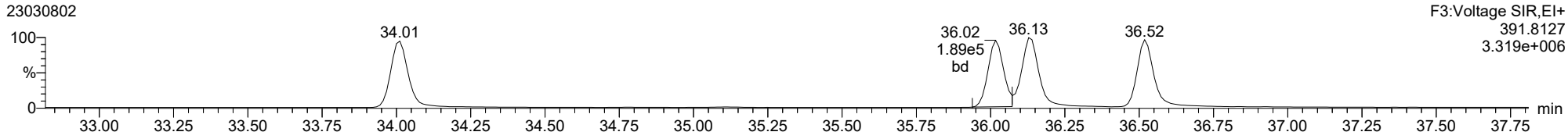

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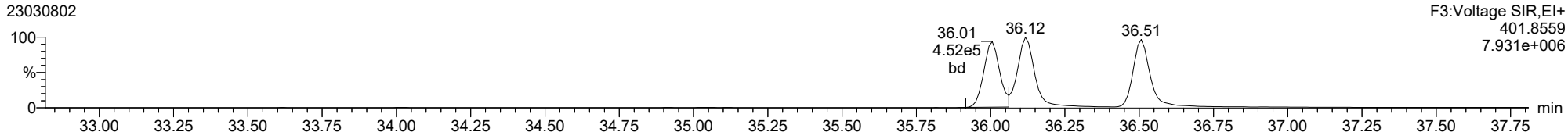

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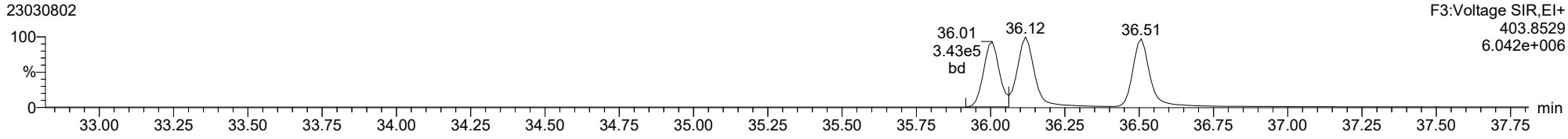

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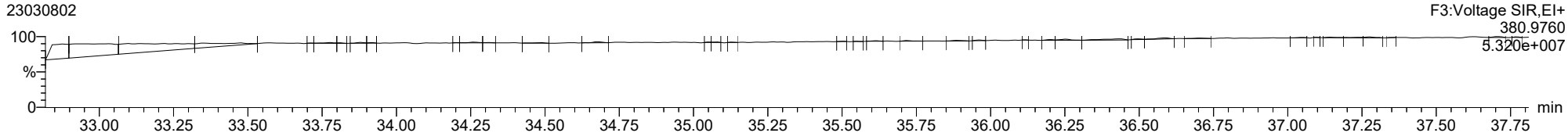

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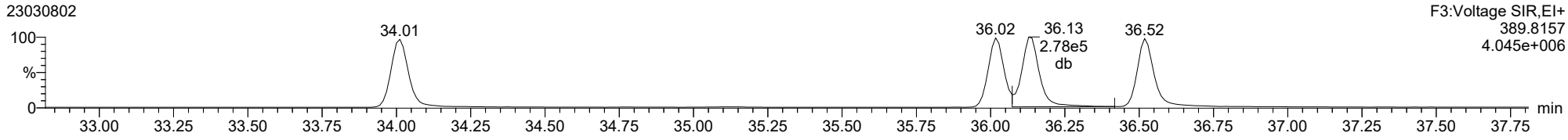

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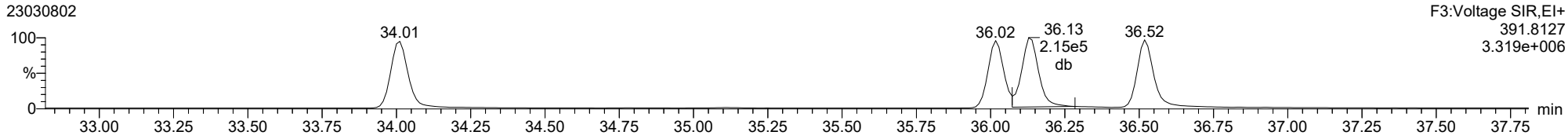

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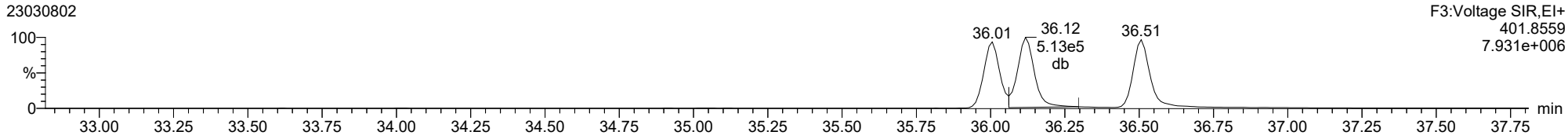

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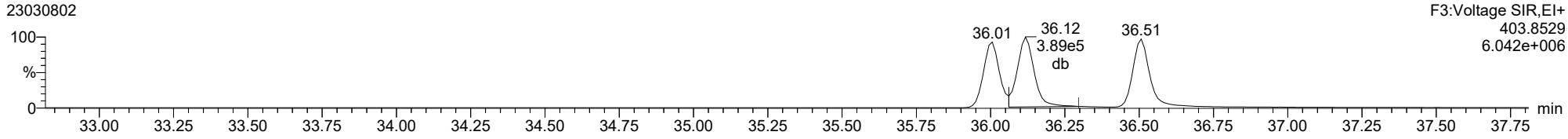

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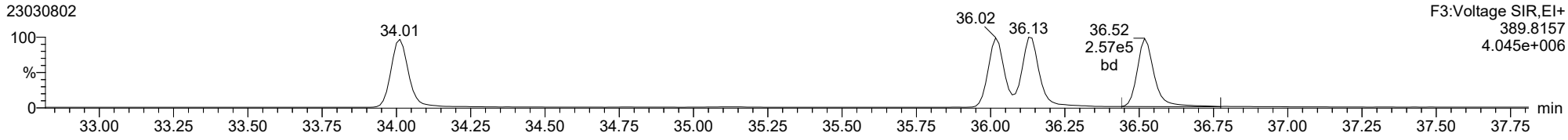

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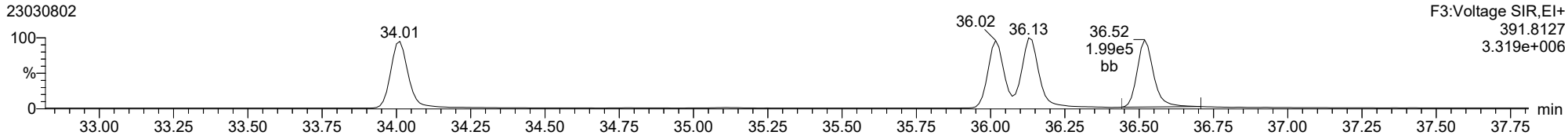

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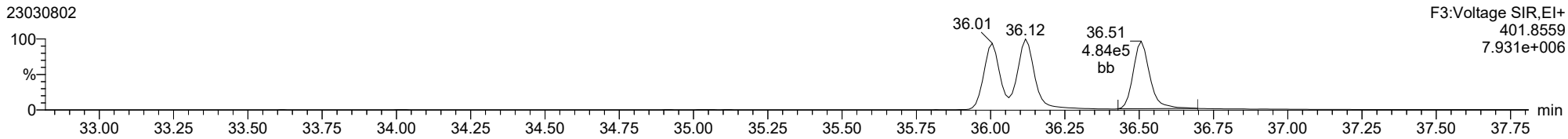

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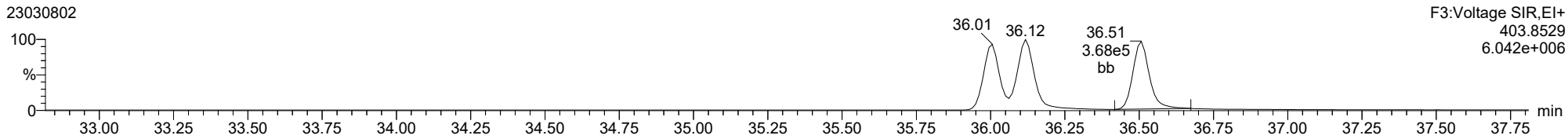

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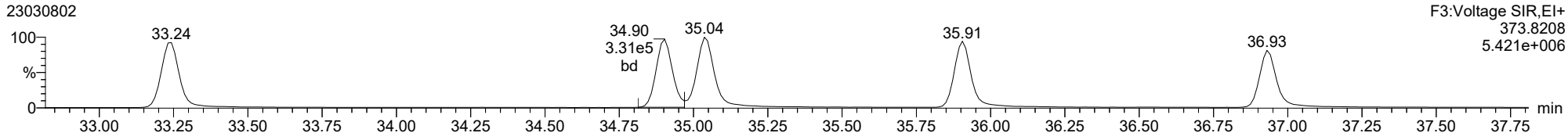

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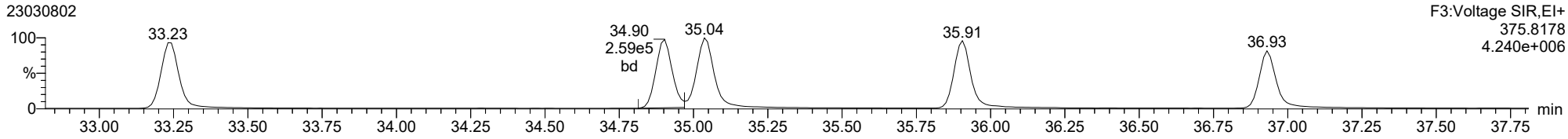

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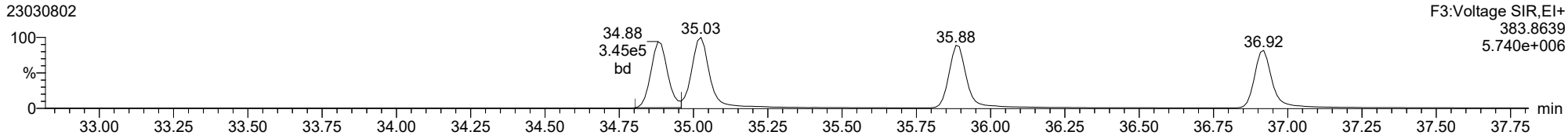

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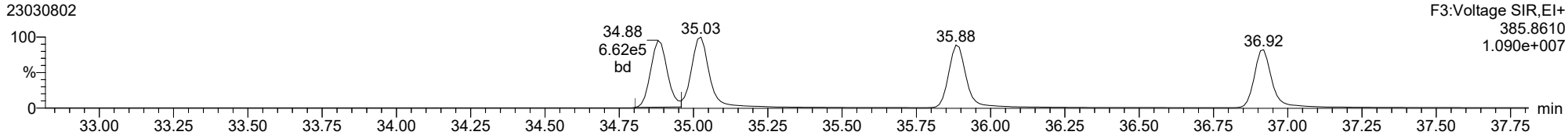

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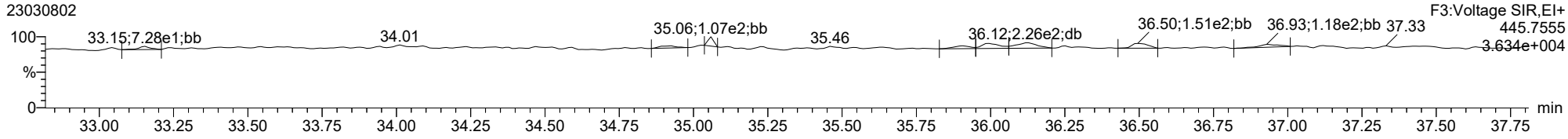

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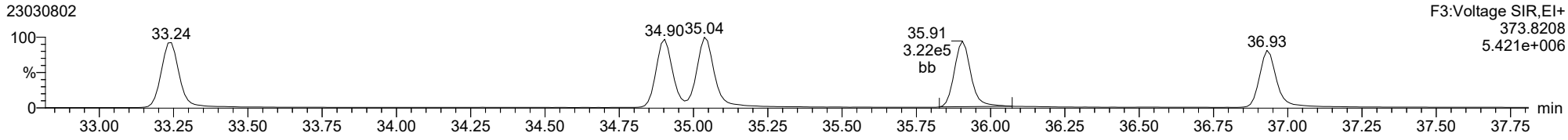

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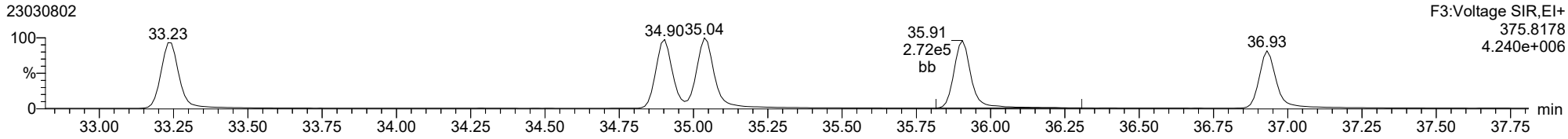

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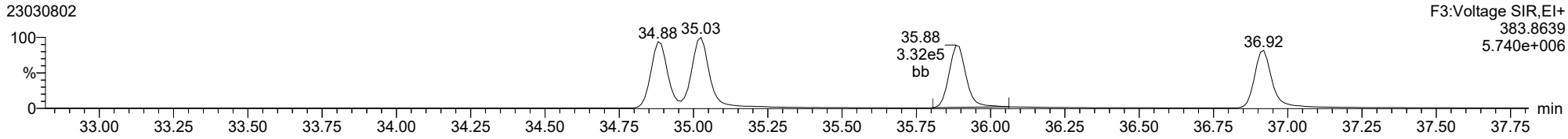

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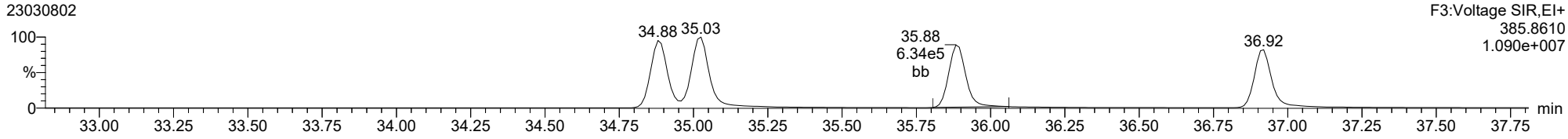

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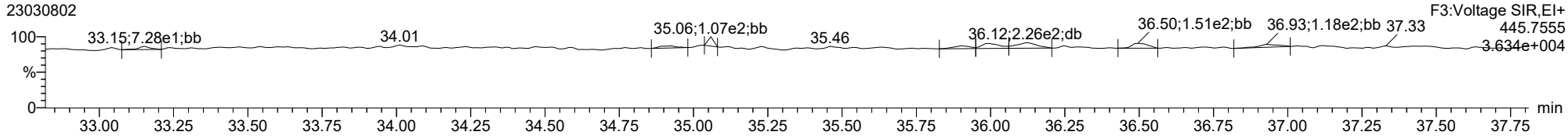

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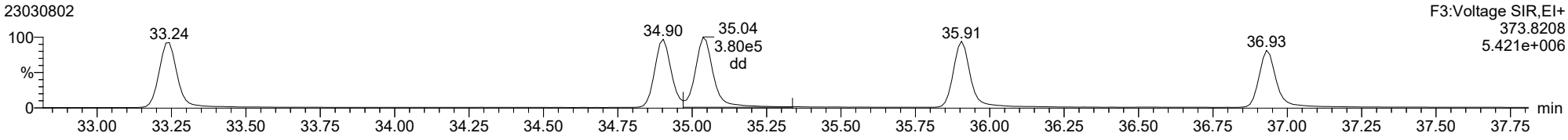

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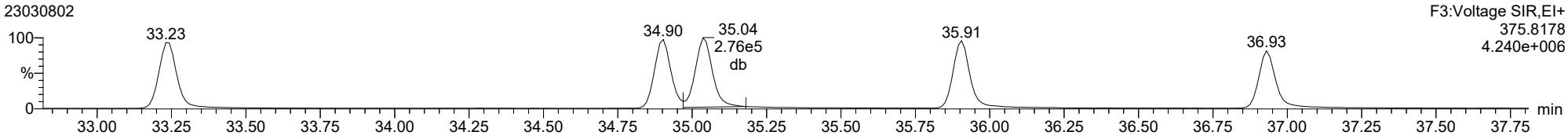

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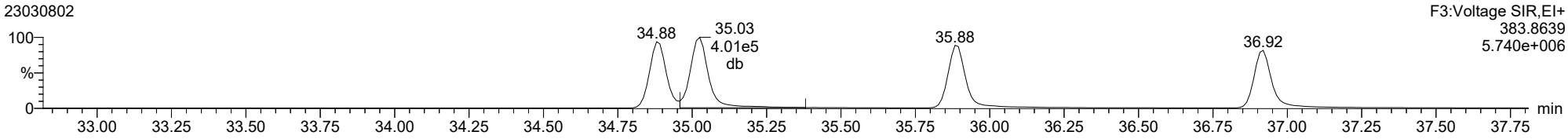

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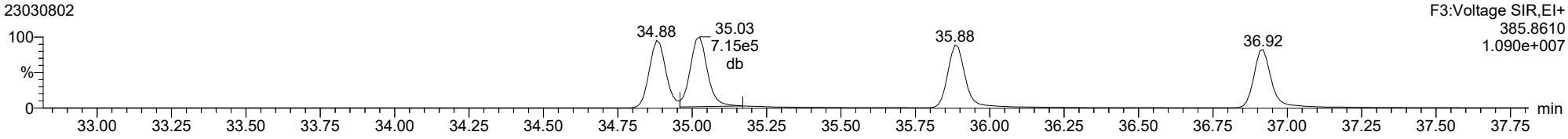

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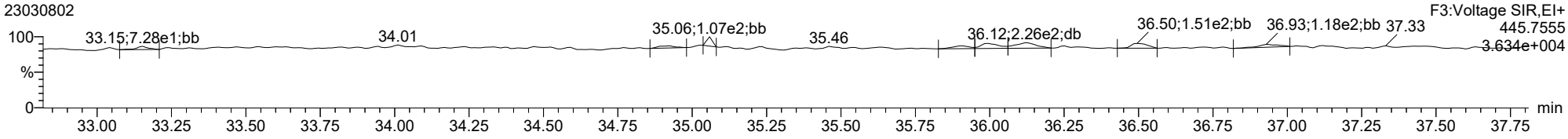

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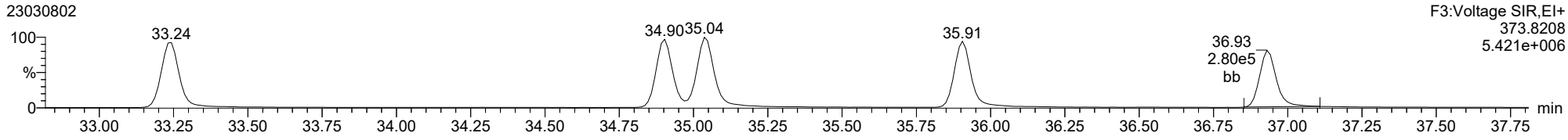

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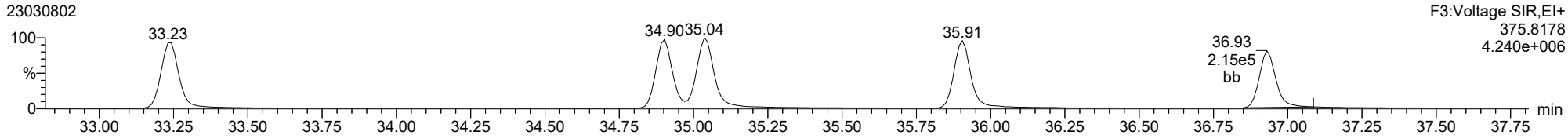

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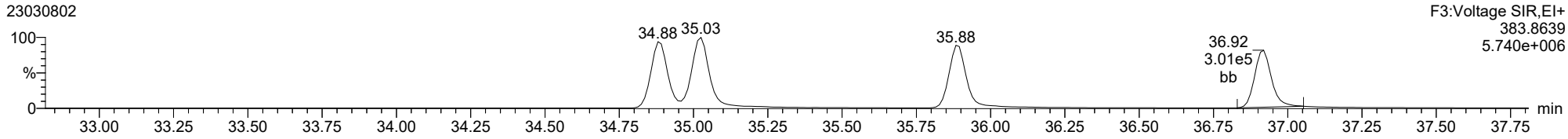

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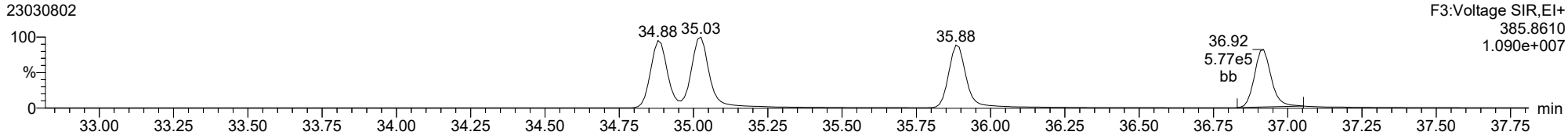

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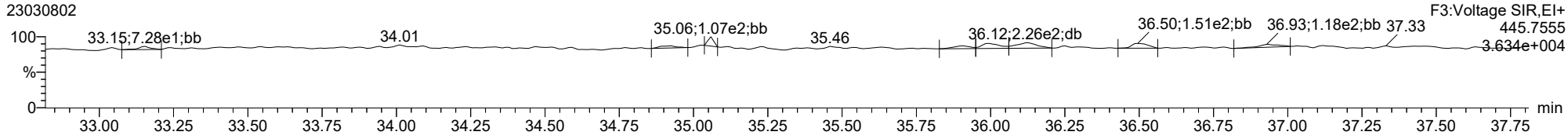

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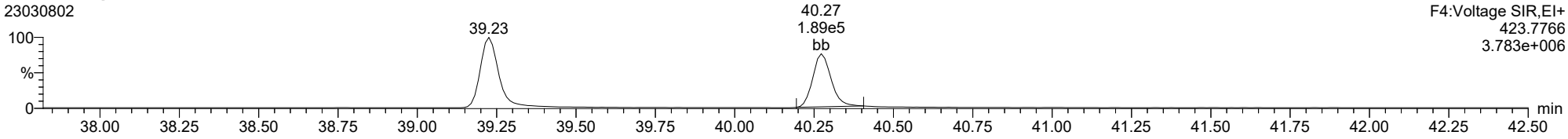

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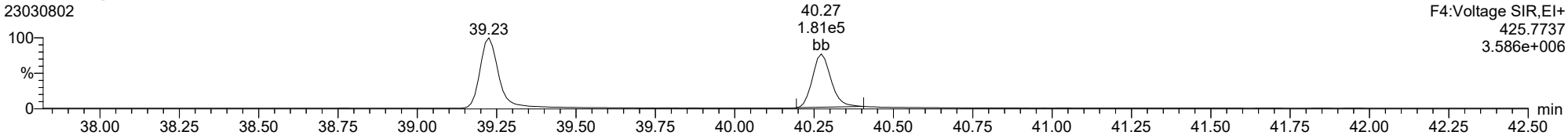

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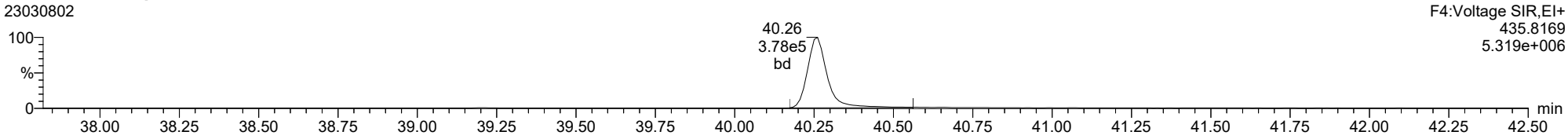

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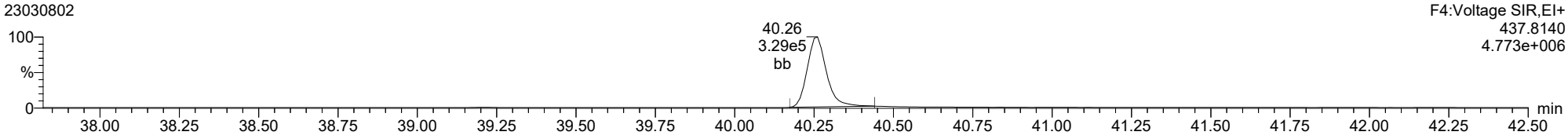
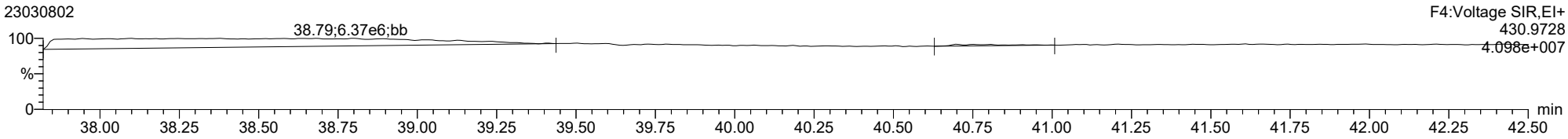


FUNCTION4 PFK



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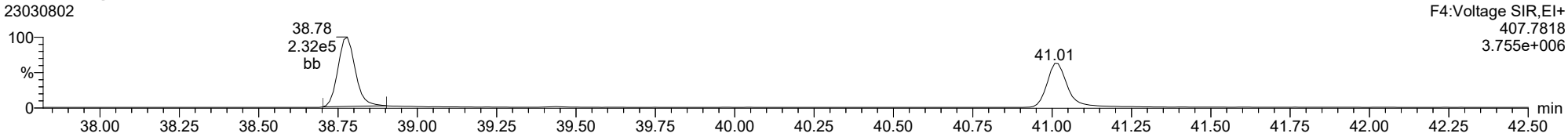

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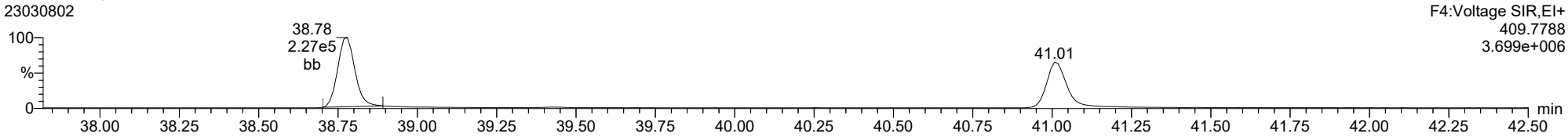

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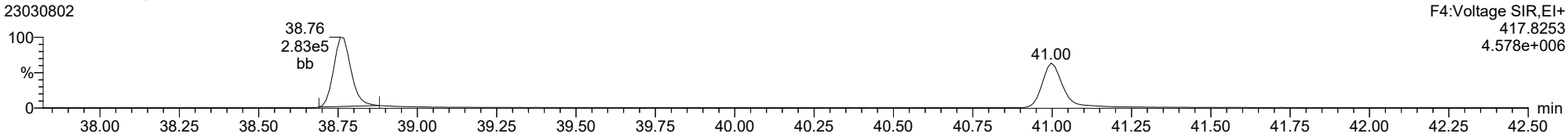

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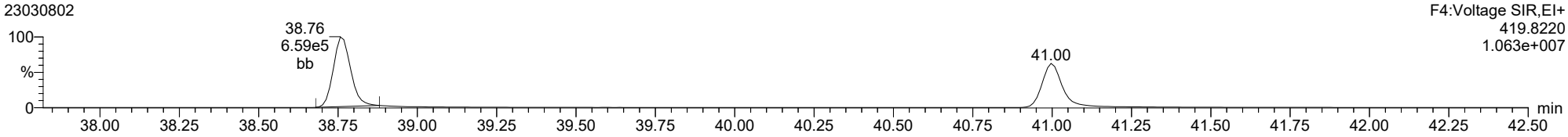

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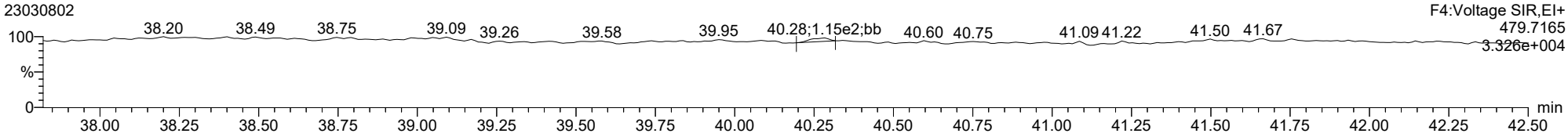

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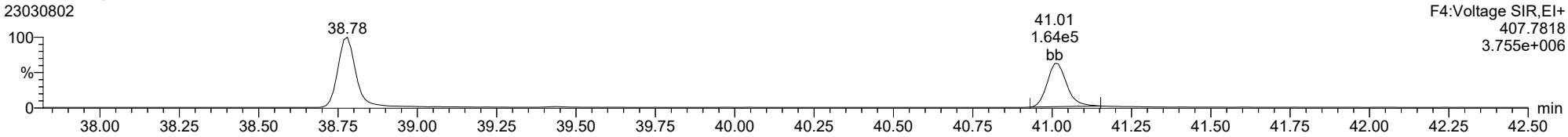

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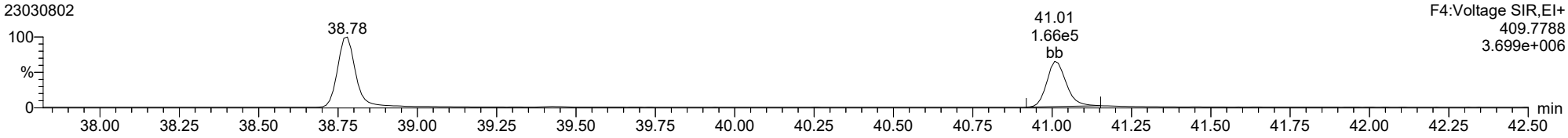

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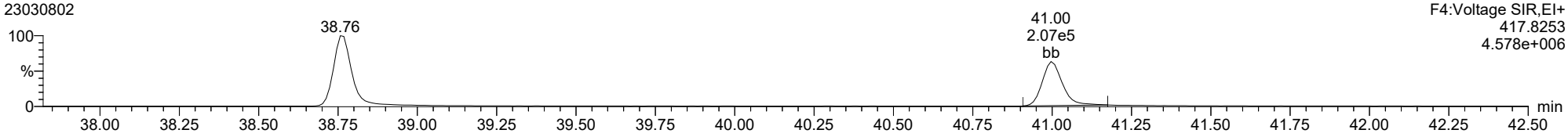

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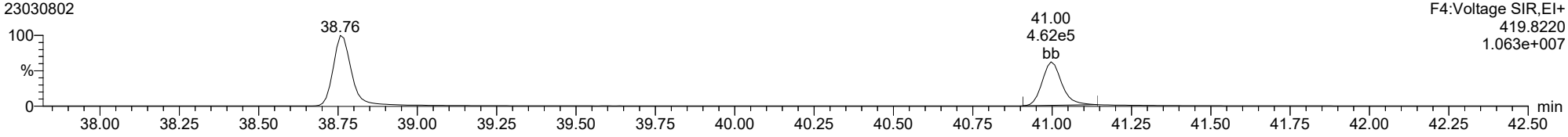

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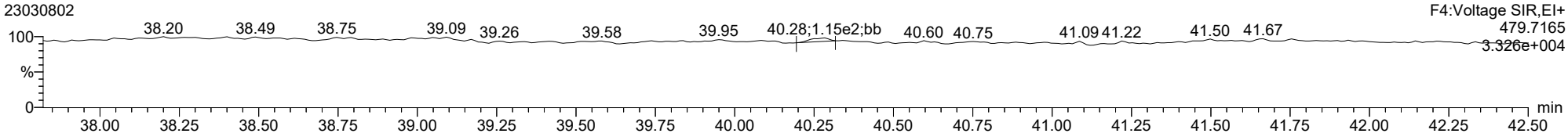

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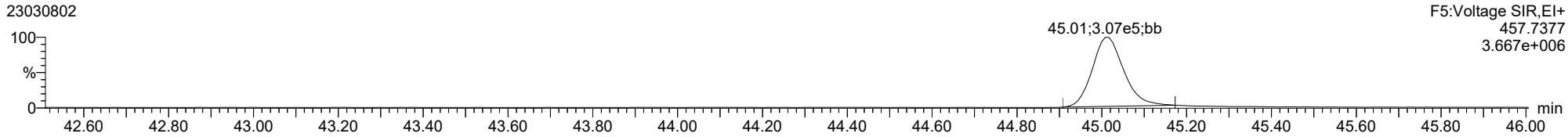

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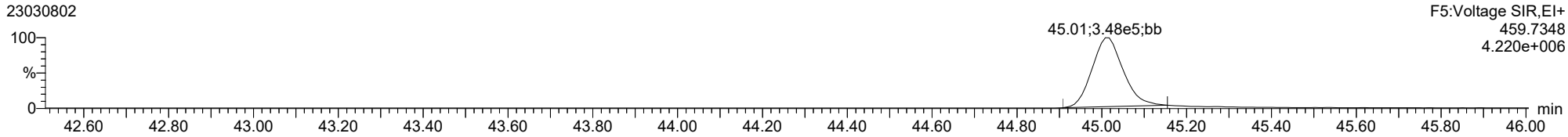

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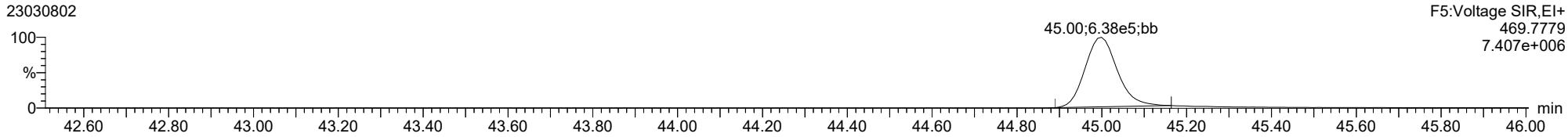

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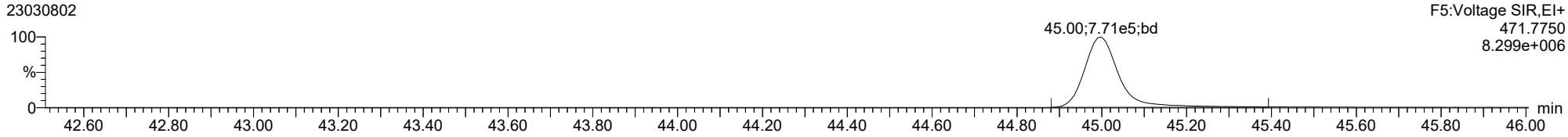
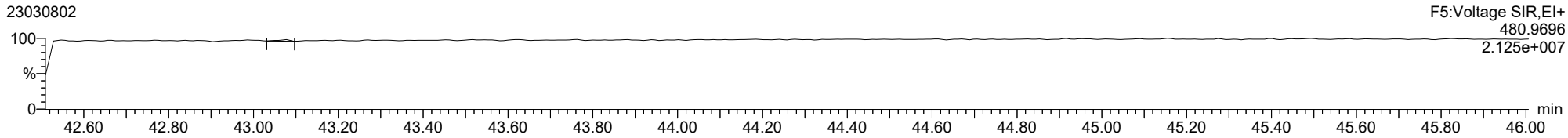


FUNCTION5 PFK



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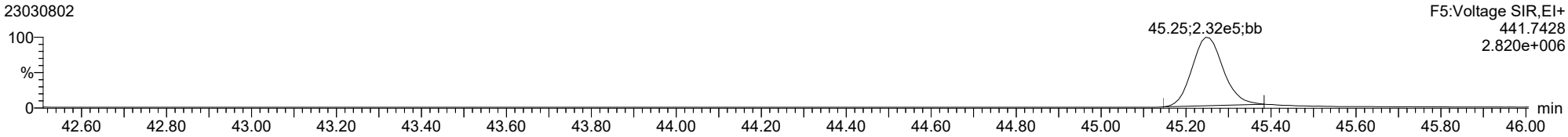

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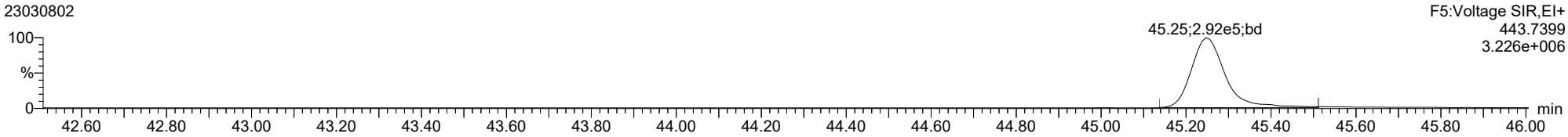
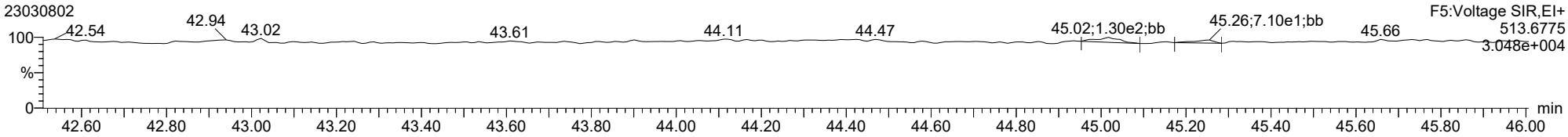


FUNCTION5 DCDPE



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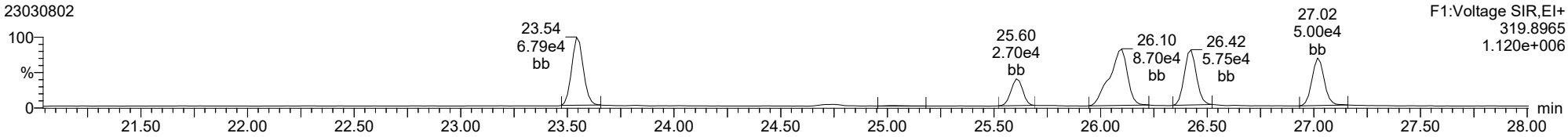
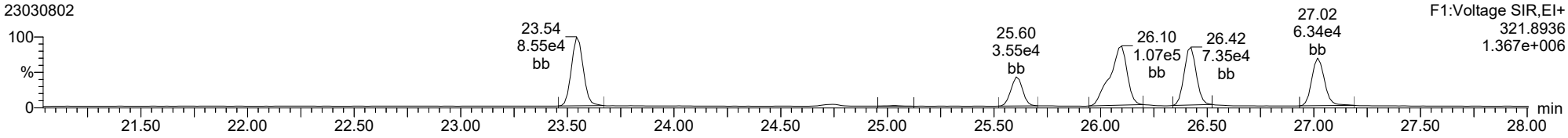
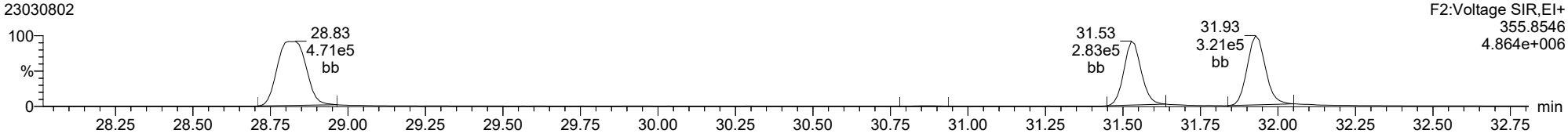
Total-tetradioxins



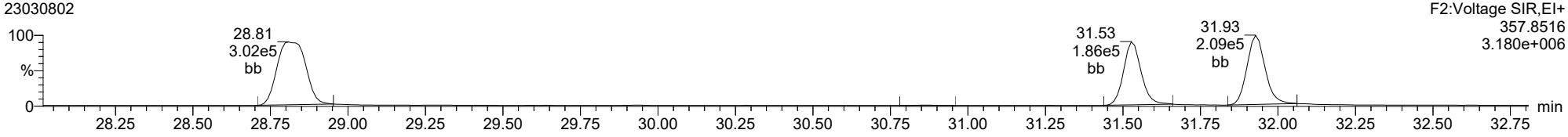
Total-tetradioxins



Total-pentadioxins

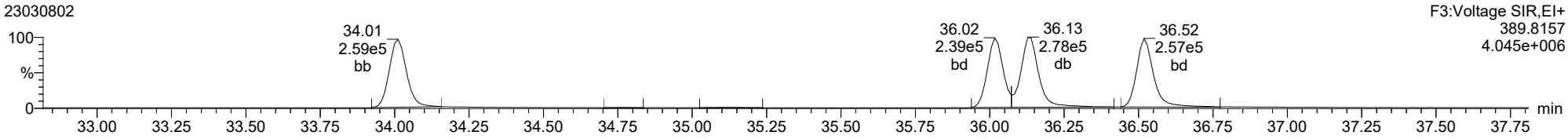


Total-pentadioxins

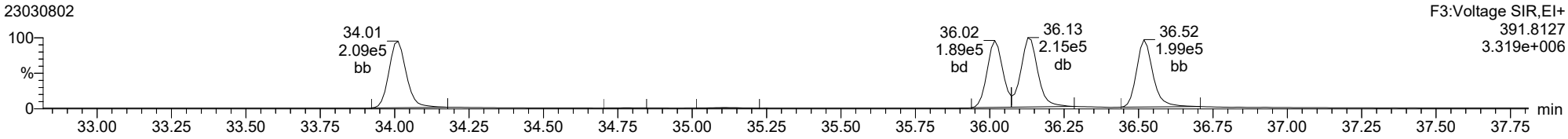


ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

Total-hexadioxins



Total-hexadioxins



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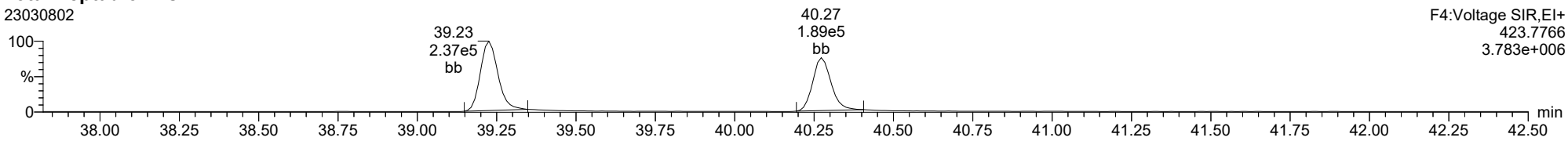
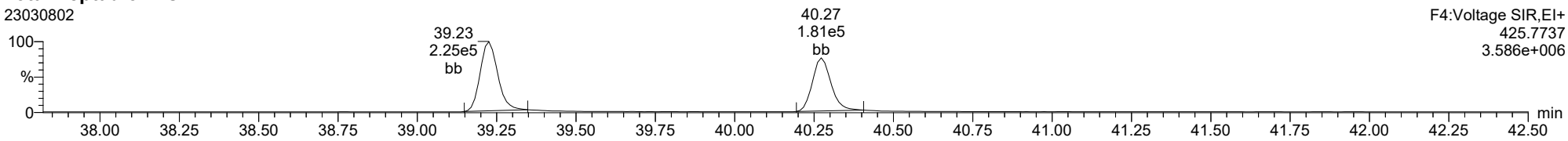
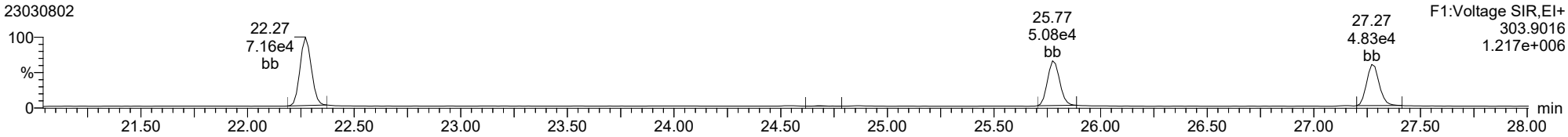


Total-heptadioxins

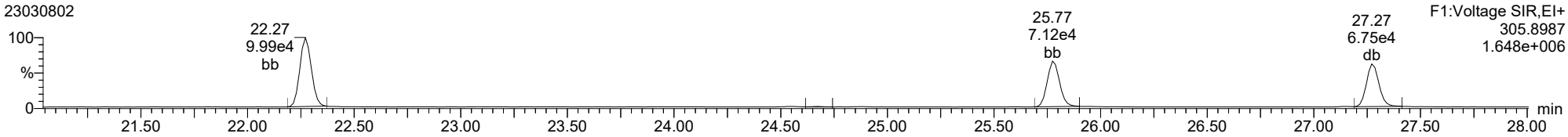


ID: CS3Y1, Name: 23030802, Date: 08-Mar-2023, Time: 10:35:46, Conditions: AUTOSPEC01, User: pk

Total-tetrafurans



Total-tetrafurans



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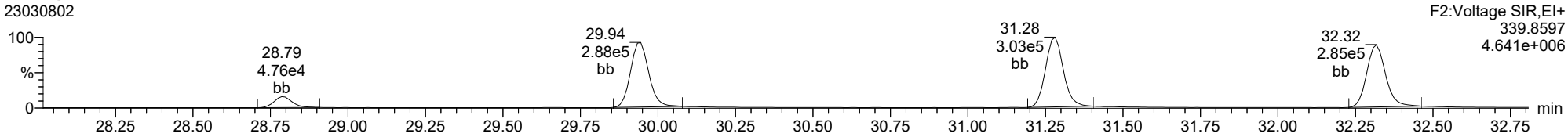
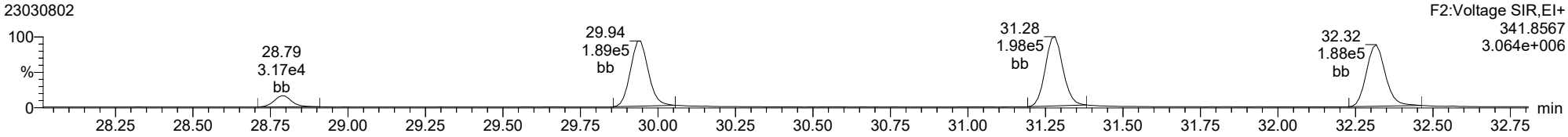


Total-pentafurans



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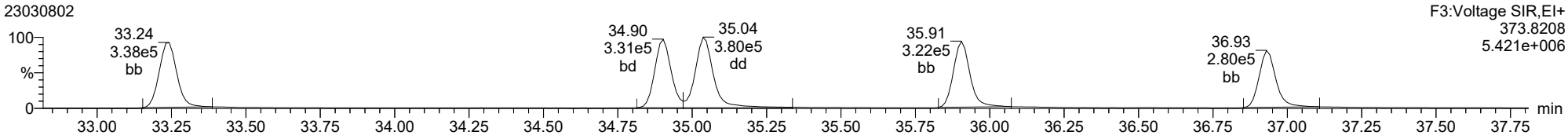
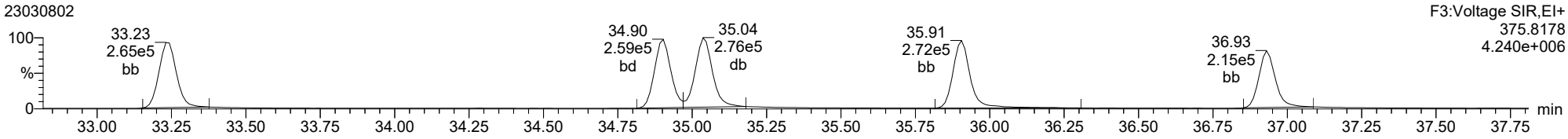
Total-hexafurans



Total-hexafurans



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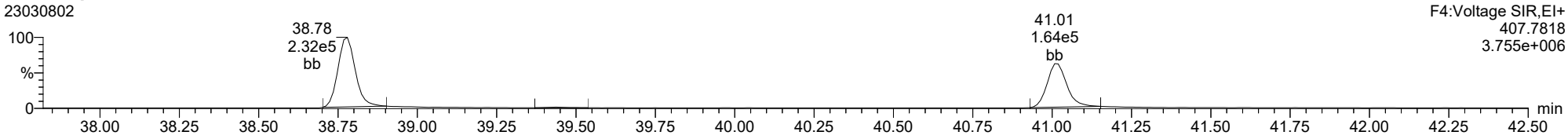

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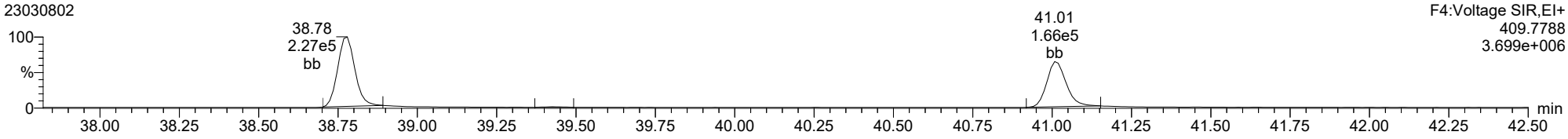

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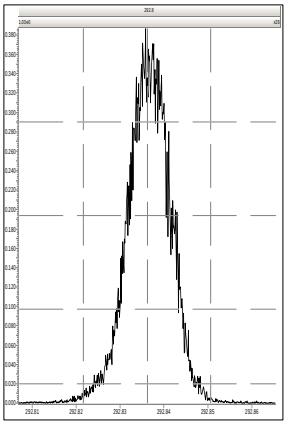
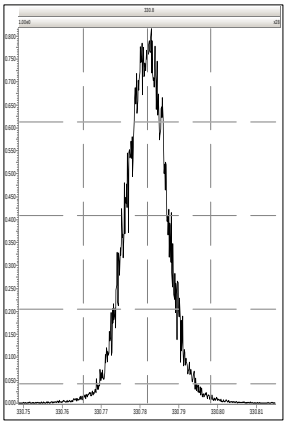
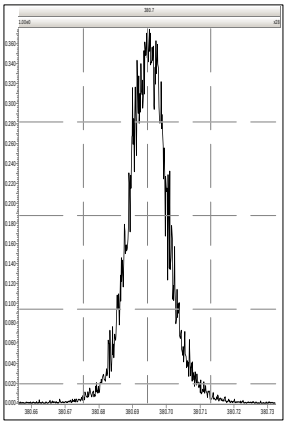
M 292.9824 R 13587



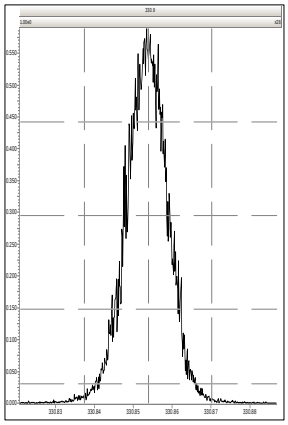
M 330.9792 R 13194



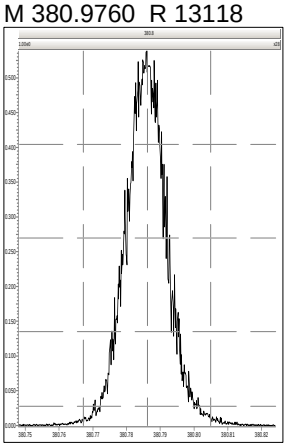
M 380.9760 R 13855



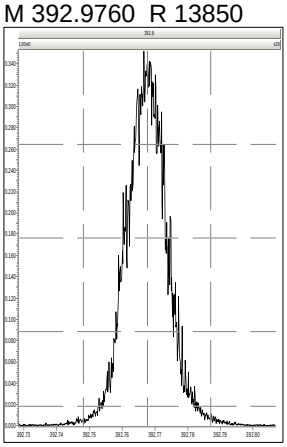
M 330.9792 R 13590



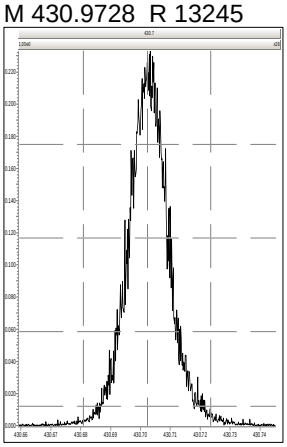
M 380.9760 R 13118



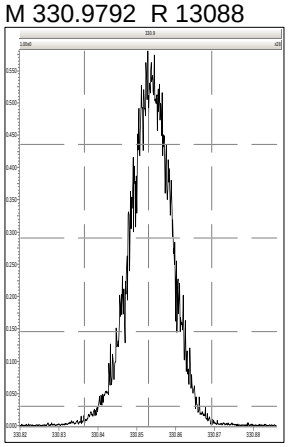
M 392.9760 R 13850



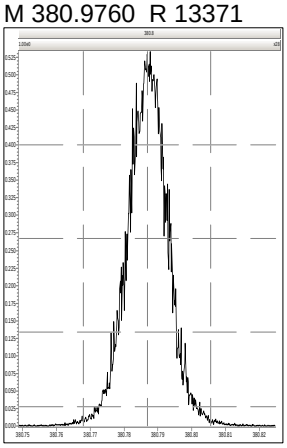
M 430.9728 R 13245



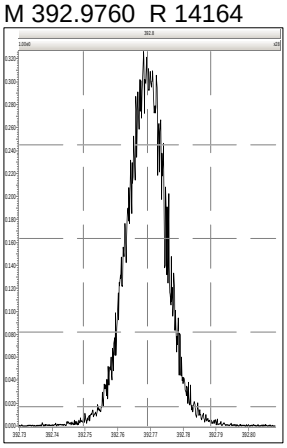
M 330.9792 R 13088



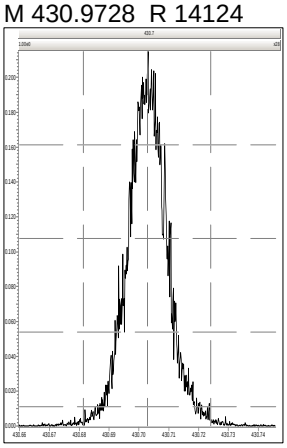
M 380.9760 R 13371



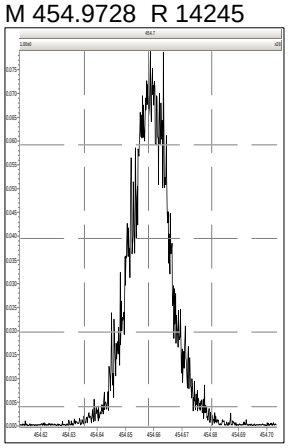
M 392.9760 R 14164



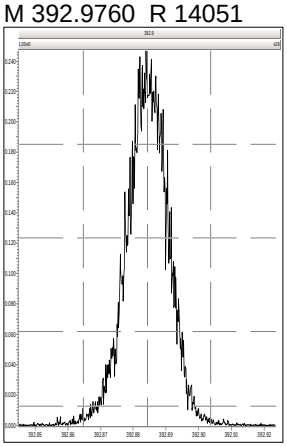
M 430.9728 R 14124



M 454.9728 R 14245



M 392.9760 R 14051



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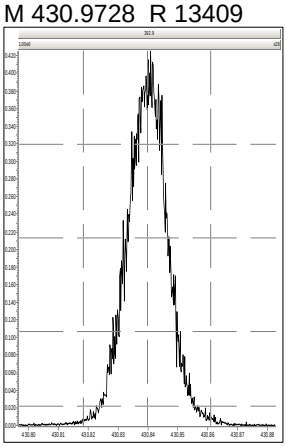
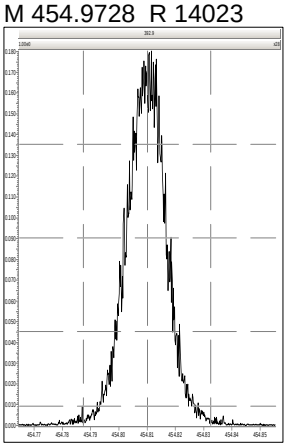
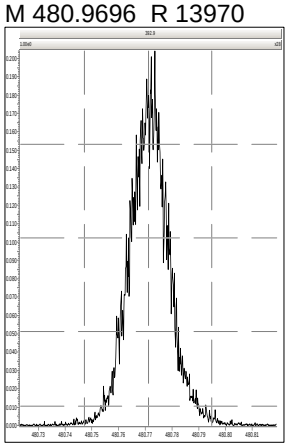


M 454.9728 R 14023



M 480.9696 R 13970



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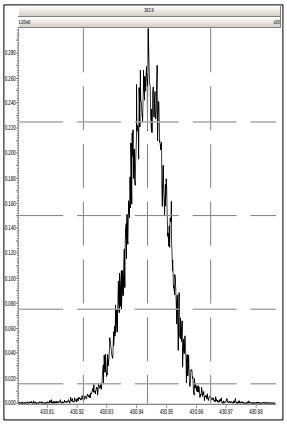
M 430.9728 R 13440



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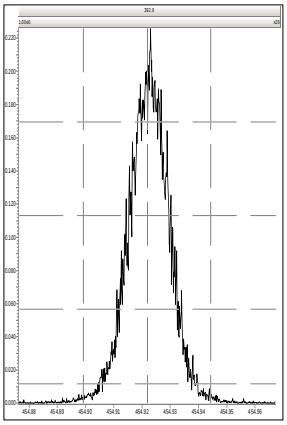
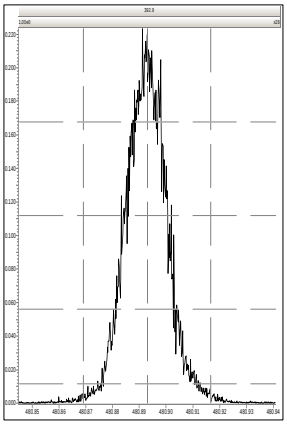
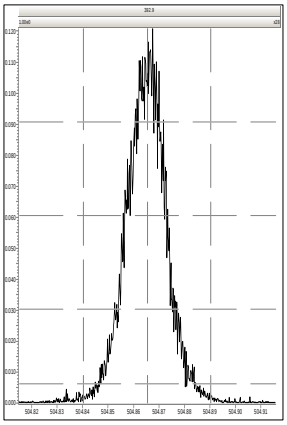


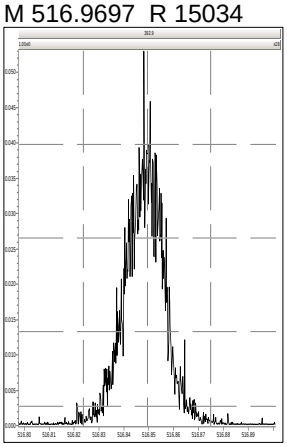
M 480.9696 R 13230

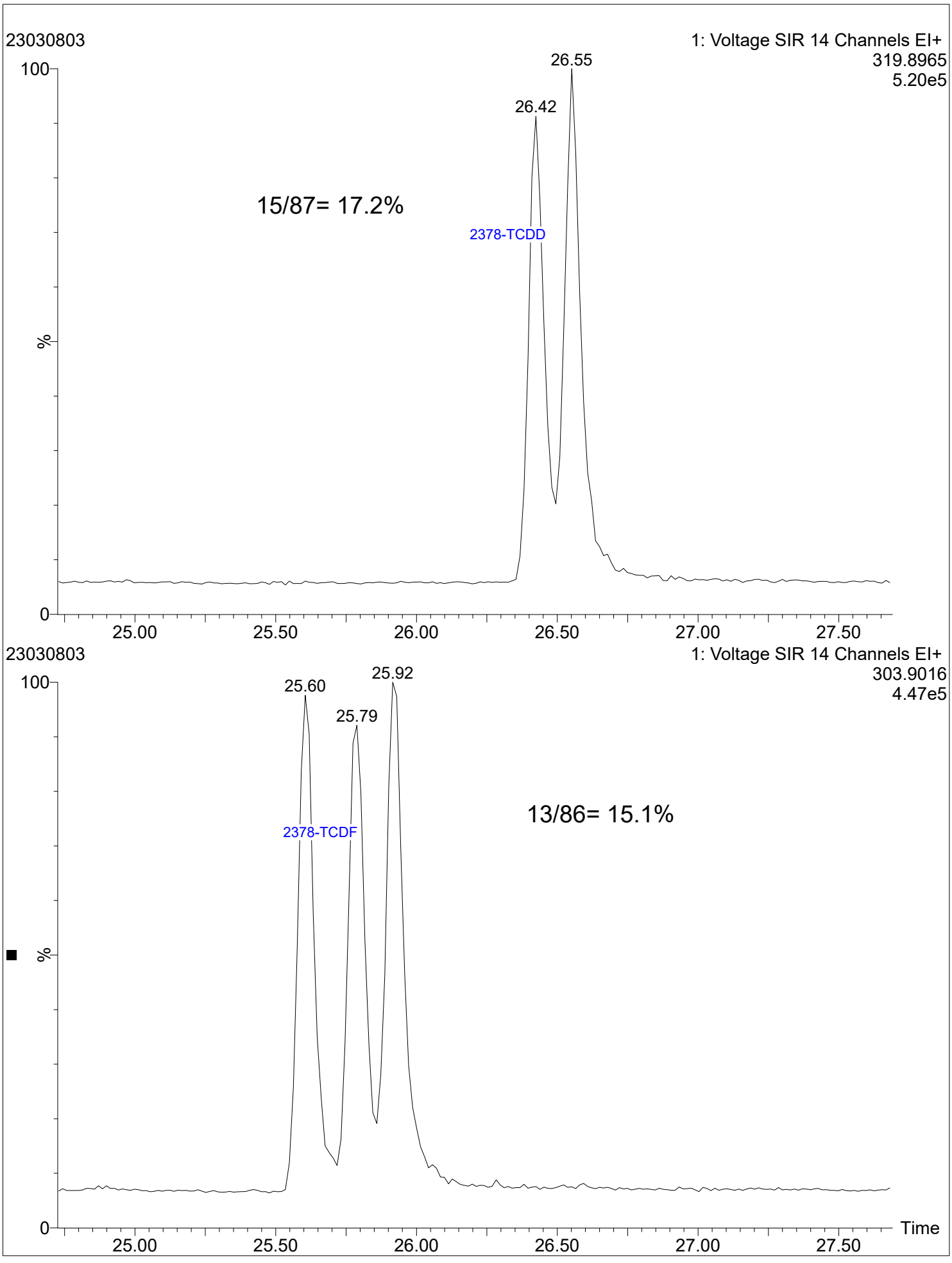


M 504.9696 R 13590



M 516.9697 R 15034




23030803
1: Voltage SIR 14 Channels EI+
319.8965
5.20e5
100
26.55
26.42
15/87= 17.2%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23030803
1: Voltage SIR 14 Channels EI+
303.9016
4.47e5
100
25.60
25.92
25.79
13/86= 15.1%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23031002	Calibration Date:	03/03/2023
Sequence:	SLC0124	Injection Date:	03/10/23
Lab Sample ID:	SLC0124-ICV1	Injection Time:	11:03
Sequence Name:	CS3Y3		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF		
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.94	0.7015272	0.6971613		-0.6	+/-16	
2,3,7,8-TCDD	A	10.000	9.48	1.1486620	1.0887650		-5.2	+/-22	
1,2,3,7,8-PeCDF	A	50.000	46.5	0.6792300	0.6316095		-7.0	+/-18	
2,3,4,7,8-PeCDF	A	50.000	44.0	0.7861704	0.6923051		-11.9	+/-18	
1,2,3,7,8-PeCDD	A	50.000	49.2	1.0218450	1.0048740		-1.7	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	46.1	1.1660380	1.0757240		-7.7	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	48.0	1.0907410	1.0479460		-3.9	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	48.7	1.1396990	1.1098300		-2.6	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	45.8	1.1370930	1.0407190		-8.5	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	51.4	0.9955689	1.0228360		2.7	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	49.8	1.0009380	0.9971271		-0.4	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	57.9	0.9071139	1.0502940		15.8	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	45.9	1.0029930	0.9206071		-8.2	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	49.2	0.9531152	0.9369155		-1.7	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	49.8	1.0390130	1.0339870		-0.5	+/-14	
OCDF	A	100.00	83.2	0.7778078	0.6472400		-16.8	+/-37	
OCDD	A	100.00	102	0.9199537	0.9377205		1.9	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	90.7	1.6201960	1.4700450		-9.3	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	103	1.1524090	1.1898721		3.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	95.4	1.2404520	1.1836933		-4.6	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	89.1	1.1177860	0.9963658		-10.9	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	84.1	0.8288129	0.6971823		-15.9	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	91.8	1.1683050	1.0727394		-8.2	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	81.0	1.3864660	1.1235306		-19.0	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	92.5	1.1292560	1.0444964		-7.5	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	107	0.9317541	1.0001111		7.3	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	92.9	0.9950393	0.9247161		-7.1	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	83.5	1.1566890	0.9654539		-16.5	+/-15	*
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	95.5	0.8952017	0.8548890		-4.5	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	97.8	0.7697516	0.7525673		-2.2	+/-23	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

INITIAL CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23031002	Calibration Date:	03/03/2023
Sequence:	SLC0124	Injection Date:	03/10/23
Lab Sample ID:	SLC0124-ICV1	Injection Time:	11:03
Sequence Name:	CS3Y3		

		CONC. (ng/mL)		RESPONSE FACTOR			% DRIFT/DIFF	
COMPOUND	TYPE	STD	ICV	ICAL	ICV	MIN	ICV	LIMIT
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	97.5	0.8401226	0.8191254		-2.5	+/-28
13C12-OCDD	A	200.00	207	0.7674714	0.7926412		3.3	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	9.12	1.2878040	1.1748670		-8.8	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:41:10 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Y3, Name: 23031002, Date: 10-Mar-2023, Time: 11:03:11, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.633	1.000	3.106e4	4.250e4	0.702	0.731	0.770	660	829	4.76e5	6.60e5	720.7	796.1	NO	bb	bb	9.938
12378-PeCDF	29.792	1.001	1.596e5	1.087e5	0.679	1.468	1.550	1205	1208	2.47e6	1.69e6	2050.9	1401.8	NO	bb	bb	46.495
23478-PeCDF	31.128	1.001	1.476e5	9.989e4	0.786	1.478	1.550	1205	1208	2.32e6	1.59e6	1928.6	1315.3	NO	bb	bb	44.030
123478-HxCDF	34.760	1.000	2.148e5	1.712e5	1.166	1.255	1.240	1081	1023	3.53e6	2.84e6	3262.2	2776.2	NO	bd	bd	46.127
234678-HxCDF	35.774	1.001	2.151e5	1.727e5	1.140	1.245	1.240	1081	1023	3.53e6	2.83e6	3268.3	2763.9	NO	bb	bb	48.690
123678-HxCDF	34.905	1.001	2.209e5	1.730e5	1.091	1.276	1.240	1081	1023	3.50e6	2.79e6	3234.2	2727.4	NO	db	db	48.038
123789-HxCDF	36.799	1.001	1.938e5	1.544e5	1.137	1.255	1.240	1081	1023	3.20e6	2.54e6	2957.0	2485.1	NO	bb	bb	45.762
1234678-HpCDF	38.649	1.000	1.294e5	1.339e5	1.003	0.967	1.050	1139	777	2.21e6	2.31e6	1939.7	2973.8	NO	bb	bb	45.893
1234789-HpCDF	40.866	1.000	1.158e5	1.201e5	0.953	0.964	1.050	1139	777	1.74e6	1.82e6	1529.7	2345.2	NO	bb	bb	49.150
OCDF	45.076	1.005	1.588e5	1.845e5	0.778	0.861	0.890	833	997	2.00e6	2.31e6	2398.9	2320.6	NO	bb	bb	83.213
2378-TCDD	26.269	1.000	4.095e4	5.202e4	1.149	0.787	0.770	1095	830	6.27e5	8.04e5	572.7	969.4	NO	bb	bb	9.479
12378-PeCDD	31.385	1.001	1.517e5	9.968e4	1.022	1.522	1.550	885	844	2.37e6	1.56e6	2677.7	1843.0	NO	bb	bb	49.170
123478-HxCDD	35.886	1.001	1.734e5	1.430e5	0.996	1.213	1.240	1336	858	2.92e6	2.38e6	2185.8	2772.1	NO	bd	bd	51.369
123678-HxCDD	35.997	1.000	1.770e5	1.451e5	1.001	1.220	1.240	1336	858	2.97e6	2.46e6	2225.4	2871.1	NO	db	db	49.810
123789-HxCDD	36.387	1.011	1.831e5	1.489e5	0.907	1.230	1.240	1336	858	3.18e6	2.56e6	2380.0	2977.1	NO	bb	bb	57.892
1234678-HpCDD	40.142	1.001	1.432e5	1.402e5	1.039	1.022	1.050	1154	1059	2.38e6	2.33e6	2059.8	2194.5	NO	bb	bb	49.758
OCDD	44.847	1.000	2.289e5	2.684e5	0.920	0.853	0.890	963	1292	2.90e6	3.38e6	3015.5	2620.0	NO	bb	bb	101.931
13C-2378-TCDF	25.619	1.007	4.581e5	5.970e5	1.620	0.767	0.770	1490	1006	7.24e6	9.38e6	4856.5	9324.5	NO	bb	bb	90.733
13C-12378-PeCDF	29.769	1.170	5.074e5	3.421e5	1.240	1.483	1.550	1196	982	7.97e6	5.45e6	6662.9	5551.2	NO	bb	bb	95.424
13C-23478-PeCDF	31.106	1.223	4.290e5	2.861e5	1.118	1.500	1.550	1196	982	6.82e6	4.57e6	5701.7	4654.9	NO	bb	bb	89.137
13C-123478-HxCDF	34.749	0.955	2.438e5	4.739e5	1.168	0.514	0.510	1085	1085	3.90e6	7.55e6	3592.7	6959.3	NO	bd	bd	91.820
13C-123678-HxCDF	34.883	0.959	2.552e5	4.965e5	1.386	0.514	0.510	1085	1085	4.14e6	8.02e6	3817.4	7387.0	NO	dd	dd	81.036
13C-234678-HxCDF	35.752	0.983	2.359e5	4.629e5	1.129	0.510	0.510	1085	1085	3.94e6	7.77e6	3631.2	7156.0	NO	bb	bb	92.494
13C-123789-HxCDF	36.777	1.011	2.279e5	4.412e5	0.932	0.516	0.510	1085	1085	3.81e6	7.33e6	3512.3	6752.6	NO	bb	bb	107.336
13C-1234678-HpCDF	38.638	1.062	1.729e5	3.991e5	0.895	0.433	0.440	1066	1101	3.05e6	7.01e6	2859.2	6366.2	NO	bb	bb	95.497
13C-1234789-HpCDF	40.855	1.123	1.527e5	3.508e5	0.770	0.435	0.440	1066	1101	2.33e6	5.40e6	2184.6	4904.1	NO	bb	bb	97.768
13C-1234-TCDD	25.435	0.000	3.164e5	4.013e5	1.000	0.788	0.770	1660	952	5.13e6	6.52e6	3089.7	6849.8	NO	bb	bb	100.000
13C-2378-TCDD	26.254	1.032	3.751e5	4.789e5	1.152	0.783	0.770	1660	952	5.90e6	7.45e6	3553.2	7825.6	NO	bb	bb	103.251
13C-12378-PeCDD	31.362	1.233	3.076e5	1.927e5	0.829	1.596	1.550	951	811	4.89e6	3.08e6	5135.8	3795.8	NO	bb	bb	84.118
13C-123478-HxCDD	35.863	0.986	3.531e5	2.656e5	0.995	1.329	1.240	1122	1260	5.91e6	4.56e6	5266.2	3617.3	NO	bd	bd	92.933
13C-123678-HxCDD	35.986	0.989	3.627e5	2.833e5	1.157	1.280	1.240	1122	1260	6.00e6	4.58e6	5348.3	3635.2	NO	dd	db	83.467
13C-1234678-HpCDD	40.119	1.103	2.840e5	2.641e5	0.840	1.075	1.050	1074	914	4.54e6	4.28e6	4226.7	4679.7	NO	bb	bb	97.501
13C-OCDD	44.828	1.232	5.013e5	5.593e5	0.767	0.896	0.890	1144	722	6.46e6	7.23e6	5650.7	10016.5	NO	bb	bb	206.559
13C-123789-HxCDD	36.376	0.000	3.751e5	2.939e5	1.000	1.276	1.240	1122	1260	6.34e6	4.97e6	5651.0	3942.8	NO	bb	bb	100.000
37CL-2378-TCDD	26.269	1.033	8.432e4		1.288			952		1.31e6		1377.6			bb		9.123

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ID: CS3Y3, Name: 23031002, Date: 10-Mar-2023, Time: 11:03:11, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.130	0.864	3.208e4	4.509e4	0.802	0.712	0.770	660	829	5.32e5	7.50e5	806.0	904.6	NO	bb	bb	9.126
1289-TCDF	27.130	1.059	3.110e4	4.236e4	0.678	0.734	0.770	660	829	4.87e5	6.39e5	737.6	770.8	NO	db	db	10.270
13468-PECDF	26.989	0.907	3.216e5	2.079e5	1.246	1.547	1.550	675	798	5.14e6	3.31e6	7616.9	4149.3	NO	bb	bb	50.012
12389-PECDF	32.165	1.081	1.344e5	8.923e4	0.496	1.506	1.550	1205	1208	2.04e6	1.36e6	1692.8	1125.5	NO	bd	bb	53.033
123468-HXCDF	33.089	0.952	1.942e5	1.567e5	1.169	1.239	1.240	1081	1023	3.06e6	2.47e6	2830.2	2416.4	NO	bb	bb	41.821
1368-TCDD	23.401	0.891	3.411e4	4.339e4	1.015	0.786	0.770	1095	830	5.50e5	7.20e5	502.4	868.0	NO	bb	bb	8.937
1289-TCDD	26.862	1.023	3.511e4	4.419e4	0.909	0.794	0.770	1095	830	5.32e5	6.85e5	485.9	825.7	NO	bb	bb	10.218
12479-PECDD	28.655	0.914	2.950e5	1.930e5	2.301	1.529	1.550	885	844	2.94e6	1.92e6	3316.2	2280.6	NO	bb	bb	42.381
12389-PECDD	31.775	1.013	1.719e5	1.106e5	1.184	1.554	1.550	885	844	2.65e6	1.73e6	2995.9	2054.4	NO	bb	bb	47.708
124679-HXCDD	33.869	0.944	1.678e5	1.361e5	1.115	1.233	1.240	1336	858	2.70e6	2.21e6	2023.8	2570.6	NO	bb	bb	44.025
1234679-HPCDD	39.094	0.974	1.533e5	1.507e5	1.137	1.017	1.050	1154	1059	2.55e6	2.53e6	2211.6	2391.6	NO	bb	bb	48.800
Total-tetrafurans			9.532e4		0.727			660		1.51e6							29.672
Total-penta1			3.216e5					675		5.14e6							50.012
Total-pentafurans			4.673e5		0.654			1205		7.23e6							152.068
Total-hexafurans			1.039e6		1.141			1081		1.68e7							230.439
Total-heptafurans			2.452e5		0.978			1139		3.95e6							95.043
Total-Furans			2.327e6		0.922			660		3.66e7							640.448
Total-tetradioxins			1.850e5		1.024			1095		2.60e6							48.123
Total-pentadioxins			6.196e5		1.502			885		7.97e6							139.470
Total-hexadioxins			7.031e5		1.005			1336		1.18e7							203.618
Total-heptadioxins			2.965e5		1.088			1154		4.93e6							98.558
Total-Dioxins			2.033e6		1.130			1095		3.02e7							591.700
Total-TEQ			4.360e6					1095		6.68e7							1232.148
FUNCTION1 PFK			5.958e6					477207		3.48e7							
FUNCTION2 PFK			8.837e6					275296		5.19e6							0.000
FUNCTION3 PFK			5.728e5					323340		1.39e7							0.000
FUNCTION4 PFK			4.439e6					198551		4.85e7							
FUNCTION5 PFK			8.959e4					175067		3.46e6							
FUNCTION1 HXCD...			7.831e1					477		1.46e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			5.204e2					728		6.12e3							0.000
FUNCTION3 OCDPE			2.460e2					539		3.22e3							0.000
FUNCTION4 NCDPE			1.187e2					638		1.85e3							0.000
FUNCTION5 DCDPE			8.128e1					549		1.68e3							0.000

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

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TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.13	3.110e4	4.236e4	0.678	0.73	0.77	737.6	YES	NO	db	db	10.270
2	Total-tetrafurans	27.00	1.079e3	1.519e3	0.727	0.71	0.77	25.6	YES	NO	bd	bd	0.339
3	2378-TCDF	25.63	3.106e4	4.250e4	0.702	0.73	0.77	720.7	YES	NO	bb	bb	9.938
4	1368-TCDF	22.13	3.208e4	4.509e4	0.802	0.71	0.77	806.0	YES	NO	bb	bb	9.126

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.99	3.216e5	2.079e5	1.246	1.55	1.55	7616.9	YES	NO	bb	bb	50.012

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.16	1.344e5	8.923e4	0.496	1.51	1.55	1692.8	YES	NO	bd	bb	53.033
2	23478-PeCDF	31.13	1.476e5	9.989e4	0.786	1.48	1.55	1928.6	YES	NO	bb	bb	44.030
3	Total-pentafurans	30.08	2.857e2	1.749e2	0.654	1.63	1.55	3.9	YES	NO	bb	bb	0.090
4	12378-PeCDF	29.79	1.596e5	1.087e5	0.679	1.47	1.55	2050.9	YES	NO	bb	bb	46.495
5	Total-pentafurans	28.64	2.536e4	1.771e4	0.654	1.43	1.55	326.7	YES	NO	bb	bb	8.420

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.80	1.938e5	1.544e5	1.137	1.26	1.24	2957.0	YES	NO	bb	bb	45.762
2	234678-HxCDF	35.77	2.151e5	1.727e5	1.140	1.25	1.24	3268.3	YES	NO	bb	bb	48.690
3	123678-HxCDF	34.91	2.209e5	1.730e5	1.091	1.28	1.24	3234.2	YES	NO	db	db	48.038
4	123478-HxCDF	34.76	2.148e5	1.712e5	1.166	1.25	1.24	3262.2	YES	NO	bd	bd	46.127
5	123468-HXCDF	33.09	1.942e5	1.567e5	1.169	1.24	1.24	2830.2	YES	NO	bb	bb	41.821

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.87	1.158e5	1.201e5	0.953	0.96	1.05	1529.7	YES	NO	bb	bb	49.150
2	1234678-HpCDF	38.65	1.294e5	1.339e5	1.003	0.97	1.05	1939.7	YES	NO	bb	bb	45.893

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.13	3.110e4	4.236e4	0.678	0.73	0.77	737.6	YES	NO	db	db	10.270
2	Total-tetrafurans	27.00	1.079e3	1.519e3	0.727	0.71	0.77	25.6	YES	NO	bd	bd	0.339
3	2378-TCDF	25.63	3.106e4	4.250e4	0.702	0.73	0.77	720.7	YES	NO	bb	bb	9.938
4	1368-TCDF	22.13	3.208e4	4.509e4	0.802	0.71	0.77	806.0	YES	NO	bb	bb	9.126
5	12389-PECDF	32.16	1.344e5	8.923e4	0.496	1.51	1.55	1692.8	YES	NO	bd	bb	53.033
6	23478-PeCDF	31.13	1.476e5	9.989e4	0.786	1.48	1.55	1928.6	YES	NO	bb	bb	44.030
7	Total-pentafurans	30.08	2.857e2	1.749e2	0.654	1.63	1.55	3.9	YES	NO	bb	bb	0.090
8	12378-PeCDF	29.79	1.596e5	1.087e5	0.679	1.47	1.55	2050.9	YES	NO	bb	bb	46.495
9	Total-pentafurans	28.64	2.536e4	1.771e4	0.654	1.43	1.55	326.7	YES	NO	bb	bb	8.420
10	123789-HxCDF	36.80	1.938e5	1.544e5	1.137	1.26	1.24	2957.0	YES	NO	bb	bb	45.762
11	234678-HxCDF	35.77	2.151e5	1.727e5	1.140	1.25	1.24	3268.3	YES	NO	bb	bb	48.690
12	123678-HxCDF	34.91	2.209e5	1.730e5	1.091	1.28	1.24	3234.2	YES	NO	db	db	48.038
13	123478-HxCDF	34.76	2.148e5	1.712e5	1.166	1.25	1.24	3262.2	YES	NO	bd	bd	46.127
14	123468-HXCDF	33.09	1.942e5	1.567e5	1.169	1.24	1.24	2830.2	YES	NO	bb	bb	41.821
15	OCDF	45.08	1.588e5	1.845e5	0.778	0.86	0.89	2398.9	YES	NO	bb	bb	83.213
16	1234789-HpCDF	40.87	1.158e5	1.201e5	0.953	0.96	1.05	1529.7	YES	NO	bb	bb	49.150
17	1234678-HpCDF	38.65	1.294e5	1.339e5	1.003	0.97	1.05	1939.7	YES	NO	bb	bb	45.893
18	13468-PECDF	26.99	3.216e5	2.079e5	1.246	1.55	1.55	7616.9	YES	NO	bb	bb	50.012

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.86	3.511e4	4.419e4	0.909	0.79	0.77	485.9	YES	NO	bb	bb	10.218
2	2378-TCDD	26.27	4.095e4	5.202e4	1.149	0.79	0.77	572.7	YES	NO	bb	bb	9.479
3	Total-tetradioxins	25.94	5.712e4	7.306e4	1.024	0.78	0.77	554.9	YES	NO	bb	bb	14.883
4	Total-tetradioxins	25.46	1.766e4	2.263e4	1.024	0.78	0.77	259.7	YES	NO	bd	bb	4.606
5	1368-TCDD	23.40	3.411e4	4.339e4	1.015	0.79	0.77	502.4	YES	NO	bb	bb	8.937

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.38	1.517e5	9.968e4	1.022	1.52	1.55	2677.7	YES	NO	bb	bb	49.170
2	Total-pentadioxins	30.72	9.457e2	6.421e2	1.502	1.47	1.55	16.0	YES	NO	bb	bb	0.211
3	12479-PECDD	28.66	2.950e5	1.930e5	2.301	1.53	1.55	3316.2	YES	NO	bb	bb	42.381
4	12389-PECDD	31.77	1.719e5	1.106e5	1.184	1.55	1.55	2995.9	YES	NO	bb	bb	47.708

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.39	1.831e5	1.489e5	0.907	1.23	1.24	2380.0	YES	NO	bb	bb	57.892
2	123678-HxCDD	36.00	1.770e5	1.451e5	1.001	1.22	1.24	2225.4	YES	NO	db	db	49.810
3	123478-HxCDD	35.89	1.734e5	1.430e5	0.996	1.21	1.24	2185.8	YES	NO	bd	bd	51.369
4	Total-hexadioxins	34.97	1.515e3	1.283e3	1.005	1.18	1.24	10.2	YES	NO	bb	bb	0.440
5	Total-hexadioxins	34.64	2.776e2	2.369e2	1.005	1.17	1.24	4.9	YES	NO	bb	bb	0.081
6	124679-HXCDD	33.87	1.678e5	1.361e5	1.115	1.23	1.24	2023.8	YES	NO	bb	bb	44.025

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234679-HPCDD	39.09	1.533e5	1.507e5	1.137	1.02	1.05	2211.6	YES	NO	bb	bb	48.800
2	1234678-HpCDD	40.14	1.432e5	1.402e5	1.039	1.02	1.05	2059.8	YES	NO	bb	bb	49.758

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.86	3.511e4	4.419e4	0.909	0.79	0.77	485.9	YES	NO	bb	bb	10.218
2	2378-TCDD	26.27	4.095e4	5.202e4	1.149	0.79	0.77	572.7	YES	NO	bb	bb	9.479
3	Total-tetradioxins	25.94	5.712e4	7.306e4	1.024	0.78	0.77	554.9	YES	NO	bb	bb	14.883
4	Total-tetradioxins	25.46	1.766e4	2.263e4	1.024	0.78	0.77	259.7	YES	NO	bd	bb	4.606
5	1368-TCDD	23.40	3.411e4	4.339e4	1.015	0.79	0.77	502.4	YES	NO	bb	bb	8.937
6	12378-PeCDD	31.38	1.517e5	9.968e4	1.022	1.52	1.55	2677.7	YES	NO	bb	bb	49.170
7	Total-pentadioxins	30.72	9.457e2	6.421e2	1.502	1.47	1.55	16.0	YES	NO	bb	bb	0.211
8	12479-PECDD	28.66	2.950e5	1.930e5	2.301	1.53	1.55	3316.2	YES	NO	bb	bb	42.381
9	123789-HxCDD	36.39	1.831e5	1.489e5	0.907	1.23	1.24	2380.0	YES	NO	bb	bb	57.892
10	123678-HxCDD	36.00	1.770e5	1.451e5	1.001	1.22	1.24	2225.4	YES	NO	db	db	49.810
11	123478-HxCDD	35.89	1.734e5	1.430e5	0.996	1.21	1.24	2185.8	YES	NO	bd	bd	51.369
12	Total-hexadioxins	34.97	1.515e3	1.283e3	1.005	1.18	1.24	10.2	YES	NO	bb	bb	0.440
13	Total-hexadioxins	34.64	2.776e2	2.369e2	1.005	1.17	1.24	4.9	YES	NO	bb	bb	0.081
14	124679-HXCDD	33.87	1.678e5	1.361e5	1.115	1.23	1.24	2023.8	YES	NO	bb	bb	44.025
15	12389-PECDD	31.77	1.719e5	1.106e5	1.184	1.55	1.55	2995.9	YES	NO	bb	bb	47.708
16	1234679-HPCDD	39.09	1.533e5	1.507e5	1.137	1.02	1.05	2211.6	YES	NO	bb	bb	48.800
17	OCDD	44.85	2.289e5	2.684e5	0.920	0.85	0.89	3015.5	YES	NO	bb	bb	101.931
18	1234678-HpCDD	40.14	1.432e5	1.402e5	1.039	1.02	1.05	2059.8	YES	NO	bb	bb	49.758

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.13	3.110e4	4.236e4	0.678	0.73	0.77	737.6	YES	NO	db	db	10.270
2	Total-tetrafurans	27.00	1.079e3	1.519e3	0.727	0.71	0.77	25.6	YES	NO	bd	bd	0.339
3	2378-TCDF	25.63	3.106e4	4.250e4	0.702	0.73	0.77	720.7	YES	NO	bb	bb	9.938
4	1368-TCDF	22.13	3.208e4	4.509e4	0.802	0.71	0.77	806.0	YES	NO	bb	bb	9.126
5	12389-PECDF	32.16	1.344e5	8.923e4	0.496	1.51	1.55	1692.8	YES	NO	bd	bb	53.033
6	23478-PeCDF	31.13	1.476e5	9.989e4	0.786	1.48	1.55	1928.6	YES	NO	bb	bb	44.030
7	Total-pentafurans	30.08	2.857e2	1.749e2	0.654	1.63	1.55	3.9	YES	NO	bb	bb	0.090
8	12378-PeCDF	29.79	1.596e5	1.087e5	0.679	1.47	1.55	2050.9	YES	NO	bb	bb	46.495
9	Total-pentafurans	28.64	2.536e4	1.771e4	0.654	1.43	1.55	326.7	YES	NO	bb	bb	8.420
10	123789-HxCDF	36.80	1.938e5	1.544e5	1.137	1.26	1.24	2957.0	YES	NO	bb	bb	45.762
11	234678-HxCDF	35.77	2.151e5	1.727e5	1.140	1.25	1.24	3268.3	YES	NO	bb	bb	48.690
12	123678-HxCDF	34.91	2.209e5	1.730e5	1.091	1.28	1.24	3234.2	YES	NO	db	db	48.038
13	123478-HxCDF	34.76	2.148e5	1.712e5	1.166	1.25	1.24	3262.2	YES	NO	bd	bd	46.127
14	123468-HXCDF	33.09	1.942e5	1.567e5	1.169	1.24	1.24	2830.2	YES	NO	bb	bb	41.821
15	OCDF	45.08	1.588e5	1.845e5	0.778	0.86	0.89	2398.9	YES	NO	bb	bb	83.213
16	1234789-HpCDF	40.87	1.158e5	1.201e5	0.953	0.96	1.05	1529.7	YES	NO	bb	bb	49.150
17	1234678-HpCDF	38.65	1.294e5	1.339e5	1.003	0.97	1.05	1939.7	YES	NO	bb	bb	45.893
18	13468-PECDF	26.99	3.216e5	2.079e5	1.246	1.55	1.55	7616.9	YES	NO	bb	bb	50.012
19	1289-TCDD	26.86	3.511e4	4.419e4	0.909	0.79	0.77	485.9	YES	NO	bb	bb	10.218
20	2378-TCDD	26.27	4.095e4	5.202e4	1.149	0.79	0.77	572.7	YES	NO	bb	bb	9.479
21	Total-tetradioxins	25.94	5.712e4	7.306e4	1.024	0.78	0.77	554.9	YES	NO	bb	bb	14.883
22	Total-tetradioxins	25.46	1.766e4	2.263e4	1.024	0.78	0.77	259.7	YES	NO	bd	bb	4.606
23	1368-TCDD	23.40	3.411e4	4.339e4	1.015	0.79	0.77	502.4	YES	NO	bb	bb	8.937
24	12378-PeCDD	31.38	1.517e5	9.968e4	1.022	1.52	1.55	2677.7	YES	NO	bb	bb	49.170
25	Total-pentadioxins	30.72	9.457e2	6.421e2	1.502	1.47	1.55	16.0	YES	NO	bb	bb	0.211
26	12479-PECDD	28.66	2.950e5	1.930e5	2.301	1.53	1.55	3316.2	YES	NO	bb	bb	42.381
27	123789-HxCDD	36.39	1.831e5	1.489e5	0.907	1.23	1.24	2380.0	YES	NO	bb	bb	57.892
28	123678-HxCDD	36.00	1.770e5	1.451e5	1.001	1.22	1.24	2225.4	YES	NO	db	db	49.810
29	123478-HxCDD	35.89	1.734e5	1.430e5	0.996	1.21	1.24	2185.8	YES	NO	bd	bd	51.369
30	Total-hexadioxins	34.97	1.515e3	1.283e3	1.005	1.18	1.24	10.2	YES	NO	bb	bb	0.440
31	Total-hexadioxins	34.64	2.776e2	2.369e2	1.005	1.17	1.24	4.9	YES	NO	bb	bb	0.081
32	124679-HXCDD	33.87	1.678e5	1.361e5	1.115	1.23	1.24	2023.8	YES	NO	bb	bb	44.025
33	12389-PECDD	31.77	1.719e5	1.106e5	1.184	1.55	1.55	2995.9	YES	NO	bb	bb	47.708
34	1234679-HPCDD	39.09	1.533e5	1.507e5	1.137	1.02	1.05	2211.6	YES	NO	bb	bb	48.800
35	OCDD	44.85	2.289e5	2.684e5	0.920	0.85	0.89	3015.5	YES	NO	bb	bb	101.931
36	1234678-HpCDD	40.14	1.432e5	1.402e5	1.039	1.02	1.05	2059.8	YES	NO	bb	bb	49.758

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	25.31	1.526e4					1.0	NO		bb		
2	FUNCTION1 PFK	24.98	3.845e3					0.6	NO		bb		
3	FUNCTION1 PFK	24.69	3.185e4					1.5	NO		bb		
4	FUNCTION1 PFK	24.63	4.791e3					0.5	NO		bb		
5	FUNCTION1 PFK	24.40	3.705e3					0.5	NO		bb		
6	FUNCTION1 PFK	24.35	2.100e4					1.4	NO		bb		
7	FUNCTION1 PFK	23.97	2.660e4					1.5	NO		bb		
8	FUNCTION1 PFK	23.80	3.025e4					1.9	NO		bb		
9	FUNCTION1 PFK	23.39	7.781e3					0.8	NO		bb		
10	FUNCTION1 PFK	23.02	9.188e3					0.7	NO		bb		
11	FUNCTION1 PFK	22.78	8.584e4					1.9	NO		bb		
12	FUNCTION1 PFK	22.60	6.513e3					0.6	NO		bb		
13	FUNCTION1 PFK	21.64	1.106e6					11.2	YES		db		
14	FUNCTION1 PFK	21.47	2.728e6					14.6	YES		dd		
15	FUNCTION1 PFK	21.18	1.623e6					20.7	YES		bd		
16	FUNCTION1 PFK	26.92	2.444e4					1.5	NO		db		
17	FUNCTION1 PFK	26.82	3.244e4					2.0	NO		dd		
18	FUNCTION1 PFK	26.73	4.242e4					1.5	NO		bd		
19	FUNCTION1 PFK	26.54	2.203e4					1.4	NO		db		
20	FUNCTION1 PFK	26.47	3.348e4					1.7	NO		dd		
21	FUNCTION1 PFK	26.41	1.940e4					1.2	NO		bd		
22	FUNCTION1 PFK	26.04	3.514e4					1.3	NO		db		
23	FUNCTION1 PFK	25.94	2.194e4					1.3	NO		bd		
24	FUNCTION1 PFK	25.58	2.349e4					1.3	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.01	4.037e5					3.2	YES		bb		0.000
2	FUNCTION2 PFK	28.25	7.813e6					6.3	YES		db		0.000
3	FUNCTION2 PFK	28.04	6.203e5					9.4	YES		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	32.77	2.376e3					0.7	NO		bb		0.000
2	FUNCTION3 PFK	32.71	3.839e4					3.2	YES		bb		0.000
3	FUNCTION3 PFK	35.34	4.125e4					1.7	NO		bb		0.000
4	FUNCTION3 PFK	35.14	6.522e3					0.9	NO		bb		0.000
5	FUNCTION3 PFK	34.99	1.536e4					1.4	NO		bb		0.000
6	FUNCTION3 PFK	34.87	1.150e4					1.5	NO		db		0.000
7	FUNCTION3 PFK	34.81	2.940e4					1.6	NO		bd		0.000
8	FUNCTION3 PFK	34.24	2.769e4					1.2	NO		bb		0.000
9	FUNCTION3 PFK	34.14	1.619e4					1.7	NO		db		0.000
10	FUNCTION3 PFK	34.07	3.540e4					2.6	NO		dd		0.000
11	FUNCTION3 PFK	34.03	2.137e4					2.1	NO		bd		0.000
12	FUNCTION3 PFK	33.96	1.419e4					1.0	NO		bb		0.000
13	FUNCTION3 PFK	33.81	1.453e4					1.1	NO		bb		0.000
14	FUNCTION3 PFK	33.55	1.255e4					1.5	NO		db		0.000
15	FUNCTION3 PFK	33.47	4.195e4					2.6	NO		bd		0.000
16	FUNCTION3 PFK	33.37	3.323e4					1.9	NO		bb		0.000
17	FUNCTION3 PFK	33.22	2.509e4					2.3	NO		bb		0.000
18	FUNCTION3 PFK	33.02	2.618e4					1.8	NO		bb		0.000
19	FUNCTION3 PFK	37.18	3.812e4					2.1	NO		bb		0.000
20	FUNCTION3 PFK	36.81	1.833e4					1.5	NO		bb		0.000
21	FUNCTION3 PFK	36.73	6.315e3					0.7	NO		bb		0.000
22	FUNCTION3 PFK	36.49	4.670e3					0.7	NO		bb		0.000
23	FUNCTION3 PFK	36.36	6.881e3					1.0	NO		bb		0.000
24	FUNCTION3 PFK	36.22	1.593e4					1.7	NO		db		0.000
25	FUNCTION3 PFK	36.14	3.963e4					2.5	NO		bd		0.000
26	FUNCTION3 PFK	35.96	2.978e4					2.1	NO		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	38.50	1.908e3					0.8	NO		db		
2	FUNCTION4 PFK	38.47	5.846e3					1.2	NO		bd		
3	FUNCTION4 PFK	38.33	2.964e3					0.8	NO		bb		
4	FUNCTION4 PFK	38.08	1.529e3					0.5	NO		bb		
5	FUNCTION4 PFK	37.85	2.117e4					2.3	NO		bb		
6	FUNCTION4 PFK	37.77	1.830e4					2.1	NO		db		
7	FUNCTION4 PFK	37.69	1.963e4					2.7	NO		bd		
8	FUNCTION4 PFK	40.48	9.402e5					32.8	YES		db		
9	FUNCTION4 PFK	40.32	5.842e5					19.9	YES		dd		
10	FUNCTION4 PFK	40.12	1.124e5					13.1	YES		dd		
11	FUNCTION4 PFK	40.06	4.955e5					12.0	YES		dd		
12	FUNCTION4 PFK	39.81	3.848e4					6.2	YES		dd		
13	FUNCTION4 PFK	39.76	8.469e4					5.9	YES		dd		
14	FUNCTION4 PFK	39.67	2.324e4					2.8	NO		dd		
15	FUNCTION4 PFK	39.60	9.353e3					1.5	NO		bd		
16	FUNCTION4 PFK	39.44	2.660e4					2.5	NO		db		
17	FUNCTION4 PFK	39.32	3.009e4					2.0	NO		bd		
18	FUNCTION4 PFK	39.22	2.097e4					1.7	NO		db		
19	FUNCTION4 PFK	39.17	5.679e3					1.3	NO		bd		
20	FUNCTION4 PFK	38.97	6.510e3					1.2	NO		bb		
21	FUNCTION4 PFK	38.87	1.635e3					0.6	NO		db		
22	FUNCTION4 PFK	38.84	1.583e4					2.0	NO		bd		
23	FUNCTION4 PFK	38.75	7.339e3					1.3	NO		bb		
24	FUNCTION4 PFK	42.45	6.017e3					1.2	NO		bb		
25	FUNCTION4 PFK	42.34	9.914e2					0.4	NO		bb		
26	FUNCTION4 PFK	42.19	3.987e3					0.9	NO		db		
27	FUNCTION4 PFK	42.13	4.803e3					0.8	NO		bd		
28	FUNCTION4 PFK	41.98	1.044e4					1.2	NO		db		
29	FUNCTION4 PFK	41.92	1.877e4					1.6	NO		bd		
30	FUNCTION4 PFK	41.75	5.380e3					1.1	NO		bb		
31	FUNCTION4 PFK	41.65	5.521e3					1.1	NO		bb		
32	FUNCTION4 PFK	40.99	3.261e5					10.9	YES		db		
33	FUNCTION4 PFK	40.93	2.758e5					12.3	YES		dd		
34	FUNCTION4 PFK	40.81	2.776e5					16.5	YES		bd		
35	FUNCTION4 PFK	40.71	4.830e5					28.3	YES		db		
36	FUNCTION4 PFK	40.62	2.271e5					26.1	YES		dd		
37	FUNCTION4 PFK	40.58	3.198e5					24.7	YES		bd		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.85	3.808e3					1.1	NO		bd		
2	FUNCTION5 PFK	45.69	2.339e3					0.7	NO		bb		
3	FUNCTION5 PFK	45.54	3.202e3					0.8	NO		db		
4	FUNCTION5 PFK	45.51	4.181e3					1.1	NO		bd		
5	FUNCTION5 PFK	44.82	7.271e2					0.5	NO		bb		
6	FUNCTION5 PFK	44.72	6.331e3					1.3	NO		bb		
7	FUNCTION5 PFK	44.27	1.368e4					1.5	NO		bb		
8	FUNCTION5 PFK	44.19	7.567e2					0.5	NO		bb		
9	FUNCTION5 PFK	44.15	3.269e3					0.8	NO		bb		
10	FUNCTION5 PFK	44.01	2.145e3					0.8	NO		bb		
11	FUNCTION5 PFK	43.64	3.312e3					1.0	NO		bb		
12	FUNCTION5 PFK	43.37	4.862e3					1.2	NO		db		
13	FUNCTION5 PFK	43.34	4.579e3					1.2	NO		bd		
14	FUNCTION5 PFK	43.16	1.372e4					1.7	NO		db		
15	FUNCTION5 PFK	43.10	4.861e3					1.1	NO		bd		
16	FUNCTION5 PFK	43.04	2.966e3					1.2	NO		bb		
17	FUNCTION5 PFK	42.92	6.397e3					1.3	NO		db		
18	FUNCTION5 PFK	45.94	2.180e3					0.8	NO		bb		
19	FUNCTION5 PFK	45.87	1.655e3					0.6	NO		bb		
20	FUNCTION5 PFK	45.75	4.622e3					0.8	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	23.20	7.831e1					3.1	YES		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	32.35	1.194e2					1.8	NO		bb		0.000
2	FUNCTION2 HPCD...	31.75	8.703e1					1.0	NO		bb		0.000
3	FUNCTION2 HPCD...	30.98	3.140e2					5.7	YES		bb		0.000

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ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	34.39	1.285e2					3.1	YES		bb		0.000
2	FUNCTION3 OCDPE	33.06	1.175e2					2.9	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	42.19	1.187e2					2.9	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	44.86	8.128e1					3.1	YES		bb		0.000

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Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:41:10 Pacific Daylight Time

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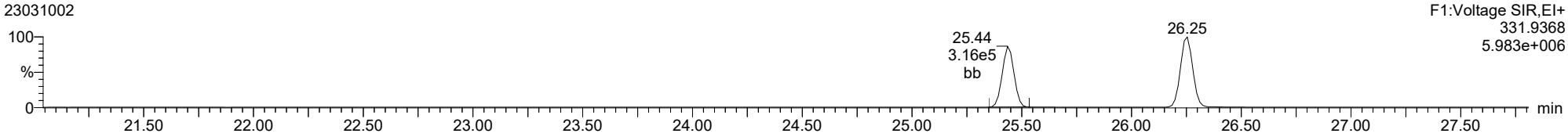

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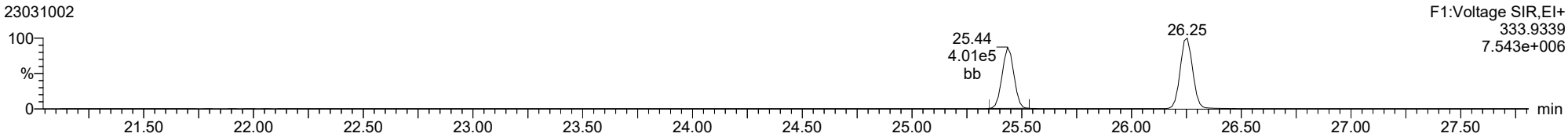

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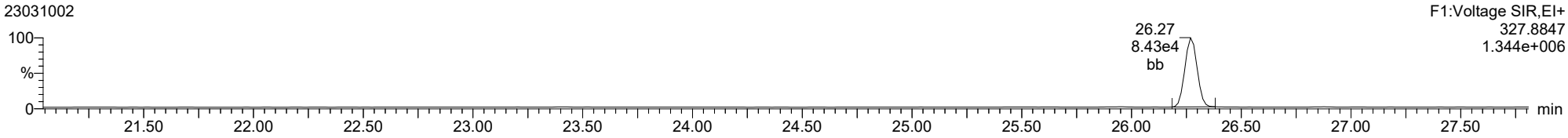

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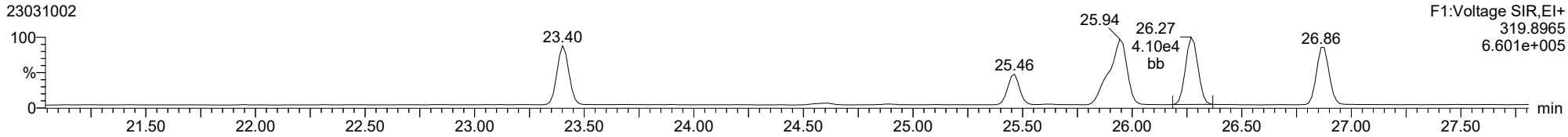

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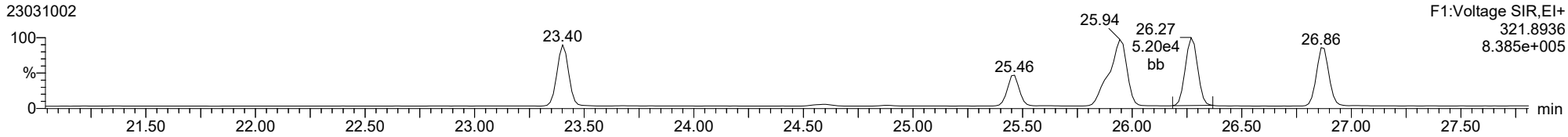

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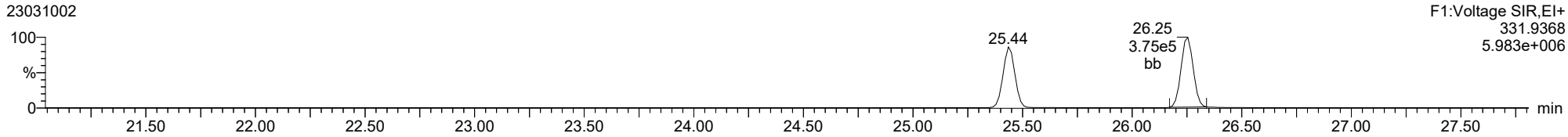

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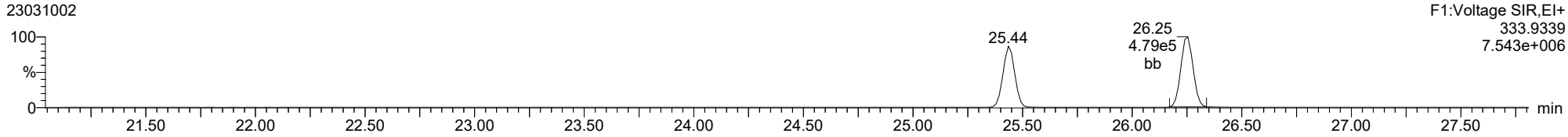

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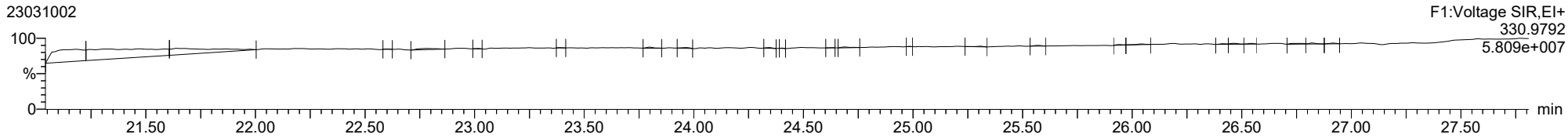

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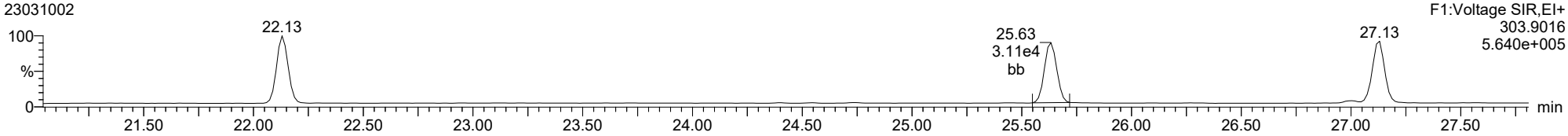

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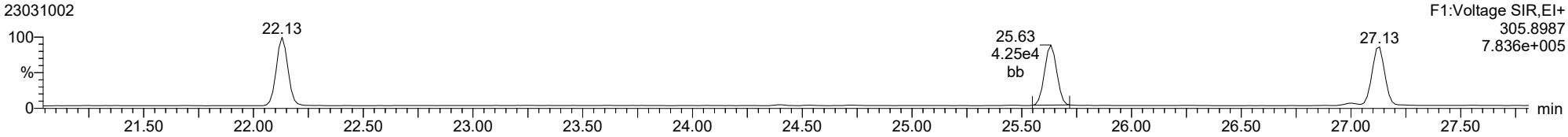

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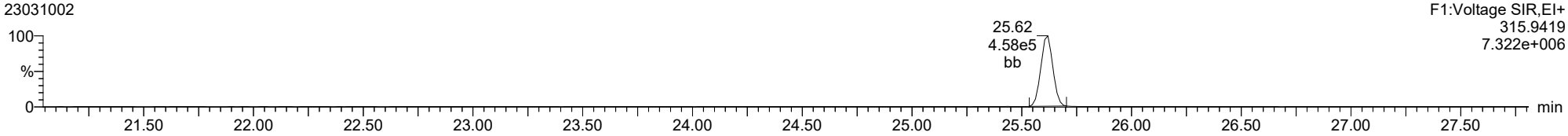

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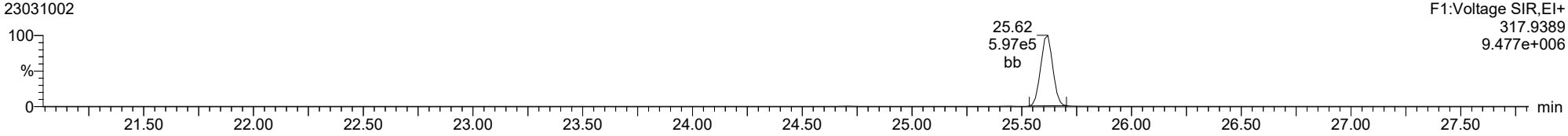

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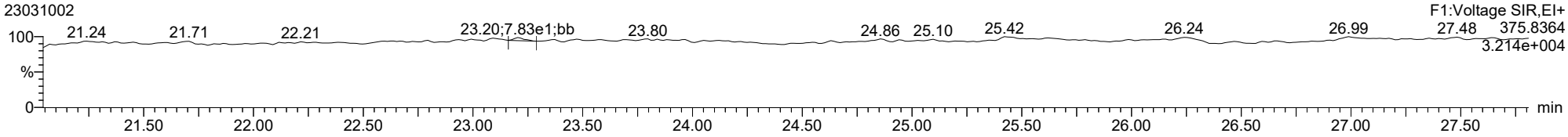

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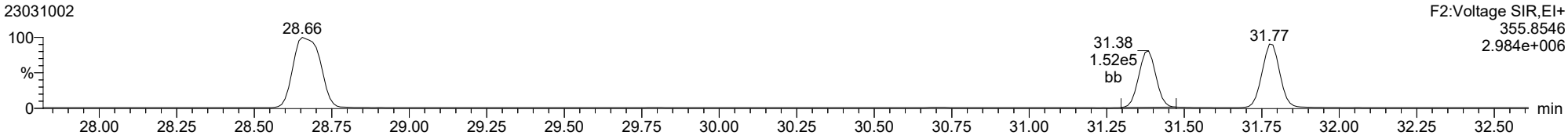

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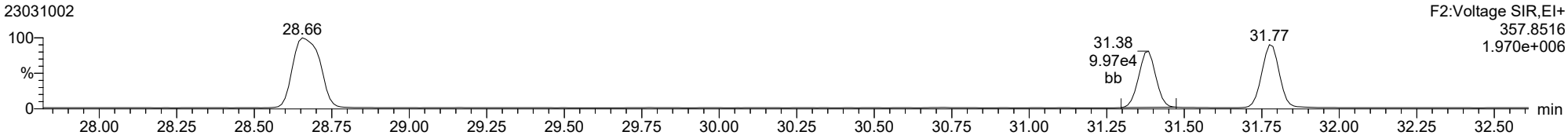

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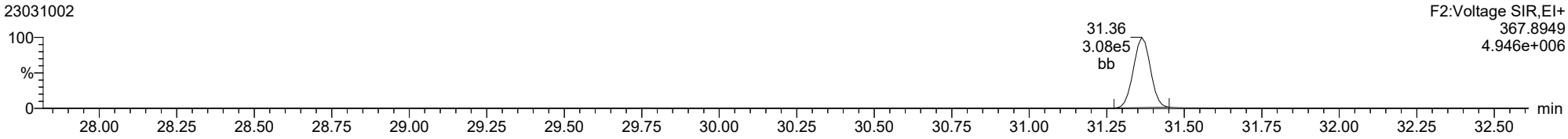

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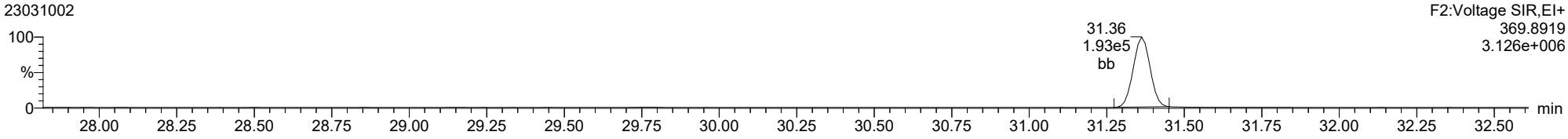

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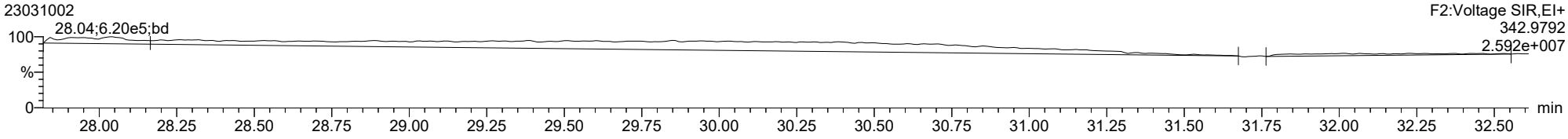

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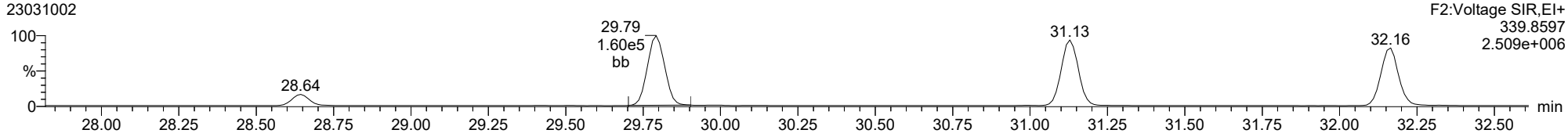

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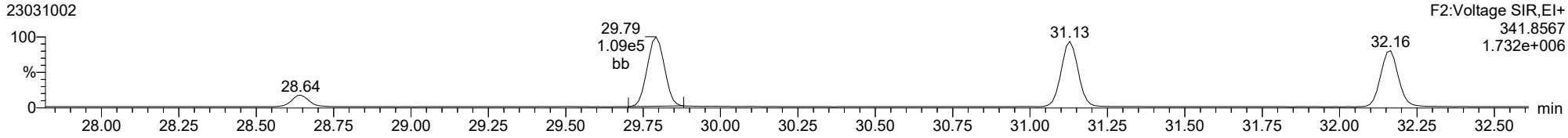

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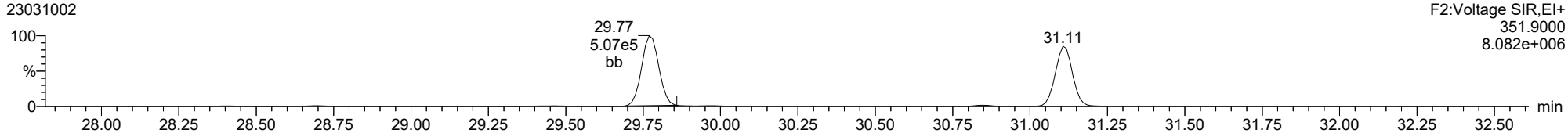

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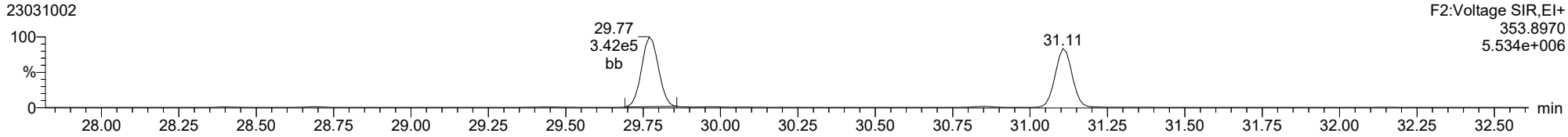

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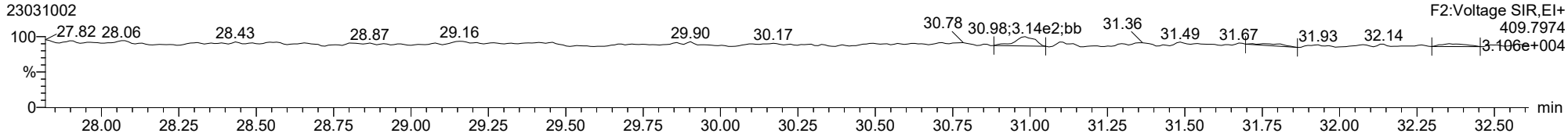

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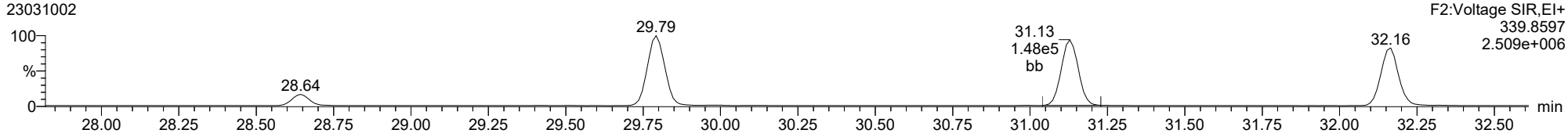

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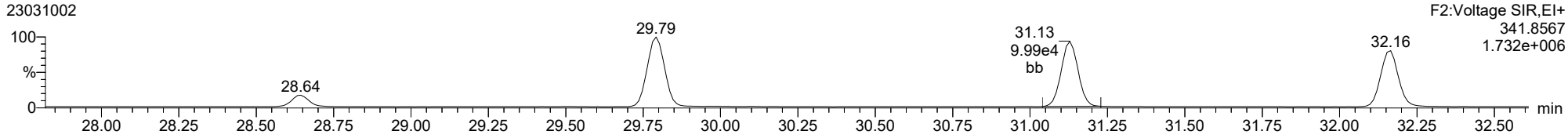

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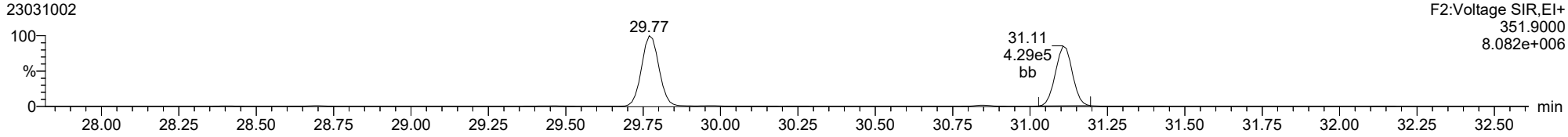

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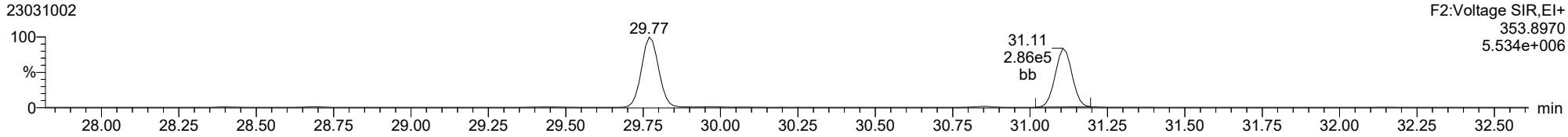

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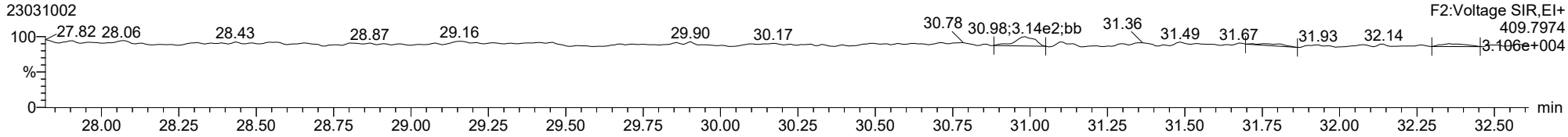

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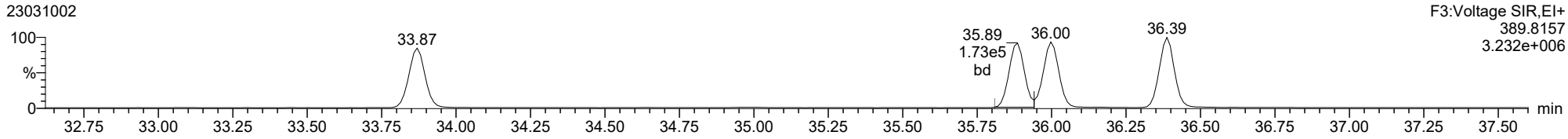

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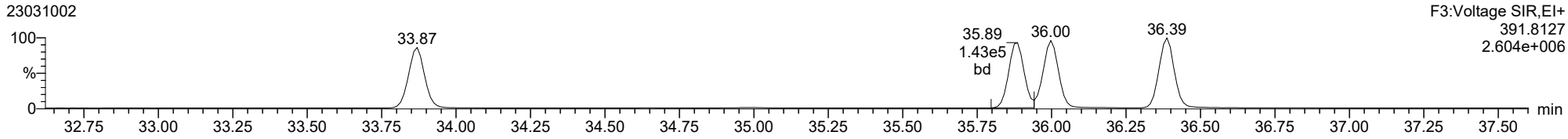

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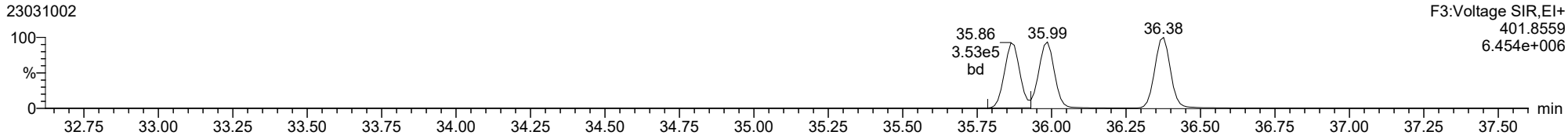

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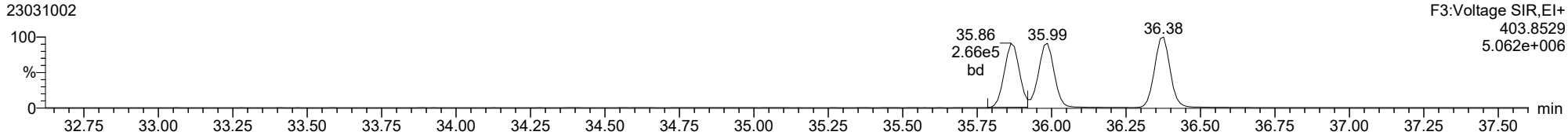

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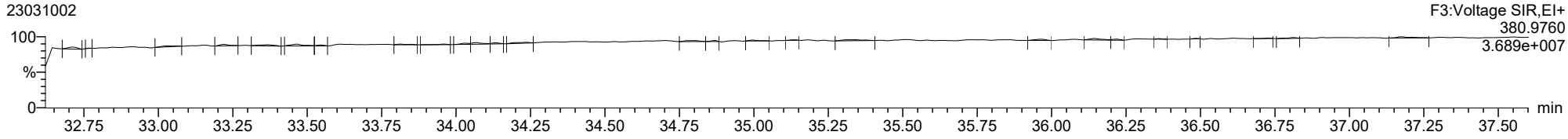

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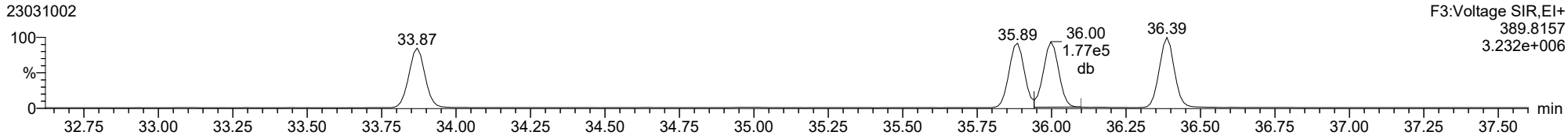

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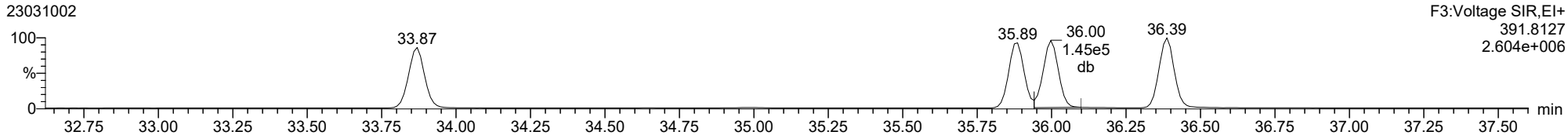

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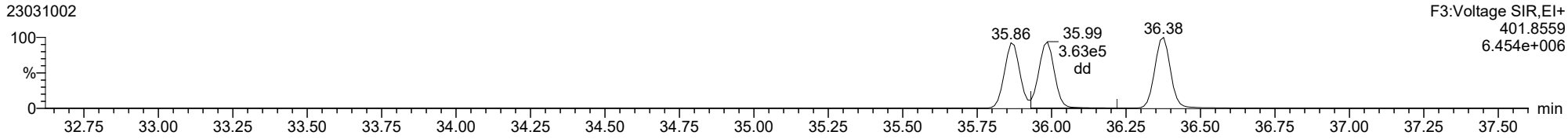

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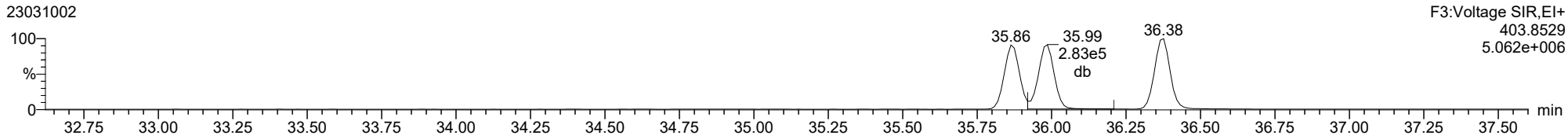

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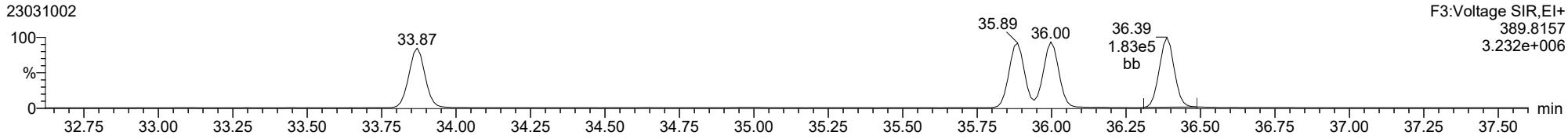

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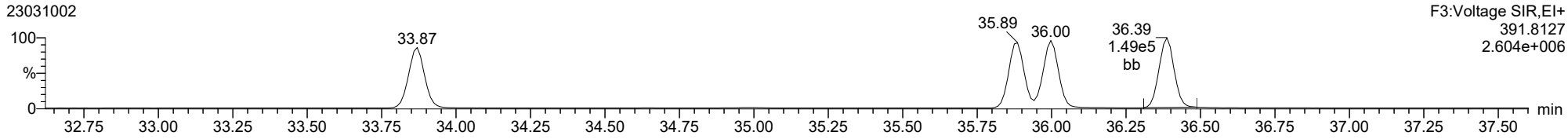

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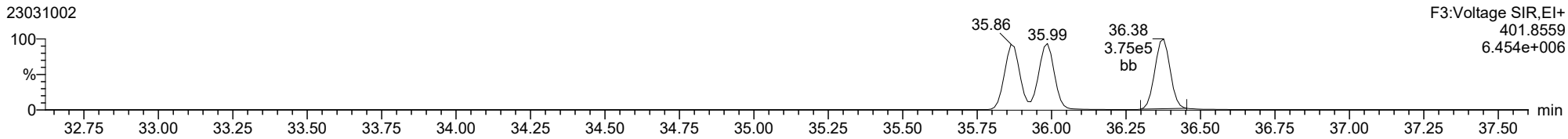

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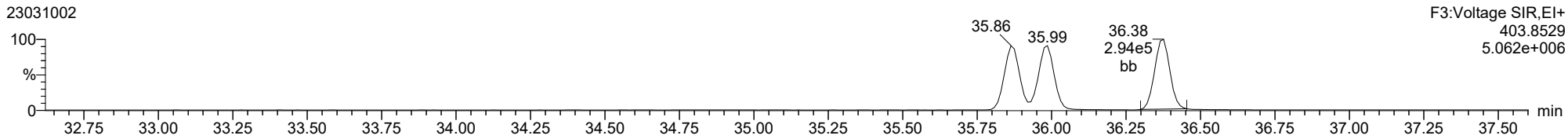

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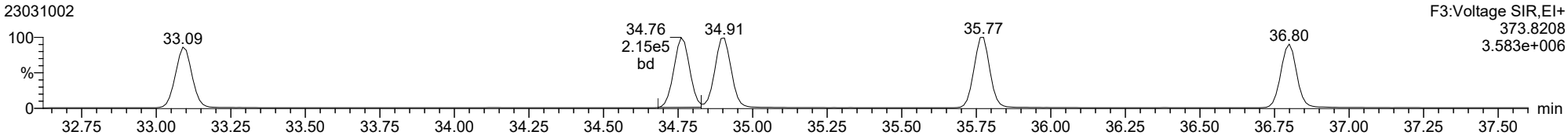

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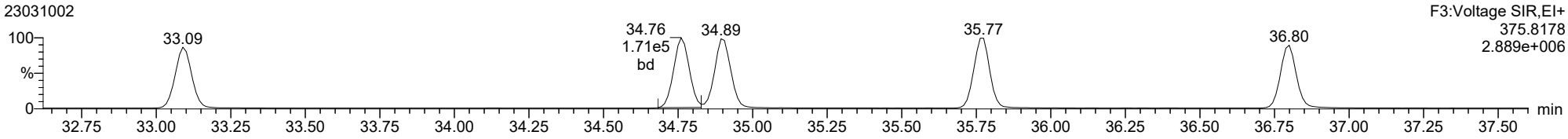

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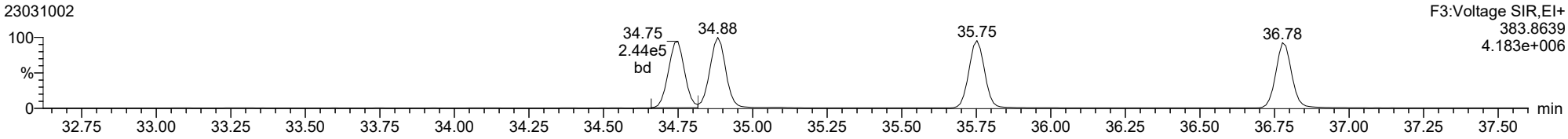

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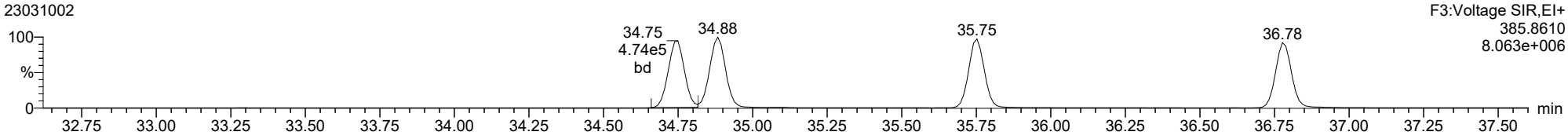
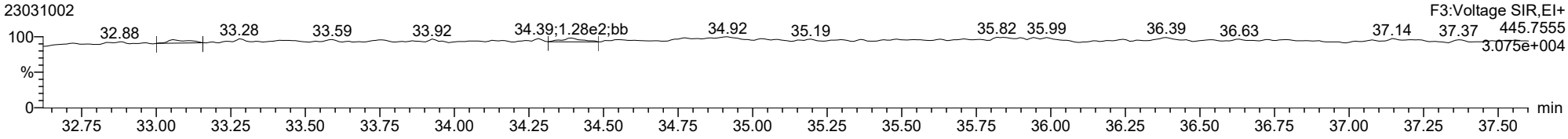


FUNCTION3 OCDPE



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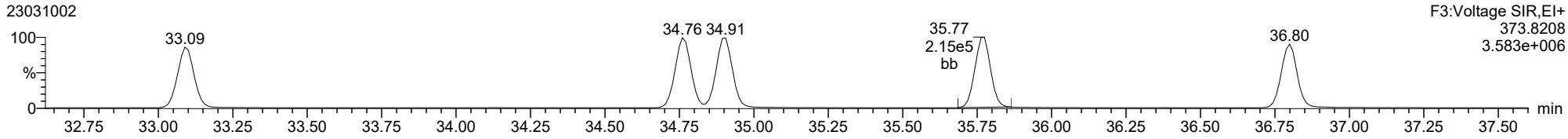
234678-HxCDF



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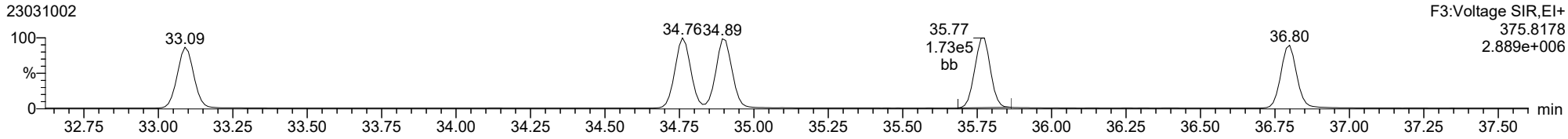

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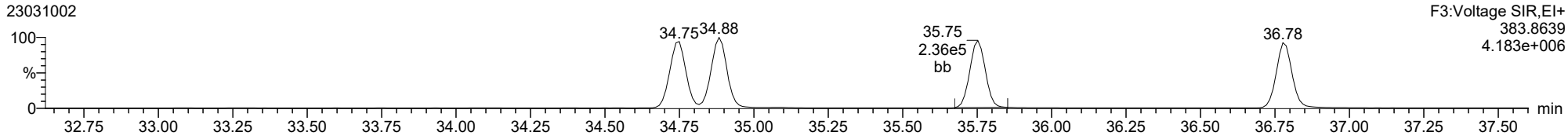

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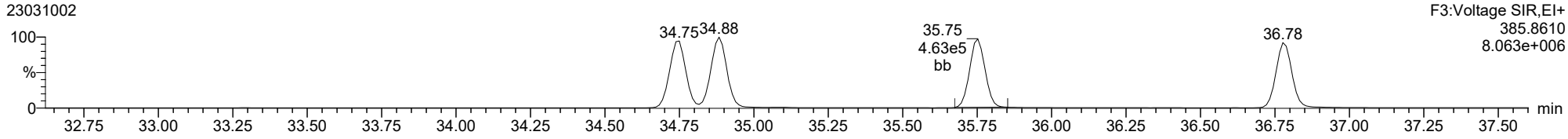

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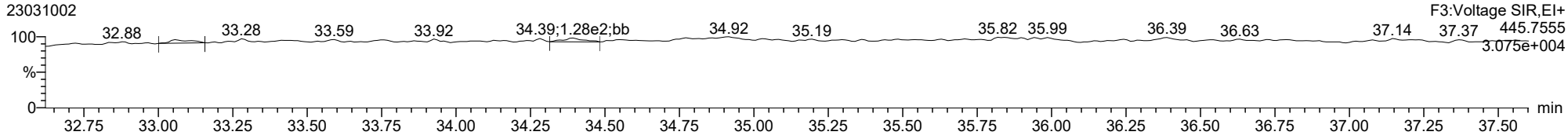

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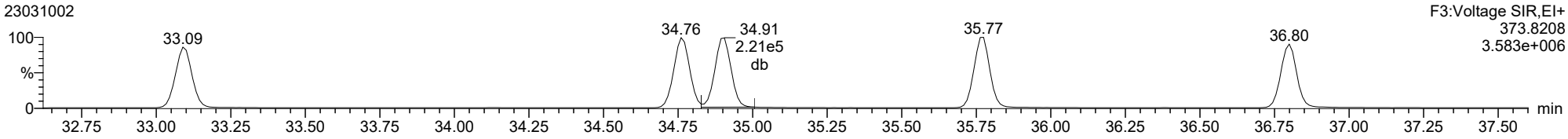

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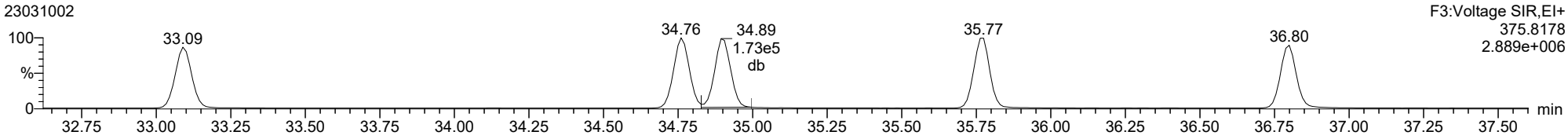

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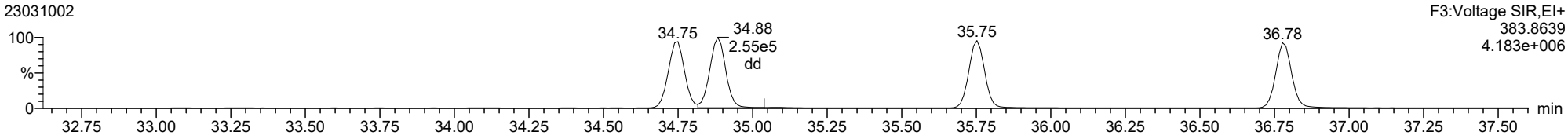

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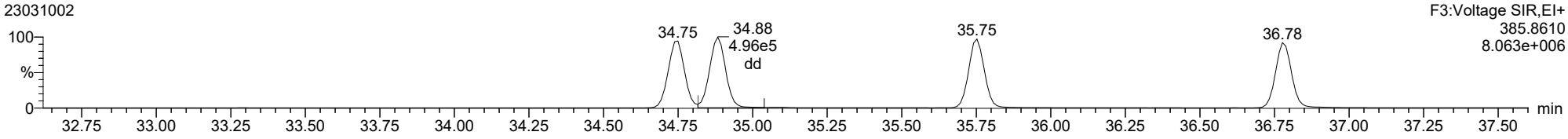
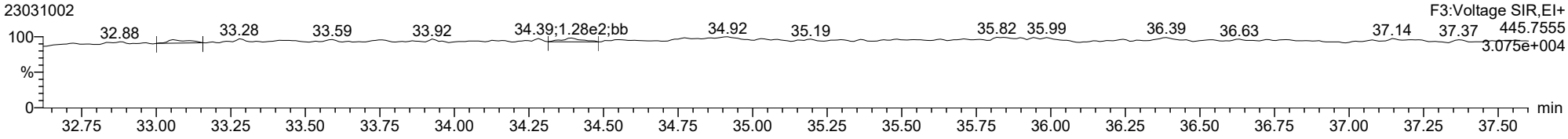


FUNCTION3 OCDPE



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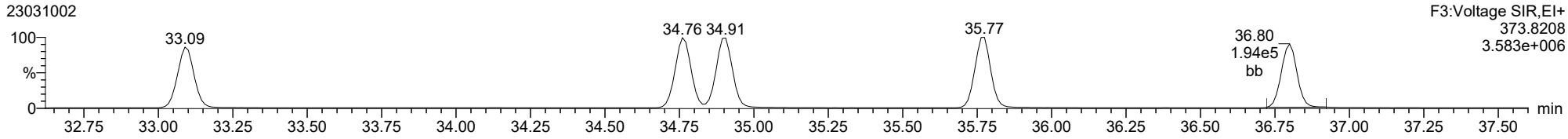

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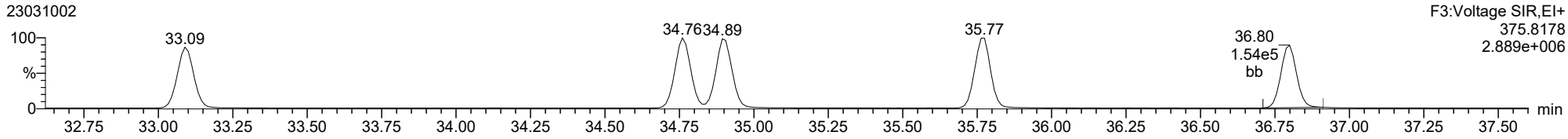

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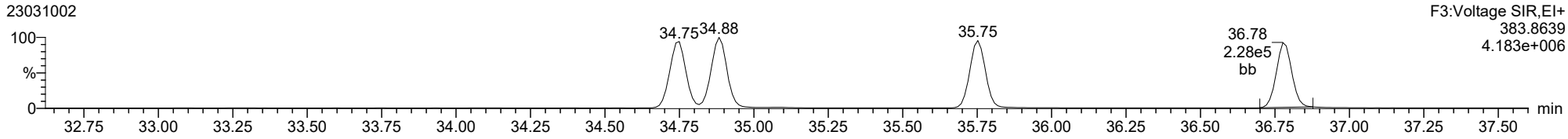

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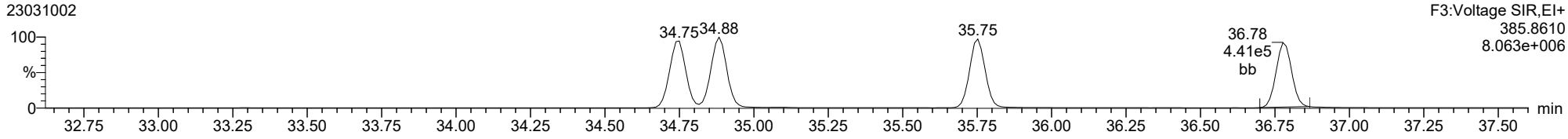

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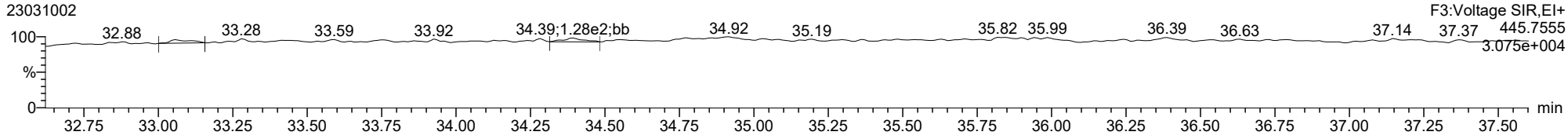

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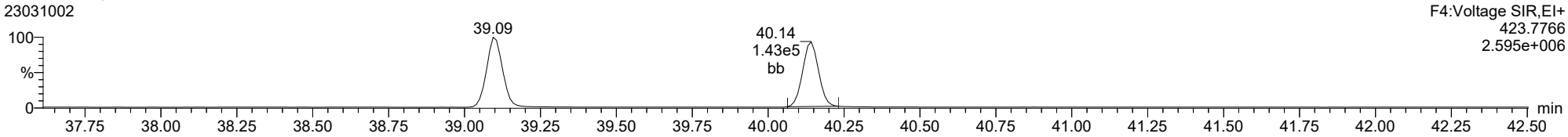

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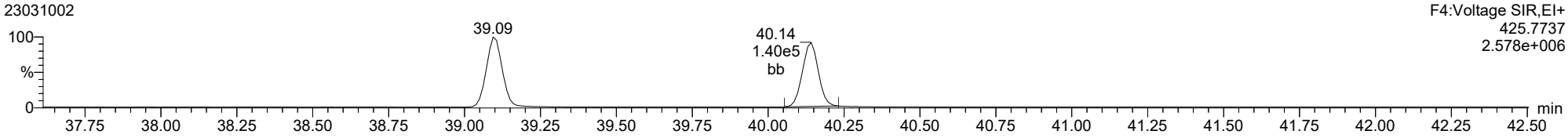

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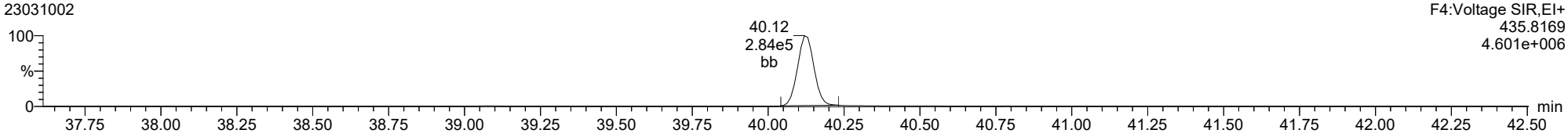

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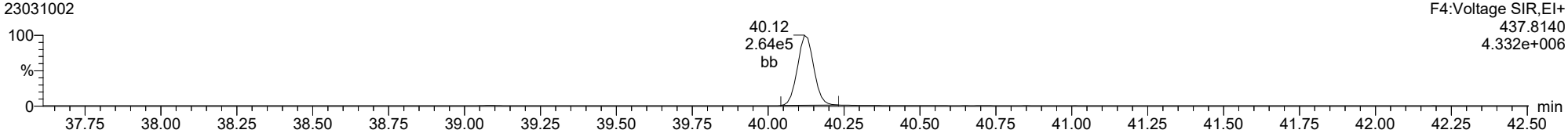
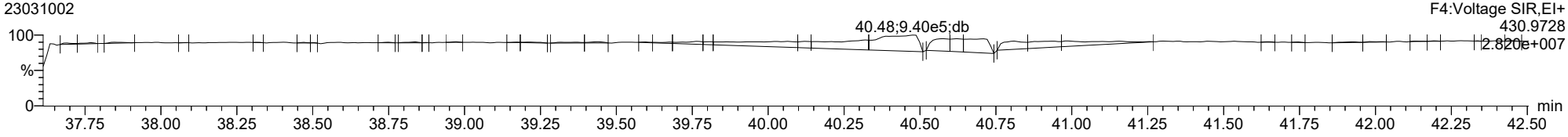


FUNCTION4 PFK



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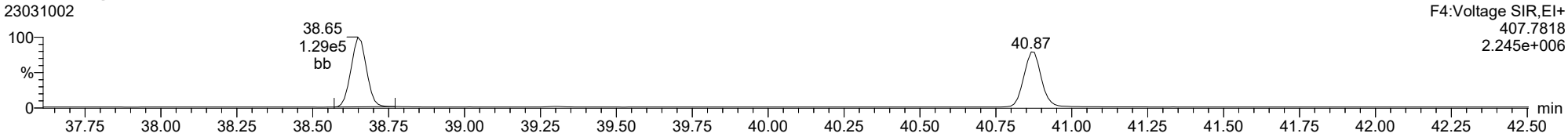

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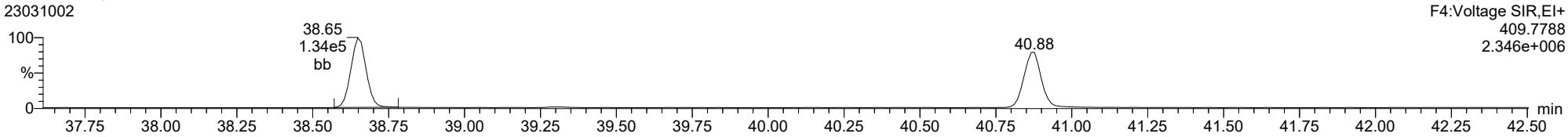

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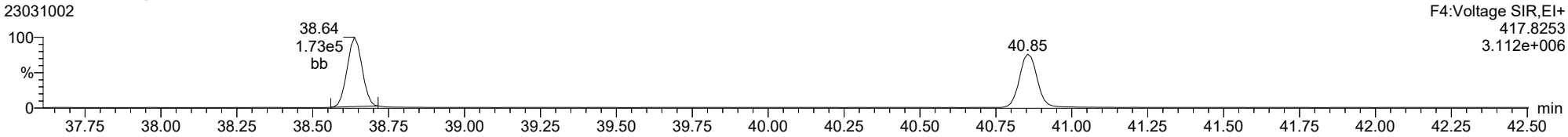

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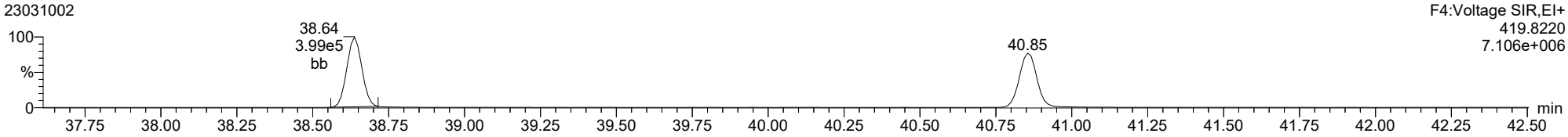
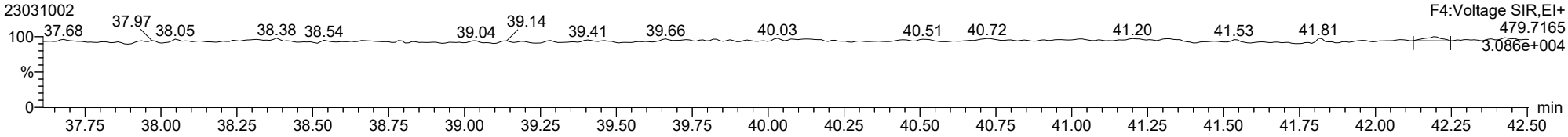


FUNCTION4 NCDPE



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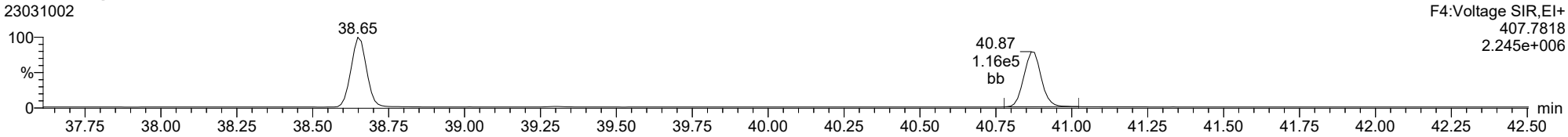

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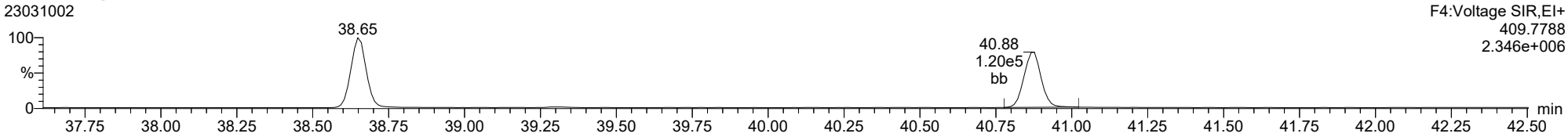

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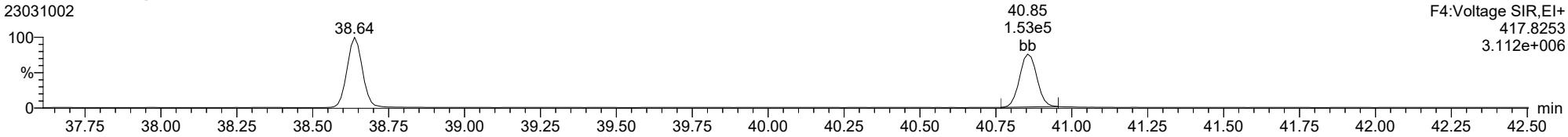

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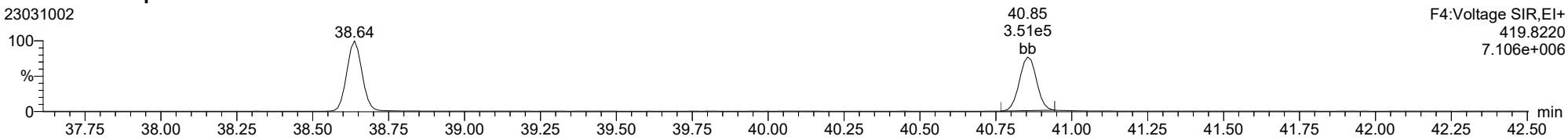

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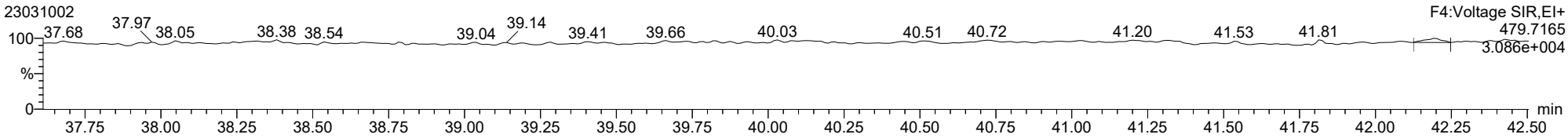

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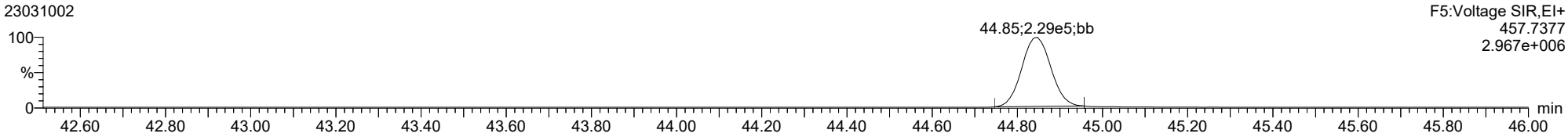

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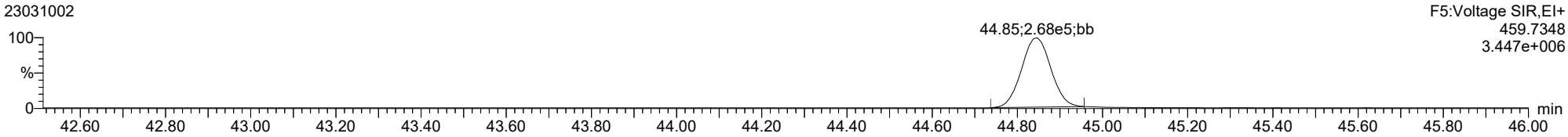

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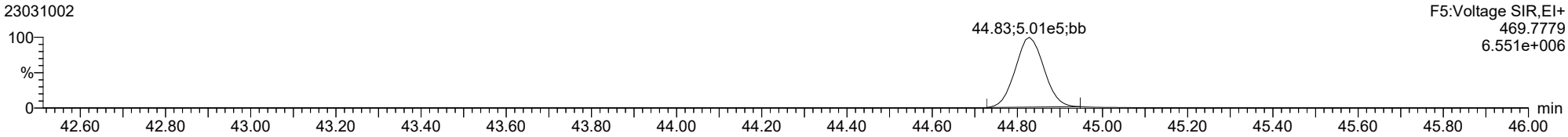

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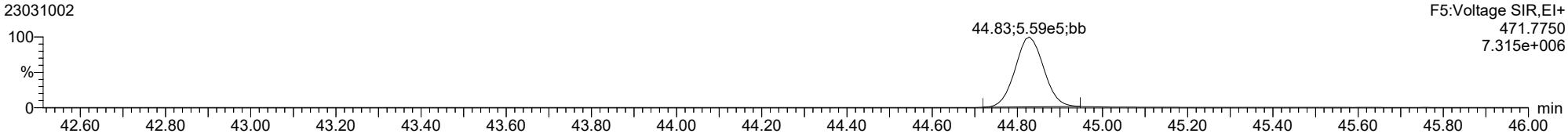
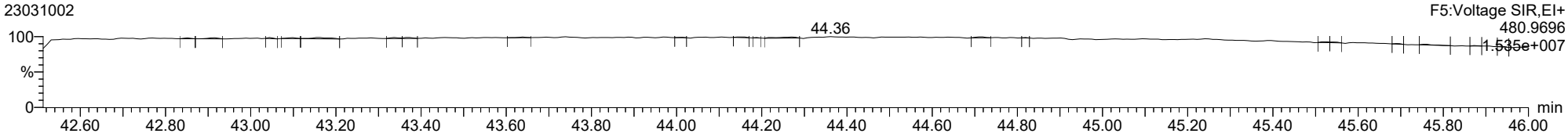


FUNCTION5 PFK



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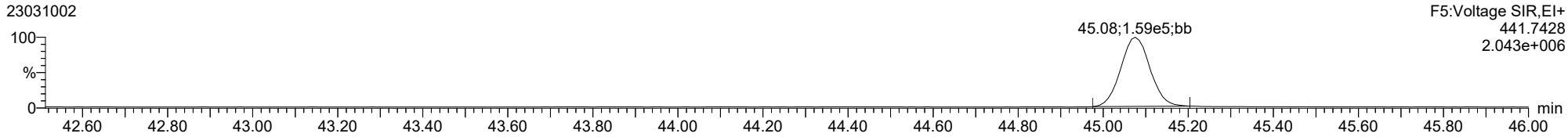

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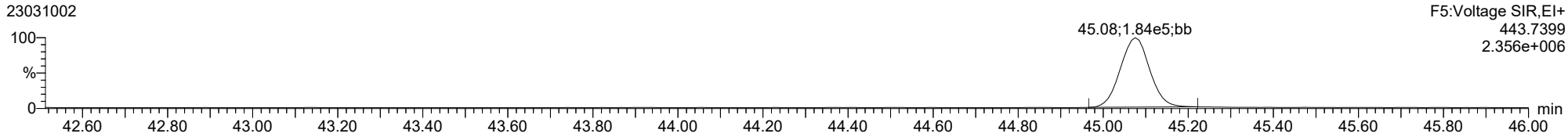

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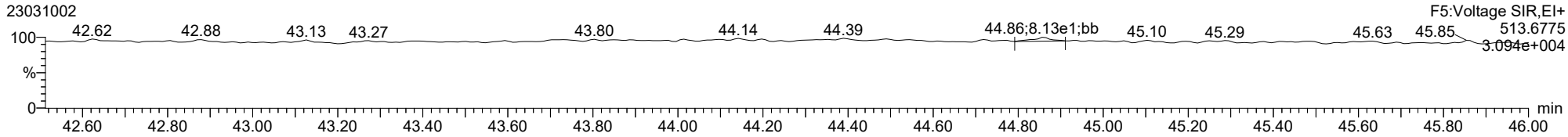

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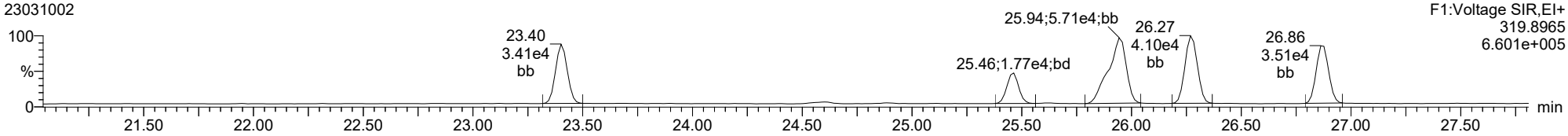
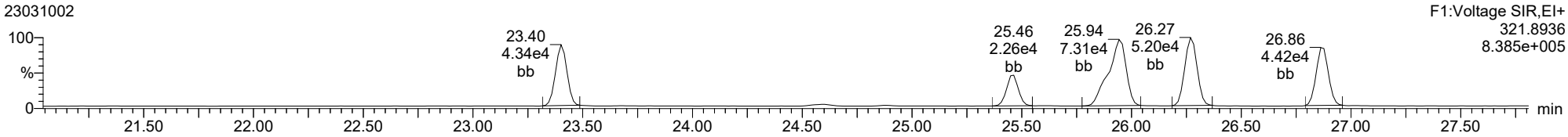
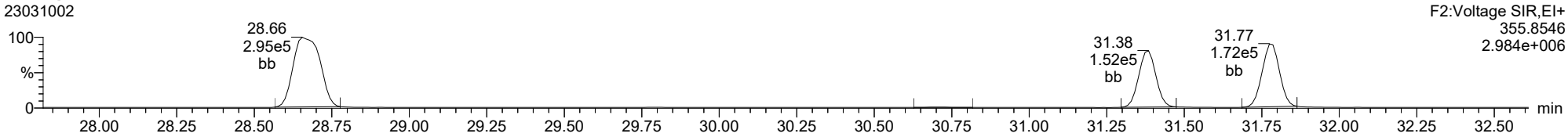
Total-tetradioxins



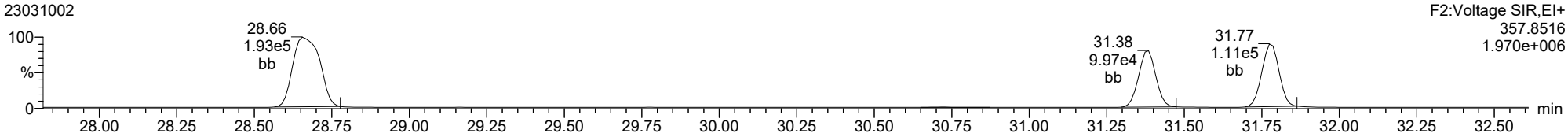
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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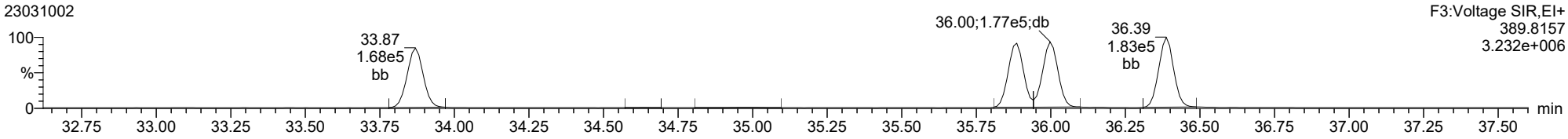
Total-hexadioxins



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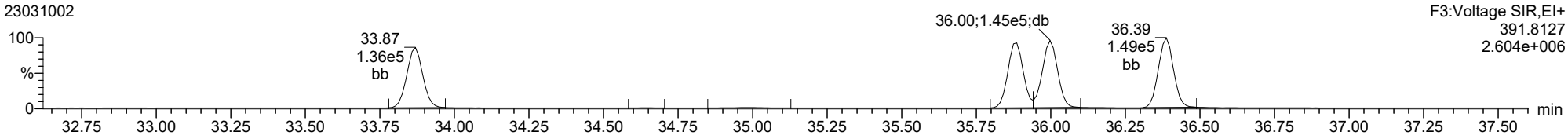
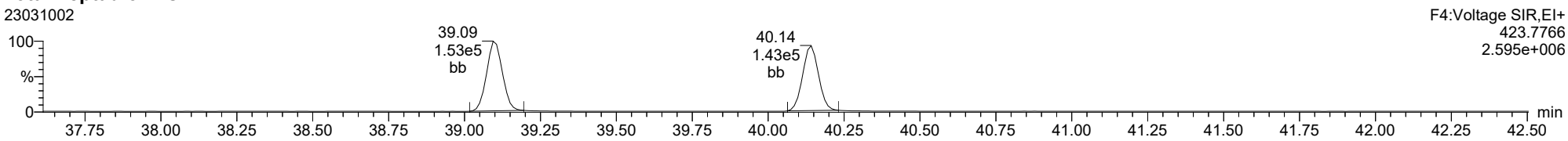


Total-heptadioxins



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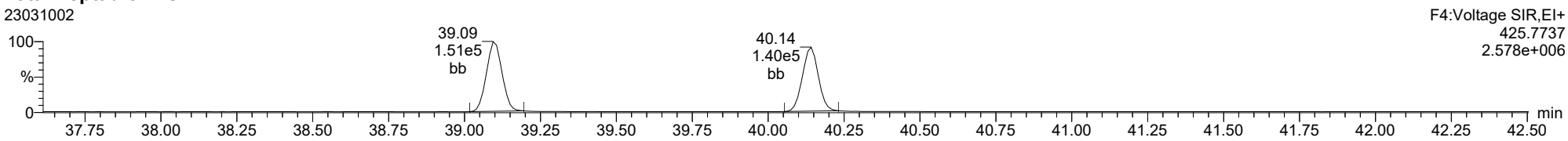

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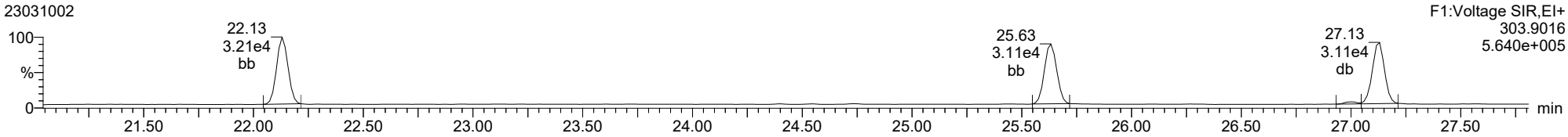
Total-tetrafurans



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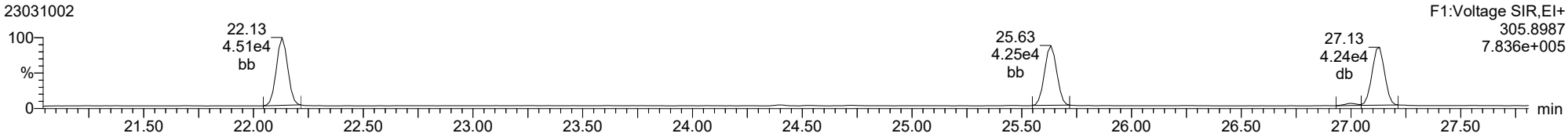

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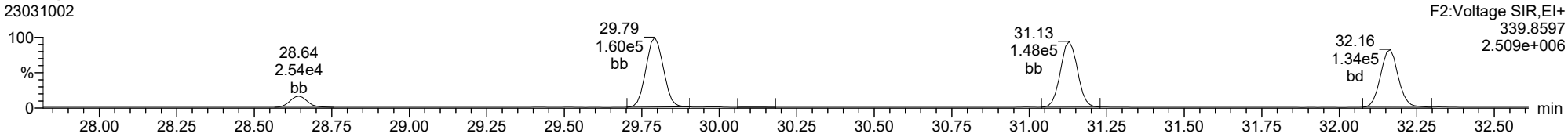

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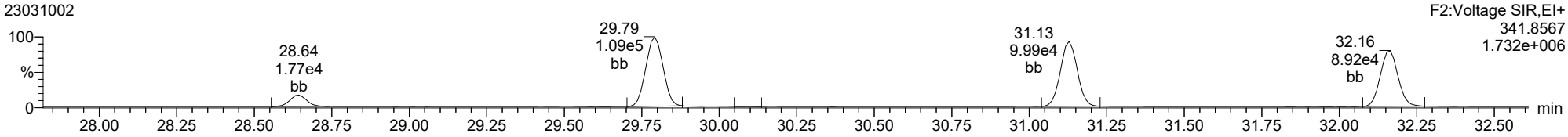

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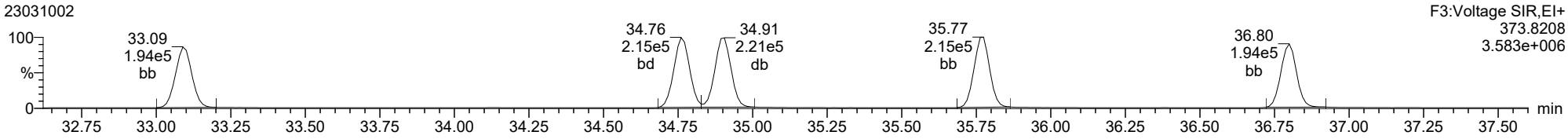
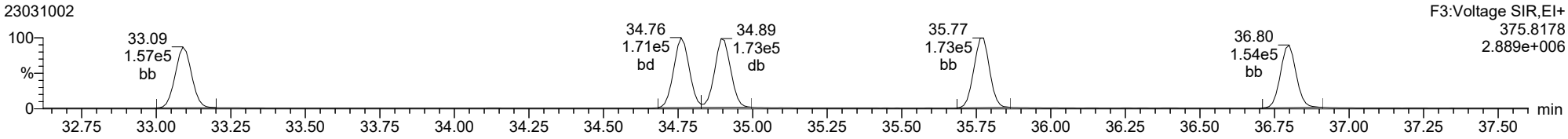
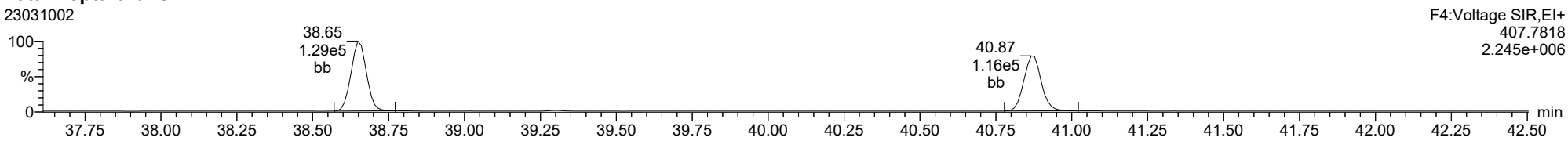
Total-hexafurans



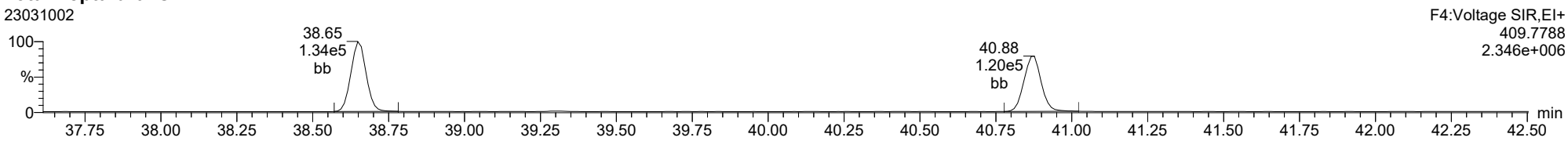
Total-hexafurans



Total-heptafurans

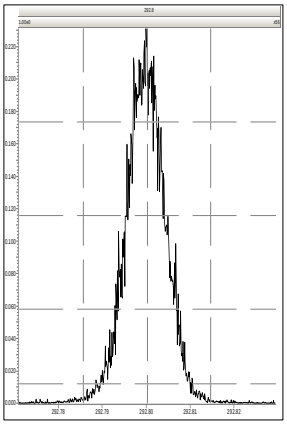


Total-heptafurans

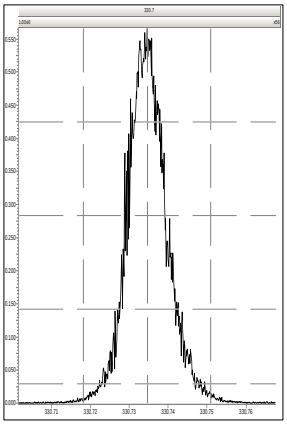


Printed: Friday, March 10, 2023 11:02:43 Pacific Standard Time

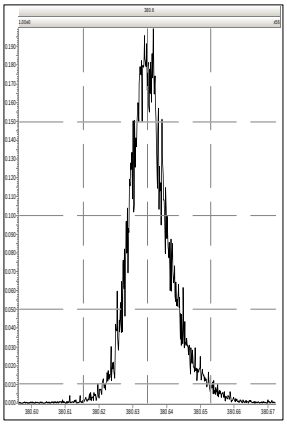
M 292.9824 R 14164



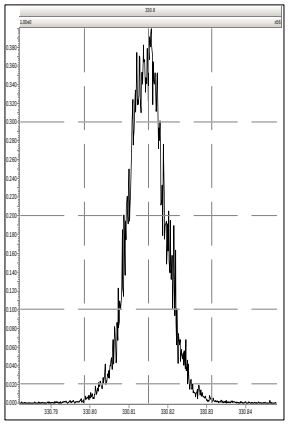
M 330.9792 R 13756



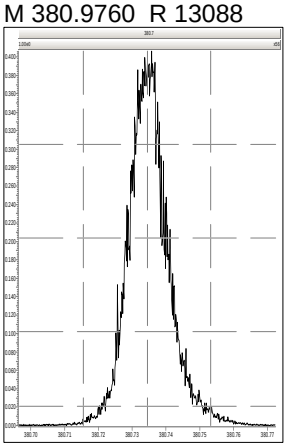
M 380.9760 R 12923



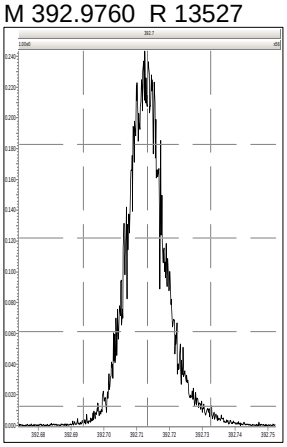
M 330.9792 R 15021



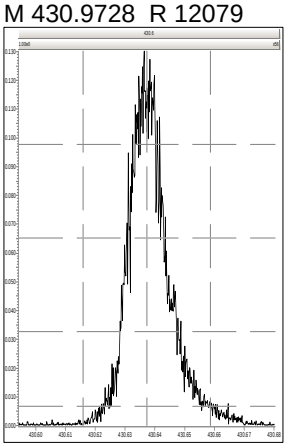
M 380.9760 R 13088



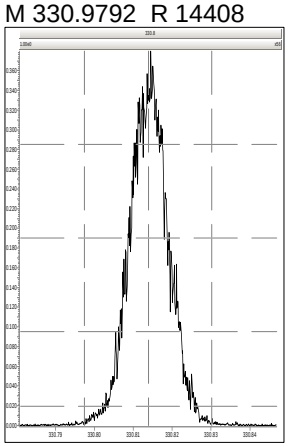
M 392.9760 R 13527



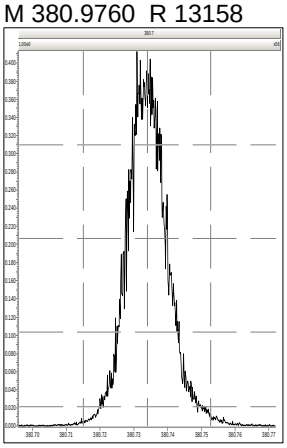
M 430.9728 R 12079



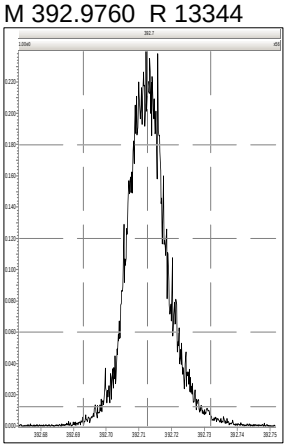
M 330.9792 R 14408



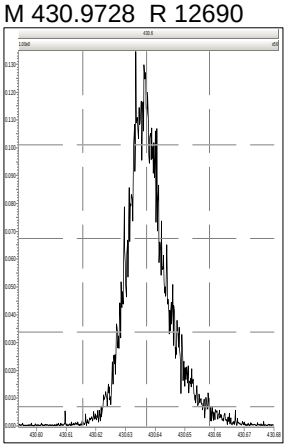
M 380.9760 R 13158



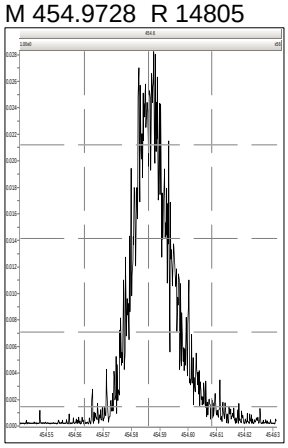
M 392.9760 R 13344



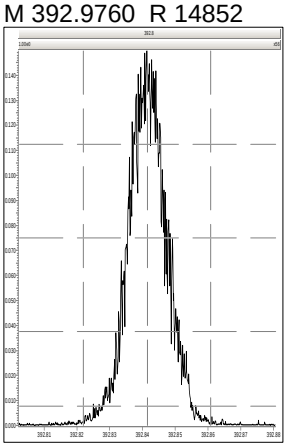
M 430.9728 R 12690



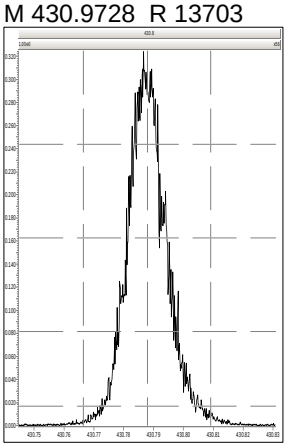
M 454.9728 R 14805



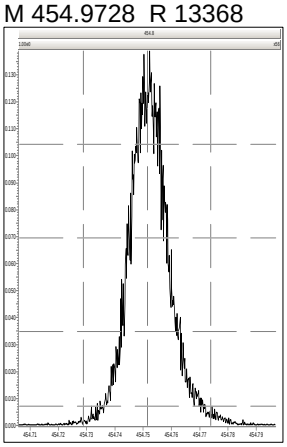
M 392.9760 R 14852



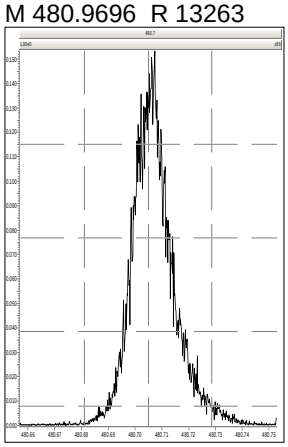
M 430.9728 R 13703



M 454.9728 R 13368

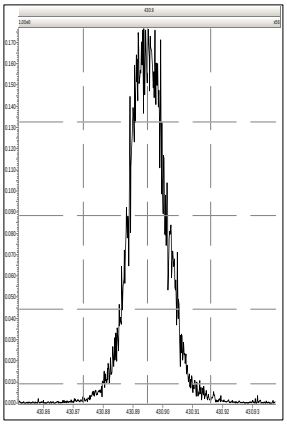


M 480.9696 R 13263

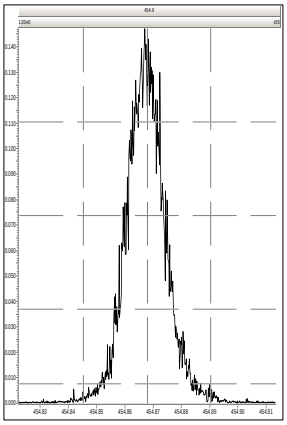


Printed: Friday, March 10, 2023 11:02:43 Pacific Standard Time

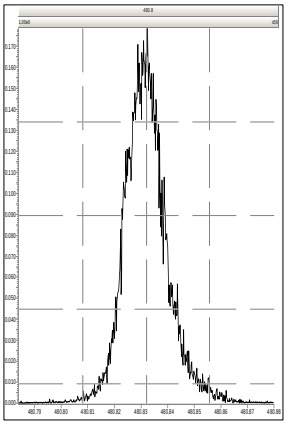
M 430.9728 R 15244



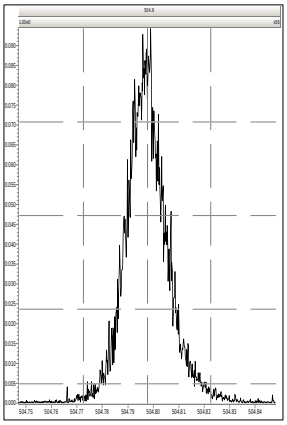
M 454.9728 R 14088



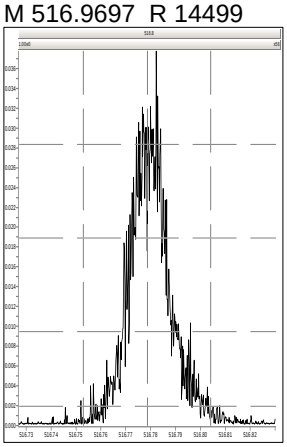
M 480.9696 R 12853

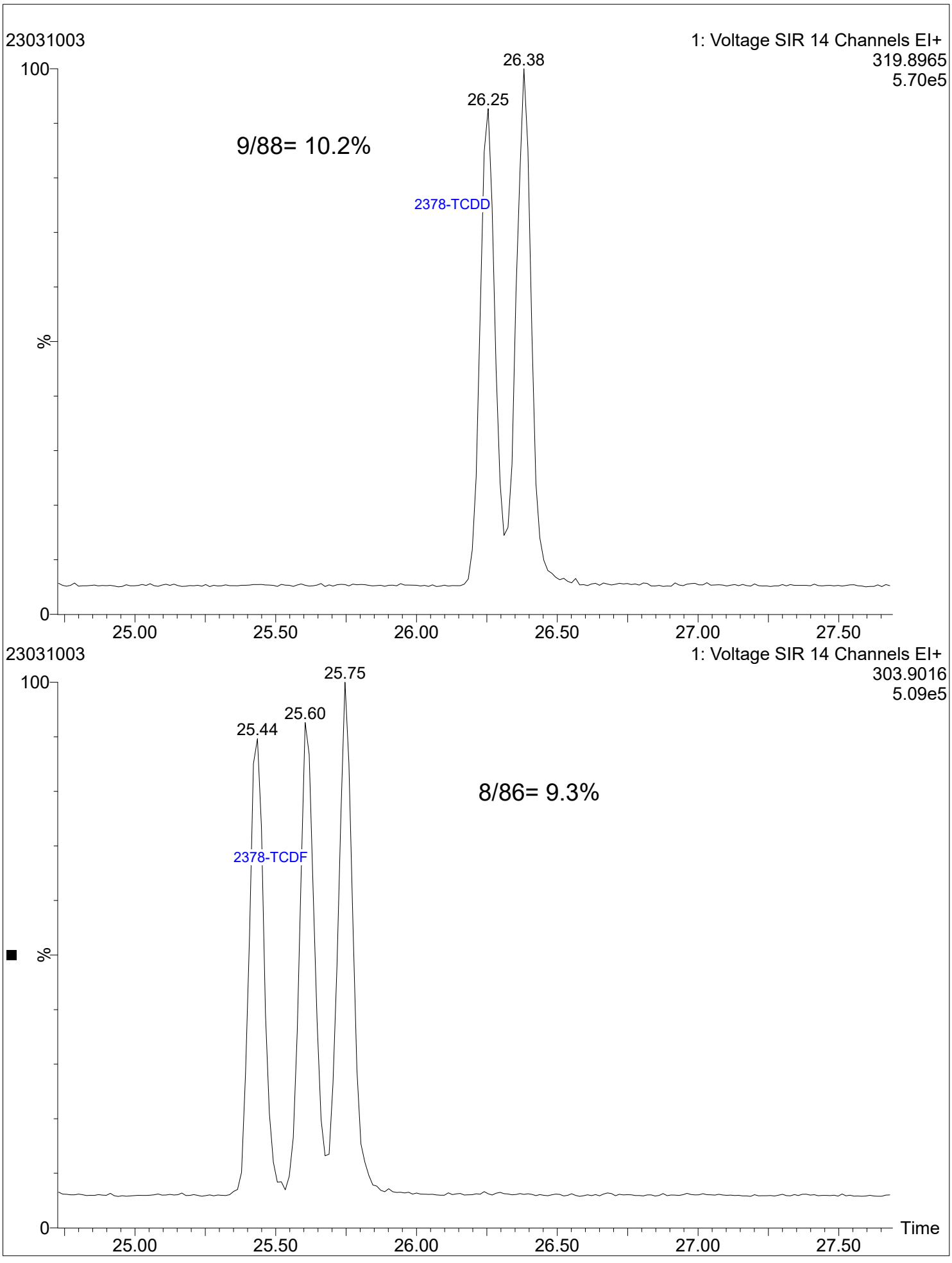


M 504.9696 R 12468



M 516.9697 R 14499




23031003
1: Voltage SIR 14 Channels EI+
319.8965
5.70e5
100
26.38
26.25
9/88= 10.2%
2378-TCDD
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23031003
1: Voltage SIR 14 Channels EI+
303.9016
5.09e5
100
25.75
25.60
25.44
8/86= 9.3%
2378-TCDF
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030311	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-CCV1	Injection Time:	17:25
Sequence Name:	CS3V4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.1	0.7015272	0.7103909		1.3	+/-16
2,3,7,8-TCDD	A	10.000	9.02	1.1486620	1.0358000		-9.8	+/-22
1,2,3,7,8-PeCDF	A	50.000	47.7	0.6792300	0.6482723		-4.6	+/-18
2,3,4,7,8-PeCDF	A	50.000	48.6	0.7861704	0.7638484		-2.8	+/-18
1,2,3,7,8-PeCDD	A	50.000	50.8	1.0218450	1.0391930		1.7	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	47.3	1.1660380	1.1031690		-5.4	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	51.4	1.0907410	1.1209930		2.8	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	52.1	1.1396990	1.1864330		4.1	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	48.9	1.1370930	1.1121660		-2.2	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	50.7	0.9955689	1.0094320		1.4	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	51.1	1.0009380	1.0234880		2.3	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	51.7	0.9071139	0.9383686		3.4	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	47.7	1.0029930	0.9566603		-4.6	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	53.6	0.9531152	1.0217610		7.2	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	52.7	1.0390130	1.0955650		5.4	+/-14
OCDF	A	100.00	95.0	0.7778078	0.7390842		-5.0	+/-37
OCDD	A	100.00	97.1	0.9199537	0.8937318		-2.9	+/-21
13C12-2,3,7,8-TCDF	A	100.00	89.4	1.6201960	1.4487738		-10.6	+/-29
13C12-2,3,7,8-TCDD	A	100.00	86.0	1.1524090	0.9914363		-14.0	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	92.6	1.2404520	1.1488109		-7.4	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	91.6	1.1177860	1.0240744		-8.4	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	90.8	0.8288129	0.7523463		-9.2	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	95.2	1.1683050	1.1119828		-4.8	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	91.1	1.3864660	1.2630996		-8.9	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	96.9	1.1292560	1.0940819		-3.1	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	101	0.9317541	0.9426254		1.2	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	97.6	0.9950393	0.9710534		-2.4	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	98.4	1.1566890	1.1378328		-1.6	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9116661		1.8	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	84.3	0.7697516	0.6486548		-15.7	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	92.0	0.8401226	0.7731635		-8.0	+/-28
13C12-OCDD	A	200.00	170	0.7674714	0.6532994		-14.9	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	7.54	1.2878040	0.9705402		-24.6	

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

SECOND-SOURCE
CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030310	Calibration Date:	03/03/2023
Sequence:	SLC0045	Injection Date:	03/03/23
Lab Sample ID:	SLC0045-SCV1	Injection Time:	16:36
Sequence Name:	ICVCW		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	9.84	0.7015272	0.6901560		-1.6	
2,3,7,8-TCDD	A	10.000	9.81	1.1486620	1.1273700		-1.9	
1,2,3,7,8-PeCDF	A	50.000	51.4	0.6792300	0.6981249		2.8	
2,3,4,7,8-PeCDF	A	50.000	49.0	0.7861704	0.7701368		-2.0	
1,2,3,7,8-PeCDD	A	50.000	48.5	1.0218450	0.9921504		-2.9	
1,2,3,4,7,8-HxCDF	A	50.000	48.2	1.1660380	1.1251100		-3.5	
1,2,3,6,7,8-HxCDF	A	50.000	48.0	1.0907410	1.0469270		-4.0	
2,3,4,6,7,8-HxCDF	A	50.000	50.2	1.1396990	1.1448090		0.4	
1,2,3,7,8,9-HxCDF	A	50.000	49.1	1.1370930	1.1161010		-1.8	
1,2,3,4,7,8-HxCDD	A	50.000	50.8	0.9955689	1.0114830		1.6	
1,2,3,6,7,8-HxCDD	A	50.000	50.2	1.0009380	1.0044310		0.3	
1,2,3,7,8,9-HxCDD	A	50.000	51.6	0.9071139	8347.938		3.2	
1,2,3,4,6,7,8-HpCDF	A	50.000	51.8	1.0029930	1.0398620		3.7	
1,2,3,4,7,8,9-HpCDF	A	50.000	48.5	0.9531152	0.9237809		-3.1	
1,2,3,4,6,7,8-HpCDD	A	50.000	49.2	1.0390130	1.0223590		-1.6	
OCDF	A	100.00	104	0.7778078	0.8050743		3.5	
OCDD	A	100.00	99.4	0.9199537	0.9146365		-0.6	
13C12-2,3,7,8-TCDF	A	100.00	96.9	1.6201960	1.5703703		-3.1	
13C12-2,3,7,8-TCDD	A	100.00	96.6	1.1524090	1.1130294		-3.4	
13C12-1,2,3,7,8-PeCDF	A	100.00	73.2	1.2404520	0.9079224		-26.8	
13C12-2,3,4,7,8-PeCDF	A	100.00	75.9	1.1177860	0.8488817		-24.1	
13C12-1,2,3,7,8-PeCDD	A	100.00	76.6	0.8288129	0.6346243		-23.4	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	93.0	1.1683050	1.0861993		-7.0	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	98.0	1.3864660	1.3581552		-2.0	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	93.4	1.1292560	1.0544008		-6.6	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	97.9	0.9317541	0.9122440		-2.1	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	95.9	0.9950393	0.9546162		-4.1	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.7	1.1566890	1.1296183		-2.3	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	102	0.8952017	0.9144345		2.1	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	104	0.7697516	0.8001798		4.0	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	102	0.8401226	0.8609226		2.5	
13C12-OCDD	A	200.00	162	0.7674714	0.6199758		-19.2	
37Cl4-2,3,7,8-TCDD	A	10.000	8.71	1.2878040	1.1221835		-12.9	

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23030814	Calibration Date:	03/03/2023
Sequence:	SLC0101	Injection Date:	03/08/23
Lab Sample ID:	SLC0101-CCV1	Injection Time:	20:31
Sequence Name:	CS3Y2		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.98	0.7015272	0.6999359		-0.2	+/-16	
2,3,7,8-TCDD	A	10.000	10.0	1.1486620	1.1496160		0.08	+/-22	
1,2,3,7,8-PeCDF	A	50.000	53.2	0.6792300	0.7225790		6.4	+/-18	
2,3,4,7,8-PeCDF	A	50.000	49.9	0.7861704	0.7853621		-0.1	+/-18	
1,2,3,7,8-PeCDD	A	50.000	53.7	1.0218450	1.0981340		7.5	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	49.8	1.1660380	1.1605790		-0.5	+/-10	
1,2,3,6,7,8-HxCDF	A	50.000	52.2	1.0907410	1.1396270		4.5	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	51.7	1.1396990	1.1792380		3.5	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	48.4	1.1370930	1.1006180		-3.2	+/-10	
1,2,3,4,7,8-HxCDD	A	50.000	49.5	0.9955689	0.9849041		-1.1	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	51.7	1.0009380	1.0349720		3.4	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	54.7	0.9071139	0.9931085		9.5	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	48.5	1.0029930	0.9725194		-3.0	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	51.7	0.9531152	0.9848619		3.3	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	51.8	1.0390130	1.0768910		3.6	+/-14	
OCDF	A	100.00	93.5	0.7778078	0.7273378		-6.5	+/-37	
OCDD	A	100.00	103	0.9199537	0.9438806		2.6	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	96.4	1.6201960	1.5611705		-3.6	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	100	1.1524090	1.1553650		0.3	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	135	1.2404520	1.6783619		35.3	+/-24	*
13C12-2,3,4,7,8-PeCDF	A	100.00	134	1.1177860	1.4926507		33.5	+/-23	*
13C12-1,2,3,7,8-PeCDD	A	100.00	122	0.8288129	1.0116005		22.1	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	92.1	1.1683050	1.0761851		-7.9	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	82.9	1.3864660	1.1491123		-17.1	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	91.9	1.1292560	1.0373014		-8.1	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	98.4	0.9317541	0.9168591		-1.6	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	96.0	0.9950393	0.9554082		-4.0	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	86.1	1.1566890	0.9961074		-13.9	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	112	0.8952017	1.0060524		12.4	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	107	0.7697516	0.8210311		6.7	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	105	0.8401226	0.8787721		4.6	+/-28	
13C12-OCDD	A	200.00	223	0.7674714	0.8560659		11.5	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	8.84	1.2878040	1.1386180		-11.6		

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:09:28 Pacific Standard Time

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.774	1.000	3.808e4	5.157e4	0.702	0.738	0.770	838	1201	5.89e5	7.80e5	703.5	649.2	NO	bb	bb	9.977
12378-PeCDF	29.934	1.001	2.978e5	1.997e5	0.679	1.491	1.550	2981	1454	4.51e6	3.06e6	1513.6	2105.8	NO	bb	bb	53.191
23478-PeCDF	31.271	1.001	2.881e5	1.927e5	0.786	1.495	1.550	2981	1454	4.47e6	2.96e6	1498.3	2034.9	NO	bb	bb	49.949
123478-HxCDF	34.903	1.001	2.992e5	2.378e5	1.166	1.259	1.240	1978	1535	4.69e6	3.69e6	2371.4	2402.8	NO	bd	bd	49.766
234678-HxCDF	35.905	1.001	2.943e5	2.316e5	1.140	1.271	1.240	1978	1535	4.62e6	3.66e6	2334.8	2385.1	NO	bb	bb	51.735
123678-HxCDF	35.036	1.000	3.151e5	2.480e5	1.091	1.270	1.240	1978	1535	4.92e6	3.86e6	2488.9	2512.0	NO	db	db	52.241
123789-HxCDF	36.930	1.000	2.417e5	1.922e5	1.137	1.257	1.240	1978	1535	3.85e6	3.07e6	1947.1	1998.9	NO	bb	bb	48.396
1234678-HpCDF	38.780	1.000	2.110e5	2.096e5	1.003	1.007	1.050	1607	1221	3.54e6	3.45e6	2204.3	2828.5	NO	bb	bb	48.481
1234789-HpCDF	41.019	1.000	1.737e5	1.739e5	0.953	0.999	1.050	1607	1221	2.51e6	2.45e6	1564.1	2005.5	NO	bb	bb	51.665
OCDF	45.246	1.005	2.509e5	2.845e5	0.778	0.882	0.890	1207	1269	2.99e6	3.46e6	2474.8	2729.9	NO	bb	bb	93.511
2378-TCDD	26.410	1.000	4.745e4	6.151e4	1.149	0.771	0.770	1013	720	7.34e5	9.22e5	724.0	1280.8	NO	bb	bd	10.008
12378-PeCDD	31.527	1.001	2.745e5	1.812e5	1.022	1.515	1.550	1798	1889	4.18e6	2.75e6	2321.5	1457.2	NO	bb	bb	53.733
123478-HxCDD	36.017	1.000	2.256e5	1.790e5	0.996	1.260	1.240	1407	1626	3.76e6	3.00e6	2669.9	1843.4	NO	bd	bd	49.464
123678-HxCDD	36.128	1.000	2.496e5	1.937e5	1.001	1.289	1.240	1407	1626	3.85e6	3.09e6	2736.1	1903.0	NO	db	db	51.700
123789-HxCDD	36.518	1.011	2.319e5	1.848e5	0.907	1.255	1.240	1407	1626	3.80e6	3.05e6	2697.7	1873.8	NO	bb	bb	54.740
1234678-HpCDD	40.273	1.000	2.054e5	2.015e5	1.039	1.019	1.050	2389	1786	3.25e6	3.17e6	1360.3	1772.4	NO	bb	bb	51.823
OCDD	45.018	1.000	3.209e5	3.739e5	0.920	0.858	0.890	1043	2361	3.76e6	4.40e6	3602.0	1861.3	NO	bb	bb	102.601
13C-2378-TCDF	25.760	1.007	5.519e5	7.289e5	1.620	0.757	0.770	1701	1198	8.27e6	1.09e7	4861.1	9125.9	NO	bb	bb	96.357
13C-12378-PeCDF	29.911	1.169	8.218e5	5.551e5	1.240	1.481	1.550	5033	2425	1.24e7	8.30e6	2464.9	3422.7	NO	bb	bb	135.302
13C-23478-PeCDF	31.248	1.222	7.357e5	4.888e5	1.118	1.505	1.550	5033	2425	1.12e7	7.46e6	2223.9	3078.1	NO	bb	bb	133.536
13C-123478-HxCDF	34.881	0.955	3.135e5	6.119e5	1.168	0.512	0.510	1588	1870	5.02e6	9.82e6	3164.9	5249.5	NO	bd	bd	92.115
13C-123678-HxCDF	35.025	0.959	3.337e5	6.544e5	1.386	0.510	0.510	1588	1870	5.05e6	9.95e6	3179.8	5323.4	NO	db	db	82.881
13C-234678-HxCDF	35.883	0.983	3.073e5	5.847e5	1.129	0.526	0.510	1588	1870	4.93e6	9.42e6	3105.4	5036.7	NO	bb	bb	91.857
13C-123789-HxCDF	36.919	1.011	2.675e5	5.209e5	0.932	0.514	0.510	1588	1870	4.23e6	8.11e6	2662.4	4338.0	NO	bb	bb	98.401
13C-1234678-HpCDF	38.769	1.062	2.622e5	6.029e5	0.895	0.435	0.440	1367	2117	4.31e6	9.94e6	3154.2	4695.7	NO	bb	bb	112.383
13C-1234789-HpCDF	40.997	1.123	2.170e5	4.890e5	0.770	0.444	0.440	1367	2117	3.13e6	7.15e6	2290.6	3378.9	NO	bb	bb	106.662
13C-1234-TCDD	25.577	0.000	3.661e5	4.542e5	1.000	0.806	0.770	1411	922	5.85e6	7.31e6	4146.3	7926.5	NO	bb	bb	100.000
13C-2378-TCDD	26.396	1.032	4.157e5	5.321e5	1.152	0.781	0.770	1411	922	6.22e6	7.86e6	4408.1	8522.4	NO	bb	bb	100.256
13C-12378-PeCDD	31.505	1.232	5.152e5	3.147e5	0.829	1.637	1.550	940	750	7.92e6	4.87e6	8425.8	6493.7	NO	bb	bb	122.054
13C-123478-HxCDD	36.006	0.986	4.608e5	3.607e5	0.995	1.278	1.240	1185	1430	7.47e6	5.74e6	6304.4	4013.6	NO	bd	bd	96.017
13C-123678-HxCDD	36.117	0.989	4.783e5	3.782e5	1.157	1.265	1.240	1185	1430	7.74e6	6.07e6	6531.0	4243.0	NO	db	db	86.117
13C-1234678-HpCDD	40.262	1.103	3.897e5	3.659e5	0.840	1.065	1.050	1348	1391	6.01e6	5.57e6	4456.4	4006.4	NO	bb	bb	104.600
13C-OCDD	45.000	1.233	6.989e5	7.734e5	0.767	0.904	0.890	984	1076	8.14e6	9.01e6	8276.7	8377.3	NO	bb	bb	223.087
13C-123789-HxCDD	36.507	0.000	4.831e5	3.768e5	1.000	1.282	1.240	1185	1430	7.75e6	6.06e6	6539.8	4236.2	NO	bb	bb	100.000
37CL-2378-TCDD	26.410	1.033	9.341e4		1.288			1210		1.44e6		1192.3			bb		8.842

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
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ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.257	0.864	4.520e4	5.948e4	0.802	0.760	0.770	838	1201	7.37e5	9.92e5	879.7	826.1	NO	bb	bb	10.198
1289-TCDF	27.272	1.059	3.577e4	5.000e4	0.678	0.715	0.770	838	1201	5.55e5	7.54e5	662.3	628.1	NO	db	db	9.878
13468-PECDF	27.130	0.907	3.442e5	2.228e5	1.246	1.545	1.550	587	683	5.22e6	3.33e6	8893.2	4880.5	NO	bb	bb	33.034
12389-PECDF	32.307	1.080	2.575e5	1.687e5	0.496	1.527	1.550	2981	1454	3.78e6	2.51e6	1267.8	1725.8	NO	bb	bb	62.358
123468-HXCDF	33.232	0.953	3.015e5	2.402e5	1.169	1.255	1.240	1978	1535	4.57e6	3.61e6	2310.5	2354.3	NO	bb	bb	50.079
1368-TCDD	23.528	0.891	4.411e4	5.474e4	1.015	0.806	0.770	1013	720	6.88e5	8.76e5	679.1	1216.6	NO	bb	bb	10.270
1289-TCDD	27.017	1.023	4.226e4	5.171e4	0.909	0.817	0.770	1013	720	6.04e5	7.62e5	595.9	1058.2	NO	bb	bb	10.910
12479-PECDD	28.797	0.914	4.959e5	3.306e5	2.301	1.500	1.550	1798	1889	4.80e6	3.20e6	2671.7	1693.7	NO	bb	bb	43.276
12389-PECDD	31.928	1.013	3.045e5	2.012e5	1.184	1.514	1.550	1798	1889	4.52e6	3.00e6	2511.1	1586.9	NO	bb	bb	51.481
124679-HXCDD	34.012	0.945	2.384e5	1.937e5	1.115	1.230	1.240	1407	1626	3.57e6	2.93e6	2537.5	1802.7	NO	bb	bb	47.151
1234679-HPCDD	39.225	0.974	2.346e5	2.298e5	1.137	1.020	1.050	2389	1786	3.83e6	3.74e6	1603.5	2095.5	NO	bb	bb	54.059
Total-tetrafurans			1.209e5		0.727			838		1.91e6							30.512
Total-penta1			3.442e5					587		5.22e6							33.034
Total-pentafurans			8.920e5		0.654			2981		1.35e7							174.950
Total-hexafurans			1.452e6		1.141			1978		2.27e7							252.217
Total-heptafurans			3.848e5		0.978			1607		6.06e6							100.146
Total-Furans			3.445e6		0.922			838		5.23e7							684.369
Total-tetradioxins			2.245e5		1.024			1013		3.11e6							52.278
Total-pentadioxins			1.075e6		1.502			1798		1.35e7							148.490
Total-hexadioxins			9.460e5		1.005			1407		1.50e7							203.178
Total-heptadioxins			4.399e5		1.088			2389		7.08e6							105.882
Total-Dioxins			3.006e6		1.130			1013		4.24e7							612.428
Total-TEQ			6.451e6					1013		9.48e7							1296.797
FUNCTION1 PFK			2.784e5					286116		7.26e6							
FUNCTION2 PFK			3.886e7					302222		1.93e7							0.000
FUNCTION3 PFK			3.509e5					274845		9.42e6							0.000
FUNCTION4 PFK			2.904e4					249466		6.50e5							
FUNCTION5 PFK			9.116e3					145139		3.54e5							
FUNCTION1 HXCD...			8.051e2					477		1.07e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			8.603e2					696		1.54e4							0.000
FUNCTION3 OCDPE			7.714e2					423		1.13e4							0.000
FUNCTION4 NCDPE			0.000e0					631		0.00e0							
FUNCTION5 DCDPE			7.596e1					439		1.66e3							0.000

Method: T:\Autospec\Methods\Dioxin230308.mdb 08 Mar 2023 14:02:32
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 10:57:27

ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.577e4	5.000e4	0.678	0.72	0.77	662.3	YES	NO	db	db	9.878
2	Total-tetrafurans	27.14	6.366e2	9.609e2	0.727	0.66	0.77	12.1	YES	NO	bd	bd	0.172
3	2378-TCDF	25.77	3.808e4	5.157e4	0.702	0.74	0.77	703.5	YES	NO	bb	bb	9.977
4	Total-tetrafurans	25.59	8.522e1	1.132e2	0.727	0.75	0.77	2.5	NO	NO	bb	bb	0.021
5	Total-tetrafurans	24.88	3.275e2	4.209e2	0.727	0.78	0.77	5.7	YES	NO	bb	bb	0.080
6	Total-tetrafurans	24.69	2.971e2	4.180e2	0.727	0.71	0.77	6.2	YES	NO	db	db	0.077
7	Total-tetrafurans	24.52	4.536e2	5.590e2	0.727	0.81	0.77	8.5	YES	NO	bd	bd	0.109
8	1368-TCDF	22.26	4.520e4	5.948e4	0.802	0.76	0.77	879.7	YES	NO	bb	bb	10.198

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	27.13	3.442e5	2.228e5	1.246	1.54	1.55	8893.2	YES	NO	bb	bb	33.034

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.31	2.575e5	1.687e5	0.496	1.53	1.55	1267.8	YES	NO	bb	bb	62.358
2	23478-PeCDF	31.27	2.881e5	1.927e5	0.786	1.50	1.55	1498.3	YES	NO	bb	bb	49.949
3	Total-pentafurans	30.23	2.959e2	2.205e2	0.654	1.34	1.55	3.2	YES	NO	db	bb	0.061
4	12378-PeCDF	29.93	2.978e5	1.997e5	0.679	1.49	1.55	1513.6	YES	NO	bb	bb	53.191
5	Total-pentafurans	28.79	4.827e4	3.161e4	0.654	1.53	1.55	243.3	YES	NO	bb	bb	9.391

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123468-HXCDF	33.23	3.015e5	2.402e5	1.169	1.26	1.24	2310.5	YES	NO	bb	bb	50.079
2	123789-HxCDF	36.93	2.417e5	1.922e5	1.137	1.26	1.24	1947.1	YES	NO	bb	bb	48.396
3	234678-HxCDF	35.91	2.943e5	2.316e5	1.140	1.27	1.24	2334.8	YES	NO	bb	bb	51.735
4	123678-HxCDF	35.04	3.151e5	2.480e5	1.091	1.27	1.24	2488.9	YES	NO	db	db	52.241
5	123478-HxCDF	34.90	2.992e5	2.378e5	1.166	1.26	1.24	2371.4	YES	NO	bd	bd	49.766

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HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	41.02	1.737e5	1.739e5	0.953	1.00	1.05	1564.1	YES	NO	bb	bb	51.665
2	1234678-HpCDF	38.78	2.110e5	2.096e5	1.003	1.01	1.05	2204.3	YES	NO	bb	bb	48.481

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.577e4	5.000e4	0.678	0.72	0.77	662.3	YES	NO	db	db	9.878
2	Total-tetrafurans	27.14	6.366e2	9.609e2	0.727	0.66	0.77	12.1	YES	NO	bd	bd	0.172
3	2378-TCDF	25.77	3.808e4	5.157e4	0.702	0.74	0.77	703.5	YES	NO	bb	bb	9.977
4	Total-tetrafurans	25.59	8.522e1	1.132e2	0.727	0.75	0.77	2.5	NO	NO	bb	bb	0.021
5	Total-tetrafurans	24.88	3.275e2	4.209e2	0.727	0.78	0.77	5.7	YES	NO	bb	bb	0.080
6	Total-tetrafurans	24.69	2.971e2	4.180e2	0.727	0.71	0.77	6.2	YES	NO	db	db	0.077
7	Total-tetrafurans	24.52	4.536e2	5.590e2	0.727	0.81	0.77	8.5	YES	NO	bd	bd	0.109
8	1368-TCDF	22.26	4.520e4	5.948e4	0.802	0.76	0.77	879.7	YES	NO	bb	bb	10.198
9	12389-PECDF	32.31	2.575e5	1.687e5	0.496	1.53	1.55	1267.8	YES	NO	bb	bb	62.358
10	23478-PeCDF	31.27	2.881e5	1.927e5	0.786	1.50	1.55	1498.3	YES	NO	bb	bb	49.949
11	Total-pentafurans	30.23	2.959e2	2.205e2	0.654	1.34	1.55	3.2	YES	NO	db	bb	0.061
12	12378-PeCDF	29.93	2.978e5	1.997e5	0.679	1.49	1.55	1513.6	YES	NO	bb	bb	53.191
13	Total-pentafurans	28.79	4.827e4	3.161e4	0.654	1.53	1.55	243.3	YES	NO	bb	bb	9.391
14	123468-HXCDF	33.23	3.015e5	2.402e5	1.169	1.26	1.24	2310.5	YES	NO	bb	bb	50.079
15	123789-HxCDF	36.93	2.417e5	1.922e5	1.137	1.26	1.24	1947.1	YES	NO	bb	bb	48.396
16	234678-HxCDF	35.91	2.943e5	2.316e5	1.140	1.27	1.24	2334.8	YES	NO	bb	bb	51.735
17	123678-HxCDF	35.04	3.151e5	2.480e5	1.091	1.27	1.24	2488.9	YES	NO	db	db	52.241
18	123478-HxCDF	34.90	2.992e5	2.378e5	1.166	1.26	1.24	2371.4	YES	NO	bd	bd	49.766
19	1234789-HpCDF	41.02	1.737e5	1.739e5	0.953	1.00	1.05	1564.1	YES	NO	bb	bb	51.665
20	1234678-HpCDF	38.78	2.110e5	2.096e5	1.003	1.01	1.05	2204.3	YES	NO	bb	bb	48.481
21	OCDF	45.25	2.509e5	2.845e5	0.778	0.88	0.89	2474.8	YES	NO	bb	bb	93.511
22	13468-PECDF	27.13	3.442e5	2.228e5	1.246	1.54	1.55	8893.2	YES	NO	bb	bb	33.034

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TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.02	4.226e4	5.171e4	0.909	0.82	0.77	595.9	YES	NO	bb	bb	10.910
2	2378-TCDD	26.41	4.745e4	6.151e4	1.149	0.77	0.77	724.0	YES	NO	bb	bd	10.008
3	Total-tetradioxins	26.09	6.857e4	8.546e4	1.024	0.80	0.77	732.2	YES	NO	bb	bb	15.866
4	Total-tetradioxins	25.59	2.193e4	2.822e4	1.024	0.78	0.77	335.3	YES	NO	bb	bd	5.166
5	Total-tetradioxins	23.81	2.291e2	3.306e2	1.024	0.69	0.77	4.3	YES	NO	bb	bb	0.058
6	1368-TCDD	23.53	4.411e4	5.474e4	1.015	0.81	0.77	679.1	YES	NO	bb	bb	10.270

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12479-PECDD	28.80	4.959e5	3.306e5	2.301	1.50	1.55	2671.7	YES	NO	bb	bb	43.276
2	12389-PECDD	31.93	3.045e5	2.012e5	1.184	1.51	1.55	2511.1	YES	NO	bb	bb	51.481
3	12378-PeCDD	31.53	2.745e5	1.812e5	1.022	1.51	1.55	2321.5	YES	NO	bb	bb	53.733

HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.52	2.319e5	1.848e5	0.907	1.25	1.24	2697.7	YES	NO	bb	bb	54.740
2	123678-HxCDD	36.13	2.496e5	1.937e5	1.001	1.29	1.24	2736.1	YES	NO	db	db	51.700
3	123478-HxCDD	36.02	2.256e5	1.790e5	0.996	1.26	1.24	2669.9	YES	NO	bd	bd	49.464
4	Total-hexadioxins	34.77	5.920e2	4.357e2	1.005	1.36	1.24	8.3	YES	NO	bd	bb	0.122
5	124679-HXCDD	34.01	2.384e5	1.937e5	1.115	1.23	1.24	2537.5	YES	NO	bb	bb	47.151

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.27	2.054e5	2.015e5	1.039	1.02	1.05	1360.3	YES	NO	bb	bb	51.823
2	1234679-HPCDD	39.23	2.346e5	2.298e5	1.137	1.02	1.05	1603.5	YES	NO	bb	bb	54.059

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 12:09:28 Pacific Standard Time

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Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	27.02	4.226e4	5.171e4	0.909	0.82	0.77	595.9	YES	NO	bb	bb	10.910
2	2378-TCDD	26.41	4.745e4	6.151e4	1.149	0.77	0.77	724.0	YES	NO	bb	bd	10.008
3	Total-tetradioxins	26.09	6.857e4	8.546e4	1.024	0.80	0.77	732.2	YES	NO	bb	bb	15.866
4	Total-tetradioxins	25.59	2.193e4	2.822e4	1.024	0.78	0.77	335.3	YES	NO	bb	bd	5.166
5	Total-tetradioxins	23.81	2.291e2	3.306e2	1.024	0.69	0.77	4.3	YES	NO	bb	bb	0.058
6	1368-TCDD	23.53	4.411e4	5.474e4	1.015	0.81	0.77	679.1	YES	NO	bb	bb	10.270
7	12479-PECDD	28.80	4.959e5	3.306e5	2.301	1.50	1.55	2671.7	YES	NO	bb	bb	43.276
8	12389-PECDD	31.93	3.045e5	2.012e5	1.184	1.51	1.55	2511.1	YES	NO	bb	bb	51.481
9	12378-PeCDD	31.53	2.745e5	1.812e5	1.022	1.51	1.55	2321.5	YES	NO	bb	bb	53.733
10	123789-HxCDD	36.52	2.319e5	1.848e5	0.907	1.25	1.24	2697.7	YES	NO	bb	bb	54.740
11	123678-HxCDD	36.13	2.496e5	1.937e5	1.001	1.29	1.24	2736.1	YES	NO	db	db	51.700
12	123478-HxCDD	36.02	2.256e5	1.790e5	0.996	1.26	1.24	2669.9	YES	NO	bd	bd	49.464
13	Total-hexadioxins	34.77	5.920e2	4.357e2	1.005	1.36	1.24	8.3	YES	NO	bd	bb	0.122
14	124679-HXCDD	34.01	2.384e5	1.937e5	1.115	1.23	1.24	2537.5	YES	NO	bb	bb	47.151
15	1234678-HpCDD	40.27	2.054e5	2.015e5	1.039	1.02	1.05	1360.3	YES	NO	bb	bb	51.823
16	1234679-HPCDD	39.23	2.346e5	2.298e5	1.137	1.02	1.05	1603.5	YES	NO	bb	bb	54.059
17	OCDD	45.02	3.209e5	3.739e5	0.920	0.86	0.89	3602.0	YES	NO	bb	bb	102.601

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.27	3.577e4	5.000e4	0.678	0.72	0.77	662.3	YES	NO	db	db	9.878
2	Total-tetrafurans	27.14	6.366e2	9.609e2	0.727	0.66	0.77	12.1	YES	NO	bd	bd	0.172
3	2378-TCDF	25.77	3.808e4	5.157e4	0.702	0.74	0.77	703.5	YES	NO	bb	bb	9.977
4	Total-tetrafurans	25.59	8.522e1	1.132e2	0.727	0.75	0.77	2.5	NO	NO	bb	bb	0.021
5	Total-tetrafurans	24.88	3.275e2	4.209e2	0.727	0.78	0.77	5.7	YES	NO	bb	bb	0.080
6	Total-tetrafurans	24.69	2.971e2	4.180e2	0.727	0.71	0.77	6.2	YES	NO	db	db	0.077
7	Total-tetrafurans	24.52	4.536e2	5.590e2	0.727	0.81	0.77	8.5	YES	NO	bd	bd	0.109
8	1368-TCDF	22.26	4.520e4	5.948e4	0.802	0.76	0.77	879.7	YES	NO	bb	bb	10.198
9	12389-PECDF	32.31	2.575e5	1.687e5	0.496	1.53	1.55	1267.8	YES	NO	bb	bb	62.358
10	23478-PeCDF	31.27	2.881e5	1.927e5	0.786	1.50	1.55	1498.3	YES	NO	bb	bb	49.949
11	Total-pentafurans	30.23	2.959e2	2.205e2	0.654	1.34	1.55	3.2	YES	NO	db	bb	0.061
12	12378-PeCDF	29.93	2.978e5	1.997e5	0.679	1.49	1.55	1513.6	YES	NO	bb	bb	53.191
13	Total-pentafurans	28.79	4.827e4	3.161e4	0.654	1.53	1.55	243.3	YES	NO	bb	bb	9.391
14	123468-HXCDF	33.23	3.015e5	2.402e5	1.169	1.26	1.24	2310.5	YES	NO	bb	bb	50.079
15	123789-HxCDF	36.93	2.417e5	1.922e5	1.137	1.26	1.24	1947.1	YES	NO	bb	bb	48.396
16	234678-HxCDF	35.91	2.943e5	2.316e5	1.140	1.27	1.24	2334.8	YES	NO	bb	bb	51.735
17	123678-HxCDF	35.04	3.151e5	2.480e5	1.091	1.27	1.24	2488.9	YES	NO	db	db	52.241
18	123478-HxCDF	34.90	2.992e5	2.378e5	1.166	1.26	1.24	2371.4	YES	NO	bd	bd	49.766
19	1234789-HpCDF	41.02	1.737e5	1.739e5	0.953	1.00	1.05	1564.1	YES	NO	bb	bb	51.665
20	1234678-HpCDF	38.78	2.110e5	2.096e5	1.003	1.01	1.05	2204.3	YES	NO	bb	bb	48.481
21	OCDF	45.25	2.509e5	2.845e5	0.778	0.88	0.89	2474.8	YES	NO	bb	bb	93.511
22	13468-PECDF	27.13	3.442e5	2.228e5	1.246	1.54	1.55	8893.2	YES	NO	bb	bb	33.034
23	1289-TCDD	27.02	4.226e4	5.171e4	0.909	0.82	0.77	595.9	YES	NO	bb	bb	10.910
24	2378-TCDD	26.41	4.745e4	6.151e4	1.149	0.77	0.77	724.0	YES	NO	bb	bd	10.008
25	Total-tetradioxins	26.09	6.857e4	8.546e4	1.024	0.80	0.77	732.2	YES	NO	bb	bb	15.866
26	Total-tetradioxins	25.59	2.193e4	2.822e4	1.024	0.78	0.77	335.3	YES	NO	bb	bd	5.166
27	Total-tetradioxins	23.81	2.291e2	3.306e2	1.024	0.69	0.77	4.3	YES	NO	bb	bb	0.058
28	1368-TCDD	23.53	4.411e4	5.474e4	1.015	0.81	0.77	679.1	YES	NO	bb	bb	10.270
29	12479-PECDD	28.80	4.959e5	3.306e5	2.301	1.50	1.55	2671.7	YES	NO	bb	bb	43.276
30	12389-PECDD	31.93	3.045e5	2.012e5	1.184	1.51	1.55	2511.1	YES	NO	bb	bb	51.481
31	12378-PeCDD	31.53	2.745e5	1.812e5	1.022	1.51	1.55	2321.5	YES	NO	bb	bb	53.733
32	123789-HxCDD	36.52	2.319e5	1.848e5	0.907	1.25	1.24	2697.7	YES	NO	bb	bb	54.740
33	123678-HxCDD	36.13	2.496e5	1.937e5	1.001	1.29	1.24	2736.1	YES	NO	db	db	51.700
34	123478-HxCDD	36.02	2.256e5	1.790e5	0.996	1.26	1.24	2669.9	YES	NO	bd	bd	49.464
35	Total-hexadioxins	34.77	5.920e2	4.357e2	1.005	1.36	1.24	8.3	YES	NO	bd	bb	0.122
36	124679-HXCDD	34.01	2.384e5	1.937e5	1.115	1.23	1.24	2537.5	YES	NO	bb	bb	47.151
37	1234678-HpCDD	40.27	2.054e5	2.015e5	1.039	1.02	1.05	1360.3	YES	NO	bb	bb	51.823

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
38	1234679-HPCDD	39.23	2.346e5	2.298e5	1.137	1.02	1.05	1603.5	YES	NO	bb	bb	54.059
39	OCDD	45.02	3.209e5	3.739e5	0.920	0.86	0.89	3602.0	YES	NO	bb	bb	102.601

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	23.36	6.313e3					0.9	NO		bb		
2	FUNCTION1 PFK	22.53	1.519e4					1.2	NO		db		
3	FUNCTION1 PFK	22.45	2.795e4					1.3	NO		bd		
4	FUNCTION1 PFK	22.13	3.229e3					0.8	NO		bb		
5	FUNCTION1 PFK	21.99	4.367e3					0.7	NO		bb		
6	FUNCTION1 PFK	21.71	1.070e4					1.1	NO		db		
7	FUNCTION1 PFK	21.66	9.361e3					1.2	NO		dd		
8	FUNCTION1 PFK	21.57	2.635e4					1.4	NO		bd		
9	FUNCTION1 PFK	27.81	4.552e4					2.2	NO		bb		
10	FUNCTION1 PFK	27.60	4.179e3					0.8	NO		bb		
11	FUNCTION1 PFK	27.55	2.473e3					0.6	NO		bb		
12	FUNCTION1 PFK	27.41	4.815e3					0.8	NO		bb		
13	FUNCTION1 PFK	27.03	1.640e3					0.4	NO		bb		
14	FUNCTION1 PFK	26.21	5.091e3					0.7	NO		bb		
15	FUNCTION1 PFK	25.72	1.528e4					1.2	NO		bb		
16	FUNCTION1 PFK	25.39	1.442e4					1.2	NO		bb		
17	FUNCTION1 PFK	25.15	6.745e3					0.8	NO		bb		
18	FUNCTION1 PFK	24.88	2.019e4					1.4	NO		db		
19	FUNCTION1 PFK	24.83	1.236e4					1.5	NO		bd		
20	FUNCTION1 PFK	24.31	1.718e3					0.4	NO		bb		
21	FUNCTION1 PFK	24.15	1.630e4					1.5	NO		bb		
22	FUNCTION1 PFK	24.09	4.700e3					0.8	NO		bb		
23	FUNCTION1 PFK	23.90	9.829e3					1.1	NO		bb		
24	FUNCTION1 PFK	23.81	3.492e3					0.6	NO		bb		
25	FUNCTION1 PFK	27.96	6.122e3					0.9	NO		bb		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	31.01	5.545e6					25.6	YES		db		0.000
2	FUNCTION2 PFK	29.60	3.331e7					38.3	YES		bd		0.000

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PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	34.55	7.628e3					1.1	NO		bb		0.000
2	FUNCTION3 PFK	34.00	4.191e3					0.8	NO		bb		0.000
3	FUNCTION3 PFK	33.96	1.741e3					0.6	NO		bb		0.000
4	FUNCTION3 PFK	33.78	1.571e4					1.4	NO		db		0.000
5	FUNCTION3 PFK	33.70	3.977e4					1.7	NO		dd		0.000
6	FUNCTION3 PFK	33.55	4.141e4					2.0	NO		dd		0.000
7	FUNCTION3 PFK	33.50	9.599e3					1.4	NO		bd		0.000
8	FUNCTION3 PFK	33.44	6.274e3					1.1	NO		bb		0.000
9	FUNCTION3 PFK	33.29	2.070e4					1.8	NO		bb		0.000
10	FUNCTION3 PFK	33.01	2.177e4					1.1	NO		bb		0.000
11	FUNCTION3 PFK	32.90	4.131e4					3.8	YES		bb		0.000
12	FUNCTION3 PFK	37.57	2.239e4					1.9	NO		bb		0.000
13	FUNCTION3 PFK	37.50	6.791e3					1.0	NO		bb		0.000
14	FUNCTION3 PFK	37.42	1.804e4					1.8	NO		bb		0.000
15	FUNCTION3 PFK	37.15	1.155e4					1.3	NO		bb		0.000
16	FUNCTION3 PFK	36.81	1.971e4					1.9	NO		db		0.000
17	FUNCTION3 PFK	36.76	7.038e3					1.1	NO		bd		0.000
18	FUNCTION3 PFK	36.52	1.311e4					1.8	NO		bb		0.000
19	FUNCTION3 PFK	36.27	3.390e3					0.7	NO		bb		0.000
20	FUNCTION3 PFK	36.19	9.974e3					1.3	NO		bb		0.000
21	FUNCTION3 PFK	35.63	1.072e4					1.1	NO		bb		0.000
22	FUNCTION3 PFK	35.57	1.442e3					0.5	NO		bb		0.000
23	FUNCTION3 PFK	35.47	2.937e3					0.6	NO		bb		0.000
24	FUNCTION3 PFK	35.40	1.442e3					0.5	NO		bb		0.000
25	FUNCTION3 PFK	35.09	1.252e3					0.4	NO		bb		0.000
26	FUNCTION3 PFK	34.96	7.816e3					0.8	NO		bb		0.000
27	FUNCTION3 PFK	34.92	1.302e3					0.4	NO		bb		0.000
28	FUNCTION3 PFK	37.74	1.917e3					0.6	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	41.20	2.904e4					2.6	NO		bb		

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PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	45.20	9.116e3					2.4	NO		bb		

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	27.12	1.350e2					3.4	YES		bb		0.000
2	FUNCTION1 HXCD...	26.40	1.344e2					3.9	YES		db		0.000
3	FUNCTION1 HXCD...	26.33	7.737e1					2.4	NO		dd		0.000
4	FUNCTION1 HXCD...	26.21	7.075e1					3.2	YES		bd		0.000
5	FUNCTION1 HXCD...	25.77	7.177e1					2.3	NO		bb		0.000
6	FUNCTION1 HXCD...	24.73	7.170e1					2.0	NO		bb		0.000
7	FUNCTION1 HXCD...	22.95	8.957e1					2.2	NO		bb		0.000
8	FUNCTION1 HXCD...	21.51	1.545e2					3.0	NO		bb		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	29.31	7.179e1					1.7	NO		bd		0.000
2	FUNCTION2 HPCD...	32.60	8.116e1					3.0	YES		bb		0.000
3	FUNCTION2 HPCD...	31.52	1.255e2					3.7	YES		bb		0.000
4	FUNCTION2 HPCD...	31.27	1.303e2					2.6	NO		bb		0.000
5	FUNCTION2 HPCD...	31.13	2.957e2					7.0	YES		bb		0.000
6	FUNCTION2 HPCD...	30.65	7.919e1					1.8	NO		bb		0.000
7	FUNCTION2 HPCD...	29.44	7.668e1					2.4	NO		db		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	36.53	2.496e2					7.3	YES		bb		0.000
2	FUNCTION3 OCDPE	36.13	2.164e2					6.8	YES		db		0.000
3	FUNCTION3 OCDPE	35.99	1.098e2					3.4	YES		bd		0.000
4	FUNCTION3 OCDPE	35.09	1.010e2					6.4	YES		db		0.000
5	FUNCTION3 OCDPE	35.04	9.468e1					3.0	NO		bd		0.000

ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 DCDPE	42.69	7.596e1					3.8	YES		bb		0.000

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Printed: Thursday, March 09, 2023 12:09:28 Pacific Standard Time

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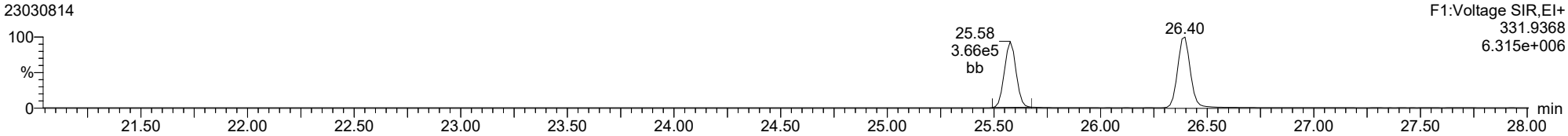
ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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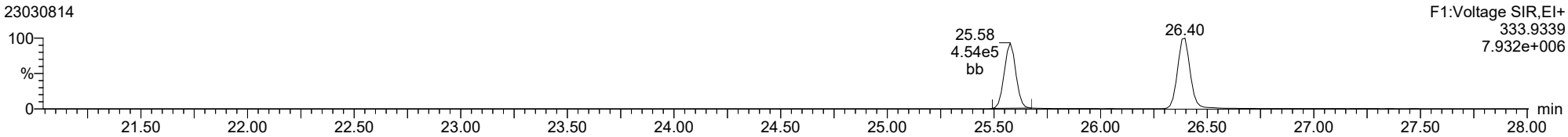
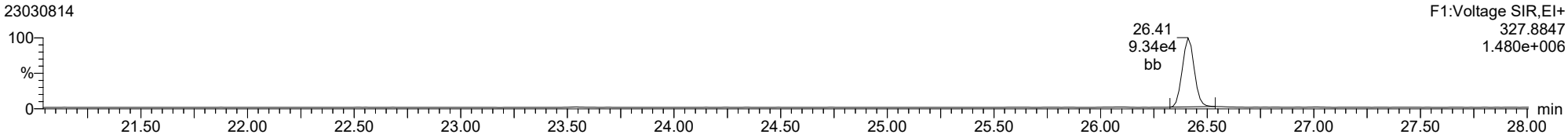


37CL-2378-TCDD



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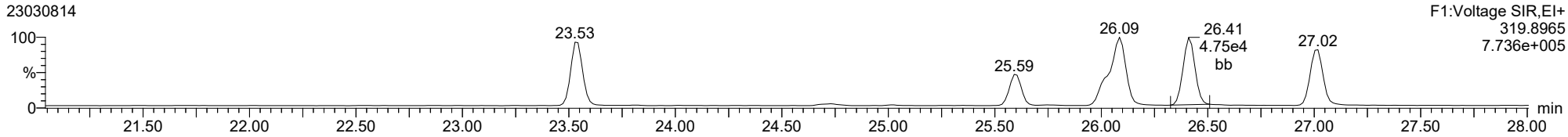
ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

2378-TCDD



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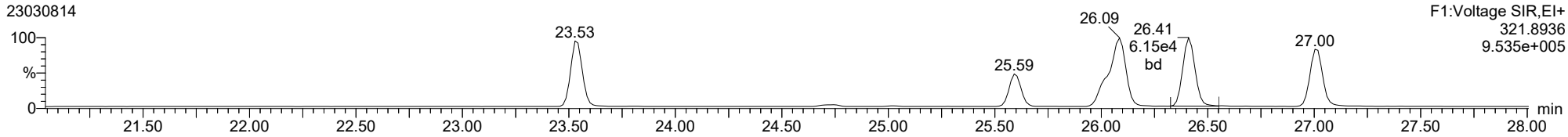

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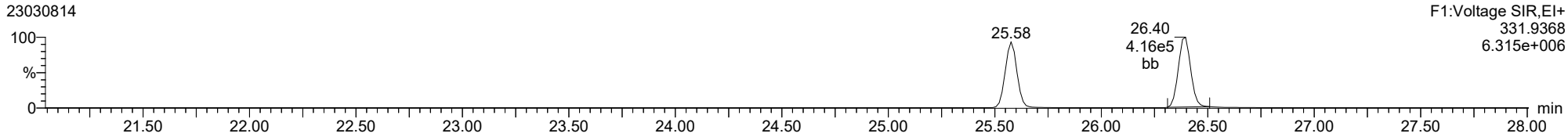

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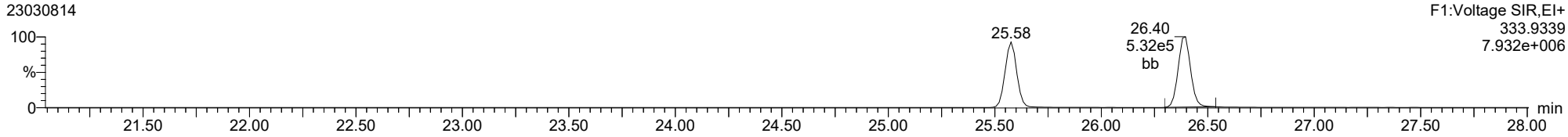

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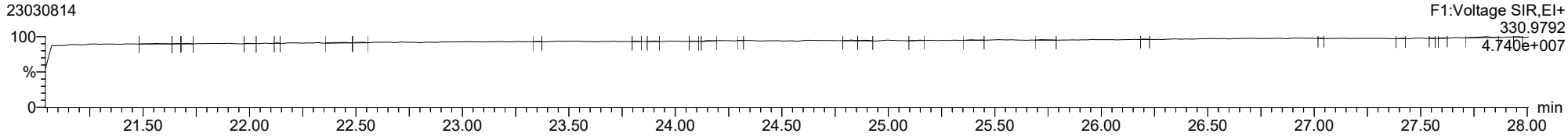

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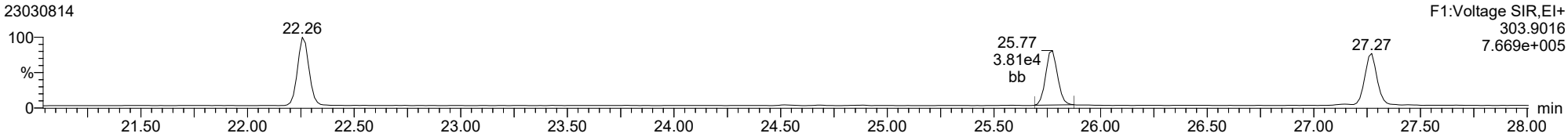
2378-TCDF



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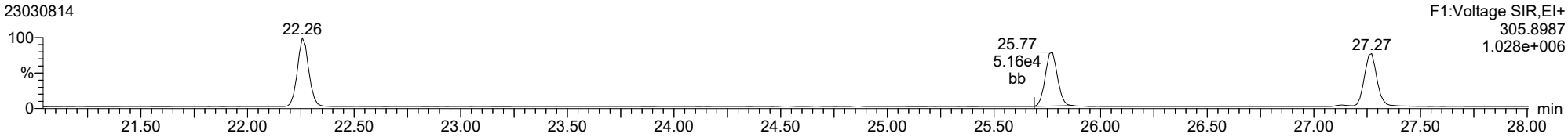

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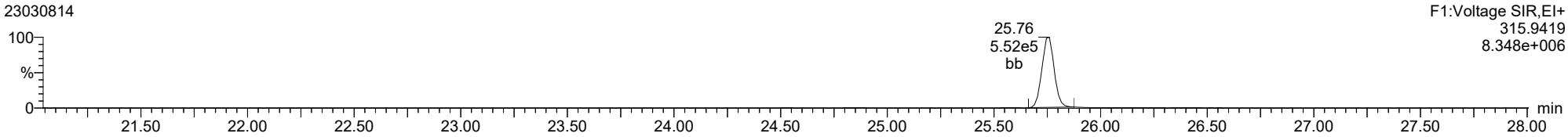

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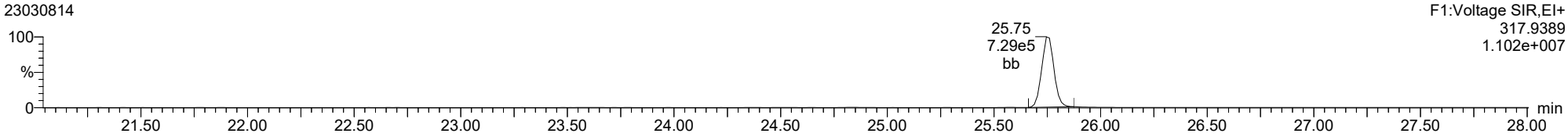
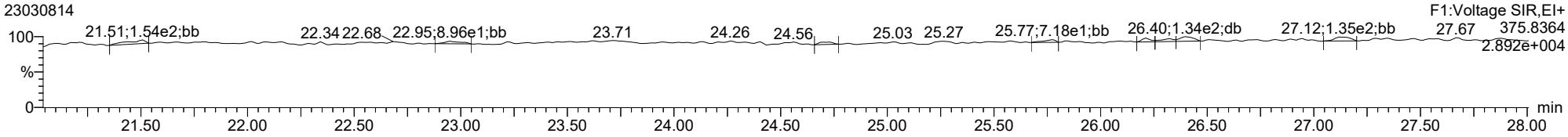


FUNCTION1 HXCDPE



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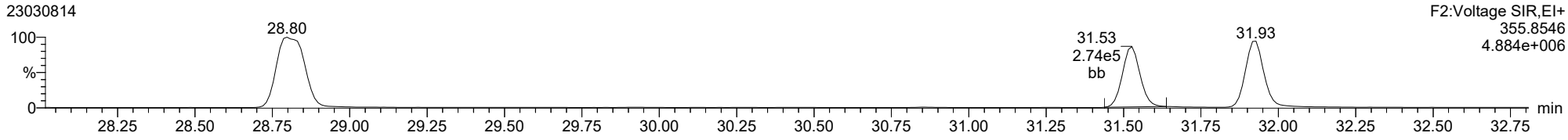
12378-PeCDD



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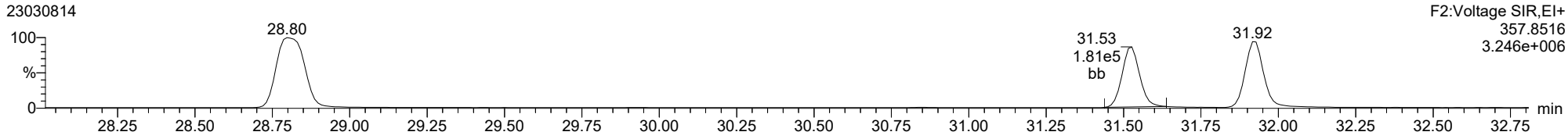

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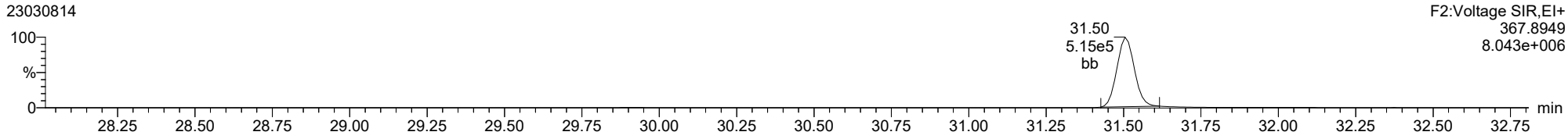

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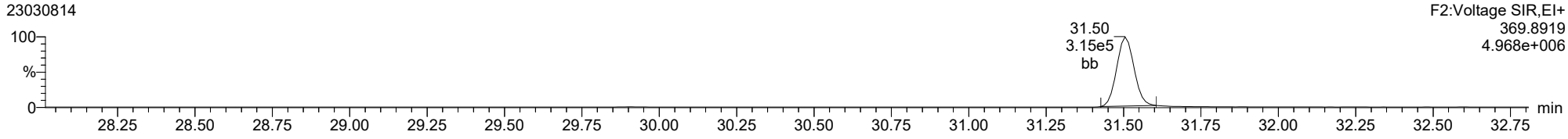

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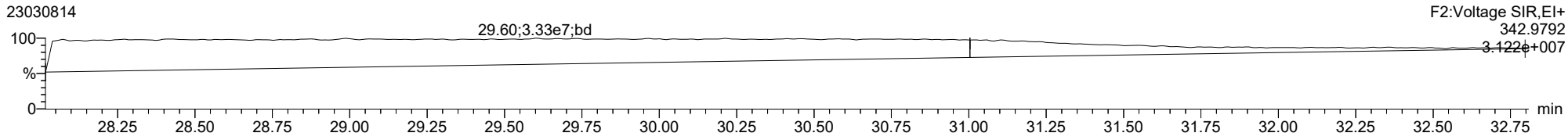

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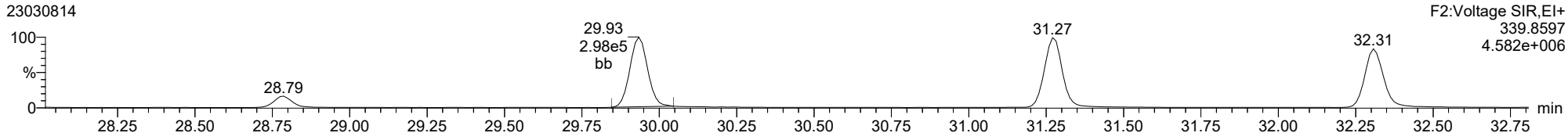

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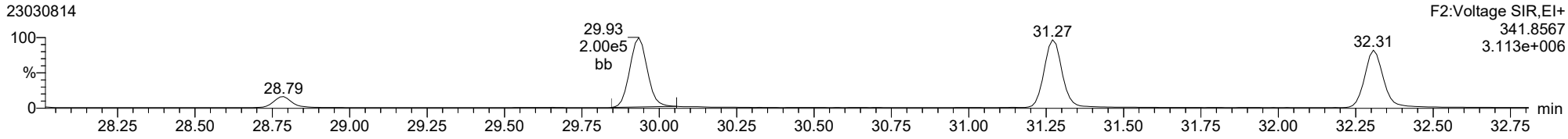

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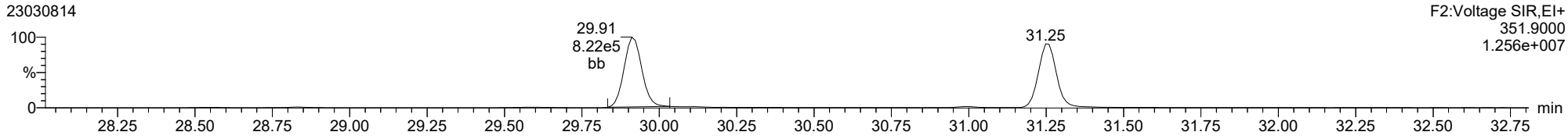

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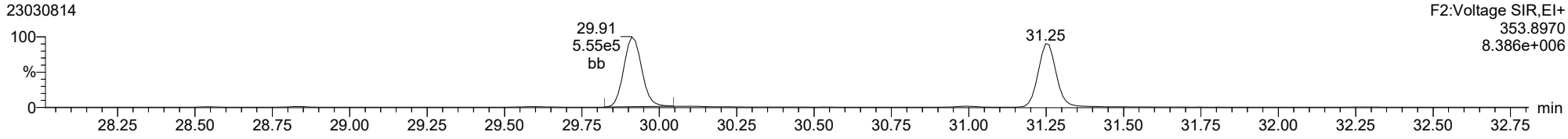
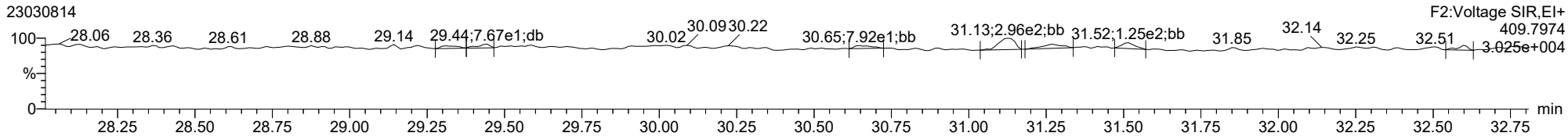


FUNCTION2 HPCDPE



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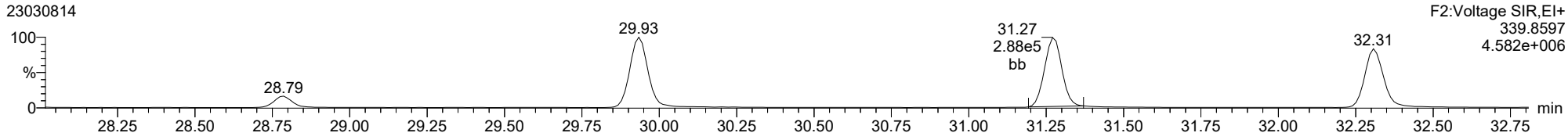
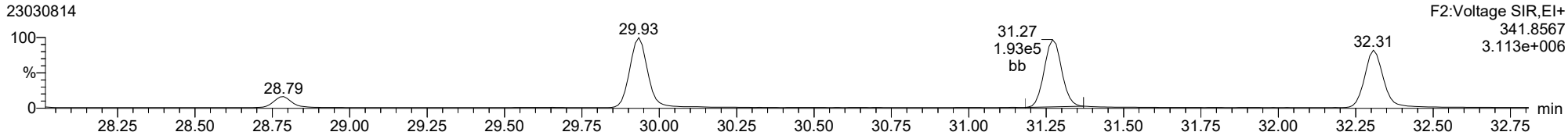


23478-PeCDF



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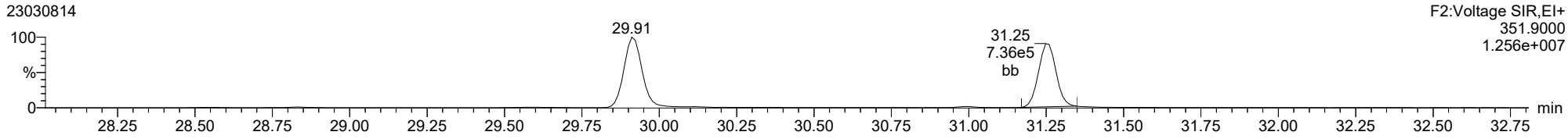

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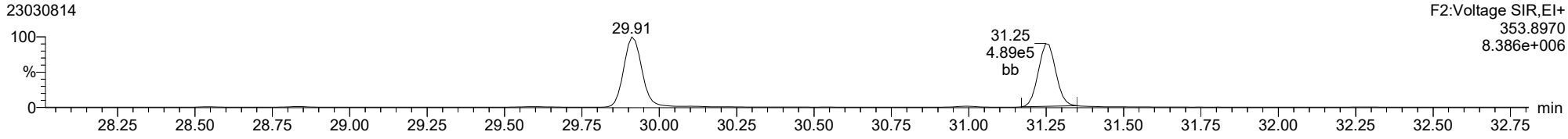

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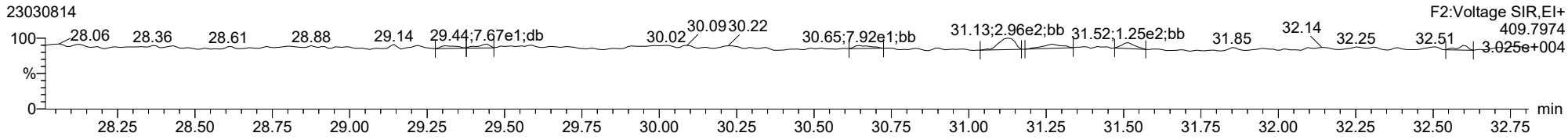

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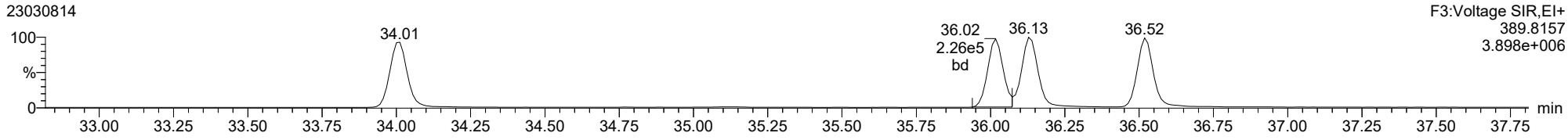
123478-HxCDD



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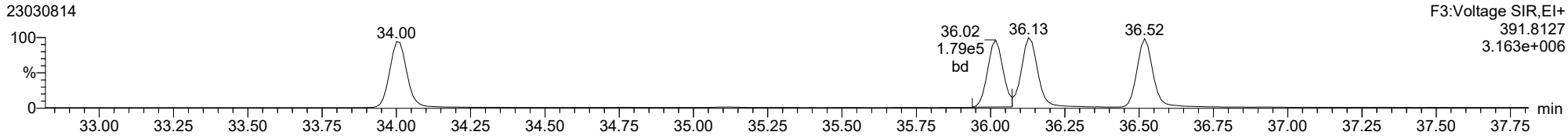

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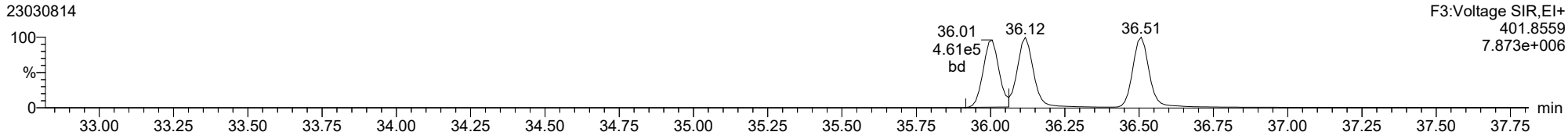

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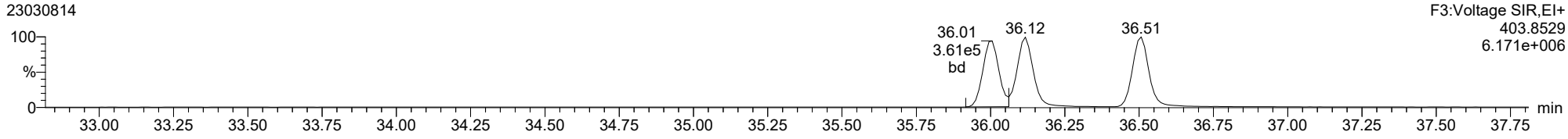

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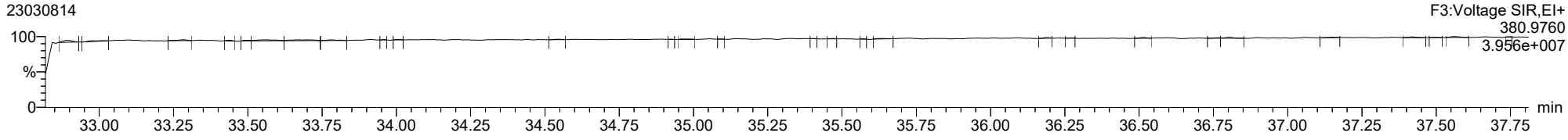

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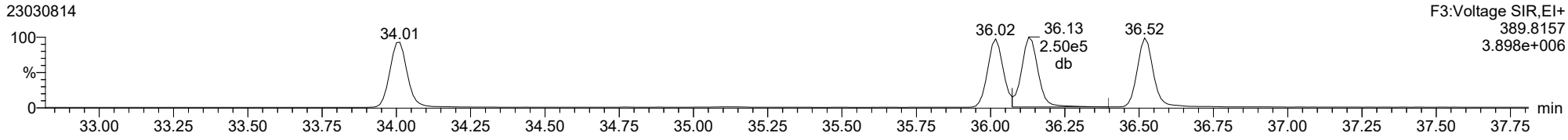

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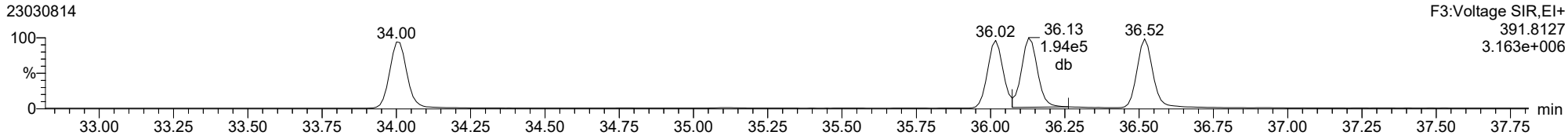

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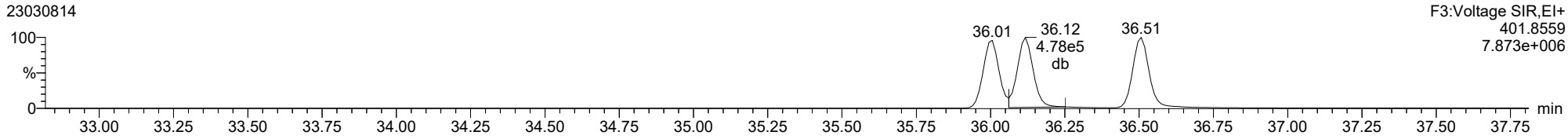

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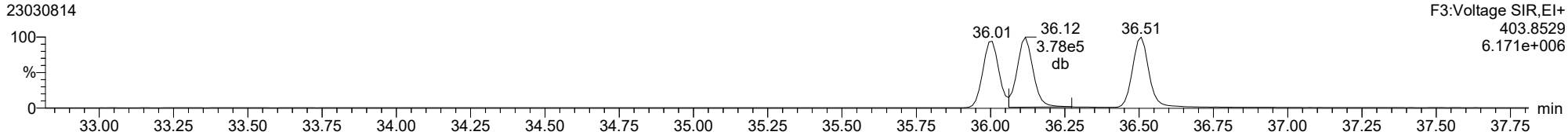

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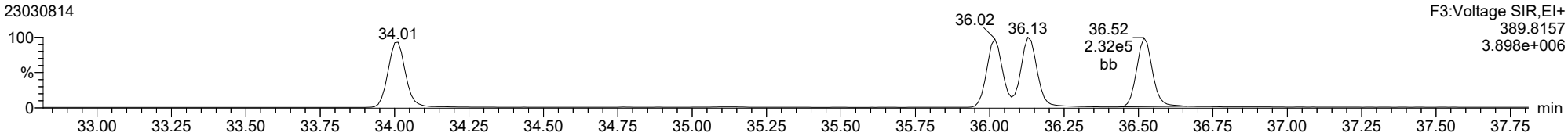

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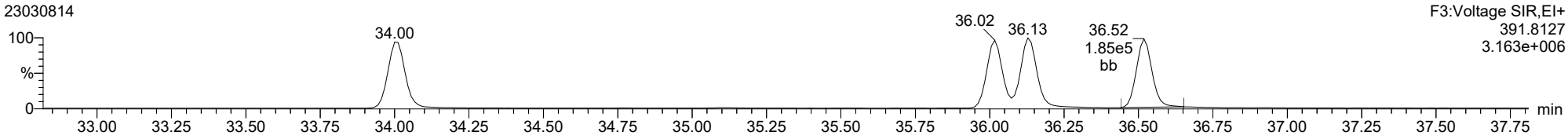

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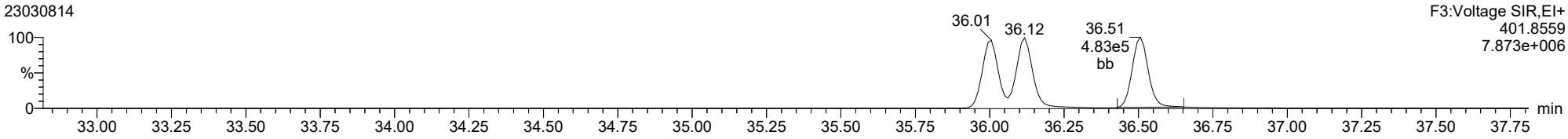

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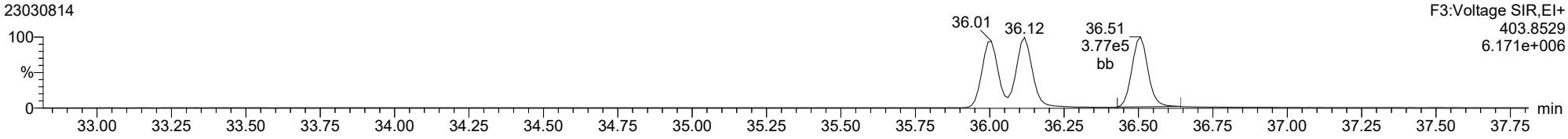

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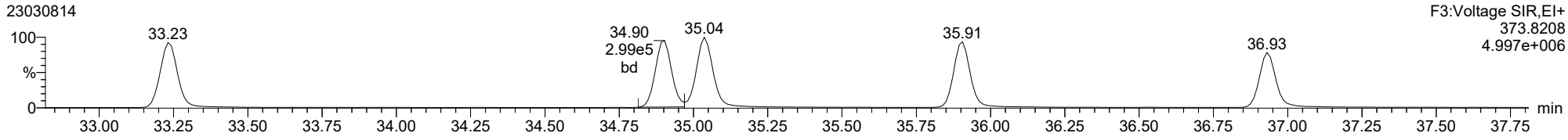

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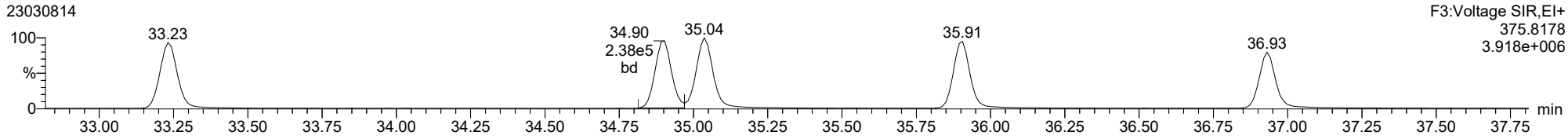

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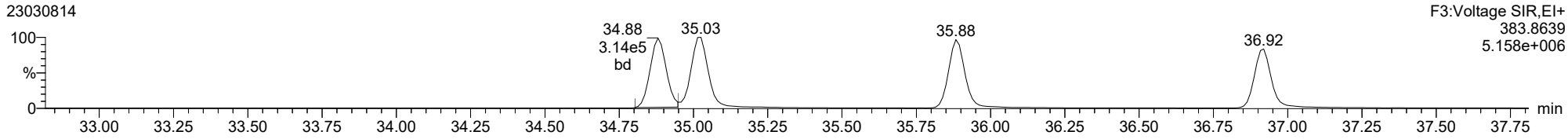

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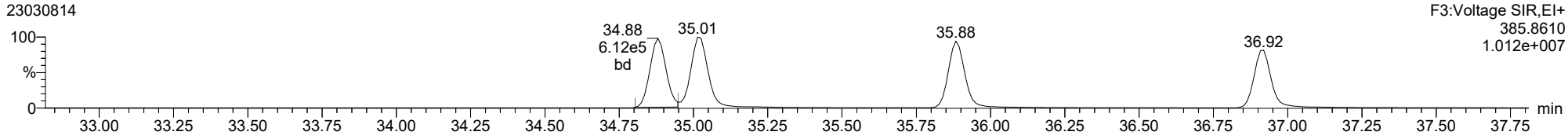

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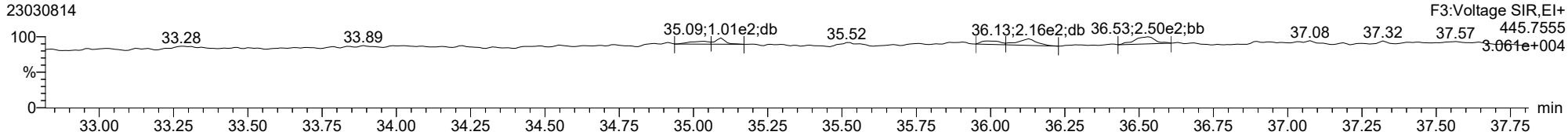

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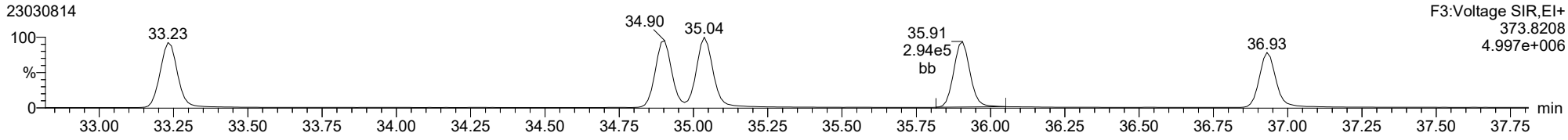

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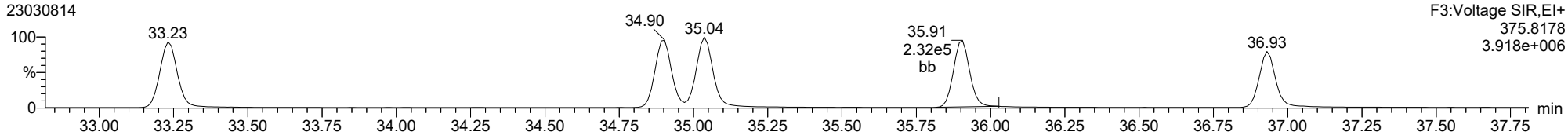

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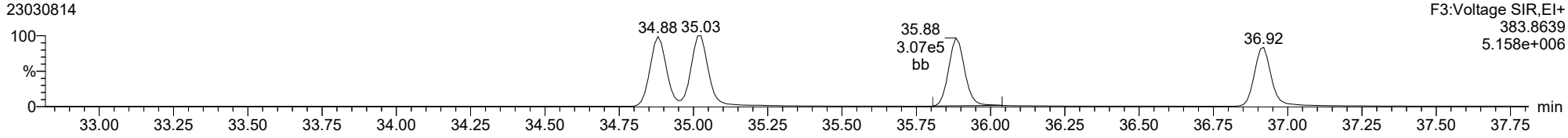

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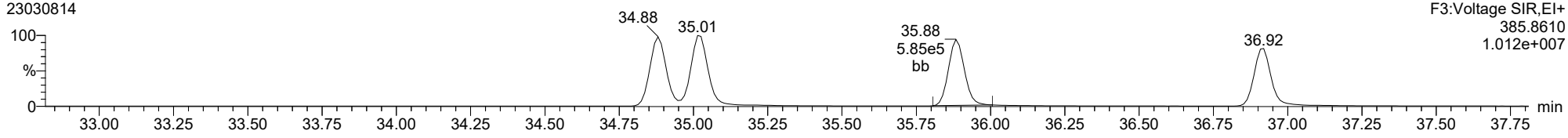

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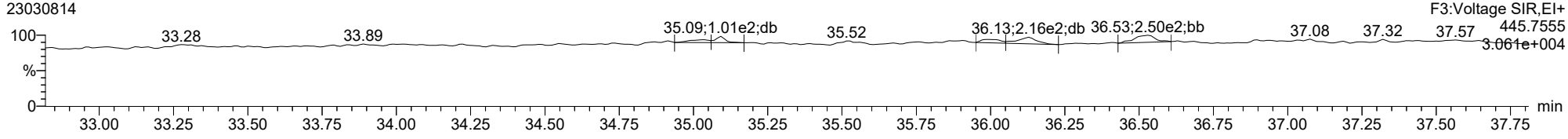

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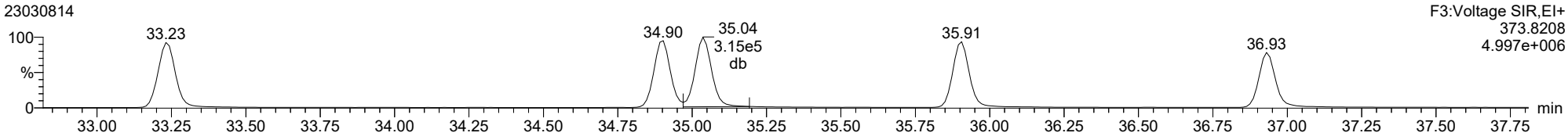

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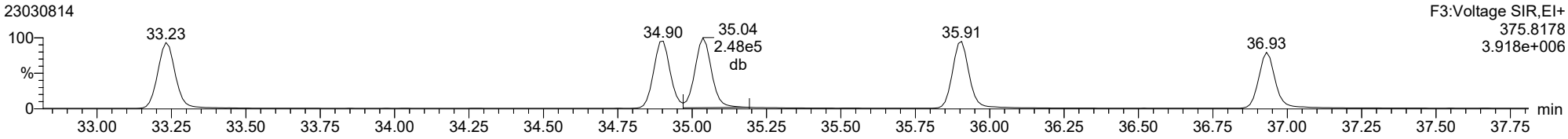

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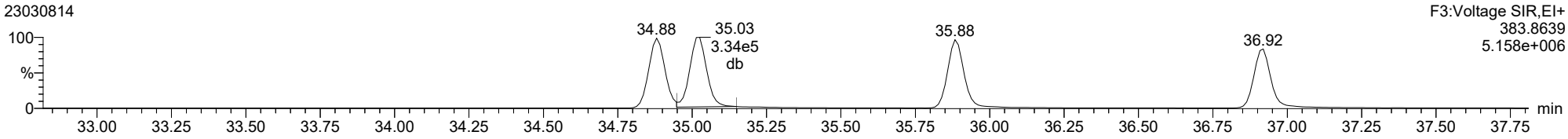

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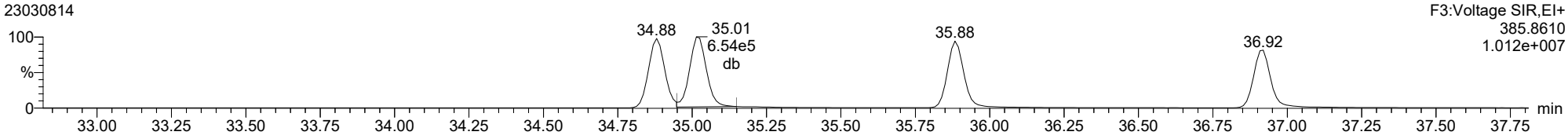

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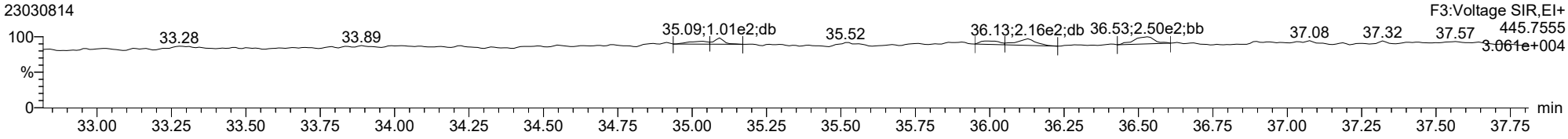

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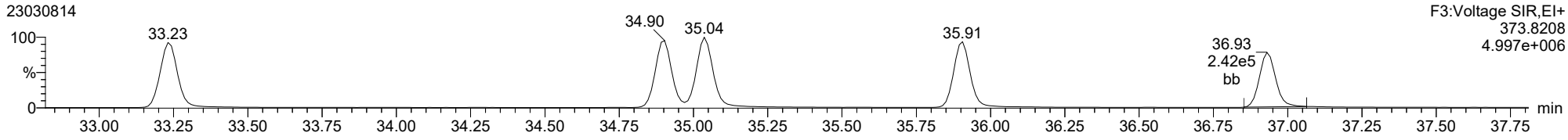

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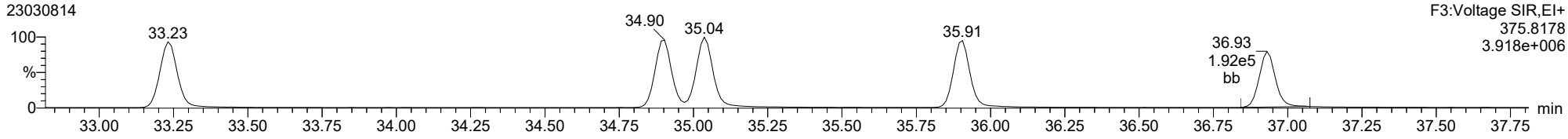

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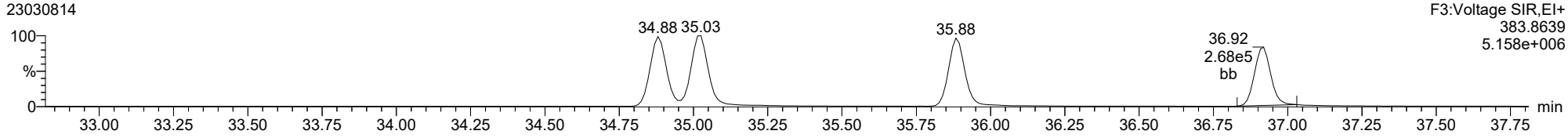

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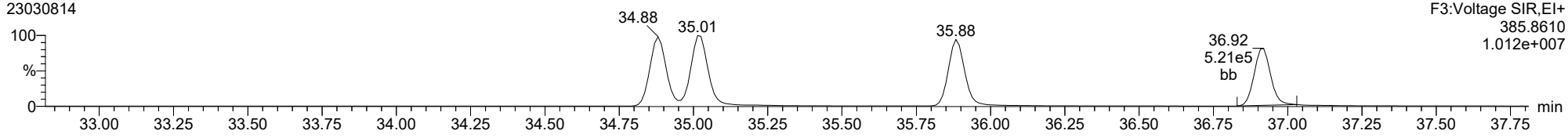

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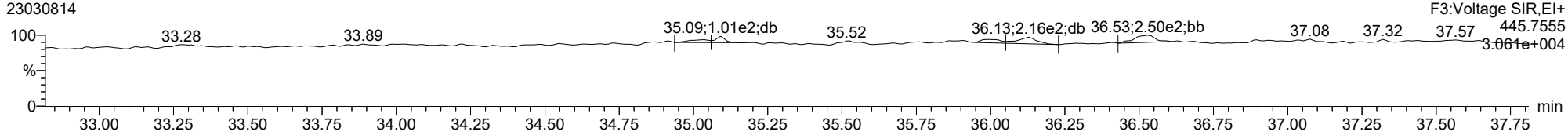

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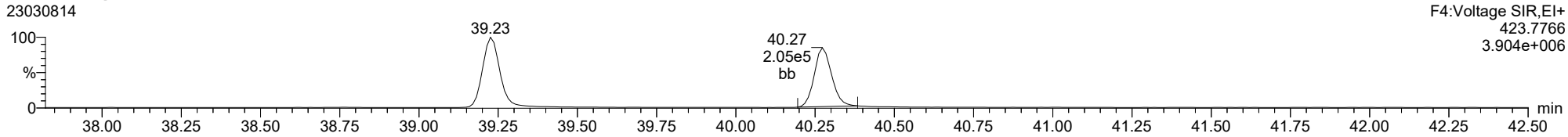

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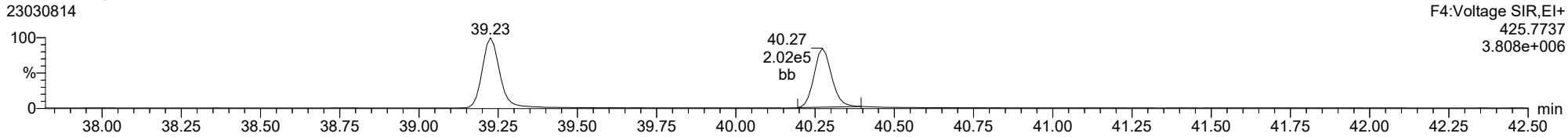

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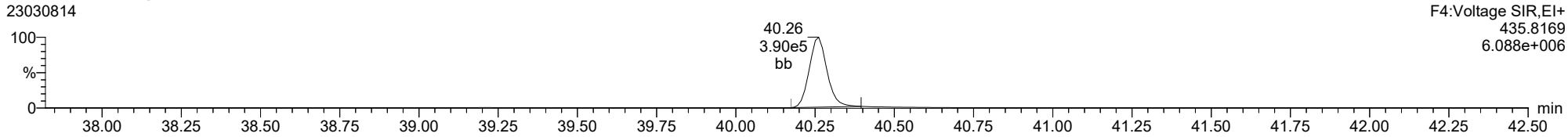

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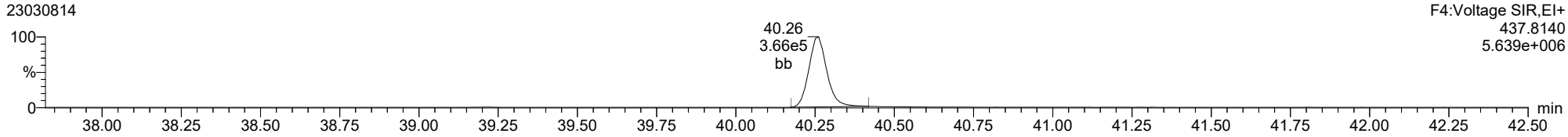

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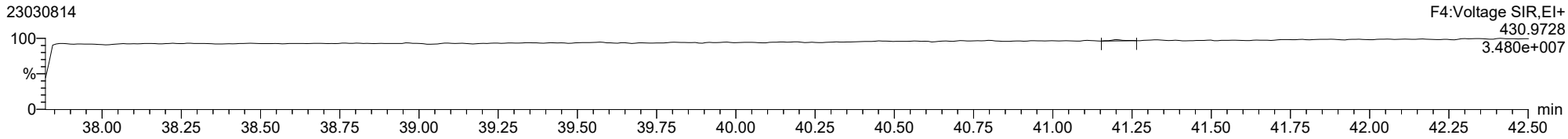

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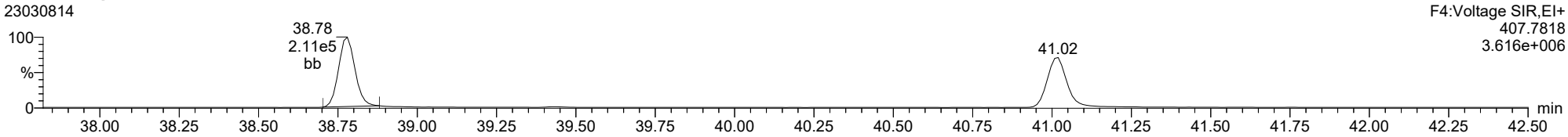

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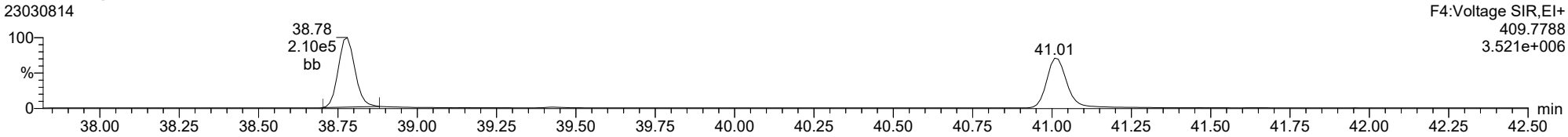

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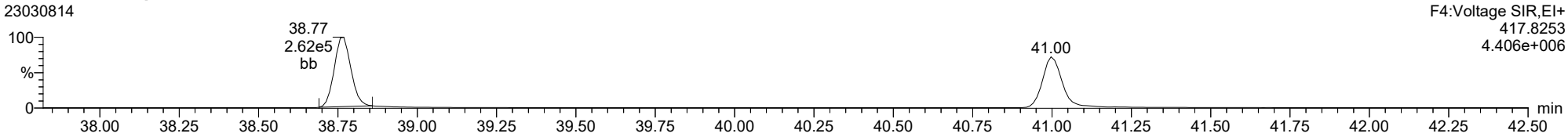

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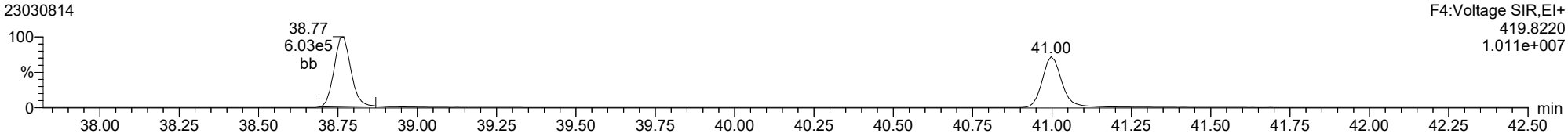

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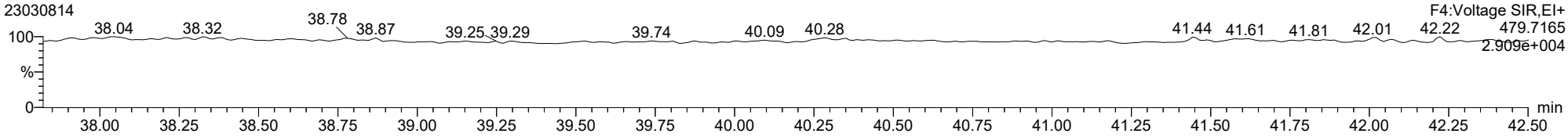

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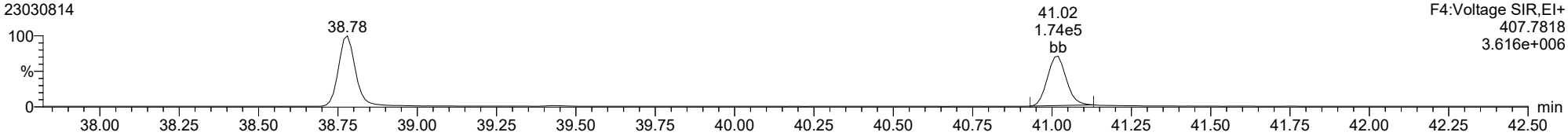

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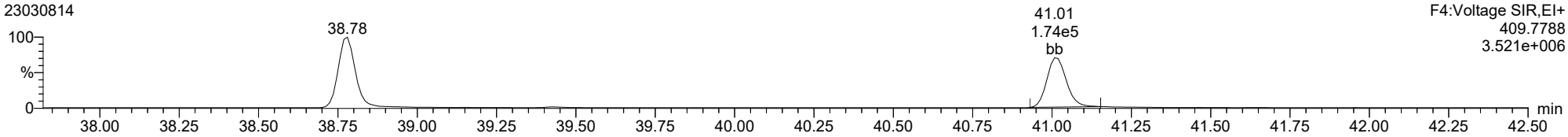

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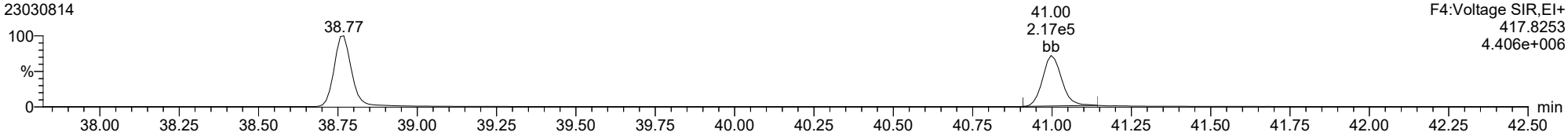

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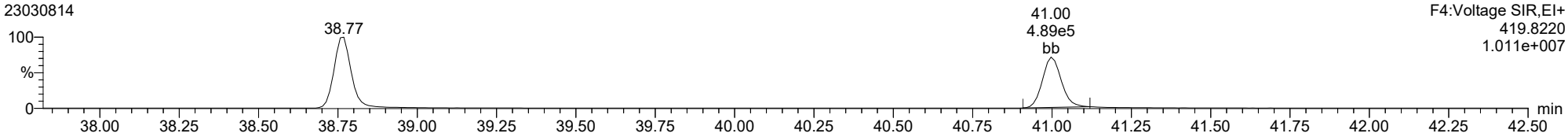

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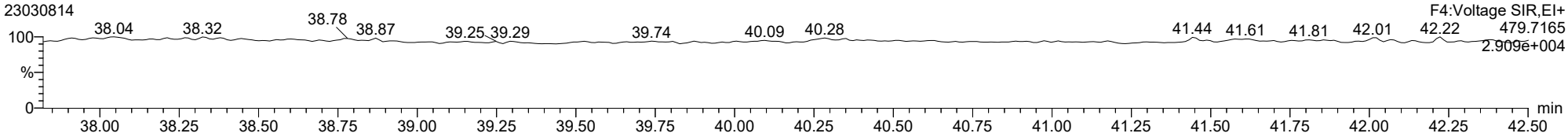

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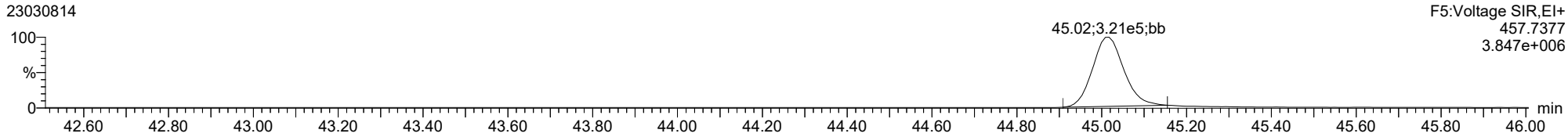

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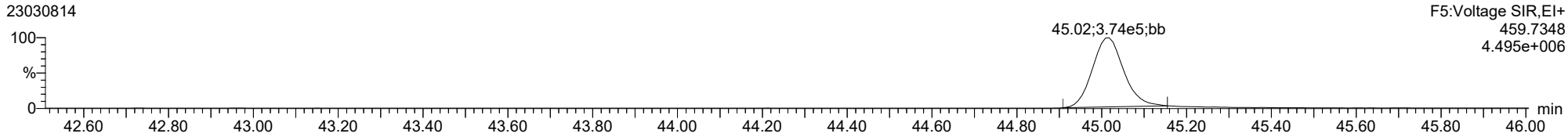

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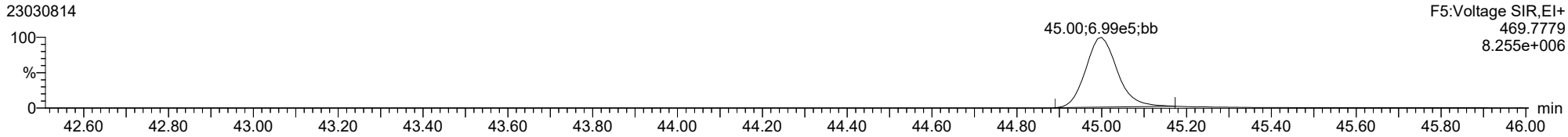

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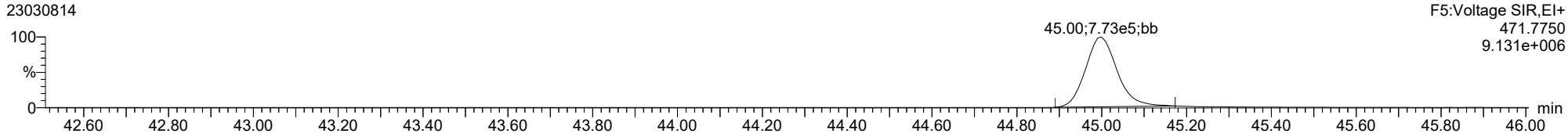

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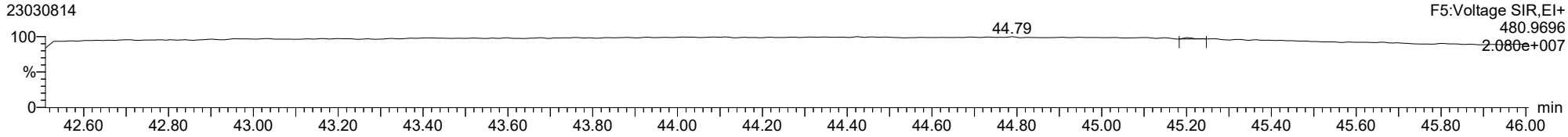

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Printed: Thursday, March 09, 2023 12:09:28 Pacific Standard Time

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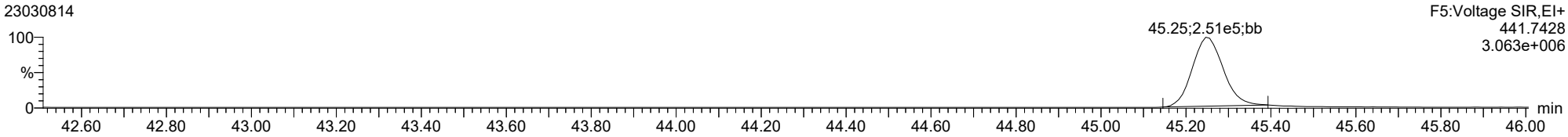

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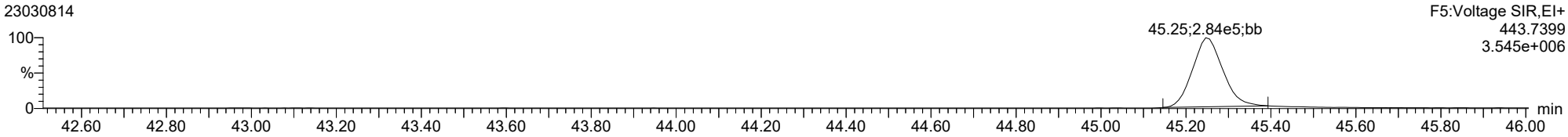
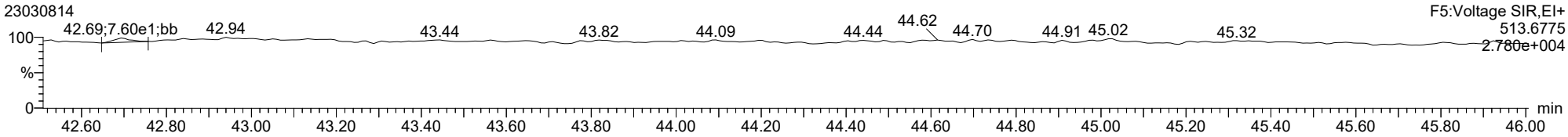


FUNCTION5 DCDPE



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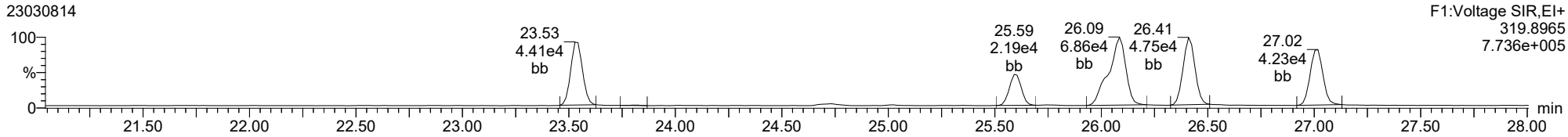

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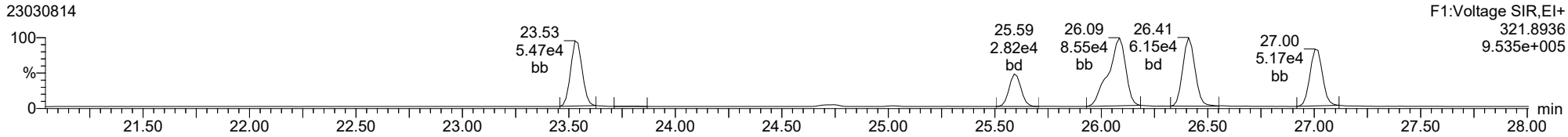

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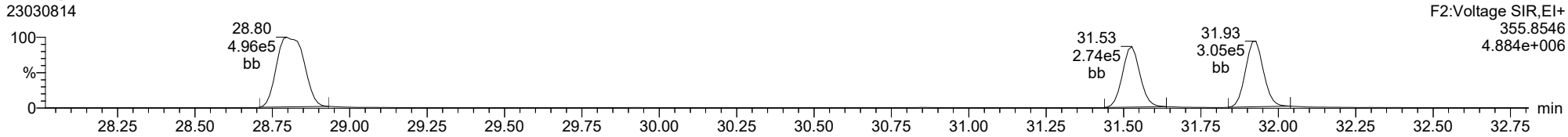

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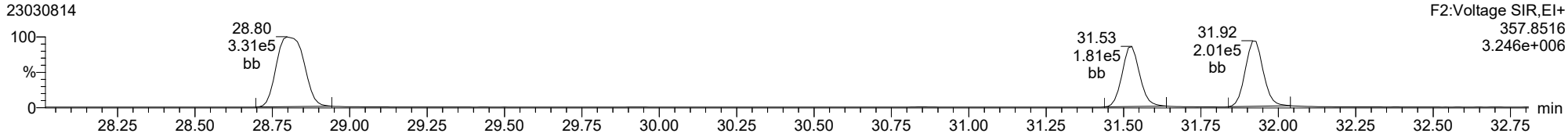

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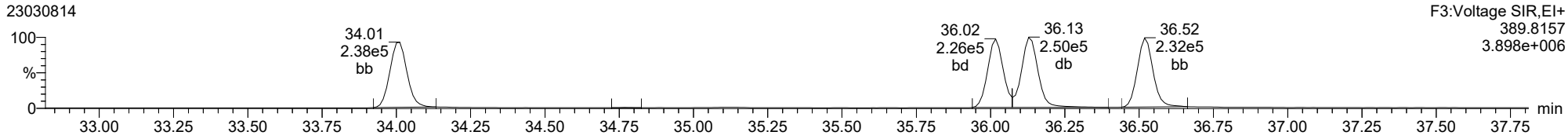
Total-hexadioxins



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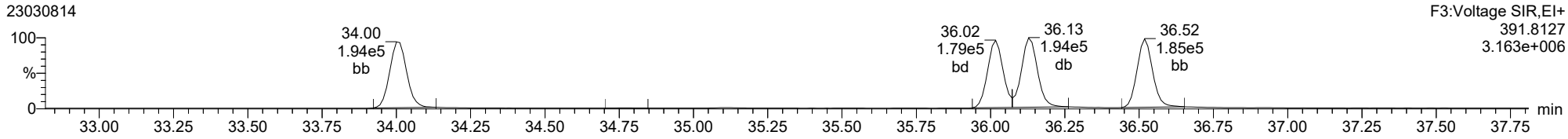
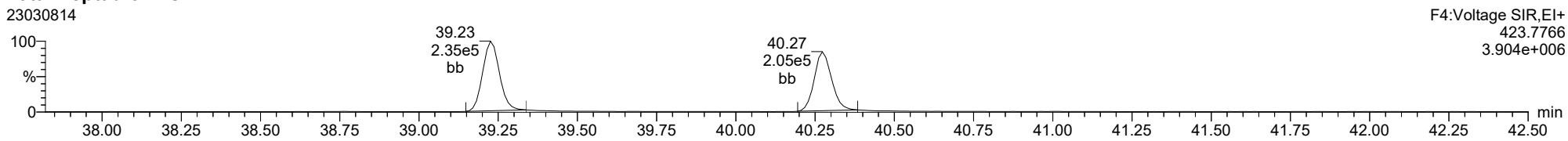


Total-heptadioxins



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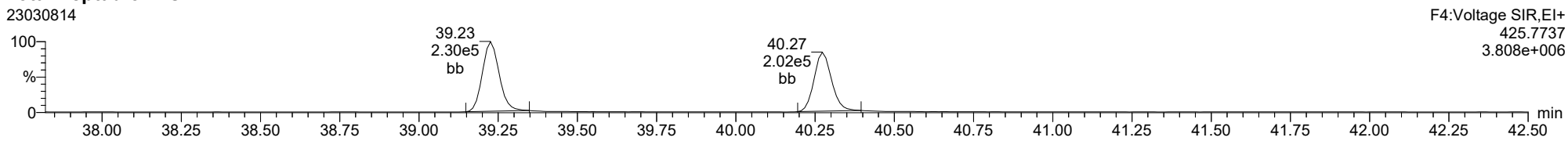

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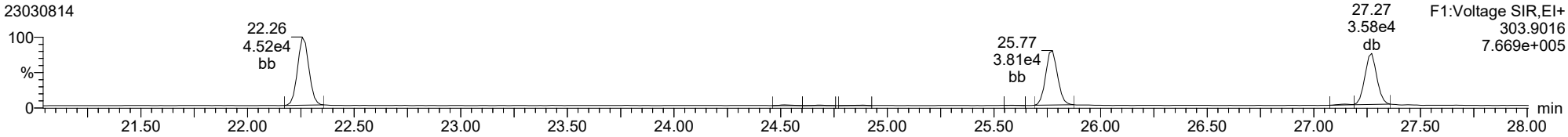
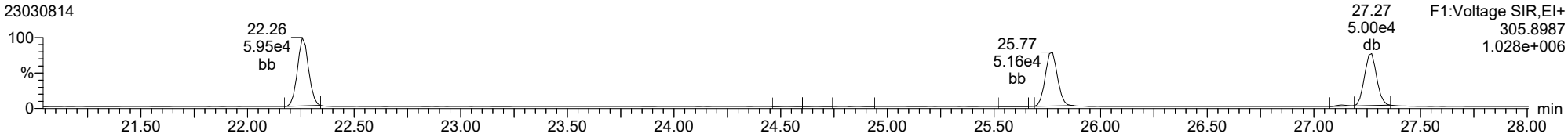
Total-tetrafurans



Total-tetrafurans



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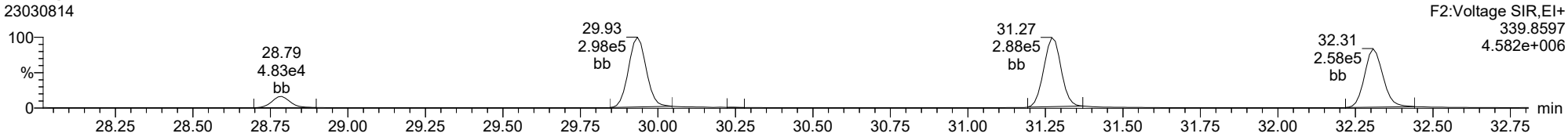
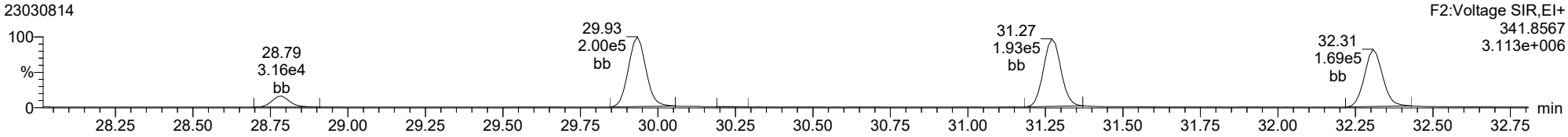
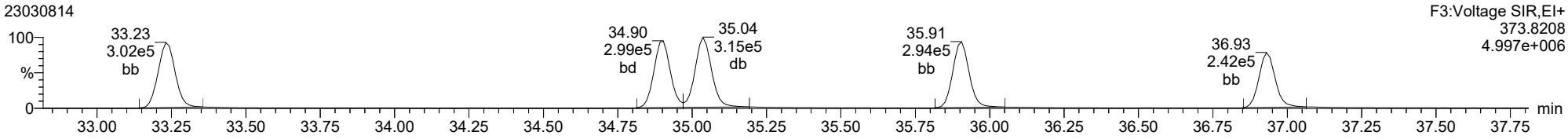


Total-pentafurans



ID: CS3Y2, Name: 23030814, Date: 08-Mar-2023, Time: 20:31:39, Conditions: AUTOSPEC01, User: pk

Total-hexafurans



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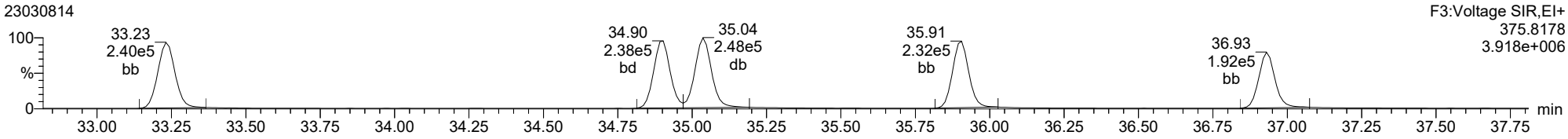

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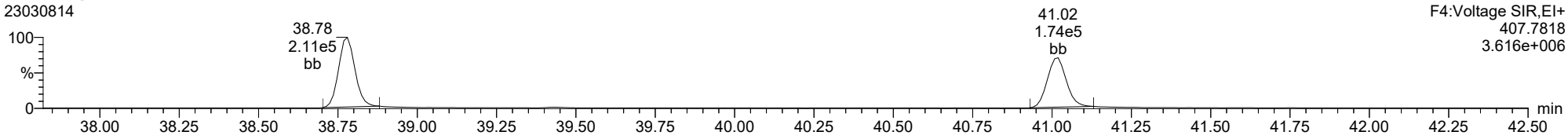

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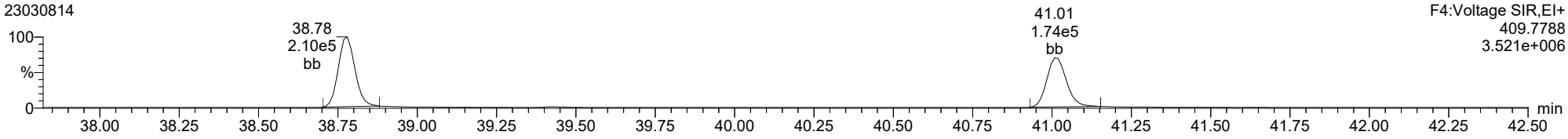

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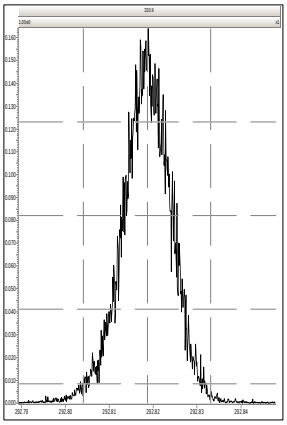
M 292.9824 R 11417



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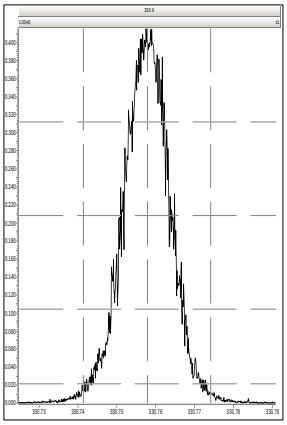
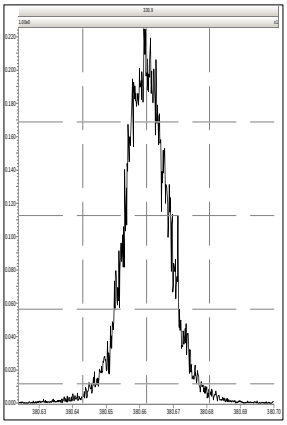
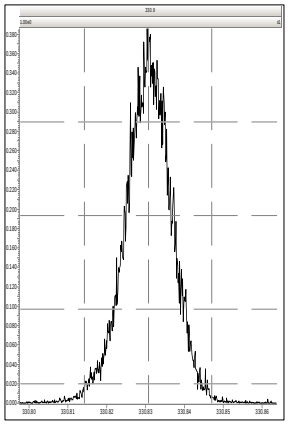


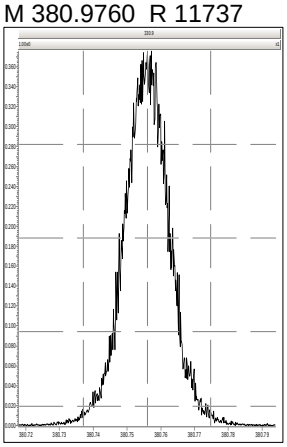
M 380.9760 R 12285



M 330.9792 R 11633



M 380.9760 R 11737



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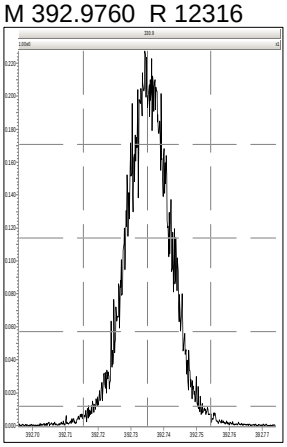
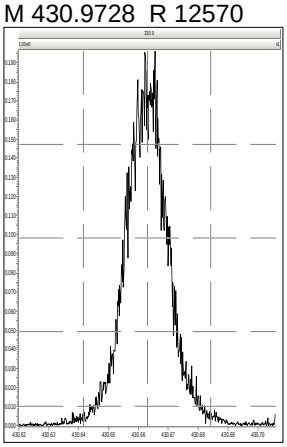


M 430.9728 R 12570



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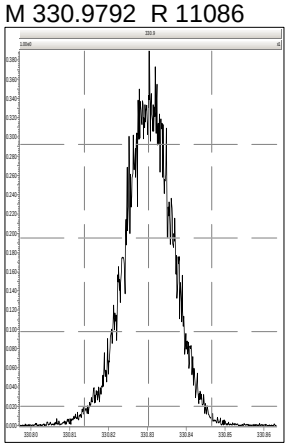

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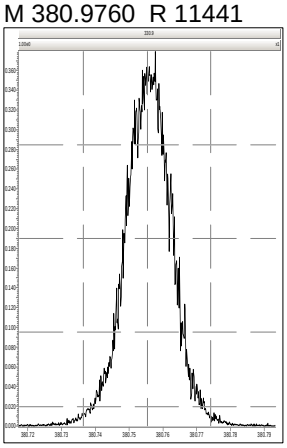

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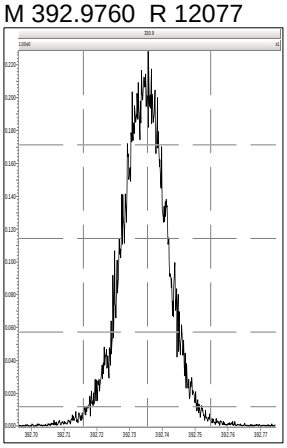

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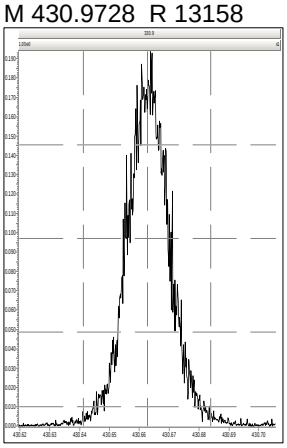

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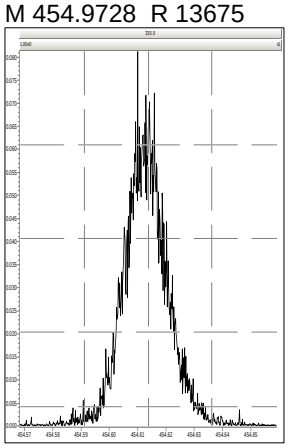

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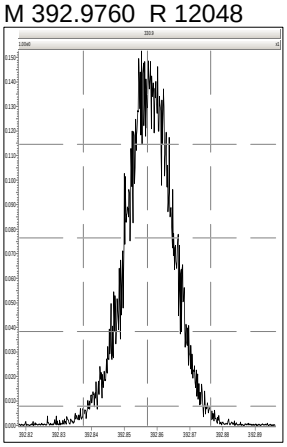
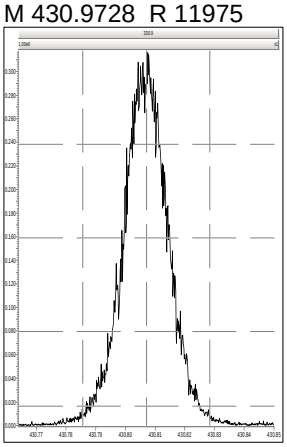
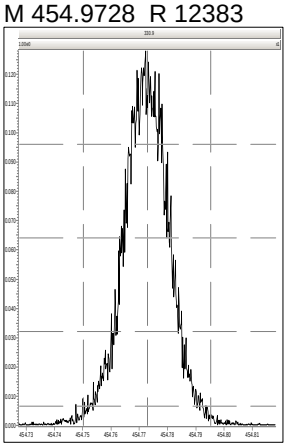


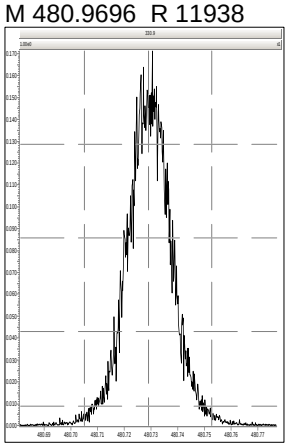
M 430.9728 R 11975



M 454.9728 R 12383



M 480.9696 R 11938



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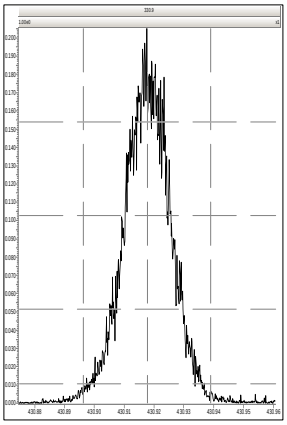
M 430.9728 R 11869



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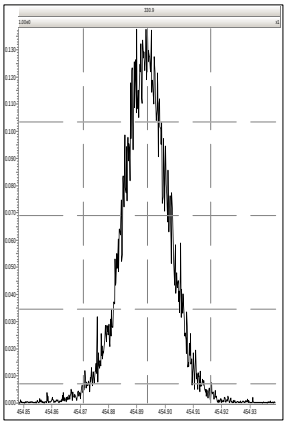
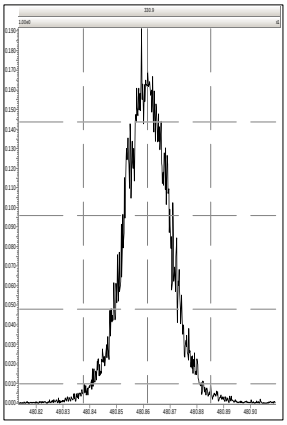


M 480.9696 R 11907



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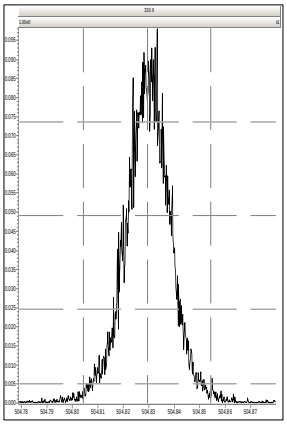
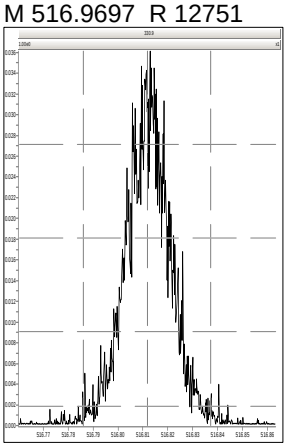
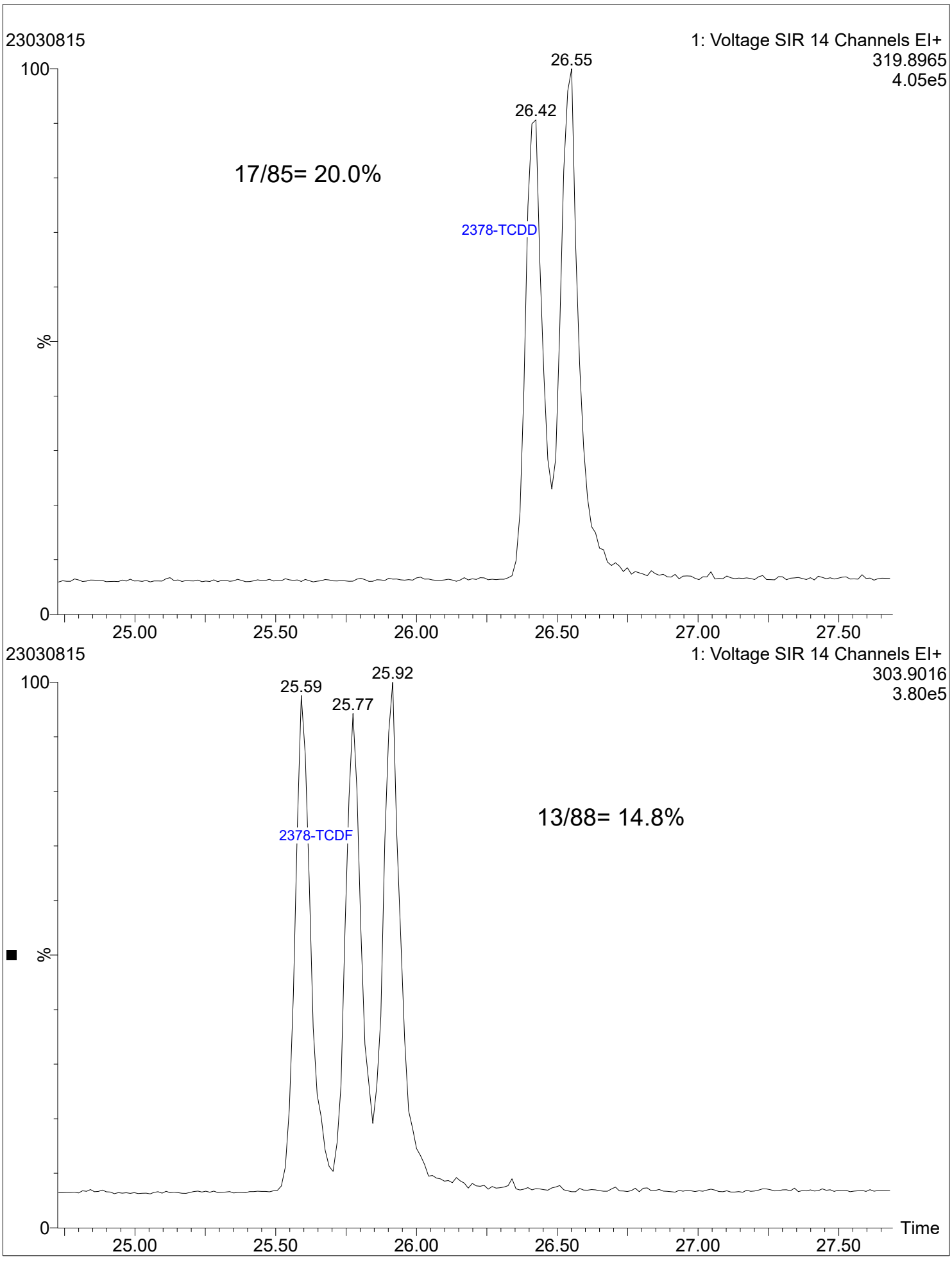


M 516.9697 R 12751




23030815
1: Voltage SIR 14 Channels EI+
319.8965
4.05e5
26.55
26.42
17/85= 20.0%
2378-TCDD
100
%
0
25.00
25.50
26.00
26.50
27.00
27.50
23030815
1: Voltage SIR 14 Channels EI+
303.9016
3.80e5
25.59
25.77
25.92
13/88= 14.8%
2378-TCDF
100
%
0
Time
25.00
25.50
26.00
26.50
27.00
27.50

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23031009	Calibration Date:	03/03/2023
Sequence:	SLC0124	Injection Date:	03/10/23
Lab Sample ID:	SLC0124-CCV1	Injection Time:	16:56
Sequence Name:	CS3Y4		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT	
2,3,7,8-TCDF	A	10.000	9.55	0.7015272	0.6702820		-4.5	+/-16	
2,3,7,8-TCDD	A	10.000	8.55	1.1486620	0.9821941		-14.5	+/-22	
1,2,3,7,8-PeCDF	A	50.000	45.8	0.6792300	0.6221307		-8.4	+/-18	
2,3,4,7,8-PeCDF	A	50.000	43.6	0.7861704	0.6856734		-12.8	+/-18	
1,2,3,7,8-PeCDD	A	50.000	49.2	1.0218450	1.0054960		-1.6	+/-22	
1,2,3,4,7,8-HxCDF	A	50.000	44.8	1.1660380	1.0452530		-10.4	+/-10	*
1,2,3,6,7,8-HxCDF	A	50.000	45.3	1.0907410	0.9891060		-9.3	+/-12	
2,3,4,6,7,8-HxCDF	A	50.000	46.4	1.1396990	1.0577140		-7.2	+/-12	
1,2,3,7,8,9-HxCDF	A	50.000	44.1	1.1370930	1.0017850		-11.9	+/-10	*
1,2,3,4,7,8-HxCDD	A	50.000	50.9	0.9955689	1.0138630		1.8	+/-22	
1,2,3,6,7,8-HxCDD	A	50.000	47.9	1.0009380	0.9582846		-4.3	+/-22	
1,2,3,7,8,9-HxCDD	A	50.000	55.3	0.9071139	1.0036500		10.6	+/-18	
1,2,3,4,6,7,8-HpCDF	A	50.000	45.8	1.0029930	0.9187687		-8.4	+/-10	
1,2,3,4,7,8,9-HpCDF	A	50.000	49.3	0.9531152	0.9393567		-1.4	+/-14	
1,2,3,4,6,7,8-HpCDD	A	50.000	49.0	1.0390130	1.0179340		-2.0	+/-14	
OCDF	A	100.00	82.5	0.7778078	0.6417850		-17.5	+/-37	
OCDD	A	100.00	100	0.9199537	0.9237564		0.4	+/-21	
13C12-2,3,7,8-TCDF	A	100.00	85.6	1.6201960	1.3865358		-14.4	+/-29	
13C12-2,3,7,8-TCDD	A	100.00	103	1.1524090	1.1868124		3.0	+/-18	
13C12-1,2,3,7,8-PeCDF	A	100.00	88.0	1.2404520	1.0920327		-12.0	+/-24	
13C12-2,3,4,7,8-PeCDF	A	100.00	86.6	1.1177860	0.9677175		-13.4	+/-23	
13C12-1,2,3,7,8-PeCDD	A	100.00	86.5	0.8288129	0.7168419		-13.5	+/-38	
13C12-1,2,3,4,7,8-HxCDF	A	100.00	82.5	1.1683050	0.9638440		-17.5	+/-24	
13C12-1,2,3,6,7,8-HxCDF	A	100.00	74.9	1.3864660	1.0380041		-25.1	+/-30	
13C12-2,3,4,6,7,8-HxCDF	A	100.00	88.7	1.1292560	1.0012692		-11.3	+/-27	
13C12-1,2,3,7,8,9-HxCDF	A	100.00	100	0.9317541	0.9316525		-0.01	+/-26	
13C12-1,2,3,4,7,8-HxCDD	A	100.00	93.2	0.9950393	0.9272077		-6.8	+/-15	
13C12-1,2,3,6,7,8-HxCDD	A	100.00	85.4	1.1566890	0.9878857		-14.6	+/-15	
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	81.4	0.8952017	0.7288674		-18.6	+/-22	
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	88.3	0.7697516	0.6794613		-11.7	+/-23	
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	86.6	0.8401226	0.7277031		-13.4	+/-28	
13C12-OCDD	A	200.00	175	0.7674714	0.6723404		-12.4	+/-52	
37Cl4-2,3,7,8-TCDD	A	10.000	8.33	1.2878040	1.0733465		-16.7		

* Values outside of QC limits

* Values outside of QC limits

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:43:07 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.591	1.001	2.979e4	4.206e4	0.702	0.708	0.770	701	946	4.50e5	6.55e5	640.9	692.1	NO	bb	bb	9.555
12378-PeCDF	29.758	1.001	1.551e5	1.075e5	0.679	1.443	1.550	988	1018	2.43e6	1.66e6	2458.1	1635.5	NO	bb	bb	45.797
23478-PeCDF	31.095	1.001	1.520e5	1.045e5	0.786	1.454	1.550	988	1018	2.40e6	1.64e6	2425.3	1616.2	NO	bb	bb	43.608
123478-HxCDF	34.738	1.001	2.159e5	1.748e5	1.166	1.235	1.240	1295	1434	3.45e6	2.81e6	2661.4	1957.2	NO	bd	bd	44.821
234678-HxCDF	35.741	1.000	2.278e5	1.829e5	1.140	1.245	1.240	1295	1434	3.81e6	3.06e6	2940.7	2132.4	NO	bb	bb	46.403
123678-HxCDF	34.872	1.000	2.208e5	1.774e5	1.091	1.245	1.240	1295	1434	3.53e6	2.86e6	2725.0	1992.4	NO	db	db	45.341
123789-HxCDF	36.777	1.001	1.994e5	1.625e5	1.137	1.227	1.240	1295	1434	3.15e6	2.57e6	2433.7	1792.2	NO	bb	bb	44.050
1234678-HpCDF	38.626	1.000	1.279e5	1.318e5	1.003	0.970	1.050	983	1197	2.18e6	2.21e6	2214.2	1847.6	NO	bb	bb	45.801
1234789-HpCDF	40.843	1.000	1.208e5	1.267e5	0.953	0.954	1.050	983	1197	1.75e6	1.83e6	1776.1	1526.0	NO	bb	bb	49.278
OCDF	45.048	1.005	1.566e5	1.781e5	0.778	0.879	0.890	776	761	1.89e6	2.15e6	2439.8	2824.8	NO	bd	bb	82.512
2378-TCDD	26.240	1.001	3.925e4	5.086e4	1.149	0.772	0.770	1099	840	6.13e5	7.97e5	557.9	949.4	NO	bb	bb	8.551
12378-PeCDD	31.351	1.001	1.676e5	1.110e5	1.022	1.510	1.550	1169	847	2.60e6	1.71e6	2222.7	2025.7	NO	bb	bb	49.200
123478-HxCDD	35.852	1.000	2.006e5	1.640e5	0.996	1.223	1.240	1120	1093	3.27e6	2.70e6	2921.9	2470.9	NO	bd	bd	50.919
123678-HxCDD	35.975	1.001	2.008e5	1.663e5	1.001	1.207	1.240	1120	1093	3.29e6	2.72e6	2938.8	2492.0	NO	db	db	47.869
123789-HxCDD	36.365	1.012	2.053e5	1.674e5	0.907	1.227	1.240	1120	1093	3.35e6	2.72e6	2990.9	2491.8	NO	bb	bb	55.321
1234678-HpCDD	40.119	1.001	1.446e5	1.427e5	1.039	1.013	1.050	1199	1095	2.28e6	2.20e6	1900.5	2008.1	NO	bb	bb	48.986
OCDD	44.819	1.000	2.205e5	2.612e5	0.920	0.844	0.890	1012	1192	2.79e6	3.28e6	2762.1	2747.3	NO	bb	bb	100.413
13C-2378-TCDF	25.576	1.007	4.627e5	6.091e5	1.620	0.760	0.770	1445	1495	7.26e6	9.55e6	5023.2	6392.1	NO	bb	bb	85.578
13C-12378-PeCDF	29.736	1.170	5.033e5	3.409e5	1.240	1.477	1.550	1188	1264	7.93e6	5.42e6	6678.4	4289.4	NO	bb	bb	88.035
13C-23478-PeCDF	31.073	1.223	4.488e5	2.993e5	1.118	1.499	1.550	1188	1264	7.09e6	4.78e6	5968.4	3780.3	NO	bb	bb	86.575
13C-123478-HxCDF	34.716	0.955	2.514e5	4.962e5	1.168	0.507	0.510	1348	1326	4.12e6	8.18e6	3059.0	6163.3	NO	bd	bd	82.499
13C-123678-HxCDF	34.861	0.959	2.707e5	5.345e5	1.386	0.507	0.510	1348	1326	4.18e6	8.12e6	3102.2	6118.4	NO	dd	dd	74.867
13C-234678-HxCDF	35.730	0.983	2.619e5	5.148e5	1.129	0.509	0.510	1348	1326	4.23e6	8.29e6	3138.1	6248.2	NO	bb	bb	88.666
13C-123789-HxCDF	36.755	1.011	2.411e5	4.816e5	0.932	0.501	0.510	1348	1326	3.93e6	7.85e6	2917.1	5916.4	NO	bb	bb	99.989
13C-1234678-HpCDF	38.615	1.063	1.749e5	3.905e5	0.895	0.448	0.440	1173	1347	3.03e6	6.82e6	2582.5	5064.6	NO	bb	bb	81.419
13C-1234789-HpCDF	40.833	1.123	1.595e5	3.675e5	0.770	0.434	0.440	1173	1347	2.35e6	5.42e6	2006.1	4020.6	NO	bb	bb	88.270
13C-1234-TCDD	25.407	0.000	3.404e5	4.326e5	1.000	0.787	0.770	1455	977	5.34e6	6.73e6	3666.7	6890.3	NO	bb	bb	100.000
13C-2378-TCDD	26.212	1.032	3.999e5	5.176e5	1.152	0.773	0.770	1455	977	6.17e6	8.01e6	4237.4	8199.3	NO	bb	bb	102.985
13C-12378-PeCDD	31.329	1.233	3.393e5	2.149e5	0.829	1.579	1.550	795	732	5.27e6	3.35e6	6626.2	4574.6	NO	bb	bb	86.490
13C-123478-HxCDD	35.841	0.986	4.038e5	3.154e5	0.995	1.280	1.240	1224	1998	6.78e6	5.27e6	5541.5	2638.4	NO	bd	bd	93.183
13C-123678-HxCDD	35.953	0.989	4.287e5	3.376e5	1.157	1.270	1.240	1224	1998	6.81e6	5.42e6	5558.8	2710.9	NO	db	db	85.406
13C-1234678-HpCDD	40.097	1.103	2.914e5	2.731e5	0.840	1.067	1.050	929	1153	4.60e6	4.34e6	4955.2	3764.9	NO	bb	bb	86.619
13C-OCDD	44.801	1.233	4.948e5	5.483e5	0.767	0.902	0.890	1149	1170	6.12e6	6.84e6	5325.3	5846.0	NO	bb	bb	175.209
13C-123789-HxCDD	36.342	0.000	4.344e5	3.412e5	1.000	1.273	1.240	1224	1998	7.12e6	5.59e6	5813.6	2800.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.240	1.033	8.297e4		1.288			681		1.26e6		1852.6			bb		8.335

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Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:43:07 Pacific Daylight Time

ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.088	0.864	3.127e4	4.397e4	0.802	0.711	0.770	701	946	5.26e5	7.09e5	749.3	748.8	NO	bb	bb	8.758
1289-TCDF	27.088	1.059	2.897e4	4.208e4	0.678	0.689	0.770	701	946	4.63e5	6.46e5	659.7	682.3	NO	bb	db	9.777
13468-PECDF	26.947	0.906	3.631e5	2.387e5	1.246	1.521	1.550	746	854	5.53e6	3.66e6	7416.2	4291.9	NO	bb	bb	57.191
12389-PECDF	32.131	1.081	1.310e5	9.046e4	0.496	1.448	1.550	988	1018	1.98e6	1.37e6	2004.5	1341.8	NO	bb	bb	52.844
123468-HXCDF	33.056	0.952	2.060e5	1.675e5	1.169	1.230	1.240	1295	1434	3.17e6	2.56e6	2448.7	1784.3	NO	bb	bb	42.737
1368-TCDD	23.359	0.891	3.538e4	4.539e4	1.015	0.779	0.770	1099	840	5.68e5	7.34e5	516.9	874.1	NO	bb	bb	8.670
1289-TCDD	26.834	1.024	3.443e4	4.475e4	0.909	0.769	0.770	1099	840	5.47e5	7.03e5	497.6	837.7	NO	bb	bb	9.497
12479-PECDD	28.622	0.914	2.993e5	1.956e5	2.301	1.530	1.550	1169	847	2.98e6	1.95e6	2549.3	2307.6	NO	bb	bb	38.801
12389-PECDD	31.752	1.013	1.811e5	1.197e5	1.184	1.513	1.550	1169	847	2.81e6	1.81e6	2402.1	2134.2	NO	bb	bb	45.865
124679-HXCDD	33.836	0.944	1.874e5	1.543e5	1.115	1.214	1.240	1120	1093	2.91e6	2.43e6	2595.9	2221.5	NO	bb	bb	42.596
1234679-HPCDD	39.072	0.974	1.560e5	1.550e5	1.137	1.006	1.050	1199	1095	2.62e6	2.60e6	2189.0	2379.5	NO	bb	bb	48.476
Total-tetrafurans			9.043e4		0.727			701		1.44e6							28.218
Total-penta1			0.000e0					746		0.00e0							
Total-pentafurans			4.626e5		0.654			988		7.19e6							150.183
Total-hexafurans			1.070e6		1.141			1295		1.71e7							223.353
Total-heptafurans			2.500e5		0.978			983		3.95e6							95.528
Total-Furans			2.393e6		0.922			701		3.71e7							636.985
Total-tetradioxins			1.844e5		1.024			1099		2.63e6							45.196
Total-pentadioxins			6.485e5		1.502			1169		8.39e6							133.968
Total-hexadioxins			7.942e5		1.005			1120		1.28e7							196.705
Total-heptadioxins			3.006e5		1.088			1199		4.90e6							97.462
Total-Dioxins			2.148e6		1.130			1099		3.15e7							573.744
Total-TEQ			4.541e6					1099		6.87e7							1210.729
FUNCTION1 PFK			9.335e7					432528		2.30e7							
FUNCTION2 PFK			0.000e0					265342		0.00e0							
FUNCTION3 PFK			4.526e5					352892		2.18e6							0.000
FUNCTION4 PFK			2.304e4					248078		5.34e5							
FUNCTION5 PFK			0.000e0					160904		0.00e0							
FUNCTION1 HXCD...			5.380e2					565		6.50e3							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			2.690e2					597		4.19e3							0.000
FUNCTION3 OCDPE			1.194e2					480		1.25e3							0.000
FUNCTION4 NCDPE			9.583e1					657		1.69e3							0.000
FUNCTION5 DCDPE			0.000e0					726		0.00e0							

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ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.897e4	4.208e4	0.678	0.69	0.77	659.7	YES	NO	bb	db	9.777
2	2378-TCDF	25.59	2.979e4	4.206e4	0.702	0.71	0.77	640.9	YES	NO	bb	bb	9.555
3	Total-tetrafurans	24.36	4.028e2	5.918e2	0.727	0.68	0.77	7.9	YES	NO	bd	bd	0.128
4	1368-TCDF	22.09	3.127e4	4.397e4	0.802	0.71	0.77	749.3	YES	NO	bb	bb	8.758

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.13	1.310e5	9.046e4	0.496	1.45	1.55	2004.5	YES	NO	bb	bb	52.844
2	23478-PeCDF	31.09	1.520e5	1.045e5	0.786	1.45	1.55	2425.3	YES	NO	bb	bb	43.608
3	Total-pentafurans	29.96	1.550e2	1.129e2	0.654	1.37	1.55	5.5	YES	NO	bb	bb	0.051
4	12378-PeCDF	29.76	1.551e5	1.075e5	0.679	1.44	1.55	2458.1	YES	NO	bb	bb	45.797
5	Total-pentafurans	28.61	2.438e4	1.666e4	0.654	1.46	1.55	384.5	YES	NO	bb	bd	7.882

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.78	1.994e5	1.625e5	1.137	1.23	1.24	2433.7	YES	NO	bb	bb	44.050
2	234678-HxCDF	35.74	2.278e5	1.829e5	1.140	1.25	1.24	2940.7	YES	NO	bb	bb	46.403
3	123678-HxCDF	34.87	2.208e5	1.774e5	1.091	1.24	1.24	2725.0	YES	NO	db	db	45.341
4	123478-HxCDF	34.74	2.159e5	1.748e5	1.166	1.24	1.24	2661.4	YES	NO	bd	bd	44.821
5	123468-HXCDF	33.06	2.060e5	1.675e5	1.169	1.23	1.24	2448.7	YES	NO	bb	bb	42.737

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDF	38.63	1.279e5	1.318e5	1.003	0.97	1.05	2214.2	YES	NO	bb	bb	45.801
2	1234789-HpCDF	40.84	1.208e5	1.267e5	0.953	0.95	1.05	1776.1	YES	NO	bb	bb	49.278
3	Total-heptafurans	39.27	1.244e3	1.153e3	0.978	1.08	1.05	23.2	YES	NO	bb	bb	0.449

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Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.897e4	4.208e4	0.678	0.69	0.77	659.7	YES	NO	bb	db	9.777
2	2378-TCDF	25.59	2.979e4	4.206e4	0.702	0.71	0.77	640.9	YES	NO	bb	bb	9.555
3	Total-tetrafurans	24.36	4.028e2	5.918e2	0.727	0.68	0.77	7.9	YES	NO	bd	bd	0.128
4	1368-TCDF	22.09	3.127e4	4.397e4	0.802	0.71	0.77	749.3	YES	NO	bb	bb	8.758
5	12389-PECDF	32.13	1.310e5	9.046e4	0.496	1.45	1.55	2004.5	YES	NO	bb	bb	52.844
6	23478-PeCDF	31.09	1.520e5	1.045e5	0.786	1.45	1.55	2425.3	YES	NO	bb	bb	43.608
7	Total-pentafurans	29.96	1.550e2	1.129e2	0.654	1.37	1.55	5.5	YES	NO	bb	bb	0.051
8	12378-PeCDF	29.76	1.551e5	1.075e5	0.679	1.44	1.55	2458.1	YES	NO	bb	bb	45.797
9	Total-pentafurans	28.61	2.438e4	1.666e4	0.654	1.46	1.55	384.5	YES	NO	bb	bd	7.882
10	123789-HxCDF	36.78	1.994e5	1.625e5	1.137	1.23	1.24	2433.7	YES	NO	bb	bb	44.050
11	234678-HxCDF	35.74	2.278e5	1.829e5	1.140	1.25	1.24	2940.7	YES	NO	bb	bb	46.403
12	123678-HxCDF	34.87	2.208e5	1.774e5	1.091	1.24	1.24	2725.0	YES	NO	db	db	45.341
13	123478-HxCDF	34.74	2.159e5	1.748e5	1.166	1.24	1.24	2661.4	YES	NO	bd	bd	44.821
14	123468-HXCDF	33.06	2.060e5	1.675e5	1.169	1.23	1.24	2448.7	YES	NO	bb	bb	42.737
15	1234678-HpCDF	38.63	1.279e5	1.318e5	1.003	0.97	1.05	2214.2	YES	NO	bb	bb	45.801
16	OCDF	45.05	1.566e5	1.781e5	0.778	0.88	0.89	2439.8	YES	NO	bd	bb	82.512
17	1234789-HpCDF	40.84	1.208e5	1.267e5	0.953	0.95	1.05	1776.1	YES	NO	bb	bb	49.278
18	Total-heptafurans	39.27	1.244e3	1.153e3	0.978	1.08	1.05	23.2	YES	NO	bb	bb	0.449
19	13468-PECDF	26.95	3.631e5	2.387e5	1.246	1.52	1.55	7416.2	YES	NO	bb	bb	57.191

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.24	3.925e4	5.086e4	1.149	0.77	0.77	557.9	YES	NO	bb	bb	8.551
2	Total-tetradioxins	25.92	5.664e4	7.547e4	1.024	0.75	0.77	561.4	YES	NO	bb	bb	14.059
3	Total-tetradioxins	25.42	1.871e4	2.281e4	1.024	0.82	0.77	263.5	YES	NO	bd	bb	4.419
4	1368-TCDD	23.36	3.538e4	4.539e4	1.015	0.78	0.77	516.9	YES	NO	bb	bb	8.670
5	1289-TCDD	26.83	3.443e4	4.475e4	0.909	0.77	0.77	497.6	YES	NO	bb	bb	9.497

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12378-PeCDD	31.35	1.676e5	1.110e5	1.022	1.51	1.55	2222.7	YES	NO	bb	bb	49.200
2	Total-pentadioxins	29.75	5.006e2	3.566e2	1.502	1.40	1.55	6.2	YES	NO	bb	bb	0.103
3	12479-PECDD	28.62	2.993e5	1.956e5	2.301	1.53	1.55	2549.3	YES	NO	bb	bb	38.801
4	12389-PECDD	31.75	1.811e5	1.197e5	1.184	1.51	1.55	2402.1	YES	NO	bb	bb	45.865

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDD	36.36	2.053e5	1.674e5	0.907	1.23	1.24	2990.9	YES	NO	bb	bb	55.321
2	123678-HxCDD	35.97	2.008e5	1.663e5	1.001	1.21	1.24	2938.8	YES	NO	db	db	47.869
3	123478-HxCDD	35.85	2.006e5	1.640e5	0.996	1.22	1.24	2921.9	YES	NO	bd	bd	50.919
4	124679-HXCDD	33.84	1.874e5	1.543e5	1.115	1.21	1.24	2595.9	YES	NO	bb	bb	42.596

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.12	1.446e5	1.427e5	1.039	1.01	1.05	1900.5	YES	NO	bb	bb	48.986
2	1234679-HPCDD	39.07	1.560e5	1.550e5	1.137	1.01	1.05	2189.0	YES	NO	bb	bb	48.476

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	2378-TCDD	26.24	3.925e4	5.086e4	1.149	0.77	0.77	557.9	YES	NO	bb	bb	8.551
2	Total-tetradioxins	25.92	5.664e4	7.547e4	1.024	0.75	0.77	561.4	YES	NO	bb	bb	14.059
3	Total-tetradioxins	25.42	1.871e4	2.281e4	1.024	0.82	0.77	263.5	YES	NO	bd	bb	4.419
4	1368-TCDD	23.36	3.538e4	4.539e4	1.015	0.78	0.77	516.9	YES	NO	bb	bb	8.670
5	12378-PeCDD	31.35	1.676e5	1.110e5	1.022	1.51	1.55	2222.7	YES	NO	bb	bb	49.200
6	Total-pentadioxins	29.75	5.006e2	3.566e2	1.502	1.40	1.55	6.2	YES	NO	bb	bb	0.103
7	12479-PECDD	28.62	2.993e5	1.956e5	2.301	1.53	1.55	2549.3	YES	NO	bb	bb	38.801
8	1289-TCDD	26.83	3.443e4	4.475e4	0.909	0.77	0.77	497.6	YES	NO	bb	bb	9.497
9	123789-HxCDD	36.36	2.053e5	1.674e5	0.907	1.23	1.24	2990.9	YES	NO	bb	bb	55.321
10	123678-HxCDD	35.97	2.008e5	1.663e5	1.001	1.21	1.24	2938.8	YES	NO	db	db	47.869
11	123478-HxCDD	35.85	2.006e5	1.640e5	0.996	1.22	1.24	2921.9	YES	NO	bd	bd	50.919
12	124679-HXCDD	33.84	1.874e5	1.543e5	1.115	1.21	1.24	2595.9	YES	NO	bb	bb	42.596
13	12389-PECDD	31.75	1.811e5	1.197e5	1.184	1.51	1.55	2402.1	YES	NO	bb	bb	45.865
14	OCDD	44.82	2.205e5	2.612e5	0.920	0.84	0.89	2762.1	YES	NO	bb	bb	100.413
15	1234678-HpCDD	40.12	1.446e5	1.427e5	1.039	1.01	1.05	1900.5	YES	NO	bb	bb	48.986
16	1234679-HPCDD	39.07	1.560e5	1.550e5	1.137	1.01	1.05	2189.0	YES	NO	bb	bb	48.476

ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.897e4	4.208e4	0.678	0.69	0.77	659.7	YES	NO	bb	db	9.777
2	2378-TCDF	25.59	2.979e4	4.206e4	0.702	0.71	0.77	640.9	YES	NO	bb	bb	9.555
3	Total-tetrafurans	24.36	4.028e2	5.918e2	0.727	0.68	0.77	7.9	YES	NO	bd	bd	0.128
4	1368-TCDF	22.09	3.127e4	4.397e4	0.802	0.71	0.77	749.3	YES	NO	bb	bb	8.758
5	12389-PECDF	32.13	1.310e5	9.046e4	0.496	1.45	1.55	2004.5	YES	NO	bb	bb	52.844
6	23478-PeCDF	31.09	1.520e5	1.045e5	0.786	1.45	1.55	2425.3	YES	NO	bb	bb	43.608
7	Total-pentafurans	29.96	1.550e2	1.129e2	0.654	1.37	1.55	5.5	YES	NO	bb	bb	0.051
8	12378-PeCDF	29.76	1.551e5	1.075e5	0.679	1.44	1.55	2458.1	YES	NO	bb	bb	45.797
9	Total-pentafurans	28.61	2.438e4	1.666e4	0.654	1.46	1.55	384.5	YES	NO	bb	bd	7.882
10	123789-HxCDF	36.78	1.994e5	1.625e5	1.137	1.23	1.24	2433.7	YES	NO	bb	bb	44.050
11	234678-HxCDF	35.74	2.278e5	1.829e5	1.140	1.25	1.24	2940.7	YES	NO	bb	bb	46.403
12	123678-HxCDF	34.87	2.208e5	1.774e5	1.091	1.24	1.24	2725.0	YES	NO	db	db	45.341
13	123478-HxCDF	34.74	2.159e5	1.748e5	1.166	1.24	1.24	2661.4	YES	NO	bd	bd	44.821
14	123468-HXCDF	33.06	2.060e5	1.675e5	1.169	1.23	1.24	2448.7	YES	NO	bb	bb	42.737
15	1234678-HpCDF	38.63	1.279e5	1.318e5	1.003	0.97	1.05	2214.2	YES	NO	bb	bb	45.801
16	OCDF	45.05	1.566e5	1.781e5	0.778	0.88	0.89	2439.8	YES	NO	bd	bb	82.512
17	1234789-HpCDF	40.84	1.208e5	1.267e5	0.953	0.95	1.05	1776.1	YES	NO	bb	bb	49.278
18	Total-heptafurans	39.27	1.244e3	1.153e3	0.978	1.08	1.05	23.2	YES	NO	bb	bb	0.449
19	13468-PECDF	26.95	3.631e5	2.387e5	1.246	1.52	1.55	7416.2	YES	NO	bb	bb	57.191
20	2378-TCDD	26.24	3.925e4	5.086e4	1.149	0.77	0.77	557.9	YES	NO	bb	bb	8.551
21	Total-tetradioxins	25.92	5.664e4	7.547e4	1.024	0.75	0.77	561.4	YES	NO	bb	bb	14.059
22	Total-tetradioxins	25.42	1.871e4	2.281e4	1.024	0.82	0.77	263.5	YES	NO	bd	bb	4.419
23	1368-TCDD	23.36	3.538e4	4.539e4	1.015	0.78	0.77	516.9	YES	NO	bb	bb	8.670
24	12378-PeCDD	31.35	1.676e5	1.110e5	1.022	1.51	1.55	2222.7	YES	NO	bb	bb	49.200
25	Total-pentadioxins	29.75	5.006e2	3.566e2	1.502	1.40	1.55	6.2	YES	NO	bb	bb	0.103
26	12479-PECDD	28.62	2.993e5	1.956e5	2.301	1.53	1.55	2549.3	YES	NO	bb	bb	38.801
27	1289-TCDD	26.83	3.443e4	4.475e4	0.909	0.77	0.77	497.6	YES	NO	bb	bb	9.497
28	123789-HxCDD	36.36	2.053e5	1.674e5	0.907	1.23	1.24	2990.9	YES	NO	bb	bb	55.321
29	123678-HxCDD	35.97	2.008e5	1.663e5	1.001	1.21	1.24	2938.8	YES	NO	db	db	47.869
30	123478-HxCDD	35.85	2.006e5	1.640e5	0.996	1.22	1.24	2921.9	YES	NO	bd	bd	50.919
31	124679-HXCDD	33.84	1.874e5	1.543e5	1.115	1.21	1.24	2595.9	YES	NO	bb	bb	42.596
32	12389-PECDD	31.75	1.811e5	1.197e5	1.184	1.51	1.55	2402.1	YES	NO	bb	bb	45.865
33	OCDD	44.82	2.205e5	2.612e5	0.920	0.84	0.89	2762.1	YES	NO	bb	bb	100.413
34	1234678-HpCDD	40.12	1.446e5	1.427e5	1.039	1.01	1.05	1900.5	YES	NO	bb	bb	48.986
35	1234679-HPCDD	39.07	1.560e5	1.550e5	1.137	1.01	1.05	2189.0	YES	NO	bb	bb	48.476

ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	27.46	6.085e7					5.6	YES		db		
2	FUNCTION1 PFK	22.47	3.250e7					47.6	YES		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	35.67	2.615e5					3.6	YES		bb		0.000
2	FUNCTION3 PFK	32.80	1.911e5					2.6	NO		bb		0.000

PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	37.77	2.304e4					2.2	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	21.51	1.457e2					2.6	NO		bb		0.000
2	FUNCTION1 HXCD...	26.23	1.446e2					4.1	YES		bb		0.000
3	FUNCTION1 HXCD...	23.27	1.177e2					1.7	NO		db		0.000
4	FUNCTION1 HXCD...	23.06	1.299e2					3.1	YES		bd		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	30.94	2.690e2					7.0	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 OCDPE	33.65	1.194e2					2.6	NO		bb		0.000

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.87	9.583e1					2.6	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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Printed: Monday, March 13, 2023 11:43:07 Pacific Daylight Time

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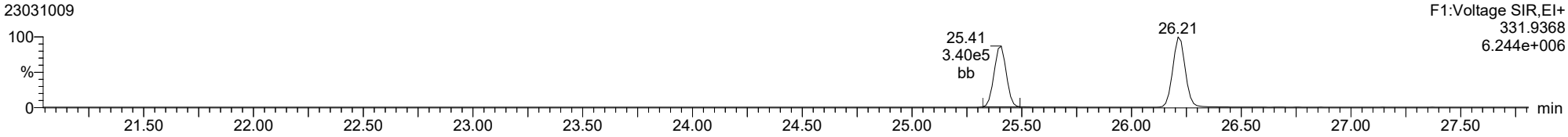
ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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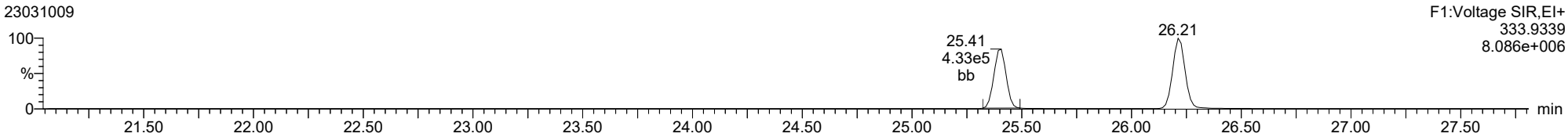

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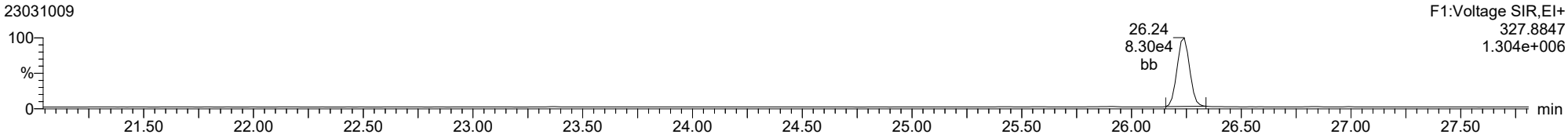

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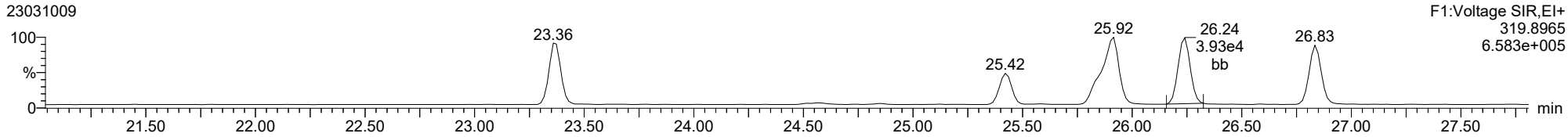

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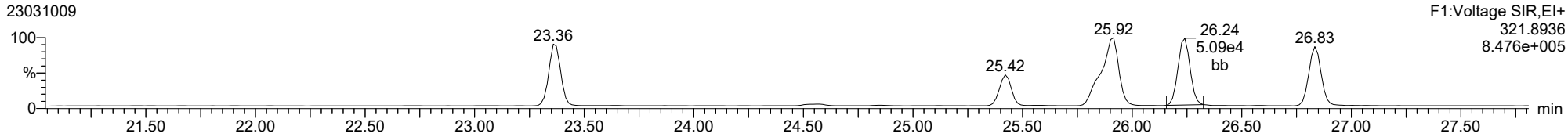

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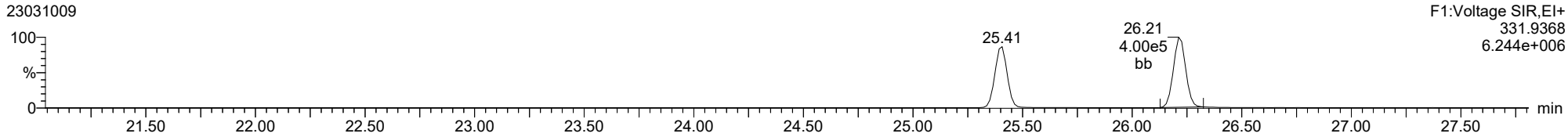

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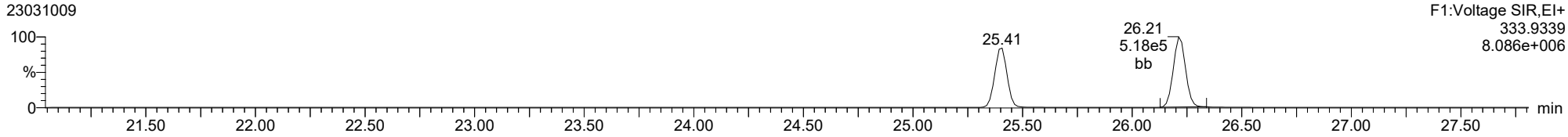

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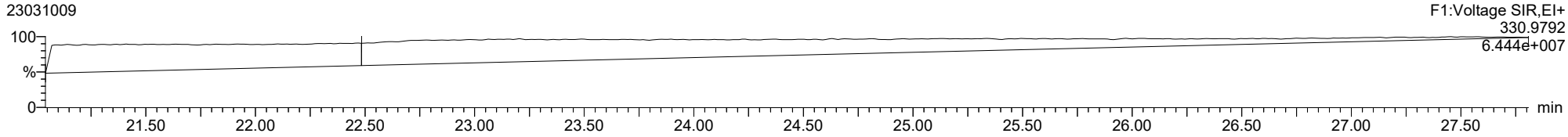

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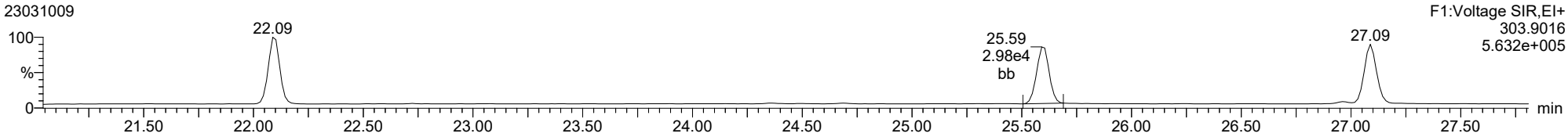
2378-TCDF



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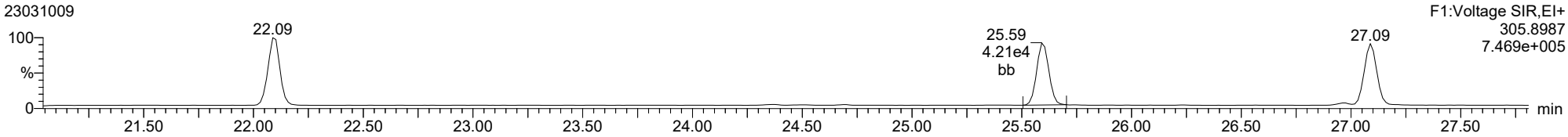

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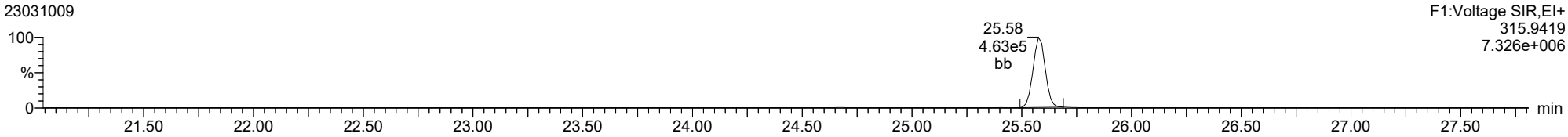

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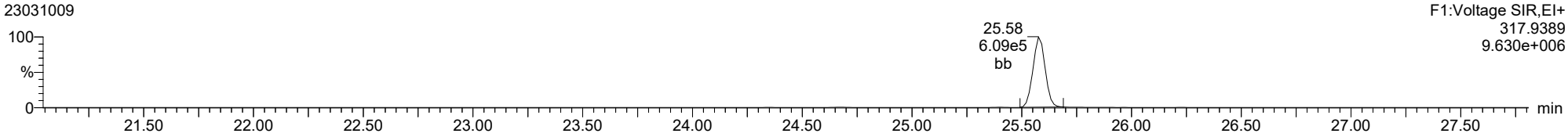
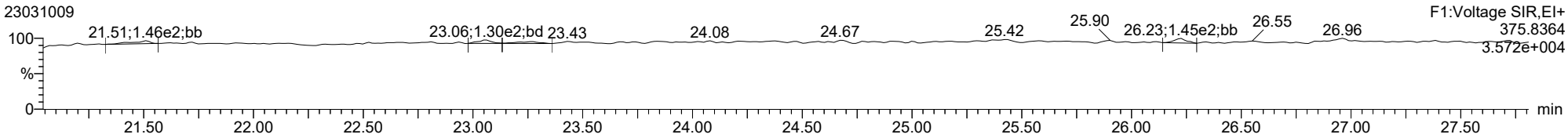
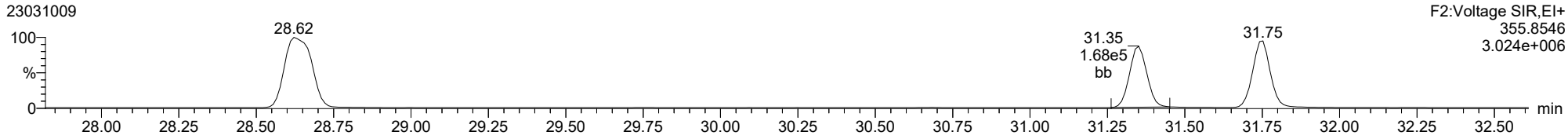


FUNCTION1 HXCDPE



ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

12378-PeCDD



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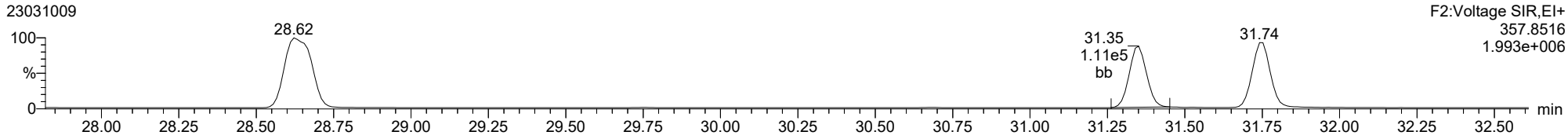

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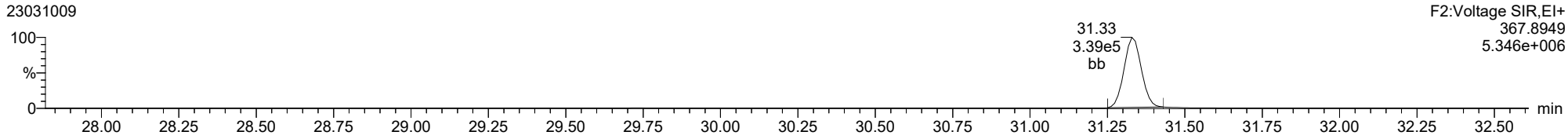

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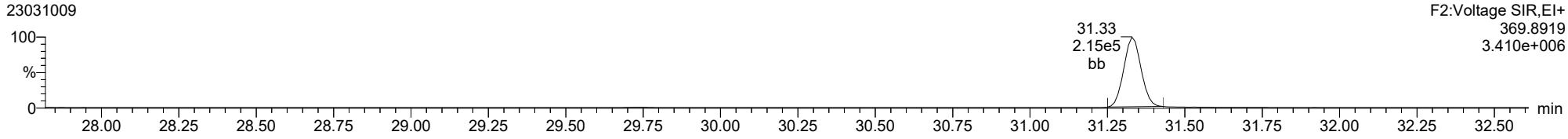
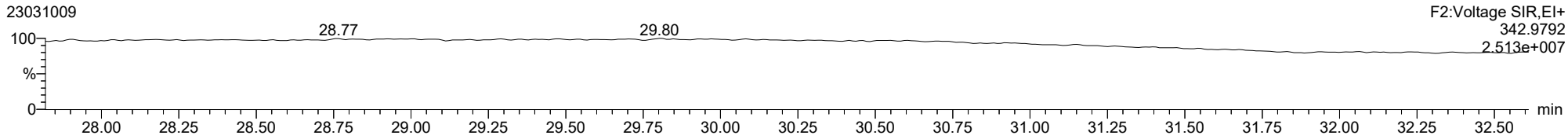


FUNCTION2 PFK



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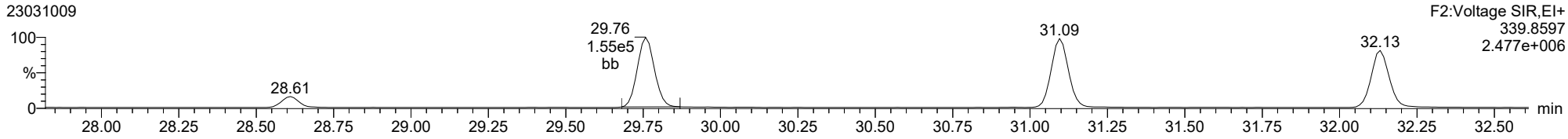
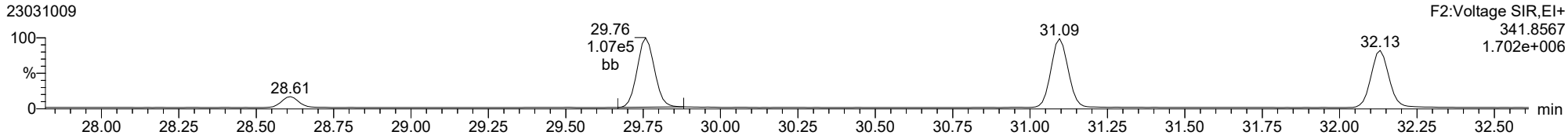
12378-PeCDF



12378-PeCDF



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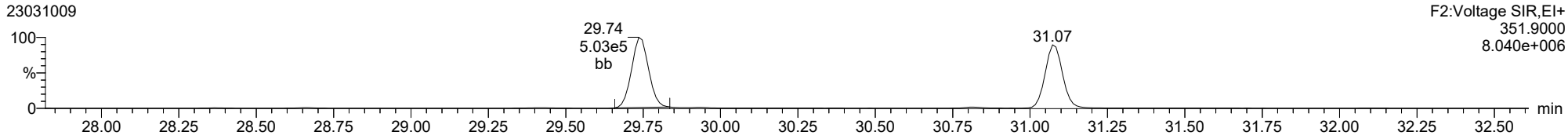

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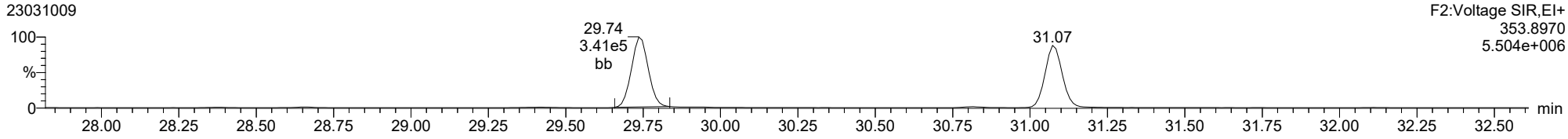
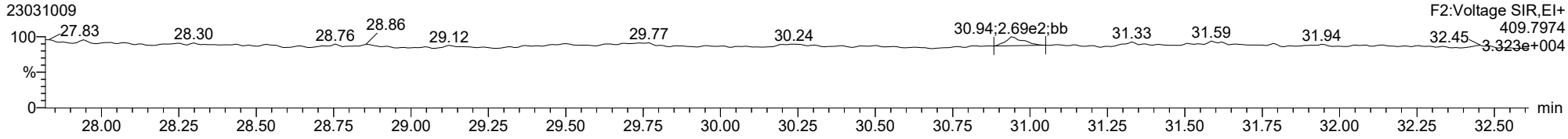
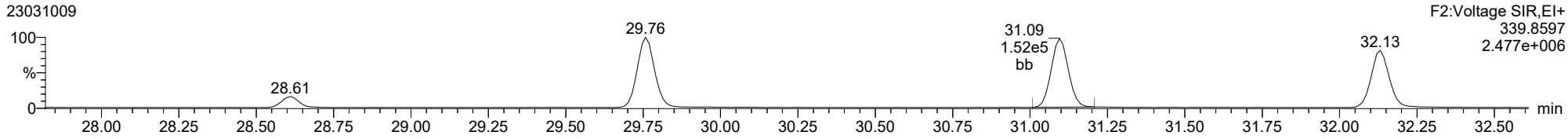


FUNCTION2 HPCDPE

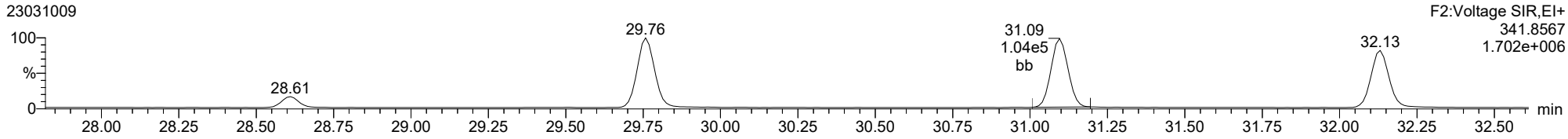


ID: CS3Y4, Name: 23031009, Date: 10-Mar-2023, Time: 16:56:38, Conditions: AUTOSPEC01, User: pk

23478-PeCDF



23478-PeCDF



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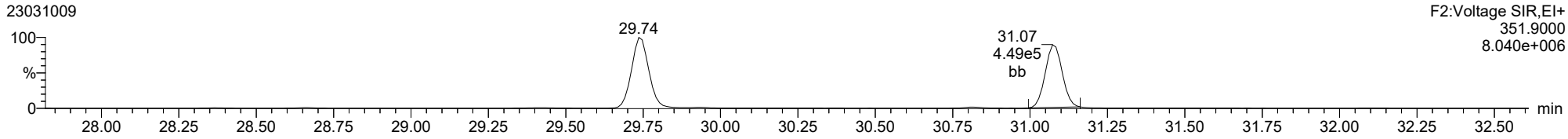
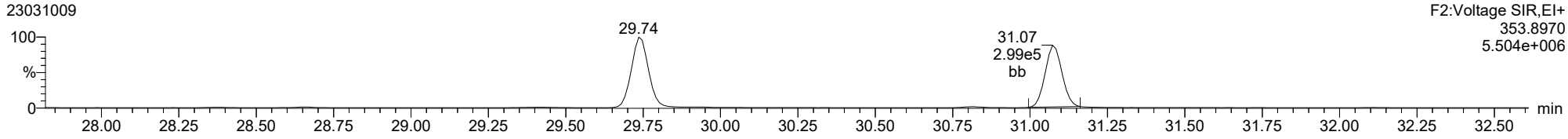


13C-23478-PeCDF



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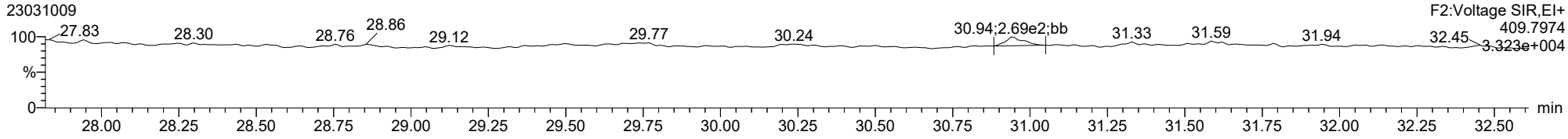

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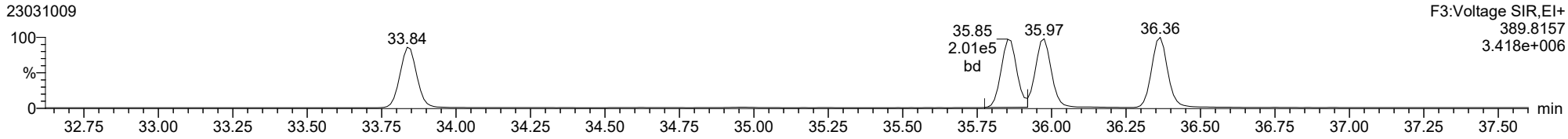

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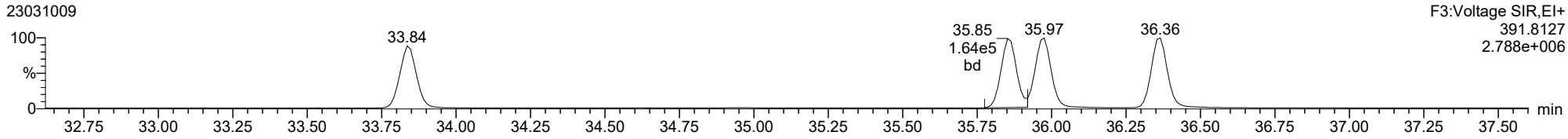

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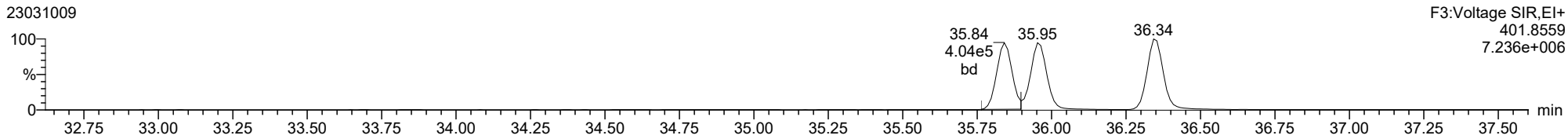

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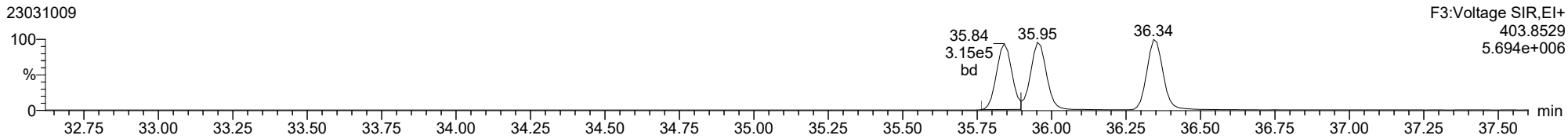

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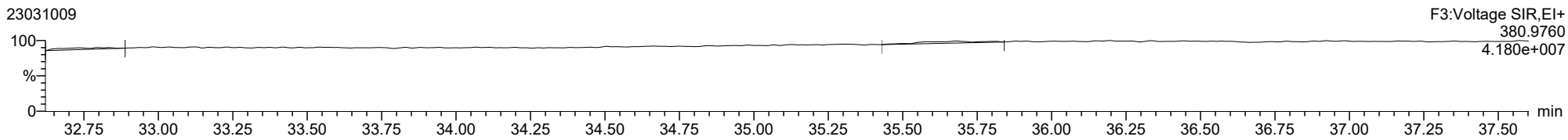

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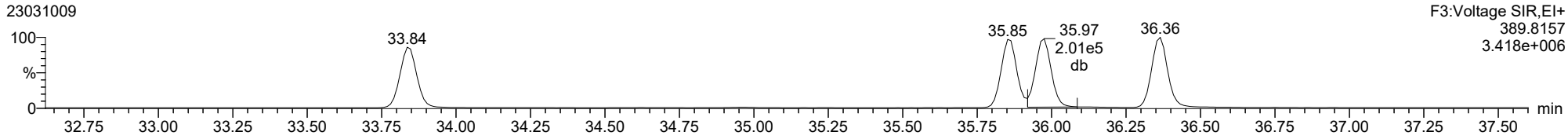

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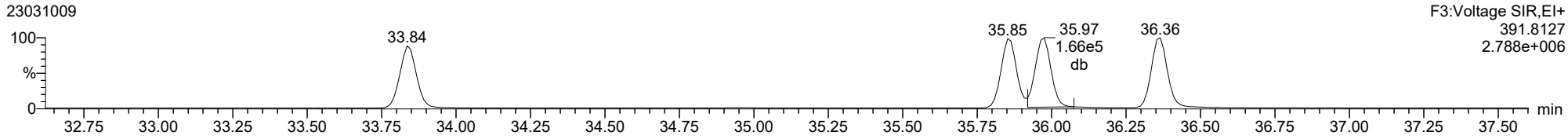

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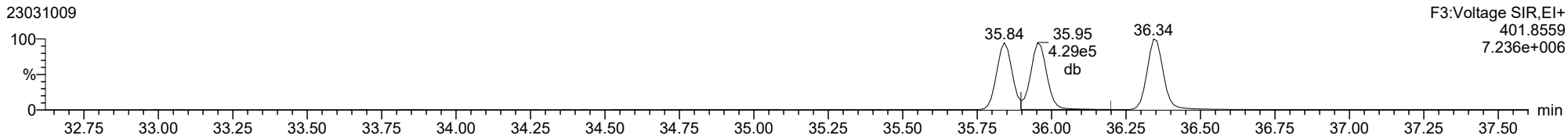

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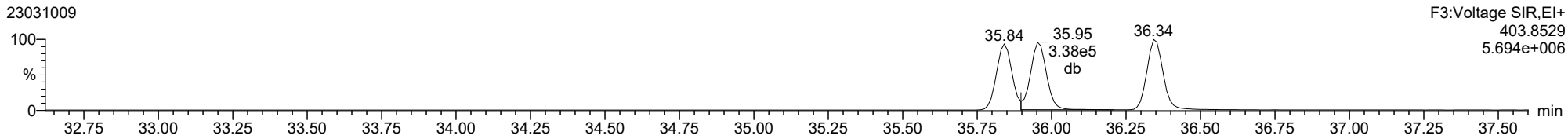

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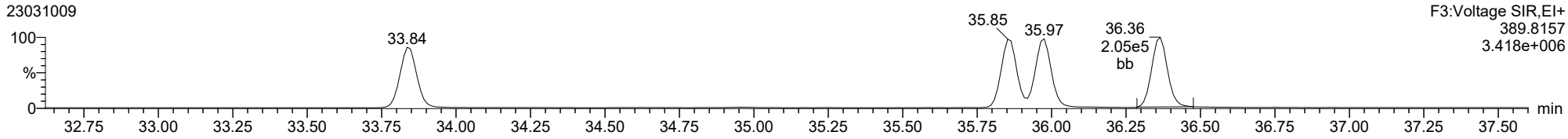

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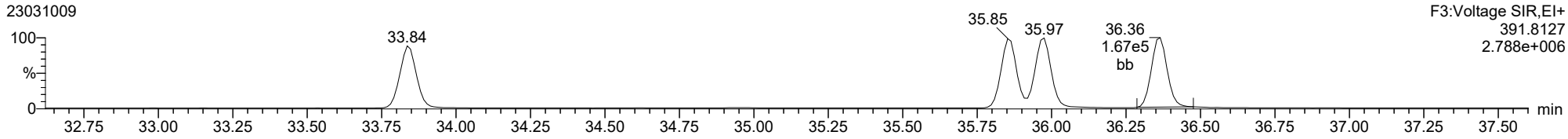

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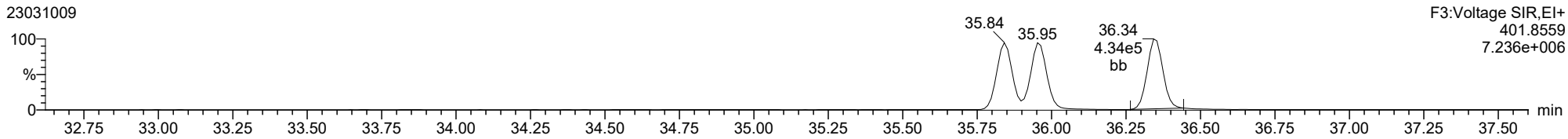

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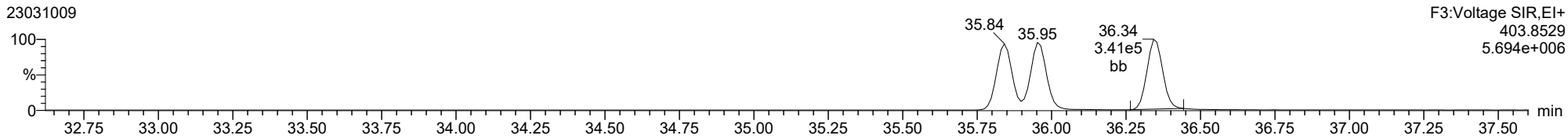

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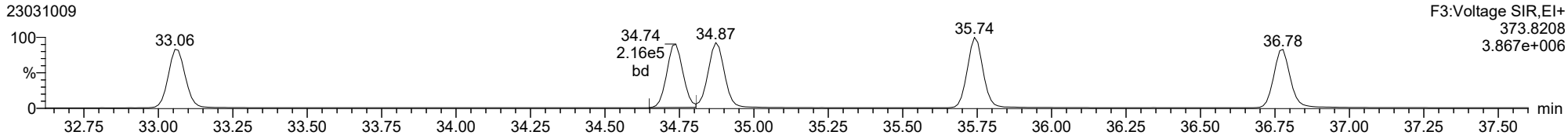

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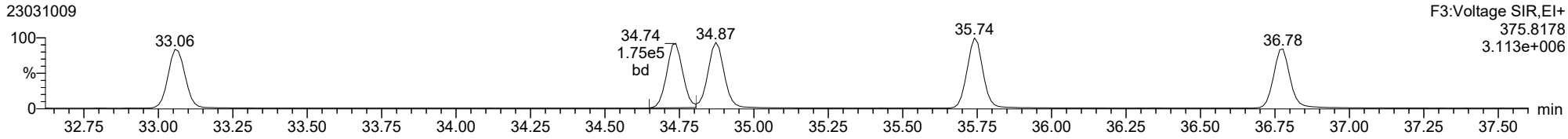

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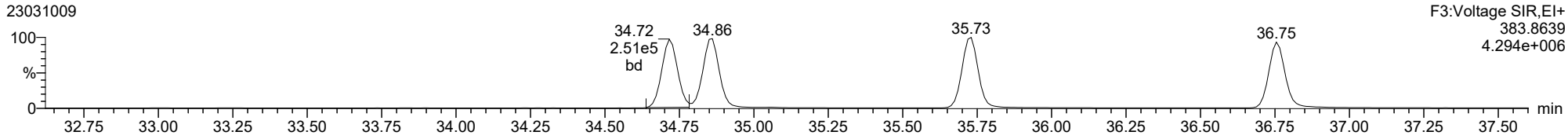

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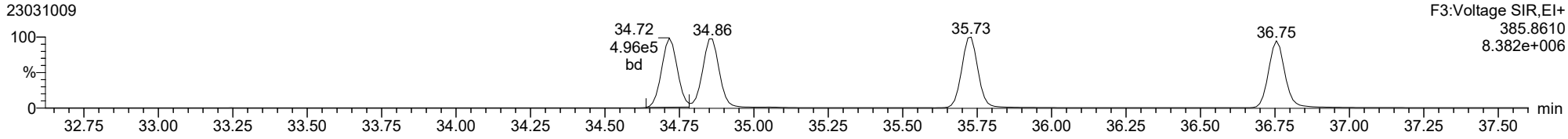

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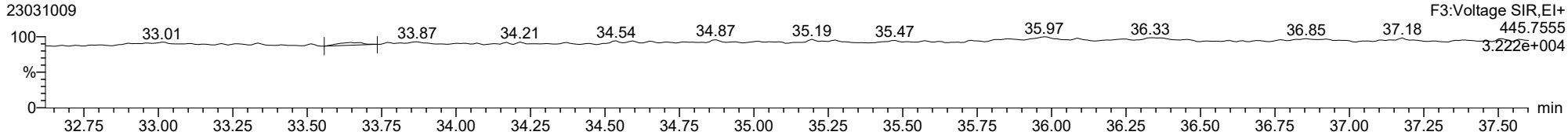

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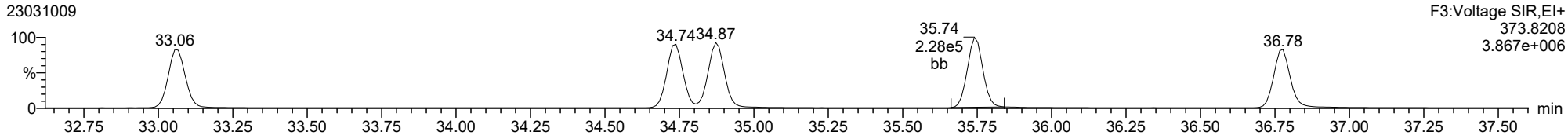

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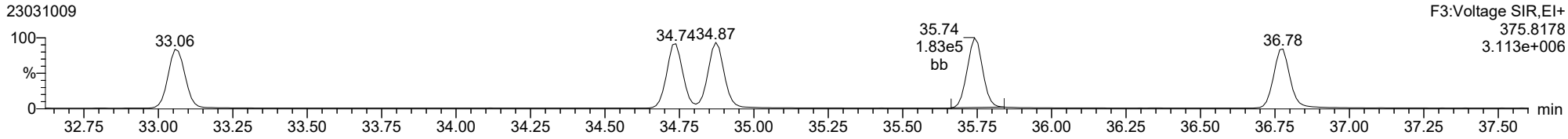

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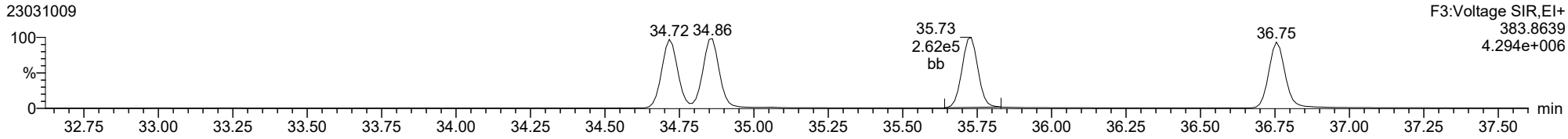

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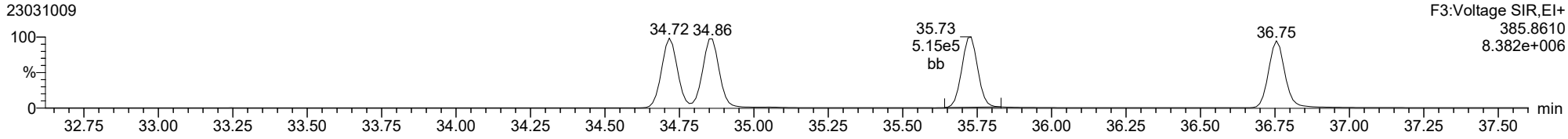

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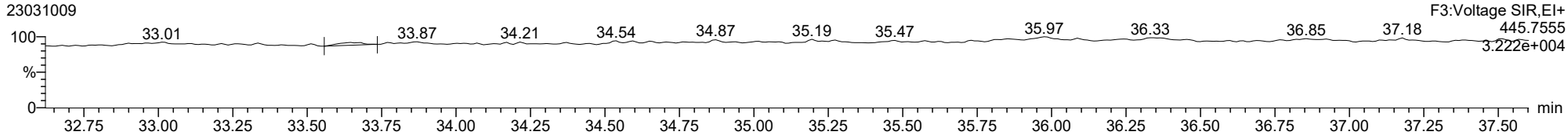

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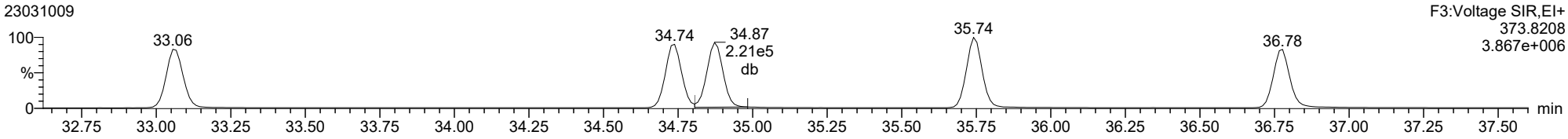

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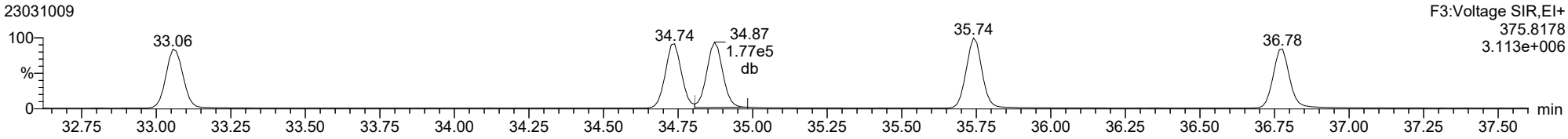

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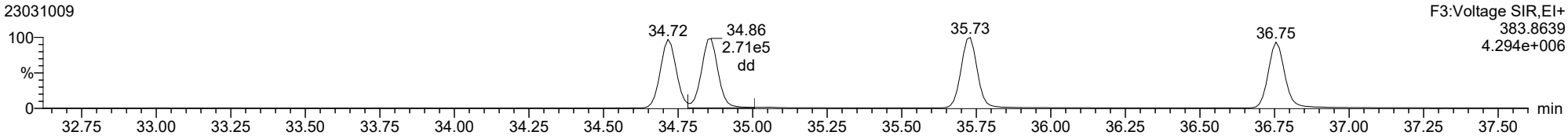

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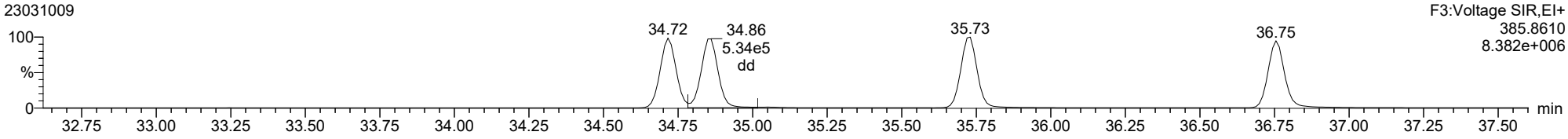

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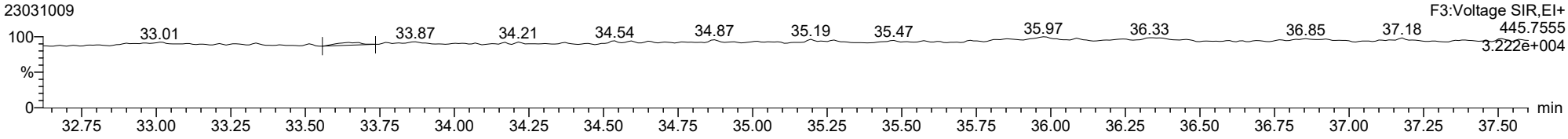

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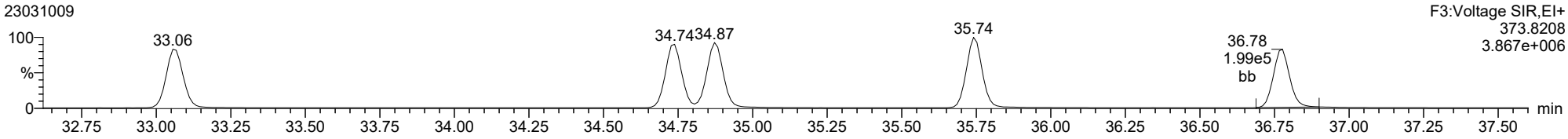

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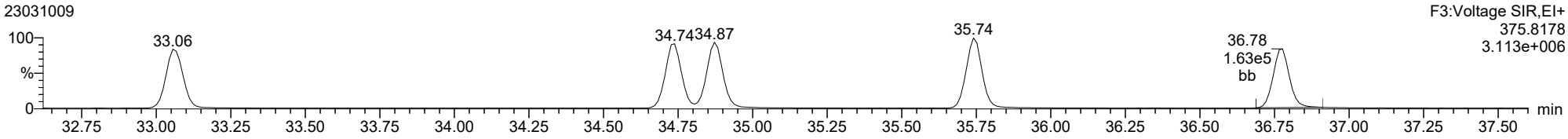

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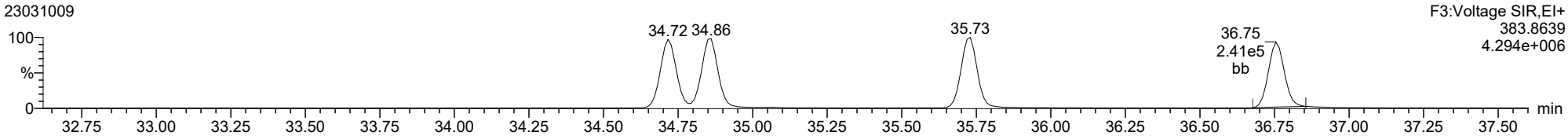

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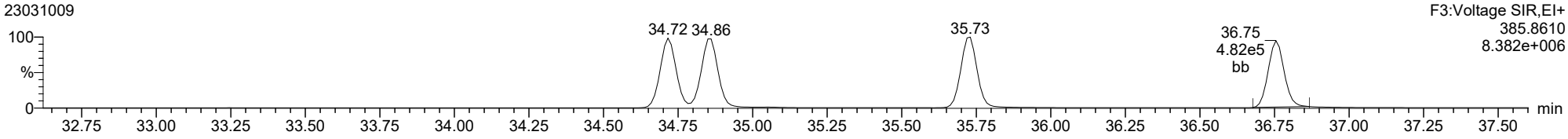

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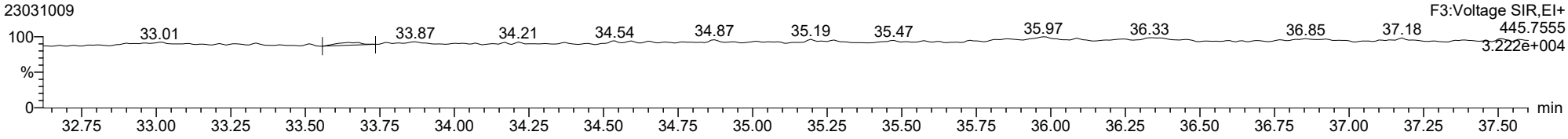

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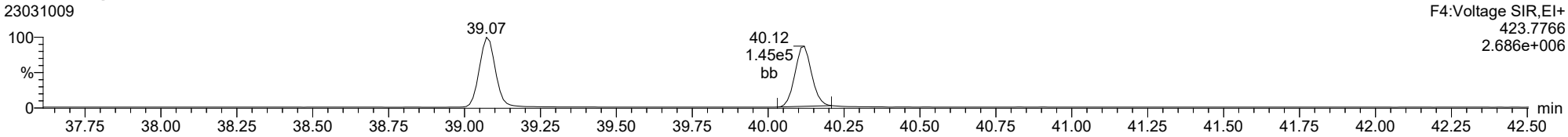

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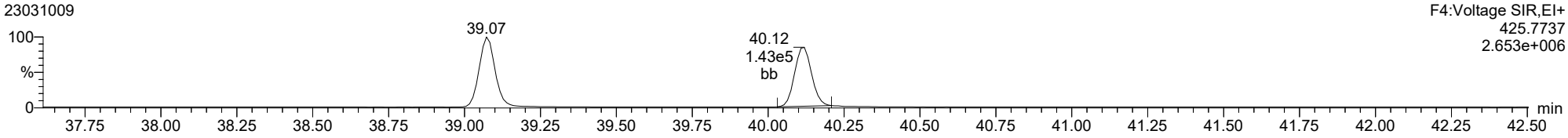

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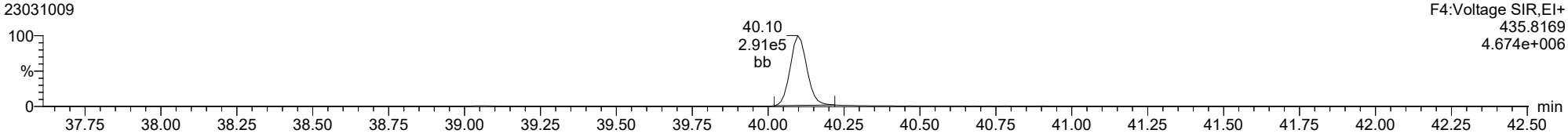

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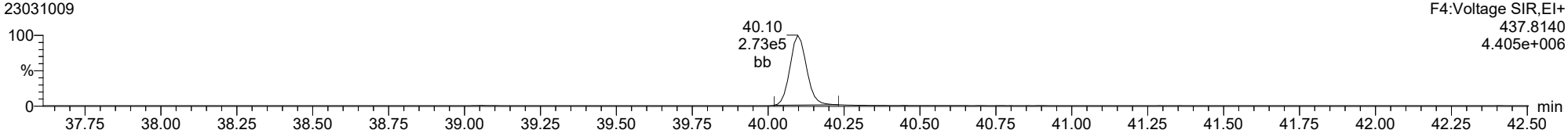

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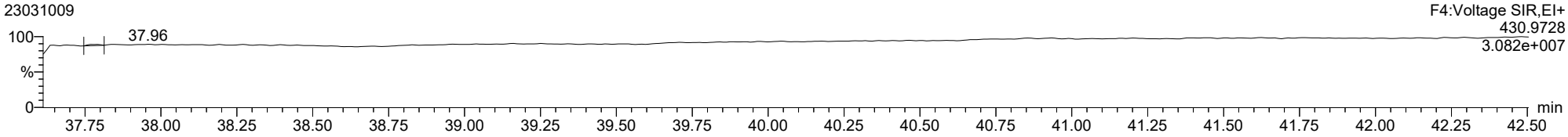

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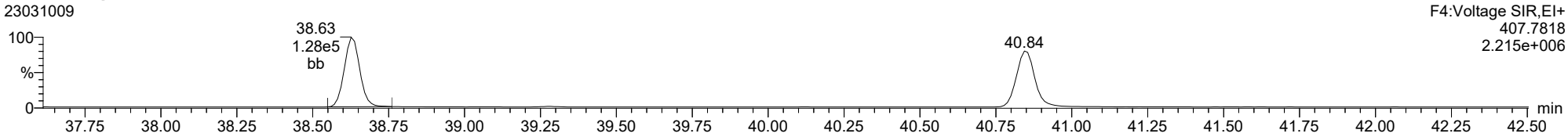

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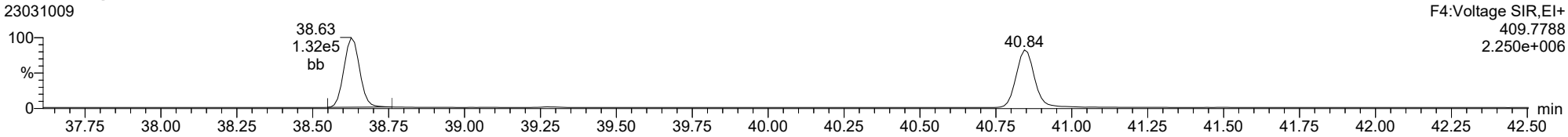

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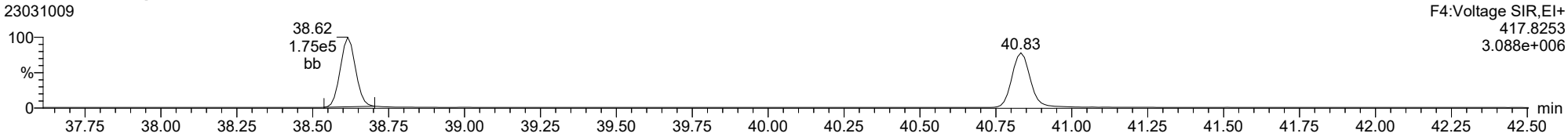

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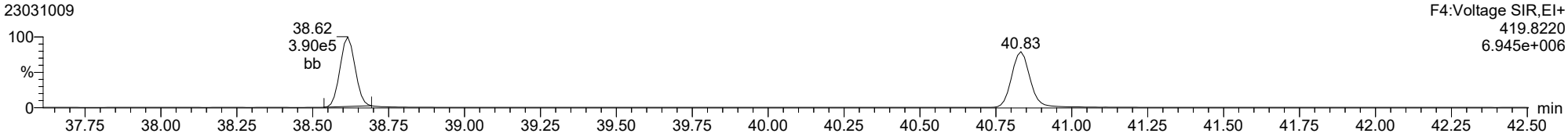

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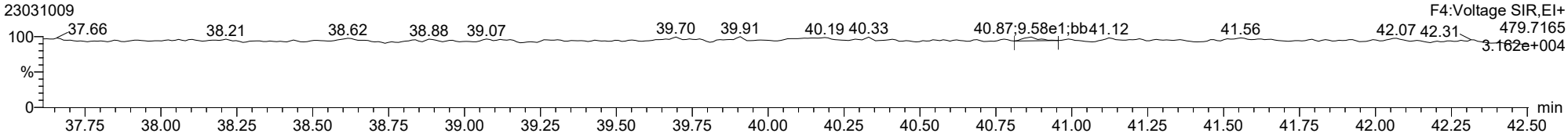

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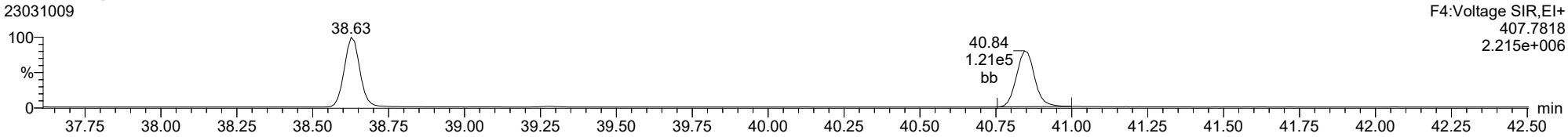

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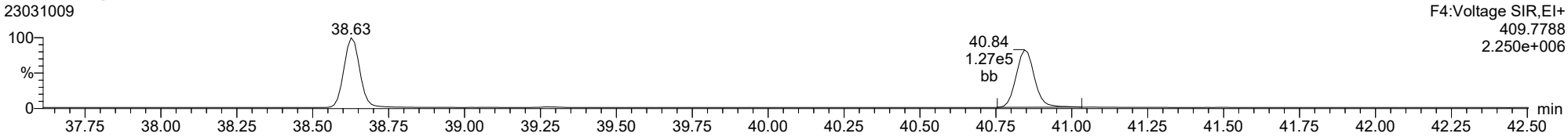

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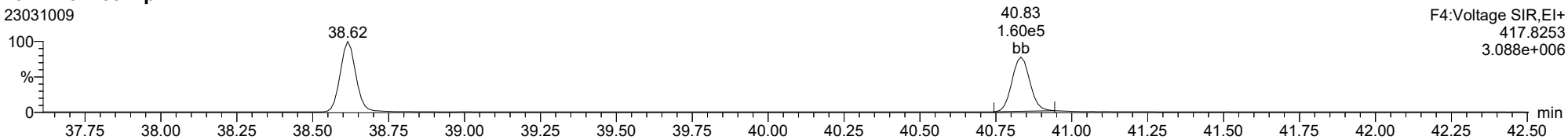

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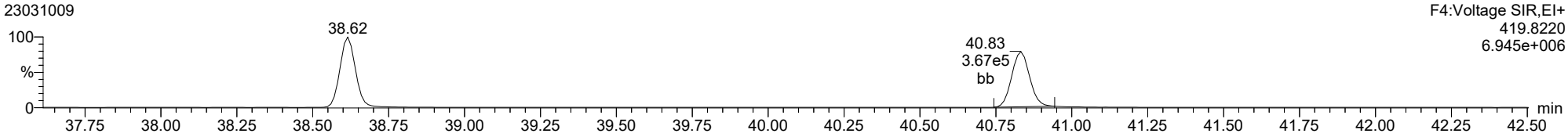

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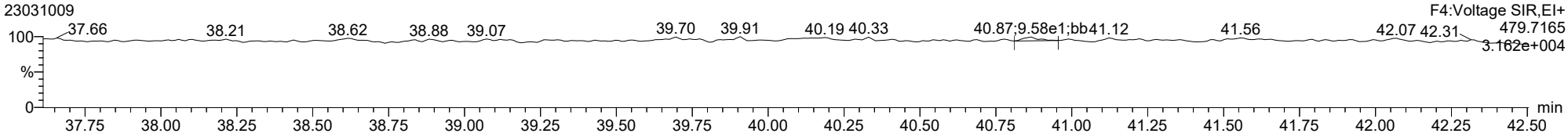

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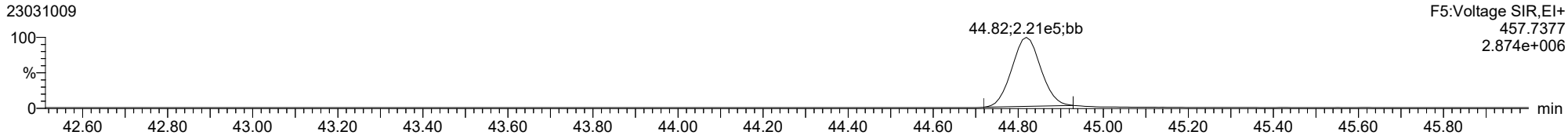

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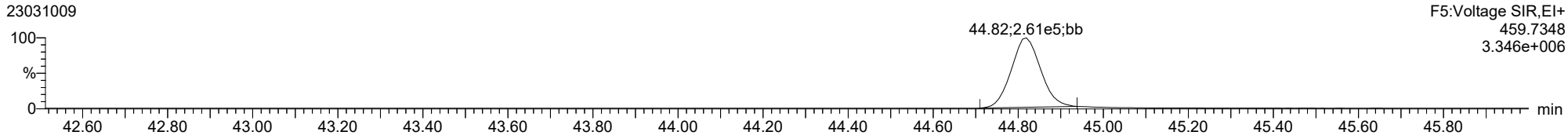

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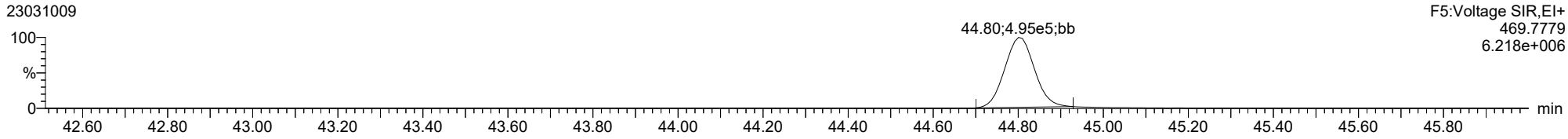

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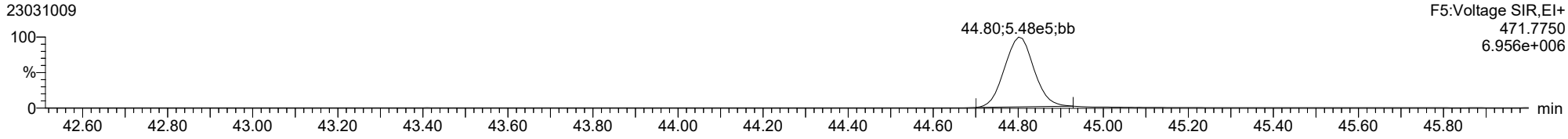

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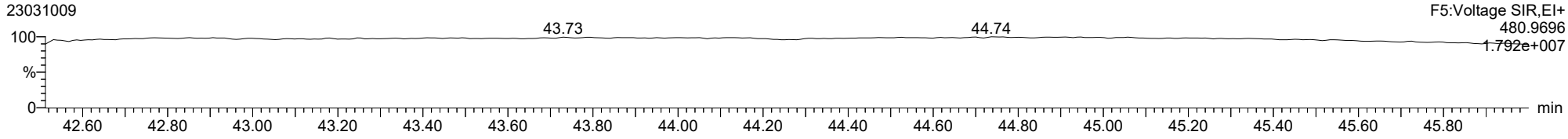

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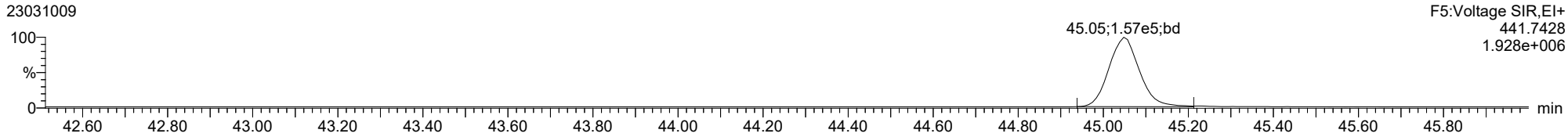

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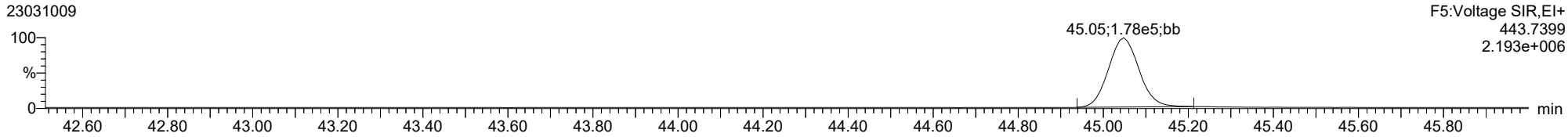
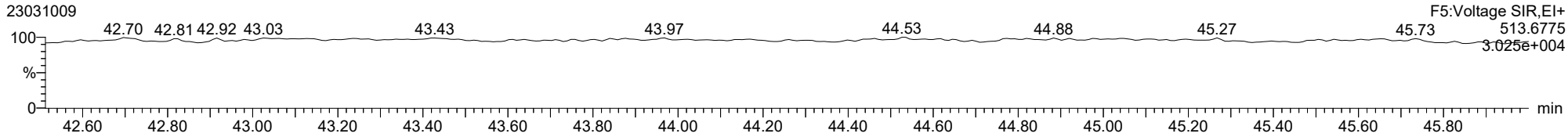


FUNCTION5 DCDPE



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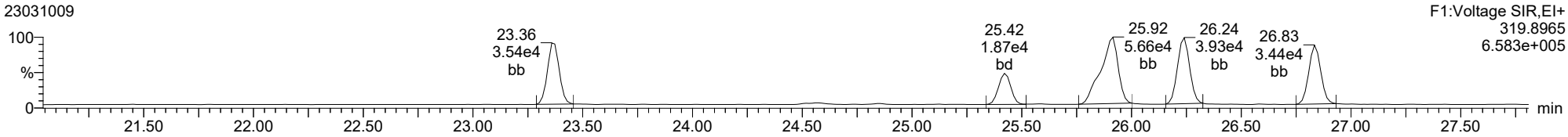

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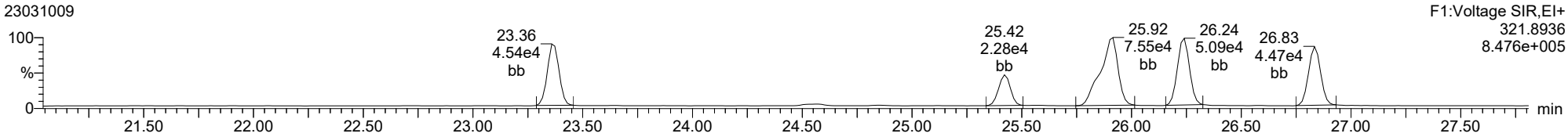

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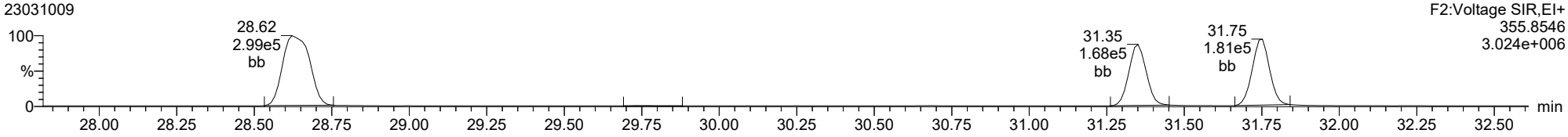

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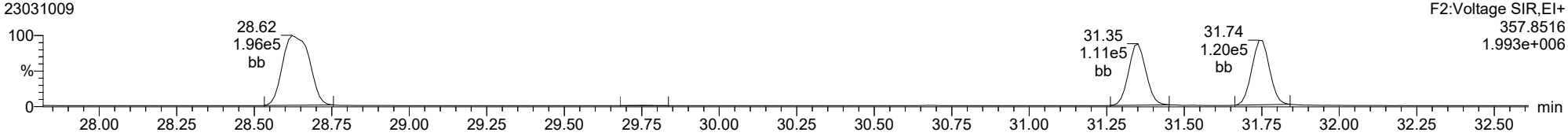

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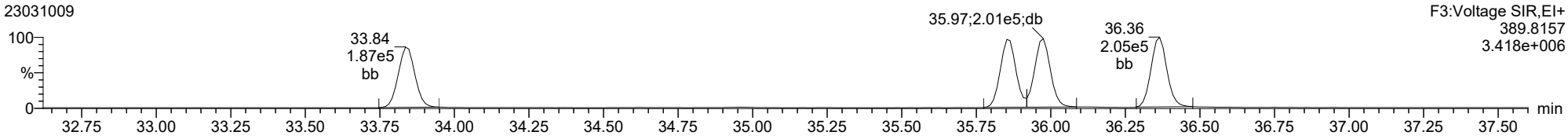

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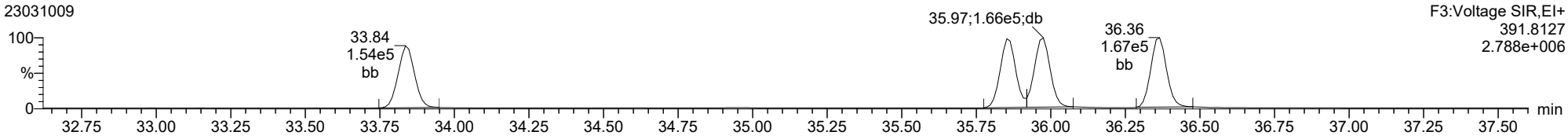

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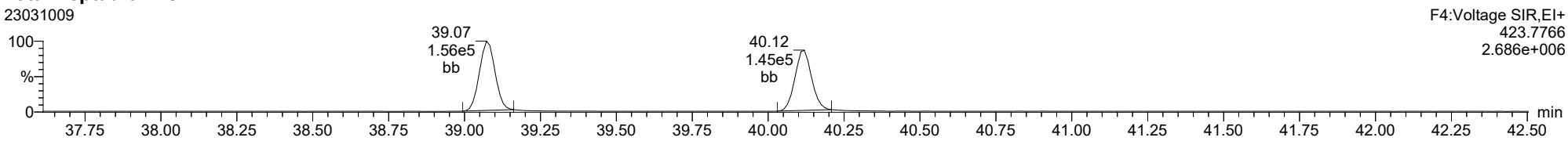

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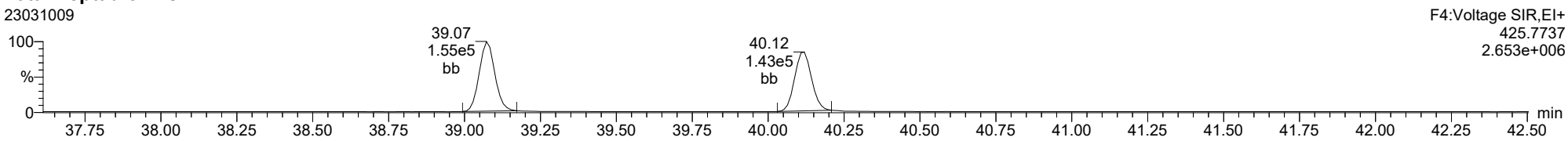

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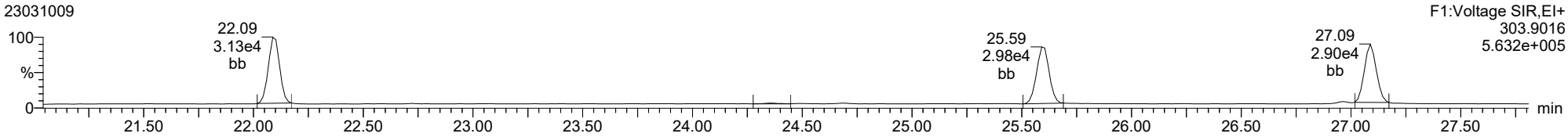

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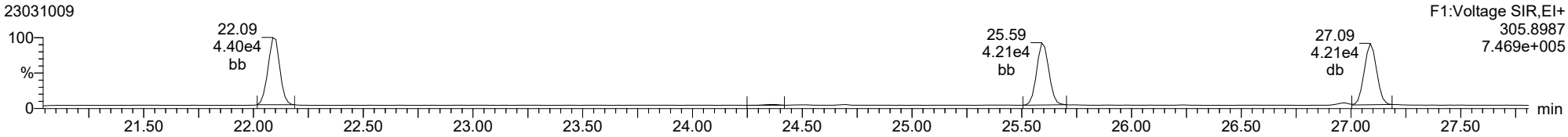

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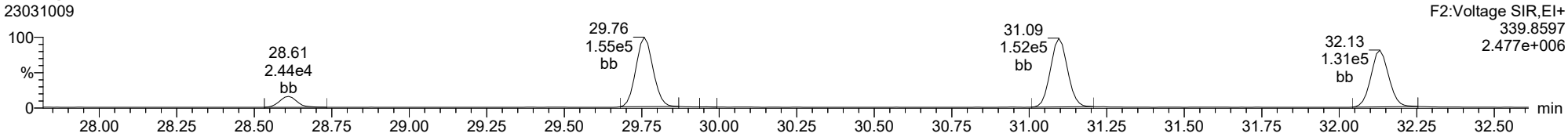

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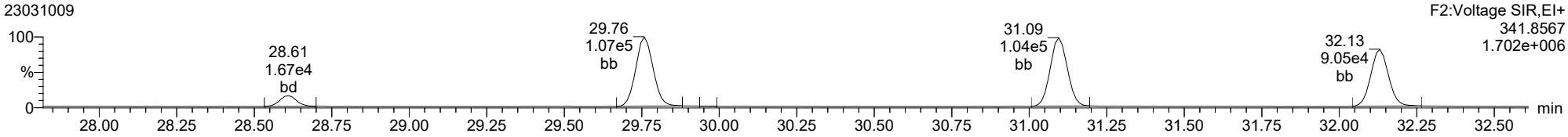

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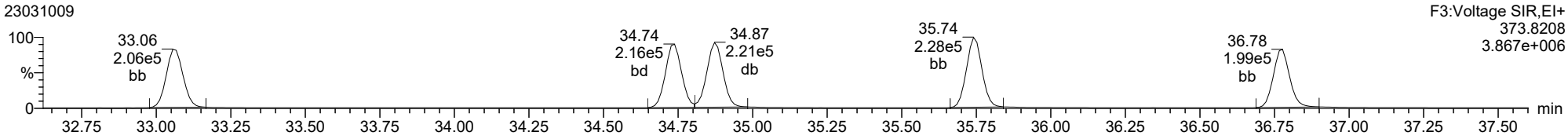

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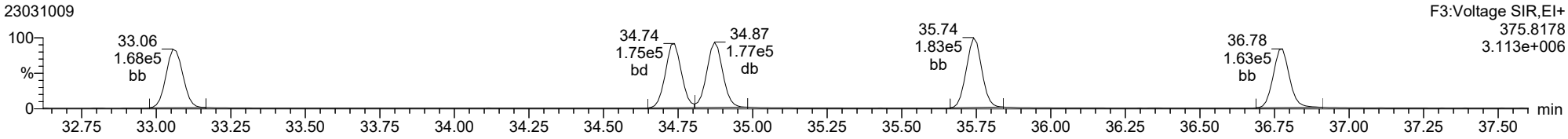

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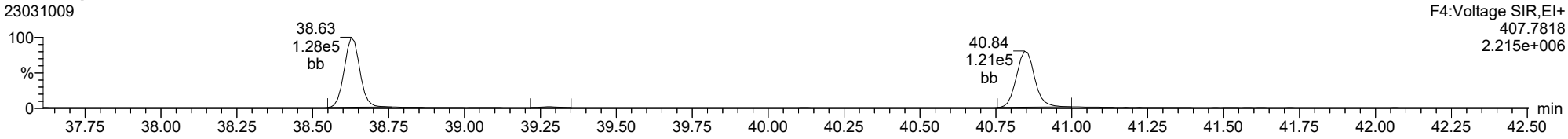

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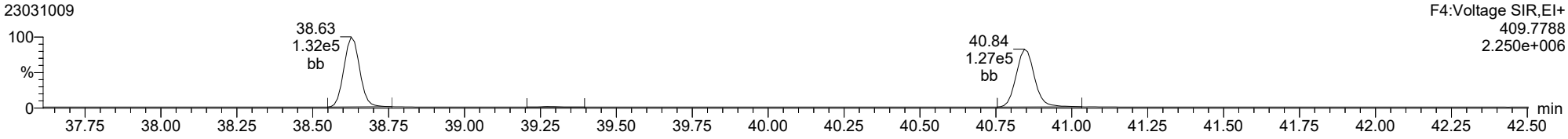

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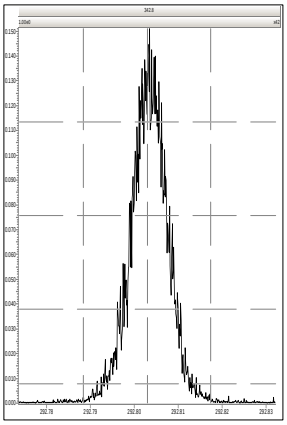

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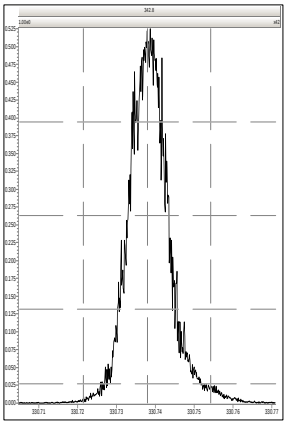

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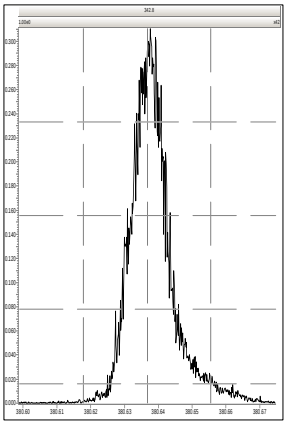

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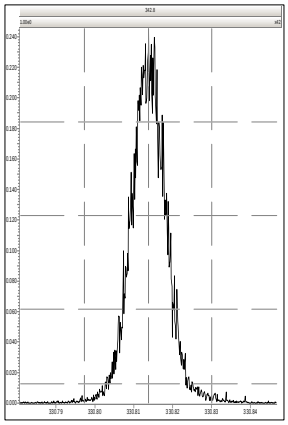

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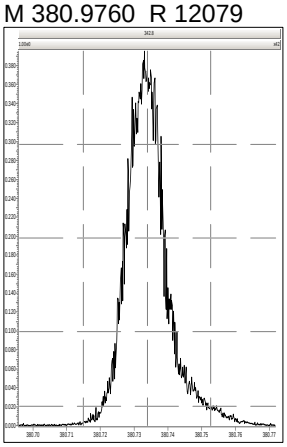

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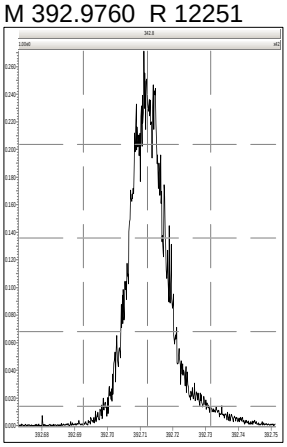

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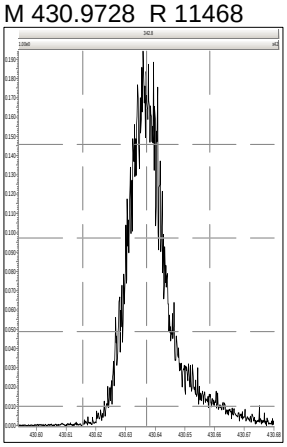

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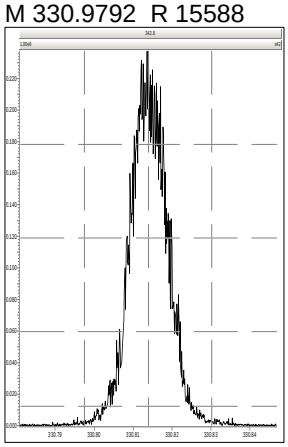

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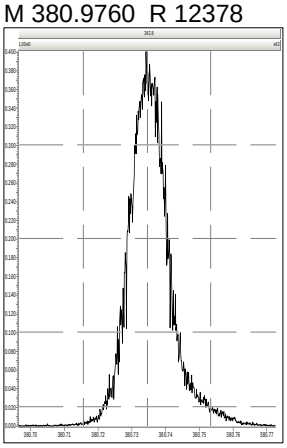

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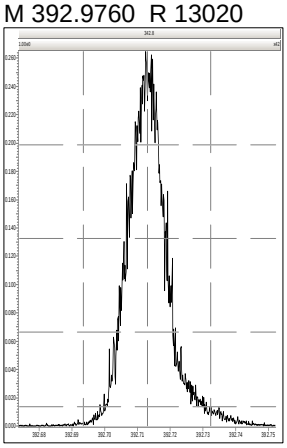

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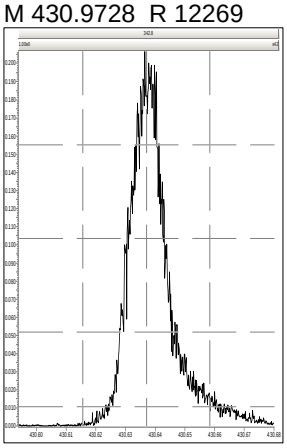

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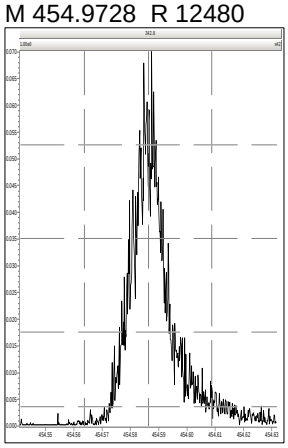

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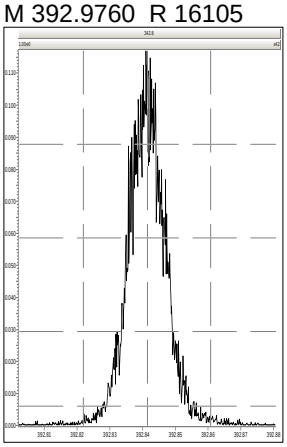

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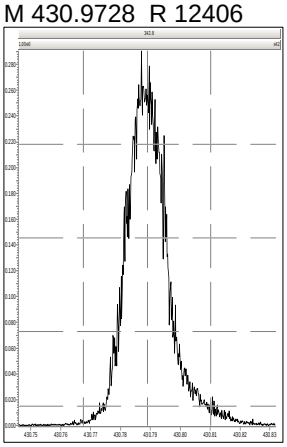

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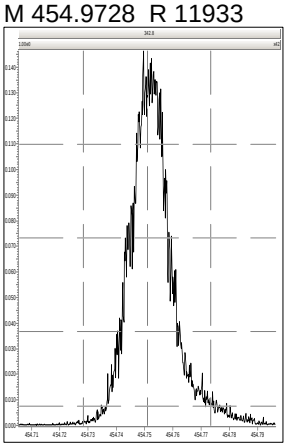

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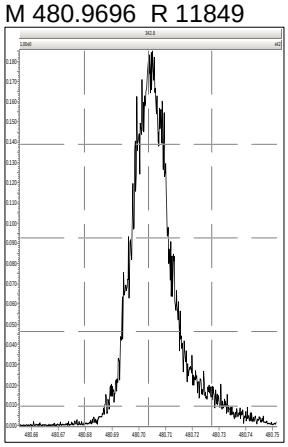

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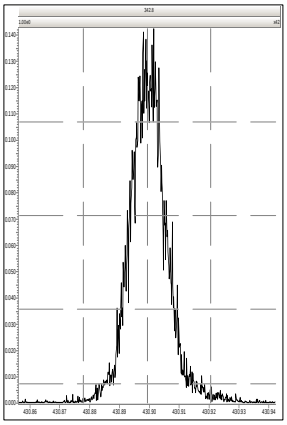

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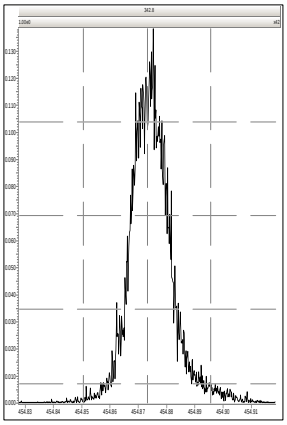

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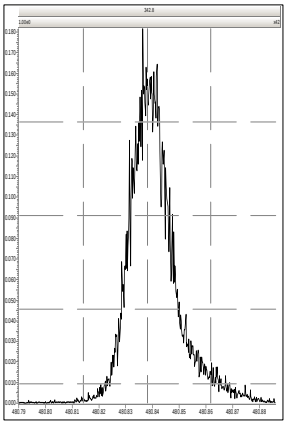
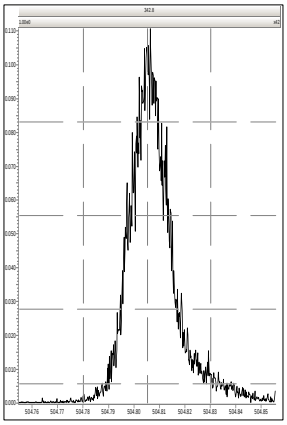
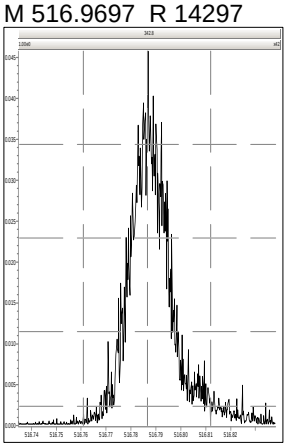
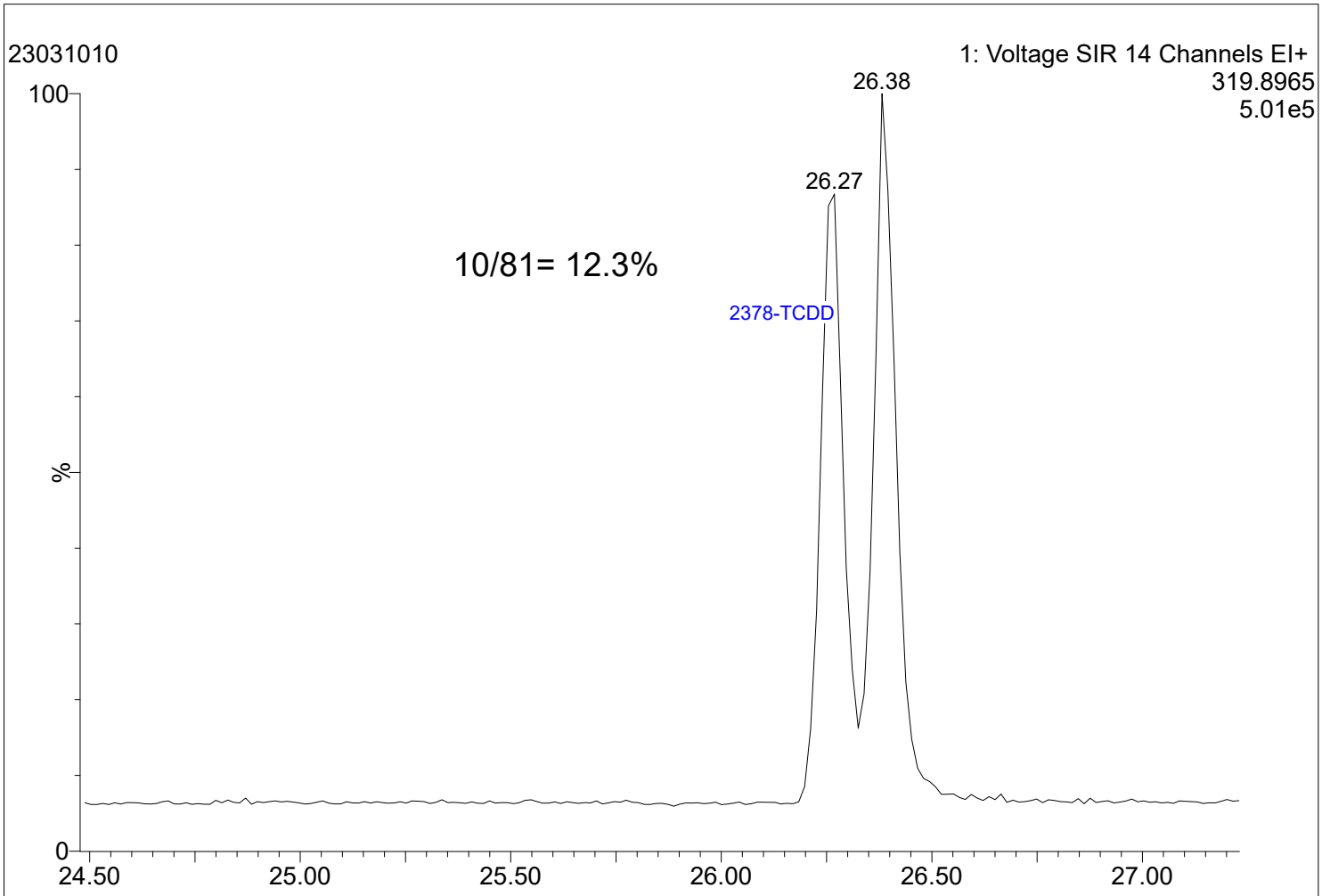


M 504.9696 R 12213



M 516.9697 R 14297

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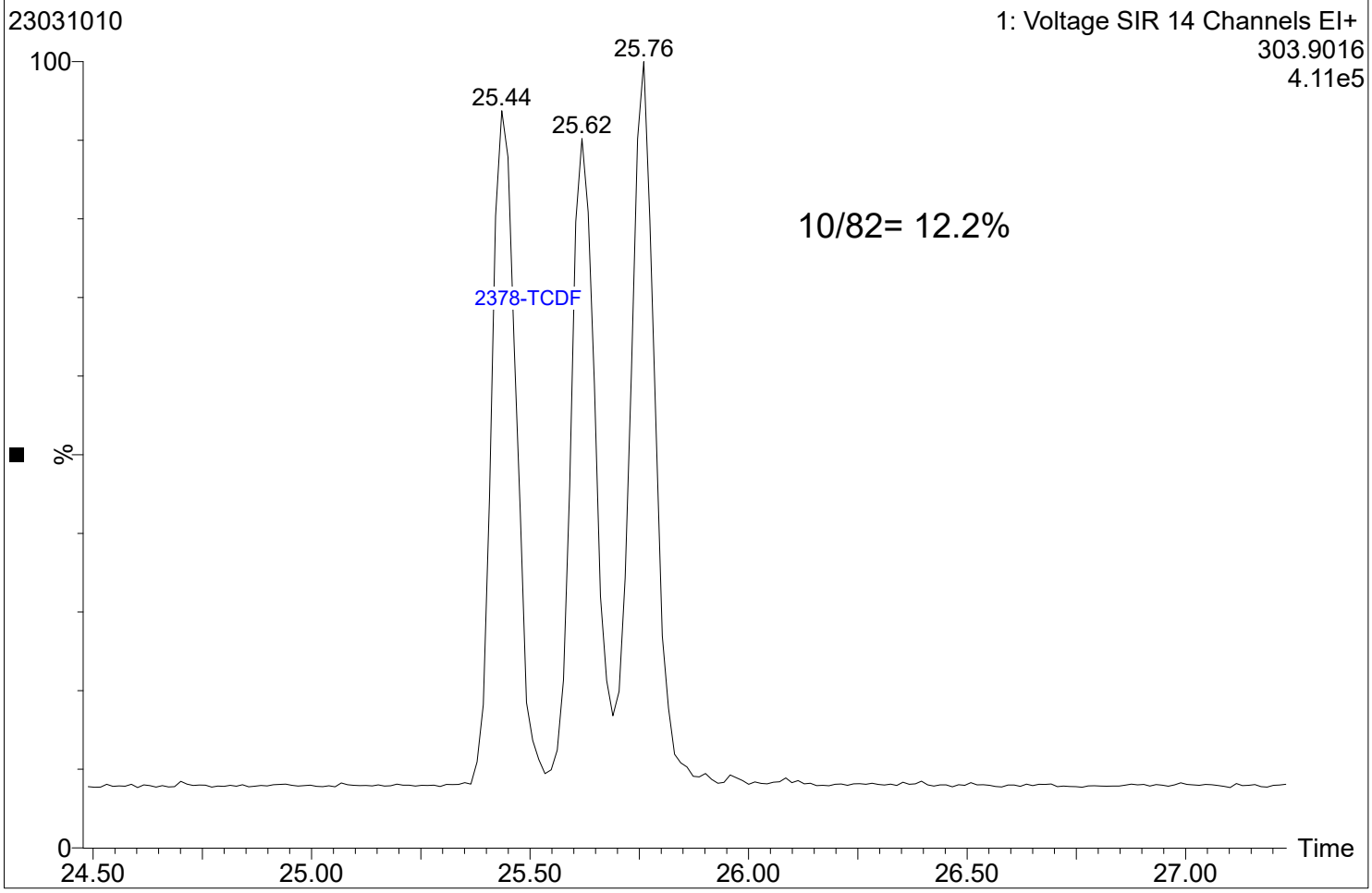
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4.11e5
25.76
25.44
25.62
10/82= 12.2%
2378-TCDF
100
%
0
Time
24.50
25.00
25.50
26.00
26.50
27.00

Analytical Resources, LLC
Analytical Chemists and Consultants

CONTINUING CALIBRATION CHECK
EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Instrument ID:	AUTOSPEC01	Calibration:	GC00015
Lab File ID:	23031016	Calibration Date:	03/03/2023
Sequence:	SLC0124	Injection Date:	03/10/23
Lab Sample ID:	SLC0124-CCV2	Injection Time:	22:46
Sequence Name:	CS3Y5		

		CONC. (ng/mL)		RESPONSE FACTOR (RRF)			% DRIFT/DIFF	
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN	CCV	LIMIT
2,3,7,8-TCDF	A	10.000	10.1	0.7015272	0.7097281		1.2	+/-16
2,3,7,8-TCDD	A	10.000	9.01	1.1486620	1.0349170		-9.9	+/-22
1,2,3,7,8-PeCDF	A	50.000	49.8	0.6792300	0.6759232		-0.5	+/-18
2,3,4,7,8-PeCDF	A	50.000	47.1	0.7861704	0.7398977		-5.9	+/-18
1,2,3,7,8-PeCDD	A	50.000	51.3	1.0218450	1.0475690		2.5	+/-22
1,2,3,4,7,8-HxCDF	A	50.000	45.5	1.1660380	1.0609870		-9.0	+/-10
1,2,3,6,7,8-HxCDF	A	50.000	46.2	1.0907410	1.0089170		-7.5	+/-12
2,3,4,6,7,8-HxCDF	A	50.000	49.1	1.1396990	1.1191440		-1.8	+/-12
1,2,3,7,8,9-HxCDF	A	50.000	45.8	1.1370930	1.0425360		-8.3	+/-10
1,2,3,4,7,8-HxCDD	A	50.000	52.3	0.9955689	1.0422090		4.7	+/-22
1,2,3,6,7,8-HxCDD	A	50.000	48.7	1.0009380	0.9742490		-2.7	+/-22
1,2,3,7,8,9-HxCDD	A	50.000	54.3	0.9071139	0.9849340		8.6	+/-18
1,2,3,4,6,7,8-HpCDF	A	50.000	50.6	1.0029930	1.0142120		1.1	+/-10
1,2,3,4,7,8,9-HpCDF	A	50.000	52.3	0.9531152	0.9964338		4.5	+/-14
1,2,3,4,6,7,8-HpCDD	A	50.000	49.7	1.0390130	1.0338040		-0.5	+/-14
OCDF	A	100.00	87.0	0.7778078	0.6769719		-13.0	+/-37
OCDD	A	100.00	101	0.9199537	0.9295171		1.0	+/-21
13C12-2,3,7,8-TCDF	A	100.00	92.0	1.6201960	1.4909140		-8.0	+/-29
13C12-2,3,7,8-TCDD	A	100.00	105	1.1524090	1.2058856		4.6	+/-18
13C12-1,2,3,7,8-PeCDF	A	100.00	76.3	1.2404520	0.9461335		-23.7	+/-24
13C12-2,3,4,7,8-PeCDF	A	100.00	81.1	1.1177860	0.9060647		-18.9	+/-23
13C12-1,2,3,7,8-PeCDD	A	100.00	76.6	0.8288129	0.6347257		-23.4	+/-38
13C12-1,2,3,4,7,8-HxCDF	A	100.00	97.4	1.1683050	1.1374640		-2.6	+/-24
13C12-1,2,3,6,7,8-HxCDF	A	100.00	97.2	1.3864660	1.3470814		-2.8	+/-30
13C12-2,3,4,6,7,8-HxCDF	A	100.00	101	1.1292560	1.1378638		0.8	+/-27
13C12-1,2,3,7,8,9-HxCDF	A	100.00	111	0.9317541	1.0352489		11.1	+/-26
13C12-1,2,3,4,7,8-HxCDD	A	100.00	96.4	0.9950393	0.9587806		-3.6	+/-15
13C12-1,2,3,6,7,8-HxCDD	A	100.00	97.8	1.1566890	1.1308212		-2.2	+/-15
13C12-1,2,3,4,6,7,8-HpCDF	A	100.00	91.9	0.8952017	0.8226835		-8.1	+/-22
13C12-1,2,3,4,7,8,9-HpCDF	A	100.00	88.0	0.7697516	0.6774147		-12.0	+/-23
13C12-1,2,3,4,6,7,8-HpCDD	A	100.00	85.5	0.8401226	0.7187238		-14.5	+/-28
13C12-OCDD	A	200.00	153	0.7674714	0.5861633		-23.6	+/-52
37Cl4-2,3,7,8-TCDD	A	10.000	8.80	1.2878040	1.1328443		-12.0	

* Values outside of QC limits

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:54 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Y5, Name: 23031016, Date: 10-Mar-2023, Time: 22:46:42, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
2378-TCDF	25.591	1.000	2.949e4	4.079e4	0.702	0.723	0.770	800	904	4.38e5	6.06e5	547.6	670.3	NO	bb	bb	10.117
12378-PeCDF	29.758	1.000	1.257e5	8.673e4	0.679	1.449	1.550	1407	1149	1.92e6	1.30e6	1362.6	1132.0	NO	bb	bb	49.757
23478-PeCDF	31.095	1.001	1.297e5	9.290e4	0.786	1.397	1.550	1407	1149	1.93e6	1.33e6	1368.5	1153.3	NO	bb	bd	47.057
123478-HxCDF	34.738	1.001	1.917e5	1.550e5	1.166	1.237	1.240	1633	1323	3.00e6	2.38e6	1837.7	1795.8	NO	bd	bd	45.495
234678-HxCDF	35.741	1.000	2.056e5	1.602e5	1.140	1.283	1.240	1633	1323	3.02e6	2.44e6	1851.5	1840.8	NO	bd	bb	49.098
123678-HxCDF	34.872	1.000	2.149e5	1.755e5	1.091	1.224	1.240	1633	1323	3.09e6	2.55e6	1894.6	1924.5	NO	db	db	46.249
123789-HxCDF	36.777	1.001	1.735e5	1.365e5	1.137	1.271	1.240	1633	1323	2.56e6	2.01e6	1566.3	1516.5	NO	bb	bb	45.842
1234678-HpCDF	38.627	1.000	1.194e5	1.203e5	1.003	0.993	1.050	1564	1180	1.80e6	1.87e6	1151.1	1582.9	NO	bd	bd	50.559
1234789-HpCDF	40.844	1.000	9.704e4	9.685e4	0.953	1.002	1.050	1564	1180	1.31e6	1.35e6	836.0	1147.3	NO	bd	bb	52.272
OCDF	45.039	1.005	1.056e5	1.224e5	0.778	0.862	0.890	964	1459	1.16e6	1.36e6	1200.3	931.0	NO	bd	bd	87.036
2378-TCDD	26.240	1.001	3.621e4	4.668e4	1.149	0.776	0.770	1087	959	5.69e5	7.22e5	523.2	753.1	NO	bb	bb	9.010
12378-PeCDD	31.351	1.001	1.343e5	8.649e4	1.022	1.553	1.550	1236	840	2.04e6	1.30e6	1648.5	1541.8	NO	bb	bb	51.259
123478-HxCDD	35.853	1.000	1.582e5	1.289e5	0.996	1.227	1.240	1424	1180	2.41e6	1.96e6	1694.4	1662.1	NO	bd	bd	52.342
123678-HxCDD	35.975	1.000	1.743e5	1.422e5	1.001	1.226	1.240	1424	1180	2.63e6	2.11e6	1848.8	1789.9	NO	db	db	48.667
123789-HxCDD	36.365	1.011	1.654e5	1.302e5	0.907	1.270	1.240	1424	1180	2.46e6	2.04e6	1727.6	1730.3	NO	bd	bb	54.289
1234678-HpCDD	40.120	1.001	1.074e5	1.060e5	1.039	1.013	1.050	1534	1453	1.65e6	1.61e6	1078.7	1109.6	NO	bb	bb	49.749
OCDD	44.810	1.000	1.441e5	1.689e5	0.920	0.853	0.890	1462	1005	1.74e6	2.06e6	1191.4	2046.2	NO	bb	bb	101.040
13C-2378-TCDF	25.577	1.007	4.282e5	5.620e5	1.620	0.762	0.770	1050	1025	6.37e6	8.35e6	6071.1	8148.0	NO	bb	bb	92.021
13C-12378-PeCDF	29.747	1.171	3.799e5	2.486e5	1.240	1.528	1.550	1305	1092	5.65e6	3.72e6	4330.0	3402.5	NO	bb	bb	76.273
13C-23478-PeCDF	31.073	1.223	3.631e5	2.388e5	1.118	1.521	1.550	1305	1092	5.47e6	3.60e6	4192.6	3297.3	NO	bb	bb	81.059
13C-123478-HxCDF	34.716	0.955	2.180e5	4.355e5	1.168	0.501	0.510	1272	1619	3.33e6	6.54e6	2616.7	4037.6	NO	bd	bd	97.360
13C-123678-HxCDF	34.861	0.959	2.606e5	5.133e5	1.386	0.508	0.510	1272	1619	3.59e6	7.02e6	2825.6	4336.1	NO	dd	db	97.159
13C-234678-HxCDF	35.730	0.983	2.239e5	4.298e5	1.129	0.521	0.510	1272	1619	3.35e6	6.55e6	2632.4	4047.5	NO	bb	bb	100.762
13C-123789-HxCDF	36.755	1.011	2.004e5	3.944e5	0.932	0.508	0.510	1272	1619	3.03e6	5.99e6	2383.9	3699.8	NO	bb	bb	111.108
13C-1234678-HpCDF	38.616	1.062	1.463e5	3.264e5	0.895	0.448	0.440	1674	1594	2.35e6	5.36e6	1403.0	3363.5	NO	bb	bb	91.899
13C-1234789-HpCDF	40.833	1.123	1.196e5	2.696e5	0.770	0.444	0.440	1674	1594	1.70e6	3.80e6	1013.2	2382.4	NO	bb	bb	88.004
13C-1234-TCDD	25.407	0.000	2.922e5	3.720e5	1.000	0.785	0.770	1263	843	4.53e6	5.71e6	3581.9	6767.4	NO	bb	bb	100.000
13C-2378-TCDD	26.212	1.032	3.523e5	4.486e5	1.152	0.785	0.770	1263	843	5.14e6	6.66e6	4069.5	7897.2	NO	bb	bb	104.640
13C-12378-PeCDD	31.329	1.233	2.582e5	1.634e5	0.829	1.579	1.550	1141	752	3.74e6	2.40e6	3277.3	3185.7	NO	bb	bb	76.583
13C-123478-HxCDD	35.841	0.986	3.095e5	2.413e5	0.995	1.283	1.240	1313	1048	5.00e6	3.84e6	3812.7	3666.2	NO	bd	bd	96.356
13C-123678-HxCDD	35.964	0.989	3.639e5	2.858e5	1.157	1.273	1.240	1313	1048	5.06e6	4.01e6	3852.6	3821.9	NO	db	db	97.764
13C-1234678-HpCDD	40.097	1.103	2.127e5	2.002e5	0.840	1.063	1.050	896	968	3.15e6	2.97e6	3509.5	3068.1	NO	bb	bb	85.550
13C-OCDD	44.792	1.232	3.291e5	3.444e5	0.767	0.956	0.890	1106	976	3.77e6	4.18e6	3403.2	4286.3	NO	bd	bb	152.752
13C-123789-HxCDD	36.354	0.000	3.221e5	2.524e5	1.000	1.276	1.240	1313	1048	4.97e6	3.86e6	3785.6	3686.1	NO	bb	bb	100.000
37CL-2378-TCDD	26.240	1.033	7.525e4		1.288			1021		1.14e6		1113.6			bb		8.797

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:54 Pacific Daylight Time

ID: CS3Y5, Name: 23031016, Date: 10-Mar-2023, Time: 22:46:42, Conditions: AUTOSPEC01, User: pk

Compound	RT	RRT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	Noise 1	Noise 2	Height 1	Height 2	S/N 1	S/N 2	EMPC	Int.1	Int.2	pg
1368-TCDF	22.088	0.864	3.473e4	4.819e4	0.802	0.721	0.770	800	904	5.35e5	7.61e5	669.3	841.6	NO	bb	bb	10.447
1289-TCDF	27.088	1.059	2.998e4	4.002e4	0.678	0.749	0.770	800	904	4.34e5	5.90e5	542.3	652.8	NO	dd	db	10.426
13468-PECDF	26.961	0.906	3.200e5	2.150e5	1.246	1.488	1.550	496	0	4.70e6	3.08e6	9471.3	0.0	NO	bb	MM	68.298
12389-PECDF	32.131	1.080	1.234e5	8.781e4	0.496	1.406	1.550	1407	1149	1.68e6	1.20e6	1195.5	1044.7	NO	bb	bd	67.719
123468-HXCDF	33.056	0.952	1.884e5	1.509e5	1.169	1.249	1.240	1633	1323	2.67e6	2.18e6	1633.7	1644.4	NO	bb	bb	44.411
1368-TCDD	23.373	0.892	3.329e4	4.188e4	1.015	0.795	0.770	1087	959	5.06e5	6.45e5	465.0	672.3	NO	bb	bb	9.242
1289-TCDD	26.834	1.024	2.994e4	3.951e4	0.909	0.758	0.770	1087	959	4.31e5	5.53e5	396.7	576.2	NO	bb	bd	9.543
12479-PECDD	28.644	0.914	2.512e5	1.637e5	2.301	1.535	1.550	1236	840	2.36e6	1.56e6	1911.6	1855.0	NO	bb	bb	42.755
12389-PECDD	31.753	1.013	1.556e5	1.003e5	1.184	1.551	1.550	1236	840	2.22e6	1.44e6	1797.2	1715.9	NO	bb	bb	51.300
124679-HXCDD	33.836	0.944	1.605e5	1.293e5	1.115	1.241	1.240	1424	1180	2.33e6	1.90e6	1639.8	1614.2	NO	bb	bb	47.163
1234679-HPCDD	39.072	0.974	1.238e5	1.206e5	1.137	1.027	1.050	1534	1453	1.95e6	1.90e6	1270.2	1310.1	NO	bb	bb	52.074
Total-tetrafurans			9.511e4		0.727			800		1.42e6							31.275
Total-penta1			3.200e5					496		4.70e6							68.298
Total-pentafurans			4.022e5		0.654			1407		5.87e6							174.267
Total-hexafurans			9.741e5		1.141			1633		1.43e7							231.096
Total-heptafurans			2.175e5		0.978			1564		3.12e6							103.292
Total-Furans			2.114e6		0.922			800		3.06e7							695.264
Total-tetradioxins			1.704e5		1.024			1087		2.32e6							46.990
Total-pentadioxins			5.411e5		1.502			1236		6.62e6							145.313
Total-hexadioxins			6.583e5		1.005			1424		9.84e6							202.462
Total-heptadioxins			2.312e5		1.088			1534		3.60e6							101.823
Total-Dioxins			1.745e6		1.130			1087		2.41e7							597.627
Total-TEQ			3.860e6					1087		5.47e7							1292.891
FUNCTION1 PFK			2.834e5					393824		7.02e6							
FUNCTION2 PFK			4.119e6					195002		4.45e6							0.000
FUNCTION3 PFK			1.154e5					306851		9.55e5							0.000
FUNCTION4 PFK			9.622e4					206768		2.73e6							
FUNCTION5 PFK			5.564e4					128826		2.53e6							
FUNCTION1 HXCD...			8.123e2					513		1.06e4							0.000
FUNCTION1 HPCD...																	
FUNCTION2 HPCD...			1.960e2					499		3.54e3							0.000
FUNCTION3 OCDPE			0.000e0					515		0.00e0							
FUNCTION4 NCDPE			7.436e1					514		1.47e3							0.000
FUNCTION5 DCDPE			0.000e0					406		0.00e0							

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Y5, Name: 23031016, Date: 10-Mar-2023, Time: 22:46:42, Conditions: AUTOSPEC01, User: pk

TF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.998e4	4.002e4	0.678	0.75	0.77	542.3	YES	NO	dd	db	10.426
2	Total-tetrafurans	26.98	6.351e2	7.826e2	0.727	0.81	0.77	12.5	YES	NO	bd	bd	0.197
3	2378-TCDF	25.59	2.949e4	4.079e4	0.702	0.72	0.77	547.6	YES	NO	bb	bb	10.117
4	Total-tetrafurans	24.72	2.809e2	3.602e2	0.727	0.78	0.77	4.1	YES	NO	bb	bb	0.089
5	1368-TCDF	22.09	3.473e4	4.819e4	0.802	0.72	0.77	669.3	YES	NO	bb	bb	10.447

PP

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	13468-PECDF	26.96	3.200e5	2.150e5	1.246	1.49	1.55	9471.3	NO	NO	bb	MM	68.298

PF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDF	32.13	1.234e5	8.781e4	0.496	1.41	1.55	1195.5	YES	NO	bb	bd	67.719
2	23478-PeCDF	31.10	1.297e5	9.290e4	0.786	1.40	1.55	1368.5	YES	NO	bb	bd	47.057
3	12378-PeCDF	29.76	1.257e5	8.673e4	0.679	1.45	1.55	1362.6	YES	NO	bb	bb	49.757
4	Total-pentafurans	28.61	2.336e4	1.580e4	0.654	1.48	1.55	247.5	YES	NO	bb	bb	9.735

HF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123789-HxCDF	36.78	1.735e5	1.365e5	1.137	1.27	1.24	1566.3	YES	NO	bb	bb	45.842
2	234678-HxCDF	35.74	2.056e5	1.602e5	1.140	1.28	1.24	1851.5	YES	NO	bd	bb	49.098
3	123678-HxCDF	34.87	2.149e5	1.755e5	1.091	1.22	1.24	1894.6	YES	NO	db	db	46.249
4	123478-HxCDF	34.74	1.917e5	1.550e5	1.166	1.24	1.24	1837.7	YES	NO	bd	bd	45.495
5	123468-HXCDF	33.06	1.884e5	1.509e5	1.169	1.25	1.24	1633.7	YES	NO	bb	bb	44.411

HPF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234789-HpCDF	40.84	9.704e4	9.685e4	0.953	1.00	1.05	836.0	YES	NO	bd	bb	52.272
2	Total-heptafurans	39.27	1.044e3	8.952e2	0.978	1.17	1.05	9.9	YES	NO	bb	bd	0.460
3	1234678-HpCDF	38.63	1.194e5	1.203e5	1.003	0.99	1.05	1151.1	YES	NO	bd	bd	50.559

ID: CS3Y5, Name: 23031016, Date: 10-Mar-2023, Time: 22:46:42, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.998e4	4.002e4	0.678	0.75	0.77	542.3	YES	NO	dd	db	10.426
2	Total-tetrafurans	26.98	6.351e2	7.826e2	0.727	0.81	0.77	12.5	YES	NO	bd	bd	0.197
3	2378-TCDF	25.59	2.949e4	4.079e4	0.702	0.72	0.77	547.6	YES	NO	bb	bb	10.117
4	Total-tetrafurans	24.72	2.809e2	3.602e2	0.727	0.78	0.77	4.1	YES	NO	bb	bb	0.089
5	1368-TCDF	22.09	3.473e4	4.819e4	0.802	0.72	0.77	669.3	YES	NO	bb	bb	10.447
6	12389-PECDF	32.13	1.234e5	8.781e4	0.496	1.41	1.55	1195.5	YES	NO	bb	bd	67.719
7	23478-PeCDF	31.10	1.297e5	9.290e4	0.786	1.40	1.55	1368.5	YES	NO	bb	bd	47.057
8	12378-PeCDF	29.76	1.257e5	8.673e4	0.679	1.45	1.55	1362.6	YES	NO	bb	bb	49.757
9	Total-pentafurans	28.61	2.336e4	1.580e4	0.654	1.48	1.55	247.5	YES	NO	bb	bb	9.735
10	123789-HxCDF	36.78	1.735e5	1.365e5	1.137	1.27	1.24	1566.3	YES	NO	bb	bb	45.842
11	234678-HxCDF	35.74	2.056e5	1.602e5	1.140	1.28	1.24	1851.5	YES	NO	bd	bb	49.098
12	123678-HxCDF	34.87	2.149e5	1.755e5	1.091	1.22	1.24	1894.6	YES	NO	db	db	46.249
13	123478-HxCDF	34.74	1.917e5	1.550e5	1.166	1.24	1.24	1837.7	YES	NO	bd	bd	45.495
14	123468-HXCDF	33.06	1.884e5	1.509e5	1.169	1.25	1.24	1633.7	YES	NO	bb	bb	44.411
15	1234789-HpCDF	40.84	9.704e4	9.685e4	0.953	1.00	1.05	836.0	YES	NO	bd	bb	52.272
16	Total-heptafurans	39.27	1.044e3	8.952e2	0.978	1.17	1.05	9.9	YES	NO	bb	bd	0.460
17	1234678-HpCDF	38.63	1.194e5	1.203e5	1.003	0.99	1.05	1151.1	YES	NO	bd	bd	50.559
18	OCDF	45.04	1.056e5	1.224e5	0.778	0.86	0.89	1200.3	YES	NO	bd	bd	87.036
19	13468-PECDF	26.96	3.200e5	2.150e5	1.246	1.49	1.55	9471.3	NO	NO	bb	MM	68.298

TD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.83	2.994e4	3.951e4	0.909	0.76	0.77	396.7	YES	NO	bb	bd	9.543
2	2378-TCDD	26.24	3.621e4	4.668e4	1.149	0.78	0.77	523.2	YES	NO	bb	bb	9.010
3	Total-tetradioxins	25.92	5.213e4	6.335e4	1.024	0.82	0.77	498.9	YES	NO	bb	bb	14.076
4	Total-tetradioxins	25.42	1.701e4	2.096e4	1.024	0.81	0.77	231.8	YES	NO	bb	bb	4.628
5	Total-tetradioxins	24.84	3.857e2	4.826e2	1.024	0.80	0.77	4.6	YES	NO	bb	bb	0.106
6	Total-tetradioxins	24.56	1.450e3	1.707e3	1.024	0.85	0.77	14.0	YES	NO	bb	bb	0.385
7	1368-TCDD	23.37	3.329e4	4.188e4	1.015	0.79	0.77	465.0	YES	NO	bb	bb	9.242

PD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	12389-PECDD	31.75	1.556e5	1.003e5	1.184	1.55	1.55	1797.2	YES	NO	bb	bb	51.300
2	12378-PeCDD	31.35	1.343e5	8.649e4	1.022	1.55	1.55	1648.5	YES	NO	bb	bb	51.259
3	12479-PECDD	28.64	2.512e5	1.637e5	2.301	1.53	1.55	1911.6	YES	NO	bb	bb	42.755

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HD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	123678-HxCDD	35.97	1.743e5	1.422e5	1.001	1.23	1.24	1848.8	YES	NO	db	db	48.667
2	123478-HxCDD	35.85	1.582e5	1.289e5	0.996	1.23	1.24	1694.4	YES	NO	bd	bd	52.342
3	124679-HXCDD	33.84	1.605e5	1.293e5	1.115	1.24	1.24	1639.8	YES	NO	bb	bb	47.163
4	123789-HxCDD	36.37	1.654e5	1.302e5	0.907	1.27	1.24	1727.6	YES	NO	bd	bb	54.289

HPD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1234678-HpCDD	40.12	1.074e5	1.060e5	1.039	1.01	1.05	1078.7	YES	NO	bb	bb	49.749
2	1234679-HPCDD	39.07	1.238e5	1.206e5	1.137	1.03	1.05	1270.2	YES	NO	bb	bb	52.074

Dioxins,TD,PD,HD,HPD,OD

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDD	26.83	2.994e4	3.951e4	0.909	0.76	0.77	396.7	YES	NO	bb	bd	9.543
2	2378-TCDD	26.24	3.621e4	4.668e4	1.149	0.78	0.77	523.2	YES	NO	bb	bb	9.010
3	Total-tetradioxins	25.92	5.213e4	6.335e4	1.024	0.82	0.77	498.9	YES	NO	bb	bb	14.076
4	Total-tetradioxins	25.42	1.701e4	2.096e4	1.024	0.81	0.77	231.8	YES	NO	bb	bb	4.628
5	Total-tetradioxins	24.84	3.857e2	4.826e2	1.024	0.80	0.77	4.6	YES	NO	bb	bb	0.106
6	Total-tetradioxins	24.56	1.450e3	1.707e3	1.024	0.85	0.77	14.0	YES	NO	bb	bb	0.385
7	1368-TCDD	23.37	3.329e4	4.188e4	1.015	0.79	0.77	465.0	YES	NO	bb	bb	9.242
8	12389-PECDD	31.75	1.556e5	1.003e5	1.184	1.55	1.55	1797.2	YES	NO	bb	bb	51.300
9	12378-PeCDD	31.35	1.343e5	8.649e4	1.022	1.55	1.55	1648.5	YES	NO	bb	bb	51.259
10	12479-PECDD	28.64	2.512e5	1.637e5	2.301	1.53	1.55	1911.6	YES	NO	bb	bb	42.755
11	123678-HxCDD	35.97	1.743e5	1.422e5	1.001	1.23	1.24	1848.8	YES	NO	db	db	48.667
12	123478-HxCDD	35.85	1.582e5	1.289e5	0.996	1.23	1.24	1694.4	YES	NO	bd	bd	52.342
13	124679-HXCDD	33.84	1.605e5	1.293e5	1.115	1.24	1.24	1639.8	YES	NO	bb	bb	47.163
14	123789-HxCDD	36.37	1.654e5	1.302e5	0.907	1.27	1.24	1727.6	YES	NO	bd	bb	54.289
15	1234678-HpCDD	40.12	1.074e5	1.060e5	1.039	1.01	1.05	1078.7	YES	NO	bb	bb	49.749
16	1234679-HPCDD	39.07	1.238e5	1.206e5	1.137	1.03	1.05	1270.2	YES	NO	bb	bb	52.074
17	OCDD	44.81	1.441e5	1.689e5	0.920	0.85	0.89	1191.4	YES	NO	bb	bb	101.040

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TotalTEQ,Furans,Dioxins

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	1289-TCDF	27.09	2.998e4	4.002e4	0.678	0.75	0.77	542.3	YES	NO	dd	db	10.426
2	Total-tetrafurans	26.98	6.351e2	7.826e2	0.727	0.81	0.77	12.5	YES	NO	bd	bd	0.197
3	2378-TCDF	25.59	2.949e4	4.079e4	0.702	0.72	0.77	547.6	YES	NO	bb	bb	10.117
4	Total-tetrafurans	24.72	2.809e2	3.602e2	0.727	0.78	0.77	4.1	YES	NO	bb	bb	0.089
5	1368-TCDF	22.09	3.473e4	4.819e4	0.802	0.72	0.77	669.3	YES	NO	bb	bb	10.447
6	12389-PECDF	32.13	1.234e5	8.781e4	0.496	1.41	1.55	1195.5	YES	NO	bb	bd	67.719
7	23478-PeCDF	31.10	1.297e5	9.290e4	0.786	1.40	1.55	1368.5	YES	NO	bb	bd	47.057
8	12378-PeCDF	29.76	1.257e5	8.673e4	0.679	1.45	1.55	1362.6	YES	NO	bb	bb	49.757
9	Total-pentafurans	28.61	2.336e4	1.580e4	0.654	1.48	1.55	247.5	YES	NO	bb	bb	9.735
10	123789-HxCDF	36.78	1.735e5	1.365e5	1.137	1.27	1.24	1566.3	YES	NO	bb	bb	45.842
11	234678-HxCDF	35.74	2.056e5	1.602e5	1.140	1.28	1.24	1851.5	YES	NO	bd	bb	49.098
12	123678-HxCDF	34.87	2.149e5	1.755e5	1.091	1.22	1.24	1894.6	YES	NO	db	db	46.249
13	123478-HxCDF	34.74	1.917e5	1.550e5	1.166	1.24	1.24	1837.7	YES	NO	bd	bd	45.495
14	123468-HXCDF	33.06	1.884e5	1.509e5	1.169	1.25	1.24	1633.7	YES	NO	bb	bb	44.411
15	1234789-HpCDF	40.84	9.704e4	9.685e4	0.953	1.00	1.05	836.0	YES	NO	bd	bb	52.272
16	Total-heptafurans	39.27	1.044e3	8.952e2	0.978	1.17	1.05	9.9	YES	NO	bb	bd	0.460
17	1234678-HpCDF	38.63	1.194e5	1.203e5	1.003	0.99	1.05	1151.1	YES	NO	bd	bd	50.559
18	OCDF	45.04	1.056e5	1.224e5	0.778	0.86	0.89	1200.3	YES	NO	bd	bd	87.036
19	13468-PECDF	26.96	3.200e5	2.150e5	1.246	1.49	1.55	9471.3	NO	NO	bb	MM	68.298
20	1289-TCDD	26.83	2.994e4	3.951e4	0.909	0.76	0.77	396.7	YES	NO	bb	bd	9.543
21	2378-TCDD	26.24	3.621e4	4.668e4	1.149	0.78	0.77	523.2	YES	NO	bb	bb	9.010
22	Total-tetradioxins	25.92	5.213e4	6.335e4	1.024	0.82	0.77	498.9	YES	NO	bb	bb	14.076
23	Total-tetradioxins	25.42	1.701e4	2.096e4	1.024	0.81	0.77	231.8	YES	NO	bb	bb	4.628
24	Total-tetradioxins	24.84	3.857e2	4.826e2	1.024	0.80	0.77	4.6	YES	NO	bb	bb	0.106
25	Total-tetradioxins	24.56	1.450e3	1.707e3	1.024	0.85	0.77	14.0	YES	NO	bb	bb	0.385
26	1368-TCDD	23.37	3.329e4	4.188e4	1.015	0.79	0.77	465.0	YES	NO	bb	bb	9.242
27	12389-PECDD	31.75	1.556e5	1.003e5	1.184	1.55	1.55	1797.2	YES	NO	bb	bb	51.300
28	12378-PeCDD	31.35	1.343e5	8.649e4	1.022	1.55	1.55	1648.5	YES	NO	bb	bb	51.259
29	12479-PECDD	28.64	2.512e5	1.637e5	2.301	1.53	1.55	1911.6	YES	NO	bb	bb	42.755
30	123678-HxCDD	35.97	1.743e5	1.422e5	1.001	1.23	1.24	1848.8	YES	NO	db	db	48.667
31	123478-HxCDD	35.85	1.582e5	1.289e5	0.996	1.23	1.24	1694.4	YES	NO	bd	bd	52.342
32	124679-HXCDD	33.84	1.605e5	1.293e5	1.115	1.24	1.24	1639.8	YES	NO	bb	bb	47.163
33	123789-HxCDD	36.37	1.654e5	1.302e5	0.907	1.27	1.24	1727.6	YES	NO	bd	bb	54.289
34	1234678-HpCDD	40.12	1.074e5	1.060e5	1.039	1.01	1.05	1078.7	YES	NO	bb	bb	49.749
35	1234679-HPCDD	39.07	1.238e5	1.206e5	1.137	1.03	1.05	1270.2	YES	NO	bb	bb	52.074
36	OCDD	44.81	1.441e5	1.689e5	0.920	0.85	0.89	1191.4	YES	NO	bb	bb	101.040

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PFK1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 PFK	21.58	1.884e4					1.0	NO		db		
2	FUNCTION1 PFK	21.45	4.865e4					1.8	NO		bd		
3	FUNCTION1 PFK	27.26	1.087e4					1.1	NO		bb		
4	FUNCTION1 PFK	26.20	4.757e4					2.0	NO		bb		
5	FUNCTION1 PFK	25.77	3.543e4					1.9	NO		bb		
6	FUNCTION1 PFK	25.70	2.279e4					1.4	NO		bb		
7	FUNCTION1 PFK	25.29	3.173e3					0.6	NO		bb		
8	FUNCTION1 PFK	24.39	1.675e4					1.2	NO		bb		
9	FUNCTION1 PFK	24.15	4.280e3					0.8	NO		bb		
10	FUNCTION1 PFK	23.05	4.687e3					0.8	NO		bb		
11	FUNCTION1 PFK	23.01	3.341e3					0.6	NO		bb		
12	FUNCTION1 PFK	22.85	1.054e4					1.2	NO		bb		
13	FUNCTION1 PFK	22.77	2.217e4					1.7	NO		db		
14	FUNCTION1 PFK	22.72	3.431e4					1.9	NO		bd		

PFK2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 PFK	32.57	3.646e4					1.9	NO		bb		0.000
2	FUNCTION2 PFK	27.92	4.082e6					20.9	YES		bb		0.000

PFK3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION3 PFK	32.73	1.154e5					3.1	YES		bb		0.000

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PFK4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 PFK	42.43	3.044e3					0.8	NO		bb		
2	FUNCTION4 PFK	42.01	1.424e3					0.6	NO		bb		
3	FUNCTION4 PFK	41.92	1.390e4					2.2	NO		bb		
4	FUNCTION4 PFK	41.74	1.451e3					0.6	NO		bb		
5	FUNCTION4 PFK	41.20	5.032e3					1.1	NO		bb		
6	FUNCTION4 PFK	38.89	2.337e4					1.8	NO		db		
7	FUNCTION4 PFK	38.79	7.973e3					1.7	NO		bd		
8	FUNCTION4 PFK	38.20	1.444e4					1.7	NO		bb		
9	FUNCTION4 PFK	37.69	2.559e4					2.7	NO		bb		

PFK5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION5 PFK	42.87	5.298e3					1.8	NO		bb		
2	FUNCTION5 PFK	42.70	3.937e3					1.4	NO		bb		
3	FUNCTION5 PFK	42.61	2.742e3					1.4	NO		db		
4	FUNCTION5 PFK	42.58	5.355e3					2.0	NO		bd		
5	FUNCTION5 PFK	45.97	5.000e3					1.4	NO		bb		
6	FUNCTION5 PFK	45.92	7.372e2					0.6	NO		bb		
7	FUNCTION5 PFK	45.57	8.634e3					2.3	NO		db		
8	FUNCTION5 PFK	45.51	2.356e3					1.1	NO		bd		
9	FUNCTION5 PFK	45.31	5.458e3					1.6	NO		bb		
10	FUNCTION5 PFK	45.19	1.539e3					0.9	NO		bb		
11	FUNCTION5 PFK	45.14	4.119e3					1.7	NO		bb		
12	FUNCTION5 PFK	45.00	6.955e2					0.6	NO		bb		
13	FUNCTION5 PFK	43.73	2.211e3					1.1	NO		bb		
14	FUNCTION5 PFK	43.51	7.559e3					1.6	NO		bb		

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ETHERS1

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION1 HXCD...	24.11	1.425e2					3.3	YES		dd		0.000
2	FUNCTION1 HXCD...	23.98	7.164e1					1.8	NO		bd		0.000
3	FUNCTION1 HXCD...	21.76	8.531e1					2.3	NO		bb		0.000
4	FUNCTION1 HXCD...	21.30	9.974e1					4.7	YES		bb		0.000
5	FUNCTION1 HXCD...	21.18	7.351e1					1.5	NO		bb		0.000
6	FUNCTION1 HXCD...	26.37	7.197e1					2.1	NO		bb		0.000
7	FUNCTION1 HXCD...	24.64	8.564e1					2.9	NO		bb		0.000
8	FUNCTION1 HXCD...	24.22	1.820e2					2.1	NO		db		0.000

ETHERS2

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS3

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION2 HPCD...	31.96	9.231e1					2.8	NO		bb		0.000
2	FUNCTION2 HPCD...	30.95	1.037e2					4.3	YES		bb		0.000

ETHERS4

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

ETHERS5

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1	FUNCTION4 NCDPE	40.10	7.436e1					2.8	NO		bb		0.000

ETHERS6

	Compound	RT	Ion1Area	Ion2Area	RRF	Ratio	Pred R	S/N 1	SNFlag	EMPC	Int.1	Int.2	pg
1													

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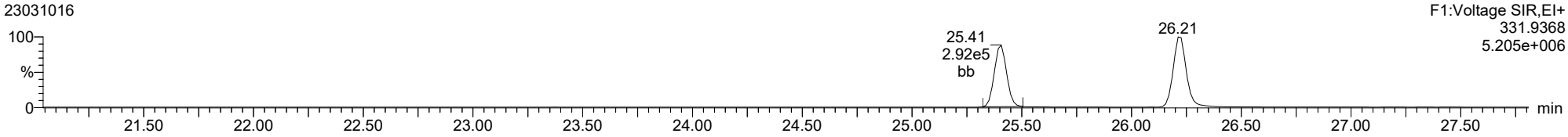
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:44:54 Pacific Daylight Time

Method: T:\Autospec\Methods\Dioxin230310.mdb 10 Mar 2023 13:02:37
Calibration: T:\Autospec\Curves\230303ICIH.cdb 06 Mar 2023 11:57:27

ID: CS3Y5, Name: 23031016, Date: 10-Mar-2023, Time: 22:46:42, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



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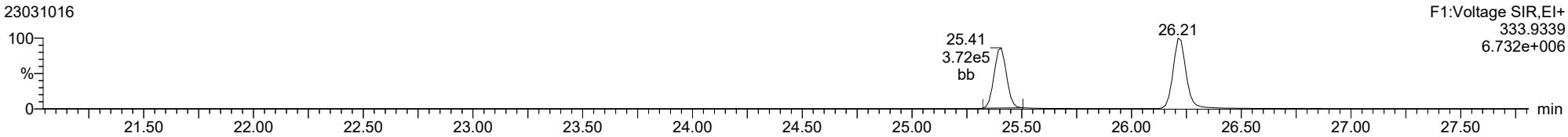
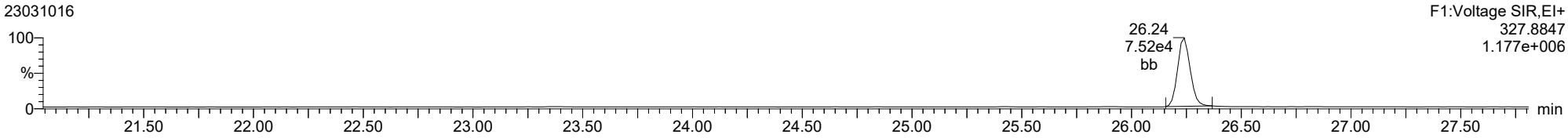


37CL-2378-TCDD



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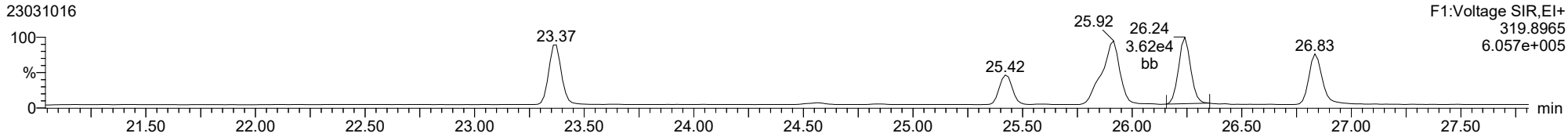
2378-TCDD



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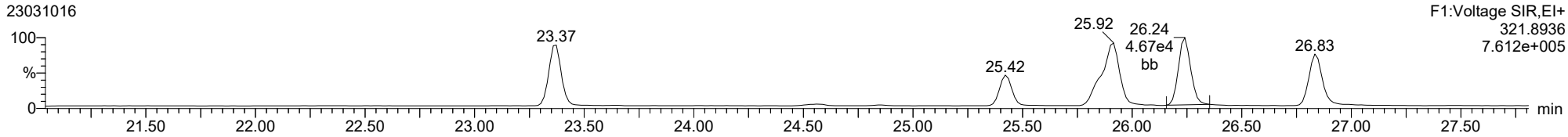

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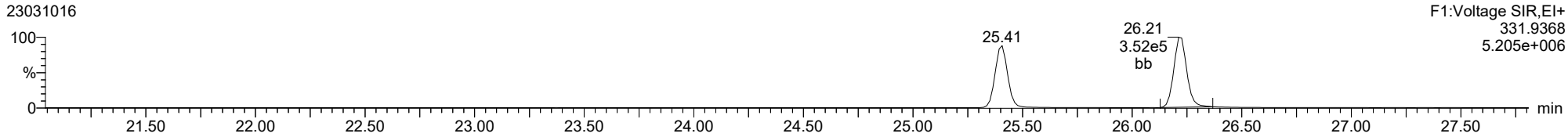

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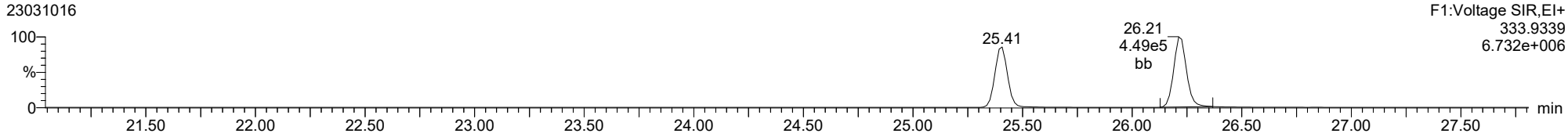

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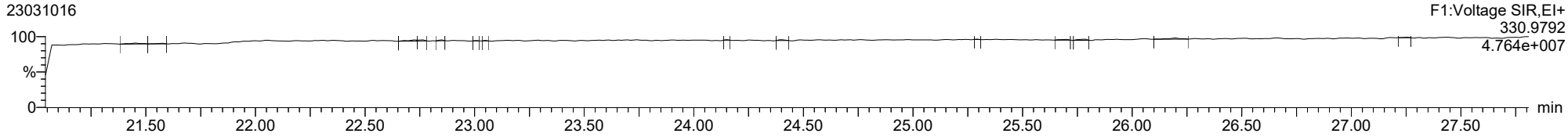

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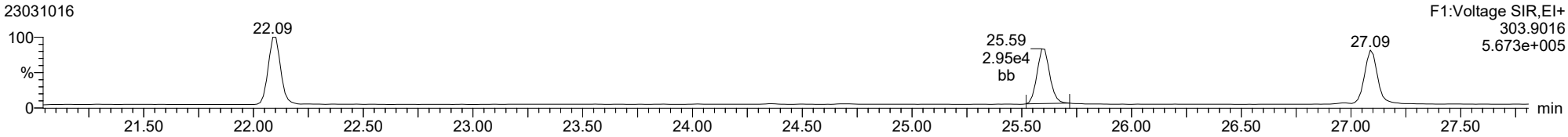

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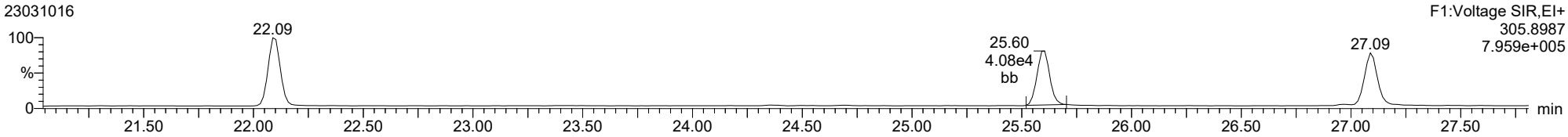

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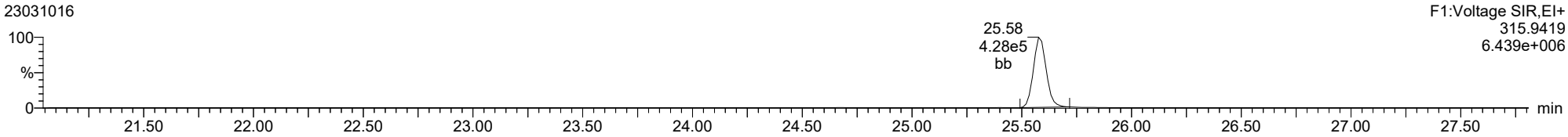

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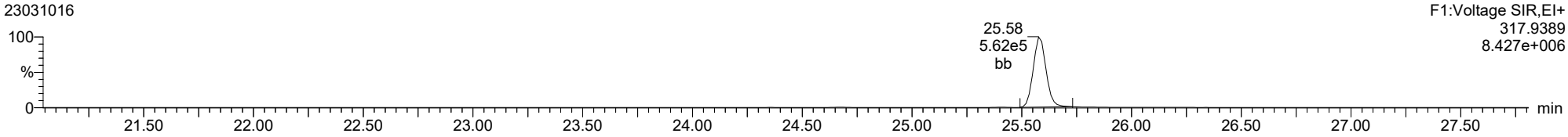

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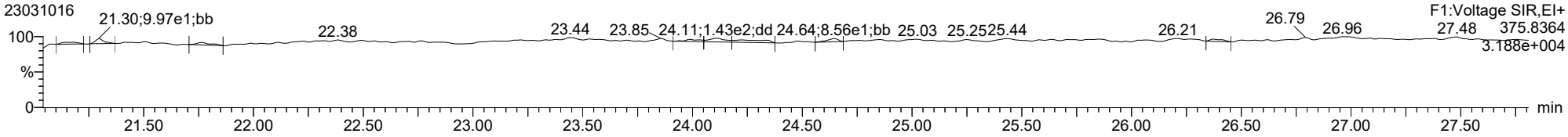

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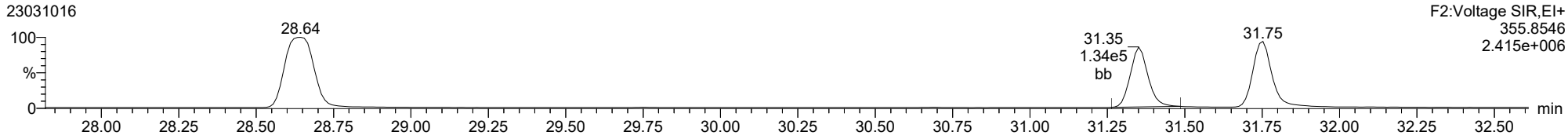
12378-PeCDD



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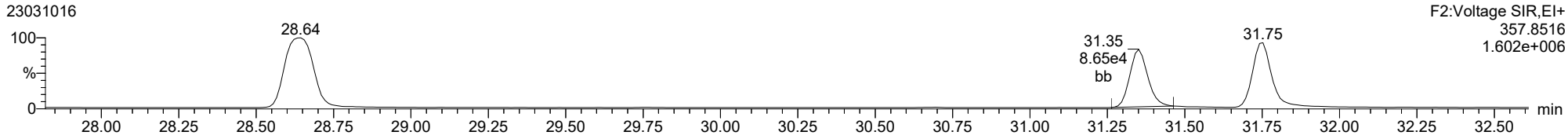

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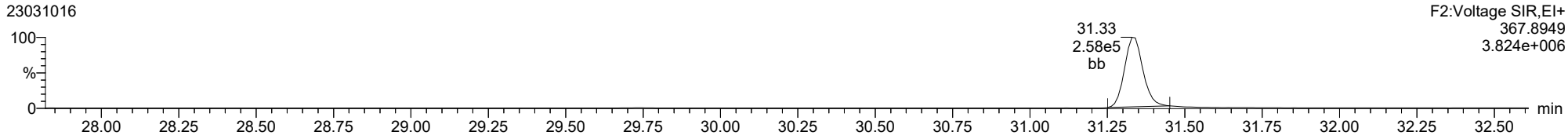

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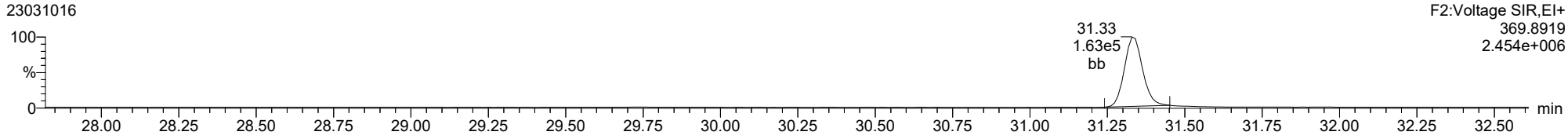

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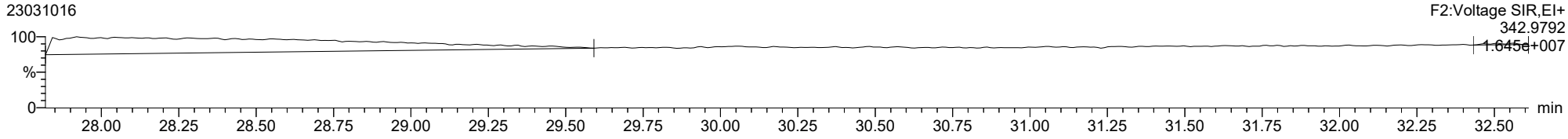

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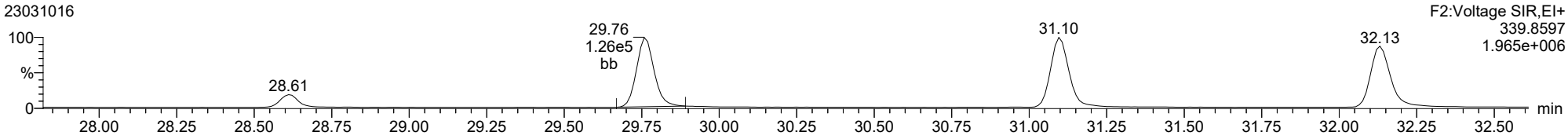

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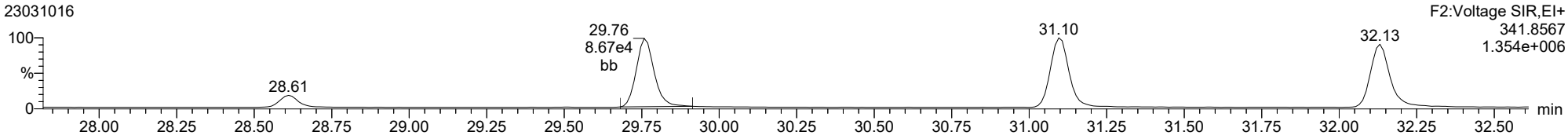

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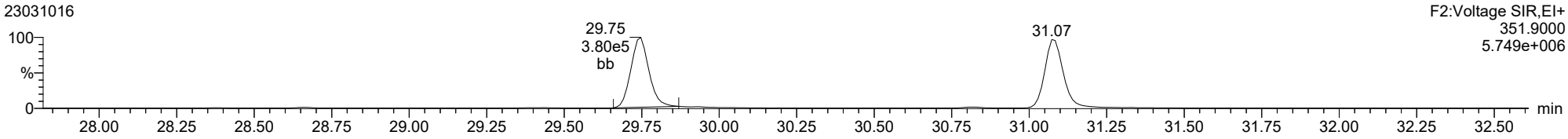

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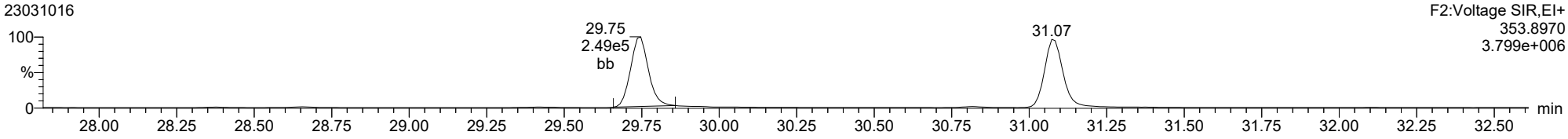
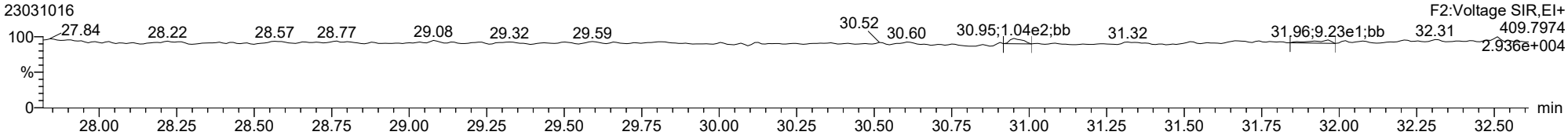


FUNCTION2 HPCDPE



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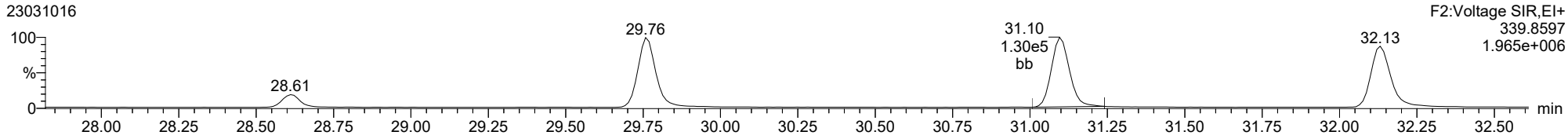
23478-PeCDF



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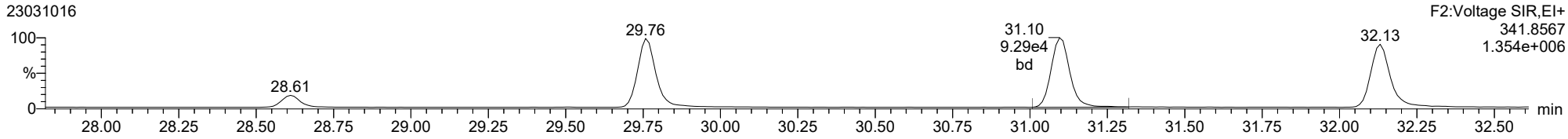

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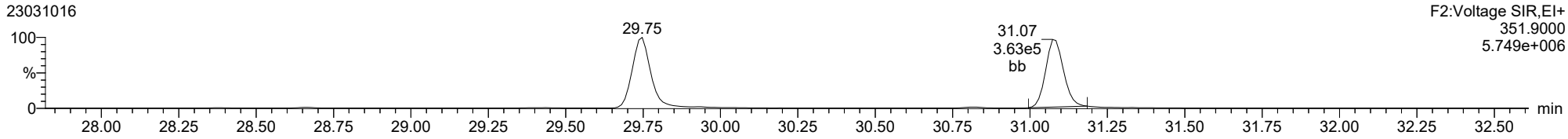

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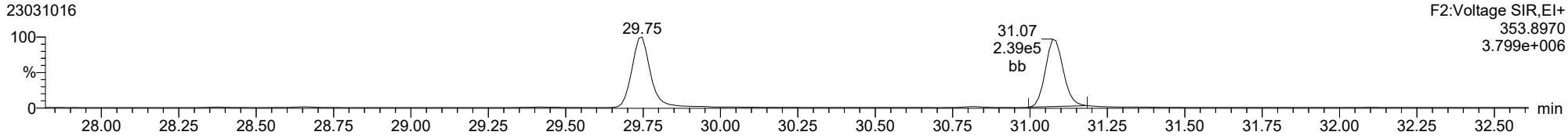

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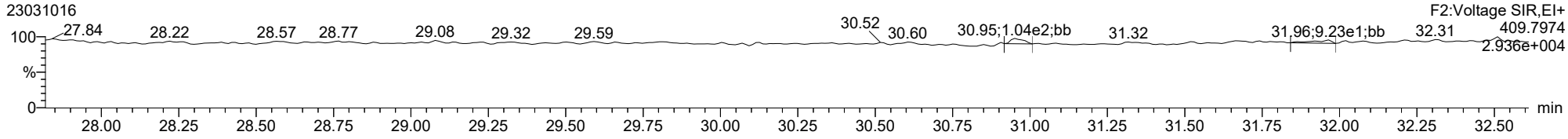

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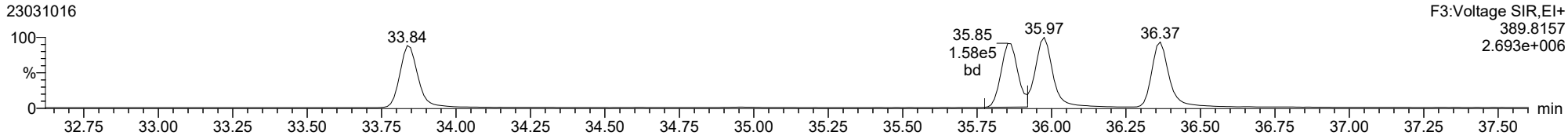

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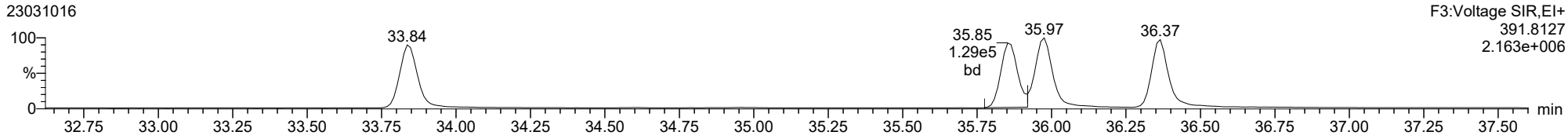

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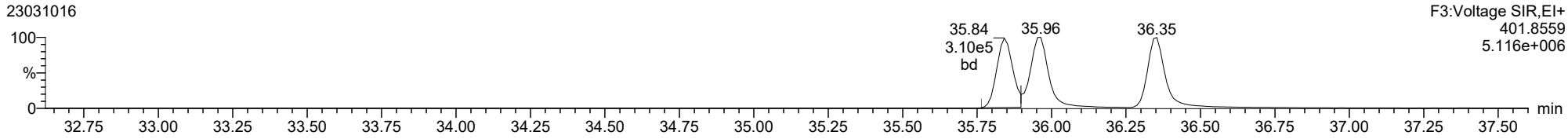

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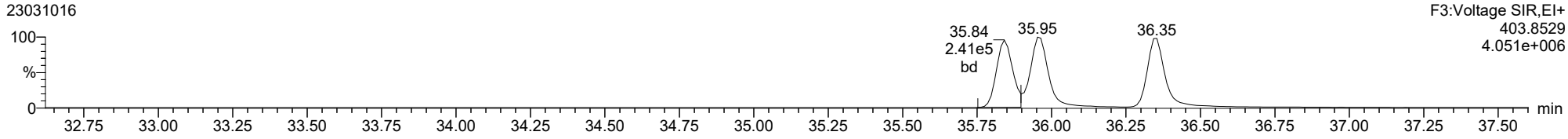

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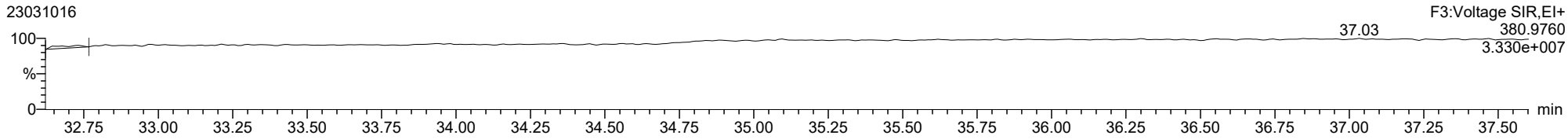

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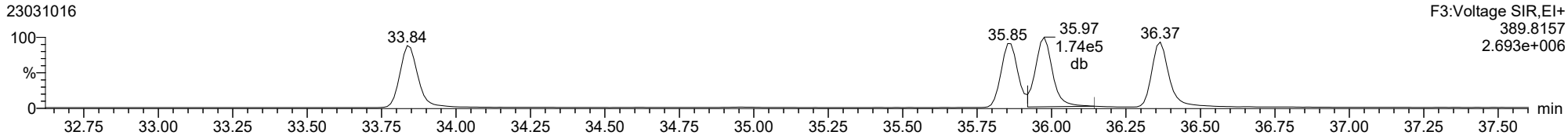

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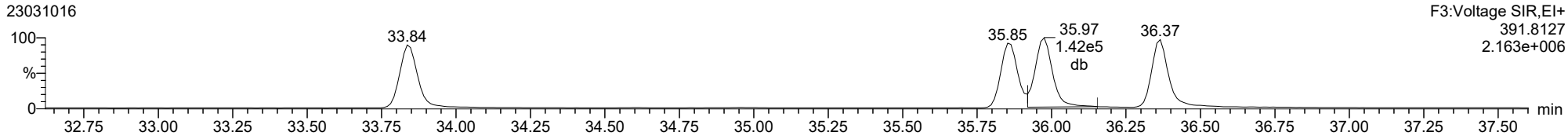

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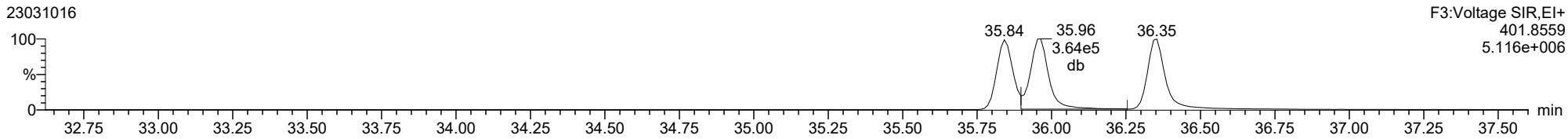

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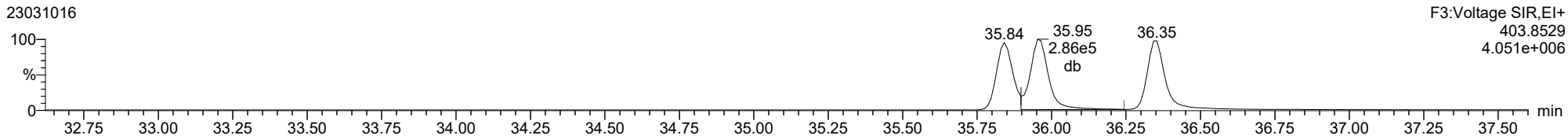

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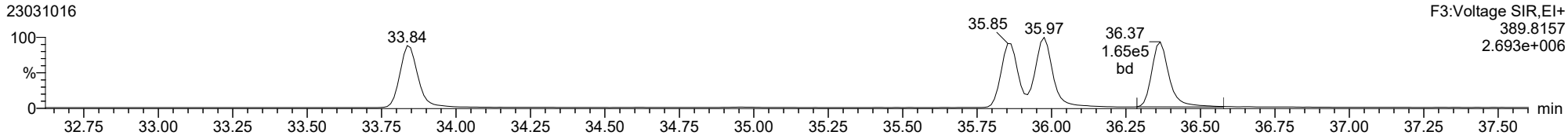

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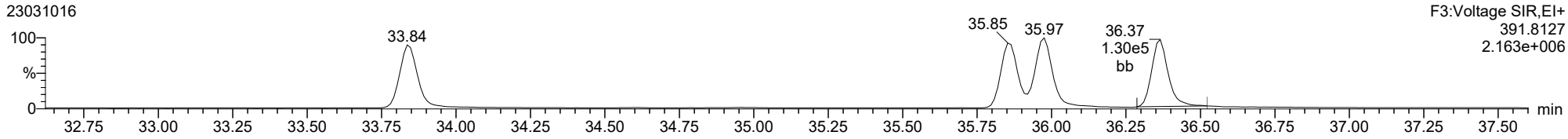

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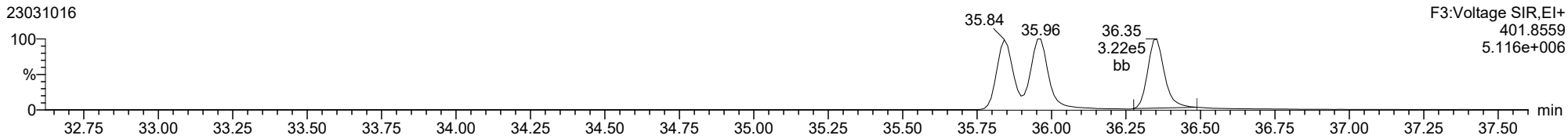

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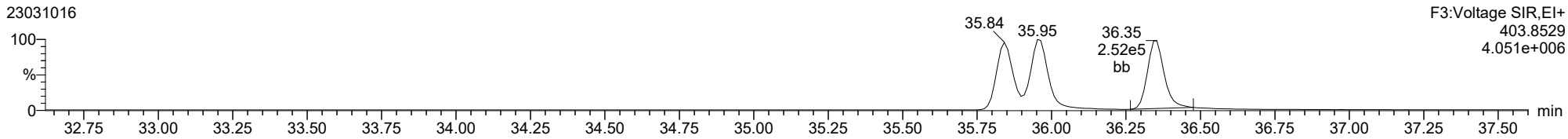

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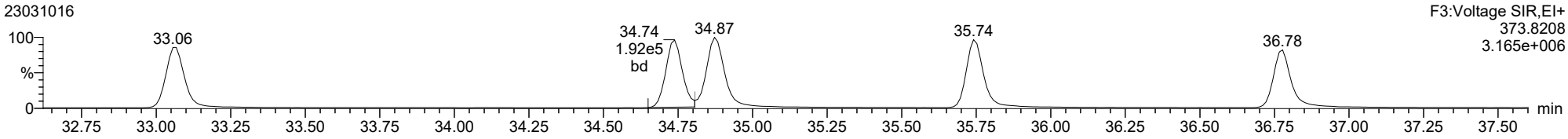

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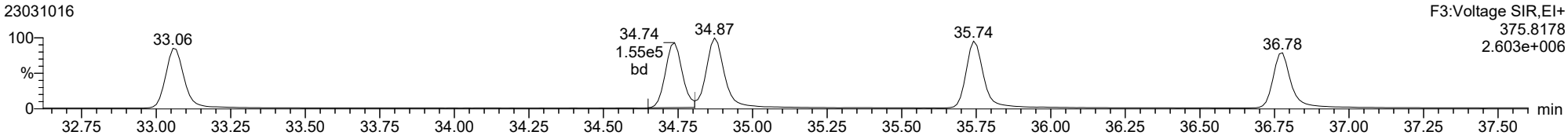

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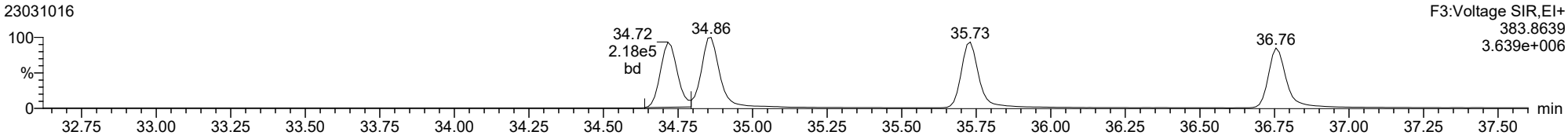

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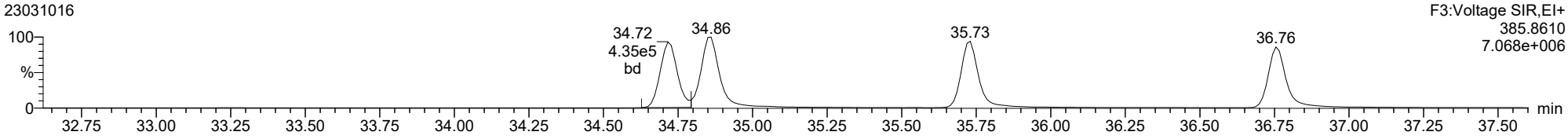
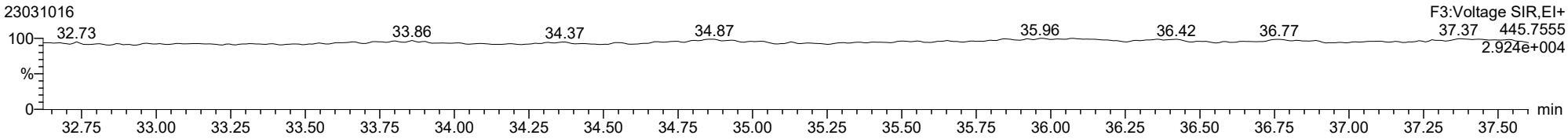


FUNCTION3 OCDPE



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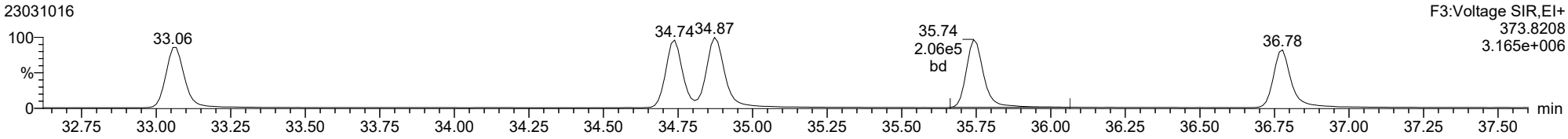

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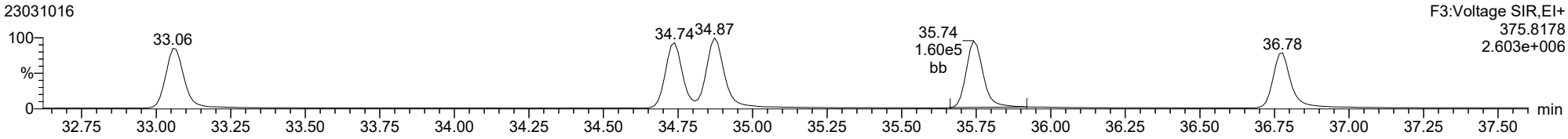

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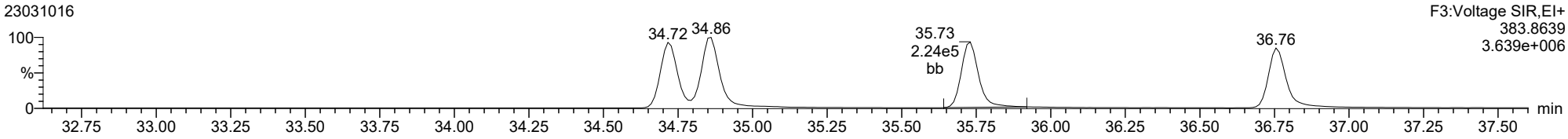

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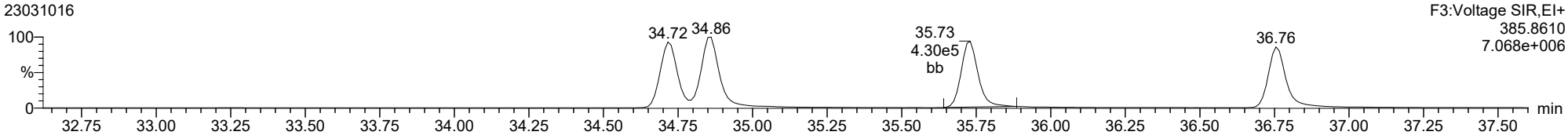
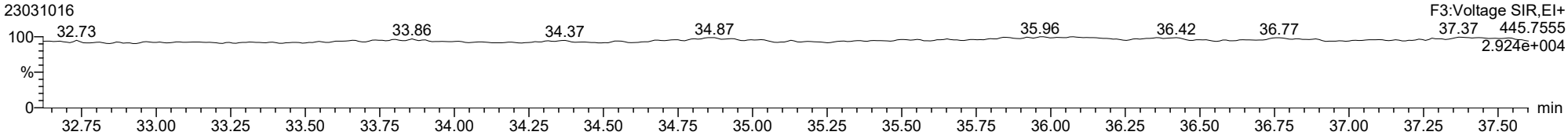


FUNCTION3 OCDPE



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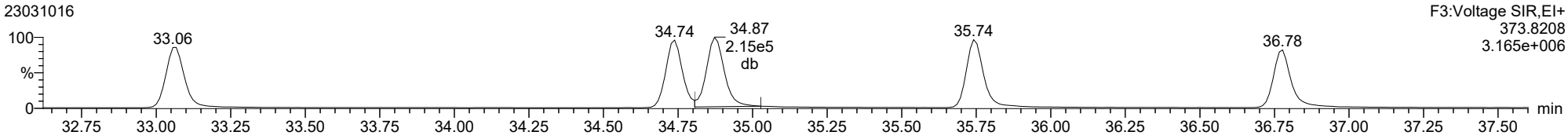

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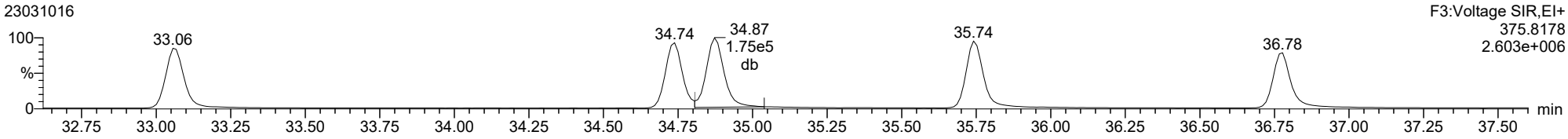

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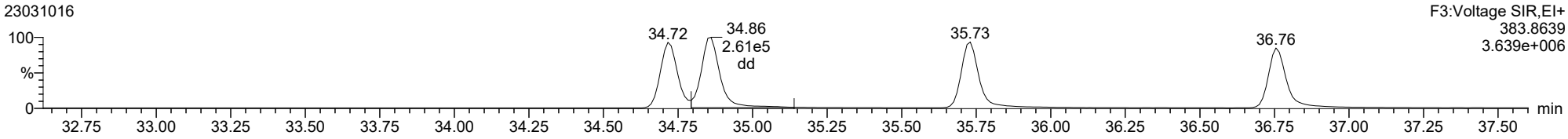

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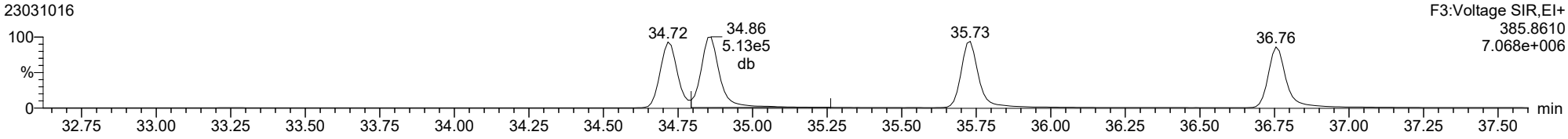

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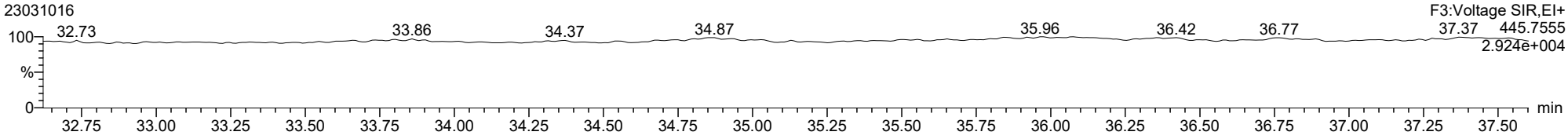

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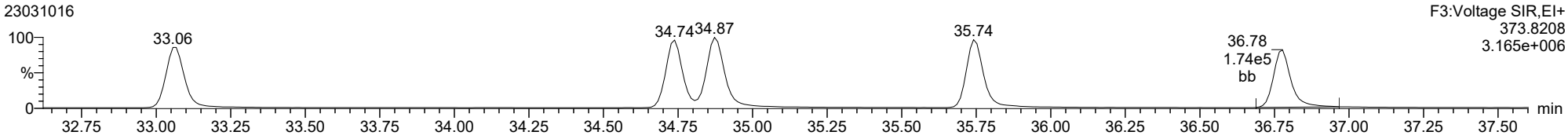

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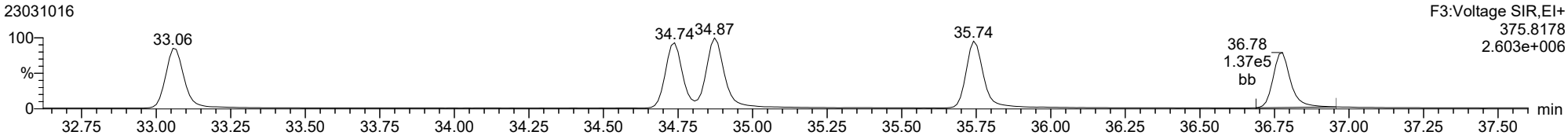

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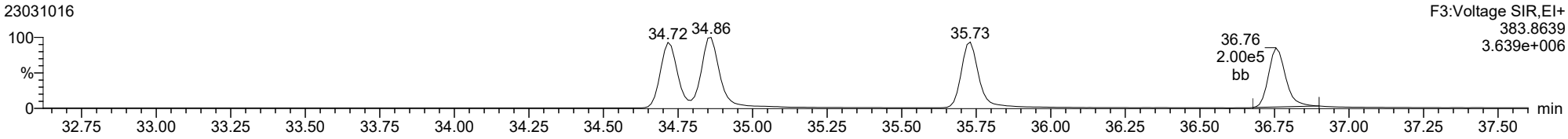

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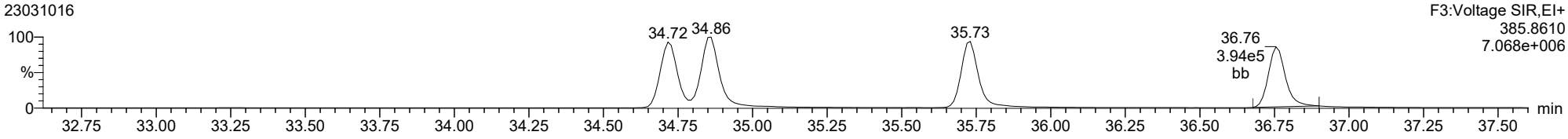

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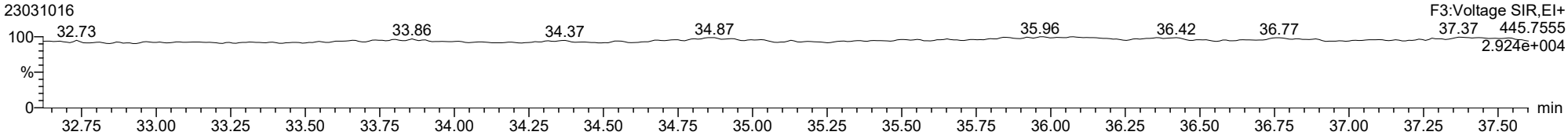

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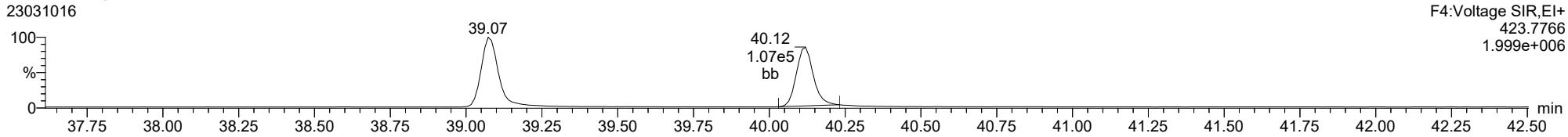

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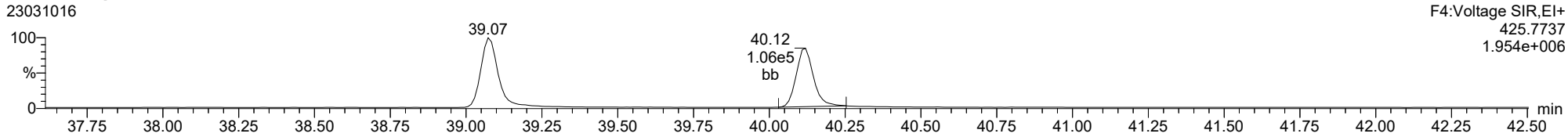

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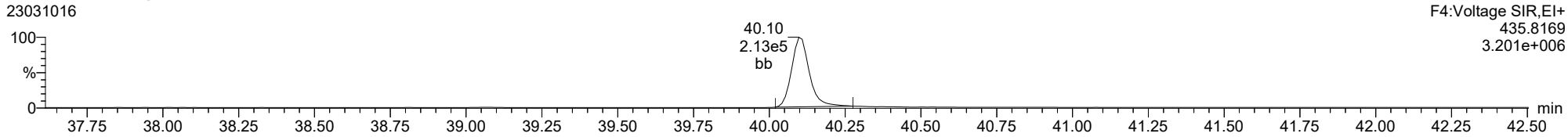

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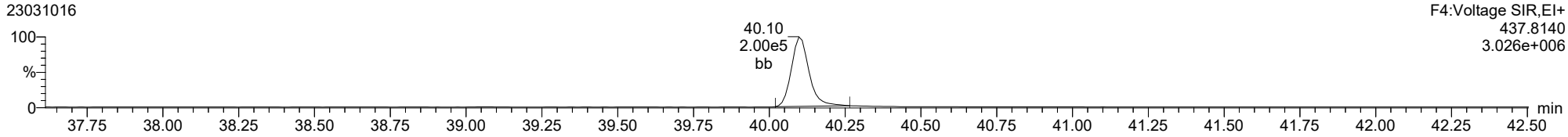

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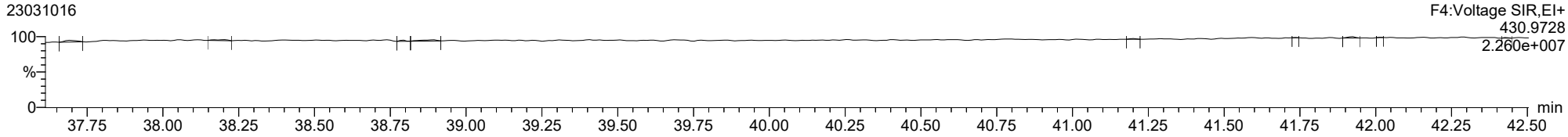

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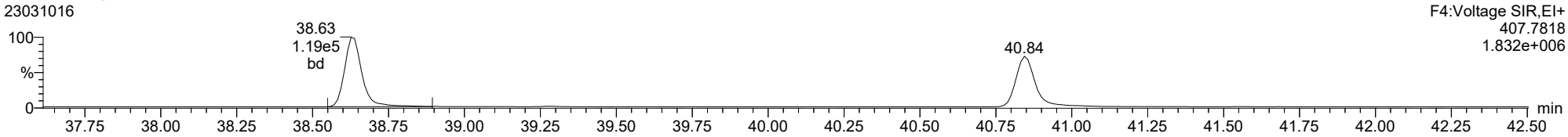

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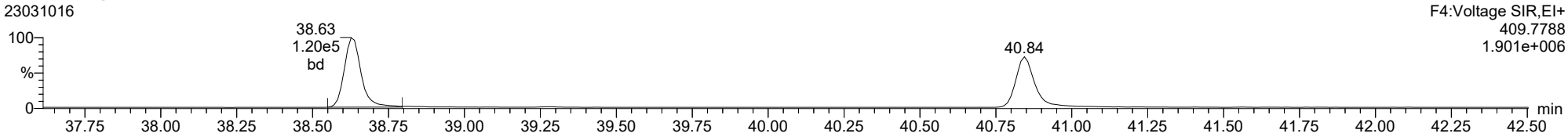

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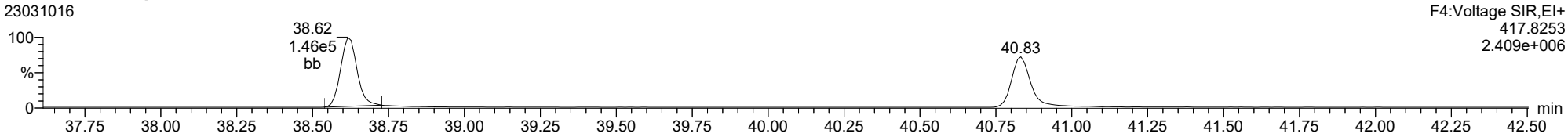

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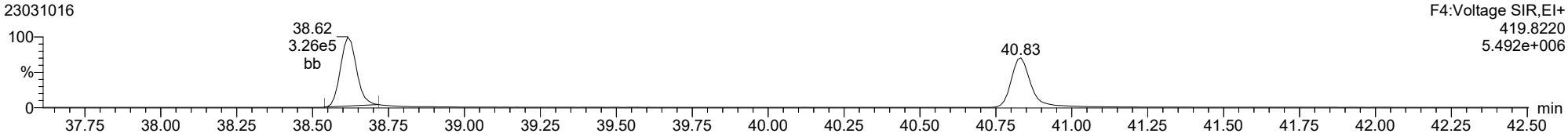
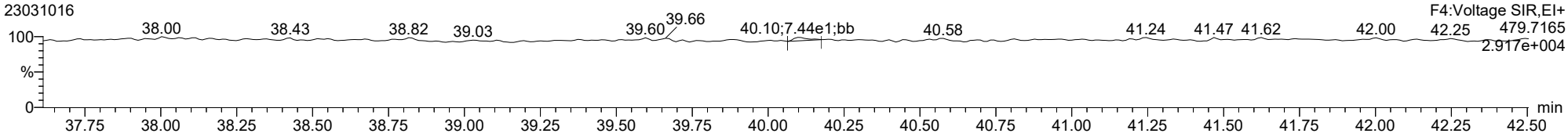


FUNCTION4 NCDPE



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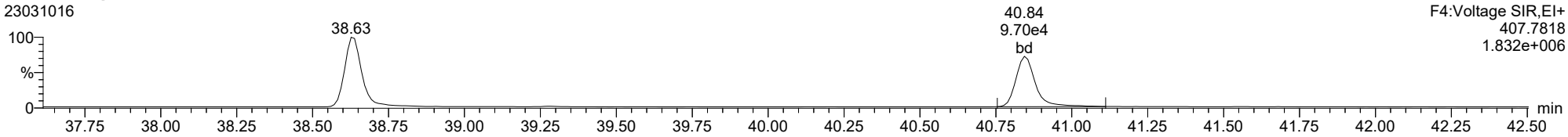

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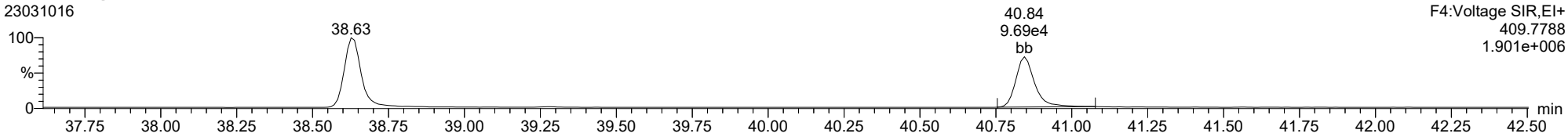

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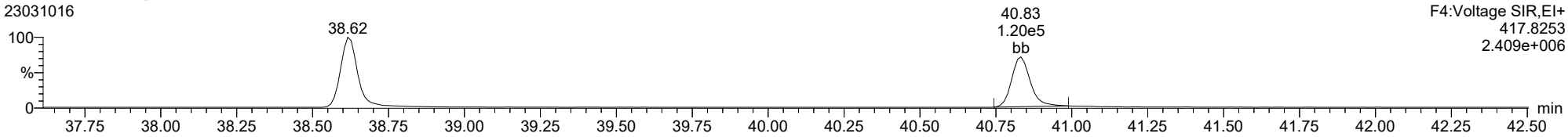

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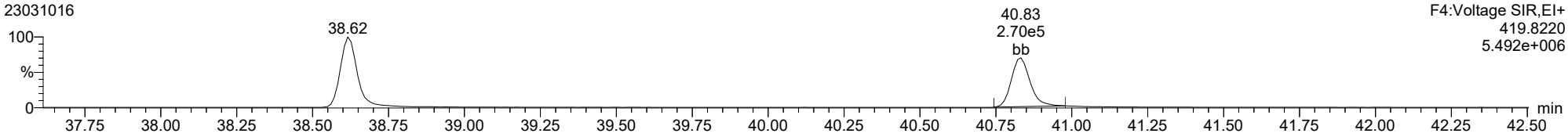
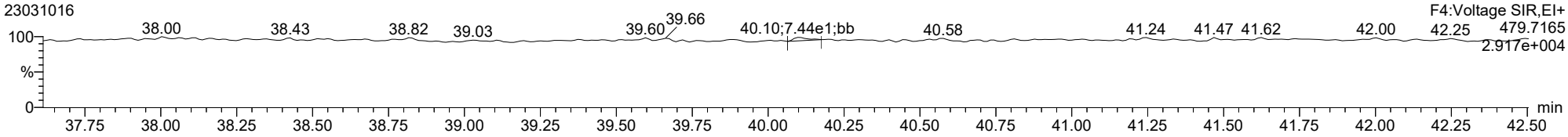


FUNCTION4 NCDPE



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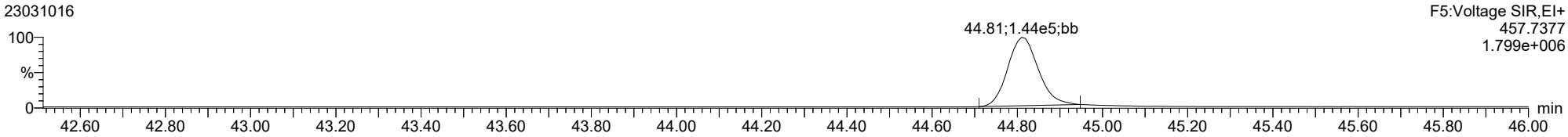

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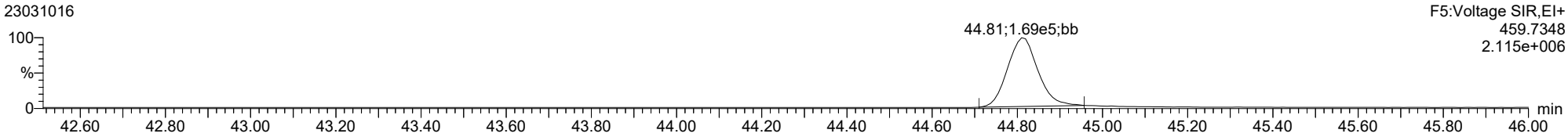

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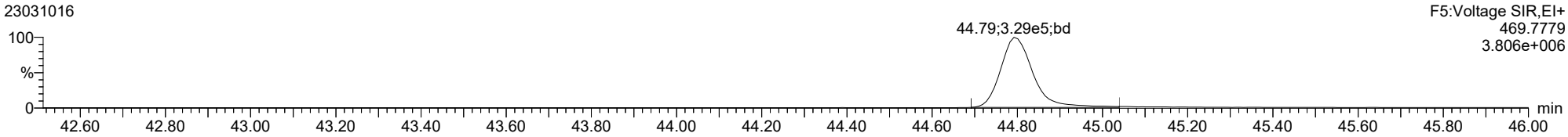

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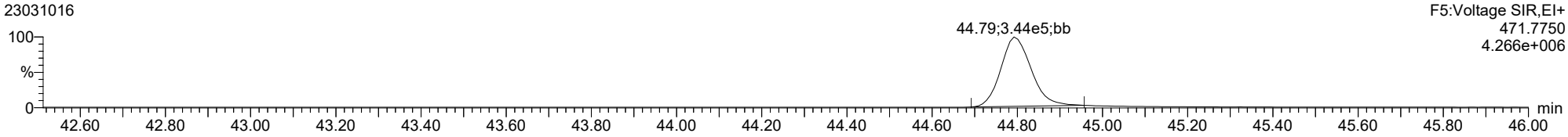
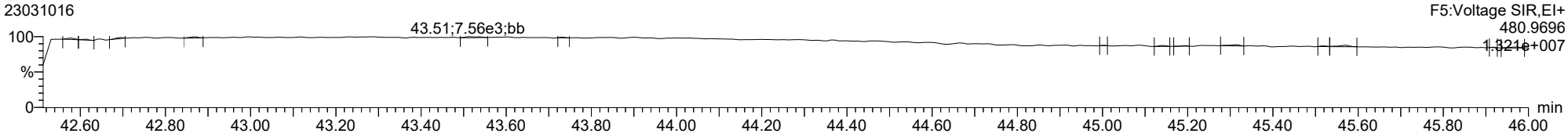


FUNCTION5 PFK



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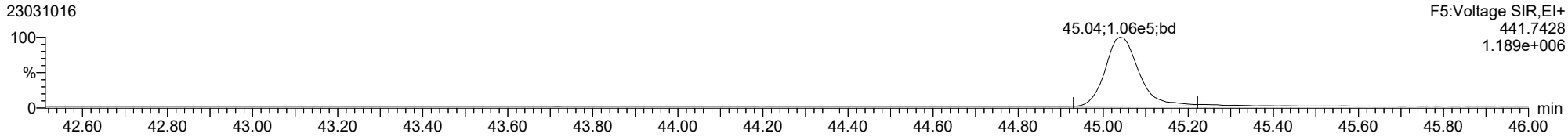

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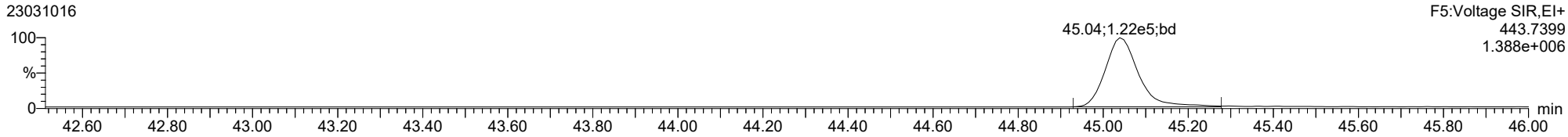

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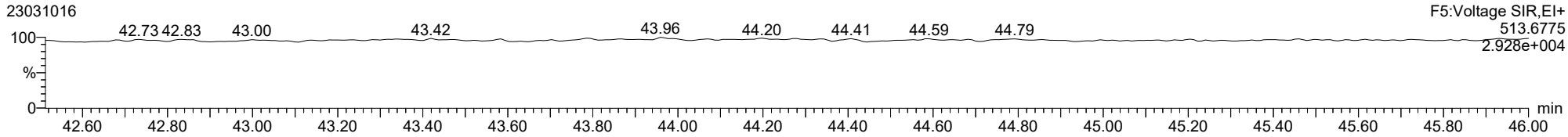

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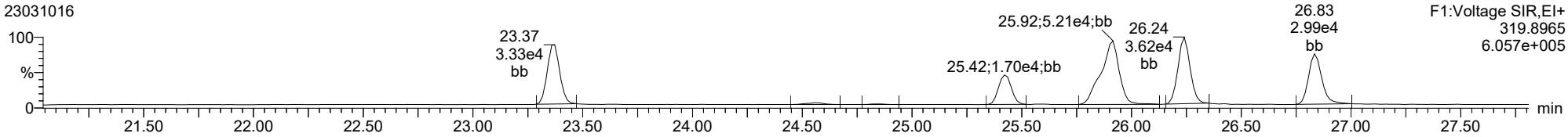
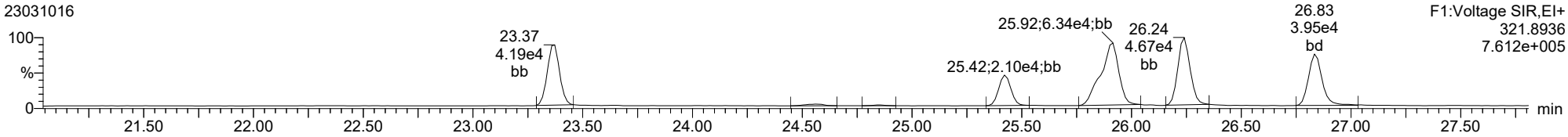
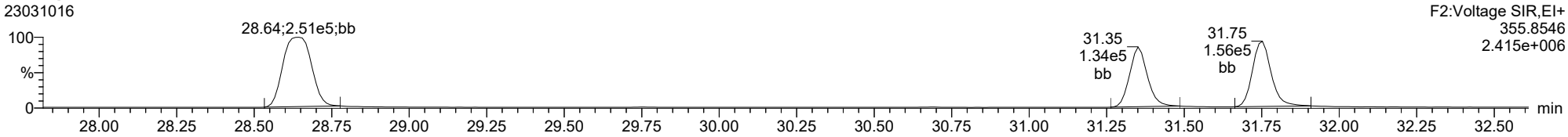
Total-tetradioxins



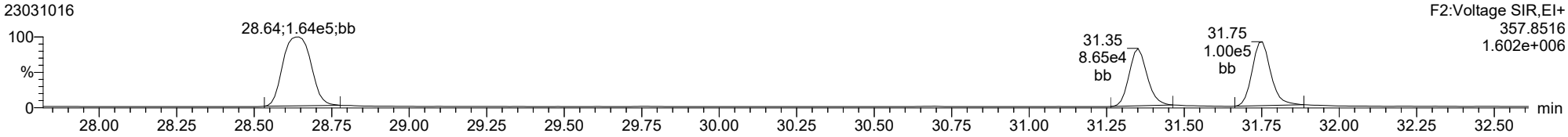
Total-tetradioxins



Total-pentadioxins



Total-pentadioxins



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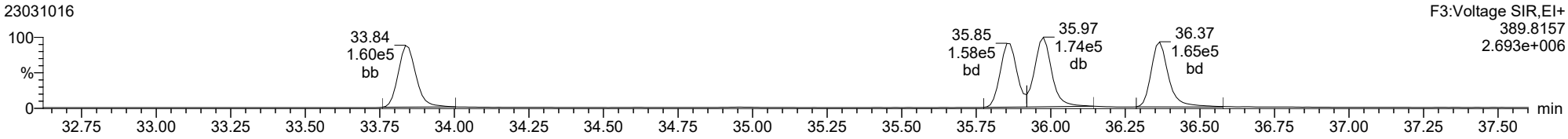
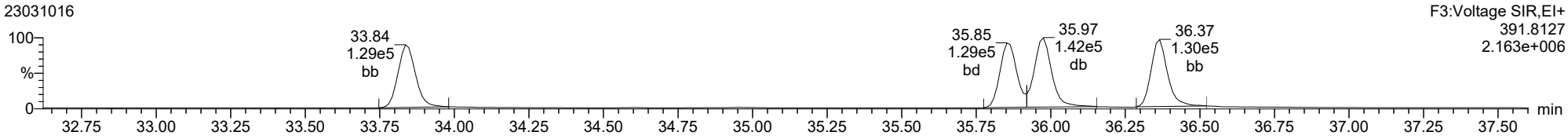
Total-hexadioxins



Total-hexadioxins



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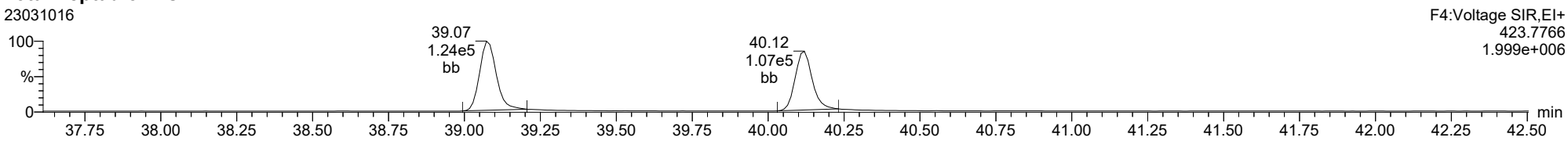
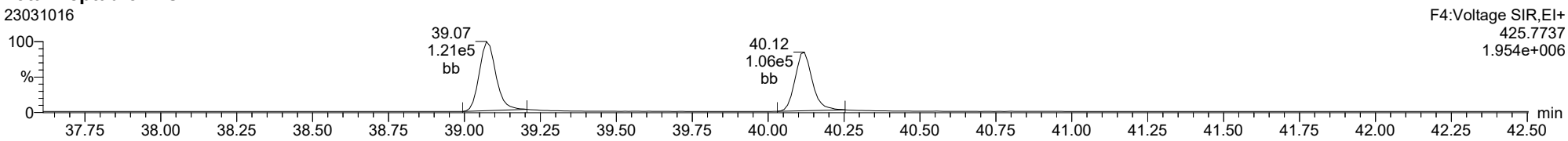


Total-heptadioxins



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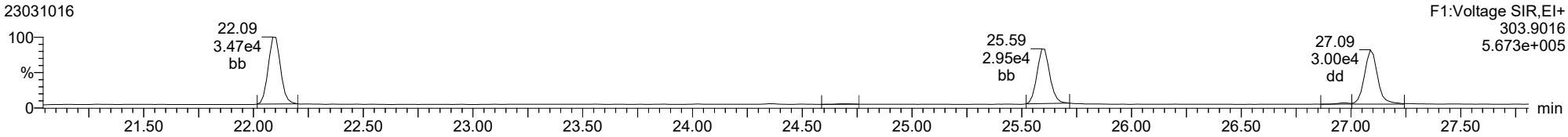
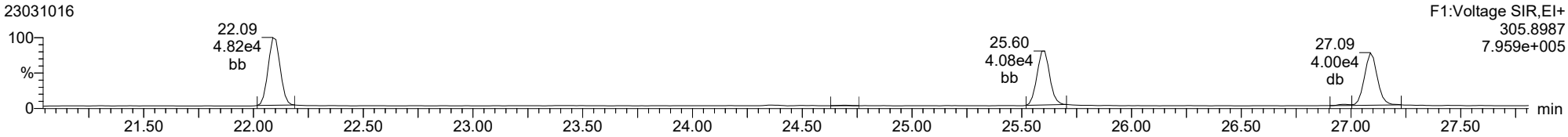
Total-tetrafurans



Total-tetrafurans



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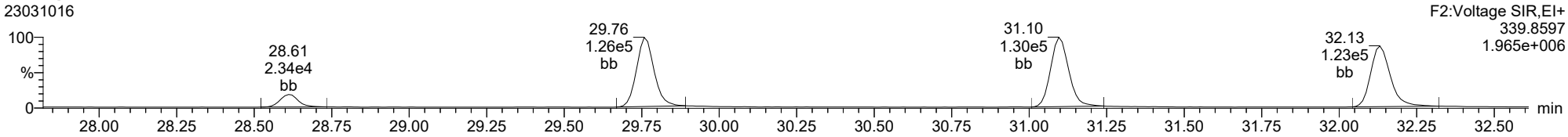

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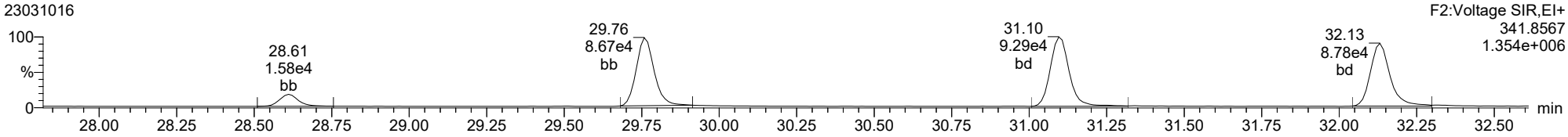

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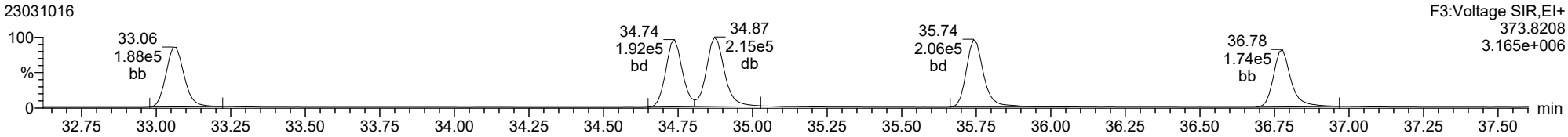
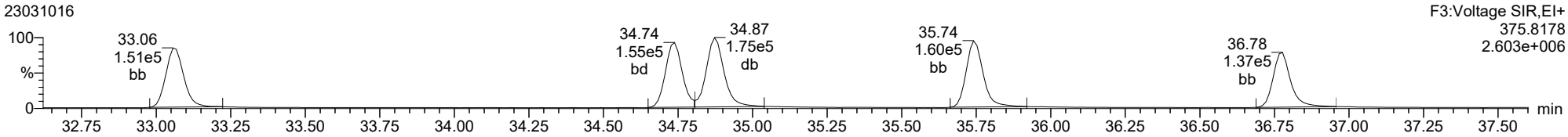
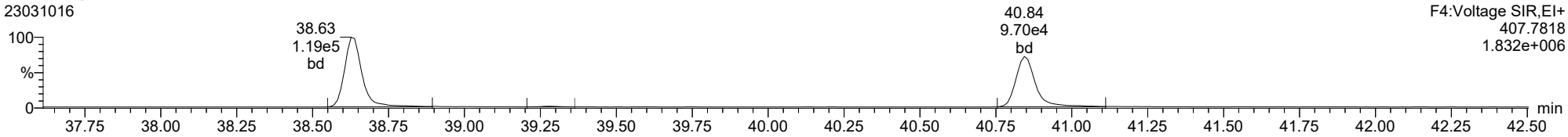
Total-hexafurans



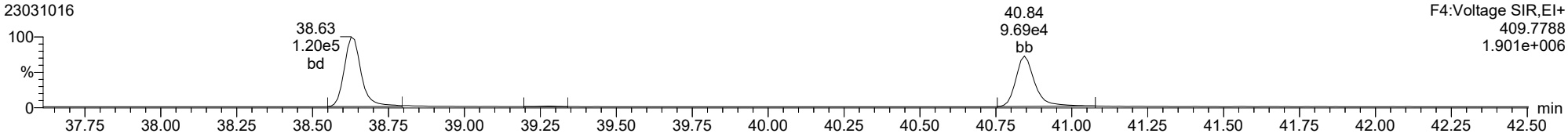
Total-hexafurans



Total-heptafurans

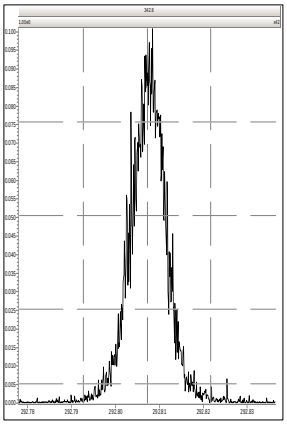


Total-heptafurans

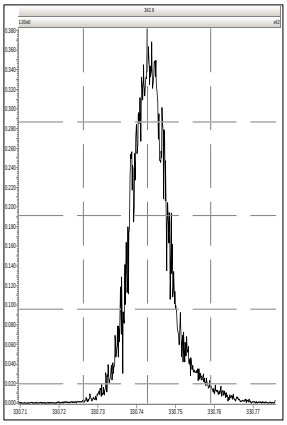


Printed: Friday, March 10, 2023 23:39:44 Pacific Standard Time

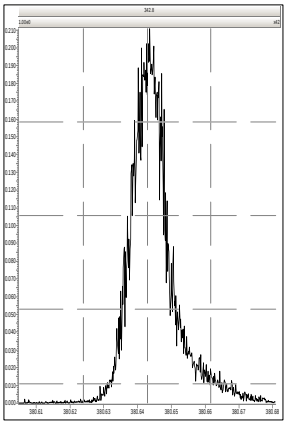
M 292.9824 R 15926



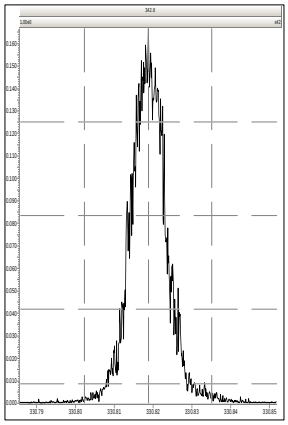
M 330.9792 R 12920



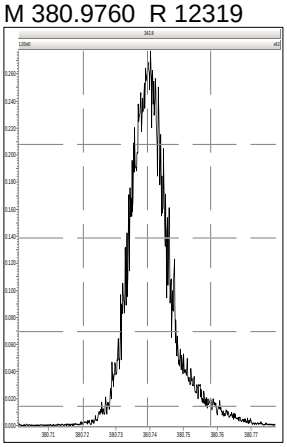
M 380.9760 R 12107



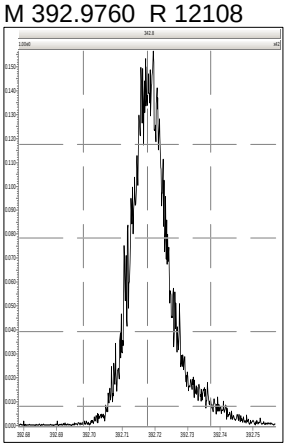
M 330.9792 R 16185



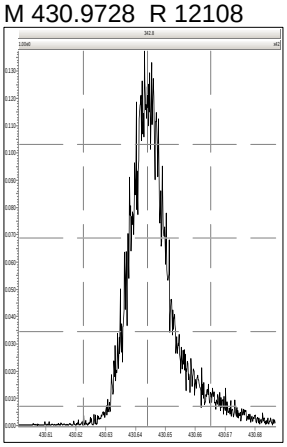
M 380.9760 R 12319



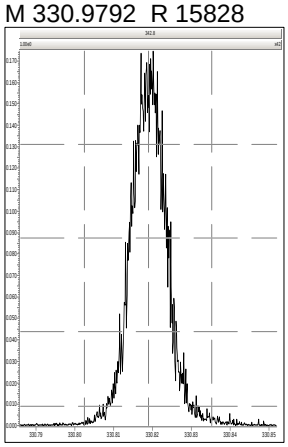
M 392.9760 R 12108



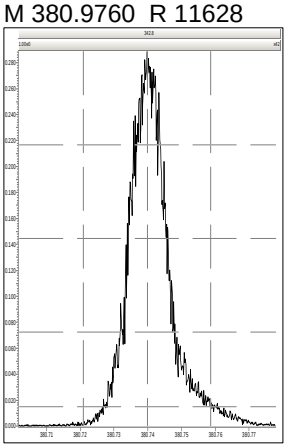
M 430.9728 R 12108



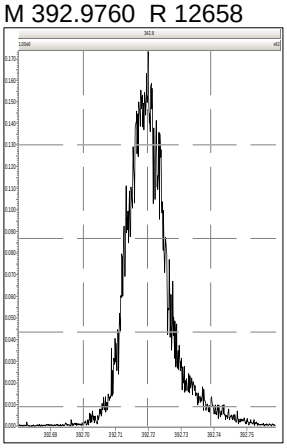
M 330.9792 R 15828



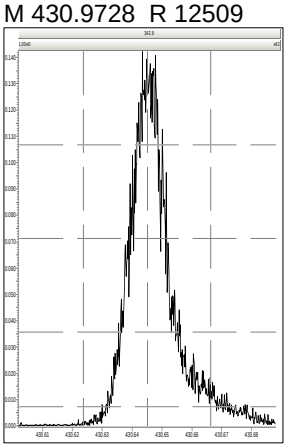
M 380.9760 R 11628



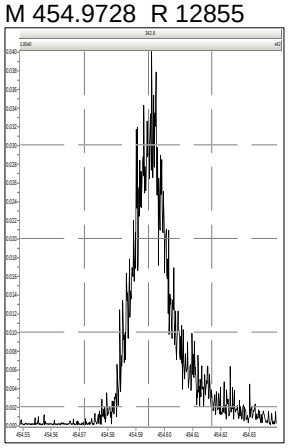
M 392.9760 R 12658



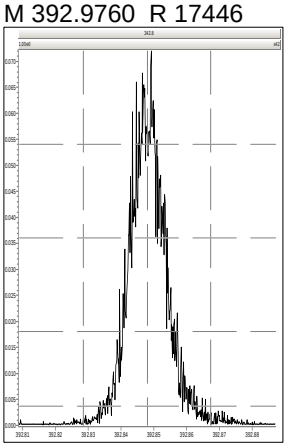
M 430.9728 R 12509



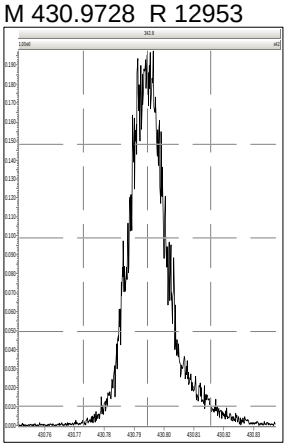
M 454.9728 R 12855



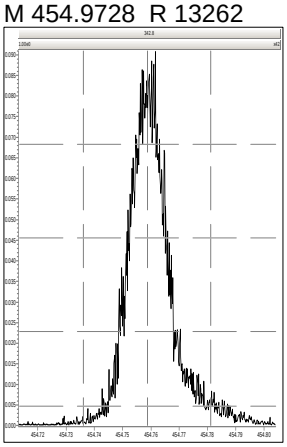
M 392.9760 R 17446



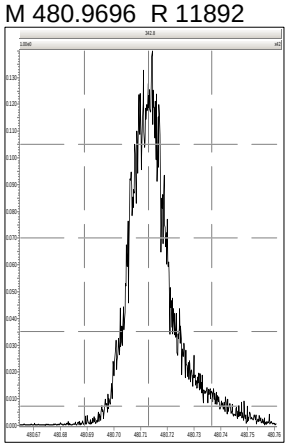
M 430.9728 R 12953



M 454.9728 R 13262

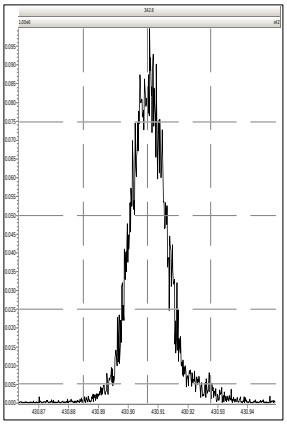


M 480.9696 R 11892

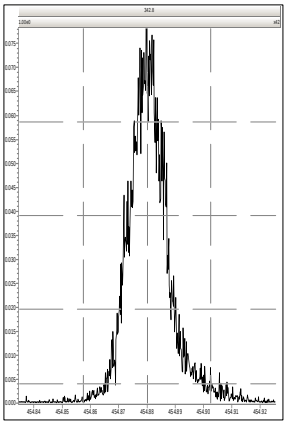


Printed: Friday, March 10, 2023 23:39:44 Pacific Standard Time

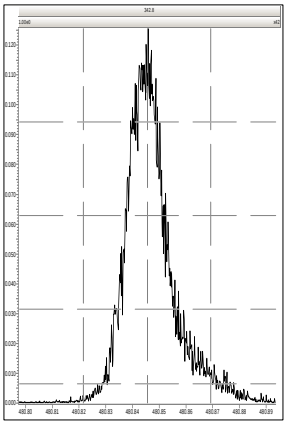
M 430.9728 R 15957



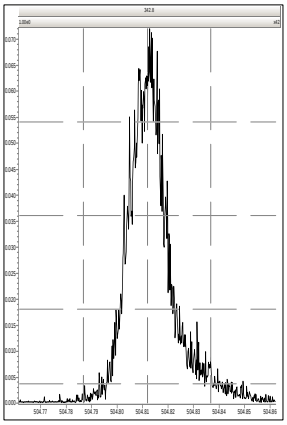
M 454.9728 R 14234



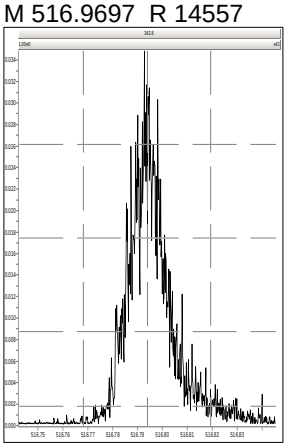
M 480.9696 R 11065

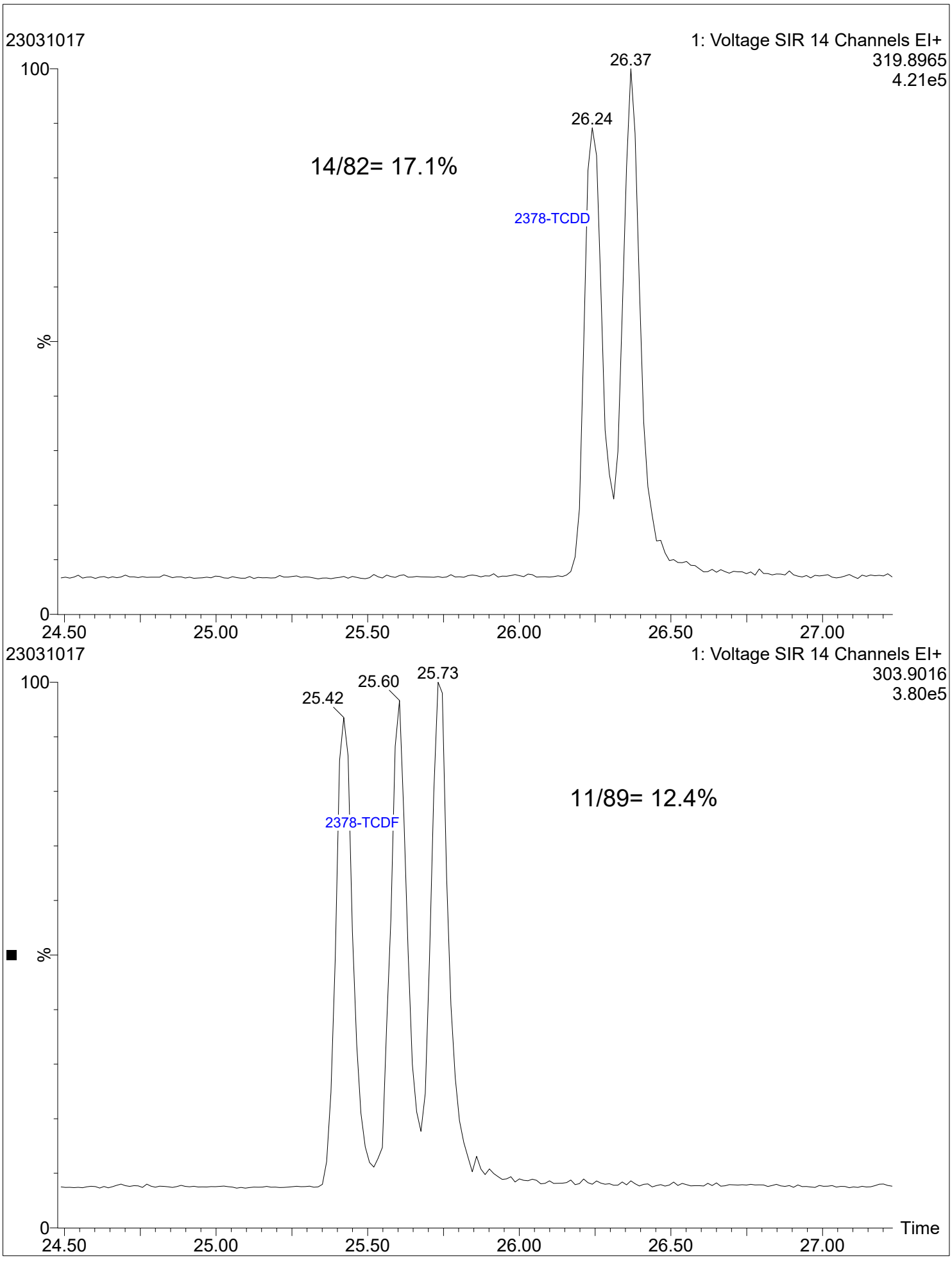


M 504.9696 R 12419



M 516.9697 R 14557




23031017
1: Voltage SIR 14 Channels EI+
319.8965
4.21e5
26.37
26.24
14/82= 17.1%
2378-TCDD
100
%
0
24.50
25.00
25.50
26.00
26.50
27.00
23031017
1: Voltage SIR 14 Channels EI+
303.9016
3.80e5
25.73
25.60
25.42
11/89= 12.4%
2378-TCDF
100
%
0
Time
24.50
25.00
25.50
26.00
26.50
27.00

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC SDG: 23A0467

Instrument .ID: AUTOSPEC01 Lab File ID: 23030303

Date Analyzed: 03/03/23 Time Analyzed: 10:39

Lab Sample ID: SLC0045-RES1 Sequence: SLC0045

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 8.8

3467-TCDF/2378-TCDF: 8.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23030312
Date Analyzed: 03/03/23
Time Analyzed: 18:18
Lab Sample ID: SLC0045-RES2
Sequence: SLC0045

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.9

3467-TCDF/2378-TCDF: 11.7

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0045-ICV1	CS3W1	23030302	03/03/2023	09:51
SLC0045-RES1	ISCW1	23030303	03/03/2023	10:39
SLC0045-CAL1	CSLCW	23030304	03/03/2023	11:28
SLC0045-CAL2	CS1CW	23030305	03/03/2023	12:23
SLC0045-CAL3	CS2CW	23030306	03/03/2023	13:16
SLC0045-CAL4	CS3CW	23030307	03/03/2023	14:06
SLC0045-CAL5	CS4CW	23030308	03/03/2023	14:59
SLC0045-CAL6	CS5CW	23030309	03/03/2023	15:47
SLC0045-SCV1	ICVCW	23030310	03/03/2023	16:36
SLC0045-CCV1	CS3V4	23030311	03/03/2023	17:25
SLC0045-RES2	ISCV4	23030312	03/03/2023	18:18

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23030803
Date Analyzed: 03/08/23
Time Analyzed: 11:31
Lab Sample ID: SLC0101-RES1
Sequence: SLC0101

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 17.2

3467-TCDF/2378-TCDF: 15.1

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0101-ICV1	CS3Y1	23030802	03/08/2023	10:35
SLC0101-RES1	ISCY1	23030803	03/08/2023	11:31
BLB0270-BLK1	Blank	23030806	03/08/2023	13:59
BLB0270-BS1	LCS	23030807	03/08/2023	14:49
BLB0270-SRM1	Reference	23030808	03/08/2023	15:37
SLC0101-CCV1	CS3Y2	23030814	03/08/2023	20:31
SLC0101-RES2	ISCY2	23030815	03/08/2023	21:24

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23030815
Date Analyzed: 03/08/23
Time Analyzed: 21:24
Lab Sample ID: SLC0101-RES2
Sequence: SLC0101

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 20

3467-TCDF/2378-TCDF: 14.8

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0101-ICV1	CS3Y1	23030802	03/08/2023	10:35
SLC0101-RES1	ISCY1	23030803	03/08/2023	11:31
BLB0270-BLK1	Blank	23030806	03/08/2023	13:59
BLB0270-BS1	LCS	23030807	03/08/2023	14:49
BLB0270-SRM1	Reference	23030808	03/08/2023	15:37
SLC0101-CCV1	CS3Y2	23030814	03/08/2023	20:31
SLC0101-RES2	ISCY2	23030815	03/08/2023	21:24

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23031003
Date Analyzed: 03/10/23
Time Analyzed: 11:52
Lab Sample ID: SLC0124-RES1
Sequence: SLC0124

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 10.2

3467-TCDF/2378-TCDF: 9.3

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0124-ICV1	CS3Y3	23031002	03/10/2023	11:03
SLC0124-RES1	ISCY3	23031003	03/10/2023	11:52
SLC0124-CCV1	CS3Y4	23031009	03/10/2023	16:56
SLC0124-RES2	ISCY4	23031010	03/10/2023	17:49
23A0467-05	LDW23-SS1004	23031013	03/10/2023	20:19
SLC0124-CCV2	CS3Y5	23031016	03/10/2023	22:46
SLC0124-RES3	ISCY5	23031017	03/10/2023	23:39

Analytical Resources, LLC
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CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23031010
Date Analyzed: 03/10/23
Time Analyzed: 17:49
Lab Sample ID: SLC0124-RES2
Sequence: SLC0124

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 12.3

3467-TCDF/2378-TCDF: 12.2

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0124-ICV1	CS3Y3	23031002	03/10/2023	11:03
SLC0124-RES1	ISCY3	23031003	03/10/2023	11:52
SLC0124-CCV1	CS3Y4	23031009	03/10/2023	16:56
SLC0124-RES2	ISCY4	23031010	03/10/2023	17:49
23A0467-05	LDW23-SS1004	23031013	03/10/2023	20:19
SLC0124-CCV2	CS3Y5	23031016	03/10/2023	22:46
SLC0124-RES3	ISCY5	23031017	03/10/2023	23:39

Analytical Resources, LLC
Analytical Chemists and Consultants

CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY

EPA 1613B

Lab Name: Analytical Resources, LLC
SDG: 23A0467
Instrument .ID: AUTOSPEC01
Lab File ID: 23031017
Date Analyzed: 03/10/23
Time Analyzed: 23:39
Lab Sample ID: SLC0124-RES3
Sequence: SLC0124

Percent Valley Determination for Column: RTX-Dioxin2 ID: 0.25 (mm)

1278-TCDD/2378-TCDD: 17.1

3467-TCDF/2378-TCDF: 12.4

Quality Control (QC) Limits: ≤ 25%

Lab Sample ID	Sample Name	Lab File ID	Data Analyzed	Time Analyzed
SLC0124-ICV1	CS3Y3	23031002	03/10/2023	11:03
SLC0124-RES1	ISCY3	23031003	03/10/2023	11:52
SLC0124-CCV1	CS3Y4	23031009	03/10/2023	16:56
SLC0124-RES2	ISCY4	23031010	03/10/2023	17:49
23A0467-05	LDW23-SS1004	23031013	03/10/2023	20:19
SLC0124-CCV2	CS3Y5	23031016	03/10/2023	22:46
SLC0124-RES3	ISCY5	23031017	03/10/2023	23:39

Analytical Resources, LLC
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ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0045	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3W1	SLC0045-ICV1	23030302	NA	03/03/23 09:51
ISCW1	SLC0045-RES1	23030303	NA	03/03/23 10:39
CSLCW	SLC0045-CAL1	23030304	NA	03/03/23 11:28
CS1CW	SLC0045-CAL2	23030305	NA	03/03/23 12:23
CS2CW	SLC0045-CAL3	23030306	NA	03/03/23 13:16
CS3CW	SLC0045-CAL4	23030307	NA	03/03/23 14:06
CS4CW	SLC0045-CAL5	23030308	NA	03/03/23 14:59
CS5CW	SLC0045-CAL6	23030309	NA	03/03/23 15:47
ICVCW	SLC0045-SCV1	23030310	NA	03/03/23 16:36
CS3V4	SLC0045-CCV1	23030311	NA	03/03/23 17:25
ISCV4	SLC0045-RES2	23030312	NA	03/03/23 18:18

ANALYSIS SEQUENCE

SLC0045

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 350 Resolution check times : 9:51, 18:18

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0045-ICV1	CS3W1	QC		1	K009821		03/03/2023 09:51	23030302	PK	
SLC0045-RES1	ISCW1	QC		2	L002084		03/03/2023 10:39	23030303	PK	
SLC0045-CAL1	CSLCW	QC		3	I005460		03/03/2023 11:28	23030304	PK	
SLC0045-CAL2	CS1CW	QC		4	I005456		03/03/2023 12:23	23030305	PK	
SLC0045-CAL3	CS2CW	QC		5	I005457		03/03/2023 13:16	23030306	PK	
SLC0045-CAL4	CS3CW	QC		6	K009821		03/03/2023 14:06	23030307	PK	
SLC0045-CAL5	CS4CW	QC		7	I005458		03/03/2023 14:59	23030308	PK	
SLC0045-CAL6	CS5CW	QC		8	I005459		03/03/2023 15:47	23030309	PK	
SLC0045-SCV1	ICVCW	QC		9	H008219		03/03/2023 16:36	23030310	PK	
SLC0045-CCV1	CS3V4	QC		10	K009821		03/03/2023 17:25	23030311	PK	
SLC0045-RES2	ISCV4	QC		11	L002084		03/03/2023 18:18	23030312	PK	

Dataset: T:\Autospec\Processed Data Batch\230303ICIH.qld
Last Altered: Monday, March 06, 2023 10:57:27 Pacific Standard Time
Printed: Monday, March 06, 2023 10:58:44 Pacific Standard Time

3/6/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030304, Compound:TD, RT:26.410	1
Peak deleted	Sample:23030304, Compound:OD, RT:44.990	1
Peak deleted	Sample:23030304, Compound:TF, RT:25.774	1
Pre modification peak	Sample:23030305, Compound:TF, RT:25.774	2
Peak modified	Sample:23030305, Compound:TF, RT:25.774	2
Pre modification peak	Sample:23030304, Compound:HPD, RT:40.261	1
Peak modified	Sample:23030304, Compound:HPD, RT:40.261	1
Peak deleted	Sample:23030308, Compound:PF, RT:32.328	5
Peak deleted	Sample:23030309, Compound:PF, RT:32.307	6
Peak deleted	Sample:23030309, Compound:HF, RT:33.220	6
Peak deleted	Sample:23030309, Compound:TD, RT:27.017	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.995	6
Peak deleted	Sample:23030309, Compound:PD, RT:31.917	6
Peak deleted	Sample:23030308, Compound:HD, RT:34.000	5
Peak deleted	Sample:23030308, Compound:HPD, RT:39.225	5
Peak deleted	Sample:23030309, Compound:HPD, RT:39.214	6
Pre modification peak	Sample:23030305, Compound:OF, RT:45.237	2
Peak modified	Sample:23030305, Compound:OF, RT:45.237	2
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230303ICIH.qld'	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3Y1	SLC0101-ICV1	23030802	NA	03/08/23 10:35
ISCY1	SLC0101-RES1	23030803	NA	03/08/23 11:31
Blank	BLB0270-BLK1	23030806	Solid	03/08/23 13:59
LCS	BLB0270-BS1	23030807	Solid	03/08/23 14:49
Reference	BLB0270-SRM1	23030808	Solid	03/08/23 15:37
CS3Y2	SLC0101-CCV1	23030814	NA	03/08/23 20:31
ISCY2	SLC0101-RES2	23030815	NA	03/08/23 21:24

ANALYSIS SEQUENCE

SLC0101

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 340 Resolution check times : 10:34, 21:24

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0101-ICV1	CS3Y1	QC		1	K009821		03/08/2023 10:35	23030802	PK	
SLC0101-RES1	ISCY1	QC		2	L002084		03/08/2023 11:31	23030803	PK	
22L0246-44RE1	LDW22-IT809C	1613B Dioxin	A 01	3		K011414	03/08/2023 12:19	23030804	PK	Added 3/8/2023 by PK
22L0246-45RE1	LDW22-IT809D	1613B Dioxin	A 01	4		K011414	03/08/2023 13:08	23030805	PK	Added 3/8/2023 by PK
BLB0270-BLK1	Blank	QC		5		K011414	03/08/2023 13:59	23030806	PK	
BLB0270-BS1	LCS	QC		6		K011414	03/08/2023 14:49	23030807	PK	
BLB0270-SRM1	Reference	QC		7		K011414	03/08/2023 15:37	23030808	PK	
BLB0270-DUP1	Duplicate	QC		8		K011414	03/08/2023 16:26	23030809	PK	
23B0054-01	DM-19-S	1613B Dioxin	A 03	9		K011414	03/08/2023 17:15	23030810	PK	
23B0054-02	DM-15-S	1613B Dioxin	A 03	10		K011414	03/08/2023 18:04	23030811	PK	
23B0054-03	DM-20-C-0-1	1613B Dioxin	A 03	11		K011414	03/08/2023 18:53	23030812	PK	
23B0054-04	DM-20-C-1-3	1613B Dioxin	A 03	12		K011414	03/08/2023 19:42	23030813	PK	
SLC0101-CCV1	CS3Y2	QC		13	K009821		03/08/2023 20:31	23030814	PK	
SLC0101-RES2	ISCY2	QC		14	L002084		03/08/2023 21:24	23030815	PK	

Dataset: T:\Autospec\Processed Data Batch\230308RE.qld
Last Altered: Wednesday, March 08, 2023 14:08:06 Pacific Standard Time
Printed: Wednesday, March 08, 2023 14:09:01 Pacific Standard Time 3/8/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030803, Compound:13C-123789-HxCDD, RT:36.507	2
Peak deleted	Sample:23030803, Compound:13C-1234-TCDD, RT:25.577	2
Pre modification peak	Sample:23030804, Compound:HPF, RT:41.019	3
Peak modified	Sample:23030804, Compound:HPF, RT:41.019	3
Peak deleted	Sample:23030804, Compound:HD, RT:36.128	3
Pre modification peak	Sample:23030804, Compound:HPD, RT:40.262	3
Peak modified	Sample:23030804, Compound:HPD, RT:40.262	3
Peak deleted	Sample:23030805, Compound:TF, RT:25.760	4
Peak deleted	Sample:23030805, Compound:TF, RT:25.845	4
Pre modification peak	Sample:23030805, Compound:HD, RT:36.507	4
Peak modified	Sample:23030805, Compound:HD, RT:36.507	4
Peak deleted	Sample:23030804, Compound:TF, RT:23.514	3
Peak deleted	Sample:23030804, Compound:PF, RT:28.764	3
Peak deleted	Sample:23030805, Compound:TF, RT:26.170	4
Peak deleted	Sample:23030805, Compound:TF, RT:27.370	4
Peak deleted	Sample:23030805, Compound:TF, RT:27.413	4
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230308RE.qld'	

Dataset: T:\Autospec\Processed Data Batch\230308D1.qld
Last Altered: Thursday, March 09, 2023 11:29:10 Pacific Standard Time
Printed: Thursday, March 09, 2023 11:29:55 Pacific Standard Time 3/9/23 PK

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23030806, Compound:PF, RT:29.934	1
Peak deleted	Sample:23030806, Compound:OF, RT:45.237	1
Peak deleted	Sample:23030806, Compound:TD, RT:26.410	1
Pre modification peak	Sample:23030809, Compound:HF, RT:35.928	4
Peak modified	Sample:23030809, Compound:HF, RT:35.928	4
Pre modification peak	Sample:23030810, Compound:HF, RT:35.894	5
Peak modified	Sample:23030810, Compound:HF, RT:35.894	5
Pre modification peak	Sample:23030811, Compound:HF, RT:35.048	6
Peak modified	Sample:23030811, Compound:HF, RT:35.048	6
Pre modification peak	Sample:23030812, Compound:HF, RT:35.950	7
Peak modified	Sample:23030812, Compound:HF, RT:35.950	7
Peak deleted	Sample:23030815, Compound:13C-1234-TCDD, RT:25.577	10
Peak deleted	Sample:23030815, Compound:13C-123789-HxCDD, RT:36.518	10
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230308D1.qld'	
Peak deleted	Sample:23030807, Compound:HPF, RT:39.248	2
Peak deleted	Sample:23030807, Compound:HPF, RT:38.947	2
Peak deleted	Sample:23030808, Compound:PP, RT:27.879	3
Peak deleted	Sample:23030808, Compound:PF, RT:29.343	3
Peak deleted	Sample:23030809, Compound:HD, RT:36.685	4
Peak deleted	Sample:23030810, Compound:HD, RT:36.674	5
Peak deleted	Sample:23030811, Compound:HD, RT:36.686	6
Peak deleted	Sample:23030812, Compound:HD, RT:36.686	7
Peak deleted	Sample:23030813, Compound:TF, RT:24.263	8
Peak deleted	Sample:23030813, Compound:TF, RT:26.933	8
Peak deleted	Sample:23030813, Compound:TF, RT:26.806	8
Peak added	Sample:23030813, Compound:PD, RT:28.864	8
Peak added	Sample:23030813, Compound:PD, RT:28.875	8
Peak deleted	Sample:23030813, Compound:HD, RT:36.686	8
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230308D1.qld'	

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0124	Instrument:	AUTOSPEC01
		Calibration:	GC00015

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CS3Y3	SLC0124-ICV1	23031002	NA	03/10/23 11:03
ISCY3	SLC0124-RES1	23031003	NA	03/10/23 11:52
CS3Y4	SLC0124-CCV1	23031009	NA	03/10/23 16:56
ISCY4	SLC0124-RES2	23031010	NA	03/10/23 17:49
LDW23-SS1004	23A0467-05	23031013	Solid	03/10/23 20:19
CS3Y5	SLC0124-CCV2	23031016	NA	03/10/23 22:46
ISCY5	SLC0124-RES3	23031017	NA	03/10/23 23:39

ANALYSIS SEQUENCE

SLC0124

Instrument: AUTOSPEC01 HRGCMS Column ID: K2310
Calibration ID: GC00015 Tune File: FEB0923_1-5
EM Voltage: 345 Resolution check times : 11:02, 17:49, 23:39

Lab Number	Sample Name	Analysis	Container	Order	STD ID	ISTD ID	Analyzed	File ID	Analyst	Comments
SLC0124-ICV1	CS3Y3	QC		1	K009821		03/10/2023 11:03	23031002	PK	
SLC0124-RES1	ISCY3	QC		2	L002084		03/10/2023 11:52	23031003	PK	
23B0054-05	DM-11-C-0-1	1613B Dioxin	A 03	3		K011414	03/10/2023 12:41	23031004	PK	
23B0054-06	DM-11-C-1-3	1613B Dioxin	A 03	4		K011414	03/10/2023 13:31	23031005	PK	
23B0054-07	DM-11-C-3-5	1613B Dioxin	A 03	5		K011414	03/10/2023 14:30	23031006	PK	
23B0054-08	DM-24-C-3-5	1613B Dioxin	A 03	6		K011414	03/10/2023 15:18	23031007	PK	
23B0054-09	DM-06-C-0-1	1613B Dioxin	A 03	7		K011414	03/10/2023 16:07	23031008	PK	
SLC0124-CCV1	CS3Y4	QC		8	K009821		03/10/2023 16:56	23031009	PK	
SLC0124-RES2	ISCY4	QC		9	L002084		03/10/2023 17:49	23031010	PK	
23B0054-10	DM-06-C-1-3	1613B Dioxin	A 03	10		K011414	03/10/2023 18:41	23031011	PK	
23B0054-11	DM-06-C-3-5	1613B Dioxin	A 03	11		K011414	03/10/2023 19:30	23031012	PK	
23B0077-05	SW-3-Z	1613B Dioxin	A 01	12		K011414	03/10/2023 21:57	23031015	PK	
23A0572-01	Composite Ash Samples	1613B Dioxin	M 01	13		K011414	03/10/2023 21:08	23031014	PK	
23A0467-05	LDW23-SS1004	1613B Dioxin	C 01	14		K011414	03/10/2023 20:19	23031013	PK	
SLC0124-CCV2	CS3Y5	QC		15	K009821		03/10/2023 22:46	23031016	PK	
SLC0124-RES3	ISCY5	QC		16	K003933		03/10/2023 23:39	23031017	PK	

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:08:55 Pacific Daylight Time 3/13/23 pk

Event	Details	Sample ID
Process Extract		
Process Integrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:23031003, Compound:13C-123789-HxCDD, RT:36.365	2
Peak deleted	Sample:23031010, Compound:13C-1234-TCDD, RT:25.421	9
Peak deleted	Sample:23031017, Compound:13C-123789-HxCDD, RT:36.354	16
Peak added	Sample:23031004, Compound:13C-123789-HxCDD, RT:36.476	3
Peak added	Sample:23031004, Compound:13C-123789-HxCDD, RT:36.476	3
Pre modification peak	Sample:23031004, Compound:PF, RT:31.162	3
Peak modified	Sample:23031004, Compound:PF, RT:31.162	3
Pre modification peak	Sample:23031004, Compound:TD, RT:26.297	3
Peak modified	Sample:23031004, Compound:TD, RT:26.297	3
Peak modified	Sample:23031004, Compound:TD, RT:26.297	3
Pre modification peak	Sample:23031006, Compound:TF, RT:25.661	5
Peak modified	Sample:23031006, Compound:TF, RT:25.661	5
Pre modification peak	Sample:23031008, Compound:HF, RT:35.808	7
Peak modified	Sample:23031008, Compound:HF, RT:35.808	7
Pre modification peak	Sample:23031008, Compound:HF, RT:36.788	7
Peak modified	Sample:23031008, Compound:HF, RT:36.788	7
Pre modification peak	Sample:23031011, Compound:HPF, RT:40.933	10
Peak modified	Sample:23031011, Compound:HPF, RT:40.933	10
Pre modification peak	Sample:23031012, Compound:OF, RT:45.139	11
Peak modified	Sample:23031012, Compound:OF, RT:45.139	11
Peak deleted	Sample:23031014, Compound:PF, RT:29.758	13
Peak deleted	Sample:23031014, Compound:TD, RT:26.240	13
Pre modification peak	Sample:23031014, Compound:OD, RT:44.801	13
Peak modified	Sample:23031014, Compound:OD, RT:44.801	13
Peak deleted	Sample:23031015, Compound:TF, RT:25.605	14
Peak deleted	Sample:23031015, Compound:TF, RT:25.548	14
Peak deleted	Sample:23031015, Compound:PF, RT:31.084	14
Pre modification peak	Sample:23031015, Compound:HF, RT:34.872	14
Peak modified	Sample:23031015, Compound:HF, RT:34.872	14
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230310.qld'	
Peak added	Sample:23031004, Compound:PF, RT:28.811	3
Peak added	Sample:23031004, Compound:PF, RT:28.811	3
Peak deleted	Sample:23031004, Compound:HF, RT:35.496	3
Peak added	Sample:23031004, Compound:HF, RT:35.808	3
Peak added	Sample:23031004, Compound:HF, RT:35.808	3
Peak added	Sample:23031004, Compound:HF, RT:35.808	3
Peak added	Sample:23031004, Compound:HF, RT:35.808	3
Peak added	Sample:23031005, Compound:PF, RT:28.889	4
Peak added	Sample:23031005, Compound:PF, RT:28.889	4
Peak added	Sample:23031005, Compound:PF, RT:29.480	4
Peak added	Sample:23031005, Compound:PF, RT:29.480	4
Peak deleted	Sample:23031005, Compound:HD, RT:36.855	4
Peak deleted	Sample:23031005, Compound:HD, RT:36.565	4
Peak deleted	Sample:23031005, Compound:HPD, RT:40.465	4
Peak added	Sample:23031007, Compound:PF, RT:28.855	6
Peak added	Sample:23031007, Compound:PF, RT:28.855	6
Peak deleted	Sample:23031008, Compound:HPF, RT:38.459	7
Peak deleted	Sample:23031008, Compound:HD, RT:36.543	7
Peak added	Sample:23031011, Compound:TF, RT:23.642	10
Peak added	Sample:23031011, Compound:TF, RT:23.642	10
Peak added	Sample:23031011, Compound:TF, RT:23.480	10

Dataset: T:\Autospec\Processed Data Batch\230310.qld
Last Altered: Monday, March 13, 2023 11:03:36 Pacific Daylight Time
Printed: Monday, March 13, 2023 11:08:55 Pacific Daylight Time

Event	Details	Sample ID
Peak added	Sample:23031011, Compound:TF, RT:23.500	10
Peak added	Sample:23031011, Compound:TF, RT:25.407	10
Peak added	Sample:23031011, Compound:TF, RT:25.421	10
Peak added	Sample:23031012, Compound:TF, RT:25.421	11
Peak added	Sample:23031012, Compound:TF, RT:25.421	11
Pre modification peak	Sample:23031013, Compound:PF, RT:28.688	12
Peak modified	Sample:23031013, Compound:PF, RT:28.688	12
Peak added	Sample:23031013, Compound:PD, RT:29.959	12
Peak added	Sample:23031013, Compound:PD, RT:29.970	12
Peak added	Sample:23031013, Compound:PD, RT:30.115	12
Peak added	Sample:23031013, Compound:PD, RT:30.104	12
Peak added	Sample:23031013, Compound:PD, RT:28.666	12
Peak added	Sample:23031013, Compound:PD, RT:28.666	12
Peak deleted	Sample:23031015, Compound:TF, RT:26.240	14
Peak added	Sample:23031016, Compound:PP, RT:26.947	15
Dataset Saved	Saved to 'T:\Autospec\Processed Data Batch\230310.qld'	

Analytical Resources, LLC
Analytical Chemists and Consultants

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-ICV1	Calibration:	GC00015
File ID:	23030302	Analyzed:	03/03/23 09:51

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	94.0	71 - 129	25.7745	25.76487	0.0096	N/A	
13C12-2,3,7,8-TCDD	100.00	102	82 - 118	26.4242	26.40287	0.0213	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.2	76 - 124	29.9337	29.92235	0.0114	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	87.6	77 - 123	31.2707	31.2611	0.0096	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	84.3	62 - 138	31.5268	31.5192	0.0076	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	84.0	76 - 124	34.8915	34.88393	0.0076	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	74.6	70 - 130	35.0363	35.02318	0.0131	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.8942	35.88653	0.0077	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	99.9	74 - 126	36.9303	36.91718	0.0131	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.5	85 - 115	36.0167	36.00728	0.0094	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.9	85 - 115	36.1393	36.12053	0.0188	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	95.3	78 - 122	38.7685	38.7593	0.0092	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	98.7	77 - 123	41.008	40.99867	0.0093	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	105	72 - 128	40.2615	40.25773	0.0038	N/A	
13C12-OCDD	200.00	107	48 - 152	44.9993	44.98705	0.0122	N/A	
37Cl4-2,3,7,8-TCDD	10.000	90.5	0 - 200	26.4383	26.42402	0.0143	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-SCV1	Calibration:	GC00015
File ID:	23030310	Analyzed:	03/03/23 16:36

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	96.9	0 - 200	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	96.6	0 - 200	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	73.2	0 - 200	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	75.9	0 - 200	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	0 - 200	31.5155	31.5192	-0.0037	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	93.0	0 - 200	34.8802	34.88393	-0.0037	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	98.0	0 - 200	35.014	35.02318	-0.0092	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	93.4	0 - 200	35.8828	35.88653	-0.0037	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	97.9	0 - 200	36.9078	36.91718	-0.0094	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	95.9	0 - 200	36.0053	36.00728	-0.0020	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.7	0 - 200	36.1168	36.12053	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	0 - 200	38.7573	38.7593	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	104	0 - 200	40.9967	40.99867	-0.0020	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	102	0 - 200	40.2502	40.25773	-0.0075	N/A	
13C12-OCDD	200.00	80.8	0 - 200	44.9807	44.98705	-0.0064	N/A	
37Cl4-2,3,7,8-TCDD	10.000	87.1	0 - 200	26.4242	26.42402	0.0002	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0045	Instrument:	AUTOSPEC01
Sample ID:	SLC0045-CCV1	Calibration:	GC00015
File ID:	23030311	Analyzed:	03/03/23 17:25

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	89.4	71 - 129	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	86.0	82 - 118	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	92.6	76 - 124	29.9225	29.92235	0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	91.6	77 - 123	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	90.8	62 - 138	31.5157	31.5192	-0.0035	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	95.2	76 - 124	34.8805	34.88393	-0.0034	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	91.1	70 - 130	35.0253	35.02318	0.0021	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	96.9	73 - 127	35.883	35.88653	-0.0035	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	101	74 - 126	36.9193	36.91718	0.0021	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	97.6	85 - 115	36.0057	36.00728	-0.0016	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	98.4	85 - 115	36.117	36.12053	-0.0035	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	102	78 - 122	38.7577	38.7593	-0.0016	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	84.3	77 - 123	40.997	40.99867	-0.0017	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	92.0	72 - 128	40.2617	40.25773	0.0040	N/A	
13C12-OCDD	200.00	85.1	48 - 152	44.9903	44.98705	0.0032	N/A	
37Cl4-2,3,7,8-TCDD	10.000	75.4	0 - 200	26.424	26.42402	0.0000	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
Sample ID:	SLC0101-ICV1	Calibration:	GC00015
File ID:	23030802	Analyzed:	03/08/23 10:35

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	103	71 - 129	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	100	82 - 118	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	107	76 - 124	29.9223	29.92235	-0.0001	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	112	77 - 123	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	104	62 - 138	31.5155	31.5192	-0.0037	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	101	76 - 124	34.8803	34.88393	-0.0036	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	94.4	70 - 130	35.0252	35.02318	0.0020	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	100	73 - 127	35.883	35.88653	-0.0035	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	111	74 - 126	36.9192	36.91718	0.0020	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.8	85 - 115	36.0055	36.00728	-0.0018	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	91.5	85 - 115	36.117	36.12053	-0.0035	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	124	78 - 129	38.7573	38.7593	-0.0020	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	102	77 - 123	40.9967	40.99867	-0.0020	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	98.8	72 - 128	40.2613	40.25773	0.0036	N/A	
13C12-OCDD	200.00	108	48 - 152	44.9992	44.98705	0.0121	N/A	
37Cl4-2,3,7,8-TCDD	10.000	89.6	0 - 200	26.424	26.42402	0.0000	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
Sample ID:	BLB0270-BLK1	Calibration:	GC00015
File ID:	23030806	Analyzed:	03/08/23 13:59

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	132	24 - 169	25.7462	25.76487	-0.0187	N/A	
13C12-2,3,7,8-TCDD	200.00	134	25 - 164	26.3817	26.40287	-0.0212	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	161	24 - 185	29.9113	29.92235	-0.0111	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	146	21 - 178	31.2483	31.2611	-0.0128	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	136	25 - 181	31.5045	31.5192	-0.0147	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	140	26 - 152	34.8803	34.88393	-0.0036	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	136	26 - 123	35.014	35.02318	-0.0092	N/A	*
13C12-2,3,4,6,7,8-HxCDF	200.00	131	28 - 136	35.8832	35.88653	-0.0033	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	126	29 - 147	36.9082	36.91718	-0.0090	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	131	32 - 141	35.9947	36.00728	-0.0126	N/A	
13C12-1,2,3,6,7,8-HxCDD	200.00	131	28 - 130	36.106	36.12053	-0.0145	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	200.00	154	28 - 143	38.7577	38.7593	-0.0016	N/A	*
13C12-1,2,3,4,7,8,9-HpCDF	200.00	131	26 - 138	40.9858	40.99867	-0.0129	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	130	23 - 140	40.2505	40.25773	-0.0072	N/A	
13C12-OCDD	400.00	120	17 - 157	44.9905	44.98705	0.0034	N/A	
37Cl4-2,3,7,8-TCDD	80.000	112	35 - 197	26.41	26.42402	-0.0140	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
Sample ID:	BLB0270-BS1	Calibration:	GC00015
File ID:	23030807	Analyzed:	03/08/23 14:49

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	200.00	111	24 - 169	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	200.00	102	25 - 164	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	200.00	146	24 - 185	29.9113	29.92235	-0.0111	N/A	
13C12-2,3,4,7,8-PeCDF	200.00	143	21 - 178	31.2593	31.2611	-0.0018	N/A	
13C12-1,2,3,7,8-PeCDD	200.00	135	25 - 181	31.5043	31.5192	-0.0149	N/A	
13C12-1,2,3,4,7,8-HxCDF	200.00	115	26 - 152	34.8803	34.88393	-0.0036	N/A	
13C12-1,2,3,6,7,8-HxCDF	200.00	108	26 - 123	35.0252	35.02318	0.0020	N/A	
13C12-2,3,4,6,7,8-HxCDF	200.00	115	28 - 136	35.8828	35.88653	-0.0037	N/A	
13C12-1,2,3,7,8,9-HxCDF	200.00	119	29 - 147	36.9192	36.91718	0.0020	N/A	
13C12-1,2,3,4,7,8-HxCDD	200.00	118	32 - 141	36.0055	36.00728	-0.0018	N/A	
13C12-1,2,3,6,7,8-HxCDD	200.00	114	28 - 130	36.1168	36.12053	-0.0037	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	200.00	135	28 - 143	38.7687	38.7593	0.0094	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	200.00	116	26 - 138	40.9968	40.99867	-0.0019	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	200.00	126	23 - 140	40.2615	40.25773	0.0038	N/A	
13C12-OCDD	400.00	95.4	17 - 157	44.9995	44.98705	0.0124	N/A	
37Cl4-2,3,7,8-TCDD	80.000	83.4	35 - 197	26.4098	26.42402	-0.0142	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
Sample ID:	BLB0270-SRM1	Calibration:	GC00015
File ID:	23030808	Analyzed:	03/08/23 15:37

Surrogate Compound	Spike Level ng/kg wet	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.60	113	24 - 169	25.7603	25.76487	-0.0046	N/A	
13C12-2,3,7,8-TCDD	199.60	113	25 - 164	26.396	26.40287	-0.0069	N/A	
13C12-1,2,3,7,8-PeCDF	199.60	160	24 - 185	29.9115	29.92235	-0.0109	N/A	
13C12-2,3,4,7,8-PeCDF	199.60	168	21 - 178	31.2597	31.2611	-0.0014	N/A	
13C12-1,2,3,7,8-PeCDD	199.60	155	25 - 181	31.5048	31.5192	-0.0144	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.60	111	26 - 152	34.8808	34.88393	-0.0031	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.60	106	26 - 123	35.0257	35.02318	0.0025	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.60	113	28 - 136	35.8947	35.88653	0.0082	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.60	117	29 - 147	36.9085	36.91718	-0.0087	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.60	109	32 - 141	36.0062	36.00728	-0.0011	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.60	104	28 - 130	36.1175	36.12053	-0.0030	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.60	103	28 - 143	38.7692	38.7593	0.0099	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.60	98.6	26 - 138	40.9975	40.99867	-0.0012	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.60	93.0	23 - 140	40.2622	40.25773	0.0045	N/A	
13C12-OCDD	399.20	84.7	17 - 157	45.0002	44.98705	0.0131	N/A	
37Cl4-2,3,7,8-TCDD	79.840	95.8	35 - 197	26.41	26.42402	-0.0140	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0101	Instrument:	AUTOSPEC01
Sample ID:	SLC0101-CCV1	Calibration:	GC00015
File ID:	23030814	Analyzed:	03/08/23 20:31

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	96.4	71 - 129	25.7602	25.76487	-0.0047	N/A	
13C12-2,3,7,8-TCDD	100.00	100	82 - 118	26.3958	26.40287	-0.0071	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	135	76 - 124	29.9113	29.92235	-0.0111	N/A	*
13C12-2,3,4,7,8-PeCDF	100.00	134	77 - 123	31.2483	31.2611	-0.0128	N/A	*
13C12-1,2,3,7,8-PeCDD	100.00	122	62 - 138	31.5047	31.5192	-0.0145	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	92.1	76 - 124	34.8805	34.88393	-0.0034	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	82.9	70 - 130	35.0253	35.02318	0.0021	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	91.9	73 - 127	35.8832	35.88653	-0.0033	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	98.4	74 - 126	36.9192	36.91718	0.0020	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	96.0	85 - 115	36.0057	36.00728	-0.0016	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	86.1	85 - 115	36.117	36.12053	-0.0035	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	112	78 - 122	38.7687	38.7593	0.0094	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	107	77 - 123	40.997	40.99867	-0.0017	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	105	72 - 128	40.2617	40.25773	0.0040	N/A	
13C12-OCDD	200.00	112	48 - 152	44.9995	44.98705	0.0124	N/A	
37Cl4-2,3,7,8-TCDD	10.000	88.4	0 - 200	26.41	26.42402	-0.0140	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0124	Instrument:	AUTOSPEC01
Sample ID:	SLC0124-ICV1	Calibration:	GC00015
File ID:	23031002	Analyzed:	03/10/23 11:03

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	90.7	71 - 129	25.619	25.76487	-0.1459	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.2545	26.40287	-0.1484	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	95.4	76 - 124	29.7693	29.92235	-0.1531	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	89.1	77 - 123	31.1062	31.2611	-0.1549	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	84.1	62 - 138	31.3625	31.5192	-0.1567	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	91.8	76 - 124	34.7493	34.88393	-0.1346	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	81.0	70 - 130	34.883	35.02318	-0.1402	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	92.5	73 - 127	35.752	35.88653	-0.1345	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	107	74 - 126	36.7768	36.91718	-0.1404	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	92.9	85 - 115	35.8635	36.00728	-0.1438	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	83.5	85 - 115	35.986	36.12053	-0.1345	N/A	*
13C12-1,2,3,4,6,7,8-HpCDF	100.00	95.5	78 - 122	38.6377	38.7593	-0.1216	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	97.8	77 - 123	40.8547	40.99867	-0.1440	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	97.5	72 - 128	40.1195	40.25773	-0.1382	N/A	
13C12-OCDD	200.00	103	48 - 152	44.8285	44.98705	-0.1586	N/A	
37Cl4-2,3,7,8-TCDD	10.000	91.2	0 - 200	26.2687	26.42402	-0.1553	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0124	Instrument:	AUTOSPEC01
Sample ID:	SLC0124-CCV1	Calibration:	GC00015
File ID:	23031009	Analyzed:	03/10/23 16:56

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	85.6	71 - 129	25.5765	25.76487	-0.1884	N/A	
13C12-2,3,7,8-TCDD	100.00	103	82 - 118	26.2122	26.40287	-0.1907	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	88.0	76 - 124	29.7358	29.92235	-0.1866	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	86.6	77 - 123	31.0727	31.2611	-0.1884	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	86.5	62 - 138	31.329	31.5192	-0.1902	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	82.5	76 - 124	34.716	34.88393	-0.1679	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	74.9	70 - 130	34.8607	35.02318	-0.1625	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	88.7	73 - 127	35.7298	35.88653	-0.1567	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	100	74 - 126	36.7548	36.91718	-0.1624	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	93.2	85 - 115	35.8412	36.00728	-0.1661	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	85.4	85 - 115	35.9527	36.12053	-0.1678	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	81.4	78 - 122	38.6153	38.7593	-0.1440	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	88.3	77 - 123	40.8325	40.99867	-0.1662	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	86.6	72 - 128	40.0972	40.25773	-0.1605	N/A	
13C12-OCDD	200.00	87.6	48 - 152	44.8008	44.98705	-0.1863	N/A	
37Cl4-2,3,7,8-TCDD	10.000	83.3	0 - 200	26.2405	26.42402	-0.1835	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0124	Instrument:	AUTOSPEC01
Sample ID:	23A0467-05	Calibration:	GC00015
File ID:	23031013	Analyzed:	03/10/23 20:19

Surrogate Compound	Spike Level ng/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	199.91	102	24 - 169	25.5767	25.76487	-0.1882	N/A	
13C12-2,3,7,8-TCDD	199.91	110	25 - 164	26.2122	26.40287	-0.1907	N/A	
13C12-1,2,3,7,8-PeCDF	199.91	97.7	24 - 185	29.747	29.92235	-0.1754	N/A	
13C12-2,3,4,7,8-PeCDF	199.91	106	21 - 178	31.0838	31.2611	-0.1773	N/A	
13C12-1,2,3,7,8-PeCDD	199.91	108	25 - 181	31.329	31.5192	-0.1902	N/A	
13C12-1,2,3,4,7,8-HxCDF	199.91	104	26 - 152	34.7158	34.88393	-0.1681	N/A	
13C12-1,2,3,6,7,8-HxCDF	199.91	92.5	26 - 123	34.8607	35.02318	-0.1625	N/A	
13C12-2,3,4,6,7,8-HxCDF	199.91	103	28 - 136	35.7408	35.88653	-0.1457	N/A	
13C12-1,2,3,7,8,9-HxCDF	199.91	116	29 - 147	36.7547	36.91718	-0.1625	N/A	
13C12-1,2,3,4,7,8-HxCDD	199.91	108	32 - 141	35.8523	36.00728	-0.1550	N/A	
13C12-1,2,3,6,7,8-HxCDD	199.91	101	28 - 130	35.9748	36.12053	-0.1457	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	199.91	88.0	28 - 143	38.6153	38.7593	-0.1440	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	199.91	94.5	26 - 138	40.8323	40.99867	-0.1664	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	199.91	96.2	23 - 140	40.1082	40.25773	-0.1495	N/A	
13C12-OCDD	399.83	82.3	17 - 157	44.8098	44.98705	-0.1773	N/A	
37Cl4-2,3,7,8-TCDD	79.966	83.3	35 - 197	26.2405	26.42402	-0.1835	N/A	

* Values outside of QC limits

SURROGATE RECOVERY AND RT SUMMARY

EPA 1613B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLC0124	Instrument:	AUTOSPEC01
Sample ID:	SLC0124-CCV2	Calibration:	GC00015
File ID:	23031016	Analyzed:	03/10/23 22:46

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
13C12-2,3,7,8-TCDF	100.00	92.0	71 - 129	25.5767	25.76487	-0.1882	N/A	
13C12-2,3,7,8-TCDD	100.00	105	82 - 118	26.2123	26.40287	-0.1906	N/A	
13C12-1,2,3,7,8-PeCDF	100.00	76.3	76 - 124	29.747	29.92235	-0.1754	N/A	
13C12-2,3,4,7,8-PeCDF	100.00	81.1	77 - 123	31.0728	31.2611	-0.1883	N/A	
13C12-1,2,3,7,8-PeCDD	100.00	76.6	62 - 138	31.3292	31.5192	-0.1900	N/A	
13C12-1,2,3,4,7,8-HxCDF	100.00	97.4	76 - 124	34.7162	34.88393	-0.1677	N/A	
13C12-1,2,3,6,7,8-HxCDF	100.00	97.2	70 - 130	34.861	35.02318	-0.1622	N/A	
13C12-2,3,4,6,7,8-HxCDF	100.00	101	73 - 127	35.73	35.88653	-0.1565	N/A	
13C12-1,2,3,7,8,9-HxCDF	100.00	111	74 - 126	36.755	36.91718	-0.1622	N/A	
13C12-1,2,3,4,7,8-HxCDD	100.00	96.4	85 - 115	35.8413	36.00728	-0.1660	N/A	
13C12-1,2,3,6,7,8-HxCDD	100.00	97.8	85 - 115	35.964	36.12053	-0.1565	N/A	
13C12-1,2,3,4,6,7,8-HpCDF	100.00	91.9	78 - 122	38.6157	38.7593	-0.1436	N/A	
13C12-1,2,3,4,7,8,9-HpCDF	100.00	88.0	77 - 123	40.8327	40.99867	-0.1660	N/A	
13C12-1,2,3,4,6,7,8-HpCDD	100.00	85.5	72 - 128	40.0973	40.25773	-0.1604	N/A	
13C12-OCDD	200.00	76.4	48 - 152	44.792	44.98705	-0.1951	N/A	
37Cl4-2,3,7,8-TCDD	10.000	88.0	0 - 200	26.2405	26.42402	-0.1835	N/A	

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/28/23 14:27	36	365	03/10/23 20:19	10	365	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 1613B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: AUTOSPEC01

Analyte	MDL	RL	Units
2,3,7,8-TCDF	0.058	1.00	ng/kg
2,3,7,8-TCDD	0.150	1.00	ng/kg
1,2,3,7,8-PeCDF	0.240	1.00	ng/kg
2,3,4,7,8-PeCDF	0.220	1.00	ng/kg
1,2,3,7,8-PeCDD	0.170	1.00	ng/kg
1,2,3,4,7,8-HxCDF	0.280	1.00	ng/kg
1,2,3,6,7,8-HxCDF	0.200	1.00	ng/kg
2,3,4,6,7,8-HxCDF	0.170	1.00	ng/kg
1,2,3,7,8,9-HxCDF	0.190	1.00	ng/kg
1,2,3,4,7,8-HxCDD	0.170	1.00	ng/kg
1,2,3,6,7,8-HxCDD	0.180	1.00	ng/kg
1,2,3,7,8,9-HxCDD	0.220	1.00	ng/kg
1,2,3,4,6,7,8-HpCDF	0.210	1.00	ng/kg
1,2,3,4,7,8,9-HpCDF	0.240	1.00	ng/kg
1,2,3,4,6,7,8-HpCDD	0.560	2.50	ng/kg
OCDF	1.10	2.50	ng/kg
OCDD	4.60	10.0	ng/kg
Total TCDF		1.00	ng/kg
Total TCDD		1.00	ng/kg
Total PeCDF		1.00	ng/kg
Total PeCDD		1.00	ng/kg
Total HxCDF		1.00	ng/kg
Total HxCDD		1.00	ng/kg
Total HpCDF		1.00	ng/kg
Total HpCDD		1.00	ng/kg

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT0918
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/24/2018
LAST TESTED: (mm/dd/yyyy)	10/29/2018
EXPIRY DATE: (mm/dd/yyyy)	10/29/2025
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native and $^{13}C_{12}$-labelled chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

CS3WT was designed and prepared to be used as a HRMS calibration standard according to U.S. EPA Method 1613B.

It is to be used for calibration verification in place of EPA-1613CS3 (Lot: 13CS30918). It also contains the PCDD and PCDF window defining congeners for a DB-5 (or equivalent) capillary column as well as the TCDD isomers required to test and confirm the resolution of 2,3,7,8-TCDD.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS10918
EPA-1613CS2	13CS20918
EPA-1613CS3	13CS30918
EPA-1613CS4	13CS40918
EPA-1613CS5	13CS50918
EPA-1613CSL	13CSL0918
EPA-1613CS0.5	13CS0.50918

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.
- Only the 2,3,7,8-substituted PCDDs and PCDFs should be used for quantitation. The other congeners (window defining and 2378-TCDD resolution testing) should be considered semi-quantitative (within ±20% of their design value). Impurities have been identified where possible.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **CS3WT; Components and Concentrations (ng/ml, in nonane/4.5% toluene)**

QUANTITATIVE ANALYTES (ng/ml, ±5%)	
Native PCDDs & PCDFs:	
2,3,7,8-TCDD	10
2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50
1,2,3,7,8-PeCDF	50
2,3,4,7,8-PeCDF	50
1,2,3,4,7,8-HxCDD	50
1,2,3,6,7,8-HxCDD	50
1,2,3,7,8,9-HxCDD	50
1,2,3,4,7,8-HxCDF	50
1,2,3,6,7,8-HxCDF	50
1,2,3,7,8,9-HxCDF	50
2,3,4,6,7,8-HxCDF	50
1,2,3,4,6,7,8-HpCDD *(WD)*	50
1,2,3,4,6,7,8-HpCDF *(WD)*	50
1,2,3,4,7,8,9-HpCDF *(WD)*	50
OCDD	100
OCDF	100
Labelled PCDDs & PCDFs:	
$^{13}C_{12}$-2,3,7,8-TCDD	100
$^{13}C_{12}$-2,3,7,8-TCDF	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100
$^{13}C_{12}$-OCDD	200
Cleanup Standard:	
$^{37}Cl_4$-2,3,7,8-TCDD	10
Internal Standards:	
$^{13}C_{12}$-1,2,3,4-TCDD	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100

SEMI-QUANTITATIVE ANALYTES (ng/ml, ±20%)	
Window Definers:*	
1,3,6,8-TCDD	10
1,2,8,9-TCDD	10
1,3,6,8-TCDF	10
1,2,8,9-TCDF	10
1,2,4,6,8/1,2,4,7,9-PeCDD	50
1,2,3,8,9-PeCDD	50
1,3,4,6,8-PeCDF	50
1,2,3,8,9-PeCDF	50
1,2,4,6,7,9-HxCDD	50
1,2,3,4,6,8-HxCDF	50
1,2,3,4,6,7,9-HpCDD	50
2378-TCDD Resolution Testing Isomers:	
1,2,3,4-TCDD	5
1,2,3,7/1,2,3,8-TCDD	5
1,2,3,9-TCDD	10

** 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD. Use 1,2,3,4,6,7,9-HpCDD to set window.*

** 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF. Use 1,2,3,4,6,7,8-HpCDF to set window.*

WD – Window Definer

Certified By: _____ **Date:** 10/30/2018
(mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

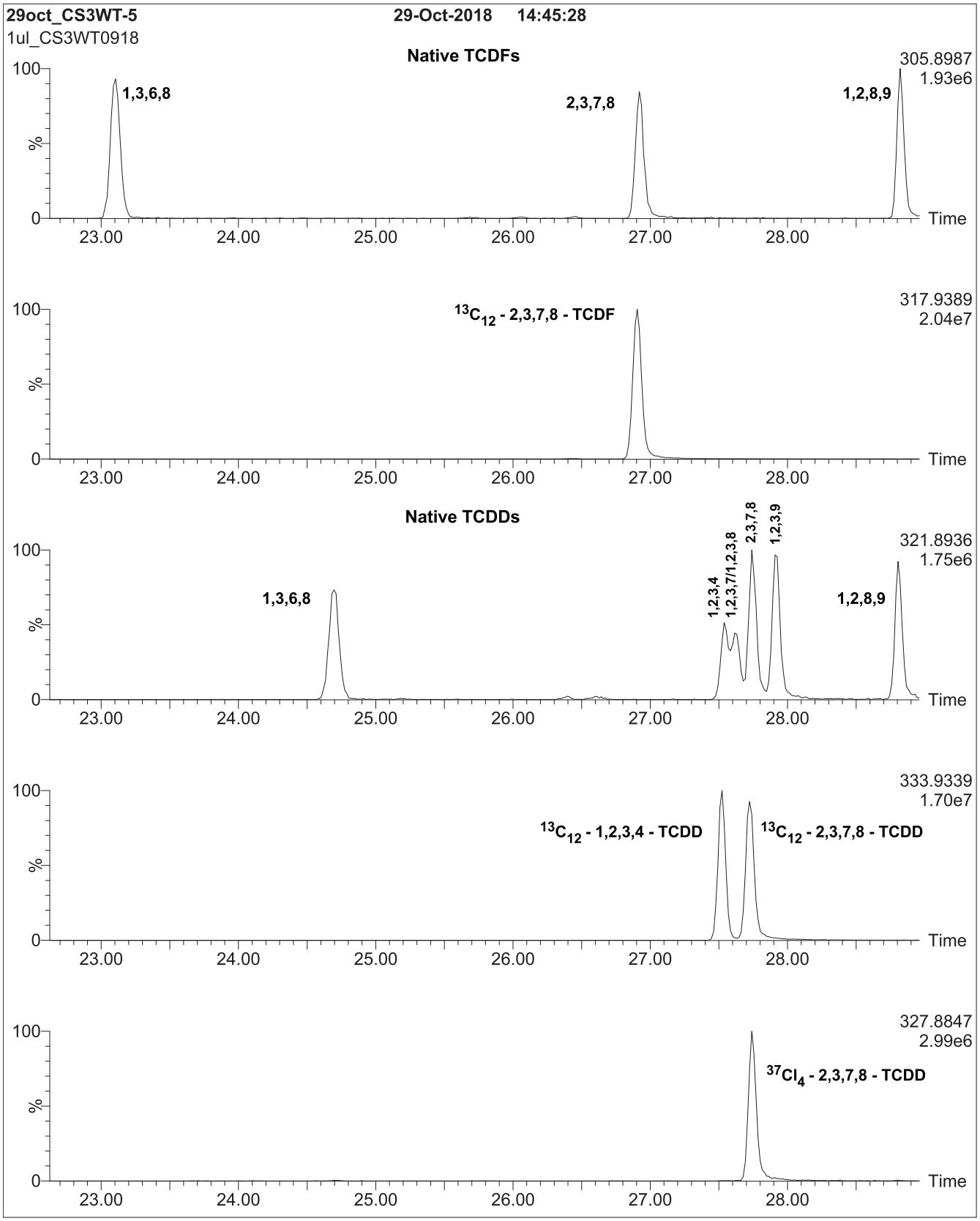


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

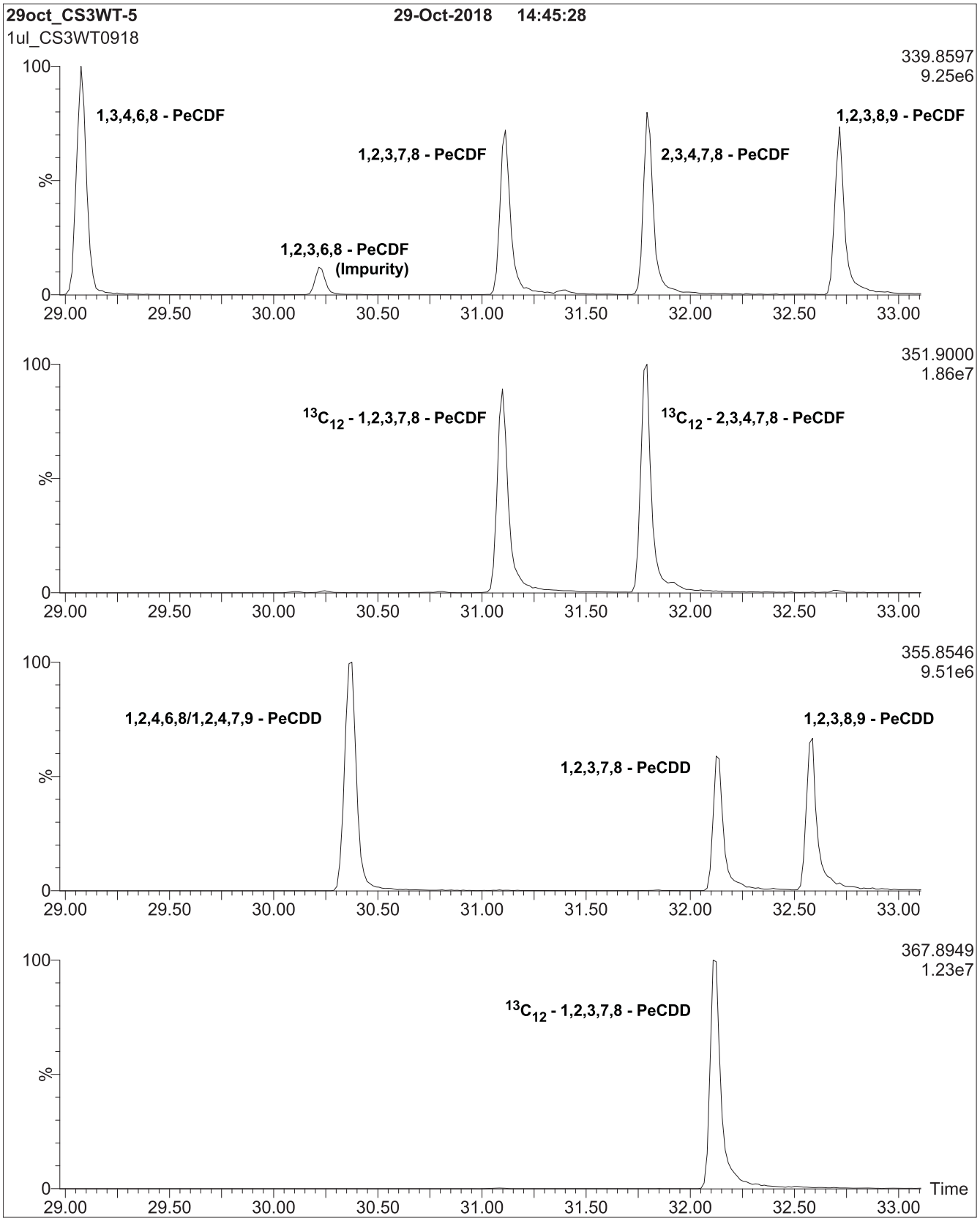


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

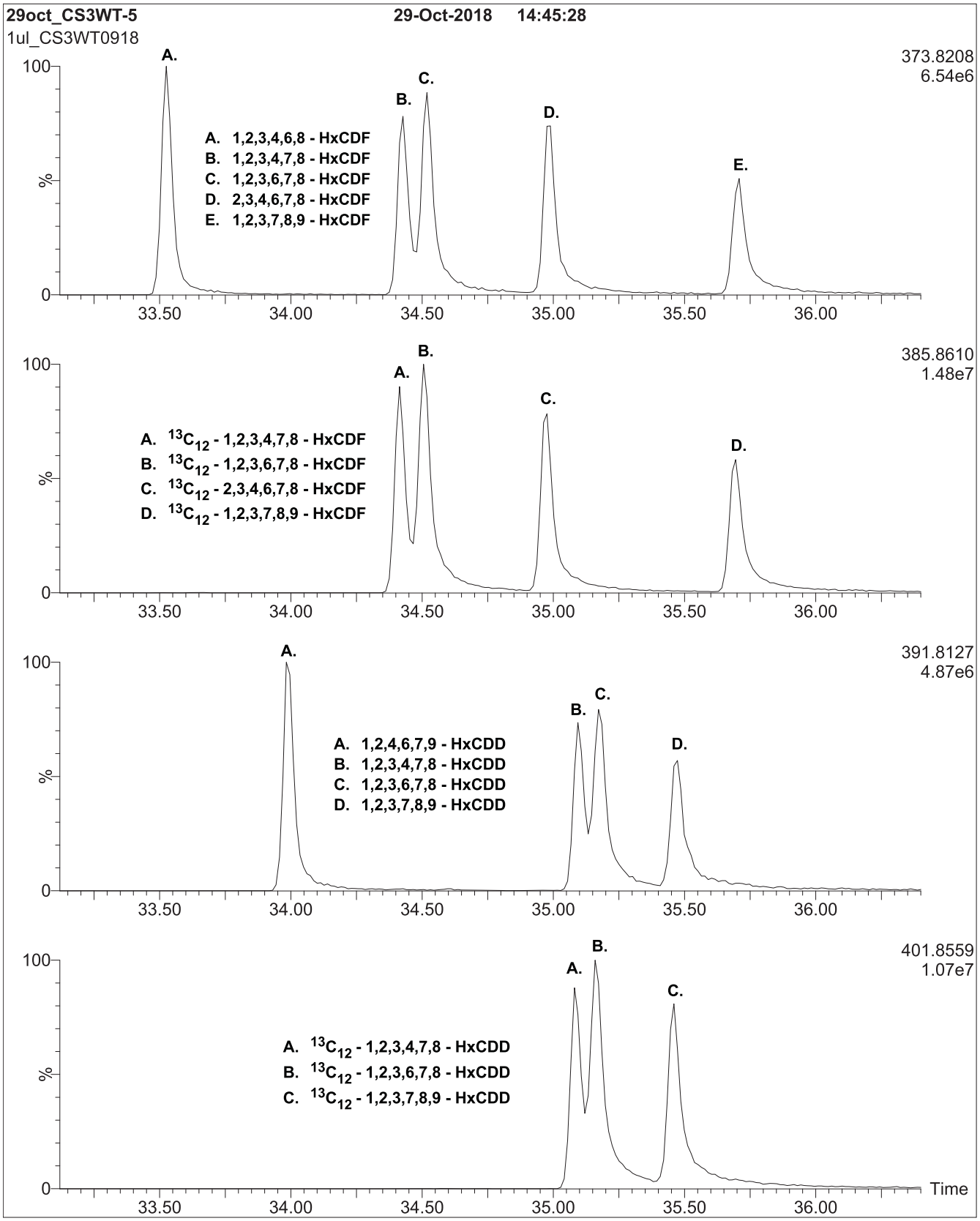


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

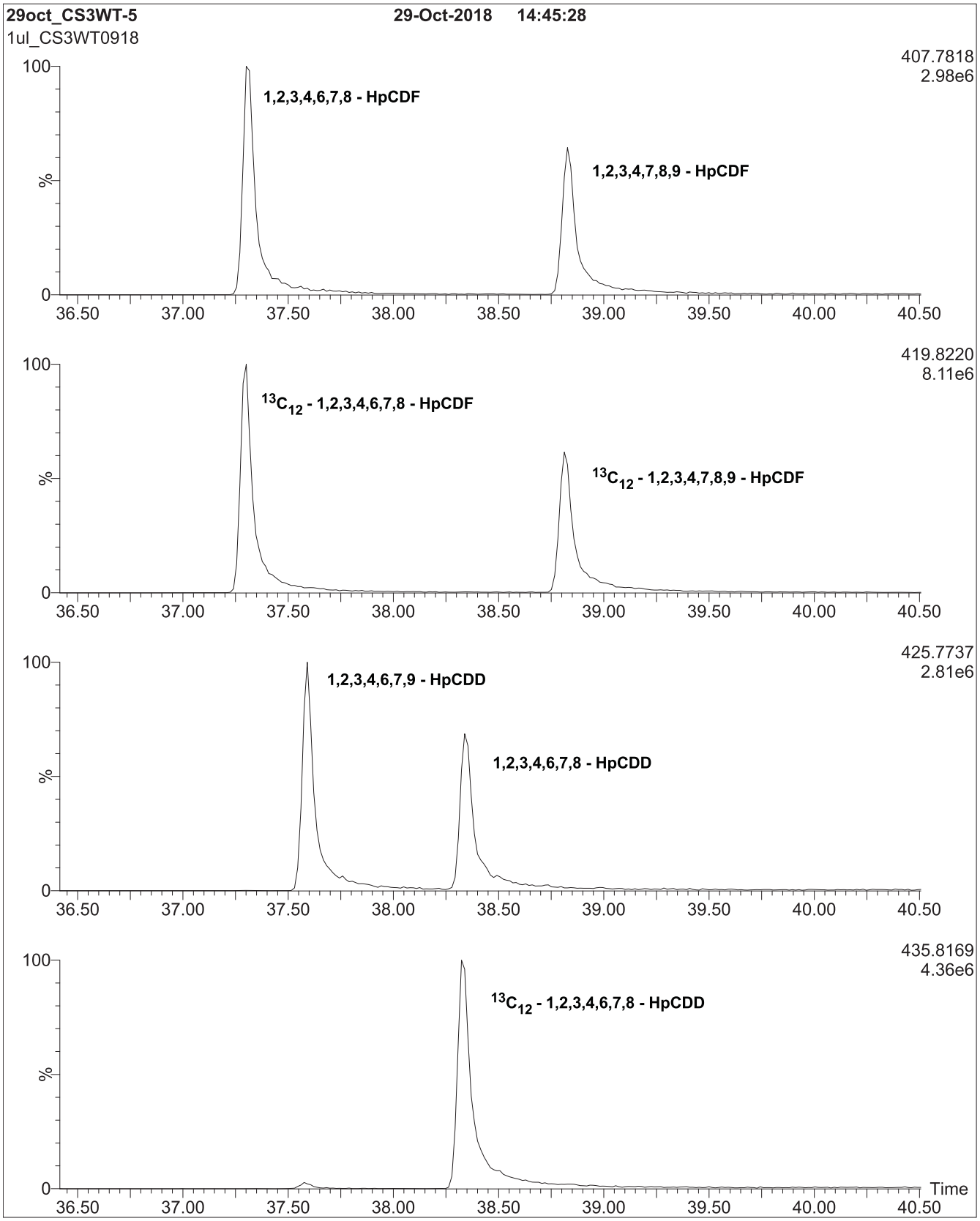
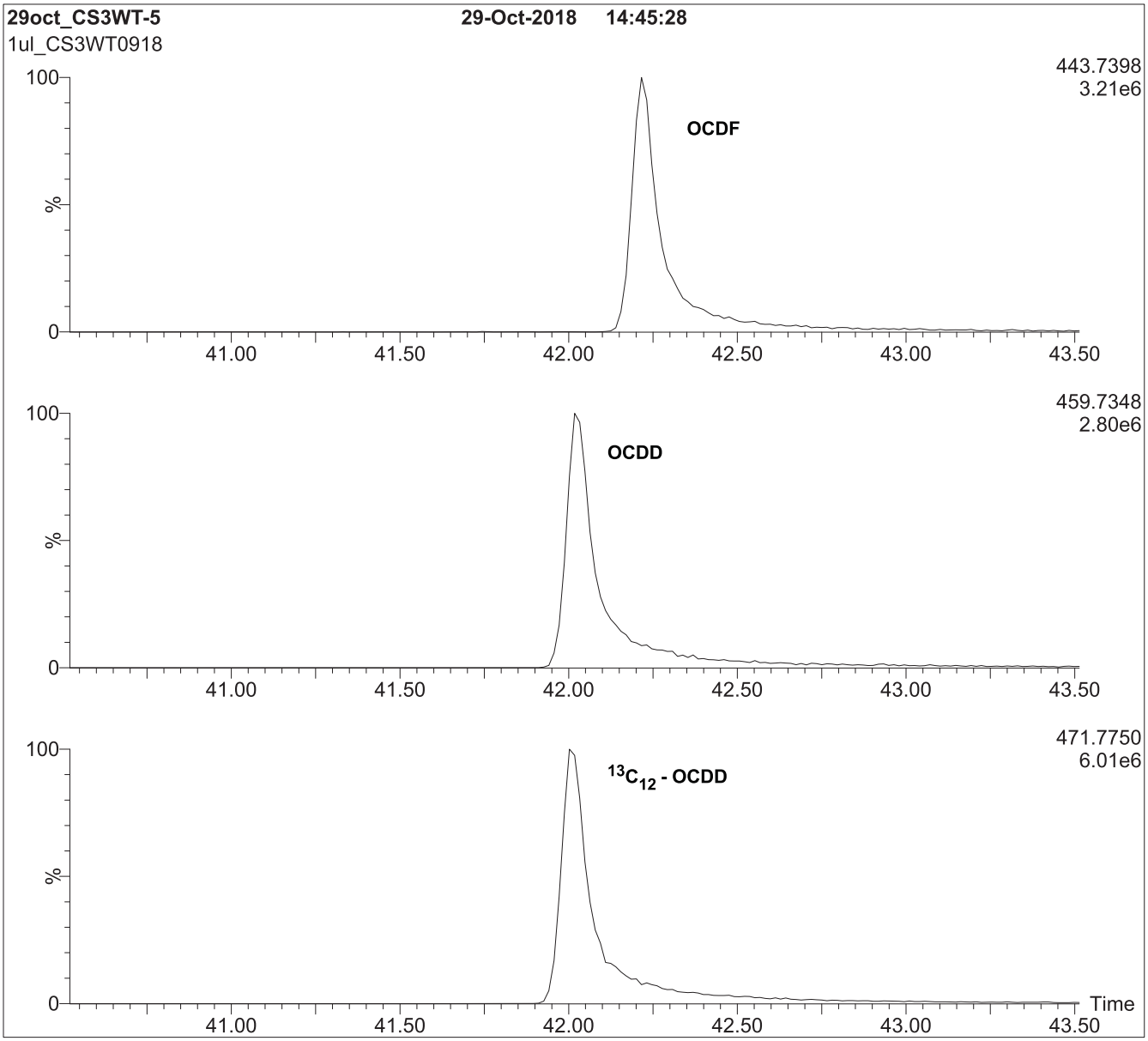


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005456
1613 CS1 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

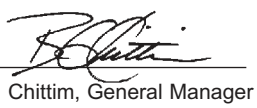
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:  **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

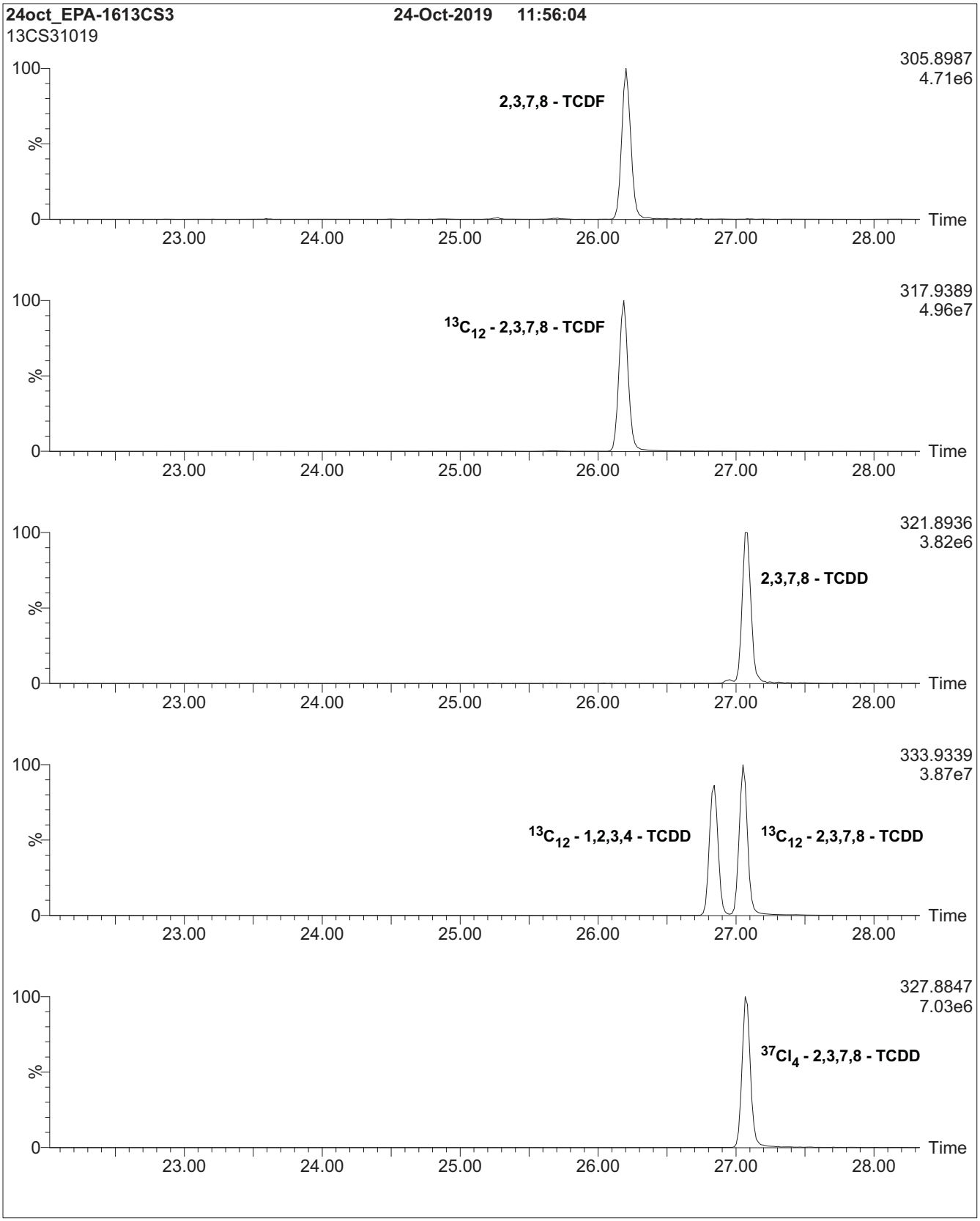


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

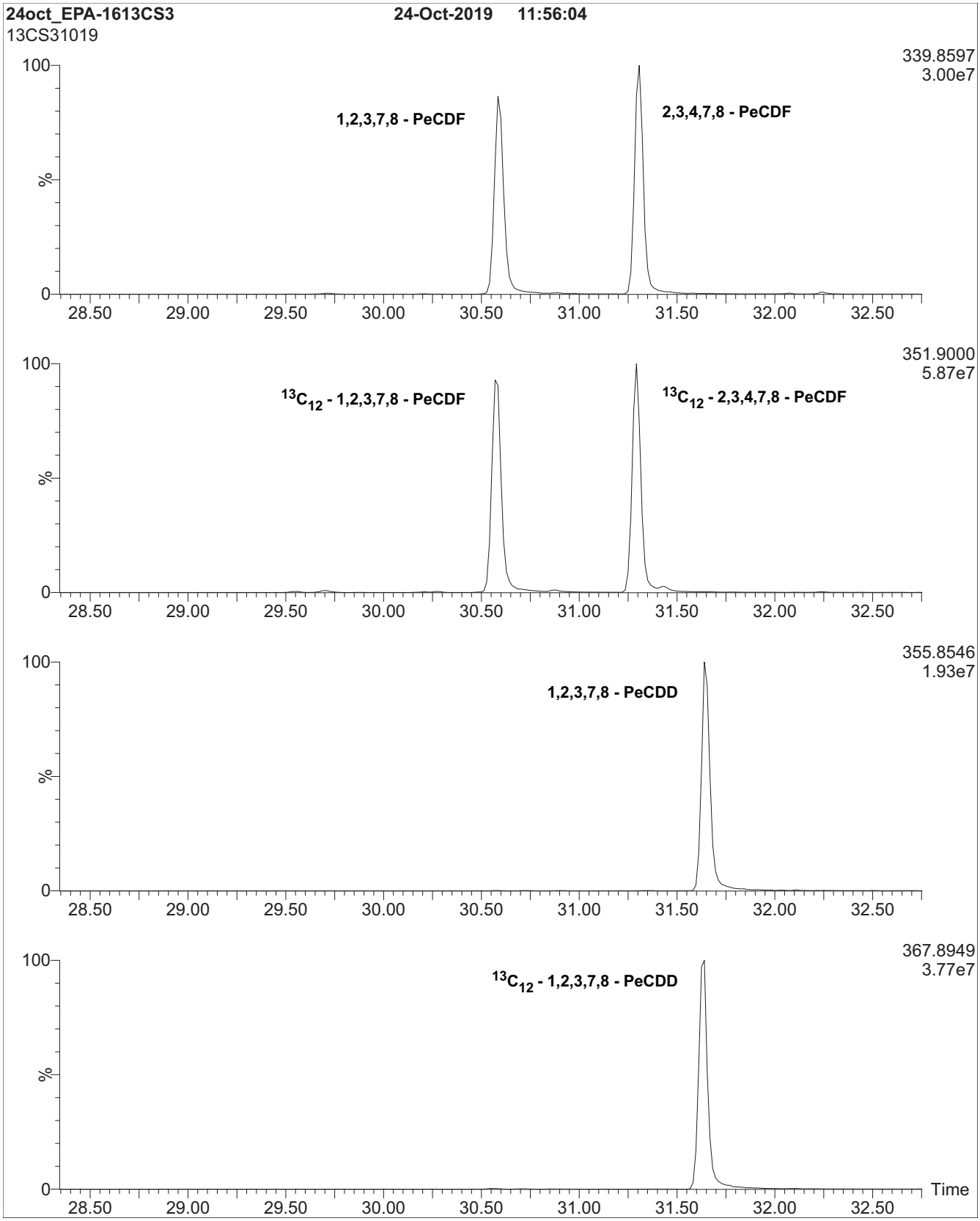


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

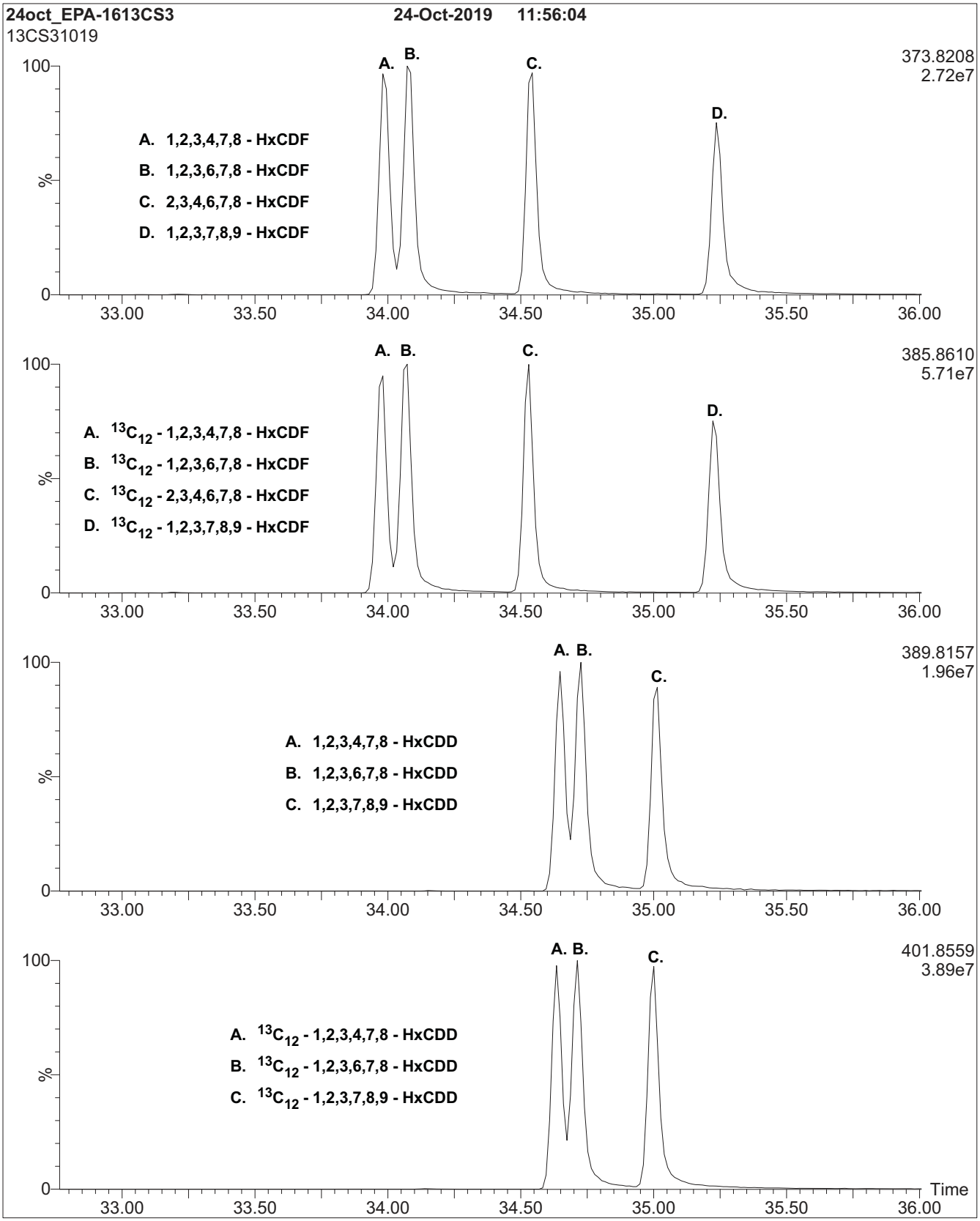


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

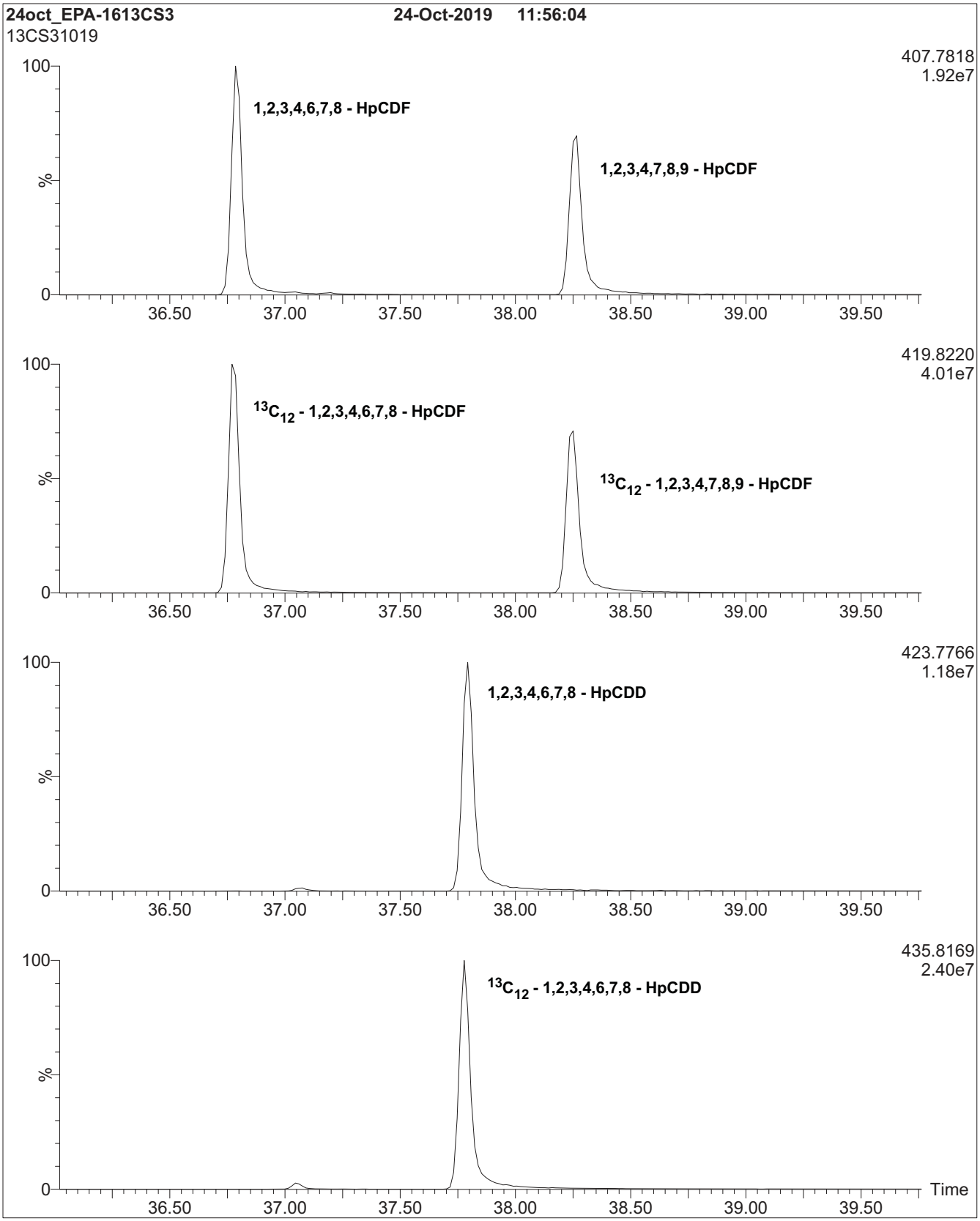
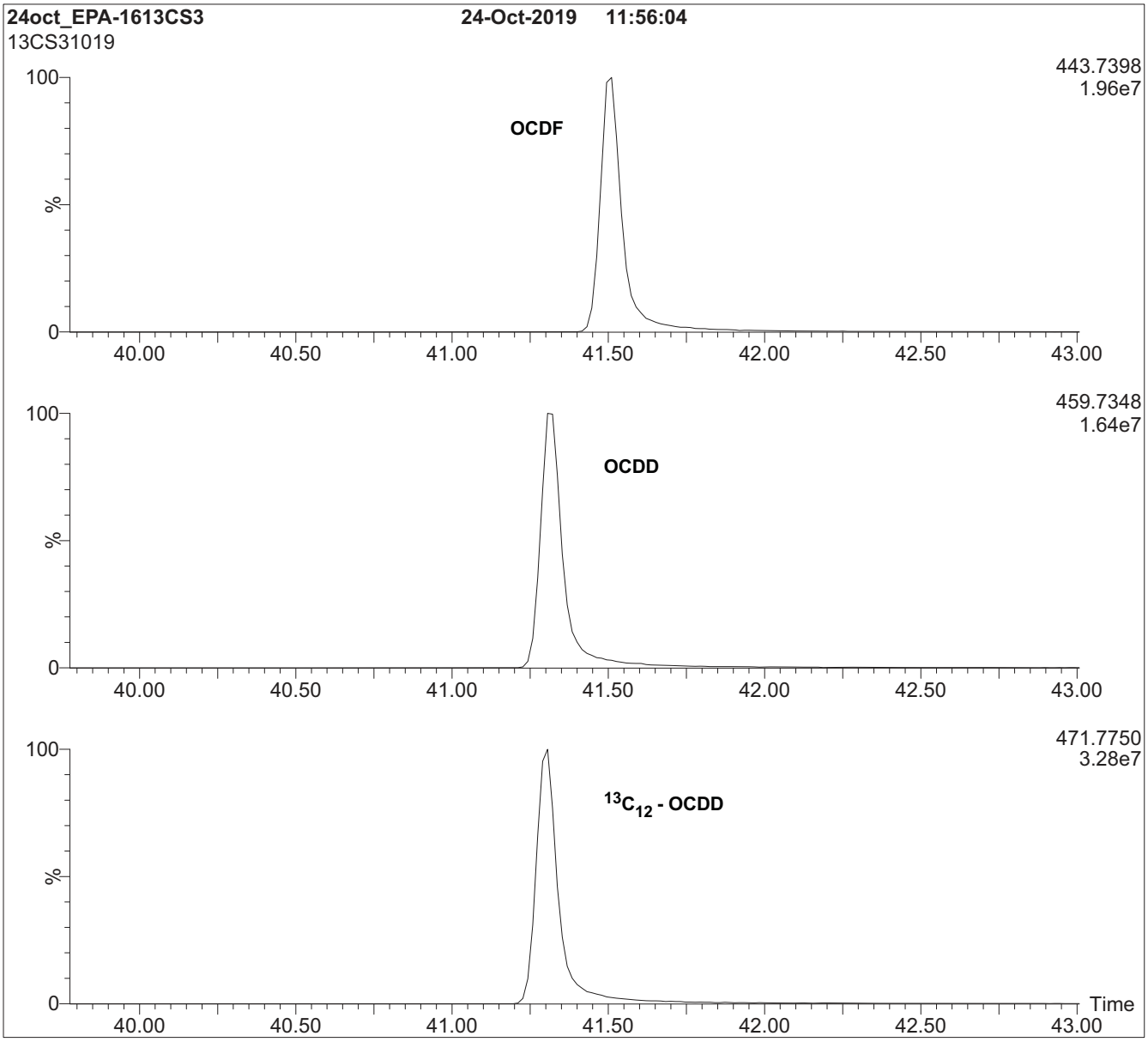


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005457
1613 CS2 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

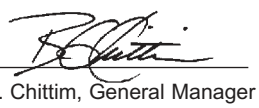
CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By:  **Date:** 10/25/2019
(mm/dd/yyyy)

B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

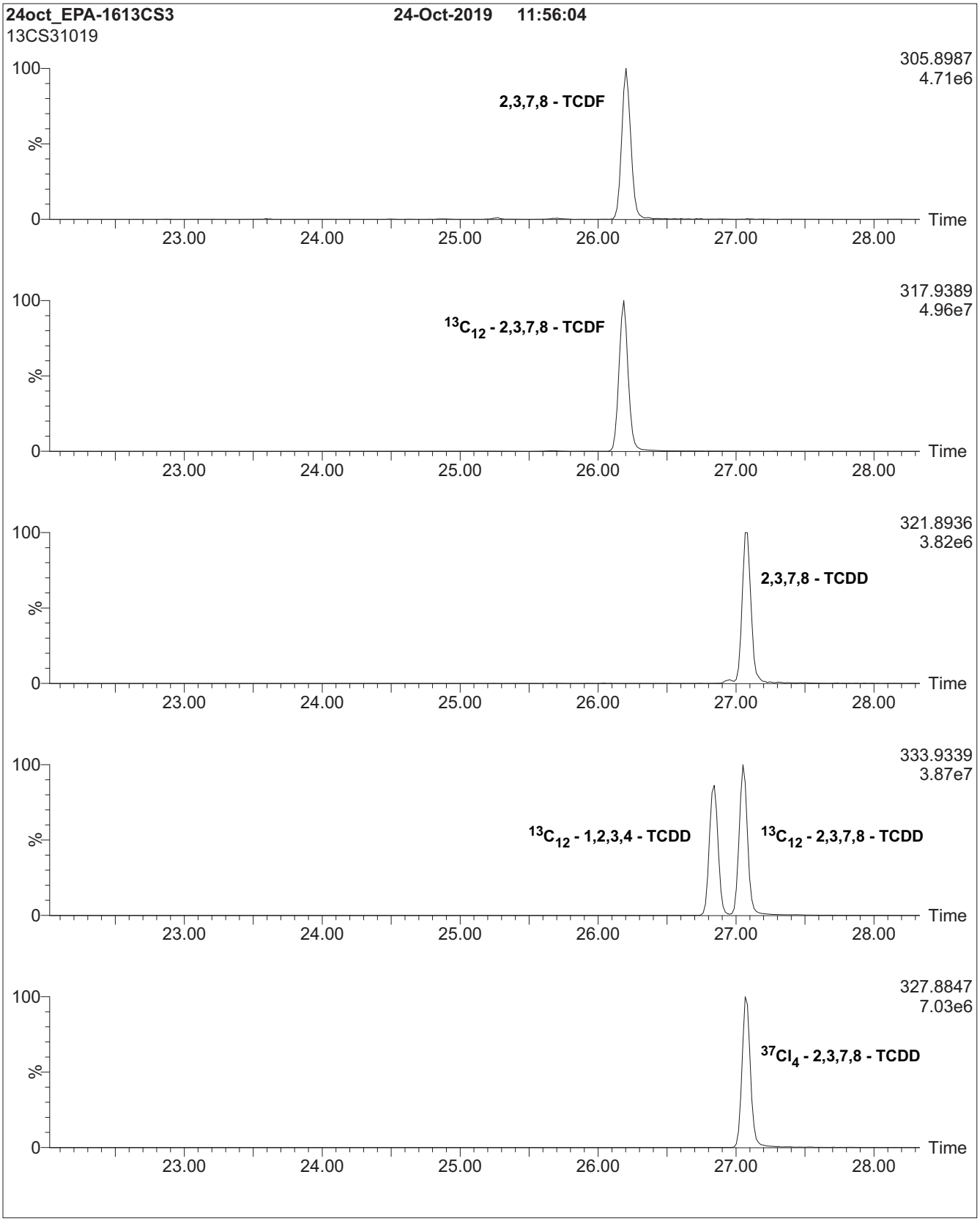


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

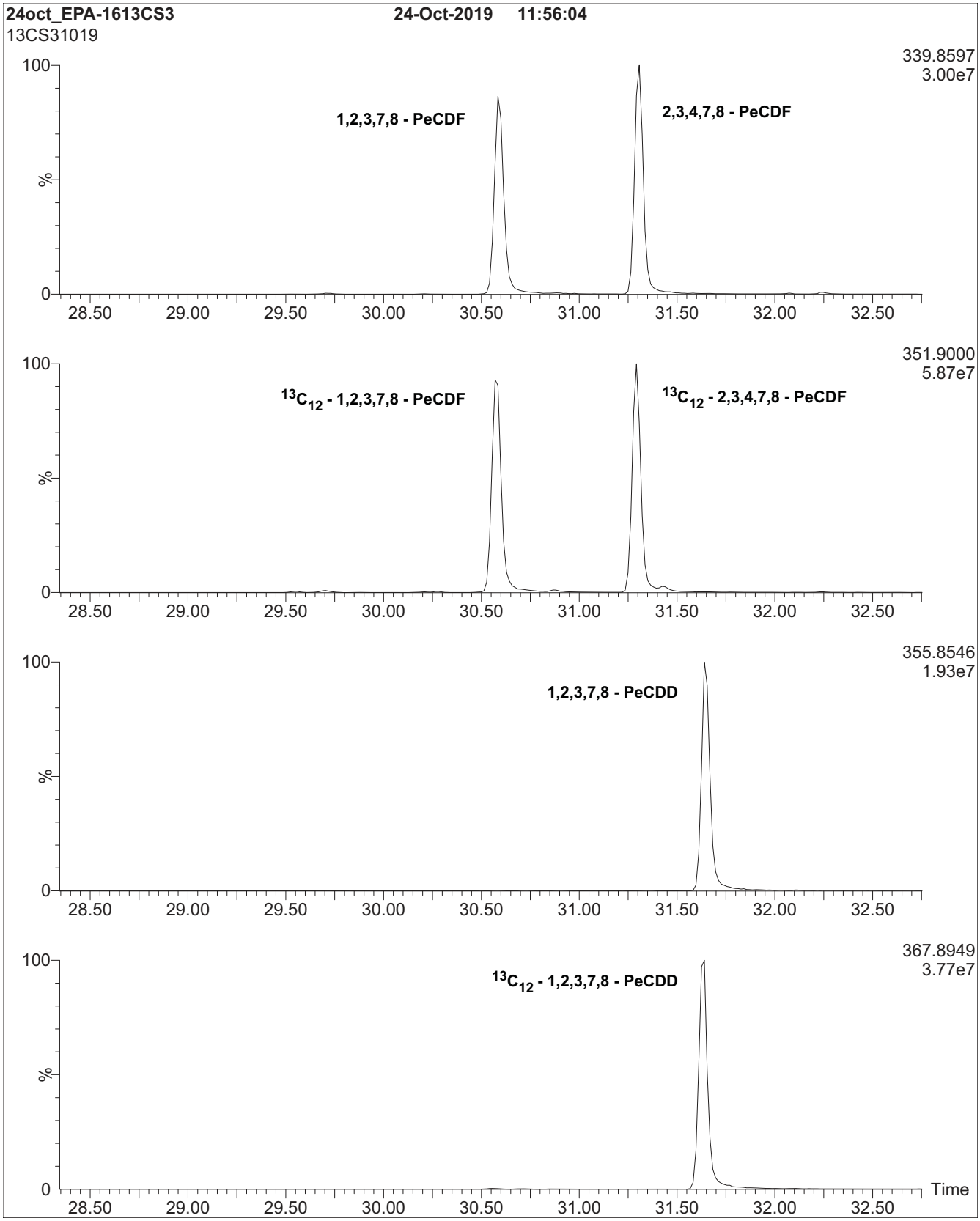


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

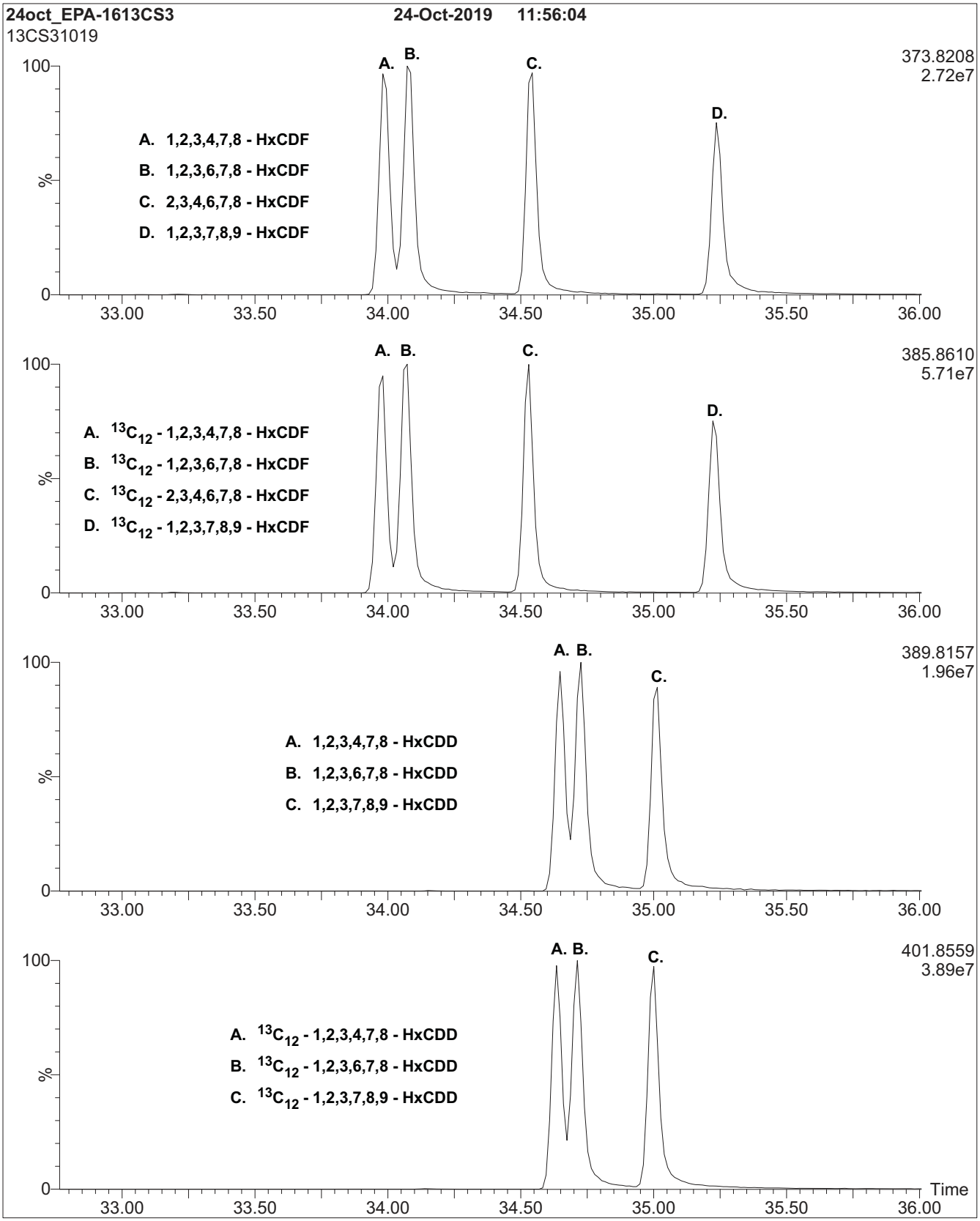


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

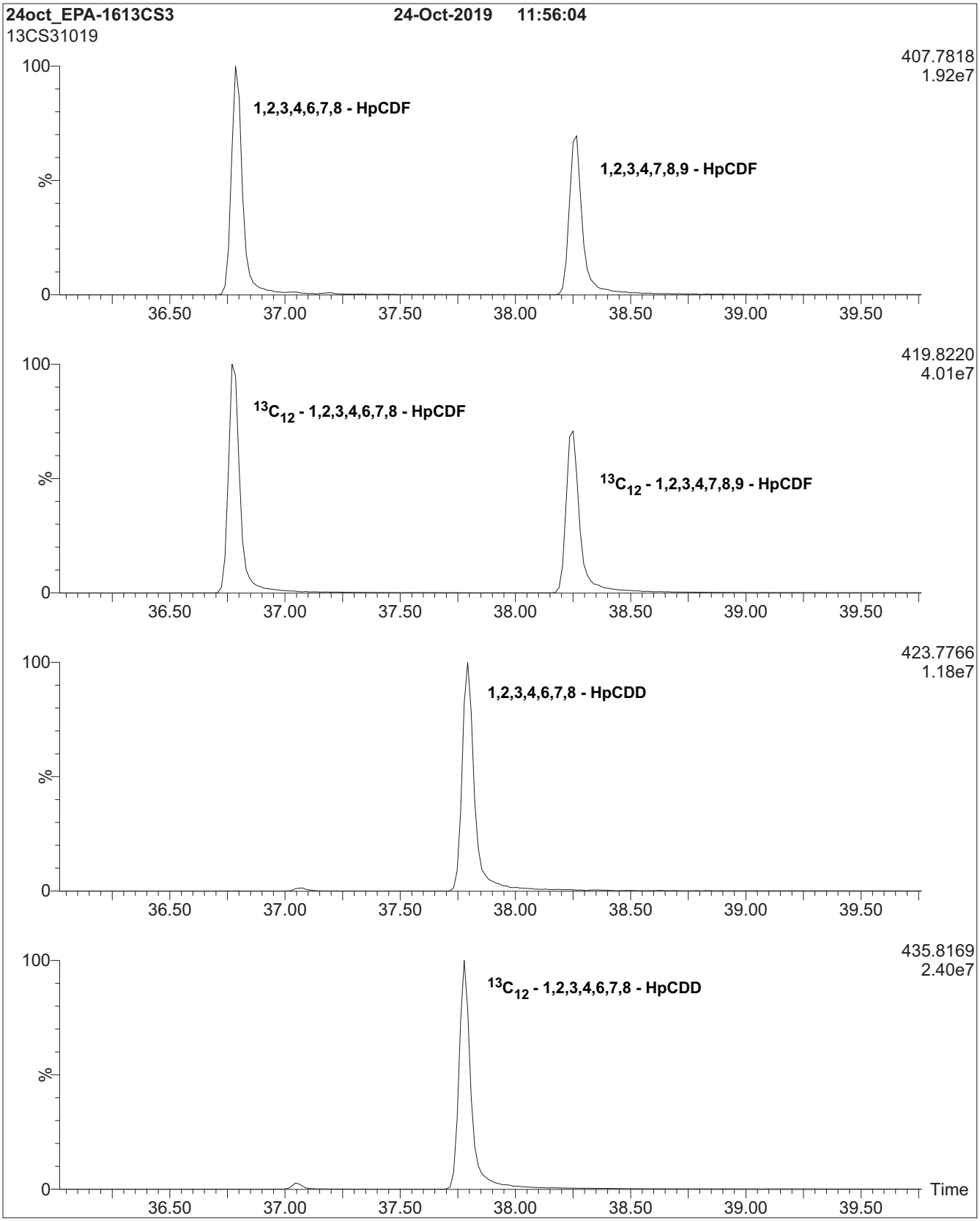
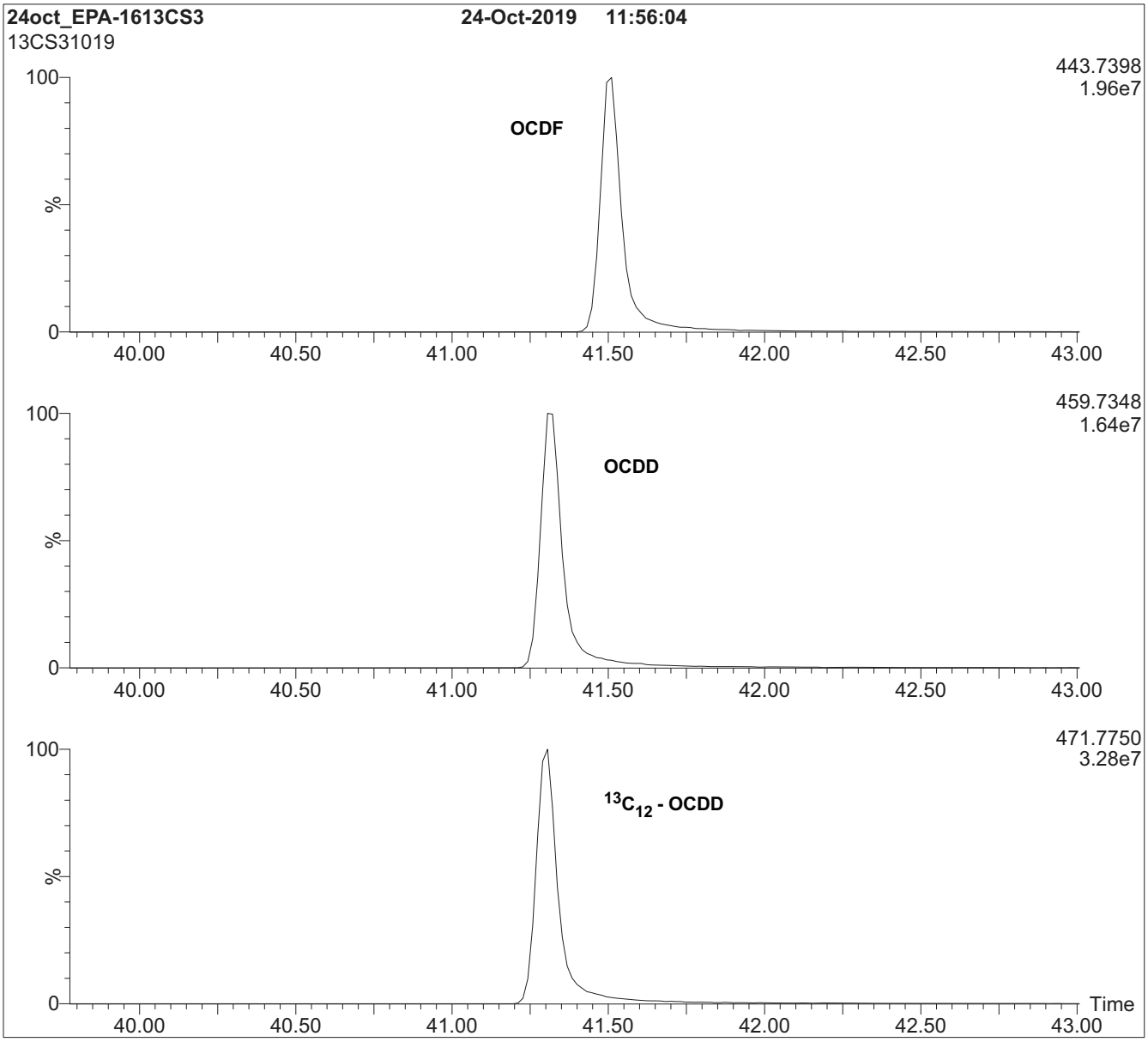


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005458
1613 CS4 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

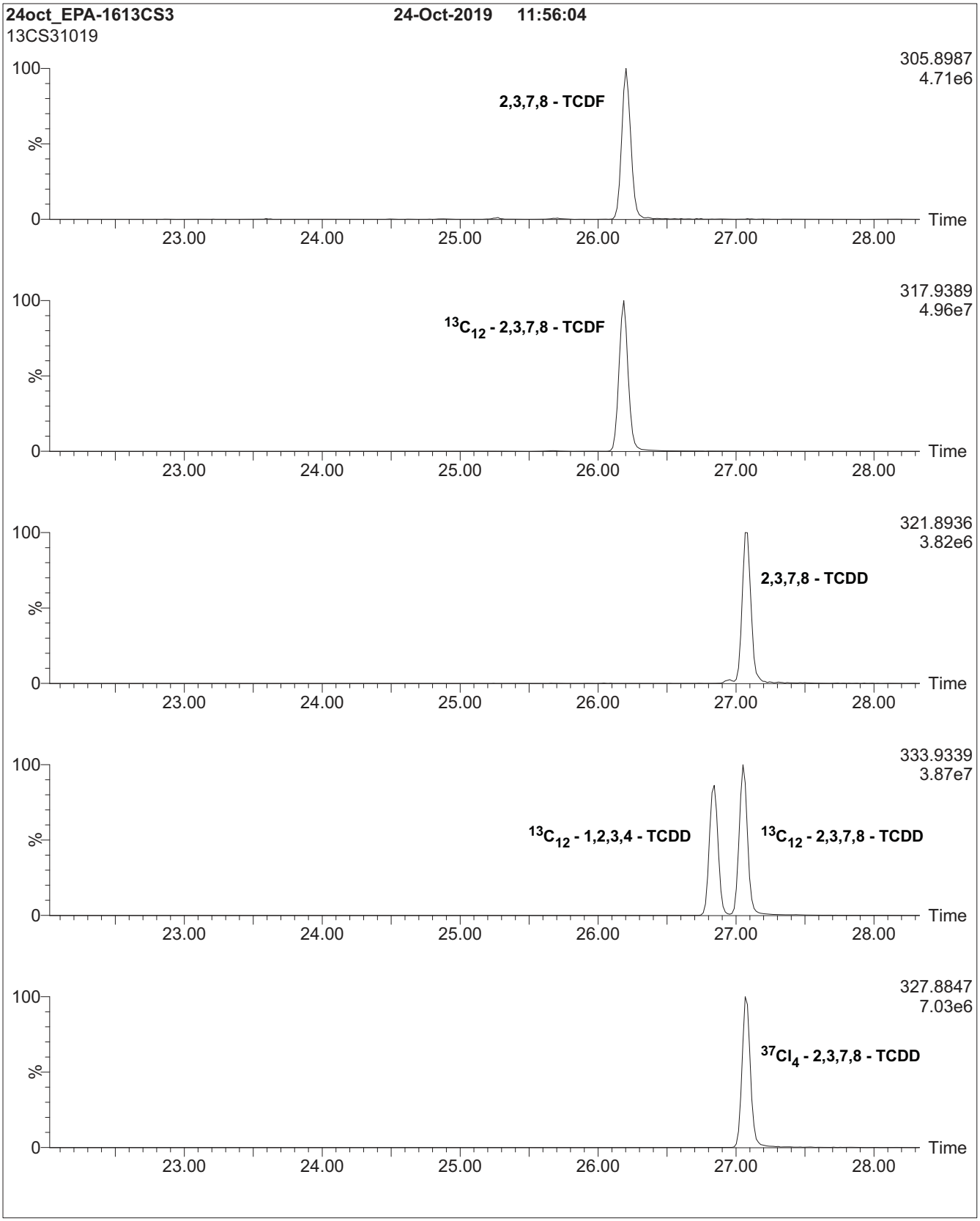


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

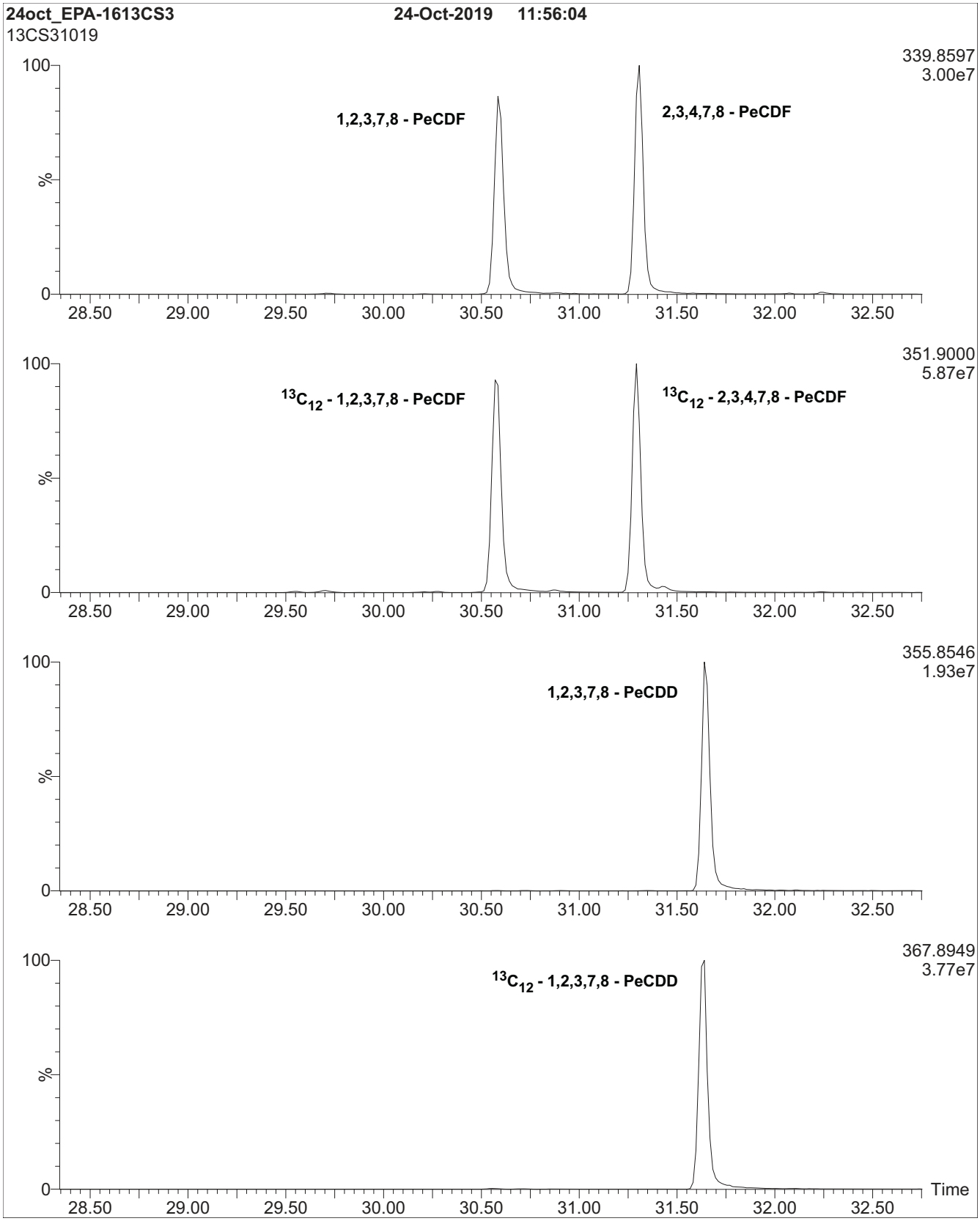


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

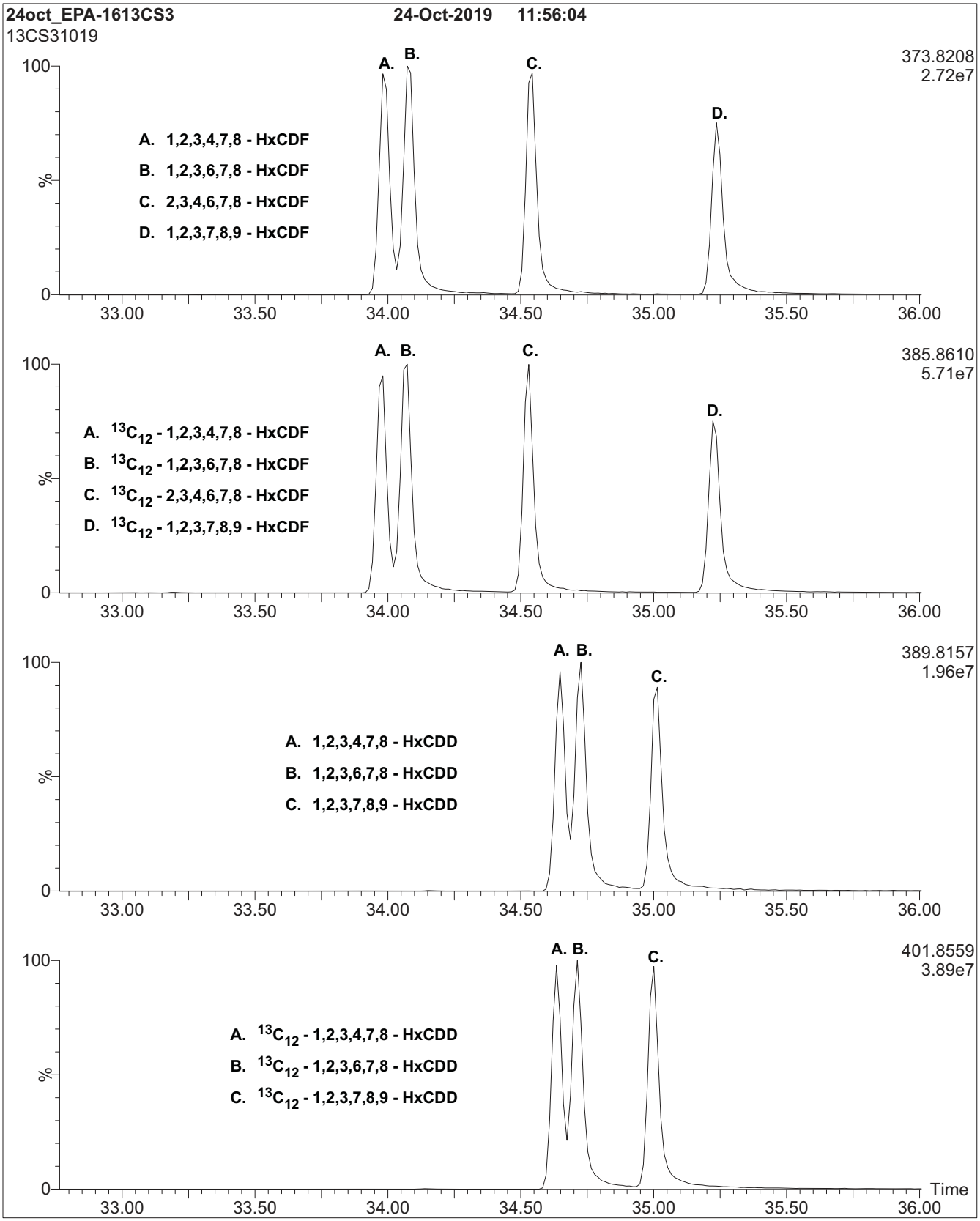


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

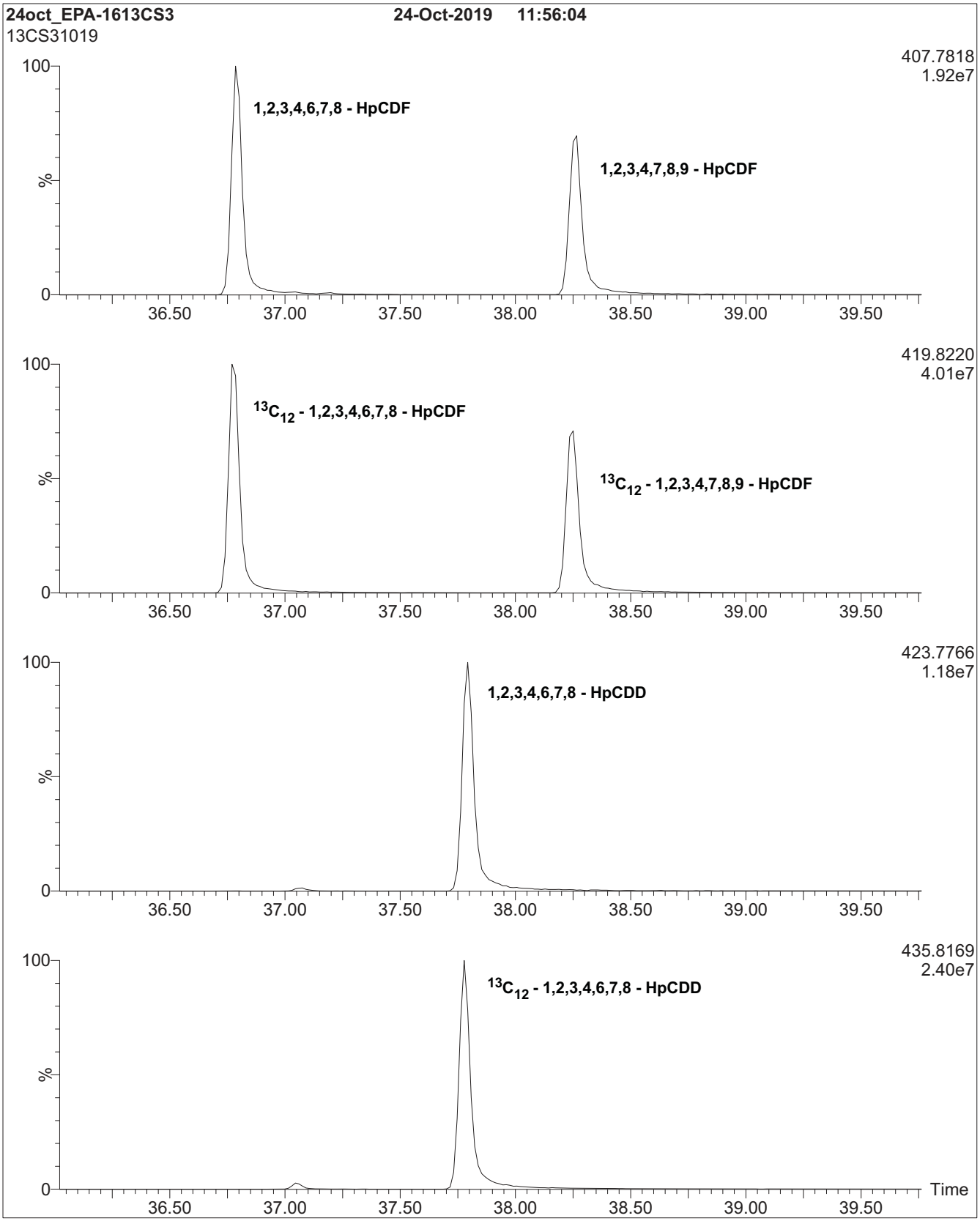
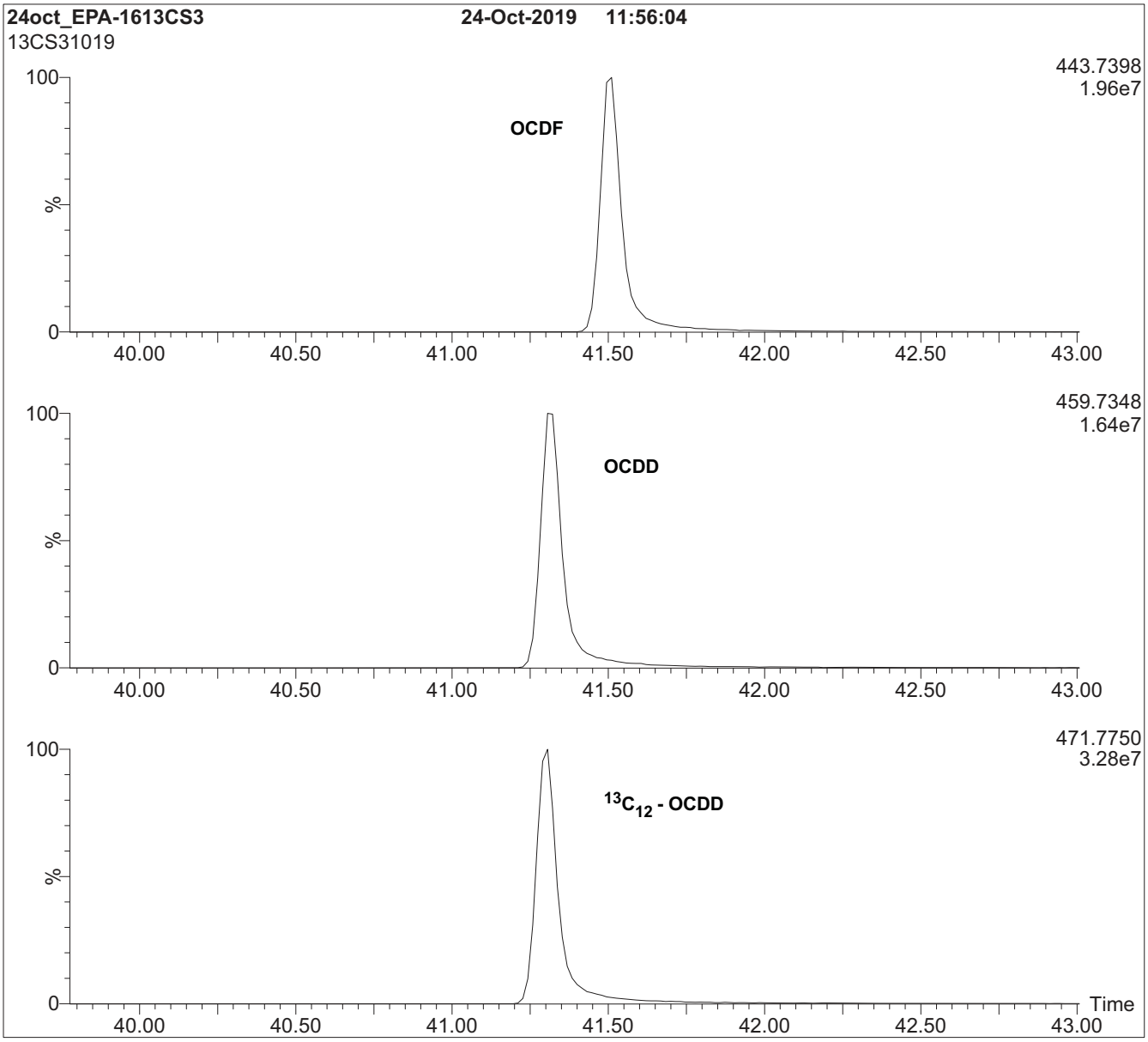


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow:	Constant at 1 ml/min	Oven:	150 °C (1 min)
Injector:	280 °C (Splitless Injection)		12 °C/min to 200 °C
Ionization:	EI+		3 °C/min to 235 °C
Detector:	280 °C		235 °C (8 min)
	SIR at 10,000 mass resolving power		8 °C/min to 310 °C
			310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005459
1613 CS5 CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

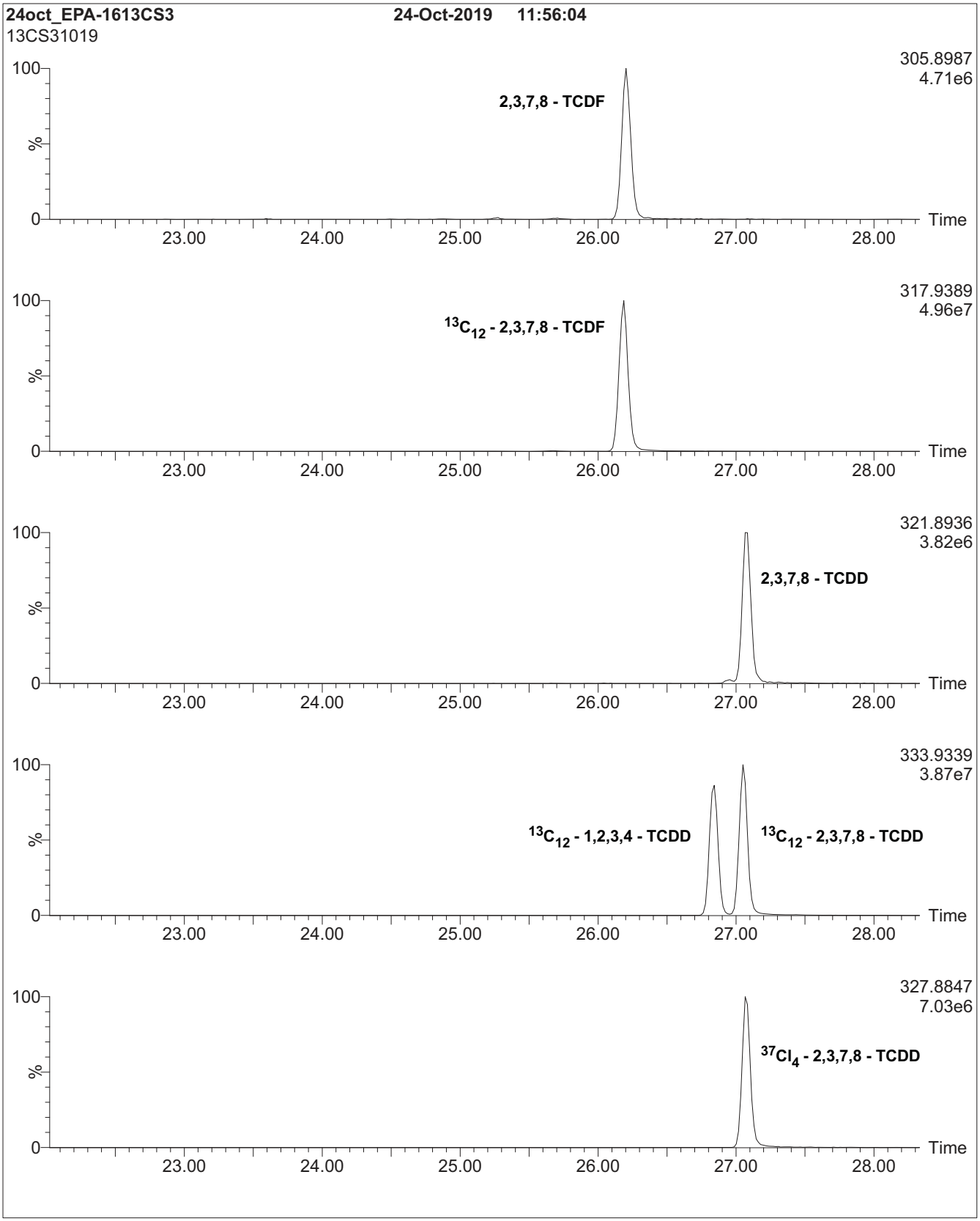


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

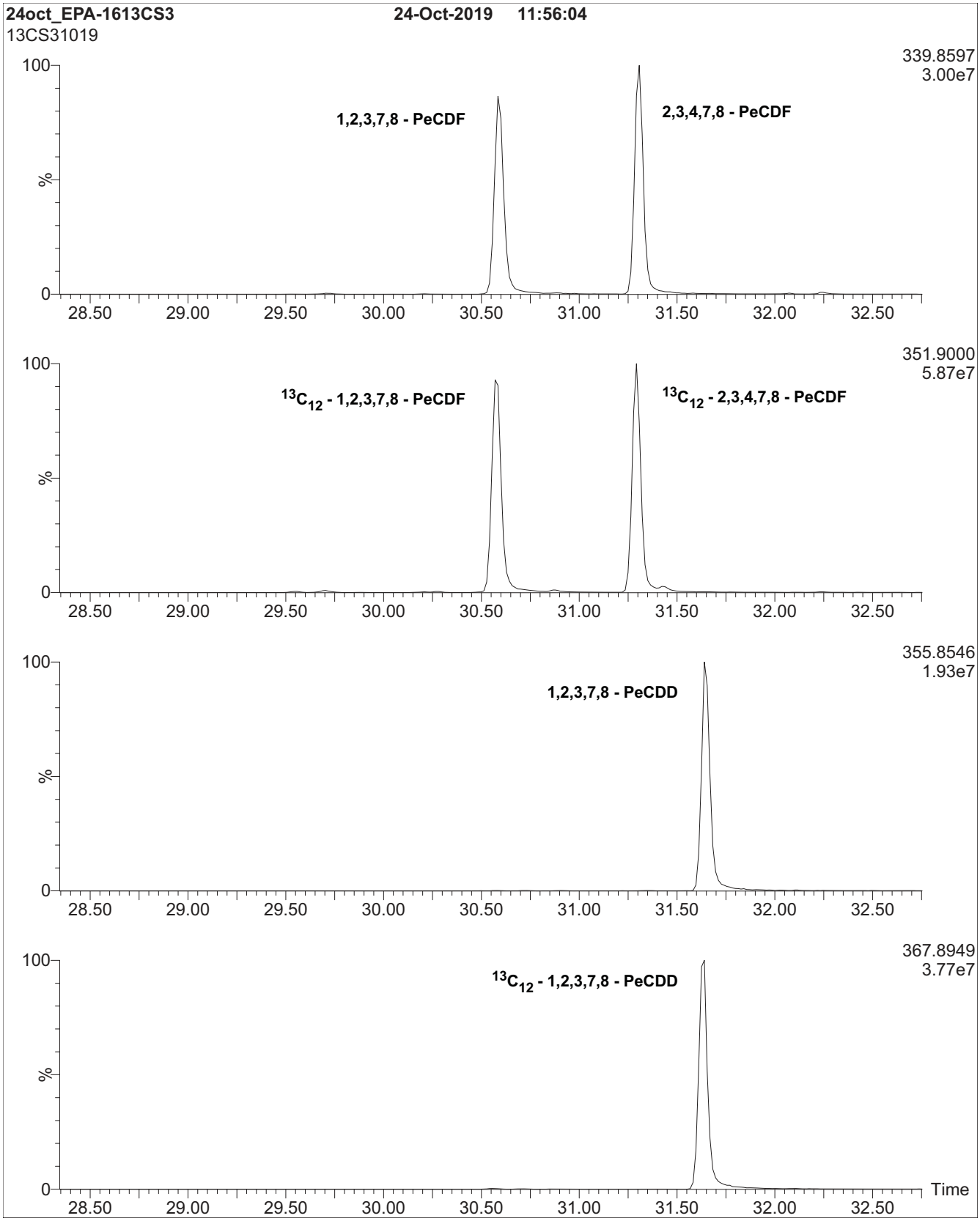


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

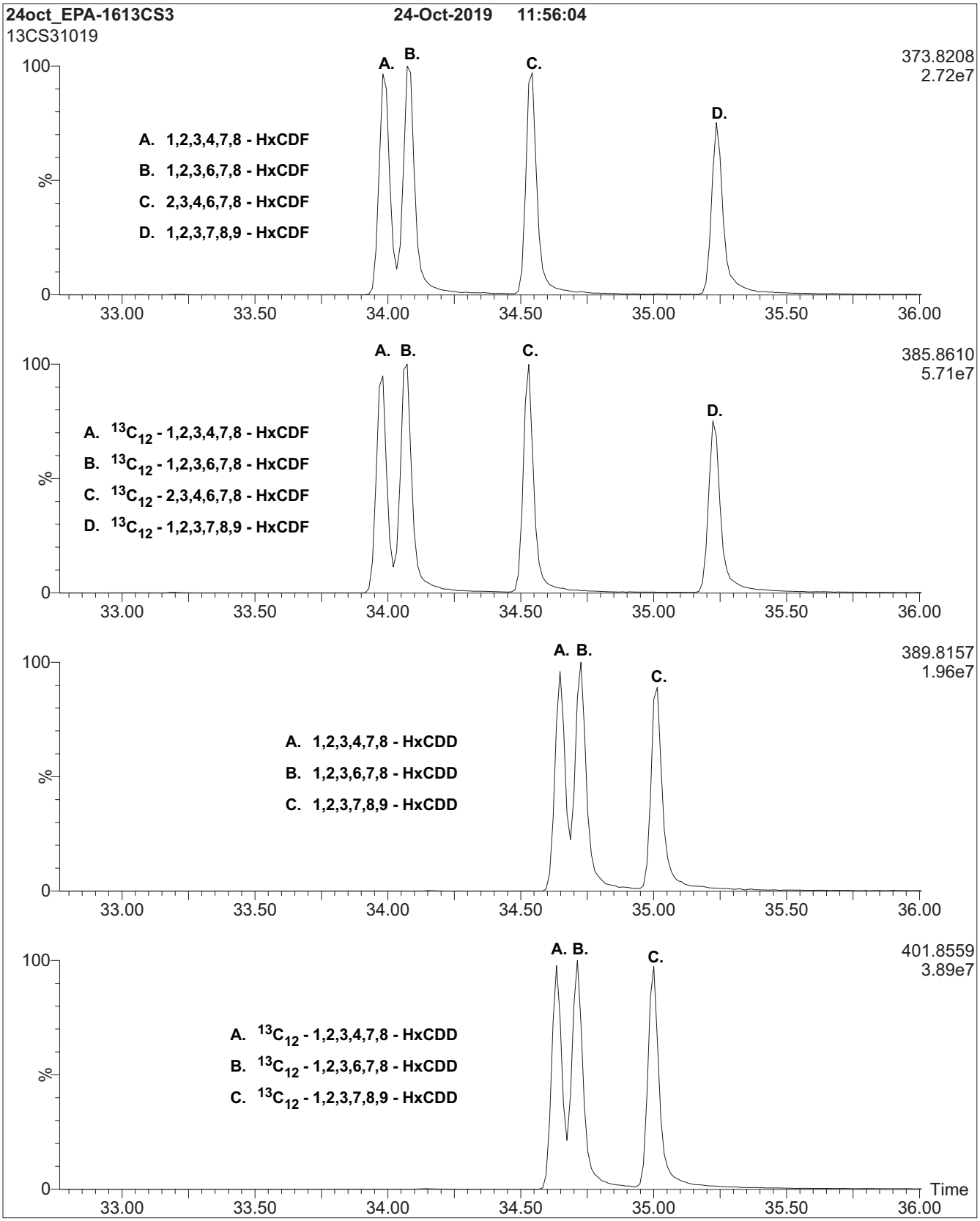


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

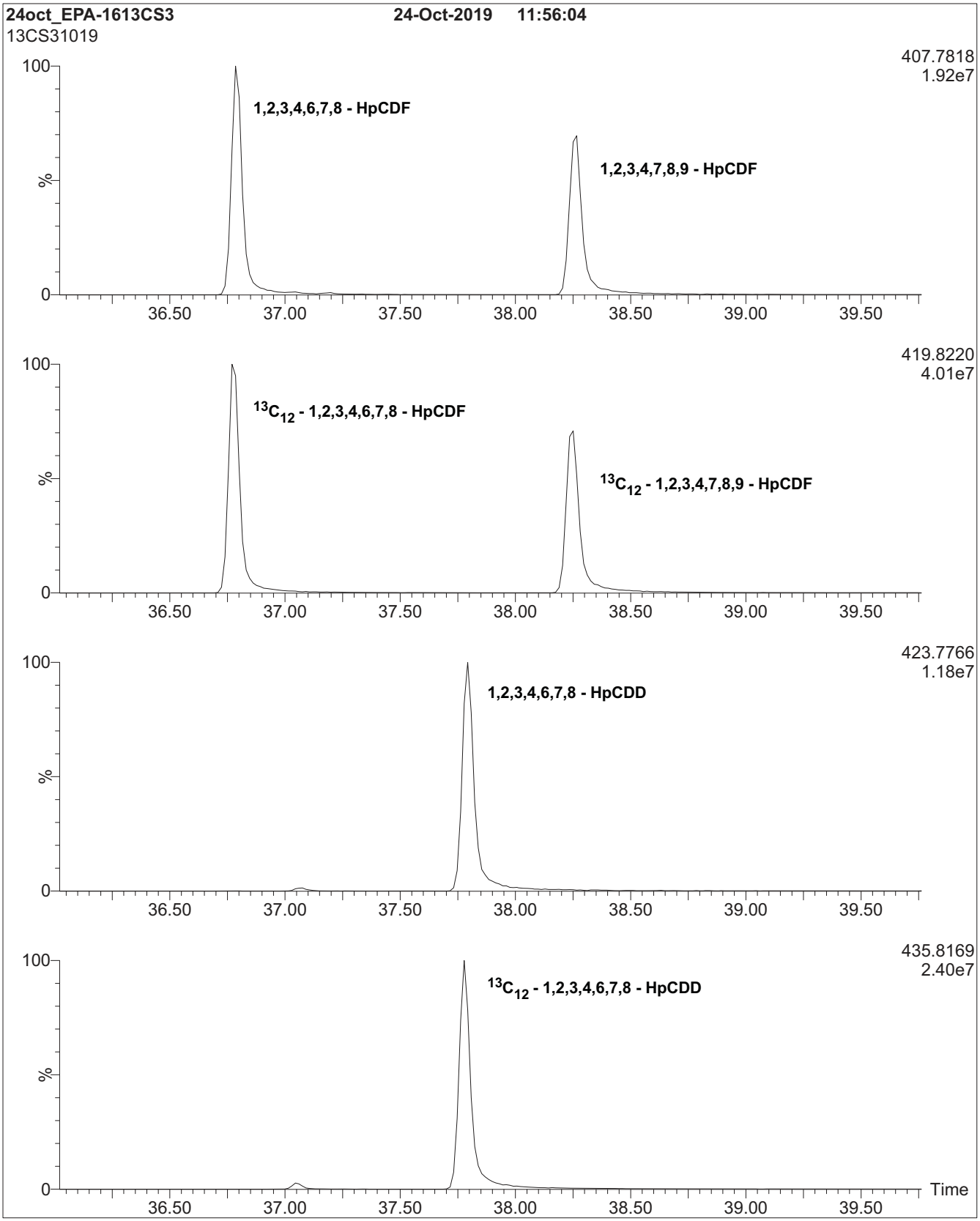
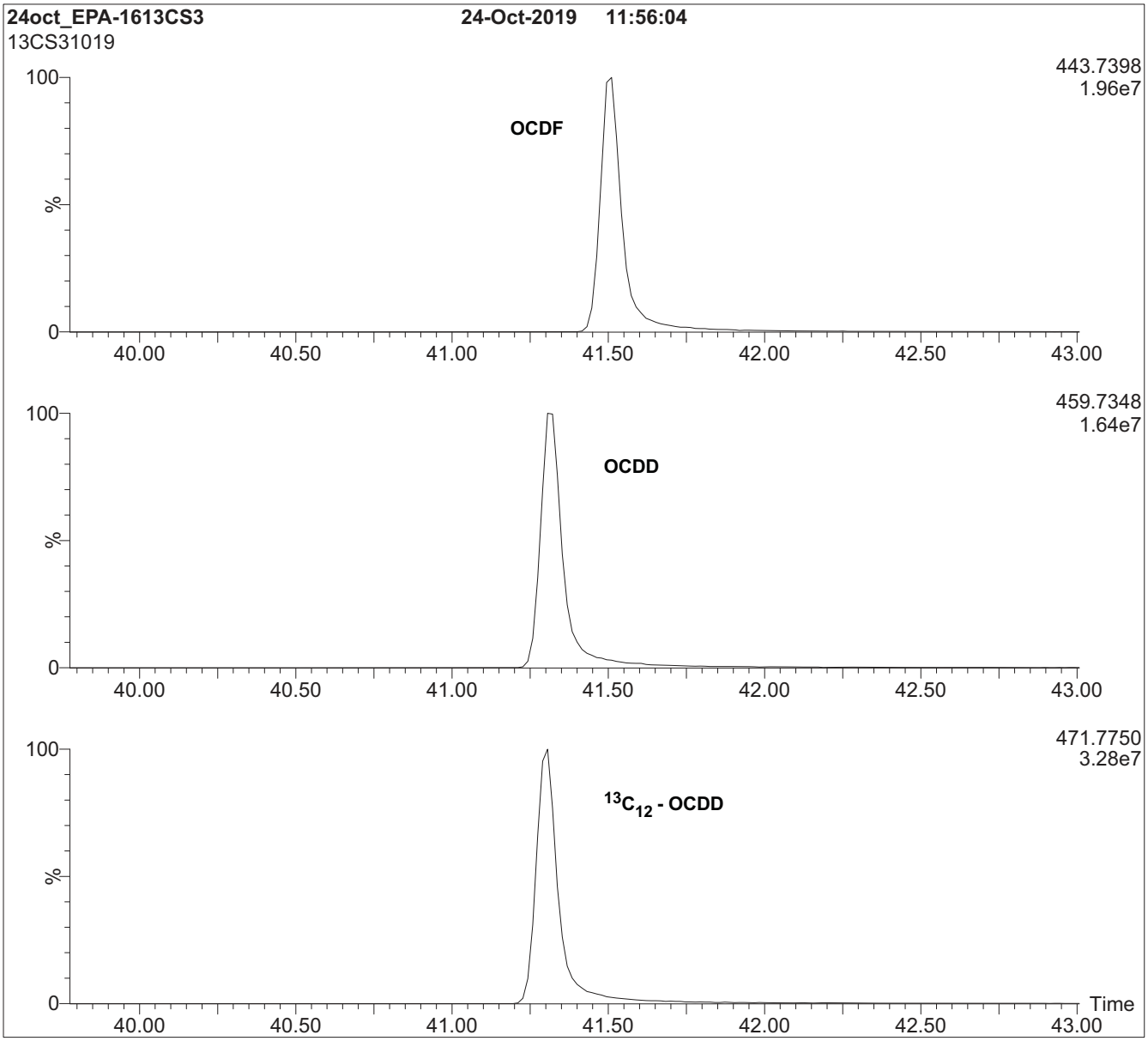


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CVS

U.S. EPA Method 1613 Calibration and Verification Solutions
plus Supplemental Calibration Solutions EPA-1613CSL & EPA-1613CS0.5

PRODUCT CODES:	EPA-1613CVS	**LOT NUMBERS:**	(see below)
	EPA-1613CS1		13CS11019
	EPA-1613CS2		13CS21019
	EPA-1613CS3		13CS31019
	EPA-1613CS4		13CS41019
	EPA-1613CS5		13CS51019

Note: EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to this calibration set that must be ordered separately.

EPA-1613CS0.5	13CS0.51019
EPA-1613CSL	13CSL1019

SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/22/2019
LAST TESTED: (mm/dd/yyyy)	10/24/2019
EXPIRY DATE: (mm/dd/yyyy)	10/24/2026
RECOMMENDED STORAGE:	Store ampoules in a cool, dark place

I005460
1613 CSL CAL STD
Expires 10/24/2026
Prepared By Joshua Rains 6/23/2020

DESCRIPTION:

EPA-1613CVS is a series of 5 calibration solutions containing native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$ and $^{37}Cl_4$) chlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs). The components of each solution, and their concentrations, are given in Table A.

They were designed for, and prepared to be used according to, U.S. EPA Method 1613 (Revision B). They are to be used as received.

EPA-1613CSL and EPA-1613CS0.5 are lower level extensions to EPA-1613CVS. Neither is required by the method, but either or both can be used to extend the calibration to lower levels.

The individual native PCDDs and PCDFs all have chemical purities of >98%. The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-$^{37}Cl_4$-Tetrachlorodibenzo-p-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Table B: 5-point HRGC/HRMS Calibration and RRF Summary
Table C: 7-point HRGC/HRMS Calibration and RRF Summary
Figure 1: HRGC/HRMS Data for EPA-1613CS3 (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 3 for further details.

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a series of standards for the identification and quantification of specific chemical compounds.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned values, and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analytes is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO 17034 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A 1226

ANAB ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); Components and Concentrations (ng/ml, ± 5% in nonane/toluene)**

Compound	Concentration (ng/ml)						
Native PCDDs and PCDFs:	**CS1**	**CS2**	**CS3**	**CS4**	**CS5**	**CSL**	**CS0.5**
2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
2,3,7,8-TCDF	0.5	2	10	40	200	0.1	0.25
1,2,3,7,8-PeCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,7,8-PeCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,7,8,9-HxCDF	2.5	10	50	200	1000	0.5	1.25
2,3,4,6,7,8-HxCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDD	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,6,7,8-HpCDF	2.5	10	50	200	1000	0.5	1.25
1,2,3,4,7,8,9-HpCDF	2.5	10	50	200	1000	0.5	1.25
OCDD	5.0	20	100	400	2000	1.0	2.5
OCDF	5.0	20	100	400	2000	1.0	2.5
Labelled PCDDs and PCDFs:							
$^{13}C_{12}$-2,3,7,8-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,7,8-TCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,7,8-PeCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	100	100	100	100	100	100	100
$^{13}C_{12}$-OCDD	200	200	200	200	200	200	200
Cleanup Standard:							
$^{37}Cl_4$-2,3,7,8-TCDD	0.5	2	10	40	200	0.1	0.25
Internal Standards:							
$^{13}C_{12}$-1,2,3,4-TCDD	100	100	100	100	100	100	100
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	100	100	100	100	100	100	100
Percent toluene (v/v)	3.6%	3.7%	4.2%	6.1%	16.2%	3.6%	3.6%

Certified By: _____ **Date:** 10/25/2019
(mm/dd/yyyy)
B.G. Chittim, General Manager

Table B: **EPA-1613CVS; 5-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard				
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5
2,3,7,8-TCDF	0.93	0.013	1.4	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.015	1.6	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.04	0.019	1.8	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.035	3.7	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.93	0.013	1.4	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.96	0.022	2.3	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.89	0.021	2.4	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.91	0.011	1.2	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.010	1.1	0.90	0.90	0.92	0.91	0.92
OCDF	1.19	0.056	4.7	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.05	0.023	2.2	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.97	0.018	1.9	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	1.00	0.019	1.9	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.98	0.032	3.2	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.97	0.016	1.6	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.025	2.5	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.013	1.3	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.57	0.047	3.0	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.21	0.078	6.5	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.17	0.081	6.9	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.020	1.5	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.51	0.034	2.2	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.38	0.012	0.9	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.014	1.2	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.033	2.5	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.08	0.046	4.3	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.13	0.036	3.2	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.79	0.047	5.9	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.027	3.1	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.04	0.010	1.0	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.017	2.1	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.74	0.055	7.4	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.026	2.6	0.95	0.94	0.99	0.99	0.99

Table C: **EPA-1613CVS (with EPA-1613CSL and EPA-1613CS0.5); 7-point HRGC/HRMS Calibration and RRF Summary**

Calibration RRF Summary				Calibration Standard						
Calibration Filename: 24oct_EPA1613CVS-CAL.QLD				CSL	CS0.5	CS1	CS2	CS3	CS4	CS5
Name	Mean	S. D.	%RSD	RRF#1	RRF#2	RRF#3	RRF#4	RRF#5	RRF#6	RRF#7
2,3,7,8-TCDF	0.92	0.045	4.8	0.96	0.83	0.92	0.95	0.93	0.92	0.95
1,2,3,7,8-PeCDF	0.93	0.013	1.4	0.94	0.92	0.92	0.92	0.93	0.93	0.95
2,3,4,7,8-PeCDF	1.02	0.058	5.7	0.90	1.00	1.03	1.02	1.05	1.05	1.07
1,2,3,4,7,8-HxCDF	0.96	0.029	3.0	0.96	0.97	0.94	0.92	0.98	0.99	1.00
1,2,3,6,7,8-HxCDF	0.92	0.030	3.3	0.90	0.86	0.92	0.94	0.94	0.91	0.94
2,3,4,6,7,8-HxCDF	0.94	0.047	5.0	0.87	0.89	0.95	0.94	0.97	0.97	0.99
1,2,3,7,8,9-HxCDF	0.88	0.029	3.3	0.83	0.88	0.87	0.88	0.90	0.90	0.92
1,2,3,4,6,7,8-HpCDF	0.90	0.033	3.7	0.83	0.93	0.90	0.90	0.90	0.92	0.92
1,2,3,4,7,8,9-HpCDF	0.91	0.018	1.9	0.89	0.94	0.90	0.90	0.92	0.91	0.92
OCDF	1.18	0.052	4.4	1.15	1.14	1.11	1.17	1.19	1.23	1.26
2,3,7,8-TCDD	1.03	0.051	5.0	1.03	0.92	1.01	1.06	1.05	1.05	1.07
1,2,3,7,8-PeCDD	0.95	0.042	4.4	0.87	0.98	0.95	0.95	0.98	0.97	0.99
1,2,3,4,7,8-HxCDD	0.97	0.066	6.8	0.83	0.98	1.01	1.00	1.00	0.96	1.01
1,2,3,6,7,8-HxCDD	0.96	0.044	4.5	0.90	0.92	0.93	0.98	0.99	1.01	1.01
1,2,3,7,8,9-HxCDD	0.94	0.054	5.7	0.83	0.92	0.95	0.96	0.98	0.99	0.98
1,2,3,4,6,7,8-HpCDD	1.01	0.033	3.3	0.95	1.03	1.01	0.97	1.02	1.03	1.04
OCDD	1.00	0.023	2.3	0.95	1.00	1.00	0.99	1.02	1.02	1.00
$^{13}C_{12}$-2,3,7,8-TCDF	1.56	0.042	2.7	1.52	1.54	1.52	1.55	1.55	1.57	1.65
$^{13}C_{12}$-1,2,3,7,8-PeCDF	1.20	0.066	5.5	1.18	1.17	1.13	1.20	1.17	1.20	1.34
$^{13}C_{12}$-2,3,4,7,8-PeCDF	1.16	0.071	6.1	1.12	1.13	1.09	1.15	1.13	1.17	1.31
$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	1.33	0.018	1.4	1.32	1.35	1.35	1.33	1.33	1.32	1.30
$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	1.53	0.045	3.0	1.60	1.56	1.47	1.48	1.53	1.53	1.54
$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	1.39	0.019	1.4	1.39	1.42	1.38	1.38	1.40	1.37	1.36
$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	1.19	0.012	1.0	1.19	1.19	1.18	1.16	1.20	1.19	1.20
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	1.31	0.028	2.2	1.30	1.33	1.31	1.26	1.33	1.31	1.35
$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	1.07	0.045	4.2	1.02	1.08	1.06	1.03	1.09	1.08	1.15
$^{13}C_{12}$-2,3,7,8-TCDD	1.12	0.033	3.0	1.09	1.11	1.10	1.11	1.11	1.13	1.19
$^{13}C_{12}$-1,2,3,7,8-PeCDD	0.78	0.040	5.1	0.75	0.78	0.74	0.78	0.75	0.79	0.86
$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	0.87	0.025	2.9	0.86	0.90	0.85	0.83	0.89	0.88	0.89
$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	1.05	0.015	1.5	1.08	1.06	1.05	1.05	1.04	1.05	1.03
$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	0.81	0.016	2.0	0.79	0.81	0.81	0.80	0.80	0.81	0.84
$^{13}C_{12}$-OCDD	0.73	0.046	6.3	0.71	0.72	0.70	0.70	0.73	0.72	0.83
$^{13}C_{12}$-1,2,3,4-TCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	1.00	0.000	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
$^{37}Cl_4$-2,3,7,8-TCDD	0.97	0.053	5.4	0.90	1.07	0.95	0.94	0.99	0.99	0.99

Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

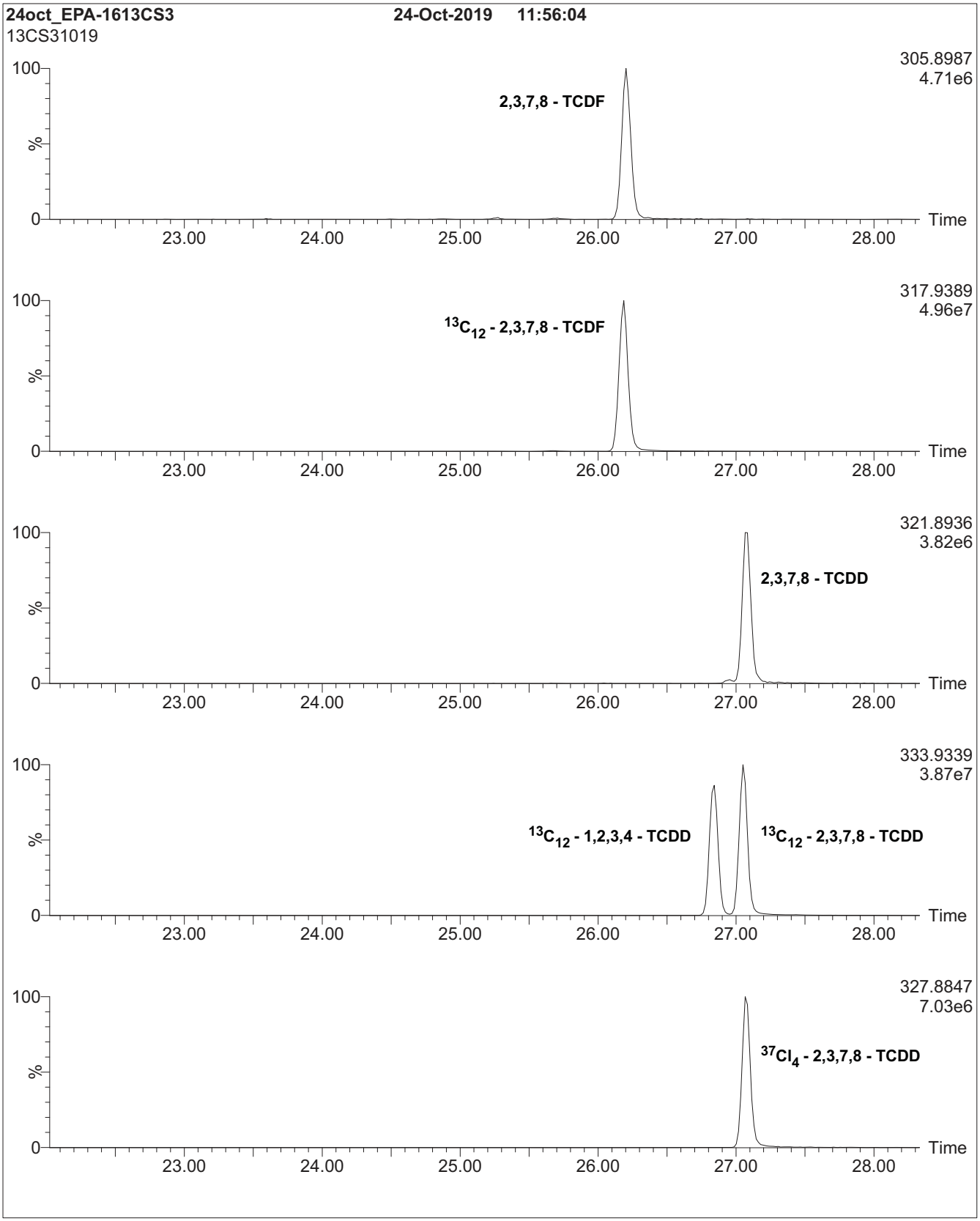


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

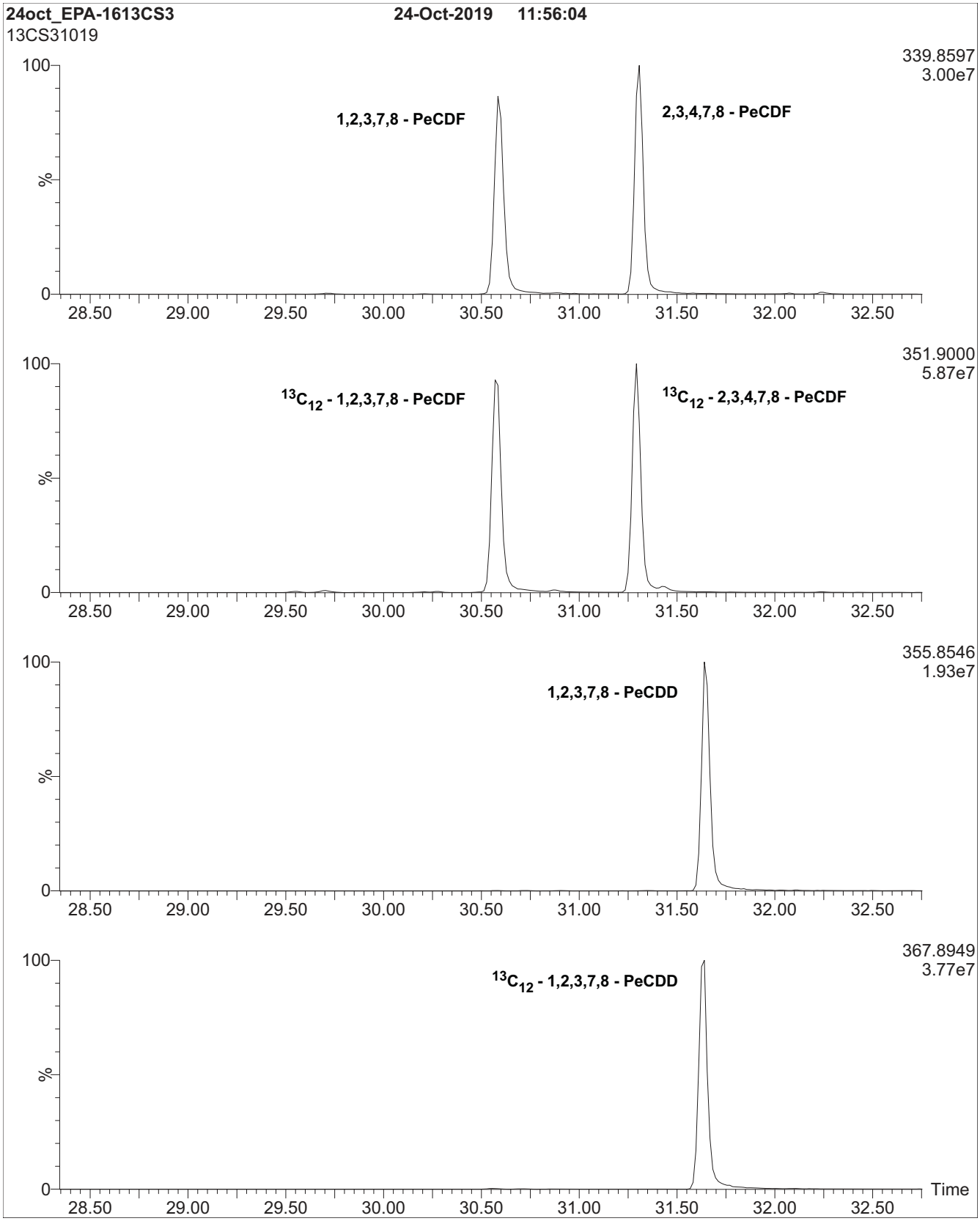


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

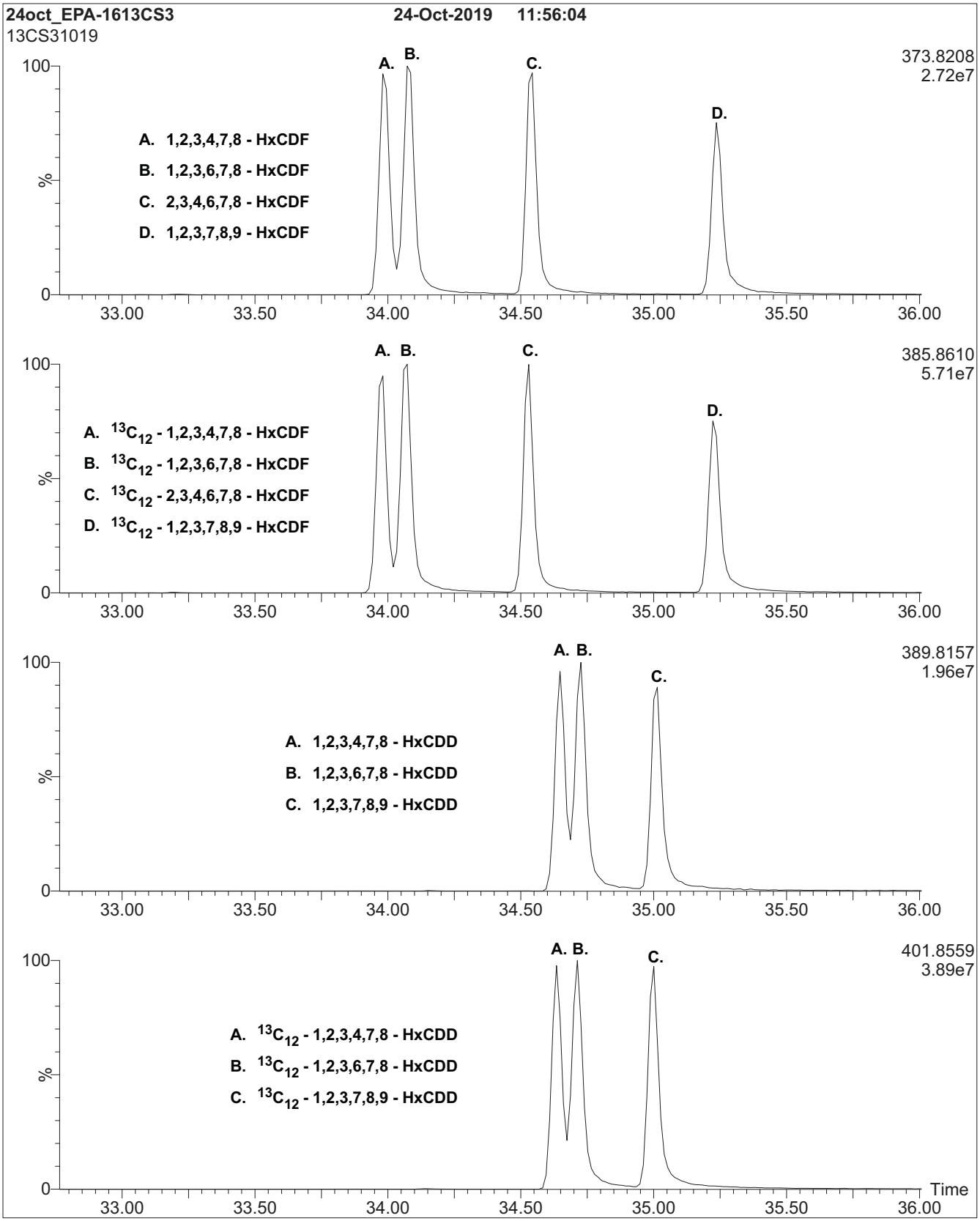


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**

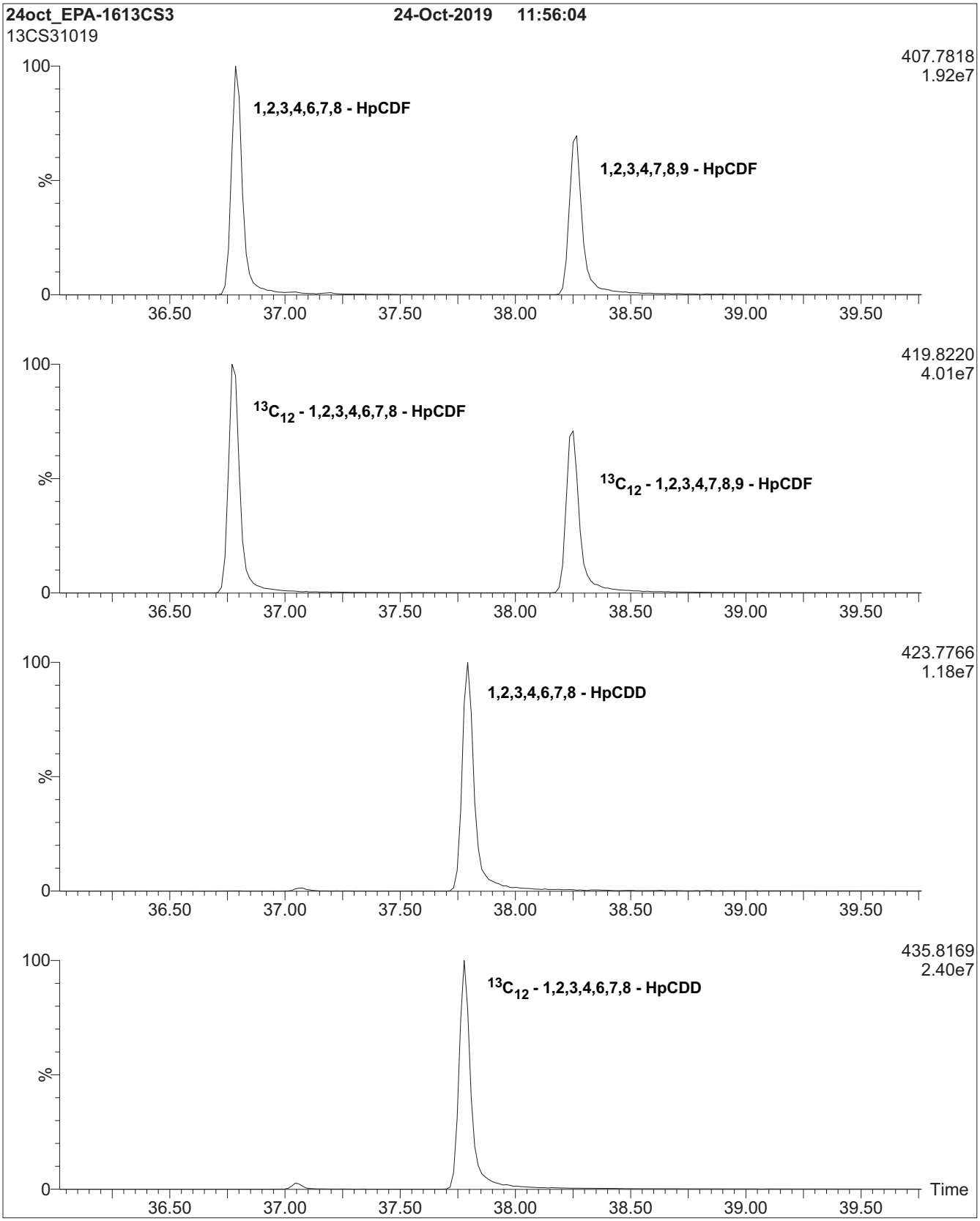
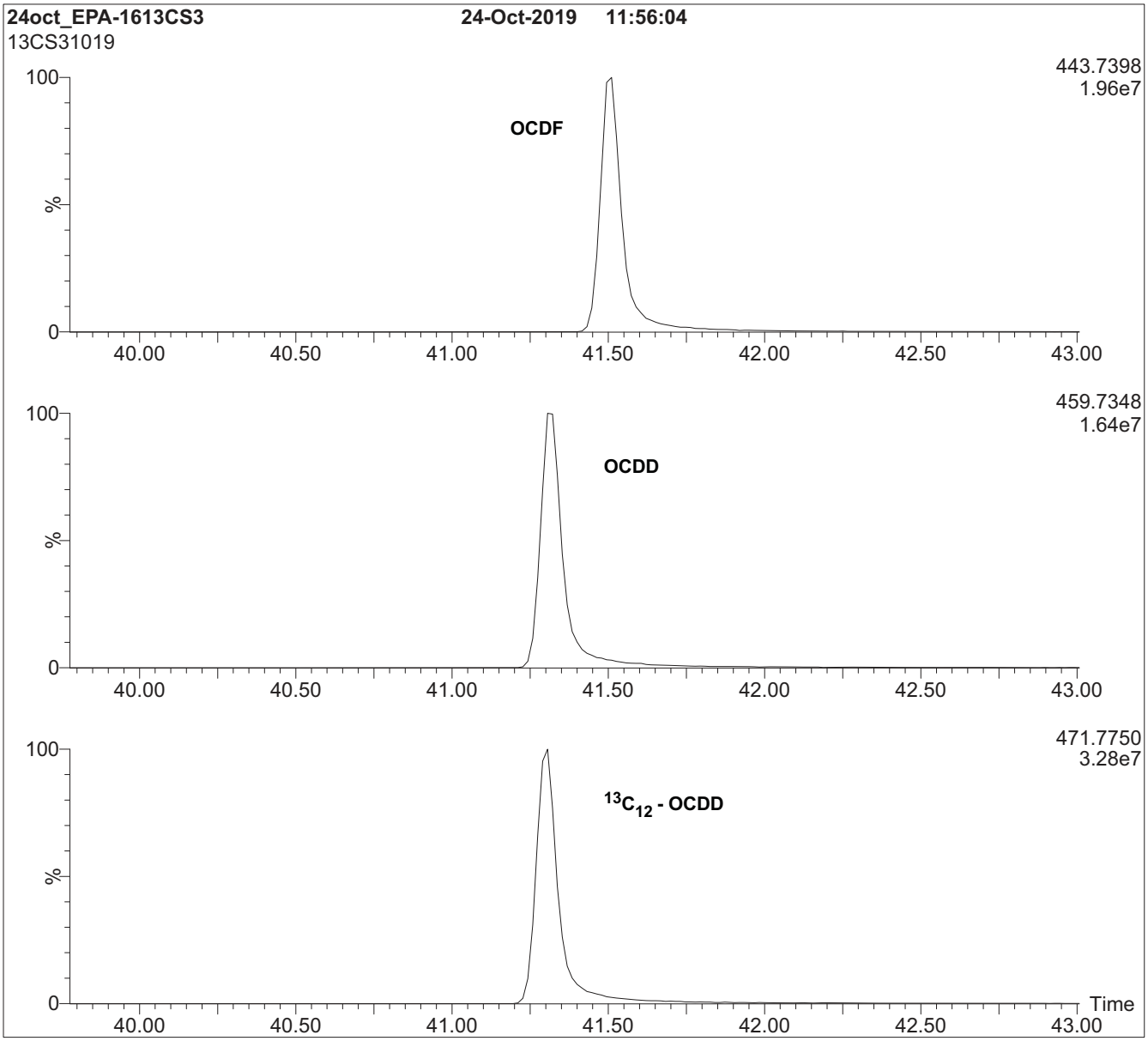


Figure 1: **EPA-1613CS3; HRGC/HRMS Data (60 m DB-5 Column)**



HRGC/HRMS:

Agilent 6890N (HRGC)
Autospec Ultima (HRMS)

Chromatographic Conditions:

Column: 60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W

Flow: Constant at 1 ml/min
Injector: 280 °C (Splitless Injection)
Ionization: EI+
Detector: 280 °C
SIR at 10,000 mass resolving power

Oven: 150 °C (1 min)
12 °C/min to 200 °C
3 °C/min to 235 °C
235 °C (8 min)
8 °C/min to 310 °C
310 °C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Recd. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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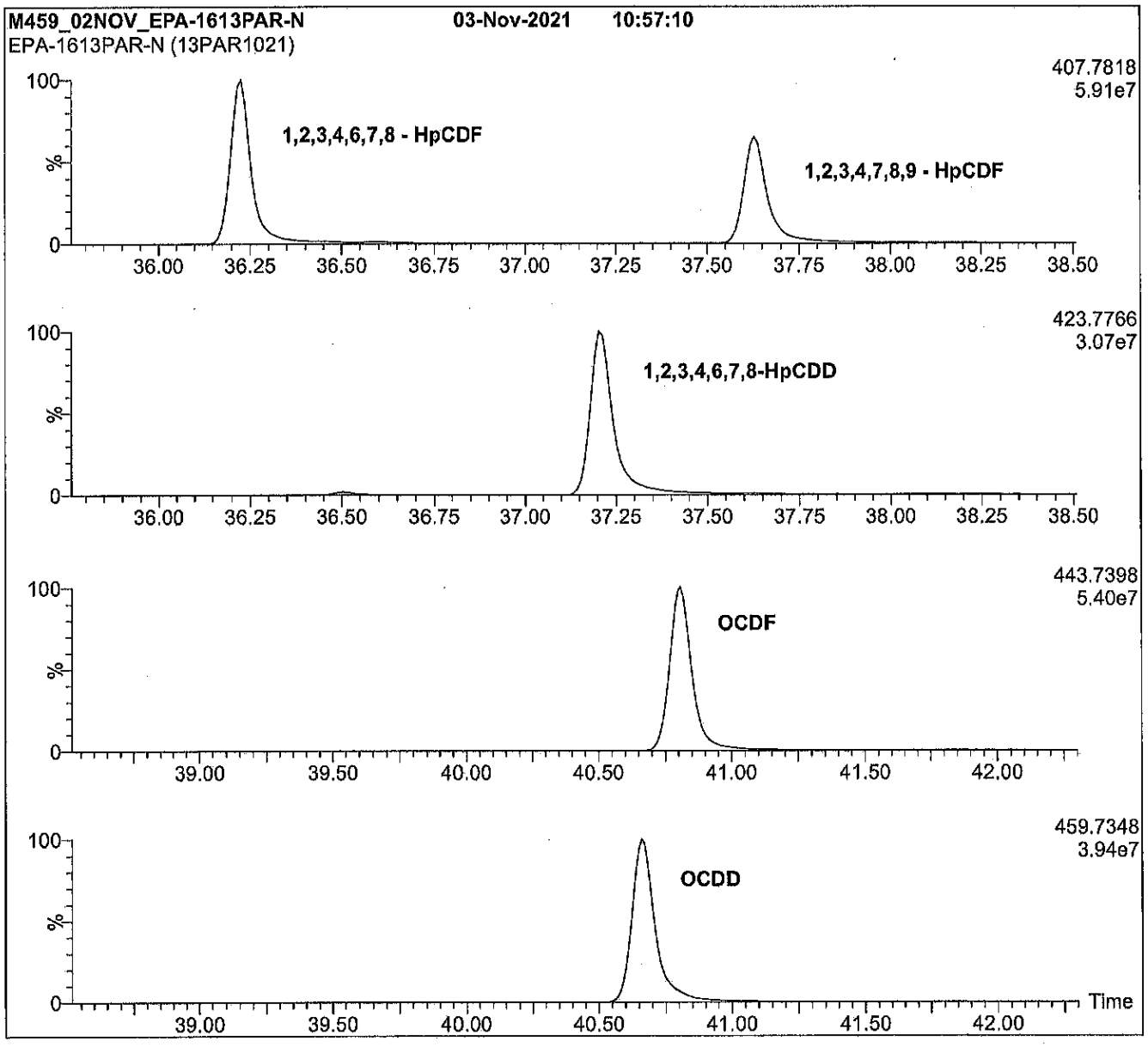
Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613PAR

U.S. EPA Method 1613 Native PCDD/PCDF Precision and Recovery Stock Solution

PRODUCT CODE:	EPA-1613PAR
LOT NUMBER:	13PAR1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/25/2021
LAST TESTED: (mm/dd/yyyy)	11/03/2021
EXPIRY DATE: (mm/dd/yyyy)	11/03/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

J013397
Recd. JR
12/20/21

DESCRIPTION:

EPA-1613PAR is a solution/mixture of all the 2,3,7,8-substituted polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613PAR was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual PCDDs and PCDFs all have chemical purities of >98%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution/Mixture
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613PAR; Components and Concentrations (ng/mL, ± 5% in nonane/2.4% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
PCDDs:			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin	2,3,7,8-TCDD	1746-01-6	40.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin	1,2,3,7,8-PeCDD	40321-76-4	200
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,4,7,8-HxCDD	39227-28-6	200
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin	1,2,3,6,7,8-HxCDD	57653-85-7	200
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	1,2,3,7,8,9-HxCDD	19408-74-3	200
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	1,2,3,4,6,7,8-HpCDD	35822-46-9	200
Octachlorodibenzo-*p*-dioxin	OCDD	3268-87-9	400
PCDFs:			
2,3,7,8-Tetrachlorodibenzofuran	2,3,7,8-TCDF	51207-31-9	40.0
1,2,3,7,8-Pentachlorodibenzofuran	1,2,3,7,8-PeCDF	57117-41-6	200
2,3,4,7,8-Pentachlorodibenzofuran	2,3,4,7,8-PeCDF	57117-31-4	200
1,2,3,4,7,8-Hexachlorodibenzofuran	1,2,3,4,7,8-HxCDF	70648-26-9	200
1,2,3,6,7,8-Hexachlorodibenzofuran	1,2,3,6,7,8-HxCDF	57117-44-9	200
1,2,3,7,8,9-Hexachlorodibenzofuran	1,2,3,7,8,9-HxCDF	72918-21-9	200
2,3,4,6,7,8-Hexachlorodibenzofuran	2,3,4,6,7,8-HxCDF	60851-34-5	200
1,2,3,4,6,7,8-Heptachlorodibenzofuran	1,2,3,4,6,7,8-HpCDF	67562-39-4	200
1,2,3,4,7,8,9-Heptachlorodibenzofuran	1,2,3,4,7,8,9-HpCDF	55673-89-7	200
Octachlorodibenzofuran	OCDF	39001-02-0	400

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**

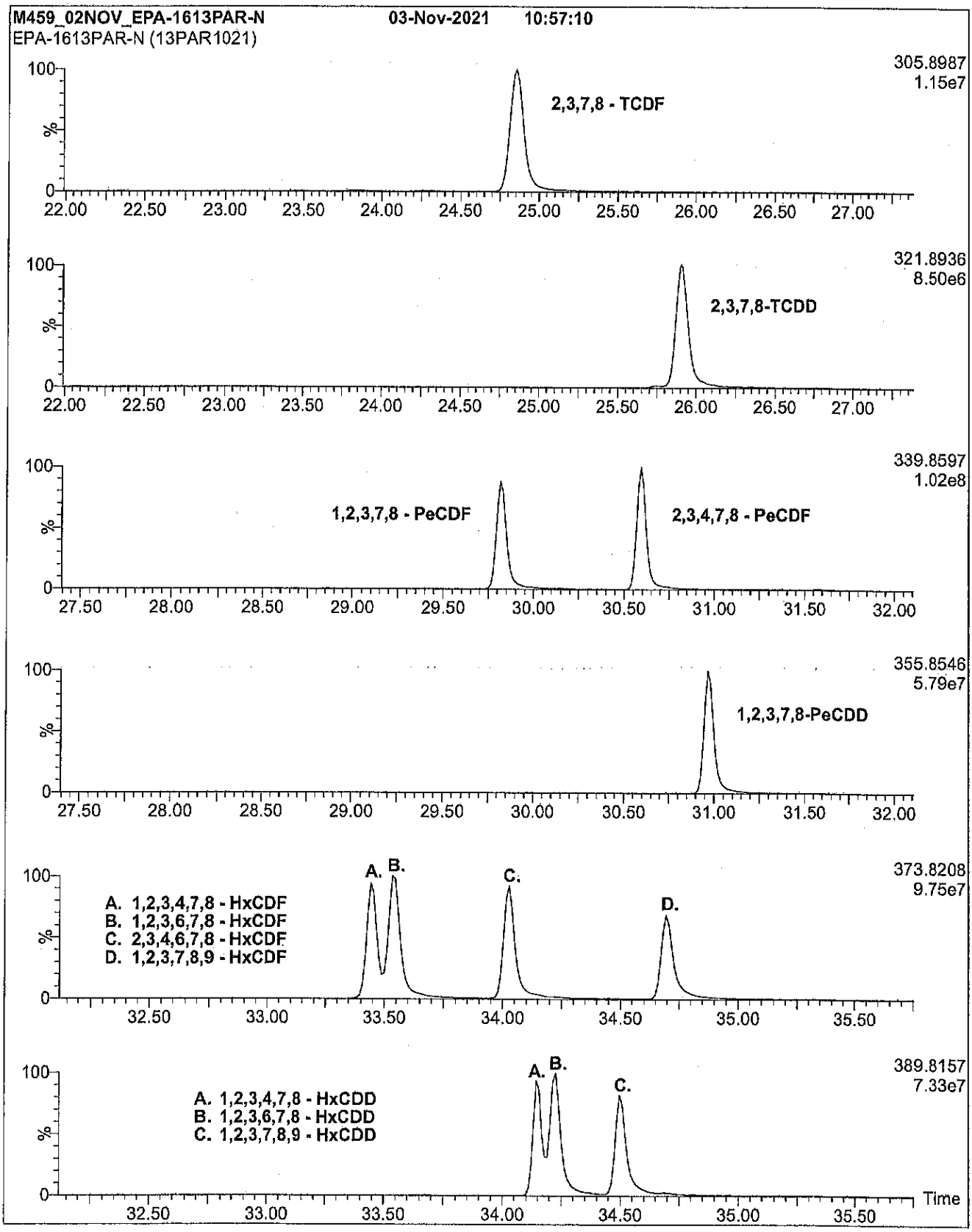
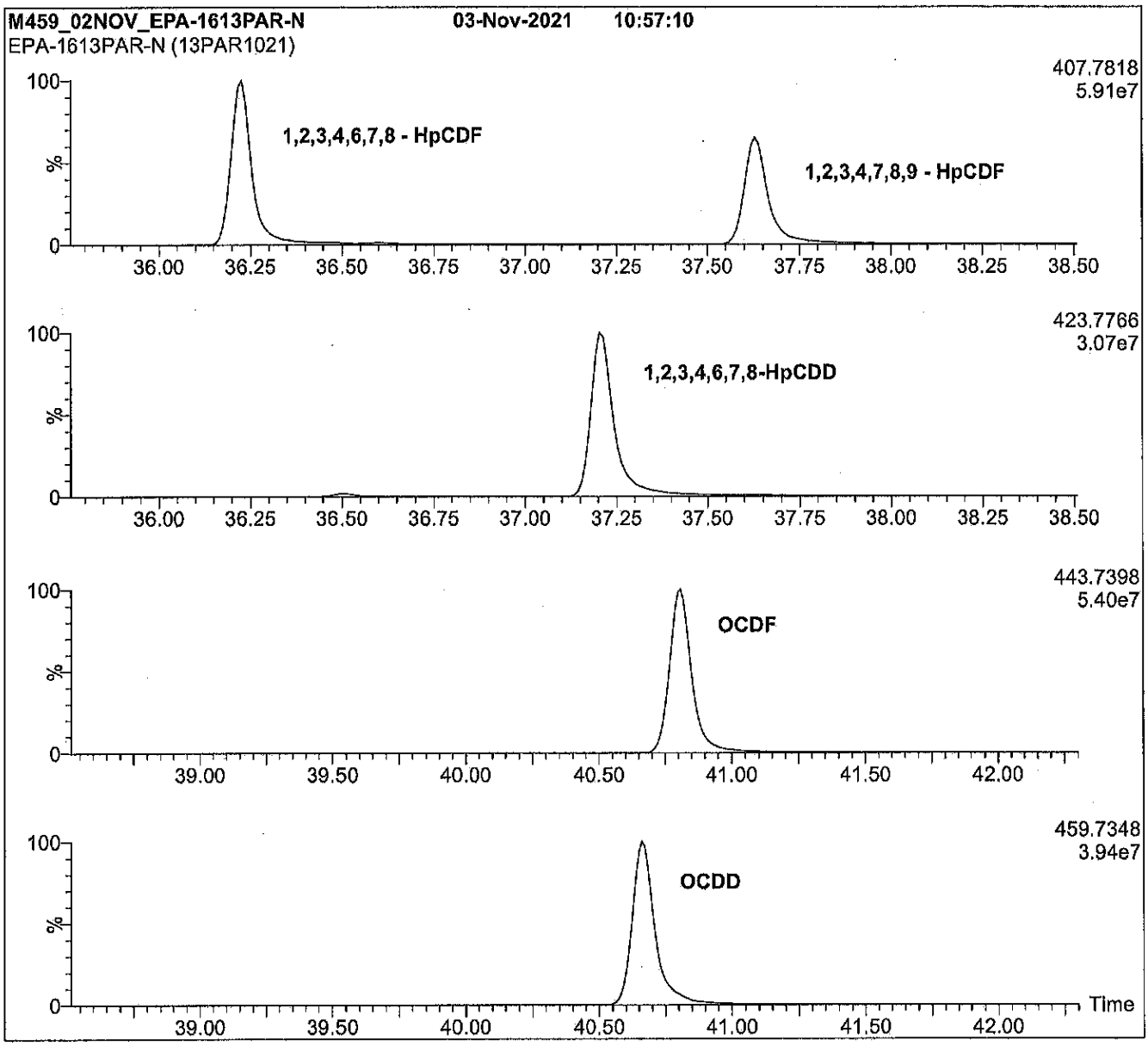


Figure 1: **EPA-1613PAR; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1021
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K003104

EPA-1613CSS contains 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.

EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin	$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	40.0

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

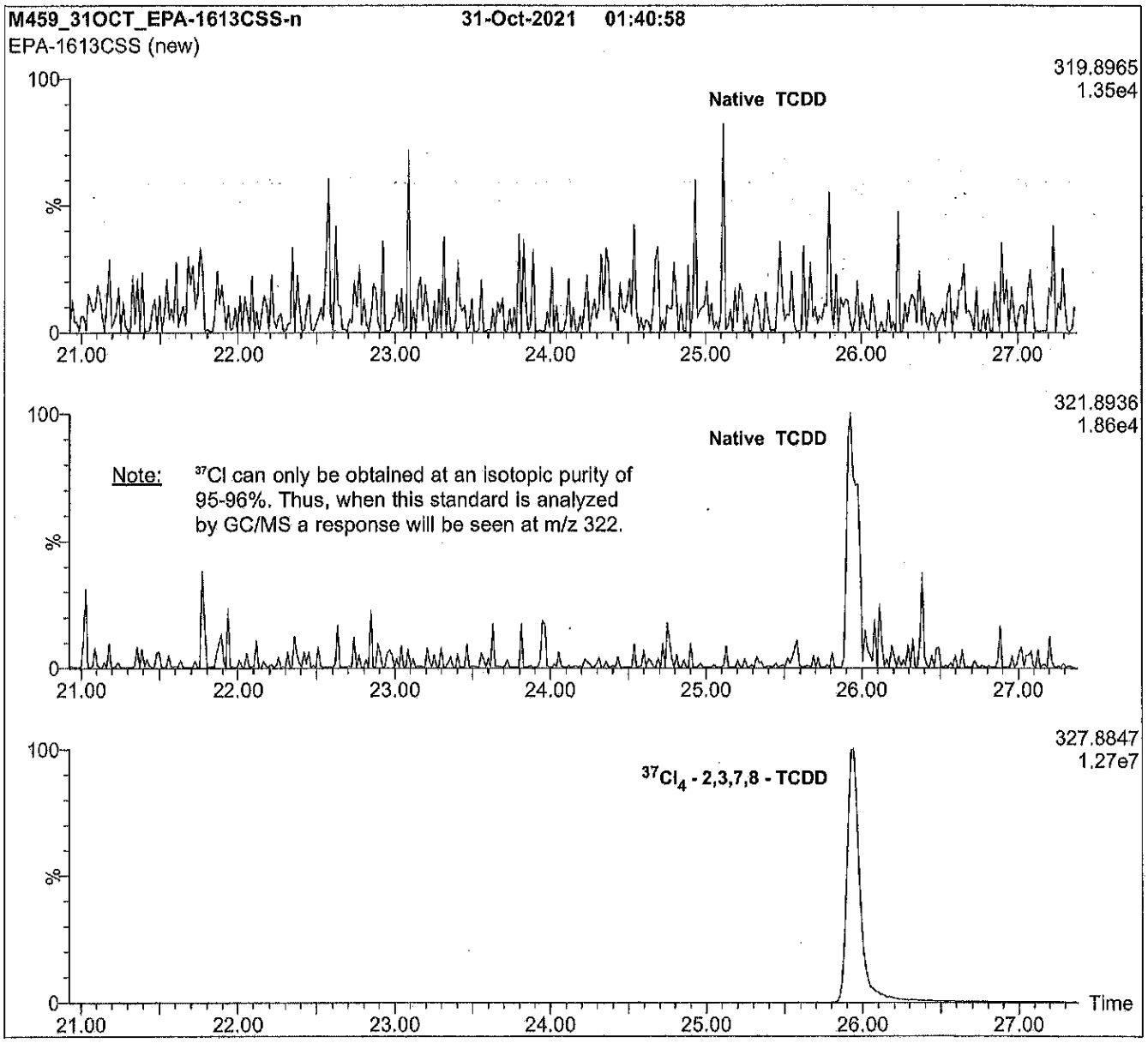
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION: K3105

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

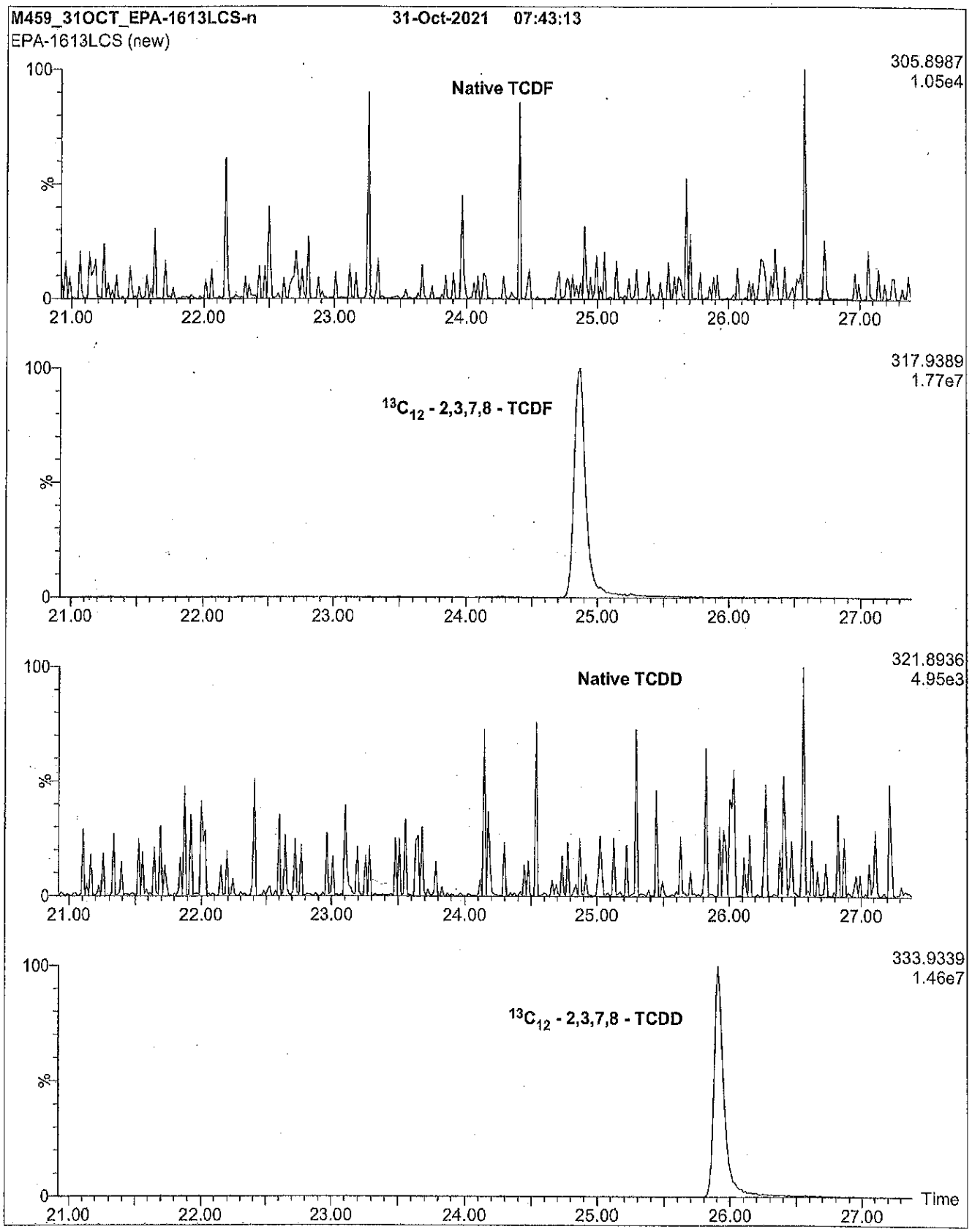


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

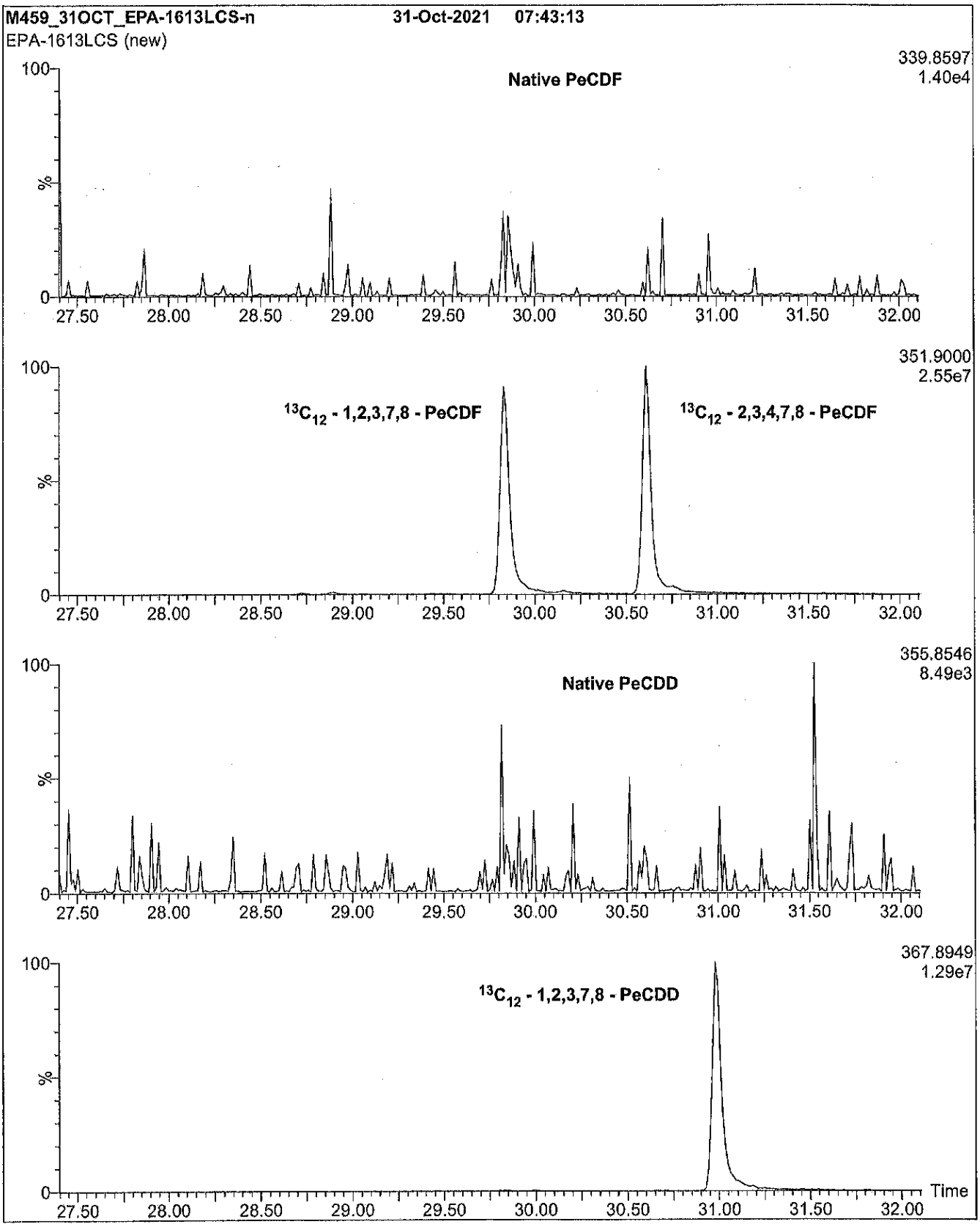


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

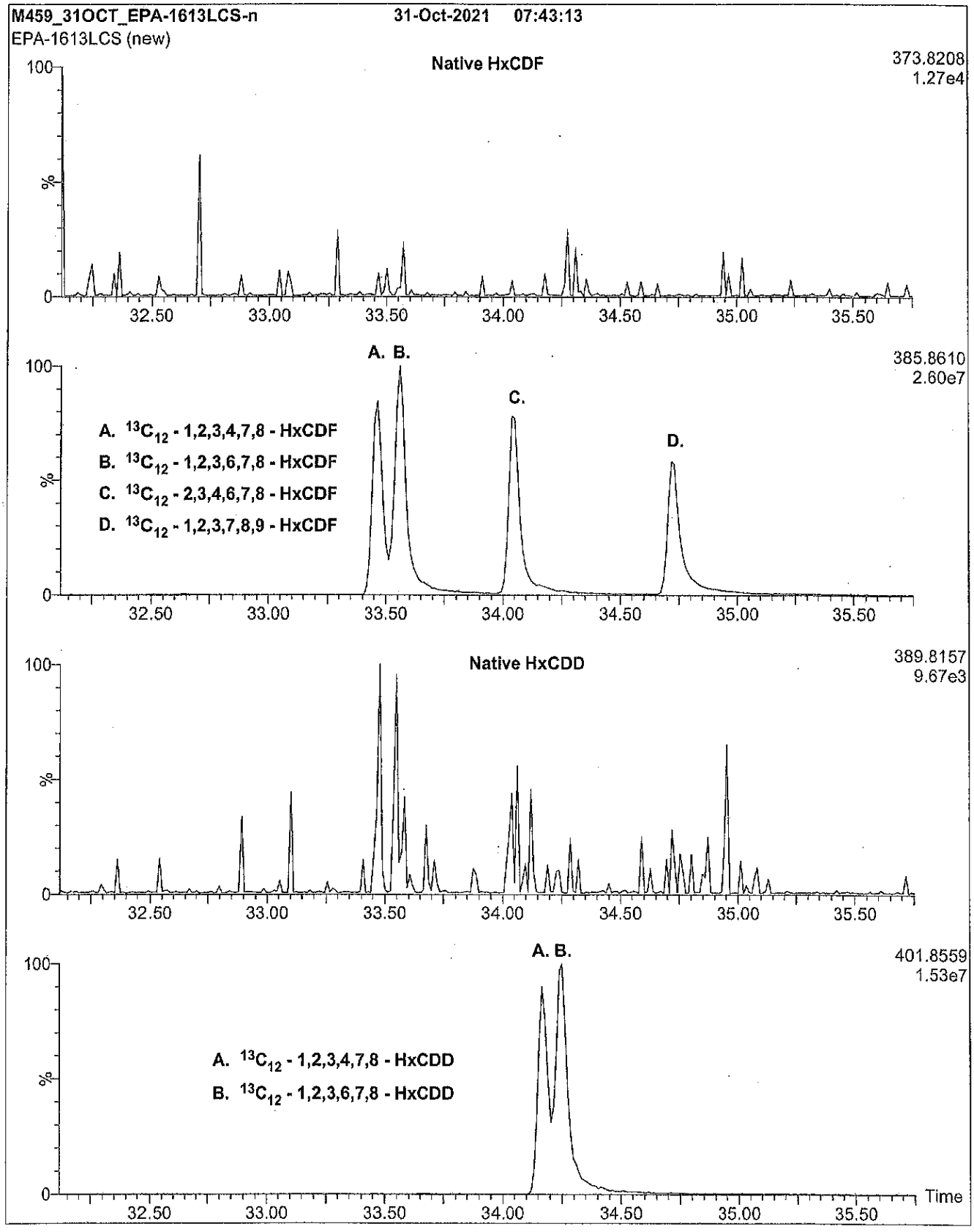


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

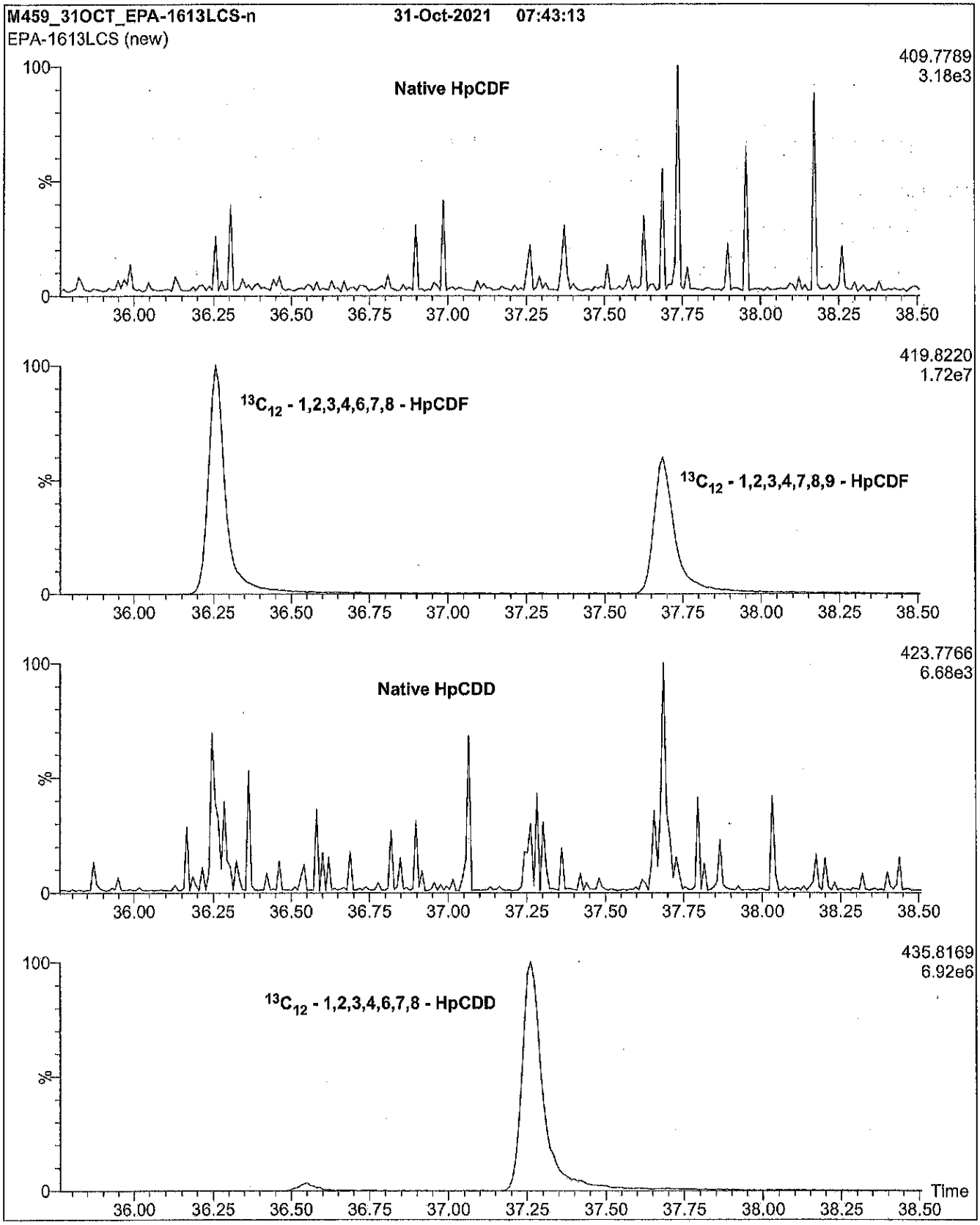
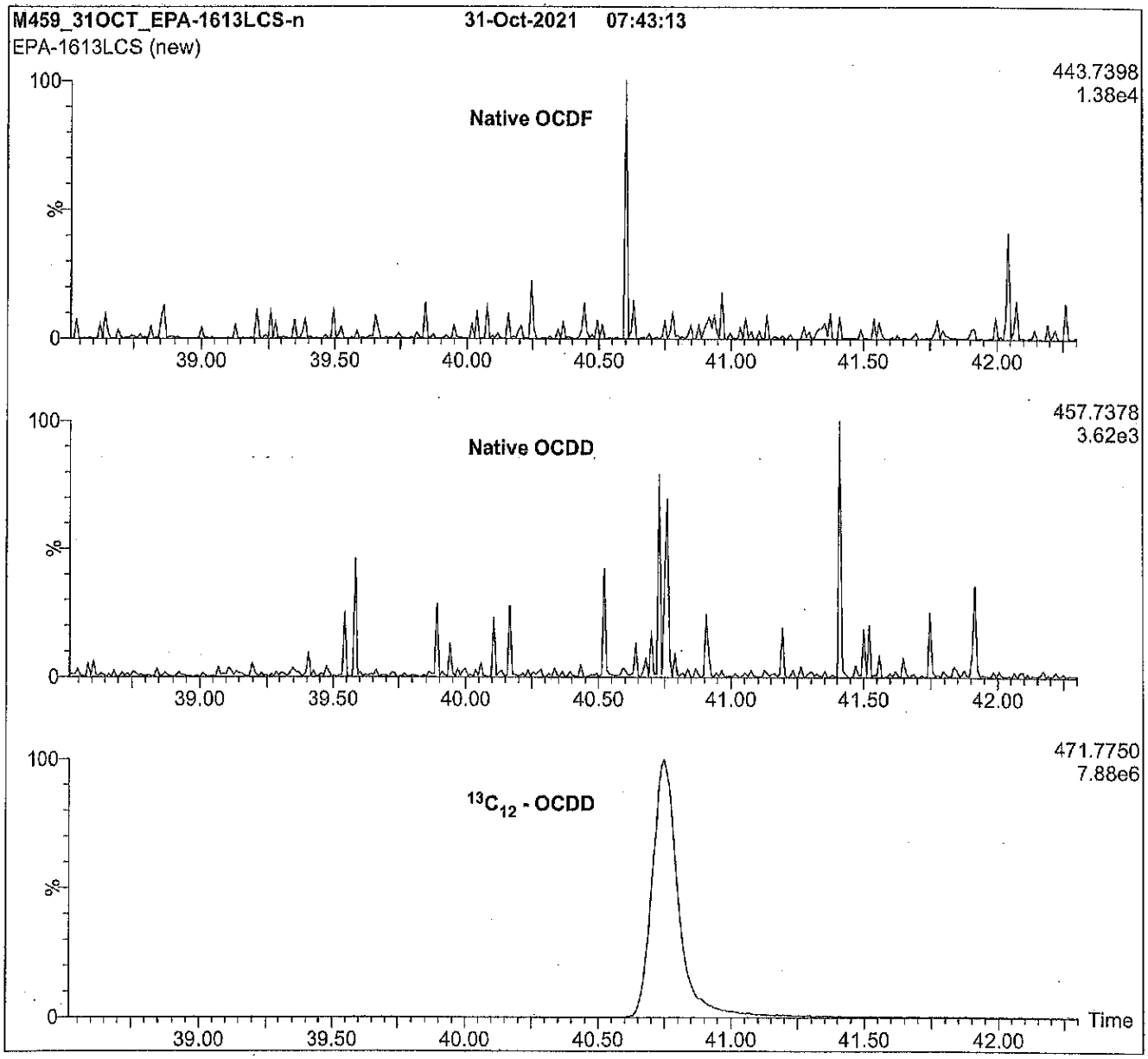


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

K9821

CS3WT

Calibration and Verification Solution (EPA-1613CS3) combined with Window Defining and 2,3,7,8-TCDD Resolution Testing Congeners

PRODUCT CODE:	CS3WT
LOT NUMBER:	CS3WT1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	11/01/2021
LAST TESTED: (mm/dd/yyyy)	11/02/2021
EXPIRY DATE: (mm/dd/yyyy)	11/02/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

DESCRIPTION:

CS3WT is a solution/mixture of native ($^{12}C_{12}$) and mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Tables A and B.

CS3WT is an HRGC/HRMS calibration solution that was designed and prepared to be used according to U.S. EPA Method 1613, Revision B, in place of EPA-1613CS3 (lot: 13CS31021). Additionally, it contains the PCDD and PCDF isomers required to set retention time windows as well as test and establish isomer specificity for 2,3,7,8-TCDD on a DB-5 (or equivalent) capillary column.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%. The 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%. The individual native 2,3,7,8-substituted PCDD and PCDF congeners all have chemical purities of >98%; the other congeners (window defining and resolution testing) should only be considered semi-quantitative.

This current lot of CS3WT is to be used with the 1613 calibration solutions having the following lot numbers:

PRODUCT CODE	LOT NUMBER
EPA-1613CS1	13CS11021
EPA-1613CS2	13CS21021
EPA-1613CS3	13CS31021
EPA-1613CS4	13CS41021
EPA-1613CS5	13CS51021
EPA-1613CSL	13CSL1021
EPA-1613CS0.5	13CS0.51021

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Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

Form#:13, Issued 2004-11-10
Revision#:9, Revised 2020-12-23

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, \ldots x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) has been assigned to the quantitative components in this product. A maximum combined percent relative uncertainty of ±20% has been assigned to the semi-quantitative components in this product.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **CS3WT; Quantitative Components and Concentrations (ng/mL, ± 5%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
Native PCDDs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzo-*p*-dioxin		2,3,7,8-TCDD	1746-01-6	10.0
1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin		1,2,3,7,8-PeCDD	40321-76-4	50.0
1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,4,7,8-HxCDD	39227-28-6	50.0
1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin		1,2,3,6,7,8-HxCDD	57653-85-7	50.0
1,2,3,7,8,9-Hexachlorodibenzo-*p*-dioxin	Last HxCDD[b]	1,2,3,7,8,9-HxCDD	19408-74-3	50.0
1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin	Last HpCDD	1,2,3,4,6,7,8-HpCDD	35822-46-9	50.0
Octachlorodibenzo-*p*-dioxin		OCDD	3268-87-9	100
Native PCDFs:	**Designation[a]**			
2,3,7,8-Tetrachlorodibenzofuran		2,3,7,8-TCDF	51207-31-9	10.0
1,2,3,7,8-Pentachlorodibenzofuran		1,2,3,7,8-PeCDF	57117-41-6	50.0
2,3,4,7,8-Pentachlorodibenzofuran		2,3,4,7,8-PeCDF	57117-31-4	50.0
1,2,3,4,7,8-Hexachlorodibenzofuran		1,2,3,4,7,8-HxCDF	70648-26-9	50.0
1,2,3,6,7,8-Hexachlorodibenzofuran		1,2,3,6,7,8-HxCDF	57117-44-9	50.0
1,2,3,7,8,9-Hexachlorodibenzofuran		1,2,3,7,8,9-HxCDF	72918-21-9	50.0
2,3,4,6,7,8-Hexachlorodibenzofuran		2,3,4,6,7,8-HxCDF	60851-34-5	50.0
1,2,3,4,6,7,8-Heptachlorodibenzofuran	First HpCDF[c]	1,2,3,4,6,7,8-HpCDF	67562-39-4	50.0
1,2,3,4,7,8,9-Heptachlorodibenzofuran	Last HpCDF	1,2,3,4,7,8,9-HpCDF	55673-89-7	50.0
Octachlorodibenzofuran		OCDF	39001-02-0	100
Mass-Labelled PCDDs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:				
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran		$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100
Cleanup Standard:				
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin		$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	10.0
Internal Standards:				
1,2,3,4-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,4-TCDD	114423-99-3	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin		$^{13}C_{12}$-1,2,3,7,8,9-HxCDD	109719-82-6	100

[a] First/Last eluting isomer for the specified homologue group (see Table B for additional Window Definers).
[b, c] – see Table B for footnote.

Table B: **CS3WT; Semi-Quantitative Components and Concentrations (ng/mL, ± 20%, in nonane/4.5% toluene)**

Compound		Acronym	CAS #	Concentration (ng/mL)
PCDD Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzo-*p*-dioxin	First TCDD	1,3,6,8-TCDD	33423-92-6	10.0
1,2,8,9-Tetrachlorodibenzo-*p*-dioxin	Last TCDD	1,2,8,9-TCDD	62470-54-6	10.0
1,2,4,6,8-/1,2,4,7,9-Pentachlorodibenzo-*p*-dioxin	First PeCDD	1,2,4,6,8-PeCDD 1,2,4,7,9-PeCDD	71998-76-0 82291-37-0	50.0[d]
1,2,3,8,9-Pentachlorodibenzo-*p*-dioxin	Last PeCDD	1,2,3,8,9-PeCDD	71925-18-3	50.0
1,2,4,6,7,9-Hexachlorodibenzo-*p*-dioxin	First HxCDD	1,2,4,6,7,9-HxCDD	39227-62-8	50.0
1,2,3,4,6,7,9-Heptachlorodibenzo-*p*-dioxin	First HpCDD	1,2,3,4,6,7,9-HpCDD	58200-70-7	50.0
PCDF Window Definers:	**Designation[a]**			
1,3,6,8-Tetrachlorodibenzofuran	First TCDF	1,3,6,8-TCDF	71998-72-6	10.0
1,2,8,9-Tetrachlorodibenzofuran	Last TCDF	1,2,8,9-TCDF	70648-22-5	10.0
1,3,4,6,8-Pentachlorodibenzofuran	First PeCDF	1,3,4,6,8-PeCDF	83704-55-6	50.0
1,2,3,8,9-Pentachlorodibenzofuran	Last PeCDF	1,2,3,8,9-PeCDF	83704-54-5	50.0
1,2,3,4,6,8-Hexachlorodibenzofuran	First HxCDF	1,2,3,4,6,8-HxCDF	69698-60-8	50.0
2,3,7,8-TCDD Resolution Testing Isomers:				
1,2,3,4-Tetrachlorodibenzo-*p*-dioxin		1,2,3,4-TCDD	30746-58-8	5.00
1,2,3,7-/1,2,3,8-Tetrachlorodibenzo-*p*-dioxin		1,2,3,7-TCDD 1,2,3,8-TCDD	67028-18-6 53555-02-5	5.00[d]
1,2,3,9-Tetrachlorodibenzo-*p*-dioxin		1,2,3,9-TCDD	71669-26-6	10.0

[a] First/Last eluting isomer for the specified homologue group (see Table A for additional Window Definers).

[b] 1,2,3,4,6,7-HxCDD (last eluting HxCDD) not included; coelutes with 1,2,3,7,8,9-HxCDD on a 60 m DB-5 column. Use 1,2,3,7,8,9-HxCDD (see Table A) and 1,2,3,4,6,7,9-HpCDD to approximate the end of the HxCDD window.

[c] 1,2,3,4,8,9-HxCDF (last eluting HxCDF) not included; can interfere with 1,2,3,7,8,9-HxCDF on a 60 m DB-5 column. Use 1,2,3,4,6,7,8-HpCDF (see Table A) to approximate the end of the HxCDF window.

[d] Total concentration of isomers.

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)

B.G. Chittim, General Manager

Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

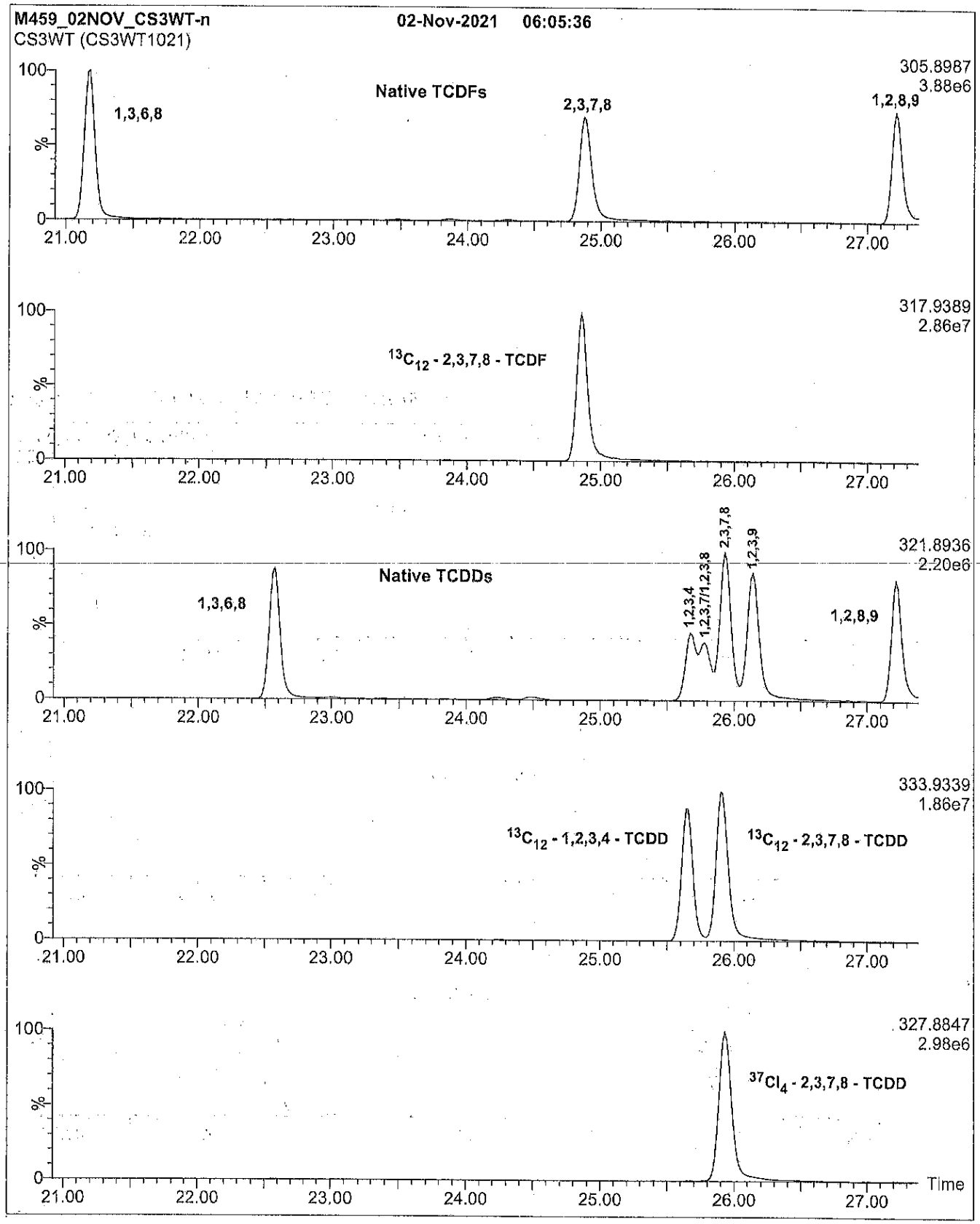


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

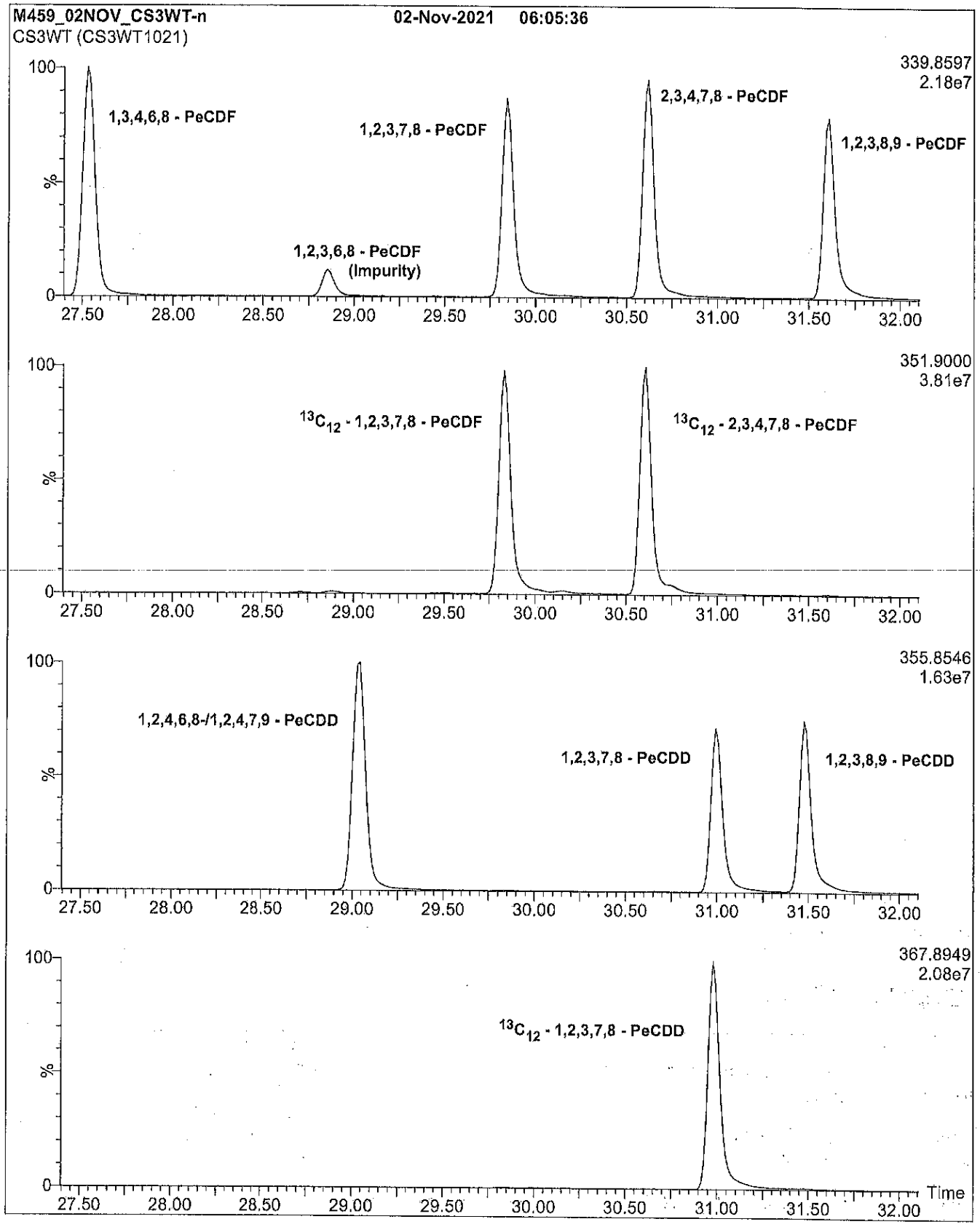


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

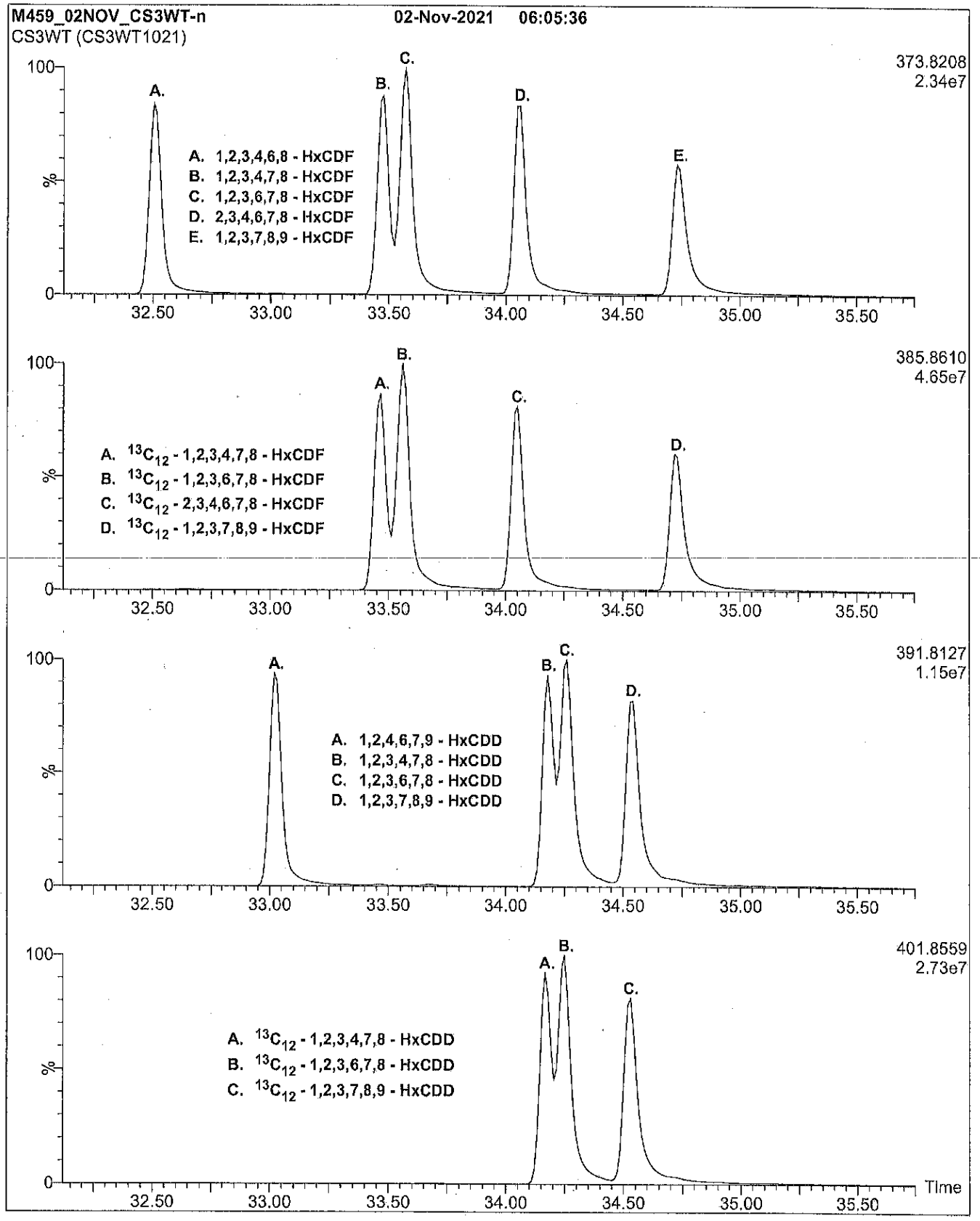


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**

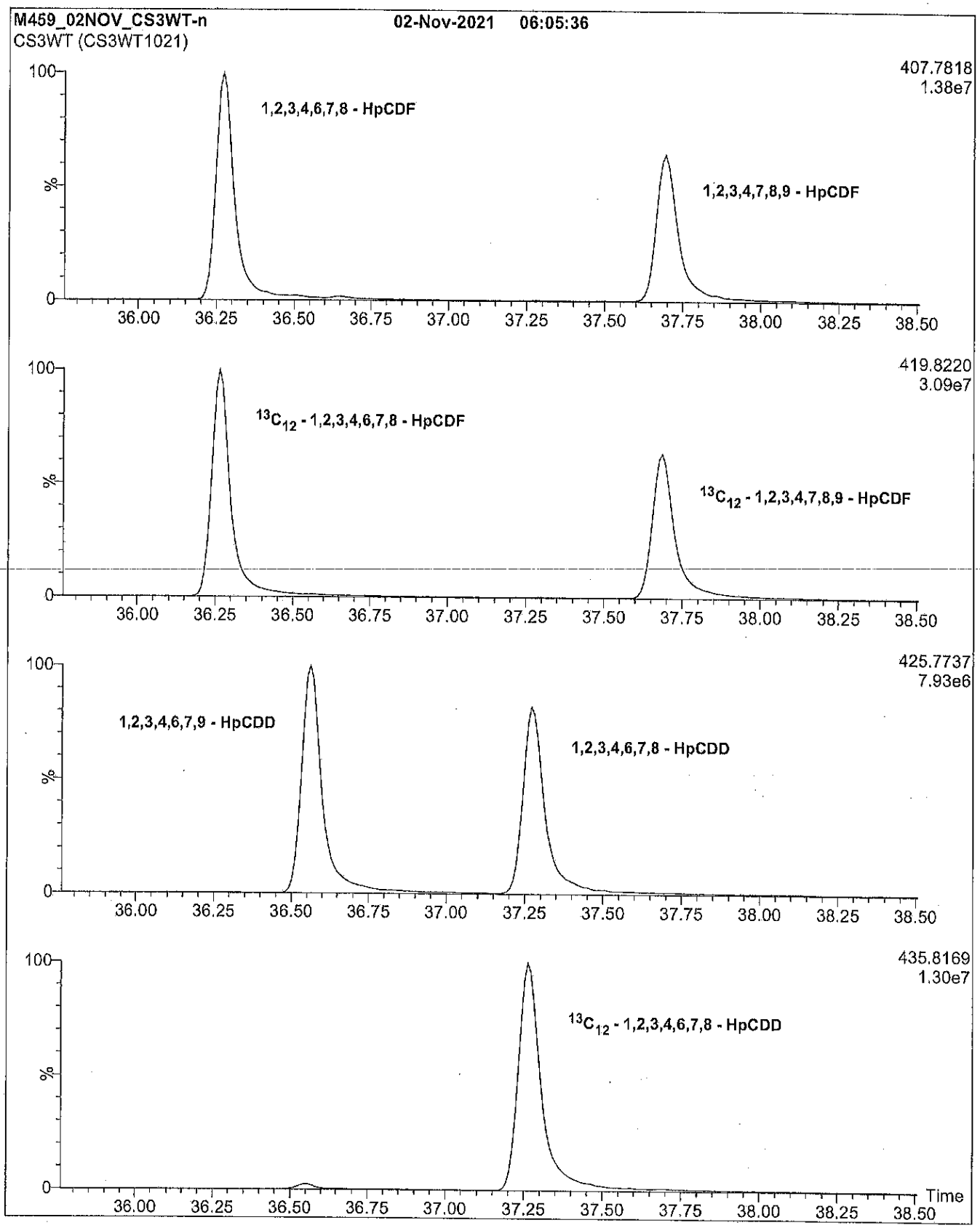
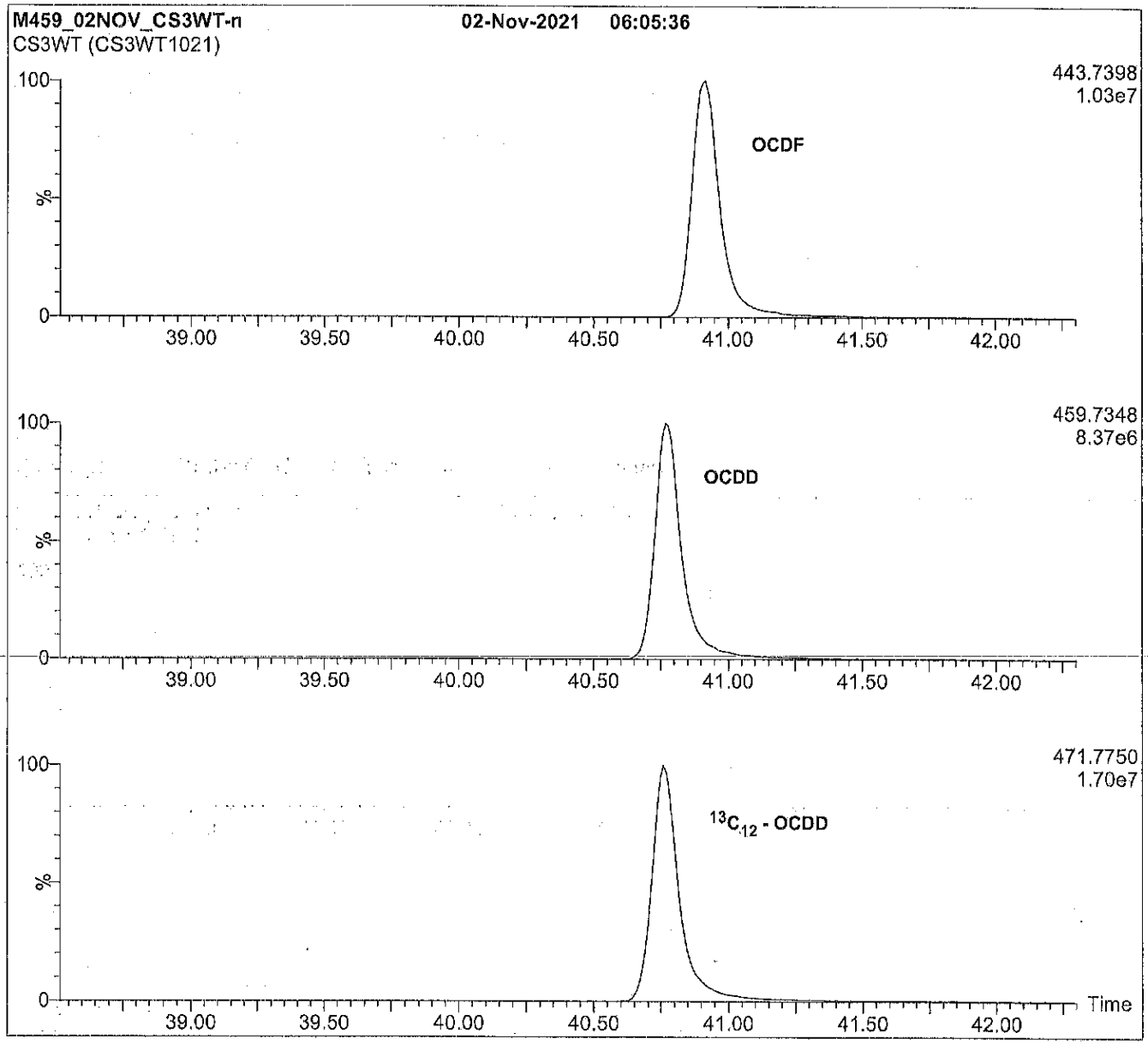


Figure 1: **CS3WT; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

EPA-1613LCS

U.S. EPA Method 1613
Labelled Compound Stock Solution

PRODUCT CODE:	EPA-1613LCS
LOT NUMBER:	13LCS1021
SOLVENT(S):	Nonane/Toluene
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

K 9985 JK Reed 10/27/22

DESCRIPTION:

EPA-1613LCS is a solution/mixture of mass-labelled ($^{13}C_{12}$) polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs). The components and their concentrations are given in Table A.

EPA-1613LCS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

The individual ^{13}C-labelled PCDDs and PCDFs all have chemical purities of >98% and isotopic purities of ≥99%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ on which it depends is:

$$u_c(y(x_1, x_2, \ldots, x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Table A: **EPA-1613LCS; Components and Concentrations (ng/mL, ± 5% in nonane/3.2% toluene)**

Compound	Acronym	CAS #	Concentration (ng/mL)
Mass-Labelled PCDDs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-2,3,7,8-TCDD	76523-40-5	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,7,8-PeCDD	109719-79-1	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,7,8-HxCDD	109719-80-4	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,6,7,8-HxCDD	109719-81-5	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDD	109719-83-7	100
Octachloro($^{13}C_{12}$)dibenzo-*p*-dioxin	$^{13}C_{12}$-OCDD	114423-97-1	200
Mass-Labelled PCDFs:			
2,3,7,8-Tetrachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,7,8-TCDF	89059-46-1	100
1,2,3,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8-PeCDF	109719-77-9	100
2,3,4,7,8-Pentachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,7,8-PeCDF	116843-02-8	100
1,2,3,4,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8-HxCDF	114423-98-2	100
1,2,3,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,6,7,8-HxCDF	116843-03-9	100
1,2,3,7,8,9-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,7,8,9-HxCDF	116843-04-0	100
2,3,4,6,7,8-Hexachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-2,3,4,6,7,8-HxCDF	116843-05-1	100
1,2,3,4,6,7,8-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,6,7,8-HpCDF	109719-84-8	100
1,2,3,4,7,8,9-Heptachloro($^{13}C_{12}$)dibenzofuran	$^{13}C_{12}$-1,2,3,4,7,8,9-HpCDF	109719-94-0	100

Certified By: _____ **Date:** 11/05/2021
(mm/dd/yyyy)
B.G. Chittim, General Manager

Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

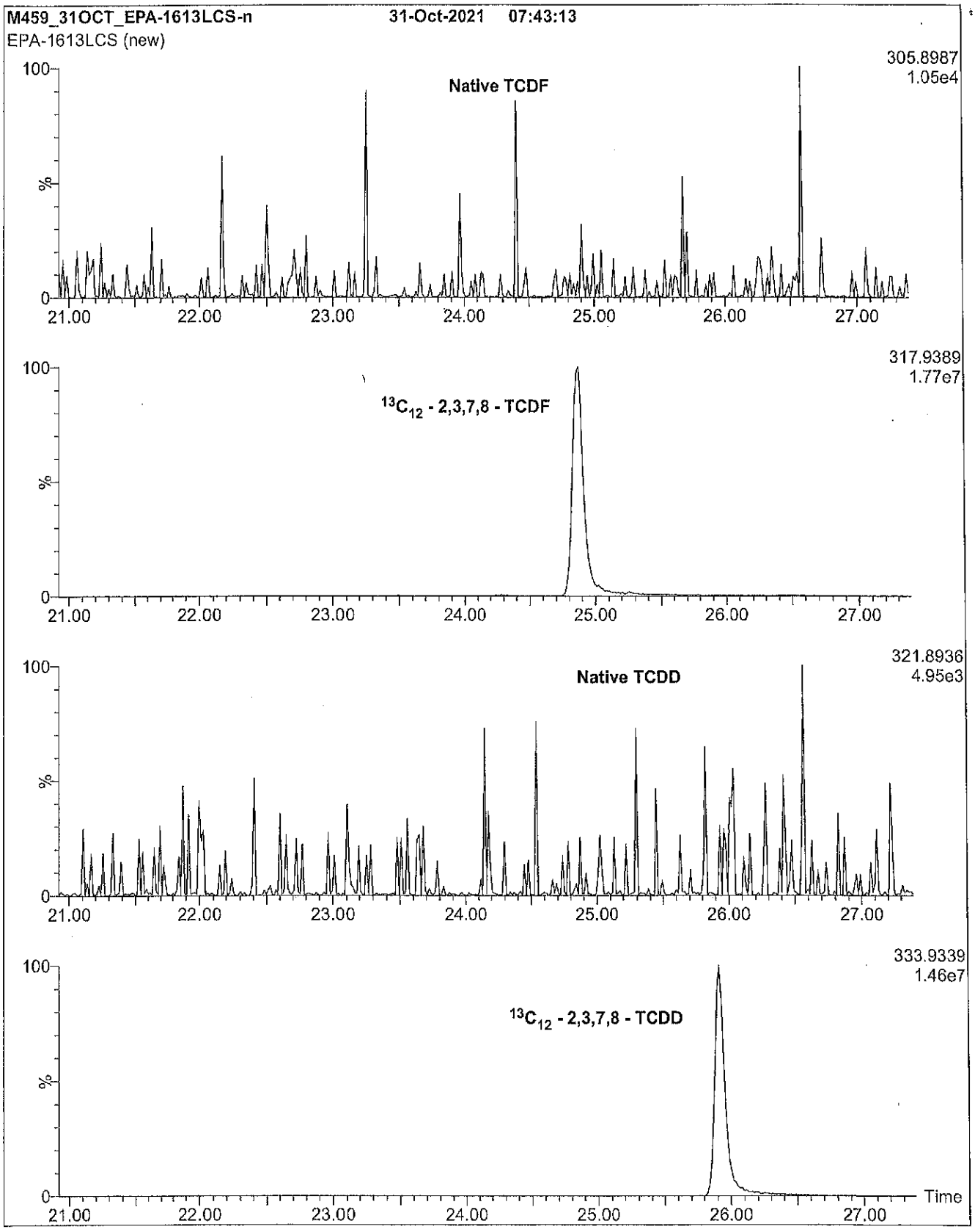


Figure 1: EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)

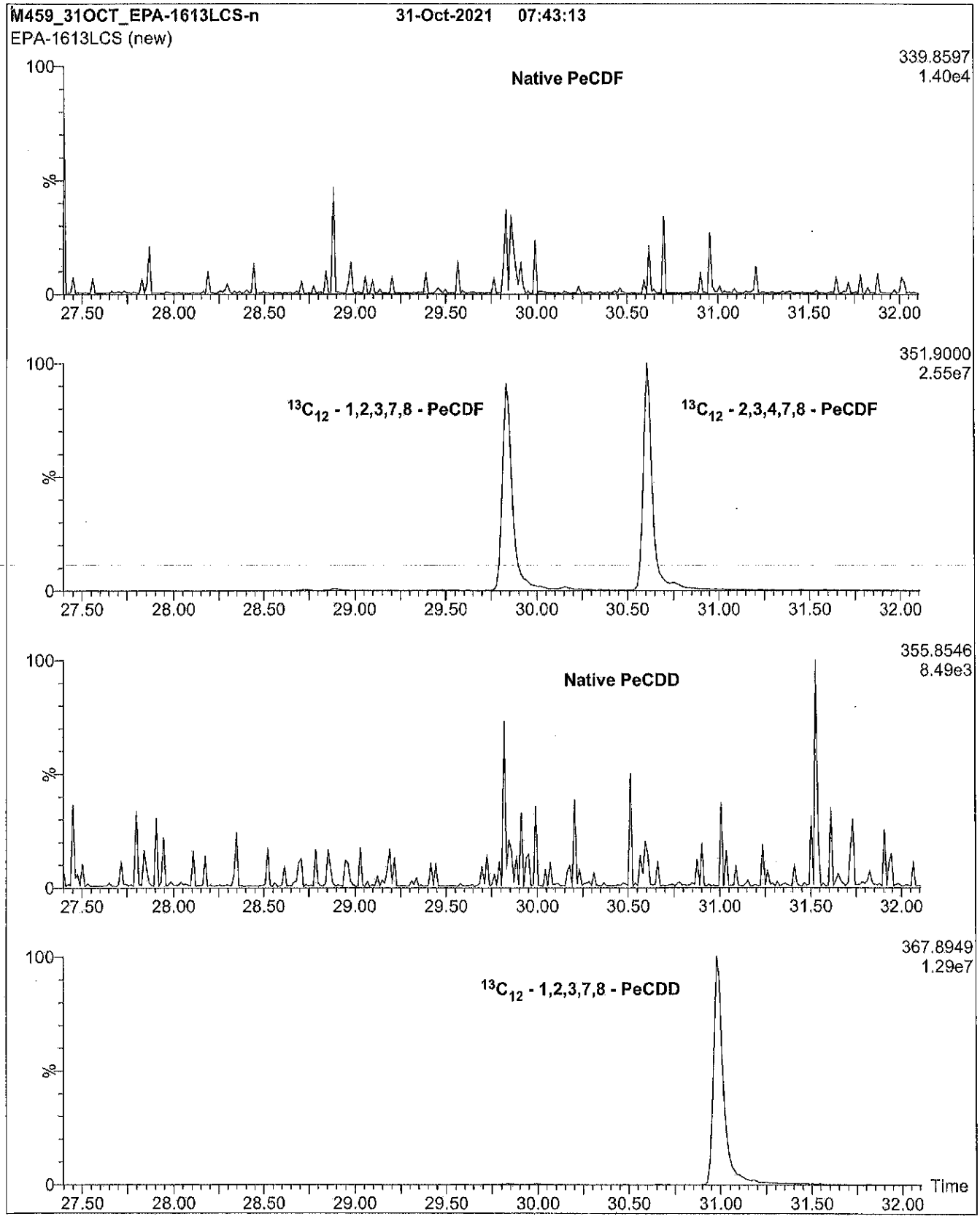


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

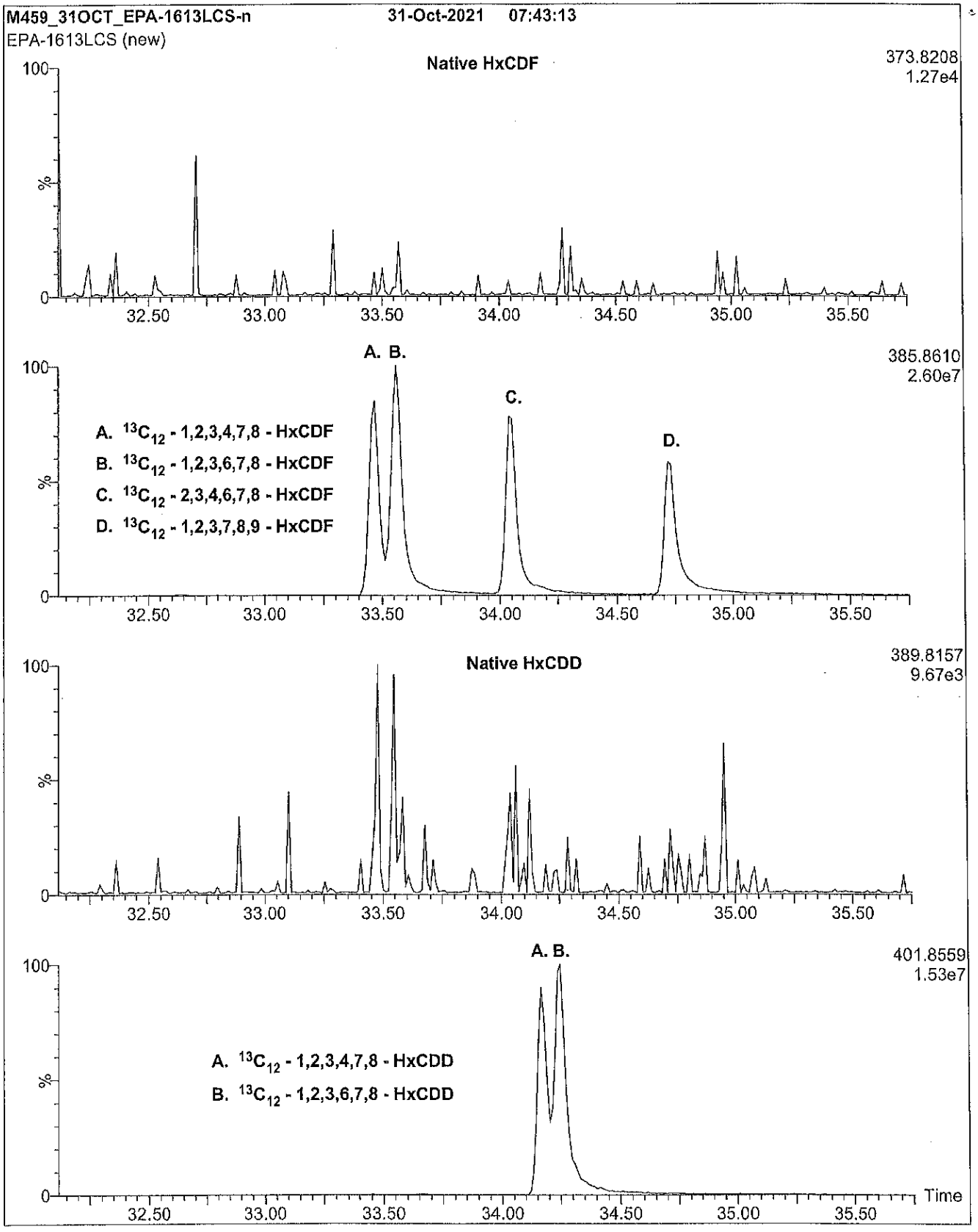


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**

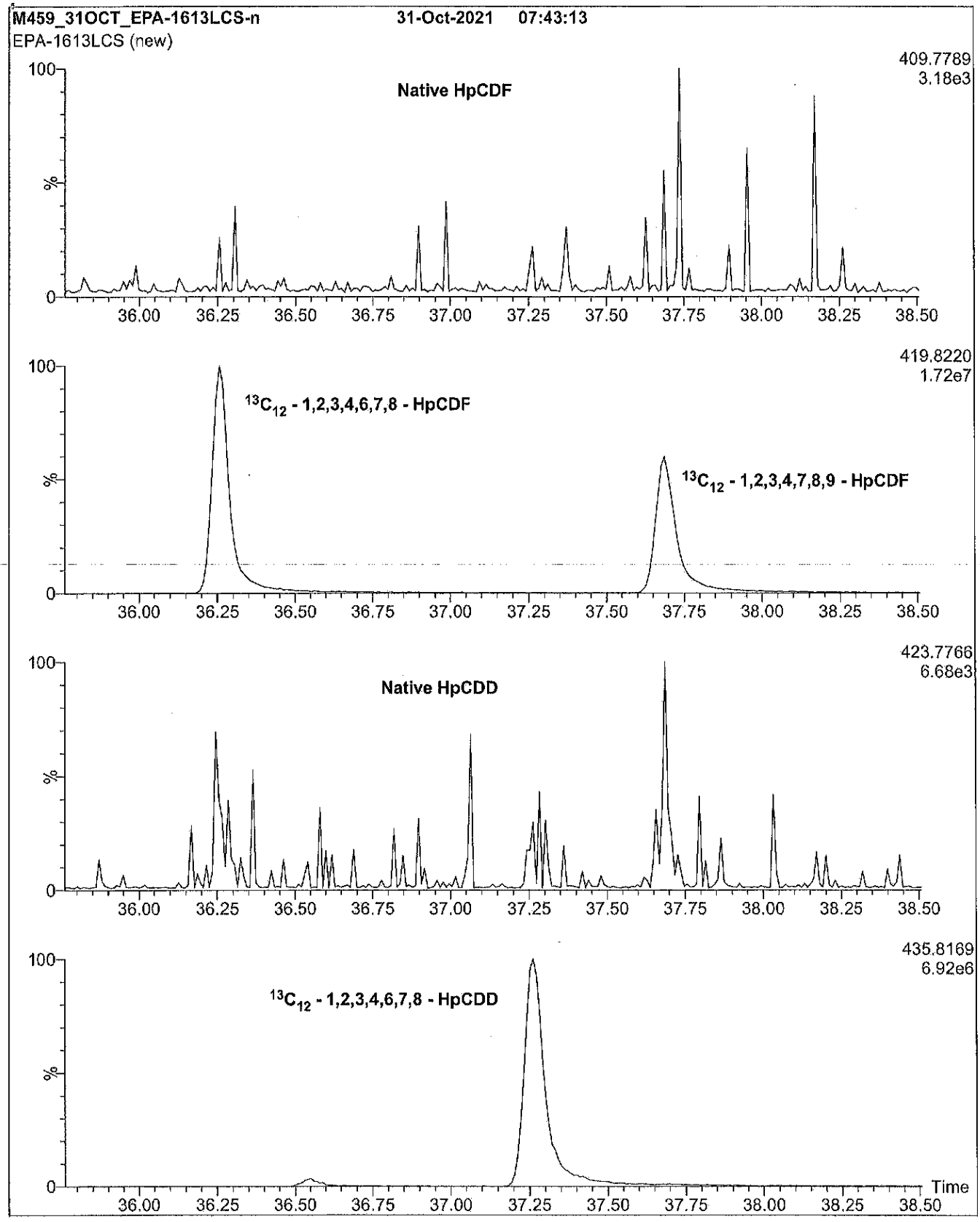
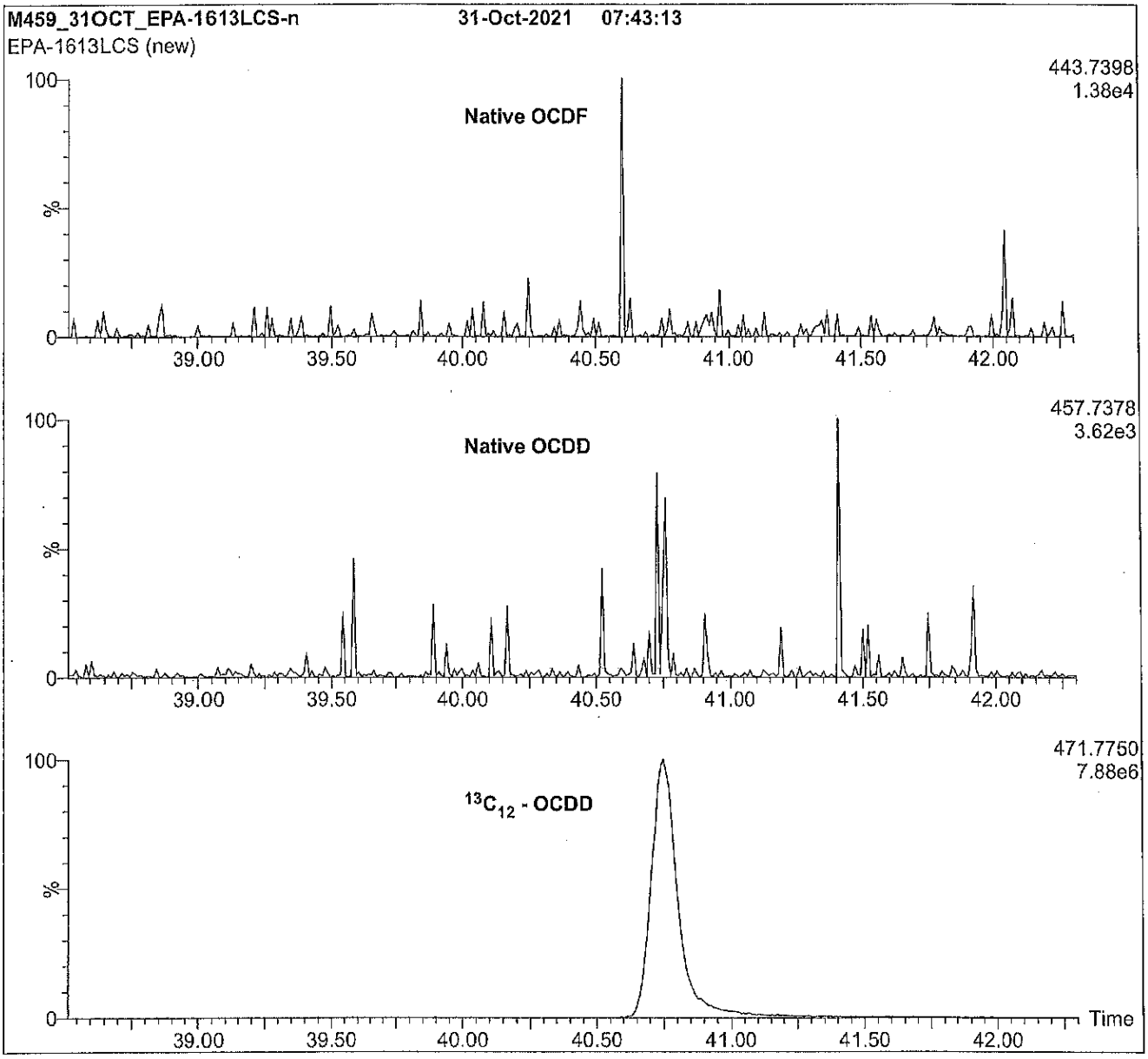


Figure 1: **EPA-1613LCS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

EPA-1613CSS

U.S. EPA Method 1613 Cleanup Standard Spiking Solution

PRODUCT CODE:	EPA-1613CSS
LOT NUMBER:	13CSS1021
SOLVENT(S):	Nonane
DATE PREPARED: (mm/dd/yyyy)	10/29/2021
LAST TESTED: (mm/dd/yyyy)	10/31/2021
EXPIRY DATE: (mm/dd/yyyy)	10/31/2028
RECOMMENDED STORAGE:	Store ampoule in a cool, dark place

K 9986 Recd. 10/27/22 JR

DESCRIPTION:

EPA-1613CSS contains 2,3,7,8-($^{37}Cl_4$)tetrachlorodibenzo-*p*-dioxin at the concentration given in Table A.

EPA-1613CSS was designed and prepared to be used according to U.S. EPA Method 1613, Revision B.

2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin has a chemical purity of >98% and an isotopic (^{37}Cl) purity of ≥95%.

DOCUMENTATION/ DATA ATTACHED:

Table A: Components and Concentrations of the Solution
Figure 1: HRGC/HRMS Data (SIR; 10,000 mass resolving power)

ADDITIONAL INFORMATION:

- See page 2 for further details.

Table A: **EPA-1613CSS; Components and Concentrations (ng/mL, ± 5% in nonane)**

Compound	Acronym	CAS #	Concentration (ng/mL)
2,3,7,8-($^{37}Cl_4$)Tetrachlorodibenzo-*p*-dioxin	$^{37}Cl_4$-2,3,7,8-TCDD	85508-50-5	40.0

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

Certified By: _____ **Date:** 11/05/2021 (mm/dd/yyyy)
B.G. Chittim, General Manager

Wellington Laboratories Inc., 345 Southgate Dr. Guelph ON N1G 3M5 CANADA
519-822-2436 • Fax: 519-822-2849 • info@well-labs.com

INTENDED USE:

The products prepared by Wellington Laboratories Inc. are for laboratory use only. This certified reference material (CRM) was designed to be used as a standard for the identification and/or quantification of the specific chemical compounds it contains.

HANDLING:

This product should only be used by qualified personnel familiar with its potential hazards and trained in the handling of hazardous chemicals. Due care should be exercised to prevent unnecessary human contact or ingestion. All procedures should be carried out in a well-functioning fume hood and suitable gloves, eye protection, and clothing should be worn at all times. Waste should be disposed of according to national and regional regulations. Safety Data Sheets (SDSs) are available upon request.

SYNTHESIS / CHARACTERIZATION:

Our products are synthesized using single-product unambiguous routes whenever possible. They are then characterized, and their structures and purities confirmed, using a combination of the most relevant techniques, such as NMR, GC/MS, LC/MS/MS, SFC/UV/MS/MS, x-ray crystallography, and melting point. Isotopic purities of mass-labelled compounds are also confirmed using HRGC/HRMS and/or LC/MS/MS.

HOMOGENEITY:

Prior to solution preparation, crystalline material is tested for homogeneity using a variety of techniques (as stated above) and its solubility in a given diluent is taken into consideration. Duplicate solutions of a new product are prepared from the same crystalline lot and, after the addition of an appropriate internal standard, they are compared by GC/MS, LC/MS/MS, and/or SFC/UV/MS/MS. The relative response factors of the analyte of interest in each solution are required to be <5% RSD. New solution lots of existing products, as well as mixtures and calibration solutions, are compared to older lots in a similar manner. This further confirms the homogeneity of the crystalline material as well as the stability and homogeneity of the solutions in the storage containers. In order to maintain the integrity of the assigned value(s), and associated uncertainty, the dilution or injection of a subsample of this product should be performed using calibrated measuring equipment.

UNCERTAINTY:

The maximum combined relative standard uncertainty of our reference standard solutions is calculated using the following equation:

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters x_1, x_2,...x_n on which it depends is:

$$u_c(y(x_1, x_2, ...x_n)) = \sqrt{\sum_{i=1}^{n} u(y, x_i)^2}$$

where x is expressed as a relative standard uncertainty of the individual parameter.

The individual uncertainties taken into account include those associated with weights (calibration of the balance) and volumes (calibration of the volumetric glassware). An expanded maximum combined percent relative uncertainty of ±5% (calculated with a coverage factor of 2 and a level of confidence of 95%) is stated on the Certificate of Analysis for all of our products.

TRACEABILITY:

All reference standard solutions are traceable to specific crystalline lots. The microbalances used for solution preparation are regularly calibrated by an external ISO/IEC 17025 accredited laboratory. In addition, their calibration is verified prior to each weighing using calibrated external weights traceable to an ISO/IEC 17025 accredited laboratory. All volumetric glassware used is calibrated, of Class A tolerance, and traceable to an ISO/IEC 17025 accredited laboratory. For certain products, traceability to international interlaboratory studies has also been established.

EXPIRY DATE / PERIOD OF VALIDITY:

Ongoing stability studies of this product have demonstrated stability in its composition and concentration, until the specified expiry date, in the unopened ampoule. Monitoring for any degradation or change in concentration of the listed analyte(s) is performed on a routine basis.

LIMITED WARRANTY:

At the time of shipment, all products are warranted to be free of defects in material and workmanship and to conform to the stated technical and purity specifications.

QUALITY MANAGEMENT:

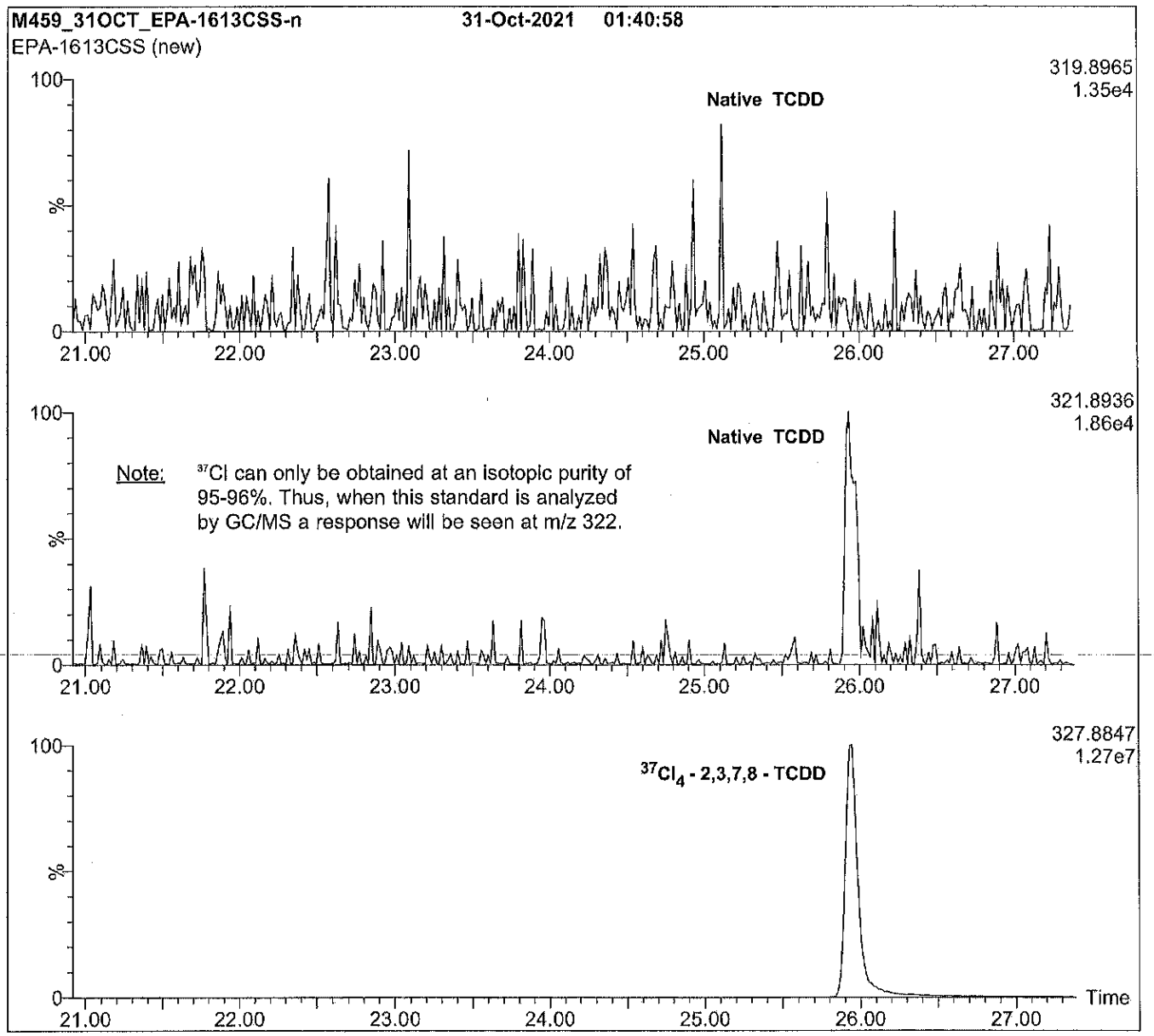
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A1226), and ISO 17034 by ANSI National Accreditation Board (ANAB; AR-1523).

CALA Testing Accreditation No. A1226

ANAB ANSI National Accreditation Board ACCREDITED ISO 17034 REFERENCE MATERIAL PRODUCER

For additional information or assistance concerning this or any other products from Wellington Laboratories Inc., please visit our website at www.well-labs.com or contact us directly at info@well-labs.com

Figure 1: **EPA-1613CSS; HRGC/HRMS Data (60 m DB-5 Column)**



Conditions for Figure 1:

Agilent 6890N HRGC
Autospec Ultima HRMS

Chromatographic Conditions:

Column:	60 m DB-5 (0.25 mm id, 0.25 µm film thickness) Agilent J&W		
Flow:	Constant at 1.4 mL/min	Oven:	150°C (1 min)
Injector:	280°C (Splitless Injection)		12°C/min to 200°C
Ionization:	EI+		3°C/min to 235°C
Detector:	280°C		235°C (8 min)
	SIR at 10,000 mass resolving power		8°C/min to 310°C
			310°C (8 min)

Recipient Copy

CHAIN-OF-CUSTODY RECORD

COC No. 15600

Order Number: CB015015 Date Shipped: 1/31/2023 AirBill No(s): 633163298570

From: QATS LABORATORY
2700 CHANDLER AVENUE, BLDG. B
LAS VEGAS, NV 89120
PHONE: 1-702-895-8712

To: SUE DUNNIHOO
ANALYTICAL RESOURCES INC.
4611 S. 134TH PLACE SUITE 100
TUKWILA WA 98168
250-695-6207

Sample ID	Qty	Description/Remarks	→ Catalogue Number
PSRM0172 - L441373	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0173 - L441374	1	PUGET SOUND SEDIMENT RM	PS-SRM
PSRM0174 - ~~L441374~~ JS 2/1/23 L441375	1	PUGET SOUND SEDIMENT RM	PS-SRM

01/31/2023

PUGET SOUND SRM FOR THE DUWAMISH AOC5 PROJECT

Please use the enclosed Sample Preparation Instructions. If catalogue number(s) are listed at the top of the Sample Preparation Instructions use the Sample Preparation Instructions with catalogue number(s) matching the catalogue number(s) of each of the samples listed above.

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	01/31/2023 (1400)	Jacob Shafer	02/06/23 1415
Custody Seal(s): Present/Absent	Remarks:		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Report No. 00, 9/11/2014 *SMP Version 3.3*

Analytical Resources, LLC
Analytical Chemists and Consultants

Analytical Standard Record

Standard ID: L002084

Printed: 3/2/2023 8:59:18AM

Description:	Dioxin ISC Mix	Expires:	24-Feb-2024
Standard Type:	Other	Prepared:	24-Feb-2023
Solvent:	Nonane	Prepared By:	Peter Kepler
Final Volume (mls):	1	Department:	HRGCMS
Vials:	1	Last Edit:	24-Feb-2023 11:19 by PK
Vendor:	NA	Lot #:	1234
Vendor Catalog #:			

Comments

Stock: H9902: 2378-TCDF, 3467-TCDF, 2348-TCDF, 1278-TCDD, 2378-TCDD. each @ 1000 ng/mL

10 ul to 1 mL FV in Nonane. Final Conc = 10 ng/mL. Analytes and units not available in Element.

Analyte	CAS Number	Concentration	Units
2,3,7,8-TCDF	51207-31-9	10	ug/mL
2,3,7,8-TCDD	1746-01-6	10	ug/mL

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1010

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-047
% Solids:	47.59	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:31
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.229 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.187	1	0.00963	0.0459	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1005

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-054
% Solids:	46.33	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:47
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.261 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.225	1	0.00868	0.0414	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1006

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-055
% Solids:	48.01	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:49
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.236 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.255	1	0.00927	0.0441	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1003

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-056
% Solids:	45.91	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:52
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.263 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.200	1	0.00870	0.0414	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1004

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-057
% Solids:	56.10	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:54
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.26 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.234	1	0.00720	0.0343	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1204

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-058
% Solids:	47.04	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:56
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.249 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.170	1	0.00896	0.0427	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1238

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-059
% Solids:	57.71	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 13:59
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.278 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.116	1	0.00654	0.0312	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1013

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-060
% Solids:	47.57	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 14:01
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.258 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.280	1	0.00855	0.0407	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 7471B

Total Metals

LDW23-SS1014

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	04/24/23 16:45	File ID:	SMM 04-25-23-061
% Solids:	63.46	Preparation:	SMM EPA 7471B	Analyzed:	04/25/23 14:04
Batch:	BLD0580	Sequence:	SLD0354	Initial/Final:	0.262 g Wet / 50 mL
Instrument:	HYDRA			Calibration:	GD00060

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	0.0905	1	0.00631	0.0301	

PREPARATION BATCH SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLD0580 Batch Matrix: Solid
Preparation: SMM EPA 7471B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	SMM 04-25-23-047	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1005	23A0467-02	SMM 04-25-23-054	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1006	23A0467-03	SMM 04-25-23-055	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1003	23A0467-04	SMM 04-25-23-056	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1004	23A0467-05	SMM 04-25-23-057	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1204	23A0467-06	SMM 04-25-23-058	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1238	23A0467-07	SMM 04-25-23-059	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1013	23A0467-08	SMM 04-25-23-060	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
LDW23-SS1014	23A0467-09	SMM 04-25-23-061	04/24/23 16:45	Store frozen; FROZEN VOLUME USED
Blank	BLD0580-BLK1	SMM 04-25-23-045	04/24/23 16:45	
LCS	BLD0580-BS1	SMM 04-25-23-046	04/24/23 16:45	
LDW23-SS1010	BLD0580-DUP1	SMM 04-25-23-048	04/24/23 16:45	
LDW23-SS1010	BLD0580-MS1	SMM 04-25-23-049	04/24/23 16:45	
LDW23-SS1010	BLD0580-MSD1	SMM 04-25-23-050	04/24/23 16:45	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM | Balance ID: BAL10 | Matrix: SOIL
Analyst: VAR | Block ID: 9 | Date: 04/24/23
Bath Temp: 95 | Start Time: 1543 | End Time: 1645

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
23A328-08	D		0.269	50	1		
23A467-01	A		0.229				
-02			0.261				
-03			0.256				
-04			0.263				
-05			0.260				
-06			0.249				
-07			0.278				
-08			0.258				
-09			0.262				
23C108-02	D		0.240				
-06			0.270				
-07			0.252				
-08			0.284				
-09			0.275				
23D37-01			0.274				
-03			0.264				
23D63-01	A		0.280				
-03			0.200				
BLD580-blk	—		—				23A467-07
-bs	—		—				
-dup	—		0.228				
-MS	—		0.228				
-MSD	—		0.230				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L2678 | H_2SO_4: L923 | HCl: —
5% $K_2S_2O_8$: L3350 | 5% $KMnO_4$: K11727 | Digest Tube Lot: 22-10117

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: SMM | Balance ID: BAL10 | Matrix: SOIL
Analyst: VAR | Block ID: 9 | Date: 04/24/23
Bath Temp: 95 | Start Time: 1543 | End Time: 1645

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
23A328-08	D		0.269	50	1		
23A467-01	A		0.229				
-02			0.261				
-03			0.256				
-04			0.263				
-05			0.260				
-06			0.249				
-07			0.278				
-08			0.258				
-09			0.262				
23C108-02	D		0.240				
-06			0.220				
-07			0.252				
-08			0.284				
-09			0.275				
23D37-01			0.274				
-03			0.264				
23D63-01	A		0.280				
-03			0.200				
BLD580-blk	—		—				23A467-07
-LCS	—		—				
-dup	—		0.228				
-MS	—		0.228				
-MSD	—		0.230				
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L2618 | H_2SO_4: L923 | HCl: —
5% $K_2S_2O_8$: L3350 | 5% $KMnO_4$: K11727 | Digest Tube Lot: 22-10117

Form I

METHOD BLANK DATA SHEET

EPA 7471B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0467

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

Batch: BLD0580 | Laboratory ID: BLD0580-BLK1 | Prepared: 04/24/23 16:45

Matrix: Solid | Preparation: SMM EPA 7471B | Analyzed: 04/25/23 13:26

Sequence: SLD0354 | Calibration: GD00060 | Instrument: HYDRA

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7439-97-6	Mercury	ND	1	0.00525	0.0250	U

LCS / LCS DUPLICATE RECOVERY

EPA 7471B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/25/23 13:29
Batch:	BLD0580	Laboratory ID:	BLD0580-BS1
Preparation:	SMM EPA 7471B	Sequence Name:	LCS
Initial/Final:	0.2 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Mercury	0.500	0.460		92.0	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 7471B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0580-DUP1
Batch: BLD0580
Lab Source ID: 23A0467-01
Preparation: SMM EPA 7471B
Initial/Final: 0.228 g / 50 mL
Source Sample Name: LDW23-SS1010
% Solids: 47.59

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Mercury	20	0.187	0.185	0.847	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/25/23 13:35
Batch:	BLD0580	Laboratory ID:	BLD0580-MS1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike
Initial/Final:	0.228 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Mercury	0.461	0.187		0.696		110	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY
EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	04/25/23 13:38
Batch:	BLD0580	Laboratory ID:	BLD0580-MSD1
Preparation:	SMM EPA 7471B	Sequence Name:	Matrix Spike Dup
Initial/Final:	0.23 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Mercury	0.457	0.733		120	5.29	20	75 - 125

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00060	Instrument:	HYDRA
Calibration Date:	04/25/2023 14:43		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Mercury	0	0	0.0001	6660000	0.0005	6334000	0.001	6288000	0.002	6022000	0.005	5852600

INITIAL CALIBRATION DATA

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GD00060	Instrument:	HYDRA
Calibration Date:	04/25/2023 14:43		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Mercury	5192767	49.3	0.9998		0.99	

Method: ARI 5 ppb (NO 0.05) Operator: Admin

SMM 04-25-23 SLD0354 GD0006D

Date of Analysis: 25 Apr 2023 11:07:49

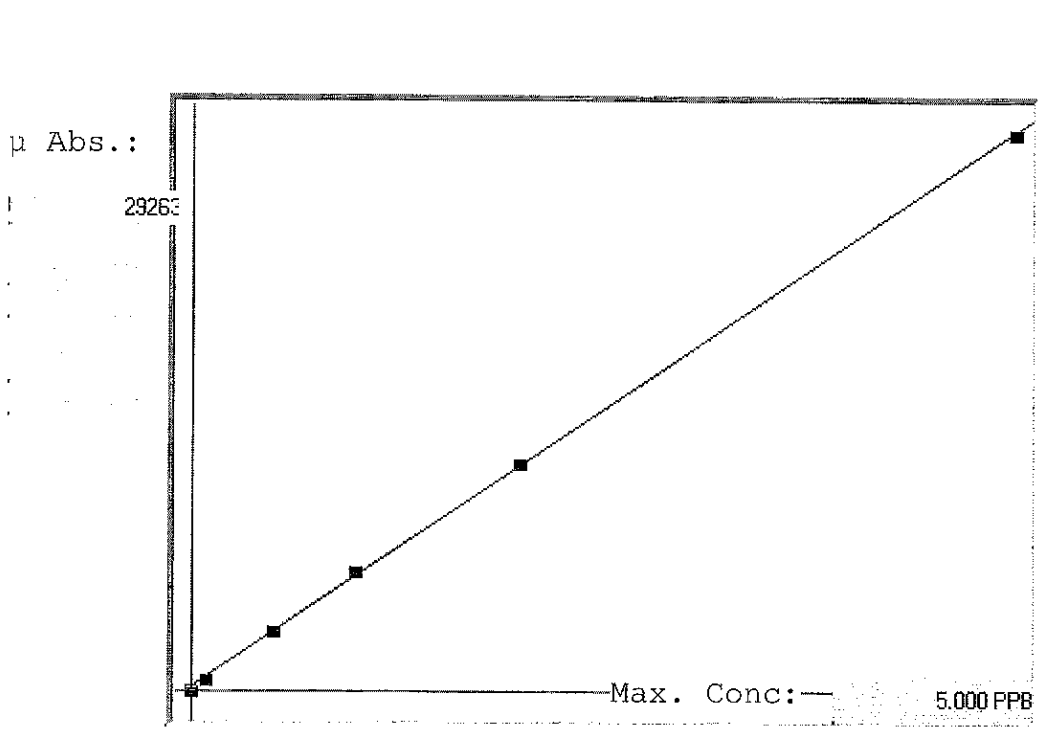
Sample ID	Mean	Units		Date	Method
SEQ-CAL1	37	PPB		25 Apr 2023 11:13:41	ARI 5 ppb (NO 0.05)
SEQ-CAL2	666	PPB		25 Apr 2023 11:16:02	ARI 5 ppb (NO 0.05)
SEQ-CAL3	3167	PPB		25 Apr 2023 11:18:23	ARI 5 ppb (NO 0.05)
SEQ-CAL4	6288	PPB		25 Apr 2023 11:20:44	ARI 5 ppb (NO 0.05)
SEQ-CAL5	12044	PPB		25 Apr 2023 11:23:05	ARI 5 ppb (NO 0.05)
SEQ-CAL6	29263	PPB		25 Apr 2023 11:25:24	ARI 5 ppb (NO 0.05)
SEQ-ICV	108.5% 4.3381	PPB	✓	25 Apr 2023 11:30:52	ARI 5 ppb (NO 0.05)
SEQ-ICB	-0.0393	PPB	✓	25 Apr 2023 11:33:10	ARI 5 ppb (NO 0.05)
SEQ-CRL	73.3% 0.0733	PPB	✓	25 Apr 2023 11:35:31	ARI 5 ppb (NO 0.05)
SEQ-CCV	109.0% 4.3617	PPB	✓	25 Apr 2023 11:37:53	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0385	PPB	✓	25 Apr 2023 11:40:12	ARI 5 ppb (NO 0.05)
BLD0505-BLK1	-0.0328	PPB		25 Apr 2023 11:42:33	ARI 5 ppb (NO 0.05)
BLD0505-BS1	1.8258	PPB	✓	25 Apr 2023 11:44:52	ARI 5 ppb (NO 0.05)
SEQ-CCV	106.8% 4.2726	PPB	✓	25 Apr 2023 11:47:11	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0384	PPB	✓	25 Apr 2023 11:49:30	ARI 5 ppb (NO 0.05)
SEQ-CCV	105.7% 4.2263	PPB	✓	25 Apr 2023 12:19:10	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0373	PPB	✓	25 Apr 2023 12:21:29	ARI 5 ppb (NO 0.05)
23A0455-01	0.4884	PPB		25 Apr 2023 12:23:50	ARI 5 ppb (NO 0.05)
BLD0505-DUP1	0.4335	PPB		25 Apr 2023 12:26:08	ARI 5 ppb (NO 0.05)
BLD0505-MS1	1.4211	PPB	✓	25 Apr 2023 12:28:28	ARI 5 ppb (NO 0.05)
BLD0505-MSD1	1.6078	PPB	✓	25 Apr 2023 12:30:46	ARI 5 ppb (NO 0.05)
23A0455-02	0.4293	PPB		25 Apr 2023 12:33:06	ARI 5 ppb (NO 0.05)
23A0455-03	0.5362	PPB		25 Apr 2023 12:35:24	ARI 5 ppb (NO 0.05)
23A0455-04	0.4379	PPB		25 Apr 2023 12:37:44	ARI 5 ppb (NO 0.05)
23A0455-05	0.0080	PPB		25 Apr 2023 12:40:03	ARI 5 ppb (NO 0.05)
23A0455-06	0.6722	PPB		25 Apr 2023 12:42:23	ARI 5 ppb (NO 0.05)
23A0455-07	0.4136	PPB		25 Apr 2023 12:44:43	ARI 5 ppb (NO 0.05)
SEQ-CCV	105.8% 4.2308	PPB	✓	25 Apr 2023 12:47:04	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0370	PPB	✓	25 Apr 2023 12:49:22	ARI 5 ppb (NO 0.05)
23A0455-08	0.3391	PPB		25 Apr 2023 12:51:43	ARI 5 ppb (NO 0.05)
23A0455-09	0.3223	PPB		25 Apr 2023 12:54:04	ARI 5 ppb (NO 0.05)
23A0455-10	0.5955	PPB		25 Apr 2023 12:56:25	ARI 5 ppb (NO 0.05)
23A0455-11	0.3914	PPB		25 Apr 2023 12:58:44	ARI 5 ppb (NO 0.05)
23A0455-12	0.4066	PPB		25 Apr 2023 13:01:03	ARI 5 ppb (NO 0.05)
23A0455-13	0.4000	PPB		25 Apr 2023 13:03:22	ARI 5 ppb (NO 0.05)
23A0455-14	0.3413	PPB		25 Apr 2023 13:05:41	ARI 5 ppb (NO 0.05)
23A0455-15	0.1962	PPB		25 Apr 2023 13:08:00	ARI 5 ppb (NO 0.05)
23A0455-16	0.4328	PPB		25 Apr 2023 13:10:19	ARI 5 ppb (NO 0.05)
23A0455-17	0.3597	PPB		25 Apr 2023 13:12:38	ARI 5 ppb (NO 0.05)
SEQ-CCV	103.7% 4.1499	PPB	✓	25 Apr 2023 13:14:59	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0371	PPB	✓	25 Apr 2023 13:17:17	ARI 5 ppb (NO 0.05)
23A0455-18	0.0536	PPB		25 Apr 2023 13:19:38	ARI 5 ppb (NO 0.05)
23D0008-01	0.3094	PPB		25 Apr 2023 13:21:59	ARI 5 ppb (NO 0.05)
23D0008-03	0.4447	PPB		25 Apr 2023 13:24:19	ARI 5 ppb (NO 0.05)
BLD0580-BLK1	-0.0315	PPB		25 Apr 2023 13:26:40	ARI 5 ppb (NO 0.05)
BLD0580-BS1	1.8403	PPB	✓	25 Apr 2023 13:29:01	ARI 5 ppb (NO 0.05)
23A0467-01	0.4074	PPB		25 Apr 2023 13:31:20	ARI 5 ppb (NO 0.05)
BLD0580-DUP1	0.4022	PPB		25 Apr 2023 13:33:39	ARI 5 ppb (NO 0.05)
BLD0580-MS1	1.5094	PPB	✓	25 Apr 2023 13:35:59	ARI 5 ppb (NO 0.05)
BLD0580-MSD1	1.6054	PPB	✓	25 Apr 2023 13:38:19	ARI 5 ppb (NO 0.05)
23A0328-08	0.4022	PPB		25 Apr 2023 13:40:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.8% 4.0729	PPB	✓	25 Apr 2023 13:42:58	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0373	PPB	✓	25 Apr 2023 13:45:16	ARI 5 ppb (NO 0.05)
23A0467-02	0.5447	PPB		25 Apr 2023 13:47:38	ARI 5 ppb (NO 0.05)
23A0467-03	0.5788	PPB		25 Apr 2023 13:49:58	ARI 5 ppb (NO 0.05)
23A0467-04	0.4825	PPB		25 Apr 2023 13:52:17	ARI 5 ppb (NO 0.05)
23A0467-05	0.6829	PPB		25 Apr 2023 13:54:37	ARI 5 ppb (NO 0.05)
23A0467-06	0.3974	PPB		25 Apr 2023 13:56:58	ARI 5 ppb (NO 0.05)
23A0467-07	0.3710	PPB		25 Apr 2023 13:59:19	ARI 5 ppb (NO 0.05)
23A0467-08	0.6868	PPB		25 Apr 2023 14:01:40	ARI 5 ppb (NO 0.05)

SMM 04-25-23

Method: ARI 5 ppb (NO 0.05) Operator: Admin Date of Analysis: 25 Apr 2023 11:07:49

Sample ID	Mean	Units		Date	Method
23A0467-09	0.3009	PPB		25 Apr 2023 14:04:00	ARI 5 ppb (NO 0.05)
23C0108-02	0.6421	PPB		25 Apr 2023 14:06:19	ARI 5 ppb (NO 0.05)
23C0108-06	0.6187	PPB		25 Apr 2023 14:08:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	101.7% 4.0677	PPB	✓	25 Apr 2023 14:10:59	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0395	PPB	✓	25 Apr 2023 14:13:17	ARI 5 ppb (NO 0.05)
23C0108-07	0.4551	PPB		25 Apr 2023 14:15:40	ARI 5 ppb (NO 0.05)
23C0108-08	0.4974	PPB		25 Apr 2023 14:17:59	ARI 5 ppb (NO 0.05)
23C0108-09	0.4383	PPB		25 Apr 2023 14:20:19	ARI 5 ppb (NO 0.05)
23D0037-01	0.3366	PPB		25 Apr 2023 14:22:38	ARI 5 ppb (NO 0.05)
23D0037-03	0.3606	PPB		25 Apr 2023 14:24:59	ARI 5 ppb (NO 0.05)
23D0063-01	0.4057	PPB		25 Apr 2023 14:27:19	ARI 5 ppb (NO 0.05)
23D0063-03	0.2557	PPB		25 Apr 2023 14:29:39	ARI 5 ppb (NO 0.05)
SEQ-CCV	100.6% 4.0238	PPB	✓	25 Apr 2023 14:32:00	ARI 5 ppb (NO 0.05)
SEQ-CCB	-0.0373	PPB	✓	25 Apr 2023 14:34:18	ARI 5 ppb (NO 0.05)

ARI 5 ppb (NO 0.05)



Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
SEQ-CAL1 - Blank	0.000	-0.031	-0.031	37	0.000	37	37	37		
SEQ-CAL2 - 0.1 PPB	0.100	0.077	-0.023	666	0.7 %	660	667	671		
SEQ-CAL3 - 0.5 PPB	0.500	0.506	0.006	3167	0.3 %	3168	3177	3157		
SEQ-CAL4 - 1.0 PPB	1.000	1.041	0.041	6287	0.5 %	6322	6251	6290		
SEQ-CAL5 - 2.0 PPB	2.000	2.028	0.028	12044	0.5 %	12094	11954	12085		
SEQ-CAL6 - 5.0 PPB	5.000	4.980	-0.020	29263	0.6 %	29483	29094	29213		

Mercury Analysis Log

Analyst: ML **Date:** 04/25/23

Instrument: HYDRA **Page:** 1 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
SEQ -CAL1	SMM	1X		
-CAL2				
-CAL3				
-CAL4				
-CAL5				
-CAL6				
-ICV			√4.33	
-ICB			√0.039	
-CRL			√0.073	
-CCV			√4.36	
-CCB			√-0.038	
BLD050S -BIK1				
-BS1			√1.825	91.2 %R
SEQ -CCV			√4.27	
-CCB			√-0.038	
-CCV			√4.22	
-CCB			√-0.037	
23A0455 -01				
BLD050S -DUP1				ND RPD
-MS1			√1.421	93.2 %R
-MSD1			√1.607	111.9 %R
23A0455 -02				
-03				
-04				
-05				
-06				
-07				
SEQ -CCV			√4.23	
-CCB			√-0.037	
23A0455 -08				

Chemical/Reagent ID:

10% $SnCl_2$: L4336 **14% NH_2OH/NaCl:** L4337

Standard ID:

Standard: L4459-L4464 **ICV/CCV:** L4456

Mercury Analysis Log

Analyst: — Date: —

Instrument: — Page: 2 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
-09				
-10				
-11				
-12				
-13				
-14				
-15				
-16				
-17				
SEQ -CCV			✓ 4.14	
↓ -CCB			✓ -0.037	
23A0455 -18				
23D0008 -01				
↓ -03				
BLD0580 -BIK1				
↓ -BS1			✓ 1.84	92 1.R
23A0467 -01				
BLD0580 -DUP1				NO RPD
-MS1			✓ 1.509	110.2 1.R
↓ -MSD1			✓ 1.605	119.8 1.R
23A0328 -08				
SEQ -CCV			✓ 4.07	
↓ -CCB			✓ -0.037	
23A0467 -02				
-03				
-04				
-05				
-06				
-07				
-08				

Chemical/Reagent ID:

10% $SnCl_2$: — 14% NH_2OH/NaCl: —

Standard ID:

Standard: — ICV/CCV: —

Mercury Analysis Log

Analyst: —
Instrument: —

Date: —
Page: 3 of 3

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
↓ -09				
23C0108 -02				
↓ -06				
SEQ -CCV			✓4.06	
↓ -CCB			✓-0.039	
23C0108 -07				
-08				
↓ -09				
23D0037 -01				
↓ -03				
23D0063 -01				
↓ -03				
SEQ -CCV			✓4.02	
↓ -CCB	↓	↓		

ML 04/25/23

Chemical/Reagent ID:
10% $SnCl_2$: —
14% $NH_2OH/NaCl$: —

Standard ID:
Standard: —
ICV/CCV: —

5026F

Revision 4
1/26/01

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GD00060
Control Limt: +/- 20.00%
Sequence: SLD0354

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLD0354-ICV1	Mercury	0.0040000	0.00434	108	mg/L	EPA 7471B
SLD0354-CCV1	Mercury	0.0040000	0.00436	109	mg/L	EPA 7471B
SLD0354-CCV2	Mercury	0.0040000	0.00427	107	mg/L	EPA 7471B
SLD0354-CCV3	Mercury	0.0040000	0.00423	106	mg/L	EPA 7471B
SLD0354-CCV4	Mercury	0.0040000	0.00423	106	mg/L	EPA 7471B
SLD0354-CCV5	Mercury	0.0040000	0.00415	104	mg/L	EPA 7471B
SLD0354-CCV6	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLD0354-CCV7	Mercury	0.0040000	0.00407	102	mg/L	EPA 7471B
SLD0354-CCV8	Mercury	0.0040000	0.00402	101	mg/L	EPA 7471B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 7471B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: HYDRA
Sequence: SLD0354

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GD00060
Date Analyzed: 04/25/23 11:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLD0354-ICB1	Mercury	-0.000039	0.000021	0.000100	mg/L	
SLD0354-CCB1	Mercury	-0.000039	0.000021	0.000100	mg/L	
SLD0354-CCB2	Mercury	-0.000038	0.000021	0.000100	mg/L	
SLD0354-CCB3	Mercury	-0.000037	0.000021	0.000100	mg/L	
SLD0354-CCB4	Mercury	-0.000037	0.000021	0.000100	mg/L	
SLD0354-CCB5	Mercury	-0.000037	0.000021	0.000100	mg/L	
SLD0354-CCB6	Mercury	-0.000037	0.000021	0.000100	mg/L	
SLD0354-CCB7	Mercury	-0.000040	0.000021	0.000100	mg/L	
SLD0354-CCB8	Mercury	-0.000037	0.000021	0.000100	mg/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLD0354
Instrument: HYDRA
Calibration: GD00060

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SLD0354-CAL1	SMM 04-25-23-001	NA	04/25/23 11:13
Cal Standard	SLD0354-CAL2	SMM 04-25-23-002	NA	04/25/23 11:16
Cal Standard	SLD0354-CAL3	SMM 04-25-23-003	NA	04/25/23 11:18
Cal Standard	SLD0354-CAL4	SMM 04-25-23-004	NA	04/25/23 11:20
Cal Standard	SLD0354-CAL5	SMM 04-25-23-005	NA	04/25/23 11:23
Cal Standard	SLD0354-CAL6	SMM 04-25-23-006	NA	04/25/23 11:25
Initial Cal Check	SLD0354-ICV1	SMM 04-25-23-007	NA	04/25/23 11:30
Initial Cal Blank	SLD0354-ICB1	SMM 04-25-23-008	NA	04/25/23 11:33
Instrument RL Check	SLD0354-CRL1	SMM 04-25-23-009	NA	04/25/23 11:35
Calibration Check	SLD0354-CCV1	SMM 04-25-23-010	NA	04/25/23 11:37
Calibration Blank	SLD0354-CCB1	SMM 04-25-23-011	NA	04/25/23 11:40
Calibration Check	SLD0354-CCV2	SMM 04-25-23-014	NA	04/25/23 11:47
Calibration Blank	SLD0354-CCB2	SMM 04-25-23-015	NA	04/25/23 11:49
Calibration Check	SLD0354-CCV3	SMM 04-25-23-016	NA	04/25/23 12:19
Calibration Blank	SLD0354-CCB3	SMM 04-25-23-017	NA	04/25/23 12:21
Calibration Check	SLD0354-CCV4	SMM 04-25-23-028	NA	04/25/23 12:47
Calibration Blank	SLD0354-CCB4	SMM 04-25-23-029	NA	04/25/23 12:49
Calibration Check	SLD0354-CCV5	SMM 04-25-23-040	NA	04/25/23 13:14
Calibration Blank	SLD0354-CCB5	SMM 04-25-23-041	NA	04/25/23 13:17
Blank	BLD0580-BLK1	SMM 04-25-23-045	Solid	04/25/23 13:26
LCS	BLD0580-BS1	SMM 04-25-23-046	Solid	04/25/23 13:29
LDW23-SS1010	23A0467-01	SMM 04-25-23-047	Solid	04/25/23 13:31
LDW23-SS1010	BLD0580-DUP1	SMM 04-25-23-048	Solid	04/25/23 13:33
LDW23-SS1010	BLD0580-MS1	SMM 04-25-23-049	Solid	04/25/23 13:35
LDW23-SS1010	BLD0580-MSD1	SMM 04-25-23-050	Solid	04/25/23 13:38
Calibration Check	SLD0354-CCV6	SMM 04-25-23-052	NA	04/25/23 13:42
Calibration Blank	SLD0354-CCB6	SMM 04-25-23-053	NA	04/25/23 13:45
LDW23-SS1005	23A0467-02	SMM 04-25-23-054	Solid	04/25/23 13:47
LDW23-SS1006	23A0467-03	SMM 04-25-23-055	Solid	04/25/23 13:49

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 7471B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLD0354	Instrument:	HYDRA
		Calibration:	GD00060

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1003	23A0467-04	SMM 04-25-23-056	Solid	04/25/23 13:52
LDW23-SS1004	23A0467-05	SMM 04-25-23-057	Solid	04/25/23 13:54
LDW23-SS1204	23A0467-06	SMM 04-25-23-058	Solid	04/25/23 13:56
LDW23-SS1238	23A0467-07	SMM 04-25-23-059	Solid	04/25/23 13:59
LDW23-SS1013	23A0467-08	SMM 04-25-23-060	Solid	04/25/23 14:01
LDW23-SS1014	23A0467-09	SMM 04-25-23-061	Solid	04/25/23 14:04
Calibration Check	SLD0354-CCV7	SMM 04-25-23-064	NA	04/25/23 14:10
Calibration Blank	SLD0354-CCB7	SMM 04-25-23-065	NA	04/25/23 14:13
Calibration Check	SLD0354-CCV8	SMM 04-25-23-073	NA	04/25/23 14:32
Calibration Blank	SLD0354-CCB8	SMM 04-25-23-074	NA	04/25/23 14:34

DETECTION LEVEL STANDARD
EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: HYDRA
Calibration: GD00060
Sequence: SLD0354
Lab Sample ID: SLD0354-CRL1

Analyte	True	Found	%R	Units	QC Limts
Mercury	0.000100	0.000073	73.3	mg/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 7471B

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:31	92	180	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:47	92	180	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:49	92	180	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:52	92	180	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:54	92	180	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:56	92	180	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:59	92	180	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 14:01	92	180	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 14:04	92	180	
Duplicate BLD0580-DUP1	01/23/23 08:26	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:33	92	180	
Matrix Spike BLD0580-MS1	01/23/23 08:26	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:35	92	180	
Matrix Spike Dup BLD0580-MSD1	01/23/23 08:26	01/23/23 13:30	04/24/23 16:45	91	180	04/25/23 13:38	92	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 7471B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: HYDRA

Analyte	MDL	RL	Units
Mercury	0.00525	0.0250	mg/kg

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGHG1
Lot Number:	S2-HG711246
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Mercury
Starting Material:	Hg Metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1000 ± 3 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **1004 ± 6 µg/mL**
ICP Assay NIST SRM 3133 Lot Number: 160921

Assay Method #2 **998 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 3 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000210	M	Eu	<	0.000210	O	Na		0.000626	M	Se	<	0.008100	M	Zn	<	0.000810
M	Al		0.000161	O	Fe	<	0.001600	M	Nb	<	0.000410	O	Si		0.000626	M	Zr	<	0.000410
M	As	<	0.002500	M	Ga	<	0.000210	M	Nd	<	0.000210	M	Sm	<	0.000210				
O	Au	<	0.001700	M	Gd	<	0.000210	O	Ni	<	0.001400	M	Sn	<	0.000410				
M	B	<	0.008500	M	Ge	<	0.000410	M	Os	<	0.003900	O	Sr	<	0.000110				
M	Ba	<	0.000210	M	Hf	<	0.000210	O	P	<	0.029000	M	Ta	<	0.000210				
O	Be	<	0.000110	s	Hg	<		M	Pb	<	0.000210	M	Tb	<	0.000210				
M	Bi	<	0.001100	M	Ho	<	0.000210	M	Pd	<	0.003500	M	Te	<	0.005700				
O	Ca		0.004754	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	O	Ti	<	0.000430				
M	Ce	<	0.000210	O	K		0.000731	M	Rb	<	0.000210	O	Tl	<	0.005400				
M	Co	<	0.000210	M	La	<	0.000210	M	Re	<	0.000210	M	Tm	<	0.000210				
O	Cr	<	0.003300	O	Li	<	0.000110	M	Rh	<	0.001100	M	U	<	0.000410				
M	Cs	<	0.000410	M	Lu	<	0.000210	M	Ru	<	0.000810	M	V	<	0.000210				
M	Cu	<	0.000810	O	Mg		0.000104	O	S	<	0.022000	M	W	<	0.001100				
M	Dy	<	0.000210	O	Mn	<	0.000430	M	Sb	<	0.000210	M	Y	<	0.000210				
M	Er	<	0.000210	M	Mo	<	0.000210	M	Sc	<	0.000210	M	Yb	<	0.000210				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+
Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.
Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.
Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 18, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 18, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-QCS-4
Lot Number:	R2-MEB695951
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	5 µg/mL ea: Mercury

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Mercury, Hg	**5.011 ± 0.023 µg/mL**		

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	061204
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The follow ing equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 20, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 20, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1010

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 D	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	01/26/23 09:09	File ID:	
% Solids:	47.59	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.59	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1005

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 D	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	01/26/23 09:09	File ID:	
% Solids:	46.33	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	46.33	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1006

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 D	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	01/26/23 09:09	File ID:	
% Solids:	48.01	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	48.01	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1003

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 D	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	01/26/23 09:09	File ID:	
% Solids:	45.91	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	45.91	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1004

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 D	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	01/26/23 09:09	File ID:	
% Solids:	56.10	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	56.10	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1204

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 D	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	01/26/23 09:09	File ID:	
% Solids:	47.04	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.04	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1238

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 D	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	01/26/23 09:09	File ID:	
% Solids:	57.71	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	57.71	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1013

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 D	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	01/26/23 09:09	File ID:	
% Solids:	47.57	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	47.57	1	0.04	0.04	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
SM 2540 G-97

LDW23-SS1014

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 D	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	01/26/23 09:09	File ID:	
% Solids:	63.46	Preparation:	No Prep Wet Chem	Analyzed:	01/26/23 09:22
Batch:	BLA0617	Sequence:		Initial/Final:	5 g Wet / 5 g
Instrument:	BAL2			Calibration:	

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	63.46	1	0.04	0.04	

PREPARATION BATCH SUMMARY

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0617 Batch Matrix: Solid
Preparation: No Prep Wet Chem

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01		01/26/23 09:09	
LDW23-SS1005	23A0467-02		01/26/23 09:09	
LDW23-SS1006	23A0467-03		01/26/23 09:09	
LDW23-SS1003	23A0467-04		01/26/23 09:09	
LDW23-SS1004	23A0467-05		01/26/23 09:09	
LDW23-SS1204	23A0467-06		01/26/23 09:09	
LDW23-SS1238	23A0467-07		01/26/23 09:09	
LDW23-SS1013	23A0467-08		01/26/23 09:09	
LDW23-SS1014	23A0467-09		01/26/23 09:09	
Blank	BLA0617-BLK1		01/26/23 09:09	
LDW23-SS1010	BLA0617-DUP1		01/26/23 09:09	
LDW23-SS1010	BLA0617-DUP2		01/26/23 09:09	

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET for Solid samples

Method: PSEP 1986, SM2540, EPA 160.1

(dry at 104 (12-24 hr) then combust at 550 (30 min))

Batch:	BLA0617
Date:	1/26/2023 9:22
Analyst:	DOE

Instrumentation

Drying Ovens:	1	**Analytical Balance:**	BAL2
Muffle Furnace:	2		

Batch drying time

record times as mm/dd/yy hh:mm

date/time in oven:	1/26/2023 10:04	
date/time out:	1/27/2023 7:13	
elapsed hrs =	21.1	OK

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

Oven Temps, °C	
Start Temp	103
Dry Cycle 1	105
Dry Cycle 2	
Dry Cycle 3	

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000
if ash wt > dry wt, "Chk for Err"
if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000

Balance Calibration Check

Record weights to 4 places

Cal Weight ID:		CV-02	CV-02	CV-02	CV-02	CV-02		CV-02	CV-02	CV-02	
Date & Time:		1/26/23 9:36	1/26/23 9:43	1/27/23 9:49							
Cal Wt (g):	10.0000	9.9999	9.9999	10.0000							
		Cal OK!	Cal OK!	Cal OK!							

Sample ID	Dish #	Tare Wt. (g)	Dish & Sample (g)	Dry Wt 104C (grams) 1	2	3	dry Wt (g)	TS (%)	Notes	ASH WT 550C (grams) 1	2	3	Ash Wt (g)	TVS (mg/kg)	TVS (%)	Notes
BLA0617-BLK1	1	0.7911	0.0000	0.7910			-0.0001	0.01%								
23A0458-02	2	0.7835	5.6312	2.2958			1.5123	31.20%								
23A0458-03	3	0.7925	5.8558	2.8388			2.0463	40.41%								
23A0467-01	4	0.7863	5.4370	2.9995			2.2132	47.59%								
BLA0617-DUP1	5	0.8165	5.7890	3.1949			2.3784	47.83%	RPD=0.5							
BLA0617-DUP2	6	0.8282	6.0753	3.3370			2.5088	47.81%	RSD=0.3							
23A0467-02	7	0.7800	6.5758	3.4650			2.6850	46.33%								
23A0467-03	8	0.7822	7.0718	3.8018			3.0196	48.01%								
23A0467-04	9	0.7968	6.5663	3.4458			2.6490	45.91%								
23A0467-05	10	0.7895	8.2503	4.9748			4.1853	56.10%								
23A0467-06	11	0.7919	7.4086	3.9047			3.1128	47.04%								
23A0467-07	12	0.7924	6.8194	4.2708			3.4784	57.71%								
23A0467-08	13	0.7957	7.3286	3.9036			3.1079	47.57%								
23A0467-09	14	0.8036	8.8369	5.9019			5.0983	63.46%								
23A0484-01	15	0.8031	7.6109	1.3753			0.5722	8.41%								
23A0484-02	16	0.8010	8.7740	1.5037			0.7027	8.81%								
23A0523-01	17	0.7843	4.0444	3.9491			3.1648	97.08%								
23A0523-02	18	0.7766	2.1338	2.0930			1.3164	96.99%								

Form I

METHOD BLANK DATA SHEET

SM 2540 G-97

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0617
Laboratory ID: BLA0617-BLK1
Prepared: 01/26/23 09:09
Matrix: Solid
Preparation: No Prep Wet Chem
Analyzed: 01/26/23 09:22
Sequence:
Calibration:
Instrument: BAL2

CAS NO.	Analyte	Concentration (%)	Dilution Factor	MDL	MRL	Q
	Total Solids	ND	1	0.04	0.04	U

LDW23-SS1010

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0617-DUP1
Batch: BLA0617
Lab Source ID: 23A0467-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1010
% Solids: 47.59

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	47.59	47.83	0.508	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

DUPLICATES

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0617-DUP2
Batch: BLA0617
Lab Source ID: 23A0467-01
Preparation: No Prep Wet Chem
Initial/Final: 5 g / 5 g
Source Sample Name: LDW23-SS1010
% Solids: 47.59

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Total Solids	20	47.59	47.81	0.471	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

HOLDING TIME SUMMARY

Analysis: SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	01/26/23 09:09	2	180	01/26/23 09:22	3	180	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	01/26/23 09:09	2	180	01/26/23 09:22	3	180	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	01/26/23 09:09	2	180	01/26/23 09:22	3	180	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	01/26/23 09:09	2	180	01/26/23 09:22	3	180	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	01/26/23 09:09	2	180	01/26/23 09:22	3	180	
Duplicate BLA0617-DUP1	01/23/23 08:26	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	
Duplicate BLA0617-DUP2	01/23/23 08:26	01/23/23 13:30	01/26/23 09:09	3	180	01/26/23 09:22	3	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

SM 2540 G-97

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids	0.04	0.04	%

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1010

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-075
% Solids:	47.59	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:59
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.033 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	30.0	20	0.53	1.02	
7439-92-1	Lead	26.9	20	0.11	0.20	
7440-22-4	Silver	0.28	20	0.04	0.41	J

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Total Metals

LDW23-SS1005

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-071
% Solids:	46.33	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:41
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.069 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	30.8	20	0.53	1.01	
7439-92-1	Lead	28.7	20	0.11	0.20	
7440-22-4	Silver	0.31	20	0.04	0.40	J

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Total Metals

LDW23-SS1006

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	04/26/23 12:19	File ID:	XDT_m1230511-122
% Solids:	48.01	Preparation:	SWN EPA 3050B	Analyzed:	05/11/23 22:22
Batch:	BLD0578	Sequence:	SLE0209	Initial/Final:	1.018 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00042

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.1	20	0.53	1.02	
7439-92-1	Lead	26.0	20	0.11	0.20	
7440-22-4	Silver	0.30	20	0.05	0.41	J

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Total Metals

LDW23-SS1003

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-073
% Solids:	45.91	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:50
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.079 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	31.1	20	0.52	1.01	
7439-92-1	Lead	33.2	20	0.10	0.20	
7440-22-4	Silver	0.35	20	0.04	0.40	J

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Total Metals

LDW23-SS1004

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-074
% Solids:	56.10	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:54
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.044 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	24.8	20	0.44	0.85	
7439-92-1	Lead	23.3	20	0.09	0.17	
7440-22-4	Silver	0.25	20	0.04	0.34	J

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Total Metals

LDW23-SS1204

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-083
% Solids:	47.04	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:37
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.04 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	28.3	20	0.53	1.02	
7439-92-1	Lead	22.8	20	0.11	0.20	
7440-22-4	Silver	0.25	20	0.04	0.41	J

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Total Metals

LDW23-SS1238

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-084
% Solids:	57.71	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:41
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.046 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	21.3	20	0.43	0.83	
7439-92-1	Lead	15.7	20	0.09	0.17	
7440-22-4	Silver	0.16	20	0.04	0.33	J

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Total Metals

LDW23-SS1013

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-085
% Solids:	47.57	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:46
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.023 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	32.8	20	0.53	1.03	
7439-92-1	Lead	34.4	20	0.11	0.21	
7440-22-4	Silver	0.36	20	0.05	0.41	J

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B

Total Metals

LDW23-SS1014

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-086
% Solids:	63.46	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:50
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.072 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium	19.7	20	0.38	0.73	
7439-92-1	Lead	17.1	20	0.08	0.15	
7440-22-4	Silver	0.15	20	0.03	0.29	J

PREPARATION BATCH SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLD0578 Batch Matrix: Solid
Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	04/26/23 12:19	
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	04/26/23 12:19	
LDW23-SS1006	23A0467-03	XDT_m1230511-122	04/26/23 12:19	
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	04/26/23 12:19	
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	04/26/23 12:19	
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	04/26/23 12:19	
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	04/26/23 12:19	
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	04/26/23 12:19	
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	04/26/23 12:19	
Blank	BLD0578-BLK1	XDT_m1230510A-059	04/26/23 12:19	
LCS	BLD0578-BS1	XDT_m1230510A-060	04/26/23 12:19	
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	04/26/23 12:19	
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	04/26/23 12:19	
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	04/26/23 12:19	

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Digestion Log

Analyst: KTZ Date: 4/25/23 - 4/26/23 Time: 1040 - 1219 (4/25 - 4/26) Balance ID: BA10

Matrix: SOIL Block ID: 3 Block Temp: 95°C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SW3N Initial Wt (g) Vol (mL)	Prep Code: SW3N Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A467-01	A		1.033	50			
-02			1.069				
-03			1.018				
-04			1.079				
-05			1.044				
-06			1.040				
-07			1.046				
-08			1.023				
-09			1.072				
23C108-02	D		1.075				
-06			1.059				
-07			1.089				
-08			1.072				
-09			1.050				
23D37-01			1.021				
-03			1.060				
23D103-01	A		~~1.000~~ AR (1)		01.014		
-03			1.040				
BLD578-blk	—		—				23A467-01
-bs	—		—				
-dup	—		1.037				
-MS	—		1.032				
-MSD	—		1.032				
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L4188 1:1 HNO_3: L4200 HCl: — H_2O_2: K110526

Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)

Form I

METHOD BLANK DATA SHEET

EPA 6020B

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0467

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

Batch: BLD0578 | Laboratory ID: BLD0578-BLK1 | Prepared: 04/26/23 12:19

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 05/10/23 20:44

Sequence: SLE0204 | Calibration: GE00040 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-47-3	Chromium-52	ND	20	0.26	0.50	U
7439-92-1	Lead-208	ND	20	0.05	0.10	U
7440-22-4	Silver-107	ND	20	0.02	0.20	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 20:48
Batch:	BLD0578	Laboratory ID:	BLD0578-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Chromium-52	25.0	25.9		103	80 - 120
Lead-208	25.0	26.5		106	80 - 120
Silver-107	25.0	26.0		104	80 - 120

* Indicates values outside of QC limits

LDW23-SS1010

DUPLICATES

EPA 6020B

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0578-DUP1
Batch: BLD0578
Lab Source ID: 23A0467-01
Preparation: SWN EPA 3050B
Initial/Final: 1.037 g / 50 mL
Source Sample Name: LDW23-SS1010
% Solids: 47.59

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Chromium-52	20	30.0	30.4	1.46	
Lead-208	20	26.9	26.7	0.758	
Silver-107	20	0.28	0.29	3.84	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 22:08
Batch:	BLD0578	Laboratory ID:	BLD0578-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.032 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Chromium-52	50.9	30.0		68.3		75.3	75 - 125
Lead-208	50.9	26.9		68.1		81.0	75 - 125
Silver-107	50.9	0.28	J	37.1	*	72.3 *	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 22:12
Batch:	BLD0578	Laboratory ID:	BLD0578-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.032 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Chromium-52	50.9	75.3		89.0	9.70	20	75 - 125
Lead-208	50.9	76.1		96.8	11.1	20	75 - 125
Silver-107	50.9	40.2		78.5	8.21	20	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0578-PS1
Batch: BLD0578
Lab Source ID: 23A0467-01
Preparation: SWN EPA 3050B
Initial/Final: 1.033 g / 50 mL
Source Sample Name: LDW23-SS1010
% Solids: 47.59

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Silver-107	80 - 120	498	0.28	500.00	99.0

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00042	Instrument:	ICPMS1
Calibration Date:	05/11/2023 13:56		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	14605	10	14850.5	20	14243.6	50	13620.14	100	13175.56
Chromium-52	0	0	0.5	31826	10	14601.9	20	13940.65	50	12586.68	100	12285.63
Chromium-53	0	0	0.5	1730	10	1565.3	20	1561.7	50	1453.62	100	1404.46
Lead-208	0	0	0.1	90790	10	90159.3	20	88189.75	50	84692.68	100	81042.75

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00042
Calibration Date: 5/11/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	11749.13	49.3	0.9995		0.998	
Chromium-52	14206.81	71.7	0.9995		0.998	
Chromium-53	1285.847	49.8	0.9994		0.998	
Lead-208	72479.08	49.2	0.9993		0.998	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** SLEΦ2Φ9 **Cal:** GEΦΦΦ42

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CAL1	L5316		
		-CAL2	L5225		
		-CAL3	L5226		
		-CAL4	L5227		In-1 sl. noisy - %R ΦAnalytes OK
		-CAL5	L5317		
		-CAL6	L5229		
		-IBL1	—		
		-ICV1	L3575		
		-ICB1	L5316		
	✓	-CAL1	—		
	✓	-CAL1	—		
	✓	-CCV1	—		Std Mode Sl. noisy
		-CCV1	L5317		
		-CCB1	L5316		
		-CRL1	L5225		
		-IFA1	L5318		Cr^{53} ↑
		-IFB1	L5319		
		-MCV1	L4780		
		-MCV2	L4781		
		-IBL2	—		(Cd↑/Cd noisy)
		-IBL3	—		
		-CCV2			
		-CCB2			
	✓	-CAL1			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCV3			
		↓ -CCB3			
		BLEΦΦ72-BS2	SWN	20	Ag, Cr, Pb only
		BLEΦ342-BLK1	REN		
		↓ -BS1	↓		
	✓	BS TEST OLD SPIKE			TEST ONLY
	✓	↓ NEW SPIKE			↓
		23EΦ271-Φ1		5	
		23EΦ239-Φ1	↓	2	
		SEQ-IBL4			
		23DΦΦ74-13	REN	100	Mn only
		SEQ-IBL5			
		↓ -CCV4			
		↓ -CCB4			
		23DΦ477-Φ4	REN		Pb only
		↓ -Φ8	↓		↓
		-1Φ			
		-12			
		-18			
		↓ -2Φ		2	
		BLEΦ1Φ6-DUP2		↓	
		↓ -MS2			
		↓ -MSD2	↓	↓	
		SEQ-IBL6			TUBE Empty

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCV5			
		↓ -CCB5			
		230Φ477-Φ1	REN	5	Pb only
		-Φ7	↓	↓	↓
		↓ -Φ9			
		230Φ48Φ-Φ1			
		SEQ-IBL7			
		230Φ477-Φ2	REN	2	Pb only
		-Φ3	↓	↓	↓
		-Φ6			
		-11			
		SEQ-IBL8			
		-CCV6			
		↓ -CCB6			
		230Φ477-13	REN	2	Pb only
		-14	↓	↓	↓
		-16			
		↓ -15		10	
		SEQ-IBL9			
		230Φ7Φ2-Φ4	REN		
		BLEΦ342-DUP1	↓		
		-MS1			
		↓ -MSD1			
		SEQ-IBLA			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCV7			
		-CCB7			
	✓	-CAL1			
		-CCV8			
		-CCB8			
	✓	23DΦ171-Φ1	REN	20	Sc↑ Mn only
		-Φ2			
		-1Φ		↓	
		-11		100	
		-12		↓	
	✓	-ΦC6		50	
		SEQ-IBLB			
		-CCV9			Sc↑
		-CCB9			
	✓	-CAL1			
		-CCVA			
		-CCBA			
		23DΦ636-Φ1	REN	10	Ba, Pb only
		BLEΦ298-DUP2			
		-MS2			
		-MSD2			
		SEQ-IBLC			
		23DΦ568-Φ8	SWN	20	Cr NR
		BLEΦ143-DUP1	↓	↓	As, Pb RPD↑

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MS **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLEΦ143-MS1	SWN	20	Pb %R↓ Cr NR
		↓ -MS01	↓	↓	Se↑/As %R↓/ω STL ↓
		SEQ-IBLD			(Ge noisy)
		-CCVB			
		↓ -CCBB			
		23DΦ568-Φ2	SWN	20	
		-Φ3			Pb↑ Pb NR
		-Φ4			
		-Φ5			
		-Φ6			
		↓ -Φ7	↓	↓	Sc, Tb↑ Cr, Pb NR
		SEQ-IBLE			
	✓	BLEΦ143-MS01	SWN	20	Se, Tb↑
		SEQ-IBLF			
		-CCVC			
		-CCBC			
	✓	-CAL1			Ba, Mn, N. Removed
		-CCVD			
		↓ -CCBD			
		23AΦ467-Φ3	SWN	20	Ag, Cr, Pb only
		23CΦΦ71-Φ3			↓
		230ΦΦΦ8-Φ1			
		230Φ136-Φ1			
		↓ -Φ3	↓	↓	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		230Φ396-Φ1	SWN	20	
		↓ -Φ3	↓	↓	
		230Φ394-Φ2	↓	↓	
		↓ -Φ4	↓	↓	
		SEQ-IBLG			
		-CCVE			
		↓ -CCBE			
		230Φ394-Φ6	SWN	20	
		-Φ7	↓	↓	
		-Φ8	↓	↓	
		-11	↓	↓	Zn↑/Cd noisy No Cd, Zn
		-12	↓	↓	
		↓ -13	↓	↓	
		230Φ393-24	↓	↓	
		-28	↓	↓	
		↓ -29	↓	↓	
		SEQ-IBLH			
		-CCVF			
		↓ -CCBF			
		230Φ393-1Φ	SWN	20	
		-11	↓	↓	
		-12	↓	↓	In-1st. noisy-%R / Ge noisy + Analytes OK No As, Cu, Zn
		-15	↓	↓	
		↓ -16	↓	↓	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/14/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		230ϕ393-17	SWN	20	
		-18	↓	↓	
		-19	↓	↓	
		-22	↓	↓	Cu↑ No Cu
		SEQ-IBL1			
		-CCVG			
		-CCBG			
		230ϕ393-ϕ4RE1	SWN	2000	Cu, Zn only
		BLEϕϕ72-DUP3	↓	↓	↓
		-MS3	↓	↓	Cu, Zn STL
		-MSD3	↓	↓	↓
		230ϕ393-ϕ4	↓	200	Cu, Zn↑ Ag, As, Cd, Pb only / Cu, Zn NR
		BLEϕϕ72-DUP2	↓	↓	↓
		-MS2	↓	↓	Ag %R↓ / As, Pb STL
		-MSD2	↓	↓	↓
		-PS2	↓	↓	↓ 50 mL IK7409
		SEQ-IBL3			
		-CCVH			
		-CCBH			
		230ϕ568-ϕ3RE1	SWN	200	Pb only
		230ϕ568-ϕ7RE1	↓	50	Cr, Pb only
		↓ -ϕ8RE1	↓	↓	Cr only
		BLEϕ143-DUP2	↓	↓	↓
		↓ -MS2	↓	↓	↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted. MB 5/11/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLE0143-MSD2	SWN	50	Cr only
		SEQ-IBLK			
	✓	230Φ393-Φ2	SWN	200	Re-run @ 20x
	✓	↓ -Φ3	↓	↓	↓
		SEQ-IBLL			
		-CCVI			
		-CCBI			
	✓	-CAL1			
		-CCVJ			
		-CCBJ			
		230Φ393-Φ5	SWN	200	Zn↑ - Not Needed ~~No ENT~~
		-Φ6			
	✓	-Φ8			Re-run @ 20x
		SEQ-IBLM			
		230Φ412-Φ2	REN		
		-Φ3			
		-Φ4			
		-Φ5			
		-Φ6			
		SEQ-IBLN			
		-CCVK			
		-CCBK			
		230Φ412-Φ7	REN		
		↓ -Φ8	↓		

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		230Φ412-Φ9	REN		
		-10			
		-11			
		-12			
		-13			
		-14			
		-15			
		SEQ-IBLO			
		-CCVL			
		-CCBL			
		230Φ442-Φ3	REN		Sc↑ - Not Needed
		-Φ4			
	✓	-Φ5			Sc↑ - Not Needed / Ge noisy
		-Φ6			↓ ↓
	✓	230Φ598-Φ4			Sc, Ge, In, In-1, Tb ↓
		-Φ6			Ge, In-1, In, Tb ↓ Cr only
		-Φ8			Sc↑ No Cr
		-10			↓ ↓
		-12			
		SEQ-IBLP			(Cr53↑)
		-CCVM			
		-CCBM			
		230Φ514-Φ2	REN		Sc↑ - Not Needed
		↓ -Φ3	↓		↓ ↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		230Φ514-Φ4	REN		ScT - Not Needed
		↓ -Φ6	↓		
		SEQ-IBLQ			
	✓	230Φ598-Φ2	REN		Int. STDs ↓
		BLEΦ119-DLP1			
		-MS1			
		-MSD1			
		SEQ-IBLR			(Sc, GeT / Cr53T)
		-CCVN			CrL
		-CCBN			
	✓	-CAL1			
		-CCVO			CrL
		-CCBO			
		230Φ537-Φ2	REN	2	
		-Φ3		↓	
		-Φ4			ScT - Not Needed
		230Φ494-Φ1			
		-Φ2			
		-Φ3			ScT - Not Needed
		-Φ4			
		-Φ5			
		-Φ6			
		SEQ-IBLS			
		↓ -CCVP			CrL / PbT

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted. MB 5/14/23

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCBP			
		230Φ494-Φ7	REN		
	✓	-Φ8			As noisy
		-Φ9			
		-1Φ			
		-11			
		230Φ578-Φ2		25	As only
		BLEΦ134-OUP1		↓	↓
		-MS1			
	✓	-MSD1	↓	↓	Ge noisy
		SEQ-IBLT			
		-CCVQ			
		-CCBQ			
		230Φ588-Φ1	REN		
		-Φ3			
		-Φ5			
		-Φ7			
		-Φ9			
		-11			
		-13			
		-15			
		230Φ587-Φ3	↓		
		SEQ-IBLU			
		-CCVR			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/11/23 **Analyst:** MB **Sequence:** ~~~~ **Cal:** ~~~~

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCBR			
		230Φ587-Φ2	REN	2	
		-Φ4		5	
		-Φ5		↓	
		230Φ578-Φ7		↓	
		-Φ8		2	
		-Φ4		↓	
		-Φ6			
		-Φ3			
		-Φ5			
		SEQ-IBLV			
		-CCVS			
		-CCBS			
		Rinse/DF			
			MB 5/11/23		

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Thursday, May 11, 2023 12:49:24
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.159
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	6461.2	6461.194	108.647	1.7	Standard
	In	114.9	67625.0	67624.969	851.616	1.3	Standard
	U	238.1	94250.1	94250.125	1957.526	2.1	Standard
⎡	CeO	155.9	1249.3	0.013	0.000	1.9	Standard
⎢>	Ce	139.9	93503.0	93502.957	927.845	1.0	Standard
⎣	Ce++	70.0	612.9	0.007	0.000	6.9	Standard
	Bkgd	220.0	1.7	1.667	0.264	15.8	Standard

Current Conditions File Data

Current Value	Description
0.92	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.92	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/11/2023 12:49:13 PM
End Time: 5/11/2023 12:54:25 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 6461.19
Obtained Intensity (In 115): 67624.97
Obtained Intensity (U 238): 94250.13
Obtained Intensity (Bkgd 220): 1.67
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=612.88 / 93502.96)
Obtained Formula (CeO 156 / Ce 140): 0.013 (=1249.32 / 93502.96)
Obtained RSD (Be 9): 0.0168
Obtained RSD (In 115): 0.0126
Obtained RSD (U 238): 0.0208

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
1.14 mm	1.04 mm	76323.34

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.93
Obtained Intensity (In 115): 79740.93
Obtained Formula (CeO 156 / Ce 140): 0.0170 (=1741.11 / 102470.19)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.713)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.680)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.703)

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/11/2023 12:49:13 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 6461.19
		Obtained Intensity (In 115): 67624.97
		Obtained Intensity (U 238): 94250.13
		Obtained Intensity (Bkgd 220): 1.67
		Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=612.88 / 93502.96)
		Obtained Formula (CeO 156 / Ce 140): 0.013 (=1249.32 / 93502.96)
		Obtained RSD (Be 9): 0.0168
		Obtained RSD (In 115): 0.0126
		Obtained RSD (U 238): 0.0208

[Passed] Optimum value(s): N/A

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	1.14 mm	1.04 mm	76323.34

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.91/0.93/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 79740.93
		Obtained Formula (CeO 156 / Ce 140): 0.0170 (=1741.11 / 102470.19)
[Passed] Optimum value(s): 0.93

Mass Calibration and Resolution
Optimization Settings:
Method: Tuning.mth.
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Iterations: 6
Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
Peak height (%) for Res. Opt.: 10

Optimization Results:
Initial Try
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.713)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.675)
Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.680)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.703)
[Passed] Optimum value(s): N/A

End Time: 5/11/2023 12:54:25 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Thursday, May 11, 2023 12:59:23
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.167
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	7408.7	7408.655	153.896	2.1	Standard
	In	114.9	77950.1	77950.141	1370.420	1.8	Standard
	U	238.1	111916.6	111916.599	2616.965	2.3	Standard
⌈	CeO	155.9	1830.2	0.018	0.001	3.8	Standard
| >	Ce	139.9	104042.3	104042.336	1986.057	1.9	Standard
⌊	Ce++	70.0	670.5	0.006	0.000	3.2	Standard
	Bkgd	220.0	1.6	1.633	0.701	42.9	Standard

Current Conditions File Data

Current Value	Description
0.93	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.93	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/11/2023 12:54:40 PM
End Time: 5/11/2023 1:01:27 PM

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.93
Obtained Intensity (In 115): 84178.28
Obtained Formula (CeO 156 / Ce 140): 0.0181 (=1892.13 / 104805.04)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.707)
Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.687)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.692)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.694)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.997; Intercept = -15.68

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.996; Intercept = -14.78

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 7408.65
Obtained Intensity (In 115): 77950.14
Obtained Intensity (U 238): 111916.60
Obtained Intensity (Bkgd 220): 1.63
Obtained Formula (Ce++ 70 / Ce 140): 0.006 (=670.55 / 104042.34)
Obtained Formula (CeO 156 / Ce 140): 0.018 (=1830.18 / 104042.34)
Obtained RSD (Be 9): 0.0208
Obtained RSD (In 115): 0.0176
Obtained RSD (U 238): 0.0234

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/11/2023 12:54:40 PM

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.93/0.96/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 84178.28
		Obtained Formula (CeO 156 / Ce 140): 0.0181 (=1892.13 / 104805.04)
[Passed] Optimum value(s): 0.93

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.707)
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.687)
		Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.692)
		Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.694)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.997; Intercept = -15.68

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-16	50196
Mg	24	41	-16.5	36699.1
In	115	41	-13	81861.9
Ce	140	41	-12.5	103929
Pb	208	41	-11.5	62620.9
U	238	41	-11.5	115279

KED Mode QID

Optimization Settings:
Method: QID Calibration.mth.
Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:
Initial Try

Optimum value(s): Correlation Coefficient = 0.996; Intercept = -14.78

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-15	35371.7
Mg	24	41	-15	56081.9
In	115	41	-12.5	122297
Ce	140	41	-11.5	105528
Pb	208	41	-11	58326.8
U	238	41	-10.5	137434

STD Performance Check
Optimization Settings:
Method: STD Performance Check.mth.
Intensity Criterion: Be 9 > 2000
Intensity Criterion: In 115 > 40000
Intensity Criterion: U 238 > 30000
Intensity Criterion: Bkgd 220 <= 5
Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
Formula Criterion: CeO 156 / Ce 140 <= 0.025
RSD Criterion: Be 9.0122 < 0.05
RSD Criterion: In 114.904 < 0.05
RSD Criterion: U 238.05 < 0.05

Optimization Results:
Initial Try
Obtained Intensity (Be 9): 7408.65
Obtained Intensity (In 115): 77950.14
Obtained Intensity (U 238): 111916.60
Obtained Intensity (Bkgd 220): 1.63
Obtained Formula (Ce++ 70 / Ce 140): 0.006 (=670.55 / 104042.34)
Obtained Formula (CeO 156 / Ce 140): 0.018 (=1830.18 / 104042.34)
Obtained RSD (Be 9): 0.0208
Obtained RSD (In 115): 0.0176
Obtained RSD (U 238): 0.0234

[Passed] Optimum value(s): N/A

End Time: 5/11/2023 1:01:27 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 13:56:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				29450	1	Standard
	Cl	**37**		ug/L				2929441	2	Standard
⎡>	**Sc**	**45**		ug/L				500966	2	Standard
⎢	**Cr**	**52**		ug/L				9079	1	Standard
⎢	**Cr**	**53**		ug/L				93	12	Standard
⎣	**Mn**	**55**		ug/L				264	2	Standard
⎡>	**Ge**	**72**		ug/L				31052	2	KED
⎢	**Ni**	**60**		ug/L				26	31	KED
⎢	**Ni**	**62**		ug/L				6	62	KED
⎢	**Cu**	**63**		ug/L				43	5	KED
⎢	**Cu**	**65**		ug/L				30	21	KED
⎢	**Zn**	**66**		ug/L				36	31	KED
⎢	**Zn**	**67**		ug/L				6	31	KED
⎣	**As**	**75**		ug/L				3	18	KED
	Y	**89**		ug/L				40261	2	Standard
	Kr	**83**		ug/L				50	4	Standard
⎡>	**In-1**	**115**		ug/L				6674	2	KED
⎢	**Cd**	**111**		ug/L				2	115	KED
⎣	**Cd**	**114**		ug/L				3	72	KED
⎡>	**In**	**115**		ug/L				458892	1	Standard
⎢	**Ag**	**107**		ug/L				13	24	Standard
⎢	**Ba**	**135**		ug/L				43	11	Standard
⎣	**Ba**	**137**		ug/L				78	10	Standard
⎡>	**Tb**	**159**		ug/L				181387	1	Standard
⎣	**Pb**	**208**		ug/L				323	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:00:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	31832	4	Standard
	Cl	**37**		ug/L			2929441	2839755	4	Standard
⌈>	**Sc**	**45**		ug/L			500966	496983	3	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.014	2	9079	15913	2	Standard
|	**Cr**	**53**	**0.500**	ug/L	0.035	6	93	865	3	Standard
⌊	**Mn**	**55**	**0.500**	ug/L	0.011	2	264	9923	5	Standard
⌈>	**Ge**	**72**		ug/L			31052	31441	1	KED
|	**Ni**	**60**	**0.500**	ug/L	0.026	5	26	775	5	KED
|	**Ni**	**62**	**0.500**	ug/L	0.077	15	6	130	13	KED
|	**Cu**	**63**	**0.500**	ug/L	0.006	1	43	2353	0	KED
|	**Cu**	**65**	**0.500**	ug/L	0.019	3	30	1191	4	KED
|	**Zn**	**66**	**6.000**	ug/L	0.188	3	36	3261	4	KED
|	**Zn**	**67**	**6.000**	ug/L	0.586	9	6	482	8	KED
⌊	**As**	**75**	**0.200**	ug/L	0.018	8	3	52	9	KED
	Y	**89**		ug/L			40261	40194	3	Standard
	Kr	**83**		ug/L			50	41	23	Standard
⌈>	**In-1**	**115**		ug/L			6674	6464	1	KED
|	**Cd**	**111**	**0.100**	ug/L	0.023	22	2	21	18	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.011	10	3	65	9	KED
⌈>	**In**	**115**		ug/L			458892	444022	3	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.003	1	13	2921	2	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.038	7	43	2729	4	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.011	2	78	4854	3	Standard
⌈>	**Tb**	**159**		ug/L			181387	179115	3	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.003	3	323	9079	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:05:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	38615	2	Standard
	Cl	**37**		ug/L			2929441	2965976	5	Standard
⌈>	**Sc**	**45**		ug/L			500966	492932	2	Standard
|	**Cr**	**52**	**10.000**	ug/L	0.241	2	9079	146019	1	Standard
|	**Cr**	**53**	**10.000**	ug/L	0.340	3	93	15653	2	Standard
⌊	**Mn**	**55**	**10.001**	ug/L	0.292	2	264	199231	2	Standard
⌈>	**Ge**	**72**		ug/L			31052	30729	2	KED
|	**Ni**	**60**	**10.001**	ug/L	0.207	2	26	15213	1	KED
|	**Ni**	**62**	**10.000**	ug/L	0.242	2	6	2455	1	KED
|	**Cu**	**63**	**10.000**	ug/L	0.230	2	43	44916	3	KED
|	**Cu**	**65**	**9.999**	ug/L	0.275	2	30	22153	0	KED
|	**Zn**	**66**	**10.082**	ug/L	0.165	1	36	5453	1	KED
|	**Zn**	**67**	**10.273**	ug/L	0.327	3	6	867	2	KED
⌊	**As**	**75**	**10.000**	ug/L	0.240	2	3	2547	0	KED
	Y	**89**		ug/L			40261	41417	3	Standard
	Kr	**83**		ug/L			50	38	27	Standard
⌈>	**In-1**	**115**		ug/L			6674	6340	1	KED
|	**Cd**	**111**	**10.000**	ug/L	0.152	1	2	2394	2	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.216	2	3	6112	2	KED
⌈>	**In**	**115**		ug/L			458892	456528	2	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.035	0	13	148505	2	Standard
|	**Ba**	**135**	**10.000**	ug/L	0.120	1	43	55666	1	Standard
⌊	**Ba**	**137**	**10.000**	ug/L	0.049	0	78	97151	2	Standard
⌈>	**Tb**	**159**		ug/L			181387	182174	3	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.225	2	323	901593	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:10:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	37598	5	Standard
	Cl	**37**		ug/L			2929441	3016985	5	Standard
⌈>	**Sc**	**45**		ug/L			500966	495356	3	Standard
|	**Cr**	**52**	**19.915**	ug/L	0.230	1	9079	278813	3	Standard
|	**Cr**	**53**	**19.982**	ug/L	0.307	1	93	31234	2	Standard
⌊	**Mn**	**55**	**19.853**	ug/L	0.270	1	264	385814	2	Standard
⌈>	**Ge**	**72**		ug/L			31052	31142	1	KED
|	**Ni**	**60**	**19.875**	ug/L	0.193	0	26	29873	1	KED
|	**Ni**	**62**	**19.829**	ug/L	0.427	2	6	4767	2	KED
|	**Cu**	**63**	**19.810**	ug/L	0.617	3	43	86810	1	KED
|	**Cu**	**65**	**19.924**	ug/L	0.406	2	30	44058	2	KED
|	**Zn**	**66**	**19.808**	ug/L	0.324	1	36	10528	1	KED
|	**Zn**	**67**	**20.108**	ug/L	0.353	1	6	1742	0	KED
⌊	**As**	**75**	**19.858**	ug/L	0.037	0	3	4985	1	KED
	Y	**89**		ug/L			40261	40956	0	Standard
	Kr	**83**		ug/L			50	36	10	Standard
⌈>	**In-1**	**115**		ug/L			6674	6162	6	KED
|	**Cd**	**111**	**19.961**	ug/L	1.156	5	2	4594	0	KED
⌊	**Cd**	**114**	**19.948**	ug/L	1.052	5	3	11699	1	KED
⌈>	**In**	**115**		ug/L			458892	442261	2	Standard
|	**Ag**	**107**	**19.961**	ug/L	0.488	2	13	284872	2	Standard
|	**Ba**	**135**	**19.961**	ug/L	0.460	2	43	106756	1	Standard
⌊	**Ba**	**137**	**20.053**	ug/L	0.424	2	78	190616	0	Standard
⌈>	**Tb**	**159**		ug/L			181387	182067	1	Standard
⌊	**Pb**	**208**	**19.912**	ug/L	0.188	0	323	1763795	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:15:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	27882	6	Standard
	Cl	**37**		ug/L			2929441	3034849	2	Standard
⌈>	**Sc**	**45**		ug/L			500966	458587	1	Standard
|	**Cr**	**52**	**49.922**	ug/L	1.876	3	9079	629334	1	Standard
|	**Cr**	**53**	**50.053**	ug/L	0.603	1	93	72681	0	Standard
⌊	**Mn**	**55**	**49.996**	ug/L	0.842	1	264	898883	1	Standard
⌈>	**Ge**	**72**		ug/L			31052	29579	0	KED
|	**Ni**	**60**	**49.802**	ug/L	0.895	1	26	69689	2	KED
|	**Ni**	**62**	**49.780**	ug/L	1.236	2	6	11116	3	KED
|	**Cu**	**63**	**49.652**	ug/L	0.326	0	43	199706	1	KED
|	**Cu**	**65**	**49.521**	ug/L	0.703	1	30	99217	1	KED
|	**Zn**	**66**	**49.752**	ug/L	0.177	0	36	24501	0	KED
|	**Zn**	**67**	**49.966**	ug/L	1.333	2	6	4090	1	KED
⌊	**As**	**75**	**49.927**	ug/L	0.338	0	3	11813	0	KED
	Y	**89**		ug/L			40261	39593	0	Standard
	Kr	**83**		ug/L			50	45	19	Standard
⌈>	**In-1**	**115**		ug/L			6674	6012	0	KED
|	**Cd**	**111**	**49.812**	ug/L	0.438	0	2	11006	1	KED
⌊	**Cd**	**114**	**49.795**	ug/L	0.668	1	3	27985	0	KED
⌈>	**In**	**115**		ug/L			458892	422438	0	Standard
|	**Ag**	**107**	**49.993**	ug/L	1.404	2	13	681007	2	Standard
|	**Ba**	**135**	**49.990**	ug/L	0.567	1	43	255103	0	Standard
⌊	**Ba**	**137**	**49.864**	ug/L	1.049	2	78	446649	1	Standard
⌈>	**Tb**	**159**		ug/L			181387	174003	0	Standard
⌊	**Pb**	**208**	**50.004**	ug/L	0.350	0	323	4234634	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:21:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	34721	5	Standard
	Cl	**37**		ug/L			2929441	3166160	3	Standard
⌈>	**Sc**	**45**		ug/L			500966	449933	0	Standard
|	**Cr**	**52**	**99.986**	ug/L	2.146	2	9079	1228563	2	Standard
|	**Cr**	**53**	**99.676**	ug/L	2.337	2	93	140446	3	Standard
⌊	**Mn**	**55**	**100.252**	ug/L	0.264	0	264	1783305	0	Standard
⌈>	**Ge**	**72**		ug/L			31052	28460	0	KED
|	**Ni**	**60**	**100.032**	ug/L	0.974	0	26	134792	1	KED
|	**Ni**	**62**	**99.699**	ug/L	0.385	0	6	21199	0	KED
|	**Cu**	**63**	**99.310**	ug/L	1.347	1	43	375622	0	KED
|	**Cu**	**65**	**99.902**	ug/L	1.609	1	30	191910	0	KED
|	**Zn**	**66**	**99.787**	ug/L	2.048	2	36	46918	1	KED
|	**Zn**	**67**	**99.193**	ug/L	0.682	0	6	7606	0	KED
⌊	**As**	**75**	**100.196**	ug/L	1.478	1	3	22957	0	KED
	Y	**89**		ug/L			40261	38715	1	Standard
	Kr	**83**		ug/L			50	53	10	Standard
⌈>	**In-1**	**115**		ug/L			6674	5881	2	KED
|	**Cd**	**111**	**99.523**	ug/L	0.347	0	2	21169	2	KED
⌊	**Cd**	**114**	**99.612**	ug/L	1.244	1	3	54050	1	KED
⌈>	**In**	**115**		ug/L			458892	403500	0	Standard
|	**Ag**	**107**	**100.284**	ug/L	0.965	0	13	1317556	1	Standard
|	**Ba**	**135**	**100.098**	ug/L	1.034	1	43	489484	0	Standard
⌊	**Ba**	**137**	**100.577**	ug/L	1.052	1	78	877436	1	Standard
⌈>	**Tb**	**159**		ug/L			181387	168275	2	Standard
⌊	**Pb**	**208**	**99.769**	ug/L	2.754	2	323	8104275	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:29:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	27815	3	Standard
	Cl	**37**		ug/L			2929441	2895451	4	Standard
⌈>	**Sc**	**45**		ug/L			500966	437362	3	Standard
|	**Cr**	**52**	**0.041**	ug/L	0.030	72	9079	8419	7	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.037	599	93	91	59	Standard
⌊	**Mn**	**55**	**0.029**	ug/L	0.051	179	264	743	124	Standard
⌈>	**Ge**	**72**		ug/L			31052	28653	0	KED
|	**Ni**	**60**	**0.002**	ug/L	0.010	401	26	27	47	KED
|	**Ni**	**62**	**0.005**	ug/L	0.005	97	6	6	15	KED
|	**Cu**	**63**	**0.002**	ug/L	0.004	188	43	48	34	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.002	37	30	20	14	KED
|	**Zn**	**66**	**-0.016**	ug/L	0.023	147	36	26	41	KED
|	**Zn**	**67**	**-0.034**	ug/L	0.025	72	6	3	50	KED
⌊	**As**	**75**	**0.011**	ug/L	0.009	76	3	5	36	KED
	Y	**89**		ug/L			40261	37510	2	Standard
	Kr	**83**		ug/L			50	50	13	Standard
⌈>	**In-1**	**115**		ug/L			6674	5933	1	KED
|	**Cd**	**111**	**0.006**	ug/L	0.015	259	2	3	86	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	367	3	3	35	KED
⌈>	**In**	**115**		ug/L			458892	409881	3	Standard
|	**Ag**	**107**	**0.035**	ug/L	0.051	145	13	488	142	Standard
|	**Ba**	**135**	**0.021**	ug/L	0.038	176	43	145	130	Standard
⌊	**Ba**	**137**	**0.022**	ug/L	0.042	189	78	267	139	Standard
⌈>	**Tb**	**159**		ug/L			181387	165152	2	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.032	172	323	1800	144	Standard

Sample Information

Sample Date/Time: Thursday, May 11, 2023 14:21:46
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Cl	37							
Sc	45							
Cr	52	**1.0000**	0.027	0.50	10	20	50	100
Cr	53	**1.0000**	0.003	0.50	10	20	50	100
Mn	55	**1.0000**	0.040	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.047	0.50	10	20	50	100
Ni	62	**1.0000**	0.007	0.50	10	20	50	100
Cu	63	**0.9999**	0.133	0.50	10	20	50	100
Cu	65	**0.9999**	0.067	0.50	10	20	50	100
Zn	66	**1.0000**	0.017	6.00	10	20	50	100
Zn	67	**0.9999**	0.003	6.00	10	20	50	100
As	75	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**1.0000**	0.036	0.10	10	20	50	100
Cd	114	**1.0000**	0.092	0.10	10	20	50	100
In	115							
Ag	107	**1.0000**	0.033	0.20	10	20	50	100
Ba	135	**1.0000**	0.012	0.50	10	20	50	100
Ba	137	**0.9999**	0.022	0.50	10	20	50	100
Tb	159							
Pb	208	**1.0000**	0.483	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:34:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	32734	2	Standard
	Cl	**37**		ug/L			2929441	3121402	2	Standard
⌈>	**Sc**	**45**		ug/L			500966	460267	1	Standard
|	**Cr**	**52**	**51.318**	ug/L	0.712	1	9079	649020	0	Standard
|	**Cr**	**53**	**51.236**	ug/L	0.611	1	93	73879	0	Standard
⌊	**Mn**	**55**	**51.172**	ug/L	0.995	1	264	931167	1	Standard
⌈>	**Ge**	**72**		ug/L			31052	29525	1	KED
|	**Ni**	**60**	**52.057**	ug/L	0.958	1	26	72781	1	KED
|	**Ni**	**62**	**52.067**	ug/L	1.276	2	6	11487	2	KED
|	**Cu**	**63**	**52.782**	ug/L	0.236	0	43	207145	1	KED
|	**Cu**	**65**	**51.949**	ug/L	0.255	0	30	103549	1	KED
|	**Zn**	**66**	**50.602**	ug/L	1.227	2	36	24700	2	KED
|	**Zn**	**67**	**50.874**	ug/L	3.016	5	6	4052	6	KED
⌊	**As**	**75**	**48.312**	ug/L	0.218	0	3	11486	1	KED
	Y	**89**		ug/L			40261	39977	0	Standard
	Kr	**83**		ug/L			50	42	20	Standard
⌈>	**In-1**	**115**		ug/L			6674	6124	0	KED
|	**Cd**	**111**	**50.931**	ug/L	1.126	2	2	11283	2	KED
⌊	**Cd**	**114**	**50.926**	ug/L	1.309	2	3	28780	2	KED
⌈>	**In**	**115**		ug/L			458892	418731	1	Standard
|	**Ag**	**107**	**51.018**	ug/L	0.913	1	13	695521	1	Standard
|	**Ba**	**135**	**50.635**	ug/L	0.899	1	43	256949	0	Standard
⌊	**Ba**	**137**	**51.005**	ug/L	0.239	0	78	461777	0	Standard
⌈>	**Tb**	**159**		ug/L			181387	173193	1	Standard
⌊	**Pb**	**208**	**51.355**	ug/L	1.100	2	323	4294627	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:42:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			29450	27252	2	Standard
	Cl	**37**		ug/L			2929441	2901324	2	Standard
⎡>	**Sc**	**45**		ug/L			500966	435323	2	Standard
⎢	**Cr**	**52**	**0.031**	ug/L	0.014	45	9079	8249	2	Standard
⎢	**Cr**	**53**	**-0.007**	ug/L	0.002	27	93	71	0	Standard
⎣	**Mn**	**55**	**-0.001**	ug/L	0.001	81	264	219	2	Standard
⎡>	**Ge**	**72**		ug/L			31052	29290	1	KED
⎢	**Ni**	**60**	**-0.000**	ug/L	0.004	1473	26	24	20	KED
⎢	**Ni**	**62**	**0.019**	ug/L	0.014	72	6	10	28	KED
⎢	**Cu**	**63**	**-0.004**	ug/L	0.001	17	43	24	12	KED
⎢	**Cu**	**65**	**-0.008**	ug/L	0.000	1	30	13	0	KED
⎢	**Zn**	**66**	**0.000**	ug/L	0.009	2333	36	34	11	KED
⎢	**Zn**	**67**	**-0.051**	ug/L	0.014	28	6	2	43	KED
⎣	**As**	**75**	**0.002**	ug/L	0.005	257	3	3	37	KED
	Y	**89**		ug/L			40261	37372	2	Standard
	Kr	**83**		ug/L			50	38	10	Standard
⎡>	**In-1**	**115**		ug/L			6674	6114	0	KED
⎢	**Cd**	**111**	**0.004**	ug/L	0.015	382	2	3	95	KED
⎣	**Cd**	**114**	**0.000**	ug/L	0.002	438	3	3	34	KED
⎡>	**In**	**115**		ug/L			458892	415249	2	Standard
⎢	**Ag**	**107**	**0.004**	ug/L	0.000	8	13	63	9	Standard
⎢	**Ba**	**135**	**-0.001**	ug/L	0.003	537	43	36	37	Standard
⎣	**Ba**	**137**	**-0.001**	ug/L	0.001	158	78	62	18	Standard
⎡>	**Tb**	**159**		ug/L			181387	163951	1	Standard
⎣	**Pb**	**208**	**-0.001**	ug/L	0.001	113	323	249	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:46:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				27246	4	Standard
	Cl	**37**		ug/L				2837394	3	Standard
⎡>	**Sc**	**45**		ug/L				433133	1	Standard
⎢	**Cr**	**52**		ug/L				8166	2	Standard
⎢	**Cr**	**53**		ug/L				76	12	Standard
⎣	**Mn**	**55**		ug/L				206	7	Standard
⎡>	**Ge**	**72**		ug/L				28633	1	KED
⎢	**Ni**	**60**		ug/L				24	13	KED
⎢	**Ni**	**62**		ug/L				1	86	KED
⎢	**Cu**	**63**		ug/L				24	19	KED
⎢	**Cu**	**65**		ug/L				15	33	KED
⎢	**Zn**	**66**		ug/L				23	32	KED
⎢	**Zn**	**67**		ug/L				6	124	KED
⎣	**As**	**75**		ug/L				1	78	KED
	Y	**89**		ug/L				37407	4	Standard
	Kr	**83**		ug/L				39	7	Standard
⎡>	**In-1**	**115**		ug/L				6039	1	KED
⎢	**Cd**	**111**		ug/L				2	145	KED
⎣	**Cd**	**114**		ug/L				2	117	KED
⎡>	**In**	**115**		ug/L				409433	1	Standard
⎢	**Ag**	**107**		ug/L				34	22	Standard
⎢	**Ba**	**135**		ug/L				38	7	Standard
⎣	**Ba**	**137**		ug/L				64	17	Standard
⎡>	**Tb**	**159**		ug/L				161761	1	Standard
⎣	**Pb**	**208**		ug/L				227	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 14:54:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				27289	5	Standard
⎡>	**Sc**	**45**		ug/L				453480	1	Standard
⎢	**Cr**	**52**		ug/L				8256	1	Standard
⎢	**Cr**	**53**		ug/L				77	3	Standard
⎣	**Mn**	**55**		ug/L				193	3	Standard
⎡>	**Ge**	**72**		ug/L				28304	1	KED
⎢	**Ni**	**60**		ug/L				22	14	KED
⎢	**Ni**	**62**		ug/L				1	86	KED
⎢	**Cu**	**63**		ug/L				24	44	KED
⎢	**Cu**	**65**		ug/L				12	18	KED
⎢	**Zn**	**66**		ug/L				26	18	KED
⎢	**Zn**	**67**		ug/L				5	0	KED
⎣	**As**	**75**		ug/L				2	10	KED
	Y	**89**		ug/L				38013	1	Standard
	Kr	**83**		ug/L				36	13	Standard
⎡>	**In-1**	**115**		ug/L				5725	0	KED
⎢	**Cd**	**111**		ug/L				4	70	KED
⎣	**Cd**	**114**		ug/L				3	87	KED
⎡>	**In**	**115**		ug/L				411490	1	Standard
⎢	**Ag**	**107**		ug/L				27	3	Standard
⎢	**Ba**	**135**		ug/L				32	0	Standard
⎣	**Ba**	**137**		ug/L				62	16	Standard
⎡>	**Tb**	**159**		ug/L				164240	3	Standard
⎣	**Pb**	**208**		ug/L				214	14	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Thursday, May 11, 2023 14:59:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	27062	2	Standard
>	**Sc**	**45**		ug/L			453480	440161	7	Standard
	Cr	**52**	**50.337**	ug/L	3.140	6	8256	607294	2	Standard
	Cr	**53**	**51.443**	ug/L	3.485	6	77	70699	1	Standard
	Mn	**55**	**50.441**	ug/L	2.492	4	193	875712	2	Standard
>	**Ge**	**72**		ug/L			28304	29116	2	KED
	Ni	**60**	**50.025**	ug/L	0.415	0	22	68966	2	KED
	Ni	**62**	**50.660**	ug/L	1.091	2	1	11014	1	KED
	Cu	**63**	**50.669**	ug/L	0.680	1	24	196030	1	KED
	Cu	**65**	**50.092**	ug/L	1.903	3	12	98378	1	KED
	Zn	**66**	**50.553**	ug/L	1.736	3	26	24313	1	KED
	Zn	**67**	**51.938**	ug/L	2.526	4	5	4074	3	KED
	As	**75**	**49.544**	ug/L	1.372	2	2	11609	0	KED
	Y	**89**		ug/L			38013	37634	8	Standard
	Kr	**83**		ug/L			36	52	23	Standard
>	**In-1**	**115**		ug/L			5725	6030	2	KED
	Cd	**111**	**50.347**	ug/L	1.224	2	4	10979	0	KED
	Cd	**114**	**50.833**	ug/L	1.154	2	3	28277	0	KED
>	**In**	**115**		ug/L			411490	395011	7	Standard
	Ag	**107**	**51.162**	ug/L	2.079	4	27	656715	3	Standard
	Ba	**135**	**51.093**	ug/L	2.849	5	32	243997	3	Standard
	Ba	**137**	**50.478**	ug/L	3.171	6	62	429804	1	Standard
>	**Tb**	**159**		ug/L			164240	165110	7	Standard
	Pb	**208**	**51.095**	ug/L	3.200	6	214	4061166	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:06:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	28083	4	Standard
⌈>	**Sc**	**45**		ug/L			453480	460376	2	Standard
|	**Cr**	**52**	**49.268**	ug/L	0.237	0	8256	623624	2	Standard
|	**Cr**	**53**	**48.687**	ug/L	0.344	0	77	70224	2	Standard
⌊	**Mn**	**55**	**49.182**	ug/L	0.910	1	193	895012	1	Standard
⌈>	**Ge**	**72**		ug/L			28304	29239	2	KED
|	**Ni**	**60**	**50.169**	ug/L	0.848	1	22	69473	3	KED
|	**Ni**	**62**	**50.974**	ug/L	1.193	2	1	11133	3	KED
|	**Cu**	**63**	**50.018**	ug/L	0.409	0	24	194361	1	KED
|	**Cu**	**65**	**49.969**	ug/L	0.555	1	12	98612	1	KED
|	**Zn**	**66**	**50.950**	ug/L	0.867	1	26	24617	0	KED
|	**Zn**	**67**	**50.684**	ug/L	0.714	1	5	3994	0	KED
⌊	**As**	**75**	**49.714**	ug/L	0.612	1	2	11702	0	KED
	Y	**89**		ug/L			38013	39217	2	Standard
	Kr	**83**		ug/L			36	42	25	Standard
⌈>	**In-1**	**115**		ug/L			5725	6156	1	KED
|	**Cd**	**111**	**50.268**	ug/L	0.769	1	4	11197	1	KED
⌊	**Cd**	**114**	**49.967**	ug/L	0.817	1	3	28389	1	KED
⌈>	**In**	**115**		ug/L			411490	411382	1	Standard
|	**Ag**	**107**	**50.038**	ug/L	0.943	1	27	670246	2	Standard
|	**Ba**	**135**	**48.789**	ug/L	1.142	2	32	243298	3	Standard
⌊	**Ba**	**137**	**49.603**	ug/L	0.657	1	62	441251	2	Standard
⌈>	**Tb**	**159**		ug/L			164240	172225	2	Standard
⌊	**Pb**	**208**	**49.434**	ug/L	0.951	1	214	4111011	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:13:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	27314	3	Standard
⌈>	**Sc**	**45**		ug/L			453480	456632	1	Standard
|	**Cr**	**52**	**0.002**	ug/L	0.009	627	8256	8331	1	Standard
|	**Cr**	**53**	**-0.012**	ug/L	0.007	63	77	61	18	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	58	193	228	9	Standard
⌈>	**Ge**	**72**		ug/L			28304	29402	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.009	676	22	25	45	KED
|	**Ni**	**62**	**0.017**	ug/L	0.019	107	1	5	78	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	47	24	36	16	KED
|	**Cu**	**65**	**0.002**	ug/L	0.003	167	12	16	40	KED
|	**Zn**	**66**	**0.011**	ug/L	0.007	64	26	32	11	KED
|	**Zn**	**67**	**0.005**	ug/L	0.015	286	5	6	17	KED
⌊	**As**	**75**	**0.008**	ug/L	0.002	26	2	4	11	KED
	Y	**89**		ug/L			38013	38102	2	Standard
	Kr	**83**		ug/L			36	40	26	Standard
⌈>	**In-1**	**115**		ug/L			5725	6168	0	KED
|	**Cd**	**111**	**-0.013**	ug/L	0.007	51	4	1	91	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.003	89	3	1	103	KED
⌈>	**In**	**115**		ug/L			411490	415787	1	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.000	15	27	70	9	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.002	81	32	43	20	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	97	62	74	14	Standard
⌈>	**Tb**	**159**		ug/L			164240	164798	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	46	214	285	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:18:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	31340	3	Standard
⌈>	**Sc**	**45**		ug/L			453480	457759	1	Standard
|	**Cr**	**52**	**0.497**	ug/L	0.030	6	8256	14505	1	Standard
|	**Cr**	**53**	**0.480**	ug/L	0.006	1	77	766	2	Standard
⌊	**Mn**	**55**	**0.503**	ug/L	0.008	1	193	9302	0	Standard
⌈>	**Ge**	**72**		ug/L			28304	29147	0	KED
|	**Ni**	**60**	**0.526**	ug/L	0.038	7	22	749	6	KED
|	**Ni**	**62**	**0.510**	ug/L	0.024	4	1	112	5	KED
|	**Cu**	**63**	**0.700**	ug/L	0.033	4	24	2736	4	KED
|	**Cu**	**65**	**0.654**	ug/L	0.037	5	12	1299	5	KED
|	**Zn**	**66**	**6.516**	ug/L	0.092	1	26	3162	1	KED
|	**Zn**	**67**	**5.954**	ug/L	0.279	4	5	473	4	KED
⌊	**As**	**75**	**0.199**	ug/L	0.021	10	2	49	9	KED
	Y	**89**		ug/L			38013	38127	2	Standard
	Kr	**83**		ug/L			36	44	40	Standard
⌈>	**In-1**	**115**		ug/L			5725	5964	0	KED
|	**Cd**	**111**	**0.083**	ug/L	0.014	16	4	22	13	KED
⌊	**Cd**	**114**	**0.085**	ug/L	0.020	23	3	50	21	KED
⌈>	**In**	**115**		ug/L			411490	416552	1	Standard
|	**Ag**	**107**	**0.206**	ug/L	0.010	4	27	2817	4	Standard
|	**Ba**	**135**	**0.486**	ug/L	0.006	1	32	2485	1	Standard
⌊	**Ba**	**137**	**0.497**	ug/L	0.008	1	62	4542	2	Standard
⌈>	**Tb**	**159**		ug/L			164240	163726	0	Standard
⌊	**Pb**	**208**	**0.113**	ug/L	0.001	0	214	9144	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:23:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	97217	3	Standard
>	**Sc**	**45**		ug/L			453480	450990	1	Standard
	Cr	**52**	**0.619**	ug/L	0.009	1	8256	15784	2	Standard
	Cr	**53**	**1.691**	ug/L	0.026	1	77	2463	3	Standard
	Mn	**55**	**0.128**	ug/L	0.002	1	193	2482	1	Standard
>	**Ge**	**72**		ug/L			28304	27762	1	KED
	Ni	**60**	**0.098**	ug/L	0.014	14	22	151	12	KED
	Ni	**62**	**0.126**	ug/L	0.038	30	1	27	28	KED
	Cu	**63**	**0.045**	ug/L	0.008	17	24	189	14	KED
	Cu	**65**	**0.054**	ug/L	0.007	13	12	112	11	KED
	Zn	**66**	**0.231**	ug/L	0.023	10	26	131	7	KED
	Zn	**67**	**0.163**	ug/L	0.041	25	5	17	16	KED
	As	**75**	**0.021**	ug/L	0.011	52	2	7	35	KED
	Y	**89**		ug/L			38013	38861	1	Standard
	Kr	**83**		ug/L			36	71	17	Standard
>	**In-1**	**115**		ug/L			5725	5764	1	KED
	Cd	**111**	**0.047**	ug/L	0.016	33	4	13	21	KED
	Cd	**114**	**0.044**	ug/L	0.005	11	3	27	8	KED
>	**In**	**115**		ug/L			411490	393779	0	Standard
	Ag	**107**	**0.004**	ug/L	0.002	42	27	79	28	Standard
	Ba	**135**	**0.107**	ug/L	0.010	9	32	544	9	Standard
	Ba	**137**	**0.101**	ug/L	0.006	6	62	920	6	Standard
>	**Tb**	**159**		ug/L			164240	161181	0	Standard
	Pb	**208**	**0.017**	ug/L	0.001	6	214	1535	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:28:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	95582	3	Standard
⌈>	**Sc**	**45**		ug/L			453480	451501	3	Standard
|	**Cr**	**52**	**19.309**	ug/L	0.190	0	8256	244658	2	Standard
|	**Cr**	**53**	**20.701**	ug/L	0.085	0	77	29324	3	Standard
⌊	**Mn**	**55**	**19.005**	ug/L	0.376	1	193	339259	1	Standard
⌈>	**Ge**	**72**		ug/L			28304	27187	1	KED
|	**Ni**	**60**	**20.096**	ug/L	0.486	2	22	25881	1	KED
|	**Ni**	**62**	**20.993**	ug/L	0.239	1	1	4264	1	KED
|	**Cu**	**63**	**20.032**	ug/L	0.187	0	24	72395	1	KED
|	**Cu**	**65**	**20.081**	ug/L	0.166	0	12	36858	1	KED
|	**Zn**	**66**	**19.222**	ug/L	0.170	0	26	8652	0	KED
|	**Zn**	**67**	**18.232**	ug/L	0.644	3	5	1339	3	KED
⌊	**As**	**75**	**19.554**	ug/L	0.554	2	2	4280	1	KED
	Y	**89**		ug/L			38013	38083	1	Standard
	Kr	**83**		ug/L			36	75	20	Standard
⌈>	**In-1**	**115**		ug/L			5725	5656	2	KED
|	**Cd**	**111**	**18.852**	ug/L	0.493	2	4	3859	1	KED
⌊	**Cd**	**114**	**18.980**	ug/L	0.824	4	3	9903	2	KED
⌈>	**In**	**115**		ug/L			411490	394438	3	Standard
|	**Ag**	**107**	**18.557**	ug/L	0.095	0	27	238342	3	Standard
|	**Ba**	**135**	**0.109**	ug/L	0.004	3	32	553	6	Standard
⌊	**Ba**	**137**	**0.103**	ug/L	0.003	3	62	939	2	Standard
⌈>	**Tb**	**159**		ug/L			164240	161935	2	Standard
⌊	**Pb**	**208**	**0.019**	ug/L	0.001	6	214	1687	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:32:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	31805	1	Standard
⌈>	**Sc**	**45**		ug/L			453480	454340	1	Standard
|	**Cr**	**52**	**193.447**	ug/L	1.846	0	8256	2392229	0	Standard
|	**Cr**	**53**	**189.875**	ug/L	3.302	1	77	269997	0	Standard
⌊	**Mn**	**55**	**197.868**	ug/L	1.246	0	193	3553689	1	Standard
⌈>	**Ge**	**72**		ug/L			28304	27450	1	KED
|	**Ni**	**60**	**192.267**	ug/L	5.856	3	22	249819	2	KED
|	**Ni**	**62**	**196.530**	ug/L	4.033	2	1	40290	0	KED
|	**Cu**	**63**	**191.286**	ug/L	3.025	1	24	697752	0	KED
|	**Cu**	**65**	**190.234**	ug/L	3.652	1	12	352415	0	KED
|	**Zn**	**66**	**192.981**	ug/L	3.879	2	26	87475	0	KED
|	**Zn**	**67**	**189.380**	ug/L	2.775	1	5	14001	1	KED
⌊	**As**	**75**	**197.010**	ug/L	2.672	1	2	43533	0	KED
	Y	**89**		ug/L			38013	39134	3	Standard
	Kr	**83**		ug/L			36	62	16	Standard
⌈>	**In-1**	**115**		ug/L			5725	5844	2	KED
|	**Cd**	**111**	**192.594**	ug/L	5.941	3	4	40691	1	KED
⌊	**Cd**	**114**	**193.758**	ug/L	8.282	4	3	104415	1	KED
⌈>	**In**	**115**		ug/L			411490	380931	1	Standard
|	**Ag**	**107**	**200.601**	ug/L	2.547	1	27	2487769	0	Standard
|	**Ba**	**135**	**198.373**	ug/L	1.293	0	32	915840	2	Standard
⌊	**Ba**	**137**	**195.380**	ug/L	0.838	0	62	1609046	1	Standard
⌈>	**Tb**	**159**		ug/L			164240	163550	1	Standard
⌊	**Pb**	**208**	**195.400**	ug/L	2.950	1	214	15432200	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:37:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	33722	4	Standard
⌈>	**Sc**	**45**		ug/L			453480	441731	1	Standard
|	**Cr**	**52**	**305.091**	ug/L	5.565	1	8256	3663729	2	Standard
|	**Cr**	**53**	**291.524**	ug/L	3.403	1	77	403107	2	Standard
⌊	**Mn**	**55**	**309.118**	ug/L	3.307	1	193	5397400	0	Standard
⌈>	**Ge**	**72**		ug/L			28304	27437	2	KED
|	**Ni**	**60**	**286.248**	ug/L	4.261	1	22	371797	2	KED
|	**Ni**	**62**	**294.176**	ug/L	9.832	3	1	60269	2	KED
|	**Cu**	**63**	**283.486**	ug/L	4.433	1	24	1033499	1	KED
|	**Cu**	**65**	**282.457**	ug/L	3.737	1	12	522986	0	KED
|	**Zn**	**66**	**280.790**	ug/L	3.654	1	26	127206	1	KED
|	**Zn**	**67**	**275.224**	ug/L	2.531	0	5	20333	1	KED
⌊	**As**	**75**	**296.499**	ug/L	4.791	1	2	65477	0	KED
	Y	**89**		ug/L			38013	36418	0	Standard
	Kr	**83**		ug/L			36	125	5	Standard
⌈>	**In-1**	**115**		ug/L			5725	5693	1	KED
|	**Cd**	**111**	**284.581**	ug/L	0.587	0	4	58604	1	KED
⌊	**Cd**	**114**	**287.279**	ug/L	2.990	1	3	150943	2	KED
⌈>	**In**	**115**		ug/L			411490	368922	1	Standard
|	**Ag**	**107**	**295.425**	ug/L	4.404	1	27	3548209	0	Standard
|	**Ba**	**135**	**285.410**	ug/L	2.244	0	32	1275959	0	Standard
⌊	**Ba**	**137**	**297.174**	ug/L	7.652	2	62	2369613	1	Standard
⌈>	**Tb**	**159**		ug/L			164240	153395	0	Standard
⌊	**Pb**	**208**	**299.935**	ug/L	6.119	2	214	22217572	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:50:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	32080	5	Standard
⌈>	**Sc**	**45**		ug/L			453480	462017	3	Standard
|	**Cr**	**52**	**0.029**	ug/L	0.011	37	8256	8782	4	Standard
|	**Cr**	**53**	**0.033**	ug/L	0.009	27	77	126	12	Standard
⌊	**Mn**	**55**	**0.008**	ug/L	0.000	4	193	346	5	Standard
⌈>	**Ge**	**72**		ug/L			28304	31188	2	KED
|	**Ni**	**60**	**0.010**	ug/L	0.003	31	22	40	12	KED
|	**Ni**	**62**	**0.018**	ug/L	0.028	152	1	5	115	KED
|	**Cu**	**63**	**0.005**	ug/L	0.002	33	24	46	14	KED
|	**Cu**	**65**	**0.008**	ug/L	0.004	50	12	31	30	KED
|	**Zn**	**66**	**0.067**	ug/L	0.033	48	26	63	27	KED
|	**Zn**	**67**	**0.030**	ug/L	0.033	107	5	8	32	KED
⌊	**As**	**75**	**0.035**	ug/L	0.003	8	2	11	8	KED
	Y	**89**		ug/L			38013	37074	2	Standard
	Kr	**83**		ug/L			36	41	16	Standard
⌈>	**In-1**	**115**		ug/L			5725	6678	0	KED
|	**Cd**	**111**	**0.344**	ug/L	0.610	177	4	88	167	KED
⌊	**Cd**	**114**	**0.415**	ug/L	0.712	171	3	260	168	KED
⌈>	**In**	**115**		ug/L			411490	405907	5	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.000	4	27	138	3	Standard
|	**Ba**	**135**	**0.011**	ug/L	0.002	15	32	84	9	Standard
⌊	**Ba**	**137**	**0.012**	ug/L	0.001	10	62	166	9	Standard
⌈>	**Tb**	**159**		ug/L			164240	165413	2	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.001	7	214	765	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 15:56:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	32817	6	Standard
⌈>	**Sc**	**45**		ug/L			453480	465595	0	Standard
|	**Cr**	**52**	**0.033**	ug/L	0.029	89	8256	8891	4	Standard
|	**Cr**	**53**	**0.022**	ug/L	0.008	36	77	112	10	Standard
⌊	**Mn**	**55**	**0.007**	ug/L	0.001	16	193	324	6	Standard
⌈>	**Ge**	**72**		ug/L			28304	30609	0	KED
|	**Ni**	**60**	**0.006**	ug/L	0.004	63	22	33	16	KED
|	**Ni**	**62**	**0.022**	ug/L	0.005	21	1	6	17	KED
|	**Cu**	**63**	**0.007**	ug/L	0.001	12	24	53	7	KED
|	**Cu**	**65**	**0.006**	ug/L	0.002	42	12	24	20	KED
|	**Zn**	**66**	**0.061**	ug/L	0.030	49	26	59	25	KED
|	**Zn**	**67**	**0.110**	ug/L	0.022	20	5	15	12	KED
⌊	**As**	**75**	**0.017**	ug/L	0.009	50	2	6	30	KED
	Y	**89**		ug/L			38013	37828	1	Standard
	Kr	**83**		ug/L			36	46	19	Standard
⌈>	**In-1**	**115**		ug/L			5725	6380	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.009	141	4	3	62	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.004	208	3	3	71	KED
⌈>	**In**	**115**		ug/L			411490	411081	2	Standard
|	**Ag**	**107**	**0.003**	ug/L	0.001	38	27	61	18	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.000	2	32	76	1	Standard
⌊	**Ba**	**137**	**0.008**	ug/L	0.001	19	62	129	8	Standard
⌈>	**Tb**	**159**		ug/L			164240	168060	0	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	6	214	699	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:02:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	28875	4	Standard
⌈>	**Sc**	**45**		ug/L			453480	482814	0	Standard
|	**Cr**	**52**	**48.915**	ug/L	1.071	2	8256	649472	2	Standard
|	**Cr**	**53**	**48.922**	ug/L	0.840	1	77	74007	2	Standard
⌊	**Mn**	**55**	**48.618**	ug/L	1.178	2	193	928265	3	Standard
⌈>	**Ge**	**72**		ug/L			28304	31467	1	KED
|	**Ni**	**60**	**47.900**	ug/L	0.847	1	22	71376	2	KED
|	**Ni**	**62**	**48.879**	ug/L	1.757	3	1	11486	2	KED
|	**Cu**	**63**	**48.723**	ug/L	0.352	0	24	203768	0	KED
|	**Cu**	**65**	**48.305**	ug/L	0.286	0	12	102604	1	KED
|	**Zn**	**66**	**49.318**	ug/L	0.810	1	26	25649	1	KED
|	**Zn**	**67**	**49.869**	ug/L	0.085	0	5	4231	1	KED
⌊	**As**	**75**	**48.603**	ug/L	0.330	0	2	12314	0	KED
	Y	**89**		ug/L			38013	39328	2	Standard
	Kr	**83**		ug/L			36	48	6	Standard
⌈>	**In-1**	**115**		ug/L			5725	6414	1	KED
|	**Cd**	**111**	**48.597**	ug/L	0.674	1	4	11277	0	KED
⌊	**Cd**	**114**	**47.948**	ug/L	0.913	1	3	28379	0	KED
⌈>	**In**	**115**		ug/L			411490	417201	1	Standard
|	**Ag**	**107**	**49.941**	ug/L	0.254	0	27	678388	1	Standard
|	**Ba**	**135**	**50.373**	ug/L	0.671	1	32	254680	0	Standard
⌊	**Ba**	**137**	**50.599**	ug/L	0.533	1	62	456395	1	Standard
⌈>	**Tb**	**159**		ug/L			164240	175544	1	Standard
⌊	**Pb**	**208**	**48.892**	ug/L	0.986	2	214	4144705	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:09:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27289	27823	4	Standard
⌈>	**Sc**	**45**		ug/L			453480	465227	3	Standard
|	**Cr**	**52**	**0.015**	ug/L	0.021	141	8256	8652	0	Standard
|	**Cr**	**53**	**0.001**	ug/L	0.006	536	77	81	8	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.001	58	193	232	8	Standard
⌈>	**Ge**	**72**		ug/L			28304	30317	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.007	437	22	26	35	KED
|	**Ni**	**62**	**0.016**	ug/L	0.005	30	1	5	21	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	88	24	32	17	KED
|	**Cu**	**65**	**0.005**	ug/L	0.002	42	12	22	17	KED
|	**Zn**	**66**	**0.047**	ug/L	0.018	38	26	51	18	KED
|	**Zn**	**67**	**0.057**	ug/L	0.047	82	5	10	36	KED
⌊	**As**	**75**	**0.016**	ug/L	0.005	33	2	6	18	KED
	Y	**89**		ug/L			38013	37122	1	Standard
	Kr	**83**		ug/L			36	37	32	Standard
⌈>	**In-1**	**115**		ug/L			5725	6495	4	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.006	118	4	3	41	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	61	3	2	45	KED
⌈>	**In**	**115**		ug/L			411490	406741	3	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	22	27	74	16	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.001	26	32	47	6	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.000	28	62	73	1	Standard
⌈>	**Tb**	**159**		ug/L			164240	165879	2	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	24	214	357	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:15:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				27225	3	Standard
>	**Sc**	**45**		ug/L				460122	1	Standard
	Cr	**52**		ug/L				8551	1	Standard
	Cr	**53**		ug/L				93	7	Standard
	Mn	**55**		ug/L				219	2	Standard
>	**Ge**	**72**		ug/L				30494	0	KED
	Ni	**60**		ug/L				28	24	KED
	Ni	**62**		ug/L				3	0	KED
	Cu	**63**		ug/L				26	37	KED
	Cu	**65**		ug/L				10	54	KED
	Zn	**66**		ug/L				19	49	KED
	Zn	**67**		ug/L				3	91	KED
	As	**75**		ug/L				2	57	KED
	Y	**89**		ug/L				38927	1	Standard
	Kr	**83**		ug/L				46	28	Standard
>	**In-1**	**115**		ug/L				6386	0	KED
	Cd	**111**		ug/L				4	135	KED
	Cd	**114**		ug/L				13	137	KED
>	**In**	**115**		ug/L				414575	1	Standard
	Ag	**107**		ug/L				42	6	Standard
	Ba	**135**		ug/L				38	10	Standard
	Ba	**137**		ug/L				52	20	Standard
>	**Tb**	**159**		ug/L				165965	0	Standard
	Pb	**208**		ug/L				210	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:19:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	28719	3	Standard
⌈>	**Sc**	**45**		ug/L			460122	479980	1	Standard
|	**Cr**	**52**	**48.714**	ug/L	0.892	1	8551	643070	0	Standard
|	**Cr**	**53**	**49.494**	ug/L	0.747	1	93	74427	0	Standard
⌊	**Mn**	**55**	**49.581**	ug/L	1.295	2	219	940735	1	Standard
⌈>	**Ge**	**72**		ug/L			30494	30799	1	KED
|	**Ni**	**60**	**49.076**	ug/L	0.404	0	28	71585	1	KED
|	**Ni**	**62**	**50.137**	ug/L	0.582	1	3	11536	0	KED
|	**Cu**	**63**	**49.653**	ug/L	0.328	0	26	203267	1	KED
|	**Cu**	**65**	**49.757**	ug/L	0.853	1	10	103428	0	KED
|	**Zn**	**66**	**51.089**	ug/L	0.637	1	19	25996	0	KED
|	**Zn**	**67**	**49.790**	ug/L	0.492	0	3	4132	2	KED
⌊	**As**	**75**	**49.584**	ug/L	0.515	1	2	12295	0	KED
	Y	**89**		ug/L			38927	40383	1	Standard
	Kr	**83**		ug/L			46	45	18	Standard
⌈>	**In-1**	**115**		ug/L			6386	6468	3	KED
|	**Cd**	**111**	**48.415**	ug/L	0.738	1	4	11326	1	KED
⌊	**Cd**	**114**	**48.721**	ug/L	0.964	1	13	29080	1	KED
⌈>	**In**	**115**		ug/L			414575	414534	0	Standard
|	**Ag**	**107**	**51.238**	ug/L	1.337	2	42	691635	2	Standard
|	**Ba**	**135**	**50.227**	ug/L	0.731	1	38	252349	1	Standard
⌊	**Ba**	**137**	**50.308**	ug/L	0.936	1	52	450887	1	Standard
⌈>	**Tb**	**159**		ug/L			165965	174759	1	Standard
⌊	**Pb**	**208**	**48.648**	ug/L	1.114	2	210	4105611	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:27:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	27300	2	Standard
⌈>	**Sc**	**45**		ug/L			460122	470436	2	Standard
|	**Cr**	**52**	**-0.018**	ug/L	0.009	52	8551	8514	4	Standard
|	**Cr**	**53**	**-0.003**	ug/L	0.004	131	93	90	5	Standard
⌊	**Mn**	**55**	**-0.000**	ug/L	0.002	781	219	220	13	Standard
⌈>	**Ge**	**72**		ug/L			30494	30726	0	KED
|	**Ni**	**60**	**-0.001**	ug/L	0.005	459	28	27	24	KED
|	**Ni**	**62**	**0.008**	ug/L	0.029	350	3	5	115	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	93	26	32	15	KED
|	**Cu**	**65**	**0.004**	ug/L	0.001	39	10	17	16	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.008	142	19	17	22	KED
|	**Zn**	**67**	**0.007**	ug/L	0.023	312	3	3	50	KED
⌊	**As**	**75**	**0.006**	ug/L	0.006	100	2	4	33	KED
	Y	**89**		ug/L			38927	38371	2	Standard
	Kr	**83**		ug/L			46	50	12	Standard
⌈>	**In-1**	**115**		ug/L			6386	6581	0	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.005	40	4	1	69	KED
⌊	**Cd**	**114**	**-0.018**	ug/L	0.004	20	13	2	74	KED
⌈>	**In**	**115**		ug/L			414575	415511	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	45	42	74	17	Standard
|	**Ba**	**135**	**0.004**	ug/L	0.002	41	38	56	14	Standard
⌊	**Ba**	**137**	**0.002**	ug/L	0.001	31	52	67	5	Standard
⌈>	**Tb**	**159**		ug/L			165965	170390	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	34	210	278	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-BS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:37:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	36179	3	Standard
>	Sc	45		ug/L			460122	489899	1	Standard
	Cr	52	24.960	ug/L	0.316	1	8551	340780	0	Standard
	Cr	53	25.380	ug/L	0.338	1	93	39004	0	Standard
	Mn	55	25.393	ug/L	0.561	2	219	491901	0	Standard
>	Ge	72		ug/L			30494	32242	1	KED
	Ni	60	25.240	ug/L	0.314	1	28	38550	1	KED
	Ni	62	25.783	ug/L	0.109	0	3	6213	1	KED
	Cu	63	26.359	ug/L	0.566	2	26	112958	1	KED
	Cu	65	25.384	ug/L	0.481	1	10	55248	2	KED
	Zn	66	79.567	ug/L	1.920	2	19	42370	1	KED
	Zn	67	75.736	ug/L	2.160	2	3	6576	1	KED
	As	75	24.433	ug/L	0.538	2	2	6343	1	KED
	Y	89		ug/L			38927	40159	1	Standard
	Kr	83		ug/L			46	43	4	Standard
>	In-1	115		ug/L			6386	6957	2	KED
	Cd	111	23.957	ug/L	0.603	2	4	6030	1	KED
	Cd	114	24.072	ug/L	0.683	2	13	15459	0	KED
>	In	115		ug/L			414575	431799	0	Standard
	Ag	107	26.127	ug/L	0.824	3	42	367351	3	Standard
	Ba	135	25.404	ug/L	0.211	0	38	132968	0	Standard
	Ba	137	25.330	ug/L	0.211	0	52	236512	1	Standard
>	Tb	159		ug/L			165965	174231	1	Standard
	Pb	208	25.433	ug/L	0.192	0	210	2140092	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0342-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:42:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	40021	2	Standard
⌈>	Sc	45		ug/L			460122	473873	0	Standard
|	Cr	52	0.097	ug/L	0.010	10	8551	10051	0	Standard
|	Cr	53	0.105	ug/L	0.018	17	93	251	9	Standard
⌊	Mn	55	0.033	ug/L	0.002	5	219	837	3	Standard
⌈>	Ge	72		ug/L			30494	31264	2	KED
|	Ni	60	0.022	ug/L	0.015	70	28	60	35	KED
|	Ni	62	0.016	ug/L	0.016	103	3	7	50	KED
|	Cu	63	0.049	ug/L	0.014	29	26	232	24	KED
|	Cu	65	0.056	ug/L	0.016	28	10	128	24	KED
|	Zn	66	0.470	ug/L	0.069	14	19	262	12	KED
|	Zn	67	0.497	ug/L	0.014	2	3	45	4	KED
⌊	As	75	0.015	ug/L	0.027	177	2	6	98	KED
	Y	89		ug/L			38927	39917	0	Standard
	Kr	83		ug/L			46	39	7	Standard
⌈>	In-1	115		ug/L			6386	6540	1	KED
|	Cd	111	-0.002	ug/L	0.012	633	4	3	75	KED
⌊	Cd	114	-0.006	ug/L	0.013	209	13	9	77	KED
⌈>	In	115		ug/L			414575	415543	1	Standard
|	Ag	107	0.003	ug/L	0.000	11	42	83	6	Standard
|	Ba	135	0.026	ug/L	0.003	12	38	171	9	Standard
⌊	Ba	137	0.029	ug/L	0.003	9	52	314	6	Standard
⌈>	Tb	159		ug/L			165965	169922	1	Standard
⌊	Pb	208	0.006	ug/L	0.001	14	210	718	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0342-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:46:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	39027	2	Standard
>	Sc	45		ug/L			460122	461654	2	Standard
	Cr	52	25.238	ug/L	0.287	1	8551	324601	2	Standard
	Cr	53	25.440	ug/L	0.296	1	93	36851	3	Standard
	Mn	55	25.373	ug/L	0.120	0	219	463229	2	Standard
>	Ge	72		ug/L			30494	30211	2	KED
	Ni	60	26.185	ug/L	0.273	1	28	37483	3	KED
	Ni	62	26.338	ug/L	0.301	1	3	5947	3	KED
	Cu	63	27.433	ug/L	0.170	0	26	110164	2	KED
	Cu	65	26.596	ug/L	0.313	1	10	54234	2	KED
	Zn	66	83.932	ug/L	1.655	1	19	41884	3	KED
	Zn	67	80.250	ug/L	2.169	2	3	6529	3	KED
	As	75	25.370	ug/L	0.056	0	2	6172	2	KED
	Y	89		ug/L			38927	38192	1	Standard
	Kr	83		ug/L			46	52	11	Standard
>	In-1	115		ug/L			6386	6501	3	KED
	Cd	111	25.134	ug/L	1.192	4	4	5907	1	KED
	Cd	114	25.194	ug/L	0.793	3	13	15119	1	KED
>	In	115		ug/L			414575	410527	2	Standard
	Ag	107	25.608	ug/L	0.856	3	42	342138	0	Standard
	Ba	135	25.741	ug/L	0.306	1	38	128095	2	Standard
	Ba	137	25.254	ug/L	0.068	0	52	224183	2	Standard
>	Tb	159		ug/L			165965	165111	0	Standard
	Pb	208	25.619	ug/L	0.557	2	210	2043320	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BS TEST OLD SPIKE
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Thursday, May 11, 2023 16:51:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	40627	4	Standard
⌈>	**Sc**	**45**		ug/L			460122	458950	2	Standard
|	**Cr**	**52**	**26.766**	ug/L	0.345	1	8551	341750	2	Standard
|	**Cr**	**53**	**26.847**	ug/L	0.458	1	93	38641	0	Standard
⌊	**Mn**	**55**	**27.372**	ug/L	0.430	1	219	496744	2	Standard
⌈>	**Ge**	**72**		ug/L			30494	30230	0	KED
|	**Ni**	**60**	**27.633**	ug/L	0.426	1	28	39570	1	KED
|	**Ni**	**62**	**28.064**	ug/L	0.431	1	3	6340	1	KED
|	**Cu**	**63**	**29.127**	ug/L	0.178	0	26	117038	0	KED
|	**Cu**	**65**	**28.454**	ug/L	0.497	1	10	58061	1	KED
|	**Zn**	**66**	**89.908**	ug/L	0.386	0	19	44892	0	KED
|	**Zn**	**67**	**86.177**	ug/L	1.866	2	3	7016	1	KED
⌊	**As**	**75**	**27.188**	ug/L	0.020	0	2	6619	0	KED
	Y	**89**		ug/L			38927	38692	1	Standard
	Kr	**83**		ug/L			46	45	39	Standard
⌈>	**In-1**	**115**		ug/L			6386	6224	1	KED
|	**Cd**	**111**	**27.062**	ug/L	0.623	2	4	6094	0	KED
⌊	**Cd**	**114**	**27.613**	ug/L	0.405	1	13	15870	0	KED
⌈>	**In**	**115**		ug/L			414575	412256	1	Standard
|	**Ag**	**107**	**27.469**	ug/L	0.347	1	42	368710	1	Standard
|	**Ba**	**135**	**26.960**	ug/L	0.678	2	38	134694	1	Standard
⌊	**Ba**	**137**	**26.753**	ug/L	0.291	1	52	238470	1	Standard
⌈>	**Tb**	**159**		ug/L			165965	167858	1	Standard
⌊	**Pb**	**208**	**26.566**	ug/L	0.294	1	210	2153961	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BS TEST NEW SPIKE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 16:55:43

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	38854	7	Standard
⌈>	**Sc**	**45**		ug/L			460122	468192	3	Standard
|	**Cr**	**52**	**23.853**	ug/L	0.197	0	8551	311663	3	Standard
|	**Cr**	**53**	**23.892**	ug/L	0.082	0	93	35097	3	Standard
⌊	**Mn**	**55**	**24.567**	ug/L	0.042	0	219	454908	3	Standard
⌈>	**Ge**	**72**		ug/L			30494	30816	1	KED
|	**Ni**	**60**	**24.684**	ug/L	0.484	1	28	36037	2	KED
|	**Ni**	**62**	**24.520**	ug/L	0.523	2	3	5646	1	KED
|	**Cu**	**63**	**25.318**	ug/L	0.217	0	26	103704	1	KED
|	**Cu**	**65**	**25.251**	ug/L	0.532	2	10	52519	1	KED
|	**Zn**	**66**	**78.571**	ug/L	1.426	1	19	39990	1	KED
|	**Zn**	**67**	**74.287**	ug/L	2.241	3	3	6164	1	KED
⌊	**As**	**75**	**23.647**	ug/L	0.271	1	2	5868	0	KED
	Y	**89**		ug/L			38927	39003	4	Standard
	Kr	**83**		ug/L			46	53	14	Standard
⌈>	**In-1**	**115**		ug/L			6386	6281	2	KED
|	**Cd**	**111**	**24.475**	ug/L	0.467	1	4	5562	0	KED
⌊	**Cd**	**114**	**24.380**	ug/L	0.860	3	13	14138	1	KED
⌈>	**In**	**115**		ug/L			414575	423587	2	Standard
|	**Ag**	**107**	**24.883**	ug/L	0.677	2	42	343351	4	Standard
|	**Ba**	**135**	**23.986**	ug/L	0.495	2	38	123196	3	Standard
⌊	**Ba**	**137**	**23.662**	ug/L	0.444	1	52	216790	3	Standard
⌈>	**Tb**	**159**		ug/L			165965	168602	1	Standard
⌊	**Pb**	**208**	**24.317**	ug/L	0.313	1	210	1980323	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0271-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:00:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	142251	4	Standard
>	Sc	45		ug/L			460122	446369	1	Standard
	Cr	52	1.076	ug/L	0.027	2	8551	21317	1	Standard
	Cr	53	0.715	ug/L	0.034	4	93	1087	3	Standard
	Mn	55	5.426	ug/L	0.020	0	219	95958	1	Standard
>	Ge	72		ug/L			30494	28103	0	KED
	Ni	60	0.941	ug/L	0.024	2	28	1278	2	KED
	Ni	62	0.875	ug/L	0.099	11	3	187	11	KED
	Cu	63	0.069	ug/L	0.007	9	26	280	9	KED
	Cu	65	0.063	ug/L	0.007	11	10	128	10	KED
	Zn	66	0.679	ug/L	0.039	5	19	333	5	KED
	Zn	67	1.086	ug/L	0.037	3	3	85	3	KED
	As	75	0.096	ug/L	0.026	26	2	24	23	KED
	Y	89		ug/L			38927	39499	0	Standard
	Kr	83		ug/L			46	41	20	Standard
>	In-1	115		ug/L			6386	5644	1	KED
	Cd	111	-0.006	ug/L	0.010	172	4	2	78	KED
	Cd	114	-0.012	ug/L	0.008	67	13	5	79	KED
>	In	115		ug/L			414575	389922	0	Standard
	Ag	107	0.003	ug/L	0.001	22	42	83	12	Standard
	Ba	135	5.108	ug/L	0.029	0	38	24174	1	Standard
	Ba	137	5.077	ug/L	0.055	1	52	42850	1	Standard
>	Tb	159		ug/L			165965	163179	1	Standard
	Pb	208	0.011	ug/L	0.001	10	210	1069	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0239-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:05:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	40361	4	Standard
>	Sc	45		ug/L			460122	468394	2	Standard
	Cr	52	100.505	ug/L	1.370	1	8551	1285499	0	Standard
	Cr	53	102.580	ug/L	0.852	0	93	150438	1	Standard
	Mn	55	1.875	ug/L	0.033	1	219	34923	0	Standard
>	Ge	72		ug/L			30494	28568	2	KED
	Ni	60	1.933	ug/L	0.084	4	28	2638	2	KED
	Ni	62	1.986	ug/L	0.028	1	3	427	1	KED
	Cu	63	15.980	ug/L	0.165	1	26	60693	2	KED
	Cu	65	15.923	ug/L	0.257	1	10	30705	0	KED
	Zn	66	12.253	ug/L	0.340	2	19	5796	1	KED
	Zn	67	11.501	ug/L	0.878	7	3	888	9	KED
	As	75	0.246	ug/L	0.030	12	2	59	9	KED
	Y	89		ug/L			38927	38347	2	Standard
	Kr	83		ug/L			46	35	17	Standard
>	In-1	115		ug/L			6386	5914	2	KED
	Cd	111	0.242	ug/L	0.044	18	4	55	17	KED
	Cd	114	0.250	ug/L	0.010	3	13	148	5	KED
>	In	115		ug/L			414575	390354	0	Standard
	Ag	107	0.013	ug/L	0.003	21	42	200	17	Standard
	Ba	135	1.685	ug/L	0.029	1	38	8004	1	Standard
	Ba	137	1.639	ug/L	0.020	1	52	13878	1	Standard
>	Tb	159		ug/L			165965	163119	1	Standard
	Pb	208	0.270	ug/L	0.002	0	210	21458	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:10:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	31547	4	Standard
⌈>	**Sc**	**45**		ug/L			460122	443747	2	Standard
|	**Cr**	**52**	**0.140**	ug/L	0.050	35	8551	9920	3	Standard
|	**Cr**	**53**	**0.065**	ug/L	0.038	58	93	179	27	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	34	219	256	5	Standard
⌈>	**Ge**	**72**		ug/L			30494	28983	0	KED
|	**Ni**	**60**	**0.007**	ug/L	0.004	57	28	36	13	KED
|	**Ni**	**62**	**0.018**	ug/L	0.023	126	3	7	66	KED
|	**Cu**	**63**	**0.004**	ug/L	0.002	61	26	39	22	KED
|	**Cu**	**65**	**0.008**	ug/L	0.004	47	10	25	30	KED
|	**Zn**	**66**	**0.104**	ug/L	0.017	16	19	68	12	KED
|	**Zn**	**67**	**0.124**	ug/L	0.038	30	3	12	22	KED
⌊	**As**	**75**	**0.003**	ug/L	0.008	231	2	3	51	KED
	Y	**89**		ug/L			38927	38028	2	Standard
	Kr	**83**		ug/L			46	40	21	Standard
⌈>	**In-1**	**115**		ug/L			6386	5864	1	KED
|	**Cd**	**111**	**-0.010**	ug/L	0.005	48	4	1	69	KED
⌊	**Cd**	**114**	**-0.013**	ug/L	0.004	30	13	4	44	KED
⌈>	**In**	**115**		ug/L			414575	408589	0	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	68	42	33	16	Standard
|	**Ba**	**135**	**0.006**	ug/L	0.003	56	38	67	24	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.002	18	52	135	11	Standard
⌈>	**Tb**	**159**		ug/L			165965	162358	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	3	210	469	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0074-13
Sample Dil Factor: 100
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:16:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	49095	3	Standard
⌈>	**Sc**	**45**		ug/L			460122	458570	1	Standard
|	**Cr**	**52**	**0.121**	ug/L	0.004	3	8551	10023	0	Standard
|	**Cr**	**53**	**0.117**	ug/L	0.006	5	93	260	3	Standard
⌊	**Mn**	**55**	**62.290**	ug/L	0.696	1	219	1129343	1	Standard
⌈>	**Ge**	**72**		ug/L			30494	29462	1	KED
|	**Ni**	**60**	**0.271**	ug/L	0.028	10	28	405	10	KED
|	**Ni**	**62**	**0.312**	ug/L	0.043	13	3	72	14	KED
|	**Cu**	**63**	**0.012**	ug/L	0.004	34	26	73	23	KED
|	**Cu**	**65**	**0.017**	ug/L	0.007	38	10	43	30	KED
|	**Zn**	**66**	**0.253**	ug/L	0.025	9	19	142	7	KED
|	**Zn**	**67**	**0.330**	ug/L	0.119	36	3	29	32	KED
⌊	**As**	**75**	**0.024**	ug/L	0.006	23	2	8	17	KED
	Y	**89**		ug/L			38927	38051	5	Standard
	Kr	**83**		ug/L			46	41	4	Standard
⌈>	**In-1**	**115**		ug/L			6386	6228	4	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.003	106	4	3	15	KED
⌊	**Cd**	**114**	**-0.017**	ug/L	0.004	21	13	3	72	KED
⌈>	**In**	**115**		ug/L			414575	414433	0	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	51	42	29	22	Standard
|	**Ba**	**135**	**1.303**	ug/L	0.021	1	38	6583	1	Standard
⌊	**Ba**	**137**	**1.275**	ug/L	0.021	1	52	11471	1	Standard
⌈>	**Tb**	**159**		ug/L			165965	164391	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	15	210	306	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:21:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	32250	3	Standard
⌈>	**Sc**	**45**		ug/L			460122	448029	3	Standard
|	**Cr**	**52**	**0.100**	ug/L	0.015	14	8551	9535	1	Standard
|	**Cr**	**53**	**0.007**	ug/L	0.002	32	93	99	4	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.000	15	219	269	6	Standard
⌈>	**Ge**	**72**		ug/L			30494	29530	2	KED
|	**Ni**	**60**	**0.005**	ug/L	0.004	76	28	34	14	KED
|	**Ni**	**62**	**0.015**	ug/L	0.026	175	3	6	83	KED
|	**Cu**	**63**	**0.007**	ug/L	0.002	31	26	53	15	KED
|	**Cu**	**65**	**0.009**	ug/L	0.006	67	10	27	45	KED
|	**Zn**	**66**	**0.101**	ug/L	0.022	21	19	68	16	KED
|	**Zn**	**67**	**0.145**	ug/L	0.017	11	3	14	7	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.000	2	2	1	0	KED
	Y	**89**		ug/L			38927	37386	3	Standard
	Kr	**83**		ug/L			46	36	27	Standard
⌈>	**In-1**	**115**		ug/L			6386	6171	1	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.002	22	4	1	34	KED
⌊	**Cd**	**114**	**-0.019**	ug/L	0.003	17	13	1	107	KED
⌈>	**In**	**115**		ug/L			414575	410481	2	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	39	42	17	53	Standard
|	**Ba**	**135**	**0.009**	ug/L	0.001	12	38	81	8	Standard
⌊	**Ba**	**137**	**0.010**	ug/L	0.002	16	52	140	7	Standard
⌈>	**Tb**	**159**		ug/L			165965	159373	2	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	6	210	454	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:25:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	28398	4	Standard
⎡>	**Sc**	**45**		ug/L			460122	469913	2	Standard
⎢	**Cr**	**52**	**48.856**	ug/L	0.643	1	8551	631392	1	Standard
⎢	**Cr**	**53**	**49.223**	ug/L	1.281	2	93	72464	2	Standard
⎣	**Mn**	**55**	**49.560**	ug/L	1.224	2	219	920566	1	Standard
⎡>	**Ge**	**72**		ug/L			30494	30063	1	KED
⎢	**Ni**	**60**	**49.867**	ug/L	0.782	1	28	70999	2	KED
⎢	**Ni**	**62**	**50.197**	ug/L	0.689	1	3	11275	1	KED
⎢	**Cu**	**63**	**50.159**	ug/L	0.576	1	26	200413	0	KED
⎢	**Cu**	**65**	**48.899**	ug/L	0.492	1	10	99227	1	KED
⎢	**Zn**	**66**	**51.739**	ug/L	1.386	2	19	25699	2	KED
⎢	**Zn**	**67**	**50.185**	ug/L	0.498	0	3	4065	2	KED
⎣	**As**	**75**	**50.172**	ug/L	0.623	1	2	12145	1	KED
	Y	**89**		ug/L			38927	39969	1	Standard
	Kr	**83**		ug/L			46	45	37	Standard
⎡>	**In-1**	**115**		ug/L			6386	6279	1	KED
⎢	**Cd**	**111**	**49.539**	ug/L	0.842	1	4	11251	0	KED
⎣	**Cd**	**114**	**49.229**	ug/L	0.544	1	13	28533	0	KED
⎡>	**In**	**115**		ug/L			414575	411972	1	Standard
⎢	**Ag**	**107**	**50.177**	ug/L	0.802	1	42	673041	1	Standard
⎢	**Ba**	**135**	**49.679**	ug/L	1.413	2	38	248006	1	Standard
⎣	**Ba**	**137**	**49.119**	ug/L	1.140	2	52	437442	1	Standard
⎡>	**Tb**	**159**		ug/L			165965	171214	1	Standard
⎣	**Pb**	**208**	**49.862**	ug/L	0.645	1	210	4122760	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:32:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	27717	4	Standard
⌈>	**Sc**	**45**		ug/L			460122	450724	2	Standard
|	**Cr**	**52**	**0.003**	ug/L	0.014	418	8551	8421	4	Standard
|	**Cr**	**53**	**-0.005**	ug/L	0.009	182	93	84	12	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.000	23	219	200	3	Standard
⌈>	**Ge**	**72**		ug/L			30494	29445	3	KED
|	**Ni**	**60**	**0.006**	ug/L	0.005	79	28	35	15	KED
|	**Ni**	**62**	**0.012**	ug/L	0.036	300	3	6	124	KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	144	26	31	23	KED
|	**Cu**	**65**	**0.003**	ug/L	0.005	179	10	15	62	KED
|	**Zn**	**66**	**0.011**	ug/L	0.008	78	19	24	16	KED
|	**Zn**	**67**	**0.002**	ug/L	0.029	1588	3	3	69	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.001	460	2	2	10	KED
	Y	**89**		ug/L			38927	37726	1	Standard
	Kr	**83**		ug/L			46	40	4	Standard
⌈>	**In-1**	**115**		ug/L			6386	6165	2	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.003	78	4	3	17	KED
⌊	**Cd**	**114**	**-0.017**	ug/L	0.002	11	13	3	35	KED
⌈>	**In**	**115**		ug/L			414575	396753	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.000	50	42	48	9	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.002	114	38	46	26	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.001	13	52	86	5	Standard
⌈>	**Tb**	**159**		ug/L			165965	158887	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	54	210	264	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:42:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	61757	0	Standard
	Kr	**83**		ug/L			46	46	14	Standard
>	**Tb**	**159**		ug/L			165965	165213	1	Standard
	Pb	**208**	**0.043**	ug/L	0.001	1	210	3630	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-08
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:43:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	58213	2	Standard
	Kr	**83**		ug/L			46	52	9	Standard
>	**Tb**	**159**		ug/L			165965	164898	0	Standard
	Pb	**208**	**0.131**	ug/L	0.002	1	210	10648	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:44:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			27225	58428	1	Standard
Kr	**83**		ug/L			46	45	11	Standard
Tb	**159**		ug/L			165965	163874	1	Standard
Pb	**208**	**0.109**	ug/L	0.003	2	210	8815	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-12
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:46:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	61012	1	Standard
	Kr	**83**		ug/L			46	47	28	Standard
>	**Tb**	**159**		ug/L			165965	164973	2	Standard
	Pb	**208**	**0.029**	ug/L	0.001	3	210	2478	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-18
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:47:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	**13**		ug/L			27225	61398	0	Standard
Kr	**83**		ug/L			46	51	16	Standard
Tb	**159**		ug/L			165965	165020	0	Standard
Pb	**208**	**0.197**	ug/L	0.005	2	210	15939	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-20
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:48:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	50771	1	Standard
	Kr	**83**		ug/L			46	48	13	Standard
>	**Tb**	**159**		ug/L			165965	171143	0	Standard
	Pb	**208**	**0.113**	ug/L	0.002	1	210	9556	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-DUP2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:50:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	49235	1	Standard
	Kr	**83**		ug/L			46	48	43	Standard
>	**Tb**	**159**		ug/L			165965	167068	1	Standard
	Pb	**208**	**0.116**	ug/L	0.001	1	210	9571	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-MS2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:51:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	49614	2	Standard
	Kr	**83**		ug/L			46	50	9	Standard
>	**Tb**	**159**		ug/L			165965	170031	2	Standard
	Pb	**208**	**13.734**	ug/L	0.344	2	210	1127528	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-MSD2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:53:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	48805	2	Standard
	Kr	**83**		ug/L			46	50	14	Standard
>	**Tb**	**159**		ug/L			165965	167377	0	Standard
	Pb	**208**	**13.869**	ug/L	0.177	1	210	1121192	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:54:24

TUBE EMPTY

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	27210	4	Standard
	Kr	**83**		ug/L			46	144	17	Standard
>	**Tb**	**159**		ug/L			165965	327175	4	Standard
	Pb	**208**	**-0.001**	ug/L	0.000	9	210	260	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:55:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	34810	2	Standard
	Kr	**83**		ug/L			46	52	17	Standard
>	**Tb**	**159**		ug/L			165965	161330	1	Standard
	Pb	**208**	**50.918**	ug/L	1.253	2	210	3966283	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 17:59:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	34296	0	Standard
	Kr	**83**		ug/L			46	49	26	Standard
>	**Tb**	**159**		ug/L			165965	159481	1	Standard
	Pb	**208**	**0.001**	ug/L	0.000	24	210	259	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:02:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	44018	1	Standard
	Kr	**83**		ug/L			46	46	26	Standard
>	**Tb**	**159**		ug/L			165965	161506	3	Standard
	Pb	**208**	**0.215**	ug/L	0.005	2	210	16953	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-07
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:03:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	44977	1	Standard
	Kr	**83**		ug/L			46	49	3	Standard
>	**Tb**	**159**		ug/L			165965	163185	2	Standard
	Pb	**208**	**0.528**	ug/L	0.010	1	210	41772	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-09
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:05:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	44276	1	Standard
	Kr	**83**		ug/L			46	57	30	Standard
>	**Tb**	**159**		ug/L			165965	165180	0	Standard
	Pb	**208**	**0.532**	ug/L	0.007	1	210	42672	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0480-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:06:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	122185	1	Standard
	Kr	**83**		ug/L			46	67	9	Standard
>	**Tb**	**159**		ug/L			165965	154453	0	Standard
	Pb	**208**	**0.031**	ug/L	0.001	2	210	2487	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:08:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	38187	0	Standard
	Kr	**83**		ug/L			46	53	19	Standard
>	**Tb**	**159**		ug/L			165965	155231	2	Standard
	Pb	**208**	**-0.000**	ug/L	0.000	290	210	190	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:09:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	49595	1	Standard
	Kr	**83**		ug/L			46	44	8	Standard
>	**Tb**	**159**		ug/L			165965	163100	0	Standard
	Pb	**208**	**0.240**	ug/L	0.001	0	210	19113	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:10:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	51006	1	Standard
	Kr	**83**		ug/L			46	44	6	Standard
>	**Tb**	**159**		ug/L			165965	164539	0	Standard
	Pb	**208**	**0.146**	ug/L	0.002	1	210	11808	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-06
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:12:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	50541	0	Standard
	Kr	**83**		ug/L			46	42	6	Standard
>	**Tb**	**159**		ug/L			165965	165015	2	Standard
	Pb	**208**	**0.314**	ug/L	0.005	1	210	25260	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-11
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:13:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	49047	2	Standard
	Kr	**83**		ug/L			46	53	25	Standard
>	**Tb**	**159**		ug/L			165965	163377	0	Standard
	Pb	**208**	**0.285**	ug/L	0.003	1	210	22689	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:15:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	39344	0	Standard
	Kr	**83**		ug/L			46	51	14	Standard
⌈>	**Tb**	**159**		ug/L			165965	155831	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	3427	210	198	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:16:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	36226	0	Standard
	Kr	**83**		ug/L			46	58	6	Standard
>	**Tb**	**159**		ug/L			165965	164187	0	Standard
	Pb	**208**	**50.229**	ug/L	0.094	0	210	3982976	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:20:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	34920	2	Standard
	Kr	**83**		ug/L			46	49	10	Standard
⌈>	**Tb**	**159**		ug/L			165965	158492	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	129	210	228	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-13
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:24:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	51951	0	Standard
	Kr	**83**		ug/L			46	52	12	Standard
>	**Tb**	**159**		ug/L			165965	160838	0	Standard
	Pb	**208**	**0.115**	ug/L	0.000	0	210	9164	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-14
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:25:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	53936	0	Standard
	Kr	**83**		ug/L			46	53	22	Standard
>	**Tb**	**159**		ug/L			165965	160287	1	Standard
	Pb	**208**	**0.483**	ug/L	0.007	1	210	37574	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-16
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:26:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	56772	2	Standard
	Kr	**83**		ug/L			46	48	8	Standard
>	**Tb**	**159**		ug/L			165965	163973	0	Standard
	Pb	**208**	**0.145**	ug/L	0.004	2	210	11656	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-15
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:28:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_pb only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	42521	0	Standard
	Kr	**83**		ug/L			46	53	16	Standard
>	**Tb**	**159**		ug/L			165965	161089	0	Standard
	Pb	**208**	**0.551**	ug/L	0.003	0	210	43096	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:29:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	33768	5	Standard
⌈>	**Sc**	**45**		ug/L			460122	479753	3	Standard
|	**Cr**	**52**	**0.041**	ug/L	0.014	35	8551	9448	2	Standard
|	**Cr**	**53**	**0.006**	ug/L	0.009	149	93	106	16	Standard
⌊	**Mn**	**55**	**-0.001**	ug/L	0.000	25	219	206	4	Standard
⌈>	**Ge**	**72**		ug/L			30494	30106	2	KED
|	**Ni**	**60**	**0.011**	ug/L	0.003	30	28	43	11	KED
|	**Ni**	**62**	**0.012**	ug/L	0.028	237	3	6	96	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	101	26	33	23	KED
|	**Cu**	**65**	**0.002**	ug/L	0.002	118	10	13	28	KED
|	**Zn**	**66**	**0.035**	ug/L	0.003	9	19	36	2	KED
|	**Zn**	**67**	**0.040**	ug/L	0.015	37	3	6	17	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.009	154	2	1	145	KED
	Y	**89**		ug/L			38927	40722	4	Standard
	Kr	**83**		ug/L			46	36	13	Standard
⌈>	**In-1**	**115**		ug/L			6386	7035	3	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.002	39	4	3	17	KED
⌊	**Cd**	**114**	**-0.015**	ug/L	0.005	30	13	5	58	KED
⌈>	**In**	**115**		ug/L			414575	426936	2	Standard
|	**Ag**	**107**	**-0.002**	ug/L	0.001	38	42	20	47	Standard
|	**Ba**	**135**	**0.004**	ug/L	0.002	61	38	58	21	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.002	60	52	85	23	Standard
⌈>	**Tb**	**159**		ug/L			165965	162029	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	24	210	219	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0702-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:34:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	50071	6	Standard
>	Sc	45		ug/L			460122	559108	3	Standard
	Cr	52	2.801	ug/L	0.106	3	8551	52852	2	Standard
	Cr	53	5.604	ug/L	0.159	2	93	9911	0	Standard
	Mn	55	89.383	ug/L	2.391	2	219	1974612	1	Standard
>	Ge	72		ug/L			30494	29308	1	KED
	Ni	60	4.352	ug/L	0.054	1	28	6064	1	KED
	Ni	62	4.366	ug/L	0.070	1	3	959	1	KED
	Cu	63	2.289	ug/L	0.036	1	26	8941	1	KED
	Cu	65	2.249	ug/L	0.100	4	10	4457	3	KED
	Zn	66	3.039	ug/L	0.133	4	19	1489	4	KED
	Zn	67	3.825	ug/L	0.302	7	3	304	7	KED
	As	75	10.055	ug/L	0.105	1	2	2374	0	KED
	Y	89		ug/L			38927	89604	2	Standard
	Kr	83		ug/L			46	51	9	Standard
>	In-1	115		ug/L			6386	6158	1	KED
	Cd	111	0.002	ug/L	0.017	872	4	4	86	KED
	Cd	114	-0.004	ug/L	0.009	233	13	10	49	KED
>	In	115		ug/L			414575	377047	1	Standard
	Ag	107	0.011	ug/L	0.002	21	42	168	14	Standard
	Ba	135	15.590	ug/L	0.479	3	38	71246	1	Standard
	Ba	137	15.628	ug/L	0.167	1	52	127422	0	Standard
>	Tb	159		ug/L			165965	170609	1	Standard
	Pb	208	0.223	ug/L	0.005	2	210	18620	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0342-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:40:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	51084	4	Standard
⌈>	Sc	45		ug/L			460122	568350	2	Standard
|	Cr	52	2.833	ug/L	0.035	1	8551	54242	2	Standard
|	Cr	53	5.610	ug/L	0.098	1	93	10090	2	Standard
⌊	Mn	55	89.613	ug/L	3.327	3	219	2014004	5	Standard
⌈>	Ge	72		ug/L			30494	28802	0	KED
|	Ni	60	4.291	ug/L	0.110	2	28	5876	2	KED
|	Ni	62	4.641	ug/L	0.202	4	3	1001	3	KED
|	Cu	63	2.274	ug/L	0.042	1	26	8728	1	KED
|	Cu	65	2.249	ug/L	0.100	4	10	4381	4	KED
|	Zn	66	2.824	ug/L	0.077	2	19	1361	2	KED
|	Zn	67	3.785	ug/L	0.579	15	3	296	15	KED
⌊	As	75	10.016	ug/L	0.092	0	2	2324	0	KED
	Y	89		ug/L			38927	89267	1	Standard
	Kr	83		ug/L			46	47	8	Standard
⌈>	In-1	115		ug/L			6386	5985	1	KED
|	Cd	111	0.003	ug/L	0.009	346	4	4	44	KED
⌊	Cd	114	-0.007	ug/L	0.003	51	13	8	22	KED
⌈>	In	115		ug/L			414575	388034	3	Standard
|	Ag	107	0.011	ug/L	0.001	6	42	176	8	Standard
|	Ba	135	15.387	ug/L	0.337	2	38	72354	1	Standard
⌊	Ba	137	15.411	ug/L	0.319	2	52	129265	1	Standard
⌈>	Tb	159		ug/L			165965	172113	0	Standard
⌊	Pb	208	0.238	ug/L	0.003	1	210	20000	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0342-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:45:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	51186	5	Standard
>	Sc	45		ug/L			460122	570416	2	Standard
	Cr	52	21.874	ug/L	0.296	1	8551	349015	1	Standard
	Cr	53	24.410	ug/L	0.481	1	93	43677	0	Standard
	Mn	55	112.129	ug/L	1.042	0	219	2528412	1	Standard
>	Ge	72		ug/L			30494	29271	0	KED
	Ni	60	27.840	ug/L	0.280	1	28	38602	0	KED
	Ni	62	27.779	ug/L	0.122	0	3	6076	0	KED
	Cu	63	25.033	ug/L	0.213	0	26	97401	0	KED
	Cu	65	25.046	ug/L	0.184	0	10	49488	0	KED
	Zn	66	72.190	ug/L	1.687	2	19	34903	1	KED
	Zn	67	69.774	ug/L	2.572	3	3	5500	3	KED
	As	75	33.963	ug/L	0.148	0	2	8005	0	KED
	Y	89		ug/L			38927	86850	1	Standard
	Kr	83		ug/L			46	47	10	Standard
>	In-1	115		ug/L			6386	5917	3	KED
	Cd	111	22.714	ug/L	1.260	5	4	4858	2	KED
	Cd	114	22.672	ug/L	0.714	3	13	12384	2	KED
>	In	115		ug/L			414575	385596	1	Standard
	Ag	107	21.779	ug/L	0.668	3	42	273430	2	Standard
	Ba	135	41.119	ug/L	0.845	2	38	192158	1	Standard
	Ba	137	40.806	ug/L	0.502	1	52	340176	0	Standard
>	Tb	159		ug/L			165965	173214	0	Standard
	Pb	208	21.567	ug/L	0.124	0	210	1804350	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0342-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:50:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27225	50121	5	Standard
>	Sc	45		ug/L			460122	566649	2	Standard
	Cr	52	21.819	ug/L	0.163	0	8551	345942	3	Standard
	Cr	53	24.581	ug/L	0.115	0	93	43704	2	Standard
	Mn	55	110.088	ug/L	0.947	0	219	2466602	3	Standard
>	Ge	72		ug/L			30494	28743	0	KED
	Ni	60	27.761	ug/L	0.348	1	28	37800	1	KED
	Ni	62	28.514	ug/L	0.618	2	3	6125	1	KED
	Cu	63	25.533	ug/L	0.214	0	26	97557	1	KED
	Cu	65	25.563	ug/L	0.514	2	10	49604	2	KED
	Zn	66	73.567	ug/L	1.366	1	19	34930	1	KED
	Zn	67	71.696	ug/L	1.628	2	3	5550	2	KED
	As	75	34.650	ug/L	0.590	1	2	8020	1	KED
	Y	89		ug/L			38927	87094	1	Standard
	Kr	83		ug/L			46	47	4	Standard
>	In-1	115		ug/L			6386	5969	3	KED
	Cd	111	22.427	ug/L	0.921	4	4	4840	0	KED
	Cd	114	22.421	ug/L	0.824	3	13	12352	1	KED
>	In	115		ug/L			414575	377052	2	Standard
	Ag	107	21.519	ug/L	0.480	2	42	264134	1	Standard
	Ba	135	41.712	ug/L	0.827	1	38	190601	2	Standard
	Ba	137	41.496	ug/L	0.365	0	52	338248	1	Standard
>	Tb	159		ug/L			165965	171228	0	Standard
	Pb	208	21.433	ug/L	0.437	2	210	1772521	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:55:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	32104	2	Standard
⌈>	**Sc**	**45**		ug/L			460122	484185	0	Standard
|	**Cr**	**52**	**0.052**	ug/L	0.019	37	8551	9682	2	Standard
|	**Cr**	**53**	**0.125**	ug/L	0.020	16	93	287	10	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	20	219	288	4	Standard
⌈>	**Ge**	**72**		ug/L			30494	31140	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.008	354	28	32	35	KED
|	**Ni**	**62**	**0.008**	ug/L	0.022	275	3	5	88	KED
|	**Cu**	**63**	**0.004**	ug/L	0.000	10	26	44	4	KED
|	**Cu**	**65**	**0.005**	ug/L	0.002	32	10	20	15	KED
|	**Zn**	**66**	**0.050**	ug/L	0.004	8	19	45	4	KED
|	**Zn**	**67**	**0.007**	ug/L	0.022	337	3	3	50	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.001	23	2	1	15	KED
	Y	**89**		ug/L			38927	38904	1	Standard
	Kr	**83**		ug/L			46	44	25	Standard
⌈>	**In-1**	**115**		ug/L			6386	6374	1	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.002	27	4	2	24	KED
⌊	**Cd**	**114**	**-0.018**	ug/L	0.002	11	13	2	47	KED
⌈>	**In**	**115**		ug/L			414575	414400	0	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	199	42	39	16	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.002	36	38	62	13	Standard
⌊	**Ba**	**137**	**0.005**	ug/L	0.000	5	52	99	3	Standard
⌈>	**Tb**	**159**		ug/L			165965	170024	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	22	210	321	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 18:59:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	29882	5	Standard
⌈>	**Sc**	**45**		ug/L			460122	492719	1	Standard
|	**Cr**	**52**	**46.862**	ug/L	0.898	1	8551	635602	3	Standard
|	**Cr**	**53**	**47.446**	ug/L	0.957	2	93	73242	0	Standard
⌊	**Mn**	**55**	**47.412**	ug/L	0.375	0	219	923706	1	Standard
⌈>	**Ge**	**72**		ug/L			30494	31679	0	KED
|	**Ni**	**60**	**49.451**	ug/L	0.657	1	28	74185	0	KED
|	**Ni**	**62**	**50.710**	ug/L	1.000	1	3	12004	2	KED
|	**Cu**	**63**	**50.219**	ug/L	0.881	1	26	211426	0	KED
|	**Cu**	**65**	**49.462**	ug/L	0.399	0	10	105774	1	KED
|	**Zn**	**66**	**51.028**	ug/L	0.143	0	19	26710	1	KED
|	**Zn**	**67**	**51.839**	ug/L	0.935	1	3	4424	2	KED
⌊	**As**	**75**	**49.952**	ug/L	0.538	1	2	12741	0	KED
	Y	**89**		ug/L			38927	39628	2	Standard
	Kr	**83**		ug/L			46	42	9	Standard
⌈>	**In-1**	**115**		ug/L			6386	6648	0	KED
|	**Cd**	**111**	**49.226**	ug/L	1.079	2	4	11839	1	KED
⌊	**Cd**	**114**	**49.147**	ug/L	0.723	1	13	30162	0	KED
⌈>	**In**	**115**		ug/L			414575	414854	2	Standard
|	**Ag**	**107**	**48.728**	ug/L	1.030	2	42	657999	1	Standard
|	**Ba**	**135**	**49.989**	ug/L	0.737	1	38	251298	1	Standard
⌊	**Ba**	**137**	**49.163**	ug/L	1.103	2	52	440803	0	Standard
⌈>	**Tb**	**159**		ug/L			165965	172287	1	Standard
⌊	**Pb**	**208**	**49.027**	ug/L	0.734	1	210	4078768	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:07:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27225	44107	2	Standard
⌈>	**Sc**	**45**		ug/L			460122	467848	1	Standard
|	**Cr**	**52**	**0.056**	ug/L	0.025	44	8551	9400	1	Standard
|	**Cr**	**53**	**0.022**	ug/L	0.020	92	93	126	21	Standard
⌊	**Mn**	**55**	**0.009**	ug/L	0.013	149	219	383	61	Standard
⌈>	**Ge**	**72**		ug/L			30494	30626	1	KED
|	**Ni**	**60**	**0.009**	ug/L	0.002	19	28	41	4	KED
|	**Ni**	**62**	**0.042**	ug/L	0.017	41	3	13	28	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	87	26	39	26	KED
|	**Cu**	**65**	**0.007**	ug/L	0.002	31	10	24	16	KED
|	**Zn**	**66**	**0.020**	ug/L	0.005	25	19	29	9	KED
|	**Zn**	**67**	**0.023**	ug/L	0.059	256	3	5	94	KED
⌊	**As**	**75**	**0.004**	ug/L	0.005	127	2	3	33	KED
	Y	**89**		ug/L			38927	37362	2	Standard
	Kr	**83**		ug/L			46	31	27	Standard
⌈>	**In-1**	**115**		ug/L			6386	6407	3	KED
|	**Cd**	**111**	**-0.012**	ug/L	0.002	17	4	1	43	KED
⌊	**Cd**	**114**	**-0.019**	ug/L	0.003	17	13	1	100	KED
⌈>	**In**	**115**		ug/L			414575	406141	1	Standard
|	**Ag**	**107**	**0.010**	ug/L	0.015	155	42	172	116	Standard
|	**Ba**	**135**	**0.014**	ug/L	0.019	129	38	107	83	Standard
⌊	**Ba**	**137**	**0.014**	ug/L	0.017	117	52	173	82	Standard
⌈>	**Tb**	**159**		ug/L			165965	163351	3	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.016	144	210	1026	113	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:14:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				35375	4	Standard
⎡>	**Sc**	**45**		ug/L				473417	1	Standard
⎢	**Cr**	**52**		ug/L				9091	2	Standard
⎢	**Cr**	**53**		ug/L				128	3	Standard
⎣	**Mn**	**55**		ug/L				216	3	Standard
⎡>	**Ge**	**72**		ug/L				31041	1	KED
⎢	**Ni**	**60**		ug/L				38	41	KED
⎢	**Ni**	**62**		ug/L				3	50	KED
⎢	**Cu**	**63**		ug/L				33	3	KED
⎢	**Cu**	**65**		ug/L				13	78	KED
⎢	**Zn**	**66**		ug/L				24	7	KED
⎢	**Zn**	**67**		ug/L				5	141	KED
⎣	**As**	**75**		ug/L				2	52	KED
	Y	**89**		ug/L				39379	3	Standard
	Kr	**83**		ug/L				33	20	Standard
⎡>	**In-1**	**115**		ug/L				6479	2	KED
⎢	**Cd**	**111**		ug/L				0	173	KED
⎣	**Cd**	**114**		ug/L				3	50	KED
⎡>	**In**	**115**		ug/L				411466	2	Standard
⎢	**Ag**	**107**		ug/L				26	25	Standard
⎢	**Ba**	**135**		ug/L				57	20	Standard
⎣	**Ba**	**137**		ug/L				109	19	Standard
⎡>	**Tb**	**159**		ug/L				168748	1	Standard
⎣	**Pb**	**208**		ug/L				245	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:18:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	31956	3	Standard
⎡>	**Sc**	**45**		ug/L			473417	483579	1	Standard
⎢	**Cr**	**52**	**48.033**	ug/L	1.112	2	9091	639308	1	Standard
⎢	**Cr**	**53**	**48.743**	ug/L	0.741	1	128	73885	0	Standard
⎣	**Mn**	**55**	**48.910**	ug/L	0.430	0	216	935147	1	Standard
⎡>	**Ge**	**72**		ug/L			31041	31531	2	KED
⎢	**Ni**	**60**	**48.774**	ug/L	2.327	4	38	72774	1	KED
⎢	**Ni**	**62**	**49.943**	ug/L	0.902	1	3	11762	1	KED
⎢	**Cu**	**63**	**49.777**	ug/L	1.894	3	33	208463	0	KED
⎢	**Cu**	**65**	**48.767**	ug/L	1.443	2	13	103739	0	KED
⎢	**Zn**	**66**	**50.712**	ug/L	1.224	2	24	26415	1	KED
⎢	**Zn**	**67**	**51.263**	ug/L	0.826	1	5	4356	3	KED
⎣	**As**	**75**	**49.678**	ug/L	1.461	2	2	12605	0	KED
	Y	**89**		ug/L			39379	39569	1	Standard
	Kr	**83**		ug/L			33	34	25	Standard
⎡>	**In-1**	**115**		ug/L			6479	6461	1	KED
⎢	**Cd**	**111**	**49.132**	ug/L	0.667	1	0	11482	2	KED
⎣	**Cd**	**114**	**48.849**	ug/L	0.955	1	3	29126	2	KED
⎡>	**In**	**115**		ug/L			411466	414070	2	Standard
⎢	**Ag**	**107**	**49.450**	ug/L	1.680	3	26	666438	2	Standard
⎢	**Ba**	**135**	**49.266**	ug/L	1.389	2	57	247159	0	Standard
⎣	**Ba**	**137**	**49.289**	ug/L	1.165	2	109	441153	0	Standard
⎡>	**Tb**	**159**		ug/L			168748	170066	1	Standard
⎣	**Pb**	**208**	**49.517**	ug/L	0.438	0	245	4066889	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:25:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	30742	2	Standard
⌈>	**Sc**	**45**		ug/L			473417	484633	4	Standard
|	**Cr**	**52**	**-0.019**	ug/L	0.032	173	9091	9049	1	Standard
|	**Cr**	**53**	**-0.016**	ug/L	0.017	102	128	106	19	Standard
⌊	**Mn**	**55**	**0.008**	ug/L	0.014	178	216	363	67	Standard
⌈>	**Ge**	**72**		ug/L			31041	31356	0	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.011	291	38	33	46	KED
|	**Ni**	**62**	**0.035**	ug/L	0.013	36	3	12	24	KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	267	33	36	20	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.002	192	13	11	44	KED
|	**Zn**	**66**	**-0.008**	ug/L	0.003	44	24	20	9	KED
|	**Zn**	**67**	**-0.008**	ug/L	0.047	590	5	4	89	KED
⌊	**As**	**75**	**0.003**	ug/L	0.004	130	2	3	31	KED
	Y	**89**		ug/L			39379	40092	3	Standard
	Kr	**83**		ug/L			33	52	21	Standard
⌈>	**In-1**	**115**		ug/L			6479	6545	2	KED
|	**Cd**	**111**	**0.003**	ug/L	0.004	149	0	0	100	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.003	271	3	3	71	KED
⌈>	**In**	**115**		ug/L			411466	418771	3	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.012	139	26	137	111	Standard
|	**Ba**	**135**	**0.007**	ug/L	0.013	191	57	92	69	Standard
⌊	**Ba**	**137**	**0.005**	ug/L	0.013	257	109	154	70	Standard
⌈>	**Tb**	**159**		ug/L			168748	167031	2	Standard
⌊	**Pb**	**208**	**0.010**	ug/L	0.016	161	245	1004	121	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-01
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:33:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	40750	2	Standard
>	**Sc**	**45**		ug/L			473417	593182	1	Standard
	Mn	**55**	**83.233**	ug/L	1.216	1	216	1952262	3	Standard
	Kr	**83**		ug/L			33	43	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-02
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:35:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	42093	1	Standard
>	**Sc**	**45**		ug/L			473417	615694	3	Standard
	Mn	**55**	**78.026**	ug/L	0.148	0	216	1899382	3	Standard
	Kr	**83**		ug/L			33	39	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-10
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:37:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	43142	3	Standard
>	**Sc**	**45**		ug/L			473417	601761	2	Standard
	Mn	**55**	**232.522**	ug/L	2.348	1	216	5531685	3	Standard
	Kr	**83**		ug/L			33	54	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-11
Sample Dil Factor: 100
DEL
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:38:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	39783	0	Standard
>	**Sc**	**45**		ug/L			473417	599154	0	Standard
	Mn	**55**	**79.755**	ug/L	2.106	2	216	1889365	3	Standard
	Kr	**83**		ug/L			33	48	29	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-12
Sample Dil Factor: 100
DEL
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:39:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	40719	0	Standard
>	**Sc**	**45**		ug/L			473417	604640	2	Standard
	Mn	**55**	**76.016**	ug/L	1.025	1	216	1817530	3	Standard
	Kr	**83**		ug/L			33	45	31	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0171-06

Sample Dil Factor: 50

DEL

Comments:

Sample Date/Time: Thursday, May 11, 2023 19:41:18

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	40463	2	Standard
>	**Sc**	**45**		ug/L			473417	603703	4	Standard
	Mn	**55**	**56.639**	ug/L	1.334	2	216	1351242	3	Standard
	Kr	**83**		ug/L			33	48	33	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:42:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	40240	2	Standard
⌈>	**Sc**	**45**		ug/L			473417	591422	1	Standard
⌊	**Mn**	**55**	**0.004**	ug/L	0.001	27	216	365	5	Standard
	Kr	**83**		ug/L			33	42	41	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:44:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	36689	1	Standard
>	**Sc**	**45**		ug/L			473417	610131	2	Standard
	Mn	**55**	**45.712**	ug/L	0.619	1	216	1103017	3	Standard
	Kr	**83**		ug/L			33	55	27	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:48:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_mn only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			35375	35587	0	Standard
⌈>	**Sc**	**45**		ug/L			473417	576301	3	Standard
⌊	**Mn**	**55**	**0.001**	ug/L	0.001	46	216	287	2	Standard
	Kr	**83**		ug/L			33	41	25	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:51:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				30125	1	Standard
>	**Sc**	**45**		ug/L				488451	2	Standard
	Cr	**52**		ug/L				8929	3	Standard
	Cr	**53**		ug/L				95	11	Standard
	Mn	**55**		ug/L				208	10	Standard
>	**Ge**	**72**		ug/L				31094	1	KED
	Ni	**60**		ug/L				36	9	KED
	Ni	**62**		ug/L				5	78	KED
	Cu	**63**		ug/L				24	13	KED
	Cu	**65**		ug/L				18	36	KED
	Zn	**66**		ug/L				23	23	KED
	Zn	**67**		ug/L				4	49	KED
	As	**75**		ug/L				2	68	KED
	Y	**89**		ug/L				40140	3	Standard
	Kr	**83**		ug/L				40	38	Standard
>	**In-1**	**115**		ug/L				6950	2	KED
	Cd	**111**		ug/L				3	56	KED
	Cd	**114**		ug/L				0	180	KED
>	**In**	**115**		ug/L				429431	3	Standard
	Ag	**107**		ug/L				24	13	Standard
	Ba	**135**		ug/L				46	4	Standard
	Ba	**137**		ug/L				85	12	Standard
>	**Tb**	**159**		ug/L				166755	2	Standard
	Pb	**208**		ug/L				213	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 19:55:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	31068	6	Standard
⌈>	**Sc**	**45**		ug/L			488451	496953	2	Standard
|	**Cr**	**52**	**47.887**	ug/L	0.305	0	8929	654584	1	Standard
|	**Cr**	**53**	**48.282**	ug/L	0.759	1	95	75177	2	Standard
⌊	**Mn**	**55**	**48.329**	ug/L	0.366	0	208	949563	1	Standard
⌈>	**Ge**	**72**		ug/L			31094	31335	1	KED
|	**Ni**	**60**	**49.504**	ug/L	1.097	2	36	73453	0	KED
|	**Ni**	**62**	**50.840**	ug/L	1.958	3	5	11900	2	KED
|	**Cu**	**63**	**49.902**	ug/L	1.103	2	24	207822	2	KED
|	**Cu**	**65**	**49.025**	ug/L	0.755	1	18	103691	0	KED
|	**Zn**	**66**	**51.257**	ug/L	1.113	2	23	26540	2	KED
|	**Zn**	**67**	**51.830**	ug/L	2.221	4	4	4375	3	KED
⌊	**As**	**75**	**50.761**	ug/L	0.849	1	2	12805	0	KED
	Y	**89**		ug/L			40140	41623	2	Standard
	Kr	**83**		ug/L			40	43	15	Standard
⌈>	**In-1**	**115**		ug/L			6950	6586	1	KED
|	**Cd**	**111**	**48.710**	ug/L	0.857	1	3	11605	0	KED
⌊	**Cd**	**114**	**49.769**	ug/L	0.997	2	0	30244	0	KED
⌈>	**In**	**115**		ug/L			429431	422607	0	Standard
|	**Ag**	**107**	**50.288**	ug/L	1.632	3	24	691847	2	Standard
|	**Ba**	**135**	**48.585**	ug/L	0.946	1	46	248842	1	Standard
⌊	**Ba**	**137**	**48.718**	ug/L	0.733	1	85	445176	1	Standard
⌈>	**Tb**	**159**		ug/L			166755	174363	1	Standard
⌊	**Pb**	**208**	**48.985**	ug/L	1.030	2	213	4124375	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:00:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	29186	4	Standard
⌈>	**Sc**	**45**		ug/L			488451	490772	1	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.042	453	8929	9089	4	Standard
|	**Cr**	**53**	**0.023**	ug/L	0.036	157	95	130	41	Standard
⌊	**Mn**	**55**	**0.019**	ug/L	0.031	161	208	581	102	Standard
⌈>	**Ge**	**72**		ug/L			31094	31384	2	KED
|	**Ni**	**60**	**-0.004**	ug/L	0.004	106	36	31	18	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.012	3657	5	5	57	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	59	24	38	20	KED
|	**Cu**	**65**	**0.001**	ug/L	0.002	433	18	19	24	KED
|	**Zn**	**66**	**0.010**	ug/L	0.020	208	23	28	35	KED
|	**Zn**	**67**	**0.022**	ug/L	0.034	155	4	6	45	KED
⌊	**As**	**75**	**0.003**	ug/L	0.003	90	2	3	24	KED
	Y	**89**		ug/L			40140	40666	1	Standard
	Kr	**83**		ug/L			40	40	25	Standard
⌈>	**In-1**	**115**		ug/L			6950	6471	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.002	220	3	3	15	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.004	50	0	5	43	KED
⌈>	**In**	**115**		ug/L			429431	430476	1	Standard
|	**Ag**	**107**	**0.022**	ug/L	0.034	155	24	335	144	Standard
|	**Ba**	**135**	**0.015**	ug/L	0.027	179	46	126	113	Standard
⌊	**Ba**	**137**	**0.014**	ug/L	0.023	164	85	219	101	Standard
⌈>	**Tb**	**159**		ug/L			166755	169298	1	Standard
⌊	**Pb**	**208**	**0.017**	ug/L	0.027	157	213	1621	137	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0636-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:07:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	37533	4	Standard
⌈>	**Sc**	**45**		ug/L			488451	529062	2	Standard
|	**Cr**	**52**	**0.541**	ug/L	0.003	0	8929	17434	2	Standard
|	**Cr**	**53**	**0.601**	ug/L	0.008	1	95	1098	1	Standard
⌊	**Mn**	**55**	**88.376**	ug/L	0.740	0	208	1848790	3	Standard
⌈>	**Ge**	**72**		ug/L			31094	31864	2	KED
|	**Ni**	**60**	**0.988**	ug/L	0.024	2	36	1526	2	KED
|	**Ni**	**62**	**1.021**	ug/L	0.115	11	5	247	8	KED
|	**Cu**	**63**	**1.647**	ug/L	0.021	1	24	6997	1	KED
|	**Cu**	**65**	**1.686**	ug/L	0.054	3	18	3643	1	KED
|	**Zn**	**66**	**4.041**	ug/L	0.149	3	23	2151	6	KED
|	**Zn**	**67**	**3.780**	ug/L	0.373	9	4	328	7	KED
⌊	**As**	**75**	**0.565**	ug/L	0.012	2	2	147	4	KED
	Y	**89**		ug/L			40140	56560	3	Standard
	Kr	**83**		ug/L			40	39	14	Standard
⌈>	**In-1**	**115**		ug/L			6950	6868	0	KED
|	**Cd**	**111**	**0.005**	ug/L	0.015	289	3	4	80	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.004	30	0	8	28	KED
⌈>	**In**	**115**		ug/L			429431	448110	1	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	29	24	85	19	Standard
|	**Ba**	**135**	**2.679**	ug/L	0.043	1	46	14596	2	Standard
⌊	**Ba**	**137**	**2.633**	ug/L	0.026	0	85	25592	1	Standard
⌈>	**Tb**	**159**		ug/L			166755	178597	0	Standard
⌊	**Pb**	**208**	**0.679**	ug/L	0.008	1	213	58760	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-DUP2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:11:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	37041	3	Standard
⌈>	Sc	45		ug/L			488451	517410	0	Standard
|	Cr	52	0.555	ug/L	0.014	2	8929	17251	1	Standard
|	Cr	53	0.620	ug/L	0.016	2	95	1105	2	Standard
⌊	Mn	55	90.495	ug/L	1.649	1	208	1851260	2	Standard
⌈>	Ge	72		ug/L			31094	31715	1	KED
|	Ni	60	0.992	ug/L	0.041	4	36	1525	2	KED
|	Ni	62	1.008	ug/L	0.067	6	5	243	5	KED
|	Cu	63	1.724	ug/L	0.022	1	24	7293	2	KED
|	Cu	65	1.698	ug/L	0.014	0	18	3653	1	KED
|	Zn	66	4.083	ug/L	0.167	4	23	2161	2	KED
|	Zn	67	3.985	ug/L	0.154	3	4	344	3	KED
⌊	As	75	0.571	ug/L	0.021	3	2	147	2	KED
	Y	89		ug/L			40140	56345	3	Standard
	Kr	83		ug/L			40	34	11	Standard
⌈>	In-1	115		ug/L			6950	6841	0	KED
|	Cd	111	-0.004	ug/L	0.006	159	3	2	57	KED
⌊	Cd	114	0.007	ug/L	0.001	21	0	4	19	KED
⌈>	In	115		ug/L			429431	437724	2	Standard
|	Ag	107	0.002	ug/L	0.001	47	24	54	24	Standard
|	Ba	135	2.795	ug/L	0.102	3	46	14868	1	Standard
⌊	Ba	137	2.763	ug/L	0.058	2	85	26229	0	Standard
⌈>	Tb	159		ug/L			166755	175911	0	Standard
⌊	Pb	208	0.692	ug/L	0.006	0	213	59009	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-MS2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:16:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	37834	4	Standard
⌈>	Sc	45		ug/L			488451	509796	3	Standard
|	Cr	52	2.928	ug/L	0.050	1	8929	49799	3	Standard
|	Cr	53	3.034	ug/L	0.078	2	95	4936	1	Standard
⌊	Mn	55	95.427	ug/L	2.392	2	208	1922397	2	Standard
⌈>	Ge	72		ug/L			31094	32404	0	KED
|	Ni	60	3.516	ug/L	0.048	1	36	5431	1	KED
|	Ni	62	3.710	ug/L	0.182	4	5	902	3	KED
|	Cu	63	4.318	ug/L	0.048	1	24	18621	0	KED
|	Cu	65	4.255	ug/L	0.153	3	18	9322	2	KED
|	Zn	66	12.225	ug/L	0.290	2	23	6564	1	KED
|	Zn	67	11.985	ug/L	0.075	0	4	1050	1	KED
⌊	As	75	3.013	ug/L	0.134	4	2	788	5	KED
	Y	89		ug/L			40140	57255	3	Standard
	Kr	83		ug/L			40	37	36	Standard
⌈>	In-1	115		ug/L			6950	6696	3	KED
|	Cd	111	2.447	ug/L	0.099	4	3	595	4	KED
⌊	Cd	114	2.438	ug/L	0.131	5	0	1507	7	KED
⌈>	In	115		ug/L			429431	437727	1	Standard
|	Ag	107	2.205	ug/L	0.040	1	24	31452	3	Standard
|	Ba	135	5.278	ug/L	0.058	1	46	28043	1	Standard
⌊	Ba	137	5.274	ug/L	0.063	1	85	49996	1	Standard
⌈>	Tb	159		ug/L			166755	177766	1	Standard
⌊	Pb	208	3.166	ug/L	0.042	1	213	272094	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-MSD2
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:20:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	36979	2	Standard
>	Sc	45		ug/L			488451	525686	2	Standard
	Cr	52	2.854	ug/L	0.078	2	8929	50302	2	Standard
	Cr	53	2.930	ug/L	0.007	0	95	4922	2	Standard
	Mn	55	91.394	ug/L	1.596	1	208	1899162	2	Standard
>	Ge	72		ug/L			31094	31781	0	KED
	Ni	60	3.555	ug/L	0.073	2	36	5384	1	KED
	Ni	62	3.613	ug/L	0.131	3	5	862	3	KED
	Cu	63	4.211	ug/L	0.090	2	24	17809	2	KED
	Cu	65	4.197	ug/L	0.110	2	18	9021	2	KED
	Zn	66	12.756	ug/L	0.172	1	23	6717	0	KED
	Zn	67	12.102	ug/L	0.236	1	4	1040	2	KED
	As	75	3.007	ug/L	0.093	3	2	771	2	KED
	Y	89		ug/L			40140	58514	3	Standard
	Kr	83		ug/L			40	45	23	Standard
>	In-1	115		ug/L			6950	6582	3	KED
	Cd	111	2.475	ug/L	0.049	1	3	592	2	KED
	Cd	114	2.509	ug/L	0.189	7	0	1521	3	KED
>	In	115		ug/L			429431	439755	2	Standard
	Ag	107	2.234	ug/L	0.064	2	24	32023	5	Standard
	Ba	135	5.335	ug/L	0.152	2	46	28465	0	Standard
	Ba	137	5.240	ug/L	0.130	2	85	49891	1	Standard
>	Tb	159		ug/L			166755	179008	1	Standard
	Pb	208	3.173	ug/L	0.034	1	213	274515	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:25:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	32810	3	Standard
⌈>	**Sc**	**45**		ug/L			488451	483754	2	Standard
|	**Cr**	**52**	**0.011**	ug/L	0.007	59	8929	8990	3	Standard
|	**Cr**	**53**	**0.002**	ug/L	0.003	137	95	97	4	Standard
⌊	**Mn**	**55**	**0.004**	ug/L	0.001	24	208	274	5	Standard
⌈>	**Ge**	**72**		ug/L			31094	32249	0	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.008	290	36	33	38	KED
|	**Ni**	**62**	**0.012**	ug/L	0.017	133	5	8	48	KED
|	**Cu**	**63**	**0.003**	ug/L	0.002	58	24	39	20	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.001	410	18	18	15	KED
|	**Zn**	**66**	**0.043**	ug/L	0.009	20	23	46	9	KED
|	**Zn**	**67**	**0.086**	ug/L	0.054	63	4	12	39	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.002	78	2	1	34	KED
	Y	**89**		ug/L			40140	40596	0	Standard
	Kr	**83**		ug/L			40	33	8	Standard
⌈>	**In-1**	**115**		ug/L			6950	6409	1	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.002	1237	3	3	17	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	59	0	3	51	KED
⌈>	**In**	**115**		ug/L			429431	430809	3	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	73	24	20	15	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.002	228	46	50	17	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	53	85	95	2	Standard
⌈>	**Tb**	**159**		ug/L			166755	168692	2	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	26	213	286	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:30:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	37172	2	Standard
>	Sc	45		ug/L			488451	585054	3	Standard
	Cr	52	19.035	ug/L	0.241	1	8929	312715	2	Standard
	Cr	53	19.184	ug/L	0.461	2	95	35219	0	Standard
	Mn	55	408.963	ug/L	6.469	1	208	9455468	1	Standard
>	Ge	72		ug/L			31094	29441	1	KED
	Ni	60	49.353	ug/L	1.005	2	36	68810	1	KED
	Ni	62	50.923	ug/L	1.247	2	5	11201	1	KED
	Cu	63	159.251	ug/L	4.042	2	24	623033	2	KED
	Cu	65	156.890	ug/L	1.546	0	18	311752	0	KED
	Zn	66	74.362	ug/L	1.528	2	23	36163	1	KED
	Zn	67	68.154	ug/L	1.445	2	4	5407	3	KED
	As	75	2.157	ug/L	0.080	3	2	513	3	KED
	Y	89		ug/L			40140	317948	1	Standard
	Kr	83		ug/L			40	200	9	Standard
>	In-1	115		ug/L			6950	6095	0	KED
	Cd	111	0.136	ug/L	0.011	8	3	33	7	KED
	Cd	114	0.132	ug/L	0.037	28	0	74	28	KED
>	In	115		ug/L			429431	379319	1	Standard
	Ag	107	0.141	ug/L	0.009	6	24	1757	6	Standard
	Ba	135	13.381	ug/L	0.231	1	46	61552	2	Standard
	Ba	137	13.256	ug/L	0.124	0	85	108769	0	Standard
>	Tb	159		ug/L			166755	185408	1	Standard
	Pb	208	11.928	ug/L	0.058	0	213	1068245	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:35:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	38308	4	Standard
>	Sc	45		ug/L			488451	581455	1	Standard
	Cr	52	18.454	ug/L	0.322	1	8929	301660	0	Standard
	Cr	53	18.605	ug/L	0.072	0	95	33968	1	Standard
	Mn	55	351.407	ug/L	4.276	1	208	8077094	1	Standard
>	Ge	72		ug/L			31094	29946	1	KED
	Ni	60	41.402	ug/L	0.644	1	36	58719	0	KED
	Ni	62	42.603	ug/L	1.363	3	5	9532	2	KED
	Cu	63	160.484	ug/L	4.473	2	24	638555	1	KED
	Cu	65	157.043	ug/L	1.660	1	18	317422	1	KED
	Zn	66	72.547	ug/L	1.040	1	23	35889	1	KED
	Zn	67	70.143	ug/L	1.933	2	4	5659	3	KED
	As	75	3.128	ug/L	0.080	2	2	756	1	KED
	Y	89		ug/L			40140	333817	0	Standard
	Kr	83		ug/L			40	213	3	Standard
>	In-1	115		ug/L			6950	6142	2	KED
	Cd	111	0.193	ug/L	0.048	24	3	46	22	KED
	Cd	114	0.180	ug/L	0.019	10	0	102	9	KED
>	In	115		ug/L			429431	386154	1	Standard
	Ag	107	0.157	ug/L	0.005	3	24	2002	4	Standard
	Ba	135	13.196	ug/L	0.309	2	46	61784	1	Standard
	Ba	137	12.810	ug/L	0.121	0	85	107005	0	Standard
>	Tb	159		ug/L			166755	190251	0	Standard
	Pb	208	15.187	ug/L	0.119	0	213	1395652	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:40:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	35682	6	Standard
>	Sc	45		ug/L			488451	602861	3	Standard
	Cr	52	40.501	ug/L	0.519	1	8929	673139	2	Standard
	Cr	53	40.134	ug/L	0.661	1	95	75801	2	Standard
	Mn	55	403.696	ug/L	9.605	2	208	9614903	1	Standard
>	Ge	72		ug/L			31094	29627	2	KED
	Ni	60	71.332	ug/L	2.031	2	36	100046	1	KED
	Ni	62	72.084	ug/L	1.289	1	5	15953	1	KED
	Cu	63	178.612	ug/L	3.276	1	24	703091	0	KED
	Cu	65	175.823	ug/L	4.358	2	18	351477	0	KED
	Zn	66	139.753	ug/L	1.404	1	23	68375	1	KED
	Zn	67	133.587	ug/L	5.323	3	4	10654	2	KED
	As	75	22.806	ug/L	0.374	1	2	5440	2	KED
	Y	89		ug/L			40140	354871	3	Standard
	Kr	83		ug/L			40	207	16	Standard
>	In-1	115		ug/L			6950	6155	1	KED
	Cd	111	24.652	ug/L	0.177	0	3	5491	2	KED
	Cd	114	24.512	ug/L	0.441	1	0	13920	0	KED
>	In	115		ug/L			429431	386831	1	Standard
	Ag	107	24.681	ug/L	0.253	1	24	310888	2	Standard
	Ba	135	34.380	ug/L	0.768	2	46	161198	2	Standard
	Ba	137	33.167	ug/L	0.625	1	85	277407	1	Standard
>	Tb	159		ug/L			166755	193863	2	Standard
	Pb	208	30.586	ug/L	0.566	1	213	2863025	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:44:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	36215	3	Standard
>	Sc	45		ug/L			488451	614737	1	Standard
	Cr	52	38.157	ug/L	0.751	1	8929	647469	1	Standard
	Cr	53	38.387	ug/L	0.645	1	95	73963	1	Standard
	Mn	55	373.236	ug/L	6.598	1	208	9069303	1	Standard
>	Ge	72		ug/L			31094	30940	0	KED
	Ni	60	64.989	ug/L	0.830	1	36	95219	1	KED
	Ni	62	66.779	ug/L	0.835	1	5	15436	0	KED
	Cu STL	63	158.301	ug/L	0.895	0	24	650906	0	KED
	Cu	65	158.710	ug/L	3.040	1	18	331427	1	KED
	Zn	66	144.837	ug/L	0.207	0	23	74011	0	KED
	Zn	67	137.610	ug/L	0.372	0	4	11466	0	KED
	As	75	20.547	ug/L	0.227	1	2	5119	0	KED
	Y	89		ug/L			40140	374892	2	Standard
	Kr	83		ug/L			40	194	15	Standard
>	In-1	115		ug/L			6950	6616	2	KED
	Cd	111	23.308	ug/L	0.995	4	3	5576	1	KED
	Cd	114	23.131	ug/L	0.515	2	0	14117	1	KED
>	In	115		ug/L			429431	390014	1	Standard
	Ag	107	25.024	ug/L	0.651	2	24	317728	1	Standard
	Ba	135	34.183	ug/L	0.292	0	46	161600	1	Standard
	Ba	137	33.671	ug/L	0.711	2	85	283919	0	Standard
>	Tb	159		ug/L			166755	198813	0	Standard
	Pb	208	31.952	ug/L	0.481	1	213	3067852	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:49:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	33486	2	Standard
>	**Sc**	**45**		ug/L			488451	492138	0	Standard
	Cr	**52**	**-0.020**	ug/L	0.018	90	8929	8729	3	Standard
	Cr	**53**	**-0.008**	ug/L	0.003	44	95	84	6	Standard
	Mn	**55**	**0.017**	ug/L	0.004	23	208	536	13	Standard
>	**Ge**	**72**		ug/L			31094	29224	18	KED
	Ni	**60**	**0.004**	ug/L	0.010	275	36	37	15	KED
	Ni	**62**	**0.001**	ug/L	0.024	1900	5	5	114	KED
	Cu	**63**	**0.016**	ug/L	0.004	28	24	81	4	KED
	Cu	**65**	**0.009**	ug/L	0.004	44	18	33	3	KED
	Zn	**66**	**0.058**	ug/L	0.014	23	23	49	7	KED
	Zn	**67**	**0.080**	ug/L	0.103	128	4	9	60	KED
	As	**75**	**0.006**	ug/L	0.005	91	2	3	43	KED
	Y	**89**		ug/L			40140	40341	2	Standard
	Kr	**83**		ug/L			40	39	12	Standard
>	**In-1**	**115**		ug/L			6950	6607	3	KED
	Cd	**111**	**0.053**	ug/L	0.050	94	3	15	75	KED
	Cd	**114**	**0.057**	ug/L	0.050	88	0	34	86	KED
>	**In**	**115**		ug/L			429431	424681	1	Standard
	Ag	**107**	**0.002**	ug/L	0.001	61	24	47	28	Standard
	Ba	**135**	**0.001**	ug/L	0.003	304	46	51	29	Standard
	Ba	**137**	**0.002**	ug/L	0.001	35	85	102	5	Standard
>	**Tb**	**159**		ug/L			166755	172906	0	Standard
	Pb	**208**	**0.002**	ug/L	0.000	18	213	376	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 20:53:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	30349	2	Standard
⌈>	**Sc**	**45**		ug/L			488451	500151	1	Standard
|	**Cr**	**52**	**47.797**	ug/L	0.682	1	8929	657554	0	Standard
|	**Cr**	**53**	**47.780**	ug/L	0.772	1	95	74890	2	Standard
⌊	**Mn**	**55**	**48.138**	ug/L	0.695	1	208	951850	0	Standard
⌈>	**Ge**	**72**		ug/L			31094	31557	1	KED
|	**Ni**	**60**	**49.111**	ug/L	0.948	1	36	73390	1	KED
|	**Ni**	**62**	**50.092**	ug/L	1.814	3	5	11808	2	KED
|	**Cu**	**63**	**50.292**	ug/L	0.819	1	24	210903	0	KED
|	**Cu**	**65**	**49.462**	ug/L	0.808	1	18	105355	1	KED
|	**Zn**	**66**	**50.887**	ug/L	0.866	1	23	26532	0	KED
|	**Zn**	**67**	**50.159**	ug/L	1.636	3	4	4266	4	KED
⌊	**As**	**75**	**50.279**	ug/L	1.185	2	2	12772	0	KED
	Y	**89**		ug/L			40140	41165	1	Standard
	Kr	**83**		ug/L			40	45	19	Standard
⌈>	**In-1**	**115**		ug/L			6950	6605	2	KED
|	**Cd**	**111**	**48.346**	ug/L	0.954	1	3	11548	0	KED
⌊	**Cd**	**114**	**49.017**	ug/L	1.180	2	0	29865	0	KED
⌈>	**In**	**115**		ug/L			429431	430018	0	Standard
|	**Ag**	**107**	**48.606**	ug/L	0.839	1	24	680582	1	Standard
|	**Ba**	**135**	**48.913**	ug/L	0.978	2	46	254944	2	Standard
⌊	**Ba**	**137**	**48.708**	ug/L	0.267	0	85	452897	0	Standard
⌈>	**Tb**	**159**		ug/L			166755	176847	0	Standard
⌊	**Pb**	**208**	**48.974**	ug/L	0.478	0	213	4182898	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:00:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	29643	3	Standard
⌈>	**Sc**	**45**		ug/L			488451	487286	0	Standard
|	**Cr**	**52**	**0.000**	ug/L	0.006	21725	8929	8908	0	Standard
|	**Cr**	**53**	**-0.004**	ug/L	0.005	120	95	89	7	Standard
⌊	**Mn**	**55**	**0.002**	ug/L	0.000	12	208	253	2	Standard
⌈>	**Ge**	**72**		ug/L			31094	32611	0	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.006	214	36	33	27	KED
|	**Ni**	**62**	**0.009**	ug/L	0.020	219	5	7	66	KED
|	**Cu**	**63**	**0.004**	ug/L	0.002	51	24	41	19	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.003	424	18	17	37	KED
|	**Zn**	**66**	**0.020**	ug/L	0.002	9	23	35	3	KED
|	**Zn**	**67**	**0.041**	ug/L	0.013	31	4	8	13	KED
⌊	**As**	**75**	**0.003**	ug/L	0.008	234	2	3	62	KED
	Y	**89**		ug/L			40140	39383	1	Standard
	Kr	**83**		ug/L			40	33	18	Standard
⌈>	**In-1**	**115**		ug/L			6950	6576	2	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.005	105	3	2	49	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.008	97	0	5	88	KED
⌈>	**In**	**115**		ug/L			429431	427806	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	35	24	45	14	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.003	825	46	48	25	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.003	817	85	88	26	Standard
⌈>	**Tb**	**159**		ug/L			166755	168082	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	33	213	311	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:06:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	46985	4	Standard
>	Sc	45		ug/L			488451	534721	1	Standard
	Cr	52	27.742	ug/L	0.720	2	8929	412240	3	Standard
	Cr	53	28.038	ug/L	0.287	1	95	47020	1	Standard
	Mn	55	1064.142	ug/L	28.598	2	208	22494749	3	Standard
>	Ge	72		ug/L			31094	32051	1	KED
	Ni	60	15.678	ug/L	0.036	0	36	23824	1	KED
	Ni	62	16.233	ug/L	0.031	0	5	3891	1	KED
	Cu	63	46.517	ug/L	0.453	0	24	198148	0	KED
	Cu	65	45.801	ug/L	0.802	1	18	99088	1	KED
	Zn	66	173.657	ug/L	4.375	2	23	91903	1	KED
	Zn	67	165.252	ug/L	1.668	1	4	14262	0	KED
	As	75	12.925	ug/L	0.220	1	2	3336	0	KED
	Y	89		ug/L			40140	142103	1	Standard
	Kr	83		ug/L			40	71	10	Standard
>	In-1	115		ug/L			6950	6885	2	KED
	Cd	111	0.414	ug/L	0.001	0	3	106	2	KED
	Cd	114	0.366	ug/L	0.022	5	0	233	4	KED
>	In	115		ug/L			429431	393324	2	Standard
	Ag	107	0.162	ug/L	0.006	3	24	2101	6	Standard
	Ba	135	31.697	ug/L	0.823	2	46	151057	0	Standard
	Ba	137	30.637	ug/L	0.149	0	85	260595	2	Standard
>	Tb	159		ug/L			166755	168476	0	Standard
	Pb	208	151.589	ug/L	2.471	1	213	12335180	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:11:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	46502	4	Standard
>	Sc	45		ug/L			488451	543996	2	Standard
	Cr	52	30.867	ug/L	0.240	0	8929	465460	2	Standard
	Cr	53	31.076	ug/L	0.581	1	95	53005	2	Standard
	Mn	55	455.053	ug/L	4.939	1	208	9786918	3	Standard
>	Ge	72		ug/L			31094	30784	1	KED
	Ni	60	15.099	ug/L	0.155	1	36	22037	1	KED
	Ni	62	14.992	ug/L	0.644	4	5	3451	3	KED
	Cu	63	131.128	ug/L	5.499	4	24	536254	2	KED
	Cu	65	131.305	ug/L	2.284	1	18	272796	0	KED
	Zn	66	169.823	ug/L	4.654	2	23	86314	1	KED
	Zn	67	157.006	ug/L	1.585	1	4	13016	1	KED
	As	75	18.607	ug/L	0.104	0	2	4613	1	KED
	Y	89		ug/L			40140	155497	1	Standard
	Kr	83		ug/L			40	89	14	Standard
>	In-1	115		ug/L			6950	6472	1	KED
	Cd	111	12.622	ug/L	0.366	2	3	2957	2	KED
	Cd	114	12.499	ug/L	0.041	0	0	7466	1	KED
>	In	115		ug/L			429431	414369	2	Standard
	Ag	107	0.148	ug/L	0.002	1	24	2024	3	Standard
	Ba	135	21.870	ug/L	0.587	2	46	109854	2	Standard
	Ba	137	21.381	ug/L	0.340	1	85	191573	1	Standard
>	Tb	159		ug/L			166755	179904	3	Standard
	Pb	208	745.655	ug/L	14.614	1	213	64757164	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:15:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	49445	4	Standard
>	Sc	45		ug/L			488451	557144	2	Standard
	Cr	52	21.947	ug/L	0.141	0	8929	341879	2	Standard
	Cr	53	22.190	ug/L	0.381	1	95	38788	2	Standard
	Mn	55	329.777	ug/L	2.960	0	208	7262106	1	Standard
>	Ge	72		ug/L			31094	31410	1	KED
	Ni	60	12.193	ug/L	0.133	1	36	18167	1	KED
	Ni	62	12.756	ug/L	0.087	0	5	2997	0	KED
	Cu	63	87.915	ug/L	0.516	0	24	366988	0	KED
	Cu	65	86.966	ug/L	1.593	1	18	184386	2	KED
	Zn	66	133.428	ug/L	1.490	1	23	69214	0	KED
	Zn	67	126.587	ug/L	0.681	0	4	10708	0	KED
	As	75	6.938	ug/L	0.154	2	2	1756	1	KED
	Y	89		ug/L			40140	162765	0	Standard
	Kr	83		ug/L			40	78	14	Standard
>	In-1	115		ug/L			6950	6408	2	KED
	Cd	111	0.222	ug/L	0.004	1	3	54	1	KED
	Cd	114	0.192	ug/L	0.008	4	0	114	6	KED
>	In	115		ug/L			429431	423474	3	Standard
	Ag	107	0.121	ug/L	0.012	9	24	1683	6	Standard
	Ba	135	23.608	ug/L	0.725	3	46	121113	0	Standard
	Ba	137	23.286	ug/L	0.661	2	85	213135	1	Standard
>	Tb	159		ug/L			166755	190018	1	Standard
	Pb	208	268.236	ug/L	5.726	2	213	24611827	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:20:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	43125	3	Standard
>	Sc	45		ug/L			488451	568425	3	Standard
	Cr	52	11.128	ug/L	0.256	2	8929	181902	1	Standard
	Cr	53	11.274	ug/L	0.144	1	95	20167	3	Standard
	Mn	55	78.112	ug/L	0.641	0	208	1755331	3	Standard
>	Ge	72		ug/L			31094	31370	1	KED
	Ni	60	8.987	ug/L	0.100	1	36	13381	1	KED
	Ni	62	9.507	ug/L	0.203	2	5	2232	1	KED
	Cu	63	15.324	ug/L	0.349	2	24	63896	0	KED
	Cu	65	15.022	ug/L	0.351	2	18	31818	1	KED
	Zn	66	62.987	ug/L	1.489	2	23	32641	1	KED
	Zn	67	62.205	ug/L	0.150	0	4	5258	1	KED
	As	75	4.223	ug/L	0.106	2	2	1068	2	KED
	Y	89		ug/L			40140	164869	4	Standard
	Kr	83		ug/L			40	59	23	Standard
>	In-1	115		ug/L			6950	6674	2	KED
	Cd	111	0.164	ug/L	0.029	17	3	42	13	KED
	Cd	114	0.184	ug/L	0.005	2	0	113	1	KED
>	In	115		ug/L			429431	436073	0	Standard
	Ag	107	0.055	ug/L	0.004	7	24	800	8	Standard
	Ba	135	31.748	ug/L	0.181	0	46	167824	1	Standard
	Ba	137	31.695	ug/L	0.503	1	85	298917	2	Standard
>	Tb	159		ug/L			166755	198717	1	Standard
	Pb	208	11.851	ug/L	0.067	0	213	1137514	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:24:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			30125	52682	5	Standard
>	Sc	45		ug/L			488451	588362	2	Standard
	Cr	52	9.639	ug/L	0.081	0	8929	164582	2	Standard
	Cr	53	9.847	ug/L	0.196	1	95	18240	1	Standard
	Mn	55	236.529	ug/L	1.621	0	208	5500825	2	Standard
>	Ge	72		ug/L			31094	33225	0	KED
	Ni	60	8.532	ug/L	0.131	1	36	13457	1	KED
	Ni	62	8.750	ug/L	0.263	3	5	2176	2	KED
	Cu	63	18.273	ug/L	0.399	2	24	80703	1	KED
	Cu	65	18.279	ug/L	0.790	4	18	41002	3	KED
	Zn	66	78.244	ug/L	1.706	2	23	42943	1	KED
	Zn	67	75.675	ug/L	1.756	2	4	6773	2	KED
	As	75	5.178	ug/L	0.031	0	2	1387	0	KED
	Y	89		ug/L			40140	155868	1	Standard
	Kr	83		ug/L			40	63	14	Standard
>	In-1	115		ug/L			6950	6990	1	KED
	Cd	111	0.159	ug/L	0.055	34	3	43	32	KED
	Cd	114	0.216	ug/L	0.010	4	0	139	5	KED
>	In	115		ug/L			429431	457253	0	Standard
	Ag	107	0.098	ug/L	0.004	3	24	1487	3	Standard
	Ba	135	26.043	ug/L	0.215	0	46	144364	1	Standard
	Ba	137	26.184	ug/L	0.847	3	85	258950	3	Standard
>	Tb	159		ug/L			166755	203335	0	Standard
	Pb	208	44.443	ug/L	0.772	1	213	4364411	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:29:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30125	50602	3	Standard
> Sc	45		ug/L			488451	631146	5	Standard
Cr	52	15.659	ug/L	0.589	3	8929	279291	2	Standard
Cr	53	15.823	ug/L	0.301	1	95	31355	3	Standard
Mn	55	235.921	ug/L	3.276	1	208	5884205	4	Standard
> Ge	72		ug/L			31094	33332	1	KED
Ni	60	19.230	ug/L	0.351	1	36	30377	0	KED
Ni	62	19.008	ug/L	0.180	0	5	4737	1	KED
Cu	63	54.270	ug/L	0.333	0	24	240431	1	KED
Cu	65	54.135	ug/L	0.602	1	18	121818	2	KED
Zn	66	194.999	ug/L	3.341	1	23	107329	1	KED
Zn	67	185.832	ug/L	0.783	0	4	16680	1	KED
As	75	5.114	ug/L	0.095	1	2	1374	1	KED
Y	89		ug/L			40140	233218	3	Standard
Kr	83		ug/L			40	90	12	Standard
> In-1	115		ug/L			6950	6868	1	KED
Cd	111	0.418	ug/L	0.031	7	3	107	5	KED
Cd	114	0.429	ug/L	0.029	6	0	272	6	KED
> In	115		ug/L			429431	446354	3	Standard
Ag	107	0.123	ug/L	0.002	1	24	1805	2	Standard
Ba	135	34.836	ug/L	0.436	1	46	188478	3	Standard
Ba	137	34.431	ug/L	0.869	2	85	332185	2	Standard
> Tb	159		ug/L			166755	209030	2	Standard
Pb	208	24.530	ug/L	0.094	0	213	2476421	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:34:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	33902	4	Standard
⌈>	**Sc**	**45**		ug/L			488451	509317	2	Standard
|	**Cr**	**52**	**-0.010**	ug/L	0.003	34	8929	9169	1	Standard
|	**Cr**	**53**	**-0.014**	ug/L	0.004	29	95	76	10	Standard
⌊	**Mn**	**55**	**0.009**	ug/L	0.002	25	208	392	11	Standard
⌈>	**Ge**	**72**		ug/L			31094	33105	3	KED
|	**Ni**	**60**	**-0.010**	ug/L	0.004	40	36	23	28	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.000	1	5	1		KED
|	**Cu**	**63**	**0.007**	ug/L	0.002	25	24	58	14	KED
|	**Cu**	**65**	**0.005**	ug/L	0.004	80	18	30	28	KED
|	**Zn**	**66**	**0.032**	ug/L	0.022	68	23	42	29	KED
|	**Zn**	**67**	**0.061**	ug/L	0.054	88	4	10	47	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.002	98	2	1	31	KED
	Y	**89**		ug/L			40140	40283	2	Standard
	Kr	**83**		ug/L			40	36	9	Standard
⌈>	**In-1**	**115**		ug/L			6950	6626	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.002	66	3	2	21	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.003	40	0	5	35	KED
⌈>	**In**	**115**		ug/L			429431	437233	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	21	24	14	15	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.000	64	46	44	6	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	198	85	91	7	Standard
⌈>	**Tb**	**159**		ug/L			166755	178936	1	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	6	213	482	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:40:52

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			30125	38182	4	Standard
> Sc	45		ug/L			488451	677388	3	Standard
Cr	52	38.068	ug/L	0.685	1	8929	711624	1	Standard
Cr	53	38.733	ug/L	1.470	3	95	82170	1	Standard
Mn	55	373.479	ug/L	7.490	2	208	9996495	1	Standard
> Ge	72		ug/L			31094	32777	1	KED
Ni	60	66.532	ug/L	2.386	3	36	103242	2	KED
Ni	62	67.162	ug/L	1.345	2	5	16448	2	KED
Cu	63	165.307	ug/L	1.190	0	24	720130	1	KED
Cu	65	163.973	ug/L	2.411	1	18	362734	0	KED
Zn	66	148.455	ug/L	3.061	2	23	80352	0	KED
Zn	67	141.313	ug/L	2.921	2	4	12472	0	KED
As	75	21.021	ug/L	0.453	2	2	5548	0	KED
Y	89		ug/L			40140	388292	2	Standard
Kr	83		ug/L			40	179	8	Standard
> In-1	115		ug/L			6950	6715	2	KED
Cd	111	24.505	ug/L	0.693	2	3	5952	1	KED
Cd	114	24.265	ug/L	0.380	1	0	15034	0	KED
> In	115		ug/L			429431	410418	2	Standard
Ag	107	24.850	ug/L	0.270	1	24	332055	1	Standard
Ba	135	35.070	ug/L	0.499	1	46	174462	2	Standard
Ba	137	33.654	ug/L	0.449	1	85	298697	3	Standard
> Tb	159		ug/L			166755	214273	1	Standard
Pb	208	31.024	ug/L	0.787	2	213	3210544	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:46:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	34214	5	Standard
⌈>	**Sc**	**45**		ug/L			488451	519979	1	Standard
|	**Cr**	**52**	**-0.024**	ug/L	0.004	16	8929	9169	2	Standard
|	**Cr**	**53**	**-0.017**	ug/L	0.004	24	95	73	11	Standard
⌊	**Mn**	**55**	**0.005**	ug/L	0.001	25	208	320	5	Standard
⌈>	**Ge**	**72**		ug/L			31094	33035	3	KED
|	**Ni**	**60**	**0.061**	ug/L	0.059	95	36	132	68	KED
|	**Ni**	**62**	**0.033**	ug/L	0.048	144	5	13	86	KED
|	**Cu**	**63**	**0.179**	ug/L	0.156	87	24	801	85	KED
|	**Cu**	**65**	**0.164**	ug/L	0.157	95	18	382	91	KED
|	**Zn**	**66**	**0.164**	ug/L	0.147	89	23	113	69	KED
|	**Zn**	**67**	**0.135**	ug/L	0.173	128	4	16	93	KED
⌊	**As**	**75**	**0.029**	ug/L	0.026	86	2	10	67	KED
	Y	**89**		ug/L			40140	40195	1	Standard
	Kr	**83**		ug/L			40	44	19	Standard
⌈>	**In-1**	**115**		ug/L			6950	6917	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	291	3	3	25	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.003	61	0	3	51	KED
⌈>	**In**	**115**		ug/L			429431	432133	1	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	905	24	26	37	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.002	129	46	40	21	Standard
⌊	**Ba**	**137**	**-0.003**	ug/L	0.001	43	85	56	21	Standard
⌈>	**Tb**	**159**		ug/L			166755	179540	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	44	213	278	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:50:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	31361	3	Standard
⌈>	**Sc**	**45**		ug/L			488451	510631	1	Standard
|	**Cr**	**52**	**48.852**	ug/L	1.102	2	8929	685926	1	Standard
|	**Cr**	**53**	**48.864**	ug/L	0.948	1	95	78172	1	Standard
⌊	**Mn**	**55**	**48.790**	ug/L	1.863	3	208	984808	2	Standard
⌈>	**Ge**	**72**		ug/L			31094	33139	0	KED
|	**Ni**	**60**	**49.000**	ug/L	0.527	1	36	76909	1	KED
|	**Ni**	**62**	**49.629**	ug/L	0.936	1	5	12290	2	KED
|	**Cu**	**63**	**49.216**	ug/L	0.050	0	24	216780	0	KED
|	**Cu**	**65**	**48.963**	ug/L	0.852	1	18	109532	1	KED
|	**Zn**	**66**	**51.210**	ug/L	1.079	2	23	28043	1	KED
|	**Zn**	**67**	**50.210**	ug/L	0.199	0	4	4484	0	KED
⌊	**As**	**75**	**49.346**	ug/L	0.471	0	2	13167	1	KED
	Y	**89**		ug/L			40140	40043	0	Standard
	Kr	**83**		ug/L			40	41	15	Standard
⌈>	**In-1**	**115**		ug/L			6950	6706	1	KED
|	**Cd**	**111**	**49.190**	ug/L	1.141	2	3	11934	2	KED
⌊	**Cd**	**114**	**48.845**	ug/L	0.837	1	0	30229	2	KED
⌈>	**In**	**115**		ug/L			429431	427274	0	Standard
|	**Ag**	**107**	**49.191**	ug/L	1.107	2	24	684390	2	Standard
|	**Ba**	**135**	**50.763**	ug/L	0.378	0	46	262894	0	Standard
⌊	**Ba**	**137**	**50.712**	ug/L	1.304	2	85	468482	2	Standard
⌈>	**Tb**	**159**		ug/L			166755	182549	2	Standard
⌊	**Pb**	**208**	**48.451**	ug/L	0.915	1	213	4270718	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 21:58:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			30125	29097	5	Standard
⌈>	**Sc**	**45**		ug/L			488451	490683	2	Standard
|	**Cr**	**52**	**-0.027**	ug/L	0.016	57	8929	8604	2	Standard
|	**Cr**	**53**	**-0.020**	ug/L	0.005	26	95	65	10	Standard
⌊	**Mn**	**55**	**0.003**	ug/L	0.001	42	208	264	6	Standard
⌈>	**Ge**	**72**		ug/L			31094	31437	2	KED
|	**Ni**	**60**	**-0.003**	ug/L	0.004	119	36	31	21	KED
|	**Ni**	**62**	**0.002**	ug/L	0.001	26	5	5	0	KED
|	**Cu**	**63**	**0.007**	ug/L	0.001	7	24	54	4	KED
|	**Cu**	**65**	**0.006**	ug/L	0.004	71	18	31	30	KED
|	**Zn**	**66**	**0.027**	ug/L	0.015	56	23	38	22	KED
|	**Zn**	**67**	**0.007**	ug/L	0.012	172	4	5	21	KED
⌊	**As**	**75**	**0.007**	ug/L	0.006	88	2	3	36	KED
	Y	**89**		ug/L			40140	39951	3	Standard
	Kr	**83**		ug/L			40	38	10	Standard
⌈>	**In-1**	**115**		ug/L			6950	6671	1	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.004	94	3	2	49	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.004	50	0	4	45	KED
⌈>	**In**	**115**		ug/L			429431	425844	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	42	24	47	20	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.002	99	46	59	19	Standard
⌊	**Ba**	**137**	**-0.002**	ug/L	0.000	17	85	68	2	Standard
⌈>	**Tb**	**159**		ug/L			166755	170214	1	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	17	213	433	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:03:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				28285	5	Standard
⎡>	**Sc**	**45**		ug/L				489773	1	Standard
⎢	**Cr**	**52**		ug/L				8505	2	Standard
⎣	**Cr**	**53**		ug/L				60	5	Standard
⎡>	**Ge**	**72**		ug/L				31037	2	KED
⎢	**Cu**	**63**		ug/L				42	18	KED
⎢	**Cu**	**65**		ug/L				15	79	KED
⎢	**Zn**	**66**		ug/L				22	36	KED
⎢	**Zn**	**67**		ug/L				4	65	KED
⎣	**As**	**75**		ug/L				3	34	KED
	Y	**89**		ug/L				38706	2	Standard
	Kr	**83**		ug/L				31	34	Standard
⎡>	**In-1**	**115**		ug/L				6431	1	KED
⎢	**Cd**	**111**		ug/L				3	75	KED
⎣	**Cd**	**114**		ug/L				0	208	KED
⎡>	**In**	**115**		ug/L				415168	1	Standard
⎣	**Ag**	**107**		ug/L				37	32	Standard
⎡>	**Tb**	**159**		ug/L				170846	0	Standard
⎣	**Pb**	**208**		ug/L				364	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:08:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	29789	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	492820	1	Standard
|	**Cr**	**52**	**47.526**	ug/L	0.881	1	8505	643953	2	Standard
⌊	**Cr**	**53**	**48.003**	ug/L	0.353	0	60	74096	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31517	1	KED
|	**Cu**	**63**	**48.957**	ug/L	0.528	1	42	205076	0	KED
|	**Cu**	**65**	**48.445**	ug/L	0.610	1	15	103059	1	KED
|	**Zn**	**66**	**50.910**	ug/L	0.274	0	22	26515	1	KED
|	**Zn**	**67**	**49.932**	ug/L	2.398	4	4	4240	4	KED
⌊	**As**	**75**	**49.739**	ug/L	0.385	0	3	12622	0	KED
	Y	**89**		ug/L			38706	39760	2	Standard
	Kr	**83**		ug/L			31	36	10	Standard
⌈>	**In-1**	**115**		ug/L			6431	6548	0	KED
|	**Cd**	**111**	**48.693**	ug/L	0.226	0	3	11534	0	KED
⌊	**Cd**	**114**	**49.288**	ug/L	0.311	0	0	29781	0	KED
⌈>	**In**	**115**		ug/L			415168	405853	1	Standard
⌊	**Ag**	**107**	**50.361**	ug/L	1.548	3	37	665305	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	174104	1	Standard
⌊	**Pb**	**208**	**49.105**	ug/L	0.386	0	364	4128822	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:15:13
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	28697	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	484962	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.008	205	8505	8370	2	Standard
⌊	**Cr**	**53**	**0.007**	ug/L	0.006	90	60	70	14	Standard
⌈>	**Ge**	**72**		ug/L			31037	31012	0	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	78	42	52	14	KED
|	**Cu**	**65**	**0.006**	ug/L	0.005	87	15	27	37	KED
|	**Zn**	**66**	**0.030**	ug/L	0.010	32	22	38	13	KED
|	**Zn**	**67**	**0.023**	ug/L	0.095	417	4	6	124	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.002	343	3	3	18	KED
	Y	**89**		ug/L			38706	38893	2	Standard
	Kr	**83**		ug/L			31	50	28	Standard
⌈>	**In-1**	**115**		ug/L			6431	6579	1	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.006	138	3	2	65	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	190	0	1	99	KED
⌈>	**In**	**115**		ug/L			415168	423463	0	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	205	37	43	26	Standard
⌈>	**Tb**	**159**		ug/L			170846	170623	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.001	203	364	394	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:22:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	48851	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	577049	3	Standard
|	**Cr**	**52**	**13.738**	ug/L	0.110	0	8505	225029	3	Standard
⌊	**Cr**	**53**	**13.944**	ug/L	0.189	1	60	25244	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	31520	0	KED
|	**Cu**	**63**	**31.485**	ug/L	1.089	3	42	131942	3	KED
|	**Cu**	**65**	**31.317**	ug/L	0.931	2	15	66646	3	KED
|	**Zn**	**66**	**59.634**	ug/L	0.617	1	22	31058	1	KED
|	**Zn**	**67**	**56.517**	ug/L	1.374	2	4	4800	2	KED
⌊	**As**	**75**	**6.809**	ug/L	0.157	2	3	1731	2	KED
	Y	**89**		ug/L			38706	202589	3	Standard
	Kr	**83**		ug/L			31	67	21	Standard
⌈>	**In-1**	**115**		ug/L			6431	6849	3	KED
|	**Cd**	**111**	**0.194**	ug/L	0.034	17	3	51	16	KED
⌊	**Cd**	**114**	**0.228**	ug/L	0.029	12	0	143	9	KED
⌈>	**In**	**115**		ug/L			415168	425958	2	Standard
⌊	**Ag**	**107**	**0.147**	ug/L	0.007	4	37	2083	5	Standard
⌈>	**Tb**	**159**		ug/L			170846	199303	2	Standard
⌊	**Pb**	**208**	**12.702**	ug/L	0.088	0	364	1223123	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:27:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	52612	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	588040	1	Standard
|	**Cr**	**52**	**14.298**	ug/L	0.054	0	8505	238304	2	Standard
⌊	**Cr**	**53**	**14.269**	ug/L	0.142	0	60	26330	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	31325	1	KED
|	**Cu**	**63**	**34.136**	ug/L	0.313	0	42	142137	0	KED
|	**Cu**	**65**	**33.400**	ug/L	0.799	2	15	70615	0	KED
|	**Zn**	**66**	**65.895**	ug/L	1.586	2	22	34095	0	KED
|	**Zn**	**67**	**65.267**	ug/L	0.838	1	4	5508	1	KED
⌊	**As**	**75**	**7.587**	ug/L	0.122	1	3	1916	1	KED
	Y	**89**		ug/L			38706	205508	0	Standard
	Kr	**83**		ug/L			31	71	24	Standard
⌈>	**In-1**	**115**		ug/L			6431	6667	2	KED
|	**Cd**	**111**	**0.243**	ug/L	0.027	11	3	61	9	KED
⌊	**Cd**	**114**	**0.225**	ug/L	0.042	18	0	138	16	KED
⌈>	**In**	**115**		ug/L			415168	427225	1	Standard
⌊	**Ag**	**107**	**0.148**	ug/L	0.004	2	37	2103	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	203411	2	Standard
⌊	**Pb**	**208**	**13.736**	ug/L	0.326	2	364	1349193	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0008-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:31:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	47376	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	581887	0	Standard
|	**Cr**	**52**	**12.314**	ug/L	0.033	0	8505	204488	0	Standard
⌊	**Cr**	**53**	**12.138**	ug/L	0.153	1	60	22175	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	30368	4	KED
|	**Cu**	**63**	**27.278**	ug/L	0.612	2	42	110055	2	KED
|	**Cu**	**65**	**26.800**	ug/L	0.990	3	15	54888	1	KED
|	**Zn**	**66**	**96.499**	ug/L	2.661	2	22	48366	1	KED
|	**Zn**	**67**	**93.435**	ug/L	1.571	1	4	7639	2	KED
⌊	**As**	**75**	**5.151**	ug/L	0.287	5	3	1260	1	KED
	Y	**89**		ug/L			38706	199023	1	Standard
	Kr	**83**		ug/L			31	67	18	Standard
⌈>	**In-1**	**115**		ug/L			6431	6421	1	KED
|	**Cd**	**111**	**0.175**	ug/L	0.034	19	3	43	19	KED
⌊	**Cd**	**114**	**0.155**	ug/L	0.039	24	0	91	22	KED
⌈>	**In**	**115**		ug/L			415168	421474	3	Standard
⌊	**Ag**	**107**	**0.108**	ug/L	0.006	5	37	1521	2	Standard
⌈>	**Tb**	**159**		ug/L			170846	200348	1	Standard
⌊	**Pb**	**208**	**10.076**	ug/L	0.105	1	364	975298	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0136-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:35:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	53073	3	Standard
⌈>	Sc	45		ug/L			489773	576636	1	Standard
|	Cr	52	14.019	ug/L	0.167	1	8505	229281	1	Standard
⌊	Cr	53	14.292	ug/L	0.280	1	60	25856	1	Standard
⌈>	Ge	72		ug/L			31037	30759	0	KED
|	Cu	63	37.943	ug/L	0.461	1	42	155136	0	KED
|	Cu	65	37.261	ug/L	0.388	1	15	77367	0	KED
|	Zn	66	84.809	ug/L	1.417	1	22	43090	1	KED
|	Zn	67	82.483	ug/L	1.771	2	4	6834	2	KED
⌊	As	75	9.140	ug/L	0.287	3	3	2266	2	KED
	Y	89		ug/L			38706	203759	0	Standard
	Kr	83		ug/L			31	71	15	Standard
⌈>	In-1	115		ug/L			6431	6435	0	KED
|	Cd	111	0.194	ug/L	0.021	10	3	48	10	KED
⌊	Cd	114	0.249	ug/L	0.007	2	0	148	3	KED
⌈>	In	115		ug/L			415168	422509	1	Standard
⌊	Ag	107	0.157	ug/L	0.006	3	37	2198	4	Standard
⌈>	Tb	159		ug/L			170846	198005	0	Standard
⌊	Pb	208	15.362	ug/L	0.160	1	364	1469423	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0136-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:40:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	50849	3	Standard
⌈>	Sc	45		ug/L			489773	582688	1	Standard
|	Cr	52	14.489	ug/L	0.118	0	8505	239127	1	Standard
⌊	Cr	53	14.675	ug/L	0.275	1	60	26833	3	Standard
⌈>	Ge	72		ug/L			31037	31484	1	KED
|	Cu	63	35.162	ug/L	0.415	1	42	147153	0	KED
|	Cu	65	34.804	ug/L	0.505	1	15	73971	1	KED
|	Zn	66	65.580	ug/L	0.825	1	22	34111	0	KED
|	Zn	67	63.513	ug/L	0.902	1	4	5387	1	KED
⌊	As	75	8.323	ug/L	0.120	1	3	2112	0	KED
	Y	89		ug/L			38706	200945	1	Standard
	Kr	83		ug/L			31	82	5	Standard
⌈>	In-1	115		ug/L			6431	6536	1	KED
|	Cd	111	0.233	ug/L	0.021	8	3	58	8	KED
⌊	Cd	114	0.235	ug/L	0.013	5	0	142	4	KED
⌈>	In	115		ug/L			415168	431832	2	Standard
⌊	Ag	107	0.161	ug/L	0.009	5	37	2299	3	Standard
⌈>	Tb	159		ug/L			170846	200028	1	Standard
⌊	Pb	208	14.745	ug/L	0.110	0	364	1424758	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0396-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:44:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	55864	5	Standard
⌈>	Sc	45		ug/L			489773	589497	0	Standard
|	Cr	52	14.311	ug/L	0.130	0	8505	239086	0	Standard
⌊	Cr	53	14.650	ug/L	0.191	1	60	27097	0	Standard
⌈>	Ge	72		ug/L			31037	31122	1	KED
|	Cu	63	38.316	ug/L	0.293	0	42	158513	1	KED
|	Cu	65	38.064	ug/L	0.356	0	15	79961	1	KED
|	Zn	66	71.053	ug/L	1.084	1	22	36536	2	KED
|	Zn	67	67.339	ug/L	2.040	3	4	5646	3	KED
⌊	As	75	7.097	ug/L	0.133	1	3	1781	3	KED
	Y	89		ug/L			38706	215059	2	Standard
	Kr	83		ug/L			31	78	33	Standard
⌈>	In-1	115		ug/L			6431	6493	3	KED
|	Cd	111	0.193	ug/L	0.054	27	3	48	21	KED
⌊	Cd	114	0.220	ug/L	0.020	9	0	132	8	KED
⌈>	In	115		ug/L			415168	424926	1	Standard
⌊	Ag	107	0.157	ug/L	0.006	4	37	2216	3	Standard
⌈>	Tb	159		ug/L			170846	201951	1	Standard
⌊	Pb	208	15.085	ug/L	0.363	2	364	1471359	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0396-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:48:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	55777	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	572796	2	Standard
|	**Cr**	**52**	**14.013**	ug/L	0.199	1	8505	227627	1	Standard
⌊	**Cr**	**53**	**14.110**	ug/L	0.283	2	60	25353	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31260	0	KED
|	**Cu**	**63**	**34.557**	ug/L	0.140	0	42	143608	1	KED
|	**Cu**	**65**	**34.753**	ug/L	0.496	1	15	73336	1	KED
|	**Zn**	**66**	**66.426**	ug/L	0.936	1	22	34305	1	KED
|	**Zn**	**67**	**63.224**	ug/L	1.361	2	4	5325	2	KED
⌊	**As**	**75**	**6.306**	ug/L	0.132	2	3	1589	1	KED
	Y	**89**		ug/L			38706	202469	0	Standard
	Kr	**83**		ug/L			31	66	5	Standard
⌈>	**In-1**	**115**		ug/L			6431	6464	0	KED
|	**Cd**	**111**	**0.194**	ug/L	0.009	4	3	48	5	KED
⌊	**Cd**	**114**	**0.184**	ug/L	0.007	3	0	110	3	KED
⌈>	**In**	**115**		ug/L			415168	425206	0	Standard
⌊	**Ag**	**107**	**0.138**	ug/L	0.002	1	37	1953	0	Standard
⌈>	**Tb**	**159**		ug/L			170846	197182	1	Standard
⌊	**Pb**	**208**	**13.939**	ug/L	0.210	1	364	1327642	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:53:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	46448	5	Standard
⌈>	Sc	45		ug/L			489773	549846	2	Standard
|	Cr	52	17.371	ug/L	0.291	1	8505	268634	2	Standard
⌊	Cr	53	17.651	ug/L	0.219	1	60	30439	3	Standard
⌈>	Ge	72		ug/L			31037	31365	0	KED
|	Cu	63	25.021	ug/L	0.154	0	42	104333	0	KED
|	Cu	65	24.851	ug/L	0.217	0	15	52626	1	KED
|	Zn	66	57.690	ug/L	0.363	0	22	29897	0	KED
|	Zn	67	56.329	ug/L	3.259	5	4	4759	4	KED
⌊	As	75	5.835	ug/L	0.052	0	3	1476	1	KED
	Y	89		ug/L			38706	164691	2	Standard
	Kr	83		ug/L			31	52	18	Standard
⌈>	In-1	115		ug/L			6431	6493	1	KED
|	Cd	111	0.078	ug/L	0.024	30	3	21	24	KED
⌊	Cd	114	0.080	ug/L	0.018	22	0	48	20	KED
⌈>	In	115		ug/L			415168	421529	1	Standard
⌊	Ag	107	0.242	ug/L	0.008	3	37	3355	4	Standard
⌈>	Tb	159		ug/L			170846	194334	0	Standard
⌊	Pb	208	11.882	ug/L	0.325	2	364	1115373	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 22:57:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	43461	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	545974	1	Standard
|	**Cr**	**52**	**17.152**	ug/L	0.276	1	8505	263488	1	Standard
⌊	**Cr**	**53**	**16.985**	ug/L	0.153	0	60	29086	0	Standard
⌈>	**Ge**	**72**		ug/L			31037	31095	0	KED
|	**Cu**	**63**	**43.419**	ug/L	1.078	2	42	179456	2	KED
|	**Cu**	**65**	**43.123**	ug/L	0.628	1	15	90515	0	KED
|	**Zn**	**66**	**109.906**	ug/L	1.583	1	22	56445	0	KED
|	**Zn**	**67**	**104.388**	ug/L	2.835	2	4	8742	2	KED
⌊	**As**	**75**	**4.796**	ug/L	0.203	4	3	1203	3	KED
	Y	**89**		ug/L			38706	160463	1	Standard
	Kr	**83**		ug/L			31	53	15	Standard
⌈>	**In-1**	**115**		ug/L			6431	6538	2	KED
|	**Cd**	**111**	**0.076**	ug/L	0.028	37	3	21	33	KED
⌊	**Cd**	**114**	**0.090**	ug/L	0.014	15	0	54	13	KED
⌈>	**In**	**115**		ug/L			415168	418749	2	Standard
⌊	**Ag**	**107**	**0.052**	ug/L	0.003	6	37	748	3	Standard
⌈>	**Tb**	**159**		ug/L			170846	193022	1	Standard
⌊	**Pb**	**208**	**23.659**	ug/L	0.416	1	364	2205491	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:02:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31345	5	Standard
⌈>	**Sc**	**45**		ug/L			489773	473998	2	Standard
|	**Cr**	**52**	**0.011**	ug/L	0.017	149	8505	8374	2	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.001	62	60	55	5	Standard
⌈>	**Ge**	**72**		ug/L			31037	31201	1	KED
|	**Cu**	**63**	**0.014**	ug/L	0.023	158	42	101	91	KED
|	**Cu**	**65**	**0.017**	ug/L	0.023	134	15	51	91	KED
|	**Zn**	**66**	**0.030**	ug/L	0.050	168	22	38	66	KED
|	**Zn**	**67**	**0.030**	ug/L	0.048	159	4	6	56	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.003	38	3	1	57	KED
	Y	**89**		ug/L			38706	39592	4	Standard
	Kr	**83**		ug/L			31	40	23	Standard
⌈>	**In-1**	**115**		ug/L			6431	6544	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.003	223	3	3	15	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	7103	0	0	209	KED
⌈>	**In**	**115**		ug/L			415168	422329	2	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	17	37	15	25	Standard
⌈>	**Tb**	**159**		ug/L			170846	170875	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	17	364	216	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:07:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	28899	5	Standard
⌈>	**Sc**	**45**		ug/L			489773	482605	1	Standard
|	**Cr**	**52**	**48.592**	ug/L	0.483	0	8505	644491	1	Standard
⌊	**Cr**	**53**	**48.168**	ug/L	0.910	1	60	72792	0	Standard
⌈>	**Ge**	**72**		ug/L			31037	31124	2	KED
|	**Cu**	**63**	**49.252**	ug/L	0.912	1	42	203714	1	KED
|	**Cu**	**65**	**49.051**	ug/L	1.631	3	15	103007	1	KED
|	**Zn**	**66**	**50.122**	ug/L	1.329	2	22	25769	0	KED
|	**Zn**	**67**	**50.418**	ug/L	2.174	4	4	4226	2	KED
⌊	**As**	**75**	**49.790**	ug/L	1.321	2	3	12473	0	KED
	Y	**89**		ug/L			38706	40740	2	Standard
	Kr	**83**		ug/L			31	43	13	Standard
⌈>	**In-1**	**115**		ug/L			6431	6726	3	KED
|	**Cd**	**111**	**48.091**	ug/L	1.867	3	3	11693	1	KED
⌊	**Cd**	**114**	**48.760**	ug/L	1.508	3	0	30247	0	KED
⌈>	**In**	**115**		ug/L			415168	420228	3	Standard
⌊	**Ag**	**107**	**49.016**	ug/L	1.974	4	37	670195	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	175745	2	Standard
⌊	**Pb**	**208**	**49.189**	ug/L	0.972	1	364	4174139	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:14:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	28266	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	475445	3	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.009	207	8505	8197	2	Standard
⌊	**Cr**	**53**	**-0.000**	ug/L	0.005	7964	60	58	11	Standard
⌈>	**Ge**	**72**		ug/L			31037	31118	1	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	39	42	50	5	KED
|	**Cu**	**65**	**0.007**	ug/L	0.005	67	15	31	33	KED
|	**Zn**	**66**	**0.026**	ug/L	0.007	27	22	36	9	KED
|	**Zn**	**67**	**0.038**	ug/L	0.047	122	4	7	50	KED
⌊	**As**	**75**	**0.001**	ug/L	0.005	385	3	3	34	KED
	Y	**89**		ug/L			38706	38769	1	Standard
	Kr	**83**		ug/L			31	29	43	Standard
⌈>	**In-1**	**115**		ug/L			6431	6283	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.011	917	3	2	88	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.003	54	0	3	49	KED
⌈>	**In**	**115**		ug/L			415168	422915	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	294	37	35	24	Standard
⌈>	**Tb**	**159**		ug/L			170846	169400	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	639	364	356	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:18:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	38997	5	Standard
⌈>	**Sc**	**45**		ug/L			489773	553643	1	Standard
|	**Cr**	**52**	**9.316**	ug/L	0.259	2	8505	149520	2	Standard
⌊	**Cr**	**53**	**9.373**	ug/L	0.208	2	60	16308	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	31627	2	KED
|	**Cu**	**63**	**29.984**	ug/L	0.541	1	42	126045	0	KED
|	**Cu**	**65**	**29.430**	ug/L	0.324	1	15	62837	2	KED
|	**Zn**	**66**	**52.353**	ug/L	1.686	3	22	27351	1	KED
|	**Zn**	**67**	**52.332**	ug/L	1.242	2	4	4459	0	KED
⌊	**As**	**75**	**3.039**	ug/L	0.073	2	3	777	3	KED
	Y	**89**		ug/L			38706	164478	3	Standard
	Kr	**83**		ug/L			31	56	15	Standard
⌈>	**In-1**	**115**		ug/L			6431	6291	1	KED
|	**Cd**	**111**	**0.028**	ug/L	0.007	25	3	9	17	KED
⌊	**Cd**	**114**	**0.043**	ug/L	0.005	11	0	25	12	KED
⌈>	**In**	**115**		ug/L			415168	427999	3	Standard
⌊	**Ag**	**107**	**0.030**	ug/L	0.002	8	37	455	11	Standard
⌈>	**Tb**	**159**		ug/L			170846	198983	0	Standard
⌊	**Pb**	**208**	**3.822**	ug/L	0.050	1	364	367686	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:23:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	38286	3	Standard
⌈>	Sc	45		ug/L			489773	519453	1	Standard
|	Cr	52	7.712	ug/L	0.073	0	8505	117692	1	Standard
⌊	Cr	53	7.871	ug/L	0.226	2	60	12861	4	Standard
⌈>	Ge	72		ug/L			31037	31448	2	KED
|	Cu	63	14.996	ug/L	0.166	1	42	62705	1	KED
|	Cu	65	14.792	ug/L	0.208	1	15	31405	0	KED
|	Zn	66	25.340	ug/L	0.850	3	22	13173	1	KED
|	Zn	67	26.232	ug/L	0.411	1	4	2224	0	KED
⌊	As	75	2.215	ug/L	0.093	4	3	563	1	KED
	Y	89		ug/L			38706	152163	1	Standard
	Kr	83		ug/L			31	47	22	Standard
⌈>	In-1	115		ug/L			6431	6420	1	KED
|	Cd	111	0.030	ug/L	0.016	53	3	10	35	KED
⌊	Cd	114	0.035	ug/L	0.004	11	0	21	11	KED
⌈>	In	115		ug/L			415168	430376	2	Standard
⌊	Ag	107	0.025	ug/L	0.002	8	37	391	7	Standard
⌈>	Tb	159		ug/L			170846	195224	1	Standard
⌊	Pb	208	1.547	ug/L	0.006	0	364	146221	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:27:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	42020	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	531122	1	Standard
|	**Cr**	**52**	**41.170**	ug/L	0.332	0	8505	602419	2	Standard
⌊	**Cr**	**53**	**40.854**	ug/L	0.232	0	60	67969	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31204	0	KED
|	**Cu**	**63**	**64.749**	ug/L	0.743	1	42	268545	1	KED
|	**Cu**	**65**	**63.857**	ug/L	0.789	1	15	134517	2	KED
|	**Zn**	**66**	**98.107**	ug/L	1.480	1	22	50571	2	KED
|	**Zn**	**67**	**104.940**	ug/L	1.572	1	4	8819	1	KED
⌊	**As**	**75**	**7.411**	ug/L	0.058	0	3	1865	1	KED
	Y	**89**		ug/L			38706	146162	2	Standard
	Kr	**83**		ug/L			31	64	15	Standard
⌈>	**In-1**	**115**		ug/L			6431	6268	1	KED
|	**Cd**	**111**	**0.233**	ug/L	0.047	19	3	55	17	KED
⌊	**Cd**	**114**	**0.227**	ug/L	0.012	5	0	131	5	KED
⌈>	**In**	**115**		ug/L			415168	410437	2	Standard
⌊	**Ag**	**107**	**0.161**	ug/L	0.004	2	37	2188	3	Standard
⌈>	**Tb**	**159**		ug/L			170846	186241	1	Standard
⌊	**Pb**	**208**	**49.354**	ug/L	0.874	1	364	4438659	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-11
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:31:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	46824	4	Standard
>	Sc	45		ug/L			489773	553481	1	Standard
	Cr	52	16.703	ug/L	0.354	2	8505	260343	0	Standard
	Cr	53	16.901	ug/L	0.438	2	60	29335	1	Standard
>	Ge	72		ug/L			31037	31314	1	KED
	Cu	63	117.753	ug/L	1.729	1	42	490034	0	KED
	Cu	65	115.655	ug/L	2.577	2	15	244431	1	KED
	Zn	66	370.231	ug/L	7.694	2	22	191412	1	KED
	Zn	67	351.821	ug/L	4.197	1	4	29662	0	KED
	As	75	11.920	ug/L	0.103	0	3	3008	0	KED
	Y	89		ug/L			38706	209610	2	Standard
	Kr	83		ug/L			31	71	24	Standard
>	In-1	115		ug/L			6431	6464	4	KED
	Cd	111	0.784	ug/L	0.104	13	3	185	8	KED
	Cd	114	0.780	ug/L	0.055	7	0	466	11	KED
>	In	115		ug/L			415168	414094	1	Standard
	Ag	107	0.213	ug/L	0.008	3	37	2914	5	Standard
>	Tb	159		ug/L			170846	199232	1	Standard
	Pb	208	155.646	ug/L	2.153	1	364	14974835	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-12
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:36:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	43502	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	536443	1	Standard
|	**Cr**	**52**	**15.990**	ug/L	0.351	2	8505	241957	1	Standard
⌊	**Cr**	**53**	**16.015**	ug/L	0.115	0	60	26951	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31252	0	KED
|	**Cu**	**63**	**23.396**	ug/L	0.365	1	42	97218	2	KED
|	**Cu**	**65**	**23.203**	ug/L	0.190	0	15	48957	0	KED
|	**Zn**	**66**	**55.790**	ug/L	0.407	0	22	28810	0	KED
|	**Zn**	**67**	**53.318**	ug/L	1.275	2	4	4490	1	KED
⌊	**As**	**75**	**5.847**	ug/L	0.035	0	3	1474	0	KED
	Y	**89**		ug/L			38706	147591	2	Standard
	Kr	**83**		ug/L			31	50	12	Standard
⌈>	**In-1**	**115**		ug/L			6431	6546	2	KED
|	**Cd**	**111**	**0.077**	ug/L	0.019	24	3	21	21	KED
⌊	**Cd**	**114**	**0.058**	ug/L	0.020	33	0	36	35	KED
⌈>	**In**	**115**		ug/L			415168	418793	1	Standard
⌊	**Ag**	**107**	**0.049**	ug/L	0.002	5	37	704	4	Standard
⌈>	**Tb**	**159**		ug/L			170846	192806	0	Standard
⌊	**Pb**	**208**	**23.560**	ug/L	0.293	1	364	2194229	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-13
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:40:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	40353	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	529737	1	Standard
|	**Cr**	**52**	**14.653**	ug/L	0.363	2	8505	219719	1	Standard
⌊	**Cr**	**53**	**14.593**	ug/L	0.216	1	60	24257	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	31322	0	KED
|	**Cu**	**63**	**21.651**	ug/L	0.262	1	42	90163	0	KED
|	**Cu**	**65**	**21.097**	ug/L	0.151	0	15	44614	0	KED
|	**Zn**	**66**	**67.677**	ug/L	0.813	1	22	35021	1	KED
|	**Zn**	**67**	**66.149**	ug/L	2.076	3	4	5582	2	KED
⌊	**As**	**75**	**4.939**	ug/L	0.116	2	3	1248	2	KED
	Y	**89**		ug/L			38706	148354	1	Standard
	Kr	**83**		ug/L			31	45	0	Standard
⌈>	**In-1**	**115**		ug/L			6431	6500	1	KED
|	**Cd**	**111**	**0.116**	ug/L	0.022	19	3	30	16	KED
⌊	**Cd**	**114**	**0.122**	ug/L	0.045	37	0	73	36	KED
⌈>	**In**	**115**		ug/L			415168	418029	0	Standard
⌊	**Ag**	**107**	**0.073**	ug/L	0.002	2	37	1027	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	195302	0	Standard
⌊	**Pb**	**208**	**32.536**	ug/L	0.079	0	364	3069165	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-24
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:44:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	46655	4	Standard
⌈>	Sc	45		ug/L			489773	577415	1	Standard
|	Cr	52	15.546	ug/L	0.231	1	8505	253510	1	Standard
⌊	Cr	53	15.712	ug/L	0.183	1	60	28460	1	Standard
⌈>	Ge	72		ug/L			31037	30637	0	KED
|	Cu	63	39.182	ug/L	0.791	2	42	159565	1	KED
|	Cu	65	38.956	ug/L	0.839	2	15	80566	1	KED
|	Zn	66	72.613	ug/L	0.513	0	22	36752	0	KED
|	Zn	67	72.912	ug/L	3.167	4	4	6017	4	KED
⌊	As	75	7.143	ug/L	0.074	1	3	1764	1	KED
	Y	89		ug/L			38706	212682	1	Standard
	Kr	83		ug/L			31	72	9	Standard
⌈>	In-1	115		ug/L			6431	6400	2	KED
|	Cd	111	0.210	ug/L	0.016	7	3	51	8	KED
⌊	Cd	114	0.220	ug/L	0.010	4	0	130	7	KED
⌈>	In	115		ug/L			415168	420678	0	Standard
⌊	Ag	107	0.179	ug/L	0.003	1	37	2485	1	Standard
⌈>	Tb	159		ug/L			170846	202518	1	Standard
⌊	Pb	208	17.818	ug/L	0.280	1	364	1742837	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-28
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:49:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	51881	3	Standard
⌈>	Sc	45		ug/L			489773	566930	1	Standard
|	Cr	52	14.201	ug/L	0.102	0	8505	228254	1	Standard
⌊	Cr	53	14.083	ug/L	0.278	1	60	25058	2	Standard
⌈>	Ge	72		ug/L			31037	30561	1	KED
|	Cu	63	28.446	ug/L	0.330	1	42	115562	1	KED
|	Cu	65	28.645	ug/L	0.218	0	15	59097	1	KED
|	Zn	66	56.512	ug/L	0.566	1	22	28538	2	KED
|	Zn	67	53.910	ug/L	1.956	3	4	4438	1	KED
⌊	As	75	7.179	ug/L	0.024	0	3	1769	1	KED
	Y	89		ug/L			38706	208995	2	Standard
	Kr	83		ug/L			31	51	20	Standard
⌈>	In-1	115		ug/L			6431	6279	2	KED
|	Cd	111	0.182	ug/L	0.035	19	3	44	19	KED
⌊	Cd	114	0.199	ug/L	0.017	8	0	115	9	KED
⌈>	In	115		ug/L			415168	417569	1	Standard
⌊	Ag	107	0.138	ug/L	0.006	4	37	1912	4	Standard
⌈>	Tb	159		ug/L			170846	201351	0	Standard
⌊	Pb	208	10.669	ug/L	0.139	1	364	1037851	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-29
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:53:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	49899	2	Standard
⌈>	Sc	45		ug/L			489773	567089	0	Standard
|	Cr	52	12.901	ug/L	0.140	1	8505	208311	1	Standard
⌊	Cr	53	13.083	ug/L	0.127	0	60	23287	1	Standard
⌈>	Ge	72		ug/L			31037	30821	0	KED
|	Cu	63	28.687	ug/L	0.561	1	42	117542	2	KED
|	Cu	65	28.326	ug/L	0.191	0	15	58942	1	KED
|	Zn	66	52.330	ug/L	0.021	0	22	26652	0	KED
|	Zn	67	50.585	ug/L	1.246	2	4	4201	1	KED
⌊	As	75	6.717	ug/L	0.081	1	3	1669	1	KED
	Y	89		ug/L			38706	187086	0	Standard
	Kr	83		ug/L			31	66	7	Standard
⌈>	In-1	115		ug/L			6431	6311	1	KED
|	Cd	111	0.155	ug/L	0.022	13	3	38	12	KED
⌊	Cd	114	0.143	ug/L	0.032	22	0	83	22	KED
⌈>	In	115		ug/L			415168	420809	2	Standard
⌊	Ag	107	0.143	ug/L	0.009	6	37	1999	6	Standard
⌈>	Tb	159		ug/L			170846	200244	0	Standard
⌊	Pb	208	11.420	ug/L	0.084	0	364	1104767	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLH
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 23:58:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31832	0	Standard
⌈>	**Sc**	**45**		ug/L			489773	467299	0	Standard
|	**Cr**	**52**	**0.004**	ug/L	0.018	499	8505	8160	2	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.006	64	60	44	20	Standard
⌈>	**Ge**	**72**		ug/L			31037	29981	2	KED
|	**Cu**	**63**	**0.002**	ug/L	0.004	215	42	47	28	KED
|	**Cu**	**65**	**0.005**	ug/L	0.001	11	15	25	4	KED
|	**Zn**	**66**	**-0.004**	ug/L	0.003	85	22	20	5	KED
|	**Zn**	**67**	**-0.014**	ug/L	0.036	251	4	3	91	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.003	67	3	2	35	KED
	Y	**89**		ug/L			38706	38062	2	Standard
	Kr	**83**		ug/L			31	41	19	Standard
⌈>	**In-1**	**115**		ug/L			6431	6328	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	254	3	2	57	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	61	0	2	47	KED
⌈>	**In**	**115**		ug/L			415168	418180	1	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	12	37	9	34	Standard
⌈>	**Tb**	**159**		ug/L			170846	168893	0	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	3	364	226	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 00:02:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	29659	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	480703	0	Standard
|	**Cr**	**52**	**48.479**	ug/L	0.498	1	8505	640524	1	Standard
⌊	**Cr**	**53**	**48.514**	ug/L	0.954	1	60	73036	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31103	1	KED
|	**Cu**	**63**	**49.409**	ug/L	1.022	2	42	204227	0	KED
|	**Cu**	**65**	**48.614**	ug/L	0.529	1	15	102058	0	KED
|	**Zn**	**66**	**49.228**	ug/L	0.915	1	22	25297	0	KED
|	**Zn**	**67**	**50.442**	ug/L	1.345	2	4	4227	1	KED
⌊	**As**	**75**	**49.437**	ug/L	0.931	1	3	12379	0	KED
	Y	**89**		ug/L			38706	40704	0	Standard
	Kr	**83**		ug/L			31	31	3	Standard
⌈>	**In-1**	**115**		ug/L			6431	6305	2	KED
|	**Cd**	**111**	**48.641**	ug/L	1.833	3	3	11089	1	KED
⌊	**Cd**	**114**	**49.361**	ug/L	0.357	0	0	28717	1	KED
⌈>	**In**	**115**		ug/L			415168	414363	1	Standard
⌊	**Ag**	**107**	**50.273**	ug/L	1.203	2	37	678201	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	177904	0	Standard
⌊	**Pb**	**208**	**49.193**	ug/L	0.355	0	364	4226831	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 00:09:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	27567	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	470683	3	Standard
|	**Cr**	**52**	**0.001**	ug/L	0.013	1520	8505	8184	3	Standard
⌊	**Cr**	**53**	**0.000**	ug/L	0.001	1858	60	58	6	Standard
⌈>	**Ge**	**72**		ug/L			31037	30027	1	KED
|	**Cu**	**63**	**0.001**	ug/L	0.005	399	42	45	40	KED
|	**Cu**	**65**	**0.006**	ug/L	0.003	57	15	27	26	KED
|	**Zn**	**66**	**0.016**	ug/L	0.003	20	22	29	3	KED
|	**Zn**	**67**	**0.057**	ug/L	0.076	132	4	8	68	KED
⌊	**As**	**75**	**0.002**	ug/L	0.004	183	3	3	30	KED
	Y	**89**		ug/L			38706	39448	2	Standard
	Kr	**83**		ug/L			31	39	18	Standard
⌈>	**In-1**	**115**		ug/L			6431	6410	1	KED
|	**Cd**	**111**	**-0.010**	ug/L	0.000	0	3	0		KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.007	103	0	4	91	KED
⌈>	**In**	**115**		ug/L			415168	414592	2	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	12572	37	37	36	Standard
⌈>	**Tb**	**159**		ug/L			170846	169619	2	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	58	364	342	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-10
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:14:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	41192	3	Standard
⌈>	Sc	45		ug/L			489773	537924	1	Standard
|	Cr	52	17.195	ug/L	0.038	0	8505	260259	1	Standard
⌊	Cr	53	17.114	ug/L	0.108	0	60	28878	1	Standard
⌈>	Ge	72		ug/L			31037	30751	1	KED
|	Cu	63	32.218	ug/L	0.519	1	42	131679	0	KED
|	Cu	65	32.308	ug/L	0.742	2	15	67054	1	KED
|	Zn	66	103.263	ug/L	1.686	1	22	52440	0	KED
|	Zn	67	99.525	ug/L	3.246	3	4	8240	1	KED
⌊	As	75	24.542	ug/L	0.621	2	3	6077	1	KED
	Y	89		ug/L			38706	170292	1	Standard
	Kr	83		ug/L			31	60	10	Standard
⌈>	In-1	115		ug/L			6431	6331	1	KED
|	Cd	111	0.161	ug/L	0.013	7	3	40	8	KED
⌊	Cd	114	0.152	ug/L	0.010	6	0	89	5	KED
⌈>	In	115		ug/L			415168	437202	2	Standard
⌊	Ag	107	0.058	ug/L	0.004	6	37	866	3	Standard
⌈>	Tb	159		ug/L			170846	199684	1	Standard
⌊	Pb	208	42.091	ug/L	0.667	1	364	4059151	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-11
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:19:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	46899	1	Standard
⌈>	Sc	45		ug/L			489773	576312	1	Standard
|	Cr	52	13.207	ug/L	0.143	1	8505	216473	1	Standard
⌊	Cr	53	13.305	ug/L	0.255	1	60	24062	1	Standard
⌈>	Ge	72		ug/L			31037	30903	1	KED
|	Cu	63	26.300	ug/L	0.203	0	42	108053	1	KED
|	Cu	65	26.266	ug/L	0.263	0	15	54801	1	KED
|	Zn	66	67.223	ug/L	1.562	2	22	34315	1	KED
|	Zn	67	64.105	ug/L	1.911	2	4	5338	3	KED
⌊	As	75	7.939	ug/L	0.077	0	3	1978	2	KED
	Y	89		ug/L			38706	227750	2	Standard
	Kr	83		ug/L			31	74	23	Standard
⌈>	In-1	115		ug/L			6431	6240	1	KED
|	Cd	111	0.262	ug/L	0.029	11	3	62	11	KED
⌊	Cd	114	0.272	ug/L	0.019	6	0	157	8	KED
⌈>	In	115		ug/L			415168	425917	1	Standard
⌊	Ag	107	0.191	ug/L	0.006	3	37	2691	2	Standard
⌈>	Tb	159		ug/L			170846	202880	0	Standard
⌊	Pb	208	11.807	ug/L	0.091	0	364	1157220	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-12
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:23:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	41484	3	Standard
>	Sc	45		ug/L			489773	546627	3	Standard
	Cr	52	9.010	ug/L	0.019	0	8505	143092	3	Standard
	Cr	53	9.160	ug/L	0.059	0	60	15738	3	Standard
>	Ge	72		ug/L			31037	28599	12	KED
	Cu	63	14.960	ug/L	1.707	11	42	56374	1	KED
	Cu	65	14.786	ug/L	1.491	10	15	28324	2	KED
	Zn	66	34.869	ug/L	3.250	9	22	16363	3	KED
	Zn	67	33.803	ug/L	2.720	8	4	2591	6	KED
	As	75	2.476	ug/L	0.217	8	3	569	6	KED
	Y	89		ug/L			38706	154862	1	Standard
	Kr	83		ug/L			31	59	6	Standard
>	In-1	115		ug/L			6431	6434	6	KED
	Cd	111	0.075	ug/L	0.026	34	3	20	23	KED
	Cd	114	0.103	ug/L	0.042	40	0	60	33	KED
>	In	115		ug/L			415168	445756	1	Standard
	Ag	107	0.045	ug/L	0.002	4	37	696	3	Standard
>	Tb	159		ug/L			170846	199553	2	Standard
	Pb	208	5.418	ug/L	0.046	0	364	522497	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-15
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:27:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	42224	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	535637	0	Standard
|	**Cr**	**52**	**9.457**	ug/L	0.202	2	8505	146712	2	Standard
⌊	**Cr**	**53**	**9.378**	ug/L	0.119	1	60	15786	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	31058	1	KED
|	**Cu**	**63**	**75.439**	ug/L	1.685	2	42	311361	1	KED
|	**Cu**	**65**	**74.439**	ug/L	0.979	1	15	156046	1	KED
|	**Zn**	**66**	**43.994**	ug/L	0.484	1	22	22580	0	KED
|	**Zn**	**67**	**42.128**	ug/L	0.370	0	4	3526	0	KED
⌊	**As**	**75**	**8.261**	ug/L	0.192	2	3	2069	3	KED
	Y	**89**		ug/L			38706	139700	1	Standard
	Kr	**83**		ug/L			31	55	3	Standard
⌈>	**In-1**	**115**		ug/L			6431	6514	2	KED
|	**Cd**	**111**	**0.032**	ug/L	0.007	22	3	10	13	KED
⌊	**Cd**	**114**	**0.043**	ug/L	0.012	28	0	26	28	KED
⌈>	**In**	**115**		ug/L			415168	444508	1	Standard
⌊	**Ag**	**107**	**0.042**	ug/L	0.001	2	37	654	2	Standard
⌈>	**Tb**	**159**		ug/L			170846	195982	1	Standard
⌊	**Pb**	**208**	**28.410**	ug/L	0.566	1	364	2689074	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-16
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:34:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	43330	4	Standard
⌈>	Sc	45		ug/L			489773	543847	1	Standard
|	Cr	52	14.647	ug/L	0.188	1	8505	225535	2	Standard
⌊	Cr	53	14.718	ug/L	0.010	0	60	25116	1	Standard
⌈>	Ge	72		ug/L			31037	30556	0	KED
|	Cu	63	14.442	ug/L	0.034	0	42	58689	0	KED
|	Cu	65	14.013	ug/L	0.412	2	15	28913	2	KED
|	Zn	66	41.095	ug/L	0.502	1	22	20756	1	KED
|	Zn	67	40.225	ug/L	0.124	0	4	3313	0	KED
⌊	As	75	2.709	ug/L	0.046	1	3	669	1	KED
	Y	89		ug/L			38706	151607	1	Standard
	Kr	83		ug/L			31	50	19	Standard
⌈>	In-1	115		ug/L			6431	6526	3	KED
|	Cd	111	0.069	ug/L	0.014	20	3	19	15	KED
⌊	Cd	114	0.034	ug/L	0.006	16	0	21	19	KED
⌈>	In	115		ug/L			415168	430357	1	Standard
⌊	Ag	107	0.046	ug/L	0.005	11	37	678	8	Standard
⌈>	Tb	159		ug/L			170846	196157	0	Standard
⌊	Pb	208	8.682	ug/L	0.035	0	364	822876	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-17
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:38:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	39815	5	Standard
⌈>	Sc	45		ug/L			489773	532303	1	Standard
|	Cr	52	12.534	ug/L	0.232	1	8505	190251	2	Standard
⌊	Cr	53	12.561	ug/L	0.168	1	60	20988	1	Standard
⌈>	Ge	72		ug/L			31037	30796	1	KED
|	Cu	63	14.010	ug/L	0.306	2	42	57374	1	KED
|	Cu	65	13.817	ug/L	0.060	0	15	28734	0	KED
|	Zn	66	45.726	ug/L	0.267	0	22	23273	1	KED
|	Zn	67	44.094	ug/L	1.961	4	4	3659	3	KED
⌊	As	75	3.287	ug/L	0.027	0	3	818	0	KED
	Y	89		ug/L			38706	134234	3	Standard
	Kr	83		ug/L			31	50	15	Standard
⌈>	In-1	115		ug/L			6431	6444	1	KED
|	Cd	111	0.048	ug/L	0.004	9	3	14	6	KED
⌊	Cd	114	0.053	ug/L	0.005	9	0	32	9	KED
⌈>	In	115		ug/L			415168	439159	1	Standard
⌊	Ag	107	0.041	ug/L	0.002	5	37	619	4	Standard
⌈>	Tb	159		ug/L			170846	196027	0	Standard
⌊	Pb	208	19.957	ug/L	0.049	0	364	1889730	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-18
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:43:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	50409	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	544792	1	Standard
|	**Cr**	**52**	**7.985**	ug/L	0.015	0	8505	127459	1	Standard
⌊	**Cr**	**53**	**8.110**	ug/L	0.084	1	60	13892	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	30737	1	KED
|	**Cu**	**63**	**15.977**	ug/L	0.152	0	42	65303	0	KED
|	**Cu**	**65**	**16.043**	ug/L	0.241	1	15	33296	0	KED
|	**Zn**	**66**	**16.443**	ug/L	0.313	1	22	8366	0	KED
|	**Zn**	**67**	**16.934**	ug/L	0.147	0	4	1405	1	KED
⌊	**As**	**75**	**3.950**	ug/L	0.069	1	3	980	0	KED
	Y	**89**		ug/L			38706	126181	1	Standard
	Kr	**83**		ug/L			31	52	5	Standard
⌈>	**In-1**	**115**		ug/L			6431	6406	2	KED
|	**Cd**	**111**	**0.022**	ug/L	0.018	80	3	8	48	KED
⌊	**Cd**	**114**	**0.022**	ug/L	0.003	15	0	13	15	KED
⌈>	**In**	**115**		ug/L			415168	442957	1	Standard
⌊	**Ag**	**107**	**0.047**	ug/L	0.000	0	37	723	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	195223	1	Standard
⌊	**Pb**	**208**	**4.130**	ug/L	0.011	0	364	389818	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-19
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:47:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	37159	5	Standard
⌈>	Sc	45		ug/L			489773	548709	2	Standard
|	Cr	52	15.393	ug/L	0.345	2	8505	238573	0	Standard
⌊	Cr	53	15.508	ug/L	0.188	1	60	26691	1	Standard
⌈>	Ge	72		ug/L			31037	30172	1	KED
|	Cu	63	48.799	ug/L	0.476	0	42	195698	0	KED
|	Cu	65	48.099	ug/L	0.245	0	15	97965	1	KED
|	Zn	66	140.370	ug/L	0.622	0	22	69950	1	KED
|	Zn	67	133.546	ug/L	3.576	2	4	10852	3	KED
⌊	As	75	15.238	ug/L	0.247	1	3	3703	0	KED
	Y	89		ug/L			38706	186543	3	Standard
	Kr	83		ug/L			31	55	5	Standard
⌈>	In-1	115		ug/L			6431	6548	1	KED
|	Cd	111	0.120	ug/L	0.036	30	3	31	27	KED
⌊	Cd	114	0.071	ug/L	0.012	16	0	43	16	KED
⌈>	In	115		ug/L			415168	438647	1	Standard
⌊	Ag	107	0.043	ug/L	0.002	5	37	652	6	Standard
⌈>	Tb	159		ug/L			170846	199150	1	Standard
⌊	Pb	208	28.845	ug/L	0.420	1	364	2774307	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-22
Sample Dil Factor: 20
Comments:
Sample Date/Time: Friday, May 12, 2023 00:51:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	43064	3	Standard
>	Sc	45		ug/L			489773	558439	1	Standard
	Cr	52	44.150	ug/L	0.302	0	8505	678482	0	Standard
	Cr	53	43.988	ug/L	0.585	1	60	76948	2	Standard
>	Ge	72		ug/L			31037	30590	0	KED
	Cu	63	595.340	ug/L	7.490	1	42	2420198	1	KED
	Cu	65	551.170	ug/L	3.704	0	15	1137954	0	KED
	Zn	66	207.307	ug/L	3.398	1	22	104721	1	KED
	Zn	67	197.681	ug/L	3.122	1	4	16283	1	KED
	As	75	8.626	ug/L	0.068	0	3	2127	1	KED
	Y	89		ug/L			38706	220432	1	Standard
	Kr	83		ug/L			31	66	9	Standard
>	In-1	115		ug/L			6431	6200	1	KED
	Cd	111	0.300	ug/L	0.036	12	3	70	10	KED
	Cd	114	0.328	ug/L	0.046	14	0	188	15	KED
>	In	115		ug/L			415168	414710	1	Standard
	Ag	107	0.141	ug/L	0.008	5	37	1944	7	Standard
>	Tb	159		ug/L			170846	198068	1	Standard
	Pb	208	104.657	ug/L	2.616	2	364	10008661	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 00:56:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31692	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	462144	1	Standard
|	**Cr**	**52**	**0.022**	ug/L	0.008	38	8505	8304	2	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.003	82	60	52	6	Standard
⌈>	**Ge**	**72**		ug/L			31037	30135	0	KED
|	**Cu**	**63**	**0.053**	ug/L	0.005	9	42	253	7	KED
|	**Cu**	**65**	**0.060**	ug/L	0.004	7	15	137	6	KED
|	**Zn**	**66**	**0.032**	ug/L	0.016	49	22	38	20	KED
|	**Zn**	**67**	**0.025**	ug/L	0.076	300	4	6	96	KED
⌊	**As**	**75**	**0.001**	ug/L	0.002	185	3	3	14	KED
	Y	**89**		ug/L			38706	38668	3	Standard
	Kr	**83**		ug/L			31	33	37	Standard
⌈>	**In-1**	**115**		ug/L			6431	6204	1	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.002	29	3	1	43	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	38	0	2	32	KED
⌈>	**In**	**115**		ug/L			415168	416951	4	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	21	37	13	34	Standard
⌈>	**Tb**	**159**		ug/L			170846	171074	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	20	364	461	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 01:00:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	28687	6	Standard
⌈>	**Sc**	**45**		ug/L			489773	479894	2	Standard
|	**Cr**	**52**	**48.044**	ug/L	0.832	1	8505	633573	1	Standard
⌊	**Cr**	**53**	**48.145**	ug/L	0.311	0	60	72354	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	30420	1	KED
|	**Cu**	**63**	**50.248**	ug/L	1.371	2	42	203123	1	KED
|	**Cu**	**65**	**49.783**	ug/L	0.973	1	15	102219	1	KED
|	**Zn**	**66**	**50.436**	ug/L	1.595	3	22	25347	2	KED
|	**Zn**	**67**	**52.050**	ug/L	1.297	2	4	4266	0	KED
⌊	**As**	**75**	**49.192**	ug/L	0.767	1	3	12048	0	KED
	Y	**89**		ug/L			38706	39850	1	Standard
	Kr	**83**		ug/L			31	45	7	Standard
⌈>	**In-1**	**115**		ug/L			6431	6340	1	KED
|	**Cd**	**111**	**48.689**	ug/L	0.297	0	3	11168	1	KED
⌊	**Cd**	**114**	**49.469**	ug/L	1.021	2	0	28938	0	KED
⌈>	**In**	**115**		ug/L			415168	415978	1	Standard
⌊	**Ag**	**107**	**48.907**	ug/L	0.542	1	37	662378	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	177816	0	Standard
⌊	**Pb**	**208**	**49.451**	ug/L	0.721	1	364	4246608	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 01:07:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	27566	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	475006	1	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.008	216	8505	8199	2	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.008	92	60	46	26	Standard
⌈>	**Ge**	**72**		ug/L			31037	29889	0	KED
|	**Cu**	**63**	**0.014**	ug/L	0.007	50	42	95	28	KED
|	**Cu**	**65**	**0.019**	ug/L	0.004	21	15	53	15	KED
|	**Zn**	**66**	**0.013**	ug/L	0.017	125	22	28	29	KED
|	**Zn**	**67**	**0.010**	ug/L	0.037	360	4	5	57	KED
⌊	**As**	**75**	**0.000**	ug/L	0.006	1348	3	3	48	KED
	Y	**89**		ug/L			38706	38925	1	Standard
	Kr	**83**		ug/L			31	48	8	Standard
⌈>	**In-1**	**115**		ug/L			6431	6244	0	KED
|	**Cd**	**111**	**0.006**	ug/L	0.010	161	3	4	49	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	185	0	1	102	KED
⌈>	**In**	**115**		ug/L			415168	430066	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	220	37	32	45	Standard
⌈>	**Tb**	**159**		ug/L			170846	168062	0	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	17	364	328	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-04RE1
Sample Dil Factor: 2000
Comments:
Sample Date/Time: Friday, May 12, 2023 01:12:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30551	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	472324	2	Standard
|	**Cr**	**52**	**1.000**	ug/L	0.022	2	8505	21019	2	Standard
⌊	**Cr**	**53**	**1.004**	ug/L	0.006	0	60	1541	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	30398	2	KED
|	**Cu**	**63**	**28.936**	ug/L	0.761	2	42	116874	0	KED
|	**Cu**	**65**	**29.260**	ug/L	0.186	0	15	60048	3	KED
|	**Zn**	**66**	**87.620**	ug/L	1.525	1	22	43982	1	KED
|	**Zn**	**67**	**83.917**	ug/L	1.102	1	4	6870	1	KED
⌊	**As**	**75**	**11.907**	ug/L	0.373	3	3	2915	1	KED
	Y	**89**		ug/L			38706	41079	3	Standard
	Kr	**83**		ug/L			31	46	31	Standard
⌈>	**In-1**	**115**		ug/L			6431	6427	0	KED
|	**Cd**	**111**	**0.057**	ug/L	0.014	23	3	16	18	KED
⌊	**Cd**	**114**	**0.069**	ug/L	0.014	20	0	41	20	KED
⌈>	**In**	**115**		ug/L			415168	427647	2	Standard
⌊	**Ag**	**107**	**0.017**	ug/L	0.002	9	37	274	10	Standard
⌈>	**Tb**	**159**		ug/L			170846	174643	0	Standard
⌊	**Pb**	**208**	**11.481**	ug/L	0.110	0	364	968692	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-DUP3
Sample Dil Factor: 2000
Comments:
Sample Date/Time: Friday, May 12, 2023 01:16:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30898	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	488984	1	Standard
|	**Cr**	**52**	**0.958**	ug/L	0.014	1	8505	21205	2	Standard
⌊	**Cr**	**53**	**0.982**	ug/L	0.028	2	60	1564	3	Standard
⌈>	**Ge**	**72**		ug/L			31037	31407	0	KED
|	**Cu**	**63**	**31.207**	ug/L	0.191	0	42	130300	1	KED
|	**Cu**	**65**	**30.125**	ug/L	0.377	1	15	63877	1	KED
|	**Zn**	**66**	**86.830**	ug/L	0.595	0	22	45047	0	KED
|	**Zn**	**67**	**84.346**	ug/L	1.688	2	4	7135	1	KED
⌊	**As**	**75**	**11.642**	ug/L	0.015	0	3	2946	0	KED
	Y	**89**		ug/L			38706	43238	2	Standard
	Kr	**83**		ug/L			31	40	2	Standard
⌈>	**In-1**	**115**		ug/L			6431	6515	3	KED
|	**Cd**	**111**	**0.052**	ug/L	0.019	36	3	15	30	KED
⌊	**Cd**	**114**	**0.078**	ug/L	0.002	2	0	47	1	KED
⌈>	**In**	**115**		ug/L			415168	444475	1	Standard
⌊	**Ag**	**107**	**0.016**	ug/L	0.002	10	37	276	7	Standard
⌈>	**Tb**	**159**		ug/L			170846	175642	1	Standard
⌊	**Pb**	**208**	**11.306**	ug/L	0.135	1	364	959316	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MS3
Sample Dil Factor: 2000
Comments:
Sample Date/Time: Friday, May 12, 2023 01:20:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte		Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C		13		ug/L			28285	30807	4	Standard
⌈>	Sc		45		ug/L			489773	490648	1	Standard
|	Cr		52	1.258	ug/L	0.023	1	8505	25260	2	Standard
⌊	Cr		53	1.264	ug/L	0.044	3	60	2001	3	Standard
⌈>	Ge		72		ug/L			31037	31055	2	KED
|	Cu	STL	63	33.693	ug/L	0.891	2	42	139054	2	KED
|	Cu		65	33.044	ug/L	0.837	2	15	69247	0	KED
|	Zn	STL	66	94.281	ug/L	1.711	1	22	48349	0	KED
|	Zn		67	86.973	ug/L	1.658	1	4	7273	0	KED
⌊	As		75	12.936	ug/L	0.137	1	3	3237	2	KED
	Y		89		ug/L			38706	42287	1	Standard
	Kr		83		ug/L			31	35	18	Standard
⌈>	In-1		115		ug/L			6431	6456	2	KED
|	Cd		111	0.280	ug/L	0.068	24	3	68	24	KED
⌊	Cd		114	0.306	ug/L	0.047	15	0	182	13	KED
⌈>	In		115		ug/L			415168	450507	2	Standard
⌊	Ag		107	0.101	ug/L	0.002	2	37	1523	3	Standard
⌈>	Tb		159		ug/L			170846	179202	1	Standard
⌊	Pb		208	11.787	ug/L	0.139	1	364	1020315	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MSD3
Sample Dil Factor: 2000
Comments:
Sample Date/Time: Friday, May 12, 2023 01:25:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte		Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C		**13**		ug/L			28285	30391	3	Standard
⌈>	**Sc**		**45**		ug/L			489773	486050	0	Standard
|	**Cr**		**52**	**1.289**	ug/L	0.016	1	8505	25435	0	Standard
⌊	**Cr**		**53**	**1.272**	ug/L	0.034	2	60	1995	2	Standard
⌈>	**Ge**		**72**		ug/L			31037	30597	0	KED
|	**Cu**	STL	**63**	**31.232**	ug/L	0.304	0	42	127032	0	KED
|	**Cu**		**65**	**30.820**	ug/L	0.571	1	15	63657	1	KED
|	**Zn**	STL	**66**	**95.342**	ug/L	2.089	2	22	48183	1	KED
|	**Zn**		**67**	**92.251**	ug/L	0.612	0	4	7603	0	KED
⌊	**As**		**75**	**14.360**	ug/L	0.327	2	3	3539	1	KED
	Y		**89**		ug/L			38706	43671	3	Standard
	Kr		**83**		ug/L			31	26	14	Standard
⌈>	**In-1**		**115**		ug/L			6431	6440	1	KED
|	**Cd**		**111**	**0.295**	ug/L	0.047	15	3	71	14	KED
⌊	**Cd**		**114**	**0.338**	ug/L	0.041	12	0	201	11	KED
⌈>	**In**		**115**		ug/L			415168	449398	1	Standard
⌊	**Ag**		**107**	**0.102**	ug/L	0.001	1	37	1530	2	Standard
⌈>	**Tb**		**159**		ug/L			170846	179486	1	Standard
⌊	**Pb**		**208**	**12.545**	ug/L	0.158	1	364	1087663	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-04
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 01:29:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30631	5	Standard
⌈>	**Sc**	**45**		ug/L			489773	493335	3	Standard
|	**Cr**	**52**	**9.547**	ug/L	0.169	1	8505	136286	1	Standard
⌊	**Cr**	**53**	**9.509**	ug/L	0.285	2	60	14734	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	31482	0	KED
|	**Cu**	**63**	**281.221**	ug/L	1.937	0	42	1176615	0	KED
|	**Cu**	**65**	**277.319**	ug/L	2.161	0	15	589274	0	KED
|	**Zn**	**66**	**852.097**	ug/L	9.023	1	22	442931	1	KED
|	**Zn**	**67**	**803.366**	ug/L	16.409	2	4	68094	2	KED
⌊	**As**	**75**	**115.076**	ug/L	0.981	0	3	29167	0	KED
	Y	**89**		ug/L			38706	61146	0	Standard
	Kr	**83**		ug/L			31	47	8	Standard
⌈>	**In-1**	**115**		ug/L			6431	7352	1	KED
|	**Cd**	**111**	**0.508**	ug/L	0.035	6	3	138	5	KED
⌊	**Cd**	**114**	**0.493**	ug/L	0.037	7	0	334	6	KED
⌈>	**In**	**115**		ug/L			415168	503740	1	Standard
⌊	**Ag**	**107**	**0.156**	ug/L	0.005	3	37	2600	2	Standard
⌈>	**Tb**	**159**		ug/L			170846	182208	1	Standard
⌊	**Pb**	**208**	**115.229**	ug/L	1.114	0	364	10140173	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-DUP2
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 01:34:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	30139	3	Standard
⌈>	Sc	45		ug/L			489773	482233	0	Standard
|	Cr	52	9.224	ug/L	0.039	0	8505	129036	0	Standard
⌊	Cr	53	9.294	ug/L	0.107	1	60	14085	0	Standard
⌈>	Ge	72		ug/L			31037	31019	0	KED
|	Cu	63	296.799	ug/L	8.170	2	42	1223536	2	KED
|	Cu	65	290.840	ug/L	4.591	1	15	608916	1	KED
|	Zn	66	837.327	ug/L	7.595	0	22	428850	0	KED
|	Zn	67	797.723	ug/L	16.671	2	4	66622	2	KED
⌊	As	75	113.575	ug/L	1.088	0	3	28363	0	KED
	Y	89		ug/L			38706	62481	1	Standard
	Kr	83		ug/L			31	47	6	Standard
⌈>	In-1	115		ug/L			6431	7466	2	KED
|	Cd	111	0.597	ug/L	0.075	12	3	164	11	KED
⌊	Cd	114	0.556	ug/L	0.063	11	0	384	12	KED
⌈>	In	115		ug/L			415168	489865	2	Standard
⌊	Ag	107	0.164	ug/L	0.005	3	37	2658	4	Standard
⌈>	Tb	159		ug/L			170846	177530	2	Standard
⌊	Pb	208	114.260	ug/L	2.317	2	364	9793943	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MS2
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 01:38:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	29199	3	Standard
>	Sc	45		ug/L			489773	481935	1	Standard
	Cr	52	12.086	ug/L	0.171	1	8505	166389	2	Standard
	Cr	53	12.337	ug/L	0.230	1	60	18663	1	Standard
>	Ge	72		ug/L			31037	30385	2	KED
	Cu	63	324.911	ug/L	8.767	2	42	1311520	1	KED
	Cu	65	320.907	ug/L	4.283	1	15	657992	1	KED
	Zn	66	913.322	ug/L	20.769	2	22	458051	0	KED
	Zn	67	843.494	ug/L	16.438	1	4	68983	0	KED
	As STL	75	126.687	ug/L	2.649	2	3	30981	0	KED
	Y	89		ug/L			38706	60811	5	Standard
	Kr	83		ug/L			31	49	7	Standard
>	In-1	115		ug/L			6431	7279	1	KED
	Cd	111	2.577	ug/L	0.147	5	3	681	4	KED
	Cd	114	2.545	ug/L	0.104	4	0	1709	2	KED
>	In	115		ug/L			415168	491629	0	Standard
	Ag	107	0.914	ug/L	0.033	3	37	14672	3	Standard
>	Tb	159		ug/L			170846	175848	2	Standard
	Pb STL	208	123.651	ug/L	2.529	2	364	10499446	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MSD2
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 01:43:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			28285	29253	2	Standard
>	Sc	45		ug/L			489773	478491	1	Standard
	Cr	52	12.000	ug/L	0.155	1	8505	164058	1	Standard
	Cr	53	12.342	ug/L	0.018	0	60	18540	1	Standard
>	Ge	72		ug/L			31037	29516	1	KED
	Cu	63	298.398	ug/L	6.261	2	42	1170402	1	KED
	Cu	65	299.647	ug/L	9.493	3	15	596840	2	KED
	Zn	66	934.941	ug/L	10.807	1	22	455607	0	KED
	Zn	67	876.581	ug/L	20.255	2	4	69647	1	KED
	As STL	75	139.598	ug/L	2.184	1	3	33169	0	KED
	Y	89		ug/L			38706	61352	0	Standard
	Kr	83		ug/L			31	49	0	Standard
>	In-1	115		ug/L			6431	7369	0	KED
	Cd	111	2.591	ug/L	0.172	6	3	694	6	KED
	Cd	114	2.626	ug/L	0.197	7	0	1786	8	KED
>	In	115		ug/L			415168	485755	2	Standard
	Ag	107	0.915	ug/L	0.014	1	37	14513	1	Standard
>	Tb	159		ug/L			170846	177756	1	Standard
	Pb STL	208	127.749	ug/L	2.128	1	364	10965682	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-PS2
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 01:49:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30713	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	480926	2	Standard
|	**Cr**	**52**	**33.128**	ug/L	0.619	1	8505	440421	1	Standard
⌊	**Cr**	**53**	**33.458**	ug/L	0.662	1	60	50398	0	Standard
⌈>	**Ge**	**72**		ug/L			31037	29561	0	KED
|	**Cu**	**63**	**308.592**	ug/L	4.739	1	42	1212252	0	KED
|	**Cu**	**65**	**304.340**	ug/L	5.202	1	15	607177	0	KED
|	**Zn**	**66**	**946.721**	ug/L	8.030	0	22	462068	0	KED
|	**Zn**	**67**	**878.577**	ug/L	8.175	0	4	69928	1	KED
⌊	**As**	**75**	**140.870**	ug/L	1.866	1	3	33524	0	KED
	Y	**89**		ug/L			38706	65298	1	Standard
	Kr	**83**		ug/L			31	56	10	Standard
⌈>	**In-1**	**115**		ug/L			6431	6960	1	KED
|	**Cd**	**111**	**22.267**	ug/L	0.592	2	3	5608	2	KED
⌊	**Cd**	**114**	**22.783**	ug/L	0.148	0	0	14632	0	KED
⌈>	**In**	**115**		ug/L			415168	488552	0	Standard
⌊	**Ag**	**107**	**22.205**	ug/L	0.197	0	37	353249	0	Standard
⌈>	**Tb**	**159**		ug/L			170846	174800	0	Standard
⌊	**Pb**	**208**	**146.960**	ug/L	0.816	0	364	12406204	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLJ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 01:54:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	29657	1	Standard
⌈>	**Sc**	**45**		ug/L			489773	453739	1	Standard
|	**Cr**	**52**	**0.003**	ug/L	0.008	251	8505	7919	1	Standard
⌊	**Cr**	**53**	**-0.012**	ug/L	0.002	16	60	39	6	Standard
⌈>	**Ge**	**72**		ug/L			31037	28655	1	KED
|	**Cu**	**63**	**0.053**	ug/L	0.003	5	42	242	5	KED
|	**Cu**	**65**	**0.049**	ug/L	0.002	4	15	109	2	KED
|	**Zn**	**66**	**0.043**	ug/L	0.013	29	22	41	14	KED
|	**Zn**	**67**	**0.013**	ug/L	0.029	227	4	5	43	KED
⌊	**As**	**75**	**0.018**	ug/L	0.009	50	3	7	29	KED
	Y	**89**		ug/L			38706	39024	2	Standard
	Kr	**83**		ug/L			31	44	19	Standard
⌈>	**In-1**	**115**		ug/L			6431	6089	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.005	222	3	2	43	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.015	166	0	5	151	KED
⌈>	**In**	**115**		ug/L			415168	420505	1	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	261	37	40	17	Standard
⌈>	**Tb**	**159**		ug/L			170846	168070	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	11	364	556	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 01:58:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	28472	1	Standard
⌈>	**Sc**	**45**		ug/L			489773	474949	1	Standard
|	**Cr**	**52**	**47.965**	ug/L	0.470	0	8505	626152	1	Standard
⌊	**Cr**	**53**	**47.875**	ug/L	0.742	1	60	71220	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	29215	0	KED
|	**Cu**	**63**	**50.335**	ug/L	0.996	1	42	195466	1	KED
|	**Cu**	**65**	**50.159**	ug/L	1.239	2	15	98918	2	KED
|	**Zn**	**66**	**49.688**	ug/L	0.599	1	22	23989	1	KED
|	**Zn**	**67**	**50.926**	ug/L	2.453	4	4	4010	5	KED
⌊	**As**	**75**	**50.121**	ug/L	0.499	0	3	11791	0	KED
	Y	**89**		ug/L			38706	40881	2	Standard
	Kr	**83**		ug/L			31	43	18	Standard
⌈>	**In-1**	**115**		ug/L			6431	6076	4	KED
|	**Cd**	**111**	**49.124**	ug/L	0.705	1	3	10793	3	KED
⌊	**Cd**	**114**	**49.453**	ug/L	1.521	3	0	27702	1	KED
⌈>	**In**	**115**		ug/L			415168	418925	2	Standard
⌊	**Ag**	**107**	**49.536**	ug/L	1.188	2	37	675500	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	174901	0	Standard
⌊	**Pb**	**208**	**50.663**	ug/L	0.504	0	364	4279485	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 02:05:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	26731	1	Standard
⌈>	**Sc**	**45**		ug/L			489773	453624	3	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.017	125	8505	8044	1	Standard
⌊	**Cr**	**53**	**0.002**	ug/L	0.005	261	60	59	11	Standard
⌈>	**Ge**	**72**		ug/L			31037	29444	1	KED
|	**Cu**	**63**	**0.032**	ug/L	0.005	15	42	165	12	KED
|	**Cu**	**65**	**0.029**	ug/L	0.003	11	15	71	9	KED
|	**Zn**	**66**	**0.025**	ug/L	0.016	65	22	33	23	KED
|	**Zn**	**67**	**-0.021**	ug/L	0.036	168	4	2	114	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.004	330	3	2	36	KED
	Y	**89**		ug/L			38706	38946	2	Standard
	Kr	**83**		ug/L			31	37	32	Standard
⌈>	**In-1**	**115**		ug/L			6431	6118	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.007	303	3	2	57	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	39	0	2	34	KED
⌈>	**In**	**115**		ug/L			415168	413830	2	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	422	37	39	21	Standard
⌈>	**Tb**	**159**		ug/L			170846	164294	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	30	364	455	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-03RE1
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 02:09:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30624	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	487192	2	Standard
|	**Cr**	**52**	**3.273**	ug/L	0.129	3	8505	51694	1	Standard
⌊	**Cr**	**53**	**3.350**	ug/L	0.083	2	60	5165	0	Standard
⌈>	**Ge**	**72**		ug/L			31037	29906	1	KED
|	**Cu**	**63**	**13.945**	ug/L	0.345	2	42	55451	1	KED
|	**Cu**	**65**	**13.640**	ug/L	0.160	1	15	27545	0	KED
|	**Zn**	**66**	**18.522**	ug/L	0.095	0	22	9167	0	KED
|	**Zn**	**67**	**17.125**	ug/L	0.234	1	4	1382	0	KED
⌊	**As**	**75**	**1.939**	ug/L	0.093	4	3	470	5	KED
	Y	**89**		ug/L			38706	51426	1	Standard
	Kr	**83**		ug/L			31	39	7	Standard
⌈>	**In-1**	**115**		ug/L			6431	6213	2	KED
|	**Cd**	**111**	**1.349**	ug/L	0.021	1	3	306	3	KED
⌊	**Cd**	**114**	**1.338**	ug/L	0.052	3	0	767	4	KED
⌈>	**In**	**115**		ug/L			415168	433493	2	Standard
⌊	**Ag**	**107**	**0.013**	ug/L	0.001	7	37	228	4	Standard
⌈>	**Tb**	**159**		ug/L			170846	176763	1	Standard
⌊	**Pb**	**208**	**78.292**	ug/L	0.952	1	364	6682947	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-07RE1
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 12, 2023 02:14:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	35262	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	498833	2	Standard
|	**Cr**	**52**	**6.919**	ug/L	0.161	2	8505	102262	1	Standard
⌊	**Cr**	**53**	**7.160**	ug/L	0.284	3	60	11232	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	29425	2	KED
|	**Cu**	**63**	**21.746**	ug/L	0.149	0	42	85074	2	KED
|	**Cu**	**65**	**21.605**	ug/L	0.331	1	15	42917	2	KED
|	**Zn**	**66**	**78.657**	ug/L	1.499	1	22	38225	0	KED
|	**Zn**	**67**	**75.072**	ug/L	3.238	4	4	5947	1	KED
⌊	**As**	**75**	**2.013**	ug/L	0.032	1	3	479	1	KED
	Y	**89**		ug/L			38706	110324	2	Standard
	Kr	**83**		ug/L			31	43	5	Standard
⌈>	**In-1**	**115**		ug/L			6431	6245	0	KED
|	**Cd**	**111**	**0.158**	ug/L	0.056	35	3	38	31	KED
⌊	**Cd**	**114**	**0.213**	ug/L	0.003	1	0	122	2	KED
⌈>	**In**	**115**		ug/L			415168	417940	1	Standard
⌊	**Ag**	**107**	**0.054**	ug/L	0.002	3	37	767	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	184577	1	Standard
⌊	**Pb**	**208**	**10.989**	ug/L	0.080	0	364	979909	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0568-08RE1
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 12, 2023 02:18:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31596	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	517960	2	Standard
|	**Cr**	**52**	**8.543**	ug/L	0.115	1	8505	129008	2	Standard
⌊	**Cr**	**53**	**8.743**	ug/L	0.132	1	60	14233	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	29166	1	KED
|	**Cu**	**63**	**65.938**	ug/L	0.910	1	42	255577	0	KED
|	**Cu**	**65**	**66.039**	ug/L	2.091	3	15	129965	1	KED
|	**Zn**	**66**	**30.904**	ug/L	1.722	5	22	14892	3	KED
|	**Zn**	**67**	**29.801**	ug/L	1.213	4	4	2343	2	KED
⌊	**As**	**75**	**0.908**	ug/L	0.052	5	3	216	3	KED
	Y	**89**		ug/L			38706	155291	2	Standard
	Kr	**83**		ug/L			31	84	7	Standard
⌈>	**In-1**	**115**		ug/L			6431	5942	1	KED
|	**Cd**	**111**	**0.044**	ug/L	0.019	43	3	12	33	KED
⌊	**Cd**	**114**	**0.065**	ug/L	0.016	24	0	35	23	KED
⌈>	**In**	**115**		ug/L			415168	407971	1	Standard
⌊	**Ag**	**107**	**0.050**	ug/L	0.006	11	37	695	10	Standard
⌈>	**Tb**	**159**		ug/L			170846	188018	3	Standard
⌊	**Pb**	**208**	**5.214**	ug/L	0.135	2	364	473576	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-DUP2
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 12, 2023 02:22:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	32188	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	514224	0	Standard
|	**Cr**	**52**	**8.460**	ug/L	0.137	1	8505	126940	1	Standard
⌊	**Cr**	**53**	**8.562**	ug/L	0.143	1	60	13842	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	28889	0	KED
|	**Cu**	**63**	**67.265**	ug/L	0.792	1	42	258273	0	KED
|	**Cu**	**65**	**68.236**	ug/L	0.153	0	15	133063	0	KED
|	**Zn**	**66**	**31.600**	ug/L	0.647	2	22	15092	1	KED
|	**Zn**	**67**	**30.536**	ug/L	1.112	3	4	2379	3	KED
⌊	**As**	**75**	**1.361**	ug/L	0.052	3	3	319	3	KED
	Y	**89**		ug/L			38706	163418	3	Standard
	Kr	**83**		ug/L			31	85	25	Standard
⌈>	**In-1**	**115**		ug/L			6431	5786	1	KED
|	**Cd**	**111**	**0.070**	ug/L	0.027	38	3	17	33	KED
⌊	**Cd**	**114**	**0.068**	ug/L	0.017	25	0	36	26	KED
⌈>	**In**	**115**		ug/L			415168	413285	2	Standard
⌊	**Ag**	**107**	**0.063**	ug/L	0.006	9	37	889	6	Standard
⌈>	**Tb**	**159**		ug/L			170846	188901	1	Standard
⌊	**Pb**	**208**	**6.697**	ug/L	0.064	0	364	611329	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-MS2
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 12, 2023 02:27:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31313	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	510684	2	Standard
|	**Cr**	**52**	**18.655**	ug/L	0.323	1	8505	267255	1	Standard
⌊	**Cr**	**53**	**18.746**	ug/L	0.348	1	60	30022	2	Standard
⌈>	**Ge**	**72**		ug/L			31037	28790	1	KED
|	**Cu**	**63**	**76.495**	ug/L	0.327	0	42	292713	1	KED
|	**Cu**	**65**	**76.368**	ug/L	0.858	1	15	148397	0	KED
|	**Zn**	**66**	**60.624**	ug/L	0.247	0	22	28838	1	KED
|	**Zn**	**67**	**56.389**	ug/L	2.283	4	4	4375	4	KED
⌊	**As**	**75**	**9.360**	ug/L	0.068	0	3	2172	0	KED
	Y	**89**		ug/L			38706	166225	3	Standard
	Kr	**83**		ug/L			31	65	24	Standard
⌈>	**In-1**	**115**		ug/L			6431	5934	1	KED
|	**Cd**	**111**	**10.090**	ug/L	0.243	2	3	2168	2	KED
⌊	**Cd**	**114**	**10.347**	ug/L	0.182	1	0	5666	1	KED
⌈>	**In**	**115**		ug/L			415168	407600	1	Standard
⌊	**Ag**	**107**	**9.938**	ug/L	0.212	2	37	131911	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	186852	1	Standard
⌊	**Pb**	**208**	**13.748**	ug/L	0.170	1	364	1240887	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-MSD2
Sample Dil Factor: 50
Comments:
Sample Date/Time: Friday, May 12, 2023 02:31:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	31044	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	518699	1	Standard
|	**Cr**	**52**	**17.572**	ug/L	0.147	0	8505	256239	1	Standard
⌊	**Cr**	**53**	**17.644**	ug/L	0.164	0	60	28701	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	29185	0	KED
|	**Cu**	**63**	**69.683**	ug/L	0.325	0	42	270307	0	KED
|	**Cu**	**65**	**68.472**	ug/L	1.336	1	15	134892	2	KED
|	**Zn**	**66**	**64.007**	ug/L	1.086	1	22	30862	1	KED
|	**Zn**	**67**	**63.315**	ug/L	1.110	1	4	4978	1	KED
⌊	**As**	**75**	**8.715**	ug/L	0.136	1	3	2050	1	KED
	Y	**89**		ug/L			38706	175850	1	Standard
	Kr	**83**		ug/L			31	71	8	Standard
⌈>	**In-1**	**115**		ug/L			6431	6045	1	KED
|	**Cd**	**111**	**10.400**	ug/L	0.308	2	3	2276	1	KED
⌊	**Cd**	**114**	**10.110**	ug/L	0.094	0	0	5640	2	KED
⌈>	**In**	**115**		ug/L			415168	412014	1	Standard
⌊	**Ag**	**107**	**9.935**	ug/L	0.244	2	37	133316	2	Standard
⌈>	**Tb**	**159**		ug/L			170846	191323	0	Standard
⌊	**Pb**	**208**	**14.236**	ug/L	0.104	0	364	1315763	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 02:36:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30359	5	Standard
⌈>	**Sc**	**45**		ug/L			489773	453998	1	Standard
|	**Cr**	**52**	**0.007**	ug/L	0.007	104	8505	7970	1	Standard
⌊	**Cr**	**53**	**-0.007**	ug/L	0.007	105	60	46	21	Standard
⌈>	**Ge**	**72**		ug/L			31037	28893	1	KED
|	**Cu**	**63**	**0.016**	ug/L	0.002	12	42	100	8	KED
|	**Cu**	**65**	**0.013**	ug/L	0.004	30	15	40	17	KED
|	**Zn**	**66**	**0.014**	ug/L	0.009	66	22	27	14	KED
|	**Zn**	**67**	**0.037**	ug/L	0.077	206	4	6	83	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.006	96	3	1	100	KED
	Y	**89**		ug/L			38706	38306	2	Standard
	Kr	**83**		ug/L			31	40	33	Standard
⌈>	**In-1**	**115**		ug/L			6431	5811	3	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.003	193	3	2	21	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	309	0	1	188	KED
⌈>	**In**	**115**		ug/L			415168	413827	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	151	37	29	43	Standard
⌈>	**Tb**	**159**		ug/L			170846	166016	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	68	364	330	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-02
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 02:40:32

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	45434	2	Standard
⌈>	**Sc**	**45**		ug/L			489773	482968	3	Standard
|	**Cr**	**52**	**2.353**	ug/L	0.019	0	8505	39210	2	Standard
⌊	**Cr**	**53**	**2.336**	ug/L	0.038	1	60	3590	3	Standard
⌈>	**Ge**	**72**		ug/L			31037	29490	1	KED
|	**Cu**	**63**	**7.628**	ug/L	0.205	2	42	29929	1	KED
|	**Cu**	**65**	**7.670**	ug/L	0.201	2	15	15279	2	KED
|	**Zn**	**66**	**15.420**	ug/L	0.323	2	22	7528	0	KED
|	**Zn**	**67**	**15.652**	ug/L	0.735	4	4	1247	5	KED
⌊	**As**	**75**	**2.343**	ug/L	0.048	2	3	559	1	KED
	Y	**89**		ug/L			38706	70245	4	Standard
	Kr	**83**		ug/L			31	35	3	Standard
⌈>	**In-1**	**115**		ug/L			6431	6169	1	KED
|	**Cd**	**111**	**0.026**	ug/L	0.011	43	3	8	26	KED
⌊	**Cd**	**114**	**0.028**	ug/L	0.007	26	0	16	23	KED
⌈>	**In**	**115**		ug/L			415168	420907	1	Standard
⌊	**Ag**	**107**	**0.034**	ug/L	0.002	6	37	505	5	Standard
⌈>	**Tb**	**159**		ug/L			170846	177257	1	Standard
⌊	**Pb**	**208**	**2.067**	ug/L	0.021	0	364	177307	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-03
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 02:48:17

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	33604	1	Standard
⌈>	**Sc**	**45**		ug/L			489773	487278	2	Standard
|	**Cr**	**52**	**2.160**	ug/L	0.027	1	8505	37006	1	Standard
⌊	**Cr**	**53**	**2.152**	ug/L	0.038	1	60	3341	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	30046	1	KED
|	**Cu**	**63**	**8.181**	ug/L	0.073	0	42	32709	1	KED
|	**Cu**	**65**	**8.188**	ug/L	0.175	2	15	16622	3	KED
|	**Zn**	**66**	**14.978**	ug/L	0.559	3	22	7450	2	KED
|	**Zn**	**67**	**15.756**	ug/L	0.427	2	4	1278	2	KED
⌊	**As**	**75**	**1.829**	ug/L	0.095	5	3	445	6	KED
	Y	**89**		ug/L			38706	83285	1	Standard
	Kr	**83**		ug/L			31	36	10	Standard
⌈>	**In-1**	**115**		ug/L			6431	6234	1	KED
|	**Cd**	**111**	**0.016**	ug/L	0.008	48	3	6	24	KED
⌊	**Cd**	**114**	**0.021**	ug/L	0.012	57	0	12	54	KED
⌈>	**In**	**115**		ug/L			415168	418765	2	Standard
⌊	**Ag**	**107**	**0.023**	ug/L	0.001	3	37	356	0	Standard
⌈>	**Tb**	**159**		ug/L			170846	178718	0	Standard
⌊	**Pb**	**208**	**2.555**	ug/L	0.004	0	364	220947	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLL
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 02:56:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	30836	3	Standard
⌈>	**Sc**	**45**		ug/L			489773	469752	4	Standard
|	**Cr**	**52**	**-0.003**	ug/L	0.010	348	8505	8120	3	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	62	60	49	15	Standard
⌈>	**Ge**	**72**		ug/L			31037	29085	0	KED
|	**Cu**	**63**	**0.017**	ug/L	0.003	17	42	104	10	KED
|	**Cu**	**65**	**0.019**	ug/L	0.002	8	15	52	5	KED
|	**Zn**	**66**	**0.014**	ug/L	0.002	14	22	27	3	KED
|	**Zn**	**67**	**-0.021**	ug/L	0.014	68	4	2	43	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.003	42	3	1	57	KED
	Y	**89**		ug/L			38706	40136	2	Standard
	Kr	**83**		ug/L			31	29	24	Standard
⌈>	**In-1**	**115**		ug/L			6431	6211	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.012	1346	3	2	88	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.002	61	0	2	47	KED
⌈>	**In**	**115**		ug/L			415168	424538	4	Standard
⌊	**Ag**	**107**	**-0.002**	ug/L	0.000	9	37	17	11	Standard
⌈>	**Tb**	**159**		ug/L			170846	172024	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	19	364	267	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:00:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	27412	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	472142	2	Standard
|	**Cr**	**52**	**48.525**	ug/L	0.359	0	8505	629678	2	Standard
⌊	**Cr**	**53**	**48.055**	ug/L	0.480	0	60	71053	1	Standard
⌈>	**Ge**	**72**		ug/L			31037	29986	0	KED
|	**Cu**	**63**	**49.546**	ug/L	0.423	0	42	197473	0	KED
|	**Cu**	**65**	**49.314**	ug/L	0.707	1	15	99822	1	KED
|	**Zn**	**66**	**49.844**	ug/L	0.989	1	22	24698	1	KED
|	**Zn**	**67**	**50.845**	ug/L	1.890	3	4	4108	3	KED
⌊	**As**	**75**	**49.357**	ug/L	0.317	0	3	11917	0	KED
	Y	**89**		ug/L			38706	40632	1	Standard
	Kr	**83**		ug/L			31	43	11	Standard
⌈>	**In-1**	**115**		ug/L			6431	6181	2	KED
|	**Cd**	**111**	**48.743**	ug/L	1.451	2	3	10895	1	KED
⌊	**Cd**	**114**	**49.281**	ug/L	1.152	2	0	28100	0	KED
⌈>	**In**	**115**		ug/L			415168	420245	0	Standard
⌊	**Ag**	**107**	**48.692**	ug/L	0.848	1	37	666249	1	Standard
⌈>	**Tb**	**159**		ug/L			170846	174791	1	Standard
⌊	**Pb**	**208**	**50.739**	ug/L	1.441	2	364	4282243	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:07:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			28285	27232	4	Standard
⌈>	**Sc**	**45**		ug/L			489773	460997	2	Standard
|	**Cr**	**52**	**-0.015**	ug/L	0.013	86	8505	7820	2	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.003	56	60	48	8	Standard
⌈>	**Ge**	**72**		ug/L			31037	28836	1	KED
|	**Cu**	**63**	**0.004**	ug/L	0.005	138	42	53	37	KED
|	**Cu**	**65**	**0.005**	ug/L	0.005	102	15	23	37	KED
|	**Zn**	**66**	**0.056**	ug/L	0.019	33	22	47	17	KED
|	**Zn**	**67**	**0.004**	ug/L	0.015	360	4	4	24	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.004	88	3	1	50	KED
	Y	**89**		ug/L			38706	38610	2	Standard
	Kr	**83**		ug/L			31	39	48	Standard
⌈>	**In-1**	**115**		ug/L			6431	6029	4	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.011	312	3	2	107	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	370	0	1	205	KED
⌈>	**In**	**115**		ug/L			415168	414487	1	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.000	275	37	38	5	Standard
⌈>	**Tb**	**159**		ug/L			170846	165442	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	87	364	398	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:12:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				26244	0	Standard
⌈>	**Sc**	**45**		ug/L				448237	0	Standard
|	**Cr**	**52**		ug/L				8038	0	Standard
⌊	**Cr**	**53**		ug/L				50	7	Standard
⌈>	**Ge**	**72**		ug/L				28647	1	KED
|	**Cu**	**63**		ug/L				51	22	KED
|	**Cu**	**65**		ug/L				25	22	KED
|	**Zn**	**66**		ug/L				36	18	KED
|	**Zn**	**67**		ug/L				6	15	KED
⌊	**As**	**75**		ug/L				2	21	KED
	Y	**89**		ug/L				38752	1	Standard
	Kr	**83**		ug/L				40	21	Standard
⌈>	**In-1**	**115**		ug/L				6124	1	KED
|	**Cd**	**111**		ug/L				4	48	KED
⌊	**Cd**	**114**		ug/L				3	51	KED
⌈>	**In**	**115**		ug/L				412702	0	Standard
⌊	**Ag**	**107**		ug/L				17	19	Standard
⌈>	**Tb**	**159**		ug/L				165777	0	Standard
⌊	**Pb**	**208**		ug/L				350	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVJ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:16:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	27528	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	465302	1	Standard
|	**Cr**	**52**	**48.195**	ug/L	1.071	2	8038	616725	3	Standard
⌊	**Cr**	**53**	**48.451**	ug/L	1.053	2	50	70619	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	29088	1	KED
|	**Cu**	**63**	**49.523**	ug/L	0.747	1	51	191468	0	KED
|	**Cu**	**65**	**49.587**	ug/L	0.811	1	25	97364	0	KED
|	**Zn**	**66**	**50.764**	ug/L	1.787	3	36	24410	2	KED
|	**Zn**	**67**	**51.486**	ug/L	0.785	1	6	4038	0	KED
⌊	**As**	**75**	**49.815**	ug/L	0.738	1	2	11666	0	KED
	Y	**89**		ug/L			38752	39682	1	Standard
	Kr	**83**		ug/L			40	38	10	Standard
⌈>	**In-1**	**115**		ug/L			6124	5986	1	KED
|	**Cd**	**111**	**50.165**	ug/L	0.768	1	4	10864	0	KED
⌊	**Cd**	**114**	**50.376**	ug/L	0.553	1	3	27830	1	KED
⌈>	**In**	**115**		ug/L			412702	414779	3	Standard
⌊	**Ag**	**107**	**48.657**	ug/L	0.166	0	17	657183	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	173047	1	Standard
⌊	**Pb**	**208**	**51.251**	ug/L	0.610	1	350	4282878	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBJ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:23:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	27346	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	461077	0	Standard
|	**Cr**	**52**	**-0.024**	ug/L	0.006	22	8038	7967	1	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.003	107	50	47	11	Standard
⌈>	**Ge**	**72**		ug/L			28647	29348	3	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.002	94	51	45	18	KED
|	**Cu**	**65**	**0.004**	ug/L	0.005	131	25	33	27	KED
|	**Zn**	**66**	**-0.007**	ug/L	0.009	130	36	34	9	KED
|	**Zn**	**67**	**-0.010**	ug/L	0.016	161	6	6	17	KED
⌊	**As**	**75**	**0.000**	ug/L	0.005	1211	2	2	44	KED
	Y	**89**		ug/L			38752	38899	0	Standard
	Kr	**83**		ug/L			40	36	32	Standard
⌈>	**In-1**	**115**		ug/L			6124	6057	3	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	242	4	3	41	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.003	104	3	1	101	KED
⌈>	**In**	**115**		ug/L			412702	421771	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	50	17	44	31	Standard
⌈>	**Tb**	**159**		ug/L			165777	166182	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	74	350	409	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-05
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 03:28:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	28967	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	473662	1	Standard
|	**Cr**	**52**	**6.951**	ug/L	0.009	0	8038	97812	1	Standard
⌊	**Cr**	**53**	**7.122**	ug/L	0.149	2	50	10613	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	29878	1	KED
|	**Cu**	**63**	**140.074**	ug/L	4.444	3	51	556090	2	KED
|	**Cu**	**65**	**137.686**	ug/L	3.184	2	25	277626	1	KED
|	**Zn**	**66**	**432.085**	ug/L	1.353	0	36	213184	1	KED
|	**Zn**	**67**	**396.702**	ug/L	8.330	2	6	31911	1	KED
⌊	**As**	**75**	**58.904**	ug/L	1.212	2	2	14168	1	KED
	Y	**89**		ug/L			38752	55902	2	Standard
	Kr	**83**		ug/L			40	50	26	Standard
⌈>	**In-1**	**115**		ug/L			6124	6550	1	KED
|	**Cd**	**111**	**0.239**	ug/L	0.038	15	4	60	13	KED
⌊	**Cd**	**114**	**0.272**	ug/L	0.015	5	3	168	6	KED
⌈>	**In**	**115**		ug/L			412702	459125	2	Standard
⌊	**Ag**	**107**	**0.090**	ug/L	0.003	3	17	1366	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	177424	1	Standard
⌊	**Pb**	**208**	**56.336**	ug/L	1.570	2	350	4826184	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-06
Sample Dil Factor: 200
Comments:
Sample Date/Time: Friday, May 12, 2023 03:32:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	30367	2	Standard
⌈>	**Sc**	**45**		ug/L			448237	479266	1	Standard
|	**Cr**	**52**	**3.211**	ug/L	0.045	1	8038	50334	0	Standard
⌊	**Cr**	**53**	**3.248**	ug/L	0.092	2	50	4923	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	30135	1	KED
|	**Cu**	**63**	**50.976**	ug/L	0.858	1	51	204186	1	KED
|	**Cu**	**65**	**49.940**	ug/L	0.275	0	25	101598	1	KED
|	**Zn**	**66**	**188.164**	ug/L	2.067	1	36	93651	0	KED
|	**Zn**	**67**	**176.994**	ug/L	2.872	1	6	14365	1	KED
⌊	**As**	**75**	**26.612**	ug/L	0.314	1	2	6457	0	KED
	Y	**89**		ug/L			38752	53142	2	Standard
	Kr	**83**		ug/L			40	43	19	Standard
⌈>	**In-1**	**115**		ug/L			6124	6312	2	KED
|	**Cd**	**111**	**0.085**	ug/L	0.040	46	4	23	38	KED
⌊	**Cd**	**114**	**0.093**	ug/L	0.015	16	3	58	17	KED
⌈>	**In**	**115**		ug/L			412702	435687	2	Standard
⌊	**Ag**	**107**	**0.036**	ug/L	0.001	3	17	523	2	Standard
⌈>	**Tb**	**159**		ug/L			165777	175550	0	Standard
⌊	**Pb**	**208**	**25.843**	ug/L	0.460	1	350	2191176	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-08
Sample Dil Factor: 200
DEL
Comments:
Sample Date/Time: Friday, May 12, 2023 03:40:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	31181	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	478509	1	Standard
|	**Cr**	**52**	**1.220**	ug/L	0.043	3	8038	24407	0	Standard
⌊	**Cr**	**53**	**1.282**	ug/L	0.063	4	50	1973	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	30151	1	KED
|	**Cu**	**63**	**6.754**	ug/L	0.133	1	51	27113	1	KED
|	**Cu**	**65**	**6.604**	ug/L	0.067	1	25	13465	0	KED
|	**Zn**	**66**	**6.390**	ug/L	0.314	4	36	3218	3	KED
|	**Zn**	**67**	**6.099**	ug/L	0.366	5	6	502	5	KED
⌊	**As**	**75**	**0.351**	ug/L	0.020	5	2	87	6	KED
	Y	**89**		ug/L			38752	50471	3	Standard
	Kr	**83**		ug/L			40	45	8	Standard
⌈>	**In-1**	**115**		ug/L			6124	6249	2	KED
|	**Cd**	**111**	**0.001**	ug/L	0.007	618	4	4	32	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.004	79	3	6	34	KED
⌈>	**In**	**115**		ug/L			412702	436235	1	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.001	18	17	115	17	Standard
⌈>	**Tb**	**159**		ug/L			165777	178703	0	Standard
⌊	**Pb**	**208**	**2.526**	ug/L	0.011	0	350	218384	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLM
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:46:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	30527	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	458442	0	Standard
|	**Cr**	**52**	**-0.015**	ug/L	0.025	167	8038	8039	3	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.005	93	50	43	18	Standard
⌈>	**Ge**	**72**		ug/L			28647	29142	1	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	98	51	48	8	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.002	84	25	22	13	KED
|	**Zn**	**66**	**-0.020**	ug/L	0.026	134	36	27	43	KED
|	**Zn**	**67**	**-0.058**	ug/L	0.037	63	6	2	114	KED
⌊	**As**	**75**	**0.000**	ug/L	0.004	856	2	2	36	KED
	Y	**89**		ug/L			38752	38600	1	Standard
	Kr	**83**		ug/L			40	36	5	Standard
⌈>	**In-1**	**115**		ug/L			6124	6084	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.005	392	4	3	25	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.010	432	3	4	111	KED
⌈>	**In**	**115**		ug/L			412702	419892	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	154	17	13	49	Standard
⌈>	**Tb**	**159**		ug/L			165777	169399	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.001	83	350	293	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-02
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:50:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	42650	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	530401	2	Standard
|	**Cr**	**52**	**0.120**	ug/L	0.007	5	8038	11239	1	Standard
⌊	**Cr**	**53**	**0.474**	ug/L	0.007	1	50	846	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	28591	0	KED
|	**Cu**	**63**	**1.290**	ug/L	0.027	2	51	4951	1	KED
|	**Cu**	**65**	**1.301**	ug/L	0.021	1	25	2536	0	KED
|	**Zn**	**66**	**1.290**	ug/L	0.052	4	36	645	4	KED
|	**Zn**	**67**	**1.518**	ug/L	0.137	9	6	123	8	KED
⌊	**As**	**75**	**0.485**	ug/L	0.024	5	2	114	4	KED
	Y	**89**		ug/L			38752	47886	3	Standard
	Kr	**83**		ug/L			40	40	23	Standard
⌈>	**In-1**	**115**		ug/L			6124	5788	1	KED
|	**Cd**	**111**	**0.012**	ug/L	0.007	62	4	6	22	KED
⌊	**Cd**	**114**	**0.017**	ug/L	0.004	20	3	12	17	KED
⌈>	**In**	**115**		ug/L			412702	424716	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	132	17	27	48	Standard
⌈>	**Tb**	**159**		ug/L			165777	173082	0	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.000	7	350	953	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:55:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	36089	1	Standard
⌈>	**Sc**	**45**		ug/L			448237	508981	1	Standard
|	**Cr**	**52**	**0.007**	ug/L	0.014	208	8038	9222	2	Standard
⌊	**Cr**	**53**	**0.471**	ug/L	0.036	7	50	807	7	Standard
⌈>	**Ge**	**72**		ug/L			28647	27519	2	KED
|	**Cu**	**63**	**0.413**	ug/L	0.017	4	51	1558	1	KED
|	**Cu**	**65**	**0.399**	ug/L	0.054	13	25	765	12	KED
|	**Zn**	**66**	**1.670**	ug/L	0.134	8	36	793	6	KED
|	**Zn**	**67**	**1.816**	ug/L	0.419	23	6	140	20	KED
⌊	**As**	**75**	**0.386**	ug/L	0.025	6	2	87	3	KED
	Y	**89**		ug/L			38752	41667	3	Standard
	Kr	**83**		ug/L			40	36	7	Standard
⌈>	**In-1**	**115**		ug/L			6124	5550	0	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.010	220	4	2	66	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.002	38	3	6	17	KED
⌈>	**In**	**115**		ug/L			412702	419007	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	74	17	25	24	Standard
⌈>	**Tb**	**159**		ug/L			165777	168327	2	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.000	2	350	1228	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 03:59:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	36160	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	501329	0	Standard
|	**Cr**	**52**	**0.098**	ug/L	0.027	27	8038	10320	3	Standard
⌊	**Cr**	**53**	**0.469**	ug/L	0.026	5	50	792	5	Standard
⌈>	**Ge**	**72**		ug/L			28647	26746	0	KED
|	**Cu**	**63**	**0.693**	ug/L	0.024	3	51	2510	3	KED
|	**Cu**	**65**	**0.676**	ug/L	0.022	3	25	1245	3	KED
|	**Zn**	**66**	**1.511**	ug/L	0.056	3	36	701	2	KED
|	**Zn**	**67**	**1.478**	ug/L	0.150	10	6	113	10	KED
⌊	**As**	**75**	**0.114**	ug/L	0.017	14	2	26	14	KED
	Y	**89**		ug/L			38752	40879	1	Standard
	Kr	**83**		ug/L			40	35	26	Standard
⌈>	**In-1**	**115**		ug/L			6124	5352	2	KED
|	**Cd**	**111**	**0.006**	ug/L	0.010	170	4	4	40	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	126	3	1	112	KED
⌈>	**In**	**115**		ug/L			412702	403498	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	116	17	24	35	Standard
⌈>	**Tb**	**159**		ug/L			165777	165184	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.001	11	350	784	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-05
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:03:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	42590	6	Standard
⌈>	**Sc**	**45**		ug/L			448237	522766	2	Standard
|	**Cr**	**52**	**0.344**	ug/L	0.007	1	8038	14260	2	Standard
⌊	**Cr**	**53**	**0.595**	ug/L	0.019	3	50	1031	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	26398	0	KED
|	**Cu**	**63**	**0.272**	ug/L	0.019	6	51	1002	6	KED
|	**Cu**	**65**	**0.264**	ug/L	0.020	7	25	493	6	KED
|	**Zn**	**66**	**1.455**	ug/L	0.138	9	36	667	8	KED
|	**Zn**	**67**	**1.581**	ug/L	0.242	15	6	118	14	KED
⌊	**As**	**75**	**1.568**	ug/L	0.081	5	2	335	4	KED
	Y	**89**		ug/L			38752	48893	0	Standard
	Kr	**83**		ug/L			40	33	31	Standard
⌈>	**In-1**	**115**		ug/L			6124	5519	2	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.007	120	4	2	57	KED
⌊	**Cd**	**114**	**0.007**	ug/L	0.006	83	3	6	41	KED
⌈>	**In**	**115**		ug/L			412702	410491	1	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	299	17	20	48	Standard
⌈>	**Tb**	**159**		ug/L			165777	168884	2	Standard
⌊	**Pb**	**208**	**0.014**	ug/L	0.001	3	350	1517	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-06
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:08:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	37374	6	Standard
⌈>	**Sc**	**45**		ug/L			448237	543142	1	Standard
|	**Cr**	**52**	**0.110**	ug/L	0.011	10	8038	11359	1	Standard
⌊	**Cr**	**53**	**0.280**	ug/L	0.014	5	50	536	4	Standard
⌈>	**Ge**	**72**		ug/L			28647	26365	1	KED
|	**Cu**	**63**	**0.140**	ug/L	0.007	5	51	536	4	KED
|	**Cu**	**65**	**0.131**	ug/L	0.015	11	25	256	9	KED
|	**Zn**	**66**	**2.253**	ug/L	0.100	4	36	1014	2	KED
|	**Zn**	**67**	**2.603**	ug/L	0.114	4	6	191	3	KED
⌊	**As**	**75**	**1.190**	ug/L	0.034	2	2	255	4	KED
	Y	**89**		ug/L			38752	41959	1	Standard
	Kr	**83**		ug/L			40	33	26	Standard
⌈>	**In-1**	**115**		ug/L			6124	5401	2	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.005	117	4	2	33	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	180	3	4	57	KED
⌈>	**In**	**115**		ug/L			412702	406534	2	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.000	39	17	22	8	Standard
⌈>	**Tb**	**159**		ug/L			165777	172296	2	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	14	350	834	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLN
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:12:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	27561	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	445679	2	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.012	31	8038	8433	2	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.007	155	50	56	17	Standard
⌈>	**Ge**	**72**		ug/L			28647	28593	1	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.002	44	51	36	18	KED
|	**Cu**	**65**	**-0.007**	ug/L	0.003	53	25	12	52	KED
|	**Zn**	**66**	**-0.023**	ug/L	0.019	82	36	26	32	KED
|	**Zn**	**67**	**-0.033**	ug/L	0.028	86	6	4	49	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.009	1538	2	2	87	KED
	Y	**89**		ug/L			38752	38260	2	Standard
	Kr	**83**		ug/L			40	36	13	Standard
⌈>	**In-1**	**115**		ug/L			6124	5663	2	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.005	50	4	1	50	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	117	3	1	104	KED
⌈>	**In**	**115**		ug/L			412702	414879	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	41	17	10	28	Standard
⌈>	**Tb**	**159**		ug/L			165777	167727	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	30	350	254	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:17:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	25817	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	458964	2	Standard
|	**Cr**	**52**	**47.339**	ug/L	0.616	1	8038	597481	1	Standard
⌊	**Cr**	**53**	**47.127**	ug/L	1.094	2	50	67723	2	Standard
⌈>	**Ge**	**72**		ug/L			28647	28285	1	KED
|	**Cu**	**63**	**49.769**	ug/L	1.510	3	51	187053	1	KED
|	**Cu**	**65**	**49.726**	ug/L	1.311	2	25	94927	1	KED
|	**Zn**	**66**	**50.171**	ug/L	1.805	3	36	23455	1	KED
|	**Zn**	**67**	**50.152**	ug/L	1.339	2	6	3824	1	KED
⌊	**As**	**75**	**49.459**	ug/L	1.582	3	2	11259	1	KED
	Y	**89**		ug/L			38752	39627	0	Standard
	Kr	**83**		ug/L			40	34	16	Standard
⌈>	**In-1**	**115**		ug/L			6124	5651	4	KED
|	**Cd**	**111**	**51.104**	ug/L	1.817	3	4	10440	2	KED
⌊	**Cd**	**114**	**51.219**	ug/L	2.169	4	3	26683	1	KED
⌈>	**In**	**115**		ug/L			412702	416361	1	Standard
⌊	**Ag**	**107**	**47.224**	ug/L	1.028	2	17	640079	0	Standard
⌈>	**Tb**	**159**		ug/L			165777	173175	2	Standard
⌊	**Pb**	**208**	**52.054**	ug/L	1.042	2	350	4352693	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBK
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:24:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	25999	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	447350	1	Standard
|	**Cr**	**52**	**-0.006**	ug/L	0.013	225	8038	7953	3	Standard
⌊	**Cr**	**53**	**0.002**	ug/L	0.004	191	50	53	11	Standard
⌈>	**Ge**	**72**		ug/L			28647	28109	1	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.001	14	51	31	9	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	88	25	19	22	KED
|	**Zn**	**66**	**-0.022**	ug/L	0.005	22	36	26	8	KED
|	**Zn**	**67**	**0.010**	ug/L	0.090	914	6	7	90	KED
⌊	**As**	**75**	**0.000**	ug/L	0.004	1855	2	2	39	KED
	Y	**89**		ug/L			38752	38816	1	Standard
	Kr	**83**		ug/L			40	33	28	Standard
⌈>	**In-1**	**115**		ug/L			6124	5534	2	KED
|	**Cd**	**111**	**-0.012**	ug/L	0.007	57	4	1	114	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.002	36	3	6	17	KED
⌈>	**In**	**115**		ug/L			412702	422383	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	36	17	43	21	Standard
⌈>	**Tb**	**159**		ug/L			165777	167282	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	62	350	417	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-07
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:28:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	34980	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	507391	2	Standard
|	**Cr**	**52**	**-0.000**	ug/L	0.011	2810	8038	9093	2	Standard
⌊	**Cr**	**53**	**0.283**	ug/L	0.019	6	50	507	7	Standard
⌈>	**Ge**	**72**		ug/L			28647	26697	1	KED
|	**Cu**	**63**	**0.111**	ug/L	0.003	3	51	440	2	KED
|	**Cu**	**65**	**0.116**	ug/L	0.014	11	25	232	10	KED
|	**Zn**	**66**	**1.554**	ug/L	0.157	10	36	718	8	KED
|	**Zn**	**67**	**2.143**	ug/L	0.179	8	6	160	8	KED
⌊	**As**	**75**	**0.679**	ug/L	0.053	7	2	148	7	KED
	Y	**89**		ug/L			38752	40544	3	Standard
	Kr	**83**		ug/L			40	34	14	Standard
⌈>	**In-1**	**115**		ug/L			6124	5355	3	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.000	3	4	1		KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.010	458	3	4	111	KED
⌈>	**In**	**115**		ug/L			412702	406592	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	121	17	26	42	Standard
⌈>	**Tb**	**159**		ug/L			165777	167561	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.001	4	350	1221	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-08
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:32:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	34708	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	521894	3	Standard
|	**Cr**	**52**	**0.034**	ug/L	0.013	37	8038	9842	3	Standard
⌊	**Cr**	**53**	**0.532**	ug/L	0.008	1	50	927	4	Standard
⌈>	**Ge**	**72**		ug/L			28647	25650	1	KED
|	**Cu**	**63**	**0.549**	ug/L	0.013	2	51	1918	2	KED
|	**Cu**	**65**	**0.549**	ug/L	0.010	1	25	972	1	KED
|	**Zn**	**66**	**2.235**	ug/L	0.080	3	36	979	4	KED
|	**Zn**	**67**	**2.713**	ug/L	0.101	3	6	193	4	KED
⌊	**As**	**75**	**0.376**	ug/L	0.019	4	2	80	4	KED
	Y	**89**		ug/L			38752	42727	2	Standard
	Kr	**83**		ug/L			40	34	20	Standard
⌈>	**In-1**	**115**		ug/L			6124	5228	2	KED
|	**Cd**	**111**	**0.018**	ug/L	0.002	12	4	6	7	KED
⌊	**Cd**	**114**	**0.023**	ug/L	0.005	23	3	14	20	KED
⌈>	**In**	**115**		ug/L			412702	418045	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	3271	17	17	50	Standard
⌈>	**Tb**	**159**		ug/L			165777	167064	0	Standard
⌊	**Pb**	**208**	**0.012**	ug/L	0.001	5	350	1348	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-09
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:37:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	39008	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	523709	2	Standard
|	**Cr**	**52**	**-0.003**	ug/L	0.009	298	8038	9348	1	Standard
⌊	**Cr**	**53**	**0.423**	ug/L	0.025	5	50	751	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	25094	2	KED
|	**Cu**	**63**	**1.206**	ug/L	0.033	2	51	4065	1	KED
|	**Cu**	**65**	**1.210**	ug/L	0.034	2	25	2071	0	KED
|	**Zn**	**66**	**2.156**	ug/L	0.124	5	36	925	5	KED
|	**Zn**	**67**	**2.797**	ug/L	0.633	22	6	194	19	KED
⌊	**As**	**75**	**0.379**	ug/L	0.019	5	2	78	4	KED
	Y	**89**		ug/L			38752	56516	3	Standard
	Kr	**83**		ug/L			40	35	24	Standard
⌈>	**In-1**	**115**		ug/L			6124	5268	2	KED
|	**Cd**	**111**	**0.056**	ug/L	0.012	21	4	14	17	KED
⌊	**Cd**	**114**	**0.050**	ug/L	0.008	16	3	27	16	KED
⌈>	**In**	**115**		ug/L			412702	413918	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	24	17	24	7	Standard
⌈>	**Tb**	**159**		ug/L			165777	165395	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.001	10	350	1075	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-10
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:41:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	37328	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	514346	2	Standard
|	**Cr**	**52**	**0.138**	ug/L	0.014	10	8038	11152	3	Standard
⌊	**Cr**	**53**	**1.128**	ug/L	0.011	1	50	1873	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	25872	0	KED
|	**Cu**	**63**	**0.438**	ug/L	0.009	1	51	1551	1	KED
|	**Cu**	**65**	**0.422**	ug/L	0.030	7	25	759	7	KED
|	**Zn**	**66**	**3.277**	ug/L	0.134	4	36	1433	3	KED
|	**Zn**	**67**	**3.610**	ug/L	0.275	7	6	257	7	KED
⌊	**As**	**75**	**0.154**	ug/L	0.008	5	2	34	4	KED
	Y	**89**		ug/L			38752	45722	0	Standard
	Kr	**83**		ug/L			40	34	14	Standard
⌈>	**In-1**	**115**		ug/L			6124	5294	3	KED
|	**Cd**	**111**	**0.013**	ug/L	0.010	77	4	6	32	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.007	88	3	7	52	KED
⌈>	**In**	**115**		ug/L			412702	418437	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	74	17	13	24	Standard
⌈>	**Tb**	**159**		ug/L			165777	172510	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	6	350	793	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-11
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:46:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	36551	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	478649	2	Standard
|	**Cr**	**52**	**0.539**	ug/L	0.040	7	8038	15579	1	Standard
⌊	**Cr**	**53**	**0.643**	ug/L	0.009	1	50	1016	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	27659	0	KED
|	**Cu**	**63**	**0.716**	ug/L	0.012	1	51	2680	1	KED
|	**Cu**	**65**	**0.697**	ug/L	0.024	3	25	1325	3	KED
|	**Zn**	**66**	**1.435**	ug/L	0.052	3	36	690	3	KED
|	**Zn**	**67**	**1.726**	ug/L	0.266	15	6	135	14	KED
⌊	**As**	**75**	**0.107**	ug/L	0.004	3	2	26	3	KED
	Y	**89**		ug/L			38752	44581	2	Standard
	Kr	**83**		ug/L			40	34	14	Standard
⌈>	**In-1**	**115**		ug/L			6124	5619	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.006	90	4	2	43	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	104	3	1	115	KED
⌈>	**In**	**115**		ug/L			412702	423122	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	42	17	12	18	Standard
⌈>	**Tb**	**159**		ug/L			165777	172262	1	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.001	17	350	942	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-12
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:50:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	37463	6	Standard
⌈>	**Sc**	**45**		ug/L			448237	481580	2	Standard
|	**Cr**	**52**	**0.475**	ug/L	0.016	3	8038	14843	2	Standard
⌊	**Cr**	**53**	**0.571**	ug/L	0.031	5	50	914	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	27543	0	KED
|	**Cu**	**63**	**0.659**	ug/L	0.006	0	51	2462	1	KED
|	**Cu**	**65**	**0.637**	ug/L	0.030	4	25	1208	3	KED
|	**Zn**	**66**	**1.718**	ug/L	0.054	3	36	816	3	KED
|	**Zn**	**67**	**1.809**	ug/L	0.237	13	6	140	13	KED
⌊	**As**	**75**	**0.103**	ug/L	0.014	13	2	25	11	KED
	Y	**89**		ug/L			38752	44952	0	Standard
	Kr	**83**		ug/L			40	34	14	Standard
⌈>	**In-1**	**115**		ug/L			6124	5573	3	KED
|	**Cd**	**111**	**-0.014**	ug/L	0.005	35	4	0	100	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.010	228	3	5	91	KED
⌈>	**In**	**115**		ug/L			412702	425006	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	511	17	15	54	Standard
⌈>	**Tb**	**159**		ug/L			165777	174747	2	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.001	11	350	860	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-13
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:54:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	50151	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	515471	4	Standard
|	**Cr**	**52**	**1.036**	ug/L	0.051	4	8038	23717	2	Standard
⌊	**Cr**	**53**	**1.163**	ug/L	0.031	2	50	1932	2	Standard
⌈>	**Ge**	**72**		ug/L			28647	26794	2	KED
|	**Cu**	**63**	**4.548**	ug/L	0.126	2	51	16238	1	KED
|	**Cu**	**65**	**4.399**	ug/L	0.140	3	25	7976	1	KED
|	**Zn**	**66**	**1.833**	ug/L	0.087	4	36	845	3	KED
|	**Zn**	**67**	**2.737**	ug/L	0.334	12	6	203	10	KED
⌊	**As**	**75**	**0.367**	ug/L	0.023	6	2	81	4	KED
	Y	**89**		ug/L			38752	55318	0	Standard
	Kr	**83**		ug/L			40	29	7	Standard
⌈>	**In-1**	**115**		ug/L			6124	5465	4	KED
|	**Cd**	**111**	**0.011**	ug/L	0.014	128	4	5	44	KED
⌊	**Cd**	**114**	**0.012**	ug/L	0.015	119	3	9	74	KED
⌈>	**In**	**115**		ug/L			412702	417323	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	11	17	34	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	171029	1	Standard
⌊	**Pb**	**208**	**0.011**	ug/L	0.000	4	350	1292	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-14
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 04:59:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	60913	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	519319	2	Standard
|	**Cr**	**52**	**0.917**	ug/L	0.019	2	8038	22240	3	Standard
⌊	**Cr**	**53**	**1.086**	ug/L	0.010	0	50	1823	2	Standard
⌈>	**Ge**	**72**		ug/L			28647	26673	0	KED
|	**Cu**	**63**	**12.597**	ug/L	0.095	0	51	44697	0	KED
|	**Cu**	**65**	**12.583**	ug/L	0.156	1	25	22674	0	KED
|	**Zn**	**66**	**1.341**	ug/L	0.039	2	36	624	3	KED
|	**Zn**	**67**	**1.414**	ug/L	0.270	19	6	107	17	KED
⌊	**As**	**75**	**54.959**	ug/L	0.366	0	2	11803	1	KED
	Y	**89**		ug/L			38752	51441	2	Standard
	Kr	**83**		ug/L			40	36	7	Standard
⌈>	**In-1**	**115**		ug/L			6124	5208	1	KED
|	**Cd**	**111**	**0.064**	ug/L	0.017	26	4	15	19	KED
⌊	**Cd**	**114**	**0.052**	ug/L	0.025	47	3	28	41	KED
⌈>	**In**	**115**		ug/L			412702	399894	2	Standard
⌊	**Ag**	**107**	**0.021**	ug/L	0.001	6	17	295	7	Standard
⌈>	**Tb**	**159**		ug/L			165777	171823	1	Standard
⌊	**Pb**	**208**	**3.243**	ug/L	0.018	0	350	269471	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0412-15
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:03:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	35421	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	497187	2	Standard
|	**Cr**	**52**	**1.002**	ug/L	0.021	2	8038	22430	1	Standard
⌊	**Cr**	**53**	**1.130**	ug/L	0.046	4	50	1815	5	Standard
⌈>	**Ge**	**72**		ug/L			28647	27665	0	KED
|	**Cu**	**63**	**0.293**	ug/L	0.005	1	51	1126	2	KED
|	**Cu**	**65**	**0.310**	ug/L	0.011	3	25	603	2	KED
|	**Zn**	**66**	**1.461**	ug/L	0.088	6	36	702	5	KED
|	**Zn**	**67**	**1.589**	ug/L	0.353	22	6	125	20	KED
⌊	**As**	**75**	**0.176**	ug/L	0.005	2	2	41	2	KED
	Y	**89**		ug/L			38752	41465	0	Standard
	Kr	**83**		ug/L			40	33	34	Standard
⌈>	**In-1**	**115**		ug/L			6124	5424	0	KED
|	**Cd**	**111**	**-0.014**	ug/L	0.008	61	4	0	173	KED
⌊	**Cd**	**114**	**0.006**	ug/L	0.006	102	3	6	47	KED
⌈>	**In**	**115**		ug/L			412702	422790	3	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	186	17	14	41	Standard
⌈>	**Tb**	**159**		ug/L			165777	173661	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	8	350	790	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLO
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:08:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	26979	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	446006	2	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.020	146	8038	8160	1	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.008	143	50	57	16	Standard
⌈>	**Ge**	**72**		ug/L			28647	27330	2	KED
|	**Cu**	**63**	**-0.008**	ug/L	0.001	10	51	19	14	KED
|	**Cu**	**65**	**-0.008**	ug/L	0.002	27	25	8	44	KED
|	**Zn**	**66**	**-0.033**	ug/L	0.006	18	36	20	14	KED
|	**Zn**	**67**	**-0.004**	ug/L	0.041	1039	6	6	45	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	169	2	1	62	KED
	Y	**89**		ug/L			38752	39183	1	Standard
	Kr	**83**		ug/L			40	40	37	Standard
⌈>	**In-1**	**115**		ug/L			6124	5504	2	KED
|	**Cd**	**111**	**-0.012**	ug/L	0.005	44	4	1	86	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.004	123	3	1	100	KED
⌈>	**In**	**115**		ug/L			412702	427851	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	45	17	10	26	Standard
⌈>	**Tb**	**159**		ug/L			165777	170202	0	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	15	350	252	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVL
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:12:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	24982	6	Standard
⌈>	**Sc**	**45**		ug/L			448237	453215	3	Standard
|	**Cr**	**52**	**46.451**	ug/L	0.802	1	8038	579315	4	Standard
⌊	**Cr**	**53**	**46.660**	ug/L	1.299	2	50	66213	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	27759	1	KED
|	**Cu**	**63**	**50.342**	ug/L	0.608	1	51	185775	2	KED
|	**Cu**	**65**	**49.546**	ug/L	0.295	0	25	92845	0	KED
|	**Zn**	**66**	**51.625**	ug/L	0.166	0	36	23695	1	KED
|	**Zn**	**67**	**50.095**	ug/L	1.491	2	6	3749	2	KED
⌊	**As**	**75**	**49.557**	ug/L	0.556	1	2	11076	1	KED
	Y	**89**		ug/L			38752	39500	1	Standard
	Kr	**83**		ug/L			40	34	16	Standard
⌈>	**In-1**	**115**		ug/L			6124	5581	2	KED
|	**Cd**	**111**	**50.088**	ug/L	2.172	4	4	10108	2	KED
⌊	**Cd**	**114**	**50.711**	ug/L	2.220	4	3	26104	1	KED
⌈>	**In**	**115**		ug/L			412702	408762	1	Standard
⌊	**Ag**	**107**	**47.187**	ug/L	0.917	1	17	628146	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	170367	0	Standard
⌊	**Pb**	**208**	**53.286**	ug/L	0.162	0	350	4384594	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBL
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:19:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	24546	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	439611	0	Standard
|	**Cr**	**52**	**-0.027**	ug/L	0.003	10	8038	7559	0	Standard
⌊	**Cr**	**53**	**0.001**	ug/L	0.003	232	50	51	6	Standard
⌈>	**Ge**	**72**		ug/L			28647	27443	2	KED
|	**Cu**	**63**	**0.019**	ug/L	0.029	156	51	119	93	KED
|	**Cu**	**65**	**0.012**	ug/L	0.026	220	25	46	106	KED
|	**Zn**	**66**	**0.036**	ug/L	0.050	137	36	52	46	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.051	227	6	5	78	KED
⌊	**As**	**75**	**0.028**	ug/L	0.028	101	2	8	75	KED
	Y	**89**		ug/L			38752	38324	0	Standard
	Kr	**83**		ug/L			40	34	39	Standard
⌈>	**In-1**	**115**		ug/L			6124	5670	1	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.005	48	4	1	69	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	225	3	4	49	KED
⌈>	**In**	**115**		ug/L			412702	412049	0	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	8	17	31	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	164866	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	67	350	402	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0442-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:23:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	40373	7	Standard
>	**Sc**	**45**		ug/L			448237	599787	2	Standard
	Cr	**52**	**0.551**	ug/L	0.022	3	8038	19717	3	Standard
	Cr	**53**	**0.814**	ug/L	0.039	4	50	1596	5	Standard
>	**Ge**	**72**		ug/L			28647	24092	0	KED
	Cu	**63**	**0.283**	ug/L	0.020	7	51	950	7	KED
	Cu	**65**	**0.276**	ug/L	0.023	8	25	469	7	KED
	Zn	**66**	**1.464**	ug/L	0.041	2	36	613	1	KED
	Zn	**67**	**2.906**	ug/L	0.225	7	6	194	6	KED
	As	**75**	**12.475**	ug/L	0.185	1	2	2421	0	KED
	Y	**89**		ug/L			38752	68837	1	Standard
	Kr	**83**		ug/L			40	35	8	Standard
>	**In-1**	**115**		ug/L			6124	4859	2	KED
	Cd	**111**	**0.005**	ug/L	0.013	259	4	4	53	KED
	Cd	**114**	**0.007**	ug/L	0.007	88	3	6	45	KED
>	**In**	**115**		ug/L			412702	328354	3	Standard
	Ag	**107**	**0.010**	ug/L	0.002	20	17	118	19	Standard
>	**Tb**	**159**		ug/L			165777	138260	3	Standard
	Pb	**208**	**0.026**	ug/L	0.001	3	350	2038	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0442-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:28:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	34260	5	Standard
⌈>	**Sc**	**45**		ug/L			448237	526058	2	Standard
|	**Cr**	**52**	**0.649**	ug/L	0.021	3	8038	18686	2	Standard
⌊	**Cr**	**53**	**0.860**	ug/L	0.041	4	50	1475	7	Standard
⌈>	**Ge**	**72**		ug/L			28647	24934	2	KED
|	**Cu**	**63**	**3.118**	ug/L	0.123	3	51	10370	2	KED
|	**Cu**	**65**	**3.010**	ug/L	0.078	2	25	5085	2	KED
|	**Zn**	**66**	**8.387**	ug/L	0.245	2	36	3483	1	KED
|	**Zn**	**67**	**8.270**	ug/L	0.453	5	6	561	5	KED
⌊	**As**	**75**	**1.589**	ug/L	0.068	4	2	320	2	KED
	Y	**89**		ug/L			38752	57215	1	Standard
	Kr	**83**		ug/L			40	37	25	Standard
⌈>	**In-1**	**115**		ug/L			6124	4993	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.011	258	4	4	48	KED
⌊	**Cd**	**114**	**0.009**	ug/L	0.013	140	3	7	80	KED
⌈>	**In**	**115**		ug/L			412702	389749	2	Standard
⌊	**Ag**	**107**	**0.011**	ug/L	0.001	7	17	161	4	Standard
⌈>	**Tb**	**159**		ug/L			165777	166152	1	Standard
⌊	**Pb**	**208**	**0.068**	ug/L	0.002	2	350	5824	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0442-05
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:32:40

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	33105	5	Standard
>	**Sc**	**45**		ug/L			448237	607600	1	Standard
	Cr	**52**	**0.733**	ug/L	0.031	4	8038	22967	0	Standard
	Cr	**53**	**0.959**	ug/L	0.018	1	50	1891	0	Standard
>	**Ge**	**72**		ug/L			28647	21788	15	KED
	Cu	**63**	**0.125**	ug/L	0.022	17	51	395	4	KED
	Cu	**65**	**0.137**	ug/L	0.035	25	25	215	6	KED
	Zn	**66**	**1.022**	ug/L	0.258	25	36	386	6	KED
	Zn	**67**	**2.284**	ug/L	0.788	34	6	134	15	KED
	As	**75**	**21.548**	ug/L	2.498	11	2	3736	4	KED
	Y	**89**		ug/L			38752	64840	2	Standard
	Kr	**83**		ug/L			40	35	15	Standard
>	**In-1**	**115**		ug/L			6124	4804	2	KED
	Cd	**111**	**-0.008**	ug/L	0.005	70	4	1	50	KED
	Cd	**114**	**-0.005**	ug/L	0.002	45	3	0	135	KED
>	**In**	**115**		ug/L			412702	373853	1	Standard
	Ag	**107**	**0.005**	ug/L	0.001	14	17	74	11	Standard
>	**Tb**	**159**		ug/L			165777	159311	2	Standard
	Pb	**208**	**0.019**	ug/L	0.001	5	350	1763	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0442-06
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:36:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	38801	5	Standard
> Sc	45		ug/L			448237	625527	2	Standard
Cr	52	0.747	ug/L	0.006	0	8038	23900	2	Standard
Cr	53	1.077	ug/L	0.007	0	50	2178	2	Standard
> Ge	72		ug/L			28647	23769	0	KED
Cu	63	0.058	ug/L	0.006	9	51	226	7	KED
Cu	65	0.058	ug/L	0.007	12	25	113	10	KED
Zn	66	0.539	ug/L	0.030	5	36	241	4	KED
Zn	67	2.082	ug/L	0.155	7	6	139	7	KED
As	75	5.811	ug/L	0.095	1	2	1114	1	KED
Y	89		ug/L			38752	67879	0	Standard
Kr	83		ug/L			40	35	17	Standard
> In-1	115		ug/L			6124	4815	3	KED
Cd	111	0.005	ug/L	0.009	175	4	4	35	KED
Cd	114	-0.002	ug/L	0.005	305	3	2	101	KED
> In	115		ug/L			412702	358808	1	Standard
Ag	107	0.004	ug/L	0.000	10	17	57	8	Standard
> Tb	159		ug/L			165777	152290	1	Standard
Pb	208	0.009	ug/L	0.000	2	350	1012	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:42:41

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	17761	6	Standard
> Sc	45		ug/L			448237	231078	5	Standard
Cr	52	0.723	ug/L	0.026	3	8038	8673	3	Standard
Cr	53	52.191	ug/L	0.345	0	50	37759	4	Standard
> Ge	72		ug/L			28647	8352	0	KED
Cu	63	1.544	ug/L	0.059	3	51	1729	4	KED
Cu	65	1.599	ug/L	0.122	7	25	908	6	KED
Zn	66	8.637	ug/L	0.767	8	36	1201	7	KED
Zn	67	10.530	ug/L	1.169	11	6	238	10	KED
As	75	1.235	ug/L	0.043	3	2	83	4	KED
Y	89		ug/L			38752	19425	4	Standard
Kr	83		ug/L			40	1582	3	Standard
> In-1	115		ug/L			6124	1935	1	KED
Cd	111	0.108	ug/L	0.063	58	4	8	50	KED
Cd	114	0.056	ug/L	0.012	21	3	11	17	KED
> In	115		ug/L			412702	116852	4	Standard
Ag	107	0.011	ug/L	0.000	3	17	48	6	Standard
> Tb	159		ug/L			165777	51852	3	Standard
Pb	208	0.021	ug/L	0.000	1	350	647	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-06
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:47:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	30698	5	Standard
> Sc	45		ug/L			448237	363422	3	Standard
Cr	52	0.375	ug/L	0.020	5	8038	10218	3	Standard
Cr	53	22.456	ug/L	0.436	1	50	25575	3	Standard
> Ge	72		ug/L			28647	15417	1	KED
Cu	63	0.551	ug/L	0.018	3	51	1156	3	KED
Cu	65	0.543	ug/L	0.028	5	25	578	4	KED
Zn	66	2.326	ug/L	0.100	4	36	612	5	KED
Zn	67	5.124	ug/L	0.163	3	6	216	4	KED
As	75	1.788	ug/L	0.044	2	2	223	3	KED
Y	89		ug/L			38752	26993	4	Standard
Kr	83		ug/L			40	332	6	Standard
> In-1	115		ug/L			6124	3207	1	KED
Cd	111	0.058	ug/L	0.013	22	4	8	16	KED
Cd	114	0.042	ug/L	0.010	23	3	14	20	KED
> In	115		ug/L			412702	197126	2	Standard
Ag	107	0.003	ug/L	0.002	58	17	24	38	Standard
> Tb	159		ug/L			165777	90869	2	Standard
Pb	208	0.018	ug/L	0.000	1	350	984	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-08
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:51:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	59809	4	Standard
> Sc	45		ug/L			448237	608571	1	Standard
Cr	52	0.829	ug/L	0.027	3	8038	24593	1	Standard
Cr	53	5.633	ug/L	0.074	1	50	10796	2	Standard
> Ge	72		ug/L			28647	31934	0	KED
Cu	63	3.272	ug/L	0.072	2	51	13944	1	KED
Cu	65	3.165	ug/L	0.081	2	25	6849	2	KED
Zn	66	0.823	ug/L	0.007	0	36	474	0	KED
Zn	67	0.803	ug/L	0.073	9	6	76	7	KED
As	75	1.529	ug/L	0.088	5	2	395	5	KED
Y	89		ug/L			38752	57187	1	Standard
Kr	83		ug/L			40	43	11	Standard
> In-1	115		ug/L			6124	6343	2	KED
Cd	111	-0.001	ug/L	0.012	1465	4	4	70	KED
Cd	114	-0.001	ug/L	0.005	539	3	3	98	KED
> In	115		ug/L			412702	392034	3	Standard
Ag	107	0.001	ug/L	0.001	70	17	25	22	Standard
> Tb	159		ug/L			165777	178669	0	Standard
Pb	208	0.014	ug/L	0.000	3	350	1605	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-10
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 05:55:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26244	58330	4	Standard
>	Sc	45		ug/L			448237	572775	1	Standard
	Cr	52	0.948	ug/L	0.041	4	8038	24998	1	Standard
	Cr	53	4.323	ug/L	0.041	0	50	7812	1	Standard
>	Ge	72		ug/L			28647	30641	1	KED
	Cu	63	3.485	ug/L	0.041	1	51	14244	0	KED
	Cu	65	3.457	ug/L	0.077	2	25	7174	0	KED
	Zn	66	1.100	ug/L	0.065	5	36	595	5	KED
	Zn	67	0.972	ug/L	0.110	11	6	87	9	KED
	As	75	1.541	ug/L	0.122	7	2	382	6	KED
	Y	89		ug/L			38752	53861	2	Standard
	Kr	83		ug/L			40	51	25	Standard
>	In-1	115		ug/L			6124	6056	1	KED
	Cd	111	-0.006	ug/L	0.011	196	4	2	88	KED
	Cd	114	-0.002	ug/L	0.005	286	3	2	110	KED
>	In	115		ug/L			412702	378024	1	Standard
	Ag	107	0.002	ug/L	0.001	49	17	37	28	Standard
>	Tb	159		ug/L			165777	174038	1	Standard
	Pb	208	0.022	ug/L	0.001	4	350	2214	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-12
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:00:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26244	46185	4	Standard
⌈>	Sc	45		ug/L			448237	544548	1	Standard
|	Cr	52	0.246	ug/L	0.027	10	8038	13403	2	Standard
⌊	Cr	53	0.968	ug/L	0.041	4	50	1710	3	Standard
⌈>	Ge	72		ug/L			28647	33646	1	KED
|	Cu	63	0.532	ug/L	0.002	0	51	2440	1	KED
|	Cu	65	0.517	ug/L	0.033	6	25	1203	7	KED
|	Zn	66	0.649	ug/L	0.047	7	36	403	5	KED
|	Zn	67	0.792	ug/L	0.115	14	6	80	13	KED
⌊	As	75	0.001	ug/L	0.003	384	2	3	22	KED
	Y	89		ug/L			38752	38286	3	Standard
	Kr	83		ug/L			40	50	30	Standard
⌈>	In-1	115		ug/L			6124	6661	2	KED
|	Cd	111	-0.011	ug/L	0.004	38	4	1	50	KED
⌊	Cd	114	0.000	ug/L	0.005	4473	3	4	70	KED
⌈>	In	115		ug/L			412702	424435	1	Standard
⌊	Ag	107	-0.000	ug/L	0.000	66	17	15	12	Standard
⌈>	Tb	159		ug/L			165777	183413	1	Standard
⌊	Pb	208	0.008	ug/L	0.001	7	350	1083	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLP
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:04:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	31558	2	Standard
⌈>	**Sc**	**45**		ug/L			448237	504623	2	Standard
|	**Cr**	**52**	**0.042**	ug/L	0.026	61	8038	9628	4	Standard
⌊	**Cr**	**53**	**0.566**	ug/L	0.015	2	50	950	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	32567	3	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.001	11	51	33	6	KED
|	**Cu**	**65**	**-0.007**	ug/L	0.003	43	25	13	51	KED
|	**Zn**	**66**	**-0.011**	ug/L	0.005	47	36	36	10	KED
|	**Zn**	**67**	**-0.040**	ug/L	0.032	79	6	4	65	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.006	8494	2	2	50	KED
	Y	**89**		ug/L			38752	36421	2	Standard
	Kr	**83**		ug/L			40	50	28	Standard
⌈>	**In-1**	**115**		ug/L			6124	6465	1	KED
|	**Cd**	**111**	**0.002**	ug/L	0.008	469	4	4	40	KED
⌊	**Cd**	**114**	**-0.005**	ug/L	0.002	39	3	1	94	KED
⌈>	**In**	**115**		ug/L			412702	404097	3	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	250	17	14	41	Standard
⌈>	**Tb**	**159**		ug/L			165777	173806	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	62	350	307	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVM
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:09:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	28089	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	500238	2	Standard
|	**Cr**	**52**	**46.342**	ug/L	1.666	3	8038	637635	2	Standard
⌊	**Cr**	**53**	**46.258**	ug/L	1.384	2	50	72443	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	31798	1	KED
|	**Cu**	**63**	**49.989**	ug/L	0.628	1	51	211286	0	KED
|	**Cu**	**65**	**48.835**	ug/L	0.757	1	25	104828	1	KED
|	**Zn**	**66**	**50.384**	ug/L	0.727	1	36	26491	1	KED
|	**Zn**	**67**	**50.846**	ug/L	1.716	3	6	4360	2	KED
⌊	**As**	**75**	**49.456**	ug/L	0.873	1	2	12661	0	KED
	Y	**89**		ug/L			38752	36596	0	Standard
	Kr	**83**		ug/L			40	48	17	Standard
⌈>	**In-1**	**115**		ug/L			6124	6257	4	KED
|	**Cd**	**111**	**48.679**	ug/L	2.211	4	4	11005	0	KED
⌊	**Cd**	**114**	**50.875**	ug/L	1.485	2	3	29353	1	KED
⌈>	**In**	**115**		ug/L			412702	394200	1	Standard
⌊	**Ag**	**107**	**48.362**	ug/L	1.578	3	17	620685	3	Standard
⌈>	**Tb**	**159**		ug/L			165777	177982	1	Standard
⌊	**Pb**	**208**	**50.250**	ug/L	0.383	0	350	4319833	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBM
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:16:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	26594	2	Standard
⌈>	**Sc**	**45**		ug/L			448237	488958	3	Standard
|	**Cr**	**52**	**-0.022**	ug/L	0.004	18	8038	8484	4	Standard
⌊	**Cr**	**53**	**0.321**	ug/L	0.023	7	50	546	9	Standard
⌈>	**Ge**	**72**		ug/L			28647	31070	2	KED
|	**Cu**	**63**	**-0.007**	ug/L	0.004	62	51	27	64	KED
|	**Cu**	**65**	**-0.007**	ug/L	0.004	59	25	12	67	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.001	5	36	31	3	KED
|	**Zn**	**67**	**0.024**	ug/L	0.024	103	6	9	20	KED
⌊	**As**	**75**	**0.007**	ug/L	0.003	34	2	4	11	KED
	Y	**89**		ug/L			38752	37149	2	Standard
	Kr	**83**		ug/L			40	43	15	Standard
⌈>	**In-1**	**115**		ug/L			6124	6245	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	207	4	3	41	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	412	3	4	50	KED
⌈>	**In**	**115**		ug/L			412702	405028	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	23	17	45	15	Standard
⌈>	**Tb**	**159**		ug/L			165777	173523	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	7	350	428	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0514-02
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:20:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	42525	2	Standard
>	**Sc**	**45**		ug/L			448237	694230	1	Standard
	Cr	**52**	**0.236**	ug/L	0.020	8	8038	16904	2	Standard
	Cr	**53**	**0.703**	ug/L	0.020	2	50	1605	2	Standard
>	**Ge**	**72**		ug/L			28647	28128	1	KED
	Cu	**63**	**0.138**	ug/L	0.007	4	51	566	5	KED
	Cu	**65**	**0.147**	ug/L	0.014	9	25	304	8	KED
	Zn	**66**	**1.017**	ug/L	0.040	3	36	508	4	KED
	Zn	**67**	**1.370**	ug/L	0.197	14	6	110	11	KED
	As	**75**	**2.219**	ug/L	0.058	2	2	504	2	KED
	Y	**89**		ug/L			38752	47039	3	Standard
	Kr	**83**		ug/L			40	53	30	Standard
>	**In-1**	**115**		ug/L			6124	5687	4	KED
	Cd	**111**	**0.017**	ug/L	0.012	70	4	7	32	KED
	Cd	**114**	**0.015**	ug/L	0.010	62	3	11	43	KED
>	**In**	**115**		ug/L			412702	371523	1	Standard
	Ag	**107**	**0.004**	ug/L	0.002	47	17	64	35	Standard
>	**Tb**	**159**		ug/L			165777	163663	1	Standard
	Pb	**208**	**0.071**	ug/L	0.003	3	350	5976	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0514-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:24:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	49735	5	Standard
>	**Sc**	**45**		ug/L			448237	570785	3	Standard
	Cr	**52**	**0.511**	ug/L	0.020	3	8038	18141	1	Standard
	Cr	**53**	**0.873**	ug/L	0.037	4	50	1624	5	Standard
>	**Ge**	**72**		ug/L			28647	29362	0	KED
	Cu	**63**	**5.258**	ug/L	0.024	0	51	20569	0	KED
	Cu	**65**	**5.291**	ug/L	0.056	1	25	10511	1	KED
	Zn	**66**	**11.958**	ug/L	0.123	1	36	5834	1	KED
	Zn	**67**	**11.733**	ug/L	0.504	4	6	934	4	KED
	As	**75**	**1.838**	ug/L	0.059	3	2	437	3	KED
	Y	**89**		ug/L			38752	48599	3	Standard
	Kr	**83**		ug/L			40	41	23	Standard
>	**In-1**	**115**		ug/L			6124	5717	3	KED
	Cd	**111**	**0.126**	ug/L	0.016	12	4	29	10	KED
	Cd	**114**	**0.101**	ug/L	0.030	29	3	56	26	KED
>	**In**	**115**		ug/L			412702	403369	0	Standard
	Ag	**107**	**0.016**	ug/L	0.003	21	17	224	20	Standard
>	**Tb**	**159**		ug/L			165777	178062	0	Standard
	Pb	**208**	**0.305**	ug/L	0.006	1	350	26620	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0514-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:29:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26244	41883	1	Standard
>	Sc	45		ug/L			448237	685666	2	Standard
	Cr	52	0.283	ug/L	0.016	5	8038	17558	2	Standard
	Cr	53	0.708	ug/L	0.006	0	50	1596	2	Standard
>	Ge	72		ug/L			28647	26983	1	KED
	Cu	63	0.137	ug/L	0.006	4	51	539	5	KED
	Cu	65	0.142	ug/L	0.007	4	25	282	5	KED
	Zn	66	1.440	ug/L	0.092	6	36	676	6	KED
	Zn	67	2.462	ug/L	0.159	6	6	185	5	KED
	As	75	1.745	ug/L	0.086	4	2	381	5	KED
	Y	89		ug/L			38752	46722	1	Standard
	Kr	83		ug/L			40	34	22	Standard
>	In-1	115		ug/L			6124	5415	3	KED
	Cd	111	-0.004	ug/L	0.010	231	4	2	66	KED
	Cd	114	0.008	ug/L	0.004	45	3	7	28	KED
>	In	115		ug/L			412702	366298	3	Standard
	Ag	107	0.002	ug/L	0.000	23	17	34	15	Standard
>	Tb	159		ug/L			165777	159318	1	Standard
	Pb	208	0.019	ug/L	0.001	5	350	1767	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0514-06
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:33:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	47810	6	Standard
⌈>	**Sc**	**45**		ug/L			448237	543763	2	Standard
|	**Cr**	**52**	**0.830**	ug/L	0.029	3	8038	21986	1	Standard
⌊	**Cr**	**53**	**1.101**	ug/L	0.010	0	50	1935	3	Standard
⌈>	**Ge**	**72**		ug/L			28647	26460	0	KED
|	**Cu**	**63**	**2.170**	ug/L	0.030	1	51	7677	1	KED
|	**Cu**	**65**	**2.101**	ug/L	0.035	1	25	3775	1	KED
|	**Zn**	**66**	**2.952**	ug/L	0.169	5	36	1323	5	KED
|	**Zn**	**67**	**3.421**	ug/L	0.336	9	6	250	9	KED
⌊	**As**	**75**	**3.319**	ug/L	0.074	2	2	709	1	KED
	Y	**89**		ug/L			38752	45453	1	Standard
	Kr	**83**		ug/L			40	45	17	Standard
⌈>	**In-1**	**115**		ug/L			6124	5459	3	KED
|	**Cd**	**111**	**0.041**	ug/L	0.006	15	4	11	9	KED
⌊	**Cd**	**114**	**0.061**	ug/L	0.023	37	3	34	30	KED
⌈>	**In**	**115**		ug/L			412702	373404	1	Standard
⌊	**Ag**	**107**	**0.011**	ug/L	0.002	16	17	153	14	Standard
⌈>	**Tb**	**159**		ug/L			165777	163816	0	Standard
⌊	**Pb**	**208**	**0.135**	ug/L	0.004	3	350	11014	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLQ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:37:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	27742	3	Standard
⌈>	**Sc**	**45**		ug/L			448237	457309	2	Standard
|	**Cr**	**52**	**-0.042**	ug/L	0.020	48	8038	7672	2	Standard
⌊	**Cr**	**53**	**0.192**	ug/L	0.011	5	50	326	6	Standard
⌈>	**Ge**	**72**		ug/L			28647	28109	0	KED
|	**Cu**	**63**	**-0.007**	ug/L	0.001	15	51	24	16	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.001	60	25	20	14	KED
|	**Zn**	**66**	**-0.045**	ug/L	0.011	24	36	15	33	KED
|	**Zn**	**67**	**-0.049**	ug/L	0.014	29	6	3	34	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.004	227	2	2	48	KED
	Y	**89**		ug/L			38752	36044	2	Standard
	Kr	**83**		ug/L			40	33	13	Standard
⌈>	**In-1**	**115**		ug/L			6124	5782	2	KED
|	**Cd**	**111**	**-0.014**	ug/L	0.004	31	4	0	100	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	92	3	2	46	KED
⌈>	**In**	**115**		ug/L			412702	400011	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	79	17	8	68	Standard
⌈>	**Tb**	**159**		ug/L			165777	168328	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	1	350	154	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0598-02
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 12, 2023 06:42:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	17383	7	Standard
> Sc	45		ug/L			448237	262738	5	Standard
Cr	52	1.775	ug/L	0.041	2	8038	17357	4	Standard
Cr	53	28.313	ug/L	0.623	2	50	23306	5	Standard
> Ge	72		ug/L			28647	9849	3	KED
Cu	63	1.282	ug/L	0.041	3	51	1695	4	KED
Cu	65	1.311	ug/L	0.020	1	25	880	3	KED
Zn	66	1.433	ug/L	0.203	14	36	245	10	KED
Zn	67	2.135	ug/L	0.094	4	6	59	6	KED
As	75	0.799	ug/L	0.049	6	2	64	9	KED
Y	89		ug/L			38752	21862	3	Standard
Kr	83		ug/L			40	427	11	Standard
> In-1	115		ug/L			6124	2264	3	KED
Cd	111	0.047	ug/L	0.012	24	4	5	20	KED
Cd	114	0.032	ug/L	0.011	33	3	7	26	KED
> In	115		ug/L			412702	153829	2	Standard
Ag	107	0.009	ug/L	0.001	7	17	50	5	Standard
> Tb	159		ug/L			165777	69804	1	Standard
Pb	208	0.022	ug/L	0.002	7	350	878	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0119-DUP1
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 12, 2023 06:46:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	19225	8	Standard
> Sc	45		ug/L			448237	275105	4	Standard
Cr	52	1.762	ug/L	0.046	2	8038	18085	5	Standard
Cr	53	26.406	ug/L	0.418	1	50	22755	3	Standard
> Ge	72		ug/L			28647	10607	1	KED
Cu	63	1.177	ug/L	0.025	2	51	1678	2	KED
Cu	65	1.181	ug/L	0.074	6	25	855	7	KED
Zn	66	1.257	ug/L	0.109	8	36	233	7	KED
Zn	67	2.666	ug/L	0.397	14	6	78	14	KED
As	75	0.734	ug/L	0.064	8	2	63	9	KED
Y	89		ug/L			38752	21868	3	Standard
Kr	83		ug/L			40	403	11	Standard
> In-1	115		ug/L			6124	2247	3	KED
Cd	111	0.021	ug/L	0.029	137	4	3	69	KED
Cd	114	0.031	ug/L	0.036	115	3	8	98	KED
> In	115		ug/L			412702	153606	3	Standard
Ag	107	0.008	ug/L	0.002	22	17	47	17	Standard
> Tb	159		ug/L			165777	70087	1	Standard
Pb	208	0.022	ug/L	0.001	4	350	903	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0119-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:50:57

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	19786	7	Standard
> Sc	45		ug/L			448237	271230	3	Standard
Cr	52	22.694	ug/L	0.111	0	8038	171840	3	Standard
Cr	53	48.152	ug/L	0.772	1	50	40887	1	Standard
> Ge	72		ug/L			28647	10203	0	KED
Cu	63	23.880	ug/L	0.347	1	51	32394	0	KED
Cu	65	23.525	ug/L	0.285	1	25	16209	1	KED
Zn	66	54.684	ug/L	1.607	2	36	9223	2	KED
Zn	67	52.527	ug/L	1.653	3	6	1445	2	KED
As	75	22.030	ug/L	0.207	0	2	1810	0	KED
Y	89		ug/L			38752	21673	2	Standard
Kr	83		ug/L			40	396	7	Standard
> In-1	115		ug/L			6124	2158	4	KED
Cd	111	18.081	ug/L	0.659	3	4	1411	0	KED
Cd	114	18.159	ug/L	1.307	7	3	3610	2	KED
> In	115		ug/L			412702	146661	2	Standard
Ag	107	19.086	ug/L	0.043	0	17	91147	2	Standard
> Tb	159		ug/L			165777	68582	0	Standard
Pb	208	18.976	ug/L	0.354	1	350	628618	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0119-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 06:55:42

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			26244	18283	7	Standard
> Sc	45		ug/L			448237	267654	4	Standard
Cr	52	22.434	ug/L	0.131	0	8038	167669	3	Standard
Cr	53	47.760	ug/L	1.118	2	50	40059	6	Standard
> Ge	72		ug/L			28647	9434	10	KED
Cu	63	25.810	ug/L	2.584	10	51	32147	1	KED
Cu	65	25.541	ug/L	2.840	11	25	16143	1	KED
Zn	66	58.973	ug/L	6.566	11	36	9126	2	KED
Zn	67	59.017	ug/L	7.534	12	6	1487	2	KED
As	75	24.201	ug/L	2.608	10	2	1824	0	KED
Y	89		ug/L			38752	21695	2	Standard
Kr	83		ug/L			40	455	15	Standard
> In-1	115		ug/L			6124	2156	4	KED
Cd	111	17.767	ug/L	1.089	6	4	1384	3	KED
Cd	114	18.136	ug/L	1.419	7	3	3601	3	KED
> In	115		ug/L			412702	143050	1	Standard
Ag	107	19.186	ug/L	0.138	0	17	89372	2	Standard
> Tb	159		ug/L			165777	67422	1	Standard
Pb	208	19.372	ug/L	0.410	2	350	630859	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLR
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:00:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26244	31830	1	Standard
>	Sc	45		ug/L			448237	567342	1	Standard
	Cr	52	0.053	ug/L	0.016	29	8038	10997	3	Standard
	Cr	53	0.841	ug/L	0.029	3	50	1557	4	Standard
>	Ge	72		ug/L			28647	36154	0	KED
	Cu	63	-0.003	ug/L	0.001	21	51	51	6	KED
	Cu	65	-0.005	ug/L	0.001	13	25	19	10	KED
	Zn	66	-0.003	ug/L	0.012	356	36	44	16	KED
	Zn	67	-0.013	ug/L	0.051	408	6	7	66	KED
	As	75	0.000	ug/L	0.009	1846	2	3	75	KED
	Y	89		ug/L			38752	37108	4	Standard
	Kr	83		ug/L			40	24	7	Standard
>	In-1	115		ug/L			6124	6953	2	KED
	Cd	111	-0.001	ug/L	0.009	836	4	4	53	KED
	Cd	114	0.000	ug/L	0.002	3619	3	4	26	KED
>	In	115		ug/L			412702	402007	1	Standard
	Ag	107	0.001	ug/L	0.000	28	17	25	11	Standard
>	Tb	159		ug/L			165777	180143	0	Standard
	Pb	208	0.004	ug/L	0.001	16	350	743	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVN
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:04:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	25754	4	Standard
⌈>	**Sc**	**45**		ug/L			448237	474757	2	Standard
|	**Cr**	**52**	**43.291**	ug/L	1.489	3	8038	565734	1	Standard
⌊	**Cr**	**53**	**42.910**	ug/L	1.575	3	50	63770	1	Standard
⌈>	**Ge**	**72**		ug/L			28647	30689	1	KED
|	**Cu**	**63**	**49.123**	ug/L	1.272	2	51	200344	1	KED
|	**Cu**	**65**	**49.656**	ug/L	1.766	3	25	102847	2	KED
|	**Zn**	**66**	**50.650**	ug/L	1.285	2	36	25703	2	KED
|	**Zn**	**67**	**49.862**	ug/L	0.427	0	6	4127	2	KED
⌊	**As**	**75**	**50.245**	ug/L	1.001	1	2	12413	0	KED
	Y	**89**		ug/L			38752	35167	1	Standard
	Kr	**83**		ug/L			40	36	24	Standard
⌈>	**In-1**	**115**		ug/L			6124	5715	1	KED
|	**Cd**	**111**	**51.094**	ug/L	0.347	0	4	10567	2	KED
⌊	**Cd**	**114**	**52.390**	ug/L	0.384	0	3	27634	1	KED
⌈>	**In**	**115**		ug/L			412702	369882	1	Standard
⌊	**Ag**	**107**	**49.464**	ug/L	1.593	3	17	595465	1	Standard
⌈>	**Tb**	**159**		ug/L			165777	164981	1	Standard
⌊	**Pb**	**208**	**51.634**	ug/L	0.630	1	350	4113891	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBN
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:11:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26244	23764	2	Standard
⌈>	**Sc**	**45**		ug/L			448237	443773	0	Standard
|	**Cr**	**52**	**-0.062**	ug/L	0.026	41	8038	7214	3	Standard
⌊	**Cr**	**53**	**0.364**	ug/L	0.031	8	50	554	7	Standard
⌈>	**Ge**	**72**		ug/L			28647	28900	2	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.003	71	51	36	32	KED
|	**Cu**	**65**	**-0.006**	ug/L	0.001	16	25	13	15	KED
|	**Zn**	**66**	**-0.024**	ug/L	0.036	153	36	26	67	KED
|	**Zn**	**67**	**-0.009**	ug/L	0.016	184	6	6	17	KED
⌊	**As**	**75**	**0.009**	ug/L	0.003	36	2	4	15	KED
	Y	**89**		ug/L			38752	34249	3	Standard
	Kr	**83**		ug/L			40	29	24	Standard
⌈>	**In-1**	**115**		ug/L			6124	5750	0	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.009	511	4	3	56	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.007	1391	3	3	102	KED
⌈>	**In**	**115**		ug/L			412702	368942	2	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	58	17	40	37	Standard
⌈>	**Tb**	**159**		ug/L			165777	159010	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	89	350	368	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:15:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				23953	4	Standard
⎡>	**Sc**	**45**		ug/L				443281	1	Standard
⎢	**Cr**	**52**		ug/L				7163	2	Standard
⎣	**Cr**	**53**		ug/L				487	7	Standard
⎡>	**Ge**	**72**		ug/L				28284	0	KED
⎢	**Cu**	**63**		ug/L				33	17	KED
⎢	**Cu**	**65**		ug/L				11	60	KED
⎢	**Zn**	**66**		ug/L				33	8	KED
⎢	**Zn**	**67**		ug/L				6	62	KED
⎣	**As**	**75**		ug/L				2	0	KED
	Y	**89**		ug/L				34497	2	Standard
	Kr	**83**		ug/L				33	8	Standard
⎡>	**In-1**	**115**		ug/L				5536	3	KED
⎢	**Cd**	**111**		ug/L				4	107	KED
⎣	**Cd**	**114**		ug/L				6	129	KED
⎡>	**In**	**115**		ug/L				370942	2	Standard
⎣	**Ag**	**107**		ug/L				18	51	Standard
⎡>	**Tb**	**159**		ug/L				161944	3	Standard
⎣	**Pb**	**208**		ug/L				380	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVO
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:20:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	23823	6	Standard
⌈>	**Sc**	**45**		ug/L			443281	457972	4	Standard
|	**Cr**	**52**	**43.059**	ug/L	0.364	0	7163	542248	3	Standard
⌊	**Cr**	**53**	**42.527**	ug/L	0.121	0	487	61452	4	Standard
⌈>	**Ge**	**72**		ug/L			28284	28052	2	KED
|	**Cu**	**63**	**49.368**	ug/L	1.094	2	33	184033	2	KED
|	**Cu**	**65**	**47.907**	ug/L	1.398	2	11	90672	0	KED
|	**Zn**	**66**	**49.389**	ug/L	0.984	1	33	22904	2	KED
|	**Zn**	**67**	**49.684**	ug/L	1.707	3	6	3756	1	KED
⌊	**As**	**75**	**49.256**	ug/L	1.063	2	2	11121	0	KED
	Y	**89**		ug/L			34497	36275	2	Standard
	Kr	**83**		ug/L			33	35	34	Standard
⌈>	**In-1**	**115**		ug/L			5536	5491	2	KED
|	**Cd**	**111**	**49.085**	ug/L	1.079	2	4	9749	1	KED
⌊	**Cd**	**114**	**50.502**	ug/L	0.827	1	6	25592	1	KED
⌈>	**In**	**115**		ug/L			370942	367831	2	Standard
⌊	**Ag**	**107**	**49.011**	ug/L	1.052	2	18	586941	2	Standard
⌈>	**Tb**	**159**		ug/L			161944	163763	1	Standard
⌊	**Pb**	**208**	**51.969**	ug/L	0.843	1	380	4110823	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBO
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:27:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	23985	3	Standard
⌈>	**Sc**	**45**		ug/L			443281	435790	1	Standard
|	**Cr**	**52**	**-0.005**	ug/L	0.004	87	7163	6989	2	Standard
⌊	**Cr**	**53**	**-0.046**	ug/L	0.015	31	487	416	5	Standard
⌈>	**Ge**	**72**		ug/L			28284	28183	2	KED
|	**Cu**	**63**	**0.001**	ug/L	0.002	135	33	37	17	KED
|	**Cu**	**65**	**0.001**	ug/L	0.005	440	11	13	65	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.007	128	33	31	12	KED
|	**Zn**	**67**	**0.066**	ug/L	0.087	133	6	11	60	KED
⌊	**As**	**75**	**0.006**	ug/L	0.008	120	2	3	45	KED
	Y	**89**		ug/L			34497	34563	2	Standard
	Kr	**83**		ug/L			33	38	18	Standard
⌈>	**In-1**	**115**		ug/L			5536	5562	2	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.008	121	4	3	45	KED
⌊	**Cd**	**114**	**-0.010**	ug/L	0.004	38	6	1	105	KED
⌈>	**In**	**115**		ug/L			370942	361618	3	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	57	18	34	28	Standard
⌈>	**Tb**	**159**		ug/L			161944	156559	2	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	322	380	358	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0537-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 12, 2023 07:31:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	32368	2	Standard
⌈>	**Sc**	**45**		ug/L			443281	546623	2	Standard
|	**Cr**	**52**	**0.360**	ug/L	0.012	3	7163	14164	2	Standard
⌊	**Cr**	**53**	**0.388**	ug/L	0.008	2	487	1265	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	26609	2	KED
|	**Cu**	**63**	**0.390**	ug/L	0.026	6	33	1410	7	KED
|	**Cu**	**65**	**0.375**	ug/L	0.008	2	11	683	1	KED
|	**Zn**	**66**	**4.759**	ug/L	0.218	4	33	2121	2	KED
|	**Zn**	**67**	**5.219**	ug/L	0.327	6	6	379	5	KED
⌊	**As**	**75**	**0.789**	ug/L	0.033	4	2	171	4	KED
	Y	**89**		ug/L			34497	42005	1	Standard
	Kr	**83**		ug/L			33	32	21	Standard
⌈>	**In-1**	**115**		ug/L			5536	5208	2	KED
|	**Cd**	**111**	**0.033**	ug/L	0.036	106	4	10	63	KED
⌊	**Cd**	**114**	**0.041**	ug/L	0.052	126	6	26	94	KED
⌈>	**In**	**115**		ug/L			370942	353505	0	Standard
⌊	**Ag**	**107**	**0.005**	ug/L	0.001	15	18	74	12	Standard
⌈>	**Tb**	**159**		ug/L			161944	154792	1	Standard
⌊	**Pb**	**208**	**0.225**	ug/L	0.004	1	380	17208	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0537-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 12, 2023 07:36:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	34681	2	Standard
⌈>	**Sc**	**45**		ug/L			443281	547793	2	Standard
|	**Cr**	**52**	**0.346**	ug/L	0.018	5	7163	13991	1	Standard
⌊	**Cr**	**53**	**0.376**	ug/L	0.020	5	487	1246	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	26586	0	KED
|	**Cu**	**63**	**0.085**	ug/L	0.008	9	33	332	7	KED
|	**Cu**	**65**	**0.093**	ug/L	0.008	8	11	177	7	KED
|	**Zn**	**66**	**0.616**	ug/L	0.002	0	33	302	0	KED
|	**Zn**	**67**	**0.972**	ug/L	0.185	19	6	75	17	KED
⌊	**As**	**75**	**40.903**	ug/L	0.639	1	2	8755	0	KED
	Y	**89**		ug/L			34497	56833	3	Standard
	Kr	**83**		ug/L			33	43	31	Standard
⌈>	**In-1**	**115**		ug/L			5536	5061	1	KED
|	**Cd**	**111**	**0.023**	ug/L	0.047	204	4	8	103	KED
⌊	**Cd**	**114**	**0.016**	ug/L	0.038	236	6	13	128	KED
⌈>	**In**	**115**		ug/L			370942	354300	2	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.003	61	18	81	49	Standard
⌈>	**Tb**	**159**		ug/L			161944	154731	1	Standard
⌊	**Pb**	**208**	**0.019**	ug/L	0.004	22	380	1782	16	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0537-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:40:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23953	38975	5	Standard
> Sc	45		ug/L			443281	600053	3	Standard
Cr	52	0.158	ug/L	0.011	7	7163	12262	2	Standard
Cr	53	0.223	ug/L	0.010	4	487	1079	3	Standard
> Ge	72		ug/L			28284	25951	1	KED
Cu	63	0.081	ug/L	0.011	13	33	309	12	KED
Cu	65	0.076	ug/L	0.015	19	11	143	19	KED
Zn	66	0.845	ug/L	0.080	9	33	393	9	KED
Zn	67	1.434	ug/L	0.338	23	6	106	22	KED
As	75	1.392	ug/L	0.082	5	2	293	6	KED
Y	89		ug/L			34497	41556	1	Standard
Kr	83		ug/L			33	31	27	Standard
> In-1	115		ug/L			5536	5022	3	KED
Cd	111	-0.005	ug/L	0.006	137	4	3	34	KED
Cd	114	-0.007	ug/L	0.006	80	6	2	94	KED
> In	115		ug/L			370942	343665	0	Standard
Ag	107	0.001	ug/L	0.000	58	18	22	14	Standard
> Tb	159		ug/L			161944	152798	1	Standard
Pb	208	0.005	ug/L	0.000	4	380	755	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-01
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:45:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	32947	4	Standard
⌈>	**Sc**	**45**		ug/L			443281	523130	1	Standard
|	**Cr**	**52**	**3.049**	ug/L	0.019	0	7163	51723	0	Standard
⌊	**Cr**	**53**	**2.997**	ug/L	0.101	3	487	5480	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	26198	1	KED
|	**Cu**	**63**	**0.207**	ug/L	0.013	6	33	751	6	KED
|	**Cu**	**65**	**0.197**	ug/L	0.016	8	11	359	6	KED
|	**Zn**	**66**	**0.798**	ug/L	0.056	6	33	376	6	KED
|	**Zn**	**67**	**1.112**	ug/L	0.183	16	6	84	16	KED
⌊	**As**	**75**	**1.668**	ug/L	0.095	5	2	353	6	KED
	Y	**89**		ug/L			34497	35978	1	Standard
	Kr	**83**		ug/L			33	37	20	Standard
⌈>	**In-1**	**115**		ug/L			5536	5284	2	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.009	119	4	2	57	KED
⌊	**Cd**	**114**	**-0.010**	ug/L	0.004	37	6	1	126	KED
⌈>	**In**	**115**		ug/L			370942	365163	1	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.000	264	18	20	28	Standard
⌈>	**Tb**	**159**		ug/L			161944	158726	1	Standard
⌊	**Pb**	**208**	**0.012**	ug/L	0.001	7	380	1262	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-02
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:49:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	34191	0	Standard
⌈>	**Sc**	**45**		ug/L			443281	516002	2	Standard
|	**Cr**	**52**	**-0.006**	ug/L	0.011	179	7163	8248	1	Standard
⌊	**Cr**	**53**	**0.032**	ug/L	0.005	15	487	619	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25749	0	KED
|	**Cu**	**63**	**0.378**	ug/L	0.009	2	33	1324	2	KED
|	**Cu**	**65**	**0.373**	ug/L	0.016	4	11	659	4	KED
|	**Zn**	**66**	**1.026**	ug/L	0.143	13	33	467	13	KED
|	**Zn**	**67**	**1.694**	ug/L	0.044	2	6	123	2	KED
⌊	**As**	**75**	**1.550**	ug/L	0.094	6	2	323	5	KED
	Y	**89**		ug/L			34497	36548	0	Standard
	Kr	**83**		ug/L			33	38	5	Standard
⌈>	**In-1**	**115**		ug/L			5536	4911	2	KED
|	**Cd**	**111**	**0.028**	ug/L	0.014	50	4	8	26	KED
⌊	**Cd**	**114**	**0.011**	ug/L	0.005	42	6	10	17	KED
⌈>	**In**	**115**		ug/L			370942	370348	2	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	579	18	19	39	Standard
⌈>	**Tb**	**159**		ug/L			161944	160625	1	Standard
⌊	**Pb**	**208**	**0.026**	ug/L	0.003	9	380	2387	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:53:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			23953	35272	2	Standard
> Sc	45		ug/L			443281	555008	1	Standard
Cr	52	1.088	ug/L	0.016	1	7163	25353	2	Standard
Cr	53	1.102	ug/L	0.017	1	487	2524	0	Standard
> Ge	72		ug/L			28284	26216	2	KED
Cu	63	0.672	ug/L	0.029	4	33	2370	3	KED
Cu	65	0.645	ug/L	0.018	2	11	1151	2	KED
Zn	66	1.342	ug/L	0.058	4	33	612	4	KED
Zn	67	2.072	ug/L	0.217	10	6	152	12	KED
As	75	1.109	ug/L	0.036	3	2	236	1	KED
Y	89		ug/L			34497	35884	0	Standard
Kr	83		ug/L			33	29	39	Standard
> In-1	115		ug/L			5536	5217	0	KED
Cd	111	0.001	ug/L	0.015	1144	4	4	65	KED
Cd	114	-0.005	ug/L	0.006	113	6	4	72	KED
> In	115		ug/L			370942	366141	1	Standard
Ag	107	0.008	ug/L	0.001	9	18	116	8	Standard
> Tb	159		ug/L			161944	158946	1	Standard
Pb	208	0.018	ug/L	0.001	3	380	1760	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-04
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 07:58:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	36798	3	Standard
⌈>	**Sc**	**45**		ug/L			443281	544050	2	Standard
|	**Cr**	**52**	**-0.054**	ug/L	0.011	20	7163	7999	2	Standard
⌊	**Cr**	**53**	**-0.025**	ug/L	0.011	43	487	556	6	Standard
⌈>	**Ge**	**72**		ug/L			28284	26708	0	KED
|	**Cu**	**63**	**0.838**	ug/L	0.016	1	33	3003	0	KED
|	**Cu**	**65**	**0.846**	ug/L	0.014	1	11	1535	1	KED
|	**Zn**	**66**	**0.633**	ug/L	0.066	10	33	311	10	KED
|	**Zn**	**67**	**1.047**	ug/L	0.035	3	6	81	2	KED
⌊	**As**	**75**	**1.910**	ug/L	0.048	2	2	412	1	KED
	Y	**89**		ug/L			34497	36725	2	Standard
	Kr	**83**		ug/L			33	29	3	Standard
⌈>	**In-1**	**115**		ug/L			5536	5148	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.006	341	4	3	25	KED
⌊	**Cd**	**114**	**-0.004**	ug/L	0.004	117	6	4	46	KED
⌈>	**In**	**115**		ug/L			370942	365824	4	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	338	18	22	71	Standard
⌈>	**Tb**	**159**		ug/L			161944	160908	1	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.001	14	380	956	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-05
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:02:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	33011	2	Standard
⌈>	**Sc**	**45**		ug/L			443281	509288	2	Standard
|	**Cr**	**52**	**-0.004**	ug/L	0.002	69	7163	8181	2	Standard
⌊	**Cr**	**53**	**-0.019**	ug/L	0.020	105	487	530	8	Standard
⌈>	**Ge**	**72**		ug/L			28284	26402	2	KED
|	**Cu**	**63**	**0.237**	ug/L	0.027	11	33	859	8	KED
|	**Cu**	**65**	**0.242**	ug/L	0.021	8	11	441	10	KED
|	**Zn**	**66**	**1.050**	ug/L	0.024	2	33	488	0	KED
|	**Zn**	**67**	**1.334**	ug/L	0.162	12	6	100	14	KED
⌊	**As**	**75**	**4.736**	ug/L	0.192	4	2	1007	1	KED
	Y	**89**		ug/L			34497	35818	2	Standard
	Kr	**83**		ug/L			33	32	10	Standard
⌈>	**In-1**	**115**		ug/L			5536	5114	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	162	4	3	31	KED
⌊	**Cd**	**114**	**-0.006**	ug/L	0.000	1	6	3	1	KED
⌈>	**In**	**115**		ug/L			370942	371382	2	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	185	18	14	52	Standard
⌈>	**Tb**	**159**		ug/L			161944	160844	0	Standard
⌊	**Pb**	**208**	**0.022**	ug/L	0.000	0	380	2106	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-06
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:06:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	33260	5	Standard
⌈>	**Sc**	**45**		ug/L			443281	520994	3	Standard
|	**Cr**	**52**	**0.001**	ug/L	0.021	4047	7163	8419	0	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.018	446	487	566	7	Standard
⌈>	**Ge**	**72**		ug/L			28284	25960	2	KED
|	**Cu**	**63**	**0.316**	ug/L	0.022	7	33	1118	5	KED
|	**Cu**	**65**	**0.311**	ug/L	0.013	4	11	554	4	KED
|	**Zn**	**66**	**0.932**	ug/L	0.103	11	33	430	10	KED
|	**Zn**	**67**	**1.015**	ug/L	0.185	18	6	76	17	KED
⌊	**As**	**75**	**12.863**	ug/L	0.161	1	2	2690	1	KED
	Y	**89**		ug/L			34497	35627	1	Standard
	Kr	**83**		ug/L			33	32	15	Standard
⌈>	**In-1**	**115**		ug/L			5536	5174	1	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.005	78	4	2	33	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.012	3000	6	6	86	KED
⌈>	**In**	**115**		ug/L			370942	378984	3	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	67	18	36	33	Standard
⌈>	**Tb**	**159**		ug/L			161944	157933	1	Standard
⌊	**Pb**	**208**	**0.008**	ug/L	0.000	1	380	960	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLS
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:11:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	24312	3	Standard
⌈>	**Sc**	**45**		ug/L			443281	423709	1	Standard
|	**Cr**	**52**	**-0.017**	ug/L	0.018	103	7163	6650	4	Standard
⌊	**Cr**	**53**	**-0.157**	ug/L	0.017	11	487	257	9	Standard
⌈>	**Ge**	**72**		ug/L			28284	26243	0	KED
|	**Cu**	**63**	**-0.002**	ug/L	0.004	200	33	24	55	KED
|	**Cu**	**65**	**0.003**	ug/L	0.001	43	11	15	12	KED
|	**Zn**	**66**	**-0.031**	ug/L	0.003	8	33	17	6	KED
|	**Zn**	**67**	**-0.030**	ug/L	0.071	236	6	3	132	KED
⌊	**As**	**75**	**0.001**	ug/L	0.002	271	2	2	20	KED
	Y	**89**		ug/L			34497	34766	2	Standard
	Kr	**83**		ug/L			33	34	8	Standard
⌈>	**In-1**	**115**		ug/L			5536	5110	2	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.010	146	4	2	66	KED
⌊	**Cd**	**114**	**-0.009**	ug/L	0.006	72	6	2	125	KED
⌈>	**In**	**115**		ug/L			370942	363346	3	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	31	18	7	43	Standard
⌈>	**Tb**	**159**		ug/L			161944	156921	0	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	5	380	127	11	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVP
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:15:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	23131	6	Standard
⌈>	**Sc**	**45**		ug/L			443281	429452	4	Standard
|	**Cr**	**52**	**43.137**	ug/L	1.283	2	7163	509091	2	Standard
⌊	**Cr**	**53**	**42.532**	ug/L	1.016	2	487	57617	4	Standard
⌈>	**Ge**	**72**		ug/L			28284	26845	1	KED
|	**Cu**	**63**	**48.586**	ug/L	1.204	2	33	173318	0	KED
|	**Cu**	**65**	**47.759**	ug/L	1.161	2	11	86522	1	KED
|	**Zn**	**66**	**48.700**	ug/L	0.829	1	33	21613	1	KED
|	**Zn**	**67**	**49.974**	ug/L	1.175	2	6	3617	2	KED
⌊	**As**	**75**	**48.187**	ug/L	0.497	1	2	10414	0	KED
	Y	**89**		ug/L			34497	35680	2	Standard
	Kr	**83**		ug/L			33	40	7	Standard
⌈>	**In-1**	**115**		ug/L			5536	5483	1	KED
|	**Cd**	**111**	**47.087**	ug/L	0.889	1	4	9340	0	KED
⌊	**Cd**	**114**	**47.831**	ug/L	1.184	2	6	24201	0	KED
⌈>	**In**	**115**		ug/L			370942	373329	1	Standard
⌊	**Ag**	**107**	**48.273**	ug/L	0.181	0	18	586801	1	Standard
⌈>	**Tb**	**159**		ug/L			161944	157225	4	Standard
⌊	**Pb**	**208**	**55.524**	ug/L	1.115	2	380	4214059	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBP
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:22:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051123_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	23153	6	Standard
⌈>	**Sc**	**45**		ug/L			443281	426749	1	Standard
|	**Cr**	**52**	**-0.033**	ug/L	0.016	49	7163	6515	2	Standard
⌊	**Cr**	**53**	**-0.183**	ug/L	0.014	7	487	225	9	Standard
⌈>	**Ge**	**72**		ug/L			28284	27054	1	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	206	33	33	13	KED
|	**Cu**	**65**	**0.001**	ug/L	0.001	59	11	12	8	KED
|	**Zn**	**66**	**-0.029**	ug/L	0.016	53	33	19	36	KED
|	**Zn**	**67**	**-0.014**	ug/L	0.031	226	6	5	43	KED
⌊	**As**	**75**	**0.011**	ug/L	0.006	51	2	4	26	KED
	Y	**89**		ug/L			34497	35176	3	Standard
	Kr	**83**		ug/L			33	33	28	Standard
⌈>	**In-1**	**115**		ug/L			5536	5166	3	KED
|	**Cd**	**111**	**-0.007**	ug/L	0.006	81	4	2	33	KED
⌊	**Cd**	**114**	**-0.008**	ug/L	0.006	72	6	2	122	KED
⌈>	**In**	**115**		ug/L			370942	374701	4	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	150	18	24	35	Standard
⌈>	**Tb**	**159**		ug/L			161944	156776	3	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	60	380	318	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-07
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:27:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	30709	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	26538	1	KED
⌊	**As**	**75**	**12.441**	ug/L	0.226	1	2	2660	2	KED
	Y	**89**		ug/L			34497	36716	2	Standard
	Kr	**83**		ug/L			33	37	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-08
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Friday, May 12, 2023 08:30:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	32393	0	Standard
⌈>	**Ge**	**72**		ug/L			28284	25720	1	KED
⌊	**As**	**75**	**1.257**	ug/L	0.241	19	2	262	17	KED
	Y	**89**		ug/L			34497	35640	3	Standard
	Kr	**83**		ug/L			33	45	21	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-09
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:34:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	38746	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25415	1	KED
⌊	**As**	**75**	**1.516**	ug/L	0.073	4	2	312	4	KED
	Y	**89**		ug/L			34497	36620	0	Standard
	Kr	**83**		ug/L			33	33	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-10
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:37:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	57220	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	25650	1	KED
⌊	**As**	**75**	**3.368**	ug/L	0.033	0	2	697	0	KED
	Y	**89**		ug/L			34497	44371	2	Standard
	Kr	**83**		ug/L			33	36	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0494-11
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 08:41:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	39588	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	26578	1	KED
⌊	**As**	**75**	**1.334**	ug/L	0.072	5	2	287	5	KED
	Y	**89**		ug/L			34497	37588	2	Standard
	Kr	**83**		ug/L			33	37	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 08:46:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25866	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25532	1	KED
⌊	**As**	**75**	**2.267**	ug/L	0.082	3	2	468	4	KED
	Y	**89**		ug/L			34497	41271	3	Standard
	Kr	**83**		ug/L			33	34	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0134-DUP1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 08:50:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25448	0	Standard
⌈>	**Ge**	**72**		ug/L			28284	25336	0	KED
⌊	**As**	**75**	**2.271**	ug/L	0.019	0	2	465	1	KED
	Y	**89**		ug/L			34497	40019	5	Standard
	Kr	**83**		ug/L			33	24	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0134-MS1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 08:53:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25656	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25138	0	KED
⌊	**As**	**75**	**7.526**	ug/L	0.068	0	2	1525	0	KED
	Y	**89**		ug/L			34497	40825	2	Standard
	Kr	**83**		ug/L			33	40	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0134-MSD1
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 08:57:14

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25165	4	Standard
>	**Ge**	**72**		ug/L			28284	22831	11	KED
	As	**75**	**8.315**	ug/L	0.579	6	2	1523	6	KED
	Y	**89**		ug/L			34497	41090	2	Standard
	Kr	**83**		ug/L			33	44	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLT
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:00:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	21044	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	25195	1	KED
⌊	**As**	**75**	**0.005**	ug/L	0.005	97	2	3	31	KED
	Y	**89**		ug/L			34497	36387	4	Standard
	Kr	**83**		ug/L			33	32	21	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVQ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:04:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	19365	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	25866	2	KED
⌊	**As**	**75**	**48.718**	ug/L	1.079	2	2	10142	0	KED
	Y	**89**		ug/L			34497	35732	3	Standard
	Kr	**83**		ug/L			33	40	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBQ
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:10:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	19521	6	Standard
⌈>	**Ge**	**72**		ug/L			28284	26236	1	KED
⌊	**As**	**75**	**0.004**	ug/L	0.007	188	2	3	50	KED
	Y	**89**		ug/L			34497	36358	4	Standard
	Kr	**83**		ug/L			33	42	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-01
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:13:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	32027	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	26007	1	KED
⌊	**As**	**75**	**0.890**	ug/L	0.049	5	2	188	4	KED
	Y	**89**		ug/L			34497	40247	1	Standard
	Kr	**83**		ug/L			33	39	27	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:17:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	30397	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25458	1	KED
⌊	**As**	**75**	**0.855**	ug/L	0.006	0	2	177	2	KED
	Y	**89**		ug/L			34497	38663	1	Standard
	Kr	**83**		ug/L			33	40	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-05
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:20:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	31369	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25256	1	KED
⌊	**As**	**75**	**0.674**	ug/L	0.013	1	2	139	3	KED
	Y	**89**		ug/L			34497	37846	4	Standard
	Kr	**83**		ug/L			33	38	31	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-07
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:24:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	31068	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25354	1	KED
⌊	**As**	**75**	**0.819**	ug/L	0.024	2	2	169	3	KED
	Y	**89**		ug/L			34497	38519	3	Standard
	Kr	**83**		ug/L			33	41	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-09
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:27:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	28545	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	25863	0	KED
⌊	**As**	**75**	**1.364**	ug/L	0.085	6	2	286	5	KED
	Y	**89**		ug/L			34497	41558	3	Standard
	Kr	**83**		ug/L			33	36	13	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-11
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:31:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	30064	0	Standard
⌈>	**Ge**	**72**		ug/L			28284	25241	1	KED
⌊	**As**	**75**	**0.975**	ug/L	0.091	9	2	200	8	KED
	Y	**89**		ug/L			34497	41326	4	Standard
	Kr	**83**		ug/L			33	38	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-13
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:34:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	34038	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25584	0	KED
⌊	**As**	**75**	**0.431**	ug/L	0.040	9	2	90	8	KED
	Y	**89**		ug/L			34497	37964	2	Standard
	Kr	**83**		ug/L			33	34	29	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0588-15
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:38:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	31176	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25211	1	KED
⌊	**As**	**75**	**0.971**	ug/L	0.064	6	2	199	5	KED
	Y	**89**		ug/L			34497	38058	1	Standard
	Kr	**83**		ug/L			33	44	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0587-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:41:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	29462	1	Standard
[>	**Ge**	**72**		ug/L			28284	26481	1	KED
[	**As**	**75**	**-0.001**	ug/L	0.002	158	2	1	25	KED
	Y	**89**		ug/L			34497	37168	0	Standard
	Kr	**83**		ug/L			33	33	43	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLU
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:45:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	21654	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25096	1	KED
⌊	**As**	**75**	**0.007**	ug/L	0.007	97	2	3	39	KED
	Y	**89**		ug/L			34497	35617	3	Standard
	Kr	**83**		ug/L			33	26	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVR
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:48:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	20136	4	Standard
⌈>	**Ge**	**72**		ug/L			28284	25943	0	KED
⌊	**As**	**75**	**48.782**	ug/L	0.808	1	2	10190	1	KED
	Y	**89**		ug/L			34497	35774	1	Standard
	Kr	**83**		ug/L			33	40	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBR
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 09:55:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	20341	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	26117	1	KED
⌊	**As**	**75**	**0.002**	ug/L	0.009	576	2	2	75	KED
	Y	**89**		ug/L			34497	36037	3	Standard
	Kr	**83**		ug/L			33	38	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0587-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 12, 2023 09:58:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25634	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25170	1	KED
⌊	**As**	**75**	**1.899**	ug/L	0.067	3	2	386	1	KED
	Y	**89**		ug/L			34497	47569	1	Standard
	Kr	**83**		ug/L			33	41	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0587-04
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 10:01:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	23088	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25083	0	KED
⌊	**As**	**75**	**2.690**	ug/L	0.083	3	2	545	3	KED
	Y	**89**		ug/L			34497	39491	2	Standard
	Kr	**83**		ug/L			33	38	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0587-05
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 10:05:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	24086	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25297	0	KED
⌊	**As**	**75**	**2.679**	ug/L	0.061	2	2	547	2	KED
	Y	**89**		ug/L			34497	39866	2	Standard
	Kr	**83**		ug/L			33	38	43	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-07
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 10:09:11
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	28092	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	24265	2	KED
⌊	**As**	**75**	**3.647**	ug/L	0.045	1	2	714	2	KED
	Y	**89**		ug/L			34497	36517	3	Standard
	Kr	**83**		ug/L			33	48	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-08
Sample Dil Factor: 5
Comments:
Sample Date/Time: Friday, May 12, 2023 10:12:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	24129	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	24842	1	KED
⌊	**As**	**75**	**1.946**	ug/L	0.065	3	2	391	2	KED
	Y	**89**		ug/L			34497	39994	1	Standard
	Kr	**83**		ug/L			33	40	19	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-04
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 12, 2023 10:16:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	27316	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25745	2	KED
⌊	**As**	**75**	**0.925**	ug/L	0.064	6	2	193	4	KED
	Y	**89**		ug/L			34497	51126	1	Standard
	Kr	**83**		ug/L			33	34	24	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-06
Sample Dil Factor: 2
Comments:
Sample Date/Time: Friday, May 12, 2023 10:19:28
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	26836	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	24007	0	KED
⌊	**As**	**75**	**3.754**	ug/L	0.071	1	2	727	2	KED
	Y	**89**		ug/L			34497	40963	1	Standard
	Kr	**83**		ug/L			33	40	28	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-03
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:23:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	29306	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25776	3	KED
⌊	**As**	**75**	**0.007**	ug/L	0.005	71	2	3	27	KED
	Y	**89**		ug/L			34497	36300	2	Standard
	Kr	**83**		ug/L			33	45	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0578-05
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:26:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	31168	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	23049	3	KED
⌊	**As**	**75**	**12.233**	ug/L	0.459	3	2	2270	1	KED
	Y	**89**		ug/L			34497	42422	0	Standard
	Kr	**83**		ug/L			33	52	20	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLV
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:30:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	22595	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25718	0	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.001	291	2	2	13	KED
	Y	**89**		ug/L			34497	35195	5	Standard
	Kr	**83**		ug/L			33	40	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVS
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:33:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	20551	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	24988	0	KED
⌊	**As**	**75**	**50.067**	ug/L	1.149	2	2	10073	2	KED
	Y	**89**		ug/L			34497	35581	2	Standard
	Kr	**83**		ug/L			33	49	21	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBS
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:39:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	20489	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	25090	0	KED
⌊	**As**	**75**	**0.002**	ug/L	0.006	279	2	2	47	KED
	Y	**89**		ug/L			34497	35714	2	Standard
	Kr	**83**		ug/L			33	38	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:43:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25632	2	Standard
⌈>	**Ge**	**72**		ug/L			28284	26454	1	KED
⌊	**As**	**75**	**0.006**	ug/L	0.010	169	2	3	61	KED
	Y	**89**		ug/L			34497	41214	3	Standard
	Kr	**83**		ug/L			33	38	24	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:46:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	24859	4	Standard
⌈>	**Ge**	**72**		ug/L			28284	26414	1	KED
⌊	**As**	**75**	**0.000**	ug/L	0.005	9977	2	2	49	KED
	Y	**89**		ug/L			34497	38257	2	Standard
	Kr	**83**		ug/L			33	41	25	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:50:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	25074	4	Standard
[>	**Ge**	**72**		ug/L			28284	25856	5	KED
[	**As**	**75**	**0.004**	ug/L	0.009	256	2	3	71	KED
	Y	**89**		ug/L			34497	40670	1	Standard
	Kr	**83**		ug/L			33	42	28	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:53:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	21544	0	Standard
⌈>	**Ge**	**72**		ug/L			28284	24979	2	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.001	29	2	1	21	KED
	Y	**89**		ug/L			34497	33632	2	Standard
	Kr	**83**		ug/L			33	40	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 10:57:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	21498	3	Standard
⌈>	**Ge**	**72**		ug/L			28284	24196	2	KED
⌊	**As**	**75**	**0.000**	ug/L	0.004	2080	2	2	35	KED
	Y	**89**		ug/L			34497	33753	1	Standard
	Kr	**83**		ug/L			33	36	26	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Friday, May 12, 2023 11:00:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_dailymethod_ked_uct_as only.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23953	21398	1	Standard
⌈>	**Ge**	**72**		ug/L			28284	25308	0	KED
⌊	**As**	**75**	**0.000**	ug/L	0.010	2112	2	2	89	KED
	Y	**89**		ug/L			34497	34273	1	Standard
	Kr	**83**		ug/L			33	34	14	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-ICV1	Chromium-52	50.000	52.9	106	ug/L	EPA 6020B
	Chromium-53	50.000	51.3	103	ug/L	EPA 6020B
	Lead-208	50.000	52.6	105	ug/L	EPA 6020B
	Silver-107	50.000	50.8	102	ug/L	EPA 6020B
SLE0204-CCV1	Chromium-52	50.000	51.5	103	ug/L	EPA 6020B
	Chromium-53	50.000	50.5	101	ug/L	EPA 6020B
	Lead-208	50.000	50.3	101	ug/L	EPA 6020B
	Silver-107	50.000	50.1	100	ug/L	EPA 6020B
SLE0204-CCV2	Chromium-52	50.000	49.6	99.2	ug/L	EPA 6020B
	Chromium-53	50.000	49.3	98.6	ug/L	EPA 6020B
	Lead-208	50.000	50.8	102	ug/L	EPA 6020B
	Silver-107	50.000	48.8	97.6	ug/L	EPA 6020B
SLE0204-CCV3	Chromium-52	50.000	50.1	100	ug/L	EPA 6020B
	Chromium-53	50.000	49.4	98.7	ug/L	EPA 6020B
	Lead-208	50.000	50.4	101	ug/L	EPA 6020B
	Silver-107	50.000	49.2	98.5	ug/L	EPA 6020B
SLE0204-CCV4	Chromium-52	50.000	50.6	101	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	99.0	ug/L	EPA 6020B
	Lead-208	50.000	51.7	103	ug/L	EPA 6020B
	Silver-107	50.000	49.8	99.6	ug/L	EPA 6020B
SLE0204-CCV5	Chromium-52	50.000	51.1	102	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	98.9	ug/L	EPA 6020B
	Lead-208	50.000	52.8	106	ug/L	EPA 6020B
	Silver-107	50.000	48.1	96.2	ug/L	EPA 6020B
SLE0204-CCV6	Chromium-52	50.000	49.2	98.3	ug/L	EPA 6020B
	Chromium-53	50.000	49.2	98.4	ug/L	EPA 6020B
	Lead-208	50.000	49.6	99.2	ug/L	EPA 6020B
	Silver-107	50.000	47.6	95.1	ug/L	EPA 6020B
SLE0204-CCV7	Chromium-52	50.000	49.7	99.4	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.8	ug/L	EPA 6020B
	Lead-208	50.000	50.5	101	ug/L	EPA 6020B
	Silver-107	50.000	48.6	97.2	ug/L	EPA 6020B
SLE0204-CCV8	Chromium-52	50.000	50.7	101	ug/L	EPA 6020B
	Chromium-53	50.000	49.7	99.4	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCV8	Lead-208	50.000	50.1	100	ug/L	EPA 6020B
	Silver-107	50.000	49.5	99.1	ug/L	EPA 6020B
SLE0204-CCV9	Chromium-52	50.000	49.4	98.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.8	ug/L	EPA 6020B
	Lead-208	50.000	52.2	104	ug/L	EPA 6020B
	Silver-107	50.000	48.8	97.6	ug/L	EPA 6020B
SLE0204-CCVA	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	49.4	98.7	ug/L	EPA 6020B
	Lead-208	50.000	51.6	103	ug/L	EPA 6020B
	Silver-107	50.000	48.9	97.9	ug/L	EPA 6020B
SLE0204-CCVB	Chromium-52	50.000	50.3	101	ug/L	EPA 6020B
	Chromium-53	50.000	49.0	98.1	ug/L	EPA 6020B
	Lead-208	50.000	51.7	103	ug/L	EPA 6020B
	Silver-107	50.000	48.8	97.6	ug/L	EPA 6020B
SLE0204-CCVC	Chromium-52	50.000	49.0	98.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.4	96.7	ug/L	EPA 6020B
	Lead-208	50.000	51.2	102	ug/L	EPA 6020B
	Silver-107	50.000	48.1	96.2	ug/L	EPA 6020B
SLE0204-CCVD	Chromium-52	50.000	49.9	99.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.9	97.8	ug/L	EPA 6020B
	Lead-208	50.000	53.3	107	ug/L	EPA 6020B
	Silver-107	50.000	46.0	92.1	ug/L	EPA 6020B
SLE0204-CCVE	Chromium-52	50.000	48.9	97.7	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.3	ug/L	EPA 6020B
	Lead-208	50.000	54.9	110	ug/L	EPA 6020B
	Silver-107	50.000	46.3	92.6	ug/L	EPA 6020B
SLE0204-CCVF	Chromium-52	50.000	48.7	97.4	ug/L	EPA 6020B
	Chromium-53	50.000	47.7	95.4	ug/L	EPA 6020B
	Lead-208	50.000	55.3	111	ug/L	EPA 6020B
	Silver-107	50.000	45.7	91.5	ug/L	EPA 6020B
SLE0204-CCVG	Chromium-52	50.000	49.5	99.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.8	97.5	ug/L	EPA 6020B
	Lead-208	50.000	55.0	110	ug/L	EPA 6020B
	Silver-107	50.000	46.7	93.3	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCVH	Chromium-52	50.000	49.5	99.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.3	96.7	ug/L	EPA 6020B
	Lead-208	50.000	55.5	111	ug/L	EPA 6020B
	Silver-107	50.000	46.7	93.4	ug/L	EPA 6020B
SLE0204-CCVI	Chromium-52	50.000	50.2	100	ug/L	EPA 6020B
	Chromium-53	50.000	48.3	96.6	ug/L	EPA 6020B
	Lead-208	50.000	54.3	109	ug/L	EPA 6020B
	Silver-107	50.000	46.8	93.5	ug/L	EPA 6020B
SLE0204-CCVJ	Chromium-52	50.000	49.8	99.7	ug/L	EPA 6020B
	Chromium-53	50.000	49.3	98.5	ug/L	EPA 6020B
	Lead-208	50.000	55.8	112	ug/L	EPA 6020B
	Silver-107	50.000	45.7	91.4	ug/L	EPA 6020B

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Control Limt: +/- 10.00%
Sequence: SLE0209

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0209-ICV1	Chromium-52	50.000	51.3	103	ug/L	EPA 6020B
	Chromium-53	50.000	51.2	102	ug/L	EPA 6020B
	Lead-208	50.000	51.4	103	ug/L	EPA 6020B
	Silver-107	50.000	51.0	102	ug/L	EPA 6020B
SLE0209-CCV1	Chromium-52	50.000	49.3	98.5	ug/L	EPA 6020B
	Chromium-53	50.000	48.7	97.4	ug/L	EPA 6020B
	Lead-208	50.000	49.4	98.9	ug/L	EPA 6020B
	Silver-107	50.000	50.0	100	ug/L	EPA 6020B
SLE0209-CCV2	Chromium-52	50.000	48.9	97.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.9	97.8	ug/L	EPA 6020B
	Lead-208	50.000	48.9	97.8	ug/L	EPA 6020B
	Silver-107	50.000	49.9	99.9	ug/L	EPA 6020B
SLE0209-CCV3	Chromium-52	50.000	48.7	97.4	ug/L	EPA 6020B
	Chromium-53	50.000	49.5	99.0	ug/L	EPA 6020B
	Lead-208	50.000	48.6	97.3	ug/L	EPA 6020B
	Silver-107	50.000	51.2	102	ug/L	EPA 6020B
SLE0209-CCV4	Chromium-52	50.000	48.9	97.7	ug/L	EPA 6020B
	Chromium-53	50.000	49.2	98.4	ug/L	EPA 6020B
	Lead-208	50.000	49.9	99.7	ug/L	EPA 6020B
	Silver-107	50.000	50.2	100	ug/L	EPA 6020B
SLE0209-CCV5	Lead-208	50.000	50.9	102	ug/L	EPA 6020B
SLE0209-CCV6	Lead-208	50.000	50.2	100	ug/L	EPA 6020B
SLE0209-CCV7	Chromium-52	50.000	46.9	93.7	ug/L	EPA 6020B
	Chromium-53	50.000	47.4	94.9	ug/L	EPA 6020B
	Lead-208	50.000	49.0	98.1	ug/L	EPA 6020B
	Silver-107	50.000	48.7	97.5	ug/L	EPA 6020B
SLE0209-CCV8	Chromium-52	50.000	48.0	96.1	ug/L	EPA 6020B
	Chromium-53	50.000	48.7	97.5	ug/L	EPA 6020B
	Lead-208	50.000	49.5	99.0	ug/L	EPA 6020B
	Silver-107	50.000	49.5	98.9	ug/L	EPA 6020B
SLE0209-CCVA	Chromium-52	50.000	47.9	95.8	ug/L	EPA 6020B
	Chromium-53	50.000	48.3	96.6	ug/L	EPA 6020B
	Lead-208	50.000	49.0	98.0	ug/L	EPA 6020B
	Silver-107	50.000	50.3	101	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Control Limt: +/- 10.00%
Sequence: SLE0209

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0209-CCVB	Chromium-52	50.000	47.8	95.6	ug/L	EPA 6020B
	Chromium-53	50.000	47.8	95.6	ug/L	EPA 6020B
	Lead-208	50.000	49.0	97.9	ug/L	EPA 6020B
	Silver-107	50.000	48.6	97.2	ug/L	EPA 6020B
SLE0209-CCVC	Chromium-52	50.000	48.9	97.7	ug/L	EPA 6020B
	Chromium-53	50.000	48.9	97.7	ug/L	EPA 6020B
	Lead-208	50.000	48.5	96.9	ug/L	EPA 6020B
	Silver-107	50.000	49.2	98.4	ug/L	EPA 6020B
SLE0209-CCVD	Chromium-52	50.000	47.5	95.1	ug/L	EPA 6020B
	Chromium-53	50.000	48.0	96.0	ug/L	EPA 6020B
	Lead-208	50.000	49.1	98.2	ug/L	EPA 6020B
	Silver-107	50.000	50.4	101	ug/L	EPA 6020B
SLE0209-CCVE	Chromium-52	50.000	48.6	97.2	ug/L	EPA 6020B
	Chromium-53	50.000	48.2	96.3	ug/L	EPA 6020B
	Lead-208	50.000	49.2	98.4	ug/L	EPA 6020B
	Silver-107	50.000	49.0	98.0	ug/L	EPA 6020B
SLE0209-CCVF	Chromium-52	50.000	48.5	97.0	ug/L	EPA 6020B
	Chromium-53	50.000	48.5	97.0	ug/L	EPA 6020B
	Lead-208	50.000	49.2	98.4	ug/L	EPA 6020B
	Silver-107	50.000	50.3	101	ug/L	EPA 6020B
SLE0209-CCVG	Chromium-52	50.000	48.0	96.1	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.3	ug/L	EPA 6020B
	Lead-208	50.000	49.5	98.9	ug/L	EPA 6020B
	Silver-107	50.000	48.9	97.8	ug/L	EPA 6020B
SLE0209-CCVH	Chromium-52	50.000	48.0	95.9	ug/L	EPA 6020B
	Chromium-53	50.000	47.9	95.8	ug/L	EPA 6020B
	Lead-208	50.000	50.7	101	ug/L	EPA 6020B
	Silver-107	50.000	49.5	99.1	ug/L	EPA 6020B
SLE0209-CCVI	Chromium-52	50.000	48.5	97.1	ug/L	EPA 6020B
	Chromium-53	50.000	48.1	96.1	ug/L	EPA 6020B
	Lead-208	50.000	50.7	101	ug/L	EPA 6020B
	Silver-107	50.000	48.7	97.4	ug/L	EPA 6020B
SLE0209-CCVJ	Chromium-52	50.000	48.2	96.4	ug/L	EPA 6020B
	Chromium-53	50.000	48.5	96.9	ug/L	EPA 6020B

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Control Limt: +/- 10.00%
Sequence: SLE0209

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0209-CCVJ	Lead-208	50.000	51.3	103	ug/L	EPA 6020B
	Silver-107	50.000	48.7	97.3	ug/L	EPA 6020B
SLE0209-CCVK	Chromium-52	50.000	47.3	94.7	ug/L	EPA 6020B
	Chromium-53	50.000	47.1	94.3	ug/L	EPA 6020B
	Lead-208	50.000	52.1	104	ug/L	EPA 6020B
	Silver-107	50.000	47.2	94.4	ug/L	EPA 6020B
SLE0209-CCVL	Chromium-52	50.000	46.5	92.9	ug/L	EPA 6020B
	Chromium-53	50.000	46.7	93.3	ug/L	EPA 6020B
	Lead-208	50.000	53.3	107	ug/L	EPA 6020B
	Silver-107	50.000	47.2	94.4	ug/L	EPA 6020B
SLE0209-CCVM	Chromium-52	50.000	46.3	92.7	ug/L	EPA 6020B
	Chromium-53	50.000	46.3	92.5	ug/L	EPA 6020B
	Lead-208	50.000	50.3	101	ug/L	EPA 6020B
	Silver-107	50.000	48.4	96.7	ug/L	EPA 6020B
SLE0209-CCVN	Chromium-52	50.000	43.3	86.6	ug/L	EPA 6020B
	Chromium-53	50.000	42.9	85.8	ug/L	EPA 6020B
	Lead-208	50.000	51.6	103	ug/L	EPA 6020B
	Silver-107	50.000	49.5	98.9	ug/L	EPA 6020B
SLE0209-CCVO	Chromium-52	50.000	43.1	86.1	ug/L	EPA 6020B
	Chromium-53	50.000	42.5	85.1	ug/L	EPA 6020B
	Lead-208	50.000	52.0	104	ug/L	EPA 6020B
	Silver-107	50.000	49.0	98.0	ug/L	EPA 6020B
SLE0209-CCVP	Chromium-52	50.000	43.1	86.3	ug/L	EPA 6020B
	Chromium-53	50.000	42.5	85.1	ug/L	EPA 6020B
	Lead-208	50.000	55.5	111	ug/L	EPA 6020B
	Silver-107	50.000	48.3	96.5	ug/L	EPA 6020B

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 16:19

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBL1	Chromium-52	0.0110	0.26	0.500	ug/L	
SLE0204-IBL1	Chromium-53	0.00400	0.239	0.500	ug/L	
SLE0204-IBL1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-IBL1	Silver-107	0.00400	0.022	0.200	ug/L	
SLE0204-ICB1	Chromium-52	0.0170	0.26	0.500	ug/L	
SLE0204-ICB1	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLE0204-ICB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-ICB1	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-CCB1	Chromium-52	0.00600	0.26	0.500	ug/L	
SLE0204-CCB1	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLE0204-CCB1	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-CCB1	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-IBL2	Chromium-52	0.0130	0.26	0.500	ug/L	
SLE0204-IBL2	Chromium-53	0.00600	0.239	0.500	ug/L	
SLE0204-IBL2	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0204-IBL2	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0204-CCB2	Chromium-52	0.0230	0.26	0.500	ug/L	
SLE0204-CCB2	Chromium-53	0.0280	0.239	0.500	ug/L	
SLE0204-CCB2	Lead-208	0.0300	0.0513	0.100	ug/L	
SLE0204-CCB2	Silver-107	0.0300	0.022	0.200	ug/L	
SLE0204-CCB3	Chromium-52	-0.0200	0.26	0.500	ug/L	
SLE0204-CCB3	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0204-CCB3	Lead-208	0.00400	0.0513	0.100	ug/L	
SLE0204-CCB3	Silver-107	0.00600	0.022	0.200	ug/L	
SLE0204-IBL3	Chromium-52	-0.0220	0.26	0.500	ug/L	
SLE0204-IBL3	Chromium-53	-0.0170	0.239	0.500	ug/L	
SLE0204-IBL3	Lead-208	0.00400	0.0513	0.100	ug/L	
SLE0204-IBL3	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCB4	Chromium-52	-0.0320	0.26	0.500	ug/L	
SLE0204-CCB4	Chromium-53	-0.0110	0.239	0.500	ug/L	
SLE0204-CCB4	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCB4	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-IBL4	Chromium-52	-0.00700	0.26	0.500	ug/L	
SLE0204-IBL4	Chromium-53	0.00500	0.239	0.500	ug/L	
SLE0204-IBL4	Lead-208	0.00400	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 19:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBL4	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-IBL5	Chromium-52	0.0360	0.26	0.500	ug/L	
SLE0204-IBL5	Chromium-53	0.0240	0.239	0.500	ug/L	
SLE0204-IBL5	Lead-208	0.00300	0.0513	0.100	ug/L	
SLE0204-IBL5	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCB5	Chromium-52	-0.0410	0.26	0.500	ug/L	
SLE0204-CCB5	Chromium-53	-0.0180	0.239	0.500	ug/L	
SLE0204-CCB5	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCB5	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-CCB6	Chromium-52	-0.0280	0.26	0.500	ug/L	
SLE0204-CCB6	Chromium-53	-0.0190	0.239	0.500	ug/L	
SLE0204-CCB6	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCB6	Silver-107	0.00400	0.022	0.200	ug/L	
SLE0204-IBL6	Chromium-52	-0.0170	0.26	0.500	ug/L	
SLE0204-IBL6	Chromium-53	0.00200	0.239	0.500	ug/L	
SLE0204-IBL6	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-IBL6	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-CCB7	Chromium-52	-0.00900	0.26	0.500	ug/L	
SLE0204-CCB7	Chromium-53	0.0110	0.239	0.500	ug/L	
SLE0204-CCB7	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCB7	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0204-IBL7	Chromium-52	-0.0510	0.26	0.500	ug/L	
SLE0204-IBL7	Chromium-53	-0.0130	0.239	0.500	ug/L	
SLE0204-IBL7	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-IBL7	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-CCB8	Chromium-52	-0.0260	0.26	0.500	ug/L	
SLE0204-CCB8	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLE0204-CCB8	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-CCB8	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-IBL8	Chromium-52	0.0300	0.26	0.500	ug/L	
SLE0204-IBL8	Chromium-53	0.0250	0.239	0.500	ug/L	
SLE0204-IBL8	Lead-208	0.275	0.0513	0.100	ug/L	
SLE0204-IBL8	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0204-CCB9	Chromium-52	-0.0280	0.26	0.500	ug/L	
SLE0204-CCB9	Chromium-53	-0.0110	0.239	0.500	ug/L	
SLE0204-CCB9	Lead-208	0.00700	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 23:28

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCB9	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0204-IBL9	Chromium-52	-0.0200	0.26	0.500	ug/L	
SLE0204-IBL9	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLE0204-IBL9	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-IBL9	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBA	Chromium-52	-0.0330	0.26	0.500	ug/L	
SLE0204-CCBA	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0204-CCBA	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0204-CCBA	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-IBLA	Chromium-52	-0.0310	0.26	0.500	ug/L	
SLE0204-IBLA	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLE0204-IBLA	Lead-208	0.00400	0.0513	0.100	ug/L	
SLE0204-IBLA	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBB	Chromium-52	-0.0160	0.26	0.500	ug/L	
SLE0204-CCBB	Chromium-53	-0.0100	0.239	0.500	ug/L	
SLE0204-CCBB	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCBB	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-CCBC	Chromium-52	0.0180	0.26	0.500	ug/L	
SLE0204-CCBC	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLE0204-CCBC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0204-CCBC	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0204-IBLB	Chromium-52	-0.0440	0.26	0.500	ug/L	
SLE0204-IBLB	Chromium-53	0.00800	0.239	0.500	ug/L	
SLE0204-IBLB	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-IBLB	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBD	Chromium-52	-0.0360	0.26	0.500	ug/L	
SLE0204-CCBD	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0204-CCBD	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-CCBD	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-IBLC	Chromium-52	0.0230	0.26	0.500	ug/L	
SLE0204-IBLC	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLE0204-IBLC	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0204-IBLC	Silver-107	0.00	0.022	0.200	ug/L	
SLE0204-IBLD	Chromium-52	-0.0450	0.26	0.500	ug/L	
SLE0204-IBLD	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLE0204-IBLD	Lead-208	-0.00100	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/11/23 03:20

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBLD	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBE	Chromium-52	-0.0500	0.26	0.500	ug/L	
SLE0204-CCBE	Chromium-53	-0.0140	0.239	0.500	ug/L	
SLE0204-CCBE	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLE0204-CCBE	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0204-IBLE	Chromium-52	-0.0460	0.26	0.500	ug/L	
SLE0204-IBLE	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLE0204-IBLE	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-IBLE	Silver-107	0.00	0.022	0.200	ug/L	
SLE0204-IBLF	Chromium-52	-0.0490	0.26	0.500	ug/L	
SLE0204-IBLF	Chromium-53	-0.00100	0.239	0.500	ug/L	
SLE0204-IBLF	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-IBLF	Silver-107	0.00	0.022	0.200	ug/L	
SLE0204-CCBF	Chromium-52	-0.0610	0.26	0.500	ug/L	
SLE0204-CCBF	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLE0204-CCBF	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-CCBF	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-CCBG	Chromium-52	0.0140	0.26	0.500	ug/L	
SLE0204-CCBG	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLE0204-CCBG	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-CCBG	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-IBLG	Chromium-52	0.0210	0.26	0.500	ug/L	
SLE0204-IBLG	Chromium-53	0.00400	0.239	0.500	ug/L	
SLE0204-IBLG	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0204-IBLG	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0204-CCBH	Chromium-52	-0.00600	0.26	0.500	ug/L	
SLE0204-CCBH	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0204-CCBH	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-CCBH	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-IBLH	Chromium-52	0.0130	0.26	0.500	ug/L	
SLE0204-IBLH	Chromium-53	0.00100	0.239	0.500	ug/L	
SLE0204-IBLH	Lead-208	-0.00400	0.0513	0.100	ug/L	
SLE0204-IBLH	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBI	Chromium-52	0.00400	0.26	0.500	ug/L	
SLE0204-CCBI	Chromium-53	0.00100	0.239	0.500	ug/L	
SLE0204-CCBI	Lead-208	-0.00300	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/11/23 06:42

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCBI	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0204-IBLI	Chromium-52	0.0160	0.26	0.500	ug/L	
SLE0204-IBLI	Chromium-53	0.00500	0.239	0.500	ug/L	
SLE0204-IBLI	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-IBLI	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-IBLJ	Chromium-52	0.00900	0.26	0.500	ug/L	
SLE0204-IBLJ	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLE0204-IBLJ	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-IBLJ	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0204-CCBJ	Chromium-52	0.0140	0.26	0.500	ug/L	
SLE0204-CCBJ	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLE0204-CCBJ	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0204-CCBJ	Silver-107	0.00100	0.022	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/11/23 14:29

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBL1	Chromium-52	0.0410	0.26	0.500	ug/L	
SLE0209-IBL1	Chromium-53	0.00600	0.239	0.500	ug/L	
SLE0209-IBL1	Lead-208	0.0180	0.0513	0.100	ug/L	
SLE0209-IBL1	Silver-107	0.0350	0.022	0.200	ug/L	
SLE0209-ICB1	Chromium-52	0.0310	0.26	0.500	ug/L	
SLE0209-ICB1	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLE0209-ICB1	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-ICB1	Silver-107	0.00400	0.022	0.200	ug/L	
SLE0209-CCB1	Chromium-52	0.00200	0.26	0.500	ug/L	
SLE0209-CCB1	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLE0209-CCB1	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCB1	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0209-IBL2	Chromium-52	0.0290	0.26	0.500	ug/L	
SLE0209-IBL2	Chromium-53	0.0330	0.239	0.500	ug/L	
SLE0209-IBL2	Lead-208	0.00700	0.0513	0.100	ug/L	
SLE0209-IBL2	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0209-IBL3	Chromium-52	0.0330	0.26	0.500	ug/L	
SLE0209-IBL3	Chromium-53	0.0220	0.239	0.500	ug/L	
SLE0209-IBL3	Lead-208	0.00600	0.0513	0.100	ug/L	
SLE0209-IBL3	Silver-107	0.00300	0.022	0.200	ug/L	
SLE0209-CCB2	Chromium-52	0.0150	0.26	0.500	ug/L	
SLE0209-CCB2	Chromium-53	0.00100	0.239	0.500	ug/L	
SLE0209-CCB2	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0209-CCB2	Silver-107	0.00400	0.022	0.200	ug/L	
SLE0209-CCB3	Chromium-52	-0.0180	0.26	0.500	ug/L	
SLE0209-CCB3	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLE0209-CCB3	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCB3	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-IBL4	Chromium-52	0.140	0.26	0.500	ug/L	
SLE0209-IBL4	Chromium-53	0.0650	0.239	0.500	ug/L	
SLE0209-IBL4	Lead-208	0.00300	0.0513	0.100	ug/L	
SLE0209-IBL4	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-IBL5	Chromium-52	0.100	0.26	0.500	ug/L	
SLE0209-IBL5	Chromium-53	0.00700	0.239	0.500	ug/L	
SLE0209-IBL5	Lead-208	0.00300	0.0513	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/11/23 17:21

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBL5	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-CCB4	Chromium-52	0.00300	0.26	0.500	ug/L	
SLE0209-CCB4	Chromium-53	-0.00500	0.239	0.500	ug/L	
SLE0209-CCB4	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCB4	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0209-IBL6	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-CCB5	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-IBL7	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-IBL8	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCB6	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-IBL9	Chromium-52	0.0410	0.26	0.500	ug/L	
SLE0209-IBL9	Chromium-53	0.00600	0.239	0.500	ug/L	
SLE0209-IBL9	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-IBL9	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-IBLA	Chromium-52	0.0520	0.26	0.500	ug/L	
SLE0209-IBLA	Chromium-53	0.125	0.239	0.500	ug/L	
SLE0209-IBLA	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-IBLA	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCB7	Chromium-52	0.0560	0.26	0.500	ug/L	
SLE0209-CCB7	Chromium-53	0.0220	0.239	0.500	ug/L	
SLE0209-CCB7	Lead-208	0.0110	0.0513	0.100	ug/L	
SLE0209-CCB7	Silver-107	0.0100	0.022	0.200	ug/L	
SLE0209-CCB8	Chromium-52	-0.0190	0.26	0.500	ug/L	
SLE0209-CCB8	Chromium-53	-0.0160	0.239	0.500	ug/L	
SLE0209-CCB8	Lead-208	0.0100	0.0513	0.100	ug/L	
SLE0209-CCB8	Silver-107	0.00800	0.022	0.200	ug/L	
SLE0209-CCBA	Chromium-52	0.00900	0.26	0.500	ug/L	
SLE0209-CCBA	Chromium-53	0.0230	0.239	0.500	ug/L	
SLE0209-CCBA	Lead-208	0.0170	0.0513	0.100	ug/L	
SLE0209-CCBA	Silver-107	0.0220	0.022	0.200	ug/L	
SLE0209-IBLC	Chromium-52	0.0110	0.26	0.500	ug/L	
SLE0209-IBLC	Chromium-53	0.00200	0.239	0.500	ug/L	
SLE0209-IBLC	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-IBLC	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLD	Chromium-52	-0.0200	0.26	0.500	ug/L	
SLE0209-IBLD	Chromium-53	-0.00800	0.239	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/11/23 20:49

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBLD	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0209-IBLD	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-CCBB	Chromium-52	0.00	0.26	0.500	ug/L	
SLE0209-CCBB	Chromium-53	-0.00400	0.239	0.500	ug/L	
SLE0209-CCBB	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBB	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-IBLE	Chromium-52	-0.0100	0.26	0.500	ug/L	
SLE0209-IBLE	Chromium-53	-0.0140	0.239	0.500	ug/L	
SLE0209-IBLE	Lead-208	0.00300	0.0513	0.100	ug/L	
SLE0209-IBLE	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-IBLF	Chromium-52	-0.0240	0.26	0.500	ug/L	
SLE0209-IBLF	Chromium-53	-0.0170	0.239	0.500	ug/L	
SLE0209-IBLF	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-IBLF	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCBC	Chromium-52	-0.0270	0.26	0.500	ug/L	
SLE0209-CCBC	Chromium-53	-0.0200	0.239	0.500	ug/L	
SLE0209-CCBC	Lead-208	0.00300	0.0513	0.100	ug/L	
SLE0209-CCBC	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-CCBD	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLE0209-CCBD	Chromium-53	0.00700	0.239	0.500	ug/L	
SLE0209-CCBD	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBD	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLG	Chromium-52	0.0110	0.26	0.500	ug/L	
SLE0209-IBLG	Chromium-53	-0.00200	0.239	0.500	ug/L	
SLE0209-IBLG	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLE0209-IBLG	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-CCBE	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLE0209-CCBE	Chromium-53	0.00	0.239	0.500	ug/L	
SLE0209-CCBE	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBE	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLH	Chromium-52	0.00400	0.26	0.500	ug/L	
SLE0209-IBLH	Chromium-53	-0.00900	0.239	0.500	ug/L	
SLE0209-IBLH	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLE0209-IBLH	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-CCBF	Chromium-52	0.00100	0.26	0.500	ug/L	
SLE0209-CCBF	Chromium-53	0.00	0.239	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/12/23 00:09

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-CCBF	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBF	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLI	Chromium-52	0.0220	0.26	0.500	ug/L	
SLE0209-IBLI	Chromium-53	-0.00400	0.239	0.500	ug/L	
SLE0209-IBLI	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-IBLI	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-CCBG	Chromium-52	-0.00400	0.26	0.500	ug/L	
SLE0209-CCBG	Chromium-53	-0.00800	0.239	0.500	ug/L	
SLE0209-CCBG	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBG	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLJ	Chromium-52	0.00300	0.26	0.500	ug/L	
SLE0209-IBLJ	Chromium-53	-0.0120	0.239	0.500	ug/L	
SLE0209-IBLJ	Lead-208	0.00200	0.0513	0.100	ug/L	
SLE0209-IBLJ	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCBH	Chromium-52	0.0140	0.26	0.500	ug/L	
SLE0209-CCBH	Chromium-53	0.00200	0.239	0.500	ug/L	
SLE0209-CCBH	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBH	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLK	Chromium-52	0.00700	0.26	0.500	ug/L	
SLE0209-IBLK	Chromium-53	-0.00700	0.239	0.500	ug/L	
SLE0209-IBLK	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-IBLK	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-IBLL	Chromium-52	-0.00300	0.26	0.500	ug/L	
SLE0209-IBLL	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLE0209-IBLL	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-IBLL	Silver-107	-0.00200	0.022	0.200	ug/L	
SLE0209-CCBI	Chromium-52	-0.0150	0.26	0.500	ug/L	
SLE0209-CCBI	Chromium-53	-0.00600	0.239	0.500	ug/L	
SLE0209-CCBI	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBI	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCBJ	Chromium-52	-0.0240	0.26	0.500	ug/L	
SLE0209-CCBJ	Chromium-53	-0.00300	0.239	0.500	ug/L	
SLE0209-CCBJ	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBJ	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-IBLM	Chromium-52	-0.0150	0.26	0.500	ug/L	
SLE0209-IBLM	Chromium-53	-0.00600	0.239	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/12/23 03:46

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-IBLM	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-IBLM	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-IBLN	Chromium-52	0.0370	0.26	0.500	ug/L	
SLE0209-IBLN	Chromium-53	0.00500	0.239	0.500	ug/L	
SLE0209-IBLN	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-IBLN	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-CCBK	Chromium-52	-0.00600	0.26	0.500	ug/L	
SLE0209-CCBK	Chromium-53	0.00200	0.239	0.500	ug/L	
SLE0209-CCBK	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBK	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-IBLO	Chromium-52	0.0140	0.26	0.500	ug/L	
SLE0209-IBLO	Chromium-53	0.00500	0.239	0.500	ug/L	
SLE0209-IBLO	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-IBLO	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCBL	Chromium-52	-0.0270	0.26	0.500	ug/L	
SLE0209-CCBL	Chromium-53	0.00100	0.239	0.500	ug/L	
SLE0209-CCBL	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBL	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0209-IBLP	Chromium-52	0.0420	0.26	0.500	ug/L	
SLE0209-IBLP	Chromium-53	0.566	0.239	0.500	ug/L	
SLE0209-IBLP	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-IBLP	Silver-107	0.00	0.022	0.200	ug/L	
SLE0209-CCBM	Chromium-52	-0.0220	0.26	0.500	ug/L	
SLE0209-CCBM	Chromium-53	0.321	0.239	0.500	ug/L	
SLE0209-CCBM	Lead-208	0.00100	0.0513	0.100	ug/L	
SLE0209-CCBM	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-IBLQ	Chromium-52	-0.0420	0.26	0.500	ug/L	
SLE0209-IBLQ	Chromium-53	0.192	0.239	0.500	ug/L	
SLE0209-IBLQ	Lead-208	-0.00200	0.0513	0.100	ug/L	
SLE0209-IBLQ	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-IBLR	Chromium-52	0.0530	0.26	0.500	ug/L	
SLE0209-IBLR	Chromium-53	0.841	0.239	0.500	ug/L	
SLE0209-IBLR	Lead-208	0.00400	0.0513	0.100	ug/L	
SLE0209-IBLR	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0209-CCBN	Chromium-52	-0.0620	0.26	0.500	ug/L	
SLE0209-CCBN	Chromium-53	0.364	0.239	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00042
Date Analyzed: 05/12/23 07:11

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0209-CCBN	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBN	Silver-107	0.00200	0.022	0.200	ug/L	
SLE0209-CCBO	Chromium-52	-0.00500	0.26	0.500	ug/L	
SLE0209-CCBO	Chromium-53	-0.0460	0.239	0.500	ug/L	
SLE0209-CCBO	Lead-208	0.00	0.0513	0.100	ug/L	
SLE0209-CCBO	Silver-107	0.00100	0.022	0.200	ug/L	
SLE0209-IBLS	Chromium-52	-0.0170	0.26	0.500	ug/L	
SLE0209-IBLS	Chromium-53	-0.157	0.239	0.500	ug/L	
SLE0209-IBLS	Lead-208	-0.00300	0.0513	0.100	ug/L	
SLE0209-IBLS	Silver-107	-0.00100	0.022	0.200	ug/L	
SLE0209-CCBP	Chromium-52	-0.0330	0.26	0.500	ug/L	
SLE0209-CCBP	Chromium-53	-0.183	0.239	0.500	ug/L	
SLE0209-CCBP	Lead-208	-0.00100	0.0513	0.100	ug/L	
SLE0209-CCBP	Silver-107	0.00	0.022	0.200	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0204-CAL1	XDT_m1230510A-008	NA	05/10/23 15:47
CAL 1 - LOW CHECK	SLE0204-CAL2	XDT_m1230510A-009	NA	05/10/23 15:51
CAL 2	SLE0204-CAL3	XDT_m1230510A-010	NA	05/10/23 15:56
CAL 3	SLE0204-CAL4	XDT_m1230510A-011	NA	05/10/23 16:01
CAL 4	SLE0204-CAL5	XDT_m1230510A-012	NA	05/10/23 16:05
CAL 5	SLE0204-CAL6	XDT_m1230510A-013	NA	05/10/23 16:12
RINSE	SLE0204-IBL1	XDT_m1230510A-014	NA	05/10/23 16:19
Initial Cal Check	SLE0204-ICV1	XDT_m1230510A-016	NA	05/10/23 16:25
Initial Cal Blank	SLE0204-ICB1	XDT_m1230510A-017	NA	05/10/23 16:32
Calibration Check	SLE0204-CCV1	XDT_m1230510A-018	NA	05/10/23 16:37
Calibration Blank	SLE0204-CCB1	XDT_m1230510A-019	NA	05/10/23 16:44
Instrument RL Check	SLE0204-CRL1	XDT_m1230510A-020	NA	05/10/23 16:49
Interference Check A	SLE0204-IFA1	XDT_m1230510A-021	NA	05/10/23 16:56
Interference Check B	SLE0204-IFB1	XDT_m1230510A-022	NA	05/10/23 17:00
LR200	SLE0204-HCV1	XDT_m1230510A-023	NA	05/10/23 17:06
LR300	SLE0204-HCV2	XDT_m1230510A-024	NA	05/10/23 17:11
Instrument Blank	SLE0204-IBL2	XDT_m1230510A-025	NA	05/10/23 17:18
Calibration Check	SLE0204-CCV2	XDT_m1230510A-026	NA	05/10/23 17:24
Calibration Blank	SLE0204-CCB2	XDT_m1230510A-027	NA	05/10/23 17:32
Calibration Check	SLE0204-CCV3	XDT_m1230510A-029	NA	05/10/23 17:41
Calibration Blank	SLE0204-CCB3	XDT_m1230510A-030	NA	05/10/23 17:49
ZZZZZ	BLD0687-BLK2	XDT_m1230510A-031	Solid	05/10/23 17:54
ZZZZZ	BLD0687-BS2	XDT_m1230510A-033	Solid	05/10/23 18:05
ZZZZZ	BLE0298-BLK1	XDT_m1230510A-034	Water	05/10/23 18:11
ZZZZZ	BLE0298-BS1	XDT_m1230510A-035	Water	05/10/23 18:15
ZZZZZ	23D0297-01	XDT_m1230510A-037	Solid	05/10/23 18:27
ZZZZZ	23D0297-01	XDT_m1230510A-037	Solid	05/10/23 18:27
ZZZZZ	BLD0728-DUP2	XDT_m1230510A-038	Solid	05/10/23 18:32
Instrument Blank	SLE0204-IBL3	XDT_m1230510A-040	NA	05/10/23 18:41

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0204-CCV4	XDT_m1230510A-041	NA	05/10/23 18:45
Calibration Blank	SLE0204-CCB4	XDT_m1230510A-042	NA	05/10/23 18:53
ZZZZZ	BLE0143-BLK1	XDT_m1230510A-045	Solid	05/10/23 19:07
ZZZZZ	BLE0143-BS1	XDT_m1230510A-047	Solid	05/10/23 19:19
ZZZZZ	BLD0728-MS2	XDT_m1230510A-048	Solid	05/10/23 19:23
Instrument Blank	SLE0204-IBL4	XDT_m1230510A-050	NA	05/10/23 19:33
Instrument Blank	SLE0204-IBL5	XDT_m1230510A-052	NA	05/10/23 19:44
Calibration Check	SLE0204-CCV5	XDT_m1230510A-053	NA	05/10/23 19:48
Calibration Blank	SLE0204-CCB5	XDT_m1230510A-054	NA	05/10/23 19:56
Calibration Check	SLE0204-CCV6	XDT_m1230510A-057	NA	05/10/23 20:30
Calibration Blank	SLE0204-CCB6	XDT_m1230510A-058	NA	05/10/23 20:37
Blank	BLD0578-BLK1	XDT_m1230510A-059	Solid	05/10/23 20:44
LCS	BLD0578-BS1	XDT_m1230510A-060	Solid	05/10/23 20:48
ZZZZZ	BLE0072-BLK1	XDT_m1230510A-061	Solid	05/10/23 20:53
ZZZZZ	23D0394-01	XDT_m1230510A-063	Solid	05/10/23 21:02
ZZZZZ	23D0394-01	XDT_m1230510A-063	Solid	05/10/23 21:02
ZZZZZ	23D0394-01	XDT_m1230510A-063	Solid	05/10/23 21:02
ZZZZZ	BLD0687-DUP2	XDT_m1230510A-064	Solid	05/10/23 21:07
ZZZZZ	BLD0687-MS2	XDT_m1230510A-065	Solid	05/10/23 21:12
ZZZZZ	BLD0687-MSD2	XDT_m1230510A-066	Solid	05/10/23 21:16
ZZZZZ	BLD0687-PS2	XDT_m1230510A-067	Solid	05/10/23 21:21
Instrument Blank	SLE0204-IBL6	XDT_m1230510A-068	NA	05/10/23 21:25
Calibration Check	SLE0204-CCV7	XDT_m1230510A-069	NA	05/10/23 21:29
Calibration Blank	SLE0204-CCB7	XDT_m1230510A-070	NA	05/10/23 21:37
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0204	Instrument:	ICPMS1
		Calibration:	GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0204	Instrument:	ICPMS1
		Calibration:	GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
LDW23-SS1010	BLD0578-PS1	XDT_m1230510A-079	Solid	05/10/23 22:16
Instrument Blank	SLE0204-IBL7	XDT_m1230510A-080	NA	05/10/23 22:21
Calibration Check	SLE0204-CCV8	XDT_m1230510A-081	NA	05/10/23 22:25
Calibration Blank	SLE0204-CCB8	XDT_m1230510A-082	NA	05/10/23 22:32
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
ZZZZZ	23D0393-04	XDT_m1230510A-087	Solid	05/10/23 22:54
ZZZZZ	BLE0072-DUP1	XDT_m1230510A-088	Solid	05/10/23 22:59
ZZZZZ	BLE0072-MS1	XDT_m1230510A-089	Solid	05/10/23 23:03
ZZZZZ	BLE0072-MSD1	XDT_m1230510A-090	Solid	05/10/23 23:08
Instrument Blank	SLE0204-IBL8	XDT_m1230510A-092	NA	05/10/23 23:16
Calibration Check	SLE0204-CCV9	XDT_m1230510A-093	NA	05/10/23 23:21
Calibration Blank	SLE0204-CCB9	XDT_m1230510A-094	NA	05/10/23 23:28
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
Instrument Blank	SLE0204-IBL9	XDT_m1230510A-104	NA	05/11/23 00:12
Calibration Check	SLE0204-CCVA	XDT_m1230510A-105	NA	05/11/23 00:16
Calibration Blank	SLE0204-CCBA	XDT_m1230510A-106	NA	05/11/23 00:24
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
Instrument Blank	SLE0204-IBLA	XDT_m1230510A-116	NA	05/11/23 01:08
Calibration Check	SLE0204-CCVB	XDT_m1230510A-117	NA	05/11/23 01:12
Calibration Blank	SLE0204-CCBB	XDT_m1230510A-118	NA	05/11/23 01:19
Calibration Check	SLE0204-CCVC	XDT_m1230510A-120	NA	05/11/23 01:28
Calibration Blank	SLE0204-CCBC	XDT_m1230510A-121	NA	05/11/23 01:35
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Instrument Blank	SLE0204-IBLB	XDT_m1230510A-131	NA	05/11/23 02:21
Calibration Check	SLE0204-CCVD	XDT_m1230510A-132	NA	05/11/23 02:26
Calibration Blank	SLE0204-CCBD	XDT_m1230510A-133	NA	05/11/23 02:33
Instrument Blank	SLE0204-IBLC	XDT_m1230510A-138	NA	05/11/23 02:57
ZZZZZ	23D0477-21	XDT_m1230510A-141	Water	05/11/23 03:11
ZZZZZ	23D0477-22	XDT_m1230510A-142	Water	05/11/23 03:15
Instrument Blank	SLE0204-IBLD	XDT_m1230510A-143	NA	05/11/23 03:20
Calibration Check	SLE0204-CCVE	XDT_m1230510A-144	NA	05/11/23 03:24
Calibration Blank	SLE0204-CCBE	XDT_m1230510A-145	NA	05/11/23 03:31
Instrument Blank	SLE0204-IBLE	XDT_m1230510A-150	NA	05/11/23 03:57
Instrument Blank	SLE0204-IBLF	XDT_m1230510A-155	NA	05/11/23 04:21
Calibration Check	SLE0204-CCVF	XDT_m1230510A-156	NA	05/11/23 04:26
Calibration Blank	SLE0204-CCBF	XDT_m1230510A-157	NA	05/11/23 04:33
Calibration Check	SLE0204-CCVG	XDT_m1230510A-159	NA	05/11/23 04:42
Calibration Blank	SLE0204-CCBG	XDT_m1230510A-160	NA	05/11/23 04:49
Instrument Blank	SLE0204-IBLG	XDT_m1230510A-170	NA	05/11/23 05:33
Calibration Check	SLE0204-CCVH	XDT_m1230510A-171	NA	05/11/23 05:38
Calibration Blank	SLE0204-CCBH	XDT_m1230510A-172	NA	05/11/23 05:45
Instrument Blank	SLE0204-IBLH	XDT_m1230510A-182	NA	05/11/23 06:31
Calibration Check	SLE0204-CCVI	XDT_m1230510A-183	NA	05/11/23 06:35
Calibration Blank	SLE0204-CCBI	XDT_m1230510A-184	NA	05/11/23 06:42
Instrument Blank	SLE0204-IBLI	XDT_m1230510A-189	NA	05/11/23 07:05
ZZZZZ	23D0636-01	XDT_m1230510A-190	Water	05/11/23 07:09
ZZZZZ	BLE0298-DUP1	XDT_m1230510A-191	Water	05/11/23 07:14
ZZZZZ	BLE0298-MS1	XDT_m1230510A-192	Water	05/11/23 07:19
ZZZZZ	BLE0298-MSD1	XDT_m1230510A-193	Water	05/11/23 07:25
Instrument Blank	SLE0204-IBLJ	XDT_m1230510A-194	NA	05/11/23 07:29
Calibration Check	SLE0204-CCVJ	XDT_m1230510A-195	NA	05/11/23 07:34
Calibration Blank	SLE0204-CCBJ	XDT_m1230510A-196	NA	05/11/23 07:41

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0209	Instrument:	ICPMS1
		Calibration:	GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0209-CAL1	XDT_m1230511-006	NA	05/11/23 13:56
CAL 1 - LOW CHECK	SLE0209-CAL2	XDT_m1230511-007	NA	05/11/23 14:00
CAL 2	SLE0209-CAL3	XDT_m1230511-008	NA	05/11/23 14:05
CAL 3	SLE0209-CAL4	XDT_m1230511-009	NA	05/11/23 14:10
CAL 4	SLE0209-CAL5	XDT_m1230511-010	NA	05/11/23 14:15
CAL 5	SLE0209-CAL6	XDT_m1230511-011	NA	05/11/23 14:21
RINSE	SLE0209-IBL1	XDT_m1230511-012	NA	05/11/23 14:29
Initial Cal Check	SLE0209-ICV1	XDT_m1230511-014	NA	05/11/23 14:34
Initial Cal Blank	SLE0209-ICB1	XDT_m1230511-015	NA	05/11/23 14:42
Calibration Check	SLE0209-CCV1	XDT_m1230511-019	NA	05/11/23 15:06
Calibration Blank	SLE0209-CCB1	XDT_m1230511-020	NA	05/11/23 15:13
Instrument RL Check	SLE0209-CRL1	XDT_m1230511-021	NA	05/11/23 15:18
Interference Check A	SLE0209-IFA1	XDT_m1230511-022	NA	05/11/23 15:23
Interference Check B	SLE0209-IFB1	XDT_m1230511-023	NA	05/11/23 15:28
LR200	SLE0209-HCV1	XDT_m1230511-024	NA	05/11/23 15:32
LR300	SLE0209-HCV2	XDT_m1230511-025	NA	05/11/23 15:37
Instrument Blank	SLE0209-IBL2	XDT_m1230511-026	NA	05/11/23 15:50
Instrument Blank	SLE0209-IBL3	XDT_m1230511-027	NA	05/11/23 15:56
Calibration Check	SLE0209-CCV2	XDT_m1230511-028	NA	05/11/23 16:02
Calibration Blank	SLE0209-CCB2	XDT_m1230511-029	NA	05/11/23 16:09
Calibration Check	SLE0209-CCV3	XDT_m1230511-031	NA	05/11/23 16:19
Calibration Blank	SLE0209-CCB3	XDT_m1230511-032	NA	05/11/23 16:27
ZZZZZ	BLE0072-BS2	XDT_m1230511-033	Solid	05/11/23 16:37
ZZZZZ	BLE0342-BLK1	XDT_m1230511-034	Water	05/11/23 16:42
ZZZZZ	BLE0342-BS1	XDT_m1230511-035	Water	05/11/23 16:46
Instrument Blank	SLE0209-IBL4	XDT_m1230511-040	NA	05/11/23 17:10
Instrument Blank	SLE0209-IBL5	XDT_m1230511-042	NA	05/11/23 17:21
Calibration Check	SLE0209-CCV4	XDT_m1230511-043	NA	05/11/23 17:25
Calibration Blank	SLE0209-CCB4	XDT_m1230511-044	NA	05/11/23 17:32

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0209
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0477-04	XDT_m1230511-045	Water	05/11/23 17:42
ZZZZZ	23D0477-08	XDT_m1230511-046	Water	05/11/23 17:43
ZZZZZ	23D0477-10	XDT_m1230511-047	Water	05/11/23 17:44
ZZZZZ	23D0477-12	XDT_m1230511-048	Water	05/11/23 17:46
ZZZZZ	23D0477-18	XDT_m1230511-049	Water	05/11/23 17:47
ZZZZZ	23D0477-20	XDT_m1230511-050	Water	05/11/23 17:48
Instrument Blank	SLE0209-IBL6	XDT_m1230511-054	NA	05/11/23 17:54
Calibration Check	SLE0209-CCV5	XDT_m1230511-055	NA	05/11/23 17:55
Calibration Blank	SLE0209-CCB5	XDT_m1230511-056	NA	05/11/23 17:59
ZZZZZ	23D0477-01	XDT_m1230511-057	Water	05/11/23 18:02
ZZZZZ	23D0477-07	XDT_m1230511-058	Water	05/11/23 18:03
ZZZZZ	23D0477-09	XDT_m1230511-059	Water	05/11/23 18:05
Instrument Blank	SLE0209-IBL7	XDT_m1230511-061	NA	05/11/23 18:08
ZZZZZ	23D0477-02	XDT_m1230511-062	Water	05/11/23 18:09
ZZZZZ	23D0477-03	XDT_m1230511-063	Water	05/11/23 18:10
ZZZZZ	23D0477-06	XDT_m1230511-064	Water	05/11/23 18:12
ZZZZZ	23D0477-11	XDT_m1230511-065	Water	05/11/23 18:13
Instrument Blank	SLE0209-IBL8	XDT_m1230511-066	NA	05/11/23 18:15
Calibration Check	SLE0209-CCV6	XDT_m1230511-067	NA	05/11/23 18:16
Calibration Blank	SLE0209-CCB6	XDT_m1230511-068	NA	05/11/23 18:20
ZZZZZ	23D0477-13	XDT_m1230511-069	Water	05/11/23 18:24
ZZZZZ	23D0477-14	XDT_m1230511-070	Water	05/11/23 18:25
ZZZZZ	23D0477-16	XDT_m1230511-071	Water	05/11/23 18:26
ZZZZZ	23D0477-15	XDT_m1230511-072	Water	05/11/23 18:28
Instrument Blank	SLE0209-IBL9	XDT_m1230511-073	NA	05/11/23 18:29
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
ZZZZZ	23D0702-04	XDT_m1230511-074	Water	05/11/23 18:34
ZZZZZ	BLE0342-DUP1	XDT_m1230511-075	Water	05/11/23 18:40

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0209
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0342-MS1	XDT_m1230511-076	Water	05/11/23 18:45
ZZZZZ	BLE0342-MSD1	XDT_m1230511-077	Water	05/11/23 18:50
Instrument Blank	SLE0209-IBLA	XDT_m1230511-078	NA	05/11/23 18:55
Calibration Check	SLE0209-CCV7	XDT_m1230511-079	NA	05/11/23 18:59
Calibration Blank	SLE0209-CCB7	XDT_m1230511-080	NA	05/11/23 19:07
Calibration Check	SLE0209-CCV8	XDT_m1230511-082	NA	05/11/23 19:18
Calibration Blank	SLE0209-CCB8	XDT_m1230511-083	NA	05/11/23 19:25
Calibration Check	SLE0209-CCVA	XDT_m1230511-094	NA	05/11/23 19:55
Calibration Blank	SLE0209-CCBA	XDT_m1230511-095	NA	05/11/23 20:00
ZZZZZ	23D0636-01	XDT_m1230511-096	Water	05/11/23 20:07
ZZZZZ	23D0636-01	XDT_m1230511-096	Water	05/11/23 20:07
ZZZZZ	BLE0298-DUP2	XDT_m1230511-097	Water	05/11/23 20:11
ZZZZZ	BLE0298-MS2	XDT_m1230511-098	Water	05/11/23 20:16
ZZZZZ	BLE0298-MSD2	XDT_m1230511-099	Water	05/11/23 20:20
Instrument Blank	SLE0209-IBLC	XDT_m1230511-100	NA	05/11/23 20:25
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	23D0568-08	XDT_m1230511-101	Solid	05/11/23 20:30
ZZZZZ	BLE0143-DUP1	XDT_m1230511-102	Solid	05/11/23 20:35
ZZZZZ	BLE0143-MS1	XDT_m1230511-103	Solid	05/11/23 20:40
ZZZZZ	BLE0143-MSD1	XDT_m1230511-104	Solid	05/11/23 20:44
Instrument Blank	SLE0209-IBLD	XDT_m1230511-105	NA	05/11/23 20:49
Calibration Check	SLE0209-CCVB	XDT_m1230511-106	NA	05/11/23 20:53
Calibration Blank	SLE0209-CCBB	XDT_m1230511-107	NA	05/11/23 21:00
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-02	XDT_m1230511-108	Solid	05/11/23 21:06
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0209
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0568-03	XDT_m1230511-109	Solid	05/11/23 21:11
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-04	XDT_m1230511-110	Solid	05/11/23 21:15
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-05	XDT_m1230511-111	Solid	05/11/23 21:20
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-06	XDT_m1230511-112	Solid	05/11/23 21:24
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
ZZZZZ	23D0568-07	XDT_m1230511-113	Solid	05/11/23 21:29
Instrument Blank	SLE0209-IBLE	XDT_m1230511-114	NA	05/11/23 21:34
Instrument Blank	SLE0209-IBLF	XDT_m1230511-116	NA	05/11/23 21:46
Calibration Check	SLE0209-CCVC	XDT_m1230511-117	NA	05/11/23 21:50
Calibration Blank	SLE0209-CCBC	XDT_m1230511-118	NA	05/11/23 21:58
Calibration Check	SLE0209-CCVD	XDT_m1230511-120	NA	05/11/23 22:08
Calibration Blank	SLE0209-CCBD	XDT_m1230511-121	NA	05/11/23 22:15
LDW23-SS1006	23A0467-03	XDT_m1230511-122	Solid	05/11/23 22:22
LDW23-SS1006	23A0467-03	XDT_m1230511-122	Solid	05/11/23 22:22
LDW23-SS1006	23A0467-03	XDT_m1230511-122	Solid	05/11/23 22:22
ZZZZZ	23C0071-03	XDT_m1230511-123	Solid	05/11/23 22:27
ZZZZZ	23C0071-03	XDT_m1230511-123	Solid	05/11/23 22:27
ZZZZZ	23C0071-03	XDT_m1230511-123	Solid	05/11/23 22:27
ZZZZZ	23D0008-01	XDT_m1230511-124	Solid	05/11/23 22:31
ZZZZZ	23D0008-01	XDT_m1230511-124	Solid	05/11/23 22:31
ZZZZZ	23D0008-01	XDT_m1230511-124	Solid	05/11/23 22:31
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0209
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-01	XDT_m1230511-125	Solid	05/11/23 22:35
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0136-03	XDT_m1230511-126	Solid	05/11/23 22:40
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-01	XDT_m1230511-127	Solid	05/11/23 22:44
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0396-03	XDT_m1230511-128	Solid	05/11/23 22:48
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-02	XDT_m1230511-129	Solid	05/11/23 22:53
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
ZZZZZ	23D0394-04	XDT_m1230511-130	Solid	05/11/23 22:57
Instrument Blank	SLE0209-IBLG	XDT_m1230511-131	NA	05/11/23 23:02
Calibration Check	SLE0209-CCVE	XDT_m1230511-132	NA	05/11/23 23:07
Calibration Blank	SLE0209-CCBE	XDT_m1230511-133	NA	05/11/23 23:14
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-06	XDT_m1230511-134	Solid	05/11/23 23:18
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-07	XDT_m1230511-135	Solid	05/11/23 23:23
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27
ZZZZZ	23D0394-08	XDT_m1230511-136	Solid	05/11/23 23:27

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0394-11	XDT_m1230511-137	Solid	05/11/23 23:31
ZZZZZ	23D0394-11	XDT_m1230511-137	Solid	05/11/23 23:31
ZZZZZ	23D0394-11	XDT_m1230511-137	Solid	05/11/23 23:31
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-12	XDT_m1230511-138	Solid	05/11/23 23:36
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0394-13	XDT_m1230511-139	Solid	05/11/23 23:40
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-24	XDT_m1230511-140	Solid	05/11/23 23:44
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-28	XDT_m1230511-141	Solid	05/11/23 23:49
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
ZZZZZ	23D0393-29	XDT_m1230511-142	Solid	05/11/23 23:53
Instrument Blank	SLE0209-IBLH	XDT_m1230511-143	NA	05/11/23 23:58
Calibration Check	SLE0209-CCVF	XDT_m1230511-144	NA	05/12/23 00:02
Calibration Blank	SLE0209-CCBF	XDT_m1230511-145	NA	05/12/23 00:09
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-10	XDT_m1230511-146	Solid	05/12/23 00:14
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-11	XDT_m1230511-147	Solid	05/12/23 00:19
ZZZZZ	23D0393-12	XDT_m1230511-148	Solid	05/12/23 00:23
ZZZZZ	23D0393-12	XDT_m1230511-148	Solid	05/12/23 00:23

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0209
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0393-12	XDT_m1230511-148	Solid	05/12/23 00:23
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-15	XDT_m1230511-149	Solid	05/12/23 00:27
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-16	XDT_m1230511-150	Solid	05/12/23 00:34
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-17	XDT_m1230511-151	Solid	05/12/23 00:38
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-18	XDT_m1230511-152	Solid	05/12/23 00:43
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-19	XDT_m1230511-153	Solid	05/12/23 00:47
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
ZZZZZ	23D0393-22	XDT_m1230511-154	Solid	05/12/23 00:51
Instrument Blank	SLE0209-IBLI	XDT_m1230511-155	NA	05/12/23 00:56
Calibration Check	SLE0209-CCVG	XDT_m1230511-156	NA	05/12/23 01:00
Calibration Blank	SLE0209-CCBG	XDT_m1230511-157	NA	05/12/23 01:07
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
ZZZZZ	23D0393-04	XDT_m1230511-162	Solid	05/12/23 01:29
ZZZZZ	BLE0072-DUP2	XDT_m1230511-163	Solid	05/12/23 01:34
ZZZZZ	BLE0072-MS2	XDT_m1230511-164	Solid	05/12/23 01:38
ZZZZZ	BLE0072-MSD2	XDT_m1230511-165	Solid	05/12/23 01:43
ZZZZZ	BLE0072-PS2	XDT_m1230511-166	Solid	05/12/23 01:49
Instrument Blank	SLE0209-IBLJ	XDT_m1230511-167	NA	05/12/23 01:54

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Calibration Check	SLE0209-CCVH	XDT_m1230511-168	NA	05/12/23 01:58
Calibration Blank	SLE0209-CCBH	XDT_m1230511-169	NA	05/12/23 02:05
ZZZZZ	23D0568-03RE1	XDT_m1230511-170	Solid	05/12/23 02:09
ZZZZZ	23D0568-07RE1	XDT_m1230511-171	Solid	05/12/23 02:14
ZZZZZ	23D0568-07RE1	XDT_m1230511-171	Solid	05/12/23 02:14
ZZZZZ	23D0568-08RE1	XDT_m1230511-172	Solid	05/12/23 02:18
ZZZZZ	BLE0143-DUP2	XDT_m1230511-173	Solid	05/12/23 02:22
ZZZZZ	BLE0143-MS2	XDT_m1230511-174	Solid	05/12/23 02:27
ZZZZZ	BLE0143-MSD2	XDT_m1230511-175	Solid	05/12/23 02:31
Instrument Blank	SLE0209-IBLK	XDT_m1230511-176	NA	05/12/23 02:36
Instrument Blank	SLE0209-IBLL	XDT_m1230511-179	NA	05/12/23 02:56
Calibration Check	SLE0209-CCVI	XDT_m1230511-180	NA	05/12/23 03:00
Calibration Blank	SLE0209-CCBI	XDT_m1230511-181	NA	05/12/23 03:07
Calibration Check	SLE0209-CCVJ	XDT_m1230511-183	NA	05/12/23 03:16
Calibration Blank	SLE0209-CCBJ	XDT_m1230511-184	NA	05/12/23 03:23
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
ZZZZZ	23D0393-06	XDT_m1230511-186	Solid	05/12/23 03:32
Instrument Blank	SLE0209-IBLM	XDT_m1230511-188	NA	05/12/23 03:46
Instrument Blank	SLE0209-IBLN	XDT_m1230511-194	NA	05/12/23 04:12
Calibration Check	SLE0209-CCVK	XDT_m1230511-195	NA	05/12/23 04:17
Calibration Blank	SLE0209-CCBK	XDT_m1230511-196	NA	05/12/23 04:24
Instrument Blank	SLE0209-IBLO	XDT_m1230511-206	NA	05/12/23 05:08
Calibration Check	SLE0209-CCVL	XDT_m1230511-207	NA	05/12/23 05:12
Calibration Blank	SLE0209-CCBL	XDT_m1230511-208	NA	05/12/23 05:19
ZZZZZ	23D0598-06	XDT_m1230511-214	Water	05/12/23 05:47
ZZZZZ	23D0598-08	XDT_m1230511-215	Water	05/12/23 05:51
ZZZZZ	23D0598-10	XDT_m1230511-216	Water	05/12/23 05:55
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0209

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00042

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0598-12	XDT_m1230511-217	Water	05/12/23 06:00
Instrument Blank	SLE0209-IBLP	XDT_m1230511-218	NA	05/12/23 06:04
Calibration Check	SLE0209-CCVM	XDT_m1230511-219	NA	05/12/23 06:09
Calibration Blank	SLE0209-CCBM	XDT_m1230511-220	NA	05/12/23 06:16
Instrument Blank	SLE0209-IBLQ	XDT_m1230511-225	NA	05/12/23 06:37
Instrument Blank	SLE0209-IBLR	XDT_m1230511-230	NA	05/12/23 07:00
Calibration Check	SLE0209-CCVN	XDT_m1230511-231	NA	05/12/23 07:04
Calibration Blank	SLE0209-CCBN	XDT_m1230511-232	NA	05/12/23 07:11
Calibration Check	SLE0209-CCVO	XDT_m1230511-234	NA	05/12/23 07:20
Calibration Blank	SLE0209-CCBO	XDT_m1230511-235	NA	05/12/23 07:27
Instrument Blank	SLE0209-IBLS	XDT_m1230511-245	NA	05/12/23 08:11
Calibration Check	SLE0209-CCVP	XDT_m1230511-246	NA	05/12/23 08:15
Calibration Blank	SLE0209-CCBP	XDT_m1230511-247	NA	05/12/23 08:22

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0204-IFA1	Chromium-52	0	0.6610		ug/L
	Chromium-53	0	1.7410		ug/L
	Lead-208	0	0.0270		ug/L
	Silver-107	0	0.0050		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0204-IFB1	Chromium-52	20.000	20.186	101	ug/L
	Chromium-53	20.000	21.276	106	ug/L
	Lead-208	0	0.0180		ug/L
	Silver-107	20.000	18.002	90.0	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0209-IFA1	Chromium-52	0	0.6190		ug/L
	Chromium-53	0	1.6910		ug/L
	Lead-208	0	0.0170		ug/L
	Silver-107	0	0.0040		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

Analytical Resources, LLC
Analytical Chemists and Consultants

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Standard ID: L005318

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0209-IFB1	Chromium-52	20.000	19.309	96.5	ug/L
	Chromium-53	20.000	20.701	104	ug/L
	Lead-208	0	0.0190		ug/L
	Silver-107	20.000	18.557	92.8	ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Lab Sample ID: SLE0204-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.523	105	ug/L	50 - 150
Chromium-53	0.50000	0.501	100	ug/L	50 - 150
Lead-208	0.10000	0.107	107	ug/L	50 - 150
Silver-107	0.20000	0.202	101	ug/L	50 - 150

* Values outside of QC limits

DETECTION LEVEL STANDARD
EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00042
Sequence: SLE0209
Lab Sample ID: SLE0209-CRL1

Analyte	True	Found	%R	Units	QC Limts
Chromium-52	0.50000	0.497	99.4	ug/L	50 - 150
Chromium-53	0.50000	0.480	96.0	ug/L	50 - 150
Lead-208	0.10000	0.113	113	ug/L	50 - 150
Silver-107	0.20000	0.206	103	ug/L	50 - 150

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00040
Laboratory ID: SLE0204-HCV1
Sequence: SLE0204
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	198	-0.8	10.00
Chromium-53	200.00	195	-2.5	10.00
Lead-208	200.00	200	0.004	10.00
Silver-107	200.00	194	-3.2	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00040
Laboratory ID: SLE0204-HCV2
Sequence: SLE0204
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	306	1.9	10.00
Chromium-53	300.00	295	-1.7	10.00
Lead-208	300.00	317	5.5	10.00
Silver-107	300.00	311	3.6	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00042
Laboratory ID: SLE0209-HCV1
Sequence: SLE0209
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	200.00	193	-3.3	10.00
Chromium-53	200.00	190	-5.1	10.00
Lead-208	200.00	195	-2.3	10.00
Silver-107	200.00	201	0.3	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00042
Laboratory ID: SLE0209-HCV2
Sequence: SLE0209
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Chromium-52	300.00	305	1.7	10.00
Chromium-53	300.00	292	-2.8	10.00
Lead-208	300.00	300	-0.02	10.00
Silver-107	300.00	295	-1.5	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:59	108	180	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:41	108	180	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	04/26/23 12:19	93	180	05/11/23 22:22	109	180	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:50	108	180	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:54	108	180	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:37	107	180	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:41	107	180	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:46	107	180	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	04/26/23 12:19	92	180	05/10/23 22:50	107	180	
Duplicate BLD0578-DUP1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:03	108	180	
Matrix Spike BLD0578-MS1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:08	108	180	
Matrix Spike Dup BLD0578-MSD1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:12	108	180	
Post Spike BLD0578-PS1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:16	108	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Chromium-52	0.26	0.50	mg/kg
Chromium-53	0.24	0.50	mg/kg
Lead-208	0.05	0.10	mg/kg
Silver-107	0.02	0.20	mg/kg

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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

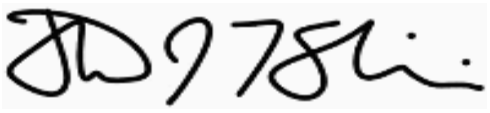
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	< 0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500			
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614			
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500			
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500			
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500			
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000			
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500			
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000			
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500			
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500			
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500			
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500			
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000			
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500			
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

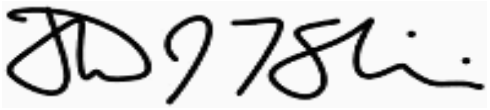
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

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$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

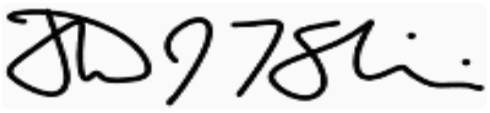
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	< 0.003200	O	Eu	< 0.002500	O	Na	0.005499	M	Se	< 0.005700	O	Zn	< 0.001100
O	Al	0.008903	O	Fe	0.000602	M	Nb	< 0.000400	O	Si	0.016758	O	Zr	< 0.002600
M	As	< 0.003600	M	Ga	< 0.001200	M	Nd	< 0.000800	M	Sm	< 0.000400			
M	Au	< 0.000810	M	Gd	< 0.000400	M	Ni	< 0.003600	M	Sn	< 0.003200			
O	B	0.004189	O	Ge	< 0.012000	M	Os	< 0.000810	O	Sr	< 0.000330			
M	Ba	< 0.002400	M	Hf	< 0.000400	O	P	< 0.022000	M	Ta	< 0.000800			
M	Be	< 0.000400	M	Hg	< 0.001700	M	Pb	< 0.002400	M	Tb	< 0.000400			
M	Bi	< 0.000400	M	Ho	< 0.000400	M	Pd	< 0.001200	M	Te	< 0.008000			
O	Ca	0.011259	O	In	< 0.013000	M	Pr	< 0.000400	M	Th	< 0.000400			
s	Cd	<	M	Ir	< 0.000410	M	Pt	< 0.000400	O	Ti	0.000602			
M	Ce	< 0.000400	O	K	0.005237	M	Rb	< 0.004400	M	Tl	0.000523			
M	Co	< 0.000400	M	La	< 0.000400	M	Re	< 0.000400	M	Tm	< 0.000400			
O	Cr	< 0.005100	O	Li	< 0.000054	M	Rh	< 0.000400	M	U	< 0.000400			
M	Cs	< 0.002400	M	Lu	< 0.000400	M	Ru	< 0.002500	M	V	< 0.002000			
O	Cu	< 0.004800	O	Mg	0.000288	O	S	< 0.022000	M	W	< 0.000400			
M	Dy	< 0.000400	O	Mn	< 0.000860	O	Sb	< 0.018000	M	Y	< 0.000400			
M	Er	< 0.000400	M	Mo	< 0.001600	O	Sc	< 0.000430	M	Yb	< 0.000400			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn	0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	< 0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100			
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800			
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750			
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300			
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100			
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600			
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100			
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800			
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100			
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100			
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100			
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800			
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200			
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100			
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10051 ± 52 µg/mL** ICP Assay NIST SRM 3151 Lot Number: 160729
Assay Method #2	**10051 ± 19 µg/mL** Volhard NIST SRM 999c Lot Number: 999c
Assay Method #3	**10049 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn	0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	< 0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110			
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900			
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100			
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110			
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110			
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110			
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210			
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000			
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110			
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110			
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410			
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<				
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000			
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110			
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 $H_2V_{10}O_{28}^{4-}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4, HF, H_3PO_4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na_2CO_3 / KNO_3); Oxides (V_2O_3 - use HCl, V_2O_4 - use HCl or HNO_3, V_2O_5 - use concentrated acids); Ores (Na_2CO_3 / KNO_3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V_2O_5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

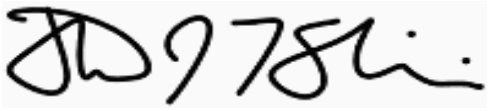
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10059 ± 40 µg/mL** ICP Assay NIST SRM 3101a Lot Number: 140903
Assay Method #2	**10044 ± 26 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10049 ± 35 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

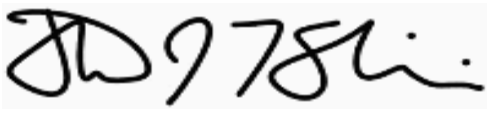
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9987 ± 24 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **10004 ± 84 µg/mL**
ICP Assay NIST SRM 3141a Lot Number: 140813

Assay Method #3 **10007 ± 45 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

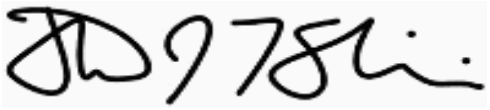
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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Christiansburg, VA 24073 USA
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

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4.0 TRACEABILITY TO NIST

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4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2
Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10005 ± 45 µg/mL**
ICP Assay NIST SRM 3109a Lot Number: 130213

Assay Method #2 **10005 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10005 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn		0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	<	0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200				
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600				
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505				
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200				
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200				
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600				
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200				
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900				
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200				
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200				
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144				
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286				
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000				
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536				
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

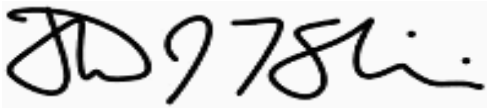
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn		0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	<	0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930				
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800				
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251				
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930				
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930				
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900				
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352				
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592				
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930				
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930				
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930				
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600				
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000				
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860				
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

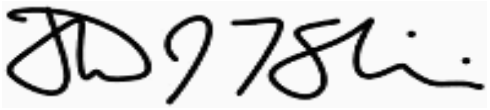
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000270	M	Eu	< 0.000270	M	Na	< 0.011000	M	Se	< 0.009300	M	Zn	0.002358			
M	Al	< 0.011000	M	Fe	0.003222	M	Nb	< 0.000270	M	Si	< 0.160000	M	Zr	< 0.001100			
M	As	< 0.002400	M	Ga	< 0.000270	M	Nd	< 0.000270	M	Sm	< 0.000270						
M	Au	< 0.000270	M	Gd	< 0.000270	M	Ni	< 0.020000	M	Sn	< 0.011000						
M	B	< 0.000270	M	Ge	< 0.000800	M	Os	< 0.001900	M	Sr	< 0.000270						
M	Ba	< 0.003800	M	Hf	< 0.000270	i	P	<	M	Ta	< 0.000270						
M	Be	< 0.000270	M	Hg	< 0.000540	M	Pb	< 0.002200	M	Tb	< 0.000270						
M	Bi	< 0.000270	M	Ho	< 0.000270	M	Pd	< 0.000540	M	Te	< 0.003800						
M	Ca	< 0.140000	M	In	< 0.000270	M	Pr	< 0.000270	M	Th	0.000129						
M	Cd	< 0.000270	M	Ir	< 0.000270	M	Pt	< 0.000270	M	Ti	< 0.002700						
M	Ce	< 0.000540	O	K	< 0.250000	M	Rb	< 0.000800	M	Tl	< 0.000270						
M	Co	< 0.000800	M	La	0.000117	M	Re	< 0.064000	M	Tm	< 0.000270						
M	Cr	0.000943	M	Li	< 0.003000	M	Rh	< 0.000270	s	U	<						
M	Cs	0.000106	M	Lu	< 0.000270	M	Ru	< 0.000540	M	V	< 0.000540						
M	Cu	< 0.001100	M	Mg	< 0.003000	i	S	<	M	W	< 0.000540						
M	Dy	< 0.000270	M	Mn	< 0.006900	M	Sb	< 0.000270	M	Y	< 0.000270						
M	Er	< 0.000270	M	Mo	< 0.006400	M	Sc	< 0.000540	M	Yb	< 0.000270						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO_2^{2+}(uranyl)

Chemical Compatibility - Soluble in HCl and HNO_3. Avoid H_3PO_4. H_2SO_4 and HF matrices should not be a problem depending upon [U]. Although the UO_2^{2+} ion is distinctly basic, any U^{+4} will precipitate in basic media. UO_2^{2+}salts are generally soluble in water and UO_2^{2+} is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF_4 and UF_6 are water soluble.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO_3); Oxide (Soluble in HNO_3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO_3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H_2SO_4.)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

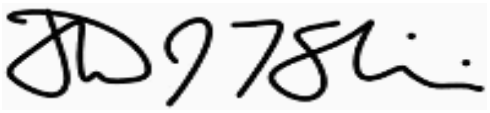
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium,	Thallium,
Uranium,	Vanadium,
Zinc,	Manganese,
Cadmium,	Cobalt,
Chromium,	Copper,
Arsenic,	Barium,
Beryllium,	Nickel,
Lead,	Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

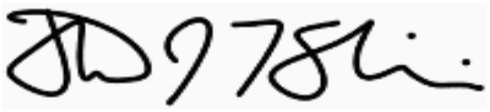
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

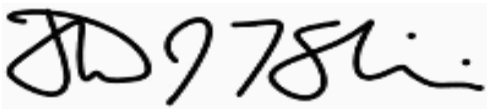
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1010

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 A	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-075
% Solids:	47.59	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:59
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.033 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	13.3	20	0.08	0.41	
7440-43-9	Cadmium	0.46	20	0.06	0.20	
7440-50-8	Copper	63.0	20	0.35	1.02	
7440-66-6	Zinc	121	20	5.9	12.2	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1005

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 A	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-071
% Solids:	46.33	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:41
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.069 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.6	20	0.08	0.40	
7440-43-9	Cadmium	0.36	20	0.06	0.20	
7440-50-8	Copper	69.5	20	0.71	1.01	
7440-66-6	Zinc	136	20	5.9	12.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
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Total Metals

LDW23-SS1006

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 A	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-072
% Solids:	48.01	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:45
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.018 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	14.0	20	0.08	0.41	
7440-43-9	Cadmium	0.42	20	0.06	0.20	
7440-50-8	Copper	63.2	20	0.36	1.02	
7440-66-6	Zinc	124	20	6.0	12.3	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1003

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 A	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-073
% Solids:	45.91	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:50
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.079 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	16.8	20	0.08	0.40	
7440-43-9	Cadmium	0.51	20	0.06	0.20	
7440-50-8	Copper	73.4	20	0.35	1.01	
7440-66-6	Zinc	136	20	5.9	12.1	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1004

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 A	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-074
% Solids:	56.10	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 21:54
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.044 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	11.3	20	0.06	0.34	
7440-43-9	Cadmium	0.28	20	0.05	0.17	
7440-50-8	Copper	52.4	20	0.30	0.85	
7440-66-6	Zinc	102	20	5.0	10.2	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1204

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 A	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-083
% Solids:	47.04	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:37
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.04 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	16.1	20	0.08	0.41	
7440-43-9	Cadmium	0.41	20	0.06	0.20	
7440-50-8	Copper	60.6	20	0.72	1.02	
7440-66-6	Zinc	139	20	6.0	12.3	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1238

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 A	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-084
% Solids:	57.71	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:41
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.046 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	10.7	20	0.06	0.33	
7440-43-9	Cadmium	0.21	20	0.05	0.17	
7440-50-8	Copper	40.6	20	0.29	0.83	
7440-66-6	Zinc	88.0	20	4.8	9.9	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1013

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 A	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-085
% Solids:	47.57	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:46
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.023 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	16.1	20	0.08	0.41	
7440-43-9	Cadmium	0.47	20	0.06	0.21	
7440-50-8	Copper	74.4	20	0.36	1.03	
7440-66-6	Zinc	140	20	6.0	12.3	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 6020B UCT-KED

Total Metals

LDW23-SS1014

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 A	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	04/26/23 12:19	File ID:	XDT_m1230510A-086
% Solids:	63.46	Preparation:	SWN EPA 3050B	Analyzed:	05/10/23 22:50
Batch:	BLD0578	Sequence:	SLE0204	Initial/Final:	1.072 g Wet / 50 mL
Instrument:	ICPMS1			Calibration:	GE00040

CAS NO.	Analyte	Concentration (mg/kg dry)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic	8.45	20	0.06	0.29	
7440-43-9	Cadmium	0.18	20	0.04	0.15	
7440-50-8	Copper	36.8	20	0.26	0.73	
7440-66-6	Zinc	89.4	20	4.3	8.8	

PREPARATION BATCH SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLD0578 Batch Matrix: Solid
Preparation: SWN EPA 3050B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	04/26/23 12:19	
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	04/26/23 12:19	
LDW23-SS1006	23A0467-03	XDT_m1230510A-072	04/26/23 12:19	
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	04/26/23 12:19	
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	04/26/23 12:19	
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	04/26/23 12:19	
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	04/26/23 12:19	
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	04/26/23 12:19	
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	04/26/23 12:19	
Blank	BLD0578-BLK1	XDT_m1230510A-059	04/26/23 12:19	
LCS	BLD0578-BS1	XDT_m1230510A-060	04/26/23 12:19	
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	04/26/23 12:19	
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	04/26/23 12:19	
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	04/26/23 12:19	

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Digestion Log

Analyst: KTZ Date: 4/25/23 - 4/26/23 Time: 1040 (4/25) - 1219 (4/26) Balance ID: BAL10

Matrix: Soil Block ID: 3 Block Temp: 95°C Thermometer: 20-2

ARI Sample ID	Btl #	pH<2	Prep Code: SW3N Initial Wt (g) Vol (mL)	Prep Code: SW3N Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
23A467-01	A		1.033	50			
-02			1.069				
-03			1.018				
-04			1.079				
-05			1.044				
-06			1.040				
-07			1.046				
-08			1.023				
-09			1.072				
23C108-02	D		1.075				
-06			1.059				
-07			1.089				
-08			1.072				
-09			1.050				
23D37-01			1.021				
-03			1.060				
23D103-01	A		~~1.000~~ KTZ 1		1.014		
-03			1.040				
BLD578-blk	—		—				23A467-01
-bs	—		—				
-dup	—		1.037				
-MS	—		1.032				
-MSD	—		1.032				
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—

Chemical/Reagent ID:

HNO_3: L4188 1:1 HNO_3: L4200 HCl: — H_2O_2: K110526

Tube Lot#: 2210117 Boiling Chip Lot#: — (DoD Only)

Form I

METHOD BLANK DATA SHEET

EPA 6020B UCT-KED

Total Metals

Blank

Laboratory: Analytical Resources, LLC | SDG: 23A0467

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

Batch: BLD0578 | Laboratory ID: BLD0578-BLK1 | Prepared: 04/26/23 12:19

Matrix: Solid | Preparation: SWN EPA 3050B | Analyzed: 05/10/23 20:44

Sequence: SLE0204 | Calibration: GE00040 | Instrument: ICPMS1

CAS NO.	Analyte	Concentration (mg/kg wet)	Dilution Factor	MDL	MRL	Q
7440-38-2	Arsenic-75a	ND	20	0.04	0.20	U
7440-43-9	Cadmium-111	ND	20	0.03	0.10	U
7440-50-8	Copper-63	ND	20	0.17	0.50	U
7440-50-8	Copper-65	ND	20	0.35	0.50	U
7440-66-6	Zinc-66	ND	20	2.9	6.0	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 20:48
Batch:	BLD0578	Laboratory ID:	BLD0578-BS1
Preparation:	SWN EPA 3050B	Sequence Name:	LCS
Initial/Final:	1 g / 50 mL		

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	Q	LCS % REC. #	QC LIMITS REC.
Arsenic-75a	25.0	25.0		99.9	80 - 120
Cadmium-111	25.0	25.2		101	80 - 120
Copper-63	25.0	27.0		108	80 - 120
Copper-65	25.0	27.0		108	80 - 120
Zinc-66	80.0	81.5		102	80 - 120

* Indicates values outside of QC limits

DUPLICATES

EPA 6020B UCT-KED

Total Metals

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0578-DUP1
Batch: BLD0578
Lab Source ID: 23A0467-01
Preparation: SWN EPA 3050B
Initial/Final: 1.037 g / 50 mL
Source Sample Name: LDW23-SS1010
% Solids: 47.59

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION	DUPLICATE CONCENTRATION	RPD %	Q
Arsenic-75a	20	13.3	14.1	5.76	
Cadmium-111	20	0.46	0.47	2.23	
Copper-63	20	63.0	62.8	0.325	
Zinc-66	20	121	128	5.31	

*: Values outside of QC limits
L: Analyte concentration is <=5 times the reporting limit and the replicate control limit defaults to Dup = +/- RL instead of 20% RPD

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 22:08
Batch:	BLD0578	Laboratory ID:	BLD0578-MS1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike
Initial/Final:	1.032 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	SAMPLE CONCENTRATION (mg/kg dry)	Q	MS CONCENTRATION (mg/kg dry)	Q	MS % REC. #	QC LIMITS REC.
Arsenic-75a	50.9	13.3		56.4		84.6	75 - 125
Cadmium-111	50.9	0.46		46.3		90.0	75 - 125
Copper-63	50.9	63.0		106		85.1	75 - 125
Zinc-66	163	121		258		84.2	75 - 125

* Values outside of QC limits

MS / MS DUPLICATE RECOVERY

EPA 6020B UCT-KED

Total Metals

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	05/10/23 22:12
Batch:	BLD0578	Laboratory ID:	BLD0578-MSD1
Preparation:	SWN EPA 3050B	Sequence Name:	Matrix Spike Dup
Initial/Final:	1.032 g / 50 mL	Source Sample:	LDW23-SS1010

COMPOUND	SPIKE ADDED (mg/kg dry)	MSD CONCENTRATION (mg/kg dry)	Q	MSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Arsenic-75a	50.9	62.9		97.4	10.9	20	75 - 125
Cadmium-111	50.9	51.6		101	11.0	20	75 - 125
Copper-63	50.9	118		108	10.2	20	75 - 125
Zinc-66	163	291		104	11.8	20	75 - 125

* Values outside of QC limits

POST DIGEST SPIKE SAMPLE RECOVERY

EPA 6020B

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLD0578-PS1
Batch: BLD0578
Lab Source ID: 23A0467-01
Preparation: SWN EPA 3050B
Initial/Final: 1.033 g / 50 mL
Source Sample Name: LDW23-SS1010
% Solids: 47.59

Analyte	Control Limit %R	Spike Sample Result (SSR) (ug/L)	Sample Result (SR) (ug/L)	Spike Added (SA) (ug/L)	%R
Silver-107	80 - 120	498	0.28	500.00	99.0

* Values outside of QC limits

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	GE00040	Instrument:	ICPMS1
Calibration Date:	05/10/2023 15:47		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Silver-107	0	0	0.2	15570	10	16140.9	20	15789.15	50	15195.72	100	15002.63
Chromium-52	0	0	0.5	31020	10	15441.1	20	15000.05	50	14462.12	100	14509.21
Chromium-53	0	0	0.5	1694	10	1654.9	20	1689.3	50	1689.16	100	1684.98
Lead-208	0	0	0.1	90610	10	90331.7	20	89339.2	50	87570.58	100	84871.84

INITIAL CALIBRATION DATA

EPA 6020B

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00040
Calibration Date: 5/10/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Silver-107	12949.73	49.1	0.9999		0.998	
Chromium-52	15072.08	65.2	1.0000		0.998	
Chromium-53	1402.057	49.0	1.0000		0.998	
Lead-208	73787.22	49.1	0.9997		0.998	

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00040
Instrument: ICPMS1
Calibration Date: 05/10/2023 15:47

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Arsenic-75a	0	0	0.2	245	10	247.9	20	243.5	50	239.7	100	242.13
Cadmium-111	0	0	0.1	210	10	235.4	20	233.45	50	230.1	100	233.47
Cadmium-114	0	0	0.1	700	10	607.9	20	614.8	50	592.84	100	599.85
Copper-63	0	0	0.5	5004	10	4375	20	4306.25	50	4084.54	100	4030.52
Copper-65	0	0	0.5	2594	10	2169.7	20	2190.8	50	2078.94	100	2074.73
Zinc-66	0	0	6	522.8333	10	539	20	516.55	50	492.7	100	498.85
Zinc-67	0	0	6	86.16666	10	89.3	20	86.65	50	79.74	100	81.23

INITIAL CALIBRATION DATA

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Instrument: ICPMS1
Calibration: GE00040
Calibration Date: 5/10/2023

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Arsenic-75a	203.0383	49.0	1.0000		0.998	
Cadmium-111	190.4033	49.2	0.9999		0.998	
Cadmium-114	519.2317	49.6	0.9999		0.998	
Copper-63	3633.385	49.9	0.9998		0.998	
Copper-65	1851.362	50.1	0.9999		0.998	
Zinc-66	428.3222	49.1	0.9998		0.998	
Zinc-67	70.51444	49.3	0.9996		0.998	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** SLEQ204 **Cal:** GEQQQ4Q

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	SEQ-CAL1	—		
	✓	-CAL2	—		
	✓	-CAL3	—		Sc↑ (New cones)
		SEQ-CAL1	LS276		
		-CAL2	LS225		
		-CAL3	LS226		
		-CAL4	LS227		
		-CAL5	LS228		
		-CAL6	LS229		
		-IBL1	—		
		-ICV1	L3575		
		-ICB1	LS276		
		-CCV1	LS228		
		-CCB1	LS276		
		-CRL1	LS226		
		-IFA1	L4688		C_6^{53}↑
		-IFB1	L4689		
		-HCV1	L478Q		In^{-1} noisy - Cd<100
		-HCV2	L4781		
		-IBL2	—		
		-CCV2			
		-CCB2			
	✓	-CAL1			
		-CCV3			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCB3			
		BLDΦ687-BLK2	SWN	20	Ag, Zn only
	✓	↓ -BS2	↓	↓	STD Mode noisy ↓
E→D		↓ -BS2	↓	↓	↓
		BLEΦ298-BLK1	REN		
		↓ -BS1	↓		
		BLEΦΦ77-MS2	↓	2	As, Co, Zn only
		230Φ297-Φ1	SWN	100	Ba, Cr only
		BLDΦ728-DUP2	↓	↓	Ba, Cr RPD↑ ↓
	✓	↓ -MS2	↓	↓	Std Mode noisy ↓
		SEQ-IBL3			
		↓ -CCV4			
		↓ -CCB4			
		BLEΦ3Φ1-BLK1	REN		
		↓ -BS1	↓		
		BLEΦ143-BLK1	SWN	20	
	✓	↓ -BS1	↓	↓	Std Mode noisy
		↓ -BS1	↓	↓	
		BLDΦ728-MS2	↓	100	Ba, Cr %R↑ Ba, Cr only
		230Φ348-Φ1	REN	20	Pb only
		SEQ-IBL4			
		230Φ374-Φ3	REN	2	Pb only
		SEQ-IBL5			
		↓ -CCV5			

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-CCB5			
	√	Rinse			Break in Analysis - Flushed Sample Nitric
	√	SEQ-CAL1			Ba Removed
		↓ -CCV6			
		↓ -CCB6			
		BLD0578-BLK1	SWN	20	
		↓ -BS1	↓	↓	
		BLE0072-BLK1			
		↓ -BS1			Std Mode no.3y
		230394-01			No Ag, Cr, Pb
		BLD0687-DUP2			Ag, Cr, Pb, Zn only
		-MS2			↓
		-MSD2			Ag %R ↓
		↓ -PS2	↓	↓	60mL K7409
		SEQ-IBL6			
		↓ -CCV7			
		↓ -CCB7			
		234467-02	SWN	20	
		-03	↓	↓	Std Mode no.3y — No Ag, Cr, Pb
		-04			
		-05			
		↓ -01			
		BLD0578-DUP1			
		↓ -MS1	↓	↓	Ag %R ↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MS **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		BLDΦ578-MSD1	SWN	20	
		↓ -PS1	↓	↓	60 mL K7409
		SEQ-IBL7			
		-CCV8			
		↓ -CCB8			
		23AΦ467-Φ6	SWN	20	
		-Φ7			
		-Φ8			
		↓ -Φ9			
		230Φ393-Φ4			In, Th ↑ / As, Cu, Pb, Zn ↑ / Cr only
		BLEΦΦ72-DUP1			
		-MS1			
		-MSD1			
		↓ -PS1	↓	↓	↓ / 60 mL K7409 / ↓ ↓
		SEQ-IBL8			
		-CCV9			
		↓ -CCB9			
		23CΦΦ71-Φ1	SWN	20	
		-Φ2			
		-Φ3			Std looks noisy — No Ag, Cr, Pb
		-Φ4			
		-Φ5			
		↓ -Φ6			
		23CΦ1Φ9-Φ2	↓	↓	

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** _____ **Cal:** _____

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23CΦ1Φ9-Φ3	SWN	20	
		23CΦ1Φ8-Φ2	↓	↓	
		SEQ-IBL9			
		-CCVA			
		-CCBA			
		23CΦ1Φ8-Φ6	SWN	20	
		-Φ7			
		-Φ8			
		-Φ9			
		23DΦΦΦ8-Φ1			Std Mode no Ag,Cr,Pb
		-Φ3			
		23DΦΦ37-Φ1			
		-Φ3			
		-Φ2			
		SEQ-IBLA			
		-CCVB			
		-CCBB			
	✓	-CAL1			
		-CCVC			
		-CCBC			
		23DΦΦ37-Φ4	SWN	20	
		23DΦΦ63-Φ1			
		-Φ3			
		23DΦ452-Φ1	REN	2	Pb only

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** ——— **Cal:** ———

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		23D0462-01	REN	2	Pb only
		23E0135-01	↓		
		-02			
		-03			
		-04	↓		
		SEQ-IBLB			
		-CCVD			
		-CCBD			
		23E0138-01	REN	2	
		23E0139-01	↓	↓	
		-02			
		-03	↓	↓	
		SEQ-IBLC			
		23E0136-01	REN		
		23E0137-01	↓		
		23D0477-21			
		-22	↓		
		SEQ-IBLD			
		-CCVE			
		-CCBE			
		23D0477-11	REN	2	No Pb
		-13	↓	↓	↓
		-02			
		23D0480-01	↓	5	↓

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ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		SEQ-IBLE			
		230Φ537-Φ5	REN	5	Cr only
		BLEΦ12Φ-DUP3	↓	↓	↓
		-MS3			
		-MSD3	↓	↓	
		SEQ-IBLF			
		-CCVF			Pb↑
		-CCBF			
	✓	-CAL1			
		-CCVG			
		-CCBG			
		230Φ477-Φ4	REN		No Pb
		-Φ6	↓		↓
		-Φ8			
		-1Φ			
		-12			
		-2Φ			
		BLEΦ1Φ6-DUP1			
		-MS1			
		-MSD1	↓		
		SEQ-IBLG			
		-CCVH			Pb↑
		-CCBH			
		230Φ477-14	REN		No Pb

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS - 01 SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 85DN5032601

Analysis Date: 5/10/23 **Analyst:** MB **Sequence:** — **Cal:** —

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		230Φ477-16	REN		No Pb
		-18			
		-Φ1			
		-Φ3			
		-Φ7			
		-Φ9			
		-15			
		230Φ487-Φ2		5	
		SEQ-IBL1			
		-CCVI			
		-CCBI			
		230Φ487-Φ6	REN	2	
		-Φ5		↓	
		-Φ4			
		-Φ3			
		SEQ-IBL1			
		230Φ636-Φ1	REN	10	No Pb
		BLEΦ298-DUP1			
		-MS1			
		-MSD1			
		SEQ-IBL5			
		-CCV5			Pb↑
		-CCB5			
		Rinse/DI			

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, May 10, 2023 14:43:46
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.149
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	5723.5	5723.480	56.895	1.0	Standard
	In	114.9	69596.5	-341751.511	924.539	0.3	Standard
	U	238.1	90402.3	90402.284	679.988	0.8	Standard
⌈	CeO	155.9	1526.9	0.017	0.000	1.7	Standard
| >	Ce	139.9	87807.4	87807.445	764.748	0.9	Standard
⌊	Ce++	70.0	422.3	0.005	0.000	1.5	Standard
	Bkgd	220.0	6.3	6.300	3.351	53.2	Standard

Current Conditions File Data

Current Value	Description
0.92	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.92	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/10/2023 2:43:45 PM
End Time: 5/10/2023 2:52:33 PM

STD Performance Check - [Failed]
Obtained Intensity (Be 9): 5723.48
Obtained Intensity (In 115): 69596.54
Obtained Intensity (U 238): 90402.28
Obtained Intensity (Bkgd 220): 6.30 - <Target not achieved>
Obtained Formula (Ce++ 70 / Ce 140): 0.005 (=422.34 / 87807.44)
Obtained Formula (CeO 156 / Ce 140): 0.017 (=1526.95 / 87807.44)
Obtained RSD (Be 9): 0.0099
Obtained RSD (In 115): 0.0027
Obtained RSD (U 238): 0.0075

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.90 mm	0.96 mm	88181.32

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 0.92
Obtained Intensity (In 115): 84673.19
Obtained Formula (CeO 156 / Ce 140): 0.0203 (=2063.15 / 101494.26)

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.700)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.688)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.701)

QID STD/DRC - Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.80

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.987; Intercept = -15.94

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/10/2023 2:43:45 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 5723.48
		Obtained Intensity (In 115): 69596.54
		Obtained Intensity (U 238): 90402.28
		Obtained Intensity (Bkgd 220): 6.30 - <Target not achieved>
		Obtained Formula (Ce++ 70 / Ce 140): 0.005 (=422.34 / 87807.44)
		Obtained Formula (CeO 156 / Ce 140): 0.017 (=1526.95 / 87807.44)
		Obtained RSD (Be 9): 0.0099
		Obtained RSD (In 115): 0.0027
		Obtained RSD (U 238): 0.0075

		[Failed]
[Failed]

Torch Alignment
	Optimization Settings:
		Method: Torch Alignment.mth.
		Intensity Criterion: In 115 Maximum

	Optimization Results:
		Vertical	Horizontal	Intensity
[Passed]	0.90 mm	0.96 mm	88181.32

Nebulizer Gas Flow STD/KED [NEB]
	Optimization Settings:
		Method: Optimize.mth.
			Initial Try - Start/End/Step: 0.89/0.96/0.01.
		Intensity Criterion: In 115 Maximum
		Formula Criterion: CeO 156 / Ce 140 <= 0.025

	Optimization Results:
	Initial Try

		Obtained Intensity (In 115): 84673.19
		Obtained Formula (CeO 156 / Ce 140): 0.0203 (=2063.15 / 101494.26)
[Passed] Optimum value(s): 0.92

Mass Calibration and Resolution
	Optimization Settings:
		Method: Tuning.mth.
		MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
		Iterations: 6
		Target accuracy (+/- amu): 0.05 for Mass Cal. and 0.03 for Resolution
		Peak height (%) for Res. Opt.: 10

	Optimization Results:
	Initial Try
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.663) - <Target not achieved>
		Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.695)
		Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.699)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.684)
		[Failed]
	Retry 1
		Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.700)
		Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.688)
		Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
		Target/Obtained mass (238.05/238.075), Target/Obtained resolution (0.7/0.701)
[Passed] Optimum value(s): N/A

QID STD/DRC
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.999; Intercept = -15.80

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-16	46294.9
		Mg	24	41	-16	32452.8
		In	115	41	-13	86971.9
		Ce	140	41	-12	102732
		Pb	208	41	-11.5	62146.9
		U	238	41	-11.5	114360

KED Mode QID
	Optimization Settings:
		Method: QID Calibration.mth.
			Initial Try - Start/End/Step: -20/0/0.5.

	Optimization Results:
	Initial Try

  Optimum value(s): Correlation Coefficient = 0.987; Intercept = -15.94

	Analyte	Mass	Points	DAC	MaxIntensity

		Li	7	41	-16	37509.2
		Mg	24	41	-15.5	70742.7
		In	115	41	-13	125291
		Ce	140	41	-11.5	108660
		Pb	208	41	-11	62379.9

	U	238	41	-10.5	141719

End Time: 5/10/2023 2:52:33 PM

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/10/2023 2:52:35 PM
End Time: 5/10/2023 2:53:50 PM

KED Mode QID - Optimum value(s): Correlation Coefficient = 0.998; Intercept = -16.07

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/10/2023 2:52:35 PM

KED Mode QID

Optimization Settings:

Method: QID Calibration.mth.

Initial Try - Start/End/Step: -20/0/0.5.

Optimization Results:

Initial Try

Optimum value(s): Correlation Coefficient = 0.998; Intercept = -16.07

Analyte	Mass	Points	DAC	MaxIntensity
Li	7	41	-16	38908.9
Mg	24	41	-15.5	65678.6
In	115	41	-12.5	124315
Ce	140	41	-11.5	108152
Pb	208	41	-11	62408
U	238	41	-11	146831

End Time: 5/10/2023 2:53:50 PM

Performance Check Report

Sample ID: STD Performance Check
Sample Date/Time: Wednesday, May 10, 2023 14:53:54
Sample Description:
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\STD Performance Check.mth
Dataset File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\DataSet\Default\STD Performance Check.157
MassCal File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Dual Detector Mode: Pulse
Acq. Dead Time (ns): 35
Current Dead Time (ns): 35
Torch Z position (mm): 0.00

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD	Mode
	Be	9.0	6511.5	6511.484	145.377	2.2	Standard
	In	114.9	81325.5	81325.516	897.738	1.1	Standard
	U	238.1	113291.7	113291.661	1664.283	1.5	Standard
⎡	CeO	155.9	1966.6	0.020	0.000	2.4	Standard
| >	Ce	139.9	98993.0	98993.030	999.094	1.0	Standard
⎣	Ce++	70.0	668.1	0.007	0.000	3.1	Standard
	Bkgd	220.0	1.1	1.133	0.650	57.3	Standard

Current Conditions File Data

Current Value	Description
0.92	Nebulizer Gas Flow STD/KED [NEB]
1.20	Auxiliary Gas Flow
17.50	Plasma Gas Flow
-10.75	Deflector Voltage
1600.00	ICP RF Power
-1600.00	Analog Stage Voltage
1000.00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-10.00	Cell Rod Offset STD [CRO]
14.00	Discriminator Threshold
-5.00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.45	RPq
0.92	DRC Mode NEB
-7.50	DRC Mode QRO
-2.00	DRC Mode CRO
-5.00	DRC Mode Cell Entrance/Exit Voltage
0.60	Cell Gas A
0.00	Cell Gas B
200.00	Axial Field Voltage
-11.00	KED Mode CRO
-12.00	KED Mode QRO
-11.00	KED Mode Cell Entrance Voltage
-33.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
3.00	KED Cell Gas B
0.00	KED RPa
0.25	KED RPq
125.00	KED Mode Axial Field Voltage

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Start Time: 5/10/2023 2:53:54 PM
End Time: 5/10/2023 2:55:58 PM

STD Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9): 6511.48
Obtained Intensity (In 115): 81325.52
Obtained Intensity (U 238): 113291.66
Obtained Intensity (Bkgd 220): 1.13
Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=668.15 / 98993.03)
Obtained Formula (CeO 156 / Ce 140): 0.020 (=1966.60 / 98993.03)
Obtained RSD (Be 9): 0.0223
Obtained RSD (In 115): 0.0110
Obtained RSD (U 238): 0.0147

SmartTune Wizard - Details

Optimization Details

SmartTune file: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Wizard\SmartTune\ARISmartTuneDailyUCT.swz

Optimization Status

Start Time: 5/10/2023 2:53:54 PM

STD Performance Check
	Optimization Settings:
		Method: STD Performance Check.mth.
		Intensity Criterion: Be 9 > 2000
		Intensity Criterion: In 115 > 40000
		Intensity Criterion: U 238 > 30000
		Intensity Criterion: Bkgd 220 <= 5
		Formula Criterion: Ce++ 70 / Ce 140 <= 0.03
		Formula Criterion: CeO 156 / Ce 140 <= 0.025
		RSD Criterion: Be 9.0122 < 0.05
		RSD Criterion: In 114.904 < 0.05
		RSD Criterion: U 238.05 < 0.05

	Optimization Results:
	Initial Try
		Obtained Intensity (Be 9): 6511.48
		Obtained Intensity (In 115): 81325.52
		Obtained Intensity (U 238): 113291.66
		Obtained Intensity (Bkgd 220): 1.13
		Obtained Formula (Ce++ 70 / Ce 140): 0.007 (=668.15 / 98993.03)
		Obtained Formula (CeO 156 / Ce 140): 0.020 (=1966.60 / 98993.03)
		Obtained RSD (Be 9): 0.0223
		Obtained RSD (In 115): 0.0110
		Obtained RSD (U 238): 0.0147

[Passed] Optimum value(s): N/A

End Time: 5/10/2023 2:55:58 PM

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 15:28:05

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				24207	2	Standard
>	**Sc**	**45**		ug/L				474403	0	Standard
	Cr	**52**		ug/L				8456	1	Standard
	Cr	**53**		ug/L				81	14	Standard
>	**Ge**	**72**		ug/L				28967	4	KED
	Ni	**60**		ug/L				19	10	KED
	Ni	**62**		ug/L				5	78	KED
	Cu	**63**		ug/L				43	9	KED
	Cu	**65**		ug/L				24	15	KED
	Zn	**66**		ug/L				19	22	KED
	Zn	**67**		ug/L				2	173	KED
	As	**75**		ug/L				1	33	KED
	Y	**89**		ug/L				49674	0	Standard
	Kr	**83**		ug/L				32	42	Standard
>	**In-1**	**115**		ug/L				6259	5	KED
	Cd	**111**		ug/L				0	100	KED
	Cd	**114**		ug/L				0	206	KED
>	**In**	**115**		ug/L				474692	1	Standard
	Ag	**107**		ug/L				12	31	Standard
	Ba	**135**		ug/L				15	25	Standard
	Ba	**137**		ug/L				31	30	Standard
>	**Tb**	**159**		ug/L				170775	0	Standard
	Pb	**208**		ug/L				201	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:

DEL

Sample Date/Time: Wednesday, May 10, 2023 15:32:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			24207	25883	2	Standard
>	**Sc**	**45**		ug/L			474403	523902	3	Standard
	Cr	**52**	**0.500**	ug/L	0.021	4	8456	15234	1	Standard
	Cr	**53**	**0.500**	ug/L	0.020	4	81	873	1	Standard
>	**Ge**	**72**		ug/L			28967	29195	0	KED
	Ni	**60**	**0.500**	ug/L	0.034	6	19	780	6	KED
	Ni	**62**	**0.500**	ug/L	0.050	10	5	116	9	KED
	Cu	**63**	**0.500**	ug/L	0.026	5	43	2412	4	KED
	Cu	**65**	**0.500**	ug/L	0.034	6	24	1190	5	KED
	Zn	**66**	**6.000**	ug/L	0.090	1	19	3153	0	KED
	Zn	**67**	**6.000**	ug/L	0.211	3	2	498	3	KED
	As	**75**	**0.200**	ug/L	0.040	19	1	51	18	KED
	Y	**89**		ug/L			49674	50949	1	Standard
	Kr	**83**		ug/L			32	51	16	Standard
>	**In-1**	**115**		ug/L			6259	6039	1	KED
	Cd	**111**	**0.100**	ug/L	0.020	19	0	23	18	KED
	Cd	**114**	**0.100**	ug/L	0.009	9	0	63	7	KED
>	**In**	**115**		ug/L			474692	480250	1	Standard
	Ag	**107**	**0.200**	ug/L	0.005	2	12	3172	2	Standard
	Ba	**135**	**0.500**	ug/L	0.016	3	15	2622	4	Standard
	Ba	**137**	**0.500**	ug/L	0.009	1	31	4621	2	Standard
>	**Tb**	**159**		ug/L			170775	172878	1	Standard
	Pb	**208**	**0.100**	ug/L	0.002	2	201	9324	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 15:37:02

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			24207	29617	2	Standard
> Sc	45		ug/L			474403	621120	0	Standard
Cr	52	10.000	ug/L	0.223	2	8456	152564	2	Standard
Cr	53	9.997	ug/L	0.230	2	81	16498	2	Standard
> Ge	72		ug/L			28967	29364	0	KED
Ni	60	9.999	ug/L	0.134	1	19	14840	1	KED
Ni	62	10.001	ug/L	0.349	3	5	2328	3	KED
Cu	63	9.997	ug/L	0.249	2	43	42394	2	KED
Cu	65	9.998	ug/L	0.087	0	24	21761	0	KED
Zn	66	9.987	ug/L	0.291	2	19	5247	2	KED
Zn	67	10.157	ug/L	0.430	4	2	885	3	KED
As	75	10.000	ug/L	0.358	3	1	2452	3	KED
Y	89		ug/L			49674	52739	0	Standard
Kr	83		ug/L			32	46	26	Standard
> In-1	115		ug/L			6259	6173	3	KED
Cd	111	10.000	ug/L	0.443	4	0	2332	4	KED
Cd	114	10.000	ug/L	0.345	3	0	6021	3	KED
> In	115		ug/L			474692	482786	2	Standard
Ag	107	10.000	ug/L	0.201	2	12	164963	1	Standard
Ba	135	10.001	ug/L	0.476	4	15	53839	2	Standard
Ba	137	10.001	ug/L	0.260	2	31	95966	0	Standard
> Tb	159		ug/L			170775	178874	0	Standard
Pb	208	10.000	ug/L	0.139	1	201	905833	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 15:47:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				23729	0	Standard
⎡>	**Sc**	**45**		ug/L				509000	1	Standard
⎢	**Cr**	**52**		ug/L				8828	1	Standard
⎣	**Cr**	**53**		ug/L				74	13	Standard
⎡>	**Ge**	**72**		ug/L				29303	1	KED
⎢	**Ni**	**60**		ug/L				5	21	KED
⎢	**Ni**	**62**		ug/L				1	100	KED
⎢	**Cu**	**63**		ug/L				34	20	KED
⎢	**Cu**	**65**		ug/L				19	27	KED
⎢	**Zn**	**66**		ug/L				23	32	KED
⎢	**Zn**	**67**		ug/L				5	0	KED
⎣	**As**	**75**		ug/L				3	9	KED
	Y	**89**		ug/L				48310	2	Standard
	Kr	**83**		ug/L				47	34	Standard
⎡>	**In-1**	**115**		ug/L				6273	3	KED
⎢	**Cd**	**111**		ug/L				2	49	KED
⎣	**Cd**	**114**		ug/L				4	66	KED
⎡>	**In**	**115**		ug/L				463649	3	Standard
⎢	**Ag**	**107**		ug/L				35	3	Standard
⎢	**Ba**	**135**		ug/L				24	20	Standard
⎣	**Ba**	**137**		ug/L				33	18	Standard
⎡>	**Tb**	**159**		ug/L				169186	2	Standard
⎣	**Pb**	**208**		ug/L				224	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 15:51:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	25525	0	Standard
⌈>	**Sc**	**45**		ug/L			509000	512472	1	Standard
|	**Cr**	**52**	**0.500**	ug/L	0.020	4	8828	15510	0	Standard
⌊	**Cr**	**53**	**0.500**	ug/L	0.011	2	74	847	3	Standard
⌈>	**Ge**	**72**		ug/L			29303	29478	0	KED
|	**Ni**	**60**	**0.500**	ug/L	0.012	2	5	719	3	KED
|	**Ni**	**62**	**0.500**	ug/L	0.073	14	1	114	13	KED
|	**Cu**	**63**	**0.500**	ug/L	0.023	4	34	2502	5	KED
|	**Cu**	**65**	**0.500**	ug/L	0.009	1	19	1297	1	KED
|	**Zn**	**66**	**6.000**	ug/L	0.034	0	23	3137	0	KED
|	**Zn**	**67**	**6.000**	ug/L	0.410	6	5	517	5	KED
⌊	**As**	**75**	**0.200**	ug/L	0.016	8	3	49	7	KED
	Y	**89**		ug/L			48310	49051	0	Standard
	Kr	**83**		ug/L			47	36	14	Standard
⌈>	**In-1**	**115**		ug/L			6273	6139	4	KED
|	**Cd**	**111**	**0.100**	ug/L	0.032	31	2	21	31	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.017	16	4	70	16	KED
⌈>	**In**	**115**		ug/L			463649	458533	2	Standard
|	**Ag**	**107**	**0.200**	ug/L	0.006	3	35	3114	1	Standard
|	**Ba**	**135**	**0.500**	ug/L	0.031	6	24	2588	4	Standard
⌊	**Ba**	**137**	**0.500**	ug/L	0.021	4	33	4565	3	Standard
⌈>	**Tb**	**159**		ug/L			169186	175328	1	Standard
⌊	**Pb**	**208**	**0.100**	ug/L	0.002	2	224	9061	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 15:56:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	28227	5	Standard
⌈>	**Sc**	**45**		ug/L			509000	547188	1	Standard
|	**Cr**	**52**	**10.001**	ug/L	0.180	1	8828	154411	2	Standard
⌊	**Cr**	**53**	**10.000**	ug/L	0.148	1	74	16549	0	Standard
⌈>	**Ge**	**72**		ug/L			29303	30268	1	KED
|	**Ni**	**60**	**10.001**	ug/L	0.091	0	5	15465	0	KED
|	**Ni**	**62**	**10.001**	ug/L	0.274	2	1	2447	1	KED
|	**Cu**	**63**	**9.996**	ug/L	0.164	1	34	43750	0	KED
|	**Cu**	**65**	**9.995**	ug/L	0.109	1	19	21697	1	KED
|	**Zn**	**66**	**10.019**	ug/L	0.157	1	23	5390	0	KED
|	**Zn**	**67**	**10.037**	ug/L	0.375	3	5	893	2	KED
⌊	**As**	**75**	**10.000**	ug/L	0.098	0	3	2479	0	KED
	Y	**89**		ug/L			48310	52333	3	Standard
	Kr	**83**		ug/L			47	35	29	Standard
⌈>	**In-1**	**115**		ug/L			6273	6321	4	KED
|	**Cd**	**111**	**10.000**	ug/L	0.361	3	2	2354	2	KED
⌊	**Cd**	**114**	**10.000**	ug/L	0.490	4	4	6079	0	KED
⌈>	**In**	**115**		ug/L			463649	495399	2	Standard
|	**Ag**	**107**	**10.000**	ug/L	0.327	3	35	161409	1	Standard
|	**Ba**	**135**	**10.000**	ug/L	0.202	2	24	54582	0	Standard
⌊	**Ba**	**137**	**9.999**	ug/L	0.141	1	33	95918	1	Standard
⌈>	**Tb**	**159**		ug/L			169186	178590	0	Standard
⌊	**Pb**	**208**	**10.000**	ug/L	0.024	0	224	903317	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:01:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	29878	4	Standard
⌈>	**Sc**	**45**		ug/L			509000	545359	2	Standard
|	**Cr**	**52**	**20.025**	ug/L	0.642	3	8828	300001	2	Standard
⌊	**Cr**	**53**	**20.105**	ug/L	0.478	2	74	33786	1	Standard
⌈>	**Ge**	**72**		ug/L			29303	30442	0	KED
|	**Ni**	**60**	**19.876**	ug/L	0.260	1	5	30161	1	KED
|	**Ni**	**62**	**20.030**	ug/L	0.349	1	1	4958	1	KED
|	**Cu**	**63**	**19.912**	ug/L	0.144	0	34	86125	1	KED
|	**Cu**	**65**	**20.015**	ug/L	0.243	1	19	43816	1	KED
|	**Zn**	**66**	**19.772**	ug/L	0.229	1	23	10331	1	KED
|	**Zn**	**67**	**19.846**	ug/L	0.513	2	5	1733	2	KED
⌊	**As**	**75**	**19.906**	ug/L	0.056	0	3	4870	0	KED
	Y	**89**		ug/L			48310	53094	1	Standard
	Kr	**83**		ug/L			47	41	20	Standard
⌈>	**In-1**	**115**		ug/L			6273	6343	2	KED
|	**Cd**	**111**	**19.953**	ug/L	0.881	4	2	4669	3	KED
⌊	**Cd**	**114**	**20.027**	ug/L	0.435	2	4	12296	1	KED
⌈>	**In**	**115**		ug/L			463649	489391	1	Standard
|	**Ag**	**107**	**19.959**	ug/L	0.325	1	35	315783	3	Standard
|	**Ba**	**135**	**19.968**	ug/L	0.582	2	24	106955	1	Standard
⌊	**Ba**	**137**	**20.045**	ug/L	0.402	2	33	191641	0	Standard
⌈>	**Tb**	**159**		ug/L			169186	179464	1	Standard
⌊	**Pb**	**208**	**19.937**	ug/L	0.237	1	224	1786784	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:05:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	25400	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	558473	1	Standard
|	**Cr**	**52**	**49.655**	ug/L	0.911	1	8828	723106	2	Standard
⌊	**Cr**	**53**	**49.854**	ug/L	0.903	1	74	84458	2	Standard
⌈>	**Ge**	**72**		ug/L			29303	30015	2	KED
|	**Ni**	**60**	**49.697**	ug/L	0.680	1	5	72172	3	KED
|	**Ni**	**62**	**49.505**	ug/L	0.762	1	1	11513	2	KED
|	**Cu**	**63**	**49.635**	ug/L	1.321	2	34	204227	4	KED
|	**Cu**	**65**	**49.687**	ug/L	0.309	0	19	103947	1	KED
|	**Zn**	**66**	**49.611**	ug/L	1.423	2	23	24635	4	KED
|	**Zn**	**67**	**49.320**	ug/L	1.429	2	5	3987	4	KED
⌊	**As**	**75**	**49.951**	ug/L	0.505	1	3	11985	2	KED
	Y	**89**		ug/L			48310	50964	0	Standard
	Kr	**83**		ug/L			47	54	10	Standard
⌈>	**In-1**	**115**		ug/L			6273	6292	0	KED
|	**Cd**	**111**	**49.924**	ug/L	0.530	1	2	11505	0	KED
⌊	**Cd**	**114**	**49.773**	ug/L	0.306	0	4	29642	0	KED
⌈>	**In**	**115**		ug/L			463649	482571	0	Standard
|	**Ag**	**107**	**49.781**	ug/L	0.756	1	35	759786	0	Standard
|	**Ba**	**135**	**49.982**	ug/L	0.497	0	24	263565	1	Standard
⌊	**Ba**	**137**	**50.029**	ug/L	0.399	0	33	473061	0	Standard
⌈>	**Tb**	**159**		ug/L			169186	178836	0	Standard
⌊	**Pb**	**208**	**49.835**	ug/L	0.541	1	224	4378529	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:12:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	28122	4	Standard
⎡>	**Sc**	**45**		ug/L			509000	558930	1	Standard
⎢	**Cr**	**52**	**100.051**	ug/L	0.647	0	8828	1450921	2	Standard
⎣	**Cr**	**53**	**99.871**	ug/L	2.158	2	74	168498	0	Standard
⎡>	**Ge**	**72**		ug/L			29303	30158	2	KED
⎢	**Ni**	**60**	**99.810**	ug/L	1.688	1	5	144647	0	KED
⎢	**Ni**	**62**	**99.827**	ug/L	1.638	1	1	23190	3	KED
⎢	**Cu**	**63**	**99.425**	ug/L	2.145	2	34	403052	1	KED
⎢	**Cu**	**65**	**99.706**	ug/L	2.344	2	19	207473	1	KED
⎢	**Zn**	**66**	**100.020**	ug/L	2.199	2	23	49885	1	KED
⎢	**Zn**	**67**	**100.026**	ug/L	1.801	1	5	8123	2	KED
⎣	**As**	**75**	**100.105**	ug/L	1.080	1	3	24213	1	KED
	Y	**89**		ug/L			48310	51944	4	Standard
	Kr	**83**		ug/L			47	57	13	Standard
⎡>	**In-1**	**115**		ug/L			6273	6458	1	KED
⎢	**Cd**	**111**	**99.701**	ug/L	0.430	0	2	23347	1	KED
⎣	**Cd**	**114**	**99.566**	ug/L	0.654	0	4	59985	0	KED
⎡>	**In**	**115**		ug/L			463649	450932	0	Standard
⎢	**Ag**	**107**	**101.152**	ug/L	1.685	1	35	1500263	1	Standard
⎢	**Ba**	**135**	**101.705**	ug/L	0.844	0	24	531312	1	Standard
⎣	**Ba**	**137**	**101.623**	ug/L	2.092	2	33	949210	1	Standard
⎡>	**Tb**	**159**		ug/L			169186	178763	1	Standard
⎣	**Pb**	**208**	**99.203**	ug/L	0.769	0	224	8487184	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:19:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	24581	4	Standard
⌈>	**Sc**	**45**		ug/L			509000	533088	2	Standard
|	**Cr**	**52**	**0.011**	ug/L	0.014	123	8828	9404	4	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.001	25	74	84	4	Standard
⌈>	**Ge**	**72**		ug/L			29303	30002	0	KED
|	**Ni**	**60**	**0.000**	ug/L	0.001	370	5	5	33	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.008	4930	1	1	100	KED
|	**Cu**	**63**	**0.003**	ug/L	0.000	18	34	46	4	KED
|	**Cu**	**65**	**0.001**	ug/L	0.006	428	19	22	50	KED
|	**Zn**	**66**	**0.007**	ug/L	0.022	332	23	27	39	KED
|	**Zn**	**67**	**-0.025**	ug/L	0.062	245	5	3	132	KED
⌊	**As**	**75**	**0.004**	ug/L	0.003	71	3	4	17	KED
	Y	**89**		ug/L			48310	48443	1	Standard
	Kr	**83**		ug/L			47	46	13	Standard
⌈>	**In-1**	**115**		ug/L			6273	6574	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.004	71	2	0	100	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.005	343	4	3	89	KED
⌈>	**In**	**115**		ug/L			463649	469846	4	Standard
|	**Ag**	**107**	**0.004**	ug/L	0.001	32	35	105	21	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.000	15	24	19	0	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	351	33	37	31	Standard
⌈>	**Tb**	**159**		ug/L			169186	173731	3	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	37	224	311	8	Standard

Sample Information

Sample Date/Time: Wednesday, May 10, 2023 16:12:26
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.m
Mass Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Conditions File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

Calibration

Analyte	Mass	**r Corr Coef**	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
C	13							
Sc	45							
Cr	52	**1.0000**	0.026	0.50	10	20	50	100
Cr	53	**1.0000**	0.003	0.50	10	20	50	100
Ge	72							
Ni	60	**1.0000**	0.048	0.50	10	20	50	100
Ni	62	**0.9999**	0.008	0.50	10	20	50	100
Cu	63	**0.9999**	0.134	0.50	10	20	50	100
Cu	65	**1.0000**	0.069	0.50	10	20	50	100
Zn	66	**1.0000**	0.017	6.00	10	20	50	100
Zn	67	**0.9999**	0.003	6.00	10	20	50	100
As	75	**1.0000**	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In-1	115							
Cd	111	**1.0000**	0.036	0.10	10	20	50	100
Cd	114	**1.0000**	0.093	0.10	10	20	50	100
In	115							
Ag	107	**0.9998**	0.033	0.20	10	20	50	100
Ba	135	**0.9995**	0.012	0.50	10	20	50	100
Ba	137	**0.9996**	0.021	0.50	10	20	50	100
Tb	159							
Pb	208	**0.9999**	0.479	0.10	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:25:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	29797	4	Standard
⌈>	**Sc**	**45**		ug/L			509000	564850	0	Standard
|	**Cr**	**52**	**52.907**	ug/L	1.586	2	8828	780016	3	Standard
⌊	**Cr**	**53**	**51.308**	ug/L	1.827	3	74	87546	3	Standard
⌈>	**Ge**	**72**		ug/L			29303	31782	0	KED
|	**Ni**	**60**	**50.903**	ug/L	0.178	0	5	77766	0	KED
|	**Ni**	**62**	**51.012**	ug/L	1.334	2	1	12489	2	KED
|	**Cu**	**63**	**52.299**	ug/L	0.986	1	34	223527	2	KED
|	**Cu**	**65**	**51.383**	ug/L	1.337	2	19	112722	2	KED
|	**Zn**	**66**	**50.838**	ug/L	0.626	1	23	26741	1	KED
|	**Zn**	**67**	**50.580**	ug/L	0.623	1	5	4332	0	KED
⌊	**As**	**75**	**48.181**	ug/L	0.178	0	3	12285	0	KED
	Y	**89**		ug/L			48310	52288	1	Standard
	Kr	**83**		ug/L			47	44	15	Standard
⌈>	**In-1**	**115**		ug/L			6273	6677	2	KED
|	**Cd**	**111**	**51.665**	ug/L	1.744	3	2	12504	2	KED
⌊	**Cd**	**114**	**51.793**	ug/L	1.375	2	4	32251	0	KED
⌈>	**In**	**115**		ug/L			463649	478187	2	Standard
|	**Ag**	**107**	**50.790**	ug/L	1.892	3	35	798375	1	Standard
|	**Ba**	**135**	**49.978**	ug/L	0.851	1	24	276825	1	Standard
⌊	**Ba**	**137**	**50.115**	ug/L	0.177	0	33	496417	2	Standard
⌈>	**Tb**	**159**		ug/L			169186	183312	0	Standard
⌊	**Pb**	**208**	**52.638**	ug/L	1.364	2	224	4617664	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-ICB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:32:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	26356	3	Standard
⌈>	**Sc**	**45**		ug/L			509000	539338	1	Standard
|	**Cr**	**52**	**0.017**	ug/L	0.016	94	8828	9587	1	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.002	123	74	75	6	Standard
⌈>	**Ge**	**72**		ug/L			29303	30568	2	KED
|	**Ni**	**60**	**0.001**	ug/L	0.003	424	5	6	69	KED
|	**Ni**	**62**	**0.005**	ug/L	0.012	239	1	3	91	KED
|	**Cu**	**63**	**0.005**	ug/L	0.004	81	34	57	30	KED
|	**Cu**	**65**	**0.004**	ug/L	0.005	126	19	28	37	KED
|	**Zn**	**66**	**0.020**	ug/L	0.026	126	23	34	38	KED
|	**Zn**	**67**	**-0.003**	ug/L	0.045	1369	5	5	66	KED
⌊	**As**	**75**	**0.007**	ug/L	0.008	127	3	4	43	KED
	Y	**89**		ug/L			48310	50406	2	Standard
	Kr	**83**		ug/L			47	43	11	Standard
⌈>	**In-1**	**115**		ug/L			6273	6493	1	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.004	232	2	1	50	KED
⌊	**Cd**	**114**	**-0.006**	ug/L	0.004	65	4	1	176	KED
⌈>	**In**	**115**		ug/L			463649	465713	1	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	51	35	73	26	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	199	24	21	28	Standard
⌊	**Ba**	**137**	**0.000**	ug/L	0.001	389	33	36	31	Standard
⌈>	**Tb**	**159**		ug/L			169186	175668	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	62	224	286	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:37:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	26594	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	564599	1	Standard
|	**Cr**	**52**	**51.471**	ug/L	0.725	1	8828	758784	2	Standard
⌊	**Cr**	**53**	**50.536**	ug/L	0.353	0	74	86184	1	Standard
⌈>	**Ge**	**72**		ug/L			29303	32146	1	KED
|	**Ni**	**60**	**49.546**	ug/L	1.173	2	5	76549	1	KED
|	**Ni**	**62**	**49.050**	ug/L	0.276	0	1	12146	1	KED
|	**Cu**	**63**	**49.725**	ug/L	0.346	0	34	214938	0	KED
|	**Cu**	**65**	**49.566**	ug/L	1.054	2	19	109970	1	KED
|	**Zn**	**66**	**49.855**	ug/L	1.259	2	23	26518	1	KED
|	**Zn**	**67**	**50.337**	ug/L	1.507	2	5	4360	2	KED
⌊	**As**	**75**	**49.689**	ug/L	1.019	2	3	12812	1	KED
	Y	**89**		ug/L			48310	53576	2	Standard
	Kr	**83**		ug/L			47	42	34	Standard
⌈>	**In-1**	**115**		ug/L			6273	6756	1	KED
|	**Cd**	**111**	**49.652**	ug/L	0.968	1	2	12162	1	KED
⌊	**Cd**	**114**	**50.647**	ug/L	0.242	0	4	31925	1	KED
⌈>	**In**	**115**		ug/L			463649	482029	1	Standard
|	**Ag**	**107**	**50.096**	ug/L	0.827	1	35	794203	0	Standard
|	**Ba**	**135**	**49.631**	ug/L	0.673	1	24	277141	0	Standard
⌊	**Ba**	**137**	**49.270**	ug/L	0.397	0	33	491965	0	Standard
⌈>	**Tb**	**159**		ug/L			169186	185684	1	Standard
⌊	**Pb**	**208**	**50.279**	ug/L	0.957	1	224	4467825	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:44:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	26575	3	Standard
⌈>	**Sc**	**45**		ug/L			509000	541589	1	Standard
|	**Cr**	**52**	**0.006**	ug/L	0.013	204	8828	9483	2	Standard
⌊	**Cr**	**53**	**-0.005**	ug/L	0.004	84	74	70	11	Standard
⌈>	**Ge**	**72**		ug/L			29303	32305	1	KED
|	**Ni**	**60**	**0.002**	ug/L	0.001	42	5	8	13	KED
|	**Ni**	**62**	**-0.001**	ug/L	0.013	2070	1	1	173	KED
|	**Cu**	**63**	**0.001**	ug/L	0.001	105	34	41	9	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.001	17	19	11	16	KED
|	**Zn**	**66**	**0.005**	ug/L	0.012	245	23	28	24	KED
|	**Zn**	**67**	**0.023**	ug/L	0.035	153	5	8	35	KED
⌊	**As**	**75**	**0.004**	ug/L	0.006	144	3	4	37	KED
	Y	**89**		ug/L			48310	50243	2	Standard
	Kr	**83**		ug/L			47	43	16	Standard
⌈>	**In-1**	**115**		ug/L			6273	6862	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.002	70	2	3	17	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.003	174	4	3	50	KED
⌈>	**In**	**115**		ug/L			463649	462636	4	Standard
|	**Ag**	**107**	**0.002**	ug/L	0.001	43	35	67	20	Standard
|	**Ba**	**135**	**0.000**	ug/L	0.001	237	24	26	15	Standard
⌊	**Ba**	**137**	**-0.000**	ug/L	0.001	187	33	29	26	Standard
⌈>	**Tb**	**159**		ug/L			169186	175175	2	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	67	224	267	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CRL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:49:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	29745	3	Standard
⌈>	**Sc**	**45**		ug/L			509000	544043	0	Standard
|	**Cr**	**52**	**0.523**	ug/L	0.009	1	8828	16764	1	Standard
⌊	**Cr**	**53**	**0.501**	ug/L	0.008	1	74	901	2	Standard
⌈>	**Ge**	**72**		ug/L			29303	32168	0	KED
|	**Ni**	**60**	**0.493**	ug/L	0.024	4	5	767	4	KED
|	**Ni**	**62**	**0.476**	ug/L	0.072	15	1	120	14	KED
|	**Cu**	**63**	**0.708**	ug/L	0.010	1	34	3101	2	KED
|	**Cu**	**65**	**0.727**	ug/L	0.032	4	19	1635	3	KED
|	**Zn**	**66**	**6.250**	ug/L	0.152	2	23	3349	2	KED
|	**Zn**	**67**	**6.111**	ug/L	0.086	1	5	535	0	KED
⌊	**As**	**75**	**0.213**	ug/L	0.006	2	3	58	3	KED
	Y	**89**		ug/L			48310	50496	2	Standard
	Kr	**83**		ug/L			47	45	12	Standard
⌈>	**In-1**	**115**		ug/L			6273	6541	2	KED
|	**Cd**	**111**	**0.113**	ug/L	0.021	18	2	29	16	KED
⌊	**Cd**	**114**	**0.097**	ug/L	0.023	23	4	64	22	KED
⌈>	**In**	**115**		ug/L			463649	478093	1	Standard
|	**Ag**	**107**	**0.202**	ug/L	0.006	2	35	3206	1	Standard
|	**Ba**	**135**	**0.482**	ug/L	0.013	2	24	2696	3	Standard
⌊	**Ba**	**137**	**0.483**	ug/L	0.017	3	33	4821	3	Standard
⌈>	**Tb**	**159**		ug/L			169186	178239	1	Standard
⌊	**Pb**	**208**	**0.107**	ug/L	0.004	4	224	9331	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFA1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 16:56:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	82148	4	Standard
>	**Sc**	**45**		ug/L			509000	540030	1	Standard
	Cr	**52**	**0.661**	ug/L	0.017	2	8828	18570	2	Standard
	Cr	**53**	**1.741**	ug/L	0.086	4	74	2916	6	Standard
>	**Ge**	**72**		ug/L			29303	28977	0	KED
	Ni	**60**	**0.108**	ug/L	0.017	15	5	154	13	KED
	Ni	**62**	**0.119**	ug/L	0.014	11	1	28	11	KED
	Cu	**63**	**0.039**	ug/L	0.002	5	34	186	5	KED
	Cu	**65**	**0.033**	ug/L	0.012	37	19	84	28	KED
	Zn	**66**	**0.312**	ug/L	0.053	17	23	172	13	KED
	Zn	**67**	**0.269**	ug/L	0.085	31	5	26	25	KED
	As	**75**	**0.026**	ug/L	0.012	45	3	9	31	KED
	Y	**89**		ug/L			48310	49648	3	Standard
	Kr	**83**		ug/L			47	65	18	Standard
>	**In-1**	**115**		ug/L			6273	5999	0	KED
	Cd	**111**	**0.043**	ug/L	0.020	45	2	11	38	KED
	Cd	**114**	**0.027**	ug/L	0.012	42	4	19	34	KED
>	**In**	**115**		ug/L			463649	441167	0	Standard
	Ag	**107**	**0.005**	ug/L	0.000	7	35	104	5	Standard
	Ba	**135**	**0.113**	ug/L	0.007	5	24	599	5	Standard
	Ba	**137**	**0.114**	ug/L	0.005	4	33	1070	4	Standard
>	**Tb**	**159**		ug/L			169186	167906	0	Standard
	Pb	**208**	**0.027**	ug/L	0.000	0	224	2394	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IFB1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:00:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	80778	1	Standard
⌈>	**Sc**	**45**		ug/L			509000	530617	1	Standard
|	**Cr**	**52**	**20.186**	ug/L	0.671	3	8828	285340	4	Standard
⌊	**Cr**	**53**	**21.276**	ug/L	0.553	2	74	34155	4	Standard
⌈>	**Ge**	**72**		ug/L			29303	27650	1	KED
|	**Ni**	**60**	**20.512**	ug/L	0.872	4	5	27258	3	KED
|	**Ni**	**62**	**20.858**	ug/L	0.487	2	1	4443	1	KED
|	**Cu**	**63**	**20.580**	ug/L	0.468	2	34	76522	1	KED
|	**Cu**	**65**	**20.103**	ug/L	0.651	3	19	38370	2	KED
|	**Zn**	**66**	**19.662**	ug/L	0.585	2	23	9009	2	KED
|	**Zn**	**67**	**17.951**	ug/L	1.720	9	5	1340	8	KED
⌊	**As**	**75**	**19.651**	ug/L	0.451	2	3	4360	1	KED
	Y	**89**		ug/L			48310	48740	2	Standard
	Kr	**83**		ug/L			47	74	13	Standard
⌈>	**In-1**	**115**		ug/L			6273	6028	0	KED
|	**Cd**	**111**	**18.519**	ug/L	0.593	3	2	4049	2	KED
⌊	**Cd**	**114**	**18.365**	ug/L	0.516	2	4	10330	2	KED
⌈>	**In**	**115**		ug/L			463649	447152	1	Standard
|	**Ag**	**107**	**18.002**	ug/L	0.130	0	35	264803	2	Standard
|	**Ba**	**135**	**0.109**	ug/L	0.010	9	24	587	6	Standard
⌊	**Ba**	**137**	**0.104**	ug/L	0.002	1	33	994	1	Standard
⌈>	**Tb**	**159**		ug/L			169186	168627	2	Standard
⌊	**Pb**	**208**	**0.018**	ug/L	0.001	2	224	1705	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:06:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	26329	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	556001	2	Standard
|	**Cr**	**52**	**198.368**	ug/L	1.458	0	8828	2851709	2	Standard
⌊	**Cr**	**53**	**195.087**	ug/L	0.307	0	74	327408	2	Standard
⌈>	**Ge**	**72**		ug/L			29303	29227	1	KED
|	**Ni**	**60**	**191.945**	ug/L	3.999	2	5	269634	1	KED
|	**Ni**	**62**	**186.640**	ug/L	4.629	2	1	42024	3	KED
|	**Cu**	**63**	**187.668**	ug/L	2.643	1	34	737510	2	KED
|	**Cu**	**65**	**185.711**	ug/L	3.770	2	19	374570	1	KED
|	**Zn**	**66**	**189.266**	ug/L	0.834	0	23	91483	1	KED
|	**Zn**	**67**	**186.660**	ug/L	4.772	2	5	14685	1	KED
⌊	**As**	**75**	**193.838**	ug/L	1.289	0	3	45439	0	KED
	Y	**89**		ug/L			48310	49992	1	Standard
	Kr	**83**		ug/L			47	83	11	Standard
⌈>	**In-1**	**115**		ug/L			6273	5371	18	KED
|	**Cd**	**111**	**219.502**	ug/L	43.976	20	2	41729	4	KED
⌊	**Cd**	**114**	**220.074**	ug/L	39.817	18	4	107921	4	KED
⌈>	**In**	**115**		ug/L			463649	435715	1	Standard
|	**Ag**	**107**	**193.623**	ug/L	0.562	0	35	2774950	2	Standard
|	**Ba**	**135**	**193.128**	ug/L	4.604	2	24	974609	1	Standard
⌊	**Ba**	**137**	**193.380**	ug/L	2.785	1	33	1745084	0	Standard
⌈>	**Tb**	**159**		ug/L			169186	171188	2	Standard
⌊	**Pb**	**208**	**200.008**	ug/L	5.919	2	224	16378774	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-HCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:11:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	29606	4	Standard
⌈>	**Sc**	**45**		ug/L			509000	552654	1	Standard
|	**Cr**	**52**	**305.580**	ug/L	3.631	1	8828	4362199	2	Standard
⌊	**Cr**	**53**	**294.803**	ug/L	0.531	0	74	491755	1	Standard
⌈>	**Ge**	**72**		ug/L			29303	28899	0	KED
|	**Ni**	**60**	**290.897**	ug/L	5.116	1	5	404100	2	KED
|	**Ni**	**62**	**288.363**	ug/L	1.622	0	1	64187	0	KED
|	**Cu**	**63**	**287.043**	ug/L	2.289	0	34	1115281	0	KED
|	**Cu**	**65**	**287.453**	ug/L	2.535	0	19	573363	1	KED
|	**Zn**	**66**	**285.291**	ug/L	2.722	0	23	136335	0	KED
|	**Zn**	**67**	**287.574**	ug/L	3.024	1	5	22370	1	KED
⌊	**As**	**75**	**305.011**	ug/L	1.315	0	3	70699	0	KED
	Y	**89**		ug/L			48310	49758	1	Standard
	Kr	**83**		ug/L			47	116	11	Standard
⌈>	**In-1**	**115**		ug/L			6273	6204	3	KED
|	**Cd**	**111**	**292.818**	ug/L	9.764	3	2	65819	0	KED
⌊	**Cd**	**114**	**294.321**	ug/L	10.877	3	4	170207	1	KED
⌈>	**In**	**115**		ug/L			463649	405906	0	Standard
|	**Ag**	**107**	**310.853**	ug/L	5.576	1	35	4149787	1	Standard
|	**Ba**	**135**	**294.858**	ug/L	8.523	2	24	1386297	2	Standard
⌊	**Ba**	**137**	**299.321**	ug/L	3.477	1	33	2516816	1	Standard
⌈>	**Tb**	**159**		ug/L			169186	154666	1	Standard
⌊	**Pb**	**208**	**316.508**	ug/L	5.627	1	224	23425103	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:18:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	28126	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	570158	2	Standard
|	**Cr**	**52**	**0.013**	ug/L	0.019	142	8828	10078	2	Standard
⌊	**Cr**	**53**	**0.006**	ug/L	0.004	67	74	93	8	Standard
⌈>	**Ge**	**72**		ug/L			29303	34258	1	KED
|	**Ni**	**60**	**0.006**	ug/L	0.003	41	5	15	27	KED
|	**Ni**	**62**	**0.004**	ug/L	0.015	410	1	3	124	KED
|	**Cu**	**63**	**0.003**	ug/L	0.003	95	34	54	23	KED
|	**Cu**	**65**	**0.003**	ug/L	0.001	51	19	29	9	KED
|	**Zn**	**66**	**0.019**	ug/L	0.018	97	23	38	26	KED
|	**Zn**	**67**	**0.031**	ug/L	0.055	177	5	9	52	KED
⌊	**As**	**75**	**0.013**	ug/L	0.005	36	3	7	17	KED
	Y	**89**		ug/L			48310	52547	0	Standard
	Kr	**83**		ug/L			47	52	20	Standard
⌈>	**In-1**	**115**		ug/L			6273	7246	0	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.008	8315	2	2	78	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.003	1197	4	4	43	KED
⌈>	**In**	**115**		ug/L			463649	497647	2	Standard
|	**Ag**	**107**	**0.008**	ug/L	0.002	18	35	175	12	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	54	24	40	19	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.002	44	33	80	23	Standard
⌈>	**Tb**	**159**		ug/L			169186	187495	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	19	224	437	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:24:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	28216	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	614310	2	Standard
|	**Cr**	**52**	**49.614**	ug/L	0.154	0	8828	796164	2	Standard
⌊	**Cr**	**53**	**49.306**	ug/L	0.655	1	74	91479	1	Standard
⌈>	**Ge**	**72**		ug/L			29303	33882	0	KED
|	**Ni**	**60**	**48.761**	ug/L	0.591	1	5	79418	1	KED
|	**Ni**	**62**	**49.065**	ug/L	1.020	2	1	12807	2	KED
|	**Cu**	**63**	**50.335**	ug/L	0.792	1	34	229335	1	KED
|	**Cu**	**65**	**49.788**	ug/L	0.248	0	19	116447	0	KED
|	**Zn**	**66**	**49.118**	ug/L	1.011	2	23	27541	1	KED
|	**Zn**	**67**	**51.803**	ug/L	0.793	1	5	4730	2	KED
⌊	**As**	**75**	**50.107**	ug/L	0.465	0	3	13619	0	KED
	Y	**89**		ug/L			48310	55027	0	Standard
	Kr	**83**		ug/L			47	46	15	Standard
⌈>	**In-1**	**115**		ug/L			6273	7119	3	KED
|	**Cd**	**111**	**50.184**	ug/L	1.227	2	2	12949	0	KED
⌊	**Cd**	**114**	**50.175**	ug/L	0.566	1	4	33318	2	KED
⌈>	**In**	**115**		ug/L			463649	504029	0	Standard
|	**Ag**	**107**	**48.797**	ug/L	0.760	1	35	808976	1	Standard
|	**Ba**	**135**	**49.515**	ug/L	0.138	0	24	289131	0	Standard
⌊	**Ba**	**137**	**49.043**	ug/L	0.770	1	33	512033	0	Standard
⌈>	**Tb**	**159**		ug/L			169186	194827	2	Standard
⌊	**Pb**	**208**	**50.847**	ug/L	1.120	2	224	4739539	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:32:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23729	27340	2	Standard
⌈>	**Sc**	**45**		ug/L			509000	580003	1	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.039	169	8828	10405	7	Standard
⌊	**Cr**	**53**	**0.028**	ug/L	0.037	134	74	133	50	Standard
⌈>	**Ge**	**72**		ug/L			29303	34295	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.003	301	5	7	66	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.008	221	1	1	173	KED
|	**Cu**	**63**	**0.000**	ug/L	0.002	646	34	41	15	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.005	8359	19	22	46	KED
|	**Zn**	**66**	**0.009**	ug/L	0.009	100	23	32	15	KED
|	**Zn**	**67**	**-0.004**	ug/L	0.023	606	5	6	34	KED
⌊	**As**	**75**	**0.008**	ug/L	0.012	144	3	5	54	KED
	Y	**89**		ug/L			48310	53554	1	Standard
	Kr	**83**		ug/L			47	59	14	Standard
⌈>	**In-1**	**115**		ug/L			6273	7121	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.002	159	2	2	24	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.001	145	4	4	24	KED
⌈>	**In**	**115**		ug/L			463649	495495	2	Standard
|	**Ag**	**107**	**0.030**	ug/L	0.033	110	35	527	103	Standard
|	**Ba**	**135**	**0.024**	ug/L	0.030	120	24	169	102	Standard
⌊	**Ba**	**137**	**0.026**	ug/L	0.031	123	33	303	108	Standard
⌈>	**Tb**	**159**		ug/L			169186	184923	3	Standard
⌊	**Pb**	**208**	**0.030**	ug/L	0.029	98	224	2932	93	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:37:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				26311	4	Standard
⌈>	**Sc**	**45**		ug/L				566891	1	Standard
|	**Cr**	**52**		ug/L				10103	1	Standard
⌊	**Cr**	**53**		ug/L				90	11	Standard
⌈>	**Ge**	**72**		ug/L				32698	0	KED
|	**Ni**	**60**		ug/L				3	50	KED
|	**Ni**	**62**		ug/L				3	34	KED
|	**Cu**	**63**		ug/L				24	19	KED
|	**Cu**	**65**		ug/L				17	11	KED
|	**Zn**	**66**		ug/L				20	48	KED
|	**Zn**	**67**		ug/L				3	132	KED
⌊	**As**	**75**		ug/L				3	45	KED
	Y	**89**		ug/L				53020	2	Standard
	Kr	**83**		ug/L				39	12	Standard
⌈>	**In-1**	**115**		ug/L				7060	1	KED
|	**Cd**	**111**		ug/L				2	89	KED
⌊	**Cd**	**114**		ug/L				3	68	KED
⌈>	**In**	**115**		ug/L				494263	2	Standard
|	**Ag**	**107**		ug/L				53	2	Standard
|	**Ba**	**135**		ug/L				15	33	Standard
⌊	**Ba**	**137**		ug/L				16	52	Standard
⌈>	**Tb**	**159**		ug/L				184968	0	Standard
⌊	**Pb**	**208**		ug/L				252	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:41:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	27086	4	Standard
⌈>	**Sc**	**45**		ug/L			566891	602734	1	Standard
|	**Cr**	**52**	**50.087**	ug/L	0.634	1	10103	788886	3	Standard
⌊	**Cr**	**53**	**49.352**	ug/L	0.393	0	90	89874	2	Standard
⌈>	**Ge**	**72**		ug/L			32698	34111	1	KED
|	**Ni**	**60**	**48.892**	ug/L	0.532	1	3	80169	1	KED
|	**Ni**	**62**	**49.253**	ug/L	0.220	0	3	12944	1	KED
|	**Cu**	**63**	**49.622**	ug/L	1.349	2	24	227559	1	KED
|	**Cu**	**65**	**48.368**	ug/L	0.349	0	17	113892	1	KED
|	**Zn**	**66**	**50.735**	ug/L	0.721	1	20	28634	1	KED
|	**Zn**	**67**	**50.136**	ug/L	0.936	1	3	4607	3	KED
⌊	**As**	**75**	**49.751**	ug/L	0.619	1	3	13613	0	KED
	Y	**89**		ug/L			53020	55757	1	Standard
	Kr	**83**		ug/L			39	41	29	Standard
⌈>	**In-1**	**115**		ug/L			7060	7062	1	KED
|	**Cd**	**111**	**50.589**	ug/L	1.752	3	2	12950	2	KED
⌊	**Cd**	**114**	**50.362**	ug/L	0.801	1	3	33178	2	KED
⌈>	**In**	**115**		ug/L			494263	496605	2	Standard
|	**Ag**	**107**	**49.227**	ug/L	0.708	1	53	803963	0	Standard
|	**Ba**	**135**	**50.459**	ug/L	2.381	4	15	290080	2	Standard
⌊	**Ba**	**137**	**50.527**	ug/L	1.528	3	16	519526	0	Standard
⌈>	**Tb**	**159**		ug/L			184968	193060	1	Standard
⌊	**Pb**	**208**	**50.413**	ug/L	1.135	2	252	4657369	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:49:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	26387	1	Standard
⌈>	**Sc**	**45**		ug/L			566891	577127	1	Standard
|	**Cr**	**52**	**-0.020**	ug/L	0.010	47	10103	9985	2	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.004	53	90	78	9	Standard
⌈>	**Ge**	**72**		ug/L			32698	34100	1	KED
|	**Ni**	**60**	**-0.002**	ug/L	0.001	33	3	0	173	KED
|	**Ni**	**62**	**-0.005**	ug/L	0.007	131	3	1	100	KED
|	**Cu**	**63**	**0.000**	ug/L	0.001	191	24	26	12	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.001	121	17	15	21	KED
|	**Zn**	**66**	**0.001**	ug/L	0.003	512	20	22	9	KED
|	**Zn**	**67**	**-0.023**	ug/L	0.020	89	3	1	100	KED
⌊	**As**	**75**	**0.000**	ug/L	0.005	4102	3	3	37	KED
	Y	**89**		ug/L			53020	51769	1	Standard
	Kr	**83**		ug/L			39	35	17	Standard
⌈>	**In-1**	**115**		ug/L			7060	7354	2	KED
|	**Cd**	**111**	**0.007**	ug/L	0.014	201	2	4	87	KED
⌊	**Cd**	**114**	**0.027**	ug/L	0.026	94	3	22	82	KED
⌈>	**In**	**115**		ug/L			494263	493687	2	Standard
|	**Ag**	**107**	**0.006**	ug/L	0.006	98	53	153	65	Standard
|	**Ba**	**135**	**0.003**	ug/L	0.007	220	15	33	118	Standard
⌊	**Ba**	**137**	**0.004**	ug/L	0.006	151	16	60	111	Standard
⌈>	**Tb**	**159**		ug/L			184968	186545	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.006	143	252	643	86	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0687-BLK2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:54:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	37670	3	Standard
⌈>	**Sc**	**45**		ug/L			566891	603363	1	Standard
|	**Cr**	**52**	**-0.001**	ug/L	0.027	4639	10103	10740	2	Standard
⌊	**Cr**	**53**	**0.001**	ug/L	0.013	1768	90	97	22	Standard
⌈>	**Ge**	**72**		ug/L			32698	33573	2	KED
|	**Ni**	**60**	**0.004**	ug/L	0.004	101	3	10	66	KED
|	**Ni**	**62**	**-0.003**	ug/L	0.011	368	3	2	114	KED
|	**Cu**	**63**	**0.070**	ug/L	0.006	8	24	340	8	KED
|	**Cu**	**65**	**0.065**	ug/L	0.006	9	17	166	7	KED
|	**Zn**	**66**	**0.172**	ug/L	0.045	25	20	116	21	KED
|	**Zn**	**67**	**0.168**	ug/L	0.041	24	3	19	17	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.006	226	3	2	60	KED
	Y	**89**		ug/L			53020	54713	1	Standard
	Kr	**83**		ug/L			39	42	18	Standard
⌈>	**In-1**	**115**		ug/L			7060	7281	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.002	48	2	3	15	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.004	367	3	2	121	KED
⌈>	**In**	**115**		ug/L			494263	517690	1	Standard
|	**Ag**	**107**	**-0.000**	ug/L	0.000	105	53	50	14	Standard
|	**Ba**	**135**	**0.005**	ug/L	0.000	6	15	45	2	Standard
⌊	**Ba**	**137**	**0.008**	ug/L	0.001	16	16	98	12	Standard
⌈>	**Tb**	**159**		ug/L			184968	194843	1	Standard
⌊	**Pb**	**208**	**0.008**	ug/L	0.001	9	252	1056	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0687-BS2
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Wednesday, May 10, 2023 17:58:46
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	33195	2	Standard
>	Sc	45		ug/L			566891	555862	11	Standard
	Cr	52	27.319	ug/L	2.314	8	10103	398623	3	Standard
	Cr	53	27.123	ug/L	2.036	7	90	45316	4	Standard
>	Ge	72		ug/L			32698	34536	1	KED
	Ni	60	26.277	ug/L	0.423	1	3	43618	0	KED
	Ni	62	25.531	ug/L	0.733	2	3	6793	1	KED
	Cu	63	26.428	ug/L	0.996	3	24	122696	2	KED
	Cu	65	26.366	ug/L	0.643	2	17	62849	1	KED
	Zn	66	81.431	ug/L	3.435	4	20	46502	2	KED
	Zn	67	77.856	ug/L	1.691	2	3	7239	2	KED
	As	75	24.595	ug/L	0.132	0	3	6815	0	KED
	Y	89		ug/L			53020	50937	11	Standard
	Kr	83		ug/L			39	43	2	Standard
>	In-1	115		ug/L			7060	7171	0	KED
	Cd	111	25.205	ug/L	0.178	0	2	6555	0	KED
	Cd	114	25.527	ug/L	0.381	1	3	17079	1	KED
>	In	115		ug/L			494263	475075	13	Standard
	Ag	107	26.777	ug/L	2.851	10	53	414464	4	Standard
	Ba	135	26.576	ug/L	2.759	10	15	144886	4	Standard
	Ba	137	26.205	ug/L	2.206	8	16	255882	5	Standard
>	Tb	159		ug/L			184968	178000	9	Standard
	Pb	208	27.358	ug/L	1.891	6	252	2320134	3	Standard

ICP-MS Quantitative Analysis - Summary Report

BLD

Sample ID: ~~BLE~~0687-BS2

Sample Dil Factor: 20

Comments:

Sample Date/Time: Wednesday, May 10, 2023 18:05:25

Number of Replicates: 3

Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth

Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun

Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac

Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	33167	3	Standard
>	Sc	45		ug/L			566891	617917	1	Standard
	Cr	52	26.566	ug/L	0.336	1	10103	434021	0	Standard
	Cr	53	25.839	ug/L	0.203	0	90	48285	2	Standard
>	Ge	72		ug/L			32698	35114	0	KED
	Ni	60	26.149	ug/L	0.318	1	3	44138	1	KED
	Ni	62	26.557	ug/L	0.236	0	3	7185	1	KED
	Cu	63	26.719	ug/L	0.111	0	24	126165	0	KED
	Cu	65	26.523	ug/L	0.868	3	17	64298	3	KED
	Zn	66	81.101	ug/L	0.657	0	20	47108	0	KED
	Zn	67	79.743	ug/L	2.633	3	3	7539	3	KED
	As	75	25.028	ug/L	0.475	1	3	7052	1	KED
	Y	89		ug/L			53020	54777	2	Standard
	Kr	83		ug/L			39	56	25	Standard
>	In-1	115		ug/L			7060	7190	2	KED
	Cd	111	25.907	ug/L	1.333	5	2	6749	2	KED
	Cd	114	25.906	ug/L	0.432	1	3	17376	2	KED
>	In	115		ug/L			494263	529323	0	Standard
	Ag	107	25.138	ug/L	0.889	3	53	437657	3	Standard
	Ba	135	25.018	ug/L	0.513	2	15	153411	1	Standard
	Ba	137	25.193	ug/L	0.818	3	16	276243	3	Standard
>	Tb	159		ug/L			184968	195659	1	Standard
	Pb	208	26.664	ug/L	0.249	0	252	2496863	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:11:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	38063	2	Standard
⌈>	Sc	45		ug/L			566891	597496	2	Standard
|	Cr	52	-0.003	ug/L	0.011	446	10103	10607	1	Standard
⌊	Cr	53	0.015	ug/L	0.002	15	90	121	5	Standard
⌈>	Ge	72		ug/L			32698	34566	1	KED
|	Ni	60	0.005	ug/L	0.001	13	3	12	9	KED
|	Ni	62	0.002	ug/L	0.007	416	3	3	50	KED
|	Cu	63	0.028	ug/L	0.004	15	24	154	12	KED
|	Cu	65	0.030	ug/L	0.004	12	17	90	10	KED
|	Zn	66	0.367	ug/L	0.046	12	20	231	10	KED
|	Zn	67	0.380	ug/L	0.094	24	3	39	22	KED
⌊	As	75	-0.002	ug/L	0.003	112	3	2	26	KED
	Y	89		ug/L			53020	53718	2	Standard
	Kr	83		ug/L			39	38	21	Standard
⌈>	In-1	115		ug/L			7060	7412	2	KED
|	Cd	111	-0.002	ug/L	0.004	224	2	1	50	KED
⌊	Cd	114	-0.001	ug/L	0.002	306	3	2	38	KED
⌈>	In	115		ug/L			494263	508864	4	Standard
|	Ag	107	0.001	ug/L	0.001	103	53	76	30	Standard
|	Ba	135	0.044	ug/L	0.001	3	15	276	7	Standard
⌊	Ba	137	0.041	ug/L	0.002	5	16	448	2	Standard
⌈>	Tb	159		ug/L			184968	189447	1	Standard
⌊	Pb	208	0.003	ug/L	0.001	15	252	551	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:15:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	41219	2	Standard
>	Sc	45		ug/L			566891	595237	2	Standard
	Cr	52	26.019	ug/L	0.637	2	10103	409724	2	Standard
	Cr	53	25.701	ug/L	0.388	1	90	46253	0	Standard
>	Ge	72		ug/L			32698	33724	2	KED
	Ni	60	26.223	ug/L	0.188	0	3	42515	3	KED
	Ni	62	25.826	ug/L	0.457	1	3	6712	3	KED
	Cu	63	27.023	ug/L	0.029	0	24	122552	2	KED
	Cu	65	26.364	ug/L	0.662	2	17	61404	4	KED
	Zn	66	84.748	ug/L	0.880	1	20	47269	1	KED
	Zn	67	82.421	ug/L	2.653	3	3	7480	1	KED
	As	75	25.246	ug/L	0.327	1	3	6830	1	KED
	Y	89		ug/L			53020	55215	3	Standard
	Kr	83		ug/L			39	61	32	Standard
>	In-1	115		ug/L			7060	7117	3	KED
	Cd	111	26.003	ug/L	0.830	3	2	6706	1	KED
	Cd	114	25.869	ug/L	1.271	4	3	17159	2	KED
>	In	115		ug/L			494263	501527	1	Standard
	Ag	107	25.380	ug/L	0.349	1	53	418726	1	Standard
	Ba	135	25.446	ug/L	0.398	1	15	147835	0	Standard
	Ba	137	25.147	ug/L	0.112	0	16	261267	1	Standard
>	Tb	159		ug/L			184968	192205	0	Standard
	Pb	208	25.898	ug/L	0.210	0	252	2382531	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0077-MS2
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:21:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	40376	1	Standard
⌈>	**Sc**	**45**		ug/L			566891	644293	2	Standard
|	**Cr**	**52**	**13.646**	ug/L	0.334	2	10103	237982	1	Standard
⌊	**Cr**	**53**	**13.650**	ug/L	0.413	3	90	26636	3	Standard
⌈>	**Ge**	**72**		ug/L			32698	35599	1	KED
|	**Ni**	**60**	**14.278**	ug/L	0.608	4	3	24427	3	KED
|	**Ni**	**62**	**14.855**	ug/L	0.778	5	3	4078	6	KED
|	**Cu**	**63**	**17.856**	ug/L	0.146	0	24	85486	1	KED
|	**Cu**	**65**	**17.890**	ug/L	0.181	1	17	43971	1	KED
|	**Zn**	**66**	**44.470**	ug/L	0.482	1	20	26195	0	KED
|	**Zn**	**67**	**44.109**	ug/L	0.983	2	3	4229	1	KED
⌊	**As**	**75**	**14.390**	ug/L	0.229	1	3	4111	0	KED
	Y	**89**		ug/L			53020	82049	1	Standard
	Kr	**83**		ug/L			39	44	35	Standard
⌈>	**In-1**	**115**		ug/L			7060	7585	1	KED
|	**Cd**	**111**	**13.396**	ug/L	0.268	2	2	3686	3	KED
⌊	**Cd**	**114**	**12.937**	ug/L	0.159	1	3	9156	1	KED
⌈>	**In**	**115**		ug/L			494263	520828	1	Standard
|	**Ag**	**107**	**13.168**	ug/L	0.834	6	53	225463	4	Standard
|	**Ba**	**135**	**18.146**	ug/L	0.439	2	15	109466	0	Standard
⌊	**Ba**	**137**	**18.016**	ug/L	0.372	2	16	194342	1	Standard
⌈>	**Tb**	**159**		ug/L			184968	198562	2	Standard
⌊	**Pb**	**208**	**13.622**	ug/L	0.430	3	252	1294148	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0297-01
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:27:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	43660	3	Standard
>	**Sc**	**45**		ug/L			566891	632000	0	Standard
	Cr	**52**	**2.036**	ug/L	0.025	1	10103	44431	0	Standard
	Cr	**53**	**2.030**	ug/L	0.034	1	90	3972	1	Standard
>	**Ge**	**72**		ug/L			32698	35701	1	KED
	Ni	**60**	**2.054**	ug/L	0.066	3	3	3527	2	KED
	Ni	**62**	**2.148**	ug/L	0.146	6	3	593	4	KED
	Cu	**63**	**3.160**	ug/L	0.088	2	24	15197	4	KED
	Cu	**65**	**3.168**	ug/L	0.115	3	17	7823	3	KED
	Zn	**66**	**13.507**	ug/L	0.376	2	20	7993	1	KED
	Zn	**67**	**13.075**	ug/L	0.153	1	3	1260	2	KED
	As	**75**	**0.552**	ug/L	0.034	6	3	161	7	KED
	Y	**89**		ug/L			53020	79010	1	Standard
	Kr	**83**		ug/L			39	41	17	Standard
>	**In-1**	**115**		ug/L			7060	7693	2	KED
	Cd	**111**	**0.040**	ug/L	0.009	23	2	13	17	KED
	Cd	**114**	**0.048**	ug/L	0.010	21	3	37	18	KED
>	**In**	**115**		ug/L			494263	523935	1	Standard
	Ag	**107**	**0.024**	ug/L	0.002	7	53	473	6	Standard
	Ba	**135**	**6.728**	ug/L	0.172	2	15	40843	2	Standard
	Ba	**137**	**6.775**	ug/L	0.223	3	16	73515	1	Standard
>	**Tb**	**159**		ug/L			184968	202392	1	Standard
	Pb	**208**	**12.755**	ug/L	0.082	0	252	1235605	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0728-DUP2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:32:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	44324	2	Standard
>	Sc	45		ug/L			566891	616246	1	Standard
	Cr	52	3.859	ug/L	0.104	2	10103	72247	0	Standard
	Cr	53	3.763	ug/L	0.033	0	90	7097	1	Standard
>	Ge	72		ug/L			32698	35016	1	KED
	Ni	60	3.217	ug/L	0.049	1	3	5417	1	KED
	Ni	62	3.072	ug/L	0.041	1	3	831	0	KED
	Cu	63	5.765	ug/L	0.101	1	24	27162	1	KED
	Cu	65	5.632	ug/L	0.198	3	17	13623	1	KED
	Zn	66	25.143	ug/L	0.668	2	20	14575	1	KED
	Zn	67	24.719	ug/L	0.461	1	3	2332	0	KED
	As	75	0.890	ug/L	0.054	6	3	253	5	KED
	Y	89		ug/L			53020	86822	2	Standard
	Kr	83		ug/L			39	38	5	Standard
>	In-1	115		ug/L			7060	7818	1	KED
	Cd	111	0.092	ug/L	0.014	15	2	28	15	KED
	Cd	114	0.078	ug/L	0.020	25	3	60	24	KED
>	In	115		ug/L			494263	505786	3	Standard
	Ag	107	0.019	ug/L	0.001	7	53	378	3	Standard
	Ba	135	12.943	ug/L	0.471	3	15	75798	1	Standard
	Ba	137	12.936	ug/L	0.581	4	16	135424	1	Standard
>	Tb	159		ug/L			184968	196469	1	Standard
	Pb	208	25.694	ug/L	0.107	0	252	2416204	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0728-MS2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:36:54

DEL

Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	43287	3	Standard
⌈>	**Sc**	**45**		ug/L			566891	591647	10	Standard
|	**Cr**	**52**	**9.452**	ug/L	0.588	6	10103	154071	5	Standard
⌊	**Cr**	**53**	**9.291**	ug/L	0.725	7	90	16595	2	Standard
⌈>	**Ge**	**72**		ug/L			32698	35179	0	KED
|	**Ni**	**60**	**8.374**	ug/L	0.172	2	3	14163	1	KED
|	**Ni**	**62**	**8.570**	ug/L	0.258	3	3	2325	3	KED
|	**Cu**	**63**	**10.707**	ug/L	0.135	1	24	50663	1	KED
|	**Cu**	**65**	**10.695**	ug/L	0.305	2	17	25987	3	KED
|	**Zn**	**66**	**41.005**	ug/L	0.450	1	20	23871	0	KED
|	**Zn**	**67**	**43.282**	ug/L	1.509	3	3	4102	4	KED
⌊	**As**	**75**	**5.955**	ug/L	0.067	1	3	1683	0	KED
	Y	**89**		ug/L			53020	82678	9	Standard
	Kr	**83**		ug/L			39	48	26	Standard
⌈>	**In-1**	**115**		ug/L			7060	7566	2	KED
|	**Cd**	**111**	**5.358**	ug/L	0.095	1	2	1472	2	KED
⌊	**Cd**	**114**	**5.303**	ug/L	0.159	2	3	3745	3	KED
⌈>	**In**	**115**		ug/L			494263	487343	10	Standard
|	**Ag**	**107**	**4.919**	ug/L	0.394	8	53	78463	4	Standard
|	**Ba**	**135**	**79.346**	ug/L	6.937	8	15	445104	2	Standard
⌊	**Ba**	**137**	**79.361**	ug/L	5.203	6	16	797381	4	Standard
⌈>	**Tb**	**159**		ug/L			184968	188193	8	Standard
⌊	**Pb**	**208**	**31.645**	ug/L	1.866	5	252	2841204	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL3
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:41:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	28394	4	Standard
⌈>	**Sc**	**45**		ug/L			566891	585732	2	Standard
|	**Cr**	**52**	**-0.022**	ug/L	0.003	13	10103	10113	1	Standard
⌊	**Cr**	**53**	**-0.017**	ug/L	0.007	42	90	63	22	Standard
⌈>	**Ge**	**72**		ug/L			32698	33367	0	KED
|	**Ni**	**60**	**0.004**	ug/L	0.002	58	3	9	34	KED
|	**Ni**	**62**	**0.007**	ug/L	0.028	390	3	5	141	KED
|	**Cu**	**63**	**0.007**	ug/L	0.006	84	24	54	46	KED
|	**Cu**	**65**	**0.001**	ug/L	0.006	513	17	20	71	KED
|	**Zn**	**66**	**0.082**	ug/L	0.030	36	20	66	24	KED
|	**Zn**	**67**	**0.049**	ug/L	0.088	181	3	8	96	KED
⌊	**As**	**75**	**-0.002**	ug/L	0.004	182	3	2	36	KED
	Y	**89**		ug/L			53020	53017	1	Standard
	Kr	**83**		ug/L			39	46	26	Standard
⌈>	**In-1**	**115**		ug/L			7060	7227	2	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.006	150	2	1	114	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	5	3	1	4	KED
⌈>	**In**	**115**		ug/L			494263	495365	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	81	53	38	35	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.002	109	15	27	49	Standard
⌊	**Ba**	**137**	**0.005**	ug/L	0.001	12	16	66	8	Standard
⌈>	**Tb**	**159**		ug/L			184968	186655	1	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	3	252	641	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:45:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	28727	4	Standard
⌈>	**Sc**	**45**		ug/L			566891	609014	3	Standard
|	**Cr**	**52**	**50.570**	ug/L	0.762	1	10103	804391	2	Standard
⌊	**Cr**	**53**	**49.489**	ug/L	1.195	2	90	91015	1	Standard
⌈>	**Ge**	**72**		ug/L			32698	34132	2	KED
|	**Ni**	**60**	**50.592**	ug/L	1.395	2	3	82971	0	KED
|	**Ni**	**62**	**50.224**	ug/L	3.628	7	3	13194	5	KED
|	**Cu**	**63**	**50.541**	ug/L	1.378	2	24	231886	1	KED
|	**Cu**	**65**	**49.221**	ug/L	0.899	1	17	115932	0	KED
|	**Zn**	**66**	**51.252**	ug/L	1.016	1	20	28936	0	KED
|	**Zn**	**67**	**52.016**	ug/L	2.220	4	3	4779	2	KED
⌊	**As**	**75**	**50.828**	ug/L	0.713	1	3	13915	1	KED
	Y	**89**		ug/L			53020	56257	1	Standard
	Kr	**83**		ug/L			39	47	10	Standard
⌈>	**In-1**	**115**		ug/L			7060	7295	0	KED
|	**Cd**	**111**	**50.371**	ug/L	0.324	0	2	13324	0	KED
⌊	**Cd**	**114**	**51.434**	ug/L	0.839	1	3	35003	1	KED
⌈>	**In**	**115**		ug/L			494263	503811	3	Standard
|	**Ag**	**107**	**49.821**	ug/L	1.108	2	53	825169	1	Standard
|	**Ba**	**135**	**50.659**	ug/L	2.522	4	15	295308	1	Standard
⌊	**Ba**	**137**	**49.729**	ug/L	1.869	3	16	518499	0	Standard
⌈>	**Tb**	**159**		ug/L			184968	191232	2	Standard
⌊	**Pb**	**208**	**51.742**	ug/L	0.772	1	252	4734666	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:53:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	27100	6	Standard
⌈>	**Sc**	**45**		ug/L			566891	604751	2	Standard
|	**Cr**	**52**	**-0.032**	ug/L	0.003	8	10103	10287	2	Standard
⌊	**Cr**	**53**	**-0.011**	ug/L	0.003	28	90	76	7	Standard
⌈>	**Ge**	**72**		ug/L			32698	35074	2	KED
|	**Ni**	**60**	**-0.000**	ug/L	0.000	30	3	3	0	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.008	107	3	1	173	KED
|	**Cu**	**63**	**0.006**	ug/L	0.002	32	24	52	14	KED
|	**Cu**	**65**	**0.002**	ug/L	0.002	76	17	24	19	KED
|	**Zn**	**66**	**-0.002**	ug/L	0.009	530	20	21	25	KED
|	**Zn**	**67**	**0.004**	ug/L	0.011	296	3	4	24	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.002	282	3	3	17	KED
	Y	**89**		ug/L			53020	52811	0	Standard
	Kr	**83**		ug/L			39	43	26	Standard
⌈>	**In-1**	**115**		ug/L			7060	7273	3	KED
|	**Cd**	**111**	**0.001**	ug/L	0.005	577	2	2	57	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.006	392	3	4	91	KED
⌈>	**In**	**115**		ug/L			494263	514317	0	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	153	53	64	20	Standard
|	**Ba**	**135**	**-0.000**	ug/L	0.001	153	15	13	28	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	65	16	26	22	Standard
⌈>	**Tb**	**159**		ug/L			184968	191895	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	16	252	332	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0301-BLK1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 18:57:58
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	36132	2	Standard
⌈>	Sc	45		ug/L			566891	602137	1	Standard
|	Cr	52	0.039	ug/L	0.002	4	10103	11333	1	Standard
⌊	Cr	53	0.041	ug/L	0.004	11	90	170	5	Standard
⌈>	Ge	72		ug/L			32698	35755	1	KED
|	Ni	60	0.009	ug/L	0.006	72	3	19	55	KED
|	Ni	62	-0.006	ug/L	0.012	205	3	1	173	KED
|	Cu	63	0.054	ug/L	0.004	7	24	286	5	KED
|	Cu	65	0.049	ug/L	0.005	11	17	139	8	KED
|	Zn	66	0.501	ug/L	0.016	3	20	318	1	KED
|	Zn	67	0.537	ug/L	0.123	22	3	55	21	KED
⌊	As	75	-0.004	ug/L	0.005	131	3	2	60	KED
	Y	89		ug/L			53020	53484	1	Standard
	Kr	83		ug/L			39	42	9	Standard
⌈>	In-1	115		ug/L			7060	7514	4	KED
|	Cd	111	-0.003	ug/L	0.004	162	2	1	69	KED
⌊	Cd	114	0.001	ug/L	0.007	593	3	4	120	KED
⌈>	In	115		ug/L			494263	515717	1	Standard
|	Ag	107	-0.001	ug/L	0.001	165	53	41	59	Standard
|	Ba	135	0.032	ug/L	0.003	7	15	208	8	Standard
⌊	Ba	137	0.034	ug/L	0.005	15	16	380	13	Standard
⌈>	Tb	159		ug/L			184968	188567	0	Standard
⌊	Pb	208	0.013	ug/L	0.001	6	252	1422	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0301-BS1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:02:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	39347	2	Standard
>	Sc	45		ug/L			566891	602736	1	Standard
	Cr	52	25.728	ug/L	0.632	2	10103	410293	1	Standard
	Cr	53	25.069	ug/L	0.544	2	90	45686	0	Standard
>	Ge	72		ug/L			32698	35760	0	KED
	Ni	60	24.931	ug/L	0.329	1	3	42859	2	KED
	Ni	62	25.470	ug/L	0.338	1	3	7019	2	KED
	Cu	63	26.115	ug/L	0.703	2	24	125575	2	KED
	Cu	65	25.523	ug/L	0.337	1	17	63008	1	KED
	Zn	66	81.836	ug/L	1.535	1	20	48404	0	KED
	Zn	67	77.435	ug/L	1.924	2	3	7455	1	KED
	As	75	24.221	ug/L	0.419	1	3	6951	2	KED
	Y	89		ug/L			53020	55246	3	Standard
	Kr	83		ug/L			39	38	17	Standard
>	In-1	115		ug/L			7060	7223	4	KED
	Cd	111	25.786	ug/L	0.757	2	2	6750	1	KED
	Cd	114	25.761	ug/L	0.217	0	3	17358	3	KED
>	In	115		ug/L			494263	502123	3	Standard
	Ag	107	25.046	ug/L	0.929	3	53	413450	2	Standard
	Ba	135	25.125	ug/L	0.881	3	15	146049	0	Standard
	Ba	137	24.829	ug/L	0.821	3	16	258081	0	Standard
>	Tb	159		ug/L			184968	192140	0	Standard
	Pb	208	26.135	ug/L	0.277	1	252	2403344	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:07:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	33143	1	Standard
>	Sc	45		ug/L			566891	616779	2	Standard
	Cr	52	-0.028	ug/L	0.019	69	10103	10547	0	Standard
	Cr	53	-0.006	ug/L	0.003	40	90	86	4	Standard
>	Ge	72		ug/L			32698	34454	0	KED
	Ni	60	0.008	ug/L	0.004	46	3	16	35	KED
	Ni	62	-0.003	ug/L	0.008	272	3	2	86	KED
	Cu	63	0.012	ug/L	0.003	29	24	79	20	KED
	Cu	65	0.008	ug/L	0.007	86	17	36	43	KED
	Zn	66	0.171	ug/L	0.019	11	20	119	8	KED
	Zn	67	0.203	ug/L	0.083	40	3	22	33	KED
	As	75	-0.003	ug/L	0.003	91	3	2	28	KED
	Y	89		ug/L			53020	56743	3	Standard
	Kr	83		ug/L			39	53	27	Standard
>	In-1	115		ug/L			7060	7418	0	KED
	Cd	111	-0.004	ug/L	0.002	51	2	1	43	KED
	Cd	114	-0.001	ug/L	0.004	676	3	2	100	KED
>	In	115		ug/L			494263	513562	2	Standard
	Ag	107	0.001	ug/L	0.001	216	53	66	31	Standard
	Ba	135	0.034	ug/L	0.003	9	15	215	6	Standard
	Ba	137	0.034	ug/L	0.001	1	16	377	3	Standard
>	Tb	159		ug/L			184968	193668	0	Standard
	Pb	208	0.007	ug/L	0.000	3	252	869	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-BS1
Sample Dil Factor: 20
DEL
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:11:48
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	31606	2	Standard
>	**Sc**	**45**		ug/L			566891	583965	11	Standard
	Cr	**52**	**27.552**	ug/L	2.680	9	10103	422084	3	Standard
	Cr	**53**	**27.385**	ug/L	2.342	8	90	48042	3	Standard
>	**Ge**	**72**		ug/L			32698	33602	2	KED
	Ni	**60**	**26.623**	ug/L	0.960	3	3	42975	0	KED
	Ni	**62**	**26.995**	ug/L	0.969	3	3	6985	1	KED
	Cu	**63**	**27.153**	ug/L	0.763	2	24	122630	0	KED
	Cu	**65**	**26.767**	ug/L	0.624	2	17	62066	0	KED
	Zn	**66**	**82.288**	ug/L	2.082	2	20	45718	0	KED
	Zn	**67**	**78.775**	ug/L	1.406	1	3	7124	0	KED
	As	**75**	**25.075**	ug/L	0.969	3	3	6756	1	KED
	Y	**89**		ug/L			53020	52675	13	Standard
	Kr	**83**		ug/L			39	52	36	Standard
>	**In-1**	**115**		ug/L			7060	7562	3	KED
	Cd	**111**	**24.984**	ug/L	0.283	1	2	6850	1	KED
	Cd	**114**	**24.822**	ug/L	0.916	3	3	17500	0	KED
>	**In**	**115**		ug/L			494263	489071	10	Standard
	Ag	**107**	**26.745**	ug/L	1.759	6	53	428268	4	Standard
	Ba	**135**	**27.408**	ug/L	2.670	9	15	154205	1	Standard
	Ba	**137**	**27.186**	ug/L	2.617	9	16	273527	2	Standard
>	**Tb**	**159**		ug/L			184968	184312	10	Standard
	Pb	**208**	**28.250**	ug/L	2.382	8	252	2477210	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0143-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:19:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	30379	2	Standard
>	Sc	45		ug/L			566891	608076	1	Standard
	Cr	52	26.503	ug/L	0.345	1	10103	426187	2	Standard
	Cr	53	26.098	ug/L	0.180	0	90	47989	1	Standard
>	Ge	72		ug/L			32698	35900	1	KED
	Ni	60	25.767	ug/L	0.436	1	3	44460	0	KED
	Ni	62	26.190	ug/L	0.532	2	3	7243	0	KED
	Cu	63	27.050	ug/L	0.206	0	24	130578	1	KED
	Cu	65	26.509	ug/L	0.178	0	17	65696	1	KED
	Zn	66	81.108	ug/L	0.527	0	20	48170	2	KED
	Zn	67	77.729	ug/L	0.535	0	3	7513	1	KED
	As	75	24.804	ug/L	0.297	1	3	7144	1	KED
	Y	89		ug/L			53020	55160	3	Standard
	Kr	83		ug/L			39	68	12	Standard
>	In-1	115		ug/L			7060	7460	2	KED
	Cd	111	25.512	ug/L	0.374	1	2	6904	3	KED
	Cd	114	24.977	ug/L	0.596	2	3	17384	2	KED
>	In	115		ug/L			494263	513378	4	Standard
	Ag	107	26.260	ug/L	0.377	1	53	443361	3	Standard
	Ba	135	26.060	ug/L	1.712	6	15	154721	2	Standard
	Ba	137	25.388	ug/L	1.063	4	16	269741	2	Standard
>	Tb	159		ug/L			184968	194271	3	Standard
	Pb	208	26.682	ug/L	0.951	3	252	2478789	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0728-MS2
Sample Dil Factor: 100
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:23:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	32572	2	Standard
>	Sc	45		ug/L			566891	634781	1	Standard
	Cr	52	8.923	ug/L	0.181	2	10103	157301	3	Standard
	Cr	53	8.784	ug/L	0.118	1	90	16931	2	Standard
>	Ge	72		ug/L			32698	35227	2	KED
	Ni	60	7.934	ug/L	0.171	2	3	13433	0	KED
	Ni	62	8.105	ug/L	0.290	3	3	2202	3	KED
	Cu	63	10.173	ug/L	0.317	3	24	48187	1	KED
	Cu	65	10.080	ug/L	0.557	5	17	24508	3	KED
	Zn	66	38.423	ug/L	0.769	2	20	22395	0	KED
	Zn	67	40.690	ug/L	1.664	4	3	3860	3	KED
	As	75	5.570	ug/L	0.174	3	3	1576	1	KED
	Y	89		ug/L			53020	85393	1	Standard
	Kr	83		ug/L			39	44	27	Standard
>	In-1	115		ug/L			7060	7444	0	KED
	Cd	111	5.163	ug/L	0.104	2	2	1395	1	KED
	Cd	114	5.160	ug/L	0.024	0	3	3586	0	KED
>	In	115		ug/L			494263	516165	3	Standard
	Ag	107	4.702	ug/L	0.128	2	53	79838	0	Standard
	Ba	135	76.355	ug/L	3.843	5	15	456151	2	Standard
	Ba	137	75.875	ug/L	3.822	5	16	810591	3	Standard
>	Tb	159		ug/L			184968	202938	1	Standard
	Pb	208	30.231	ug/L	0.583	1	252	2935613	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0348-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:28:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	25448	5	Standard
>	Sc	45		ug/L			566891	529281	3	Standard
	Cr	52	0.440	ug/L	0.008	1	10103	15429	3	Standard
	Cr	53	1.137	ug/L	0.039	3	90	1900	3	Standard
>	Ge	72		ug/L			32698	27739	0	KED
	Ni	60	1.356	ug/L	0.067	4	3	1811	5	KED
	Ni	62	1.314	ug/L	0.157	11	3	283	10	KED
	Cu	63	1.848	ug/L	0.018	0	24	6912	0	KED
	Cu	65	1.781	ug/L	0.011	0	17	3424	0	KED
	Zn	66	16.919	ug/L	0.501	2	20	7776	2	KED
	Zn	67	15.634	ug/L	0.215	1	3	1170	0	KED
	As	75	1.258	ug/L	0.034	2	3	282	3	KED
	Y	89		ug/L			53020	48610	0	Standard
	Kr	83		ug/L			39	43	19	Standard
>	In-1	115		ug/L			7060	5801	2	KED
	Cd	111	0.005	ug/L	0.004	92	2	2	33	KED
	Cd	114	0.010	ug/L	0.009	90	3	7	62	KED
>	In	115		ug/L			494263	443792	0	Standard
	Ag	107	0.001	ug/L	0.001	64	53	62	14	Standard
	Ba	135	0.370	ug/L	0.025	6	15	1916	6	Standard
	Ba	137	0.371	ug/L	0.010	2	16	3427	3	Standard
>	Tb	159		ug/L			184968	173759	1	Standard
	Pb	208	0.116	ug/L	0.001	1	252	9874	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL4
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:33:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	24223	2	Standard
⌈>	**Sc**	**45**		ug/L			566891	575088	3	Standard
|	**Cr**	**52**	**-0.007**	ug/L	0.012	171	10103	10143	3	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.011	218	90	100	18	Standard
⌈>	**Ge**	**72**		ug/L			32698	30306	11	KED
|	**Ni**	**60**	**0.002**	ug/L	0.002	106	3	6	56	KED
|	**Ni**	**62**	**-0.008**	ug/L	0.004	58	3	1	86	KED
|	**Cu**	**63**	**0.004**	ug/L	0.003	73	24	36	26	KED
|	**Cu**	**65**	**0.003**	ug/L	0.003	113	17	21	26	KED
|	**Zn**	**66**	**0.070**	ug/L	0.009	13	20	54	19	KED
|	**Zn**	**67**	**0.035**	ug/L	0.010	28	3	6	17	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.002	52	3	1	25	KED
	Y	**89**		ug/L			53020	52486	2	Standard
	Kr	**83**		ug/L			39	40	9	Standard
⌈>	**In-1**	**115**		ug/L			7060	6912	1	KED
|	**Cd**	**111**	**-0.006**	ug/L	0.002	35	2	0	86	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.003	164	3	1	103	KED
⌈>	**In**	**115**		ug/L			494263	502957	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.001	187	53	45	43	Standard
|	**Ba**	**135**	**0.001**	ug/L	0.001	180	15	19	34	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	33	16	49	21	Standard
⌈>	**Tb**	**159**		ug/L			184968	186751	0	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.000	10	252	622	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0374-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:40:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			26311	27470	2	Standard
⌈>	Sc	45		ug/L			566891	535366	2	Standard
|	Cr	52	1.485	ug/L	0.027	1	10103	30025	1	Standard
⌊	Cr	53	2.427	ug/L	0.053	2	90	4007	4	Standard
⌈>	Ge	72		ug/L			32698	26716	2	KED
|	Ni	60	0.991	ug/L	0.067	6	3	1276	8	KED
|	Ni	62	0.904	ug/L	0.041	4	3	188	2	KED
|	Cu	63	1.735	ug/L	0.003	0	24	6252	2	KED
|	Cu	65	1.743	ug/L	0.055	3	17	3228	5	KED
|	Zn	66	1.685	ug/L	0.077	4	20	761	6	KED
|	Zn	67	2.401	ug/L	0.167	6	3	175	8	KED
⌊	As	75	0.727	ug/L	0.067	9	3	158	8	KED
	Y	89		ug/L			53020	49651	1	Standard
	Kr	83		ug/L			39	38	15	Standard
⌈>	In-1	115		ug/L			7060	5871	1	KED
|	Cd	111	0.008	ug/L	0.007	86	2	3	41	KED
⌊	Cd	114	0.009	ug/L	0.009	96	3	7	63	KED
⌈>	In	115		ug/L			494263	457235	0	Standard
|	Ag	107	-0.000	ug/L	0.001	375	53	46	22	Standard
|	Ba	135	19.449	ug/L	0.234	1	15	103026	0	Standard
⌊	Ba	137	19.409	ug/L	0.370	1	16	183823	1	Standard
⌈>	Tb	159		ug/L			184968	175956	0	Standard
⌊	Pb	208	0.110	ug/L	0.002	1	252	9480	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:44:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	24303	5	Standard
⌈>	**Sc**	**45**		ug/L			566891	576791	3	Standard
|	**Cr**	**52**	**0.036**	ug/L	0.027	76	10103	10807	3	Standard
⌊	**Cr**	**53**	**0.024**	ug/L	0.004	15	90	133	5	Standard
⌈>	**Ge**	**72**		ug/L			32698	33136	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.002	203	3	5	66	KED
|	**Ni**	**62**	**-0.000**	ug/L	0.009	6668	3	3	69	KED
|	**Cu**	**63**	**-0.001**	ug/L	0.001	138	24	20	24	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.003	284	17	15	37	KED
|	**Zn**	**66**	**0.053**	ug/L	0.010	18	20	50	9	KED
|	**Zn**	**67**	**0.042**	ug/L	0.022	52	3	7	25	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.006	153	3	2	68	KED
	Y	**89**		ug/L			53020	52970	2	Standard
	Kr	**83**		ug/L			39	34	8	Standard
⌈>	**In-1**	**115**		ug/L			7060	6842	2	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.007	143	2	0	173	KED
⌊	**Cd**	**114**	**-0.003**	ug/L	0.002	57	3	1	90	KED
⌈>	**In**	**115**		ug/L			494263	506336	1	Standard
|	**Ag**	**107**	**-0.001**	ug/L	0.000	21	53	30	18	Standard
|	**Ba**	**135**	**0.002**	ug/L	0.001	49	15	26	21	Standard
⌊	**Ba**	**137**	**0.003**	ug/L	0.001	35	16	48	23	Standard
⌈>	**Tb**	**159**		ug/L			184968	187814	2	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.000	5	252	556	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:48:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	24269	4	Standard
⌈>	**Sc**	**45**		ug/L			566891	590553	1	Standard
|	**Cr**	**52**	**51.066**	ug/L	0.308	0	10103	787666	1	Standard
⌊	**Cr**	**53**	**49.455**	ug/L	0.522	1	90	88228	1	Standard
⌈>	**Ge**	**72**		ug/L			32698	33288	2	KED
|	**Ni**	**60**	**49.520**	ug/L	1.070	2	3	79212	1	KED
|	**Ni**	**62**	**50.158**	ug/L	1.195	2	3	12858	0	KED
|	**Cu**	**63**	**50.304**	ug/L	2.007	3	24	225023	1	KED
|	**Cu**	**65**	**50.399**	ug/L	1.418	2	17	115756	1	KED
|	**Zn**	**66**	**51.639**	ug/L	1.107	2	20	28433	1	KED
|	**Zn**	**67**	**50.767**	ug/L	0.397	0	3	4551	1	KED
⌊	**As**	**75**	**49.807**	ug/L	1.104	2	3	13296	0	KED
	Y	**89**		ug/L			53020	54784	0	Standard
	Kr	**83**		ug/L			39	47	4	Standard
⌈>	**In-1**	**115**		ug/L			7060	6811	3	KED
|	**Cd**	**111**	**51.475**	ug/L	1.428	2	2	12706	0	KED
⌊	**Cd**	**114**	**51.093**	ug/L	1.398	2	3	32450	1	KED
⌈>	**In**	**115**		ug/L			494263	508399	2	Standard
|	**Ag**	**107**	**48.081**	ug/L	1.462	3	53	803607	0	Standard
|	**Ba**	**135**	**48.411**	ug/L	0.773	1	15	285047	1	Standard
⌊	**Ba**	**137**	**48.840**	ug/L	0.572	1	16	514273	2	Standard
⌈>	**Tb**	**159**		ug/L			184968	194510	1	Standard
⌊	**Pb**	**208**	**52.796**	ug/L	1.254	2	252	4913375	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 19:56:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	23676	7	Standard
⌈>	**Sc**	**45**		ug/L			566891	595773	0	Standard
|	**Cr**	**52**	**-0.041**	ug/L	0.018	43	10103	9984	3	Standard
⌊	**Cr**	**53**	**-0.018**	ug/L	0.005	27	90	63	14	Standard
⌈>	**Ge**	**72**		ug/L			32698	32613	1	KED
|	**Ni**	**60**	**0.000**	ug/L	0.001	345	3	4	49	KED
|	**Ni**	**62**	**0.000**	ug/L	0.005	5394	3	3	34	KED
|	**Cu**	**63**	**0.002**	ug/L	0.003	144	24	33	39	KED
|	**Cu**	**65**	**-0.000**	ug/L	0.002	574	17	16	24	KED
|	**Zn**	**66**	**-0.015**	ug/L	0.002	15	20	12	8	KED
|	**Zn**	**67**	**0.015**	ug/L	0.045	306	3	5	78	KED
⌊	**As**	**75**	**-0.001**	ug/L	0.004	298	3	2	33	KED
	Y	**89**		ug/L			53020	54754	2	Standard
	Kr	**83**		ug/L			39	36	18	Standard
⌈>	**In-1**	**115**		ug/L			7060	7291	3	KED
|	**Cd**	**111**	**0.001**	ug/L	0.009	818	2	2	94	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	91	3	4	26	KED
⌈>	**In**	**115**		ug/L			494263	530983	2	Standard
|	**Ag**	**107**	**0.001**	ug/L	0.001	69	53	74	16	Standard
|	**Ba**	**135**	**-0.001**	ug/L	0.001	164	15	12	45	Standard
⌊	**Ba**	**137**	**0.001**	ug/L	0.001	103	16	31	44	Standard
⌈>	**Tb**	**159**		ug/L			184968	189359	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	20	252	351	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:21:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			26311	30742	2	Standard
⌈>	**Sc**	**45**		ug/L			566891	624857	1	Standard
|	**Cr**	**52**	**0.084**	ug/L	0.034	40	10103	12489	5	Standard
⌊	**Cr**	**53**	**0.132**	ug/L	0.039	29	90	350	22	Standard
⌈>	**Ge**	**72**		ug/L			32698	35356	3	KED
|	**Ni**	**60**	**0.546**	ug/L	0.226	41	3	922	37	KED
|	**Ni**	**62**	**0.552**	ug/L	0.142	25	3	153	22	KED
|	**Cu**	**63**	**0.023**	ug/L	0.003	11	24	133	9	KED
|	**Cu**	**65**	**0.022**	ug/L	0.011	48	17	72	36	KED
|	**Zn**	**66**	**0.601**	ug/L	0.108	17	20	372	12	KED
|	**Zn**	**67**	**0.587**	ug/L	0.108	18	3	59	13	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.003	102	3	2	26	KED
	Y	**89**		ug/L			53020	55653	0	Standard
	Kr	**83**		ug/L			39	54	22	Standard
⌈>	**In-1**	**115**		ug/L			7060	7908	3	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	242	2	1	124	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	386	3	4	68	KED
⌈>	**In**	**115**		ug/L			494263	523603	3	Standard
|	**Ag**	**107**	**0.000**	ug/L	0.001	196	53	64	19	Standard
|	**Ba**	**135**	**0.121**	ug/L	0.027	22	15	751	23	Standard
⌊	**Ba**	**137**	**0.118**	ug/L	0.013	11	16	1298	13	Standard
⌈>	**Tb**	**159**		ug/L			184968	191054	1	Standard
⌊	**Pb**	**208**	**0.005**	ug/L	0.000	7	252	724	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:26:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				27881	1	Standard
⌈>	**Sc**	**45**		ug/L				600447	1	Standard
|	**Cr**	**52**		ug/L				10860	1	Standard
⌊	**Cr**	**53**		ug/L				113	5	Standard
⌈>	**Ge**	**72**		ug/L				35776	2	KED
|	**Ni**	**60**		ug/L				145	17	KED
|	**Ni**	**62**		ug/L				28	29	KED
|	**Cu**	**63**		ug/L				53	12	KED
|	**Cu**	**65**		ug/L				29	13	KED
|	**Zn**	**66**		ug/L				87	12	KED
|	**Zn**	**67**		ug/L				19	11	KED
⌊	**As**	**75**		ug/L				2	44	KED
	Y	**89**		ug/L				55660	0	Standard
	Kr	**83**		ug/L				44	13	Standard
⌈>	**In-1**	**115**		ug/L				7587	4	KED
|	**Cd**	**111**		ug/L				4	13	KED
⌊	**Cd**	**114**		ug/L				1	106	KED
⌈>	**In**	**115**		ug/L				519229	3	Standard
⌊	**Ag**	**107**		ug/L				33	13	Standard
⌈>	**Tb**	**159**		ug/L				190542	1	Standard
⌊	**Pb**	**208**		ug/L				524	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:30:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	29050	1	Standard
⌈>	**Sc**	**45**		ug/L			600447	626146	0	Standard
|	**Cr**	**52**	**49.167**	ug/L	0.927	1	10860	804779	2	Standard
⌊	**Cr**	**53**	**49.187**	ug/L	0.914	1	113	93067	2	Standard
⌈>	**Ge**	**72**		ug/L			35776	35306	0	KED
|	**Ni**	**60**	**48.708**	ug/L	1.092	2	145	82805	2	KED
|	**Ni**	**62**	**48.519**	ug/L	1.369	2	28	13221	2	KED
|	**Cu**	**63**	**49.493**	ug/L	0.730	1	53	234973	1	KED
|	**Cu**	**65**	**49.388**	ug/L	0.330	0	29	120371	1	KED
|	**Zn**	**66**	**50.574**	ug/L	1.281	2	87	29610	2	KED
|	**Zn**	**67**	**50.034**	ug/L	0.468	0	19	4773	1	KED
⌊	**As**	**75**	**49.621**	ug/L	0.526	1	2	14052	0	KED
	Y	**89**		ug/L			55660	56069	3	Standard
	Kr	**83**		ug/L			44	62	6	Standard
⌈>	**In-1**	**115**		ug/L			7587	7367	0	KED
|	**Cd**	**111**	**50.587**	ug/L	0.561	1	4	13516	1	KED
⌊	**Cd**	**114**	**50.851**	ug/L	0.642	1	1	34948	1	KED
⌈>	**In**	**115**		ug/L			519229	515799	3	Standard
⌊	**Ag**	**107**	**47.565**	ug/L	1.435	3	33	806664	2	Standard
⌈>	**Tb**	**159**		ug/L			190542	197846	0	Standard
⌊	**Pb**	**208**	**49.588**	ug/L	0.492	0	524	4695653	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:37:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	30403	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	612688	0	Standard
|	**Cr**	**52**	**-0.028**	ug/L	0.012	42	10860	10643	1	Standard
⌊	**Cr**	**53**	**-0.019**	ug/L	0.007	33	113	80	16	Standard
⌈>	**Ge**	**72**		ug/L			35776	35407	2	KED
|	**Ni**	**60**	**-0.008**	ug/L	0.005	61	145	130	8	KED
|	**Ni**	**62**	**-0.052**	ug/L	0.015	29	28	13	28	KED
|	**Cu**	**63**	**0.002**	ug/L	0.001	24	53	64	6	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.004	251	29	25	35	KED
|	**Zn**	**66**	**-0.024**	ug/L	0.007	30	87	72	4	KED
|	**Zn**	**67**	**-0.091**	ug/L	0.043	47	19	10	36	KED
⌊	**As**	**75**	**0.010**	ug/L	0.003	36	2	4	22	KED
	Y	**89**		ug/L			55660	55266	2	Standard
	Kr	**83**		ug/L			44	45	19	Standard
⌈>	**In-1**	**115**		ug/L			7587	7638	0	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.000	0	4	1		KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	80	1	3	34	KED
⌈>	**In**	**115**		ug/L			519229	538099	1	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.001	16	33	101	10	Standard
⌈>	**Tb**	**159**		ug/L			190542	193312	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	34	524	610	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:44:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	40138	4	Standard
⌈>	Sc	45		ug/L			600447	621245	1	Standard
|	Cr	52	0.003	ug/L	0.001	45	10860	11280	1	Standard
⌊	Cr	53	0.007	ug/L	0.004	47	113	131	4	Standard
⌈>	Ge	72		ug/L			35776	35226	1	KED
|	Ni	60	0.016	ug/L	0.020	127	145	170	19	KED
|	Ni	62	0.011	ug/L	0.039	354	28	31	33	KED
|	Cu	63	0.003	ug/L	0.003	102	53	67	23	KED
|	Cu	65	0.007	ug/L	0.002	30	29	46	11	KED
|	Zn	66	0.068	ug/L	0.015	22	87	125	6	KED
|	Zn	67	0.057	ug/L	0.101	177	19	24	38	KED
⌊	As	75	-0.003	ug/L	0.003	105	2	1	78	KED
	Y	89		ug/L			55660	55969	0	Standard
	Kr	83		ug/L			44	39	14	Standard
⌈>	In-1	115		ug/L			7587	7906	1	KED
|	Cd	111	-0.007	ug/L	0.008	103	4	2	98	KED
⌊	Cd	114	0.002	ug/L	0.005	193	1	3	93	KED
⌈>	In	115		ug/L			519229	537592	1	Standard
⌊	Ag	107	0.005	ug/L	0.004	76	33	119	54	Standard
⌈>	Tb	159		ug/L			190542	199925	0	Standard
⌊	Pb	208	0.006	ug/L	0.005	84	524	1100	41	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:48:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	37980	2	Standard
⌈>	Sc	45		ug/L			600447	626934	1	Standard
|	Cr	52	25.864	ug/L	0.160	0	10860	429230	1	Standard
⌊	Cr	53	25.501	ug/L	0.209	0	113	48367	2	Standard
⌈>	Ge	72		ug/L			35776	35083	0	KED
|	Ni	60	26.314	ug/L	0.807	3	145	44509	2	KED
|	Ni	62	25.633	ug/L	0.562	2	28	6954	1	KED
|	Cu	63	27.020	ug/L	0.634	2	53	127486	1	KED
|	Cu	65	27.020	ug/L	0.828	3	29	65447	2	KED
|	Zn	66	81.453	ug/L	3.084	3	87	47326	3	KED
|	Zn	67	77.935	ug/L	0.929	1	19	7377	0	KED
⌊	As	75	24.974	ug/L	0.394	1	2	7029	1	KED
	Y	89		ug/L			55660	56955	1	Standard
	Kr	83		ug/L			44	48	19	Standard
⌈>	In-1	115		ug/L			7587	7518	2	KED
|	Cd	111	25.173	ug/L	0.343	1	4	6865	2	KED
⌊	Cd	114	25.138	ug/L	0.825	3	1	17623	1	KED
⌈>	In	115		ug/L			519229	527783	1	Standard
⌊	Ag	107	25.955	ug/L	0.935	3	33	450479	2	Standard
⌈>	Tb	159		ug/L			190542	197638	2	Standard
⌊	Pb	208	26.529	ug/L	0.826	3	524	2508791	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-BLK1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:53:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	37385	3	Standard
⌈>	Sc	45		ug/L			600447	615099	2	Standard
|	Cr	52	0.015	ug/L	0.013	88	10860	11362	1	Standard
⌊	Cr	53	0.002	ug/L	0.005	210	113	120	5	Standard
⌈>	Ge	72		ug/L			35776	34993	1	KED
|	Ni	60	0.065	ug/L	0.008	12	145	250	4	KED
|	Ni	62	0.021	ug/L	0.042	200	28	33	34	KED
|	Cu	63	0.010	ug/L	0.004	39	53	97	17	KED
|	Cu	65	0.009	ug/L	0.003	34	29	51	16	KED
|	Zn	66	0.232	ug/L	0.032	13	87	219	8	KED
|	Zn	67	0.207	ug/L	0.030	14	19	38	7	KED
⌊	As	75	0.001	ug/L	0.009	1125	2	2	105	KED
	Y	89		ug/L			55660	55904	3	Standard
	Kr	83		ug/L			44	43	15	Standard
⌈>	In-1	115		ug/L			7587	7454	2	KED
|	Cd	111	-0.002	ug/L	0.002	84	4	3	15	KED
⌊	Cd	114	0.003	ug/L	0.002	75	1	3	40	KED
⌈>	In	115		ug/L			519229	537278	1	Standard
⌊	Ag	107	0.005	ug/L	0.002	53	33	116	35	Standard
⌈>	Tb	159		ug/L			190542	195405	3	Standard
⌊	Pb	208	0.006	ug/L	0.001	16	524	1060	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-BS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 20:57:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	36094	2	Standard
⌈>	Sc	45		ug/L			600447	572755	10	Standard
|	Cr	52	27.852	ug/L	2.315	8	10860	419085	4	Standard
⌊	Cr	53	27.110	ug/L	1.969	7	113	46728	4	Standard
⌈>	Ge	72		ug/L			35776	35198	0	KED
|	Ni	60	25.504	ug/L	0.222	0	145	43291	1	KED
|	Ni	62	25.791	ug/L	0.614	2	28	7019	1	KED
|	Cu	63	26.575	ug/L	0.425	1	53	125806	1	KED
|	Cu	65	26.358	ug/L	0.294	1	29	64056	1	KED
|	Zn	66	79.691	ug/L	1.477	1	87	46463	1	KED
|	Zn	67	76.937	ug/L	1.501	1	19	7307	2	KED
⌊	As	75	24.014	ug/L	0.245	1	2	6781	0	KED
	Y	89		ug/L			55660	53298	9	Standard
	Kr	83		ug/L			44	53	40	Standard
⌈>	In-1	115		ug/L			7587	7340	4	KED
|	Cd	111	25.290	ug/L	0.565	2	4	6730	1	KED
⌊	Cd	114	25.211	ug/L	0.729	2	1	17251	1	KED
⌈>	In	115		ug/L			519229	495969	9	Standard
⌊	Ag	107	26.638	ug/L	2.172	8	33	432404	2	Standard
⌈>	Tb	159		ug/L			190542	186305	10	Standard
⌊	Pb	208	27.713	ug/L	2.476	8	524	2455977	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0394-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:02:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	49327	2	Standard
>	Sc	45		ug/L			600447	731706	2	Standard
	Cr	52	12.124	ug/L	0.147	1	10860	241826	1	Standard
	Cr	53	12.156	ug/L	0.116	0	113	26975	1	Standard
>	Ge	72		ug/L			35776	34902	1	KED
	Ni	60	10.919	ug/L	0.231	2	145	18456	0	KED
	Ni	62	10.987	ug/L	0.493	4	28	2979	2	KED
	Cu	63	24.875	ug/L	0.831	3	53	116737	1	KED
	Cu	65	24.816	ug/L	0.603	2	29	59790	0	KED
	Zn	66	53.146	ug/L	1.002	1	87	30749	0	KED
	Zn	67	51.278	ug/L	1.131	2	19	4834	0	KED
	As	75	5.436	ug/L	0.145	2	2	1523	2	KED
	Y	89		ug/L			55660	260380	0	Standard
	Kr	83		ug/L			44	76	23	Standard
>	In-1	115		ug/L			7587	7321	2	KED
	Cd	111	0.108	ug/L	0.008	7	4	32	8	KED
	Cd	114	0.152	ug/L	0.016	10	1	105	10	KED
>	In	115		ug/L			519229	519189	4	Standard
	Ag	107	0.100	ug/L	0.001	0	33	1748	4	Standard
>	Tb	159		ug/L			190542	217094	0	Standard
	Pb	208	9.840	ug/L	0.276	2	524	1022869	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0687-DUP2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:07:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	48948	3	Standard
>	Sc	45		ug/L			600447	717992	2	Standard
	Cr	52	12.278	ug/L	0.108	0	10860	240147	1	Standard
	Cr	53	12.202	ug/L	0.281	2	113	26574	3	Standard
>	Ge	72		ug/L			35776	34652	1	KED
	Ni	60	11.215	ug/L	0.148	1	145	18817	0	KED
	Ni	62	10.981	ug/L	0.055	0	28	2958	1	KED
	Cu	63	24.789	ug/L	0.125	0	53	115536	1	KED
	Cu	65	25.011	ug/L	0.663	2	29	59828	1	KED
	Zn	66	52.626	ug/L	0.823	1	87	30233	1	KED
	Zn	67	51.295	ug/L	1.023	1	19	4802	2	KED
	As	75	5.303	ug/L	0.187	3	2	1475	2	KED
	Y	89		ug/L			55660	264619	1	Standard
	Kr	83		ug/L			44	89	9	Standard
>	In-1	115		ug/L			7587	7338	4	KED
	Cd	111	0.127	ug/L	0.015	11	4	37	6	KED
	Cd	114	0.124	ug/L	0.007	5	1	86	9	KED
>	In	115		ug/L			519229	507795	1	Standard
	Ag	107	0.096	ug/L	0.003	3	33	1642	4	Standard
>	Tb	159		ug/L			190542	217783	1	Standard
	Pb	208	9.267	ug/L	0.055	0	524	966473	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0687-MS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:12:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	43798	4	Standard
>	Sc	45		ug/L			600447	712380	2	Standard
	Cr	52	33.848	ug/L	0.696	2	10860	634231	2	Standard
	Cr	53	33.218	ug/L	0.454	1	113	71537	1	Standard
>	Ge	72		ug/L			35776	34769	1	KED
	Ni	60	35.480	ug/L	0.262	0	145	59435	1	KED
	Ni	62	35.792	ug/L	0.375	1	28	9613	2	KED
	Cu	63	49.044	ug/L	0.181	0	53	229305	0	KED
	Cu	65	49.587	ug/L	0.401	0	29	119023	1	KED
	Zn	66	127.164	ug/L	1.063	0	87	73182	0	KED
	Zn	67	123.226	ug/L	4.628	3	19	11545	2	KED
	As	75	28.650	ug/L	0.300	1	2	7990	0	KED
	Y	89		ug/L			55660	263207	0	Standard
	Kr	83		ug/L			44	70	9	Standard
>	In-1	115		ug/L			7587	7271	0	KED
	Cd	111	24.050	ug/L	0.279	1	4	6344	0	KED
	Cd	114	24.062	ug/L	0.530	2	1	16324	2	KED
>	In	115		ug/L			519229	498952	2	Standard
	Ag	107	20.136	ug/L	0.422	2	33	330380	0	Standard
>	Tb	159		ug/L			190542	217190	0	Standard
	Pb	208	31.824	ug/L	0.401	1	524	3308209	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0687-MSD2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:16:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42886	5	Standard
>	Sc	45		ug/L			600447	713189	2	Standard
	Cr	52	32.799	ug/L	0.728	2	10860	615560	1	Standard
	Cr	53	32.872	ug/L	0.464	1	113	70870	1	Standard
>	Ge	72		ug/L			35776	34920	2	KED
	Ni	60	34.594	ug/L	0.175	0	145	58202	1	KED
	Ni	62	34.631	ug/L	1.105	3	28	9337	1	KED
	Cu	63	47.676	ug/L	1.144	2	53	223798	0	KED
	Cu	65	47.132	ug/L	2.056	4	29	113539	2	KED
	Zn	66	125.287	ug/L	2.668	2	87	72401	1	KED
	Zn	67	124.246	ug/L	1.881	1	19	11692	1	KED
	As	75	27.961	ug/L	0.434	1	2	7831	1	KED
	Y	89		ug/L			55660	247812	1	Standard
	Kr	83		ug/L			44	69	20	Standard
>	In-1	115		ug/L			7587	7305	2	KED
	Cd	111	24.552	ug/L	0.448	1	4	6504	0	KED
	Cd	114	24.586	ug/L	1.060	4	1	16749	3	KED
>	In	115		ug/L			519229	504337	3	Standard
	Ag	107	17.259	ug/L	0.157	0	33	286300	2	Standard
>	Tb	159		ug/L			190542	221250	1	Standard
	Pb	208	30.874	ug/L	0.352	1	524	3269435	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0687-PS2
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:21:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	48757	4	Standard
⌈>	**Sc**	**45**		ug/L			600447	729719	3	Standard
|	**Cr**	**52**	**33.107**	ug/L	0.489	1	10860	635718	2	Standard
⌊	**Cr**	**53**	**32.943**	ug/L	0.273	0	113	72672	2	Standard
⌈>	**Ge**	**72**		ug/L			35776	34959	1	KED
|	**Ni**	**60**	**36.373**	ug/L	0.157	0	145	61261	1	KED
|	**Ni**	**62**	**36.640**	ug/L	0.186	0	28	9894	1	KED
|	**Cu**	**63**	**49.754**	ug/L	0.930	1	53	233872	1	KED
|	**Cu**	**65**	**49.585**	ug/L	0.881	1	29	119664	2	KED
|	**Zn**	**66**	**132.457**	ug/L	3.739	2	87	76640	2	KED
|	**Zn**	**67**	**126.800**	ug/L	2.433	1	19	11947	1	KED
⌊	**As**	**75**	**30.260**	ug/L	0.577	1	2	8485	0	KED
	Y	**89**		ug/L			55660	274282	1	Standard
	Kr	**83**		ug/L			44	81	11	Standard
⌈>	**In-1**	**115**		ug/L			7587	7422	1	KED
|	**Cd**	**111**	**25.084**	ug/L	0.224	0	4	6753	0	KED
⌊	**Cd**	**114**	**25.290**	ug/L	0.359	1	1	17510	0	KED
⌈>	**In**	**115**		ug/L			519229	501845	2	Standard
⌊	**Ag**	**107**	**24.345**	ug/L	0.418	1	33	401777	1	Standard
⌈>	**Tb**	**159**		ug/L			190542	220281	1	Standard
⌊	**Pb**	**208**	**32.333**	ug/L	0.276	0	524	3409321	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL6
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:25:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	28733	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	603287	2	Standard
|	**Cr**	**52**	**-0.017**	ug/L	0.014	80	10860	10646	3	Standard
⌊	**Cr**	**53**	**0.002**	ug/L	0.010	424	113	118	17	Standard
⌈>	**Ge**	**72**		ug/L			35776	35096	0	KED
|	**Ni**	**60**	**0.102**	ug/L	0.008	7	145	314	4	KED
|	**Ni**	**62**	**0.112**	ug/L	0.027	23	28	58	12	KED
|	**Cu**	**63**	**0.004**	ug/L	0.001	33	53	71	8	KED
|	**Cu**	**65**	**0.005**	ug/L	0.009	160	29	41	51	KED
|	**Zn**	**66**	**0.017**	ug/L	0.010	60	87	95	6	KED
|	**Zn**	**67**	**-0.043**	ug/L	0.035	81	19	15	21	KED
⌊	**As**	**75**	**0.000**	ug/L	0.003	2492	2	2	44	KED
	Y	**89**		ug/L			55660	53844	3	Standard
	Kr	**83**		ug/L			44	50	7	Standard
⌈>	**In-1**	**115**		ug/L			7587	7525	0	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.002	62	4	3	17	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.006	149	1	4	90	KED
⌈>	**In**	**115**		ug/L			519229	512731	3	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.000	11	33	68	8	Standard
⌈>	**Tb**	**159**		ug/L			190542	193475	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	135	524	539	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:29:56
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	27927	5	Standard
⌈>	**Sc**	**45**		ug/L			600447	636370	1	Standard
|	**Cr**	**52**	**49.675**	ug/L	0.721	1	10860	826310	2	Standard
⌊	**Cr**	**53**	**48.401**	ug/L	0.534	1	113	93080	2	Standard
⌈>	**Ge**	**72**		ug/L			35776	34775	2	KED
|	**Ni**	**60**	**49.673**	ug/L	0.162	0	145	83169	2	KED
|	**Ni**	**62**	**50.020**	ug/L	0.731	1	28	13424	2	KED
|	**Cu**	**63**	**50.381**	ug/L	1.600	3	53	235511	1	KED
|	**Cu**	**65**	**49.220**	ug/L	1.166	2	29	118121	0	KED
|	**Zn**	**66**	**51.392**	ug/L	1.224	2	87	29629	2	KED
|	**Zn**	**67**	**52.114**	ug/L	1.313	2	19	4897	4	KED
⌊	**As**	**75**	**50.182**	ug/L	0.760	1	2	13995	0	KED
	Y	**89**		ug/L			55660	56443	3	Standard
	Kr	**83**		ug/L			44	49	15	Standard
⌈>	**In-1**	**115**		ug/L			7587	7362	1	KED
|	**Cd**	**111**	**49.881**	ug/L	1.210	2	4	13314	1	KED
⌊	**Cd**	**114**	**50.034**	ug/L	1.724	3	1	34349	1	KED
⌈>	**In**	**115**		ug/L			519229	514927	3	Standard
⌊	**Ag**	**107**	**48.588**	ug/L	2.233	4	33	822157	2	Standard
⌈>	**Tb**	**159**		ug/L			190542	200300	2	Standard
⌊	**Pb**	**208**	**50.450**	ug/L	1.358	2	524	4835024	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:37:06
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	26930	5	Standard
⌈>	**Sc**	**45**		ug/L			600447	613915	1	Standard
|	**Cr**	**52**	**-0.009**	ug/L	0.004	42	10860	10962	2	Standard
⌊	**Cr**	**53**	**0.011**	ug/L	0.007	64	113	135	7	Standard
⌈>	**Ge**	**72**		ug/L			35776	34316	3	KED
|	**Ni**	**60**	**0.071**	ug/L	0.027	37	145	257	19	KED
|	**Ni**	**62**	**0.060**	ug/L	0.053	89	28	43	33	KED
|	**Cu**	**63**	**0.023**	ug/L	0.025	111	53	158	76	KED
|	**Cu**	**65**	**0.023**	ug/L	0.027	118	29	82	79	KED
|	**Zn**	**66**	**-0.028**	ug/L	0.029	104	87	68	26	KED
|	**Zn**	**67**	**-0.033**	ug/L	0.051	155	19	15	30	KED
⌊	**As**	**75**	**0.014**	ug/L	0.024	172	2	6	112	KED
	Y	**89**		ug/L			55660	54932	0	Standard
	Kr	**83**		ug/L			44	48	18	Standard
⌈>	**In-1**	**115**		ug/L			7587	7637	1	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.007	75	4	1	124	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.003	3557	1	1	113	KED
⌈>	**In**	**115**		ug/L			519229	519681	1	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.000	6	33	78	5	Standard
⌈>	**Tb**	**159**		ug/L			190542	193231	0	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	30	524	613	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:41:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	45032	3	Standard
>	Sc	45		ug/L			600447	742114	2	Standard
	Cr	52	15.234	ug/L	0.188	1	10860	304818	3	Standard
	Cr	53	14.955	ug/L	0.198	1	113	33634	2	Standard
>	Ge	72		ug/L			35776	34523	2	KED
	Ni	60	13.744	ug/L	0.476	3	145	22932	0	KED
	Ni	62	13.777	ug/L	0.715	5	28	3687	2	KED
	Cu	63	35.145	ug/L	1.144	3	53	163083	1	KED
	Cu	65	34.406	ug/L	1.355	3	29	81948	1	KED
	Zn	66	67.279	ug/L	2.612	3	87	38459	1	KED
	Zn	67	66.917	ug/L	3.870	5	19	6229	3	KED
	As	75	7.207	ug/L	0.238	3	2	1996	1	KED
	Y	89		ug/L			55660	305809	2	Standard
	Kr	83		ug/L			44	67	10	Standard
>	In-1	115		ug/L			7587	7350	2	KED
	Cd	111	0.179	ug/L	0.026	14	4	51	12	KED
	Cd	114	0.231	ug/L	0.005	2	1	160	4	KED
>	In	115		ug/L			519229	505016	3	Standard
	Ag	107	0.154	ug/L	0.013	8	33	2584	4	Standard
>	Tb	159		ug/L			190542	223968	1	Standard
	Pb	208	14.203	ug/L	0.190	1	524	1522706	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:45:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42622	4	Standard
>	Sc	45		ug/L			600447	690566	8	Standard
	Cr	52	15.019	ug/L	0.756	5	10860	279010	4	Standard
	Cr	53	14.873	ug/L	0.661	4	113	31049	4	Standard
>	Ge	72		ug/L			35776	34971	0	KED
	Ni	60	12.825	ug/L	0.224	1	145	21699	1	KED
	Ni	62	13.074	ug/L	0.636	4	28	3549	5	KED
	Cu	63	30.875	ug/L	0.469	1	53	145218	1	KED
	Cu	65	31.639	ug/L	0.368	1	29	76384	0	KED
	Zn	66	60.680	ug/L	0.755	1	87	35170	1	KED
	Zn	67	58.931	ug/L	1.790	3	19	5565	3	KED
	As	75	6.862	ug/L	0.217	3	2	1927	3	KED
	Y	89		ug/L			55660	279514	1	Standard
	Kr	83		ug/L			44	93	4	Standard
>	In-1	115		ug/L			7587	7541	3	KED
	Cd	111	0.206	ug/L	0.031	15	4	60	12	KED
	Cd	114	0.210	ug/L	0.029	13	1	149	12	KED
>	In	115		ug/L			519229	467677	10	Standard
	Ag	107	0.158	ug/L	0.011	6	33	2457	6	Standard
>	Tb	159		ug/L			190542	208844	7	Standard
	Pb	208	14.122	ug/L	0.952	6	524	1406990	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:50:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42039	1	Standard
⌈>	Sc	45		ug/L			600447	722307	1	Standard
|	Cr	52	15.403	ug/L	0.058	0	10860	299782	1	Standard
⌊	Cr	53	15.134	ug/L	0.260	1	113	33122	1	Standard
⌈>	Ge	72		ug/L			35776	34398	1	KED
|	Ni	60	13.305	ug/L	0.513	3	145	22132	2	KED
|	Ni	62	13.397	ug/L	0.866	6	28	3575	5	KED
|	Cu	63	36.367	ug/L	0.976	2	53	168193	1	KED
|	Cu	65	36.194	ug/L	1.342	3	29	85923	2	KED
|	Zn	66	67.215	ug/L	1.956	2	87	38301	1	KED
|	Zn	67	67.347	ug/L	2.218	3	19	6251	2	KED
⌊	As	75	8.338	ug/L	0.373	4	2	2301	3	KED
	Y	89		ug/L			55660	280878	1	Standard
	Kr	83		ug/L			44	83	13	Standard
⌈>	In-1	115		ug/L			7587	7122	1	KED
|	Cd	111	0.253	ug/L	0.034	13	4	69	11	KED
⌊	Cd	114	0.270	ug/L	0.039	14	1	180	15	KED
⌈>	In	115		ug/L			519229	504674	3	Standard
⌊	Ag	107	0.171	ug/L	0.006	3	33	2876	3	Standard
⌈>	Tb	159		ug/L			190542	219689	1	Standard
⌊	Pb	208	16.464	ug/L	0.545	3	524	1730980	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:54:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42806	1	Standard
⌈>	Sc	45		ug/L			600447	716286	1	Standard
|	Cr	52	14.519	ug/L	0.159	1	10860	281010	2	Standard
⌊	Cr	53	14.343	ug/L	0.209	1	113	31134	0	Standard
⌈>	Ge	72		ug/L			35776	35309	1	KED
|	Ni	60	11.887	ug/L	0.160	1	145	20315	0	KED
|	Ni	62	12.515	ug/L	0.232	1	28	3432	3	KED
|	Cu	63	30.686	ug/L	0.194	0	53	145729	2	KED
|	Cu	65	30.856	ug/L	0.789	2	29	75198	0	KED
|	Zn	66	59.607	ug/L	0.519	0	87	34885	2	KED
|	Zn	67	59.174	ug/L	0.672	1	19	5643	3	KED
⌊	As	75	6.641	ug/L	0.158	2	2	1883	3	KED
	Y	89		ug/L			55660	284193	1	Standard
	Kr	83		ug/L			44	70	37	Standard
⌈>	In-1	115		ug/L			7587	7365	0	KED
|	Cd	111	0.162	ug/L	0.039	24	4	47	21	KED
⌊	Cd	114	0.184	ug/L	0.024	12	1	128	12	KED
⌈>	In	115		ug/L			519229	495838	1	Standard
⌊	Ag	107	0.144	ug/L	0.007	4	33	2379	5	Standard
⌈>	Tb	159		ug/L			190542	222154	1	Standard
⌊	Pb	208	13.638	ug/L	0.162	1	524	1450648	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 21:59:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	44599	4	Standard
>	Sc	45		ug/L			600447	731713	0	Standard
	Cr	52	14.739	ug/L	0.210	1	10860	291190	1	Standard
	Cr	53	14.638	ug/L	0.276	1	113	32460	2	Standard
>	Ge	72		ug/L			35776	35401	1	KED
	Ni	60	12.912	ug/L	0.463	3	145	22105	1	KED
	Ni	62	13.360	ug/L	0.173	1	28	3671	2	KED
	Cu	63	30.949	ug/L	0.224	0	53	147347	1	KED
	Cu	65	30.919	ug/L	0.887	2	29	75545	1	KED
	Zn	66	59.526	ug/L	1.559	2	87	34920	1	KED
	Zn	67	58.622	ug/L	1.849	3	19	5602	1	KED
	As	75	6.546	ug/L	0.025	0	2	1860	2	KED
	Y	89		ug/L			55660	287110	1	Standard
	Kr	83		ug/L			44	80	8	Standard
>	In-1	115		ug/L			7587	7523	1	KED
	Cd	111	0.226	ug/L	0.023	10	4	65	8	KED
	Cd	114	0.271	ug/L	0.051	18	1	192	19	KED
>	In	115		ug/L			519229	509267	1	Standard
	Ag	107	0.139	ug/L	0.004	2	33	2357	2	Standard
>	Tb	159		ug/L			190542	226516	2	Standard
	Pb	208	13.207	ug/L	0.260	1	524	1431982	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:03:37
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	45160	2	Standard
⌈>	Sc	45		ug/L			600447	709676	1	Standard
|	Cr	52	15.013	ug/L	0.150	0	10860	287439	2	Standard
⌊	Cr	53	14.978	ug/L	0.160	1	113	32210	0	Standard
⌈>	Ge	72		ug/L			35776	35230	1	KED
|	Ni	60	13.396	ug/L	0.331	2	145	22823	1	KED
|	Ni	62	13.330	ug/L	0.172	1	28	3645	2	KED
|	Cu	63	30.968	ug/L	0.110	0	53	146728	1	KED
|	Cu	65	31.310	ug/L	0.657	2	29	76161	2	KED
|	Zn	66	63.015	ug/L	0.738	1	87	36788	0	KED
|	Zn	67	62.204	ug/L	1.138	1	19	5916	2	KED
⌊	As	75	6.961	ug/L	0.186	2	2	1968	1	KED
	Y	89		ug/L			55660	283560	1	Standard
	Kr	83		ug/L			44	85	22	Standard
⌈>	In-1	115		ug/L			7587	7404	1	KED
|	Cd	111	0.232	ug/L	0.043	18	4	66	17	KED
⌊	Cd	114	0.233	ug/L	0.017	7	1	162	8	KED
⌈>	In	115		ug/L			519229	492481	0	Standard
⌊	Ag	107	0.145	ug/L	0.004	2	33	2386	3	Standard
⌈>	Tb	159		ug/L			190542	220224	3	Standard
⌊	Pb	208	13.158	ug/L	0.300	2	524	1386701	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:08:02
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41520	3	Standard
>	Sc	45		ug/L			600447	717446	3	Standard
	Cr	52	33.556	ug/L	0.650	1	10860	633326	3	Standard
	Cr	53	33.648	ug/L	0.689	2	113	72972	2	Standard
>	Ge	72		ug/L			35776	35212	3	KED
	Ni	60	35.184	ug/L	2.100	5	145	59616	2	KED
	Ni	62	34.676	ug/L	1.662	4	28	9422	1	KED
	Cu	63	52.193	ug/L	2.020	3	53	246942	1	KED
	Cu	65	52.053	ug/L	2.137	4	29	126415	1	KED
	Zn	66	126.817	ug/L	6.484	5	87	73838	2	KED
	Zn	67	124.720	ug/L	2.442	1	19	11832	1	KED
	As	75	27.696	ug/L	0.850	3	2	7818	0	KED
	Y	89		ug/L			55660	271396	0	Standard
	Kr	83		ug/L			44	100	14	Standard
>	In-1	115		ug/L			7587	7455	2	KED
	Cd	111	22.716	ug/L	0.408	1	4	6142	1	KED
	Cd	114	22.248	ug/L	0.741	3	1	15469	2	KED
>	In	115		ug/L			519229	514419	4	Standard
	Ag	107	18.205	ug/L	0.801	4	33	307640	0	Standard
>	Tb	159		ug/L			190542	221393	0	Standard
	Pb	208	33.456	ug/L	0.468	1	524	3545238	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:12:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	44015	3	Standard
>	Sc	45		ug/L			600447	721052	3	Standard
	Cr	52	36.977	ug/L	0.616	1	10860	700011	2	Standard
	Cr	53	37.171	ug/L	1.010	2	113	80983	2	Standard
>	Ge	72		ug/L			35776	34237	2	KED
	Ni	60	39.106	ug/L	0.914	2	145	64469	0	KED
	Ni	62	38.644	ug/L	0.795	2	28	10214	0	KED
	Cu	63	57.815	ug/L	0.699	1	53	266134	1	KED
	Cu	65	57.115	ug/L	0.664	1	29	134960	1	KED
	Zn	66	142.699	ug/L	4.197	2	87	80822	0	KED
	Zn	67	135.117	ug/L	3.802	2	19	12463	1	KED
	As	75	30.878	ug/L	0.621	2	2	8478	0	KED
	Y	89		ug/L			55660	287252	1	Standard
	Kr	83		ug/L			44	95	12	Standard
>	In-1	115		ug/L			7587	7377	2	KED
	Cd	111	25.360	ug/L	0.541	2	4	6784	0	KED
	Cd	114	25.469	ug/L	0.366	1	1	17530	3	KED
>	In	115		ug/L			519229	497333	1	Standard
	Ag	107	19.764	ug/L	0.913	4	33	323142	2	Standard
>	Tb	159		ug/L			190542	219212	0	Standard
	Pb	208	37.388	ug/L	0.368	0	524	3923097	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLD0578-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:16:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	45372	6	Standard
⌈>	**Sc**	**45**		ug/L			600447	718540	2	Standard
|	**Cr**	**52**	**36.741**	ug/L	0.599	1	10860	693185	1	Standard
⌊	**Cr**	**53**	**36.056**	ug/L	0.837	2	113	78288	0	Standard
⌈>	**Ge**	**72**		ug/L			35776	34859	1	KED
|	**Ni**	**60**	**37.401**	ug/L	0.136	0	145	62811	1	KED
|	**Ni**	**62**	**38.589**	ug/L	0.944	2	28	10387	2	KED
|	**Cu**	**63**	**56.121**	ug/L	0.896	1	53	263033	0	KED
|	**Cu**	**65**	**55.252**	ug/L	1.012	1	29	132930	0	KED
|	**Zn**	**66**	**138.618**	ug/L	1.496	1	87	79980	1	KED
|	**Zn**	**67**	**132.100**	ug/L	4.039	3	19	12408	2	KED
⌊	**As**	**75**	**30.730**	ug/L	0.687	2	2	8591	0	KED
	Y	**89**		ug/L			55660	288018	2	Standard
	Kr	**83**		ug/L			44	80	8	Standard
⌈>	**In-1**	**115**		ug/L			7587	7491	3	KED
|	**Cd**	**111**	**24.290**	ug/L	0.743	3	4	6597	1	KED
⌊	**Cd**	**114**	**24.183**	ug/L	0.272	1	1	16899	2	KED
⌈>	**In**	**115**		ug/L			519229	508102	0	Standard
⌊	**Ag**	**107**	**24.891**	ug/L	0.312	1	33	416033	1	Standard
⌈>	**Tb**	**159**		ug/L			190542	220946	1	Standard
⌊	**Pb**	**208**	**37.236**	ug/L	0.193	0	524	3937864	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL7
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:21:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	27642	4	Standard
⌈>	**Sc**	**45**		ug/L			600447	603813	2	Standard
|	**Cr**	**52**	**-0.051**	ug/L	0.021	41	10860	10122	2	Standard
⌊	**Cr**	**53**	**-0.013**	ug/L	0.005	41	113	90	8	Standard
⌈>	**Ge**	**72**		ug/L			35776	35433	2	KED
|	**Ni**	**60**	**0.021**	ug/L	0.007	33	145	179	6	KED
|	**Ni**	**62**	**0.047**	ug/L	0.030	63	28	41	20	KED
|	**Cu**	**63**	**0.002**	ug/L	0.002	110	53	62	15	KED
|	**Cu**	**65**	**0.002**	ug/L	0.001	43	29	34	5	KED
|	**Zn**	**66**	**-0.045**	ug/L	0.015	32	87	60	13	KED
|	**Zn**	**67**	**-0.092**	ug/L	0.078	84	19	10	71	KED
⌊	**As**	**75**	**-0.000**	ug/L	0.004	850	2	2	48	KED
	Y	**89**		ug/L			55660	56192	1	Standard
	Kr	**83**		ug/L			44	38	7	Standard
⌈>	**In-1**	**115**		ug/L			7587	7673	1	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.003	40	4	1	50	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.005	205	1	3	104	KED
⌈>	**In**	**115**		ug/L			519229	511235	2	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.000	5	33	62	0	Standard
⌈>	**Tb**	**159**		ug/L			190542	202248	1	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	102	524	535	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:25:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	27192	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	608622	1	Standard
|	**Cr**	**52**	**50.684**	ug/L	0.378	0	10860	805976	1	Standard
⌊	**Cr**	**53**	**49.678**	ug/L	1.026	2	113	91340	1	Standard
⌈>	**Ge**	**72**		ug/L			35776	35568	0	KED
|	**Ni**	**60**	**48.330**	ug/L	0.870	1	145	82768	1	KED
|	**Ni**	**62**	**48.442**	ug/L	0.639	1	28	13298	1	KED
|	**Cu**	**63**	**49.417**	ug/L	0.579	1	53	236363	1	KED
|	**Cu**	**65**	**48.231**	ug/L	1.469	3	29	118414	2	KED
|	**Zn**	**66**	**49.608**	ug/L	0.551	1	87	29261	1	KED
|	**Zn**	**67**	**49.324**	ug/L	1.186	2	19	4740	2	KED
⌊	**As**	**75**	**49.969**	ug/L	0.076	0	2	14256	0	KED
	Y	**89**		ug/L			55660	56809	4	Standard
	Kr	**83**		ug/L			44	47	18	Standard
⌈>	**In-1**	**115**		ug/L			7587	7389	1	KED
|	**Cd**	**111**	**49.546**	ug/L	1.061	2	4	13275	1	KED
⌊	**Cd**	**114**	**49.494**	ug/L	0.422	0	1	34117	1	KED
⌈>	**In**	**115**		ug/L			519229	506372	2	Standard
⌊	**Ag**	**107**	**49.532**	ug/L	0.924	1	33	824893	2	Standard
⌈>	**Tb**	**159**		ug/L			190542	201346	2	Standard
⌊	**Pb**	**208**	**50.146**	ug/L	1.169	2	524	4830970	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:32:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	27637	6	Standard
⌈>	**Sc**	**45**		ug/L			600447	601964	1	Standard
|	**Cr**	**52**	**-0.026**	ug/L	0.016	62	10860	10474	1	Standard
⌊	**Cr**	**53**	**-0.005**	ug/L	0.003	63	113	103	4	Standard
⌈>	**Ge**	**72**		ug/L			35776	36137	1	KED
|	**Ni**	**60**	**0.016**	ug/L	0.012	73	145	174	12	KED
|	**Ni**	**62**	**-0.044**	ug/L	0.014	32	28	16	24	KED
|	**Cu**	**63**	**0.002**	ug/L	0.003	112	53	66	21	KED
|	**Cu**	**65**	**0.002**	ug/L	0.001	67	29	33	8	KED
|	**Zn**	**66**	**-0.036**	ug/L	0.015	41	87	66	12	KED
|	**Zn**	**67**	**-0.081**	ug/L	0.028	34	19	12	24	KED
⌊	**As**	**75**	**0.003**	ug/L	0.007	258	2	3	65	KED
	Y	**89**		ug/L			55660	54450	2	Standard
	Kr	**83**		ug/L			44	43	21	Standard
⌈>	**In-1**	**115**		ug/L			7587	7720	2	KED
|	**Cd**	**111**	**-0.009**	ug/L	0.005	57	4	1	91	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.003	180	1	2	70	KED
⌈>	**In**	**115**		ug/L			519229	507656	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	25	33	67	14	Standard
⌈>	**Tb**	**159**		ug/L			190542	194063	1	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.000	133	524	566	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:37:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	44112	4	Standard
⌈>	Sc	45		ug/L			600447	709054	2	Standard
|	Cr	52	13.866	ug/L	0.406	2	10860	266055	0	Standard
⌊	Cr	53	14.000	ug/L	0.297	2	113	30081	1	Standard
⌈>	Ge	72		ug/L			35776	34999	2	KED
|	Ni	60	11.928	ug/L	0.327	2	145	20201	1	KED
|	Ni	62	11.602	ug/L	0.091	0	28	3155	1	KED
|	Cu	63	30.347	ug/L	0.908	2	53	142788	1	KED
|	Cu	65	29.640	ug/L	1.166	3	29	71581	1	KED
|	Zn	66	67.932	ug/L	2.944	4	87	39370	2	KED
|	Zn	67	65.305	ug/L	2.153	3	19	6167	1	KED
⌊	As	75	7.893	ug/L	0.118	1	2	2217	1	KED
	Y	89		ug/L			55660	269034	2	Standard
	Kr	83		ug/L			44	83	10	Standard
⌈>	In-1	115		ug/L			7587	7517	0	KED
|	Cd	111	0.202	ug/L	0.025	12	4	59	11	KED
⌊	Cd	114	0.197	ug/L	0.029	14	1	139	14	KED
⌈>	In	115		ug/L			519229	510602	1	Standard
⌊	Ag	107	0.120	ug/L	0.002	1	33	2052	2	Standard
⌈>	Tb	159		ug/L			190542	219802	3	Standard
⌊	Pb	208	11.171	ug/L	0.325	2	524	1174869	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:41:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42440	3	Standard
>	Sc	45		ug/L			600447	715357	1	Standard
	Cr	52	12.859	ug/L	0.040	0	10860	250000	1	Standard
	Cr	53	13.009	ug/L	0.357	2	113	28218	3	Standard
>	Ge	72		ug/L			35776	34864	1	KED
	Ni	60	13.775	ug/L	0.257	1	145	23223	1	KED
	Ni	62	13.798	ug/L	0.584	4	28	3734	5	KED
	Cu	63	24.510	ug/L	0.357	1	53	114927	0	KED
	Cu	65	24.470	ug/L	0.195	0	29	58904	0	KED
	Zn	66	53.122	ug/L	1.279	2	87	30701	1	KED
	Zn	67	53.087	ug/L	0.536	1	19	4999	0	KED
	As	75	6.441	ug/L	0.043	0	2	1803	0	KED
	Y	89		ug/L			55660	266859	1	Standard
	Kr	83		ug/L			44	73	3	Standard
>	In-1	115		ug/L			7587	7219	2	KED
	Cd	111	0.125	ug/L	0.023	18	4	36	14	KED
	Cd	114	0.155	ug/L	0.036	23	1	106	25	KED
>	In	115		ug/L			519229	505027	1	Standard
	Ag	107	0.096	ug/L	0.002	2	33	1635	3	Standard
>	Tb	159		ug/L			190542	222110	1	Standard
	Pb	208	9.491	ug/L	0.215	2	524	1009179	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:46:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42216	5	Standard
⌈>	Sc	45		ug/L			600447	737126	2	Standard
|	Cr	52	15.985	ug/L	0.581	3	10860	316818	1	Standard
⌊	Cr	53	15.684	ug/L	0.237	1	113	35018	1	Standard
⌈>	Ge	72		ug/L			35776	34661	1	KED
|	Ni	60	13.792	ug/L	0.237	1	145	23115	0	KED
|	Ni	62	13.986	ug/L	0.109	0	28	3761	1	KED
|	Cu	63	36.202	ug/L	0.537	1	53	168737	0	KED
|	Cu	65	36.196	ug/L	0.297	0	29	86607	0	KED
|	Zn	66	68.237	ug/L	0.710	1	87	39187	0	KED
|	Zn	67	64.700	ug/L	1.108	1	19	6053	0	KED
⌊	As	75	7.814	ug/L	0.160	2	2	2174	0	KED
	Y	89		ug/L			55660	305716	1	Standard
	Kr	83		ug/L			44	94	9	Standard
⌈>	In-1	115		ug/L			7587	7387	3	KED
|	Cd	111	0.230	ug/L	0.034	14	4	65	10	KED
⌊	Cd	114	0.189	ug/L	0.020	10	1	132	12	KED
⌈>	In	115		ug/L			519229	504320	1	Standard
⌊	Ag	107	0.173	ug/L	0.003	1	33	2906	2	Standard
⌈>	Tb	159		ug/L			190542	220823	3	Standard
⌊	Pb	208	16.723	ug/L	0.540	3	524	1766569	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23A0467-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:50:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	36941	3	Standard
⌈>	Sc	45		ug/L			600447	707482	1	Standard
|	Cr	52	13.403	ug/L	0.125	0	10860	257172	1	Standard
⌊	Cr	53	12.977	ug/L	0.121	0	113	27843	2	Standard
⌈>	Ge	72		ug/L			35776	35020	0	KED
|	Ni	60	12.070	ug/L	0.218	1	145	20458	1	KED
|	Ni	62	12.224	ug/L	0.385	3	28	3325	3	KED
|	Cu	63	25.027	ug/L	0.373	1	53	117881	1	KED
|	Cu	65	24.754	ug/L	0.415	1	29	59854	1	KED
|	Zn	66	60.844	ug/L	0.755	1	87	35314	0	KED
|	Zn	67	108.303	ug/L	2.395	2	19	10225	1	KED
⌊	As	75	5.746	ug/L	0.088	1	2	1616	1	KED
	Y	89		ug/L			55660	254580	0	Standard
	Kr	83		ug/L			44	77	7	Standard
⌈>	In-1	115		ug/L			7587	7416	2	KED
|	Cd	111	0.125	ug/L	0.025	19	4	37	19	KED
⌊	Cd	114	0.136	ug/L	0.011	7	1	95	8	KED
⌈>	In	115		ug/L			519229	494495	1	Standard
⌊	Ag	107	0.103	ug/L	0.004	3	33	1702	2	Standard
⌈>	Tb	159		ug/L			190542	218399	1	Standard
⌊	Pb	208	11.623	ug/L	0.140	1	524	1215246	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0393-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:54:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			27881	28956	0	Standard
> Sc	45		ug/L			600447	632927	2	Standard
Cr	52	83.030	ug/L	1.894	2	10860	1365955	3	Standard
Cr	53	82.553	ug/L	2.117	2	113	157762	1	Standard
> Ge	72		ug/L			35776	31287	1	KED
Ni	60	23.659	ug/L	0.556	2	145	35697	0	KED
Ni	62	27.194	ug/L	0.581	2	28	6576	0	KED
Cu	63	2498.049	ug/L	48.349	1	53	10506397	1	KED
Cu	65	2569.123	ug/L	57.301	2	29	5546287	0	KED
Zn	66	7354.329	ug/L	288.789	3	87	3803532	3	KED
Zn	67	6774.525	ug/L	131.191	1	19	570411	2	KED
As	75	1054.444	ug/L	16.893	1	2	264562	0	KED
Y	89		ug/L			55660	282337	3	Standard
Kr	83		ug/L			44	108	15	Standard
> In-1	115		ug/L			7587	16696	0	KED
Cd	111	2.127	ug/L	0.026	1	4	1296	1	KED
Cd	114	2.036	ug/L	0.022	1	1	3175	0	KED
> In	115		ug/L			519229	910777	0	Standard
Ag	107	0.753	ug/L	0.018	2	33	22621	2	Standard
> Tb	159		ug/L			190542	158646	1	Standard
Pb	208	1211.380	ug/L	38.633	3	524	91952848	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-DUP1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 22:59:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			27881	30314	5	Standard
> Sc	45		ug/L			600447	626535	3	Standard
Cr	52	85.240	ug/L	2.397	2	10860	1386839	0	Standard
Cr	53	84.038	ug/L	2.060	2	113	158948	2	Standard
> Ge	72		ug/L			35776	30534	0	KED
Ni	60	24.774	ug/L	0.555	2	145	36484	2	KED
Ni	62	29.303	ug/L	0.311	1	28	6915	0	KED
Cu	63	2817.731	ug/L	58.540	2	53	11567687	2	KED
Cu	65	2764.990	ug/L	27.962	1	29	5826764	0	KED
Zn	66	7637.721	ug/L	56.656	0	87	3856088	0	KED
Zn	67	7060.766	ug/L	69.114	0	19	580207	0	KED
As	75	1082.369	ug/L	5.384	0	2	265078	0	KED
Y	89		ug/L			55660	316457	1	Standard
Kr	83		ug/L			44	93	15	Standard
> In-1	115		ug/L			7587	15962	1	KED
Cd	111	2.478	ug/L	0.072	2	4	1442	3	KED
Cd	114	2.439	ug/L	0.022	0	1	3635	0	KED
> In	115		ug/L			519229	899865	0	Standard
Ag	107	0.832	ug/L	0.021	2	33	24686	1	Standard
> Tb	159		ug/L			190542	160807	0	Standard
Pb	208	1201.329	ug/L	19.280	1	524	92444349	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:03:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	27291	5	Standard
>	Sc	45		ug/L			600447	608593	1	Standard
	Cr	52	110.095	ug/L	3.295	2	10860	1737242	1	Standard
	Cr	53	108.219	ug/L	1.529	1	113	198841	0	Standard
>	Ge	72		ug/L			35776	29436	2	KED
	Ni	60	48.982	ug/L	1.875	3	145	69379	1	KED
	Ni	62	54.981	ug/L	2.524	4	28	12479	1	KED
	Cu	63	3042.849	ug/L	134.473	4	53	12033133	1	KED
	Cu	65	3048.235	ug/L	86.303	2	29	6189784	1	KED
	Zn	66	7993.790	ug/L	257.905	3	87	3888434	0	KED
	Zn	67	7334.042	ug/L	256.573	3	19	580633	0	KED
	As	75	1176.119	ug/L	32.073	2	2	277546	0	KED
	Y	89		ug/L			55660	297960	0	Standard
	Kr	83		ug/L			44	105	19	Standard
>	In-1	115		ug/L			7587	15976	1	KED
	Cd	111	10.853	ug/L	0.123	1	4	6294	0	KED
	Cd	114	10.994	ug/L	0.247	2	1	16388	2	KED
>	In	115		ug/L			519229	904235	1	Standard
	Ag	107	4.491	ug/L	0.132	2	33	133599	1	Standard
>	Tb	159		ug/L			190542	157324	0	Standard
	Pb	208	1280.635	ug/L	22.743	1	524	96414758	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-MSD1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:08:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	26877	3	Standard
>	Sc	45		ug/L			600447	611441	1	Standard
	Cr	52	111.436	ug/L	3.976	3	10860	1766516	2	Standard
	Cr	53	110.105	ug/L	4.573	4	113	203202	2	Standard
>	Ge	72		ug/L			35776	29152	0	KED
	Ni	60	48.618	ug/L	0.881	1	145	68250	2	KED
	Ni	62	51.789	ug/L	1.011	1	28	11653	2	KED
	Cu	63	2806.959	ug/L	37.381	1	53	11000916	0	KED
	Cu	65	2816.731	ug/L	71.420	2	29	5666231	1	KED
	Zn	66	8265.905	ug/L	136.269	1	87	3984176	1	KED
	Zn	67	7616.692	ug/L	44.699	0	19	597534	0	KED
	As	75	1296.431	ug/L	11.821	0	2	303108	0	KED
	Y	89		ug/L			55660	289686	0	Standard
	Kr	83		ug/L			44	106	18	Standard
>	In-1	115		ug/L			7587	16333	1	KED
	Cd	111	11.000	ug/L	0.211	1	4	6521	0	KED
	Cd	114	10.726	ug/L	0.114	1	1	16343	0	KED
>	In	115		ug/L			519229	951207	3	Standard
	Ag	107	4.378	ug/L	0.114	2	33	136944	1	Standard
>	Tb	159		ug/L			190542	157453	1	Standard
	Pb	208	1380.771	ug/L	20.785	1	524	104030860	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0072-PS1
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:12:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	27119	1	Standard
⌈>	**Sc**	**45**		ug/L			600447	605688	1	Standard
|	**Cr**	**52**	**107.946**	ug/L	4.648	4	10860	1695312	3	Standard
⌊	**Cr**	**53**	**105.056**	ug/L	2.621	2	113	192093	1	Standard
⌈>	**Ge**	**72**		ug/L			35776	29173	1	KED
|	**Ni**	**60**	**48.441**	ug/L	1.072	2	145	68035	1	KED
|	**Ni**	**62**	**51.887**	ug/L	1.933	3	28	11679	2	KED
|	**Cu**	**63**	**2659.663**	ug/L	25.993	0	53	10431378	0	KED
|	**Cu**	**65**	**2674.653**	ug/L	89.805	3	29	5383864	2	KED
|	**Zn**	**66**	**7740.478**	ug/L	41.895	0	87	3733813	1	KED
|	**Zn**	**67**	**7109.067**	ug/L	112.602	1	19	558068	0	KED
⌊	**As**	**75**	**1097.144**	ug/L	7.742	0	2	256700	0	KED
	Y	**89**		ug/L			55660	287334	1	Standard
	Kr	**83**		ug/L			44	88	2	Standard
⌈>	**In-1**	**115**		ug/L			7587	15754	1	KED
|	**Cd**	**111**	**11.382**	ug/L	0.376	3	4	6507	1	KED
⌊	**Cd**	**114**	**11.428**	ug/L	0.447	3	1	16790	2	KED
⌈>	**In**	**115**		ug/L			519229	924163	2	Standard
⌊	**Ag**	**107**	**11.450**	ug/L	0.297	2	33	347999	1	Standard
⌈>	**Tb**	**159**		ug/L			190542	158980	1	Standard
⌊	**Pb**	**208**	**1253.989**	ug/L	4.849	0	524	95406487	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL8
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:16:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	22829	2	Standard
⌈>	**Sc**	**45**		ug/L			600447	564251	0	Standard
|	**Cr**	**52**	**0.030**	ug/L	0.034	113	10860	10641	4	Standard
⌊	**Cr**	**53**	**0.025**	ug/L	0.031	125	113	148	35	Standard
⌈>	**Ge**	**72**		ug/L			35776	31647	0	KED
|	**Ni**	**60**	**0.041**	ug/L	0.020	47	145	190	15	KED
|	**Ni**	**62**	**0.027**	ug/L	0.012	44	28	31	9	KED
|	**Cu**	**63**	**0.082**	ug/L	0.007	8	53	398	7	KED
|	**Cu**	**65**	**0.082**	ug/L	0.013	15	29	205	13	KED
|	**Zn**	**66**	**0.206**	ug/L	0.036	17	87	185	10	KED
|	**Zn**	**67**	**0.094**	ug/L	0.046	48	19	25	15	KED
⌊	**As**	**75**	**0.075**	ug/L	0.010	13	2	20	12	KED
	Y	**89**		ug/L			55660	54412	1	Standard
	Kr	**83**		ug/L			44	53	15	Standard
⌈>	**In-1**	**115**		ug/L			7587	6568	3	KED
|	**Cd**	**111**	**-0.012**	ug/L	0.002	18	4	0	86	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.001	26	1	2	8	KED
⌈>	**In**	**115**		ug/L			519229	523168	3	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.008	104	33	168	86	Standard
⌈>	**Tb**	**159**		ug/L			190542	194825	1	Standard
⌊	**Pb**	**208**	**0.275**	ug/L	0.271	98	524	25917	95	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCV9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:21:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	24653	5	Standard
⌈>	**Sc**	**45**		ug/L			600447	591563	1	Standard
|	**Cr**	**52**	**49.379**	ug/L	0.755	1	10860	763476	1	Standard
⌊	**Cr**	**53**	**48.410**	ug/L	0.314	0	113	86533	1	Standard
⌈>	**Ge**	**72**		ug/L			35776	32024	1	KED
|	**Ni**	**60**	**49.999**	ug/L	0.359	0	145	77097	2	KED
|	**Ni**	**62**	**50.338**	ug/L	0.599	1	28	12440	0	KED
|	**Cu**	**63**	**50.853**	ug/L	0.479	0	53	218983	1	KED
|	**Cu**	**65**	**50.279**	ug/L	0.509	1	29	111154	1	KED
|	**Zn**	**66**	**50.970**	ug/L	0.590	1	87	27069	2	KED
|	**Zn**	**67**	**51.946**	ug/L	1.180	2	19	4493	1	KED
⌊	**As**	**75**	**50.153**	ug/L	1.115	2	2	12882	1	KED
	Y	**89**		ug/L			55660	54346	3	Standard
	Kr	**83**		ug/L			44	41	30	Standard
⌈>	**In-1**	**115**		ug/L			7587	6872	2	KED
|	**Cd**	**111**	**49.954**	ug/L	1.477	2	4	12444	0	KED
⌊	**Cd**	**114**	**50.060**	ug/L	0.658	1	1	32090	1	KED
⌈>	**In**	**115**		ug/L			519229	500870	0	Standard
⌊	**Ag**	**107**	**48.812**	ug/L	0.335	0	33	804173	0	Standard
⌈>	**Tb**	**159**		ug/L			190542	196347	1	Standard
⌊	**Pb**	**208**	**52.229**	ug/L	0.704	1	524	4907728	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCB9
Sample Dil Factor:
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:28:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	24509	6	Standard
⌈>	**Sc**	**45**		ug/L			600447	583759	2	Standard
|	**Cr**	**52**	**-0.028**	ug/L	0.018	66	10860	10137	2	Standard
⌊	**Cr**	**53**	**-0.011**	ug/L	0.006	52	113	90	13	Standard
⌈>	**Ge**	**72**		ug/L			35776	33371	3	KED
|	**Ni**	**60**	**-0.006**	ug/L	0.007	114	145	125	11	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.022	152	28	22	22	KED
|	**Cu**	**63**	**0.016**	ug/L	0.007	43	53	120	27	KED
|	**Cu**	**65**	**0.018**	ug/L	0.005	27	29	69	15	KED
|	**Zn**	**66**	**0.001**	ug/L	0.018	3110	87	81	10	KED
|	**Zn**	**67**	**-0.063**	ug/L	0.009	14	19	12	8	KED
⌊	**As**	**75**	**0.023**	ug/L	0.007	31	2	8	20	KED
	Y	**89**		ug/L			55660	54110	1	Standard
	Kr	**83**		ug/L			44	46	13	Standard
⌈>	**In-1**	**115**		ug/L			7587	6862	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.004	201	4	3	34	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	180	1	2	81	KED
⌈>	**In**	**115**		ug/L			519229	515794	3	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	26	33	82	17	Standard
⌈>	**Tb**	**159**		ug/L			190542	195697	2	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.000	1	524	1220	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:33:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41800	4	Standard
⌈>	Sc	45		ug/L			600447	694893	1	Standard
|	Cr	52	14.760	ug/L	0.330	2	10860	276862	1	Standard
⌊	Cr	53	14.749	ug/L	0.355	2	113	31060	2	Standard
⌈>	Ge	72		ug/L			35776	33387	1	KED
|	Ni	60	12.096	ug/L	0.354	2	145	19540	1	KED
|	Ni	62	12.236	ug/L	0.141	1	28	3173	2	KED
|	Cu	63	34.440	ug/L	0.616	1	53	154616	0	KED
|	Cu	65	33.554	ug/L	0.420	1	29	77335	1	KED
|	Zn	66	61.897	ug/L	0.534	0	87	34249	1	KED
|	Zn	67	60.911	ug/L	2.396	3	19	5489	2	KED
⌊	As	75	7.068	ug/L	0.157	2	2	1894	2	KED
	Y	89		ug/L			55660	279345	1	Standard
	Kr	83		ug/L			44	90	13	Standard
⌈>	In-1	115		ug/L			7587	6934	2	KED
|	Cd	111	0.195	ug/L	0.047	24	4	52	21	KED
⌊	Cd	114	0.219	ug/L	0.014	6	1	143	8	KED
⌈>	In	115		ug/L			519229	517494	0	Standard
⌊	Ag	107	0.165	ug/L	0.003	1	33	2844	1	Standard
⌈>	Tb	159		ug/L			190542	224144	0	Standard
⌊	Pb	208	14.987	ug/L	0.095	0	524	1608279	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:37:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41920	5	Standard
⌈>	Sc	45		ug/L			600447	707279	1	Standard
|	Cr	52	13.606	ug/L	0.173	1	10860	260824	2	Standard
⌊	Cr	53	13.450	ug/L	0.128	0	113	28839	1	Standard
⌈>	Ge	72		ug/L			35776	33813	2	KED
|	Ni	60	12.474	ug/L	0.318	2	145	20402	0	KED
|	Ni	62	12.568	ug/L	0.337	2	28	3298	0	KED
|	Cu	63	27.102	ug/L	0.625	2	53	123211	0	KED
|	Cu	65	26.633	ug/L	0.700	2	29	62154	0	KED
|	Zn	66	53.856	ug/L	2.290	4	87	30171	1	KED
|	Zn	67	53.534	ug/L	0.966	1	19	4890	3	KED
⌊	As	75	6.504	ug/L	0.322	4	2	1764	2	KED
	Y	89		ug/L			55660	279415	2	Standard
	Kr	83		ug/L			44	85	14	Standard
⌈>	In-1	115		ug/L			7587	7109	2	KED
|	Cd	111	0.169	ug/L	0.030	17	4	47	16	KED
⌊	Cd	114	0.154	ug/L	0.036	23	1	103	20	KED
⌈>	In	115		ug/L			519229	506285	1	Standard
⌊	Ag	107	0.112	ug/L	0.003	2	33	1899	2	Standard
⌈>	Tb	159		ug/L			190542	221252	0	Standard
⌊	Pb	208	10.941	ug/L	0.016	0	524	1159070	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:41:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41624	4	Standard
⌈>	Sc	45		ug/L			600447	641883	18	Standard
|	Cr	52	16.175	ug/L	2.585	15	10860	274088	4	Standard
⌊	Cr	53	16.107	ug/L	2.732	16	113	30688	3	Standard
⌈>	Ge	72		ug/L			35776	33460	0	KED
|	Ni	60	13.007	ug/L	0.126	0	145	21054	1	KED
|	Ni	62	12.937	ug/L	0.251	1	28	3360	1	KED
|	Cu	63	34.231	ug/L	0.569	1	53	154049	2	KED
|	Cu	65	33.408	ug/L	0.682	2	29	77167	1	KED
|	Zn	66	66.941	ug/L	2.382	3	87	37107	2	KED
|	Zn	67	64.779	ug/L	1.290	1	19	5850	1	KED
⌊	As	75	7.501	ug/L	0.124	1	2	2015	1	KED
	Y	89		ug/L			55660	272445	5	Standard
	Kr	83		ug/L			44	93	25	Standard
⌈>	In-1	115		ug/L			7587	7083	2	KED
|	Cd	111	0.206	ug/L	0.024	11	4	56	9	KED
⌊	Cd	114	0.231	ug/L	0.024	10	1	153	9	KED
⌈>	In	115		ug/L			519229	441955	19	Standard
⌊	Ag	107	0.171	ug/L	0.035	20	33	2452	1	Standard
⌈>	Tb	159		ug/L			190542	205536	15	Standard
⌊	Pb	208	15.984	ug/L	2.361	14	524	1548517	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:46:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41611	5	Standard
⌈>	Sc	45		ug/L			600447	699791	2	Standard
|	Cr	52	14.261	ug/L	0.110	0	10860	269809	2	Standard
⌊	Cr	53	14.245	ug/L	0.285	2	113	30206	1	Standard
⌈>	Ge	72		ug/L			35776	33878	0	KED
|	Ni	60	12.340	ug/L	0.198	1	145	20233	1	KED
|	Ni	62	11.929	ug/L	0.375	3	28	3139	2	KED
|	Cu	63	32.200	ug/L	0.998	3	53	146699	2	KED
|	Cu	65	31.622	ug/L	0.386	1	29	73963	1	KED
|	Zn	66	61.960	ug/L	0.332	0	87	34789	0	KED
|	Zn	67	62.225	ug/L	1.387	2	19	5691	1	KED
⌊	As	75	7.169	ug/L	0.232	3	2	1949	2	KED
	Y	89		ug/L			55660	273102	1	Standard
	Kr	83		ug/L			44	73	25	Standard
⌈>	In-1	115		ug/L			7587	6963	1	KED
|	Cd	111	0.182	ug/L	0.016	8	4	49	9	KED
⌊	Cd	114	0.260	ug/L	0.013	4	1	170	3	KED
⌈>	In	115		ug/L			519229	502263	0	Standard
⌊	Ag	107	0.134	ug/L	0.006	4	33	2247	4	Standard
⌈>	Tb	159		ug/L			190542	223559	0	Standard
⌊	Pb	208	13.661	ug/L	0.263	1	524	1462194	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-05
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:50:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	40115	3	Standard
⌈>	Sc	45		ug/L			600447	696541	1	Standard
|	Cr	52	13.972	ug/L	0.171	1	10860	263366	0	Standard
⌊	Cr	53	14.084	ug/L	0.546	3	113	29722	2	Standard
⌈>	Ge	72		ug/L			35776	34063	0	KED
|	Ni	60	12.153	ug/L	0.004	0	145	20035	0	KED
|	Ni	62	12.203	ug/L	0.252	2	28	3228	2	KED
|	Cu	63	30.621	ug/L	0.182	0	53	140286	1	KED
|	Cu	65	30.888	ug/L	0.529	1	29	72636	1	KED
|	Zn	66	61.152	ug/L	1.552	2	87	34527	3	KED
|	Zn	67	60.193	ug/L	0.541	0	19	5536	0	KED
⌊	As	75	6.442	ug/L	0.173	2	2	1761	2	KED
	Y	89		ug/L			55660	267558	1	Standard
	Kr	83		ug/L			44	67	5	Standard
⌈>	In-1	115		ug/L			7587	7095	0	KED
|	Cd	111	0.200	ug/L	0.033	16	4	55	15	KED
⌊	Cd	114	0.229	ug/L	0.041	17	1	153	18	KED
⌈>	In	115		ug/L			519229	499273	1	Standard
⌊	Ag	107	0.139	ug/L	0.012	8	33	2310	7	Standard
⌈>	Tb	159		ug/L			190542	219835	0	Standard
⌊	Pb	208	14.358	ug/L	0.249	1	524	1511199	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0071-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:55:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	40341	3	Standard
⌈>	Sc	45		ug/L			600447	679727	1	Standard
|	Cr	52	13.576	ug/L	0.280	2	10860	250134	2	Standard
⌊	Cr	53	13.642	ug/L	0.301	2	113	28109	1	Standard
⌈>	Ge	72		ug/L			35776	33903	1	KED
|	Ni	60	11.924	ug/L	0.282	2	145	19565	1	KED
|	Ni	62	11.936	ug/L	0.534	4	28	3142	3	KED
|	Cu	63	27.743	ug/L	0.140	0	53	126506	1	KED
|	Cu	65	27.736	ug/L	0.201	0	29	64920	1	KED
|	Zn	66	58.405	ug/L	1.496	2	87	32817	2	KED
|	Zn	67	57.184	ug/L	1.965	3	19	5233	1	KED
⌊	As	75	5.879	ug/L	0.200	3	2	1600	2	KED
	Y	89		ug/L			55660	253187	1	Standard
	Kr	83		ug/L			44	62	15	Standard
⌈>	In-1	115		ug/L			7587	7134	2	KED
|	Cd	111	0.173	ug/L	0.033	19	4	48	16	KED
⌊	Cd	114	0.200	ug/L	0.032	15	1	134	17	KED
⌈>	In	115		ug/L			519229	507129	2	Standard
⌊	Ag	107	0.133	ug/L	0.005	4	33	2255	2	Standard
⌈>	Tb	159		ug/L			190542	221170	1	Standard
⌊	Pb	208	19.884	ug/L	0.450	2	524	2104767	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0109-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Wednesday, May 10, 2023 23:59:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	41351	4	Standard
⌈>	Sc	45		ug/L			600447	689065	1	Standard
|	Cr	52	13.277	ug/L	0.115	0	10860	248242	1	Standard
⌊	Cr	53	13.127	ug/L	0.146	1	113	27430	2	Standard
⌈>	Ge	72		ug/L			35776	33601	1	KED
|	Ni	60	10.961	ug/L	0.105	0	145	17839	1	KED
|	Ni	62	10.953	ug/L	0.166	1	28	2861	0	KED
|	Cu	63	37.403	ug/L	0.776	2	53	169002	1	KED
|	Cu	65	37.230	ug/L	1.137	3	29	86342	1	KED
|	Zn	66	54.195	ug/L	0.498	0	87	30188	0	KED
|	Zn	67	51.947	ug/L	1.758	3	19	4714	2	KED
⌊	As	75	8.383	ug/L	0.093	1	2	2260	0	KED
	Y	89		ug/L			55660	253081	2	Standard
	Kr	83		ug/L			44	70	4	Standard
⌈>	In-1	115		ug/L			7587	7085	2	KED
|	Cd	111	0.178	ug/L	0.018	10	4	49	8	KED
⌊	Cd	114	0.173	ug/L	0.014	7	1	116	9	KED
⌈>	In	115		ug/L			519229	506436	3	Standard
⌊	Ag	107	0.140	ug/L	0.009	6	33	2360	2	Standard
⌈>	Tb	159		ug/L			190542	218914	0	Standard
⌊	Pb	208	13.032	ug/L	0.026	0	524	1365955	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0109-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:03:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	44730	2	Standard
>	Sc	45		ug/L			600447	695996	0	Standard
	Cr	52	13.163	ug/L	0.197	1	10860	248690	1	Standard
	Cr	53	12.957	ug/L	0.368	2	113	27345	2	Standard
>	Ge	72		ug/L			35776	33265	1	KED
	Ni	60	11.039	ug/L	0.401	3	145	17780	2	KED
	Ni	62	11.096	ug/L	0.292	2	28	2868	1	KED
	Cu	63	33.534	ug/L	0.794	2	53	150033	2	KED
	Cu	65	33.030	ug/L	0.499	1	29	75849	0	KED
	Zn	66	55.322	ug/L	0.971	1	87	30504	0	KED
	Zn	67	55.166	ug/L	1.585	2	19	4957	3	KED
	As	75	8.674	ug/L	0.314	3	2	2315	2	KED
	Y	89		ug/L			55660	251821	1	Standard
	Kr	83		ug/L			44	67	20	Standard
>	In-1	115		ug/L			7587	6853	1	KED
	Cd	111	0.200	ug/L	0.020	10	4	53	7	KED
	Cd	114	0.185	ug/L	0.031	16	1	119	14	KED
>	In	115		ug/L			519229	504230	4	Standard
	Ag	107	0.143	ug/L	0.009	6	33	2395	1	Standard
>	Tb	159		ug/L			190542	215455	1	Standard
	Pb	208	13.720	ug/L	0.338	2	524	1415046	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0108-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:08:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	43300	5	Standard
>	Sc	45		ug/L			600447	713310	1	Standard
	Cr	52	16.422	ug/L	0.161	0	10860	314787	1	Standard
	Cr	53	16.361	ug/L	0.435	2	113	35354	3	Standard
>	Ge	72		ug/L			35776	32638	0	KED
	Ni	60	15.409	ug/L	0.351	2	145	24305	2	KED
	Ni	62	15.069	ug/L	0.298	1	28	3813	1	KED
	Cu	63	38.928	ug/L	0.502	1	53	170861	0	KED
	Cu	65	39.033	ug/L	0.216	0	29	87953	1	KED
	Zn	66	75.753	ug/L	0.903	1	87	40958	1	KED
	Zn	67	73.795	ug/L	1.061	1	19	6499	1	KED
	As	75	8.223	ug/L	0.084	1	2	2154	0	KED
	Y	89		ug/L			55660	331620	1	Standard
	Kr	83		ug/L			44	85	5	Standard
>	In-1	115		ug/L			7587	7151	0	KED
	Cd	111	0.175	ug/L	0.028	15	4	49	14	KED
	Cd	114	0.189	ug/L	0.041	21	1	127	20	KED
>	In	115		ug/L			519229	494671	2	Standard
	Ag	107	0.155	ug/L	0.005	3	33	2553	5	Standard
>	Tb	159		ug/L			190542	226865	1	Standard
	Pb	208	15.700	ug/L	0.343	2	524	1704869	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBL9
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:12:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	26146	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	573930	1	Standard
|	**Cr**	**52**	**-0.020**	ug/L	0.012	58	10860	10084	3	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.008	84	113	92	15	Standard
⌈>	**Ge**	**72**		ug/L			35776	32582	1	KED
|	**Ni**	**60**	**0.015**	ug/L	0.010	68	145	155	11	KED
|	**Ni**	**62**	**0.005**	ug/L	0.030	607	28	27	28	KED
|	**Cu**	**63**	**0.014**	ug/L	0.002	14	53	111	6	KED
|	**Cu**	**65**	**0.010**	ug/L	0.005	55	29	48	25	KED
|	**Zn**	**66**	**-0.030**	ug/L	0.021	69	87	63	16	KED
|	**Zn**	**67**	**-0.067**	ug/L	0.011	16	19	12	9	KED
⌊	**As**	**75**	**0.003**	ug/L	0.005	152	2	2	44	KED
	Y	**89**		ug/L			55660	54155	0	Standard
	Kr	**83**		ug/L			44	38	2	Standard
⌈>	**In-1**	**115**		ug/L			7587	6900	0	KED
|	**Cd**	**111**	**-0.012**	ug/L	0.002	17	4	0	86	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.002	101	1	0	207	KED
⌈>	**In**	**115**		ug/L			519229	511559	0	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	5	33	10	10	Standard
⌈>	**Tb**	**159**		ug/L			190542	194216	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	31	524	634	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:16:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	25538	4	Standard
⌈>	**Sc**	**45**		ug/L			600447	594963	3	Standard
|	**Cr**	**52**	**50.178**	ug/L	0.793	1	10860	779879	1	Standard
⌊	**Cr**	**53**	**49.353**	ug/L	1.384	2	113	88670	0	Standard
⌈>	**Ge**	**72**		ug/L			35776	34074	1	KED
|	**Ni**	**60**	**48.680**	ug/L	0.968	1	145	79858	2	KED
|	**Ni**	**62**	**47.611**	ug/L	0.229	0	28	12521	1	KED
|	**Cu**	**63**	**49.180**	ug/L	0.308	0	53	225338	1	KED
|	**Cu**	**65**	**48.634**	ug/L	0.916	1	29	114372	0	KED
|	**Zn**	**66**	**48.427**	ug/L	0.650	1	87	27362	1	KED
|	**Zn**	**67**	**50.458**	ug/L	2.031	4	19	4643	2	KED
⌊	**As**	**75**	**49.054**	ug/L	1.109	2	2	13404	0	KED
	Y	**89**		ug/L			55660	54653	1	Standard
	Kr	**83**		ug/L			44	55	9	Standard
⌈>	**In-1**	**115**		ug/L			7587	7138	3	KED
|	**Cd**	**111**	**49.973**	ug/L	2.395	4	4	12921	0	KED
⌊	**Cd**	**114**	**49.890**	ug/L	1.571	3	1	33197	1	KED
⌈>	**In**	**115**		ug/L			519229	506488	1	Standard
⌊	**Ag**	**107**	**48.935**	ug/L	1.204	2	33	815045	1	Standard
⌈>	**Tb**	**159**		ug/L			190542	196385	0	Standard
⌊	**Pb**	**208**	**51.586**	ug/L	0.606	1	524	4848875	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:24:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	25562	4	Standard
⌈>	**Sc**	**45**		ug/L			600447	584484	0	Standard
|	**Cr**	**52**	**-0.033**	ug/L	0.013	38	10860	10071	2	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.004	52	113	96	8	Standard
⌈>	**Ge**	**72**		ug/L			35776	33932	0	KED
|	**Ni**	**60**	**-0.017**	ug/L	0.007	39	145	109	9	KED
|	**Ni**	**62**	**-0.031**	ug/L	0.030	96	28	19	40	KED
|	**Cu**	**63**	**0.003**	ug/L	0.001	48	53	64	10	KED
|	**Cu**	**65**	**0.004**	ug/L	0.003	56	29	38	15	KED
|	**Zn**	**66**	**-0.058**	ug/L	0.002	3	87	50	2	KED
|	**Zn**	**67**	**-0.135**	ug/L	0.031	23	19	6	45	KED
⌊	**As**	**75**	**0.007**	ug/L	0.004	63	2	3	30	KED
	Y	**89**		ug/L			55660	54405	2	Standard
	Kr	**83**		ug/L			44	37	28	Standard
⌈>	**In-1**	**115**		ug/L			7587	7340	1	KED
|	**Cd**	**111**	**-0.008**	ug/L	0.006	81	4	1	86	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.002	175	1	2	47	KED
⌈>	**In**	**115**		ug/L			519229	506728	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.001	46	33	59	22	Standard
⌈>	**Tb**	**159**		ug/L			190542	195679	1	Standard
⌊	**Pb**	**208**	**0.002**	ug/L	0.000	5	524	691	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0108-06
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:28:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	42152	3	Standard
⌈>	Sc	45		ug/L			600447	701617	2	Standard
|	Cr	52	13.784	ug/L	0.159	1	10860	261945	2	Standard
⌊	Cr	53	13.824	ug/L	0.149	1	113	29404	2	Standard
⌈>	Ge	72		ug/L			35776	33631	1	KED
|	Ni	60	11.683	ug/L	0.169	1	145	19022	2	KED
|	Ni	62	11.656	ug/L	0.112	0	28	3046	0	KED
|	Cu	63	32.720	ug/L	0.427	1	53	147993	1	KED
|	Cu	65	32.727	ug/L	0.710	2	29	75985	2	KED
|	Zn	66	58.096	ug/L	1.862	3	87	32377	1	KED
|	Zn	67	57.353	ug/L	1.009	1	19	5208	1	KED
⌊	As	75	8.068	ug/L	0.212	2	2	2178	2	KED
	Y	89		ug/L			55660	268399	1	Standard
	Kr	83		ug/L			44	84	7	Standard
⌈>	In-1	115		ug/L			7587	7254	0	KED
|	Cd	111	0.183	ug/L	0.012	6	4	52	5	KED
⌊	Cd	114	0.196	ug/L	0.027	13	1	134	13	KED
⌈>	In	115		ug/L			519229	505482	0	Standard
⌊	Ag	107	0.143	ug/L	0.008	5	33	2409	6	Standard
⌈>	Tb	159		ug/L			190542	222718	0	Standard
⌊	Pb	208	13.876	ug/L	0.125	0	524	1479618	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0108-07
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:32:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
C	13		ug/L			27881	40027	8	Standard
Sc	45		ug/L			600447	698775	1	Standard
Cr	52	14.213	ug/L	0.080	0	10860	268577	1	Standard
Cr	53	14.164	ug/L	0.155	1	113	30003	2	Standard
Ge	72		ug/L			35776	33832	0	KED
Ni	60	11.465	ug/L	0.137	1	145	18781	0	KED
Ni	62	11.563	ug/L	0.199	1	28	3040	2	KED
Cu	63	33.675	ug/L	0.564	1	53	153215	1	KED
Cu	65	32.656	ug/L	0.151	0	29	76276	0	KED
Zn	66	57.957	ug/L	1.470	2	87	32501	2	KED
Zn	67	55.816	ug/L	1.269	2	19	5099	1	KED
As	75	8.291	ug/L	0.137	1	2	2251	1	KED
Y	89		ug/L			55660	265350	3	Standard
Kr	83		ug/L			44	74	5	Standard
In-1	115		ug/L			7587	7022	2	KED
Cd	111	0.241	ug/L	0.056	23	4	65	23	KED
Cd	114	0.248	ug/L	0.041	16	1	163	15	KED
In	115		ug/L			519229	507693	0	Standard
Ag	107	0.154	ug/L	0.006	3	33	2596	4	Standard
Tb	159		ug/L			190542	218126	0	Standard
Pb	208	14.843	ug/L	0.185	1	524	1550062	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0108-08
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:37:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	38717	0	Standard
>	Sc	45		ug/L			600447	703681	1	Standard
	Cr	52	13.446	ug/L	0.155	1	10860	256553	0	Standard
	Cr	53	13.362	ug/L	0.125	0	113	28507	1	Standard
>	Ge	72		ug/L			35776	33183	1	KED
	Ni	60	12.093	ug/L	0.381	3	145	19417	2	KED
	Ni	62	12.156	ug/L	0.093	0	28	3133	2	KED
	Cu	63	28.972	ug/L	0.594	2	53	129274	0	KED
	Cu	65	28.921	ug/L	0.252	0	29	66254	0	KED
	Zn	66	56.544	ug/L	1.297	2	87	31099	1	KED
	Zn	67	56.684	ug/L	1.162	2	19	5079	1	KED
	As	75	6.999	ug/L	0.103	1	2	1864	1	KED
	Y	89		ug/L			55660	267168	0	Standard
	Kr	83		ug/L			44	76	8	Standard
>	In-1	115		ug/L			7587	6892	3	KED
	Cd	111	0.172	ug/L	0.019	11	4	46	9	KED
	Cd	114	0.224	ug/L	0.026	11	1	145	14	KED
>	In	115		ug/L			519229	502886	1	Standard
	Ag	107	0.124	ug/L	0.000	0	33	2079	1	Standard
>	Tb	159		ug/L			190542	220269	0	Standard
	Pb	208	11.496	ug/L	0.252	2	524	1212380	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23C0108-09
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:41:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	36163	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	675390	2	Standard
|	**Cr**	**52**	**11.612**	ug/L	0.348	2	10860	214261	1	Standard
⌊	**Cr**	**53**	**11.687**	ug/L	0.277	2	113	23940	1	Standard
⌈>	**Ge**	**72**		ug/L			35776	33264	0	KED
|	**Ni**	**60**	**9.904**	ug/L	0.159	1	145	15969	1	KED
|	**Ni**	**62**	**9.757**	ug/L	0.454	4	28	2526	4	KED
|	**Cu**	**63**	**26.785**	ug/L	0.607	2	53	119830	1	KED
|	**Cu**	**65**	**26.312**	ug/L	0.547	2	29	60427	1	KED
|	**Zn**	**66**	**52.519**	ug/L	0.742	1	87	28964	0	KED
|	**Zn**	**67**	**51.518**	ug/L	2.705	5	19	4630	5	KED
⌊	**As**	**75**	**6.060**	ug/L	0.120	1	2	1618	1	KED
	Y	**89**		ug/L			55660	234210	0	Standard
	Kr	**83**		ug/L			44	67	25	Standard
⌈>	**In-1**	**115**		ug/L			7587	7065	1	KED
|	**Cd**	**111**	**0.155**	ug/L	0.017	10	4	43	10	KED
⌊	**Cd**	**114**	**0.153**	ug/L	0.016	10	1	102	11	KED
⌈>	**In**	**115**		ug/L			519229	505119	2	Standard
⌊	**Ag**	**107**	**0.108**	ug/L	0.003	3	33	1821	3	Standard
⌈>	**Tb**	**159**		ug/L			190542	217502	2	Standard
⌊	**Pb**	**208**	**10.645**	ug/L	0.144	1	524	1108469	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0008-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:46:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	36904	6	Standard
⌈>	Sc	45		ug/L			600447	658482	8	Standard
|	Cr	52	13.364	ug/L	1.275	9	10860	237528	1	Standard
⌊	Cr	53	13.224	ug/L	1.165	8	113	26285	3	Standard
⌈>	Ge	72		ug/L			35776	33385	1	KED
|	Ni	60	11.756	ug/L	0.301	2	145	18995	0	KED
|	Ni	62	11.718	ug/L	0.482	4	28	3038	2	KED
|	Cu	63	26.959	ug/L	0.285	1	53	121042	0	KED
|	Cu	65	26.749	ug/L	0.537	2	29	61646	0	KED
|	Zn	66	95.776	ug/L	0.264	0	87	52948	1	KED
|	Zn	67	93.257	ug/L	3.356	3	19	8393	2	KED
⌊	As	75	5.155	ug/L	0.087	1	2	1382	0	KED
	Y	89		ug/L			55660	267607	3	Standard
	Kr	83		ug/L			44	82	18	Standard
⌈>	In-1	115		ug/L			7587	7025	1	KED
|	Cd	111	0.159	ug/L	0.028	17	4	44	17	KED
⌊	Cd	114	0.164	ug/L	0.003	1	1	109	1	KED
⌈>	In	115		ug/L			519229	476583	10	Standard
⌊	Ag	107	0.109	ug/L	0.012	10	33	1730	1	Standard
⌈>	Tb	159		ug/L			190542	212482	8	Standard
⌊	Pb	208	11.065	ug/L	1.013	9	524	1119922	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0008-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:50:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	35181	3	Standard
⌈>	Sc	45		ug/L			600447	694840	0	Standard
|	Cr	52	12.759	ug/L	0.166	1	10860	241055	1	Standard
⌊	Cr	53	12.803	ug/L	0.260	2	113	26979	2	Standard
⌈>	Ge	72		ug/L			35776	32911	1	KED
|	Ni	60	11.463	ug/L	0.048	0	145	18267	0	KED
|	Ni	62	11.716	ug/L	0.618	5	28	2995	5	KED
|	Cu	63	30.419	ug/L	0.228	0	53	134653	1	KED
|	Cu	65	30.125	ug/L	0.324	1	29	68448	1	KED
|	Zn	66	63.456	ug/L	1.666	2	87	34603	1	KED
|	Zn	67	61.360	ug/L	1.215	1	19	5452	2	KED
⌊	As	75	6.807	ug/L	0.171	2	2	1798	1	KED
	Y	89		ug/L			55660	270124	3	Standard
	Kr	83		ug/L			44	94	9	Standard
⌈>	In-1	115		ug/L			7587	7021	2	KED
|	Cd	111	0.179	ug/L	0.037	20	4	49	17	KED
⌊	Cd	114	0.173	ug/L	0.024	14	1	114	16	KED
⌈>	In	115		ug/L			519229	499685	2	Standard
⌊	Ag	107	0.116	ug/L	0.008	6	33	1932	4	Standard
⌈>	Tb	159		ug/L			190542	221804	0	Standard
⌊	Pb	208	11.749	ug/L	0.083	0	524	1247680	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0037-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:54:53
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	37636	5	Standard
⌈>	Sc	45		ug/L			600447	685486	0	Standard
|	Cr	52	16.521	ug/L	0.526	3	10860	304236	2	Standard
⌊	Cr	53	16.594	ug/L	0.435	2	113	34456	2	Standard
⌈>	Ge	72		ug/L			35776	32742	0	KED
|	Ni	60	12.901	ug/L	0.250	1	145	20434	1	KED
|	Ni	62	12.820	ug/L	0.316	2	28	3258	1	KED
|	Cu	63	32.180	ug/L	0.702	2	53	141691	1	KED
|	Cu	65	32.801	ug/L	0.389	1	29	74144	0	KED
|	Zn	66	71.544	ug/L	1.069	1	87	38808	0	KED
|	Zn	67	69.189	ug/L	1.002	1	19	6114	2	KED
⌊	As	75	7.614	ug/L	0.071	0	2	2001	1	KED
	Y	89		ug/L			55660	259985	1	Standard
	Kr	83		ug/L			44	85	9	Standard
⌈>	In-1	115		ug/L			7587	7023	1	KED
|	Cd	111	0.137	ug/L	0.009	6	4	38	7	KED
⌊	Cd	114	0.144	ug/L	0.012	8	1	95	6	KED
⌈>	In	115		ug/L			519229	496722	1	Standard
⌊	Ag	107	0.113	ug/L	0.004	3	33	1883	2	Standard
⌈>	Tb	159		ug/L			190542	218818	0	Standard
⌊	Pb	208	17.415	ug/L	0.324	1	524	1824272	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0037-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 00:59:18
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			27881	37582	3	Standard
⌈>	Sc	45		ug/L			600447	669281	2	Standard
|	Cr	52	22.029	ug/L	0.384	1	10860	392004	2	Standard
⌊	Cr	53	21.690	ug/L	0.339	1	113	43926	1	Standard
⌈>	Ge	72		ug/L			35776	32667	2	KED
|	Ni	60	18.945	ug/L	0.600	3	145	29864	0	KED
|	Ni	62	18.494	ug/L	0.363	1	28	4678	1	KED
|	Cu	63	103.407	ug/L	2.883	2	53	454006	0	KED
|	Cu	65	102.730	ug/L	1.556	1	29	231623	2	KED
|	Zn	66	178.533	ug/L	4.616	2	87	96485	2	KED
|	Zn	67	170.011	ug/L	2.949	1	19	14964	3	KED
⌊	As	75	16.375	ug/L	0.240	1	2	4291	1	KED
	Y	89		ug/L			55660	241132	1	Standard
	Kr	83		ug/L			44	73	26	Standard
⌈>	In-1	115		ug/L			7587	6780	0	KED
|	Cd	111	0.418	ug/L	0.049	11	4	106	10	KED
⌊	Cd	114	0.454	ug/L	0.060	13	1	288	12	KED
⌈>	In	115		ug/L			519229	502468	3	Standard
⌊	Ag	107	0.118	ug/L	0.002	1	33	1979	1	Standard
⌈>	Tb	159		ug/L			190542	213368	0	Standard
⌊	Pb	208	48.910	ug/L	0.730	1	524	4994590	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0037-02
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:03:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	42891	2	Standard
⌈>	**Sc**	**45**		ug/L			600447	690386	1	Standard
|	**Cr**	**52**	**15.879**	ug/L	0.081	0	10860	295013	1	Standard
⌊	**Cr**	**53**	**15.797**	ug/L	0.231	1	113	33044	2	Standard
⌈>	**Ge**	**72**		ug/L			35776	32570	1	KED
|	**Ni**	**60**	**15.329**	ug/L	0.559	3	145	24120	2	KED
|	**Ni**	**62**	**15.503**	ug/L	0.390	2	28	3914	1	KED
|	**Cu**	**63**	**35.760**	ug/L	0.959	2	53	156594	1	KED
|	**Cu**	**65**	**34.988**	ug/L	0.447	1	29	78674	2	KED
|	**Zn**	**66**	**81.273**	ug/L	1.022	1	87	43842	1	KED
|	**Zn**	**67**	**78.630**	ug/L	2.118	2	19	6908	1	KED
⌊	**As**	**75**	**6.077**	ug/L	0.117	1	2	1589	0	KED
	Y	**89**		ug/L			55660	293531	0	Standard
	Kr	**83**		ug/L			44	81	11	Standard
⌈>	**In-1**	**115**		ug/L			7587	6877	0	KED
|	**Cd**	**111**	**0.163**	ug/L	0.024	14	4	44	14	KED
⌊	**Cd**	**114**	**0.184**	ug/L	0.033	18	1	119	17	KED
⌈>	**In**	**115**		ug/L			519229	497287	2	Standard
⌊	**Ag**	**107**	**0.123**	ug/L	0.006	4	33	2042	6	Standard
⌈>	**Tb**	**159**		ug/L			190542	220337	0	Standard
⌊	**Pb**	**208**	**18.272**	ug/L	0.349	1	524	1927197	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:08:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	24843	3	Standard
⌈>	**Sc**	**45**		ug/L			600447	570538	2	Standard
|	**Cr**	**52**	**-0.031**	ug/L	0.013	43	10860	9866	1	Standard
⌊	**Cr**	**53**	**-0.012**	ug/L	0.015	128	113	86	27	Standard
⌈>	**Ge**	**72**		ug/L			35776	32250	0	KED
|	**Ni**	**60**	**0.020**	ug/L	0.011	56	145	161	10	KED
|	**Ni**	**62**	**0.016**	ug/L	0.016	99	28	29	13	KED
|	**Cu**	**63**	**0.008**	ug/L	0.002	30	53	81	12	KED
|	**Cu**	**65**	**0.004**	ug/L	0.004	103	29	34	24	KED
|	**Zn**	**66**	**-0.028**	ug/L	0.030	106	87	64	25	KED
|	**Zn**	**67**	**-0.109**	ug/L	0.034	30	19	8	35	KED
⌊	**As**	**75**	**0.001**	ug/L	0.002	122	2	2	20	KED
	Y	**89**		ug/L			55660	53022	1	Standard
	Kr	**83**		ug/L			44	46	24	Standard
⌈>	**In-1**	**115**		ug/L			7587	6858	1	KED
|	**Cd**	**111**	**-0.010**	ug/L	0.009	88	4	1	173	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.003	915	1	1	106	KED
⌈>	**In**	**115**		ug/L			519229	507926	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	23	33	12	37	Standard
⌈>	**Tb**	**159**		ug/L			190542	192482	2	Standard
⌊	**Pb**	**208**	**0.004**	ug/L	0.004	126	524	860	50	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:12:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	24688	5	Standard
⌈>	**Sc**	**45**		ug/L			600447	587821	1	Standard
|	**Cr**	**52**	**50.267**	ug/L	0.836	1	10860	772260	3	Standard
⌊	**Cr**	**53**	**49.039**	ug/L	1.119	2	113	87116	3	Standard
⌈>	**Ge**	**72**		ug/L			35776	33250	0	KED
|	**Ni**	**60**	**48.819**	ug/L	0.971	1	145	78156	1	KED
|	**Ni**	**62**	**48.209**	ug/L	1.520	3	28	12372	2	KED
|	**Cu**	**63**	**49.620**	ug/L	0.752	1	53	221871	1	KED
|	**Cu**	**65**	**48.668**	ug/L	0.371	0	29	111709	0	KED
|	**Zn**	**66**	**50.023**	ug/L	1.122	2	87	27580	1	KED
|	**Zn**	**67**	**49.741**	ug/L	2.604	5	19	4468	4	KED
⌊	**As**	**75**	**49.558**	ug/L	0.239	0	2	13218	0	KED
	Y	**89**		ug/L			55660	53986	1	Standard
	Kr	**83**		ug/L			44	40	28	Standard
⌈>	**In-1**	**115**		ug/L			7587	7116	3	KED
|	**Cd**	**111**	**48.527**	ug/L	2.801	5	4	12510	3	KED
⌊	**Cd**	**114**	**48.916**	ug/L	3.450	7	1	32427	4	KED
⌈>	**In**	**115**		ug/L			519229	497812	2	Standard
⌊	**Ag**	**107**	**48.787**	ug/L	0.812	1	33	798652	0	Standard
⌈>	**Tb**	**159**		ug/L			190542	199063	0	Standard
⌊	**Pb**	**208**	**51.680**	ug/L	0.781	1	524	4923450	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:19:44
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			27881	24490	0	Standard
⌈>	**Sc**	**45**		ug/L			600447	572095	1	Standard
|	**Cr**	**52**	**-0.016**	ug/L	0.007	47	10860	10114	2	Standard
⌊	**Cr**	**53**	**-0.010**	ug/L	0.005	52	113	90	10	Standard
⌈>	**Ge**	**72**		ug/L			35776	33107	1	KED
|	**Ni**	**60**	**-0.019**	ug/L	0.017	93	145	104	25	KED
|	**Ni**	**62**	**-0.036**	ug/L	0.021	57	28	17	29	KED
|	**Cu**	**63**	**0.007**	ug/L	0.003	36	53	81	14	KED
|	**Cu**	**65**	**0.011**	ug/L	0.011	102	29	50	46	KED
|	**Zn**	**66**	**-0.055**	ug/L	0.037	66	87	50	38	KED
|	**Zn**	**67**	**-0.111**	ug/L	0.077	68	19	8	81	KED
⌊	**As**	**75**	**0.006**	ug/L	0.002	30	2	3	15	KED
	Y	**89**		ug/L			55660	53252	4	Standard
	Kr	**83**		ug/L			44	46	16	Standard
⌈>	**In-1**	**115**		ug/L			7587	7049	3	KED
|	**Cd**	**111**	**-0.011**	ug/L	0.007	58	4	0	173	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	226	1	1	94	KED
⌈>	**In**	**115**		ug/L			519229	500651	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	50	33	55	22	Standard
⌈>	**Tb**	**159**		ug/L			190542	194761	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.000	22	524	665	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:24:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				23951	1	Standard
⌈>	**Sc**	**45**		ug/L				579638	2	Standard
|	**Cr**	**52**		ug/L				10138	1	Standard
⌊	**Cr**	**53**		ug/L				92	13	Standard
⌈>	**Ge**	**72**		ug/L				33052	2	KED
|	**Ni**	**60**		ug/L				97	25	KED
|	**Ni**	**62**		ug/L				15	49	KED
|	**Cu**	**63**		ug/L				198	57	KED
|	**Cu**	**65**		ug/L				107	77	KED
|	**Zn**	**66**		ug/L				67	36	KED
|	**Zn**	**67**		ug/L				15	13	KED
⌊	**As**	**75**		ug/L				4	114	KED
	Y	**89**		ug/L				53627	1	Standard
	Kr	**83**		ug/L				34	20	Standard
⌈>	**In-1**	**115**		ug/L				7114	5	KED
|	**Cd**	**111**		ug/L				2	24	KED
⌊	**Cd**	**114**		ug/L				0	293	KED
⌈>	**In**	**115**		ug/L				522018	2	Standard
⌊	**Ag**	**107**		ug/L				24	23	Standard
⌈>	**Tb**	**159**		ug/L				194588	1	Standard
⌊	**Pb**	**208**		ug/L				589	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:28:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	24643	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	604497	1	Standard
|	**Cr**	**52**	**48.978**	ug/L	0.531	1	10138	773644	2	Standard
⌊	**Cr**	**53**	**48.354**	ug/L	0.493	1	92	88313	2	Standard
⌈>	**Ge**	**72**		ug/L			33052	33370	0	KED
|	**Ni**	**60**	**49.324**	ug/L	1.040	2	97	79207	1	KED
|	**Ni**	**62**	**47.977**	ug/L	1.281	2	15	12345	1	KED
|	**Cu**	**63**	**49.978**	ug/L	1.244	2	198	224398	1	KED
|	**Cu**	**65**	**48.605**	ug/L	0.688	1	107	112041	0	KED
|	**Zn**	**66**	**50.089**	ug/L	0.902	1	67	27704	1	KED
|	**Zn**	**67**	**50.597**	ug/L	2.408	4	15	4559	4	KED
⌊	**As**	**75**	**49.659**	ug/L	1.424	2	4	13295	2	KED
	Y	**89**		ug/L			53627	55035	2	Standard
	Kr	**83**		ug/L			34	50	21	Standard
⌈>	**In-1**	**115**		ug/L			7114	7142	0	KED
|	**Cd**	**111**	**49.790**	ug/L	0.467	0	2	12894	1	KED
⌊	**Cd**	**114**	**49.917**	ug/L	0.583	1	0	33256	1	KED
⌈>	**In**	**115**		ug/L			522018	505738	4	Standard
⌊	**Ag**	**107**	**48.105**	ug/L	1.906	3	24	799289	0	Standard
⌈>	**Tb**	**159**		ug/L			194588	199862	1	Standard
⌊	**Pb**	**208**	**51.228**	ug/L	1.038	2	589	4900055	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:35:45
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	24390	5	Standard
⌈>	**Sc**	**45**		ug/L			579638	570057	2	Standard
|	**Cr**	**52**	**0.018**	ug/L	0.030	170	10138	10227	2	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.005	170	92	86	11	Standard
⌈>	**Ge**	**72**		ug/L			33052	34200	3	KED
|	**Ni**	**60**	**0.005**	ug/L	0.011	211	97	109	18	KED
|	**Ni**	**62**	**-0.016**	ug/L	0.016	101	15	12	32	KED
|	**Cu**	**63**	**-0.017**	ug/L	0.005	27	198	128	14	KED
|	**Cu**	**65**	**-0.024**	ug/L	0.005	19	107	55	15	KED
|	**Zn**	**66**	**-0.023**	ug/L	0.025	111	67	57	28	KED
|	**Zn**	**67**	**-0.062**	ug/L	0.046	74	15	10	40	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.005	104	4	3	37	KED
	Y	**89**		ug/L			53627	53691	4	Standard
	Kr	**83**		ug/L			34	40	9	Standard
⌈>	**In-1**	**115**		ug/L			7114	7219	0	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.006	147	2	1	114	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	907	0	0	218	KED
⌈>	**In**	**115**		ug/L			522018	508569	2	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	30	24	77	18	Standard
⌈>	**Tb**	**159**		ug/L			194588	192635	1	Standard
⌊	**Pb**	**208**	**0.001**	ug/L	0.001	55	589	699	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0037-04
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:40:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	37083	2	Standard
⌈>	**Sc**	**45**		ug/L			579638	666315	2	Standard
|	**Cr**	**52**	**14.778**	ug/L	0.414	2	10138	265352	2	Standard
⌊	**Cr**	**53**	**14.846**	ug/L	0.408	2	92	29949	2	Standard
⌈>	**Ge**	**72**		ug/L			33052	33256	2	KED
|	**Ni**	**60**	**13.070**	ug/L	0.294	2	97	20983	0	KED
|	**Ni**	**62**	**13.519**	ug/L	0.640	4	15	3476	2	KED
|	**Cu**	**63**	**33.896**	ug/L	0.667	1	198	151715	0	KED
|	**Cu**	**65**	**34.294**	ug/L	1.367	3	107	78776	1	KED
|	**Zn**	**66**	**78.001**	ug/L	1.335	1	67	42946	0	KED
|	**Zn**	**67**	**76.310**	ug/L	3.075	4	15	6841	2	KED
⌊	**As**	**75**	**7.516**	ug/L	0.211	2	4	2008	1	KED
	Y	**89**		ug/L			53627	253479	2	Standard
	Kr	**83**		ug/L			34	67	14	Standard
⌈>	**In-1**	**115**		ug/L			7114	7022	2	KED
|	**Cd**	**111**	**0.173**	ug/L	0.026	14	2	46	15	KED
⌊	**Cd**	**114**	**0.168**	ug/L	0.032	19	0	110	19	KED
⌈>	**In**	**115**		ug/L			522018	501570	2	Standard
⌊	**Ag**	**107**	**0.124**	ug/L	0.008	6	24	2072	3	Standard
⌈>	**Tb**	**159**		ug/L			194588	216254	2	Standard
⌊	**Pb**	**208**	**24.655**	ug/L	0.542	2	589	2551303	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0063-01
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:44:35
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	36093	5	Standard
⌈>	Sc	45		ug/L			579638	675816	1	Standard
|	Cr	52	12.093	ug/L	0.292	2	10138	222478	3	Standard
⌊	Cr	53	11.925	ug/L	0.087	0	92	24429	1	Standard
⌈>	Ge	72		ug/L			33052	32692	0	KED
|	Ni	60	10.569	ug/L	0.056	0	97	16704	0	KED
|	Ni	62	10.693	ug/L	0.267	2	15	2708	2	KED
|	Cu	63	28.415	ug/L	0.362	1	198	125086	0	KED
|	Cu	65	27.586	ug/L	0.411	1	107	62347	1	KED
|	Zn	66	54.295	ug/L	1.764	3	67	29412	2	KED
|	Zn	67	54.009	ug/L	0.750	1	15	4767	0	KED
⌊	As	75	6.145	ug/L	0.125	2	4	1615	1	KED
	Y	89		ug/L			53627	247657	1	Standard
	Kr	83		ug/L			34	70	10	Standard
⌈>	In-1	115		ug/L			7114	6869	3	KED
|	Cd	111	0.128	ug/L	0.034	26	2	33	26	KED
⌊	Cd	114	0.143	ug/L	0.032	22	0	91	23	KED
⌈>	In	115		ug/L			522018	498017	1	Standard
⌊	Ag	107	0.114	ug/L	0.004	3	24	1886	1	Standard
⌈>	Tb	159		ug/L			194588	218860	2	Standard
⌊	Pb	208	11.885	ug/L	0.301	2	589	1244967	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0063-03
Sample Dil Factor: 20
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:49:00
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	35499	1	Standard
⌈>	Sc	45		ug/L			579638	667168	1	Standard
|	Cr	52	12.476	ug/L	0.197	1	10138	226180	1	Standard
⌊	Cr	53	12.216	ug/L	0.084	0	92	24701	1	Standard
⌈>	Ge	72		ug/L			33052	32239	3	KED
|	Ni	60	10.330	ug/L	0.214	2	97	16096	1	KED
|	Ni	62	10.576	ug/L	0.168	1	15	2640	2	KED
|	Cu	63	29.293	ug/L	0.285	0	198	127139	2	KED
|	Cu	65	28.863	ug/L	0.751	2	107	64290	0	KED
|	Zn	66	56.772	ug/L	2.696	4	67	30296	1	KED
|	Zn	67	55.840	ug/L	3.137	5	15	4854	2	KED
⌊	As	75	7.812	ug/L	0.264	3	4	2022	1	KED
	Y	89		ug/L			53627	245815	2	Standard
	Kr	83		ug/L			34	64	9	Standard
⌈>	In-1	115		ug/L			7114	6861	2	KED
|	Cd	111	0.175	ug/L	0.040	22	2	45	19	KED
⌊	Cd	114	0.161	ug/L	0.030	18	0	103	17	KED
⌈>	In	115		ug/L			522018	506848	1	Standard
⌊	Ag	107	0.117	ug/L	0.005	4	24	1968	5	Standard
⌈>	Tb	159		ug/L			194588	214654	2	Standard
⌊	Pb	208	11.626	ug/L	0.374	3	589	1194319	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0452-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:53:19
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	105848	5	Standard
⌈>	**Sc**	**45**		ug/L			579638	461044	2	Standard
|	**Cr**	**52**	**2.573**	ug/L	0.016	0	10138	38630	2	Standard
⌊	**Cr**	**53**	**2.140**	ug/L	0.084	3	92	3048	1	Standard
⌈>	**Ge**	**72**		ug/L			33052	25757	1	KED
|	**Ni**	**60**	**3.973**	ug/L	0.094	2	97	4995	2	KED
|	**Ni**	**62**	**3.970**	ug/L	0.157	3	15	800	4	KED
|	**Cu**	**63**	**0.400**	ug/L	0.004	1	198	1539	0	KED
|	**Cu**	**65**	**0.392**	ug/L	0.035	8	107	780	7	KED
|	**Zn**	**66**	**2.796**	ug/L	0.241	8	67	1243	8	KED
|	**Zn**	**67**	**2.790**	ug/L	0.296	10	15	205	9	KED
⌊	**As**	**75**	**0.134**	ug/L	0.017	12	4	31	10	KED
	Y	**89**		ug/L			53627	44123	1	Standard
	Kr	**83**		ug/L			34	34	27	Standard
⌈>	**In-1**	**115**		ug/L			7114	5449	7	KED
|	**Cd**	**111**	**0.033**	ug/L	0.004	11	2	8	13	KED
⌊	**Cd**	**114**	**0.026**	ug/L	0.009	35	0	13	39	KED
⌈>	**In**	**115**		ug/L			522018	421633	1	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.005	111	24	76	82	Standard
⌈>	**Tb**	**159**		ug/L			194588	165473	1	Standard
⌊	**Pb**	**208**	**0.040**	ug/L	0.001	1	589	3659	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0462-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 01:58:08
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	27229	5	Standard
⌈>	**Sc**	**45**		ug/L			579638	536374	1	Standard
|	**Cr**	**52**	**0.130**	ug/L	0.034	26	10138	11176	4	Standard
⌊	**Cr**	**53**	**0.395**	ug/L	0.027	6	92	725	7	Standard
⌈>	**Ge**	**72**		ug/L			33052	27488	2	KED
|	**Ni**	**60**	**1.680**	ug/L	0.028	1	97	2301	2	KED
|	**Ni**	**62**	**1.689**	ug/L	0.045	2	15	370	1	KED
|	**Cu**	**63**	**0.581**	ug/L	0.032	5	198	2311	3	KED
|	**Cu**	**65**	**0.564**	ug/L	0.036	6	107	1158	5	KED
|	**Zn**	**66**	**1.179**	ug/L	0.101	8	67	591	5	KED
|	**Zn**	**67**	**1.938**	ug/L	0.261	13	15	156	14	KED
⌊	**As**	**75**	**0.362**	ug/L	0.010	2	4	83	0	KED
	Y	**89**		ug/L			53627	49793	3	Standard
	Kr	**83**		ug/L			34	47	16	Standard
⌈>	**In-1**	**115**		ug/L			7114	5876	2	KED
|	**Cd**	**111**	**0.015**	ug/L	0.008	49	2	5	28	KED
⌊	**Cd**	**114**	**0.019**	ug/L	0.008	42	0	10	38	KED
⌈>	**In**	**115**		ug/L			522018	482911	0	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.000	276	24	24	20	Standard
⌈>	**Tb**	**159**		ug/L			194588	180457	1	Standard
⌊	**Pb**	**208**	**0.029**	ug/L	0.001	2	589	3029	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0135-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:03:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	37969	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	547722	2	Standard
|	**Cr**	**52**	**0.714**	ug/L	0.028	3	10138	19664	2	Standard
⌊	**Cr**	**53**	**0.678**	ug/L	0.015	2	92	1207	0	Standard
⌈>	**Ge**	**72**		ug/L			33052	30087	2	KED
|	**Ni**	**60**	**0.612**	ug/L	0.033	5	97	975	6	KED
|	**Ni**	**62**	**0.639**	ug/L	0.038	5	15	162	7	KED
|	**Cu**	**63**	**5.288**	ug/L	0.088	1	198	21568	0	KED
|	**Cu**	**65**	**5.255**	ug/L	0.116	2	107	11007	0	KED
|	**Zn**	**66**	**140.941**	ug/L	1.920	1	67	70163	1	KED
|	**Zn**	**67**	**133.083**	ug/L	3.879	2	15	10786	2	KED
⌊	**As**	**75**	**1.106**	ug/L	0.012	1	4	270	1	KED
	Y	**89**		ug/L			53627	51171	1	Standard
	Kr	**83**		ug/L			34	71	15	Standard
⌈>	**In-1**	**115**		ug/L			7114	6329	1	KED
|	**Cd**	**111**	**0.112**	ug/L	0.013	12	2	27	12	KED
⌊	**Cd**	**114**	**0.097**	ug/L	0.002	2	0	57	2	KED
⌈>	**In**	**115**		ug/L			522018	493757	1	Standard
⌊	**Ag**	**107**	**0.009**	ug/L	0.001	7	24	170	6	Standard
⌈>	**Tb**	**159**		ug/L			194588	185755	1	Standard
⌊	**Pb**	**208**	**0.563**	ug/L	0.020	3	589	50598	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0135-02
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:08:22
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	36538	6	Standard
⌈>	**Sc**	**45**		ug/L			579638	578838	2	Standard
|	**Cr**	**52**	**0.519**	ug/L	0.007	1	10138	17866	2	Standard
⌊	**Cr**	**53**	**0.988**	ug/L	0.059	5	92	1818	5	Standard
⌈>	**Ge**	**72**		ug/L			33052	29808	1	KED
|	**Ni**	**60**	**0.569**	ug/L	0.017	2	97	904	3	KED
|	**Ni**	**62**	**0.530**	ug/L	0.027	5	15	135	3	KED
|	**Cu**	**63**	**3.554**	ug/L	0.126	3	198	14417	2	KED
|	**Cu**	**65**	**3.585**	ug/L	0.056	1	107	7470	0	KED
|	**Zn**	**66**	**2.359**	ug/L	0.068	2	67	1222	1	KED
|	**Zn**	**67**	**2.363**	ug/L	0.363	15	15	203	14	KED
⌊	**As**	**75**	**1.123**	ug/L	0.031	2	4	272	1	KED
	Y	**89**		ug/L			53627	59933	0	Standard
	Kr	**83**		ug/L			34	63	13	Standard
⌈>	**In-1**	**115**		ug/L			7114	6300	2	KED
|	**Cd**	**111**	**0.004**	ug/L	0.009	216	2	2	66	KED
⌊	**Cd**	**114**	**0.010**	ug/L	0.002	17	0	6	16	KED
⌈>	**In**	**115**		ug/L			522018	486907	0	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.000	2	24	141	1	Standard
⌈>	**Tb**	**159**		ug/L			194588	189476	1	Standard
⌊	**Pb**	**208**	**0.205**	ug/L	0.005	2	589	19197	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0135-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:12:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	38119	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	558704	1	Standard
|	**Cr**	**52**	**0.554**	ug/L	0.023	4	10138	17750	3	Standard
⌊	**Cr**	**53**	**0.562**	ug/L	0.027	4	92	1036	4	Standard
⌈>	**Ge**	**72**		ug/L			33052	30571	1	KED
|	**Ni**	**60**	**0.746**	ug/L	0.032	4	97	1186	2	KED
|	**Ni**	**62**	**0.744**	ug/L	0.118	15	15	189	14	KED
|	**Cu**	**63**	**5.766**	ug/L	0.128	2	198	23876	0	KED
|	**Cu**	**65**	**5.570**	ug/L	0.189	3	107	11848	2	KED
|	**Zn**	**66**	**60.188**	ug/L	2.507	4	67	30468	2	KED
|	**Zn**	**67**	**58.288**	ug/L	1.458	2	15	4810	3	KED
⌊	**As**	**75**	**0.270**	ug/L	0.016	6	4	70	6	KED
	Y	**89**		ug/L			53627	54774	3	Standard
	Kr	**83**		ug/L			34	70	10	Standard
⌈>	**In-1**	**115**		ug/L			7114	6555	0	KED
|	**Cd**	**111**	**0.049**	ug/L	0.020	40	2	13	34	KED
⌊	**Cd**	**114**	**0.048**	ug/L	0.005	9	0	29	9	KED
⌈>	**In**	**115**		ug/L			522018	515795	2	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.001	14	24	168	11	Standard
⌈>	**Tb**	**159**		ug/L			194588	191287	1	Standard
⌊	**Pb**	**208**	**0.846**	ug/L	0.012	1	589	78051	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0135-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:17:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	38665	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	566861	1	Standard
|	**Cr**	**52**	**0.728**	ug/L	0.010	1	10138	20546	2	Standard
⌊	**Cr**	**53**	**0.803**	ug/L	0.062	7	92	1465	8	Standard
⌈>	**Ge**	**72**		ug/L			33052	31153	1	KED
|	**Ni**	**60**	**1.149**	ug/L	0.046	3	97	1813	4	KED
|	**Ni**	**62**	**1.105**	ug/L	0.081	7	15	280	5	KED
|	**Cu**	**63**	**6.771**	ug/L	0.129	1	198	28541	0	KED
|	**Cu**	**65**	**6.596**	ug/L	0.167	2	107	14285	3	KED
|	**Zn**	**66**	**65.082**	ug/L	0.876	1	67	33581	0	KED
|	**Zn**	**67**	**61.094**	ug/L	4.276	6	15	5132	5	KED
⌊	**As**	**75**	**0.523**	ug/L	0.041	7	4	134	6	KED
	Y	**89**		ug/L			53627	59942	1	Standard
	Kr	**83**		ug/L			34	76	13	Standard
⌈>	**In-1**	**115**		ug/L			7114	6559	2	KED
|	**Cd**	**111**	**0.061**	ug/L	0.030	48	2	16	42	KED
⌊	**Cd**	**114**	**0.056**	ug/L	0.002	4	0	34	6	KED
⌈>	**In**	**115**		ug/L			522018	504265	0	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.001	12	24	164	11	Standard
⌈>	**Tb**	**159**		ug/L			194588	192160	1	Standard
⌊	**Pb**	**208**	**2.595**	ug/L	0.038	1	589	239201	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:21:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21544	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	545161	2	Standard
|	**Cr**	**52**	**-0.044**	ug/L	0.022	49	10138	8919	2	Standard
⌊	**Cr**	**53**	**0.008**	ug/L	0.003	39	92	100	4	Standard
⌈>	**Ge**	**72**		ug/L			33052	30281	2	KED
|	**Ni**	**60**	**0.028**	ug/L	0.008	27	97	130	5	KED
|	**Ni**	**62**	**0.036**	ug/L	0.016	46	15	22	16	KED
|	**Cu**	**63**	**0.014**	ug/L	0.008	60	198	236	11	KED
|	**Cu**	**65**	**0.010**	ug/L	0.009	99	107	118	16	KED
|	**Zn**	**66**	**-0.013**	ug/L	0.015	120	67	55	13	KED
|	**Zn**	**67**	**-0.085**	ug/L	0.021	24	15	7	25	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.006	79	4	2	60	KED
	Y	**89**		ug/L			53627	50064	2	Standard
	Kr	**83**		ug/L			34	67	16	Standard
⌈>	**In-1**	**115**		ug/L			7114	6136	0	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.007	168	2	0	173	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.000	12	0	0	50	KED
⌈>	**In**	**115**		ug/L			522018	493408	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	30	24	7	66	Standard
⌈>	**Tb**	**159**		ug/L			194588	186807	0	Standard
⌊	**Pb**	**208**	**-0.000**	ug/L	0.000	396	589	558	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:26:03
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21516	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	550260	3	Standard
|	**Cr**	**52**	**49.898**	ug/L	0.736	1	10138	717062	2	Standard
⌊	**Cr**	**53**	**48.905**	ug/L	0.774	1	92	81286	2	Standard
⌈>	**Ge**	**72**		ug/L			33052	30601	1	KED
|	**Ni**	**60**	**49.258**	ug/L	1.105	2	97	72531	1	KED
|	**Ni**	**62**	**49.062**	ug/L	0.777	1	15	11579	2	KED
|	**Cu**	**63**	**50.423**	ug/L	1.755	3	198	207598	2	KED
|	**Cu**	**65**	**50.155**	ug/L	0.422	0	107	106033	2	KED
|	**Zn**	**66**	**51.110**	ug/L	1.440	2	67	25916	1	KED
|	**Zn**	**67**	**50.481**	ug/L	0.741	1	15	4171	0	KED
⌊	**As**	**75**	**49.333**	ug/L	0.457	0	4	12111	0	KED
	Y	**89**		ug/L			53627	51421	2	Standard
	Kr	**83**		ug/L			34	50	35	Standard
⌈>	**In-1**	**115**		ug/L			7114	6373	2	KED
|	**Cd**	**111**	**51.144**	ug/L	0.617	1	2	11817	1	KED
⌊	**Cd**	**114**	**51.111**	ug/L	1.372	2	0	30374	0	KED
⌈>	**In**	**115**		ug/L			522018	491126	0	Standard
⌊	**Ag**	**107**	**46.025**	ug/L	0.868	1	24	743507	2	Standard
⌈>	**Tb**	**159**		ug/L			194588	193039	1	Standard
⌊	**Pb**	**208**	**53.346**	ug/L	0.719	1	589	4928316	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:33:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	20958	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	544844	3	Standard
|	**Cr**	**52**	**-0.036**	ug/L	0.007	18	10138	9030	2	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.008	108	92	73	17	Standard
⌈>	**Ge**	**72**		ug/L			33052	30925	2	KED
|	**Ni**	**60**	**0.009**	ug/L	0.032	345	97	106	47	KED
|	**Ni**	**62**	**0.017**	ug/L	0.041	236	15	19	51	KED
|	**Cu**	**63**	**0.011**	ug/L	0.031	286	198	232	57	KED
|	**Cu**	**65**	**0.003**	ug/L	0.019	572	107	108	39	KED
|	**Zn**	**66**	**-0.038**	ug/L	0.026	68	67	43	32	KED
|	**Zn**	**67**	**-0.087**	ug/L	0.023	26	15	7	25	KED
⌊	**As**	**75**	**0.012**	ug/L	0.013	106	4	7	46	KED
	Y	**89**		ug/L			53627	51661	1	Standard
	Kr	**83**		ug/L			34	57	21	Standard
⌈>	**In-1**	**115**		ug/L			7114	6496	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.006	191	2	1	114	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.000	5	0	0	21	KED
⌈>	**In**	**115**		ug/L			522018	495425	0	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	9	24	44	4	Standard
⌈>	**Tb**	**159**		ug/L			194588	187990	1	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	9	589	317	8	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0138-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:37:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	26731	3	Standard
⌈>	Sc	45		ug/L			579638	510919	2	Standard
|	Cr	52	3.536	ug/L	0.053	1	10138	55491	1	Standard
⌊	Cr	53	3.450	ug/L	0.048	1	92	5401	3	Standard
⌈>	Ge	72		ug/L			33052	27574	0	KED
|	Ni	60	0.373	ug/L	0.022	5	97	576	5	KED
|	Ni	62	0.368	ug/L	0.037	9	15	91	8	KED
|	Cu	63	2.632	ug/L	0.032	1	198	9922	1	KED
|	Cu	65	2.576	ug/L	0.005	0	107	4991	0	KED
|	Zn	66	1.731	ug/L	0.144	8	67	845	6	KED
|	Zn	67	1.654	ug/L	0.275	16	15	135	14	KED
⌊	As	75	0.040	ug/L	0.010	23	4	12	17	KED
	Y	89		ug/L			53627	46957	1	Standard
	Kr	83		ug/L			34	50	22	Standard
⌈>	In-1	115		ug/L			7114	5630	4	KED
|	Cd	111	0.012	ug/L	0.007	62	2	4	35	KED
⌊	Cd	114	0.005	ug/L	0.002	32	0	2	32	KED
⌈>	In	115		ug/L			522018	454440	3	Standard
⌊	Ag	107	0.001	ug/L	0.001	86	24	35	32	Standard
⌈>	Tb	159		ug/L			194588	177445	0	Standard
⌊	Pb	208	0.009	ug/L	0.000	4	589	1292	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0139-01
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:42:27
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	25305	6	Standard
⌈>	Sc	45		ug/L			579638	495840	2	Standard
|	Cr	52	6.970	ug/L	0.074	1	10138	97727	1	Standard
⌊	Cr	53	6.889	ug/L	0.140	2	92	10389	3	Standard
⌈>	Ge	72		ug/L			33052	26357	0	KED
|	Ni	60	0.396	ug/L	0.027	6	97	579	5	KED
|	Ni	62	0.351	ug/L	0.046	13	15	83	10	KED
|	Cu	63	2.634	ug/L	0.022	0	198	9492	0	KED
|	Cu	65	2.580	ug/L	0.023	0	107	4779	1	KED
|	Zn	66	1.552	ug/L	0.050	3	67	730	2	KED
|	Zn	67	1.324	ug/L	0.279	21	15	106	19	KED
⌊	As	75	0.037	ug/L	0.004	10	4	11	7	KED
	Y	89		ug/L			53627	45441	0	Standard
	Kr	83		ug/L			34	40	33	Standard
⌈>	In-1	115		ug/L			7114	5374	2	KED
|	Cd	111	0.009	ug/L	0.014	150	2	3	78	KED
⌊	Cd	114	0.027	ug/L	0.012	46	0	13	43	KED
⌈>	In	115		ug/L			522018	432964	3	Standard
⌊	Ag	107	0.001	ug/L	0.000	45	24	31	12	Standard
⌈>	Tb	159		ug/L			194588	174764	1	Standard
⌊	Pb	208	0.034	ug/L	0.001	1	589	3409	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0139-02
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:47:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	26683	4	Standard
>	Sc	45		ug/L			579638	489659	3	Standard
	Cr	52	3.753	ug/L	0.073	1	10138	55912	1	Standard
	Cr	53	3.762	ug/L	0.018	0	92	5636	2	Standard
>	Ge	72		ug/L			33052	26552	0	KED
	Ni	60	0.369	ug/L	0.018	4	97	549	4	KED
	Ni	62	0.345	ug/L	0.078	22	15	83	18	KED
	Cu	63	2.510	ug/L	0.028	1	198	9120	0	KED
	Cu	65	2.433	ug/L	0.067	2	107	4546	3	KED
	Zn	66	1.083	ug/L	0.028	2	67	529	2	KED
	Zn	67	0.817	ug/L	0.129	15	15	71	12	KED
	As	75	0.036	ug/L	0.011	29	4	11	19	KED
	Y	89		ug/L			53627	46118	3	Standard
	Kr	83		ug/L			34	36	7	Standard
>	In-1	115		ug/L			7114	5389	1	KED
	Cd	111	0.017	ug/L	0.006	33	2	5	21	KED
	Cd	114	0.010	ug/L	0.007	70	0	5	65	KED
>	In	115		ug/L			522018	441133	2	Standard
	Ag	107	-0.001	ug/L	0.000	46	24	12	31	Standard
>	Tb	159		ug/L			194588	175179	1	Standard
	Pb	208	0.007	ug/L	0.001	12	589	1111	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0139-03
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:53:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	26767	4	Standard
⌈>	Sc	45		ug/L			579638	504015	1	Standard
|	Cr	52	3.513	ug/L	0.093	2	10138	54463	4	Standard
⌊	Cr	53	3.463	ug/L	0.043	1	92	5348	3	Standard
⌈>	Ge	72		ug/L			33052	26771	0	KED
|	Ni	60	0.451	ug/L	0.023	5	97	659	4	KED
|	Ni	62	0.489	ug/L	0.039	8	15	113	6	KED
|	Cu	63	2.660	ug/L	0.052	1	198	9732	0	KED
|	Cu	65	2.699	ug/L	0.079	2	107	5073	1	KED
|	Zn	66	1.768	ug/L	0.133	7	67	836	6	KED
|	Zn	67	1.750	ug/L	0.245	13	15	139	13	KED
⌊	As	75	0.035	ug/L	0.007	21	4	11	15	KED
	Y	89		ug/L			53627	46971	2	Standard
	Kr	83		ug/L			34	48	12	Standard
⌈>	In-1	115		ug/L			7114	5586	1	KED
|	Cd	111	0.010	ug/L	0.005	47	2	3	25	KED
⌊	Cd	114	0.010	ug/L	0.004	41	0	5	37	KED
⌈>	In	115		ug/L			522018	433798	0	Standard
⌊	Ag	107	0.002	ug/L	0.001	54	24	53	34	Standard
⌈>	Tb	159		ug/L			194588	175484	1	Standard
⌊	Pb	208	0.014	ug/L	0.001	5	589	1719	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLC
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 02:57:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	20581	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	514460	2	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.028	121	10138	9300	1	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.001	15	92	67	3	Standard
⌈>	**Ge**	**72**		ug/L			33052	29561	0	KED
|	**Ni**	**60**	**0.037**	ug/L	0.010	28	97	139	10	KED
|	**Ni**	**62**	**0.010**	ug/L	0.040	389	15	16	54	KED
|	**Cu**	**63**	**-0.030**	ug/L	0.002	8	198	57	16	KED
|	**Cu**	**65**	**-0.036**	ug/L	0.003	6	107	22	22	KED
|	**Zn**	**66**	**-0.017**	ug/L	0.016	93	67	52	15	KED
|	**Zn**	**67**	**-0.107**	ug/L	0.041	38	15	5	57	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.005	67	4	2	53	KED
	Y	**89**		ug/L			53627	48791	1	Standard
	Kr	**83**		ug/L			34	54	43	Standard
⌈>	**In-1**	**115**		ug/L			7114	6083	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.005	315	2	1	69	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	123	0	1	90	KED
⌈>	**In**	**115**		ug/L			522018	488801	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	49	24	18	11	Standard
⌈>	**Tb**	**159**		ug/L			194588	184314	1	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	30	589	479	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0136-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:02:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	32770	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	557739	0	Standard
|	**Cr**	**52**	**67.274**	ug/L	2.653	3	10138	976668	3	Standard
⌊	**Cr**	**53**	**66.446**	ug/L	0.652	0	92	111934	1	Standard
⌈>	**Ge**	**72**		ug/L			33052	29236	0	KED
|	**Ni**	**60**	**1.121**	ug/L	0.050	4	97	1661	3	KED
|	**Ni**	**62**	**1.234**	ug/L	0.177	14	15	292	14	KED
|	**Cu**	**63**	**7.027**	ug/L	0.005	0	198	27797	0	KED
|	**Cu**	**65**	**6.877**	ug/L	0.141	2	107	13973	2	KED
|	**Zn**	**66**	**6.382**	ug/L	0.084	1	67	3144	1	KED
|	**Zn**	**67**	**6.911**	ug/L	0.750	10	15	557	9	KED
⌊	**As**	**75**	**2.137**	ug/L	0.056	2	4	504	2	KED
	Y	**89**		ug/L			53627	87368	1	Standard
	Kr	**83**		ug/L			34	57	10	Standard
⌈>	**In-1**	**115**		ug/L			7114	6172	2	KED
|	**Cd**	**111**	**0.003**	ug/L	0.007	235	2	2	57	KED
⌊	**Cd**	**114**	**0.015**	ug/L	0.010	69	0	8	65	KED
⌈>	**In**	**115**		ug/L			522018	485517	3	Standard
⌊	**Ag**	**107**	**0.011**	ug/L	0.000	2	24	199	4	Standard
⌈>	**Tb**	**159**		ug/L			194588	194873	2	Standard
⌊	**Pb**	**208**	**1.553**	ug/L	0.050	3	589	145383	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23E0137-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:06:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	35755	6	Standard
⌈>	**Sc**	**45**		ug/L			579638	535473	2	Standard
|	**Cr**	**52**	**0.338**	ug/L	0.032	9	10138	14033	5	Standard
⌊	**Cr**	**53**	**0.343**	ug/L	0.012	3	92	639	4	Standard
⌈>	**Ge**	**72**		ug/L			33052	29985	1	KED
|	**Ni**	**60**	**0.275**	ug/L	0.028	10	97	484	6	KED
|	**Ni**	**62**	**0.284**	ug/L	0.052	18	15	80	14	KED
|	**Cu**	**63**	**4.731**	ug/L	0.041	0	198	19250	1	KED
|	**Cu**	**65**	**4.659**	ug/L	0.101	2	107	9738	2	KED
|	**Zn**	**66**	**45.233**	ug/L	0.593	1	67	22489	2	KED
|	**Zn**	**67**	**42.656**	ug/L	1.352	3	15	3456	3	KED
⌊	**As**	**75**	**0.172**	ug/L	0.015	8	4	45	9	KED
	Y	**89**		ug/L			53627	51488	2	Standard
	Kr	**83**		ug/L			34	48	35	Standard
⌈>	**In-1**	**115**		ug/L			7114	6231	1	KED
|	**Cd**	**111**	**0.026**	ug/L	0.011	39	2	7	30	KED
⌊	**Cd**	**114**	**0.040**	ug/L	0.007	16	0	23	17	KED
⌈>	**In**	**115**		ug/L			522018	499250	1	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.001	15	24	86	10	Standard
⌈>	**Tb**	**159**		ug/L			194588	189397	1	Standard
⌊	**Pb**	**208**	**0.787**	ug/L	0.023	2	589	71873	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-21
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:11:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	33248	2	Standard
⌈>	Sc	45		ug/L			579638	537208	1	Standard
|	Cr	52	0.097	ug/L	0.020	20	10138	10742	2	Standard
⌊	Cr	53	0.104	ug/L	0.004	3	92	253	3	Standard
⌈>	Ge	72		ug/L			33052	29942	2	KED
|	Ni	60	0.000	ug/L	0.010	5753	97	88	17	KED
|	Ni	62	0.026	ug/L	0.014	53	15	20	14	KED
|	Cu	63	0.081	ug/L	0.008	9	198	505	6	KED
|	Cu	65	0.080	ug/L	0.008	10	107	262	4	KED
|	Zn	66	0.867	ug/L	0.118	13	67	490	11	KED
|	Zn	67	0.698	ug/L	0.164	23	15	70	16	KED
⌊	As	75	0.000	ug/L	0.007	1825	4	4	43	KED
	Y	89		ug/L			53627	50819	1	Standard
	Kr	83		ug/L			34	50	11	Standard
⌈>	In-1	115		ug/L			7114	6279	2	KED
|	Cd	111	0.005	ug/L	0.002	39	2	3	17	KED
⌊	Cd	114	0.004	ug/L	0.002	46	0	2	39	KED
⌈>	In	115		ug/L			522018	507431	1	Standard
⌊	Ag	107	-0.000	ug/L	0.001	2064	24	23	46	Standard
⌈>	Tb	159		ug/L			194588	187192	0	Standard
⌊	Pb	208	0.021	ug/L	0.001	6	589	2460	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-22
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:15:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	33216	5	Standard
⌈>	Sc	45		ug/L			579638	540455	2	Standard
|	Cr	52	0.193	ug/L	0.007	3	10138	12141	2	Standard
⌊	Cr	53	0.213	ug/L	0.006	2	92	432	1	Standard
⌈>	Ge	72		ug/L			33052	29934	2	KED
|	Ni	60	-0.016	ug/L	0.007	43	97	65	13	KED
|	Ni	62	-0.013	ug/L	0.015	121	15	11	28	KED
|	Cu	63	0.144	ug/L	0.010	6	198	760	2	KED
|	Cu	65	0.145	ug/L	0.007	4	107	398	4	KED
|	Zn	66	0.558	ug/L	0.016	2	67	337	2	KED
|	Zn	67	0.635	ug/L	0.206	32	15	65	24	KED
⌊	As	75	-0.008	ug/L	0.004	48	4	2	48	KED
	Y	89		ug/L			53627	51381	1	Standard
	Kr	83		ug/L			34	43	45	Standard
⌈>	In-1	115		ug/L			7114	6475	1	KED
|	Cd	111	-0.005	ug/L	0.004	87	2	0	100	KED
⌊	Cd	114	-0.001	ug/L	0.000	18	0	0	91	KED
⌈>	In	115		ug/L			522018	506450	0	Standard
⌊	Ag	107	-0.000	ug/L	0.000	27	24	15	13	Standard
⌈>	Tb	159		ug/L			194588	190548	0	Standard
⌊	Pb	208	0.003	ug/L	0.001	18	589	829	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLD
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:20:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21935	7	Standard
⌈>	**Sc**	**45**		ug/L			579638	534807	2	Standard
|	**Cr**	**52**	**-0.045**	ug/L	0.003	6	10138	8736	2	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	69	92	75	6	Standard
⌈>	**Ge**	**72**		ug/L			33052	29971	2	KED
|	**Ni**	**60**	**0.025**	ug/L	0.011	45	97	123	11	KED
|	**Ni**	**62**	**0.043**	ug/L	0.040	95	15	24	37	KED
|	**Cu**	**63**	**-0.031**	ug/L	0.002	6	198	53	16	KED
|	**Cu**	**65**	**-0.033**	ug/L	0.009	26	107	29	59	KED
|	**Zn**	**66**	**-0.013**	ug/L	0.015	121	67	54	12	KED
|	**Zn**	**67**	**-0.060**	ug/L	0.096	158	15	9	80	KED
⌊	**As**	**75**	**-0.009**	ug/L	0.009	99	4	1	108	KED
	Y	**89**		ug/L			53627	51479	1	Standard
	Kr	**83**		ug/L			34	55	15	Standard
⌈>	**In-1**	**115**		ug/L			7114	6208	1	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.004	3385	2	1	50	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	255	0	1	184	KED
⌈>	**In**	**115**		ug/L			522018	496396	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	8	24	8	12	Standard
⌈>	**Tb**	**159**		ug/L			194588	186482	2	Standard
⌊	**Pb**	**208**	**-0.001**	ug/L	0.000	16	589	459	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:24:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	22807	7	Standard
⌈>	**Sc**	**45**		ug/L			579638	556000	2	Standard
|	**Cr**	**52**	**48.851**	ug/L	0.760	1	10138	709575	1	Standard
⌊	**Cr**	**53**	**48.141**	ug/L	0.705	1	92	80877	3	Standard
⌈>	**Ge**	**72**		ug/L			33052	29925	0	KED
|	**Ni**	**60**	**50.748**	ug/L	0.354	0	97	73083	1	KED
|	**Ni**	**62**	**50.531**	ug/L	1.699	3	15	11660	3	KED
|	**Cu**	**63**	**51.681**	ug/L	0.769	1	198	208097	1	KED
|	**Cu**	**65**	**50.635**	ug/L	1.471	2	107	104669	2	KED
|	**Zn**	**66**	**51.834**	ug/L	0.857	1	67	25705	1	KED
|	**Zn**	**67**	**50.952**	ug/L	0.559	1	15	4117	0	KED
⌊	**As**	**75**	**50.274**	ug/L	0.907	1	4	12069	1	KED
	Y	**89**		ug/L			53627	50922	0	Standard
	Kr	**83**		ug/L			34	59	6	Standard
⌈>	**In-1**	**115**		ug/L			7114	6455	1	KED
|	**Cd**	**111**	**50.608**	ug/L	1.004	1	2	11844	0	KED
⌊	**Cd**	**114**	**51.083**	ug/L	1.456	2	0	30752	1	KED
⌈>	**In**	**115**		ug/L			522018	489404	3	Standard
⌊	**Ag**	**107**	**46.320**	ug/L	1.660	3	24	744936	0	Standard
⌈>	**Tb**	**159**		ug/L			194588	189215	1	Standard
⌊	**Pb**	**208**	**54.914**	ug/L	0.055	0	589	4973228	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:31:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	22233	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	549986	1	Standard
|	**Cr**	**52**	**-0.050**	ug/L	0.020	40	10138	8905	3	Standard
⌊	**Cr**	**53**	**-0.014**	ug/L	0.005	36	92	64	12	Standard
⌈>	**Ge**	**72**		ug/L			33052	30190	2	KED
|	**Ni**	**60**	**-0.022**	ug/L	0.003	15	97	57	10	KED
|	**Ni**	**62**	**-0.005**	ug/L	0.013	257	15	13	24	KED
|	**Cu**	**63**	**-0.035**	ug/L	0.004	12	198	38	45	KED
|	**Cu**	**65**	**-0.040**	ug/L	0.002	6	107	15	30	KED
|	**Zn**	**66**	**-0.071**	ug/L	0.013	18	67	26	23	KED
|	**Zn**	**67**	**-0.155**	ug/L	0.024	15	15	1	100	KED
⌊	**As**	**75**	**-0.006**	ug/L	0.006	114	4	2	56	KED
	Y	**89**		ug/L			53627	49886	1	Standard
	Kr	**83**		ug/L			34	40	18	Standard
⌈>	**In-1**	**115**		ug/L			7114	6635	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.000	41	2	1		KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	42	0	3	37	KED
⌈>	**In**	**115**		ug/L			522018	502273	1	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.002	86	24	62	52	Standard
⌈>	**Tb**	**159**		ug/L			194588	186108	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.002	146	589	411	53	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-11
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:36:16
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	31765	4	Standard
⌈>	Sc	45		ug/L			579638	563677	2	Standard
|	Cr	52	0.516	ug/L	0.028	5	10138	17347	1	Standard
⌊	Cr	53	0.528	ug/L	0.028	5	92	987	7	Standard
⌈>	Ge	72		ug/L			33052	31098	3	KED
|	Ni	60	0.485	ug/L	0.004	0	97	817	3	KED
|	Ni	62	0.513	ug/L	0.019	3	15	137	2	KED
|	Cu	63	4.141	ug/L	0.127	3	198	17492	1	KED
|	Cu	65	4.064	ug/L	0.150	3	107	8818	0	KED
|	Zn	66	14.845	ug/L	0.550	3	67	7690	1	KED
|	Zn	67	13.795	ug/L	1.052	7	15	1168	6	KED
⌊	As	75	0.979	ug/L	0.034	3	4	248	1	KED
	Y	89		ug/L			53627	58044	1	Standard
	Kr	83		ug/L			34	40	45	Standard
⌈>	In-1	115		ug/L			7114	6522	1	KED
|	Cd	111	0.010	ug/L	0.015	148	2	4	81	KED
⌊	Cd	114	0.024	ug/L	0.022	92	0	15	90	KED
⌈>	In	115		ug/L			522018	517383	2	Standard
⌊	Ag	107	0.005	ug/L	0.001	12	24	112	7	Standard
⌈>	Tb	159		ug/L			194588	192288	0	Standard
⌊	Pb	208	0.297	ug/L	0.004	1	589	27902	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-13
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:40:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	33420	6	Standard
⌈>	**Sc**	**45**		ug/L			579638	597184	2	Standard
|	**Cr**	**52**	**0.086**	ug/L	0.003	3	10138	11761	2	Standard
⌊	**Cr**	**53**	**0.672**	ug/L	0.020	3	92	1306	5	Standard
⌈>	**Ge**	**72**		ug/L			33052	29672	0	KED
|	**Ni**	**60**	**0.873**	ug/L	0.063	7	97	1333	7	KED
|	**Ni**	**62**	**0.796**	ug/L	0.037	4	15	196	3	KED
|	**Cu**	**63**	**2.671**	ug/L	0.041	1	198	10832	1	KED
|	**Cu**	**65**	**2.604**	ug/L	0.067	2	107	5428	2	KED
|	**Zn**	**66**	**4.566**	ug/L	0.064	1	67	2300	0	KED
|	**Zn**	**67**	**4.512**	ug/L	0.361	8	15	374	8	KED
⌊	**As**	**75**	**8.446**	ug/L	0.070	0	4	2013	0	KED
	Y	**89**		ug/L			53627	52902	3	Standard
	Kr	**83**		ug/L			34	40	29	Standard
⌈>	**In-1**	**115**		ug/L			7114	6338	3	KED
|	**Cd**	**111**	**0.044**	ug/L	0.017	39	2	12	35	KED
⌊	**Cd**	**114**	**0.047**	ug/L	0.021	45	0	28	48	KED
⌈>	**In**	**115**		ug/L			522018	485458	1	Standard
⌊	**Ag**	**107**	**0.007**	ug/L	0.001	11	24	130	8	Standard
⌈>	**Tb**	**159**		ug/L			194588	190390	1	Standard
⌊	**Pb**	**208**	**0.116**	ug/L	0.005	4	589	11107	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-02
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:45:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	38314	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	646981	2	Standard
|	**Cr**	**52**	**0.888**	ug/L	0.023	2	10138	26120	2	Standard
⌊	**Cr**	**53**	**1.076**	ug/L	0.017	1	92	2203	2	Standard
⌈>	**Ge**	**72**		ug/L			33052	29945	1	KED
|	**Ni**	**60**	**1.543**	ug/L	0.011	0	97	2310	0	KED
|	**Ni**	**62**	**1.604**	ug/L	0.107	6	15	384	5	KED
|	**Cu**	**63**	**8.861**	ug/L	0.062	0	198	35851	0	KED
|	**Cu**	**65**	**8.710**	ug/L	0.233	2	107	18094	1	KED
|	**Zn**	**66**	**59.363**	ug/L	1.858	3	67	29443	1	KED
|	**Zn**	**67**	**55.640**	ug/L	1.116	2	15	4497	2	KED
⌊	**As**	**75**	**13.552**	ug/L	0.241	1	4	3258	0	KED
	Y	**89**		ug/L			53627	53454	1	Standard
	Kr	**83**		ug/L			34	42	31	Standard
⌈>	**In-1**	**115**		ug/L			7114	6255	2	KED
|	**Cd**	**111**	**0.095**	ug/L	0.028	29	2	23	26	KED
⌊	**Cd**	**114**	**0.094**	ug/L	0.028	29	0	55	31	KED
⌈>	**In**	**115**		ug/L			522018	483384	2	Standard
⌊	**Ag**	**107**	**0.020**	ug/L	0.003	14	24	338	11	Standard
⌈>	**Tb**	**159**		ug/L			194588	187521	0	Standard
⌊	**Pb**	**208**	**0.498**	ug/L	0.005	1	589	45223	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0480-01
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:49:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	70854	3	Standard
>	Sc	45		ug/L			579638	449320	6	Standard
	Cr	52	7.887	ug/L	0.328	4	10138	99022	2	Standard
	Cr	53	7.426	ug/L	0.154	2	92	10131	4	Standard
>	Ge	72		ug/L			33052	25478	2	KED
	Ni	60	1.547	ug/L	0.066	4	97	1969	4	KED
	Ni	62	1.644	ug/L	0.112	6	15	334	4	KED
	Cu	63	0.100	ug/L	0.014	13	198	497	9	KED
	Cu	65	0.093	ug/L	0.018	19	107	246	10	KED
	Zn	66	11.574	ug/L	0.487	4	67	4924	2	KED
	Zn	67	10.735	ug/L	0.983	9	15	747	6	KED
	As	75	0.044	ug/L	0.003	6	4	12	3	KED
	Y	89		ug/L			53627	44728	0	Standard
	Kr	83		ug/L			34	46	9	Standard
>	In-1	115		ug/L			7114	5192	0	KED
	Cd	111	0.170	ug/L	0.024	13	2	33	13	KED
	Cd	114	0.224	ug/L	0.028	12	0	108	11	KED
>	In	115		ug/L			522018	411063	1	Standard
	Ag	107	0.000	ug/L	0.000	143	24	23	26	Standard
>	Tb	159		ug/L			194588	163966	1	Standard
	Pb	208	0.025	ug/L	0.001	5	589	2473	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 03:57:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	20319	5	Standard
⌈>	**Sc**	**45**		ug/L			579638	499605	1	Standard
|	**Cr**	**52**	**-0.046**	ug/L	0.012	25	10138	8150	1	Standard
⌊	**Cr**	**53**	**-0.005**	ug/L	0.004	73	92	71	6	Standard
⌈>	**Ge**	**72**		ug/L			33052	27777	0	KED
|	**Ni**	**60**	**-0.024**	ug/L	0.014	58	97	50	38	KED
|	**Ni**	**62**	**-0.003**	ug/L	0.031	991	15	12	52	KED
|	**Cu**	**63**	**-0.034**	ug/L	0.004	10	198	38	34	KED
|	**Cu**	**65**	**-0.036**	ug/L	0.001	2	107	20	9	KED
|	**Zn**	**66**	**-0.045**	ug/L	0.043	96	67	36	55	KED
|	**Zn**	**67**	**-0.059**	ug/L	0.097	163	15	8	81	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.004	52	4	1	50	KED
	Y	**89**		ug/L			53627	46991	0	Standard
	Kr	**83**		ug/L			34	40	50	Standard
⌈>	**In-1**	**115**		ug/L			7114	5646	3	KED
|	**Cd**	**111**	**-0.005**	ug/L	0.003	50	2	0	86	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.006	134	0	2	115	KED
⌈>	**In**	**115**		ug/L			522018	478274	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.001	134	24	15	56	Standard
⌈>	**Tb**	**159**		ug/L			194588	177490	1	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	8	589	291	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0537-05
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:02:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	25567	1	Standard
⌈>	**Sc**	**45**		ug/L			579638	570472	2	Standard
|	**Cr**	**52**	**0.037**	ug/L	0.013	34	10138	10522	1	Standard
⌊	**Cr**	**53**	**0.161**	ug/L	0.007	4	92	368	5	Standard
⌈>	**Ge**	**72**		ug/L			33052	27813	1	KED
|	**Ni**	**60**	**0.117**	ug/L	0.020	17	97	238	9	KED
|	**Ni**	**62**	**0.157**	ug/L	0.051	32	15	46	23	KED
|	**Cu**	**63**	**0.061**	ug/L	0.008	13	198	394	9	KED
|	**Cu**	**65**	**0.056**	ug/L	0.007	12	107	198	5	KED
|	**Zn**	**66**	**0.314**	ug/L	0.053	16	67	201	13	KED
|	**Zn**	**67**	**0.544**	ug/L	0.135	24	15	53	17	KED
⌊	**As**	**75**	**0.881**	ug/L	0.057	6	4	200	5	KED
	Y	**89**		ug/L			53627	51535	1	Standard
	Kr	**83**		ug/L			34	35	18	Standard
⌈>	**In-1**	**115**		ug/L			7114	5808	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.003	97	2	1	43	KED
⌊	**Cd**	**114**	**0.003**	ug/L	0.006	216	0	1	180	KED
⌈>	**In**	**115**		ug/L			522018	466235	0	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	647	24	23	38	Standard
⌈>	**Tb**	**159**		ug/L			194588	184807	1	Standard
⌊	**Pb**	**208**	**0.009**	ug/L	0.001	10	589	1353	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0120-DUP3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:06:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	25921	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	571398	1	Standard
|	**Cr**	**52**	**0.026**	ug/L	0.018	67	10138	10378	1	Standard
⌊	**Cr**	**53**	**0.167**	ug/L	0.014	8	92	378	6	Standard
⌈>	**Ge**	**72**		ug/L			33052	27769	2	KED
|	**Ni**	**60**	**0.146**	ug/L	0.011	7	97	276	3	KED
|	**Ni**	**62**	**0.101**	ug/L	0.050	49	15	34	30	KED
|	**Cu**	**63**	**0.017**	ug/L	0.017	97	198	231	27	KED
|	**Cu**	**65**	**0.013**	ug/L	0.008	62	107	114	13	KED
|	**Zn**	**66**	**0.357**	ug/L	0.064	17	67	220	12	KED
|	**Zn**	**67**	**0.443**	ug/L	0.103	23	15	46	14	KED
⌊	**As**	**75**	**0.944**	ug/L	0.075	7	4	213	5	KED
	Y	**89**		ug/L			53627	51598	1	Standard
	Kr	**83**		ug/L			34	38	23	Standard
⌈>	**In-1**	**115**		ug/L			7114	5735	1	KED
|	**Cd**	**111**	**0.007**	ug/L	0.003	39	2	3	17	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.004	80	0	2	73	KED
⌈>	**In**	**115**		ug/L			522018	473625	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	51	24	15	25	Standard
⌈>	**Tb**	**159**		ug/L			194588	184642	1	Standard
⌊	**Pb**	**208**	**0.006**	ug/L	0.000	7	589	1104	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0120-MS3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:11:40
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	26225	3	Standard
⌈>	**Sc**	**45**		ug/L			579638	578116	3	Standard
|	**Cr**	**52**	**4.784**	ug/L	0.234	4	10138	81350	3	Standard
⌊	**Cr**	**53**	**4.812**	ug/L	0.226	4	92	8479	1	Standard
⌈>	**Ge**	**72**		ug/L			33052	28372	0	KED
|	**Ni**	**60**	**5.500**	ug/L	0.057	1	97	7584	1	KED
|	**Ni**	**62**	**5.488**	ug/L	0.209	3	15	1212	2	KED
|	**Cu**	**63**	**5.297**	ug/L	0.107	2	198	20376	2	KED
|	**Cu**	**65**	**5.293**	ug/L	0.035	0	107	10457	1	KED
|	**Zn**	**66**	**17.411**	ug/L	0.199	1	67	8225	1	KED
|	**Zn**	**67**	**16.806**	ug/L	0.629	3	15	1296	2	KED
⌊	**As**	**75**	**6.246**	ug/L	0.164	2	4	1424	1	KED
	Y	**89**		ug/L			53627	53132	2	Standard
	Kr	**83**		ug/L			34	51	45	Standard
⌈>	**In-1**	**115**		ug/L			7114	5936	1	KED
|	**Cd**	**111**	**5.302**	ug/L	0.017	0	2	1142	1	KED
⌊	**Cd**	**114**	**5.212**	ug/L	0.091	1	0	2887	3	KED
⌈>	**In**	**115**		ug/L			522018	478703	2	Standard
⌊	**Ag**	**107**	**4.852**	ug/L	0.119	2	24	76442	4	Standard
⌈>	**Tb**	**159**		ug/L			194588	185283	0	Standard
⌊	**Pb**	**208**	**5.696**	ug/L	0.049	0	589	505647	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0120-MSD3
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:17:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			23951	26543	2	Standard
⌈>	Sc	45		ug/L			579638	587593	2	Standard
|	Cr	52	4.909	ug/L	0.087	1	10138	84614	2	Standard
⌊	Cr	53	4.941	ug/L	0.054	1	92	8855	2	Standard
⌈>	Ge	72		ug/L			33052	29168	1	KED
|	Ni	60	5.411	ug/L	0.139	2	97	7671	2	KED
|	Ni	62	5.517	ug/L	0.086	1	15	1253	1	KED
|	Cu	63	5.427	ug/L	0.106	1	198	21457	1	KED
|	Cu	65	5.392	ug/L	0.133	2	107	10947	1	KED
|	Zn	66	17.608	ug/L	0.518	2	67	8549	1	KED
|	Zn	67	16.790	ug/L	0.367	2	15	1332	3	KED
⌊	As	75	6.344	ug/L	0.141	2	4	1487	0	KED
	Y	89		ug/L			53627	54403	3	Standard
	Kr	83		ug/L			34	43	19	Standard
⌈>	In-1	115		ug/L			7114	6065	1	KED
|	Cd	111	5.441	ug/L	0.071	1	2	1198	1	KED
⌊	Cd	114	5.437	ug/L	0.220	4	0	3075	2	KED
⌈>	In	115		ug/L			522018	480828	1	Standard
⌊	Ag	107	4.983	ug/L	0.032	0	24	78821	0	Standard
⌈>	Tb	159		ug/L			194588	183019	2	Standard
⌊	Pb	208	5.992	ug/L	0.152	2	589	525164	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:21:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21528	5	Standard
⌈>	**Sc**	**45**		ug/L			579638	504587	2	Standard
|	**Cr**	**52**	**-0.049**	ug/L	0.013	26	10138	8189	4	Standard
⌊	**Cr**	**53**	**-0.001**	ug/L	0.010	914	92	78	20	Standard
⌈>	**Ge**	**72**		ug/L			33052	29052	2	KED
|	**Ni**	**60**	**-0.027**	ug/L	0.002	9	97	48	6	KED
|	**Ni**	**62**	**-0.020**	ug/L	0.008	39	15	9	20	KED
|	**Cu**	**63**	**-0.035**	ug/L	0.001	4	198	38	13	KED
|	**Cu**	**65**	**-0.041**	ug/L	0.002	5	107	12	31	KED
|	**Zn**	**66**	**-0.064**	ug/L	0.013	20	67	28	24	KED
|	**Zn**	**67**	**-0.122**	ug/L	0.028	22	15	4	49	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.008	108	4	2	81	KED
	Y	**89**		ug/L			53627	49637	1	Standard
	Kr	**83**		ug/L			34	38	20	Standard
⌈>	**In-1**	**115**		ug/L			7114	6027	1	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.007	226	2	1	114	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	394	0	0	180	KED
⌈>	**In**	**115**		ug/L			522018	479515	1	Standard
⌊	**Ag**	**107**	**-0.000**	ug/L	0.000	299	24	20	32	Standard
⌈>	**Tb**	**159**		ug/L			194588	179966	0	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	6	589	288	5	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:26:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21819	4	Standard
⌈>	**Sc**	**45**		ug/L			579638	537241	1	Standard
|	**Cr**	**52**	**48.713**	ug/L	0.418	0	10138	683894	1	Standard
⌊	**Cr**	**53**	**47.716**	ug/L	0.941	1	92	77447	2	Standard
⌈>	**Ge**	**72**		ug/L			33052	28563	3	KED
|	**Ni**	**60**	**50.357**	ug/L	1.050	2	97	69185	1	KED
|	**Ni**	**62**	**49.360**	ug/L	2.641	5	15	10859	2	KED
|	**Cu**	**63**	**50.236**	ug/L	1.591	3	198	192937	0	KED
|	**Cu**	**65**	**49.314**	ug/L	2.387	4	107	97191	1	KED
|	**Zn**	**66**	**51.840**	ug/L	1.972	3	67	24518	1	KED
|	**Zn**	**67**	**50.726**	ug/L	2.388	4	15	3909	3	KED
⌊	**As**	**75**	**49.845**	ug/L	2.221	4	4	11411	2	KED
	Y	**89**		ug/L			53627	50469	1	Standard
	Kr	**83**		ug/L			34	51	9	Standard
⌈>	**In-1**	**115**		ug/L			7114	6035	1	KED
|	**Cd**	**111**	**50.348**	ug/L	1.040	2	2	11017	1	KED
⌊	**Cd**	**114**	**49.801**	ug/L	1.740	3	0	28030	2	KED
⌈>	**In**	**115**		ug/L			522018	483754	2	Standard
⌊	**Ag**	**107**	**45.747**	ug/L	1.559	3	24	727585	1	Standard
⌈>	**Tb**	**159**		ug/L			194588	186391	1	Standard
⌊	**Pb**	**208**	**55.271**	ug/L	0.646	1	589	4930661	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBF
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:33:31
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			23951	21106	1	Standard
⌈>	**Sc**	**45**		ug/L			579638	522344	0	Standard
|	**Cr**	**52**	**-0.061**	ug/L	0.019	31	10138	8310	2	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.004	59	92	73	8	Standard
⌈>	**Ge**	**72**		ug/L			33052	29478	2	KED
|	**Ni**	**60**	**-0.012**	ug/L	0.009	77	97	69	16	KED
|	**Ni**	**62**	**0.005**	ug/L	0.010	201	15	15	12	KED
|	**Cu**	**63**	**-0.037**	ug/L	0.002	5	198	30	27	KED
|	**Cu**	**65**	**-0.038**	ug/L	0.004	9	107	18	41	KED
|	**Zn**	**66**	**-0.070**	ug/L	0.007	9	67	26	15	KED
|	**Zn**	**67**	**-0.130**	ug/L	0.025	19	15	3	50	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.003	62	4	2	26	KED
	Y	**89**		ug/L			53627	49249	1	Standard
	Kr	**83**		ug/L			34	43	24	Standard
⌈>	**In-1**	**115**		ug/L			7114	6244	2	KED
|	**Cd**	**111**	**-0.002**	ug/L	0.009	593	2	1	124	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	251	0	1	184	KED
⌈>	**In**	**115**		ug/L			522018	496790	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	101	24	40	40	Standard
⌈>	**Tb**	**159**		ug/L			194588	181353	2	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	9	589	283	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CAL1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:37:57
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L				21210	4	Standard
⌈>	**Sc**	**45**		ug/L				512571	4	Standard
|	**Cr**	**52**		ug/L				7952	2	Standard
⌊	**Cr**	**53**		ug/L				75	19	Standard
⌈>	**Ge**	**72**		ug/L				28784	1	KED
|	**Ni**	**60**		ug/L				75	11	KED
|	**Ni**	**62**		ug/L				12	56	KED
|	**Cu**	**63**		ug/L				53	8	KED
|	**Cu**	**65**		ug/L				25	37	KED
|	**Zn**	**66**		ug/L				52	8	KED
|	**Zn**	**67**		ug/L				8	13	KED
⌊	**As**	**75**		ug/L				3	33	KED
	Y	**89**		ug/L				50088	0	Standard
	Kr	**83**		ug/L				44	32	Standard
⌈>	**In-1**	**115**		ug/L				6034	0	KED
|	**Cd**	**111**		ug/L				1	34	KED
⌊	**Cd**	**114**		ug/L				1	102	KED
⌈>	**In**	**115**		ug/L				486697	0	Standard
⌊	**Ag**	**107**		ug/L				29	39	Standard
⌈>	**Tb**	**159**		ug/L				178618	1	Standard
⌊	**Pb**	**208**		ug/L				534	9	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:42:23
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	22837	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	535240	2	Standard
|	**Cr**	**52**	**49.491**	ug/L	0.986	1	7952	690998	3	Standard
⌊	**Cr**	**53**	**48.754**	ug/L	0.390	0	75	78819	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	29525	1	KED
|	**Ni**	**60**	**50.055**	ug/L	0.415	0	75	71110	0	KED
|	**Ni**	**62**	**49.979**	ug/L	1.344	2	12	11377	1	KED
|	**Cu**	**63**	**50.840**	ug/L	1.123	2	53	201840	1	KED
|	**Cu**	**65**	**49.659**	ug/L	0.970	1	25	101204	1	KED
|	**Zn**	**66**	**50.552**	ug/L	0.931	1	52	24728	0	KED
|	**Zn**	**67**	**49.626**	ug/L	2.134	4	8	3950	3	KED
⌊	**As**	**75**	**48.478**	ug/L	0.311	0	3	11483	0	KED
	Y	**89**		ug/L			50088	50850	3	Standard
	Kr	**83**		ug/L			44	46	16	Standard
⌈>	**In-1**	**115**		ug/L			6034	6252	1	KED
|	**Cd**	**111**	**49.549**	ug/L	0.377	0	1	11233	2	KED
⌊	**Cd**	**114**	**50.157**	ug/L	0.178	0	1	29252	1	KED
⌈>	**In**	**115**		ug/L			486697	479759	2	Standard
⌊	**Ag**	**107**	**46.667**	ug/L	0.707	1	29	736349	2	Standard
⌈>	**Tb**	**159**		ug/L			178618	186665	1	Standard
⌊	**Pb**	**208**	**55.001**	ug/L	1.042	1	534	4913677	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:49:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	21997	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	533122	1	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.006	43	7952	8458	2	Standard
⌊	**Cr**	**53**	**-0.009**	ug/L	0.006	71	75	64	15	Standard
⌈>	**Ge**	**72**		ug/L			28784	29712	0	KED
|	**Ni**	**60**	**-0.021**	ug/L	0.008	39	75	48	24	KED
|	**Ni**	**62**	**-0.024**	ug/L	0.000	0	12	7	0	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.001	17	53	36	9	KED
|	**Cu**	**65**	**-0.004**	ug/L	0.002	41	25	17	22	KED
|	**Zn**	**66**	**-0.068**	ug/L	0.025	37	52	20	59	KED
|	**Zn**	**67**	**-0.059**	ug/L	0.041	70	8	3	86	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	212	3	3	37	KED
	Y	**89**		ug/L			50088	49727	2	Standard
	Kr	**83**		ug/L			44	43	24	Standard
⌈>	**In-1**	**115**		ug/L			6034	6050	0	KED
|	**Cd**	**111**	**-0.004**	ug/L	0.003	57	1	0	86	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.004	6243	1	1	192	KED
⌈>	**In**	**115**		ug/L			486697	490182	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	61	29	45	23	Standard
⌈>	**Tb**	**159**		ug/L			178618	181329	1	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.001	22	534	307	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:53:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	41125	4	Standard
⌈>	Sc	45		ug/L			512571	553406	2	Standard
|	Cr	52	0.370	ug/L	0.014	3	7952	13862	0	Standard
⌊	Cr	53	0.421	ug/L	0.015	3	75	784	3	Standard
⌈>	Ge	72		ug/L			28784	29957	1	KED
|	Ni	60	0.870	ug/L	0.040	4	75	1330	3	KED
|	Ni	62	0.872	ug/L	0.054	6	12	214	6	KED
|	Cu	63	2.805	ug/L	0.089	3	53	11350	2	KED
|	Cu	65	2.680	ug/L	0.062	2	25	5568	2	KED
|	Zn	66	10.735	ug/L	0.292	2	52	5370	1	KED
|	Zn	67	10.167	ug/L	0.647	6	8	827	5	KED
⌊	As	75	1.857	ug/L	0.005	0	3	450	1	KED
	Y	89		ug/L			50088	52074	0	Standard
	Kr	83		ug/L			44	43	2	Standard
⌈>	In-1	115		ug/L			6034	6279	0	KED
|	Cd	111	0.015	ug/L	0.005	32	1	5	21	KED
⌊	Cd	114	0.018	ug/L	0.004	21	1	11	19	KED
⌈>	In	115		ug/L			486697	500655	1	Standard
⌊	Ag	107	0.002	ug/L	0.001	40	29	55	19	Standard
⌈>	Tb	159		ug/L			178618	186090	1	Standard
⌊	Pb	208	0.043	ug/L	0.002	3	534	4388	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-06
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 04:58:24
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	37818	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	620959	3	Standard
|	**Cr**	**52**	**0.750**	ug/L	0.035	4	7952	21630	0	Standard
⌊	**Cr**	**53**	**0.850**	ug/L	0.037	4	75	1682	2	Standard
⌈>	**Ge**	**72**		ug/L			28784	28362	2	KED
|	**Ni**	**60**	**1.873**	ug/L	0.124	6	75	2627	7	KED
|	**Ni**	**62**	**2.080**	ug/L	0.104	5	12	466	2	KED
|	**Cu**	**63**	**6.207**	ug/L	0.041	0	53	23720	1	KED
|	**Cu**	**65**	**5.944**	ug/L	0.210	3	25	11654	1	KED
|	**Zn**	**66**	**13.939**	ug/L	0.181	1	52	6588	1	KED
|	**Zn**	**67**	**13.056**	ug/L	0.606	4	8	1005	6	KED
⌊	**As**	**75**	**13.044**	ug/L	0.191	1	3	2970	0	KED
	Y	**89**		ug/L			50088	52960	3	Standard
	Kr	**83**		ug/L			44	37	12	Standard
⌈>	**In-1**	**115**		ug/L			6034	5947	1	KED
|	**Cd**	**111**	**0.186**	ug/L	0.014	7	1	41	5	KED
⌊	**Cd**	**114**	**0.208**	ug/L	0.016	7	1	116	6	KED
⌈>	**In**	**115**		ug/L			486697	479901	1	Standard
⌊	**Ag**	**107**	**0.012**	ug/L	0.001	8	29	218	5	Standard
⌈>	**Tb**	**159**		ug/L			178618	184864	1	Standard
⌊	**Pb**	**208**	**0.644**	ug/L	0.011	1	534	57486	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-08
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:02:49
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	35079	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	617244	2	Standard
|	**Cr**	**52**	**0.125**	ug/L	0.020	15	7952	11566	2	Standard
⌊	**Cr**	**53**	**0.244**	ug/L	0.006	2	75	546	4	Standard
⌈>	**Ge**	**72**		ug/L			28784	27855	1	KED
|	**Ni**	**60**	**0.829**	ug/L	0.066	7	75	1181	6	KED
|	**Ni**	**62**	**0.946**	ug/L	0.098	10	12	215	9	KED
|	**Cu**	**63**	**3.890**	ug/L	0.068	1	53	14619	1	KED
|	**Cu**	**65**	**3.923**	ug/L	0.106	2	25	7565	1	KED
|	**Zn**	**66**	**3.697**	ug/L	0.051	1	52	1753	2	KED
|	**Zn**	**67**	**3.953**	ug/L	0.258	6	8	304	5	KED
⌊	**As**	**75**	**20.959**	ug/L	0.676	3	3	4684	1	KED
	Y	**89**		ug/L			50088	50382	1	Standard
	Kr	**83**		ug/L			44	40	12	Standard
⌈>	**In-1**	**115**		ug/L			6034	5808	2	KED
|	**Cd**	**111**	**0.055**	ug/L	0.019	34	1	13	27	KED
⌊	**Cd**	**114**	**0.072**	ug/L	0.029	40	1	40	39	KED
⌈>	**In**	**115**		ug/L			486697	470446	1	Standard
⌊	**Ag**	**107**	**0.006**	ug/L	0.000	7	29	123	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	183524	1	Standard
⌊	**Pb**	**208**	**0.140**	ug/L	0.003	1	534	12872	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-10
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:07:14
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	36815	5	Standard
⌈>	**Sc**	**45**		ug/L			512571	612003	2	Standard
|	**Cr**	**52**	**0.190**	ug/L	0.013	7	7952	12489	1	Standard
⌊	**Cr**	**53**	**0.324**	ug/L	0.013	4	75	687	5	Standard
⌈>	**Ge**	**72**		ug/L			28784	27936	0	KED
|	**Ni**	**60**	**0.814**	ug/L	0.060	7	75	1165	6	KED
|	**Ni**	**62**	**0.884**	ug/L	0.083	9	12	202	8	KED
|	**Cu**	**63**	**3.939**	ug/L	0.170	4	53	14843	3	KED
|	**Cu**	**65**	**3.916**	ug/L	0.044	1	25	7575	0	KED
|	**Zn**	**66**	**4.135**	ug/L	0.215	5	52	1961	5	KED
|	**Zn**	**67**	**4.277**	ug/L	0.228	5	8	329	4	KED
⌊	**As**	**75**	**20.891**	ug/L	0.311	1	3	4684	0	KED
	Y	**89**		ug/L			50088	50782	1	Standard
	Kr	**83**		ug/L			44	56	10	Standard
⌈>	**In-1**	**115**		ug/L			6034	5897	1	KED
|	**Cd**	**111**	**0.072**	ug/L	0.012	16	1	16	14	KED
⌊	**Cd**	**114**	**0.084**	ug/L	0.026	31	1	47	31	KED
⌈>	**In**	**115**		ug/L			486697	476512	1	Standard
⌊	**Ag**	**107**	**0.005**	ug/L	0.001	21	29	111	17	Standard
⌈>	**Tb**	**159**		ug/L			178618	184815	0	Standard
⌊	**Pb**	**208**	**0.113**	ug/L	0.001	0	534	10555	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-12
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:11:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	37614	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	541924	1	Standard
|	**Cr**	**52**	**0.444**	ug/L	0.005	1	7952	14603	1	Standard
⌊	**Cr**	**53**	**0.458**	ug/L	0.009	2	75	828	2	Standard
⌈>	**Ge**	**72**		ug/L			28784	29366	1	KED
|	**Ni**	**60**	**0.438**	ug/L	0.038	8	75	694	6	KED
|	**Ni**	**62**	**0.467**	ug/L	0.046	9	12	118	9	KED
|	**Cu**	**63**	**4.007**	ug/L	0.099	2	53	15872	0	KED
|	**Cu**	**65**	**3.821**	ug/L	0.120	3	25	7768	2	KED
|	**Zn**	**66**	**15.485**	ug/L	0.769	4	52	7568	3	KED
|	**Zn**	**67**	**14.598**	ug/L	0.300	2	8	1161	2	KED
⌊	**As**	**75**	**1.412**	ug/L	0.061	4	3	336	5	KED
	Y	**89**		ug/L			50088	54650	2	Standard
	Kr	**83**		ug/L			44	40	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	6075	2	KED
|	**Cd**	**111**	**0.006**	ug/L	0.008	134	1	2	57	KED
⌊	**Cd**	**114**	**0.005**	ug/L	0.010	194	1	4	138	KED
⌈>	**In**	**115**		ug/L			486697	485971	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	66	29	45	23	Standard
⌈>	**Tb**	**159**		ug/L			178618	187970	2	Standard
⌊	**Pb**	**208**	**0.026**	ug/L	0.001	3	534	2930	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-20
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:16:05
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	40097	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	603458	1	Standard
|	**Cr**	**52**	**0.809**	ug/L	0.013	1	7952	21936	1	Standard
⌊	**Cr**	**53**	**0.815**	ug/L	0.006	0	75	1573	2	Standard
⌈>	**Ge**	**72**		ug/L			28784	28977	2	KED
|	**Ni**	**60**	**1.925**	ug/L	0.145	7	75	2754	5	KED
|	**Ni**	**62**	**1.888**	ug/L	0.139	7	12	433	5	KED
|	**Cu**	**63**	**8.198**	ug/L	0.187	2	53	31985	1	KED
|	**Cu**	**65**	**8.011**	ug/L	0.219	2	25	16040	1	KED
|	**Zn**	**66**	**2.547**	ug/L	0.146	5	52	1273	5	KED
|	**Zn**	**67**	**2.986**	ug/L	0.210	7	8	241	8	KED
⌊	**As**	**75**	**2.558**	ug/L	0.105	4	3	598	5	KED
	Y	**89**		ug/L			50088	93417	2	Standard
	Kr	**83**		ug/L			44	48	4	Standard
⌈>	**In-1**	**115**		ug/L			6034	6056	1	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	303	1	1	50	KED
⌊	**Cd**	**114**	**0.013**	ug/L	0.008	56	1	8	49	KED
⌈>	**In**	**115**		ug/L			486697	499578	1	Standard
⌊	**Ag**	**107**	**0.009**	ug/L	0.001	8	29	184	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	188351	0	Standard
⌊	**Pb**	**208**	**0.237**	ug/L	0.005	1	534	21965	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-DUP1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:20:30
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	41033	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	600732	2	Standard
|	**Cr**	**52**	**0.798**	ug/L	0.026	3	7952	21676	3	Standard
⌊	**Cr**	**53**	**0.812**	ug/L	0.040	4	75	1561	6	Standard
⌈>	**Ge**	**72**		ug/L			28784	29419	1	KED
|	**Ni**	**60**	**1.815**	ug/L	0.049	2	75	2643	0	KED
|	**Ni**	**62**	**1.980**	ug/L	0.134	6	12	461	6	KED
|	**Cu**	**63**	**8.139**	ug/L	0.123	1	53	32242	0	KED
|	**Cu**	**65**	**8.017**	ug/L	0.020	0	25	16304	1	KED
|	**Zn**	**66**	**2.465**	ug/L	0.142	5	52	1252	4	KED
|	**Zn**	**67**	**2.747**	ug/L	0.140	5	8	226	6	KED
⌊	**As**	**75**	**2.471**	ug/L	0.116	4	3	586	2	KED
	Y	**89**		ug/L			50088	90128	3	Standard
	Kr	**83**		ug/L			44	61	25	Standard
⌈>	**In-1**	**115**		ug/L			6034	6203	0	KED
|	**Cd**	**111**	**0.010**	ug/L	0.007	76	1	3	43	KED
⌊	**Cd**	**114**	**0.008**	ug/L	0.004	42	1	6	34	KED
⌈>	**In**	**115**		ug/L			486697	491241	1	Standard
⌊	**Ag**	**107**	**0.008**	ug/L	0.001	9	29	165	7	Standard
⌈>	**Tb**	**159**		ug/L			178618	190226	0	Standard
⌊	**Pb**	**208**	**0.240**	ug/L	0.006	2	534	22402	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-MS1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:24:50
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	39760	3	Standard
⌈>	Sc	45		ug/L			512571	584445	1	Standard
|	Cr	52	24.504	ug/L	0.768	3	7952	378151	3	Standard
⌊	Cr	53	24.330	ug/L	0.333	1	75	42999	2	Standard
⌈>	Ge	72		ug/L			28784	29130	0	KED
|	Ni	60	29.233	ug/L	0.300	1	75	41006	0	KED
|	Ni	62	28.687	ug/L	1.279	4	12	6447	3	KED
|	Cu	63	35.588	ug/L	0.038	0	53	139434	0	KED
|	Cu	65	35.292	ug/L	0.441	1	25	70972	0	KED
|	Zn	66	85.618	ug/L	1.238	1	52	41287	0	KED
|	Zn	67	85.737	ug/L	1.395	1	8	6729	1	KED
⌊	As	75	28.239	ug/L	0.482	1	3	6601	0	KED
	Y	89		ug/L			50088	90513	2	Standard
	Kr	83		ug/L			44	48	20	Standard
⌈>	In-1	115		ug/L			6034	6109	2	KED
|	Cd	111	26.780	ug/L	0.465	1	1	5932	0	KED
⌊	Cd	114	26.945	ug/L	0.773	2	1	15357	3	KED
⌈>	In	115		ug/L			486697	492130	1	Standard
⌊	Ag	107	24.738	ug/L	0.495	2	29	400420	2	Standard
⌈>	Tb	159		ug/L			178618	191727	1	Standard
⌊	Pb	208	29.314	ug/L	0.364	1	534	2689958	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0106-MSD1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:29:39
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	38779	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	593612	0	Standard
|	**Cr**	**52**	**24.128**	ug/L	0.502	2	7952	378325	1	Standard
⌊	**Cr**	**53**	**23.584**	ug/L	0.272	1	75	42336	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	29134	1	KED
|	**Ni**	**60**	**28.208**	ug/L	0.262	0	75	39574	1	KED
|	**Ni**	**62**	**28.944**	ug/L	0.377	1	12	6506	1	KED
|	**Cu**	**63**	**35.573**	ug/L	0.102	0	53	139393	1	KED
|	**Cu**	**65**	**35.339**	ug/L	0.595	1	25	71081	2	KED
|	**Zn**	**66**	**89.540**	ug/L	0.536	0	52	43185	2	KED
|	**Zn**	**67**	**85.104**	ug/L	1.844	2	8	6679	0	KED
⌊	**As**	**75**	**27.745**	ug/L	0.236	0	3	6486	1	KED
	Y	**89**		ug/L			50088	91556	2	Standard
	Kr	**83**		ug/L			44	59	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	6041	2	KED
|	**Cd**	**111**	**26.686**	ug/L	0.564	2	1	5845	0	KED
⌊	**Cd**	**114**	**26.924**	ug/L	1.283	4	1	15164	2	KED
⌈>	**In**	**115**		ug/L			486697	492919	2	Standard
⌊	**Ag**	**107**	**24.337**	ug/L	1.058	4	29	394333	2	Standard
⌈>	**Tb**	**159**		ug/L			178618	189477	1	Standard
⌊	**Pb**	**208**	**29.445**	ug/L	0.796	2	534	2669694	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLG
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:33:59
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23042	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	504065	2	Standard
|	**Cr**	**52**	**0.021**	ug/L	0.003	14	7952	8096	2	Standard
⌊	**Cr**	**53**	**0.004**	ug/L	0.004	98	75	80	8	Standard
⌈>	**Ge**	**72**		ug/L			28784	29215	1	KED
|	**Ni**	**60**	**-0.017**	ug/L	0.006	36	75	52	16	KED
|	**Ni**	**62**	**-0.032**	ug/L	0.022	68	12	5	88	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.002	43	53	40	17	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.004	230	25	22	39	KED
|	**Zn**	**66**	**-0.055**	ug/L	0.018	32	52	26	31	KED
|	**Zn**	**67**	**-0.018**	ug/L	0.028	158	8	6	31	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.001	16	3	2	12	KED
	Y	**89**		ug/L			50088	47701	0	Standard
	Kr	**83**		ug/L			44	36	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	6006	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.009	596	1	1	100	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.005	220	1	2	118	KED
⌈>	**In**	**115**		ug/L			486697	485981	4	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.002	91	29	71	52	Standard
⌈>	**Tb**	**159**		ug/L			178618	179589	0	Standard
⌊	**Pb**	**208**	**0.000**	ug/L	0.006	1138	534	580	82	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVH
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:38:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23250	6	Standard
⌈>	**Sc**	**45**		ug/L			512571	528228	1	Standard
|	**Cr**	**52**	**49.500**	ug/L	0.901	1	7952	681993	1	Standard
⌊	**Cr**	**53**	**48.349**	ug/L	0.150	0	75	77149	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	30008	0	KED
|	**Ni**	**60**	**48.196**	ug/L	0.665	1	75	69599	1	KED
|	**Ni**	**62**	**47.638**	ug/L	0.836	1	12	11023	1	KED
|	**Cu**	**63**	**48.752**	ug/L	0.851	1	53	196743	1	KED
|	**Cu**	**65**	**49.349**	ug/L	0.352	0	25	102234	1	KED
|	**Zn**	**66**	**49.407**	ug/L	0.678	1	52	24567	0	KED
|	**Zn**	**67**	**49.504**	ug/L	0.874	1	8	4006	1	KED
⌊	**As**	**75**	**48.304**	ug/L	0.703	1	3	11630	1	KED
	Y	**89**		ug/L			50088	50276	3	Standard
	Kr	**83**		ug/L			44	66	8	Standard
⌈>	**In-1**	**115**		ug/L			6034	6120	0	KED
|	**Cd**	**111**	**51.184**	ug/L	0.659	1	1	11358	0	KED
⌊	**Cd**	**114**	**51.083**	ug/L	0.638	1	1	29165	1	KED
⌈>	**In**	**115**		ug/L			486697	478764	0	Standard
⌊	**Ag**	**107**	**46.724**	ug/L	0.422	0	29	735777	0	Standard
⌈>	**Tb**	**159**		ug/L			178618	184982	1	Standard
⌊	**Pb**	**208**	**55.526**	ug/L	1.157	2	534	4914953	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBH
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:45:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	22826	1	Standard
⌈>	**Sc**	**45**		ug/L			512571	514605	2	Standard
|	**Cr**	**52**	**-0.006**	ug/L	0.008	138	7952	7911	3	Standard
⌊	**Cr**	**53**	**-0.008**	ug/L	0.004	46	75	63	11	Standard
⌈>	**Ge**	**72**		ug/L			28784	29448	0	KED
|	**Ni**	**60**	**-0.017**	ug/L	0.016	91	75	53	40	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.017	238	12	11	33	KED
|	**Cu**	**63**	**-0.004**	ug/L	0.007	195	53	40	68	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.001	21	25	20	5	KED
|	**Zn**	**66**	**-0.051**	ug/L	0.018	36	52	29	30	KED
|	**Zn**	**67**	**-0.082**	ug/L	0.024	29	8	1	100	KED
⌊	**As**	**75**	**0.006**	ug/L	0.006	98	3	5	26	KED
	Y	**89**		ug/L			50088	48607	1	Standard
	Kr	**83**		ug/L			44	52	12	Standard
⌈>	**In-1**	**115**		ug/L			6034	6091	2	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.004	139	1	0	100	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.002	90	1	2	45	KED
⌈>	**In**	**115**		ug/L			486697	473300	0	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	11	29	50	5	Standard
⌈>	**Tb**	**159**		ug/L			178618	179990	0	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.001	15	534	251	17	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-14
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:50:01
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	40592	5	Standard
⌈>	**Sc**	**45**		ug/L			512571	625583	3	Standard
|	**Cr**	**52**	**0.332**	ug/L	0.007	1	7952	15056	3	Standard
⌊	**Cr**	**53**	**1.924**	ug/L	0.015	0	75	3723	3	Standard
⌈>	**Ge**	**72**		ug/L			28784	28463	2	KED
|	**Ni**	**60**	**1.957**	ug/L	0.061	3	75	2750	1	KED
|	**Ni**	**62**	**2.020**	ug/L	0.030	1	12	455	1	KED
|	**Cu**	**63**	**9.385**	ug/L	0.272	2	53	35960	2	KED
|	**Cu**	**65**	**9.404**	ug/L	0.188	2	25	18493	0	KED
|	**Zn**	**66**	**10.817**	ug/L	0.187	1	52	5141	1	KED
|	**Zn**	**67**	**11.789**	ug/L	0.263	2	8	911	2	KED
⌊	**As**	**75**	**20.812**	ug/L	0.559	2	3	4753	0	KED
	Y	**89**		ug/L			50088	53972	1	Standard
	Kr	**83**		ug/L			44	42	15	Standard
⌈>	**In-1**	**115**		ug/L			6034	6071	0	KED
|	**Cd**	**111**	**0.141**	ug/L	0.013	8	1	32	8	KED
⌊	**Cd**	**114**	**0.100**	ug/L	0.004	4	1	57	5	KED
⌈>	**In**	**115**		ug/L			486697	454002	2	Standard
⌊	**Ag**	**107**	**0.026**	ug/L	0.002	7	29	414	5	Standard
⌈>	**Tb**	**159**		ug/L			178618	181226	2	Standard
⌊	**Pb**	**208**	**0.990**	ug/L	0.014	1	534	86358	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-16
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:54:26
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	43420	6	Standard
⌈>	**Sc**	**45**		ug/L			512571	546125	1	Standard
|	**Cr**	**52**	**0.647**	ug/L	0.033	5	7952	17577	4	Standard
⌊	**Cr**	**53**	**0.675**	ug/L	0.033	4	75	1193	4	Standard
⌈>	**Ge**	**72**		ug/L			28784	30240	0	KED
|	**Ni**	**60**	**0.675**	ug/L	0.035	5	75	1059	4	KED
|	**Ni**	**62**	**0.602**	ug/L	0.023	3	12	153	3	KED
|	**Cu**	**63**	**5.711**	ug/L	0.106	1	53	23274	1	KED
|	**Cu**	**65**	**5.569**	ug/L	0.142	2	25	11649	2	KED
|	**Zn**	**66**	**29.892**	ug/L	0.254	0	52	15000	0	KED
|	**Zn**	**67**	**28.725**	ug/L	0.734	2	8	2346	2	KED
⌊	**As**	**75**	**3.914**	ug/L	0.061	1	3	953	1	KED
	Y	**89**		ug/L			50088	54733	0	Standard
	Kr	**83**		ug/L			44	45	8	Standard
⌈>	**In-1**	**115**		ug/L			6034	6139	2	KED
|	**Cd**	**111**	**0.037**	ug/L	0.002	5	1	9	5	KED
⌊	**Cd**	**114**	**0.014**	ug/L	0.004	28	1	8	22	KED
⌈>	**In**	**115**		ug/L			486697	497849	1	Standard
⌊	**Ag**	**107**	**0.003**	ug/L	0.001	25	29	85	15	Standard
⌈>	**Tb**	**159**		ug/L			178618	190840	1	Standard
⌊	**Pb**	**208**	**0.300**	ug/L	0.005	1	534	27994	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-18
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 05:58:51
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	41506	5	Standard
⌈>	Sc	45		ug/L			512571	563971	1	Standard
|	Cr	52	0.879	ug/L	0.056	6	7952	21514	2	Standard
⌊	Cr	53	0.921	ug/L	0.009	1	75	1650	1	Standard
⌈>	Ge	72		ug/L			28784	29591	0	KED
|	Ni	60	0.841	ug/L	0.034	4	75	1274	4	KED
|	Ni	62	0.988	ug/L	0.174	17	12	238	16	KED
|	Cu	63	3.718	ug/L	0.097	2	53	14845	2	KED
|	Cu	65	3.603	ug/L	0.056	1	25	7384	1	KED
|	Zn	66	16.875	ug/L	0.347	2	52	8310	1	KED
|	Zn	67	16.131	ug/L	1.579	9	8	1292	9	KED
⌊	As	75	1.797	ug/L	0.041	2	3	430	1	KED
	Y	89		ug/L			50088	56214	2	Standard
	Kr	83		ug/L			44	30	21	Standard
⌈>	In-1	115		ug/L			6034	6314	4	KED
|	Cd	111	0.008	ug/L	0.006	69	1	3	31	KED
⌊	Cd	114	0.011	ug/L	0.006	60	1	7	52	KED
⌈>	In	115		ug/L			486697	482029	1	Standard
⌊	Ag	107	0.005	ug/L	0.001	24	29	115	18	Standard
⌈>	Tb	159		ug/L			178618	192728	0	Standard
⌊	Pb	208	0.200	ug/L	0.003	1	534	19033	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-01
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:03:17
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	35873	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	619987	1	Standard
|	**Cr**	**52**	**1.104**	ug/L	0.004	0	7952	27252	2	Standard
⌊	**Cr**	**53**	**1.258**	ug/L	0.032	2	75	2444	3	Standard
⌈>	**Ge**	**72**		ug/L			28784	29585	1	KED
|	**Ni**	**60**	**1.906**	ug/L	0.066	3	75	2788	4	KED
|	**Ni**	**62**	**1.874**	ug/L	0.068	3	12	440	2	KED
|	**Cu**	**63**	**11.407**	ug/L	0.361	3	53	45418	2	KED
|	**Cu**	**65**	**10.967**	ug/L	0.111	1	25	22416	0	KED
|	**Zn**	**66**	**60.525**	ug/L	0.205	0	52	29659	1	KED
|	**Zn**	**67**	**58.668**	ug/L	1.256	2	8	4678	1	KED
⌊	**As**	**75**	**14.694**	ug/L	0.332	2	3	3490	1	KED
	Y	**89**		ug/L			50088	54055	0	Standard
	Kr	**83**		ug/L			44	48	13	Standard
⌈>	**In-1**	**115**		ug/L			6034	6021	0	KED
|	**Cd**	**111**	**0.100**	ug/L	0.018	17	1	23	16	KED
⌊	**Cd**	**114**	**0.090**	ug/L	0.014	15	1	51	15	KED
⌈>	**In**	**115**		ug/L			486697	482814	0	Standard
⌊	**Ag**	**107**	**0.034**	ug/L	0.002	6	29	575	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	185868	0	Standard
⌊	**Pb**	**208**	**1.077**	ug/L	0.010	0	534	96390	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:07:42
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	43263	3	Standard
⌈>	Sc	45		ug/L			512571	531042	1	Standard
|	Cr	52	0.707	ug/L	0.019	2	7952	17913	1	Standard
⌊	Cr	53	0.767	ug/L	0.021	2	75	1306	3	Standard
⌈>	Ge	72		ug/L			28784	29609	0	KED
|	Ni	60	0.786	ug/L	0.054	6	75	1195	5	KED
|	Ni	62	0.839	ug/L	0.050	5	12	204	5	KED
|	Cu	63	5.822	ug/L	0.067	1	53	23229	0	KED
|	Cu	65	5.535	ug/L	0.116	2	25	11336	1	KED
|	Zn	66	13.078	ug/L	0.235	1	52	6456	0	KED
|	Zn	67	12.540	ug/L	0.549	4	8	1007	4	KED
⌊	As	75	1.716	ug/L	0.082	4	3	411	5	KED
	Y	89		ug/L			50088	53989	0	Standard
	Kr	83		ug/L			44	57	29	Standard
⌈>	In-1	115		ug/L			6034	6197	2	KED
|	Cd	111	0.015	ug/L	0.005	29	1	5	21	KED
⌊	Cd	114	0.014	ug/L	0.014	94	1	9	80	KED
⌈>	In	115		ug/L			486697	493755	1	Standard
⌊	Ag	107	0.089	ug/L	0.007	7	29	1466	6	Standard
⌈>	Tb	159		ug/L			178618	188017	0	Standard
⌊	Pb	208	0.305	ug/L	0.004	1	534	28030	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-07
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:12:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	36616	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	609800	2	Standard
|	**Cr**	**52**	**0.487**	ug/L	0.028	5	7952	17107	3	Standard
⌊	**Cr**	**53**	**0.596**	ug/L	0.001	0	75	1187	2	Standard
⌈>	**Ge**	**72**		ug/L			28784	28812	2	KED
|	**Ni**	**60**	**1.347**	ug/L	0.050	3	75	1939	0	KED
|	**Ni**	**62**	**1.268**	ug/L	0.098	7	12	293	6	KED
|	**Cu**	**63**	**10.734**	ug/L	0.298	2	53	41615	0	KED
|	**Cu**	**65**	**10.264**	ug/L	0.203	1	25	20429	0	KED
|	**Zn**	**66**	**7.755**	ug/L	0.118	1	52	3746	1	KED
|	**Zn**	**67**	**8.262**	ug/L	0.482	5	8	648	3	KED
⌊	**As**	**75**	**27.631**	ug/L	0.581	2	3	6386	0	KED
	Y	**89**		ug/L			50088	52863	1	Standard
	Kr	**83**		ug/L			44	45	7	Standard
⌈>	**In-1**	**115**		ug/L			6034	5973	0	KED
|	**Cd**	**111**	**0.142**	ug/L	0.021	14	1	32	13	KED
⌊	**Cd**	**114**	**0.136**	ug/L	0.023	17	1	76	16	KED
⌈>	**In**	**115**		ug/L			486697	471762	1	Standard
⌊	**Ag**	**107**	**0.032**	ug/L	0.001	3	29	520	5	Standard
⌈>	**Tb**	**159**		ug/L			178618	184829	1	Standard
⌊	**Pb**	**208**	**2.682**	ug/L	0.056	2	534	237695	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-09
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:16:32
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	35157	5	Standard
⌈>	**Sc**	**45**		ug/L			512571	618826	2	Standard
|	**Cr**	**52**	**0.520**	ug/L	0.025	4	7952	17896	2	Standard
⌊	**Cr**	**53**	**0.627**	ug/L	0.026	4	75	1260	3	Standard
⌈>	**Ge**	**72**		ug/L			28784	28728	0	KED
|	**Ni**	**60**	**1.391**	ug/L	0.040	2	75	1996	3	KED
|	**Ni**	**62**	**1.401**	ug/L	0.054	3	12	322	2	KED
|	**Cu**	**63**	**10.972**	ug/L	0.175	1	53	42431	1	KED
|	**Cu**	**65**	**10.761**	ug/L	0.087	0	25	21361	0	KED
|	**Zn**	**66**	**7.901**	ug/L	0.123	1	52	3805	2	KED
|	**Zn**	**67**	**8.117**	ug/L	0.560	6	8	635	6	KED
⌊	**As**	**75**	**29.103**	ug/L	0.478	1	3	6709	1	KED
	Y	**89**		ug/L			50088	55720	3	Standard
	Kr	**83**		ug/L			44	47	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	6067	2	KED
|	**Cd**	**111**	**0.152**	ug/L	0.036	23	1	35	24	KED
⌊	**Cd**	**114**	**0.154**	ug/L	0.026	16	1	88	18	KED
⌈>	**In**	**115**		ug/L			486697	464844	1	Standard
⌊	**Ag**	**107**	**0.031**	ug/L	0.002	7	29	503	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	185300	1	Standard
⌊	**Pb**	**208**	**2.712**	ug/L	0.064	2	534	240965	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0477-15
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:20:52
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	39624	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	537265	2	Standard
|	**Cr**	**52**	**1.179**	ug/L	0.044	3	7952	24668	3	Standard
⌊	**Cr**	**53**	**1.177**	ug/L	0.016	1	75	1987	3	Standard
⌈>	**Ge**	**72**		ug/L			28784	29689	1	KED
|	**Ni**	**60**	**1.227**	ug/L	0.038	3	75	1828	1	KED
|	**Ni**	**62**	**1.280**	ug/L	0.124	9	12	306	10	KED
|	**Cu**	**63**	**25.781**	ug/L	1.054	4	53	102918	2	KED
|	**Cu**	**65**	**25.054**	ug/L	0.251	1	25	51356	0	KED
|	**Zn**	**66**	**49.987**	ug/L	1.395	2	52	24584	1	KED
|	**Zn**	**67**	**48.808**	ug/L	1.051	2	8	3907	0	KED
⌊	**As**	**75**	**7.808**	ug/L	0.282	3	3	1862	2	KED
	Y	**89**		ug/L			50088	56736	3	Standard
	Kr	**83**		ug/L			44	47	12	Standard
⌈>	**In-1**	**115**		ug/L			6034	6201	2	KED
|	**Cd**	**111**	**0.093**	ug/L	0.012	13	1	22	9	KED
⌊	**Cd**	**114**	**0.076**	ug/L	0.022	28	1	44	25	KED
⌈>	**In**	**115**		ug/L			486697	493967	0	Standard
⌊	**Ag**	**107**	**0.082**	ug/L	0.002	2	29	1368	2	Standard
⌈>	**Tb**	**159**		ug/L			178618	190178	2	Standard
⌊	**Pb**	**208**	**5.513**	ug/L	0.179	3	534	502033	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0487-02
Sample Dil Factor: 5
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:26:41
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	35825	0	Standard
⌈>	**Sc**	**45**		ug/L			512571	562560	1	Standard
|	**Cr**	**52**	**1.220**	ug/L	0.017	1	7952	26415	1	Standard
⌊	**Cr**	**53**	**1.264**	ug/L	0.015	1	75	2229	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	29752	1	KED
|	**Ni**	**60**	**6.548**	ug/L	0.096	1	75	9441	0	KED
|	**Ni**	**62**	**6.686**	ug/L	0.384	5	12	1544	5	KED
|	**Cu**	**63**	**0.176**	ug/L	0.010	5	53	761	4	KED
|	**Cu**	**65**	**0.180**	ug/L	0.017	9	25	395	8	KED
|	**Zn**	**66**	**0.527**	ug/L	0.056	10	52	313	7	KED
|	**Zn**	**67**	**0.901**	ug/L	0.142	15	8	80	13	KED
⌊	**As**	**75**	**15.233**	ug/L	0.237	1	3	3638	1	KED
	Y	**89**		ug/L			50088	79316	0	Standard
	Kr	**83**		ug/L			44	40	4	Standard
⌈>	**In-1**	**115**		ug/L			6034	6266	0	KED
|	**Cd**	**111**	**0.003**	ug/L	0.013	536	1	2	137	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.000	0	1	3	0	KED
⌈>	**In**	**115**		ug/L			486697	468178	0	Standard
⌊	**Ag**	**107**	**0.005**	ug/L	0.000	7	29	112	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	187920	2	Standard
⌊	**Pb**	**208**	**0.034**	ug/L	0.001	3	534	3577	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLH
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:31:07
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23115	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	517740	2	Standard
|	**Cr**	**52**	**0.013**	ug/L	0.006	48	7952	8202	1	Standard
⌊	**Cr**	**53**	**0.001**	ug/L	0.008	1453	75	77	19	Standard
⌈>	**Ge**	**72**		ug/L			28784	29261	1	KED
|	**Ni**	**60**	**-0.015**	ug/L	0.011	73	75	55	29	KED
|	**Ni**	**62**	**-0.018**	ug/L	0.018	103	12	8	44	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.001	27	53	33	17	KED
|	**Cu**	**65**	**-0.001**	ug/L	0.005	613	25	24	43	KED
|	**Zn**	**66**	**-0.060**	ug/L	0.017	28	52	24	33	KED
|	**Zn**	**67**	**-0.082**	ug/L	0.000	0	8	1		KED
⌊	**As**	**75**	**-0.004**	ug/L	0.009	212	3	2	72	KED
	Y	**89**		ug/L			50088	49988	1	Standard
	Kr	**83**		ug/L			44	55	15	Standard
⌈>	**In-1**	**115**		ug/L			6034	6137	0	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.004	144	1	0	100	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	176	1	0	180	KED
⌈>	**In**	**115**		ug/L			486697	486698	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.001	57	29	12	77	Standard
⌈>	**Tb**	**159**		ug/L			178618	183514	1	Standard
⌊	**Pb**	**208**	**-0.004**	ug/L	0.000	3	534	240	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:35:33
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23784	6	Standard
⌈>	**Sc**	**45**		ug/L			512571	524165	1	Standard
|	**Cr**	**52**	**50.223**	ug/L	1.690	3	7952	686346	2	Standard
⌊	**Cr**	**53**	**48.285**	ug/L	0.163	0	75	76453	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	29553	1	KED
|	**Ni**	**60**	**49.754**	ug/L	0.656	1	75	70745	0	KED
|	**Ni**	**62**	**50.882**	ug/L	3.005	5	12	11590	4	KED
|	**Cu**	**63**	**50.319**	ug/L	1.412	2	53	199933	1	KED
|	**Cu**	**65**	**49.530**	ug/L	0.589	1	25	101036	0	KED
|	**Zn**	**66**	**50.795**	ug/L	1.374	2	52	24867	1	KED
|	**Zn**	**67**	**50.525**	ug/L	1.241	2	8	4025	1	KED
⌊	**As**	**75**	**50.135**	ug/L	0.843	1	3	11885	1	KED
	Y	**89**		ug/L			50088	50673	2	Standard
	Kr	**83**		ug/L			44	55	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	6213	2	KED
|	**Cd**	**111**	**49.407**	ug/L	1.725	3	1	11124	0	KED
⌊	**Cd**	**114**	**50.485**	ug/L	1.873	3	1	29245	1	KED
⌈>	**In**	**115**		ug/L			486697	478603	2	Standard
⌊	**Ag**	**107**	**46.759**	ug/L	0.518	1	29	736095	2	Standard
⌈>	**Tb**	**159**		ug/L			178618	187493	1	Standard
⌊	**Pb**	**208**	**54.257**	ug/L	1.080	1	534	4867949	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:42:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	22705	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	510222	2	Standard
|	**Cr**	**52**	**0.004**	ug/L	0.015	349	7952	7968	2	Standard
⌊	**Cr**	**53**	**0.001**	ug/L	0.003	207	75	77	6	Standard
⌈>	**Ge**	**72**		ug/L			28784	29563	0	KED
|	**Ni**	**60**	**-0.021**	ug/L	0.008	38	75	48	23	KED
|	**Ni**	**62**	**-0.021**	ug/L	0.032	151	12	8	87	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.002	42	53	33	27	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.004	155	25	20	43	KED
|	**Zn**	**66**	**-0.064**	ug/L	0.010	15	52	22	22	KED
|	**Zn**	**67**	**-0.051**	ug/L	0.060	118	8	4	107	KED
⌊	**As**	**75**	**0.002**	ug/L	0.007	315	3	4	37	KED
	Y	**89**		ug/L			50088	49119	4	Standard
	Kr	**83**		ug/L			44	40	5	Standard
⌈>	**In-1**	**115**		ug/L			6034	6359	0	KED
|	**Cd**	**111**	**0.004**	ug/L	0.005	126	1	2	43	KED
⌊	**Cd**	**114**	**0.002**	ug/L	0.004	182	1	2	92	KED
⌈>	**In**	**115**		ug/L			486697	484923	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.002	141	29	45	50	Standard
⌈>	**Tb**	**159**		ug/L			178618	182782	1	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	6	534	264	6	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0487-06
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:47:09
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	32134	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	622588	1	Standard
|	**Cr**	**52**	**0.373**	ug/L	0.016	4	7952	15647	2	Standard
⌊	**Cr**	**53**	**0.480**	ug/L	0.009	1	75	994	3	Standard
⌈>	**Ge**	**72**		ug/L			28784	28304	2	KED
|	**Ni**	**60**	**1.014**	ug/L	0.054	5	75	1452	2	KED
|	**Ni**	**62**	**1.030**	ug/L	0.099	9	12	236	7	KED
|	**Cu**	**63**	**0.040**	ug/L	0.006	14	53	205	8	KED
|	**Cu**	**65**	**0.036**	ug/L	0.013	35	25	94	23	KED
|	**Zn**	**66**	**0.740**	ug/L	0.013	1	52	398	4	KED
|	**Zn**	**67**	**1.054**	ug/L	0.107	10	8	88	6	KED
⌊	**As**	**75**	**19.230**	ug/L	0.660	3	3	4366	1	KED
	Y	**89**		ug/L			50088	69538	3	Standard
	Kr	**83**		ug/L			44	30	16	Standard
⌈>	**In-1**	**115**		ug/L			6034	5855	1	KED
|	**Cd**	**111**	**0.005**	ug/L	0.005	108	1	2	43	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.003	349	1	1	112	KED
⌈>	**In**	**115**		ug/L			486697	442888	2	Standard
⌊	**Ag**	**107**	**0.002**	ug/L	0.000	14	29	52	5	Standard
⌈>	**Tb**	**159**		ug/L			178618	176146	1	Standard
⌊	**Pb**	**208**	**0.007**	ug/L	0.000	4	534	1141	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0487-05
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:51:34
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	32551	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	622587	2	Standard
|	**Cr**	**52**	**0.412**	ug/L	0.016	3	7952	16267	3	Standard
⌊	**Cr**	**53**	**0.486**	ug/L	0.013	2	75	1004	5	Standard
⌈>	**Ge**	**72**		ug/L			28784	27718	2	KED
|	**Ni**	**60**	**1.154**	ug/L	0.065	5	75	1610	4	KED
|	**Ni**	**62**	**1.189**	ug/L	0.121	10	12	266	10	KED
|	**Cu**	**63**	**0.037**	ug/L	0.001	3	53	189	3	KED
|	**Cu**	**65**	**0.039**	ug/L	0.008	21	25	99	15	KED
|	**Zn**	**66**	**0.454**	ug/L	0.039	8	52	259	7	KED
|	**Zn**	**67**	**0.737**	ug/L	0.045	6	8	62	3	KED
⌊	**As**	**75**	**17.452**	ug/L	0.167	0	3	3882	1	KED
	Y	**89**		ug/L			50088	70299	3	Standard
	Kr	**83**		ug/L			44	43	23	Standard
⌈>	**In-1**	**115**		ug/L			6034	5780	1	KED
|	**Cd**	**111**	**0.008**	ug/L	0.010	120	1	3	62	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	267	1	1	106	KED
⌈>	**In**	**115**		ug/L			486697	454628	1	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.000	19	29	44	6	Standard
⌈>	**Tb**	**159**		ug/L			178618	178896	0	Standard
⌊	**Pb**	**208**	**0.003**	ug/L	0.001	20	534	808	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0487-04
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 06:55:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	43951	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	611223	0	Standard
|	**Cr**	**52**	**0.674**	ug/L	0.028	4	7952	20103	2	Standard
⌊	**Cr**	**53**	**0.801**	ug/L	0.030	3	75	1567	4	Standard
⌈>	**Ge**	**72**		ug/L			28784	27657	2	KED
|	**Ni**	**60**	**4.379**	ug/L	0.108	2	75	5891	1	KED
|	**Ni**	**62**	**4.412**	ug/L	0.139	3	12	951	2	KED
|	**Cu**	**63**	**5.152**	ug/L	0.035	0	53	19209	2	KED
|	**Cu**	**65**	**5.031**	ug/L	0.155	3	25	9622	1	KED
|	**Zn**	**66**	**9.989**	ug/L	0.373	3	52	4615	1	KED
|	**Zn**	**67**	**10.437**	ug/L	0.353	3	8	784	4	KED
⌊	**As**	**75**	**4.605**	ug/L	0.101	2	3	1024	1	KED
	Y	**89**		ug/L			50088	69977	3	Standard
	Kr	**83**		ug/L			44	36	15	Standard
⌈>	**In-1**	**115**		ug/L			6034	5721	3	KED
|	**Cd**	**111**	**0.307**	ug/L	0.017	5	1	65	3	KED
⌊	**Cd**	**114**	**0.269**	ug/L	0.048	17	1	143	14	KED
⌈>	**In**	**115**		ug/L			486697	463308	0	Standard
⌊	**Ag**	**107**	**0.017**	ug/L	0.002	11	29	289	9	Standard
⌈>	**Tb**	**159**		ug/L			178618	184294	0	Standard
⌊	**Pb**	**208**	**0.306**	ug/L	0.004	1	534	27565	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0487-03
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:00:43
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	34930	6	Standard
⌈>	**Sc**	**45**		ug/L			512571	627875	1	Standard
|	**Cr**	**52**	**0.380**	ug/L	0.019	5	7952	15891	1	Standard
⌊	**Cr**	**53**	**0.553**	ug/L	0.025	4	75	1139	4	Standard
⌈>	**Ge**	**72**		ug/L			28784	27514	0	KED
|	**Ni**	**60**	**2.436**	ug/L	0.075	3	75	3293	3	KED
|	**Ni**	**62**	**2.256**	ug/L	0.038	1	12	490	1	KED
|	**Cu**	**63**	**1.485**	ug/L	0.027	1	53	5545	1	KED
|	**Cu**	**65**	**1.415**	ug/L	0.035	2	25	2711	2	KED
|	**Zn**	**66**	**1.359**	ug/L	0.066	4	52	668	4	KED
|	**Zn**	**67**	**1.908**	ug/L	0.317	16	8	149	15	KED
⌊	**As**	**75**	**1.535**	ug/L	0.082	5	3	342	5	KED
	Y	**89**		ug/L			50088	68173	1	Standard
	Kr	**83**		ug/L			44	43	9	Standard
⌈>	**In-1**	**115**		ug/L			6034	5812	3	KED
|	**Cd**	**111**	**0.046**	ug/L	0.015	32	1	11	24	KED
⌊	**Cd**	**114**	**0.042**	ug/L	0.011	26	1	23	25	KED
⌈>	**In**	**115**		ug/L			486697	461876	0	Standard
⌊	**Ag**	**107**	**0.004**	ug/L	0.000	2	29	84	1	Standard
⌈>	**Tb**	**159**		ug/L			178618	183150	1	Standard
⌊	**Pb**	**208**	**0.017**	ug/L	0.001	6	534	2074	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:05:10
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	24777	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	495765	2	Standard
|	**Cr**	**52**	**0.016**	ug/L	0.006	40	7952	7890	2	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.003	57	75	79	6	Standard
⌈>	**Ge**	**72**		ug/L			28784	28451	2	KED
|	**Ni**	**60**	**-0.016**	ug/L	0.012	71	75	52	29	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.001	8	12	9	0	KED
|	**Cu**	**63**	**-0.005**	ug/L	0.002	38	53	34	20	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.002	41	25	15	25	KED
|	**Zn**	**66**	**-0.054**	ug/L	0.016	29	52	26	25	KED
|	**Zn**	**67**	**-0.064**	ug/L	0.039	60	8	3	91	KED
⌊	**As**	**75**	**-0.005**	ug/L	0.004	96	3	2	36	KED
	Y	**89**		ug/L			50088	48564	3	Standard
	Kr	**83**		ug/L			44	48	37	Standard
⌈>	**In-1**	**115**		ug/L			6034	5785	2	KED
|	**Cd**	**111**	**0.003**	ug/L	0.007	204	1	2	65	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	881	1	1	94	KED
⌈>	**In**	**115**		ug/L			486697	478635	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	34	29	12	45	Standard
⌈>	**Tb**	**159**		ug/L			178618	179215	1	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	11	534	261	10	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: 23D0636-01
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:09:36
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	27281	2	Standard
⌈>	Sc	45		ug/L			512571	527974	2	Standard
|	Cr	52	0.531	ug/L	0.004	0	7952	15415	2	Standard
⌊	Cr	53	0.556	ug/L	0.057	10	75	962	8	Standard
⌈>	Ge	72		ug/L			28784	27707	0	KED
|	Ni	60	0.997	ug/L	0.030	3	75	1400	2	KED
|	Ni	62	0.972	ug/L	0.145	14	12	219	14	KED
|	Cu	63	1.671	ug/L	0.041	2	53	6275	1	KED
|	Cu	65	1.694	ug/L	0.063	3	25	3263	3	KED
|	Zn	66	3.878	ug/L	0.013	0	52	1827	0	KED
|	Zn	67	3.658	ug/L	0.276	7	8	280	6	KED
⌊	As	75	0.526	ug/L	0.028	5	3	120	4	KED
	Y	89		ug/L			50088	65167	0	Standard
	Kr	83		ug/L			44	40	24	Standard
⌈>	In-1	115		ug/L			6034	5801	4	KED
|	Cd	111	0.000	ug/L	0.006	1388	1	1	69	KED
⌊	Cd	114	0.005	ug/L	0.004	74	1	3	50	KED
⌈>	In	115		ug/L			486697	473435	2	Standard
⌊	Ag	107	0.001	ug/L	0.000	28	29	48	9	Standard
⌈>	Tb	159		ug/L			178618	186385	0	Standard
⌊	Pb	208	0.744	ug/L	0.012	1	534	66913	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-DUP1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:14:25
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	28530	3	Standard
>	Sc	45		ug/L			512571	538334	0	Standard
	Cr	52	0.537	ug/L	0.030	5	7952	15807	2	Standard
	Cr	53	0.592	ug/L	0.045	7	75	1040	6	Standard
>	Ge	72		ug/L			28784	28724	0	KED
	Ni	60	0.998	ug/L	0.070	6	75	1452	6	KED
	Ni	62	1.102	ug/L	0.076	6	12	256	6	KED
	Cu	63	1.729	ug/L	0.041	2	53	6729	2	KED
	Cu	65	1.667	ug/L	0.038	2	25	3329	1	KED
	Zn	66	4.091	ug/L	0.104	2	52	1995	2	KED
	Zn	67	4.288	ug/L	0.718	16	8	339	16	KED
	As	75	0.560	ug/L	0.031	5	3	132	5	KED
	Y	89		ug/L			50088	65772	1	Standard
	Kr	83		ug/L			44	57	36	Standard
>	In-1	115		ug/L			6034	6012	3	KED
	Cd	111	0.014	ug/L	0.018	129	1	4	81	KED
	Cd	114	0.010	ug/L	0.002	16	1	6	16	KED
>	In	115		ug/L			486697	480605	1	Standard
	Ag	107	0.001	ug/L	0.000	42	29	38	10	Standard
>	Tb	159		ug/L			178618	189596	0	Standard
	Pb	208	0.754	ug/L	0.014	1	534	68955	2	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-MS1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:19:15
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	27955	5	Standard
⌈>	Sc	45		ug/L			512571	525581	2	Standard
|	Cr	52	2.936	ug/L	0.034	1	7952	47911	2	Standard
⌊	Cr	53	2.885	ug/L	0.053	1	75	4653	3	Standard
⌈>	Ge	72		ug/L			28784	28593	2	KED
|	Ni	60	3.498	ug/L	0.051	1	75	4881	1	KED
|	Ni	62	3.654	ug/L	0.214	5	12	816	3	KED
|	Cu	63	4.341	ug/L	0.156	3	53	16732	0	KED
|	Cu	65	4.320	ug/L	0.187	4	25	8544	2	KED
|	Zn	66	12.514	ug/L	0.258	2	52	5966	0	KED
|	Zn	67	11.781	ug/L	0.398	3	8	914	5	KED
⌊	As	75	3.033	ug/L	0.163	5	3	698	2	KED
	Y	89		ug/L			50088	67142	3	Standard
	Kr	83		ug/L			44	37	12	Standard
⌈>	In-1	115		ug/L			6034	5883	2	KED
|	Cd	111	2.582	ug/L	0.073	2	1	552	1	KED
⌊	Cd	114	2.689	ug/L	0.054	2	1	1476	1	KED
⌈>	In	115		ug/L			486697	479355	0	Standard
⌊	Ag	107	2.061	ug/L	0.025	1	29	32527	1	Standard
⌈>	Tb	159		ug/L			178618	182686	0	Standard
⌊	Pb	208	3.600	ug/L	0.075	2	534	315263	1	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: BLE0298-MSD1
Sample Dil Factor: 10
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:25:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	13		ug/L			21210	28749	4	Standard
⌈>	Sc	45		ug/L			512571	530124	2	Standard
|	Cr	52	2.822	ug/L	0.034	1	7952	46777	2	Standard
⌊	Cr	53	2.760	ug/L	0.057	2	75	4491	1	Standard
⌈>	Ge	72		ug/L			28784	28834	0	KED
|	Ni	60	3.466	ug/L	0.040	1	75	4878	1	KED
|	Ni	62	3.268	ug/L	0.068	2	12	738	2	KED
|	Cu	63	4.176	ug/L	0.095	2	53	16242	2	KED
|	Cu	65	4.187	ug/L	0.061	1	25	8358	1	KED
|	Zn	66	12.041	ug/L	0.301	2	52	5792	2	KED
|	Zn	67	11.364	ug/L	0.700	6	8	890	6	KED
⌊	As	75	2.958	ug/L	0.065	2	3	687	1	KED
	Y	89		ug/L			50088	66898	0	Standard
	Kr	83		ug/L			44	43	18	Standard
⌈>	In-1	115		ug/L			6034	6008	3	KED
|	Cd	111	2.402	ug/L	0.153	6	1	524	3	KED
⌊	Cd	114	2.457	ug/L	0.086	3	1	1378	4	KED
⌈>	In	115		ug/L			486697	486503	2	Standard
⌊	Ag	107	2.042	ug/L	0.032	1	29	32695	0	Standard
⌈>	Tb	159		ug/L			178618	185233	0	Standard
⌊	Pb	208	3.411	ug/L	0.010	0	534	302959	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-IBLJ
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:29:54
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23093	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	491451	2	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.012	138	7952	7733	3	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.007	369	75	69	16	Standard
⌈>	**Ge**	**72**		ug/L			28784	28042	0	KED
|	**Ni**	**60**	**-0.015**	ug/L	0.005	33	75	53	12	KED
|	**Ni**	**62**	**-0.007**	ug/L	0.014	191	12	10	26	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.002	28	53	28	24	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	74	25	19	20	KED
|	**Zn**	**66**	**-0.049**	ug/L	0.032	65	52	28	52	KED
|	**Zn**	**67**	**-0.031**	ug/L	0.025	81	8	5	33	KED
⌊	**As**	**75**	**-0.007**	ug/L	0.005	79	3	2	53	KED
	Y	**89**		ug/L			50088	47507	2	Standard
	Kr	**83**		ug/L			44	39	2	Standard
⌈>	**In-1**	**115**		ug/L			6034	5851	3	KED
|	**Cd**	**111**	**0.002**	ug/L	0.005	256	1	1	50	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	208	1	0	188	KED
⌈>	**In**	**115**		ug/L			486697	482259	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	48	29	13	55	Standard
⌈>	**Tb**	**159**		ug/L			178618	176757	2	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	11	534	247	12	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCVJ
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:34:20
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23085	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	510290	2	Standard
|	**Cr**	**52**	**49.845**	ug/L	0.659	1	7952	663306	1	Standard
⌊	**Cr**	**53**	**49.254**	ug/L	0.241	0	75	75919	1	Standard
⌈>	**Ge**	**72**		ug/L			28784	28502	0	KED
|	**Ni**	**60**	**49.022**	ug/L	0.991	2	75	67228	1	KED
|	**Ni**	**62**	**49.233**	ug/L	0.674	1	12	10820	1	KED
|	**Cu**	**63**	**51.028**	ug/L	1.049	2	53	195577	1	KED
|	**Cu**	**65**	**50.266**	ug/L	0.362	0	25	98899	0	KED
|	**Zn**	**66**	**50.246**	ug/L	1.428	2	52	23728	2	KED
|	**Zn**	**67**	**49.533**	ug/L	0.241	0	8	3807	0	KED
⌊	**As**	**75**	**49.156**	ug/L	0.750	1	3	11240	1	KED
	Y	**89**		ug/L			50088	49783	0	Standard
	Kr	**83**		ug/L			44	61	7	Standard
⌈>	**In-1**	**115**		ug/L			6034	6026	1	KED
|	**Cd**	**111**	**50.412**	ug/L	0.446	0	1	11014	0	KED
⌊	**Cd**	**114**	**50.125**	ug/L	0.823	1	1	28176	2	KED
⌈>	**In**	**115**		ug/L			486697	469523	3	Standard
⌊	**Ag**	**107**	**45.677**	ug/L	1.580	3	29	704992	1	Standard
⌈>	**Tb**	**159**		ug/L			178618	183887	1	Standard
⌊	**Pb**	**208**	**55.762**	ug/L	1.321	2	534	4906643	0	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: SEQ-CCBJ
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:41:29
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23317	1	Standard
⌈>	**Sc**	**45**		ug/L			512571	498254	1	Standard
|	**Cr**	**52**	**0.014**	ug/L	0.004	27	7952	7906	0	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.007	202	75	68	15	Standard
⌈>	**Ge**	**72**		ug/L			28784	28666	1	KED
|	**Ni**	**60**	**0.001**	ug/L	0.015	3020	75	76	29	KED
|	**Ni**	**62**	**-0.014**	ug/L	0.037	258	12	9	87	KED
|	**Cu**	**63**	**0.008**	ug/L	0.019	252	53	83	90	KED
|	**Cu**	**65**	**0.012**	ug/L	0.028	241	25	48	116	KED
|	**Zn**	**66**	**-0.042**	ug/L	0.036	85	52	33	53	KED
|	**Zn**	**67**	**-0.033**	ug/L	0.041	123	8	5	57	KED
⌊	**As**	**75**	**0.007**	ug/L	0.018	259	3	5	77	KED
	Y	**89**		ug/L			50088	47888	0	Standard
	Kr	**83**		ug/L			44	58	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	5978	1	KED
|	**Cd**	**111**	**0.003**	ug/L	0.005	168	1	2	49	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	2472	1	1	86	KED
⌈>	**In**	**115**		ug/L			486697	472919	2	Standard
⌊	**Ag**	**107**	**0.001**	ug/L	0.001	115	29	41	35	Standard
⌈>	**Tb**	**159**		ug/L			178618	178659	0	Standard
⌊	**Pb**	**208**	**-0.003**	ug/L	0.000	7	534	267	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:45:55
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	25958	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	564678	1	Standard
|	**Cr**	**52**	**0.004**	ug/L	0.014	382	7952	8811	1	Standard
⌊	**Cr**	**53**	**-0.007**	ug/L	0.004	53	75	70	7	Standard
⌈>	**Ge**	**72**		ug/L			28784	28993	1	KED
|	**Ni**	**60**	**-0.013**	ug/L	0.008	60	75	58	17	KED
|	**Ni**	**62**	**-0.023**	ug/L	0.009	37	12	7	25	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.001	50	53	43	14	KED
|	**Cu**	**65**	**-0.002**	ug/L	0.003	109	25	20	24	KED
|	**Zn**	**66**	**-0.015**	ug/L	0.013	81	52	45	14	KED
|	**Zn**	**67**	**-0.000**	ug/L	0.052	15913	8	8	48	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.008	108	3	2	96	KED
	Y	**89**		ug/L			50088	54349	1	Standard
	Kr	**83**		ug/L			44	48	48	Standard
⌈>	**In-1**	**115**		ug/L			6034	6353	3	KED
|	**Cd**	**111**	**-0.000**	ug/L	0.005	1172	1	1	69	KED
⌊	**Cd**	**114**	**-0.001**	ug/L	0.002	166	1	0	205	KED
⌈>	**In**	**115**		ug/L			486697	523133	3	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.001	200	29	36	26	Standard
⌈>	**Tb**	**159**		ug/L			178618	196229	1	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	12	534	414	3	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:50:21
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	26612	5	Standard
⌈>	**Sc**	**45**		ug/L			512571	549525	3	Standard
|	**Cr**	**52**	**0.023**	ug/L	0.007	31	7952	8850	1	Standard
⌊	**Cr**	**53**	**-0.003**	ug/L	0.001	43	75	75	5	Standard
⌈>	**Ge**	**72**		ug/L			28784	29286	2	KED
|	**Ni**	**60**	**-0.020**	ug/L	0.016	81	75	48	43	KED
|	**Ni**	**62**	**-0.013**	ug/L	0.024	188	12	10	54	KED
|	**Cu**	**63**	**-0.003**	ug/L	0.003	86	53	43	25	KED
|	**Cu**	**65**	**-0.003**	ug/L	0.002	53	25	19	14	KED
|	**Zn**	**66**	**-0.008**	ug/L	0.028	351	52	49	25	KED
|	**Zn**	**67**	**-0.001**	ug/L	0.051	3767	8	8	48	KED
⌊	**As**	**75**	**-0.011**	ug/L	0.003	28	3	1	57	KED
	Y	**89**		ug/L			50088	54172	0	Standard
	Kr	**83**		ug/L			44	42	13	Standard
⌈>	**In-1**	**115**		ug/L			6034	6173	0	KED
|	**Cd**	**111**	**0.001**	ug/L	0.004	340	1	1	50	KED
⌊	**Cd**	**114**	**0.001**	ug/L	0.004	339	1	1	115	KED
⌈>	**In**	**115**		ug/L			486697	514395	3	Standard
⌊	**Ag**	**107**	**0.000**	ug/L	0.000	1870	29	31	18	Standard
⌈>	**Tb**	**159**		ug/L			178618	194120	0	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	15	534	381	7	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: RINSE
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:54:47
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	25778	3	Standard
⌈>	**Sc**	**45**		ug/L			512571	553078	2	Standard
|	**Cr**	**52**	**0.011**	ug/L	0.009	77	7952	8737	2	Standard
⌊	**Cr**	**53**	**0.005**	ug/L	0.006	133	75	89	11	Standard
⌈>	**Ge**	**72**		ug/L			28784	29423	0	KED
|	**Ni**	**60**	**-0.011**	ug/L	0.006	56	75	60	14	KED
|	**Ni**	**62**	**-0.004**	ug/L	0.027	647	12	12	50	KED
|	**Cu**	**63**	**-0.006**	ug/L	0.002	29	53	32	21	KED
|	**Cu**	**65**	**-0.005**	ug/L	0.002	36	25	15	25	KED
|	**Zn**	**66**	**-0.005**	ug/L	0.045	918	52	51	42	KED
|	**Zn**	**67**	**-0.018**	ug/L	0.037	204	8	6	41	KED
⌊	**As**	**75**	**-0.010**	ug/L	0.002	19	3	1	33	KED
	Y	**89**		ug/L			50088	54582	3	Standard
	Kr	**83**		ug/L			44	37	19	Standard
⌈>	**In-1**	**115**		ug/L			6034	6229	3	KED
|	**Cd**	**111**	**-0.003**	ug/L	0.004	129	1	0	100	KED
⌊	**Cd**	**114**	**-0.000**	ug/L	0.002	1785	1	1	98	KED
⌈>	**In**	**115**		ug/L			486697	520624	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	61	29	22	26	Standard
⌈>	**Tb**	**159**		ug/L			178618	196970	0	Standard
⌊	**Pb**	**208**	**-0.002**	ug/L	0.000	7	534	358	4	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 07:59:12
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23586	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	467022	2	Standard
|	**Cr**	**52**	**0.007**	ug/L	0.015	218	7952	7326	2	Standard
⌊	**Cr**	**53**	**-0.002**	ug/L	0.004	211	75	65	11	Standard
⌈>	**Ge**	**72**		ug/L			28784	27849	0	KED
|	**Ni**	**60**	**-0.039**	ug/L	0.002	6	75	20	15	KED
|	**Ni**	**62**	**-0.040**	ug/L	0.018	44	12	3	100	KED
|	**Cu**	**63**	**-0.009**	ug/L	0.001	14	53	19	26	KED
|	**Cu**	**65**	**-0.009**	ug/L	0.004	40	25	6	103	KED
|	**Zn**	**66**	**-0.064**	ug/L	0.006	9	52	21	13	KED
|	**Zn**	**67**	**-0.090**	ug/L	0.029	32	8	1	173	KED
⌊	**As**	**75**	**-0.004**	ug/L	0.006	157	3	2	44	KED
	Y	**89**		ug/L			50088	45718	0	Standard
	Kr	**83**		ug/L			44	45	4	Standard
⌈>	**In-1**	**115**		ug/L			6034	5676	2	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.011	1009	1	1	173	KED
⌊	**Cd**	**114**	**0.000**	ug/L	0.002	909	1	1	90	KED
⌈>	**In**	**115**		ug/L			486697	443034	2	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	30	29	8	66	Standard
⌈>	**Tb**	**159**		ug/L			178618	170677	0	Standard
⌊	**Pb**	**208**	**-0.005**	ug/L	0.000	5	534	131	15	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 08:03:38
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23858	2	Standard
⌈>	**Sc**	**45**		ug/L			512571	471059	2	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.006	67	7952	7422	1	Standard
⌊	**Cr**	**53**	**-0.006**	ug/L	0.006	86	75	60	12	Standard
⌈>	**Ge**	**72**		ug/L			28784	28025	1	KED
|	**Ni**	**60**	**-0.034**	ug/L	0.005	13	75	27	22	KED
|	**Ni**	**62**	**-0.022**	ug/L	0.015	70	12	7	43	KED
|	**Cu**	**63**	**-0.007**	ug/L	0.001	15	53	25	17	KED
|	**Cu**	**65**	**-0.009**	ug/L	0.004	40	25	6	103	KED
|	**Zn**	**66**	**-0.072**	ug/L	0.014	19	52	17	34	KED
|	**Zn**	**67**	**-0.090**	ug/L	0.015	16	8	1	86	KED
⌊	**As**	**75**	**-0.003**	ug/L	0.005	147	3	3	32	KED
	Y	**89**		ug/L			50088	46999	2	Standard
	Kr	**83**		ug/L			44	50	21	Standard
⌈>	**In-1**	**115**		ug/L			6034	5675	3	KED
|	**Cd**	**111**	**-0.001**	ug/L	0.011	1342	1	1	173	KED
⌊	**Cd**	**114**	**0.004**	ug/L	0.002	47	1	3	33	KED
⌈>	**In**	**115**		ug/L			486697	453748	1	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	9	29	5	33	Standard
⌈>	**Tb**	**159**		ug/L			178618	170230	0	Standard
⌊	**Pb**	**208**	**-0.005**	ug/L	0.000	5	534	110	18	Standard

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, May 11, 2023 08:08:04
Number of Replicates: 3
Method File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Method\200.8_DailyMethod_KED_UCT.mth
Tuning File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\MassCal\Default.tun
Optimization File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\Conditions\Default.dac
Calibration File: C:\Users\Public\Documents\PerkinElmer Syngistix\ICPMS\System\051023_A.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD	Mode
	C	**13**		ug/L			21210	23298	4	Standard
⌈>	**Sc**	**45**		ug/L			512571	476857	3	Standard
|	**Cr**	**52**	**0.009**	ug/L	0.007	78	7952	7511	2	Standard
⌊	**Cr**	**53**	**-0.004**	ug/L	0.002	35	75	63	0	Standard
⌈>	**Ge**	**72**		ug/L			28784	27968	1	KED
|	**Ni**	**60**	**-0.032**	ug/L	0.007	20	75	30	28	KED
|	**Ni**	**62**	**-0.031**	ug/L	0.017	56	12	5	66	KED
|	**Cu**	**63**	**-0.009**	ug/L	0.001	9	53	17	19	KED
|	**Cu**	**65**	**-0.008**	ug/L	0.002	24	25	9	40	KED
|	**Zn**	**66**	**-0.050**	ug/L	0.005	10	52	27	7	KED
|	**Zn**	**67**	**-0.073**	ug/L	0.015	20	8	2	43	KED
⌊	**As**	**75**	**-0.008**	ug/L	0.004	46	3	1	43	KED
	Y	**89**		ug/L			50088	46307	0	Standard
	Kr	**83**		ug/L			44	41	18	Standard
⌈>	**In-1**	**115**		ug/L			6034	5740	3	KED
|	**Cd**	**111**	**0.007**	ug/L	0.012	183	1	2	88	KED
⌊	**Cd**	**114**	**-0.002**	ug/L	0.000	8	1	0	124	KED
⌈>	**In**	**115**		ug/L			486697	464061	3	Standard
⌊	**Ag**	**107**	**-0.001**	ug/L	0.000	23	29	10	43	Standard
⌈>	**Tb**	**159**		ug/L			178618	172358	0	Standard
⌊	**Pb**	**208**	**-0.005**	ug/L	0.000	2	534	118	7	Standard

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Control Limt: +/- 10.00%

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-ICV1	Arsenic-75a	50.000	48.2	96.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.7	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	52.3	105	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.6	101	ug/L	PA 6020B UCT-KE
SLE0204-CCV1	Arsenic-75a	50.000	49.7	99.4	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.9	99.7	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.3	101	ug/L	PA 6020B UCT-KE
SLE0204-CCV2	Arsenic-75a	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.1	98.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.8	104	ug/L	PA 6020B UCT-KE
SLE0204-CCV3	Arsenic-75a	50.000	49.8	99.5	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.4	96.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.7	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.1	100	ug/L	PA 6020B UCT-KE
SLE0204-CCV4	Arsenic-75a	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.3	103	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCV4	Zinc-67	50.000	52.0	104	ug/L	PA 6020B UCT-KE
SLE0204-CCV5	Arsenic-75a	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.5	103	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.6	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.8	102	ug/L	PA 6020B UCT-KE
SLE0204-CCV6	Arsenic-75a	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.9	102	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.0	100	ug/L	PA 6020B UCT-KE
SLE0204-CCV7	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.4	103	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	52.1	104	ug/L	PA 6020B UCT-KE
SLE0204-CCV8	Arsenic-75a	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.2	96.5	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
SLE0204-CCV9	Arsenic-75a	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.9	102	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.3	101	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCV9	Zinc-66	50.000	51.0	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.9	104	ug/L	PA 6020B UCT-KE
SLE0204-CCVA	Arsenic-75a	50.000	49.1	98.1	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.0	99.9	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.2	98.4	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.6	97.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	48.4	96.9	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLE0204-CCVB	Arsenic-75a	50.000	49.6	99.1	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	48.5	97.1	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	48.9	97.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	49.6	99.2	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.7	97.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.7	99.5	ug/L	PA 6020B UCT-KE
SLE0204-CCVC	Arsenic-75a	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.9	99.8	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.0	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	48.6	97.2	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.6	101	ug/L	PA 6020B UCT-KE
SLE0204-CCVD	Arsenic-75a	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLE0204-CCVE	Arsenic-75a	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	51.7	103	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCVE	Copper-65	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	51.0	102	ug/L	PA 6020B UCT-KE
SLE0204-CCVF	Arsenic-75a	50.000	49.8	99.7	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	49.8	99.6	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.3	98.6	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	51.8	104	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.7	101	ug/L	PA 6020B UCT-KE
SLE0204-CCVG	Arsenic-75a	50.000	48.5	97.0	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.7	99.3	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.6	101	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.6	99.3	ug/L	PA 6020B UCT-KE
SLE0204-CCVH	Arsenic-75a	50.000	48.3	96.6	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	51.2	102	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	51.1	102	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	48.8	97.5	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.3	98.7	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.5	99.0	ug/L	PA 6020B UCT-KE
SLE0204-CCVI	Arsenic-75a	50.000	50.1	100	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	49.4	98.8	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.5	101	ug/L	PA 6020B UCT-KE
	Copper-63	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.8	102	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	50.5	101	ug/L	PA 6020B UCT-KE
SLE0204-CCVJ	Arsenic-75a	50.000	49.2	98.3	ug/L	PA 6020B UCT-KE
	Cadmium-111	50.000	50.4	101	ug/L	PA 6020B UCT-KE
	Cadmium-114	50.000	50.1	100	ug/L	PA 6020B UCT-KE

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Control Limt: +/- 10.00%
Sequence: SLE0204

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLE0204-CCVJ	Copper-63	50.000	51.0	102	ug/L	PA 6020B UCT-KE
	Copper-65	50.000	50.3	101	ug/L	PA 6020B UCT-KE
	Zinc-66	50.000	50.2	100	ug/L	PA 6020B UCT-KE
	Zinc-67	50.000	49.5	99.1	ug/L	PA 6020B UCT-KE

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 16:19

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBL1	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0204-IBL1	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLE0204-IBL1	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLE0204-IBL1	Copper-63	0.00300	0.173	0.500	ug/L	
SLE0204-IBL1	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0204-IBL1	Zinc-66	0.0070	2.92	6.00	ug/L	
SLE0204-IBL1	Zinc-67	-0.0250	0.94	6.00	ug/L	
SLE0204-ICB1	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0204-ICB1	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0204-ICB1	Cadmium-114	-0.00600	0.04	0.100	ug/L	
SLE0204-ICB1	Copper-63	0.00500	0.173	0.500	ug/L	
SLE0204-ICB1	Copper-65	0.00400	0.35	0.500	ug/L	
SLE0204-ICB1	Zinc-66	0.0200	2.92	6.00	ug/L	
SLE0204-ICB1	Zinc-67	-0.0030	0.94	6.00	ug/L	
SLE0204-CCB1	Arsenic-75a	0.00400	0.0373	0.200	ug/L	
SLE0204-CCB1	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0204-CCB1	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLE0204-CCB1	Copper-63	0.00100	0.173	0.500	ug/L	
SLE0204-CCB1	Copper-65	-0.00500	0.35	0.500	ug/L	
SLE0204-CCB1	Zinc-66	0.0050	2.92	6.00	ug/L	
SLE0204-CCB1	Zinc-67	0.0230	0.94	6.00	ug/L	
SLE0204-IBL2	Arsenic-75a	0.0130	0.0373	0.200	ug/L	
SLE0204-IBL2	Cadmium-111	0.00	0.03	0.100	ug/L	
SLE0204-IBL2	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-IBL2	Copper-63	0.00300	0.173	0.500	ug/L	
SLE0204-IBL2	Copper-65	0.00300	0.35	0.500	ug/L	
SLE0204-IBL2	Zinc-66	0.0190	2.92	6.00	ug/L	
SLE0204-IBL2	Zinc-67	0.0310	0.94	6.00	ug/L	
SLE0204-CCB2	Arsenic-75a	0.00800	0.0373	0.200	ug/L	
SLE0204-CCB2	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLE0204-CCB2	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-CCB2	Copper-63	0.00	0.173	0.500	ug/L	
SLE0204-CCB2	Copper-65	0.00	0.35	0.500	ug/L	
SLE0204-CCB2	Zinc-66	0.0090	2.92	6.00	ug/L	
SLE0204-CCB2	Zinc-67	-0.0040	0.94	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 17:49

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCB3	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0204-CCB3	Cadmium-111	0.00700	0.03	0.100	ug/L	
SLE0204-CCB3	Cadmium-114	0.0270	0.04	0.100	ug/L	
SLE0204-CCB3	Copper-63	0.00	0.173	0.500	ug/L	
SLE0204-CCB3	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0204-CCB3	Zinc-66	0.0010	2.92	6.00	ug/L	
SLE0204-CCB3	Zinc-67	-0.0230	0.94	6.00	ug/L	
SLE0204-IBL3	Arsenic-75a	-0.00200	0.0373	0.200	ug/L	
SLE0204-IBL3	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0204-IBL3	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLE0204-IBL3	Copper-63	0.00700	0.173	0.500	ug/L	
SLE0204-IBL3	Copper-65	0.00100	0.35	0.500	ug/L	
SLE0204-IBL3	Zinc-66	0.0820	2.92	6.00	ug/L	
SLE0204-IBL3	Zinc-67	0.0490	0.94	6.00	ug/L	
SLE0204-CCB4	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	
SLE0204-CCB4	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLE0204-CCB4	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLE0204-CCB4	Copper-63	0.00600	0.173	0.500	ug/L	
SLE0204-CCB4	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0204-CCB4	Zinc-66	-0.0020	2.92	6.00	ug/L	
SLE0204-CCB4	Zinc-67	0.0040	0.94	6.00	ug/L	
SLE0204-IBL4	Arsenic-75a	-0.00400	0.0373	0.200	ug/L	
SLE0204-IBL4	Cadmium-111	-0.00600	0.03	0.100	ug/L	
SLE0204-IBL4	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLE0204-IBL4	Copper-63	0.00400	0.173	0.500	ug/L	
SLE0204-IBL4	Copper-65	0.00300	0.35	0.500	ug/L	
SLE0204-IBL4	Zinc-66	0.0700	2.92	6.00	ug/L	
SLE0204-IBL4	Zinc-67	0.0350	0.94	6.00	ug/L	
SLE0204-IBL5	Arsenic-75a	-0.00400	0.0373	0.200	ug/L	
SLE0204-IBL5	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLE0204-IBL5	Cadmium-114	-0.00300	0.04	0.100	ug/L	
SLE0204-IBL5	Copper-63	-0.00100	0.173	0.500	ug/L	
SLE0204-IBL5	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0204-IBL5	Zinc-66	0.0530	2.92	6.00	ug/L	
SLE0204-IBL5	Zinc-67	0.0420	0.94	6.00	ug/L	
SLE0204-CCB5	Arsenic-75a	-0.00100	0.0373	0.200	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 19:56

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCB5	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLE0204-CCB5	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCB5	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0204-CCB5	Copper-65	0.00	0.35	0.500	ug/L	
SLE0204-CCB5	Zinc-66	-0.0150	2.92	6.00	ug/L	
SLE0204-CCB5	Zinc-67	0.0150	0.94	6.00	ug/L	
SLE0204-CCB6	Arsenic-75a	0.0100	0.0373	0.200	ug/L	
SLE0204-CCB6	Cadmium-111	-0.00800	0.03	0.100	ug/L	
SLE0204-CCB6	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCB6	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0204-CCB6	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0204-CCB6	Zinc-66	-0.0240	2.92	6.00	ug/L	
SLE0204-CCB6	Zinc-67	-0.0910	0.94	6.00	ug/L	
SLE0204-IBL6	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0204-IBL6	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLE0204-IBL6	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLE0204-IBL6	Copper-63	0.00400	0.173	0.500	ug/L	
SLE0204-IBL6	Copper-65	0.00500	0.35	0.500	ug/L	
SLE0204-IBL6	Zinc-66	0.0170	2.92	6.00	ug/L	
SLE0204-IBL6	Zinc-67	-0.0430	0.94	6.00	ug/L	
SLE0204-CCB7	Arsenic-75a	0.0140	0.0373	0.200	ug/L	
SLE0204-CCB7	Cadmium-111	-0.00900	0.03	0.100	ug/L	
SLE0204-CCB7	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-CCB7	Copper-63	0.0230	0.173	0.500	ug/L	
SLE0204-CCB7	Copper-65	0.0230	0.35	0.500	ug/L	
SLE0204-CCB7	Zinc-66	-0.0280	2.92	6.00	ug/L	
SLE0204-CCB7	Zinc-67	-0.0330	0.94	6.00	ug/L	
SLE0204-IBL7	Arsenic-75a	0.00	0.0373	0.200	ug/L	
SLE0204-IBL7	Cadmium-111	-0.00800	0.03	0.100	ug/L	
SLE0204-IBL7	Cadmium-114	0.00300	0.04	0.100	ug/L	
SLE0204-IBL7	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0204-IBL7	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0204-IBL7	Zinc-66	-0.0450	2.92	6.00	ug/L	
SLE0204-IBL7	Zinc-67	-0.0920	0.94	6.00	ug/L	
SLE0204-CCB8	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLE0204-CCB8	Cadmium-111	-0.00900	0.03	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/10/23 22:32

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCB8	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCB8	Copper-63	0.00200	0.173	0.500	ug/L	
SLE0204-CCB8	Copper-65	0.00200	0.35	0.500	ug/L	
SLE0204-CCB8	Zinc-66	-0.0360	2.92	6.00	ug/L	
SLE0204-CCB8	Zinc-67	-0.0810	0.94	6.00	ug/L	
SLE0204-IBL8	Arsenic-75a	0.0750	0.0373	0.200	ug/L	
SLE0204-IBL8	Cadmium-111	-0.0120	0.03	0.100	ug/L	
SLE0204-IBL8	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-IBL8	Copper-63	0.0820	0.173	0.500	ug/L	
SLE0204-IBL8	Copper-65	0.0820	0.35	0.500	ug/L	
SLE0204-IBL8	Zinc-66	0.206	2.92	6.00	ug/L	
SLE0204-IBL8	Zinc-67	0.0940	0.94	6.00	ug/L	
SLE0204-CCB9	Arsenic-75a	0.0230	0.0373	0.200	ug/L	
SLE0204-CCB9	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0204-CCB9	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCB9	Copper-63	0.0160	0.173	0.500	ug/L	
SLE0204-CCB9	Copper-65	0.0180	0.35	0.500	ug/L	
SLE0204-CCB9	Zinc-66	0.0010	2.92	6.00	ug/L	
SLE0204-CCB9	Zinc-67	-0.0630	0.94	6.00	ug/L	
SLE0204-IBL9	Arsenic-75a	0.00300	0.0373	0.200	ug/L	
SLE0204-IBL9	Cadmium-111	-0.0120	0.03	0.100	ug/L	
SLE0204-IBL9	Cadmium-114	-0.00200	0.04	0.100	ug/L	
SLE0204-IBL9	Copper-63	0.0140	0.173	0.500	ug/L	
SLE0204-IBL9	Copper-65	0.0100	0.35	0.500	ug/L	
SLE0204-IBL9	Zinc-66	-0.0300	2.92	6.00	ug/L	
SLE0204-IBL9	Zinc-67	-0.0670	0.94	6.00	ug/L	
SLE0204-CCBA	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0204-CCBA	Cadmium-111	-0.00800	0.03	0.100	ug/L	
SLE0204-CCBA	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLE0204-CCBA	Copper-63	0.00300	0.173	0.500	ug/L	
SLE0204-CCBA	Copper-65	0.00400	0.35	0.500	ug/L	
SLE0204-CCBA	Zinc-66	-0.0580	2.92	6.00	ug/L	
SLE0204-CCBA	Zinc-67	-0.135	0.94	6.00	ug/L	
SLE0204-IBLA	Arsenic-75a	0.00100	0.0373	0.200	ug/L	
SLE0204-IBLA	Cadmium-111	-0.0100	0.03	0.100	ug/L	
SLE0204-IBLA	Cadmium-114	0.00	0.04	0.100	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/11/23 01:08

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBLA	Copper-63	0.00800	0.173	0.500	ug/L	
SLE0204-IBLA	Copper-65	0.00400	0.35	0.500	ug/L	
SLE0204-IBLA	Zinc-66	-0.0280	2.92	6.00	ug/L	
SLE0204-IBLA	Zinc-67	-0.109	0.94	6.00	ug/L	
SLE0204-CCBB	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLE0204-CCBB	Cadmium-111	-0.0110	0.03	0.100	ug/L	
SLE0204-CCBB	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-CCBB	Copper-63	0.00700	0.173	0.500	ug/L	
SLE0204-CCBB	Copper-65	0.0110	0.35	0.500	ug/L	
SLE0204-CCBB	Zinc-66	-0.0550	2.92	6.00	ug/L	
SLE0204-CCBB	Zinc-67	-0.111	0.94	6.00	ug/L	
SLE0204-CCBC	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLE0204-CCBC	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0204-CCBC	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-CCBC	Copper-63	-0.0170	0.173	0.500	ug/L	
SLE0204-CCBC	Copper-65	-0.0240	0.35	0.500	ug/L	
SLE0204-CCBC	Zinc-66	-0.0230	2.92	6.00	ug/L	
SLE0204-CCBC	Zinc-67	-0.0620	0.94	6.00	ug/L	
SLE0204-IBLB	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLE0204-IBLB	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0204-IBLB	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-IBLB	Copper-63	0.0140	0.173	0.500	ug/L	
SLE0204-IBLB	Copper-65	0.0100	0.35	0.500	ug/L	
SLE0204-IBLB	Zinc-66	-0.0130	2.92	6.00	ug/L	
SLE0204-IBLB	Zinc-67	-0.0850	0.94	6.00	ug/L	
SLE0204-CCBD	Arsenic-75a	0.0120	0.0373	0.200	ug/L	
SLE0204-CCBD	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLE0204-CCBD	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-CCBD	Copper-63	0.0110	0.173	0.500	ug/L	
SLE0204-CCBD	Copper-65	0.00300	0.35	0.500	ug/L	
SLE0204-CCBD	Zinc-66	-0.0380	2.92	6.00	ug/L	
SLE0204-CCBD	Zinc-67	-0.0870	0.94	6.00	ug/L	
SLE0204-IBLC	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLE0204-IBLC	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0204-IBLC	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-IBLC	Copper-63	-0.0300	0.173	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/11/23 02:57

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-IBLC	Copper-65	-0.0360	0.35	0.500	ug/L	
SLE0204-IBLC	Zinc-66	-0.0170	2.92	6.00	ug/L	
SLE0204-IBLC	Zinc-67	-0.107	0.94	6.00	ug/L	
SLE0204-IBLD	Arsenic-75a	-0.00900	0.0373	0.200	ug/L	
SLE0204-IBLD	Cadmium-111	0.00	0.03	0.100	ug/L	
SLE0204-IBLD	Cadmium-114	0.00100	0.04	0.100	ug/L	
SLE0204-IBLD	Copper-63	-0.0310	0.173	0.500	ug/L	
SLE0204-IBLD	Copper-65	-0.0330	0.35	0.500	ug/L	
SLE0204-IBLD	Zinc-66	-0.0130	2.92	6.00	ug/L	
SLE0204-IBLD	Zinc-67	-0.0600	0.94	6.00	ug/L	
SLE0204-CCBE	Arsenic-75a	-0.00600	0.0373	0.200	ug/L	
SLE0204-CCBE	Cadmium-111	-0.00100	0.03	0.100	ug/L	
SLE0204-CCBE	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLE0204-CCBE	Copper-63	-0.0350	0.173	0.500	ug/L	
SLE0204-CCBE	Copper-65	-0.0400	0.35	0.500	ug/L	
SLE0204-CCBE	Zinc-66	-0.0710	2.92	6.00	ug/L	
SLE0204-CCBE	Zinc-67	-0.155	0.94	6.00	ug/L	
SLE0204-IBLE	Arsenic-75a	-0.00800	0.0373	0.200	ug/L	
SLE0204-IBLE	Cadmium-111	-0.00500	0.03	0.100	ug/L	
SLE0204-IBLE	Cadmium-114	0.00400	0.04	0.100	ug/L	
SLE0204-IBLE	Copper-63	-0.0340	0.173	0.500	ug/L	
SLE0204-IBLE	Copper-65	-0.0360	0.35	0.500	ug/L	
SLE0204-IBLE	Zinc-66	-0.0450	2.92	6.00	ug/L	
SLE0204-IBLE	Zinc-67	-0.0590	0.94	6.00	ug/L	
SLE0204-IBLF	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLE0204-IBLF	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLE0204-IBLF	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-IBLF	Copper-63	-0.0350	0.173	0.500	ug/L	
SLE0204-IBLF	Copper-65	-0.0410	0.35	0.500	ug/L	
SLE0204-IBLF	Zinc-66	-0.0640	2.92	6.00	ug/L	
SLE0204-IBLF	Zinc-67	-0.122	0.94	6.00	ug/L	
SLE0204-CCBF	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLE0204-CCBF	Cadmium-111	-0.00200	0.03	0.100	ug/L	
SLE0204-CCBF	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCBF	Copper-63	-0.0370	0.173	0.500	ug/L	
SLE0204-CCBF	Copper-65	-0.0380	0.35	0.500	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: ICPMS1
Sequence: SLE0204

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: GE00040
Date Analyzed: 05/11/23 04:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCBF	Zinc-66	-0.0700	2.92	6.00	ug/L	
SLE0204-CCBF	Zinc-67	-0.130	0.94	6.00	ug/L	
SLE0204-CCBG	Arsenic-75a	-0.00300	0.0373	0.200	ug/L	
SLE0204-CCBG	Cadmium-111	-0.00400	0.03	0.100	ug/L	
SLE0204-CCBG	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-CCBG	Copper-63	-0.00500	0.173	0.500	ug/L	
SLE0204-CCBG	Copper-65	-0.00400	0.35	0.500	ug/L	
SLE0204-CCBG	Zinc-66	-0.0680	2.92	6.00	ug/L	
SLE0204-CCBG	Zinc-67	-0.0590	0.94	6.00	ug/L	
SLE0204-IBLG	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLE0204-IBLG	Cadmium-111	0.00100	0.03	0.100	ug/L	
SLE0204-IBLG	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-IBLG	Copper-63	-0.00400	0.173	0.500	ug/L	
SLE0204-IBLG	Copper-65	-0.00200	0.35	0.500	ug/L	
SLE0204-IBLG	Zinc-66	-0.0550	2.92	6.00	ug/L	
SLE0204-IBLG	Zinc-67	-0.0180	0.94	6.00	ug/L	
SLE0204-CCBH	Arsenic-75a	0.00600	0.0373	0.200	ug/L	
SLE0204-CCBH	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLE0204-CCBH	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCBH	Copper-63	-0.00400	0.173	0.500	ug/L	
SLE0204-CCBH	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0204-CCBH	Zinc-66	-0.0510	2.92	6.00	ug/L	
SLE0204-CCBH	Zinc-67	-0.0820	0.94	6.00	ug/L	
SLE0204-IBLH	Arsenic-75a	-0.00400	0.0373	0.200	ug/L	
SLE0204-IBLH	Cadmium-111	-0.00300	0.03	0.100	ug/L	
SLE0204-IBLH	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-IBLH	Copper-63	-0.00500	0.173	0.500	ug/L	
SLE0204-IBLH	Copper-65	-0.00100	0.35	0.500	ug/L	
SLE0204-IBLH	Zinc-66	-0.0600	2.92	6.00	ug/L	
SLE0204-IBLH	Zinc-67	-0.0820	0.94	6.00	ug/L	
SLE0204-CCBI	Arsenic-75a	0.00200	0.0373	0.200	ug/L	
SLE0204-CCBI	Cadmium-111	0.00400	0.03	0.100	ug/L	
SLE0204-CCBI	Cadmium-114	0.00200	0.04	0.100	ug/L	
SLE0204-CCBI	Copper-63	-0.00500	0.173	0.500	ug/L	
SLE0204-CCBI	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0204-CCBI	Zinc-66	-0.0640	2.92	6.00	ug/L	

INSTRUMENT BLANKS
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Date Analyzed: 05/11/23 06:42

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLE0204-CCBI	Zinc-67	-0.0510	0.94	6.00	ug/L	
SLE0204-IBLI	Arsenic-75a	-0.00500	0.0373	0.200	ug/L	
SLE0204-IBLI	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0204-IBLI	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-IBLI	Copper-63	-0.00500	0.173	0.500	ug/L	
SLE0204-IBLI	Copper-65	-0.00500	0.35	0.500	ug/L	
SLE0204-IBLI	Zinc-66	-0.0540	2.92	6.00	ug/L	
SLE0204-IBLI	Zinc-67	-0.0640	0.94	6.00	ug/L	
SLE0204-IBLJ	Arsenic-75a	-0.00700	0.0373	0.200	ug/L	
SLE0204-IBLJ	Cadmium-111	0.00200	0.03	0.100	ug/L	
SLE0204-IBLJ	Cadmium-114	-0.00100	0.04	0.100	ug/L	
SLE0204-IBLJ	Copper-63	-0.00600	0.173	0.500	ug/L	
SLE0204-IBLJ	Copper-65	-0.00300	0.35	0.500	ug/L	
SLE0204-IBLJ	Zinc-66	-0.0490	2.92	6.00	ug/L	
SLE0204-IBLJ	Zinc-67	-0.0310	0.94	6.00	ug/L	
SLE0204-CCBJ	Arsenic-75a	0.00700	0.0373	0.200	ug/L	
SLE0204-CCBJ	Cadmium-111	0.00300	0.03	0.100	ug/L	
SLE0204-CCBJ	Cadmium-114	0.00	0.04	0.100	ug/L	
SLE0204-CCBJ	Copper-63	0.00800	0.173	0.500	ug/L	
SLE0204-CCBJ	Copper-65	0.0120	0.35	0.500	ug/L	
SLE0204-CCBJ	Zinc-66	-0.0420	2.92	6.00	ug/L	
SLE0204-CCBJ	Zinc-67	-0.0330	0.94	6.00	ug/L	

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
CAL 0	SLE0204-CAL1	XDT_m1230510A-008	NA	05/10/23 15:47
CAL 1 - LOW CHECK	SLE0204-CAL2	XDT_m1230510A-009	NA	05/10/23 15:51
CAL 2	SLE0204-CAL3	XDT_m1230510A-010	NA	05/10/23 15:56
CAL 3	SLE0204-CAL4	XDT_m1230510A-011	NA	05/10/23 16:01
CAL 4	SLE0204-CAL5	XDT_m1230510A-012	NA	05/10/23 16:05
CAL 5	SLE0204-CAL6	XDT_m1230510A-013	NA	05/10/23 16:12
RINSE	SLE0204-IBL1	XDT_m1230510A-014	NA	05/10/23 16:19
Initial Cal Check	SLE0204-ICV1	XDT_m1230510A-016	NA	05/10/23 16:25
Initial Cal Blank	SLE0204-ICB1	XDT_m1230510A-017	NA	05/10/23 16:32
Calibration Check	SLE0204-CCV1	XDT_m1230510A-018	NA	05/10/23 16:37
Calibration Blank	SLE0204-CCB1	XDT_m1230510A-019	NA	05/10/23 16:44
Instrument RL Check	SLE0204-CRL1	XDT_m1230510A-020	NA	05/10/23 16:49
Interference Check A	SLE0204-IFA1	XDT_m1230510A-021	NA	05/10/23 16:56
Interference Check B	SLE0204-IFB1	XDT_m1230510A-022	NA	05/10/23 17:00
LR200	SLE0204-HCV1	XDT_m1230510A-023	NA	05/10/23 17:06
LR300	SLE0204-HCV2	XDT_m1230510A-024	NA	05/10/23 17:11
Instrument Blank	SLE0204-IBL2	XDT_m1230510A-025	NA	05/10/23 17:18
Calibration Check	SLE0204-CCV2	XDT_m1230510A-026	NA	05/10/23 17:24
Calibration Blank	SLE0204-CCB2	XDT_m1230510A-027	NA	05/10/23 17:32
Calibration Check	SLE0204-CCV3	XDT_m1230510A-029	NA	05/10/23 17:41
Calibration Blank	SLE0204-CCB3	XDT_m1230510A-030	NA	05/10/23 17:49
ZZZZZ	BLD0687-BLK2	XDT_m1230510A-031	Solid	05/10/23 17:54
ZZZZZ	BLD0687-BS2	XDT_m1230510A-033	Solid	05/10/23 18:05
ZZZZZ	BLE0298-BLK1	XDT_m1230510A-034	Water	05/10/23 18:11
ZZZZZ	BLE0298-BS1	XDT_m1230510A-035	Water	05/10/23 18:15
ZZZZZ	BLE0077-MS2	XDT_m1230510A-036	Water	05/10/23 18:21
Instrument Blank	SLE0204-IBL3	XDT_m1230510A-040	NA	05/10/23 18:41
Calibration Check	SLE0204-CCV4	XDT_m1230510A-041	NA	05/10/23 18:45
Calibration Blank	SLE0204-CCB4	XDT_m1230510A-042	NA	05/10/23 18:53

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	BLE0143-BLK1	XDT_m1230510A-045	Solid	05/10/23 19:07
ZZZZZ	BLE0143-BS1	XDT_m1230510A-047	Solid	05/10/23 19:19
Instrument Blank	SLE0204-IBL4	XDT_m1230510A-050	NA	05/10/23 19:33
Instrument Blank	SLE0204-IBL5	XDT_m1230510A-052	NA	05/10/23 19:44
Calibration Check	SLE0204-CCV5	XDT_m1230510A-053	NA	05/10/23 19:48
Calibration Blank	SLE0204-CCB5	XDT_m1230510A-054	NA	05/10/23 19:56
Calibration Check	SLE0204-CCV6	XDT_m1230510A-057	NA	05/10/23 20:30
Calibration Blank	SLE0204-CCB6	XDT_m1230510A-058	NA	05/10/23 20:37
Blank	BLD0578-BLK1	XDT_m1230510A-059	Solid	05/10/23 20:44
LCS	BLD0578-BS1	XDT_m1230510A-060	Solid	05/10/23 20:48
ZZZZZ	BLE0072-BLK1	XDT_m1230510A-061	Solid	05/10/23 20:53
ZZZZZ	BLE0072-BS1	XDT_m1230510A-062	Solid	05/10/23 20:57
ZZZZZ	23D0394-01	XDT_m1230510A-063	Solid	05/10/23 21:02
ZZZZZ	BLD0687-DUP2	XDT_m1230510A-064	Solid	05/10/23 21:07
ZZZZZ	BLD0687-MS2	XDT_m1230510A-065	Solid	05/10/23 21:12
ZZZZZ	BLD0687-MSD2	XDT_m1230510A-066	Solid	05/10/23 21:16
Instrument Blank	SLE0204-IBL6	XDT_m1230510A-068	NA	05/10/23 21:25
Calibration Check	SLE0204-CCV7	XDT_m1230510A-069	NA	05/10/23 21:29
Calibration Blank	SLE0204-CCB7	XDT_m1230510A-070	NA	05/10/23 21:37
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1005	23A0467-02	XDT_m1230510A-071	Solid	05/10/23 21:41
LDW23-SS1006	23A0467-03	XDT_m1230510A-072	Solid	05/10/23 21:45
LDW23-SS1006	23A0467-03	XDT_m1230510A-072	Solid	05/10/23 21:45
LDW23-SS1006	23A0467-03	XDT_m1230510A-072	Solid	05/10/23 21:45
LDW23-SS1006	23A0467-03	XDT_m1230510A-072	Solid	05/10/23 21:45
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0204	Instrument:	ICPMS1
		Calibration:	GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50
LDW23-SS1003	23A0467-04	XDT_m1230510A-073	Solid	05/10/23 21:50
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1004	23A0467-05	XDT_m1230510A-074	Solid	05/10/23 21:54
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	23A0467-01	XDT_m1230510A-075	Solid	05/10/23 21:59
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-DUP1	XDT_m1230510A-076	Solid	05/10/23 22:03
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MS1	XDT_m1230510A-077	Solid	05/10/23 22:08
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLE0204	Instrument:	ICPMS1
		Calibration:	GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
LDW23-SS1010	BLD0578-MSD1	XDT_m1230510A-078	Solid	05/10/23 22:12
Instrument Blank	SLE0204-IBL7	XDT_m1230510A-080	NA	05/10/23 22:21
Calibration Check	SLE0204-CCV8	XDT_m1230510A-081	NA	05/10/23 22:25
Calibration Blank	SLE0204-CCB8	XDT_m1230510A-082	NA	05/10/23 22:32
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1204	23A0467-06	XDT_m1230510A-083	Solid	05/10/23 22:37
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1238	23A0467-07	XDT_m1230510A-084	Solid	05/10/23 22:41
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1013	23A0467-08	XDT_m1230510A-085	Solid	05/10/23 22:46
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
LDW23-SS1014	23A0467-09	XDT_m1230510A-086	Solid	05/10/23 22:50
Instrument Blank	SLE0204-IBL8	XDT_m1230510A-092	NA	05/10/23 23:16
Calibration Check	SLE0204-CCV9	XDT_m1230510A-093	NA	05/10/23 23:21
Calibration Blank	SLE0204-CCB9	XDT_m1230510A-094	NA	05/10/23 23:28
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-01	XDT_m1230510A-095	Solid	05/10/23 23:33
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-02	XDT_m1230510A-096	Solid	05/10/23 23:37
ZZZZZ	23C0071-03	XDT_m1230510A-097	Solid	05/10/23 23:41
ZZZZZ	23C0071-03	XDT_m1230510A-097	Solid	05/10/23 23:41
ZZZZZ	23C0071-03	XDT_m1230510A-097	Solid	05/10/23 23:41
ZZZZZ	23C0071-03	XDT_m1230510A-097	Solid	05/10/23 23:41
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-04	XDT_m1230510A-098	Solid	05/10/23 23:46
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-05	XDT_m1230510A-099	Solid	05/10/23 23:50
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0071-06	XDT_m1230510A-100	Solid	05/10/23 23:55
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-02	XDT_m1230510A-101	Solid	05/10/23 23:59
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0109-03	XDT_m1230510A-102	Solid	05/11/23 00:03
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
ZZZZZ	23C0108-02	XDT_m1230510A-103	Solid	05/11/23 00:08
Instrument Blank	SLE0204-IBL9	XDT_m1230510A-104	NA	05/11/23 00:12
Calibration Check	SLE0204-CCVA	XDT_m1230510A-105	NA	05/11/23 00:16
Calibration Blank	SLE0204-CCBA	XDT_m1230510A-106	NA	05/11/23 00:24
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-06	XDT_m1230510A-107	Solid	05/11/23 00:28
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-07	XDT_m1230510A-108	Solid	05/11/23 00:32
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-08	XDT_m1230510A-109	Solid	05/11/23 00:37
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23C0108-09	XDT_m1230510A-110	Solid	05/11/23 00:41
ZZZZZ	23D0008-01	XDT_m1230510A-111	Solid	05/11/23 00:46
ZZZZZ	23D0008-01	XDT_m1230510A-111	Solid	05/11/23 00:46
ZZZZZ	23D0008-01	XDT_m1230510A-111	Solid	05/11/23 00:46
ZZZZZ	23D0008-01	XDT_m1230510A-111	Solid	05/11/23 00:46
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50
ZZZZZ	23D0008-03	XDT_m1230510A-112	Solid	05/11/23 00:50

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0204
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-01	XDT_m1230510A-113	Solid	05/11/23 00:54
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-03	XDT_m1230510A-114	Solid	05/11/23 00:59
ZZZZZ	23D0037-02	XDT_m1230510A-115	Solid	05/11/23 01:03
Instrument Blank	SLE0204-IBLA	XDT_m1230510A-116	NA	05/11/23 01:08
Calibration Check	SLE0204-CCVB	XDT_m1230510A-117	NA	05/11/23 01:12
Calibration Blank	SLE0204-CCBB	XDT_m1230510A-118	NA	05/11/23 01:19
Calibration Check	SLE0204-CCVC	XDT_m1230510A-120	NA	05/11/23 01:28
Calibration Blank	SLE0204-CCBC	XDT_m1230510A-121	NA	05/11/23 01:35
ZZZZZ	23D0037-04	XDT_m1230510A-122	Solid	05/11/23 01:40
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-01	XDT_m1230510A-123	Solid	05/11/23 01:44
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
ZZZZZ	23D0063-03	XDT_m1230510A-124	Solid	05/11/23 01:49
Instrument Blank	SLE0204-IBLB	XDT_m1230510A-131	NA	05/11/23 02:21
Calibration Check	SLE0204-CCVD	XDT_m1230510A-132	NA	05/11/23 02:26
Calibration Blank	SLE0204-CCBD	XDT_m1230510A-133	NA	05/11/23 02:33
Instrument Blank	SLE0204-IBLC	XDT_m1230510A-138	NA	05/11/23 02:57
ZZZZZ	23D0477-21	XDT_m1230510A-141	Water	05/11/23 03:11
ZZZZZ	23D0477-21	XDT_m1230510A-141	Water	05/11/23 03:11

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLE0204
SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0477-21	XDT_m1230510A-141	Water	05/11/23 03:11
ZZZZZ	23D0477-22	XDT_m1230510A-142	Water	05/11/23 03:15
ZZZZZ	23D0477-22	XDT_m1230510A-142	Water	05/11/23 03:15
ZZZZZ	23D0477-22	XDT_m1230510A-142	Water	05/11/23 03:15
Instrument Blank	SLE0204-IBLD	XDT_m1230510A-143	NA	05/11/23 03:20
Calibration Check	SLE0204-CCVE	XDT_m1230510A-144	NA	05/11/23 03:24
Calibration Blank	SLE0204-CCBE	XDT_m1230510A-145	NA	05/11/23 03:31
ZZZZZ	23D0477-11	XDT_m1230510A-146	Water	05/11/23 03:36
ZZZZZ	23D0477-11	XDT_m1230510A-146	Water	05/11/23 03:36
ZZZZZ	23D0477-11	XDT_m1230510A-146	Water	05/11/23 03:36
ZZZZZ	23D0477-13	XDT_m1230510A-147	Water	05/11/23 03:40
ZZZZZ	23D0477-13	XDT_m1230510A-147	Water	05/11/23 03:40
ZZZZZ	23D0477-13	XDT_m1230510A-147	Water	05/11/23 03:40
ZZZZZ	23D0477-02	XDT_m1230510A-148	Water	05/11/23 03:45
ZZZZZ	23D0477-02	XDT_m1230510A-148	Water	05/11/23 03:45
ZZZZZ	23D0477-02	XDT_m1230510A-148	Water	05/11/23 03:45
Instrument Blank	SLE0204-IBLE	XDT_m1230510A-150	NA	05/11/23 03:57
Instrument Blank	SLE0204-IBLF	XDT_m1230510A-155	NA	05/11/23 04:21
Calibration Check	SLE0204-CCVF	XDT_m1230510A-156	NA	05/11/23 04:26
Calibration Blank	SLE0204-CCBF	XDT_m1230510A-157	NA	05/11/23 04:33
Calibration Check	SLE0204-CCVG	XDT_m1230510A-159	NA	05/11/23 04:42
Calibration Blank	SLE0204-CCBG	XDT_m1230510A-160	NA	05/11/23 04:49
ZZZZZ	23D0477-04	XDT_m1230510A-161	Water	05/11/23 04:53
ZZZZZ	23D0477-04	XDT_m1230510A-161	Water	05/11/23 04:53
ZZZZZ	23D0477-04	XDT_m1230510A-161	Water	05/11/23 04:53
ZZZZZ	23D0477-06	XDT_m1230510A-162	Water	05/11/23 04:58
ZZZZZ	23D0477-06	XDT_m1230510A-162	Water	05/11/23 04:58
ZZZZZ	23D0477-06	XDT_m1230510A-162	Water	05/11/23 04:58
ZZZZZ	23D0477-08	XDT_m1230510A-163	Water	05/11/23 05:02

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0477-08	XDT_m1230510A-163	Water	05/11/23 05:02
ZZZZZ	23D0477-08	XDT_m1230510A-163	Water	05/11/23 05:02
ZZZZZ	23D0477-10	XDT_m1230510A-164	Water	05/11/23 05:07
ZZZZZ	23D0477-10	XDT_m1230510A-164	Water	05/11/23 05:07
ZZZZZ	23D0477-10	XDT_m1230510A-164	Water	05/11/23 05:07
ZZZZZ	23D0477-12	XDT_m1230510A-165	Water	05/11/23 05:11
ZZZZZ	23D0477-12	XDT_m1230510A-165	Water	05/11/23 05:11
ZZZZZ	23D0477-12	XDT_m1230510A-165	Water	05/11/23 05:11
ZZZZZ	23D0477-20	XDT_m1230510A-166	Water	05/11/23 05:16
ZZZZZ	23D0477-20	XDT_m1230510A-166	Water	05/11/23 05:16
ZZZZZ	23D0477-20	XDT_m1230510A-166	Water	05/11/23 05:16
Instrument Blank	SLE0204-IBLG	XDT_m1230510A-170	NA	05/11/23 05:33
Calibration Check	SLE0204-CCVH	XDT_m1230510A-171	NA	05/11/23 05:38
Calibration Blank	SLE0204-CCBH	XDT_m1230510A-172	NA	05/11/23 05:45
ZZZZZ	23D0477-14	XDT_m1230510A-173	Water	05/11/23 05:50
ZZZZZ	23D0477-14	XDT_m1230510A-173	Water	05/11/23 05:50
ZZZZZ	23D0477-14	XDT_m1230510A-173	Water	05/11/23 05:50
ZZZZZ	23D0477-16	XDT_m1230510A-174	Water	05/11/23 05:54
ZZZZZ	23D0477-16	XDT_m1230510A-174	Water	05/11/23 05:54
ZZZZZ	23D0477-16	XDT_m1230510A-174	Water	05/11/23 05:54
ZZZZZ	23D0477-18	XDT_m1230510A-175	Water	05/11/23 05:58
ZZZZZ	23D0477-18	XDT_m1230510A-175	Water	05/11/23 05:58
ZZZZZ	23D0477-18	XDT_m1230510A-175	Water	05/11/23 05:58
ZZZZZ	23D0477-01	XDT_m1230510A-176	Water	05/11/23 06:03
ZZZZZ	23D0477-01	XDT_m1230510A-176	Water	05/11/23 06:03
ZZZZZ	23D0477-01	XDT_m1230510A-176	Water	05/11/23 06:03
ZZZZZ	23D0477-03	XDT_m1230510A-177	Water	05/11/23 06:07
ZZZZZ	23D0477-03	XDT_m1230510A-177	Water	05/11/23 06:07
ZZZZZ	23D0477-03	XDT_m1230510A-177	Water	05/11/23 06:07

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Sequence: SLE0204
Instrument: ICPMS1
Calibration: GE00040

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
ZZZZZ	23D0477-07	XDT_m1230510A-178	Water	05/11/23 06:12
ZZZZZ	23D0477-07	XDT_m1230510A-178	Water	05/11/23 06:12
ZZZZZ	23D0477-07	XDT_m1230510A-178	Water	05/11/23 06:12
ZZZZZ	23D0477-09	XDT_m1230510A-179	Water	05/11/23 06:16
ZZZZZ	23D0477-09	XDT_m1230510A-179	Water	05/11/23 06:16
ZZZZZ	23D0477-09	XDT_m1230510A-179	Water	05/11/23 06:16
ZZZZZ	23D0477-15	XDT_m1230510A-180	Water	05/11/23 06:20
ZZZZZ	23D0477-15	XDT_m1230510A-180	Water	05/11/23 06:20
ZZZZZ	23D0477-15	XDT_m1230510A-180	Water	05/11/23 06:20
ZZZZZ	23D0487-02	XDT_m1230510A-181	Water	05/11/23 06:26
Instrument Blank	SLE0204-IBLH	XDT_m1230510A-182	NA	05/11/23 06:31
Calibration Check	SLE0204-CCVI	XDT_m1230510A-183	NA	05/11/23 06:35
Calibration Blank	SLE0204-CCBI	XDT_m1230510A-184	NA	05/11/23 06:42
ZZZZZ	23D0487-06	XDT_m1230510A-185	Water	05/11/23 06:47
ZZZZZ	23D0487-05	XDT_m1230510A-186	Water	05/11/23 06:51
ZZZZZ	23D0487-04	XDT_m1230510A-187	Water	05/11/23 06:55
ZZZZZ	23D0487-03	XDT_m1230510A-188	Water	05/11/23 07:00
Instrument Blank	SLE0204-IBLI	XDT_m1230510A-189	NA	05/11/23 07:05
ZZZZZ	23D0636-01	XDT_m1230510A-190	Water	05/11/23 07:09
ZZZZZ	23D0636-01	XDT_m1230510A-190	Water	05/11/23 07:09
ZZZZZ	23D0636-01	XDT_m1230510A-190	Water	05/11/23 07:09
ZZZZZ	23D0636-01	XDT_m1230510A-190	Water	05/11/23 07:09
ZZZZZ	BLE0298-DUP1	XDT_m1230510A-191	Water	05/11/23 07:14
ZZZZZ	BLE0298-MS1	XDT_m1230510A-192	Water	05/11/23 07:19
ZZZZZ	BLE0298-MSD1	XDT_m1230510A-193	Water	05/11/23 07:25
Instrument Blank	SLE0204-IBLJ	XDT_m1230510A-194	NA	05/11/23 07:29
Calibration Check	SLE0204-CCVJ	XDT_m1230510A-195	NA	05/11/23 07:34
Calibration Blank	SLE0204-CCBJ	XDT_m1230510A-196	NA	05/11/23 07:41

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0204-IFA1	Arsenic-75a	0	0.0260		ug/L
	Cadmium-111	0	0.0430		ug/L
	Cadmium-114	0	0.0270		ug/L
	Copper-63	0	0.0390		ug/L
	Copper-65	0	0.0330		ug/L
	Zinc-66	0	0.3120		ug/L
	Zinc-67	0	0.2690		ug/L

* Indicates %R outside of QC limits

NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

ICP INTERFERENCE CHECK SAMPLE

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Standard ID: L004688

Lab Sample ID	Analyte	True	Found	%R	Units
SLE0204-IFB1	Arsenic-75a	20.000	19.651	98.3	ug/L
	Cadmium-111	20.000	18.519	92.6	ug/L
	Cadmium-114	20.000	18.365	91.8	ug/L
	Copper-63	20.000	20.580	103	ug/L
	Copper-65	20.000	20.103	101	ug/L
	Zinc-66	20.000	19.662	98.3	ug/L
	Zinc-67	20.000	17.951	89.8	ug/L

* Indicates %R outside of QC limits
NOTE: True value and %R are populated only for analytes found in the interference check standards, and will be seen only if those analytes were requested.

DETECTION LEVEL STANDARD
EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: ICPMS1
Calibration: GE00040
Sequence: SLE0204
Lab Sample ID: SLE0204-CRL1

Analyte	True	Found	%R	Units	QC Limts
Arsenic-75a	0.20000	0.213	107	ug/L	50 - 150
Cadmium-111	0.10000	0.113	113	ug/L	50 - 150
Cadmium-114	0.10000	0.0970	97.0	ug/L	50 - 150
Copper-63	0.50000	0.708	142	ug/L	50 - 150
Copper-65	0.50000	0.727	145	ug/L	50 - 150
Zinc-66	6.0000	6.25	104	ug/L	50 - 150
Zinc-67	6.0000	6.11	102	ug/L	50 - 150

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00040
Laboratory ID: SLE0204-HCV1
Sequence: SLE0204
Standard ID: L004780

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	200.00	194	-3.1	10.00
Cadmium-111	200.00	220	9.8	10.00
Cadmium-114	200.00	220	10.0	10.00
Copper-63	200.00	188	-6.2	10.00
Copper-65	200.00	186	-7.1	10.00
Zinc-66	200.00	189	-5.4	10.00
Zinc-67	200.00	187	-6.7	10.00

* Values outside of QC limits

HIGH-CONCENTRATION CALIBRATION VERIFICATION

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: GE00040
Laboratory ID: SLE0204-HCV2
Sequence: SLE0204
Standard ID: L004781

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Arsenic-75a	300.00	305	1.7	10.00
Cadmium-111	300.00	293	-2.4	10.00
Cadmium-114	300.00	294	-1.9	10.00
Copper-63	300.00	287	-4.3	10.00
Copper-65	300.00	287	-4.2	10.00
Zinc-66	300.00	285	-4.9	10.00
Zinc-67	300.00	288	-4.1	10.00

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:59	108	180	
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:41	108	180	
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:45	108	180	
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:50	108	180	
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 21:54	108	180	
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:37	107	180	
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:41	107	180	
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:46	107	180	
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	04/26/23 12:19	92	180	05/10/23 22:50	107	180	
Duplicate BLD0578-DUP1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:03	108	180	
Matrix Spike BLD0578-MS1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:08	108	180	
Matrix Spike Dup BLD0578-MSD1	01/23/23 08:26	01/23/23 13:30	04/26/23 12:19	93	180	05/10/23 22:12	108	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 6020B UCT-KED

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: ICPMS1

Analyte	MDL	RL	Units
Arsenic-75a	0.04	0.20	mg/kg
Cadmium-111	0.03	0.10	mg/kg
Cadmium-114	0.04	0.10	mg/kg
Copper-63	0.17	0.50	mg/kg
Copper-65	0.35	0.50	mg/kg
Zinc-66	2.9	6.0	mg/kg
Zinc-67	0.9	6.0	mg/kg

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCU10
Lot Number:	P2-CU682108
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Copper
Starting Material:	Cu Metal
Starting Material Lot#:	2095
Starting Material Purity:	99.9996%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10013 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9977 ± 50 µg/mL**
ICP Assay NIST SRM 3114 Lot Number: 121207

Assay Method #2 **10024 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10007 ± 46 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.007542	M	Eu	<	0.000942	O	Na		0.001434	M	Se	<	0.016971	M	Zn	<	0.005657
O	Al	<	0.000609	O	Fe		0.008700	M	Nb	<	0.000942	O	Si		0.003052	M	Zr	<	0.000942
M	As	<	0.010371	M	Ga	<	0.000942	M	Nd	<	0.000942	M	Sm	<	0.000942				
M	Au	<	0.001885	M	Gd	<	0.000942	M	Ni		0.003781	M	Sn	<	0.005657				
O	B		0.003663	M	Ge	<	0.005657	M	Os	<	0.000942	M	Sr	<	0.000942				
M	Ba		0.004253	M	Hf	<	0.000942	O	P	<	0.031668	M	Ta	<	0.000942				
M	Be	<	0.000942	O	Hg	<	0.007064	M	Pb		0.005789	M	Tb	<	0.000942				
M	Bi	<	0.000942	M	Ho	<	0.000942	M	Pd	<	0.000942	M	Te	<	0.004714				
O	Ca		0.002304	M	In	<	0.000942	M	Pr	<	0.000942	M	Th	<	0.000942				
M	Cd	<	0.000942	M	Ir	<	0.000942	M	Pt	<	0.000942	O	Ti	<	0.002801				
M	Ce	<	0.000942	O	K		0.000763	M	Rb	<	0.000942	M	Tl	<	0.000942				
M	Co		0.001890	M	La	<	0.000942	M	Re	<	0.000942	M	Tm	<	0.000942				
M	Cr	<	0.005657	O	Li	<	0.000243	i	Rh	<		M	U	<	0.000942				
M	Cs	<	0.000942	M	Lu	<	0.000942	M	Ru	<	0.039588	M	V	<	0.003771				
s	Cu	<		O	Mg		0.000320	O	S		0.007174	M	W	<	0.005657				
M	Dy	<	0.000942	O	Mn		0.000793	M	Sb	<	0.001885	M	Y	<	0.000942				
M	Er	<	0.000942	M	Mo	<	0.005657	M	Sc	<	0.000942	M	Yb	<	0.000942				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 63.55 +2 6 $Cu(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cu Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 63 amu	10 ppt	n/a	40Ar23Na 47Ti16O, 14N12C37Cl, 16O12C35Cl, 23Na40Ca
ICP-OES 219.958 nm	0.01/.002 µg/mL	1	Th, Ta, Nb, U, Hf
ICP-OES 224.700 nm	0.01/.001 µg/mL	1	Pb, Ir, Ni, W
ICP-OES 324.754 nm	0.06/.001 µg/mL		Nb, U, Th, Mo, Hf

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 24, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 24, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGPB10
Lot Number:	S2-PB713228
Matrix:	0.5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Lead
Starting Material:	Lead Nitrate
Starting Material Lot#:	2343
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10042 ± 31 µg/mL

Density: 1.015 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10024 ± 41 µg/mL**
ICP Assay NIST SRM 3128 Lot Number: 101026

Assay Method #2 **10054 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	M	Na		0.001470	M	Se	<	0.009100	O	Zn	0.006155
O	Al		0.017098	O	Fe		0.002496	M	Nb	<	0.000310	O	Si		0.003761	O	Zr	< 0.001700
M	As	<	0.003100	M	Ga	<	0.000310	M	Nd	<	0.000310	M	Sm	<	0.000310			
M	Au	<	0.000910	M	Gd	<	0.000310	O	Ni		0.001709	M	Sn	<	0.001300			
O	B	<	0.005600	M	Ge	<	0.002200	M	Os	<	0.000310	O	Sr		0.000444			
O	Ba		0.007865	M	Hf	<	0.000310	O	P	<	0.038000	M	Ta	<	0.000310			
O	Be	<	0.000320	M	Hg	<	0.002200	s	Pb	<		M	Tb	<	0.000610			
M	Bi	<	0.028000	M	Ho	<	0.000310	M	Pd	<	0.000610	M	Te	<	0.000310			
O	Ca		0.019834	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.000310			
O	Cd	<	0.000630	M	Ir	<	0.000310	M	Pt	<	0.000910	O	Ti		0.005129			
M	Ce		0.004787	O	K		0.008207	M	Rb	<	0.006700	M	Tl	<	0.016000			
M	Co	<	0.000610	M	La	<	0.001900	M	Re	<	0.000310	M	Tm	<	0.000310			
O	Cr	<	0.001500	O	Li	<	0.000110	O	Rh	<	0.007700	M	U	<	0.000310			
M	Cs	<	0.006100	M	Lu	<	0.000310	M	Ru	<	0.001300	M	V	<	0.001600			
M	Cu	<	0.001600	O	Mg		0.003317	O	S	<	0.052000	M	W	<	0.000910			
M	Dy	<	0.000310	O	Mn	<	0.001600	O	Sb	<	0.015000	M	Y	<	0.000310			
M	Er	<	0.000310	M	Mo	<	0.000610	O	Sc	<	0.000630	M	Yb	<	0.000310			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 207.20 +2 6 $Pb(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, HF and HNO_3. Avoid H_2SO_4. Stable with most metals and inorganic anions forming insoluble carbonate, borate, sulfate, sulfite, sulfide, phosphate, oxalate, chromate, tannate, iodate, and cyanide in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.

Pb Containing Samples (Preparation and Solution) -Metal (Best dissolved in 1:1 H_2O / HNO_3); Oxides (The many different Pb oxides are soluble in HNO_3 with the exception of PbO_2 which is soluble in HCl or HF); Ores and Alloys (Best attacked using 1:1 H_2O / HNO_3); Organic Matrices (Dry ash and dissolve in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 208 amu	5 ppt	n/a	192Pt16O, 192Os16O
ICP-OES 168.215 nm	0.03 / 0.003 µg/mL	1	Co
ICP-OES 217.000 nm	0.09 / 0.03 µg/mL	1	W, Ir, Hf, Sb, Th
ICP-OES 220.353 nm	0.04 / 0.006 µg/mL	1	Bi, Nb

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

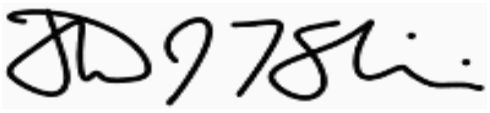
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGZN10
Lot Number:	S2-ZN711249
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Zinc
Starting Material:	Zinc Metal
Starting Material Lot#:	2349
Starting Material Purity:	99.9988%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9981 ± 56 µg/mL**
ICP Assay NIST SRM 3168a Lot Number: 120629

Assay Method #2 **9987 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10002 ± 32 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002000	M	Eu	<	0.000500	O	Na		0.008713	M	Se	<	0.048000	s	Zn	<
O	Al	<	0.011000	O	Fe		0.015467	M	Nb	<	0.000500	O	Si		0.007842	M	Zr	< 0.000500
O	As	<	0.012000	M	Ga	<	0.004900	M	Nd	<	0.000500	M	Sm	<	0.000500			
M	Au	<	0.006500	M	Gd	<	0.000500	O	Ni		0.003049	M	Sn		0.002614			
O	B	<	0.019000	M	Ge	<	0.009100	M	Os	<	0.000500	M	Sr	<	0.000500			
M	Ba	<	0.000500	M	Hf	<	0.000500	O	P	<	0.059000	M	Ta	<	0.000500			
O	Be	<	0.000230	O	Hg	<	0.003800	M	Pb		0.016774	M	Tb	<	0.000500			
M	Bi	<	0.002400	M	Ho	<	0.000500	M	Pd	<	0.001000	M	Te	<	0.017000			
O	Ca		0.052283	M	In	<	0.003500	M	Pr	<	0.000500	M	Th	<	0.000500			
O	Cd		0.000588	M	Ir	<	0.001000	M	Pt	<	0.000500	M	Ti	<	0.002000			
M	Ce	<	0.000500	O	K		0.017209	M	Rb	<	0.002500	M	Tl	<	0.000500			
M	Co		0.000653	M	La	<	0.000500	M	Re	<	0.000500	M	Tm	<	0.000500			
O	Cr		0.001089	O	Li	<	0.000230	M	Rh	<	0.000500	M	U	<	0.000500			
M	Cs	<	0.000500	M	Lu	<	0.000500	M	Ru	<	0.005000	M	V	<	0.000500			
O	Cu		0.001938	O	Mg		0.000871	O	S	<	0.048000	M	W	<	0.001000			
M	Dy	<	0.000500	O	Mn		0.000172	M	Sb	<	0.004300	M	Y	<	0.000500			
M	Er	<	0.000500	M	Mo	<	0.001500	O	Sc	<	0.000900	M	Yb	<	0.000500			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 65.39 +2 4 Zn(OH)(aq)1+
Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media forming insoluble carbonate and hydroxide. Stable with most metals and inorganic anions in acidic media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
Zn Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3); Organic based (dry ash at 4500C and dissolve ash in HCl) (sulfuric/peroxide acid digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 66 amu	7 ppt	N/A	50Ti16O,50Cr16O, 50V16O, 34S16O2, 32S16O18O, 32S17O2, 33S16O17O, 32S34S, 33S2
ICP-OES 202.548 nm	0.004/0.0002 µg/mL	1	Nb, Cu, Co, Hf
ICP-OES 206.200 nm	0.006/0.0006 µg/mL	1	Sb, Ta, Bi, Os
ICP-OES 213.856 nm	0.002/0.0004 µg/mL	1	Ni, Cu, V

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 22, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

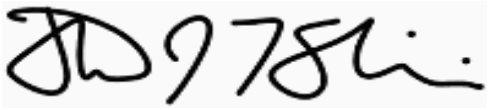
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSE10
Lot Number:	S2-SE711004
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Selenium
Starting Material:	Se Metal
Starting Material Lot#:	1962
Starting Material Purity:	99.9991%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9955 ± 61 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9955 ± 50 µg/mL**
ICP Assay NIST SRM 3149 Lot Number: 100901

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002242	M	Eu	<	0.000373	O	Na		0.013654	s	Se	<		O	Zn		0.002374
M	Al		0.004450	M	Fe		0.008478	O	Nb	<	0.002975	O	Si		0.006249	M	Zr	<	0.001868
O	As	<	0.022040	M	Ga	<	0.000373	M	Nd	<	0.000373	M	Sm	<	0.000373				
M	Au	<	0.000373	M	Gd	<	0.000373	O	Ni		0.001843	M	Sn		0.000847				
O	B	<	0.007714	M	Ge	<	0.002616	M	Os	<	0.000373	M	Sr	<	0.001121				
M	Ba	<	0.001495	M	Hf	<	0.000373	O	P	<	0.022040	M	Ta	<	0.000373				
M	Be	<	0.001495	M	Hg	<	0.002240	M	Pb		0.006358	M	Tb	<	0.006353				
M	Bi	<	0.000373	M	Ho	<	0.000373	M	Pd	<	0.000373	M	Te	<	0.012707				
O	Ca		0.006530	M	In	<	0.000373	M	Pr	<	0.001495	M	Th	<	0.002990				
M	Cd		0.001165	M	Ir	<	0.000373	M	Pt	<	0.000373	M	Ti	<	0.003363				
M	Ce	<	0.000373	O	K		0.001999	M	Rb	<	0.001868	M	Tl		0.008584				
M	Co	<	0.000373	M	La	<	0.001121	M	Re	<	0.000373	M	Tm	<	0.000373				
M	Cr		0.002861	O	Li		0.000062	M	Rh	<	0.000373	M	U	<	0.000373				
M	Cs	<	0.001121	M	Lu	<	0.000373	M	Ru	<	0.001493	M	V	<	0.000747				
M	Cu	<	0.000747	O	Mg		0.001156	O	S		0.024591	M	W	<	0.002242				
M	Dy	<	0.000373	M	Mn	<	0.000373	M	Sb	<	0.002242	M	Y	<	0.000373				
M	Er	<	0.000373	O	Mo	<	0.003195	M	Sc	<	0.001121	M	Yb	<	0.000373				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 78.96 +4 6 H_2SeO_3

Chemical Compatibility -Soluble in HCl, HNO_3,H_3PO_4, H_2SO_4 and HF aqueous matrices and water. It is stable with most inorganic anions but many cationic metals form the insoluble selenites under pH neutral conditions. When fluorinated and/or under acidic conditions precipitation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Se Containing Samples (Preparation and Solution) -Metal (soluble in HNO_3); Oxides (readily soluble in water); Minerals and alloys (acid digestion with HNO_3or HNO_3 / HF); Organic Matrices (acid digestion with hot concentrated H_2SO_4 accompanied by the careful dropwise addition of H_2O_2 until clear).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 82 amu	200 ppt	N/A	12C35Cl2
ICP-OES 196.026 nm	0.08/0.006 µg/mL	1	Fe
ICP-OES 203.985 nm	0.2/0.05 µg/mL	1	Sb, Ir, Cr, Ta
ICP-OES 206.279 nm	0.3/0.16 µg/mL	1	Cr, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 17, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO10
Lot Number:	S2-MO706255
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	10 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10026 ± 47 µg/mL

Density: 1.011 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10032 ± 68 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

Assay Method #2 **10020 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.008739	M	Se	<	0.008000	M	Zn		0.005942
M	Al		0.005592	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.001747				
M	Ba		0.016778	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.062920	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Ti	<	0.032000				
M	Ce	<	0.008300	M	K		1.293372	M	Rb		0.045442	M	Tl		0.012584				
M	Co		0.005942	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.005243	O	Li		0.000594	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.005243	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.022371	M	Mg		0.005592	i	S	<		M	W		0.873900				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.015031	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 04, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 04, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTL10
Lot Number:	T2-TL714687
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Thallium
Starting Material:	TlNO3
Starting Material Lot#:	2118
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10030 ± 42 µg/mL

Density: 1.036 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10040 ± 43 µg/mL**
ICP Assay NIST SRM 3158 Lot Number: 151215

Assay Method #2 **10010 ± 65 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL(

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000200	O	Na		0.002489	M	Se	<	0.011019	O	Zn		0.002298
O	Al	<	0.004184	O	Fe	<	0.002824	M	Nb	<	0.000200	O	Si		0.003760	M	Zr	<	0.000200
M	As	<	0.002003	M	Ga	<	0.000200	M	Nd	<	0.000200	M	Sm	<	0.000200				
O	Au	<	0.002824	M	Gd	<	0.000200	M	Ni		0.001724	M	Sn	<	0.000601				
O	B	<	0.004184	M	Ge	<	0.000801	M	Os	<	0.000198	O	Sr	<	0.000313				
M	Ba	<	0.000400	M	Hf	<	0.000200	O	P	<	0.010460	M	Ta	<	0.000200				
O	Be	<	0.000104	M	Hg	<	0.000794	M	Pb		0.000811	M	Tb	<	0.000200				
M	Bi	<	0.005209	M	Ho	<	0.000200	M	Pd	<	0.000400	M	Te	<	0.005008				
O	Ca		0.002436	M	In	<	0.000200	M	Pr	<	0.000200	M	Th	<	0.000200				
M	Cd		0.001318	M	Ir	<	0.000198	M	Pt	<	0.000801	O	Ti	<	0.001255				
M	Ce	<	0.000200	O	K		0.006175	M	Rb	<	0.000200	s	Tl	<					
M	Co	<	0.000601	M	La	<	0.000200	M	Re	<	0.000200	M	Tm	<	0.000200				
M	Cr	<	0.000801	O	Li	<	0.000177	M	Rh	<	0.000200	M	U	<	0.000200				
M	Cs	<	0.003606	M	Lu	<	0.000200	M	Ru	<	0.000397	M	V	<	0.002203				
M	Cu	<	0.001001	O	Mg		0.000529	O	S	<	0.015690	M	W	<	0.000601				
M	Dy	<	0.000200	M	Mn	<	0.000801	M	Sb	<	0.000400	M	Y	<	0.000200				
M	Er	<	0.000200	M	Mo	<	0.001202	O	Sc	<	0.000711	M	Yb	<	0.000200				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 204.38 +1 6 Tl(H2O)61+
Chemical Compatibility - Soluble in HCl, HNO3, and H2SO4. Stable with most metals and inorganic anions. The sulfite, thiocyanate and oxalate are moderately soluble; the phosphate and arsenite are slightly soluble and the sulfide is insoluble.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Tl Containing Samples)Preparation and Solution) -Metal (Best dissolved in HNO3 which forms chiefly the Tl1+ ion.); Oxide (The thallous oxide is readily soluble in water. The thallic oxide requires high levels of acid); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in HCl).
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 205 amu	2 ppt	N/A	189Os16O
ICP-OES 190.864 nm	0.04 / 0.004 µg/mL	1	V, Ti
ICP-OES 276.787 nm	0.1 / 0.01 µg/mL	1	Ta, V, Fe, Cr
ICP-OES 351.924 nm	0.2 / 0.02 µg/mL	1	Th, Ce, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 08, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **February 08, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

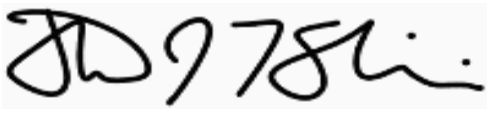
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCD10
Lot Number:	S2-CD710508
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cadmium
Starting Material:	Cd Metal
Starting Material Lot#:	1953
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10008 ± 30 µg/mL

Density: 1.029 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10010 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #2 **10011 ± 30 µg/mL**
ICP Assay NIST SRM 3108 Lot Number: 130116

Assay Method #3 **10003 ± 30 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag	<	0.003200	O	Eu	<	0.002500	O	Na		0.005499	M	Se	<	0.005700	O	Zn	<	0.001100
O	Al		0.008903	O	Fe		0.000602	M	Nb	<	0.000400	O	Si		0.016758	O	Zr	<	0.002600
M	As	<	0.003600	M	Ga	<	0.001200	M	Nd	<	0.000800	M	Sm	<	0.000400				
M	Au	<	0.000810	M	Gd	<	0.000400	M	Ni	<	0.003600	M	Sn	<	0.003200				
O	B		0.004189	O	Ge	<	0.012000	M	Os	<	0.000810	O	Sr	<	0.000330				
M	Ba	<	0.002400	M	Hf	<	0.000400	O	P	<	0.022000	M	Ta	<	0.000800				
M	Be	<	0.000400	M	Hg	<	0.001700	M	Pb	<	0.002400	M	Tb	<	0.000400				
M	Bi	<	0.000400	M	Ho	<	0.000400	M	Pd	<	0.001200	M	Te	<	0.008000				
O	Ca		0.011259	O	In	<	0.013000	M	Pr	<	0.000400	M	Th	<	0.000400				
s	Cd	<		M	Ir	<	0.000410	M	Pt	<	0.000400	O	Ti		0.000602				
M	Ce	<	0.000400	O	K		0.005237	M	Rb	<	0.004400	M	Tl		0.000523				
M	Co	<	0.000400	M	La	<	0.000400	M	Re	<	0.000400	M	Tm	<	0.000400				
O	Cr	<	0.005100	O	Li	<	0.000054	M	Rh	<	0.000400	M	U	<	0.000400				
M	Cs	<	0.002400	M	Lu	<	0.000400	M	Ru	<	0.002500	M	V	<	0.002000				
O	Cu	<	0.004800	O	Mg		0.000288	O	S	<	0.022000	M	W	<	0.000400				
M	Dy	<	0.000400	O	Mn	<	0.000860	O	Sb	<	0.018000	M	Y	<	0.000400				
M	Er	<	0.000400	M	Mo	<	0.001600	O	Sc	<	0.000430	M	Yb	<	0.000400				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 112.41 +2 4 Cd2(OH) (aq)3+ and Cd(OH)(aq)

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 , and HF. Avoid basic media forming insoluble carbonate and hydroxide.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO3 / LDPE container.

Cd Containing Samples (Preparation and Solution) -Metal (soluble in HNO3); Oxides (soluble in HCl or HNO3); Ores (dissolve in HCl /HNO3 then take to fumes with H2SO4. The silica and lead sulfate are filtered off after the addition of water); Organic based (dry ash at 450°C and dissolve ash in HCl), (sulfuric / peroxide acid digestion).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 111 amu	11 ppt	n/a	95Mo16O
ICP-OES 214.438 nm	0.003 / 0.0003 µg/mL	1	Pt, Ir
ICP-OES 226.502 nm	0.003 / 0.0003 µg/mL	1	Ir
ICP-OES 228.802 nm	0.003 / 0.0003 µg/mL	1	Co, Ir, As, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 01, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 01, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMN10
Lot Number:	S2-MN704240
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Manganese
Starting Material:	Mn Metal
Starting Material Lot#:	2275
Starting Material Purity:	99.9909%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10011 ± 30 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9989 ± 69 µg/mL**
ICP Assay NIST SRM 3132 Lot Number: 050429

Assay Method #2 **10011 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10024 ± 47 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001500	M	Eu	<	0.000730	O	Na		0.176097	M	Se	<	0.006600	M	Zn		0.009925
O	Al		0.004322	M	Fe	<	0.650000	M	Nb	<	0.000730	O	Si		0.097654	M	Zr	<	0.000730
M	As	<	0.008000	M	Ga		0.004322	M	Nd	<	0.001500	M	Sm	<	0.000730				
M	Au	<	0.000730	M	Gd	<	0.000730	M	Ni		0.024013	M	Sn	<	0.002200				
M	B		0.068838	M	Ge	<	0.004400	M	Os	<	0.000730	O	Sr		0.000928				
M	Ba	<	0.001500	M	Hf	<	0.000730	i	P	<		M	Ta	<	0.000730				
M	Be	<	0.000730	M	Hg	<	0.002200	M	Pb		0.007364	M	Tb	<	0.000730				
M	Bi	<	0.003000	M	Ho	<	0.000730	M	Pd	<	0.000730	M	Te	<	0.019000				
O	Ca		0.062434	M	In	<	0.003000	M	Pr	<	0.000730	M	Th	<	0.000730				
M	Cd	<	0.001500	M	Ir	<	0.000730	M	Pt	<	0.000730	O	Ti	<	0.006500				
M	Ce	<	0.007300	O	K		0.006403	M	Rb	<	0.006600	M	Tl	<	0.000730				
O	Co		0.014728	M	La	<	0.003000	M	Re	<	0.000730	M	Tm	<	0.000730				
O	Cr		0.272151	O	Li		0.000416	M	Rh	<	0.003000	M	U	<	0.001500				
M	Cs	<	0.000730	M	Lu	<	0.000730	M	Ru	<	0.004400	M	V	<	0.000730				
O	Cu		0.007684	O	Mg		0.320177	i	S	<		M	W	<	0.004400				
M	Dy	<	0.001500	s	Mn	<		M	Sb	<	0.021000	O	Y		0.001360				
M	Er	<	0.001500	M	Mo		0.010245	O	Sc	<	0.004100	M	Yb	<	0.000730				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 54.94 +2 6 $Mn(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5 % HNO_3/LDPE container.

Mn Containing Samples (Preparation and Solution) -Metal (Soluble in dilute acids); Oxides (Soluble in dilute acids); Ores (Dissolve with HCl. If silica is present add HF and then fume off silica by adding H_2SO_4 and heat to SO_3 fumes - dense white fumes).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 55 amu	10 ppt	n/a	40Ar14N1H,39K16O,37Cl18O,40Ar15N,38Ar17O,36Ar18O1H ,38Ar16O1H,37Cl17O1H,23Na32S
ICP-OES 257.610 nm	0.0014 / 0.00002 µg/mL	1	Ce, W, Re
ICP-OES 259.373 nm	0.0016 / 0.00002 µg/mL	1	U, Ta, Mo, Fe, Nb
ICP-OES 260.569 nm	0.0021 / 0.00002 µg/mL	1	Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 17, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 17, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSB10
Lot Number:	R2-SB688559
Matrix:	3% (v/v) HNO3 3% (w/v) tartaric acid
Value / Analyte(s):	10 000 µg/mL ea: Antimony
Starting Material:	Antimony Metal
Starting Material Lot#:	1857
Starting Material Purity:	99.9894%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10003 ± 47 µg/mL

Density: 1.061 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10003 ± 41 µg/mL**
ICP Assay NIST SRM 3102a Lot Number: 140911

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000200	M	Eu	<	0.000300	O	Na		0.140000	M	Se	<	0.007300	O	Zn		0.005000
M	Al		0.003200	O	Fe		0.060000	M	Nb	<	0.000100	O	Si		0.150000	O	Zr	<	0.006300
M	As	<	0.004400	M	Ga	<	0.000400	M	Nd	<	0.000100	M	Sm	<	0.000100				
M	Au	<	0.000210	M	Gd	<	0.000100	O	Ni		0.004800	M	Sn	<	0.001800				
M	B	<	0.011000	M	Ge	<	0.000600	M	Os	<	0.000110	O	Sr		0.000750				
O	Ba	<	0.004900	M	Hf	<	0.000100	O	P		0.540000	M	Ta		0.003300				
M	Be	<	0.000400	M	Hg	<	0.000110	M	Pb	<	0.000400	M	Tb	<	0.000100				
M	Bi	<	0.000200	M	Ho	<	0.000100	M	Pd	<	0.000210	M	Te	<	0.000600				
O	Ca		0.110000	M	In	<	0.000100	M	Pr	<	0.001600	M	Th	<	0.000100				
M	Cd	<	0.000200	M	Ir	<	0.000110	M	Pt	<	0.000600	M	Ti	<	0.002800				
M	Ce		0.006500	O	K		0.020000	M	Rb	<	0.001000	M	Tl	<	0.000100				
M	Co	<	0.000200	O	La	<	0.016000	M	Re	<	0.000100	M	Tm	<	0.000100				
M	Cr		0.006900	O	Li	<	0.000430	M	Rh	<	0.000300	M	U	<	0.000100				
M	Cs	<	0.000200	M	Lu	<	0.000100	M	Ru	<	0.000310	M	V	<	0.000800				
M	Cu	<	0.000600	O	Mg		0.021000	n	S	<		M	W	<	0.000200				
M	Dy	<	0.000100	O	Mn		0.001900	s	Sb	<		M	Y	<	0.000100				
M	Er	<	0.000100	M	Mo	<	0.000500	O	Sc	<	0.002300	M	Yb	<	0.000100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 121.75 +3 6 Sb(O)C4H4O6-1

Chemical Compatibility -Stable in conc. HCl, dilute or conc. HF. Stable in dilute HNO3 as the fluoride or tartrate complex. Avoid basic media. Stable with most metals and inorganic anions in acidic media as the tartrate provided the acidity is not too high or the acid is oxidizing causing loss of the stabilizing tartrate ion. The fluoride complex of antimony is stable in strong acid but you should only mix with other metals that are fluorinated.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-2% HNO3 / LDPE container.

Sb Containing Samples (Preparation and Solution) -Metal and alloys (Soluble in H2O / HF / HNO3 mixture); Oxides (Soluble in HCl and tartaric acid or H2O / HF / HNO3 mixtures); Ores (fusion with Na2CO3 in Pt0 followed by dissolving the fuseate in a H2O / HF / HNO3 mixture); Organic based (sulfuric acid / hydrogen peroxide digestion)

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 121 amu	5 ppt	N/A	105Pd16O, 89Y16O2
ICP-OES 206.833 nm	0.03/0.003 µg/mL	1	Ta, Cr, Ge, Hf
ICP-OES 217.581 nm	0.05/0.005 µg/mL	1	Nb, W, Re, Fe
ICP-OES 231.147 nm	0.06/0.006 µg/mL	1	Ni, Co, Pt

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 30, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 30, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAS10
Lot Number:	T2-AS718260
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Arsenic
Starting Material:	As Metal
Starting Material Lot#:	2208
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10060 ± 40 µg/mL

Density: 1.037 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10062 ± 46 µg/mL**
ICP Assay NIST SRM 3103a Lot Number: 100818

Assay Method #2 **10055 ± 76 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.003200	M	Eu	< 0.000530	O	Na	0.032544	M	Se	< 0.006300	O	Zn	0.001952			
M	Al	0.007593	O	Fe	0.001475	O	Nb	< 0.012000	O	Si	0.238658	O	Zr	< 0.004100			
s	As	<	M	Ga	< 0.000530	M	Nd	< 0.000530	M	Sm	< 0.000530						
M	Au	< 0.003100	M	Gd	< 0.000530	M	Ni	< 0.002100	M	Sn	< 0.000530						
M	B	0.026035	M	Ge	< 0.001600	M	Os	< 0.000520	M	Sr	< 0.000530						
M	Ba	< 0.000530	M	Hf	< 0.000530	O	P	< 0.043000	M	Ta	< 0.000530						
O	Be	< 0.000360	M	Hg	< 0.001600	M	Pb	< 0.002100	M	Tb	< 0.000530						
M	Bi	< 0.000530	M	Ho	< 0.000530	M	Pd	< 0.001100	M	Te	< 0.004700						
O	Ca	0.004339	M	In	< 0.023000	M	Pr	< 0.005300	M	Th	< 0.000530						
M	Cd	< 0.001100	M	Ir	< 0.000520	M	Pt	< 0.000530	O	Ti	< 0.002300						
M	Ce	< 0.000530	O	K	0.002061	M	Rb	< 0.000530	M	Tl	< 0.000530						
M	Co	< 0.000530	M	La	< 0.001100	M	Re	< 0.000530	M	Tm	< 0.000530						
O	Cr	< 0.001800	O	Li	< 0.000120	M	Rh	< 0.000530	M	U	< 0.000530						
M	Cs	< 0.005300	M	Lu	< 0.000530	M	Ru	< 0.000520	M	V	< 0.002700						
M	Cu	< 0.001600	O	Mg	0.000154	O	S	0.028205	M	W	< 0.012000						
M	Dy	< 0.000530	O	Mn	0.000154	M	Sb	< 0.000530	M	Y	< 0.000530						
M	Er	< 0.000530	M	Mo	< 0.000530	O	Sc	< 0.001700	M	Yb	< 0.000530						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 74.92 ; mix of +3 and +5 ; 6 ; H3AsO4 and HAsO2

Chemical Compatibility - Arsenic has no cationic chemistry. It is soluble in HCl, HNO3,H3PO4, H2SO4 and HF aqueous matrices water and NH4OH . It is stable with most inorganic anions (forms arsenate when boiled with chromate) but many cationic metals form the insoluble arsenates under pH neutral conditions. When fluorinated and / or under acidic conditions arsenate formation is typically not a problem at moderate to low concentrations.

Stability - 2-100 ppb levels stable for months alone or mixed with other elements at equivalent levels in 1% HNO3 / LDPE container.

As Containing Samples (Preparation and Solution) - Metal (soluble in 1:1 H2O / HNO3); Oxides (the oxide exists in crystalline and amorphous forms where the amorphic form is more water soluble. The oxides typically dissolve in dilute acidic solutions when boiled); Minerals (one gram of powered sample is fused in a Ni crucible with 10 grams of a 1:1 mix of K2CO3 and KNO3 and the melt extracted with hot water); Organic Matrices (0.2 to 0.5 grams of sample are fused with 15 grams of a 1:1 Na2CO3 / Na2O2 mix in a Ni crucible. The fuseate is extracted with water and acidified with HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 75 amu	20 ppt	N/A	40Ar35Cl, 59Co16O, 36Ar38Ar1H,8Ar37Cl,Ar39K, 150Nd2+,150Sm2+
ICP-OES 189.042 nm	0.05/0.005 µg/mL	1	Cr
ICP-OES 193.696 nm	0.1/0.01 µg/mL	1	V, Ge
ICP-OES 228.812 nm	0.1/0.01 µg/mL	1	Cd, Pt, Ir, Co

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 10, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 10, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBA10
Lot Number:	R2-BA692576
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Barium
Starting Material:	Barium Nitrate
Starting Material Lot#:	1969
Starting Material Purity:	99.9982%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10018 ± 50 µg/mL** ICP Assay NIST SRM 3104a Lot Number: 140909
Assay Method #2	**10023 ± 31 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #3	**10023 ± 30 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000410	O	Eu	<	0.005200	O	Na		0.004610	M	Se	<	0.003700	O	Zn		0.000658
M	Al	<	0.003100	O	Fe		0.015707	M	Nb	<	0.000210	O	Si		0.005573	M	Zr	<	0.001300
M	As	<	0.001300	M	Ga	<	0.000210	M	Nd	<	0.000210	O	Sm	<	0.021000				
M	Au	<	0.001300	M	Gd	<	0.000210	M	Ni	<	0.000810	M	Sn	<	0.000410				
O	B	<	0.005200	M	Ge	<	0.002500	M	Os	<	0.000410	O	Sr		0.003850				
s	Ba	<		M	Hf	<	0.000810	O	P	<	0.026000	M	Ta	<	0.000410				
O	Be	<	0.000320	M	Hg	<	0.000210	M	Pb	<	0.002300	M	Tb	<	0.000210				
M	Bi	<	0.000210	M	Ho	<	0.000210	M	Pd	<	0.000210	M	Te	<	0.001900				
O	Ca		0.007093	M	In	<	0.000210	M	Pr	<	0.000210	M	Th	<	0.000210				
M	Cd	<	0.000210	M	Ir	<	0.000210	M	Pt	<	0.000210	M	Ti	<	0.002100				
M	Ce	<	0.001300	O	K		0.035467	M	Rb	<	0.002100	M	Tl	<	0.000210				
M	Co	<	0.000410	O	La	<	0.005200	M	Re	<	0.000210	M	Tm	<	0.000410				
M	Cr	<	0.001700	O	Li	<	0.000630	M	Rh	<	0.000210	M	U	<	0.000210				
M	Cs	<	0.003300	M	Lu	<	0.001700	M	Ru	<	0.000210	O	V	<	0.005200				
M	Cu	<	0.001300	O	Mg		0.000861	O	S		0.268539	M	W	<	0.000410				
M	Dy	<	0.000210	M	Mn	<	0.000410	M	Sb	<	0.001300	O	Y	<	0.005200				
M	Er	<	0.001300	M	Mo	<	0.000410	M	Sc	<	0.000410	M	Yb	<	0.001300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 137.33 +2 6 $Ba(H_2O)_6^{+2}$
Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, iodate, molybdate, sulfite and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1 -10,000 ppm solutions chemically stable for years in 1-3.5% HNO_3 / LDPE container.
Ba Containing Samples (Preparation and Solution) -Metal(is best dissolved in diluted HNO_3); Ores(Carbonate fusion in Pt0 followed by HCl dissolution. If sulfate is present dissolve the fuseate using HCl / tartaric acid to prevent $BaSO_4$ precipitate); Organic Matrices (dry ash and dissolve in dilute HCl.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 138 amu	1 ppt	N/A	122Sn16O, 122Te16O
ICP-OES 230.424 nm	0.004/0.0005 µg/mL	1	Mo, Ir, Co
ICP-OES 233.527 nm	0.004/0.0003 µg/mL	1	
ICP-OES 455.403 nm	0.002/0.0001 µg/mL	1	Zr, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 11, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 11, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 · 540.585.3030
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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGBE10
Lot Number:	R2-BE692992
Matrix:	6% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Beryllium
Starting Material:	Beryllium Acetate
Starting Material Lot#:	2281
Starting Material Purity:	99.9998%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10032 ± 41 µg/mL

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10042 ± 67 µg/mL**
ICP Assay NIST SRM 3105a Lot Number: 090514

Assay Method #2 **10025 ± 51 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001100	M	Eu	<	0.000270	O	Na		0.040962	M	Se	<	0.005000	M	Zn		0.013054
O	Al		0.016205	O	Fe		0.015754	M	Nb	<	0.000270	O	Si		0.024307	O	Zr	<	0.001900
M	As	<	0.002900	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270				
M	Au	<	0.000520	M	Gd	<	0.000270	M	Ni	<	0.003700	M	Sn	<	0.000790				
M	B	<	0.091000	M	Ge	<	0.000270	M	Os	<	0.000260	M	Sr		0.000630				
M	Ba		0.002700	M	Hf	<	0.000270	O	P	<	0.066000	M	Ta	<	0.000270				
s	Be	<		M	Hg	<	0.000520	M	Pb	<	0.000270	M	Tb	<	0.000270				
M	Bi	<	0.000530	M	Ho	<	0.000270	M	Pd	<	0.000520	M	Te	<	0.003700				
O	Ca		0.072022	M	In	<	0.000790	M	Pr	<	0.000270	M	Th	<	0.000270				
M	Cd	<	0.000790	M	Ir	<	0.000260	M	Pt	<	0.000270	O	Ti	<	0.000400				
M	Ce	<	0.000270	O	K		0.045014	M	Rb	<	0.000270	M	Tl	<	0.000790				
O	Co	<	0.003200	M	La	<	0.000270	M	Re	<	0.000270	M	Tm	<	0.000270				
O	Cr	<	0.001800	O	Li	<	0.000660	M	Rh	<	0.001100	M	U	<	0.000270				
M	Cs		0.001440	M	Lu	<	0.000270	M	Ru	<	0.000260	M	V	<	0.000790				
M	Cu	<	0.002100	O	Mg		0.016205	i	S	<		M	W	<	0.000530				
M	Dy	<	0.000270	M	Mn		0.001215	M	Sb	<	0.000270	M	Y	<	0.000270				
M	Er	<	0.000270	M	Mo	<	0.000530	O	Sc	<	0.000930	M	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 9.01 +2 4 $Be(H_2O)_4^{+2}$

Chemical Compatibility -Soluble in HCl, HNO_3, H_2SO_4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1 % HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 5-10 % HNO_3 / LDPE container.

Be Containing Samples (Preparation and Solution) - Meta l(is best dissolved in diluted H_2SO_4); BeO (boiling nitric, hydrochloric, or sulfuric acids or KHSO4 fusion); Ores (H_2SO_4/HF digestion or carbonate fusion in Pt0); Organic Matrices (sulfuric/peroxide digestion or nitric/sulfuric/perchloric acid decomposition, or dry ash and dissolution according to the BeO procedure above).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 9 amu	4 ppt	N/A	
ICP-OES 234.861 nm	0.0003/0.00016 µg/mL	1	Fe, Ta, Mo
ICP-OES 313.042 nm	0.0003/0.00009 µg/mL	1	V, Ce, U
ICP-OES 313.107 nm	0.0007/0.0005 µg/mL	1	Ce, Th, Tm

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION, PERIOD OF VALIDITY AND REVISION HISTORY

11.1 Certification Issue Date

May 13, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 13, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

11.4 Revision Status

- Revision 1 - Revised on Thursday, Jan 14, 2021 by utruong. Revision was made for the following reason: Modified Section 7 Chemical Form in Solution.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

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fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCO10
Lot Number:	R2-CO695285
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Cobalt
Starting Material:	Co Metal
Starting Material Lot#:	2326
Starting Material Purity:	99.9934%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10012 ± 31 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10031 ± 67 µg/mL**
ICP Assay NIST SRM 3113 Lot Number: 190630

Assay Method #2 **10019 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10000 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	0.014660	M	Eu	<	0.000590	O	Na	0.007534	M	Se	<	0.019000	M	Zn	0.003461	
M	Al	< 0.024000	M	Fe	0.050905	M	Nb	<	0.000590	O	Si	0.075340	M	Zr	<	0.001200	
i	As	<	M	Ga	<	0.000590	M	Nd	<	0.000590	M	Sm	<	0.000590			
M	Au	< 0.004100	M	Gd	<	0.000590	O	Ni	0.427608	M	Sn	<	0.001200				
M	B	< 0.031000	M	Ge	<	0.003000	M	Os	<	0.000590	O	Sr	<	0.000260			
M	Ba	< 0.000590	M	Hf	<	0.000590	n	P	<		M	Ta	<	0.001200			
O	Be	< 0.001300	M	Hg	<	0.001800	M	Pb	0.003257	M	Tb	<	0.000590				
M	Bi	< 0.003000	M	Ho	<	0.000590	M	Pd	<	0.000590	M	Te	<	0.005300			
O	Ca	0.010588	M	In	<	0.001200	M	Pr	<	0.000590	M	Th	<	0.000590			
M	Cd	< 0.004700	M	Ir	<	0.001200	M	Pt	<	0.002400	M	Ti	<	0.014000			
M	Ce	< 0.000590	O	K	0.008144	M	Rb	<	0.000590	M	Tl	0.002647					
s	Co	<	M	La	<	0.000590	M	Re	<	0.000590	M	Tm	<	0.000590			
M	Cr	< 0.021000	O	Li	<	0.000130	M	Rh	<	0.000590	M	U	<	0.000590			
M	Cs	< 0.002400	M	Lu	<	0.000590	M	Ru	<	0.007100	O	V	<	0.000880			
M	Cu	0.189369	O	Mg	0.001893	n	S	<		M	W	<	0.000590				
M	Dy	< 0.000590	M	Mn	<	0.001800	M	Sb	<	0.003600	M	Y	<	0.000590			
M	Er	< 0.000590	M	Mo	<	0.002400	O	Sc	<	0.001600	M	Yb	<	0.000590			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.93 +2 6 $Co(H_2O)_6^{2+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4 ,HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Co Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxides (Soluble in HCl); Ores (dissolve in HCl / HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 59 amu	2 ppt	n/a	42Ca16O1H , 40Ar18O1H , 36Ar23Na, 43Ca16O, 24Mg35Cl
ICP-OES 228.616 nm	0.01/0.001 µg/mL	1	
ICP-OES 237.862 nm	0.01/0.002 µg/mL	1	W, Re, Al, Ta
ICP-OES 238.892 nm	0.01/0.002 µg/mL	1	Fe, W, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 04, 2020

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 04, 2024**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAG10
Lot Number:	S2-AG712977
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Silver
Starting Material:	Ag Shot
Starting Material Lot#:	2289
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10051 ± 30 µg/mL

Density: 1.056 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10051 ± 52 µg/mL** ICP Assay NIST SRM 3151 Lot Number: 160729
Assay Method #2	**10051 ± 19 µg/mL** Volhard NIST SRM 999c Lot Number: 999c
Assay Method #3	**10049 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Ag	<		M	Eu	<	0.000260	O	Na		0.003811	M	Se	<	0.003900	O	Zn		0.048146
M	Al		0.002688	O	Fe		0.006419	M	Nb	<	0.000260	O	Si		0.005215	M	Zr	<	0.000260
M	As	<	0.001100	M	Ga	<	0.000260	M	Nd	<	0.000260	M	Sm	<	0.000260				
M	Au	<	0.000260	M	Gd	<	0.000260	O	Ni		0.001765	M	Sn		0.020060				
O	B	<	0.004300	M	Ge	<	0.002300	M	Os	<	0.001100	O	Sr	<	0.000110				
M	Ba	<	0.000520	M	Hf	<	0.000260	O	P	<	0.017000	M	Ta	<	0.000260				
O	Be	<	0.001100	M	Hg	<	0.000770	M	Pb	<	0.003600	M	Tb	<	0.000260				
M	Bi		0.004814	M	Ho	<	0.000260	M	Pd		0.044134	M	Te	<	0.009000				
O	Ca		0.005215	M	In		0.003691	M	Pr	<	0.000260	M	Th	<	0.000260				
M	Cd	<	0.000260	M	Ir	<	0.000520	M	Pt	<	0.001100	O	Ti	<	0.000440				
M	Ce	<	0.002100	O	K	<	0.008700	M	Rb	<	0.001100	M	Tl	<	0.004100				
O	Co	<	0.000330	M	La	<	0.000260	M	Re	<	0.000260	M	Tm	<	0.000260				
O	Cr	<	0.002500	O	Li	<	0.000110	M	Rh	<	0.000520	M	U	<	0.000260				
M	Cs	<	0.002600	M	Lu	<	0.000260	M	Ru	<	0.000260	M	V	<	0.000260				
O	Cu		0.357085	O	Mg		0.001203	O	S	<	0.017000	M	W	<	0.000260				
M	Dy	<	0.000260	O	Mn	<	0.000220	M	Sb	<	0.014000	M	Y	<	0.000260				
M	Er	<	0.000260	M	Mo	<	0.000260	O	Sc	<	0.000220	M	Yb	<	0.000260				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 107.87 +1 6 $Ag(H_2O)_6^+$

Chemical Compatibility -Stable in HNO_3, and HF. Avoid basic media. Ag forms more insoluble salts than any other metal. It also is subject to photochemical reduction to the metal in HCl media although 10 µg/mL solutions in 10% HCl [$AgCl_{x1-x}$] are commonly used in the analytical laboratory. The most common solubility problems exist with arsenate, arsenite , bromide, chloride, iodide, carbonate , chromate, cyanide, iodate, oxalate, oxide, sulfate, sulfide, tartrate, and thiocyanate in aqueous media. The addition of nitric acid renders many of these salts soluble.

Stability - 2-100 ppb levels stable for 75+ days when mixed with equivalent levels of all other elements including the precious metals (where chloride is present) when in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Ag Containing Samples (Preparation and Solution) -Metal (Soluble in HNO_3); Oxides (Soluble in HNO_3); Ores (Digestion with conc. HNO_3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 107 amu	1 ppt	N/A	91Zr16O
ICP-OES 243.779 nm	0.12/0.01 µg/mL	1	Mn, Th, Ni, Rh
ICP-OES 328.068 nm	0.007/0.0007 µg/mL	1	Ce, Rh, V
ICP-OES 338.289 nm	0.013/0.001 µg/mL	1	Ce, Cr, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Technical

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Refine your results. Redefine your industry.

Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCR(3)10
Lot Number:	S2-CR709784
Matrix:	10% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Chromium
Starting Material:	Cr Metal
Starting Material Lot#:	2328
Starting Material Purity:	99.9951%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10027 ± 41 µg/mL

Density: 1.072 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10027 ± 40 µg/mL**
ICP Assay NIST SRM 3112a Lot Number: 170630

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001700	M	Eu	<	0.003400	O	Na		0.090372	M	Se	<	0.012000	O	Zn	<	0.006100
M	Al		0.034916	O	Fe		0.246471	M	Nb	<	0.017000	n	Si	<		M	Zr	<	0.007800
M	As	<	0.028000	O	Ga	<	0.013000	M	Nd	<	0.013000	M	Sm	<	0.006900				
M	Au	<	0.001700	M	Gd	<	0.000560	M	Ni		0.016020	M	Sn		0.006983				
O	B	<	0.025000	O	Ge	<	0.014000	M	Os	<	0.000560	M	Sr		0.006367				
M	Ba	<	0.008900	M	Hf	<	0.000560	i	P	<		M	Ta	<	0.000560				
M	Be	<	0.013000	M	Hg	<	0.001700	M	Pb		0.010064	M	Tb	<	0.000560				
M	Bi	<	0.002300	M	Ho	<	0.000560	M	Pd	<	0.021000	M	Te	<	0.010000				
O	Ca		0.075995	M	In	<	0.000560	M	Pr	<	0.001700	M	Th	<	0.000560				
M	Cd	<	0.000560	M	Ir	<	0.000560	M	Pt	<	0.001200	O	Ti		0.013555				
M	Ce	<	0.001200	O	K		0.043132	i	Rb	<		M	Tl	<	0.000560				
M	Co	<	0.002600	M	La	<	0.001200	M	Re	<	0.001200	O	Tm	<	0.013000				
s	Cr	<		O	Li		0.000390	M	Rh	<	0.095000	M	U	<	0.000560				
M	Cs	<	0.007800	M	Lu	<	0.000560	M	Ru	<	0.087000	O	V		0.014993				
O	Cu		0.007599	O	Mg		0.000883	i	S	<		M	W	<	0.049000				
M	Dy	<	0.000560	M	Mn		0.008626	M	Sb	<	0.003400	M	Y	<	0.001700				
M	Er	<	0.019000	M	Mo	<	0.032000	M	Sc		0.003080	M	Yb	<	0.000560				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 52.00 +3 6 $Cr(H_2O)_6^{3+}$

Chemical Compatibility -Stable in HCl, HNO_3, H_2SO_4, HF, H_3PO_4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO_3 / LDPE container.

Cr3 Containing Samples (Preparation and Solution) -Metal (soluble in HCl); Oxides/Ores (Chrome ore/oxides are very difficult to dissolve. The following procedures [A-D] are commonly used: A. Fusion with $KHSO_4$ and extraction with hot KCl. The residue fused with Na_2CO_3 and $KClO_3$, 3:1. B. Fusion with $NaKSO_4$ and NaF 2:1, C. Fusion with magnesia or lime and sodium or potassium carbonates, 4:1. D. Fusion with Na_2O_2 or NaOH and KNO_3 or NaOH and Na_2O_2. Nickel, iron, copper, or silver crucibles should be used for D. Platinum may be used for A, <, C); Organic Matrices (ash at 4500C followed by one of the fusion methods above or sulfuric/hydrogen peroxide acid digestions may be applicable to non oxide containing samples).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 52 amu	40 ppt	N/A	36S16O, 36Ar16O - The 50Cr, 53Cr, 54Cr lines suffer from many more potential interferences from sulfur, chlorine and argon compounds of oxygen, nitrogen and carbon.
ICP-OES 205.552 nm	0.006/0.0008 µg/mL	1	Os
ICP-OES 276.654 nm	0.01/0.001 µg/mL	1	Cu, Ta, V
ICP-OES 284.325 nm	0.008/0.0007 µg/mL	1	

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 26, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **October 26, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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300 Technology Drive
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CERTIFICATE OF ANALYSIS

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNI10
Lot Number:	P2-NI686384
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Nickel
Starting Material:	Ni Metal
Starting Material Lot#:	2277 and 2282
Starting Material Purity:	99.9992%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9979 ± 30 µg/mL

Density: 1.038 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9971 ± 54 µg/mL**
ICP Assay NIST SRM 3136 Lot Number: 120619

Assay Method #2 **9970 ± 32 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **9993 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag		0.002606	M	Eu	<	0.001100	O	Na		0.004965	O	Se	<	0.067000	M	Zn		0.006578
M	Al	<	0.013000	O	Fe		0.018618	M	Nb	<	0.001100	O	Si		0.010923	M	Zr	<	0.001100
O	As	<	0.067000	M	Ga	<	0.001100	M	Nd	<	0.001100	M	Sm	<	0.001100				
M	Au	<	0.002100	M	Gd	<	0.001100	s	Ni	<		M	Sn	<	0.016000				
M	B	<	0.017000	M	Ge	<	0.004200	M	Os		0.002110	O	Sr	<	0.000940				
M	Ba	<	0.001100	M	Hf	<	0.001100	i	P	<		M	Ta	<	0.001100				
O	Be	<	0.000410	M	Hg		0.014895	M	Pb		0.006578	M	Tb	<	0.001100				
M	Bi	<	0.004200	M	Ho	<	0.001100	M	Pd	<	0.001100	M	Te	<	0.015000				
O	Ca		0.003351	M	In	<	0.001100	M	Pr	<	0.001100	M	Th	<	0.001100				
M	Cd		0.001365	M	Ir		0.004716	M	Pt	<	0.001100	M	Ti	<	0.004200				
M	Ce	<	0.001100	O	K		0.004716	M	Rb	<	0.001100	M	Tl	<	0.001100				
O	Co		0.017377	M	La	<	0.001100	M	Re		0.001737	M	Tm	<	0.001100				
O	Cr	<	0.006700	O	Li	<	0.000140	M	Rh	<	0.006300	M	U	<	0.001100				
M	Cs	<	0.007300	M	Lu	<	0.001100	M	Ru	<	0.019000	M	V	<	0.002100				
M	Cu		0.004096	O	Mg		0.000372	i	S	<		M	W	<	0.006300				
M	Dy	<	0.001100	O	Mn	<	0.001900	M	Sb		0.005833	O	Y	<	0.000540				
M	Er	<	0.001100	M	Mo	<	0.008400	M	Sc	<	0.002100	M	Yb	<	0.001100				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 58.69 +2 6 Ni(H2O)62+

Chemical Compatibility -Stable in HCl, HNO3, H2SO4 ,HF, H3PO4. Avoid basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Ni Containing Samples (Preparation and Solution) -Metal (Soluble in HNO3); Oxides (Soluble in HCl); Ores (Dissolve in HCl / HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 60 amu	100 ppt	n/a	43Ca16O1H , 44Ca16O, 23Na37Cl
ICP-OES 221.647 nm	0.01 / 0.0009 µg/mL	1	Si
ICP-OES 231.604 nm	0.02 / 0.002 µg/mL	1	Sb, Ta, Co
ICP-OES 232.003 nm	0.02 / 0.006 µg/mL	1	Cr, Re, Os, Nb, Ag, Pt, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 02, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 02, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Manager, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGV10
Lot Number:	S2-V711005
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Vanadium
Starting Material:	Vanadium Pentoxide
Starting Material Lot#:	1782
Starting Material Purity:	99.9877%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10014 ± 30 µg/mL

Density: 1.104 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10017 ± 42 µg/mL**
ICP Assay NIST SRM 3165 Lot Number: 160906

Assay Method #2 **10013 ± 30 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000110	M	Eu	<	0.000110	O	Na		0.120000	M	Se	<	0.009400	M	Zn	0.009400
O	Al		0.120000	O	Fe		0.460000	M	Nb	<	0.001300	O	Si		0.270000	M	Zr	< 0.002900
M	As	<	0.000210	M	Ga	<	0.009300	M	Nd	<	0.000610	M	Sm	<	0.000110			
M	Au	<	0.004700	M	Gd	<	0.000110	M	Ni		0.012000	M	Sn		0.003900			
M	B		0.051000	M	Ge	<	0.000410	M	Os	<	0.000110	O	Sr		0.007100			
M	Ba		0.003600	M	Hf	<	0.000110	O	P	<	0.034000	M	Ta	<	0.000110			
O	Be	<	0.000560	M	Hg	<	0.000410	M	Pb		0.001400	M	Tb	<	0.000110			
M	Bi	<	0.000210	M	Ho	<	0.000110	M	Pd	<	0.000410	M	Te	<	0.000110			
O	Ca		0.730000	M	In	<	0.000110	M	Pr	<	0.000110	M	Th	<	0.000210			
M	Cd	<	0.000610	M	Ir	<	0.000110	M	Pt	<	0.000110	M	Ti		0.017000			
M	Ce	<	0.000610	M	K		0.052000	M	Rb	<	0.000310	M	Tl	<	0.000110			
M	Co	<	0.001300	M	La	<	0.000410	M	Re		0.001700	M	Tm	<	0.000110			
O	Cr		0.170000	M	Li	<	0.000810	M	Rh	<	0.000110	M	U	<	0.000410			
M	Cs		0.005600	M	Lu	<	0.000110	M	Ru	<	0.000110	s	V	<				
M	Cu	<	0.001300	M	Mg		0.053000	i	S	<		M	W		0.002000			
M	Dy	<	0.000110	M	Mn		0.007900	M	Sb		0.078000	M	Y	<	0.000110			
M	Er	<	0.000110	M	Mo		0.094000	M	Sc	<	0.000410	M	Yb	<	0.000110			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 50.94 +5 6 H2V10O284-

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4, HF, H3PO4 and strong basic media. Stable with most metals and inorganic anions in acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

V Containing Samples (Preparation and Solution) -Metal (Fusion with NaOH or KOH in Ni0 or Na2CO3 / KNO3); Oxides (V2O3 - use HCl, V2O4 - use HCl or HNO3, V2O5 - use concentrated acids); Ores (Na2CO3 / KNO3 in Pt0 caution - nitrates attack Pto followed by water extraction of fuseate); Organic Matrices (Ash at 450 EC followed by dissolving according to V2O5 above) .

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 51 amu	4 ppt	N/A	34S16O1H, 35Cl16O, 38Ar13C, 36Ar15N, 36Ar14N1H, 37Cl14N,36S15N, 33S18O, 34S17O, 102Ru+2,02Pd+2
ICP-OES 290.882 nm	0.008 / 0.0008 µg/mL	1	Hf, Nb
ICP-OES 292.402 nm	0.006 / 0.001 µg/mL	1	Th
ICP-OES 309.311 nm	0.005 / 0.001 µg/mL	1	Mg, U, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

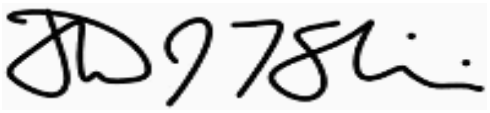
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGAL10
Lot Number:	T2-AL716102
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Aluminum
Starting Material:	Aluminum Nitrate Nonahydrate
Starting Material Lot#:	2460
Starting Material Purity:	99.9938%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10049 ± 31 µg/mL

Density: 1.087 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10059 ± 40 µg/mL**
ICP Assay NIST SRM 3101a Lot Number: 140903

Assay Method #2 **10044 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10049 ± 35 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.002100	M	Eu	<	0.002100	O	Na		0.352819	M	Se	<	0.005200	M	Zn	0.006018
s	Al	<		O	Fe		0.074714	M	Nb	<	0.000520	O	Si		0.017848	O	Zr	0.004358
M	As		0.008716	O	Ga		0.112072	M	Nd	<	0.000520	M	Sm	<	0.000520			
M	Au	<	0.008400	M	Gd	<	0.001100	O	Ni	<	0.006000	M	Sn		0.000747			
O	B	<	0.014000	M	Ge	<	0.005200	M	Os	<	0.000650	O	Sr		0.000518			
O	Ba		0.012867	M	Hf	<	0.004100	n	P	<		M	Ta	<	0.000520			
O	Be	<	0.000270	M	Hg	<	0.002000	M	Pb		0.002282	M	Tb	<	0.000520			
M	Bi		0.001930	M	Ho	<	0.000520	M	Pd	<	0.000520	M	Te	<	0.001100			
O	Ca		0.076790	M	In	<	0.002100	M	Pr	<	0.000520	M	Th	<	0.000520			
M	Cd	<	0.000520	M	Ir	<	0.000650	M	Pt	<	0.000520	O	Ti		0.001930			
M	Ce	<	0.001100	O	K		0.043583	M	Rb	<	0.000520	M	Tl	<	0.000520			
O	Co	<	0.005400	M	La	<	0.002100	M	Re	<	0.000520	M	Tm	<	0.000520			
O	Cr		0.006018	O	Li		0.000112	M	Rh	<	0.000520	M	U	<	0.000520			
M	Cs		0.000643	M	Lu	<	0.000520	M	Ru	<	0.002000	M	V		0.001286			
O	Cu	<	0.008300	O	Mg		0.068488	i	S	<		M	W	<	0.009800			
M	Dy	<	0.002100	O	Mn		0.000913	M	Sb	<	0.003100	M	Y	<	0.001100			
M	Er	<	0.000520	M	Mo		0.005396	O	Sc	<	0.000950	M	Yb	<	0.000520			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 26.98 +3 6 Al(H2O)6+3
Chemical Compatibility -Soluble in HCl, HNO3, v F and v 2SO4. Avoid neutral media. Soluble in strongly basic NaOH forming the Al(OH)4(H2O)21- species. Stable with most metals and inorganic anions. The phosphate is insoluble in water and only slightly soluble in acid.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.
Al Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); a- Al2O3 (Na2CO3 fusion in Pt0);
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 27 amu	30 ppt	N/A	12C15N, 13C14N, 1H12C14N, 11B16O, 54Cr2+, 54Fe2+
ICP-OES 167.078 nm	0.1/0.009 µg/mL	1	Fe
ICP-OES 394.401 nm	0.05/0.006 µg/mL	1	U, Ce
ICP-OES 396.152 nm	0.03/0.006 µg/mL	1	Mo, Zr, Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 22, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

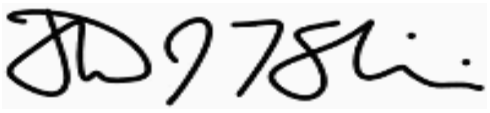
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGK10
Lot Number:	S2-K711973
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Potassium
Starting Material:	KNO3
Starting Material Lot#:	2313
Starting Material Purity:	99.9971%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9992 ± 30 µg/mL

Density: 1.024 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**9987 ± 24 µg/mL** Gravimetric NIST SRM Lot Number: See Sec. 4.2
Assay Method #2	**10004 ± 84 µg/mL** ICP Assay NIST SRM 3141a Lot Number: 140813
Assay Method #3	**10007 ± 45 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001400	M	Eu	<	0.000660	O	Na		0.246220	M	Se	<	0.007900	O	Zn		0.018056
O	Al		0.001592	O	Fe		0.005909	M	Nb	<	0.000660	O	Si		0.011490	O	Zr	<	0.001600
M	As	<	0.005300	M	Ga	<	0.000660	M	Nd	<	0.000660	M	Sm	<	0.000660				
M	Au	<	0.002000	M	Gd	<	0.000660	O	Ni	<	0.004900	M	Sn	<	0.000660				
O	B	<	0.005600	M	Ge	<	0.002000	M	Os	<	0.003300	O	Sr		0.000055				
O	Ba	<	0.000860	M	Hf	<	0.000660	O	P	<	0.032000	M	Ta	<	0.000660				
O	Be	<	0.000082	M	Hg	<	0.002000	M	Pb	<	0.002300	M	Tb	<	0.000660				
M	Bi	<	0.006600	M	Ho	<	0.000660	M	Pd	<	0.000660	M	Te	<	0.017000				
O	Ca		0.031187	M	In	<	0.000660	M	Pr	<	0.000660	M	Th	<	0.000660				
O	Cd	<	0.000450	M	Ir	<	0.000660	M	Pt	<	0.002700	M	Ti	<	0.000660				
M	Ce	<	0.000660	s	K	<		M	Rb		0.476026	M	Tl	<	0.000660				
O	Co	<	0.000780	M	La	<	0.000660	M	Re	<	0.000660	M	Tm	<	0.000660				
O	Cr		0.000541	O	Li	<	0.000084	M	Rh	<	0.000660	M	U	<	0.000660				
M	Cs	<	0.000660	M	Lu	<	0.000660	M	Ru	<	0.000660	O	V	<	0.001100				
M	Cu	<	0.002700	O	Mg		0.006237	O	S		0.027905	M	W	<	0.000660				
M	Dy	<	0.000660	O	Mn		0.000476	M	Sb	<	0.000660	M	Y	<	0.000660				
M	Er	<	0.000660	M	Mo	<	0.000660	O	Sc	<	0.000340	O	Yb	<	0.000270				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 39.10 +1 (6) K+(aq)
Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Avoid use of HClO4 due to insolubility of the perchlorate. Stable with all metals and inorganic anions except ClO4-.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.
K Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Sodium carbonate fusion in Pt0 followed by HCl dissolution-blank levels of K in sodium carbonate critical); Organic Matrices (Sulfuric/peroxide digestion)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 39 amu	10 ppt	n/a	38ArH, 23Na16O, 78Se
ICP-OES 404.721 nm	1.1 / 0.05 µg/mL	1	U, Ce
ICP-OES 766.490 nm	0.4 / 0.001 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 771.531 nm	1.0 / 0.03 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 10, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 10, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

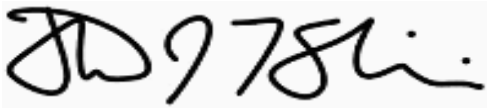
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMG10
Lot Number:	S2-MG704239
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Magnesium
Starting Material:	Magnesium Metal
Starting Material Lot#:	2168
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10053 ± 30 µg/mL

Density: 1.053 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **10022 ± 62 µg/mL**
ICP Assay NIST SRM 3131a Lot Number: 140110

Assay Method #2 **10078 ± 26 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **10033 ± 26 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.002106	M	Eu	<	0.000910	O	Na		0.071075	O	Se	<	0.048000	O	Zn		0.003299
M	Al		0.003553	M	Fe		0.002538	M	Nb	<	0.000460	O	Si	<	0.032000	O	Zr	<	0.002700
M	As	<	0.001400	M	Ga	<	0.000460	M	Nd	<	0.000910	M	Sm	<	0.000460				
M	Au	<	0.001400	M	Gd	<	0.000460	O	Ni	<	0.001600	M	Sn	<	0.002300				
O	B		0.006853	M	Ge	<	0.001400	M	Os	<	0.000460	O	Sr		0.000279				
O	Ba		0.000964	M	Hf	<	0.000460	O	P		0.015230	M	Ta	<	0.000460				
O	Be	<	0.000120	M	Hg	<	0.000460	M	Pb	<	0.000460	M	Tb	<	0.000460				
M	Bi	<	0.000460	M	Ho	<	0.000460	M	Pd	<	0.003200	M	Te	<	0.007300				
O	Ca		0.053306	M	In	<	0.000460	M	Pr	<	0.000460	M	Th	<	0.000460				
O	Cd	<	0.000360	M	Ir	<	0.000460	M	Pt	<	0.001900	O	Ti	<	0.001700				
M	Ce	<	0.002300	M	K		0.048229	M	Rb		0.002411	M	Tl		0.003046				
M	Co	<	0.000910	M	La	<	0.002800	M	Re	<	0.000460	M	Tm	<	0.000460				
M	Cr	<	0.002300	O	Li		0.027922	M	Rh	<	0.000460	M	U	<	0.000460				
M	Cs		0.001040	M	Lu	<	0.000460	M	Ru	<	0.000460	M	V	<	0.000460				
O	Cu	<	0.003000	s	Mg	<		O	S	<	0.190000	M	W	<	0.000460				
M	Dy	<	0.000460	O	Mn		0.015230	M	Sb		0.020814	O	Y	<	0.000720				
M	Er	<	0.000460	M	Mo	<	0.000910	O	Sc	<	0.000480	M	Yb	<	0.000460				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 24.31 +2 6 Mg(H2O)6+2

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4 avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicates, carbonates, hydroxides, oxides, and tungstates in neutral and slightly acidic media.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.

Mg Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO3); Oxide (Readily soluble in above compatible aqueous acidic solutions); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric / peroxide digestion or nitric / sulfuric / perchloric acid decomposition, or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 24 amu	42 ppt	n/a	7Li17O, 48Ti+2 , 48Ca+2
ICP-OES 279.553 nm	0.0002 / 0.00003 µg/mL	1	Th
ICP-OES 280.270 nm	0.0003 / 0.00005 µg/mL	1	U, V
ICP-OES 285.213 nm	0.002 / 0.00003 µg/mL	1	U, Hf, Cr, Zr

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 23, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 23, 2025**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGCA10
Lot Number:	T2-CA716103
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Calcium
Starting Material:	CaCO3
Starting Material Lot#:	2472
Starting Material Purity:	99.9950%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10005 ± 30 µg/mL

Density: 1.039 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1	**10005 ± 45 µg/mL** ICP Assay NIST SRM 3109a Lot Number: 130213
Assay Method #2	**10005 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10005 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001200	M	Eu	<	0.001200	O	Na		0.006112	M	Se	<	0.024000	M	Zn	0.005362
M	Al		0.065419	O	Fe		0.009115	M	Nb	<	0.001200	O	Si		0.139417	O	Zr	< 0.006700
O	As	<	0.013000	M	Ga	<	0.015000	M	Nd	<	0.020000	M	Sm	<	0.001200			
M	Au	<	0.017000	M	Gd	<	0.004800	O	Ni		0.000793	M	Sn	<	0.003600			
O	B		0.001179	M	Ge	<	0.003600	M	Os	<	0.001200	M	Sr		0.081505			
O	Ba		0.002788	M	Hf	<	0.001200	O	P	<	0.041000	M	Ta	<	0.001200			
O	Be	<	0.000410	M	Hg	<	0.004800	M	Pb		0.001608	M	Tb	<	0.001200			
M	Bi		0.001608	M	Ho	<	0.001200	M	Pd	<	0.001200	M	Te	<	0.003600			
s	Ca	<		M	In	<	0.001200	M	Pr		0.000257	M	Th	<	0.001200			
O	Cd	<	0.001300	M	Ir	<	0.001200	M	Pt	<	0.003600	O	Ti	<	0.001900			
M	Ce		0.001029	O	K		0.009759	M	Rb	<	0.001200	M	Tl	<	0.001200			
O	Co		0.000418	M	La		0.001823	M	Re	<	0.001200	M	Tm	<	0.001200			
O	Cr		0.003324	O	Li	<	0.007300	M	Rh	<	0.001200	M	U		0.002144			
M	Cs		0.007399	M	Lu		0.000128	M	Ru	<	0.001200	M	V		0.001286			
O	Cu	<	0.011000	M	Mg		1.286934	O	S		0.055767	O	W	<	0.024000			
M	Dy	<	0.002400	O	Mn		0.004611	M	Sb	<	0.009600	O	Y		0.000536			
M	Er	<	0.002400	M	Mo		0.003539	O	Sc	<	0.001400	M	Yb	<	0.001200			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 40.08 +2 6 Ca(H2O)6+2
Chemical Compatibility - Soluble in HCl and HNO3. Avoid H2SO4, vF, v3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate, and tungstate in neutral aqueous media.
Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-10% HNO3 / LDPE container.
Ca Containing Samples)Preparation and Solution) -Metal (best dissolved in diluted HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (dry ash and dissolution in dilute HCl. Do not heat when dissolving to avoid precipitation of SiO2). The oxide, hydroxide, carbonate, phosphate, and fluoride of calcium are soluble in % levels of HCl or HNO3. The sulfates (gypsum, anhydrite, etc.), certain silicates, and complex compounds require fusion with Na2CO3 followed by HCl / water dissolution. Note that contamination is a very real problem when analyzing for trace levels.
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 44 amu	1200 ppt	n/a	16O212C, 28Si16O, 88Sr
ICP-OES 393.366 nm	0.0002 / 0.00004 µg/mL	1	U, Ce
ICP-OES 396.847 nm	0.0005 / 0.00006 µg/mL	1	Th
ICP-OES 422.673 nm	0.01 / 0.001 µg/mL	1	Ge

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 14, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 14, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

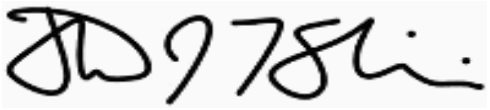
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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F: 540-585-3012
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGNA10
Lot Number:	T2-NA717221
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Sodium
Starting Material:	Na2CO3
Starting Material Lot#:	2358 and 2453
Starting Material Purity:	99.9977%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 9977 ± 30 µg/mL

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **9974 ± 18 µg/mL**
Gravimetric NIST SRM Lot Number: See Sec. 4.2

Assay Method #2 **9977 ± 34 µg/mL**
ICP Assay NIST SRM 3152a Lot Number: 200413

Assay Method #3 **9987 ± 31 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000930	M	Eu	<	0.000930	s	Na	<		M	Se	<	0.003800	O	Zn		0.000138
M	Al		0.004409	O	Fe		0.002393	M	Nb	<	0.000930	O	Si		0.056696	O	Zr	<	0.003200
O	As	<	0.023000	M	Ga	<	0.000930	M	Nd	<	0.000930	M	Sm	<	0.000930				
O	Au	<	0.004100	M	Gd	<	0.000930	O	Ni	<	0.003000	M	Sn	<	0.002800				
O	B		0.001385	M	Ge	<	0.004700	M	Os	<	0.000930	O	Sr		0.000251				
M	Ba		0.004031	M	Hf	<	0.000930	O	P		0.010205	M	Ta	<	0.000930				
O	Be	<	0.000130	M	Hg	<	0.000930	M	Pb	<	0.000930	M	Tb	<	0.000930				
M	Bi	<	0.000930	M	Ho	<	0.000930	M	Pd	<	0.000930	M	Te	<	0.001900				
O	Ca		0.176388	M	In	<	0.000930	M	Pr	<	0.000930	M	Th		0.000352				
O	Cd	<	0.000860	M	Ir	<	0.000930	M	Pt	<	0.000930	O	Ti		0.000592				
M	Ce	<	0.001900	O	K		0.302380	M	Rb	<	0.000930	M	Tl	<	0.000930				
O	Co	<	0.001800	O	La	<	0.002100	M	Re	<	0.000930	M	Tm	<	0.000930				
M	Cr	<	0.002800	O	Li		0.000031	M	Rh	<	0.000930	M	U	<	0.000930				
M	Cs	<	0.000930	M	Lu	<	0.000930	M	Ru	<	0.001900	O	V	<	0.001600				
O	Cu	<	0.003900	O	Mg		0.026458	O	S		0.040317	O	W	<	0.028000				
M	Dy	<	0.000930	O	Mn	<	0.000740	M	Sb	<	0.000930	O	Y	<	0.000860				
M	Er	<	0.000930	O	Mo	<	0.003600	O	Sc	<	0.000610	O	Yb	<	0.000250				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 22.99 +1 (6) Na+(aq) largely ionic in nature

Chemical Compatibility -Soluble in HCl, HNO3, H2SO4 and HF aqueous matrices. Stable with all metals and inorganic anions.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1-5% HNO3 / LDPE container.

Na Containing Samples (Preparation and Solution) - Metal (Dissolves very rapidly in water); Ores (Lithium carbonate fusion in graphite crucible followed by HCl dissolution - blank levels of Na in lithium carbonate critical); Organic Matrices (Sulfuric / peroxide digestion or nitric/sulfuric/perchloric acid decomposition).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 23 amu	310 ppt	n/a	46Ti+2 , 46Ca+2
ICP-OES 330.237 nm	2.0 / 0.09 µg/mL	1	Pd, Zn
ICP-OES 588.995 nm	0.03 / 0.006 µg/mL	1	2nd order radiation from R.E.s on some optical designs
ICP-OES 589.595 nm	0.07 / 0.00009 µg/mL	1	2nd order radiation from R.E.s on some optical designs

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 20, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **April 20, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

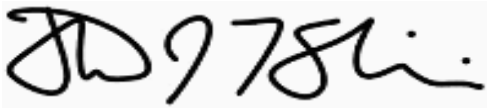
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGU1
Lot Number:	S2-U707914
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Uranium
Starting Material:	Uranyl Nitrate Hexahydrate
Starting Material Lot#:	P2-2322
Starting Material Purity:	99.9997%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 5 µg/mL

Density: 1.010 g/mL (measured at 20 ± 4 ºC)

Assay Information:

Assay Method #1 **998 ± 5 µg/mL**
ICP Assay NIST SRM 3164 Lot Number: 080521

Assay Method #2 **1001 ± 6 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000270	M	Eu	<	0.000270	M	Na	<	0.011000	M	Se	<	0.009300	M	Zn	0.002358
M	Al	<	0.011000	M	Fe		0.003222	M	Nb	<	0.000270	M	Si	<	0.160000	M	Zr	< 0.001100
M	As	<	0.002400	M	Ga	<	0.000270	M	Nd	<	0.000270	M	Sm	<	0.000270			
M	Au	<	0.000270	M	Gd	<	0.000270	M	Ni	<	0.020000	M	Sn	<	0.011000			
M	B	<	0.000270	M	Ge	<	0.000800	M	Os	<	0.001900	M	Sr	<	0.000270			
M	Ba	<	0.003800	M	Hf	<	0.000270	i	P	<		M	Ta	<	0.000270			
M	Be	<	0.000270	M	Hg	<	0.000540	M	Pb	<	0.002200	M	Tb	<	0.000270			
M	Bi	<	0.000270	M	Ho	<	0.000270	M	Pd	<	0.000540	M	Te	<	0.003800			
M	Ca	<	0.140000	M	In	<	0.000270	M	Pr	<	0.000270	M	Th		0.000129			
M	Cd	<	0.000270	M	Ir	<	0.000270	M	Pt	<	0.000270	M	Ti	<	0.002700			
M	Ce	<	0.000540	O	K	<	0.250000	M	Rb	<	0.000800	M	Tl	<	0.000270			
M	Co	<	0.000800	M	La		0.000117	M	Re	<	0.064000	M	Tm	<	0.000270			
M	Cr		0.000943	M	Li	<	0.003000	M	Rh	<	0.000270	s	U	<				
M	Cs		0.000106	M	Lu	<	0.000270	M	Ru	<	0.000540	M	V	<	0.000540			
M	Cu	<	0.001100	M	Mg	<	0.003000	i	S	<		M	W	<	0.000540			
M	Dy	<	0.000270	M	Mn	<	0.006900	M	Sb	<	0.000270	M	Y	<	0.000270			
M	Er	<	0.000270	M	Mo	<	0.006400	M	Sc	<	0.000540	M	Yb	<	0.000270			

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 238.03 +6 8 UO_2^{2+}(uranyl)
Chemical Compatibility - Soluble in HCl and HNO_3. Avoid H_3PO_4. H_2SO_4 and HF matrices should not be a problem depending upon [U]. Although the UO_2^{2+} ion is distinctly basic, any U^{+4} will precipitate in basic media. UO_2^{2+}salts are generally soluble in water and UO_2^{2+} is stable with most metals and inorganic anions. The uranyl phosphate is insoluble in water. UF_4 and UF_6 are water soluble.
Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO_3 / LDPE container.
U Containing Samples (Preparation and Solution) -Metal (Dissolves rapidly in HCl and HNO_3); Oxide (Soluble in HNO_3); Ores (Digest for 1-2 hours with 1 gram of ore to 30 mL 1:1 HNO_3. Silica insolubles are removed by filtration after bringing the sample to fumes with conc. H_2SO_4.)
Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 238 amu	2 ppt	N/A	206Pb16O2
ICP-OES 263.553 nm	0.3 / 0.01 µg/mL	1	Ce, Ir, Th, Rh, W, Zr, Ta, Ti, V, Hf, Fe, Re, Ru
ICP-OES 367.007 nm	0.3 / 0.02 µg/mL	1	Th, Ce
ICP-OES 385.958 nm	0.3 / 0.01 µg/mL	1	Th, Fe

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 28, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 28, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-2
Lot Number:	T2-MEB719895
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	2.5 µg/mL ea: Molybdenum, Antimony

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**2.499 ± 0.015 µg/mL**	**Molybdenum, Mo**	**2.500 ± 0.017 µg/mL**

Density: 1.014 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Sb	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

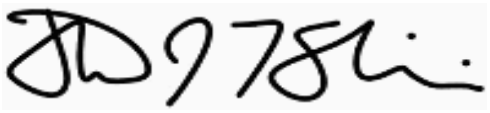
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-ICVMS-3
Lot Number:	T2-MEB719896
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

4 µg/mL ea:
Selenium,

2.5 µg/mL ea:

Thorium, Thallium,
Uranium, Vanadium,
Zinc, Manganese,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Barium,
Beryllium, Nickel,
Lead, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	250.0 ± 0.9 µg/mL	Arsenic, As	2.500 ± 0.018 µg/mL
Barium, Ba	2.501 ± 0.013 µg/mL	Beryllium, Be	2.501 ± 0.015 µg/mL
Cadmium, Cd	2.501 ± 0.013 µg/mL	Calcium, Ca	250.0 ± 1.3 µg/mL
Chromium, Cr	2.500 ± 0.015 µg/mL	Cobalt, Co	2.500 ± 0.014 µg/mL
Copper, Cu	2.500 ± 0.014 µg/mL	Iron, Fe	250.0 ± 1.0 µg/mL
Lead, Pb	2.500 ± 0.013 µg/mL	Magnesium, Mg	250.0 ± 1.3 µg/mL
Manganese, Mn	2.500 ± 0.014 µg/mL	Nickel, Ni	2.500 ± 0.014 µg/mL
Potassium, K	250.0 ± 1.2 µg/mL	Selenium, Se	4.002 ± 0.024 µg/mL
Silver, Ag	2.501 ± 0.017 µg/mL	Sodium, Na	250.0 ± 1.2 µg/mL
Thallium, Tl	2.500 ± 0.017 µg/mL	Thorium, Th	2.499 ± 0.013 µg/mL
Uranium, U	2.501 ± 0.015 µg/mL	Vanadium, V	2.500 ± 0.014 µg/mL
Zinc, Zn	2.500 ± 0.014 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Cu	Calculated		See Sec. 4.2
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Mn	Calculated		See Sec. 4.2
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Th	EDTA	928	928
Th	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2

V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928
Zn	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 06, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

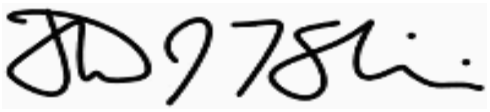
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	AR-6020ICS-0A10
Lot Number:	T2-MEB719898
Matrix:	1.4% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Chloride,
	200 µg/mL ea: Carbon,
	100 µg/mL ea: Calcium, Aluminum, Iron, Potassium, Magnesium, Sodium, Phosphorus, Sulfur,
	2 µg/mL ea: Titanium, Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**100.0 ± 0.4 µg/mL**	**Calcium, Ca**	**100.0 ± 0.5 µg/mL**
Carbon, C	**200.1 ± 0.5 µg/mL**	**Chloride, Cl**	**1 000 ± 5 µg/mL**
Iron, Fe	**100.0 ± 0.5 µg/mL**	**Magnesium, Mg**	**100.0 ± 0.5 µg/mL**
Molybdenum, Mo	**2.001 ± 0.014 µg/mL**	**Phosphorus, P**	**100.0 ± 0.6 µg/mL**
Potassium, K	**100.0 ± 0.5 µg/mL**	**Sodium, Na**	**100.0 ± 0.5 µg/mL**
Sulfur, S	**100.0 ± 0.5 µg/mL**	**Titanium, Ti**	**2.001 ± 0.015 µg/mL**

Density: 1.009 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
C	Acidimetric	84L	84L
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cl	Acidimetric	84L	84L
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mo	ICP Assay	3134	130418
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 07, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 07, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

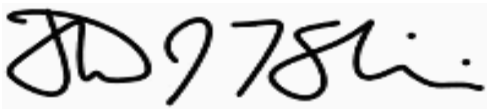
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1010

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-01 D	SDG:	23A0467
Sampled:	01/23/23 08:26	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-207
% Solids:	47.59	Preparation:	Plumb 1981	Analyzed:	01/26/23 05:24
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5694 g Wet / 0.5694 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.72	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1005

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-02 D	SDG:	23A0467
Sampled:	01/23/23 08:39	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-225
% Solids:	46.33	Preparation:	Plumb 1981	Analyzed:	01/26/23 06:55
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5458 g Wet / 0.5458 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.75	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1006

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-03 D	SDG:	23A0467
Sampled:	01/23/23 08:50	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-233
% Solids:	48.01	Preparation:	Plumb 1981	Analyzed:	01/26/23 07:26
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5304 g Wet / 0.5304 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.63	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1003

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-04 D	SDG:	23A0467
Sampled:	01/23/23 09:03	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-240
% Solids:	45.91	Preparation:	Plumb 1981	Analyzed:	01/26/23 07:56
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.544 g Wet / 0.544 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.60	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1004

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-05 D	SDG:	23A0467
Sampled:	01/23/23 09:42	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-246
% Solids:	56.10	Preparation:	Plumb 1981	Analyzed:	01/26/23 08:27
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5277 g Wet / 0.5277 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.73	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1204

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-06 D	SDG:	23A0467
Sampled:	01/23/23 11:11	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-252
% Solids:	47.04	Preparation:	Plumb 1981	Analyzed:	01/26/23 08:57
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.183 g Wet / 0.183 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.32	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1238

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-07 D	SDG:	23A0467
Sampled:	01/23/23 11:35	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-259
% Solids:	57.71	Preparation:	Plumb 1981	Analyzed:	01/26/23 09:28
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5071 g Wet / 0.5071 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	1.70	1	0.02	0.02	

Analytical Resources, LLC
Analytical Chemists and Consultants

Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1013

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-08 D	SDG:	23A0467
Sampled:	01/23/23 12:07	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-266
% Solids:	47.57	Preparation:	Plumb 1981	Analyzed:	01/26/23 09:58
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5235 g Wet / 0.5235 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	2.79	1	0.02	0.02	

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Form I
INORGANIC ANALYSIS DATA SHEET
EPA 9060A m

LDW23-SS1014

Laboratory:	Analytical Resources, LLC				
Client:	Anchor QEA, LLC				
Project:	AOC5 MR Phase 1				
Matrix:	Sediment	Laboratory ID:	23A0467-09 D	SDG:	23A0467
Sampled:	01/23/23 12:26	Prepared:	01/25/23 10:40	File ID:	CubeData_01262023@1133-272
% Solids:	63.46	Preparation:	Plumb 1981	Analyzed:	01/26/23 10:29
Batch:	BLA0567	Sequence:	SLA0248	Initial/Final:	0.5585 g Wet / 0.5585 g
Instrument:	TOC Cube			Calibration:	FD00070

CAS NO.	Analyte	Concentration (% dry)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	0.99	1	0.02	0.02	

PREPARATION BATCH SUMMARY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0567 Batch Matrix: Solid
Preparation: Plumb 1981

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1010	23A0467-01	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1005	23A0467-02	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1006	23A0467-03	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1003	23A0467-04	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1004	23A0467-05	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1204	23A0467-06	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1238	23A0467-07	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1013	23A0467-08	eData_01262023@1133-	01/25/23 10:40	
LDW23-SS1014	23A0467-09	eData_01262023@1133-	01/25/23 10:40	
Blank	BLA0567-BLK1	eData_01262023@1133-	01/25/23 10:40	
LCS	BLA0567-BS1	eData_01262023@1133-	01/25/23 10:40	
MRL Check	BLA0567-MRL1	eData_01262023@1133-	01/25/23 10:40	
Reference	BLA0567-SRM1	eData_01262023@1133-	01/25/23 10:40	

Form I

METHOD BLANK DATA SHEET

EPA 9060A m

TotalAnalytes

Blank

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0567
Laboratory ID: BLA0567-BLK1
Prepared: 01/25/23 10:40
Matrix: Solid
Preparation: Plumb 1981
Analyzed: 01/25/23 22:50
Sequence: SLA0248
Calibration: FD00070
Instrument: TOC Cube

CAS NO.	Analyte	Concentration (% wet)	Dilution Factor	MDL	MRL	Q
	Total Organic Carbon	ND	1	0.02	0.02	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Matrix:	Solid	Analyzed:	01/25/23 23:20
Batch:	BLA0567	Laboratory ID:	BLA0567-BS1
Preparation:	Plumb 1981	Sequence Name:	LCS
Initial/Final:	0.0228 g / 0.0228 g		

COMPOUND	SPIKE ADDED (% wet)	LCS CONCENTRATION (% wet)	Q	LCS % REC. #	QC LIMITS REC.
Total Organic Carbon	44.4	44.8		101	80 - 120

* Indicates values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SKD0371	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Cal Standard	SKD0371-CAL1	CubeData_04272022@1136-001	NA	04/26/22 12:30
Cal Standard	SKD0371-CAL2	CubeData_04272022@1136-002	NA	04/26/22 13:00
Cal Standard	SKD0371-CAL3	CubeData_04272022@1136-003	NA	04/26/22 13:30
Cal Standard	SKD0371-CAL4	CubeData_04272022@1136-004	NA	04/26/22 14:00
Cal Standard	SKD0371-CAL5	CubeData_04272022@1136-005	NA	04/26/22 14:30
Cal Standard	SKD0371-CAL6	CubeData_04272022@1136-006	NA	04/26/22 15:00
Cal Standard	SKD0371-CAL7	CubeData_04272022@1136-007	NA	04/26/22 15:30
Cal Standard	SKD0371-CAL8	CubeData_04272022@1136-008	NA	04/26/22 16:00
Cal Standard	SKD0371-CAL9	CubeData_04272022@1136-009	NA	04/26/22 16:30
Cal Standard	SKD0371-CALA	CubeData_04272022@1136-010	NA	04/26/22 17:00
Cal Standard	SKD0371-CALB	CubeData_04272022@1136-011	NA	04/26/22 17:30
Cal Standard	SKD0371-CALC	CubeData_04272022@1136-012	NA	04/26/22 18:00
Cal Standard	SKD0371-CALD	CubeData_04272022@1136-013	NA	04/26/22 18:30
Cal Standard	SKD0371-CALE	CubeData_04272022@1136-014	NA	04/26/22 19:00
Cal Standard	SKD0371-CALF	CubeData_04272022@1136-015	NA	04/26/22 19:31
Cal Standard	SKD0371-CALG	CubeData_04272022@1136-016	NA	04/26/22 20:01
Cal Standard	SKD0371-CALH	CubeData_04272022@1136-017	NA	04/26/22 20:31
Cal Standard	SKD0371-CALI	CubeData_04272022@1136-018	NA	04/26/22 21:01
Cal Standard	SKD0371-CALJ	CubeData_04272022@1136-019	NA	04/26/22 21:31
Cal Standard	SKD0371-CALK	CubeData_04272022@1136-020	NA	04/26/22 22:01
Initial Cal Check	SKD0371-ICV1	CubeData_04272022@1136-027	NA	04/27/22 02:03
Initial Cal Blank	SKD0371-ICB1	CubeData_04272022@1136-028	NA	04/27/22 02:33
Cal Standard	SKD0371-CALL	CubeData_04272022@1136-021	NA	04/27/22 11:08
Cal Standard	SKD0371-CALM	CubeData_04272022@1136-022	NA	04/27/22 11:08
Cal Standard	SKD0371-CALN	CubeData_04272022@1136-023	NA	04/27/22 11:09
Cal Standard	SKD0371-CALO	CubeData_04272022@1136-024	NA	04/27/22 11:09

Analytical Resources, LLC
Analytical Chemists and Consultants

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Sequence:	SLA0248	Instrument:	TOC Cube
		Calibration:	FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
Initial Cal Check	SLA0248-ICV1	CubeData_01262023@1133-019	NA	01/23/23 17:12
Initial Cal Blank	SLA0248-ICB1	CubeData_01262023@1133-025	NA	01/23/23 17:43
Calibration Check	SLA0248-CCV1	CubeData_01262023@1133-089	NA	01/23/23 23:16
Calibration Blank	SLA0248-CCB1	CubeData_01262023@1133-096	NA	01/23/23 23:46
Calibration Check	SLA0248-CCV2	CubeData_01262023@1133-173	NA	01/24/23 05:19
Calibration Blank	SLA0248-CCB2	CubeData_01262023@1133-180	NA	01/24/23 05:49
Calibration Check	SLA0248-CCV3	CubeData_01262023@1133-247	NA	01/24/23 11:23
Calibration Blank	SLA0248-CCB3	CubeData_01262023@1133-253	NA	01/24/23 11:53
Calibration Check	SLA0248-CCV4	CubeData_01262023@1133-292	NA	01/24/23 17:28
Calibration Blank	SLA0248-CCB4	CubeData_01262023@1133-293	NA	01/24/23 17:59
Calibration Check	SLA0248-CCV5	CubeData_01262023@1133-304	NA	01/24/23 23:33
Calibration Blank	SLA0248-CCB5	CubeData_01262023@1133-305	NA	01/25/23 00:03
Calibration Check	SLA0248-CCV6	CubeData_01262023@1133-316	NA	01/25/23 05:38
Calibration Blank	SLA0248-CCB6	CubeData_01262023@1133-317	NA	01/25/23 06:08
Calibration Check	SLA0248-CCV7	CubeData_01262023@1133-328	NA	01/25/23 11:43
Calibration Blank	SLA0248-CCB7	CubeData_01262023@1133-329	NA	01/25/23 12:14
Calibration Check	SLA0248-CCV8	CubeData_01262023@1133-057	NA	01/25/23 17:47
Calibration Blank	SLA0248-CCB8	CubeData_01262023@1133-062	NA	01/25/23 18:18
MRL Check	BLA0567-MRL1	CubeData_01262023@1133-116	Solid	01/25/23 22:19
Blank	BLA0567-BLK1	CubeData_01262023@1133-123	Solid	01/25/23 22:50
LCS	BLA0567-BS1	CubeData_01262023@1133-129	Solid	01/25/23 23:20
Calibration Check	SLA0248-CCV9	CubeData_01262023@1133-135	NA	01/25/23 23:50
Calibration Blank	SLA0248-CCB9	CubeData_01262023@1133-143	NA	01/26/23 00:21
Reference	BLA0567-SRM1	CubeData_01262023@1133-151	Solid	01/26/23 00:51
LDW23-SS1010	23A0467-01	CubeData_01262023@1133-207	Solid	01/26/23 05:24
Calibration Check	SLA0248-CCVA	CubeData_01262023@1133-213	NA	01/26/23 05:54
Calibration Blank	SLA0248-CCBA	CubeData_01262023@1133-219	NA	01/26/23 06:25
LDW23-SS1005	23A0467-02	CubeData_01262023@1133-225	Solid	01/26/23 06:55
LDW23-SS1006	23A0467-03	CubeData_01262023@1133-233	Solid	01/26/23 07:26

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060A m

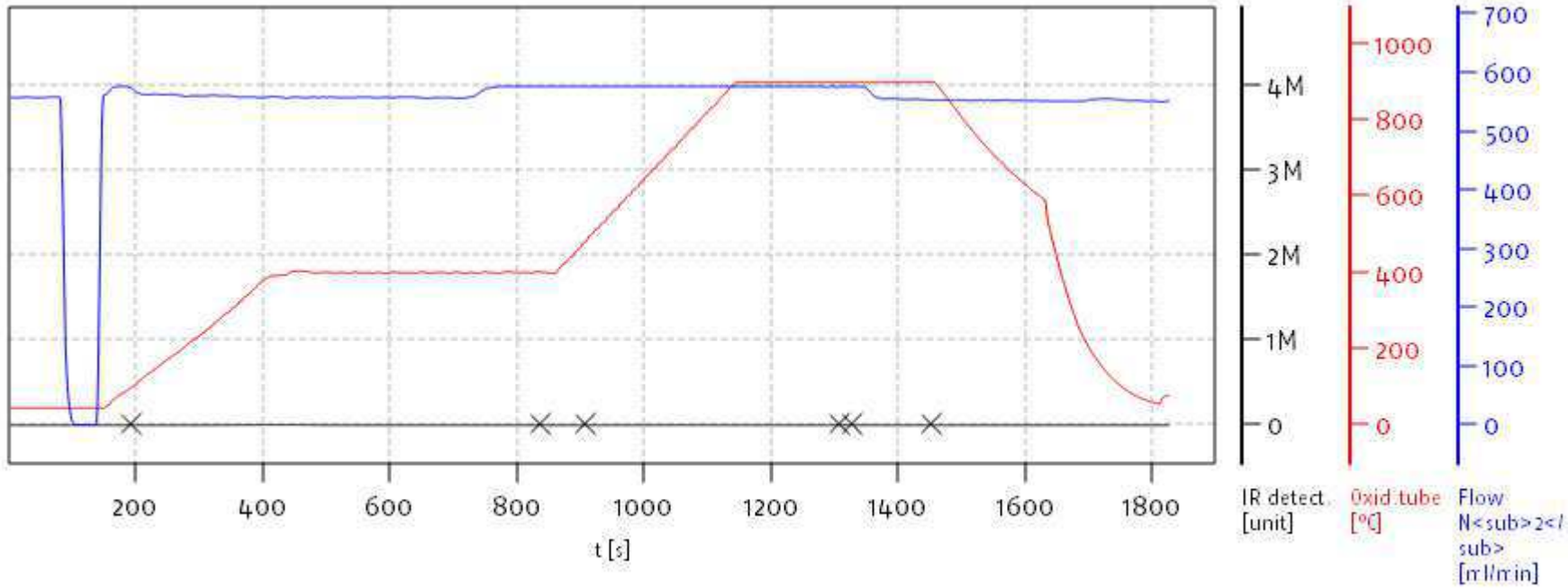
Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Sequence: SLA0248

SDG: 23A0467
Project: AOC5 MR Phase 1
Instrument: TOC Cube
Calibration: FD00070

Sample Name	Lab Sample ID	Lab File ID	Matrix	Analysis Date/Time
LDW23-SS1003	23A0467-04	CubeData_01262023@1133-240	Solid	01/26/23 07:56
LDW23-SS1004	23A0467-05	CubeData_01262023@1133-246	Solid	01/26/23 08:27
LDW23-SS1204	23A0467-06	CubeData_01262023@1133-252	Solid	01/26/23 08:57
LDW23-SS1238	23A0467-07	CubeData_01262023@1133-259	Solid	01/26/23 09:28
LDW23-SS1013	23A0467-08	CubeData_01262023@1133-266	Solid	01/26/23 09:58
LDW23-SS1014	23A0467-09	CubeData_01262023@1133-272	Solid	01/26/23 10:29
Calibration Check	SLA0248-CCVB	CubeData_01262023@1133-280	NA	01/26/23 10:59
Calibration Blank	SLA0248-CCBB	CubeData_01262023@1133-286	NA	01/26/23 11:29

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		CARBON	1/ 23/2023 3:42 PM	bl	0.000	24 254	0.000	0.000	1 654	10 157	0.000	0.000	1.0000	1.0000



Name:

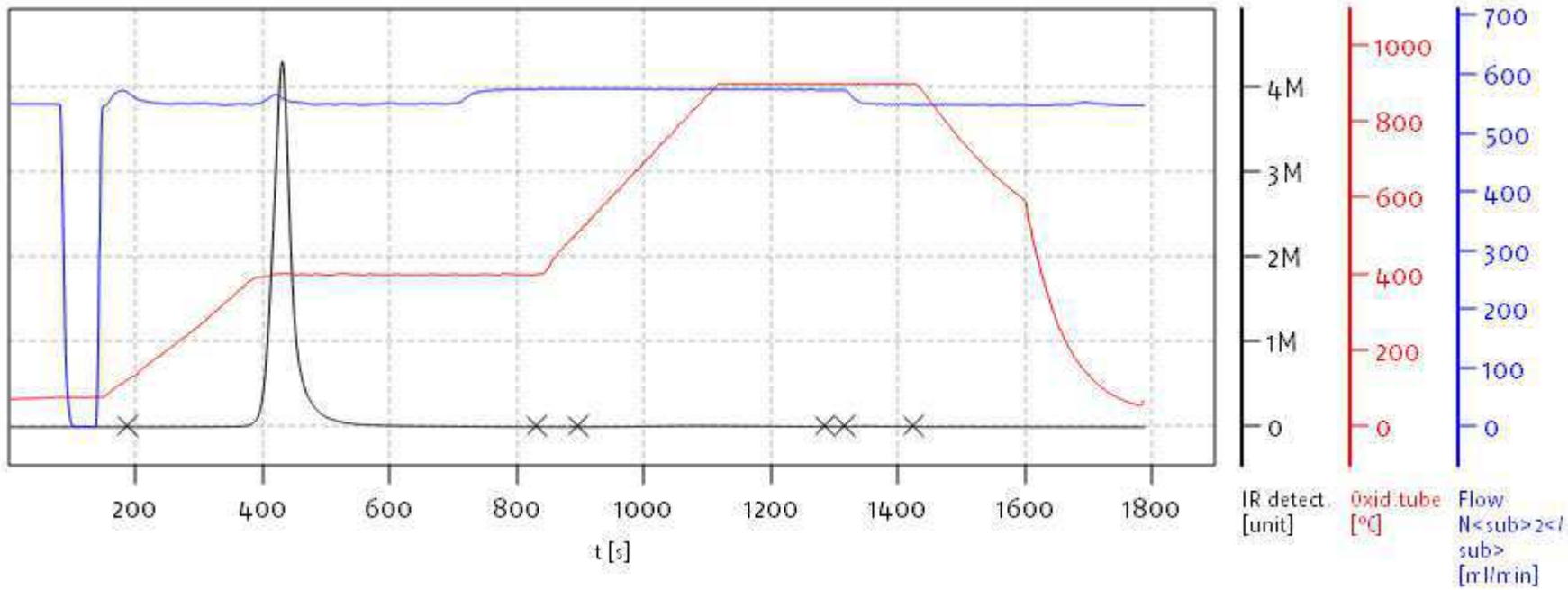
Access: soliTOC superuser

Date: Thu Jan 26 11:30:20 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
2	2	Dfactor	19.50		CARBON	1/23/2023 4:12 PM	bl	44.446	5 763 756	45.134	0.000	24 224	113 253	44.446	0.688	0.9758	1.0000



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Serial No: 0300.181017
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Balance: BAL3
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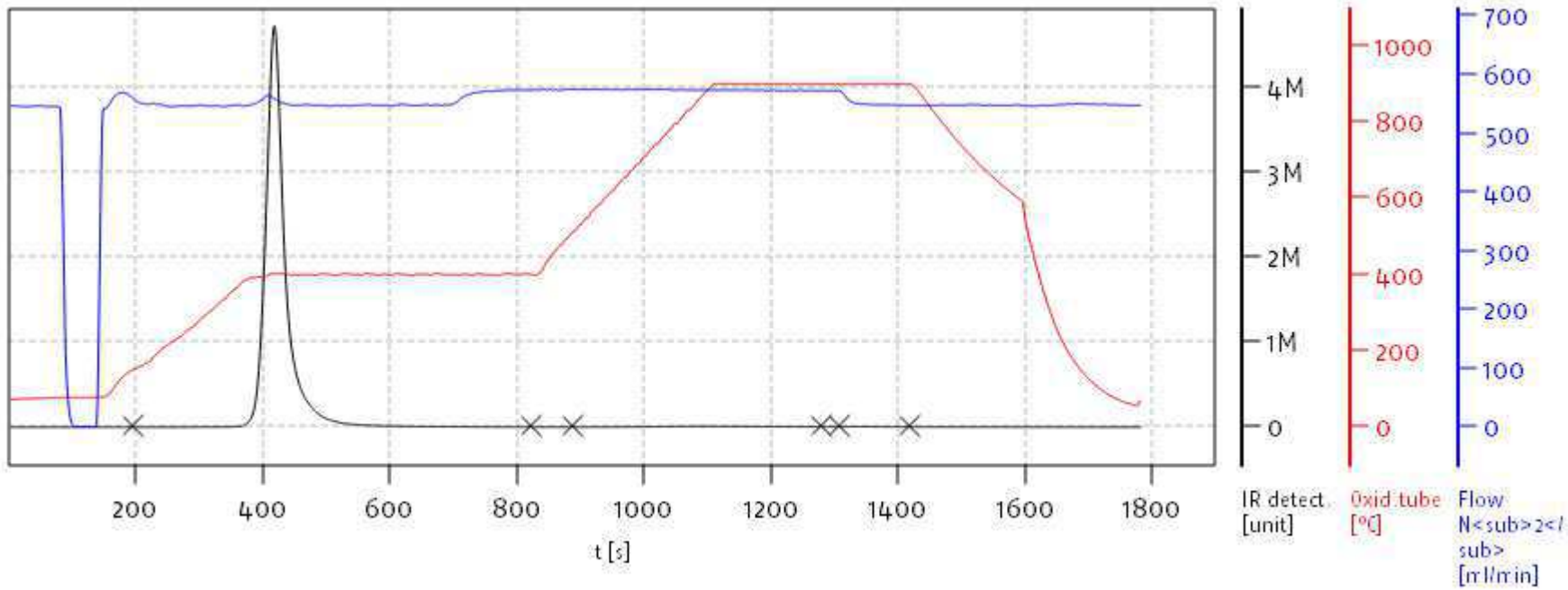
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
3	3	Dfactor	21.10		CARBON	1/23/2023 4:42 PM	bl	44.446	6 292 641	44.834	0.000	18 059	79 449	44.446	0.388	0.9668	1.0000



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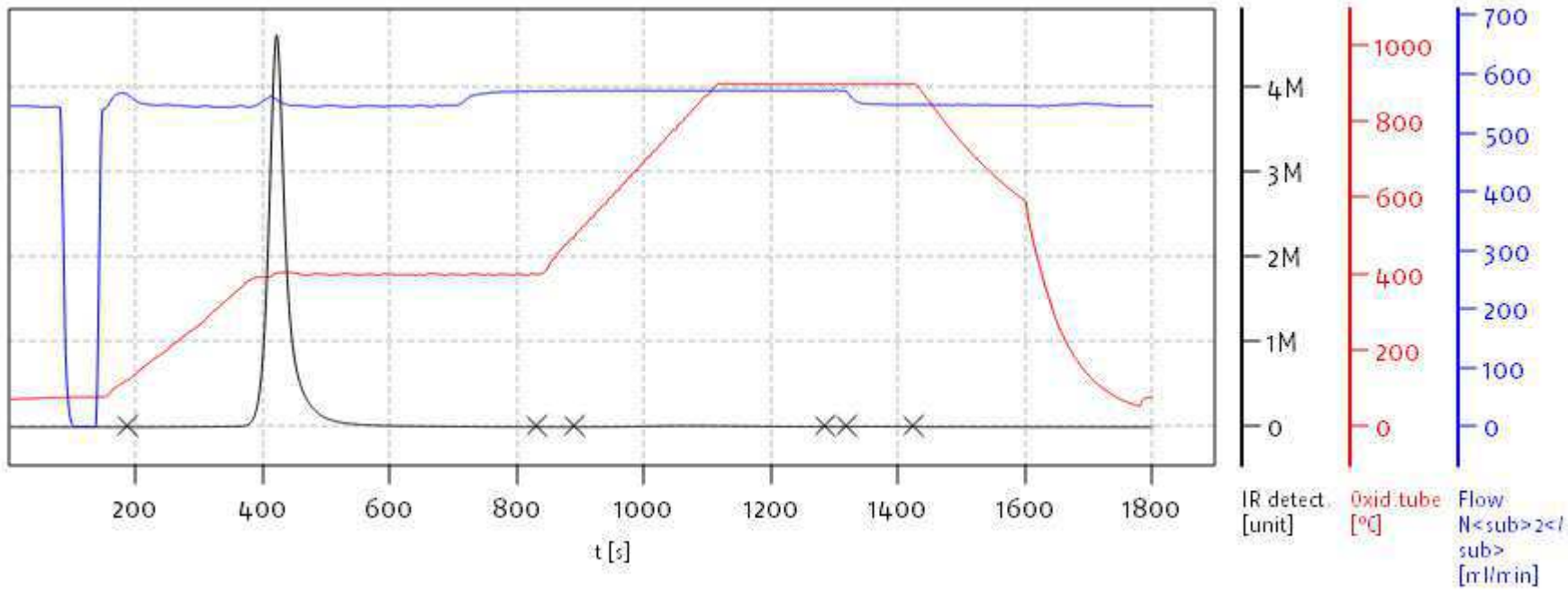
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
4	4	SLA0248-ICV1	20.00		CARBON	1/23/2023 5:12 PM	bl	44.260	5 913 547	44.988	0.000	19 586	120 634	44.260	0.728	0.9713	1.0000



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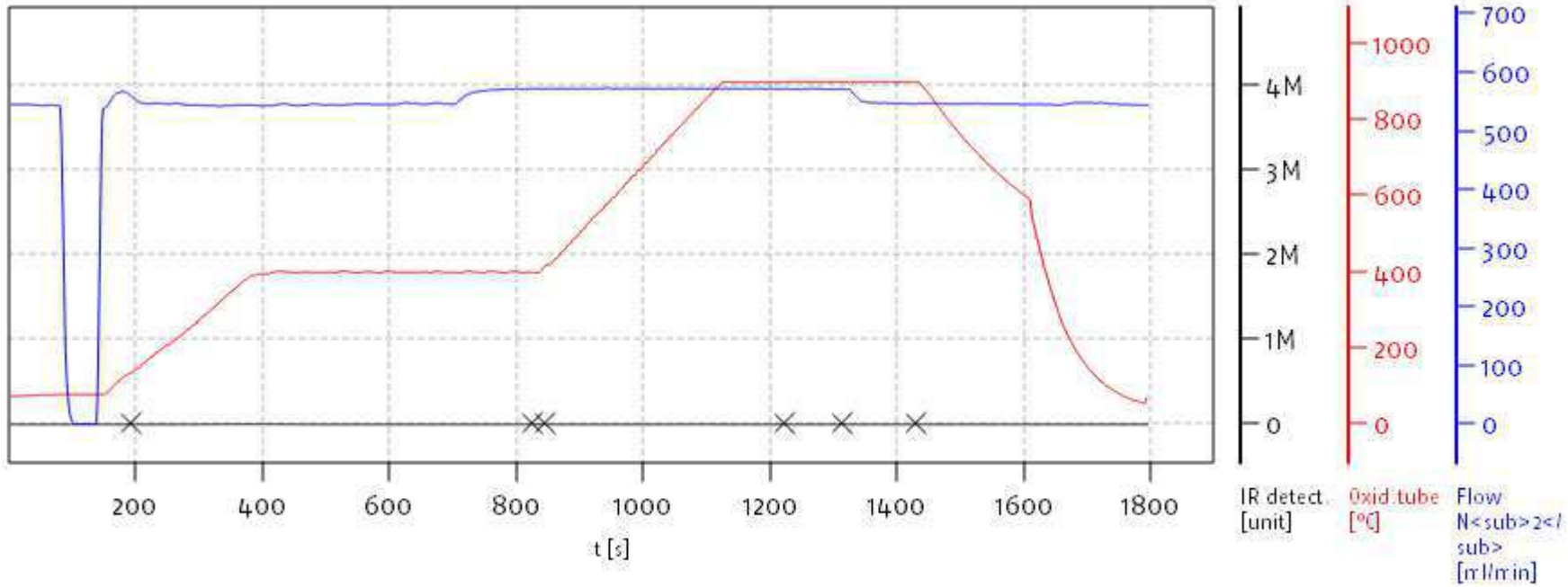
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
5	5	SLA0248-ICB1	500.70		CARBON	1/23/2023 5:43 PM	bl,C2u	0.000	13 139	0.000	0.000	1 222	3 531	0.000	0.000	0.9713	1.0000



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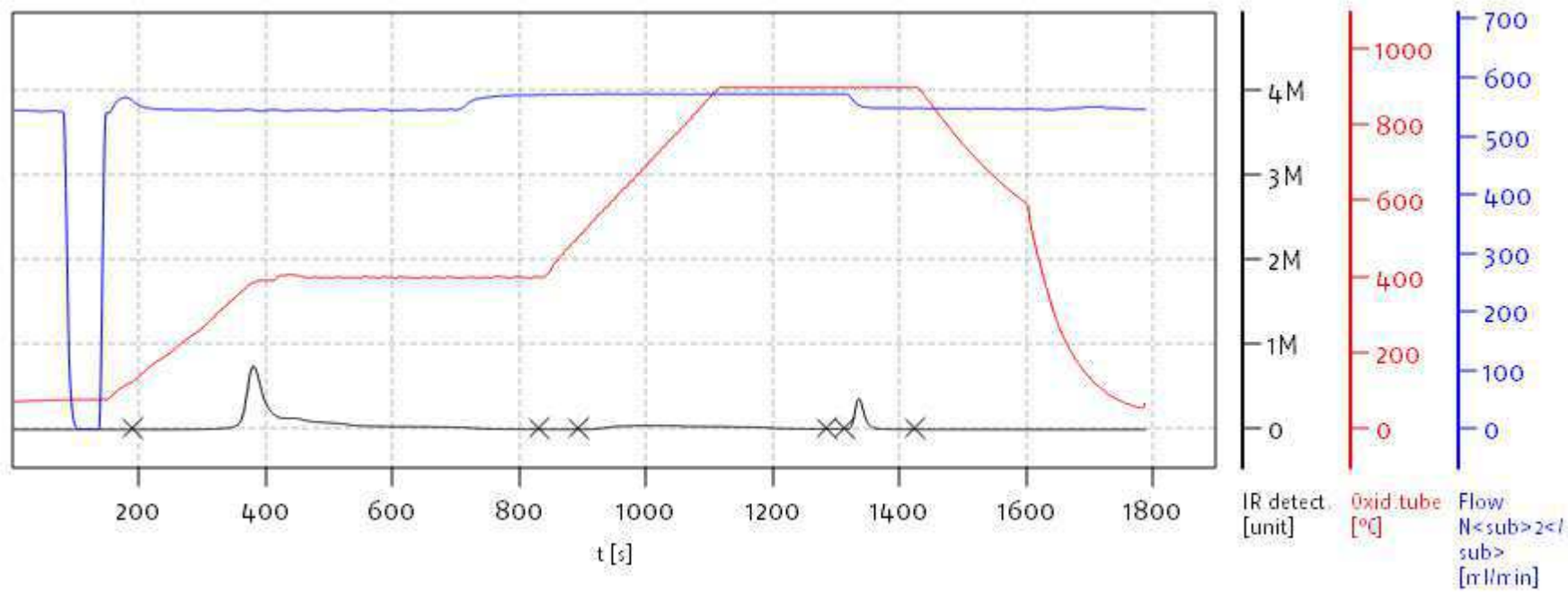
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
6	6	23A0328-03RE1	227.90		CARBON	1/23/2023 6:13 PM	bl	1.203	1 625 125	1.456	0.149	245 212	398 003	1.055	0.252	0.9713	1.0000



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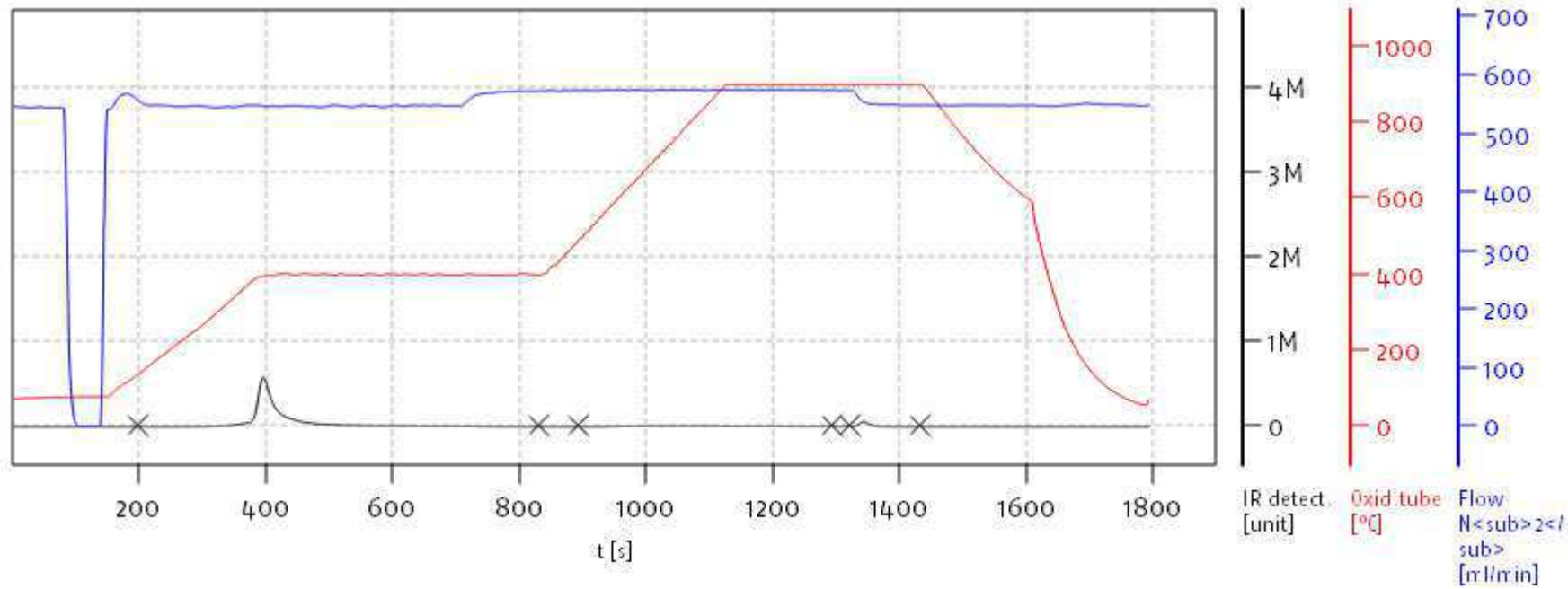
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
7	7	23A0385-01RE1	109.10		CARBON	1/23/2023 6:43 PM	bl	1.190	874 784	1.273	0.021	41 338	85 265	1.169	0.083	0.9713	1.0000



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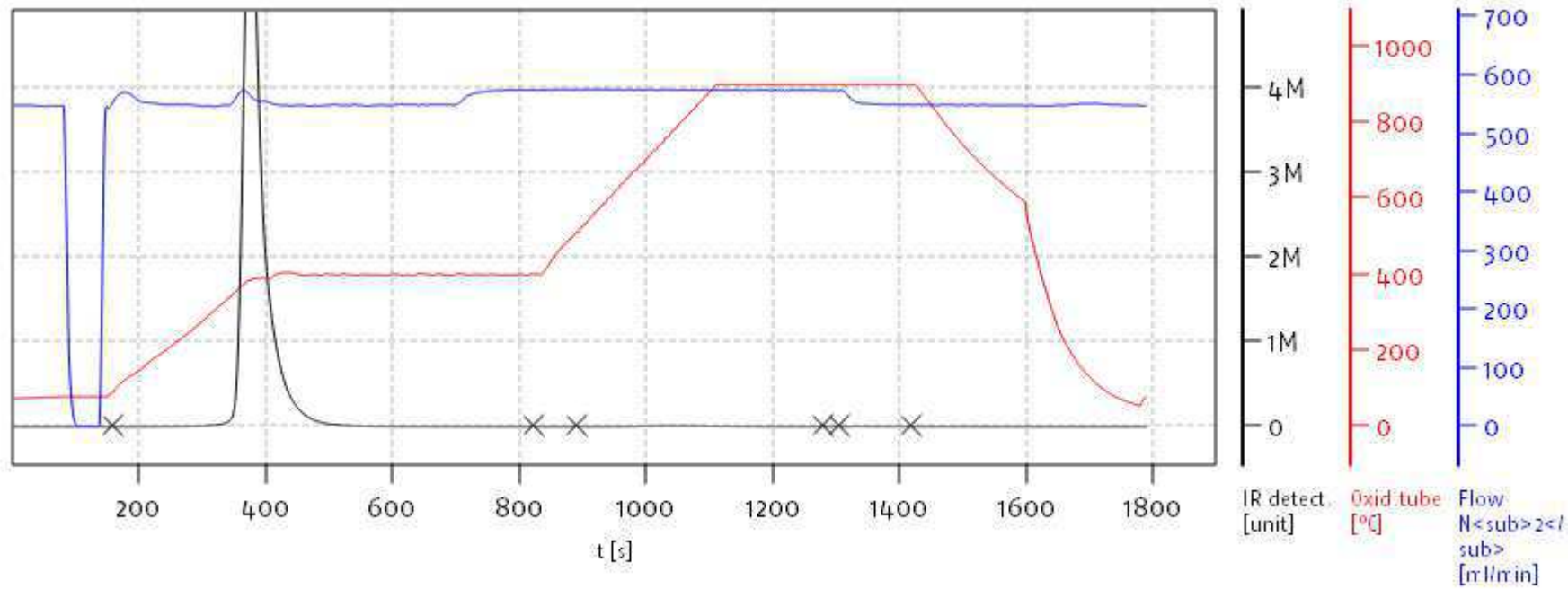
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
8	8	23A0385-02RE1	129.10		CARBON	1/23/2023 7:13 PM	bl	10.269	8 843 651	10.303	0.000	8 633	54 806	10.269	0.034	0.9713	1.0000



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Balance: BAL3
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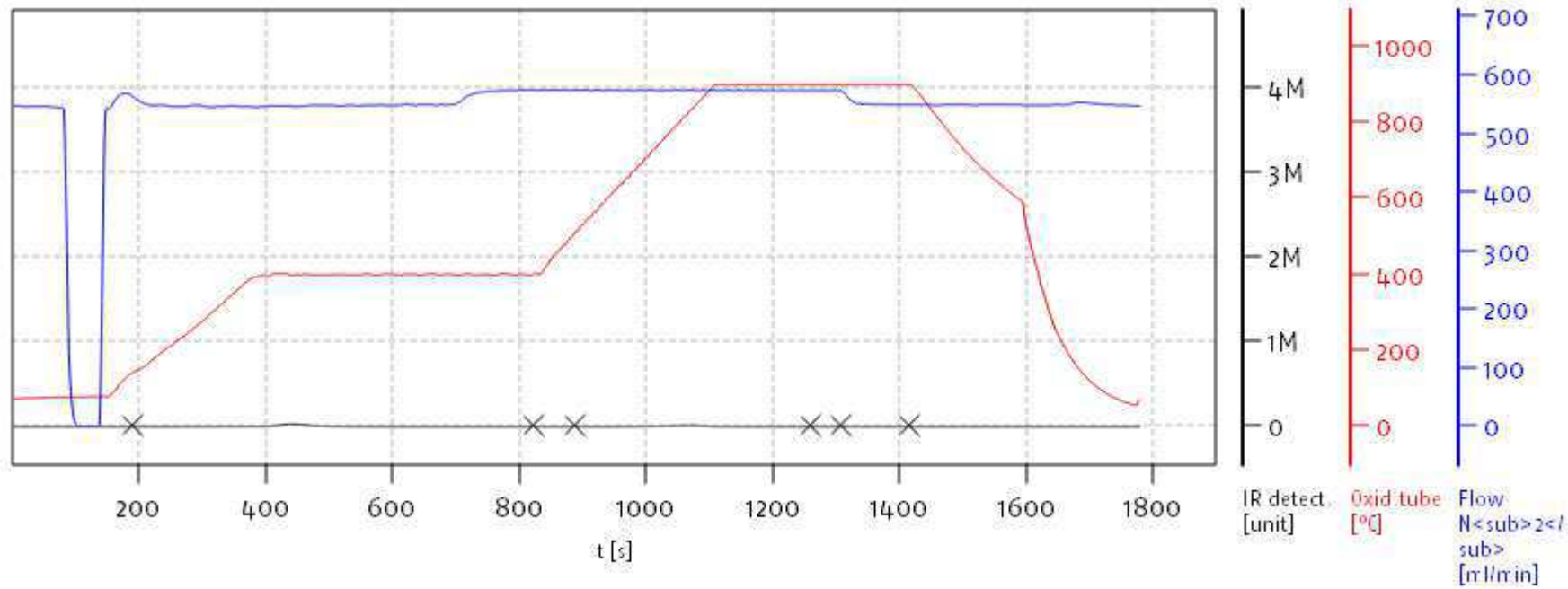
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
9	9	BLA0526-MRL1	509.40		CARBON	1/23/2023 7:43 PM	bl,C2u	0.014	72 656	0.016	0.000	537	35 766	0.014	0.003	0.9713	1.0000



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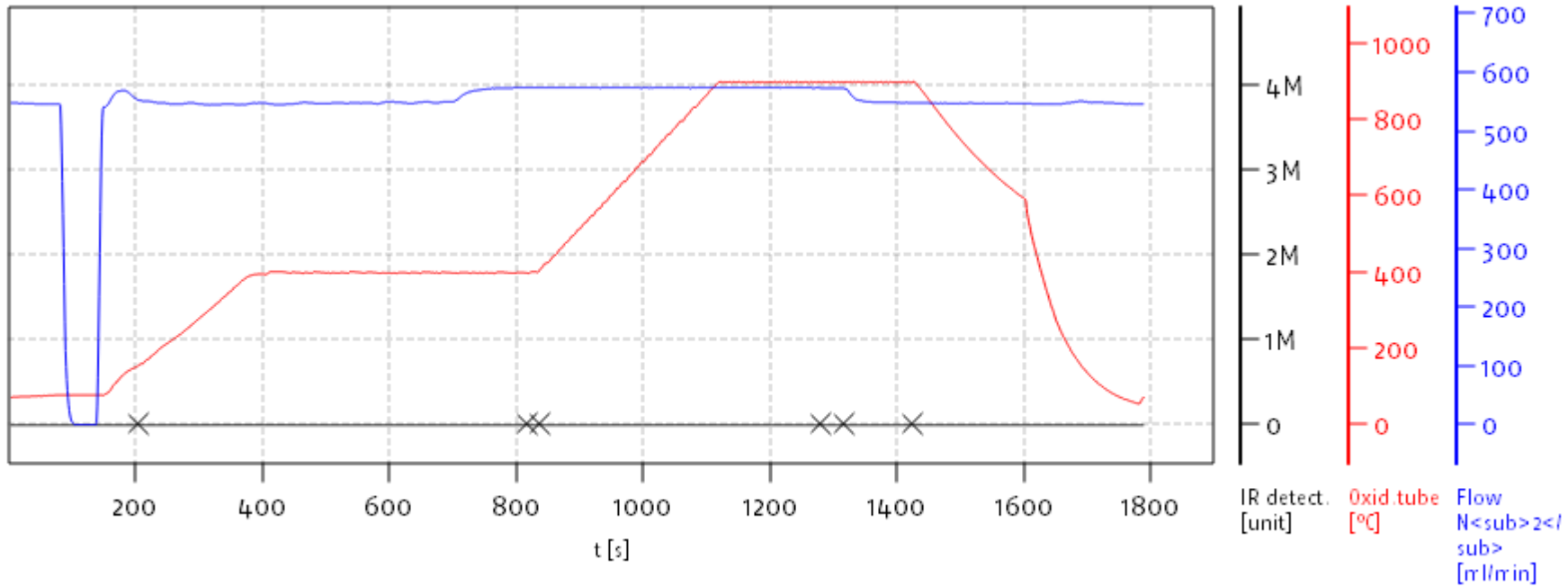
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
10	10	BLA0526-BLK1	527.90		CARBON	1/23/2023 8:14 PM	bl,C2u	0.000	5 941	0.000	0.000	480	4 113	0.000	0.000	0.9713	1.0000



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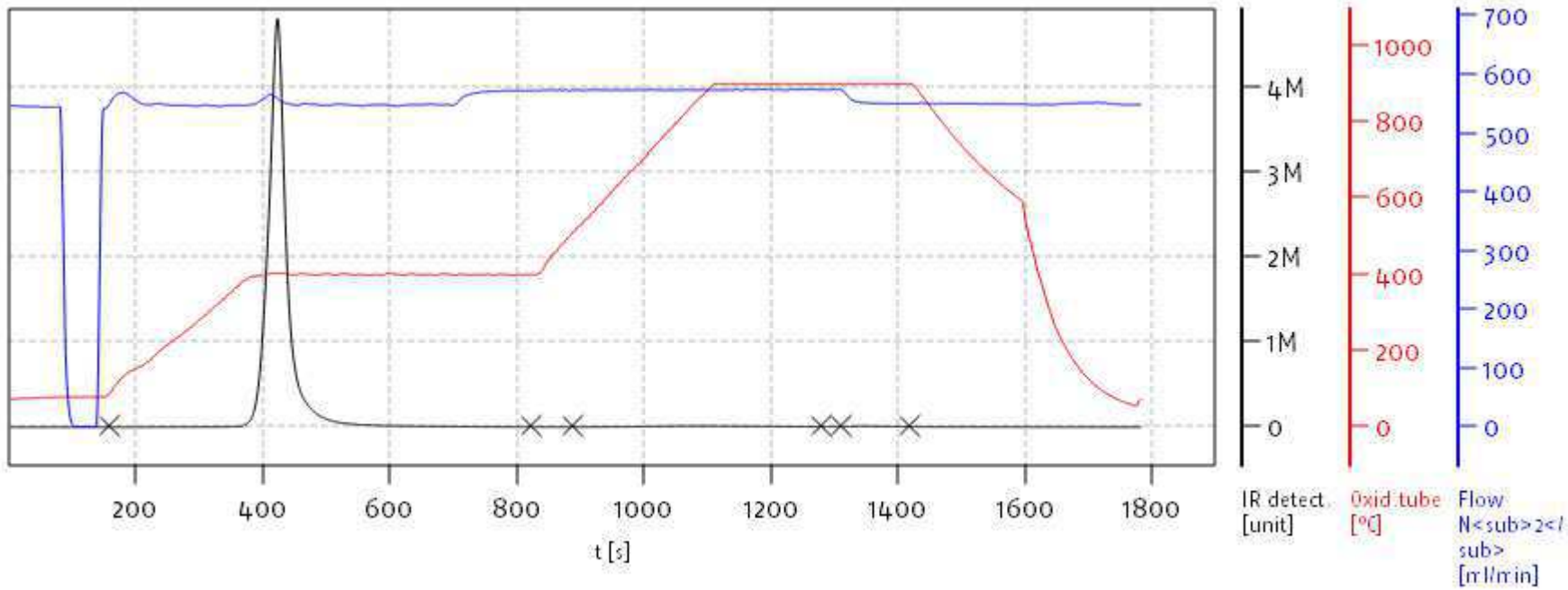
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
11	11	BLA0526-BS1	21.00		CARBON	1/23/2023 8:44 PM	bl	43.970	6 163 353	44.615	0.029	30 531	114 084	43.941	0.645	0.9713	1.0000



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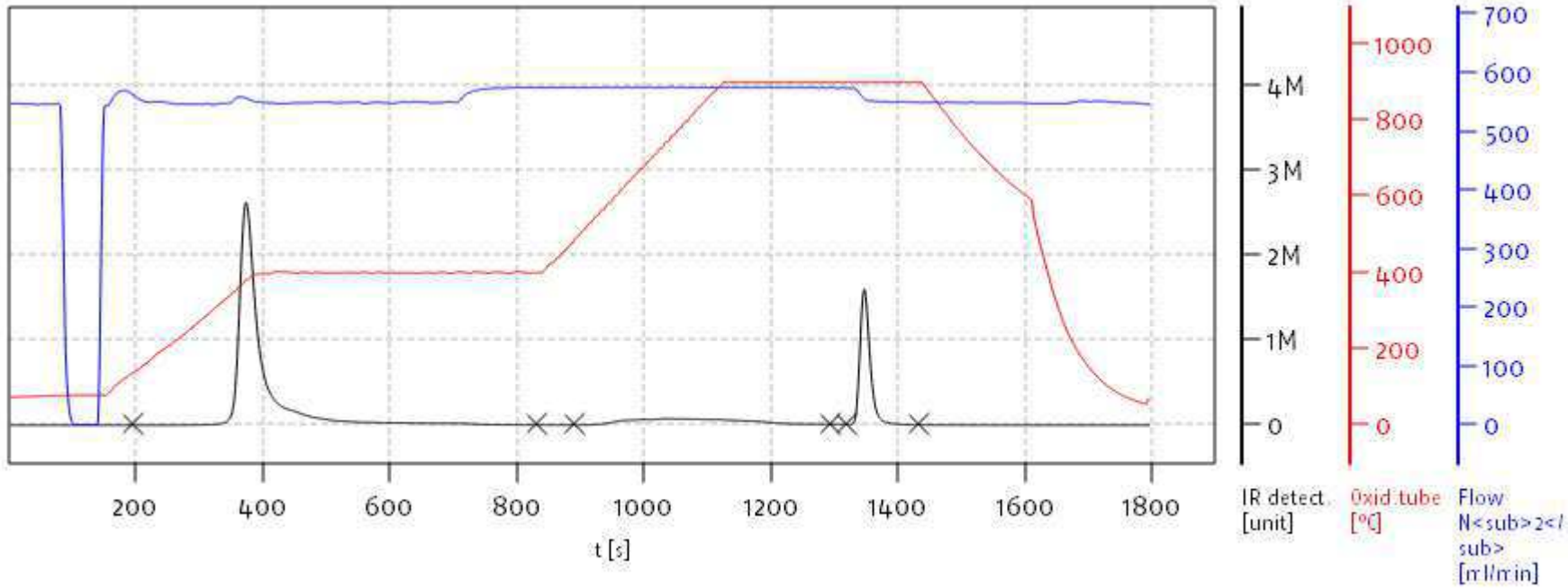
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
12	12	BLA0526-SRM1	250.90		CARBON	1/23/2023 9:14 PM	bl	2.913	3 763 037	3.297	0.674	1 119 165	647 738	2.239	0.383	0.9713	1.0000



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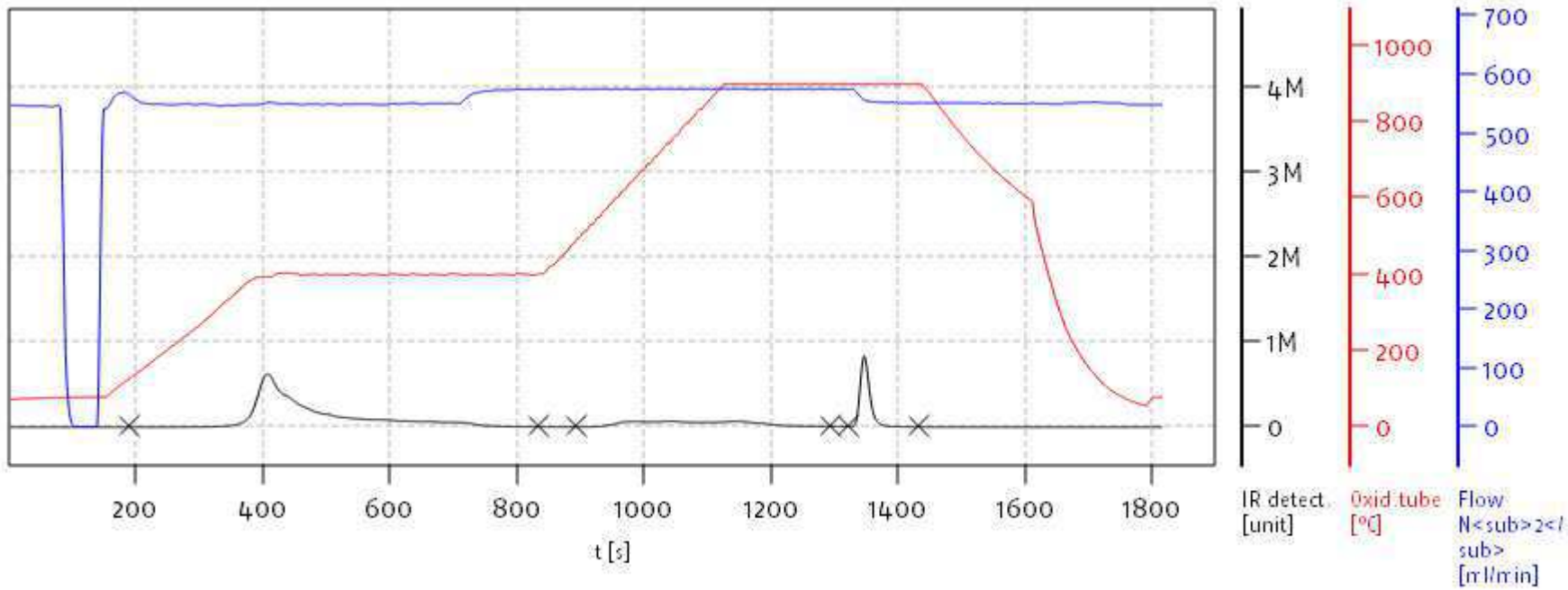
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
13	13	23A0417-01	520.30		CARBON	1/23/2023 9:45 PM	bl	0.822	2 322 424	0.995	0.158	558 783	608 457	0.663	0.173	0.9713	1.0000



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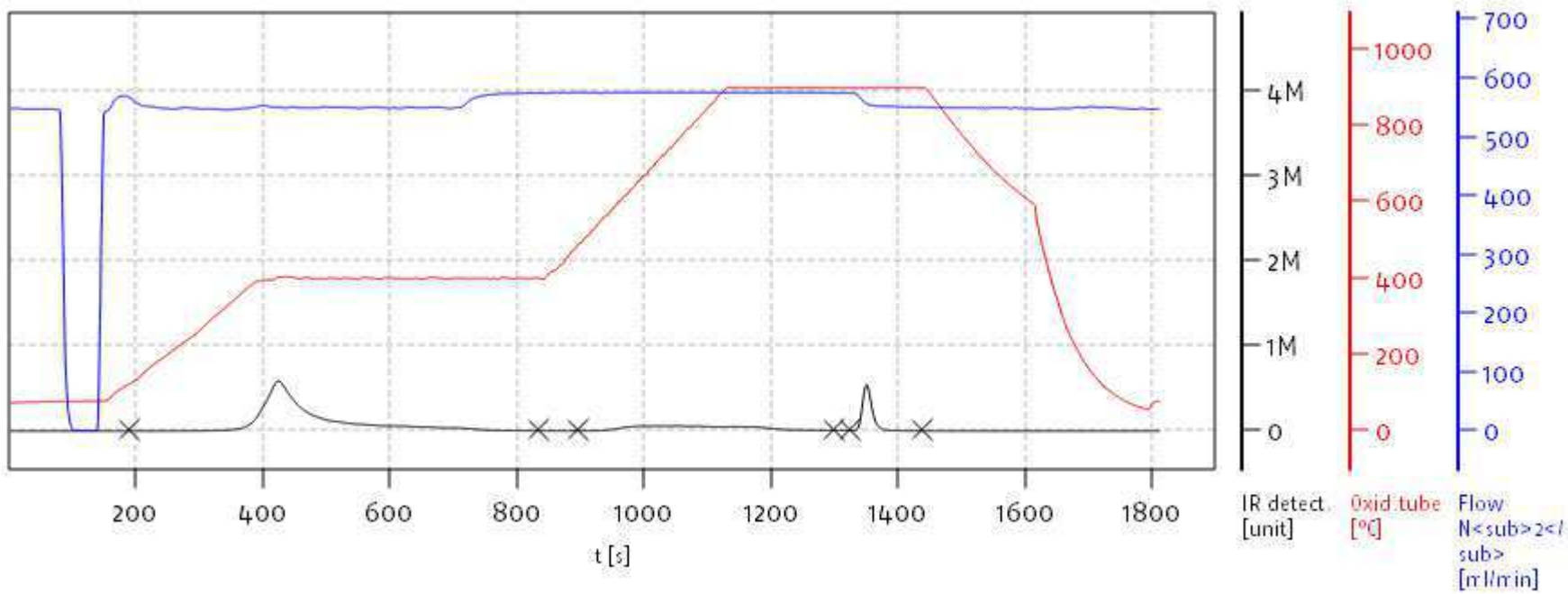
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
14	14	BLA0526-DUP1	531.00		CARBON	1/23/2023 10:15 PM	bl	0.660	2 010 977	0.808	0.099	364 598	531 554	0.562	0.147	0.9713	1.0000



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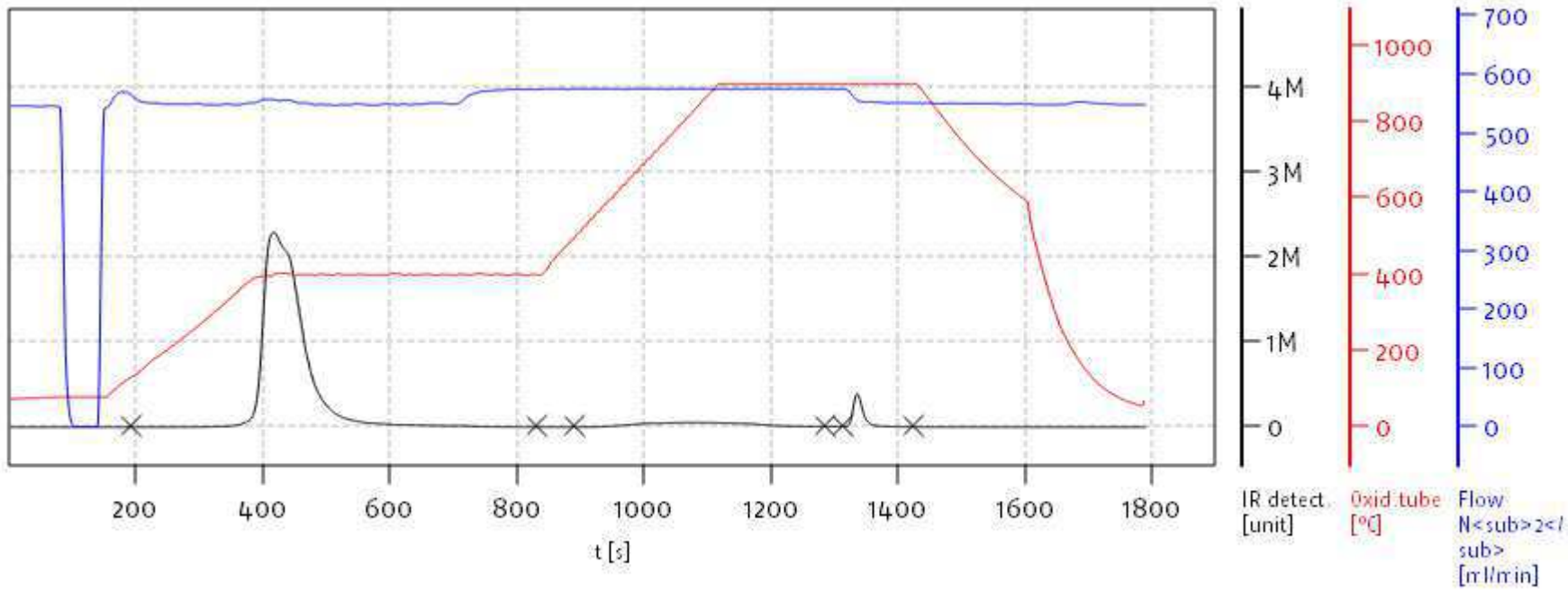
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
15	15	BLA0526-MS1	537.10	0.0088	CARBON	1/23/2023 10:46 PM	bl	1.780	6 130 764	1.896	0.071	274 209	427 181	1.709	0.115	0.9713	1.0000



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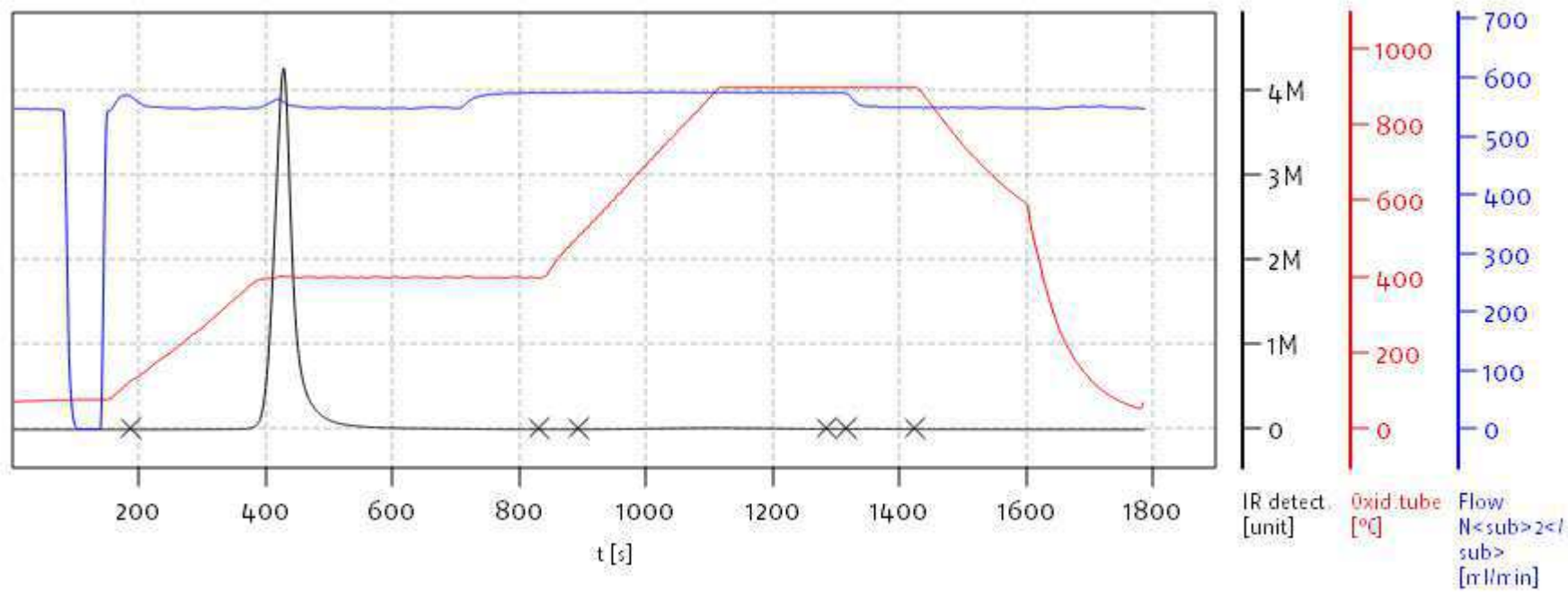
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
16	16	SLA0248-CCV1	19.60		CARBON	1/23/2023 11:16 PM	bl	43.638	5 714 757	44.632	0.000	22 126	152 433	43.638	0.994	0.9713	1.0000



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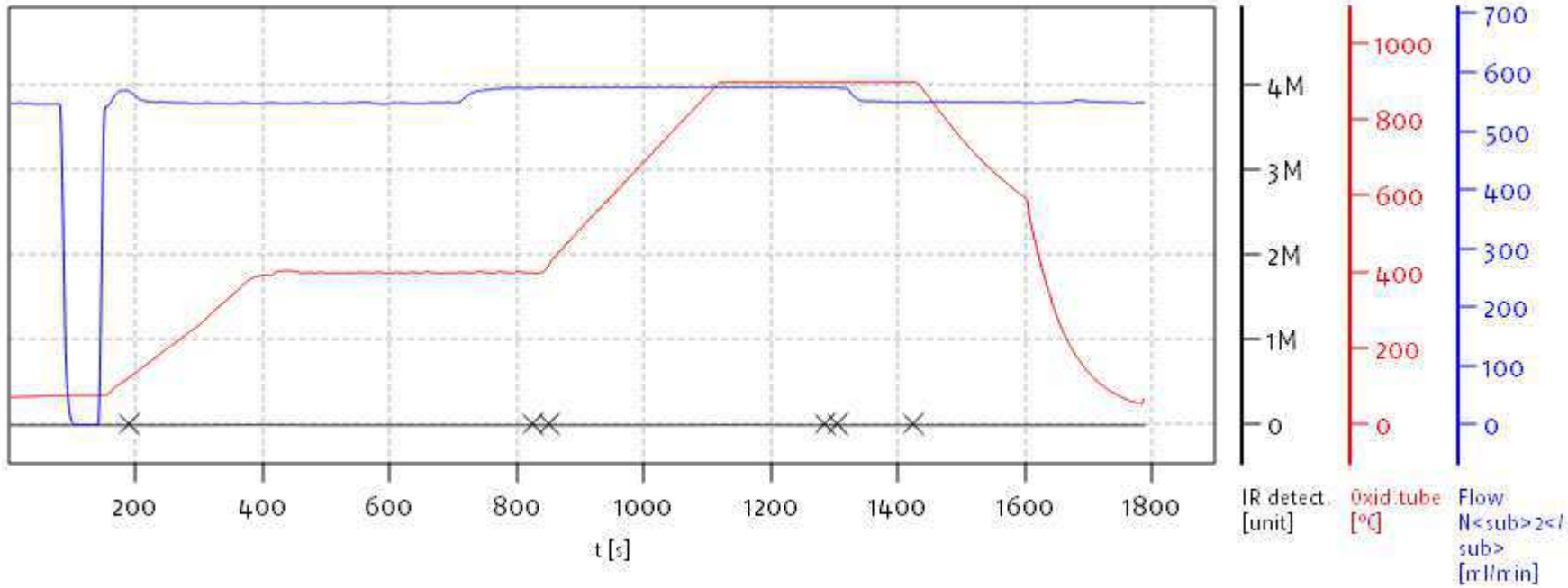
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
17	17	SLA0248-CCB1	513.30		CARBON	1/23/2023 11:46 PM	bl,C2u	0.000	12 790	0.000	0.000	675	11 783	0.000	0.000	0.9713	1.0000



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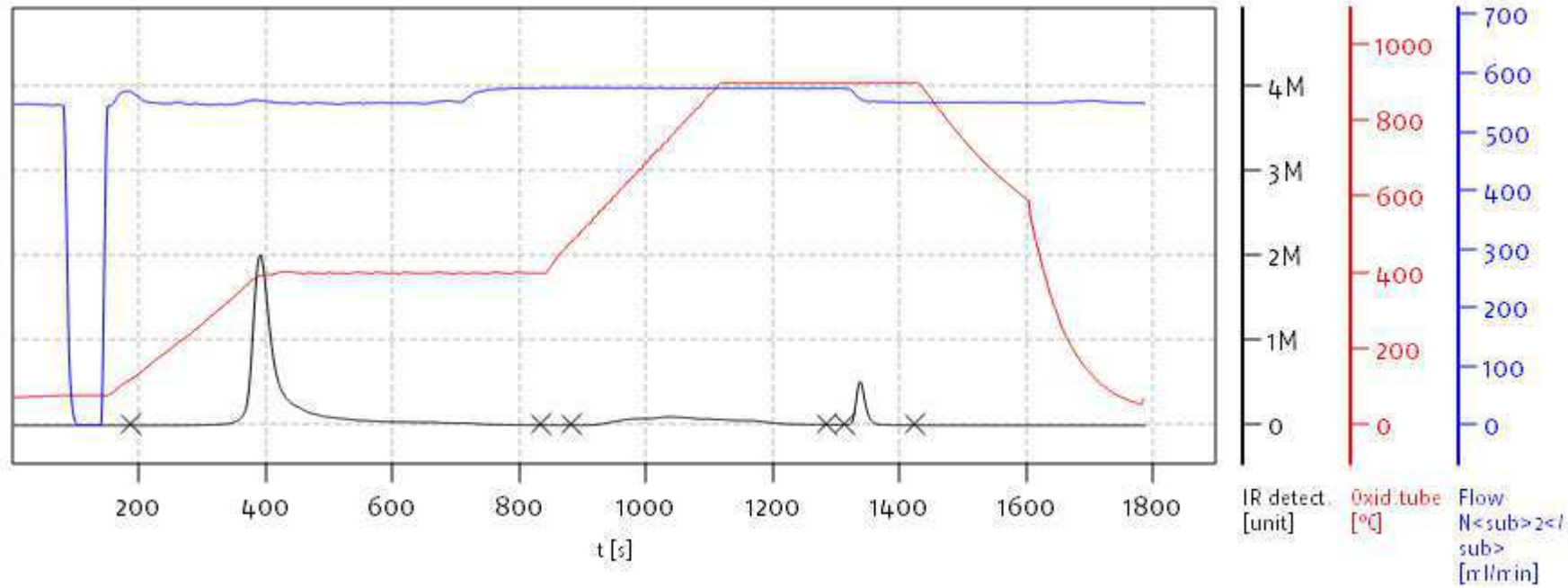
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
18	18	23A0417-02	527.20		CARBON	1/24/2023 12:16 AM	bl	1.063	3 437 301	1.276	0.091	335 182	751 689	0.973	0.213	0.9713	1.0000



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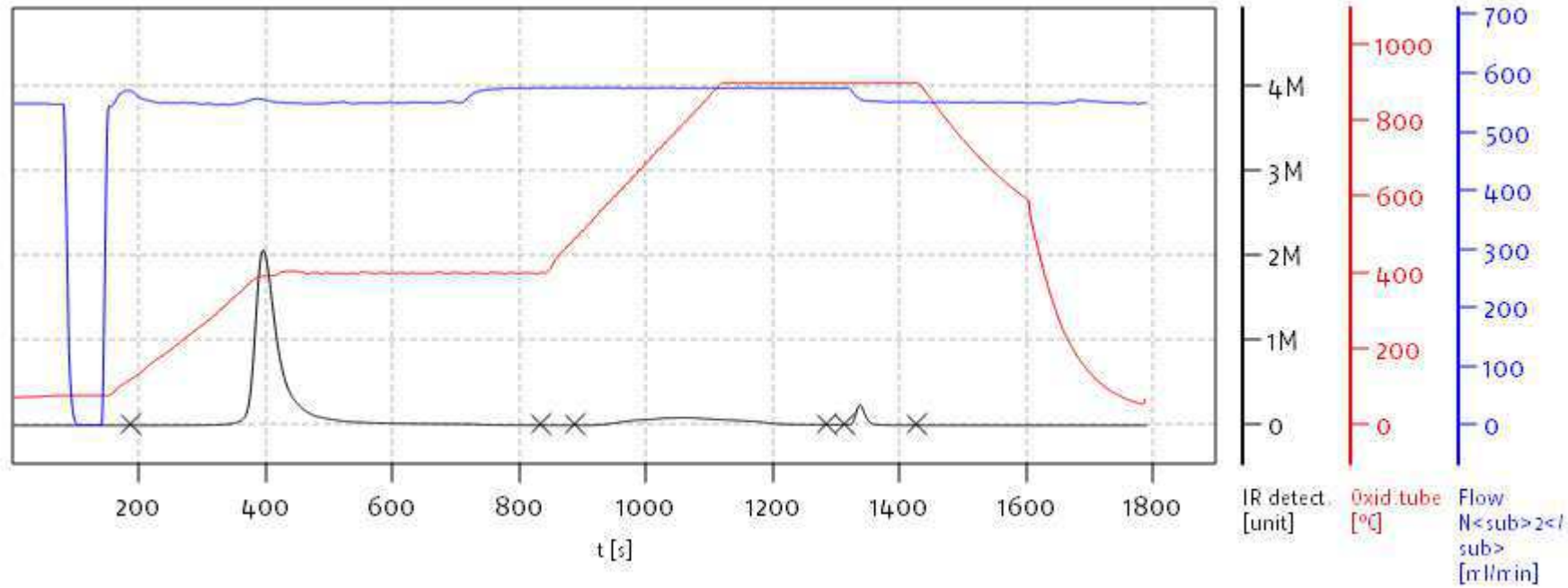
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
19	19	23A0417-03	520.30		CARBON	1/24/2023 12:46 AM	bl	1.074	3 605 237	1.264	0.040	161 637	664 150	1.034	0.190	0.9713	1.0000



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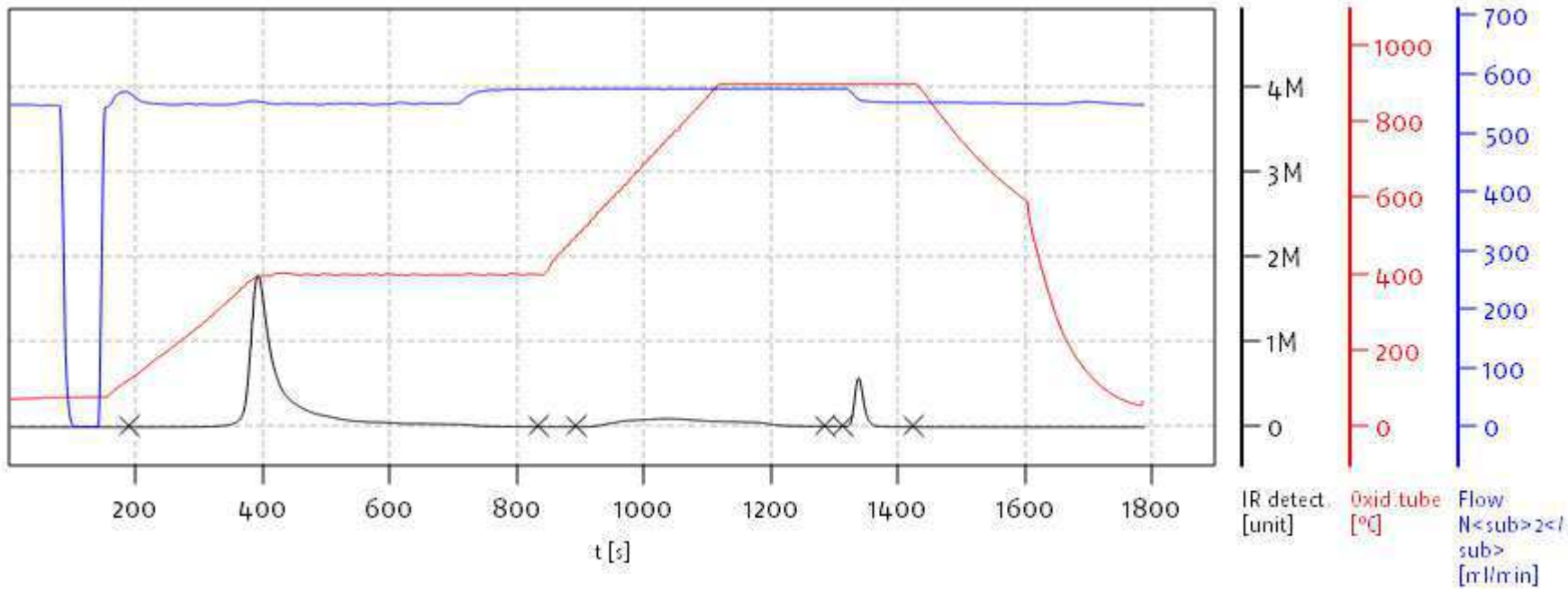
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
20	20	23A0417-04	527.80		CARBON	1/24/2023 1:17 AM	bl	1.083	3 472 766	1.301	0.102	373 179	769 424	0.982	0.218	0.9713	1.0000



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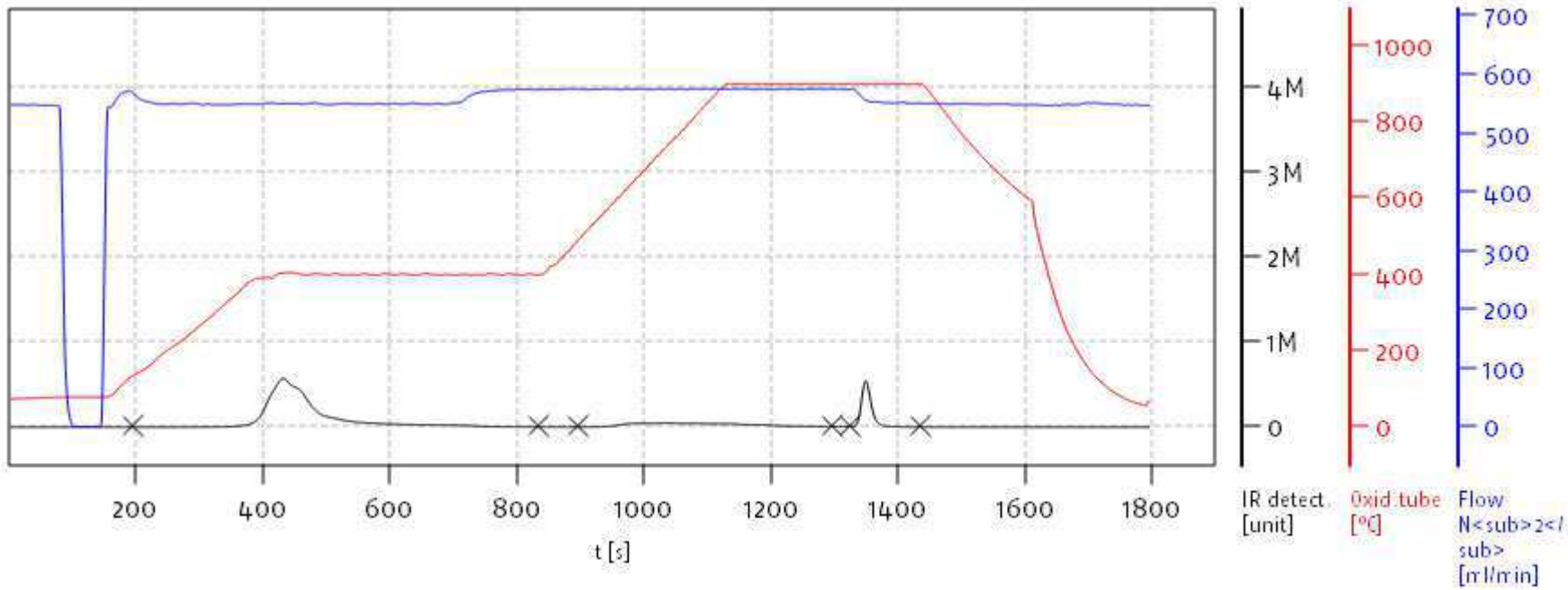
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
21	21	23A0417-05	502.00		CARBON	1/24/2023 1:47 AM	bl	0.654	1 855 876	0.770	0.106	371 856	400 241	0.548	0.115	0.9713	1.0000



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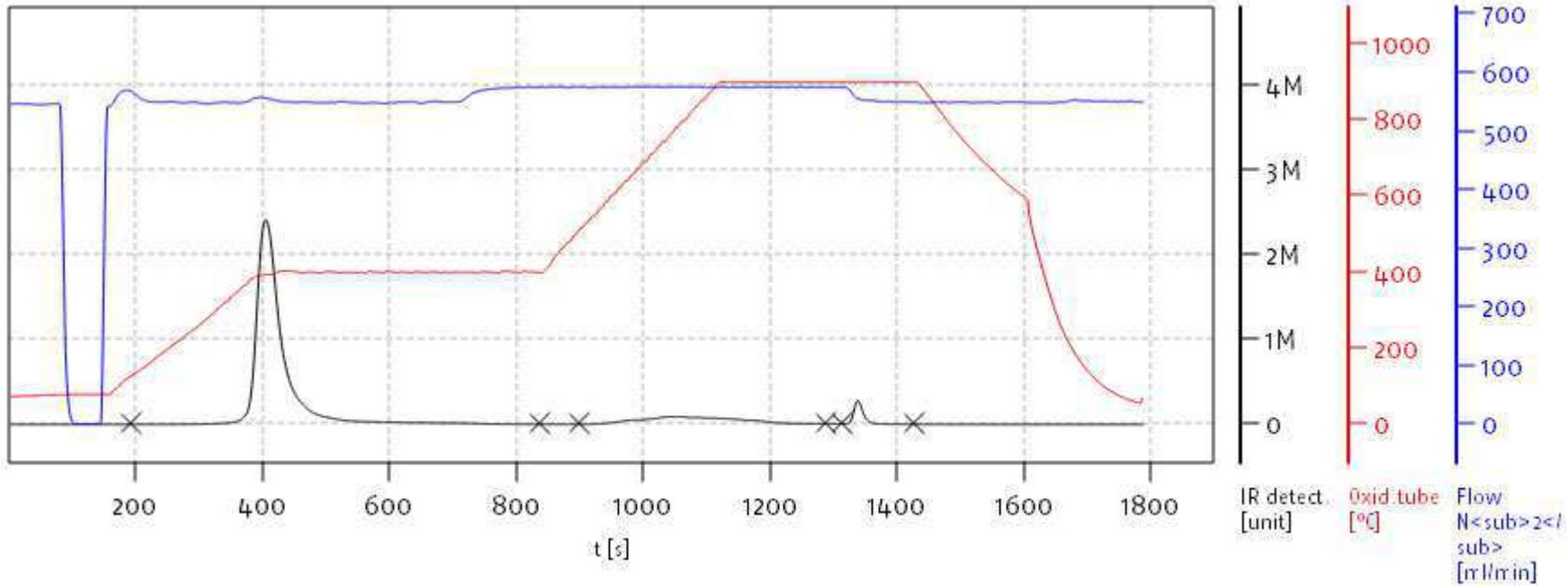
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
22	22	23A0417-06	527.80		CARBON	1/24/2023 2:17 AM	bl	1.245	4 227 598	1.426	0.048	189 628	646 254	1.197	0.182	0.9713	1.0000



Name:

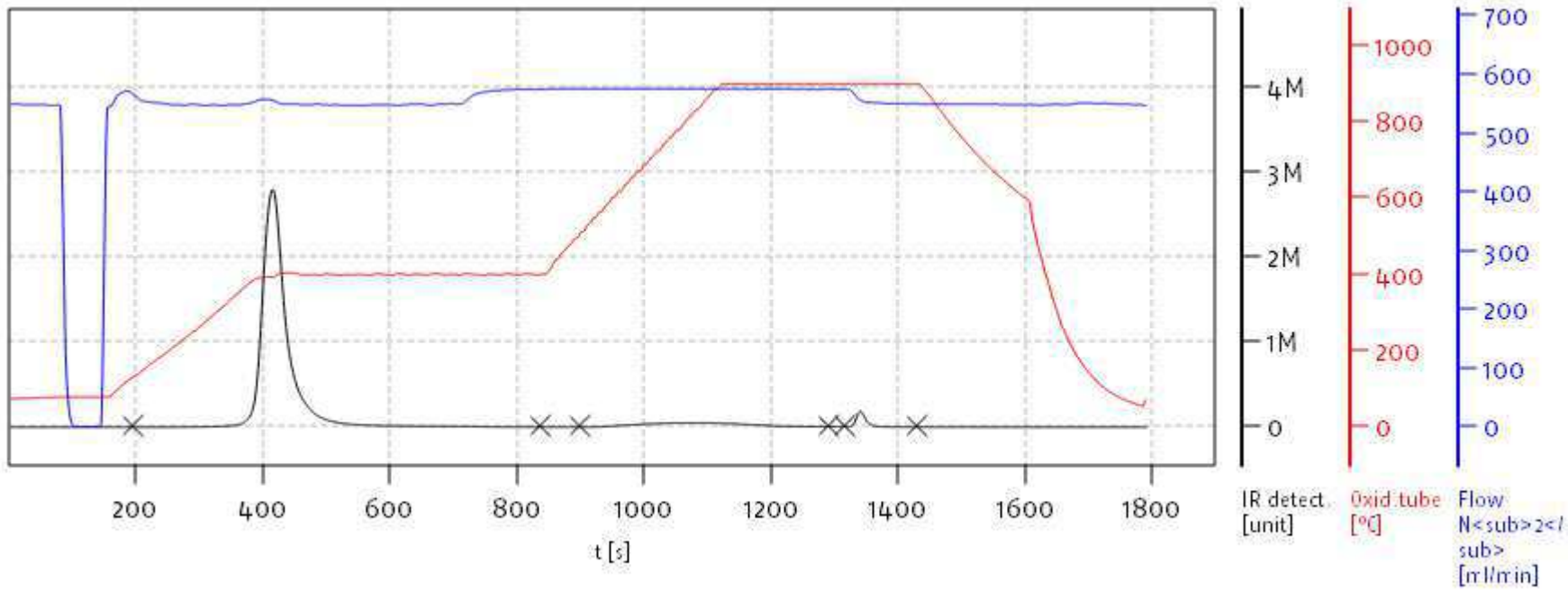
Access: soliTOC superuser

Date: Thu Jan 26 11:30:20 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
23	23	23A0417-07	534.10		CARBON	1/24/2023 2:47 AM	bl	1.330	4 649 871	1.433	0.029	125 835	380 375	1.302	0.103	0.9713	1.0000



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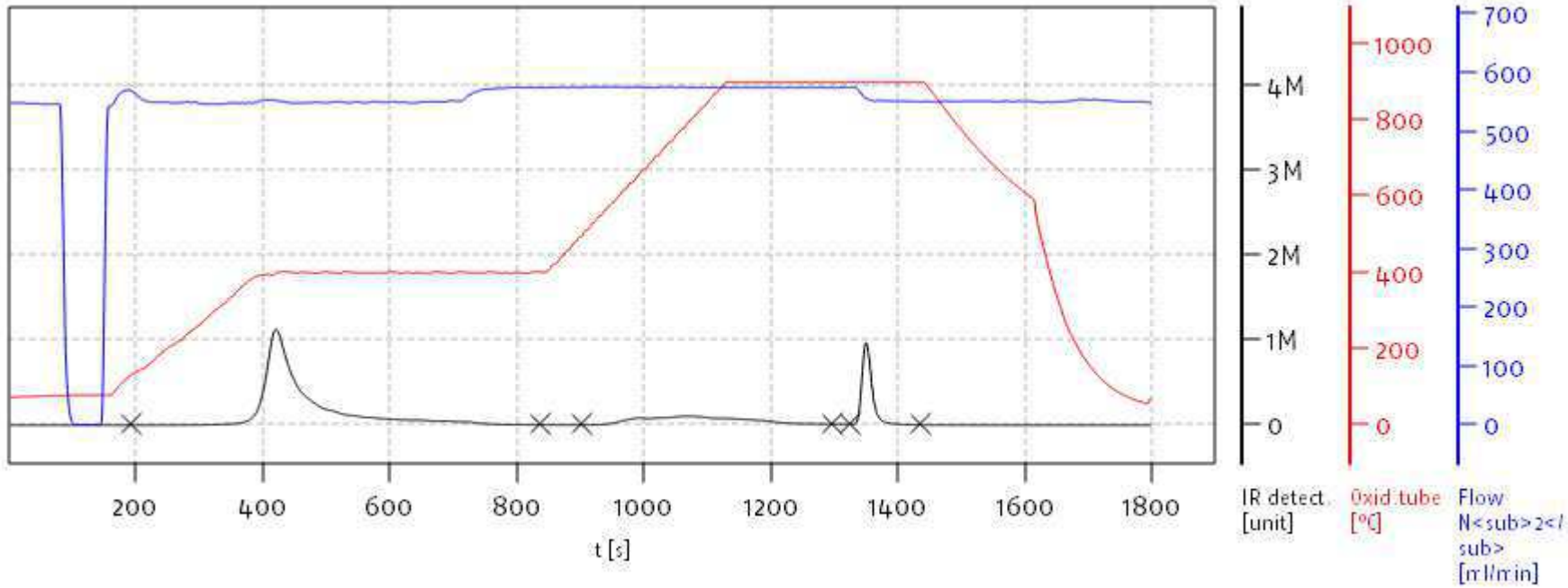
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
24	24	23A0417-08	520.90		CARBON	1/24/2023 3:18 AM	bl	1.056	3 013 492	1.290	0.194	679 922	811 733	0.862	0.233	0.9713	1.0000



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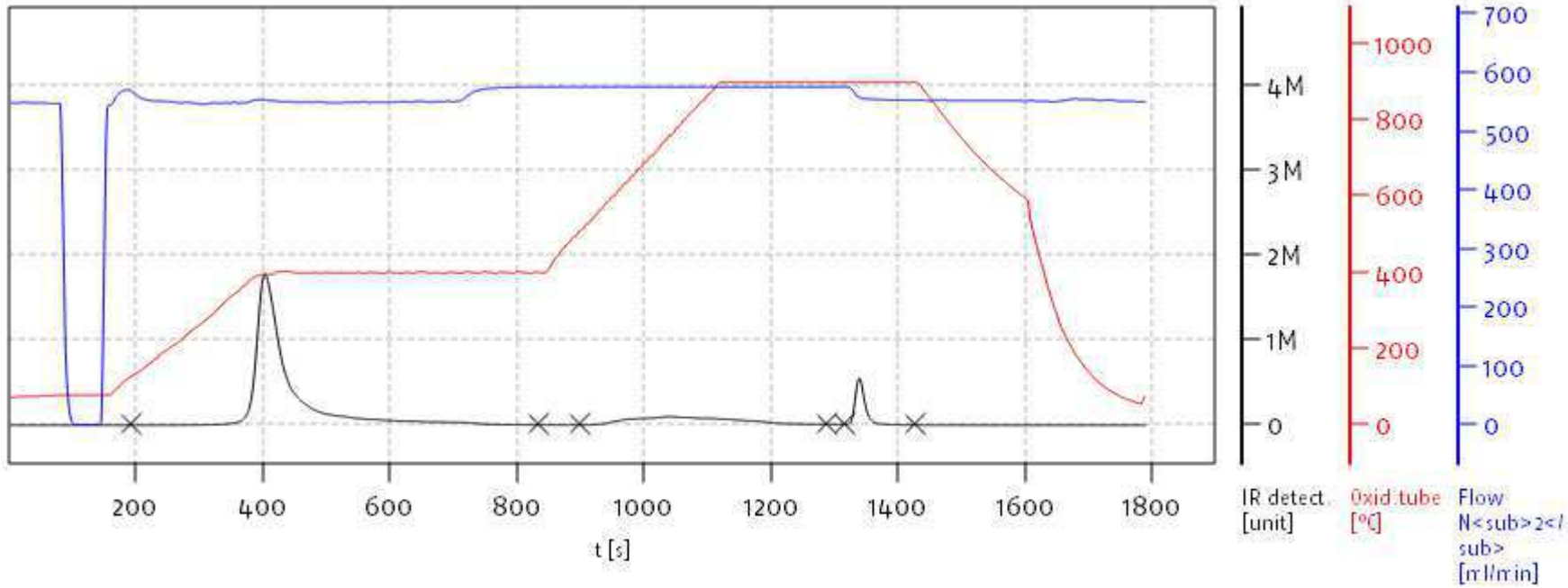
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
25	25	23A0417-09	533.50		CARBON	1/24/2023 3:48 AM	bl	1.135	3 692 506	1.344	0.101	375 619	750 032	1.033	0.210	0.9713	1.0000



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Serial No: 0300.181017
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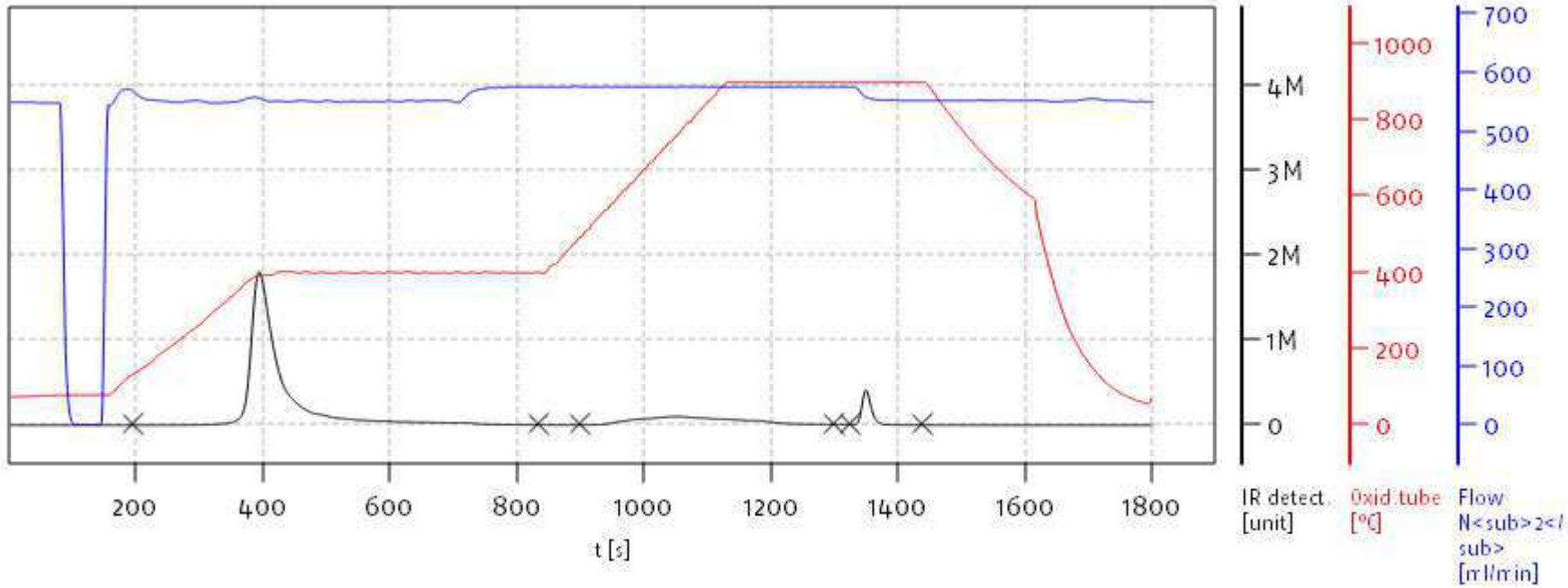
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
26	26	23A0417-10	507.60		CARBON	1/24/2023 4:18 AM	bl	1.121	3 560 683	1.337	0.074	269 169	736 051	1.047	0.216	0.9713	1.0000



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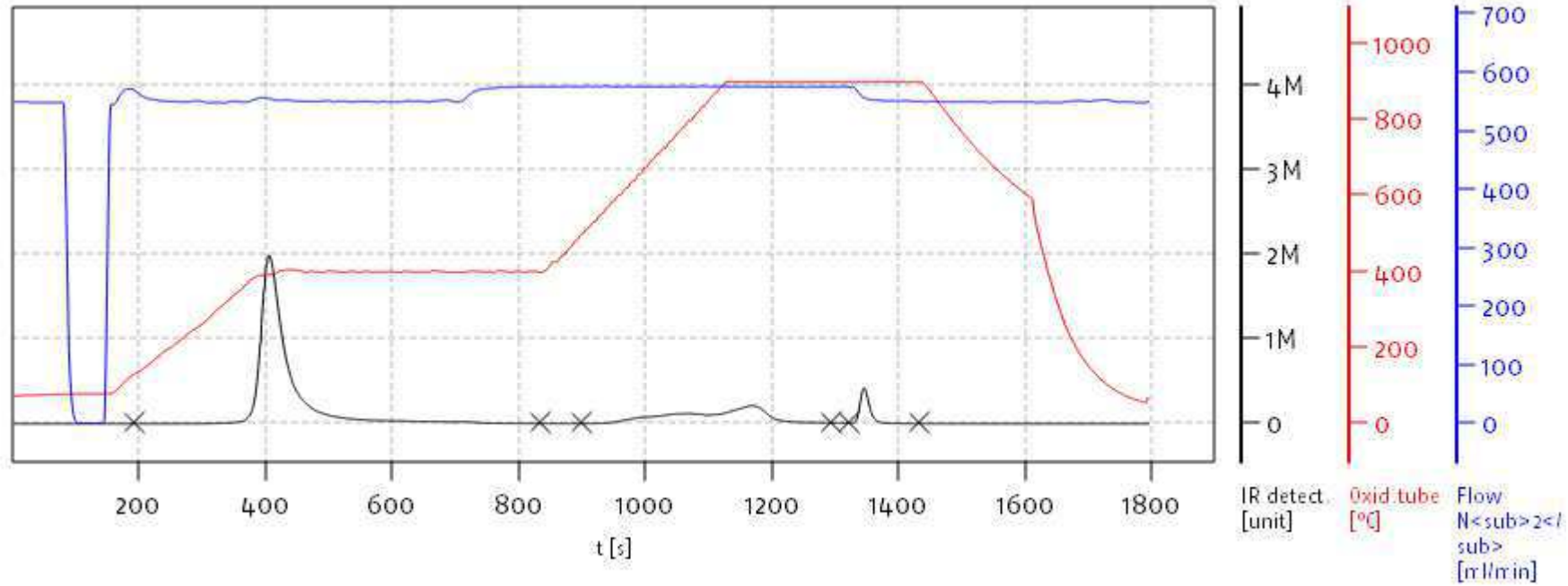
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
27	27	23A0417-11	535.30		CARBON	1/24/2023 4:49 AM	bl	1.083	3 620 348	1.409	0.074	281 788	1 154 369	1.009	0.326	0.9713	1.0000



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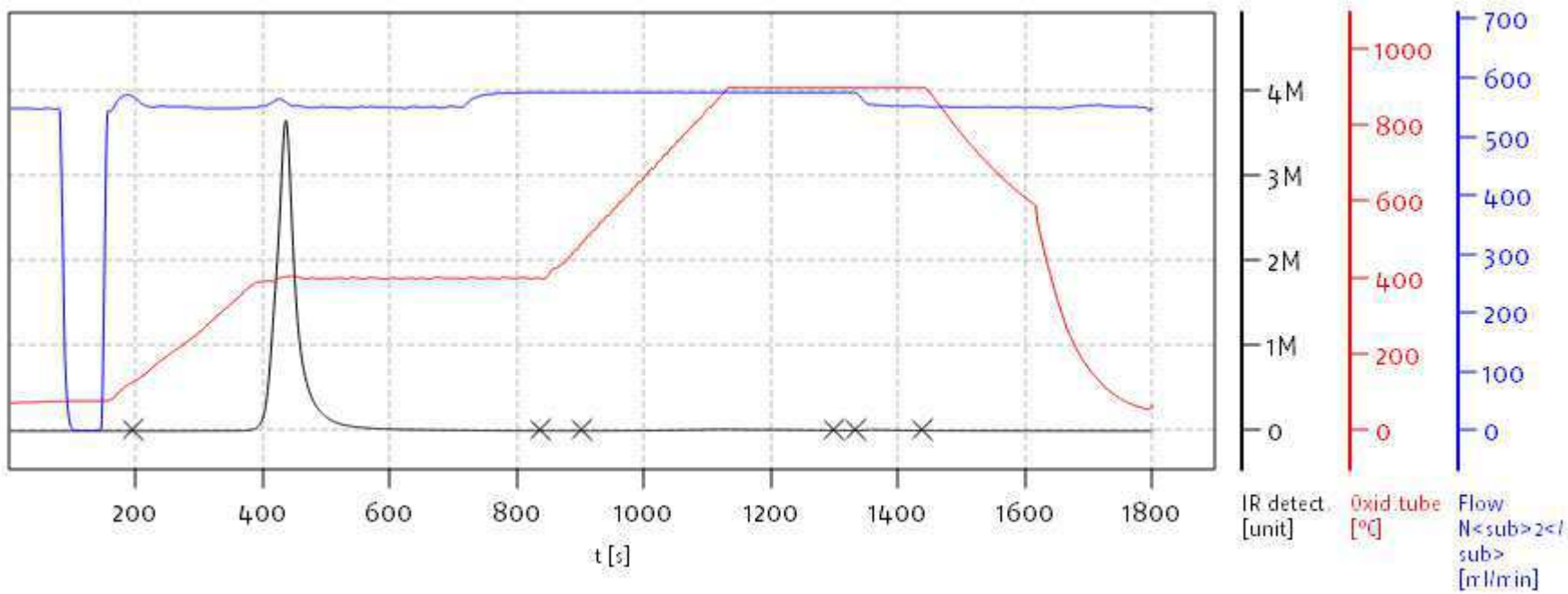
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
28	28	SLA0248-CCV2	18.30		CARBON	1/24/2023 5:19 AM	bl	42.411	5 180 950	43.456	0.059	33 558	150 104	42.352	1.045	0.9713	1.0000



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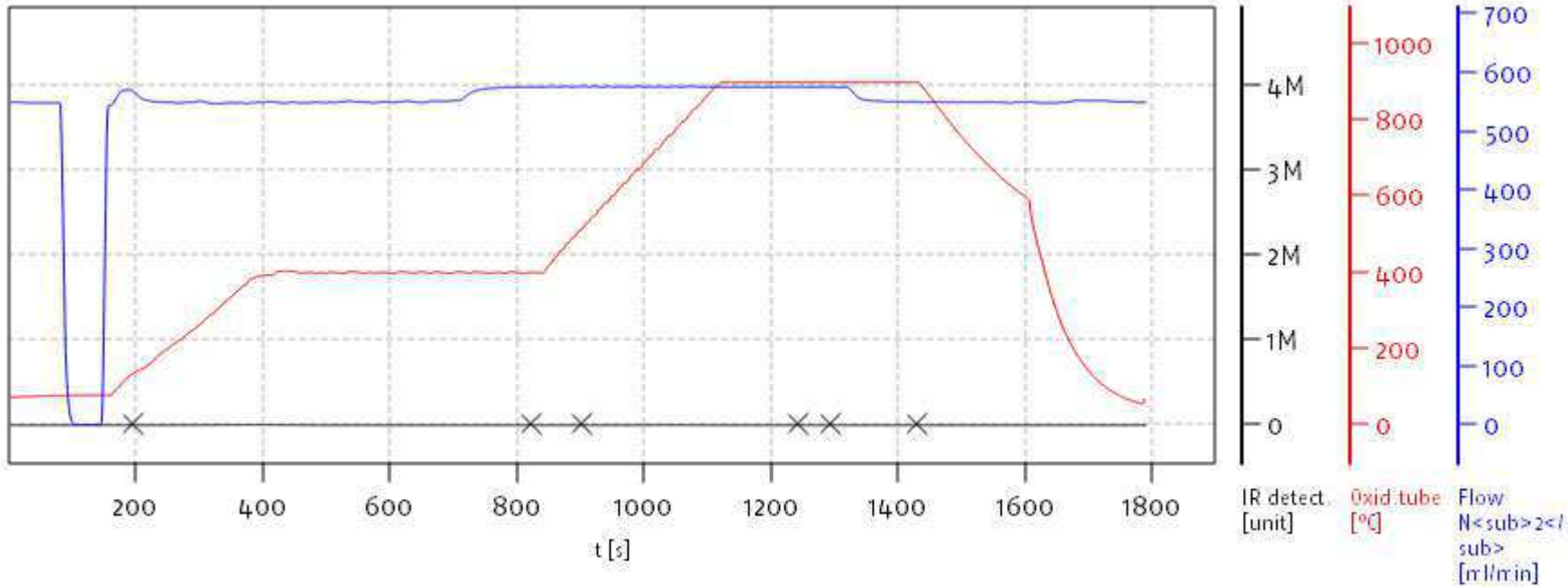
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
29	29	SLA0248-CCB2	507.20		CARBON	1/24/2023 5:49 AM	bl,C2u	0.000	21 088	0.000	0.000	755	5 520	0.000	0.000	0.9713	1.0000



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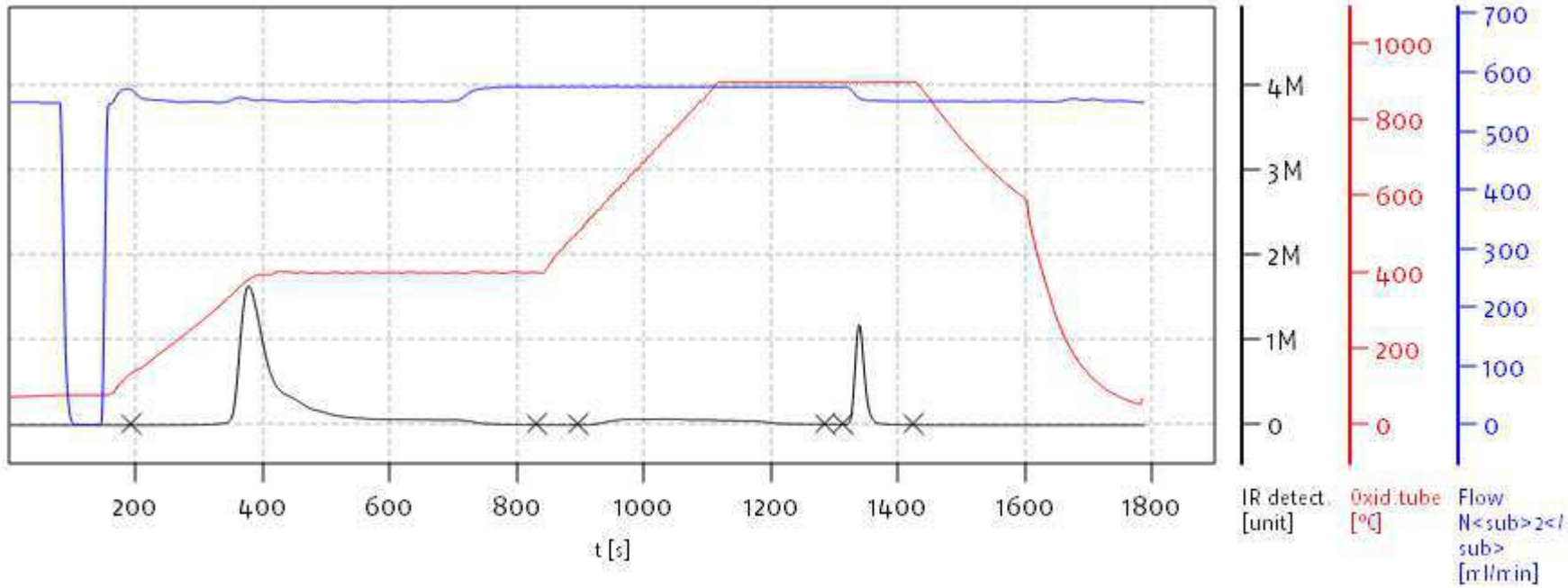
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
30	30	23A0417-12	603.80		CARBON	1/24/2023 6:19 AM	bl	1.211	4 113 045	1.367	0.193	779 716	637 049	1.018	0.157	0.9713	1.0000



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Balance: BAL3
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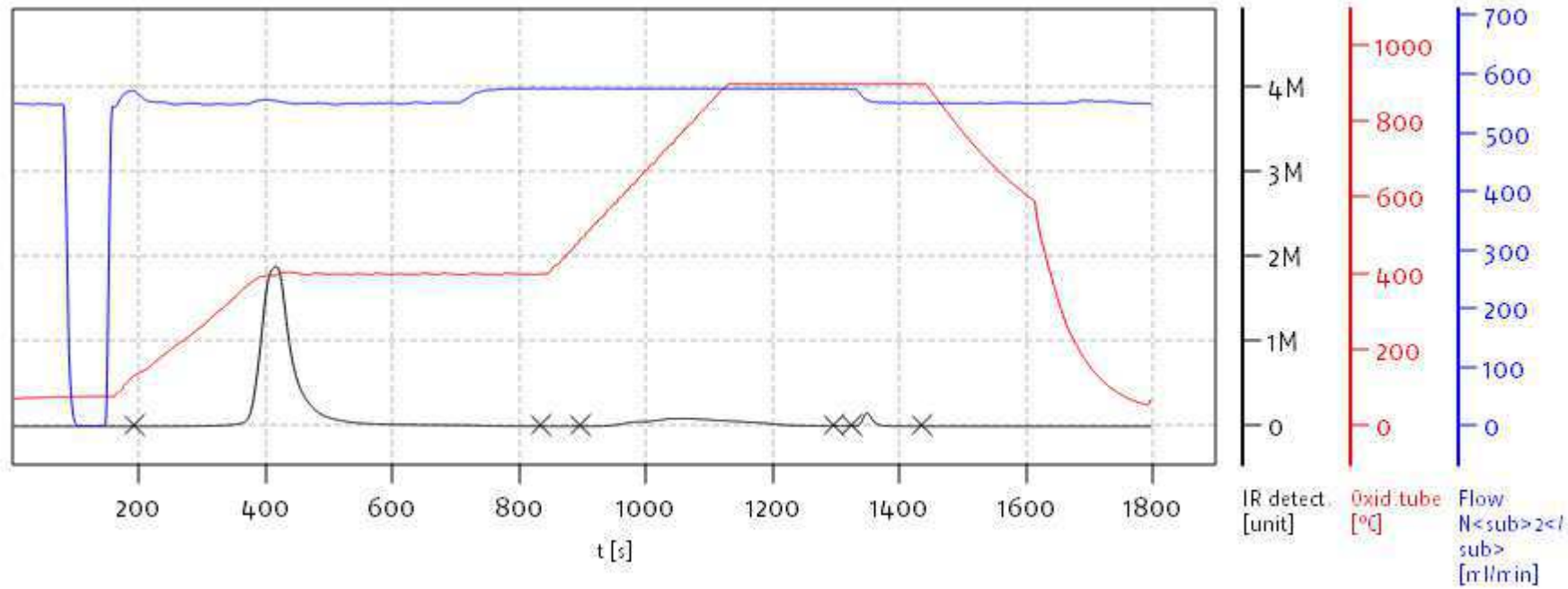
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
31	31	23A0417-13	561.40		CARBON	1/24/2023 6:50 AM	bl	1.128	4 151 942	1.297	0.023	109 546	639 394	1.105	0.169	0.9713	1.0000



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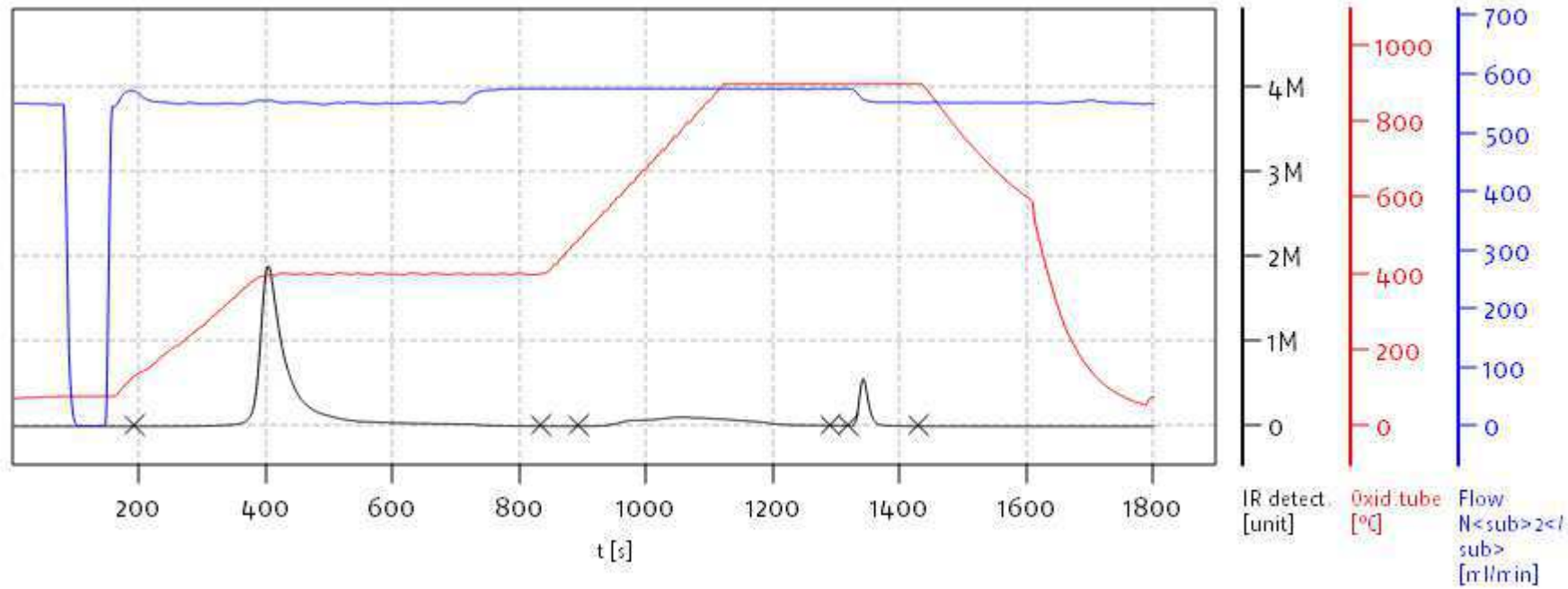
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
32	32	23A0417-14	504.30		CARBON	1/24/2023 7:20 AM	bl	1.181	3 632 357	1.419	0.106	370 920	801 586	1.075	0.238	0.9713	1.0000



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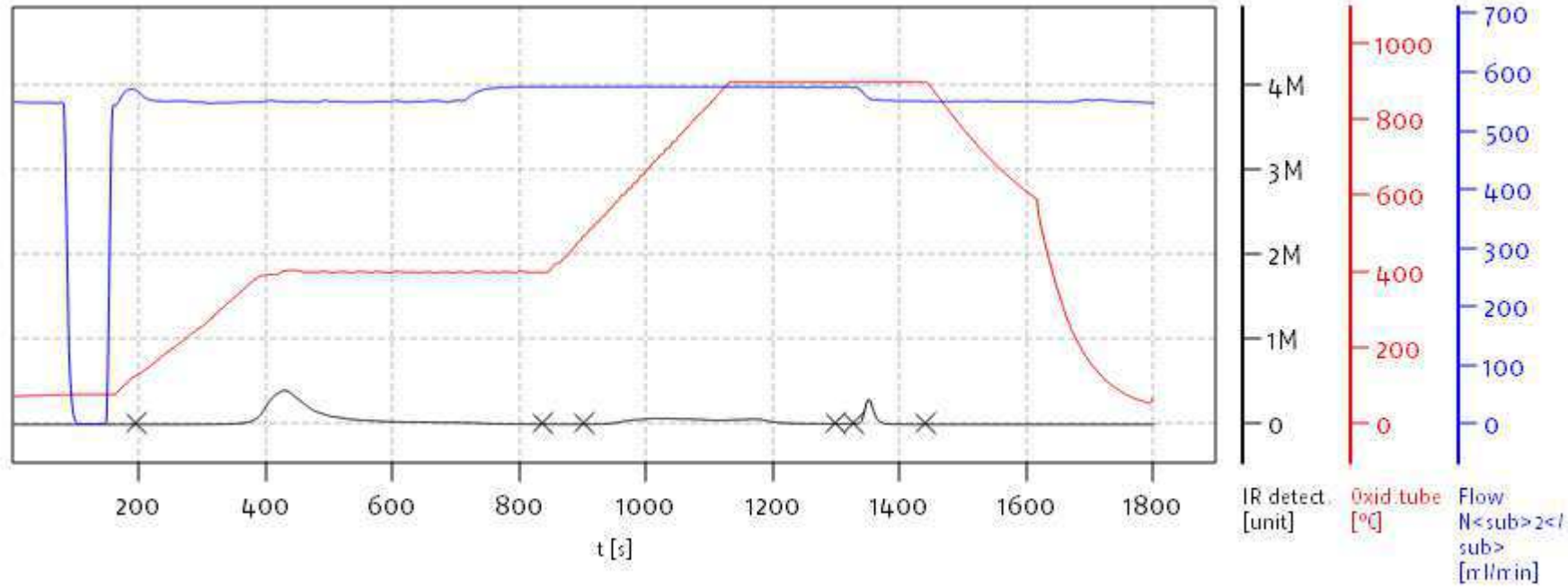
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
33	33	23A0417-15	522.10		CARBON	1/24/2023 7:51 AM	bl	0.462	1 461 072	0.625	0.049	192 083	575 350	0.413	0.163	0.9713	1.0000



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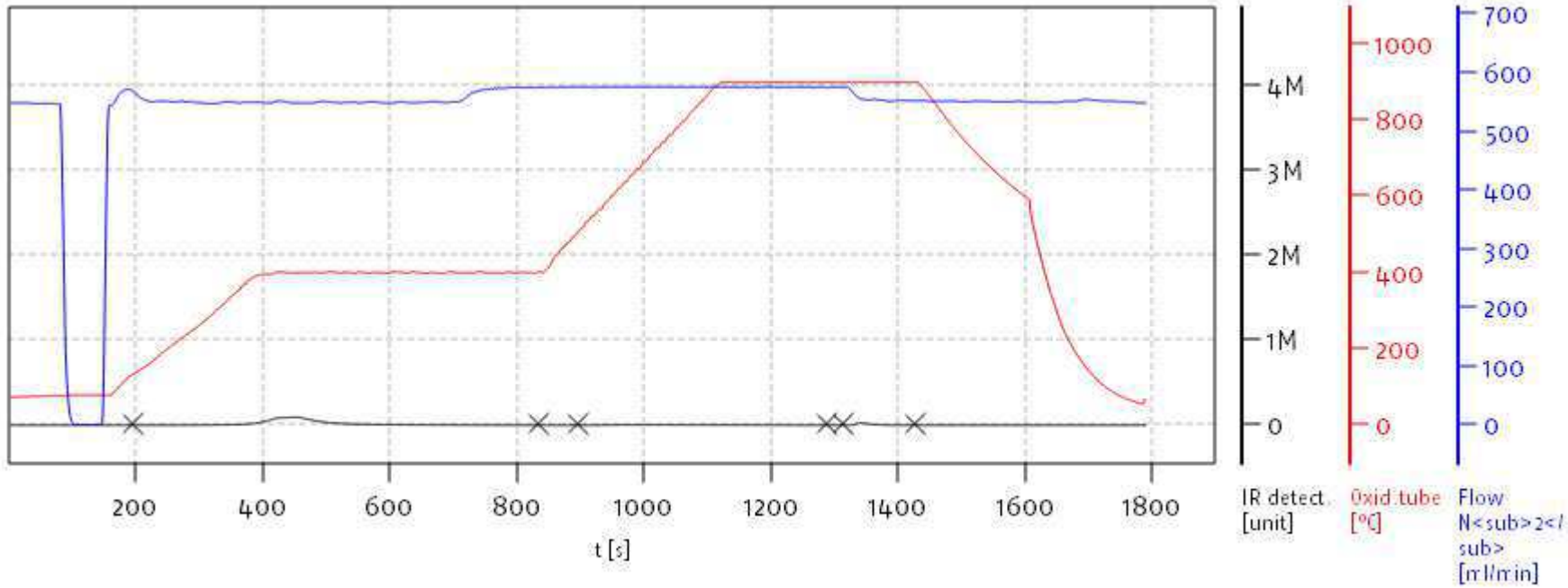
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
34	34	23A0418-01	584.30		CARBON	1/24/2023 8:21 AM	bl	0.090	375 658	0.091	0.000	24 619	31 807	0.090	0.001	0.9713	1.0000



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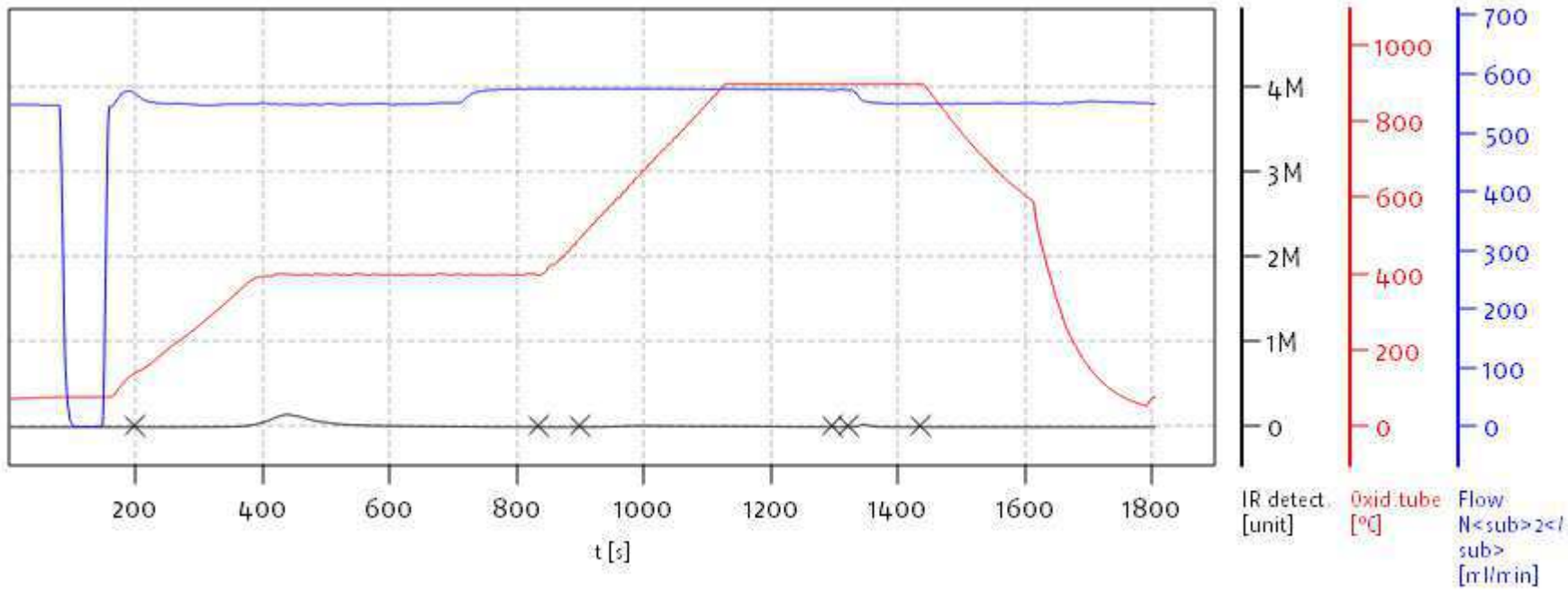
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
35	35	23A0418-02	568.90		CARBON	1/24/2023 8:51 AM	bl	0.145	576 504	0.169	0.000	25 191	111 873	0.145	0.023	0.9713	1.0000



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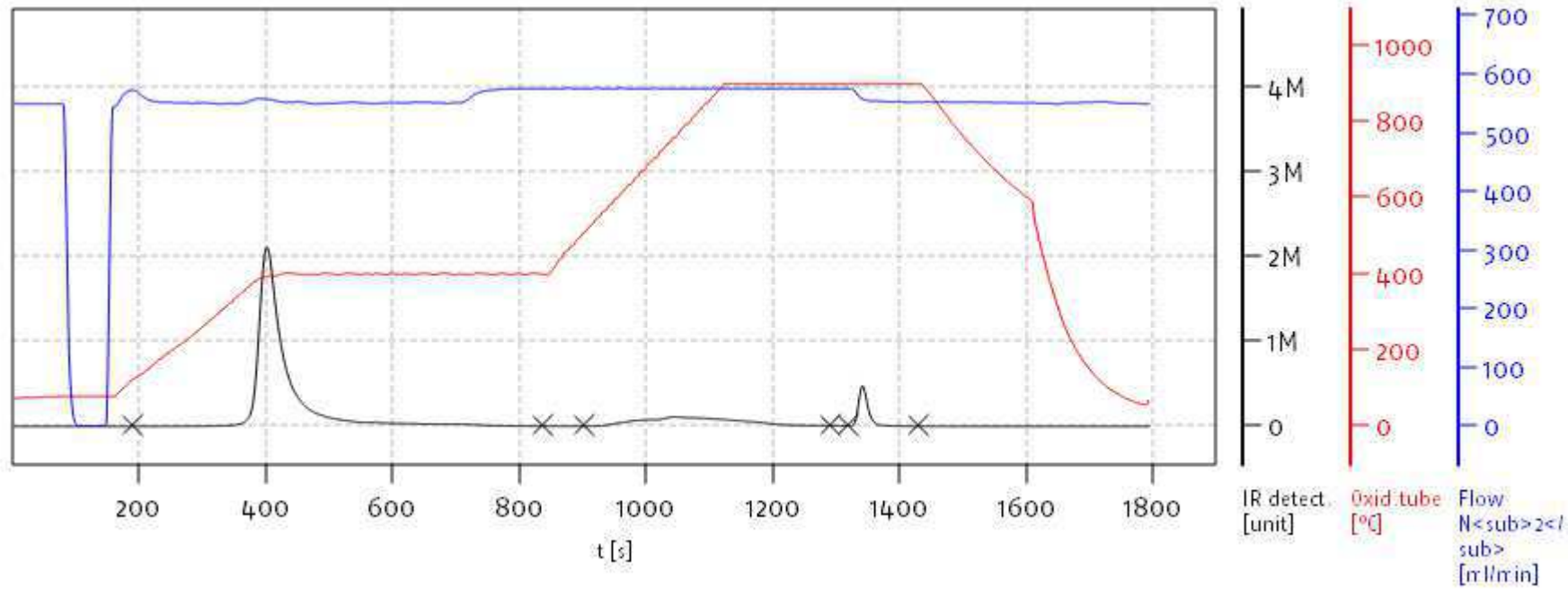
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
36	36	23A0418-03	525.30		CARBON	1/24/2023 9:22 AM	bl	1.158	3 773 077	1.377	0.085	315 974	770 874	1.072	0.219	0.9713	1.0000



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Balance: BAL3
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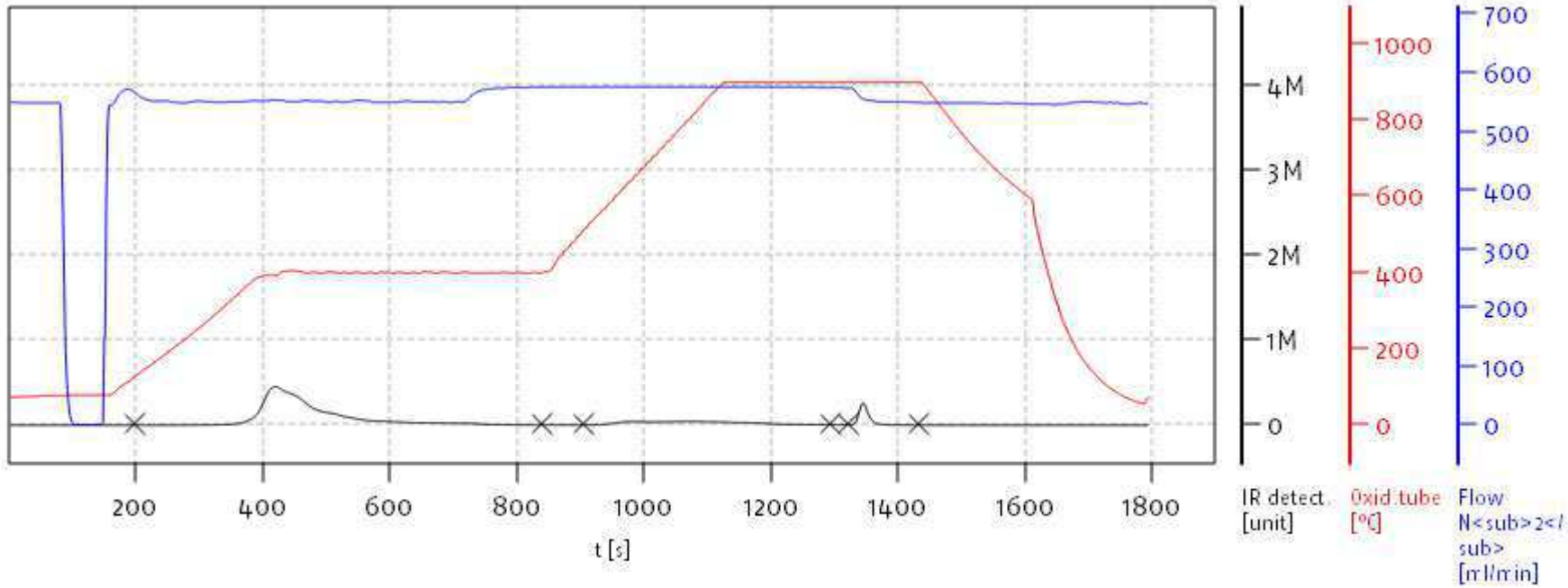
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
37	37	23A0418-04	501.00		CARBON	1/24/2023 9:52 AM		0.574	1 786 164	0.680	0.046	175 502	369 065	0.528	0.106	0.9713	1.0000



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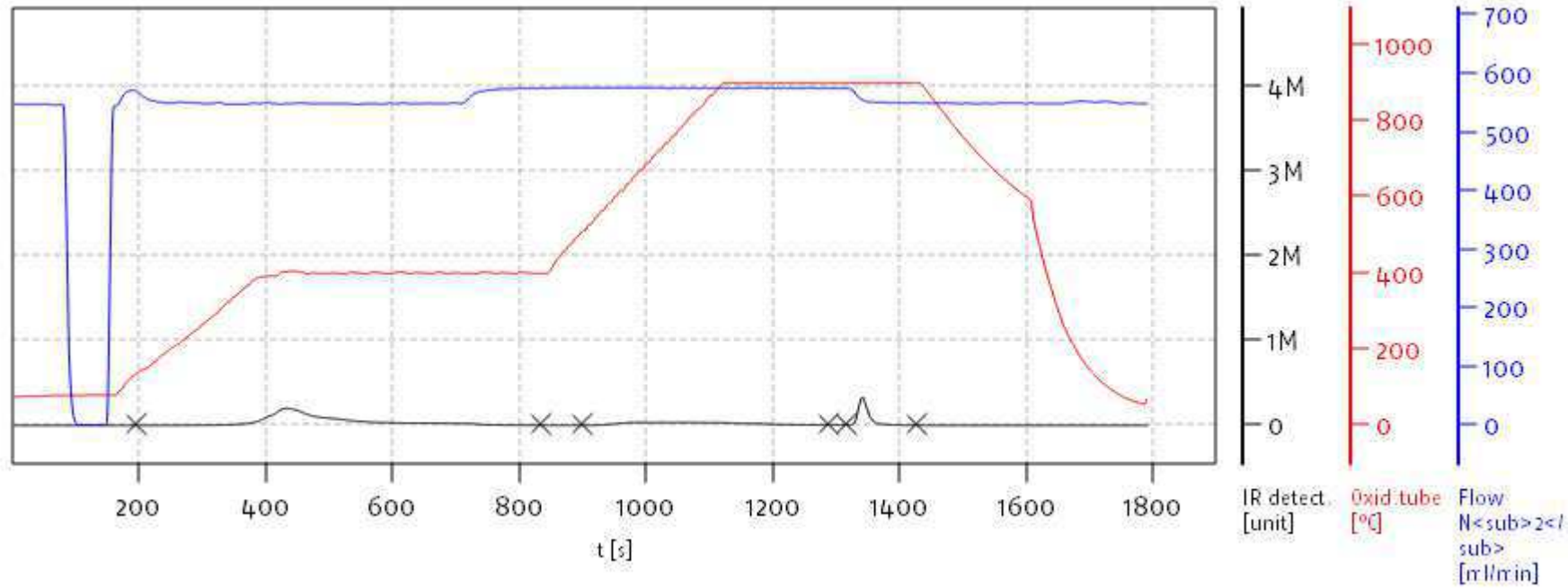
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
38	38	23A0418-05	505.00		CARBON	1/24/2023 10:22 AM	bl	0.336	940 508	0.422	0.064	233 922	307 987	0.272	0.086	0.9713	1.0000



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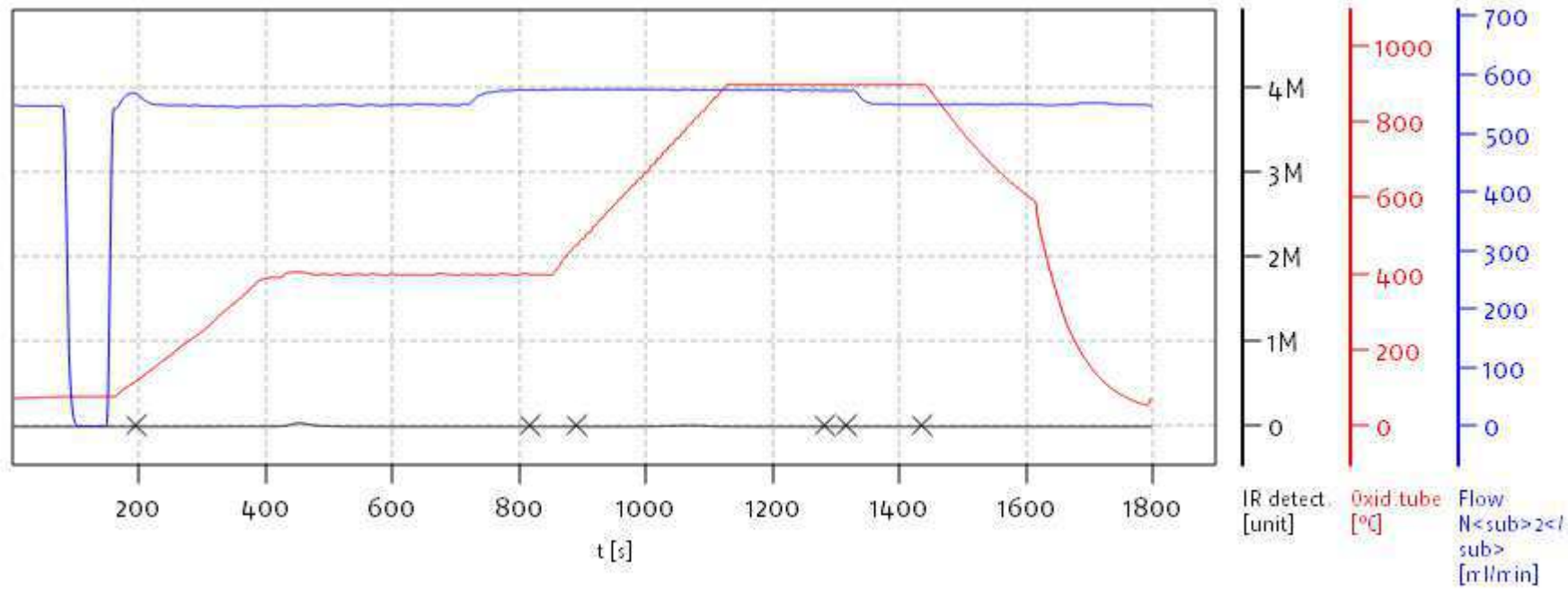
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
39	39	BLA0527-MRL1	518.90		CARBON	1/24/2023 10:53 AM	bl,C2u	0.013	71 947	0.016	0.000	281	35 716	0.013	0.003	0.9713	1.0000



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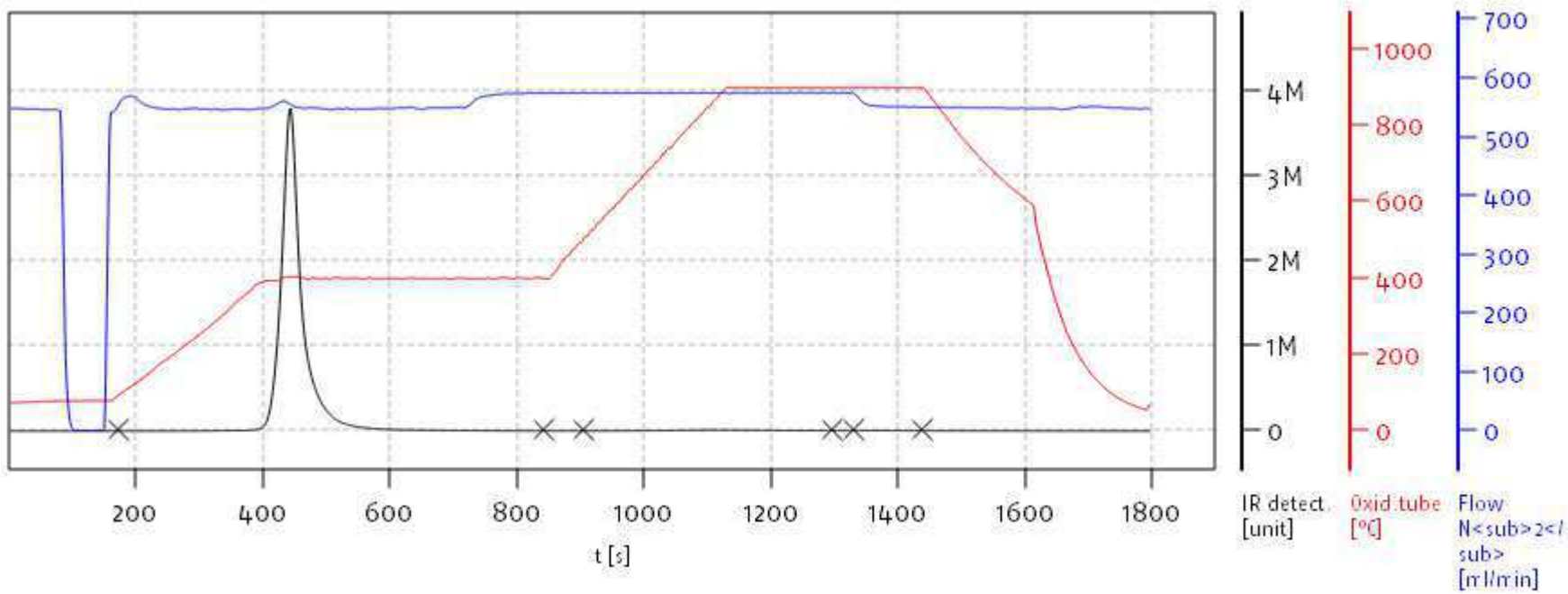
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
40	40	SLA0248-CCV3	18.40		CARBON	1/24/2023 11:23 AM	bl	43.515	5 351 464	44.093	0.000	20 432	95 190	43.515	0.578	0.9713	1.0000



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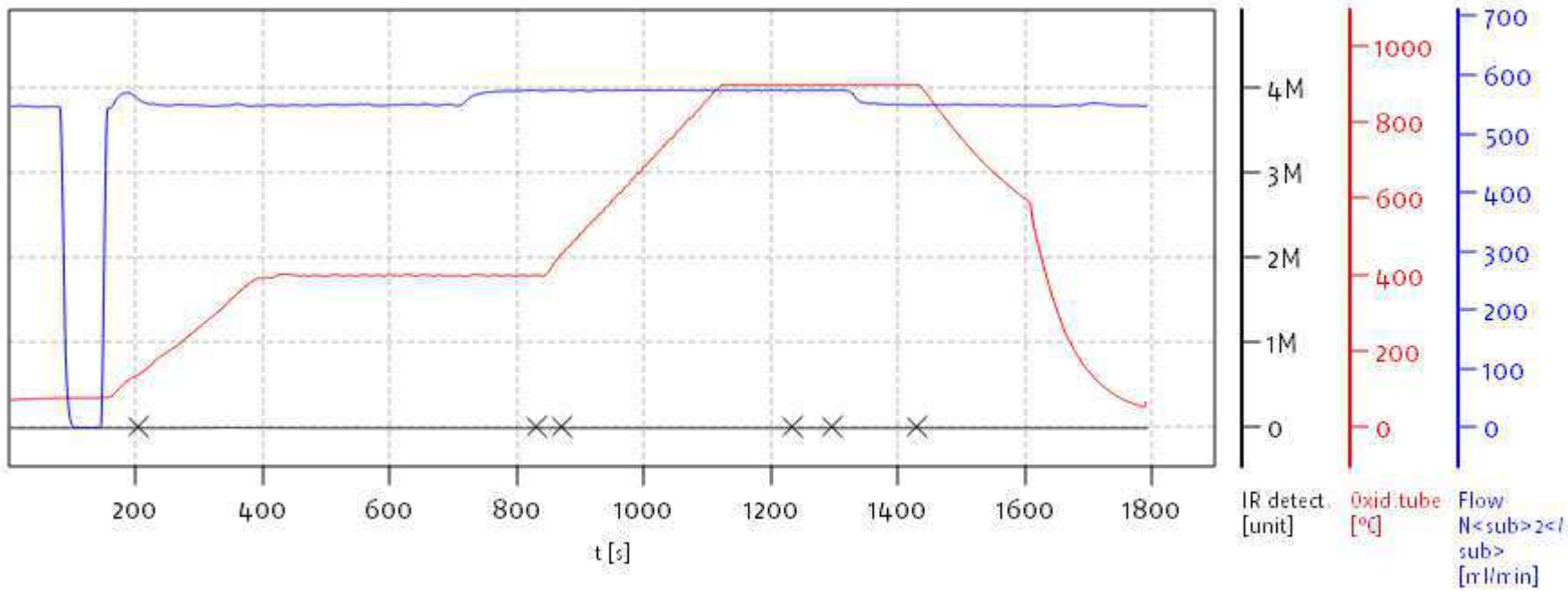
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
41	41	SLA0248-CCB3	509.40		CARBON	1/24/2023 11:53 AM	bl,C3u,C2u	0.000	17 668	0.000	0.000	566	2 045	0.000	0.000	0.9713	1.0000



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Mode CCC

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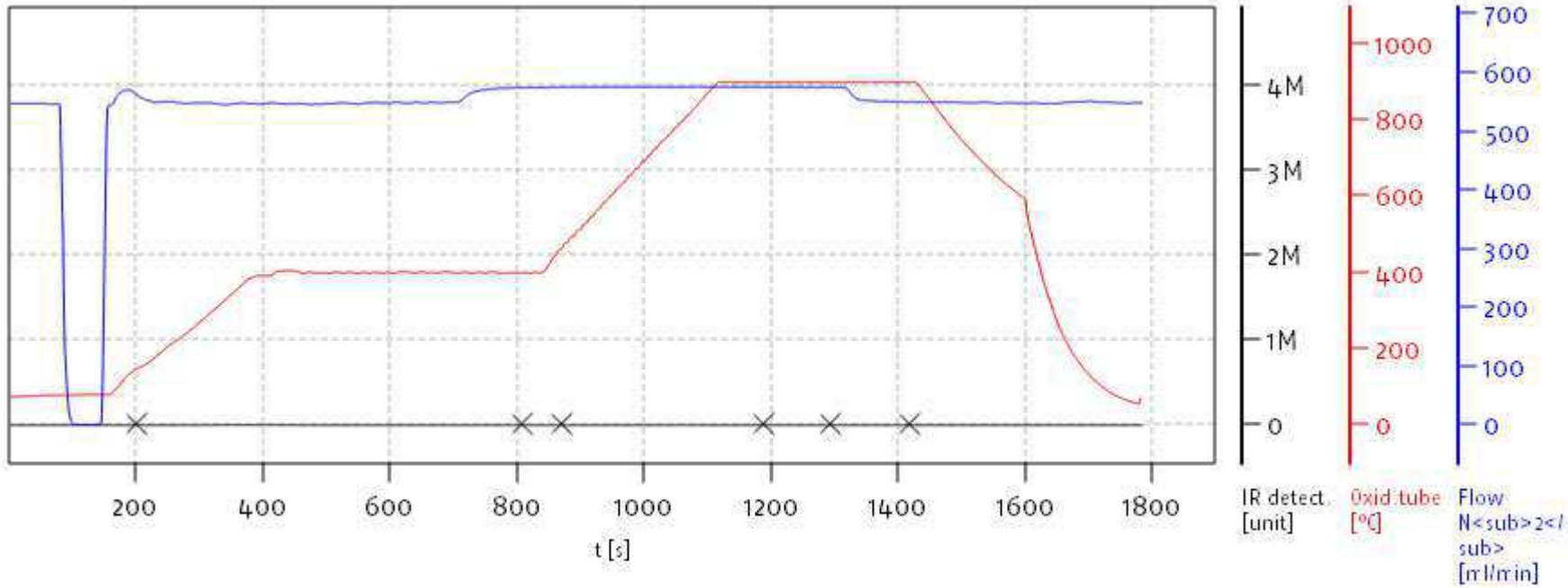
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
42	42	BLA0527-BLK1	520.40		CARBON	1/24/2023 12:23 PM	bl,C2u	0.000	13 395	0.000	0.000	786	2 876	0.000	0.000	0.9713	1.0000



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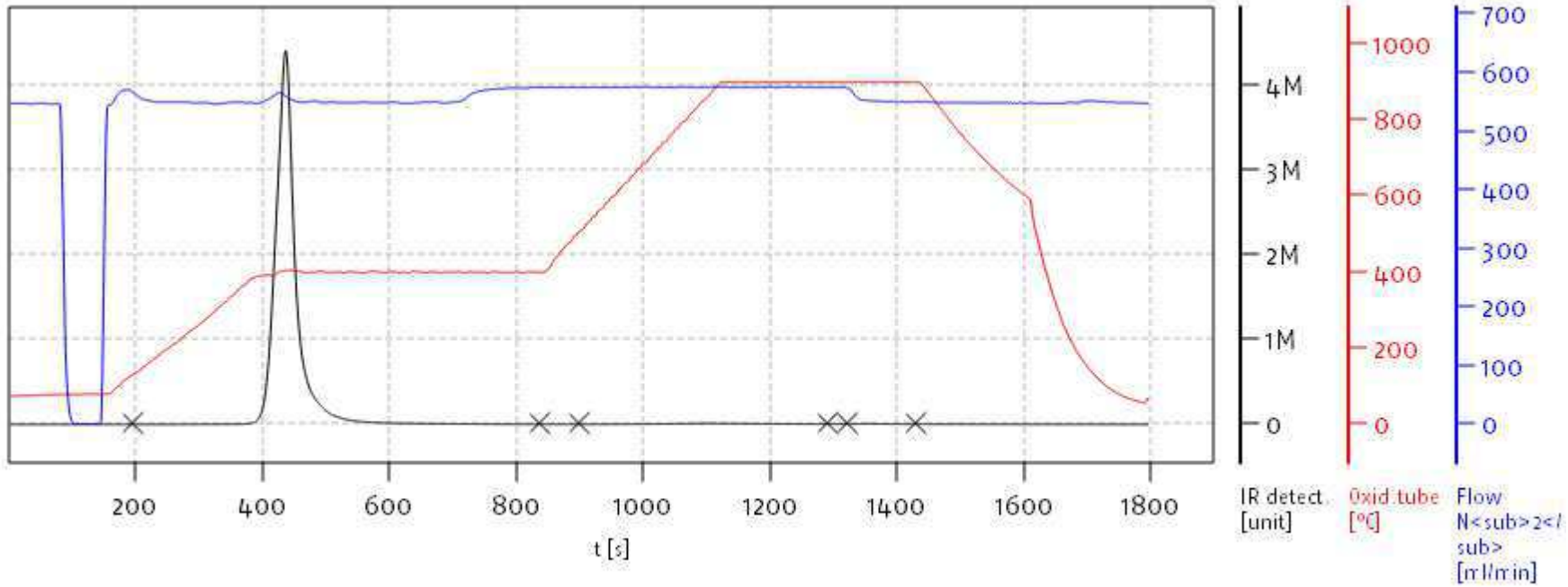
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
43	43	BLA0527-BS1	20.40		CARBON	1/24/2023 12:54 PM	bl	44.081	6 007 097	44.568	0.000	21 666	90 617	44.081	0.486	0.9713	1.0000



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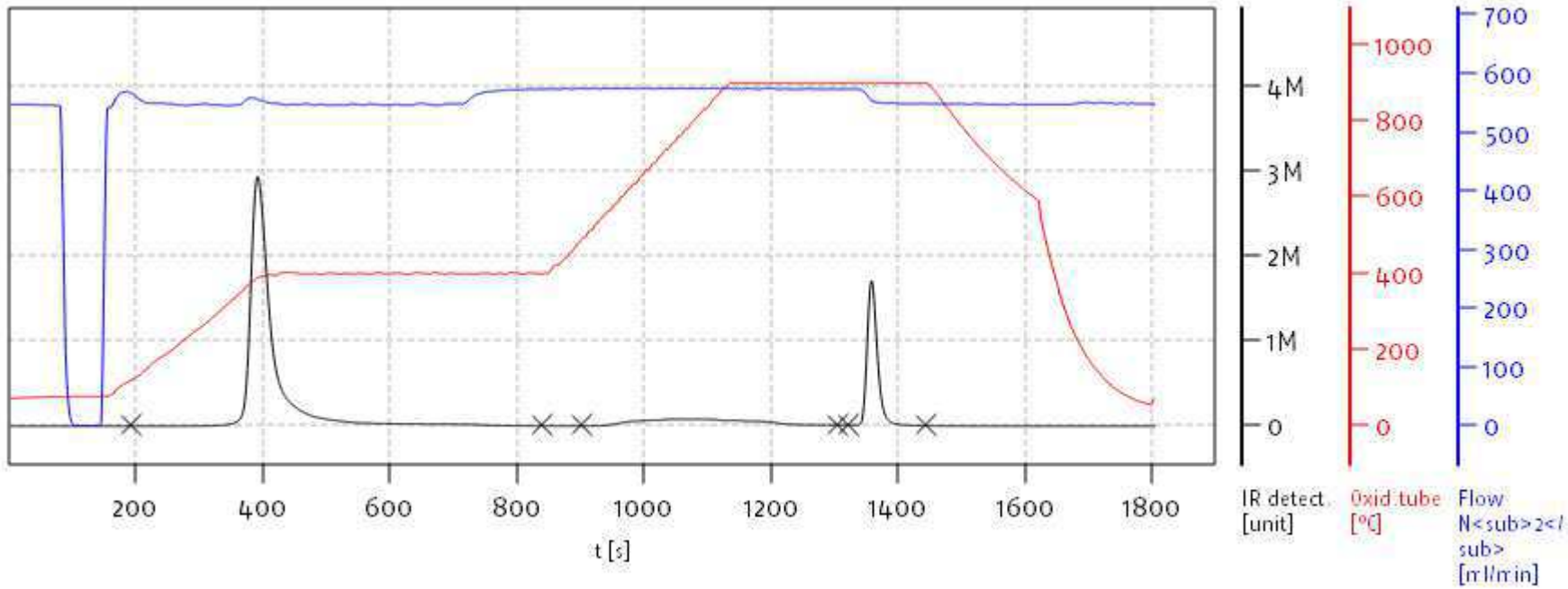
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
44	44	BLA0527-SRM1	281.80		CARBON	1/24/2023 1:24 PM	bl	2.940	4 308 791	3.314	0.655	1 219 661	706 221	2.285	0.373	0.9713	1.0000



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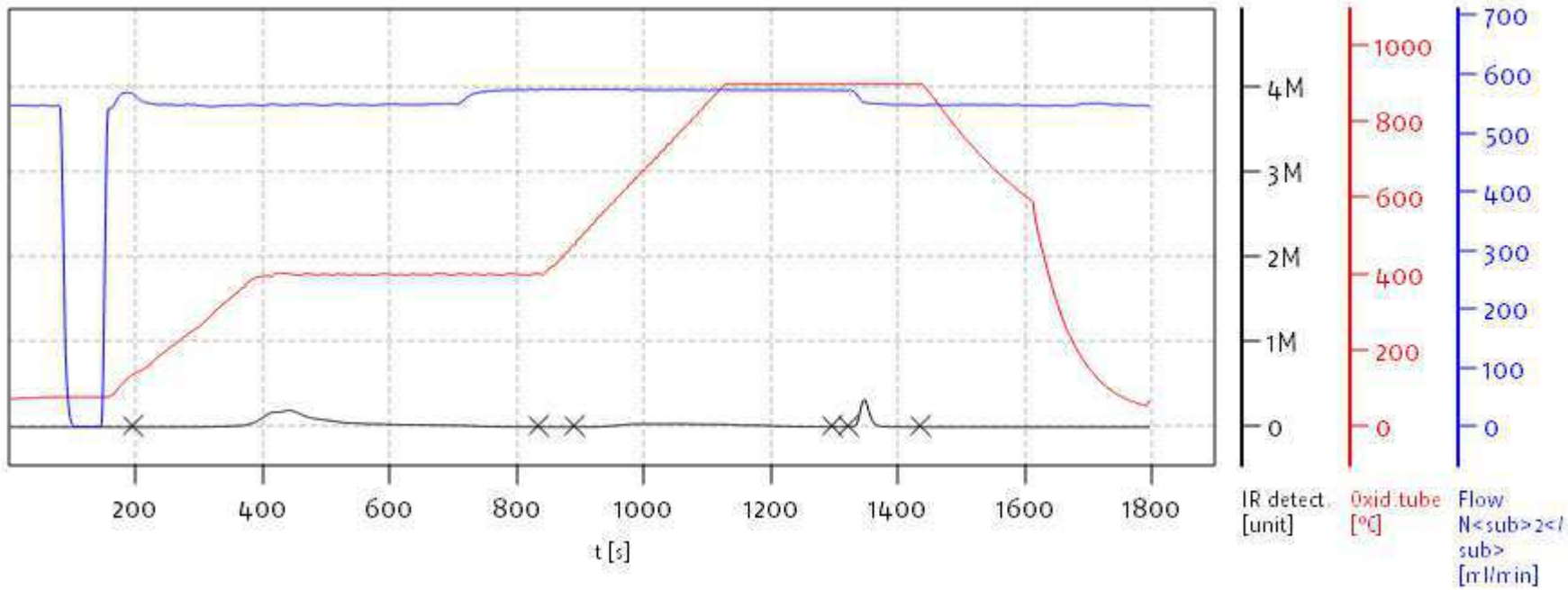
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
45	45	23A0418-06	547.90		CARBON	1/24/2023 1:54 PM	bl	0.306	951 233	0.388	0.052	211 425	318 302	0.254	0.082	0.9713	1.0000



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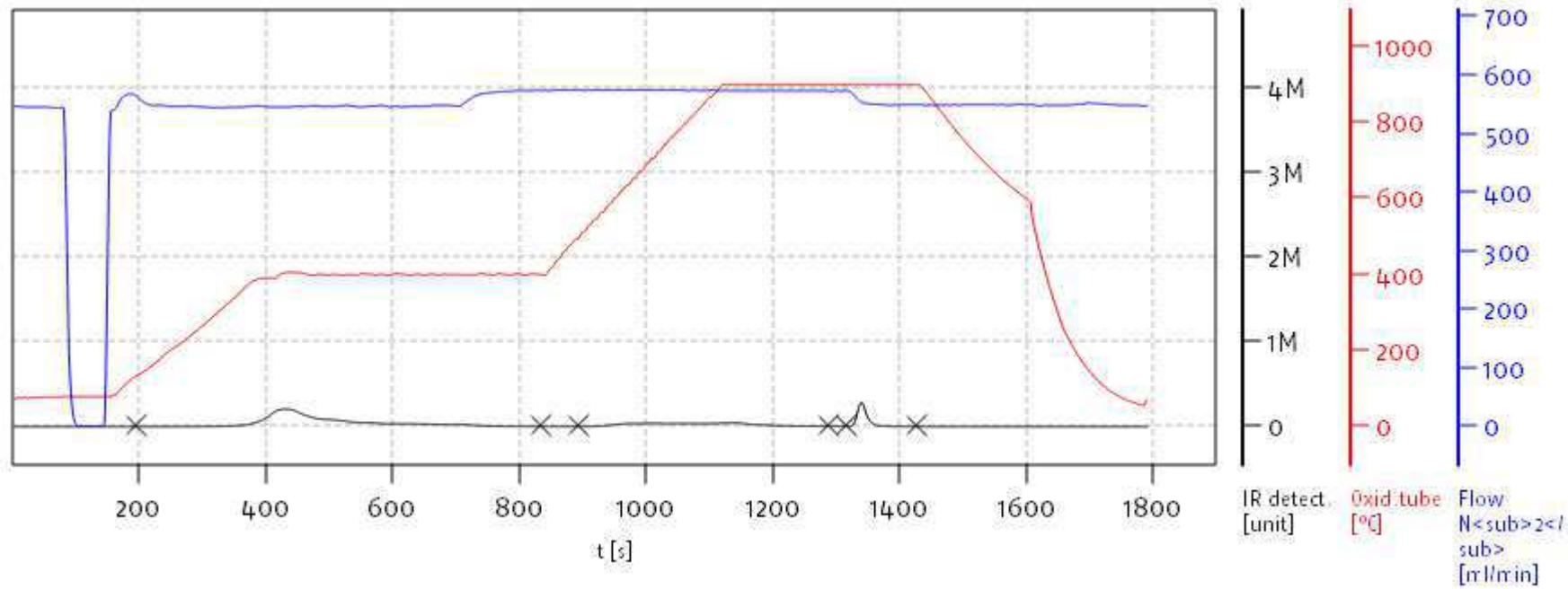
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
46	46	BLA0527-DUP1	532.60		CARBON	1/24/2023 2:25 PM	bl	0.319	985 884	0.417	0.049	193 745	361 729	0.271	0.097	0.9713	1.0000



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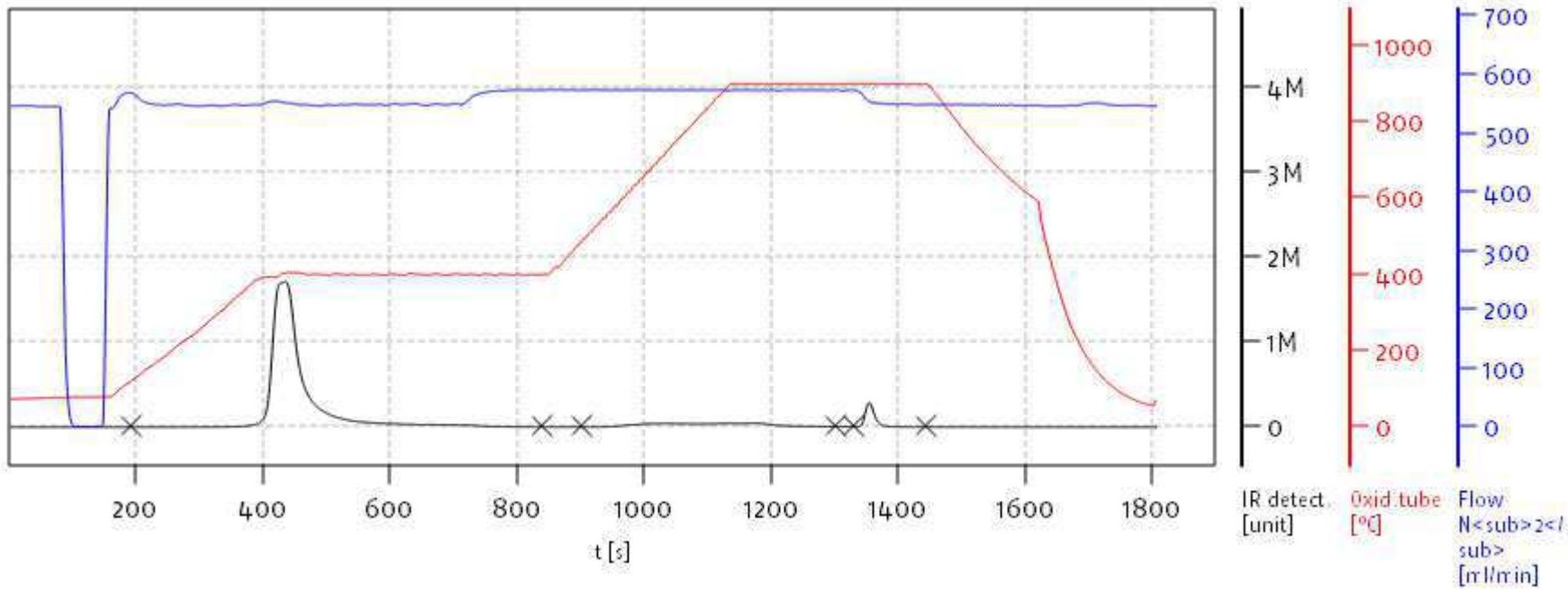
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
47	47	BLA0527-MS1	529.60	0.0086	CARBON	1/24/2023 2:55 PM	bl	1.031	3 488 160	1.139	0.048	189 968	395 784	0.983	0.108	0.9713	1.0000



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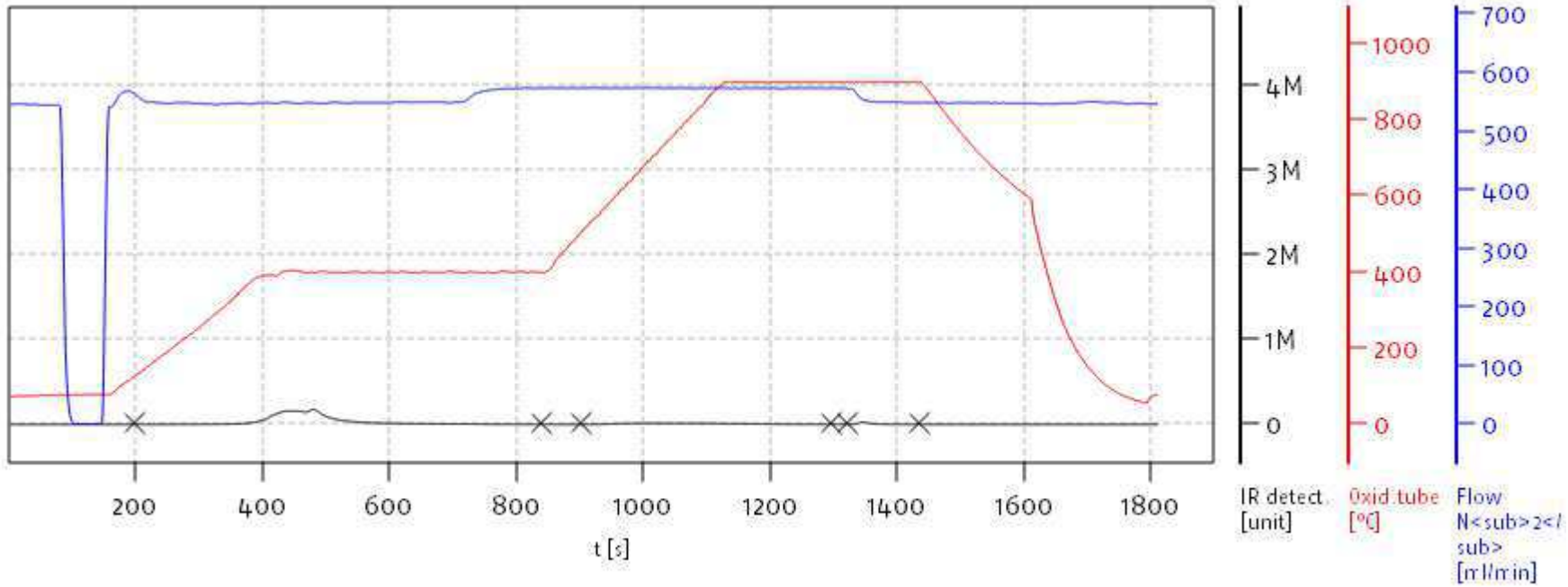
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
48	48	23A0418-07	509.40		CARBON	1/24/2023 3:26 PM	bl	0.207	729 140	0.233	0.000	24 008	110 588	0.207	0.026	0.9713	1.0000



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Balance: BAL3
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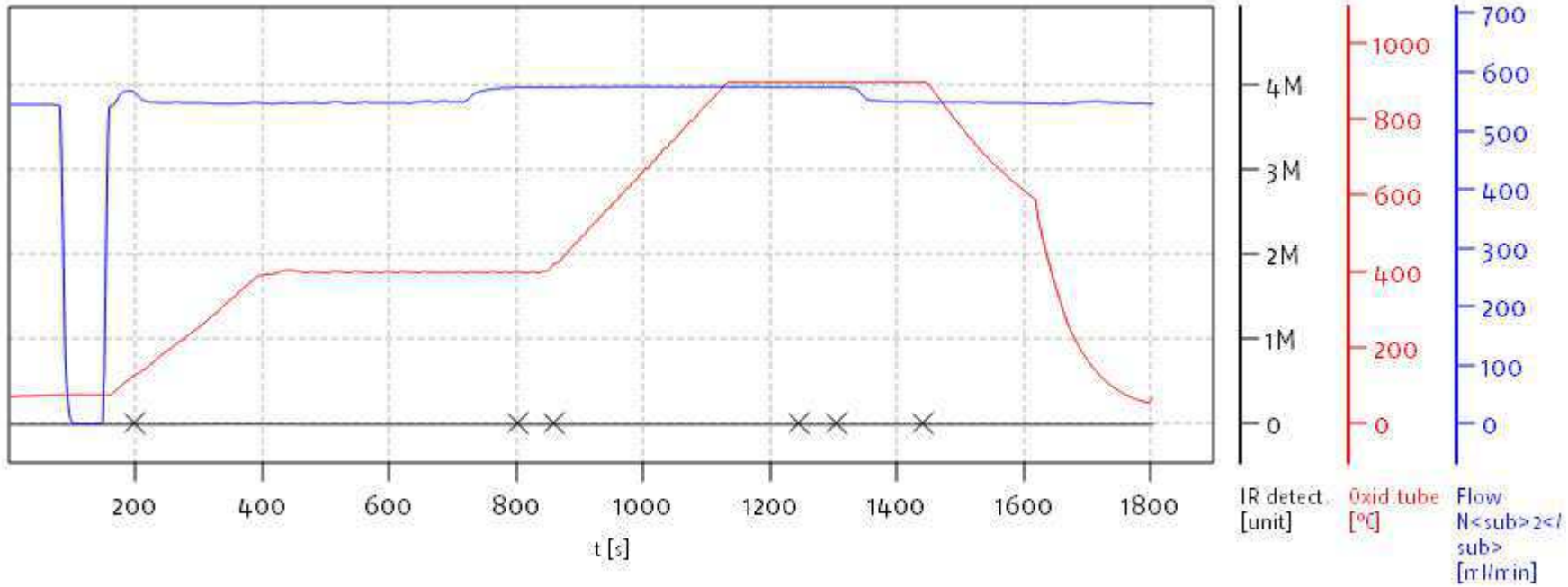
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
49	49	BLANK	1.00		CARBON	1/ 24/2023 3:56 PM	bl	0.000	15 215	0.000	0.000	501	1 464	0.000	0.000	0.9713	1.0000



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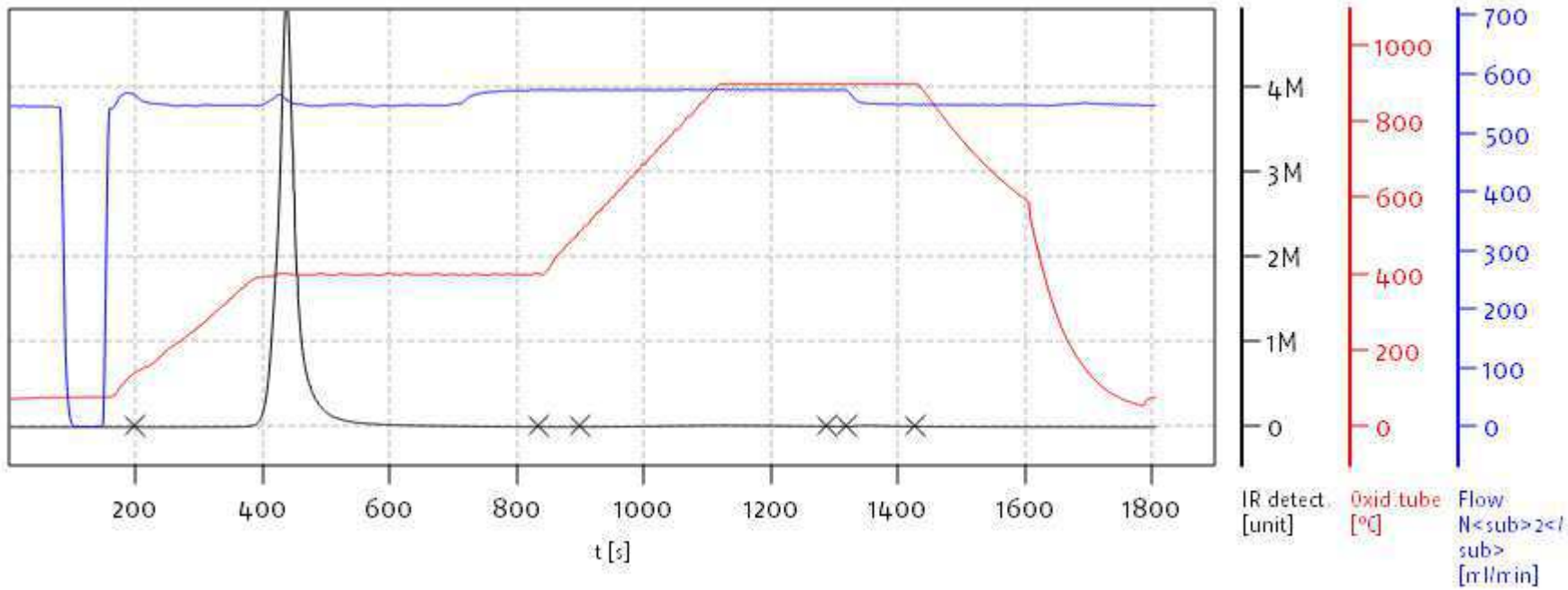
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
50	50	Dfactor	22.40		CARBON	1/24/2023 4:27 PM	bl	44.577	6 396 545	45.551	0.131	45 479	167 520	44.446	0.974	1.0096	1.0000



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Balance: BAL3
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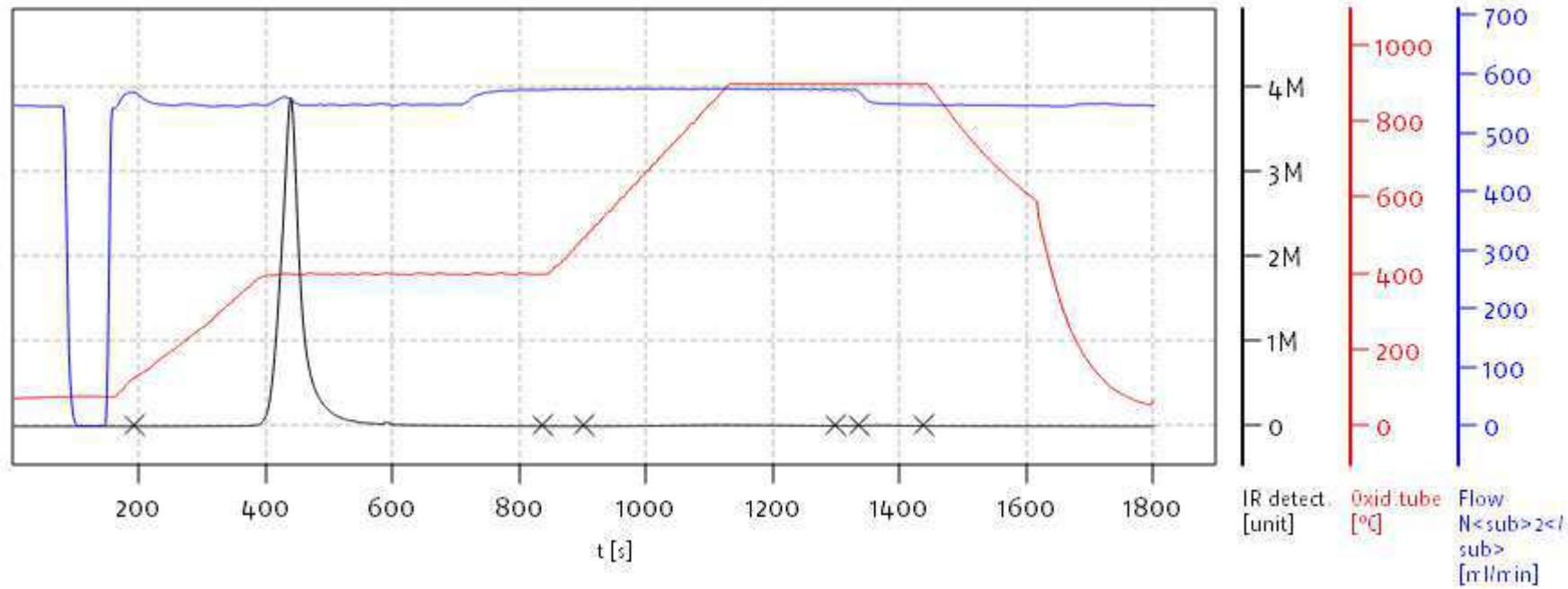
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
51	51	Dfactor	19.00		CARBON	1/24/2023 4:57 PM	bl	44.463	5 474 613	45.280	0.018	28 723	126 814	44.446	0.817	1.0013	1.0000



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Balance: BAL3
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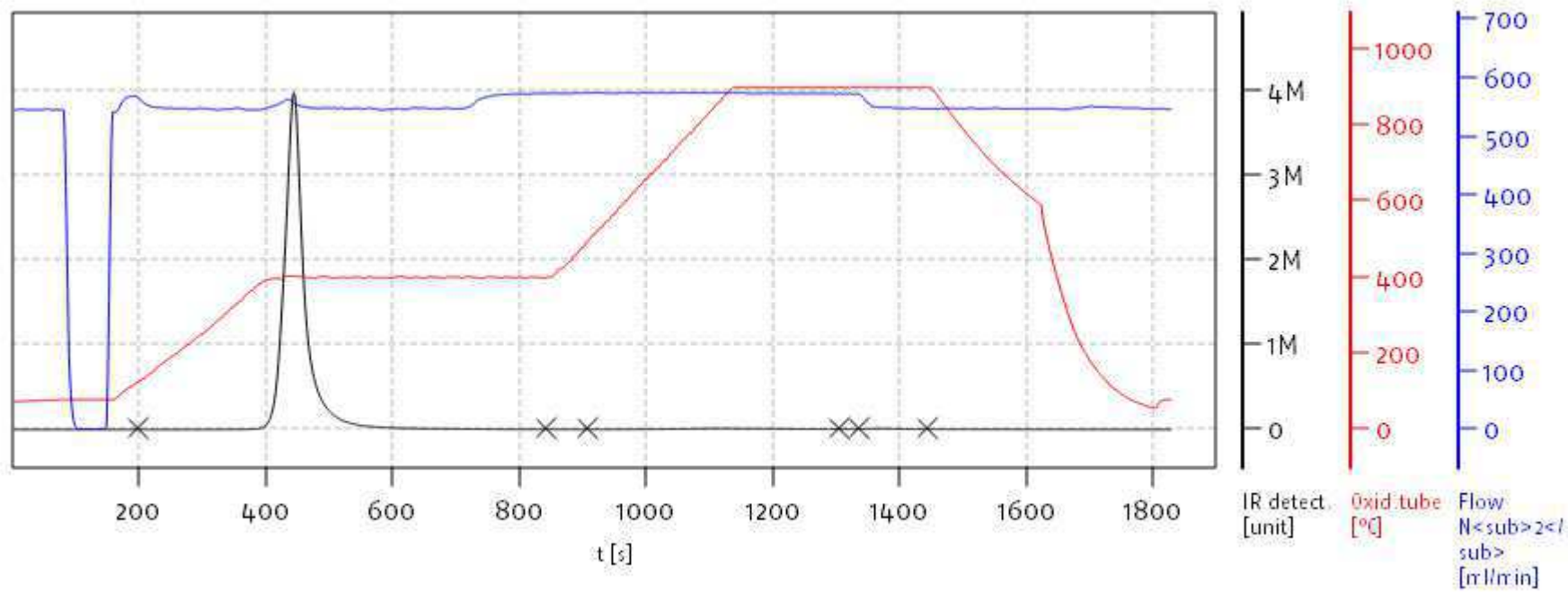
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
52	52	SLA0248-CCV4	19.00		CARBON	1/24/2023 5:28 PM	bl	44.940	5 509 997	45.534	0.019	28 915	99 472	44.920	0.594	1.0055	1.0000



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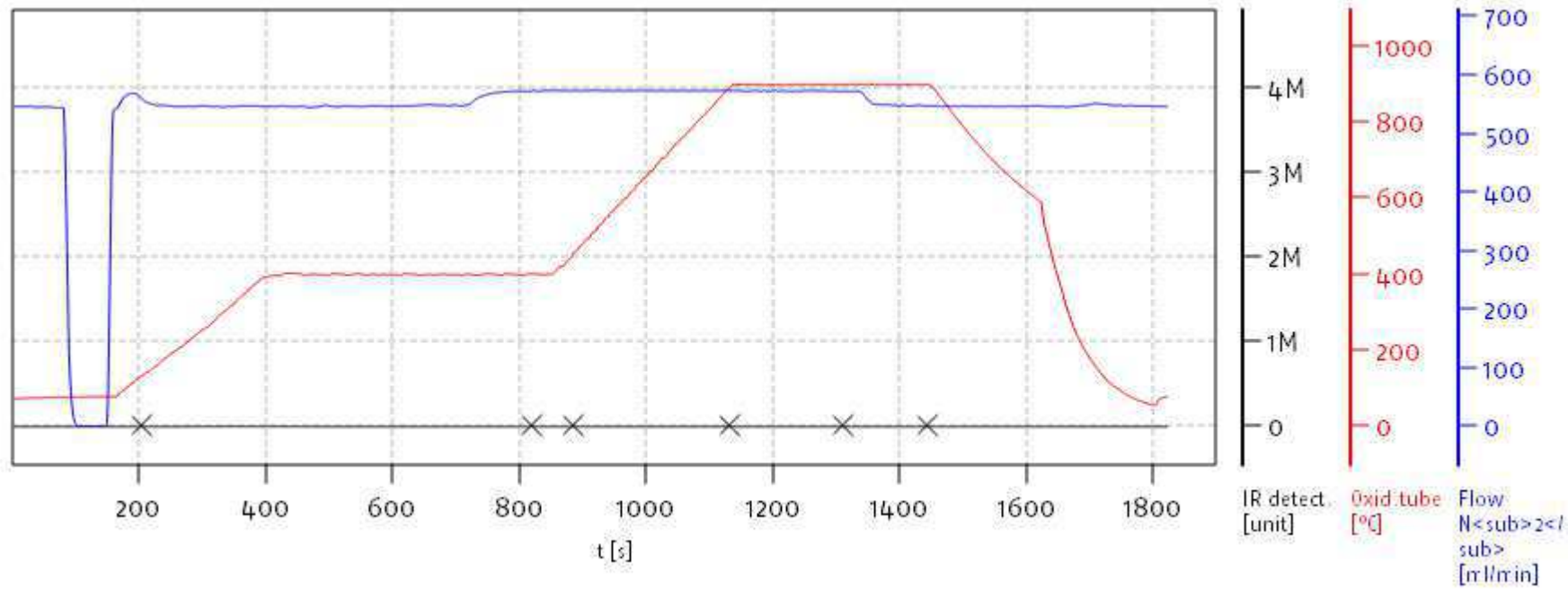
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
53	53	SLA0248-CCB4	532.30		CARBON	1/24/2023 5:59 PM	bl,C3u,C2u	0.000	12 484	0.000	0.000	1 627	827	0.000	0.000	1.0055	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
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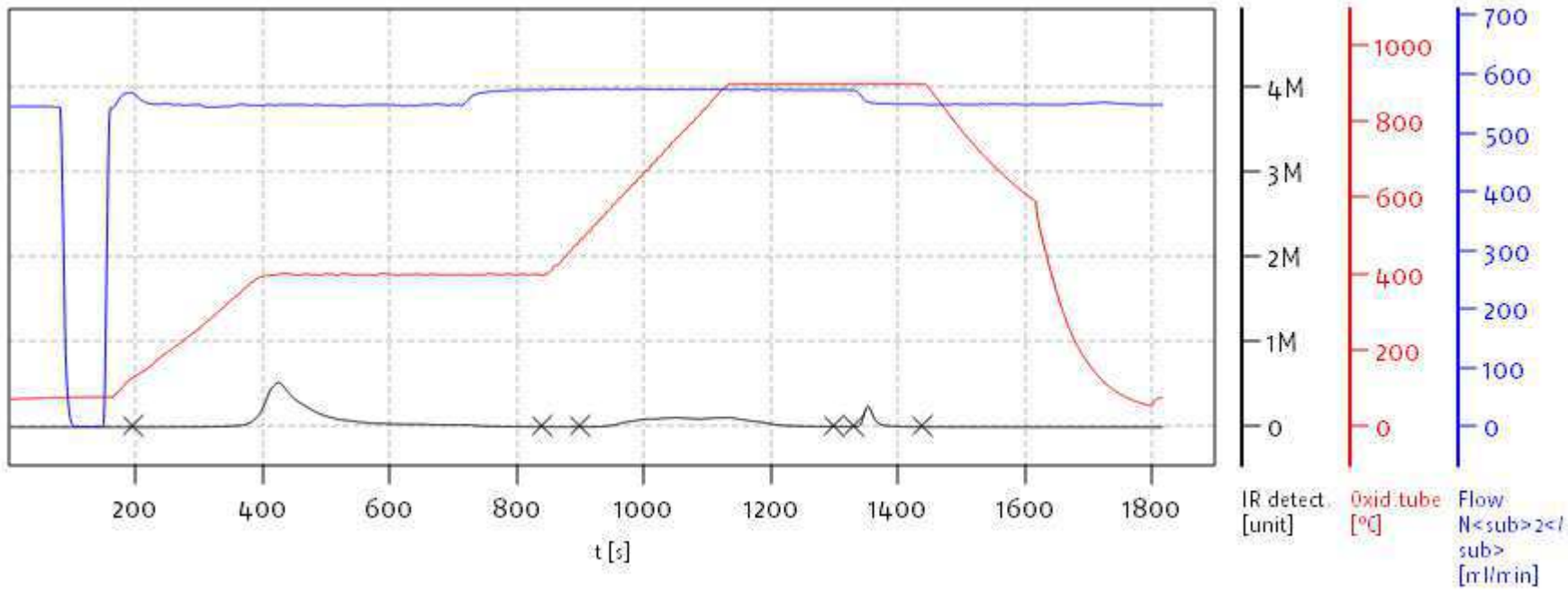
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
54	54	23A0418-08	550.80		CARBON	1/24/2023 6:30 PM	bl	0.536	1 768 321	0.776	0.044	182 546	881 633	0.492	0.240	1.0055	1.0000



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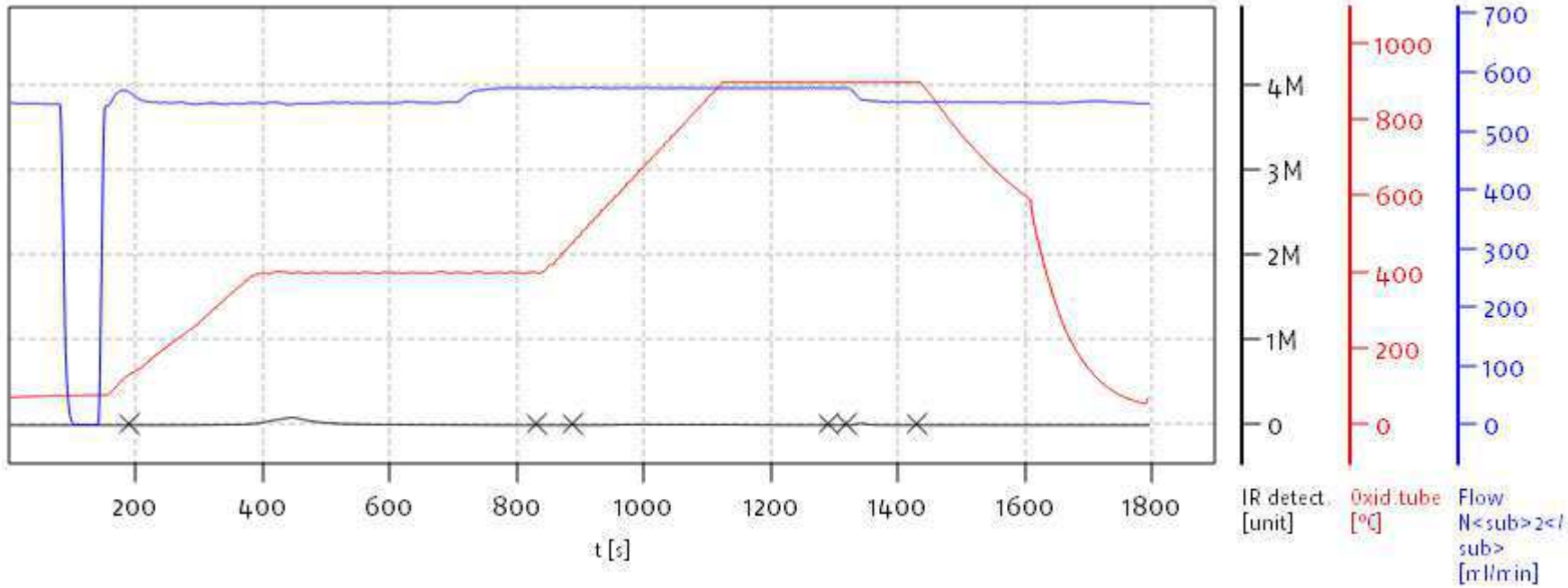
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
55	55	23A0418-09	537.80		CARBON	1/24/2023 7:00 PM	bl	0.087	327 798	0.096	0.000	16 307	57 203	0.087	0.009	1.0055	1.0000



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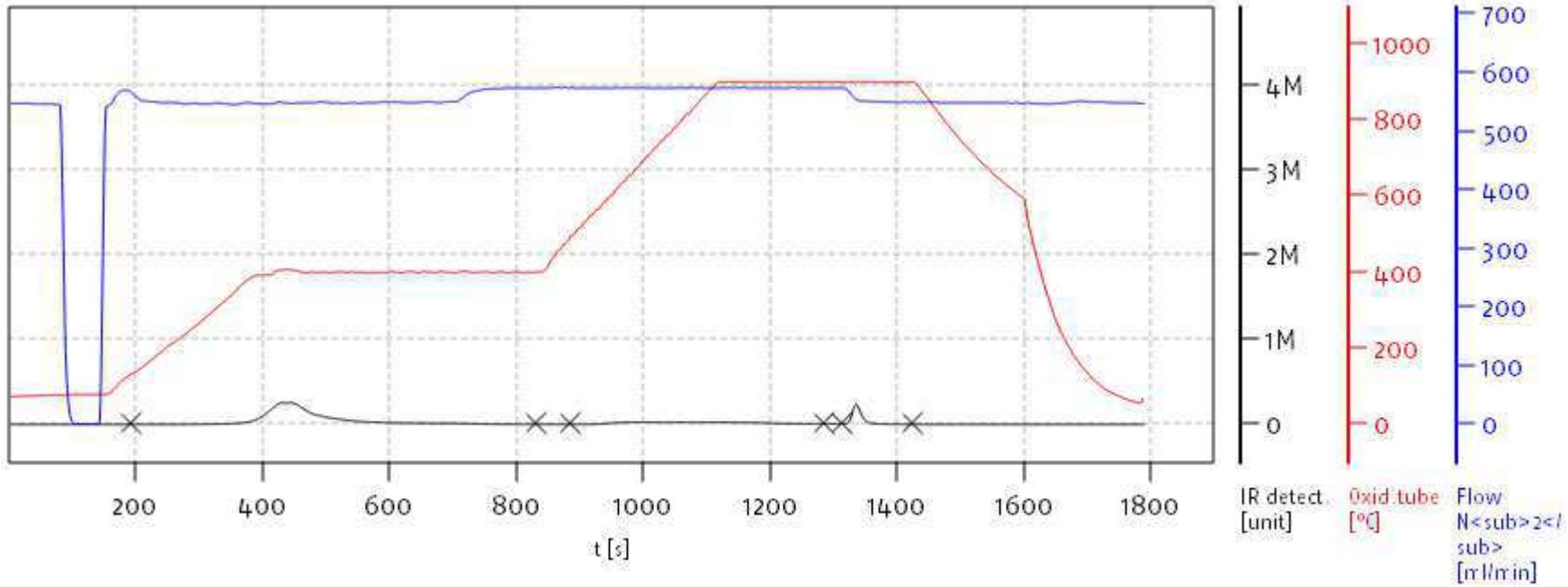
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
56	56	23A0418-10	503.50		CARBON	1/24/2023 7:30 PM	bl	0.340	996 939	0.412	0.040	158 102	259 903	0.300	0.072	1.0055	1.0000



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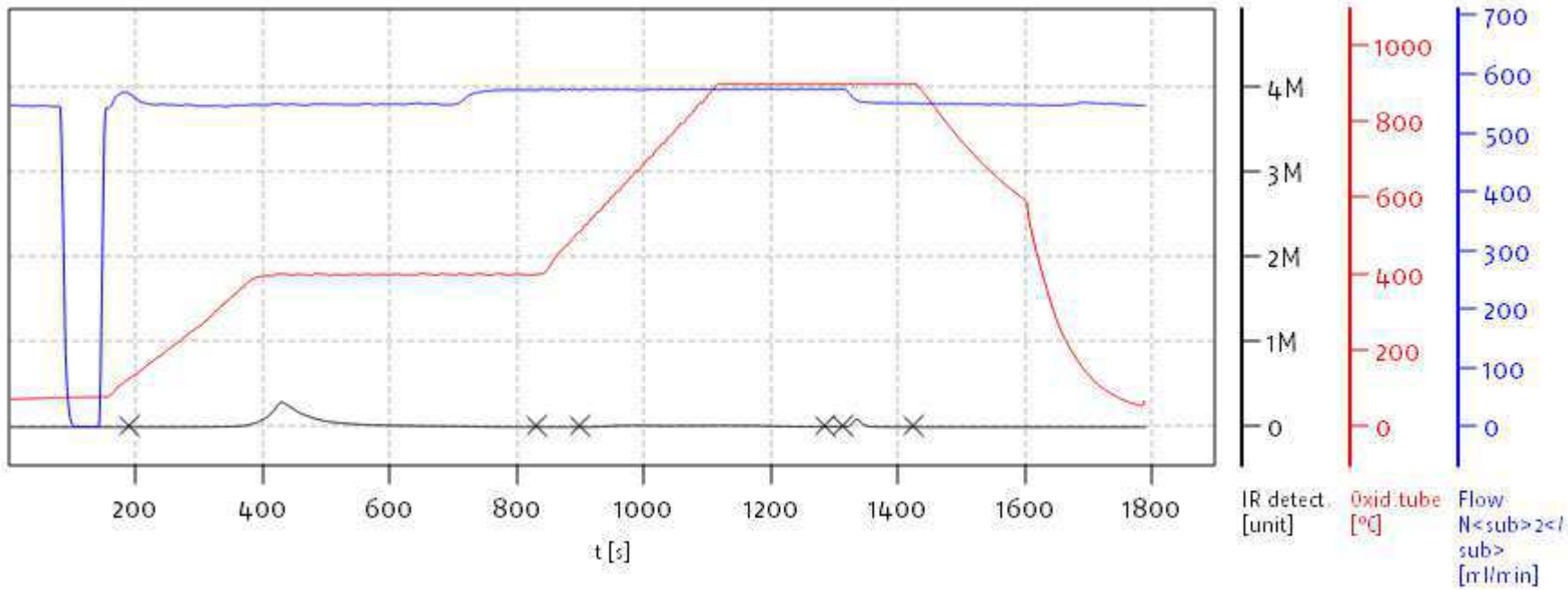
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
57	57	23A0418-11	532.10		CARBON	1/24/2023 8:00 PM	bl	0.267	901 035	0.311	0.011	64 384	180 068	0.256	0.045	1.0055	1.0000



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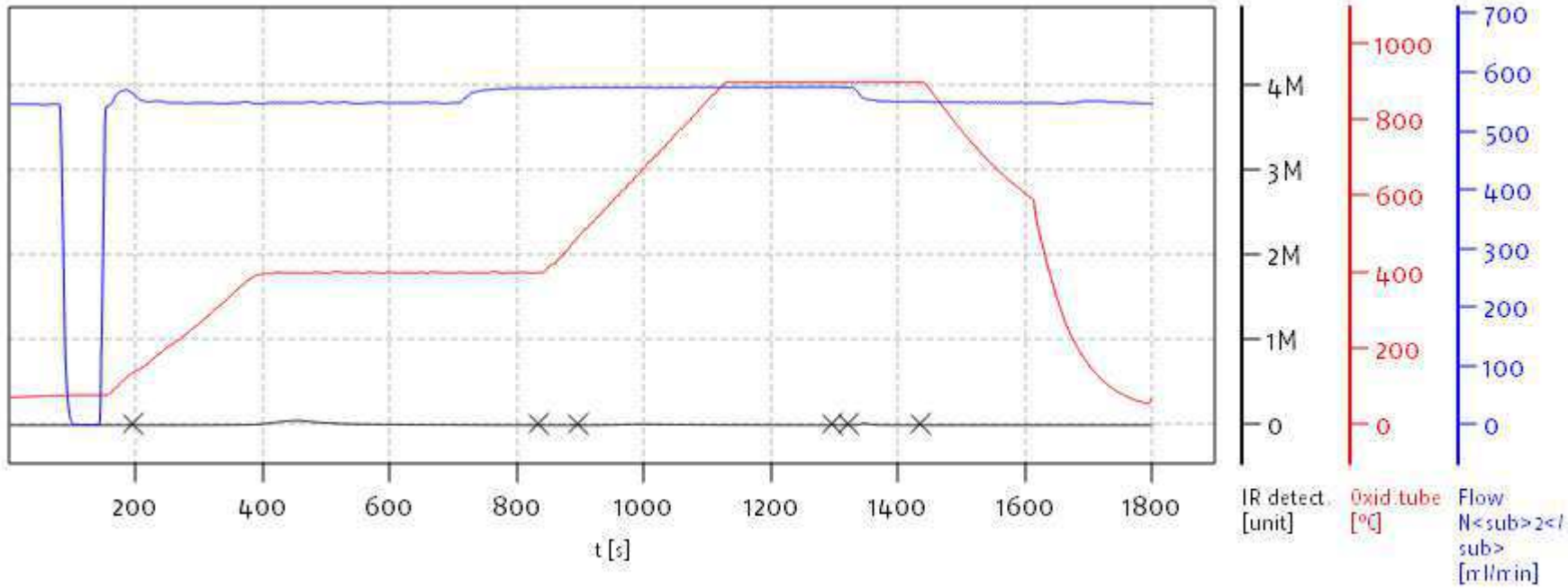
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
58	58	23A0418-12	545.40		CARBON	1/24/2023 8:31 PM	bl	0.060	235 333	0.067	0.000	14 871	51 112	0.060	0.007	1.0055	1.0000



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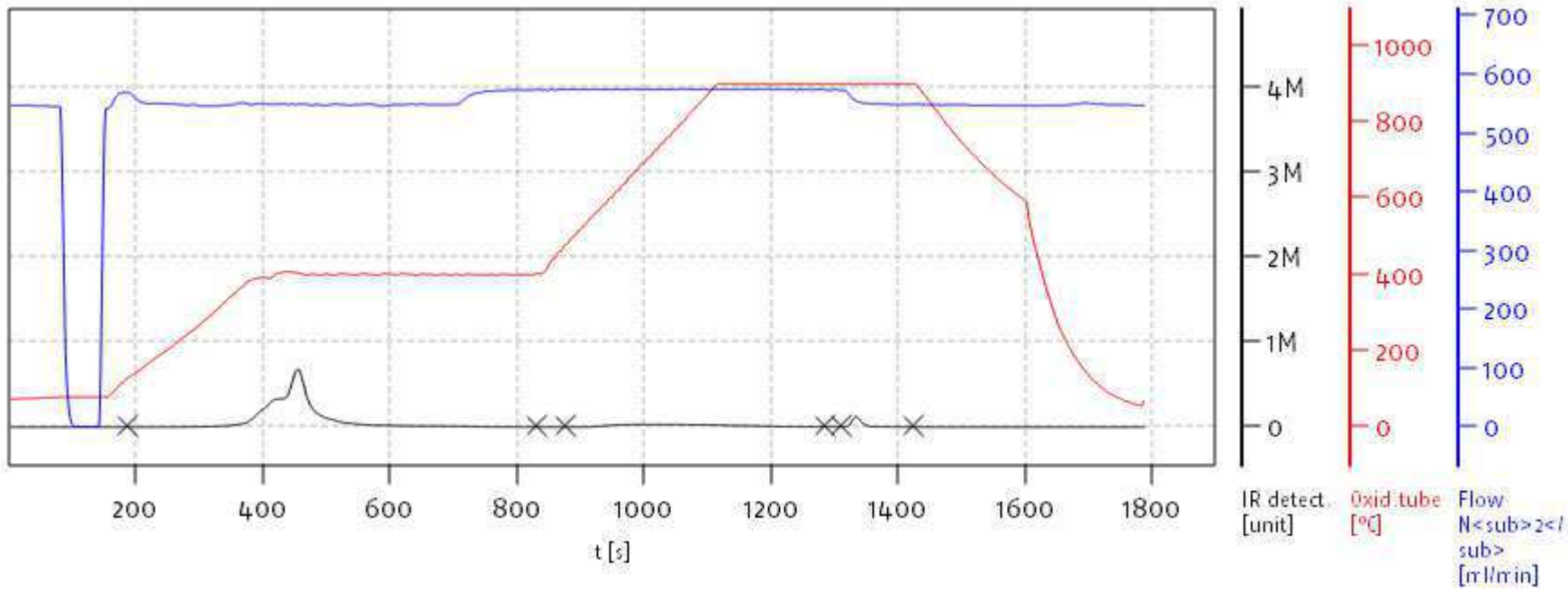
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
59	59	23A0419-01	515.30		CARBON	1/24/2023 9:01 PM	bl	0.521	1 692 132	0.591	0.018	86 928	258 431	0.503	0.070	1.0055	1.0000



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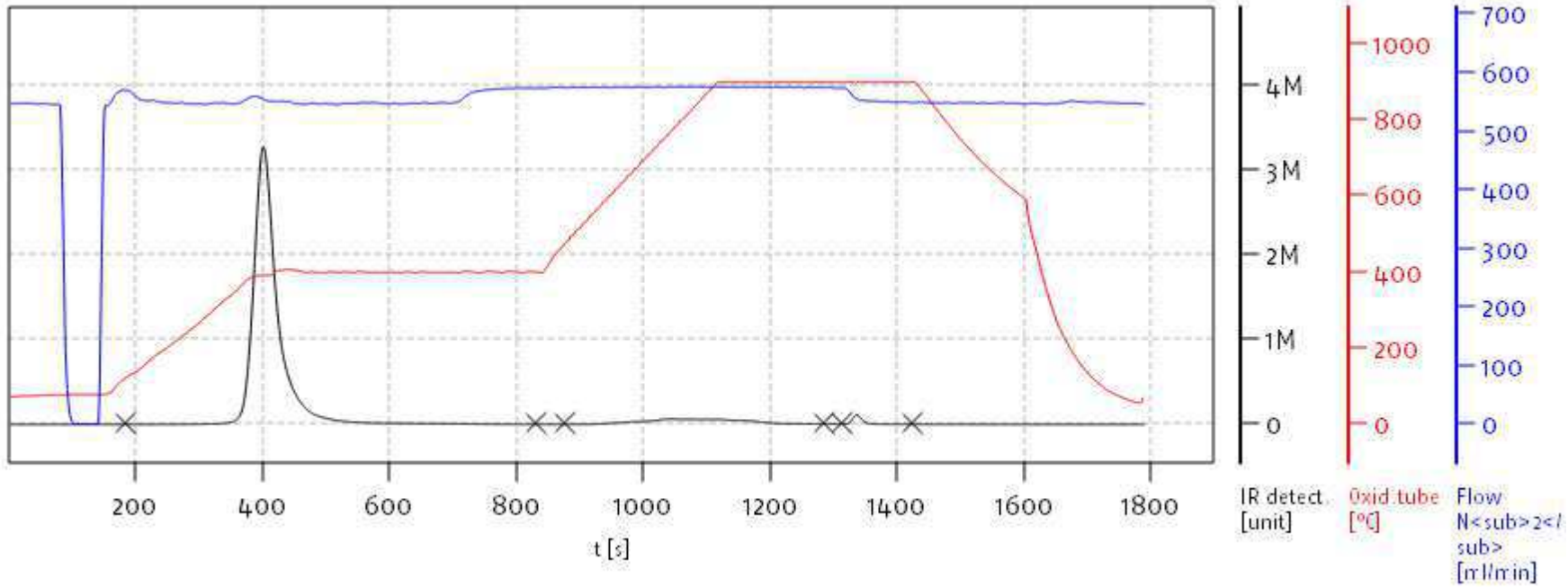
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
60	60	23A0419-02	550.60		CARBON	1/24/2023 9:31 PM	bl	1.522	5 357 359	1.644	0.015	79 872	462 306	1.507	0.123	1.0055	1.0000



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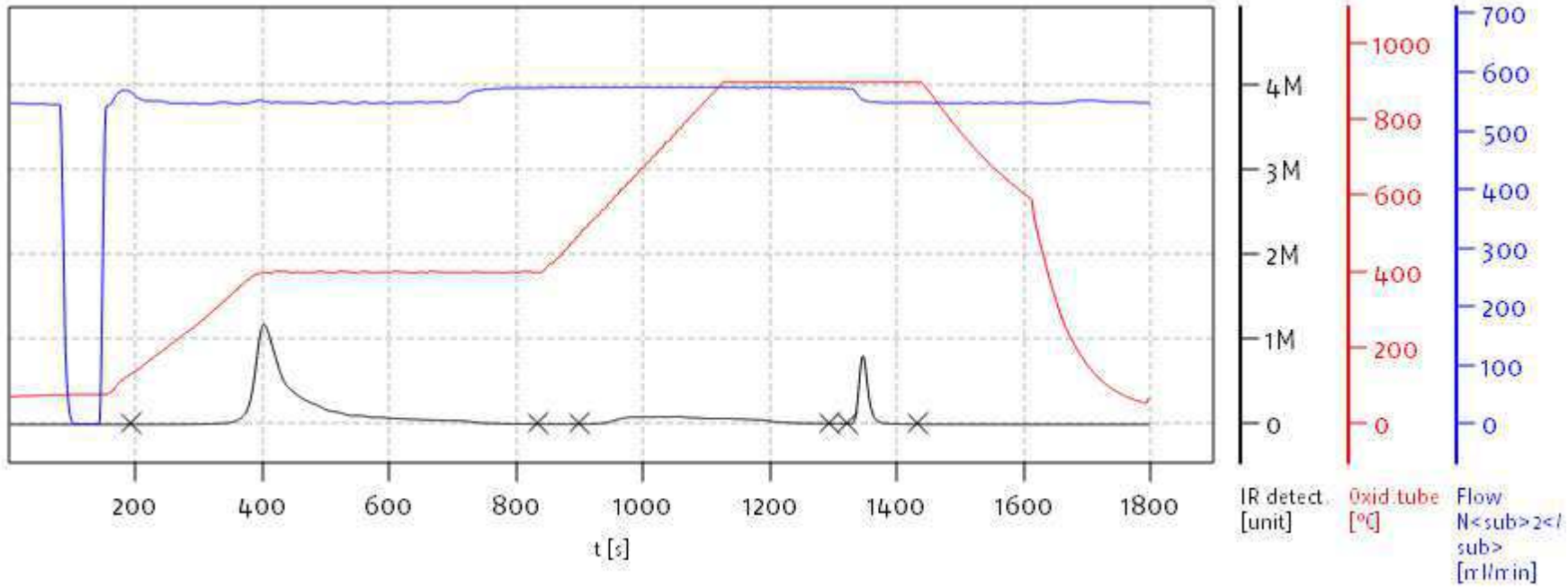
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
61	61	23A0419-03	613.30		CARBON	1/24/2023 10:02 PM	bl	0.944	3 249 770	1.133	0.126	526 318	773 639	0.818	0.189	1.0055	1.0000



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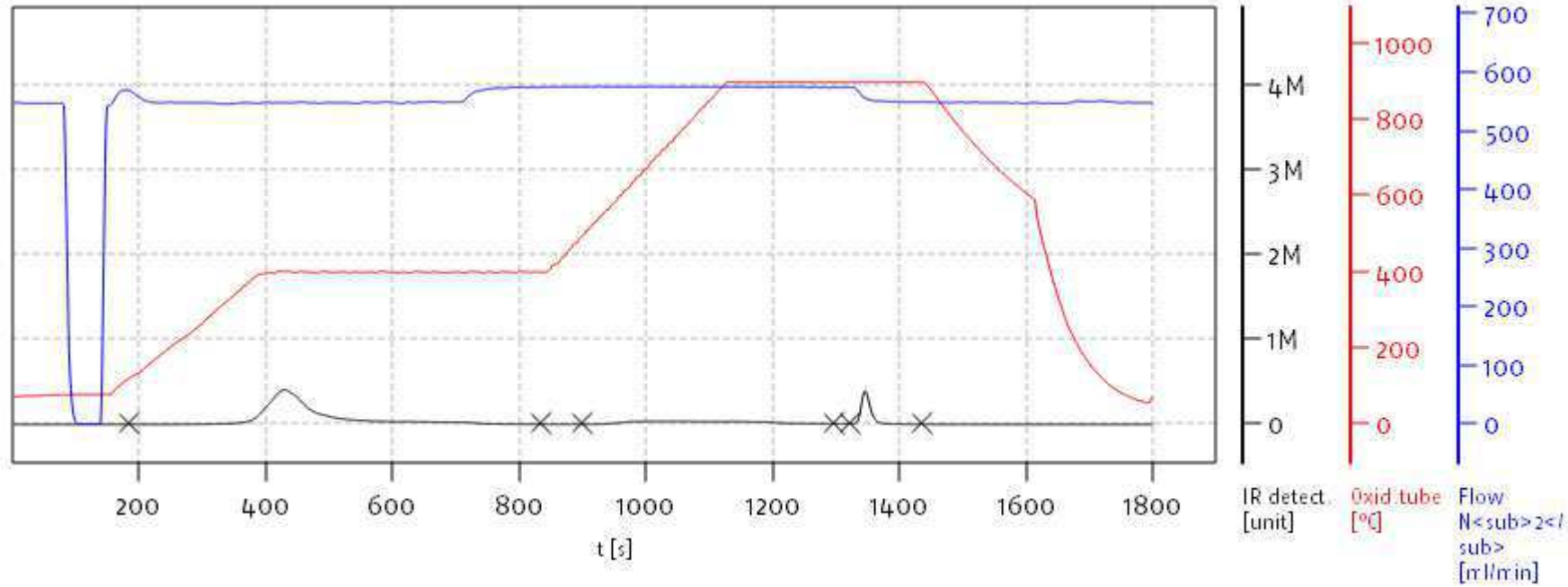
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
62	62	23A0419-04	545.90		CARBON	1/24/2023 10:32 PM	bl	0.473	1 454 308	0.565	0.066	258 009	352 785	0.407	0.093	1.0055	1.0000



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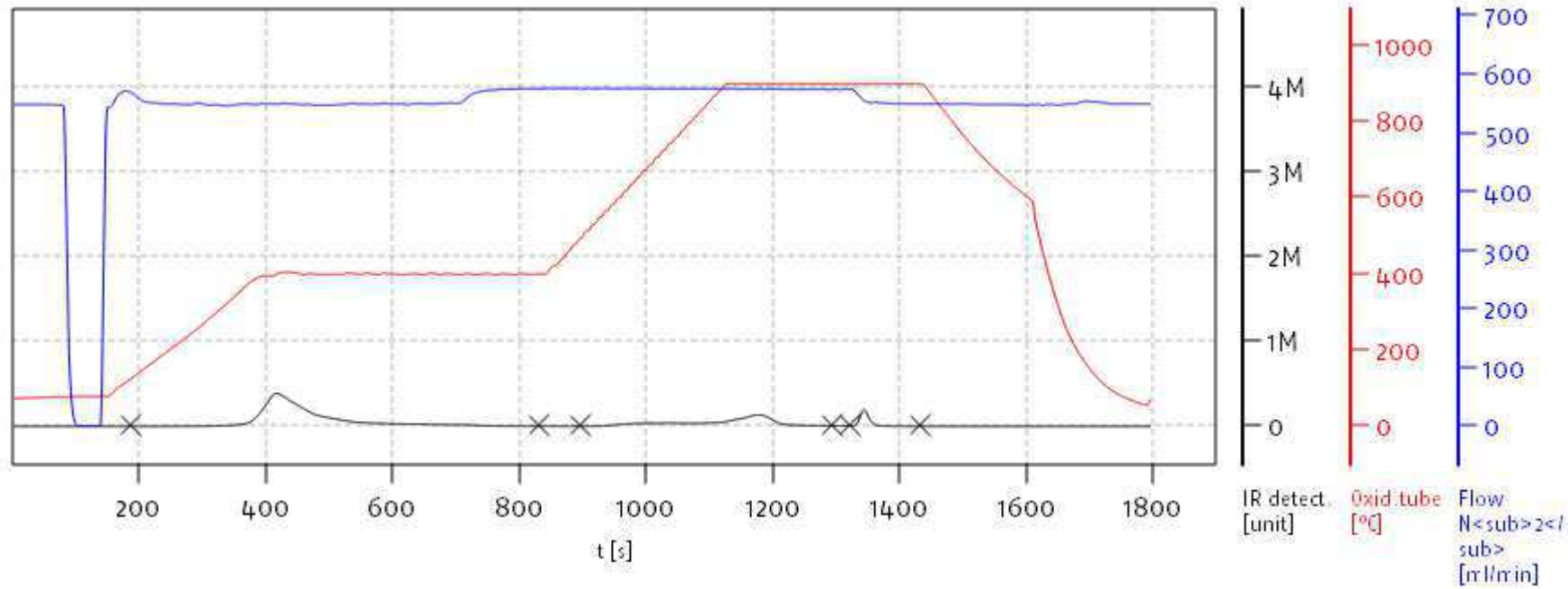
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
63	63	23A0419-05	506.80		CARBON	1/24/2023 11:02 PM	bl	0.458	1 417 466	0.632	0.031	128 482	594 540	0.427	0.173	1.0055	1.0000



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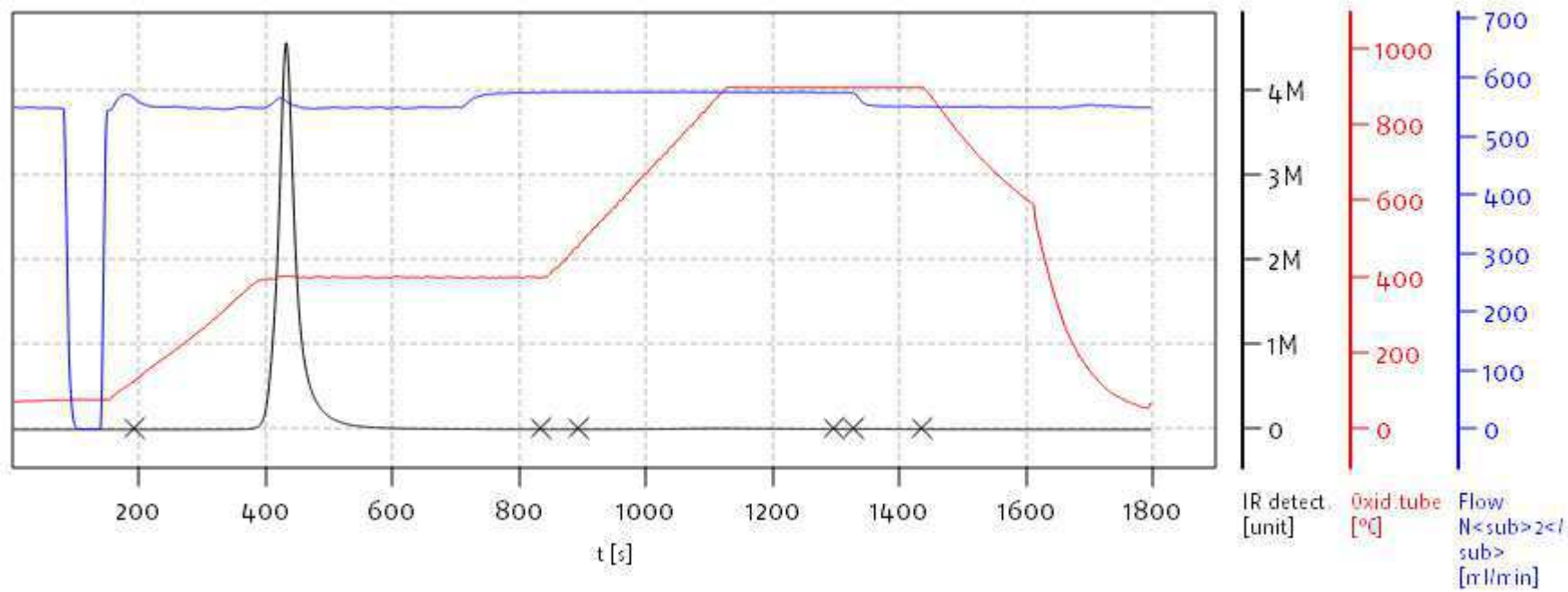
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
64	64	SLA0248-CCV5	20.20		CARBON	1/24/2023 11:33 PM	bl	45.627	5 948 035	46.215	0.000	18 294	103 230	45.627	0.588	1.0055	1.0000



Name:

Access: soliTOC superuser

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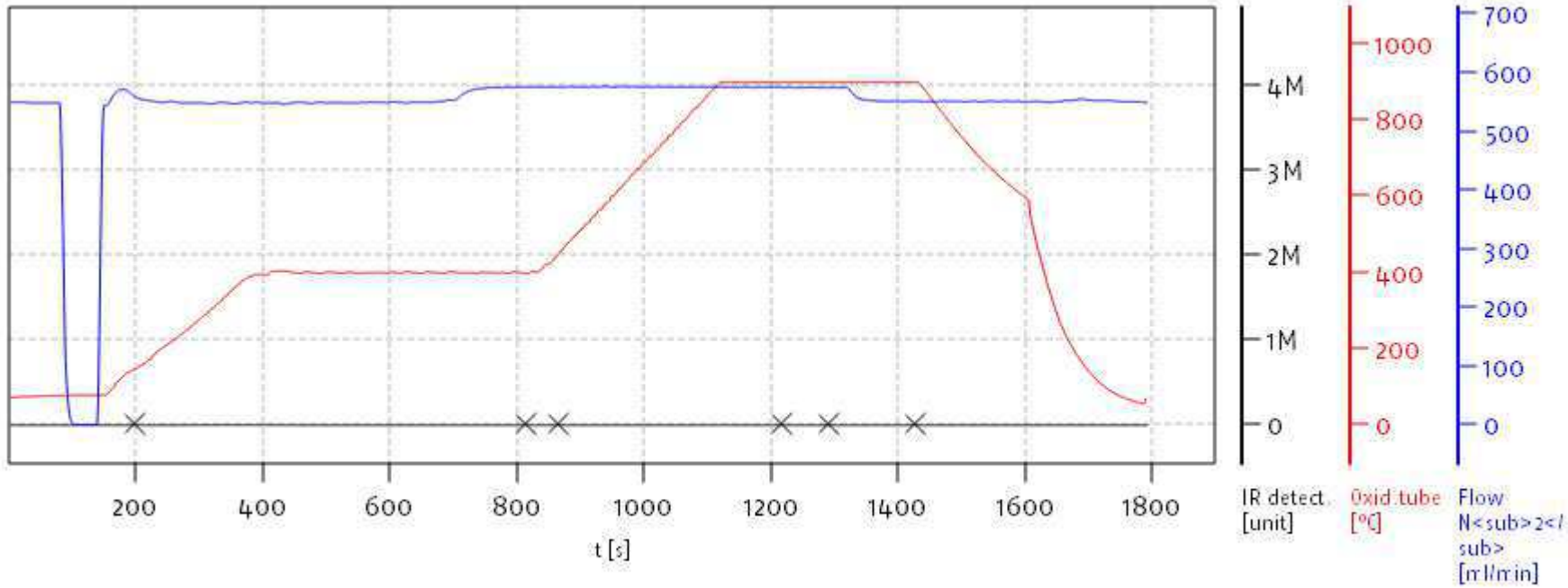
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
65	65	SLA0248-CCB5	513.30		CARBON	1/25/2023 12:03 AM	bl,C3u,C2u	0.000	9 871	0.000	0.000	593	1 761	0.000	0.000	1.0055	1.0000



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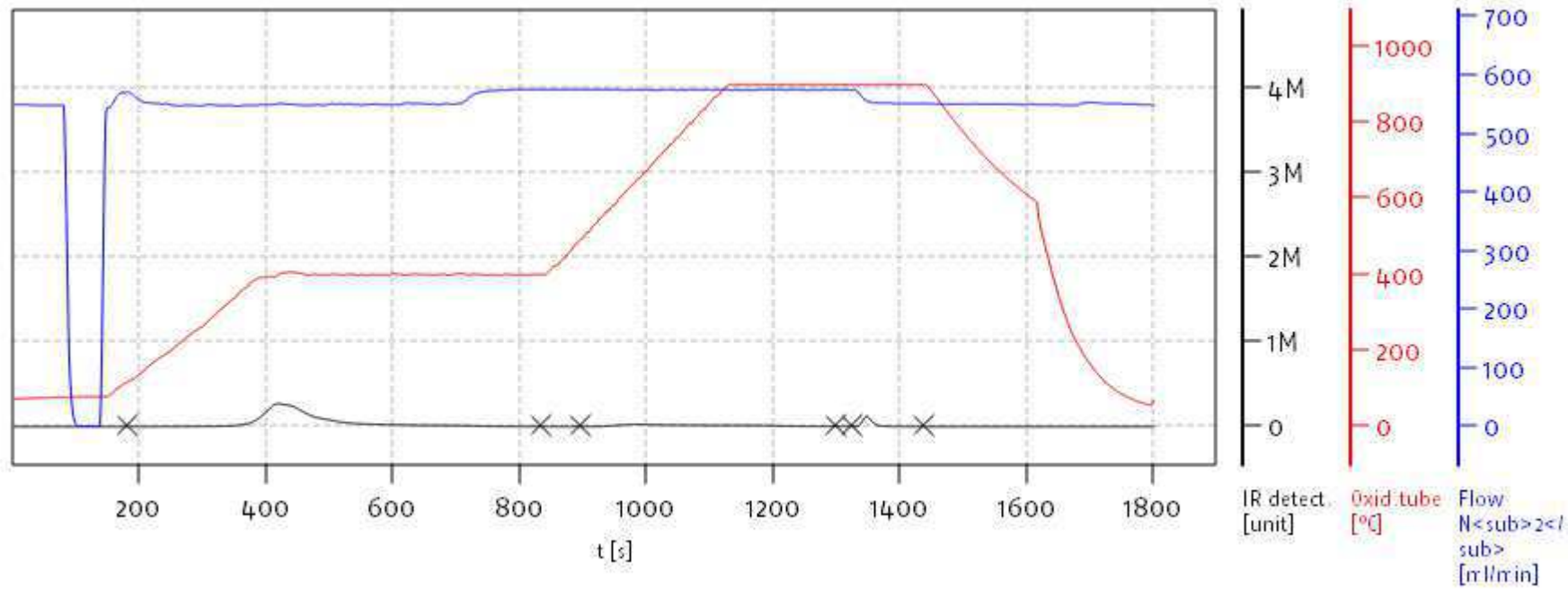
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
66	66	23A0419-06	630.20		CARBON	1/25/2023 12:33 AM	bl	0.270	1 061 559	0.310	0.014	83 788	189 582	0.256	0.040	1.0055	1.0000



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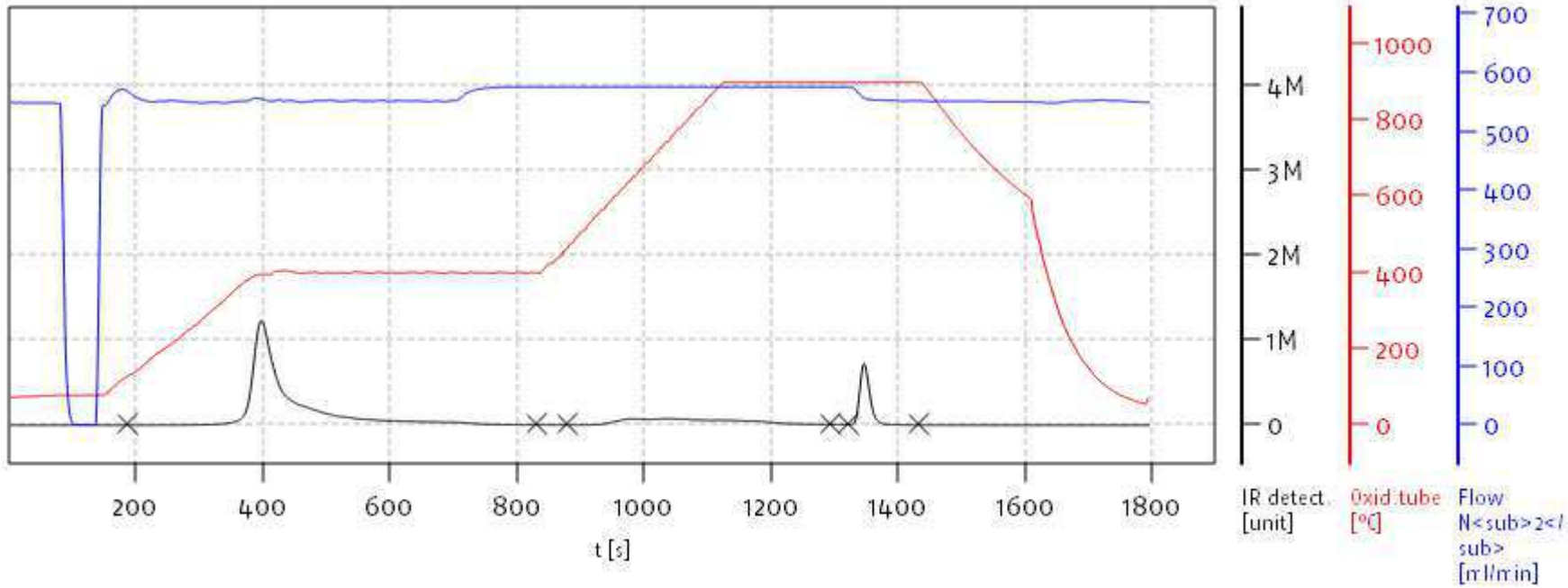
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
67	67	23A0419-07	537.70		CARBON	1/25/2023 1:04 AM	bl	0.951	2 835 937	1.129	0.138	505 685	645 187	0.813	0.178	1.0055	1.0000



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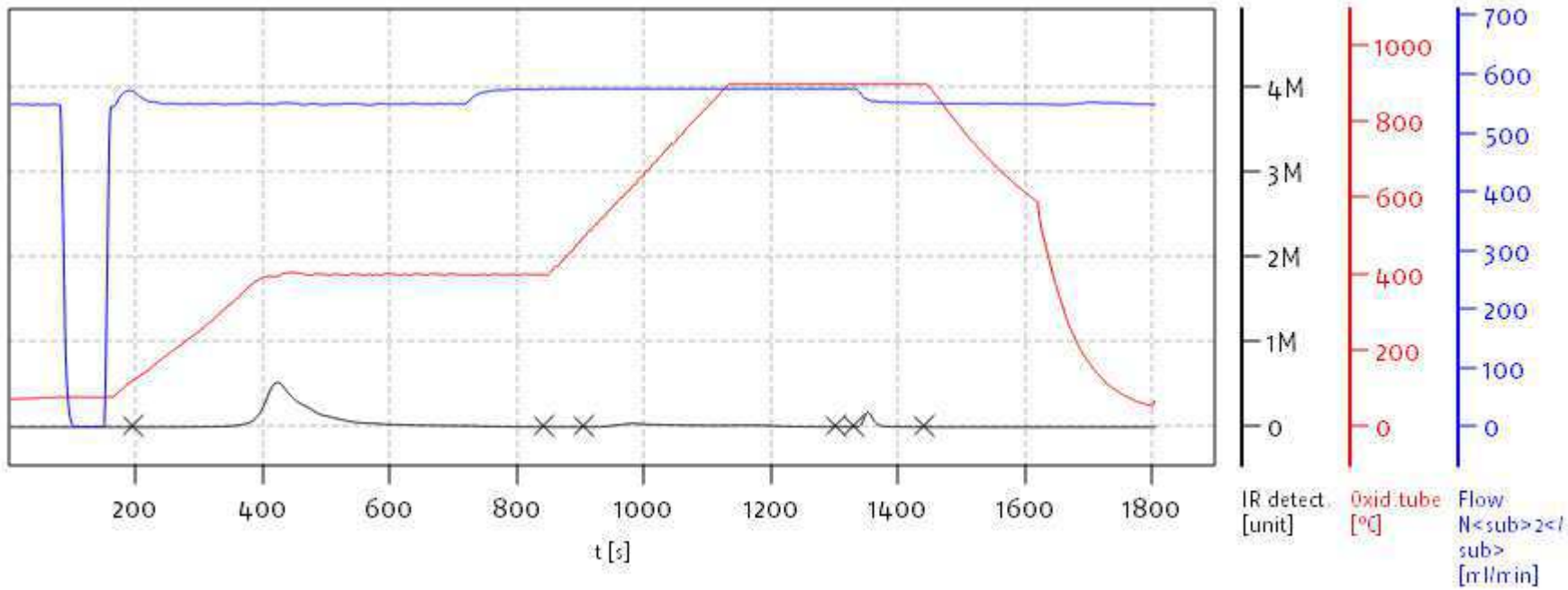
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
68	68	23A0419-08	537.60		CARBON	1/25/2023 1:34 AM	bl	0.515	1 711 460	0.583	0.027	121 660	261 895	0.488	0.068	1.0055	1.0000



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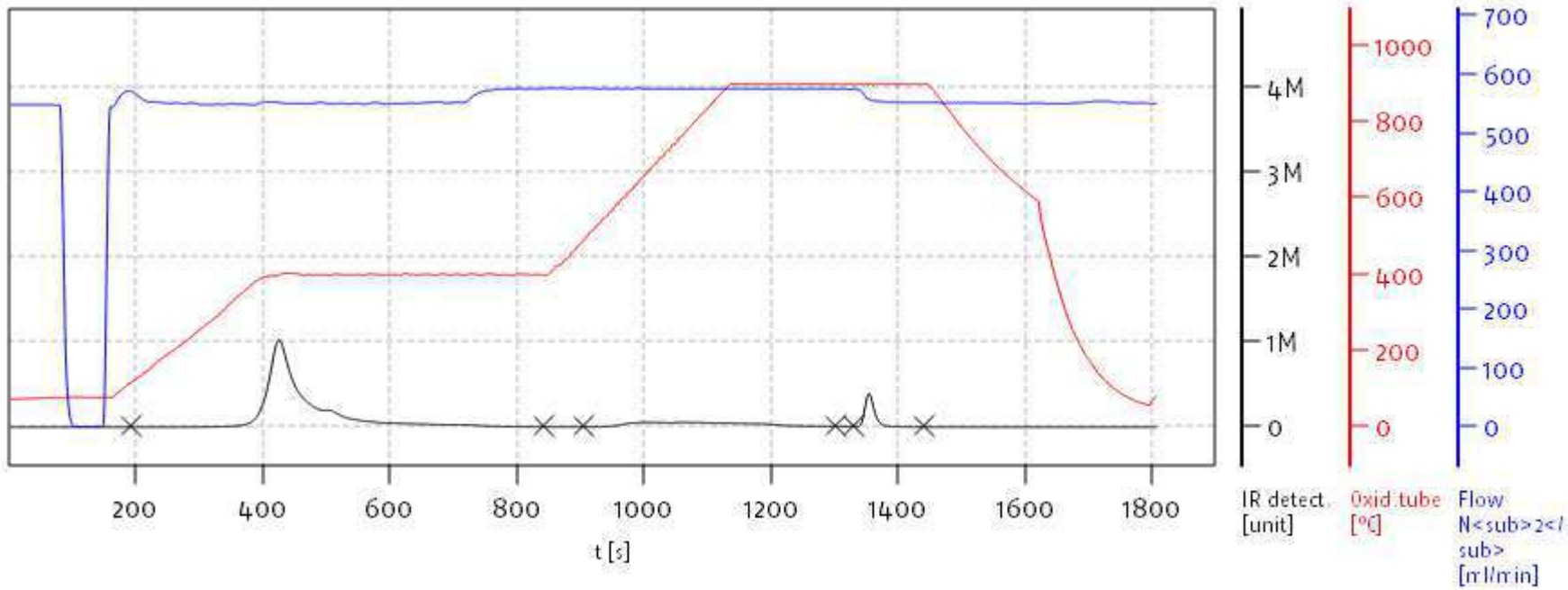
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
69	69	23A0419-09	509.30		CARBON	1/25/2023 2:05 AM	bl	0.857	2 595 167	0.999	0.072	264 304	493 561	0.785	0.142	1.0055	1.0000



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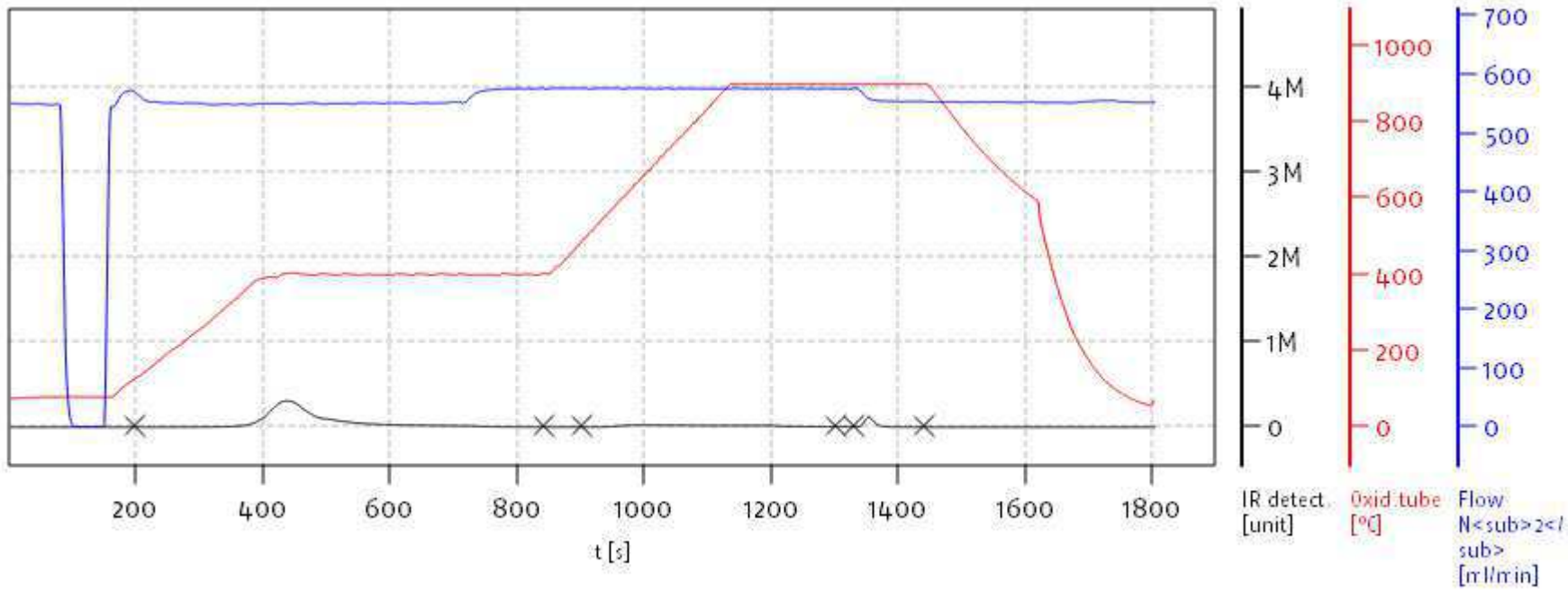
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
70	70	23A0419-10	504.20		CARBON	1/25/2023 2:35 AM	bl	0.369	1 165 099	0.427	0.018	84 367	215 101	0.351	0.058	1.0055	1.0000



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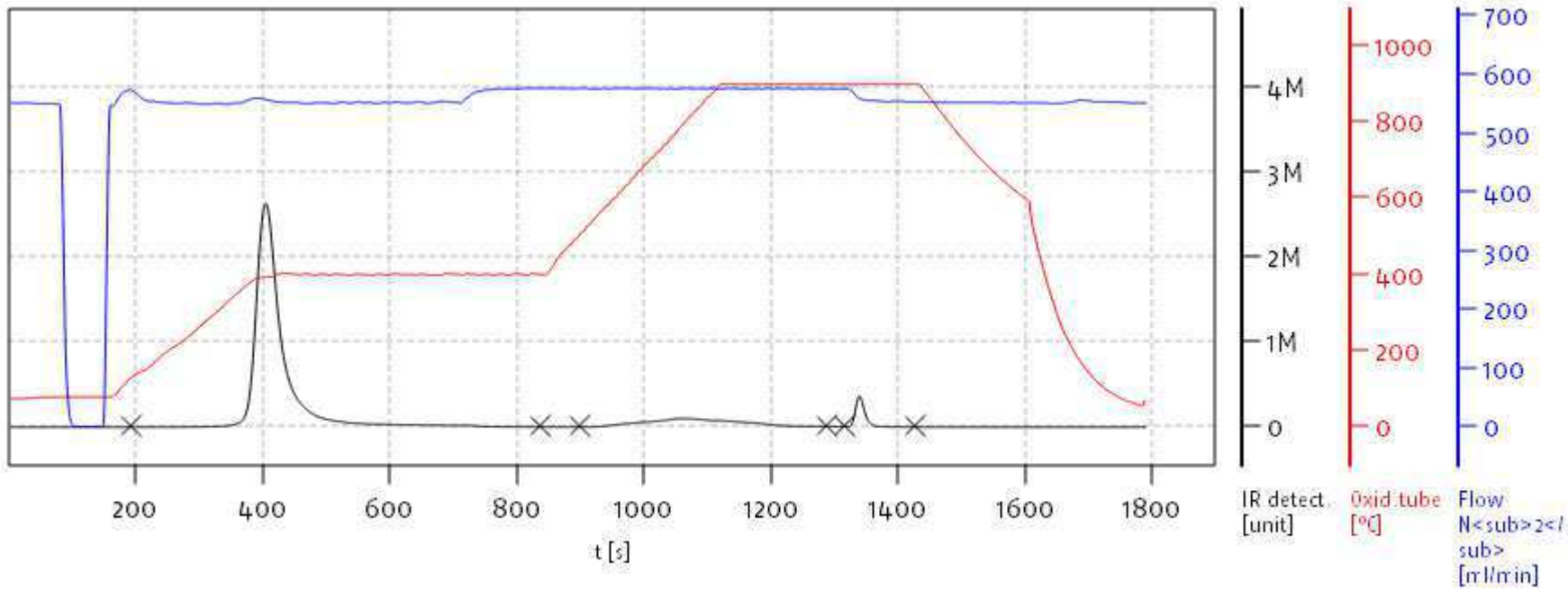
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
71	71	23A0419-11	531.70		CARBON	1/25/2023 3:05 AM	bl	1.405	4 616 787	1.594	0.061	236 679	675 880	1.344	0.189	1.0055	1.0000



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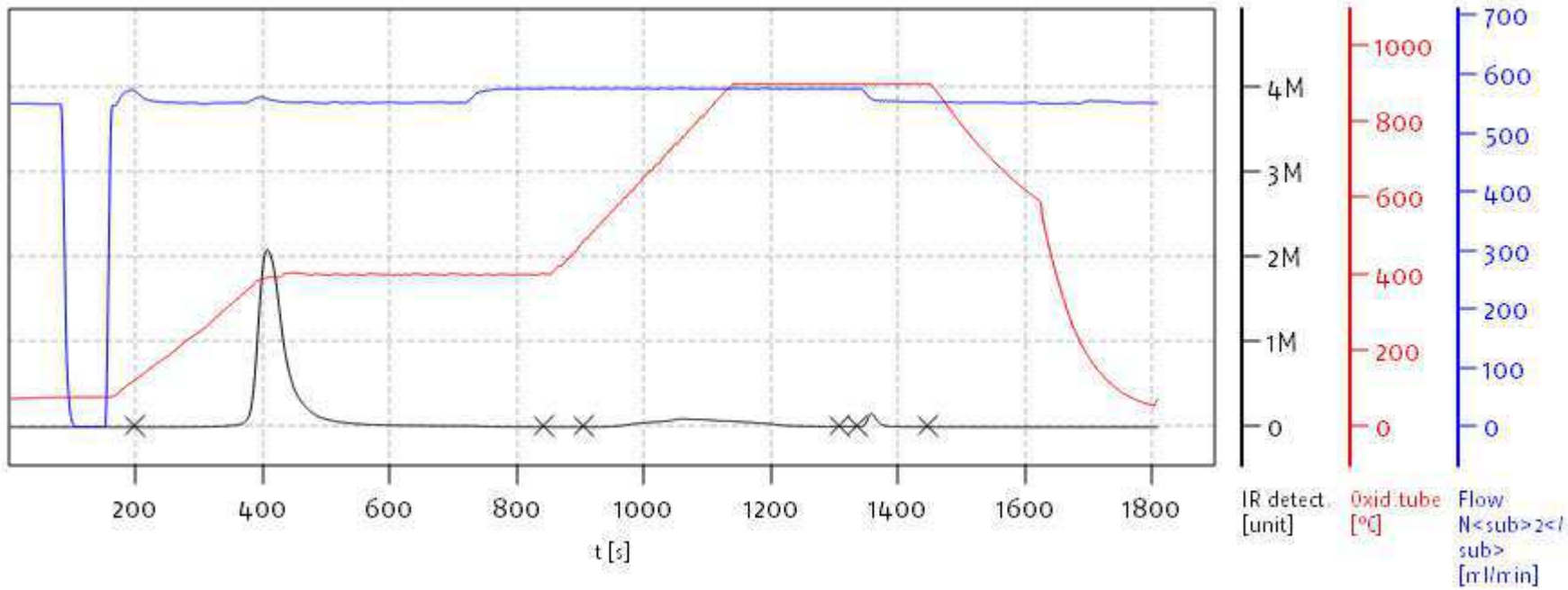
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
72	72	23A0419-12	521.80		CARBON	1/25/2023 3:36 AM	bl	1.214	4 010 810	1.396	0.026	113 948	638 461	1.188	0.182	1.0055	1.0000



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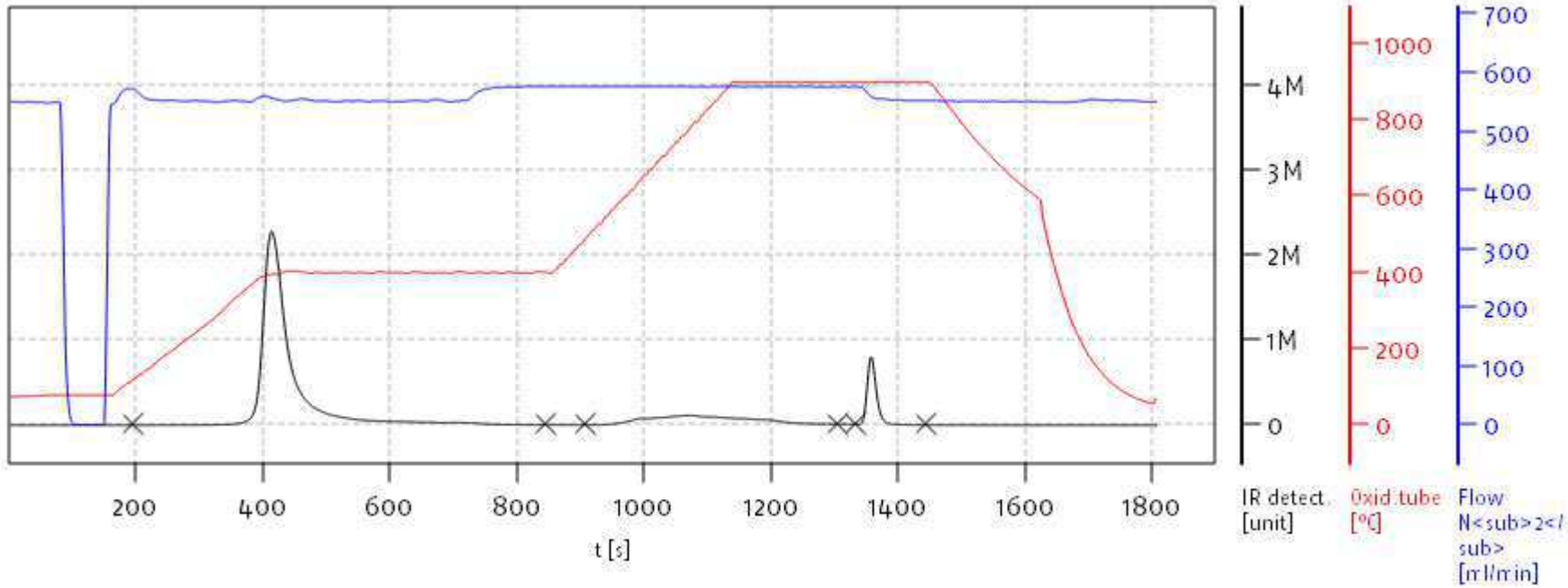
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
73	73	23A0420-01	557.90		CARBON	1/25/2023 4:06 AM	bl	1.297	4 183 421	1.527	0.137	519 608	857 047	1.160	0.230	1.0055	1.0000



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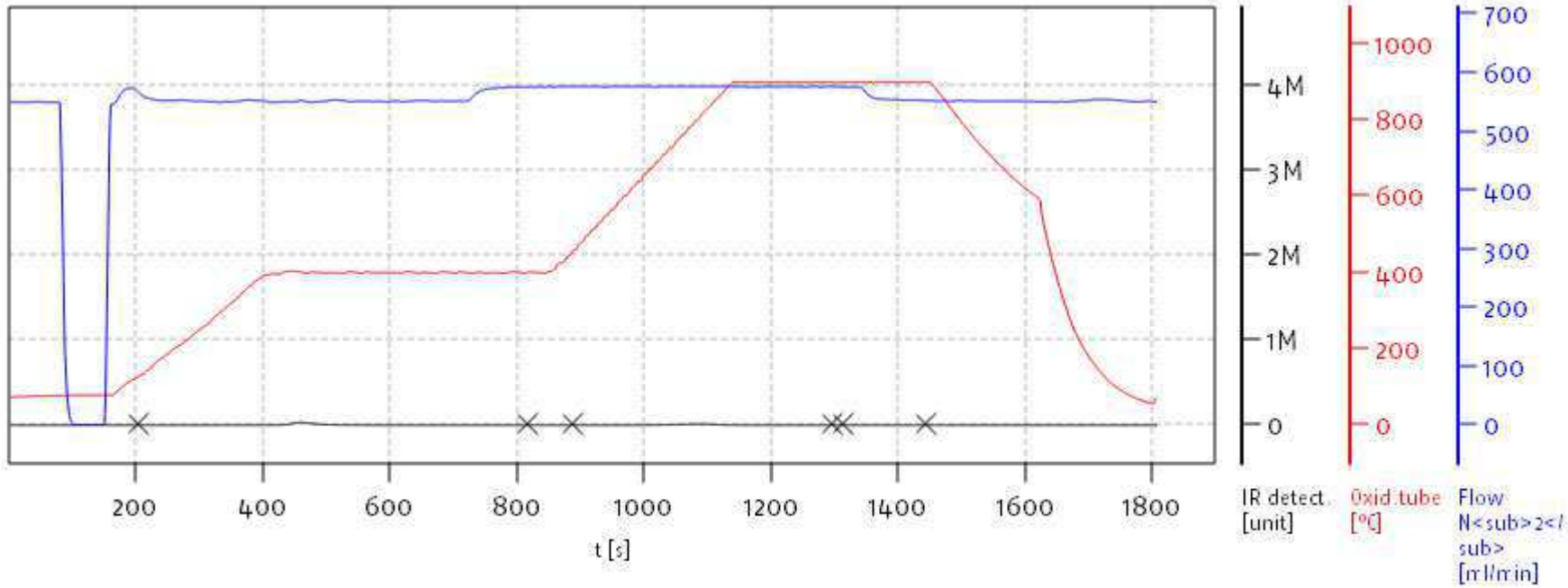
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
74	74	BLA0536-MRL1	527.70		CARBON	1/25/2023 4:37 AM	bl,C2u	0.009	58 025	0.012	0.000	345	35 521	0.009	0.003	1.0055	1.0000



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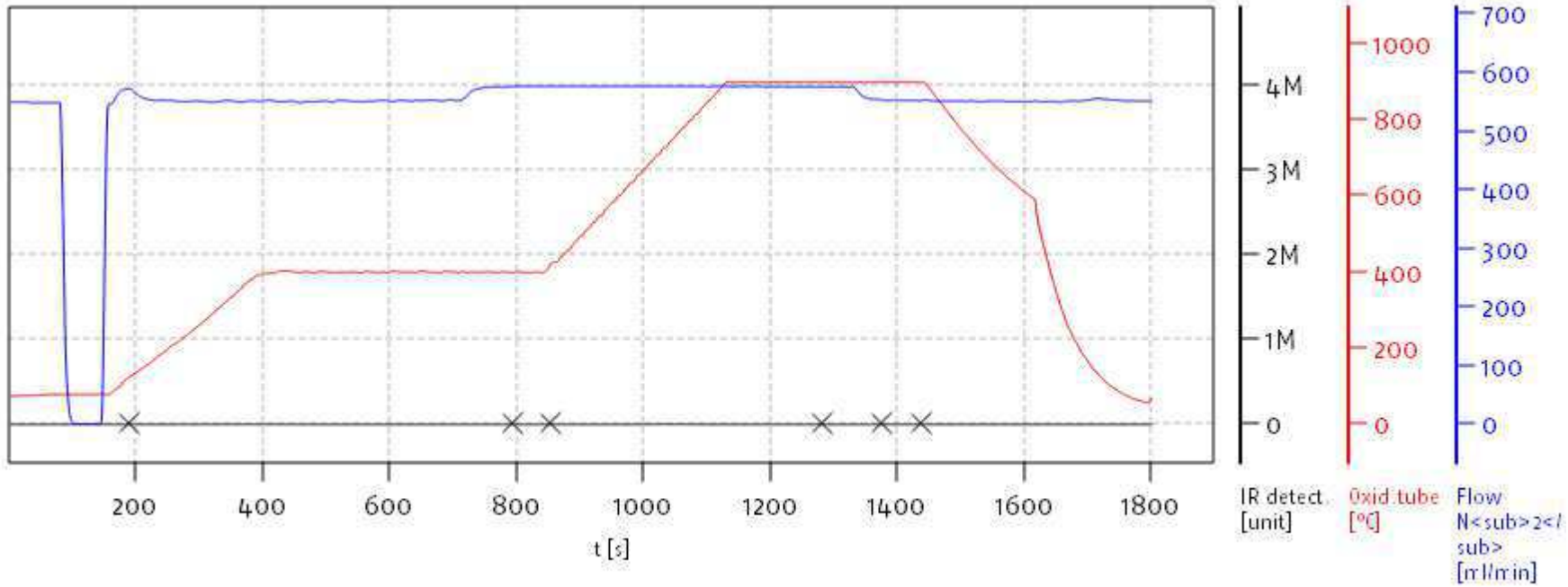
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
75	75	BLA0536-BLK1	519.40		CARBON	1/25/2023 5:07 AM	bl,C2u	0.000	8 243	0.000	0.000	238	6 505	0.000	0.000	1.0055	1.0000



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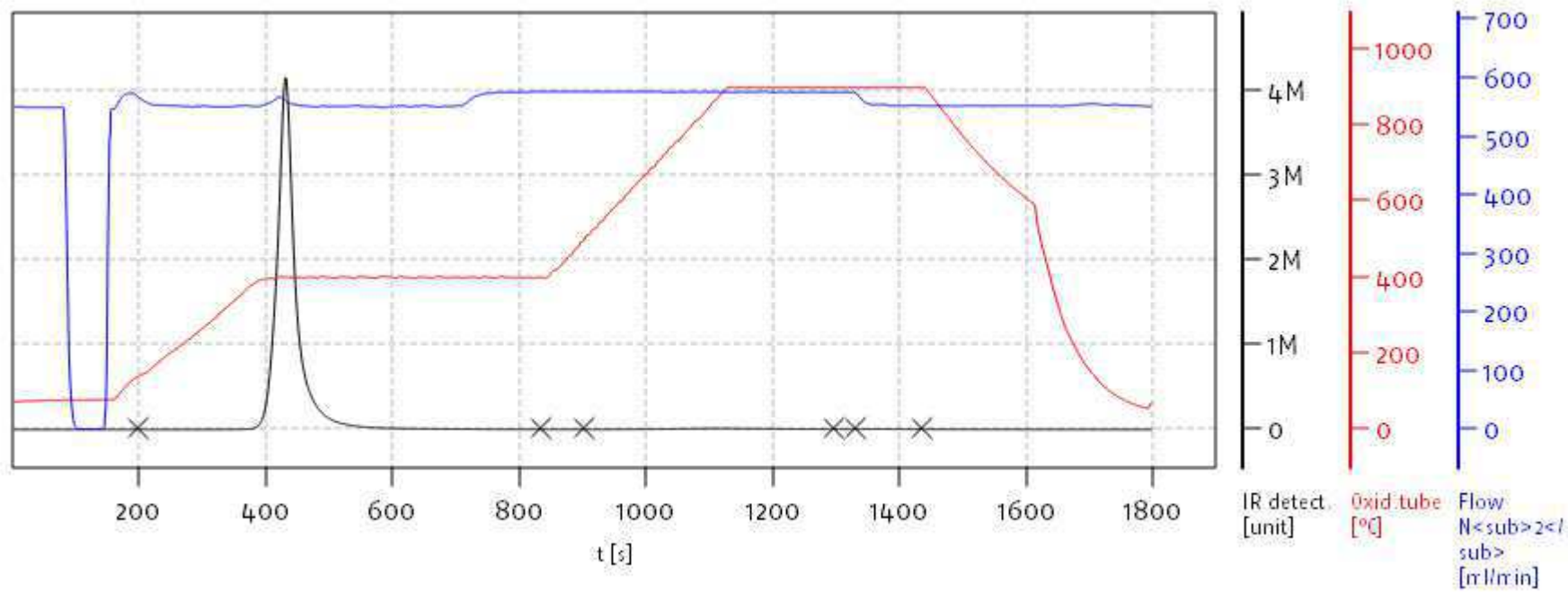
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
76	76	SLA0248-CCV6	18.60		CARBON	1/25/2023 5:38 AM	bl	44.707	5 369 056	45.302	0.000	19 465	97 995	44.707	0.595	1.0055	1.0000



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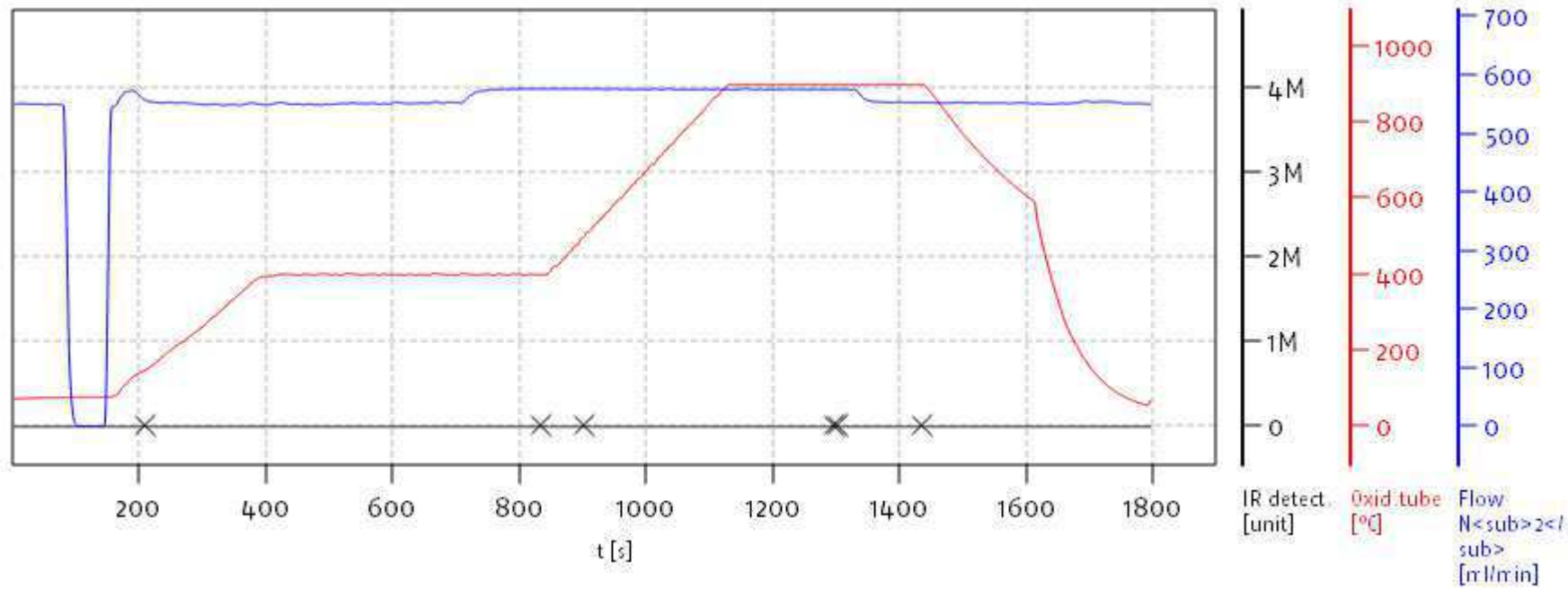
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
77	77	SLA0248-CCB6	523.50		CARBON	1/25/2023 6:08 AM	bl,C3u,C2u	0.000	4 357	0.000	0.000	597	177	0.000	0.000	1.0055	1.0000



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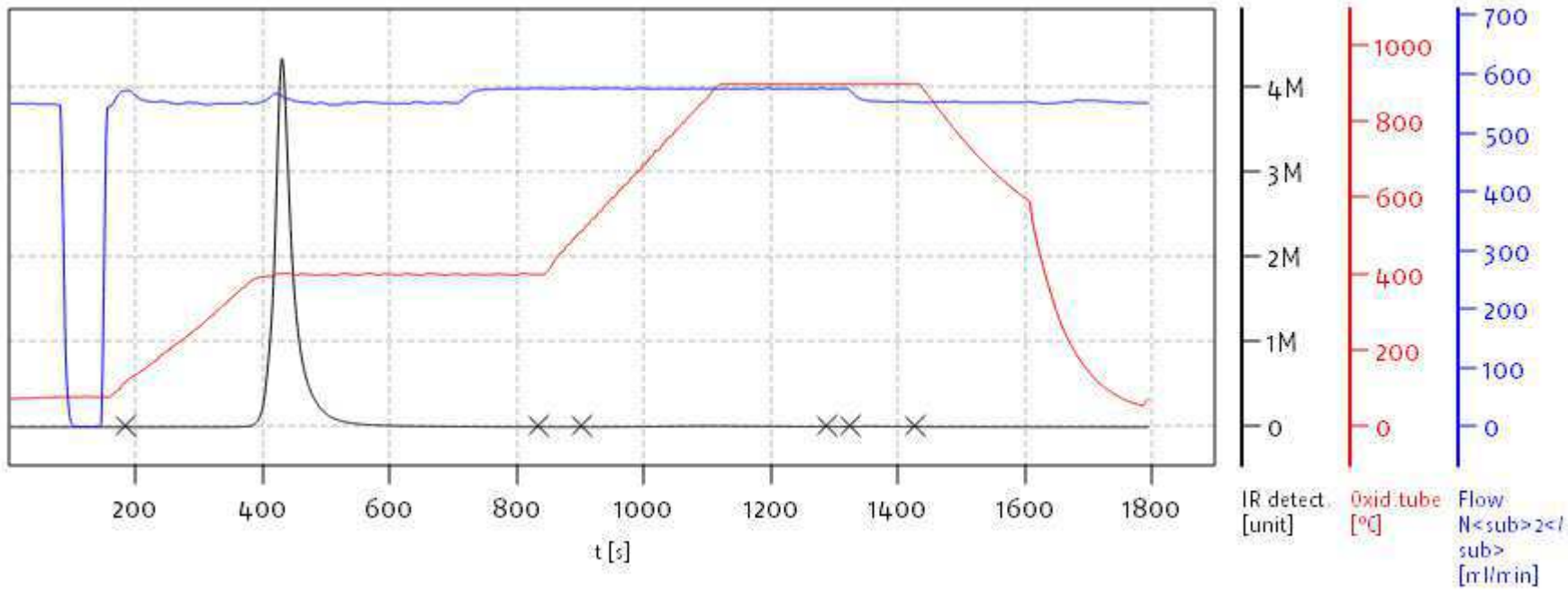
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
78	78	BLA0536-BS1	19.70		CARBON	1/25/2023 6:38 AM	bl	44.843	5 702 289	45.465	0.000	23 176	105 684	44.843	0.622	1.0055	1.0000



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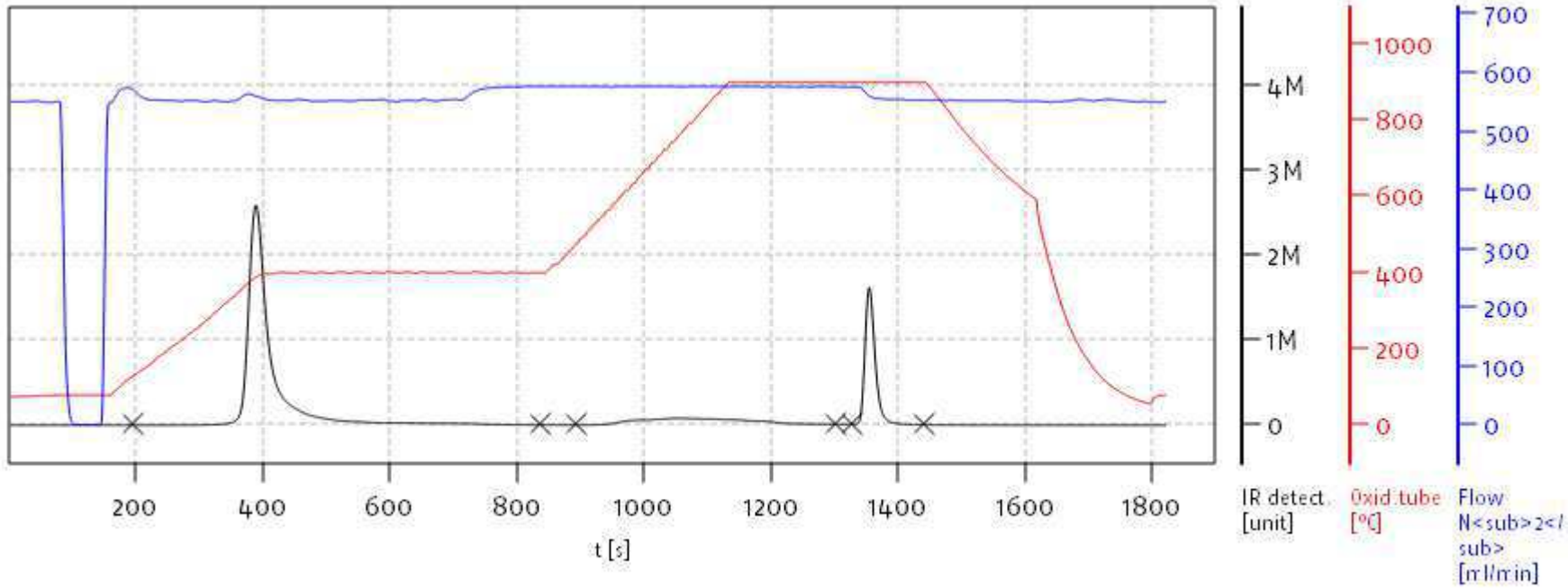
79	79	BLA0536-SRM1	257.50		CARBON	1/25/2023 7:09 AM	bl	2.969	3 828 148	3.354	0.671	1 143 426	666 051	2.298	0.384	1.0055	1.0000



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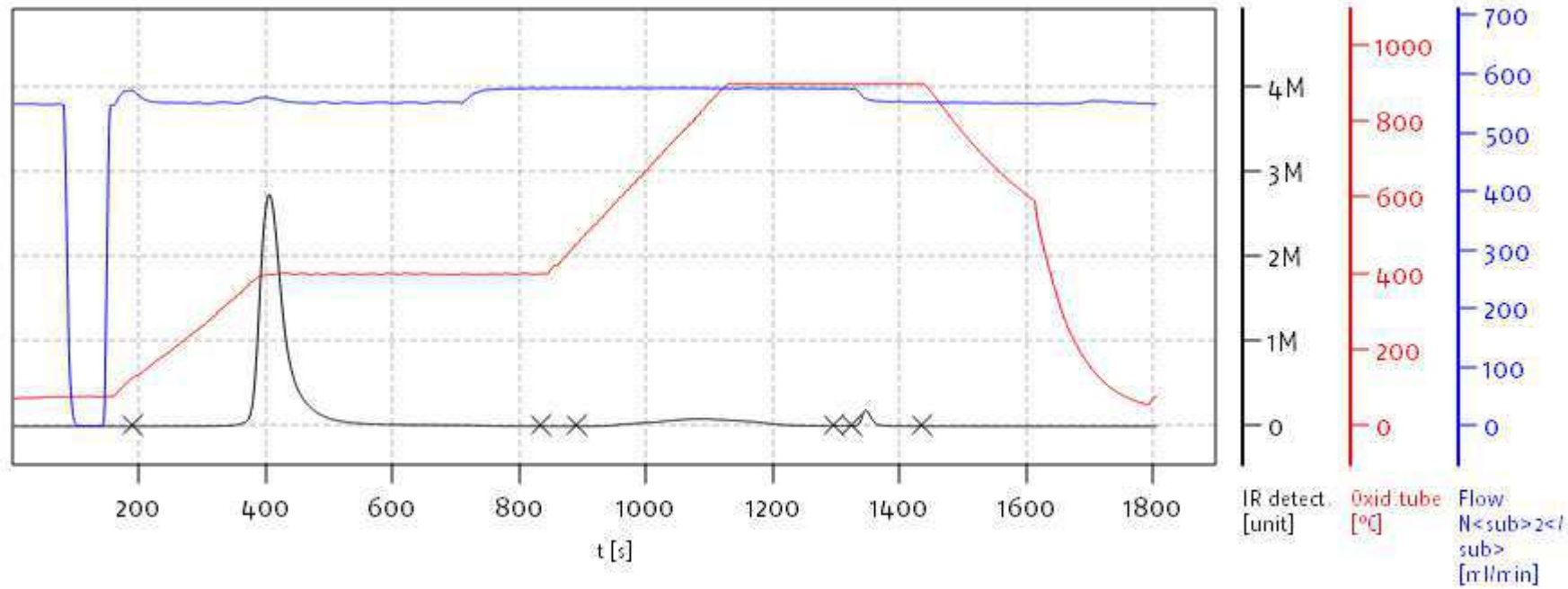
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
80	80	23A0420-02	538.70		CARBON	1/25/2023 7:40 AM	bl	1.414	4 815 615	1.580	0.031	133 189	603 826	1.384	0.166	1.0055	1.0000



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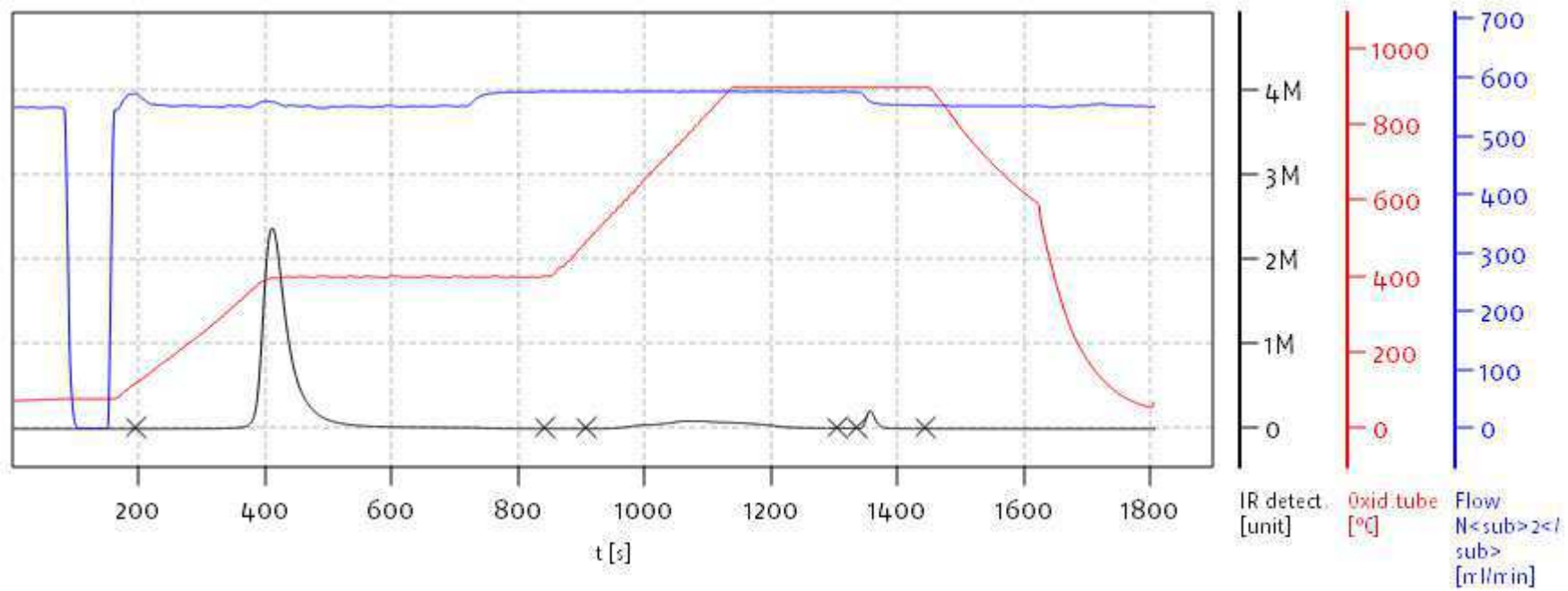
81	81	BLA0536-DUP1	517.10		CARBON	1/25/2023 8:10 AM	bl	1.342	4 366 419	1.523	0.035	144 427	634 068	1.306	0.182	1.0055	1.0000



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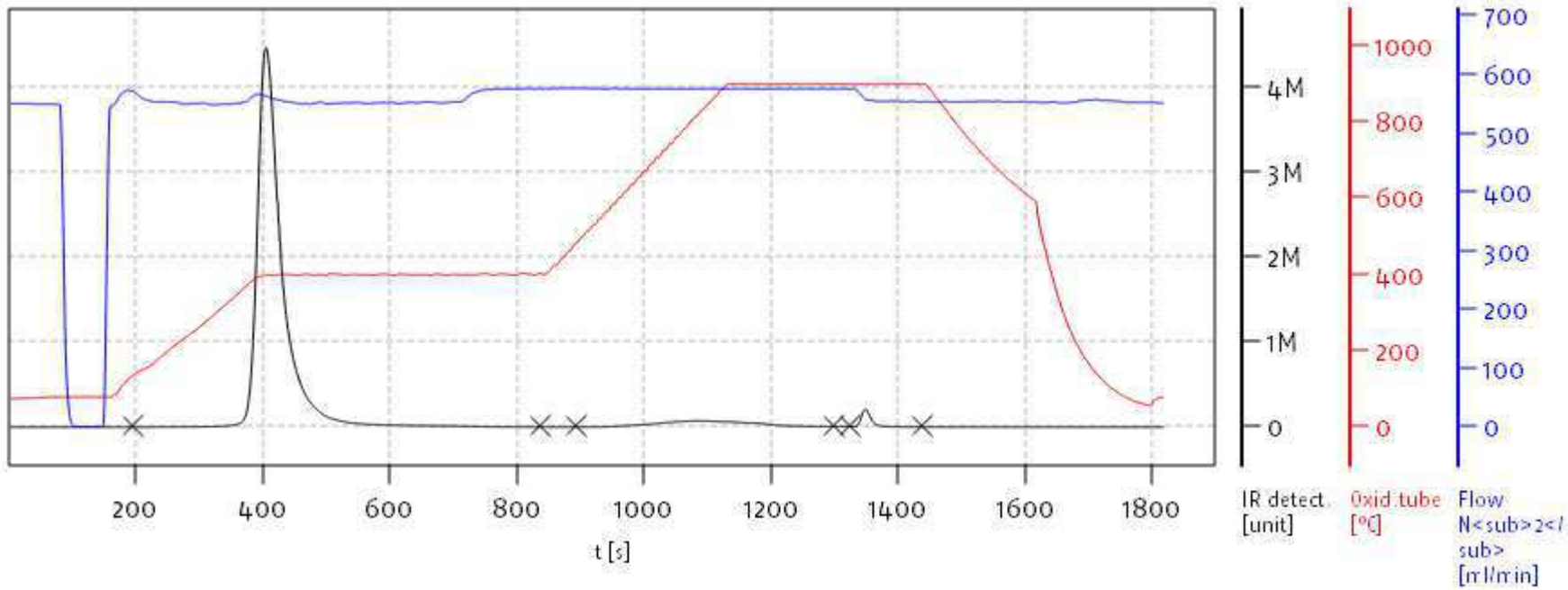
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
82	82	BLA0536-MS1	520.70	0.0094	CARBON	1/25/2023 8:41 AM	bl	2.268	7 493 431	2.410	0.036	147 574	505 750	2.232	0.142	1.0055	1.0000



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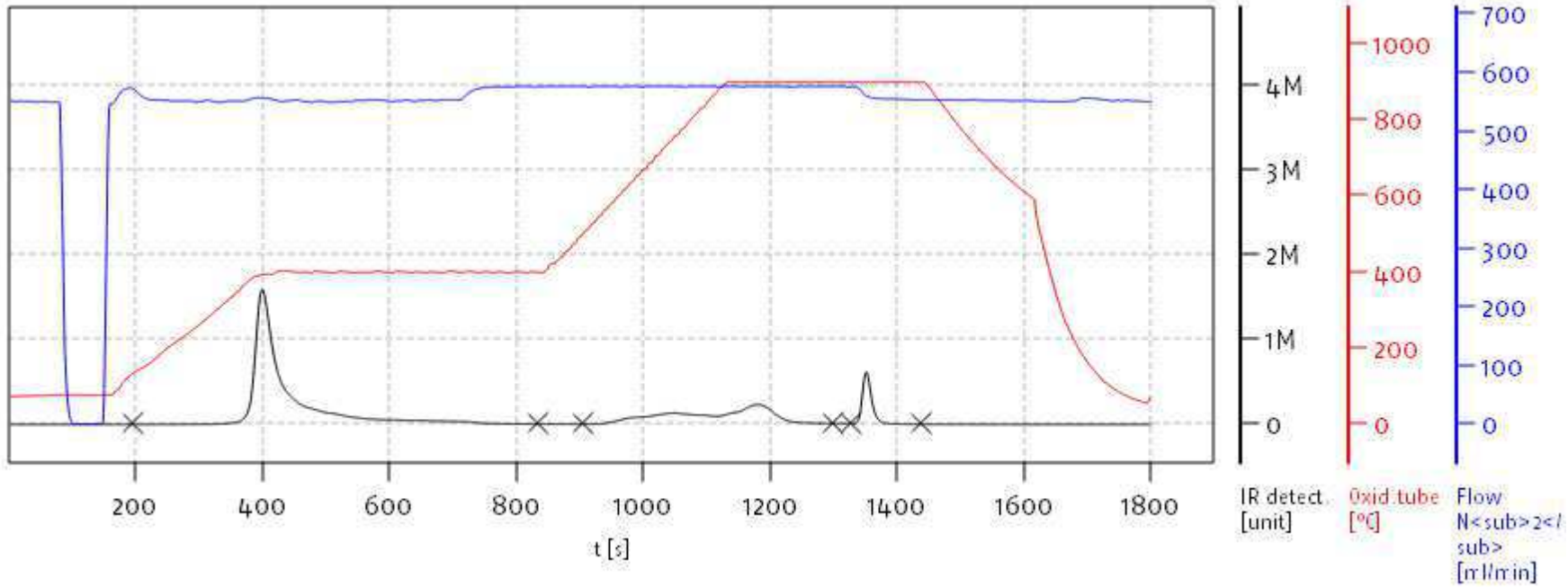
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
83	83	23A0420-03	508.60		CARBON	1/25/2023 9:11 AM	bl	1.071	3 147 291	1.467	0.116	406 097	1 327 970	0.955	0.396	1.0055	1.0000



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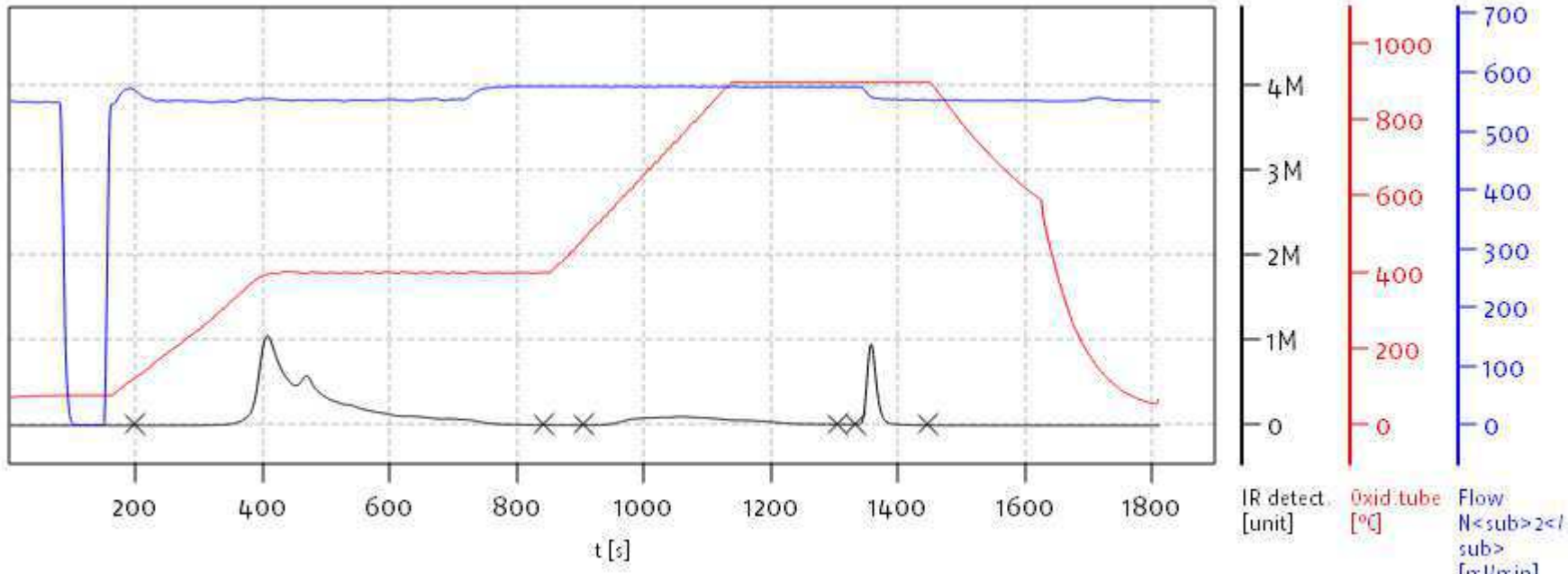
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
84	84	23A0420-04	512.40		CARBON	1/25/2023 9:42 AM	bl	1.401	4 027 952	1.634	0.185	640 119	798 657	1.215	0.233	1.0055	1.0000



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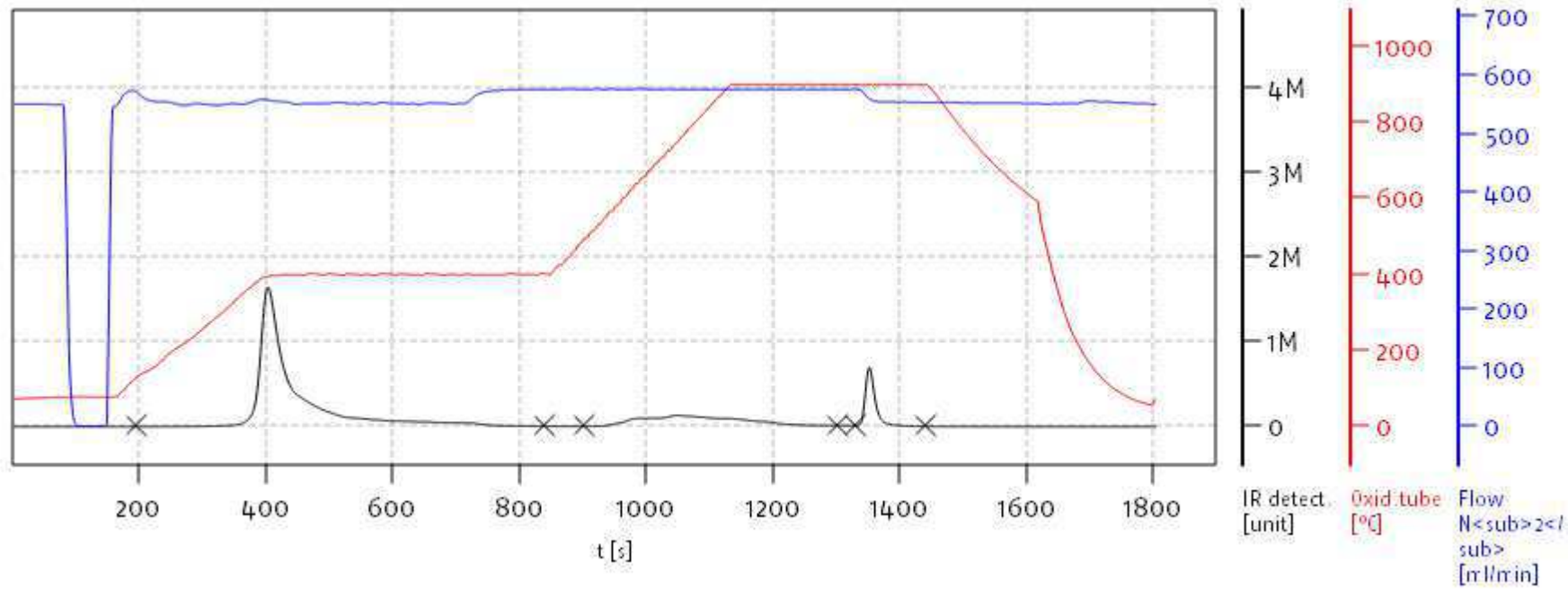
Date: Thu Jan 26 11:30:20 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
85	85	23A0420-05	550.70		CARBON	1/25/2023 10:12 AM	bl	1.127	3 559 043	1.391	0.129	484 909	965 035	0.998	0.264	1.0055	1.0000



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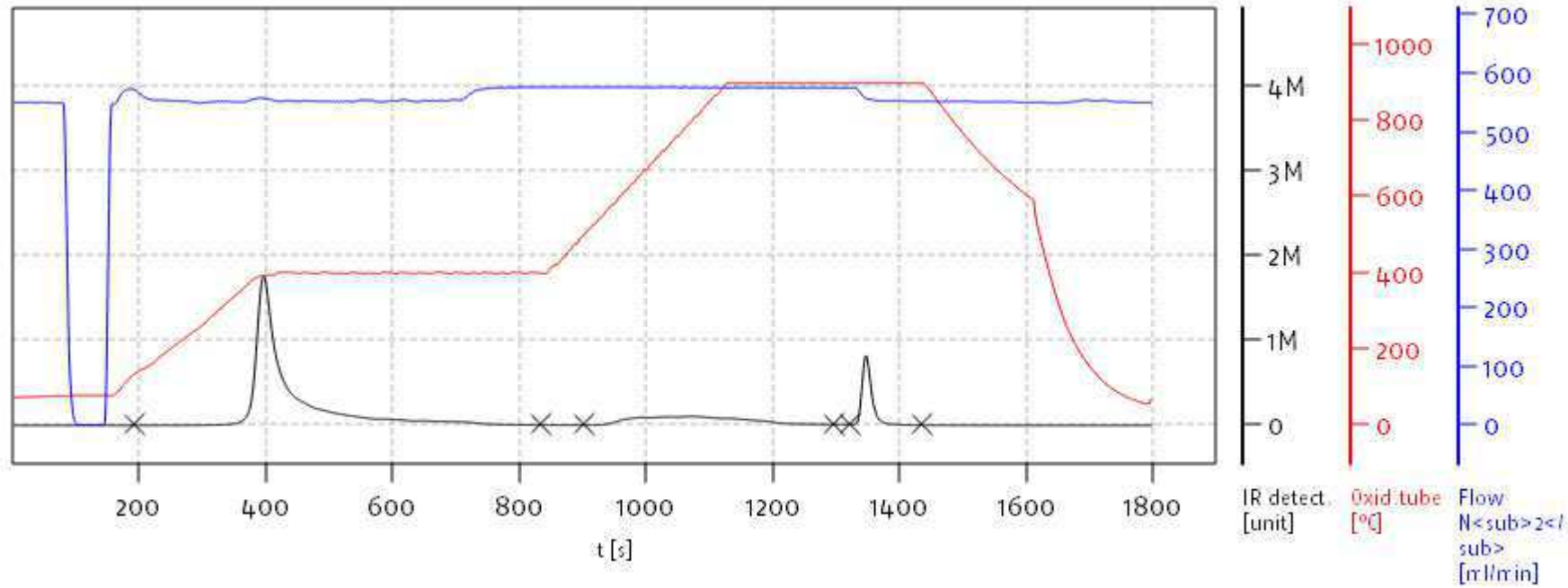
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
86	86	23A0420-06	551.60		CARBON	1/25/2023 10:43 AM	bl	1.143	3 548 920	1.378	0.149	557 915	864 692	0.994	0.235	1.0055	1.0000



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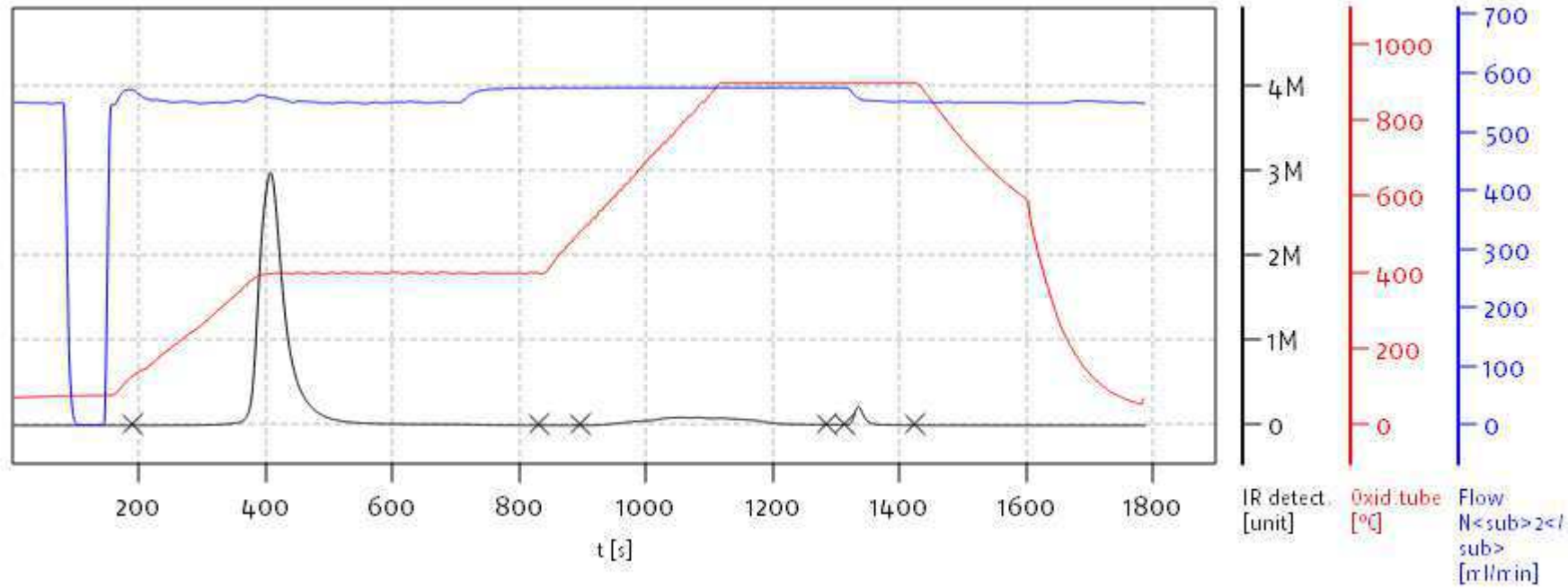
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
87	87	23A0420-07	576.00		CARBON	1/25/2023 11:13 AM	bl	1.499	5 441 719	1.677	0.035	157 829	691 486	1.463	0.179	1.0055	1.0000



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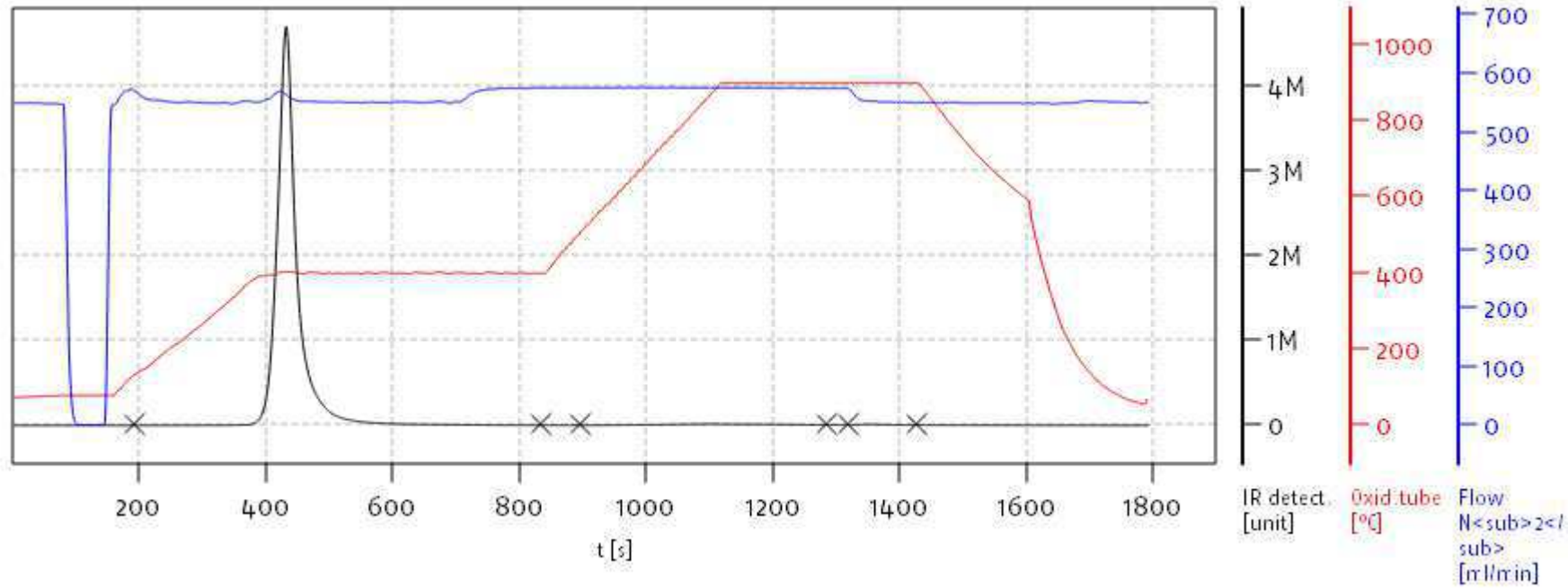
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
88	88	SLA0248-CCV7	22.20		CARBON	1/25/2023 11:43 AM	bl	44.445	6 360 834	45.184	0.034	31 436	132 487	44.411	0.739	1.0055	1.0000



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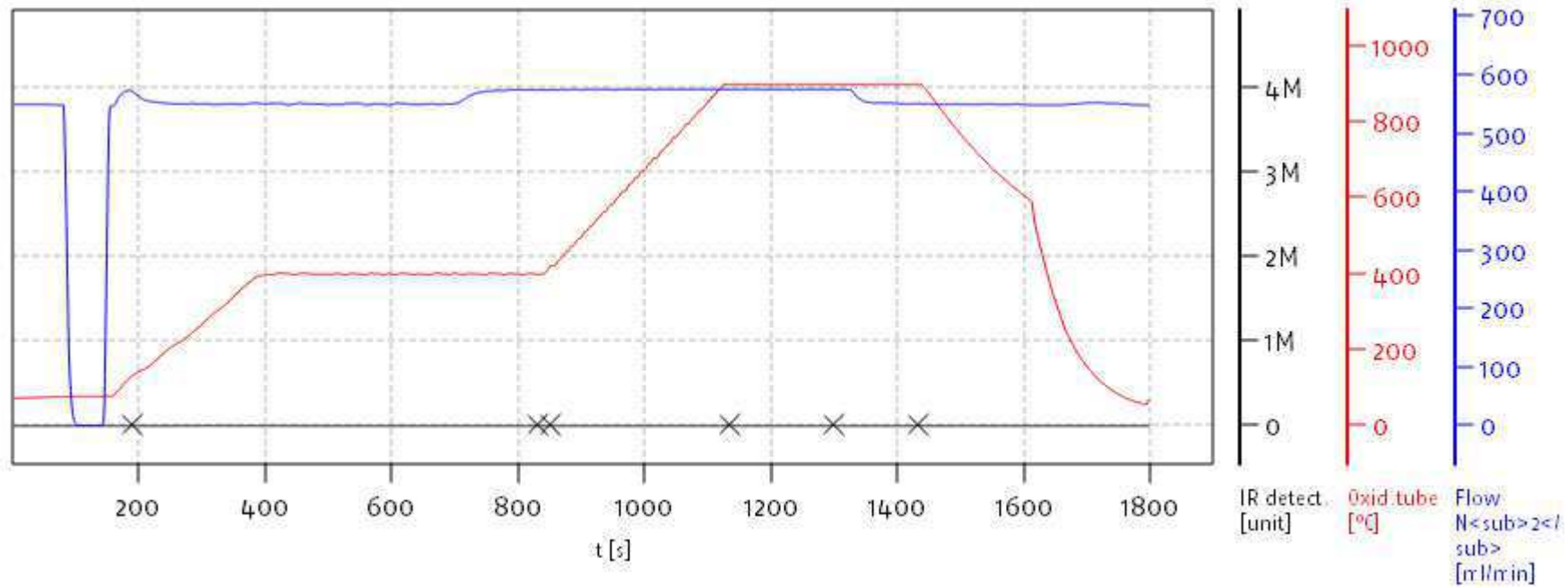
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
89	89	SLA0248-CCB7	510.40		CARBON	1/25/2023 12:14 PM	bl,C3u,C2u	0.000	9 173	0.000	0.000	755	173	0.000	0.000	1.0055	1.0000



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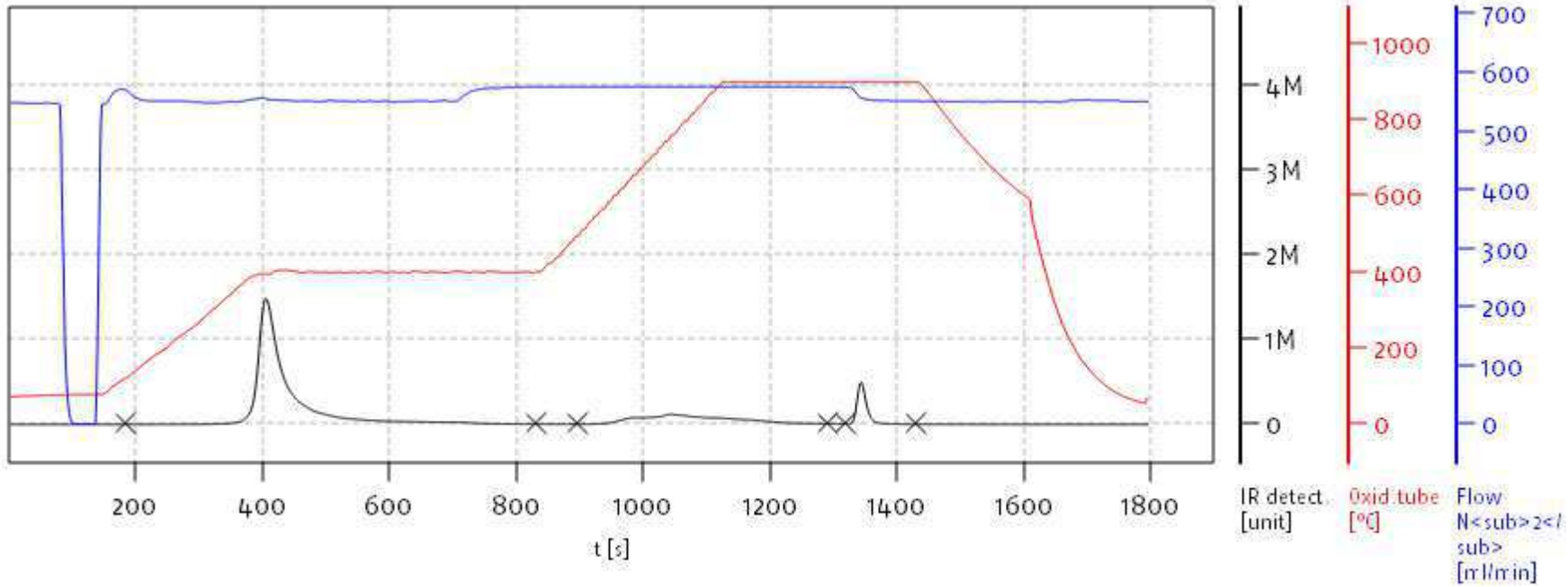
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
90	1	23A0420-08	531.50		CARBON	1/25/2023 12:44 PM	bl	0.932	2 908 752	1.150	0.088	330 034	774 946	0.844	0.218	1.0055	1.0000



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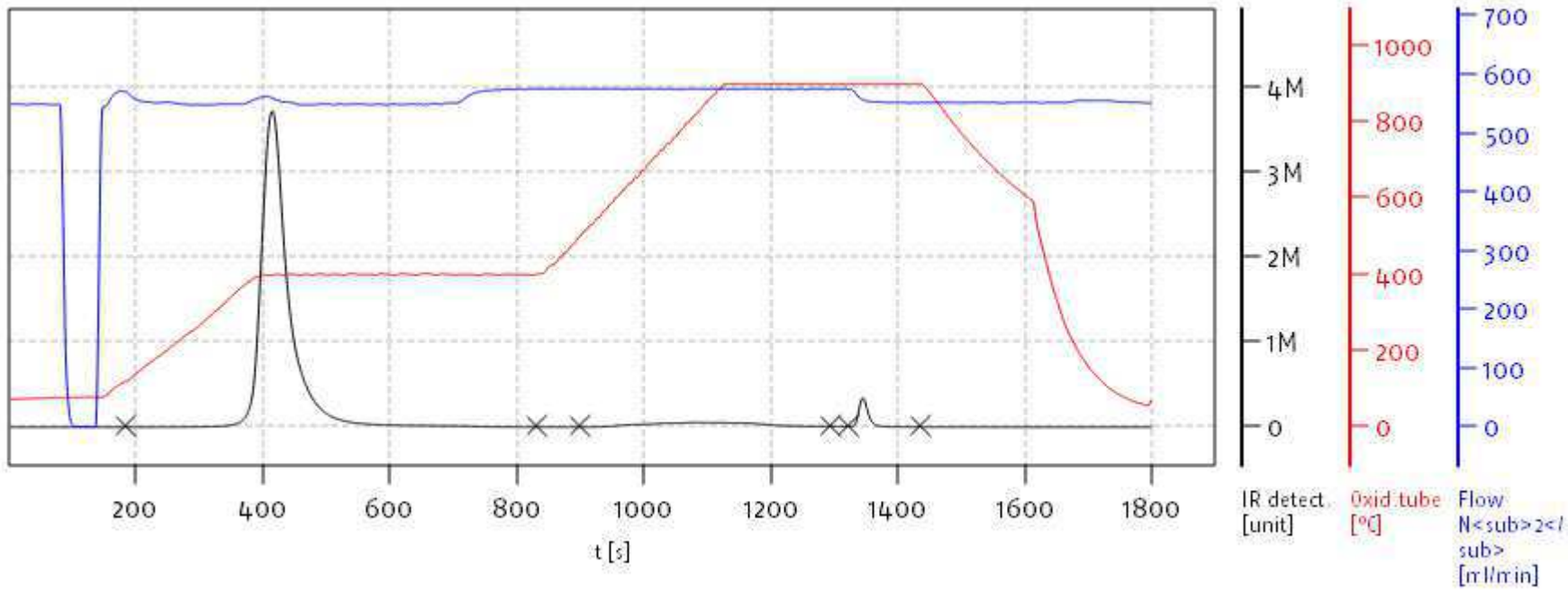
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
91	2	23A0420-09	595.70		CARBON	1/25/2023 1:14 PM	bl	1.856	6 930 831	1.963	0.052	226 221	440 193	1.804	0.107	1.0055	1.0000



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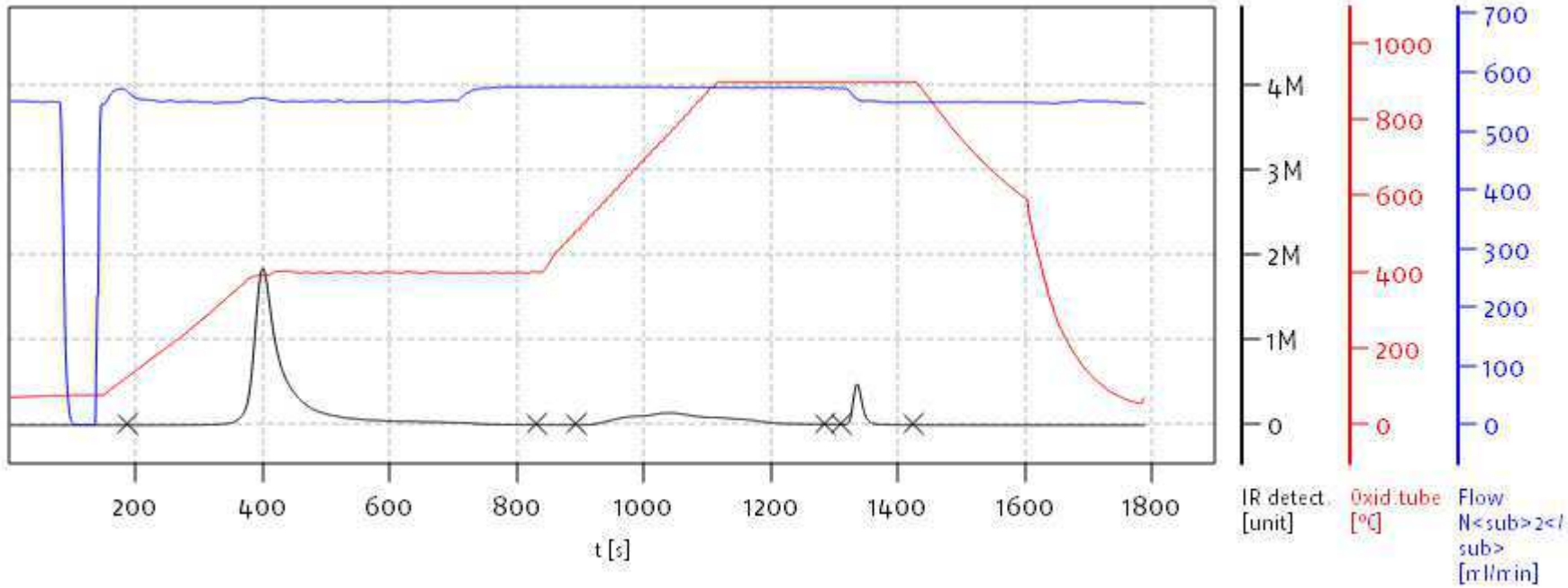
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
92	3	23A0455-01	643.80		CARBON	1/25/2023 1:45 PM	bl	0.978	3 780 275	1.208	0.070	319 720	982 408	0.908	0.230	1.0055	1.0000



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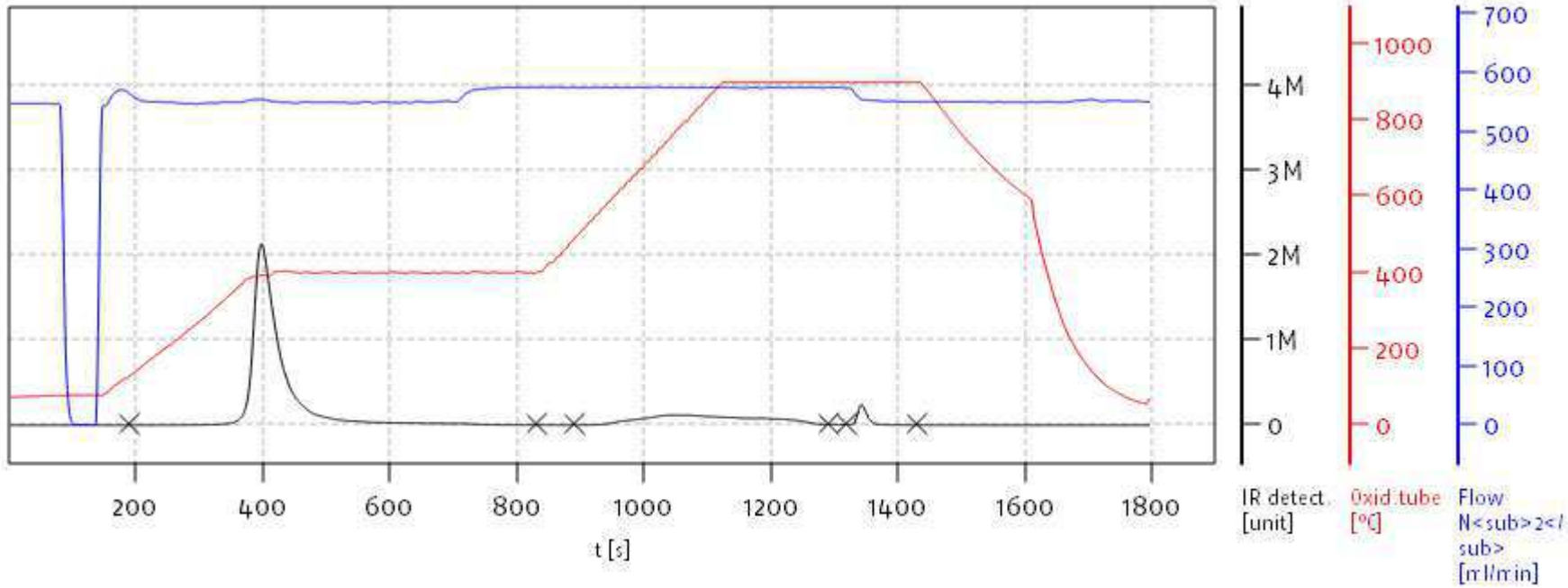
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
93	4	23A0455-02	544.10		CARBON	1/25/2023 2:15 PM	bl	1.155	3 928 863	1.434	0.038	161 622	1 007 942	1.116	0.279	1.0055	1.0000



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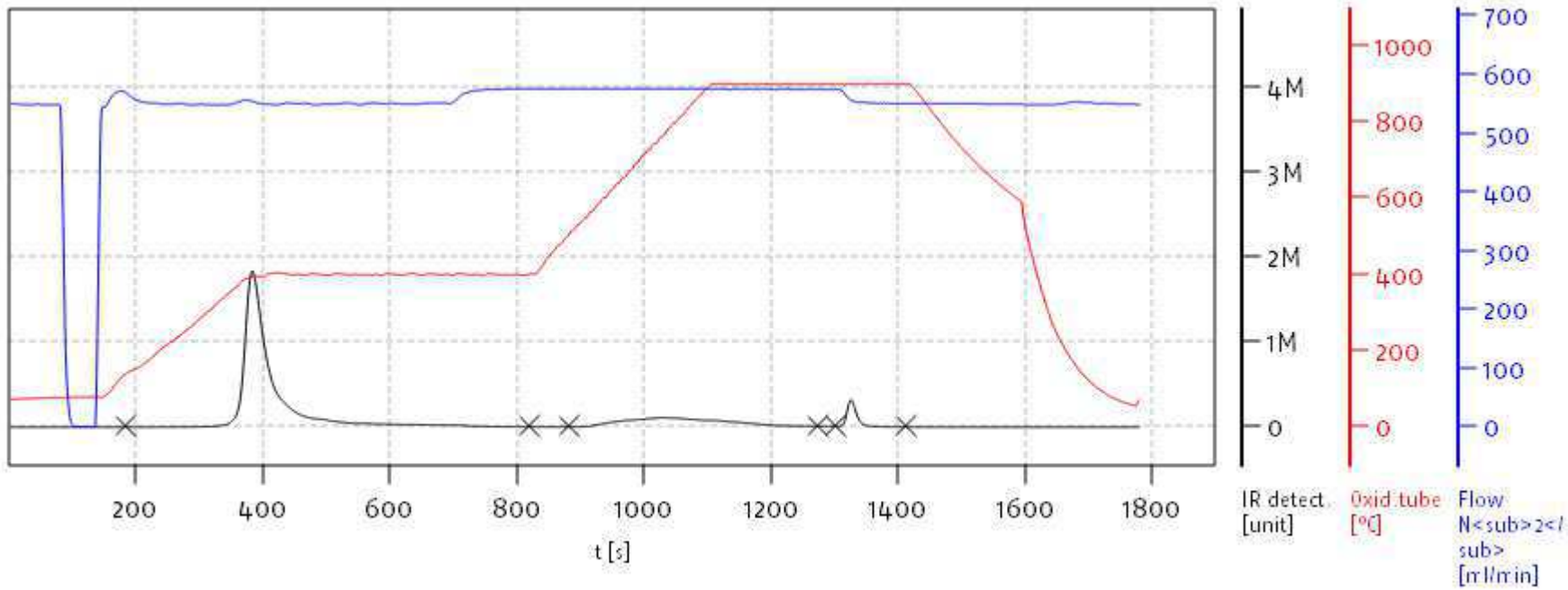
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
94	5	23A0455-03	533.10		CARBON	1/25/2023 2:45 PM	bl	1.006	3 280 902	1.233	0.055	217 577	811 013	0.950	0.228	1.0055	1.0000



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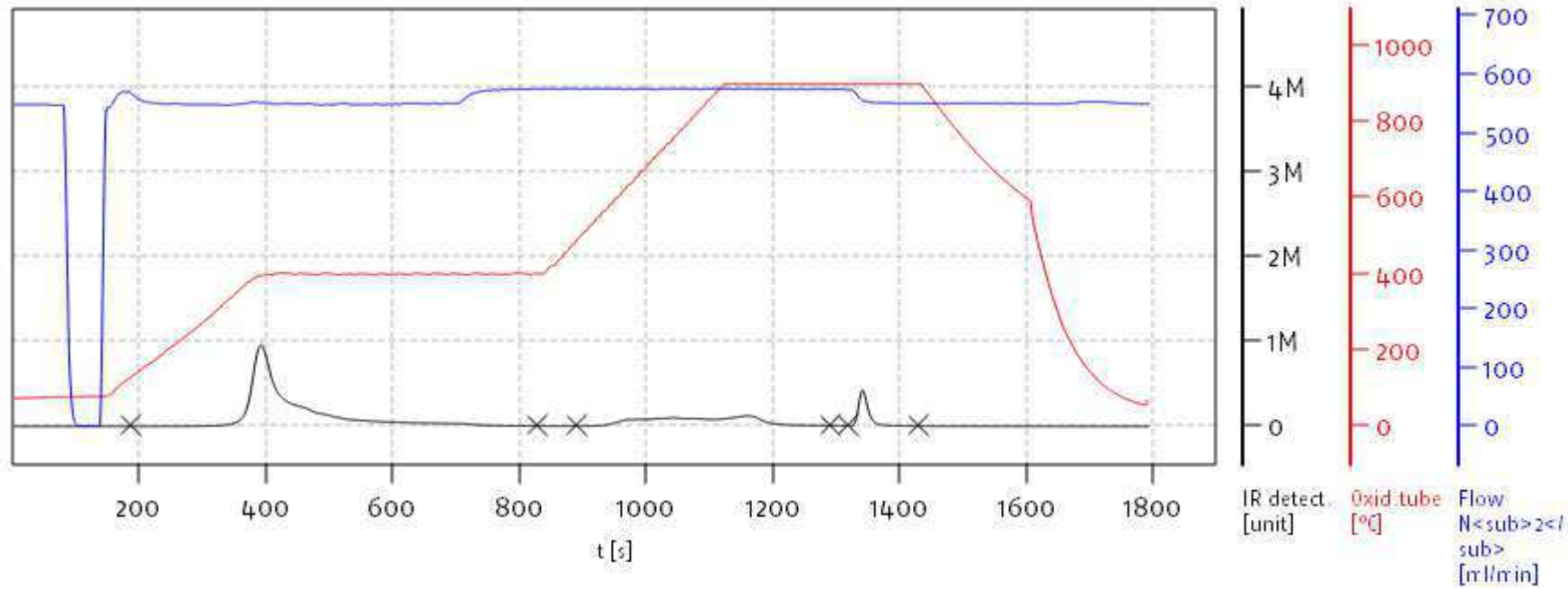
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
95	6	23A0455-04	505.70		CARBON	1/25/2023 3:15 PM	bl	0.839	2 483 236	1.107	0.083	296 855	901 894	0.756	0.268	1.0055	1.0000



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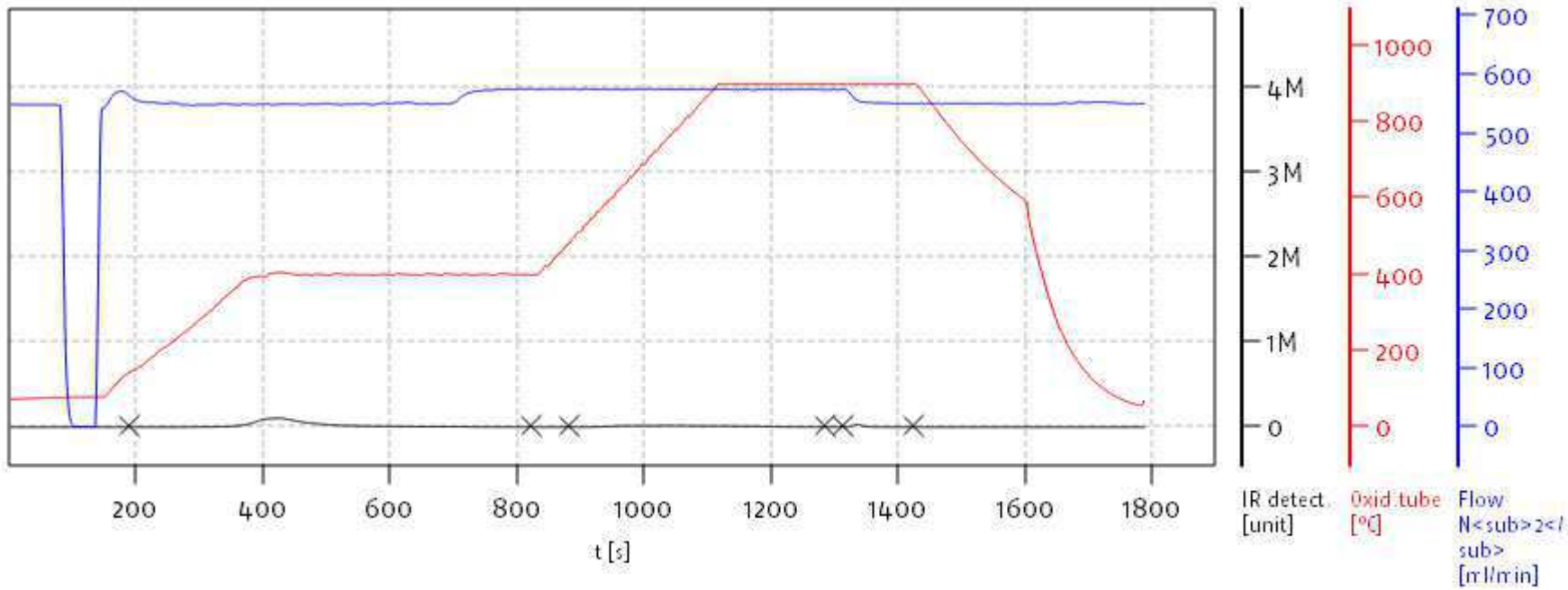
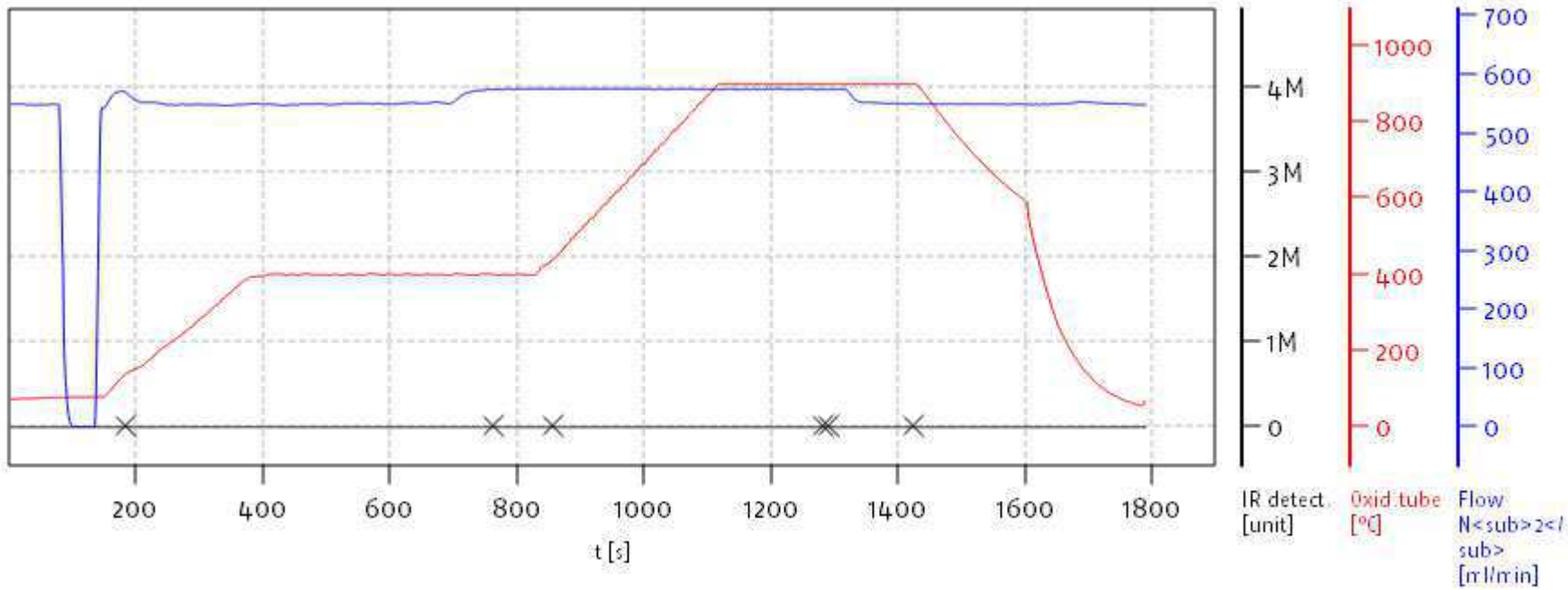
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
96	7	23A0455-05	578.50		CARBON	1/25/2023 3:45 PM	bl	0.114	448 511	0.143	0.000	21 176	135 200	0.114	0.029	1.0055	1.0000



Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
97	8	BLANK	1.00		CARBON	1/ 25/2023 4:16 PM	bl	0.000	9 690	0.000	0.000	398	1 467	0.000	0.000	1.0055	1.0000



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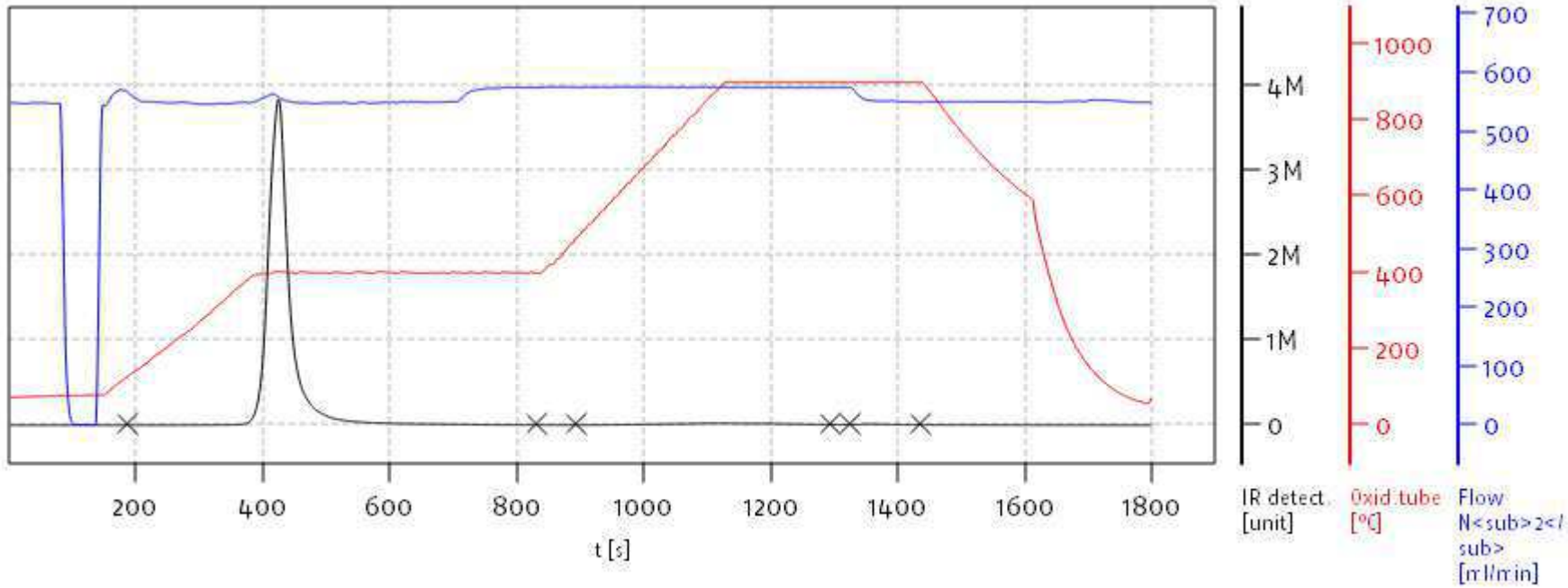
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
98	9	Dfactor	19.70		CARBON	1/25/2023 4:46 PM	bl	44.493	5 581 097	45.733	0.047	32 519	184 433	44.446	1.241	1.0183	1.0000



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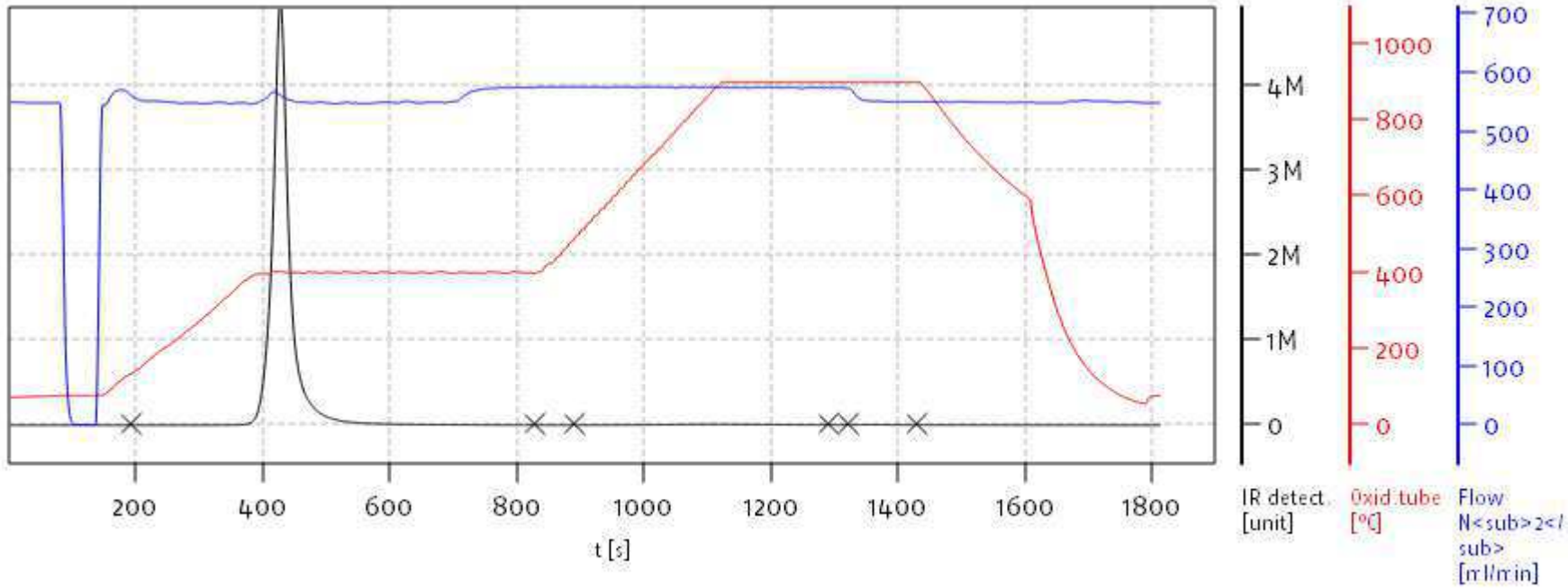
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
99	10	Dfactor	19.70		CARBON	1/25/2023 5:17 PM	bl	44.446	5 816 436	44.894	0.000	17 042	83 614	44.446	0.449	0.9769	1.0000



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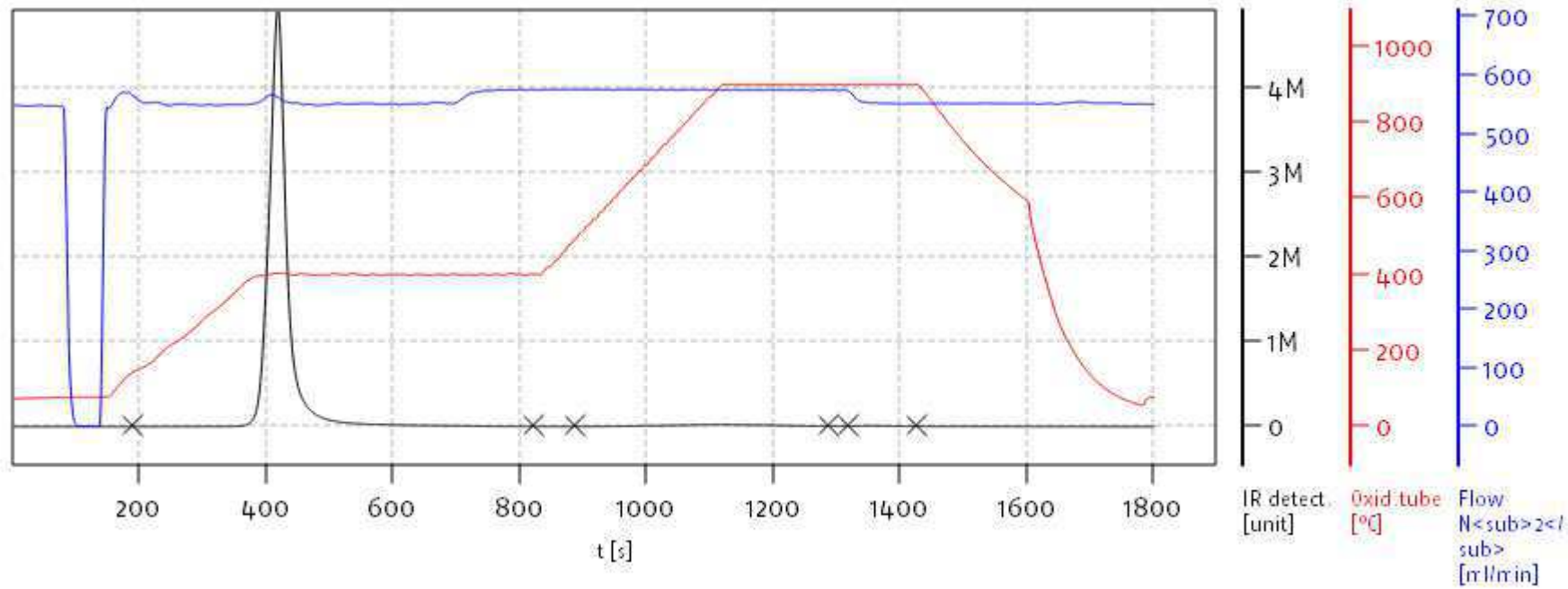
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
100	11	SLA0248-CCV8	21.00		CARBON	1/25/2023 5:47 PM	bl	44.971	6 141 719	46.160	0.001	26 726	187 870	44.970	1.189	0.9976	1.0000



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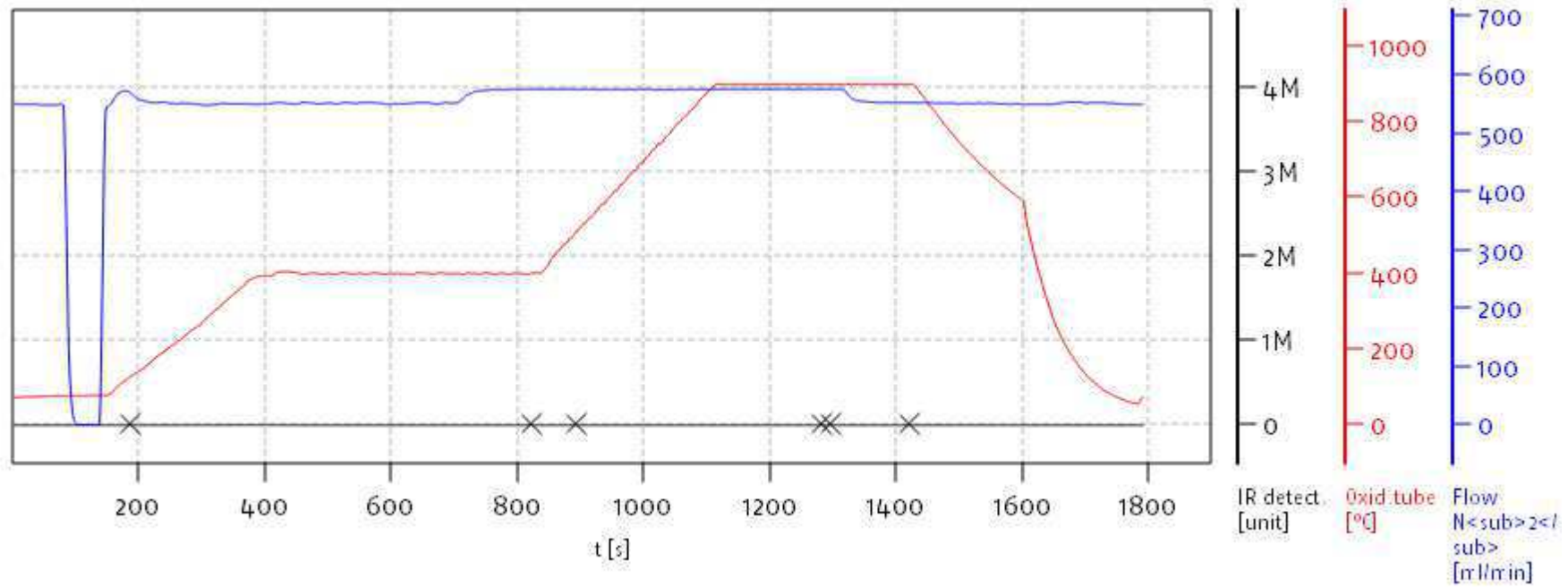
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
101	12	SLA0248-CCB8	506.50		CARBON	1/25/2023 6:18 PM	bl,C3u,C2u	0.000	9 854	0.000	0.000	1 317	874	0.000	0.000	0.9976	1.0000



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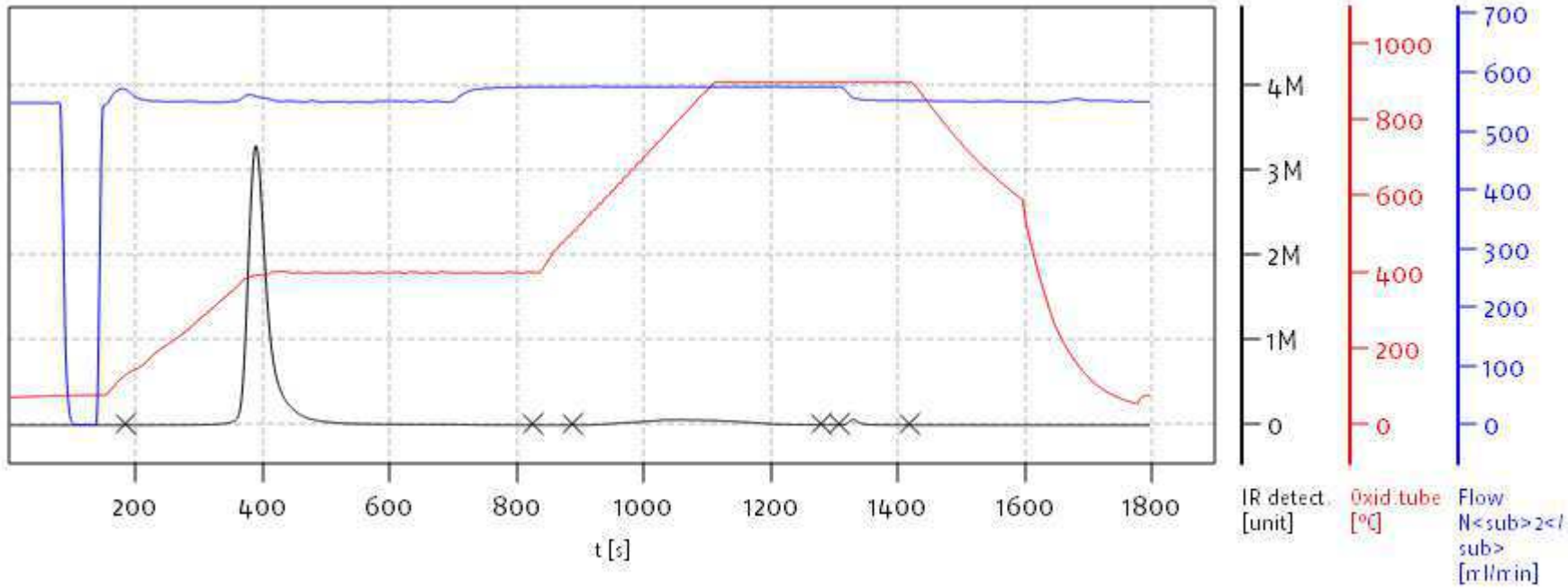
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
102	13	23A0455-06	506.40		CARBON	1/25/2023 6:48 PM	bl	1.383	4 536 741	1.513	0.008	52 336	450 457	1.375	0.130	0.9976	1.0000



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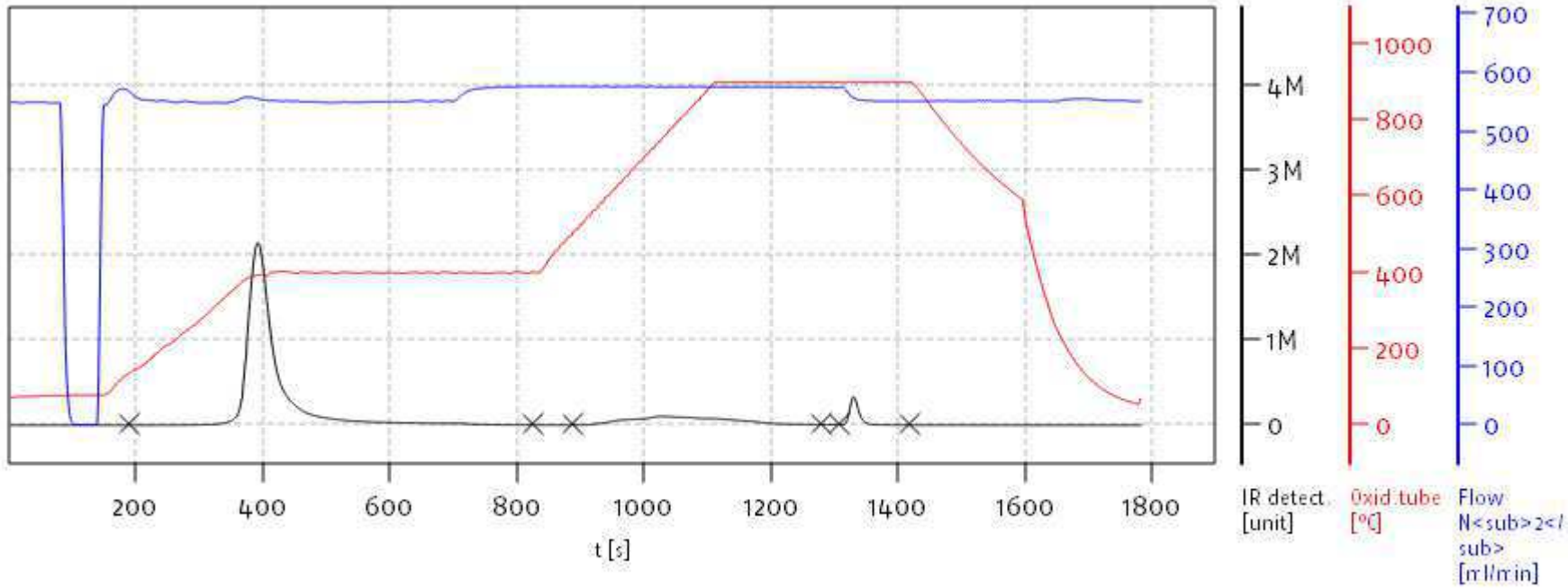
103	14	23A0455-07	506.40		CARBON	1/25/2023 7:18 PM	bl	1.265	3 983 520	1.480	0.058	215 698	731 107	1.207	0.215	0.9976	1.0000



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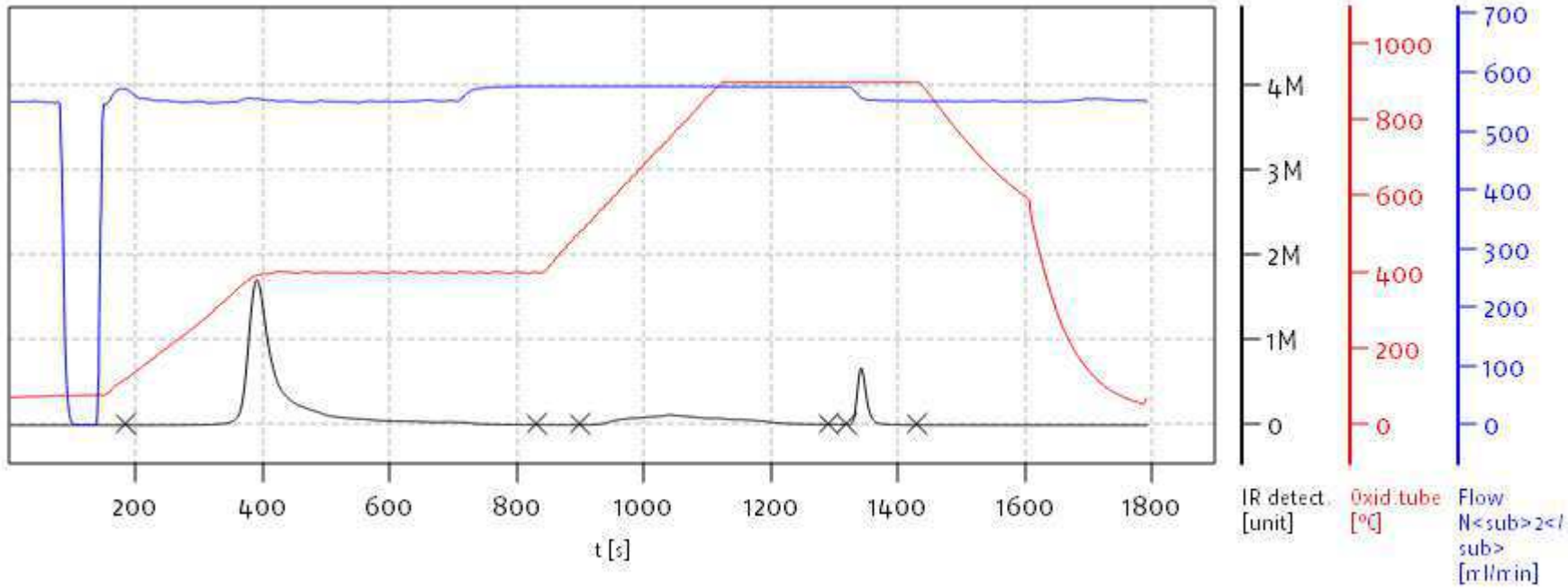
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
104	15	23A0455-08	529.90		CARBON	1/25/2023 7:48 PM	bl	1.147	3 547 390	1.386	0.121	440 173	845 635	1.026	0.239	0.9976	1.0000



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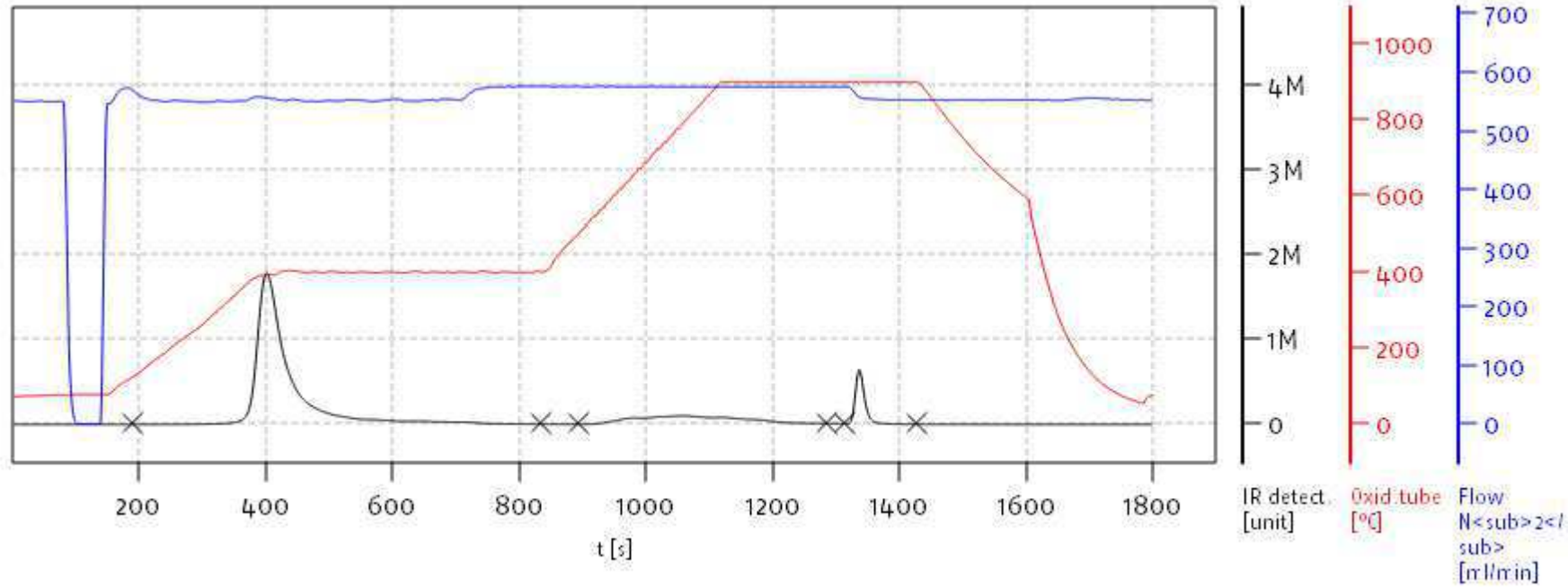
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
105	16	23A0455-09	526.50		CARBON	1/25/2023 8:19 PM	bl	1.234	3 839 753	1.461	0.115	419 247	800 429	1.118	0.228	0.9976	1.0000



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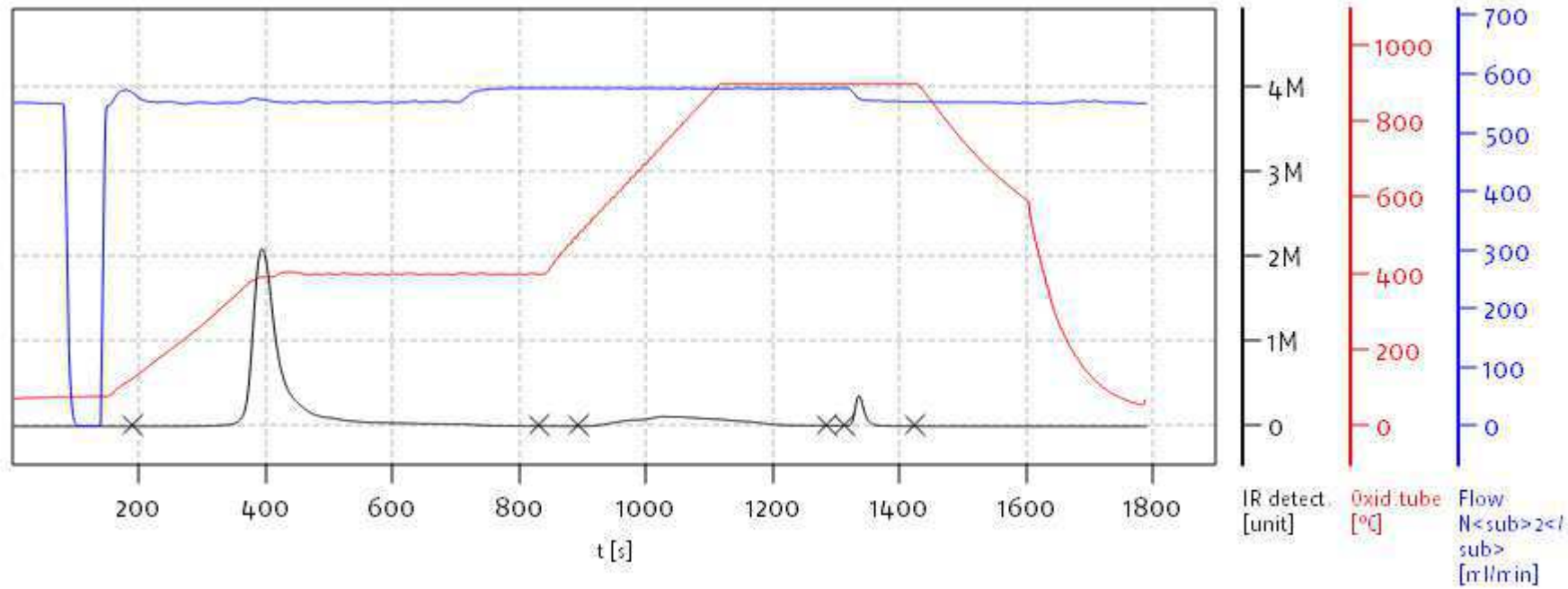
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
106	17	23A0455-10	522.30		CARBON	1/25/2023 8:49 PM	bl	1.245	4 025 520	1.479	0.063	238 642	814 813	1.182	0.234	0.9976	1.0000



Name:

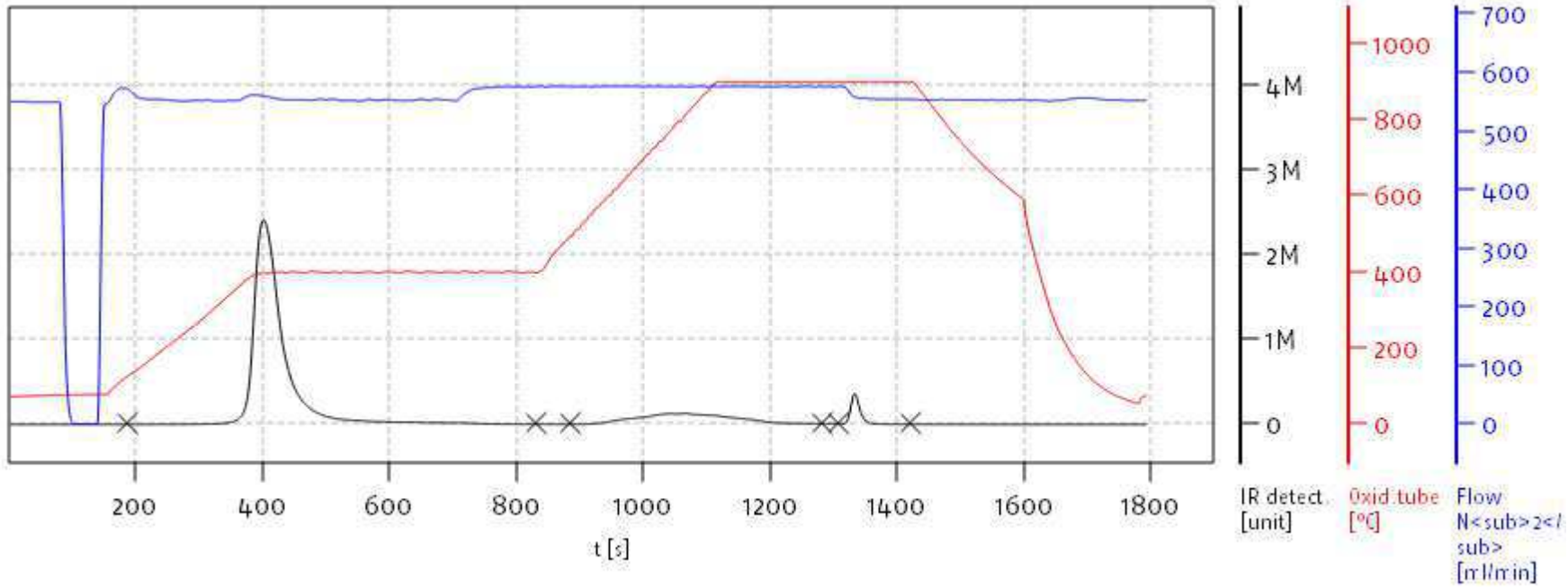
Access: soliTOC superuser

Date: Thu Jan 26 11:30:20 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
107	18	23A0455-11	617.70		CARBON	1/25/2023 9:19 PM	bl	1.235	4 759 248	1.453	0.052	235 130	895 715	1.183	0.218	0.9976	1.0000



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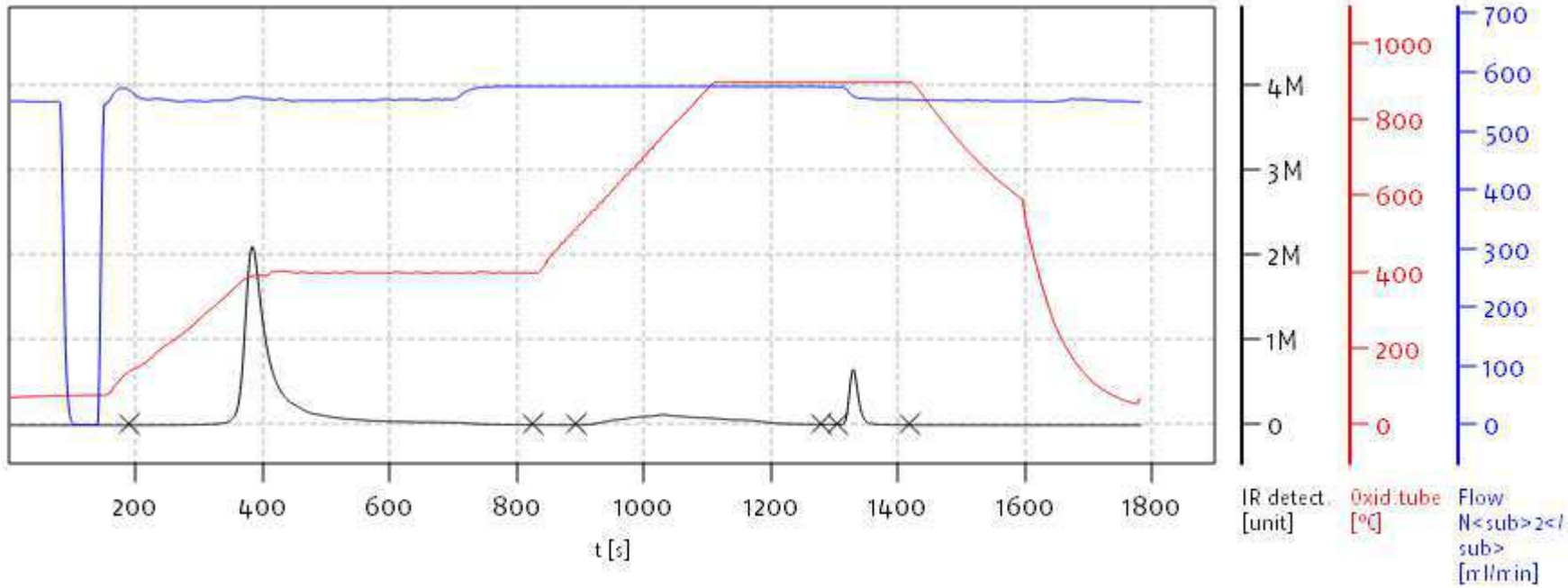
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
108	19	23A0455-12	516.20		CARBON	1/25/2023 9:49 PM	bl	1.278	3 901 605	1.525	0.119	423 387	848 229	1.159	0.246	0.9976	1.0000



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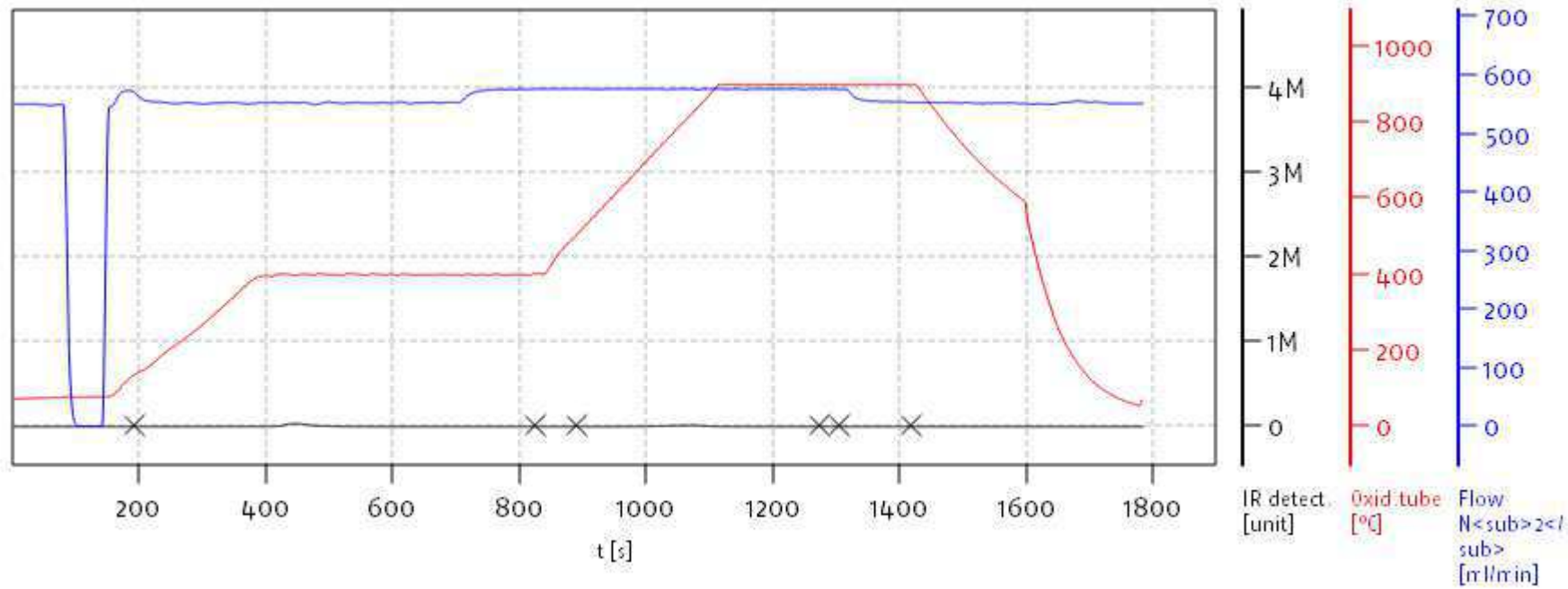
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
109	20	BLA0567-MRL1	603.30		CARBON	1/25/2023 10:19 PM	bl,C2u	0.012	72 784	0.016	0.000	458	41 440	0.012	0.004	0.9976	1.0000



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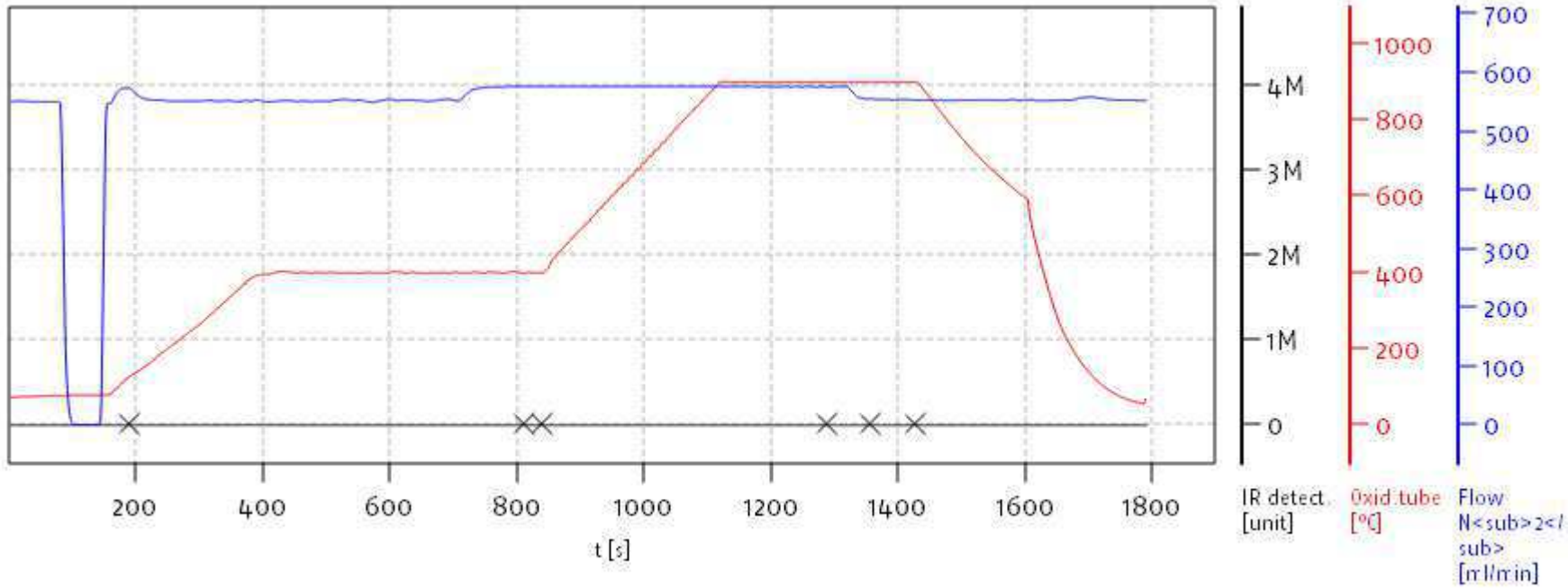
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
110	21	BLA0567-BLK1	511.60		CARBON	1/25/2023 10:50 PM	bl,C2u	0.000	9 802	0.000	0.000	280	3 832	0.000	0.000	0.9976	1.0000



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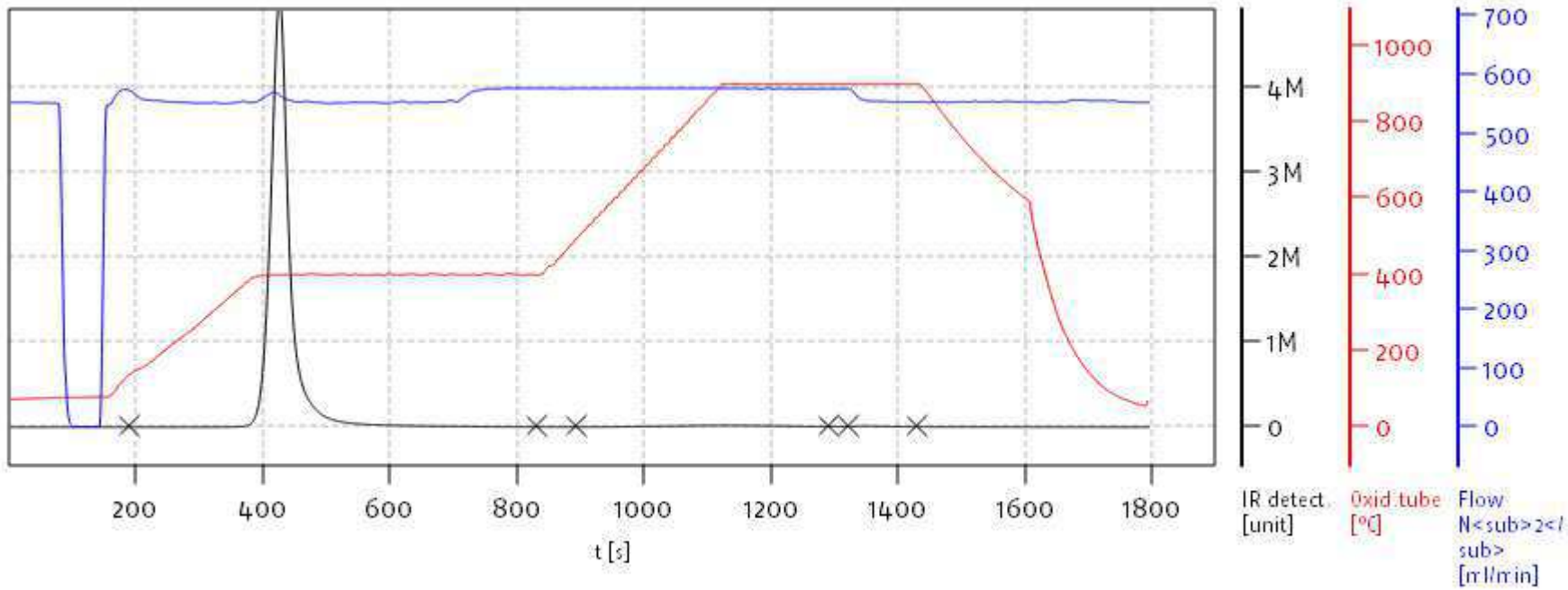
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
111	22	BLA0567-BS1	22.80		CARBON	1/25/2023 11:20 PM	bl	44.786	6 634 985	45.708	0.026	30 346	162 281	44.760	0.922	0.9976	1.0000



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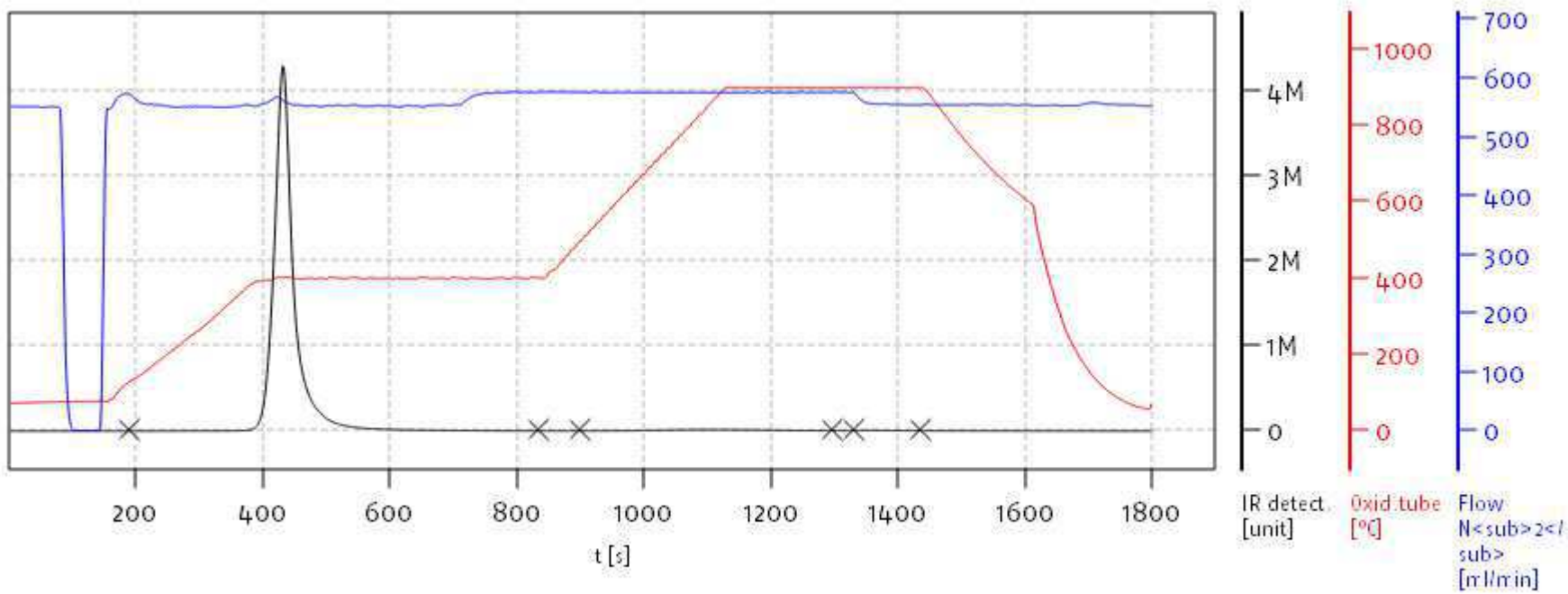
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
112	23	SLA0248-CCV9	19.90		CARBON	1/25/2023 11:50 PM	bl	44.500	5 760 928	45.261	0.000	22 135	124 339	44.500	0.761	0.9976	1.0000



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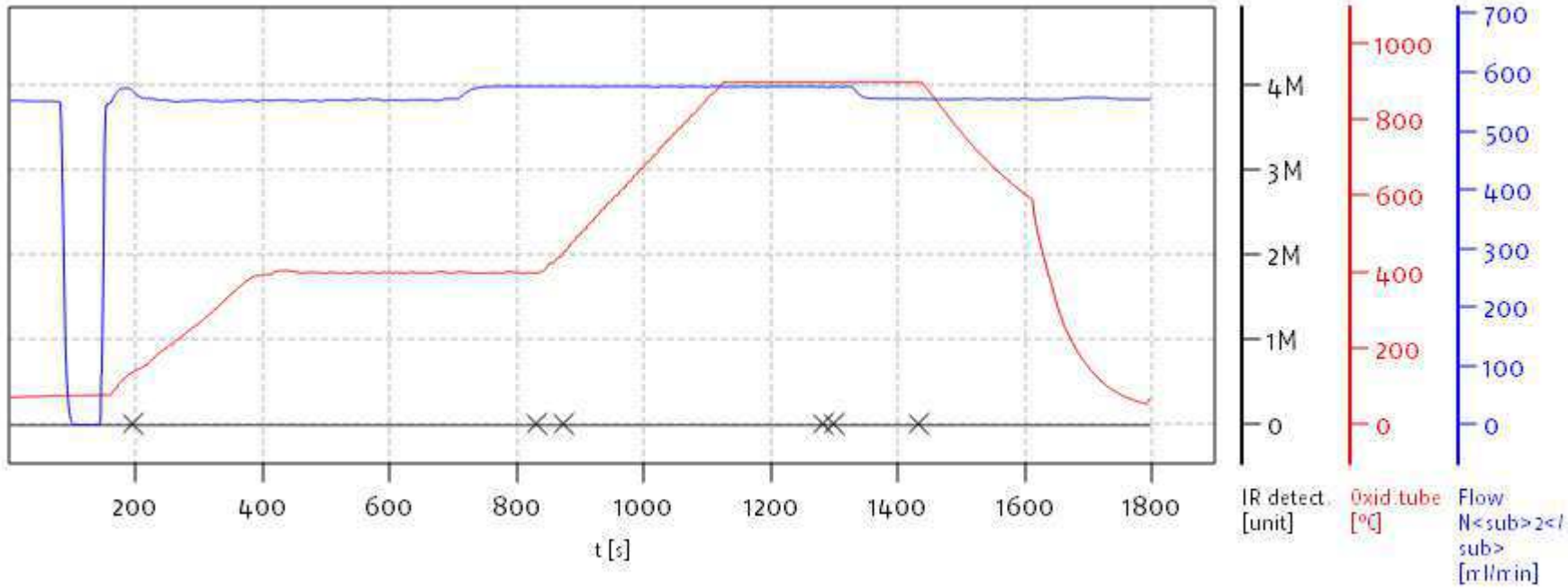
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
113	24	SLA0248-CCB9	513.80		CARBON	1/26/2023 12:21 AM	bl,C2u	0.000	7 942	0.000	0.000	1 083	4 655	0.000	0.000	0.9976	1.0000



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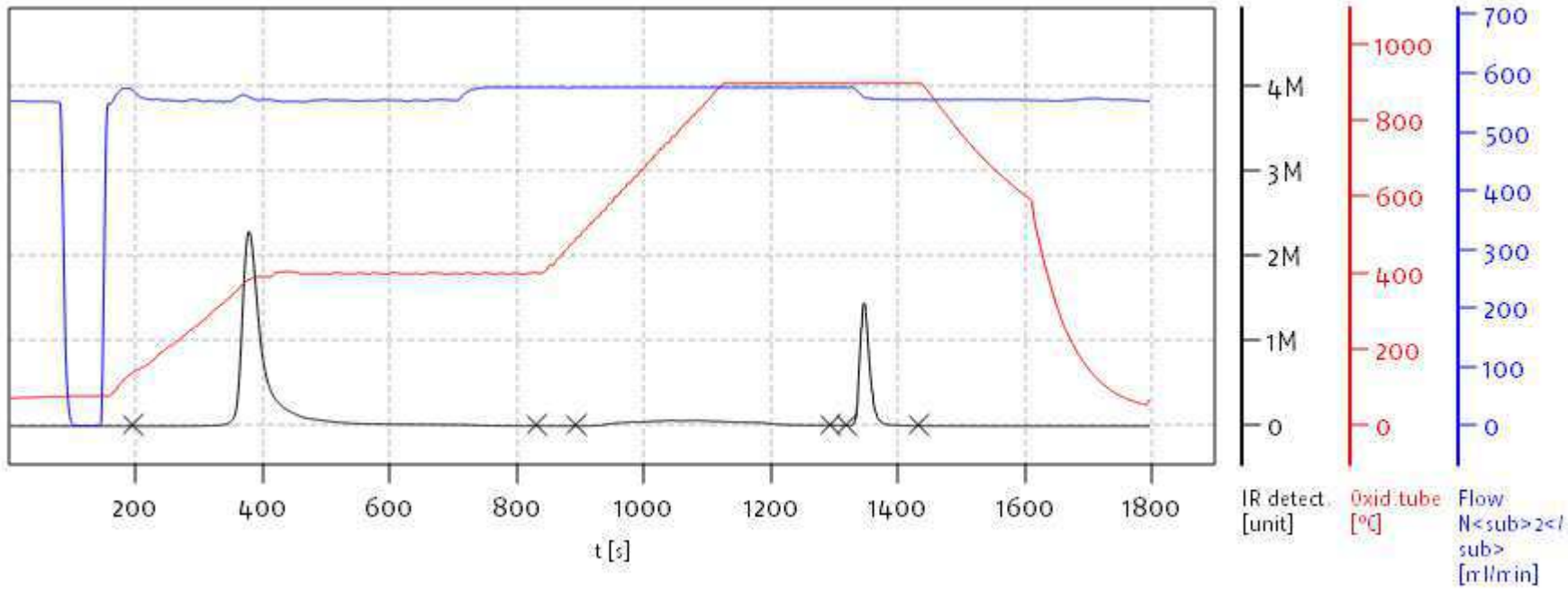
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
114	25	BLA0567-SRM1	226.10		CARBON	1/26/2023 12:51 AM	bl	2.944	3 377 549	3.306	0.655	983 463	555 249	2.289	0.362	0.9976	1.0000



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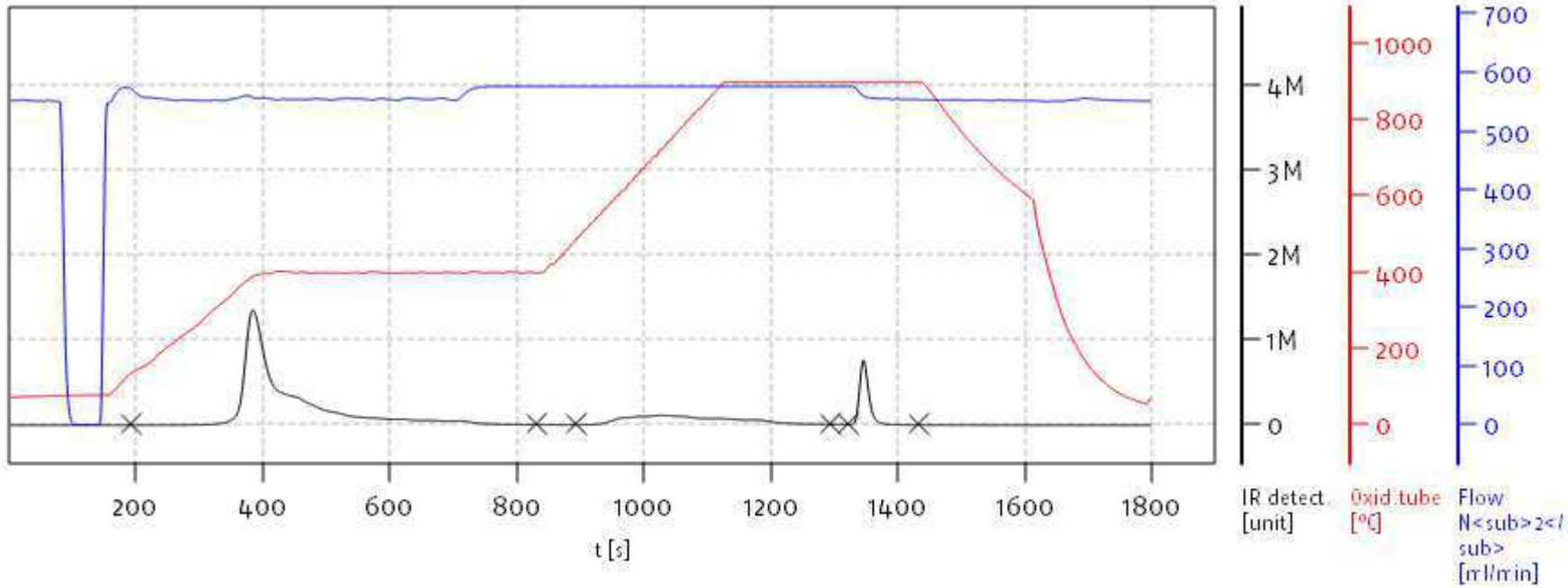
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
115	26	23A0455-13	565.70		CARBON	1/26/2023 1:22 AM	bl	1.077	3 504 412	1.313	0.128	493 953	887 488	0.949	0.236	0.9976	1.0000



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Soli TOC Cube, Carbon
Balance: BAL3
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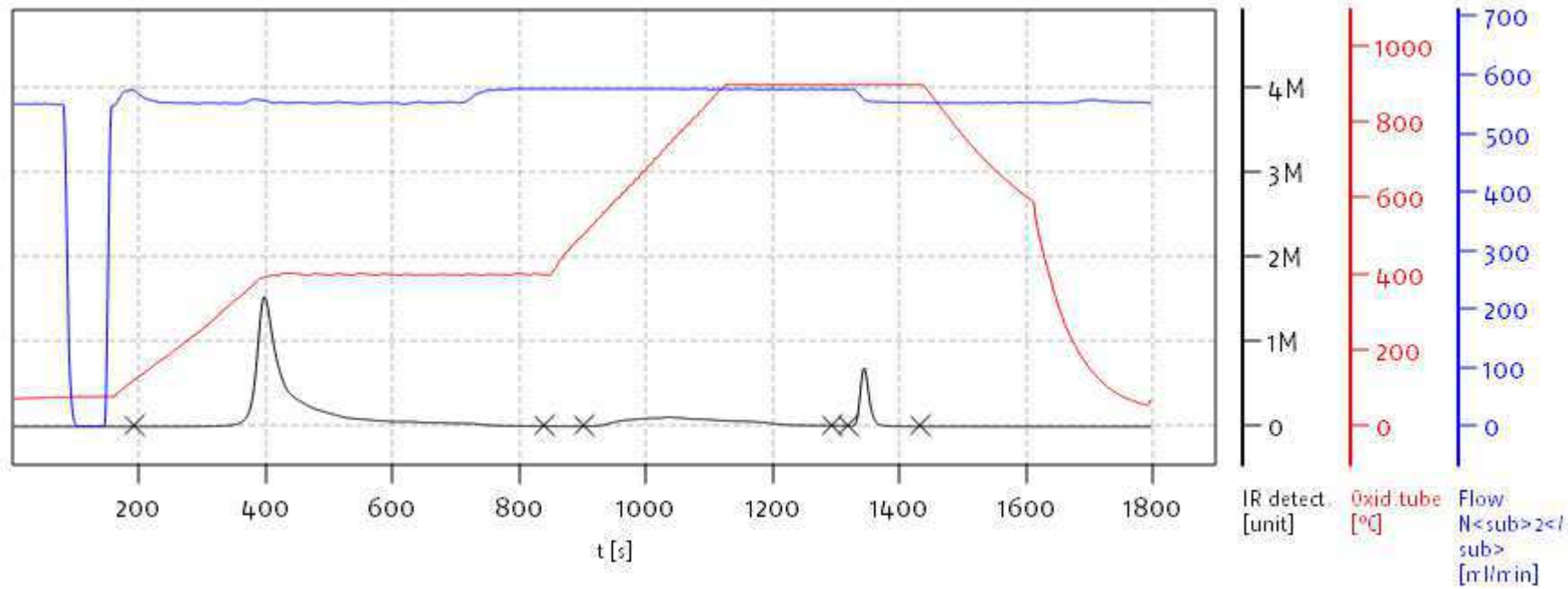
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
116	27	BLA0567-DUP1	532.30		CARBON	1/26/2023 1:52 AM	bl	1.082	3 342 670	1.319	0.120	438 124	843 486	0.962	0.238	0.9976	1.0000



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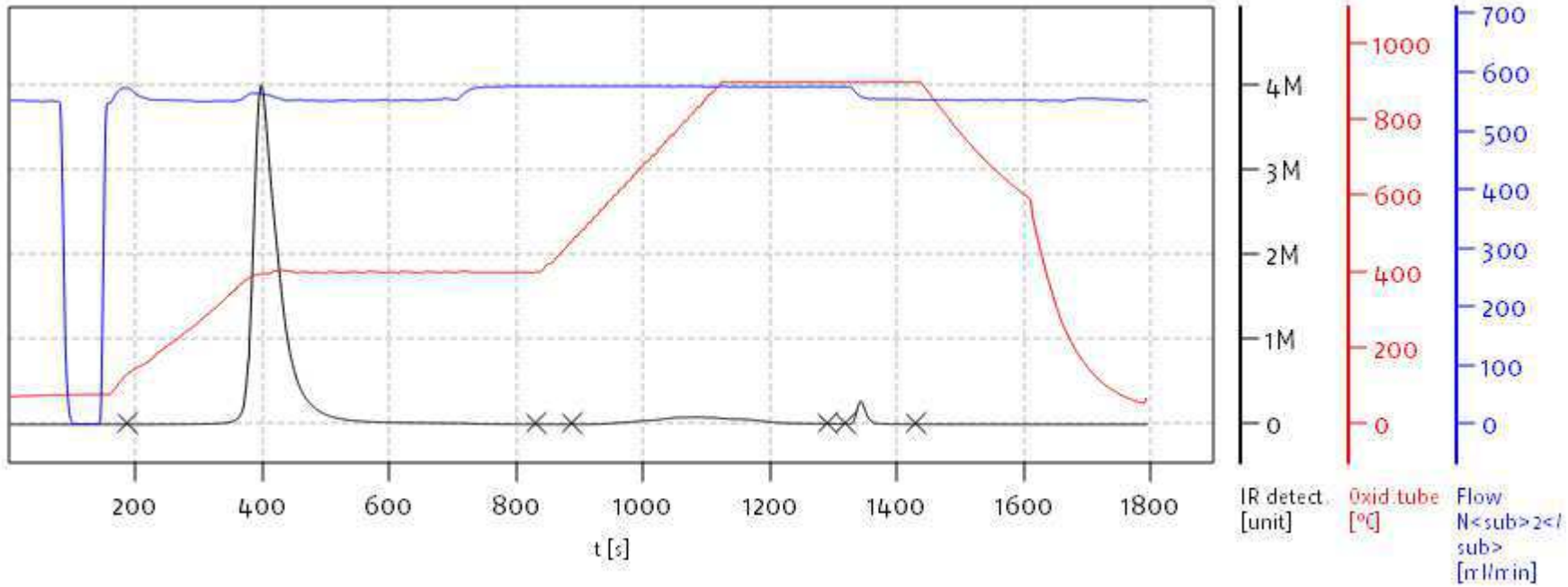
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
117	28	BLA0567-MS1	566.00	0.0092	CARBON	1/26/2023 2:22 AM	bl	1.988	7 155 402	2.145	0.043	183 953	598 965	1.945	0.157	0.9976	1.0000



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Balance: BAL3
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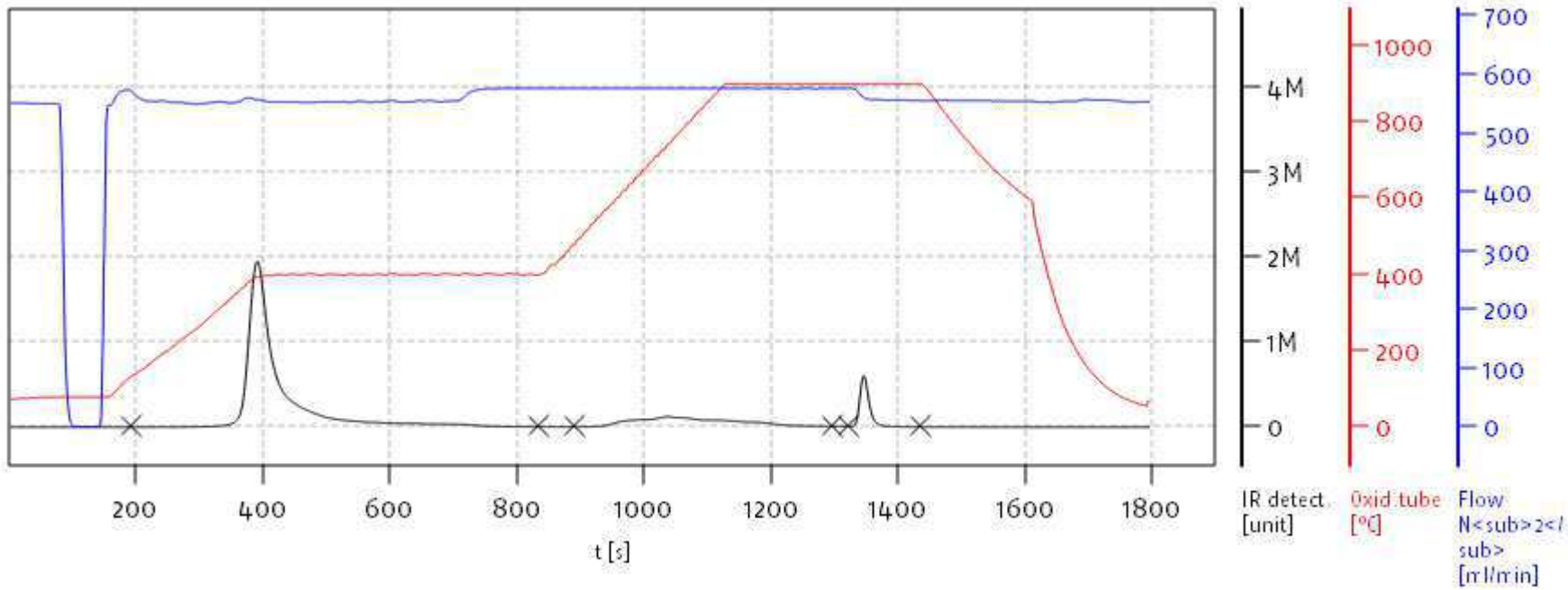
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
118	29	23A0455-14	511.80		CARBON	1/26/2023 2:53 AM	bl	1.250	3 799 218	1.501	0.112	396 470	856 358	1.138	0.251	0.9976	1.0000



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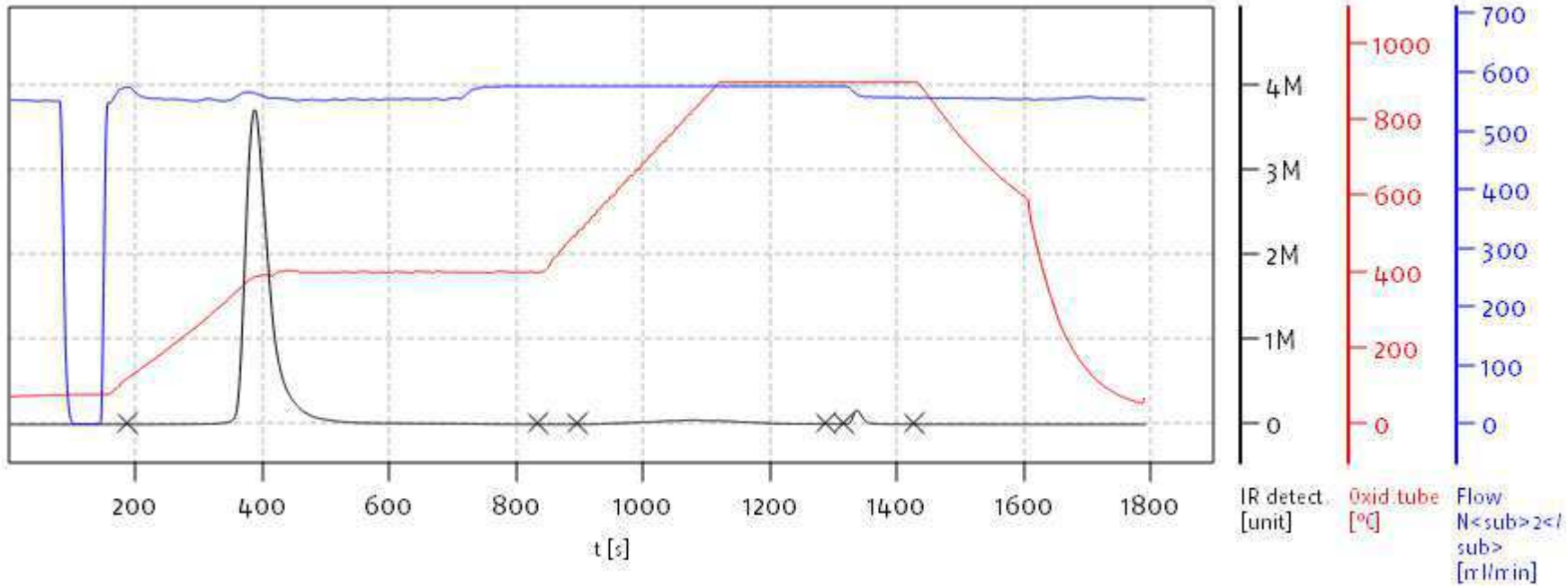
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
119	30	23A0455-15	505.10		CARBON	1/26/2023 3:23 AM	bl	1.907	6 176 062	2.002	0.027	115 337	334 881	1.880	0.095	0.9976	1.0000



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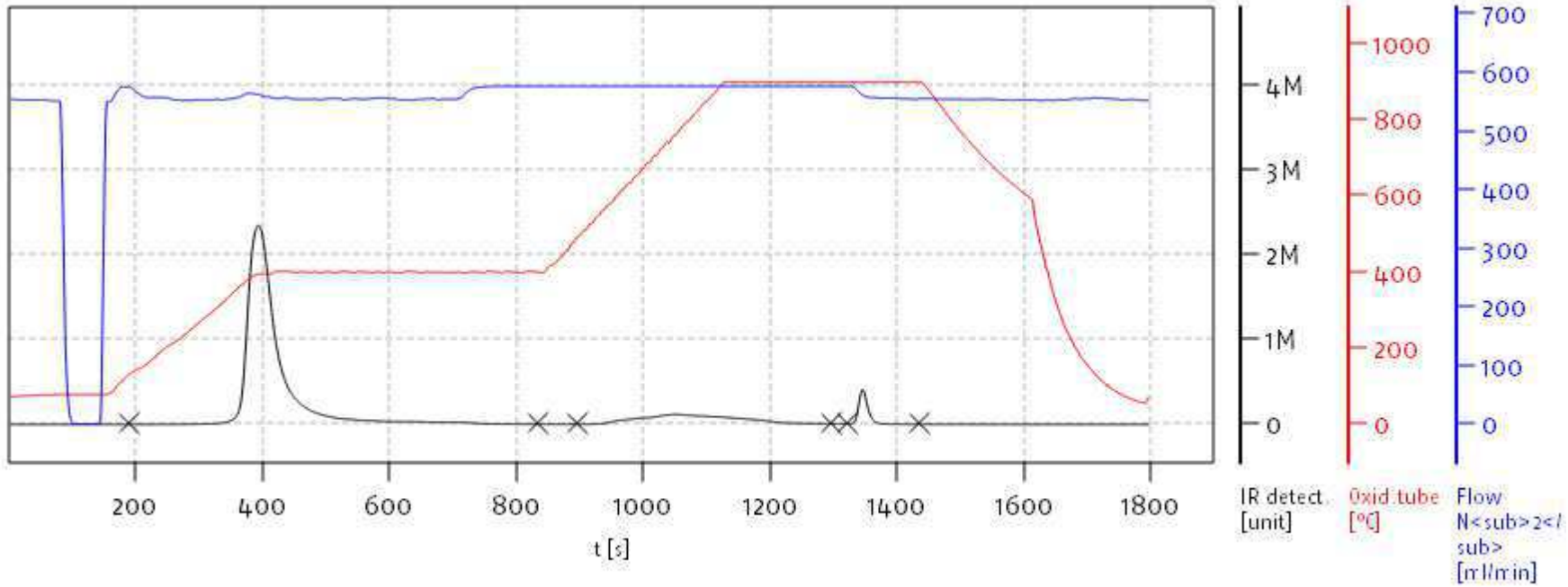
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
120	31	23A0455-16	535.40		CARBON	1/26/2023 3:53 AM	bl	1.447	4 805 329	1.677	0.068	263 268	822 780	1.378	0.230	0.9976	1.0000



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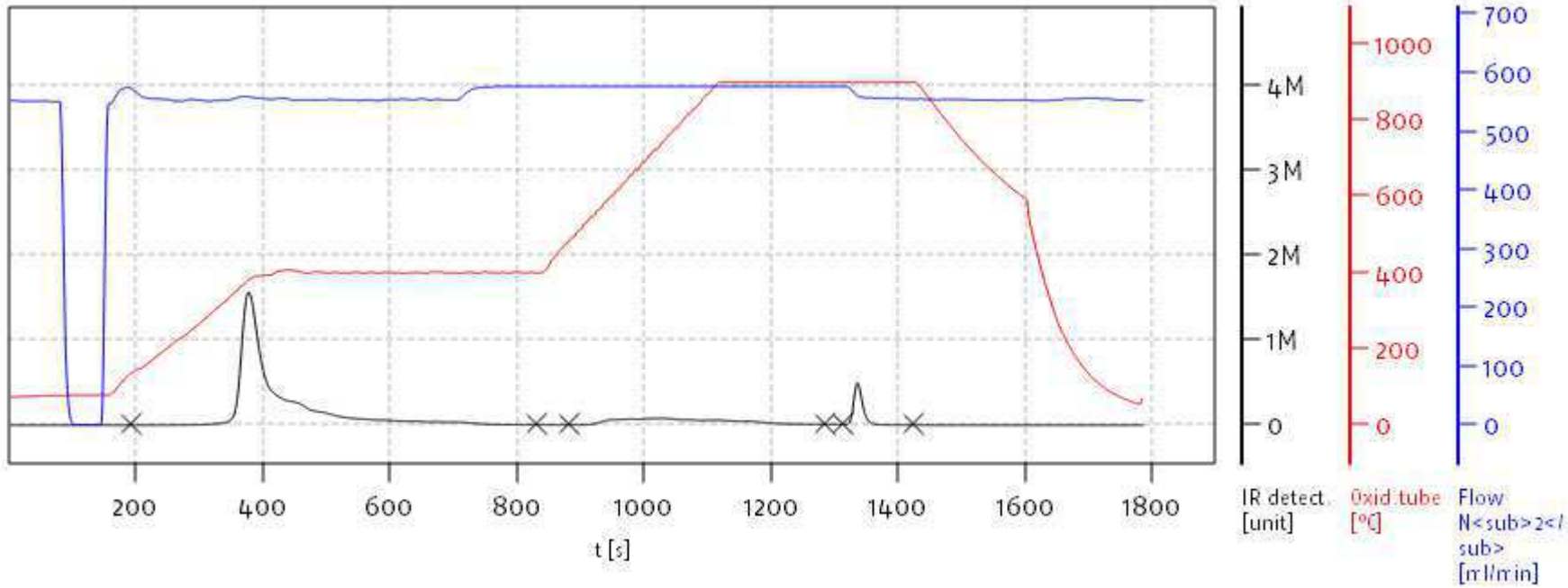
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
121	32	23A0455-17	517.70		CARBON	1/26/2023 4:23 AM	bl	1.081	3 366 692	1.271	0.085	309 721	661 069	0.996	0.190	0.9976	1.0000



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elementar
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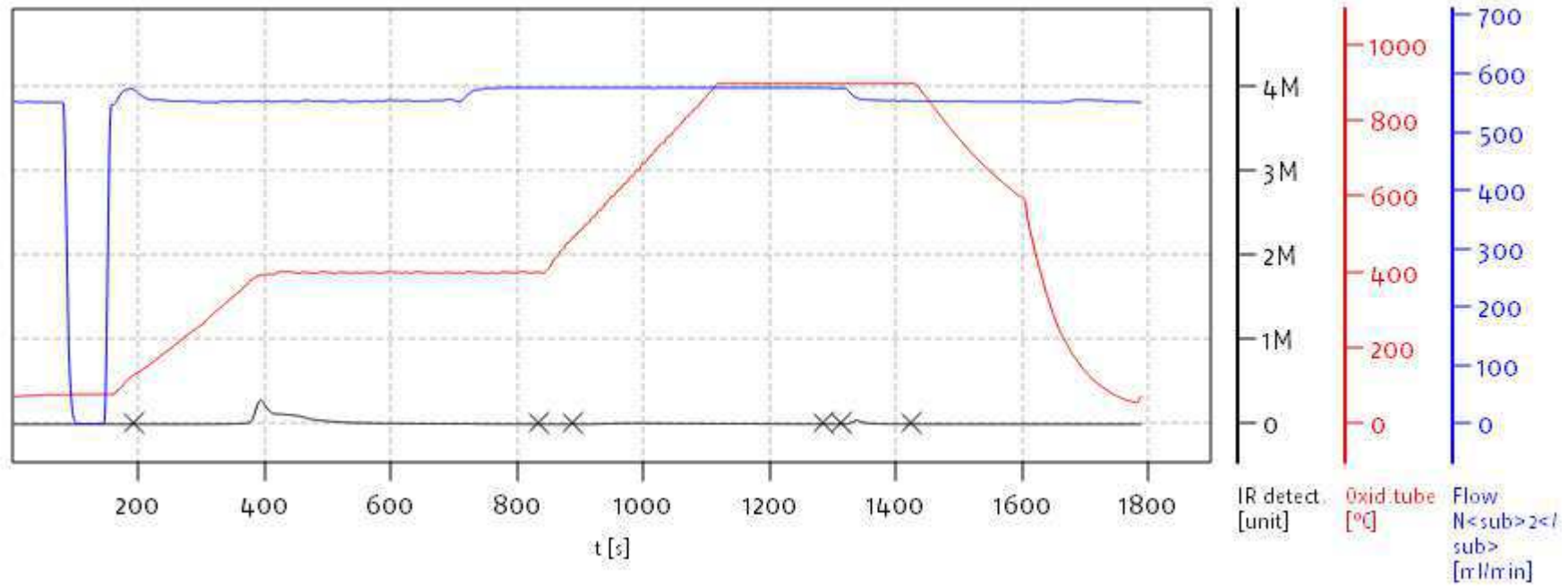
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
122	33	23A0455-18	517.00		CARBON	1/26/2023 4:54 AM	bl	0.188	643 350	0.205	0.004	39 263	82 950	0.184	0.017	0.9976	1.0000



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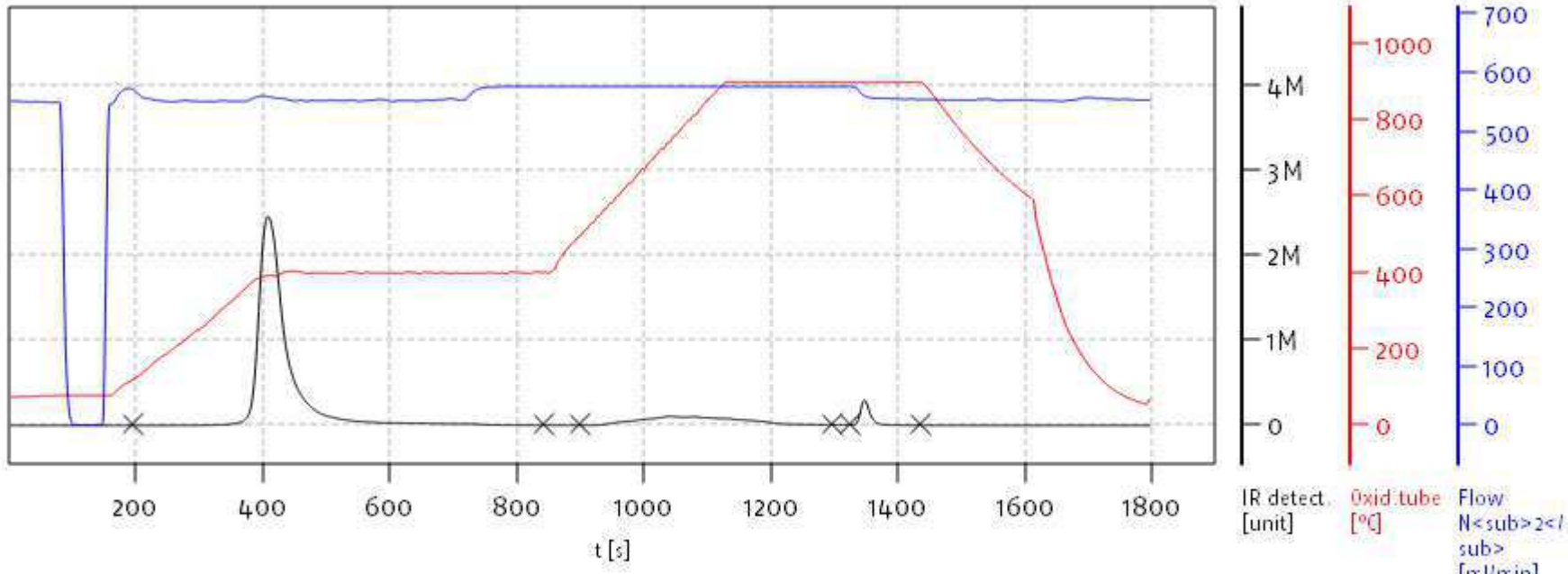
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
123	34	23A0467-01	569.40		CARBON	1/26/2023 5:24 AM	bl	1.293	4 617 765	1.493	0.048	202 181	762 625	1.245	0.200	0.9976	1.0000



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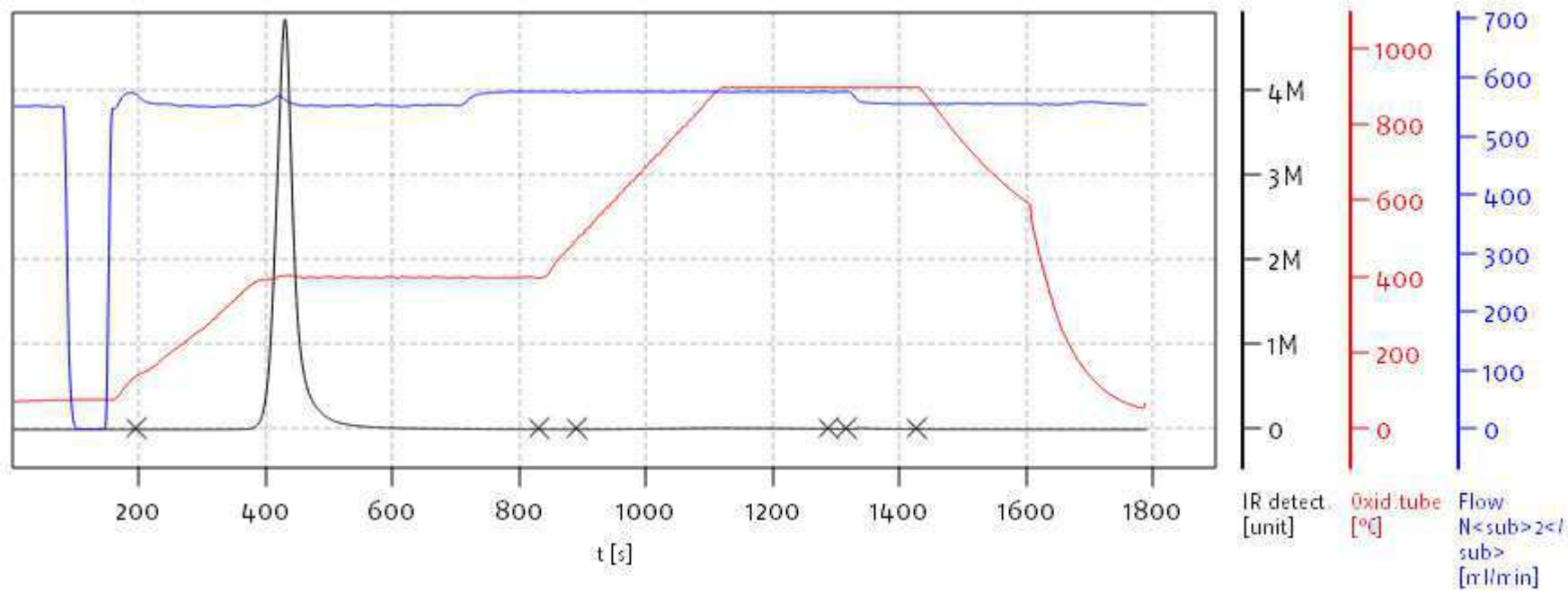
	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
124	35	SLA0248-CCVA	21.80		CARBON	1/26/2023 5:54 AM	bl	44.607	6 318 367	45.452	0.036	31 650	145 591	44.571	0.845	0.9976	1.0000



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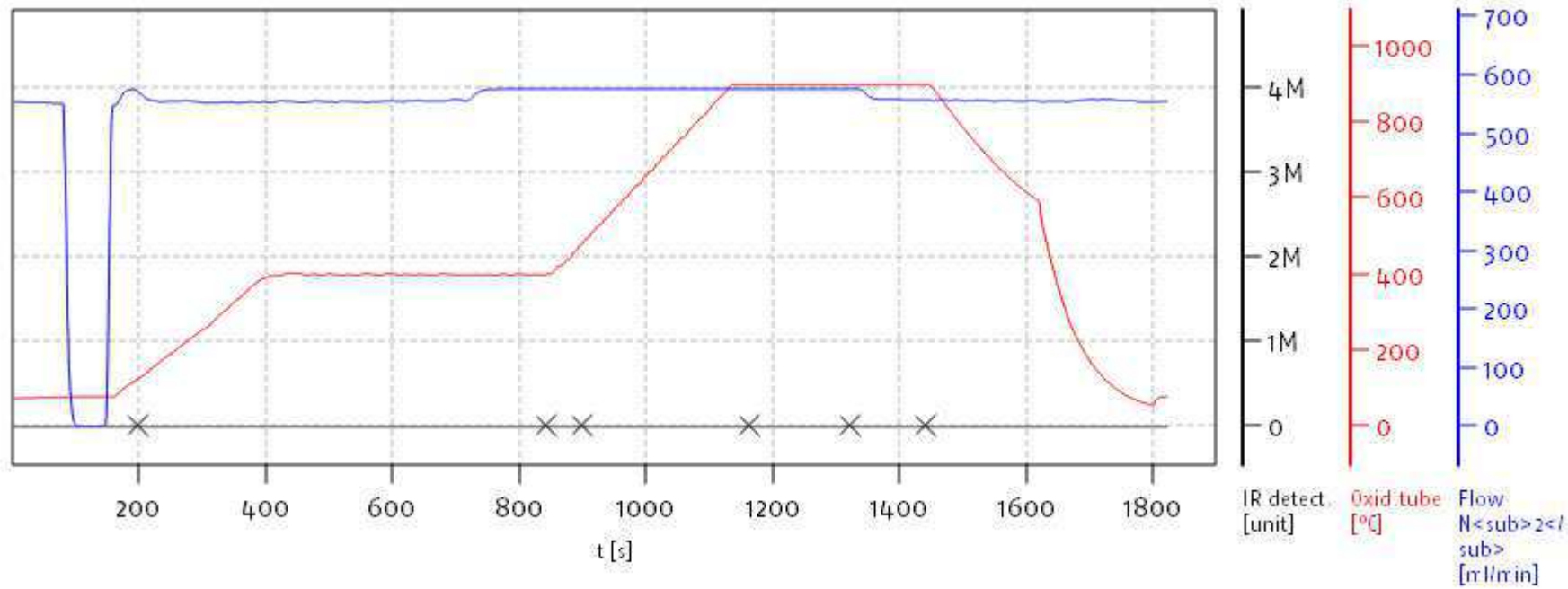
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
125	36	SLA0248-CCBA	524.10		CARBON	1/26/2023 6:25 AM	bl,C3u,C2u	0.000	9 643	0.000	0.000	554	531	0.000	0.000	0.9976	1.0000



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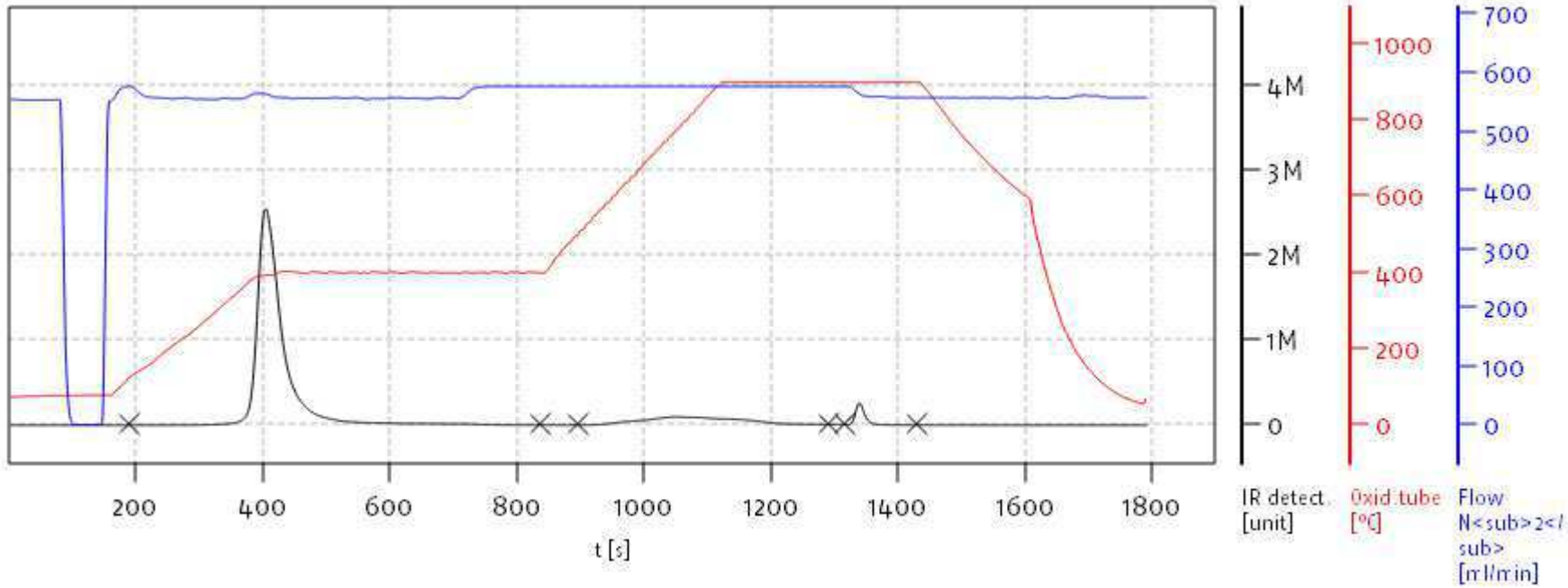
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
126	37	23A0467-02	545.80		CARBON	1/26/2023 6:55 AM	bl	1.274	4 383 555	1.463	0.041	171 156	694 640	1.233	0.189	0.9976	1.0000



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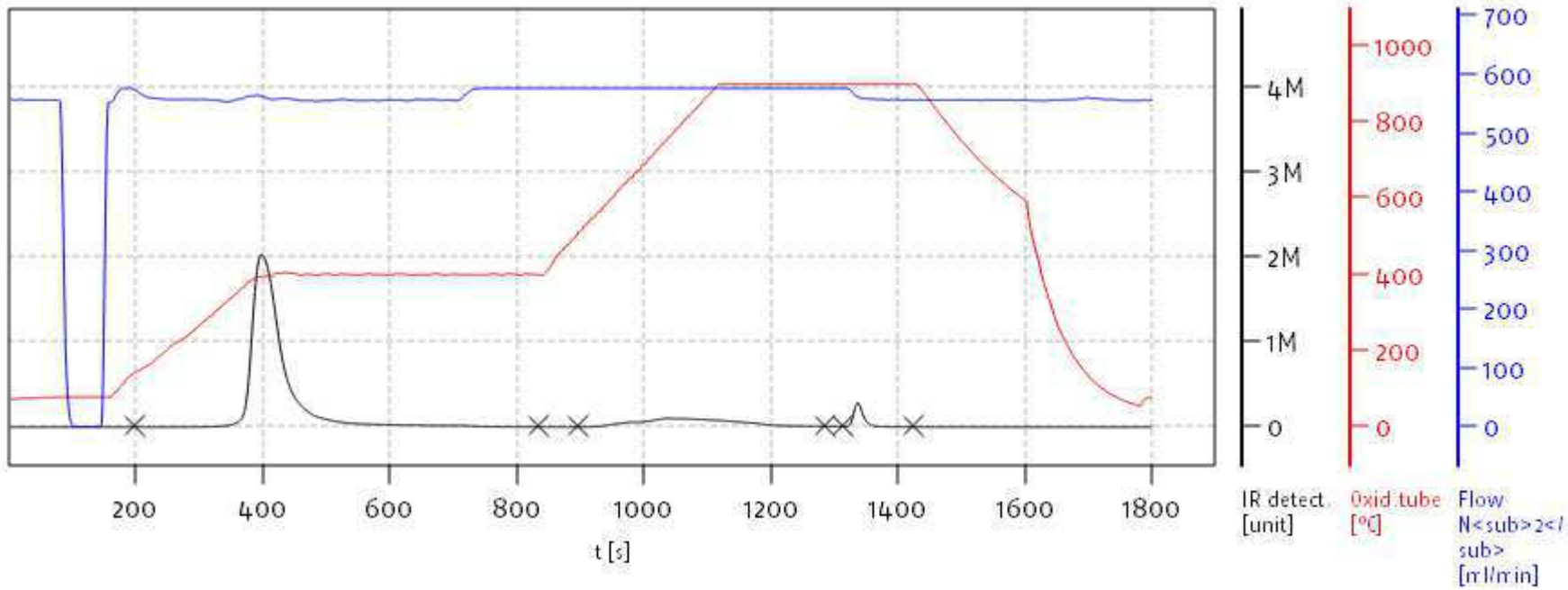
Date: Thu Jan 26 11:30:20 2023

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
127	38	23A0467-03	530.40		CARBON	1/26/2023 7:26 AM	bl	1.264	4 199 050	1.467	0.049	195 335	722 943	1.215	0.203	0.9976	1.0000



Name:

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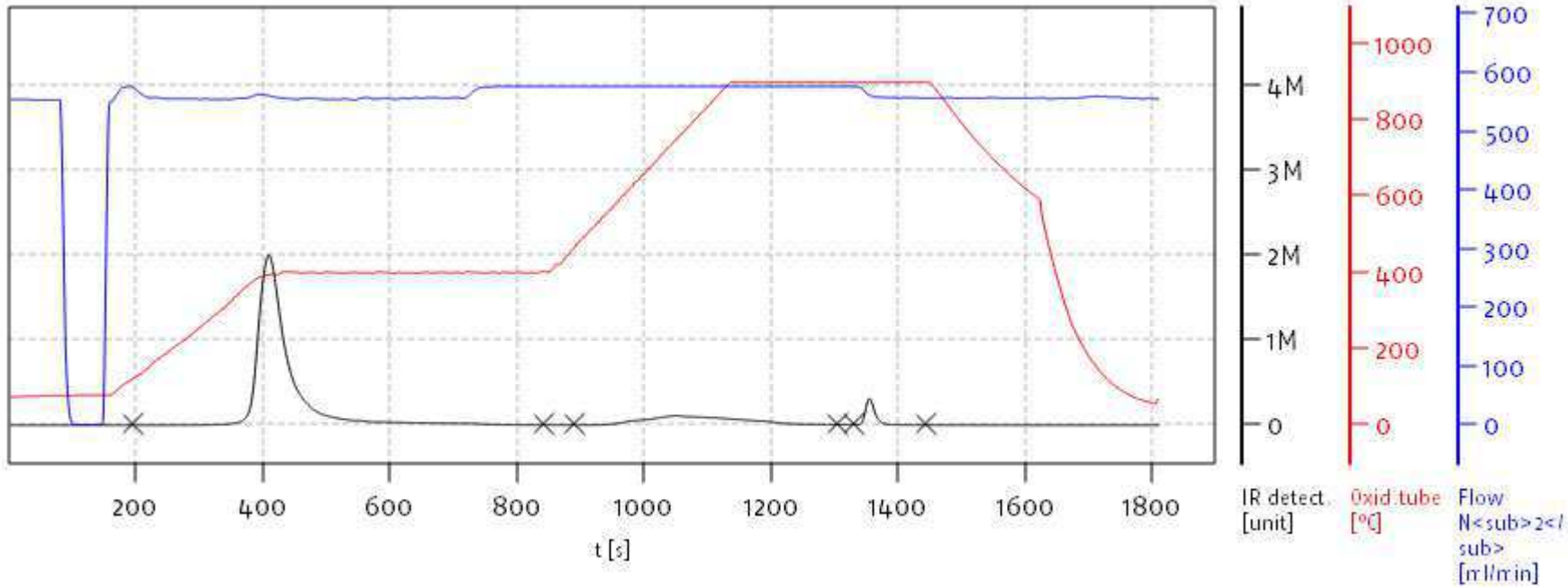
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
128	39	23A0467-04	544.00		CARBON	1/26/2023 7:56 AM	bl	1.195	4 052 849	1.398	0.052	208 257	740 768	1.143	0.203	0.9976	1.0000



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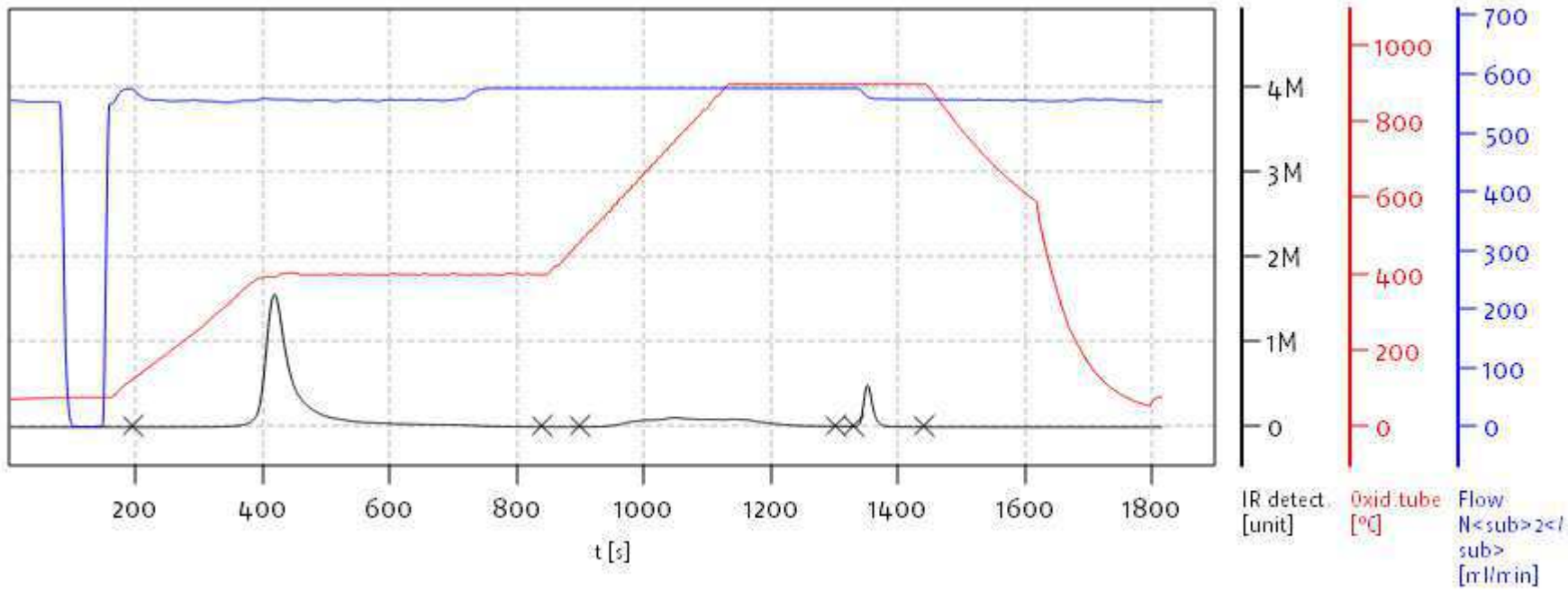
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
129	40	23A0467-05	527.70		CARBON	1/26/2023 8:27 AM	bl	0.968	3 043 531	1.204	0.085	315 557	833 183	0.883	0.237	0.9976	1.0000



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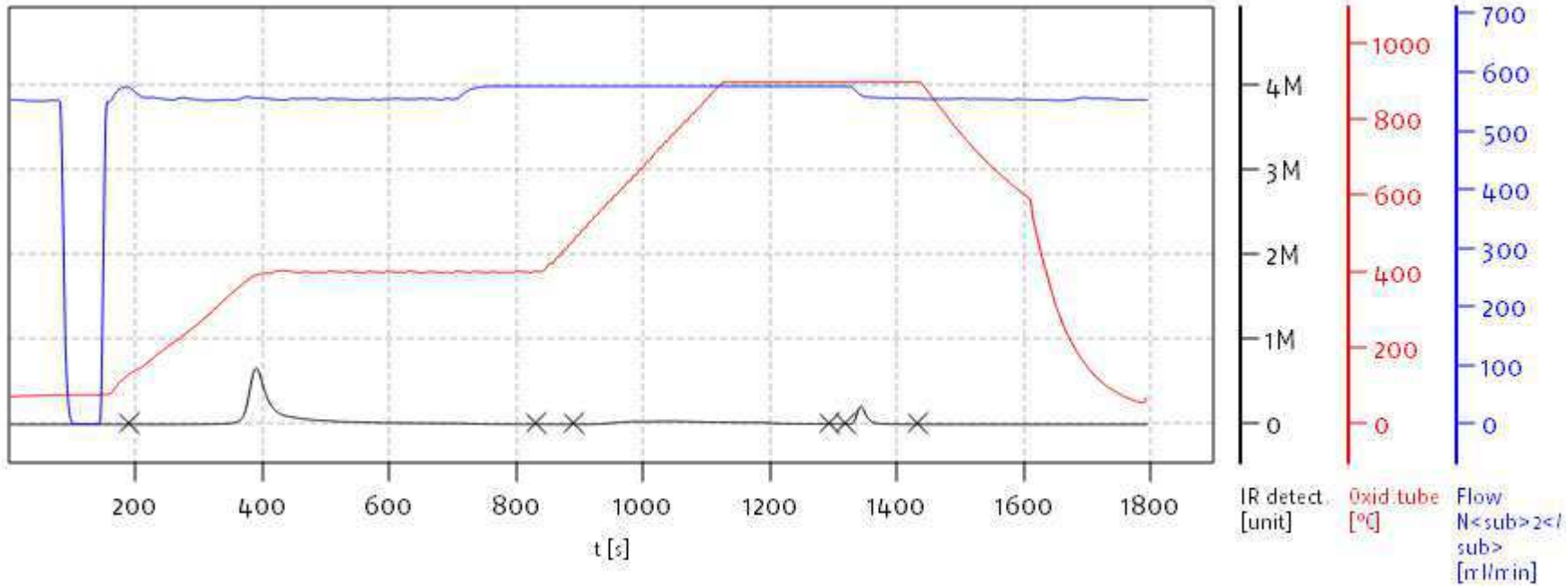
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
130	41	23A0467-06	183.00		CARBON	1/26/2023 8:57 AM	bl	1.092	1 202 027	1.325	0.100	145 294	301 990	0.992	0.233	0.9976	1.0000



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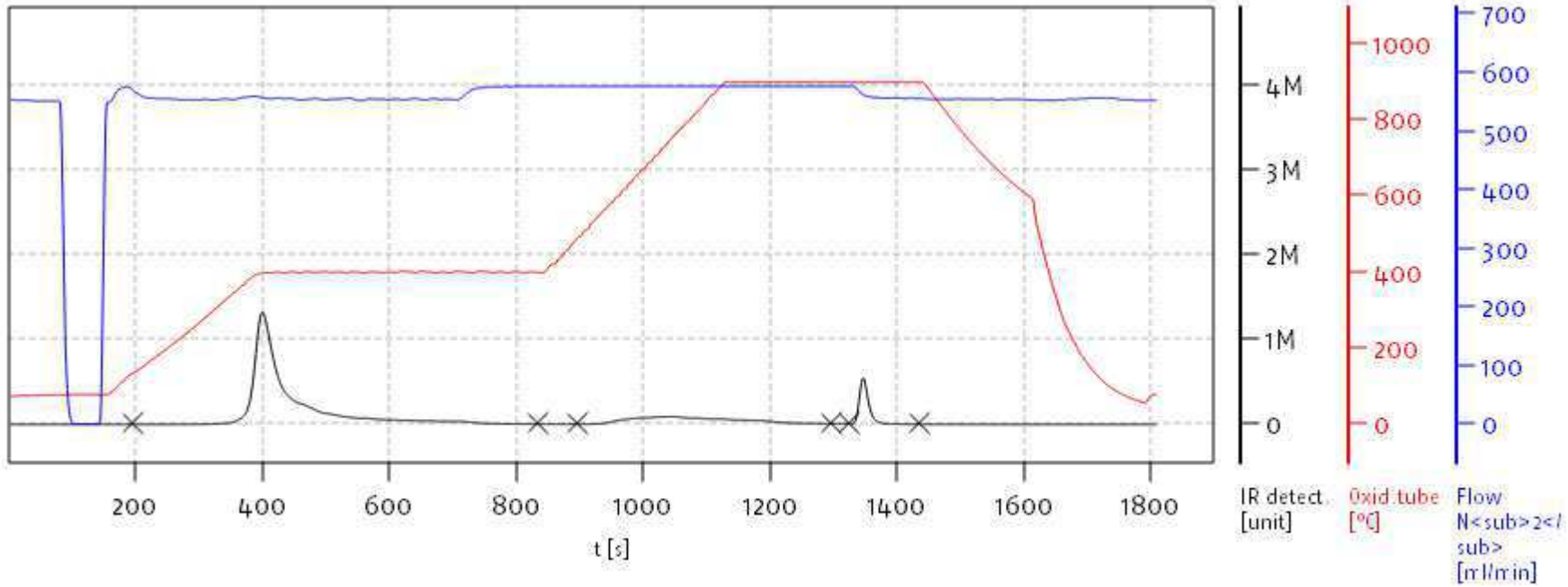
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
131	42	23A0467-07	507.10		CARBON	1/26/2023 9:28 AM	bl	0.980	2 914 148	1.185	0.100	355 083	699 820	0.879	0.206	0.9976	1.0000



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Serial No: 0300.181017
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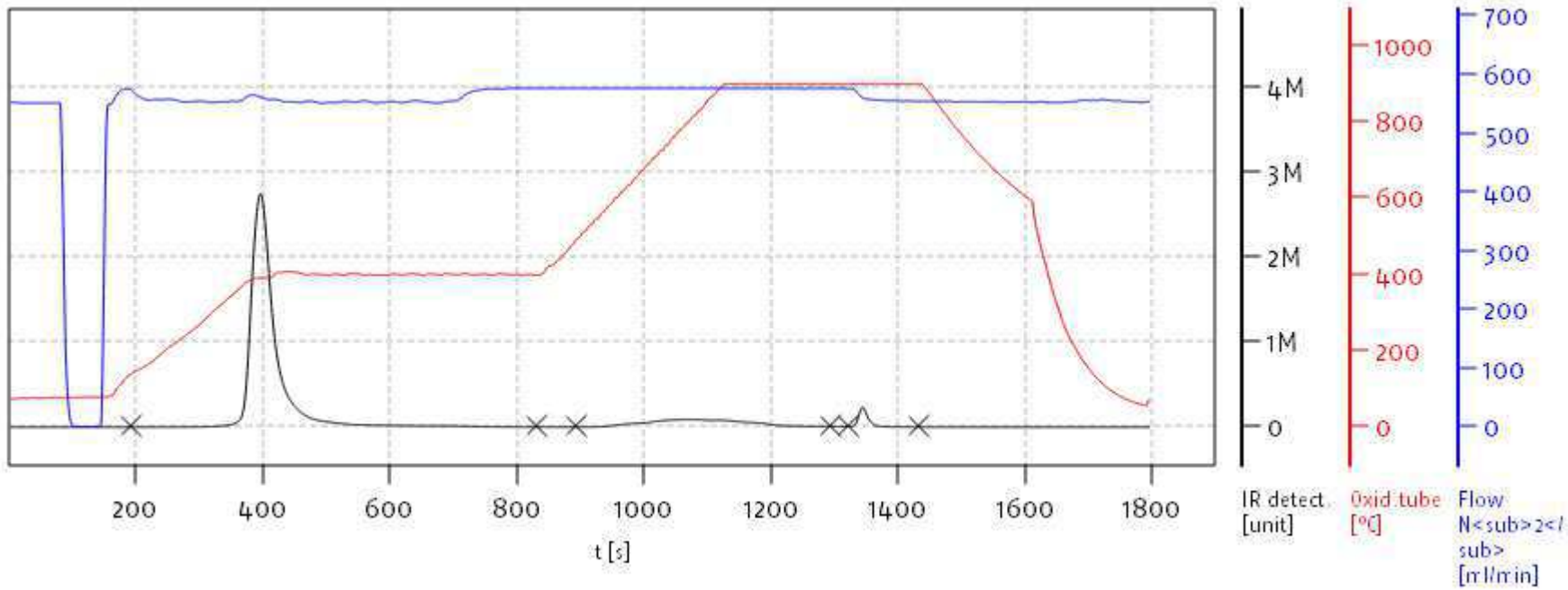
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
132	43	23A0467-08	523.50		CARBON	1/26/2023 9:58 AM	bl	1.325	4 390 162	1.511	0.038	155 894	654 584	1.287	0.186	0.9976	1.0000



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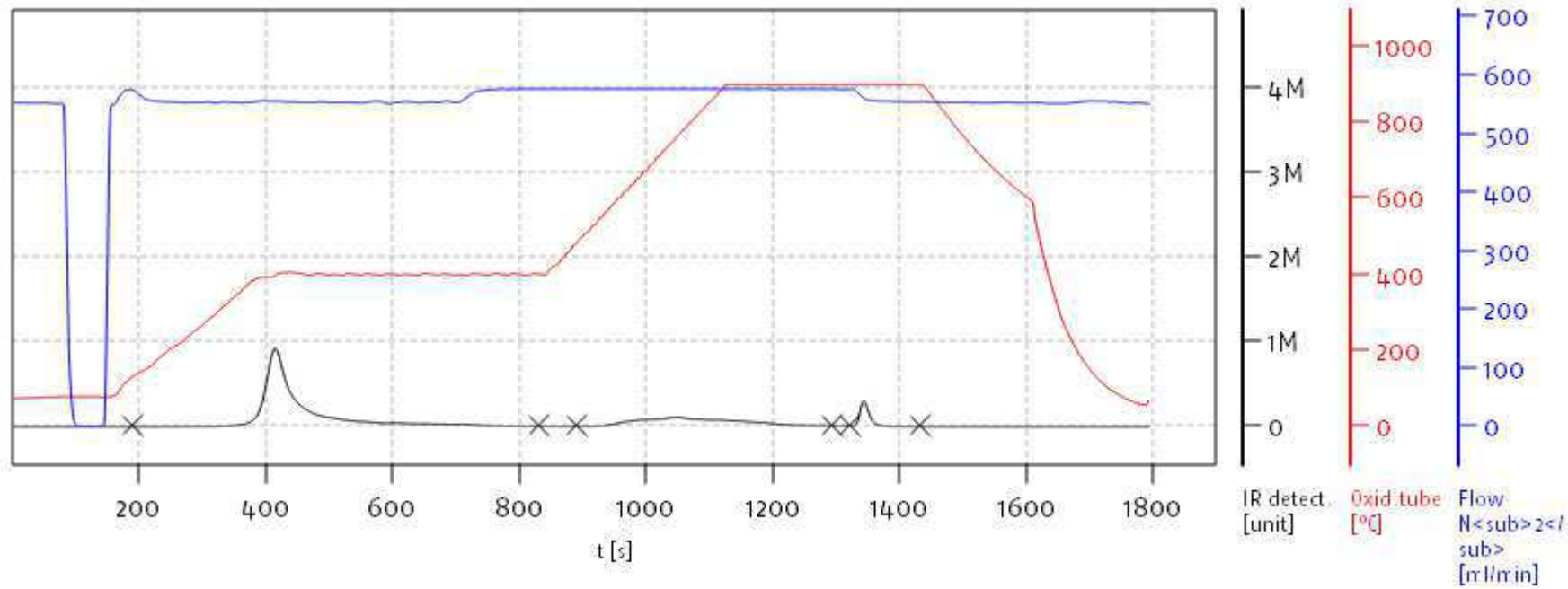
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
133	44	23A0467-09	558.50		CARBON	1/26/2023 10:29 AM	bl	0.627	2 115 762	0.835	0.049	203 167	779 790	0.578	0.209	0.9976	1.0000



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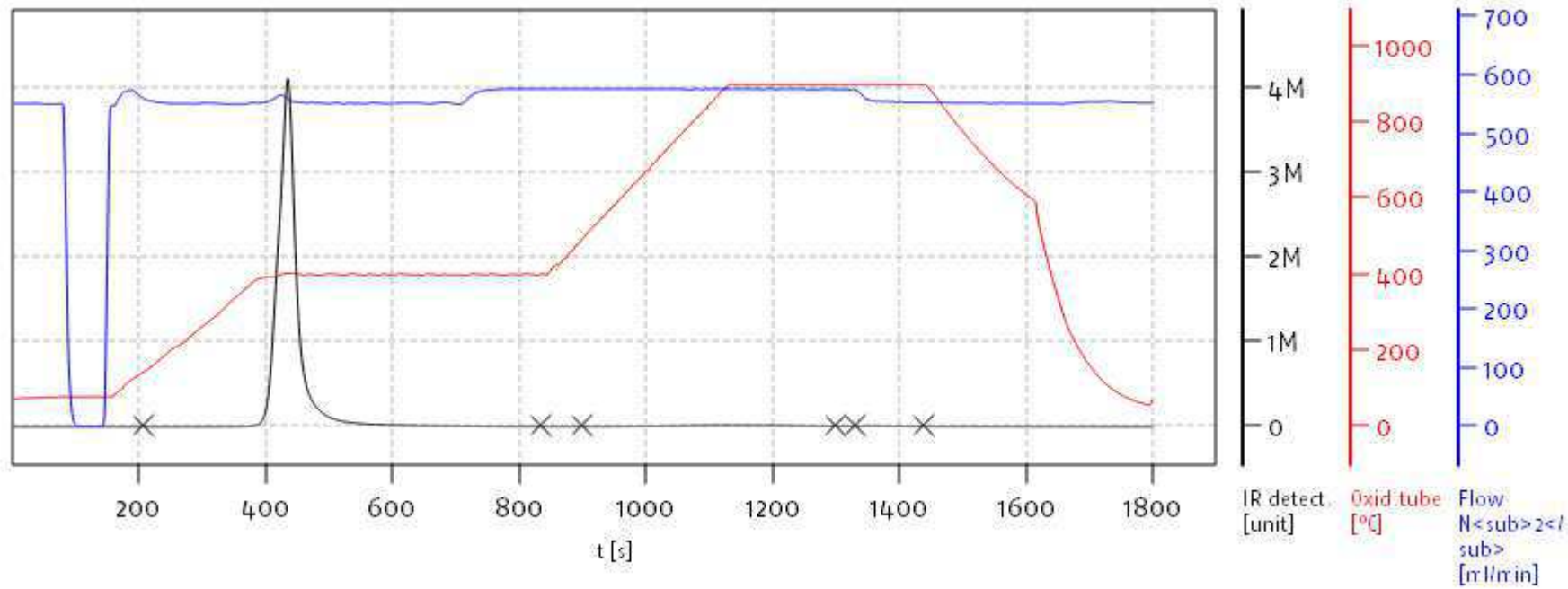
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
134	45	SLA0248-CCVB	18.50		CARBON	1/26/2023 10:59 AM	bl	44.025	5 300 584	44.939	0.000	22 577	135 761	44.025	0.914	0.9976	1.0000



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Serial No: 0300.181017
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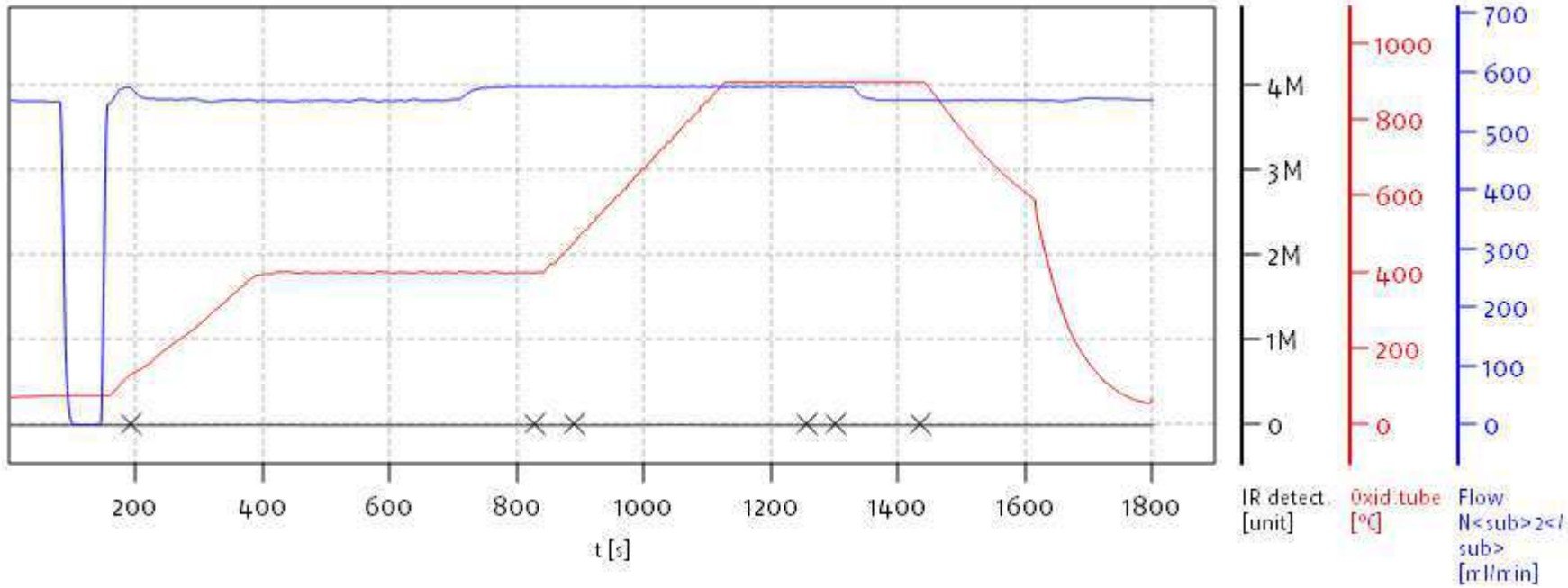
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Method	Date Time	Info	TOC [%]	TOC400 Area	TC [%]	ROC [%]	ROC Area	TIC900 Area	TOC400 [%]	TIC900 [%]	TOC400 Factor	TIC900 Factor
135	46	SLA0248-CCBB	520.00		CARBON	1/26/2023 11:29 AM	bl,C2u	0.000	11 812	0.000	0.000	673	9 902	0.000	0.000	0.9976	1.0000



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soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
Total Inorganic Carbon	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085
% Soot	0.0080973	1449743	0.014695	1300238	0.021293	1292913	0.02939	1293535	0.044385	2094063	0.05878	1400085

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
Total Inorganic Carbon	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135
% Soot	0.074075	1370638	0.08937	1351930	0.12056	2158544	0.14995	1559046	0.24	1346463	0.288	1430135

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
Total Inorganic Carbon	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882
% Soot	0.414	1337053	0.606	1385937	0.894	1382774	1.188	1379790	1.5	1375927	1.818	1372882

INITIAL CALIBRATION DATA

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Calibration: FD00070
Instrument: TOC Cube
Calibration Date: 04/26/2022 11:29

Compound	Level 19		Level 20		Level 21		Level 22		Level 23		Level 24	
	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF	Conc	RF
Total Organic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
Total Inorganic Carbon	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408
% Soot	2.49	1398606	2.982	1376871	4.188	1256057	4.818	1279542	5.406	1283358	7.2	1301408

INITIAL CALIBRATION DATA

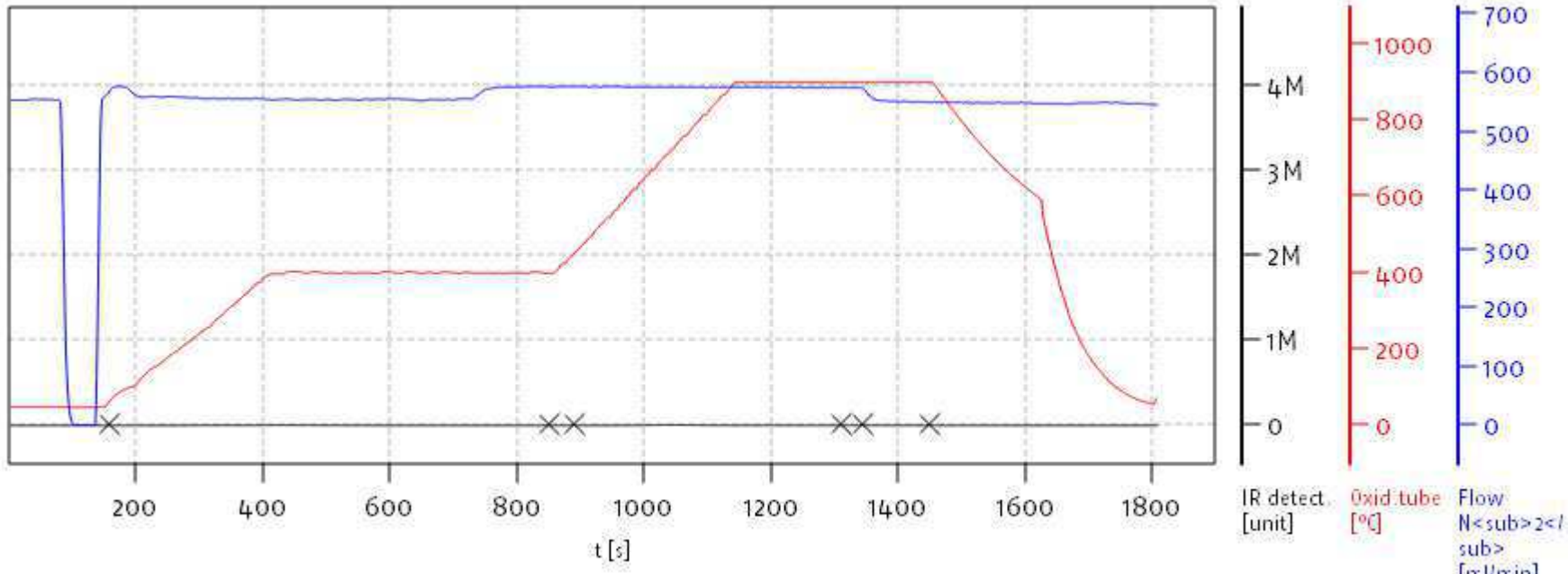
EPA 9060A m

Laboratory:	Analytical Resources, LLC	SDG:	23A0467
Client:	Anchor QEA, LLC	Project:	AOC5 MR Phase 1
Calibration:	FD00070	Instrument:	TOC Cube
Calibration Date:	04/26/2022 11:29		

COMPOUND	Mean RF	RF RSD	Linear COD	Quad COD	COD Limit	Q
Total Organic Carbon	1424064	15.9	0.9988			
Total Carbon	1424064	15.9	0.9988			
Total Inorganic Carbon	1424064	15.9	0.9988			
% Soot	1424064	15.9	0.9988			

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
1	1	BLANK	1.00		1.00	CARBON	4/26/2022 11:29 AM	0.000	0.000	0.000	bl	29 049	30 612	3 899	1.0000	1.0000



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

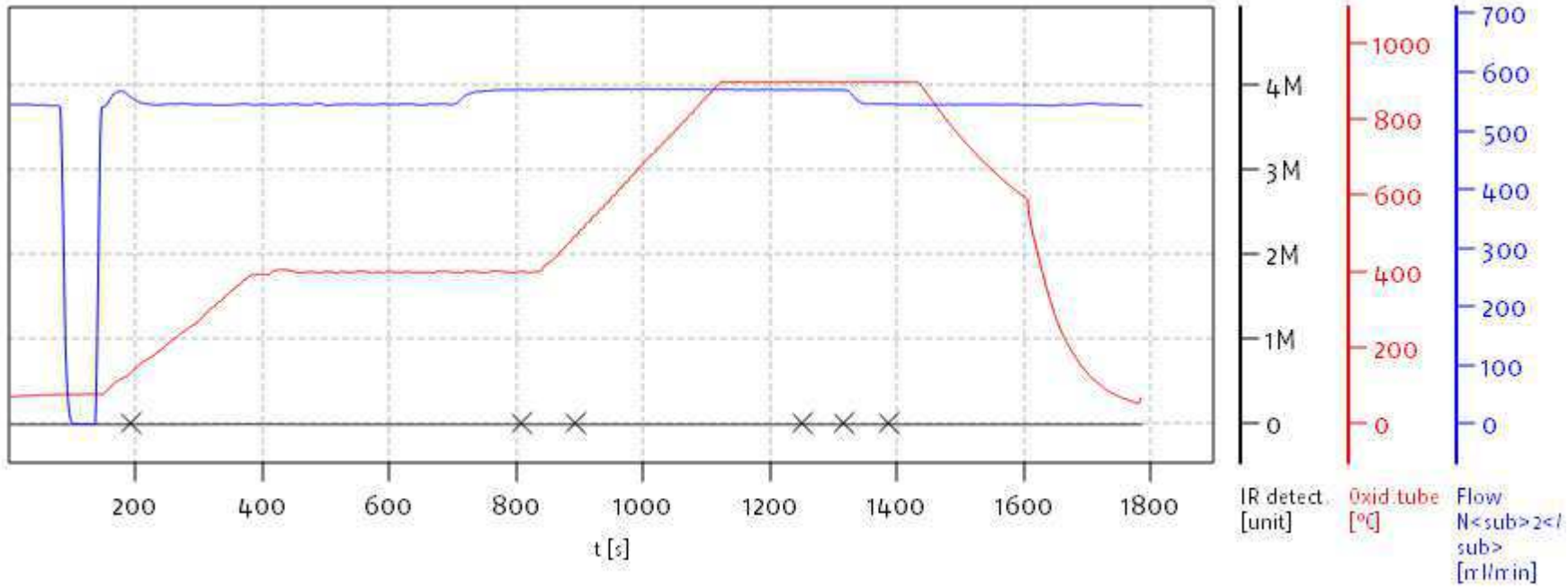
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
2	2	BLANK	1.00		1.00	CARBON	4/26/2022 12:00 PM	0.000	0.000	0.000	bl	11 115	60	8	1.0000	1.0000



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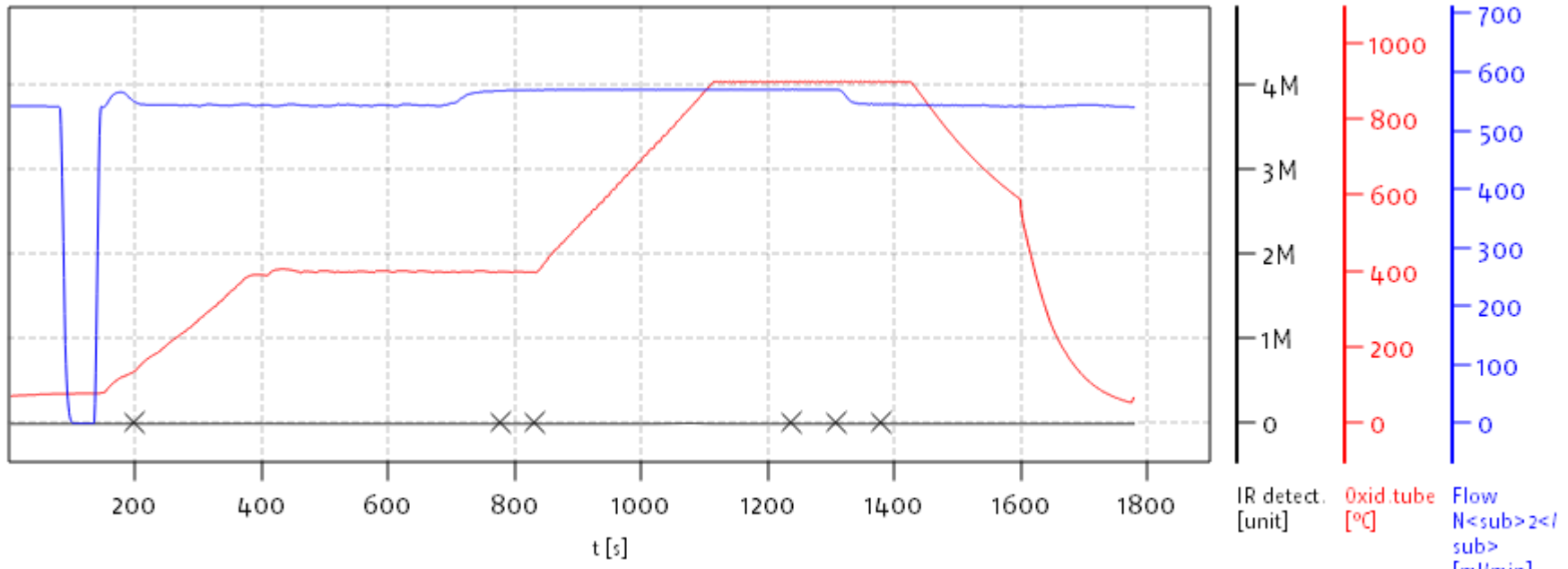
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
3	3	SEQ-CAL1	200.00	0.0027	1.00	CARBON	4/26/2022 12:30 PM	0.010	0.008	0.018	bl,C1u,C2u	7 294	11 739	22	1.0000	0.7425



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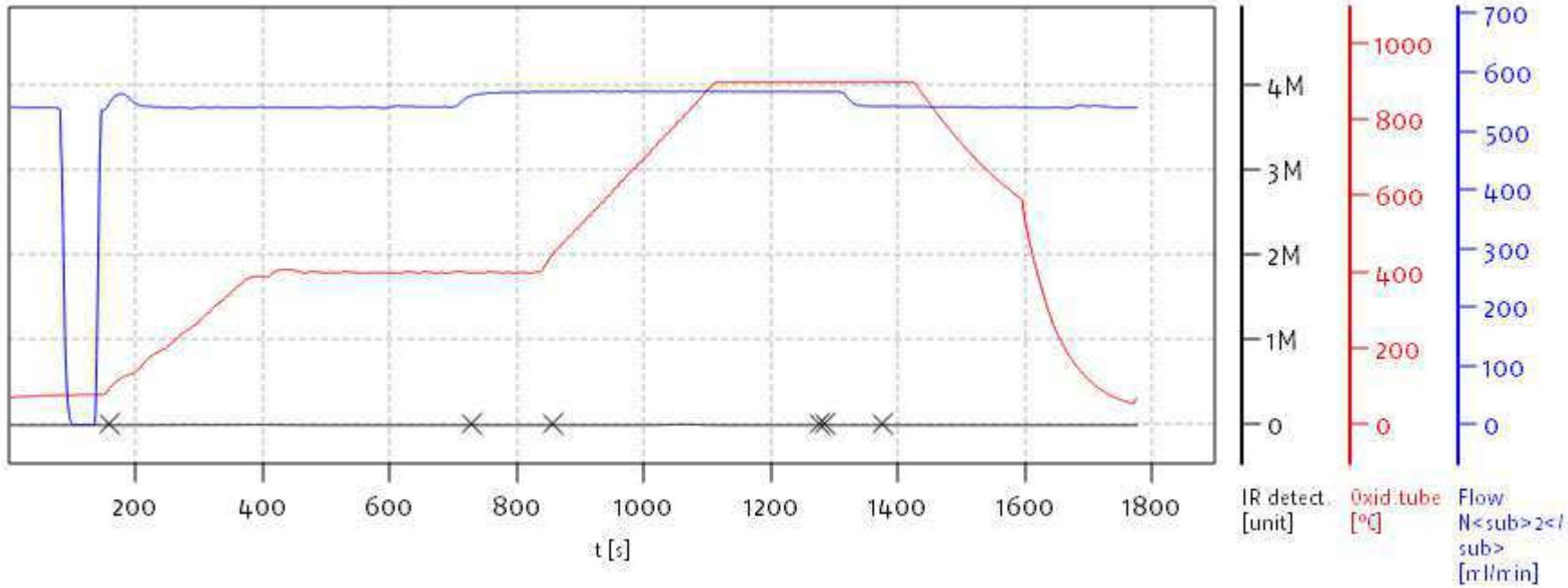
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
4	4	SEQ-CAL2	200.00	0.0049	1.00	CARBON	4/26/2022 1:00 PM	0.023	0.015	0.038	bl,C2u	23 296	19 107	47	1.0000	0.8936



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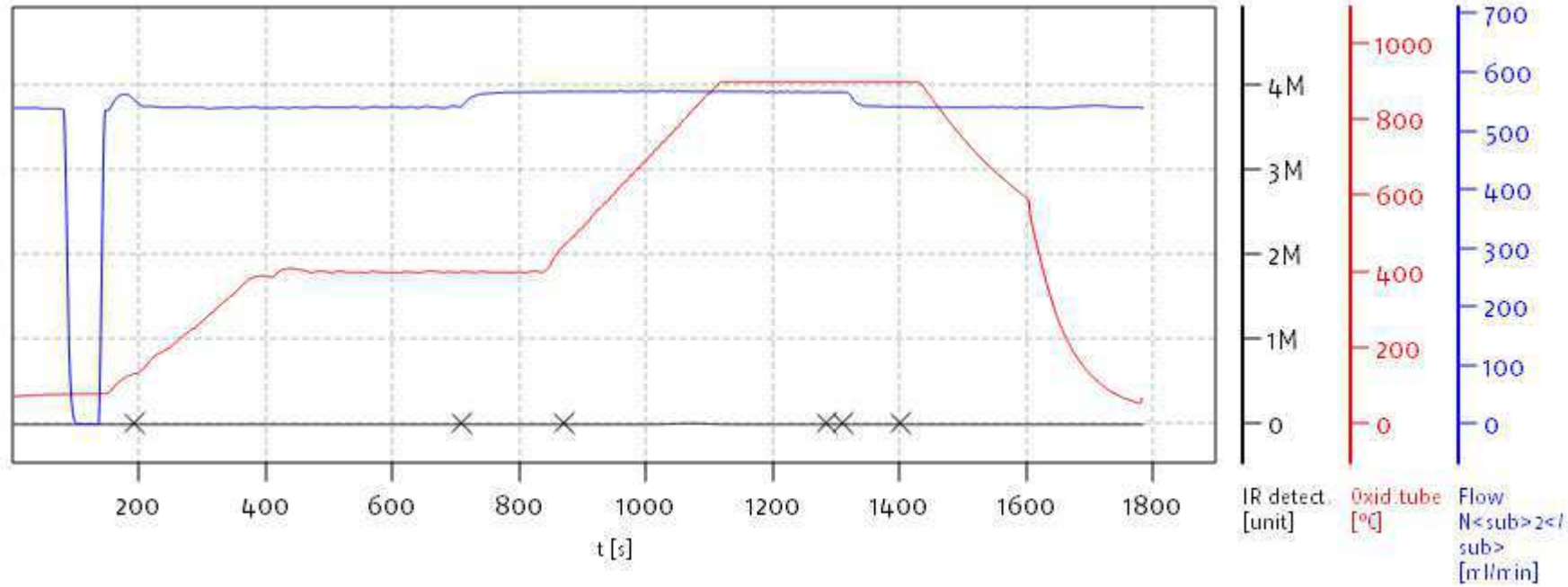
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
5	5	SEQ-CAL3	200.00	0.0071	1.00	CARBON	4/26/2022 1:30 PM	0.006	0.022	0.028	bl,C1u,C2u	2 319	27 530	170	1.0000	0.9343



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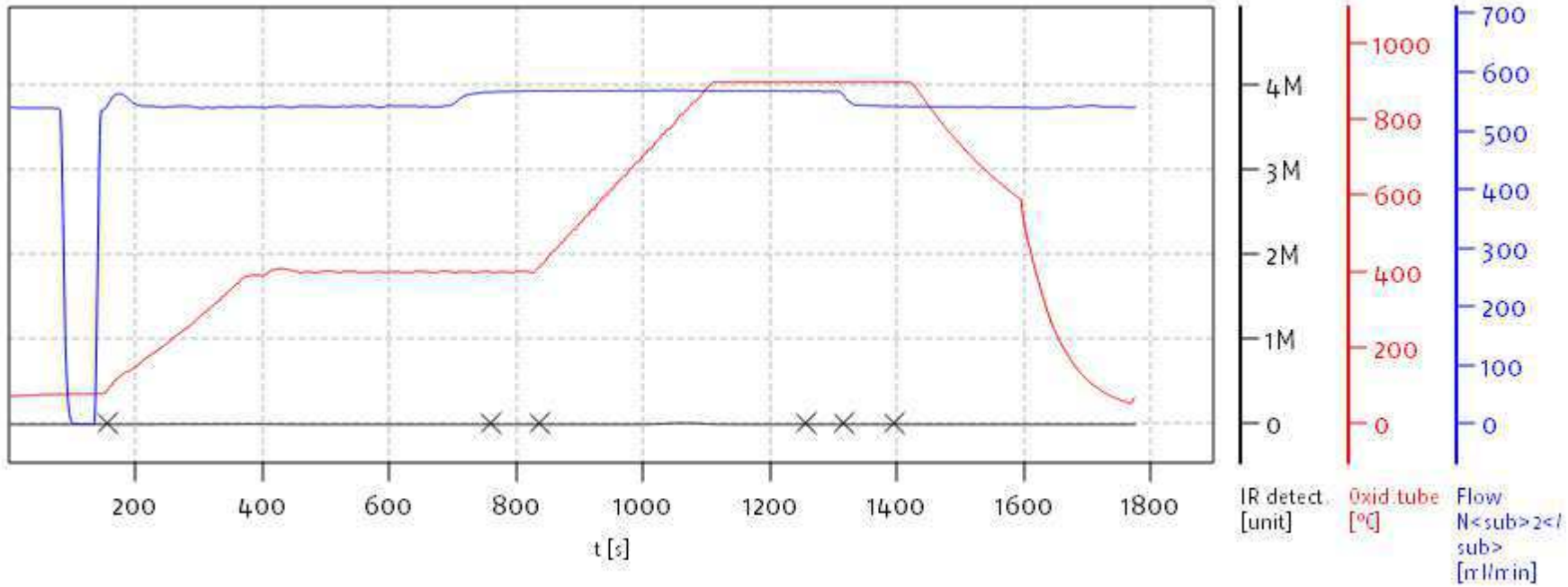
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
6	6	SEQ-CAL4	200.00	0.0098	1.00	CARBON	4/26/2022 2:00 PM	0.020	0.030	0.050	bl,C2u	19 746	38 017	109	1.0000	0.9461



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Serial No: 0300.181017
Mode CCC

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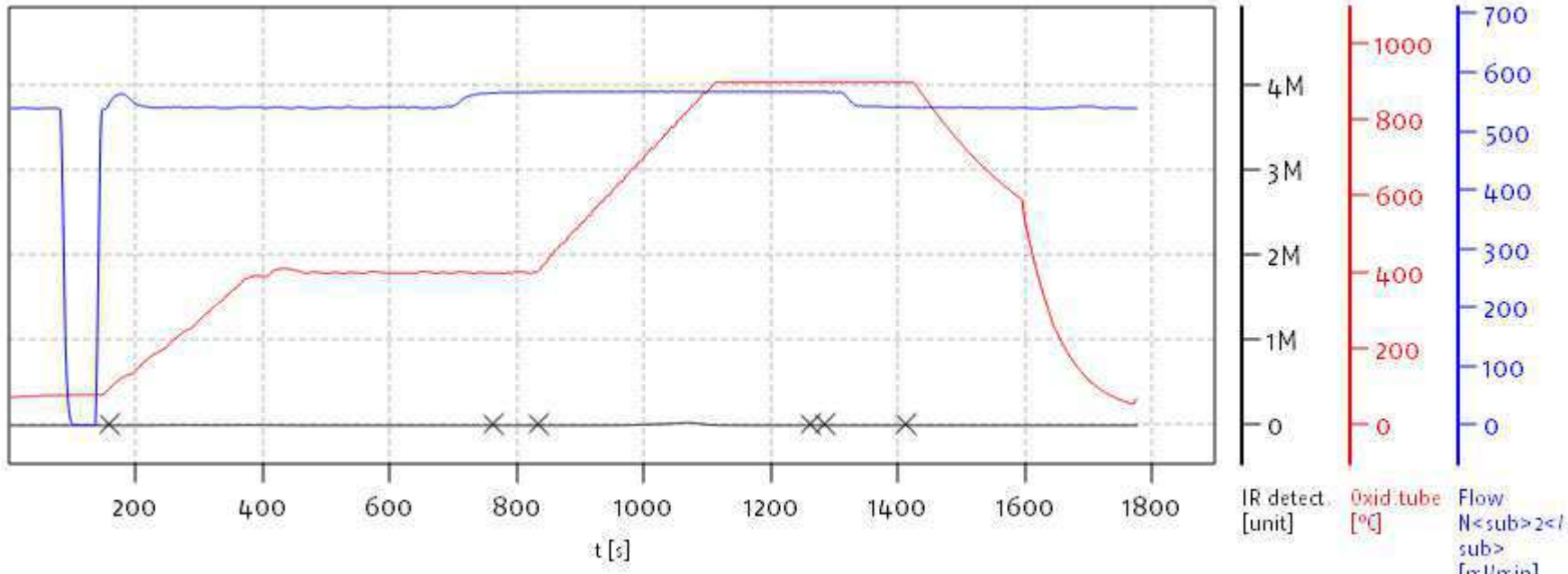
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
7	7	SEQ-CAL5	200.00	0.0148	1.00	CARBON	4/26/2022 2:30 PM	0.021	0.045	0.066	bl,C2u	20 951	92 945	236	1.0000	0.5975



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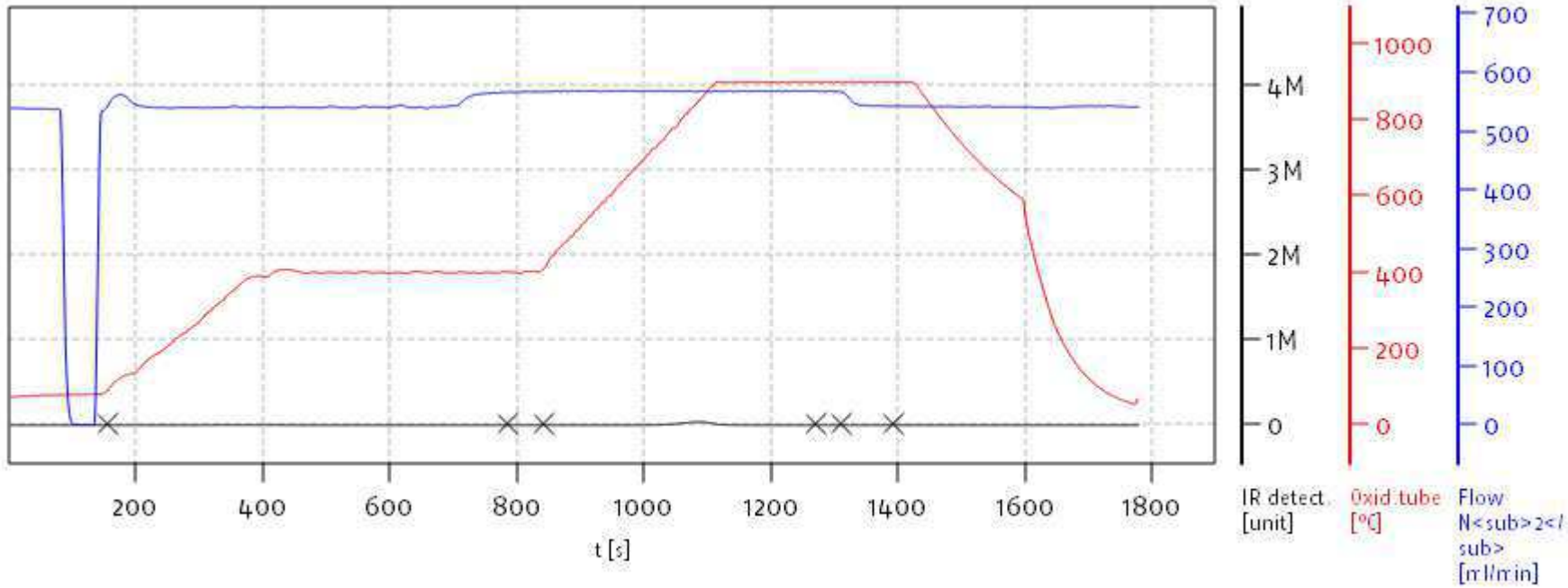
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
8	8	SEQ-CAL6	200.00	0.0196	1.00	CARBON	4/26/2022 3:00 PM	0.012	0.061	0.073	bl,C2u	10 118	82 297	59	1.0000	0.9144



Name:

Access: soliTOC superuser

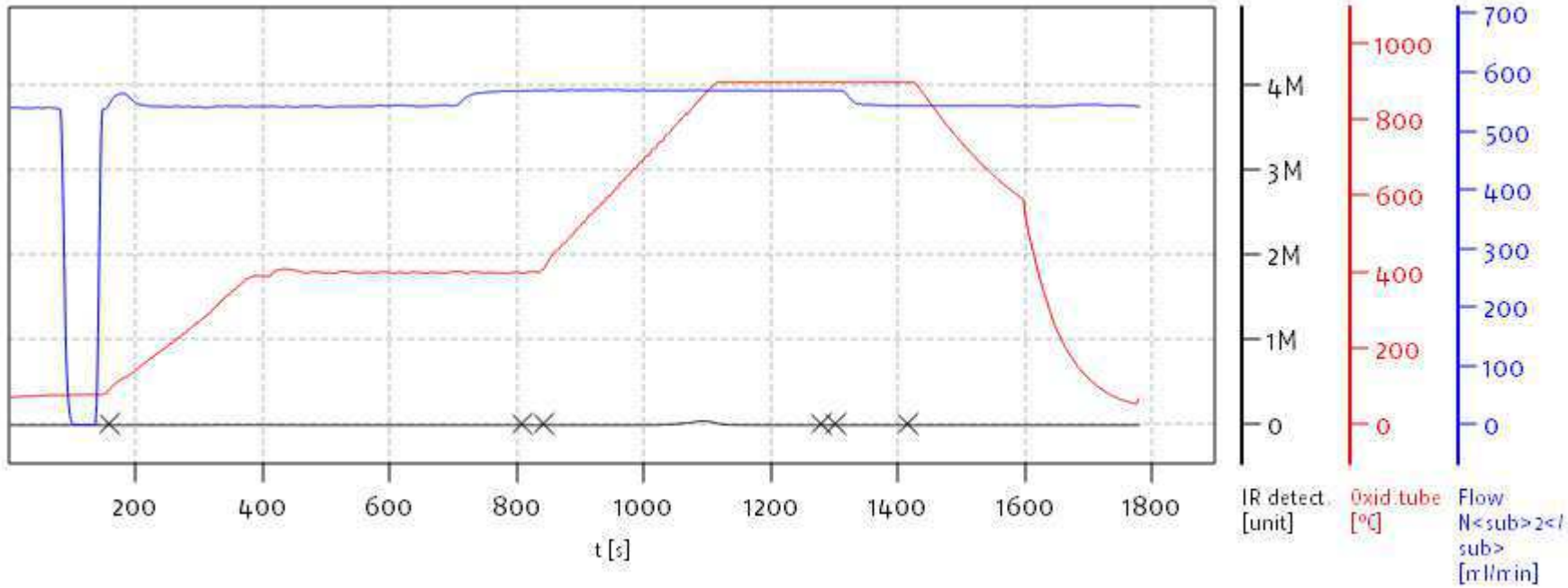
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
9	9	SEQ-CAL7	200.00	0.0247	1.00	CARBON	4/26/2022 3:30 PM	0.013	0.075	0.088	bl,C2u	10 555	101 530	292	1.0000	0.9173



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Access: soliTOC superuser

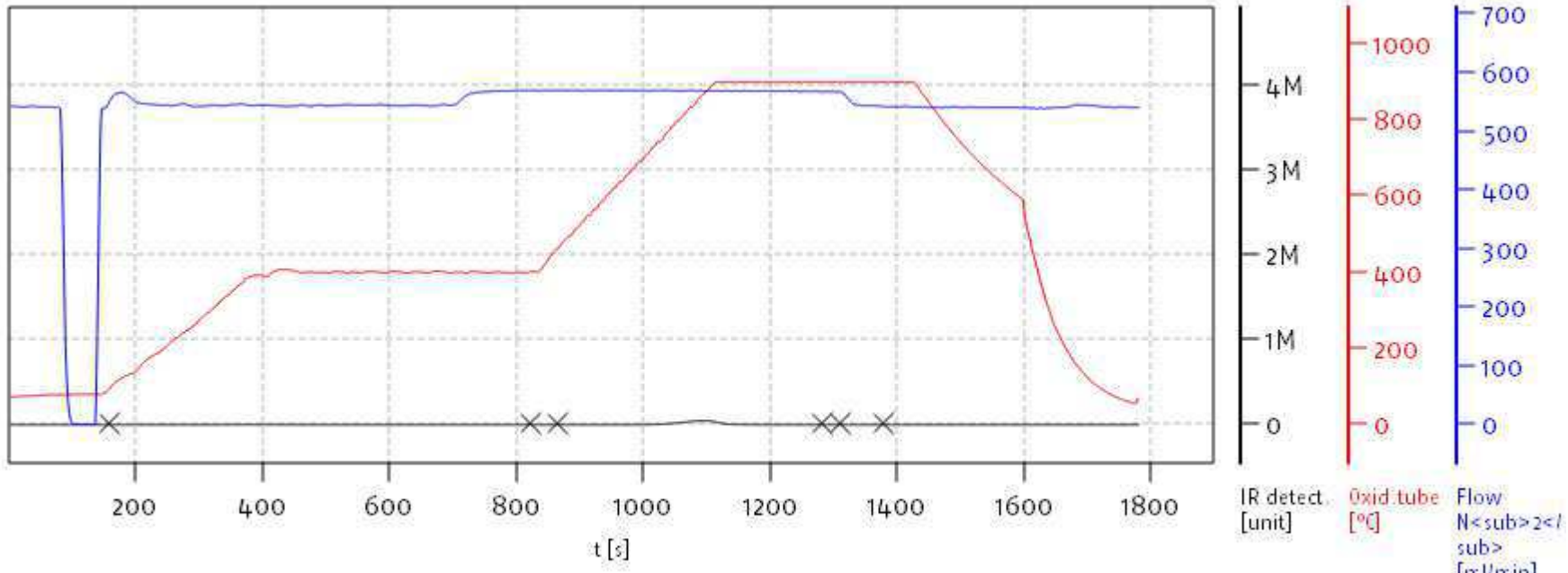
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
10	10	SEQ-CAL8	200.00	0.0298	1.00	CARBON	4/26/2022 4:00 PM	0.009	0.091	0.100	bl,C1u,C2u	6 668	120 822	116	1.0000	0.9312



Name:

Access: soliTOC superuser

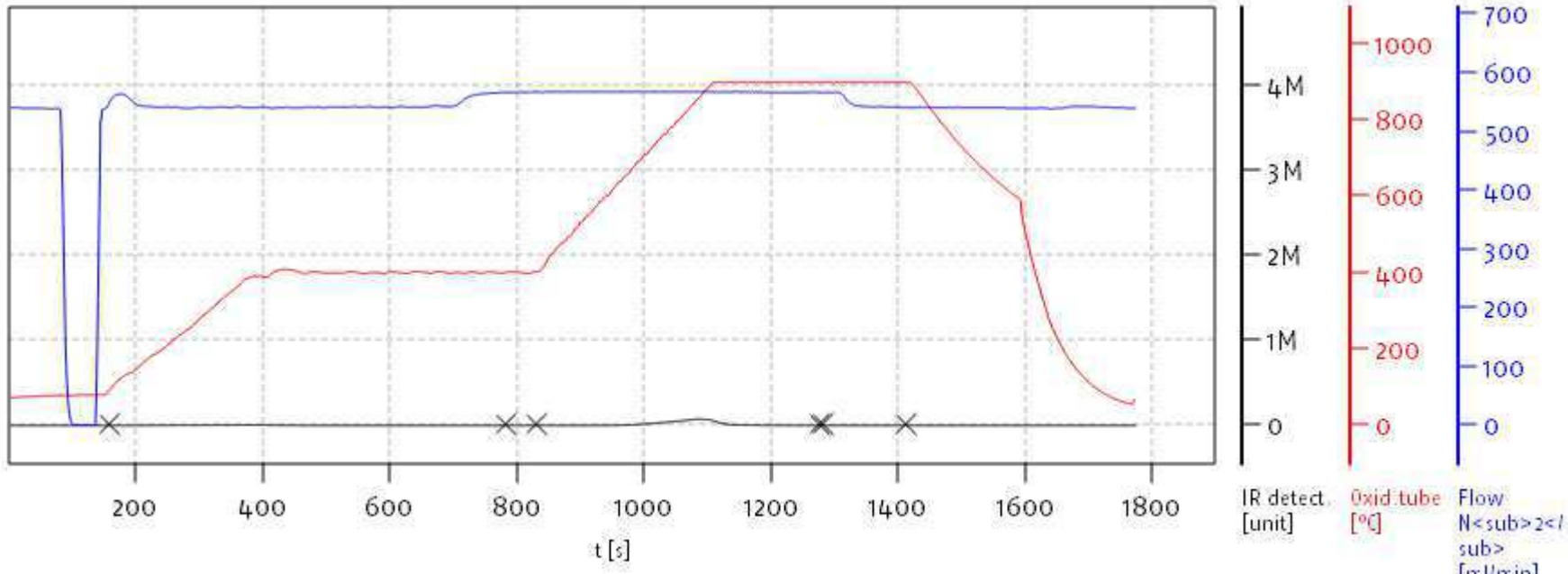
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
11	11	SEQ-CAL9	200.00	0.0402	1.00	CARBON	4/26/2022 4:30 PM	0.031	0.120	0.151	bl,C2u	32 999	260 234	1 044	1.0000	0.5792



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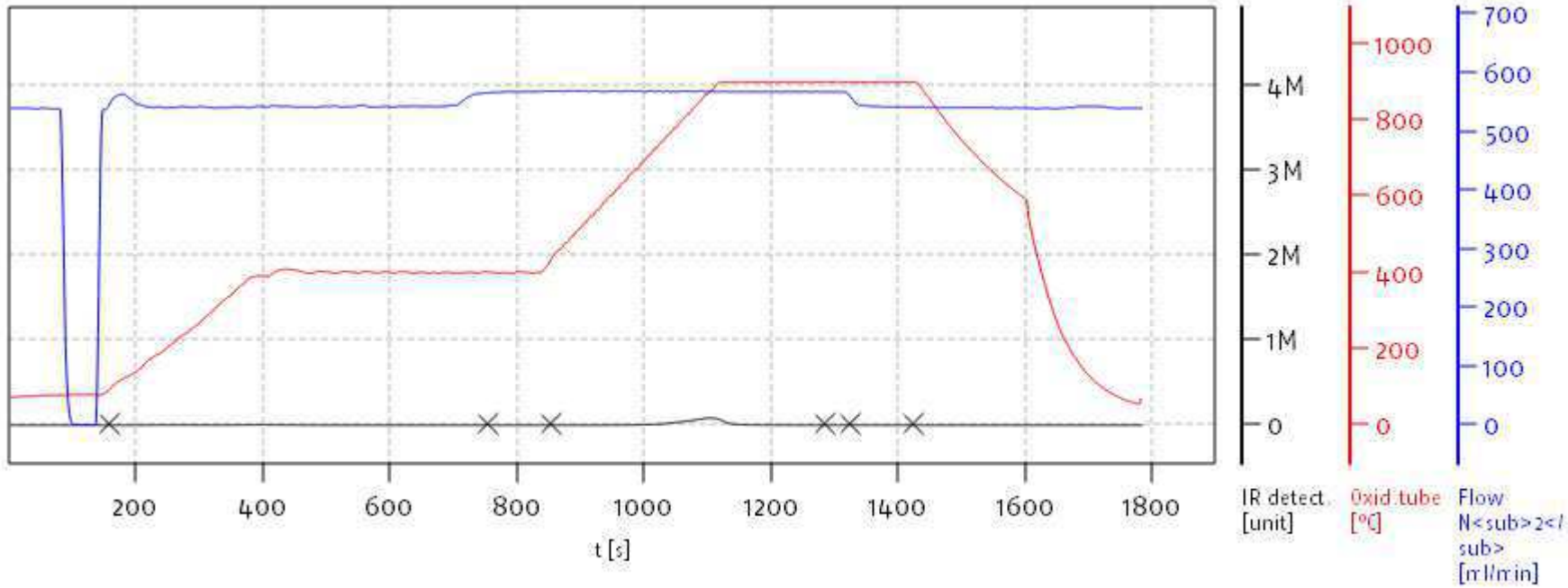
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
12	12	SEQ-CALA	200.00	0.0500	1.00	CARBON	4/26/2022 5:00 PM	0.021	0.151	0.172	bl,C2u	20 147	233 779	913	1.0000	0.8099



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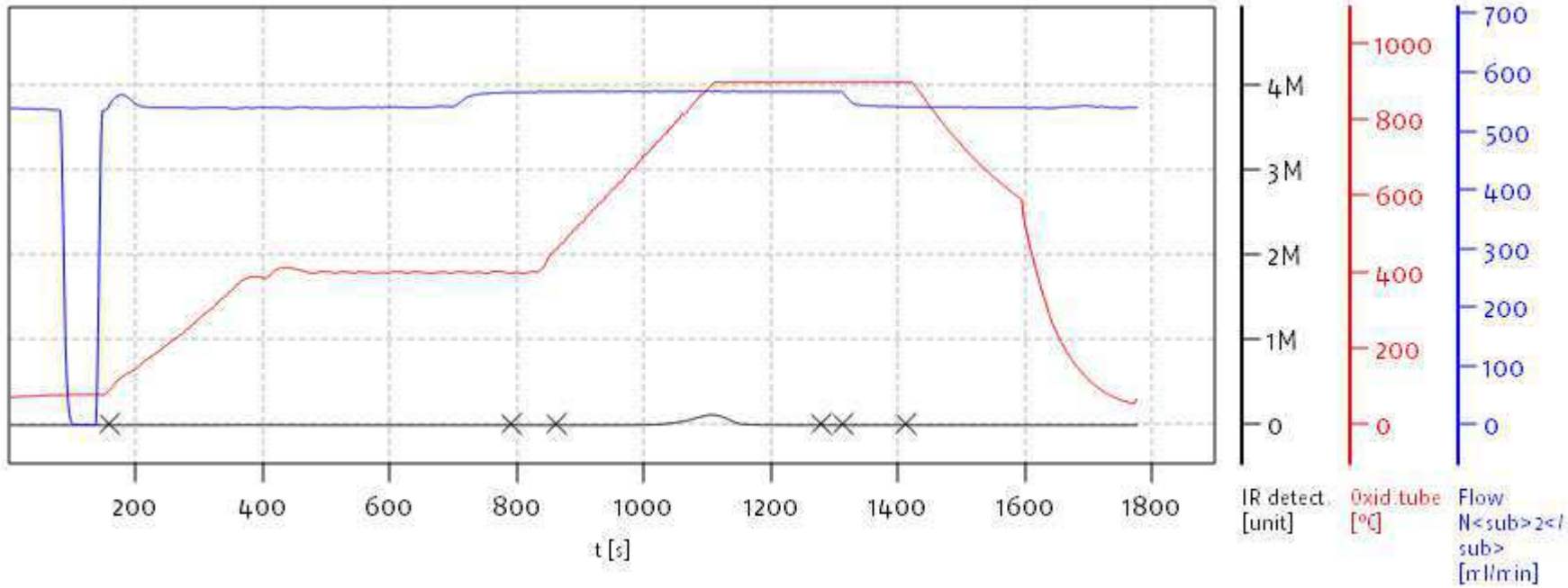
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
13	13	SEQ-CALB	200.00	0.0040	1.00	CARBON	4/26/2022 5:30 PM	0.010	0.258	0.268	bl,C1u,C2u	7 070	323 151	663	1.0000	1.0048



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Date: Wed Apr 27 11:07:12 2022

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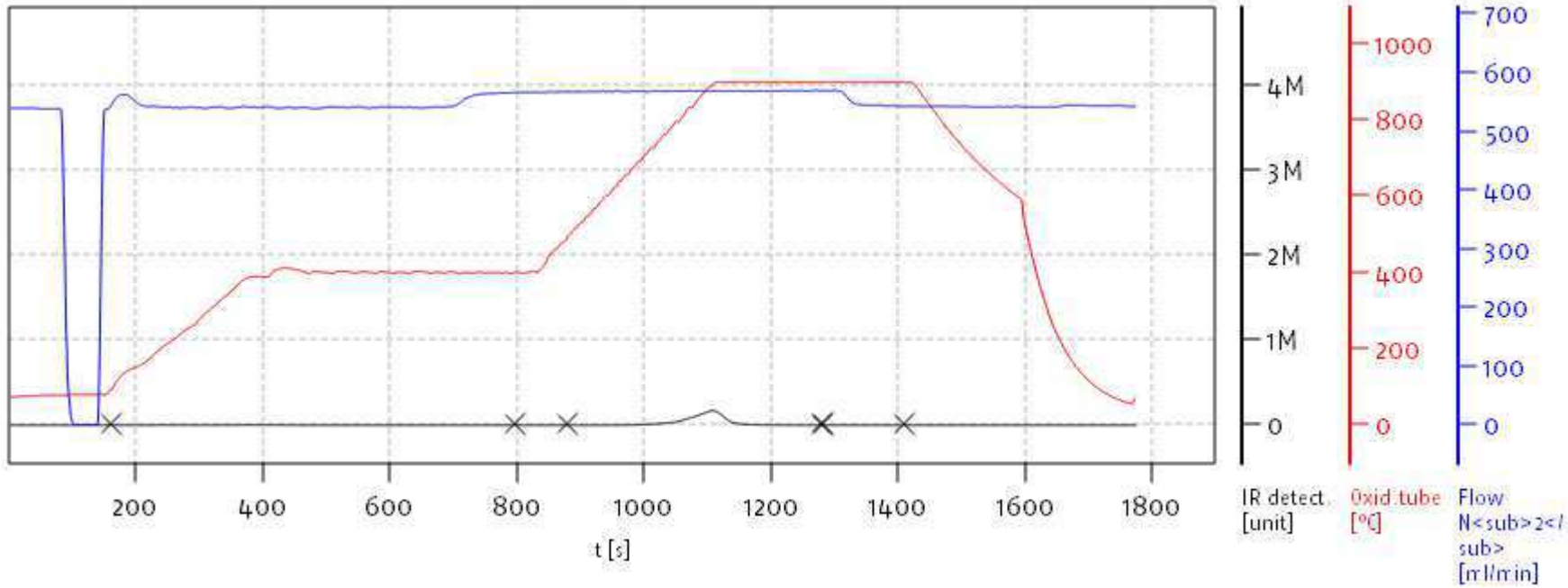
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
14	14	SEQ-CALC	200.00	0.0048	1.00	CARBON	4/26/2022 6:00 PM	0.015	0.324	0.339	bl,C2u	13 785	411 879	575	1.0000	0.9917



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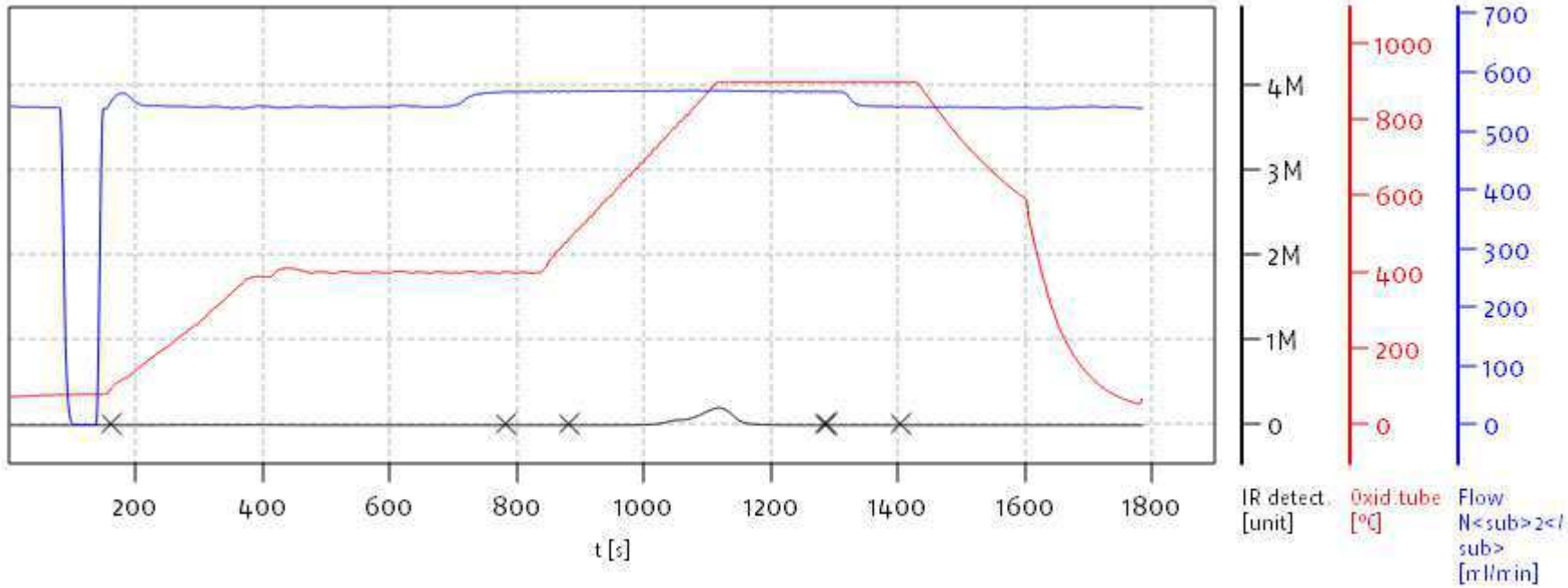
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
15	15	SEQ-CALD	200.00	0.0069	1.00	CARBON	4/26/2022 6:30 PM	0.019	0.444	0.463	bl,C2u	18 465	553 540	263	1.0000	1.0129



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Date: Wed Apr 27 11:07:12 2022

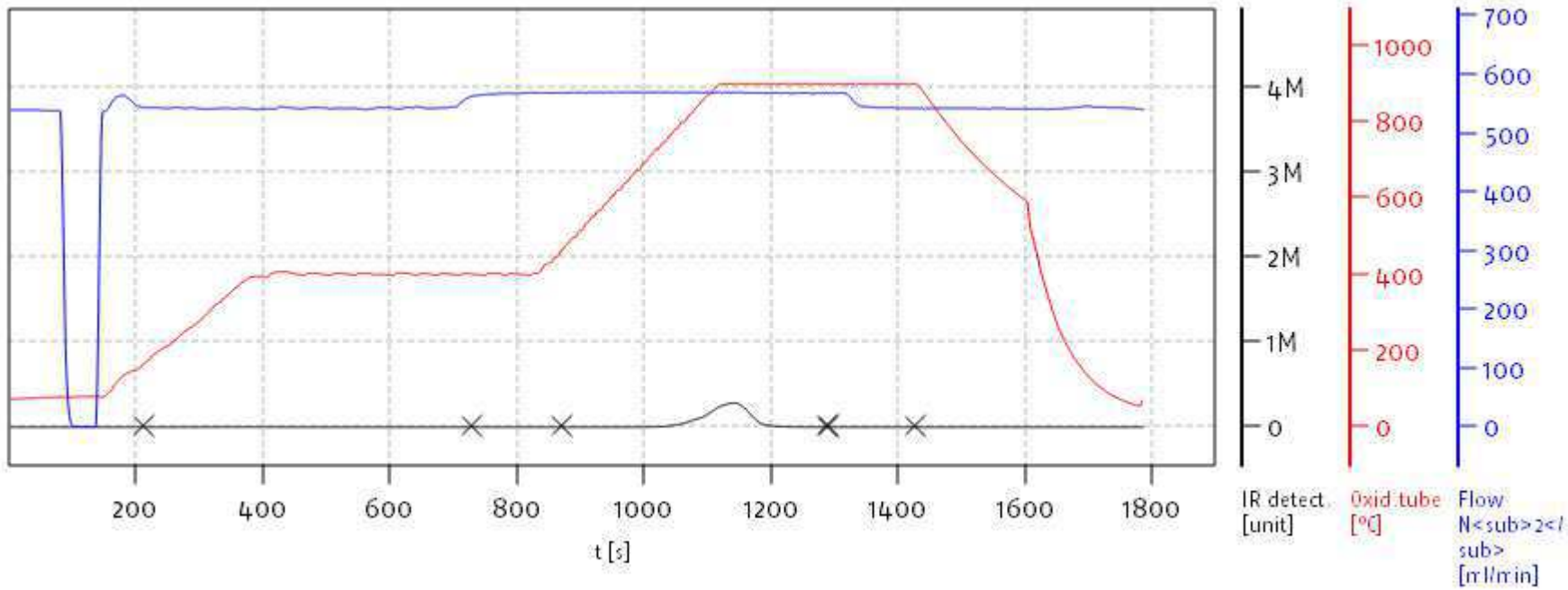
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
16	16	SEQ-CALE	200.00	0.0101	1.00	CARBON	4/26/2022 7:00 PM	0.009	0.600	0.609	bl,C1u,C2u	5 485	839 878	536	1.0000	0.9036



Name:

Access: soliTOC superuser

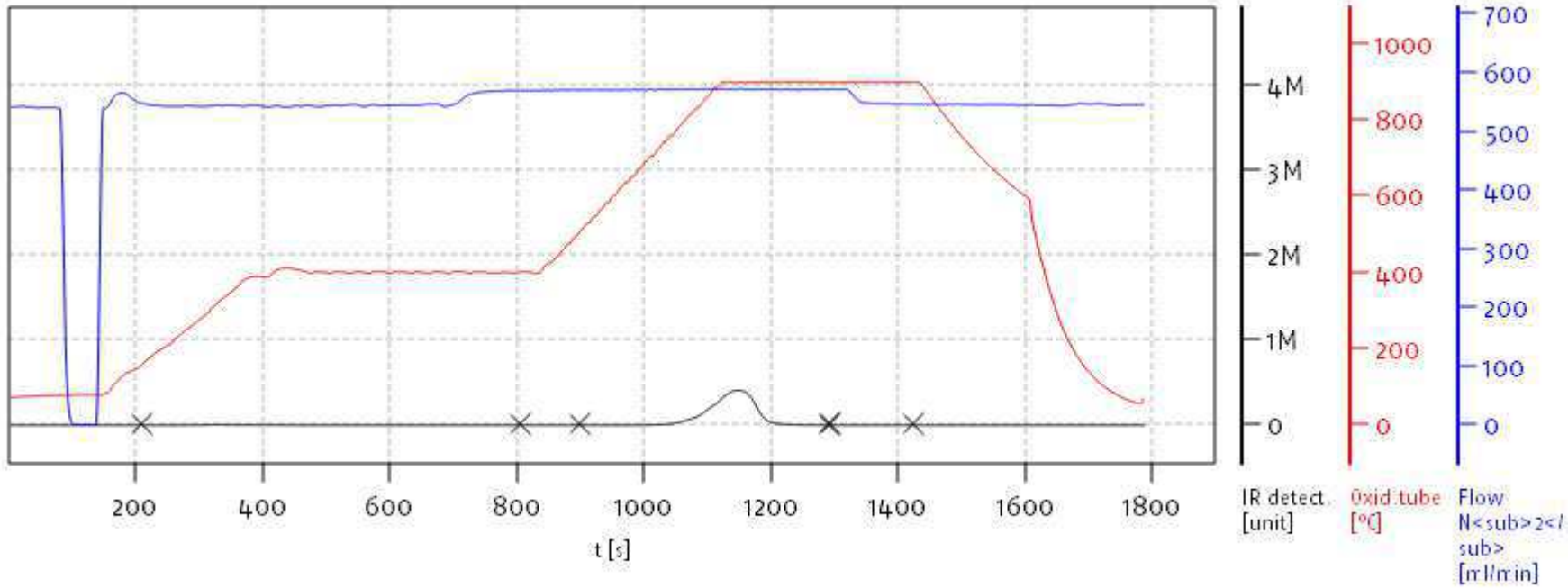
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
17	17	SEQ-CALF	200.00	0.0149	1.00	CARBON	4/26/2022 7:31 PM	0.019	0.906	0.925	bl,C2u	17 439	1 236 200	814	1.0000	0.9279



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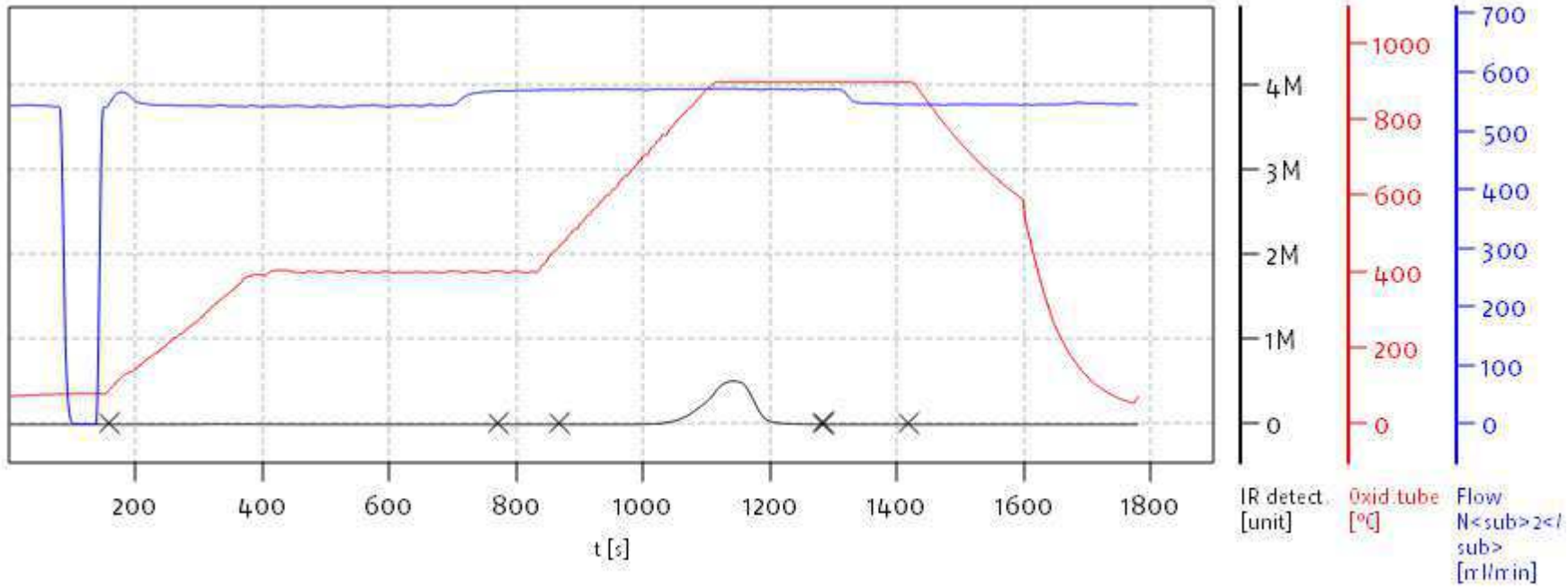
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
18	18	SEQ-CALG	200.00	0.0198	1.00	CARBON	4/26/2022 8:01 PM	0.015	1.206	1.221	bl,C2u	12 557	1 639 190	1 295	1.0000	0.9320



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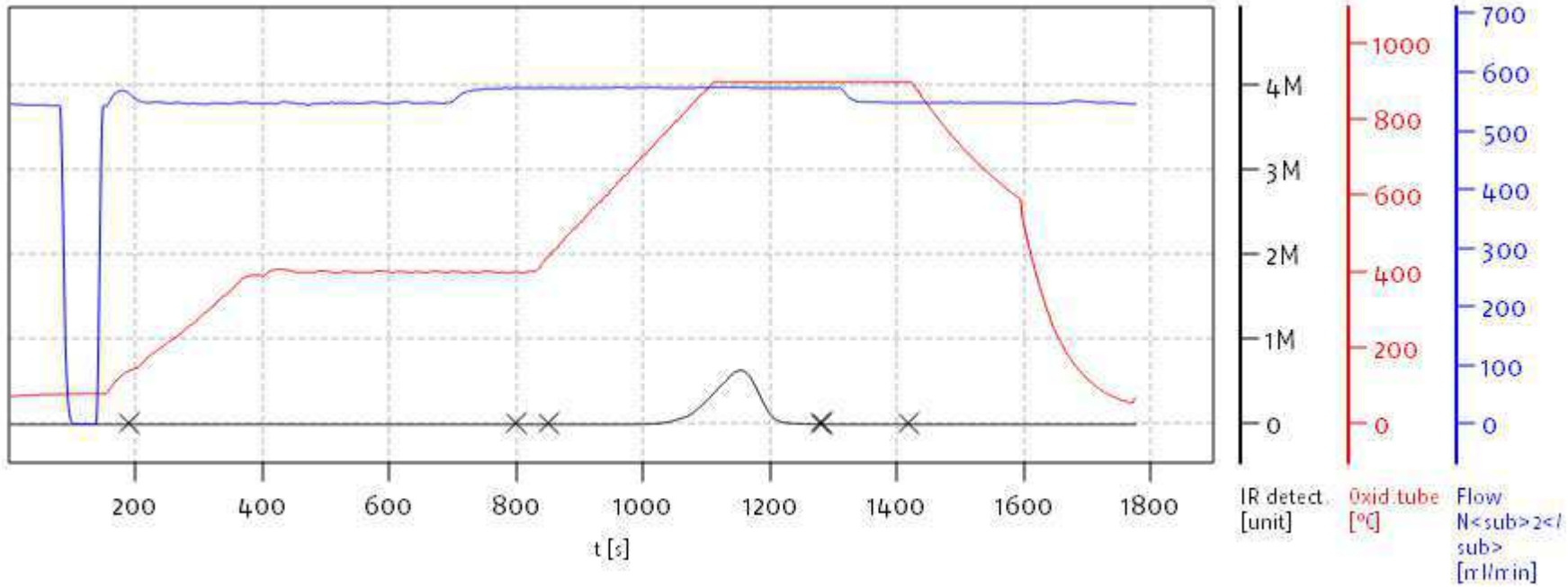
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
19	19	SEQ-CALH	200.00	0.0250	1.00	CARBON	4/26/2022 8:31 PM	0.009	1.524	1.533	bl,C1u,C2u	4 029	2 063 890	2 225	1.0000	0.9357



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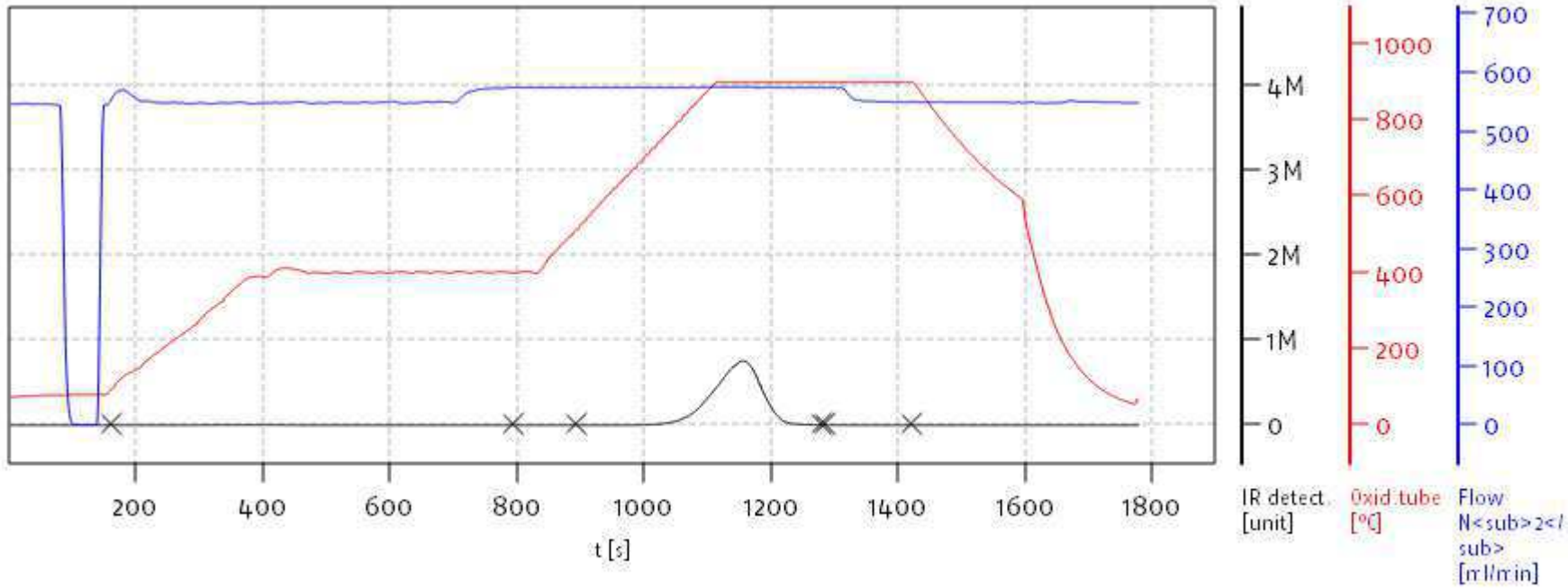
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
20	20	SEQ-CALI	200.00	0.0303	1.00	CARBON	4/26/2022 9:01 PM	0.017	1.800	1.817	bl,C2u	13 926	2 495 900	2 903	1.0000	0.9140



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

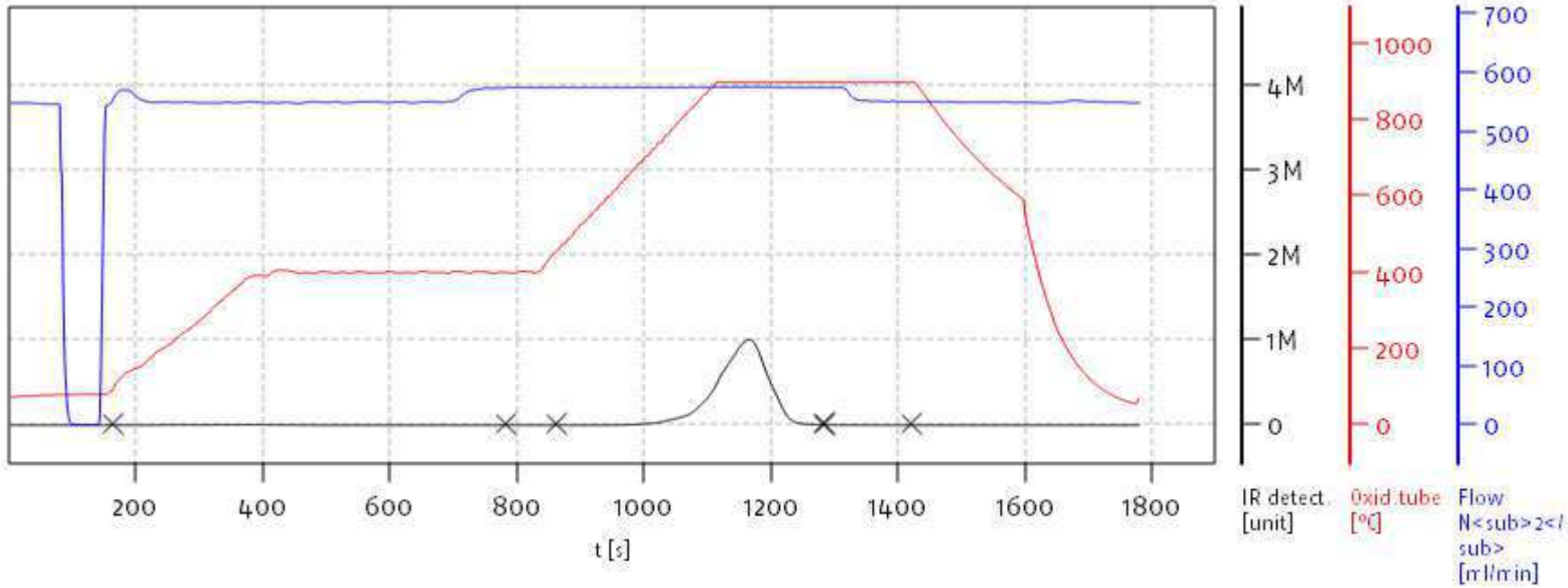
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: 4/27/2022 11:05 AM

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
21	21	SEQ-CALJ	200.00	0.0415	1.00	CARBON	4/26/2022 9:31 PM	0.031	2.400	2.431	bl,C2u	28 786	3 482 530	5 351	1.0000	0.8737



Name:

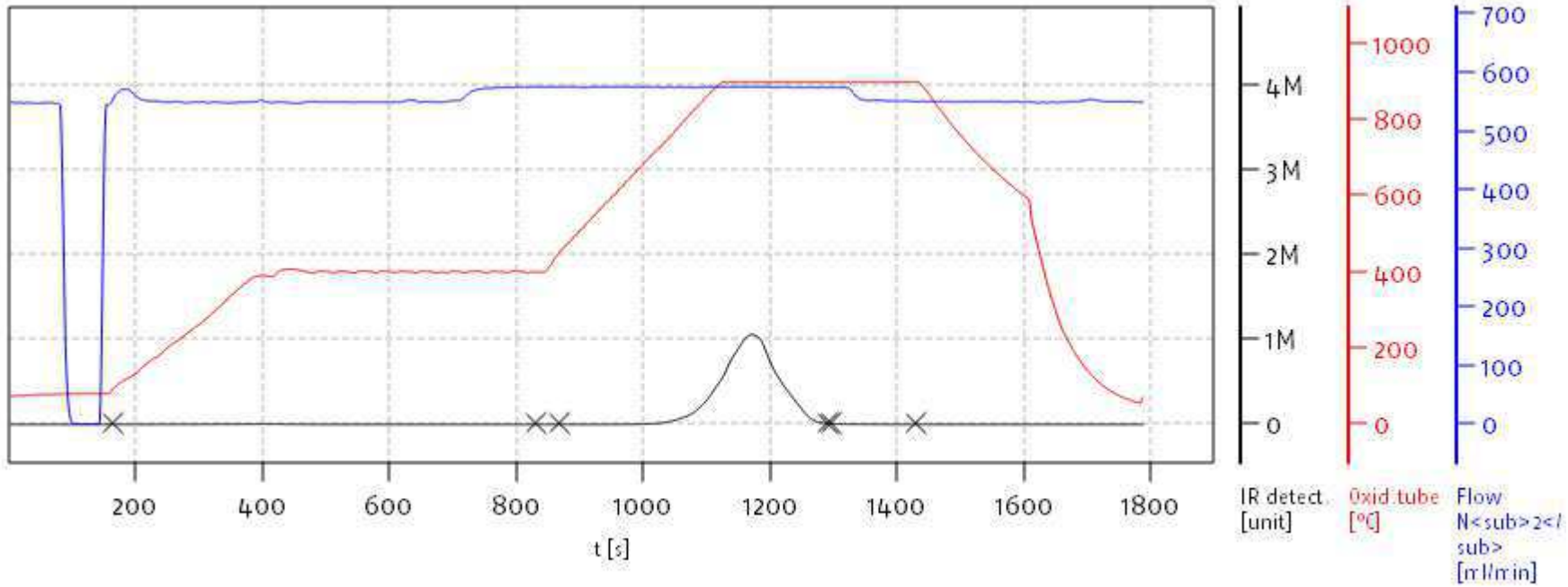
Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
22	22	SEQ-CALK	200.00	0.0497	1.00	CARBON	4/26/2022 10:01 PM	0.031	3.012	3.043	bl	23 732	4 105 830	9 736	1.0000	0.9301



Name:

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soliTOC V2.0.2 (31015f9) 2018-11-19
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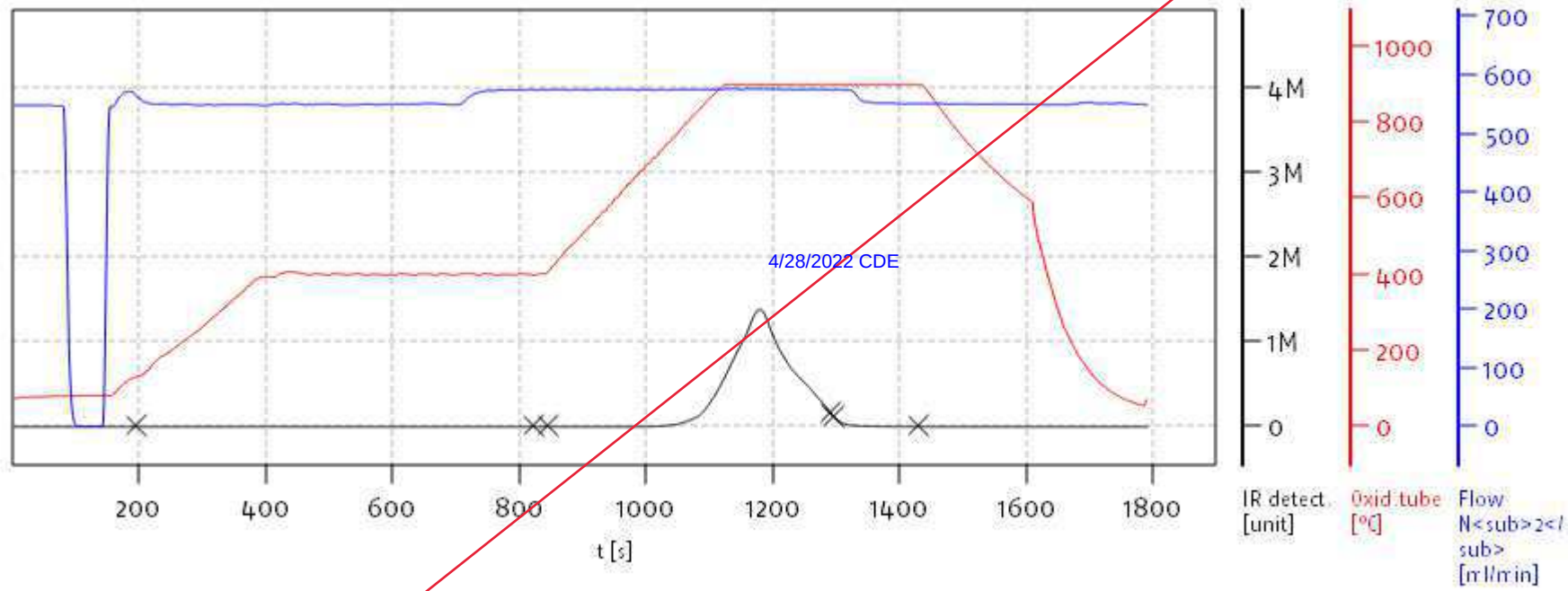
Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/26/2022 10:31 PM	0.005	3.805	3.810	bl,C1u	3 605	5 648 620	71 970	1.0000	0.9443



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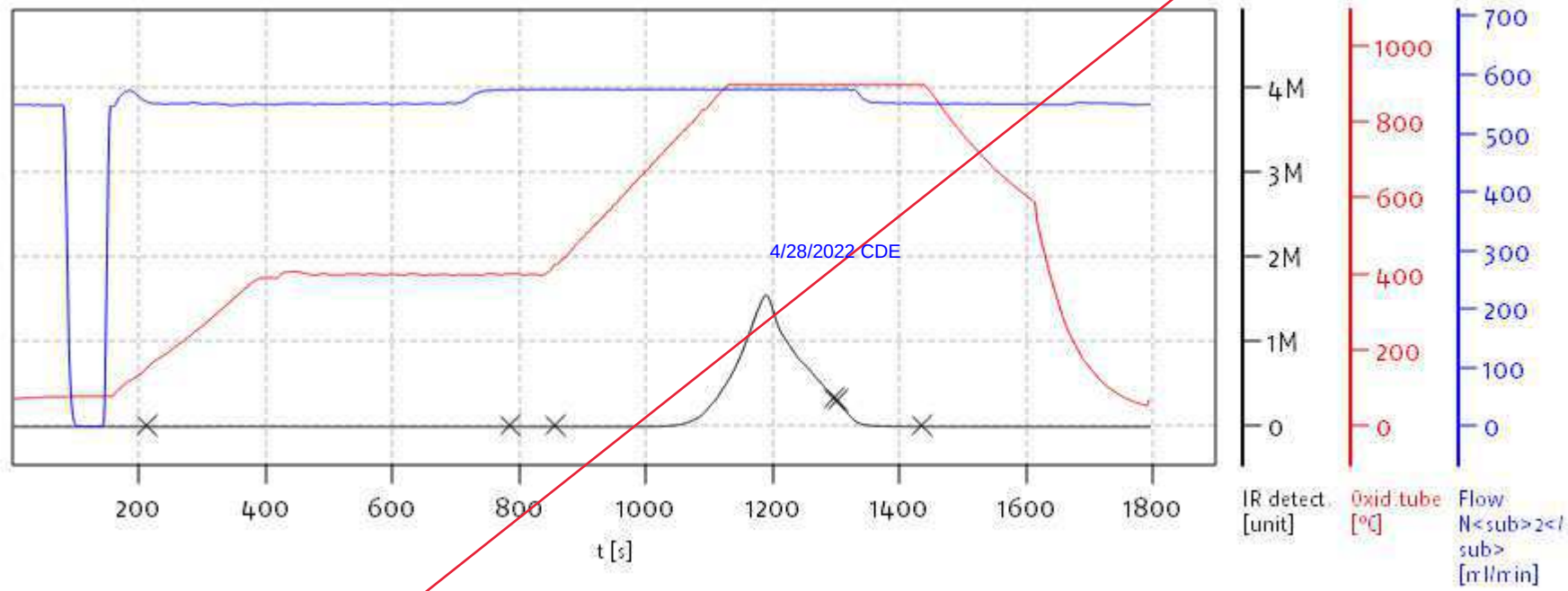
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/26/2022 11:02 PM	0.010	4.637	4.647	bl	10 023	6 397 530	228 171	1.0000	0.9539



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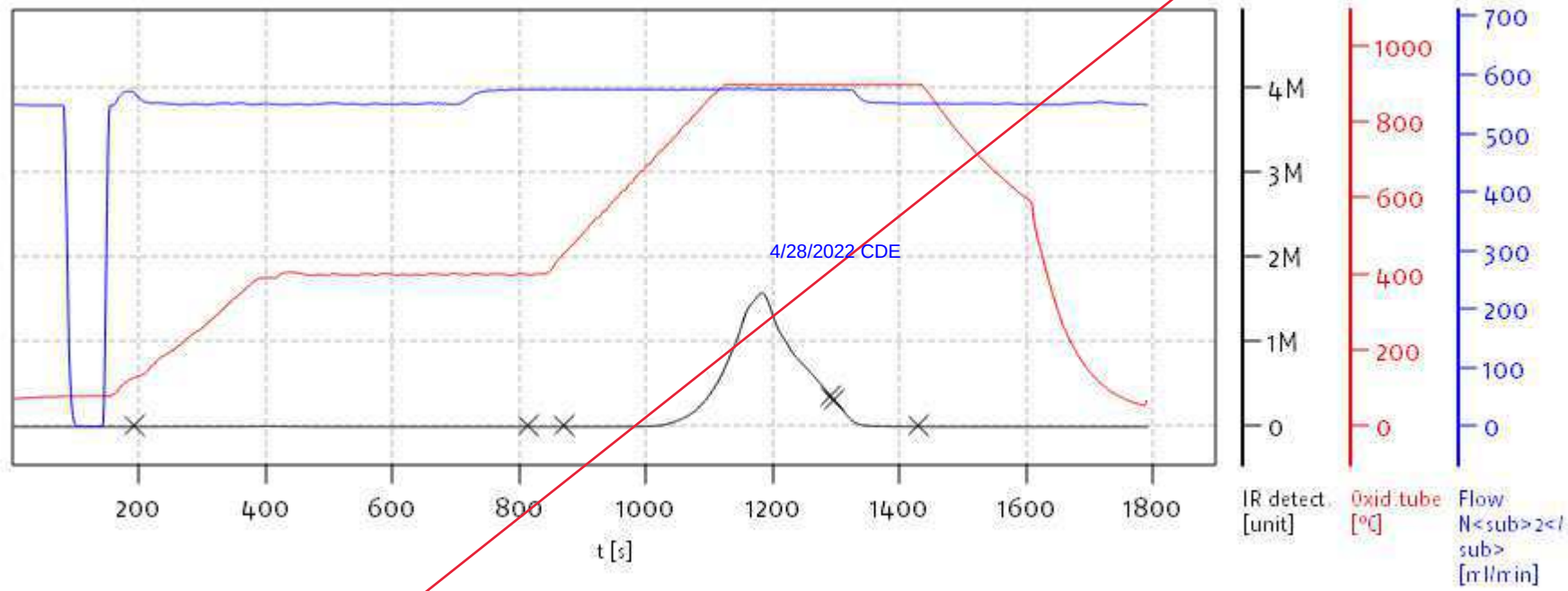
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/26/2022 11:32 PM	0.020	5.219	5.239	bl	23 354	7 186 580	239 986	1.0000	0.9540



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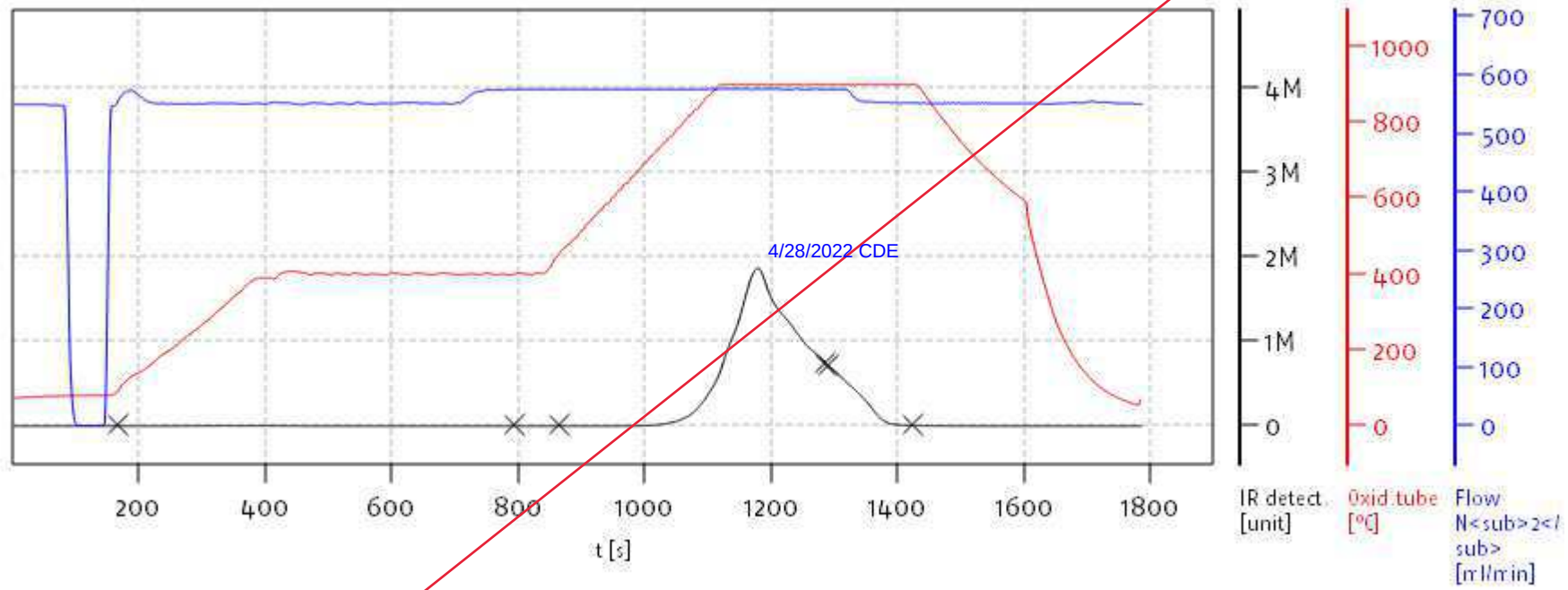
elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 12:02 AM	0.019	7.915	7.934	bl,C3o	21 248	8 544 610	1 334 580	1.0000	1.0714



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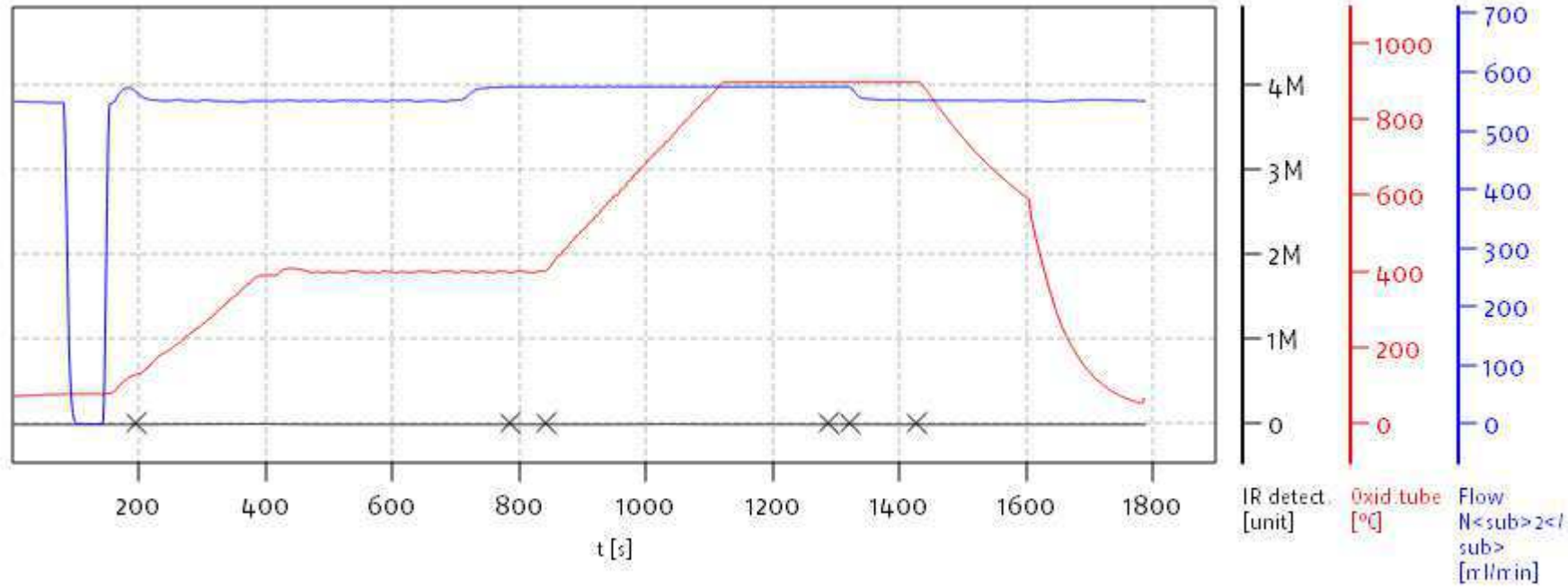
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
27	27	BLANK	1.00		1.00	CARBON	4/27/2022 12:32 AM	0.000	0.000	0.000	bl	29 766	19 596	1 205	1.0000	0.9007



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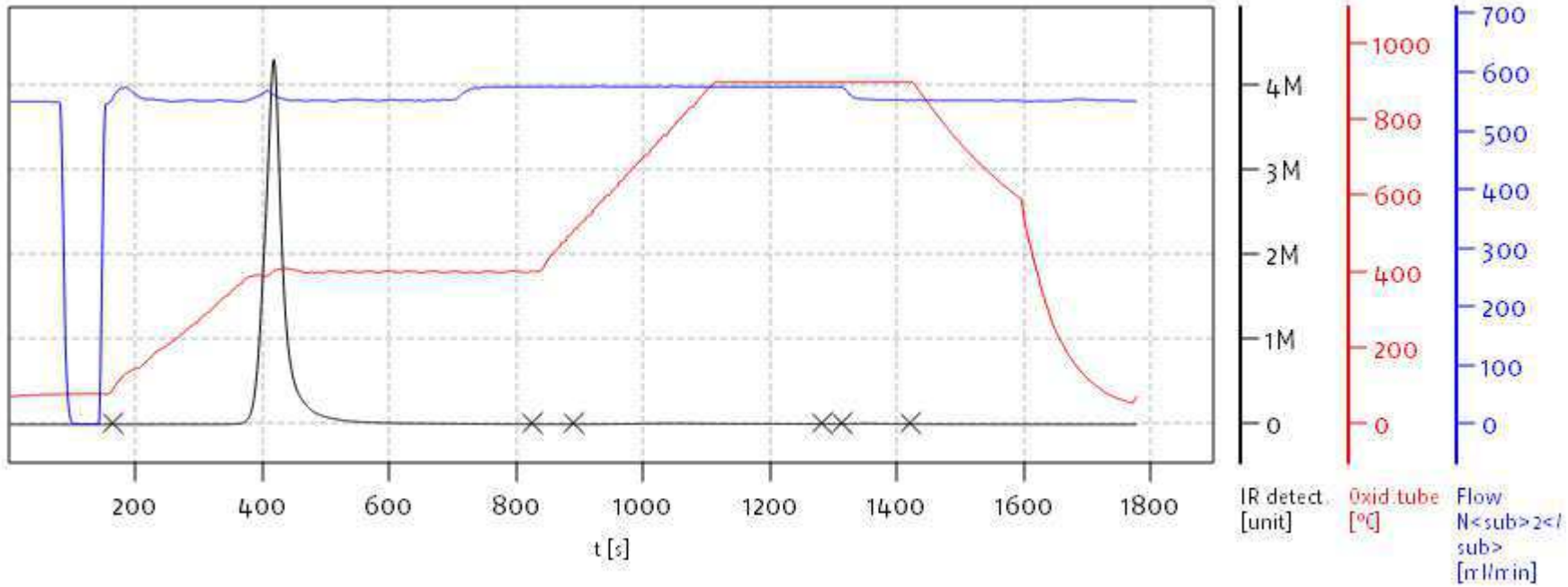
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
28	28	Dfactor	19.00		1.00	CARBON	4/27/2022 1:02 AM	44.678	0.893	45.571	bl	5 588 680	104 999	25 384	0.9581	1.0000



Name:

Access: soliTOC superuser

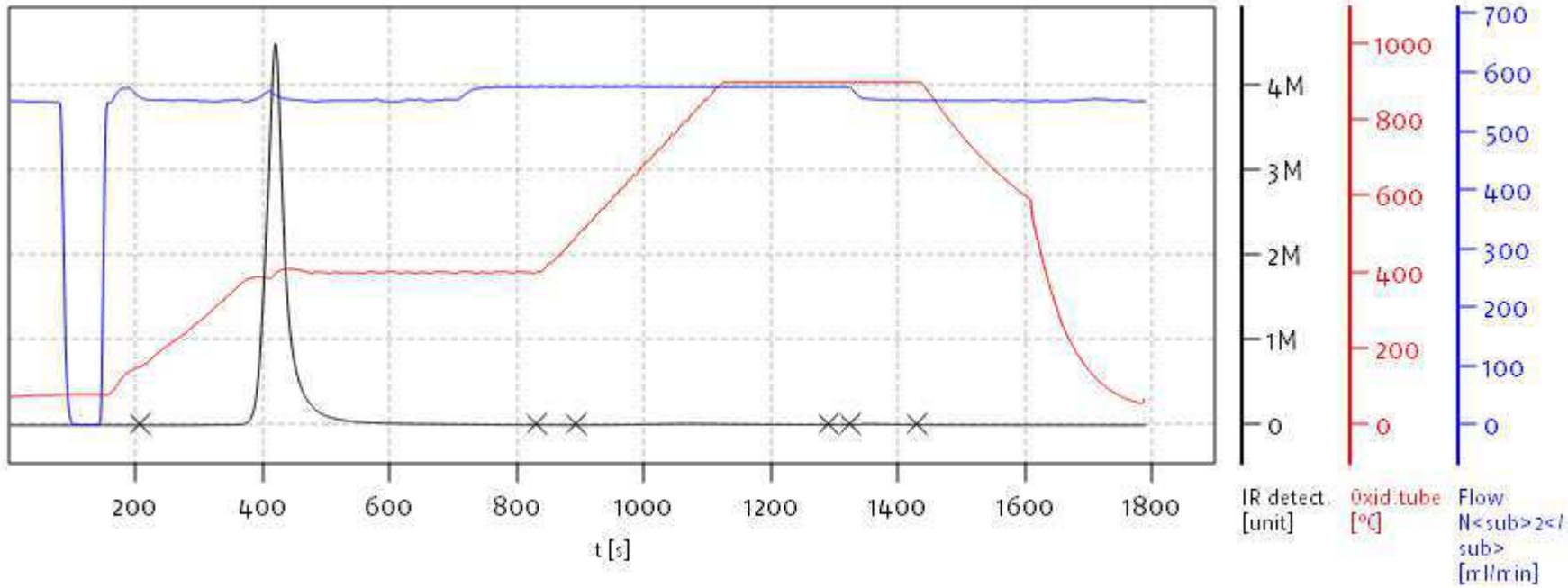
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
29	29	Dfactor	20.80		1.00	CARBON	4/27/2022 1:32 AM	44.694	0.937	45.631	bl	6 076 750	120 961	30 224	0.9647	1.0000



Name:

Access: soliTOC superuser

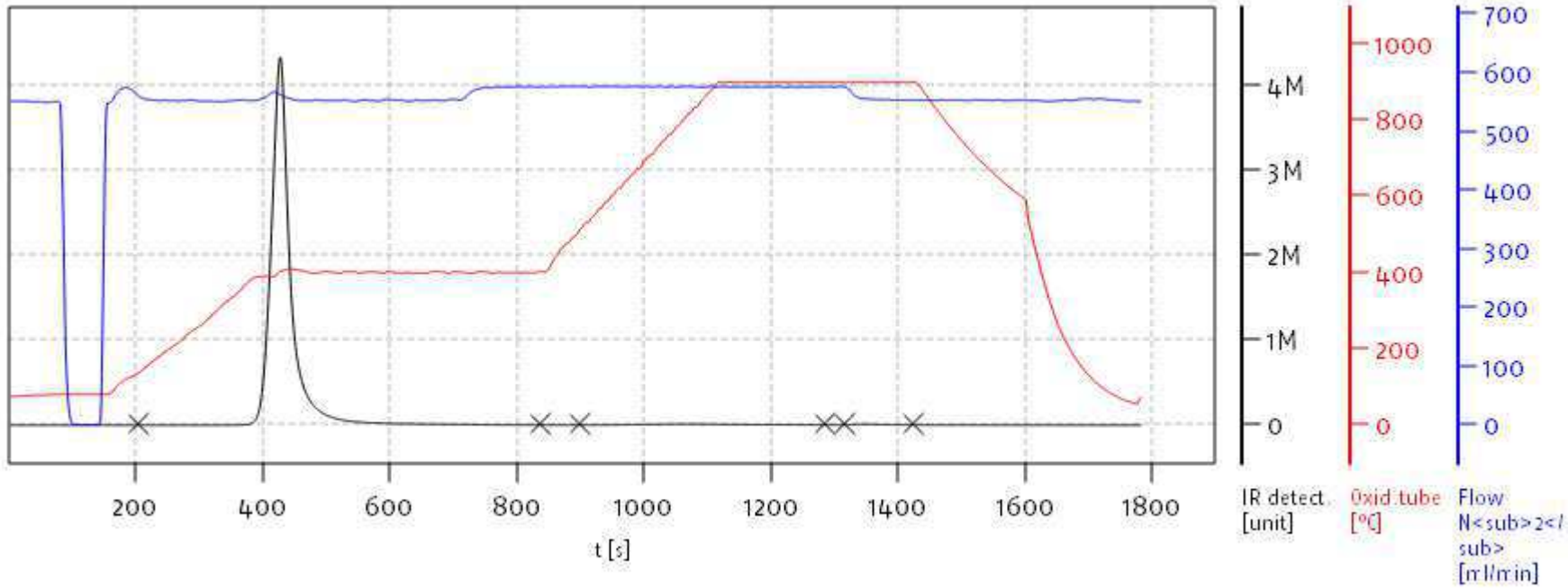
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
30	30	SEQ-ICV1	19.40		1.00	CARBON	4/27/2022 2:03 AM	44.964	0.742	45.706	bl	5 722 450	98 735	27 054	0.9614	0.9007



Name:

Access: soliTOC superuser

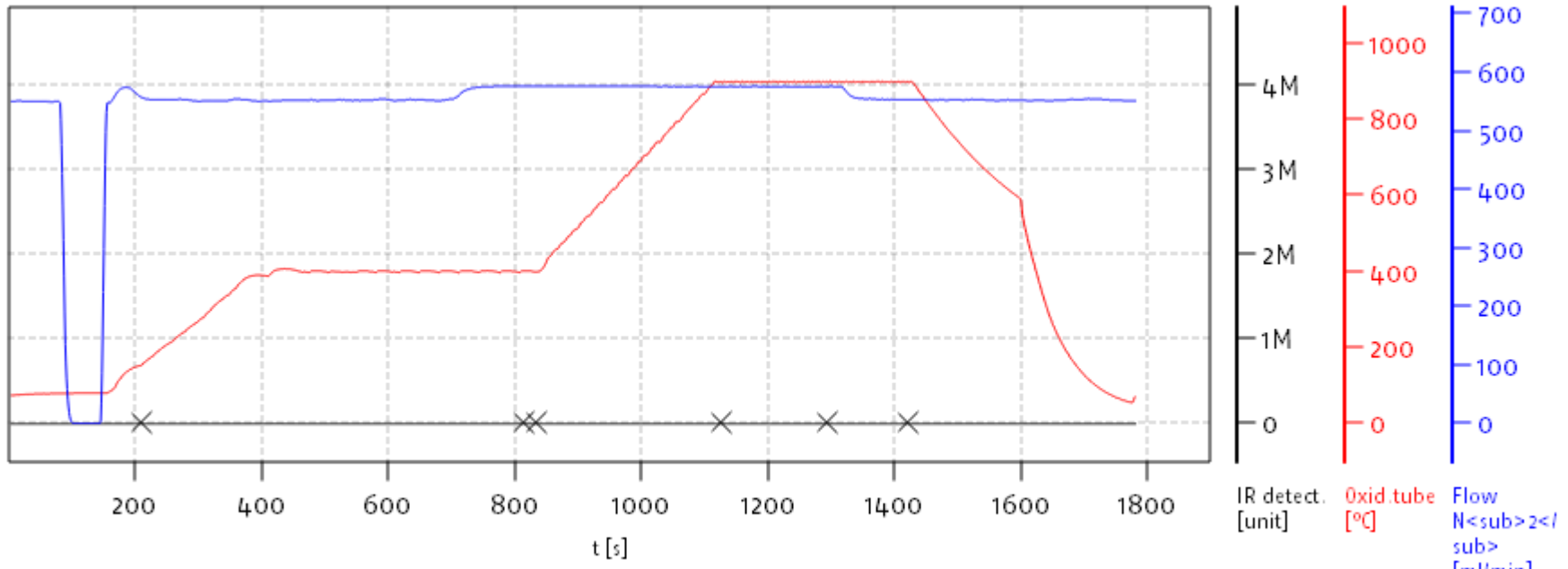
Date: Wed Apr 27 11:07:12 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
31	31	SEQ-ICB1	501.10		1.00	CARBON	4/27/2022 2:33 AM	0.002	0.001	0.003	bl,C1u,C3u,C2u	2 158	225	165	0.9614	0.9007



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:07:12 2022

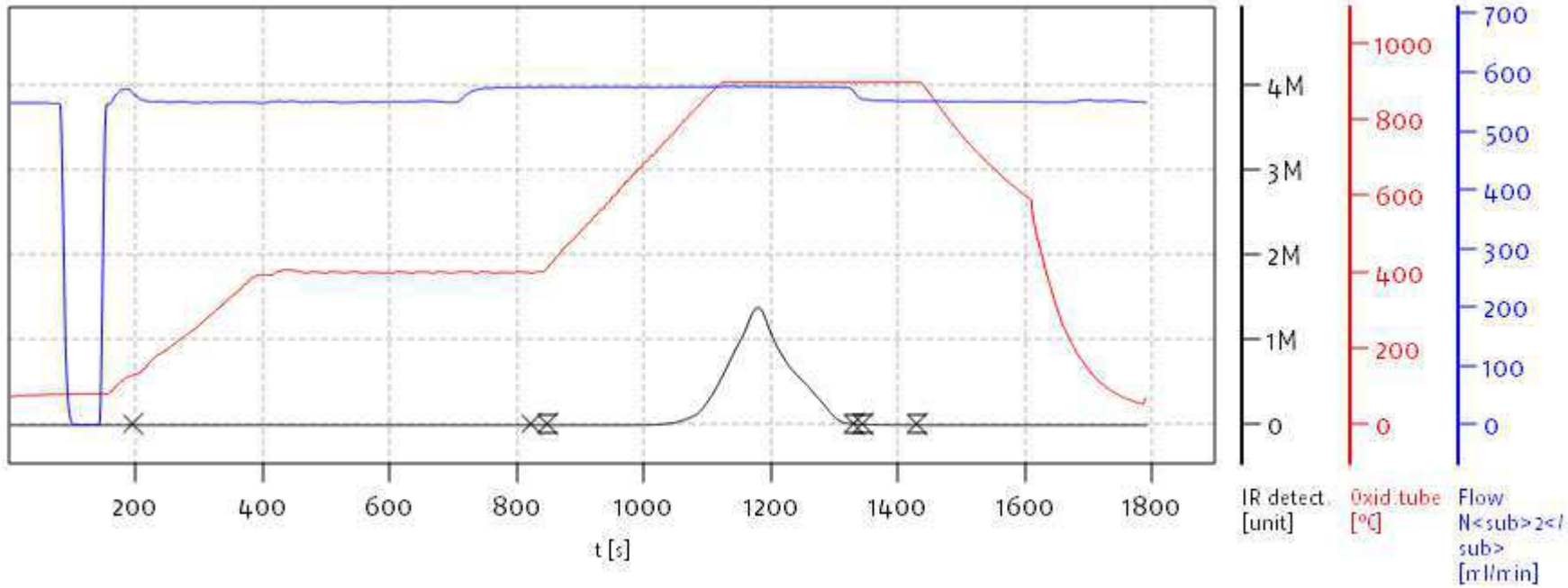
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

Analytical Resources, Incorporated
Analytical Chemists and Consultants

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
23	23	SEQ-CALL	200.00	0.0698	1.00	CARBON	4/27/2022 11:08 AM	0.005	3.917	3.922	bl,C1u	3 605	**5 260 365**	**0**	1.0000	0.9443



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

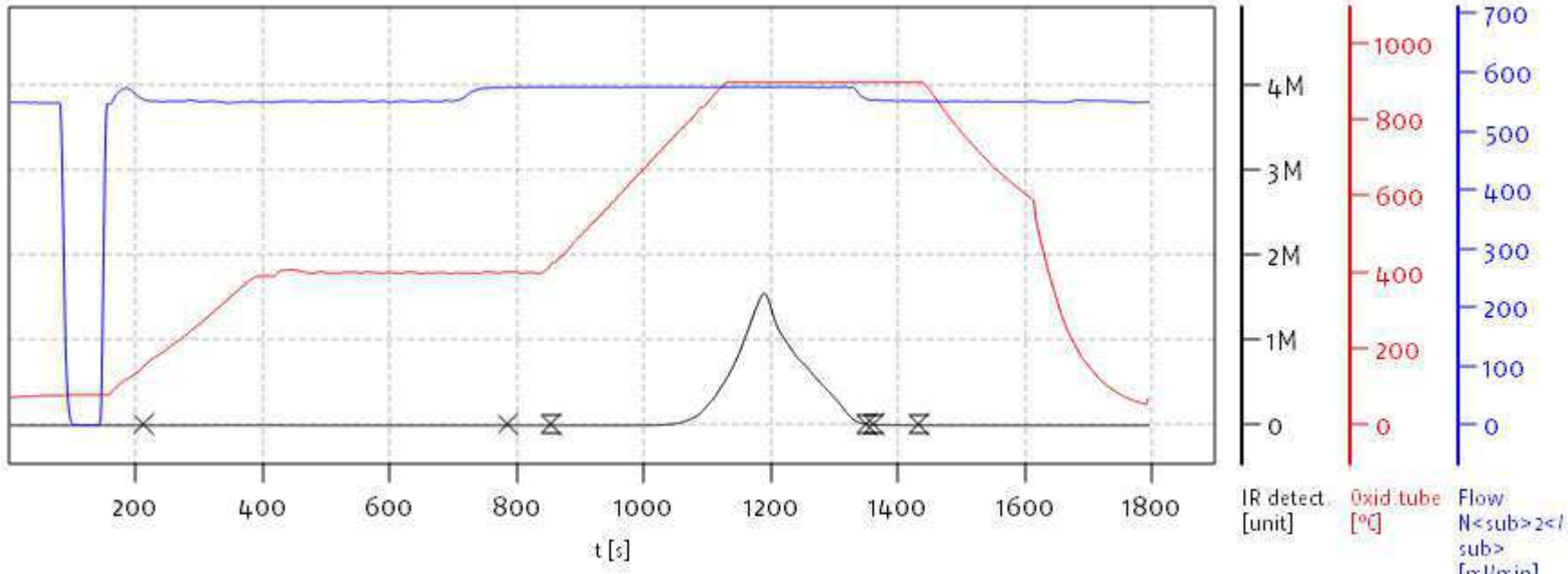
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
24	24	SEQ-CALM	200.00	0.0803	1.00	CARBON	4/27/2022 11:08 AM	0.010	4.637	4.647	bl	10 023	**6 164 833**	**0**	1.0000	0.9539



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

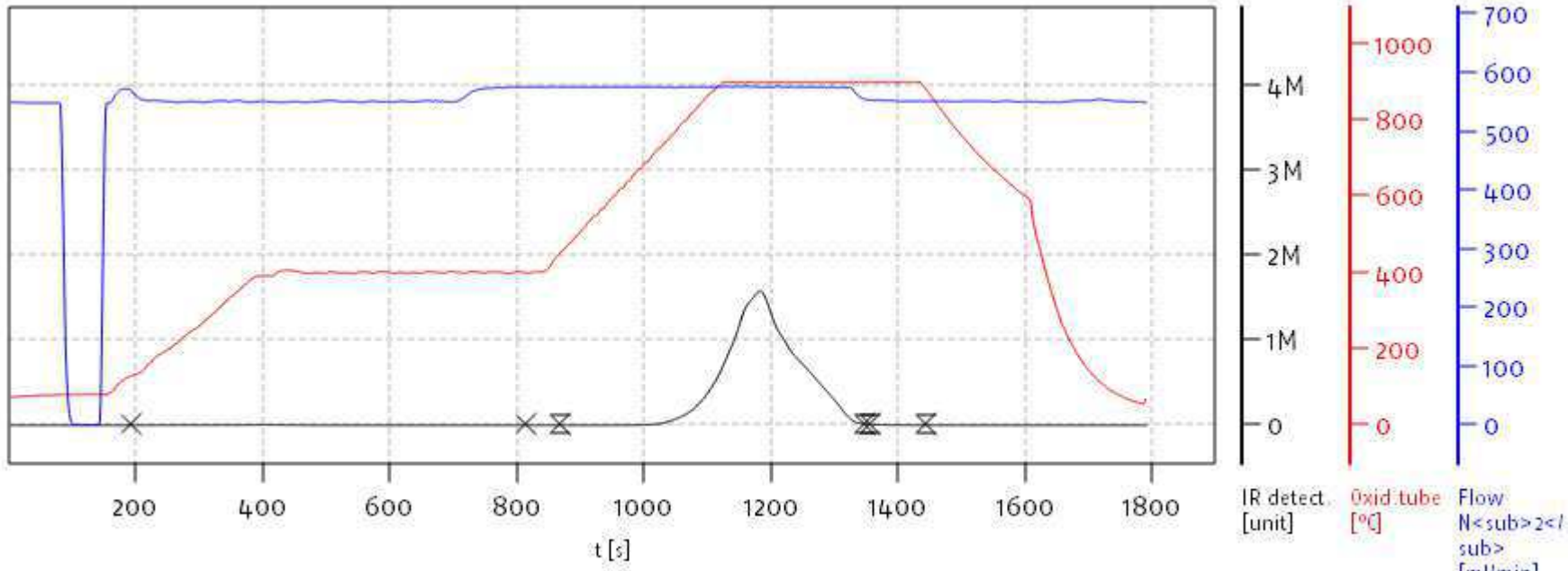
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
25	25	SEQ-CALN	200.00	0.0901	1.00	CARBON	4/27/2022 11:09 AM	0.020	5.219	5.239	bl	23 354	**6 937 833**	**0**	1.0000	0.9540



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

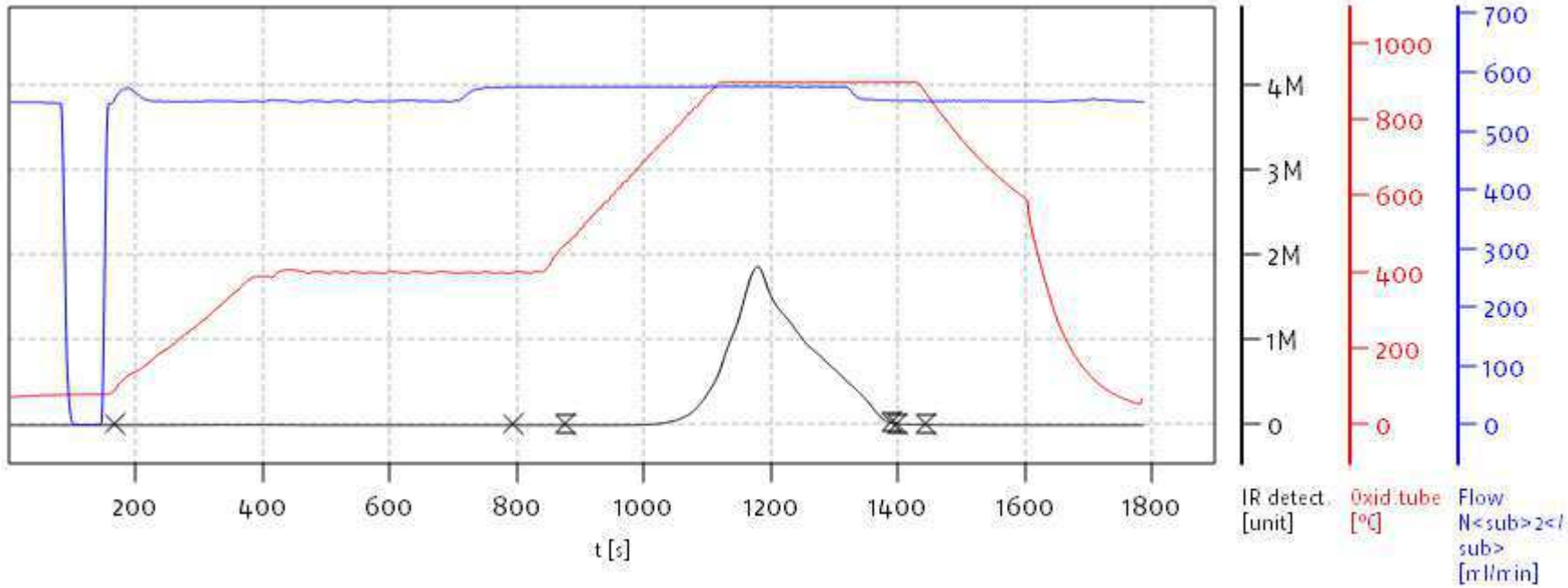
soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Soli TOC Cube, Carbon
Balance: BAL3
Analyst: DOE

	Pos.	Name	Weight [mg]	Memo	Dilut. Factor	Method	Date Time	TOC [%]	TIC900 [%]	TC [%]	Info	TOC400 Area	TIC900 Area	ROC Area	TOC400 Factor	TIC900 Factor
26	26	SEQ-CALO	200.00	0.1200	1.00	CARBON	4/27/2022 11:09 AM	0.019	7.915	7.934	bl,C3o	21 248	9 370 139	0	1.0000	1.0714



Name:

Access: soliTOC superuser

Date: Wed Apr 27 11:10:16 2022

soliTOC V2.0.2 (31015f9) 2018-11-19
Serial No: 0300.181017
Mode CCC

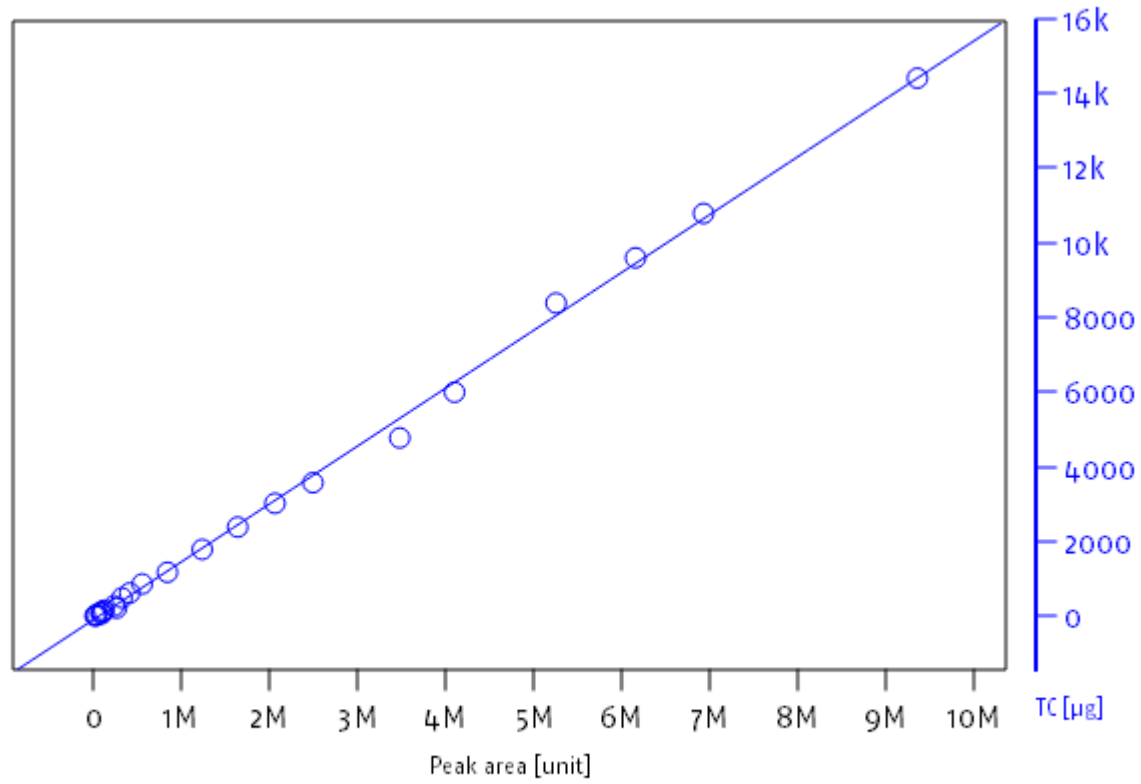
elementar
EXCELLENCE IN ELEMENTS

Document: 042622 DOE CALIBRATION from: --.--.-- (modified)

Calibration parameters TC, Whole range

a	-4.107546e-02
b	+1.548032e-06
c	+0.000000e+00
d	+0.000000e+00
e	+0.000000e+00
r	0.998372
r_old	0.998372
Proc.-SD	166.070255 µg

Calibration graph TC, Whole range



INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Sequence: SKD0371
Date Analyzed: 04/27/22 02:33

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SKD0371-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	

INSTRUMENT BLANKS
EPA 9060A m

Laboratory: Analytical Resources, LLC
Client: Anchor QEA, LLC
Instrument ID: TOC Cube
Sequence: SLA0248

SDG: 23A0467
Project: AOC5 MR Phase 1
Calibration: FD00070
Date Analyzed: 01/23/23 17:43

Lab Sample ID	Analyte	Found	MDL	MRL	Units	C
SLA0248-ICB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB1	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB2	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB3	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB4	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB5	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB6	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB7	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB8	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCB9	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCBA	Total Organic Carbon	0.00	0.02	0.02	%	
SLA0248-CCBB	Total Organic Carbon	0.00	0.02	0.02	%	

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SKD0371

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SKD0371-ICV1	Total Organic Carbon	44.446	43.7	98.3	%	EPA 9060A m
	Total Carbon	44.446	44.1	99.2	%	EPA 9060A m
	Total Inorganic Carbon	0.0000	0.40		%	EPA 9060A m
	% Soot	0.0000	0.004		%	EPA 9060A m

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Instrument ID: TOC Cube
Calibration: FD00070
Control Limt: +/- 10.00%
Sequence: SLA0248

Lab Sample ID	Analyte	True	Found	%R	Units	Method
SLA0248-ICV1	Total Organic Carbon	44.446	44.3	99.6	%	EPA 9060A m
SLA0248-CCV1	Total Organic Carbon	44.446	43.6	98.2	%	EPA 9060A m
SLA0248-CCV2	Total Organic Carbon	44.446	42.4	95.4	%	EPA 9060A m
SLA0248-CCV3	Total Organic Carbon	44.446	43.5	97.9	%	EPA 9060A m
SLA0248-CCV4	Total Organic Carbon	44.446	44.9	101	%	EPA 9060A m
SLA0248-CCV5	Total Organic Carbon	44.446	45.6	103	%	EPA 9060A m
SLA0248-CCV6	Total Organic Carbon	44.446	44.7	101	%	EPA 9060A m
SLA0248-CCV7	Total Organic Carbon	44.446	44.4	100	%	EPA 9060A m
SLA0248-CCV8	Total Organic Carbon	44.446	45.0	101	%	EPA 9060A m
SLA0248-CCV9	Total Organic Carbon	44.446	44.5	100	%	EPA 9060A m
SLA0248-CCVA	Total Organic Carbon	44.446	44.6	100	%	EPA 9060A m
SLA0248-CCVB	Total Organic Carbon	44.446	44.0	99.1	%	EPA 9060A m

* Values outside of QC limits

Analytical Resources, LLC
Analytical Chemists and Consultants

STANDARD REFERENCE MATERIAL RECOVERY

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Laboratory ID: BLA0567-SRM1
Batch: BLA0567
Initial/Final: 0.2261 g / 0.2261 g
Preparation: Plumb 1981
Analyzed: 01/26/2023 0:51
Standard ID: L000299
Expires: 01/11/2024
Standard Lot#: NA
Description: 1941B - Organics in Marine Sediment (Conv

ANALYTE	TRUE (% wet)	FOUND (% wet)	MDL	MRL	Q	SRM % REC.	QC LIMITS REC.
Total Organic Carbon	2.9900	2.94	0.02	0.02		98.5	80 - 120

* Values outside of QC limits

HOLDING TIME SUMMARY

Analysis: EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1010 23A0467-01	01/23/23 08:26	01/23/23 13:30	01/25/23 10:40	2	180	01/26/23 05:24			
LDW23-SS1005 23A0467-02	01/23/23 08:39	01/23/23 13:30	01/25/23 10:40	2	180	01/26/23 06:55			
LDW23-SS1006 23A0467-03	01/23/23 08:50	01/23/23 13:30	01/25/23 10:40	2	180	01/26/23 07:26			
LDW23-SS1003 23A0467-04	01/23/23 09:03	01/23/23 13:30	01/25/23 10:40	2	180	01/26/23 07:56			
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	01/25/23 10:40	2	180	01/26/23 08:27			
LDW23-SS1204 23A0467-06	01/23/23 11:11	01/23/23 13:30	01/25/23 10:40	1	180	01/26/23 08:57			
LDW23-SS1238 23A0467-07	01/23/23 11:35	01/23/23 13:30	01/25/23 10:40	1	180	01/26/23 09:28			
LDW23-SS1013 23A0467-08	01/23/23 12:07	01/23/23 13:30	01/25/23 10:40	1	180	01/26/23 09:58			
LDW23-SS1014 23A0467-09	01/23/23 12:26	01/23/23 13:30	01/25/23 10:40	1	180	01/26/23 10:29			

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

EPA 9060A m

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument: TOC Cube

Analyte	MDL	RL	Units
Total Organic Carbon	0.02	0.02	%

National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material® 1941b

Organics in Marine Sediment

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. Information values are also provided for total organic carbon (TOC), total carbon, hydrogen, and nitrogen. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Certified Mass Fraction Values: Certified mass fraction values for PAHs, PCB congeners, and chlorinated pesticides are provided in Table 1 through Table 3. The certified values for the PAHs, PCB congeners, and chlorinated pesticides are based on the agreement of results obtained at NIST from two or more chemically independent analytical techniques along with results from an interlaboratory comparison study [1]. A NIST certified value is a value for which NIST has the highest confidence in its accuracy in that all known or suspected sources of bias have been investigated or taken into account [1].

Reference Mass Fraction Values: Reference mass fraction values for additional PAHs (some in combination), additional PCB congeners, and additional chlorinated pesticides are provided in Table 4 through Table 7. Reference values for alkylated PAH groups are provided in Table 8 and for selected hopanes and steranes in Table 9. A reference value for total organic carbon is provided in Table 10. Reference values are noncertified values that are the best estimate of the true value; however, the values do not meet the NIST criteria for certification and are provided with associated uncertainties that may reflect only measurement precision, may not include all sources of uncertainty, or may reflect a lack of sufficient statistical agreement among multiple analytical methods [1].

Information Mass Fraction Values: Information mass fraction values are provided in Table 11 for carbon, hydrogen, and nitrogen. An information value is considered to be a value that will be of use to the SRM user, but insufficient information is available to assess the uncertainty associated with the value [1]. Information values cannot be used to establish metrological traceability.

Expiration of Certification: The certification of **SRM 1941b** is valid, within the measurement uncertainty specified, until **01 October 2020**, provided the SRM is handled and stored in accordance with the instructions given in this certificate (see "Instructions for Handling, Storage, and Use"). This certification is nullified if the SRM is damaged, contaminated, or otherwise modified.

Maintenance of SRM Certification: NIST will monitor this SRM over the period of its certification. If substantive technical changes occur that affect the certification before the expiration of this certificate, NIST will notify the purchaser. Registration (see attached sheet or register online) will facilitate notification.

Coordination of the technical measurements leading to the certification of this material was under the leadership of M.M. Schantz and S.A. Wise of the NIST Chemical Sciences Division.

Analytical measurements for the certification of SRM 1941b were performed at NIST by J.R. Kucklick, B.J. Porter, D.L. Poster, M.M. Schantz, P. Schubert, S. Tutschku, and L.L. Yu of the NIST Chemical Sciences Division.

Carlos A. Gonzalez, Chief
Chemical Sciences Division

Gaithersburg, MD 20899
Certificate Issue Date: 16 January 2015

Robert L. Watters, Jr., Director
Office of Reference Materials

Measurements for TOC were provided by a commercial laboratory and T.L. Wade of the Geochemical and Environmental Research Group, Texas A&M University (College Station, TX). The carbon, hydrogen, and nitrogen data were provided by a commercial laboratory. Results for the PAHs, PCBs, and chlorinated pesticides from 38 laboratories (see Appendix A) that participated in an interlaboratory comparison exercise coordinated by NIST were used. Results for the alkylated PAH groups, hopanes, and steranes from 33 laboratories (see Appendix B) that participated in another interlaboratory comparison exercise coordinated by NIST were also used.

Collection and preparation of SRM 1941b were performed by M.P. Cronise and C.N. Fales of the NIST Office of Reference Materials and B.J. Porter and M.M. Schantz of the NIST Chemical Sciences Division. The sediment material was collected with the assistance of G.G. Lauenstein, J. Collier, and J. Lewis (National Oceanic and Atmospheric Administration, Silver Spring, MD).

Consultation on the statistical design of the experimental work and evaluation of the data were provided by S.D. Leigh and J.H. Yen of the NIST Statistical Engineering Division.

Support aspects involved in the issuance of this SRM were coordinated through the NIST Office of Reference Materials.

INSTRUCTIONS FOR HANDLING, STORAGE, AND USE

Handling: This material is naturally occurring marine sediment from an urban area and may contain constituents of unknown toxicities; therefore, caution and care should be exercised during its handling and use.

Storage: SRM 1941b must be stored in its original bottle at temperatures less than 30 °C and away from direct sunlight.

Use: Prior to removal of subsamples for analysis, the contents of the bottle should be mixed. The mass fractions of constituents in SRM 1941b are reported on a dry-mass basis. The SRM, as received, contains a mass fraction of approximately 2.4 % moisture (see "Conversion to Dry-Mass Basis"). The sediment sample should be dried to a constant mass before weighing for analysis; or a separate subsample of the sediment should be removed from the bottle at the time of analysis and dried to determine the mass fraction on a dry-mass basis. If the constituents of interest are volatile, then the moisture must be determined with a separate subsample.

PREPARATION AND ANALYSIS[1]

Sample Collection and Preparation: The sediment used to prepare this SRM was collected from the Chesapeake Bay at the mouth of the Baltimore (MD) Harbor near the Francis Scott Key Bridge (39°12.3'N and 76°31.4'W). This location is very near the site where SRM 1941 and SRM 1941a were collected. The sediment was collected using a Kynar-coated modified Van Veen-type grab sampler. A total of approximately 3300 kg of wet sediment was collected from the site. The sediment was freeze-dried, sieved at 150 μm (100 % passing), homogenized in a cone blender, radiation sterilized (^{60}Co), and then packaged in screw-capped amber glass bottles each containing approximately 50 g.

Conversion to Dry-Mass Basis: The results for the constituents in SRM 1941b are reported on a dry-mass basis; however, the material "as received" contains residual moisture. The amount of moisture in SRM 1941b was determined by measuring the mass loss after freeze-drying subsamples of 1.1 g to 1.3 g for four days at 1 Pa with a –10 °C shelf temperature and a –50 °C condenser temperature. The moisture content in SRM 1941b at the time of the certification analyses was 2.39 % ± 0.08 % (95 % confidence level). Analytical results for the organic constituents were determined on an as-received basis and then converted to a dry-mass basis by dividing by the conversion factor of 0.9761 (gram dry mass per gram as-received mass).

Polycyclic Aromatic Hydrocarbons: The general approach used for the value assignment of the PAHs in SRM 1941b was similar to that reported in detail elsewhere [2]. The approach consisted of combining results from analyses using various combinations of different extraction techniques and solvents, clean-up/isolation procedures, and chromatographic separation and detection techniques: Soxhlet extraction and pressurized-fluid extraction (PFE) using dichloromethane (DCM) or a hexane/acetone mixture, cleanup of the extracts using solid-phase extraction (SPE) or normal-phase liquid chromatography (LC), followed by analysis using the following techniques: (1) reversed-phase liquid chromatography with fluorescence detection (LC-FL) analysis of the total PAH fraction, (2) reversed-phase

[1] Certain commercial equipment, instruments or materials are identified in this certificate to adequately specify the experimental procedure. Such identification does not imply recommendation or endorsement by the National Institute of Standards

LC-FL analysis of isomeric PAH fractions isolated by normal-phase LC (i.e., multidimensional LC), (3) gas chromatography/mass spectrometry (GC/MS) analysis of the PAH fraction on three stationary phases of different selectivity, i.e., a 5 % (all column compositions are given as mole fractions in %) phenyl-substituted methylpolysiloxane phase, a 50 % phenyl-substituted methylpolysiloxane phase, and a relatively non-polar proprietary phase.

Three sets of GC/MS results, designated as GC/MS (I), GC/MS (II), and GC/MS (III), were obtained using three columns with different selectivities for the separation of PAHs. For GC/MS (I) analyses, duplicate subsamples of approximately 1 g from ten bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 2 % DCM in hexane (all solvent concentrations are given as volume fractions in %). The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5 MS, J&W Scientific, Folsom, CA). The GC/MS (II) analyses were performed using 5 g subsamples from six bottles of SRM 1941b. These samples were extracted using PFE with DCM. The high molecular mass compounds were removed from the extracts using size exclusion chromatography (SEC) with a preparative-scale divinylbenzene-polystyrene column (10 μm particle size with 10 nm diameter pores), and the sulfur was removed from the extracts by adding copper powder. The concentrated extract was passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The analysis was by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17 MS, J&W Scientific). For the GC/MS (III), 9 g subsamples from six bottles of SRM 1941b were Soxhlet-extracted for 18 h with 250 mL of a mixture of 50 % hexane/50 % acetone. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific).

Two sets of LC-FL results, designated as LC-FL (total) and LC-FL (isomer), were used in the certification process. For the LC-FL (total), subsamples of approximately 1 g from six bottles of SRM 1941b were extracted using PFE with a mixture of 50 % hexane/50 % acetone. The extracts were concentrated and then processed through an aminopropylsilane SPE cartridge using 2 % DCM in hexane to obtain the total PAH fraction. For the LC-FL (isomer), a 5 g subsample from the six bottles was extracted using PFE with DCM and processed through an aminopropylsilane SPE cartridge using 10 % DCM in hexane; the PAH fraction was then fractionated further on a semi-preparative aminopropylsilane column (μBondapak NH_2, 9 mm i.d. × 30 cm, Waters Associates, Milford, MA) to isolate isomeric PAH fractions as described previously [3–6]. The total PAH fraction and the isomeric PAH fractions were analyzed using a 5 μm particle-size polymeric octadecylsilane (C_{18}) column (4.6 mm i.d. × 25 cm, Hypersil-PAH, Keystone Scientific, Inc., Bellefonte, PA) with wavelength-programmed fluorescence detection [4,5].

For the GC/MS and LC-FL measurements described above, selected perdeuterated PAHs were added to the sediment prior to solvent extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PAHs in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

Homogeneity Assessment for PAHs: The homogeneity of SRM 1941b was assessed by analyzing duplicate samples of approximately 1 g from ten bottles selected by stratified random sampling. Samples were extracted, processed, and analyzed as described above for GC/MS (I). No statistically significant differences among bottles were observed for the PAHs at this sample size.

PAH Isomers of Molecular Mass 300 and 302: For the determination of the molecular mass 300 and 302 isomers, three subsamples of approximately 5 g each were extracted using PFE with DCM. The extracts were then concentrated with a solvent change to hexane and passed through an aminopropyl SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS using a 0.25 mm i.d. × 60 m fused silica capillary column with a 50 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-17MS, J&W Scientific). Perdeuterated dibenzo[*a,i*]pyrene was added to the sediment prior to extraction for use as an internal standard [8].

PCBs and Chlorinated Pesticides: The general approach used for the determination of PCBs and chlorinated pesticides in SRM 1941b consisted of combining results from analyses using various combinations of different extraction techniques and solvents, cleanup/isolation procedures, and chromatographic separation and detection techniques. Techniques and solvents included Soxhlet extraction and PFE using DCM or a hexane/acetone mixture.

clean-up/isolation using SPE or LC, followed by analysis using GC/MS and gas chromatography with electron capture detection (GC-ECD) on two columns with different selectivity for the separation of PCBs and chlorinated pesticides. The analytical methods are described in detail elsewhere [2].

Six sets of results were obtained and designated as GC-ECD (I) A and B, GC/MS (I) A and B, GC/MS (II), and Interlaboratory Comparison Exercise. For the GC-ECD (I) analyses, approximately 10 g subsamples from six bottles of SRM 1941b were extracted using PFE with DCM. Copper powder was added to the extract to remove elemental sulfur, and SEC, as described above, was used to remove the high molecular mass compounds. The concentrated extract was then fractionated on a semi-preparative aminopropylsilane column to isolate two fractions containing: (1) the PCBs and lower-polarity pesticides and (2) the more polar pesticides. GC-ECD analyses of the two fractions were performed on two columns of different selectivities for PCB separations: 0.25 mm × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5, J&W Scientific), and a 0.25 mm × 60 m fused silica capillary column with a non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The results from the 5 % phenyl phase are designated as GC-ECD (IA) and the results from the proprietary phase are designated as GC-ECD (IB). For the GC-ECD analyses, two PCB congeners that are not significantly present in the sediment extract (PCB 103 and PCB 198 [9,10]) and endosulfan I-d_4, 4,4'-DDE-d_8, 4,4'-DD-d_8, and 4,4'-DDT-d_8 were added to the sediment prior to extraction for use as internal standards for quantification purposes.

Two sets of results were obtained by GC/MS. For GC/MS (I), approximately 9 g subsamples from six bottles were Soxhlet- extracted with a mixture of 50 % hexane/50 % acetone for approximately 18 h. Copper powder was added to the extract to remove elemental sulfur, and the concentrated extract was passed through a silica SPE cartridge and eluted with 10 % DCM in hexane. The processed extract was then analyzed by GC/MS with two ionization modes, electron impact (EI) and negative ion chemical ionization (NICI). The GC/MS EI method, GC/MS (IA), used a 0.25 mm i.d. × 60 m fused silica capillary column with a relatively non-polar proprietary phase (0.25 μm film thickness; DB-XLB, J&W Scientific). The GC/MS NICI method, GC/MS (IB), used a 0.25 mm i.d. × 60 m fused silica capillary column with a 5 % phenyl-substituted methylpolysiloxane phase (0.25 μm film thickness; DB-5MS, J&W Scientific). The GC/MS (II) results were obtained in the same manner as the GC/MS (IA) analyses except that three subsamples were Soxhlet-extracted with DCM for approximately 18 h. For the GC/MS analyses, selected carbon-13 labeled PCB congeners and chlorinated pesticides were added to the sediment prior to extraction for use as internal standards for quantification purposes.

In addition to the analyses performed at NIST, SRM 1941b was used in an interlaboratory comparison exercise in 1999 as part of the NIST Intercomparison Exercise Program for Organic Contaminants in the Marine Environment [7]. Results from 38 laboratories that participated in this exercise were used as the sixth data set in the determination of the certified values for PCB congeners and chlorinated pesticides in SRM 1941b. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest.

The reference value for PCB 77 was determined from a separate fraction. The samples were extracted and processed as for GC-ECD (I) above. The first (PCB and lower-polarity pesticide) fraction from the semi-preparative aminopropylsilane column was further fractionated using a Cosmosil PYE (pyrenylethyl group bonded) column (5 μm particle size, 4.6 mm i.d. × 25 cm ; Phenomenex, Torrance, CA) [11]. Three fractions were collected: the first fraction contained the pesticides and multi-*ortho* PCBs, the second fraction contained the polychlorinated naphthalenes, non-*ortho* PCB congeners, and some mono-*ortho* PCB congeners, and the third fraction removed the residual planar compounds from the column. The second fraction was analyzed by GC/MS NICI using the same column as GC/MS (IB) above. Carbon-13 labeled PCB 77 was used as an internal standard for quantification purposes.

Alkylated PAH Groups, Hopanes, and Steranes: SRM 1941b was used in an interlaboratory comparison exercise in 2011 [12]. Results from 33 laboratories that participated in this exercise were used in the determination of the reference values for alkylated PAH groups, hopanes, and steranes in SRM 1941b. Note that not all laboratories returned data for each analyte. The laboratories participating in this exercise used the analytical procedures routinely used in their laboratories to measure the analytes of interest. For the alkylated PAHs, the majority of the laboratories (>90 %) used the parent PAH for determination of the response factor for the corresponding alkylated group.

Total Organic Carbon (TOC): Two laboratories provided results for TOC using similar procedures. Briefly, subsamples of approximately 200 mg were reacted with 6 mol/L hydrochloric acid and rinsed with deionized water prior to combustion in a gas fusion furnace. The carbon monoxide and carbon dioxide produced were measured and compared to a blank for calculation of the percent TOC. Each laboratory analyzed subsamples from three bottles of SRM 1941b. One of the laboratories also analyzed three subsamples from three bottles of SRM 1941b for carbon, hydrogen, and nitrogen.

Table 1. Certified Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
Naphthalene[b,c,d,e,f,g]	848	±	95[h]
Fluorene[b,c,d,e,f,g]	85	±	15[h]
Phenanthrene[b,c,d,e,f,g]	406	±	44[h]
Anthracene[b,c,d,e,f,g]	184	±	18[h]
3-Methylphenanthrene[b,c,d]	105	±	13[h]
2-Methylphenathrene[b,c,d]	128	±	14[h]
1-Methylphenanthrene[b,c,d,g]	73.2	±	5.9[h]
Fluoranthene[b,c,d,e,f,g]	651	±	50[h]
Pyrene[b,c,d,e,f,g]	581	±	39[h]
Benz[*a*]anthracene[b,c,d,e,f,g]	335	±	25[h]
Chrysene[d,f]	291	±	31[h]
Triphenylene[d,f]	108	±	5[i]
Benzo[*b*]fluoranthene[c,e]	453	±	21[h]
Benzo[*k*]fluoranthene[b,c,d,e]	225	±	18[h]
Benzo[*e*]pyrene[b,c,d,g]	325	±	25[h]
Benzo[*a*]pyrene[b,c,d,f,g]	358	±	17[h]
Perylene[b,c,d,f,g]	397	±	45[h]
Benzo[*ghi*]perylene[b,c,d,f,g]	307	±	45[h]
Indeno[1,2,3-*cd*]pyrene[b,c,d,f,g]	341	±	57[h]
Dibenz[*a,j*]anthracene[b,c,d,f]	48.9	±	4.6[h]
Dibenz[*a,c*]anthracene[c,f]	36.7	±	5.2[h]
Dibenz[*a,h*]anthracene[c,f]	53	±	10[h]
Benzo[*b*]chrysene[b,c,d,f]	53	±	12[h]
Picene[b,c,d]	46.6	±	4.7[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] LC-FL (total) of total PAH fraction after PFE with DCM.
[f] LC-FL (isomer) of isomeric PAH fractions after PFE with DCM.
[g] 1999 Interlaboratory Comparison Study [7] with 21 to 29 laboratories submitting data for each PAH.
[h] Certified values are weighted means of the results from two to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[i] The certified value is an unweighted mean of the results from two analytical methods. The uncertainty listed with the value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the value is metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 2. Certified Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b] (µg/kg)		
PCB	8	(2,4'-Dichlorobiphenyl)[c,d,e,f,g]	1.65	±	0.19[h]
PCB	18	(2,2',5-Trichlorobiphenyl)[c,d,e,f,g]	2.39	±	0.29[h]
PCB	28	(2,4,4'-Trichlorobiphenyl)[c,d,e,f,g]	4.52	±	0.57[h]
PCB	31	(2,4',5-Trichlorobiphenyl)[c,e,f]	3.18	±	0.41[h]
PCB	44	(2,2'3,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	3.85	±	0.20[i]
PCB	49	(2,2'4,5'-Tetrachlorobiphenyl)[c,d,e,f]	4.34	±	0.28[i]
PCB	52	(2,2',5,5'-Tetrachlorobiphenyl)[c,d,e,f,g]	5.24	±	0.28[i]
PCB	66	(2,3',4,4'-Tetrachlorobiphenyl)[c,e,f,g,j]	4.96	±	0.53[i]
PCB	87	(2,2',3,4,5'-Pentachlorobiphenyl)[c,d,f,j]	1.14	±	0.16[h]
PCB	95	(2,2',3,5',6-Pentachlorobiphenyl)[c,e,f,g]	3.93	±	0.62[i]
PCB	99	(2,2',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g]	2.90	±	0.36[i]
PCB	101	(2,2',4,5,5'-Pentachlorobiphenyl)[c,e,f,g,j]	5.11	±	0.34[i]
PCB	105	(2,3,3',4,4'-Pentachlorobiphenyl)[c,d,e,f,g,j]	1.43	±	0.10[i]
PCB	110	(2,3,3',4',6-Pentachlorobiphenyl)[c,e,f,j]	4.62	±	0.36[i]
PCB	118	(2,3',4,4',5-Pentachlorobiphenyl)[c,d,e,f,g,j]	4.23	±	0.19[i]
PCB	128	(2,2',3,3',4,4'-Hexachlorobiphenyl)[c,d,e,f,g,j]	0.696	±	0.044[i]
PCB	138	(2,2',3,4,4',5'-Hexachlorobiphenyl)[c,e,f,j]	3.60	±	0.28[i]
PCB	149	(2,2',3,4',5',6-Hexachlorobiphenyl)[c,d,e,j]	4.35	±	0.26[h]
PCB	153	(2,2',4,4',5,5'-Hexachlorobiphenyl)[c,d,e,f,g,j]	5.47	±	0.32[i]
PCB	156	(2,3,3',4,4',5-Hexachlorobiphenyl)[c,d,e,f,j]	0.507	±	0.090[h]
PCB	170	(2,2',3,3',4,4',5-Heptachlorobiphenyl)[c,d,e,f,g,j]	1.35	±	0.09[i]
PCB	180	(2,2',3,4,4',5,5'-Heptachlorobiphenyl)[c,d,e,f,g,j]	3.24	±	0.51[i]
PCB	183	(2,2',3,4,4',5',6-Heptachlorobiphenyl)[c,d,e,j]	0.979	±	0.087[h]
PCB	187	(2,2',3,4',5,5',6-Heptachlorobiphenyl)[c,d,e,f,g,j]	2.17	±	0.22[i]
PCB	194	(2,2',3,3',4,4',5,5'-Octachlorobiphenyl)[c,d,e,j]	1.04	±	0.06[h]
PCB	195	(2,2',3,3',4,4',5,6-Octachlorbiphenyl)[c,e,g,j]	0.645	±	0.060[i]
PCB	201	(2,2',3,3',4,5',6,6'-Octachlorobiphenyl)[c,e,j]	0.777	±	0.034[h]
PCB	206	(2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl)[c,e,f,g,j]	2.42	±	0.19[i]
PCB	209	Decachlorobiphenyl[c,d,e,f,g,j]	4.86	±	0.45[i]

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform to IUPAC rules, except PCB 201. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 201 is listed as PCB 200.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.

[g] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each PCB congener.

[h] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[i] Certified values are weighted means of the results from three to six analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[j] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

Table 3. Certified Mass Fraction Values for Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a] (µg/kg)
Hexachlorobenzene[b,c,d,e]	5.83 ± 0.38[f]
cis-Chlordane[b,c,d,e,g]	0.85 ± 0.11[h]
trans-Chlordane[b,c,e]	0.566 ± 0.093[f]
cis-Nonachlor[b,e,g]	0.378 ± 0.053[h]
trans-Nonachlor[b,c,d,e,g]	0.438 ± 0.073[f]
4,4'-DDE[b,d,e,g]	3.22 ± 0.28[h]
4,4'-DDD[b,d,e,g]	4.66 ± 0.46[h]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[e] 1999 Interlaboratory Comparison Study [7] with 13 to 31 laboratories submitting data for each pesticide.
[f] Certified values are unweighted means of the results from three to five analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the constituent listed and the values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.
[h] Certified values are weighted means of the results from three to five analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed and the values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 4. Reference Mass Fraction Values for PAHs in SRM 1941b

PAHs	Mass Fractions[a] (µg/kg)		
1-Methylnaphthalene[b,c,d,e]	127	±	14[f]
2-Methylnaphthalene[b,c,d,e]	276	±	53[f]
2,6-Dimethylnaphthalene[b,c,d,e]	75.9	±	4.5[f]
2,3,5-Trimethylnaphthalene[b,c,d,e]	25.5	±	5.1[f]
Biphenyl[b,c,d,e]	74.0	±	8.0[f]
Acenaphthylene[b,c,d,e]	53.3	±	6.4[f]
Acenaphthene[b,c,d,e]	38.4	±	5.2[f]
9-Methylphenanthrene[c]	63.5	±	2.5[g]
4-Methylphenanthrene and 9-Methylphenanthrene[b,d]	80.1	±	4.8[f]
2-Methylanthracene[c,d]	36	±	15[f]
8-Methylfluoranthene[b]	49.5	±	2.7[g]
7-Methylfluoranthene[b]	45.4	±	1.5[g]
1-Methylfluoranthene[b]	42.4	±	2.1[g]
3-Methylfluoranthene[b]	28.8	±	1.3[g]
2-Methylpyrene[b]	78.7	±	4.0[g]
4-Methylpyrene[b]	66.4	±	2.6[g]
1-Methylpyrene[b]	52.5	±	2.3[g]
Acephenanthrene[d]	30.5	±	1.9[g]
Benzo[*c*]phenanthrene[b,c,d]	58	±	15[f]
Benzo[*a*]fluoranthene[b,c,d]	73	±	18[f]
Benzo[*j*]fluoranthene[c]	217	±	5[g]
Indeno[1,2,3-*cd*]fluoranthene[d]	9.63	±	0.34[g]
Pentaphene[d]	25.3	±	1.0[g]

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] GC/MS (I) on 5 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[c] GC/MS (II) on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM.
[d] GC/MS (III) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.
[e] 1999 Interlaboratory Comparison Study [7] with 14 to 26 laboratories submitting data for each PAH.
[f] Reference values are weighted means of the results from two to four analytical methods [13]. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of PAHs listed as determined by the methods indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[g] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for the associated degrees of freedom (19 for footnote b and 5 for footnotes c and d) and 95 % confidence level for each analyte. The measurand is the total mass fraction of the PAHs listed as determined by the method indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

Table 5. Reference Mass Fraction Values for PAHs of Molecular Mass 300 and 302 in SRM 1941b

PAHs of Molecular Mass 300 and 302	Mass Fractions[a,b,c] (µg/kg)		
Coronene	72.6	±	4.7
Dibenzo[*b,e*]fluoranthene	10.3	±	0.3
Naphtho[1,2-*b*]fluoranthene	91.0	±	3.1
Naphtho[1,2-*k*]fluoranthene and Naphtho[2,3-*j*]fluoranthene	79.8	±	2.5
Naphtho[2,3-*b*]fluoranthene	23.5	±	0.3
Dibenzo[*b,k*]fluoranthene	95.6	±	3.1
Dibenzo[*a,k*]fluoranthene	26.6	±	0.4
Dibenzo[*j,l*]fluoranthene	63.8	±	1.8
Dibenzo[*a,l*]pyrene	11.1	±	1.0
Naphtho[2,3-*k*]fluoranthene	10.7	±	0.6
Naphtho[1,2-*a*]pyrene	16.7	±	1.4
Naphtho[2,3-*e*]pyrene	33.2	±	2.3
Dibenzo[*a,e*]pyrene	76.1	±	3.6
Naphtho[2,1-*a*]pyrene	59.2	±	1.8
Dibenzo[*e,i*]pyrene	35.0	±	2.4
Naphtho[2,3-*a*]pyrene	16.5	±	0.6
Benzo[*b*]perylene	38.2	±	1.2
Dibenzo[*a,i*]pyrene	25.5	±	1.0
Dibenzo[*a,h*]pyrene	6.94	±	0.29

[a] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[b] Reference values are the means of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution for two degrees of freedom and 95 % confidence level for each analyte. The measurand is the total mass fraction of the constituent listed as determined by the method indicted. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.

[c] GC/MS on 50 % phenyl-substituted methylpolysiloxane phase after PFE with DCM [8].

Table 6. Reference Mass Fraction Values for PCB Congeners[a] in SRM 1941b

PCB Congeners			Mass Fractions[b,c] (µg/kg)		
PCB	45	(2,2',3,6-Tetrachlorobiphenyl)[d,e]	0.73	±	0.12
PCB	56	(2,3,3',4'-Tetrachlorobiphenyl)[d,f,g]	1.21	±	0.11
PCB	63	(2,3,4',5-Tetrachlorobiphenyl)[e,f,g]	0.213	±	0.040
PCB	70	(2,3',4',5-Tetrachlorobiphenyl)[e,f,g]	4.99	±	0.29
PCB	74	(2,4,4',5-Tetrachlorobiphenyl)[e,f,g]	2.04	±	0.15
PCB	77	(3,3',4,4'-Tetrachlorobiphenyl)[h]	0.31	±	0.03
PCB	107	(2,3,3',4',5-Pentachlorobiphenyl)[d,e,f,g]	0.628	±	0.028
PCB	132	(2,2',3,3',4,6'-Hexachlorobiphenyl)[d,f,g]	1.28	±	0.27
PCB	146	(2,2',3,4',5,5'-Hexachlorobiphenyl)[e,f,g]	1.22	±	0.12
PCB	158	(2,3,3',4,4',6-Hexachlorobiphenyl)[d,e,f,g]	0.65	±	0.15
PCB	163	(2,3,3',4',5,6-Hexachlorobiphenyl)[e,f,g]	1.28	±	0.06
PCB	174	(2,2',3,3',4,5,6'-Heptachlorobiphenyl)[d,e,f,g]	1.51	±	0.39
PCB	193	(2,3,3',4',5,5',6-Heptachlorobiphenyl)[d,e,f,g]	0.292	±	0.075

[a] PCB congeners are numbered according to the scheme proposed by Ballschmiter and Zell [9] and later revised by Schulte and Malisch [10] to conform with IUPAC rules, except PCB 107. Under the Ballschmiter and Zell numbering system, the IUPAC PCB 107 is listed as PCB 108.

[b] Mass fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.

[c] For these PCB congeners except PCB 77, the reference values are unweighted means of the results from two to four analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled within-method variance following the ISO/JCGM Guide [14,15]. For PCB 77, the reference value is the mean of results obtained by NIST using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the analyte mean, and the coverage factor, k, is determined from the Student's t-distribution corresponding to two degrees of freedom and 95 % confidence level for PCB 77. The measurand is the total mass fraction of the PCB Congeners listed as determined by the method or methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as microgram per kilogram on a dry-mass basis.

[d] GC-ECD (IA) on 5 % phenyl-substituted methylpolysiloxane phase after PFE extraction with DCM.

[e] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).

[f] GC/MS (IA) on a relatively non-polar proprietary phase after Soxhlet extraction with 50 % hexane/50 % acetone mixture.

[g] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).

[h] GC/MS NICI on a 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC-ECD (I) fractionated using a PYE column.

Table 7. Reference Mass Fraction Values for Selected Chlorinated Pesticides in SRM 1941b

Chlorinated Pesticides	Mass Fractions[a,b] (µg/kg)		
2,4'-DDE[c,d]	0.38	±	0.12
4,4'-DDT[e,f]	1.12	±	0.42

[a] Mass Fractions reported on dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference values are unweighted means of the results from two analytical methods. The uncertainty listed with each value is an expanded uncertainty about the mean, with coverage factor 2, calculated by combining a between-method variance [16] with a pooled, within-method variance following the ISO/JCGM Guide [14,15]. The measurand is the total mass fraction of the chlorinated pesticides listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[c] GC/MS (IB) on 5 % phenyl-substituted methylpolysiloxane phase; same extracts analyzed as in GC/MS (IA).
[d] GC-ECD (IB) on a relatively non-polar proprietary phase; same extracts analyzed as in GC-ECD (IA).
[e] GC/MS (II) on a relatively non-polar proprietary phase after Soxhlet extraction with DCM.
[f] 1999 Interlaboratory Comparison Study [7] with 10 laboratories submitting data for 4,4'-DDT.

Table 8. Reference Mass Fraction Values for Alkylated PAH Groups in SRM 1941b

Alkylated PAH Group	Mass Fraction[a,b] (µg/kg)		
C2-decalins	18	±	5
C4-decalins	41	±	4
C2-naphthalenes	187	±	53
C3-naphthalenes	158	±	42
C1-benzothiophenes	25	±	14
C2-benzothiophenes	20	±	11
C3-benzothiophenes	22	±	13
C4-benzothiophenes	18	±	5
C1-fluorenes	57	±	18
C2-fluorenes	122	±	43
C3-fluorenes	128	±	31
C1-phenanthrenes/anthracenes	313	±	99
C2-phenanthrenes/anthracenes	247	±	62
C3-phenanthrenes/anthracenes	165	±	46
C4-phenanthrenes/anthracenes	87	±	36
C1-dibenzothiophenes	54	±	13
C2-dibenzothiophenes	91	±	18
C3-dibenzothiophenes	84	±	15
C4-dibenzothiophenes	57	±	13
C1-fluoranthenes/pyrenes	252	±	48
C2-fluoranthenes/pyrenes	205	±	38
C3-fluoranthenes/pyrenes	102	±	22
C4-fluoranthenes/pyrenes	121	±	59
C1-benzanthraces/chrysenes/triphenylenes	208	±	43
C2-benzanthraces/chrysenes/triphenylenes	120	±	24
C3-benzanthraces/chrysenes/triphenylenes	73	±	31
C4-benzanthraces/chrysenes/triphenylenes	41	±	11

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the alkylated PAH groups listed as determined by the interlaboratory study methods. The values listed are metrologically traceable to the SI unit of mass fraction, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 9. Reference Mass Fraction Values for Hopanes and Steranes in SRM 1941b

Hopane or Sterane	Mass Fraction[a,b] (µg/kg)
17α(H)-22,29,30-Trisnorhopane	54 ± 18
17α(H)-21β(H)-30-Norhopane	137 ± 21
17α(H)-21β(H)-30-Hopane	215 ± 44
17α(H)-21β(H)-22R-Homohopane	44 ± 10
17α(H)-21β(H)-22S-Homohopane	48 ± 13
5α(H)-14α(H),17α(H)-Cholestane 20R	41 ± 11
5α(H)-14β(H),17β(H)-Cholestane 20R	27 ± 6
5α(H)-14β(H),17β(H)-24-Methylcholestane 20R	21 ± 8
5α(H)-14α(H),17α(H)-24-Ethylcholestane 20R	19 ± 5
5α(H)-14β(H),17β(H)-24-Ethylcholestane 20R	41 ± 9

[a] The reference mass fraction value reported on a dry-mass basis is the median of results using one analytical technique. The expanded uncertainty, U, is calculated as $U = ku_c$, where u_c is one standard deviation of the median, and the coverage factor, $k = 2$. The measurand is the total mass fraction of the constituent listed as determined by the methods used during the interlaboratory study. The values are metrologically traceable to the SI unit of mass, expressed as micrograms per kilogram on a dry-mass basis.
[b] Data from the interlaboratory study [12].

Table 10. Reference Mass Fraction Value for Total Organic Carbon in SRM 1941b

Total Organic Carbon (TOC)	2.99 % ± 0.24 %[a,b]

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.
[b] The reference value for total organic carbon is a weighted mean value from routine measurements made by two laboratories [21]. The uncertainty listed is an expanded uncertainty about the mean, with coverage factor 2 (approximately 95 % confidence), calculated by combining a between-method variance incorporating inter-method bias with a pooled within-method variance. The reporting follows the ISO/JCGM Guides [2]. The measurand is the total mass fraction of TOC listed as determined by the methods indicted. The values listed are metrologically traceable to the SI unit of mass, expressed as a percent on a dry-mass basis.

Table 11. Information Mass Fraction Values for Carbon, Hydrogen, and Nitrogen in SRM 1941b

Elements	Mass Fractions[a] (%)
Carbon	3.3
Hydrogen	1.2
Nitrogen	<0.5

[a] Mass fraction is reported on a dry-mass basis; material as received contains approximately 2.4 % moisture.

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Certificate Revision History: 16 January 2015 (Corrected IUPAC name for PCB-56 and PCB-107; editorial changes); 10 June 2014 (Units corrected from mg/kg to µg/kg in Tables 8 and 9; editorial changes); 10 April 2012 (Reference value added for alkylated PAH groups, hopanes, and steranes; extension of certification period; editorial changes); 16 August 2004 (Reference values for the butyl tins removed; editorial changes); 15 July 2002 (Original certificate date).

Users of this SRM should ensure that the Certificate of Analysis in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail srminfo@nist.gov; or via the Internet at http://www.nist.gov/srm.

APPENDIX A

The laboratories listed below performed measurements that contributed to the certification of PAHs, PCBs, and chlorinated pesticides in SRM 1941b Organics in Marine Sediment.

Arthur D. Little, Inc; Cambridge, MA
Axys Analytical Services; Sidney, BC, Canada
B & B Laboratories; College Station, TX
Battelle Ocean Sciences; Duxbury, MA
Bedford Institute of Oceanography; Dartmouth, NS, Canada
California Department of Fish and Game; Rancho Cordova, CA
Central Contra Costa Sanitary District; Martinez, CA
Chesapeake Biological Laboratory; Solomons, MD
Centro de Investigacionies Energeticas Medioambientales y Tecnologicas; Madrid, Spain
City of Los Angeles Environmental Monitoring Division; Playa del Rey, CA
City of San Jose Environmental Services Department; San Jose, CA
Columbia Analytical Services; Kelso, WA
East Bay Municipal Utility District; Oakland, CA
Florida Department of Environmental Protection; Tallahassee, FL
Manchester Environmental Laboratory; Port Orchard, WA
Murray State University; Murray, KY
Massachusetts Water Resources Authority Central Lab; Winthrop, MA
National Research Council of Canada; Ottawa, Ontario, Canada
National Oceanic and Atmospheric Association (NOAA), National Marine Fisheries Service (NMFS), Auke Bay Laboratory; Juneau, AK
NOAA, National Ocean Service/Center for Coastal Environmental Health and Biomolecular Research; Charleston, SC
NOAA, NMFS, Sandy Hook Marine Laboratory; Highlands, NJ
NOAA, NMFS, Northwest Fisheries Science Center; Seattle, WA
Orange County Sanitation District; Fountain Valley, CA
Philip Analytical Services; Burlington, Ontario, Canada
Serv de Hidrografia Naval; Buenos Aires, Argentina
Skidaway Institute of Technology; Savannah, GA
Southwest Laboratory of Oklahoma; Broken Arrow, OK
Severn Trent Knoxville Laboratory; Knoxville, TN
Texas A&M University, Geochemical and Environmental Research Group; College Station, TX
Texas Parks and Wildlife Department; San Marcos, TX
University of California at Los Angeles, Institute of Geophysics and Planetary Physics; Los Angeles, CA
University of Connecticut, Environmental Research Institute; Storrs, CT
University of Rhode Island, Graduate School of Oceanography; Narragansett, RI
US Department of Agriculture, Environmental Chemistry Laboratory; Beltsville, MD
US Environmental Protection Agency, Atlantic Ecology Division; Narragansett, RI
US Geological Survey, National Water Quality Laboratory; Denver, CO
Woods Hole Group Environmental Lab; Raynham, MA
Wright State University; Dayton, OH

APPENDIX B

The laboratories listed below performed measurements that contributed to the certification of alkylated PAH groups, hopanes, and steranes in SRM 1941b Organics in Marine Sediment.

Alpha Analytical, Inc.; Mansfield, MA
Analytical Resources, Inc.; Tukwila, WA
Axys Analytical Services; Sydney, BC, Canada
Battelle Analytical & Environmental Chemistry Laboratory; Duxbury, MA
Center for Laboratory Sciences; Pasco, WA
Columbia Analytical Services; Jacksonville, FL
Columbia Analytical Services; Rochester, NY
Columbia Analytical Services, Kelso, WA
Florida Department of Environmental Protection; Tallahassee, FL
Florida International University; North Miami, FL
Michigan Department of Natural Resources and Environment; Lansing, MI
Mississippi State Chemical Laboratory; Mississippi State, MS
NIST; Charleston, SC
NIST; Gaithersburg, MD
NOAA/NCCOS/NOS; Charleston, SC
NOAA/NMFS/Alaska Fisheries Science Center; Juneau, AK
NY State Department of Health; Albany, NY
Pace Analytical Services, Inc. Minneapolis; Minneapolis, MN
RJ Lee Group, Inc; Monroeville, PA
TDI/B&B Laboratories, Inc.; College Station, TX
TestAmerica Laboratories; Mobile, AL
TestAmerica Laboratories; West Sacramento, CA
TestAmerica Laboratories; University Park, IL
TestAmerica Laboratories; Schriever, LA
TestAmerica Laboratories; Edison, NJ
TestAmerica Laboratories; Knoxville, TN
TestAmerica Laboratories; Pittsburgh, PA
TestAmerica Laboratories; South Burlington, VT
TestAmerica Laboratories; Tacoma, WA
US Army Engineer Research and Development Center; Vicksburg, MS
USGS Columbia Environmental Research Center; Columbia, MO
University of Iowa, State Hygienic Laboratory; Iowa City, IO
Washington State Public Health Laboratories; Shoreline, WA

NIST

Date of Issue:
31 March 2014

SAFETY DATA SHEET

1. Substance and Source Identification

Product Identifier

SRM Number: 1941b
SRM Name: Organics in Marine Sediment
Other Means of Identification: Not applicable.

Recommended Use of This Material and Restrictions of Use

This Standard Reference Material (SRM) is marine sediment collected at the mouth of the Baltimore (MD) Harbor. SRM 1941b is intended for use in evaluating analytical methods for the determination of selected polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and chlorinated pesticides in marine sediment and similar matrices. All of the constituents for which certified, reference, and information values are provided in SRM 1941b were naturally present in the sediment before processing. A unit of SRM 1941b consists of a bottle containing 50 g of radiation-sterilized, freeze-dried sediment.

Company Information

National Institute of Standards and Technology
Standard Reference Materials Program
100 Bureau Drive, Stop 2300
Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200
FAX: 301-948-3730
E-mail: SRMMSDS@nist.gov
Website: http://www.nist.gov/srm

Emergency Telephone ChemTrec:
1-800-424-9300 (North America)
+1-703-527-3887 (International)

2. Hazards Identification

Classification

Physical Hazard: Not classified.
Health Hazard: Not classified.

Label Elements
Symbol
No Symbol/Pictogram

Signal Word
Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s): Not applicable.

Hazards Not Otherwise Classified: Not applicable.

Ingredients(s) with Unknown Acute Toxicity: Not applicable.

3. Composition and Information on Hazardous Ingredients

Substance: Marine sediment

Other Designations: Sediment.

This material is naturally occurring marine sediment from an urban area. The material contains trace amounts of polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyl (PCB) congeners, and should be handled with care. Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

Hazardous Component(s)	CAS Number	EC Number (EINECS)	Nominal Mass Concentration (%)
Marine Sediment	Not available	Not available	100

4. First Aid Measures

Description of First Aid Measures:

Inhalation: If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

Skin Contact: Wash skin with soap and water.

Eye Contact: Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

Ingestion: If adverse effects occur after ingestion, seek medical treatment.

Most Important Symptoms/Effects, Acute and Delayed: May cause irritation.

Indication of any immediate medical attention and special treatment needed, if necessary: If any of the above symptoms are present, seek medical attention if needed.

5. Fire Fighting Measures

Fire and Explosion Hazards: Negligible fire hazard. Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

Extinguishing Media:
Suitable: Use extinguishing media appropriate for surrounding fire.
Unsuitable: None listed.

Specific Hazards Arising from the Chemical: None listed.

Special Protective Equipment and Precautions for Fire-Fighters: Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

NFPA Ratings (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 1 Fire = 0 Reactivity = 0

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

Methods and Materials for Containment and Clean up: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

7. Handling and Storage

Safe Handling Precautions: Minimize dust generation and accumulation on surfaces. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. See Section 8, "Exposure Controls and Personal Protection".

Storage: Store and handling in accordance with all current regulations and standards.

8. Exposure Controls and Personal Protection

Exposure Limits: No occupational exposure limits have been established for marine sediment. This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. The exposure limits for Particulates Not Otherwise Regulated (PNOR) are applicable.

OSHA (PEL): 15 mg/m^3 (TWA, total particulates not otherwise regulated)
OSHA (PEL) 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

NIOSH (REL): 10 mg/m^3 (TWA, total particulates not otherwise regulated, 8 h)
NIOSH (REL): 5 mg/m^3 (TWA, respirable particulates not otherwise regulated)

Engineering Controls: Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

Personal Protection: In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

Respiratory Protection: If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

Eye/Face Protection: Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

Skin and Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

Descriptive Properties:

Appearance (physical state, color, etc.):	amorphous powder
Molecular Formula:	not applicable
Molar Mass (g/mol):	not applicable
Odor:	not available
Odor threshold:	not available
pH:	not available
Evaporation rate:	not applicable
Melting point/freezing point (°C):	not available
Specific Gravity (water=1)	not available
Vapor Pressure (mmHg):	not applicable
Vapor Density (air = 1):	not applicable
Viscosity (cP):	not applicable
Solubility(ies):	not available
Partition coefficient (n-octanol/water):	not available
Particle Size:	<150 µm

Thermal Stability Properties:

Autoignition Temperature (°C):	not available
Thermal Decomposition (°C):	not available
Initial boiling point and boiling range (°C):	not available
Explosive Limits, LEL (Volume %):	not available
Explosive Limits, UEL (Volume %):	not available
Flash Point (°C):	not available
Flammability (solid, gas):	not available

10. STABILITY AND REACTIVITY

Reactivity: Stable at normal temperatures and pressure.

Stability: X Stable _____ Unstable

Possible Hazardous Reactions: None listed.

Conditions to Avoid: Avoid generating dust.

Incompatible Materials: None listed.

Fire/Explosion Information: See Section 5, "Fire Fighting Measures".

Hazardous Decomposition: Thermal decomposition will produce oxides of carbon.

Hazardous Polymerization: _____ Will Occur X Will Not Occur

11. TOXICOLOGICAL INFORMATION

Route of Exposure: __X__ Inhalation __X__ Skin _____ Ingestion

Symptoms Related to the Physical, Chemical and Toxicological Characteristics: Generated dust may cause irritation if inhaled.

Potential Health Effects (Acute, Chronic and Delayed):

Inhalation: Generated dust may cause irritation.

Skin Contact: May cause mechanical irritation.

Eye Contact: May cause mechanical irritation.

Ingestion: No data available.

Numerical Measures of Toxicity:

Acute Toxicity: Not classified; no data available.

Skin Corrosion/Irritation: Not classified; no data available.

Serious Eye damage/ Eye irritation: Not classified; no data available.

Respiratory Sensitization: Not classified; no data available.

Skin Sensitization: Not classified; no data available.

Germ Cell Mutagenicity: Not classified; no data available.

Carcinogenicity: Not classified.

Listed as a Carcinogen/Potential Carcinogen _____ Yes __X__ No
Marine sediment is not listed by NTP, IARC or OSHA as a carcinogen.

Reproductive Toxicity: Not classified; no data available.

Specific Target Organ Toxicity, Single Exposure: Not classified; no data available.

Specific Target Organ Toxicity, Repeated Exposure: Not classified; no data available.

Aspiration Hazard: Not classified; no data available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Data: No data available.

Persistence and Degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other Adverse effects: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste in accordance with all applicable federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. DOT and IATA: Not regulated by DOT or IATA.

15. REGULATORY INFORMATION

U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

ACUTE HEALTH:	No.
CHRONIC HEALTH:	No.
FIRE:	No.
REACTIVE:	No.
PRESSURE:	No.

State Regulations:
California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

Canadian Regulations:
WHMIS Information: Not provided for this material.

16. OTHER INFORMATION

Issue Date: 31 March 2014

Sources: 29 CFR Occupational Health and Safety Office (OSHA) 1910.1000, *Limits for Air Contaminants*, Table Z-1; available at http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=9992 (accessed Mar 2014).

Center for Disease Control (CDC) NIOSH Pocket Guide to Chemical Hazards, *Particulates not otherwise regulated*; available at http://www.cdc.gov/niosh/npg/npgd0480.html (accessed Mar 2014).

Key of Acronyms:

ACGIH	American Conference of Governmental Industrial Hygienists	NRC	Nuclear Regulatory Commission
ALI	Annual Limit on Intake	NTP	National Toxicology Program
CAS	Chemical Abstracts Service	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
CFR	Code of Federal Regulations	RCRA	Resource Conservation and Recovery Act
DOT	Department of Transportation	REL	Recommended Exposure Limit
EC50	Effective Concentration, 50 %	RM	Reference Material
EINECS	European Inventory of Existing Commercial Chemical Substances	RQ	Reportable Quantity
EPCRA	Emergency Planning and Community Right-to-Know Act	RTECS	Registry of Toxic Effects of Chemical Substances
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IATA	International Air Transportation Agency	SCBA	Self-Contained Breathing Apparatus
IDLH	Immediately Dangerous to Life and Health	SRM	Standard Reference Material
LC50	Lethal Concentration, 50 %	STEL	Short Term Exposure Limit
LD50	Lethal Dose, 50 %	TLV	Threshold Limit Value
LEL	Lower Explosive Limit	TPQ	Threshold Planning Quantity
MSDS	Material Safety Data Sheet	TSCA	Toxic Substances Control Act
NFPA	National Fire Protection Association	TWA	Time Weighted Average
NIOSH	National Institute for Occupational Safety and Health	UEL	Upper Explosive Limit
NIST	National Institute of Standards and Technology	WHMIS	Workplace Hazardous Materials Information System

Disclaimer: Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail SRMINFO@nist.gov; Internet at http://www.nist.gov/srm.

Bill to:	Ship to:
68455 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205	68456 DAVE MITCHELL ANALYTICAL RESOURCES INC 4611 S 134TH PLACE SUITE 100 TUKWILA, WA 98168-3240 1 (206)695-6205

Ship via	UPS Ground	Description		Ship from	
Salesmen	MCMIDM2	Instructions		Blanket	
Contact	DAVE MITCHELL	Pro#		Truck#	

Order discrepancies (other than back ordered items) must be reported to our Customer Relations Department at 301-975-6776 within 5 days of receipt of shipment or this order will be considered complete. NIST SRMs/RMs are generally not returnable - with the exception of defective goods or shipments made in error by NIST. To return a SRM/RM, please call for instructions and a Return SRM/RM Authorization Number before shipment. Returns WILL NOT BE ACCEPTED without prior authorization.

Order	UOM	Ship	UOM	B/O	UOM	Item	Description
1	EACH	1	EACH	0	EACH	1941B	Organics in Marine Sediment
						Total qty:	1 / EACH
							NOT FOR HUMAN CONSUMPTION, LABORATORY USE ONLY.

9/21/16
04:04 PM

1700101

Picked by	
Packed by	
# of pieces	
Weight	

MP Biomedicals, LLC

29525 Fountain Parkway
Solon, Ohio 44139

Telephone: 440/337-1200
Toll Free: 800/854-0530

Fax: 440/337-1180
web: www.mpbio.com

Certificate of Analysis

Product Description: Microcrystalline Cellulose Powder_
Catalog Number: 191499_
Lot: Q9483_

Formula: $(C_6H_{10}O_5)n$	**Formula Weight:** N/A
CAS #: 9004-34-6	**Storage:** 15 - 30°C
Physical Description: White Powder	

Test	Specification	Result
Identity Test	Passes	Passes
Purity	97.0 - 102.0%	97.0 - 102.0%
Moisture	<5.0%	3.4%
Particle Size/Mesh +60 mesh +200 mesh	Wt % <8% >45%	 <1% 55%
pH	5 - 7	6.73
Residue on Ignition	<0.05%	<0.05%
Water Soluble Substances	<12.0 mg/5 g	4.5 mg/5 g
Heavy Metals	<10 ppm	<10 ppm

H001822
Microcrystalline Cellulose Powder (TOC)
Expires 11/30/2022
Prepared By Casey English 2/22/2019

Identification A & B: Passes
Bulk Density: 0.29 g/ml
Bulk Density (graduated cylinder): 0.31 g/ml
Conductivity: 18 µS/cm
Starch: Negative
Ether Soluble Substances: 0.01%
Total Aerobic microbial Count: 100 cfu/g
Total Mold and Yeast Count: 20 cfu/g
Staphylococcus aureus: Absent/1 g
Pseudomonas aeruginosa: Absent/1 g
E. coli: Absent/1 g
Salmonella: Absent/10 g
Particle size:

- 450 mesh: 77%
- d10: 37 um
- d50: 139 um
- d90: 271 um

TUP: <9/600 cm^2
Degree of brightness: >88%
Powder flow-angle of repose: <42°
Recommended Retest Date: 11/30/2022

07/26/2018 - *John Huang, PhD*
MP Biomedicals, LLC.
Quality Control Manager

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Technical Service: 1-800-279-5490 (440-337-1200) Customer Service: 1-800-854-0530 (440-337-1200)

PREPARATION BATCH SUMMARY

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Batch: BLA0650
Batch Matrix: Solid
Preparation: No Prep-Organics

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
LDW23-SS1004	23A0467-05		02/20/23 12:04	

HOLDING TIME SUMMARY

Analysis: ASTM D2216

Laboratory: Analytical Resources, LLC SDG: 23A0467

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

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
LDW23-SS1004 23A0467-05	01/23/23 09:42	01/23/23 13:30	02/20/23 12:04	28	180	02/21/23 05:13	29	180	

* Indicates hold time exceedance.

METHOD DETECTION AND REPORTING LIMITS

ASTM D2216

Laboratory: Analytical Resources, LLC
SDG: 23A0467
Client: Anchor QEA, LLC
Project: AOC5 MR Phase 1
Matrix: Solid
Instrument:

Analyte	MDL	RL	Units
Total Solids		0.01	%

TOTAL SOLIDS BENCHSHEET							Batch:	BLB0378
Method: PSEP 1986							Date:	2/15/2023 10:49
(dry at 103-105 C)							Analyst:	CR
Instrumentation							Drying Oven:	15
							Analytical Balance:	B139298002

Batch drying time					
Record times as mm/dd/yy hh:mm		Oven Temp, C	TS (%) calculated as:	Oven Temps, °C	
Date/time in oven:	2/20/2023 9:49	110	Final dry wt (g) = (Dry Wt - Tare Wt)	Start Temp:	110
Date/time out:	2/21/2023 6:59	95	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)	End Temp:	95
Elapsed hrs:	21.2				

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0467-01	0.8000	12.4400	6.6100	5.81	**49.91%**	Yes
23A0467-02	0.7900	11.2800	5.7100	4.92	**46.90%**	Yes
23A0467-03	0.7900	11.8200	6.0800	5.29	**47.96%**	Yes
23A0467-04	0.8200	12.2800	6.2200	5.40	**47.12%**	Yes
23A0467-05	0.7900	11.5100	6.7000	5.91	**55.13%**	Yes
23A0467-06	0.7800	11.8500	6.0100	5.23	**47.24%**	Yes
23A0467-07	0.8100	12.4400	7.2300	6.42	**55.20%**	Yes
23A0467-08	0.8100	11.3300	5.9000	5.09	**48.38%**	Yes
23A0467-09	0.8100	11.1500	7.4100	6.60	**63.83%**	Yes

Done!!

TOTAL SOLIDS BENCHSHEET

Method: PSEP 1986

(dry at 103-105 C)

Batch:	BLB0378
Date:	2/15/2023 10:49
Analyst:	CR
Drying Oven:	015
Analytical Balance:	BI39298002

Instrumentation

Batch drying time			Oven Temp, C	TS (%) calculated as:
Record times as mm/dd/yy hh:mm				
Date/time in oven:	2/20/23	9:49	110	Final dry wt (g) = (Dry Wt - Tare Wt)
Date/time out:	2/21/23	6:59	95	TS = (Final Dry Wt X 100)/ (sample & dish -dish tare)
Elapsed hrs:	0.0			

Oven Temps, °C	
Start Temp:	110
End Temp:	95

SAMPLE ID	Dish Tare Wt (g)	Dish with Sample (g)	Dry Wt (g)	Solids Wt (g)	TS (%)	Sample Decanted
23A0467-01 A	0.80	12.44	6.61			~~No~~ yes
23A0467-02	0.79	11.28	5.71			~~No~~ yes
23A0467-03	0.79	11.82	6.08			~~No~~ yes
23A0467-04	0.82	12.28	6.22			~~No~~ yes
23A0467-05	0.79	11.51	6.70			~~No~~ yes
23A0467-06	0.78	11.85	6.01			~~No~~ yes
23A0467-07	0.81	12.44	7.23			~~No~~ yes
23A0467-08	0.81	11.33	5.90			~~No~~ yes
23A0467-09 A	0.81	11.15	7.41			~~No~~ yes

TS (Screen)
2 copies